SUP

NOVEMBER 2025

PROJECT ID: 1610-00-81

WITH: 8520-02-71

COUNTY: ASHLAND

ORDER OF SHEETS

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

TOTAL SHEETS = 286



28

N

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

PARK FALLS - MELLEN

PRICE CO LN TO MORSE RD

STH 13

ASHLAND COUNTY

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1610-00-81	WISC 2026054	1

STATE PROJECT NUMBER

1610-00-81

DESIGN DESIGNATION

A.A.D.T.	(2026)	=	2,230
A.A.D.T.	(2046)	=	2,230
D.H.V.		=	--
D.D.		=	50/50
T.		=	21.20%
DESIGN SPEED		=	55 MPH
ESALS		=	760,000

CONVENTIONAL SYMBOLS

PLAN

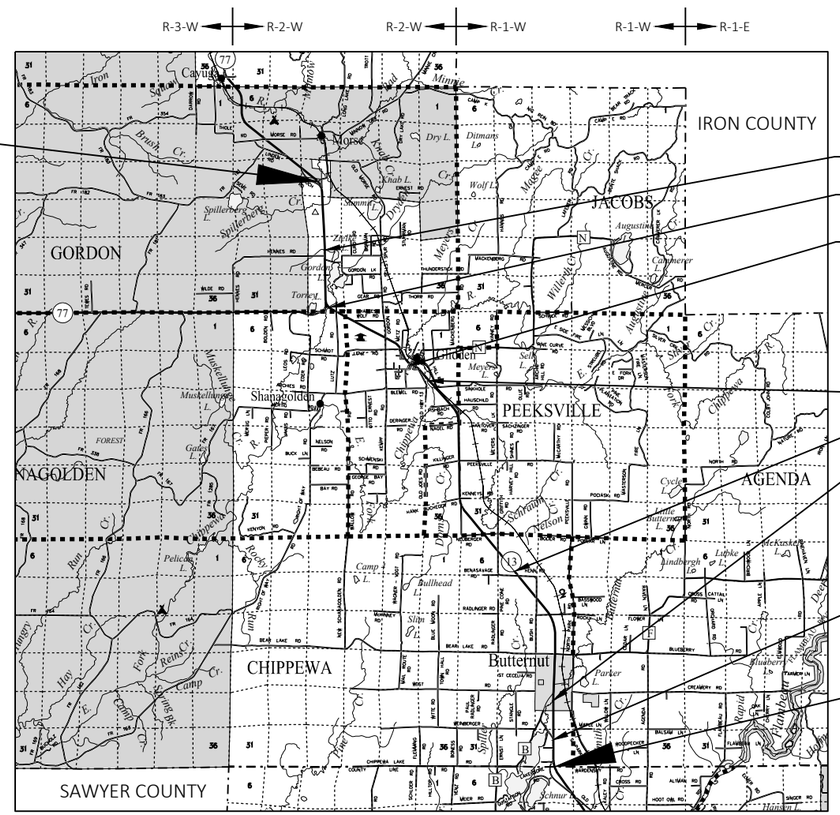
- CORPORATE LIMITS
- PROPERTY LINE
- LOT LINE
- LIMITED HIGHWAY EASEMENT
- EXISTING RIGHT OF WAY
- PROPOSED OR NEW R/W LINE
- SLOPE INTERCEPT
- REFERENCE LINE (300'EB')
- EXISTING CULVERT
- PROPOSED CULVERT (Box or Pipe)
- COMBUSTIBLE FLUIDS (CAUTION)
- MARSH AREA
- WOODED OR SHRUB AREA

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 4 MI

TOTAL NET LENGTH OF CENTERLINE = 17.174 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), ASHLAND COUNTY, NAD83 (12A.), 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.

ORIGINAL PLANS PREPARED BY

AYRES

WISCONSIN
JEFFREY A. ABRAMSON
32337
Eau Claire
WI
PROFESSIONAL ENGINEER

7/22/2025 (Date) (Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	SURVEYOR
Designer	AYRES ASSOCIATES INC
Project Manager	MATTHEW DICKENSON
Regional Examiner	REGIONAL EXAMINER
Regional Supervisor	REGIONAL SUPERVISOR

APPROVED FOR THE DEPARTMENT

DATE: 7/22/2025 MATTHEW DICKENSON (Signature)

E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\SHEETS\010101-TI.DWG PLOT DATE : 7/10/2025 11:23 AM PLOT BY : RESHESKE, CARRIE PLOT NAME :

GENERAL NOTES

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

THE CONTRACTOR SHALL NOTIFY DIGGERS HOTLINE AND AFFECTED UTILITIES PRIOR TO THE START OF WORK. ANY UTILITY WHICH IS NOT A MEMBER OF THE DIGGERS HOTLINE MUST BE CONTACTED SEPARATELY.

NO TREES OR SHRUBS SHALL BE REMOVED WITHOUT APPROVAL BY THE ENGINEER.

THE EROSION CONTROL ITEMS SHOWN ON THE PLANS ARE AT SUGGESTED LOCATIONS. THE ENGINEER MAY MODIFY LOCATIONS AS NEEDED. ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL SUCH TIME AS THE ENGINEER DETERMINES THE MEASURE IS NO LONGER NECESSARY.

SEED, INSTALL EROSION MAT, AND FERTILIZE ALL SALVAGED TOPSOIL AREAS WITHIN 7 WORKING DAYS AFTER GRADING WORK IS COMPLETED.

DO NOT APPLY FERTILIZER WITHIN 20 FEET OF A WATER BODY OR WETLAND.

TEMPORARY STORAGE OF ANY EXCAVATED MATERIAL WILL NOT BE PERMITTED IN WETLANDS, FLOODWAY OR FLOODPLAIN OF ANY WETLANDS.

TRAFFIC CONTROL DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

EXISTING ELEVATIONS SHALL BE VERIFIED IN THE FIELD.

UTILITY CONTACTS

ASTREA - COMMUNICATION LINE
1810 LAKE SHORE DRIVE EAST
ASHLAND, WI 54806
ATTN: RYAN NELSON
MOBILE: 715-931-0238
ryan.nelson@charter.com

BUTTERNUT VILLAGE OF - SEWER
PO BOX 276
BUTTERNUT, WI 54514
ATTN: CORY CARLSON
OFFICE: 715-769-3113
MOBILE: 715-209-2202
butternut000@centurytel.net

BUTTERNUT MUNICIPAL WATER DEPT - WATER
PO BOX 276
BUTTERNUT, WI 54514
ATTN: CORY CARLSON
OFFICE: 715-769-3113
MOBILE: 715-209-2202
butternut000@centurytel.net

CENTURYLINK - COMMUNICATION LINE
20 SOUTH WILSON ANENUE
RICE LAKE, WI 54868
ATTN: KYLE SCHLAMPP
OFFICE: 715-234-5573
MOBILE: 715-292-0082
kyle.schlampp@lumen.com

GLIDDEN SANITARY DISTRICT - SEWER
23 NORTH GRANT STREET
GLIDDEN, WI 54527
ATTN:LUKE EDER
MOBILE: 715-663-0638
leder@gmail.com

GLIDDEN SANITARY DISTRICT - WATER
23 NORTH GRANT STREET
GLIDDEN, WI 54527
ATTN: LUKE EDER
MOBILE: 715-663-0638
leder@gmail.com

PRICE ELECTRIC COOPERATIVE INC - ELECTRICITY
W6803 SPRINGS DRIVE
PHILLIPS, WI 54555
ATTN: BEN ORYSEN
OFFICE: 715-339-2155
MOBILE: 715-360-2264
borysen@priceelectric.coop

SPECTRUM - COMMUNICATION LINE
1810 LAKE SHORE DRIVE EAST
ASHLAND, WI 54806
ATTN: RYAN NELSON
MOBILE: 715-931-0238
ryan.nelson@charter.com

XCEL ENERGY - ELECTRICITY
1400 WESTERN AVENUE
EAU CLAIRE, WI 54703
ATTN: JOHN KELSER
OFFICE: 715-737-6020
john.kelser@xcelenergy.com

XCEL ENERGY - GAS/PETROLEUM
1400 WESTERN AVENUE
EAU CLAIRE, WI 54703
ATTN: JOHN KELSER
OFFICE: 715-737-6020
john.kelser@xcelenergy.com

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

DNR CONTACT

DNR NORTHERN REGION HQ
810 WEST MAPLE STREET
SPOONER, WI 54801
ATTN: SHAWN HASELEU
715-635-4228
shawn.haseleu@wisconsin.gov

DESIGN CONTACT

AYRES ASSOCIATES INC
3433 OAKWOOD HILLS PARKWAY
EAU CLAIRE, WI 54701
ATTN: JEFF ABRAMSON, PE
715-834-3161
abramsonj@ayresassociates.com

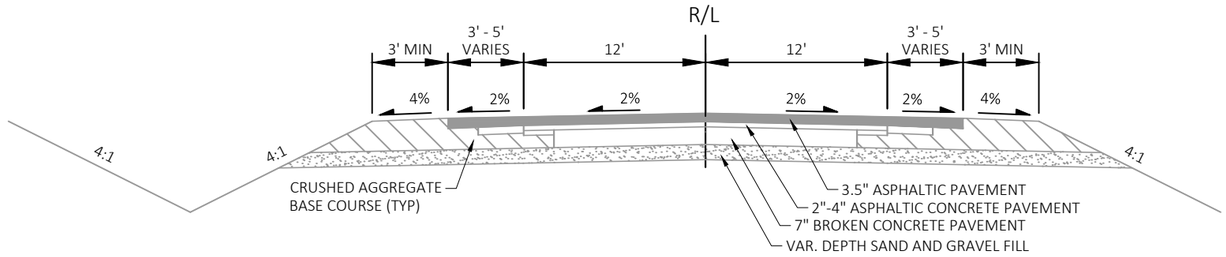
WISDOT DESIGN CONTACT

DEPARTMENT OF TRANSPORTATION
1701 NORTH 4TH STREET
SUPERIOR, WI 54880
ATTN: MATTHEW DICKENSON, PE
715-395-3022
matthew.dickenson@dot.wi.gov

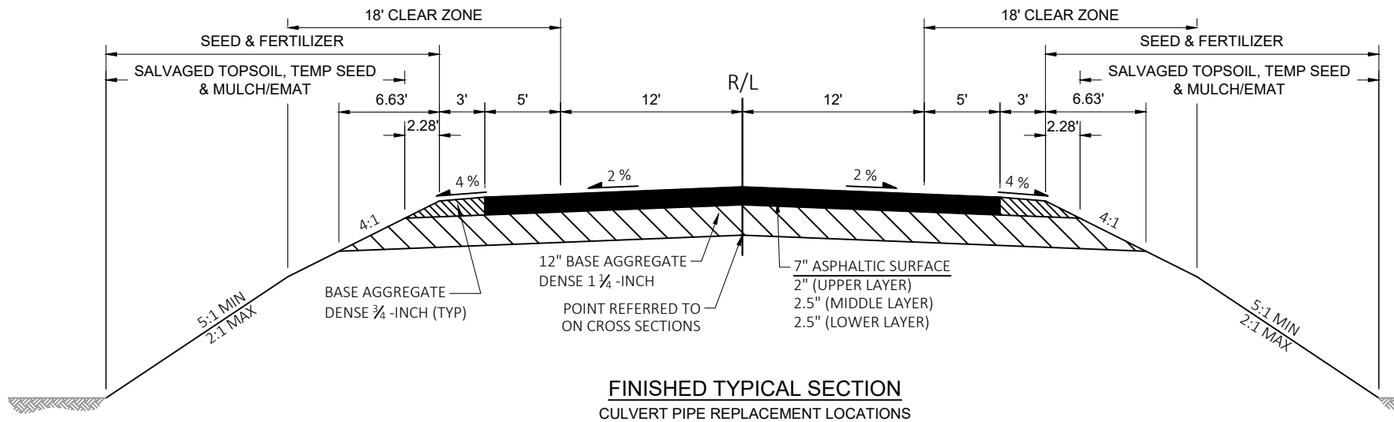
RAILROAD COORDINATOR

NORTHWEST REGION RAILROAD COORDINATOR
1701 NORTH 4TH STREET
SUPERIOR, WI 54880
ATTN: ANNA DAVEY
715-392-7960
anna.davey@dot.wi.gov

2

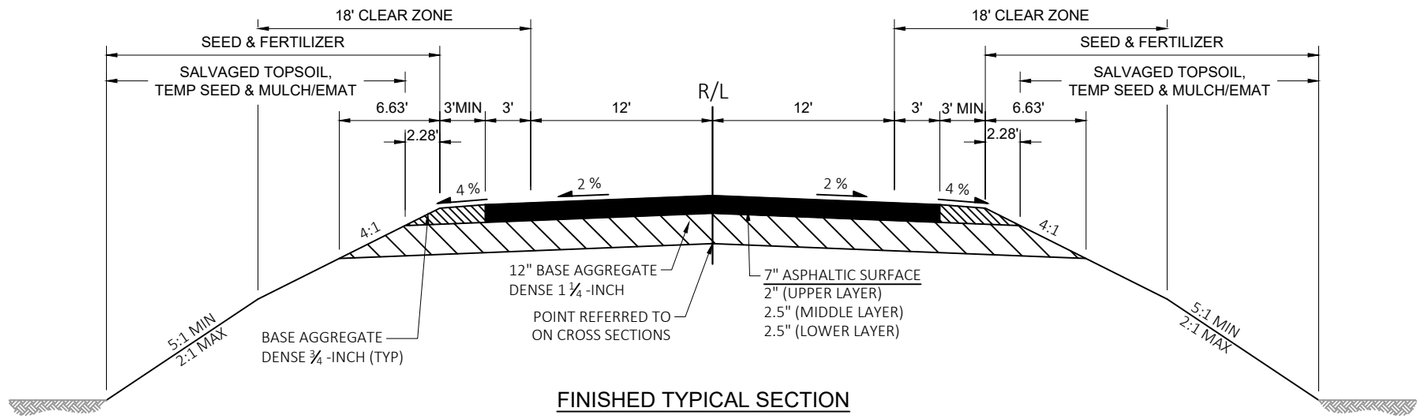


EXISTING TYPICAL SECTION



FINISHED TYPICAL SECTION

CULVERT PIPE REPLACEMENT LOCATIONS
BETWEEN STA 96+32 - STA 724+50

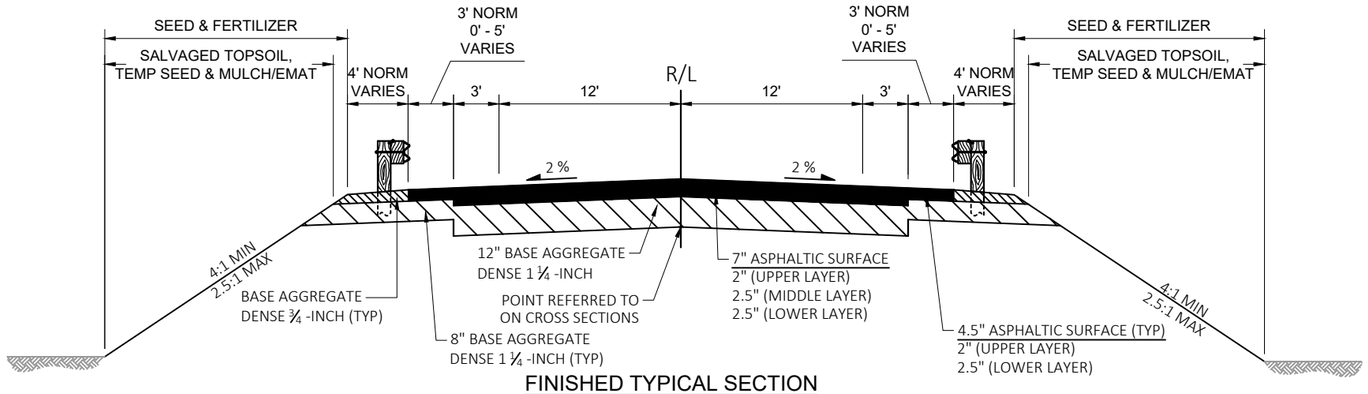


FINISHED TYPICAL SECTION

CULVERT PIPE REPLACEMENT LOCATIONS
BETWEEN STA 738+50 - STA 1017+12

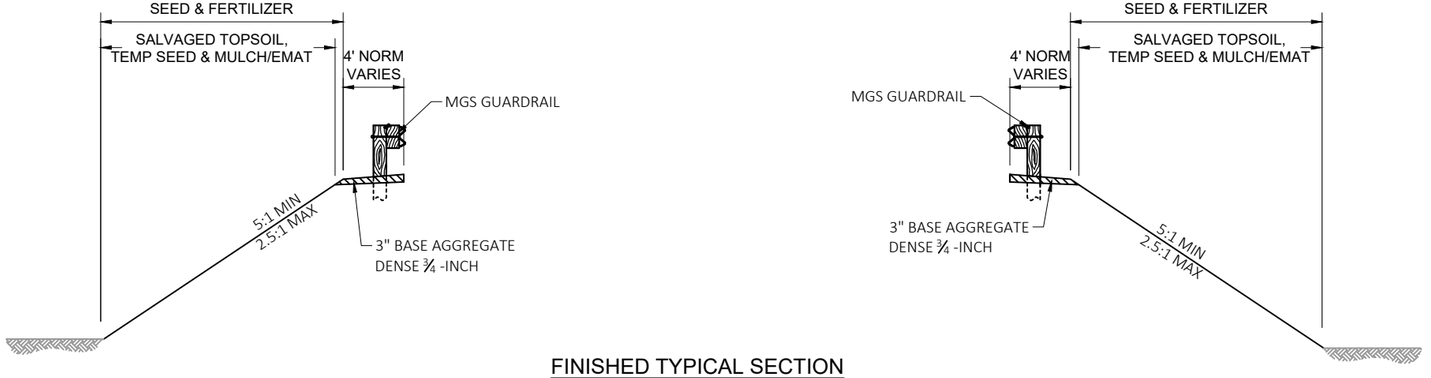
PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	TYPICAL SECTIONS	SHEET 3	E

2



FINISHED TYPICAL SECTION

BECKY CREEK



FINISHED TYPICAL SECTION

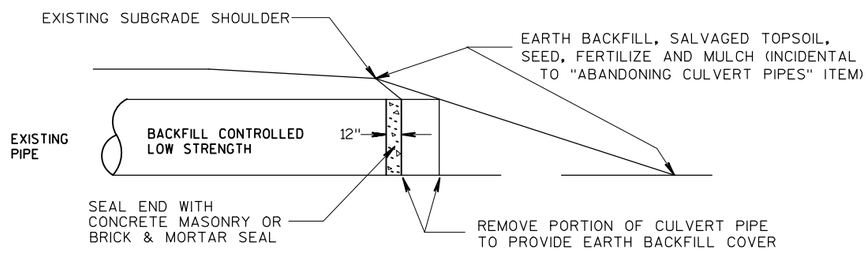
GUARDRAIL REPLACEMENT SECTIONS

PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	TYPICAL SECTIONS	SHEET 4	E

RUNOFF COEFFICIENT TABLE

A	HYDROLOGIC SOIL GROUP											
	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											

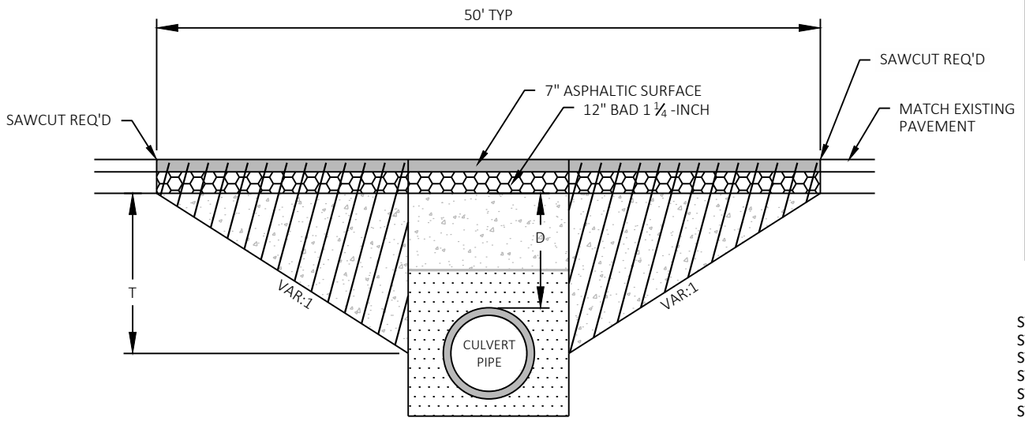
TOTAL PROJECT AREA = ___55___ ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = ___8___ACRES



ABANDONING CULVERT PIPE DETAIL

STA 458+20

2



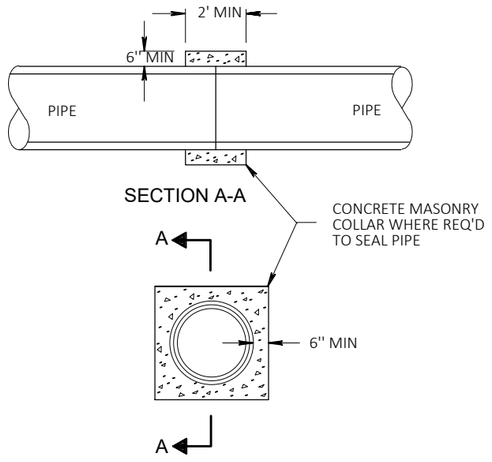
DEPTH D < 6 FT

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.

DESIGN NOTE
ESTIMATED COMMON EXC AT PIPES:
40' = ROADWAY TOP (12 & 8 x 2)
44" = 50' - 6' TRENCH ASSUMED
(BECAUSE TRIANGLE DIVIDE BY 2)
6.583' = DEPTH 7" + 12" + 5'

40 x 22 x 6.583 = 5793 CF
5793 CF / 27 = 214.557 CY

SAY 215 CY COMMON EX AT EACH PIPE



CONCRETE COLLAR DETAIL

LEGEND
- PROPOSED SURFACE
- PROPOSED BASE
- TRENCH BACKFILL
- BACKFILL GRANULAR GRADE 2
- TRANSITION CUT

CULVERT PIPE TRANSITION

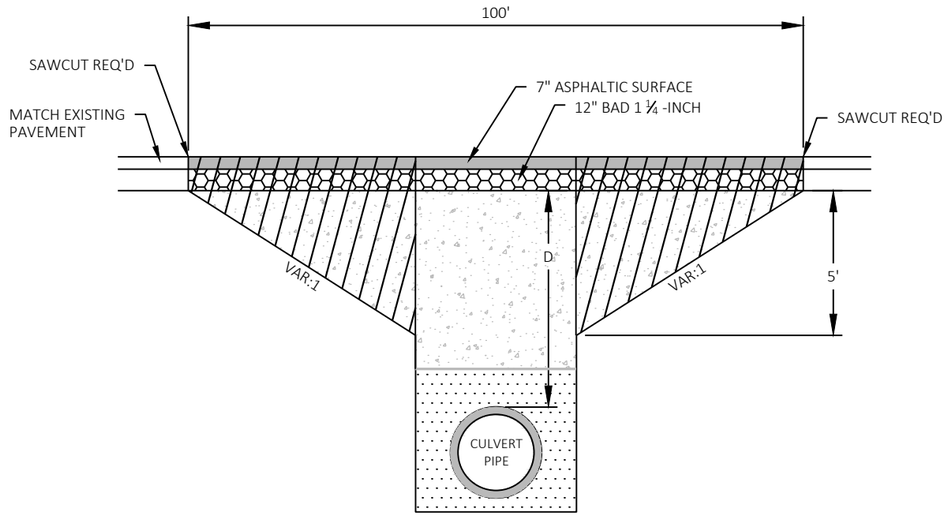
STA 157+12	STA 369+51	STA 584+28
STA 164+61	STA 373+52	STA 772+11
STA 170+62	STA 399+07	STA 783+12
STA 234+46	STA 424+94	STA 795+34
STA 242+11	STA 442+75	STA 838+95
STA 247+29	STA 458+88	STA 896+09
STA 285+48	STA 479+92	STA 912+62
STA 294+63	STA 506+70	STA 956+25
STA 307+67	STA 534+32	STA 970+97
STA 317+15	STA 556+23	STA 978+74
STA 341+50	STA 569+53	STA 990+89
STA 359+35	STA 578+32	STA 1001+62

NOTES

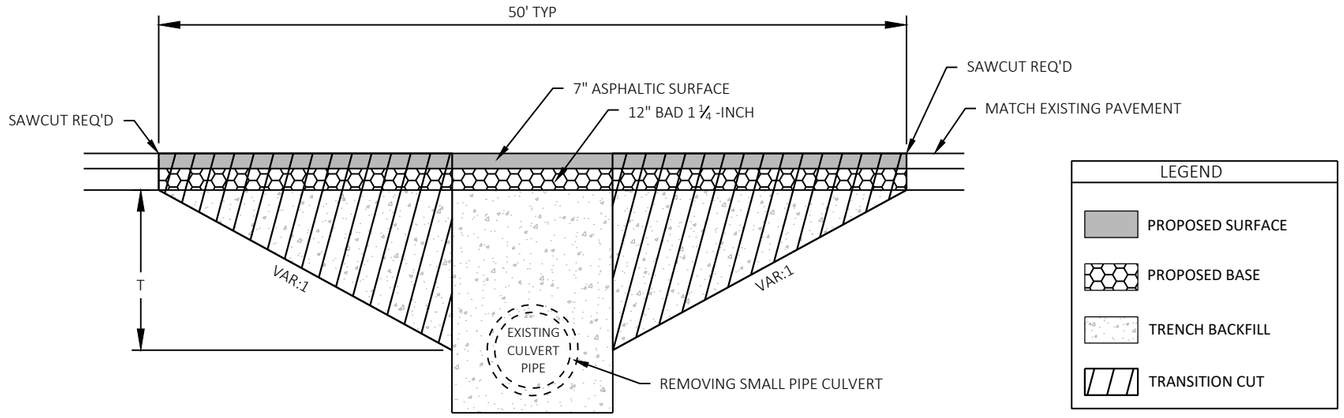
TRANSITION CUT WIDTH IS FROM SUBGRADE SHOULDER POINT TO SUBGRADE SHOULDER POINT.

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

PERFORM SAWCUTS AT TIME OF BASE PLACEMENT TO AVOID DAMAGING PAVEMENT EDGE.



DEPTH D ≥ 6 FT



CULVERT PIPE REMOVAL

STA 139+04	STA 470+04
STA 270+08	STA 500+27
STA 281+19	STA 502+69
STA 389+56	STA 512+88
STA 408+54	STA 849+43
STA 458+29	STA 862+41

2

2

N

EXISTING R/W

CUTOFF RD

XCEL ENERGY - ELECTRICITY

SLOPE INTERCEPT (TYP)

LUMEN

EXISTING R/W

139+00

STH 13

138+00

STA 139+04
REMOVING OLD STRUCTURE
(EXISTING STRUCTURE C-02-1491
47'x42"x72" RCCP)

TEL

GUY

OH

FO

PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CULVERT PIPE REMOVAL DETAIL STA 139+04	SHEET 7	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\SHEETS\021002-CD.DWG
LAYOUT NAME - 01_139+04

PLOT DATE : 7/10/2025 11:23 AM PLOT BY : RESHESKE, CARRIE PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 44

2

2

N

158+00

157+00

STH 13

EXISTING R/W

EXISTING R/W

FO

WETLAND BOUNDARY

WETLAND BOUNDARY

SLOPE INTERCEPT (TYP)

LUMEN

SILT FENCE (TYP)

CULVERT PIPE CHECK

LUMEN

STA 157+12
REMOVING SMALL PIPE CULVERTS
(EXISTING 85'x36" RCCP)

STA 157+12
1 - 88'x42" CP CL.III
2 - APRON ENDWALLS REQ'D

PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CULVERT PIPE DETAIL STA 157+12	SHEET 8	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\SHEETS\021002-CD.DWG
LAYOUT NAME - 01A_157+12

PLOT DATE : 7/10/2025 11:23 AM PLOT BY : RESHESKE, CARRIE PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 44

2

N

165+00

164+00

STH 13

EXISTING R/W

EXISTING R/W

WETLAND BOUNDARY

WETLAND BOUNDARY

SLOPE INTERCEPT (TYP)

CULVERT PIPE CHECK

LUMEN

SILT FENCE (TYP)

FO

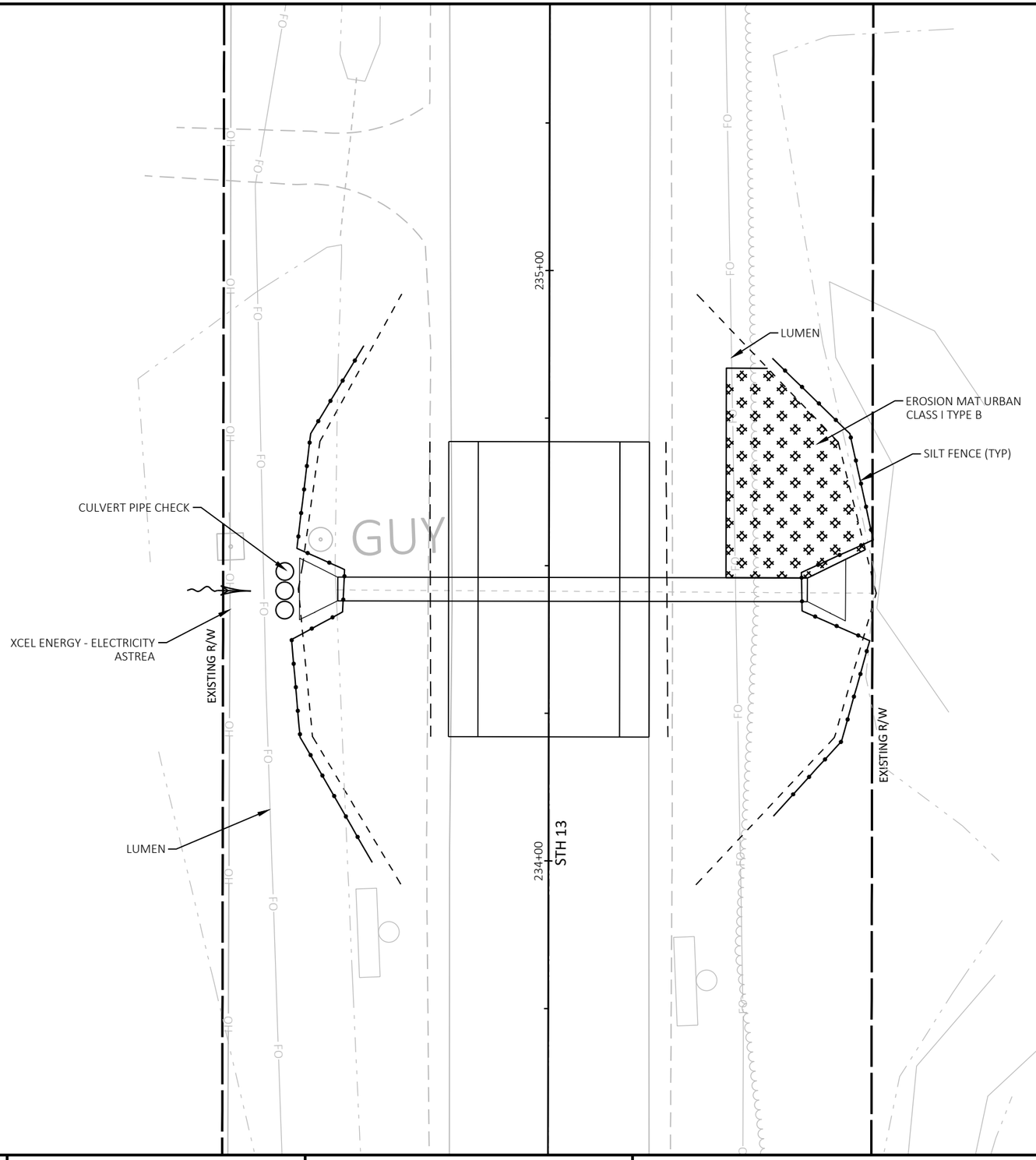
STA 164+61
REMOVING SMALL PIPE CULVERTS
(EXISTING 65'x24" RCCP)

STA 164+61
1 - 78'x42" CP CL.III
2 - APRON ENDWALLS REQ'D

PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CULVERT PIPE DETAIL STA 164+61	SHEET 9	E

2

N



STA 234+46
REMOVING SMALL PIPE CULVERTS
(EXISTING 89'x24" RCCP)

STA 234+46
1 - 80'x48" CP CL.III
2 - APRON ENDWALLS REQ'D

PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CULVERT PIPE DETAIL STA 234+46	SHEET 10	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\SHEETS\021002-CD.DWG
LAYOUT NAME - 04_234+46
PLOT DATE : 7/10/2025 11:23 AM
PLOT BY : RESHESKE, CARRIE
PLOT NAME :
PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 44

2

2

N

EXISTING R/W

EXISTING R/W

WETLAND BOUNDARY

SLOPE INTERCEPT (TYP)

171+00

LUMEN

CULVERT PIPE CHECK

SILT FENCE (TYP)

WETLAND BOUNDARY

STH 13

170+00

FO

STA 170+62
REMOVING SMALL PIPE CULVERTS
(EXISTING 63'x24" RCCP)

STA 170+62
1 - 76'x30" CP CL.III-A
2 - APRON ENDWALLS REQ'D

PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CULVERT PIPE DETAIL STA 170+62	SHEET 11	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\SHEETS\021002-CD.DWG
LAYOUT NAME - 03_170+62

PLOT DATE : 7/10/2025 11:23 AM PLOT BY : RESHESKE, CARRIE PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 44

2

2

N

STA 242+11
REMOVING SMALL PIPE CULVERTS
(EXISTING 71'x24" RCCP)

STA 242+11
1 - 72'x30" CP CL.III-A
2 - APRON ENDWALLS REQ'D

XCEL ENERGY - ELECTRICITY
ASTREA

CULVERT PIPE CHECK

WETLAND
BOUNDARY

LUMEN

LUMEN

SILT FENCE (TYP)

SLOPE INTERCEPT (TYP)

EXISTING R/W

EXISTING R/W

243+00

242+00

STH 13

OH

FO

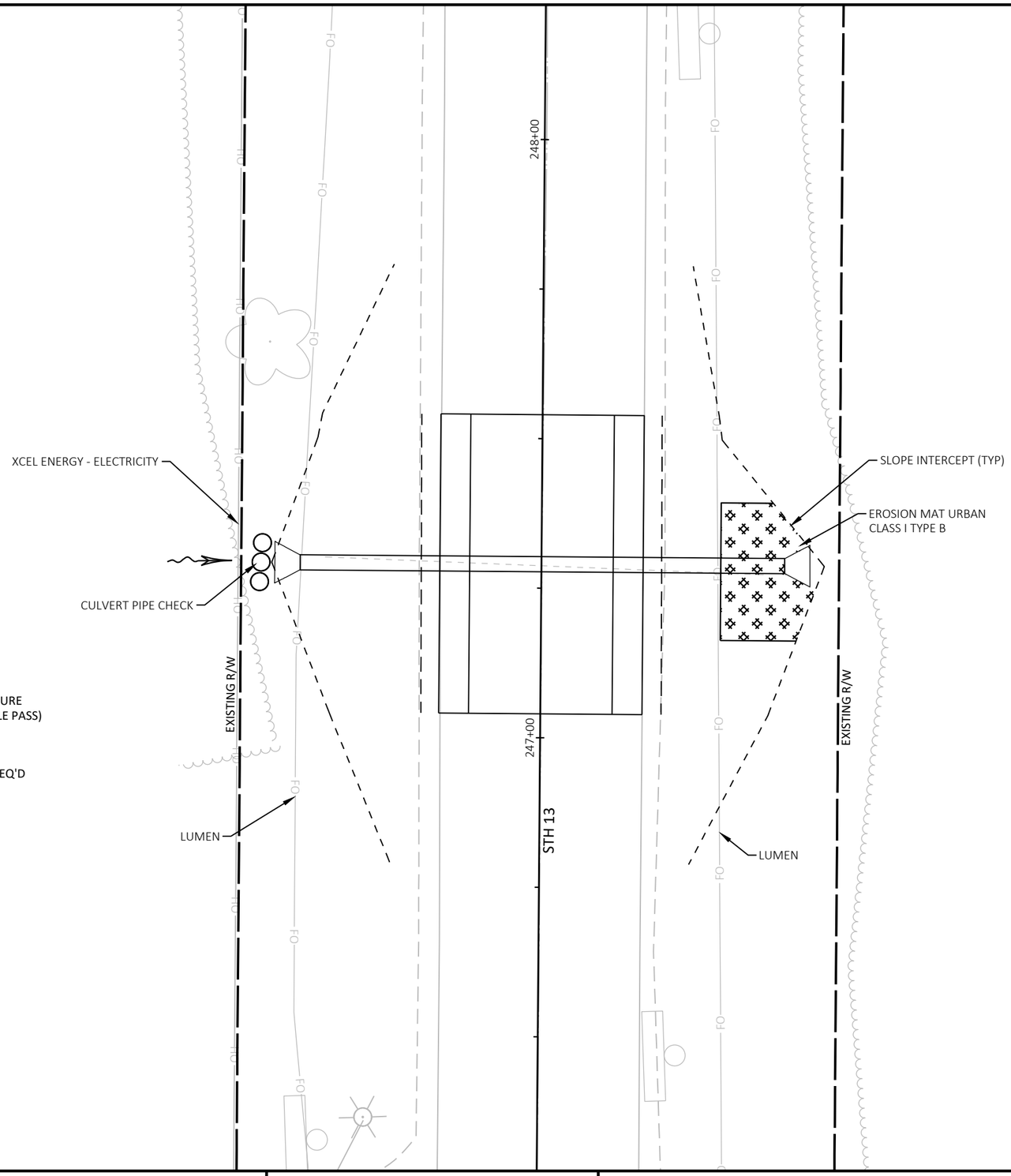
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FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\SHEETS\021002-CD.DWG
LAYOUT NAME - 05_242+11

PLOT DATE : 7/10/2025 11:23 AM PLOT BY : RESHESKE, CARRIE PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 44

2



STA 247+29
REMOVING OLD STRUCTURE
(EXISTING 70'x72" CATTLE PASS)

STA 247+29
1 - 81'x24" CP CL.III-A
2 - APRON ENDWALLS REQ'D

PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CULVERT PIPE DETAIL STA 247+29	SHEET 13	E

2

2

N

XCEL ENERGY - ELECTRICITY

SILT FENCE

LUMEN

SLOPE INTERCEPT (TYP)

LUMEN

WETLAND BOUNDARY

EXISTING R/W

EXISTING R/W

270+00

STH 13

STA 270+08
REMOVING SMALL PIPE CULVERTS
(EXISTING 73'x24" RCCP)

OH

FO

WETLAND BOUNDARY

GUY

STA 281+19
REMOVING SMALL PIPE CULVERTS
(EXISTING 59'x24" RCCP)

N

PC: 282+33.50

280+00

281+00

282+00

STH 13

LUMEN

STA 280+53
REMOVING SMALL PIPE CULVERTS
(EXISTING 20'x18" CMCP)

STA 280+53
1-26'x18" CP CL.III-A
2-APRON EW FOR CP SLOPED SIDE
DRAINS STEEL 18-INCH 4 TO 1 REQ'D

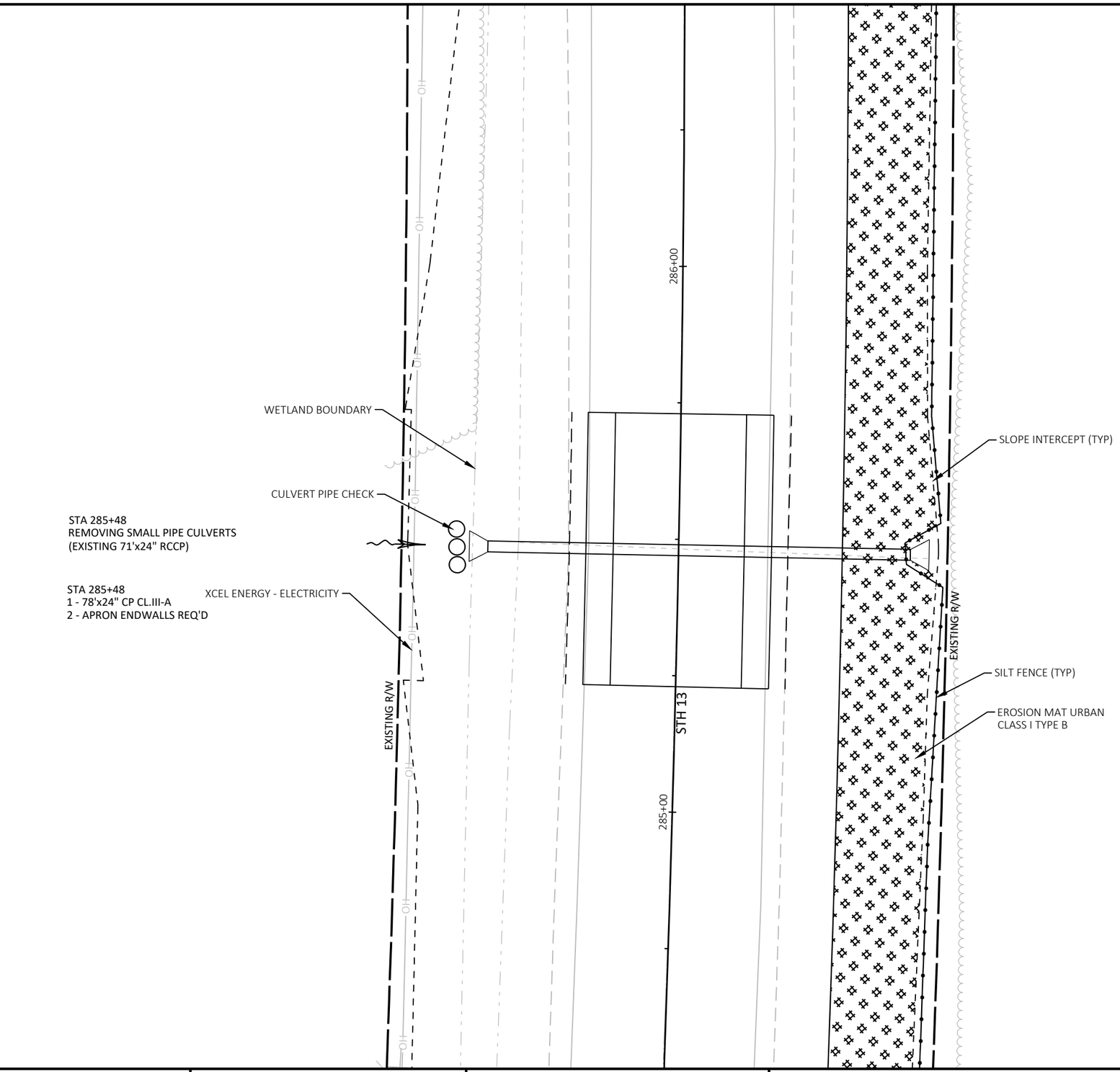
SLOPE INTERCEPT (TYP)

SILT FENCE

PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CULVERT PIPE REMOVAL DETAIL STA 270+08/STA 281+19	SHEET 14	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\SHEETS\021002-CD.DWG
LAYOUT NAME - 07_270+08_281+19
PLOT DATE : 7/10/2025 11:23 AM
PLOT BY : RESHESKE, CARRIE
PLOT NAME :
PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 44

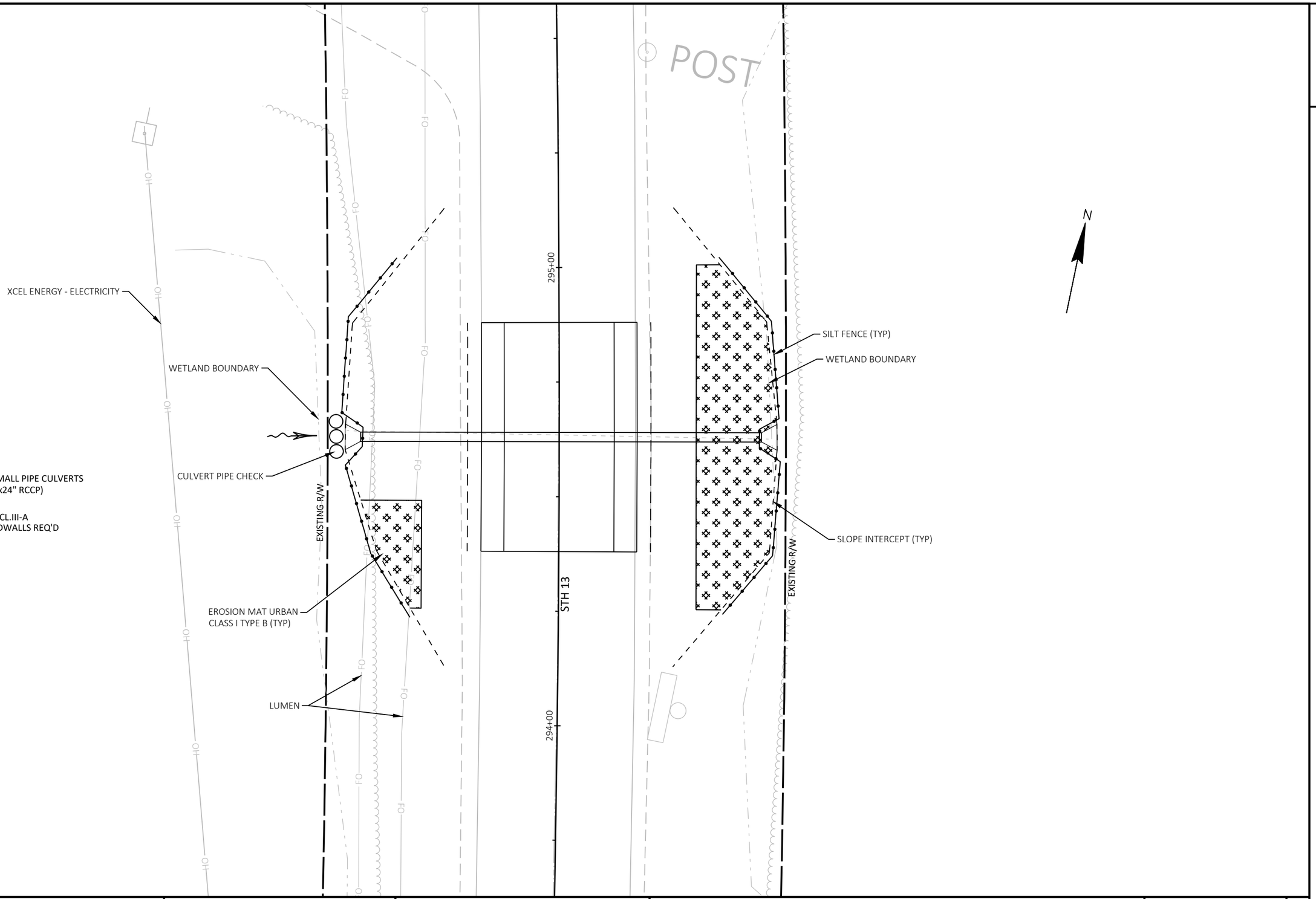
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PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CULVERT PIPE DETAIL STA 285+48	SHEET 15	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\SHEETS\021002-CD.DWG
LAYOUT NAME - 08_285+48
PLOT DATE : 7/10/2025 11:23 AM
PLOT BY : RESHESKE, CARRIE
PLOT NAME :
PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 44

2



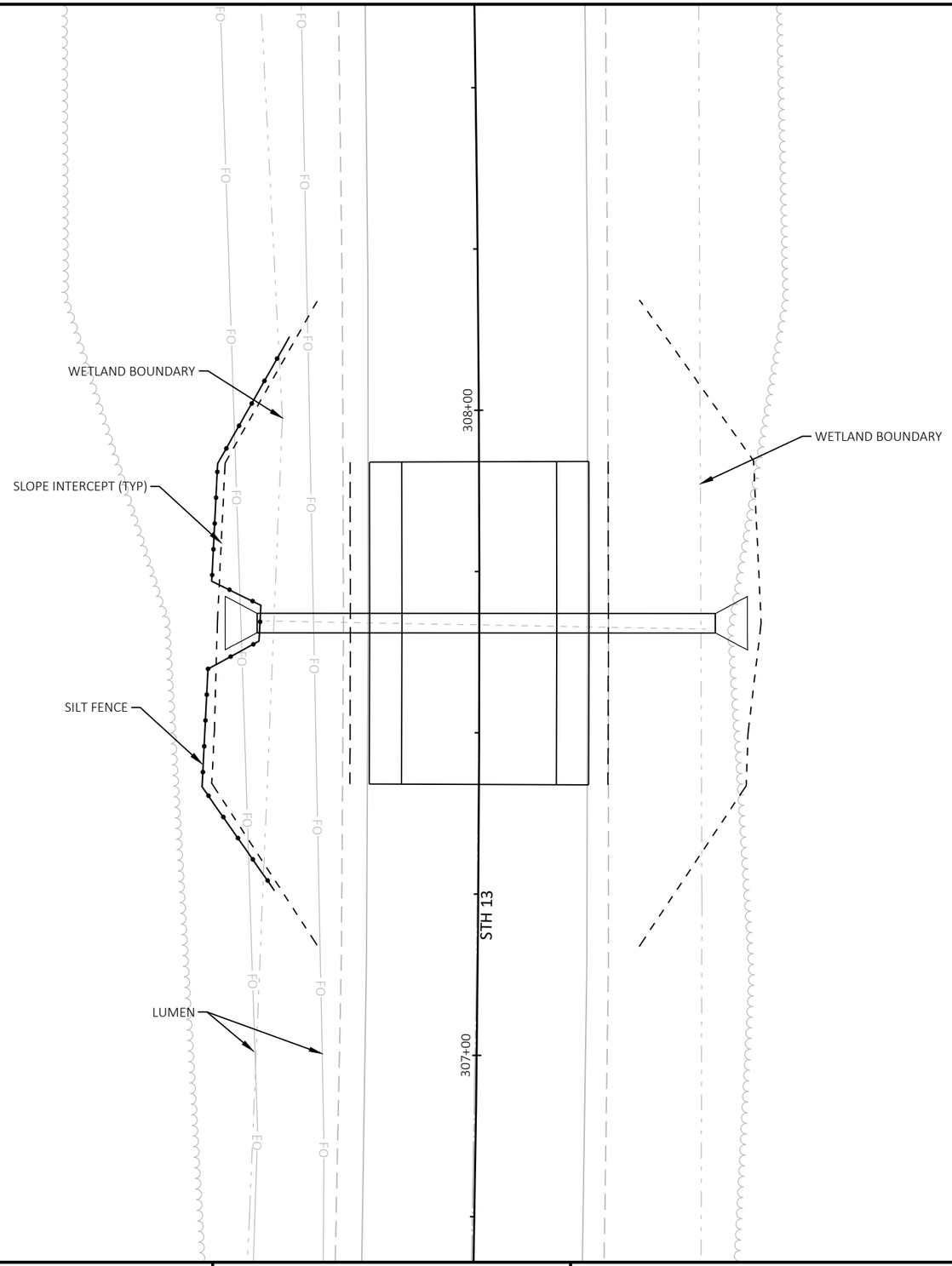
PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CULVERT PIPE DETAIL STA 294+63	SHEET 16	E

2

2

STA 307+67
REMOVING SMALL PIPE CULVERTS
(EXISTING 66'x24" RCCP)

STA 307+67
1 - 71'x36" CP CL.III-A
2 - APRON ENDWALLS REQ'D



PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CULVERT PIPE DETAIL STA 307+67	SHEET 17	E

2

2

CONTROL PT

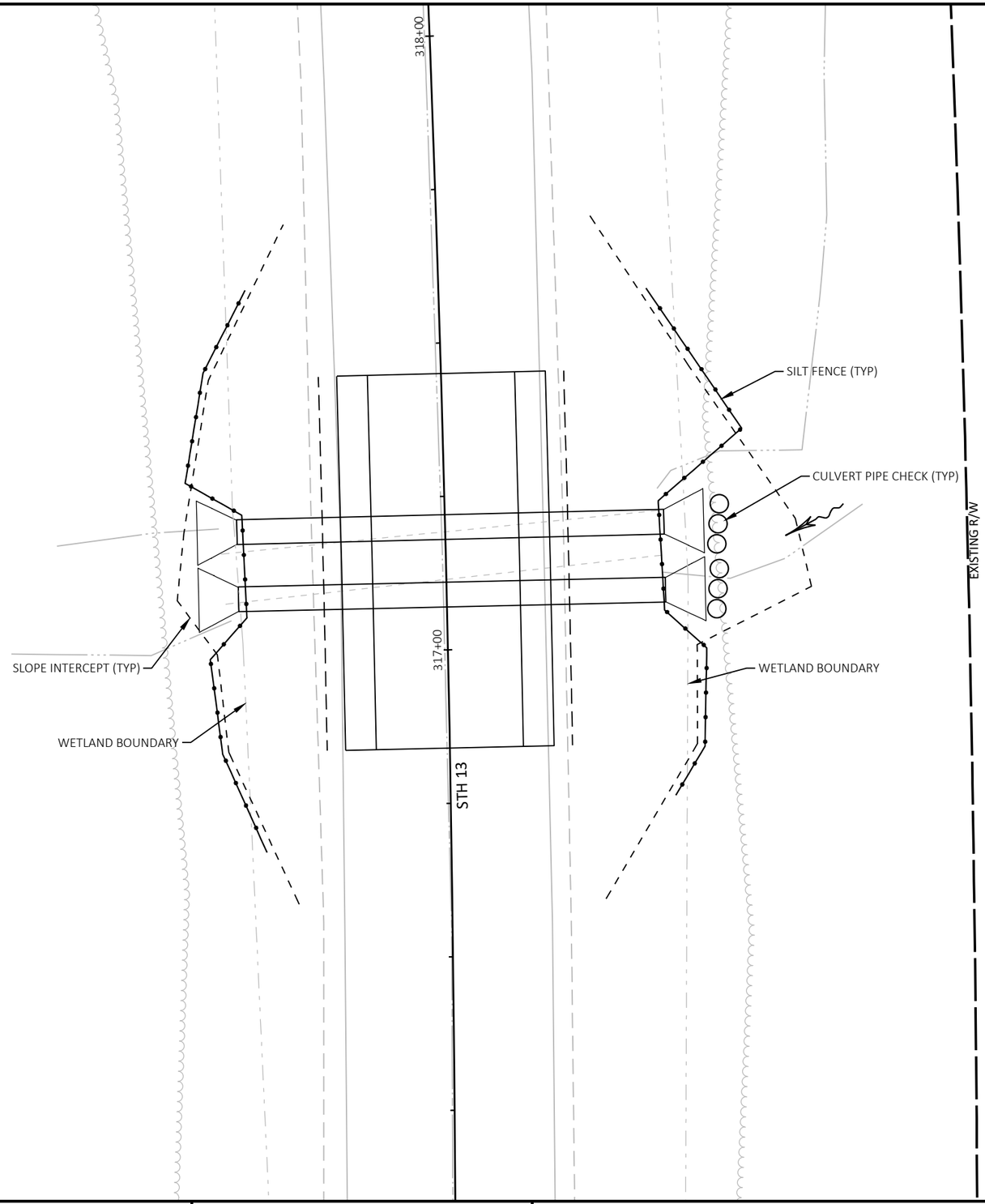
971
319+29.87, 27.31 LT
X=597412.151
Y=122123.801
EL: 1562.53
CP 3/4IR W/ CAP

STA 317+10
REMOVING SMALL PIPE CULVERTS
(EXISTING 69'x48" RCCP)

STA 317+20
REMOVING SMALL PIPE CULVERTS
(EXISTING 69'x48" RCCP)

STA 317+09
1 - 70'x48" CP CL.III
2 - APRON ENDWALLS REQ'D

STA 317+20
1 - 70'x48" CP CL.III
2 - APRON ENDWALLS REQ'D



CONTROL PT

972
315+15.29, 25.09 RT
X=597688.305
Y=121812.459
EL: 1562.18
CP 3/4IR W/ CAP

PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CULVERT PIPE DETAIL STA 317+09 / STA 317+20	SHEET 18	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\SHEETS\021003-CD.DWG
LAYOUT NAME - 11_317+09_317+20
PLOT DATE : 7/10/2025 11:23 AM
PLOT BY : RESHESKE, CARRIE
PLOT NAME :
PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 44

2

2

CONTROL PT

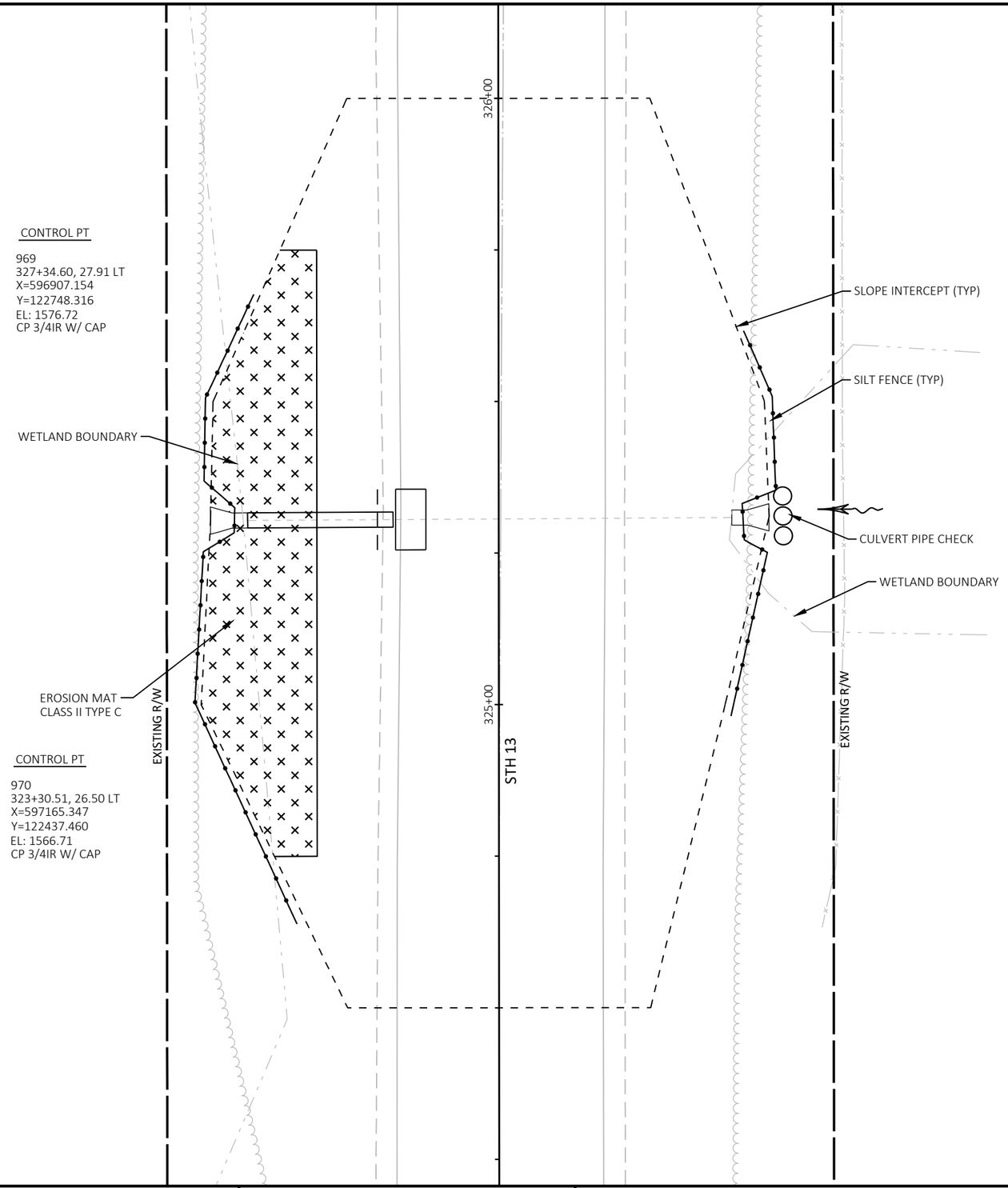
969
327+34.60, 27.91 LT
X=596907.154
Y=122748.316
EL: 1576.72
CP 3/4IR W/ CAP

STA 325+31
REMOVING SMALL PIPE CULVERTS
(3 SECTIONS (24') LT ONLY)
(EXISTING 69'x24" RCCP)

STA 325+31
1 - 24'x24" CPRC CL.III, LT
1 - CONCRETE COLLAR REQ'D
1 - APRON ENDWALLS REQ'D

CONTROL PT

970
323+30.51, 26.50 LT
X=597165.347
Y=122437.460
EL: 1566.71
CP 3/4IR W/ CAP



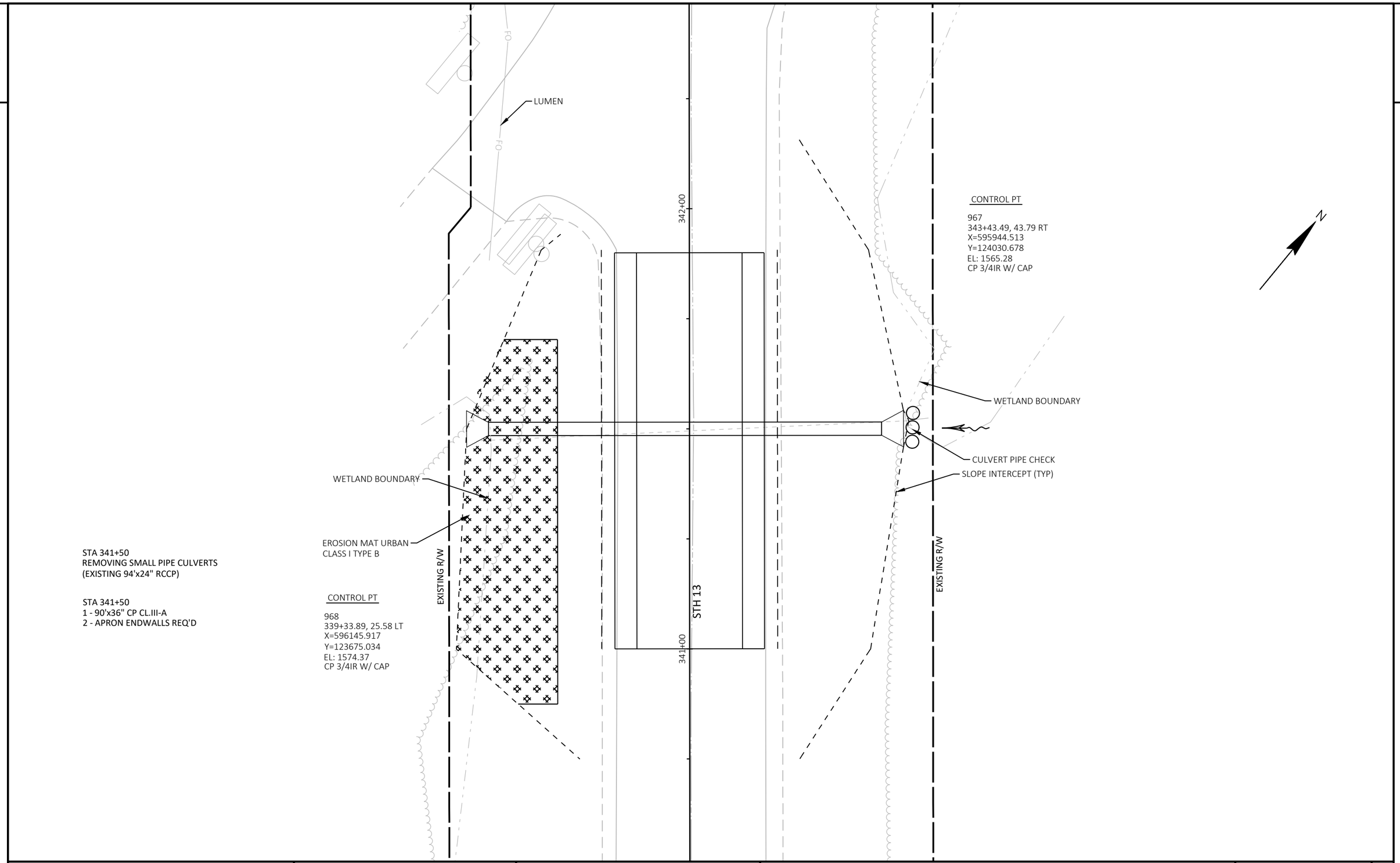
PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CULVERT PIPE DETAIL STA 325+31	SHEET 19	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\SHEETS\021003-CD.DWG
LAYOUT NAME - 12_325+31

PLOT DATE : 7/10/2025 11:23 AM PLOT BY : RESHESKE, CARRIE PLOT NAME : PLOT SCALE : 1 IN:20 FT

2

2



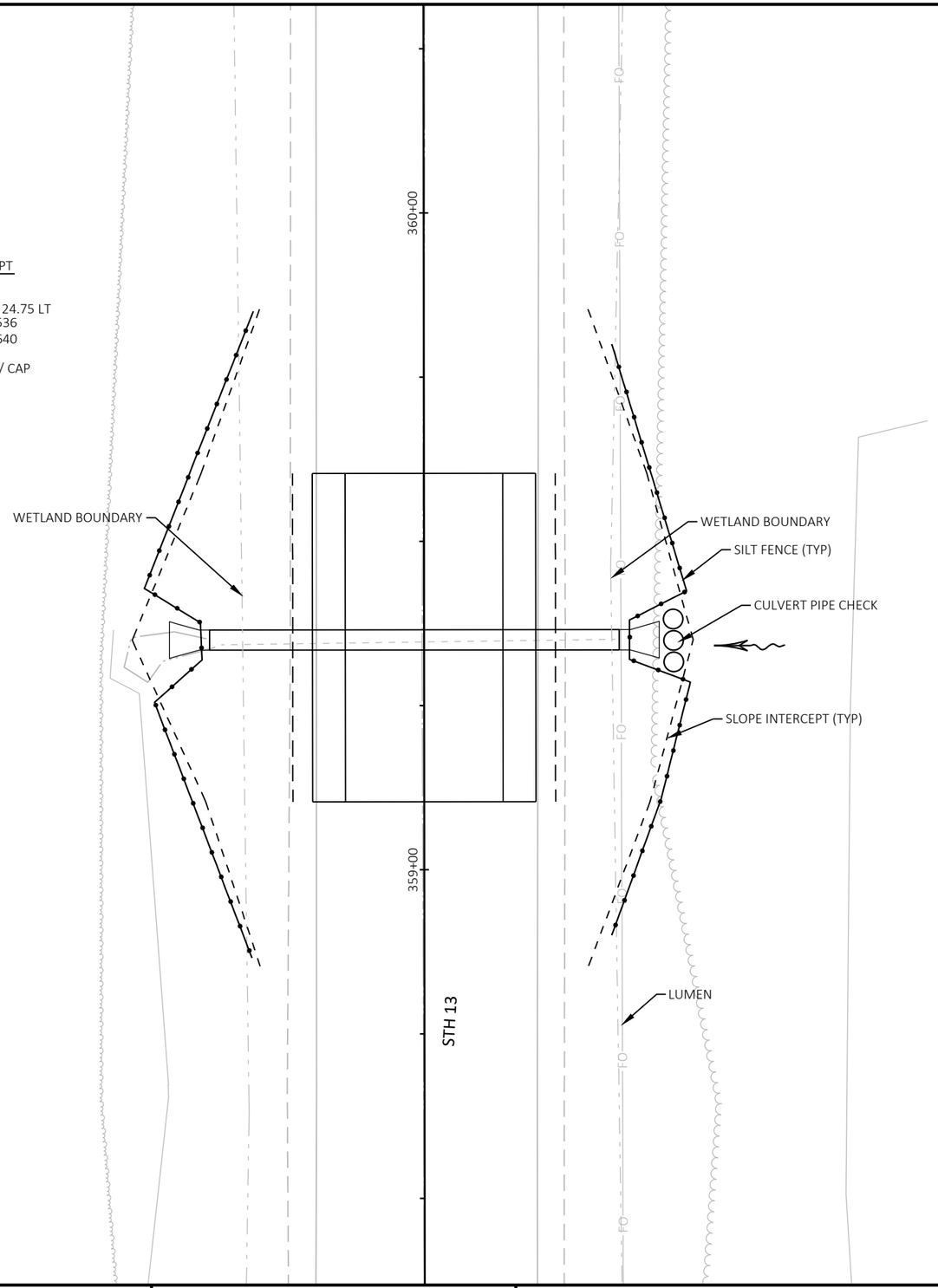
PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CULVERT PIPE DETAIL STA 341+50	SHEET 20	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\SHEETS\021003-CD.DWG
LAYOUT NAME - 13_341+50
PLOT DATE : 7/10/2025 11:23 AM
PLOT BY : RESHESKE, CARRIE
PLOT NAME :
PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 44

2

CONTROL PT

965
363+66.95, 24.75 LT
X=594598.536
Y=125552.640
EL: 1554.49
CP 3/4IR W/ CAP



STA 359+35
REMOVING SMALL PIPE CULVERTS
(EXISTING 58'x24" RCCP)

STA 359+35
1 - 62'x30" CPRC CL.IV
2 - APRON ENDWALLS REQ'D

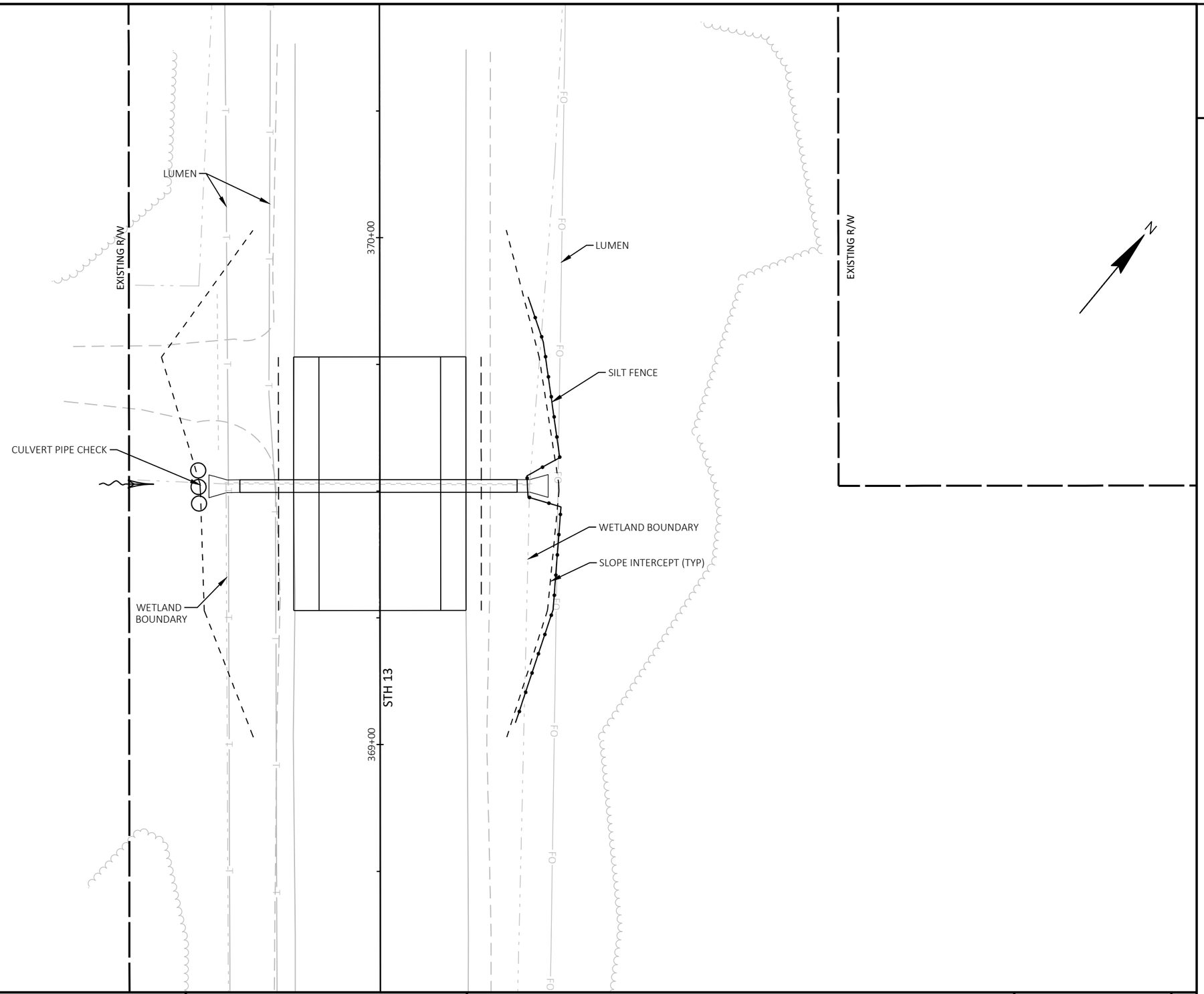
CONTROL PT

966
357+22.90, 30.34 RT
X=595050.808
Y=125090.816
EL: 1555.50
CP 3/4IR W/ CAP

PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CULVERT PIPE DETAIL STA 359+35	SHEET 21	E

2

2



STA 369+51
REMOVING SMALL PIPE CULVERTS
(EXISTING 61'x24" RCCP)

STA 369+51
1 - 55'x24" CPRC CL.IV
2 - APRON ENDWALLS REQ'D

PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CULVERT PIPE DETAIL STA 369+51	SHEET 22	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\SHEETS\021003-CD.DWG
LAYOUT NAME - 15_369+51

PLOT DATE : 7/10/2025 11:23 AM PLOT BY : RESHESKE, CARRIE PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 44

2

2

CONTROL PT

963
375+65.02, 26.05 LT
X=593835.262
Y=126476.108
EL: 1558.53
CP 3/4IR W/ CAP

EXISTING R/W

374+00

WETLAND BOUNDARY

SLOPE INTERCEPT (TYP)

SILT FENCE

WETLAND BOUNDARY

LUMEN

FO

POST

STH 13

373+00

EXISTING R/W

STA 373+52
REMOVING SMALL PIPE CULVERTS
(EXISTING 58'x24" RCCP)

STA 373+52
1 - 60'x30" CPRC CL.III
2 - APRON ENDWALLS REQ'D

CONTROL PT

964
371+18.66, 24.52 RT
X=594158.275
Y=126163.920
EL: 1554.78
CP 3/4IR W/ CAP

PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CULVERT PIPE DETAIL STA 373+52	SHEET 23	E

2

2

FO

FO

FO

FO

FO

FO

FO

FO

FO

390+00

389+00

STH 13

EXISTING R/W

EXISTING R/W

EROSION MAT URBAN
CLASS I TYPE B (TYP)

LUMEN

LUMEN

SLOPE INTERCEPT (TYP)

CONTROL PT

961
391+62.98, 30.10 RT
X=592861.892
Y=127744.642
EL: 1565.05
CP 3/4IR W/ CAP

STA 389+56
REMOVING OLD STRUCTURE
(EXISTING STRUCTURE C-02-0168
66'x42"x72" RCCP)

CONTROL PT

962
387+58.23, 26.05 LT
X=593076.089
Y=127396.655
EL: 1571.66
CP 3/4IR W/ CAP

N

PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CULVERT PIPE DETAIL STA 389+56	SHEET 24	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\SHEETS\021003-CD.DWG
LAYOUT NAME - 17_389+56

PLOT DATE : 7/10/2025 11:23 AM PLOT BY : RESHESKE, CARRIE PLOT NAME : PLOT SCALE : 1 IN:20 FT

2

CONTROL PT

959
400+31.81, 29.27 LT
X=592263.296
Y=128377.157
EL: 1557.88
CP 3/4IR W/ CAP

EXISTING R/W

LUMEN

WETLAND BOUNDARY

SLOPE INTERCEPT (TYP)

CULVERT PIPE CHECK

FO

400

399+00

STH 13

EXISTING R/W

WETLAND BOUNDARY

SILT FENCE

N

STA 399+07
REMOVING SMALL PIPE CULVERTS
(EXISTING 82'x24" RCCP)

STA 399+07
1 - 69'x42" CP CL.III
2 - APRON ENDWALLS REQ'D

CONTROL PT

960
396+72.40, 27.31 RT
X=592535.622
Y=128135.877
EL: 1558.03
CP 3/4IR W/ CAP

2

PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CULVERT PIPE DETAIL STA 399+07	SHEET 25	E

2

2

EXISTING R/W

EXISTING R/W

409+00

408+00

STH 13

FO

LUMEN

LUMEN

WETLAND BOUNDARY

SLOPE INTERCEPT (TYP)

CONTROL PT

957
410+59.72, 27.69 RT
X=591653.238
Y=129206.418
EL: 1563.26
CP 3/4IR W/ CAP

N

STA 408+54
REMOVING SMALL PIPE CULVERTS
(EXISTING 60'x24" RCCP)

CONTROL PT

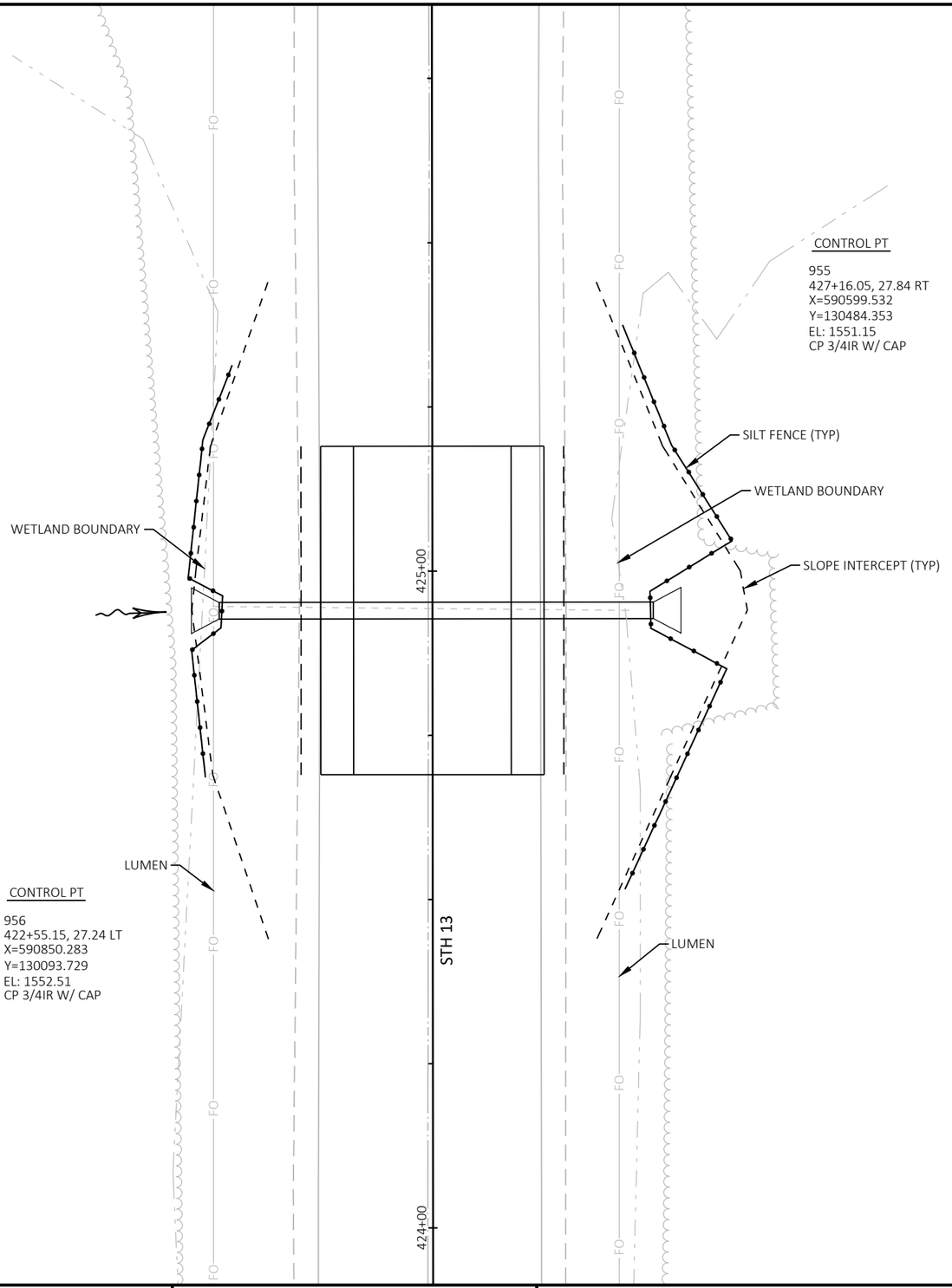
958
406+62.07, 27.39 LT
X=591863.745
Y=128864.592
EL: 1565.54
CP 3/4IR W/ CAP

PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CULVERT PIPE REMOVAL DETAIL STA 408+54	SHEET 26	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\SHEETS\021003-CD.DWG
LAYOUT NAME - 19_408+54

PLOT DATE : 7/10/2025 11:23 AM PLOT BY : RESHESKE, CARRIE PLOT NAME : PLOT SCALE : 1 IN:20 FT

2



STA 424+94
REMOVING SMALL PIPE CULVERTS
(EXISTING 60'x24" RCCP)

STA 424+94
1 - 66'x30" CP CL.III-A
2 - APRON ENDWALLS REQ'D

PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CULVERT PIPE DETAIL STA 424+94	SHEET 27	E

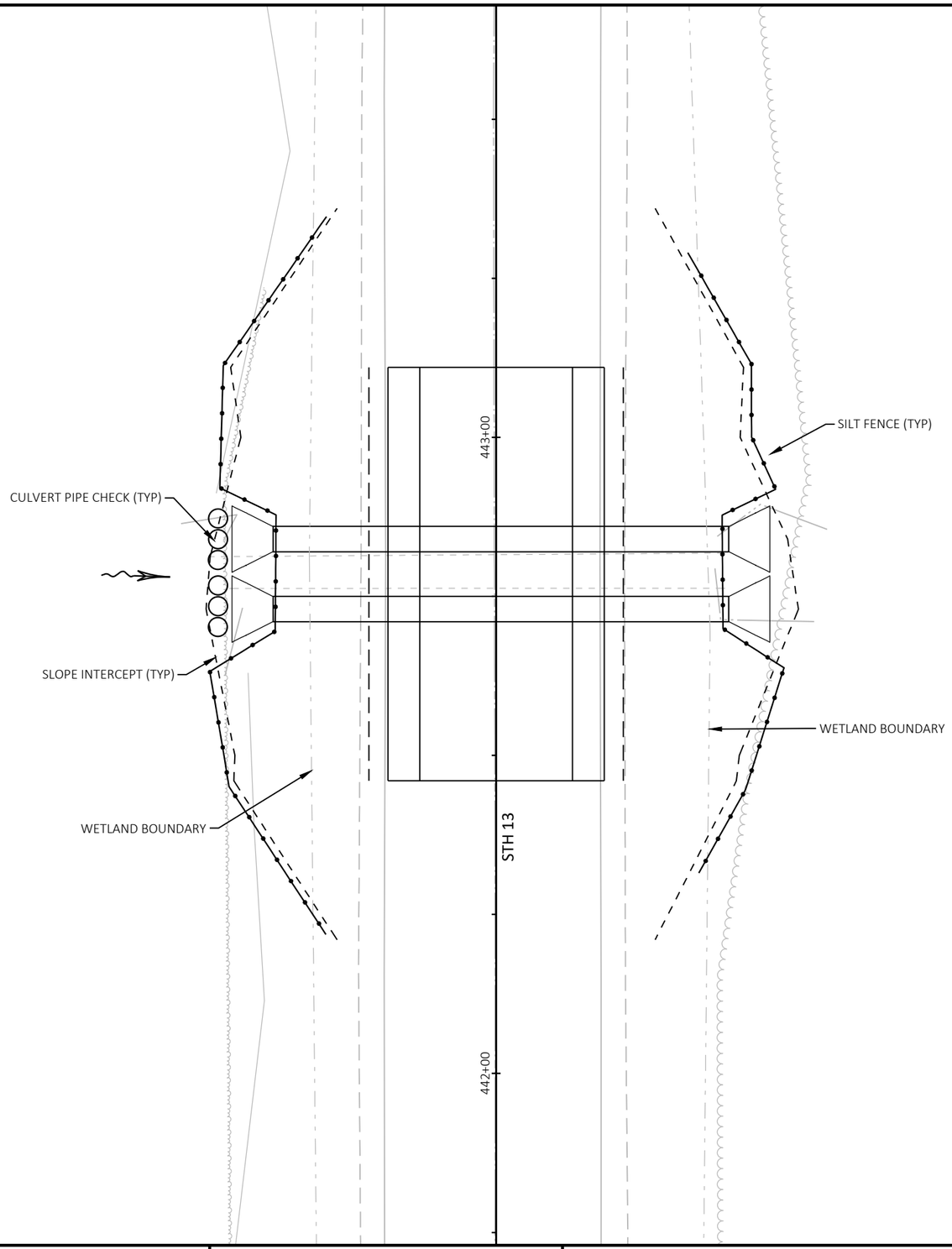
2

STA 442+70
REMOVING SMALL PIPE CULVERTS
(EXISTING 66'x36" RCCP)

STA 442+80
REMOVING SMALL PIPE CULVERTS
(EXISTING 66'x36" RCCP)

STA 442+73
1 - 72'x48" CP CL.III
2 - APRON ENDWALLS REQ'D

STA 442+84
1 - 72'x48" CP CL.III
2 - APRON ENDWALLS REQ'D



PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CULVERT PIPE DETAIL STA 442+70 / STA 442+81	SHEET 28	E

2

2

WETLAND BOUNDARY

EROSION MAT
CLASS II TYPE C

CULVERT PIPE CHECK

SLOPE INTERCEPT (TYP)

SILT FENCE

EXISTING R/W

EXISTING R/W

459+00

458+00

STH 13

NEUBERGER RD

LEWIS R

N

STA 458+29
ABONDONING CULVERT PIPES (APPROX. 56')
REMOVING SMALL PIPE CULVERTS
(2 SECTION (16') LT)
(EXISTING 72'x24" RCCP)

STA 458+88
1 - 62'x24" CPRC CL.IV
2 - APRON ENDWALLS REQ'D
SKEW 22° LHF

3" ASPHALTIC SURFACE OVER 8" BASE
AGGREGATE DENSE 1 ¼ -INCH

PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CULVERT PIPE DETAIL STA 458+68	SHEET 29	E

2

2

STH 13

471+00

470+00

EXISTING R/W

EXISTING R/W

POST

FO

LUMEN

LUMEN

SILT FENCE

SLOPE INTERCEPT (TYP)

WETLAND BOUNDARY

STA 470+04
REMOVING SMALL PIPE CULVERTS
(EXISTING 114'x24" RCCP)

N

PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CULVERT PIPE REMOVAL DETAIL STA 470+04	SHEET 30	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\SHEETS\021004-CD.DWG
LAYOUT NAME - 23_470+04

PLOT DATE : 7/10/2025 11:24 AM PLOT BY : RESHESKE, CARRIE PLOT NAME : PLOT SCALE : 1 IN:20 FT

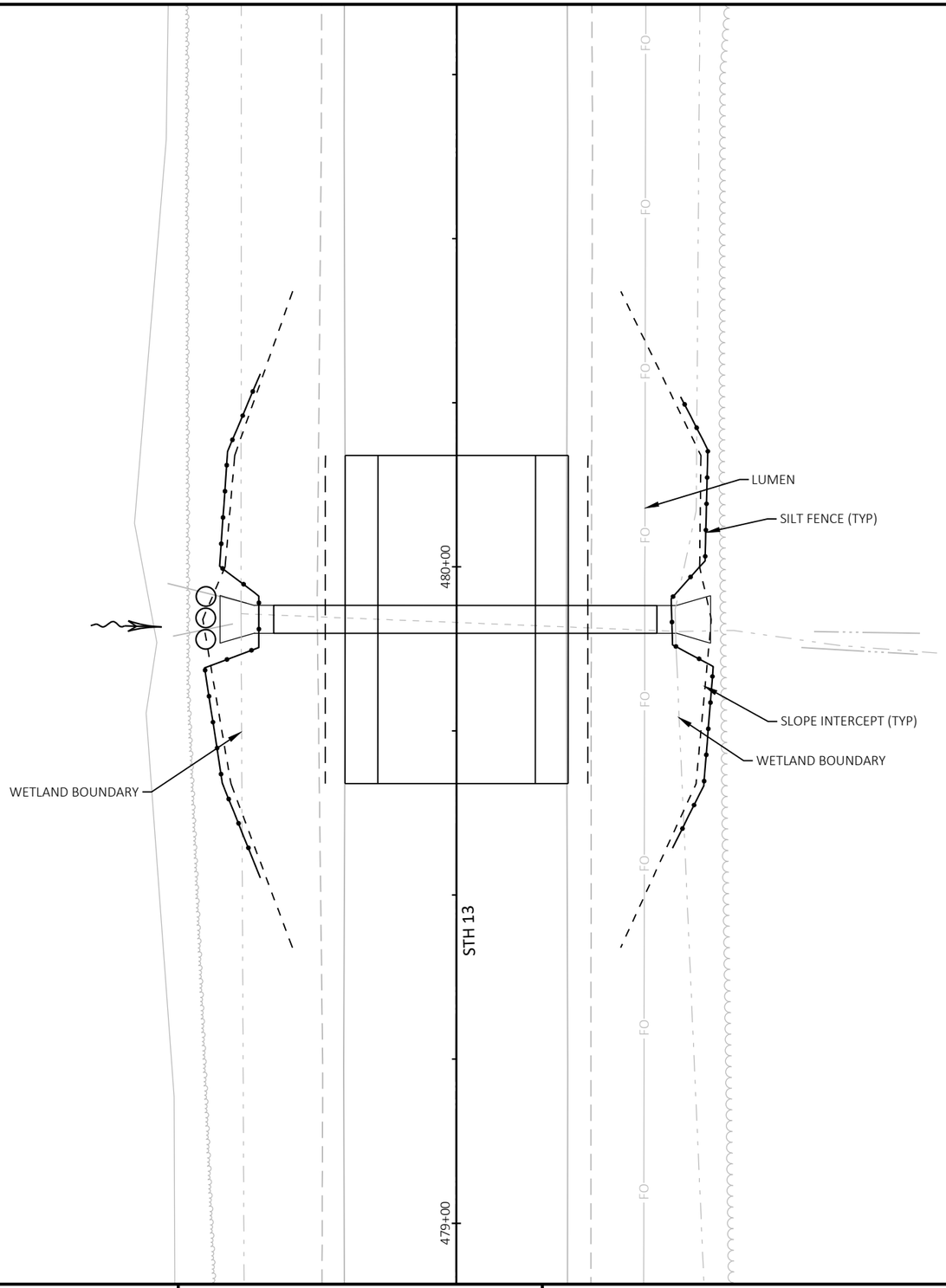
WISDOT/CADDS SHEET 44

2

2

EXISTING R/W

EXISTING R/W



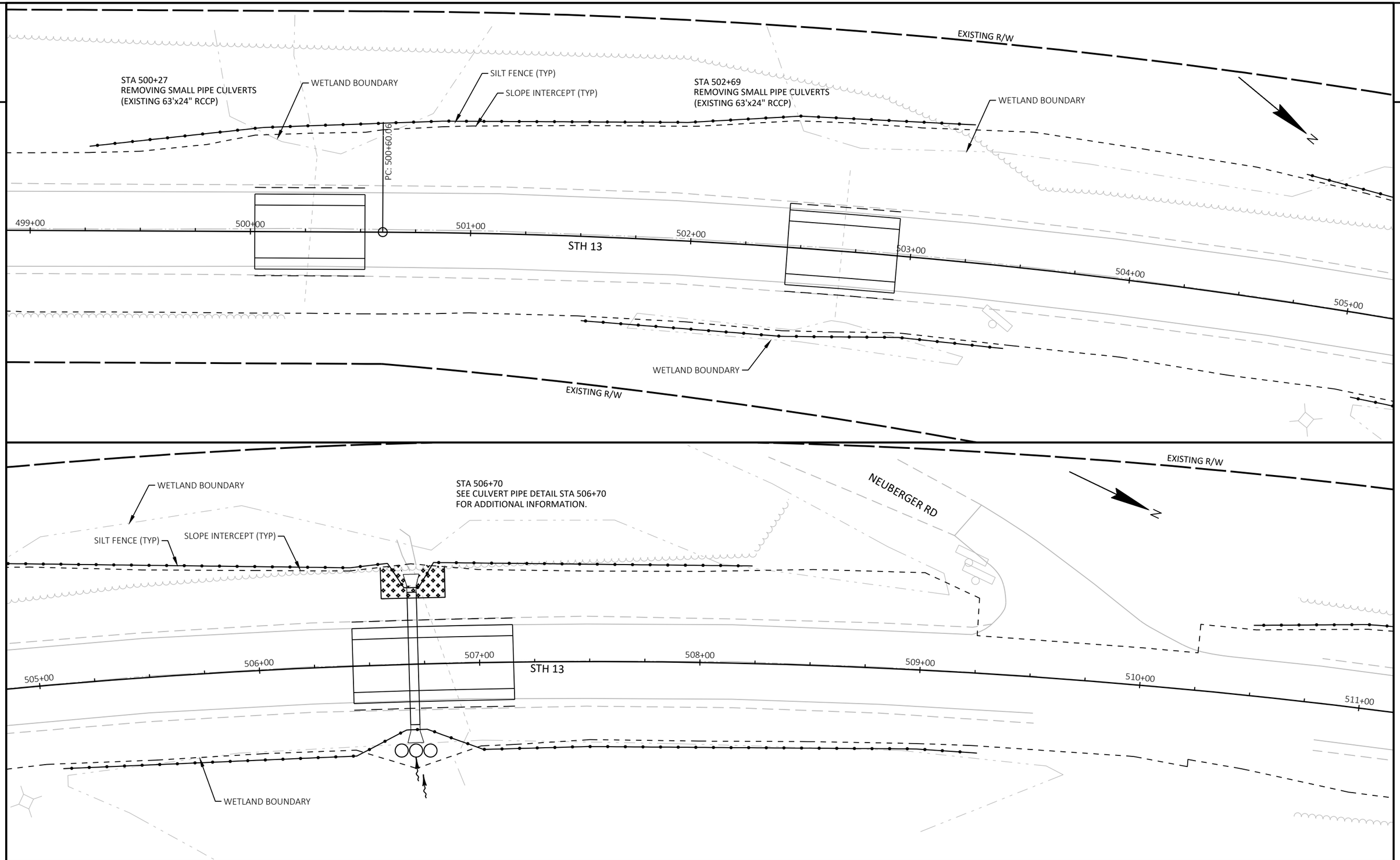
STA 479+92
REMOVING SMALL PIPE CULVERTS
(EXISTING 60'x24" RCCP)

STA 479+92
1 - 59'x42" CPRC CL.IV
2 - APRON ENDWALLS REQ'D

PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CULVERT PIPE DETAIL STA 479+92	SHEET 31	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\SHEETS\021004-CD.DWG
LAYOUT NAME - 24_479+92
PLOT DATE : 7/10/2025 11:24 AM
PLOT BY : RESHESKE, CARRIE
PLOT NAME :
PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 44

2



PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CULVERT PIPE DETAIL STA 500+27 / STA 502+69	SHEET 32	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\SHEETS\021004-CD.DWG
LAYOUT NAME - 25_500+27_502+69
PLOT DATE : 7/10/2025 11:24 AM
PLOT BY : RESHESKE, CARRIE
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 44

2

N

EXISTING R/W

STA 512+88
REMOVING SMALL PIPE CULVERTS
(EXISTING 80'x24" RCCP)

WETLAND BOUNDARY

SILT FENCE

511+00

512+00

513+00

514+00

515+00

516+00

STH 13

WETLAND BOUNDARY

SLOPE INTERCEPT (TYP)

EXISTING R/W

PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CULVERT PIPE REMOVAL DETAIL STA 512+88	SHEET 33	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\SHEETS\021004-CD.DWG
LAYOUT NAME - 26_512+88

PLOT DATE : 7/10/2025 11:24 AM PLOT BY : RESHESKE, CARRIE PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 44

2

2

STA 506+94
REMOVING SMALL PIPE CULVERTS
(EXISTING 72'x24" RCCP)

STA 506+70
1 -60'x42" CPRC CL.III
2 - APRON ENDWALLS REQ'D

EXISTING R/W

STH 13

507+00

WETLAND BOUNDARY

SILT FENCE (TYP)

SLOPE INTERCEPT (TYP)

CULVERT PIPE CHECK

WETLAND BOUNDARY

EROSION MAT URBAN
CLASS I TYPE B

506+00

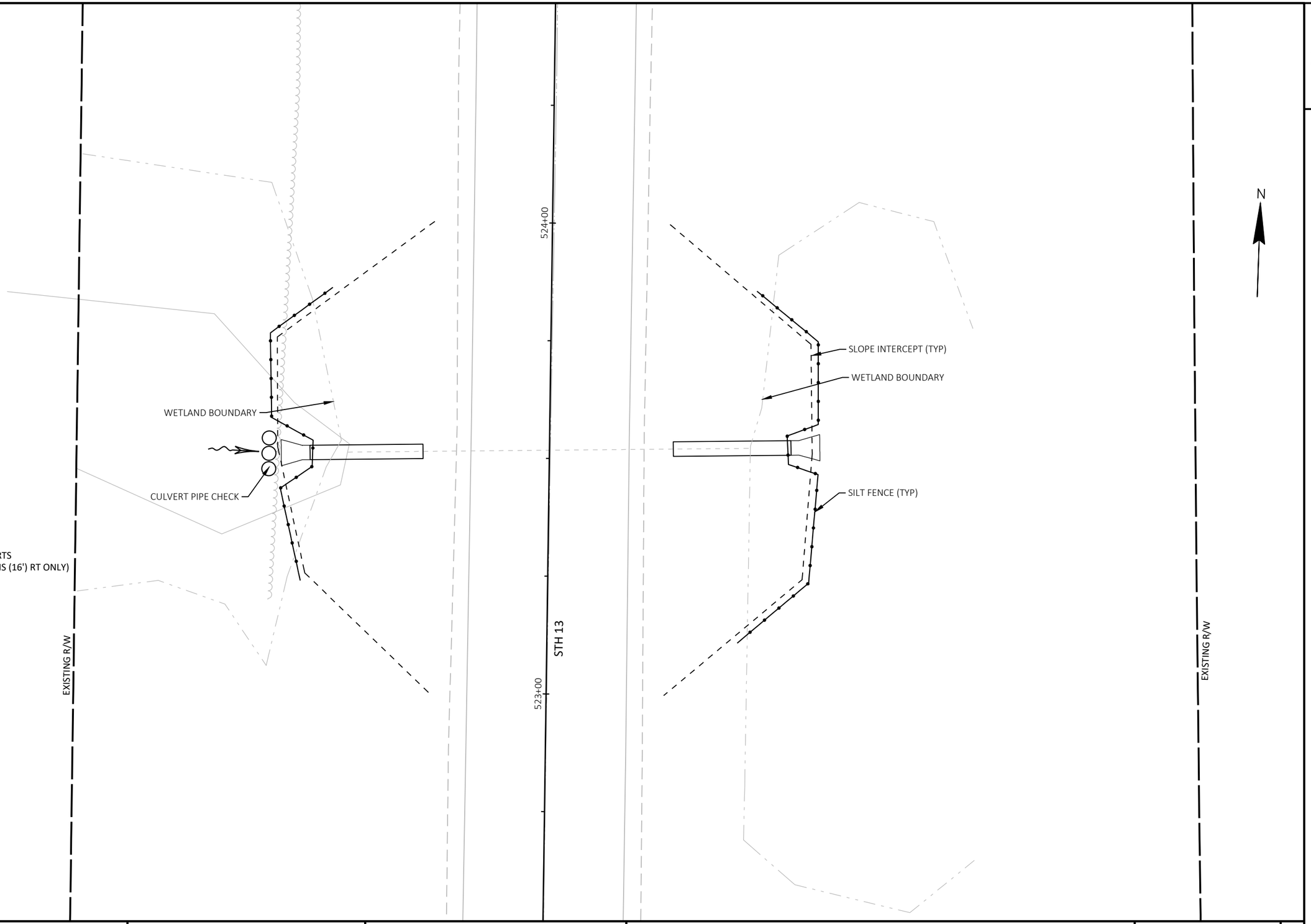
EXISTING R/W

N

PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CULVERT PIPE DETAIL STA 506+70	SHEET 34	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\SHEETS\021004-CD.DWG
LAYOUT NAME - 27_506+70
PLOT DATE : 7/10/2025 11:24 AM
PLOT BY : RESHESKE, CARRIE
PLOT NAME :
PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 44

2



STA 523+52
REMOVING SMALL PIPE CULVERTS
(2 SECTIONS (16') LT; 2 SECTIONS (16') RT ONLY)
(EXISTING 83'x30" RCCP)

STA 523+52
1 - 24'x30" CPRC CL.III, LT
1 - 25'x30" CPRC CL.III, RT
2 - CONCRETE COLLARS
2 - APRON ENDWALLS REQ'D

PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CULVERT PIPE DETAIL STA 523+52	SHEET 35	E

2

2

535+00

534+00

STH 13

EXISTING R/W

EXISTING R/W

N

WETLAND BOUNDARY

SILT FENCE

SLOPE INTERCEPT (TYP)

WETLAND BOUNDARY

CULVERT PIPE CHECK

STA 534+32
REMOVING SMALL PIPE CULVERTS
(EXISTING 83'x24" RCCP)

STA 534+32
1 - 106'x30" CP CL.III-A
2 - APRON ENDWALLS REQ'D

PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CULVERT PIPE DETAIL STA 534+32	SHEET 36	E

2

2

N

557+00

556+00

WETLAND BOUNDARY

SLOPE INTERCEPT (TYP)

WETLAND BOUNDARY

CULVERT PIPE CHECK

SILT FENCE

STA 556+23
REMOVING SMALL PIPE CULVERTS
(EXISTING 95'x24" RCCP)

STA 556+23
1 - 88'x36" CP CL.III-A
2 - APRON ENDWALLS REQ'D

EXISTING R/W

STH 13

EXISTING R/W

PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CULVERT PIPE DETAIL STA 556+23	SHEET 37	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\SHEETS\021004-CD.DWG
LAYOUT NAME - 30_556+23

PLOT DATE : 7/10/2025 11:24 AM PLOT BY : RESHESKE, CARRIE PLOT NAME : PLOT SCALE : 1 IN:20 FT

2

2

N

SILT FENCE

SLOPE INTERCEPT (TYP)

WETLAND BOUNDARY

CULVERT PIPE CHECK

WETLAND BOUNDARY

570+00

569+00

STH 13

EXISTING R/W

EXISTING R/W

OH

OH

OH

OH

OH

STA 569+53
REMOVING SMALL PIPE CULVERTS
(EXISTING 103'x24" RCCP)

STA 569+53
1 - 95'x36" CP CL.III-A
2 - APRON ENDWALLS REQ'D

PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CULVERT PIPE DETAIL STA 569+53	SHEET 38	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\SHEETS\021005-CD.DWG
LAYOUT NAME - 31_569+53

PLOT DATE : 7/10/2025 11:24 AM PLOT BY : RESHESKE, CARRIE PLOT NAME : PLOT SCALE : 1 IN:20 FT

2

2

N

SILT FENCE

WETLAND BOUNDARY

SLOPE INTERCEPT (TYP)

CULVERT PIPE CHECK

WETLAND BOUNDARY

579+00

578+00

STH 13

EXISTING R/W

EXISTING R/W

STA 578+32
REMOVING SMALL PIPE CULVERTS
(EXISTING 115'x24" RCCP)

STA 578+32
1 - 103'x30" CP CL.III-A
2 - APRON ENDWALLS REQ'D

PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CULVERT PIPE DETAIL STA 578+32	SHEET 39	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\SHEETS\021005-CD.DWG
LAYOUT NAME - 32_578+32

PLOT DATE : 7/10/2025 11:24 AM PLOT BY : RESHESKE, CARRIE PLOT NAME : PLOT SCALE : 1 IN:20 FT

2

2

585+00

584+00

STH 13

EXISTING R/W

EXISTING R/W

N

SILT FENCE

SLOPE INTERCEPT (TYP)

WETLAND BOUNDARY

WETLAND BOUNDARY

CULVERT PIPE CHECK

STA 584+28
REMOVING SMALL PIPE CULVERTS
(EXISTING 86'x24" RCCP)

STA 584+28
1 - 79'x30" CP CL.III-A
2 - APRON ENDWALLS REQ'D

PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CULVERT PIPE DETAIL STA 584+28	SHEET 40	E

2

2

608+00

607+00

STH 13

N

SILT FENCE (TYP)

EROSION MAT URBAN
CLASS II TYPE C (TYP)

STA 607+30
REMOVING SMALL PIPE CULVERTS
(3 SECTIONS (24') LT & 1 SECTION (8') RT ONLY)
(EXISTING 99'x24" RCCP)

STA 607+30
1 - 26'x24" CPRC CL.III, LT (3 SECTIONS)
1 - 10'x 24" CPRC CL.III, RT (1 SECTION)
2 - CONCRETE COLLAR REQ'D
2 - APRON ENDWALLS REQ'D

WETLAND BOUNDARY

EXISTING R/W

WETLAND BOUNDARY

CULVERT PIPE CHECK

SLOPE INTERCEPT (TYP)

EXISTING R/W

OH

OH

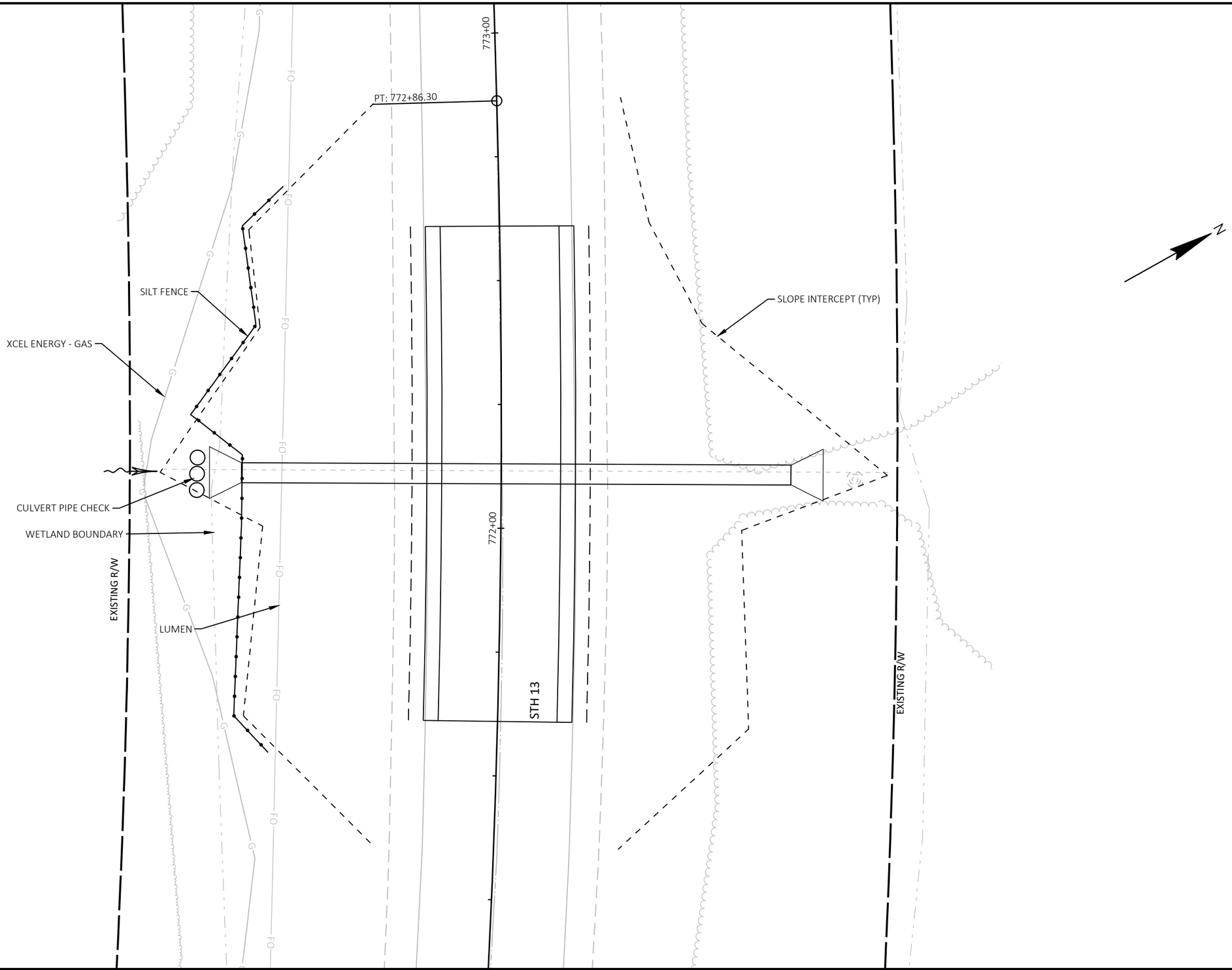
OH

PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CULVERT PIPE DETAIL STA 607+30	SHEET 41	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\SHEETS\021005-CD.DWG
LAYOUT NAME - 34_607+30

PLOT DATE : 9/24/2025 9:52 AM PLOT BY : RESHESKE, CARRIE PLOT NAME : PLOT SCALE : 1 IN:20 FT

2



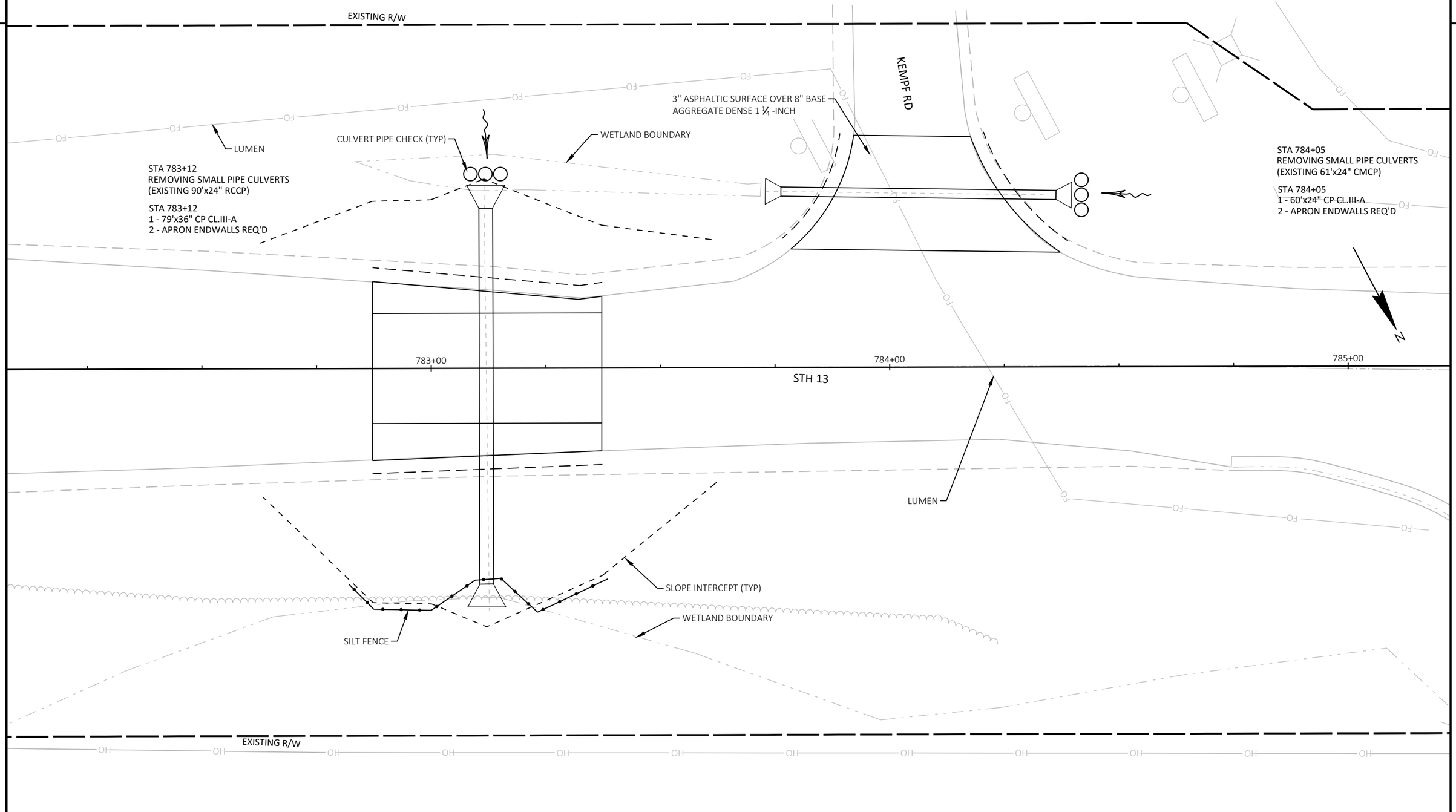
STA 772+11
REMOVING SMALL PIPE CULVERTS
(EXISTING 141'x30" RCCP)

STA 772+11
1 - 111'x48" CP CL.III
2 - APRON ENDWALLS REQ'D

PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CULVERT PIPE DETAIL STA 772+11	SHEET 42	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\SHEETS\021005-CD.DWG
LAYOUT NAME - 36_772+11
PLOT DATE : 7/10/2025 11:24 AM
PLOT BY : RESHESKE, CARRIE
PLOT NAME :
PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 44

2



PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CULVERT PIPE DETAIL STA 783+12	SHEET 43	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\SHEETS\021005-CD.DWG
LAYOUT NAME - 37_783+12

PLOT DATE : 9/19/2025 1:49 PM PLOT BY : RESHESKE, CARRIE PLOT NAME : PLOT SCALE : 1 IN:20 FT

2

2

796+00

795+00

FO

WETLAND BOUNDARY

SLOPE INTERCEPT (TYP)

CULVERT PIPE CHECK (TYP)

LUMEN

SILT FENCE (TYP)

WETLAND BOUNDARY

EXISTING R/W

EXISTING R/W

STH 13

PRES. LHE

PRES. LHE

N

STA 795+34
REMOVING SMALL PIPE CULVERTS
(EXISTING 82'x24" RCCP)

STA 795+29
1 - 74'x36" CP CORRUGATED POLYETHYLENE
2 - APRON ENDWALLS REQ'D

STA 795+38
1 - 74'x36" CP CORRUGATED POLYETHYLENE
2 - APRON ENDWALLS REQ'D

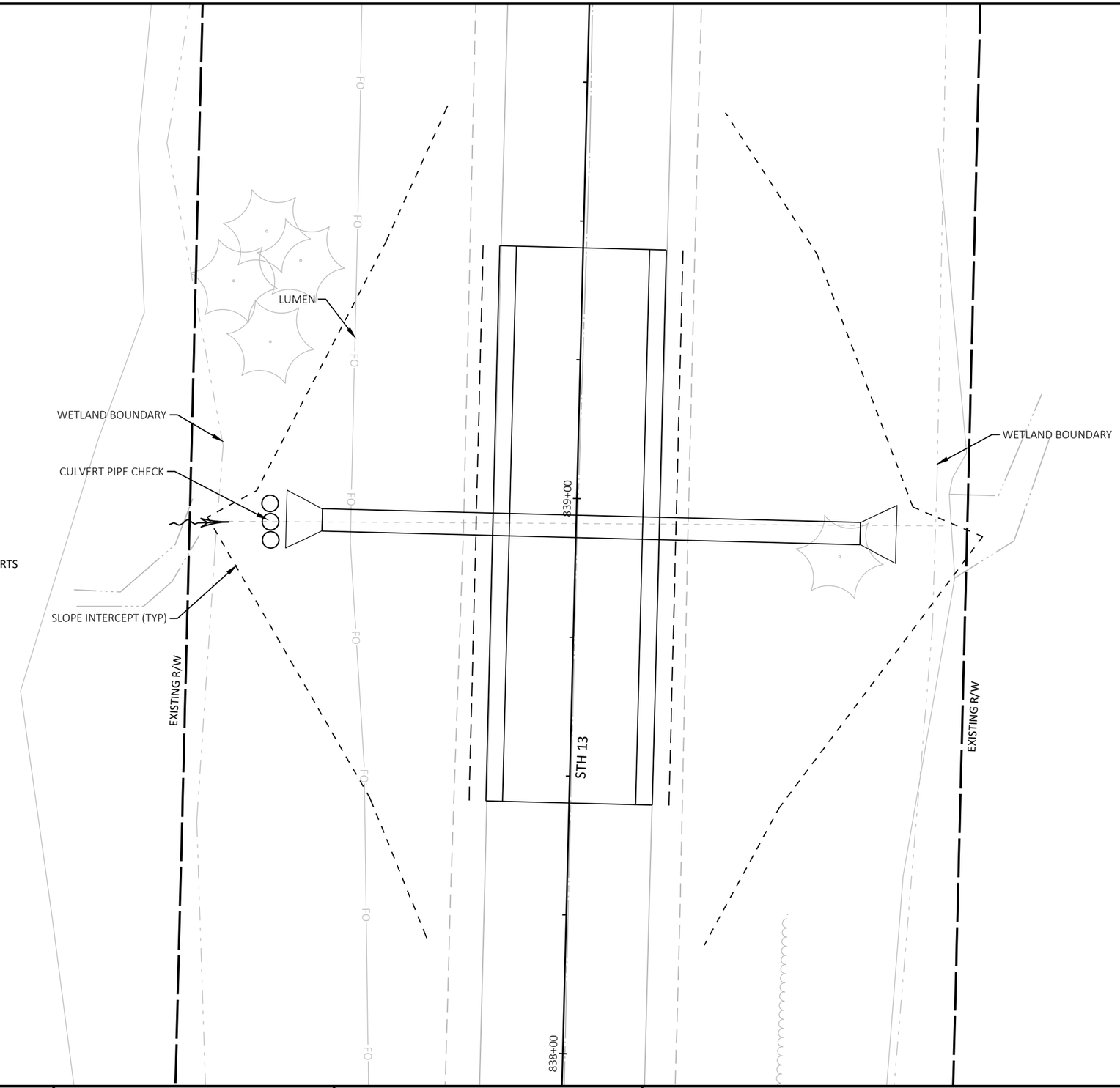
PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CULVERT PIPE DETAIL STA 795+29 / STA 795+38	SHEET 44	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\SHEETS\021005-CD.DWG
LAYOUT NAME - 38_795+29_795+38

PLOT DATE : 7/10/2025 11:24 AM PLOT BY : RESHESKE, CARRIE PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 44

2



STA 838+95
REMOVING SMALL PIPE CULVERTS
(EXISTING 127'x48" RCCP)

STA 838+95
1 - 97'x48" CP CL.III
2 - APRON ENDWALLS REQ'D

PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CULVERT PIPE DETAIL STA 838+95	SHEET 45	E

2

2

EXISTING R/W

CULVERT PIPE CHECK (TYP)

STA 848+00
REMOVING SMALL PIPE CULVERTS
(EXISTING 37'x18" CMCP)

STA 848+00
1 - 34'x18" CP CL.III-A
2 - APRON ENDWALLS REQ'D

LUMEN

WETLAND BOUNDARY

STA 849+43
REMOVING SMALL PIPE CULVERTS
(EXISTING 64'x24" RCCP)

N

848+00

849+00

850+00

STH 13

POST

WETLAND BOUNDARY

STA 848+58
REMOVING SMALL PIPE CULVERTS
(EXISTING 34'x18" CMCP)

STA 848+58
1 - 38'x18" CP CL.III-A
2 - APRON ENDWALLS REQ'D

SILT FENCE (TYP)

SLOPE INTERCEPT (TYP)

WETLAND BOUNDARY

EXISTING R/W

PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CULVERT PIPE DETAIL STA 849+43	SHEET 46	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\SHEETS\021005-CD.DWG
LAYOUT NAME - 40_849+43

PLOT DATE : 7/10/2025 11:24 AM PLOT BY : RESHESKE, CARRIE PLOT NAME : PLOT SCALE : 1 IN:20 FT

2

EXISTING R/W

LUMEN

STA 862+41
REMOVING SMALL PIPE CULVERTS
(EXISTING 90'x24" RCCP)

LUTZ RD

LUMEN

N

862+00

863+00

864+00

STH 13

SLOPE INTERCEPT (TYP)

CULVERT PIPE CHECK

3" ASPHALTIC SURFACE OVER 8" BASE
AGGREGATE DENSE 1 ¼ -INCH

EAGAN RD

STA 863+56
REMOVING SMALL PIPE CULVERTS
(EXISTING 37'x24" RCCP)

STA 863+50
1 - 36'x24" CP CL.III-A
2 - APRON ENDWALLS REQ'D

EXISTING R/W

PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CULVERT PIPE DETAIL STA 862+41	SHEET 47	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\SHEETS\021006-CD.DWG
LAYOUT NAME - 41_862+41
PLOT DATE : 9/19/2025 1:45 PM
PLOT BY : RESHESKE, CARRIE
PLOT NAME :
PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 44

2

2

897+00

896+00

STH 13

EXISTING R/W

EXISTING R/W

N

SILT FENCE (TYP)

SLOPE INTERCEPT (TYP)

CULVERT PIPE CHECK

WETLAND BOUNDARY

LUMEN

WETLAND BOUNDARY

STA 896+09
REMOVING SMALL PIPE CULVERTS
(EXISTING 85'x24" RCCP)

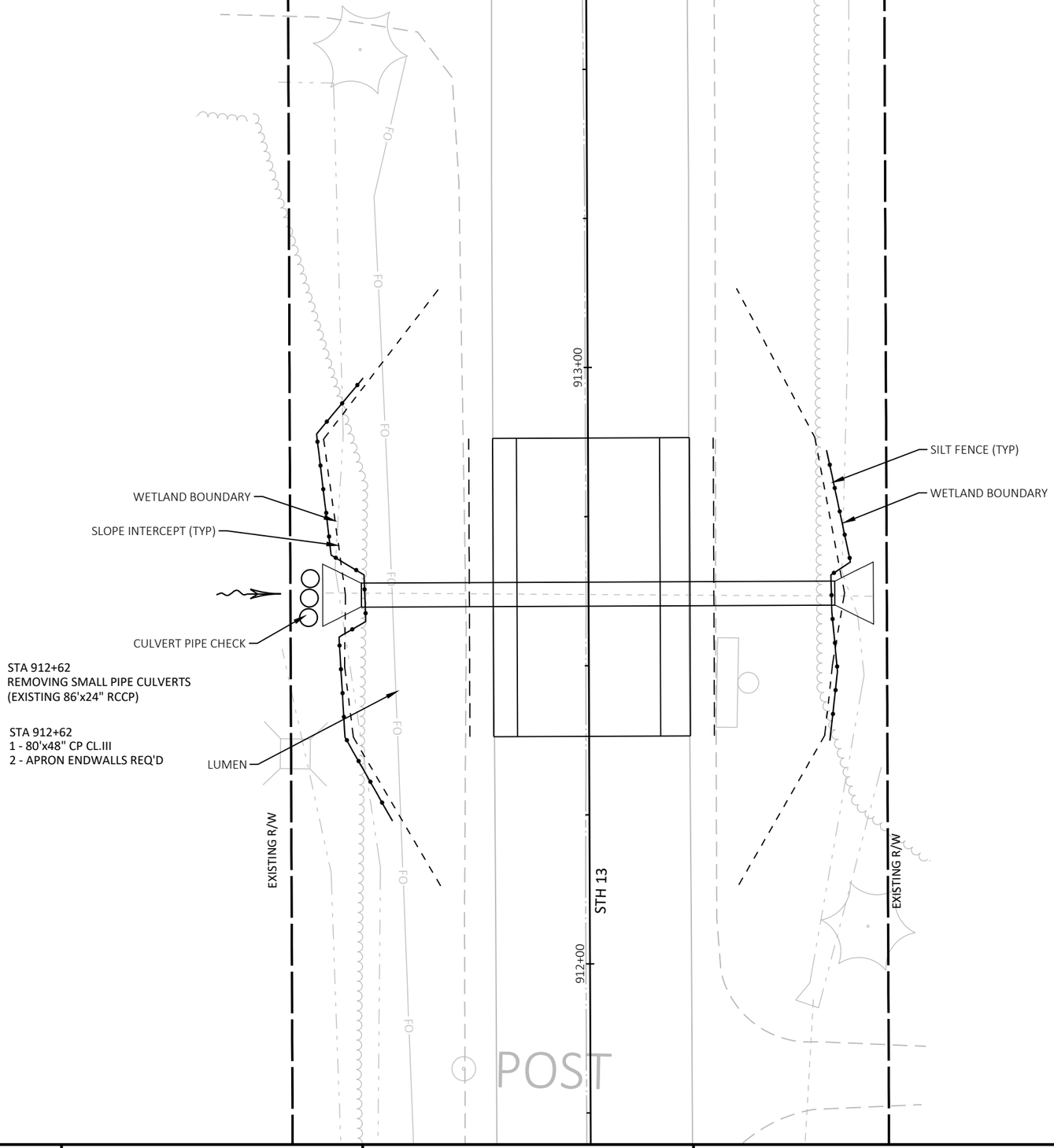
STA 896+09
1 - 97'x48" CP CL.III
2 - APRON ENDWALLS REQ'D

PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CULVERT PIPE DETAIL STA 896+09	SHEET 48	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\SHEETS\021006-CD.DWG
LAYOUT NAME - 42_896+09

PLOT DATE : 7/29/2025 8:36 AM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT

2

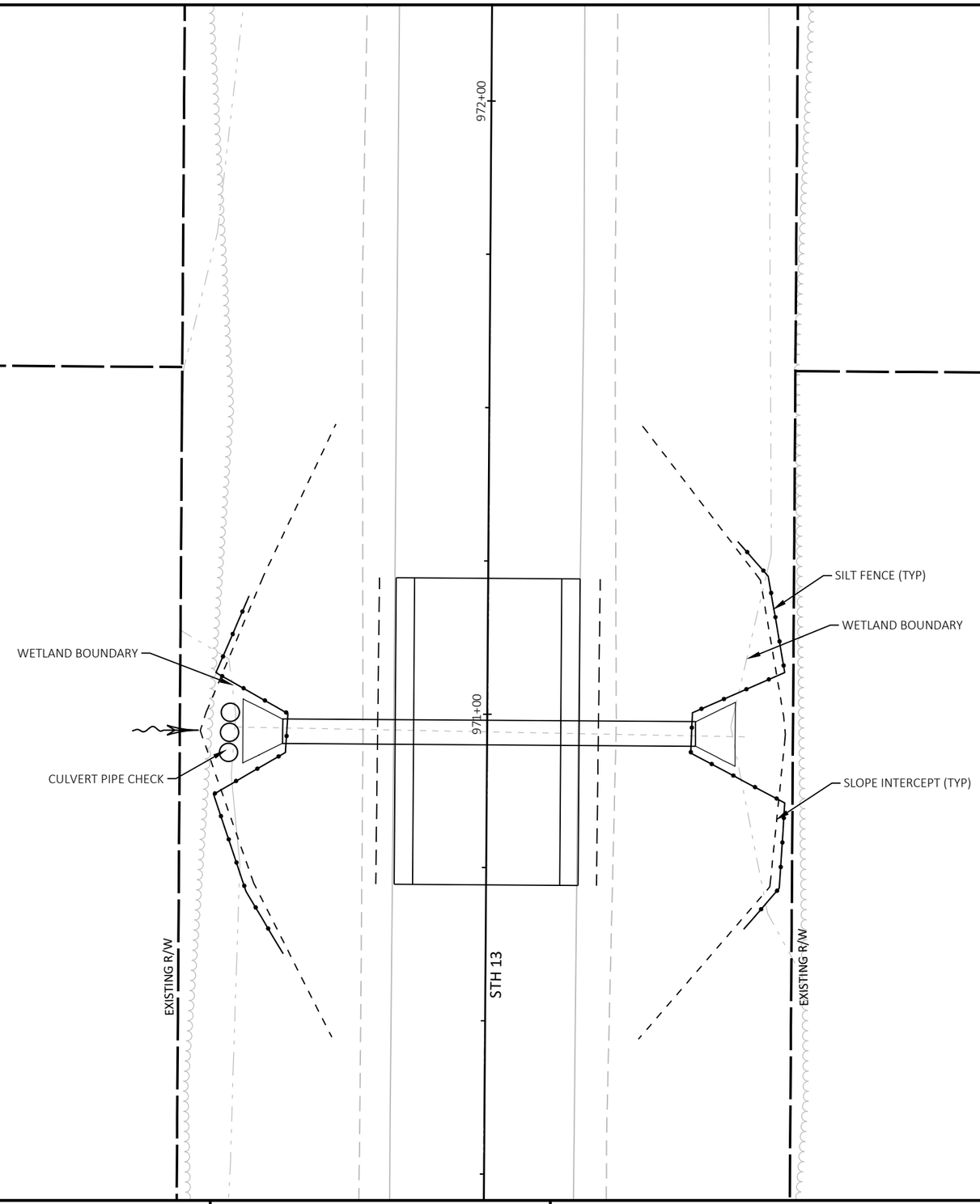


PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CULVERT PIPE DETAIL STA 912+62	SHEET 49	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\SHEETS\021006-CD.DWG
LAYOUT NAME - 43_912+62
PLOT DATE : 7/10/2025 11:24 AM
PLOT BY : RESHESKE, CARRIE
PLOT NAME :
PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 44

2

2



STA 970+97
REMOVING SMALL PIPE CULVERTS
(EXISTING 84'x24" RCCP)

STA 970+97
1 - 68'x48" CP CL.III
2 - APRON ENDWALLS REQ'D

PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CULVERT PIPE DETAIL STA 970+97	SHEET 50	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\SHEETS\021006-CD.DWG
LAYOUT NAME - 44_970+97

PLOT DATE : 7/10/2025 11:24 AM PLOT BY : RESHESKE, CARRIE PLOT NAME : PLOT SCALE : 1 IN:20 FT

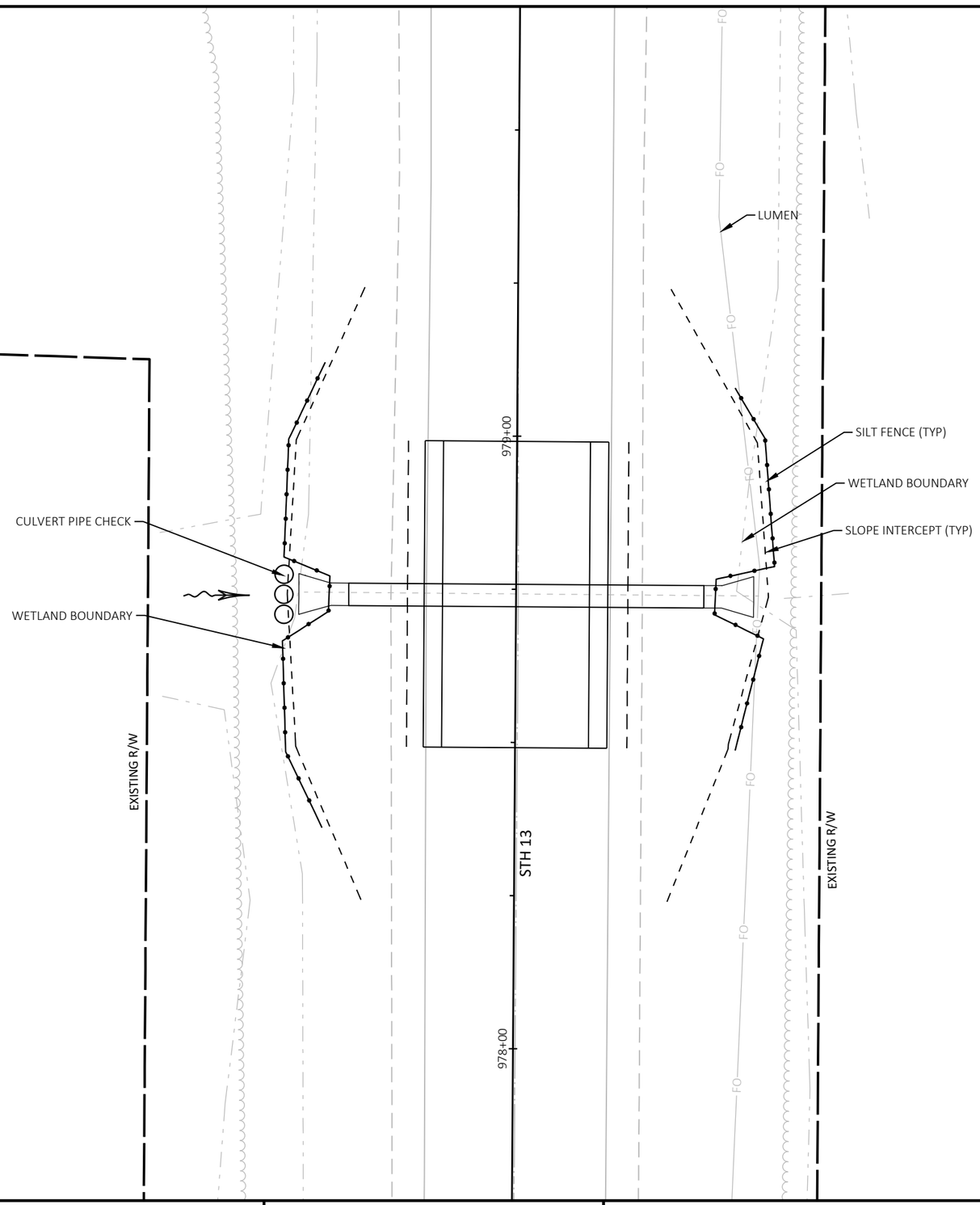
WISDOT/CADDS SHEET 44

2

2

STA 978+74
REMOVING SMALL PIPE CULVERTS
(EXISTING 72'x24" RCCP)

STA 978+74
1 - 58'x36" CPRC CL.III
2 - APRON ENDWALLS REQ'D



PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CULVERT PIPE DETAIL STA 978+74	SHEET 51	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\SHEETS\021006-CD.DWG
LAYOUT NAME - 45_978+74

PLOT DATE : 7/10/2025 11:24 AM PLOT BY : RESHESKE, CARRIE PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 44

2

WAYSIDE

CULVERT PIPE CHECK

3" ASPHALTIC SURFACE OVER 8" BASE
AGGREGATE DENSE 1 ¼ -INCH

STA 984+25
REMOVING SMALL PIPE CULVERTS
(EXISTING 51'x15" CMCP)

STA 984+25
1 - 52'x18" CP CL.III-A
2 - APRON ENDWALLS REQ'D

983+00

984+00

985+00

STH 13

EXISTING R/W

PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CULVERT PIPE DETAIL STA 984+25	SHEET 52	E

2

2

N

WETLAND BOUNDARY

CULVERT PIPE CHECK

LHE

991+00

990+00

STH 13

EXISTING R/W

WETLAND BOUNDARY

SILT FENCE (TYP)

LHE

SLOPE INTERCEPT (TYP)

EXISTING R/W

STA 990+89
REMOVING SMALL PIPE CULVERTS
(EXISTING 78'x24" RCCP)

STA 990+89
1 - 70'x42" CP CL.III
2 - APRON ENDWALLS REQ'D

PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CULVERT PIPE DETAIL STA 990+89	SHEET 53	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\SHEETS\021006-CD.DWG
LAYOUT NAME - 47_990+89
PLOT DATE : 7/10/2025 11:24 AM
PLOT BY : RESHESKE, CARRIE
PLOT NAME :
PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 44

2

2

N

1002+00

WETLAND BOUNDARY

SLOPE INTERCEPT (TYP)

CULVERT PIPE CHECK

WETLAND BOUNDARY

SILT FENCE (TYP)

EXISTING R/W

STH 13

EXISTING R/W

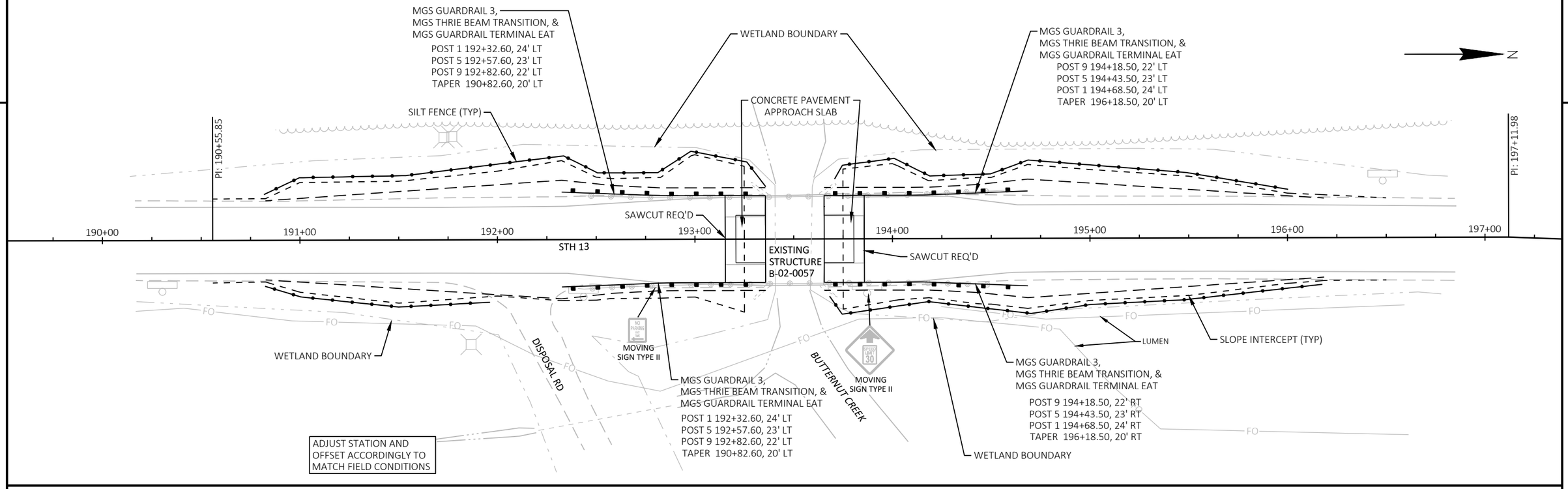
1001+00

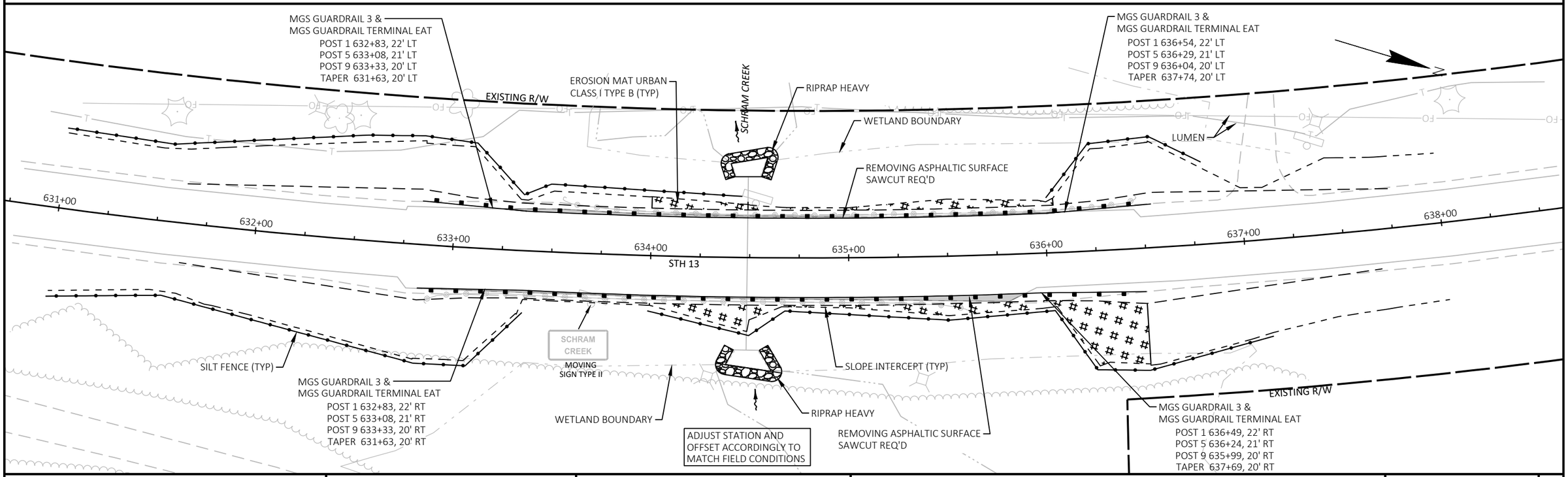
STA 1001+62
REMOVING SMALL PIPE CULVERTS
(EXISTING 77'x24" RCCP)

STA 1001+62
1 - 69'x36" CP CL.III-A
2 - APRON ENDWALLS REQ'D

PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CULVERT PIPE DETAIL STA 1001+62	SHEET 54	E

2





PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	GUARDRAIL DETAILS	SHEET 55	E

2

2

STA 696+55 - STA 698+55
CLIMBIMG TURTLE
EXCLUSION FENCE

SILT FENCE

WETLAND BOUNDARY

MGS GUARDRAIL 3,
MGS THRIE BEAM TRANSITION, &
MGS GUARDRAIL TERMINAL EAT
POST 1 697+35, 24' LT
POST 5 697+60, 23' LT
POST 9 697+85, 22' LT
TAPER 695+85, 20' LT

TEMPORARY SMALL ANIMAL
TURN-AROUND (SEE DETAIL)

EAST FORK CHIPPEWA RIVER

STA 699+70 - STA 701+70
CLIMBIMG TURTLE
EXCLUSION FENCE

EXISTING R/W

WETLAND BOUNDARY

EAST FORK
CHIPPEWA
RIVER
MOVING
SIGN TYPE II

MGS GUARDRAIL 3,
MGS THRIE BEAM TRANSITION, &
MGS GUARDRAIL TERMINAL EAT
POST 1 702+53, 24' LT
POST 5 702+28, 23' LT
POST 9 702+03, 22' LT
TAPER 704+03, 20' LT

SILT FENCE

696+00 | 697+00 | 698+00 | 699+00 | 700+00 | 701+00 | 702+00 | 703+00

STH 13

SAWCUT REQ'D

EXISTING
STRUCTURE
B-02-0047

SAWCUT REQ'D

CONCRETE PAVEMENT
APPROACH SLAB

TEMPORARY SMALL ANIMAL
TURN-AROUND (SEE DETAIL)

EAST FORK
CHIPPEWA
RIVER
MOVING
SIGN TYPE II

WETLAND BOUNDARY

WETLAND BOUNDARY

SILT FENCE

STA 696+55 - STA 698+55
CLIMBIMG TURTLE
EXCLUSION FENCE

EROSION MAT URBAN
CLASS I TYPE B (TYP)

MGS GUARDRAIL 3,
MGS THRIE BEAM TRANSITION, &
MGS GUARDRAIL TERMINAL EAT
POST 1 697+35, 24' RT
POST 5 697+60, 23' RT
POST 9 697+85, 22' RT
TAPER 695+85, 20' RT

ADJUST STATION AND
OFFSET ACCORDINGLY TO
MATCH FIELD CONDITIONS

MGS GUARDRAIL 3,
MGS THRIE BEAM TRANSITION, &
MGS GUARDRAIL TERMINAL EAT
POST 1 700+65, 24' RT
POST 5 700+40, 23' RT
POST 9 700+15, 22' RT
TAPER 702+15, 20' RT

SLOPE INTERCEPT (TYP)

STA 699+70 - STA 701+70
CLIMBIMG TURTLE
EXCLUSION FENCE

SILT FENCE

EXISTING R/W

ANY GUARDRAIL POST DRIVEN IN CLOSE PROXIMITY (ABOVE
OR ADJACENT) TO THE BOX CULVERT MUST BE A STEEL POST.

MGS GUARDRAIL 3 &
MGS GUARDRAIL TERMINAL EAT
POST 1 872+72, 24' LT
POST 5 872+97, 23' LT
POST 9 873+22, 22' LT
TAPER 871+52, 20' LT

EXISTING R/W

WETLAND BOUNDARY

DRYDEN CREEK

SLOPE INTERCEPT (TYP)

NO
FISHING
FROM
BRIDGE
MOVING
SIGN TYPE II

SOUTH
13
MOVING
SIGN TYPE II

LUMEN

MGS GUARDRAIL 3 &
MGS GUARDRAIL TERMINAL EAT
POST 1 875+78, 24' LT
POST 5 875+53, 23' LT
POST 9 875+28, 22' LT
TAPER NEAR INTERSECTION

PRICE ELECTRIC
COOPERATIVE

STH 77

N

LUMEN

PC: 871+46.53

871+00 | 872+00 | 873+00 | 874+00 | 875+00 | 876+00 | 877+00 | 878+00

STH 13

(PASSING LANE)

MGS GUARDRAIL 3 &
MGS GUARDRAIL TERMINAL EAT
POST 1 872+72, 22' RT
POST 5 872+97, 21' RT
POST 9 873+22, 20' RT
TAPER 871+52, 20' RT

NO
FISHING
FROM
BRIDGE
MOVING
SIGN TYPE II

REMOVING ASPHALTIC SURFACE
SAWCUT REQ'D

SILT FENCE (TYP)

WETLAND BOUNDARY

EXISTING
STRUCTURE
B-02-0046

ATTACH GUARDRAIL POST TO
THE EXISTING STRUCTURE
(SEE SDD "ANCHOR POST ASSEMBLY
TOP MOUNTED)

MGS GUARDRAIL 3 &
MGS GUARDRAIL TERMINAL EAT
POST 1 875+31, 30.5' RT
POST 5 875+06, 27.5' RT
POST 9 874+81, 24.5' RT
TAPER 876+51, 30' RT

EXISTING R/W

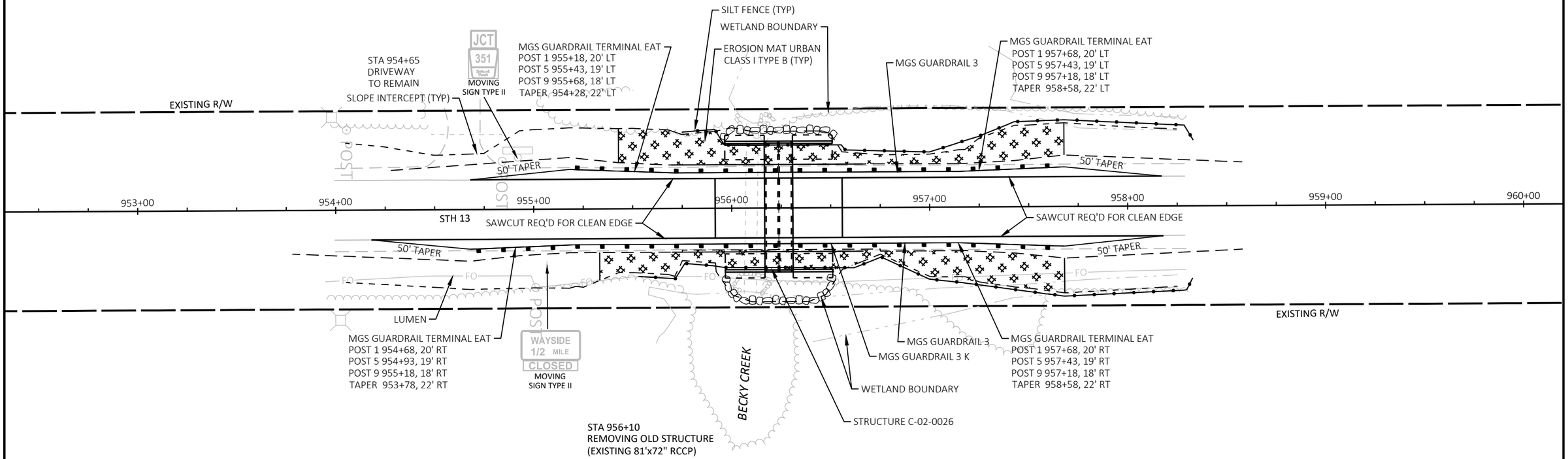
ADJUST STATION AND
OFFSET ACCORDINGLY TO
MATCH FIELD CONDITIONS

PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	GUARDRAIL DETAILS	SHEET 56	E

2

N

ANY GUARDRAIL POST DRIVEN IN CLOSE PROXIMITY (ABOVE OR ADJACENT) TO THE BOX CULVERT MUST BE A STEEL POST.



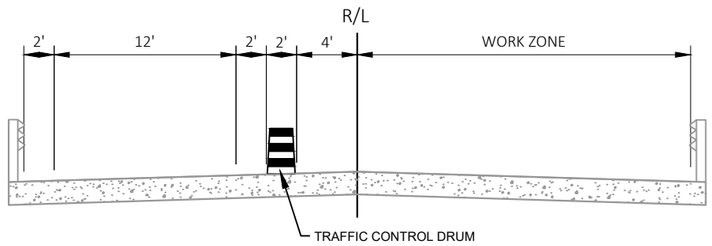
ADJUST STATION AND OFFSET ACCORDINGLY TO MATCH FIELD CONDITIONS

PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	GUARDRAIL DETAILS - BOX CULVERT C-02-0026	SHEET 57	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\SHEETS\021007-CD.DWG
LAYOUT NAME - 021009-cd

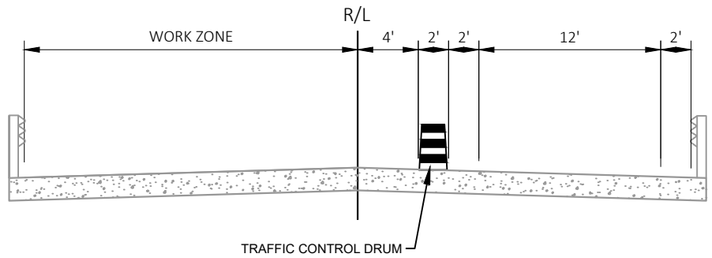
PLOT DATE : 10/1/2025 2:51 PM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:50 FT

2



STAGE 1

STA 193+36 (BUTTERNUT CREEK)
STA 699+14 (EAST FORK CHIPPEWA RIVER)

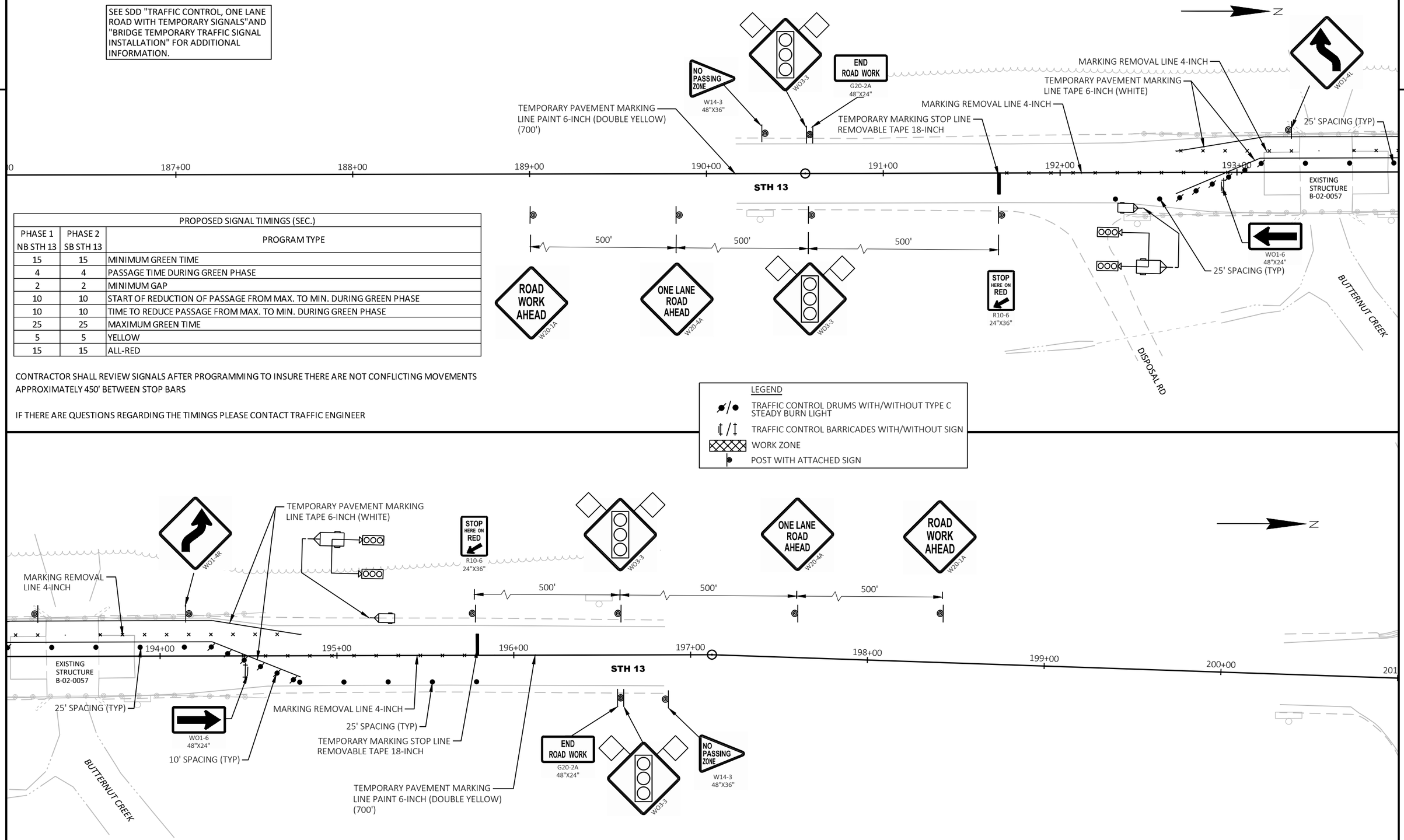


STAGE 2

STA 193+36 (BUTTERNUT CREEK)
STA 699+14 (EAST FORK CHIPPEWA RIVER)

2

SEE SDD "TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS"AND "BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION" FOR ADDITIONAL INFORMATION.



PROPOSED SIGNAL TIMINGS (SEC.)		
PHASE 1 NB STH 13	PHASE 2 SB STH 13	PROGRAM TYPE
15	15	MINIMUM GREEN TIME
4	4	PASSAGE TIME DURING GREEN PHASE
2	2	MINIMUM GAP
10	10	START OF REDUCTION OF PASSAGE FROM MAX. TO MIN. DURING GREEN PHASE
10	10	TIME TO REDUCE PASSAGE FROM MAX. TO MIN. DURING GREEN PHASE
25	25	MAXIMUM GREEN TIME
5	5	YELLOW
15	15	ALL-RED

CONTRACTOR SHALL REVIEW SIGNALS AFTER PROGRAMMING TO INSURE THERE ARE NOT CONFLICTING MOVEMENTS APPROXIMATELY 450' BETWEEN STOP BARS

IF THERE ARE QUESTIONS REGARDING THE TIMINGS PLEASE CONTACT TRAFFIC ENGINEER

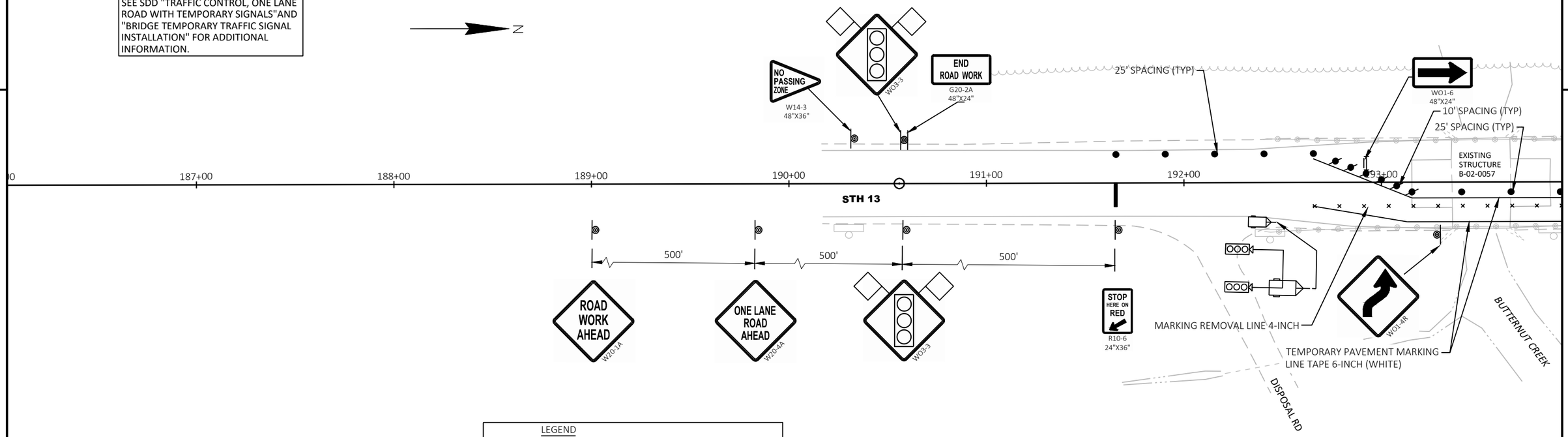
LEGEND

- TRAFFIC CONTROL DRUMS WITH/WITHOUT TYPE C STEADY BURN LIGHT
- TRAFFIC CONTROL BARRICADES WITH/WITHOUT SIGN
- WORK ZONE
- POST WITH ATTACHED SIGN

PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	TRAFFIC CONTROL - STAGE 1 (BUTTERNUT CREEK)	SHEET 59	E

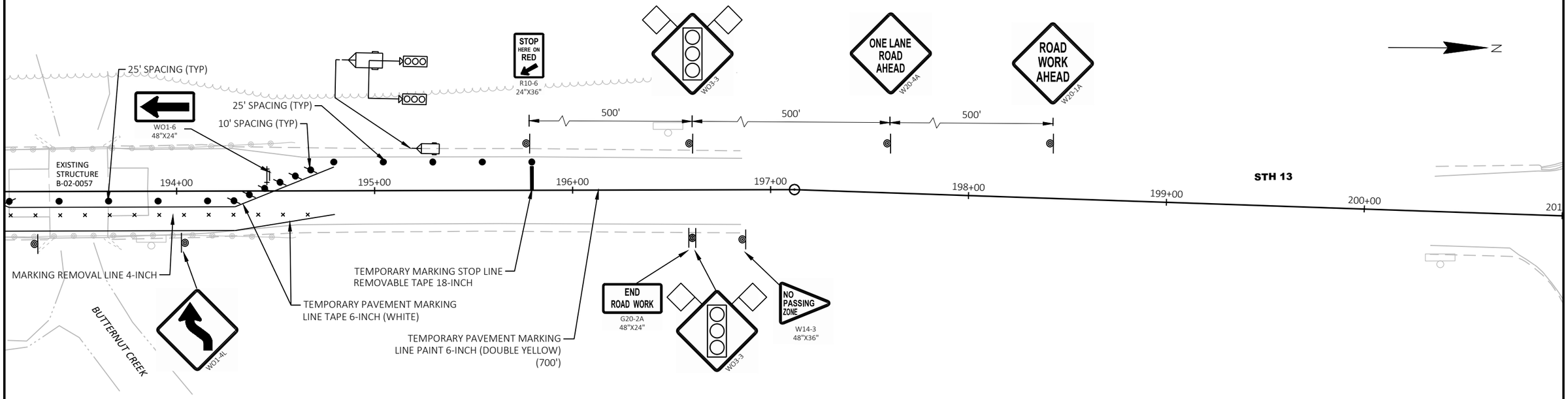
SEE SDD "TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS"AND "BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION" FOR ADDITIONAL INFORMATION.

N



LEGEND

- TRAFFIC CONTROL DRUMS WITH/WITHOUT TYPE C STEADY BURN LIGHT
- TRAFFIC CONTROL BARRICADES WITH/WITHOUT SIGN
- WORK ZONE
- POST WITH ATTACHED SIGN



PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	TRAFFIC CONTROL - STAGE 2 (BUTTERNUT CREEK)	SHEET 60	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\SHEETS\025102-TC.DWG
LAYOUT NAME - 025102-tc2

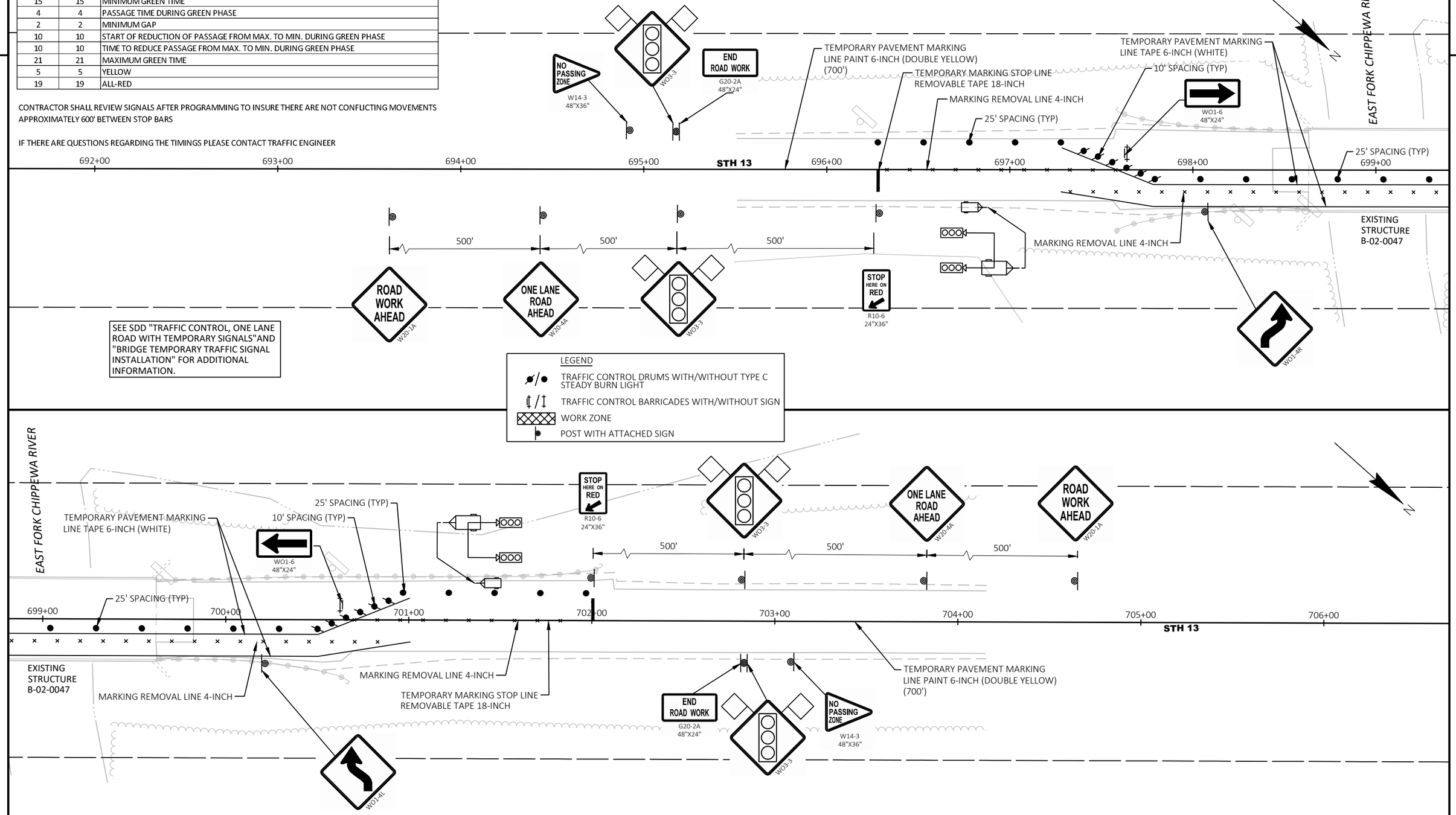
PLOT DATE : 7/10/2025 11:25 AM PLOT BY : RESHESKE, CARRIE PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 44

PROPOSED SIGNAL TIMINGS (SEC.)		
PHASE 1 NB STH 13	PHASE 2 SB STH 13	PROGRAM TYPE
15	15	MINIMUM GREEN TIME
4	4	PASSAGE TIME DURING GREEN PHASE
2	2	MINIMUM GAP
10	10	START OF REDUCTION OF PASSAGE FROM MAX. TO MIN. DURING GREEN PHASE
10	10	TIME TO REDUCE PASSAGE FROM MAX. TO MIN. DURING GREEN PHASE
21	21	MAXIMUM GREEN TIME
5	5	YELLOW
19	19	ALL-RED

CONTRACTOR SHALL REVIEW SIGNALS AFTER PROGRAMMING TO INSURE THERE ARE NOT CONFLICTING MOVEMENTS APPROXIMATELY 600' BETWEEN STOP BARS

IF THERE ARE QUESTIONS REGARDING THE TIMINGS PLEASE CONTACT TRAFFIC ENGINEER



SEE SDD "TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS"AND "BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION" FOR ADDITIONAL INFORMATION.

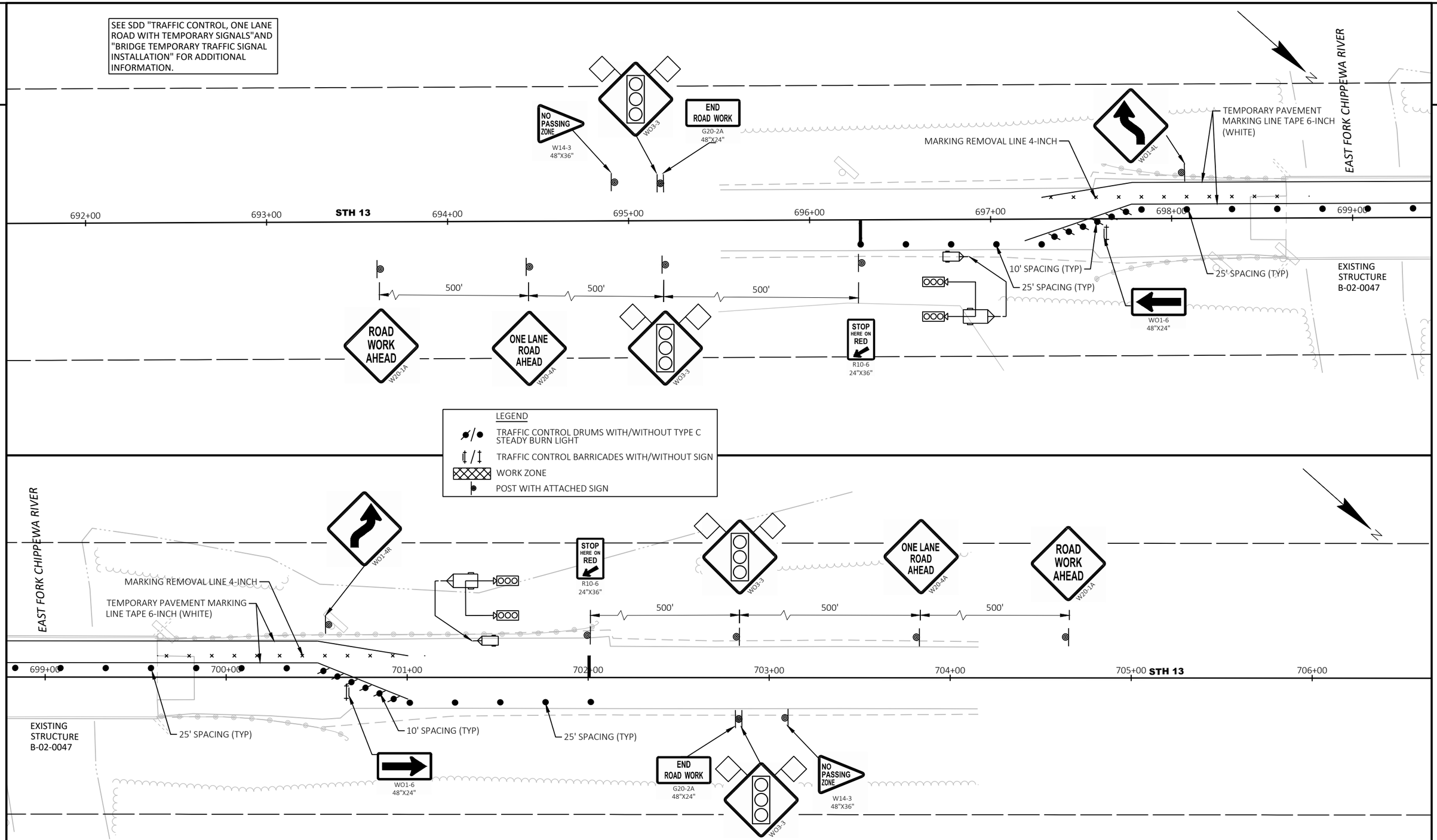
LEGEND

- TRAFFIC CONTROL DRUMS WITH/WITHOUT TYPE C STEADY BURN LIGHT
- TRAFFIC CONTROL BARRICADES WITH/WITHOUT SIGN
- WORK ZONE
- POST WITH ATTACHED SIGN

PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	TRAFFIC CONTROL - STAGE 1 (EAST FORK CHIPPEWA RIVER)	SHEET 61	E

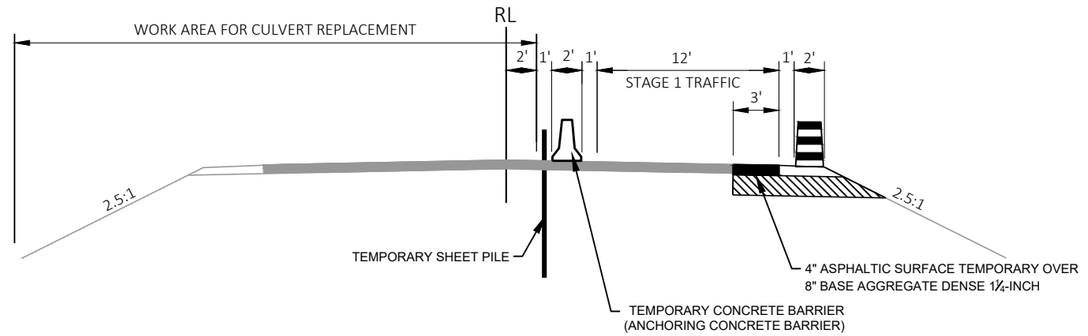
FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\SHEETS\025102-TC.DWG
LAYOUT NAME - 025102-tc5
PLOT DATE : 7/10/2025 11:25 AM PLOT BY : RESHESKE, CARRIE PLOT NAME : PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 44

SEE SDD "TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS"AND "BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION" FOR ADDITIONAL INFORMATION.



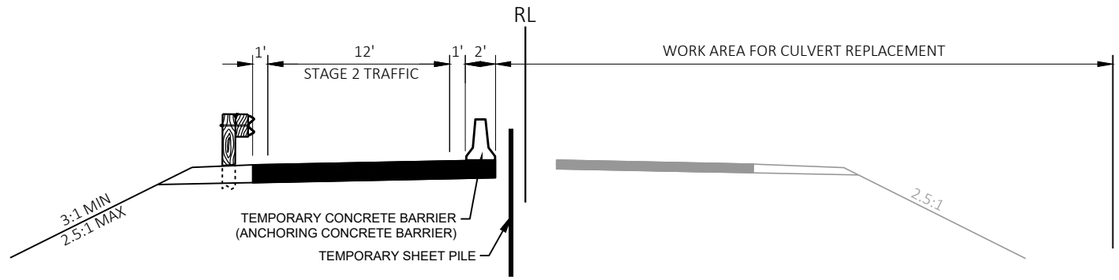
PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	TRAFFIC CONTROL - STAGE 2 (EAST FORK CHIPPEWA RIVER)	SHEET 62	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\SHEETS\025102-TC.DWG
LAYOUT NAME - 025102-tc6
PLOT DATE : 7/10/2025 11:25 AM PLOT BY : RESHESKE, CARRIE PLOT NAME : PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 44



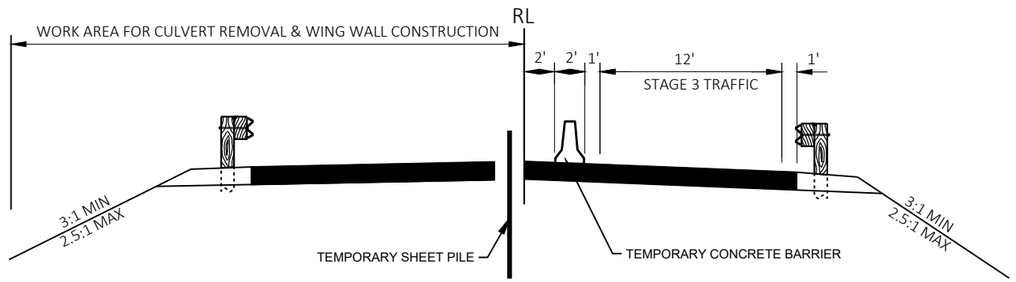
STAGE 1

STA 956+18 (BECKY CREEK)



STAGE 2

STA 956+18 (BECKY CREEK)



STAGE 3

STA 956+18 (BECKY CREEK)

PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	TRAFFIC CONTROL	SHEET 63	E

2



PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	TRAFFIC CONTROL - ADVANCED WIDTH RESTRICTION SIGNING (BECKY CREEK)	SHEET 64	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\SHEETS\025101-TC.DWG
LAYOUT NAME - 025301-tc

PLOT DATE : 10/1/2025 1:56 PM PLOT BY : RESHESKE, CARRIE PLOT NAME : PLOT SCALE : ##########

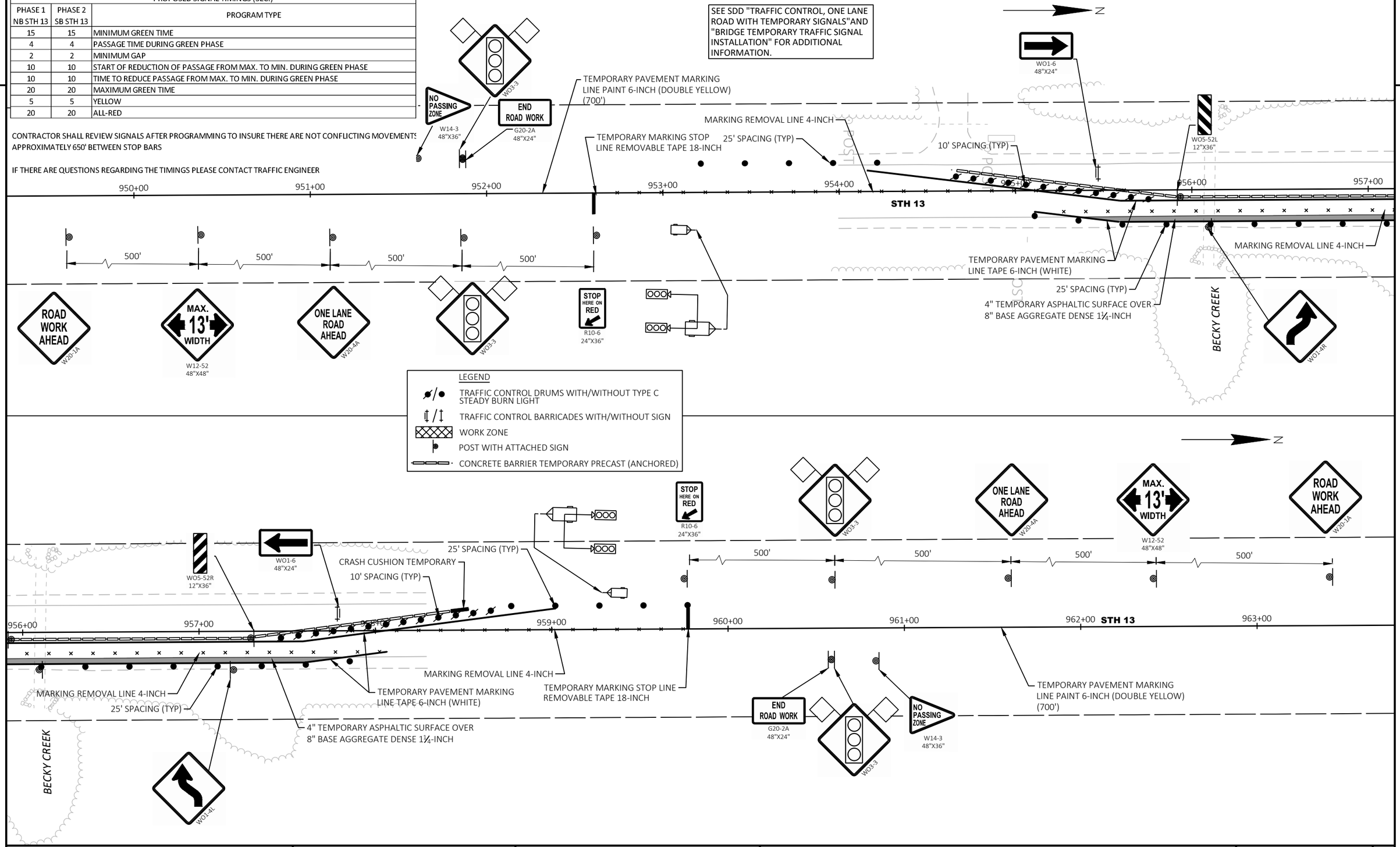
2

PROPOSED SIGNAL TIMINGS (SEC.)		
PHASE 1 NB STH 13	PHASE 2 SB STH 13	PROGRAM TYPE
15	15	MINIMUM GREEN TIME
4	4	PASSAGE TIME DURING GREEN PHASE
2	2	MINIMUM GAP
10	10	START OF REDUCTION OF PASSAGE FROM MAX. TO MIN. DURING GREEN PHASE
10	10	TIME TO REDUCE PASSAGE FROM MAX. TO MIN. DURING GREEN PHASE
20	20	MAXIMUM GREEN TIME
5	5	YELLOW
20	20	ALL-RED

CONTRACTOR SHALL REVIEW SIGNALS AFTER PROGRAMMING TO INSURE THERE ARE NOT CONFLICTING MOVEMENTS
APPROXIMATELY 650' BETWEEN STOP BARS

IF THERE ARE QUESTIONS REGARDING THE TIMINGS PLEASE CONTACT TRAFFIC ENGINEER

SEE SDD "TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS"AND "BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION" FOR ADDITIONAL INFORMATION.



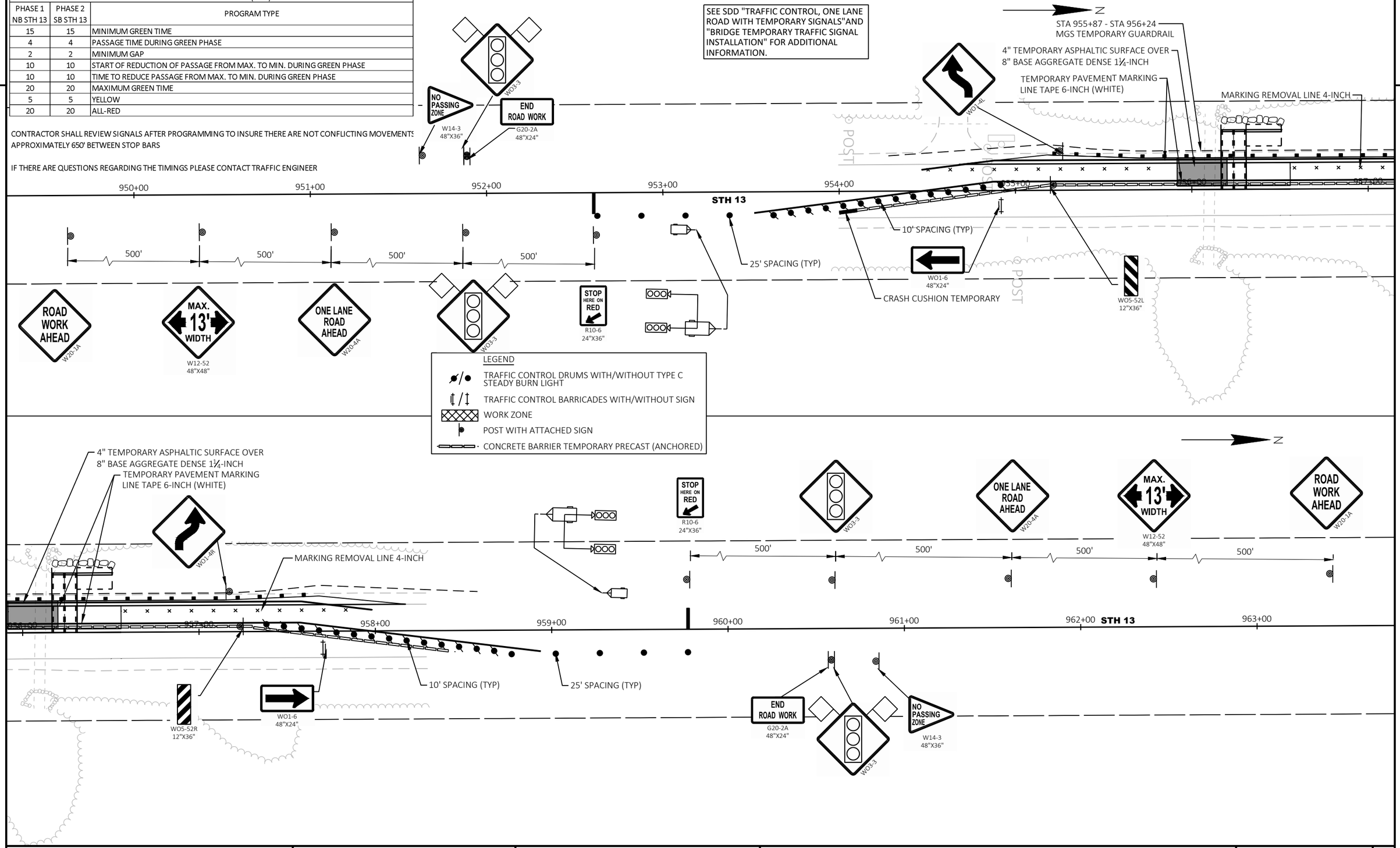
PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	TRAFFIC CONTROL - STAGE 1	SHEET 65	E

PROPOSED SIGNAL TIMINGS (SEC.)		
PHASE 1 NB STH 13	PHASE 2 SB STH 13	PROGRAM TYPE
15	15	MINIMUM GREEN TIME
4	4	PASSAGE TIME DURING GREEN PHASE
2	2	MINIMUM GAP
10	10	START OF REDUCTION OF PASSAGE FROM MAX. TO MIN. DURING GREEN PHASE
10	10	TIME TO REDUCE PASSAGE FROM MAX. TO MIN. DURING GREEN PHASE
20	20	MAXIMUM GREEN TIME
5	5	YELLOW
20	20	ALL-RED

CONTRACTOR SHALL REVIEW SIGNALS AFTER PROGRAMMING TO INSURE THERE ARE NOT CONFLICTING MOVEMENTS
APPROXIMATELY 650' BETWEEN STOP BARS

IF THERE ARE QUESTIONS REGARDING THE TIMINGS PLEASE CONTACT TRAFFIC ENGINEER

SEE SDD "TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS"AND "BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION" FOR ADDITIONAL INFORMATION.



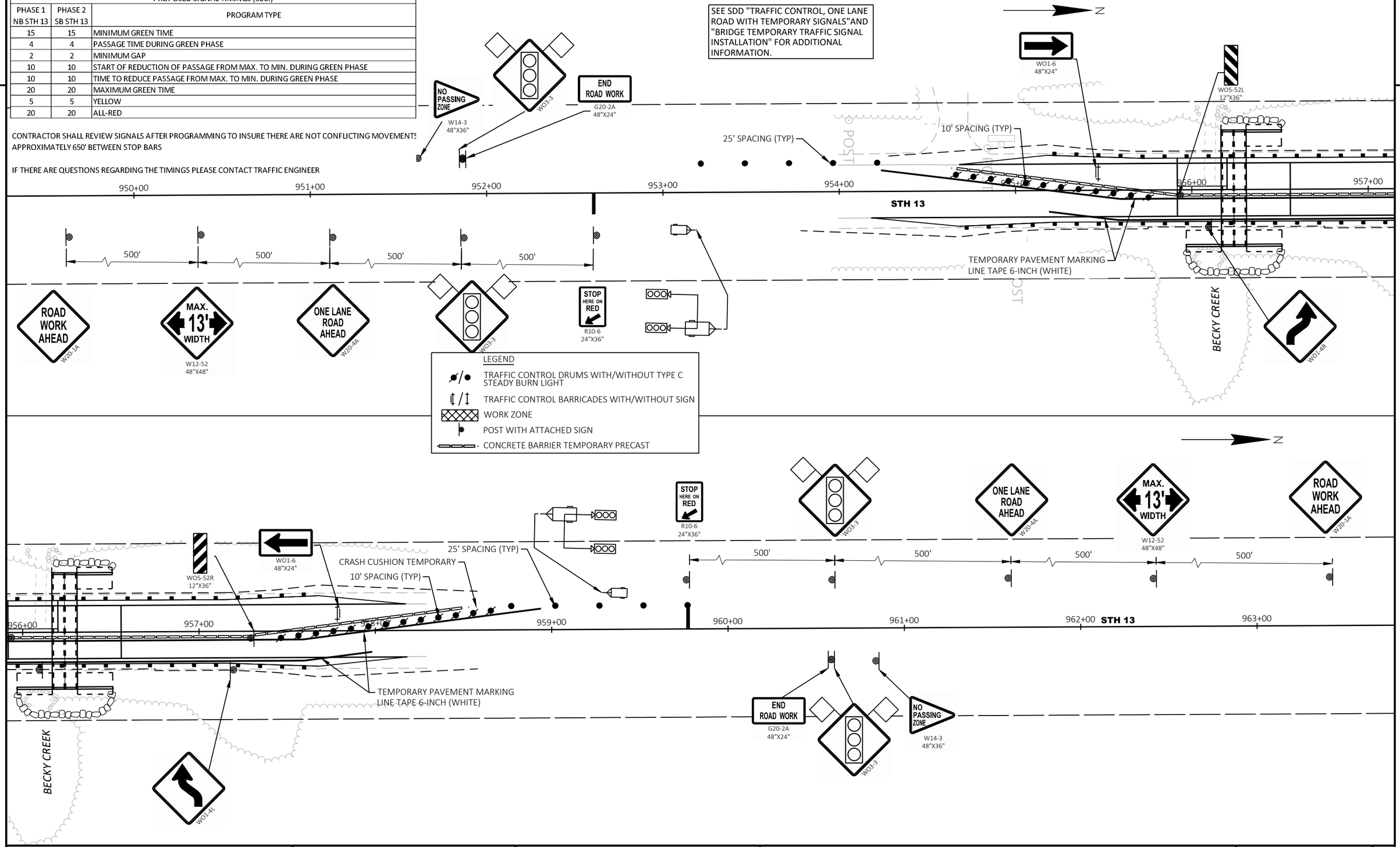
PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	TRAFFIC CONTROL - STAGE 2 (BECKY CREEK)	SHEET 66	E

PROPOSED SIGNAL TIMINGS (SEC.)		
PHASE 1 NB STH 13	PHASE 2 SB STH 13	PROGRAM TYPE
15	15	MINIMUM GREEN TIME
4	4	PASSAGE TIME DURING GREEN PHASE
2	2	MINIMUM GAP
10	10	START OF REDUCTION OF PASSAGE FROM MAX. TO MIN. DURING GREEN PHASE
10	10	TIME TO REDUCE PASSAGE FROM MAX. TO MIN. DURING GREEN PHASE
20	20	MAXIMUM GREEN TIME
5	5	YELLOW
20	20	ALL-RED

CONTRACTOR SHALL REVIEW SIGNALS AFTER PROGRAMMING TO INSURE THERE ARE NOT CONFLICTING MOVEMENTS
APPROXIMATELY 650' BETWEEN STOP BARS

IF THERE ARE QUESTIONS REGARDING THE TIMINGS PLEASE CONTACT TRAFFIC ENGINEER

SEE SDD "TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS"AND "BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION" FOR ADDITIONAL INFORMATION.



PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	TRAFFIC CONTROL - STAGE 3 (BECKY CREEK)	SHEET 67	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\SHEETS\025105-TC.DWG
LAYOUT NAME - 025105-tc
PLOT DATE : 10/1/2025 12:23 PM PLOT BY : RESHESKE, CARRIE PLOT NAME : PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 44

1610-00-81

Line	Item	Item Description	Unit	Total	Qty
0002	201.0105	Clearing	STA	44.000	44.000
0004	201.0205	Grubbing	STA	44.000	44.000
0006	203.0100	Removing Small Pipe Culverts	EACH	58.000	58.000
0008	203.0220	Removing Structure (structure) 01. C-02-1491	EACH	1.000	1.000
0010	203.0220	Removing Structure (structure) 02. Cattle Pass 70'X42"X72"	EACH	1.000	1.000
0012	203.0220	Removing Structure (structure) 03. C-02-0168	EACH	1.000	1.000
0014	203.0220	Removing Structure (structure) 04. 81'X72" RCCP	EACH	1.000	1.000
0016	203.0220	Removing Structure (structure) 05. 72-Inch 85-FT Concrete Culvert Pipe	EACH	1.000	1.000
0020	204.0100	Removing Concrete Pavement	SY	6,467.000	6,467.000
0022	204.0110	Removing Asphaltic Surface	SY	4,743.000	4,743.000
0024	204.0165	Removing Guardrail	LF	2,018.000	2,018.000
0026	204.0270	Abandoning Culvert Pipes	EACH	1.000	1.000
0028	205.0100	Excavation Common	CY	1,625.000	1,625.000
0030	206.2001	Excavation for Structures Culverts (structure) 01. C-02-0026	EACH	1.000	1.000
0032	208.0100	Borrow	CY	5,284.000	5,284.000
0034	208.1500.S	Temporary Lane Shift During Culvert Work	EACH	46.000	46.000
0038	210.2500	Backfill Structure Type B	TON	185.000	185.000
0042	213.0100	Finishing Roadway (project) 01. 1610-00-81	EACH	1.000	1.000
0046	305.0110	Base Aggregate Dense 3/4-Inch	TON	1,675.000	1,675.000
0048	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	10,990.000	10,990.000
0050	311.0110	Breaker Run	TON	110.000	110.000
0054	415.0410	Concrete Pavement Approach Slab	SY	160.000	160.000
0056	455.0605	Tack Coat	GAL	1,116.000	1,116.000
0058	465.0105	Asphaltic Surface	TON	4,365.000	4,365.000
0062	465.0125	Asphaltic Surface Temporary	TON	32.000	32.000
0064	502.3200	Protective Surface Treatment	SY	143.000	143.000
0068	504.0100	Concrete Masonry Culverts	CY	207.000	207.000
0070	505.0400	Bar Steel Reinforcement HS Structures	LB	19,820.000	19,820.000
0072	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	3,480.000	3,480.000
0074	509.0301	Preparation Decks Type 1	SY	20.000	20.000
0076	509.0302	Preparation Decks Type 2	SY	9.000	9.000
0078	509.0310.S	Sawing Pavement Deck Preparation Areas	LF	218.000	218.000
0080	509.0500	Cleaning Decks	SY	143.000	143.000
0084	509.1500	Concrete Surface Repair	SF	95.000	95.000
0086	509.2000	Full-Depth Deck Repair	SY	11.000	11.000
0088	509.2100.S	Concrete Masonry Deck Repair	CY	5.000	5.000
0090	509.2500	Concrete Masonry Overlay Decks	CY	8.000	8.000
0094	511.1200	Temporary Shoring (structure) 01. C-02-0026	SF	440.000	440.000
0096	516.0500	Rubberized Membrane Waterproofing	SY	36.000	36.000
0098	520.1018	Apron Endwalls for Culvert Pipe 18-Inch	EACH	8.000	8.000
0100	520.1024	Apron Endwalls for Culvert Pipe 24-Inch	EACH	10.000	10.000
0102	520.1030	Apron Endwalls for Culvert Pipe 30-Inch	EACH	12.000	12.000
0104	520.1036	Apron Endwalls for Culvert Pipe 36-Inch	EACH	16.000	16.000
0106	520.1042	Apron Endwalls for Culvert Pipe 42-Inch	EACH	8.000	8.000
0108	520.1048	Apron Endwalls for Culvert Pipe 48-Inch	EACH	20.000	20.000
0110	520.3142	Culvert Pipe Class III 42-Inch	LF	305.000	305.000
0112	520.3148	Culvert Pipe Class III 48-Inch	LF	817.000	817.000
0114	520.3318	Culvert Pipe Class III-A 18-Inch	LF	188.000	188.000
0116	520.3324	Culvert Pipe Class III-A 24-Inch	LF	343.000	343.000

1610-00-81

Line	Item	Item Description	Unit	Total	Qty
0118	520.3330	Culvert Pipe Class III-A 30-Inch	LF	500.000	500.000
0120	520.3336	Culvert Pipe Class III-A 36-Inch	LF	492.000	492.000
0122	520.8000	Concrete Collars for Pipe	EACH	6.000	6.000
0124	520.8700	Cleaning Culvert Pipes	EACH	1.000	1.000
0126	521.1503	Apron Endwalls for Culvert Pipe Sloped Side Drains Steel 18-Inch 4 to 1	EACH	2.000	2.000
0128	522.0124	Culvert Pipe Reinforced Concrete Class III 24-Inch	LF	60.000	60.000
0130	522.0130	Culvert Pipe Reinforced Concrete Class III 30-Inch	LF	109.000	109.000
0132	522.0136	Culvert Pipe Reinforced Concrete Class III 36-Inch	LF	58.000	58.000
0134	522.0142	Culvert Pipe Reinforced Concrete Class III 42-Inch	LF	60.000	60.000
0136	522.0424	Culvert Pipe Reinforced Concrete Class IV 24-Inch	LF	117.000	117.000
0138	522.0430	Culvert Pipe Reinforced Concrete Class IV 30-Inch	LF	62.000	62.000
0140	522.0442	Culvert Pipe Reinforced Concrete Class IV 42-Inch	LF	59.000	59.000
0142	522.1024	Apron Endwalls for Culvert Pipe Reinforced Concrete 24-Inch	EACH	8.000	8.000
0144	522.1030	Apron Endwalls for Culvert Pipe Reinforced Concrete 30-Inch	EACH	6.000	6.000
0146	522.1036	Apron Endwalls for Culvert Pipe Reinforced Concrete 36-Inch	EACH	2.000	2.000
0148	522.1042	Apron Endwalls for Culvert Pipe Reinforced Concrete 42-Inch	EACH	4.000	4.000
0150	530.0136	Culvert Pipe Corrugated Polyethylene 36-Inch	LF	148.000	148.000
0152	603.8000	Concrete Barrier Temporary Precast Delivered	LF	450.000	450.000
0154	603.8125	Concrete Barrier Temporary Precast Installed	LF	1,240.000	1,240.000
0156	603.8500	Anchoring Concrete Barrier Temporary Precast	LF	210.000	210.000
0158	606.0300	Riprap Heavy	CY	160.000	160.000
0160	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	95.000	95.000
0162	614.0905	Crash Cushions Temporary	EACH	3.000	3.000
0164	614.1000	MGS Guardrail Temporary	LF	37.500	37.500
0166	614.2300	MGS Guardrail 3	LF	1,386.500	1,386.500
0168	614.2330	MGS Guardrail 3 K	LF	100.000	100.000
0170	614.2500	MGS Thrie Beam Transition	LF	300.000	300.000
0172	614.2610	MGS Guardrail Terminal EAT	EACH	20.000	20.000
0174	614.8010	Anchor Post Assembly Top Mount	EACH	5.000	5.000
0176	618.0100	Maintenance and Repair of Haul Roads (project) 01. 1610-00-81	EACH	1.000	1.000
0180	619.1000	Mobilization	EACH	0.850	0.850
0186	625.0500	Salvaged Topsoil	SY	39,225.000	39,225.000
0188	627.0200	Mulching	SY	44,345.000	44,345.000
0190	628.1504	Silt Fence	LF	13,920.000	13,920.000
0192	628.1520	Silt Fence Maintenance	LF	13,920.000	13,920.000
0194	628.1905	Mobilizations Erosion Control	EACH	3.000	3.000
0196	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0198	628.2008	Erosion Mat Urban Class I Type B	SY	3,900.000	3,900.000
0200	628.2027	Erosion Mat Class II Type C	SY	825.000	825.000
0202	628.7555	Culvert Pipe Checks	EACH	345.000	345.000
0206	629.0210	Fertilizer Type B	CWT	32.000	32.000
0210	630.0140	Seeding Mixture No. 40	LB	2,228.000	2,228.000
0212	630.0200	Seeding Temporary	LB	1,337.000	1,337.000
0214	630.0500	Seed Water	MGAL	1,112.000	1,112.000
0216	633.5200	Markers Culvert End	EACH	98.000	98.000
0218	638.2102	Moving Signs Type II	EACH	10.000	10.000
0220	638.4000	Moving Small Sign Supports	EACH	12.000	12.000
0222	642.5001	Field Office Type B	EACH	0.850	0.850
0224	643.0300	Traffic Control Drums	DAY	15,661.000	15,661.000

1610-00-81

Line	Item	Item Description	Unit	Total	Qty
0226	643.0420	Traffic Control Barricades Type III	DAY	390.000	390.000
0228	643.0705	Traffic Control Warning Lights Type A	DAY	775.000	775.000
0230	643.0715	Traffic Control Warning Lights Type C	DAY	3,225.000	3,225.000
0232	643.0900	Traffic Control Signs	DAY	7,240.000	7,240.000
0238	643.3165	Temporary Marking Line Paint 6-Inch	LF	8,400.000	8,400.000
0240	643.3180	Temporary Marking Line Removable Tape 6-Inch	LF	4,831.000	4,831.000
0242	643.3805	Temporary Marking Stop Line Paint 18-Inch	LF	72.000	72.000
0248	643.5000	Traffic Control	EACH	0.850	0.850
0250	645.0105	Geotextile Type C	SY	150.000	150.000
0252	645.0120	Geotextile Type HR	SY	350.000	350.000
0254	646.2005	Marking Line Paint 6-Inch	LF	15,231.000	15,231.000
0258	646.9002	Marking Removal Line 6-Inch	LF	2,475.000	2,475.000
0262	650.5000	Construction Staking Base	LF	3,276.000	3,276.000
0264	650.6000	Construction Staking Pipe Culverts	EACH	37.000	37.000
0266	650.6501	Construction Staking Structure Layout (structure) 01. C-02-0026	EACH	1.000	1.000
0272	650.9911	Construction Staking Supplemental Control (project) 01. 1610-00-81	EACH	1.000	1.000
0276	650.9920	Construction Staking Slope Stakes	LF	10,900.000	10,900.000
0278	661.0101	Temporary Traffic Signals for Bridges (structure) 01. B-02-0057	EACH	1.000	1.000
0280	661.0101	Temporary Traffic Signals for Bridges (structure) 02. B-02-0047	EACH	1.000	1.000
0282	661.0101	Temporary Traffic Signals for Bridges (structure) 03. C-02-0026	EACH	1.000	1.000
0286	690.0150	Sawing Asphalt	LF	5,010.000	5,010.000
0288	690.0250	Sawing Concrete	LF	1,880.000	1,880.000
0290	715.0502	Incentive Strength Concrete Structures	DOL	1,230.000	1,230.000
0294	999.2100.S	Installing and Maintaining Climbing Turtle Exclusion Fence	LF	980.000	980.000
0296	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	800.000	800.000
0298	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	600.000	600.000
0302	SPV.0060	Special 01. Embedded Galvanic Anodes	EACH	22.000	22.000
0304	SPV.0090	Special 01. Flashing Stainless Steel	LF	291.000	291.000
0306	SPV.0090	Special 02. Bridge Joint Repair	LF	99.000	99.000

3

CLEARING & GRUBBING

STATION	TO	STATION	LOCATION	201.0105 CLEARING STA	201.0205 GRUBBING STA
139+00	-	140+00	STH 13	1	1
156+00	-	158+00	STH 13	2	2
164+00	-	165+00	STH 13	1	1
234+00	-	235+00	STH 13	1	1
281+00	-	283+00	STH 13	2	2
285+00		287+00	STH 13	2	2
294+00	-	295+00	STH 13	1	1
307+00	-	308+00	STH 13	1	1
317+00	-	318+00	STH 13	1	1
325+00	-	326+00	STH 13	1	1
341+00	-	342+00	STH 13	1	1
359+00	-	360+00	STH 13	1	1
389+00	-	390+00	STH 13	1	1
408+00	-	409+00	STH 13	1	1
424+00	-	426+00	STH 13	2	2
442+00	-	444+00	STH 13	2	2
458+00	-	460+00	STH 13	2	2
503+00	-	507+00	STH 13	4	4
512+00	-	515+00	STH 13	3	3
696+00	-	698+00	STH 13	2	2
771+00	-	773+00	STH 13	2	2
782+00	-	784+00	STH 13	2	2
838+00	-	839+00	STH 13	1	1
895+00	-	897+00	STH 13	2	2
912+00	-	913+00	STH 13	1	1
954+00	-	958+00	STH 13	4	4
			TOTAL 0010	44	44

REMOVING STRUCTURE

STATION	LOCATION	203.0220.01 REMOVING STRUCTURE (STRUCTURE) (01. C-02-1491) EACH	203.0220.02 REMOVING STRUCTURE (STRUCTURE) (02. CATTLE PASS 70'X42"X72") EACH	203.0220.03 REMOVING STRUCTURE (STRUCTURE) (03. C-02-0168) EACH	203.0220.04 REMOVING STRUCTURE (STRUCTURE) (04. 81'X72" RCCP) EACH
139+04	STH 13	1	--	--	--
247+29	STH 13	--	1	--	--
389+56	STH 13	--	--	1	--
956+10	STH 13	--	--	--	1
TOTAL 0010		1	1	1	1

REMOVING SMALL PIPE CULVERTS

STATION	LOCATION	SIZE/MATERIAL	203.0100 REMOVING SMALL PIPE CULVERTS EACH	REMARKS
157+12	STH 13	85'x36" RCCP	1	
164+61	STH 13	65'x24" RCCP	1	
170+62	STH 13	63'x24" RCCP	1	
234+46	STH 13	89'x24" RCCP	1	
242+11	STH 13	71'x24" RCCP	1	
270+08	STH 13	73'x24" RCCP	1	
280+53	STH 13, RT	20'x 18" CMCP	1	
281+19	STH 13	59'x24" RCCP	1	
285+48	STH 13	71'x24" RCCP	1	
294+63	STH 13	90'x24" RCCP	1	
307+67	STH 13	66'x24" RCCP	1	
317+10	STH 13	69'x48" RCCP	1	
317+20	STH 13	69'x48" RCCP	1	
325+31	STH 13	24'x24" RCCP	1	3 SECTIONS, LT
341+50	STH 13	94'x24" RCCP	1	
359+35	STH 13	58'x24" RCCP	1	
369+51	STH 13	61'x24" RCCP	1	
373+52	STH 13	58'x24" RCCP	1	
399+07	STH 13	82'x24" RCCP	1	
408+54	STH 13	60'x24" RCCP	1	
424+94	STH 13	60'x24" RCCP	1	
442+70	STH 13	66'x36" RCCP	1	

~ CONTINUE ~

REMOVING SMALL PIPE CULVERTS ~ CONTINUED ~

STATION	LOCATION	SIZE/MATERIAL	203.0100 REMOVING SMALL PIPE CULVERTS EACH	REMARKS
442+80	STH 13	66'x36" RCCP	1	
458+29	STH 13	72'x24" RCCP	1	
	HEUBURGER RD	48'x24" CMCP	1	PARTIAL REMOVAL
470+04	STH 13	114'x24" RCCP	1	
479+92	STH 13	60'x24" RCCP	1	
500+27	STH 13	63'x24" RCCP	1	
502+69	STH 13	63'x24" RCCP	1	
506+94	STH 13	72'x24" RCCP	1	
512+88	STH 13	80'x24" RCCP	1	
523+52	STH 13	16'x30" RCCP	1	2 SECTIONS, LT
	STH 13	16'x30" RCCP	1	2 SECTIONS, RT
534+32	STH 13	83'x24" RCCP	1	
556+23	STH 13	95'x24" RCCP	1	
569+53	STH 13	103'x24" RCCP	1	
578+32	STH 13	115'x24" RCCP	1	
584+28	STH 13	86'x24" RCCP	1	
607+30	STH 13	24'x24" RCCP	1	3 SECTIONS, LT
	STH 13	8'x24" RCCP	1	1 SECTIONS, RT
772+11	STH 13	141'x30" RCCP	1	
783+12	STH 13	90'x24" RCCP	1	
784+05	KEMPF RD	61'x24" CMCP	1	
795+34	STH 13	82'x24" RCCP	1	
838+95	STH 13	127'x48" RCCP	1	
848+00	STH 13, LT	37'x18" CMCP	1	
848+58	STH 13, RT	34'x18" CMCP	1	
849+43	STH 13	64'x24" RCCP	1	
862+41	STH 13	90'x24" RCCP	1	
863+56	EAGAN RD	37'x24" RCCP	1	
896+09	STH 13	85'x24" RCCP	1	
912+62	STH 13	86'x24" RCCP	1	
932+00	STH 13, LT	38'x18" PLASTIC	1	
970+97	STH 13	84'x24" RCCP	1	
978+74	STH 13	72'x24" RCCP	1	
984+25	STH 13, WAYSIDE	51'x15" CMCP	1	
990+89	STH 13	78'x24" RCCP	1	
1001+62	STH 13	77'x24" RCCP	1	
		TOTAL 0010	58	

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

3

REMOVING CONCRETE PAVEMENT & ASPHALTIC SURFACE AND SAWCUTS

STATION	TO	PIPE STATION	LOCATION	204.0100 REMOVING CONCRETE PAVEMENT SY	204.0110 REMOVING ASPHALTIC SURFACE SY	690.0150 SAWING ASPHALT LF	690.0250 SAWING CONCRETE LF	REMARKS
		139+04	STH 13	111	78	68	40	BOX CULVERT REMOVAL
		157+12	STH 13	132	89	68	40	PIPE REPLACEMENT
		164+61	STH 13	111	78	68	40	PIPE REPLACEMENT
		170+62	STH 13	111	76	68	40	PIPE REPLACEMENT
193+15	-	193+36	STH 13 (BUTTERNUT CREEK)	55	47	44	--	APPROACH SLAB SOUTH
193+65	-	193+86	STH 13 (BUTTERNUT CREEK)	54	46	44	--	APPROACH SLAB NORTH
		234+46	STH 13	111	76	68	40	PIPE REPLACEMENT
		242+11	STH 13	111	76	68	40	PIPE REPLACEMENT
		247+29	STH 13	111	77	68	40	PIPE REPLACEMENT
		270+08	STH 13	111	71	68	40	PIPE REMOVAL
		281+19	STH 13	111	73	68	40	PIPE REMOVAL
		285+48	STH 13	111	73	68	40	PIPE REPLACEMENT
		294+63	STH 13	111	76	68	40	PIPE REPLACEMENT
		307+67	STH 13	111	79	68	40	PIPE REPLACEMENT
		317+10/317+20	STH 13	136	90	68	40	PIPE REPLACEMENT
		325+31	STH 13	--	5	19	--	SECTION REPLACEMENT
		341+50	STH 13	200	140	68	40	PIPE REPLACEMENT
		359+35	STH 13	111	76	68	40	PIPE REPLACEMENT
		369+51	STH 13	--	--	68	40	PIPE REPLACEMENT
		373+52	STH 13	111	78	68	40	PIPE REPLACEMENT
		389+56	STH 13	134	94	68	40	BOX CULVERT REMOVAL/PIPE PLACEMENT
		399+07	STH 13	111	78	68	40	PIPE REPLACEMENT
		408+54	STH 13	111	77	68	40	PIPE REMOVAL
		424+94	STH 13	111	76	68	40	PIPE REPLACEMENT
		442+70/442+80	STH 13	145	101	68	40	PIPE REPLACEMENT
		458+88	STH 13/NEUBURGER RD	251	188	129	40	PIPE REPLACEMENT
		470+04	STH 13	147	100	68	40	PIPE REMOVAL
		479+92	STH 13	111	77	68	40	PIPE REPLACEMENT
		500+27	STH 13	111	77	68	40	PIPE REMOVAL
		502+69	STH 13	111	77	68	40	PIPE REMOVAL
		506+94	STH 13	163	110	68	40	PIPE REPLACEMENT
		512+88	STH 13	111	74	68	40	PIPE REMOVAL
		534+32	STH 13	223	154	68	40	PIPE REPLACEMENT
		556+23	STH 13	111	77	68	40	PIPE REPLACEMENT
		569+53	STH 13	223	154	68	40	PIPE REPLACEMENT
		578+32	STH 13	223	155	68	40	PIPE REPLACEMENT
		584+28	STH 13	111	77	68	40	PIPE REPLACEMENT

~ CONTINUE ~

~ CONTINUED ~

REMOVING CONCRETE PAVEMENT & ASPHALTIC SURFACE AND SAWCUTS

STATION	TO	PIPE STATION	LOCATION	204.0100 REMOVING CONCRETE PAVEMENT SY	204.0110 REMOVING ASPHALTIC SURFACE SY	690.0150 SAWING ASPHALT LF	690.0250 SAWING CONCRETE LF	REMARKS
632+83	-	635+88	STH 13, RT (SCHRAM CREEK)	--	40	307	--	GUARDRAIL REPLACEMENT
633+24	-	636+10	STH 13, LT (SCHRAM CREEK)	--	30	284	--	GUARDRAIL REPLACEMENT
698+44	-	698+63	STH 13 (EAST FORK CHIPPEWA RIVER)	53	38	43	--	APPROACH SLAB SOUTH
699+62	-	699+82	STH 13 (EAST FORK CHIPPEWA RIVER)	55	40	43	--	APPROACH SLAB NORTH
		772+11	STH 13	223	112	60	40	PIPE REPLACEMENT
		783+12	STH 13	111	89	73	40	PIPE REPLACEMENT
		784+05	KEMPF RD	--	106	85	--	PIPE REPLACEMENT
		795+34	STH 13	131	64	60	40	PIPE REPLACEMENT
		838+95	STH 13	223	109	60	40	PIPE REPLACEMENT
		849+43	STH 13	111	55	60	40	PIPE REMOVAL
		862+41	STH 13	111	80	82	40	PIPE REMOVAL
		863+56	EAGAN RD	--	82	66	--	PIPE REPLACEMENT
872+81	-	874+69	STH 13, RT (DRYDEN CREEK)	--	55	186	--	GUARDRAIL REPLACEMENT
		896+09	STH 13	223	91	60	40	PIPE REPLACEMENT
		912+62	STH 13	111	71	66	40	PIPE REPLACEMENT
954+68	-	958+18	STH 13 (BECKY CREEK)	143	214	682	40	PIPE REMOVAL/NEW BOX CULVERT NORTH
		970+97	STH 13	111	57	60	40	PIPE REPLACEMENT
		978+74	STH 13	111	56	60	40	PIPE REPLACEMENT
		984+25	STH 13, WAYSIDE	--	92	73	--	PIPE REPLACEMENT
		990+89	STH 13	111	55	60	40	PIPE REPLACEMENT
		1001+62	STH 13	111	57	60	40	PIPE REPLACEMENT
			TOTAL 0010	**6,467**	**4,743**	**5,010**	**1,880**	

REMOVING GUARDRAIL

STATION	TO	STATION	LOCATION	204.0165 REMOVING GUARDRAIL LF
192+41	-	193+36	STH 13, LT/RT	190
193+65	-	194+60	STH 13, LT/RT	190
632+88	-	635+62	STH 13, RT	274
633+55	-	636+47	STH 13, LT	292
697+58	-	698+63	STH 13, LT/RT	210
699+62	-	700+68	STH 13, RT	106
699+62	-	702+06	STH 13, LT	244
872+94	-	875+77	STH 13, LT	283
873+00	-	875+29	STH 13, RT	229
			TOTAL 0010	**2,018**

ABANDONING CULVERT PIPES

STATION	LOCATION	204.0270 ABANDONING CULVERT PIPES EACH	REMARKS
458+20	NEUBURGER RD	1	APPROX 33' UNDER ROADWAY
	TOTAL 0010	**1**	

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

DIVISION	FROM/TO STATION	205.0100 COMMON EXCAVATION (1) CUT (2)	AVAILABLE MATERIAL (5)	PIPE EXCAVATION FOR INFORMATION ONLY	PIPE EMBANKMENT FOR INFORMATION ONLY	UNEXPANDED FILL	EXPANDED FILL (13) FACTOR 1.30	MASS ORDINATE +/- (14)	WASTE	208.0100 BORROW
DIVISION SOUTH										
0-SLG CP STA 317+15	316+84/317+45	0	0	239	105	0	0	0	0	0
1-SLG-B-57 GRAIL 193+50	190+82.60/196+18.50	21	21	0	0	63	82	-61	0	61
2-SLG-BOX STA 139+04	138+79.35/139+29.35	0	0	0	130	0	0	0	0	0
3-SLG-CP STA 157+12	156+82.32/157+41.41	0	0	215	91	0	0	0	0	0
4-SLG-CP STA 170+63	170+38/170+88	0	0	215	84	0	0	0	0	0
5-SLG-CP STA 234+46	234+21/234+71	0	0	215	103	0	0	0	0	0
6-SLG-CP STA 242+11	241+86/242+36	0	0	215	69	0	0	0	0	0
7-SLG-CP STA 281+20	280+50/287+00	473	473	295	149	585	761	-288	0	288
8-SLG-CP STA 294+63	294+38/294+88	0	0	215	81	0	0	0	0	0
9-SLG-CP STA 307+67	307+42/307+92	0	0	215	100	0	0	0	0	0
10-SLG-CP STA 325+31	325+00/325+50	0	0	152	120	0	0	0	0	0
11-SLG-CP STA 341+50	341+00/341+90.65	0	0	410	147	0	0	0	0	0
12-SLG-CP STA 359+35	359+10.35/359+60.35	0	0	215	60	0	0	0	0	0
13-SLG-CP STA 369+51	369+26.47/369+76.47	0	0	215	20	0	0	0	0	0
14-SLG-CP STA 373+52	373+27.07/373+77.07	0	0	215	40	0	0	0	0	0
15-SLG-CP STA 389+56	389+26.53/389+86.53	0	0	0	30	0	0	0	0	0
16-SLG-CP STA 399+07	398+82.19/399+32.19	0	0	215	64	0	0	0	0	0
17-SLG-CP STA 408+54	408+29/408+79	0	0	0	66	0	0	0	0	0
18-SLG-CP STA 424+94	424+69/425+19	0	0	215	45	0	0	0	0	0
19-SLG-CP STA 442+75	442+46/443+11	0	0	258	137	0	0	0	0	0
20-SLG-CP STA 458+68	458+25/459+00	0	0	493	71	0	0	0	0	0
21-SLG-CP STA 470+04	469+71.23/470+37.26	0	0	0	37	0	0	0	0	0
22-SLG-CP STA 479+92	479+66.97/480+16.97	0	0	215	52	0	0	0	0	0
23-SLG-CP-STA 164+61	164+36/164+86	0	0	258	104	0	0	0	0	0
24-SLG-CP-STA 247+29	247+04/247+54	0	0	215	47	0	0	0	0	0
25-SLG-CP-STA 270+08	269+83/270+33	0	0	0	43	0	0	0	0	0
26-SLG-GRADING STA 499	499+00/514+00	634	634	509	449	1,817	2,362	-1,728	0	1,728
DIVISION SOUTH SUBTOTAL		1,128	1,128	5,409	2,444	2,465	3,205	-2,077	0	2,077
GRAND TOTAL		1,128	1,128	5,409	2,444	2,465	3,205	-2,077	0	2,077
TOTAL COMMON EXC		1,128								

NOTES:

(1) COMMON EXCAVATION IS THE SUM OF THE CUT AND EBS EXCAVATION COLUMNS. ITEM NUMBER 205.0100

(2) SALVAGED/UNSUABLE PAVEMENT MATERIAL IS INCLUDED IN CUT.

(5) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSUABLE PAVEMENT MATERIAL

(13) EXPANDED FILL FACTOR = 1.30 EXPANDED FILL = UNEXPANDED FILL * FILL FACTOR

(14) THE MASS ORDINATE + OR - QTY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION. MINUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION.

(15) FACTORS USED TO COMPUTE ANTICIPATED WASTE AND THE COMPUTED WASTE VOLUME IDENTIFIED ARE FOR GENERAL INFORMATION ONLY.

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

DIVISION	FROM/TO STATION	205.0100 COMMON EXCAVATION (1) CUT (2)	AVAILABLE MATERIAL (5)	PIPE EXCAVATION FOR INFORMATION ONLY	PIPE EMBANKMENT FOR INFORMATION ONLY	UNEXPANDED FILL	EXPANDED FILL (13) FACTOR 1.30	MASS ORDINATE +/- (14)	WASTE	208.0100 BORROW
DIVISION NORTH										
STRUCTURE B-02-47 GUARDRAIL	695+85/703+52.60	90	90	0	0	1,800	2,340	-2,250	0	2,250
SCHRAM CRK BOX GUARDRAIL	631+63.30/637+74.10	53	53	0	0	732	952	-899	0	899
DRYDEN CRK BOX GUARDRAIL	871+06.47/877+00	106	106	0	0	36	47	59	59	0
TWIN CELL BOX STA 956+25	955+90.17/956+43.17	248	248	0	0	236	307	-59	0	59
4-SLG-CP STA 523+52	523+25/523+75	0	0	0	206	0	0	0	0	0
5-SLG-CP STA 534+32	533+82/534+82	0	0	458	603	0	0	0	0	0
6-SLG-CP STA 556+23	555+98/556+48	0	0	215	78	0	0	0	0	0
7-SLG-CP STA 569+53	569+03/570+03	0	0	458	131	0	0	0	0	0
8-SLG-CP STA 578+32	577+82/578+82	0	0	458	81	0	0	0	0	0
9-SLG-CP STA 584+28	584+03/584+53	0	0	215	75	0	0	0	0	0
10-SLG-CP STA 607+30	607+05/607+55	0	0	0	343	0	0	0	0	0
11-SLG-CP STA 772+11	771+61/772+61	0	0	458	36	0	0	0	0	0
12-SLG-CP STA 783+12	782+87.22/783+37.22	0	0	215	41	0	0	0	0	0
13-SLG-CP STA 795+34	795+04/795+63	0	0	229	9	0	0	0	0	0
14-SLG-CP STA 838+95	838+45.16/839+45.16	0	0	458	35	0	0	0	0	0
15-SLG-CP STA 849+43	849+18.16/849+68.16	0	0	0	6	0	0	0	0	0
16-SLG-CP STA 862+41	862+15.16/863+53	0	0	0	30	0	0	0	0	0
17-SLG-CP STA 896+09	895+58.17/896+58.17	0	0	458	202	0	0	0	0	0
18-SLG-CP STA 912+62	912+38.16/912+88.16	0	0	215	48	0	0	0	0	0
19-SLG-CP STA 970+97	970+72.16/971+22.16	0	0	215	49	0	0	0	0	0
20-SLG-CP STA 978+74	978+49.16/978+99.16	0	0	215	19	0	0	0	0	0
21-SLG-CP STA 990+89	990+64.16/991+14.16	0	0	215	51	0	0	0	0	0
22-SLG-CP STA 1001+62	1001+37.16/1001+87.16	0	0	215	22	0	0	0	0	0
DIVISION NORTH SUBTOTAL		497	497	4,697	2,065	2,804	3,645	-3,148	59	3,207
GRAND TOTAL		497	497	4,697	2,065	2,804	3,645	-3,148	59	3,207
TOTAL COMMON EXC		497								

NOTES:

(1) COMMON EXCAVATION IS THE SUM OF THE CUT AND EBS EXCAVATION COLUMNS. ITEM NUMBER 205.0100

(2) SALVAGED/UNSUABLE PAVEMENT MATERIAL IS INCLUDED IN CUT.

(5) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSUABLE PAVEMENT MATERIAL

(13) EXPANDED FILL FACTOR = 1.: EXPANDED FILL = UNEXPANDED FILL * FILL FACTOR

(14) THE MASS ORDINATE + OR - QTY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION. MINUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION.

(15) FACTORS USED TO COMPUTE ANTICIPATED WASTE AND THE COMPUTED WASTE VOLUME IDENTIFIED ARE FOR GENERAL INFORMATION ONLY.

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

3

TEMPORARY LANE SHIFT DURING CULVERT WORK

STATION	LOCATION	208.1500.S TEMPORARY LANE SHIFT DURING CULVERT WORK EACH
139+04	STH 13	1
157+12	STH 13	1
164+61	STH 13	1
170+62	STH 13	1
234+46	STH 13	1
242+11	STH 13	1
247+29	STH 13	1
270+08	STH 13	1
281+19	STH 13	1
285+48	STH 13	1
294+63	STH 13	1
307+67	STH 13	1
317+10/317+20	STH 13	1
341+50	STH 13	1
359+35	STH 13	1
369+51	STH 13	1
373+52	STH 13	1
389+56	STH 13	1
399+07	STH 13	1
408+54	STH 13	1
424+94	STH 13	1
442+73/442+84	STH 13	1
458+88	STH 13	1
470+04	STH 13	1
479+92	STH 13	1
500+27	STH 13	1
502+69	STH 13	1
506+70	STH 13	1
512+88	STH 13	1
534+32	STH 13	1
556+23	STH 13	1
569+53	STH 13	1
578+32	STH 13	1
584+28	STH 13	1
772+11	STH 13	1
783+12	STH 13	1
795+34	STH 13	1
838+95	STH 13	1
849+43	STH 13	1

~ CONTINUE ~

TEMPORARY LANE SHIFT DURING CULVERT WORK ~ CONTINUED ~

STATION	LOCATION	208.1500.S TEMPORARY LANE SHIFT DURING CULVERT WORK EACH
862+41	STH 13	1
896+09	STH 13	1
912+62	STH 13	1
970+97	STH 13	1
978+74	STH 13	1
990+89	STH 13	1
1001+62	STH 13	1
	TOTAL 0010	**46**

FINISHING ROADWAY

PROJECT	213.0100.01 FINISHING ROADWAY (PROJECT) (01. 1610-00-81) EACH
1610-00-81	1
TOTAL 0010	**1**

BASE AGGREGATE DENSE & ASPHALTIC SURFACE

STATION	TO	STATION	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	455.0605 TACK COAT GAL	465.0105 ASPHALTIC SURFACE TON	465.0125 ASPHALTIC SURFACE TEMPORARY TON	650.5000 CONSTRUCTION STAKING BASE LF
		139+04	STH 13	17	181	19	74	--	50
		157+12	STH 13	21	214	22	88	--	59
		164+61	STH 13	17	181	19	74	--	50
		170+62	STH 13	17	181	19	74	--	50
190+83	-	193+36	BUTTERNUT CREEK APPROACH SLAB	48	60	6	24	--	20
193+66	-	196+19	BUTTERNUT CREEK APPROACH SLAB	48	60	6	24	--	20
		234+46	STH 13	17	181	19	74	--	50
		242+11	STH 13	17	181	19	74	--	50
		247+29	STH 13	17	181	19	74	--	50
		270+08	STH 13	17	181	19	74	--	50
		280+53	STH 13, RT	13	--	--	--	--	--
		281+19	STH 13	17	181	19	74	--	50
		285+48	STH 13	17	181	19	74	--	50
		294+63	STH 13	17	181	19	74	--	50
		307+67	STH 13	17	181	19	74	--	50
		317+10/317+20	STH 13	21	221	23	91	--	61
		325+31	STH 13	2	9	1	3	--	--
		341+50	STH 13	31	326	34	134	--	90
		359+35	STH 13	17	181	19	74	--	50
		369+51	STH 13	17	181	19	74	--	50
		373+52	STH 13	17	181	19	74	--	50
		389+56	STH 13	21	217	23	90	--	60
		399+07	STH 13	17	181	19	74	--	50
		408+54	STH 13	17	181	19	74	--	50
		424+94	STH 13	17	181	19	74	--	50
		442+73/442+84	STH 13	23	235	25	97	--	65
		458+88	STH 13/ NEUBURGER RD	31	419	50	181	--	113
		470+04	STH 13	23	240	25	99	--	66
		479+92	STH 13	17	181	19	74	--	50
		500+27	STH 13	17	181	19	74	--	50
		502+69	STH 13	17	181	19	74	--	50
		506+70	STH 13	25	264	28	109	--	73
		512+88	STH 13	17	181	19	74	--	50
		534+32	STH 13	35	362	38	149	--	100
		556+23	STH 13	17	181	19	74	--	50
		569+53	STH 13	35	362	38	149	--	100
		578+32	STH 13	35	362	38	149	--	100
		584+28	STH 13	17	181	19	74	--	50

~ CONTINUE ~

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

3

BASE AGGREGATE DENSE & ASPHALTIC SURFACE ~ CONTINUED ~

STATION	TO	STATION	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	455.0605 TACK COAT GAL	465.0105 ASPHALTIC SURFACE TON	465.0125 ASPHALTIC SURFACE TEMPORARY TON	650.5000 CONSTRUCTION STAKING BASE LF
631+63	-	637+75	SCHRAM CREEK GUARDRAIL	107	--	--	--	--	--
695+85	-	698+63	E FORK CHIP RIVER APPROACH SLAB	54	56	6	23	--	20
699+62	-	704+03	E FORK CHIP RIVER APPROACH SLAB	64	60	6	24	--	20
		772+11	STH 13	35	332	33	132	--	100
		783+12	STH 13	17	188	20	79	--	50
		784+05	KEMPF RD	2	54	5	18	--	--
		795+34	STH 13	21	196	20	77	--	59
		838+95	STH 13	35	332	33	132	--	100
		848+00	STH 13, LT	21	--	--	--	--	--
		848+50	STH 13, RT	18	--	--	--	--	--
		849+43	STH 13	17	166	17	66	--	50
		862+41	STH 13	18	186	19	76	--	50
		863+56	EAGAN RD	--	55	4	14	--	--
873+52	-	876+67	DRYDEN CREEK GUARDRAIL	92	--	--	--	--	--
		896+09	STH 13	35	332	33	132	--	100
		912+62	STH 13	21	184	18	73	--	50
		932+00	STH 13, LT	15	--	--	--	--	--
953+78	-	958+88	BECKY CREEK BOX CULVERT	232	611	35	150	32	400
		970+97	STH 13	17	166	17	66	--	50
		978+74	STH 13	17	166	17	66	--	50
		984+25	STH 13, WAYSIDE	--	60	5	16	--	--
		990+89	STH 13	17	166	17	66	--	50
		1001+62	STH 13	17	166	17	66	--	50
-									
			TOTAL 0010	**1,675**	**10,990**	**1,116**	**4,365**	**32**	**3,276**

CONCRETE PAVEMENT APPROACH SLAB

STATION	TO	STATION	LOCATION	415.0410 CONCRETE PAVEMENT APPROACH SLAB SY
193+21	-	193+36	BUTTERNUT CREEK	40
193+65	-	193+86	BUTTERNUT CREEK	40
698+48	-	698+63	EAST FORK CHIPPEWA RIVER	40
699+62	-	699+77	EAST FORK CHIPPEWA RIVER	40
			TOTAL 0010	**160**

CLEANING CULVERT PIPES

STATION	LOCATION	MATERIAL/SIZE	520.8700 CLEANING CULVERT PIPES EACH
361+50	STH 13	61'x24" RCCP	1
		TOTAL 0010	**1**

MOBILIZATION

PROJECT	619.1000 MOBILIZATION EACH
1610-00-81	0.85
TOTAL 0010	**0.85**

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

3

MGS GUARDRAIL

STATION	TO	STATION	LOCATION	614.1000 MGS GUARDRAIL TEMPORARY LF	614.2300 MGS GUARDRAIL 3 LF	614.2330 MGS GUARDRAIL 3 K LF	614.2500 MGS THRIE BEAM TRANSITION LF	614.2610 MGS GUARDRAIL TERMINAL EAT EACH	614.8010 ANCHOR POST ASSEMBLY TOP MOUNT EACH
192+33	-	193+36	STH 13, LT	--	12.5	--	37.5	1	--
192+33	-	193+36	STH 13, RT	--	12.5	--	37.5	1	--
193+65	-	194+69	STH 13, LT	--	12.5	--	37.5	1	--
193+65	-	194+69	STH 13, RT	--	12.5	--	37.5	1	--
632+83	-	636+49	STH 13, RT	--	262	--	--	2	--
632+83	-	636+54	STH 13, LT	--	262	--	--	2	--
697+35	-	698+63	STH 13, LT	--	12.5	--	37.5	1	--
697+35	-	698+63	STH 13, RT	--	12.5	--	37.5	1	--
699+62	-	702+03	STH 13, LT	--	150	--	37.5	1	--
699+62	-	699+77	STH 13, RT	--	12.5	--	37.5	1	--
872+72	-	876+22	STH 13, LT	--	250	--	--	2	--
872+72	-	875+32	STH 13, RT	--	150	--	--	2	5
955+18	-	957+68	STH 13, LT	--	137.5	--	--	2	--
955+87	-	956+24	STH 13, LT (STAGE 2)	37.5	--	--	--	--	--
954+68	-	957+68	STH 13, RT	--	87.5	100	--	2	--
			TOTAL 0010	37.5	1,386.5	100	300	20	5

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

CULVERT PIPES

STATION	LOCATION	520.3142 CULVERT PIPE CLASS III 42-INCH LF	520.3148 CULVERT PIPE CLASS III 48-INCH LF	520.3318 CULVERT PIPE CLASS III-A 18-INCH LF	520.3324 CULVERT PIPE CLASS III-A 24-INCH LF	520.3330 CULVERT PIPE CLASS III-A 30-INCH LF	520.3336 CULVERT PIPE CLASS III-A 36-INCH LF	530.0136 CULVERT PIPE CORRUGATED POLYETHYLENE 36-INCH LF	MINIMUM THICKNESS STEEL (INCHES)	MINIMUM THICKNESS ALUM (INCHES)	UPSTREAM INVERT	DOWNSTREAM INVERT	SLOPE (%)
157+12	STH 13	88	--	--	--	--	--	--	0.109	0.105	1496.38	1496.00	0.43
164+61	STH 13	78	--	--	--	--	--	--	0.109	0.105	1492.93	1491.00	2.47
170+62	STH 13	--	--	--	--	76	--	--	0.079	0.075	1493.00	1492.40	0.79
234+46	STH 13	--	80	--	--	--	--	--	0.109	0.105	1534.81	1532.28	3.16
242+11	STH 13	--	--	--	--	70	--	--	0.079	0.075	1549.90	1547.84	2.94
247+29	STH 13	--	--	--	81	--	--	--	0.064	0.075	1564.80	1564.28	0.64
280+53	STH 13, RT	--	--	26	--	--	--	--	0.064	0.060	1572.50	1572.00	1.92
285+48	STH 13	--	--	--	78	--	--	--	0.064	0.075	1568.25	1565.70	3.27
294+63	STH 13	--	--	--	88	--	--	--	0.064	0.075	1562.75	1562.33	0.48
307+67	STH 13	--	--	--	--	--	71	--	0.079	0.105	1558.99	1558.90	0.13
317+09	STH 13	--	70	--	--	--	--	--	0.109	0.105	1557.57	1557.24	0.47
317+20	STH 13	--	70	--	--	--	--	--	0.109	0.105	1557.57	1557.24	0.47
341+50	STH 13	--	--	--	--	--	90	--	0.079	0.105	1559.91	1558.25	1.84
399+07	STH 13	69	--	--	--	--	--	--	0.109	0.105	1553.20	1552.70	0.72
424+94	STH 13	--	--	--	--	66	--	--	0.079	0.075	1549.35	1549.00	0.53
442+73	STH 13	--	72	--	--	--	--	--	0.109	0.105	1533.75	1533.20	0.76
442+84	STH 13	--	72	--	--	--	--	--	0.109	0.105	1533.75	1533.20	0.76
534+32	STH 13	--	--	--	--	106	--	--	0.079	0.075	1555.46	1554.11	1.27
556+23	STH 13	--	--	--	--	--	88	--	0.079	0.105	1542.84	1540.00	3.23
569+53	STH 13	--	--	--	--	--	95	--	0.079	0.105	1543.62	1542.82	0.84
578+32	STH 13	--	--	--	--	103	--	--	0.079	0.075	1546.47	1544.51	1.90
584+28	STH 13	--	--	--	--	79	--	--	0.079	0.075	1552.00	1551.70	0.38
772+11	STH 13	--	111	--	--	--	--	--	0.109	0.105	1534.36	1533.80	0.50
783+12	STH 13	--	--	--	--	--	79	--	0.079	0.105	1535.09	1531.00	5.18
784+05	KEMPF RD	--	--	--	60	--	--	--	0.064	0.075	1538.30	1537.50	1.33
795+29	STH 13	--	--	--	--	--	--	74	--	--	1528.86	1528.16	0.95
795+38	STH 13	--	--	--	--	--	--	74	--	--	1528.86	1528.16	0.95
838+95	STH 13	--	97	--	--	--	--	--	0.109	0.105	1515.29	1513.20	2.15
848+00	STH 13, LT	--	--	34	--	--	--	--	0.064	0.060	1539.30	1538.90	1.18
848+58	STH 13, RT	--	--	38	--	--	--	--	0.064	0.060	1539.20	1538.70	1.32
863+50	EAGAN RD	--	--	--	36	--	--	--	0.064	0.075	1538.70	1537.65	2.92
896+09	STH 13	--	97	--	--	--	--	--	0.109	0.105	1503.89	1502.89	1.03
912+62	STH 13	--	80	--	--	--	--	--	0.109	0.105	1501.62	1500.63	1.24
932+00	STH 13, LT	--	--	38	--	--	--	--	0.064	0.060			
970+97	STH 13	--	68	--	--	--	--	--	0.109	0.105	1512.00	1511.80	0.29
984+25	STH 13, WAYSIDE	--	--	52	--	--	--	--	0.064	0.060	1513.85	1513.55	0.58
990+89	STH 13	70	--	--	--	--	--	--	0.109	0.105	1509.20	1508.80	0.57
1001+62	STH 13	--	--	--	--	--	69	--	0.079	0.105	1509.50	1508.34	1.68
	TOTAL 0010	**305**	**817**	**188**	**343**	**500**	**492**	**148**					

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

APRON ENDWALLS FOR CULVERT PIPE

STATION	LOCATION	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	520.1048 APRON ENDWALLS FOR CULVERT PIPE 48-INCH EACH	521.1503 APRON ENDWALLS FOR CULVERT PIPE SLOPED SIDE DRAINS STEEL 18-INCH 4 TO 1 EACH	MINIMUM THICKNESS STEEL (INCHES)	MINIMUM THICKNESS ALUM (INCHES)
157+12	STH 13	--	--	--	--	2	--	--	0.109	0.105
164+61	STH 13	--	--	--	--	2	--	--	0.109	0.105
170+62	STH 13	--	--	2	--	--	--	--	0.079	0.075
234+46	STH 13	--	--	--	--	--	2	--	0.109	0.105
242+11	STH 13	--	--	2	--	--	--	--	0.079	0.075
247+29	STH 13	--	2	--	--	--	--	--	0.064	0.075
280+53	STH 13, RT	--	--	--	--	--	--	2	0.064	--
285+48	STH 13	--	2	--	--	--	--	--	0.064	0.075
294+63	STH 13	--	2	--	--	--	--	--	0.064	0.075
307+67	STH 13	--	--	--	2	--	--	--	0.079	0.105
317+09	STH 13	--	--	--	--	--	2	--	0.109	0.105
317+20	STH 13	--	--	--	--	--	2	--	0.109	0.105
341+50	STH 13	--	--	--	2	--	--	--	0.079	0.105
399+07	STH 13	--	--	--	--	2	--	--	0.109	0.105
424+94	STH 13	--	--	2	--	--	--	--	0.079	0.075
442+73	STH 13	--	--	--	--	--	2	--	0.109	0.105
442+84	STH 13	--	--	--	--	--	2	--	0.109	0.105
534+32	STH 13	--	--	2	--	--	--	--	0.079	0.075
556+23	STH 13	--	--	--	2	--	--	--	0.079	0.105
569+53	STH 13	--	--	--	2	--	--	--	0.079	0.105
578+32	STH 13	--	--	2	--	--	--	--	0.079	0.075
584+28	STH 13	--	--	2	--	--	--	--	0.079	0.075
772+11	STH 13	--	--	--	--	--	2	--	0.109	0.105
783+12	STH 13	--	--	--	2	--	--	--	0.079	0.105
784+05	KEMPF RD	--	2	--	--	--	--	--	0.064	0.075
795+29	STH 13	--	--	--	2	--	--	--	0.079	0.105
795+38	STH 13	--	--	--	2	--	--	--	0.079	0.105
838+95	STH 13	--	--	--	--	--	2	--	0.109	0.105
848+00	STH 13, LT	2	--	--	--	--	--	--	0.064	0.060
848+58	STH 13, RT	2	--	--	--	--	--	--	0.064	0.060
863+50	EAGAN RD	--	2	--	--	--	--	--	0.064	0.075
896+09	STH 13	--	--	--	--	--	2	--	0.109	0.105
912+62	STH 13	--	--	--	--	--	2	--	0.109	0.105
932+00	STH 13, LT	2	--	--	--	--	--	--	0.064	0.060
970+97	STH 13	--	--	--	--	--	2	--	0.109	0.105
984+25	STH 13, WAYSIDE	2	--	--	--	--	--	--	0.064	0.060
990+89	STH 13	--	--	--	--	2	--	--	0.109	0.105
1001+62	STH 13	--	--	--	2	--	--	--	0.079	0.105
	TOTAL 0010	**8**	**10**	**12**	**16**	**8**	**20**	**2**		

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

CULVERT PIPES REINFORCED CONCRETE

STATION	LOCATION	520.8000 CONCRETE COLLARS FOR PIPE EACH	522.0124 CULVERT PIPE REINFORCED CONCRETE CLASS III 24-INCH LF	522.0130 CULVERT PIPE REINFORCED CONCRETE CLASS III 30-INCH LF	522.0136 CULVERT PIPE REINFORCED CONCRETE CLASS III 36-INCH LF	522.0142 CULVERT PIPE REINFORCED CONCRETE CLASS III 42-INCH LF	522.0424 CULVERT PIPE REINFORCED CONCRETE CLASS IV 24-INCH LF	522.0430 CULVERT PIPE REINFORCED CONCRETE CLASS IV 30-INCH LF	522.0442 CULVERT PIPE REINFORCED CONCRETE CLASS IV 42-INCH LF	522.1024 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH EACH	522.1030 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 30-INCH EACH	522.1036 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 36-INCH EACH	522.1042 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 42-INCH EACH	UPSTREAM INVERT	DOWNSTREAM INVERT	SLOPE (%)
325+31	STH 13, LT	1	24	--	--	--	--	--	--	1	--	--	--			
	STH 13, RT	1	--	--	--	--	--	--	--	1	--	--	--			
359+35	STH 13	--	--	--	--	--	--	62	--	--	2	--	--	1553.00	1552.30	1.13
369+51	STH 13	--	--	--	--	--	55	--	--	2	--	--	--	1552.78	1552.15	1.15
373+52	STH 13	--	--	60	--	--	--	--	--	--	2	--	--	1552.76	1552.68	0.13
458+88	STH 13	--	--	--	--	--	62	--	--	2	--	--	--	1542.00	1539.80	3.55
479+92	STH 13	--	--	--	--	--	--	--	59	--	--	--	2	1532.75	1531.98	1.31
506+70	STH 13	--	--	--	--	60	--	--	--	--	--	--	2	1526.93	1526.30	1.05
523+52	STH 13, LT	1	--	24	--	--	--	--	--	--	1	--	--			
	STH 13, RT	1	--	25	--	--	--	--	--	--	1	--	--			
607+30	STH 13, LT	1	26	--	--	--	--	--	--	1	--	--	--			
	STH 13, RT	1	10	--	--	--	--	--	--	1	--	--	--			
978+74	STH 13	--	--	--	58	--	--	--	--	--	--	2	--	1511.82	1510.69	1.95
	TOTAL 0010	**6**	**60**	**109**	**58**	**60**	**117**	**62**	**59**	**8**	**6**	**2**	**4**			

CONCRETE BARRIER TEMPORARY

STAGE	603.8000 CONCRETE BARRIER TEMPORARY PRECAST DELIVERED LF	603.8125 CONCRETE BARRIER TEMPORARY PRECAST INSTALLED LF	603.8500 ANCHORING CONCRETE BARRIER TEMPORARY PRECAST LF	614.0905 CRASH CUSHIONS TEMPORARY EACH	BACK WIDTH FT	OBJECT MARKING PATTERN	CRASH TEST LEVEL	TRAFFIC DIRECTION	TRAFFIC LOCATION	CRASH CUSHION SHIELDS
STAGE 1 (BECKY CREEK)	395	395	90	1	4	OM-3R	TL-3	UNIDIRECTIONAL	LT	TEMPORARY BARRIER END
STAGE 2 (BECKY CREEK)	55	450	90	1	4	OM-3R	TL-3	UNIDIRECTIONAL	RT	TEMPORARY BARRIER END
STAGE 3 (BECKY CREEK)	--	395	30	1	4	OM-3R	TL-3	UNIDIRECTIONAL	LT	TEMPORARY BARRIER END
TOTAL 0010	**450**	**1,240**	**210**	**3**						

RIPRAP HEAVY & GEOTEXTILE TYPE HR

STATION	LOCATION	606.0300 RIPRAP HEAVY CY	645.0120 GEOTEXTILE TYPE HR SY	REMARKS
634+49	STH 13, LT (SCHRAM CREEK)	41	73	5'x30'x6' DEPTH OFF END OF WINGWALL; 5'x2' DEPTH BY WINGWALLS
634+49	STH 13, RT (SCHRAM CREEK)	23	62	5'x34'x2' DEPTH OFF END OF WINGWALL; 5'x2' DEPTH BY WINGWALLS
	UNDISTRIBUTED	16	35	
	TOTAL 0010	**80**	**170**	

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

EROSION CONTROL ITEMS

STATION	TO	STATION	LOCATION	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.2008 EROSION MAT URBAN CLASS I TYPE B SY	628.2027 EROSION MAT CLASS II TYPE C SY	628.7555 CULVERT PIPE CHECKS EACH
		157+12	STH 13	201	201	--	--	8
		164+61	STH 13	161	161	--	--	8
		170+62	STH 13	159	159	--	--	5
190+82	-	196+15	STH 13	878	878	--	--	--
		234+46	STH 13	208	208	71	--	10
		242+11	STH 13	92	92	--	--	5
		247+29	STH 13	--	--	33	--	3
		270+08	STH 13	81	81	--	--	--
		280+53	STH 13, RT	--	--	--	--	2
280+70	-	288+50	STH 13, RT	691	691	--	--	--
284+25	-	288+50	STH 13, RT	--	--	548	--	--
		285+48	STH 13	--	--	--	--	3
		294+63	STH 13	182	182	145	--	3
		307+67	STH 13	102	102	--	--	--
		317+09	STH 13	201	201	--	--	10
		317+20	STH 13					10
		325+31	STH 13	187	187	--	167	3
		341+50	STH 13	--	--	179	--	7
		359+35	STH 13	219	219	--	--	5
		369+51	STH 13	95	95	--	--	3
		373+52	STH 13	84	84	--	--	--
		389+56	STH 13	--	--	104	--	--
		399+07	STH 13	92	92	--	--	8
		424+94	STH 13	178	178	--	--	--
		442+73	STH 13	248	248	--	--	10
		442+84	STH 13					10
		458+88	STH 13	148	148	--	29	3
		470+04	STH 13	47	47	--	--	--
		479+92	STH 13	165	165	--	--	13
499+25	-	509+25	STH 13	1,193	1,193	--	--	--
		506+73	STH 13	--	--	41	--	8
510+50	-	515+00	STH 13	461	461	--	--	--
		523+52	STH 13	176	176	--	--	5
		534+32	STH 13	93	93	--	--	5
		556+23	STH 13	90	90	--	--	7
		569+53	STH 13	124	124	--	--	7
		578+32	STH 13	91	91	--	--	5
		584+28	STH 13	89	89	--	--	5
		607+30	STH 13	237	237	--	465	3

~ CONTINUE ~

EROSION CONTROL ITEMS ~ CONTINUED ~

STATION	TO	STATION	LOCATION	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.2008 EROSION MAT URBAN CLASS I TYPE B SY	628.2027 EROSION MAT CLASS II TYPE C SY	628.7555 CULVERT PIPE CHECKS EACH
631+00	-	637+10	STH 13	1,046	1,046	300	--	--
695+50	-	698+55	STH 13	283	283	828	--	--
699+70	-	704+00	STH 13	558	558	296	--	--
		772+11	STH 13	130	130	--	--	10
		783+12	STH 13	65	65	--	--	7
		784+05	KEMPF RD	--	--	--	--	3
		795+29	STH 13	--	--	--	--	7
		795+38	STH 13					7
		838+95	STH 13	--	--	--	--	10
		848+00	STH 13, LT	--	--	--	--	2
		848+58	STH 13, RT	--	--	--	--	2
		849+43	STH 13	81	81	--	--	--
		863+50	EAGAN RD	--	--	--	--	3
872+50	-	875+75	STH 13	604	604	--	--	--
		896+09	STH 13	175	175	--	--	10
		912+62	STH 13	61	61	--	--	10
		932+00	STH 13, LT	--	--	--	--	2
955+30	-	958+28	STH 13	563	563	572	--	--
		970+97	STH 13	163	163	--	--	10
		978+74	STH 13	162	162	--	--	7
		984+25	STH 13, WAYSIDE	--	--	--	--	2
		990+89	STH 13	134	134	--	--	8
		1001+62	STH 13	137	137	--	--	7
		UNDISTRIBUTED		2,785	2,785	783	164	64
			TOTAL 0010	**13,920**	**13,920**	**3,900**	**825**	**345**

MOBILIZATIONS EROSION CONTROL & EMERGENCY EROSION CONTROL

LOCATION	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH
PROJECT LIMITS	3	2
TOTAL 0010	**3**	**2**

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

3

RESTORATION ITEMS

STATION	TO	STATION	LOCATION	625.0500 SALVAGED TOPSOIL SY	627.0200 MULCHING SY	629.0210 FERTILIZER TYPE B CWT	630.0120 SEEDING MIXTURE NO. 20 LB	630.0200 SEEDING TEMPORARY LB	630.0500 SEED WATER MGAL
		139+04	STH 13	269	269	0.2	12.1	7.3	6.0
		157+12	STH 13	477	477	0.3	21.5	12.9	10.7
		164+61	STH 13	350	350	0.2	15.7	9.4	7.8
		170+62	STH 13	325	325	0.2	14.6	8.8	7.3
190+56	-	196+50	STH 13	967	967	0.6	43.5	26.1	21.7
		234+46	STH 13	423	352	0.3	19.0	11.4	9.5
		242+11	STH 13	323	323	0.2	14.5	8.7	7.2
		247+29	STH 13	302	269	0.2	13.6	8.2	6.8
		270+08	STH 13	306	306	0.2	13.8	8.3	6.9
278+50	-	287+50	STH 13	3,875	3,327	2.4	174.4	104.6	87.0
		294+63	STH 13	414	269	0.3	18.6	11.2	9.3
		307+67	STH 13	352	352	0.2	15.8	9.5	7.9
		317+10/317+20	STH 13	424	424	0.3	19.1	11.4	9.5
		325+31	STH 13	555	388	0.4	25.0	15.0	12.5
		341+50	STH 13	616	437	0.4	27.7	16.6	13.8
		359+35	STH 13	275	275	0.2	12.4	7.4	6.2
		369+51	STH 13	253	253	0.2	11.4	6.8	5.7
		373+52	STH 13	291	291	0.2	13.1	7.8	6.5
		389+56	STH 13	381	277	0.2	17.1	10.3	8.5
		399+07	STH 13	329	329	0.2	14.8	8.9	7.4
		408+54	STH 13	288	288	0.2	12.9	7.8	6.5
		424+94	STH 13	284	284	0.2	12.8	7.7	6.4
		442+73/442+84	STH 13	426	426	0.3	19.2	11.5	9.6
		458+88	STH 13/ NEUBURGER RD	396	367	0.3	17.8	10.7	8.9
		470+04	STH 13	261	261	0.2	11.7	7.0	5.9
		479+92	STH 13	267	267	0.2	12.0	7.2	6.0
498+50	-	515+00	STH 13	6,889	6,889	4.3	310.0	186.0	154.7
		523+50	STH 13	549	549	0.4	24.7	14.8	12.3
		534+32	STH 13	960	960	0.6	43.2	25.9	21.6
		556+23	STH 13	442	442	0.3	19.9	11.9	9.9
		569+53	STH 13	830	830	0.5	37.4	22.4	18.6
		578+32	STH 13	834	834	0.5	37.5	22.5	18.7
		584+28	STH 13	399	399	0.3	18.0	10.8	9.0
		607+30	STH 13	664	199	0.4	29.9	17.9	14.9
631+00	-	638+00	STH 13	2,838	2,538	1.8	127.7	76.6	63.7
695+50	-	704+00	STH 13	3,523	2,399	2.2	158.5	95.1	79.1
		772+11	STH 13	890	890	0.6	40.1	24.0	20.0
		783+12	STH 13	389	389	0.3	17.5	10.5	8.7

~ CONTINUE ~

RESTORATION ITEMS ~ CONTINUED ~

STATION	TO	STATION	LOCATION	625.0500 SALVAGED TOPSOIL SY	627.0200 MULCHING SY	629.0210 FERTILIZER TYPE B CWT	630.0120 SEEDING MIXTURE NO. 20 LB	630.0200 SEEDING TEMPORARY LB	630.0500 SEED WATER MGAL
		795+34	STH 13	443	443	0.3	19.9	12.0	9.9
		838+95	STH 13	837	837	0.5	37.6	22.6	18.8
		849+43	STH 13	237	237	0.2	10.6	6.4	5.3
		862+41	STH 13	365	365	0.2	16.4	9.9	8.2
871+50	-	876+75	STH 13	1,022	1,022	0.6	46.0	27.6	22.9
		896+09	STH 13	785	785	0.5	35.3	21.2	17.6
		912+62	STH 13	376	376	0.2	16.9	10.2	8.4
954+00	-	958+75	STH 13	1,110	527	1.0	67.8	40.7	33.8
		970+97	STH 13	420	420	0.3	18.9	11.3	9.4
		978+74	STH 13	318	318	0.2	14.3	8.6	7.1
		990+89	STH 13	373	373	0.2	16.8	10.1	8.4
		1001+62	STH 13	303	303	0.2	13.6	8.2	6.8
		UNDISTRIBUTED		--	8,868	6.6	445.4	267.3	222.7
			TOTAL 0010	**39,225**	**44,345**	**32**	**2,228**	**1,337**	**1,112**

MARKERS CULVERT END

STATION	LOCATION	633.5200 MARKERS CULVERT END EACH
157+12	STH 13	2
164+61	STH 13	2
170+62	STH 13	2
234+46	STH 13	2
242+11	STH 13	2
247+29	STH 13	2
280+53	STH 13	2
285+48	STH 13	2
294+63	STH 13	2
307+67	STH 13	2
317+09	STH 13	2
317+20	STH 13	2
325+31	STH 13	2
341+50	STH 13	2
359+35	STH 13	2
361+50	STH 13	2
369+51	STH 13	2
373+52	STH 13	2

~ CONTINUE ~

MARKERS CULVERT END

STATION	LOCATION	633.5200 MARKERS CULVERT END EACH
399+07	STH 13	2
424+94	STH 13	2
442+73	STH 13	2
442+84	STH 13	2
458+88	STH 13	2
479+92	STH 13	2
506+70	STH 13	2
523+52	STH 13	2
534+32	STH 13	2
556+23	STH 13	2
569+53	STH 13	2
578+32	STH 13	2
584+28	STH 13	2
607+30	STH 13	2
772+11	STH 13	2
783+12	STH 13	2
784+05	KEMPF RD	2
795+29	STH 13	2

~ CONTINUE ~

MARKERS CULVERT END

STATION	LOCATION	633.5200 MARKERS CULVERT END EACH
795+38	STH 13	2
838+95	STH 13	2
848+00	STH 13	2
848+58	STH 13	2
863+50	EAGAN RD	2
896+09	STH 13	2
912+62	STH 13	2
932+00	STH 13	2
970+97	STH 13	2
978+74	STH 13	2
984+25	STH 13, WAYSIDE	2
990+89	STH 13	2
1001+62	STH 13	2
	TOTAL 0010	**98**

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

3

MOVING SIGNS TYPE II

STATION	LOCATION	638.2102 MOVING SIGNS TYPE II EACH	638.4000 MOVING SMALL SIGN SUPPORTS EACH	REMARKS
192+80	STH 13, RT	1	1	NO PARKING
193+87	STH 13, RT	1	1	REDUCED SPEED AHEAD
633+70	STH 13, RT	1	2	SCHRAM CREEK
698+24	STH 13, RT	1	1	EAST FORK CHIPPEWA RIVER
700+58	STH 13, LT	1	1	EAST FORK CHIPPEWA RIVER
873+47	STH 13, RT	1	1	NO FISHING FROM BRIDGE
875+05	STH 13, LT	1	1	NO FISHING FROM BRIDGE
875+69	STH 13, LT	1	1	SOUTH 13
954+92	STH 13, LT	1	1	JCT 351 NATIONAL FOREST
955+06	STH 13, RT	1	2	WAYSIDE 1/2 MILE CLOSED
	TOTAL 0010	**10**	**12**	

TRAFFIC CONTROL

LOCATION	IN SERVICE DAYS	#	643.0300 TRAFFIC CONTROL DRUMS DAY	#	643.0420 TRAFFIC CONTROL BARRICADES TYPE III DAY	#	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A DAY	#	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C DAY	#	643.0900 TRAFFIC CONTROL SIGNS DAY
BUTTERNUT CREEK	60	26	1,560	2	120	4	240	12	720	18	1,080
EAST FORK CHIPPEWA RIVER	35	33	1,155	2	70	4	140	12	420	18	630
BECKY CREEK	60	48	2,880	2	120	4	240	24	1,440	20	1,200
CULVERT PIPE REPLACEMENT	120	80	9,600	--	--	--	--	--	--	24	2,880
UNDISTRIBUTED			466		80		155		645		1,450
TOTAL 0010			**15,661**		**390**		**775**		**3,225**		**7,240**

3

FIELD OFFICE TYPE B

PROJECT	642.5001 FIELD OFFICE TYPE B EACH
1610-00-81	0.85
TOTAL 0010	**0.85**

TEMPORARY MARKING LINE & MARKING REMOVAL LINE

LOCATION	STAGE	643.3165 TEMPORARY MARKING LINE PAINT 6-INCH LF	643.3180 TEMPORARY MARKING LINE REMOVABLE TAPE 6-INCH LF	643.3805 TEMPORARY MARKING STOP LINE PAINT 18-INCH LF	646.9002 MARKING REMOVAL LINE 6-INCH LF
BUTTERNUT CREEK	1	2,800	437	24	487
BUTTERNUT CREEK	2	--	437	--	214
EAST FORK CHIPPEWA RIVER	1	2,800	754	24	373
EAST FORK CHIPPEWA RIVER	2	--	763	--	296
BECKY CREEK	1	2,800	785	24	817
BECKY CREEK	2	--	900	--	288
BECKY CREEK	3	--	755	--	--
TOTAL 0010		**8,400**	**4,831**	**72**	**2,475**

TRAFFIC CONTROL

PROJECT	643.5000 TRAFFIC CONTROL EACH
1610-00-81	0.85
TOTAL 0010	**0.85**

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

3

MARKING LINE PAINT 6-INCH

STATION	TO	STATION	DESCRIPTION	646.2005 MARKING LINE PAINT 6-INCH LF
		139+04	CENTERLINE/EDGELINE	113
		157+12	CENTERLINE/EDGELINE	131
		164+61	CENTERLINE/EDGELINE	113
		170+62	CENTERLINE/EDGELINE	113
191+65	-	195+80	CENTERLINE/EDGELINE	934
		234+46	CENTERLINE/EDGELINE	113
		242+11	CENTERLINE/EDGELINE	153
		247+29	CENTERLINE/EDGELINE	163
		270+08	CENTERLINE/EDGELINE	113
		281+19	CENTERLINE/EDGELINE	163
		285+48	CENTERLINE/EDGELINE	163
		294+63	CENTERLINE/EDGELINE	200
		307+67	CENTERLINE/EDGELINE	200
		317+10/317+20	CENTERLINE/EDGELINE	244
		325+31	EDGELINE, LT	10
		341+50	CENTERLINE/EDGELINE	200
		359+35	CENTERLINE/EDGELINE	113
		369+51	CENTERLINE/EDGELINE	113
		373+52	CENTERLINE/EDGELINE	113
		389+56	CENTERLINE/EDGELINE	140
		399+07	CENTERLINE/EDGELINE	113
		408+54	CENTERLINE/EDGELINE	113
		424+94	CENTERLINE/EDGELINE	163
		442+73/442+84	CENTERLINE/EDGELINE	143
		458+88	CENTERLINE/EDGELINE	300
		470+04	CENTERLINE/EDGELINE	264
		479+92	CENTERLINE/EDGELINE	200
		500+27	CENTERLINE/EDGELINE	200
		502+69	CENTERLINE/EDGELINE	200
		506+70	CENTERLINE/EDGELINE	292
		512+88	CENTERLINE/EDGELINE	200
		534+32	CENTERLINE/EDGELINE	325

~ CONTINUE ~

MARKING LINE PAINT 6-INCH ~ CONTINUED ~

STATION	TO	STATION	DESCRIPTION	646.2005 MARKING LINE PAINT 6-INCH LF
		556+23	CENTERLINE/EDGELINE	132
		569+53	CENTERLINE/EDGELINE	225
		578+32	CENTERLINE/EDGELINE	225
		584+28	CENTERLINE/EDGELINE	163
632+33	-	637+03	EDGELINE, LT/RT	940
696+28	-	702+00	CENTERLINE/EDGELINE	1,287
		772+11	CENTERLINE/EDGELINE	400
		783+12	CENTERLINE/EDGELINE	113
		795+34	CENTERLINE/EDGELINE	141
		838+95	CENTERLINE/EDGELINE	225
		849+43	CENTERLINE/EDGELINE	163
		862+41	CENTERLINE/EDGELINE	188
872+00	-	875+82	EDGELINE, RT	382
872+00	-	876+67	EDGELINE, LT	467
		896+09	CENTERLINE/EDGELINE	400
		912+62	CENTERLINE/EDGELINE	125
953+45	-	959+77	CENTERLINE/EDGELINE	3,035
		970+97	CENTERLINE/EDGELINE	163
		978+74	CENTERLINE/EDGELINE	113
		990+89	CENTERLINE/EDGELINE	113
		1001+62	CENTERLINE/EDGELINE	113
			TOTAL 0010	15,231

CONSTUCTION STAKING

LOCATION	650.6000 CONSTRUCTION STAKING PIPE CULVERTS EACH	650.6501.01 CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) (01. C-02-0026) EACH	650.9911.01 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) (01. 1610-00-81) EACH	650.9920 CONSTRUCTION STAKING SLOPE STAKES LF
VARIOUS LOCATIONS STH 13	37	--	--	10,900
BECKY CREEK	--	1	--	--
1610-00-81	--	--	1	--
TOTAL 0010	**37**	**1**	**1**	**10,900**

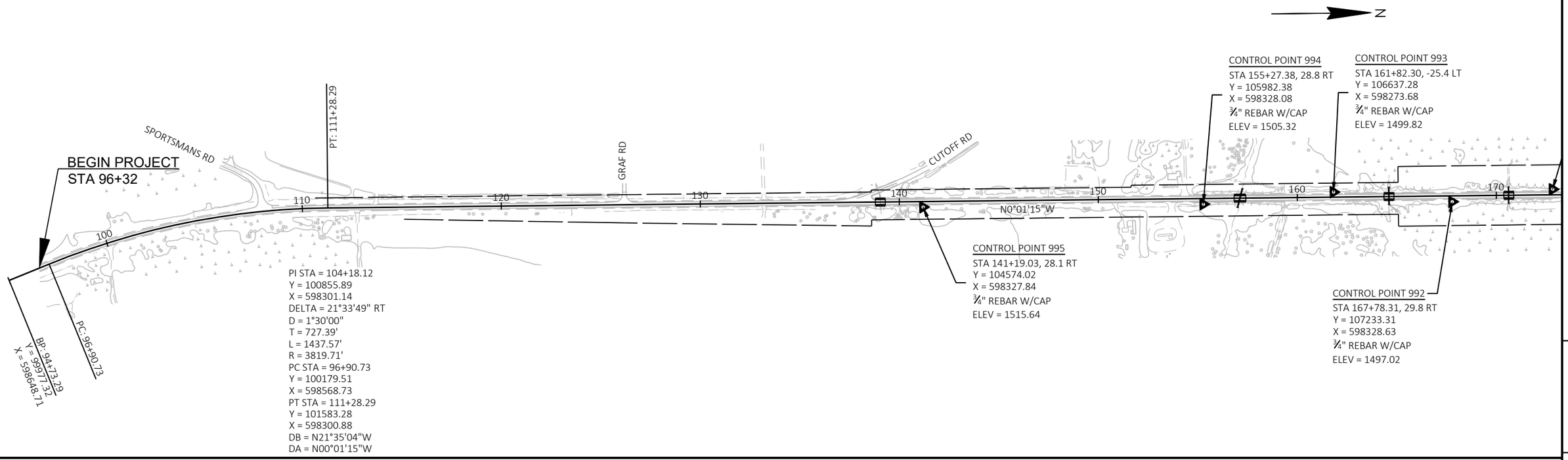
TEMPORARY TRAFFIC SIGNALS FOR BRIDGES

LOCATION	661.0101.01 TEMPORARY TRAFFIC SIGNALS FOR BRIDGES (STRUCTURE) (01. B-02-0057) EACH	661.0101.02 TEMPORARY TRAFFIC SIGNALS FOR BRIDGES (STRUCTURE) (02. B-02-0047) EACH	661.0101.03 TEMPORARY TRAFFIC SIGNALS FOR BRIDGES (STRUCTURE) (03. C-02-0026) EACH
BUTTERNUT CREEK	1	--	--
EAST FORK CHIPPEWA RIVER	--	1	--
BECKY CREEK	--	--	1
TOTAL 0010	**1**	**1**	**1**

INSTALLING AND MAINTAINING CLIMBING TURTLE EXCLUSION FENCE

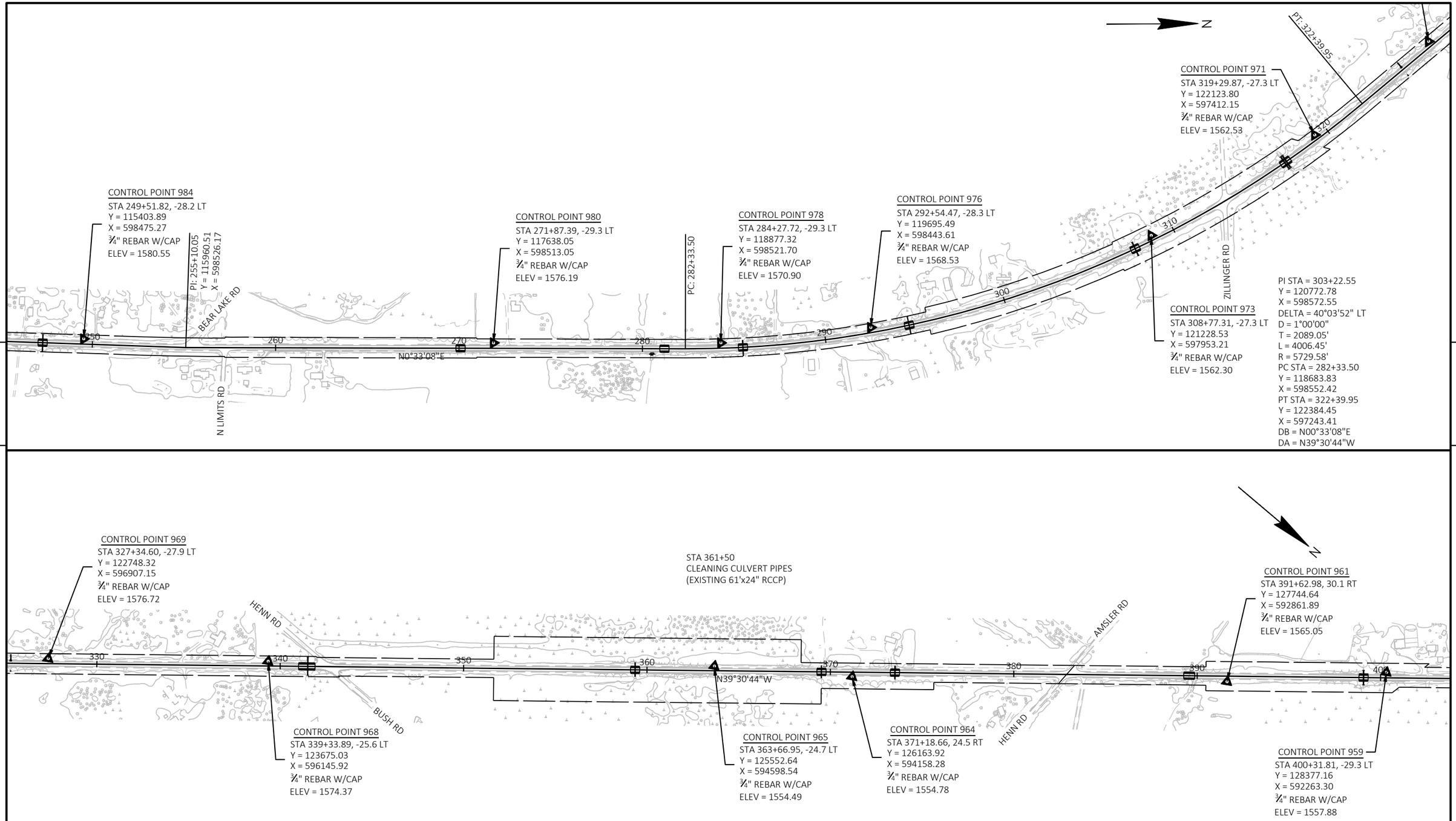
STATION	LOCATION	999.2100.S. INSTALLING AND MAINTAINING CLIMBING TURTLE EXCLUSION FENCE LF
698+58	STH 13, LT/RT	490
699+68	STH 13, LT/RT	490
	TOTAL 0010	**980**

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

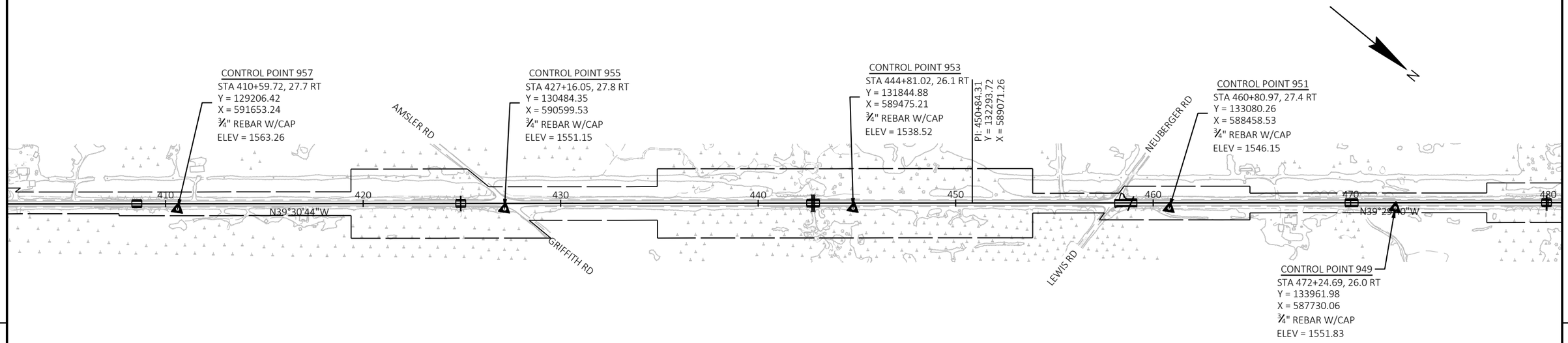


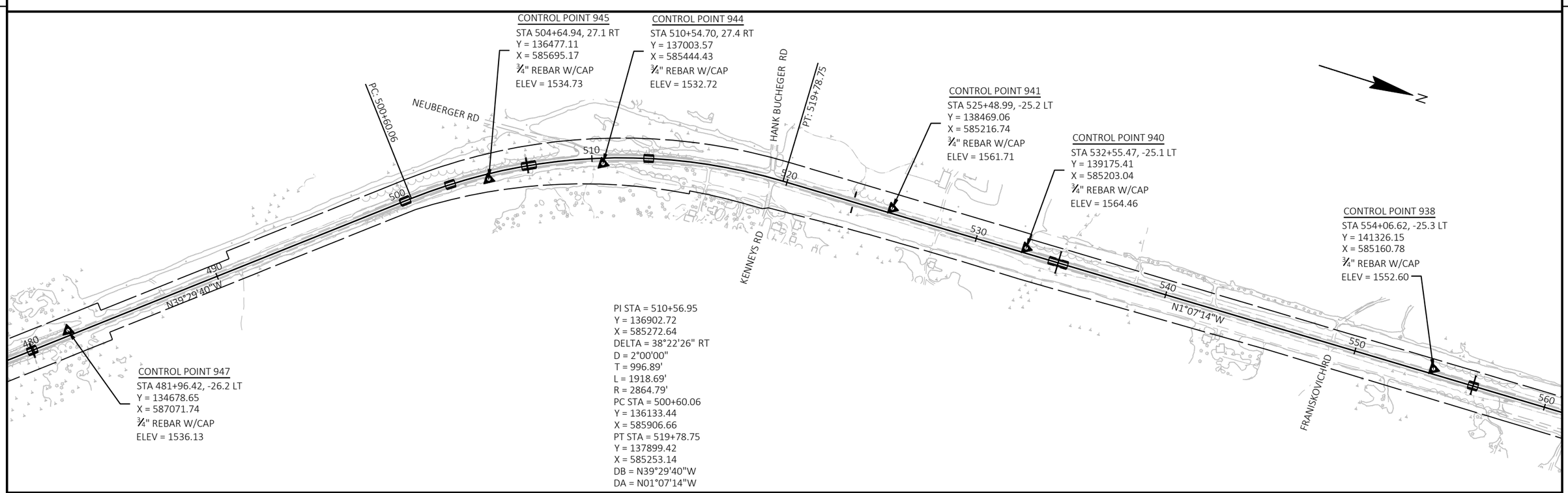
PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	PLAN	SHEET 85	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\SHEETS\050101-PN.DWG
LAYOUT NAME - 050101-pn
PLOT DATE : 7/10/2025 11:25 AM PLOT BY : RESHESKE, CARRIE PLOT NAME : PLOT SCALE : 1 IN:500 FT
WISDOT/CADDS SHEET 44

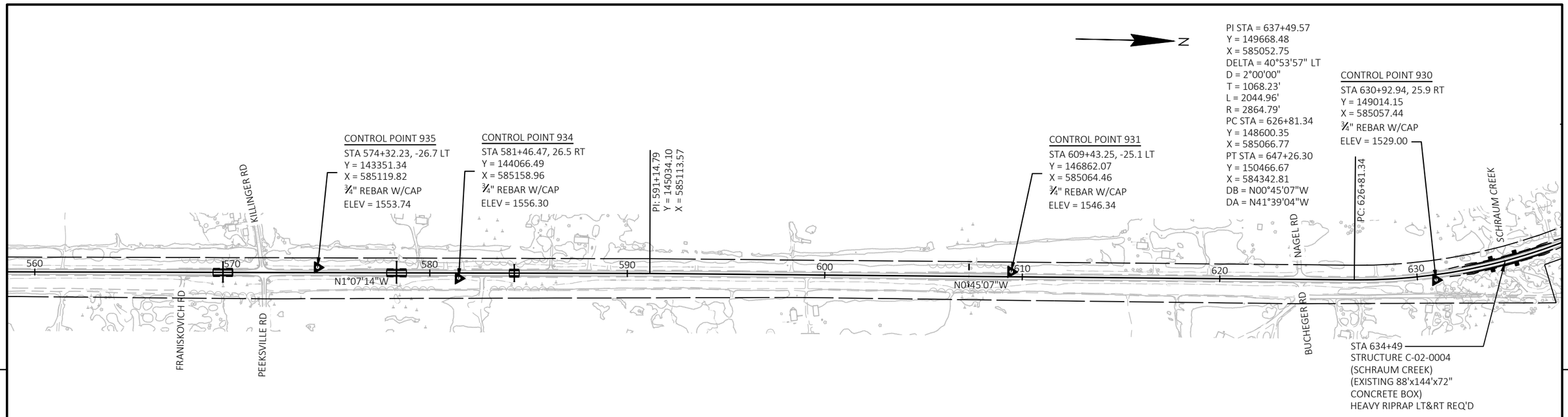


PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	PLAN	SHEET 86	E



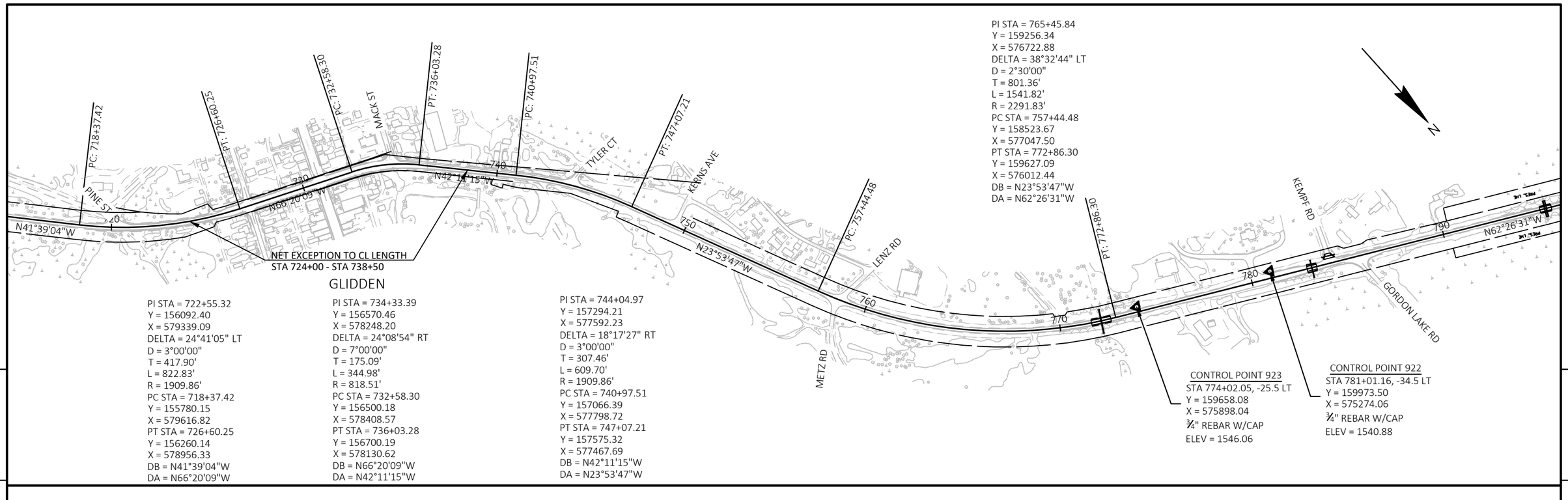


PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	PLAN	SHEET 87	E



PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	PLAN	SHEET 88	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\SHEETS\050101-PN.DWG
LAYOUT NAME - 050104-pn
PLOT DATE : 7/23/2025 11:33 AM PLOT BY : RESHESKE, CARRIE PLOT NAME : PLOT SCALE : 1 IN:500 FT
WISDOT/CADDS SHEET 44



PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	PLAN	SHEET 89	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\SHEETS\050101-PN.DWG
LAYOUT NAME - 050105-pn

PLOT DATE : 7/10/2025 11:25 AM PLOT BY : RESHESKE, CARRIE PLOT NAME : PLOT SCALE : 1 IN:500 FT

WISDOT/CADDS SHEET 44

PI STA = 879+83.84
Y = 164641.08
X = 566562.86
DELTA = 60°37'02" RT
D = 4°00'00"
T = 837.31'
L = 1515.42'
R = 1432.39'
PC STA = 871+46.53
Y = 164245.99
X = 567301.10
PT STA = 886+61.95
Y = 165478.20
X = 566544.93
DB = N61°50'41"W
DA = N01°13'39"W

N

PT: 886+61.95

CONTROL POINT 910
STA 898+37.12, 26.5 RT
Y = 166653.67
X = 566546.27
¾" REBAR W/CAP
ELEV = 1519.15

CONTROL POINT 908
STA 914+71.07, -24.8 LT
Y = 168286.14
X = 566459.99
¾" REBAR W/CAP
ELEV = 1509.33

PI: 945+42.42
Y = 171357.31

STH 77

890 900 910 920 930 940

N1°13'39"W

880

PC: 871+46.53

STA 874+15
STRUCTURE B-02-0046
(DRYDEN CREEK)
(EXISTING BOX CULVERT)
CONCRETE SURFACE REPAIRS
REPLACE GUARDRAIL (SEE DETAIL)

DRYDEN CREEK

870

GORDON LAKE RD

5

5

PI STA = 967+21.11
Y = 173536.00
X = 566413.56
DELTA = 2°58'25" LT
D = 2°00'00"
T = 74.35'
L = 148.67'
R = 2864.79'
PC STA = 966+46.75
Y = 173461.64
X = 566413.74
PT STA = 967+95.43
Y = 173610.24
X = 566409.52
DB = N00°08'30"W
DA = N03°06'54"W

CONTROL POINT 907
STA 953+94.68, 25.2 RT
Y = 172209.64
X = 566442.02
¾" REBAR W/CAP
ELEV = 1515.66

CONTROL POINT 906
STA 958+33.37, 25.5 RT
Y = 172648.32
X = 566441.22
¾" REBAR W/CAP
ELEV = 1514.33

PC: 966+46.75

PT: 967+95.43

GREAT DIVIDE
WAYSIDE PARK

CONTROL POINT 902
STA 992+95.60, -27.5 LT
Y = 176105.22
X = 566246.16
¾" REBAR W/CAP
ELEV = 1513.76

CONTROL POINT 901
STA 999+32.01, 26.5 RT
Y = 176743.62
X = 566265.49
¾" REBAR W/CAP
ELEV = 1514.15

END PROJECT
STA 1017+12

PI STA = 1037+98.72
Y = 181066.45
X = 565963.29

PI: 945+42.42
Y = 171357.31
X = 566418.94

HENNES RD

BECKY CREEK

950 960 970 980 990 1000 1010 1020

N0°08'30"W

N3°06'54"W

SPILLERBERG CREEK

STA 956+18
STRUCTURE C-02-26
TWIN-CELL BOX CULVERT
GUARDRAIL REQ'D (SEE DETAIL)
TEMPORARY TRAFFIC SIGNALS FOR
BRIDGES REQ'D FOR WORK (SEE DETAIL)

CONTROL POINT 904
STA 975+25.60, 27.1 RT
Y = 174340.81
X = 566396.92
¾" REBAR W/CAP
ELEV = 1516.24

PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	PLAN	SHEET 90	E

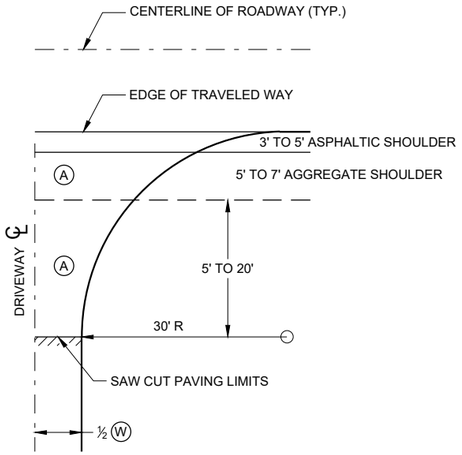
Standard Detail Drawing List

08D22-01	DRIVEWAYS WITHOUT CURB & GUTTER RESURFACING PROJECTS RURAL
08E09-06	SILT FENCE
08E15-01	CULVERT PIPE CHECK
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F04-08	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
08F08-02	STEEL APRON ENDWALLS FOR CULVERT PIPE AND PIPE ARCH SLOPED CROSS DRAINS
09G02-05A	BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION
09G02-05B	BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION
09G02-05C	BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION
13B02-09A	CONCRETE PAVEMENT APPROACH SLAB
14B07-16A	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16B	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16C	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16D	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16E	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16F	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16G	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16H	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16I	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16J	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16K	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16L	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16M	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16N	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
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
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)
14B45-05A	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05B	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05C	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05D	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05E	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05F	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05G	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05H	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05I	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05J	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05K	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05L	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B51-04A	ANCHOR POST ASSEMBLY TOP-MOUNTED
14D01-01	TURTLE EXCLUSION FENCE CLIMBING TURTLE
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15C02-09F	ADVANCED WIDTH RESTRICTION SIGNING
15C04-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C08-24A	PERMANENT LONGITUDINAL PAVEMENT MARKINGS
15C11-10A	CHANNELIZING DEVICES FLEXIBLE TUBULAR MARKER POST
15C11-10B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C12-09A	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15D33-09	TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS
15D45-03	TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH LOOSE GRAVEL

6

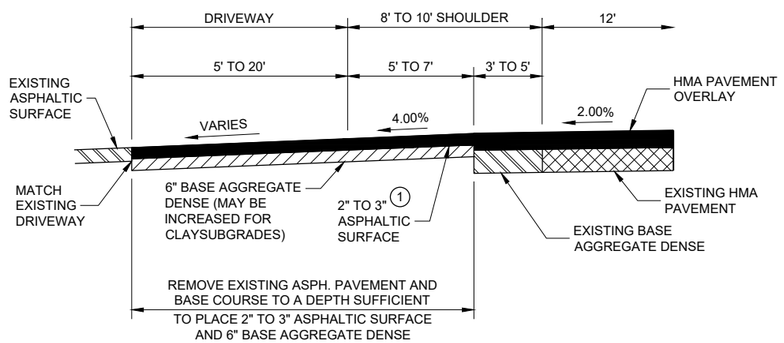
GENERAL NOTES

(1) DESIGN WILL DETERMINE FINAL DRIVEWAY ASPHALTIC THICKNESS BASED ON TYPE OF USAGE AND LOADINGS.



PLAN VIEW

HALF SECTION



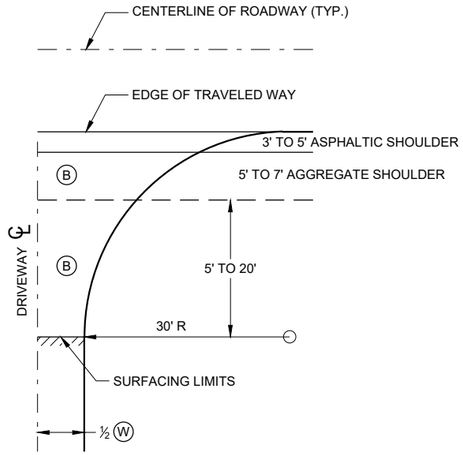
PROFILE VIEW

RURAL ENTRANCE
WITH ASPHALTIC SURFACE
RESURFACING PROJECTS

(A) : PAID FOR AS ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES. (TON)

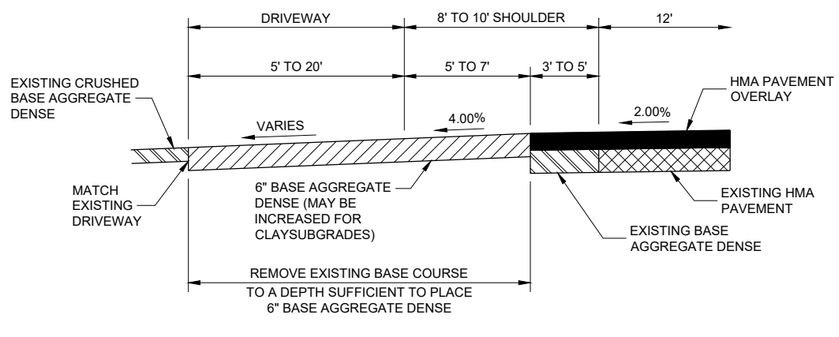
(B) : PAID FOR AS BASE AGGREGATE DENSE 1 ¼" (TON)

(W) : DRIVEWAY WIDTH 16' MIN. - 24' MAX.



PLAN VIEW

HALF SECTION



PROFILE VIEW

RURAL ENTRANCE
WITH AGGREGATE SURFACE
6" BASE AGGREGATE DENSE
RESURFACING PROJECTS

DRIVEWAYS WITHOUT CURB AND GUTTER RESURFACING PROJECTS RURAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

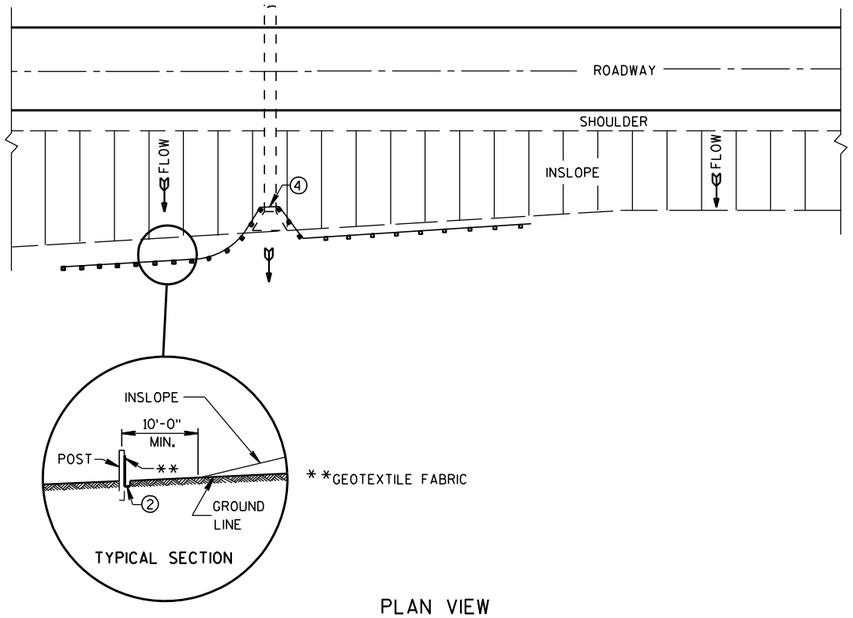
APPROVED
December 2016 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE ENGINEER
FHWA

6

SDD 08D22 - 01

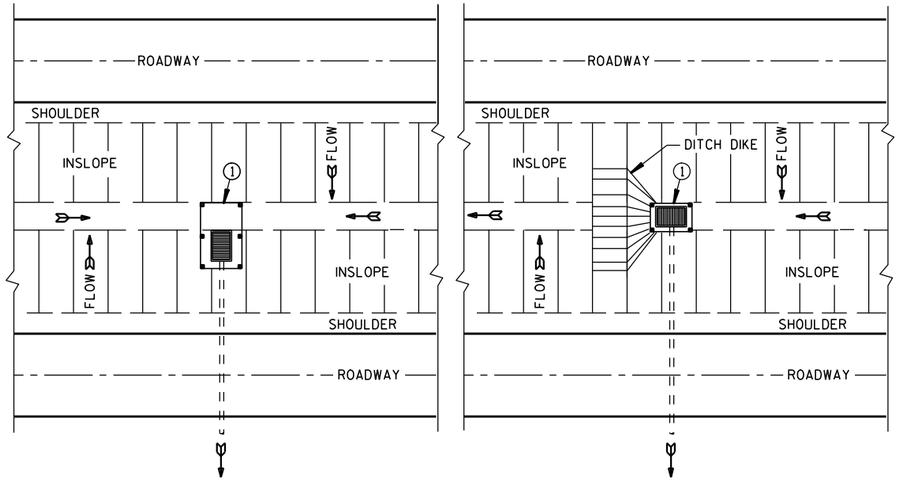
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SDD 08D22 - 01



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



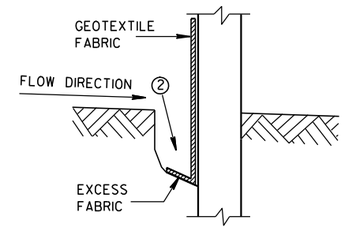
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

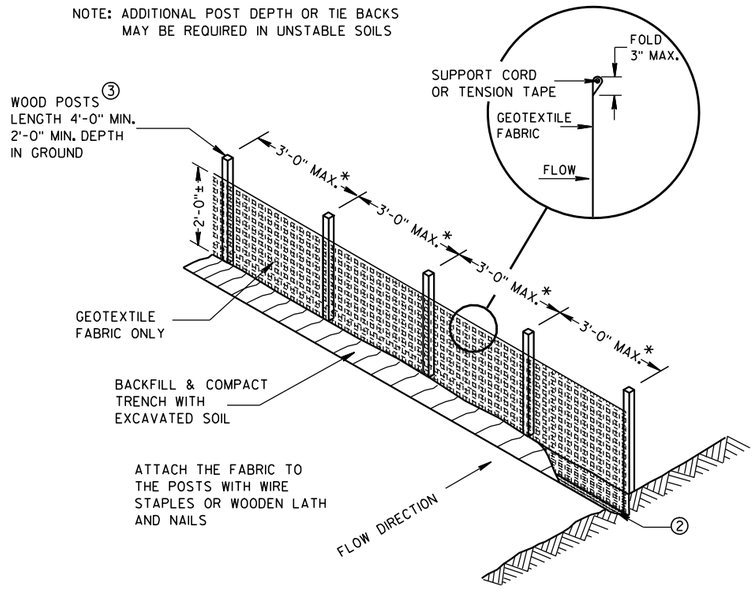
GENERAL NOTES

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

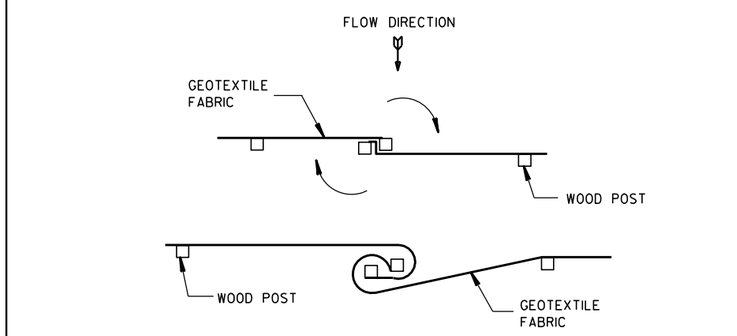
1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL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



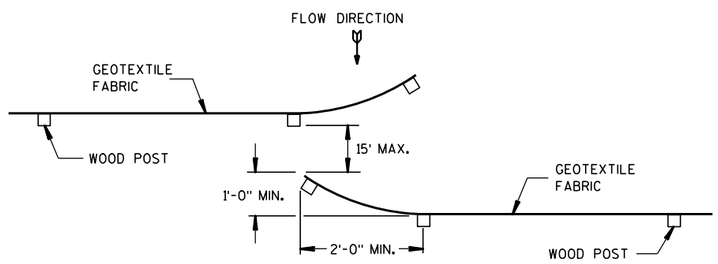
TRENCH DETAIL



SILT FENCE

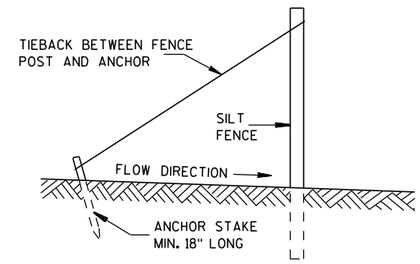


TWIST METHOD



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

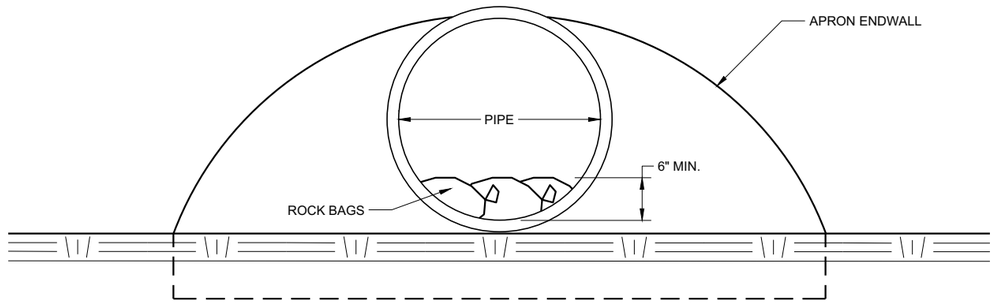
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

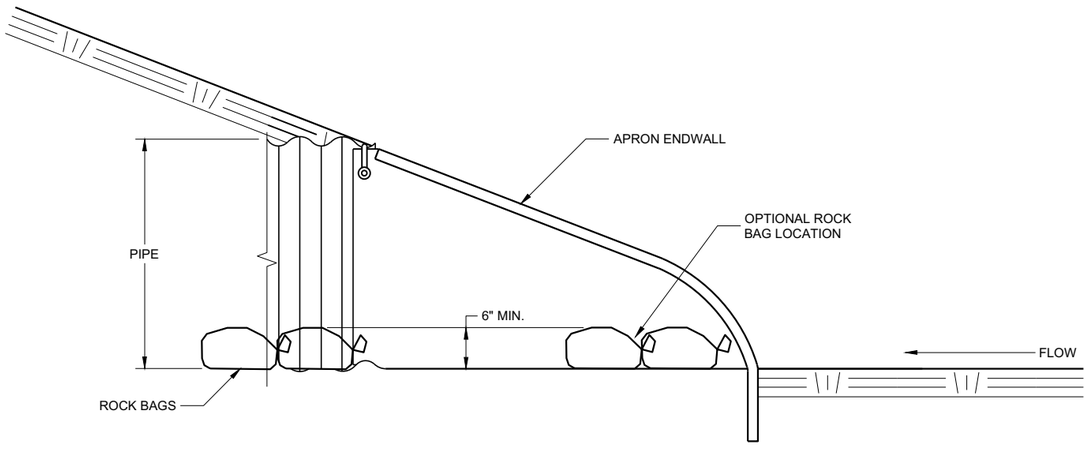
S.D.D. 8 E 9-6

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	

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SDD 08E15 - 01

METAL APRON ENDWALLS

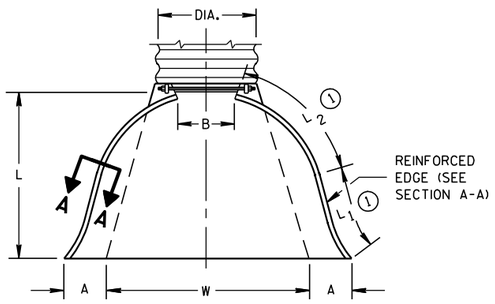
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4	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

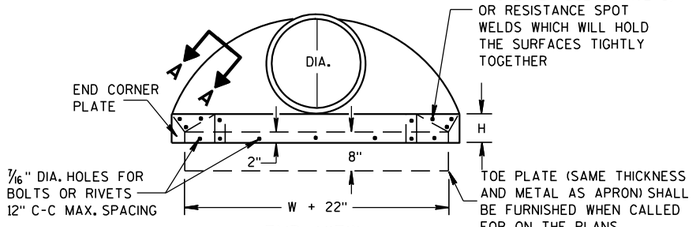
REINFORCED CONCRETE APRON ENDWALLS

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

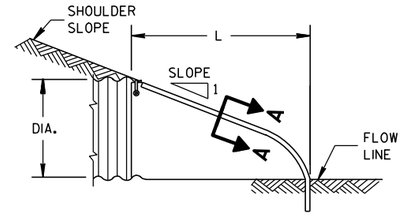
*MINIMUM
**MAXIMUM



PLAN VIEW

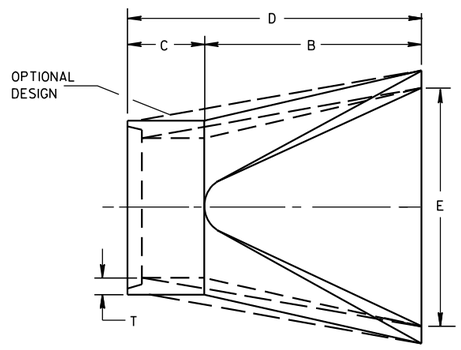


END VIEW

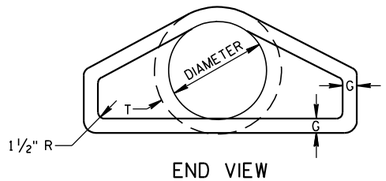


SIDE ELEVATION

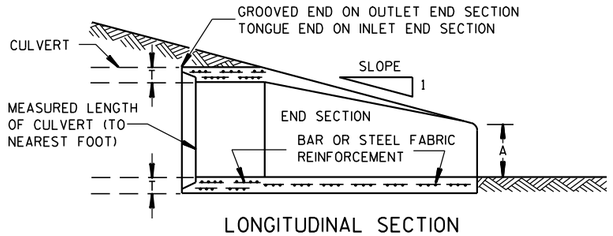
METAL ENDWALLS



PLAN

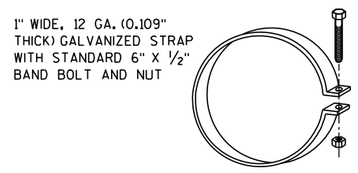


END VIEW



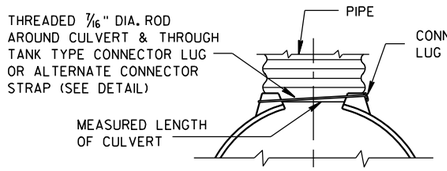
LONGITUDINAL SECTION

CONCRETE ENDWALLS

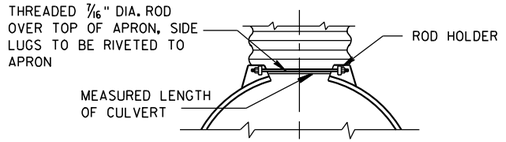


ALTERNATE FOR TYPE 1 CONNECTION

END SECTION CONNECTOR STRAP

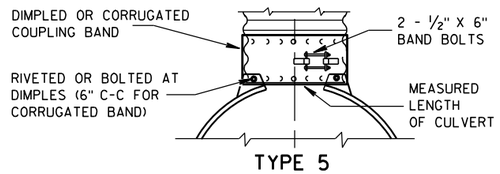


TYPE 1
FOR 12" THRU 24" CORR. PIPE



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

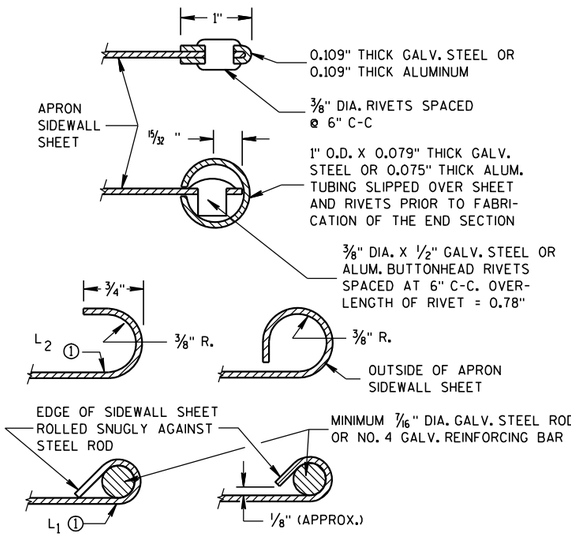
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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.

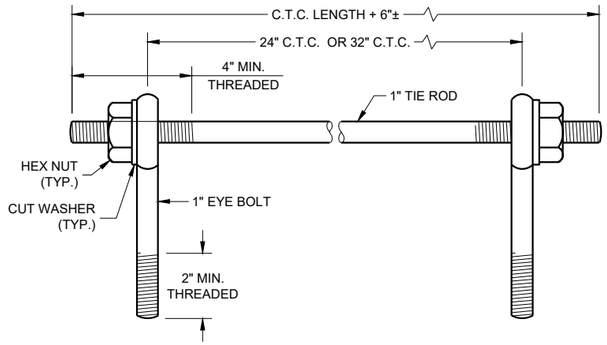
① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR CULVERT PIPE

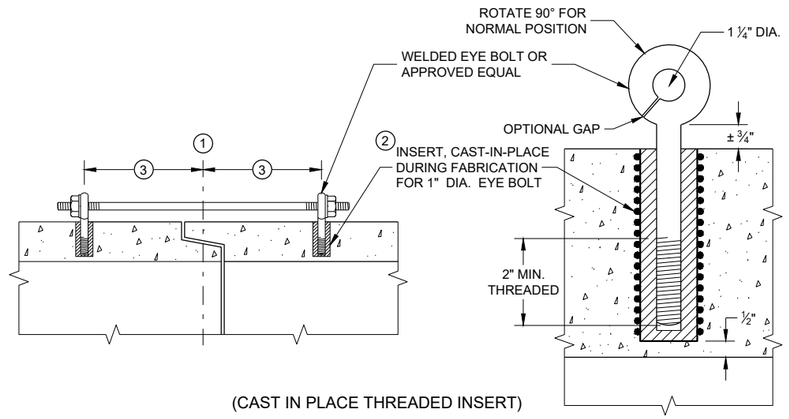
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/30/94 DATE
/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOP 95 NEER
FHWA

6
S.D.D. 8 F 1-11



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.

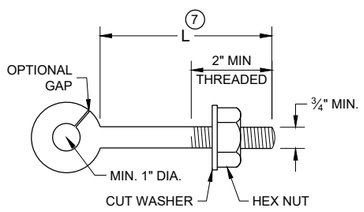
(3) HOLES SHALL BE CAST-IN-PLACE OR DRILLED PER THE APPLICABLE DETAIL, AND EQUAL DISTANCE FROM THE CENTERLINE OF THE JOINT.

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

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

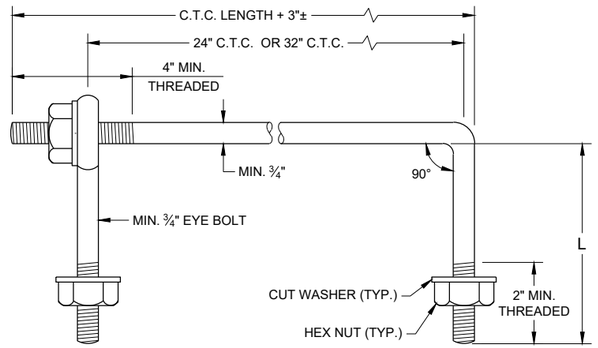
(6) LENGTH ADEQUATE TO EXTEND TO WITHIN ½ INCH OF THE INNER SURFACE OF THE PIPE.

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

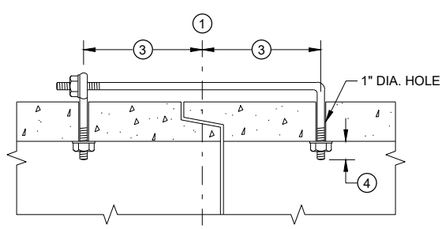


EYE BOLT (7)

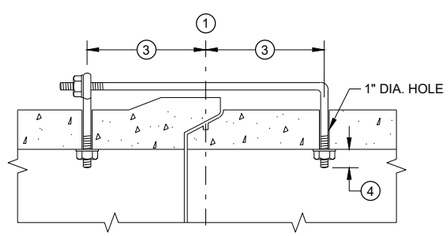
NOTE: TWO EYE BOLTS MAY BE USED WITH A 30" OR 38" LONG THREADED ROD IN LIEU OF THE 90° BENT TIE ROD.



EYE BOLT AND TIE ROD



(TONGUE AND GROOVE PIPE)



(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

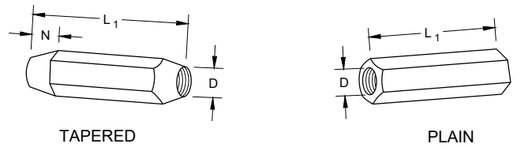
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

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

ADJUSTABLE TIE ROD TABLE

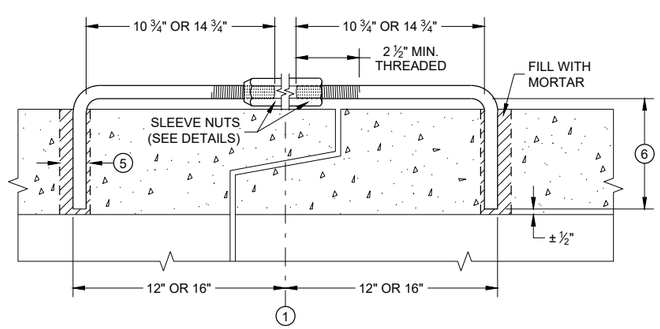
PIPE DIAMETER	TIE ROD DIAMETER	D	L_1	N
12 - 60	⅝	⅝	5	½
66 - 84	¾	¾	5	½
90 - 144	1	1	7	1 7/16

DIMENSIONS SHOWN ARE IN INCHES



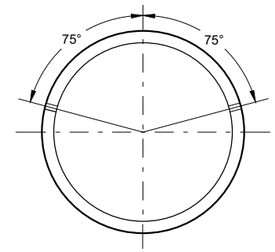
RIGHT AND LEFT THREADS

SLEEVE NUTS



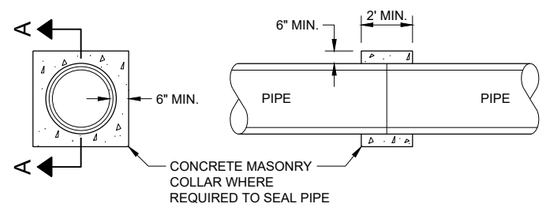
LONGITUDINAL SECTION

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

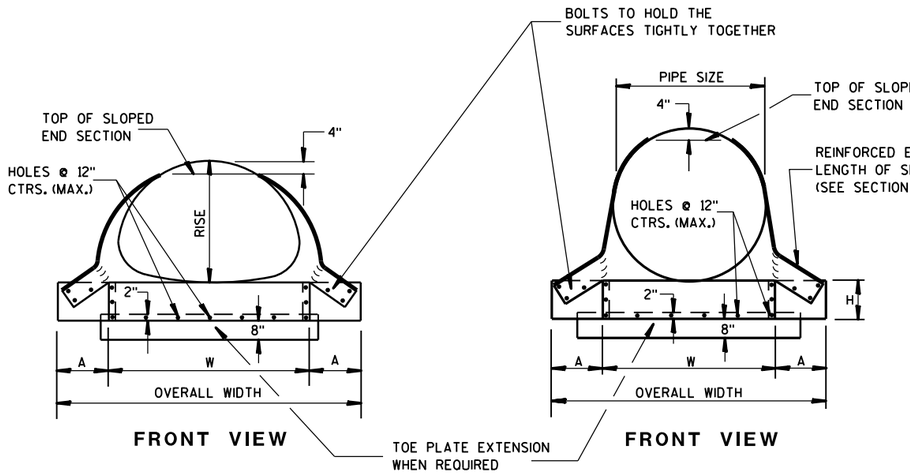
JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

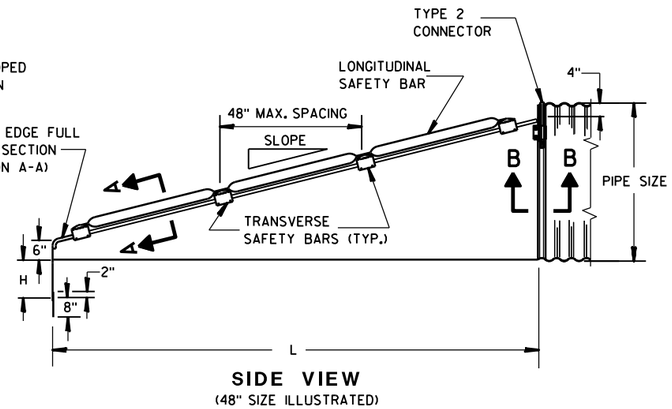
SDD 08F04 - 08

SDD 08F04 - 08



FRONT VIEW

FRONT VIEW



SIDE VIEW
(48" SIZE ILLUSTRATED)

GENERAL NOTES

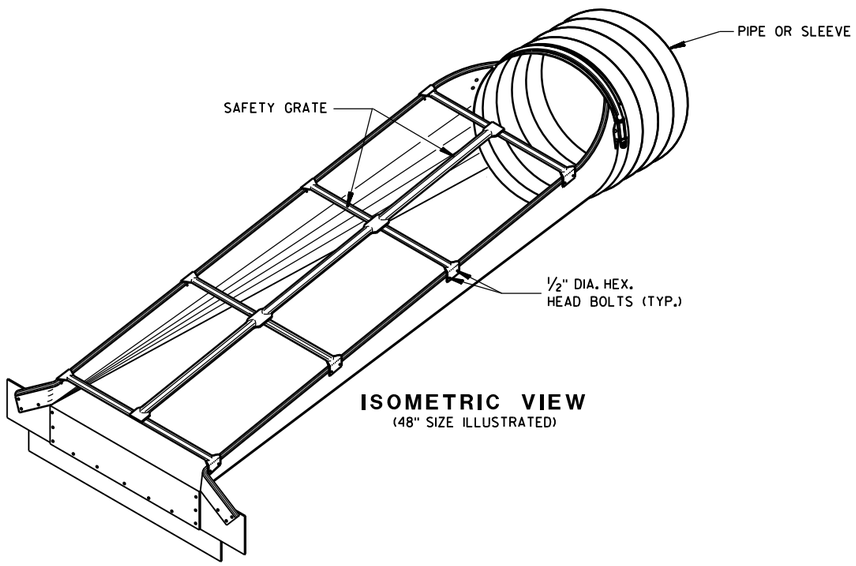
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

SAFETY GRATES SHALL BE FABRICATED FROM 3-INCH DIAMETER GALVANIZED PIPE MEETING THE REQUIREMENTS OF ASTM A-53, GRADE B, SCHEDULE 40 OR APPROVED EQUAL. THE LONGITUDINAL BAR SHALL BE WELDED TO THE TRANSVERSE BARS WHERE THE BARS CROSS. THE NUMBER OF TRANSVERSE BARS REQUIRED WILL VARY DEPENDING ON THE LENGTH OF THE END SECTION.

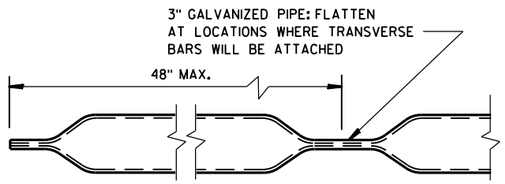
SLOPED STEEL ENDWALLS LOCATED AT THE ENDS OF CONCRETE CULVERT PIPE SHALL BE FURNISHED WITH STEEL ADAPTER SLEEVES.

STEEL APRON ENDWALLS FOR CULVERT PIPE CROSS DRAINS

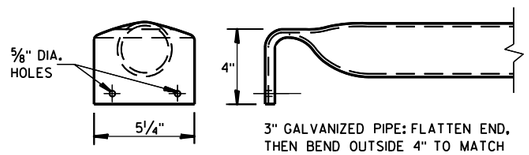
PIPE DIA. (IN.)	MIN. THICK.		DIMENSIONS (Inches)				L DIMENSIONS			
	IN.	GAGE	A	H	W	OVERALL WIDTH	SLOPE	LENGTH INCHES	SLOPE	LENGTH INCHES
36	.109	12	12	9	42	66	4:1	104	6:1	156
42	.109	12	16	12	48	80	4:1	128	6:1	192
48	.109	12	16	12	54	86	4:1	152	6:1	228
54	.109	12	16	12	60	92	4:1	176	6:1	264
60	.109	12	16	12	66	98	4:1	200	6:1	300



ISOMETRIC VIEW
(48" SIZE ILLUSTRATED)



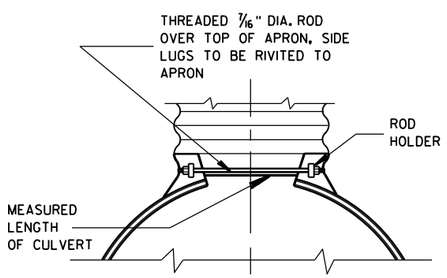
LONGITUDINAL SAFETY BAR



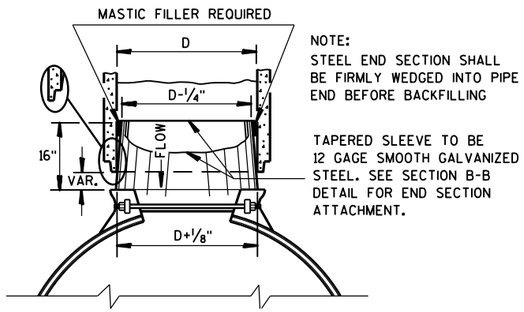
TRANSVERSE SAFETY BAR

STEEL APRON ENDWALLS FOR PIPE ARCH SLOPED CROSS DRAINS

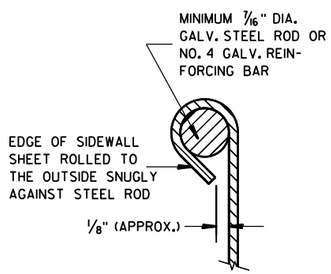
EQUIV. DIA. (IN.)	INCHES		MIN. THICK.		DIMENSIONS (Inches)				L DIMENSIONS			
	SPAN	RISE	IN.	GAGE	A	H	W	OVERALL WIDTH	SLOPE	LENGTH INCHES	SLOPE	LENGTH INCHES
30	35	24	.079	14	12	9	41	65	4:1	56	6:1	84
36	42	29	.109	12	12	9	48	72	4:1	76	6:1	114
42	49	33	.109	12	16	12	55	87	4:1	92	6:1	138
48	57	38	.109	12	16	12	63	95	4:1	112	6:1	168
54	64	43	.109	12	16	12	70	102	4:1	132	6:1	198
60	71	47	.109	12	16	12	77	109	4:1	148	6:1	222



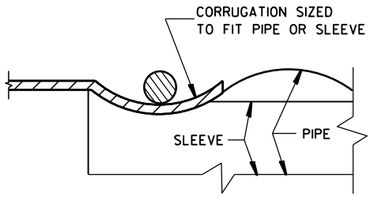
TYPE 2 CONNECTOR DETAIL



STEEL ADAPTER SLEEVE FOR CONCRETE PIPE



SECTION A-A



SECTION B-B

STEEL APRON ENDWALLS FOR CULVERT PIPE AND PIPE ARCH SLOPED CROSS DRAINS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

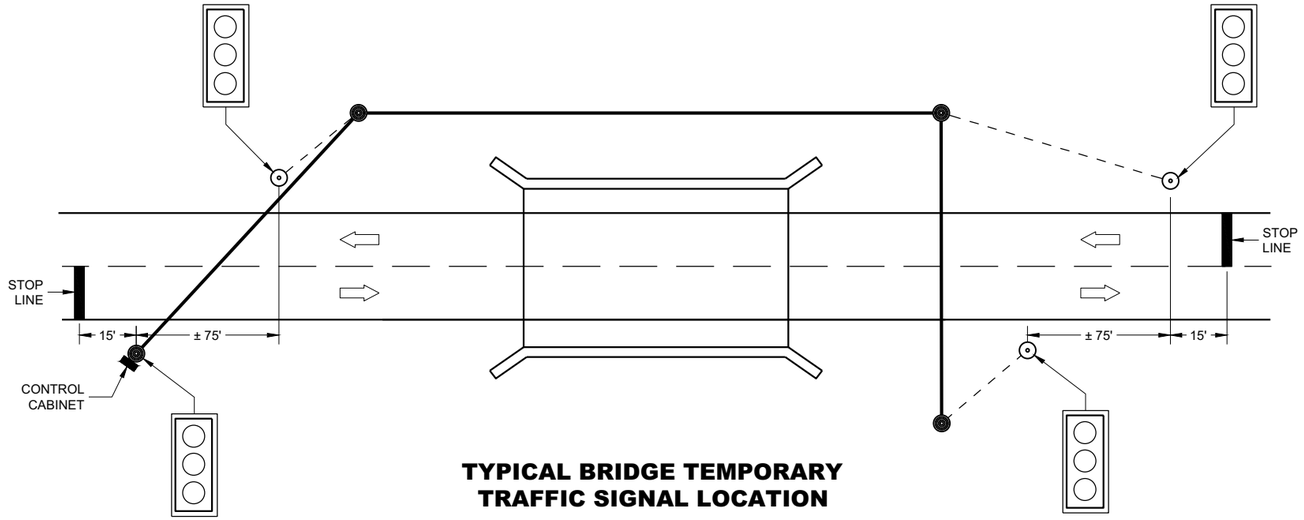
APPROVED
6/5/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

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S.D.D. 8 F 8-2

6

S.D.D. 8 F 8-2



TYPICAL BRIDGE TEMPORARY TRAFFIC SIGNAL LOCATION

LEGEND

- WOOD POLE (NON-BREAKAWAY)
- WOOD POST (BREADAWAY)
- SIGNAL CABLE
- SIGNAL CABLE W/MESSENGER
- DIRECTION OF TRAFFIC
- LED TRAFFIC SIGNAL WITH BACKPLATE (3-12")

GENERAL NOTES

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

POLE MOUNTED TRAFFIC SIGNAL CONTROL CABINET MAY BE MOUNTED ON THE SERVICE POLE IF THE ELECTRICAL UTILITY ALLOWS THE INSTALLATION.

WHEN UTILITY POLES ARE USED TO SPAN THE TEMPORARY OVERHEAD CABLE, WRITTEN PERMISSION MUST BE OBTAINED FROM THE OWNER OF THE POLES AND GIVEN TO THE PROJECT MANAGER. ALL PERTINENT UTILITY AND CODE CLEARANCES SHALL BE MAINTAINED.

WOOD POLES (NON-BREAKAWAY) SHALL BE NO CLOSER TO EDGE OF PAVEMENT THAN OFFSET DISTANCE CHART ALLOWS OR 4 FEET BEHIND PROTECTIVE BARRIER (BEAM GUARD, ETC.).

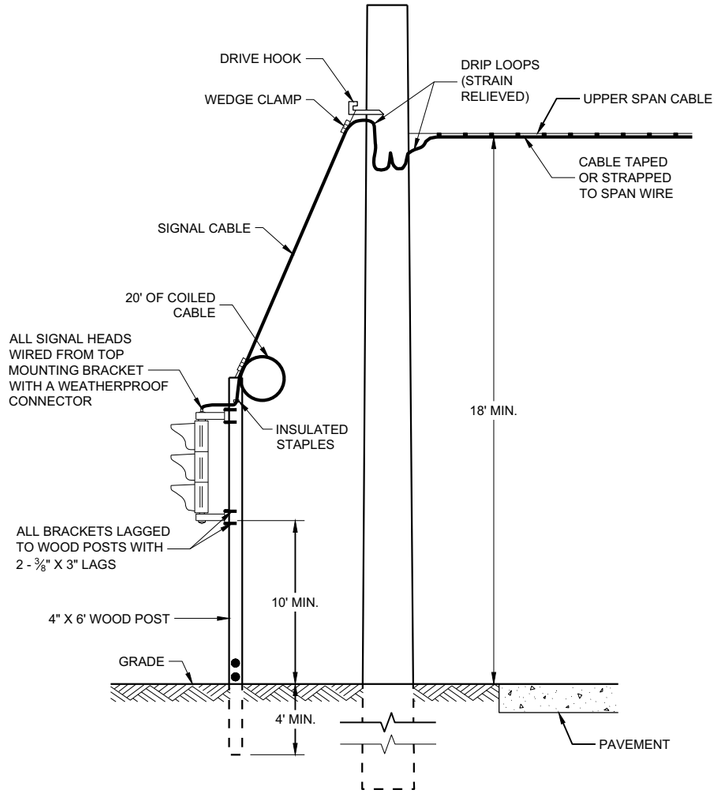
WOOD POSTS (BREAKAWAY) SHALL BE NO CLOSER THAN 2 FEET OUTSIDE OF SHOULDER.

VERTICAL CLEARANCE ETC. PER NEC.

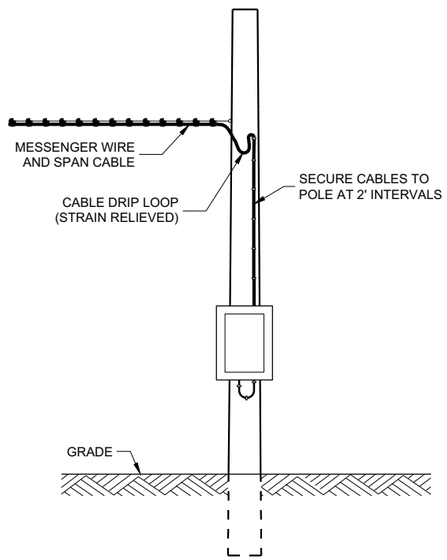
TRAFFIC SIGNAL FACES SHALL BE TYPICALLY PLACED 12 FEET FROM EDGE OF PAVEMENT.

EACH TRAFFIC SIGNAL SHALL HAVE A BACKPLATE.

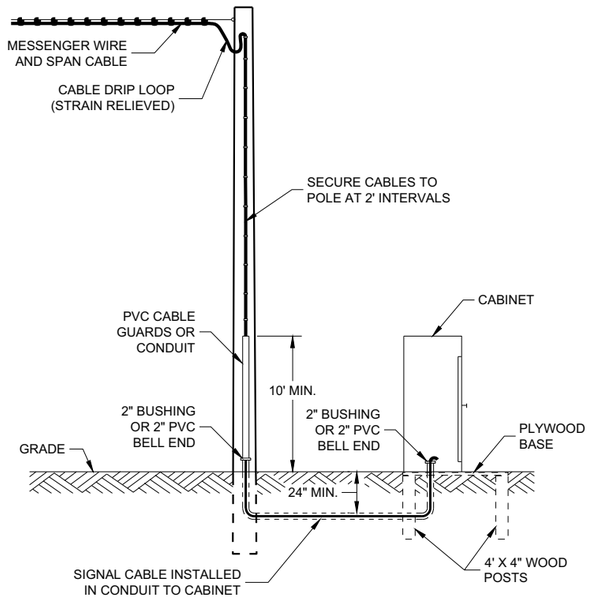
SIGNING, PAVEMENT MARKING AND LANE CONTROL REQUIREMENTS SHALL CONFORM TO STANDARD DETAIL DRAWING 15D33.



TYPICAL DROP TO TRAFFIC SIGNAL FACE



POLE MOUNT CABINET INSTALLATION



GROUND MOUNT CABINET INSTALLATION

MINIMUM POLE LENGTHS	CLASS	POLE BURIAL DEPTHS
25'	V	5'
30'	V	6'
35'	IV	7'
40'	IV	8'
45'	IV	9'

OFFSET DISTANCES FOR TEMPORARY NON-BREAKAWAY POLES	
SPEED LIMIT	OFFSET DISTANCE*
GREATER THAN 45 MPH	18 FT
45 MPH OR LESS	12 FT
45 MPH OR LESS W/CURBS	2 FT

* NOTE: OFFSET MEASURED FROM OUTER EDGE OF OUTSIDE THRU LANE.

BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018 — DATE
/S/ Ahmet Demirbilek — ROADWAY STANDARDS DEVE ENGINEER
FHWA

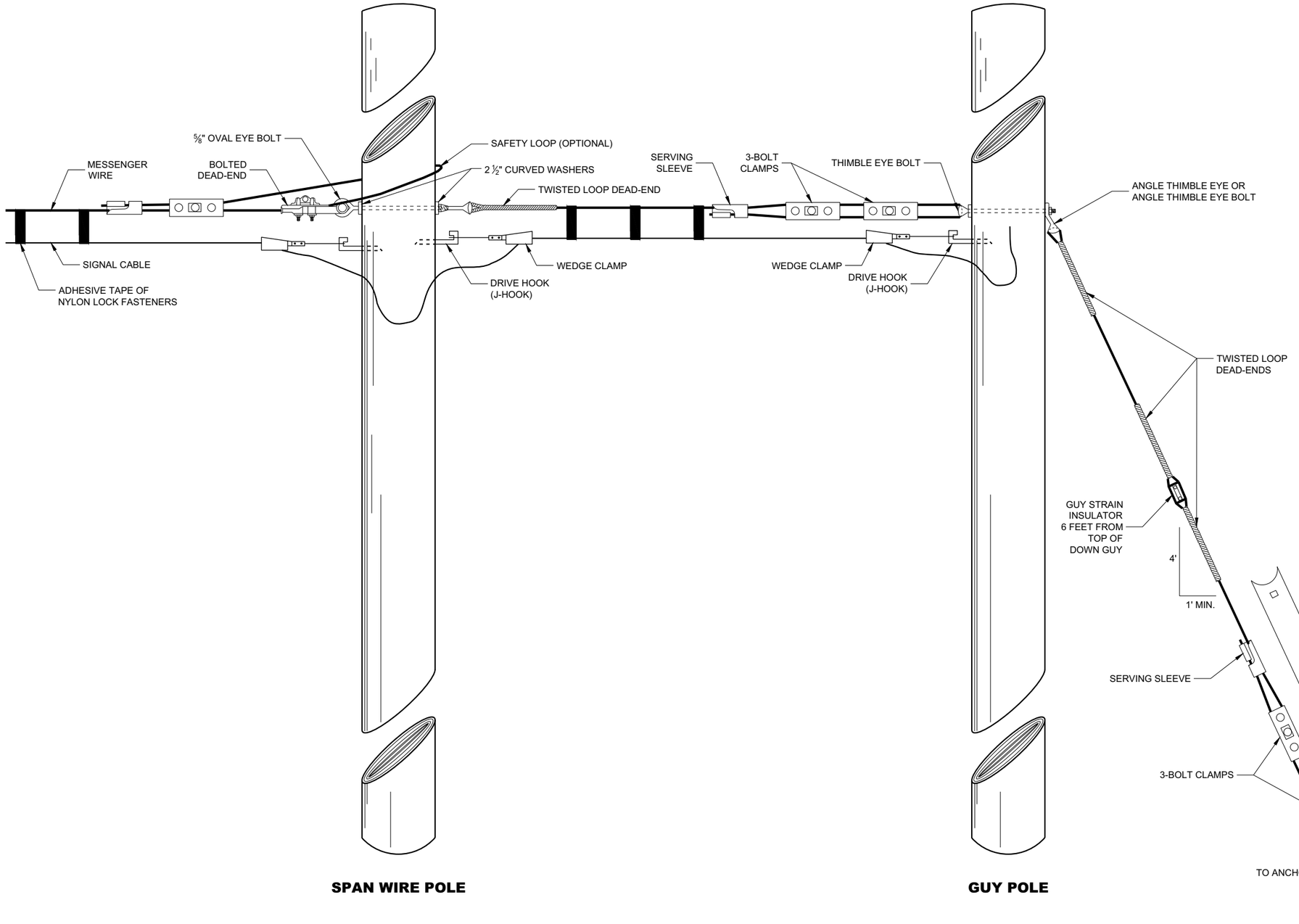
SDD09G02 - 05a

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SDD09G02 - 05a

GENERAL NOTES

USE ¾" DRILL IN WOOD POLE TO PROVIDE FOR ⅝" BOLTS.



SPAN WIRE POLE

GUY POLE

TYPICAL DEAD-ENDINGS OR GUYING

BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2015 — DATE
/S/ Ahmet Demerbilek — ROADWAY STANDARDS DEVE ENGINEER

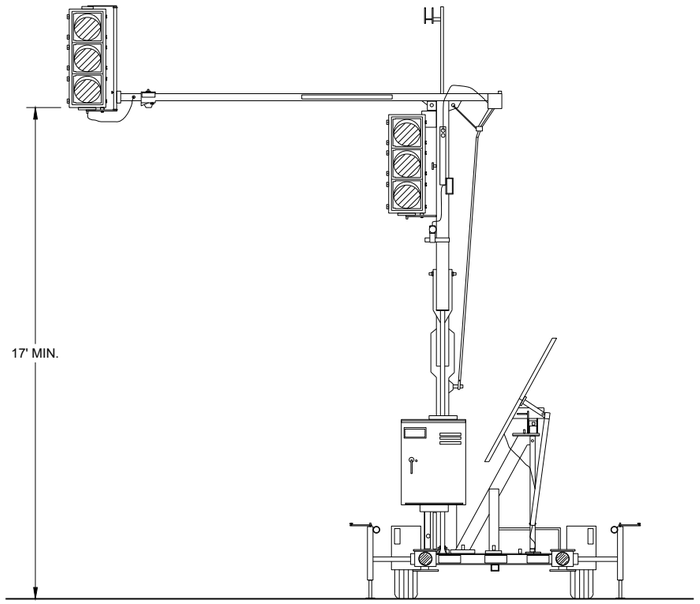
FHWA

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SDD09G02 - 05b

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SDD09G02 - 05b

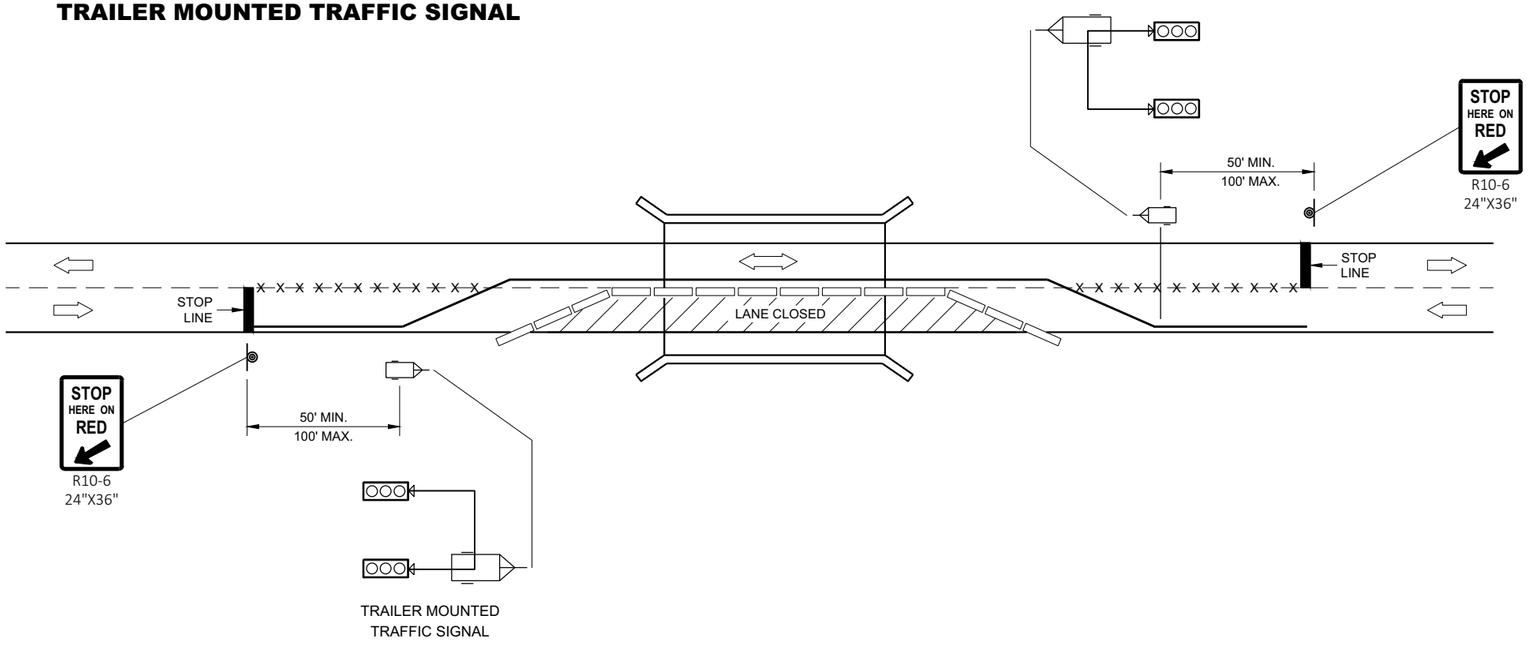


TRAILER MOUNTED TRAFFIC SIGNAL

GENERAL NOTES

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

SIGNING, PAVEMENT MARKING AND LANE CONTROL REQUIREMENTS SHALL CONFORM TO STANDARD DETAIL DRAWING 15D33.



TYPICAL TRAILER MOUNTED TRAFFIC SIGNAL LOCATION

LEGEND

- POST MOUNTED SIGN
- TEMPORARY PRECAST CONCRETE BARRIER
- TRAILER MOUNTED TRAFFIC SIGNAL
- REMOVE PAVEMENT MARKINGS
- DIRECTION OF TRAFFIC

BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June 2015
DATE

/S/ Ahmet Demerbilek
ROADWAY STANDARDS DEVE ENGINEER

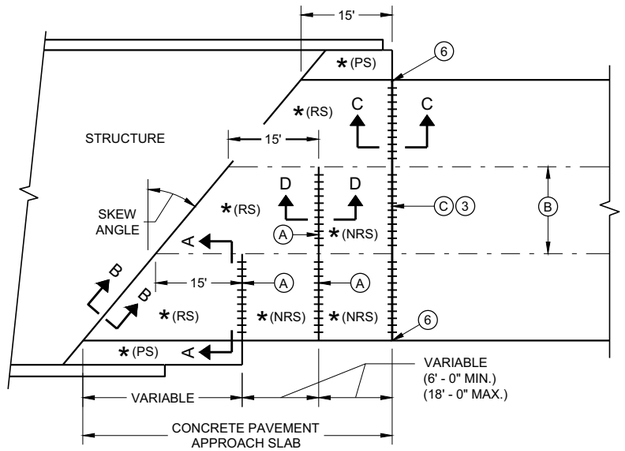
FHWA

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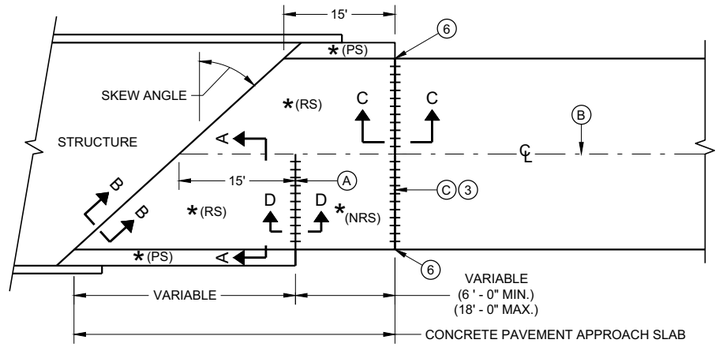
SDD09G02 - 05c

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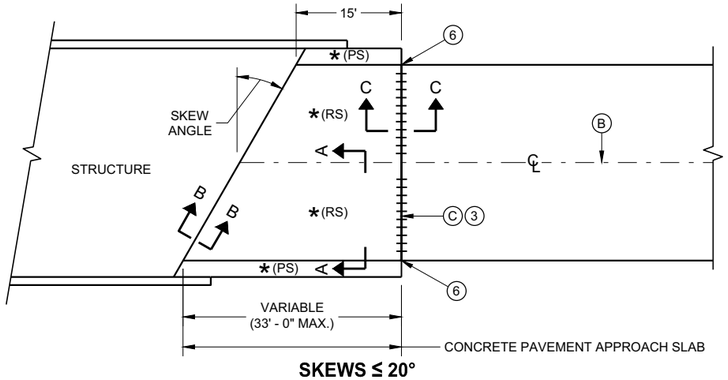
SDD09G02 - 05c



SKEWED APPROACH
(PAVEMENT MORE THAN TWO LANES)



SKEWS > 20°
(PAVEMENT WIDTH ≤ 30')



SKEWS ≤ 20°
(PAVEMENT WIDTH ≤ 30')

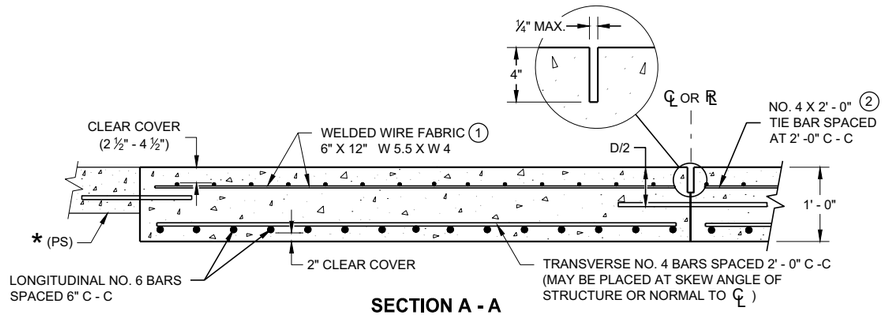
APPROACH SLAB AND ADJACENT PAVEMENT

* (RS) = REINFORCED CONCRETE SLAB

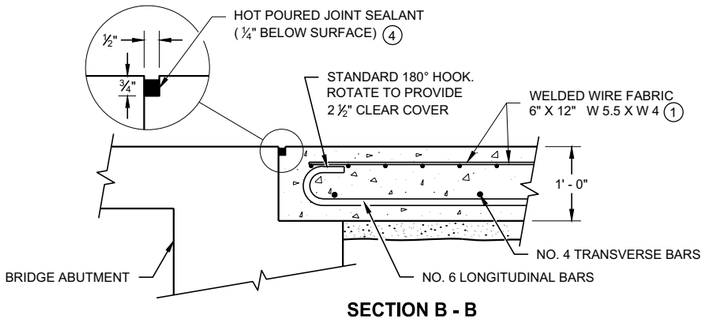
* (PS) = PAVED CONCRETE SHOULDER OR CONCRETE DRAINAGE SLAB

* (NRS) - NON - REINFORCED CONCRETE SLAB

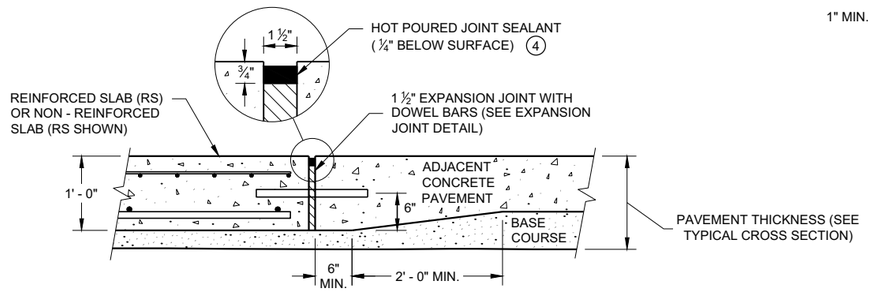
*** STANDARD DOWEL BAR DIAMETER (SEE SDD 13C11 AND SDD 13C13)



SECTION A - A
REINFORCEMENT POSITIONING DETAIL



SECTION B - B
BEND DETAIL
BOTTOM REINFORCEMENT



SECTION C - C
TRANSITION DETAIL
APPROACH SLAB TO ADJACENT PAVEMENT

GENERAL NOTES

THE CONTRACTOR MAY SPLICE NO. 6 BARS IN THE APPROACH SLAB FOR SKEWED STRUCTURES ONLY. STAGGER SPLICES WITH A MAXIMUM OF ONE SPLICE PER BAR. THE LENGTH OF LAP IS 20 INCHES.

TACK WELD DOWEL BARS TO THE BASKETS ON ALTERNATE ENDS.

(1) THE CONTRACTOR MAY USE NO. 4 BARS SPACED AT 2' - 0 " C - C IN BOTH THE LONGITUDINAL AND TRANSVERSE DIRECTIONS FOR TOP REINFORCEMENT AS AN ALTERNATIVE TO THE WELDED WIRE FABRIC.

(2) THE CONTRACTOR MAY OMIT THE BARS BETWEEN REINFORCED SLABS WHERE SLAB REINFORCEMENT BARS EXTEND ACROSS THE CENTERLINE OR REFERENCE LINE.

(3) DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING AN HMA PAVEMENT.

(4) USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.

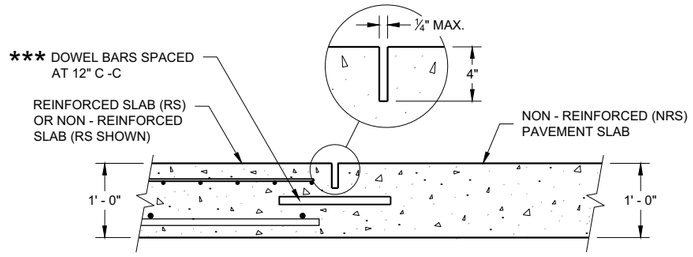
(5) PLACE EXPANSION CAP ON THE END OF THE DOWEL THAT IS NOT TACK WELDED TO THE BASKET. DO NOT FORCE DOWEL BAR PAST THE DOWEL STOP.

(6) EXTEND EXPANSION JOINT THROUGH ANY ADJACENT TIED CONCRETE.

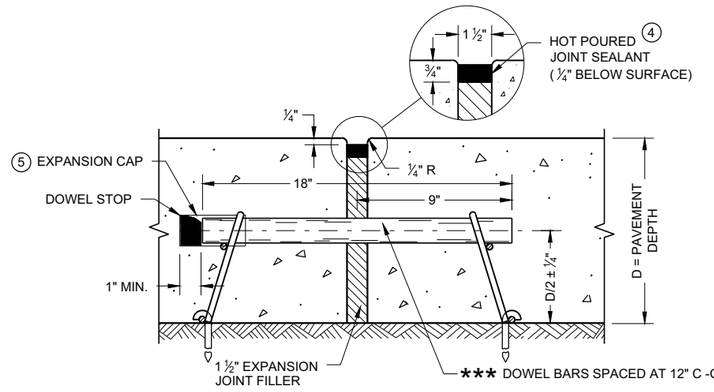
(A) STANDARD CONTRACTION JOINT NORMAL TO ℄ OR ℞.

(B) STANDARD LONGITUDINAL JOINT WITH TIE BARS.

(C) 1 ½" EXPANSION JOINT WITH DOWEL BARS NORMAL TO ℄ OR ℞ .



SECTION D - D
CONTRACTION JOINT



EXPANSION JOINT DETAIL

CONCRETE PAVEMENT APPROACH SLAB

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

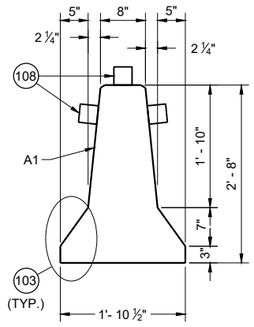
APPROVED
November 2018
DATE

/S/ Peter Kemp, P.E.
PAVEMENT SUPERVIS

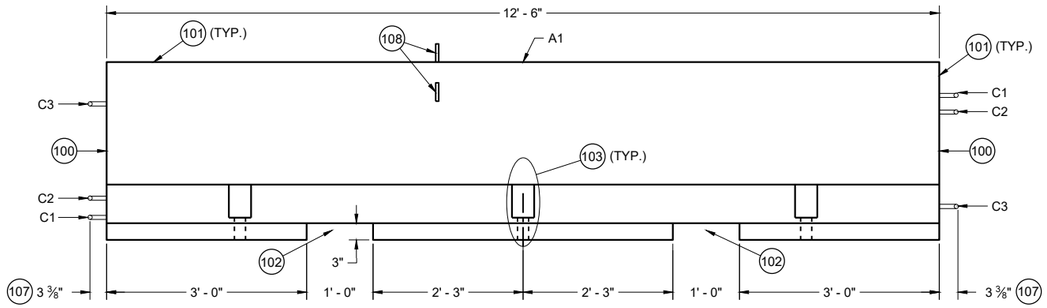
FHWA

6

SDD 13B02 - 09a



CROSS SECTION



PROFILE VIEW

GENERAL NOTES

PLACE BARRIER ON PAVED SURFACE. BEFORE PLACEMENT OF TEMPORARY BARRIER, REMOVE ALL LOOSE MATERIAL FROM PAVED SURFACE.

LOOP BARS C1, C2 AND C3 ARE NOT FOR PLACEMENT OR MOVEMENT OF BARRIER.

(100) PERMANENTLY FORM INTO ONE END OF BARRIER THE FOLLOWING INFORMATION:
- A. TYPE OF BARRIER: WI-CBTP
- B. MANUFACTURER
- C. DATE OF MANUFACTURE (MONTH AND YEAR)

(101) 1" OPTIONAL CHAMFER

(102) SEE LIFTING SLOT DETAIL

(103) SEE ANCHOR BLOCK DETAIL

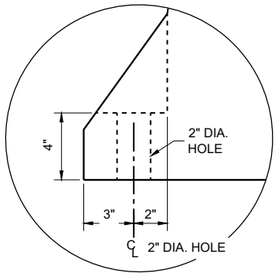
(104) 1 ¾" MIN. CLEAR COVER

(105) 2" MIN. CLEAR COVER

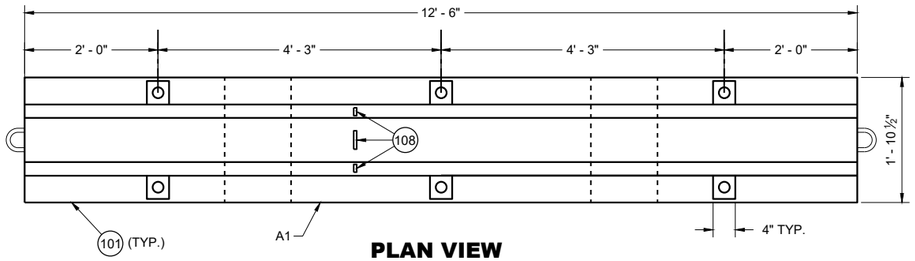
(106) 1" MIN. CLEAR COVER

(107) ± ⅛" MEASURED FROM FACE OF CONCRETE BARRIER TO OUTSIDE OF LOOP BAR (TYP.)

(108) USE DELINEATORS CONFORMING TO SECTION 633 OF THE STANDARD SPECIFICATIONS. CONTRACTOR MY USE ALTERNATE SHAPES AND HOUSING. INSTALL DELINEATORS ACCORDING TO MANUFACTURERS INSTRUCTION. INSTALL YELLOW REFLECTORS WHEN BARRIER IS LOCATED LEFT OF TRAFFIC AND WHITE WHEN BARRIER IS LOCATED RIGHT OF TRAFFIC. SPACE DELINEATORS A MAXIMUM OF 25 FEET APART, PROVIDE TOP MOUNTED DELINEATORS IN ADDITION TO SIDE MOUNTED DELINEATORS ON BARRIER INSTALLATIONS LOCATED ON A CURVED ALIGNMENT LONGER THAT 200 FEET AND ON BARRIERS USED TO SEPARATE OPPOSING TRAFFIC.

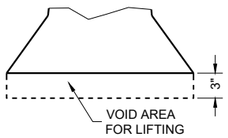


ANCHOR BLOCK DETAIL

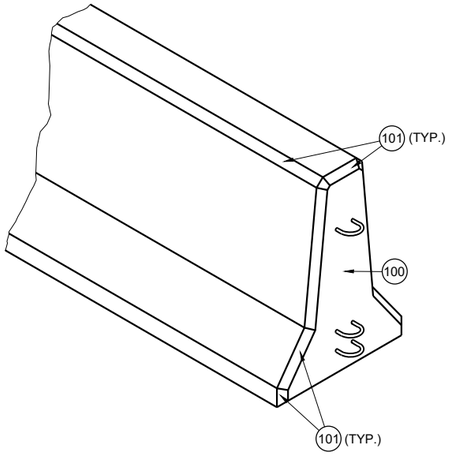


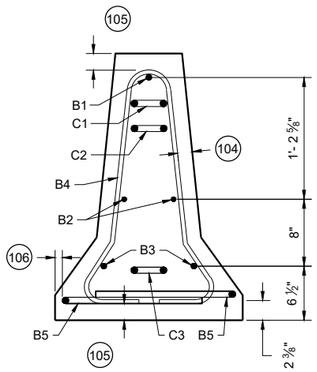
PLAN VIEW

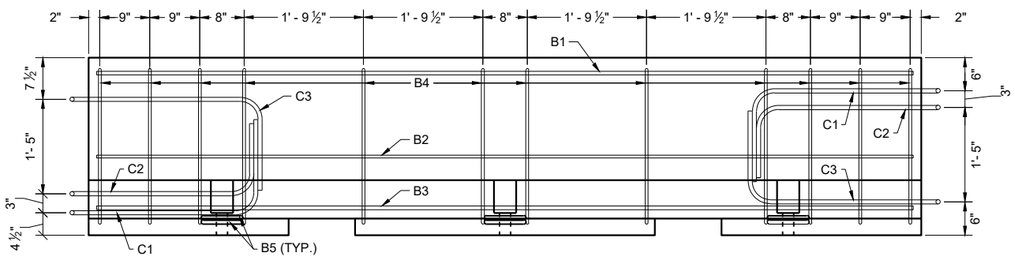
TEMPORARY BARRIER



LIFTING SLOT DETAIL (TYP.)







PROFILE VIEW

TEMPORARY BARRIER REINFORCEMENT

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

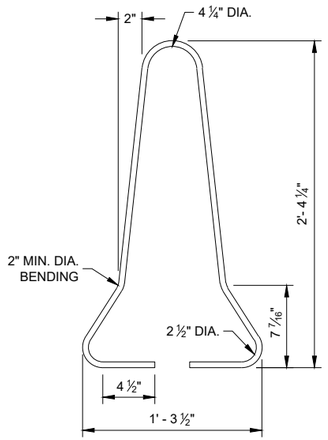
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

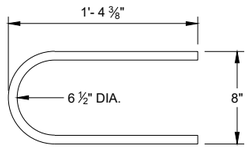
SDD 14B07-16a

6

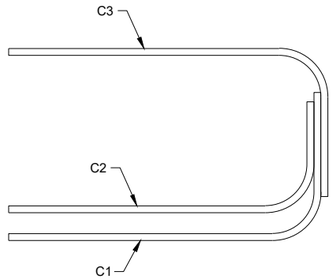
SDD 14B07-16a



B4 BAR DETAIL

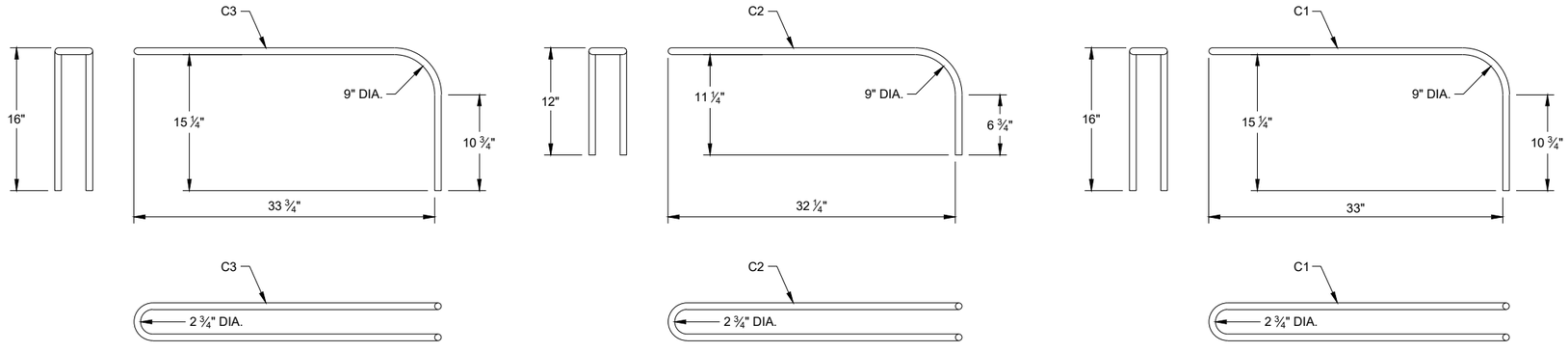


B5 BAR DETAIL



PROFILE VIEW

LOOP BAR ASSEMBLY



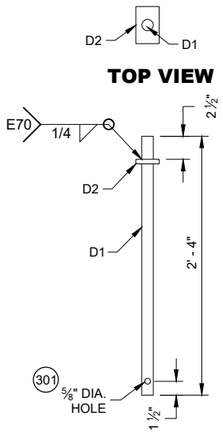
C BAR DETAILS

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTA

6

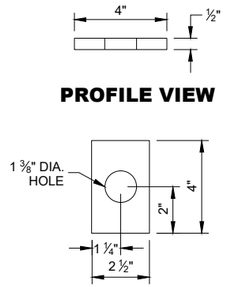
SDD 14B07-16b



TOP VIEW

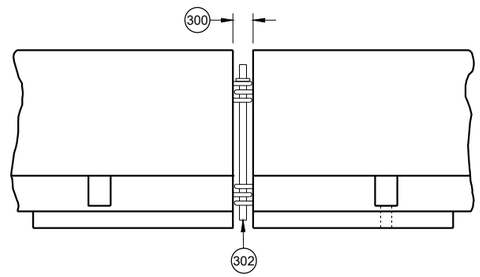
PROFILE VIEW

CONNECTOR PIN ASSEMBLY



PROFILE VIEW

TOP VIEW D2



CONNECTING TEMPORARY BARRIER SECTIONS

GENERAL NOTES

300 SET WITH 3 ⅝" WOOD BLOCK.

301 HOLE IS OPTIONAL.

302 CONNECTOR PIN ASSEMBLY.

303 CONCRETE PAVEMENT, APPROACH SLAB, OR DECK.

304 CONCRETE DECK.

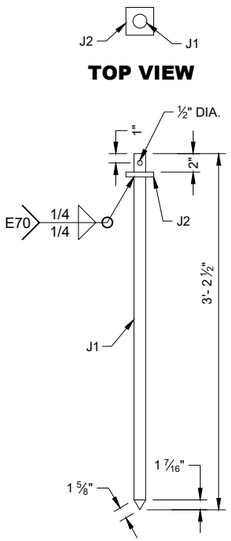
305 DO NOT USE ON CONCRETE BRIDGE DECK WITH ASPHALT OVERLAY OR CONCRETE PAVEMENT WITH ASPHALT OVERLAY.

306 MINIMUM OF 2" OF ASPHALT.

307 ASPHALT ANCHOR PIN ASSEMBLY

308 IF DRILLING A PILOT HOLE, THE MAX, DIA. OF THE HOLE IS 3/4"

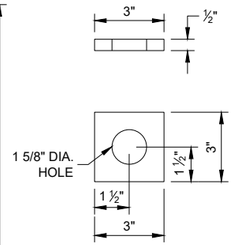
309 WHEN THERE IS ASPHALT OVERLAYING CONCRETE PAVEMENT, A 1 5/8" DIA. PILOT HOLE CAN BE DRILLED INTO THE OVERLAY AND CONCRETE. IF NEEDED DRILL A 3/4" PILOT HOLE IN BASE COURSE.



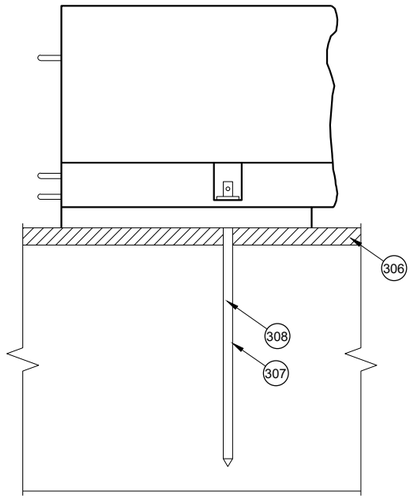
TOP VIEW

PROFILE VIEW

ASPHALT ANCHOR PIN ASSEMBLY

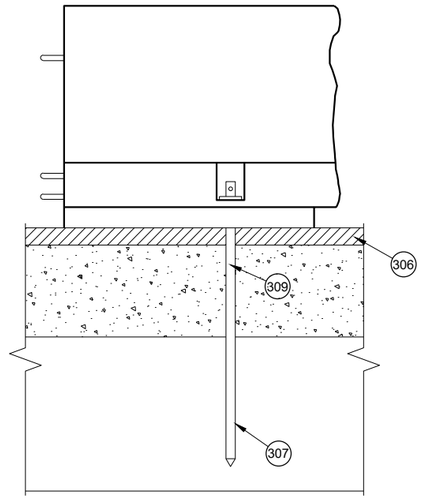


TOP VIEW J2



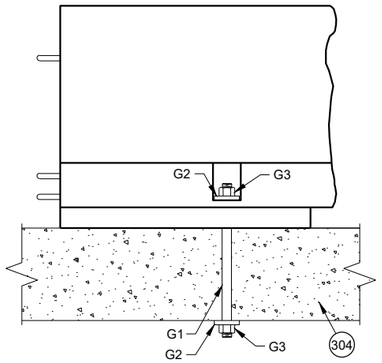
SIDE VIEW

ASPHALT ANCHOR INSTALLATION THROUGH ASPHALT PAVEMENT



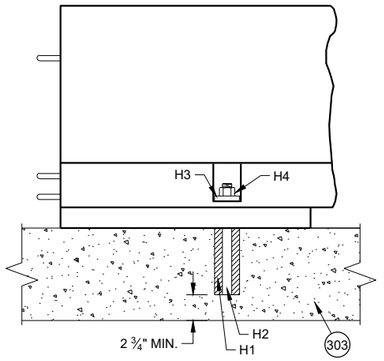
SIDE VIEW

ASPHALT ANCHOR INSTALLATION THROUGH ASPHALT OVERLAY ON TOP OF CONCRETE PAVEMENT



SIDE VIEW

THROUGH BOLT ANCHOR INSTALLATION (305)



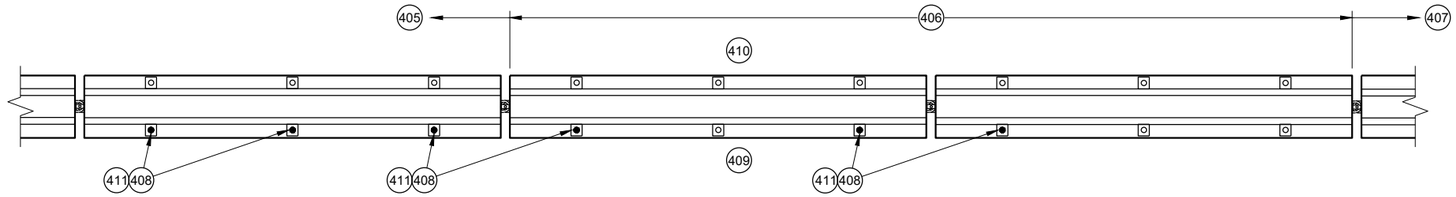
SIDE VIEW

ADHESIVE ANCHOR INSTALLATION (305)

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

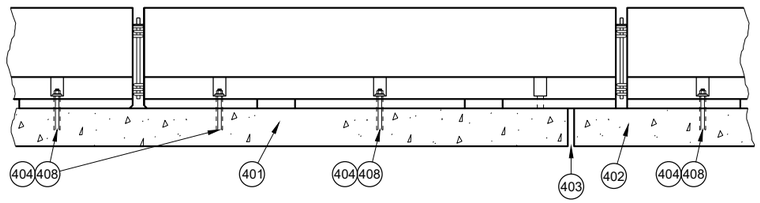
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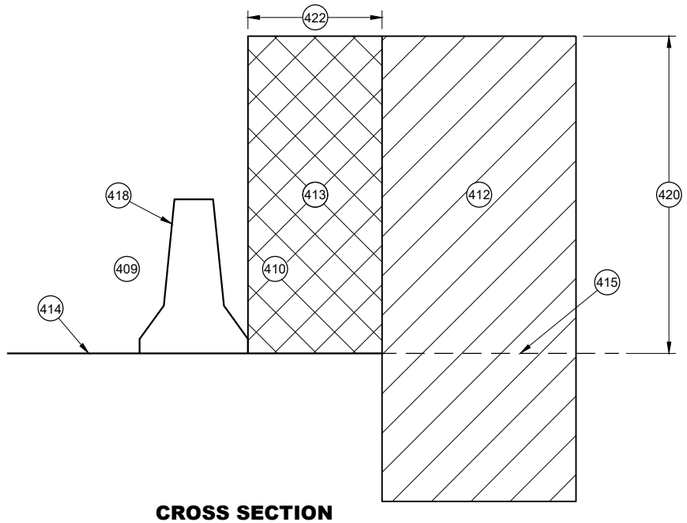
PLAN VIEW

TRANSITION FROM FREE STANDING TO ANCHORED BARRIER



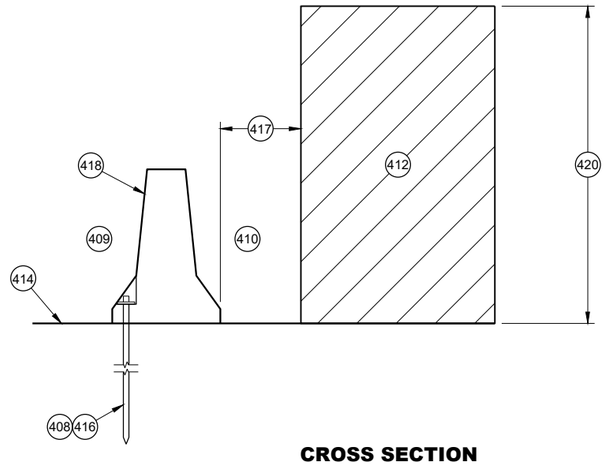
PROFILE VIEW

ANCHORED BARRIER NEAR EXPANSION JOINT (400)



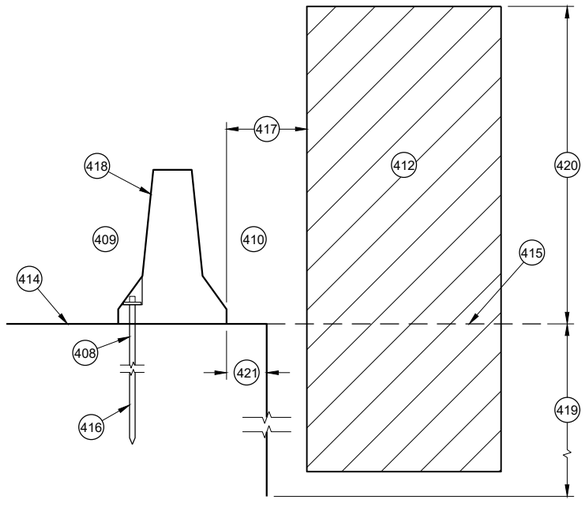
CROSS SECTION

FREE STANDING BARRIER



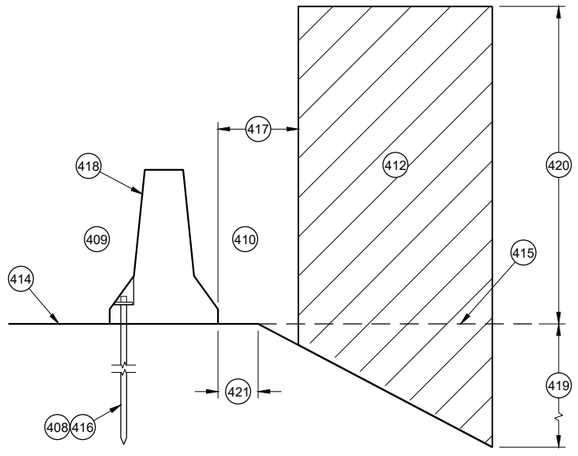
CROSS SECTION

ANCHORED BARRIER FOR OBJECTS ABOVE THE GRADE LINE AND NEAR THE BARRIER



CROSS SECTION

ANCHORED BARRIER NEAR VERTICAL DROP OFF



CROSS SECTION

ANCHORED BARRIER NEAR A SLOPE

GENERAL NOTES

(400) NO SINGLE CONCRETE BARRIER SECTION SHALL BE ANCHORED TO BOTH THE BRIDGE DECK AND THE APPROACH SLAB. ALL ANCHOR BOLT LOCATIONS SHALL BE ANCHORED TO THE DECK IN ACCORDANCE WITH THE DETAIL. NO MORE THAN ONE ANCHOR BOLT SHALL BE ELIMINATED FROM A BARRIER SECTION WHEN SPANNING AN EXPANSION JOINT.

(401) CONCRETE DECK

(402) CONCRETE DECK OR APPROACH SLAB.

(403) EXPANSION JOINT

(404) ADHESIVE ANCHOR SHOWN. SEE ANCHOR DETAILS.

(405) ANCHORED TEMPORARY BARRIER

(406) TRANSITION FROM ANCHORED TEMPORARY BARRIER TO FREE STANDING

(407) FREE STANDING BARRIER

(408) REMOVE ALL ANCHORS WHEN NO LONGER NEEDED. FILL CONCRETE PAVEMENTS, DECKS AND APPROACH SLABS WITH NON-SHRINK COMMERCIAL GROUT FROM THE APPROVED PRODUCT LIST. FILL ASPHALT PAVEMENTS WITH ASTM D6690 TYPE II RUBBERIZED CRACK FILLER.

(409) TRAFFIC SIDE

(410) NON-TRAFFIC SIDE

(411) ANCHOR LOCATION. SEE ANCHORING DETAILS.

(412) WORK AREA

(413) AREA FREE OF OBJECTS AND WORKERS

(414) GRADE LINE

(415) EXTENDED GRADE LINE

(416) ANCHORED TEMPORARY BARRIER. SEE BOLT THROUGH DECK, REMOVABLE ADHESIVE ANCHOR, OR AN ASPHALT ANCHOR ROD DETAILS FOR MORE INFORMATION. ASPHALT ANCHOR ROD SHOWN.

(417) WHEN OBJECTS EXTEND ABOVE THE GRADE. A MINIMUM OF 1 FOOT IS REQUIRED FROM BACK OF BARRIER TO OBJECT.

(418) OBJECTS ARE NOT TO BE PLACED ON, MOUNTED TO, OR ALLOWED TO LEAN AGAINST THE BARRIER WITHOUT WRITTEN PERMISSION OF THE PROJECT ENGINEER.

(419) DEPTHS OF 3 FEET OR MORE.

(420) Y = 6.5'

(421) OFFSET FROM BACK OF BARRIER EDGE:

CONCRETE PAVEMENT	0.5'
ASPHALT	0.5'

(422) POSTED SPEED (MPH):

45 OR GREATER	4.0'
40 OR LOWER	2.0'

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
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GENERAL NOTES

(500) EXISTING RIGID BARRIERS (VARIES)

(501) TEMPORARY BARRIER

(502) SEE OTHER DETAIL ON HOW TO ANCHOR TEMPORARY BARRIER (BARRIER ASPHALT ANCHOR SHOWN).

(503) ANCHORS ARE REQUIRED ON BOTH SIDE OF THE TEMPORARY BARRIER.

(504) NESTED RAILS ARE REQUIRED ON BOTH SIDES OF THE TEMPORARY BARRIER FOR ALL INSTALLATIONS.

(505) TRAFFIC TRAVELS FROM PERMANENT BARRIER TO TEMPORARY BARRIER.

(506) TRAFFIC TRAVELS FROM TEMPORARY BARRIER TO PERMANENT BARRIER.

(507) VERTICAL BARRIER

(508) SAFETY SHAPE BARRIER

(509) SINGLE SLOPE BARRIER

(510) CAP END PLATE PLACED FLUSH WITH UPSTREAM END OF RIGID BARRIER.

(511) BENT THRIE BEAM TO FIT.

(512) THRIE BEAM PIECES ARE OFFSET 15 ¼" TO PREVENT INTERFERENCE FROM THE ANCHORS ON OPPOSING SIDES.

(513) TWO (2) P1, P2 AND P3 ARE REQUIRED

(514) FIVE (5) N1, N2 AND N3 ARE REQUIRED

(515) TWO (2) R1, R2 AND R3 ARE REQUIRED

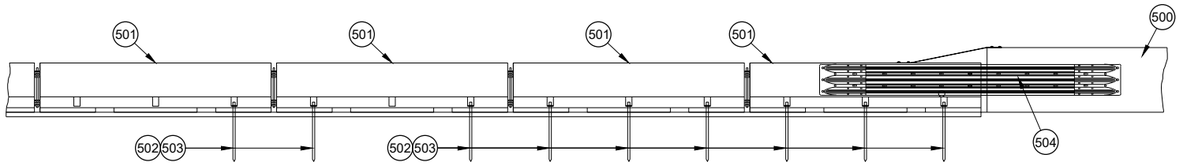
(516) CUT WOOD BLOCK TO FIT.

(517) SEE THRIE BEAM RAIL TERMINAL CONNECTOR DETAIL ASSEMBLY.

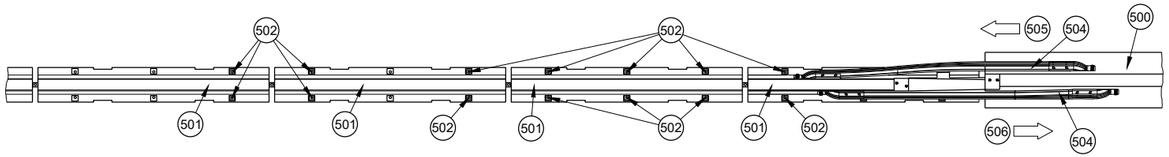
(518) CAP ASSEMBLY

(519) 4" MAX. GAP BETWEEN TEMPORARY BARRIER AND RIGID BARRIER.

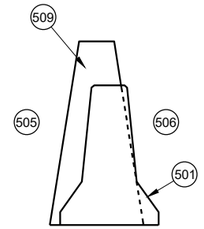
(520) ALL TWELVE SPLICE HOLES REQUIRE M1 AND M2



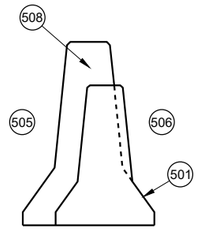
PROFILE VIEW



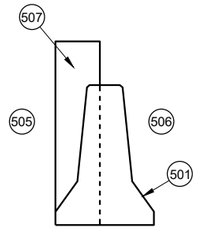
PLAN VIEW



CROSS SECTION TEMPORARY BARRIER PLACEMENT SINGLE SLOPE

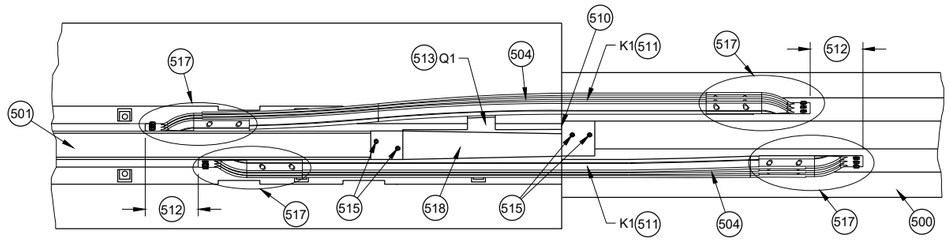


CROSS SECTION TEMPORARY BARRIER PLACEMENT SAFETY SHAPE

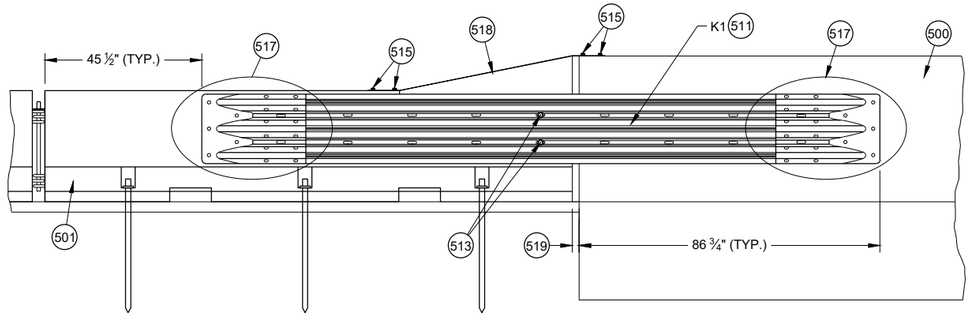


CROSS SECTION TEMPORARY BARRIER PLACEMENT VERTICAL

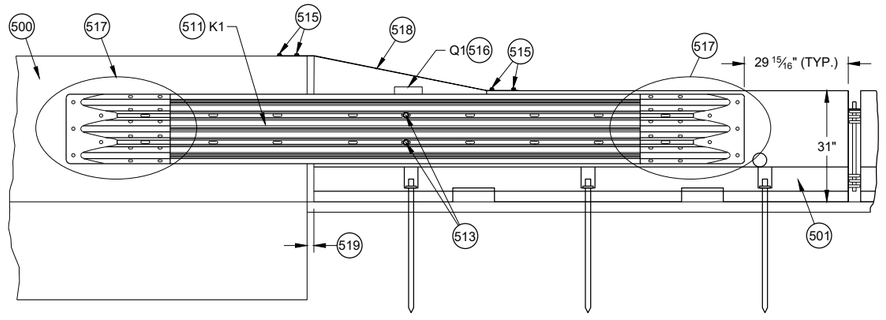
PLAN VIEW
TRANSITION TO RIGID BARRIER



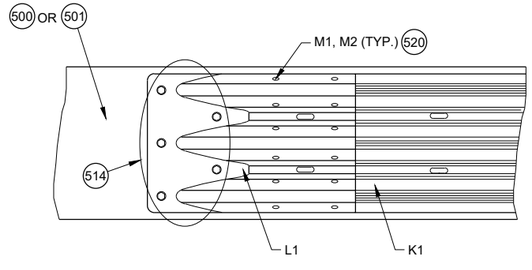
PLAN DETAIL VIEW
TRANSITION TO RIGID BARRIER



FRONT DETAIL VIEW
TRANSITION TO RIGID BARRIER



BACK DETAIL VIEW
TRANSITION TO RIGID BARRIER

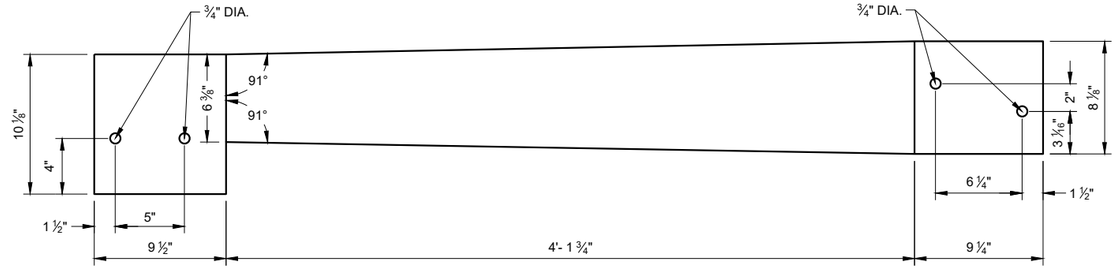


(517) DETAIL PLAN VIEW
THRIE BEAM RAIL TERMINAL CONNECTOR ASSEMBLY

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

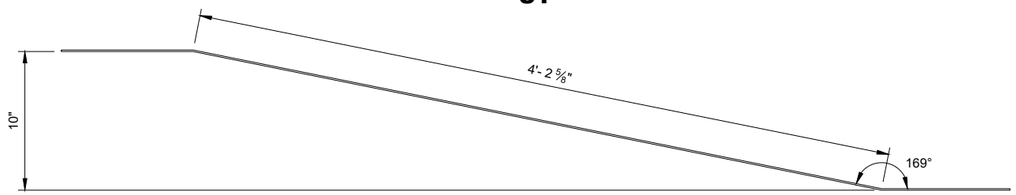
6

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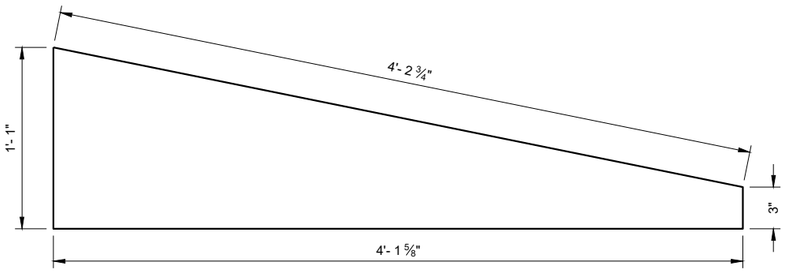
TOP VIEW

S1



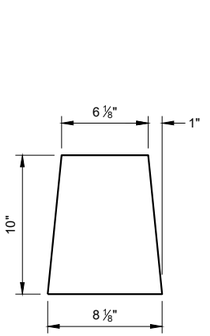
ELEVATION VIEW

S1

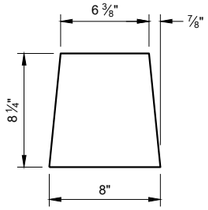


SIDE VIEW

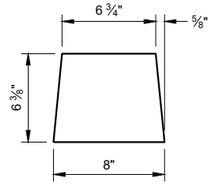
S3



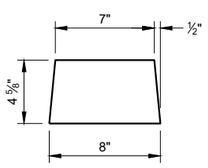
S2



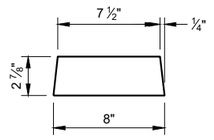
S4



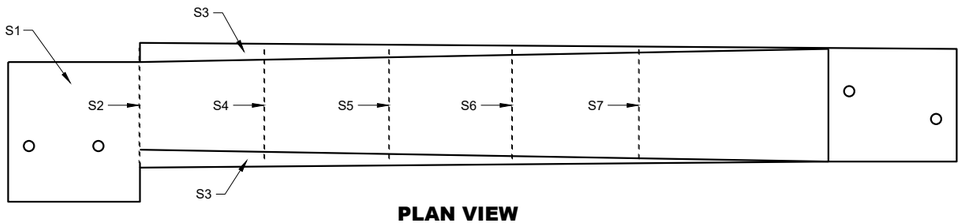
S5



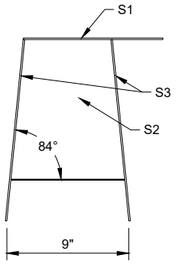
S6



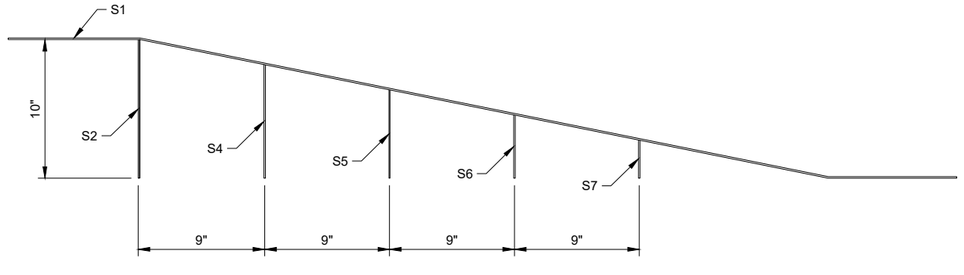
S7



PLAN VIEW



BACK VIEW



SIDE VIEW (600)

42" TOP CAP ASSEMBLY

GENERAL NOTES

STITCH WELD GUSSET PLATES AND END PLATES ON THREE SIDES

STITCH WELD TWO SIDE PLATES TO TOP PLATE, END PLATE AND GUSSETS.

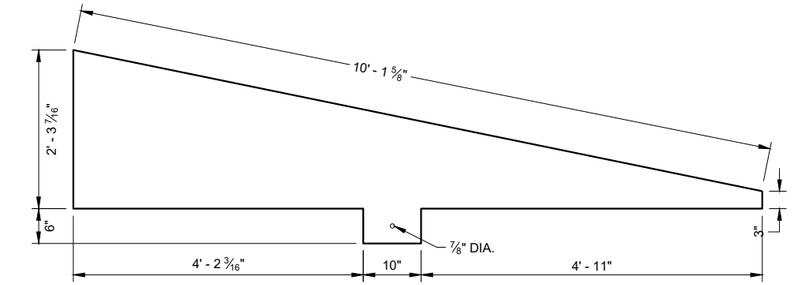
(600) SIDE PLATES (S3) NOT SHOWN FOR CLARITY.

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTA

6

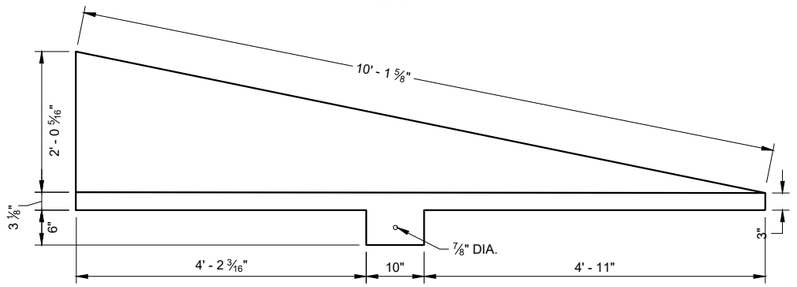
SDD 14B07-16f



SIDE VIEW
T4



END VIEW



SIDE VIEW
T3

END VIEW

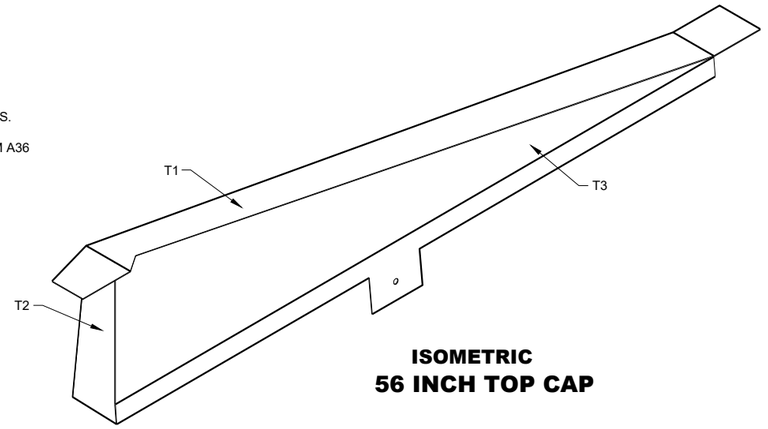
GENERAL NOTES

STITCH WELD GUSSET PLATES AND END PLATES ON THRIE SIDES

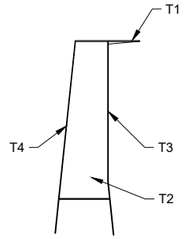
STITCH WELD TWO SIDE PLATES TO TOP PLATE, END PLATE AND GUSSETS.

SIDE PLATES, TOP PLATE, END PLATE AND GUSSETS ARE 12 GAUGE ASTM A36 GALVANIZED STEEL.

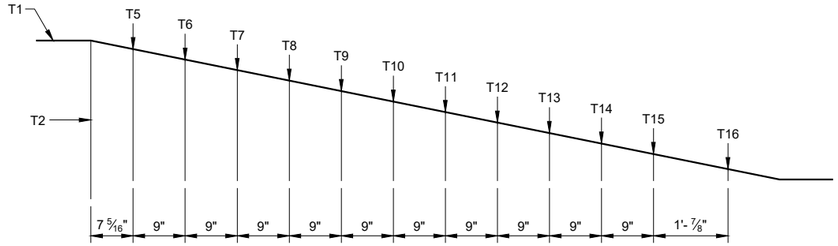
(700) SIDE PLATES (T3 AND T4) NOT SHOWN FOR CLARITY.



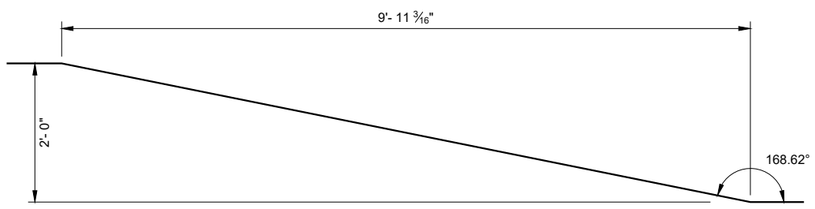
ISOMETRIC
56 INCH TOP CAP



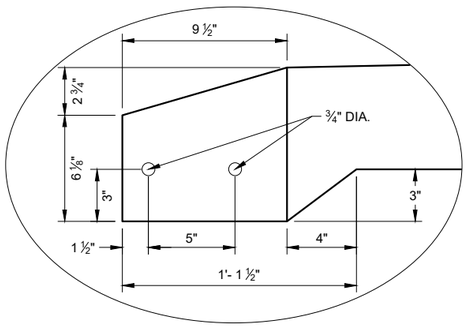
END VIEW
56 INCH TOP CAP



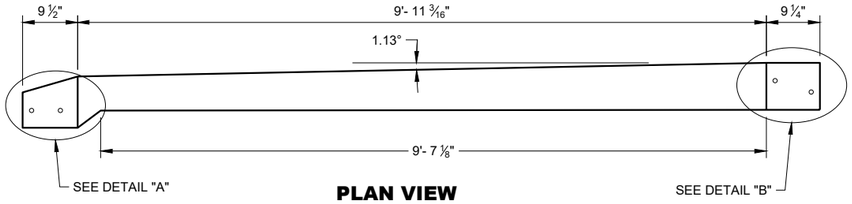
SIDE VIEW (700)
56 INCH TOP CAP



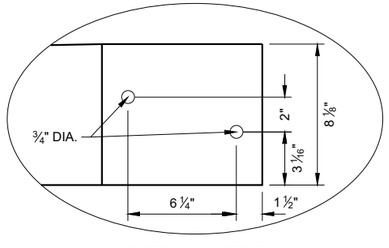
SIDE VIEW
TOP PLATE T1



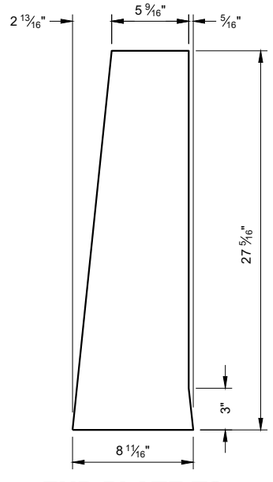
DETAIL "A"



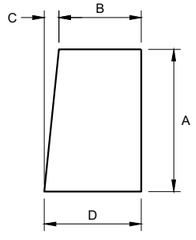
PLAN VIEW
TOP PLATE T1



DETAIL "B"



END PLATE T2



GUSSET PLATES
T5 - T16

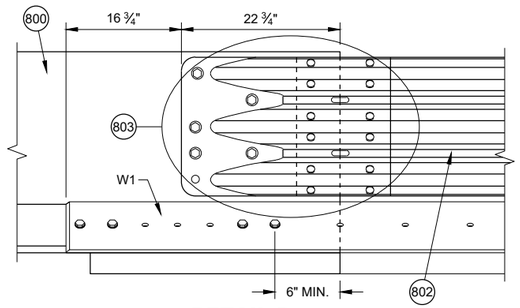
GUSSET DIMENSIONS				
GUSSET NO.	A	B	C	D
T5	22 13/16"	5 1/16"	2 5/16"	8 1/16"
T6	21"	5 7/8"	2 3/16"	8 1/16"
T7	19 3/16"	6 1/16"	1 15/16"	8 1/16"
T8	17 3/8"	6 1/4"	1 13/16"	8 1/16"
T9	15 5/16"	6 7/16"	1 9/16"	8 1/16"
T10	13 3/4"	6 5/8"	1 7/16"	8 1/16"
T11	11 15/16"	6 13/16"	1 1/4"	8 1/16"
T12	10 1/8"	7"	1 1/16"	8 1/16"
T13	8 5/16"	7 3/16"	7/8"	8 1/16"
T14	6 1/2"	7 3/8"	1 1/16"	8 1/16"
T15	4 1/16"	7 9/16"	1/2"	8"
T16	2 7/8"	7 3/4"	1/4"	8"

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

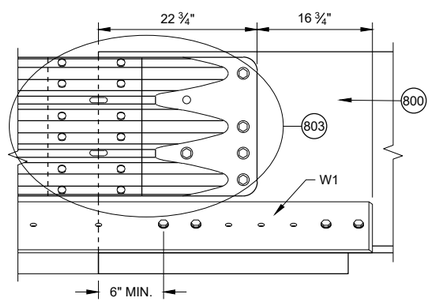
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

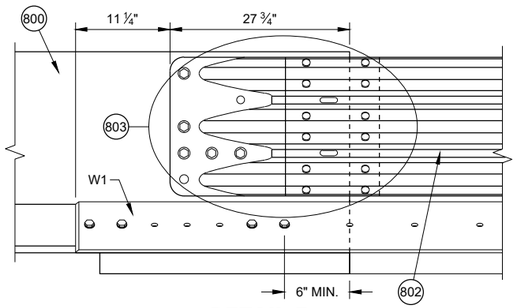
SDD 14B07-16g



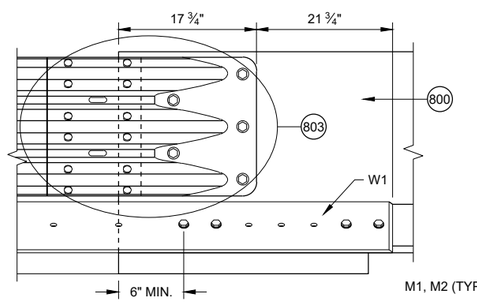
DETAIL D



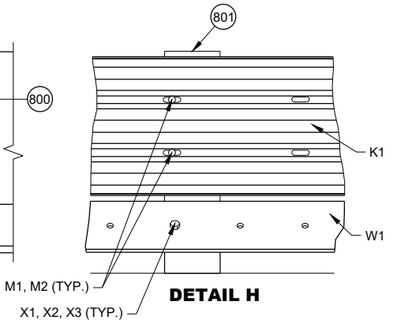
DETAIL E



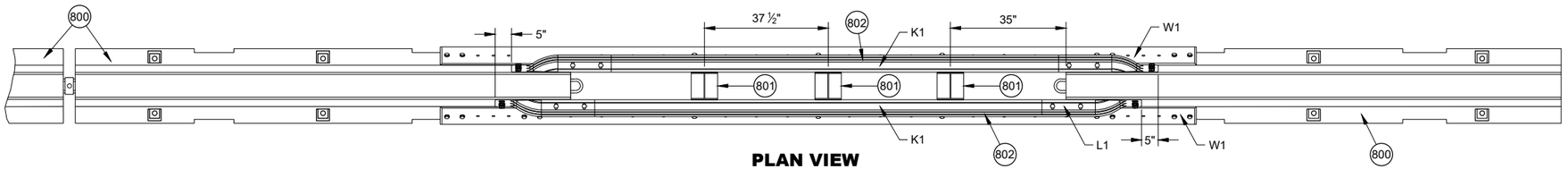
DETAIL F



DETAIL G



DETAIL H



PLAN VIEW

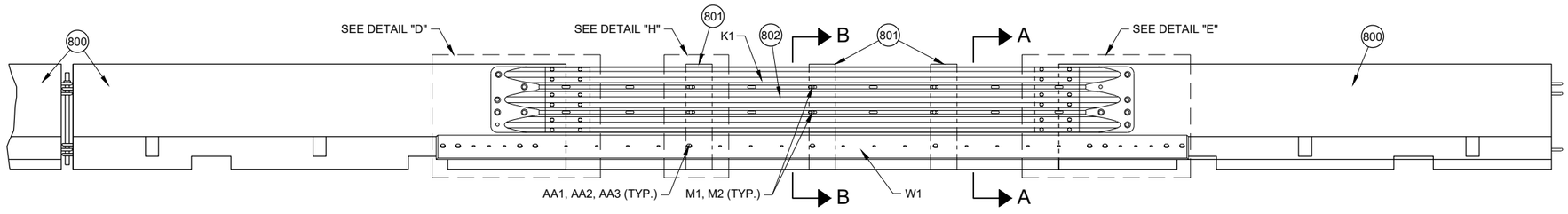
GENERAL NOTES

(800) FREE STANDING TEMPORARY BARRIER

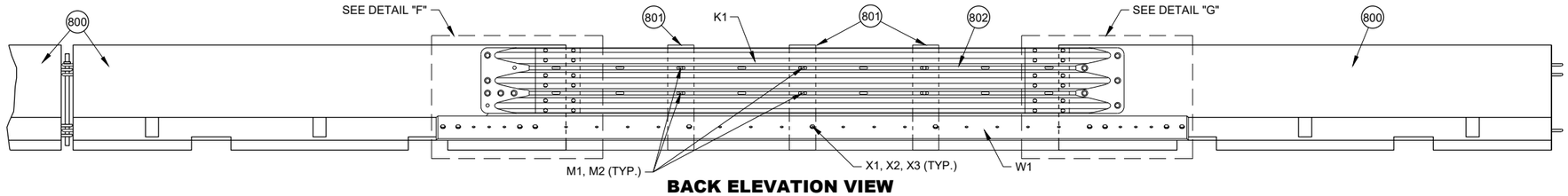
(801) GAP STIFFENER ASSEMBLY

(802) THRIE BEAMS ARE NESTED ON BOTH SIDES OF THE TEMPORARY BARRIER.

(803) SEE THRIE BEAM RAIL TERMINAL CONNECTOR DETAIL



FRONT ELEVATION VIEW



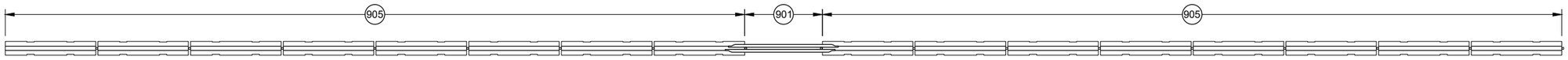
BACK ELEVATION VIEW

PORTABLE CONCRETE BARRIER GAP THRIE BEAM COVER

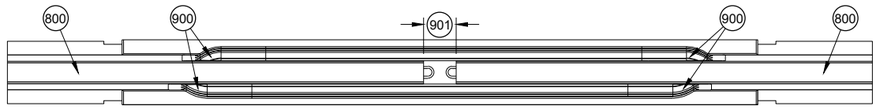
CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
SDD 14B07-16h



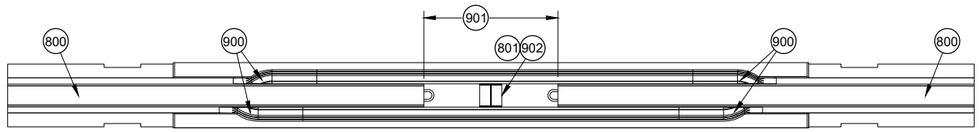
PLAN VIEW
GAP WITHIN SPACING



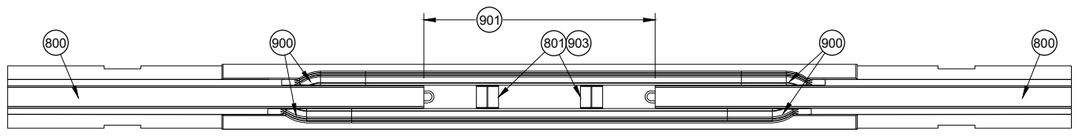
PLAN VIEW
TEMPORARY BARRIER GAP OVER 4" TO 1' MAX. (904)

GENERAL NOTES

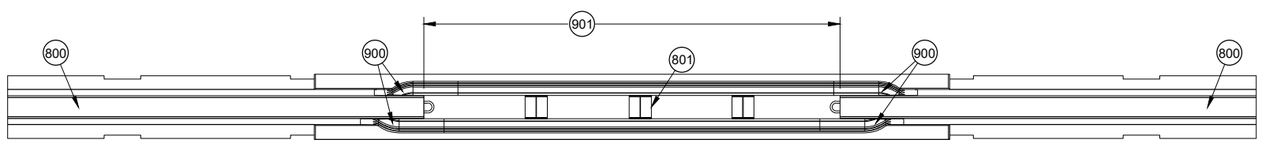
(900) SEE OTHER DETAILS FOR TEMPORARY GAP HARDWARE (TYP.)
(901) TEMPORARY BARRIER GAP
(902) GAP STIFFENER ASSEMBLY CENTERED IN THE GAP.
(903) GAP STIFFENER ASSEMBLY IS OFFSET 18 ¾" FROM CENTER
(904) MINIMUM NUMBER OF GAP STIFFENERS SHOWN FOR THE GAP RANGE SHOWN.
(905) MINIMUM OF 8 CONTINUOUS FREE STANDING TEMPORARY BARRIERS



PLAN VIEW
TEMPORARY BARRIER GAP OVER 1' TO 4' MAX. (904)



PLAN VIEW
TEMPORARY BARRIER GAP OVER 4' TO 7' MAX. (904)

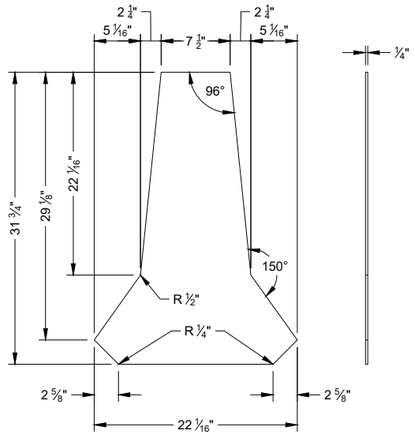


PLAN VIEW
TEMPORARY BARRIER GAP OVER 7' TO 12.5' MAX. (904)

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

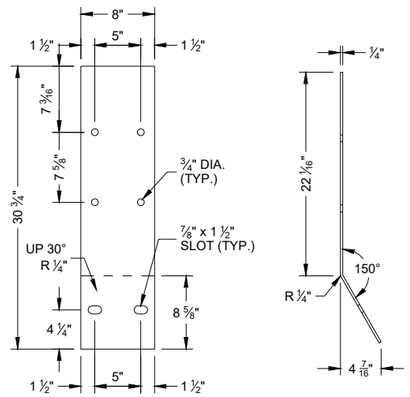
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
SDD 14B07-16i



PROFILE VIEW SIDE VIEW

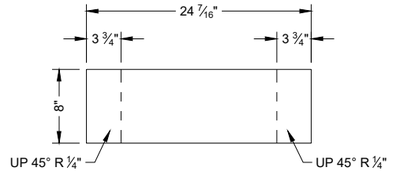
STIFFENER ASSEMBLY CENTER PANEL U1



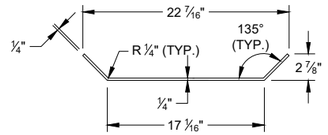
FLAT PATTERN

SIDE VIEW

STIFFENER ASSEMBLY SIDE PANEL U2

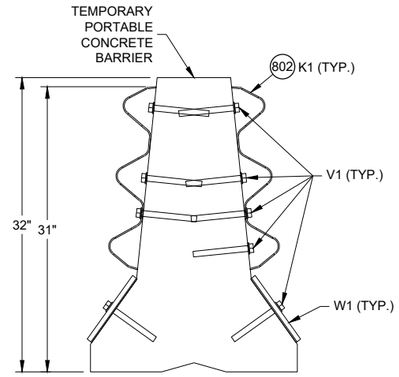


FLAT PATTERN

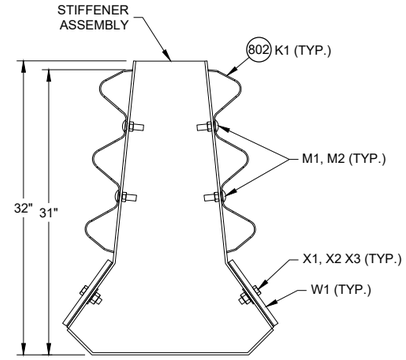


PROFILE VIEW

STIFFENER ASSEMBLY BOTTOM PANEL U3

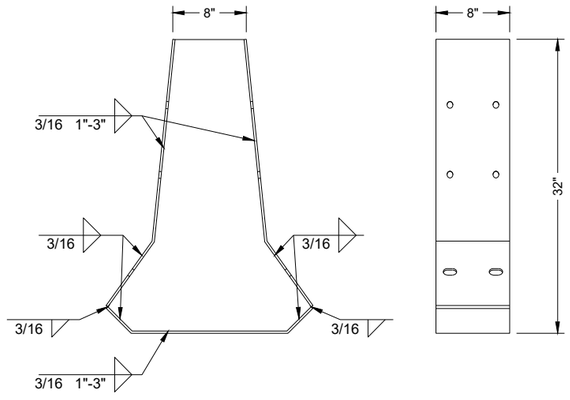


SECTION A - A



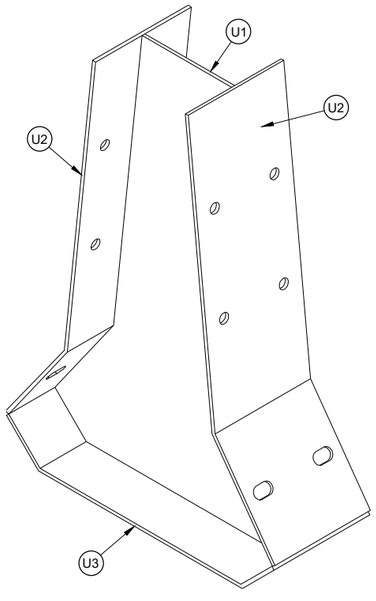
SECTION B - B

PLAN VIEW



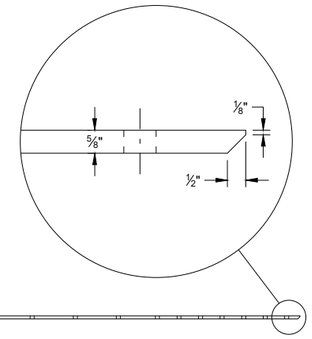
PROFILE VIEW

SIDE VIEW

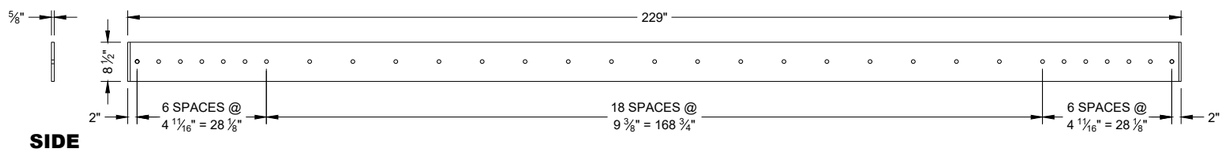


ISOMETRIC

GAP STIFFENER ASSEMBLY



PLAN VIEW



SIDE VIEW

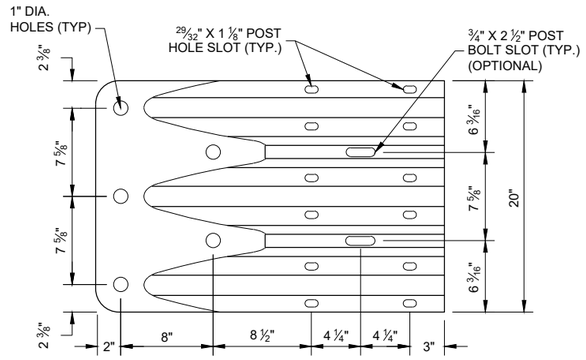
ELEVATION VIEW

W1 TOE PLATE

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

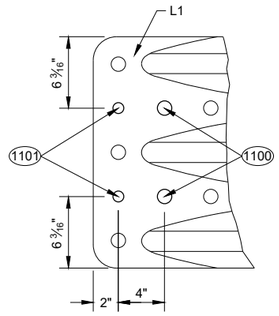
STATE OF WISCONSIN
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ELEVATION VIEW

THRIE BEAM TERMINAL CONNECTOR



ELEVATION VIEW

ADDITIONAL THRIE BEAM (1102) TERMINAL CONNECTOR HOLE DETAIL

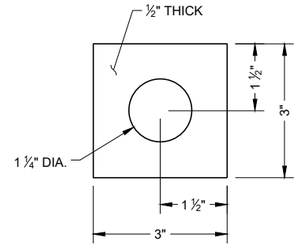


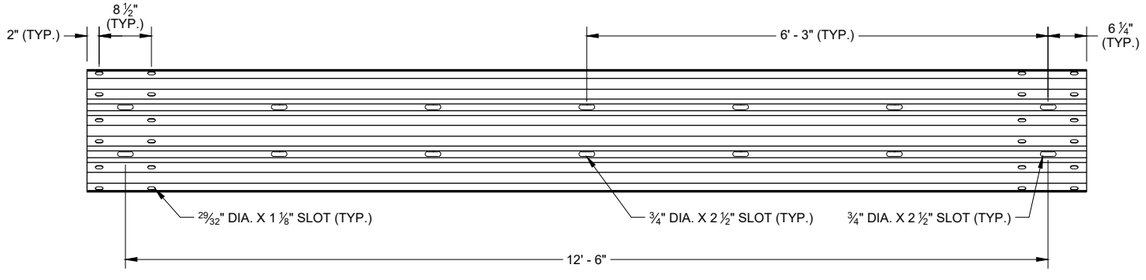
PLATE WASHER DETAIL G2, H3

GENERAL NOTES

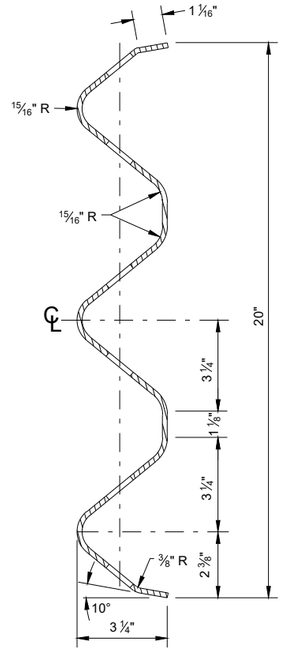
(1100) 1" DIA. HOLE

(1101) 3/4" DIA. HOLE

(1102) PROVIDE HOLES IN THRIE BEAM TERMINAL CONNECTOR TO LIMIT STEEL REINFORCEMENT OR LOOP BAR CONFLICT. CONTRACTOR MAY FIELD DRILL ADDITIONAL HOLE OR PROVIDE THRIE BEAM TERMINAL CONNECTOR WITH ADDITIONAL HOLES FROM SUPPLIER.



SLOTTED THRIE BEAM RAIL K1



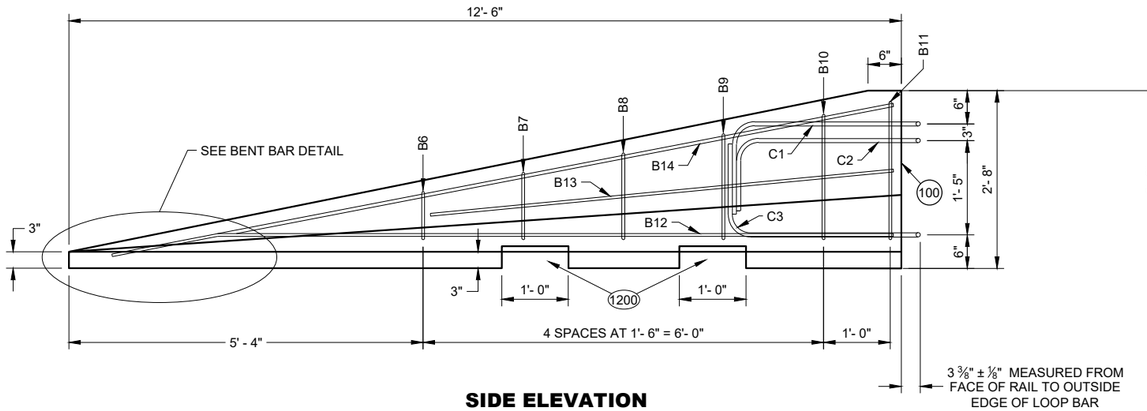
SECTION THROUGH BEAM K1

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

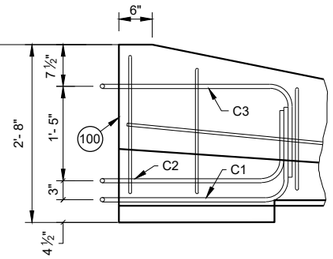
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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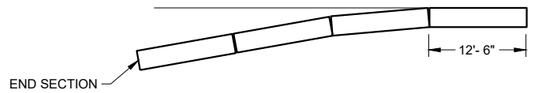
SIDE ELEVATION
(FOR CONNECTION TO LEFT END OF BARRIER)



SIDE ELEVATION
LOOP BAR ASSEMBLY INVERTED FOR OPPOSITE END
(FOR CONNECTION TO RIGHT END OF BARRIER)

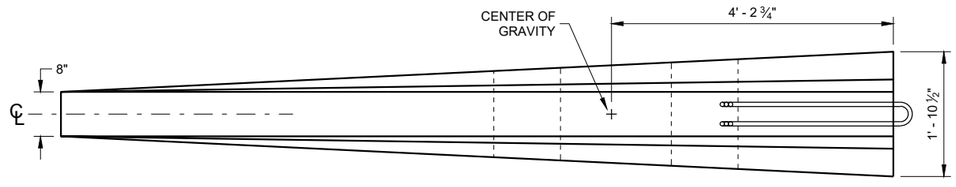
GENERAL NOTES

(1200) SEE LIFTING SLOT DETAIL. LOCATION OF LIFTING SLOTS DETERMINED BY CONTRACTOR.

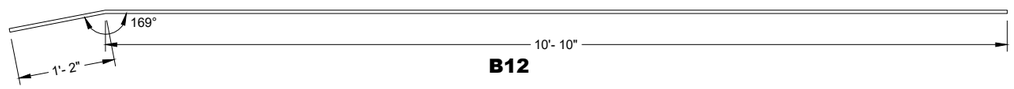


FLARE AT BARRIER END

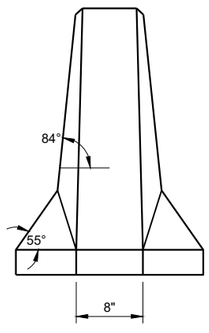
POSTED SPEED, (MPH)	FLARE RATE
40 OR LESS	6:1
45 OR GREATER	8:1



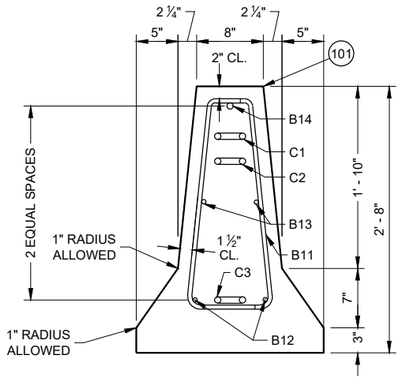
PLAN VIEW



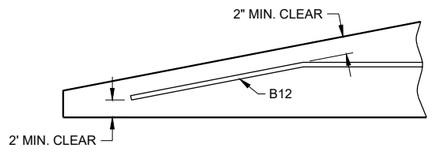
B12



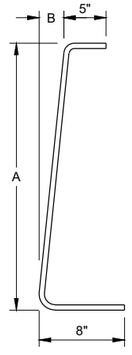
FRONT ELEVATION



END SECTION



BENT BAR DETAIL



BAR	A	B
B6	10"	1"
B7	1'- 1"	1 ¼"
B8	1'- 5"	1 ⅝"
B9	1'- 8"	1 ⅞"
B10	2'- 0 ½"	2 ⅜"
B11	2'- 3"	2 ¾"

B BARS
2 OF EACH SIZE REQUIRED FOR STIRRUP ASSEMBLY

DETAILS OF BARRIER TAPER SECTION

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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BILL OF MATERIALS - CONCRETE BARRIER PRECAST

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
A1	PRECAST TEMPORARY BARRIER - CONCRETE	MIN. = f'c 5000 PSI	
B1	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#5 REBAR, LENGTH 12'-2"
B2	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 12'-2"
B3	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#5 REBAR, LENGTH 12'-2"
B4	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 6'-0"
B5	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#6 REBAR, LENGTH 2'-11"
B6	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 1'-11"
B7	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 2'-2"
B8	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 2'-6"
B9	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 2'-9"
B10	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 3'-2"
B11	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 3'-4"
B12	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 12'-0"
B13	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 7'-9"
B14	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#5 REBAR, LENGTH 11'-9"
C1	LOOP BAR	ASTM A709 GRADE 70 SMOOTH BAR OR ASTM A706 GRADE 60 REBAR UNCOATED	¾" DIA.
C2	LOOP BAR	ASTM A709 GRADE 70 SMOOTH BAR OR ASTM A706 GRADE 60 REBAR UNCOATED	¾" DIA.
C3	LOOP BAR	ASTM A709 GRADE 70 SMOOTH BAR OR ASTM A706 GRADE 60 REBAR UNCOATED	¾" DIA.
D1	CONNECTION PIN - ROD	ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI	1 ¼" DIA.
D2	CONNECTION PIN - TOP PLATE	ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI	
G1	BOLT THROUGH ANCHOR - THREADED ROD	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 A307 GRADE A OR SAE J429 GRADE 2 UNC	1 ⅛" DIA.
G2	BOLT THROUGH ANCHOR - WASHER, SQUARE	ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI	
G3	BOLT THROUGH ANCHOR - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	
H1	ADHESIVE ANCHOR - ADHESIVE	ICC-ES-AC308 5 ¼" EMBEDMENT WITH A MIN. BOND STRENGTH OF 1,650 PSI. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.	
H2	ADHESIVE ANCHOR - THREADED ROD	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 A307 GRADE A / SAE J429 GRADE 2 UNC	1 ⅛" DIA.
H3	ADHESIVE ANCHOR - WASHER, SQUARE	ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI	
H4	ADHESIVE ANCHOR - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	
J1	ASPHALT ANCHOR PIN - ROD	ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI	1 ½" DIA.
J2	ASPHALT ANCHOR PIN - STOP PLATE	ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI	
K1	THRIE BEAM RAIL	AASHTO M180 CLASS A TYPE 2 APPROVED PRODUCER	12 GAUGE
L1	THRIE BEAM RAIL - TERMINAL	AASHTO M180 CLASS A TYPE 2 APPROVED PRODUCER	12 GAUGE

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
M1	SPLICE BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 UNC AASHTO M180 HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36	⅝" DIA.
M2	SPLICE BOLT - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 AASHTO M180 RECESSED HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	
N1	THRIE BEAM RAIL TERMINAL - MECHANICAL ANCHOR	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 AASHTO M180 RECESSED HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	¾" DIA. LENGTH 6"
N2	THRIE BEAM RAIL TERMINAL - WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 F436 TYPE 1	
N3	THRIE BEAM RAIL TERMINAL MECHANICAL OR ADHESIVE ANCHOR	MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 17.9 KIPS AND ULTIMATE SHEAR LOAD 21.96 KIPS. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.	
P1	THRIE BEAM RAIL CONNECTION 1-BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 AASHTO M180 RECESSED HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	¾" DIA.
P2	THRIE BEAM RAIL CONNECTION 1-WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 F436 TYPE 1	
P3	THRIE BEAM RAIL CONNETION 1- MECHANICAL OR ADHESIVE ANCHOR	MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 9.48 KIPS AND ULTIMATE SHEAR LOAD 10.48 KIPS. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.	
Q1	BLOCK WOOD	SEE STANDARD SPEC. 614	
R1	CAP - BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 AASHTO M180 RECESSED HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	⅝" DIA.
R2	CAP- BOLT - WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 F436 TYPE 1	
R3	CAP - BOLT - MECHANICAL ANCHOR	MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS ULTIMATE TENSILE LOAD 12.14 KIPS AND ULTIMATE SHEAR LOAD 17.5 KIPS.SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.	12 GAUGE
S1	CAP 42-INCH TOP PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
S2	CAP 42-INCH END PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
S3	CAP 42-INCH SIDE PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
S4	CAP 42-INCH GUSSET 1	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
S5	CAP 42-INCH GUSSET 2	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
S6	CAP 42-INCH GUSSET 3	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
S7	CAP 42-INCH GUSSET 4	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE

6

SDD 14B07-16m

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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SDD 14B07-16m

BILL OF MATERIALS - CONCRETE BARRIER PRECAST

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
T1	CAP 56-INCH TOP PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T2	CAP 56-INCH END PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T3	CAP 56-INCH SIDE PLATE 1	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T4	CAP 56-INCH SIDE PLATE 2	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T5	CAP 56-INCH GUSSET 1	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T6	CAP 56-INCH GUSSET 2	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T7	CAP 56-INCH GUSSET 3	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T8	CAP 42-INCH GUSSET 4	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T9	CAP 42-INCH GUSSET 5	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T10	CAP 42-INCH GUSSET 6	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T11	CAP 42-INCH GUSSET 7	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T12	CAP 42-INCH GUSSET 8	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T13	CAP 42-INCH GUSSET 9	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T14	CAP 42-INCH GUSSET 10	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T15	CAP 42-INCH GUSSET 11	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T16	CAP 42-INCH GUSSET 12	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
U1	GAP STIFFENER	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	
U2	GAP STIFFENER - CONNECTOR PLATE 1	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	
U3	GAP STIFFENER - CONNECTOR PLATE 2	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
V1	THRIE BEAM RAIL TERMINAL MECHANICAL OR ADHESIVE ANCHOR	MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS ULTIMATE TENSILE LOAD 24.0 KIPS AND ULTIMATE SHEAR LOAD 21.5 KIPS. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.	¾" DIA.
V2	GAP STIFFENER - BOLT - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C O R MECHANICAL GALVANIZE TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291/ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	
W1	TOE PLATE	AASHTO M111/ASTM A123 ASTM A36 MIN STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	
X1	TOE PLATE - CONNECTION BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 UNC HEAVY HEX HEAD OR AASTHO M180 HEAD, ASTM F3125 GRADE A325 TYPE 1 HEAVY HEX HEAD OR SAE J429 GRADE 5 HEAVY HEX HEAD / ASTM A449 TYPE 1 HEAVY HEX HEAD. BOLTS MAY BE FULLY THREADED. PROVIDE ENOUGH THREADING FOR PROPER TIGHTENING OF BOLT.	¾" DIA.
X2	TOE PLATE - CONNECTION BOLT - WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 F436 TYPE 1 (HARDEN WASHER ONLY)	
X3	TOE PLATE - CONNECTION BOLT - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	

6

SDD 14B07-16n

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2023
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS DEVE ENGINEER

FHWA

6

SDD 14B07-16n

(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.

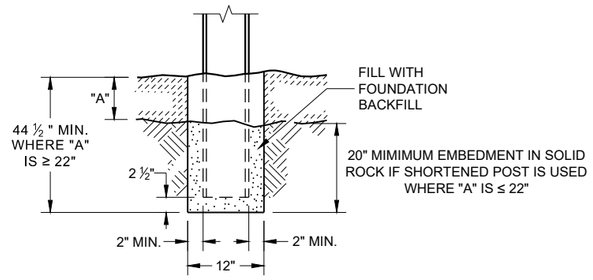
(3) IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL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

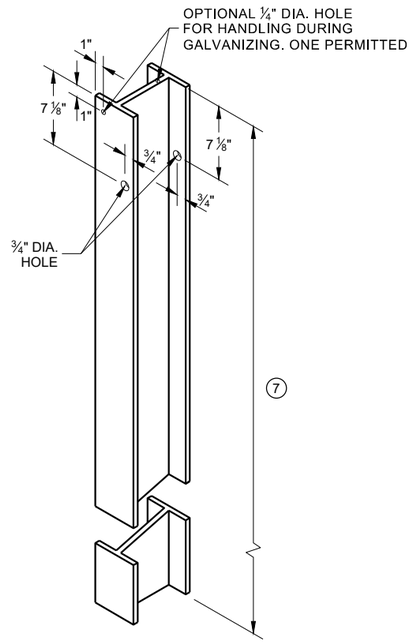
(5) FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ±1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 ¾" TO 32".

(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.

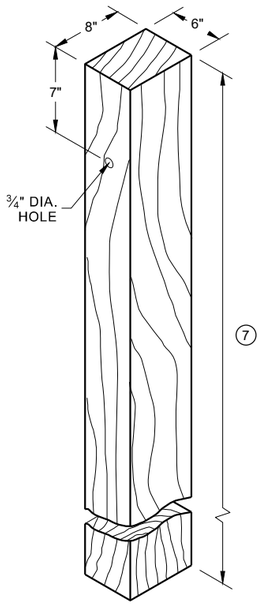
(7) TOTAL POST LENGTH FOR TYPE K IS 7' - 0".
TOTAL POST LENGTH FOR OTHER MGS TYPES IS 6' - 0".



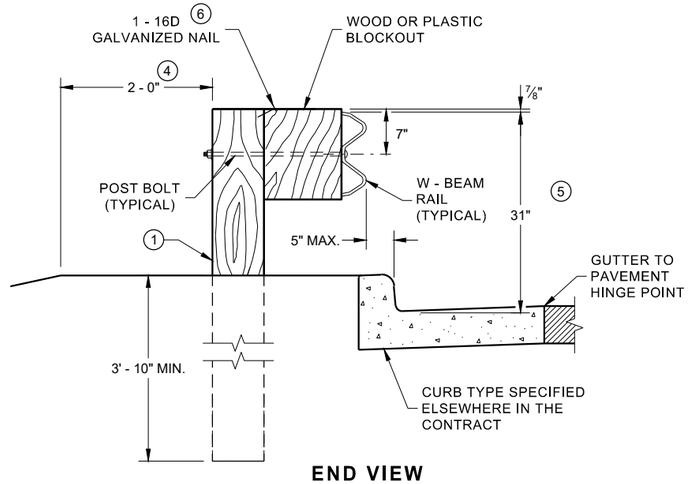
END VIEW
SETTING STEEL OR WOOD POST IN ROCK (3)



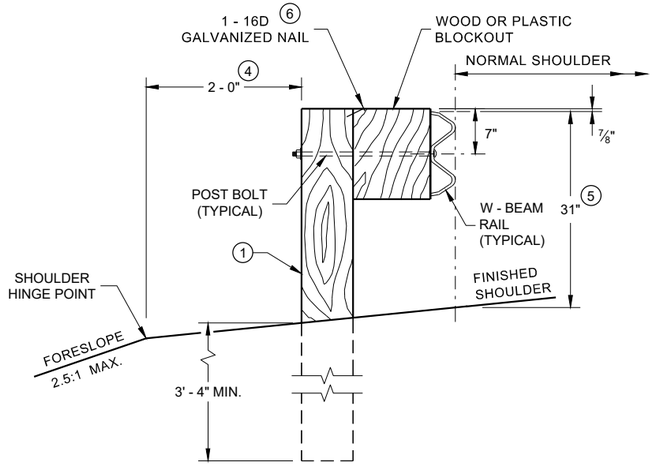
STEEL POST & HOLE PUNCHING DETAIL (W 6 X 9) (1)



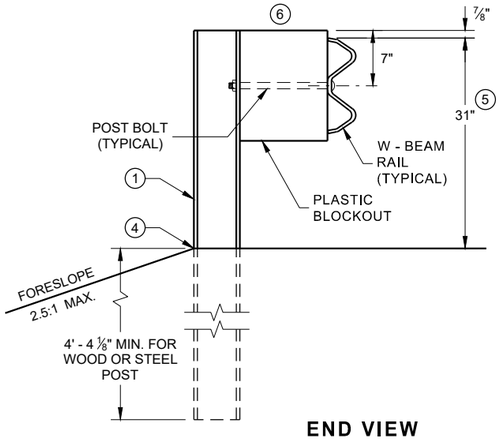
WOOD POST (6" X 8") NOMINAL (1)



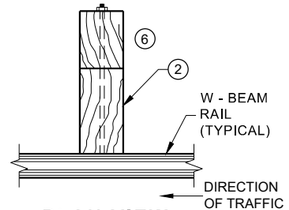
END VIEW
LOCATED ALONG A CURBED ROADWAY



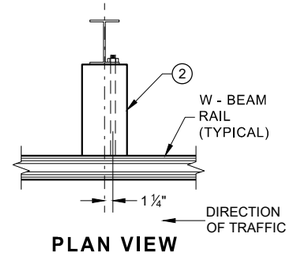
END VIEW
LOCATED ALONG A ROADWAY SHOULDER STANDARD INSTALLATION



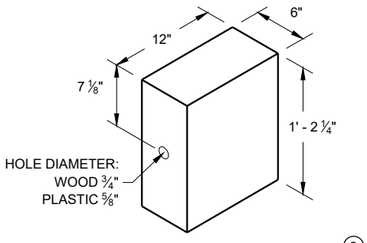
END VIEW
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



PLAN VIEW
WOOD POST, BLOCKOUT & BEAM



PLAN VIEW
STEEL POST, PLASTIC BLOCKOUT & BEAM



WOOD OR PLASTIC BLOCKOUT (2)

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

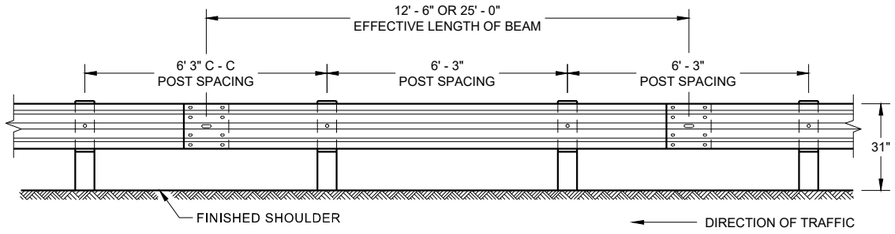
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

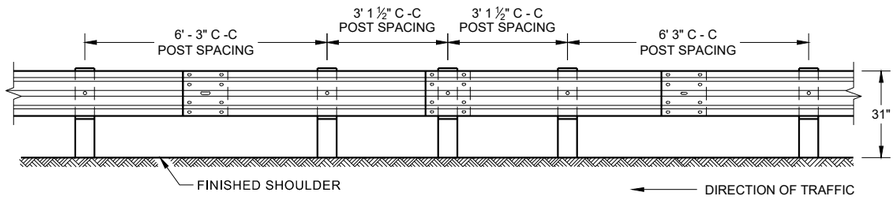
SDD 14B42 - 07a

6

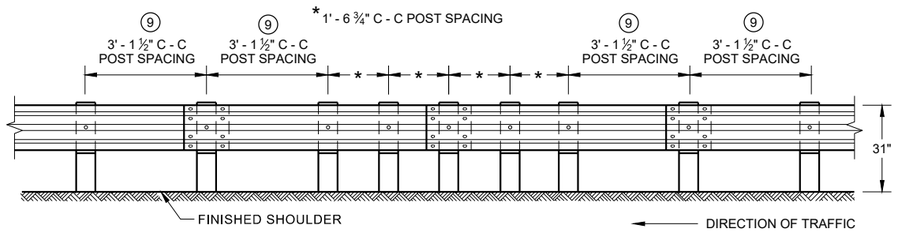
SDD 14B42 - 07a



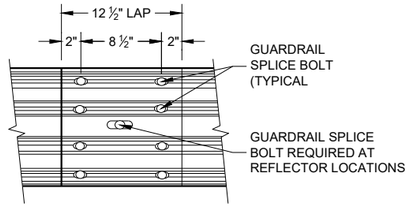
FRONT VIEW
POST SPACING STANDARD INSTALLATION



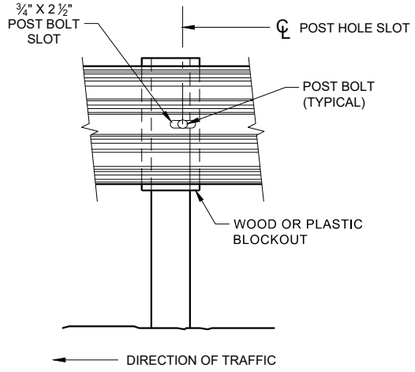
FRONT VIEW
HALF POST SPACING (HS) AND
HALF POST SPACING WITH LONGER POSTS (K)



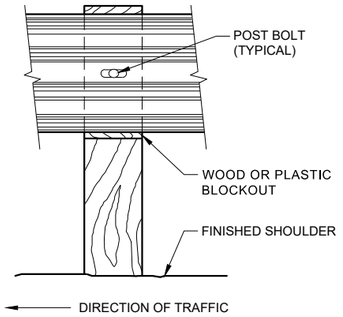
FRONT VIEW
QUARTER POST SPACING (QS)



FRONT VIEW
MID-SPAN BEAM SPLICE



FRONT VIEW AT STEEL POST



FRONT VIEW AT WOOD POST

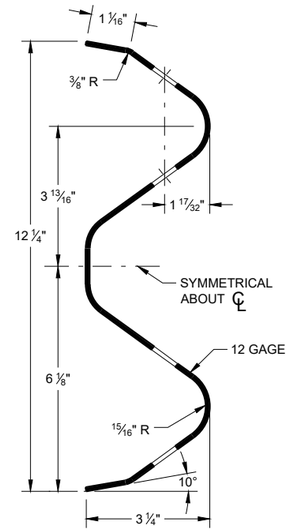
GENERAL NOTES

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

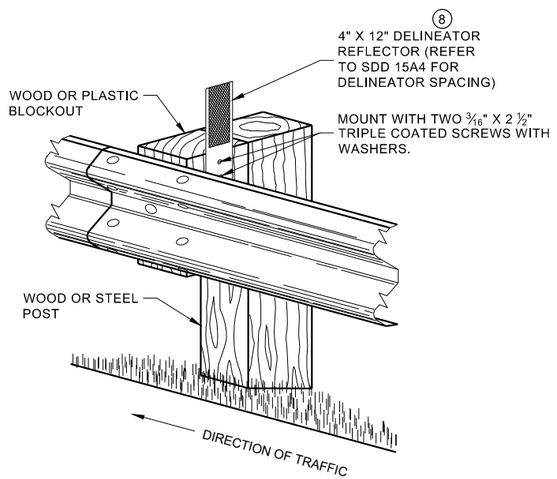
⑨ 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

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.



SECTION THRU W-BEAM RAIL



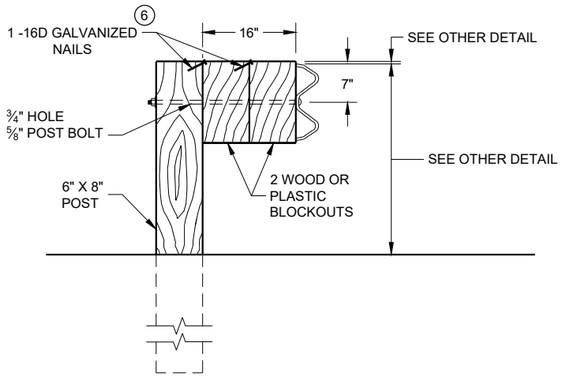
ONE SIDED REFLECTOR DETAIL
AND TYPICAL INSTALLATION

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 14B42 - 07b

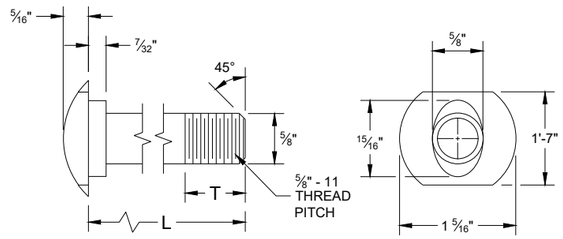


DETAIL FOR 16" BLOCKOUT DEPTH

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.

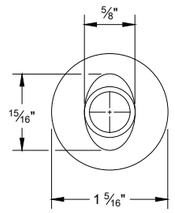
NOTE:

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.

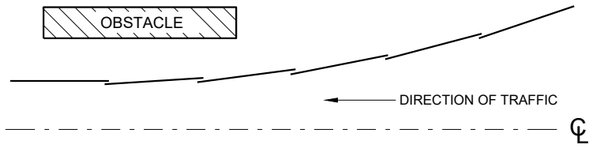


POST BOLT TABLE

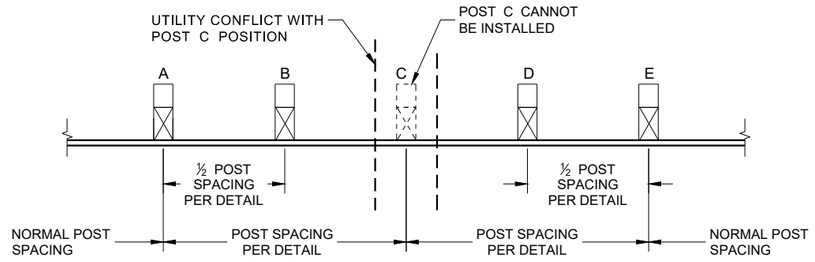
L	T (MIN.)
1 ¼"	1 ⅛"
2"	1 ¾"
10"	4"
14"	4 1⁄16"
18"	4"
21"	4 1⁄16"
25"	4"



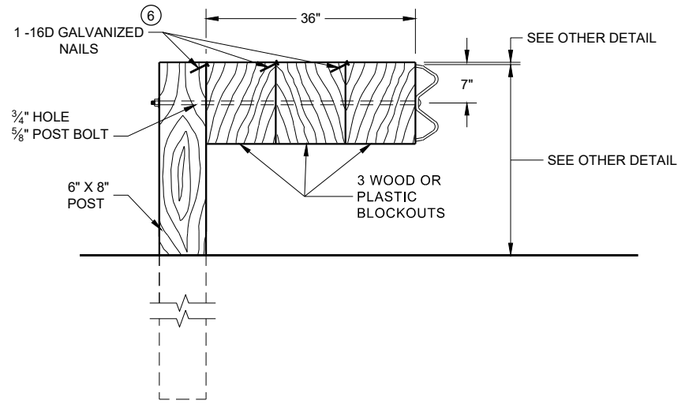
ALTERNATE BOLT HEAD



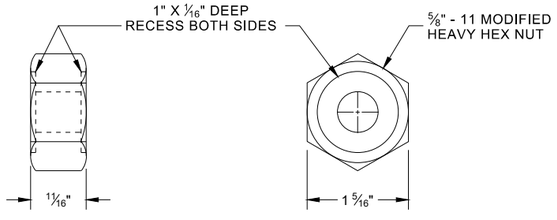
PLAN VIEW
BEAM LAPPING DETAIL



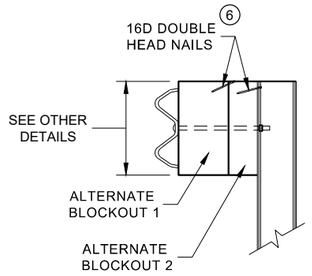
POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



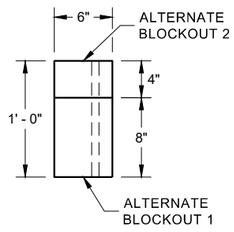
DETAIL FOR 36" BLOCKOUT DEPTH



POST BOLT, SPLICE BOLT AND RECESS NUT



SIDE VIEW



PLAN VIEW

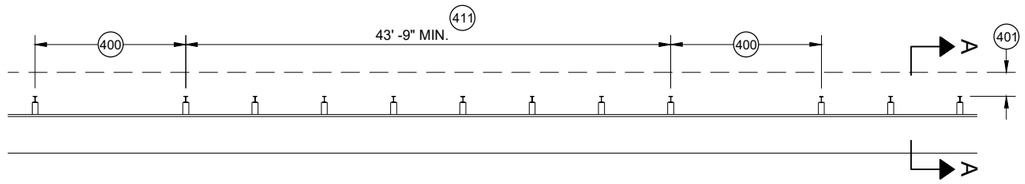
ALTERNATE WOOD BLOCKOUT DETAIL

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.

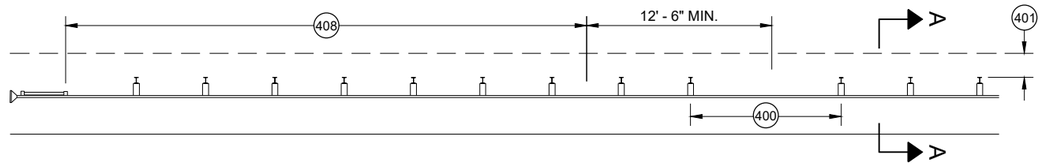
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

(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.

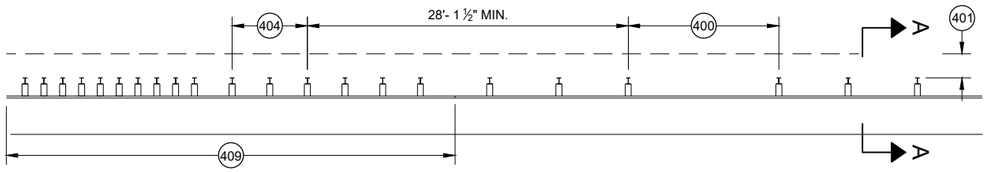
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL



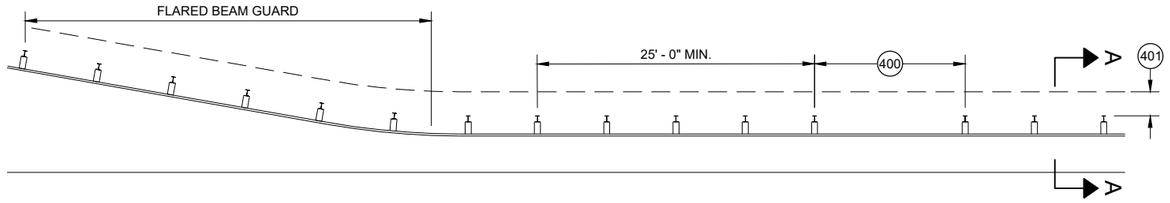
MISSING POST IN MGS GUARDRAIL



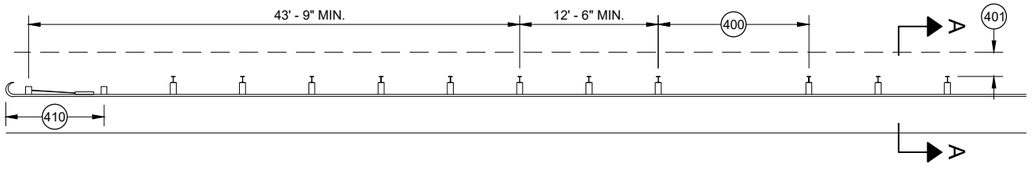
MISSING POST IN MGS GUARDRAIL NEAR EAT



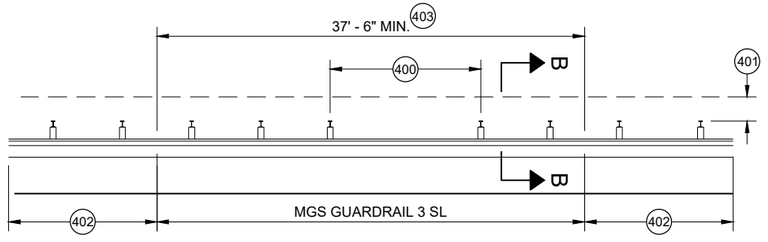
MISSING POST IN MGS GUARDRAIL NEAR AN APPROACH TRANSITION



MISSING POST IN MGS GUARDRAIL NEAR FLARED BEAM GUARD

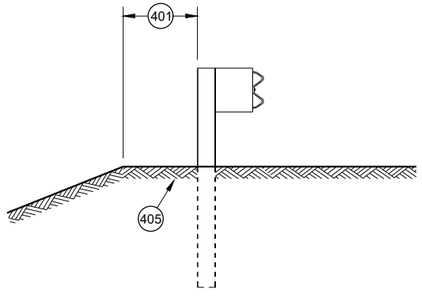


MISSING POST IN MGS GUARDRAIL NEAR A TYPE 2 END TERMINAL

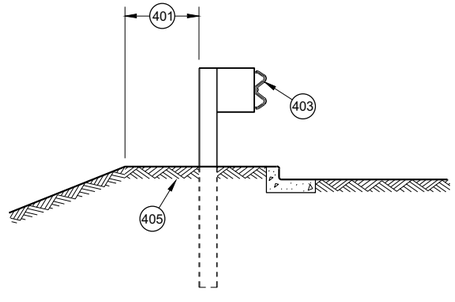


MISSING POST IN SHORT SPAN MGS GUARDRAIL NEAR CURB (SL) 407

(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

(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.

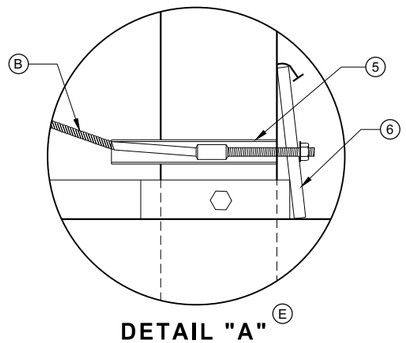
SEE SDD 14B42 FOR MORE INFORMATION.

* DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.

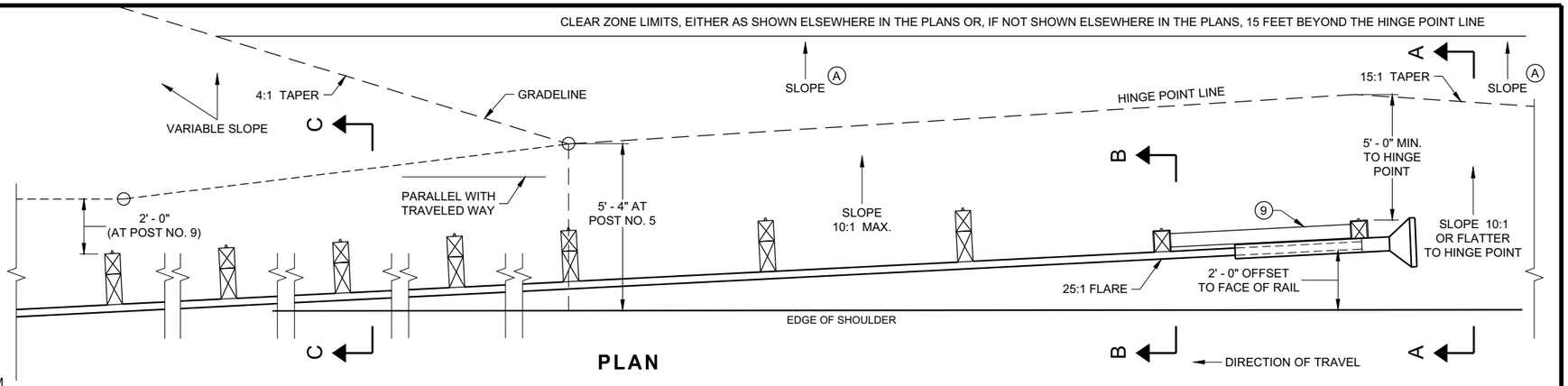
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

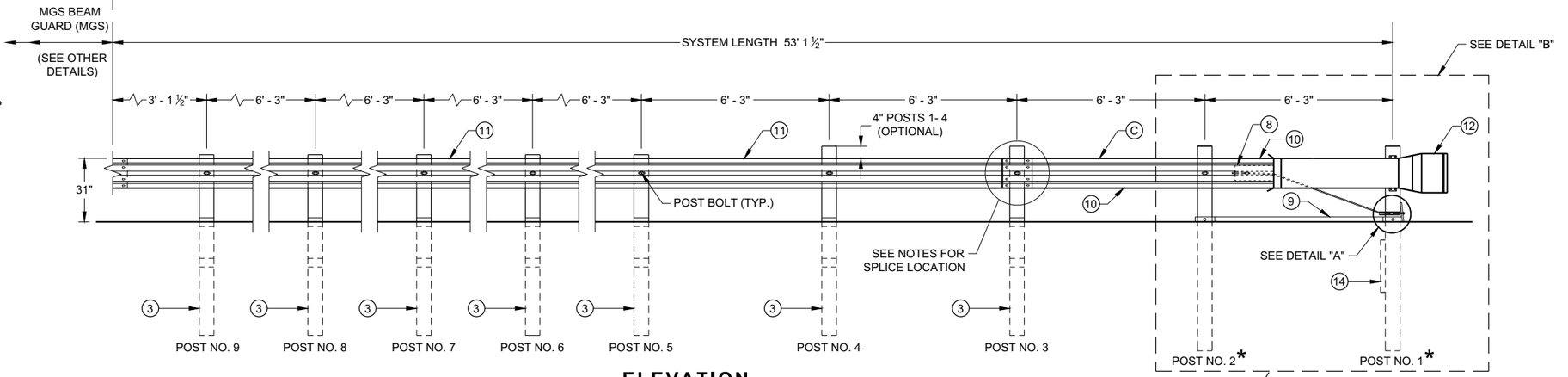
SEE MANUFACTURER'S DRAWING FOR SPLICE LOCATION, HARDWARE DIMENSIONS AND INSTALLATION INSTRUCTIONS.

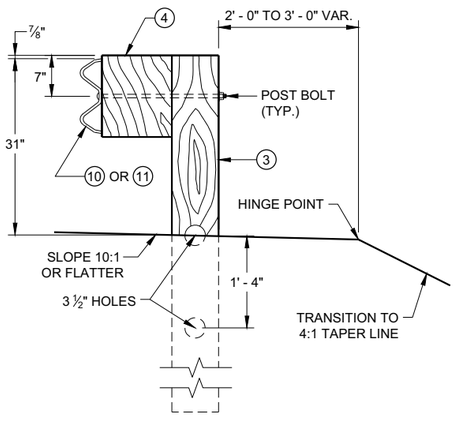
THE CENTER OF THE UPPER 3 ½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE. WOOD BLOCKS ON POSTS NUMBERED 3 THROUGH 9 MAY BE ADJUSTED UP TO 3" ABOVE THE TOP OF POST.



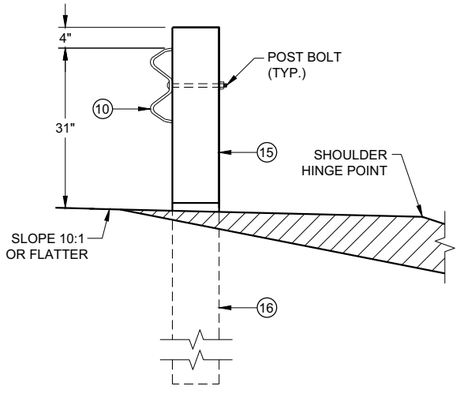
DETAIL "A" (E)



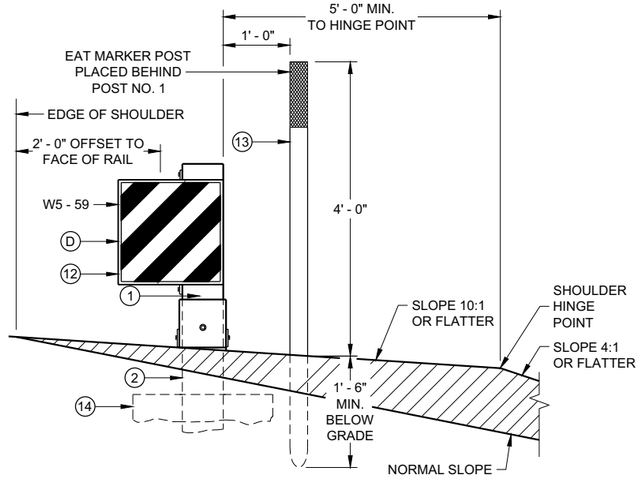




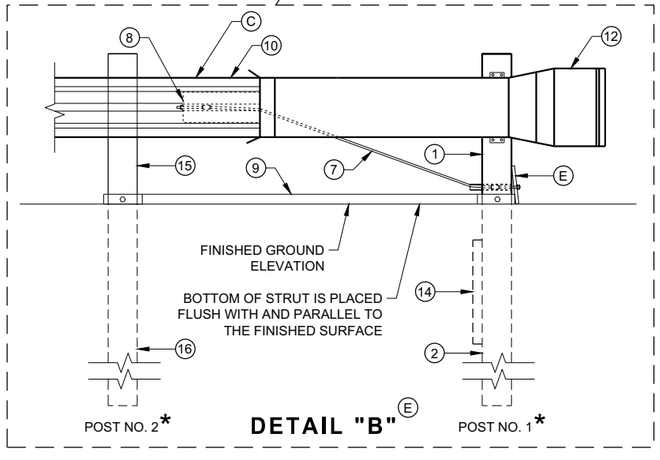
SECTION C - C
TYPICAL AT POST NOS. 3 - 9



SECTION B - B
TYPICAL AT POST NO. 2*



SECTION A - A
TYPICAL AT POST NO. 1*



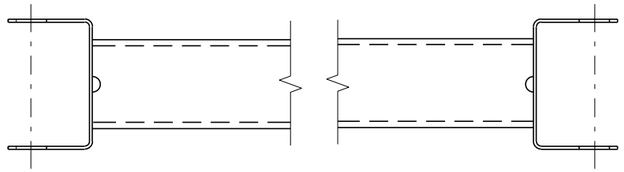
DETAIL "B" (E)

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B44 - 04a

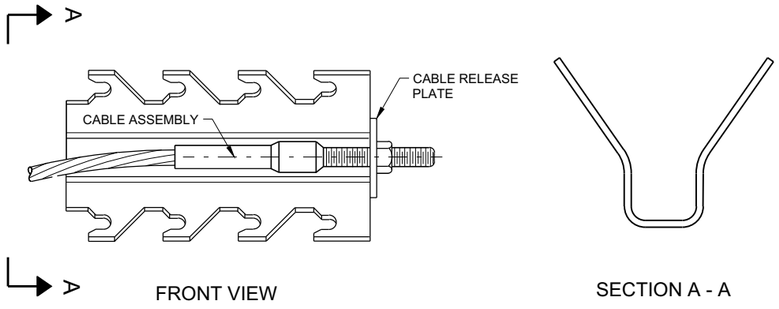
SDD 14B44 - 04a



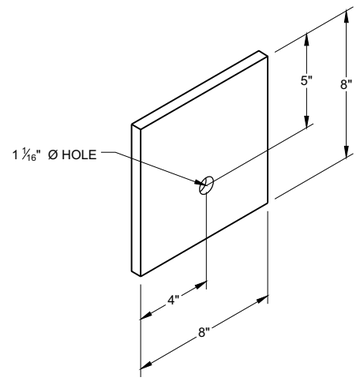
GENERIC GROUND STRUT ⑨ Ⓔ

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 Ⓔ



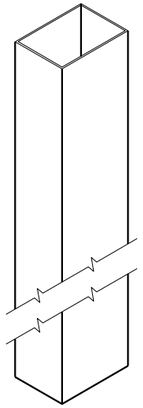
BEARING PLATE ⑥ Ⓔ

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

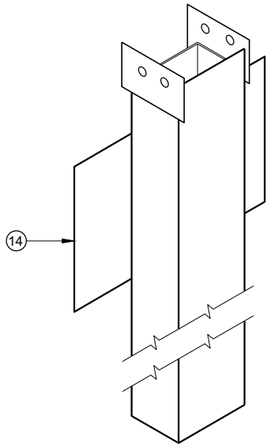
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

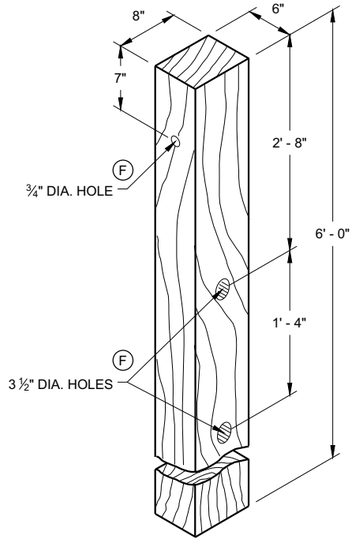
SDD 14B44 - 04b



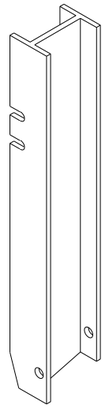
UPPER POST NO. 1 (1) (E)



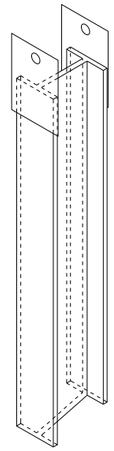
LOWER POST NO. 1 (2) (E)



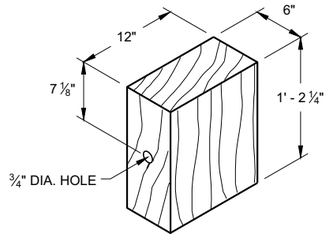
WOOD CRT POST (3) (E)
POSTS NUMBER 3-9



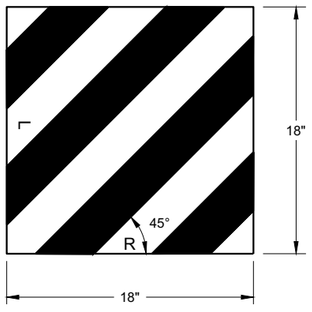
UPPER POST NO. 2 (15) (E)



LOWER POST NO. 2 (16) (E)

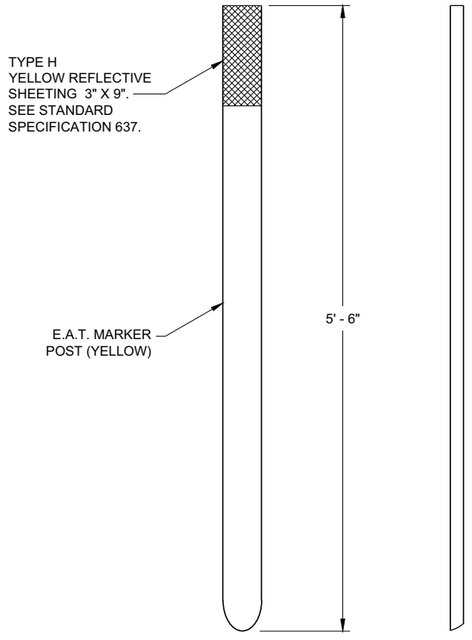


WOOD BLOCKOUT (4)
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



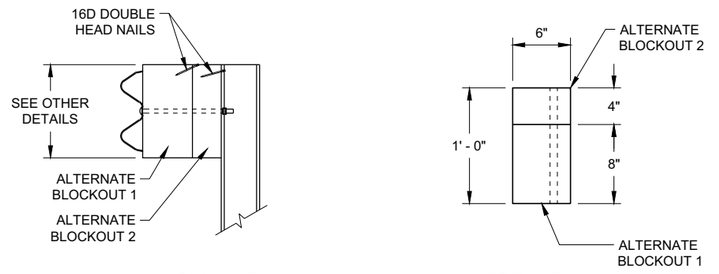
W5 - 59

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)

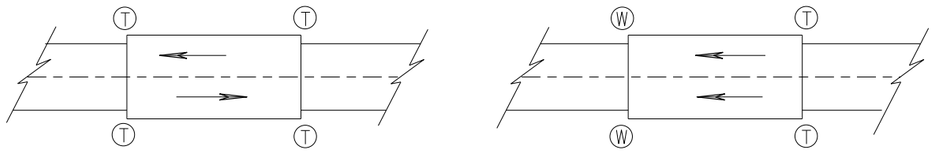
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

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SDD 14B44 - 04c



TWO WAY TRAFFIC

ONE WAY TRAFFIC

(T) THRIE BEAM CONNECTION

(W) W-BEAM CONNECTION WHEN REQUIRED

TYPICAL LOCATIONS OF THRIE BEAM AND W-BEAM CONNECTIONS TO BRIDGE

GENERAL NOTES

IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2½", AND 12" DIAMETER AROUND POST. SEE 14B42 FOR MORE DETAILS.

TRANSITION USES STEEL POSTS ONLY.

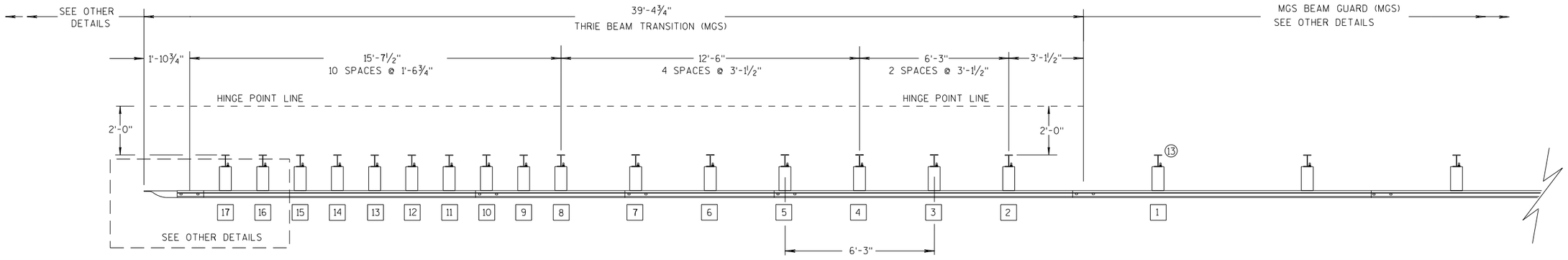
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

POST 2 THROUGH 17 USES STEEL POST ONLY

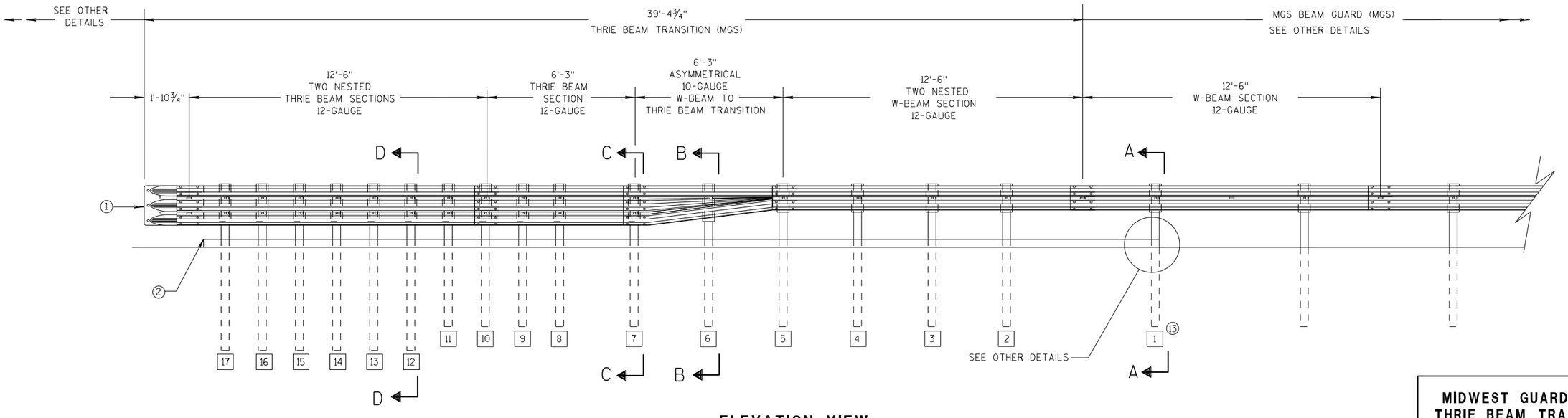
(1) BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.

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

(13) STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD14B42



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 14 B 45-5a

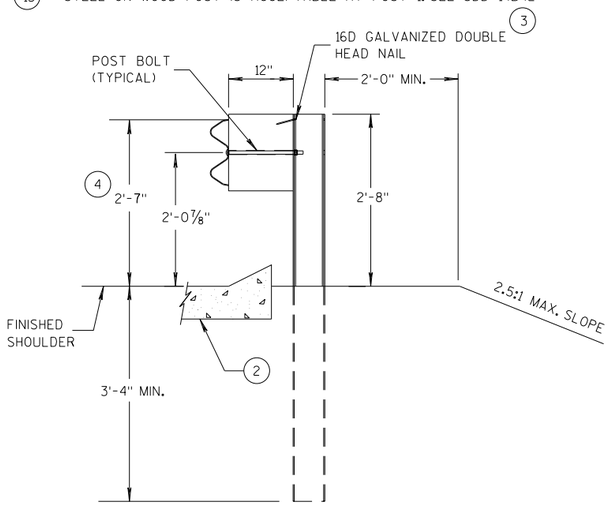
GENERAL NOTES

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

(3) WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 10D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

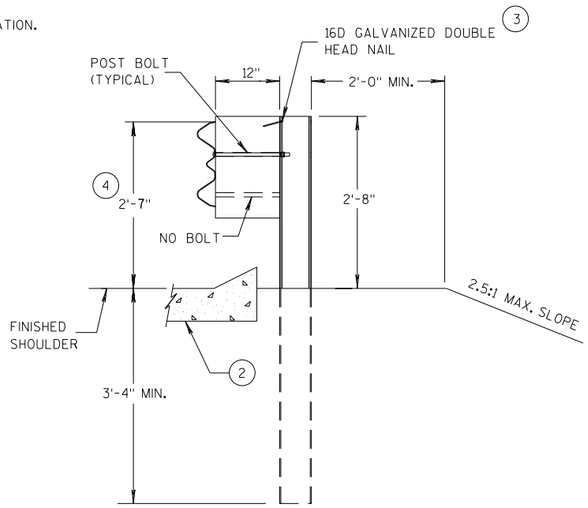
(4) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".

(13) STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD 14B42



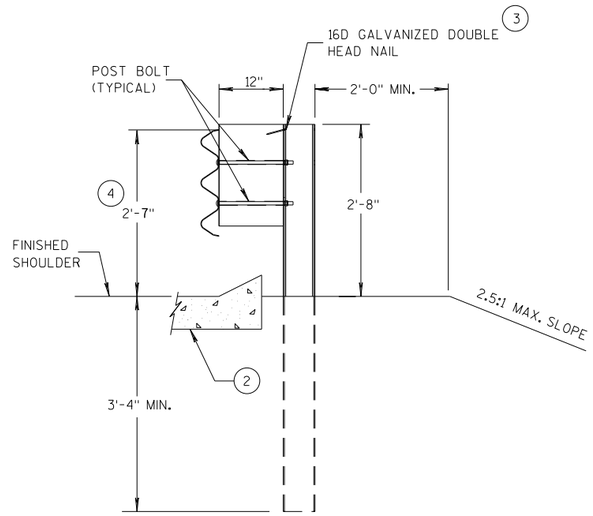
SECTION A-A (13)

POSTS 1-5



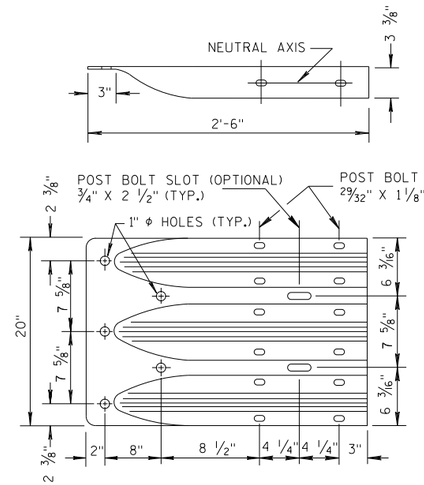
SECTION B-B

POST 6

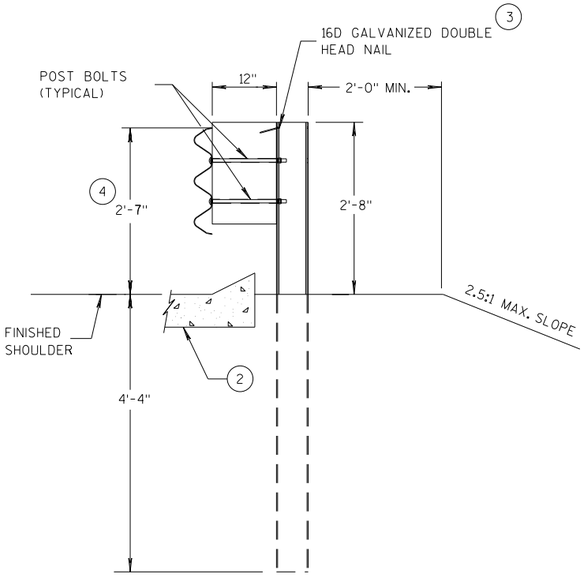


SECTION C-C

POSTS 7-11

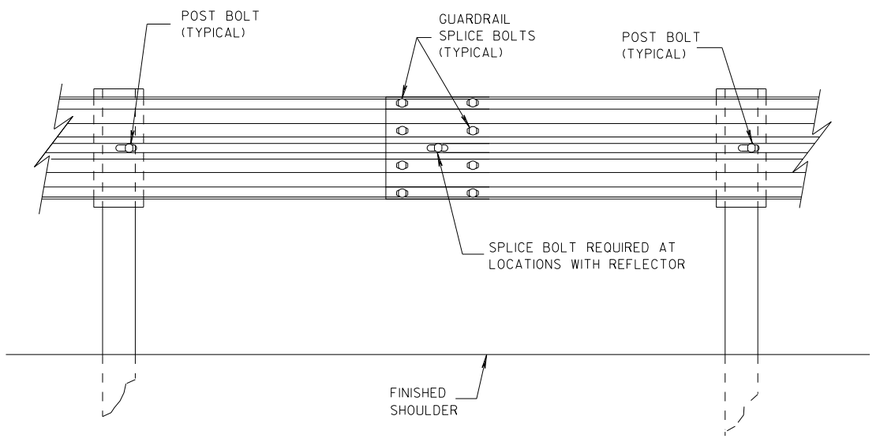


THRIE BEAM TERMINAL CONNECTOR



SECTION D-D

POSTS 12-17



SPLICE DETAIL

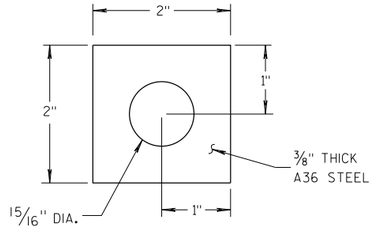
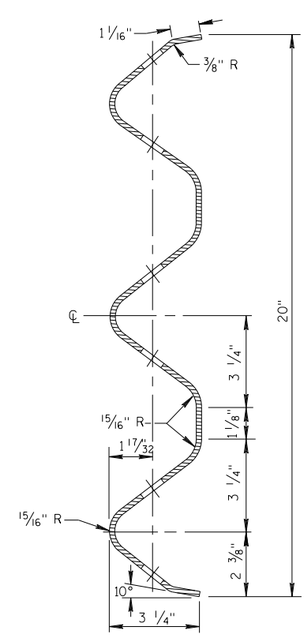


PLATE WASHER DETAIL



SECTION THRU THRIE BEAM RAIL ELEMENT

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

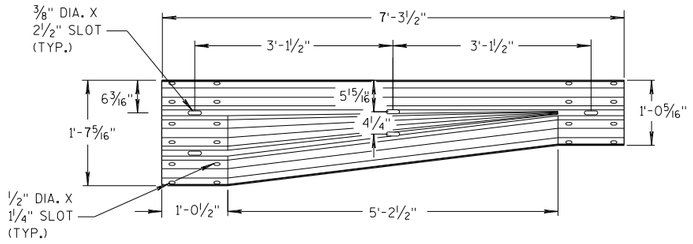
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR 124

6

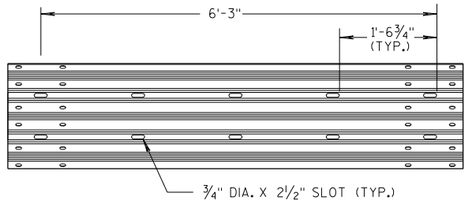
S.D.D. 14 B 45-5b

6

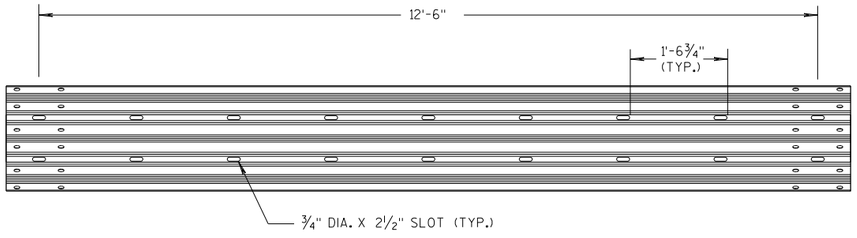
S.D.D. 14 B 45-5b



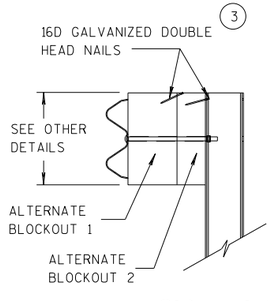
W-BEAM TO THRIE BEAM TRANSITION SECTION



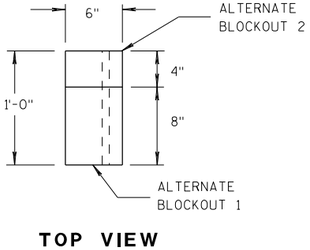
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

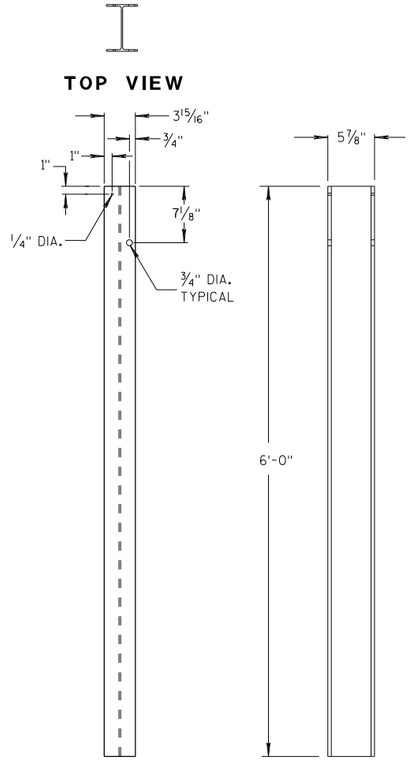


SIDE VIEW

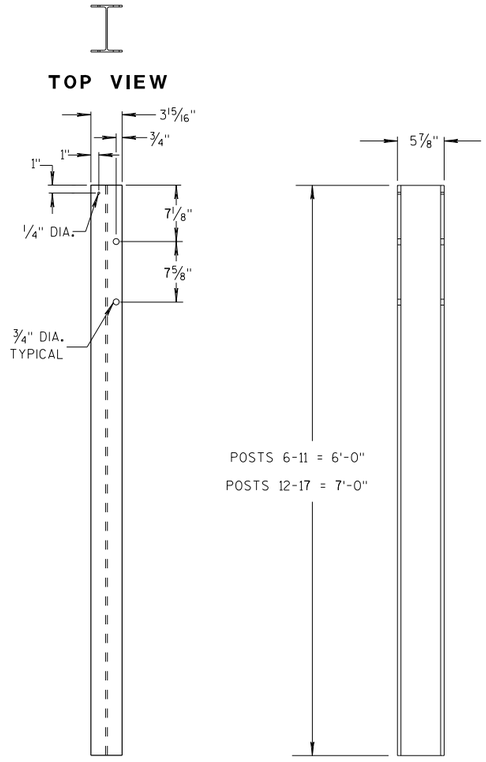


TOP VIEW

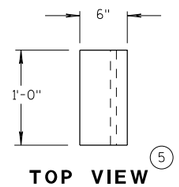
ALTERNATE WOOD BLOCKOUT DETAIL



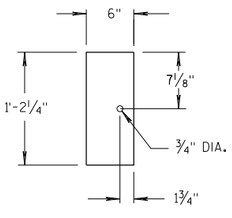
STEEL POSTS 1-5 (13)



STEEL POSTS 6-17

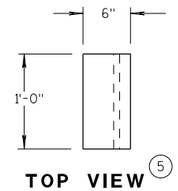


TOP VIEW (5)

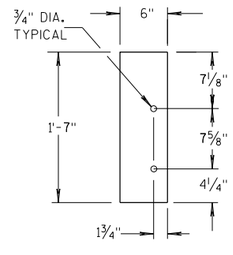


FRONT VIEW

BLOCKOUT POSTS 1-5



TOP VIEW (5)



FRONT VIEW

BLOCKOUT POSTS 6-17

GENERAL NOTES

STEEL POSTS ARE W6X9 OR W6X8.5.

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

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

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

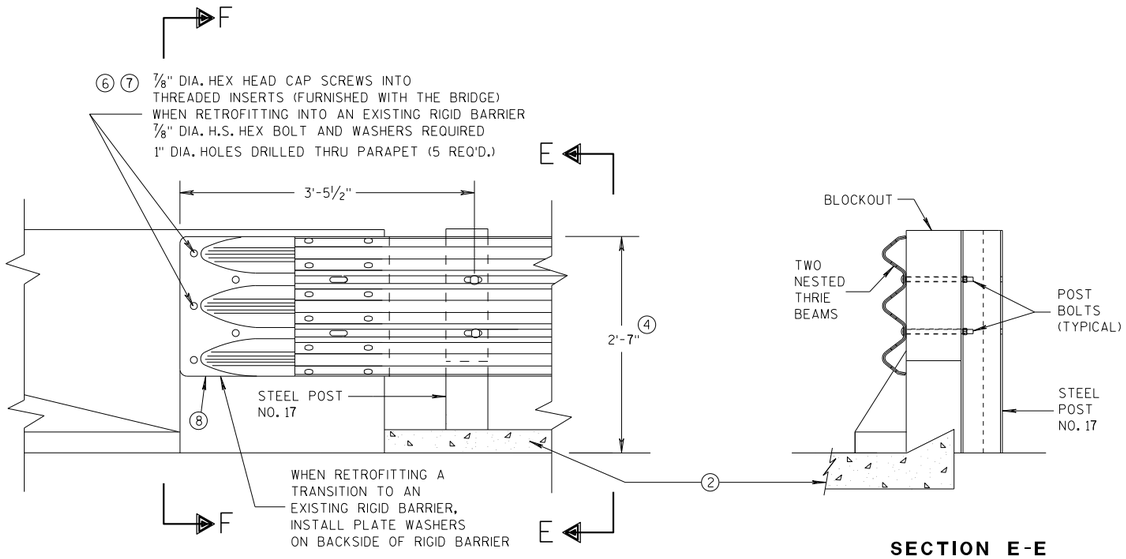
(13) STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD 14B42.

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOF

6

S.D.D. 14 B 45-5c



FRONT VIEW

SECTION E-E

THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS

GENERAL NOTES

THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSTION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.

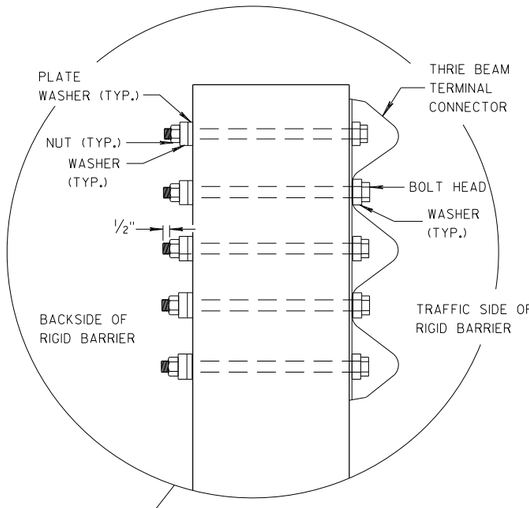
② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

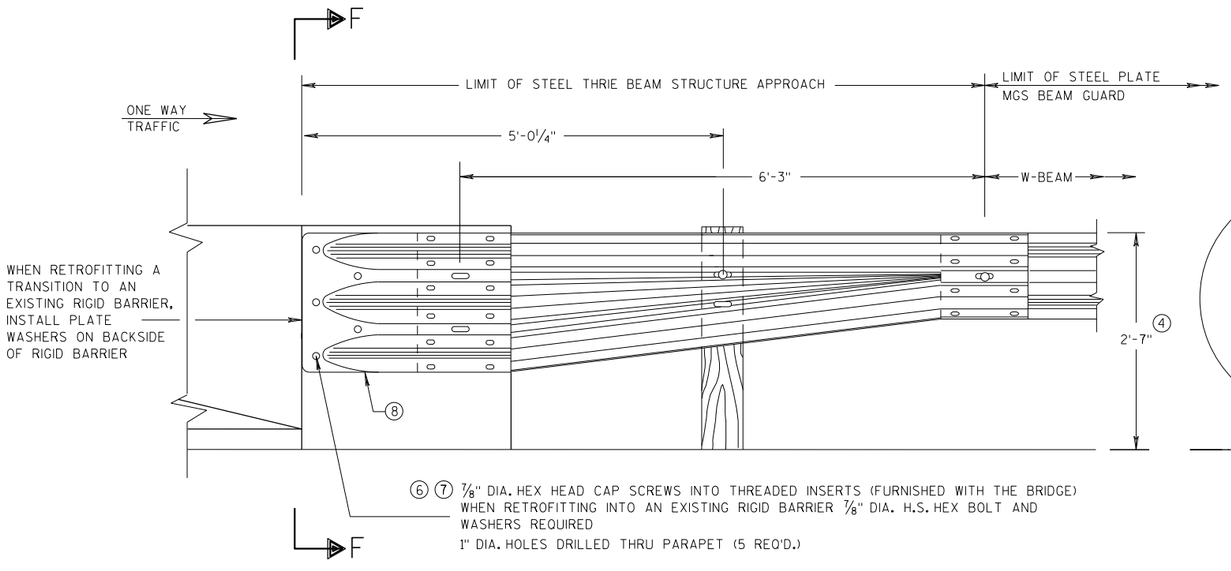
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

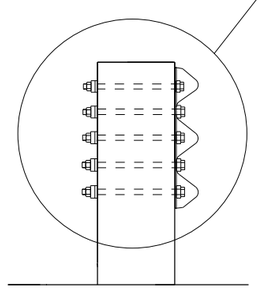
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⑧ THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2".

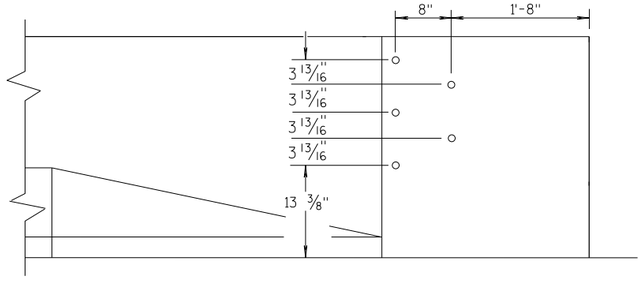




FRONT VIEW



SECTION F-F



DRILL HOLE LOCATION

W BEAM TRANSITION AND CONNECTION TO BRIDGE PARAPETS WITH SQUARE ENDS

(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
07/2018 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS D[illegible] UNIT SUPERVIS[illegible]NT
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S.D.D. 14 B 45-5d

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S.D.D. 14 B 45-5d

GENERAL NOTES

THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSTION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.

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

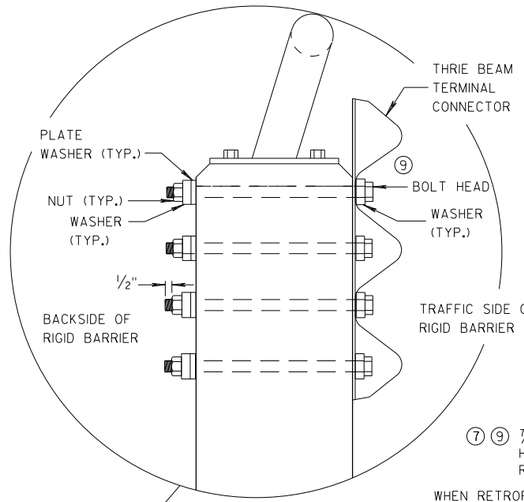
(4) TOLERANCE FOR TOP OF BEAM IS ± 1".

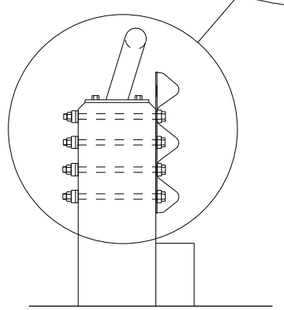
(6) DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

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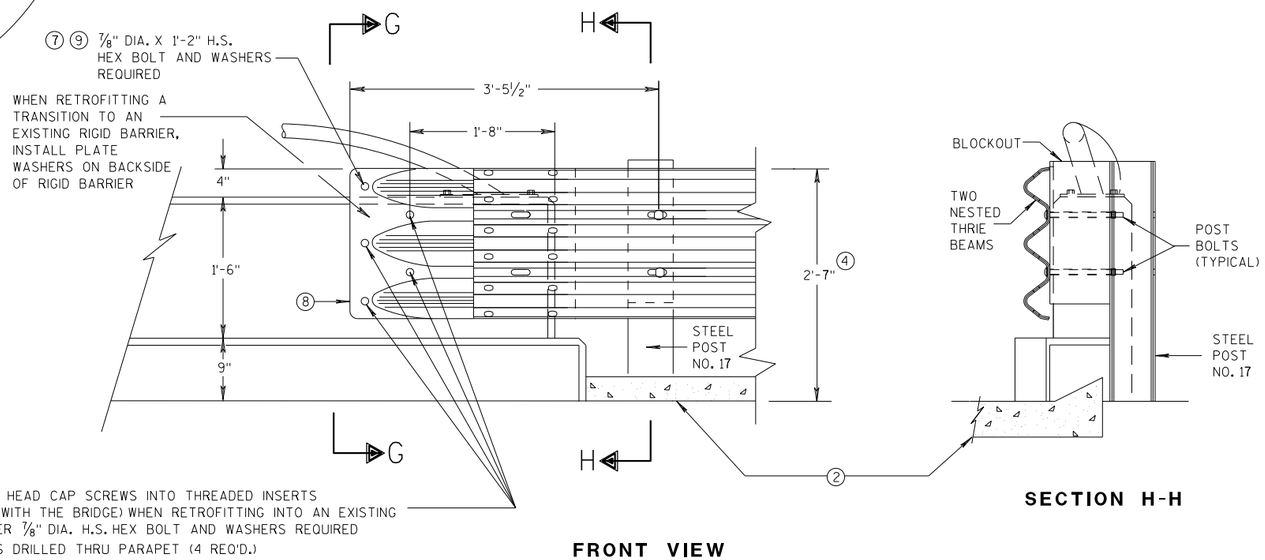
(8) THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 ½".

(9) BOLT, NUT AND WASHERS NOT REQUIRED FOR THIS LOCATION WHEN RETROFITTING AN EXISTING PAPAPET AND THE HOLE IS EITHER ABOVE PARAPET OR WITHIN 4 INCHES OF THE EDGE OF PARAPET.





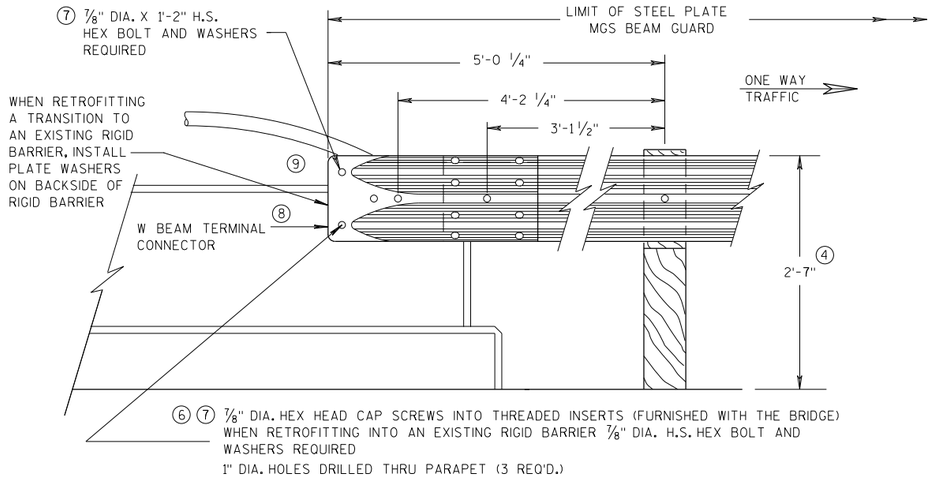
SECTION G-G



FRONT VIEW

SECTION H-H

THRIE BEAM CONNECTION TO VERTICAL FACED PARAPETS



FRONT VIEW

W BEAM CONNECTION TO VERTICAL FACE PARAPET

(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

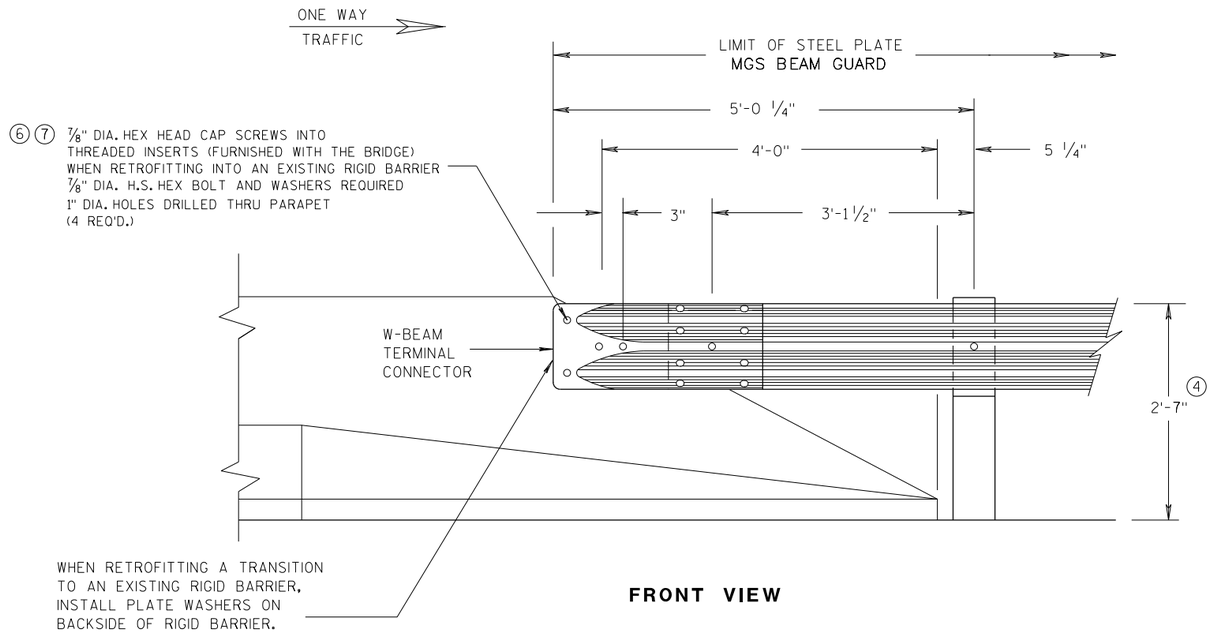
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07/2018 — DATE
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S.D.D. 14 B 45-5e



FRONT VIEW

W BEAM CONNECTION TO PARAPETS WITH SLOPED ENDS

(USE ONLY AT TRAFFIC EXIT END OF ONE WAY BRIDGE)

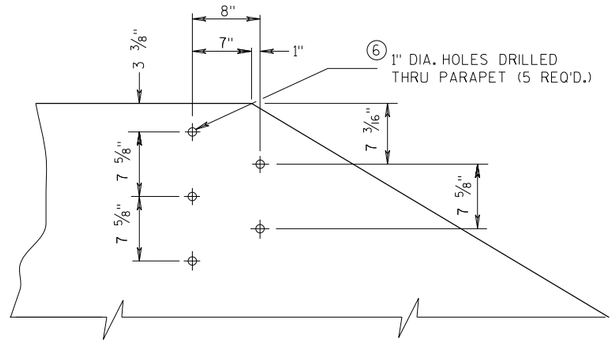
GENERAL NOTES

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

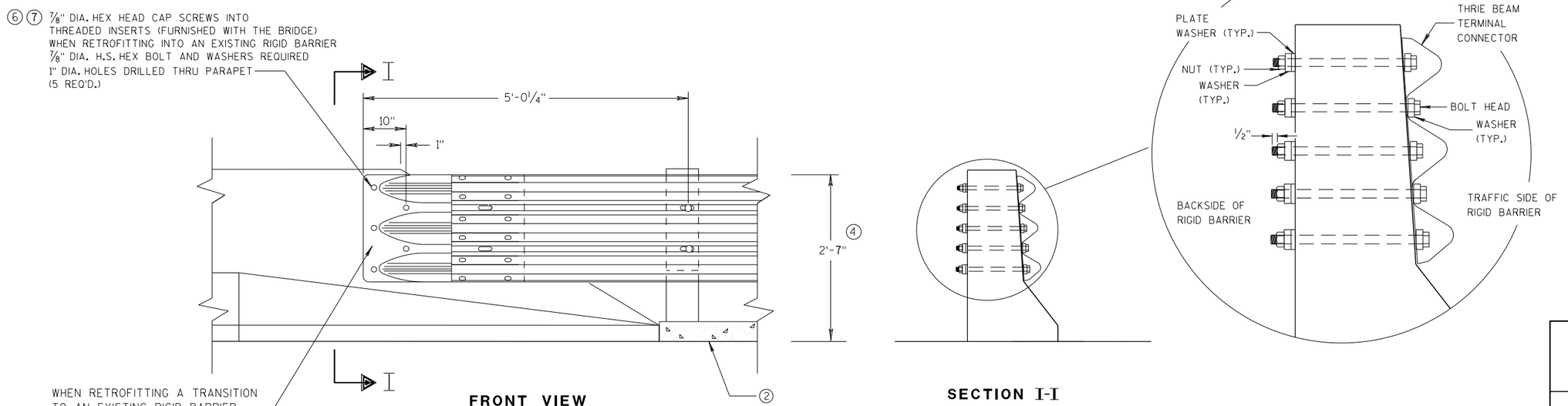
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DRILL HOLE LOCATION AND PATTERN FOR THRIE BEAM CONNECTION



FRONT VIEW

SECTION I-I

THRIE BEAM CONNECTION TO BRIDGE PARAPETS WITH SLOPED ENDS

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

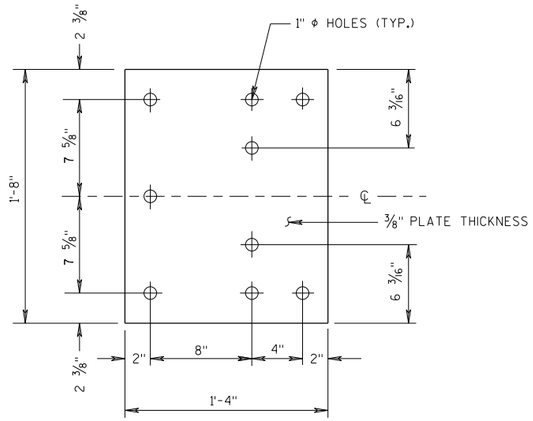
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FHWA

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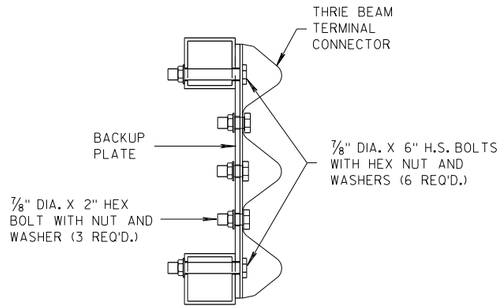
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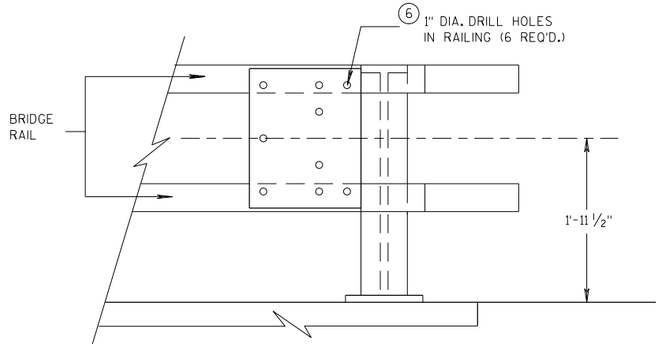
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BACK-UP PLATE DETAIL



SECTION J-J

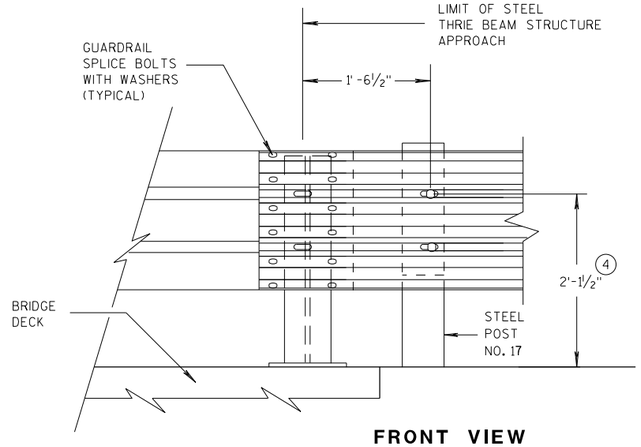


BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING

GENERAL NOTES

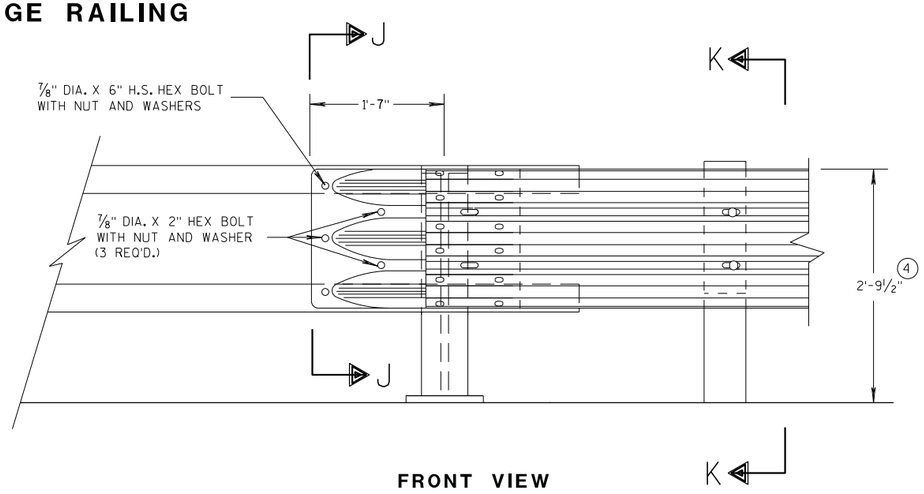
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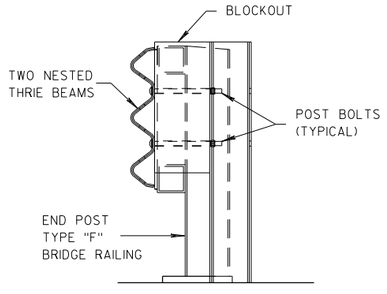


FRONT VIEW

THRIE BEAM CONNECTION TO STEEL RAILING TYPE "W"



FRONT VIEW



SECTION K-K

THRIE BEAM CONNECTION TO TUBULAR RAILING TYPE "F"

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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/S/ Rodney Taylor — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
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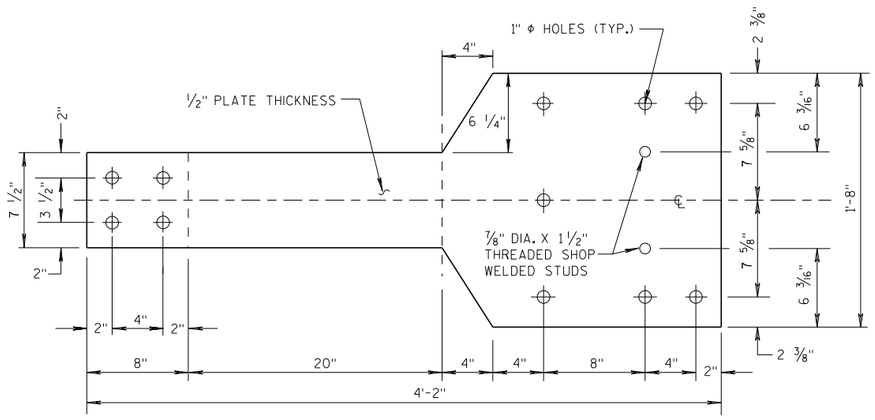
S.D.D. 14 B 45-5g

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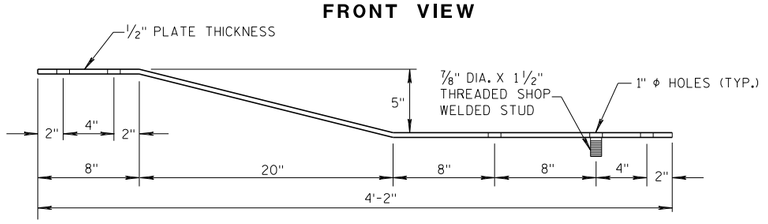
S.D.D. 14 B 45-5g

GENERAL NOTES

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

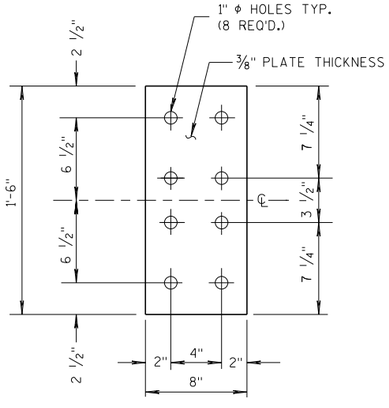


FRONT VIEW



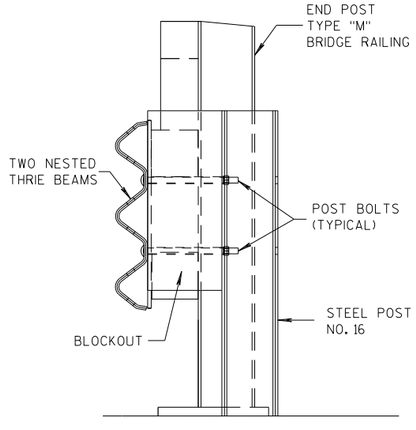
PLAN VIEW

BACK-UP PLATE DETAIL, TYPE "M"

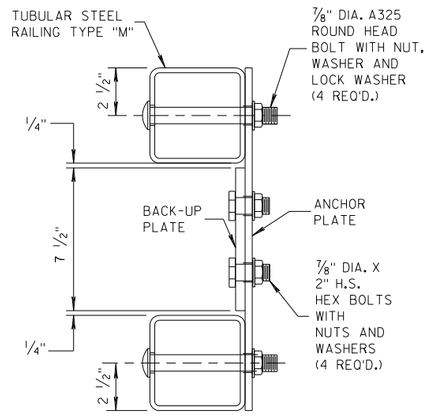


FRONT VIEW

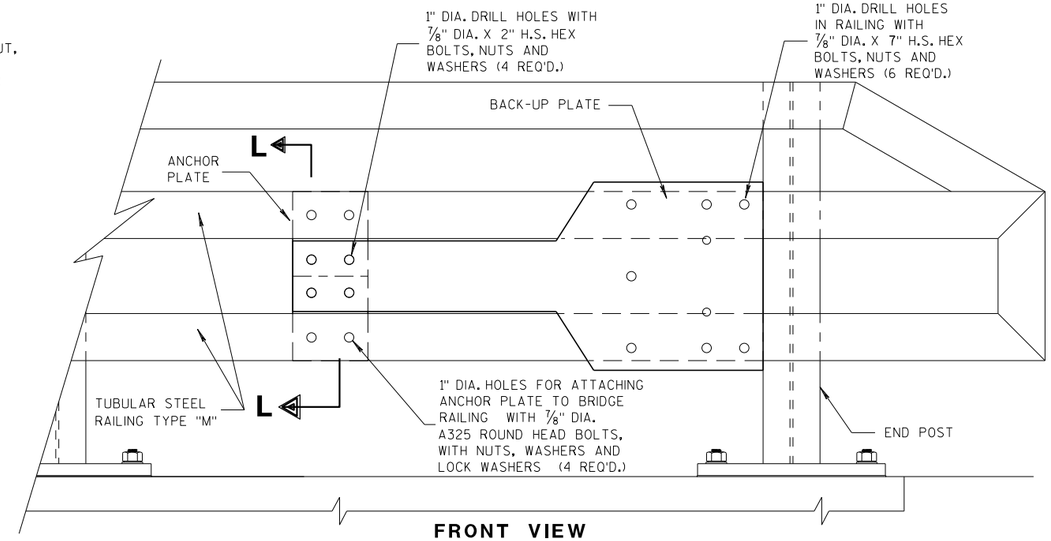
ANCHOR PLATE DETAIL, TYPE "M"



SECTION M-M

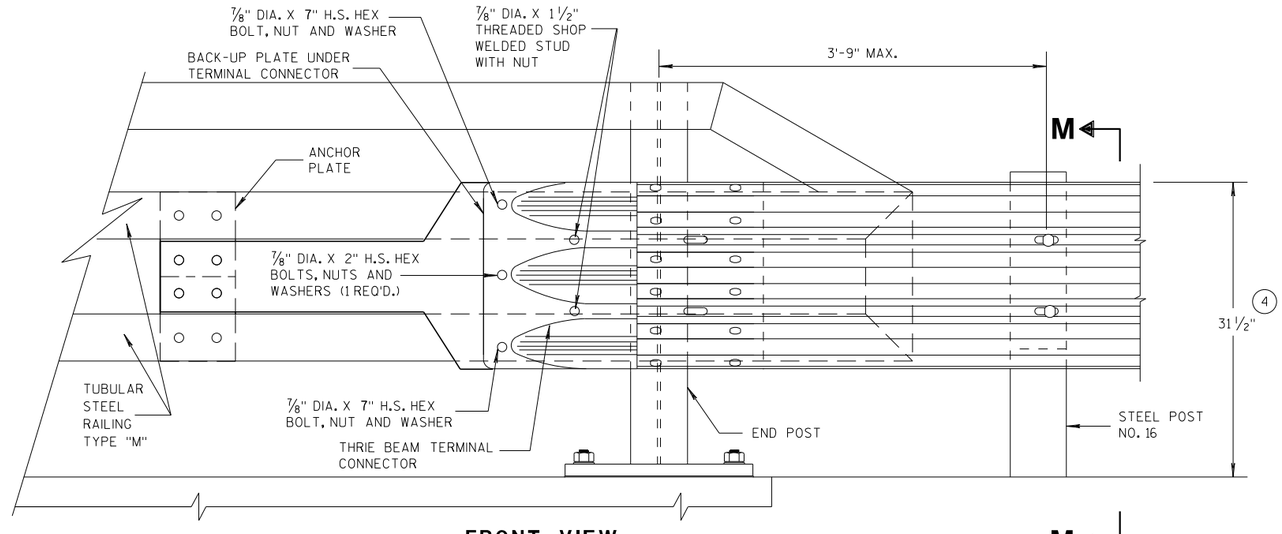


SECTION L-L

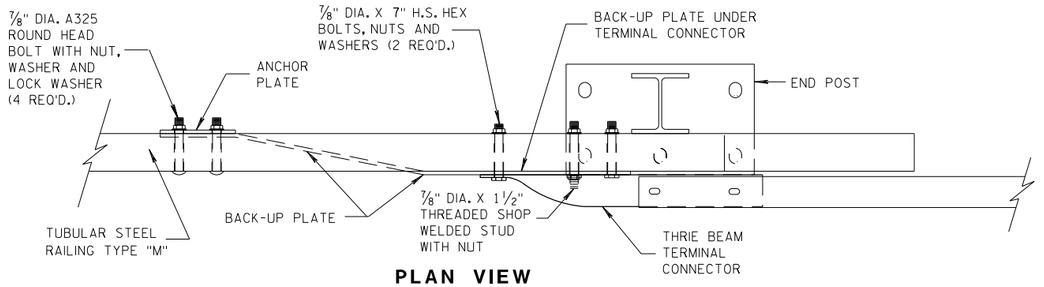


FRONT VIEW

ANCHOR AND BACK-UP PLATE MOUNTING TO BRIDGE RAILING, TYPE "M"



FRONT VIEW



PLAN VIEW

THRIE BEAM CONNECTION TO TUBULAR RAILING, TYPE "M"

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
07/2018 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
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S.D.D. 14 B 45-5h

GENERAL NOTES

COVER PLATE PANELS ARE 3/16" THICK.

ALL STIFFENERS ARE 1/4" THICK.

CONNECTOR PLATE SHALL BE FABRICATED FROM ASTM GRADE A36 STEEL AND GALVANIZED.

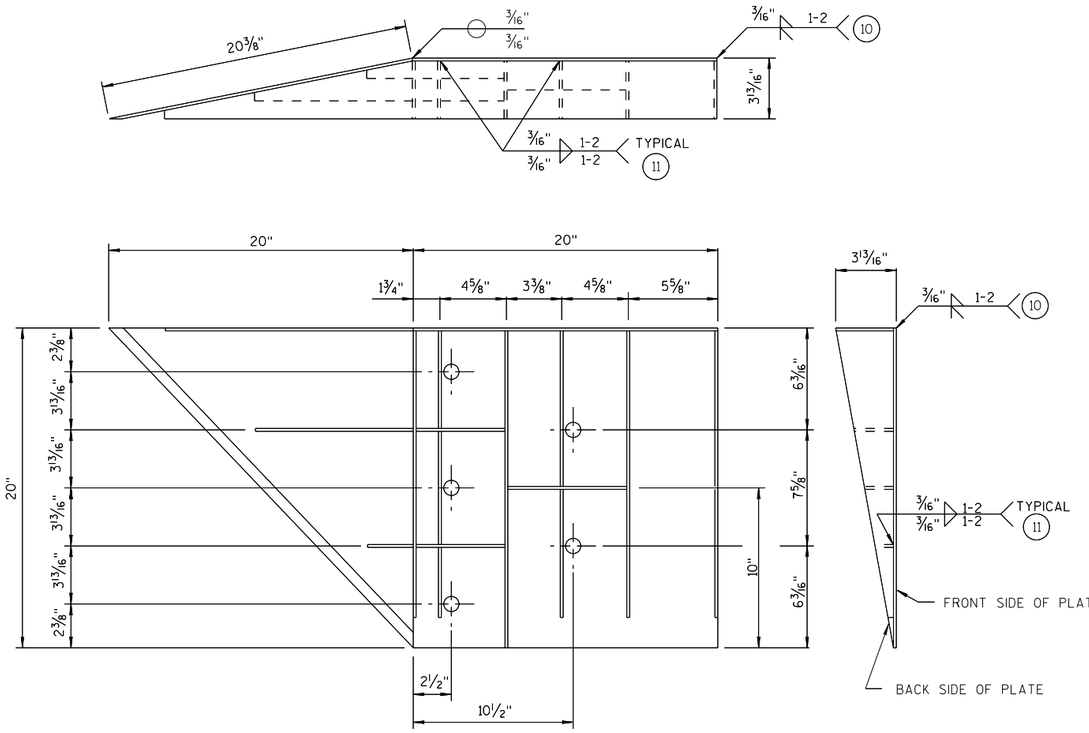
FOR GALVANIZED REQUIREMENTS, SEE SECTION 614 OF THE STANDARD SPECIFICATIONS.

ALL HOLE DIAMETERS SHALL BE 1".

FOR OPPOSITE SIDE INSTALLATION MIRROR DRAWINGS.

(10) STIFFENERS LOCATED AT THE OUTSIDE EDGES OF THE COVER PLATES SHALL BE WELDED AS FOLLOWS:
SINGLE BEVEL GROOVE WELD ON EXTERNAL SIDES AND 3/16" FILLET WELD BY 1" LONG SPACED AT 2" ON INTERNAL SIDES.

(11) STIFFENERS LOCATED ON THE INSIDE OF THE COVER PLATE SHALL BE WELDED AS FOLLOWS:
3/16" FILLET WELD BY 1" LONG SPACED AT 2".



WELDING INSTRUCTION

(VIEWED FROM BACK SIDE OF PLATE)

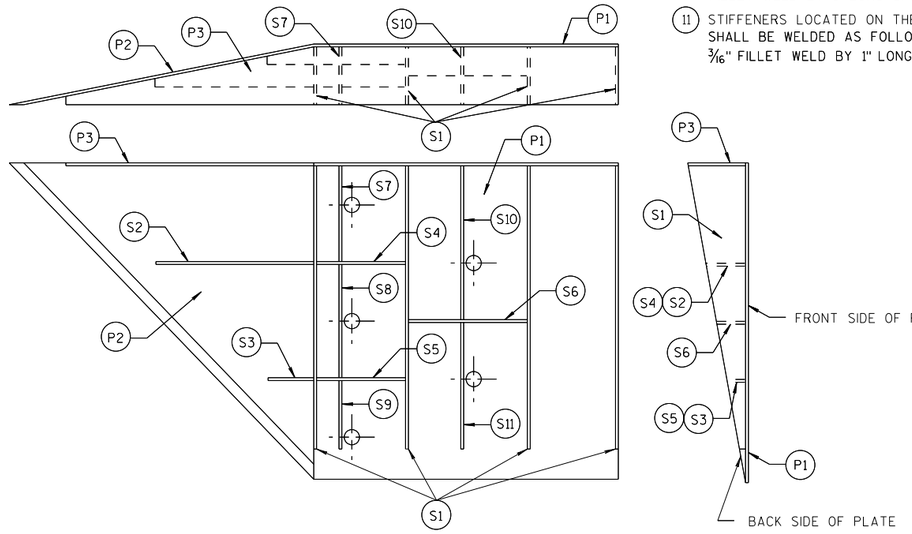


PLATE AND STIFFENER IDENTIFICATION

(VIEWED FROM BACK SIDE OF PLATE)

CONNECTOR PLATE DIMENSION (PER ASSEMBLY)

PLATE	QUANTITY	SHAPE	SIZE (A x B x C x D)	THICKNESS
P1	1		20" x 20"	3/16"
P2	1		20" x 20" x 28 9/16"	3/16"
P3	1		39" x 3 5/8" x 20" x 19 5/16"	3/16"
S1	4		18 7/16" x 3 5/8" x 18 3/4"	1/4"
S2	1		10 1/4" x 2 7/16" x 10 3/8" x 1/2"	1/4"
S3	1		3" x 1 1/16" x 3 1/8" x 1/2"	1/4"
S4	1		6 1/8" x 2 7/16"	1/4"
S5	1		6 1/8" x 1 1/16"	1/4"
S6	1		7 3/4" x 1 3/4"	1/4"
S7	1		2 9/16" x 6" x 3 5/8" x 5 7/8"	1/4"
S8	1		1 5/32" x 7 1/2" x 2 1/2" x 7 3/8"	1/4"
S9	1		6 1/16" x 6 3/16" x 1 3/32"	1/4"
S10	1		1 7/8" x 9 7/8" x 3 5/8" x 9 11/16"	1/4"
S11	1		8 1/2" x 8 3/4" x 1 13/16"	1/4"

SINGLE SLOPE CONNECTION PLATE

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

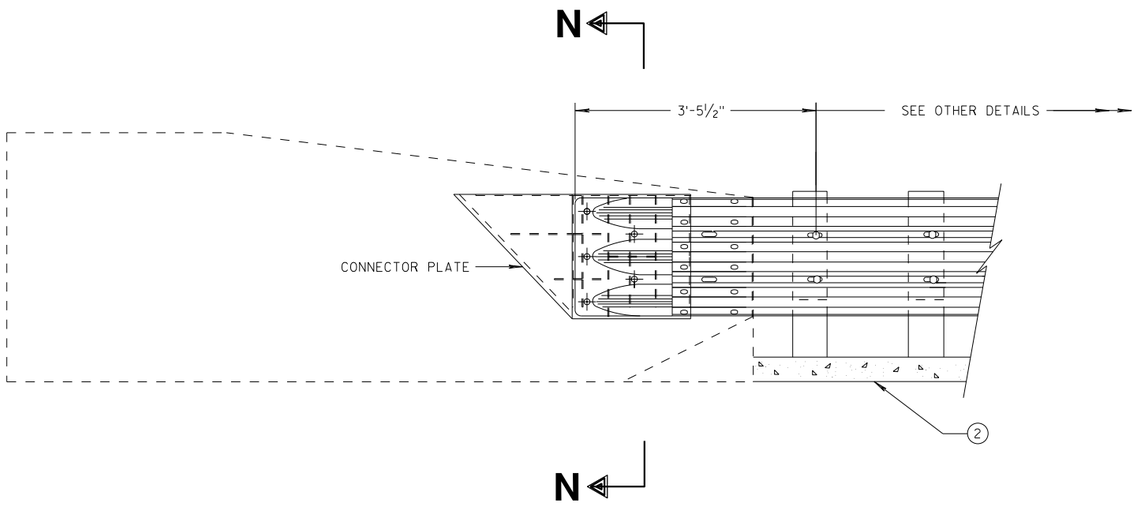
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018
DATE
FHWA

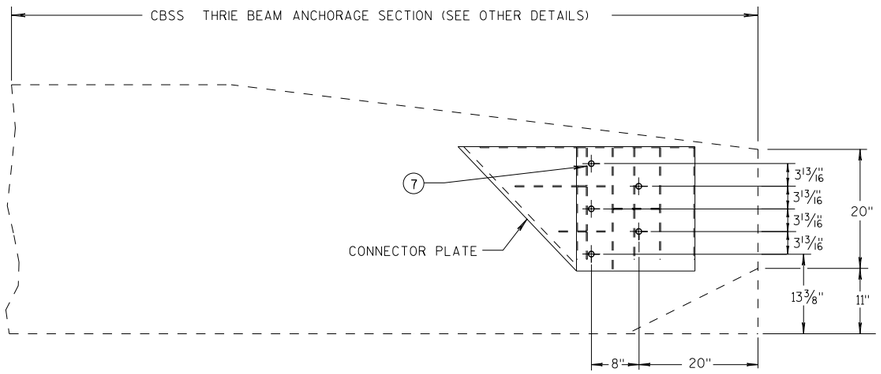
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UNIT SUPERVI ENT

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THRIE BEAM CONNECTION TO SINGLE SLOPE BARRIER



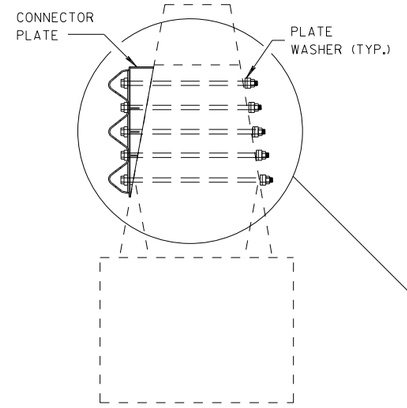
SINGLE SLOPE CONNECTION PLATE PLACEMENT

GENERAL NOTES

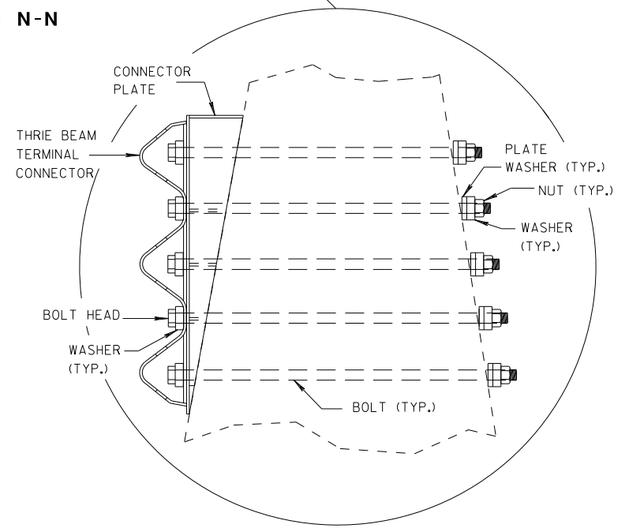
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SECTION N-N



MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

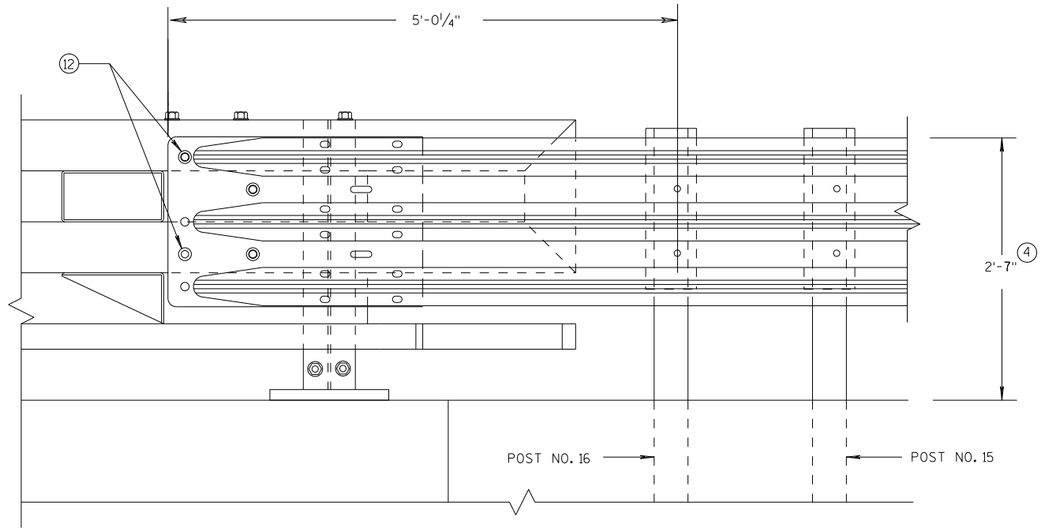
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DATE
/S/ Rodney Taylor
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S.D.D. 14 B 45-5j

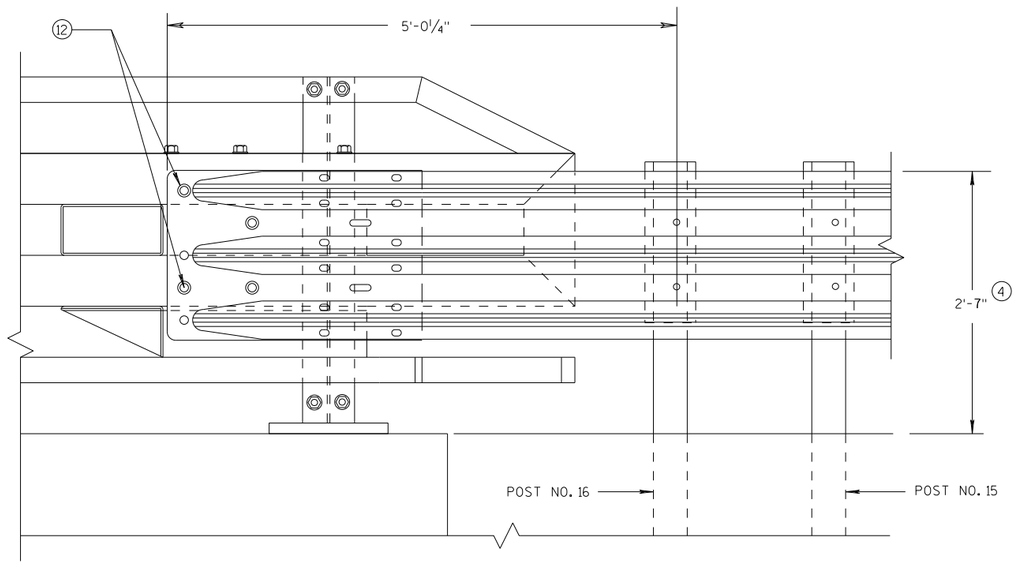
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S.D.D. 14 B 45-5j



ELEVATION OF DETAIL AT NY3 END POST

THRIE BEAM RAIL ATTACHMENT



ELEVATION OF DETAIL AT NY4 END POST

THRIE BEAM RAIL ATTACHMENT

GENERAL NOTES

(4) TOLERANCE FOR TOP OF BEAM IS ± 1".

(12) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. ON BACKSIDE OF PARAPET ONE ROUND WASHER, AND NUT REQUIRED. BOLT THREAD IS TO EXTEND 1/2-INCH BEYOND NUT.

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018
DATE
FHWA

/S/ Rodney Taylor
ROADWAY STANDARDS D
UNIT SUPERVIS

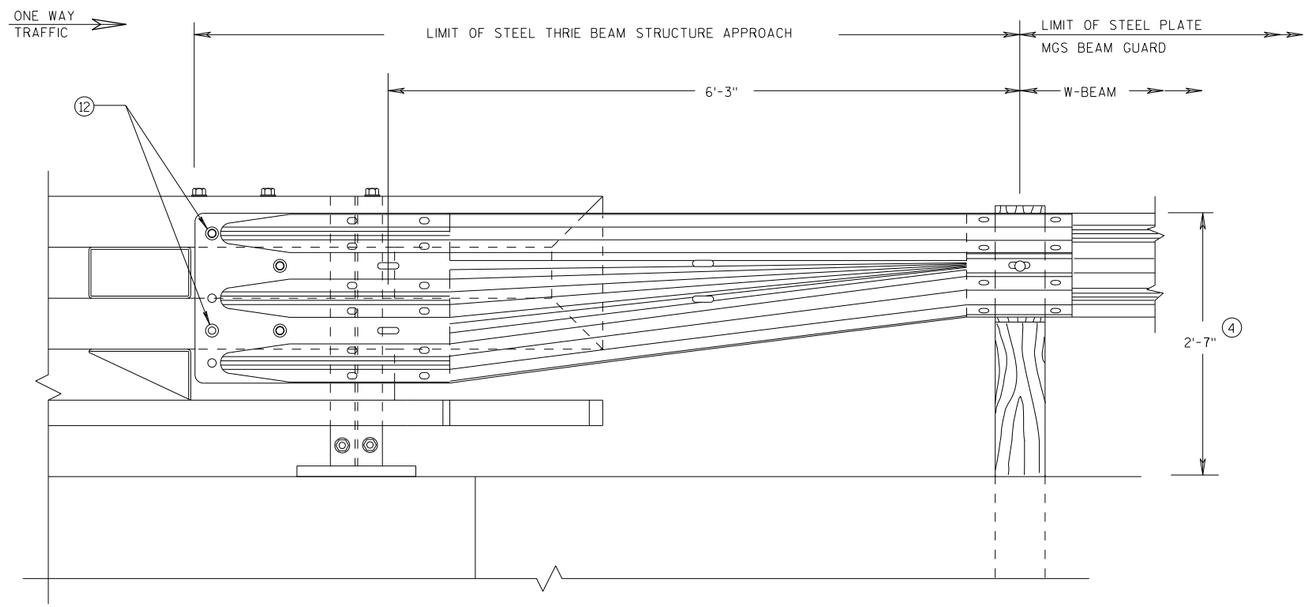
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S.D.D. 14 B 45-5k

6

S.D.D. 14 B 45-5k



FRONT VIEW

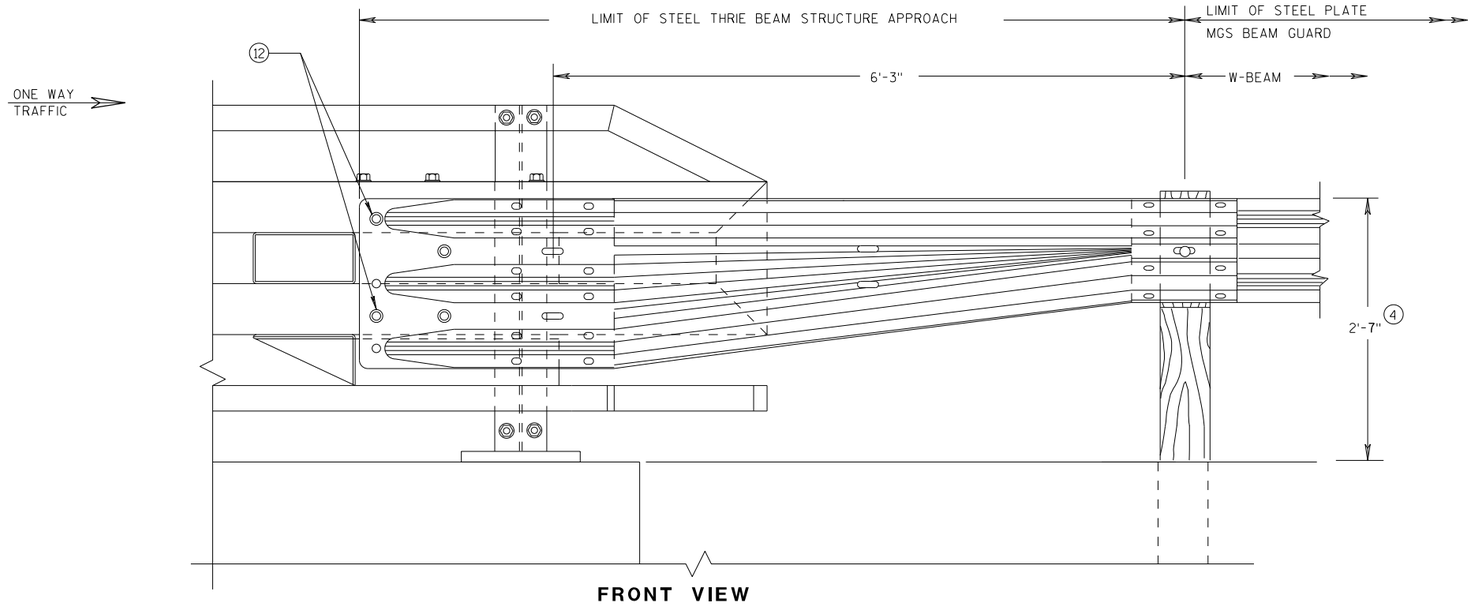
W BEAM TRANSITION AND CONNECTION TO BRIDGE RAILING TYPE "NY3"

(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

GENERAL NOTES

(4) TOLERANCE FOR TOP OF BEAM IS ± 1".

(12) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. ON BACKSIDE OF PARAPET ONE ROUND WASHER, AND NUT REQUIRED. BOLT THREAD IS TO EXTEND 1/2-INCH BEYOND NUT.



FRONT VIEW

W BEAM TRANSITION AND CONNECTION TO BRIDGE RAILING TYPE "NY4"

(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018 DATE
/S/ Rodney Taylor
ROADWAY STANDARDS D UNIT SUPERVIS
FHWA

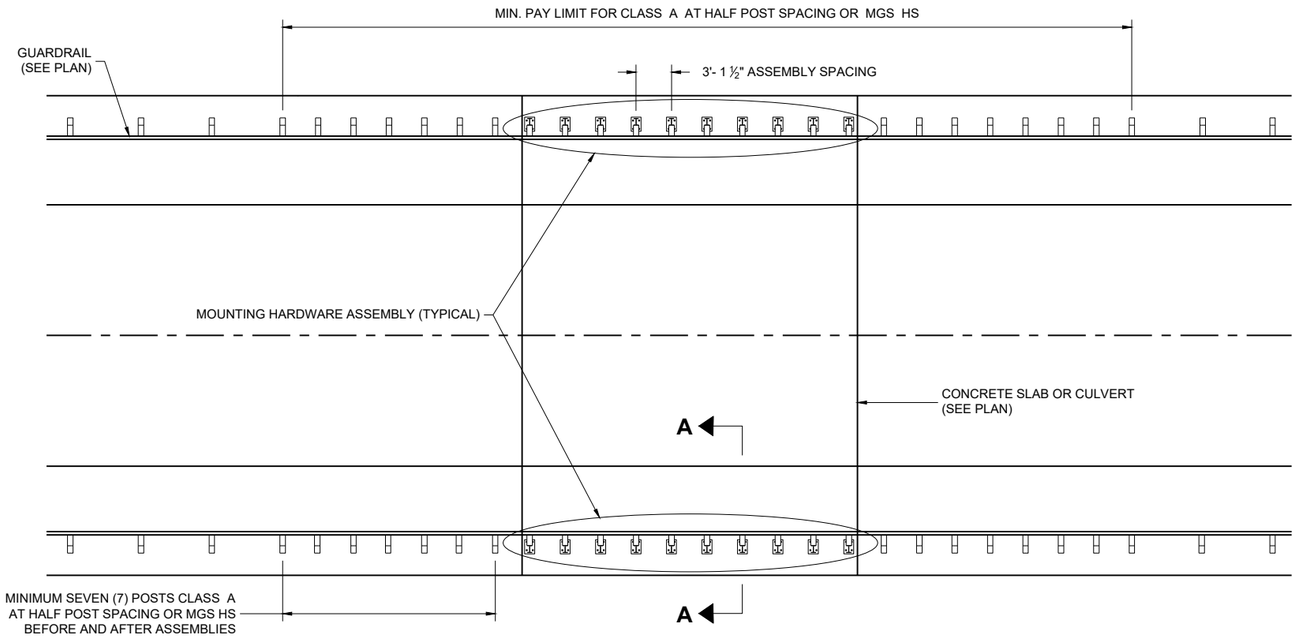
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S.D.D. 14 B 45-5L

6

S.D.D. 14 B 45-5L



PLAN VIEW

GENERAL NOTES

HOLES DRILLED INTO CONCRETE SLAB OR CULVERT ARE 1 ⅛" DIAMETER.

POST BASE PLATE (AND BOTTOM PLATES IF USED) SHALL BE FLAT WITH ALL SURFACES SMOOTH, AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS. CUT BOTTOM OF POST SO THAT POST WILL BE VERTICAL WHEN POST ASSEMBLY IS PLACED ON TOP OF CONCRETE. HEX BOLTS AND THREADED RODS ARE TO BE PLACED PERPENDICULAR TO THE BASE PLATE.

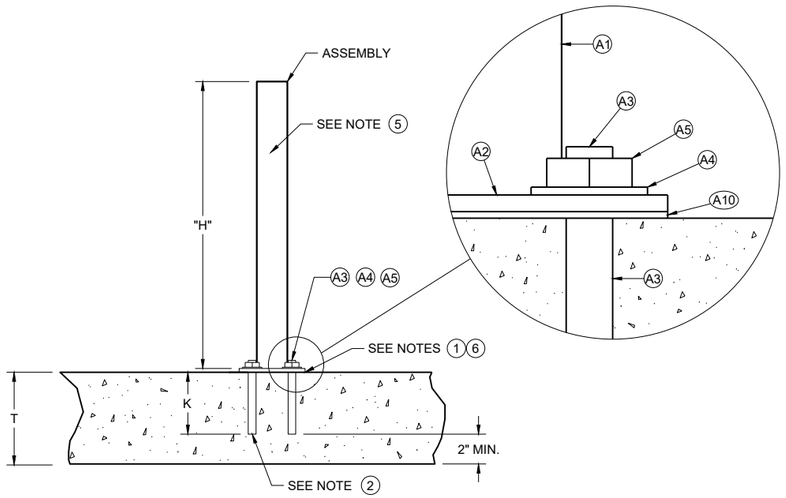
"H" DIMENSION WILL VARY. SEE PLAN FOR "H" DIMENSION. CONTRACTOR HAS OPTION OF INSTALLING POSTS THAT ARE TALLER THAN "H" DIMENSION AND CUT POSTS TO PROPER "H" DIMENSION IN THE FIELD. IF ELECTING TO FIELD CUT POSTS, DRILL HOLES AT APPROPRIATE LOCATIONS AND APPLY GALVANIZATION.

GALVANIZE STEEL COMPONENTS AFTER FABRICATION PER SECTION 614 OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS.

INSTALL 1 NUT AND 1 WASHER WHERE APPLICABLE. PROVIDE SUFFICIENT LENGTH OF BOLT OR THREADED ROD TO ALLOW FOR ¼" TO ½" OF THREAD TO BEYOND THE NUT.

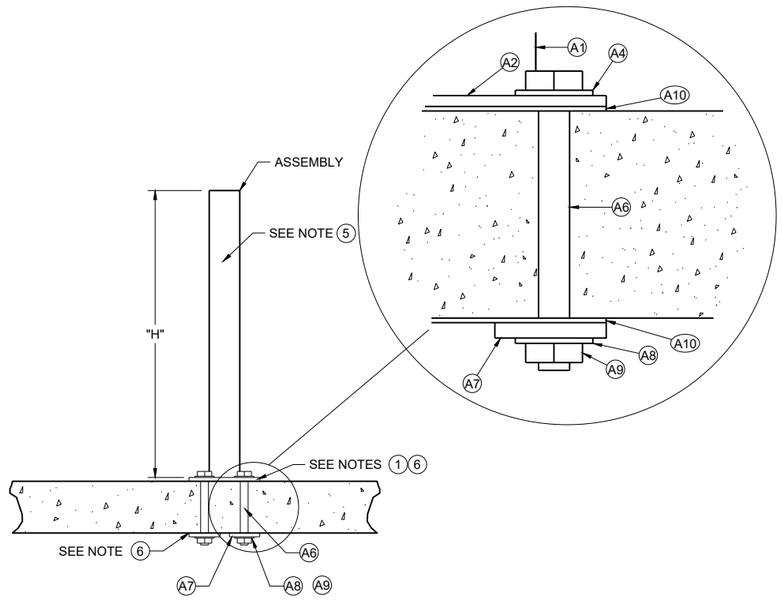
1. FILL BOLT SLOT OPENINGS IN POST SHIMS AND PLATE A2 WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. CAULK AROUND PERIMETER OF A2 WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.
2. BOND STRENGTH OF ADHESIVE IS 1,305 PSI OR GREATER WITH A MINIMUM EMBEDMENT DEPTH OF 8-INCHES. IF MINIMUM EMBEDMENT CANNOT BE ACHIEVED, BOLT THROUGH STRUCTURE.
3. USE GAS-METAL ARC WELDING (GMAW) PROCESS WITH ER70S-3 WELDING WIRE AND ARGON-OXYGEN OR CO_2 COVER GAS.
4. OTHER COMPONENT OF BARRIER SYSTEM NOT SHOWN. SEE SDD 14B15 OR SDD 14B42 FOR MORE DETAILS.
5. HOLES TO MOUNT BEAM GUARD AND BLOCK NOT SHOWN ON DRAWINGS. SEE SDD 14B15 OR SDD 14B42 FOR MORE DETAILS.
6. ADD AND ADJUST SHIM PLATES AS NECESSARY TO INSTALL POST PLUMB. SEE (A10) FOR DETAIL.

Concrete Strength (f'c) PSI	"T" Inch	Min. "K" Inch
3,500	11 ≤	9
4,000	10 ≤	8



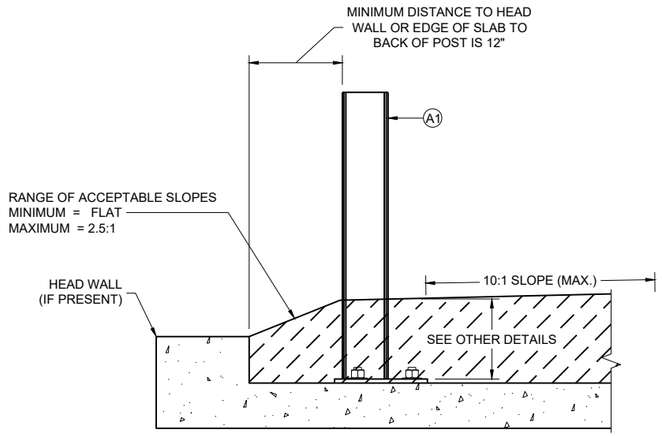
ADHESIVE ANCHOR DETAIL

SEE NOTE 4



BOLT THROUGH DETAIL

SEE NOTE 4



SECTION A - A

SEE NOTE 4

ANCHOR POST ASSEMBLY TOP MOUNTED

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

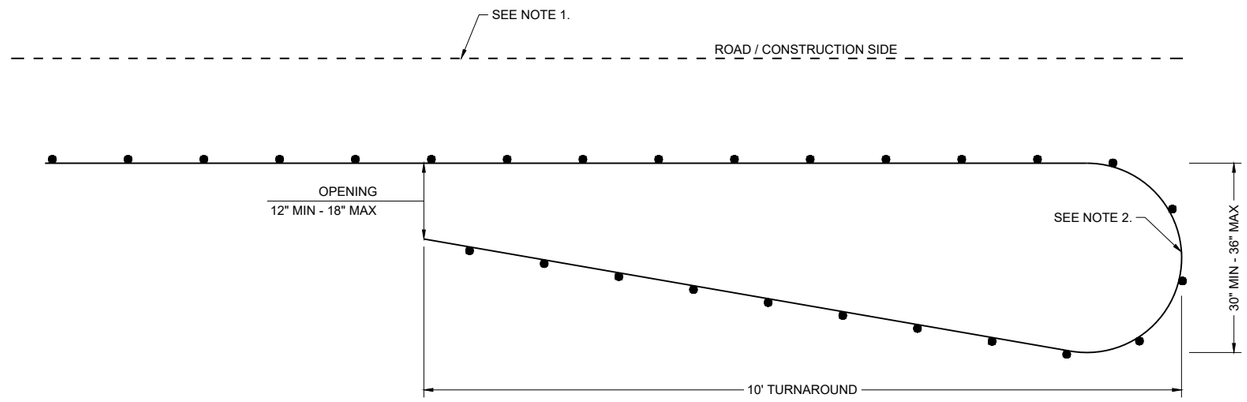
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SDD 14B51-04a

GENERAL NOTES:

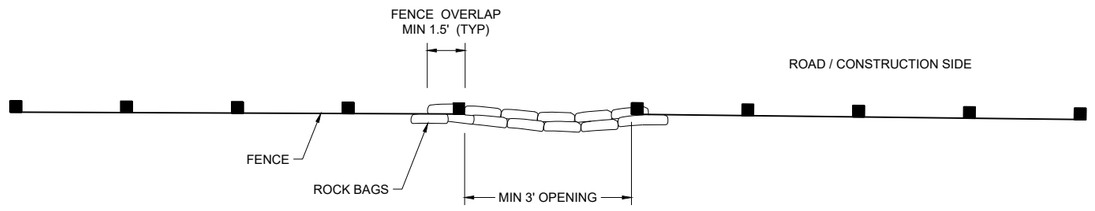
1. WHERE SILT FENCE IS REQUIRED, IT SHALL BE PLACED ON THE CONSTRUCTION SIDE OF THE EXCLUSION FENCING, OR COMBINED WITH THE EXCLUSION FENCING AS ALLOWED IN THE SPECIFICATIONS. STAKES ON THIS DETAIL ARE OPPOSITE OF STANDARD SILT FENCE FOR SEDIMENT CONTROL.
2. PLACE TURNAROUNDS AT ALL TERMINI ENDS OF THE EXCLUSION FENCING.
3. IF TEMPORARY ACCESS POINTS ARE NEEDED DURING CONSTRUCTION THAT REQUIRE OPENINGS IN THE EXCLUSION FENCING, ACCESS OPENINGS SHOULD BE TIGHTLY SECURED WITH BALES OF HAY OR STRAW WHENEVER CONSTRUCTION RELATED ACTIVITIES ARE NOT OCCURRING. REINSTALL EXCLUSION FENCING WHEN THE WORK REQUIRING THE TEMPORARY ACCESS OPENING IS COMPLETED.
4. THE FENCE CAP MAY BE A 6" UNDER DRAIN PIPE, SLIT DOWN THE CENTER AND PLACED OVER THE FENCE. COMMERCIALLY AVAILABLE SAFETY CAPS WITH A LIP MAY BE USED. OTHER DNR APPROVED METHODS TO PREVENT TURTLES FROM PASSING OVER THE TOP OF THE FENCE MAY BE USED.

   SECURELY FASTEN THE CAP TO PREVENT IT FROM BEING DISLODGED.

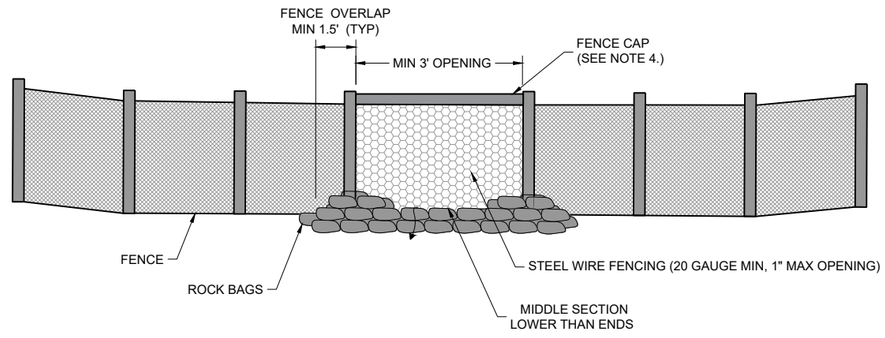


PLAN VIEW

CLIMBING TURTLE EXCLUSION FENCE DETAIL



PLAN VIEW



FRONT VIEW

CLIMBING TURTLE FENCE RELIEF DETAIL

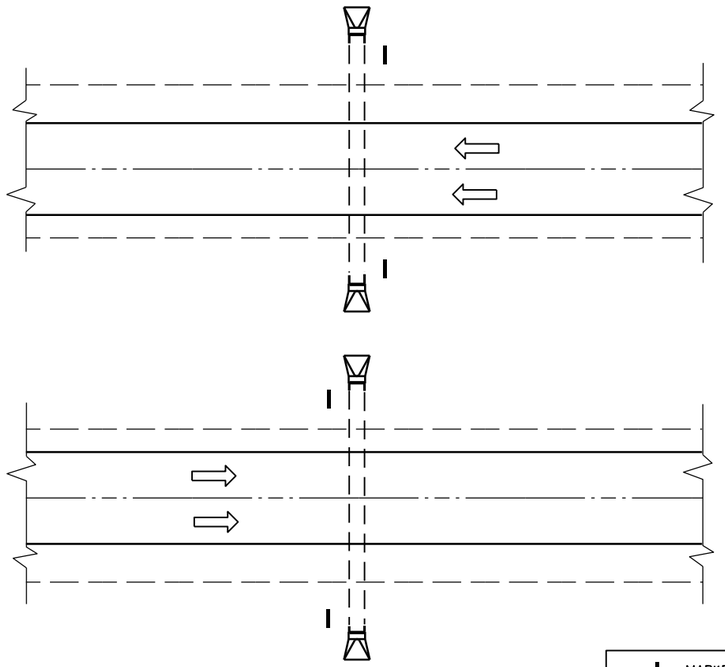
TURTLE EXCLUSION FENCE
CLIMBING TURTLE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
AUGUST 2025
DATE

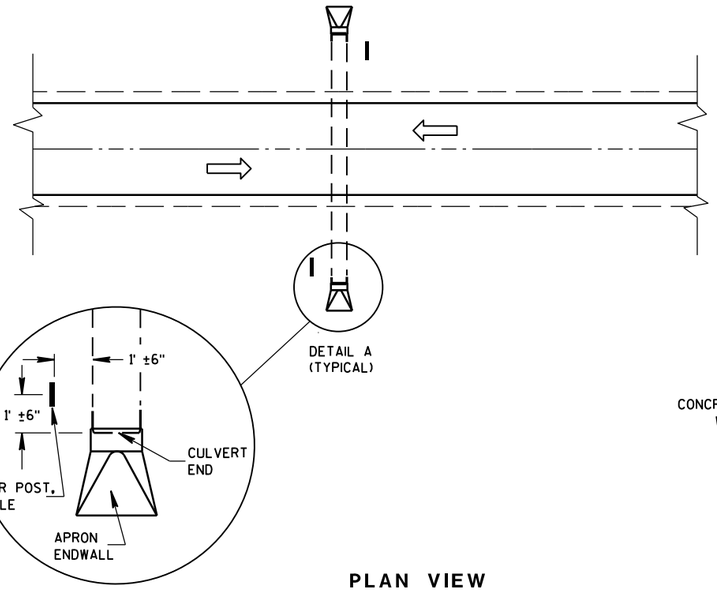
/S/ ALYSSA BARRETTE
CHIEF STATEWIDE ENVIRONMENTAL SERVICES
BUREAU OF TECHNICAL SER

FHWA



PLAN VIEW

DIVIDED HIGHWAY



DETAIL A
(TYPICAL)

PLAN VIEW

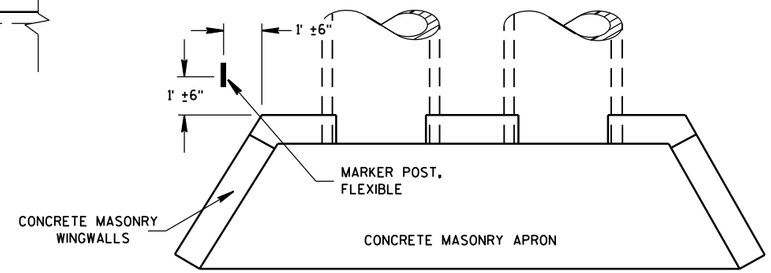
UNDIVIDED HIGHWAY

MARKER POST, FLEXIBLE

DIRECTION OF TRAFFIC FLOW

GENERAL NOTES

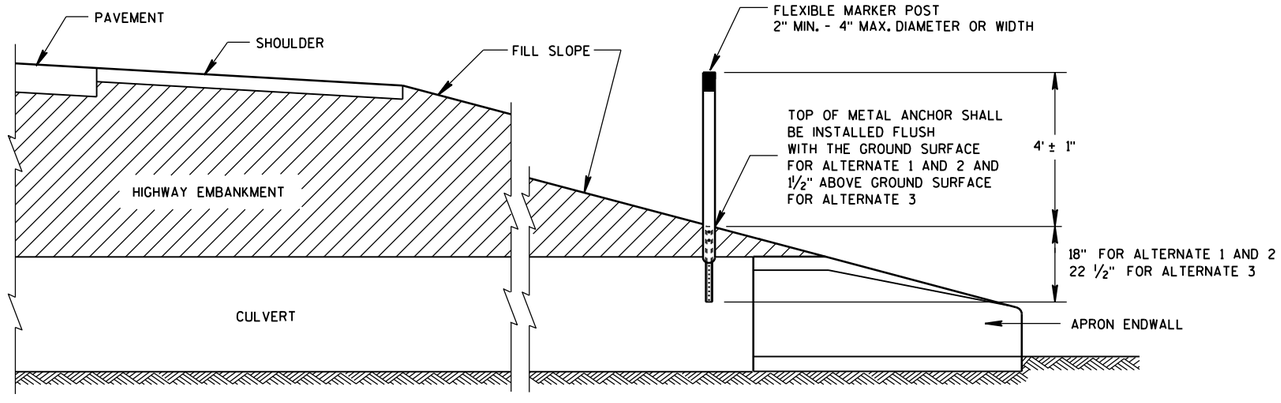
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



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

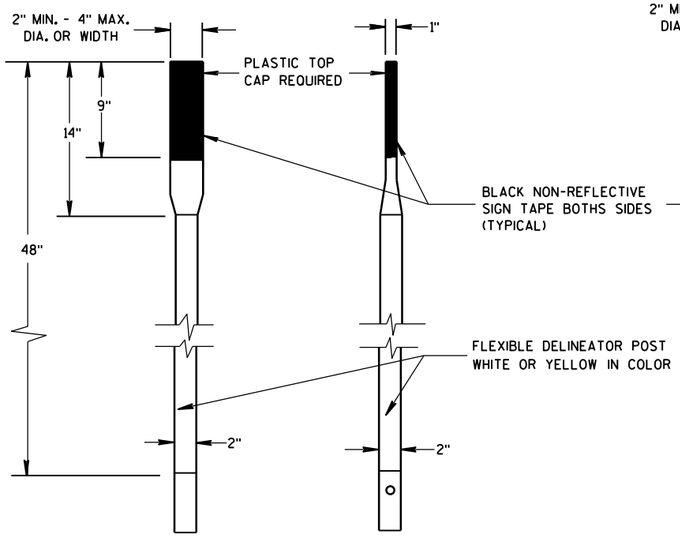
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

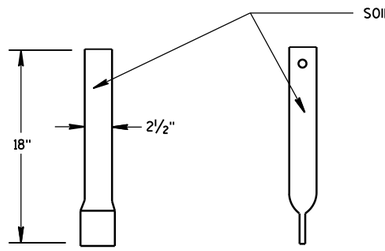
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S.D.D. 15 A 3-2a

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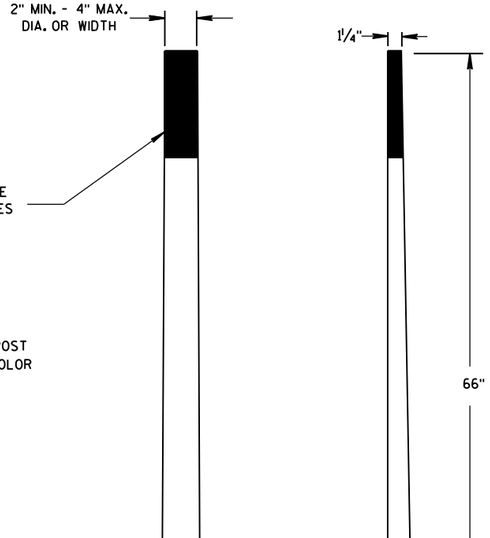
S.D.D. 15 A 3-2a





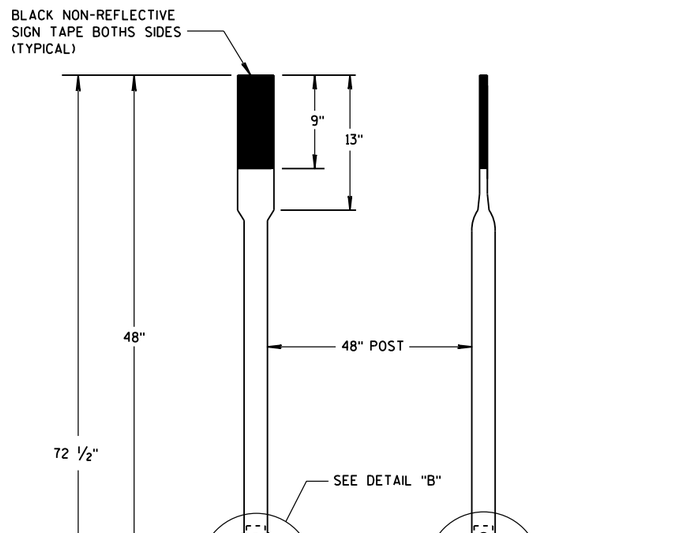
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

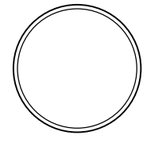
ALTERNATE 2



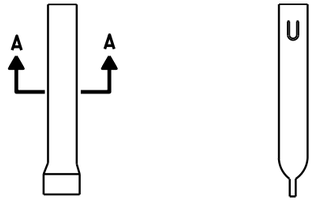
FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POSTS

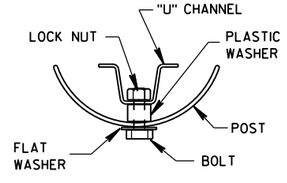


SECTION A-A

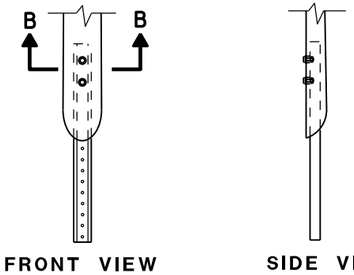


FRONT VIEW SIDE VIEW

ALTERNATE 1

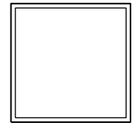


SECTION B-B

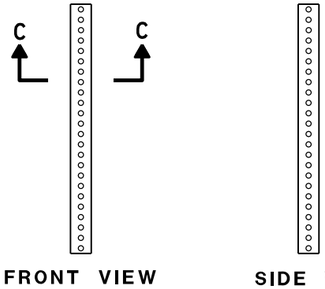


FRONT VIEW SIDE VIEW

ALTERNATE 2



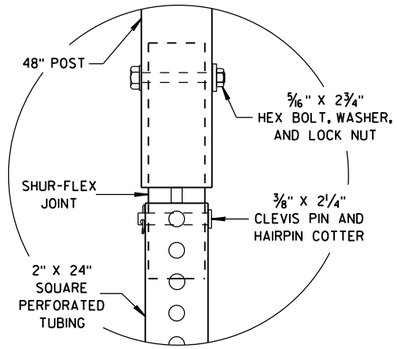
SECTION C-C



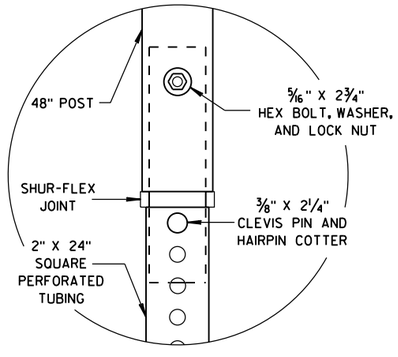
FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POST ANCHORS



DETAIL B



DETAIL C

FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

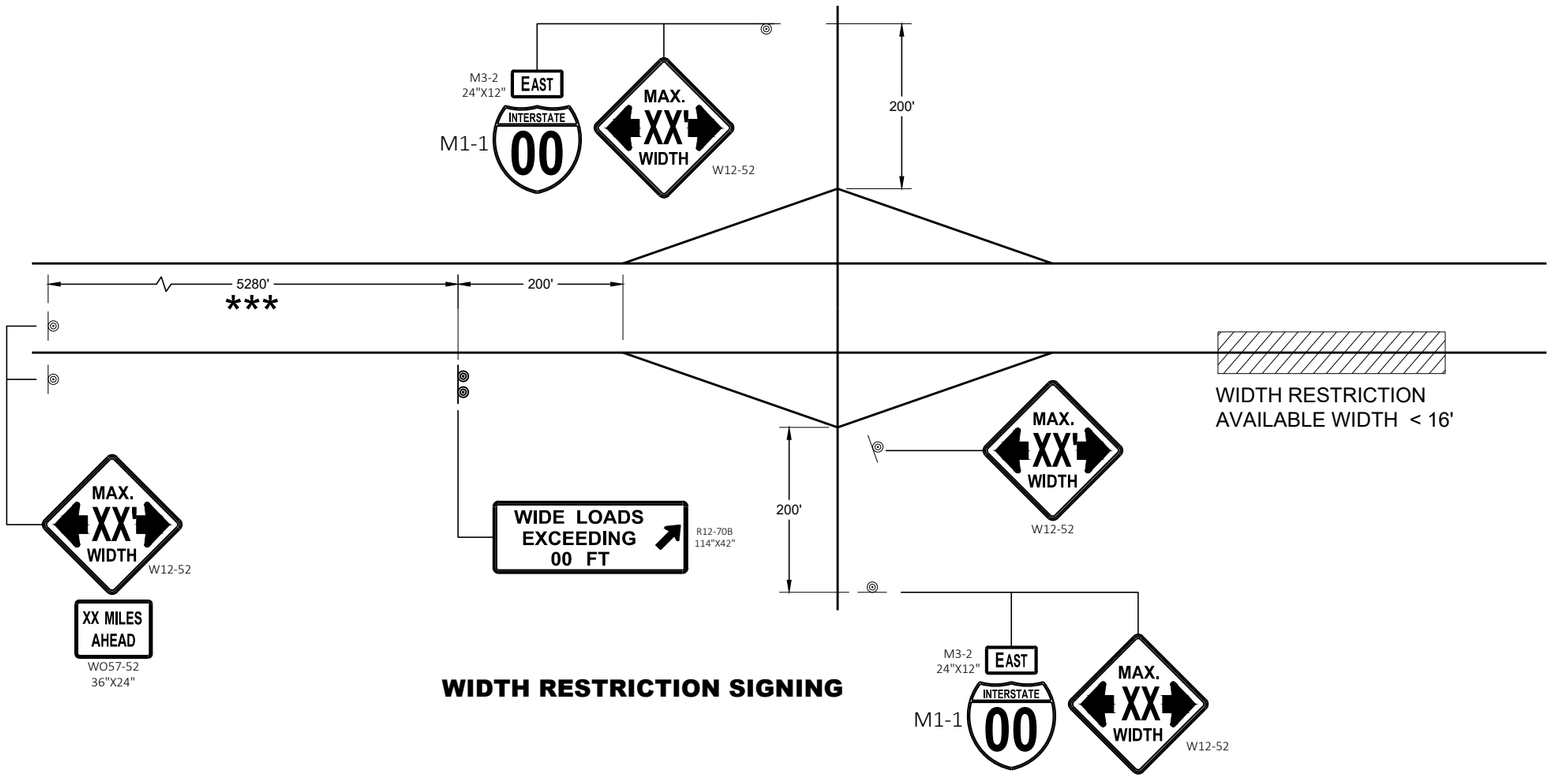
APPROVED
10/1/2012
DATE
/S/ Travis Feltes
STATE TRAFFIC ENGINEER
FHWA

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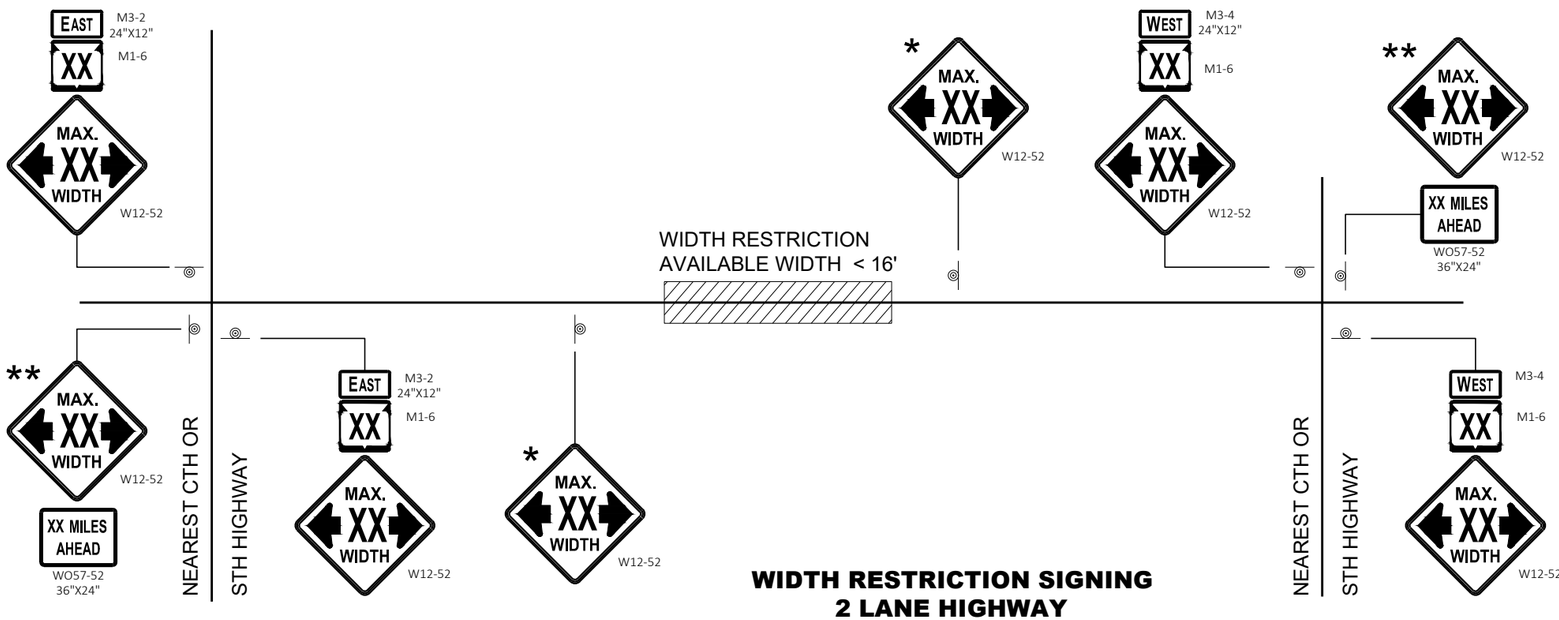
S.D.D. 15 A 3-2b

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



WIDTH RESTRICTION SIGNING



WIDTH RESTRICTION SIGNING
2 LANE HIGHWAY

LEGEND

◎ SIGN ON PERMANENT SUPPORT

GENERAL NOTES

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

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

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

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

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

WIDTH ON SIGN TO BE APPROXIMATELY ONE FOOT LESS THAN AVAILABLE WIDTH.

* PLACE 500 FEET AFTER THE W20 - 1A AND 500 FEET BEFORE ADDITIONAL SIGNS FOR ROADWAYS WITH A PRE - CONSTRUCTION SPEED LIMIT OF 45 MPH OR MORE. FOR 35-40 MPH, USE 350 FOOT TYPICAL SPACING. FOR 25-30 MPH, USE 200 FOOT TYPICAL SPACING.

** SIGN SHALL BE VISIBLE FROM ROADWAY.

*** ADDITIONAL SIGNS NEEDED IF THERE IS AN ON RAMP BETWEEN SIGNS.



WIDTH ON SIGN TO BE APPROX. 1 - FOOT LESS THAN AVAILABLE WIDTH

ADVANCED WIDTH RESTRICTION SIGNING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

6

SDD 15C02 - 09f

6

SDD 15C02 - 09f

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.

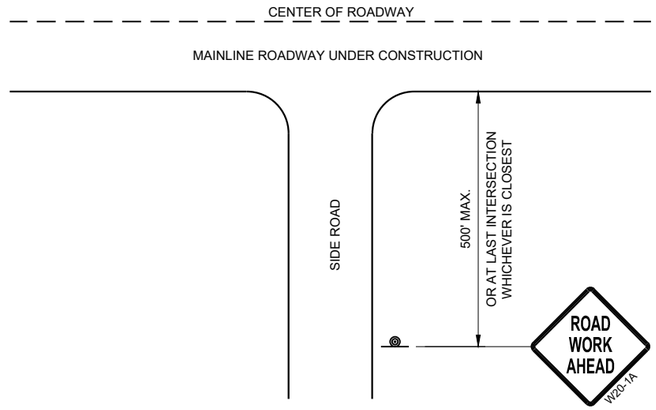
ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

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.



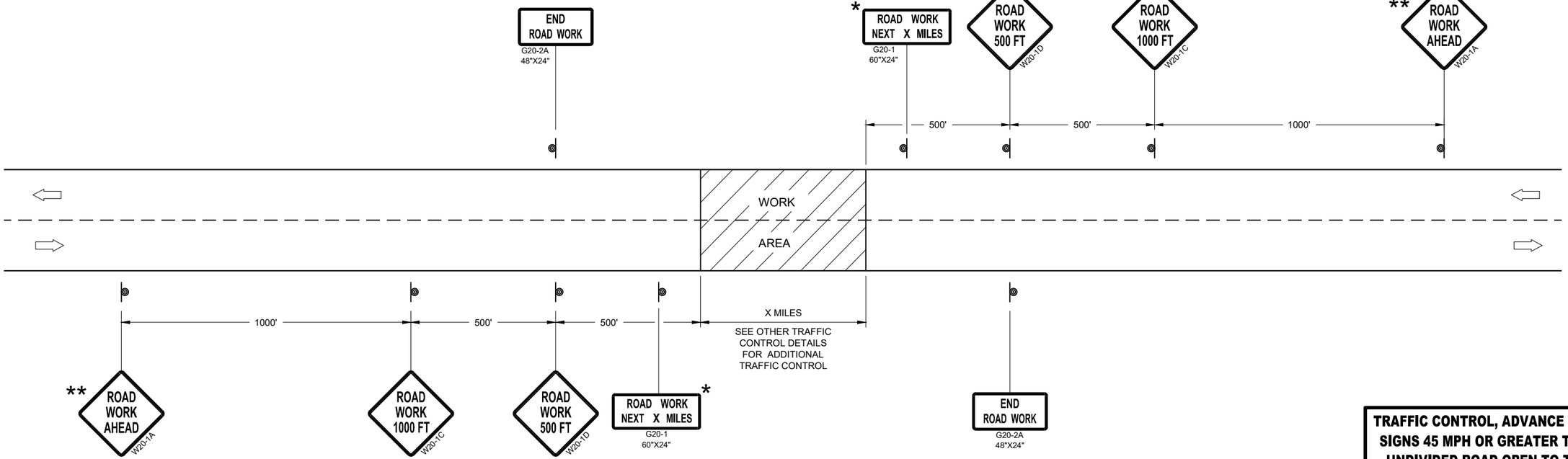
TYPICAL SIDE ROAD APPROACH WARNING SIGN DETAIL

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

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SDD 15C04 - 05

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.

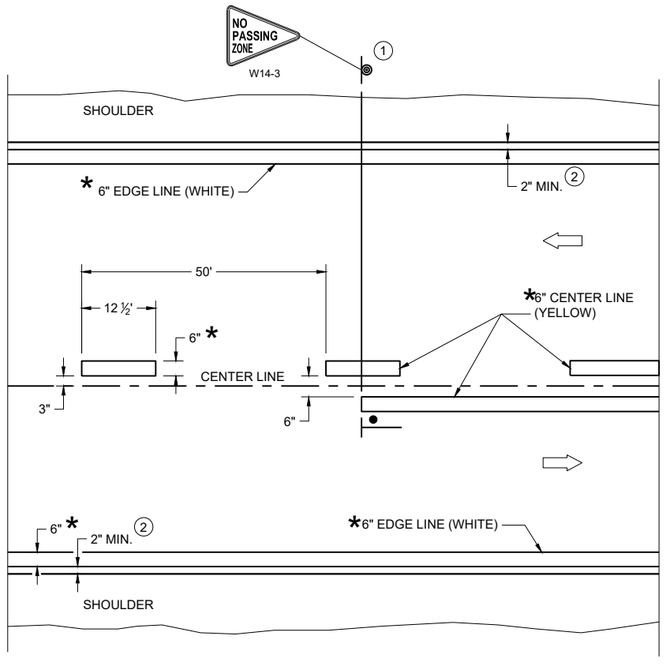
LEGEND

"T" MARKING

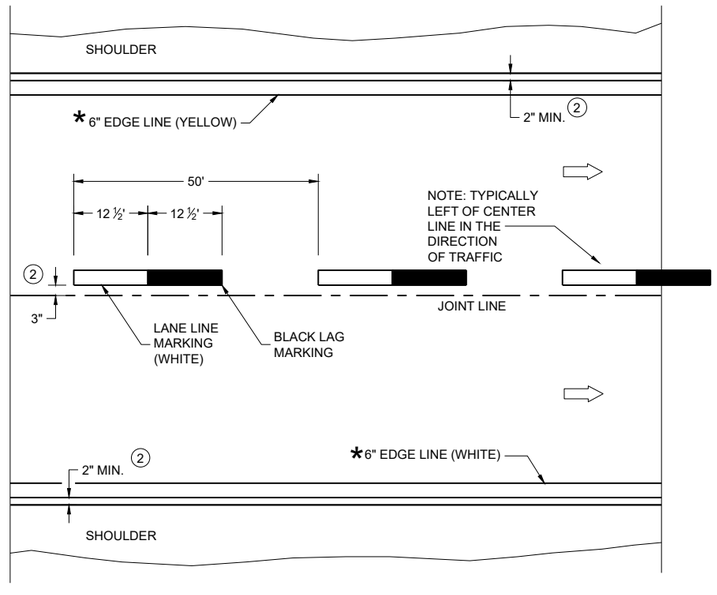
SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC

*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

6

SDD 15C08-24a

PERMANENT LONGITUDINAL PAVEMENT MARKINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

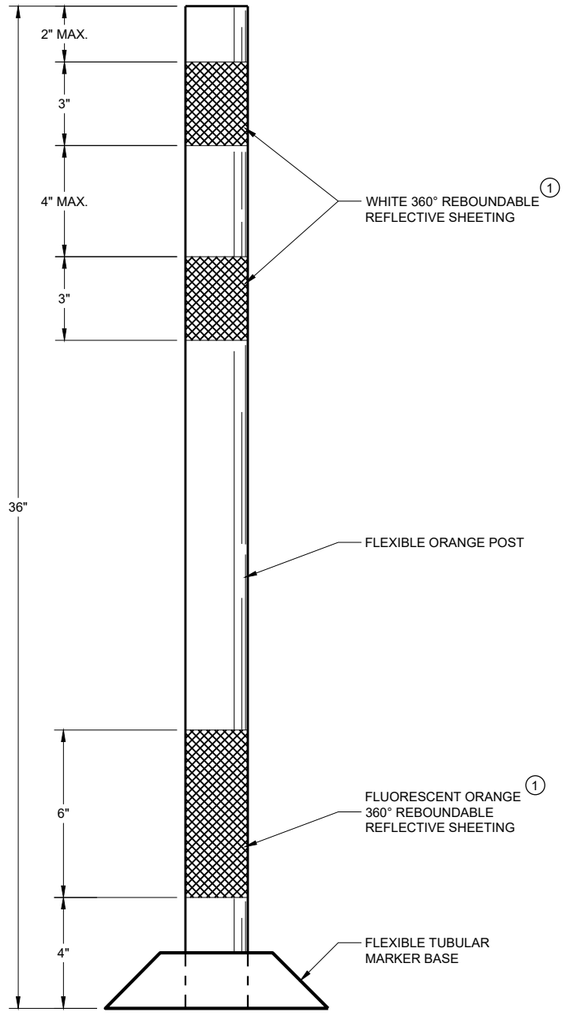
APPROVED
December 2024
DATE

/S/ Jeannie Silver
Statewide Pavement Marking Engineer

FHWA

6

SDD 15C08-24a



FLEXIBLE TUBULAR MARKER POST WORK ZONE

GENERAL NOTES

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

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

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

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

CHANNELIZING DEVICES FLEXIBLE TUBULAR MARKER POST

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2022
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

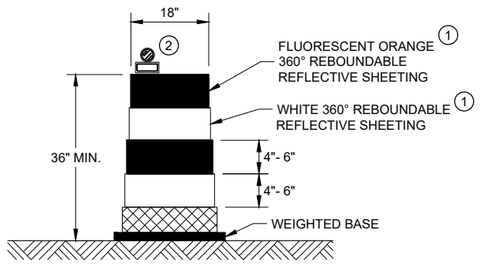
FHWA

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SDD 15C11 - 10a

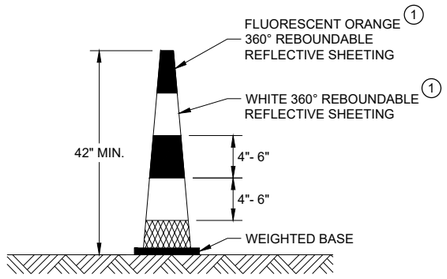
GENERAL NOTES

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

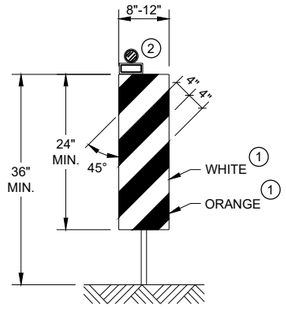
BALLAST WIDTHS
RANGE FROM 24"-36"



42" CONE

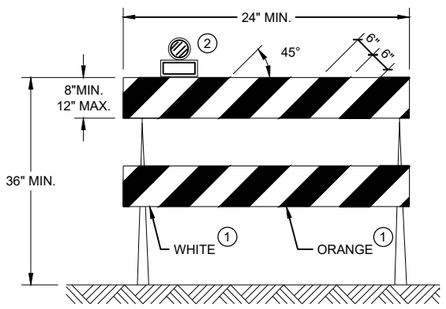
DO NOT USE IN TAPERS
½ SPACING OF DRUMS

BALLAST WIDTHS
RANGE FROM 14"-20"



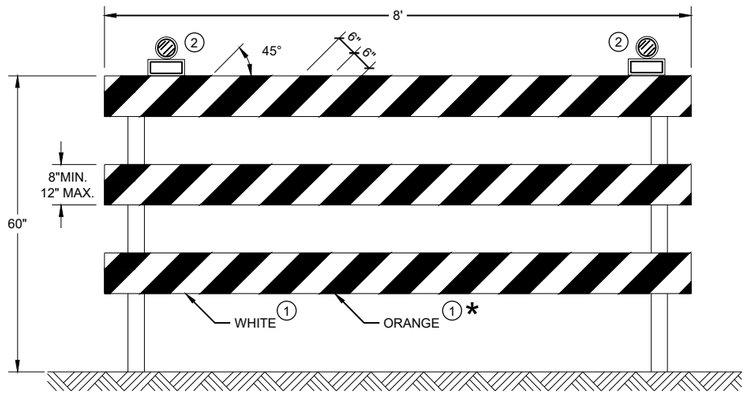
VERTICAL PANEL

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.

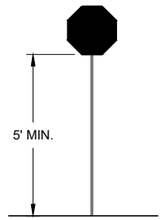
(3) EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS PLACED TRANSVERSE ACROSS THE LANE AT THE LOCATIONS SHOWN. WITHIN EACH ARRAY, SPACING BETWEEN RUMBLE STRIPS SHALL BE 15 FEET ON CENTER

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

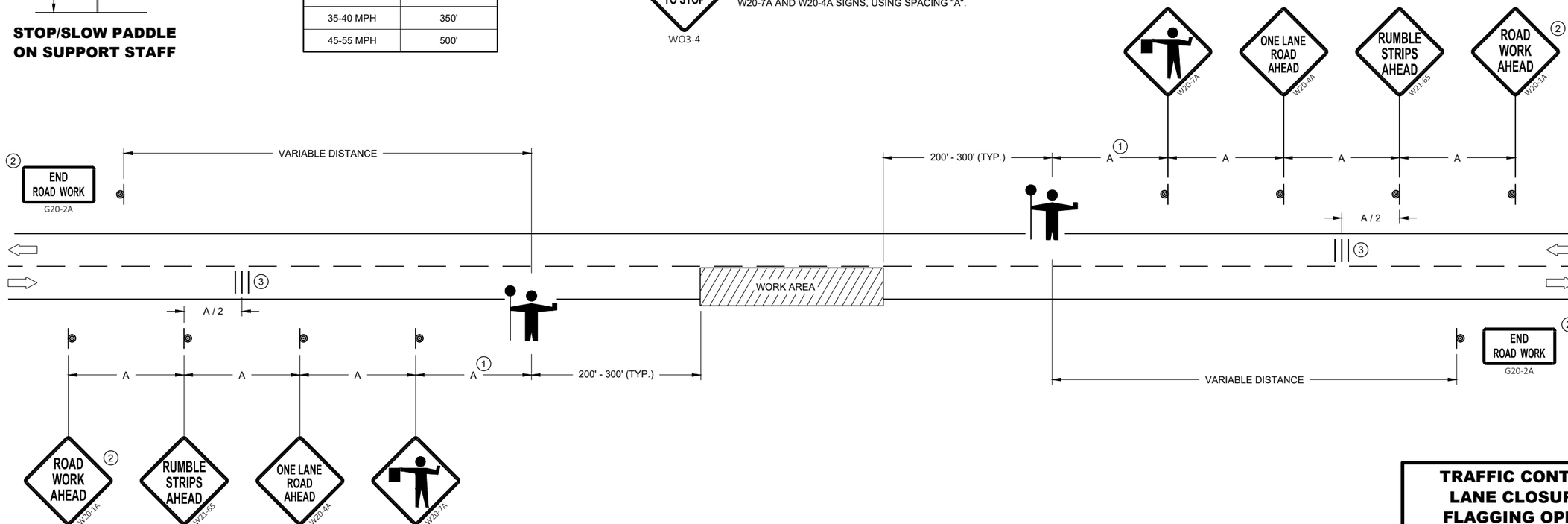
SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

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

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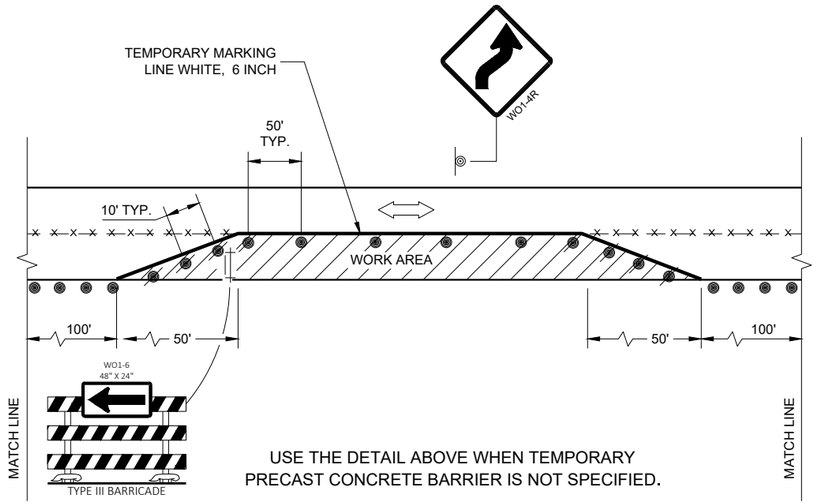
SDD 15C12 - 09a

6

SDD 15C12 - 09a

LEGEND

- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- FLAGS, 16" X 16" MIN. (ORANGE)
- REMOVING PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- ASPHALTIC PAVEMENT WIDENING
- CONCRETE BARRIER TEMPORARY PRECAST
- TEMPORARY SIGNAL. SEE SDD 09G02 FOR EXACT PLACEMENT



USE THE DETAIL ABOVE WHEN TEMPORARY PRECAST CONCRETE BARRIER IS NOT SPECIFIED.

GENERAL NOTES

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

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

THIS LANE CLOSURE IS TYPICAL FOR CLOSING RIGHT LANE - REVERSE FOR CLOSING LEFT LANE.

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

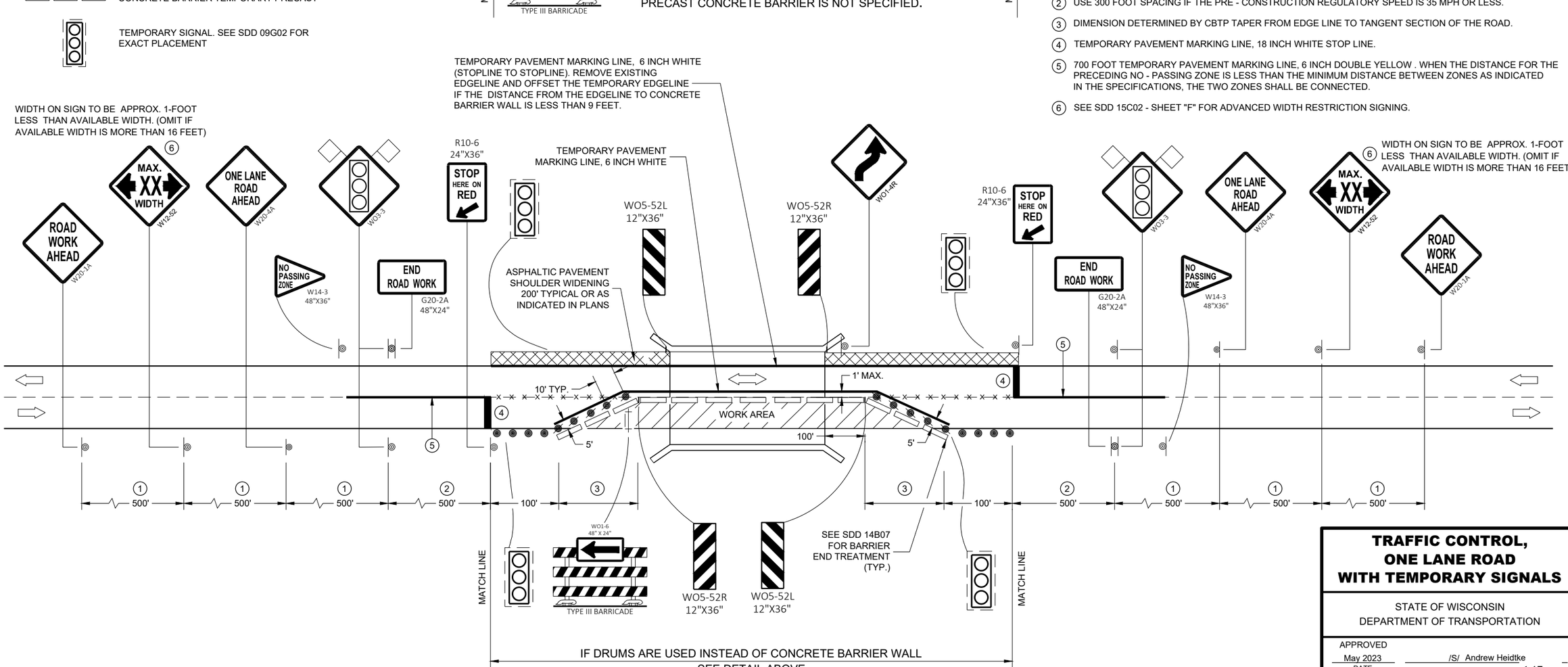
"WO" IS THE SAME AS "W" EXCEPT THE BACKGROUND IS ORANGE.

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

REMOVE PAVEMENT MARKING AND PLACE TEMPORARY PAVEMENT MARKING LINES IF THE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

INSTALL OVERHEAD TEMPORARY SIGNAL HEADS ABOVE THE MIDDLE OF THE TRAVEL LANE THEY ARE CONTROLLING.

1. 500 FOOT SPACING SHOWN IS FOR ROADWAYS WITH A PRE-CONSTRUCTION REGULATORY SPEED LIMIT OF 45 MPH OR MORE. FOR 35 - 40 MPH, USE 350 FOOT TYPICAL SPACING. FOR 25 - 30 MPH, USE 200 FOOT TYPICAL SPACING.
2. USE 300 FOOT SPACING IF THE PRE - CONSTRUCTION REGULATORY SPEED IS 35 MPH OR LESS.
3. DIMENSION DETERMINED BY CBTP TAPER FROM EDGE LINE TO TANGENT SECTION OF THE ROAD.
4. TEMPORARY PAVEMENT MARKING LINE, 18 INCH WHITE STOP LINE.
5. 700 FOOT TEMPORARY PAVEMENT MARKING LINE, 6 INCH DOUBLE YELLOW . WHEN THE DISTANCE FOR THE PRECEDING NO - PASSING ZONE IS LESS THAN THE MINIMUM DISTANCE BETWEEN ZONES AS INDICATED IN THE SPECIFICATIONS, THE TWO ZONES SHALL BE CONNECTED.
6. SEE SDD 15C02 - SHEET "F" FOR ADVANCED WIDTH RESTRICTION SIGNING.



TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6 SDD 15D33-09

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.

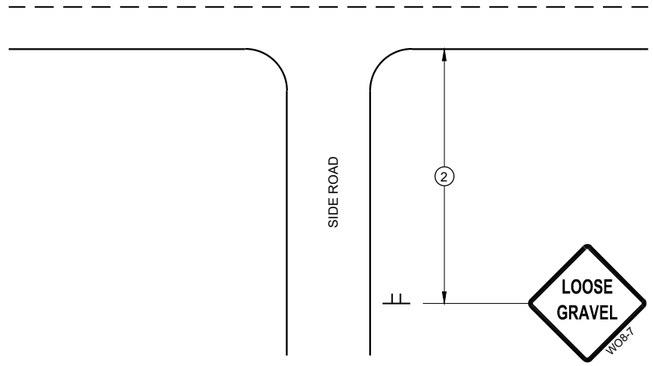
(2) PLACE SIGN 200' MIN. FROM INTERSECTION AND 200' MIN. AFTER ADVANCE WARNING SIGN SHOWN IN SDD 15C04.

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

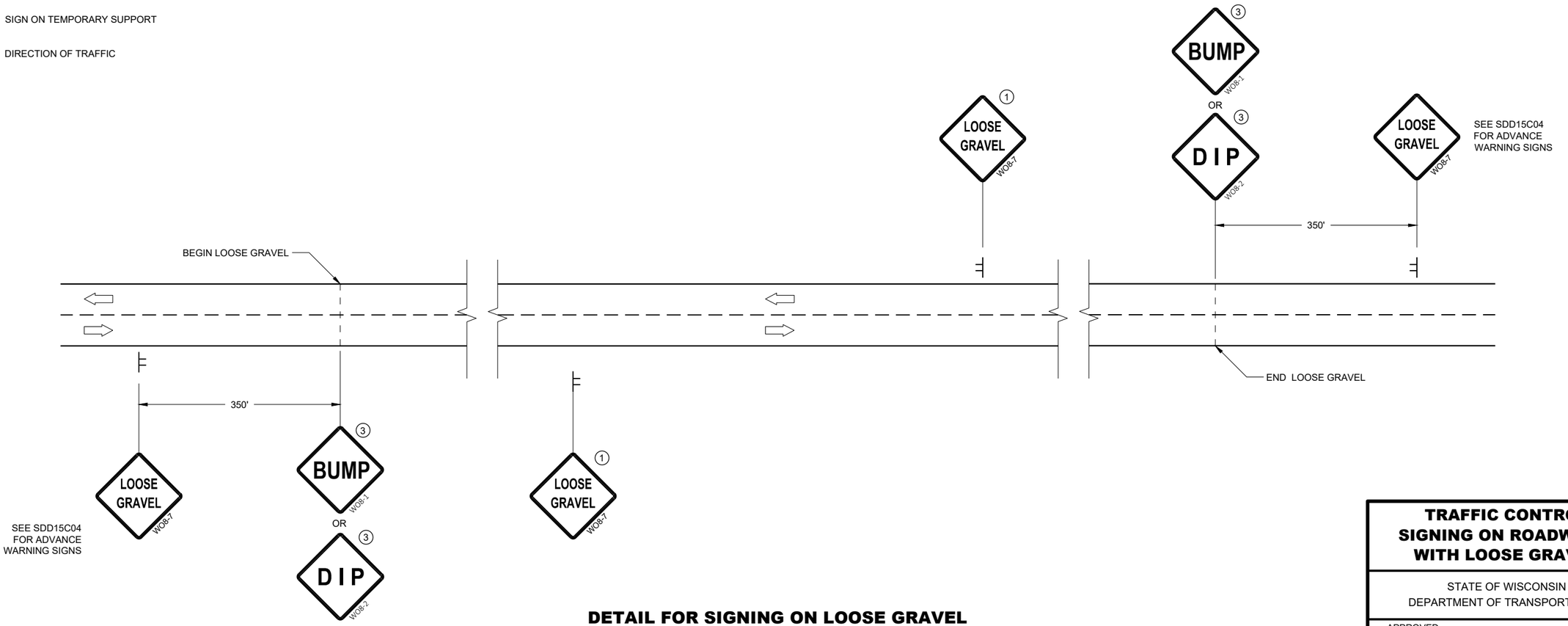
LEGEND

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

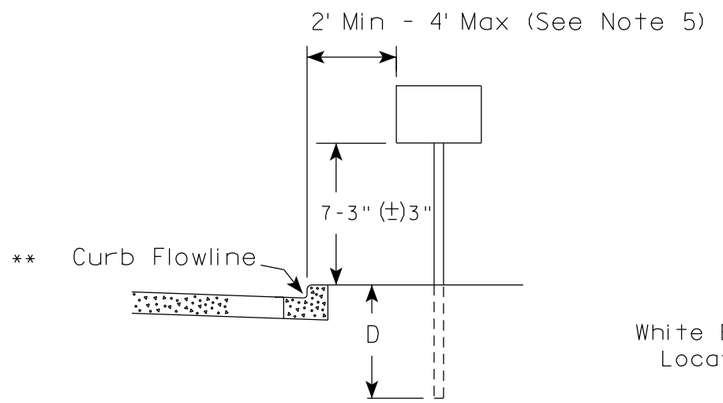
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SDD 15D45 - 03

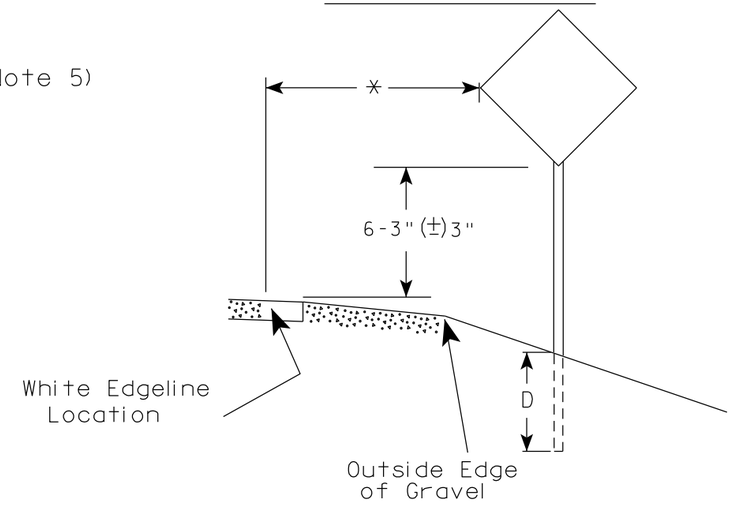
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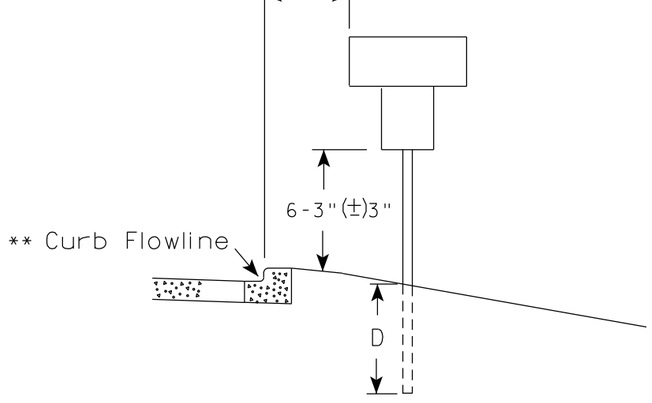
SDD 15D45 - 03

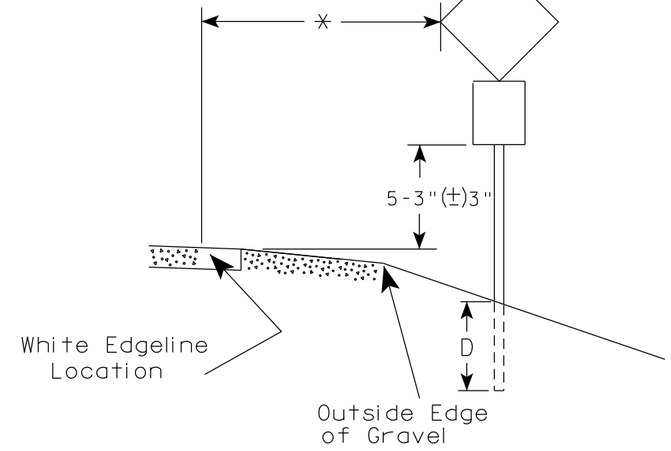
URBAN AREA



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.

GENERAL NOTES

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

POST EMBEDMENT DEPTH

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

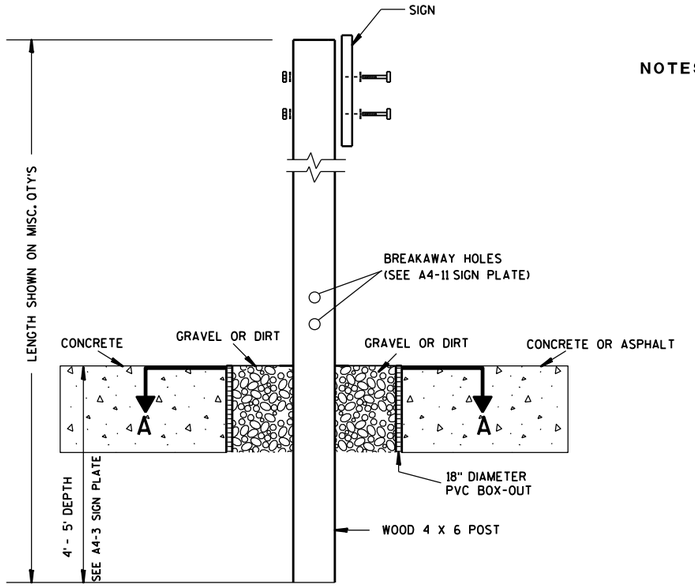
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

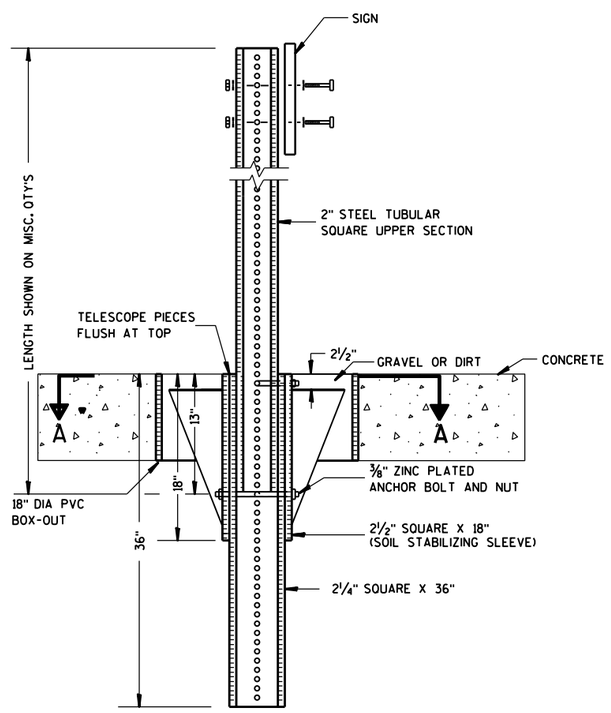
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 147	E



ELEVATION VIEW

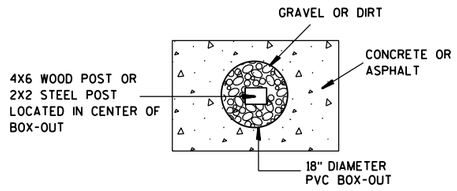
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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



ELEVATION VIEW

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



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B

WISCONSIN DEPT OF TRANSPORTATION

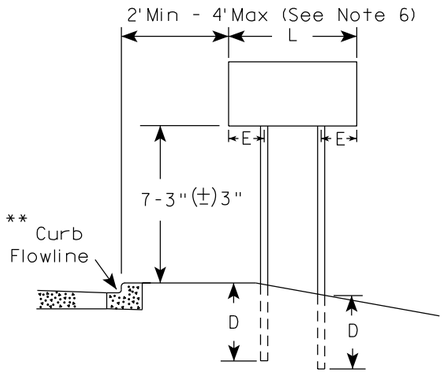
APPROVED Matthew R Rauch
for State Traffic Engineer

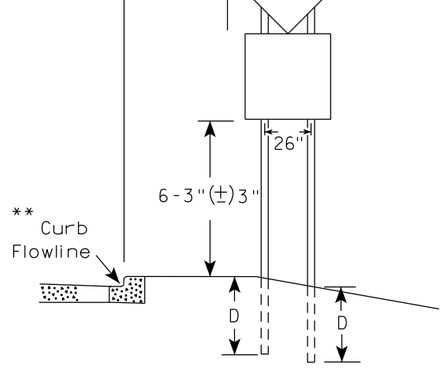
DATE 1/27/14 PLATE NO. A4-3B.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

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

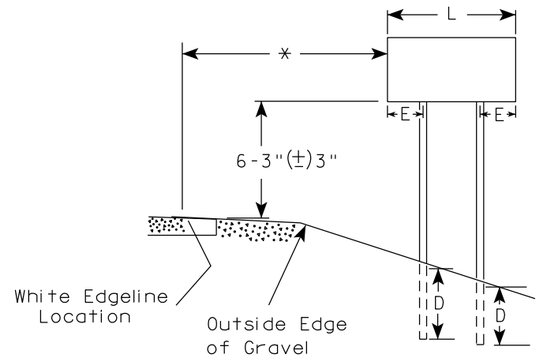
URBAN AREA

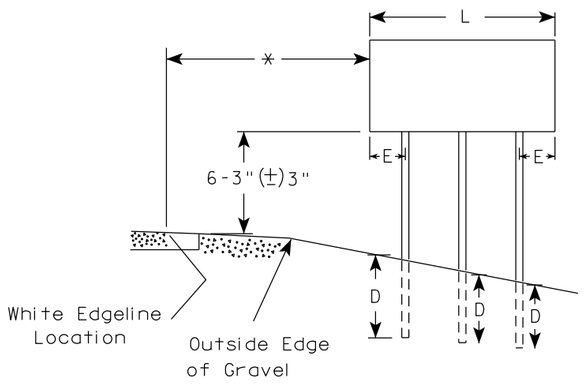


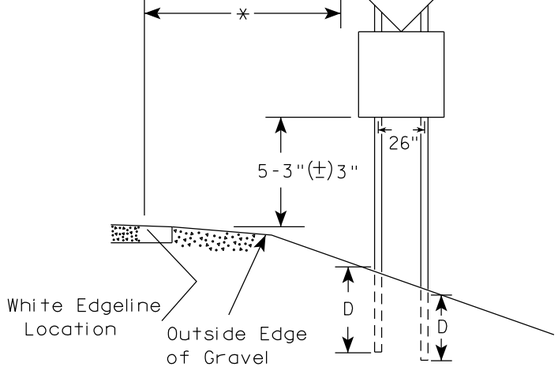


48" DIAMOND WARNING SIGN

RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN

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

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

GENERAL NOTES

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

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

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

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

POST EMBEDMENT DEPTH

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

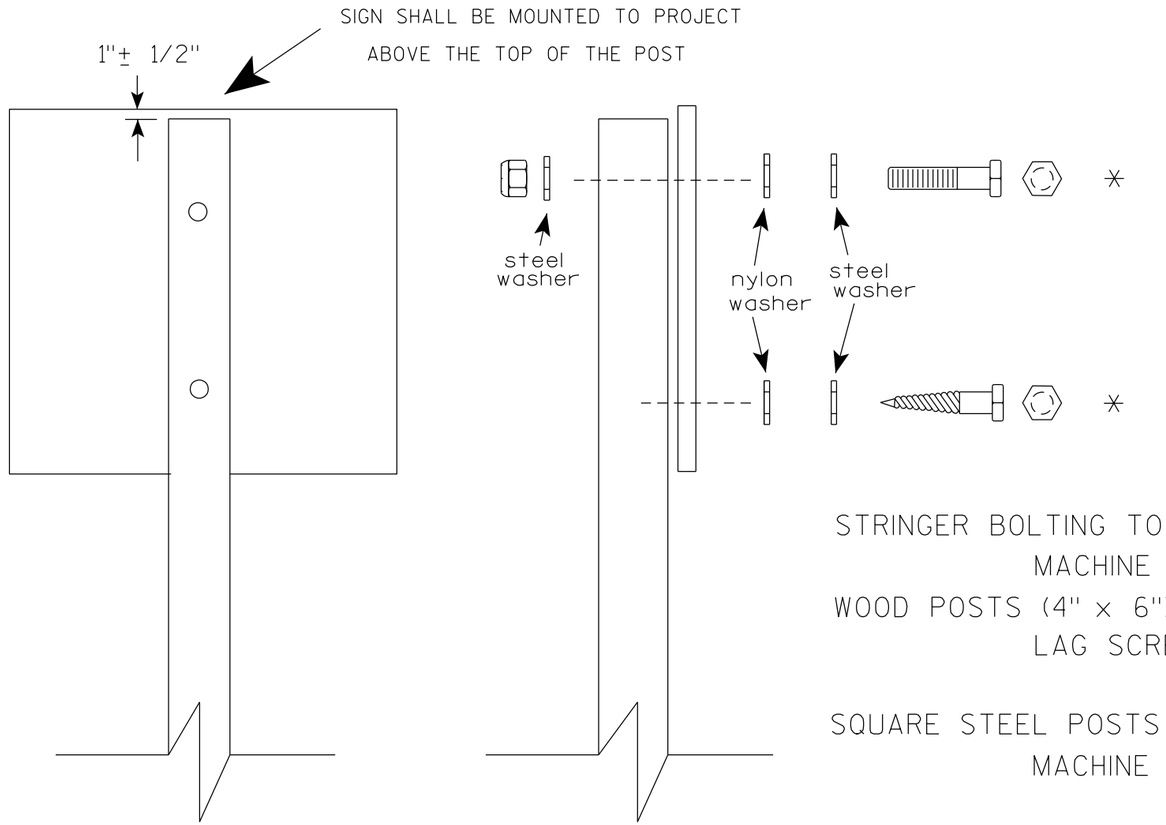
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 149	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

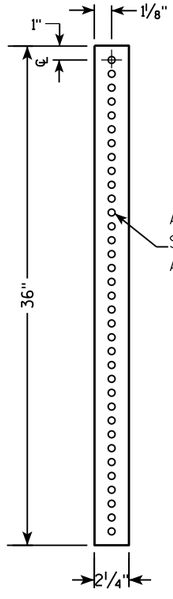
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

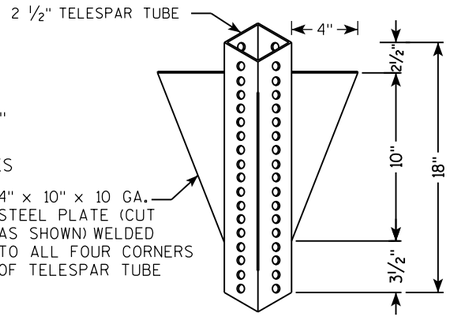
DATE 4/1/2020 PLATE NO. A4-8.9

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

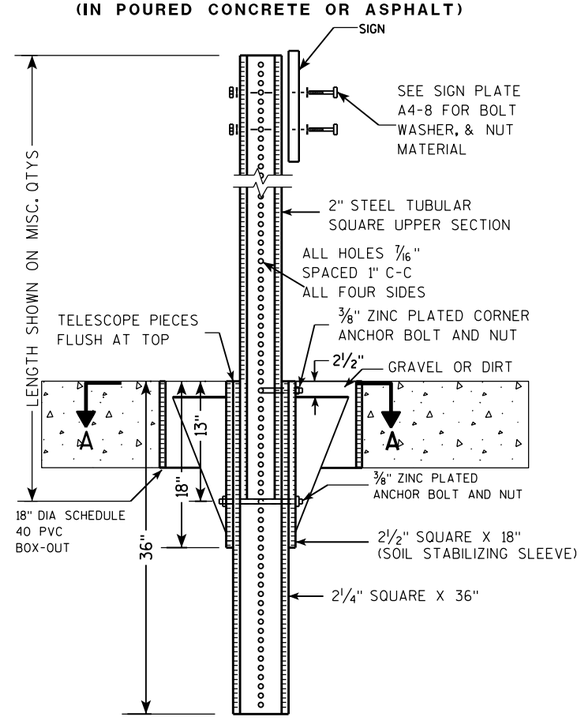
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



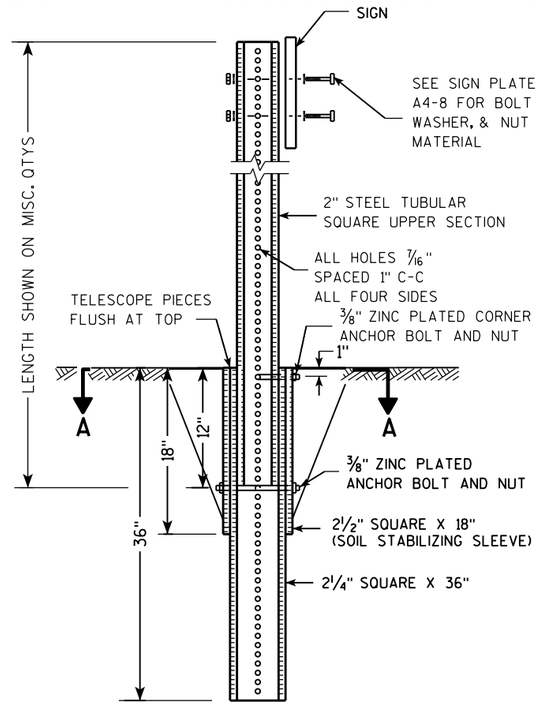
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

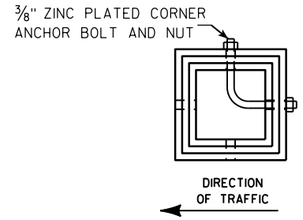


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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

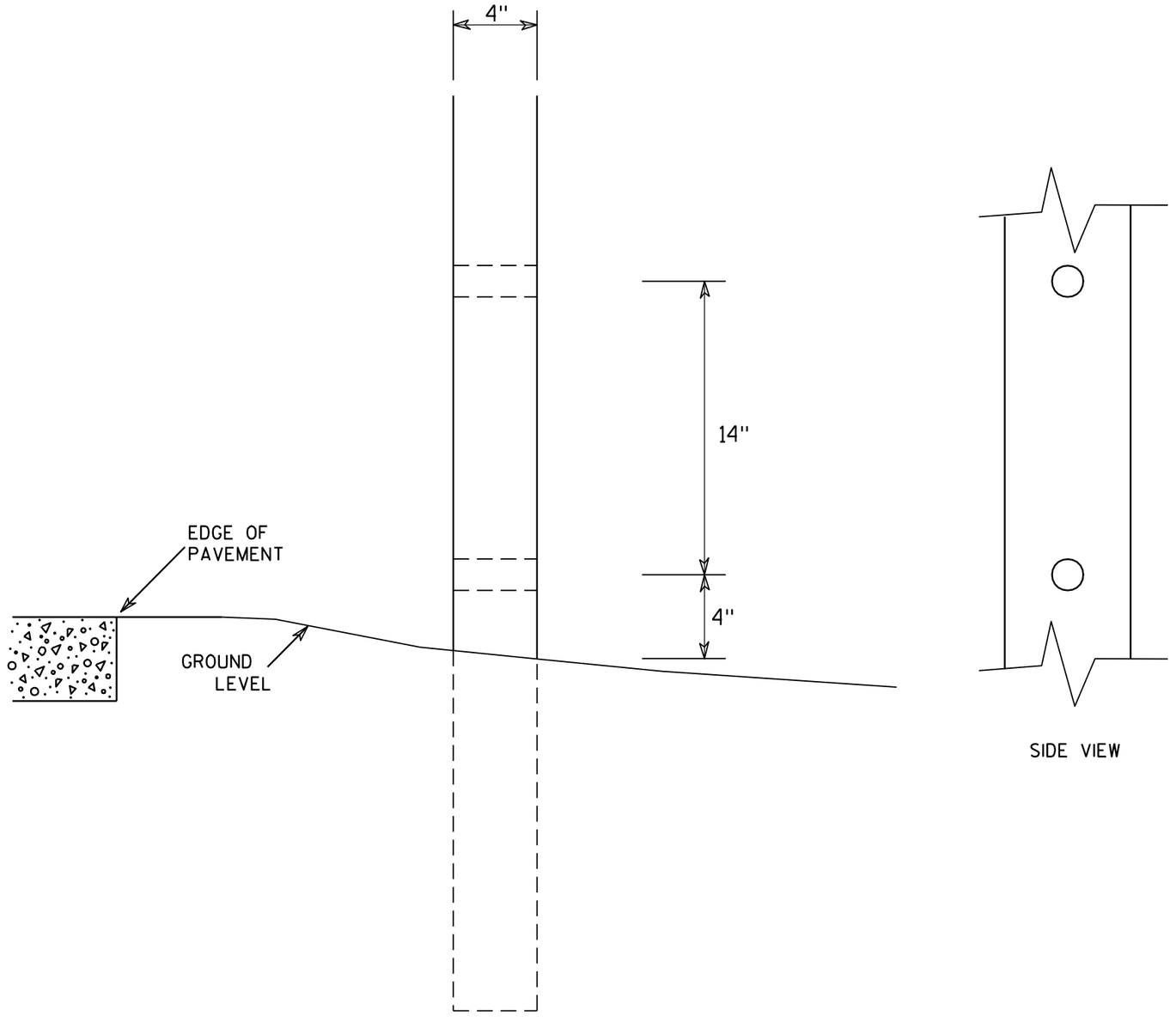
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE A4-9.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

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



SIDE VIEW

GENERAL NOTES

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

7

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4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

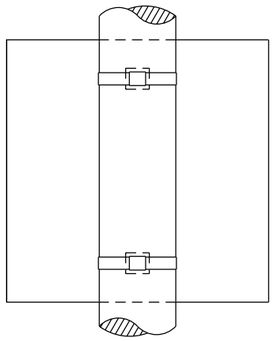
APPROVED Chester J Spang for State Traffic Engineer

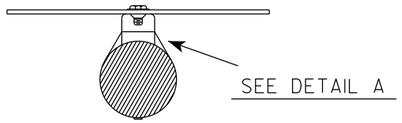
DATE 3/27/97 PLATE NO. A4-11.2

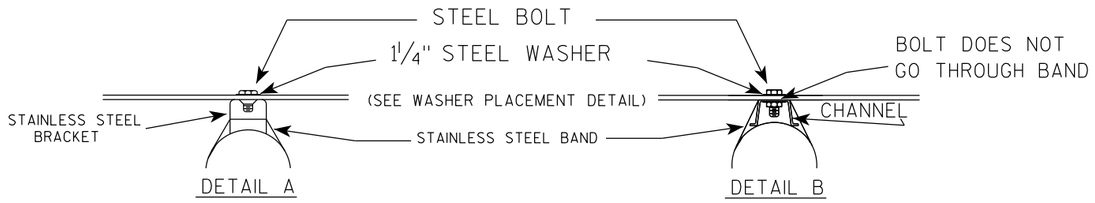
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 152	E

BANDING

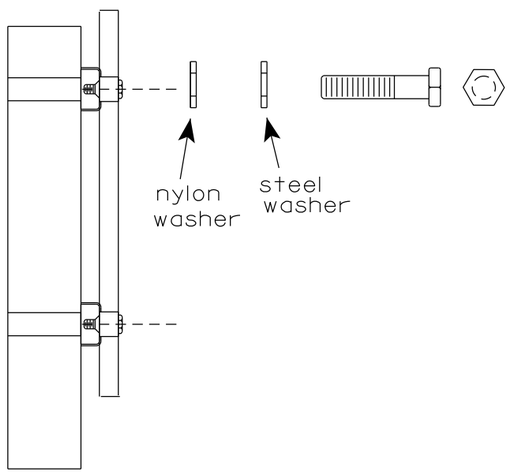
SINGLE SIGN







WASHER PLACEMENT

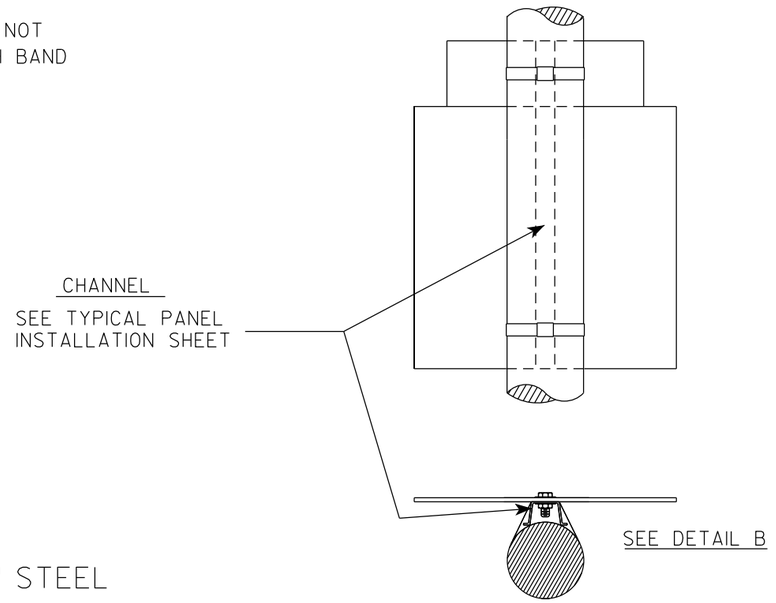


WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

GENERAL NOTES

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

"J" ASSEMBLY



STANDARD SIGN
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

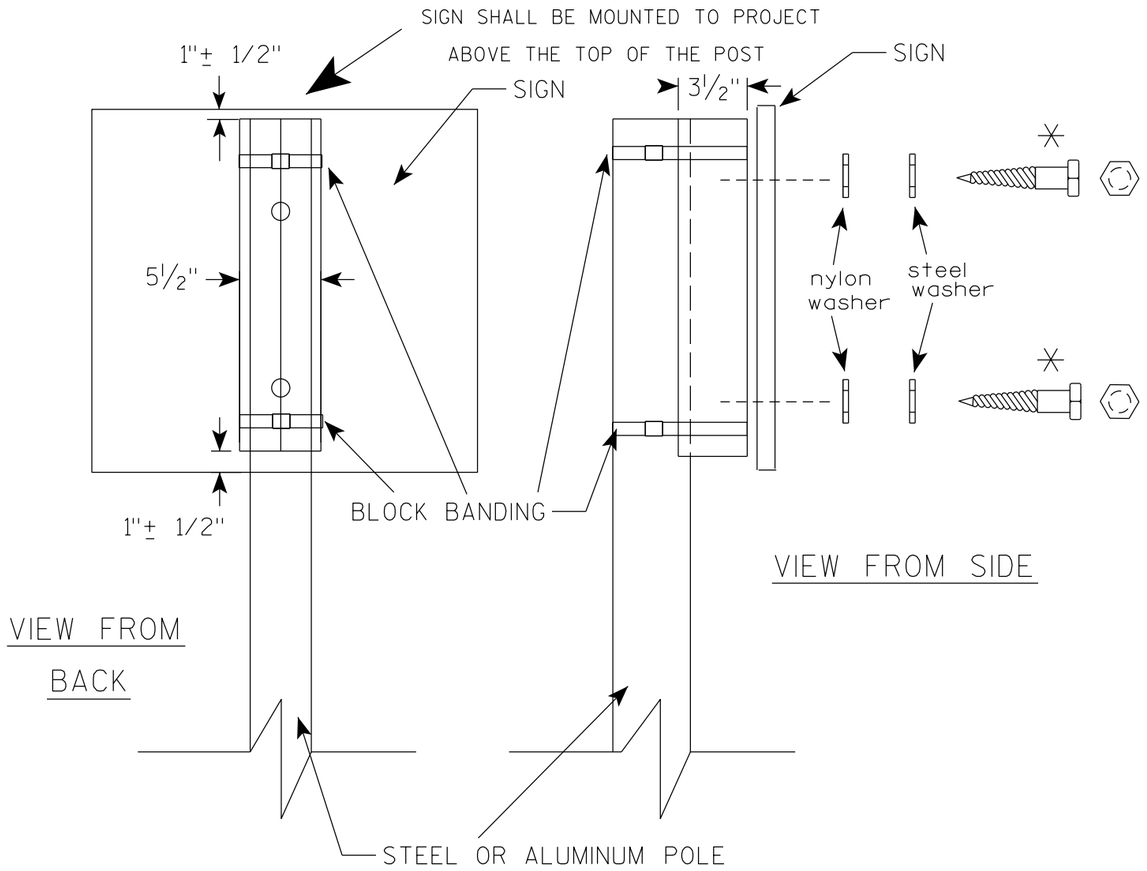
DATE 6/10/19 PLATE NO. A5-9.4

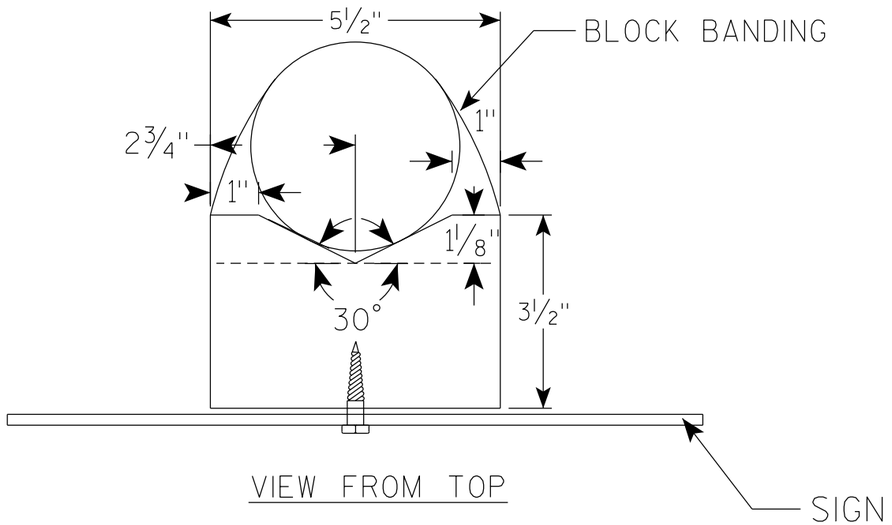
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 153	E

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

7

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GENERAL NOTES

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

✳ LAG BOLTS SHALL BE ⅜" X 2½"

BLOCK BANDING DETAIL (V-BLOCK OPTION)

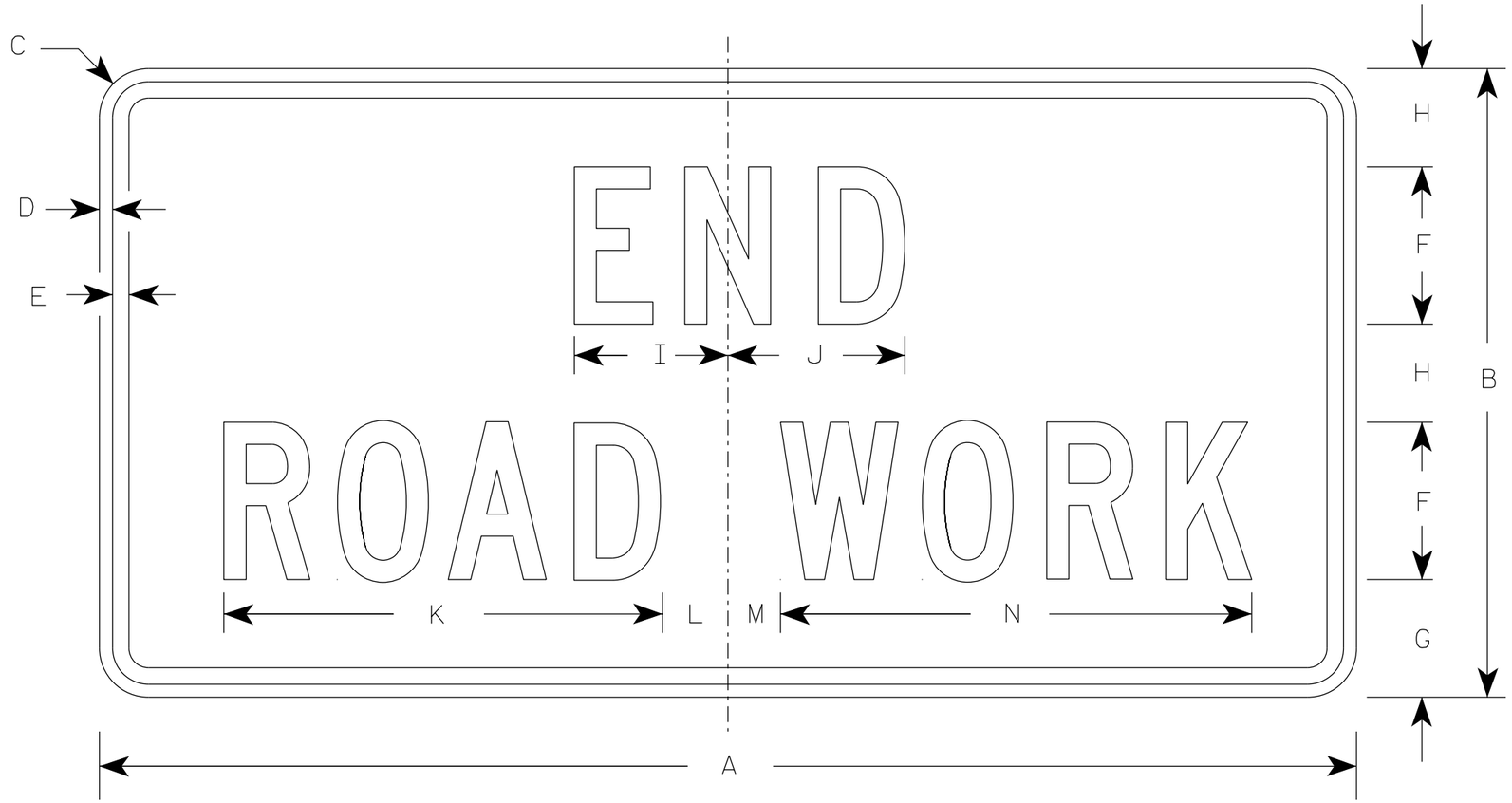
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:

SHEET NO: 154 E



G20-2A

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	18	1 1/2	3/8	1/2	4	3 3/4	2 1/2	4 1/8	4 1/8	11 1/8	2	1	12 1/8													4.5
2	48	24	1 7/8	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0
2M	48	24	1 7/8	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0
3	48	24	1 7/8	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0
4	48	24	1 7/8	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0
5	48	24	1 7/8	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0

STANDARD SIGN

G20-2A

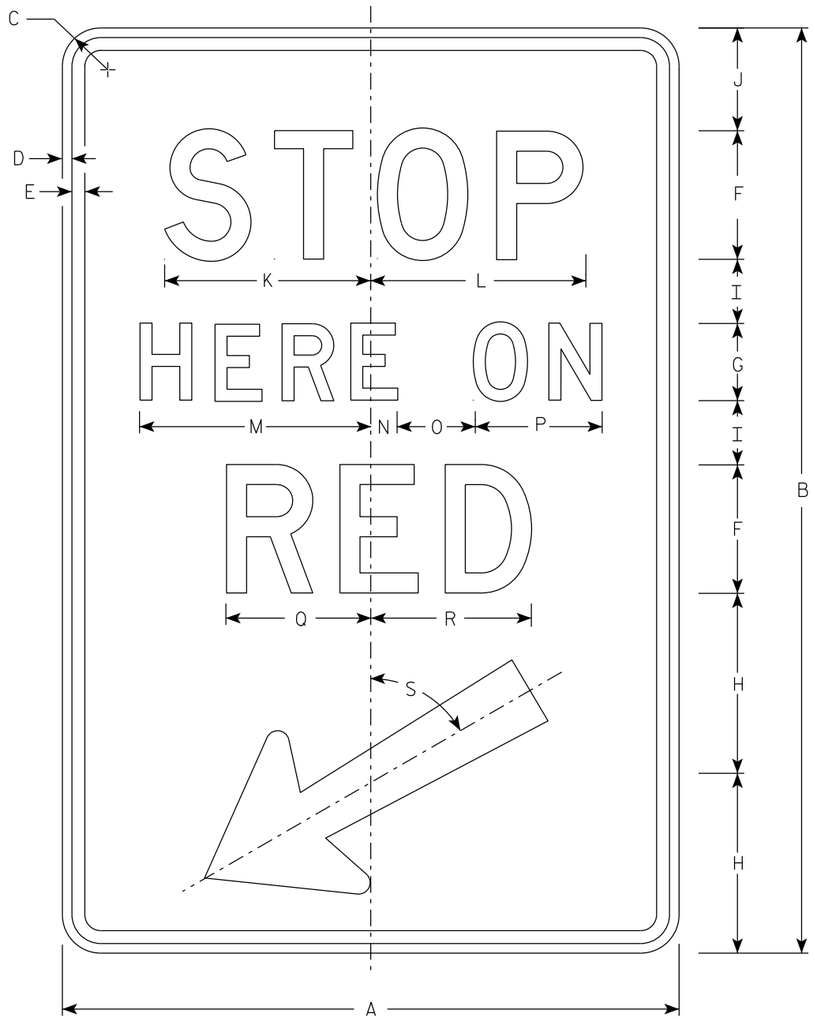
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/26/2023 PLATE NO. G20-2A.10

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

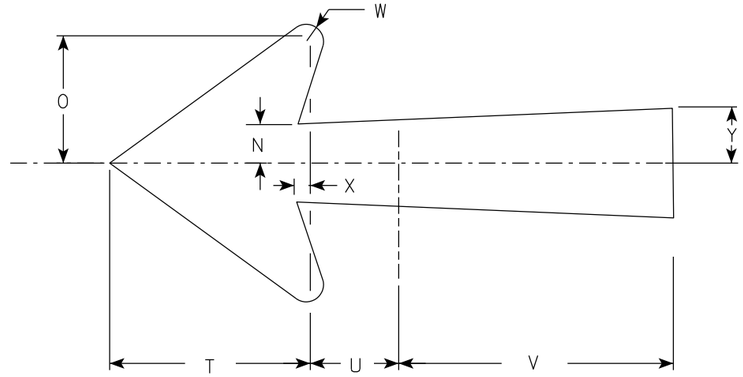
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\G202A.dgn PLOT DATE : 26-JAN 2023 8:27 PLOT BY : dotc4c PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42



R10-6

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D



Arrow Detail

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Areq sq. ft.
1																											
2S	24	36	1 1/2	3/8	1/2	5	3	7	2 1/2	4	8	8 3/8	9	1	3	5	5 5/8	6 1/4	60°	5 1/4	2 1/4	7 1/8	1/2	3/8	1 3/8		6.0
2M	24	36	1 1/2	3/8	1/2	5	3	7	2 1/2	4	8	8 3/8	9	1	3	5	5 5/8	6 1/4	60°	5 1/4	2 1/4	7 1/8	1/2	3/8	1 3/8		6.0
3																											
4																											
5																											

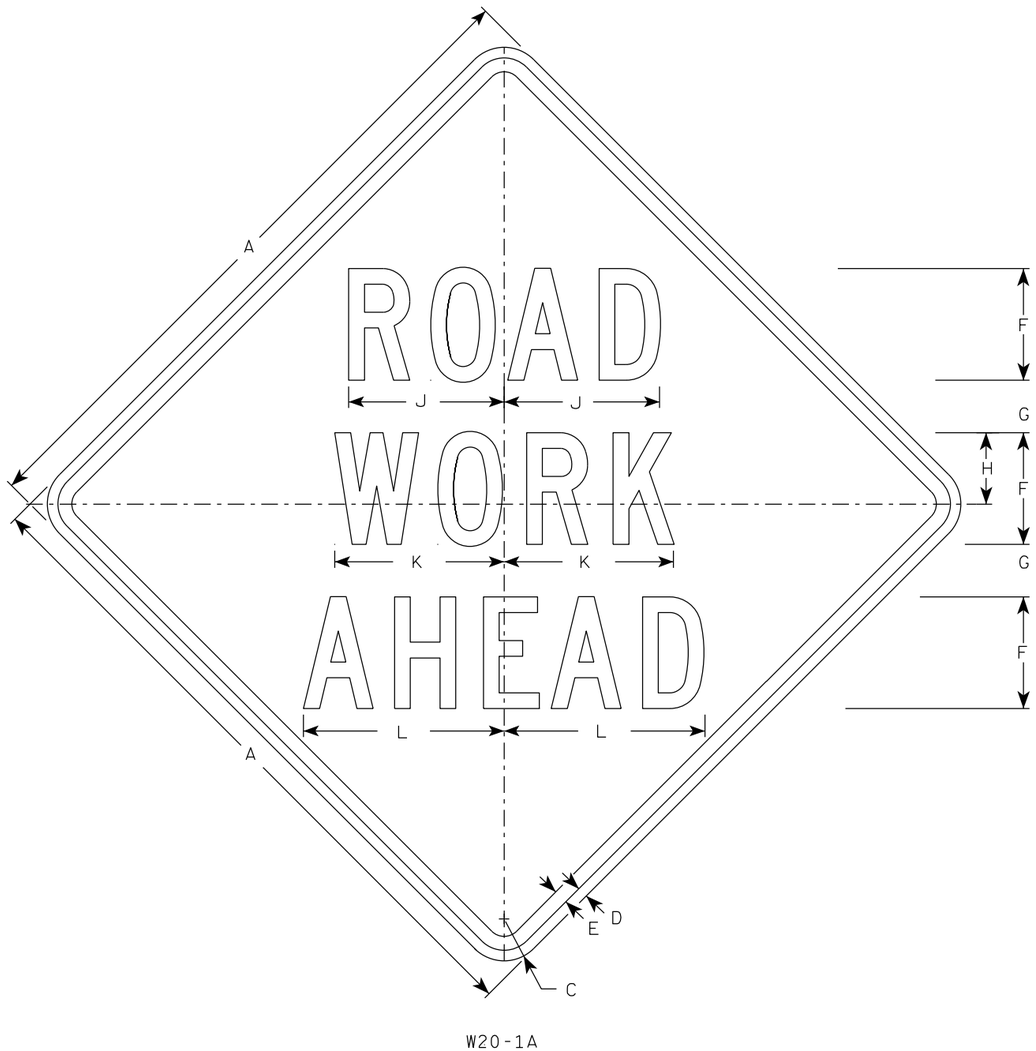
STANDARD SIGN
R10-6

WISCONSIN DEPT OF TRANSPORTATION

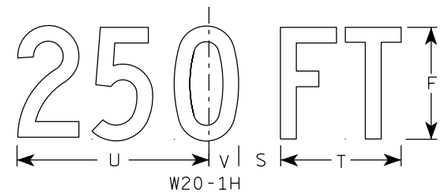
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/25/24 PLATE NO. R10-6.7

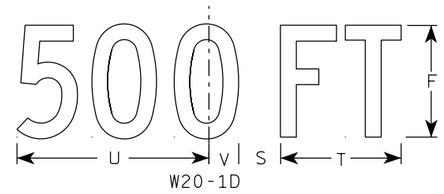
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 156	E



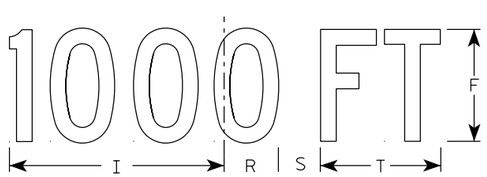
W20-1A



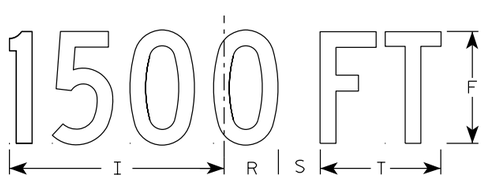
W20-1H



W20-1D



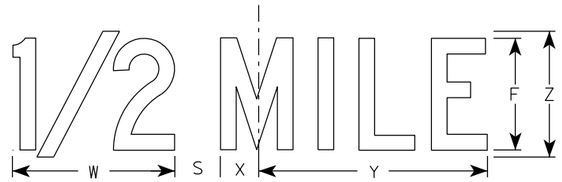
W20-1C



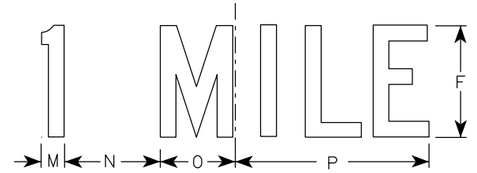
W20-1B

NOTES

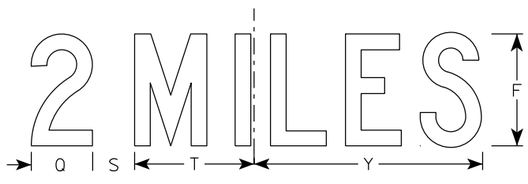
1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



W20-1G



W20-1F



W20-1E

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	36		2 1/4	5/8	3/4	5	2 5/8	3 1/4	10 1/8	7	7 5/8	8 7/8	1 1/8	4 1/2	3 1/2	9	3 1/4	2 1/2	2 1/4	5 5/8	9	1 3/8	8	1 3/4	10 3/4	6	9.0
2S	48		3	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
2M	48		3	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
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4	48		3	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
5	48		3	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0

STANDARD SIGN
W20-1A, B, C, D, E, F, G & H

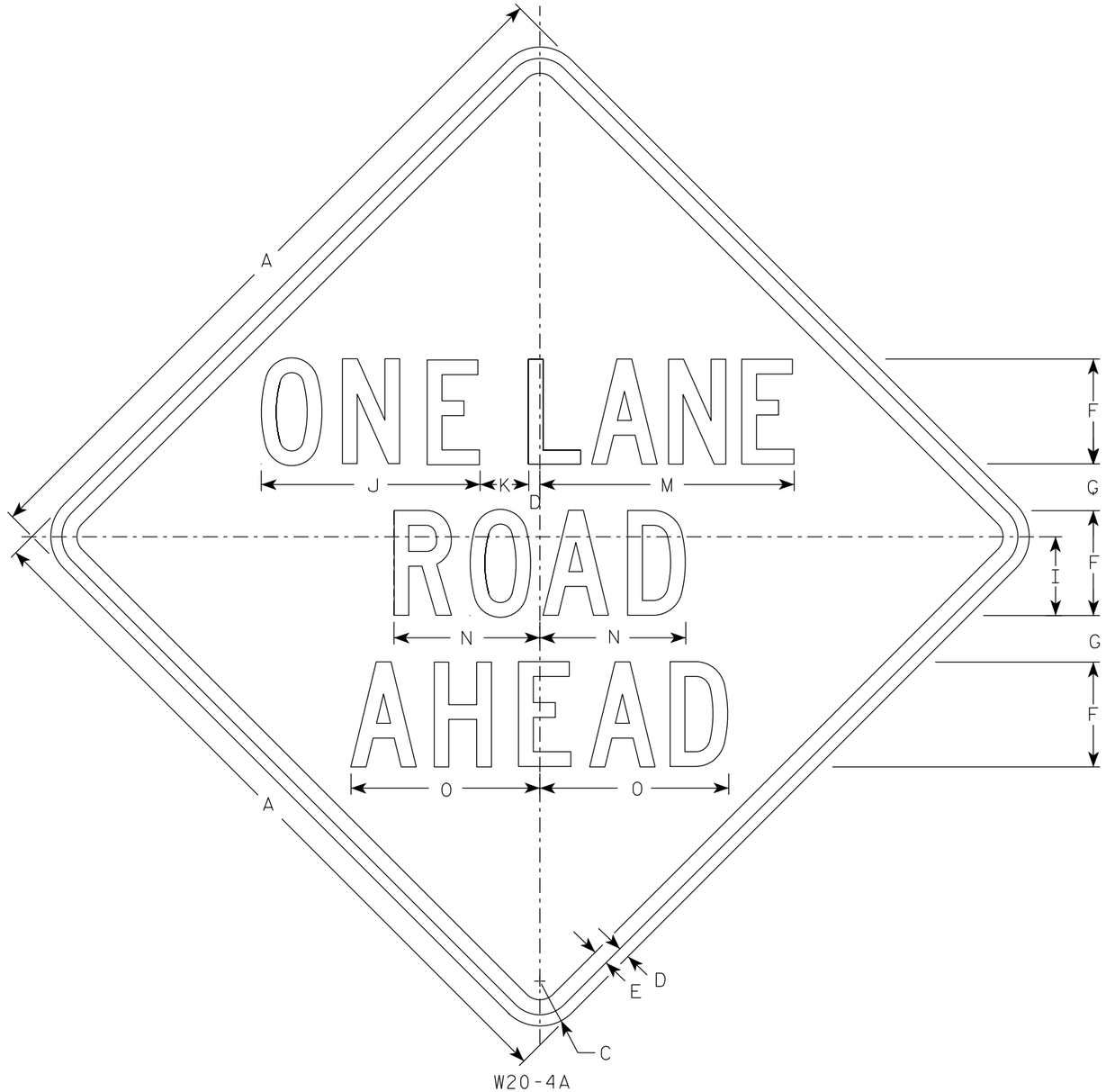
WISCONSIN DEPT OF TRANSPORTATION

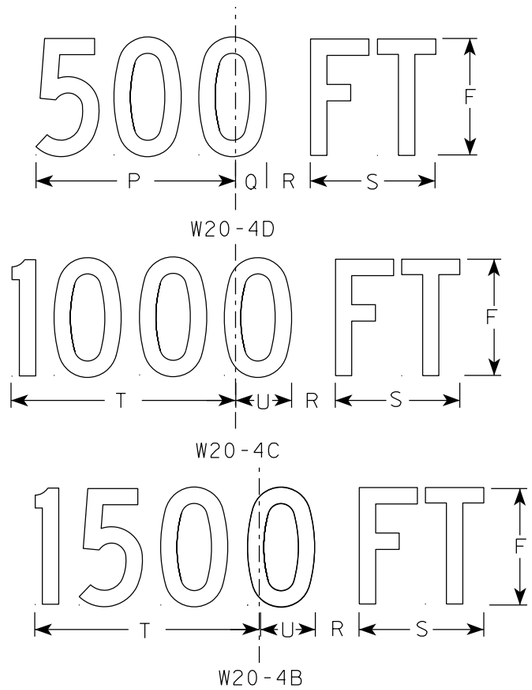
APPROVED Matthew R Rauch
for State Traffic Engineer

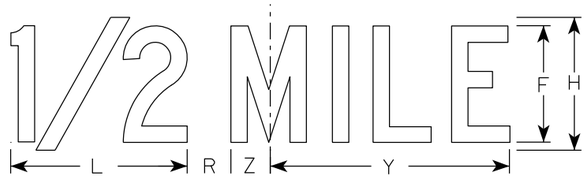
DATE 1/10/2024 PLATE NO. W20-1.12

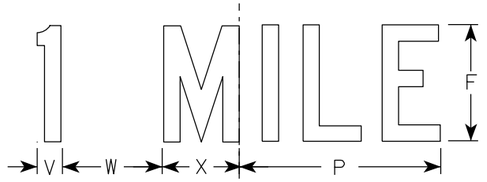
PROJECT NO:

SHEET NO: 157 E









NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		2 1/4	5/8	3/4	5	2 3/8	6	3 3/4	10 3/8	2 3/8	8	13 1/2	7	8 7/8	9	1 3/8	1 7/8	5 5/8	10 1/8	2 1/2	1 1/8	4 1/2	3 1/2	10 3/4	1 3/4	9.0
2S	48		3	3/4	1	7	3 1/8	8	5 1/4	14 5/8	3 1/4	10 5/8	17 3/4	9 3/4	12 5/8	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	14 3/8	2 3/8	16.0
2M	48		3	3/4	1	7	3 1/8	8	5 1/4	14 5/8	3 1/4	10 5/8	17 3/4	9 3/4	12 5/8	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	14 3/8	2 3/8	16.0
3	48		3	3/4	1	7	3 1/8	8	5 1/4	14 5/8	3 1/4	10 5/8	17 3/4	9 3/4	12 5/8	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	14 3/8	2 3/8	16.0
4	48		3	3/4	1	7	3 1/8	8	5 1/4	14 5/8	3 1/4	10 5/8	17 3/4	9 3/4	12 5/8	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	14 3/8	2 3/8	16.0
5	48		3	3/4	1	7	3 1/8	8	5 1/4	14 5/8	3 1/4	10 5/8	17 3/4	9 3/4	12 5/8	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	14 3/8	2 3/8	16.0

STANDARD SIGN
W20-4A, B, C, D, F & G

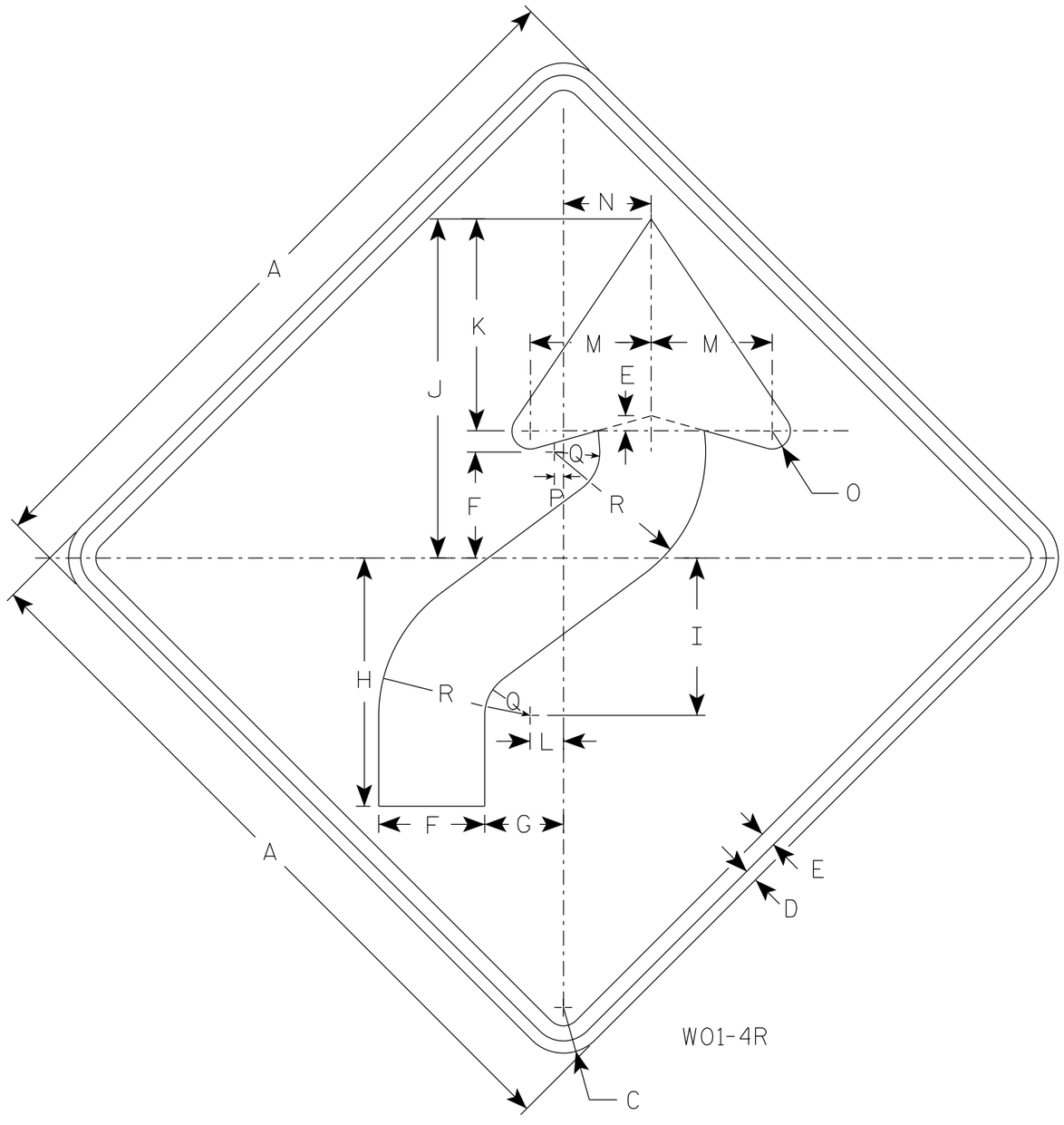
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/10/2024 PLATE NO. W20-4.10

PROJECT NO:

SHEET NO: 158 E



W01-4R

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W01-4L is the same as W01-4R except the arrow is reversed along the vertical centerline.

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	36		2 1/4	5/8	3/4	5 1/4	4	12 3/8	7 7/8	16 7/8	10 1/2	1 5/8	6	4 1/2	1	1/2	2 1/4	7 1/2									9.0
2S	48		3	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
2M	48		3	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
3	48		3	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
4	48		3	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
5	48		3	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0

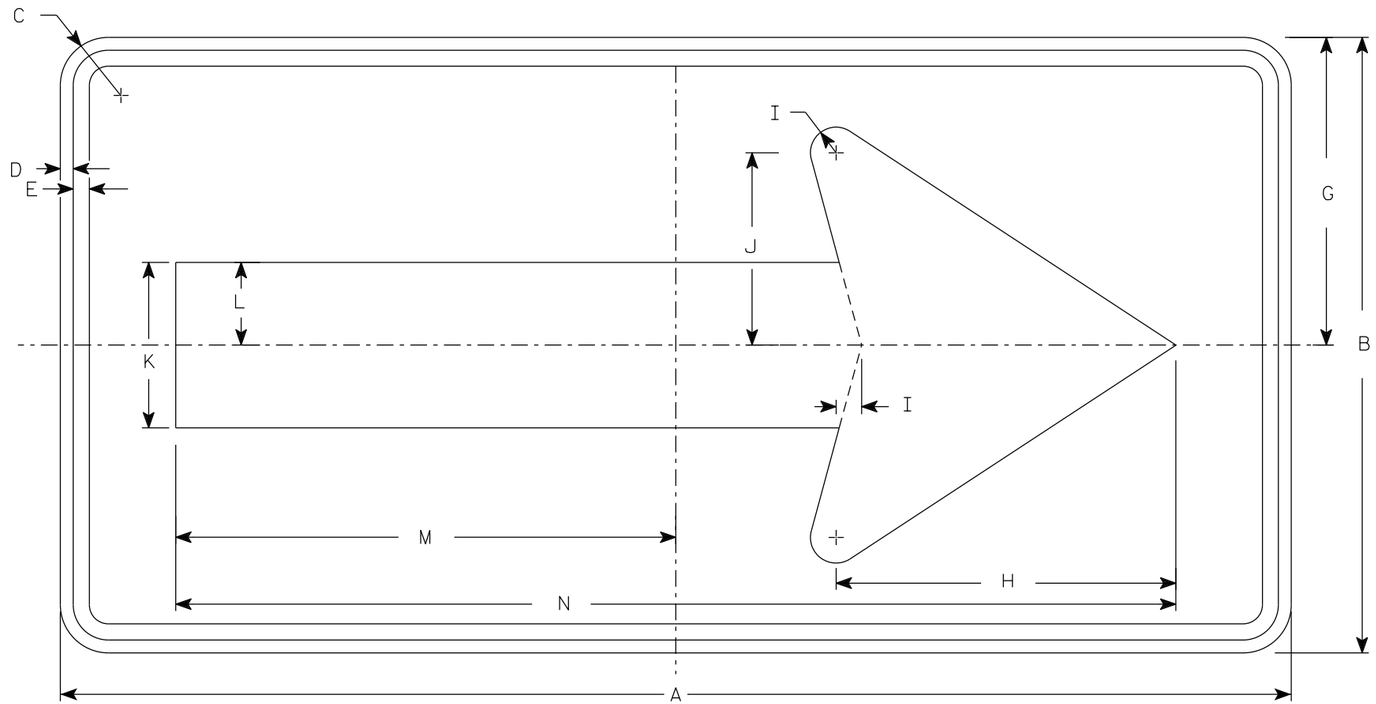
STANDARD SIGN
W01-4

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 1/24/2024 PLATE NO. W01-4.2

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 159 | E



WO1-6

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	24	1 7/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
2M	48	24	1 7/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
3	60	30	1 7/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
4	60	30	1 7/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
5	60	30	1 7/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5

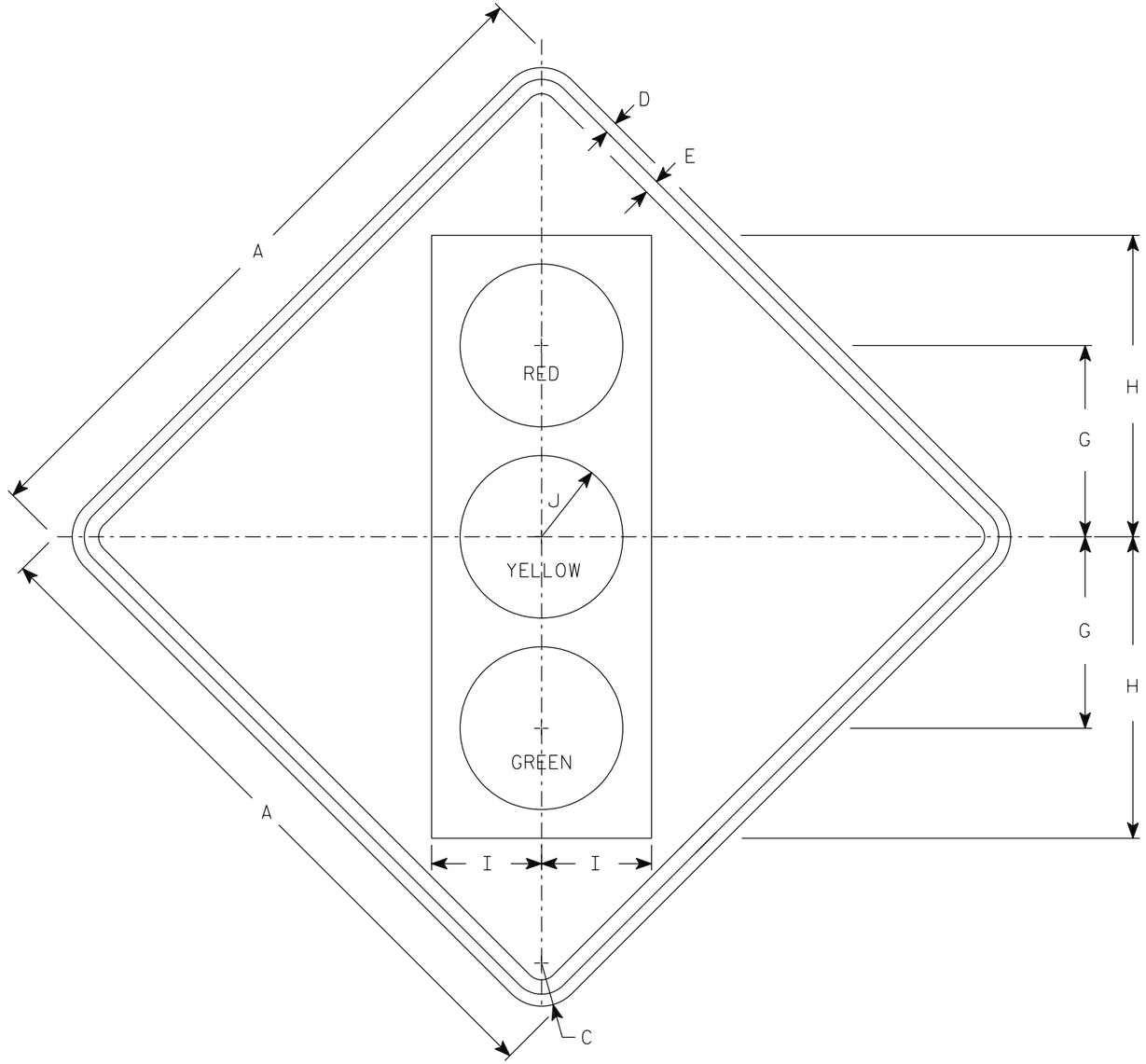
STANDARD SIGN
WO1-6

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/24/2024 PLATE NO. WO1-6.2

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



W03-3

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - See Note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Symbol and border are non-reflective black.
   Top circle - Type H Reflectorized Red
   Center circle - Same as background
   Bottom circle - Type H Reflectorized Green

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	36		2 1/4	5/8	3/4		10	15 3/4	5 3/4	4 1/4																	9.0
2S	48		3	3/4	1		12 1/2	20	7 1/2	5																	16.0
2M	48		3	3/4	1		12 1/2	20	7 1/2	5																	16.0
3	48		3	3/4	1		12 1/2	20	7 1/2	5																	16.0
4	48		3	3/4	1		12 1/2	20	7 1/2	5																	16.0
5	48		3	3/4	1		12 1/2	20	7 1/2	5																	16.0

STANDARD SIGN
W03-3

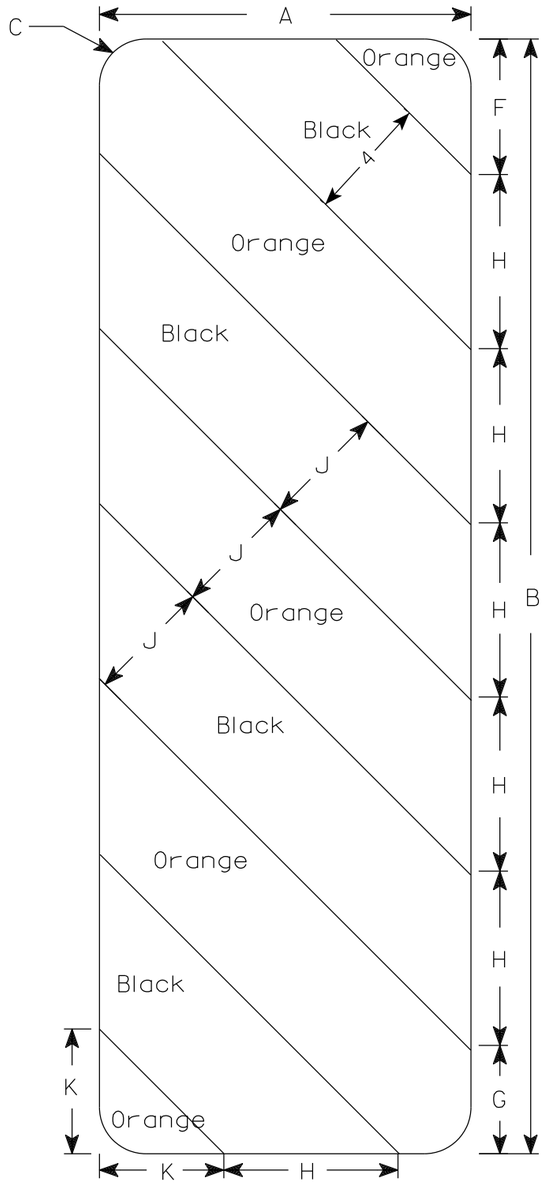
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

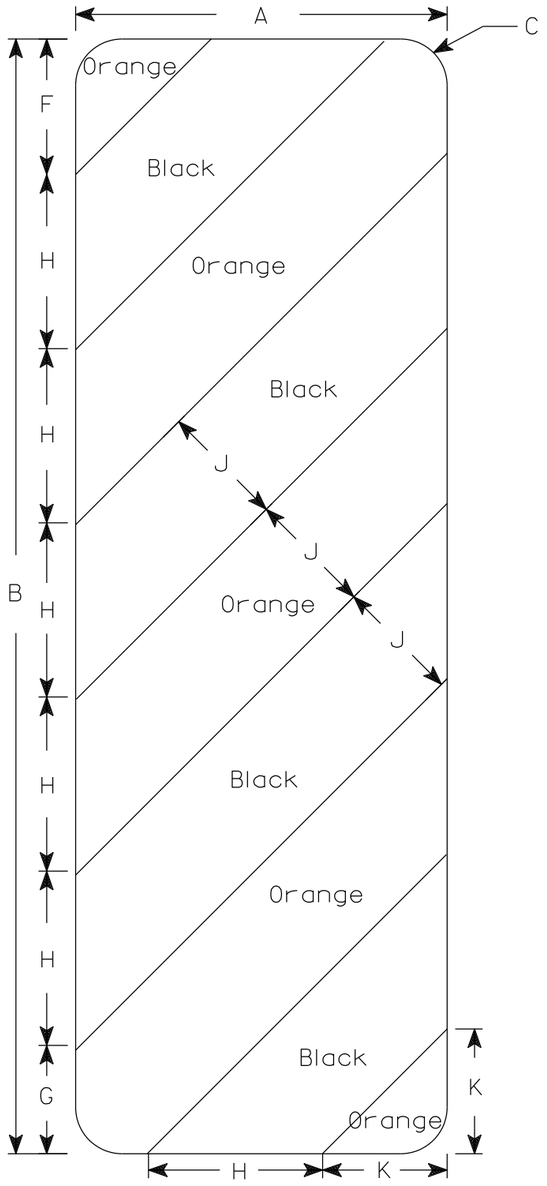
DATE 1/24/2024 PLATE NO. W03-3.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W033.DGN PLOT DATE : 24-JAN 2024 2:07 PLOT BY : dotc4c PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42



W05-52L



W05-52R

NOTES

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

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

STANDARD SIGN

W05-52L & W05-52R

WISCONSIN DEPT OF TRANSPORTATION

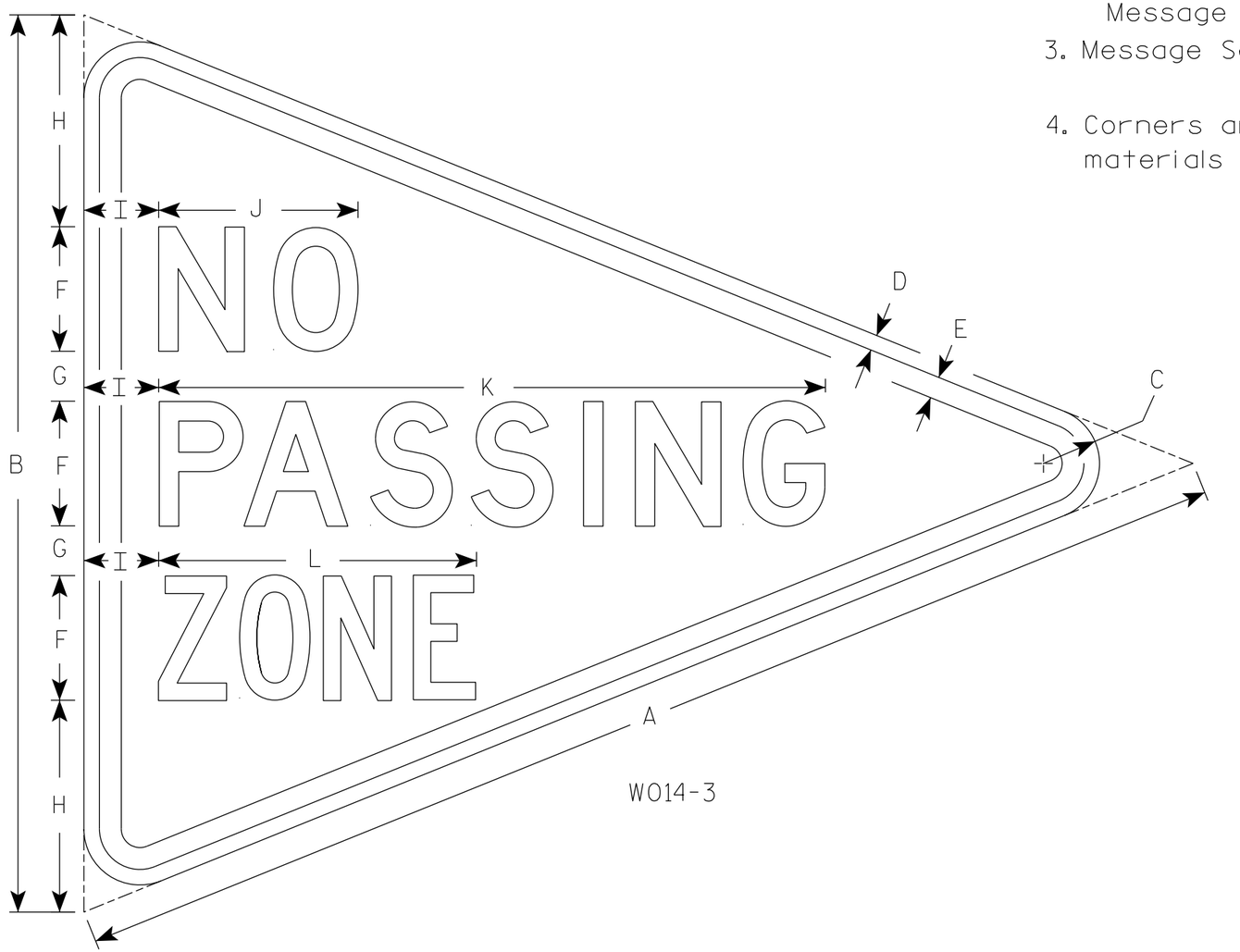
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/13/2024 PLATE NO. W05-52.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 162	E

NOTES

1. Sign is Type II- Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - Lines 1 and 2 are Series D.
   Line 3 is series C.
4. Corners and borders shall be rounded on all base materials for this sign.



W014-3

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	36	2 1/4	5/8	7/8	5	2	8 1/2	3	8	26 3/4	12 3/4															5.56
2M																											
3																											
4																											
5																											

STANDARD SIGN
W014-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/7/21 PLATE NO. W014-3.1

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 163 | E

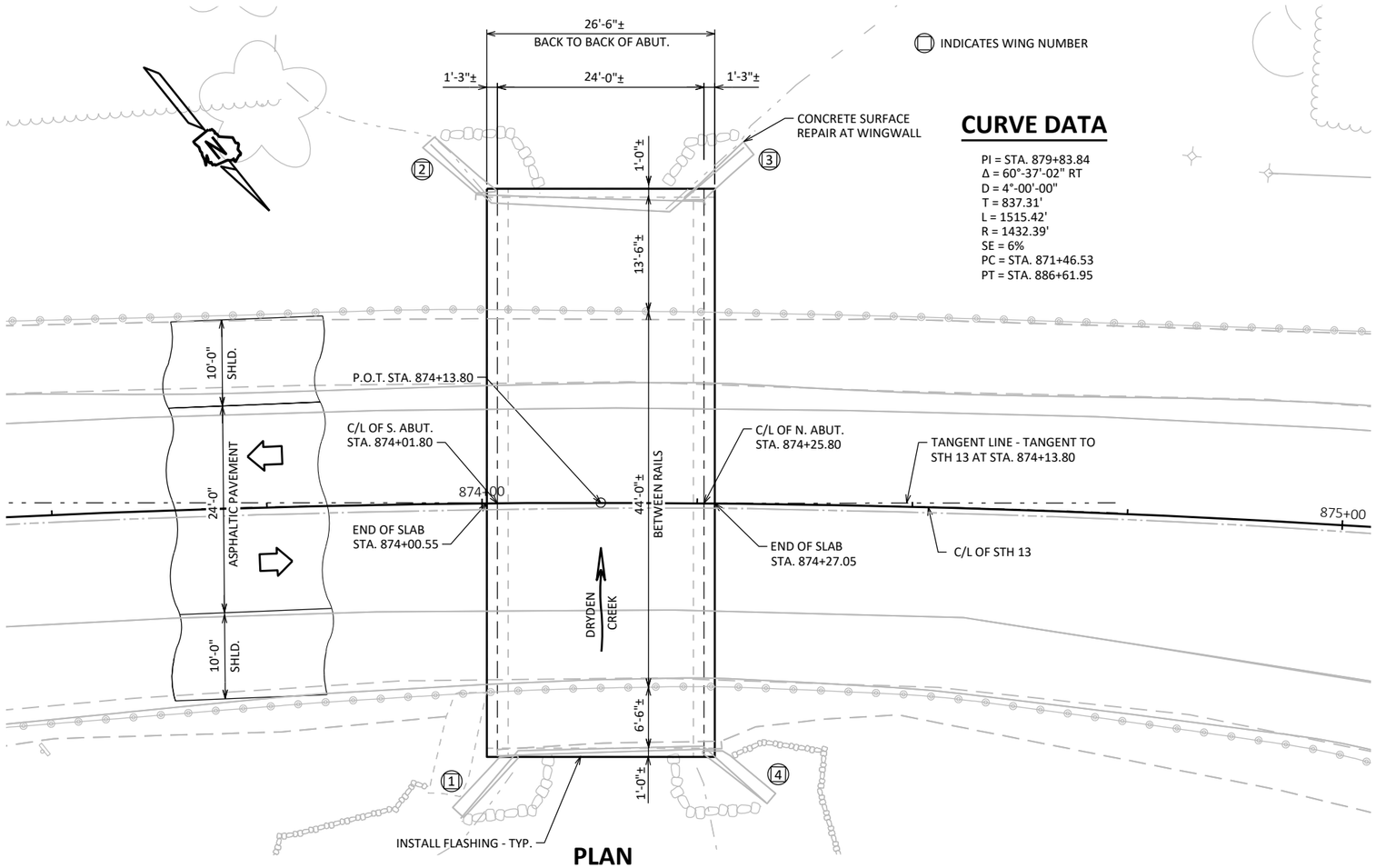
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W0143.dgn PLOT DATE : 7-OCT 2021 10:33 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42

7

7

STATE PROJECT NUMBER

1610-00-81



PLAN

SINGLE-SPAN FLAT SLAB BRIDGE
CONCRETE SURFACE REPAIRS

CURVE DATA

PI = STA. 879+83.84
Δ = 60°-37'-02" RT
D = 4°-00'-00"
T = 837.31'
L = 1515.42'
R = 1432.39'
SE = 6%
PC = STA. 871+46.53
PT = STA. 886+61.95

DESIGN DATA

LIVE LOAD:

DESIGN LOADING:	HS-20	
INVENTORY RATING:	HS = 17	(FROM INSPECTION REPORT)
OPERATING RATING:	HS = 29	

MATERIAL PROPERTIES:

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

TRAFFIC DATA

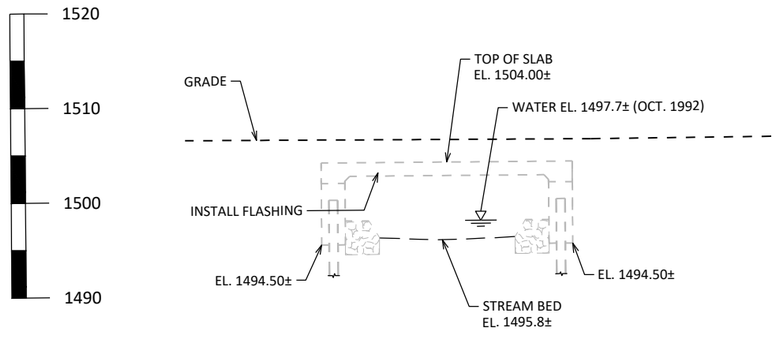
FEATURE ON: STH 13
ADT = 1,200 (2046)
R.D.S. = 60 MPH

LIST OF DRAWINGS:

1. GENERAL PLAN
2. TYPICAL SECTION, QUANTITIES AND NOTES

SCOPE OF WORK

1. CONCRETE SURFACE REPAIR AT WING 3
2. CONCRETE SURFACE REPAIR AT ENDS OF DECK
3. INSTALL EDGE OF DECK FLASHING



ELEVATION

WISCONSIN
ARLEN E. BEAUDETTE
E-36829
EAU CLAIRE
WI
PROFESSIONAL ENGINEER

06/02/2025

STRUCTURE DESIGN CONTACTS:

AARON BONK	608-261-0261
ARLEN BEAUDETTE	715-834-3161

NO.	DATE	REVISION	BY

ORIGINAL PLANS PREPARED BY
AYRES 3433 Oakwood Hills Parkway Eau Claire, WI 54701 www.AyresAssociates.com

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED JLR 08/04/25
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-2-46

STH 13 OVER DRYDEN CREEK

COUNTY	TOWN
ASHLAND	GORDON

DESIGN SPEC.
REHABILITATION N/A

DESIGNED BY	DESIGNED CK'D	DRAWN BY	PLANS CK'D
DRS	AEB	CLP	AEB

GENERAL PLAN

SHEET 1 OF 2
164

I.D.

DATE:

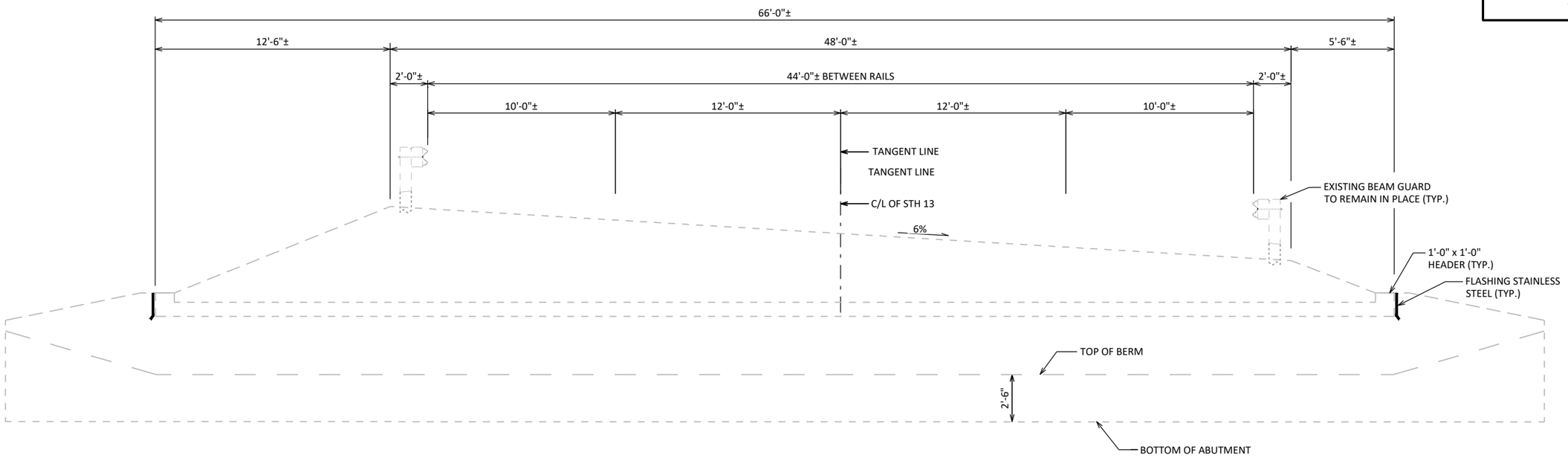
SCALE =

8

8

STATE PROJECT NUMBER

1610-00-81



CROSS SECTION THRU ROADWAY

LOOKING UPSTATION

GENERAL NOTES

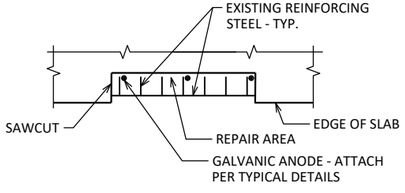
DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

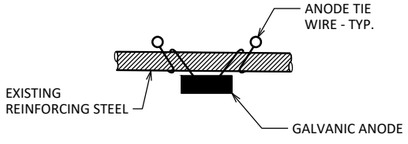
TOTAL ESTIMATED QUANTITIES

	BID ITEM NUMBER	BID ITEMS	UNIT	TOTALS
⚹	509.1500	CONCRETE SURFACE REPAIR	SF	50
	SPV.0060.01	EMBEDDED GALVANIC ANODES	EACH	22
	SPV.0090.01	FLASHING STAINLESS STEEL	LF	53

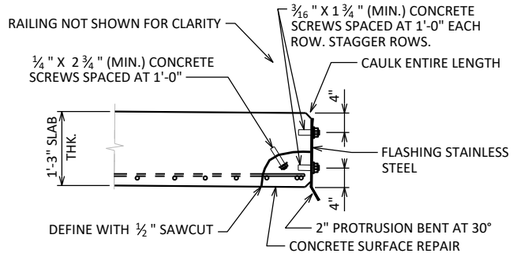
⚹ UNDISTRIBUTED FOR ABUTMENTS AND EDGE OF SLAB AS DIRECTED BY THE ENGINEER.



PART. PLAN TYPICAL REPAIR DETAIL



TYPICAL INSTALLATION FOR BAR STEEL



REHABILITATION FLASHING DETAIL

THE BID ITEM "FLASHING STAINLESS STEEL" SHALL INCLUDE PROVIDING AND INSTALLING THE STAINLESS STEEL FLASHING, CAULK, 3/16 " AND 1/4 " CONCRETE SCREWS, AND CLEANING THE EDGE OF THE DECK PRIOR TO ATTACHMENT OF THE FLASHING.

NOTES

SURFACE REPAIR AREAS WITH CATHODIC PROTECTION ARE BASED ON THE PLANS AND AS DETERMINED BY THE ENGINEER. THE PLAN QUANTITY FOR THE BID ITEM "EMBEDDED GALVANIC ANODES" IS BASED ON A MAXIMUM SPACING OF 24-INCHES AROUND THE SURFACE REPAIR PERIMETER. THE ACTUAL QUANTITY SHALL BE BASED ON THE FIELD CONDITIONS AND AS RECOMMENDED BY THE GALVANIC ANODE SUPPLIER.

SURFACE REPAIRS SHALL BE FILLED WITH REPAIR MATERIALS COMPATIBLE WITH CATHODIC PROTECTION, AS RECOMMENCED BY THE ANODE SUPPLIER.

EXISTING REINFORCING STEEL TO BE COMPLETELY CLEANED OF CORRODED MATERIAL AND CONCRETE TO PROVIDE SUFFICIENT ELECTRICAL CONNECTION AND BOND. CATHODIC PROTECTION PREPARATION ARE INCLUDED IN THE BID ITEM "EMBEDDED GALVANIC ANODES".

ANODES NEAREST TO EDGE OF REPAIR TO BE WITHIN 6" OF EDGE.

AFTER PLACEMENT, GALVANIC ANODES SHOULD MAINTAIN A MINIMUM TOP COVER OF 1 1/2" AND A MINIMUM BOTTOM COVER OF 3/4".

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-2-46

DRAWN BY CLP | PLANS CK'D AEB

TYPICAL SECTION, QUANTITIES AND NOTES

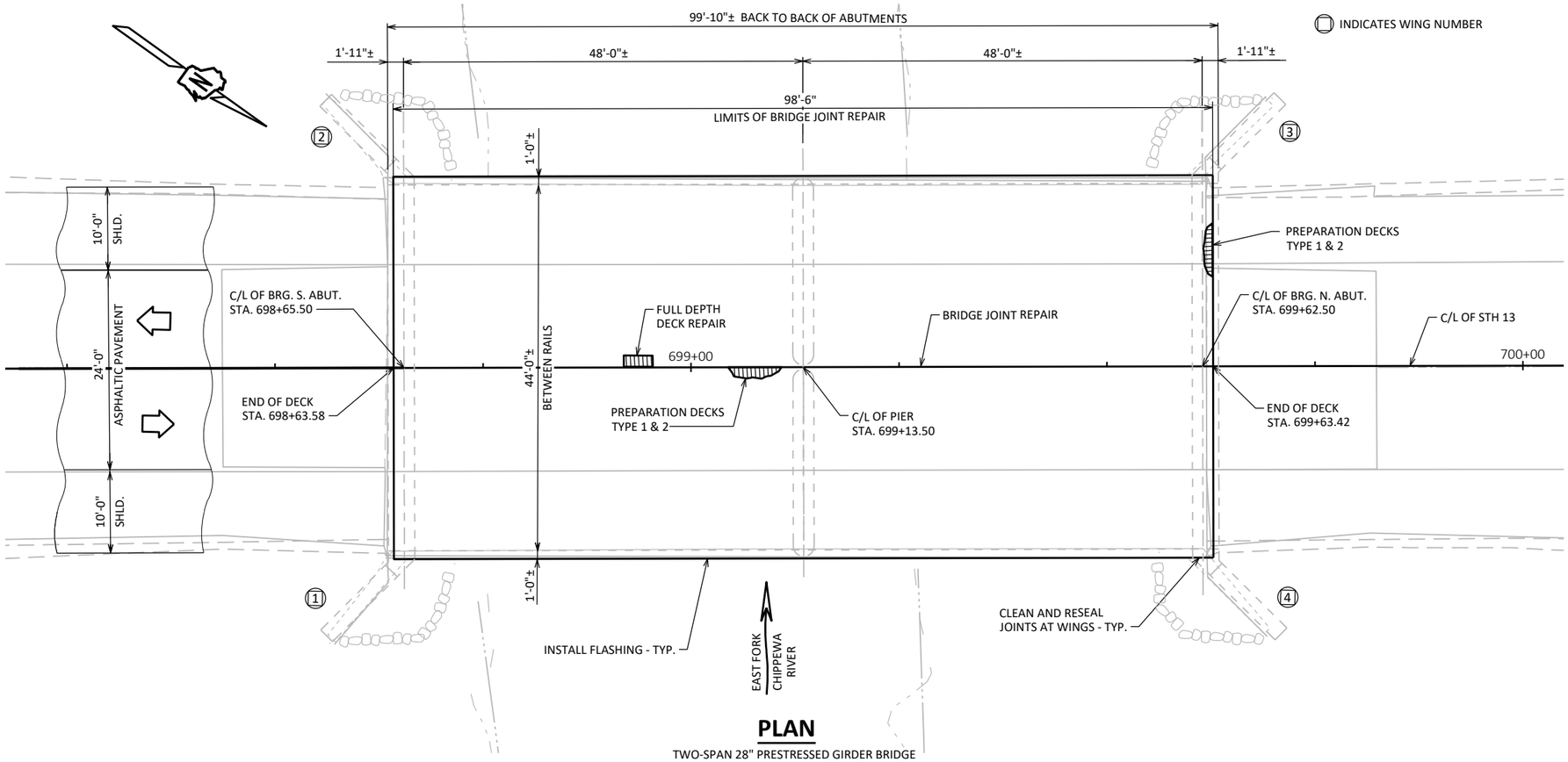
SHEET 2 OF 2

165

SCALE =

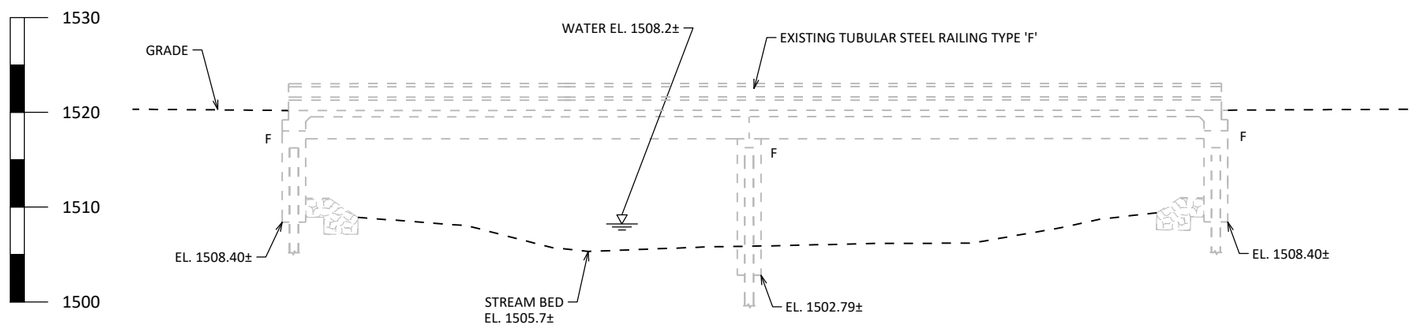
STATE PROJECT NUMBER

1610-00-81



PLAN

TWO-SPAN 28" PRESTRESSED GIRDER BRIDGE
BRIDGE DECK PATCHING



ELEVATION

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HS-20
INVENTORY RATING: HS = HS-36 (FROM INSPECTION REPORT)
OPERATING RATING: HS = HS-60

MATERIAL PROPERTIES:

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

TRAFFIC DATA

FEATURE ON: STH 13
ADT = 1,200 (2046)
R.D.S. = 60 MPH

LIST OF DRAWINGS:

1. GENERAL PLAN
2. TYPICAL SECTION, QUANTITIES AND NOTES

SCOPE OF WORK

1. LONGITUDINAL BRIDGE JOINT REPAIR
2. CLEAN AND RESEAL JOINTS BETWEEN WING AND DECK/ABUTMENTS
3. CONCRETE SURFACE REPAIR AT ENDS OF DECK
4. INSTALL EDGE OF DECK FLASHING

WISCONSIN
ARLEN E. BEAUDETTE
E-36829
EAU CLAIRE
WI
PROFESSIONAL ENGINEER

07/31/2025

STRUCTURE DESIGN CONTACTS:

AARON BONK	608-261-0261
ARLEN BEAUDETTE	715-834-3161

NO.	DATE	REVISION	BY

ORIGINAL PLANS PREPARED BY

AYRES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORATION

ACCEPTED JJ:R 08/04/25
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-2-47

STH 13 OVER EAST FORK CHIPPEWA RIVER

COUNTY	TOWN
ASHLAND	JACOBS

DESIGN SPEC.
REHABILITATION N/A

DESIGNED BY	DESIGNED CK'D	DRAWN BY	PLANS CK'D
DRS	AEB	CLP	AEB

GENERAL PLAN

SHEET 1 OF 2
166

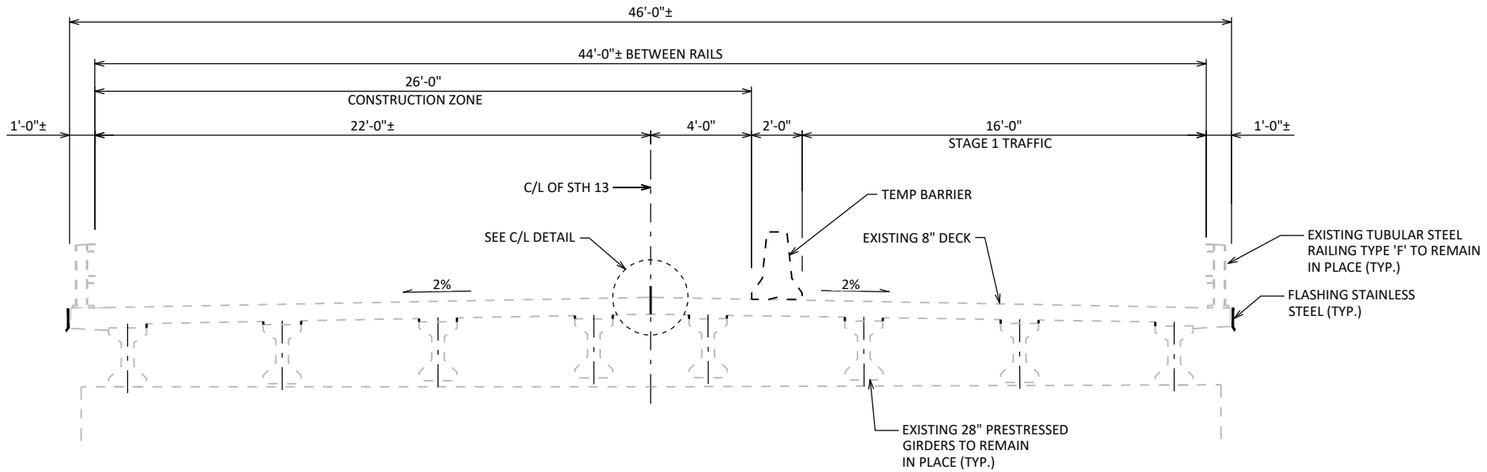
SCALE =

I.D.

DATE:

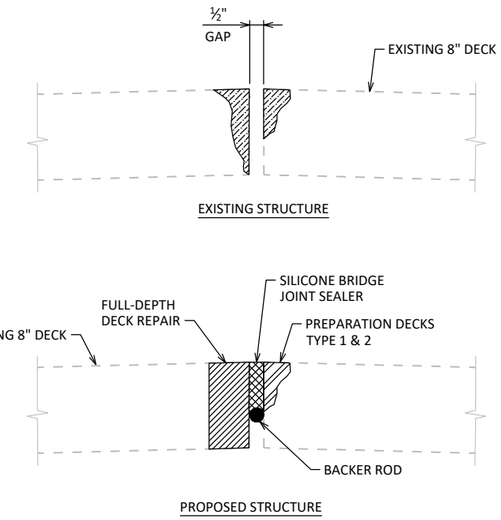
STATE PROJECT NUMBER

1610-00-81



CROSS SECTION THRU ROADWAY

LOOKING UPSTATION



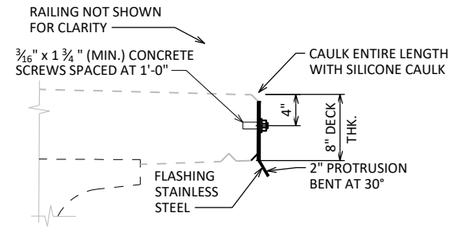
C/L DETAIL

TOTAL ESTIMATED QUANTITIES

	BID ITEM NUMBER	BID ITEMS	UNIT	TOTALS
	509.0301	PREPARATION DECKS TYPE 1	SY	10
	509.0302	PREPARATION DECKS TYPE 2	SY	5
⚹	509.0310.S	SAWING PAVEMENT DECK PREPARATION AREAS	LF	218
	509.1500	CONCRETE SURFACE REPAIR	SF	40
	509.2000	FULL-DEPTH DECK REPAIR	SY	10
⚹	509.2100.S	CONCRETE MASONRY DECK REPAIR	CY	5
	SPV.0090	FLASHING STAINLESS STEEL	LF	187
◭	SPV.0090	BRIDGE JOINT REPAIR	LF	99

⚹ BID ITEM INCLUDES CONCRETE FOR PREPARATION DECKS TYPE 1 & 2 AND FOR FULL-DEPTH DECK REPAIR.

◭ REMOVING AND REPLACEMENT OF MATERIAL AT JOINT PAID FOR UNDER ITEM "BRIDGE JOINT REPAIR".



FLASHING DETAIL FOR NEW BRIDGES WITH OPEN RAILING

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

CONCRETE SCREWS SHALL BE 410 STAINLESS STEEL.

EXTEND FLASHING TO FRONT FACE OF ABUTMENT DIAPHRAGM.

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

THE FLASHING IS TO BE A CONSISTENT HEIGHT BASED ON THE THINNEST DECK DEPTH OVER THE BRIDGE LENGTH.

PROVIDE 2-INCH MINIMUM FLASHING OVERLAP. FASTEN WITH 3/16" x 2" (MIN.) CONCRETE SCREWS.

CAULK SHALL BE NON-STAINING, GRAY NON-BITUMINOUS JOINT SEALER.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

EXISTING FILLER AT JOINT BETWEEN WING AND SUPERSTRUCTURE TO BE CLEANED AND RE-SEALED WITH NON-STAINING, GRAY NON-BITUMINOUS JOINT SEALER, TO BE PAID FOR UNDER ITEM "CONCRETE SURFACE REPAIR".

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-2-47

DRAWN BY CLP | PLANS CK'D AEB

TYPICAL SECTION, QUANTITIES AND NOTES

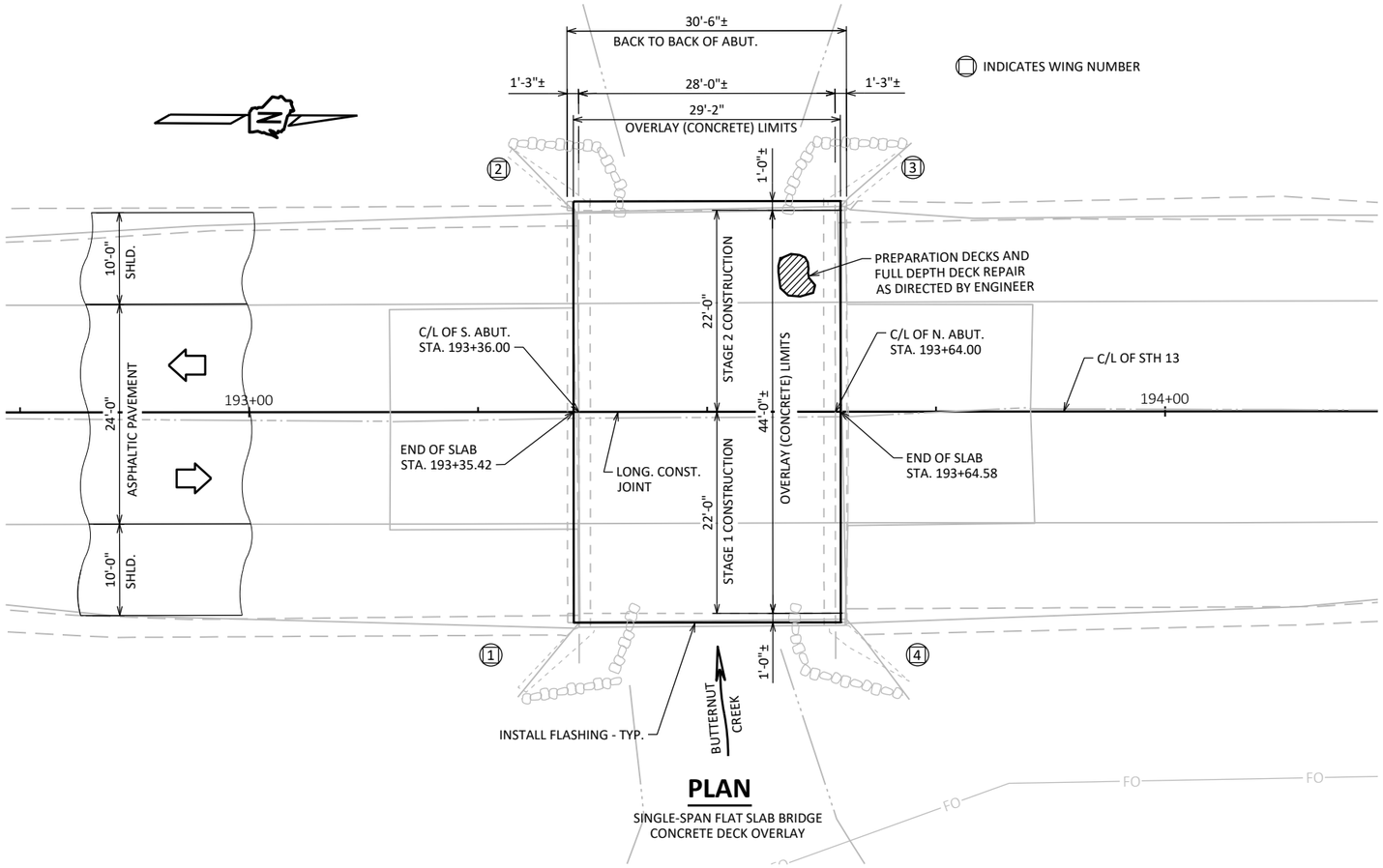
SHEET 2 OF 2

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SCALE =

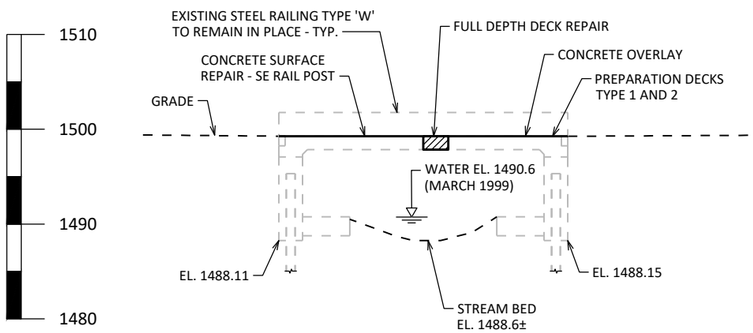
STATE PROJECT NUMBER

1610-00-81



PLAN

SINGLE-SPAN FLAT SLAB BRIDGE
CONCRETE DECK OVERLAY



ELEVATION

(NORMAL TO BUTTERNUT CREEK)

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HS-20
INVENTORY RATING: HS = 22
OPERATING RATING: HS = 38
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV): 200 (KIPS)

MATERIAL PROPERTIES:

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

TRAFFIC DATA

FEATURE ON: STH 13
ADT = 2,230 (2046)
RDS = 55 MPH

LIST OF DRAWINGS:

1. GENERAL PLAN
2. TYPICAL SECTION, QUANTITIES AND NOTES

SCOPE OF WORK

1. PLACE CONCRETE OVERLAY
2. CONCRETE SURFACE REPAIR AT SE RAIL POST
3. INSTALL EDGE OF DECK FLASHING
4. REPLACE APPROACH SLABS - SEE ROAD PLANS

WISCONSIN
ARLEN E. BEAUDETTE
E-36829
EAU CLAIRE
PROFESSIONAL ENGINEER

07/31/2025

STRUCTURE DESIGN CONTACTS:

AARON BONK	608-261-0261
ARLEN BEAUDETTE	715-834-3161

NO.	DATE	REVISION	BY

ORIGINAL PLANS PREPARED BY
AYRES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORATION

ACCEPTED JLR 08/04/25
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-2-57

STH 13 OVER BUTTERNUT CREEK

COUNTY	VILLAGE
ASHLAND	BUTTERNUT

DESIGN SPEC.
REHABILITATION N/A

DESIGNED BY	DESIGNED CK'D	DRAWN BY	PLANS CK'D
NBE	AEB	CLP	AEB

GENERAL PLAN

SHEET 1 OF 2
168

SCALE =

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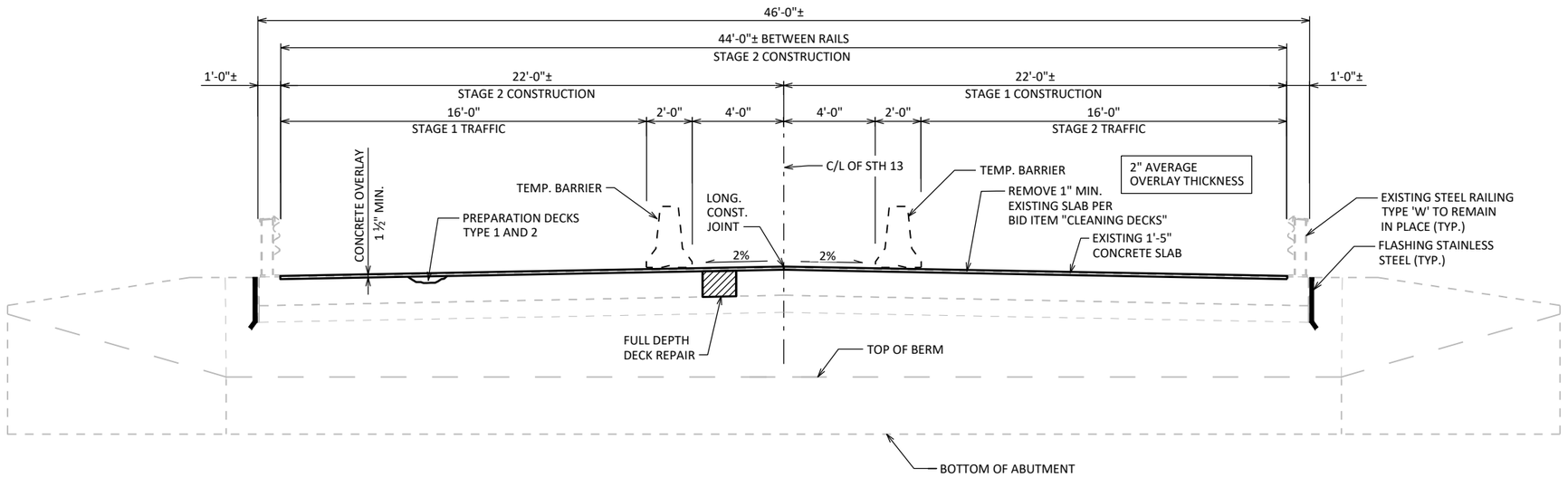
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STATE PROJECT NUMBER

1610-00-81



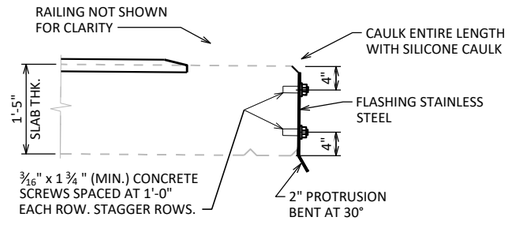
CROSS SECTION THRU ROADWAY

LOOKING UPSTATION
(PILING NOT SHOWN FOR CLARITY)

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	TOTALS
502.3200	PROTECTIVE SURFACE TREATMENT	SY	143
509.0301	PREPARATION DECKS TYPE 1	SY	10
509.0302	PREPARATION DECKS TYPE 2	SY	4
509.0500	CLEANING DECKS	SY	143
◐ 509.1500	CONCRETE SURFACE REPAIR	SF	5
509.2000	FULL DEPTH DECK REPAIR	SY	1
509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	8
SPV.0090	FLASHING STAINLESS STEEL	LF	51

◐ UNDISTRIBUTED FOR SUPERSTRUCTURE AS DIRECTED BY ENGINEER IN THE FIELD.



FLASHING DETAIL

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

FLASHING TO BE INSTALLED AFTER PROTECTIVE SURFACE TREATMENT APPLICATION.

CONCRETE SCREWS SHALL BE 410 STAINLESS STEEL.

EXTEND FLASHING TO FRONT FACE OF ABUTMENT DIAPHRAGM.

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

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

PROVIDE 2-INCH MINIMUM FLASHING OVERLAP. FASTEN WITH 3/16" x 2" (MIN.) CONCRETE SCREWS.

CAULK SHALL BE NON-STAINING, GRAY NON-BITUMINOUS JOINT SEALER.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE ENTIRE TOP OF THE NEW CONCRETE OVERLAY.

SEAL OVERLAY CONSTRUCTION JOINTS ACCORDING TO SECTION 502.3.13.1 OF THE STANDARD SPECIFICATIONS. COST INCIDENTAL TO BID ITEM "CONCRETE MASONRY OVERLAY DECKS".

A MINIMUM OF 1-INCH OF CONCRETE SHALL BE REMOVED FROM THE ENTIRE BRIDGE DECK UNDER THE BID ITEM "CLEANING DECKS".

THE AVERAGE OVERLAY THICKNESS IS BASED ON THE MINIMUM OVERLAY THICKNESS PLUS ½-INCH TO ACCOUNT FOR VARIATIONS IN THE DECK SURFACE.

PREPARATION DECKS TYPE 1, PREPARATION DECKS TYPE 2, AND FULL-DEPTH DECK REPAIR AREAS ARE BASED ON THE PLANS AND AS DETERMINED BY THE ENGINEER. DECK PREPARATION AND FULL-DEPTH DECK REPAIRS SHALL BE FILLED WITH "CONCRETE MASONRY OVERLAY DECKS".

ANY EXCAVATION NECESSARY TO COMPLETE THE OVERLAY OR JOINT REPAIRS AT THE ABUTMENTS IS TO BE CONSIDERED INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY OVERLAY DECKS".

PROFILE GRADE LINE SHALL BE DETERMINED IN THE FIELD BASED ON A MINIMUM OVERLAY THICKNESS OF 1½" PLACED ABOVE THE DECK SURFACE AFTER SURFACE PREPARATION. EXPECTED AVERAGE OVERLAY THICKNESS IS 2". IF EXPECTED AVERAGE OVERLAY THICKNESS IS EXCEEDED BY MORE THAN ½", CONTACT THE STRUCTURES DESIGN SECTION.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-2-57

DRAWN BY CLP | PLANS CK'D AEB

TYPICAL SECTION, QUANTITIES AND NOTES

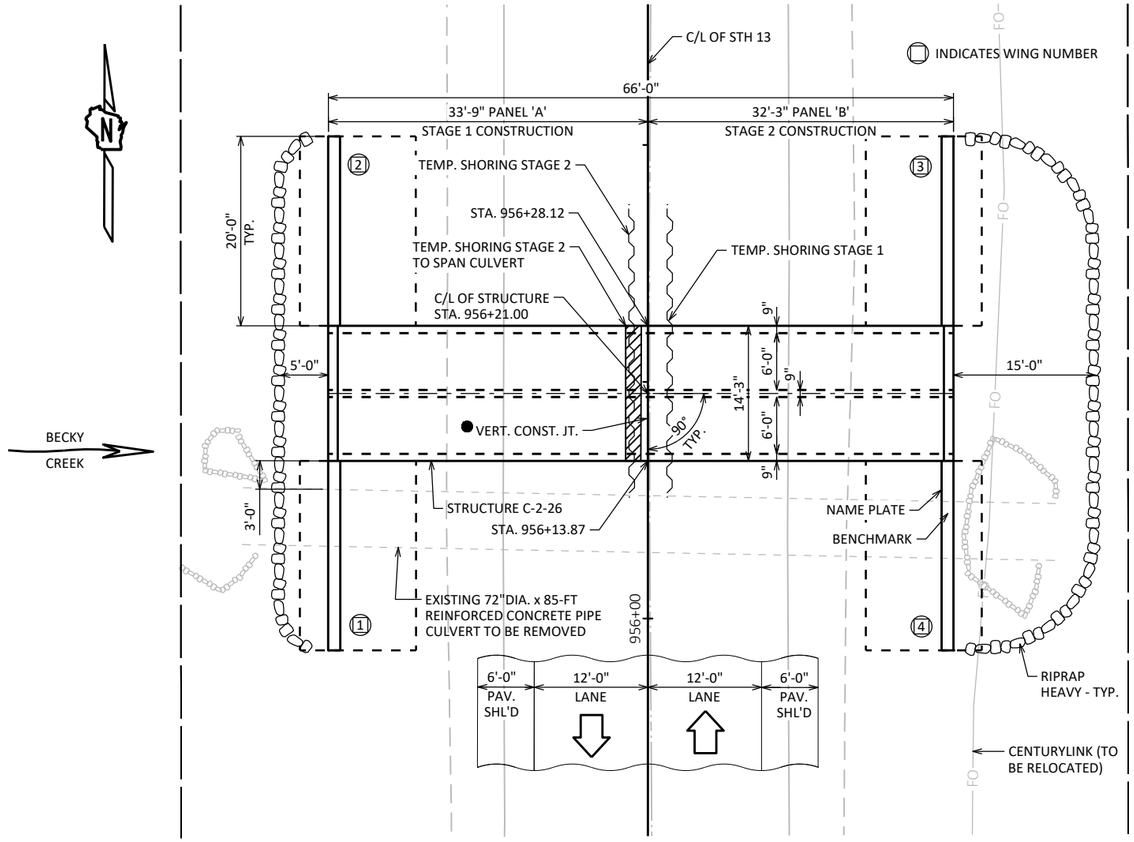
SHEET 2 OF 2

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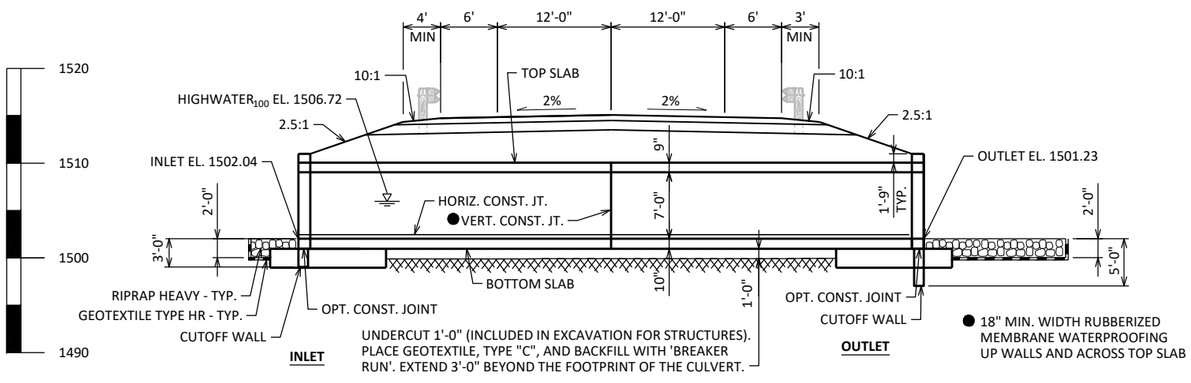
STATE PROJECT NUMBER

1610-00-81

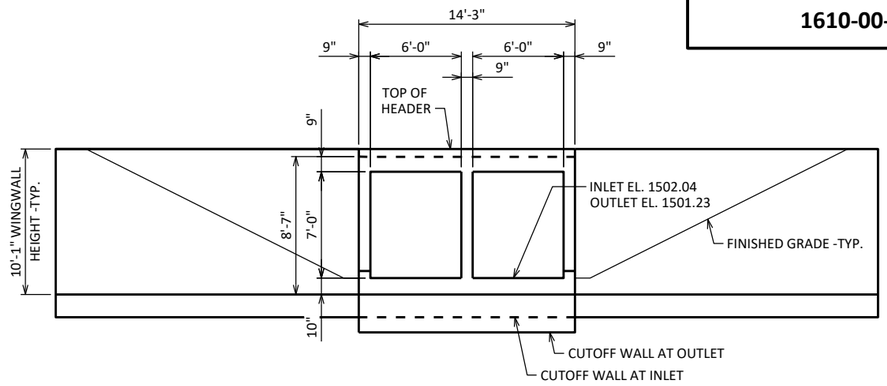


PLAN

TWIN-CELL CONCRETE BOX CULVERT



ELEVATION



TYPICAL SECTION THRU BOX

LIST OF DRAWINGS:

1. GENERAL PLAN
2. QUANTITIES AND NOTES
3. CONSTRUCTION STAGING
4. BOX DETAILS
5. BAR STEEL LAYOUT
6. WINGWALL DETAILS
7. BILL OF BARS AND DETAILS
8. SUBSURFACE EXPLORATION

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING: RF = 1.74
OPERATING RATING: RF = 2.70
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV): 250 (KIPS)

EARTHLOAD:

DESIGNED FOR 5.0 TO 6.0 FT. OF FILL.

MATERIAL PROPERTIES:

CONCRETE MASONRY — f'_c = 3,500 PSI
BAR STEEL REINFORCEMENT — f_y = 60,000 PSI

HYDRAULIC DATA

100-YEAR FREQUENCY:

Q_{100}= 205 C.F.S.
V_{100}= 11.1 F.P.S.
HW_{100}= EL. 1506.72
WATERWAY AREA = 18 SQ.FT
DRAINAGE AREA = 3.6 SQ. MI.
ROADWAY OVERTOPPING = N/A
SCOUR CRITICAL CODE = 8

2-YEAR FREQUENCY:

Q_{100}= 60 C.F.S.
V_{100}= 7.9 F.P.S.
HW_{100}= EL. 1,504.94

TRAFFIC DATA

FEATURE ON: STH 13

ADT = 2,230 (2026)
ADT = 2,230 (2046)
R.D.S. = 55 MPH



10/02/2025

STRUCTURE DESIGN CONTACTS:

ARLEN BEAUDETTE 715-834-3161
AARON BONK 608-261-0261

NO.	DATE	REVISION	BY

ORIGINAL PLANS PREPARED BY

AYRES 3433 Oakwood Hills Parkway Eau Claire, WI 54701 www.AyresAssociates.com

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED JLR 10/02/25
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE C-2-26

STH 13 OVER BECKY CREEK

COUNTY	TOWN
ASHLAND	GORDON

DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPECIFICATION

DESIGNED BY	DESIGN CK'D	DRAWN BY	PLANS CK'D
AEB	ZSS	ZSS/CLP	AEB

GENERAL PLAN

SHEET 1 OF 8
170

I.D. DATE:

8

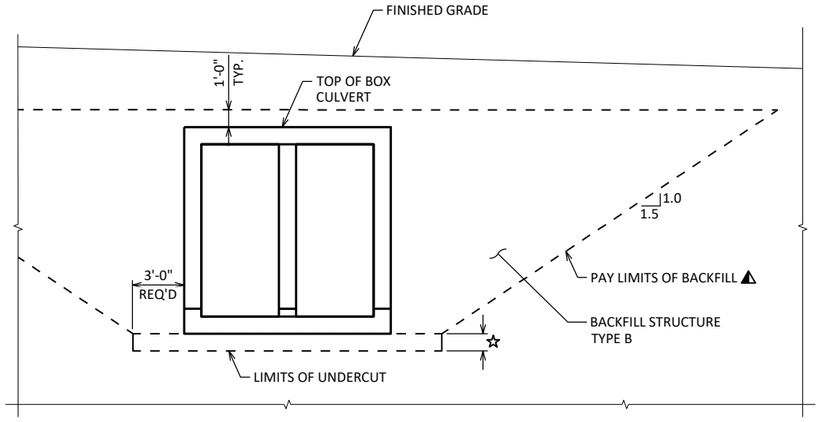
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STATE PROJECT NUMBER

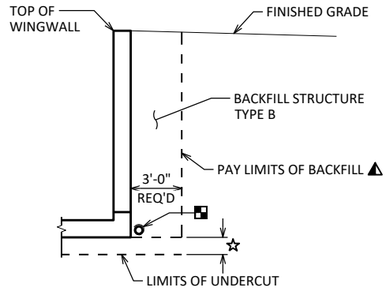
1610-00-81

TOTAL ESTIMATED QUANTITIES

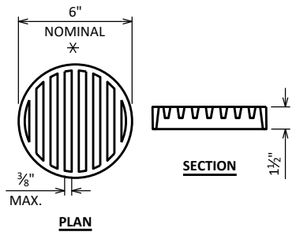
BID ITEM NUMBER	BID ITEMS	UNIT	TOTALS
203.0220	REMOVING STRUCTURE 72-INCH 85-FT CONCRETE CULVERT PIPE	EACH	1
206.2001	EXCAVATION FOR STRUCTURES CULVERTS C-2-26	EACH	1
210.2500	BACKFILL STRUCTURE TYPE B	TON	185
311.0110	BREAKER RUN	TON	110
504.0100	CONCRETE MASONRY CULVERTS	CY	207
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	19,820
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	3,480
511.1200	TEMPORARY SHORING C-2-26	SF	440
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	36
606.0300	RIPRAP HEAVY	CY	80
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	95
645.0105	GEOTEXTILE TYPE C	SY	150
645.0120	GEOTEXTILE TYPE HR	SY	180
	NON-BID ITEMS		
	FILLER	SIZE	½", ¾"



TYPICAL SECTION THRU BOX CULVERT



TYPICAL SECTION THRU BOX CULVERT WINGWALL



RODENT SHIELD DETAIL

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

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

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

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

☆ UNDERCUT 1'-0". EXCAVATION FOR UNDER CUT IS TO BE INCLUDED IN EXCAVATION FOR STRUCTURES. PLACE "GEOTEXTILE FABRIC TYPE C" AND BACKFILL WITH "BREAKER RUN".

IN LIEU OF USING BREAKER RUN FOR THE BOX CONSTRUCTION PLATFORM, THE CONTRACTOR MAY ELECT TO SUBSTITUTE #1 OR #2 CONCRETE COARSE AGGREGATE, SELECT CRUSHED MATERIAL OR OTHER GRANULAR MATERIAL AS APPROVED BY THE ENGINEER. THE CONTRACTOR IS RESPONSIBLE FOR THE BASE STABILITY WITH ANY SUBSTITUTED MATERIAL. THE REGION GEOTECHNICAL ENGINEER MAY BE CONTACTED TO DETERMINE IF "OTHER GRANULAR MATERIAL" IS ACCEPTABLE.

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

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

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

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES CULVERTS C-02-26" SHALL BE THE EXISTING GROUNDLINE.

ALL VOLUME WHICH CANNOT BE PLACED BEFORE CULVERT CONSTRUCTION AND NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL WITHIN THE LENGTH OF THE CULVERT INCLUDING THE WING WALLS.

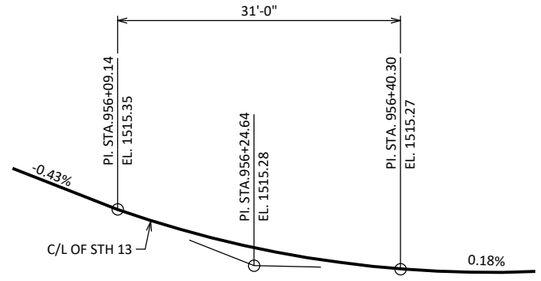
THE QUANTITY FOR BACKFILL STRUCTURE IS CALCULATED BASED ON THE DETAIL SHOWN IN THE PLANS.

THE CONCRETE IN THE CUTOFF WALLS MAY BE PLACED UNDERWATER IF THE EXCAVATION CANNOT BE DEWATERED.

PLACE 18" (MIN.) WIDE SHEET OF "RUBBERIZED MEMBRANE WATERPROOFING" ON TOP SLAB OVER ALL CONSTRUCTION JOINTS AND EXTEND 6" MIN. BELOW TOP OF BOTTOM SLAB.

THE CONTRACTOR MAY FURNISH A PRECAST CONCRETE BOX CULVERT IN LIEU OF THE CAST-IN-PLACE BOX CULVERT WITH THE ACCEPTANCE OF THE SHOP DRAWINGS BY THE STRUCTURES DESIGN SECTION. THE PRECAST CONCRETE BOX CULVERT SHALL CONFORM TO PRECAST DETAILS ON CHAPTER 36 STANDARDS OF THE CURRENT WISC. DOT BRIDGE MANUAL. PAYMENT FOR THE PRECAST CULVERT SHALL BE BASED ON THE QUANTITIES AND PRICES BID FOR THE ITEMS LISTED IN THE "TOTAL ESTIMATED QUANTITIES".

ANY BEAM GUARD POST DRIVEN IN CLOSE PROXIMITY (ABOVE OR ADJACENT) TO BOX CULVERT MUST BE A STEEL POST.



PROFILE GRADE LINE

BENCH MARK/CONTROL POINTS

NO.	STATION	DESCRIPTION	ELEV.
907	953+94.68	¾" REBAR W/ CAP. 25.2' RT.	1515.66
906	958+33.37	¾" REBAR W/ CAP, 25.5' RT.	1514.33

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE C-2-26

DRAWN BY ZSS/CLP | PLANS CK'D AEB

QUANTITIES AND NOTES

SHEET 2 OF 8

171

8

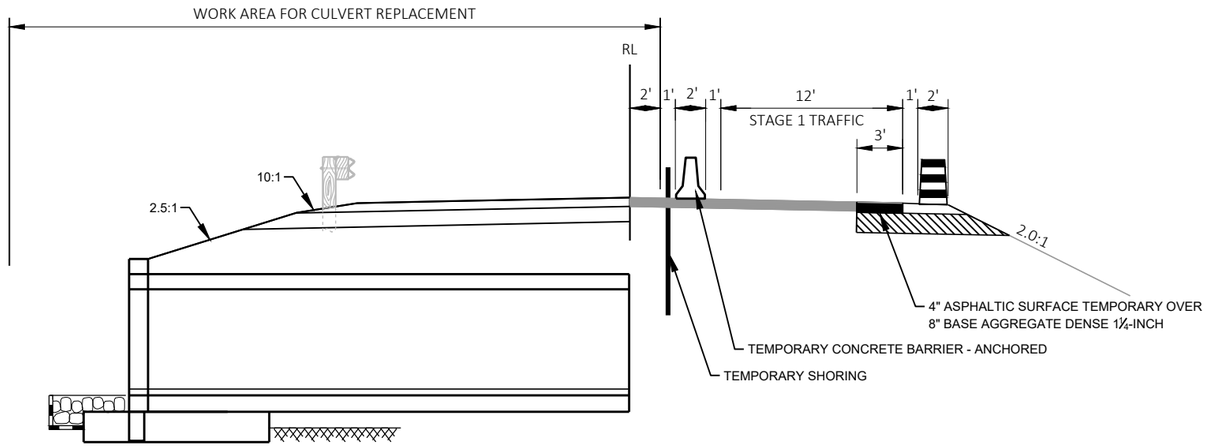
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STATE PROJECT NUMBER

1610-00-81

STAGE 1

- BUILD INLET, BARREL, AND WING 2
- WATER IN EXISTING PIPE



STAGE 1

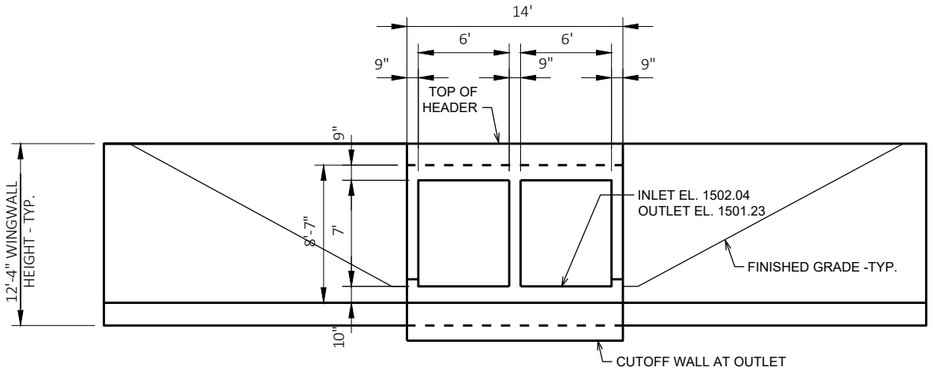
STA 956+18 (BECKY CREEK)

STAGE 2

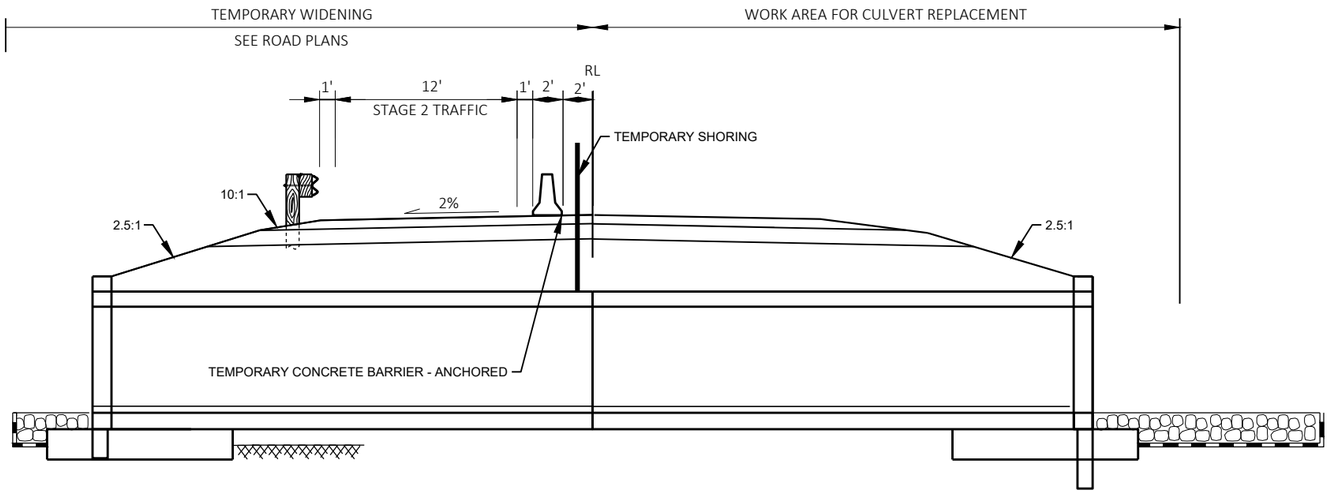
- BUILD OUTLET, BARREL, AND WING 3
- MOVE WATER TO NEW BARREL
- REMOVE PART OF EXISTING PIPE AND BUILD WING 4

STAGE 3

- BUILD WING 1 AND REMOVE EXISTING PIPE



INLET



STAGE 2

STA 956+18 (BECKY CREEK)

OUTLET

NOTE:

PROPOSED BOX CULVERT TO BE CONSTRUCTED PARALLEL TO THE EXISTING PIPE. EXISTING PIPE WILL REMAIN IN USE UNTIL PROPOSED BOX CULVERT IS COMPLETED.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE C-2-26

DRAWN BY DRS/CLP | PLANS CK'D AEB

CONSTRUCTION STAGING

SHEET 3 OF 8

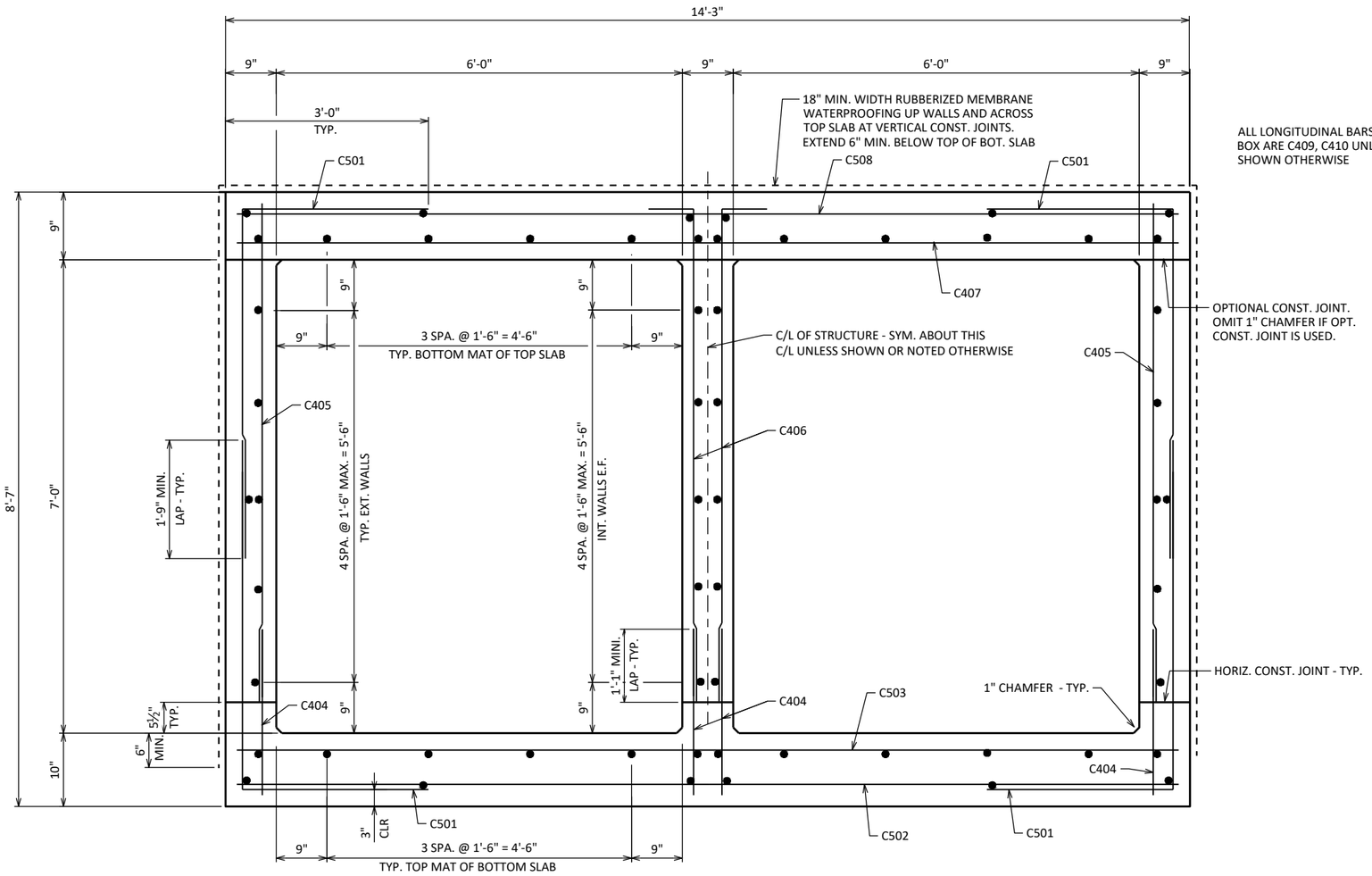
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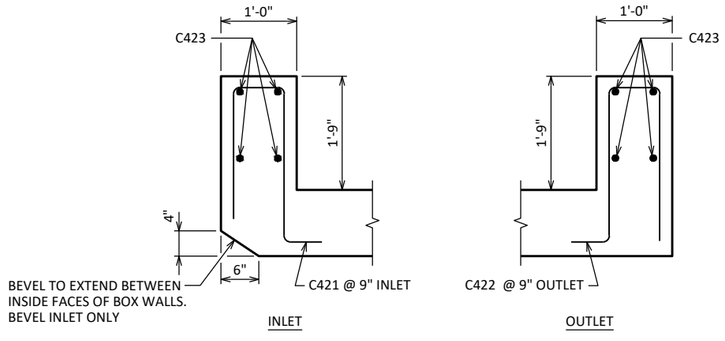
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STATE PROJECT NUMBER

1610-00-81



TYPICAL SECTION THRU BOX



SECTION THRU HEADER

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE C-2-26

DRAWN BY CLP | PLANS CK'D AEB

BOX DETAILS

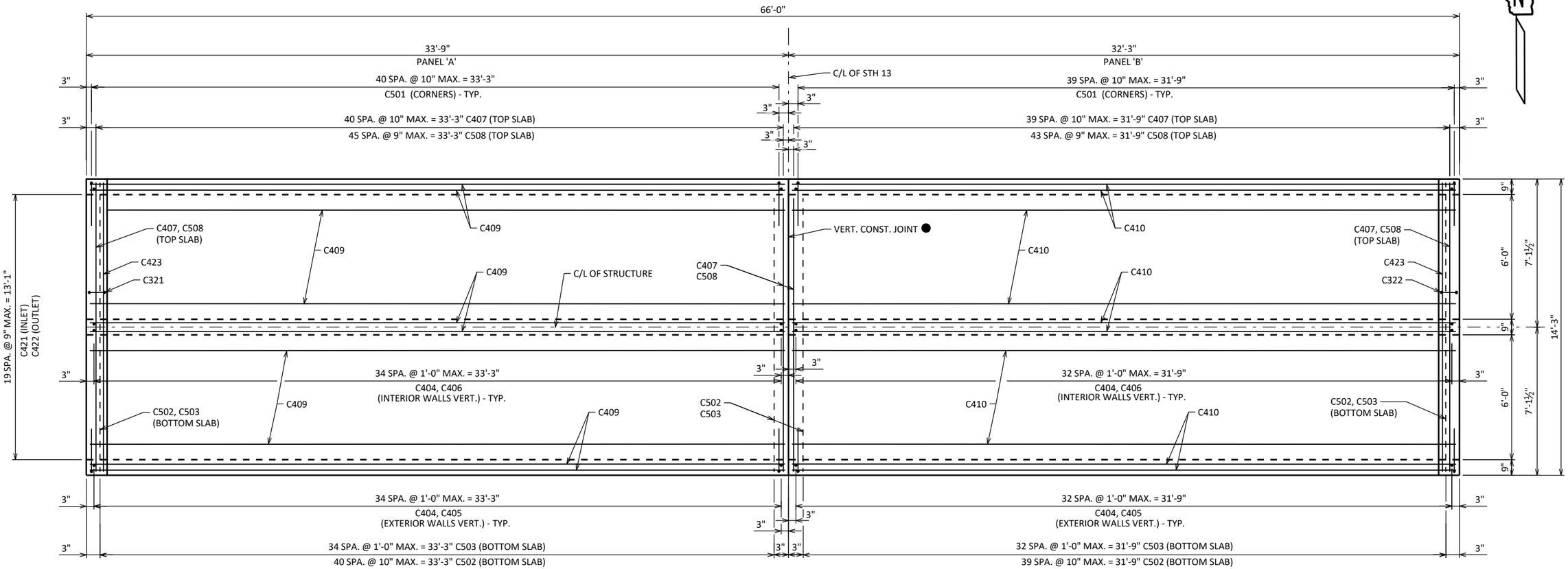
SHEET 4 OF 8

8

8

STATE PROJECT NUMBER

1610-00-81



BAR STEEL LAYOUT

● 18" MIN. WIDTH RUBBERIZED MEMBRANE WATERPROOFING UP WALLS AND ACROSS TOP SLAB AT VERTICAL CONST. JOINTS. EXTEND 6" MIN. BELOW TOP OF BOT. SLAB

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE C-2-26

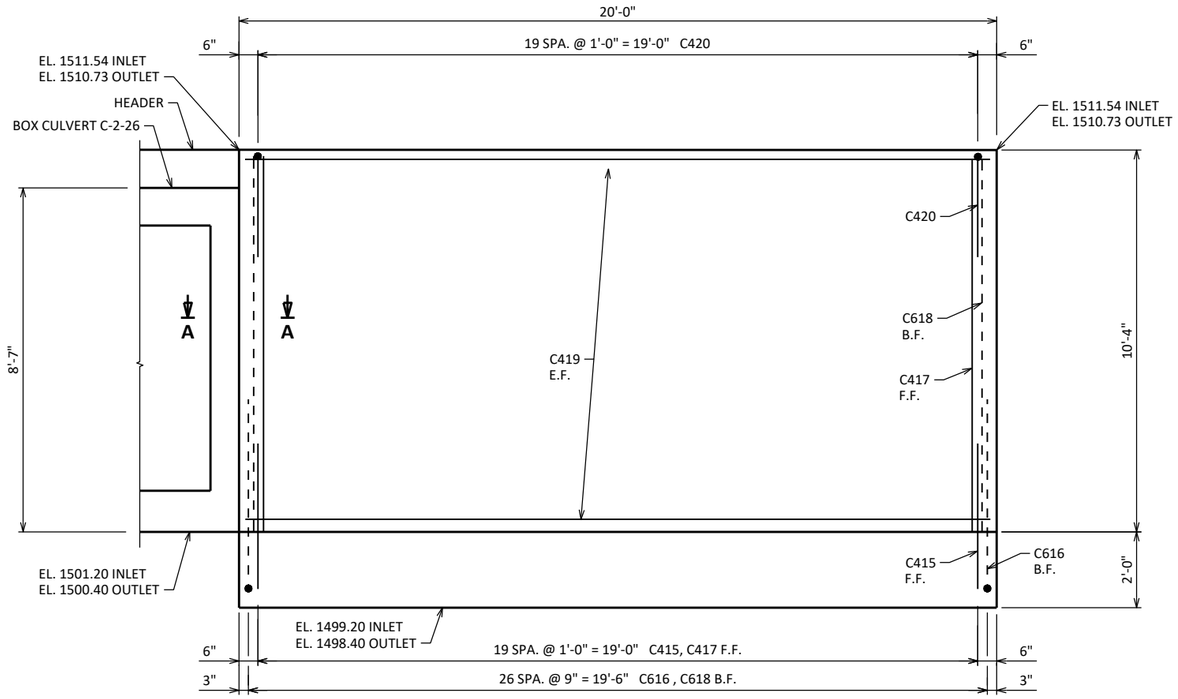
DRAWN BY CLP | PLANS CK'D AEB

BAR STEEL LAYOUT

SHEET 5 OF 8

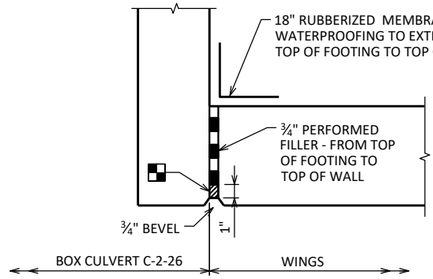
STATE PROJECT NUMBER

1610-00-81



ELEVATION OF WING 1

WING 1 SHOWN, OTHERS SIMILAR



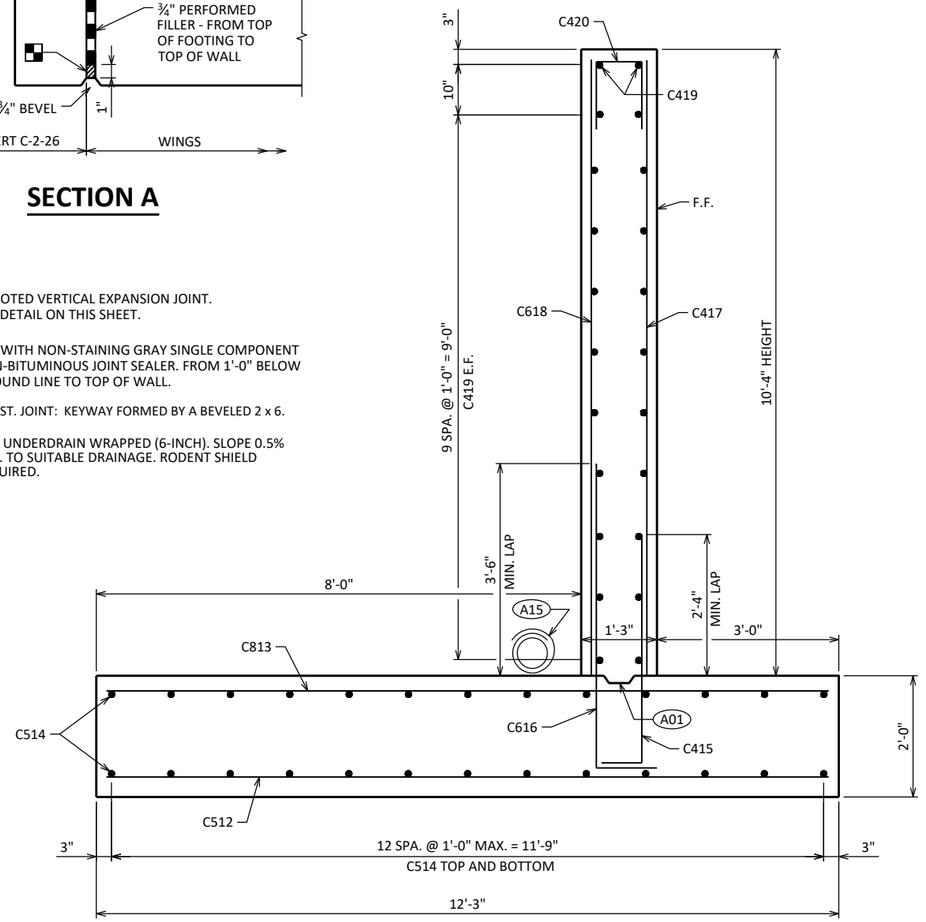
SECTION A

◐ DENOTED VERTICAL EXPANSION JOINT.
SEE DETAIL ON THIS SHEET.

▚ FILL WITH NON-STAINING GRAY SINGLE COMPONENT NON-BITUMINOUS JOINT SEALER. FROM 1'-0" BELOW GROUND LINE TO TOP OF WALL.

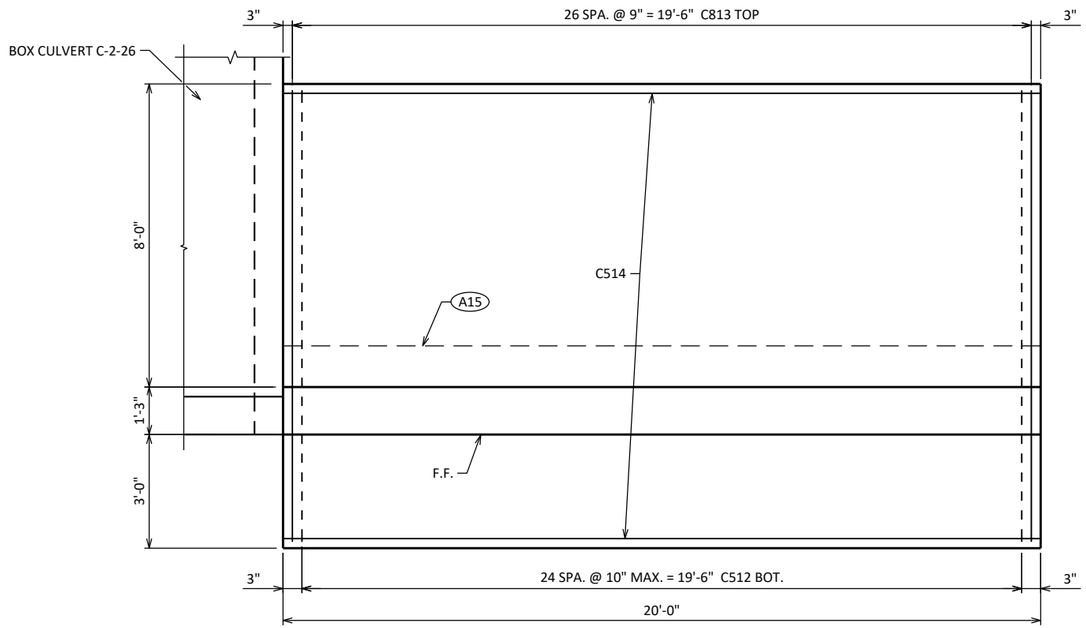
(A01) CONST. JOINT: KEYWAY FORMED BY A BEVELED 2 x 6.

(A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.



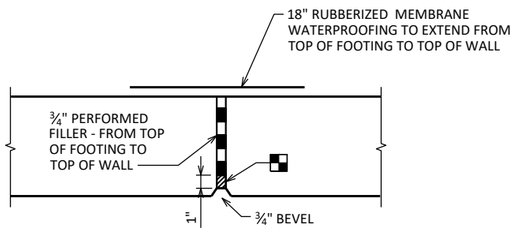
SECTION THRU WINGWALL

NOTE:
BOTTOM MAT FOOTING 3" CLEAR,
ALL OTHERS ARE 2" CLEAR.



PLAN OF WING 1

WING 1 SHOWN, OTHERS SIMILAR



VERTICAL EXPANSION JOINT DETAIL

DO NOT RUN ANY BAR STEEL THRU JOINT

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE C-2-26

DRAWN BY CLP | PLANS CK'D AEB

WINGWALL DETAILS

SHEET 6 OF 8

175

8

8

STATE PROJECT NUMBER

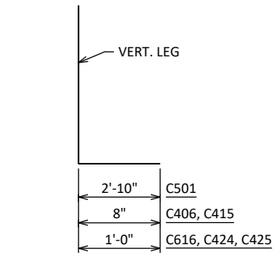
1610-00-81

BILL OF BARS

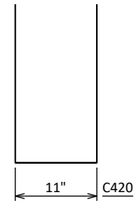
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
C501		324	7'-11"	X		BOX CORNERS
C502		81	13'-11"			BOX BOTTOM SLAB TRANS.
C503		68	13'-11"			BOX BOTTOM SLAB TRANS.
C404		272	2'-6"			BOX WALLS VERT. INT. & EXT.
C405		136	7'-0"			BOX WALLS VERT. EXT.
C406		136	7'-7"	X		BOX WALLS VERT. INT.
C407		81	13'-11"			BOX TOP SLAB TRANS.
C508		90	13'-11"			BOX TOP SLAB TRANS.
C409		58	33'-5"			BOX LONG. WALLS, TOP & BOTTOM SLAB PANEL 'A'
C410		58	31'-11"			BOX LONG. WALLS, TOP & BOTTOM SLAB PANEL 'B'
C511		51	4'-0"			BOX VERT. & LONG. @ VERT. CONST. JOINT
C512		100	11'-11"			WINGS FOOTING BOTTOM
C813		108	11'-11"			WINGS FOOTING TOP
C514		104	19'-8"			WINGS FOOTING TOP & BOTTOM
C415		80	4'-7"	X		WING DOWELS VERT. F.F.
C616		108	6'-0"	X		WING DOWELS VERT. B.F.
C417	X	80	10'-1"			WINGS VERT. F.F.
C618	X	108	10'-1"			WINGS VERT. B.F.
C419	X	88	19'-8"			WINGS HORIZ. E.F.
C420	X	80	2'-9"	X		WINGS VERT. TOP
C421		20	5'-3"	X		HEADER INLET VERT.
C422		20	5'-7"	X		HEADER OUTLET VERT.
C423		8	13'-11"			HEADER HORIZ.
C424		15	3'-7"	X		CUT-OFF WALL INLET
C425		15	5'-7"	X		CUT-OFF WALL OUTLET
C426		10	13'-11"			CUT-OFF WALL HORIZ.

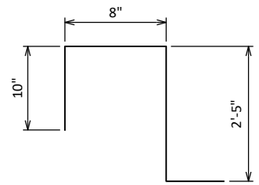
BENDING DIMENSIONS ARE OUT TO OUT OF BARS.



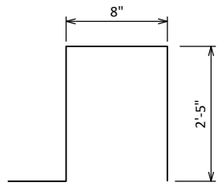
C501, C406, C415
C616, C424, C425



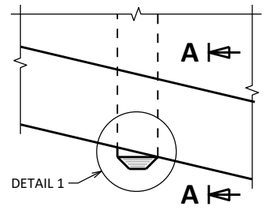
C420



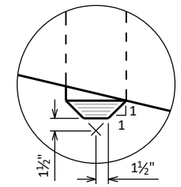
C421



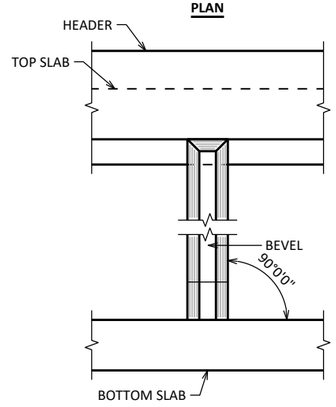
C422



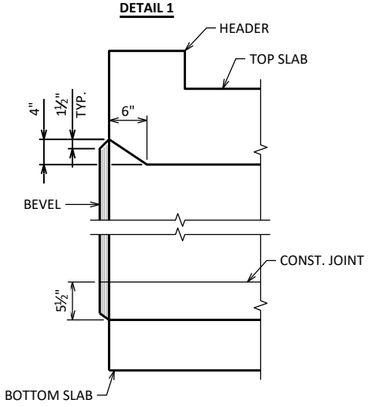
PLAN



DETAIL 1

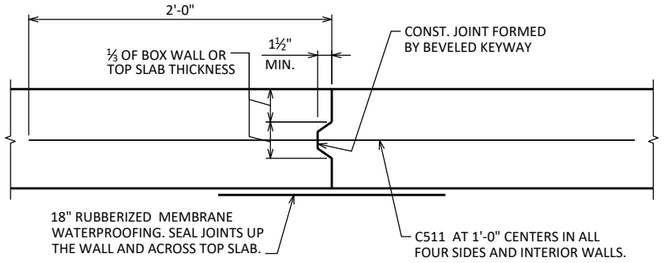


ELEVATION

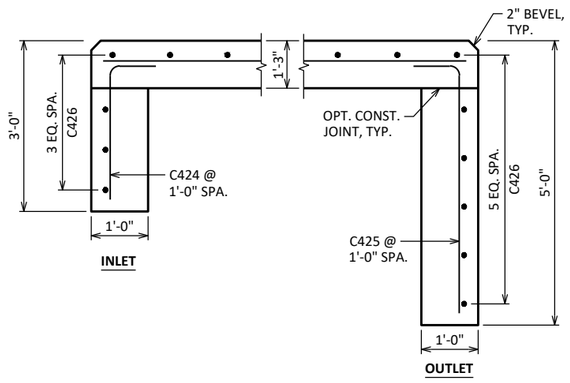


SECTION A-A

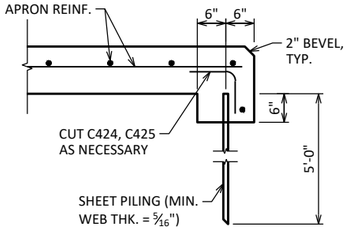
INLET NOSE DETAILS



VERTICAL CONSTRUCTION JOINT



CUT-OFF WALLS



ALTERNATE CUT-OFF WALLS

THE ABOVE ALTERNATIVE MAY BE USED IN LIEU OF CAST-IN-PLACE CONCRETE CUT-OFF WALLS. PAYMENT WILL BE BASED ON THE CONCRETE CUT-OFF WALLS.

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NO.	DATE	REVISION	BY

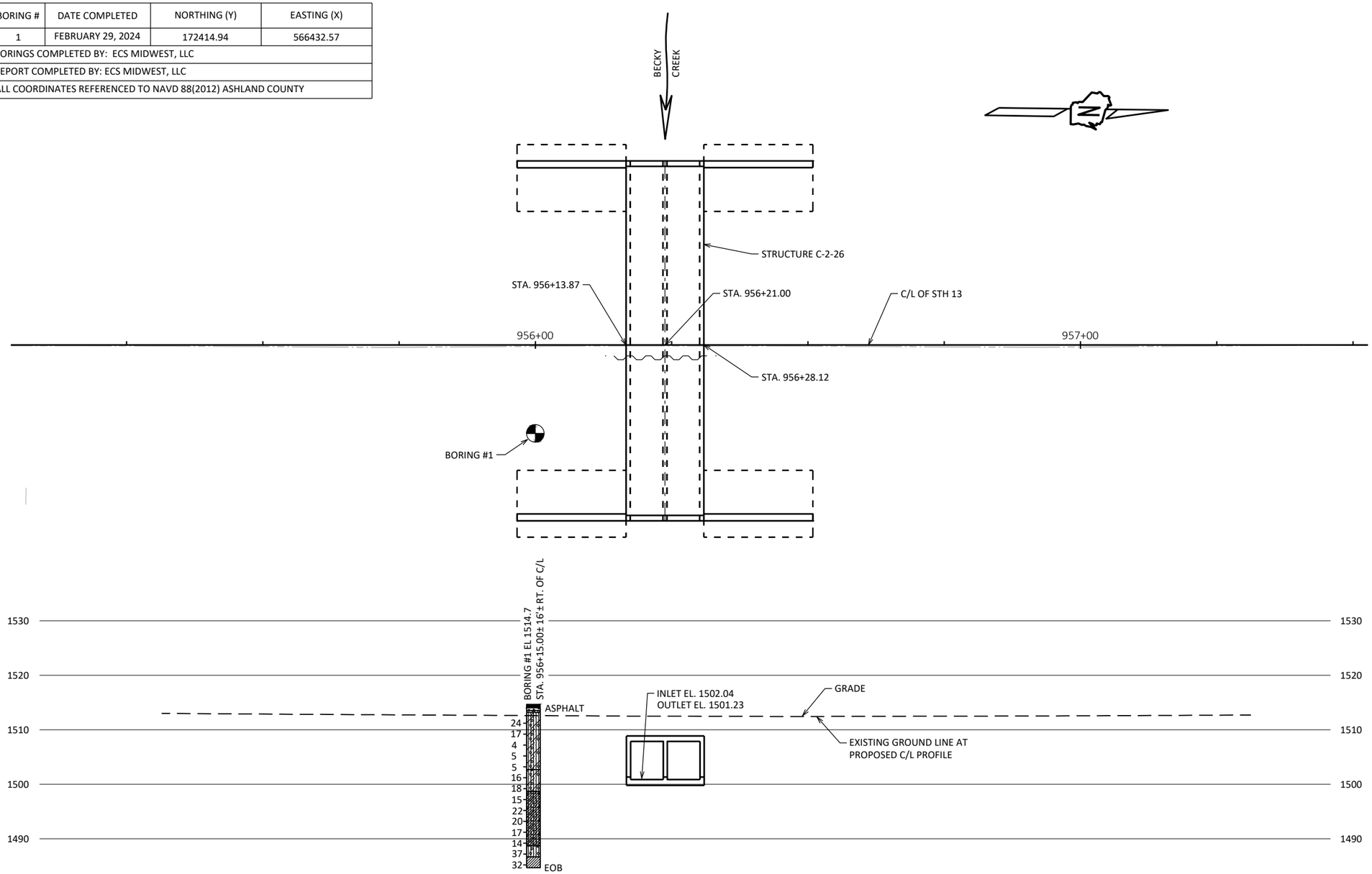
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE C-2-26

DRAWN BY CLP | PLANS CK'D AEB

BILL OF BARS AND DETAILS

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	FEBRUARY 29, 2024	172414.94	566432.57
BORINGS COMPLETED BY: ECS MIDWEST, LLC			
REPORT COMPLETED BY: ECS MIDWEST, LLC			
ALL COORDINATES REFERENCED TO NAVD 88(2012) ASHLAND COUNTY			



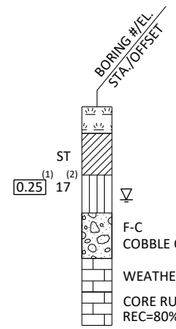
STATE PROJECT NUMBER

1610-00-81

MATERIAL SYMBOLS

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

LEGEND OF BORING



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

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

GROUND WATER ELEVATION

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

ABBREVIATIONS

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

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE C-2-26

DRAWN BY ZSS | PLANS CK'D AEB

SUBSURFACE EXPLORATION

SHEET 8 OF 8

8

8

STH 13 STRUCTURE B-02-0057 GRADING

STATION	AREA (SF)		INCREMENTAL VOL (CY) (UNADJUSTED)		CUMULATIVE VOL (CY)		
	CUT	FILL	CUT	FILL	CUT 1.00	EXPANDED FILL 1.30	MASS ORDINATE
190+82.60	1.33	0.00	0.00	0.00	0.00	0.00	0.00
191+00.00	0.98	1.87	1.00	1.00	1.00	1.30	-0.30
191+50.00	0.82	4.11	2.00	6.00	3.00	9.10	-6.10
192+00.00	1.59	2.24	2.00	6.00	5.00	16.90	-11.90
192+32.60	3.93	1.67	3.00	2.00	8.00	19.50	-11.50
192+57.60	0.61	1.35	2.00	1.00	10.00	20.80	-10.80
192+82.60	0.81	1.83	1.00	1.00	11.00	22.10	-11.10
193+00.00	1.04	9.32	1.00	4.00	12.00	27.30	-15.30
193+35.00	0.00	0.00	1.00	6.00	13.00	35.10	-22.10
STRUCTURE							
193+65.00	0.00	0.00	0.00	0.00	13.00	35.10	-22.10
194+00.00	0.86	8.22	1.00	11.00	13.00	41.60	-28.60
194+18.50	0.87	1.15	1.00	3.00	14.00	45.50	-31.50
194+43.50	0.70	1.82	1.00	1.00	15.00	46.80	-31.80
194+68.50	2.52	6.04	1.00	4.00	16.00	52.00	-36.00
195+00.00	0.95	6.89	2.00	8.00	18.00	62.40	-44.40
195+50.00	0.77	4.65	2.00	11.00	20.00	76.70	-56.70
196+00.00	0.72	0.03	1.00	4.00	21.00	81.90	-60.90
196+18.50	0.64	0.00	0.00	0.00	21.00	81.90	-60.90

STH 13 GRADING STA 280+50 TO STA 287+00

STATION	AREA (SF)		INCREMENTAL VOL (CY) (UNADJUSTED)		CUMULATIVE VOL (CY)		
	CUT	FILL	CUT	FILL	CUT 1.00	EXPANDED FILL 1.30	MASS ORDINATE
280+50.00	32.72	11.42	0.00	0.00	0.00	0.00	0.00
280+94.00	0.00	0.00	27.00	9.00	27.00	11.70	15.30
281+19.00	0.00	0.00	0.00	0.00	27.00	11.70	15.30
281+44.00	0.00	0.00	0.00	0.00	27.00	11.70	15.30
282+00.00	27.38	19.57	28.00	20.00	55.00	37.70	17.30
282+50.00	34.59	22.25	57.00	39.00	112.00	88.40	23.60
283+00.00	36.25	20.23	66.00	39.00	178.00	139.10	38.90
283+50.00	32.06	27.26	63.00	44.00	241.00	196.30	44.70
284+00.00	24.76	42.75	53.00	65.00	294.00	280.80	13.20
284+50.00	23.19	46.94	44.00	83.00	338.00	388.70	-50.70
285+00.00	24.39	51.62	44.00	91.00	382.00	507.00	-125.00
285+23.00	0.00	0.00	10.00	22.00	392.00	535.60	-143.60
285+48.00	0.00	0.00	0.00	0.00	392.00	535.60	-143.60
285+73.00	0.00	0.00	0.00	0.00	392.00	535.60	-143.60
286+00.00	25.57	42.95	13.00	21.00	405.00	562.90	-157.90
286+50.00	16.36	38.99	39.00	76.00	444.00	661.70	-217.70
287+00.00	15.35	42.97	29.00	76.00	473.00	760.50	-287.50

STH 13 GRADING STA 499+00 TO STA 514+00

STATION	AREA (SF)		INCREMENTAL VOL (CY) (UNADJUSTED)		CUMULATIVE VOL (CY)		
	CUT	FILL	CUT	FILL	CUT 1.00	EXPANDED FILL 1.30	MASS ORDINATE
499+00.00	17.84	19.05	0.00	0.00	0.00	0.00	0.00
499+50.00	17.98	19.85	33.00	36.00	33.00	46.80	-13.80
500+02.00	0.00	0.00	17.00	19.00	50.00	71.50	-21.50
500+27.00	0.00	0.00	0.00	0.00	50.00	71.50	-21.50
500+52.00	0.00	0.00	0.00	0.00	50.00	71.50	-21.50
501+00.00	14.82	34.61	13.00	31.00	63.00	111.80	-48.80
501+50.00	16.41	30.72	29.00	60.00	92.00	189.80	-97.80
502+00.00	17.62	37.32	32.00	63.00	124.00	271.70	-147.70
502+44.00	0.00	0.00	14.00	30.00	138.00	310.70	-172.70
502+69.00	0.00	0.00	0.00	0.00	138.00	310.70	-172.70
502+94.00	0.00	0.00	0.00	0.00	138.00	310.70	-172.70
503+50.00	15.03	126.87	16.00	132.00	154.00	482.30	-328.30
504+00.00	14.82	138.80	28.00	246.00	182.00	802.10	-620.10
504+50.00	14.31	120.77	27.00	240.00	209.00	1,114.10	-905.10
505+00.00	13.94	93.81	26.00	199.00	235.00	1,372.80	-1,137.80
505+50.00	13.66	76.07	26.00	157.00	261.00	1,576.90	-1,315.90
506+00.00	13.04	63.28	25.00	129.00	286.00	1,744.60	-1,458.60
506+42.55	0.00	0.00	10.00	50.00	296.00	1,809.60	-1,513.60
506+70.00	0.00	0.00	0.00	0.00	296.00	1,809.60	-1,513.60
507+00.00	0.00	0.00	0.00	0.00	296.00	1,809.60	-1,513.60
507+15.15	0.00	0.00	0.00	0.00	296.00	1,809.60	-1,513.60
507+50.00	12.37	40.87	8.00	26.00	304.00	1,843.40	-1,539.40
508+00.00	12.80	35.31	23.00	71.00	327.00	1,935.70	-1,608.70
508+50.00	13.32	38.51	24.00	68.00	351.00	2,024.10	-1,673.10
509+00.00	13.76	41.60	25.00	74.00	376.00	2,120.30	-1,744.30
509+50.00	8.30	2.43	20.00	41.00	396.00	2,173.60	-1,777.60
510+00.00	12.94	0.12	20.00	2.00	416.00	2,176.20	-1,760.20
510+50.00	17.45	0.00	28.00	0.00	444.00	2,176.20	-1,732.20
511+00.00	22.99	8.83	37.00	8.00	481.00	2,186.60	-1,705.60
511+50.00	23.04	14.32	43.00	21.00	524.00	2,213.90	-1,689.90
512+00.00	26.48	18.41	46.00	30.00	570.00	2,252.90	-1,682.90
512+63.00	0.00	0.00	31.00	21.00	601.00	2,280.20	-1,679.20
512+88.00	0.00	0.00	0.00	0.00	601.00	2,280.20	-1,679.20
513+13.00	0.00	0.00	0.00	0.00	601.00	2,280.20	-1,679.20
513+50.00	12.75	23.31	9.00	16.00	610.00	2,301.00	-1,691.00
514+00.00	13.23	26.97	24.00	47.00	634.00	2,362.10	-1,728.10

EARTHWORK DATA FOR INDIVIDUAL PIPES IN NOT SHOWN. SEE EARTHWORK SUMMARY

STH 13 EXISTING STRUCTURE C-02-0004 GRADING

STATION	AREA (SF)		INCREMENTAL VOL (CY) (UNADJUSTED)		CUMULATIVE VOL (CY)		
	CUT	FILL	CUT	FILL	CUT 1.00	EXPANDED FILL 1.30	MASS ORDINATE
631+00.00	1.44	15.84	0.00	0.00	0.00	0.00	0.00
631+63.30	0.73	15.23	3.00	36.00	3.00	46.80	-43.80
632+00.00	0.70	29.28	1.00	30.00	4.00	85.80	-81.80
632+50.00	0.92	67.60	2.00	90.00	6.00	202.80	-196.80
632+83.30	2.06	93.78	2.00	100.00	8.00	332.80	-324.80
633+08.30	1.91	65.79	2.00	74.00	10.00	429.00	-419.00
633+33.30	2.62	0.30	2.00	31.00	12.00	469.30	-457.30
634+00.00	1.70	0.94	5.00	2.00	17.00	471.90	-454.90
634+50.00	1.72	2.84	3.00	3.00	20.00	475.80	-455.80
635+00.00	2.29	0.10	4.00	3.00	24.00	479.70	-455.70
635+50.00	7.93	0.81	9.00	1.00	33.00	481.00	-448.00
635+99.28	3.69	0.17	11.00	1.00	44.00	482.30	-438.30
636+04.10	2.98	0.13	1.00	0.00	45.00	482.30	-437.30
636+24.28	1.45	135.99	2.00	51.00	47.00	548.60	-501.60
636+29.10	1.37	115.64	0.00	22.00	47.00	577.20	-530.20
636+49.28	1.28	95.71	1.00	79.00	48.00	679.90	-631.90
636+54.10	1.53	94.98	0.00	17.00	48.00	702.00	-654.00
637+11.00	0.68	22.78	2.00	124.00	50.00	863.20	-813.20
637+50.00	0.74	21.72	1.00	32.00	51.00	904.80	-853.80
637+69.28	0.81	18.67	1.00	14.00	52.00	923.00	-871.00
637+74.10	0.78	18.95	0.00	3.00	52.00	926.90	-874.90
638+00.00	0.70	20.09	1.00	19.00	53.00	951.60	-898.60

STH 13 STRUCTURE B-02-0047 GRADING

STATION	AREA (SF)		INCREMENTAL VOL (CY) (UNADJUSTED)		CUMULATIVE VOL (CY)		
	CUT	FILL	CUT	FILL	CUT 1.00	EXPANDED FILL 1.30	MASS ORDINATE
695+85.00	0.91	89.28	0.00	0.00	0.00	0.00	0.00
696+50.00	0.83	130.99	2.00	265.00	2.00	344.50	-342.50
697+00.00	1.59	140.46	2.00	251.00	4.00	670.80	-666.80
697+35.00	3.48	45.24	3.00	120.00	7.00	826.80	-819.80
697+60.00	13.98	0.00	8.00	21.00	15.00	854.10	-839.10
697+85.00	8.58	0.00	10.00	0.00	25.00	854.10	-829.10
698+00.00	8.95	0.00	5.00	0.00	30.00	854.10	-824.10
698+50.00	0.90	43.27	9.00	40.00	39.00	906.10	-867.10
STRUCTURE							
699+75.00	0.79	22.53	0.00	0.00	39.00	906.10	-867.10
700+15.10	1.69	8.04	2.00	23.00	41.00	936.00	-895.00
700+40.10	1.96	6.78	2.00	7.00	43.00	945.10	-902.10
700+65.10	2.15	2.53	2.00	4.00	45.00	950.30	-905.30
701+00.00	1.67	26.17	2.00	19.00	47.00	975.00	-928.00
701+50.00	3.40	58.32	5.00	78.00	52.00	1,076.40	-1,024.40
702+02.60	19.38	58.98	22.00	114.00	74.00	1,224.60	-1,150.60
702+15.10	9.59	74.48	7.00	31.00	81.00	1,264.90	-1,183.90
702+27.60	2.81	82.22	3.00	36.00	84.00	1,311.70	-1,227.70
702+52.60	1.39	129.57	2.00	98.00	86.00	1,439.10	-1,353.10
703+00.00	0.52	133.49	2.00	231.00	88.00	1,739.40	-1,651.40
703+50.00	0.45	128.24	1.00	242.00	89.00	2,054.00	-1,965.00
704+00.00	0.44	109.75	1.00	220.00	90.00	2,340.00	-2,250.00

STH 13 STRUCTURE C-02-0046 GRADING

STATION	AREA (SF)		INCREMENTAL VOL (CY) (UNADJUSTED)		CUMULATIVE VOL (CY)		
	CUT	FILL	CUT	FILL	CUT 1.00	EXPANDED FILL 1.30	MASS ORDINATE
871+51.84	2.53	0.00	0.00	0.00	0.00	0.00	0.00
872+00.00	1.58	4.52	4.00	4.00	4.00	5.20	-1.20
872+50.00	3.75	6.63	5.00	10.00	9.00	18.20	-9.20
872+71.84	0.91	13.24	2.00	8.00	11.00	28.60	-17.60
872+96.84	15.33	0.00	8.00	6.00	19.00	36.40	-17.40
873+21.84	14.63	0.00	14.00	0.00	33.00	36.40	-3.40
873+50.00	11.41	0.00	14.00	0.00	47.00	36.40	10.60
874+00.00	2.23	1.40	13.00	1.00	60.00	37.70	22.30
874+25.00	2.22	0.06	2.00	1.00	62.00	39.00	23.00
874+50.00	2.69	0.36	2.00	0.00	64.00	39.00	25.00
874+81.21	6.90	0.00	6.00	0.00	70.00	39.00	31.00
875+06.21	11.82	0.00	9.00	0.00	79.00	39.00	40.00
875+28.09	6.85	0.00	8.00	0.00	87.00	39.00	48.00
875+31.21	5.88	0.00	1.00	0.00	88.00	39.00	49.00
875+53.08	6.70	0.01	5.00	0.00	93.00	39.00	54.00
875+78.09	6.41	1.46	6.00	1.00	99.00	40.30	58.70
876+00.00	1.78	3.40	3.00	2.00	102.00	42.90	59.10
876+51.21	2.09	0.01	4.00	3.00	106.00	46.80	59.20

STH 13 STRUCTURE C-02-0026 GRADING

STATION	AREA (SF)		INCREMENTAL VOL (CY) (UNADJUSTED)		CUMULATIVE VOL (CY)		
	CUT	FILL	CUT	FILL	CUT 1.00	EXPANDED FILL 1.30	MASS ORDINATE
954+05.00	15.20	10.30	0.00	0.00	0.00	0.00	0.00
954+50.00	17.49	14.20	27.00	20.00	27.00	26.00	1.00
954+68.00	18.11	18.08	12.00	11.00	39.00	40.30	-1.30
954+93.00	13.58	29.81	15.00	22.00	54.00	68.90	-14.90
955+00.00	13.76	31.97	4.00	8.00	58.00	79.30	-5.40
955+18.00	14.11	38.66	9.00	24.00	67.00	110.50	-27.60
955+43.00	14.12	20.55	13.00	27.00	80.00	145.60	-49.70
955+68.00	13.40	9.69	13.00	14.00	93.00	163.80	-54.90
955+86.00	13.02	3.29	9.00	4.00	102.00	169.00	-51.10
956+10.00	64.45	0.51	34.00	2.00	136.00	171.60	-19.70
956+18.00	18.12	0.28	12.00	0.00	148.00	171.60	-7.70
956+50.00	19.50	0.18	22.00	0.00	170.00	171.60	14.30
957+00.00	12.89	2.19	30.00	2.00	200.00	174.20	41.70
957+18.00	12.98	2.34	9.00	2.00	209.00	176.80	48.10
957+43.00	13.17	19.88	12.00	10.00	221.00	189.80	47.10
957+68.00	12.90	53.64	12.00	34.00	233.00	234.00	14.90
958+00.00	12.90	41.06	15.00	56.00	248.00	306.80	-42.90

EARTHWORK DATA FOR INDIVIDUAL PIPES IN NOT SHOWN. SEE EARTHWORK SUMMARY

9

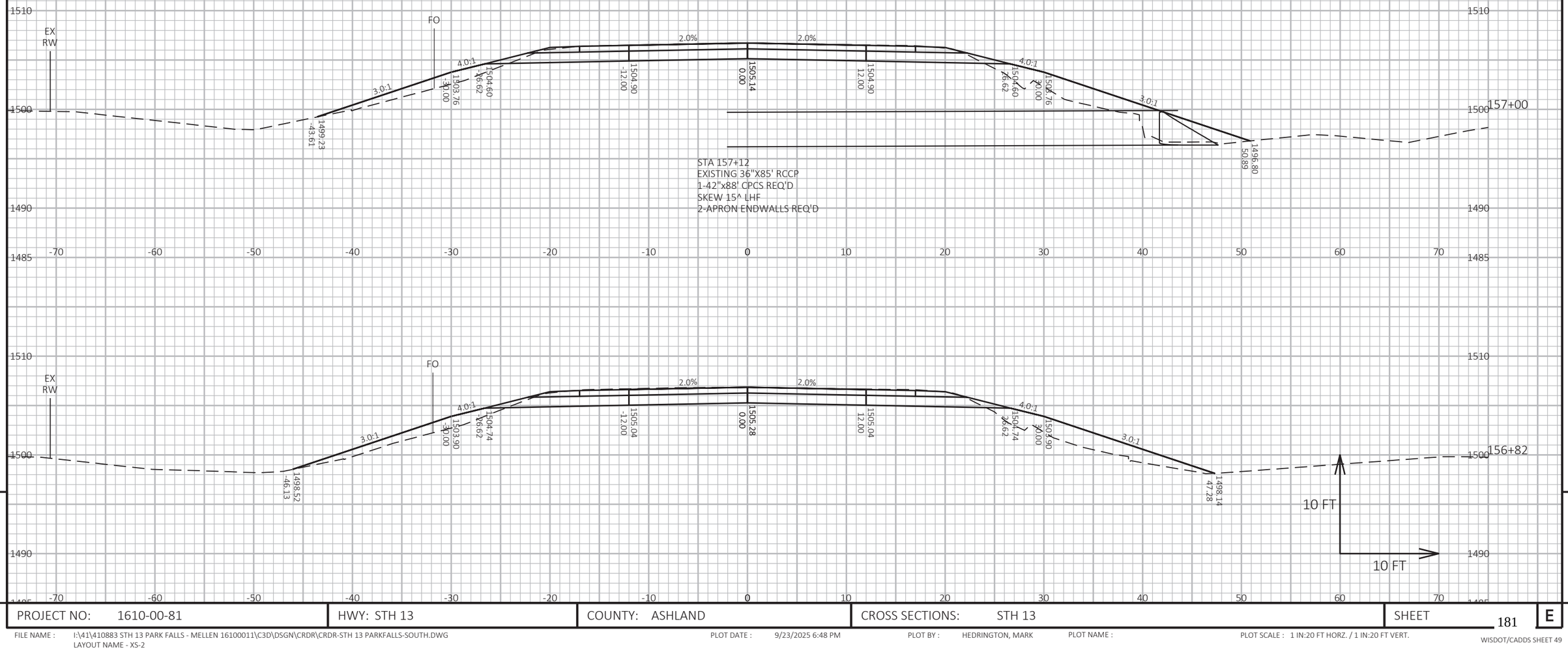
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PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: STH 13	SHEET 180	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-SOUTH.DWG
LAYOUT NAME - XS-1

PLOT DATE : 9/23/2025 6:48 PM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

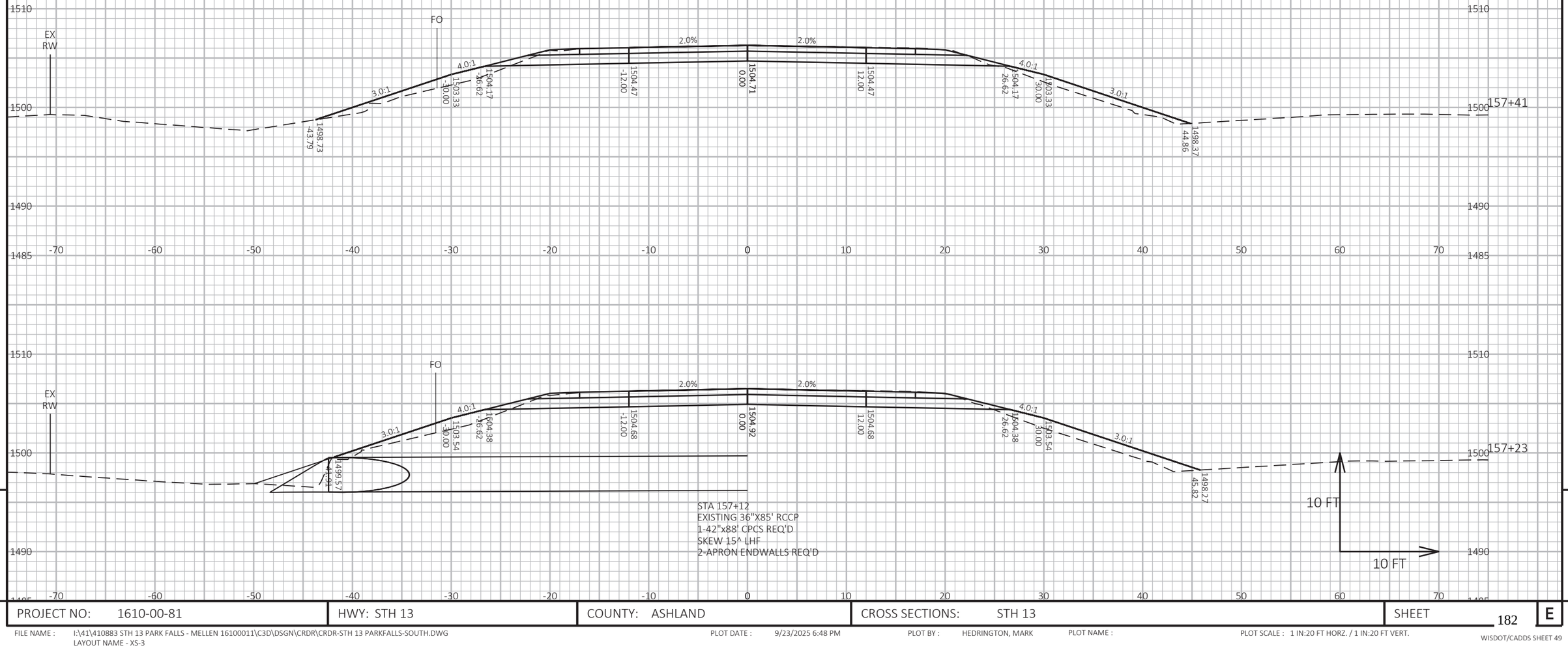
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PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: STH 13	SHEET 181	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-SOUTH.DWG
LAYOUT NAME - XS-2

PLOT DATE : 9/23/2025 6:48 PM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

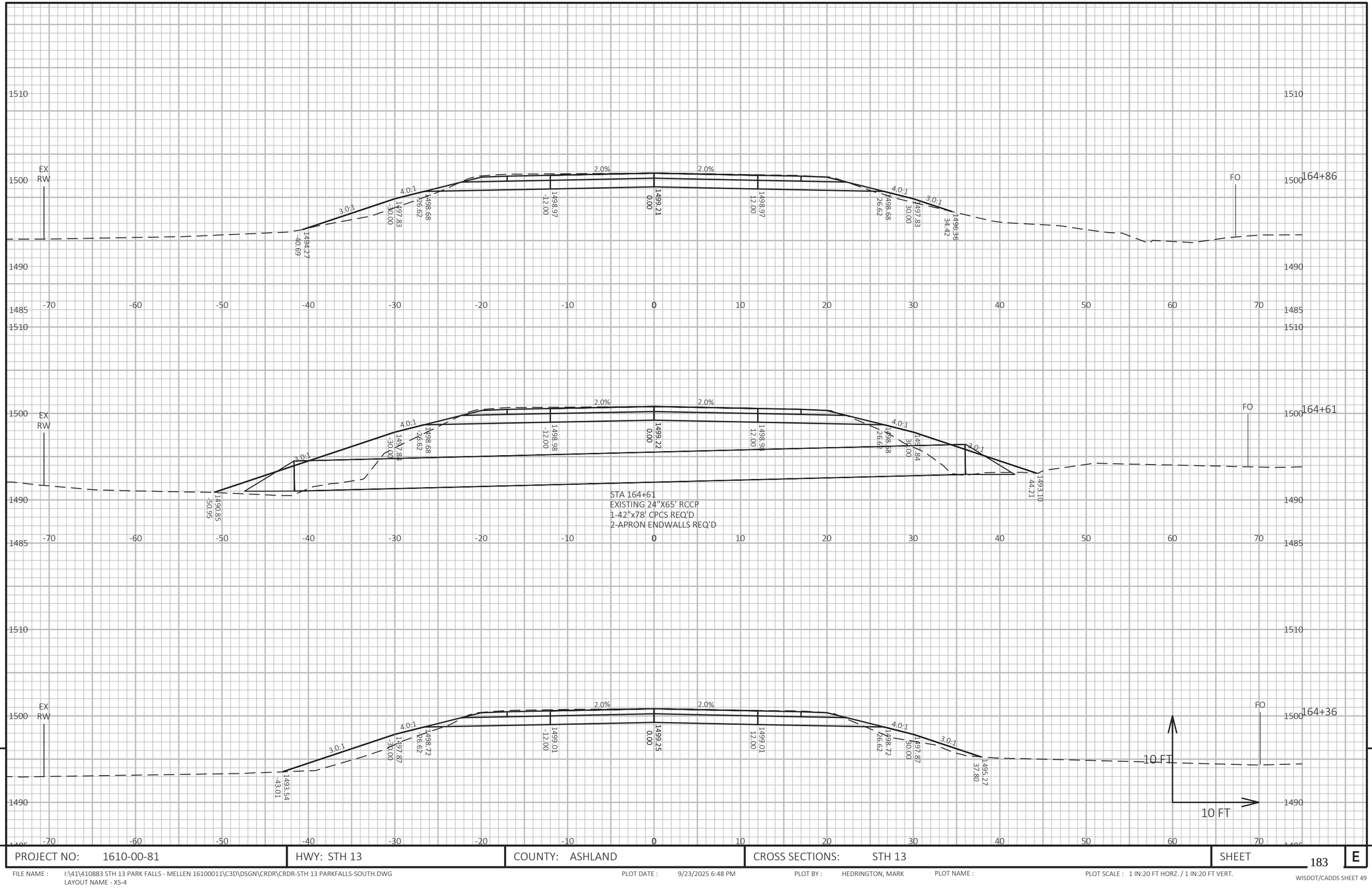


PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: STH 13	SHEET 182	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-SOUTH.DWG
LAYOUT NAME - XS-3

PLOT DATE : 9/23/2025 6:48 PM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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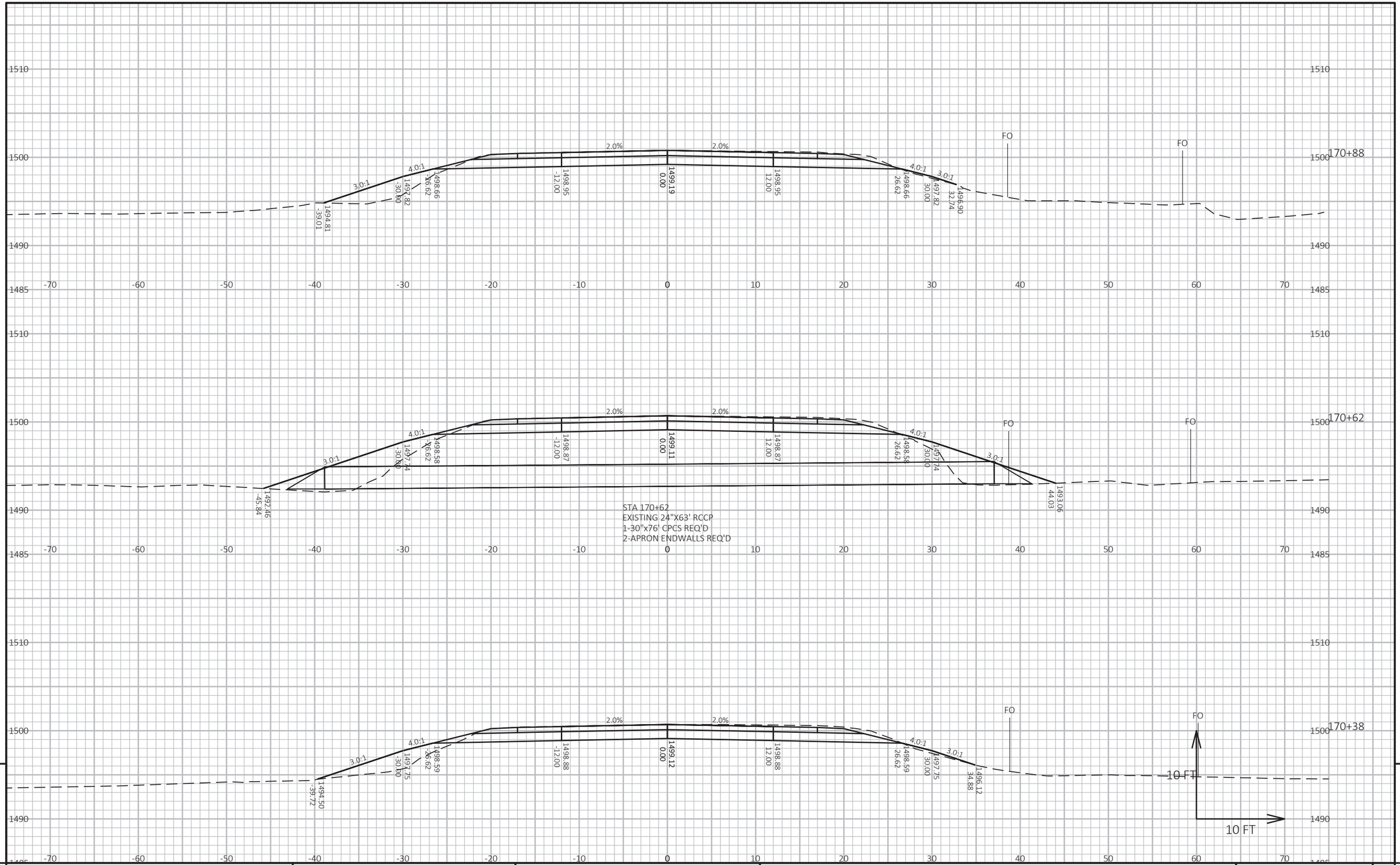
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LAYOUT NAME - XS-4

PLOT DATE : 9/23/2025 6:48 PM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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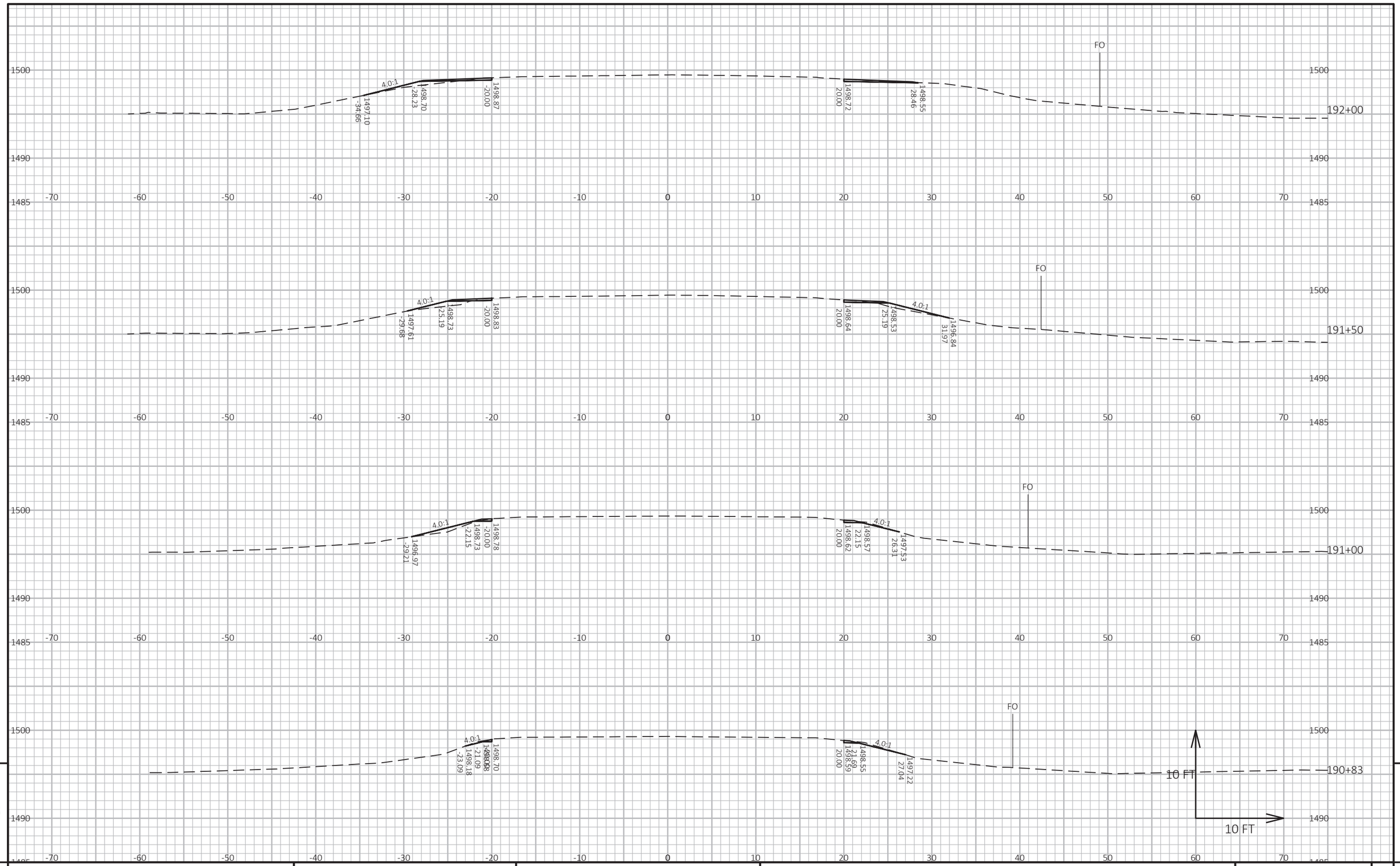
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LAYOUT NAME - XS-5

PLOT DATE : 9/23/2025 6:48 PM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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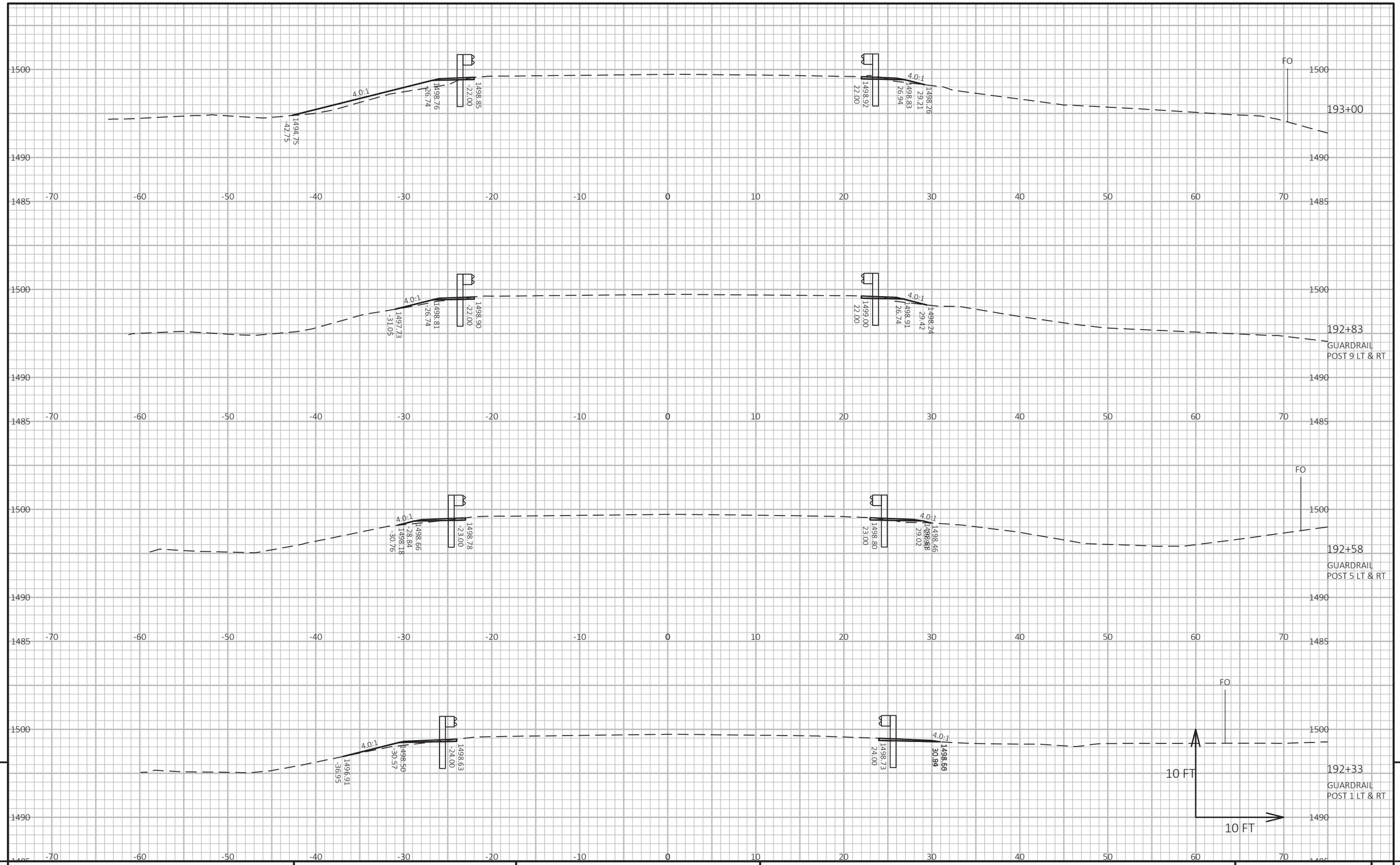
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PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: STH 13	SHEET 185	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-SOUTH.DWG
LAYOUT NAME - XS-6

PLOT DATE : 9/23/2025 6:48 PM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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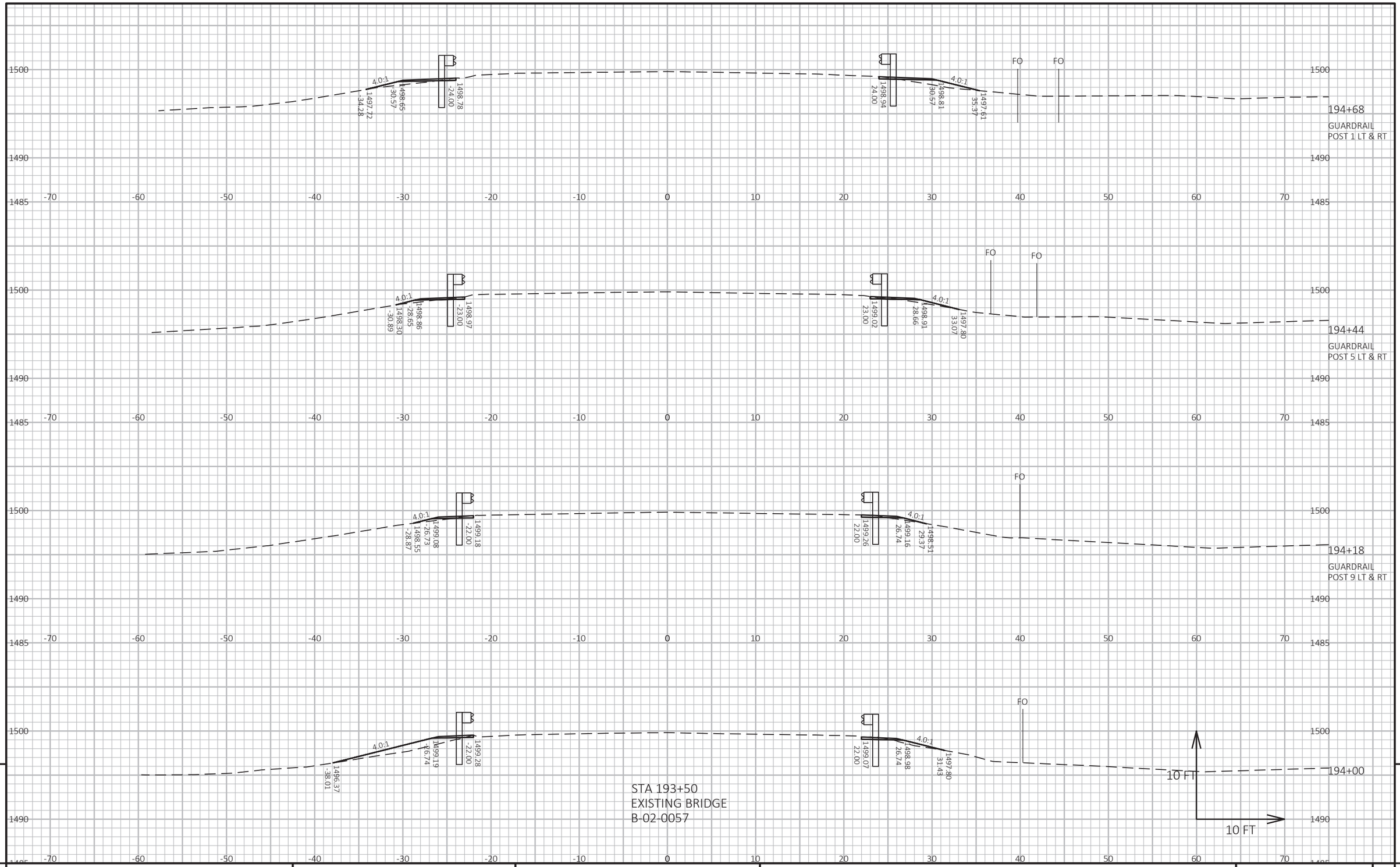
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PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: STH 13	SHEET 186	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-SOUTH.DWG
LAYOUT NAME - XS-7

PLOT DATE : 9/23/2025 6:48 PM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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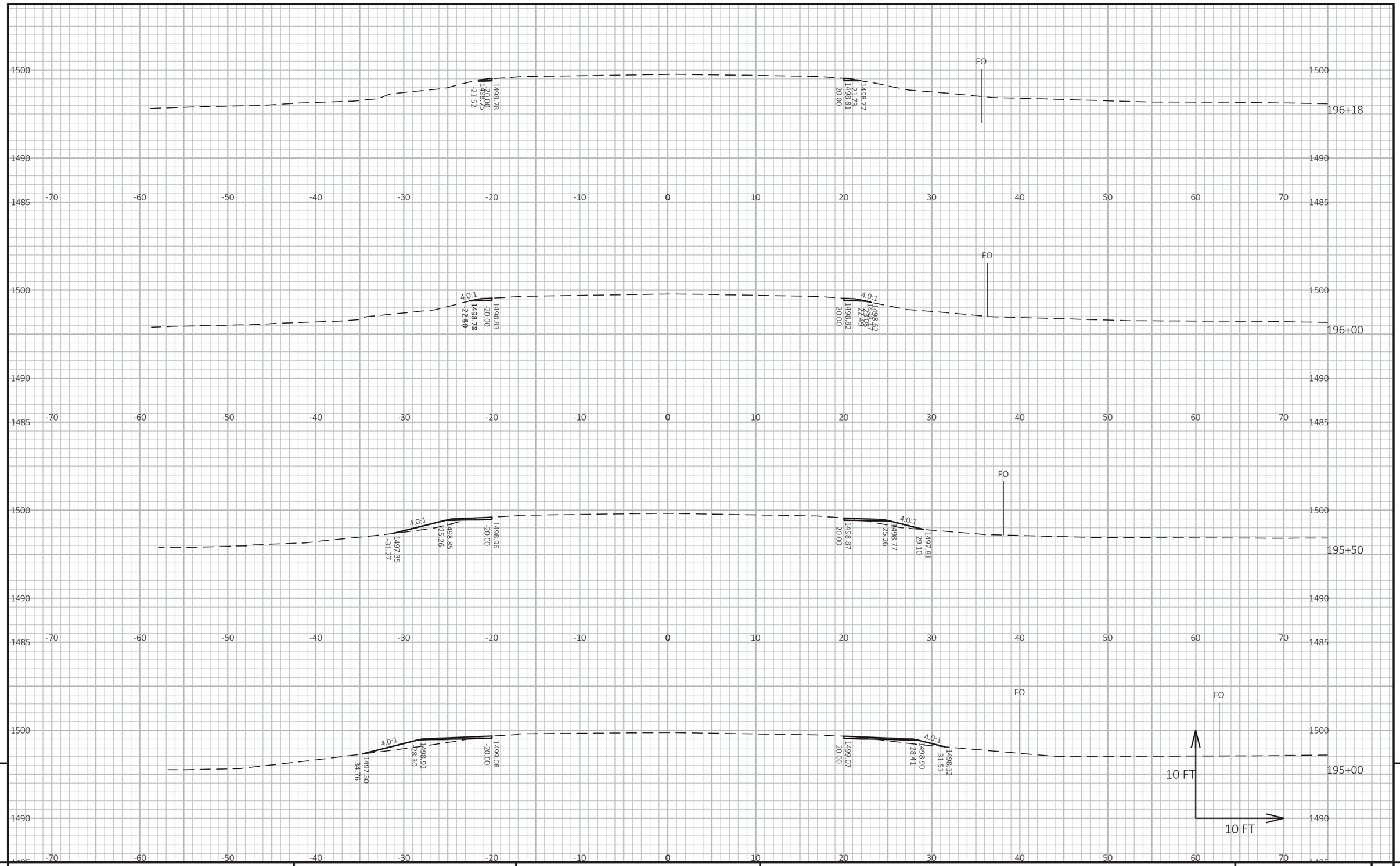
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PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: STH 13	SHEET 187	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-SOUTH.DWG
LAYOUT NAME - XS-8

PLOT DATE : 9/23/2025 6:48 PM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

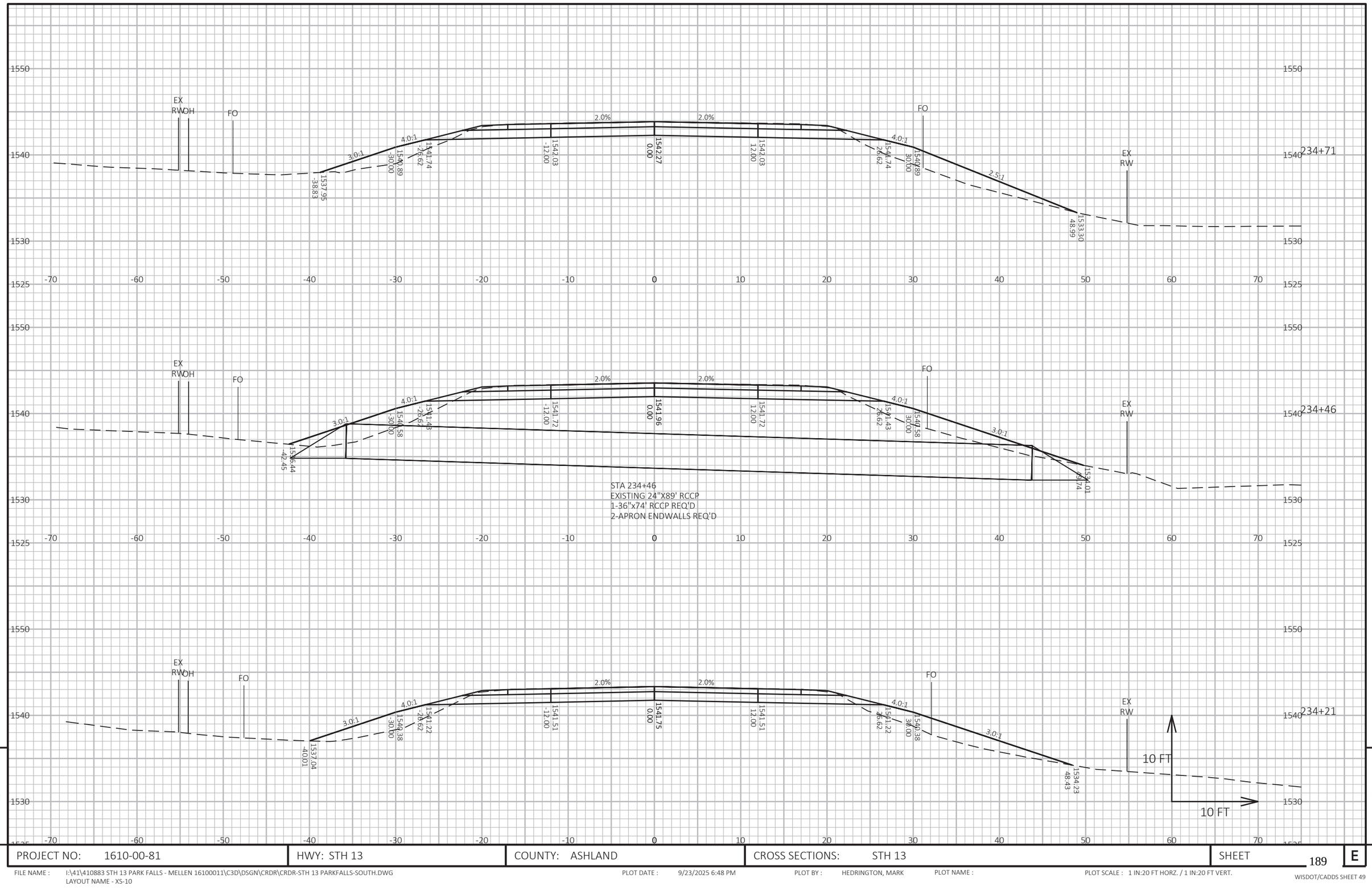


PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: STH 13	SHEET 188	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-SOUTH.DWG
LAYOUT NAME - XS-9

PLOT DATE : 9/23/2025 6:48 PM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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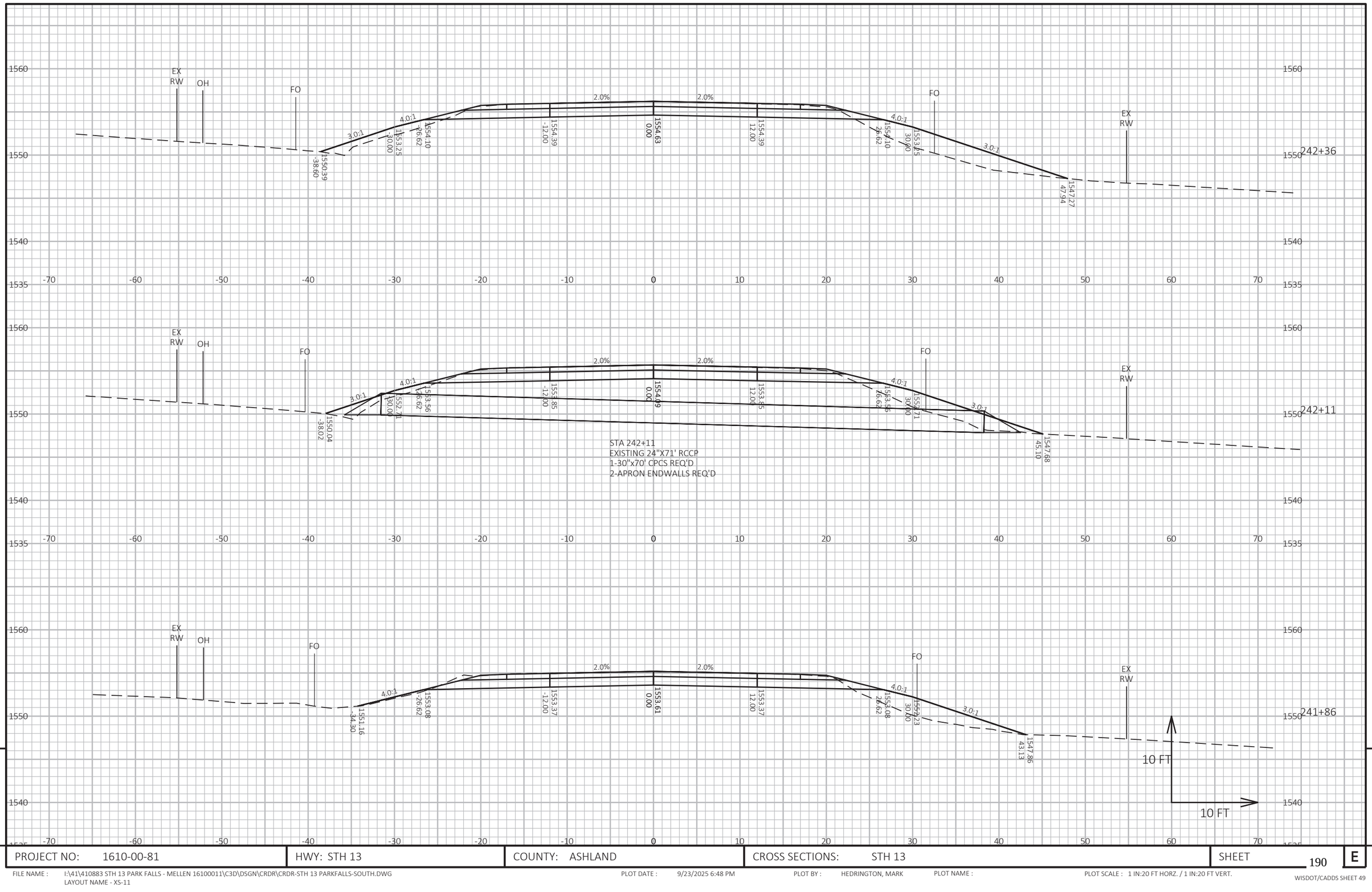
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PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: STH 13	SHEET 189	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-SOUTH.DWG
LAYOUT NAME - XS-10

PLOT DATE : 9/23/2025 6:48 PM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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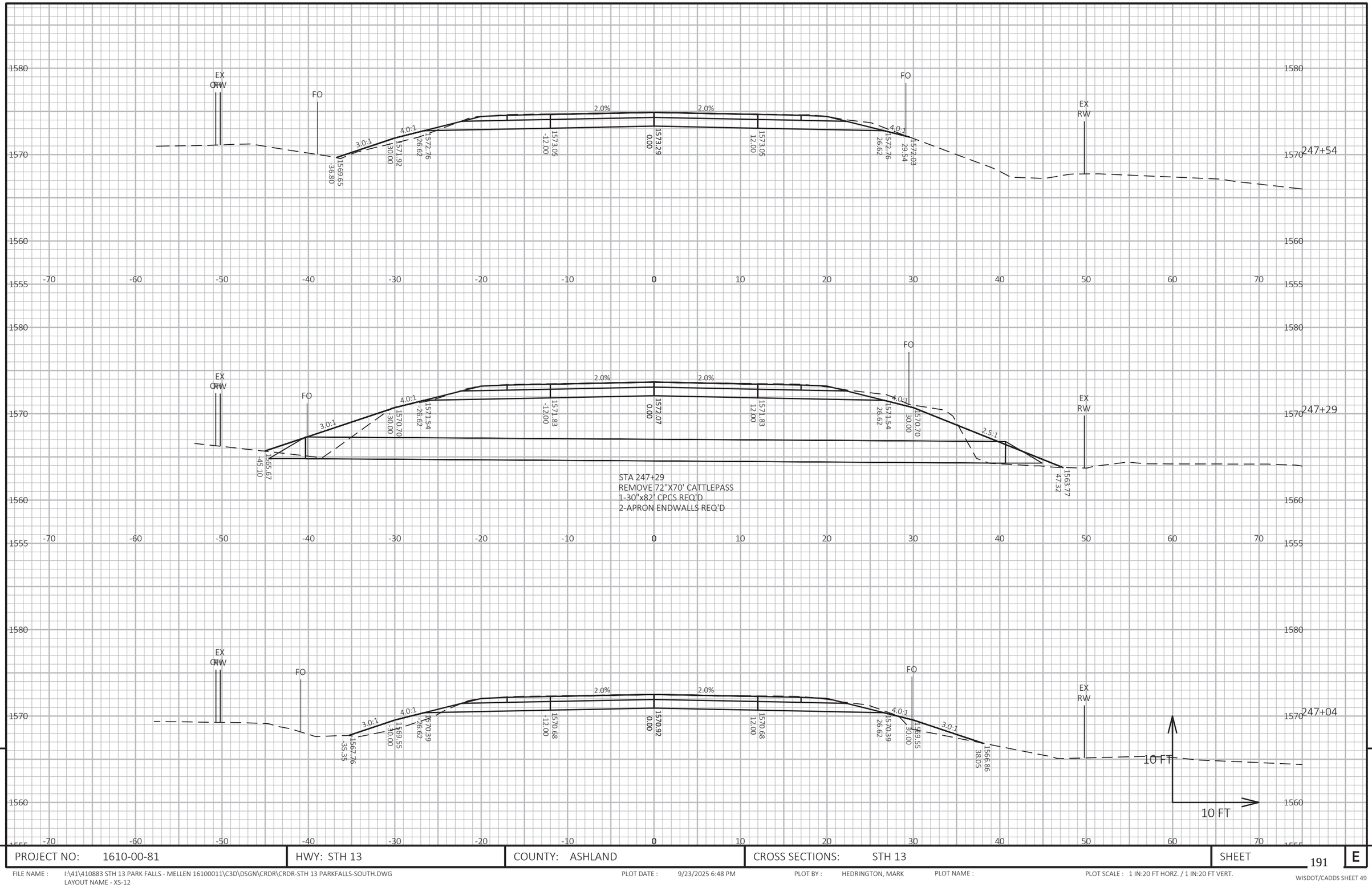
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PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: STH 13	SHEET 190	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-SOUTH.DWG
LAYOUT NAME - XS-11

PLOT DATE : 9/23/2025 6:48 PM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

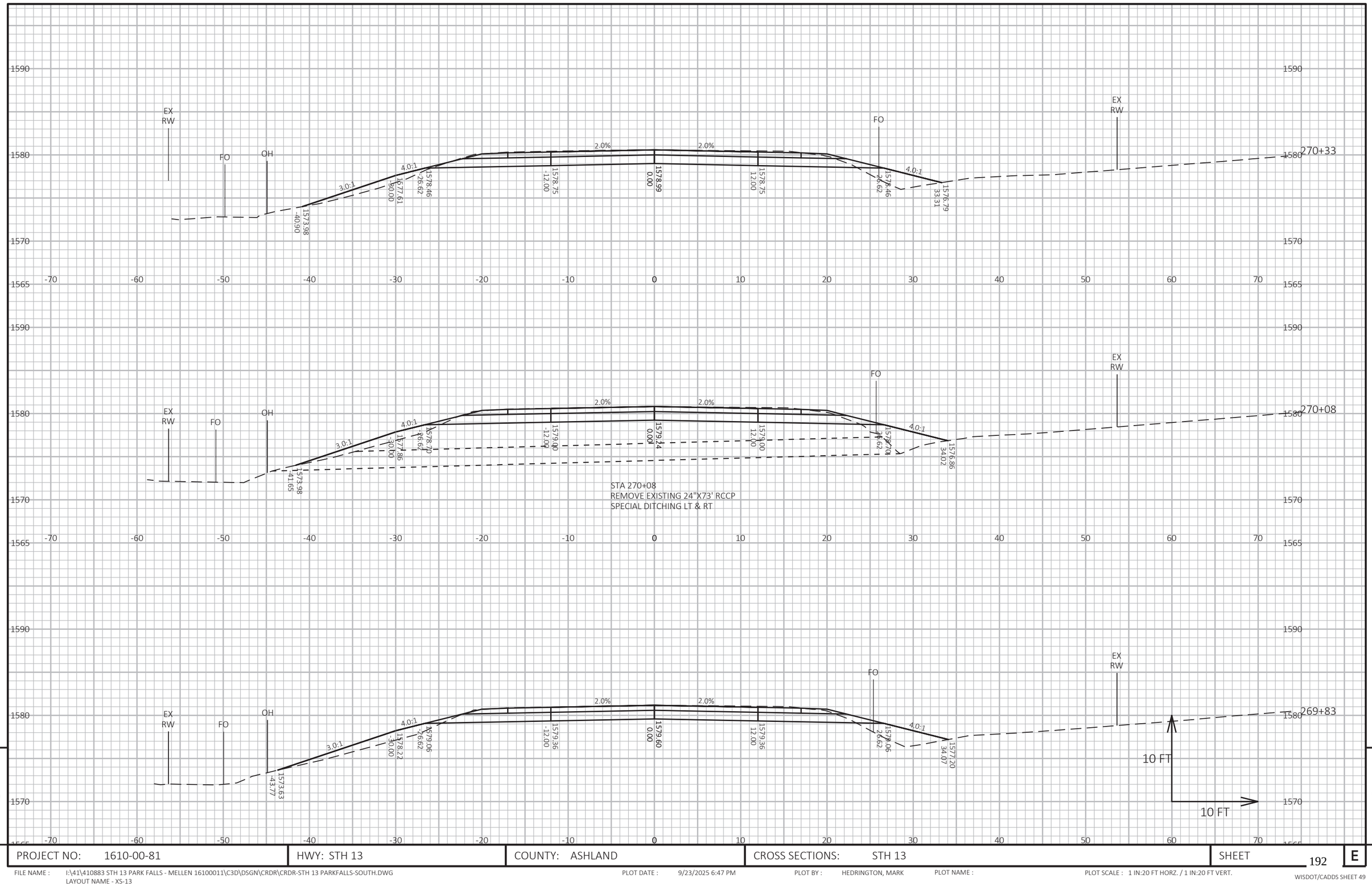


PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: STH 13	SHEET 191 E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-SOUTH.DWG
LAYOUT NAME - XS-12

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WISDOT/CADDS SHEET 49



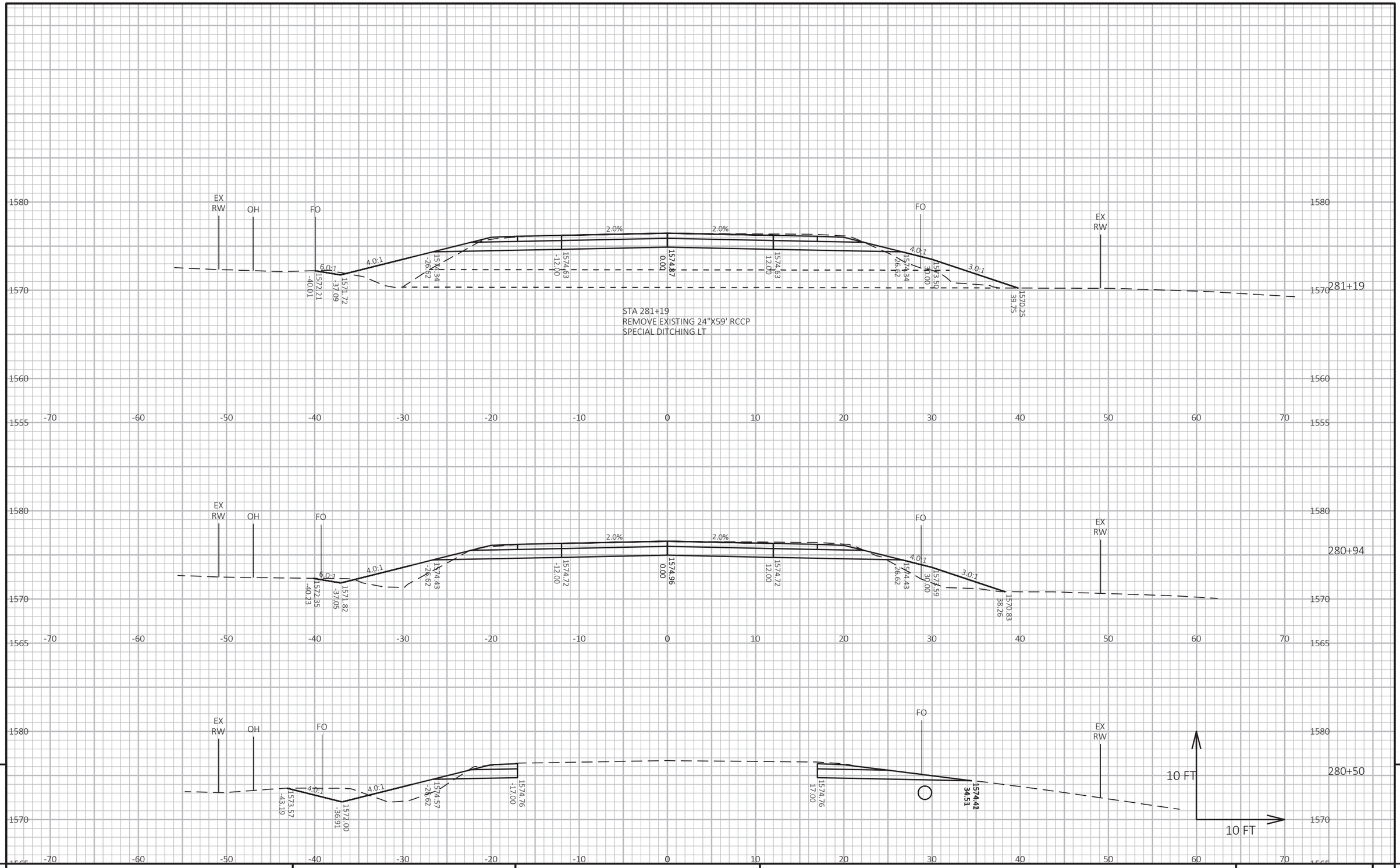
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PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: STH 13	SHEET 192 E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-SOUTH.DWG
LAYOUT NAME - XS-13

PLOT DATE : 9/23/2025 6:47 PM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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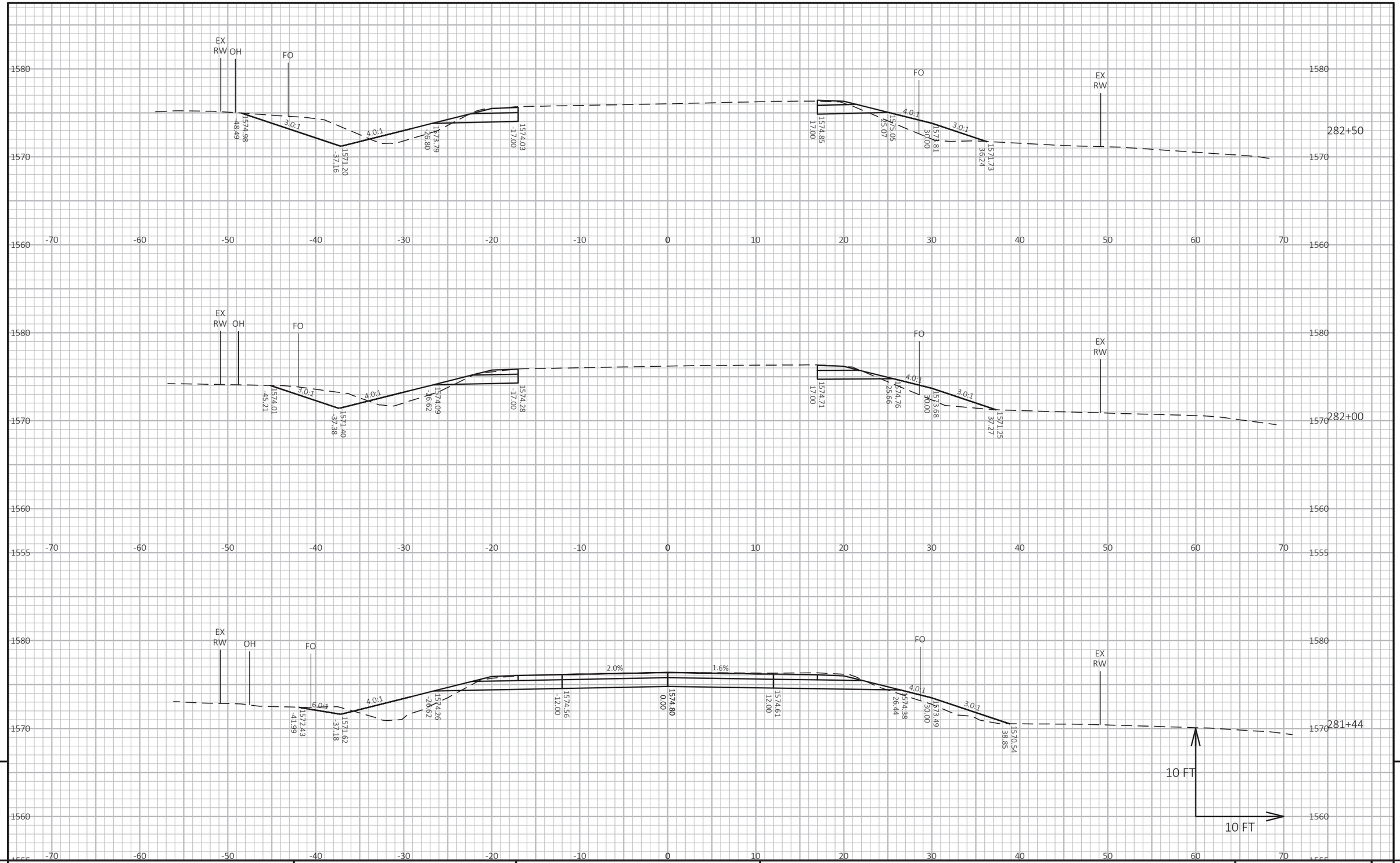
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PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: STH 13	SHEET 193	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-SOUTH.DWG
LAYOUT NAME - XS-14

PLOT DATE : 9/23/2025 6:47 PM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: STH 13	SHEET 194	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-SOUTH.DWG
LAYOUT NAME - XS-15

PLOT DATE : 9/23/2025 6:47 PM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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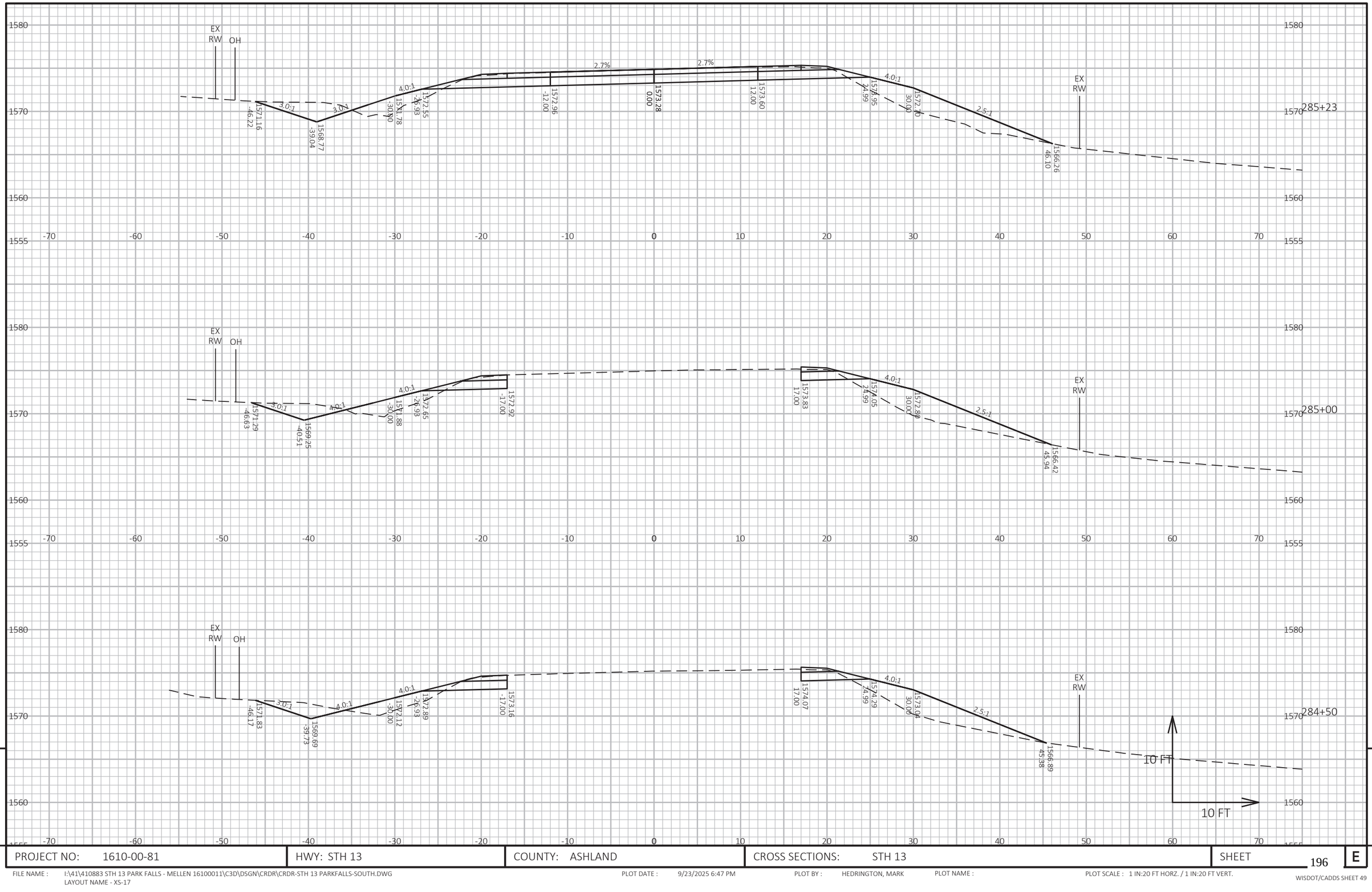
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FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-SOUTH.DWG
LAYOUT NAME - XS-16

PLOT DATE : 9/23/2025 6:47 PM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

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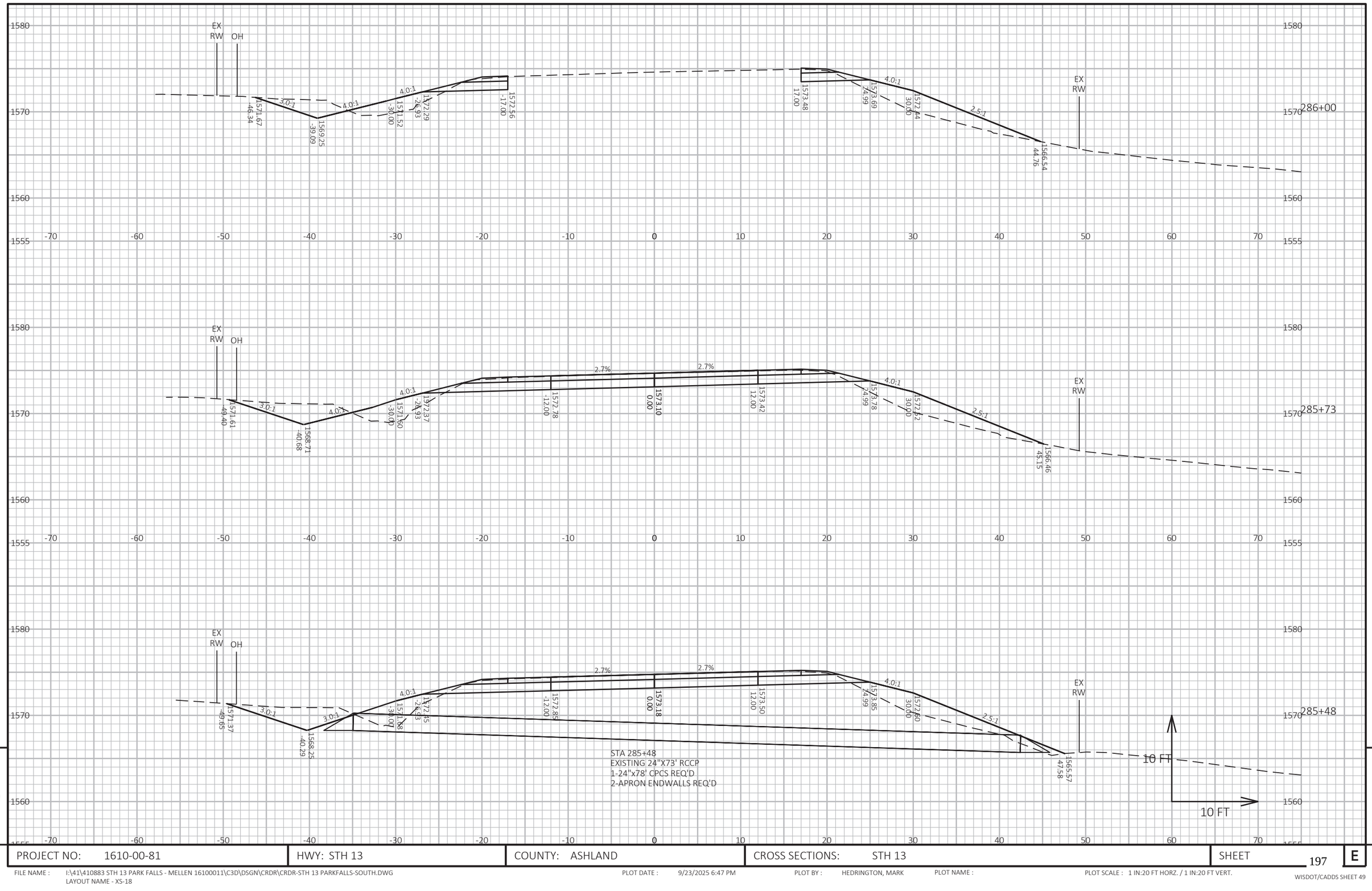


PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: STH 13	SHEET 196	E

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LAYOUT NAME - XS-17

PLOT DATE : 9/23/2025 6:47 PM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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9

PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: STH 13	SHEET 197	E

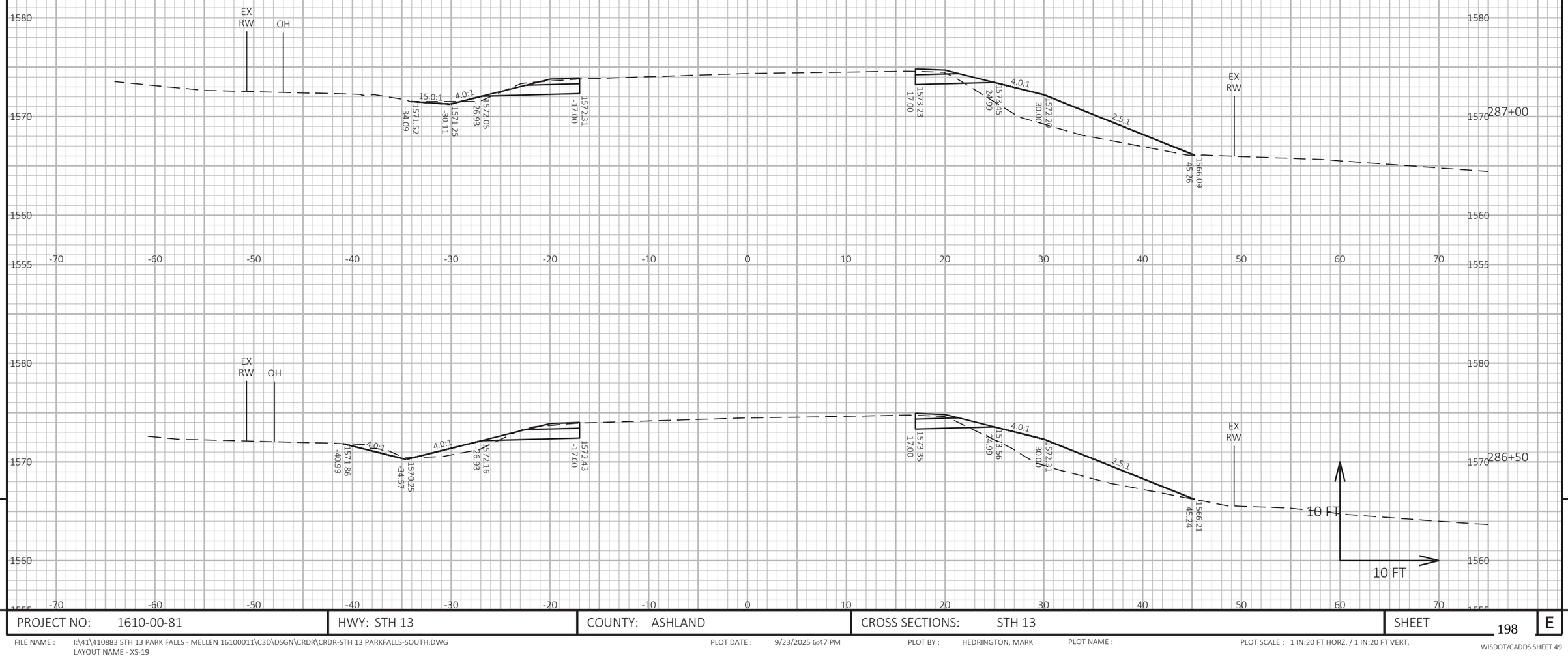
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LAYOUT NAME - XS-18

PLOT DATE : 9/23/2025 6:47 PM

PLOT BY : HEDRINGTON, MARK

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

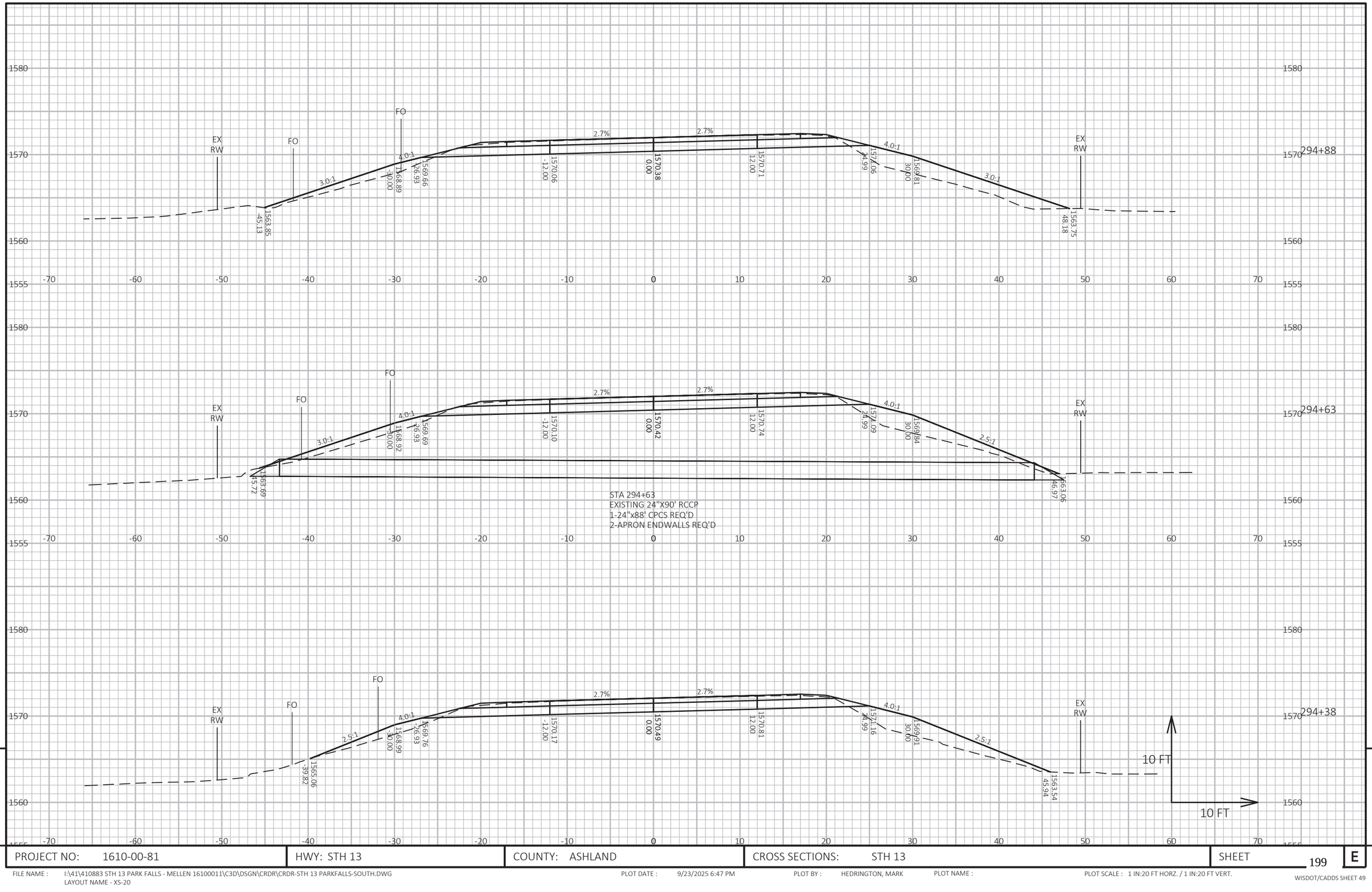


PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: STH 13	SHEET 198	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-SOUTH.DWG
LAYOUT NAME - XS-19

PLOT DATE : 9/23/2025 6:47 PM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: STH 13	SHEET 199	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-SOUTH.DWG
LAYOUT NAME - XS-20

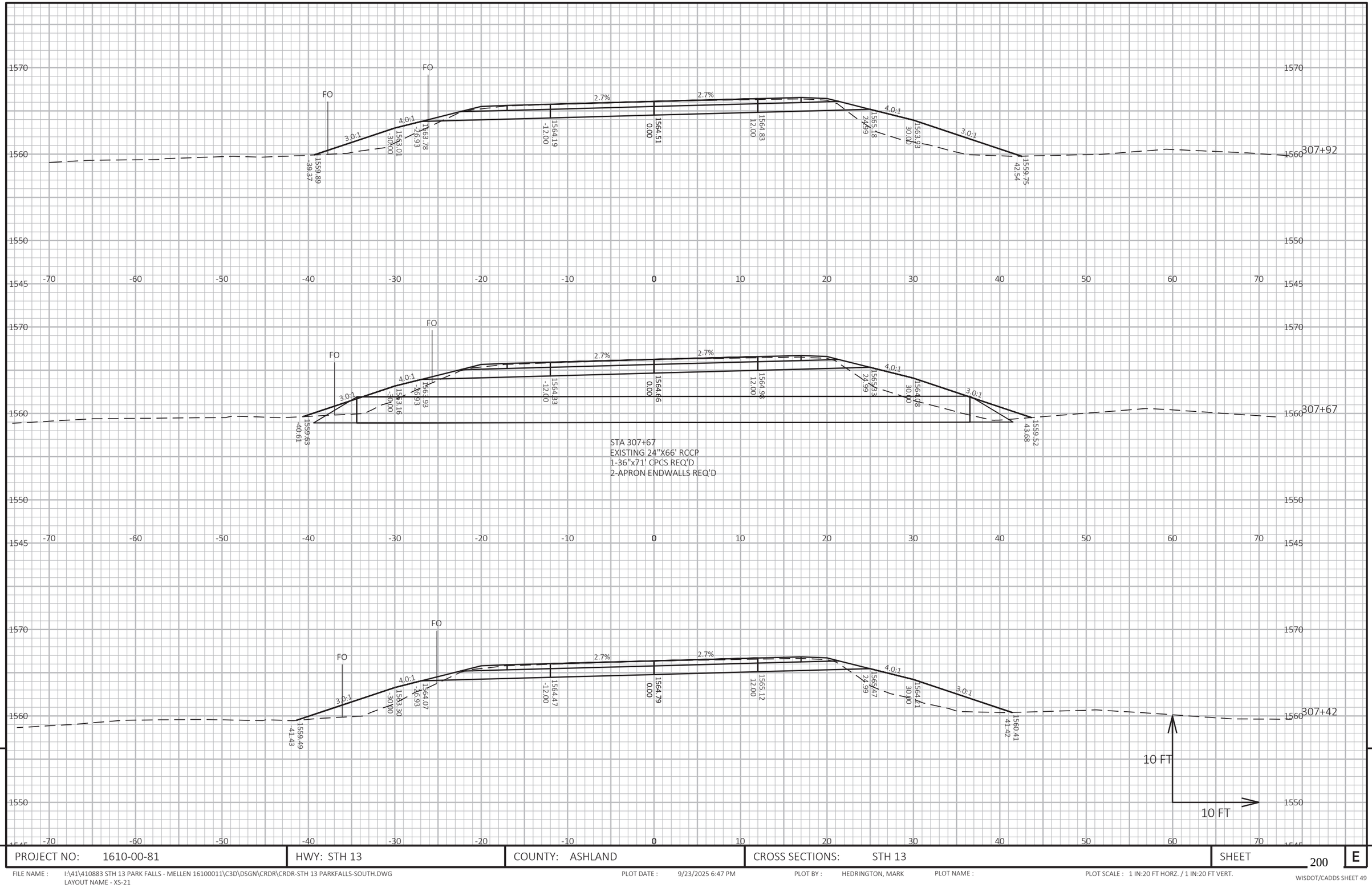
PLOT DATE : 9/23/2025 6:47 PM

PLOT BY : HEDRINGTON, MARK

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

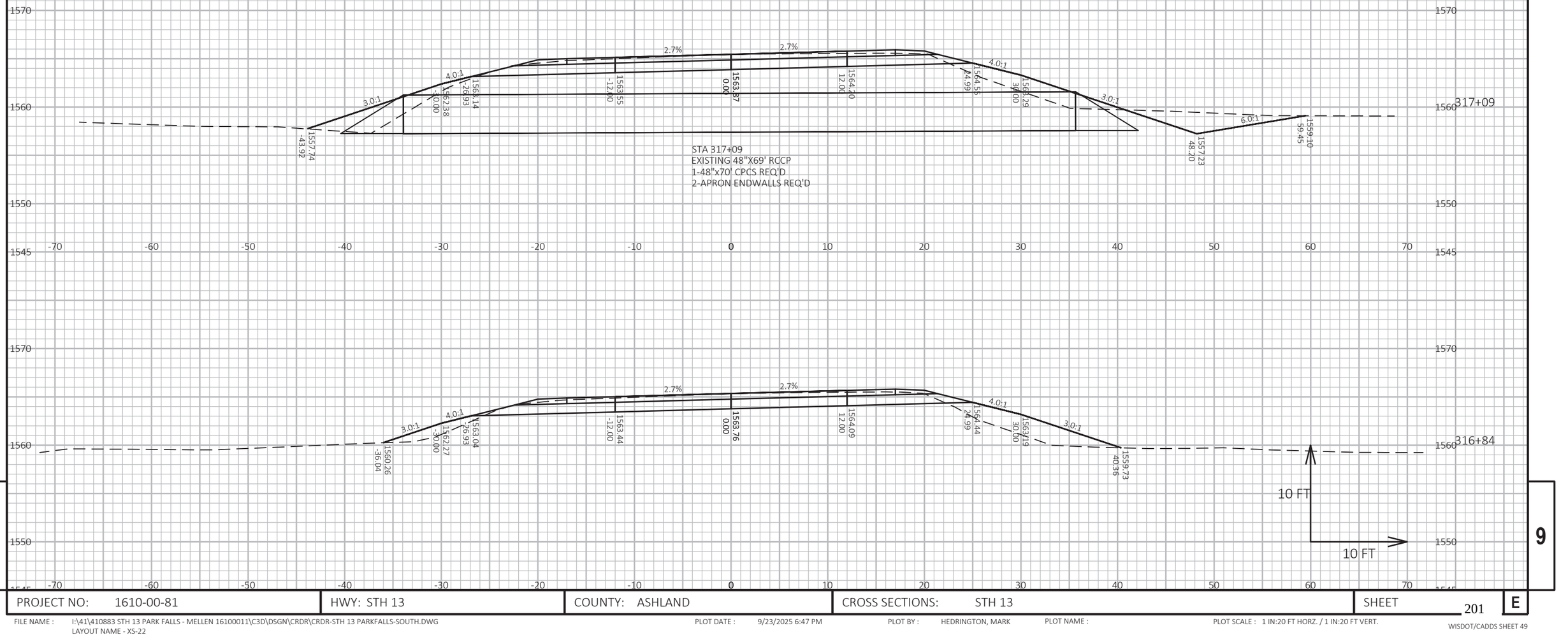
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PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: STH 13	SHEET 200	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-SOUTH.DWG
LAYOUT NAME - XS-21

PLOT DATE : 9/23/2025 6:47 PM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



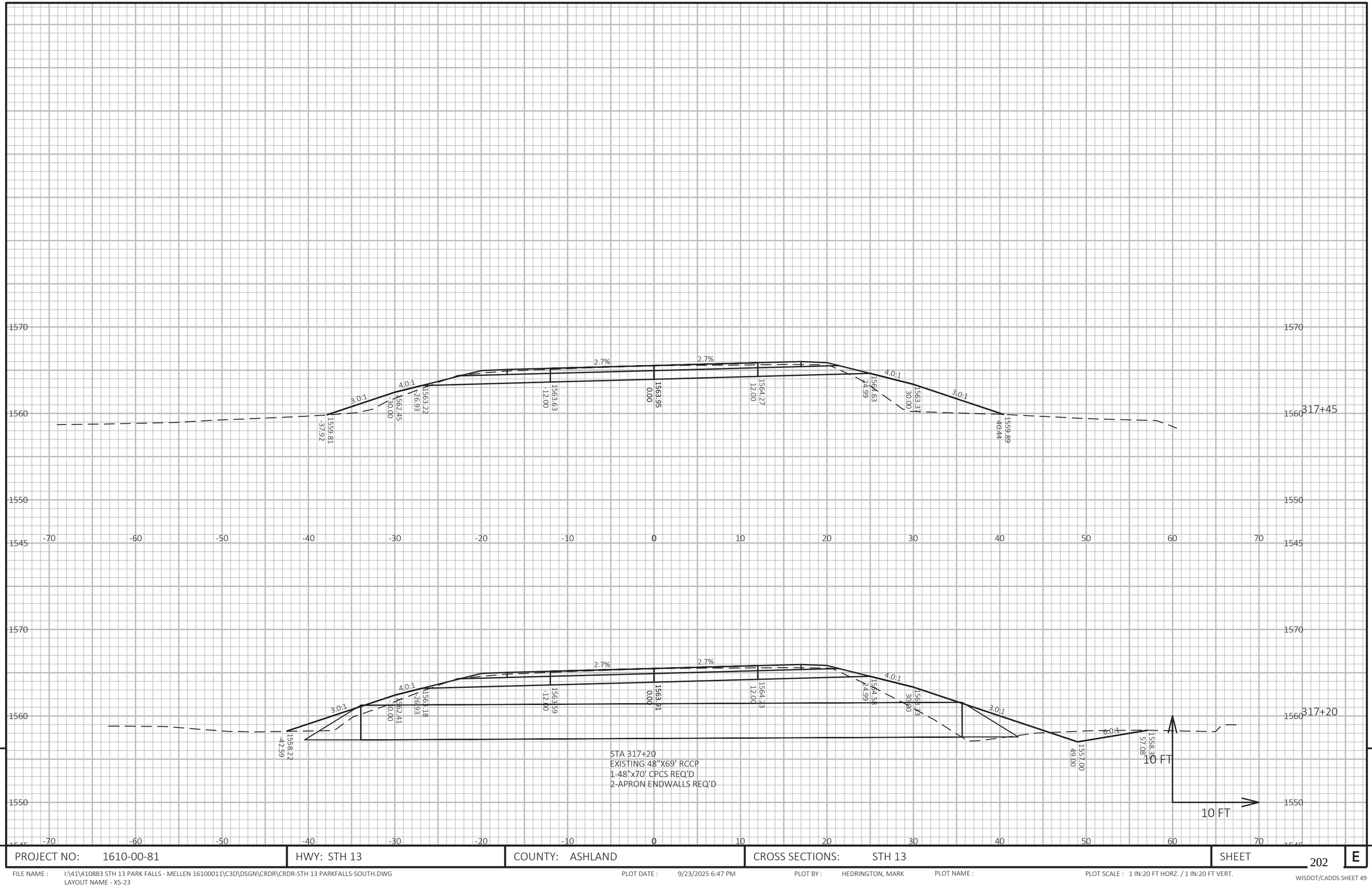
9

9

PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: STH 13	SHEET 201	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-SOUTH.DWG
LAYOUT NAME - XS-22

PLOT DATE : 9/23/2025 6:47 PM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



9

9

PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: STH 13	SHEET 202	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-SOUTH.DWG
LAYOUT NAME - XS-23

PLOT DATE : 9/23/2025 6:47 PM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

9

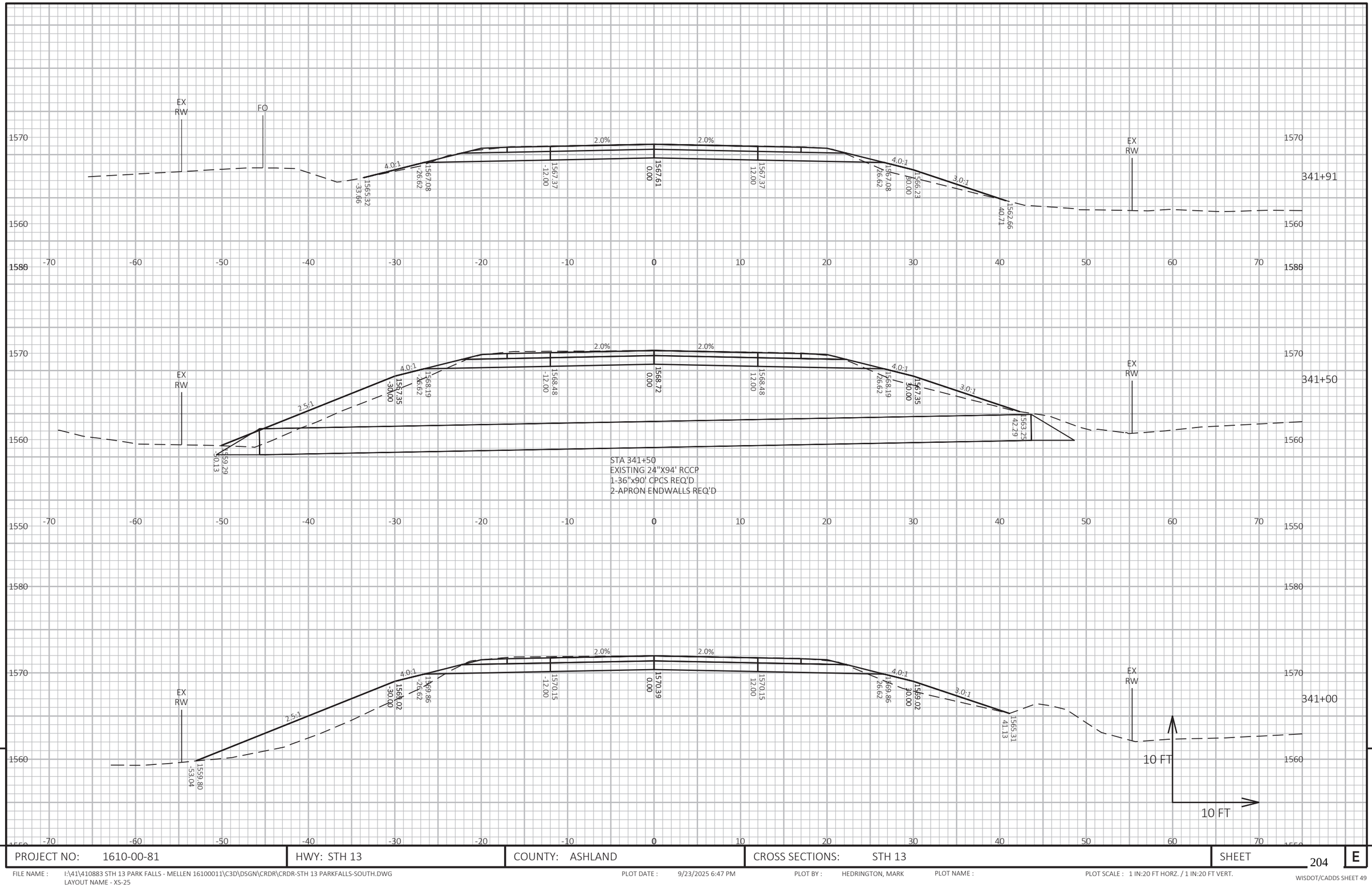
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PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: STH 13	SHEET 203	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-SOUTH.DWG
LAYOUT NAME - XS-24

PLOT DATE : 9/23/2025 6:47 PM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

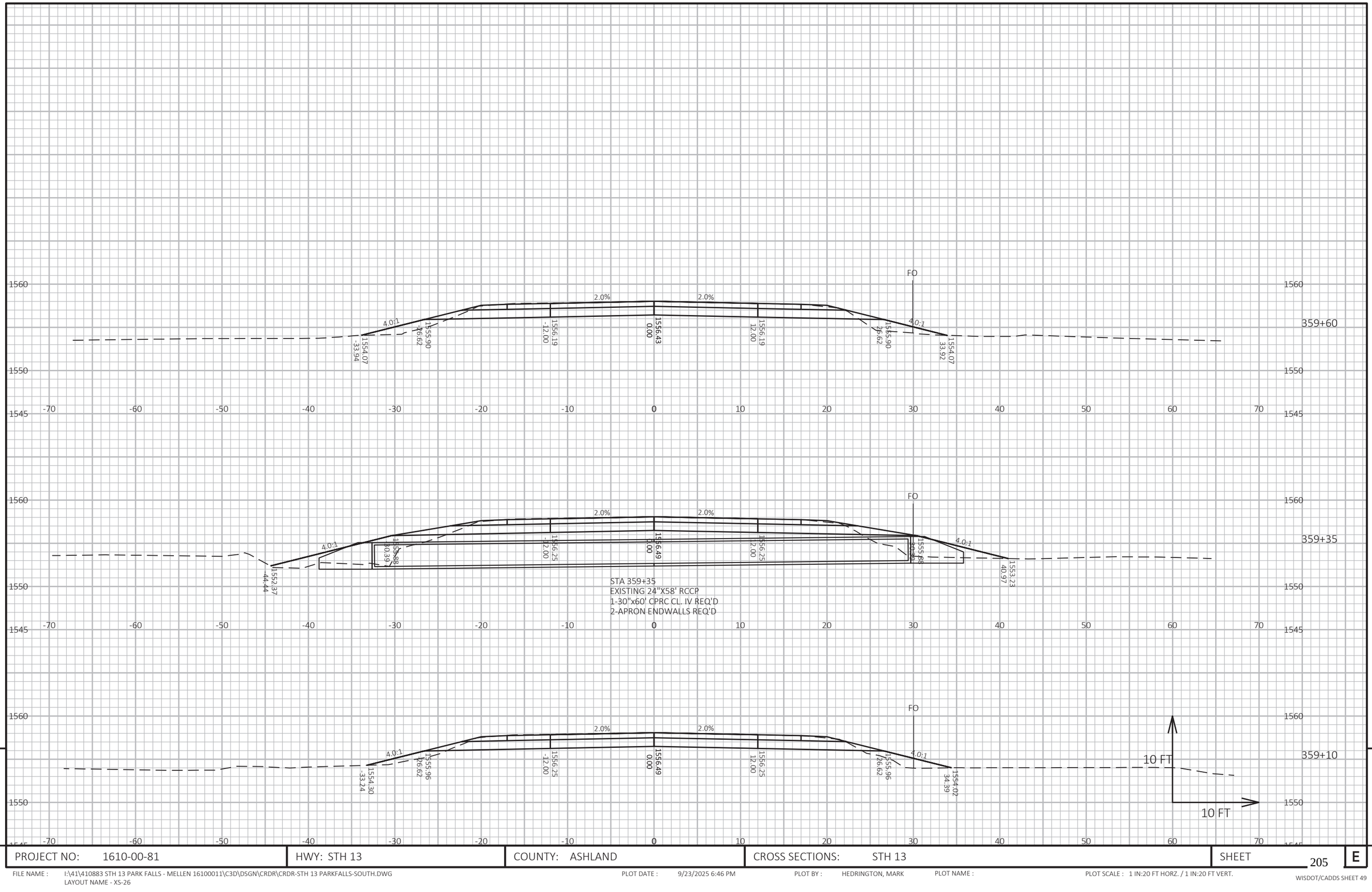
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PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: STH 13	SHEET 204	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-SOUTH.DWG
LAYOUT NAME - XS-25

PLOT DATE : 9/23/2025 6:47 PM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

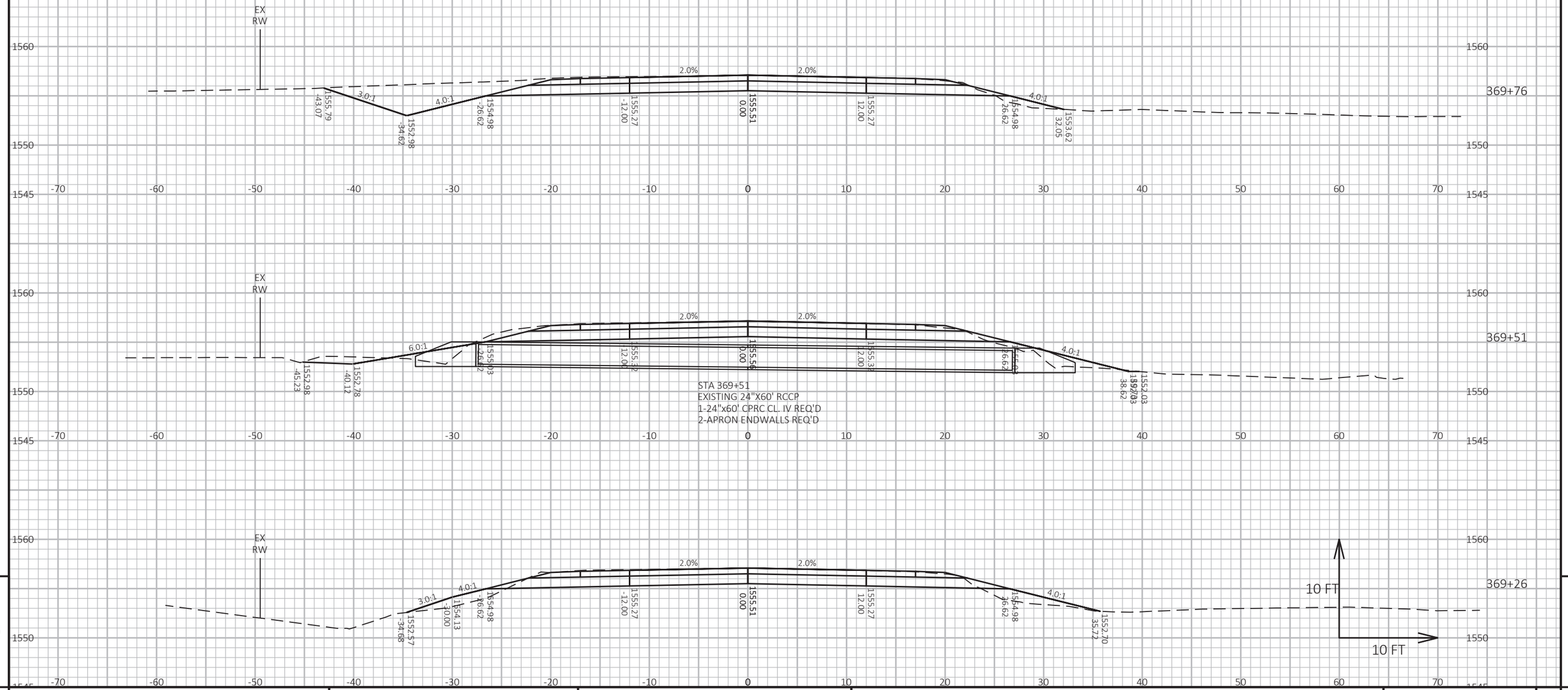
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PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: STH 13	SHEET 205	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-SOUTH.DWG
LAYOUT NAME - XS-26

PLOT DATE : 9/23/2025 6:46 PM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

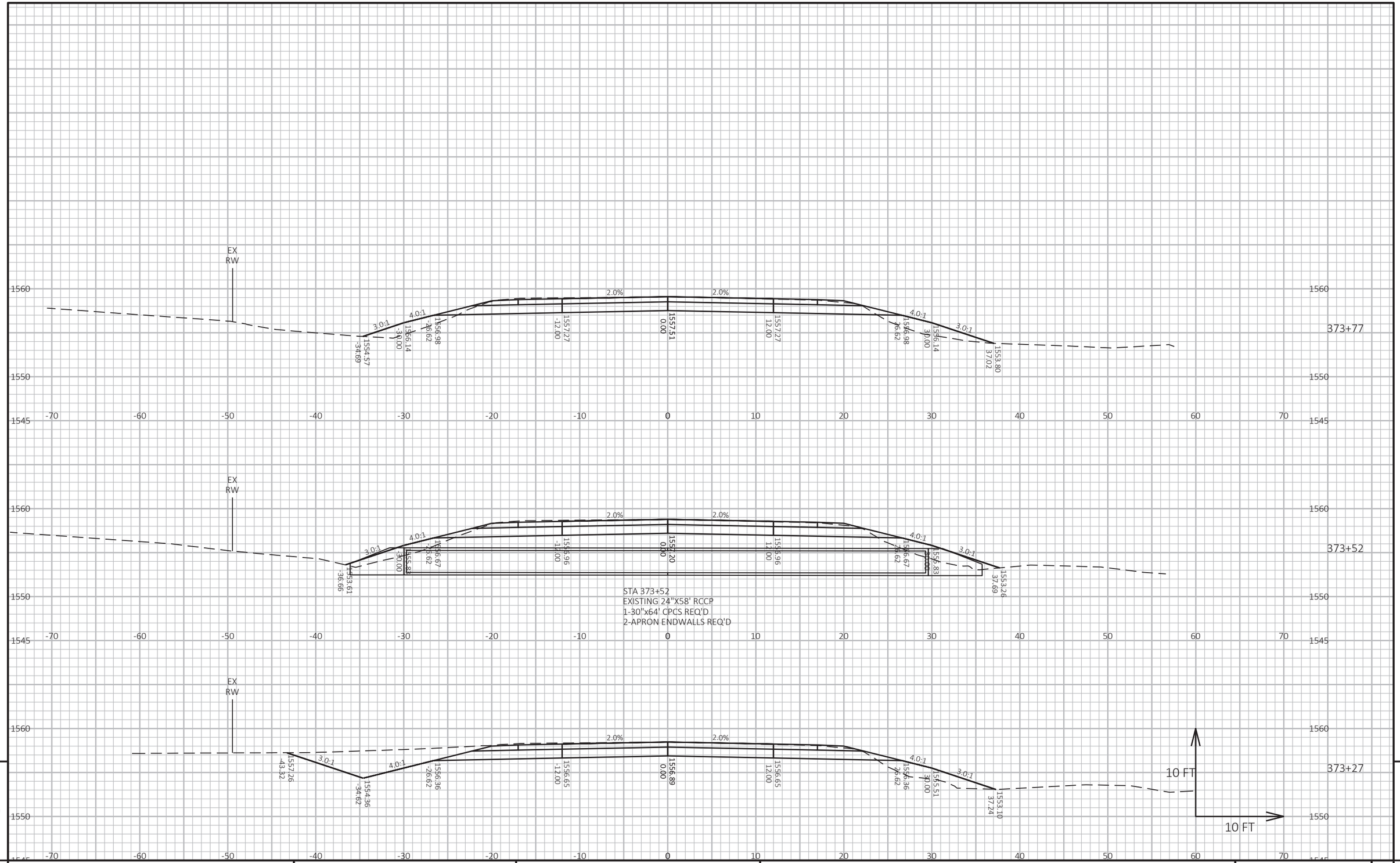
9

PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: STH 13	SHEET 206	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-SOUTH.DWG
LAYOUT NAME - XS-27

PLOT DATE : 9/23/2025 6:46 PM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

9

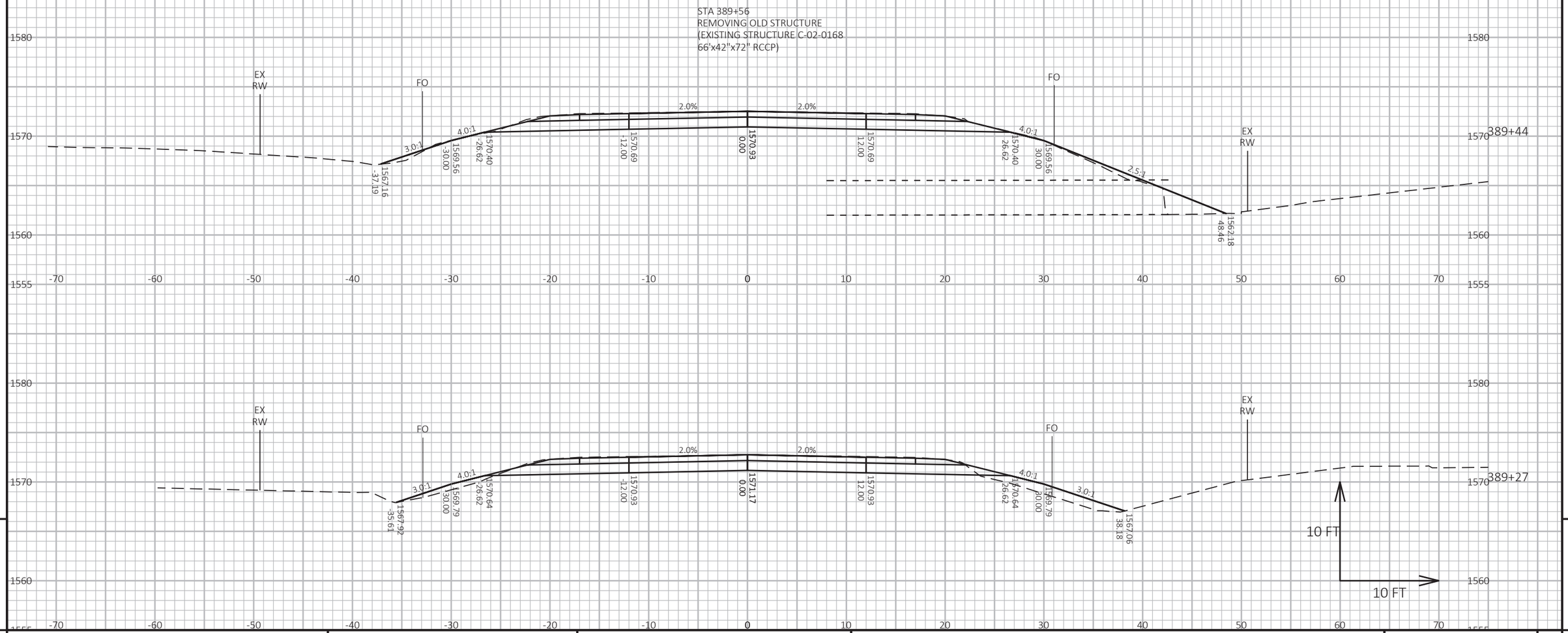
PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: STH 13	SHEET 207	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-SOUTH.DWG
LAYOUT NAME - XS-28

PLOT DATE : 9/23/2025 6:46 PM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

STA 389+56
REMOVING OLD STRUCTURE
(EXISTING STRUCTURE C-02-0168
66'x42"x72" RCCP)

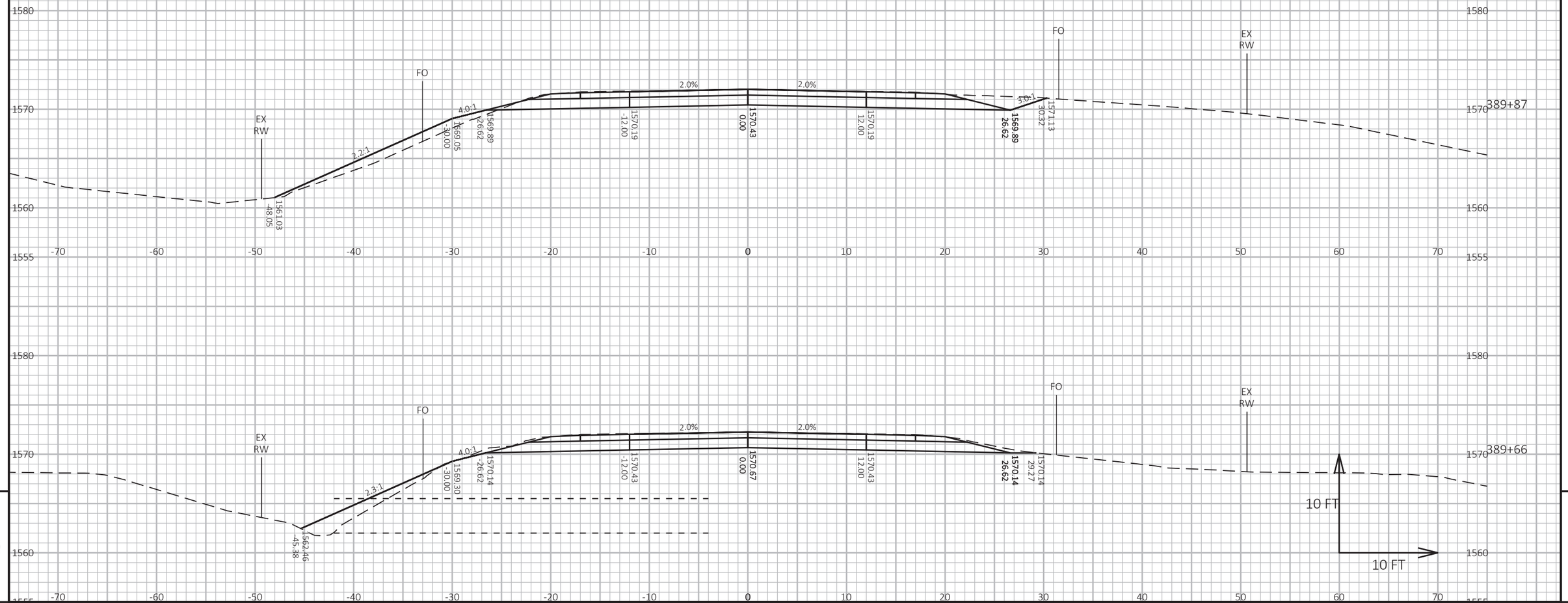


9 9

PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: STH 13	SHEET 208	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-SOUTH.DWG
LAYOUT NAME - XS-29

PLOT DATE : 9/23/2025 6:46 PM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



9

9

PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: STH 13	SHEET 209	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-SOUTH.DWG
LAYOUT NAME - XS-30

PLOT DATE : 9/23/2025 6:46 PM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

9

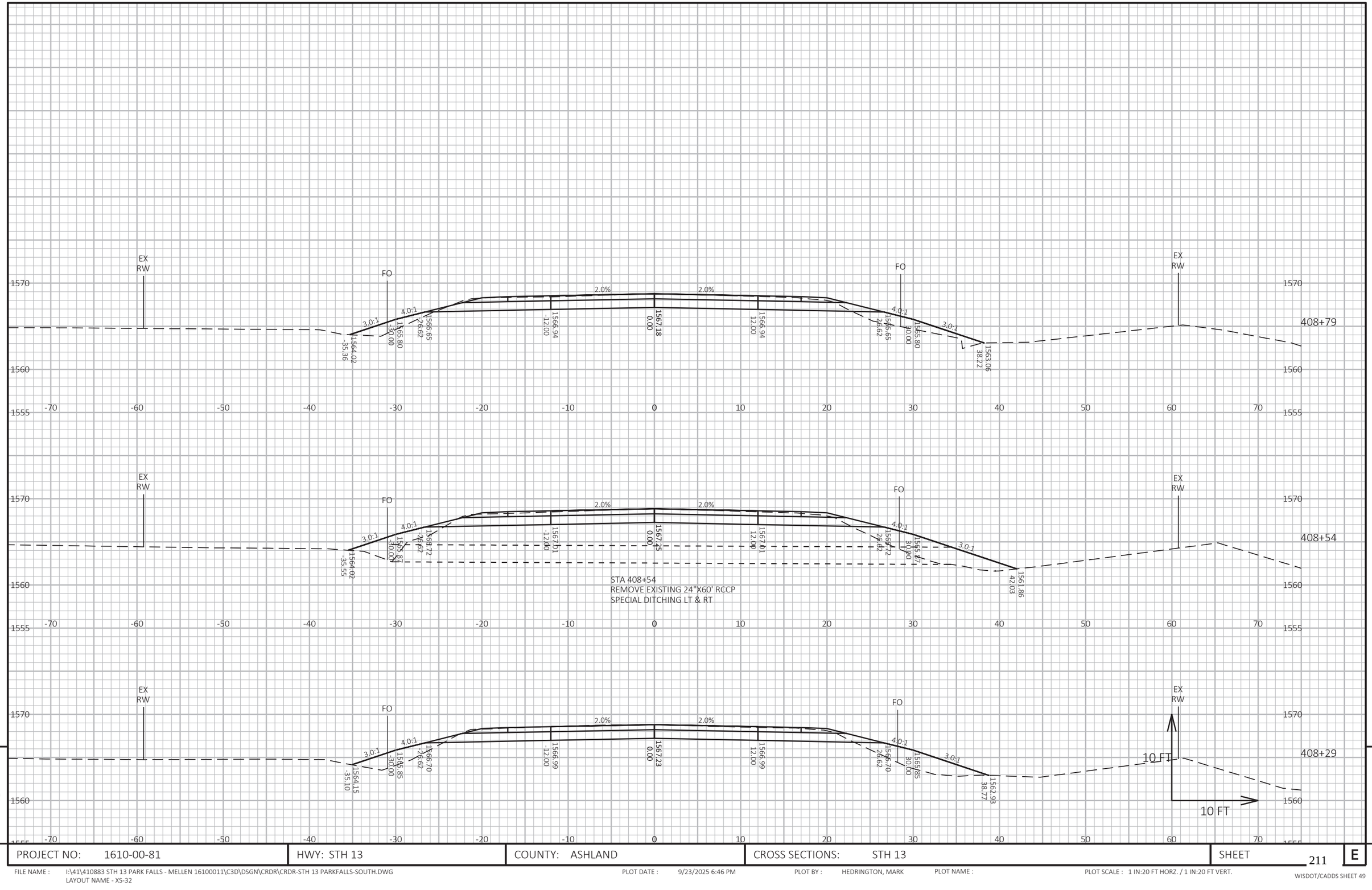
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PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: STH 13	SHEET 210	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-SOUTH.DWG
LAYOUT NAME - XS-31

PLOT DATE : 9/23/2025 6:46 PM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

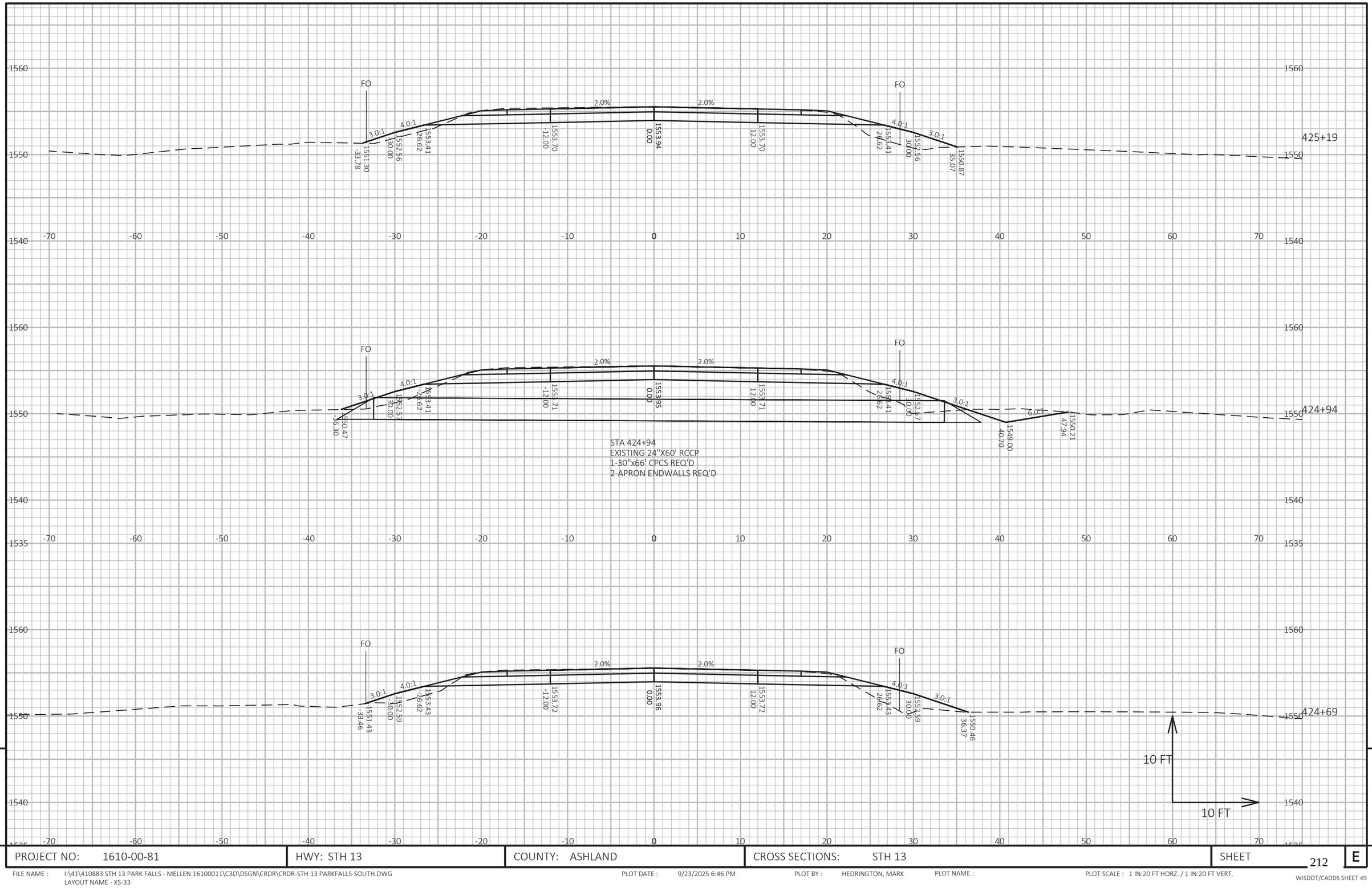


PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: STH 13	SHEET 211	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-SOUTH.DWG
LAYOUT NAME - XS-32

PLOT DATE : 9/23/2025 6:46 PM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

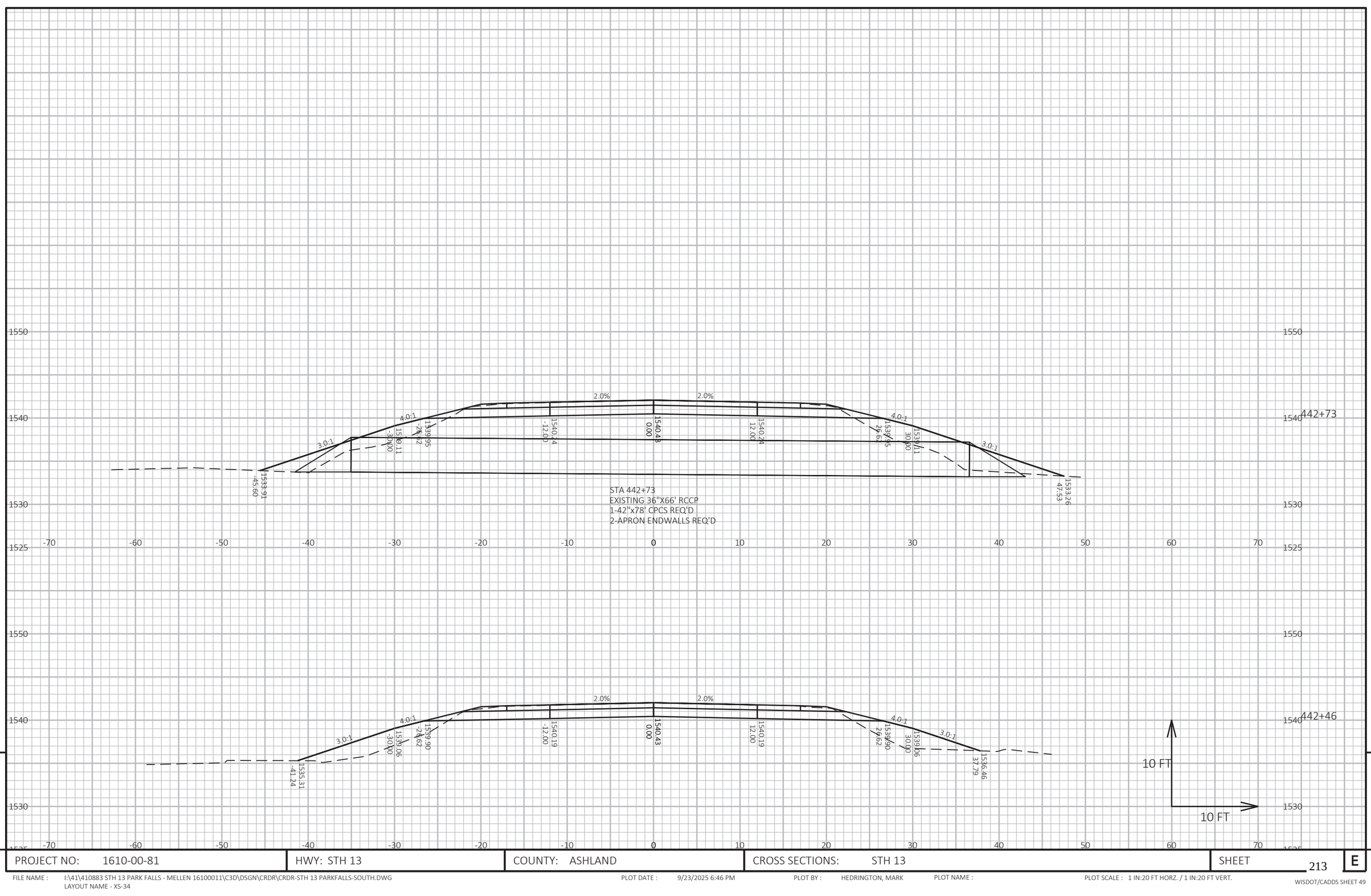


PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: STH 13	SHEET 212	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-SOUTH.DWG
LAYOUT NAME - XS-33

PLOT DATE : 9/23/2025 6:46 PM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

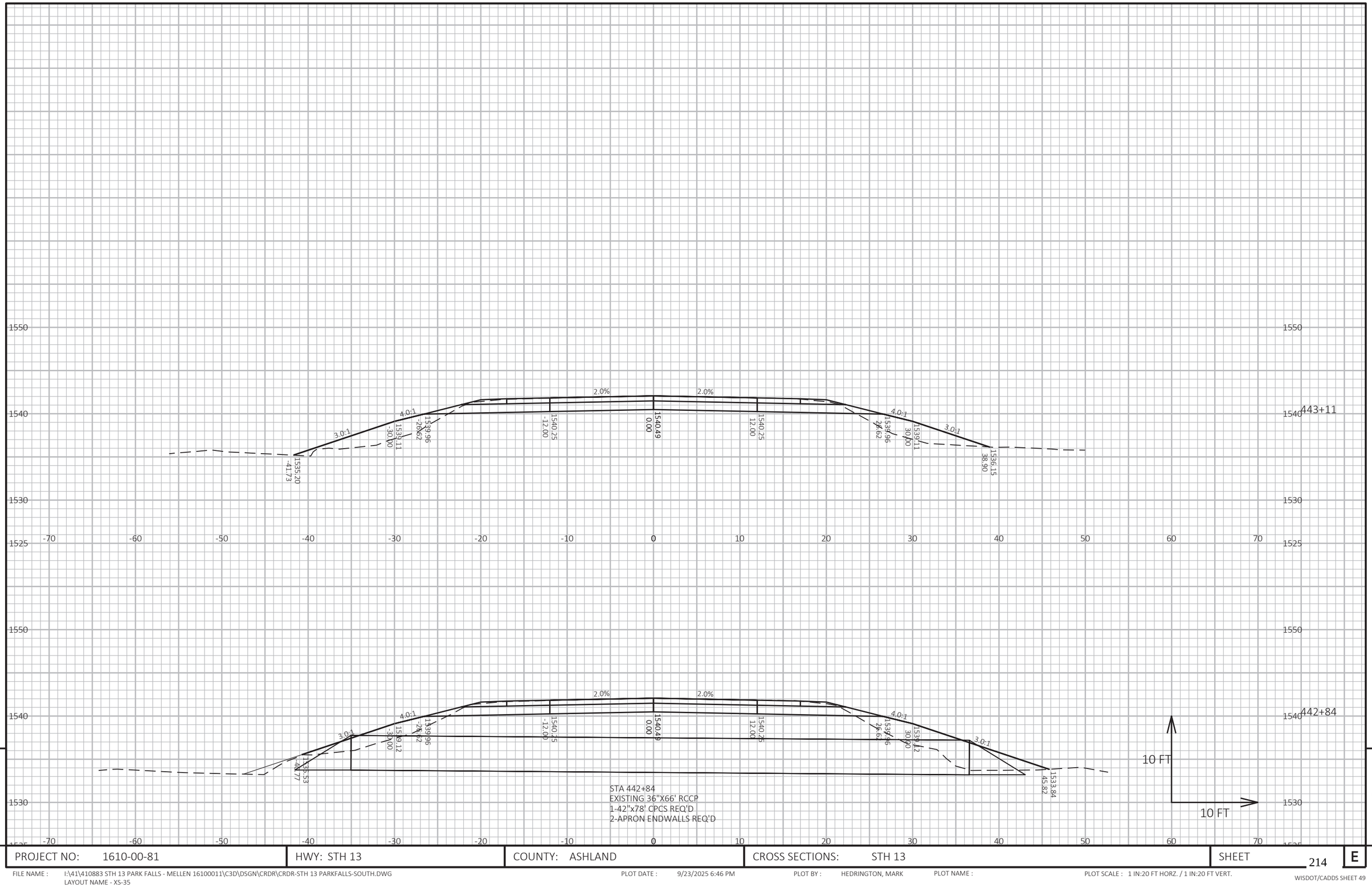
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PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: STH 13	SHEET 213	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-SOUTH.DWG
LAYOUT NAME - XS-34

PLOT DATE : 9/23/2025 6:46 PM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: STH 13	SHEET 214	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-SOUTH.DWG
LAYOUT NAME - XS-35

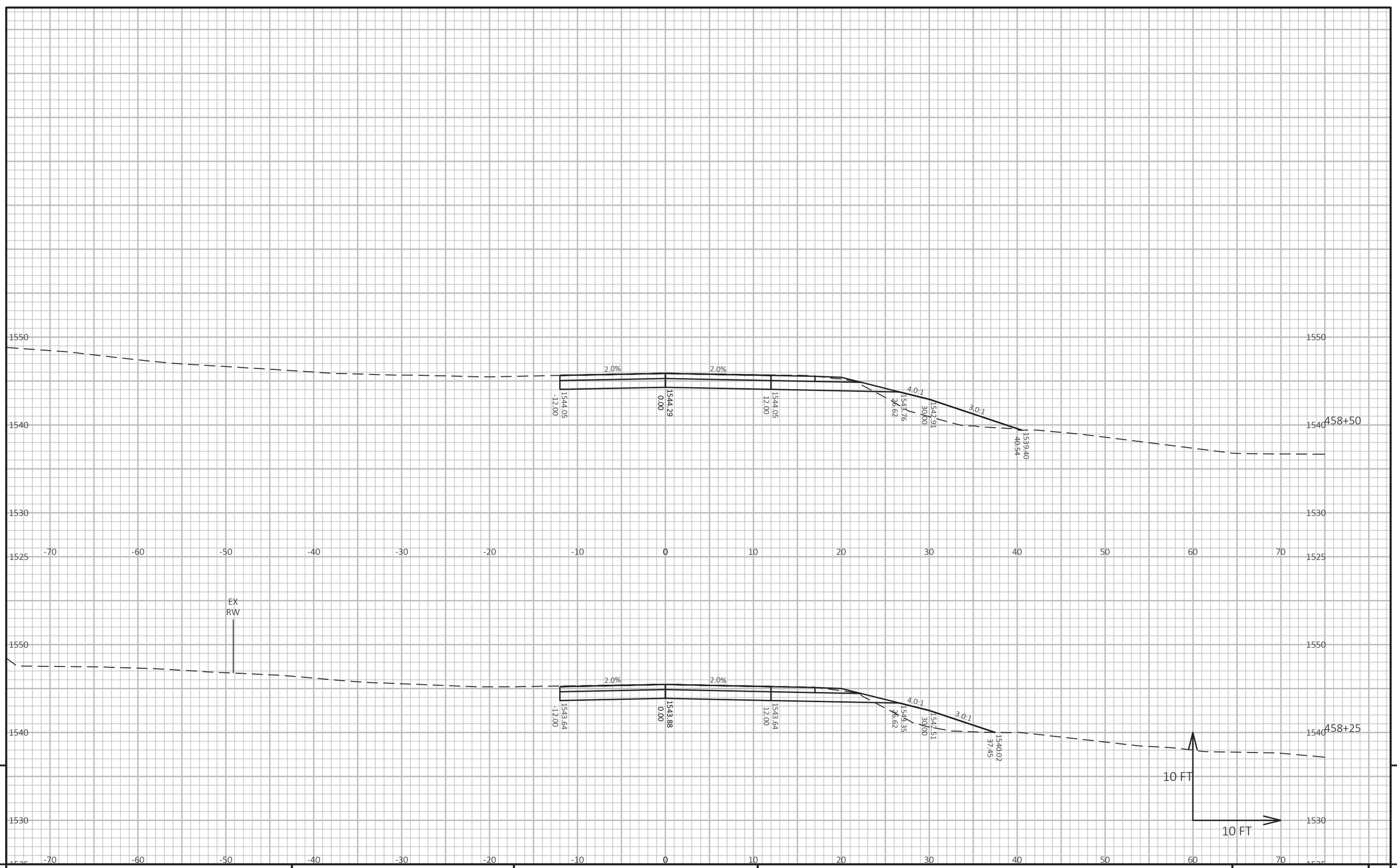
PLOT DATE : 9/23/2025 6:46 PM

PLOT BY : HEDRINGTON, MARK

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: STH 13	SHEET 215	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-SOUTH.DWG
LAYOUT NAME - XS-36

PLOT DATE : 9/23/2025 6:46 PM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

459+00

1560
1550
1540
1530
1525

-70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70

4.0:1
3.0:1
2.0%
1545.82
41.69
1542.22
-34.50
1544.17
26.62
1543.72
30.00
1544.86
-12.00
1545.10
0.00
1544.86
12.00
1544.57
26.62
1543.72
30.00
1539.73
41.96

STA 458+88
EXISTING 24"X72' RCCP
1-24"x70' CPRC REQ'D
SKEW 22^ LHF
2-APRON ENDWALLS REQ'D

458+75

1560
1550
1540
1530
1525

-70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70

4.0:1
3.0:1
2.0%
1544.16
-26.62
1543.22
-30.40
1544.45
-12.00
1544.69
0.00
1544.45
12.00
1544.16
26.62
1543.32
30.00
1539.57
41.23

10 FT
10 FT

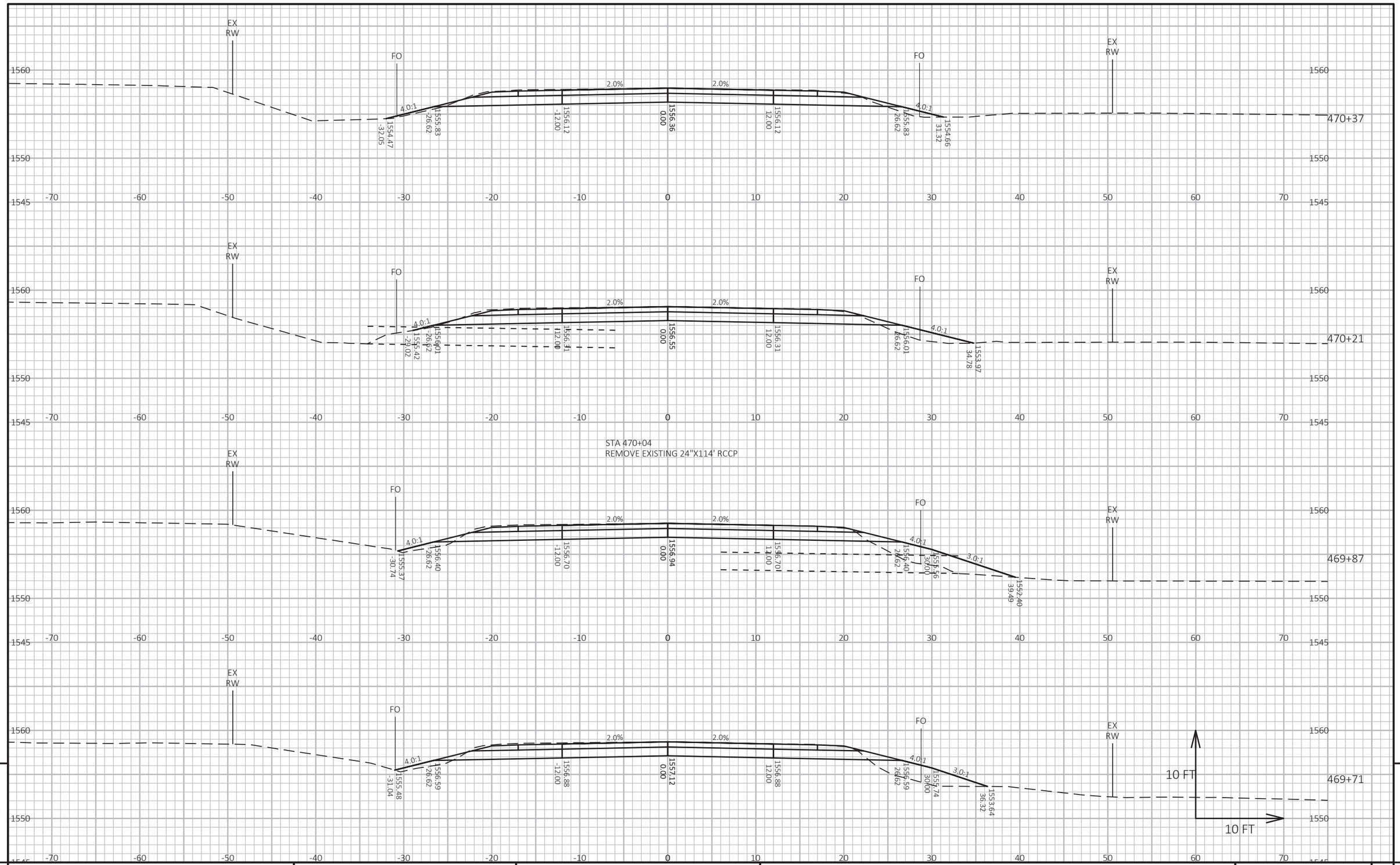
9 9

PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: STH 13	SHEET 216	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-SOUTH.DWG
LAYOUT NAME - XS-37

PLOT DATE : 9/23/2025 6:45 PM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



STA 470+04
REMOVE EXISTING 24"X114' RCCP

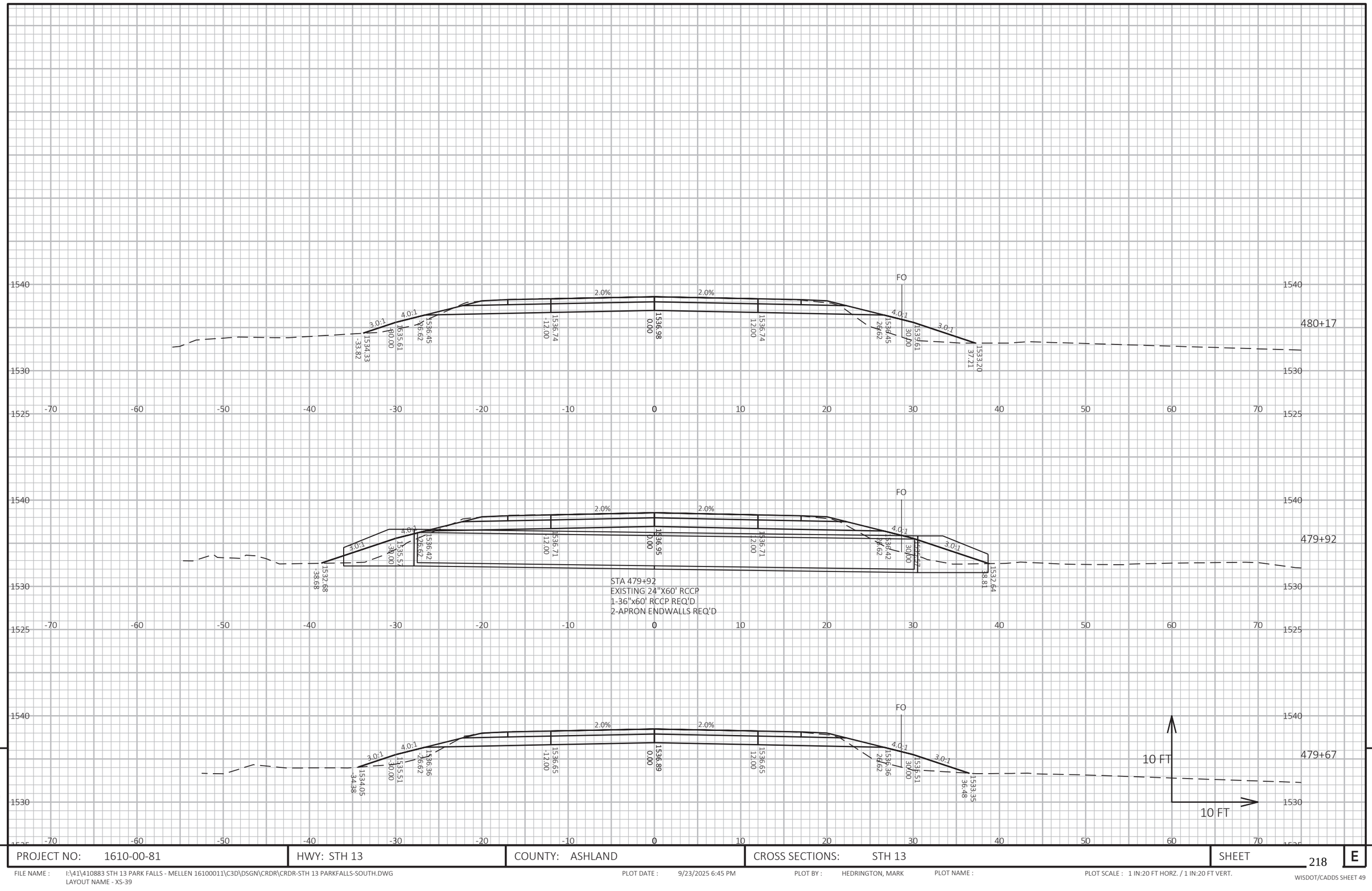
9 9

PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: STH 13	SHEET 217	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-SOUTH.DWG
LAYOUT NAME - XS-38

PLOT DATE : 9/23/2025 6:45 PM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

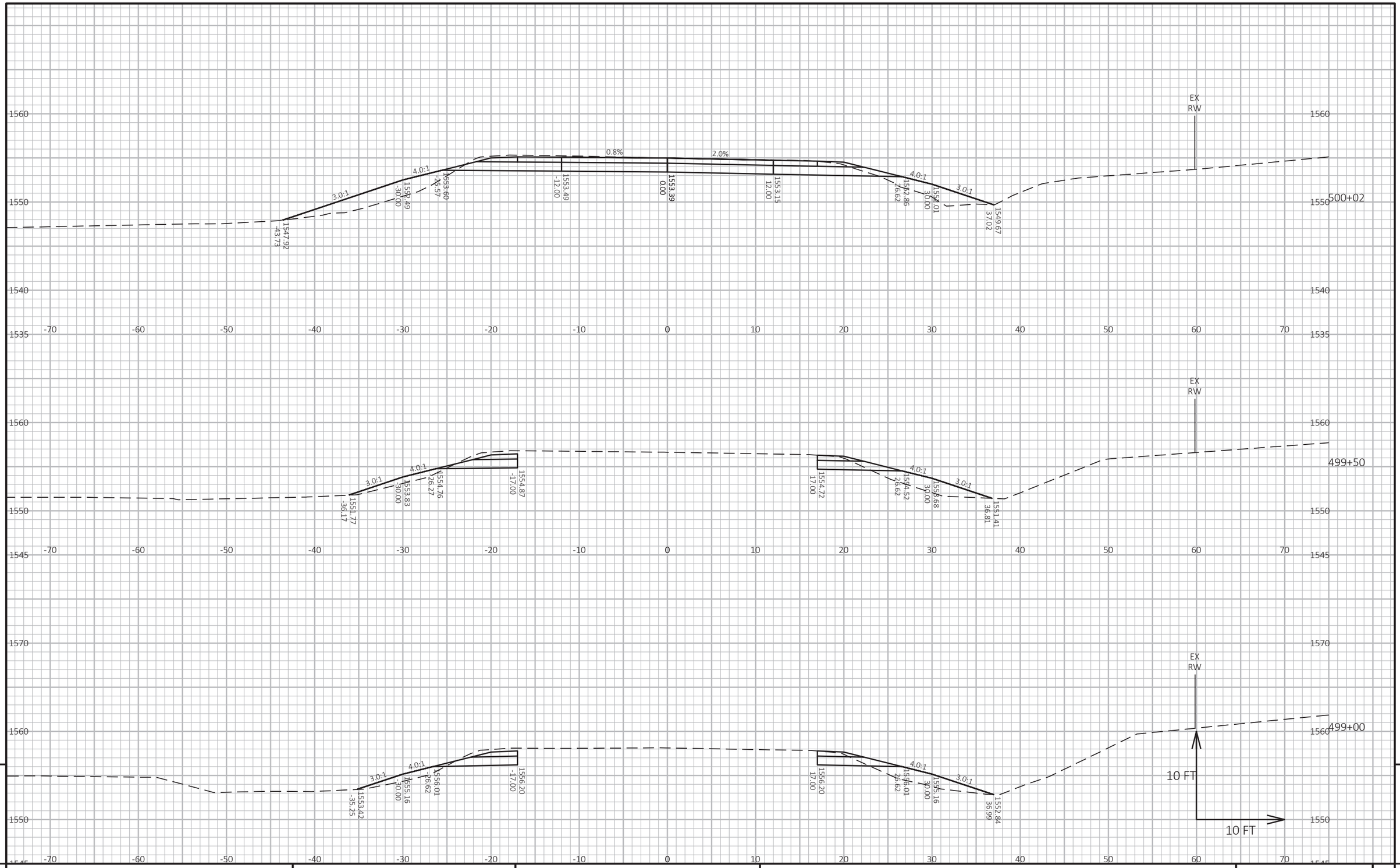
9

PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: STH 13	SHEET 218	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-SOUTH.DWG
LAYOUT NAME - XS-39

PLOT DATE : 9/23/2025 6:45 PM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

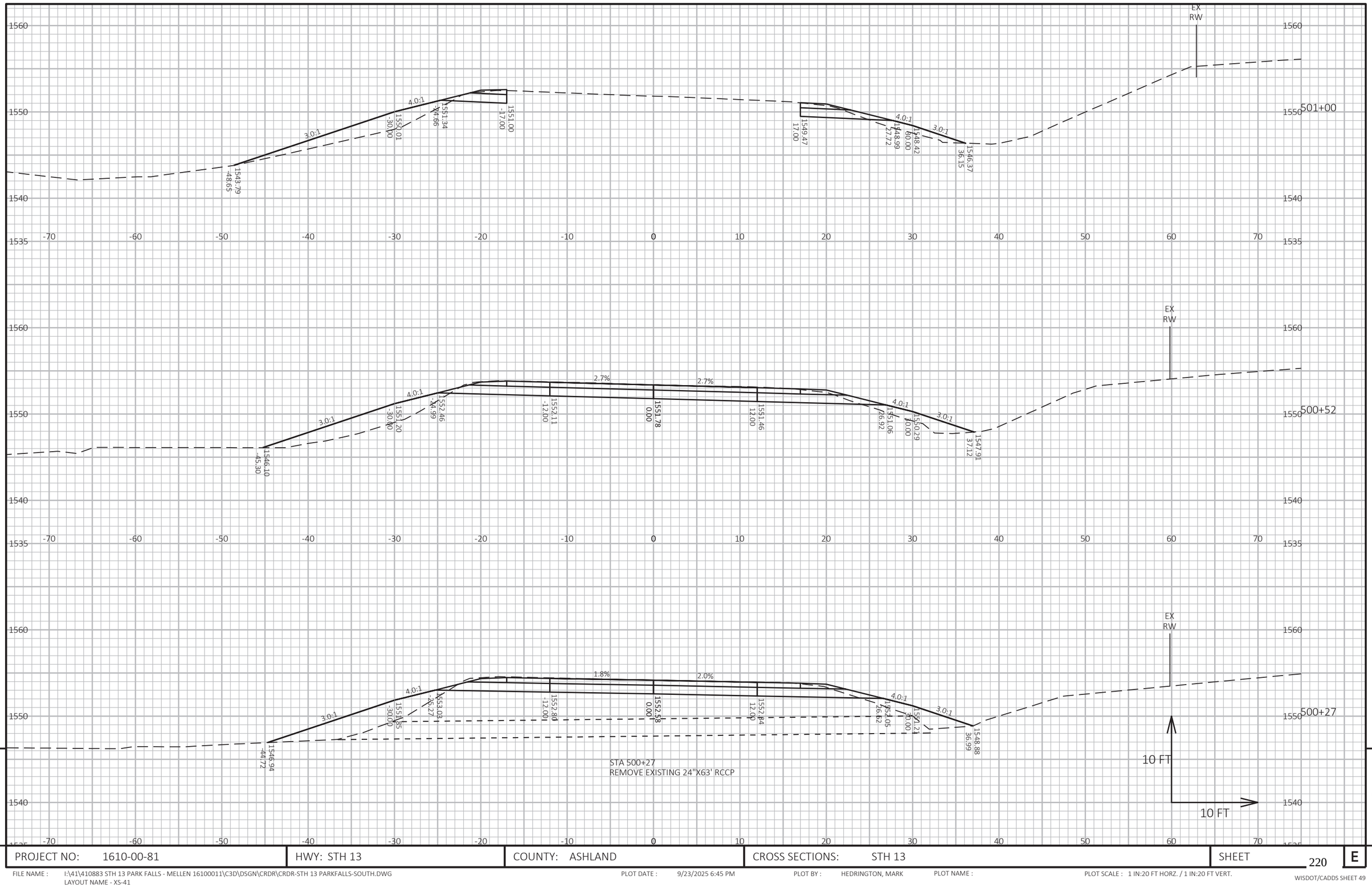
9

PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: STH 13	SHEET 219	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-SOUTH.DWG
LAYOUT NAME - XS-40

PLOT DATE : 9/23/2025 6:45 PM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



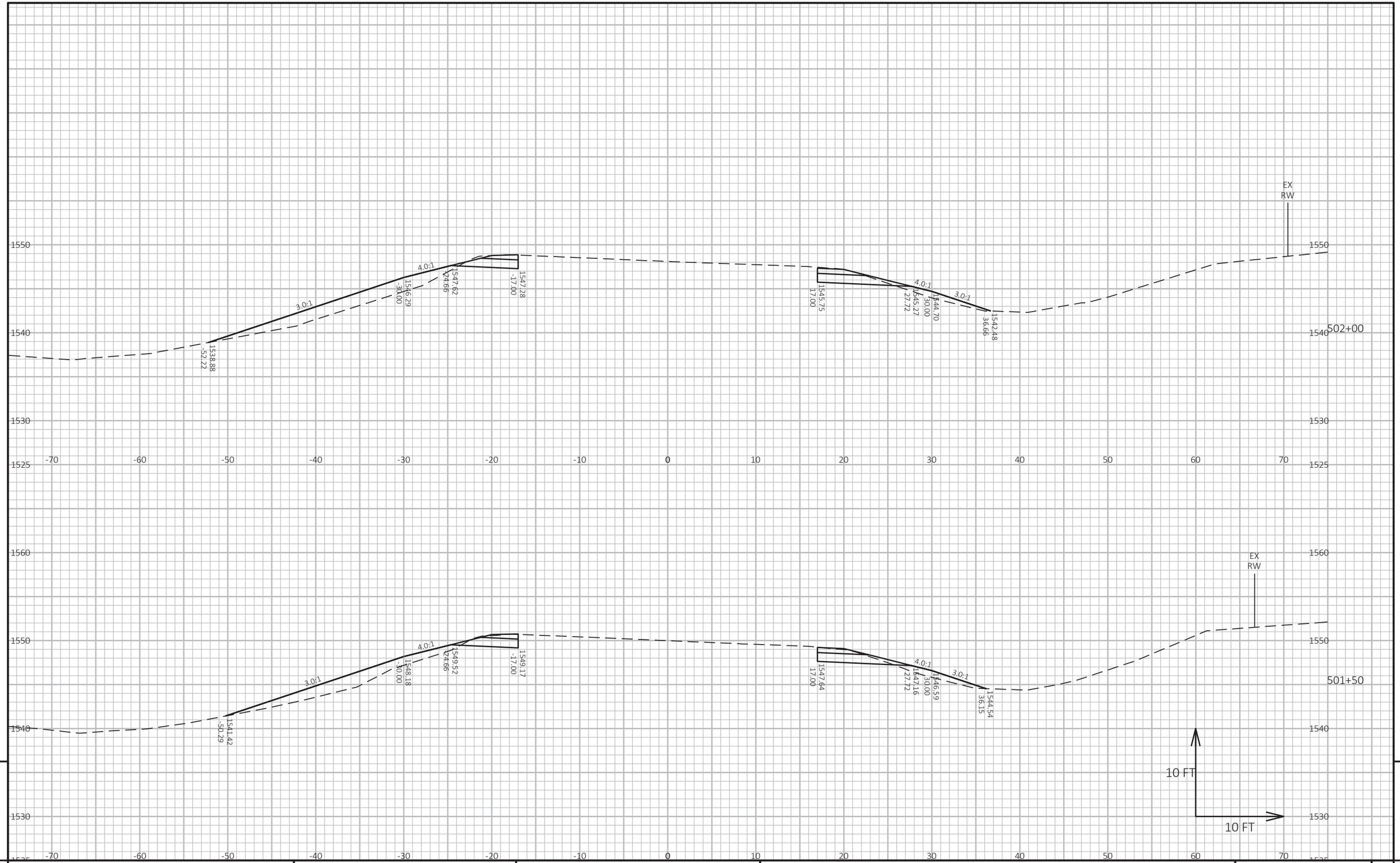
9

9

PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: STH 13	SHEET 220	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-SOUTH.DWG
LAYOUT NAME - XS-41

PLOT DATE : 9/23/2025 6:45 PM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



9

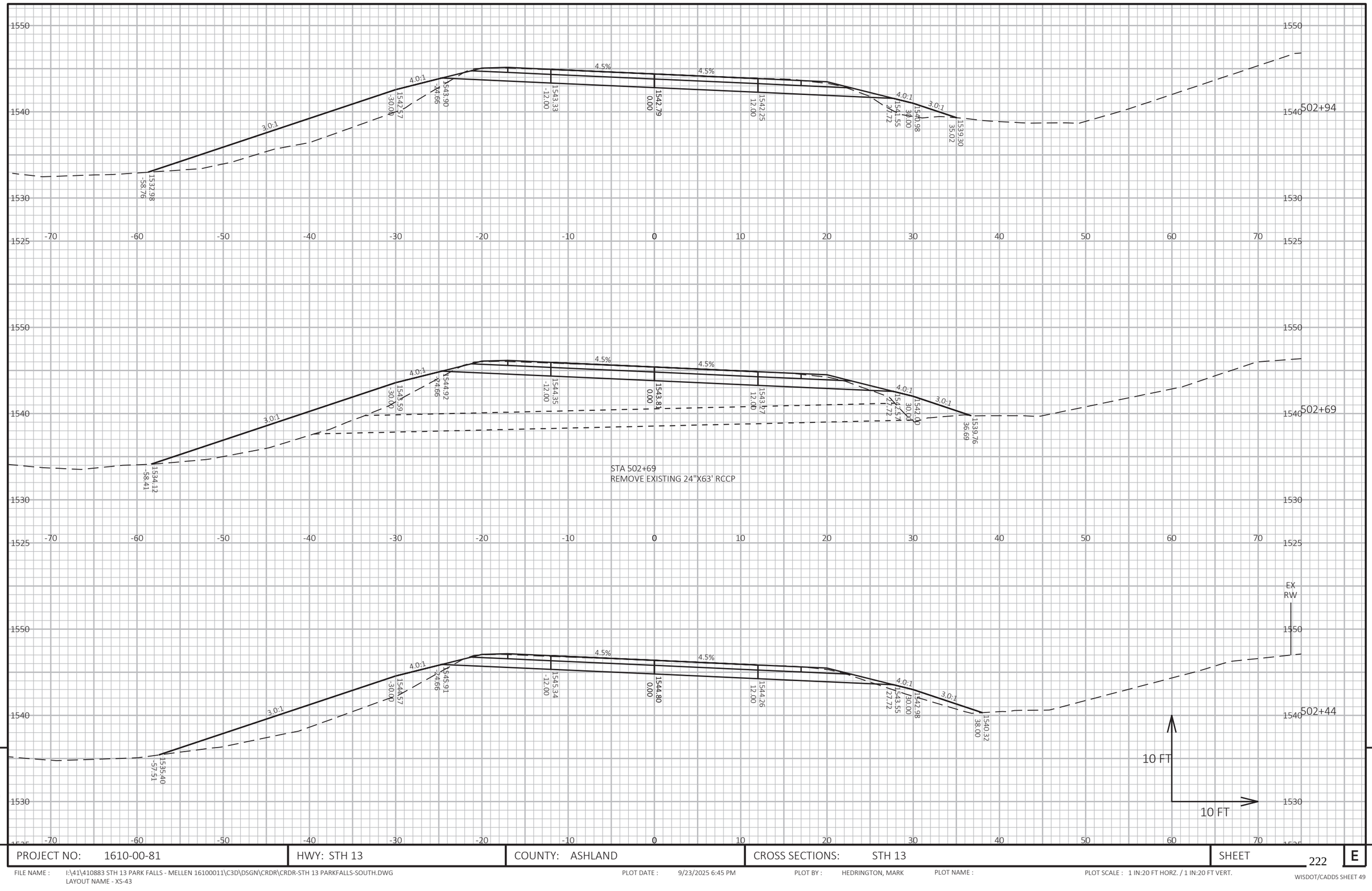
9

PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: STH 13	SHEET 221	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-SOUTH.DWG
LAYOUT NAME - XS-42

PLOT DATE : 9/23/2025 6:45 PM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



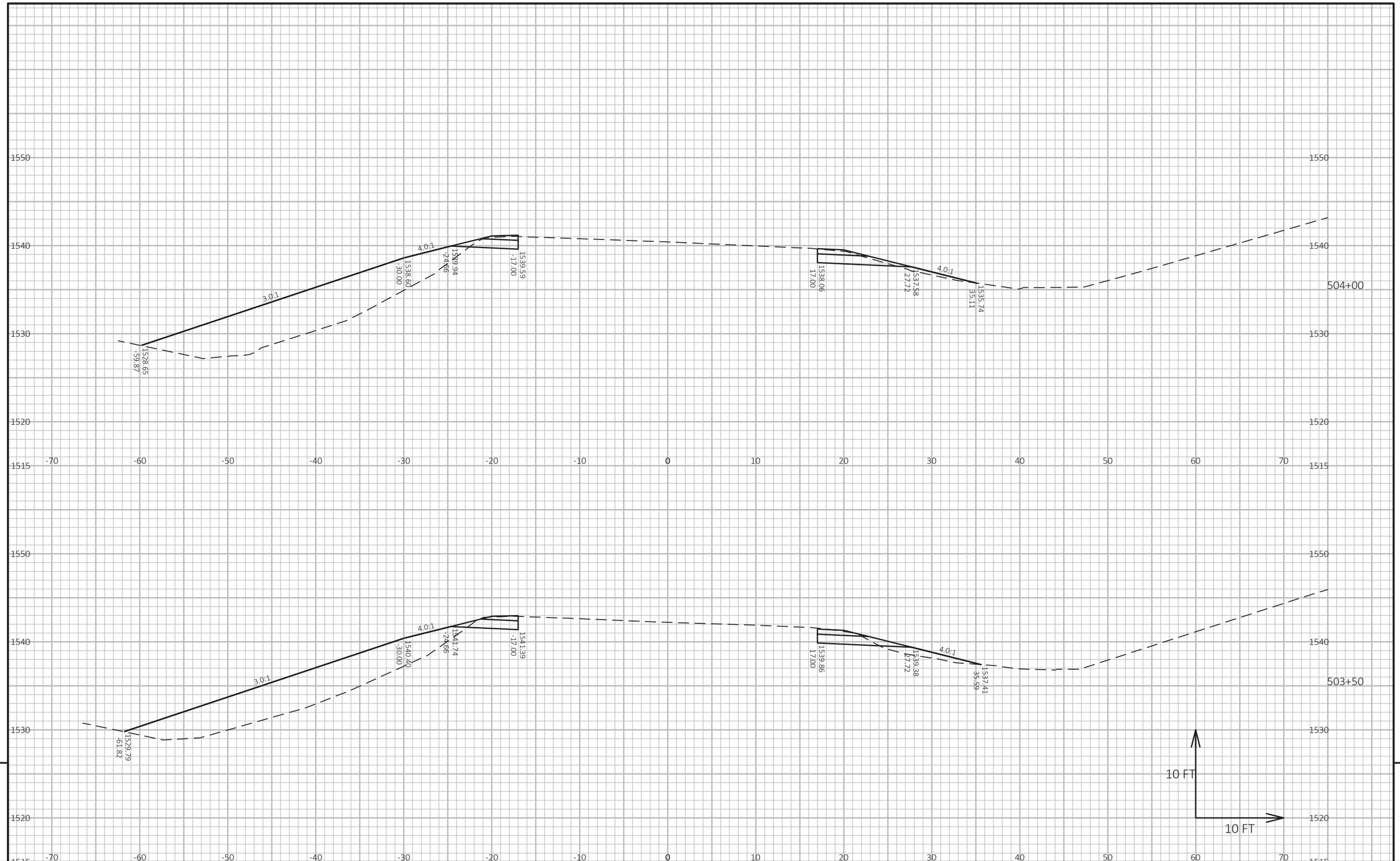
9 9

PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: STH 13	SHEET 222	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-SOUTH.DWG
LAYOUT NAME - XS-43

PLOT DATE : 9/23/2025 6:45 PM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

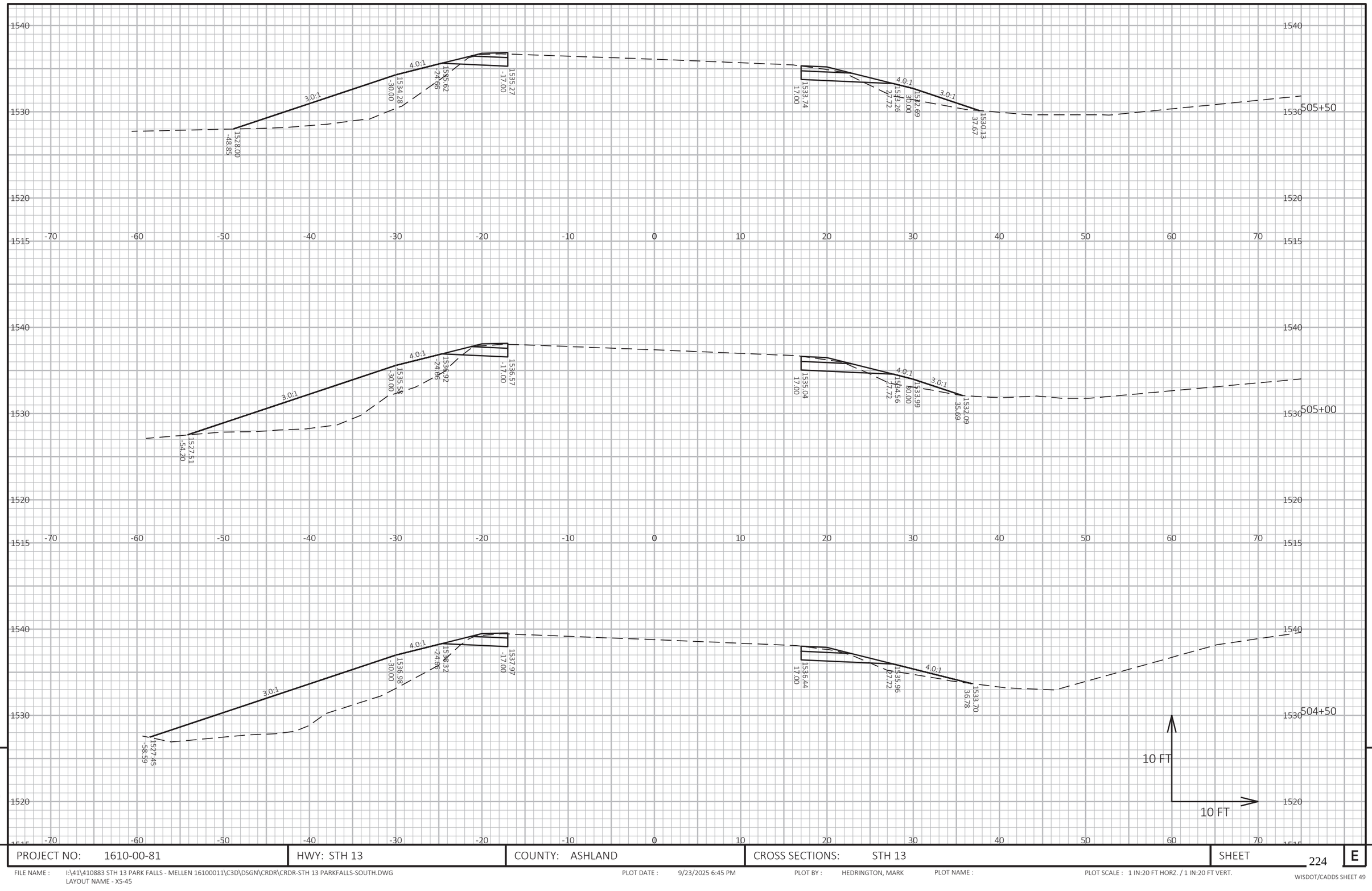
9

PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: STH 13	SHEET 223	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-SOUTH.DWG
LAYOUT NAME - XS-44

PLOT DATE : 9/23/2025 6:45 PM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

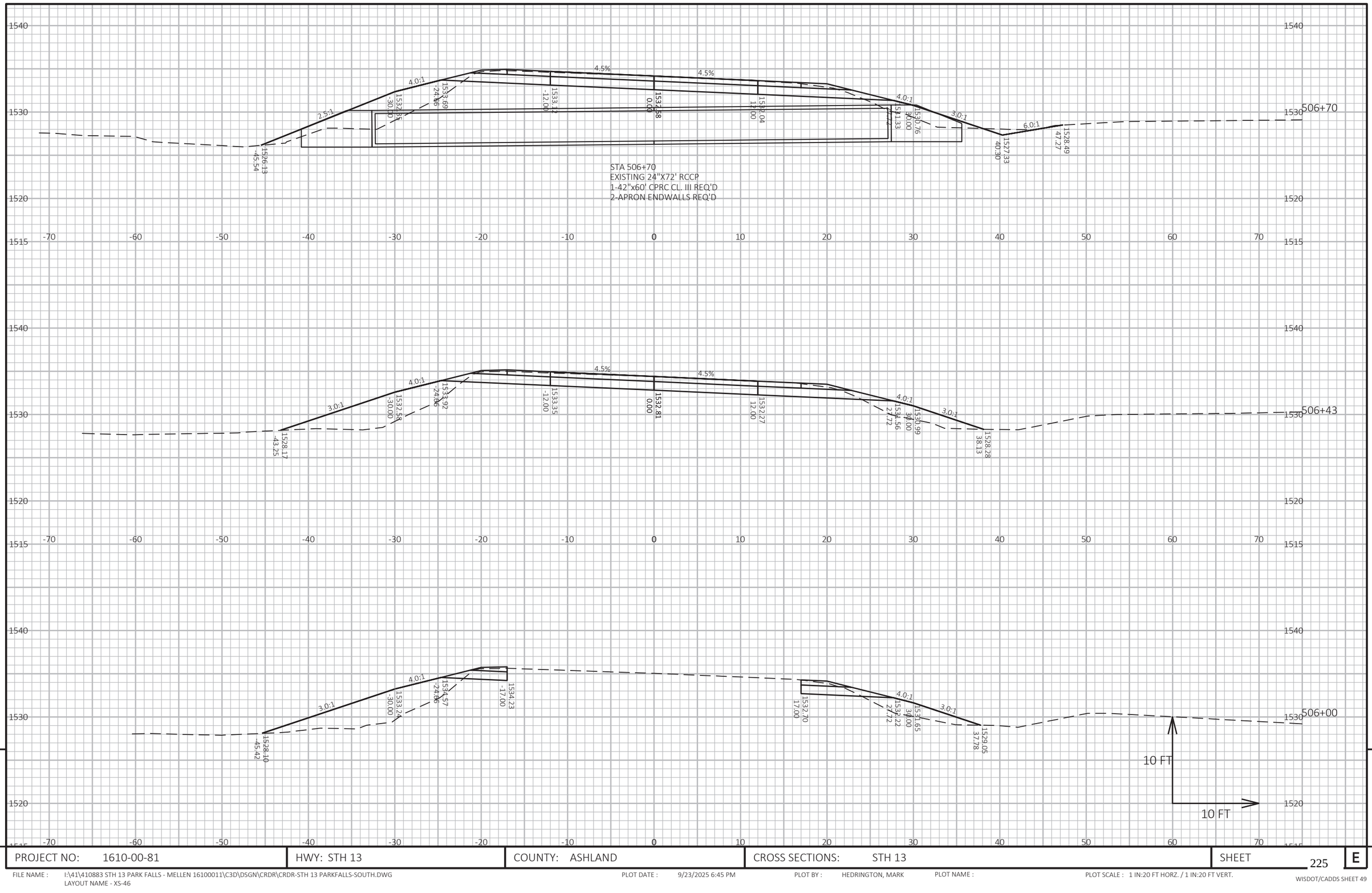


PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: STH 13	SHEET 224	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-SOUTH.DWG
LAYOUT NAME - XS-45

PLOT DATE : 9/23/2025 6:45 PM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

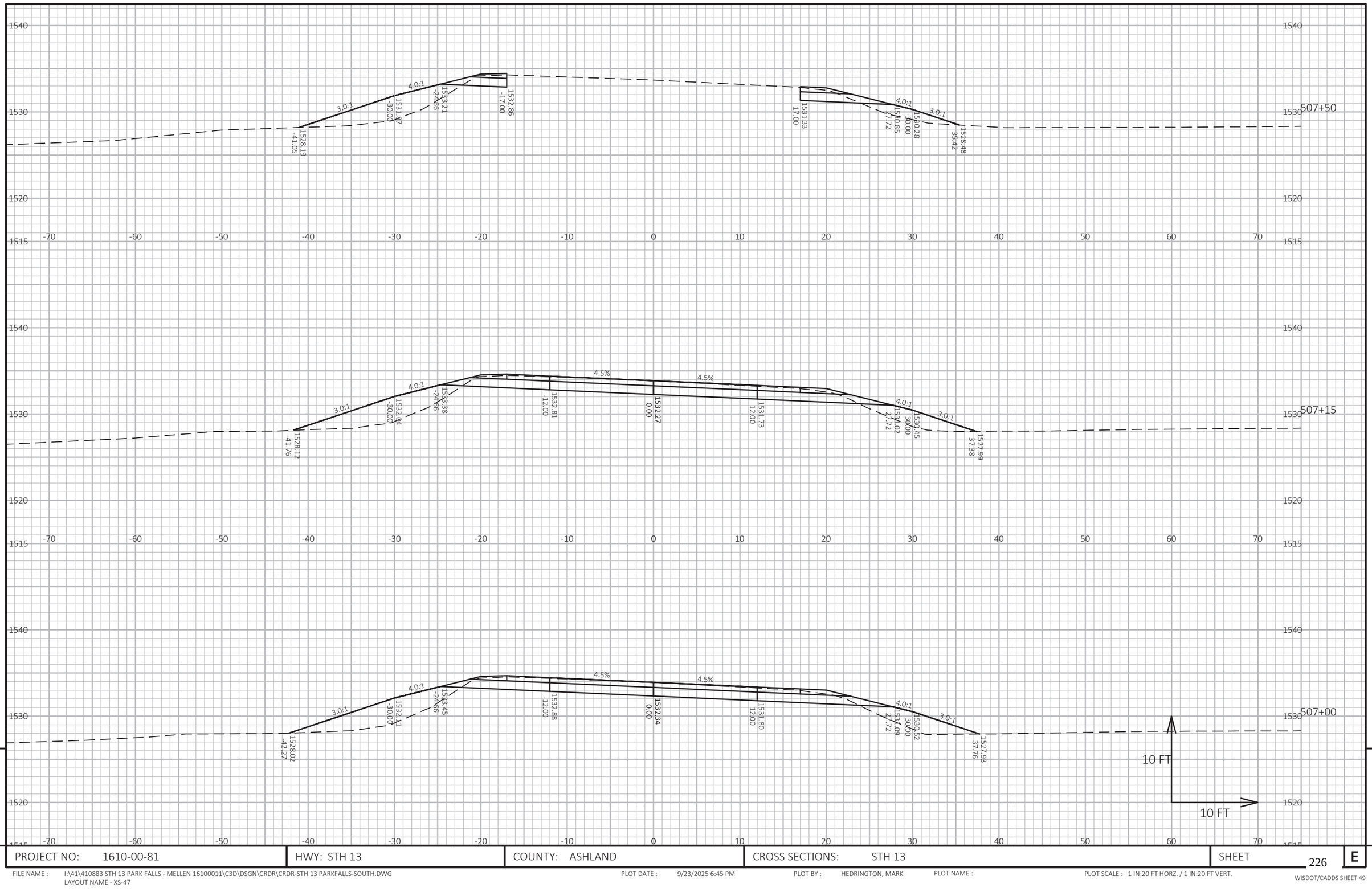


PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: STH 13	SHEET 225	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-SOUTH.DWG
LAYOUT NAME - XS-46

PLOT DATE : 9/23/2025 6:45 PM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

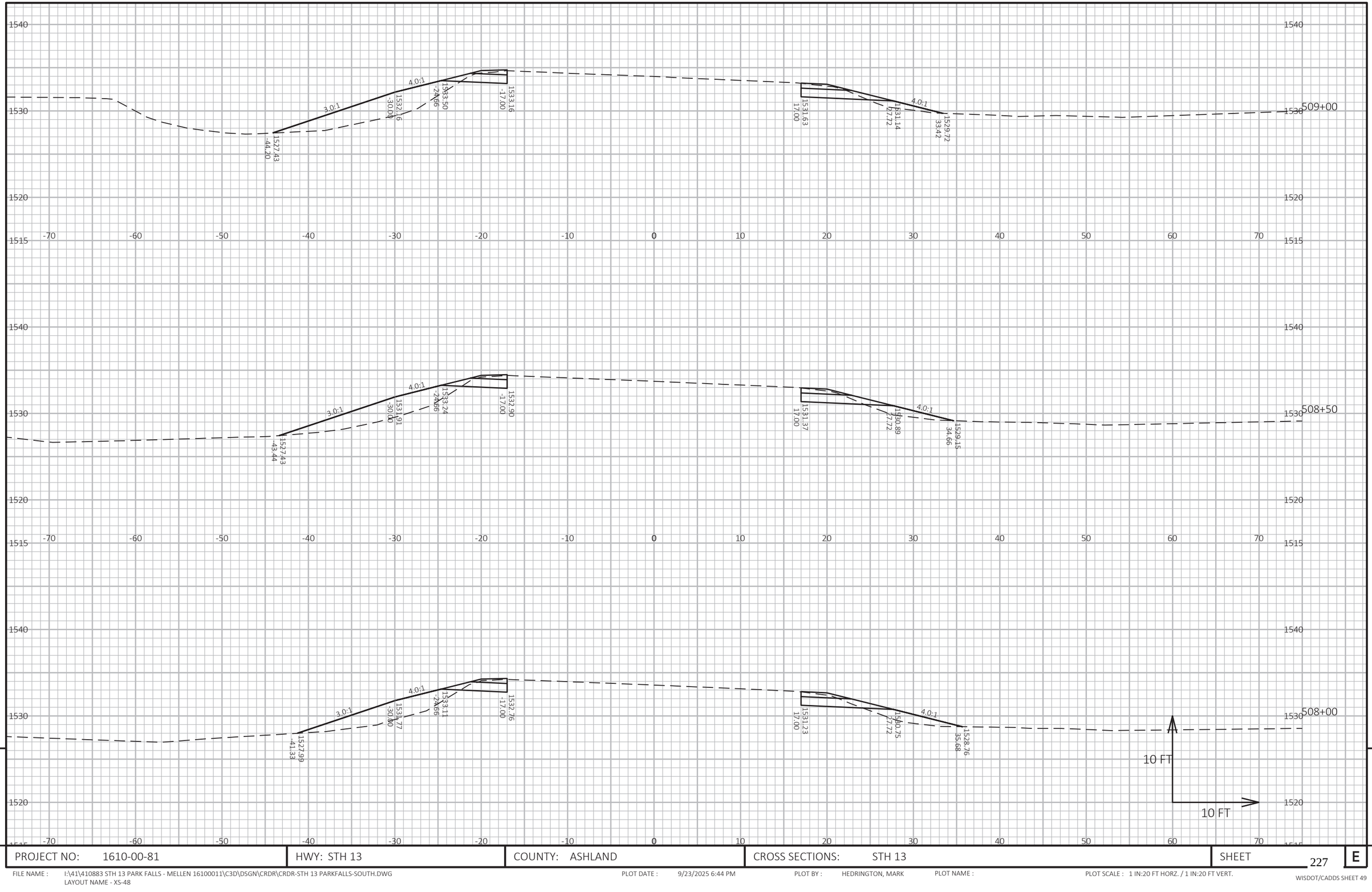
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PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: STH 13	SHEET 226	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-SOUTH.DWG
LAYOUT NAME - XS-47

PLOT DATE : 9/23/2025 6:45 PM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

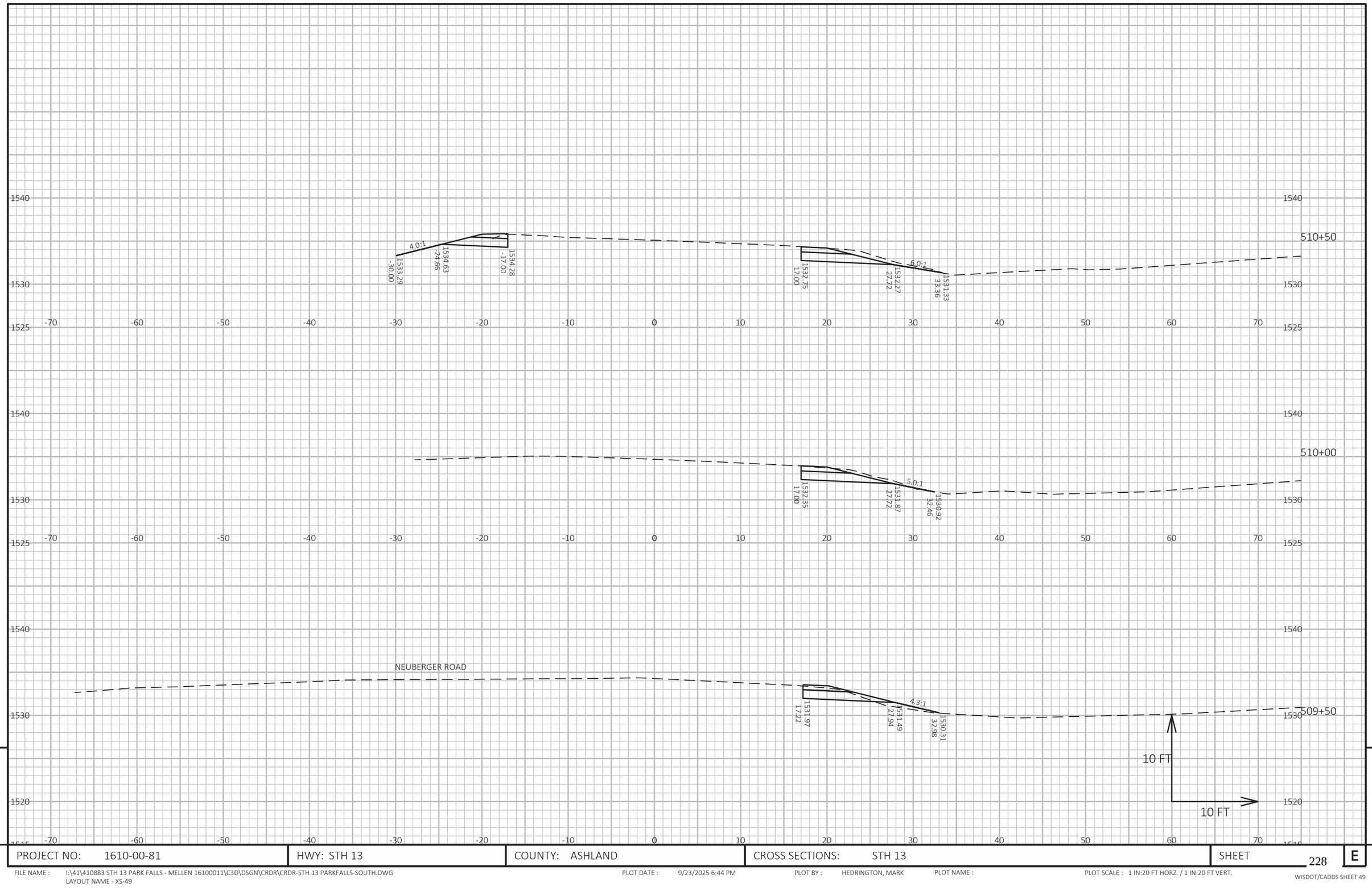


PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: STH 13	SHEET 227	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-SOUTH.DWG
LAYOUT NAME - XS-48

PLOT DATE : 9/23/2025 6:44 PM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

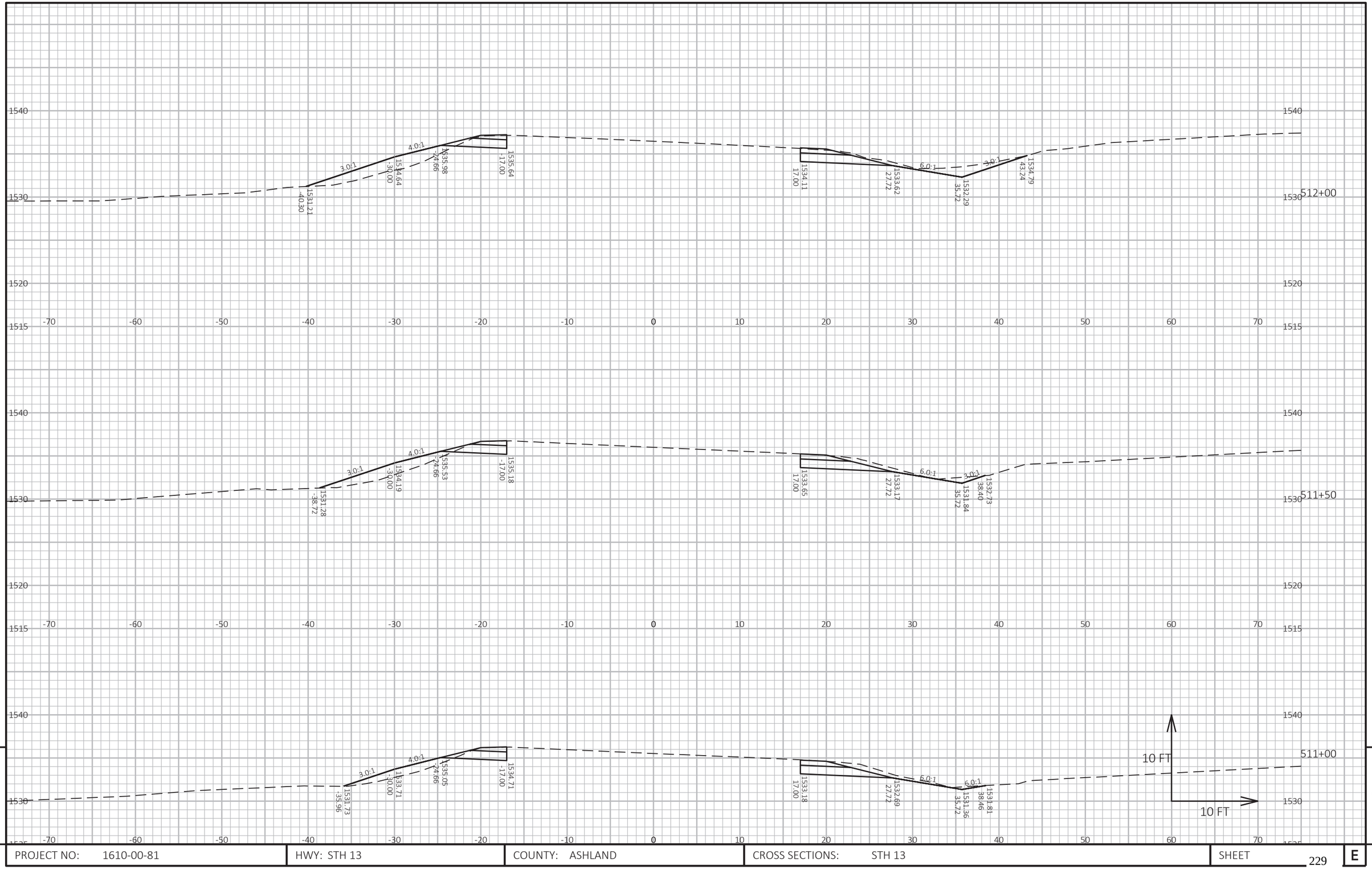
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PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: STH 13	SHEET 228	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-SOUTH.DWG
LAYOUT NAME - XS-49

PLOT DATE : 9/23/2025 6:44 PM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

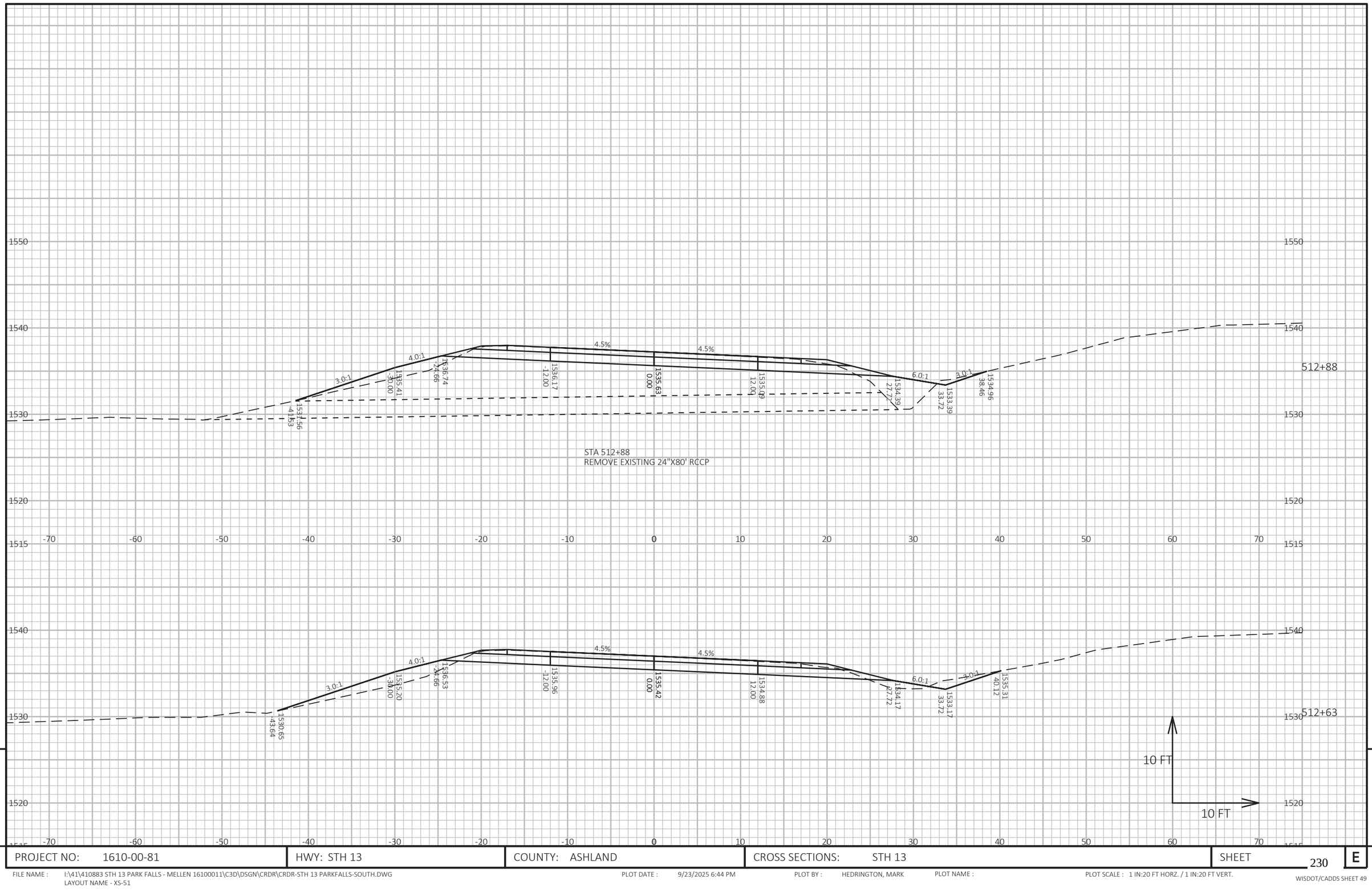


PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: STH 13	SHEET 229	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-SOUTH.DWG
LAYOUT NAME - XS-50

PLOT DATE : 9/23/2025 6:44 PM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

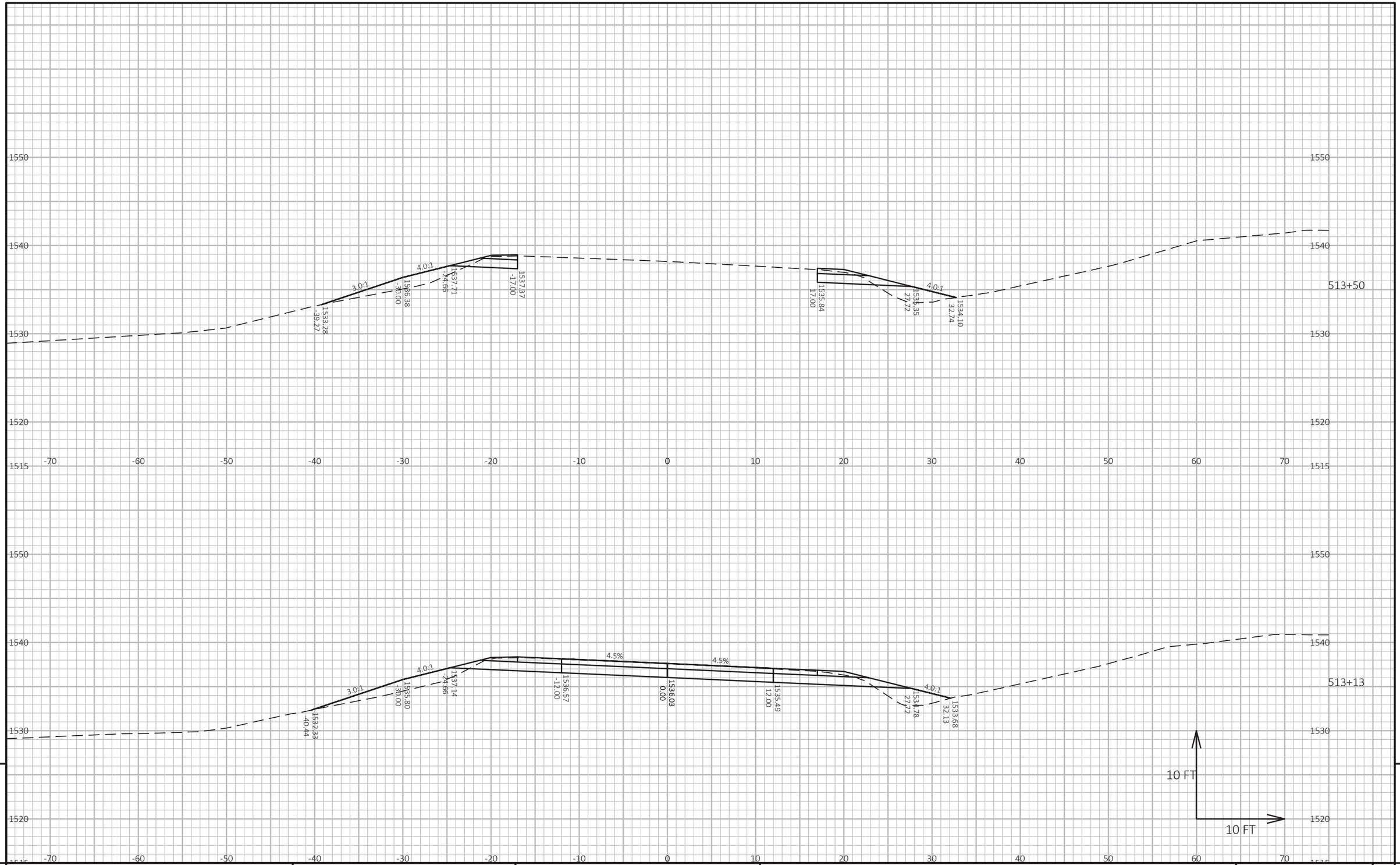
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PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: STH 13	SHEET 230	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-SOUTH.DWG
LAYOUT NAME - XS-51

PLOT DATE : 9/23/2025 6:44 PM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

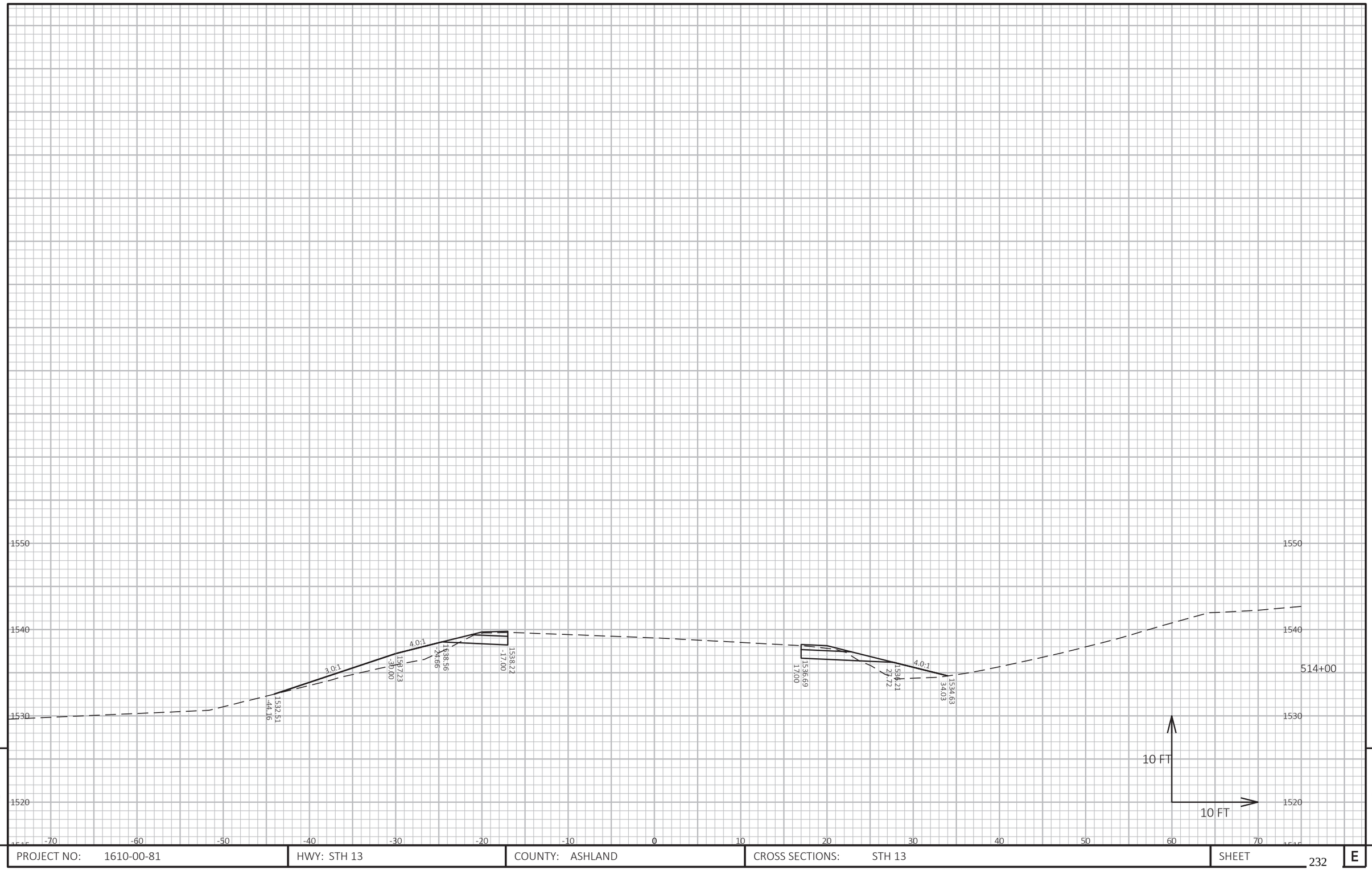
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PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: STH 13	SHEET 231	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-SOUTH.DWG
LAYOUT NAME - XS-52

PLOT DATE : 9/23/2025 6:44 PM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

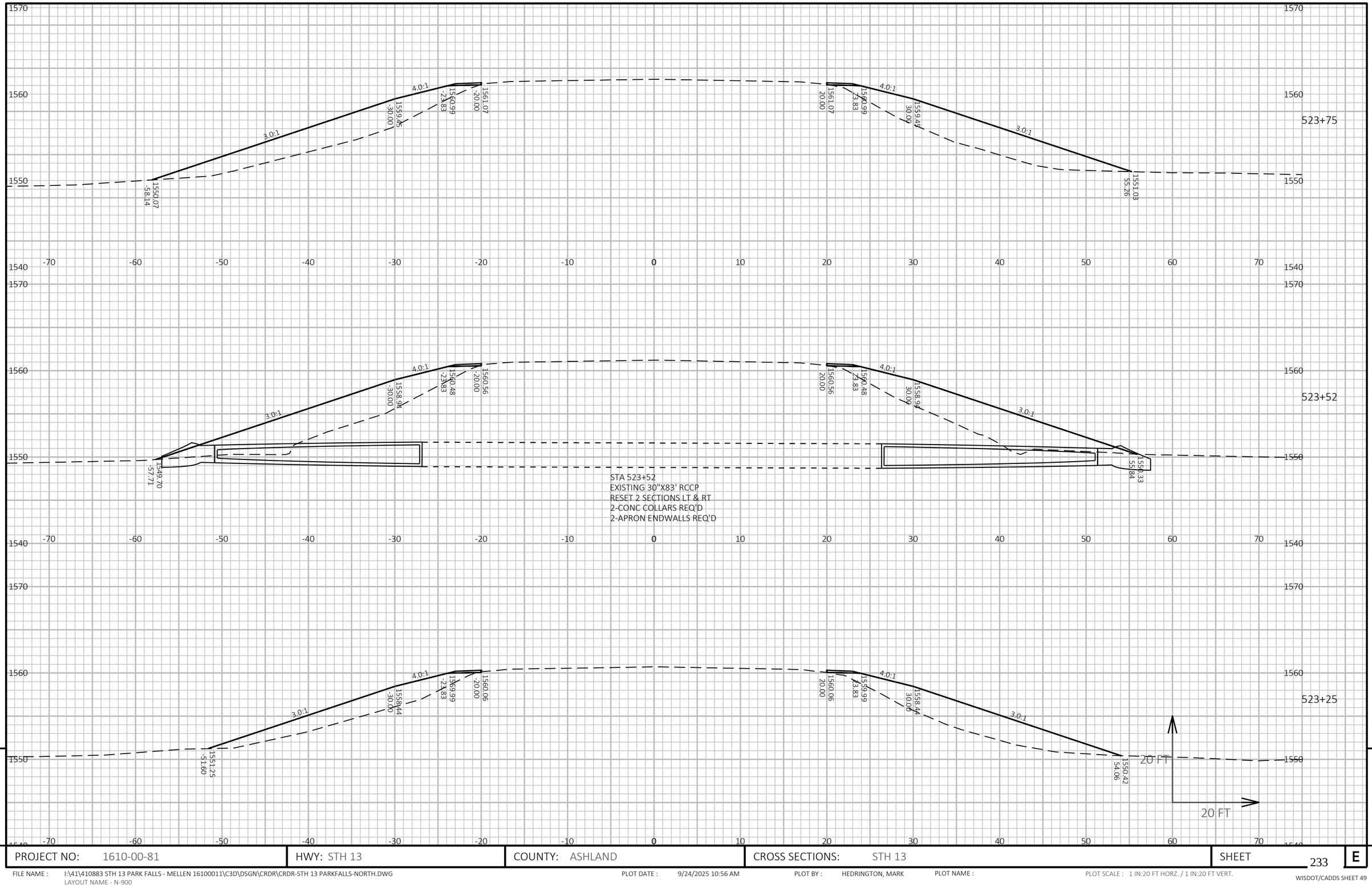
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PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: STH 13	SHEET 232	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-SOUTH.DWG
LAYOUT NAME - XS-53

PLOT DATE : 9/23/2025 6:44 PM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



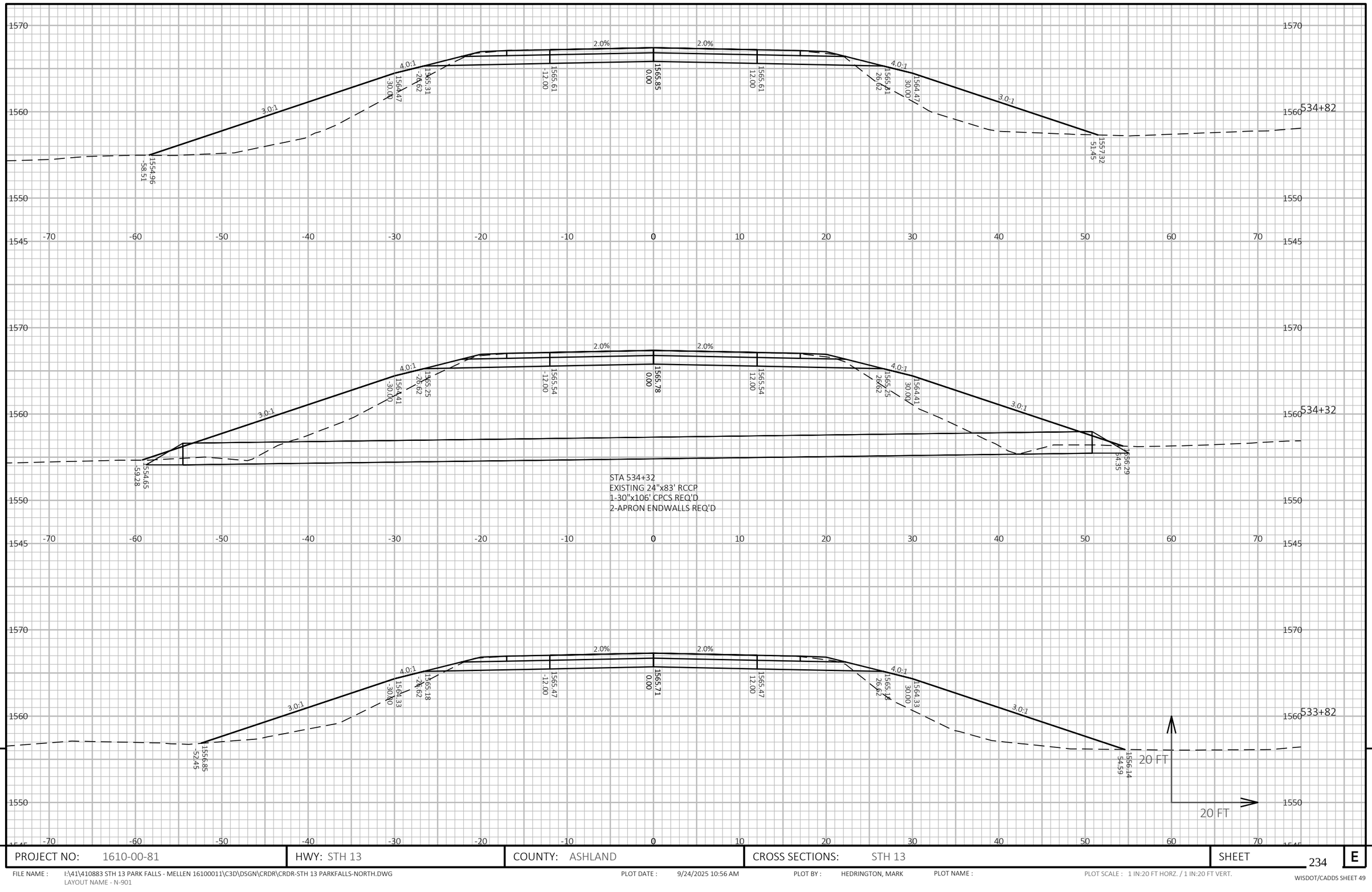
9 9

PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: STH 13	SHEET 233	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-NORTH.DWG
LAYOUT NAME - N-900

PLOT DATE : 9/24/2025 10:56 AM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

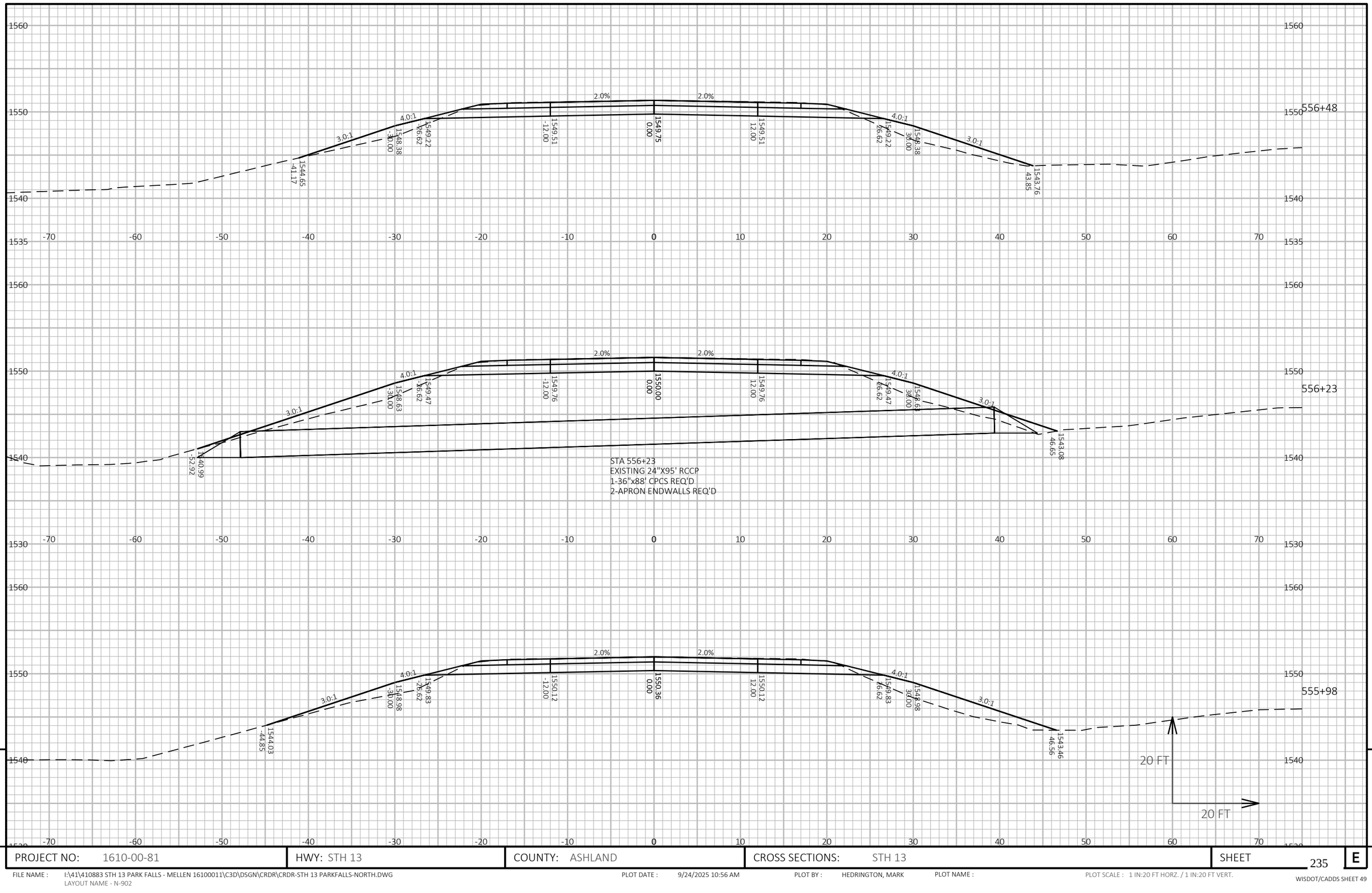


PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: STH 13	SHEET 234	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-NORTH.DWG
LAYOUT NAME - N-901

PLOT DATE : 9/24/2025 10:56 AM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



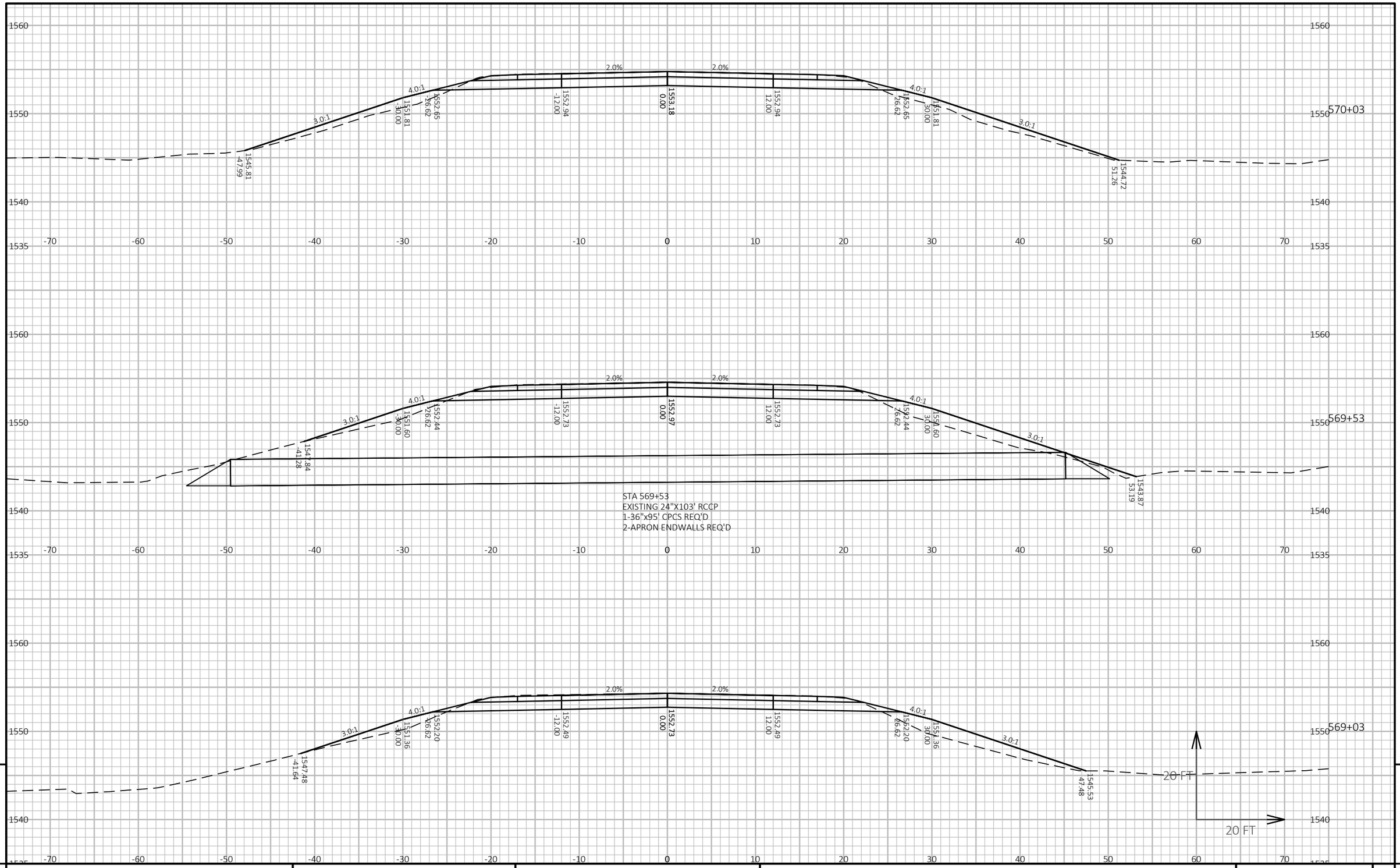
9 9

PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: STH 13	SHEET 235	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-NORTH.DWG
LAYOUT NAME - N-902

PLOT DATE : 9/24/2025 10:56 AM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

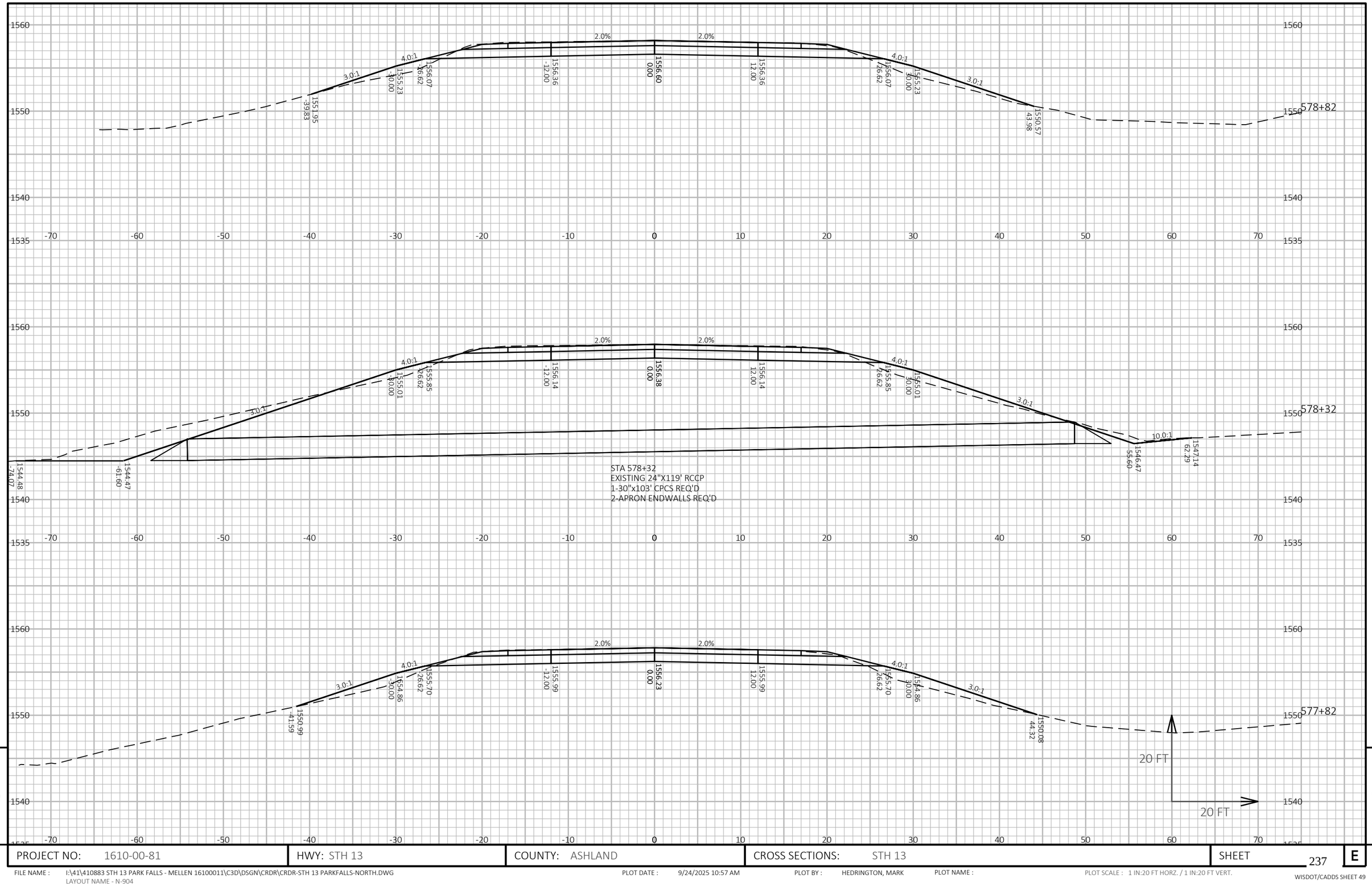


PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: STH 13	SHEET 236	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-NORTH.DWG
LAYOUT NAME - N-903

PLOT DATE : 9/24/2025 10:57 AM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

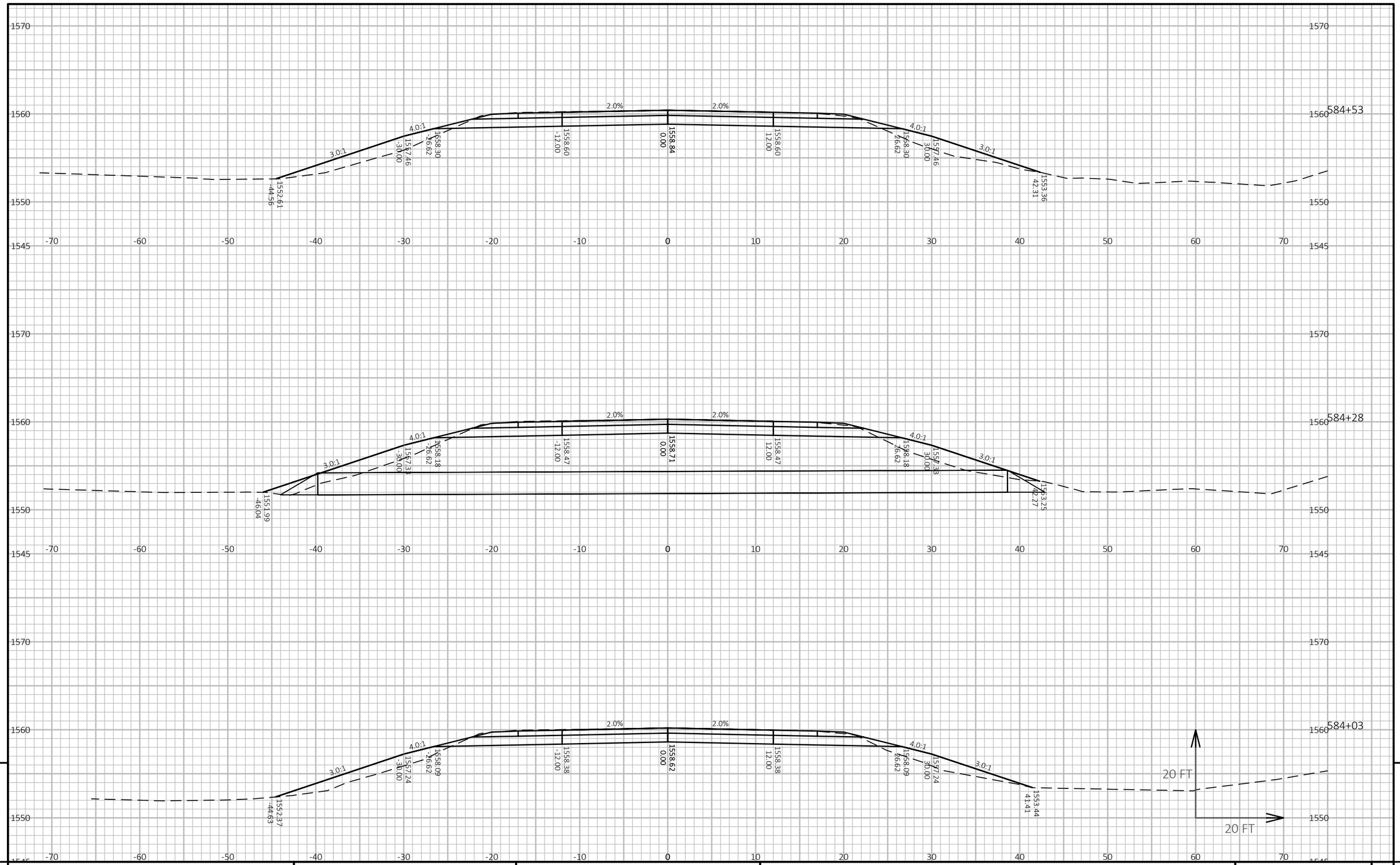


PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: STH 13	SHEET 237 E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-NORTH.DWG
LAYOUT NAME - N-904

PLOT DATE : 9/24/2025 10:57 AM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

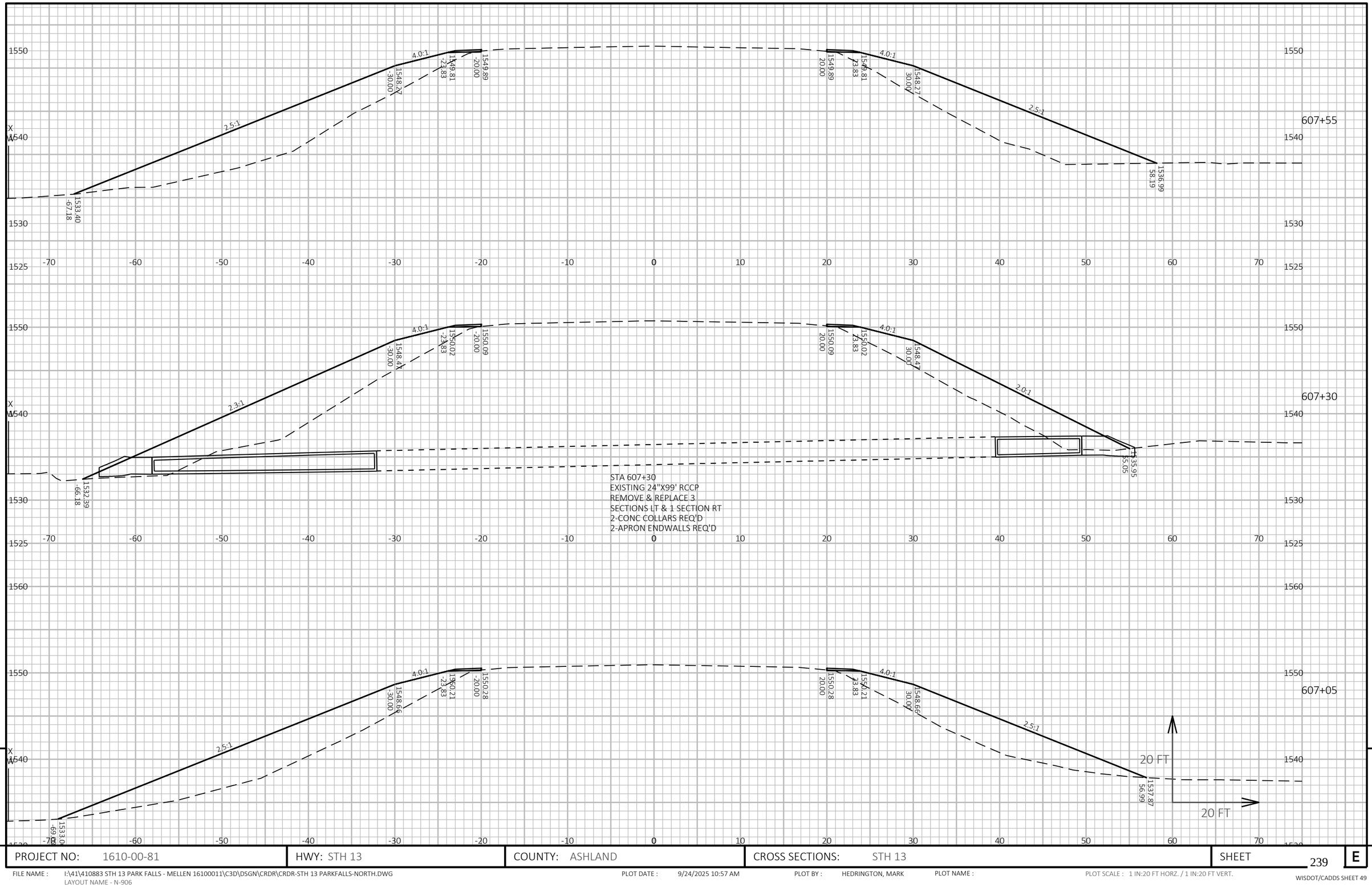
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PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: STH 13	SHEET 238	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-NORTH.DWG
LAYOUT NAME - N-905

PLOT DATE : 9/24/2025 10:57 AM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

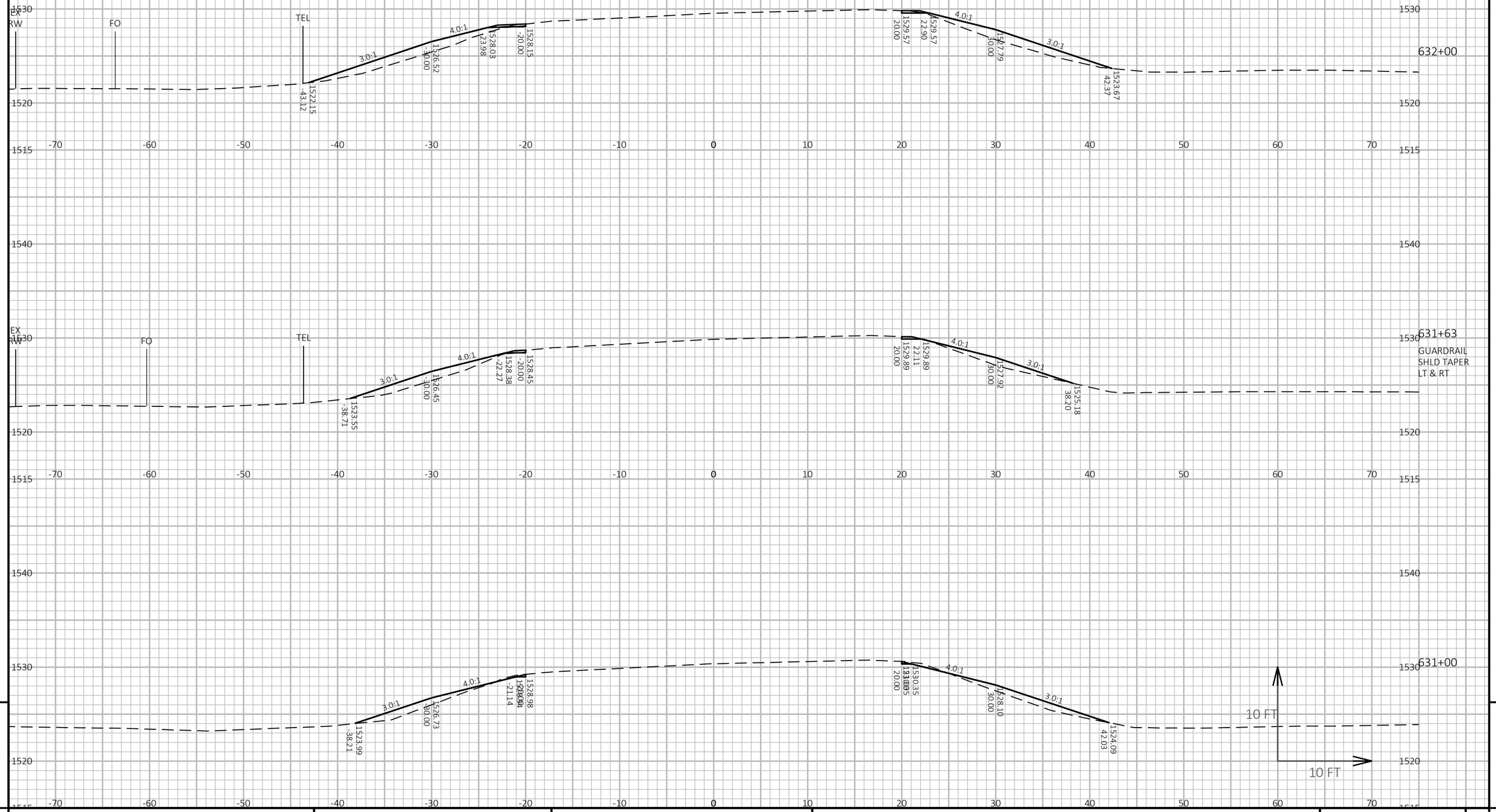


PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: STH 13	SHEET 239 E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-NORTH.DWG
LAYOUT NAME - N-906

PLOT DATE : 9/24/2025 10:57 AM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

9

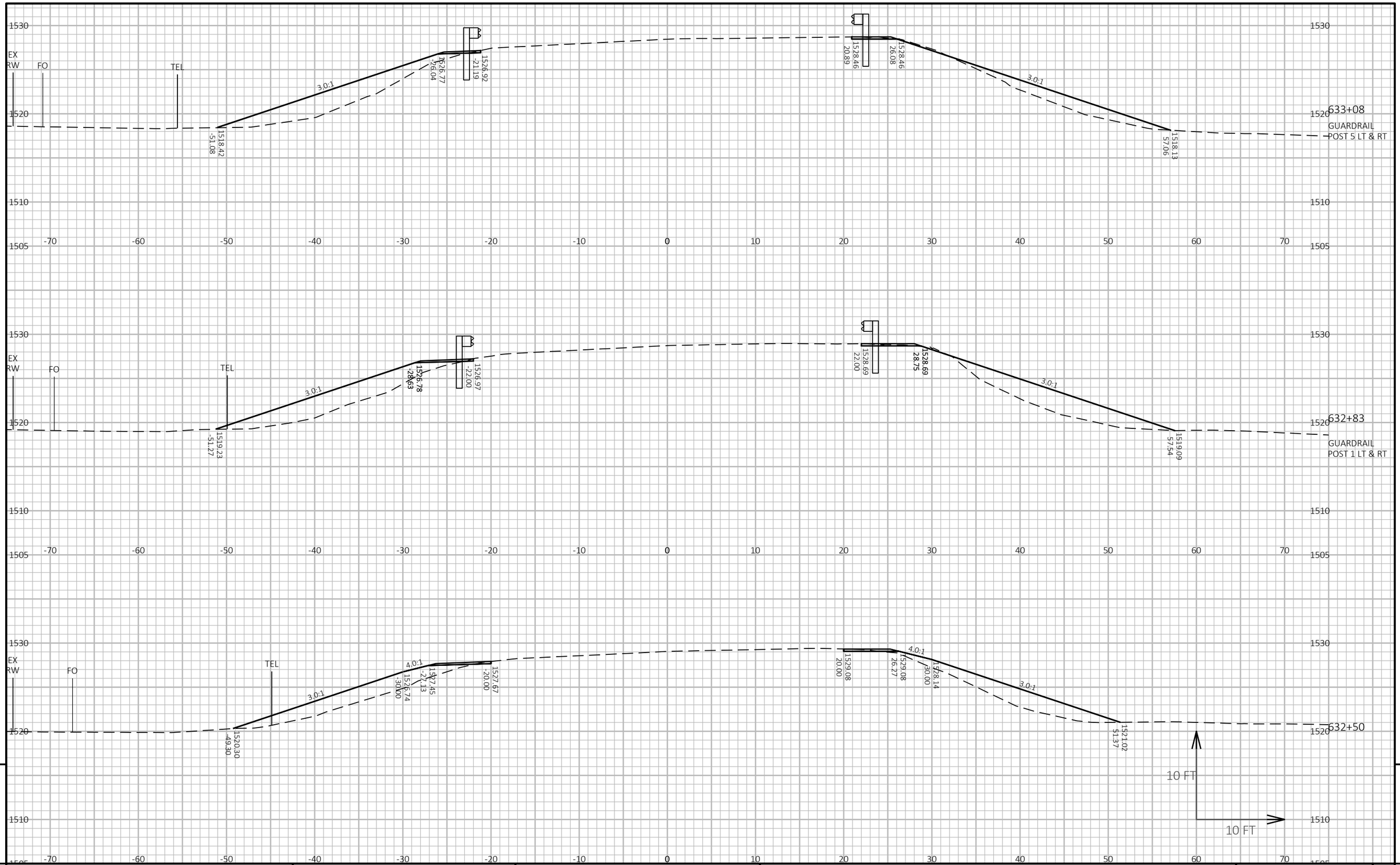
PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: C-02-0004 GUARD RAIL	SHEET 240	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-NORTH.DWG
LAYOUT NAME - BG 1

PLOT DATE : 9/23/2025 7:36 PM PLOT BY : HEDRINGTON, MARK PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

9

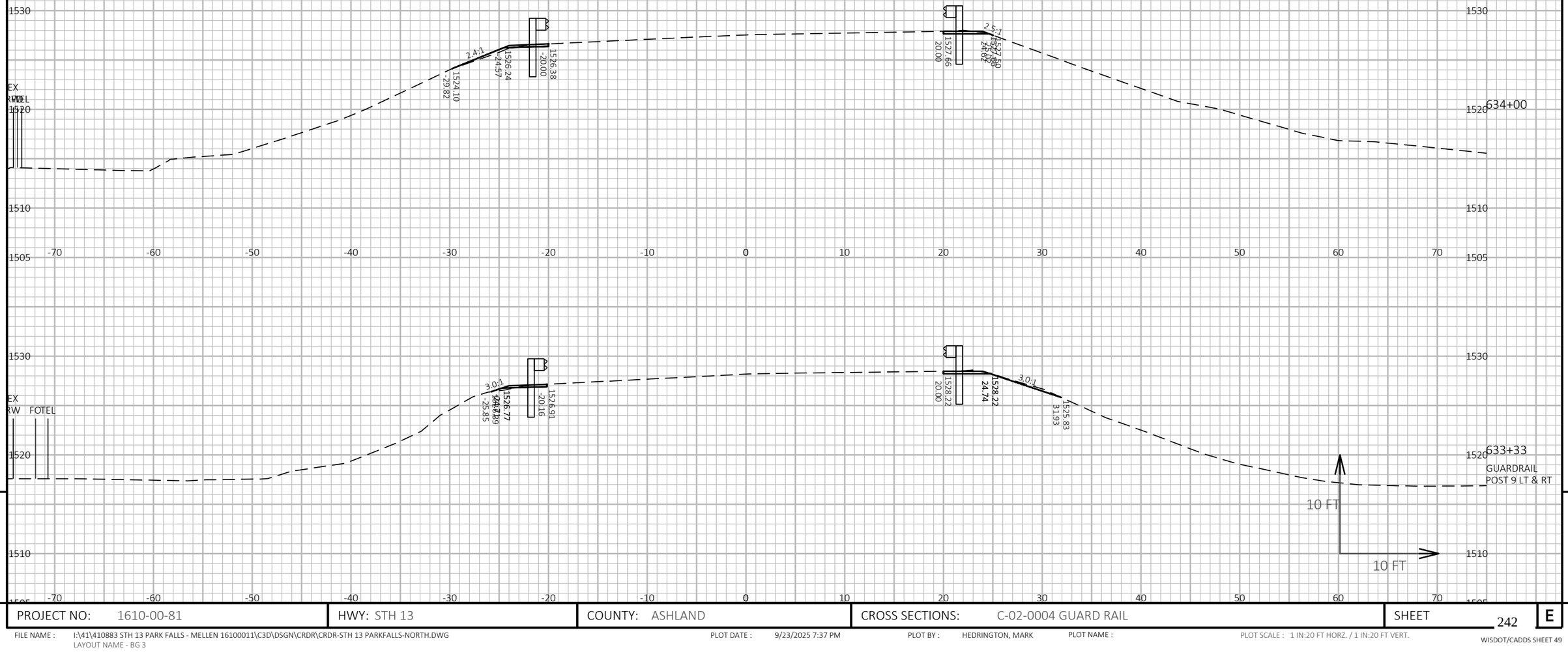
PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: C-02-0004 GUARD RAIL	SHEET 241	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-NORTH.DWG
LAYOUT NAME - BG 2

PLOT DATE : 9/23/2025 7:36 PM PLOT BY : HEDRINGTON, MARK PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: C-02-0004 GUARD RAIL	SHEET 242	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-NORTH.DWG
LAYOUT NAME - BG 3

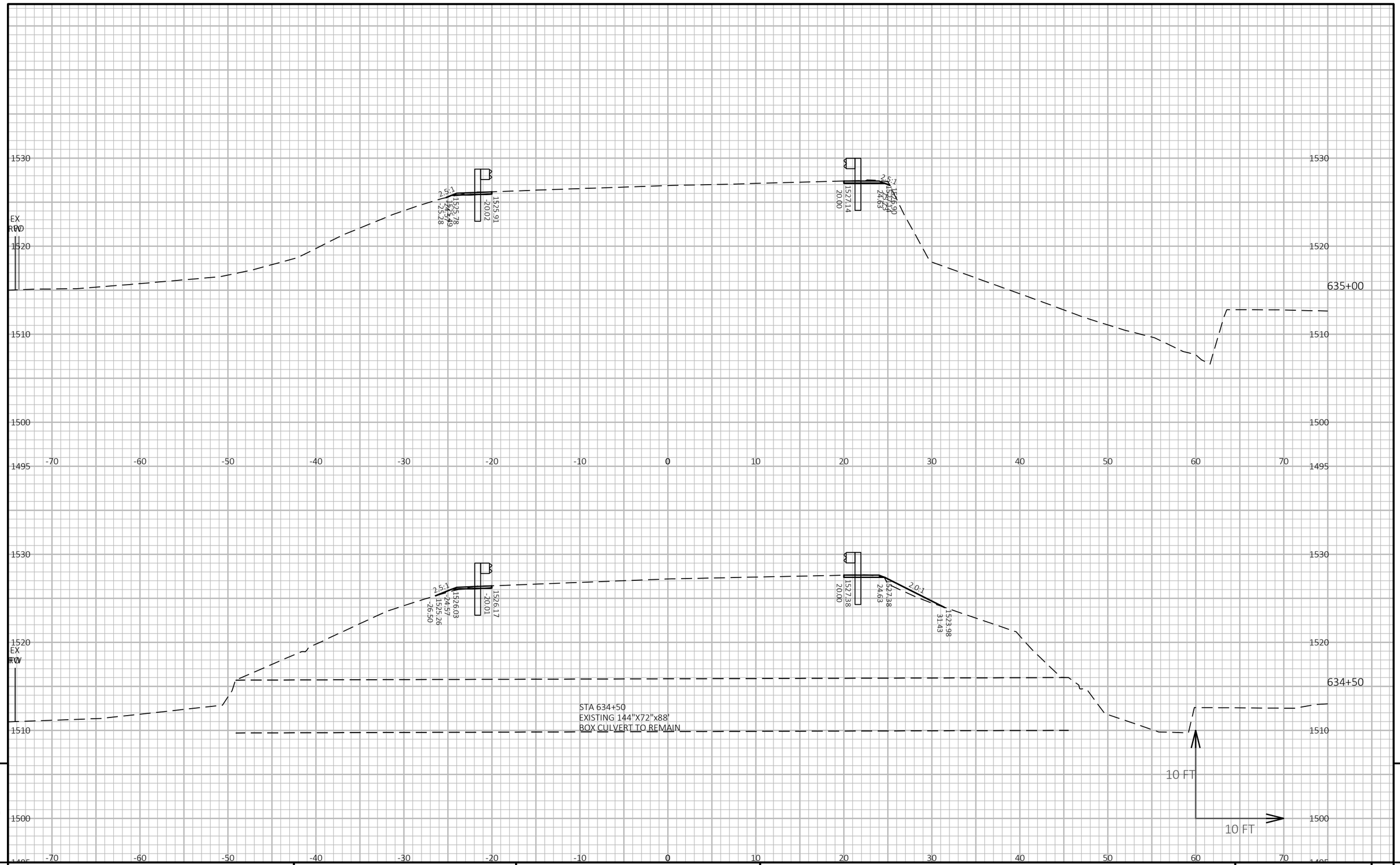
PLOT DATE : 9/23/2025 7:37 PM

PLOT BY : HEDRINGTON, MARK

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: C-02-0004 GUARD RAIL	SHEET 243	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-NORTH.DWG
LAYOUT NAME - BG 4

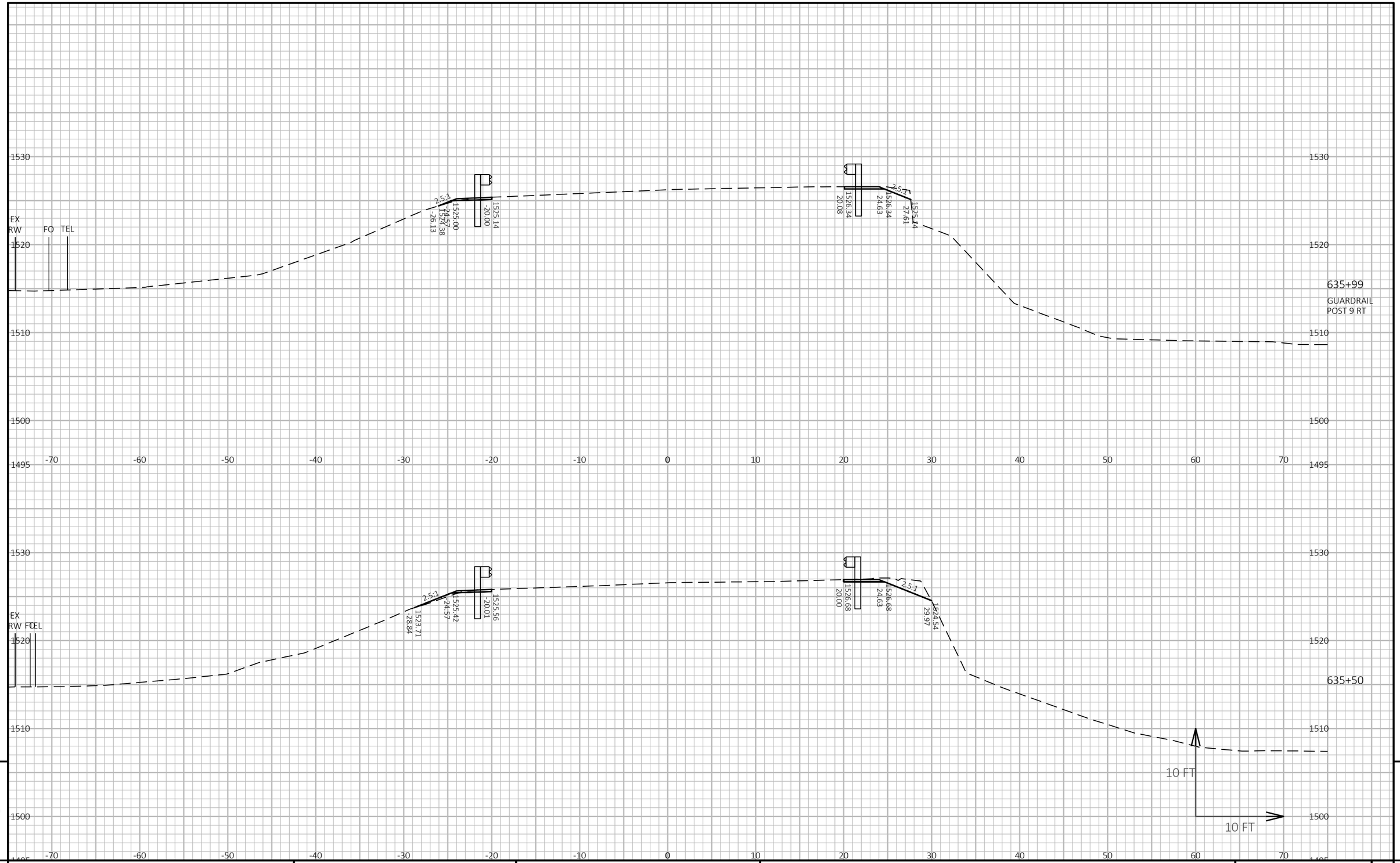
PLOT DATE : 9/23/2025 7:37 PM

PLOT BY : HEDRINGTON, MARK

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

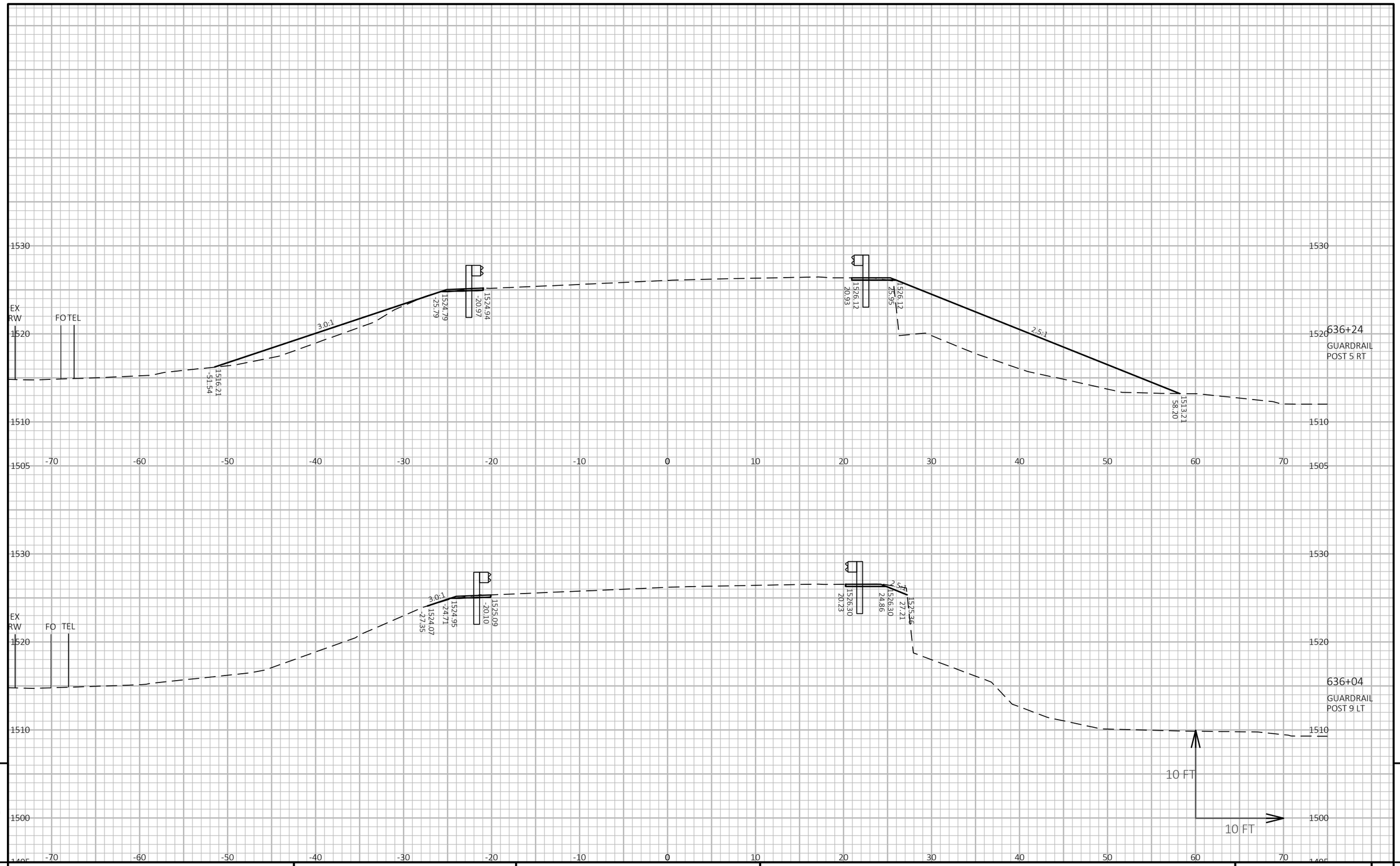
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PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: C-02-0004 GUARD RAIL	SHEET 244	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-NORTH.DWG
LAYOUT NAME - BG 5

PLOT DATE : 9/23/2025 7:37 PM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

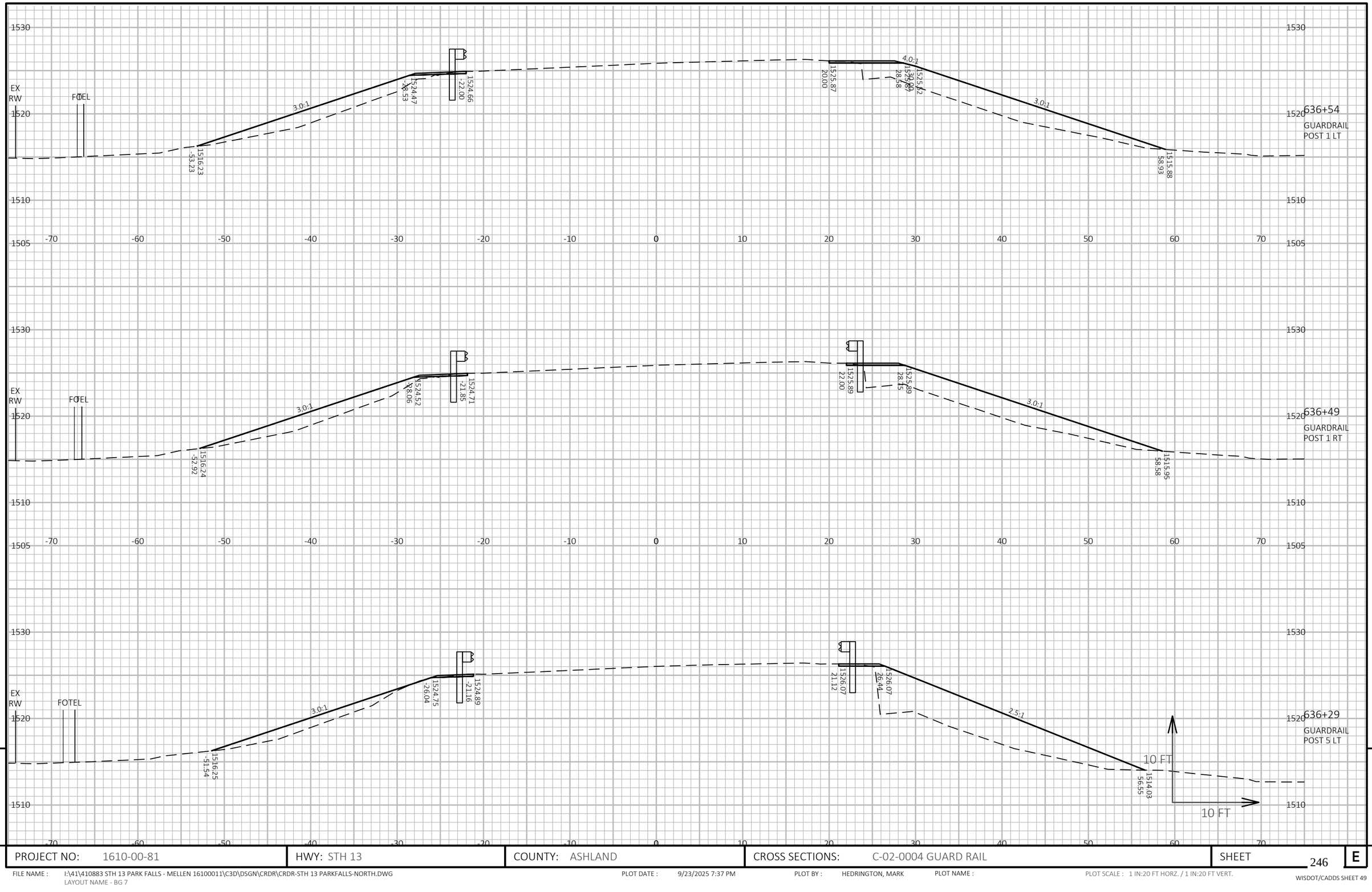
9

PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: C-02-0004 GUARD RAIL	SHEET 245	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-NORTH.DWG
LAYOUT NAME - BG 6

PLOT DATE : 9/23/2025 7:37 PM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

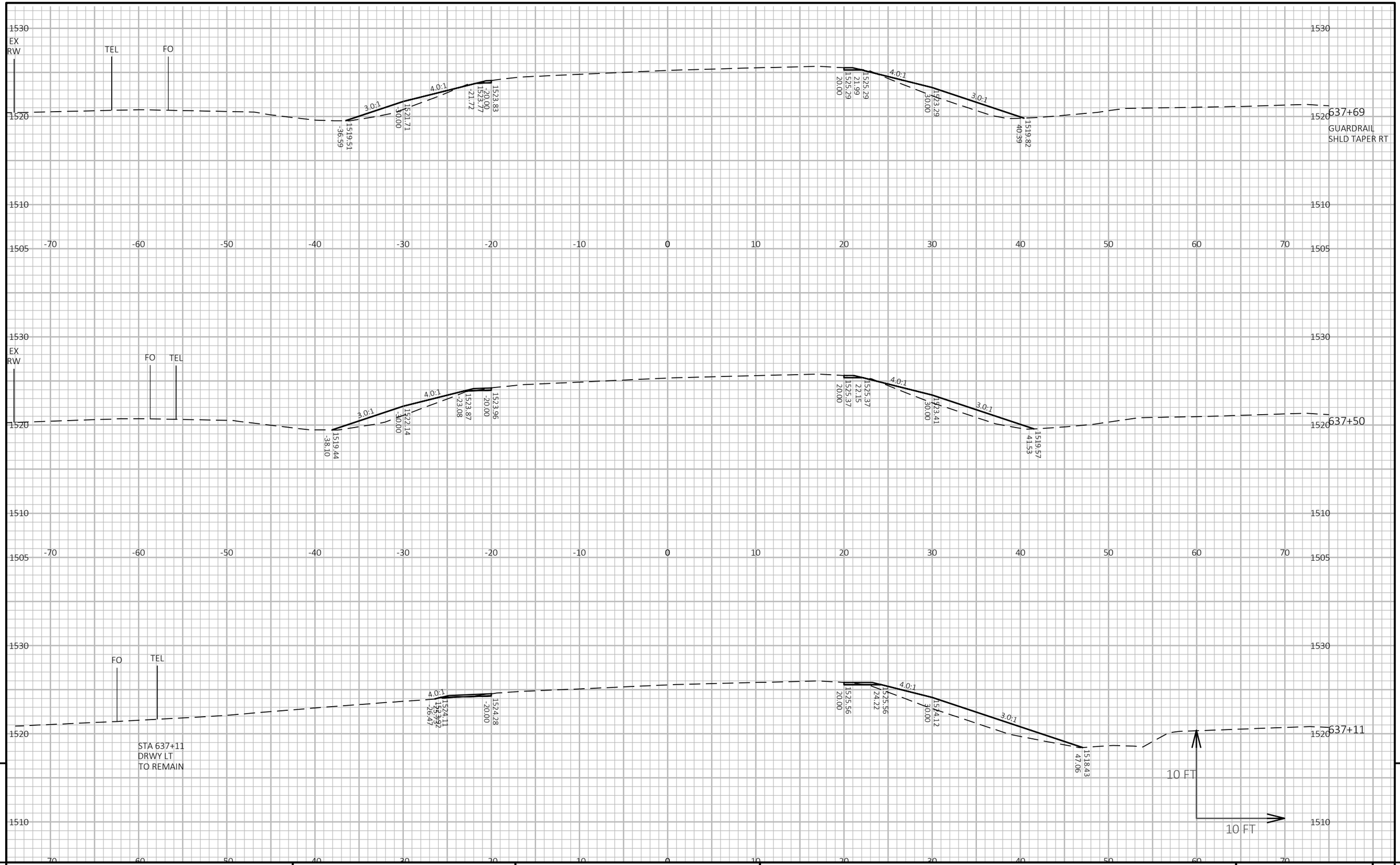
9

PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: C-02-0004 GUARD RAIL	SHEET 246	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-NORTH.DWG
LAYOUT NAME - BG 7

PLOT DATE : 9/23/2025 7:37 PM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

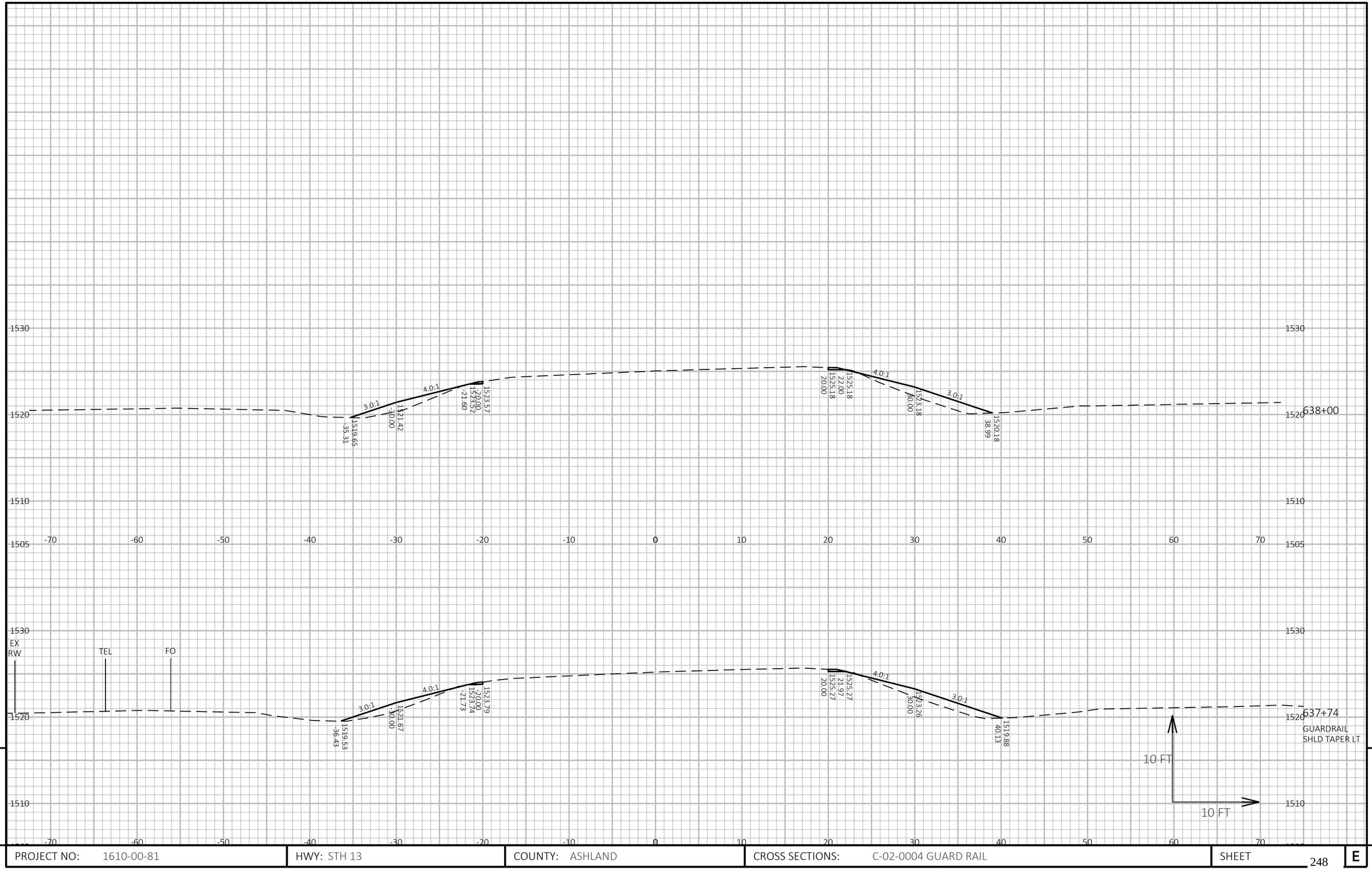
9

PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: C-02-0004 GUARD RAIL	SHEET 247	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-NORTH.DWG
LAYOUT NAME - BG 8

PLOT DATE : 9/23/2025 7:37 PM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



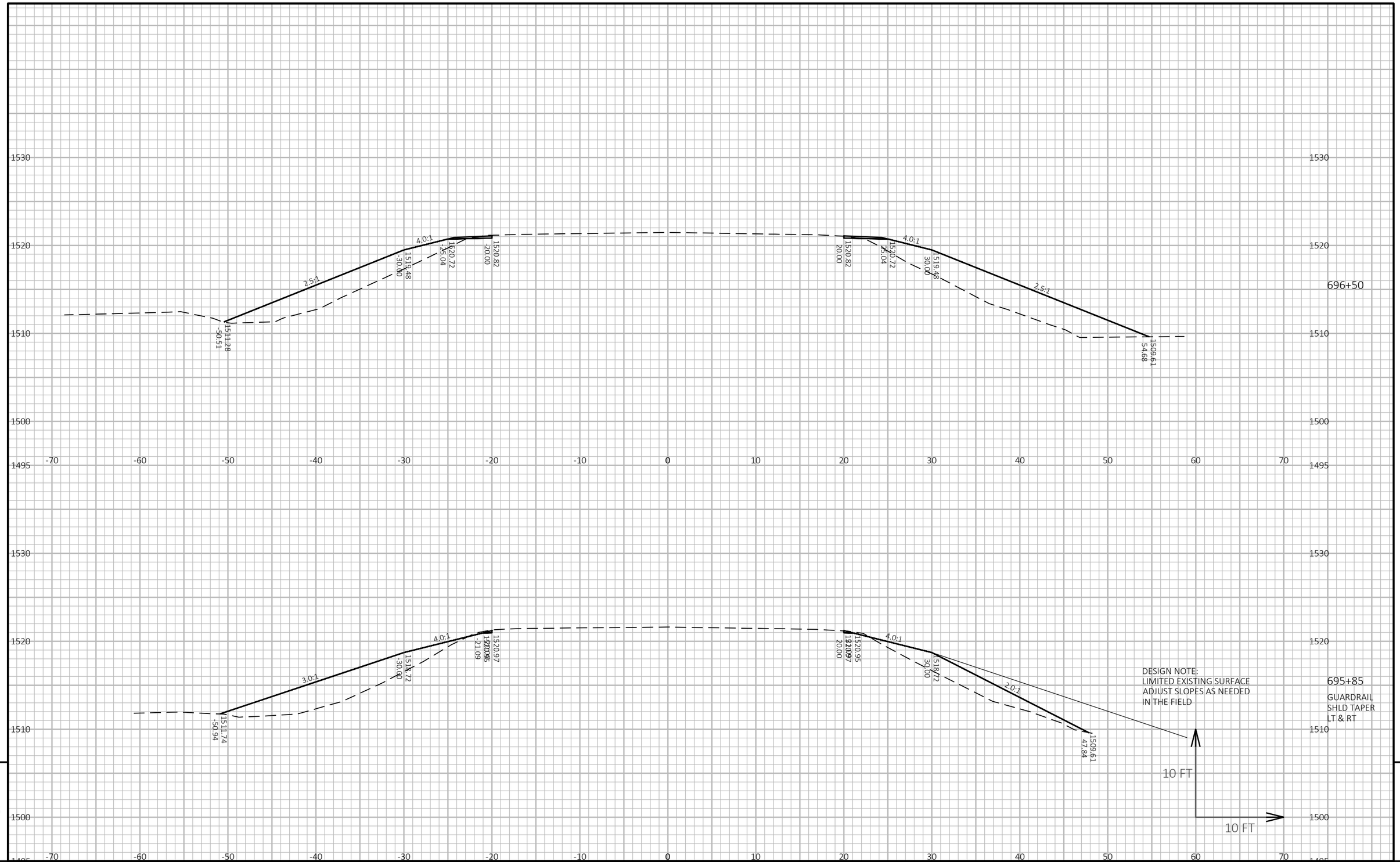
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9

PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: C-02-0004 GUARD RAIL	SHEET 248	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-NORTH.DWG
LAYOUT NAME - BG 9

PLOT DATE : 9/23/2025 7:37 PM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



9

9

PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: B-02-47 GUARDRAIL	SHEET 249	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-NORTH.DWG
LAYOUT NAME - GR 1

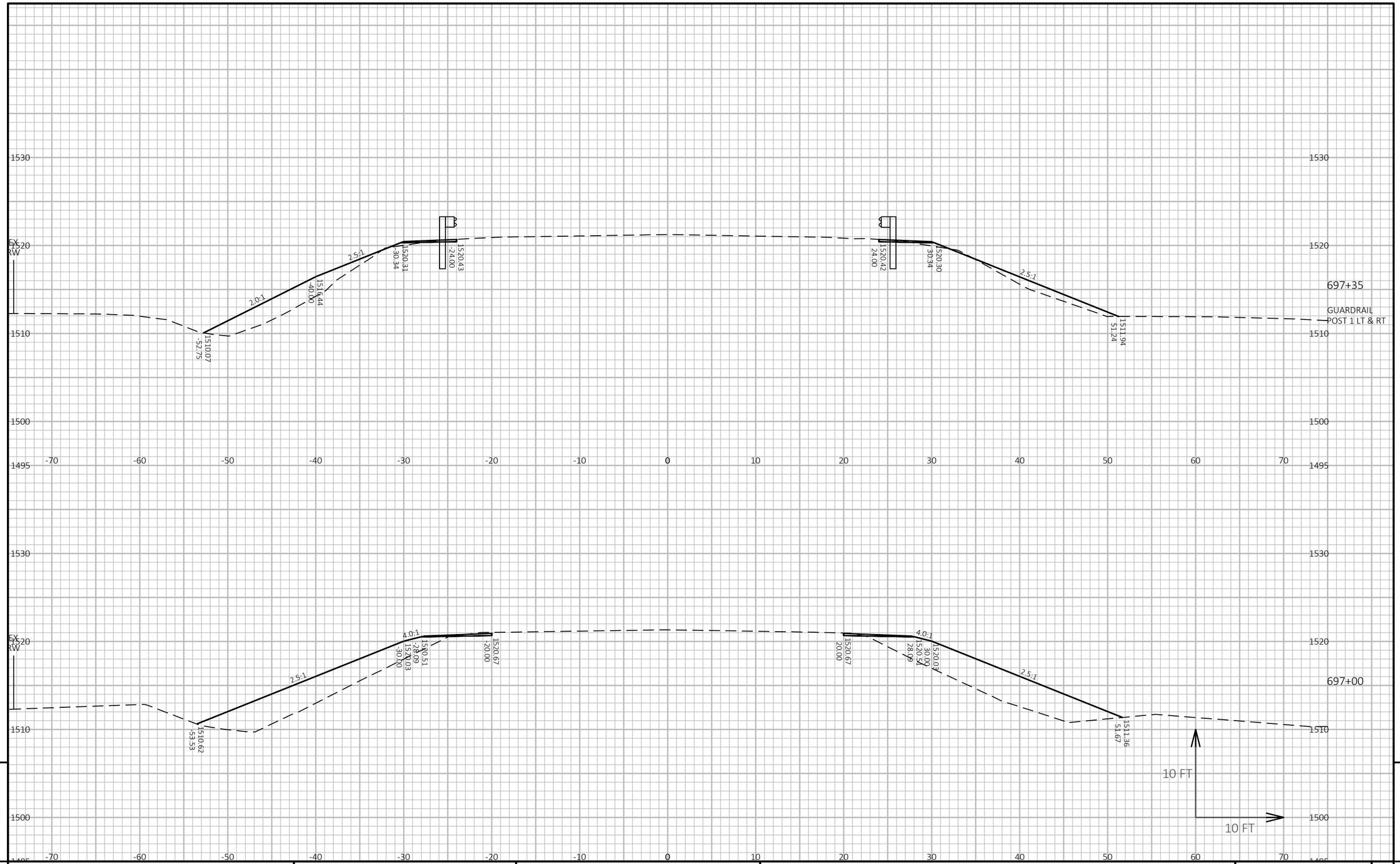
PLOT DATE : 9/23/2025 7:35 PM

PLOT BY : HEDRINGTON, MARK

PLOT NAME :

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

WISDOT/CADDS SHEET 49



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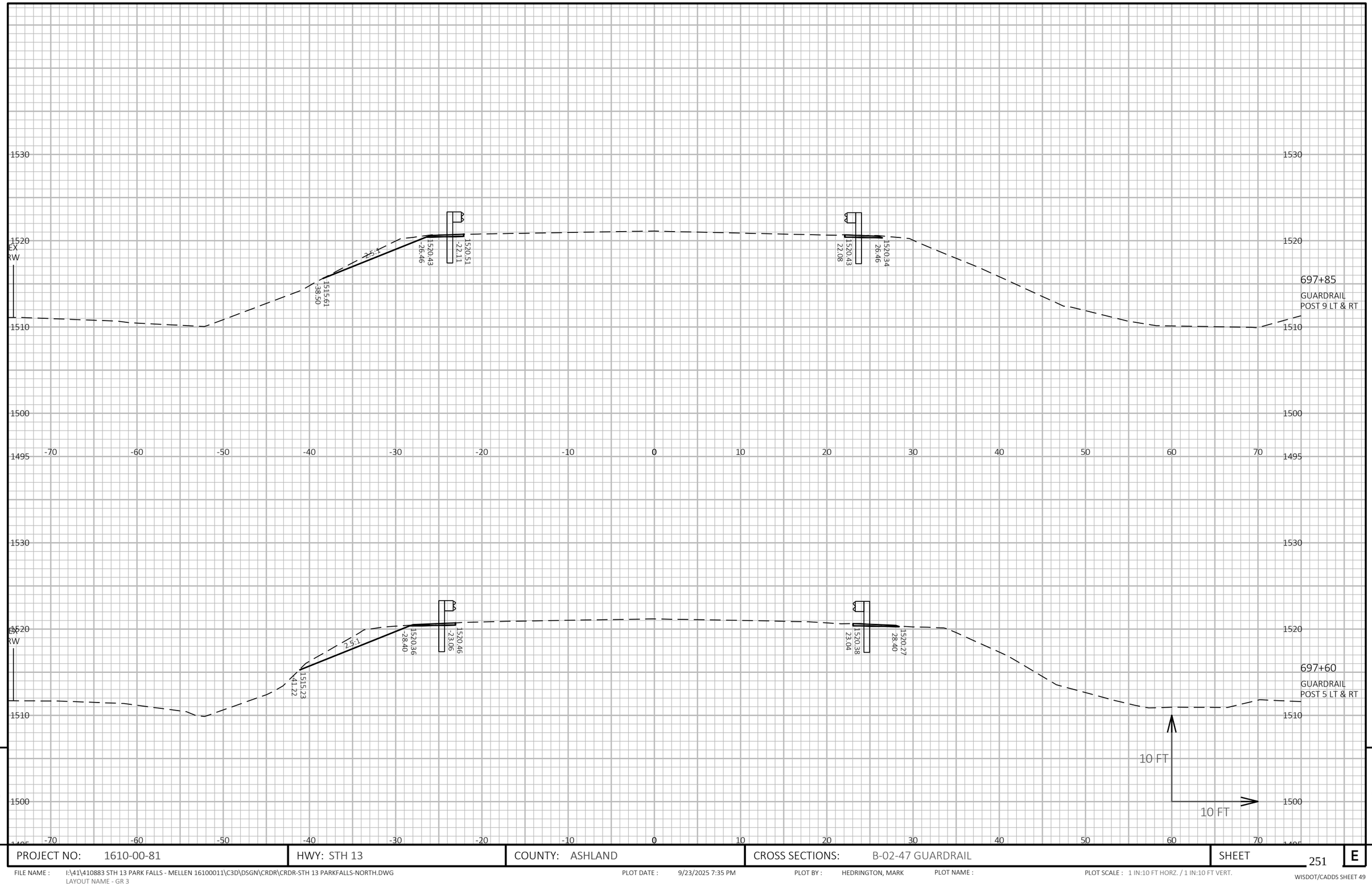
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PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: B-02-47 GUARDRAIL	SHEET 250	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-NORTH.DWG
LAYOUT NAME - GR 2

PLOT DATE : 9/23/2025 7:35 PM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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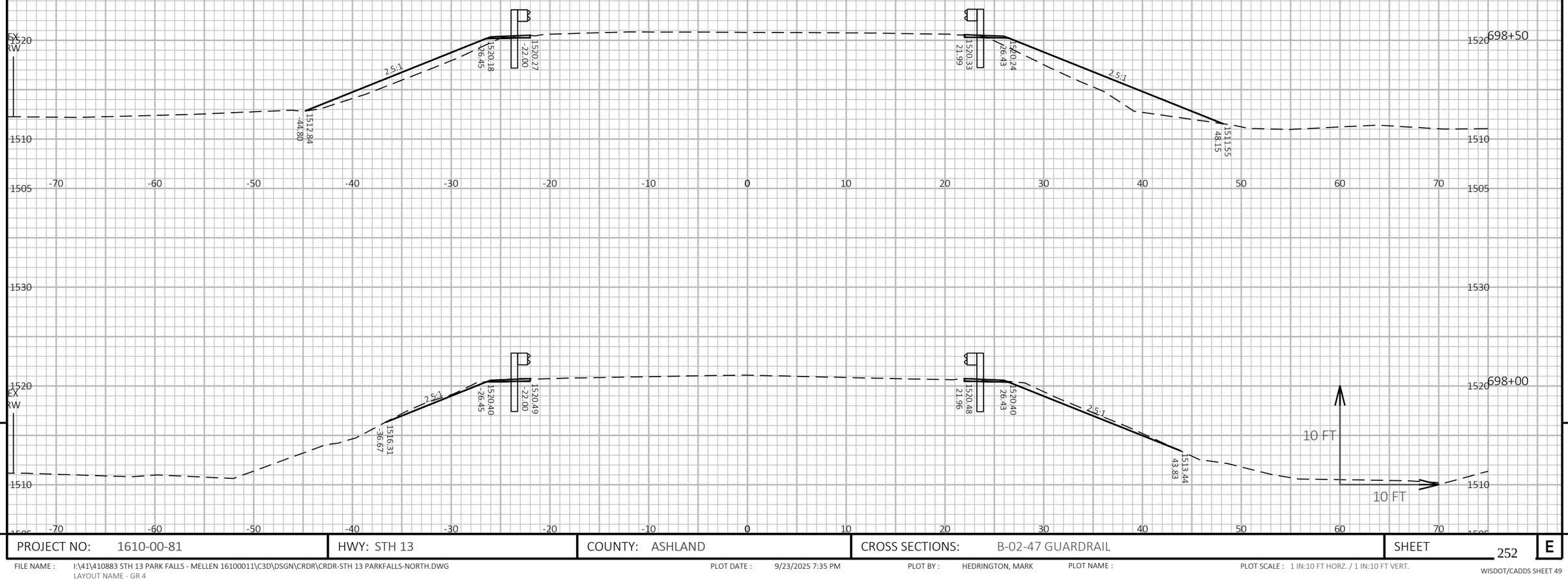
PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: B-02-47 GUARDRAIL	SHEET 251	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-NORTH.DWG
LAYOUT NAME - GR 3

PLOT DATE : 9/23/2025 7:35 PM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

STRUCTURE B-02-47 TO REMAIN



9

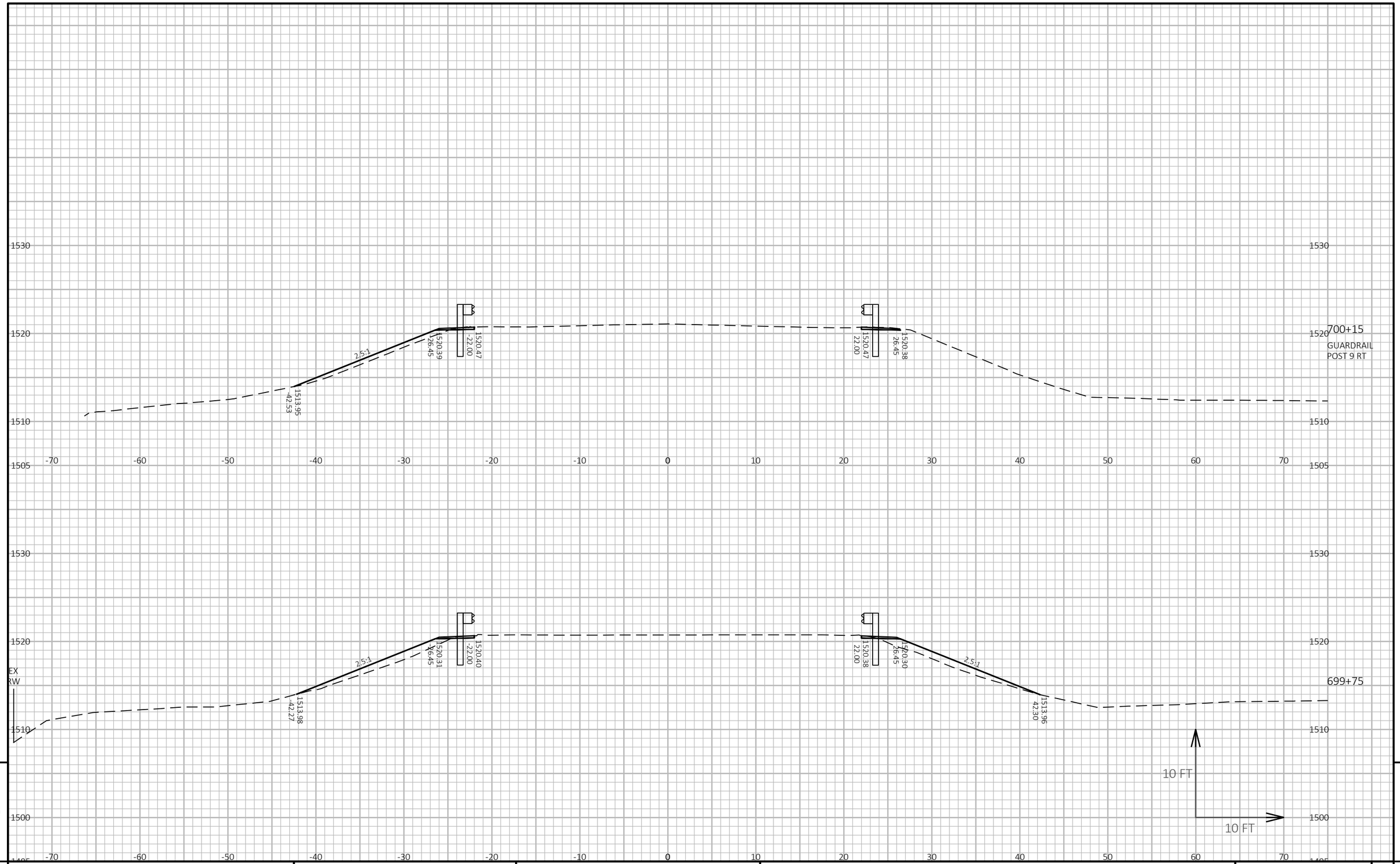
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PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: B-02-47 GUARDRAIL	SHEET 252	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-NORTH.DWG
LAYOUT NAME - GR 4

PLOT DATE : 9/23/2025 7:35 PM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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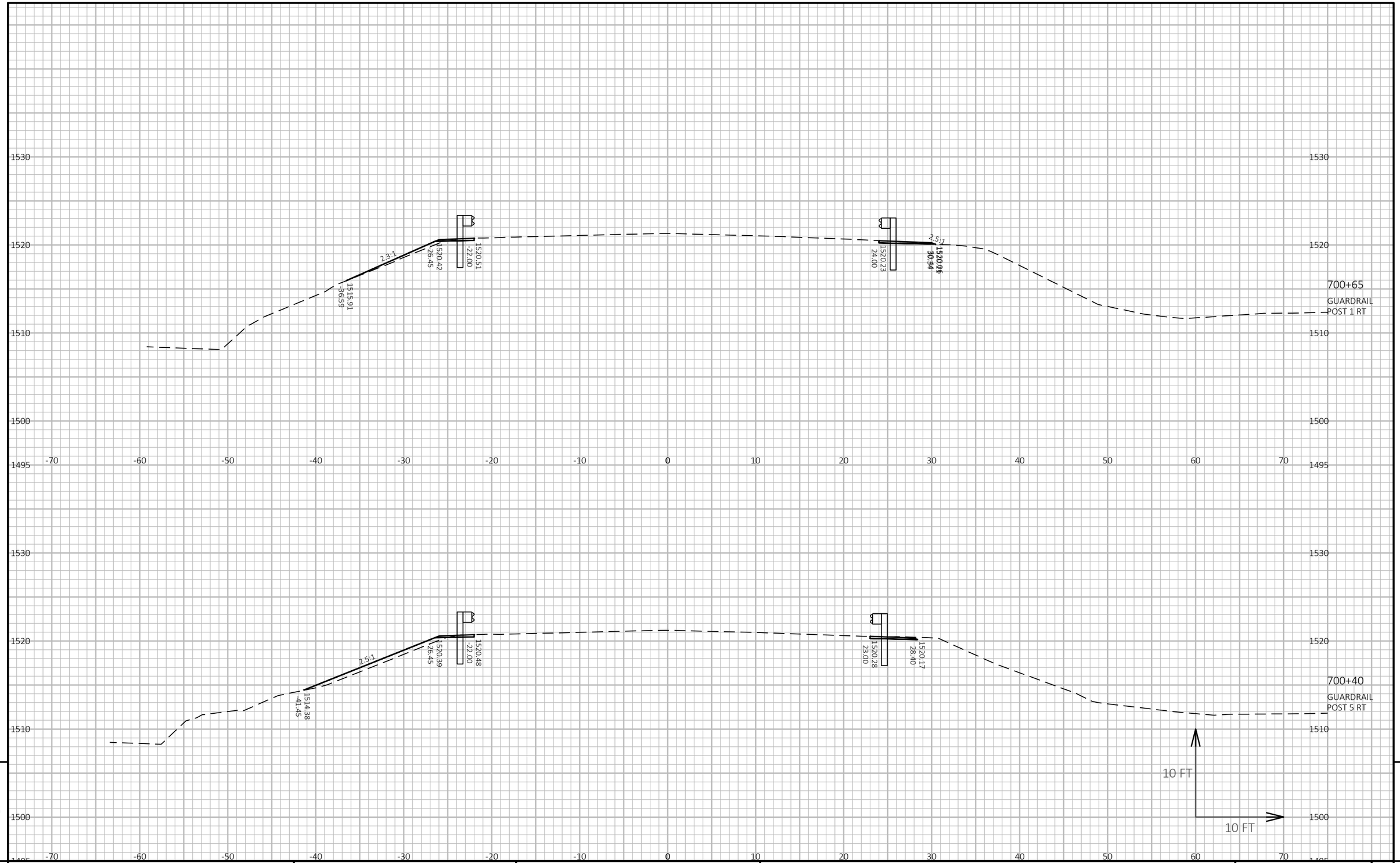
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FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-NORTH.DWG
LAYOUT NAME - GR 5

PLOT DATE : 9/23/2025 7:35 PM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



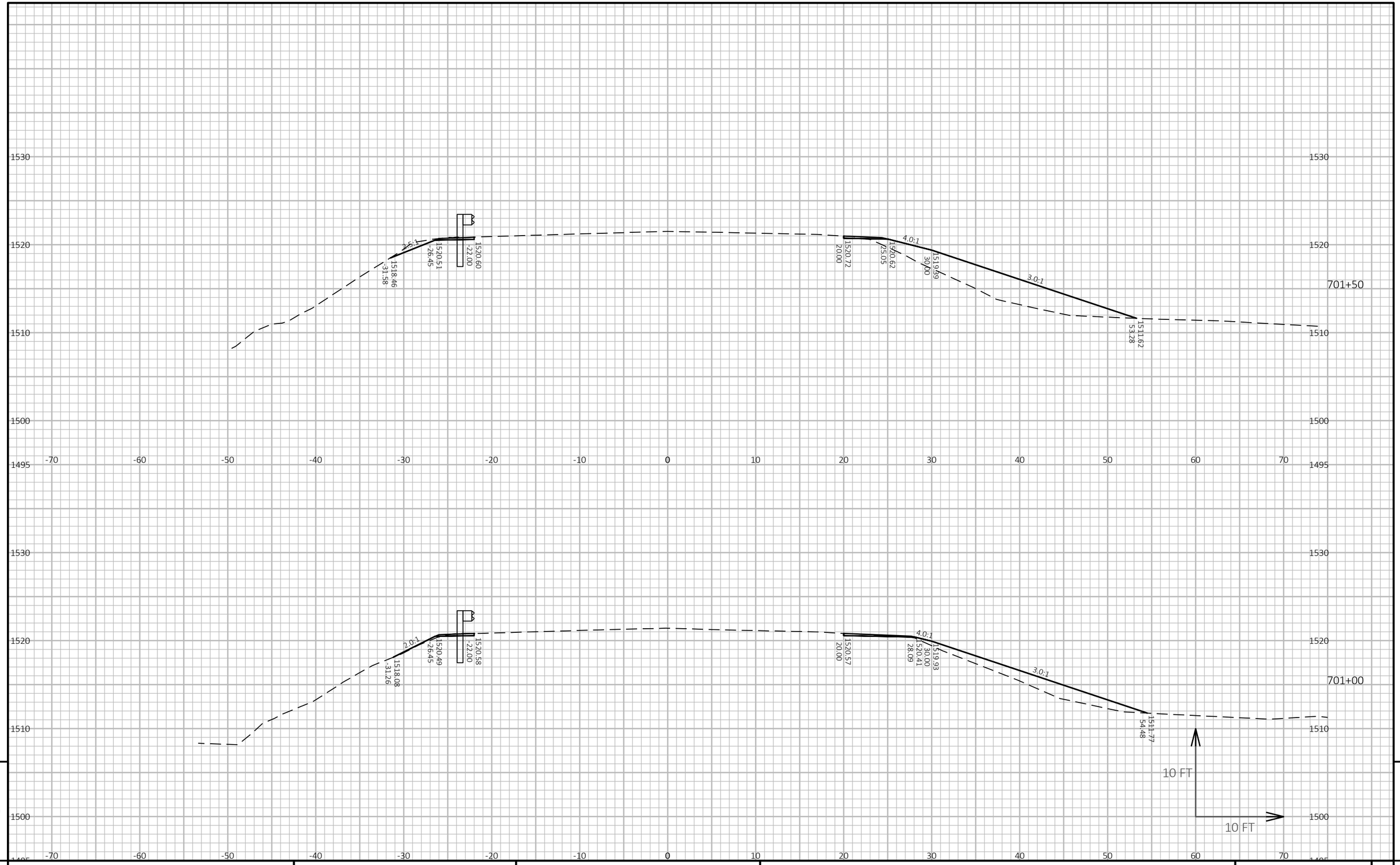
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PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: B-02-47 GUARDRAIL	SHEET 254	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-NORTH.DWG
LAYOUT NAME - GR 6

PLOT DATE : 9/23/2025 7:35 PM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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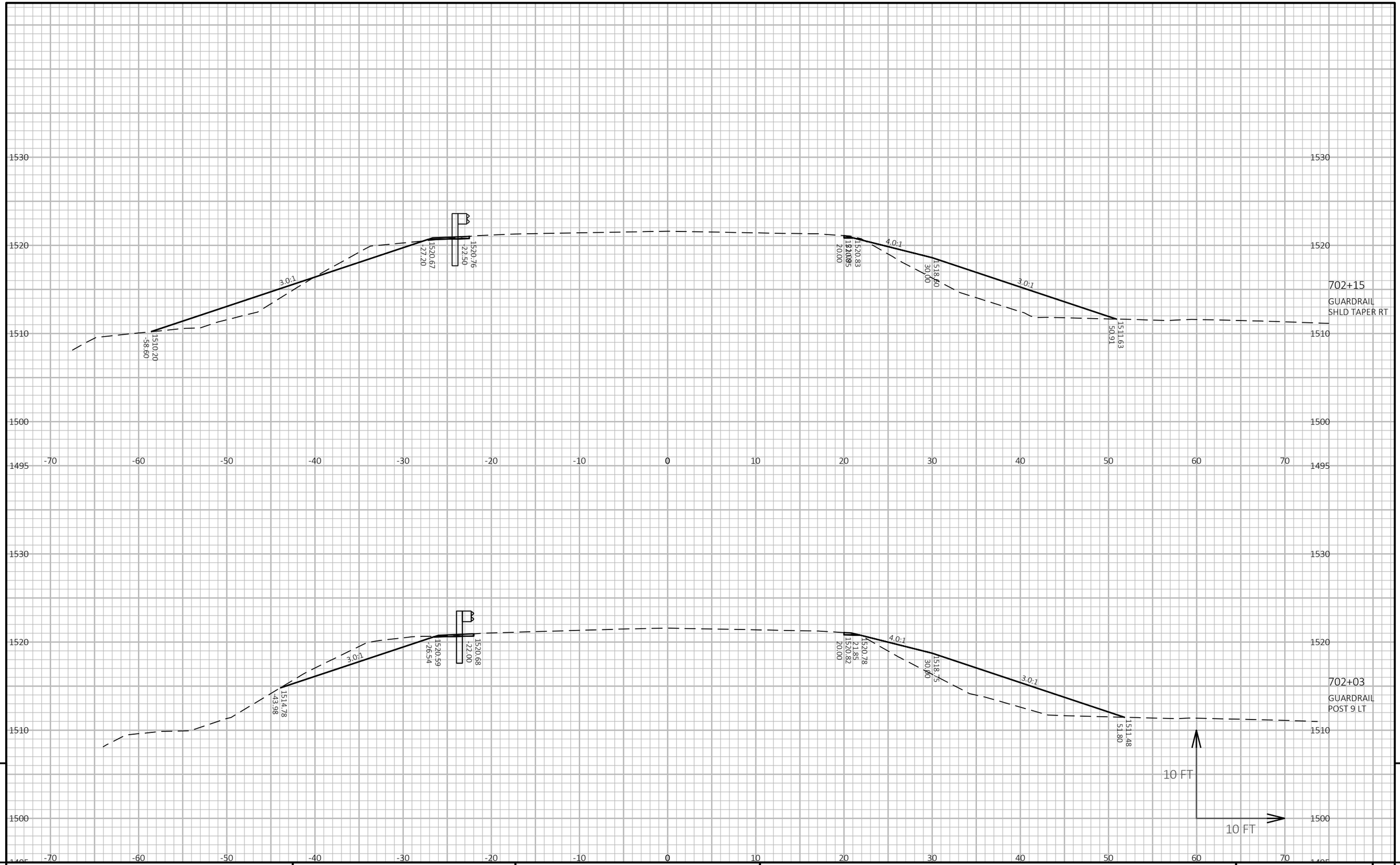
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PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: B-02-47 GUARDRAIL	SHEET 255	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-NORTH.DWG
LAYOUT NAME - GR 7

PLOT DATE : 9/23/2025 7:35 PM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



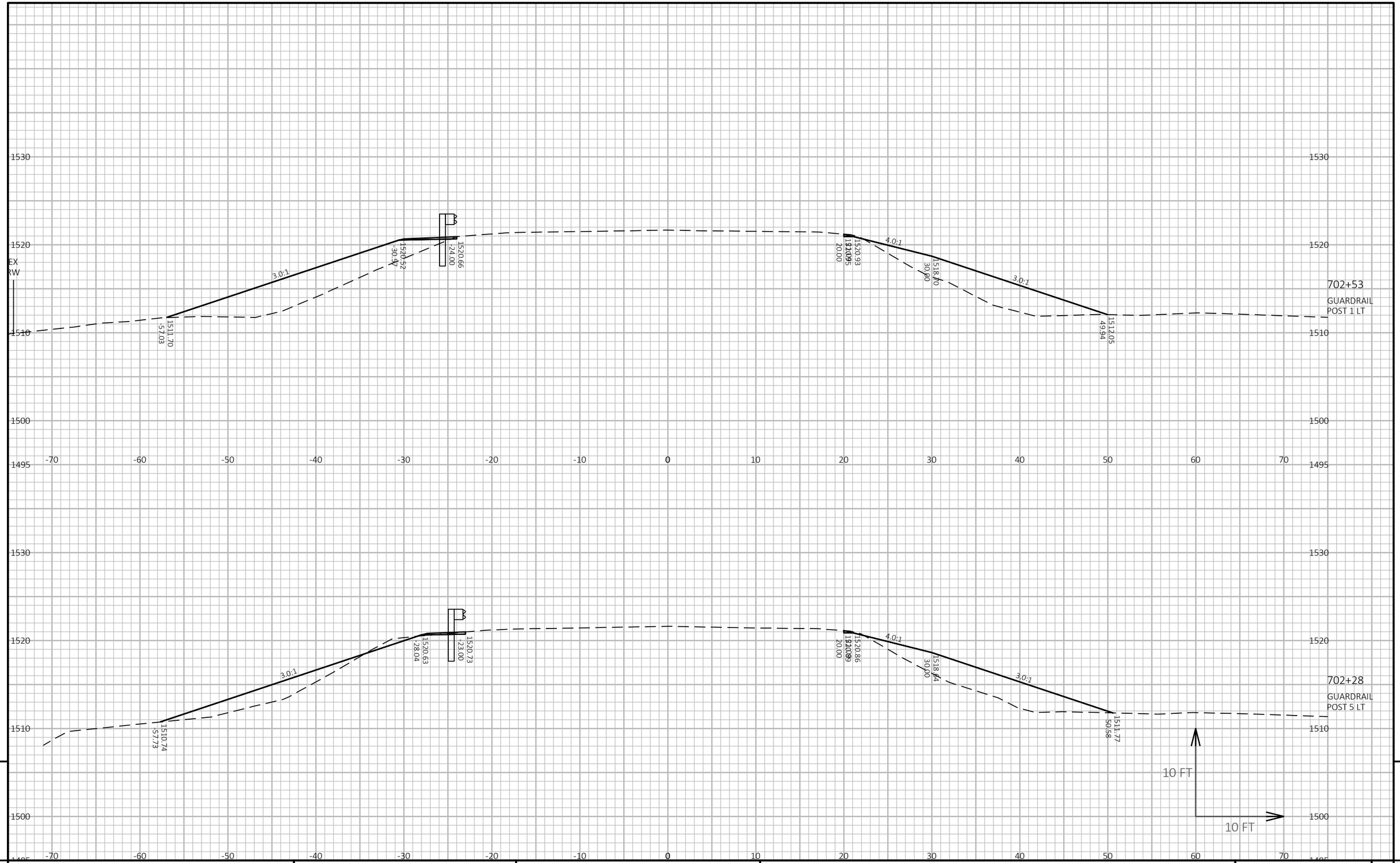
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PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: B-02-47 GUARDRAIL	SHEET 256	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-NORTH.DWG
LAYOUT NAME - GR 8

PLOT DATE : 9/23/2025 7:35 PM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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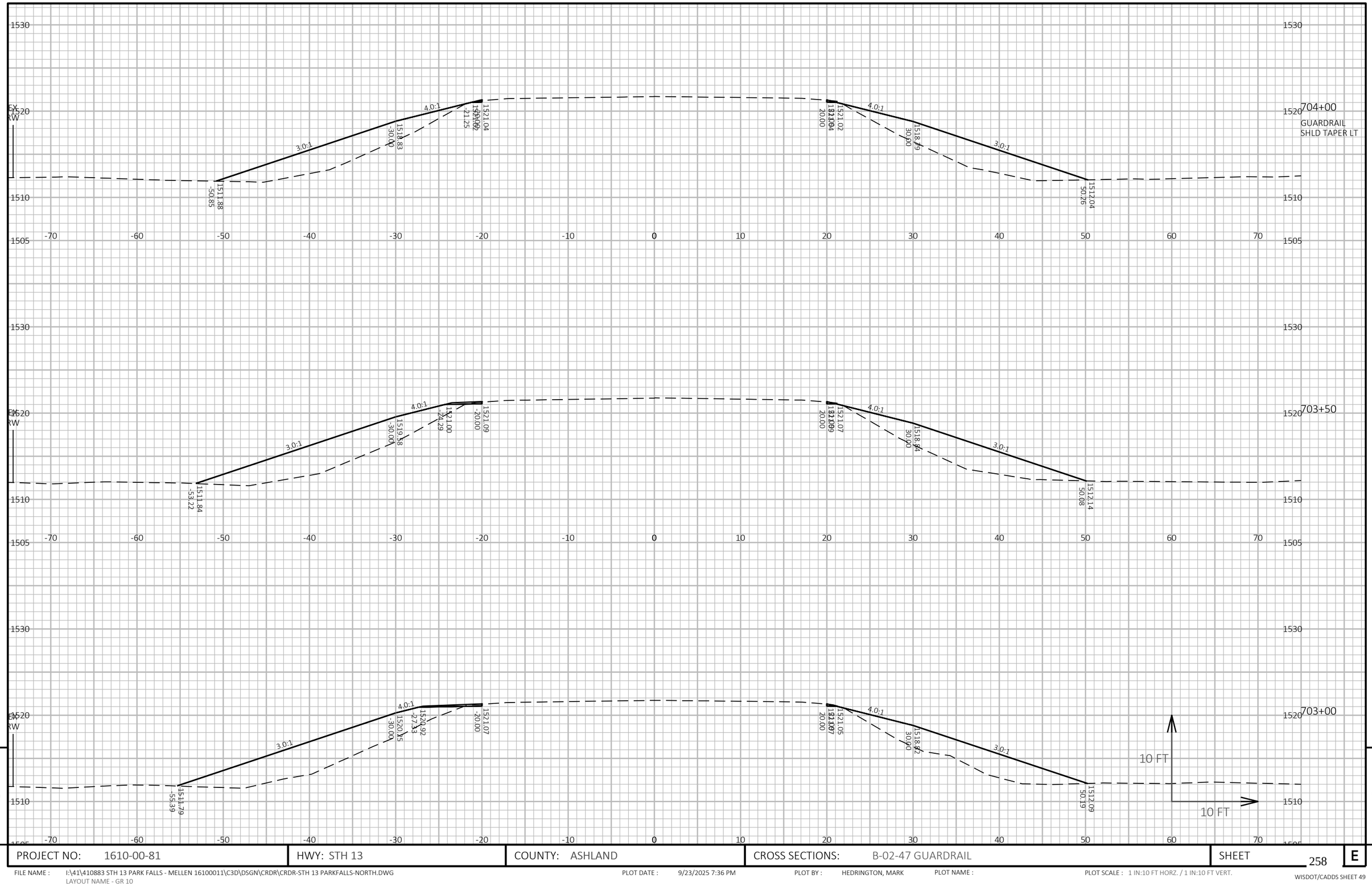
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PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: B-02-47 GUARDRAIL	SHEET 257	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-NORTH.DWG
LAYOUT NAME - GR 9

PLOT DATE : 9/23/2025 7:36 PM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: B-02-47 GUARDRAIL	SHEET 258	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-NORTH.DWG
LAYOUT NAME - GR 10

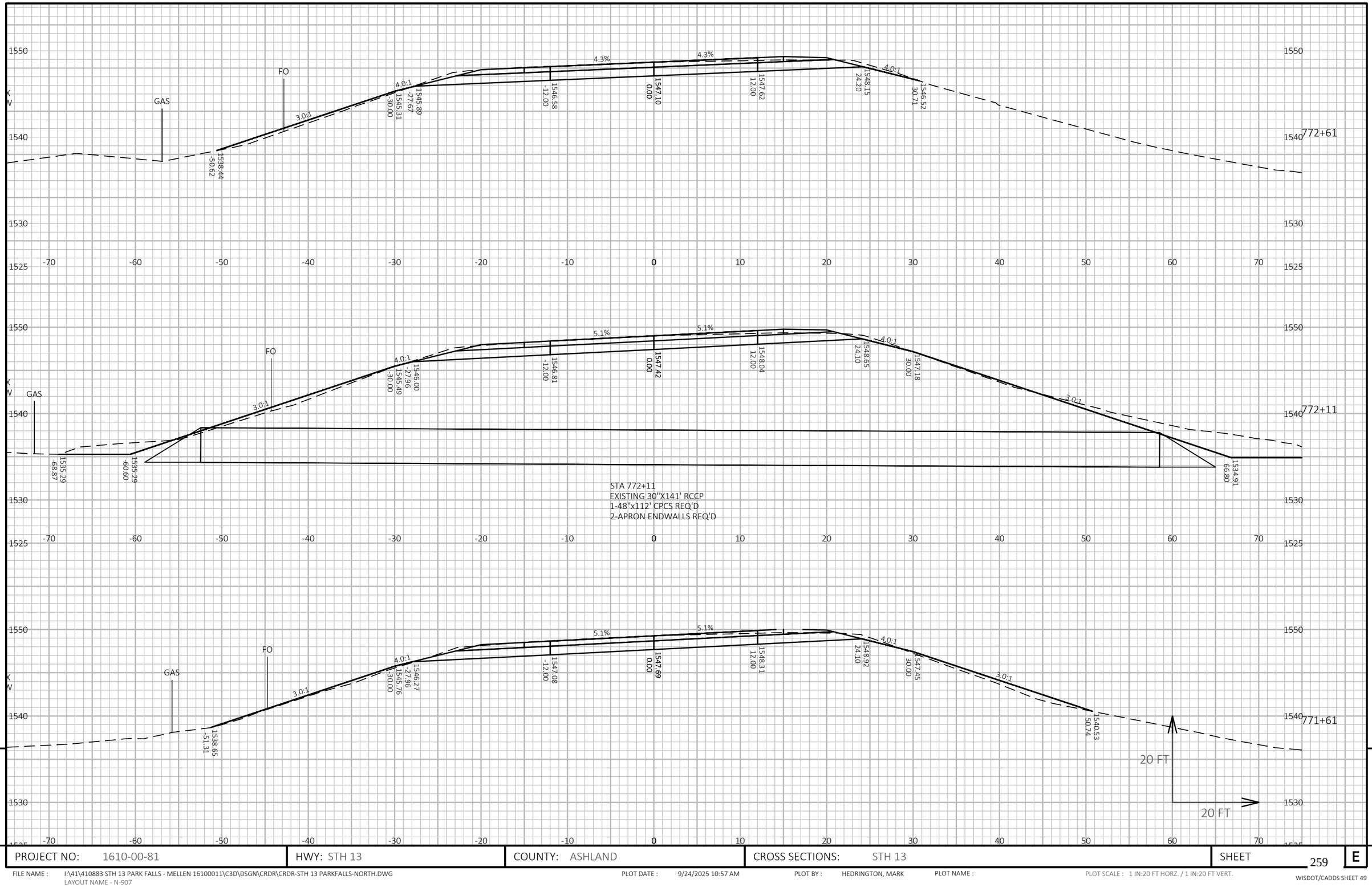
PLOT DATE : 9/23/2025 7:36 PM

PLOT BY : HEDRINGTON, MARK

PLOT NAME :

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

WISDOT/CADDS SHEET 49



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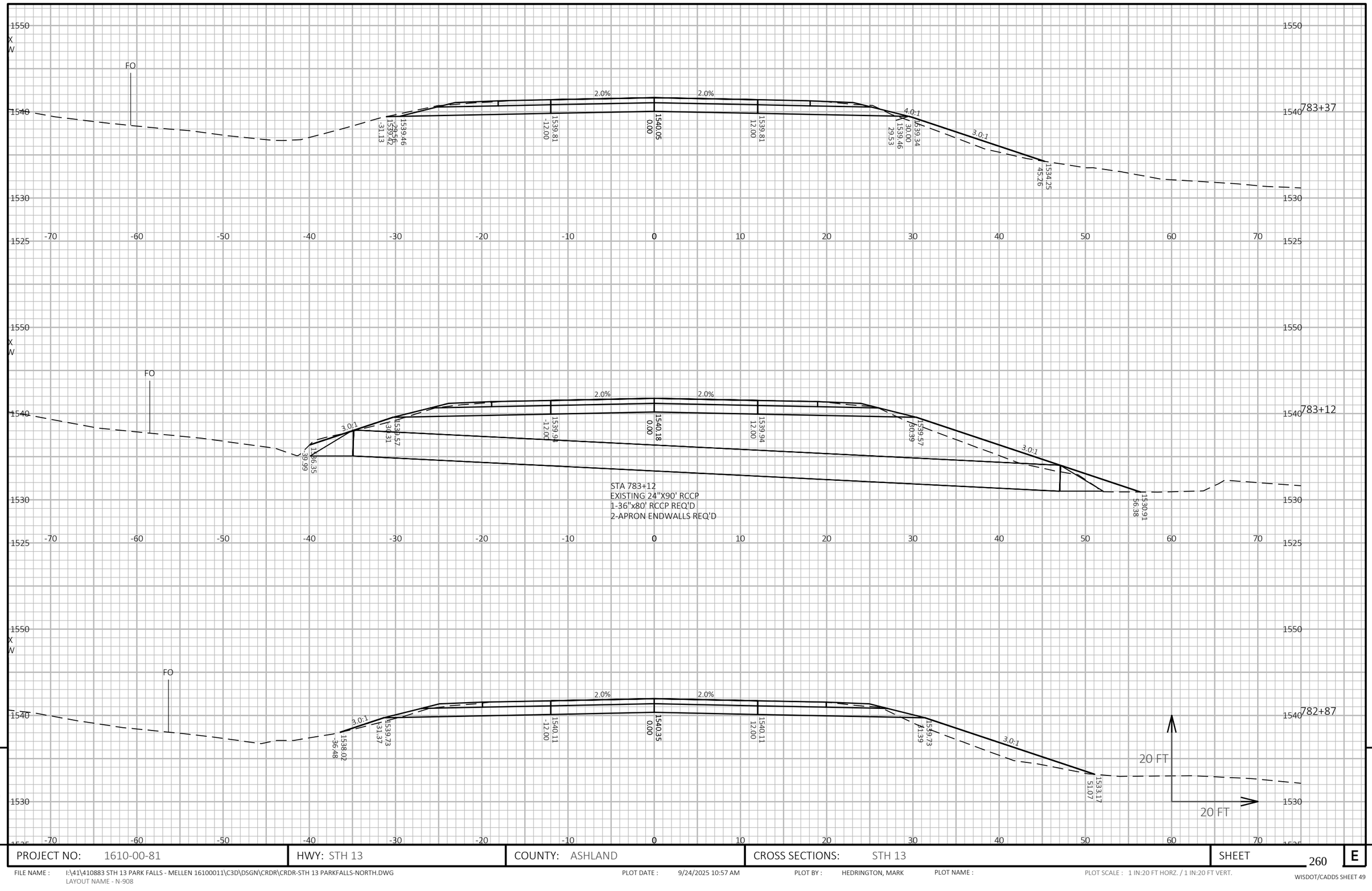
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PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: STH 13	SHEET 259	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-NORTH.DWG
LAYOUT NAME - N-907

PLOT DATE : 9/24/2025 10:57 AM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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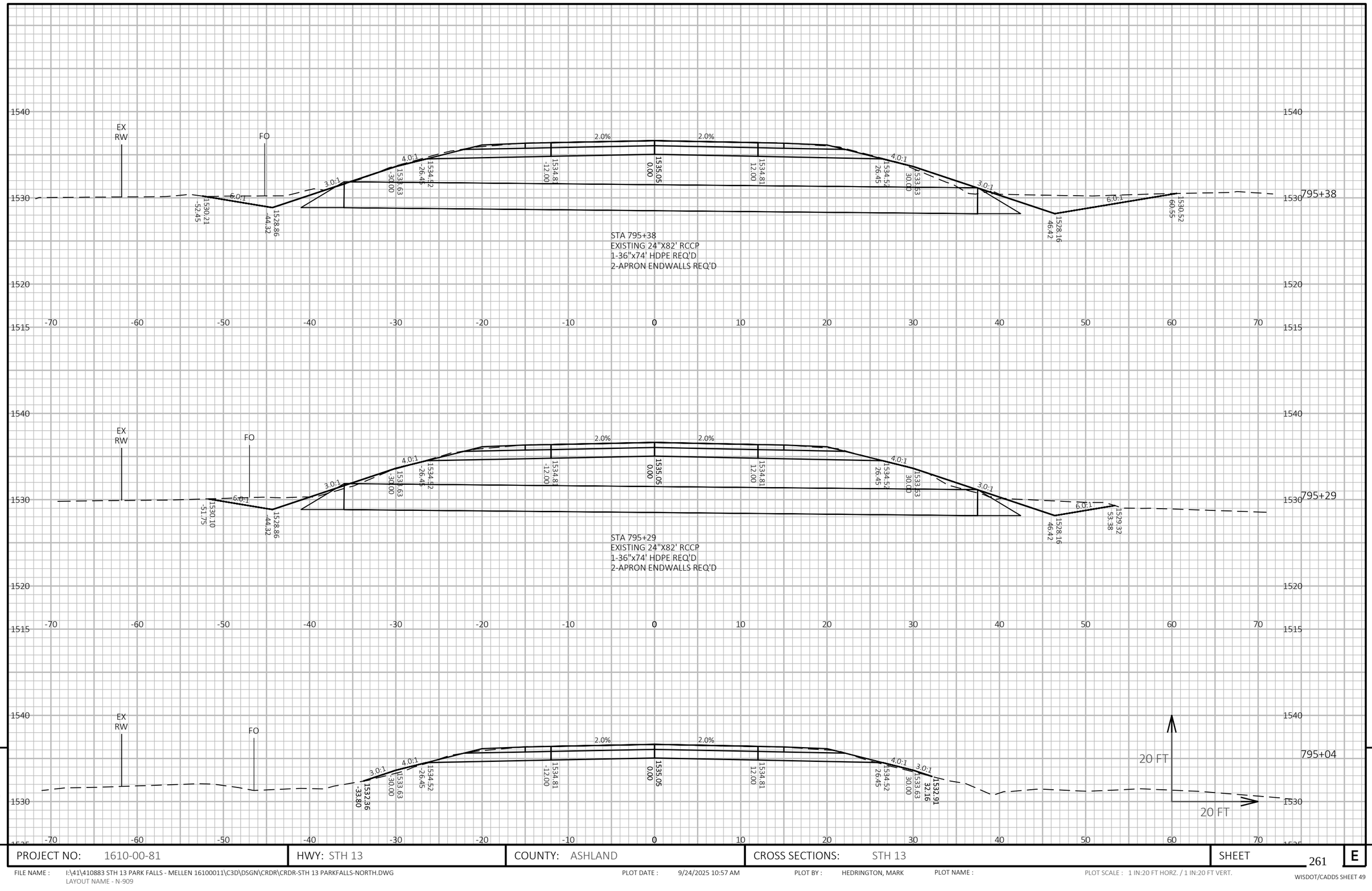
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PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: STH 13	SHEET 260	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-NORTH.DWG
LAYOUT NAME - N-908

PLOT DATE : 9/24/2025 10:57 AM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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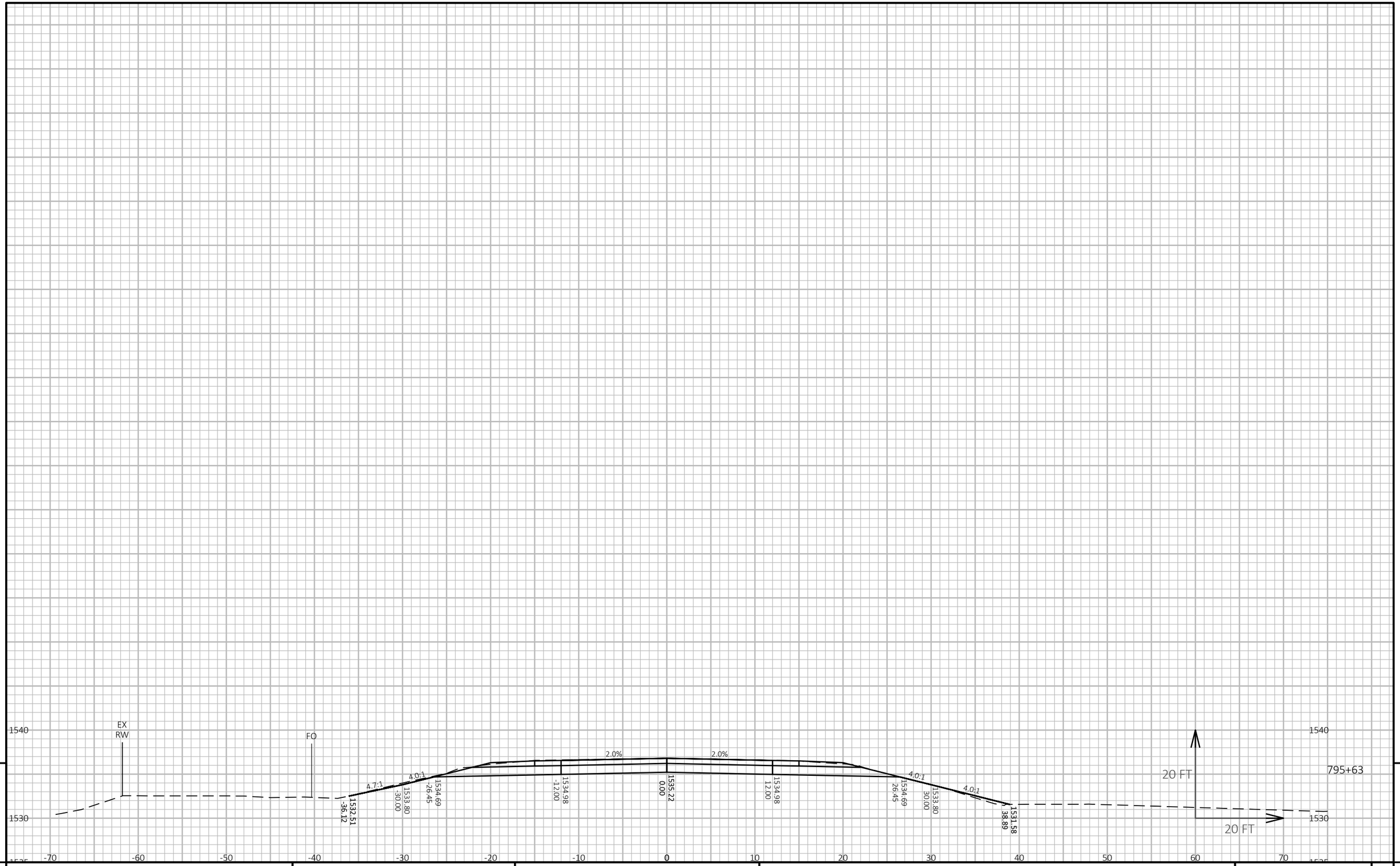
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PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: STH 13	SHEET 261	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-NORTH.DWG
LAYOUT NAME - N-909

PLOT DATE : 9/24/2025 10:57 AM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: STH 13	SHEET 262	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-NORTH.DWG
LAYOUT NAME - N-909A

PLOT DATE : 9/24/2025 10:57 AM PLOT BY : HEDRINGTON, MARK PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

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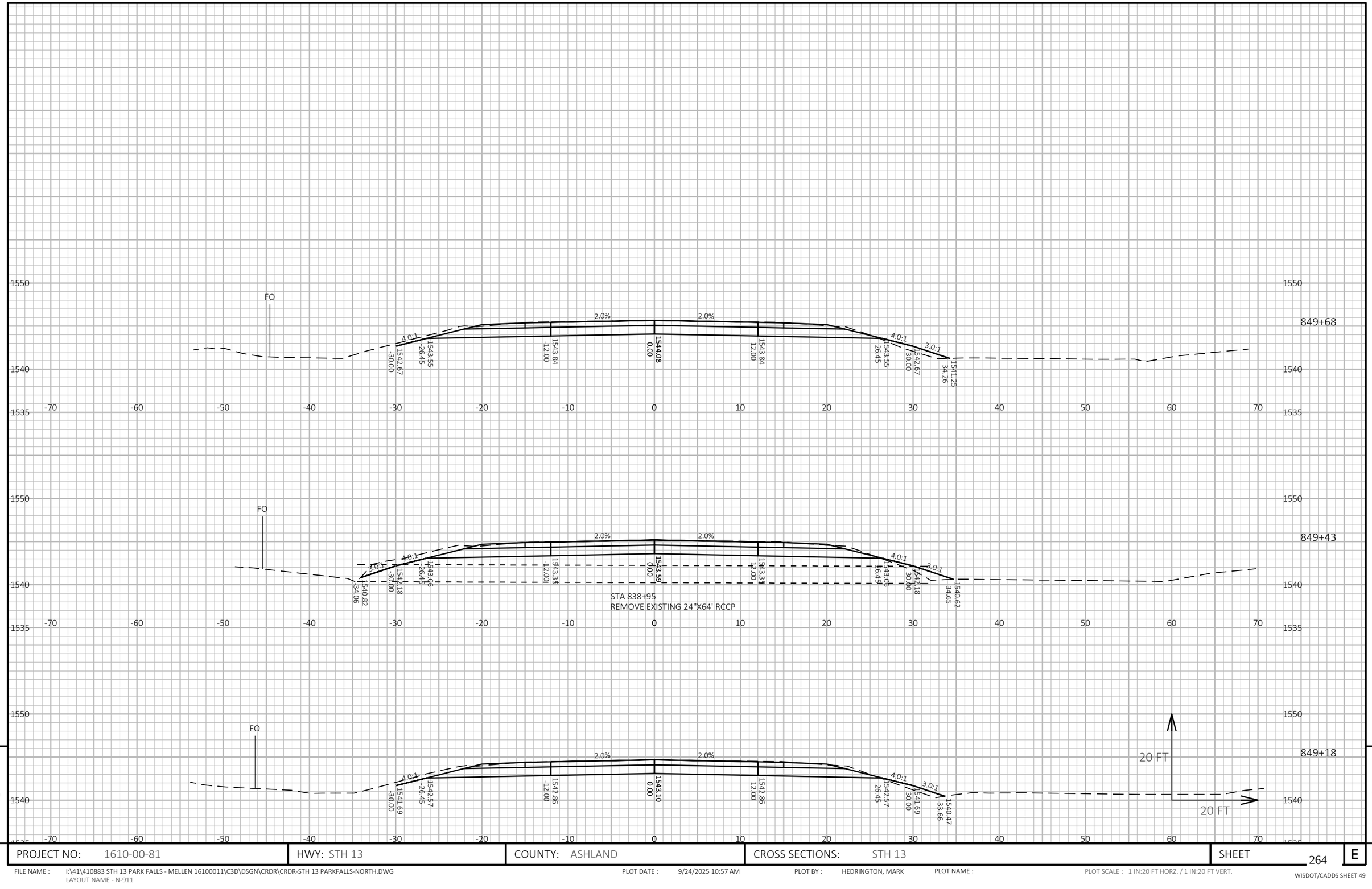
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PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: STH 13	SHEET 263	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-NORTH.DWG
LAYOUT NAME - N-910

PLOT DATE : 9/24/2025 10:57 AM PLOT BY : HEDRINGTON, MARK PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



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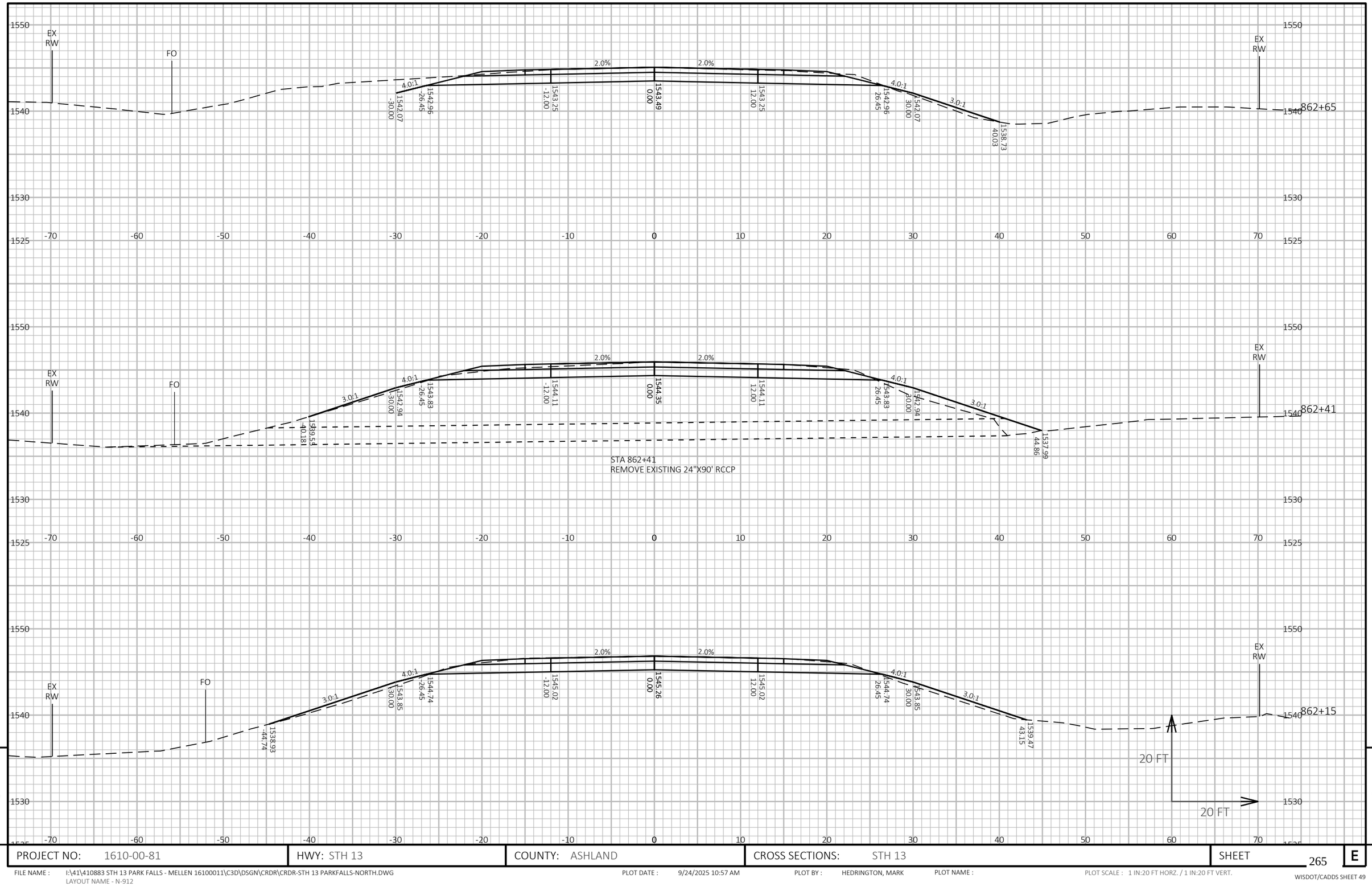
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PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: STH 13	SHEET 264	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-NORTH.DWG
LAYOUT NAME - N-911

PLOT DATE : 9/24/2025 10:57 AM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

9

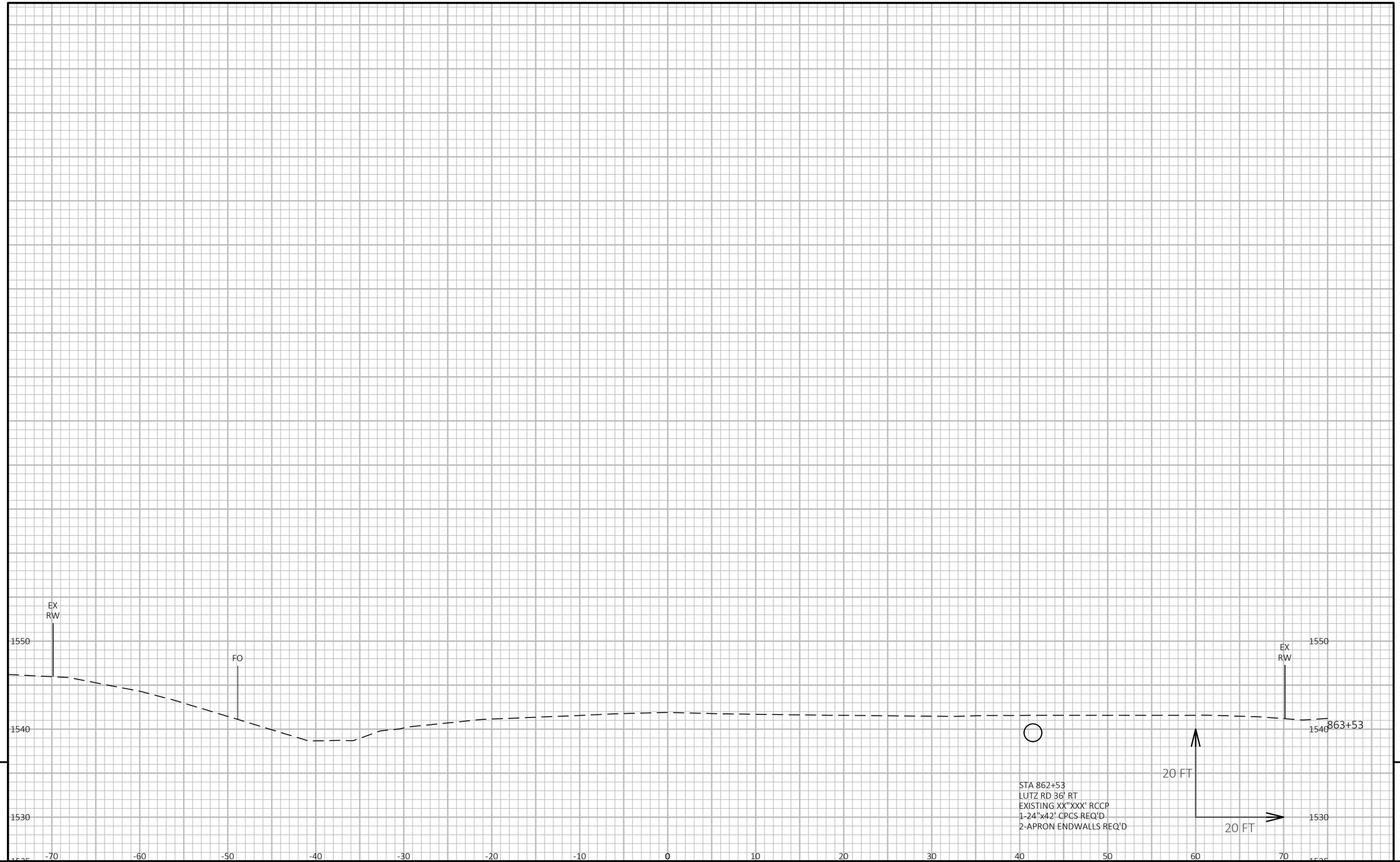
PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: STH 13	SHEET 265	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-NORTH.DWG
LAYOUT NAME - N-912

PLOT DATE : 9/24/2025 10:57 AM PLOT BY : HEDRINGTON, MARK PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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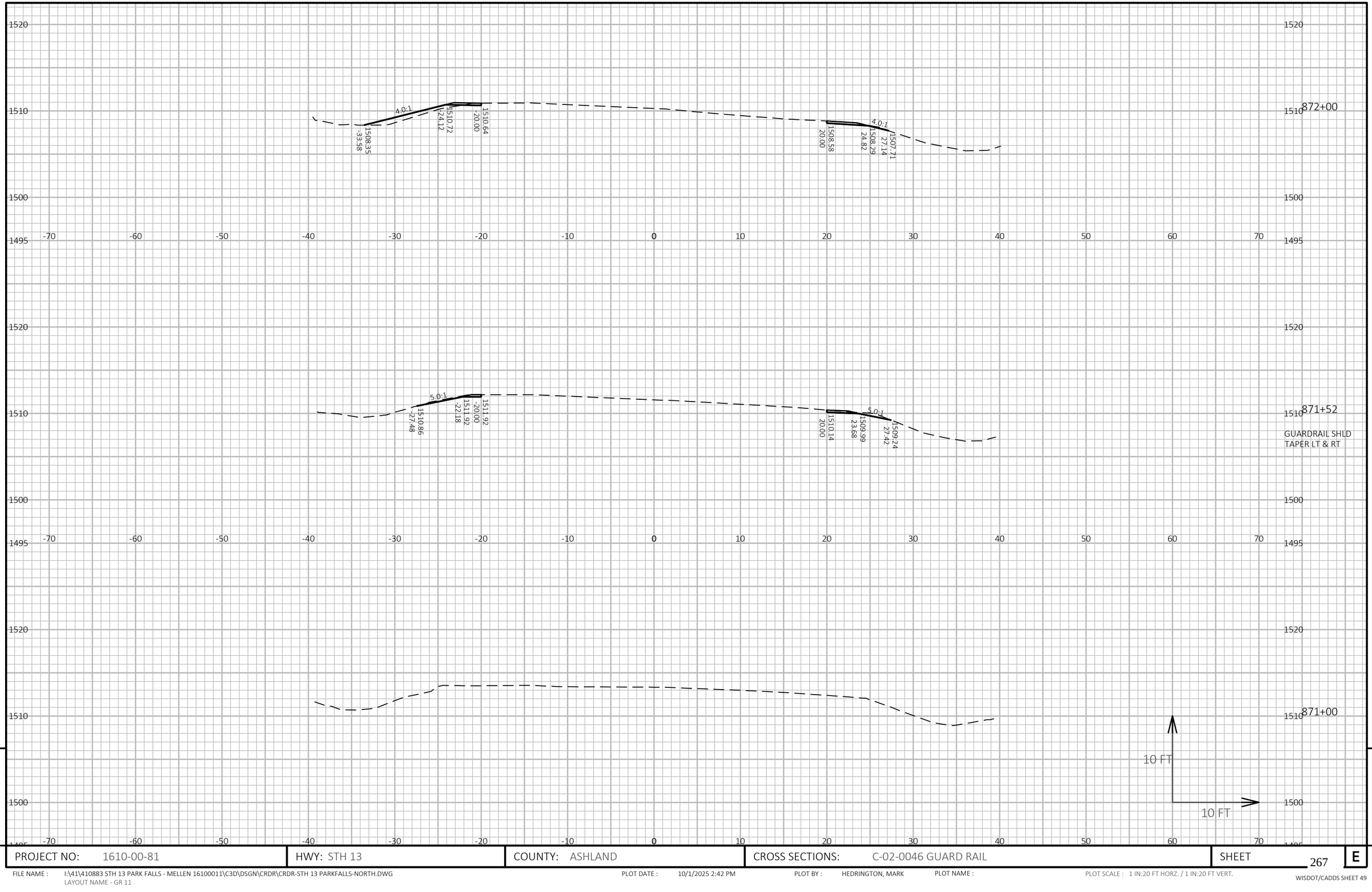
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PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: STH 13	SHEET 266	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-NORTH.DWG
LAYOUT NAME - N-912A

PLOT DATE : 9/24/2025 10:58 AM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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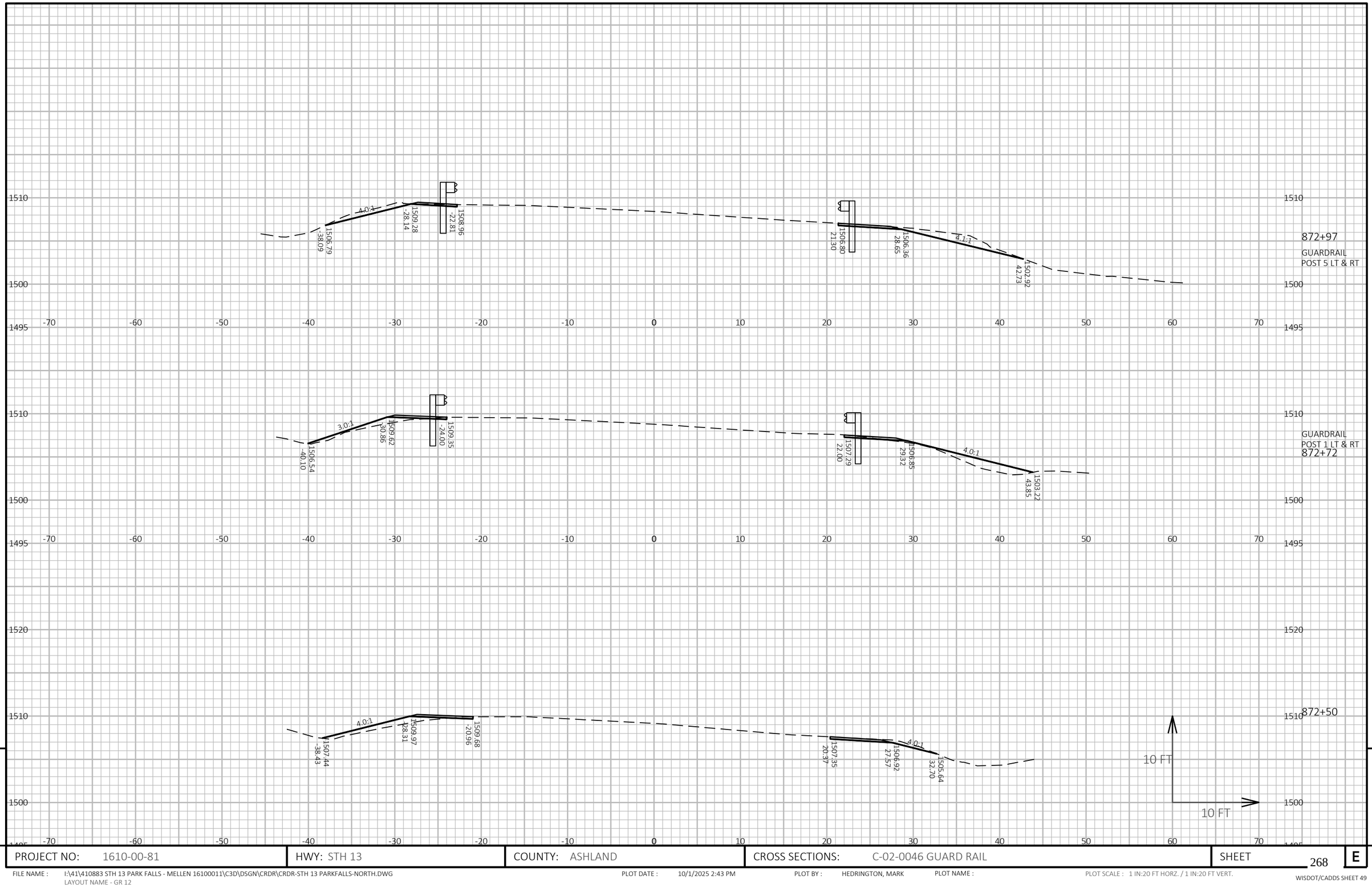
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PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: C-02-0046 GUARD RAIL	SHEET 267	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-NORTH.DWG
LAYOUT NAME - GR 11

PLOT DATE : 10/1/2025 2:42 PM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



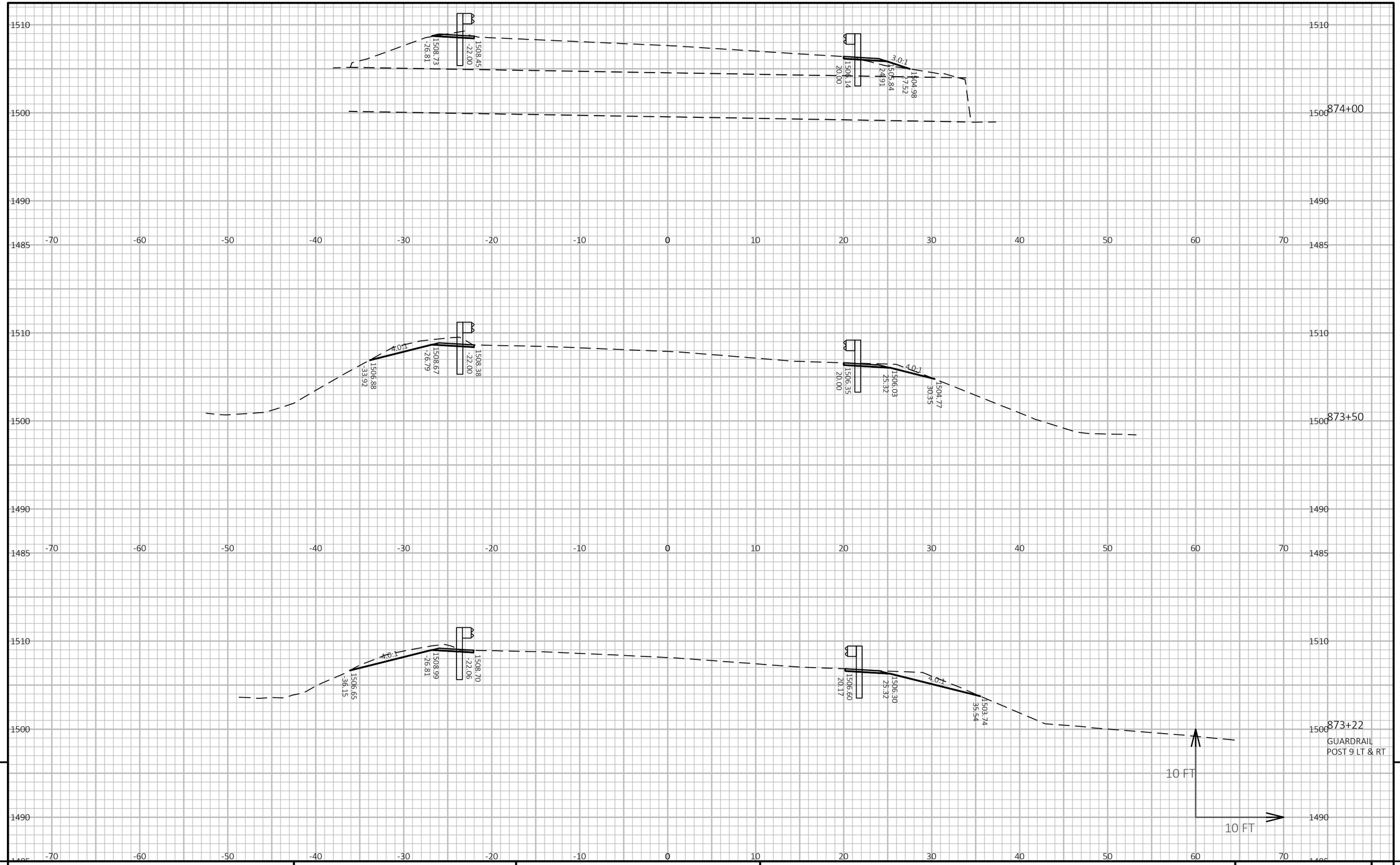
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PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: C-02-0046 GUARD RAIL	SHEET 268	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-NORTH.DWG
LAYOUT NAME - GR 12

PLOT DATE : 10/1/2025 2:43 PM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



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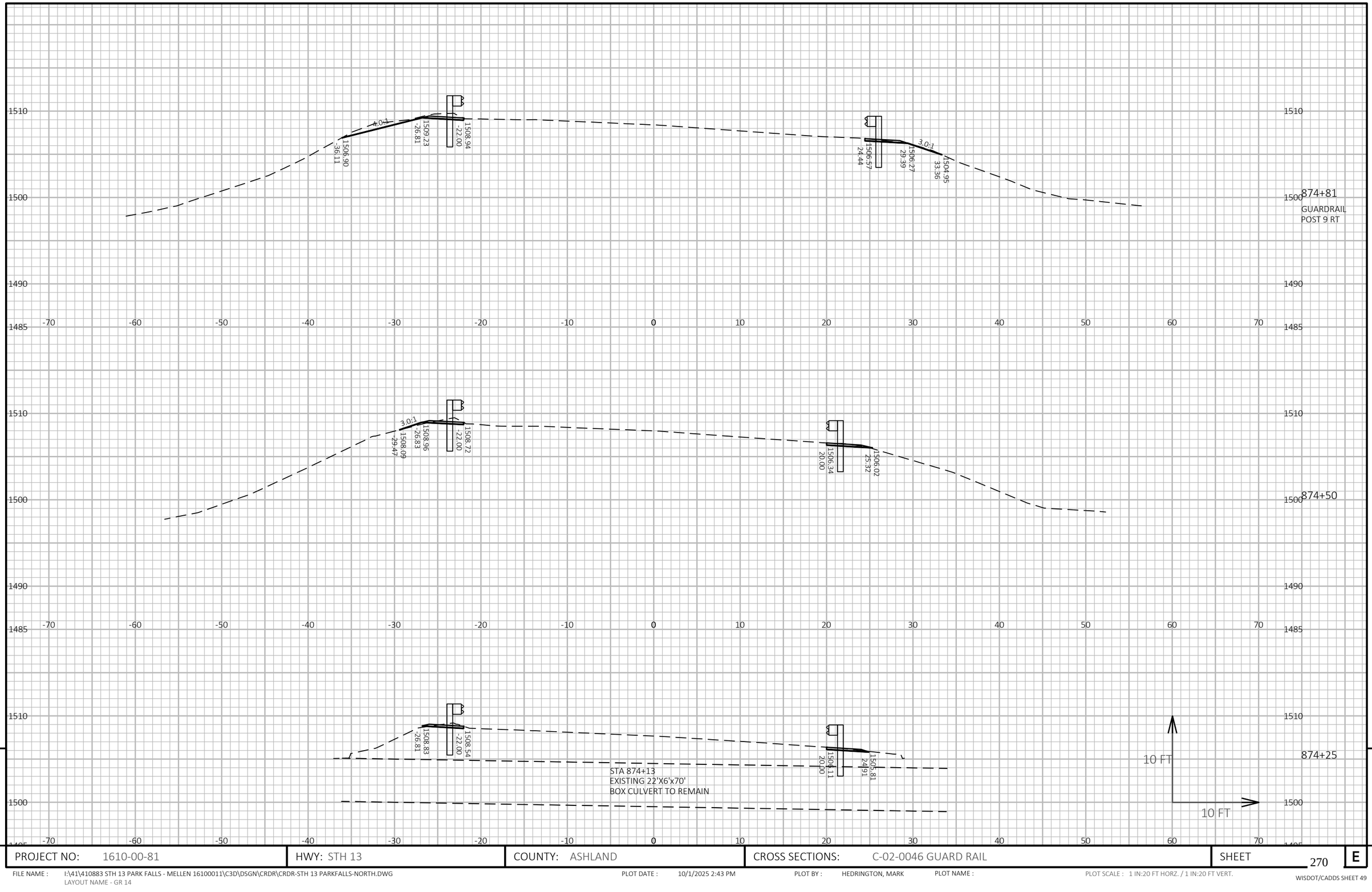
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PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: C-02-0046 GUARD RAIL	SHEET 269	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-NORTH.DWG
LAYOUT NAME - GR 13

PLOT DATE : 10/1/2025 2:43 PM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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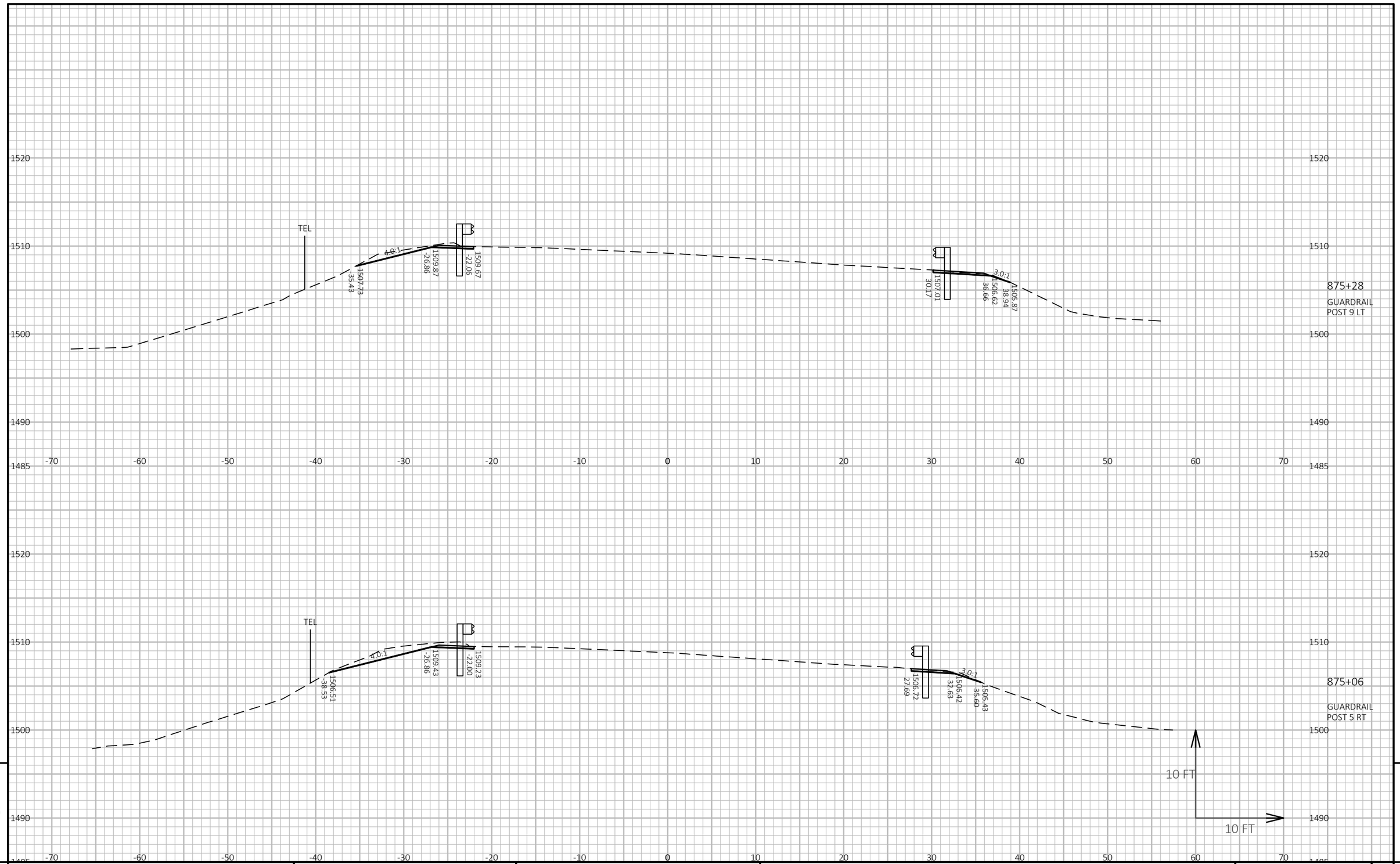
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PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: C-02-0046 GUARD RAIL	SHEET 270	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-NORTH.DWG
LAYOUT NAME - GR 14

PLOT DATE : 10/1/2025 2:43 PM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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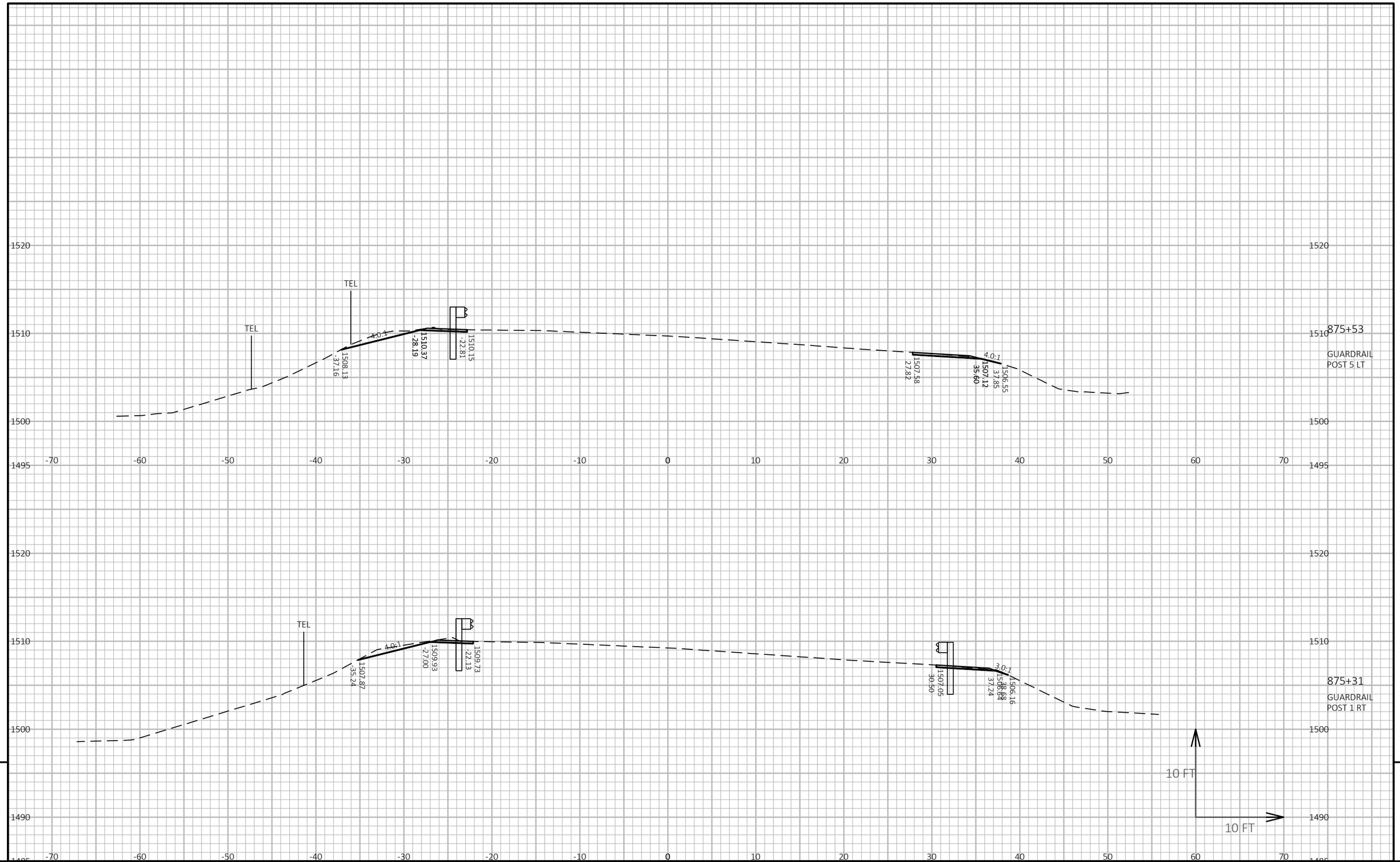
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PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: C-02-0046 GUARD RAIL	SHEET 271	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-NORTH.DWG
LAYOUT NAME - GR 15

PLOT DATE : 10/1/2025 2:43 PM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: C-02-0046 GUARD RAIL	SHEET 272	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-NORTH.DWG
LAYOUT NAME - GR 16

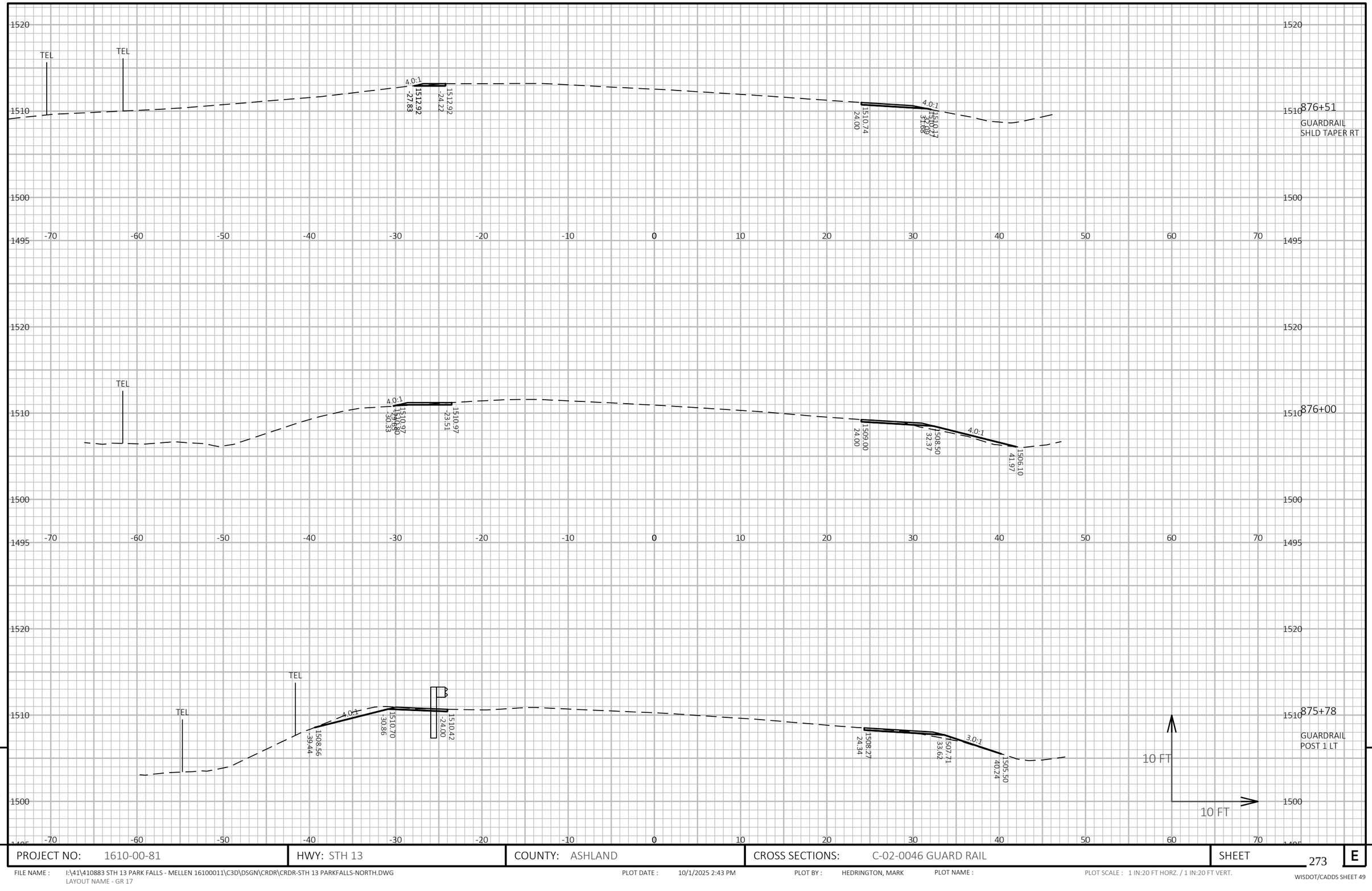
PLOT DATE : 10/1/2025 2:43 PM

PLOT BY : HEDRINGTON, MARK

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: C-02-0046 GUARD RAIL	SHEET 273	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-NORTH.DWG
LAYOUT NAME - GR 17

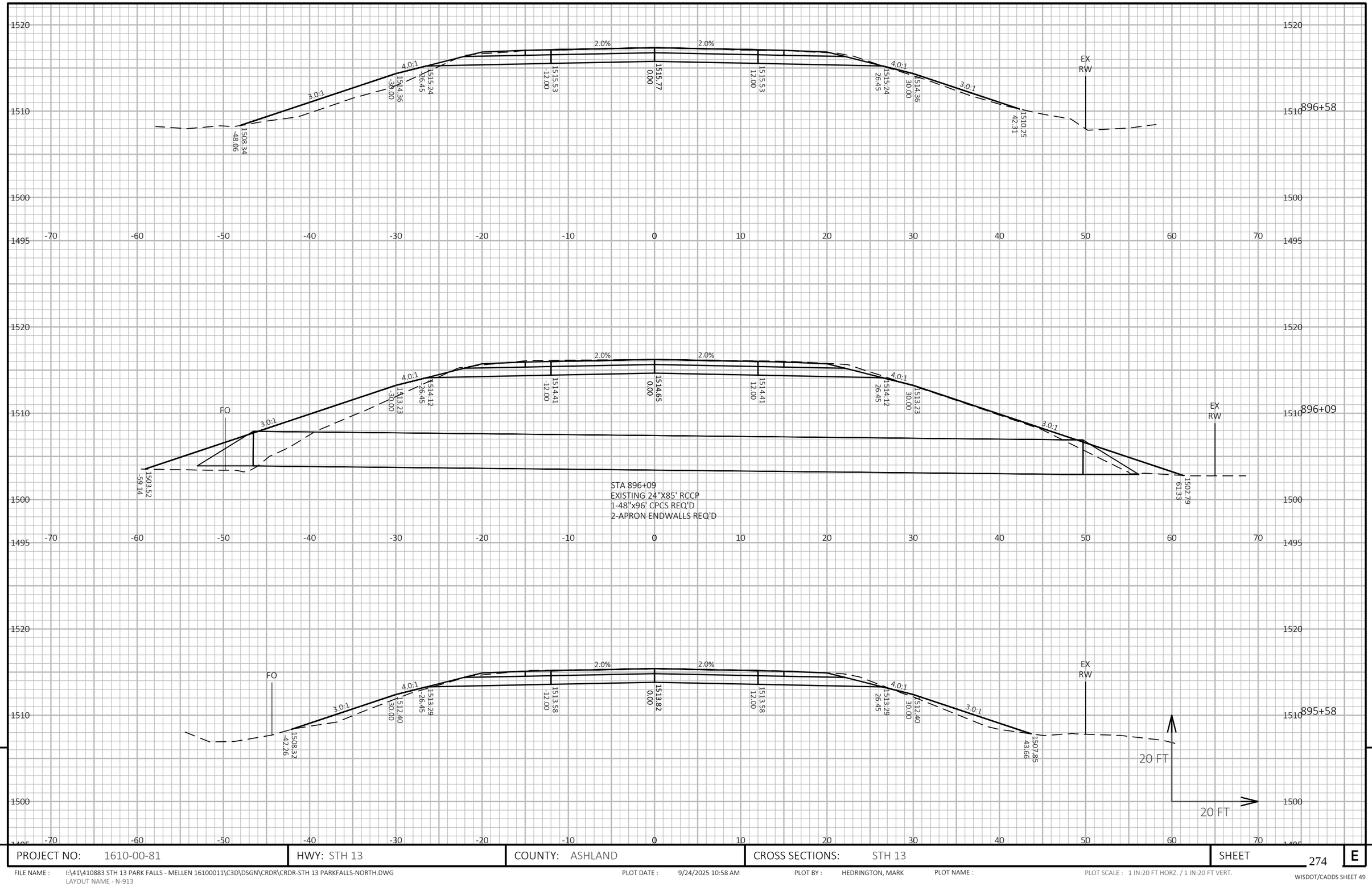
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PLOT BY : HEDRINGTON, MARK

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

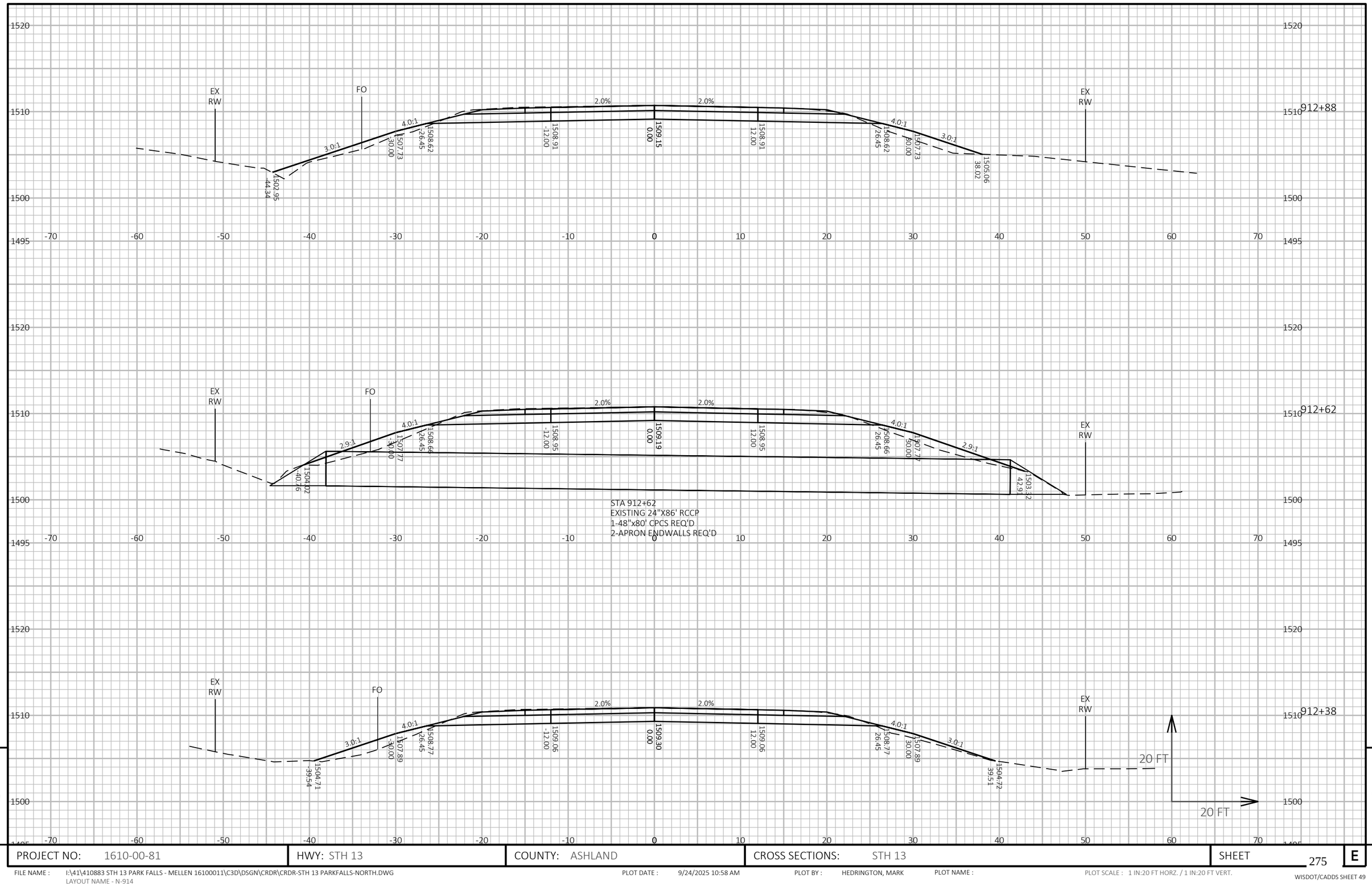


PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: STH 13	SHEET 274	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-NORTH.DWG
LAYOUT NAME - N-913

PLOT DATE : 9/24/2025 10:58 AM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

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PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: STH 13	SHEET 275	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-NORTH.DWG
LAYOUT NAME - N-914

PLOT DATE : 9/24/2025 10:58 AM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

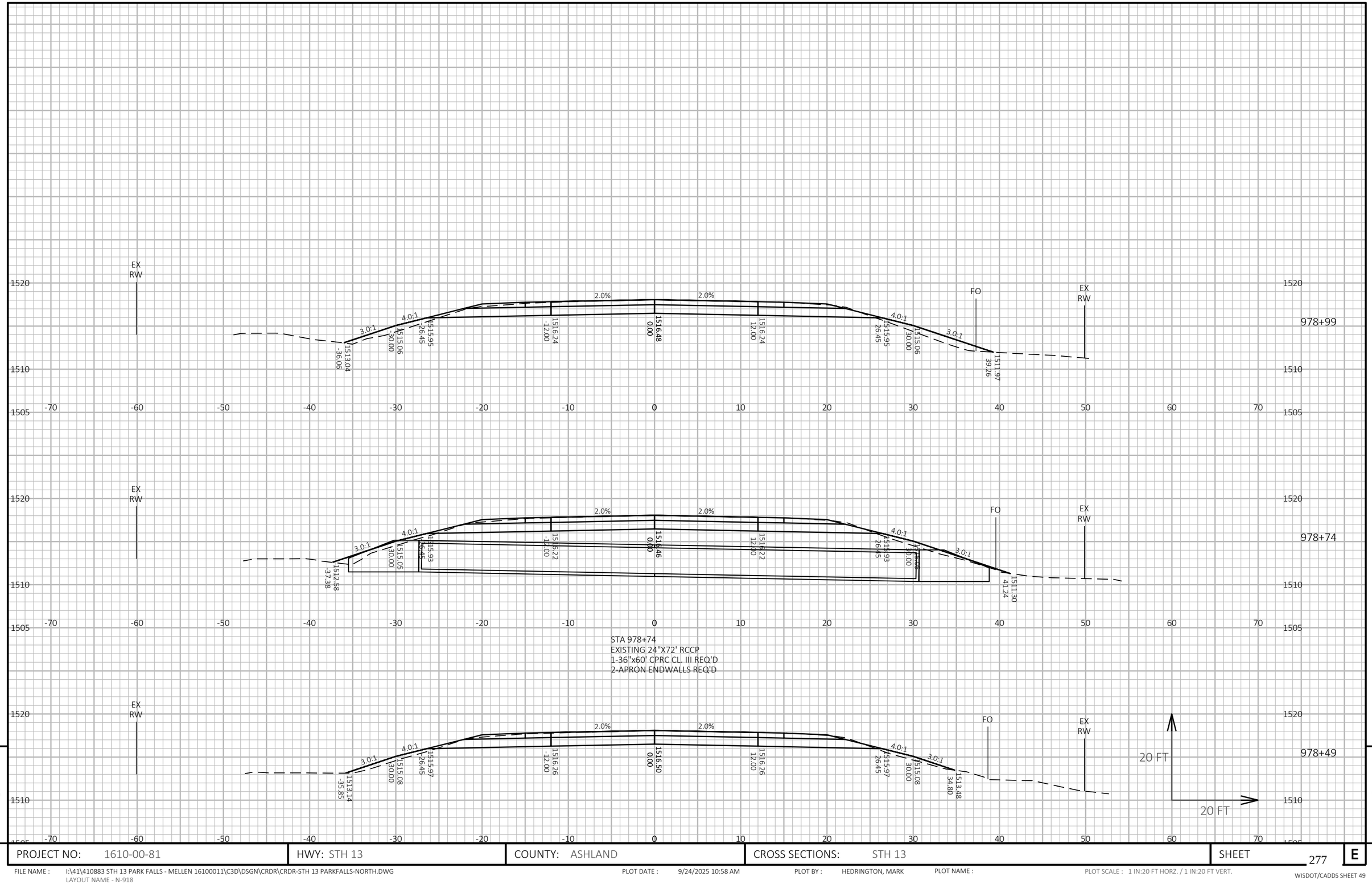
WISDOT/CADDS SHEET 49

STA 970+98
EXISTING 24"X84' RCCP
1-48"x68' CPCS REQ'D
2-APRON ENDWALLS REQ'D

9 9

PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: STH 13	SHEET 276	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-NORTH.DWG
LAYOUT NAME - N-917
PLOT DATE : 9/24/2025 10:58 AM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.
WISDOT/CADDS SHEET 49



9

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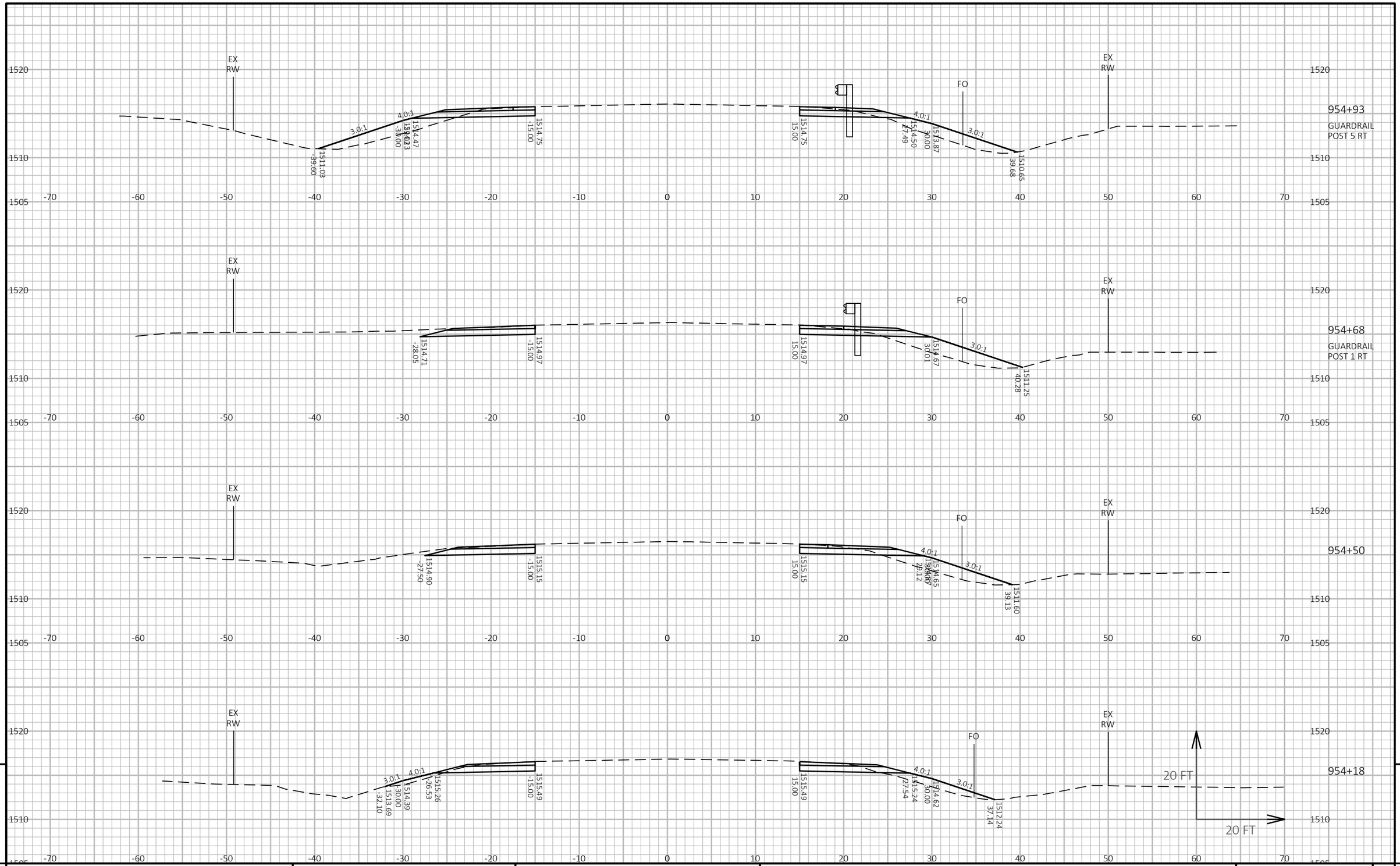
PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: STH 13	SHEET 277	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-NORTH.DWG
LAYOUT NAME - N-918

PLOT DATE : 9/24/2025 10:58 AM PLOT BY : HEDRINGTON, MARK PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

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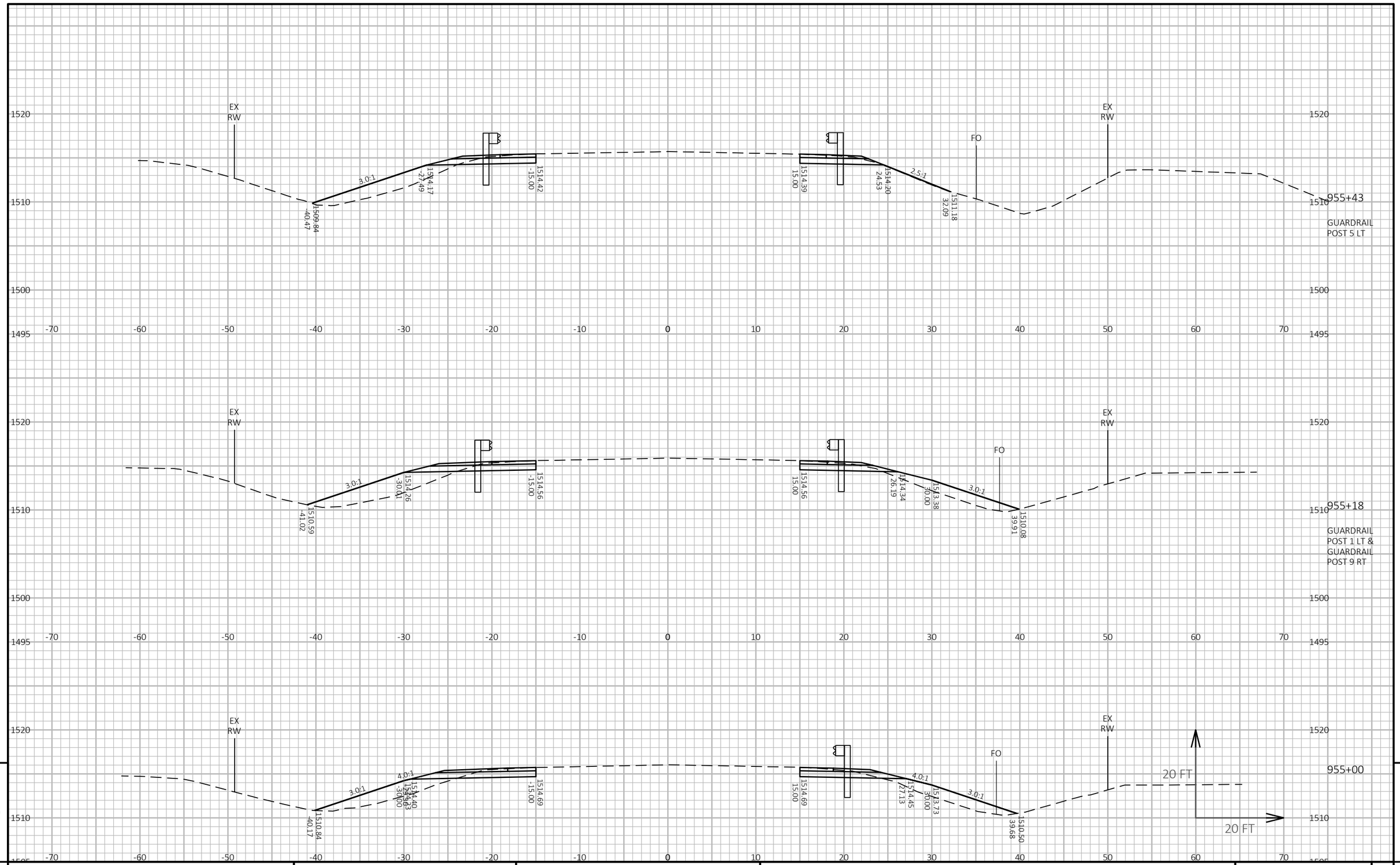
PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: STH 13	SHEET 278	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-NORTH.DWG
LAYOUT NAME - N-915A

PLOT DATE : 9/30/2025 4:34 PM PLOT BY : HEDRINGTON, MARK PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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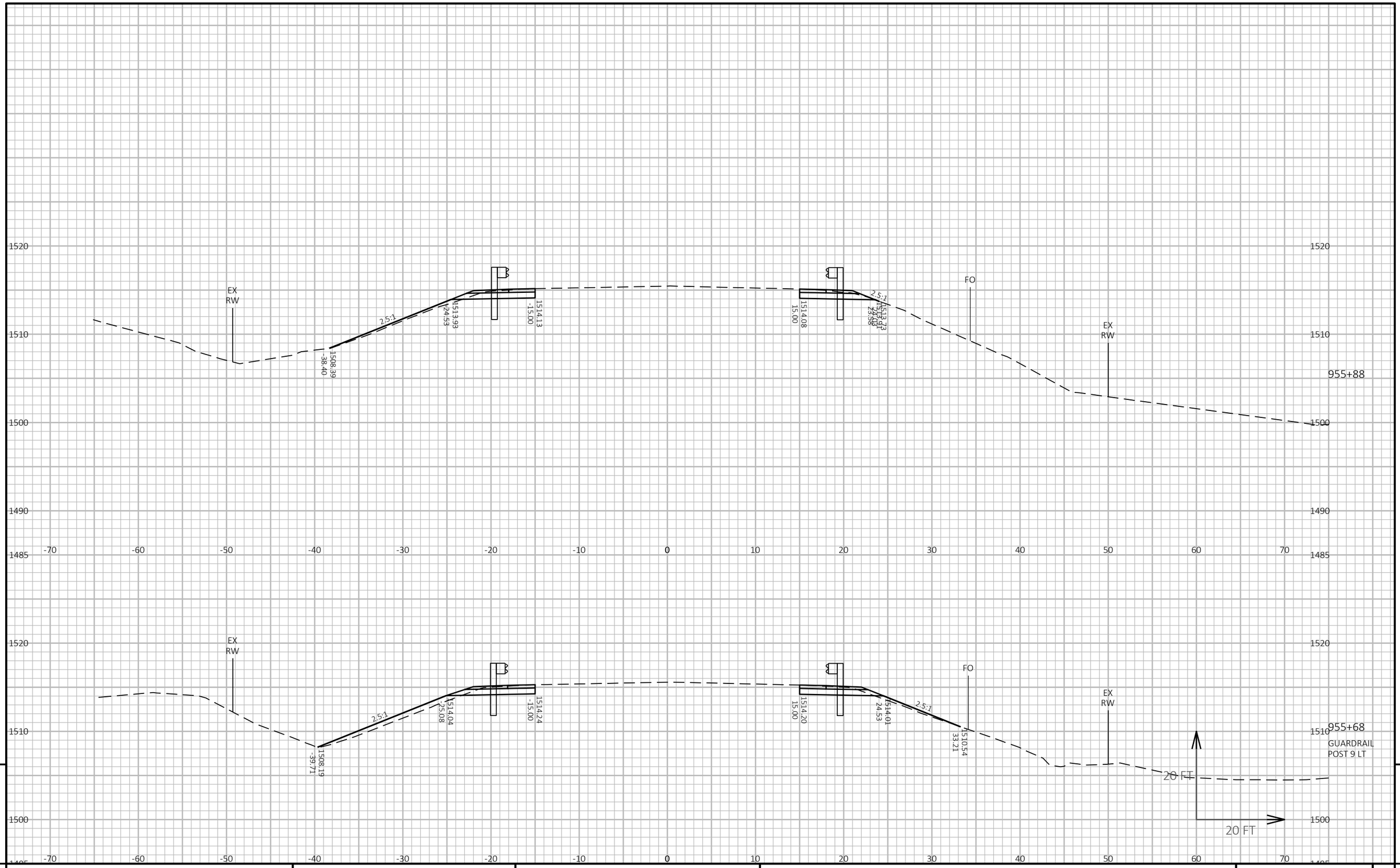
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PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: STH 13	SHEET 279	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-NORTH.DWG
LAYOUT NAME - N-915B

PLOT DATE : 9/30/2025 4:34 PM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9 9

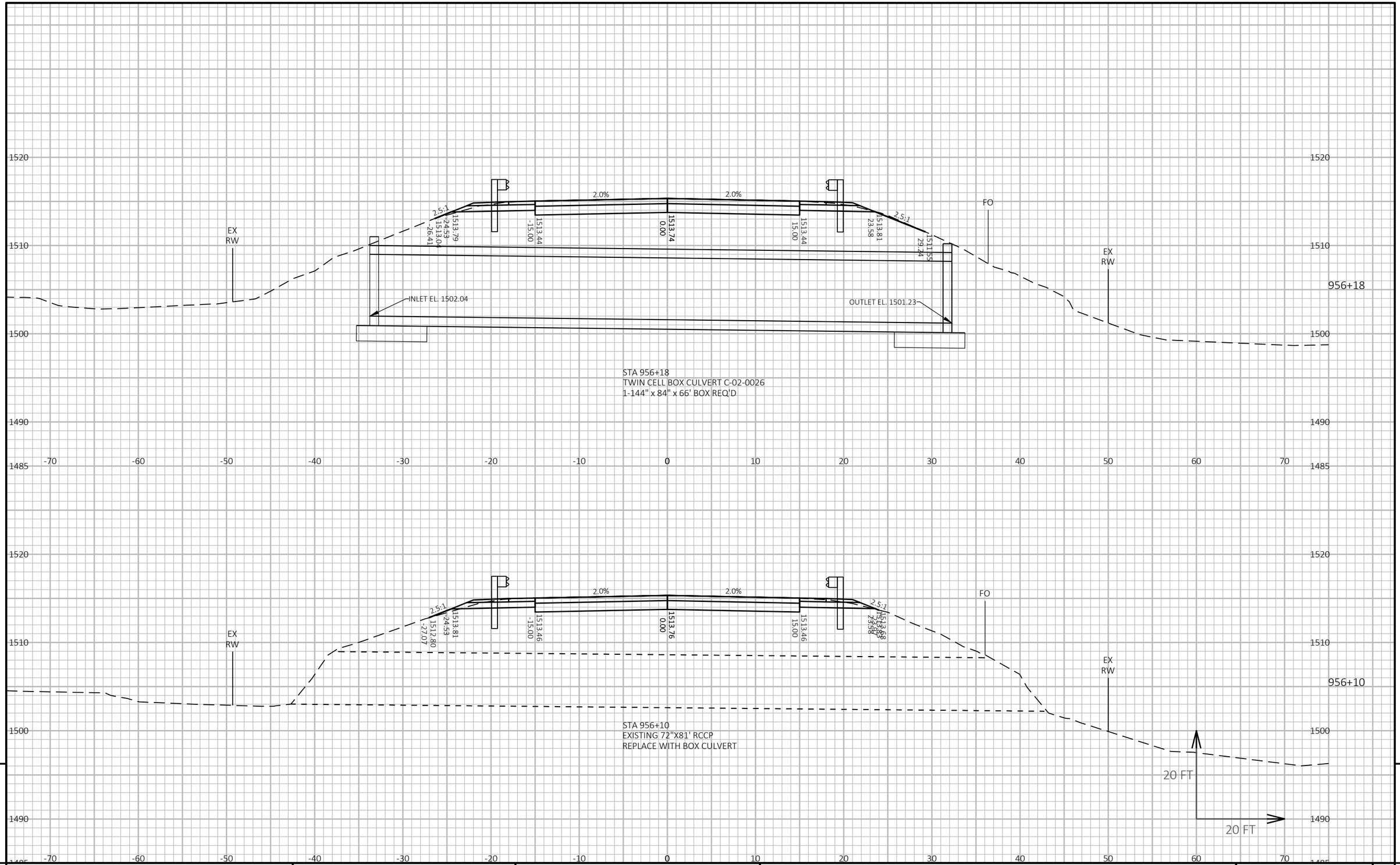
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FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-NORTH.DWG
LAYOUT NAME - N-915C

PLOT DATE : 9/30/2025 4:34 PM PLOT BY : HEDRINGTON, MARK PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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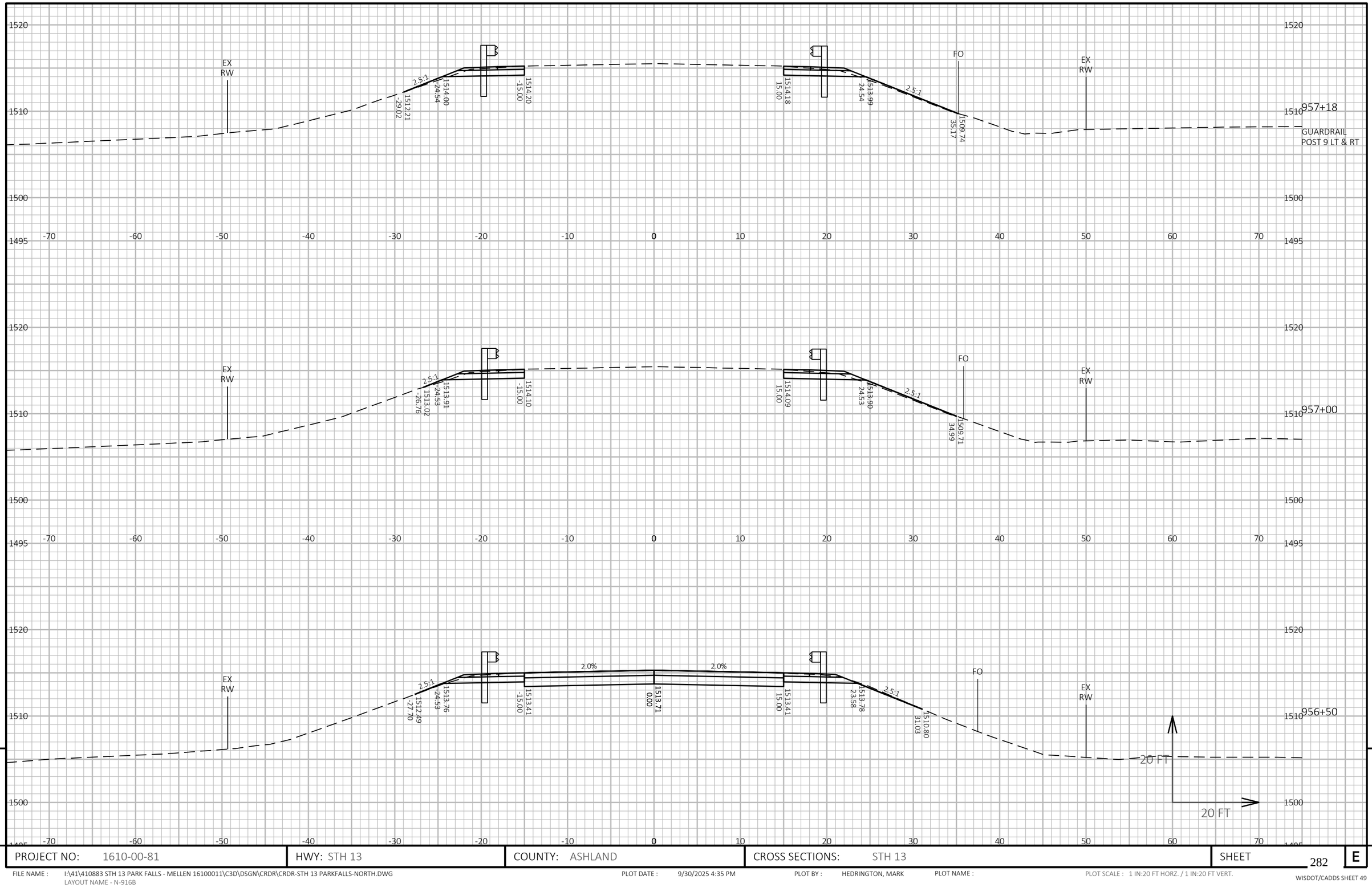
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PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: STH 13	SHEET 281	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-NORTH.DWG
LAYOUT NAME - N-916A

PLOT DATE : 9/30/2025 4:35 PM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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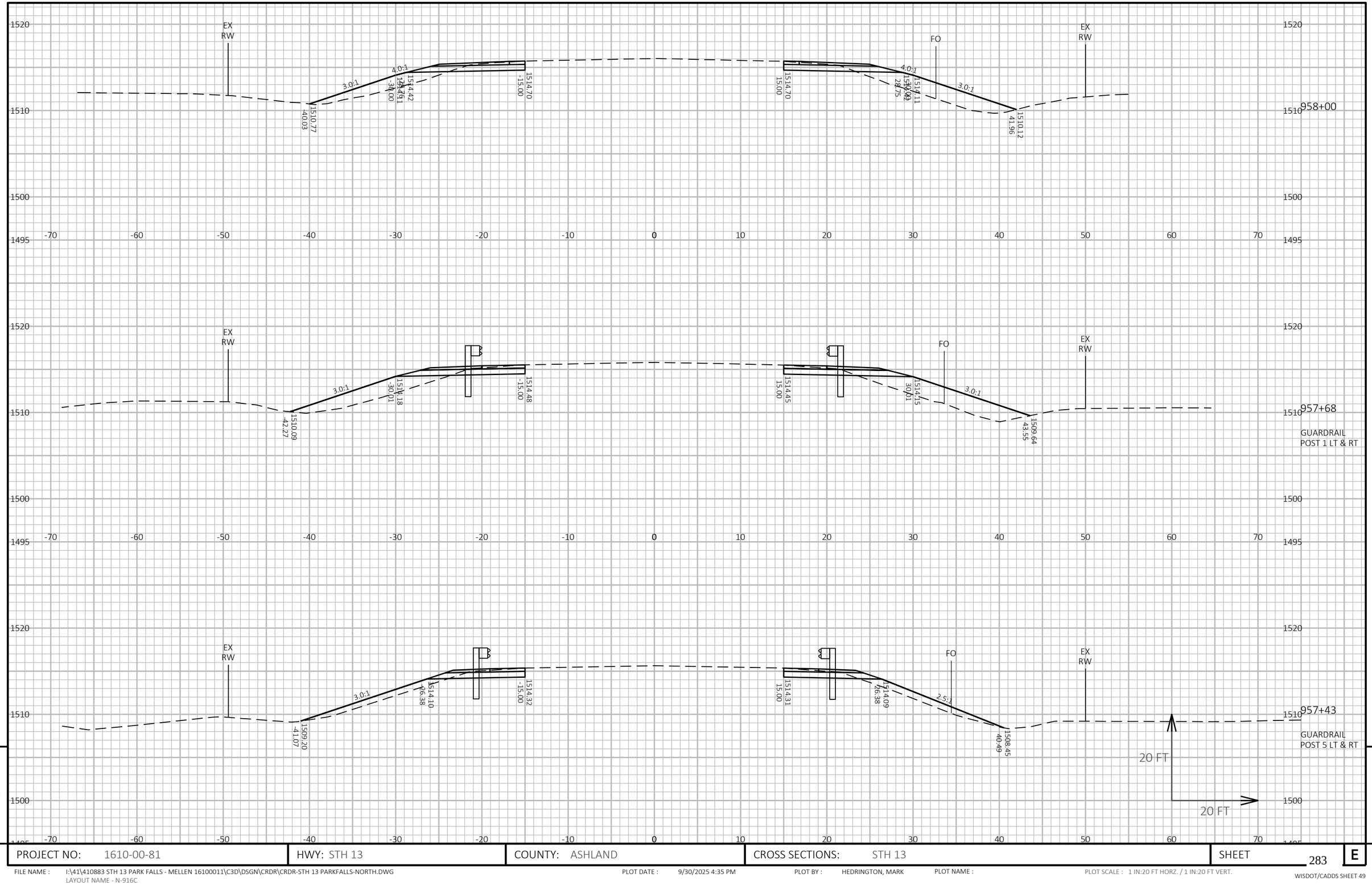
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PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: STH 13	SHEET 282	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-NORTH.DWG
LAYOUT NAME - N-916B

PLOT DATE : 9/30/2025 4:35 PM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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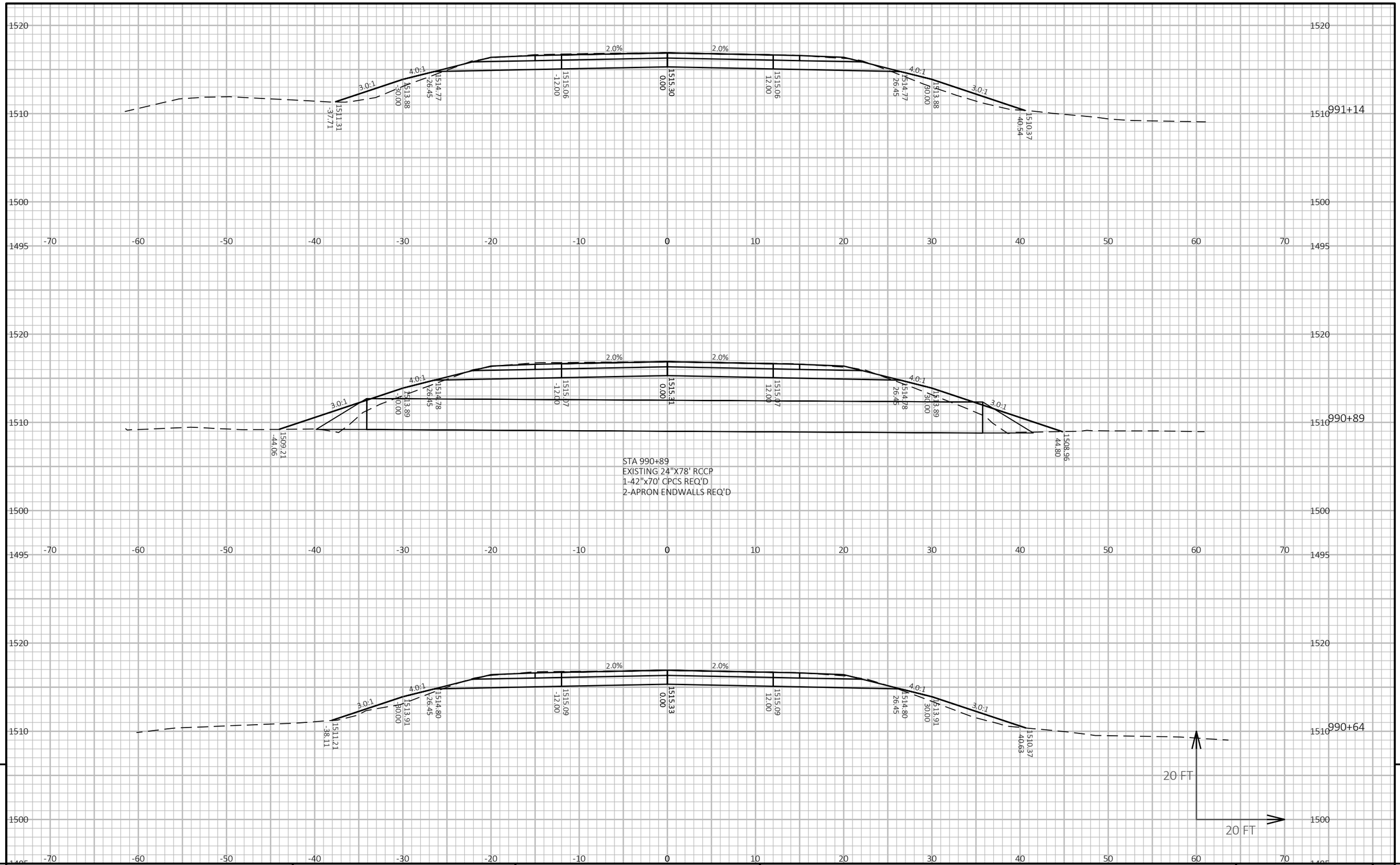
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PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: STH 13	SHEET 283	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-NORTH.DWG
LAYOUT NAME - N-916C

PLOT DATE : 9/30/2025 4:35 PM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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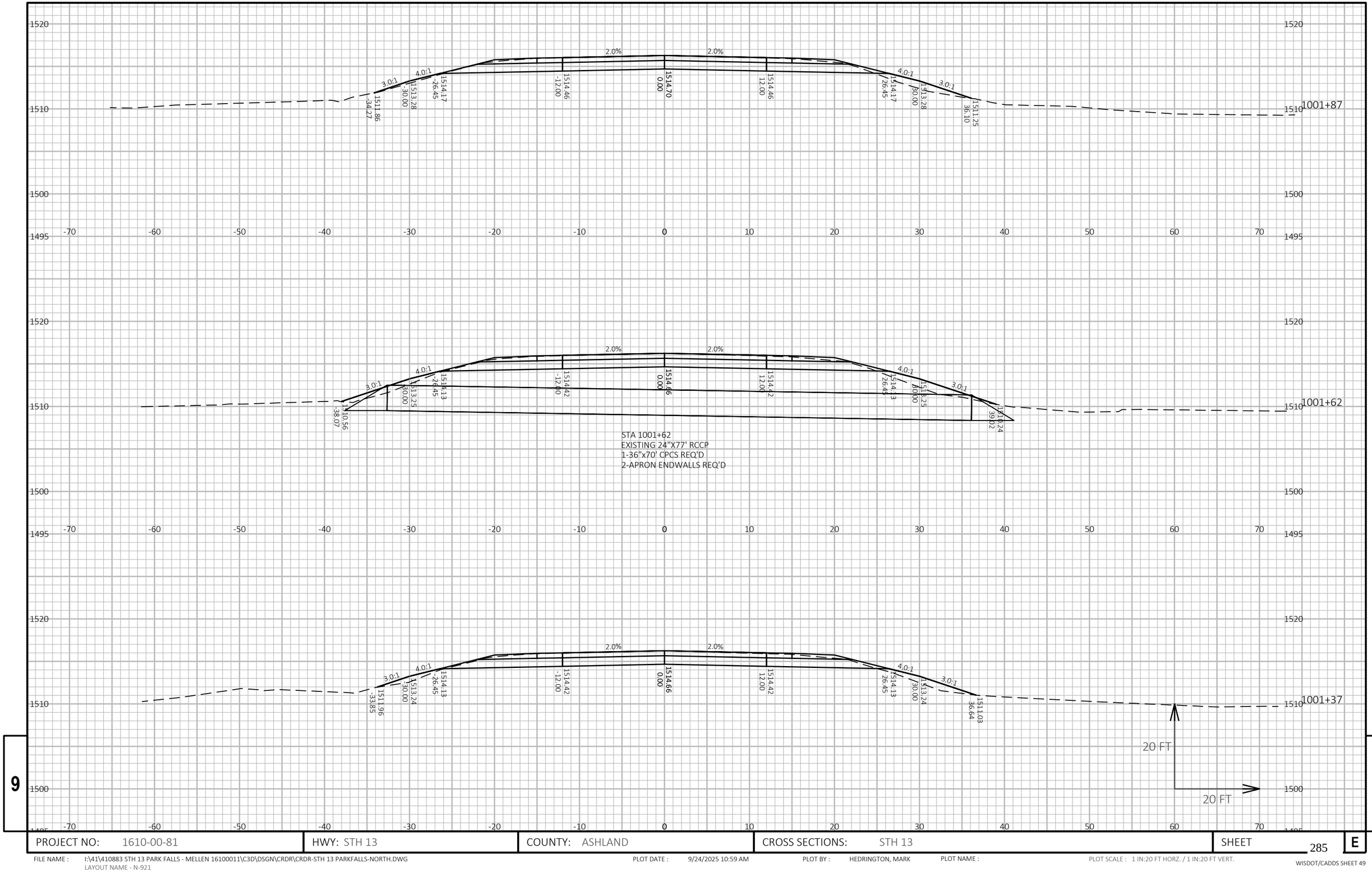
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PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: STH 13	SHEET 284	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-NORTH.DWG
LAYOUT NAME - N-920

PLOT DATE : 9/24/2025 10:58 AM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



PROJECT NO: 1610-00-81	HWY: STH 13	COUNTY: ASHLAND	CROSS SECTIONS: STH 13	SHEET 285	E

FILE NAME : I:\41\410883 STH 13 PARK FALLS - MELLEN 16100011\C3D\DSGN\CRDR\CRDR-STH 13 PARKFALLS-NORTH.DWG
LAYOUT NAME - N-921

PLOT DATE : 9/24/2025 10:59 AM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 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

SUP | NOVEMBER 2025

PROJECT ID: 8520-02-71

WITH: 1610-00-81

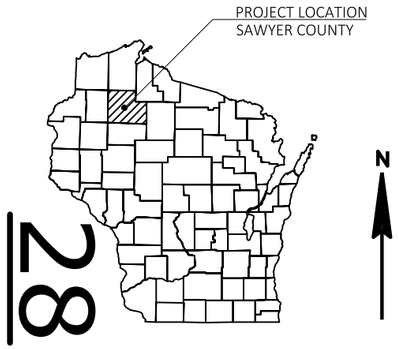
COUNTY: SAWYER

28

ORDER OF SHEETS

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

TOTAL SHEETS = 64



STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

HAYWARD - CLAM LAKE

TEAL RIVER BRIDGE B-57-0025

STH 77

SAWYER COUNTY

STATE PROJECT NUMBER
8520-02-71

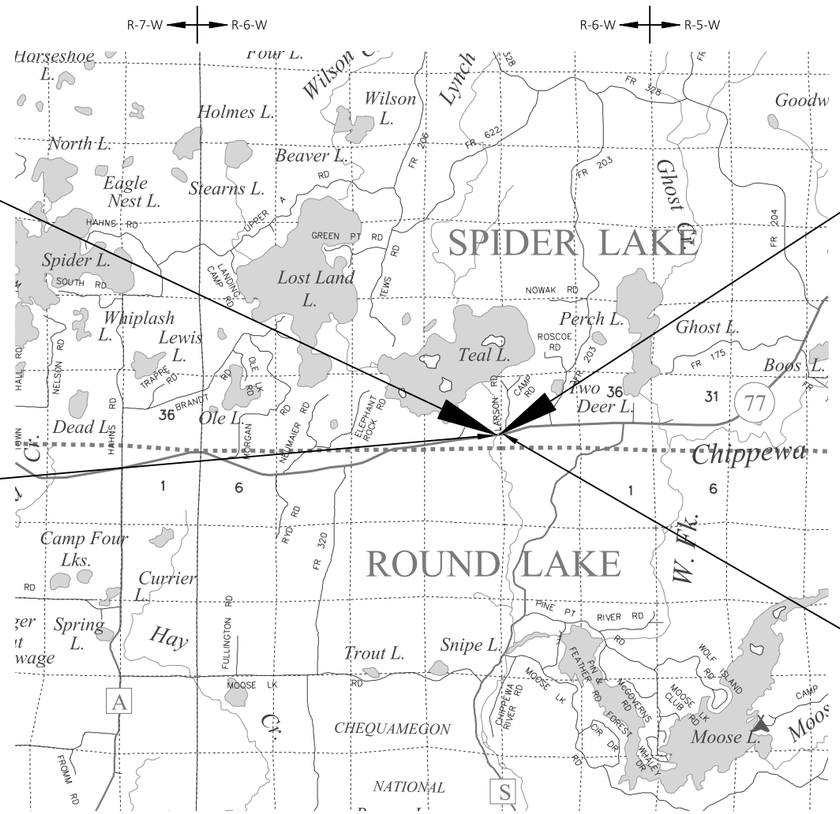
STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
8520-02-71		

BEGIN PROJECT
STA 1107+96
Y = 458,624.397
X = 716,826.985

BEGIN CONSTRUCTION
STA 1105+28

END PROJECT
STA 1109+15
Y = 458,639.177
X = 716,944.973

END CONSTRUCTION
STA 1111+69



LAYOUT

SCALE 0 2 MI

TOTAL NET LENGTH OF CENTERLINE = 0.023 MI.

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), SAWYER 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.

DESIGN DESIGNATION

A.A.D.T.	2026	=	610
A.A.D.T.	2046	=	610
D.H.V.		=	17.9
D.D.		=	61/39
T.		=	11.4
DESIGN SPEED		=	55 MPH
ESALS		=	250,000

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

ORIGINAL PLANS PREPARED BY

MSA

332 W Superior Street, Duluth MN 55802
(218) 722-3915 www.msa-ps.com

© MSA Professional Services, Inc.

WISCONSIN PROFESSIONAL ENGINEER
ALEX PASSOW
E-464886
MINOCQUA
WI

DATE: 09/23/2025 (Professional Engineer Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

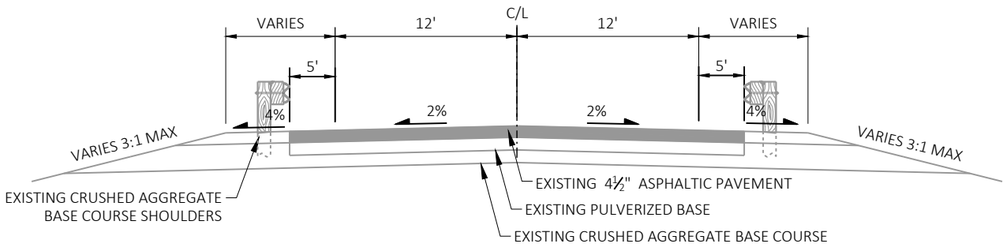
Surveyor	N/A
Designer	MSA PROFESSIONAL SERVICES, INC
Project Manager	MATTHEW VAN NATTA, PE
Regional Examiner	WISDOT NW REGION
Regional Supervisor	MATTHEW VAN NATTA, PE

APPROVED FOR THE DEPARTMENT

DATE: Matthew Van Natta (Signature)

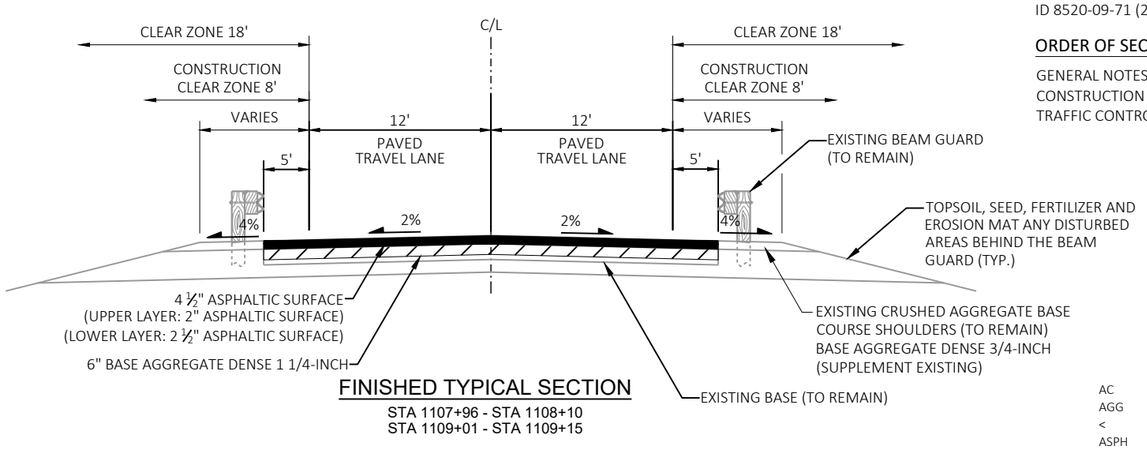
Location: Superior
Reason: I am approving this document
Date: 2025.09.24 09:17:49-05'00'

E



EXISTING TYPICAL SECTION

STA 1107+96 - STA 1108+10
STA 1109+01 - STA 1109+15



FINISHED TYPICAL SECTION

STA 1107+96 - STA 1108+10
STA 1109+01 - STA 1109+15

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		2-6	6 & OVER	0-2	2-6	6 & OVER
MEDIAN STRIP TURF	0.19	0.20	0.24	0.19	0.22	0.26	0.20	0.23	0.30	0.20	0.25 0.32	0.30 0.40
SIDE SLOPE TURF			0.25			0.27			0.28			0.30 0.38
PAVEMENT:	0.40 - 0.60											
ASPHALT:	0.70 - 0.95											
CONCRETE:	0.80 - 0.95											
BRICK:	0.70 - 0.80											
DRIVES, WALKS:	0.75 - 0.85											
ROOFS:	0.75 - 0.95											
GRAVEL ROADS, SHOULDERS	0.40 - 0.60											

TOTAL PROJECT AREA = 0.22 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.16 ACRES

EROSION CONTROL NOTES

RUNOFF COEFFICIENTS FOR THIS PROJECT: EXISTING SIDE SLOPES 0.30, PROPOSED SIDE SLOPES 0.30, EXISTING PAVEMENT 0.95, PROPOSED PAVEMENT 0.95.

GENERAL NOTES

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

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

RIGHT OF WAY LOCATIONS ARE BASED ON AVAILABLE ASBUILTS AND GIS.

AS-BUILT REFERENCE (YEAR)

ID 8520-04-71 (1978)
ID 8530-07-71 (1997)
ID 8520-09-71 (2003)

ORDER OF SECTION 2 DETAIL SHEETS

GENERAL NOTES
CONSTRUCTION DETAIL
TRAFFIC CONTROL

AC	ACRE
AGG	AGGREGATE
<	ANGLE
ASPH	ASPHALTIC
AC	ASPHALT CEMENT
ADT	AVERAGE DAILY TRAFFIC
B & B	BALLED AND BURLAPPED
BM	BENCH MARK
CB	CATCH BASIN
` OR C/L	CENTER LINE
C-C	CENTER TO CENTER
CONC	CONCRETE
CO	COUNTY
CTH	COUNTY TRUNK HIGHWAY
CY	CUBIC YARD
CULV	CULVERT
CP	CULVERT PIPE
CPRC	CULVERT PIPE REINFORCED CONCRETE
C & G	CURB AND GUTTER
D	DEGREE OF CURVE
DHV	DESIGN HOUR VOLUME
DIA OR |	DIAMETER
DIST	DISTRICT
DWY	DRIVEWAY
E	EAST
X	EAST GRID COORDINATE
EB	EASTBOUND
ELEC	ELECTRIC
EL OR ELEV	ELEVATION
EMB	EMBANKMENT
EW	ENDWALL
ESALS	EQUIVALENT SINGLE AXLE LOADS
EXC	EXCAVATION
EBS	EXCAVATION BELOW SUBGRADE
EXIST	EXISTING
EXP	EXPANSION
F-F	FACE TO FACE
FERT	FERTILIZER
FE	FIELD ENTRANCE

DNR LIAISON

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
SHAWN HASELEU
810 W MAPLE ST.
SPOONER, WI 54801-1255
715-635-4228
SHAWN.HASELEU@WISCONSIN.GOV

DESIGN CONTACT

WISCONSIN DEPARTMENT OF TRANSPORTATION
MATTHEW VAN NATTA, PE
NORTHWEST REGION, SUPERIOR OFFICE
1701 N. 4TH ST.
SUPERIOR, WI 54880
715-392-7966
MATTHEW.VANNATTA@DOT.WI.GOV

DESIGN CONTACT

MSA PROFESSIONAL SERVICES, INC.
ALEX PASSOW, PE
332 W SUPERIOR STREET
DULUTH, MN 55802
715-304-0401
APASSOW@MSA-PS.COM

COMMUNICATIONS

CENTURYLINK
KYLE SCHLAMPP
20 S WILSON AVE
RICE LAKE, WI 54868
715-475-2029
KYLE.SCHLAMPP@LUMEN.COM

ELECTRIC

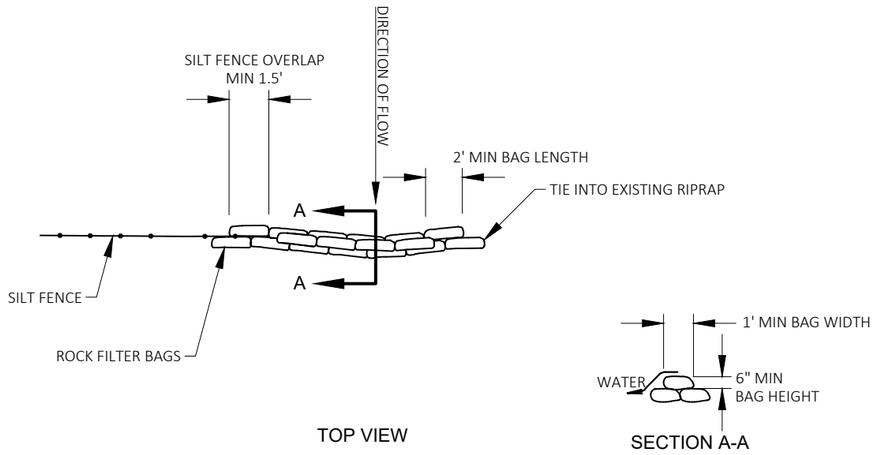
JUMP RIVER ELECTRIC COOPERATIVE
KRAIG GAY
13895 W COUNTY RD B
HAYWARD, WI 54843
715-634-4575
KGAY@JREC.COM

* NOT A DIGGERS HOTLINE MEMBER

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

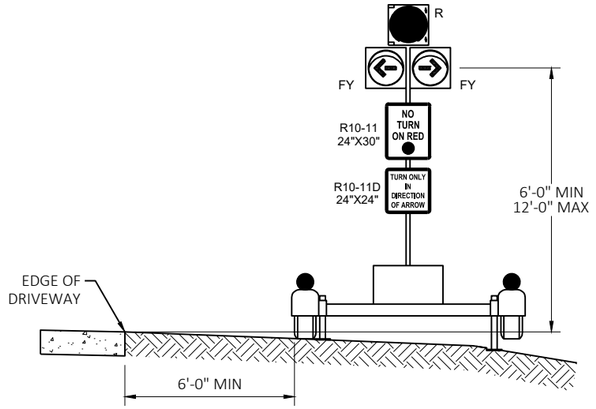
STANDARD ABBREVIATIONS

F/L	FLOW LINE
FT	FOOT
GN	GRID NORTH
HR	HANDICAP RAMP
HT	HEIGHT
CWT	HUNDREDWEIGHT
HYD	HYDRANT
IN DIA	INCH DIAMETER
INL	INLET
ID	INSIDE DIAMETER
I	INTERSECTION ANGLE
IE	INVERT ELEVATION
IP	IRON PIPE OR PIN
JCT	JUNCTION
L	LENGTH OF CURVE
LF	LINEAR FOOT
LC	LONG CHORD OF CURVE
LCB	LONG CHORD BEARING
LS	LUMP SUM
MH	MANHOLE
N	NORTH
Y	NORTH GRID COORDINATE
OE	OUTLET ELEVATION
OL	OUT LOT
OD	OUTSIDE DIAMETER
OH	OVERHEAD LINES
PAVT	PAVEMENT
PLE	PERMANENT LIMITED EASEMENT
PC	POINT OF CURVATURE
PI	POINT OF INTERSECTION
PT	POINT OF TANGENCY
PCC	PORTLAND CEMENT CONCRETE
LB	POUND
PE	PRIVATE ENTRANCE
R OR RAD	RADIUS
RR	RAILROAD
R	RANGE
~ OR R/L	REFERENCE LINE
REQD	REQUIRED
RT	RIGHT
R / W	RIGHT-OF-WAY
RD	ROAD
SALV	SALVAGED
SAN	SANITARY SEWER
SECT	SECTION
SHLDR	SHOULDER
SW	SIDEWALK
S	SOUTH
SB	SOUTHBOUND
SPECS	SPECIFICATIONS
SQ	SQUARE
SF OR SQ FT	SQUARE FEET
SY	SQUARE YARD
SSPRC	STORM SEWER PIPE REINFORCED CONCRETE
STD	STANDARD
SDD	STANDARD DETAIL DRAWINGS
STH	STATE TRUNK HIGHWAYS
STA	STATION
SS	STORM SEWER
T	TANGENT
TEL	TELEPHONE
TEMP	TEMPORARY
TLE	TEMPORARY LIMITED EASEMENT
T	TON
TC	TOP OF CURB
TN	TOWN
TRANS	TRANSITION
T	TRUCKS (percent of)
TYP	TYPICAL
UNCL	UNCLASSIFIED
USH	UNITED STATES HIGHWAY
VAR	VARIABLE
VERT	VERTICAL
VC	VERTICAL CURVE
VOL	VOLUME
WM	WATER MAIN
WV	WATER VALVE
W	WEST
WB	WESTBOUND
YD	YARD



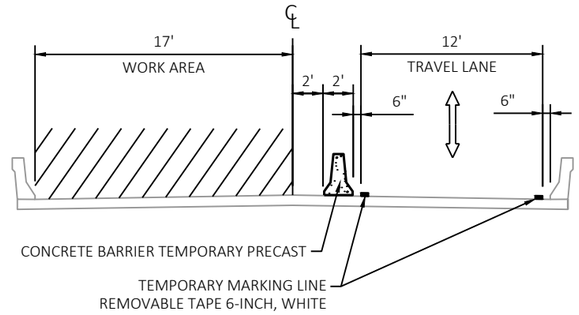
ROCK BAGS

PROJECT NO: 8520-02-71	HWY: STH 77	COUNTY: SAWYER	CONSTRUCTION DETAIL	SHEET 3	E

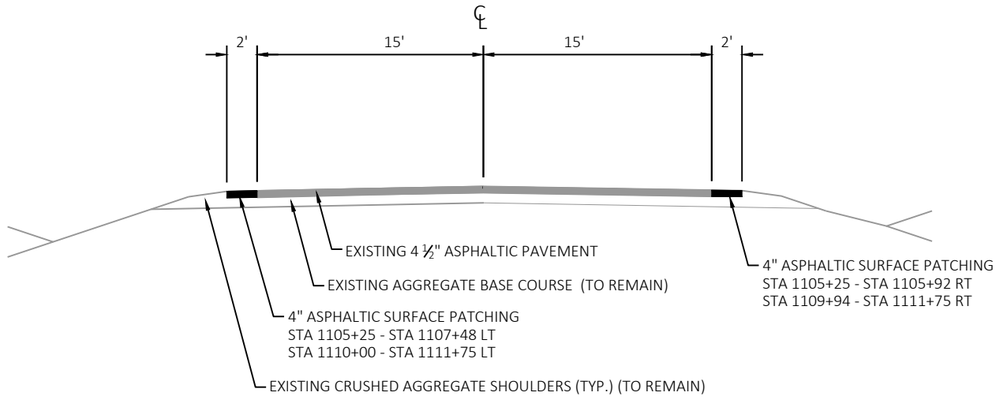


ELEVATION VIEW

DAD 3 HEAD DEVICE



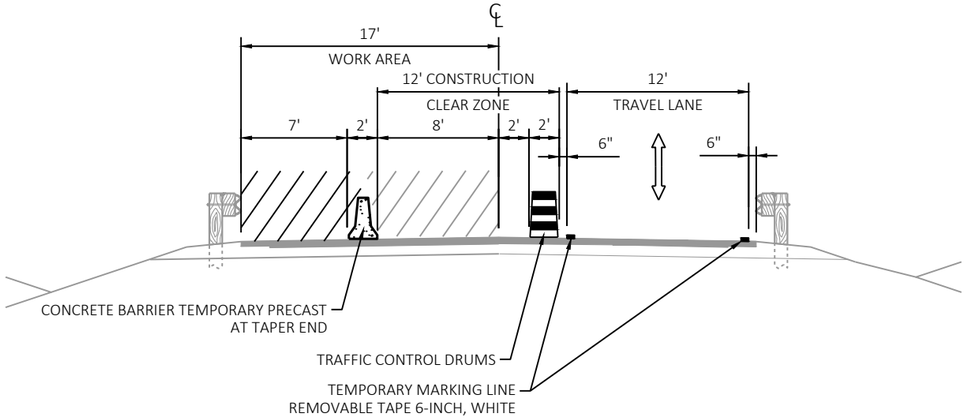
WORK AREA ON BRIDGE B-57-0025



TRAFFIC CONTROL - STAGE 1

STH 77 LOOKING EAST

STAGE 1 NOTES:
1. CLOSE LANES FOLLOWING STANDARD DETAIL DRAWING TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
2. ASPHALTIC SURFACE PATCHING (SEE TRAFFIC CONTROL PLAN FOR LOCATIONS)

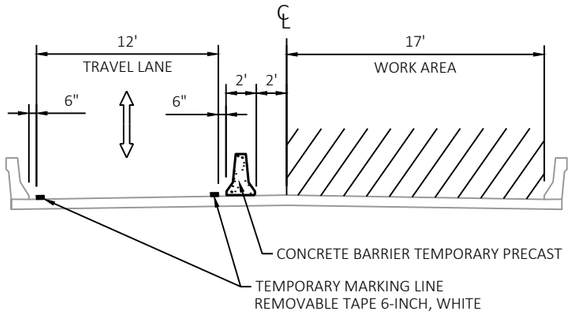


TRAFFIC CONTROL - STAGE 2

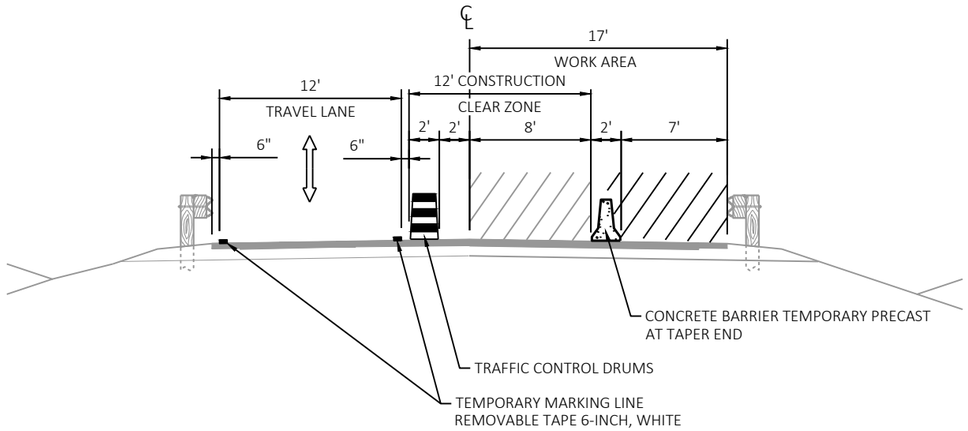
STH 77 LOOKING EAST

STAGE 2 NOTES:
1. SEE TRAFFIC CONTROL PLAN, PLAN SHEET AND STRUCTURE PLANS
2. CONCRETE DECK REPAIR ON B-57-0025 AND CONCRETE PAVEMENT APPROACH SLABS ON WB APPROACHES

2



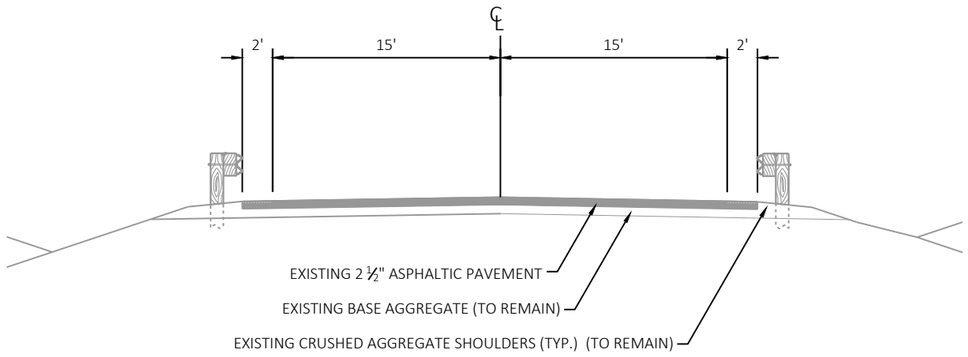
WORK AREA ON BRIDGE B-57-0025



TRAFFIC CONTROL - STAGE 3

STH 77 LOOKING EAST

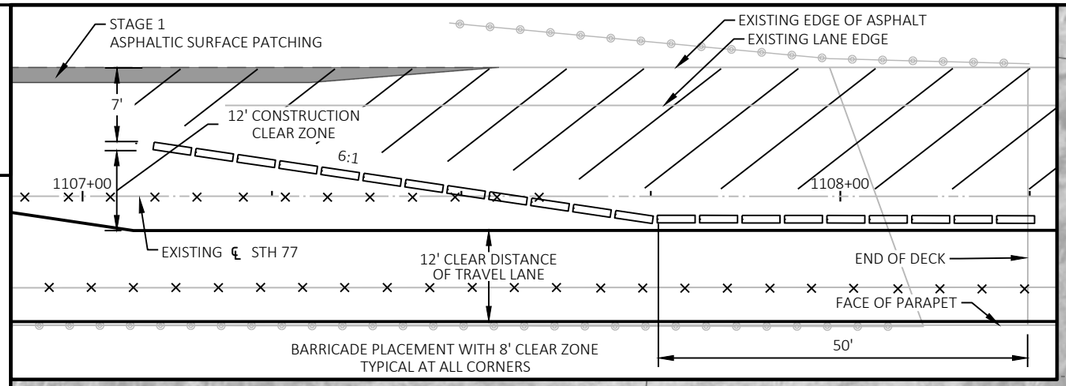
STAGE 3 NOTES:
1. SEE TRAFFIC CONTROL PLAN, PLAN SHEET AND STRUCTURE PLANS
2. CONCRETE DECK REPAIR ON B-57-0025 AND CONCRETE PAVEMENT APPROACH SLABS ON EASTBOUND APPROACHES



TRAFFIC CONTROL - STAGE 4

STH 77 LOOKING EAST

STAGE 4 NOTES:
1. FOLLOWING STANDARD DETAIL DRAWING TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
2. INSTALL PERMANENT PAVEMENT MARKINGS ON ROADWAY APPROACH AND STRUCTURE



2

N

TEAL RIVER

WO1-6
48" X 24"

TEMPORARY MARKING STOP LINE
REMOVABLE TAPE 18-INCH (TYP.)

TEMPORARY MARKING
LINE REMOVABLE TAPE
6-INCH, WHITE (TYP.)

B-57-0025

ROAD WORK AHEAD
W20-1A

MAX. 12' WIDTH
W12-52

ONE LANE ROAD AHEAD
W20-4A

WO3-3

NO PASSING ZONE
W14-3
48"X36"

END ROAD WORK
G20-2A
48"X24"

WO5-52L
12"X36"

WO5-52R
12"X36"

STOP HERE ON RED
R10-6
24"X36"

PE GRAVEL

PE ASPHALT

EXISTING R/W

STH 77

1103+00 1104+00 1105+00 1106+00 1107+00 1108+00 1109+00 1110+00 1111+00 1112+00 1113+00 1114+00 1115+00 1116+00

BRIDGE DECK

50'

500'

700 FOOT TEMPORARY MARKING LINE
REMOVABLE TAPE 6-INCH, DOUBLE YELLOW

WO1-4R

ONE LANE TWO WAY TRAFFIC

*

TEMPORARY TRAFFIC SIGNAL TIMING

ALL TIMES LISTED IN SECONDS

SEQUENCE 1: 8:00 AM TO 6:00 PM
TOTAL CYCLE TIME = 108.0

EASTBOUND	WESTBOUND	YELLOW	ALL RED	GREEN
RED	RED		20.0	
GREEN	RED			29.0
YELLOW	RED	5.0		
RED	RED		20.0	
RED	GREEN			29.0
RED	YELLOW	5.0		
TOTAL:		10.0	40.0	58.0

SEQUENCE 2: 6:00 PM TO 8:00 AM
TOTAL CYCLE TIME = 96.0

EASTBOUND	WESTBOUND	YELLOW	ALL RED	GREEN
RED	RED		20.0	
GREEN	RED			23.0
YELLOW	RED	5.0		
RED	RED		20.0	
RED	GREEN			23.0
RED	YELLOW	5.0		
TOTAL:		10.0	40.0	46.0

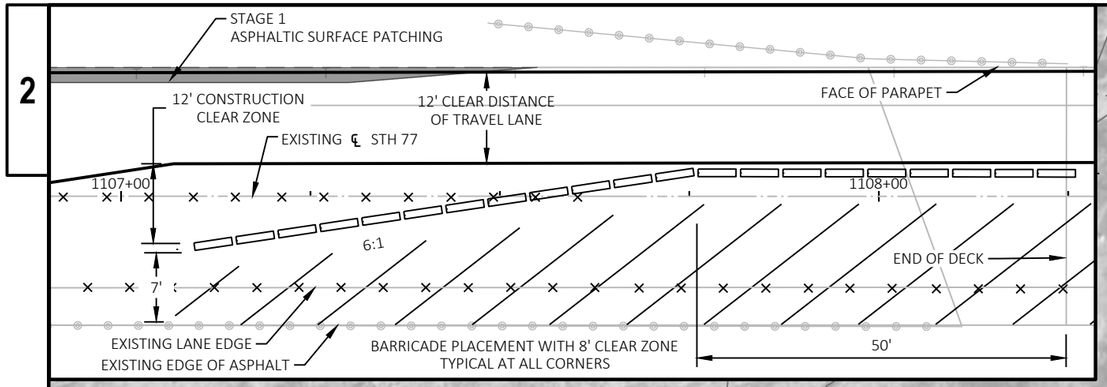
LEGEND

- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- SIGN FLAGS, 16" X 16" MIN., (ORANGE)
- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE WITH ATTACHED SIGN
- DIRECTION OF TRAFFIC
- CONCRETE BARRIER TEMPORARY PRECAST
- TEMPORARY MARKING REMOVABLE MASK OUT TAPE 6-INCH
- STOP BAR
- WORK AREA
- TRAILER MOUNTED TRAFFIC SIGNAL
- DRIVEWAY ASSISTANCE DEVICE
- * STAGE 1 ASPHALTIC SURFACE PATCHING LIMITS

STAGE 3 NOTES:
1. ALL EXISTING SIGNS IN CONFLICT WITH TEMPORARY TRAFFIC CONTROL WILL BE COVERED.
2. ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.
3. DRUMS, BARRICADES, PAVEMENT MARKING, SIGNS AND SIGNAL LAYOUT SHALL FOLLOW STANDARD DETAIL DRAWINGS TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS AND BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION.

PROJECT NO: 8520-02-71	HWY: STH 77	COUNTY: SAWYER	TRAFFIC CONTROL - STAGE 2	SHEET 6	E

FILE NAME : G:\00\00093\00093673\CADD\SHEETSPLAN\025001-TC.DWG
LAYOUT NAME - 025001-tc - Stage 2
PLOT DATE : 1/31/2025 10:15 AM
PLOT BY : SHAWN DOLENS
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42



2

2

N

ROAD WORK AHEAD W20-1A

MAX. 12' WIDTH W12-52

ONE LANE ROAD AHEAD W20-4A

NO PASSING ZONE W14-3 48"X36"

W03-3

END ROAD WORK G20-2A 48"X24"

TEMPORARY MARKING LINE REMOVABLE TAPE 6-INCH, WHITE (TYP.)

ONE LANE TWO WAY TRAFFIC

B-57-0025

TEAL RIVER

W01-4R

WO5-52L 12"X36"

WO5-52R 12"X36"

STOP HERE ON RED R10-6 24"X36"

PE GRAVEL

PE ASPHALT

EXISTING R/W

STH 77

1103+00 1104+00 1105+00 1106+00 1107+00 1108+00 1109+00 1110+00 1111+00 1112+00 1113+00 1114+00 1115+00 1116+00

BRIDGE DECK

50'

500'

WO5-52R 12"X36"

WO5-52L 12"X36"

WO1-6 48" X 24"

END ROAD WORK G20-2A 48"X24"

NO PASSING ZONE W14-3 48"X36"

ROAD WORK AHEAD W20-1A

MAX. 12' WIDTH W12-52

ONE LANE ROAD AHEAD W20-4A

W03-3

LEGEND

- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- SIGN FLAGS, 16" X 16" MIN., (ORANGE)
- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE WITH ATTACHED SIGN
- DIRECTION OF TRAFFIC
- CONCRETE BARRIER TEMPORARY PRECAST
- TEMPORARY MARKING REMOVABLE MASK OUT TAPE 6-INCH
- STOP BAR
- WORK AREA
- TRAILER MOUNTED TRAFFIC SIGNAL
- DRIVEWAY ASSISTANCE DEVICE
- STAGE 1 ASPHALTIC SURFACE PATCHING LIMITS

STAGE 3 NOTES:

1. ALL EXISTING SIGNS IN CONFLICT WITH TEMPORARY TRAFFIC CONTROL WILL BE COVERED.
2. ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.
3. DRUMS, BARRICADES, PAVEMENT MARKING, SIGNS AND SIGNAL LAYOUT SHALL FOLLOW STANDARD DETAIL DRAWINGS TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS AND BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION.

TEMPORARY TRAFFIC SIGNAL TIMING

ALL TIMES LISTED IN SECONDS

SEQUENCE 1: 8:00 AM TO 6:00 PM
TOTAL CYCLE TIME = 108.0

EASTBOUND	WESTBOUND	YELLOW	ALL RED	GREEN
RED	RED		20.0	
GREEN	RED			29.0
YELLOW	RED	5.0		
RED	RED		20.0	
RED	GREEN			29.0
RED	YELLOW	5.0		
TOTAL:		10.0	40.0	58.0

SEQUENCE 2: 6:00 PM TO 8:00 AM
TOTAL CYCLE TIME = 96.0

EASTBOUND	WESTBOUND	YELLOW	ALL RED	GREEN
RED	RED		20.0	
GREEN	RED			23.0
YELLOW	RED	5.0		
RED	RED		20.0	
RED	GREEN			23.0
RED	YELLOW	5.0		
TOTAL:		10.0	40.0	46.0

PROJECT NO: 8520-02-71	HWY: STH 77	COUNTY: SAWYER	TRAFFIC CONTROL - STAGE 3	SHEET 7	E

FILE NAME : G:\00\00093\00093673\CADD\SHEETSPLAN\025001-TC.DWG
LAYOUT NAME - 025001-tc - Stage 3
PLOT DATE : 1/31/2025 10:15 AM
PLOT BY : SHAWN DOLENS
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

8520-02-71

Line	Item	Item Description	Unit	Total	Qty
0018	203.0335	Debris Containment Over Waterway (structure) 01. B-57-0025	EACH	1.000	1.000
0020	204.0100	Removing Concrete Pavement	SY	152.000	152.000
0022	204.0110	Removing Asphaltic Surface	SY	36.000	36.000
0028	205.0100	Excavation Common	CY	102.000	102.000
0036	209.0200.S	Backfill Controlled Low Strength	CY	5.000	5.000
0040	211.0400	Prepare Foundation for Asphaltic Shoulders	STA	10.000	10.000
0044	213.0100	Finishing Roadway (project) 02. 8520-02-71	EACH	1.000	1.000
0046	305.0110	Base Aggregate Dense 3/4-Inch	TON	10.000	10.000
0048	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	120.000	120.000
0052	415.0090	Concrete Pavement 9-Inch	SY	34.000	34.000
0054	415.0410	Concrete Pavement Approach Slab	SY	80.000	80.000
0056	455.0605	Tack Coat	GAL	19.000	19.000
0058	465.0105	Asphaltic Surface	TON	28.000	28.000
0060	465.0110	Asphaltic Surface Patching	TON	33.000	33.000
0064	502.3200	Protective Surface Treatment	SY	232.000	232.000
0066	502.3205	Pigmented Surface Sealer Reseal	SY	56.000	56.000
0074	509.0301	Preparation Decks Type 1	SY	65.000	65.000
0076	509.0302	Preparation Decks Type 2	SY	26.000	26.000
0082	509.0505.S	Cleaning Decks to Reapply Concrete Masonry Overlay	SY	232.000	232.000
0084	509.1500	Concrete Surface Repair	SF	70.000	70.000
0086	509.2000	Full-Depth Deck Repair	SY	7.000	7.000
0090	509.2500	Concrete Masonry Overlay Decks	CY	21.000	21.000
0092	509.9005.S	Removing Concrete Masonry Deck Overlay (structure) 01. B-57-0025	SY	232.000	232.000
0152	603.8000	Concrete Barrier Temporary Precast Delivered	LF	325.000	325.000
0154	603.8125	Concrete Barrier Temporary Precast Installed	LF	650.000	650.000
0158	606.0300	Riprap Heavy	CY	10.000	10.000
0178	618.0100	Maintenance and Repair of Haul Roads (project) 02. 8520-02-71	EACH	1.000	1.000
0180	619.1000	Mobilization	EACH	0.150	0.150
0182	624.0100	Water	MGAL	5.000	5.000
0184	625.0100	Topsoil	SY	890.000	890.000
0190	628.1504	Silt Fence	LF	665.000	665.000
0192	628.1520	Silt Fence Maintenance	LF	665.000	665.000
0194	628.1905	Mobilizations Erosion Control	EACH	3.000	3.000
0196	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0198	628.2008	Erosion Mat Urban Class I Type B	SY	890.000	890.000
0204	628.7570	Rock Bags	EACH	260.000	260.000
0206	629.0210	Fertilizer Type B	CWT	55.000	55.000
0208	630.0120	Seeding Mixture No. 20	LB	42.000	42.000
0214	630.0500	Seed Water	MGAL	53.000	53.000
0222	642.5001	Field Office Type B	EACH	0.150	0.150
0224	643.0300	Traffic Control Drums	DAY	1,600.000	1,600.000
0226	643.0420	Traffic Control Barricades Type III	DAY	80.000	80.000
0228	643.0705	Traffic Control Warning Lights Type A	DAY	160.000	160.000
0230	643.0715	Traffic Control Warning Lights Type C	DAY	960.000	960.000
0232	643.0900	Traffic Control Signs	DAY	2,272.000	2,272.000
0234	643.0920	Traffic Control Covering Signs Type II	EACH	2.000	2.000
0236	643.1000	Traffic Control Signs Fixed Message	SF	36.000	36.000
0240	643.3180	Temporary Marking Line Removable Tape 6-Inch	LF	5,340.000	5,340.000
0244	643.3850	Temporary Marking Stop Line Removable Tape 18-Inch	LF	48.000	48.000

8520-02-71

Line	Item	Item Description	Unit	Total	Qty
0246	643.3980	Temporary Marking Removable Mask Out Tape 8-Inch	LF	1,505.000	1,505.000
0248	643.5000	Traffic Control	EACH	0.150	0.150
0252	645.0120	Geotextile Type HR	SY	30.000	30.000
0256	646.2020	Marking Line Epoxy 6-Inch	LF	395.000	395.000
0260	650.4500	Construction Staking Subgrade	LF	30.000	30.000
0262	650.5000	Construction Staking Base	LF	30.000	30.000
0268	650.6501	Construction Staking Structure Layout (structure) 02. B-57-0025	EACH	1.000	1.000
0270	650.8000	Construction Staking Resurfacing Reference	LF	58.000	58.000
0274	650.9911	Construction Staking Supplemental Control (project) 02. 8520-02-71	EACH	1.000	1.000
0284	661.0101	Temporary Traffic Signals for Bridges (structure) 04. B-57-0025	EACH	1.000	1.000
0286	690.0150	Sawing Asphalt	LF	751.000	751.000
0288	690.0250	Sawing Concrete	LF	40.000	40.000
0292	715.0720	Incentive Compressive Strength Concrete Pavement	DOL	500.000	500.000
0300	SPV.0045	Special 01. Driveway Assistance Device System	DAY	80.000	80.000

SURFACING

STATION	TO	STATION	LOCATION	204.0110 REMOVING ASPHALTIC SURFACE SY	211.0400 PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS STA	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	455.0605 TACK COAT GAL	465.0105 ASPHALTIC SURFACE TON	465.0110 ASPHALTIC SURFACE PATCHING TON	624.0100 WATER MGAL	REMARKS
1105+25	-	1107+48	LT	7	3	--	--	4	--	13	--	SHOULDER WIDENING
1105+25	-	1105+92	RT	3	1	--	--	1	--	3	--	SHOULDER WIDENING
1107+96	-	1108+10	LT & RT	--	--	--	20	4	14	--	1	MAINLINE
1108+10	-	1108+25	LT & RT	--	--	--	40	--	--	--	1	MAINLINE
1108+86	-	1109+01	LT & RT	--	--	--	40	--	--	--	1	MAINLINE
1109+01	-	1109+25	LT & RT	--	--	--	20	4	14	--	1	MAINLINE
1109+90	-	1111+75	RT	7	3	--	--	3	--	8	--	SHOULDER WIDENING
1109+96	-	1111+75	LT	7	3	--	--	3	--	7	--	SHOULDER WIDENING
		1110+24	LT	7	--	--	--	--	--	2	--	DRIVEWAY
1107+96	-	1109+15	LT & RT	5	--	10	--	--	--	--	1	UNDISTRIBUTED
			TOTAL 0010	36	10	10	120	19	28	33	5	

COMMON

STATION	TO	STATION	LOCATION	205.0100 EXCAVATION COMMON CY
1107+96	-	1108+25	LT & RT	51
1108+86	-	1109+15	LT & RT	51
			TOTAL 0010	102

APPROACH SLAB

STATION	TO	STATION	LOCATION	204.0100 REMOVING CONCRETE PAVEMENT SY	415.0090 CONCRETE PAVEMENT 9-INCH SY	415.0410 CONCRETE PAVEMENT APPROACH SLAB SY
1107+98	-	1108+25	MAINLINE	76	--	--
1108+10	-	1108+25	MAINLINE	--	17	40
1108+86	-	1109+13	MAINLINE	76	--	--
1108+86	-	1109+01	MAINLINE	--	17	40
			TOTAL 0010	152	34	80

EROSION CONTROL

STATION	TO	STATION	LOCATION	625.0100 TOPSOIL SY	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH	628.2008 EROSION MAT URBAN CLASS I TYPE B SY	629.0210 FERTILIZER TYPE B CWT	630.0120 SEEDING MIXTURE NO. 20 LB	630.0500 SEED WATER MGAL	628.7570 ROCK BAGS EACH	REMARKS
			PROJECT	--	--	--	3	2	--	--	--	--	--	
1105+70	-	1108+25	RT	340	250	250	--	--	340	21	15	20	40	ACCESS FOR SPOT RIPRAP SUPPLEMENT
1107+25	-	1108+25	LT	140	105	105	--	--	140	9	6	8	40	ACCESS FOR SPOT RIPRAP SUPPLEMENT
1108+80	-	1110+20	RT	180	130	130	--	--	180	11	8	11	40	ACCESS FOR SPOT RIPRAP SUPPLEMENT
1108+80	-	1110+20	LT	180	130	130	--	--	180	11	8	11	40	ACCESS FOR SPOT RIPRAP SUPPLEMENT
			UNDISTRIBUTED	50	50	50	--	--	50	3	5	3	100	
			TOTAL 0010	890	665	665	3	2	890	55	42	53	260	

TRAFFIC CONTROL

LOCATION	DAYS	603.8000 CONCRETE BARRIER TEMPORARY PRECAST DELIVERED LF	603.8125 CONCRETE BARRIER TEMPORARY PRECAST INSTALLED LF	643.0300 TRAFFIC CONTROL DRUMS EACH	643.0300 DAY	643.0420 TRAFFIC CONTROL BARRICADES TYPE III EACH	643.0420 DAY	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A EACH	643.0705 DAY	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C EACH	643.0715 DAY	643.0900 TRAFFIC CONTROL SIGNS EACH	643.0900 DAY	* 643.1000 TRAFFIC CONTROL SIGNS FIXED MESSAGE SF	643.5000 TRAFFIC CONTROL EACH	661.0101 TEMPORARY TRAFFIC SIGNALS FOR BRIDGES (B-57-25) EACH	SPV.0045.01 DRIVEWAY ASSISTANCE DEVICE SYSTEM	SPV.0045.01 DAY
PROJECT ID 8520-02-71		325	650	--	--	--	--	--	--	--	--	--	--	--	0.15	1	--	--
STAGE 1	2	--	--	--	--	--	--	--	--	--	--	8	16	36	--	--	--	--
STAGE 2	40	--	--	20	800	1	40	2	80	12	480	28	1,120	--	--	--	1	40
STAGE 3	40	--	--	20	800	1	40	2	80	12	480	28	1,120	--	--	--	1	40
STAGE 4	2	--	--	--	--	--	--	--	--	--	--	8	16	--	--	--	--	--
TOTAL 0010		325	650		1,600		80		160		960		2,272	36	0.15	1		80

* G20-57 SIGNS TO BE PLACED AT PROJECT TERMINI 7 DAYS PRIOR TO CONSTRUCTION AND REMOVED WHEN CONSTRUCTION BEGINS

PAVEMENT MARKING

COVERING SIGNS

LOCATION	NUMBER OF CYCLES	643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II EACH	REMARKS
PROJECT	1	2	NO PASSING
TOTAL 0010		2	

STATION	TO	STATION	LOCATION	643.3180 TEMPORARY MARKING LINE REMOVABLE TAPE 6-INCH LF	643.3850 TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH LF	643.3980 TEMPORARY MARKING REMOVABLE MASK OUT TAPE 8-INCH LF	646.2020 MARKING LINE EPOXY 6-INCH YELLOW LF	646.2020 MARKING LINE EPOXY 6-INCH WHITE LF
			STAGE 2	4,070	24	865	--	--
			STAGE 3	1,270	24	640	--	--
1107+96	-	1109+15	LT & RT	--	--	--	157	238
			TOTAL 0010	5,340	48	1,505	395	

GEOTEXTILE

LOCATION	645.0120 GEOTEXTILE TYPE HR SY	REMARKS
B-57-25 WEST ABUTMENT	15	SPOT RIPRAP TO SUPPLEMENT EXISTING
B-57-25 EAST ABUTMENT	15	SPOT RIPRAP TO SUPPLEMENT EXISTING
TOTAL 0010	30	

CONSTRUCTION STAKING

STATION	TO	STATION	LOCATION	650.4500 CONSTRUCTION STAKING SUBGRADE LF	650.5000 CONSTRUCTION STAKING BASE LF	650.6501 CONSTRUCTION STAKING STRUCTURE LAYOUT(B-57-25) EACH	650.8000 CONSTRUCTION STAKING RESURFACING REFERENCE LF	650.9911 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (8520-02-71) EACH
1107+96	-	1109+15	LT & RT	--	--	1	58	1
1108+10	-	1108+25	MAINLINE	15	15	--	--	--
1108+86	-	1109+01	MAINLINE	15	15	--	--	--
			TOTAL 0010	30	30	1	58	1

SAWING

STATION	TO	STATION	LOCATION	690.0150 SAWING ASPHALT LF	690.0250 SAWING CONCRETE LF
1107+96	-	1108+05	MAINLINE	43	--
1108+05	-	1108+25	CL	--	20
1108+86	-	1109+06	CL	--	20
1109+06	-	1109+15	MAINLINE	43	--
1105+25	-	1111+75	WIDENINGS LT & RT	650	--
			UNDISTRIBUTED	15	--
			TOTAL 0010	751	40

RAYMOND & CAROLANNE MELICK

TEAL RIVER

JEFFREY F KOPPA

N

USDA FOREST SERVICE
CHEQUAMEGON-NICOLET
NATIONAL FOREST

EXISTING STRUCTURE B-57-25
(SEE STRUCTURE PLANS)

EXISTING DRY HYDRANT
(TO REMAIN)

CONCRETE PAVEMENT 9-INCH

BEGIN PROJECT
STA 1107+96
MATCH EXISTING

CONCRETE PAVEMENT 9-INCH

ASPHALTIC SURFACE

END PROJECT
STA 1109+15
MATCH EXISTING

SHOULDER WIDENING TO REMAIN
AFTER CONSTRUCTION (TYP).
(SEE TRAFFIC CONTROL DETAILS)

EXISTING R/W

EXISTING R/W

CENTURYLINK
(COMMUNICATIONS)

PE
GRAVEL

SURVEY MONUMENT (TO REMAIN)

PE
ASPHALT

XXX

PC: 1111+42.17

5

5

USGS

1106+00

1107+00

SAWING ASPHALT

1108+00

1109+00

1110+00

STH 77

1111+00

SAWING CONCRETE

PE
GRAVEL

BEGIN CONSTRUCTION
STA 1105+28

SHOULDER WIDENING TO REMAIN
AFTER CONSTRUCTION (TYP).
(SEE TRAFFIC CONTROL DETAILS)

ASPHALTIC SURFACE

SAWING ASPHALT

SAWING CONCRETE

EXISTING R/W

END CONSTRUCTION
STA 1111+69

EXISTING R/W

JUMP RIVER ELECTRIC COOPERATIVE
(ELECTRIC)

REMOVING CONCRETE PAVEMENT
CONCRETE PAVEMENT APPROACH SLAB
10"- BASE AGGREGATE DENSE 1 1/4-INCH

CONCRETE PAVEMENT 9-INCH

REMOVING CONCRETE PAVEMENT
CONCRETE PAVEMENT APPROACH SLAB
10"- BASE AGGREGATE DENSE 1 1/4-INCH

CONCRETE PAVEMENT 9-INCH

MICHAEL G &
ANNEMARIE K HAMS

TEAL RIVER

EUGENE GIRARD

USDA FOREST SERVICE
CHEQUAMEGON-NICOLET NATIONAL FOREST

LEGEND

EROSION MAT URBAN CLASS I TYPE B

SILT FENCE

R ROCK BAGS

PROJECT NO: 8520-02-71	HWY: STH 77	COUNTY: SAWYER	PLAN	SHEET 12	E

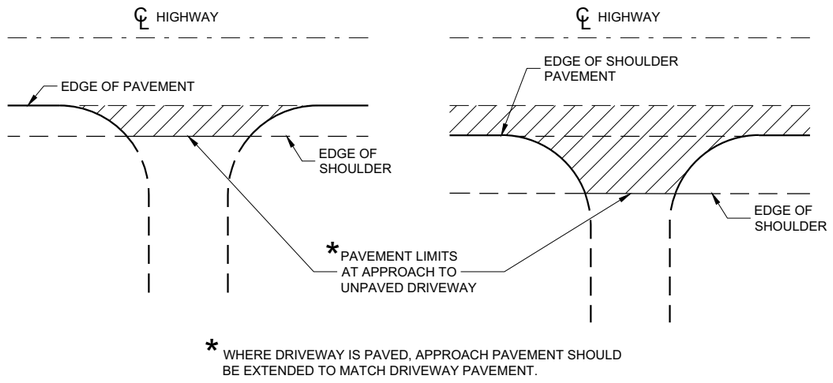
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LAYOUT NAME - 050201-pn

PLOT DATE : 5/19/2025 2:30 PM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 44

Standard Detail Drawing List

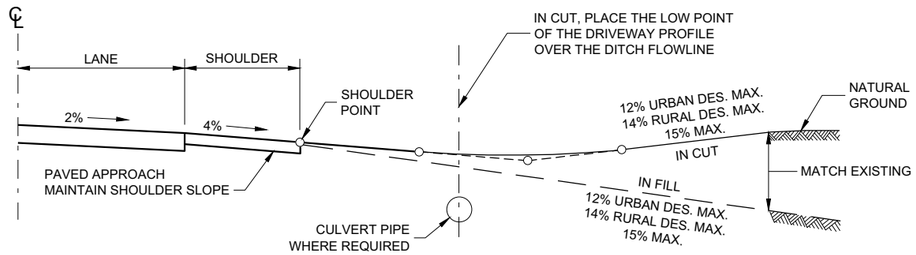
08D21-01	DRIVEWAYS WITHOUT CURB & GUTTER
08E09-06	SILT FENCE
09G02-05A	BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION
09G02-05B	BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION
09G02-05C	BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION
13B02-09A	CONCRETE PAVEMENT APPROACH SLAB
13C01-19	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
14B07-16A	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16B	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16C	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16D	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16E	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16F	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16G	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16H	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16I	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16J	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16K	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16L	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16M	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16N	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
15C02-09F	ADVANCED WIDTH RESTRICTION SIGNING
15C04-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C06-12	SIGNING & MARKING FOR TWO LANE BRIDGES
15C08-23A	PERMANENT LONGITUDINAL PAVEMENT MARKINGS
15C08-23B	TEMPORARY LONGITUDINAL PAVEMENT MARKING
15C11-10B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C12-09A	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15D28-04	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
15D33-09	TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS



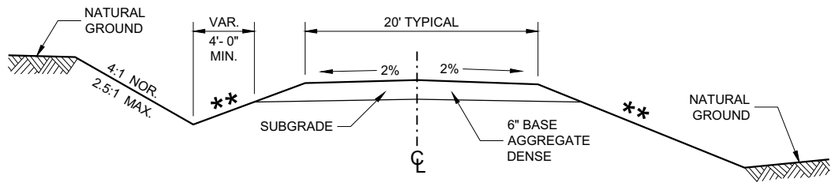
PLAN VIEW
(UNPAVED SHOULDER ON HIGHWAY)

PLAN VIEW
(PAVED SHOULDER ON HIGHWAY)

RURAL DRIVEWAY INTERSECTION DETAIL
(NO CURB AND GUTTER OR SIDEWALK)



TYPICAL DRIVEWAY PROFILES

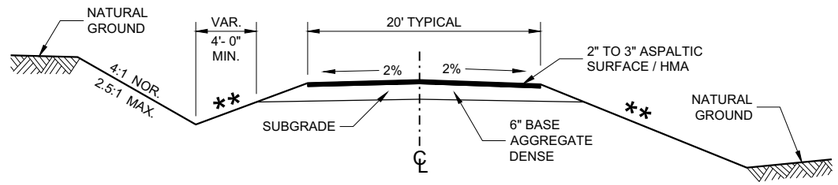


IN CUT IN FILL

TYPICAL CROSS SECTION FOR PRIVATE DRIVE OR FIELD ENTRANCE AGGREGATE SURFACE

** SLOPE CAN VARY WITH SPEED. SEE 11-45-30.6.2

POSTED SPEED MPH	MAX. SLOPE
<35	4:1
≥ 35 TO < 60	6:1
≥60	10:1



IN CUT IN FILL

TYPICAL CROSS SECTION FOR PRIVATE DRIVE OR FIELD ENTRANCE ASPHALTIC SURFACE

6

SDD 08D21 - 01

6

SDD 08D21 - 01

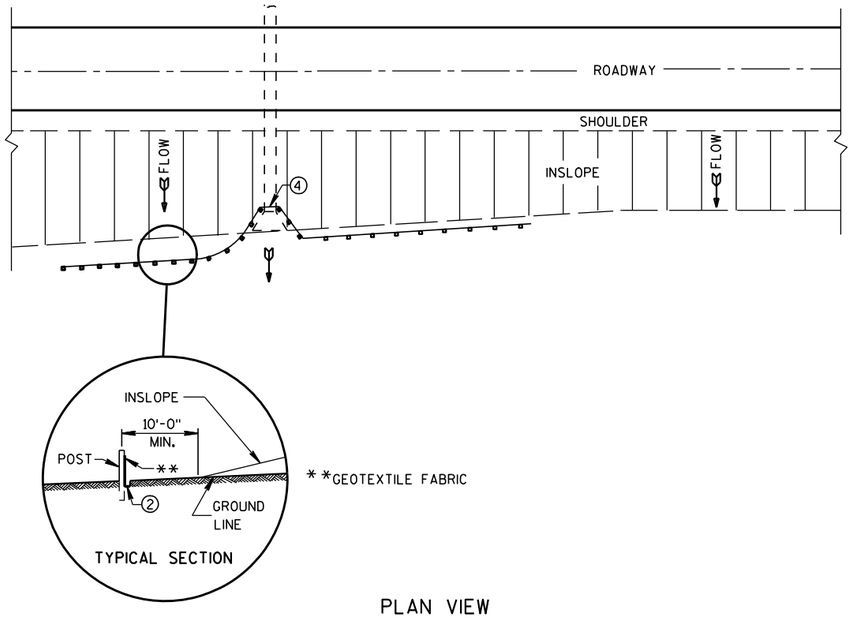
DRIVEWAYS WITHOUT CURB AND GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
December 2017
DATE

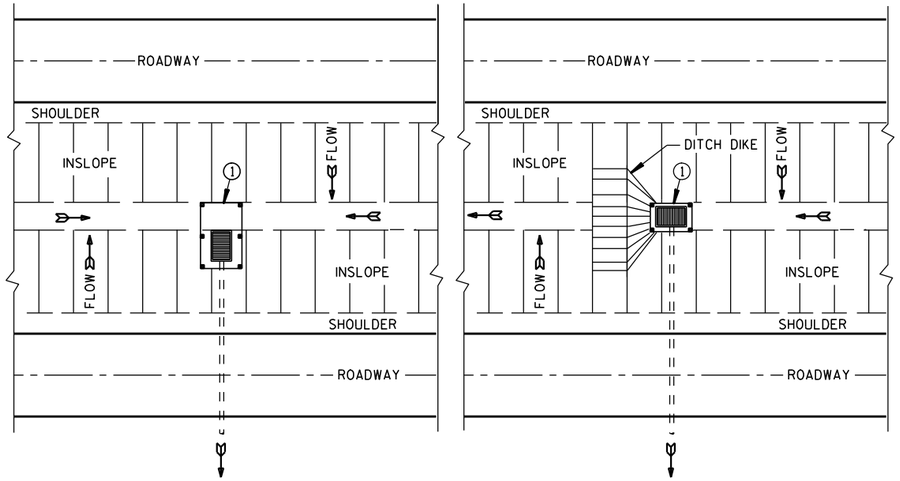
/S/ Rodney Taylor
ROADWAY STANDARDS DEVE
UNIT SUPERVISOR

FHWA



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



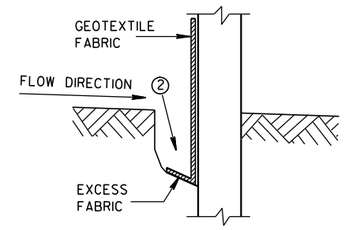
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

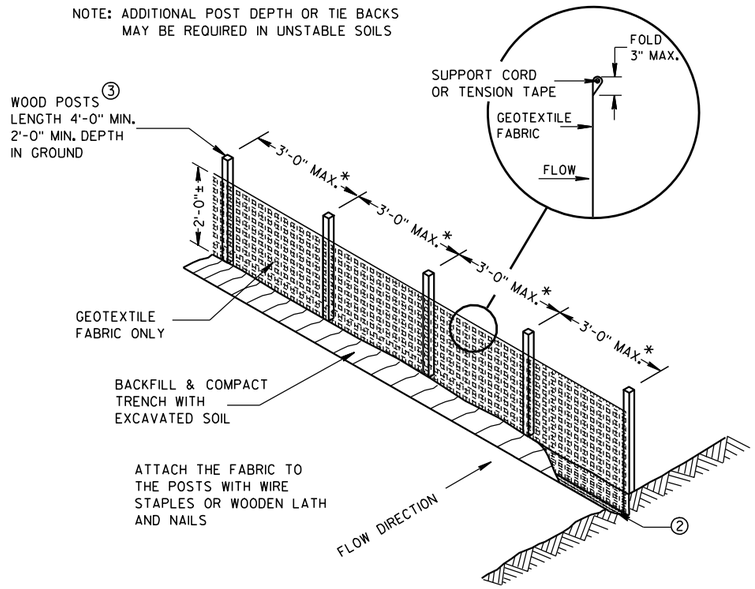
GENERAL NOTES

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

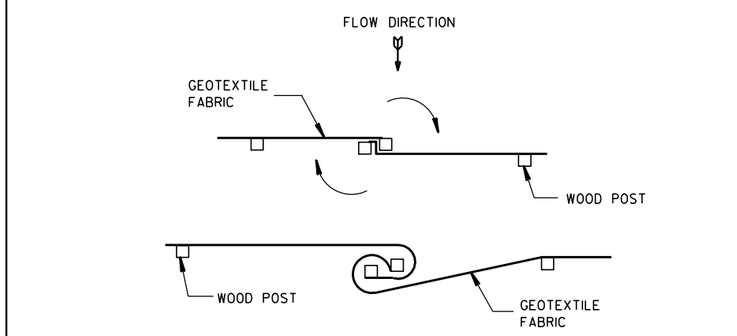
1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL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



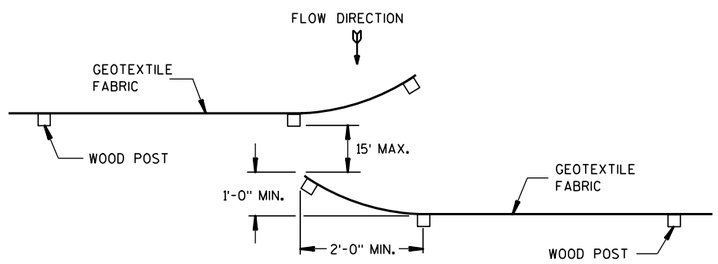
TRENCH DETAIL



SILT FENCE

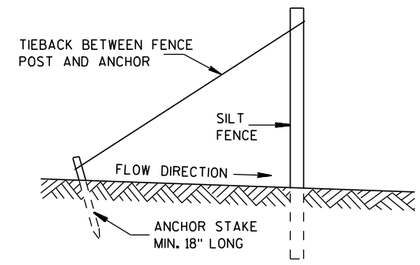


TWIST METHOD



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

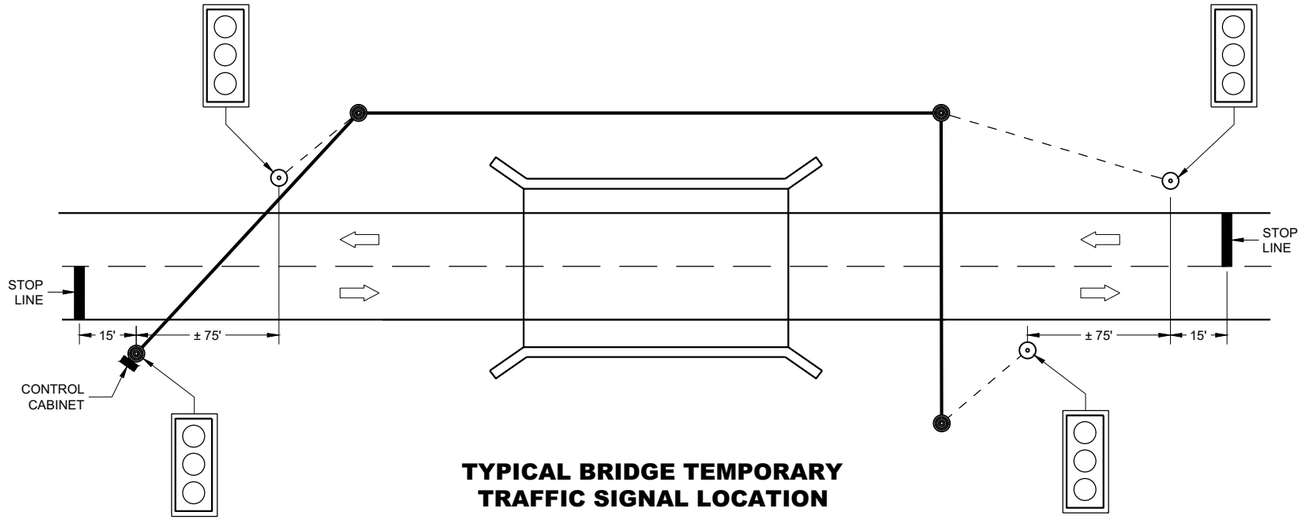
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 8 E 9-6

6

S.D.D. 8 E 9-6



TYPICAL BRIDGE TEMPORARY TRAFFIC SIGNAL LOCATION

LEGEND

- WOOD POLE (NON-BREAKAWAY)
- WOOD POST (BREADAWAY)
- SIGNAL CABLE
- SIGNAL CABLE W/MESSENGER
- DIRECTION OF TRAFFIC
- LED TRAFFIC SIGNAL WITH BACKPLATE (3-12")

GENERAL NOTES

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

POLE MOUNTED TRAFFIC SIGNAL CONTROL CABINET MAY BE MOUNTED ON THE SERVICE POLE IF THE ELECTRICAL UTILITY ALLOWS THE INSTALLATION.

WHEN UTILITY POLES ARE USED TO SPAN THE TEMPORARY OVERHEAD CABLE, WRITTEN PERMISSION MUST BE OBTAINED FROM THE OWNER OF THE POLES AND GIVEN TO THE PROJECT MANAGER. ALL PERTINENT UTILITY AND CODE CLEARANCES SHALL BE MAINTAINED.

WOOD POLES (NON-BREAKAWAY) SHALL BE NO CLOSER TO EDGE OF PAVEMENT THAN OFFSET DISTANCE CHART ALLOWS OR 4 FEET BEHIND PROTECTIVE BARRIER (BEAM GUARD, ETC.).

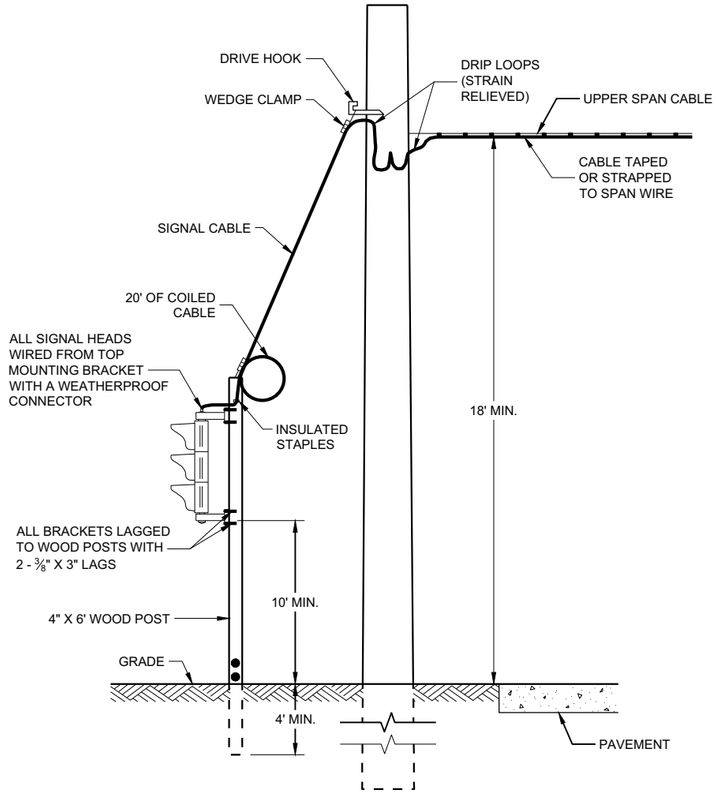
WOOD POSTS (BREAKAWAY) SHALL BE NO CLOSER THAN 2 FEET OUTSIDE OF SHOULDER.

VERTICAL CLEARANCE ETC. PER NEC.

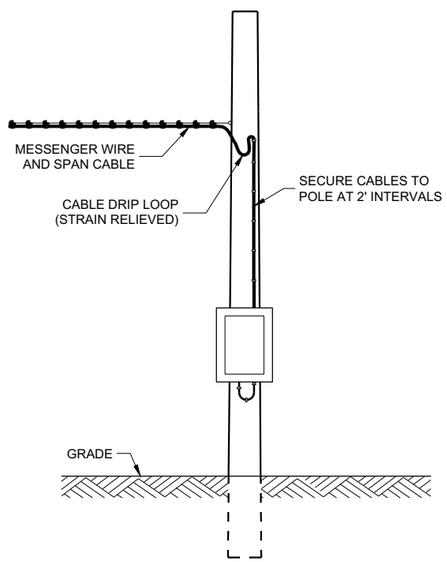
TRAFFIC SIGNAL FACES SHALL BE TYPICALLY PLACED 12 FEET FROM EDGE OF PAVEMENT.

EACH TRAFFIC SIGNAL SHALL HAVE A BACKPLATE.

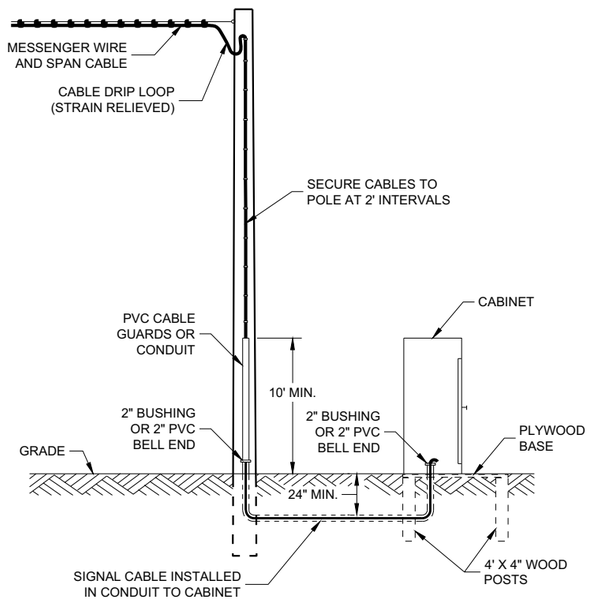
SIGNING, PAVEMENT MARKING AND LANE CONTROL REQUIREMENTS SHALL CONFORM TO STANDARD DETAIL DRAWING 15D33.



TYPICAL DROP TO TRAFFIC SIGNAL FACE



POLE MOUNT CABINET INSTALLATION



GROUND MOUNT CABINET INSTALLATION

MINIMUM POLE LENGTHS	CLASS	POLE BURIAL DEPTHS
25'	V	5'
30'	V	6'
35'	IV	7'
40'	IV	8'
45'	IV	9'

OFFSET DISTANCES FOR TEMPORARY NON-BREAKAWAY POLES	
SPEED LIMIT	OFFSET DISTANCE*
GREATER THAN 45 MPH	18 FT
45 MPH OR LESS	12 FT
45 MPH OR LESS W/CURBS	2 FT

* NOTE: OFFSET MEASURED FROM OUTER EDGE OF OUTSIDE THRU LANE.

BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018 — DATE
/S/ Ahmet Demirbilek — ROADWAY STANDARDS DEVE ENGINEER

FHWA

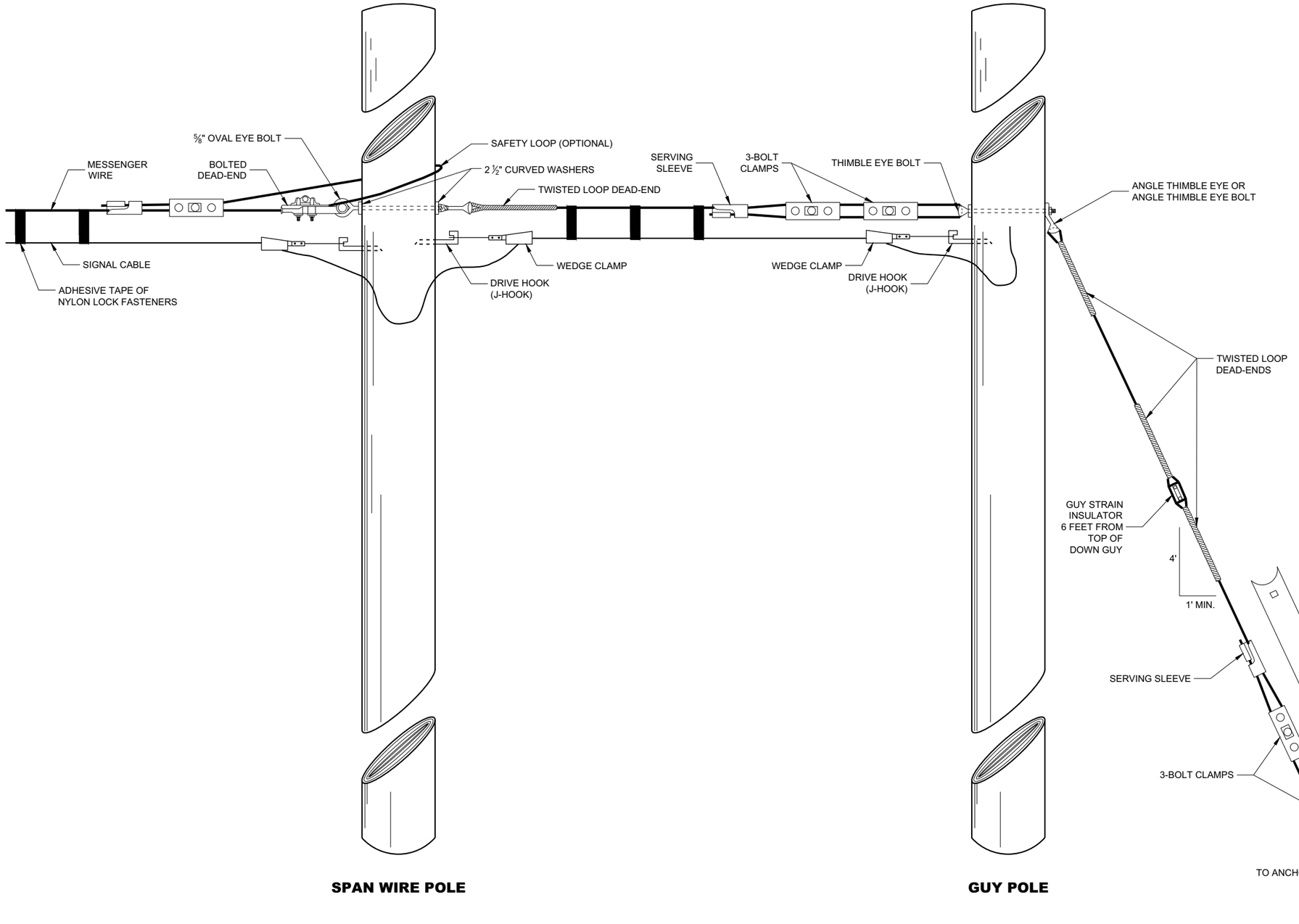
6

SDD09G02 - 05a

SDD09G02 - 05a

GENERAL NOTES

USE ¾" DRILL IN WOOD POLE TO PROVIDE FOR ⅝" BOLTS.



SPAN WIRE POLE

GUY POLE

TYPICAL DEAD-ENDINGS OR GUYING

BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June 2015
DATE

/S/ Ahmet Demerbilek
ROADWAY STANDARDS DEVE ENGINEER

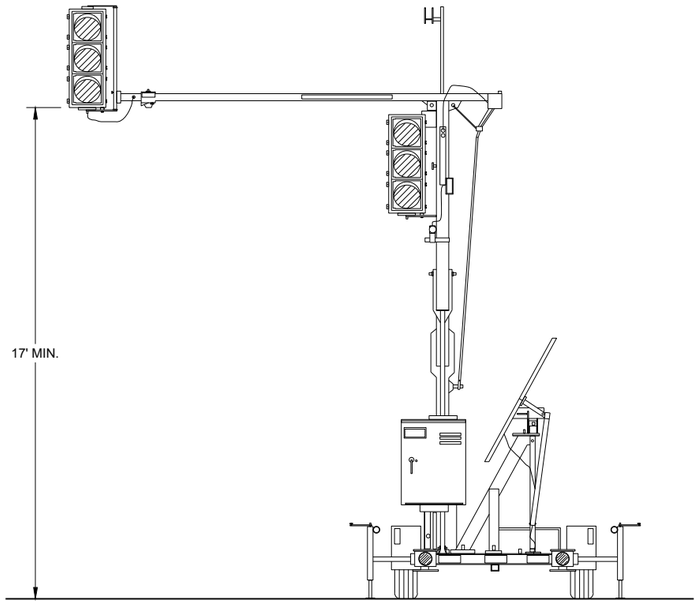
FHWA

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SDD09G02 - 05b

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SDD09G02 - 05b

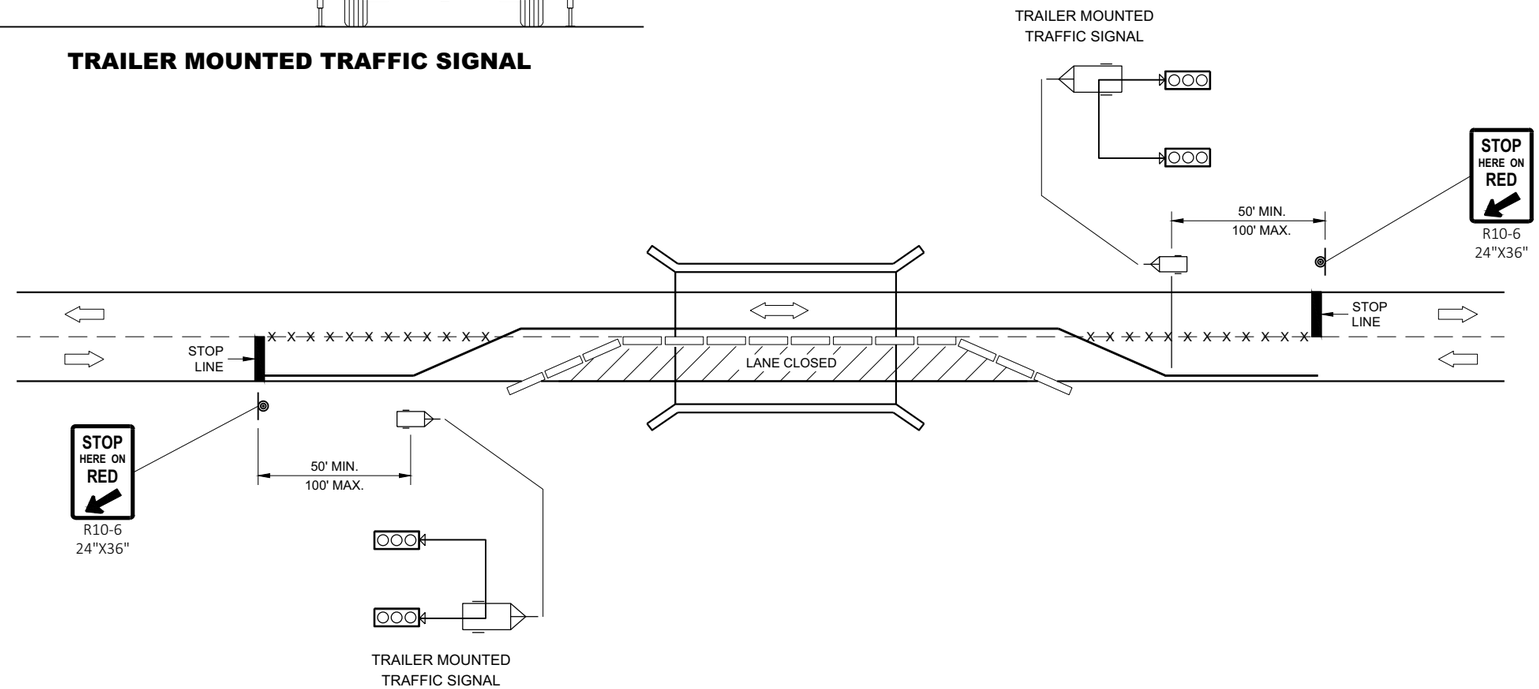


TRAILER MOUNTED TRAFFIC SIGNAL

GENERAL NOTES

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

SIGNING, PAVEMENT MARKING AND LANE CONTROL REQUIREMENTS SHALL CONFORM TO STANDARD DETAIL DRAWING 15D33.



TYPICAL TRAILER MOUNTED TRAFFIC SIGNAL LOCATION

LEGEND

- POST MOUNTED SIGN
- TEMPORARY PRECAST CONCRETE BARRIER
- TRAILER MOUNTED TRAFFIC SIGNAL
- REMOVE PAVEMENT MARKINGS
- DIRECTION OF TRAFFIC

BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June 2015
DATE

/S/ Ahmet Demerbilek
ROADWAY STANDARDS DEVE ENGINEER

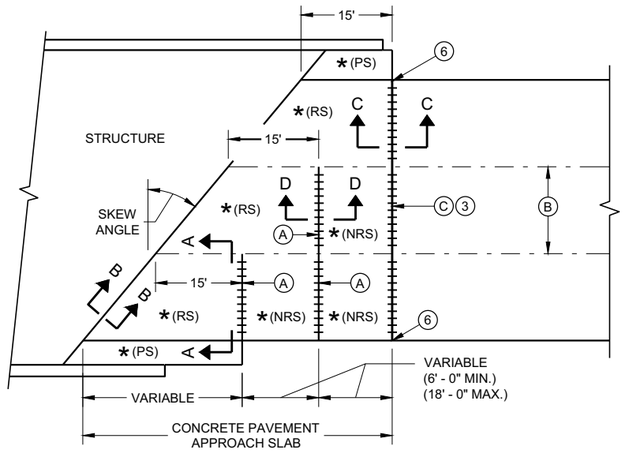
FHWA

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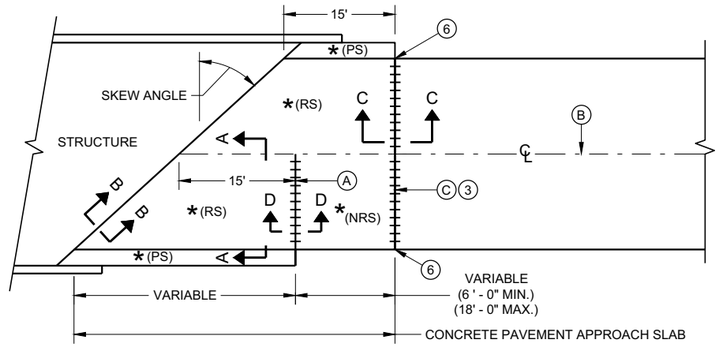
SDD09G02 - 05c

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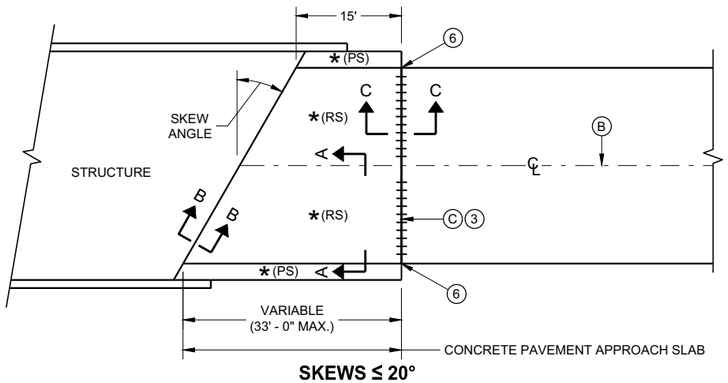
SDD09G02 - 05c



SKEWED APPROACH
(PAVEMENT MORE THAN TWO LANES)



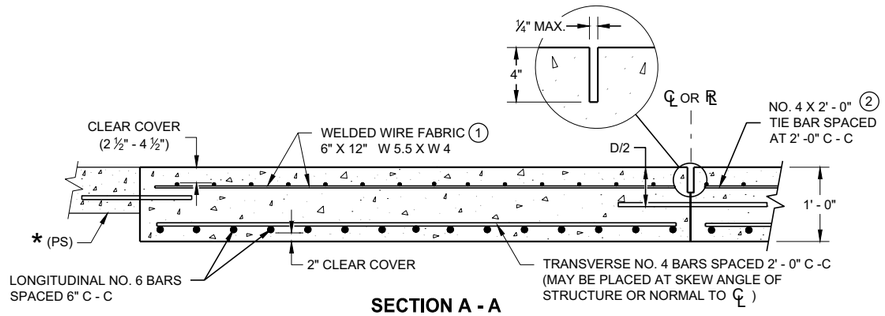
SKEWS > 20°
(PAVEMENT WIDTH ≤ 30')



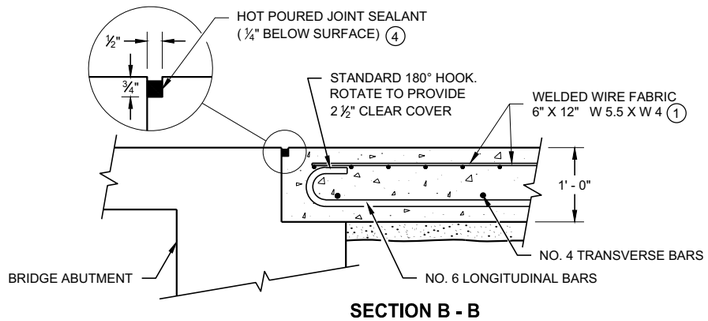
SKEWS ≤ 20°
(PAVEMENT WIDTH ≤ 30')

APPROACH SLAB AND ADJACENT PAVEMENT

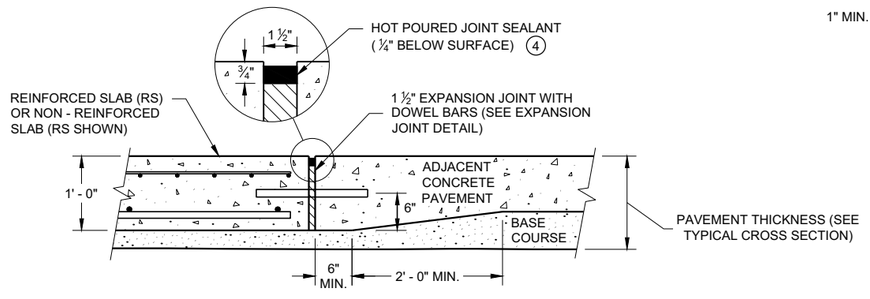
* (RS) = REINFORCED CONCRETE SLAB
* (PS) = PAVED CONCRETE SHOULDER OR CONCRETE DRAINAGE SLAB
* (NRS) - NON - REINFORCED CONCRETE SLAB
*** STANDARD DOWEL BAR DIAMETER (SEE SDD 13C11 AND SDD 13C13)



SECTION A - A
REINFORCEMENT POSITIONING DETAIL



SECTION B - B
BEND DETAIL
BOTTOM REINFORCEMENT



SECTION C - C
TRANSITION DETAIL
APPROACH SLAB TO ADJACENT PAVEMENT

GENERAL NOTES

THE CONTRACTOR MAY SPLICE NO. 6 BARS IN THE APPROACH SLAB FOR SKEWED STRUCTURES ONLY. STAGGER SPLICES WITH A MAXIMUM OF ONE SPLICE PER BAR. THE LENGTH OF LAP IS 20 INCHES.

TACK WELD DOWEL BARS TO THE BASKETS ON ALTERNATE ENDS.

(1) THE CONTRACTOR MAY USE NO. 4 BARS SPACED AT 2' - 0 " C - C IN BOTH THE LONGITUDINAL AND TRANSVERSE DIRECTIONS FOR TOP REINFORCEMENT AS AN ALTERNATIVE TO THE WELDED WIRE FABRIC.

(2) THE CONTRACTOR MAY OMIT THE BARS BETWEEN REINFORCED SLABS WHERE SLAB REINFORCEMENT BARS EXTEND ACROSS THE CENTERLINE OR REFERENCE LINE.

(3) DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING AN HMA PAVEMENT.

(4) USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.

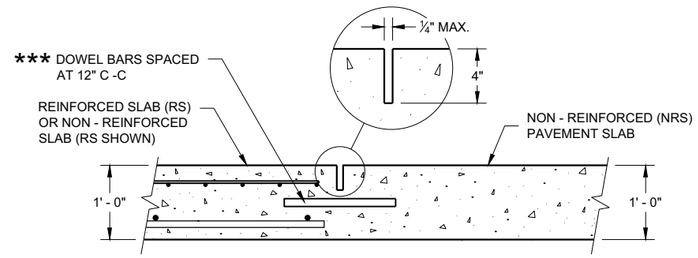
(5) PLACE EXPANSION CAP ON THE END OF THE DOWEL THAT IS NOT TACK WELDED TO THE BASKET. DO NOT FORCE DOWEL BAR PAST THE DOWEL STOP.

(6) EXTEND EXPANSION JOINT THROUGH ANY ADJACENT TIED CONCRETE.

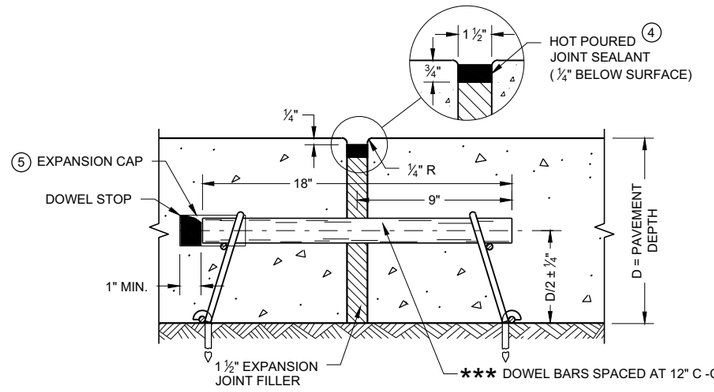
(A) STANDARD CONTRACTION JOINT NORMAL TO ℄ OR ℞.

(B) STANDARD LONGITUDINAL JOINT WITH TIE BARS.

(C) 1 ½" EXPANSION JOINT WITH DOWEL BARS NORMAL TO ℄ OR ℞ .



SECTION D - D
CONTRACTION JOINT



EXPANSION JOINT DETAIL

CONCRETE PAVEMENT APPROACH SLAB

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

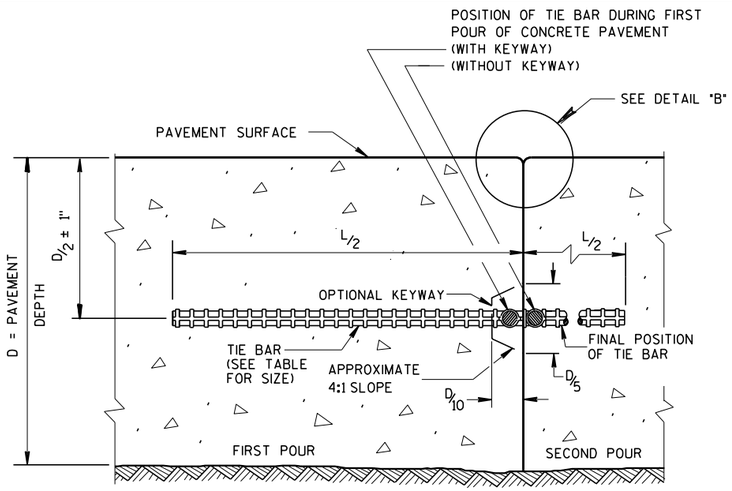
APPROVED
November 2018
DATE

/S/ Peter Kemp, P.E.
PAVEMENT SUPERVIS

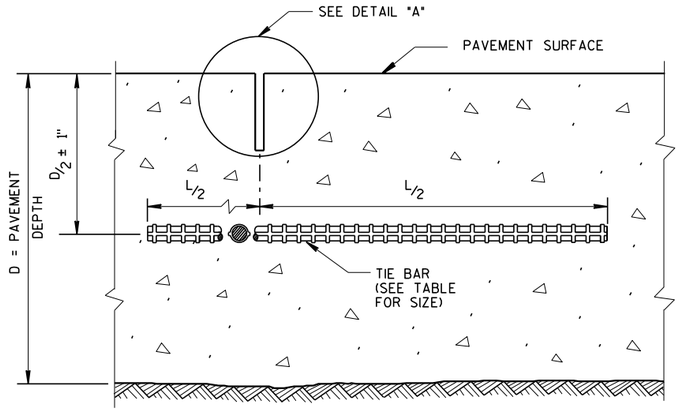
FHWA

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SDD 13B02 - 09a



CONSTRUCTION JOINT



SAWED JOINT

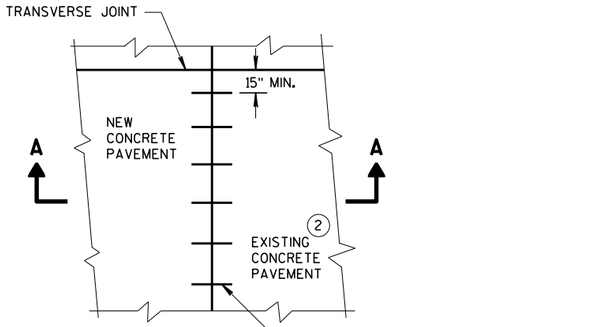
GENERAL NOTES

CREATE A LONGITUDINAL JOINT FOR PAVEMENT WIDTHS GREATER THAN 15 FEET.

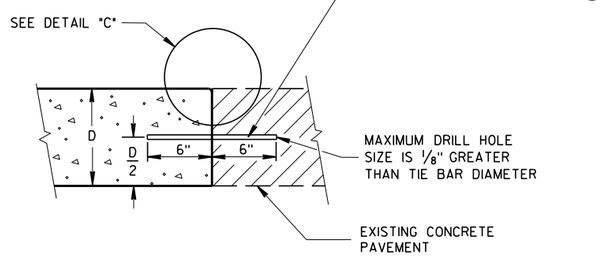
CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

(1) ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

(2) PAVEMENT THAT WAS IN PLACE PRIOR TO THE CONTRACT.

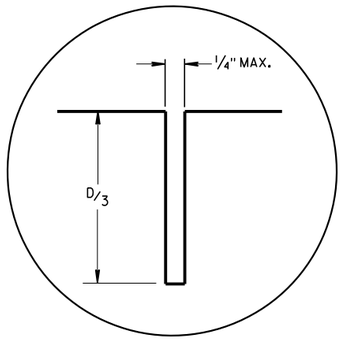


PLAN VIEW

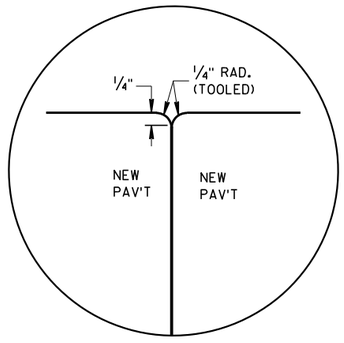


SECTION A-A

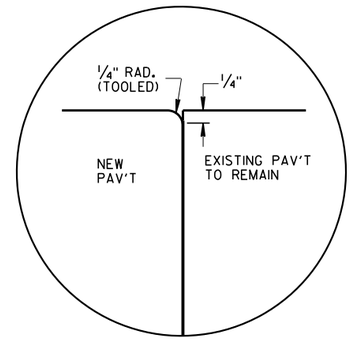
LONGITUDINAL CONSTRUCTION JOINT TIE BARS ANCHORED INTO EXISTING PAVEMENT



DETAIL "A"



DETAIL "B"



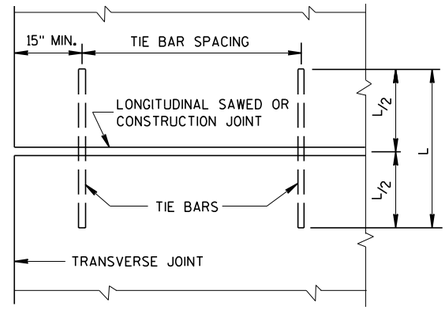
DETAIL "C"

TIE BAR TABLE

PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 1/2"	NO. 4	30"	36"
≥ 10 1/2"	NO. 5	36"	36"
	NO. 4 *	30"	24" **

* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

** CONFORM TO 15" MINUMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.



PLAN VIEW
SHOWING LOCATION OF TIE BARS

CONCRETE PAVEMENT
LONGITUDINAL JOINTS AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

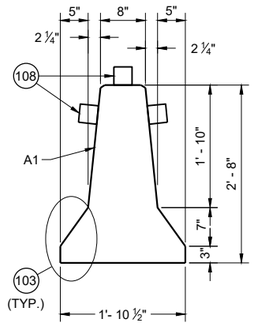
APPROVED
March 2018 — DATE
/S/ Peter Kemp P.E. — PAVEMENT SUPE
FHWA

6

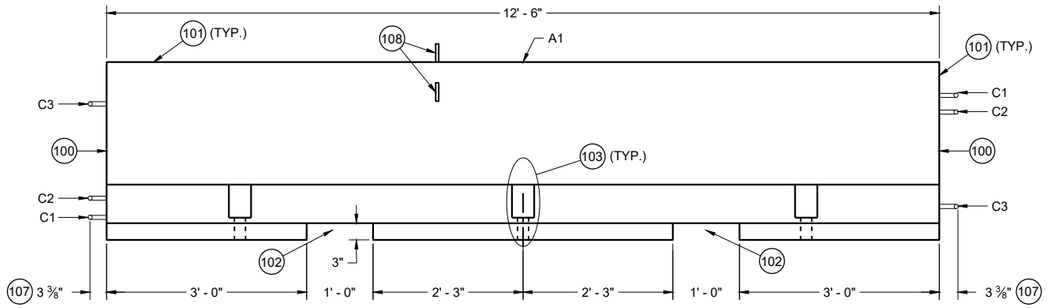
S.D.D. 13 C 1-19

6

S.D.D. 13 C 1-19



CROSS SECTION



PROFILE VIEW

GENERAL NOTES

PLACE BARRIER ON PAVED SURFACE. BEFORE PLACEMENT OF TEMPORARY BARRIER, REMOVE ALL LOOSE MATERIAL FROM PAVED SURFACE.

LOOP BARS C1, C2 AND C3 ARE NOT FOR PLACEMENT OR MOVEMENT OF BARRIER.

(100) PERMANENTLY FORM INTO ONE END OF BARRIER THE FOLLOWING INFORMATION:
- A. TYPE OF BARRIER: WI-CBTP
- B. MANUFACTURER
- C. DATE OF MANUFACTURE (MONTH AND YEAR)

(101) 1" OPTIONAL CHAMFER

(102) SEE LIFTING SLOT DETAIL

(103) SEE ANCHOR BLOCK DETAIL

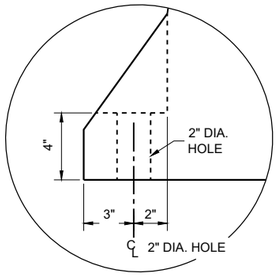
(104) 1 ¾" MIN. CLEAR COVER

(105) 2" MIN. CLEAR COVER

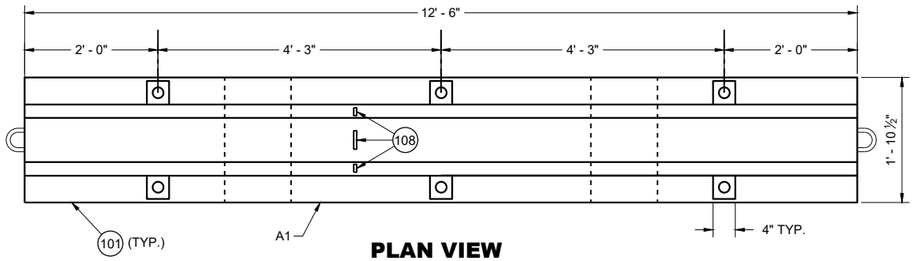
(106) 1" MIN. CLEAR COVER

(107) ± ⅛" MEASURED FROM FACE OF CONCRETE BARRIER TO OUTSIDE OF LOOP BAR (TYP.)

(108) USE DELINEATORS CONFORMING TO SECTION 633 OF THE STANDARD SPECIFICATIONS. CONTRACTOR MY USE ALTERNATE SHAPES AND HOUSING. INSTALL DELINEATORS ACCORDING TO MANUFACTURERS INSTRUCTION. INSTALL YELLOW REFLECTORS WHEN BARRIER IS LOCATED LEFT OF TRAFFIC AND WHITE WHEN BARRIER IS LOCATED RIGHT OF TRAFFIC. SPACE DELINEATORS A MAXIMUM OF 25 FEET APART, PROVIDE TOP MOUNTED DELINEATORS IN ADDITION TO SIDE MOUNTED DELINEATORS ON BARRIER INSTALLATIONS LOCATED ON A CURVED ALIGNMENT LONGER THAT 200 FEET AND ON BARRIERS USED TO SEPARATE OPPOSING TRAFFIC.

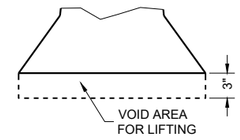


ANCHOR BLOCK DETAIL

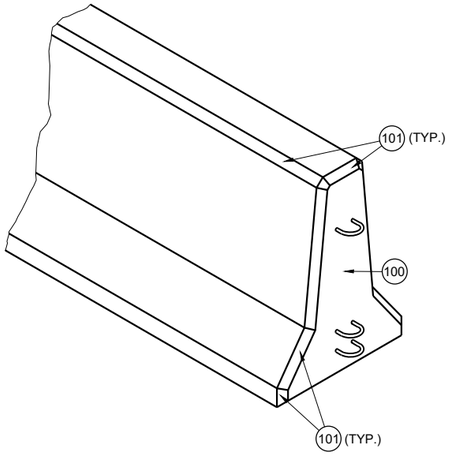


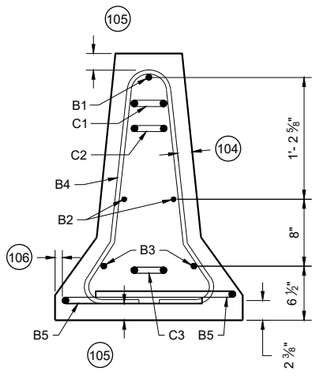
PLAN VIEW

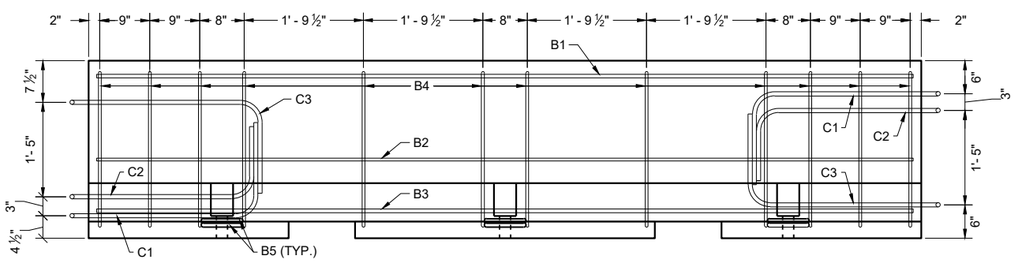
TEMPORARY BARRIER



LIFTING SLOT DETAIL (TYP.)







PROFILE VIEW

TEMPORARY BARRIER REINFORCEMENT

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

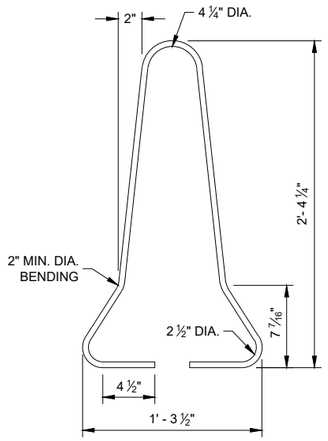
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

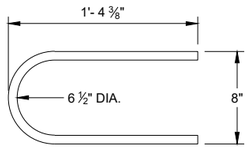
SDD 14B07-16a

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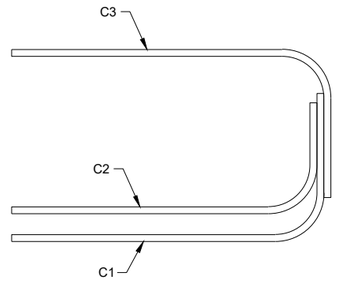
SDD 14B07-16a



B4 BAR DETAIL

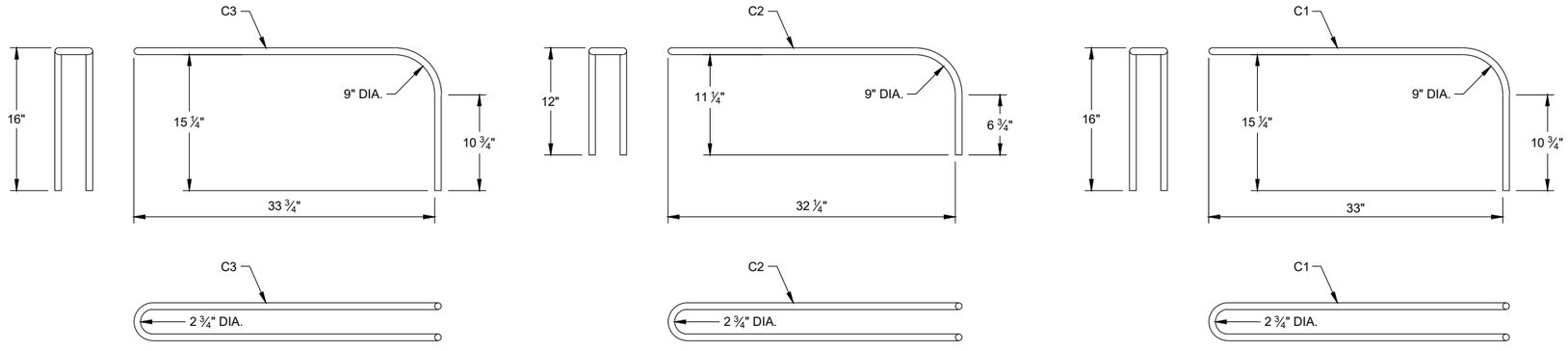


B5 BAR DETAIL



PROFILE VIEW

LOOP BAR ASSEMBLY



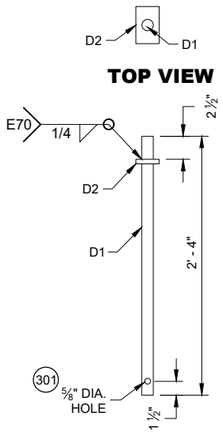
C BAR DETAILS

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

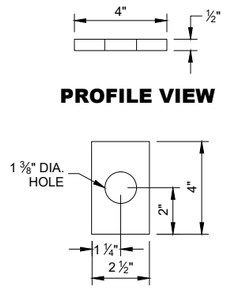
SDD 14B07-16b



TOP VIEW

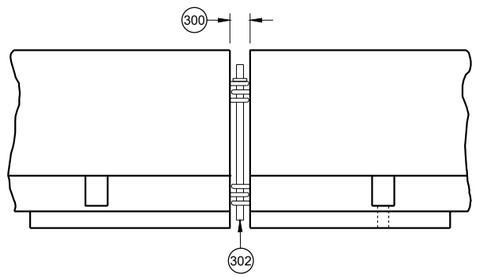
PROFILE VIEW

CONNECTOR PIN ASSEMBLY



PROFILE VIEW

TOP VIEW D2



CONNECTING TEMPORARY BARRIER SECTIONS

GENERAL NOTES

300 SET WITH 3 ⅝" WOOD BLOCK.

301 HOLE IS OPTIONAL.

302 CONNECTOR PIN ASSEMBLY.

303 CONCRETE PAVEMENT, APPROACH SLAB, OR DECK.

304 CONCRETE DECK.

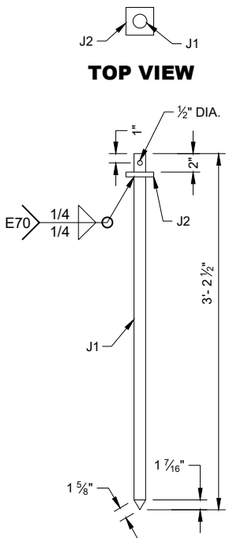
305 DO NOT USE ON CONCRETE BRIDGE DECK WITH ASPHALT OVERLAY OR CONCRETE PAVEMENT WITH ASPHALT OVERLAY.

306 MINIMUM OF 2" OF ASPHALT.

307 ASPHALT ANCHOR PIN ASSEMBLY

308 IF DRILLING A PILOT HOLE, THE MAX, DIA. OF THE HOLE IS 3/4"

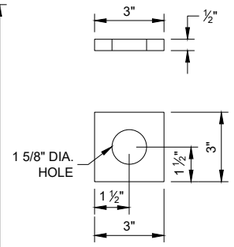
309 WHEN THERE IS ASPHALT OVERLAYING CONCRETE PAVEMENT, A 1 5/8" DIA. PILOT HOLE CAN BE DRILLED INTO THE OVERLAY AND CONCRETE. IF NEEDED DRILL A 3/4" PILOT HOLE IN BASE COURSE.



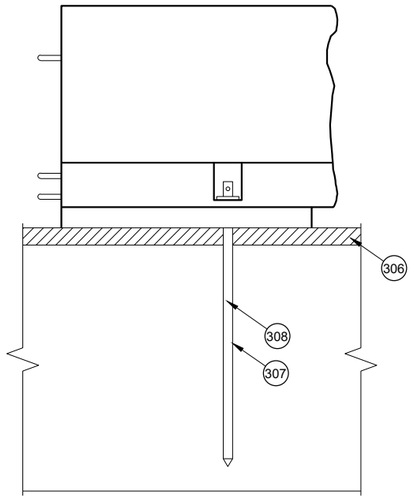
TOP VIEW

PROFILE VIEW

ASPHALT ANCHOR PIN ASSEMBLY

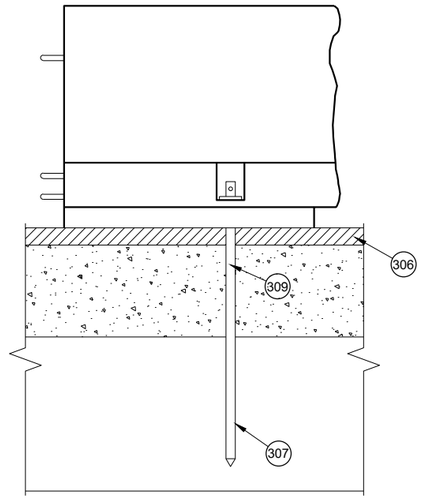


TOP VIEW J2



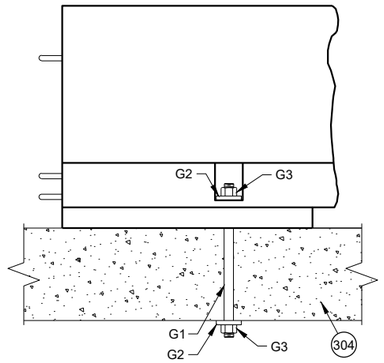
SIDE VIEW

ASPHALT ANCHOR INSTALLATION THROUGH ASPHALT PAVEMENT



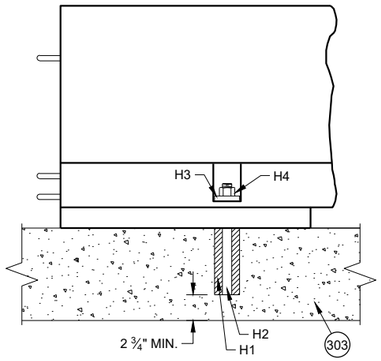
SIDE VIEW

ASPHALT ANCHOR INSTALLATION THROUGH ASPHALT OVERLAY ON TOP OF CONCRETE PAVEMENT



SIDE VIEW

THROUGH BOLT ANCHOR INSTALLATION (305)



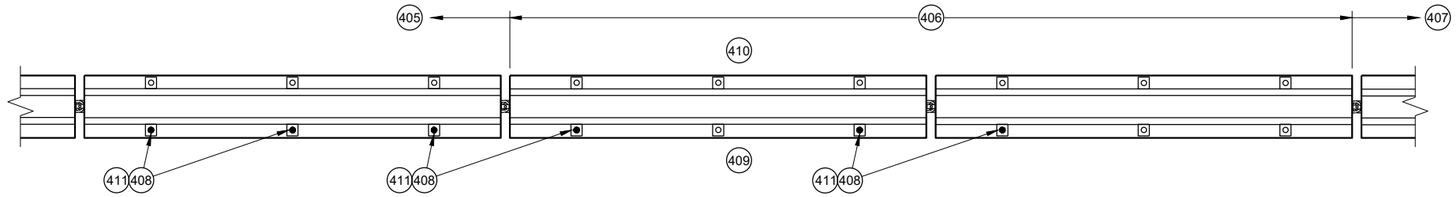
SIDE VIEW

ADHESIVE ANCHOR INSTALLATION (305)

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

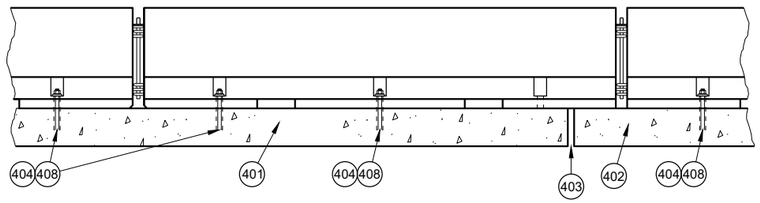
STATE OF WISCONSIN
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SDD 14B07-16c



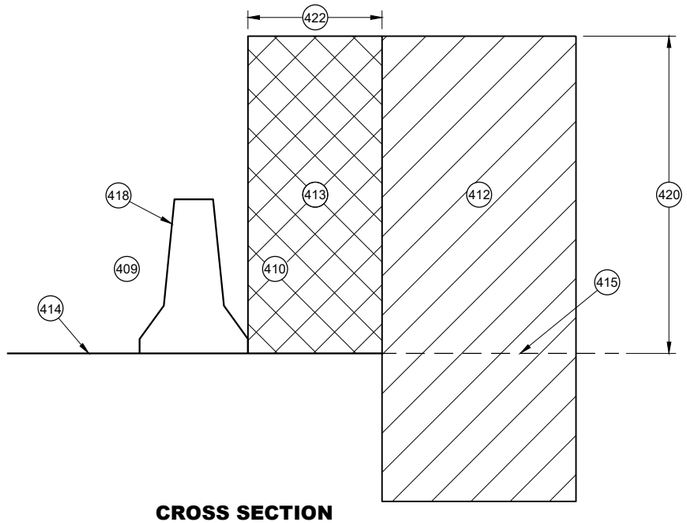
PLAN VIEW

TRANSITION FROM FREE STANDING TO ANCHORED BARRIER



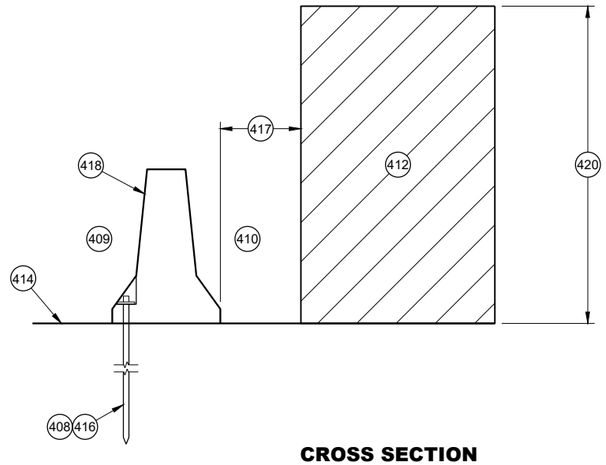
PROFILE VIEW

ANCHORED BARRIER NEAR EXPANSION JOINT (400)



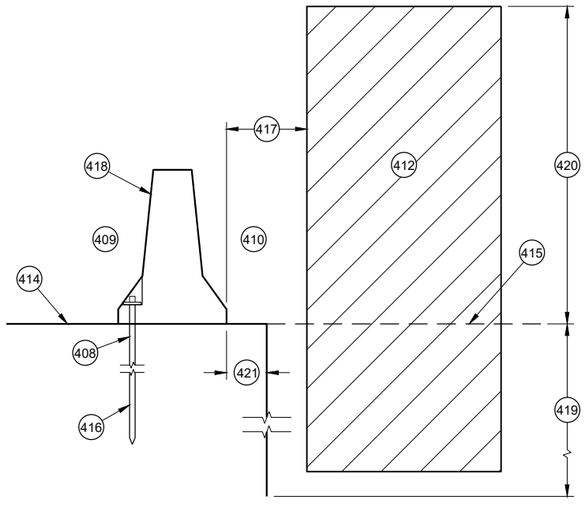
CROSS SECTION

FREE STANDING BARRIER



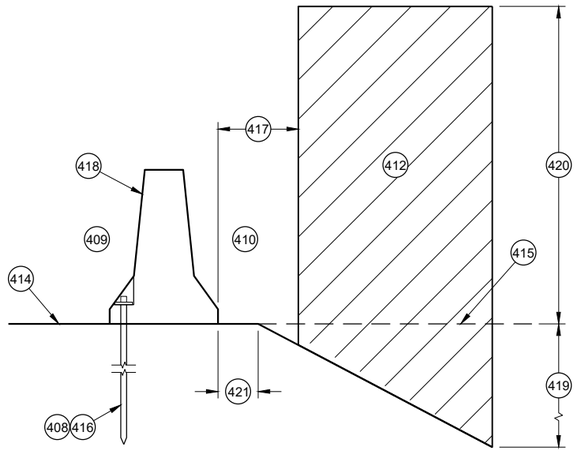
CROSS SECTION

ANCHORED BARRIER FOR OBJECTS ABOVE THE GRADE LINE AND NEAR THE BARRIER



CROSS SECTION

ANCHORED BARRIER NEAR VERTICAL DROP OFF



CROSS SECTION

ANCHORED BARRIER NEAR A SLOPE

GENERAL NOTES

(400) NO SINGLE CONCRETE BARRIER SECTION SHALL BE ANCHORED TO BOTH THE BRIDGE DECK AND THE APPROACH SLAB. ALL ANCHOR BOLT LOCATIONS SHALL BE ANCHORED TO THE DECK IN ACCORDANCE WITH THE DETAIL. NO MORE THAN ONE ANCHOR BOLT SHALL BE ELIMINATED FROM A BARRIER SECTION WHEN SPANNING AN EXPANSION JOINT.

(401) CONCRETE DECK

(402) CONCRETE DECK OR APPROACH SLAB.

(403) EXPANSION JOINT

(404) ADHESIVE ANCHOR SHOWN. SEE ANCHOR DETAILS.

(405) ANCHORED TEMPORARY BARRIER

(406) TRANSITION FROM ANCHORED TEMPORARY BARRIER TO FREE STANDING

(407) FREE STANDING BARRIER

(408) REMOVE ALL ANCHORS WHEN NO LONGER NEEDED. FILL CONCRETE PAVEMENTS, DECKS AND APPROACH SLABS WITH NON-SHRINK COMMERCIAL GROUT FROM THE APPROVED PRODUCT LIST. FILL ASPHALT PAVEMENTS WITH ASTM D6690 TYPE II RUBBERIZED CRACK FILLER.

(409) TRAFFIC SIDE

(410) NON-TRAFFIC SIDE

(411) ANCHOR LOCATION. SEE ANCHORING DETAILS.

(412) WORK AREA

(413) AREA FREE OF OBJECTS AND WORKERS

(414) GRADE LINE

(415) EXTENDED GRADE LINE

(416) ANCHORED TEMPORARY BARRIER. SEE BOLT THROUGH DECK, REMOVABLE ADHESIVE ANCHOR, OR AN ASPHALT ANCHOR ROD DETAILS FOR MORE INFORMATION. ASPHALT ANCHOR ROD SHOWN.

(417) WHEN OBJECTS EXTEND ABOVE THE GRADE. A MINIMUM OF 1 FOOT IS REQUIRED FROM BACK OF BARRIER TO OBJECT.

(418) OBJECTS ARE NOT TO BE PLACED ON, MOUNTED TO, OR ALLOWED TO LEAN AGAINST THE BARRIER WITHOUT WRITTEN PERMISSION OF THE PROJECT ENGINEER.

(419) DEPTHS OF 3 FEET OR MORE.

(420) Y = 6.5'

(421) OFFSET FROM BACK OF BARRIER EDGE:

CONCRETE PAVEMENT	0.5'
ASPHALT	0.5'

(422) POSTED SPEED (MPH):

45 OR GREATER	4.0'
40 OR LOWER	2.0'

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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GENERAL NOTES

(500) EXISTING RIGID BARRIERS (VARIES)

(501) TEMPORARY BARRIER

(502) SEE OTHER DETAIL ON HOW TO ANCHOR TEMPORARY BARRIER (BARRIER ASPHALT ANCHOR SHOWN).

(503) ANCHORS ARE REQUIRED ON BOTH SIDE OF THE TEMPORARY BARRIER.

(504) NESTED RAILS ARE REQUIRED ON BOTH SIDES OF THE TEMPORARY BARRIER FOR ALL INSTALLATIONS.

(505) TRAFFIC TRAVELS FROM PERMANENT BARRIER TO TEMPORARY BARRIER.

(506) TRAFFIC TRAVELS FROM TEMPORARY BARRIER TO PERMANENT BARRIER.

(507) VERTICAL BARRIER

(508) SAFETY SHAPE BARRIER

(509) SINGLE SLOPE BARRIER

(510) CAP END PLATE PLACED FLUSH WITH UPSTREAM END OF RIGID BARRIER.

(511) BENT THRIE BEAM TO FIT.

(512) THRIE BEAM PIECES ARE OFFSET 15 ¼" TO PREVENT INTERFERENCE FROM THE ANCHORS ON OPPOSING SIDES.

(513) TWO (2) P1, P2 AND P3 ARE REQUIRED

(514) FIVE (5) N1, N2 AND N3 ARE REQUIRED

(515) TWO (2) R1, R2 AND R3 ARE REQUIRED

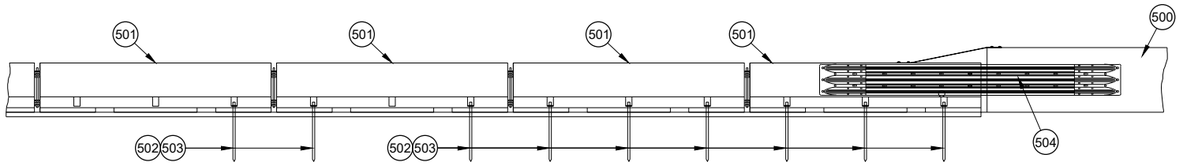
(516) CUT WOOD BLOCK TO FIT.

(517) SEE THRIE BEAM RAIL TERMINAL CONNECTOR DETAIL ASSEMBLY.

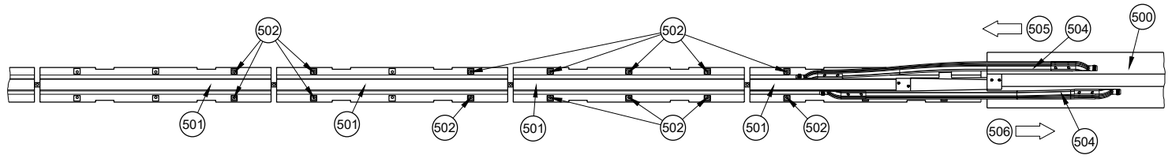
(518) CAP ASSEMBLY

(519) 4" MAX. GAP BETWEEN TEMPORARY BARRIER AND RIGID BARRIER.

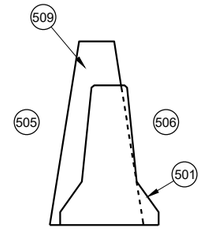
(520) ALL TWELVE SPLICE HOLES REQUIRE M1 AND M2



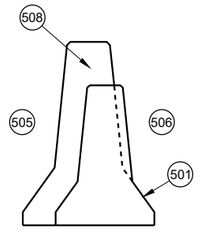
PROFILE VIEW



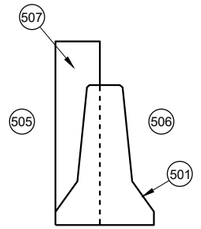
PLAN VIEW



CROSS SECTION TEMPORARY BARRIER PLACEMENT SINGLE SLOPE

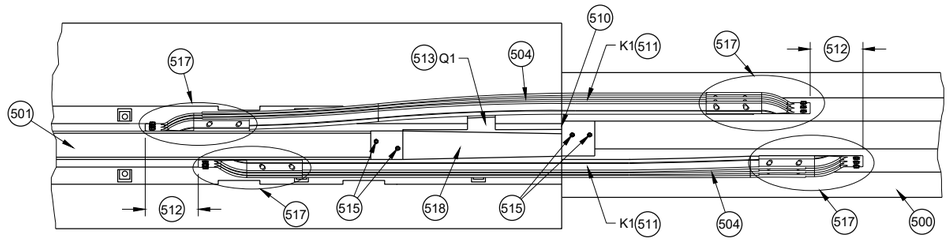


CROSS SECTION TEMPORARY BARRIER PLACEMENT SAFETY SHAPE

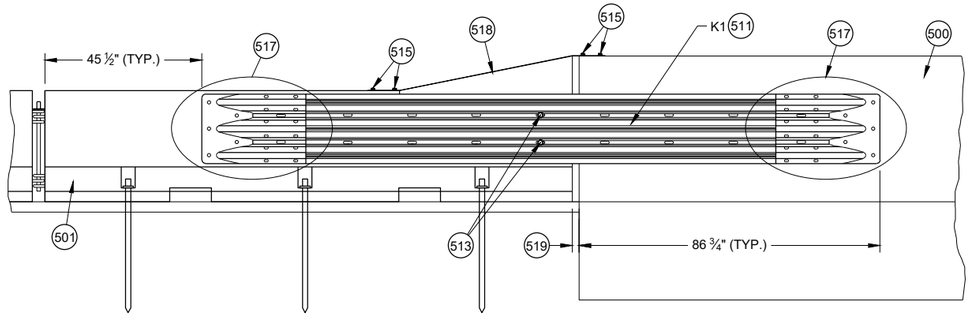


CROSS SECTION TEMPORARY BARRIER PLACEMENT VERTICAL

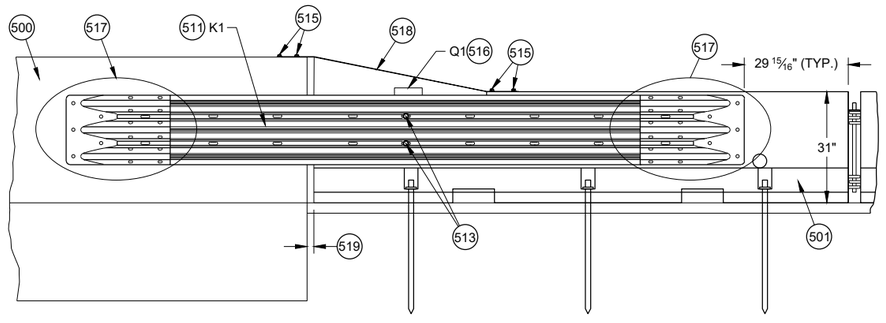
PLAN VIEW TRANSITION TO RIGID BARRIER



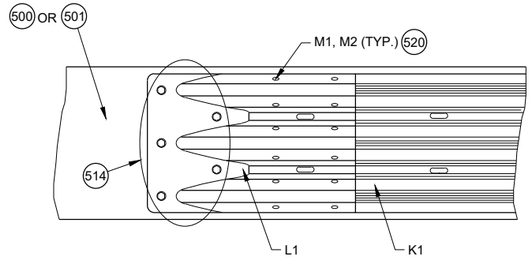
PLAN DETAIL VIEW TRANSITION TO RIGID BARRIER



FRONT DETAIL VIEW TRANSITION TO RIGID BARRIER



BACK DETAIL VIEW TRANSITION TO RIGID BARRIER

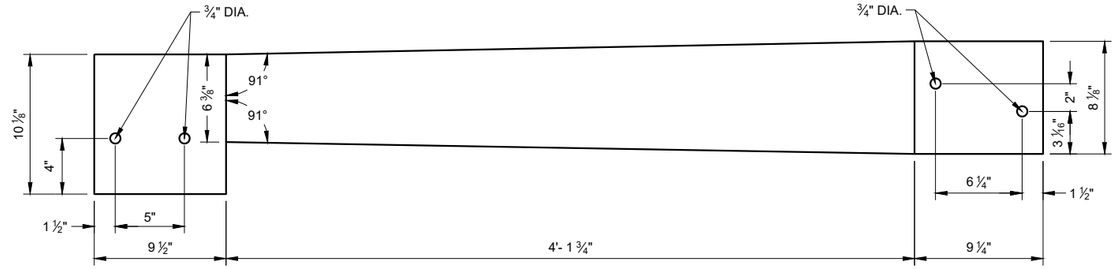


517 DETAIL PLAN VIEW THRIE BEAM RAIL TERMINAL CONNECTOR ASSEMBLY

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

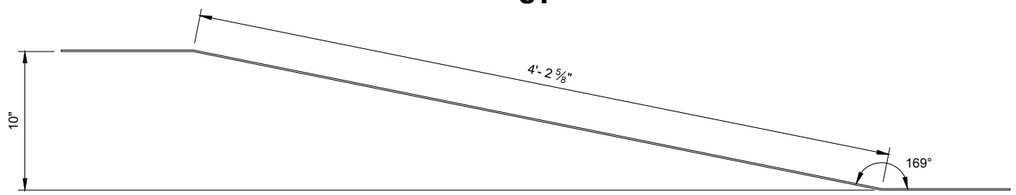
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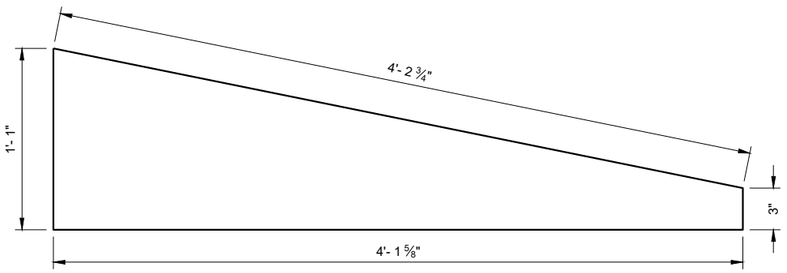
TOP VIEW

S1



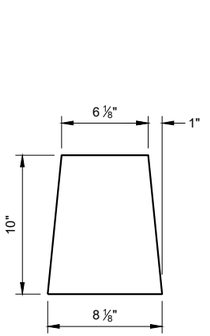
ELEVATION VIEW

S1

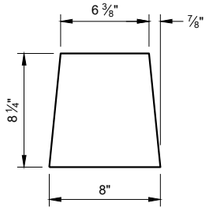


SIDE VIEW

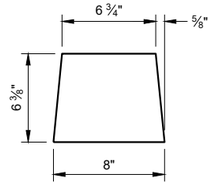
S3



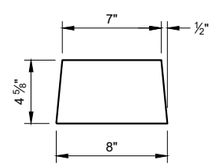
S2



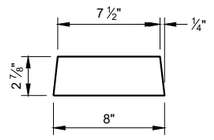
S4



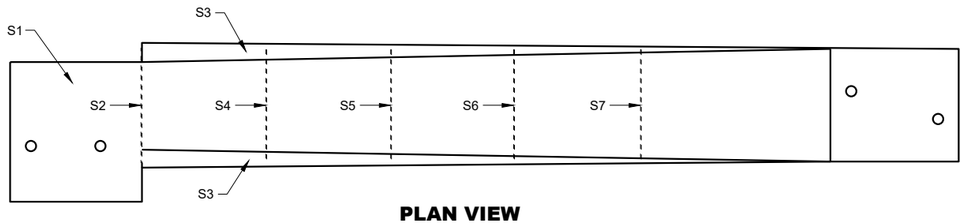
S5



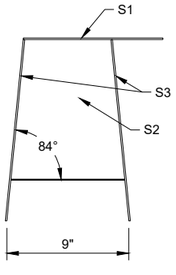
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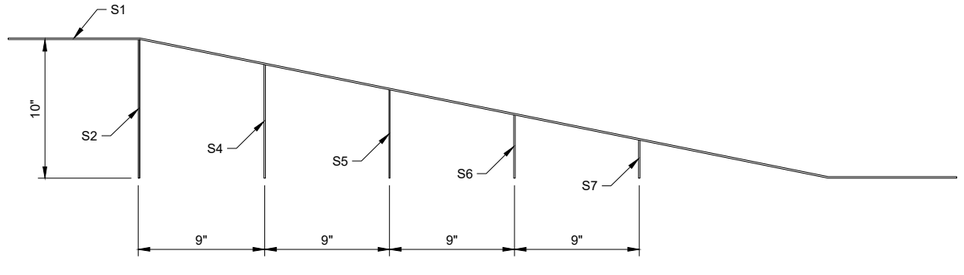
S7



PLAN VIEW



BACK VIEW



SIDE VIEW (600)

42" TOP CAP ASSEMBLY

GENERAL NOTES

STITCH WELD GUSSET PLATES AND END PLATES ON THREE SIDES

STITCH WELD TWO SIDE PLATES TO TOP PLATE, END PLATE AND GUSSETS.

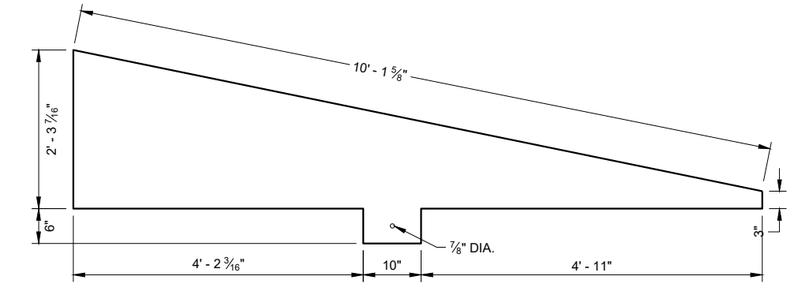
(600) SIDE PLATES (S3) NOT SHOWN FOR CLARITY.

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTA

6

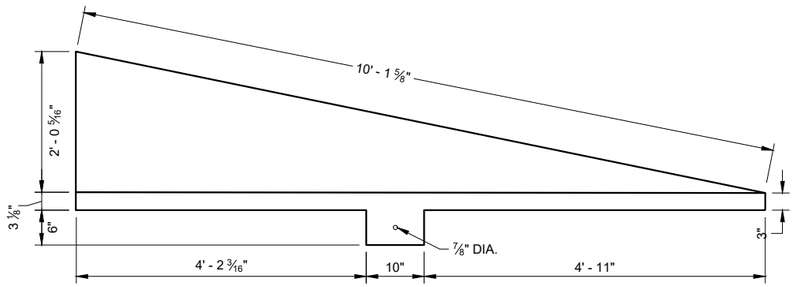
SDD 14B07-16f



SIDE VIEW
T4



END VIEW



SIDE VIEW
T3

END VIEW

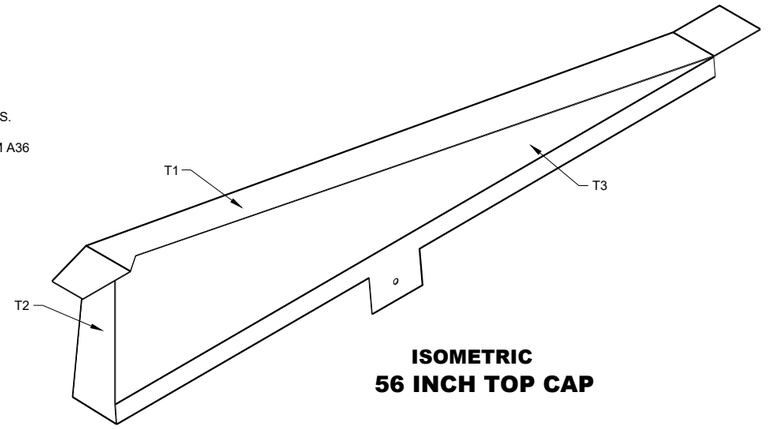
GENERAL NOTES

STITCH WELD GUSSET PLATES AND END PLATES ON THRIE SIDES

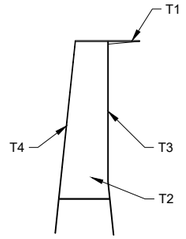
STITCH WELD TWO SIDE PLATES TO TOP PLATE, END PLATE AND GUSSETS.

SIDE PLATES, TOP PLATE, END PLATE AND GUSSETS ARE 12 GAUGE ASTM A36 GALVANIZED STEEL.

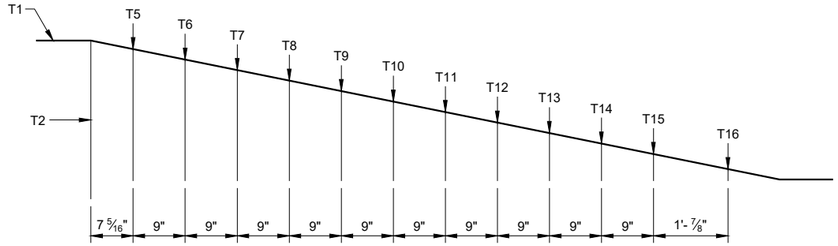
(700) SIDE PLATES (T3 AND T4) NOT SHOWN FOR CLARITY.



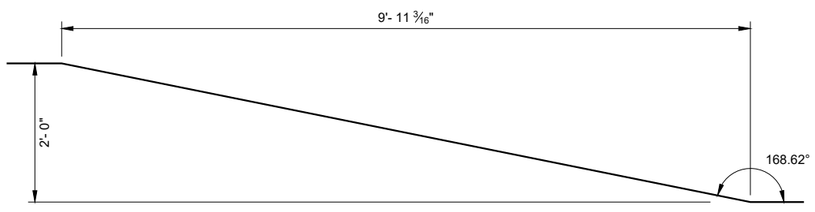
ISOMETRIC
56 INCH TOP CAP



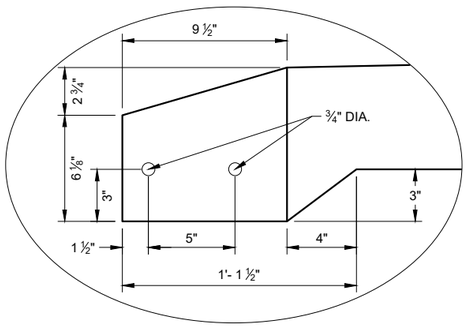
END VIEW
56 INCH TOP CAP



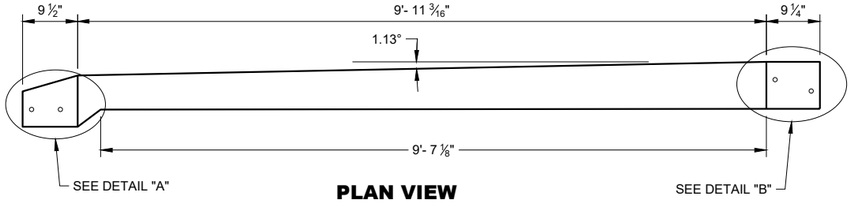
SIDE VIEW (700)
56 INCH TOP CAP



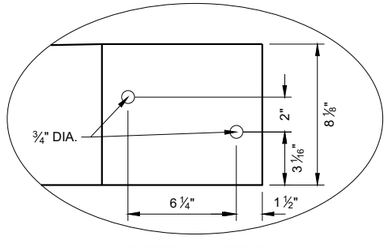
SIDE VIEW
TOP PLATE T1



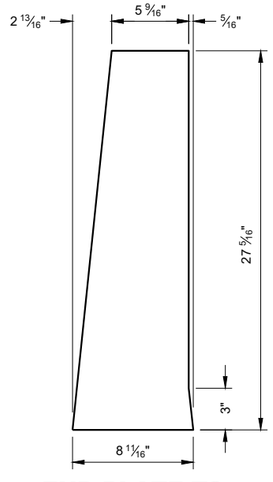
DETAIL "A"



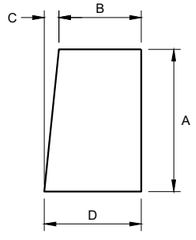
PLAN VIEW
TOP PLATE T1



DETAIL "B"



END PLATE T2



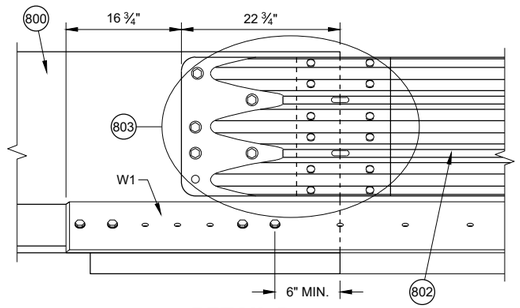
GUSSET PLATES
T5 - T16

GUSSET DIMENSIONS				
GUSSET NO.	A	B	C	D
T5	22 13/16"	5 1/16"	2 5/16"	8 1/16"
T6	21"	5 7/8"	2 3/16"	8 1/16"
T7	19 3/16"	6 1/16"	1 15/16"	8 1/16"
T8	17 3/8"	6 1/4"	1 13/16"	8 1/16"
T9	15 5/16"	6 7/16"	1 9/16"	8 1/16"
T10	13 3/4"	6 5/8"	1 7/16"	8 1/16"
T11	11 15/16"	6 13/16"	1 1/4"	8 1/16"
T12	10 1/8"	7"	1 1/16"	8 1/16"
T13	8 5/16"	7 3/16"	7/8"	8 1/16"
T14	6 1/2"	7 3/8"	1 1/16"	8 1/16"
T15	4 1/16"	7 9/16"	1/2"	8"
T16	2 7/8"	7 3/4"	1/4"	8"

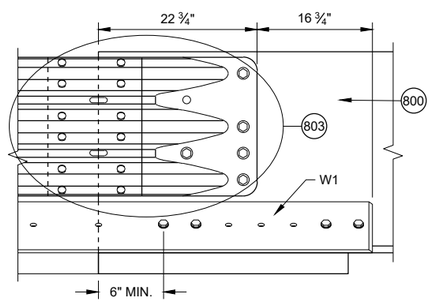
CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

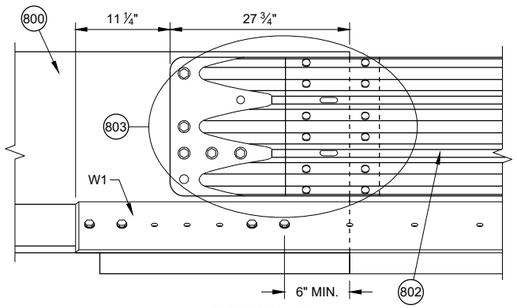
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SDD 14B07-16g



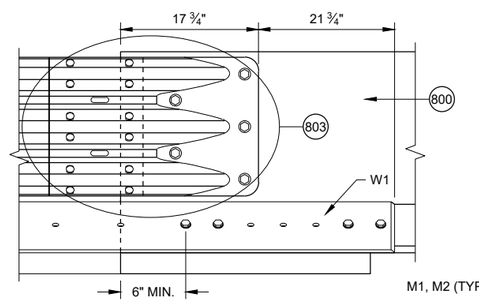
DETAIL D



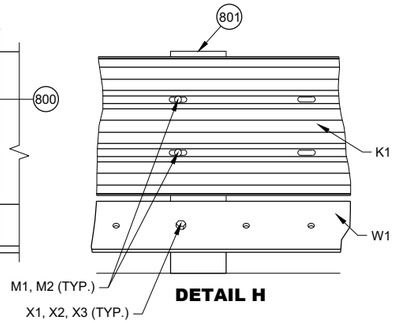
DETAIL E



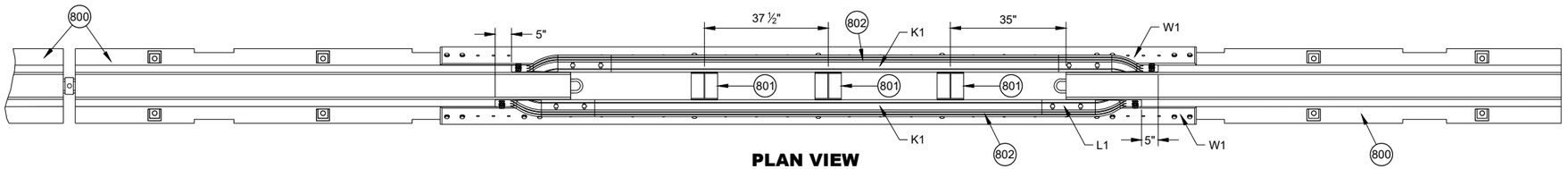
DETAIL F



DETAIL G



DETAIL H



PLAN VIEW

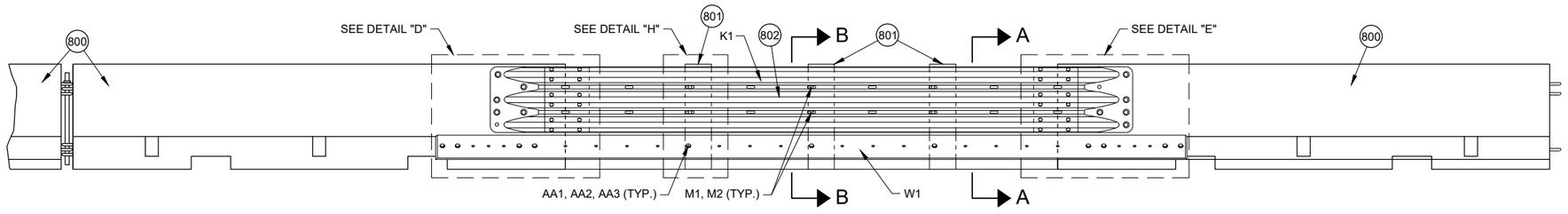
GENERAL NOTES

(800) FREE STANDING TEMPORARY BARRIER

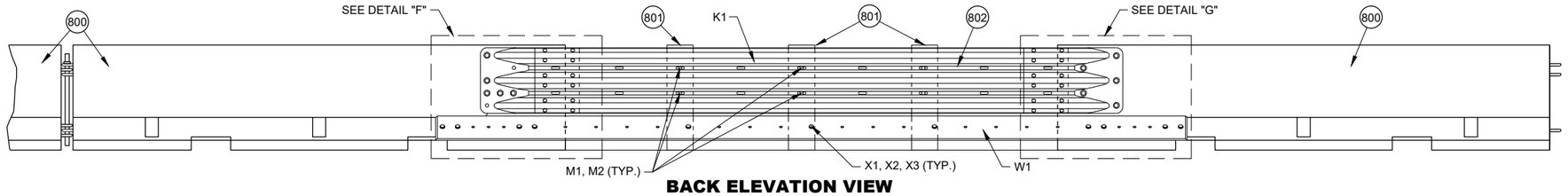
(801) GAP STIFFENER ASSEMBLY

(802) THRIE BEAMS ARE NESTED ON BOTH SIDES OF THE TEMPORARY BARRIER.

(803) SEE THRIE BEAM RAIL TERMINAL CONNECTOR DETAIL



FRONT ELEVATION VIEW



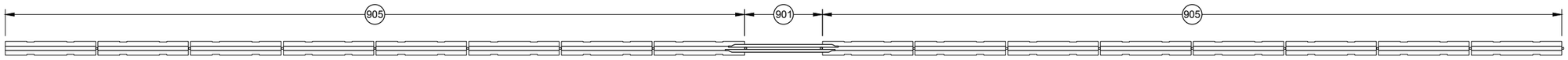
BACK ELEVATION VIEW

PORTABLE CONCRETE BARRIER GAP THRIE BEAM COVER

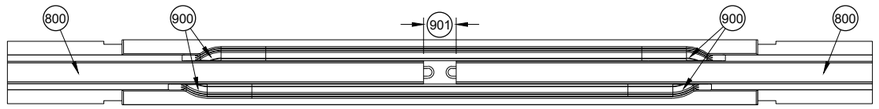
CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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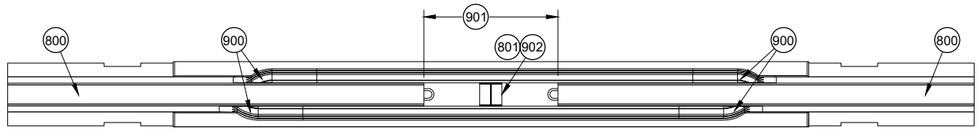
PLAN VIEW
GAP WITHIN SPACING



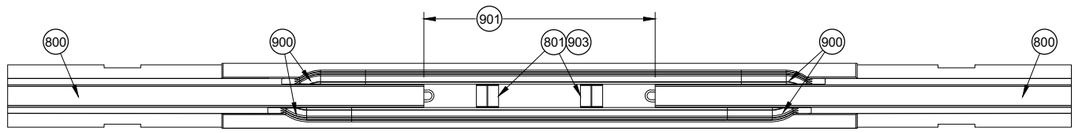
PLAN VIEW
TEMPORARY BARRIER GAP OVER 4" TO 1' MAX. (904)

GENERAL NOTES

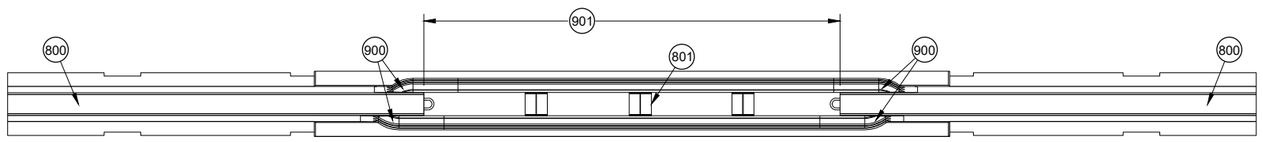
(900) SEE OTHER DETAILS FOR TEMPORARY GAP HARDWARE (TYP.)
(901) TEMPORARY BARRIER GAP
(902) GAP STIFFENER ASSEMBLY CENTERED IN THE GAP.
(903) GAP STIFFENER ASSEMBLY IS OFFSET 18 ¾" FROM CENTER
(904) MINIMUM NUMBER OF GAP STIFFENERS SHOWN FOR THE GAP RANGE SHOWN.
(905) MINIMUM OF 8 CONTINUOUS FREE STANDING TEMPORARY BARRIERS



PLAN VIEW
TEMPORARY BARRIER GAP OVER 1' TO 4' MAX. (904)



PLAN VIEW
TEMPORARY BARRIER GAP OVER 4' TO 7' MAX. (904)

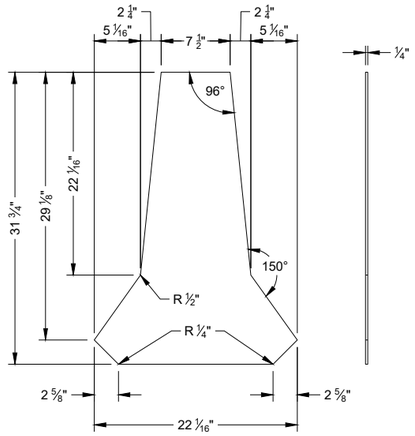


PLAN VIEW
TEMPORARY BARRIER GAP OVER 7' TO 12.5' MAX. (904)

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

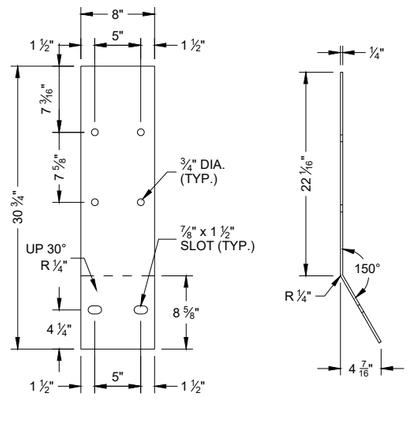
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
SDD 14B07-16i



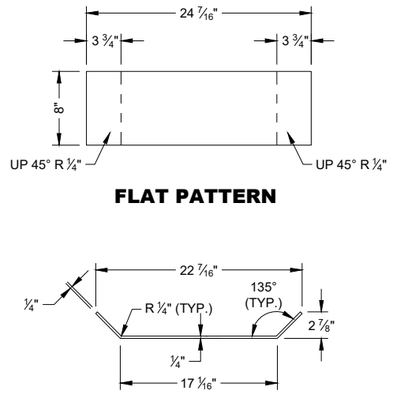
PROFILE VIEW SIDE VIEW

STIFFENER ASSEMBLY CENTER PANEL U1



FLAT PATTERN SIDE VIEW

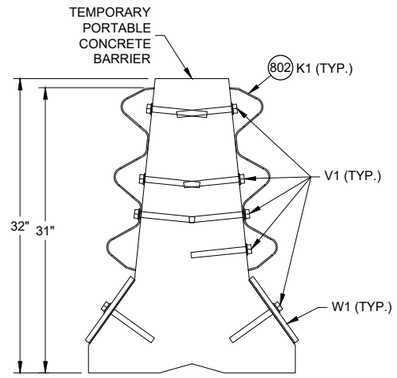
STIFFENER ASSEMBLY SIDE PANEL U2



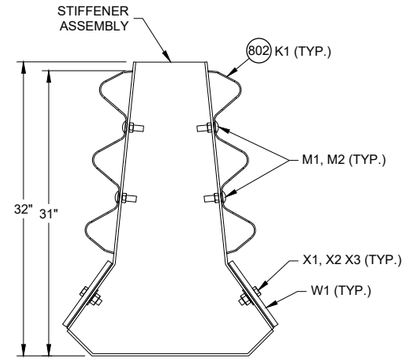
FLAT PATTERN

PROFILE VIEW

STIFFENER ASSEMBLY BOTTOM PANEL U3

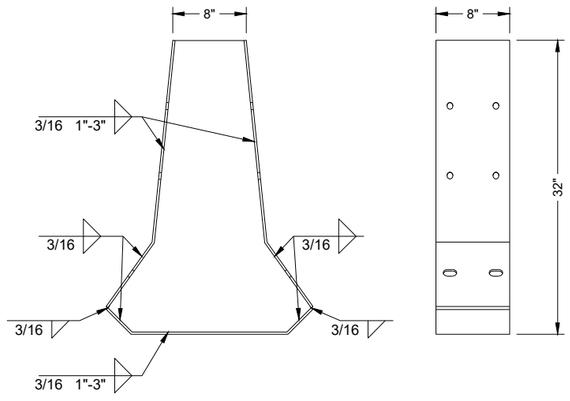


SECTION A - A



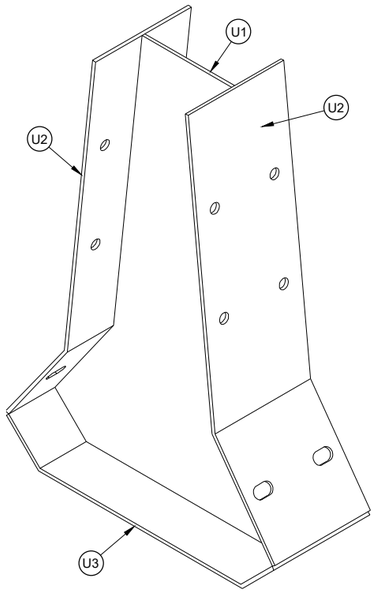
SECTION B - B

PLAN VIEW



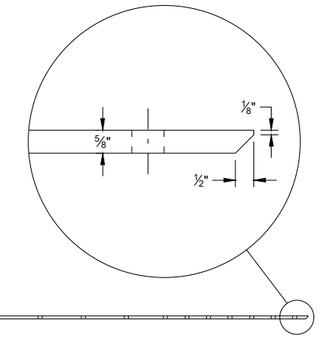
PROFILE VIEW

SIDE VIEW

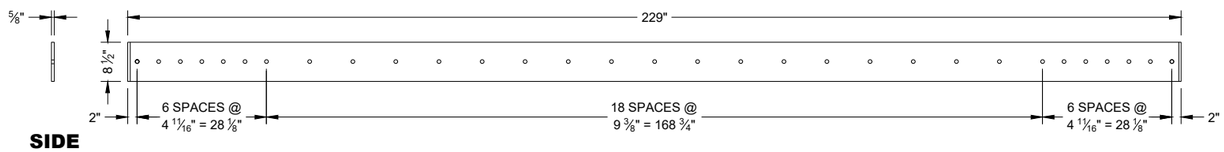


ISOMETRIC

GAP STIFFENER ASSEMBLY



PLAN VIEW



SIDE VIEW

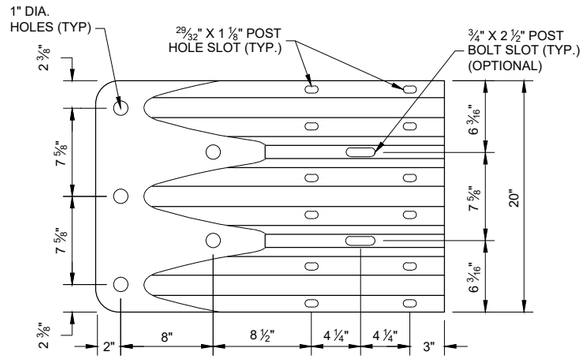
ELEVATION VIEW

W1 TOE PLATE

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

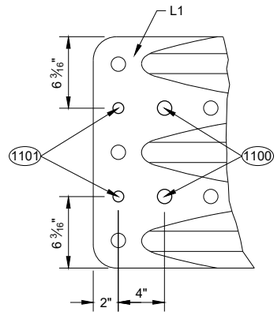
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ELEVATION VIEW

THRIE BEAM TERMINAL CONNECTOR



ELEVATION VIEW

ADDITIONAL THRIE BEAM (1102) TERMINAL CONNECTOR HOLE DETAIL

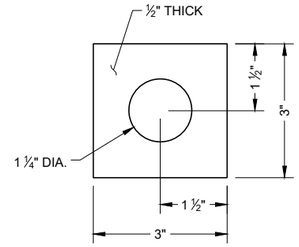


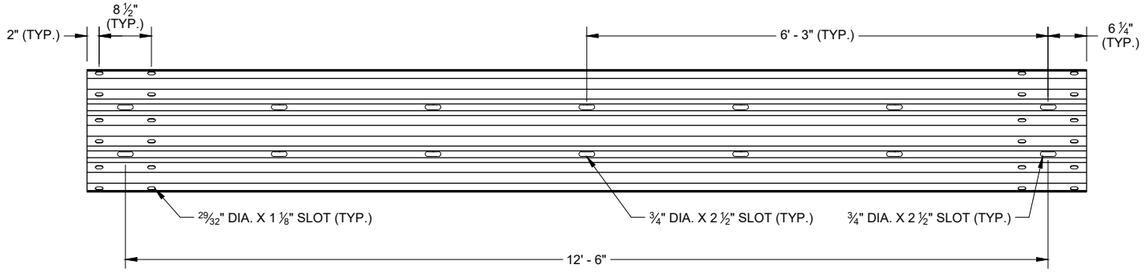
PLATE WASHER DETAIL G2, H3

GENERAL NOTES

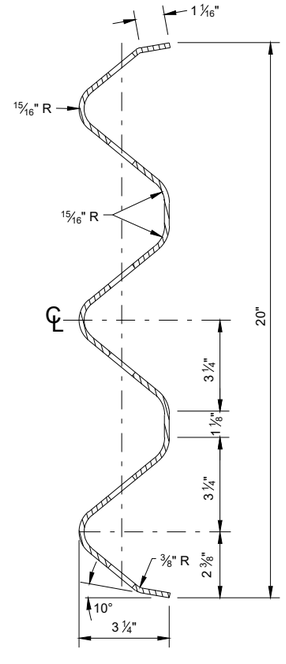
(1100) 1" DIA. HOLE

(1101) 3/4" DIA. HOLE

(1102) PROVIDE HOLES IN THRIE BEAM TERMINAL CONNECTOR TO LIMIT STEEL REINFORCEMENT OR LOOP BAR CONFLICT. CONTRACTOR MAY FIELD DRILL ADDITIONAL HOLE OR PROVIDE THRIE BEAM TERMINAL CONNECTOR WITH ADDITIONAL HOLES FROM SUPPLIER.



SLOTTED THRIE BEAM RAIL K1

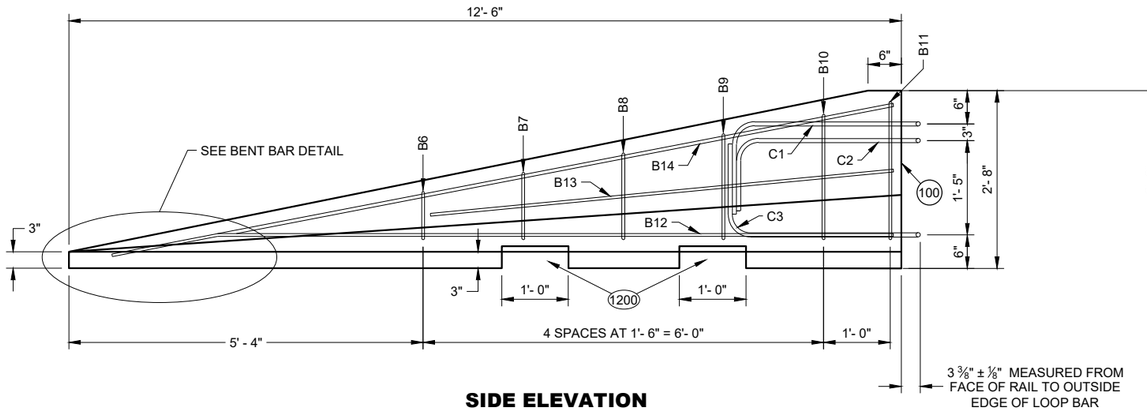


SECTION THROUGH BEAM K1

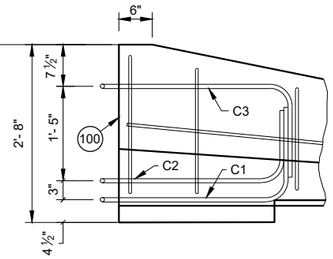
CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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SDD 14B07-16k



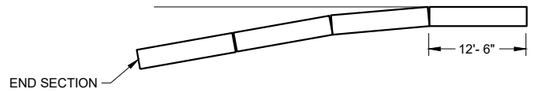
SIDE ELEVATION
(FOR CONNECTION TO LEFT END OF BARRIER)



SIDE ELEVATION
LOOP BAR ASSEMBLY INVERTED FOR OPPOSITE END
(FOR CONNECTION TO RIGHT END OF BARRIER)

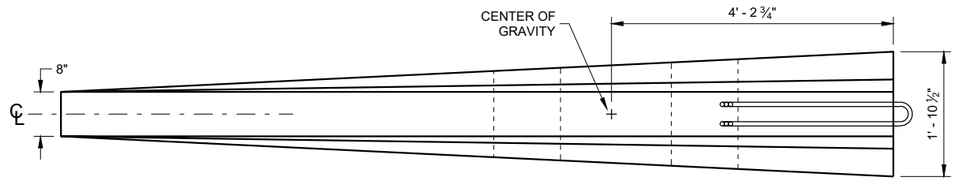
GENERAL NOTES

(1200) SEE LIFTING SLOT DETAIL. LOCATION OF LIFTING SLOTS DETERMINED BY CONTRACTOR.

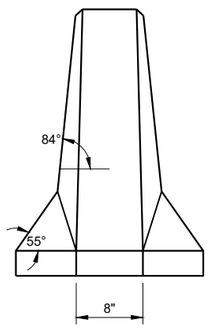


FLARE AT BARRIER END

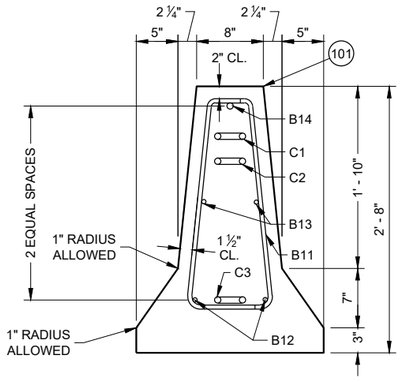
POSTED SPEED, (MPH)	FLARE RATE
40 OR LESS	6:1
45 OR GREATER	8:1



PLAN VIEW

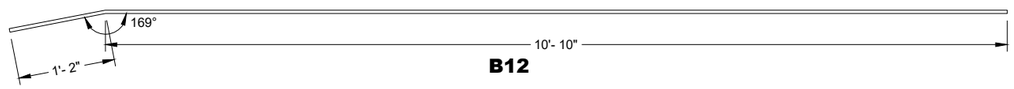


FRONT ELEVATION

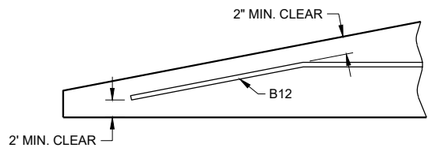


END SECTION

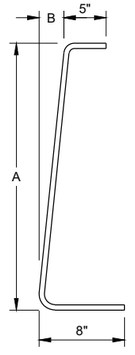
DETAILS OF BARRIER TAPER SECTION



B12



BENT BAR DETAIL



BAR	A	B
B6	10"	1"
B7	1'- 1"	1 ¼"
B8	1'- 5"	1 ⅝"
B9	1'- 8"	1 ⅞"
B10	2'- 0 ½"	2 ⅜"
B11	2'- 3"	2 ¾"

B BARS
2 OF EACH SIZE REQUIRED FOR STIRRUP ASSEMBLY

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

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SDD 14B07-16I

BILL OF MATERIALS - CONCRETE BARRIER PRECAST

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
A1	PRECAST TEMPORARY BARRIER - CONCRETE	MIN. = f'c 5000 PSI	
B1	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#5 REBAR, LENGTH 12'-2"
B2	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 12'-2"
B3	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#5 REBAR, LENGTH 12'-2"
B4	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 6'-0"
B5	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#6 REBAR, LENGTH 2'-11"
B6	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 1'-11"
B7	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 2'-2"
B8	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 2'-6"
B9	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 2'-9"
B10	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 3'-2"
B11	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 3'-4"
B12	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 12'-0"
B13	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 7'-9"
B14	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#5 REBAR, LENGTH 11'-9"
C1	LOOP BAR	ASTM A709 GRADE 70 SMOOTH BAR OR ASTM A706 GRADE 60 REBAR UNCOATED	¾" DIA.
C2	LOOP BAR	ASTM A709 GRADE 70 SMOOTH BAR OR ASTM A706 GRADE 60 REBAR UNCOATED	¾" DIA.
C3	LOOP BAR	ASTM A709 GRADE 70 SMOOTH BAR OR ASTM A706 GRADE 60 REBAR UNCOATED	¾" DIA.
D1	CONNECTION PIN - ROD	ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI	1 ¼" DIA.
D2	CONNECTION PIN - TOP PLATE	ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI	
G1	BOLT THROUGH ANCHOR - THREADED ROD	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 A307 GRADE A OR SAE J429 GRADE 2 UNC	1 ⅛" DIA.
G2	BOLT THROUGH ANCHOR - WASHER, SQUARE	ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI	
G3	BOLT THROUGH ANCHOR - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	
H1	ADHESIVE ANCHOR - ADHESIVE	ICC-ES-AC308 5 ¼" EMBEDMENT WITH A MIN. BOND STRENGTH OF 1,650 PSI. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.	
H2	ADHESIVE ANCHOR - THREADED ROD	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 A307 GRADE A / SAE J429 GRADE 2 UNC	1 ⅛" DIA.
H3	ADHESIVE ANCHOR - WASHER, SQUARE	ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI	
H4	ADHESIVE ANCHOR - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	
J1	ASPHALT ANCHOR PIN - ROD	ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI	1 ½" DIA.
J2	ASPHALT ANCHOR PIN - STOP PLATE	ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI	
K1	THRIE BEAM RAIL	AASHTO M180 CLASS A TYPE 2 APPROVED PRODUCER	12 GAUGE
L1	THRIE BEAM RAIL - TERMINAL	AASHTO M180 CLASS A TYPE 2 APPROVED PRODUCER	12 GAUGE

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
M1	SPLICE BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 UNC AASHTO M180 HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36	⅝" DIA.
M2	SPLICE BOLT - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 AASHTO M180 RECESSED HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	
N1	THRIE BEAM RAIL TERMINAL - MECHANICAL ANCHOR	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 AASHTO M180 RECESSED HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	¾" DIA. LENGTH 6"
N2	THRIE BEAM RAIL TERMINAL - WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 F436 TYPE 1	
N3	THRIE BEAM RAIL TERMINAL MECHANICAL OR ADHESIVE ANCHOR	MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 17.9 KIPS AND ULTIMATE SHEAR LOAD 21.96 KIPS. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.	
P1	THRIE BEAM RAIL CONNECTION 1-BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 AASHTO M180 RECESSED HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	¾" DIA.
P2	THRIE BEAM RAIL CONNECTION 1-WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 F436 TYPE 1	
P3	THRIE BEAM RAIL CONNETION 1- MECHANICAL OR ADHESIVE ANCHOR	MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 9.48 KIPS AND ULTIMATE SHEAR LOAD 10.48 KIPS. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.	
Q1	BLOCK WOOD	SEE STANDARD SPEC. 614	
R1	CAP - BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 AASHTO M180 RECESSED HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	⅝" DIA.
R2	CAP- BOLT - WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 F436 TYPE 1	
R3	CAP - BOLT - MECHANICAL ANCHOR	MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS ULTIMATE TENSILE LOAD 12.14 KIPS AND ULTIMATE SHEAR LOAD 17.5 KIPS.SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.	12 GAUGE
S1	CAP 42-INCH TOP PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
S2	CAP 42-INCH END PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
S3	CAP 42-INCH SIDE PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
S4	CAP 42-INCH GUSSET 1	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
S5	CAP 42-INCH GUSSET 2	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
S6	CAP 42-INCH GUSSET 3	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
S7	CAP 42-INCH GUSSET 4	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE

6

SDD 14B07-16m

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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SDD 14B07-16m

BILL OF MATERIALS - CONCRETE BARRIER PRECAST

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
T1	CAP 56-INCH TOP PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T2	CAP 56-INCH END PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T3	CAP 56-INCH SIDE PLATE 1	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T4	CAP 56-INCH SIDE PLATE 2	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T5	CAP 56-INCH GUSSET 1	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T6	CAP 56-INCH GUSSET 2	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T7	CAP 56-INCH GUSSET 3	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T8	CAP 42-INCH GUSSET 4	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T9	CAP 42-INCH GUSSET 5	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T10	CAP 42-INCH GUSSET 6	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T11	CAP 42-INCH GUSSET 7	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T12	CAP 42-INCH GUSSET 8	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T13	CAP 42-INCH GUSSET 9	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T14	CAP 42-INCH GUSSET 10	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T15	CAP 42-INCH GUSSET 11	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T16	CAP 42-INCH GUSSET 12	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
U1	GAP STIFFENER	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	
U2	GAP STIFFENER - CONNECTOR PLATE 1	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	
U3	GAP STIFFENER - CONNECTOR PLATE 2	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
V1	THRIE BEAM RAIL TERMINAL MECHANICAL OR ADHESIVE ANCHOR	MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS ULTIMATE TENSILE LOAD 24.0 KIPS AND ULTIMATE SHEAR LOAD 21.5 KIPS. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.	¾" DIA.
V2	GAP STIFFENER - BOLT - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C O R MECHANICAL GALVANIZE TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291/ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	
W1	TOE PLATE	AASHTO M111/ASTM A123 ASTM A36 MIN STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	
X1	TOE PLATE - CONNECTION BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 UNC HEAVY HEX HEAD OR AASTHO M180 HEAD, ASTM F3125 GRADE A325 TYPE 1 HEAVY HEX HEAD OR SAE J429 GRADE 5 HEAVY HEX HEAD / ASTM A449 TYPE 1 HEAVY HEX HEAD. BOLTS MAY BE FULLY THREADED. PROVIDE ENOUGH THREADING FOR PROPER TIGHTENING OF BOLT.	¾" DIA.
X2	TOE PLATE - CONNECTION BOLT - WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 F436 TYPE 1 (HARDEN WASHER ONLY)	
X3	TOE PLATE - CONNECTION BOLT - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	

6

SDD 14B07-16n

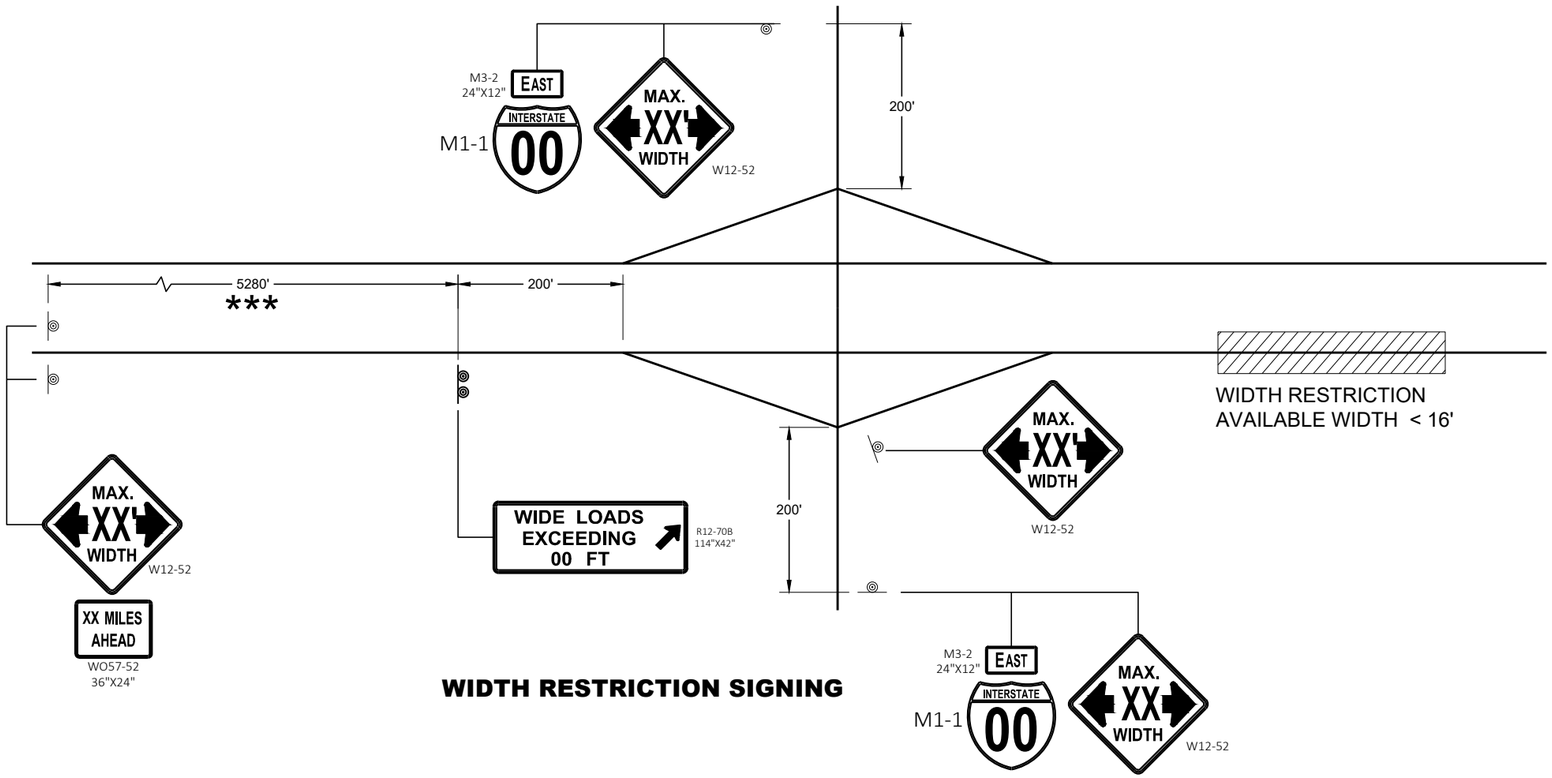
CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

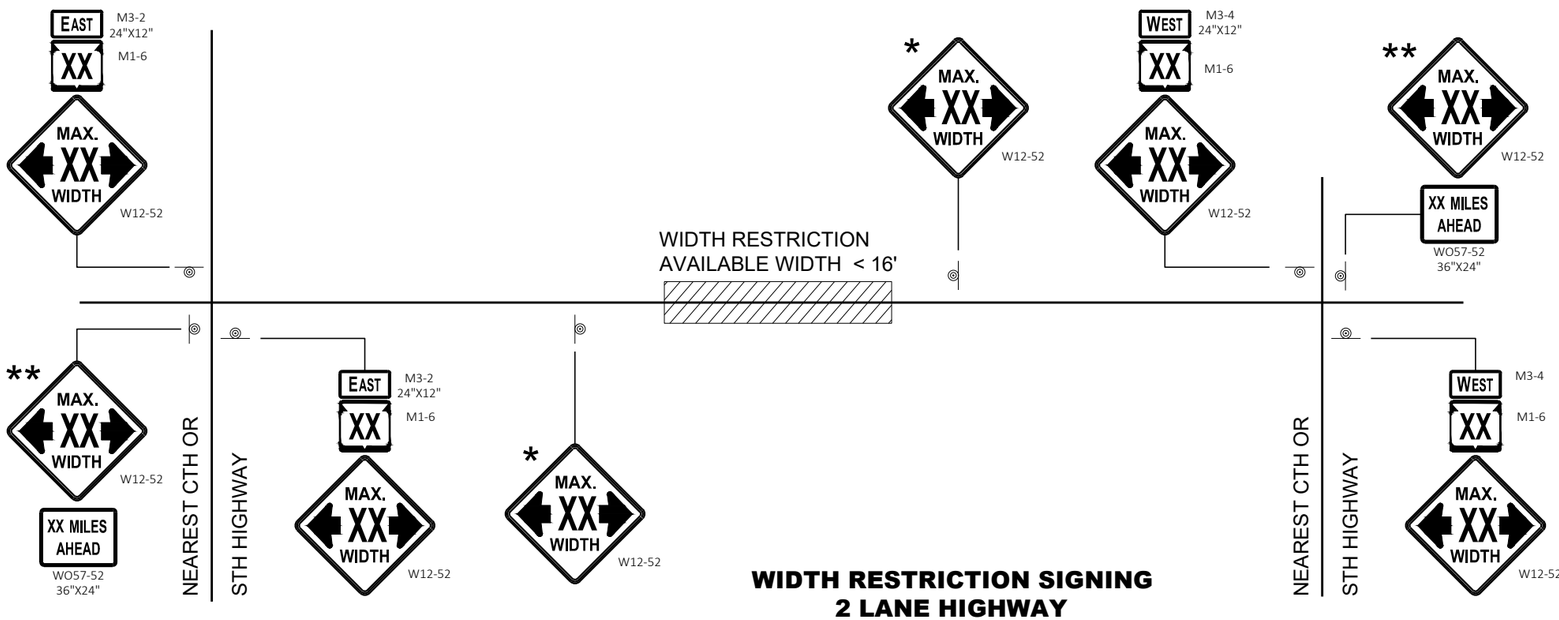
APPROVED
February 2023 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE ENGINEER
FHWA

6

SDD 14B07-16n



WIDTH RESTRICTION SIGNING



WIDTH RESTRICTION SIGNING
2 LANE HIGHWAY

LEGEND

◎ SIGN ON PERMANENT SUPPORT

GENERAL NOTES

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

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

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

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

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

WIDTH ON SIGN TO BE APPROXIMATELY ONE FOOT LESS THAN AVAILABLE WIDTH.

* PLACE 500 FEET AFTER THE W20 - 1A AND 500 FEET BEFORE ADDITIONAL SIGNS FOR ROADWAYS WITH A PRE - CONSTRUCTION SPEED LIMIT OF 45 MPH OR MORE. FOR 35-40 MPH, USE 350 FOOT TYPICAL SPACING. FOR 25-30 MPH, USE 200 FOOT TYPICAL SPACING.

** SIGN SHALL BE VISIBLE FROM ROADWAY.

*** ADDITIONAL SIGNS NEEDED IF THERE IS AN ON RAMP BETWEEN SIGNS.



WIDTH ON SIGN TO BE APPROX. 1 - FOOT LESS THAN AVAILABLE WIDTH

ADVANCED WIDTH RESTRICTION SIGNING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

6

SDD 15C02 - 09f

6

SDD 15C02 - 09f

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.

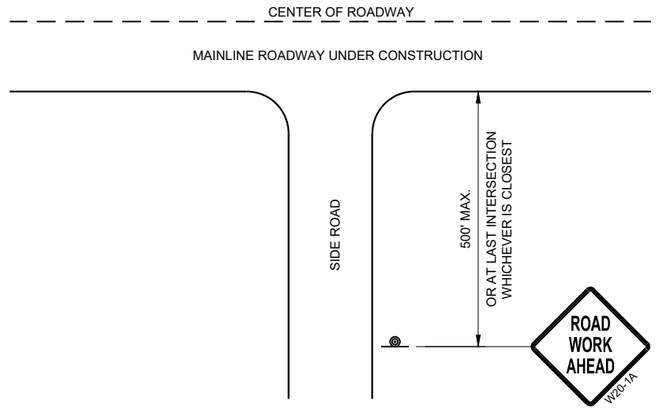
ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

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.



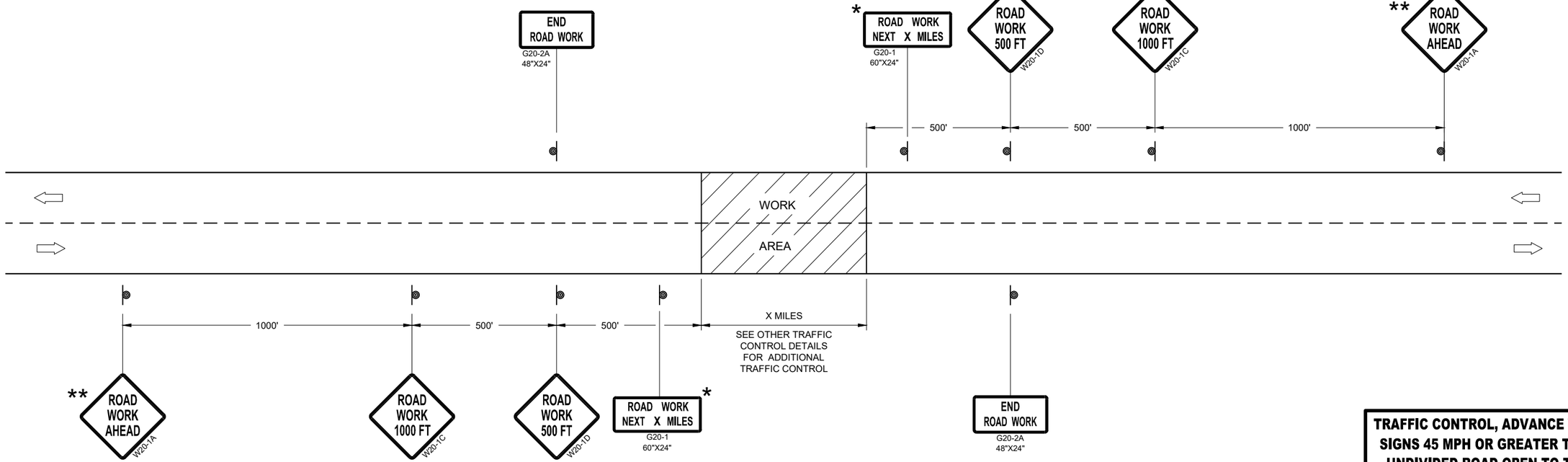
TYPICAL SIDE ROAD APPROACH WARNING SIGN DETAIL

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

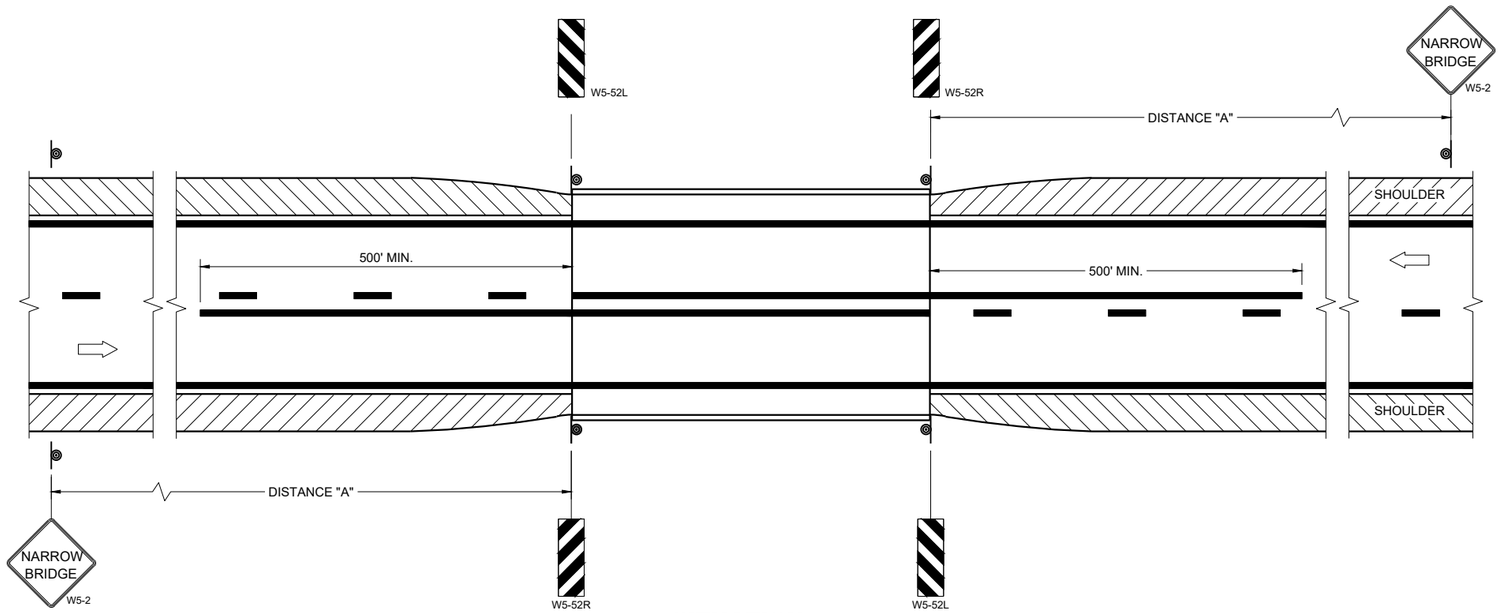
APPROVED
July 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

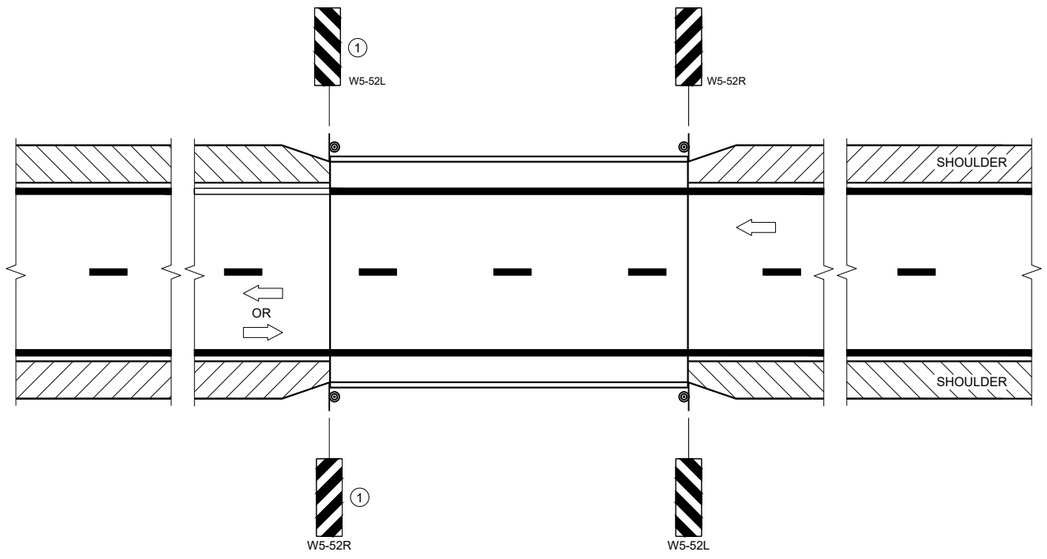
6

SDD 15C04 - 05



SITUATION 1

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



SITUATION 2

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

GENERAL NOTES

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

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

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

ON BRIDGE ONLY PROJECTS, PLACE 300 FEET OF EDGELINE.

OMIT EDGELINES ON ROADWAYS WITHOUT EXISTING EDGELINES.

(1) OMIT ON ONE-WAY TRAVELED WAYS.

LEGEND

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC

DISTANCE TABLE

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

SIGNING AND MARKING FOR TWO LANE BRIDGES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6
SDD 15C06-12

GENERAL NOTES

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.

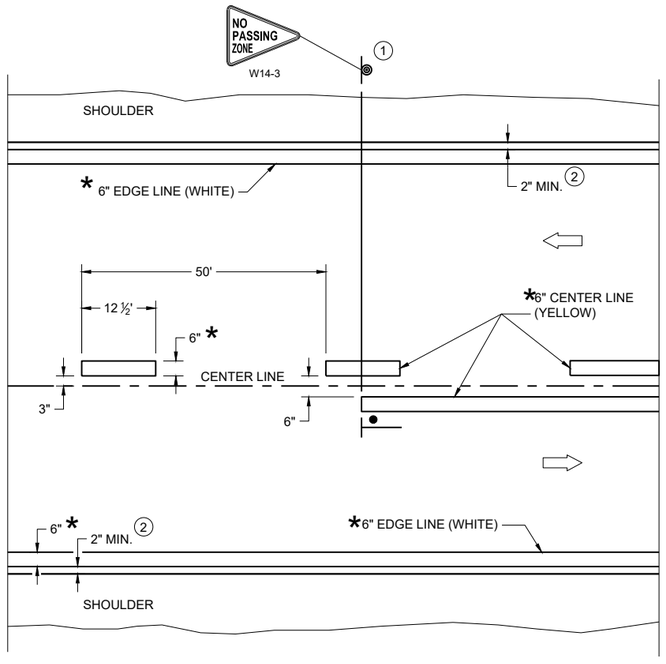
*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

LEGEND

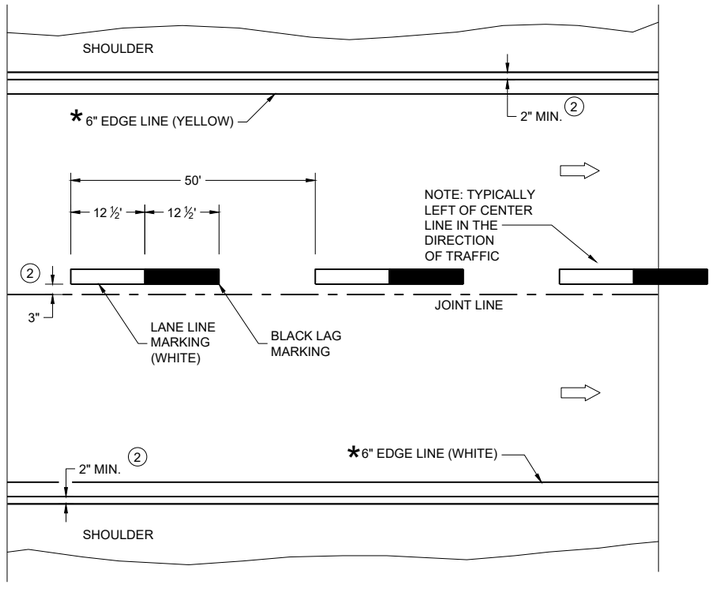
"T" MARKING

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

6

PERMANENT LONGITUDINAL PAVEMENT MARKINGS

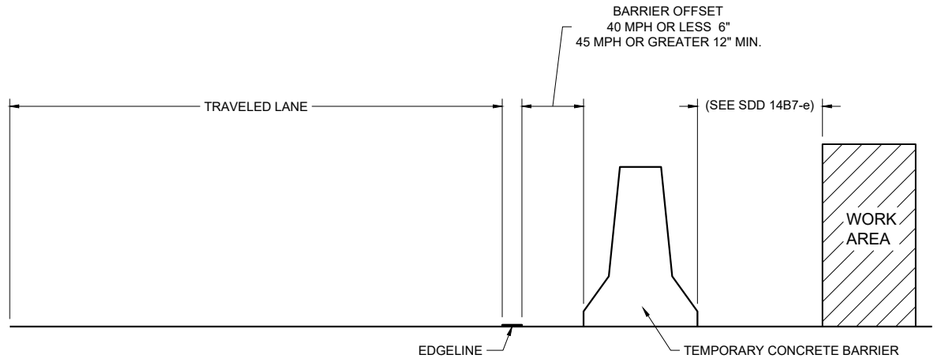
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

SDD 15C08-23a

SDD 15C08-23a



TEMPORARY BARRIER OFFSET FROM EDGELINE

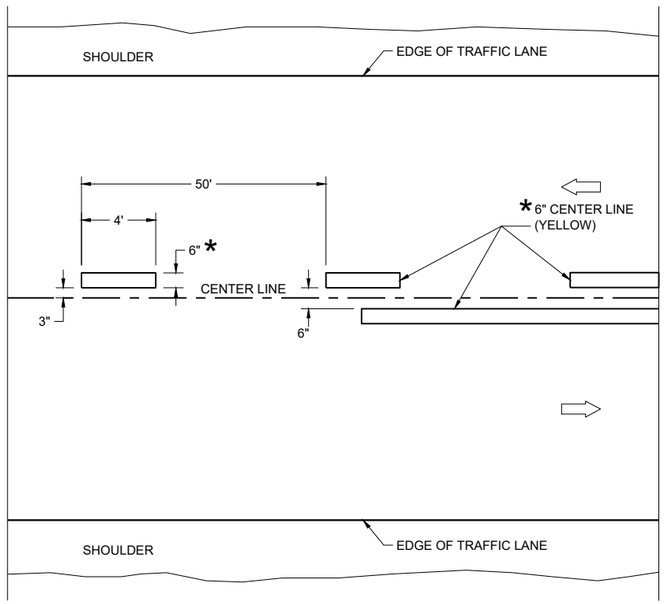
GENERAL NOTES

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

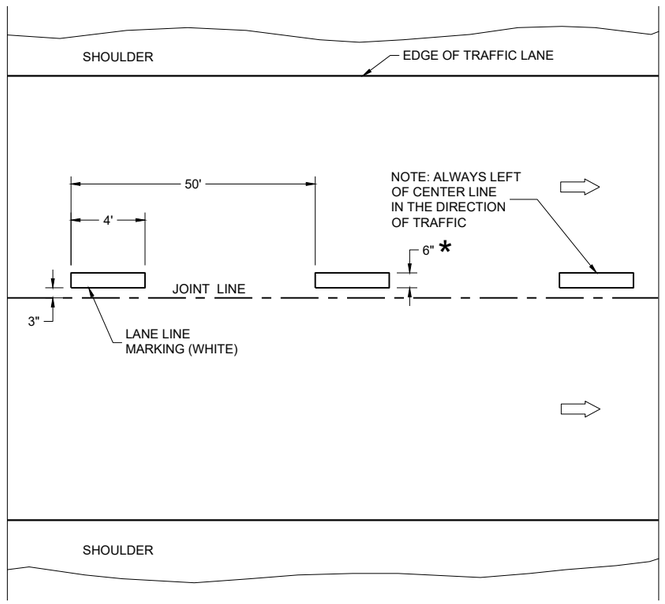
LEGEND

DIRECTION OF TRAFFIC

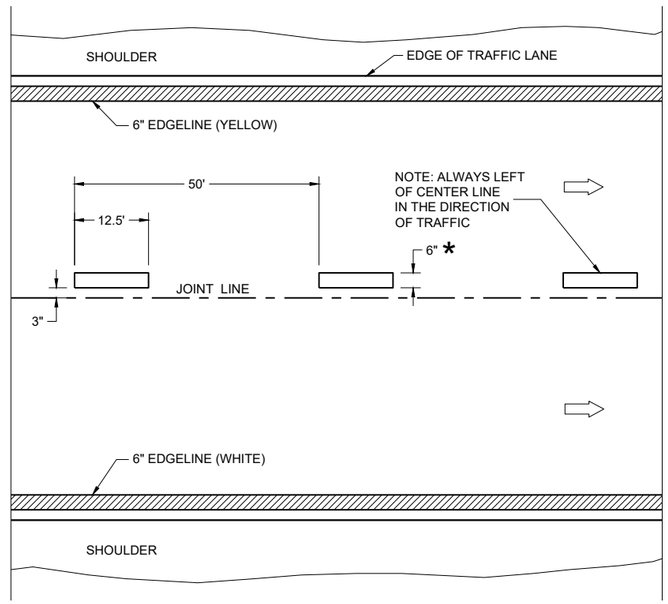
*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



TWO WAY TRAFFIC



ONE WAY TRAFFIC



FREEWAYS AND EXPRESSWAYS

TEMPORARY PAVEMENT MARKING

TEMPORARY LONGITUDINAL PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

6

SDD 15C08-23b

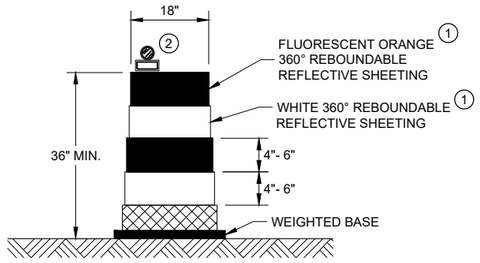
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SDD 15C08-23b

GENERAL NOTES

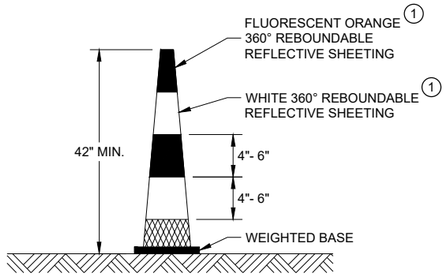
(1) REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.

(2) LOCATION OF WARNING LIGHTS WHEN SHOWN ON THE PLAN.



DRUM

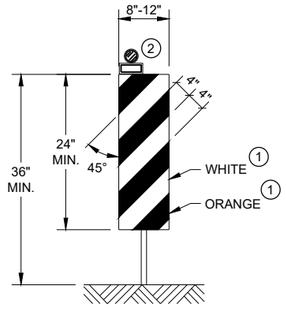
BALLAST WIDTHS
RANGE FROM 24"-36"



42" CONE

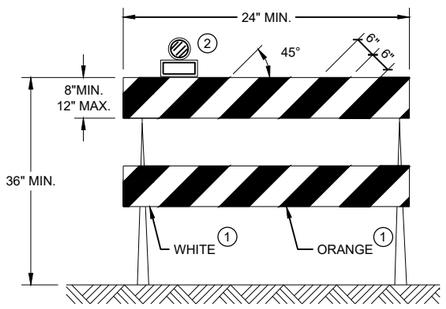
DO NOT USE IN TAPERS
½ SPACING OF DRUMS

BALLAST WIDTHS
RANGE FROM 14"-20"



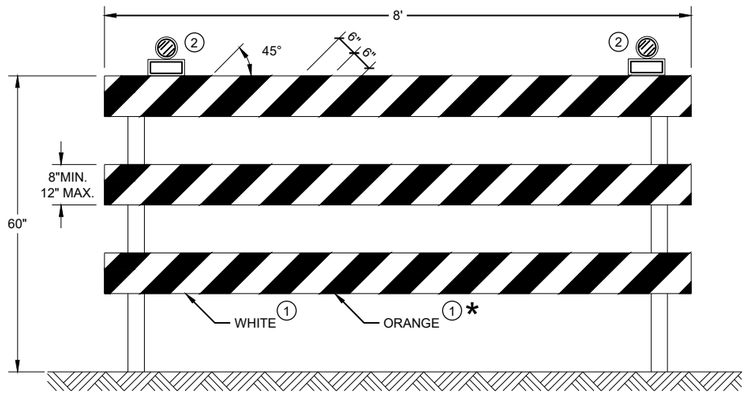
VERTICAL PANEL

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 ENGINEER

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.

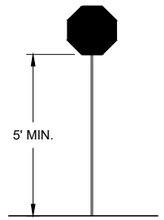
(3) EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS PLACED TRANSVERSE ACROSS THE LANE AT THE LOCATIONS SHOWN. WITHIN EACH ARRAY, SPACING BETWEEN RUMBLE STRIPS SHALL BE 15 FEET ON CENTER

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

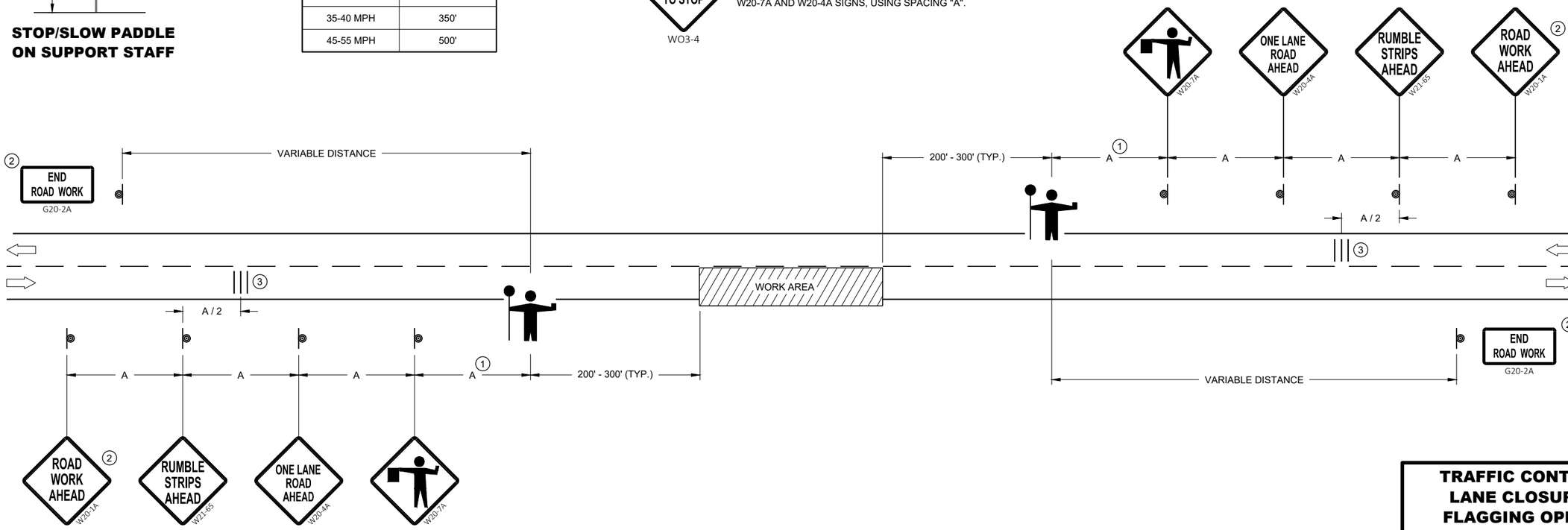
SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

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 ENGINEER

FHWA

SDD 15C12 - 09a

SDD 15C12 - 09a

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.

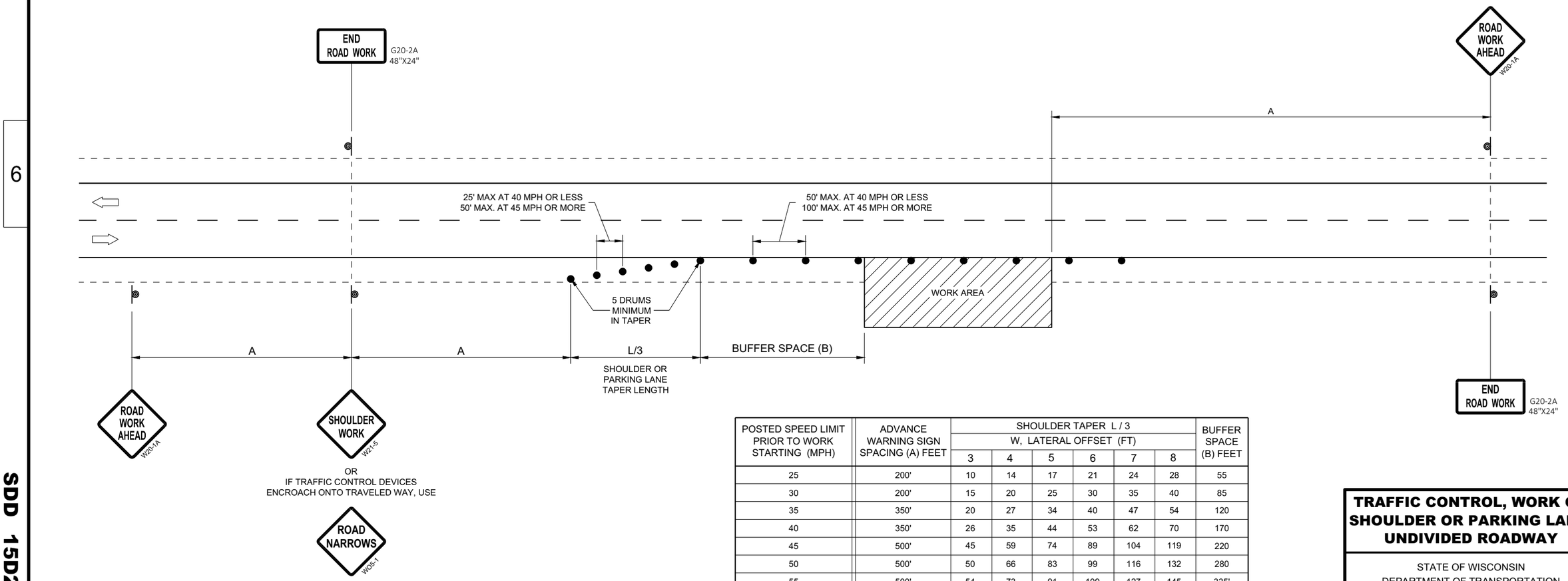
ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

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

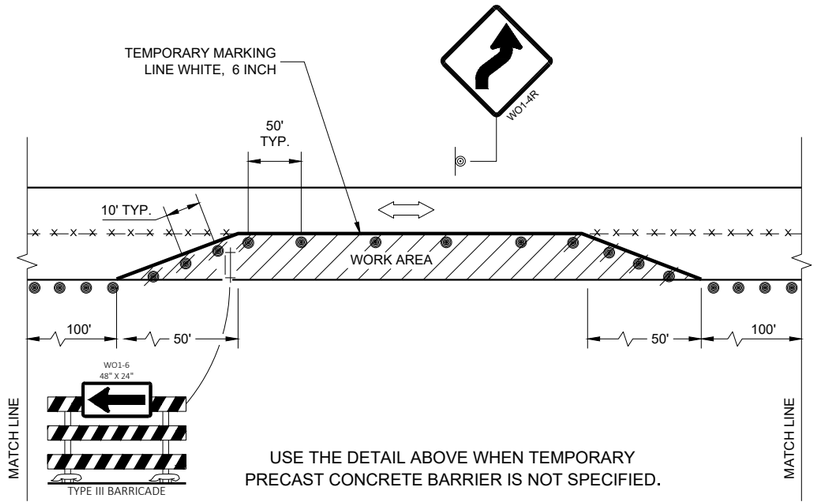
FHWA

SDD 15D28 - 04

SDD 15D28 - 04

LEGEND

- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- FLAGS, 16" X 16" MIN. (ORANGE)
- REMOVING PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- ASPHALTIC PAVEMENT WIDENING
- CONCRETE BARRIER TEMPORARY PRECAST
- TEMPORARY SIGNAL. SEE SDD 09G02 FOR EXACT PLACEMENT



USE THE DETAIL ABOVE WHEN TEMPORARY PRECAST CONCRETE BARRIER IS NOT SPECIFIED.

GENERAL NOTES

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

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

THIS LANE CLOSURE IS TYPICAL FOR CLOSING RIGHT LANE - REVERSE FOR CLOSING LEFT LANE.

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

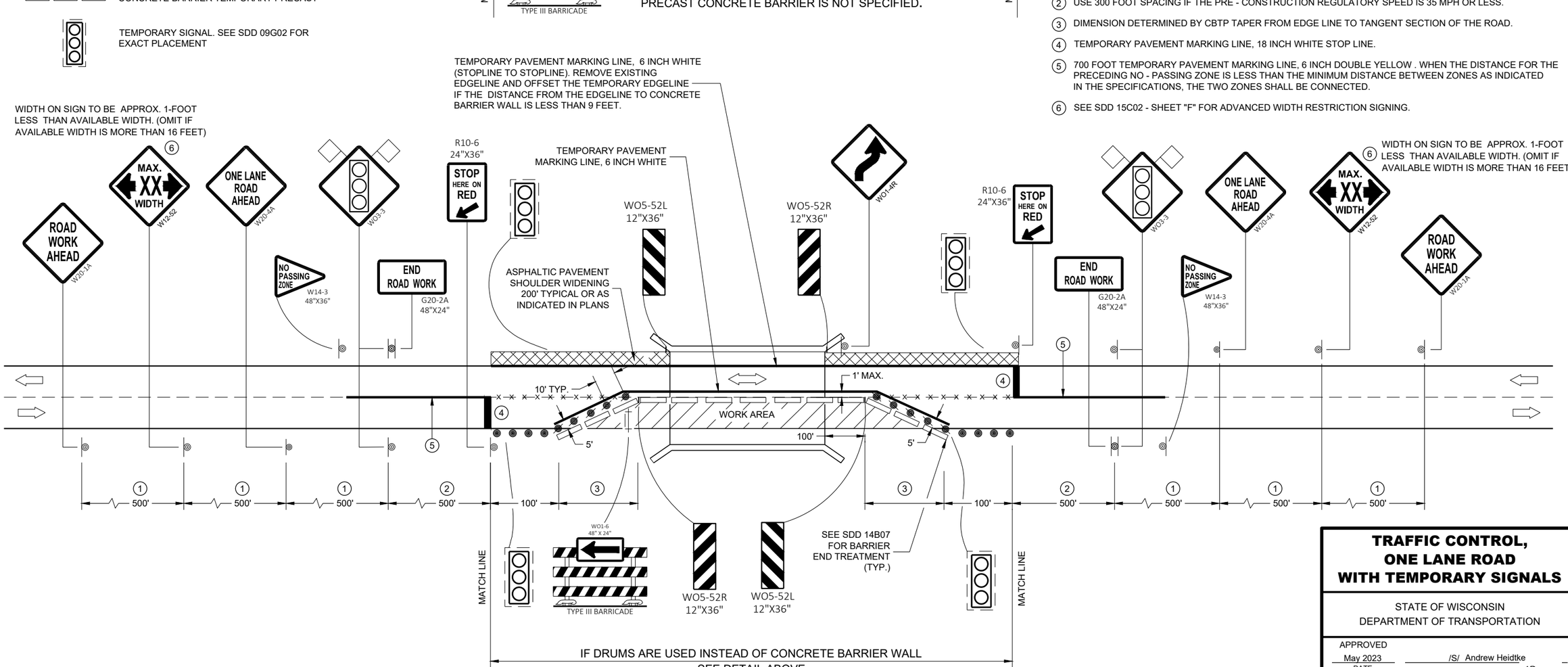
"WO" IS THE SAME AS "W" EXCEPT THE BACKGROUND IS ORANGE.

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

REMOVE PAVEMENT MARKING AND PLACE TEMPORARY PAVEMENT MARKING LINES IF THE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

INSTALL OVERHEAD TEMPORARY SIGNAL HEADS ABOVE THE MIDDLE OF THE TRAVEL LANE THEY ARE CONTROLLING.

1. 500 FOOT SPACING SHOWN IS FOR ROADWAYS WITH A PRE-CONSTRUCTION REGULATORY SPEED LIMIT OF 45 MPH OR MORE. FOR 35 - 40 MPH, USE 350 FOOT TYPICAL SPACING. FOR 25 - 30 MPH, USE 200 FOOT TYPICAL SPACING.
2. USE 300 FOOT SPACING IF THE PRE - CONSTRUCTION REGULATORY SPEED IS 35 MPH OR LESS.
3. DIMENSION DETERMINED BY CBTP TAPER FROM EDGE LINE TO TANGENT SECTION OF THE ROAD.
4. TEMPORARY PAVEMENT MARKING LINE, 18 INCH WHITE STOP LINE.
5. 700 FOOT TEMPORARY PAVEMENT MARKING LINE, 6 INCH DOUBLE YELLOW . WHEN THE DISTANCE FOR THE PRECEDING NO - PASSING ZONE IS LESS THAN THE MINIMUM DISTANCE BETWEEN ZONES AS INDICATED IN THE SPECIFICATIONS, THE TWO ZONES SHALL BE CONNECTED.
6. SEE SDD 15C02 - SHEET "F" FOR ADVANCED WIDTH RESTRICTION SIGNING.



TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

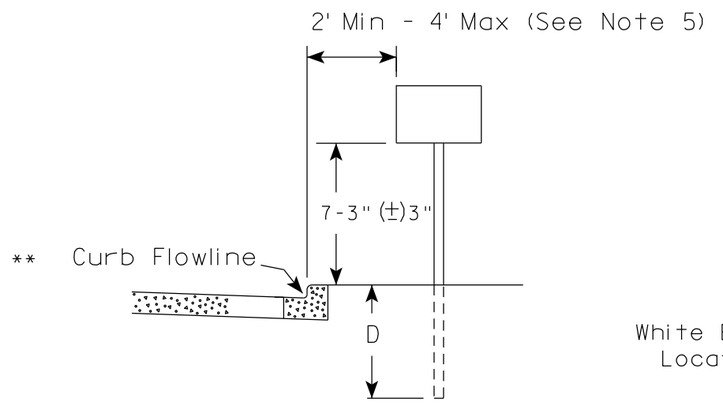
APPROVED
May 2023
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

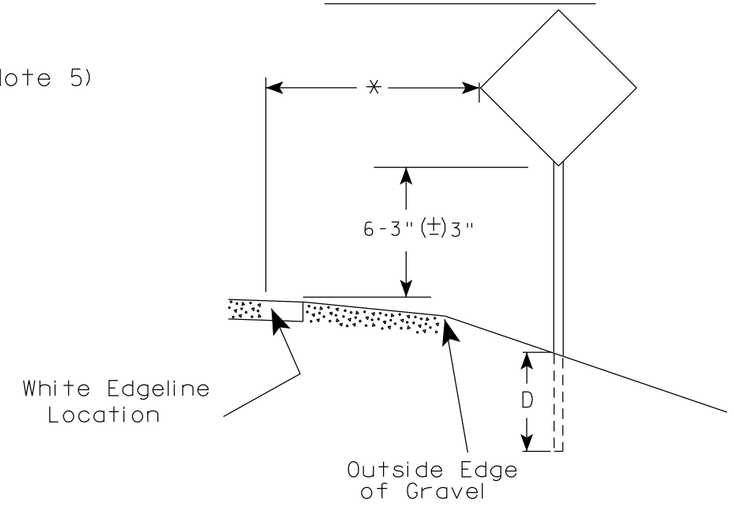
FHWA

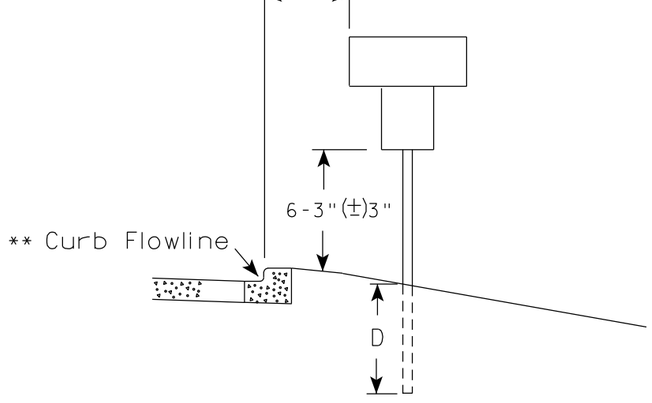
6
SDD 15D33-09

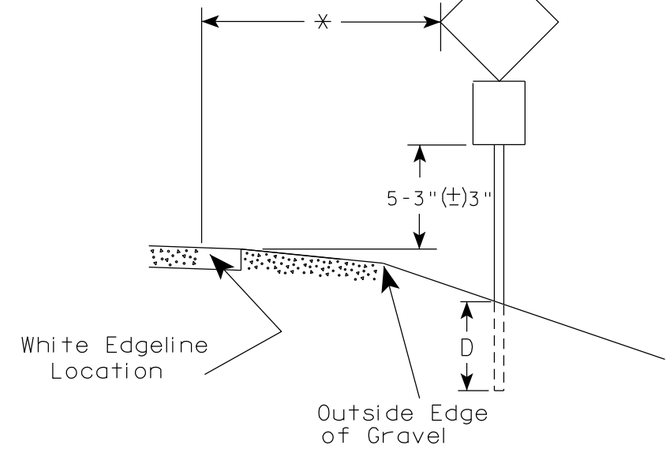
URBAN AREA



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.

GENERAL NOTES

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

POST EMBEDMENT DEPTH

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

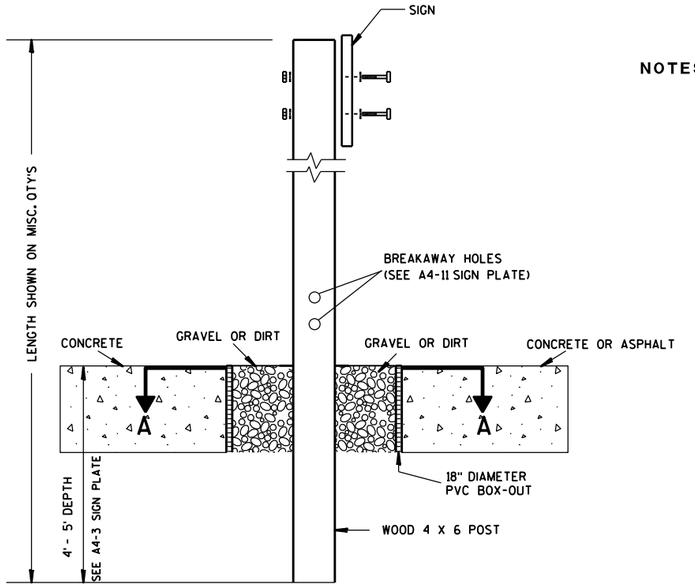
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

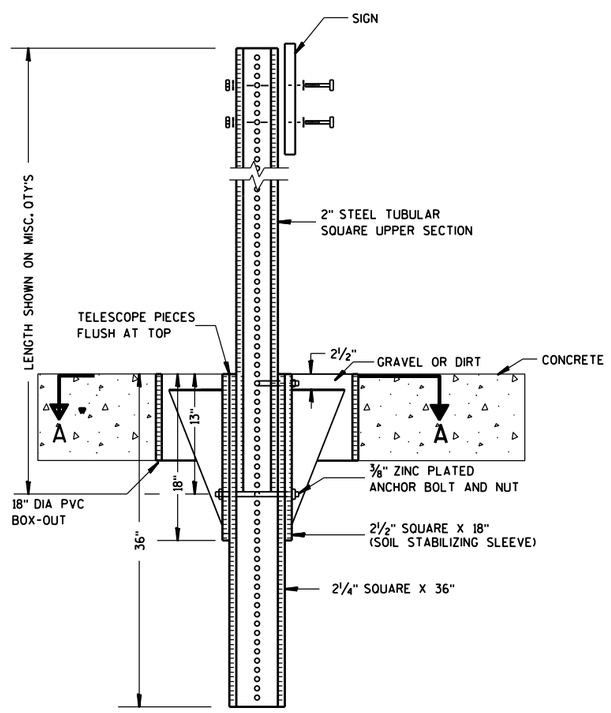
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 44	E



ELEVATION VIEW

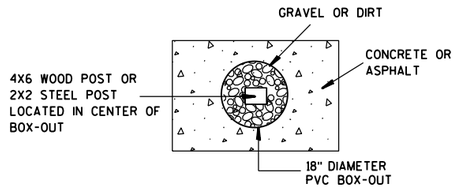
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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



ELEVATION VIEW

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



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B

WISCONSIN DEPT OF TRANSPORTATION

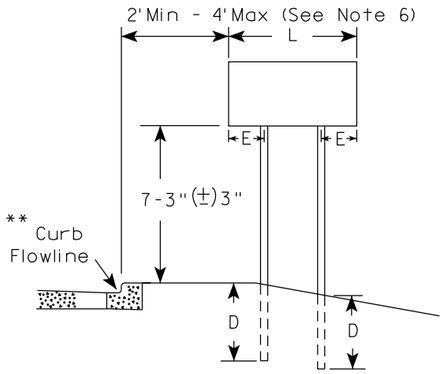
APPROVED Matthew R Rauch
for State Traffic Engineer

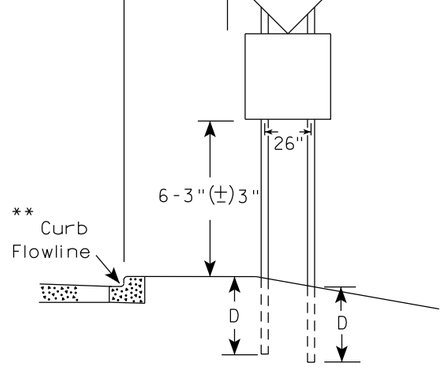
DATE 1/27/14 PLATE NO. A4-3B.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

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

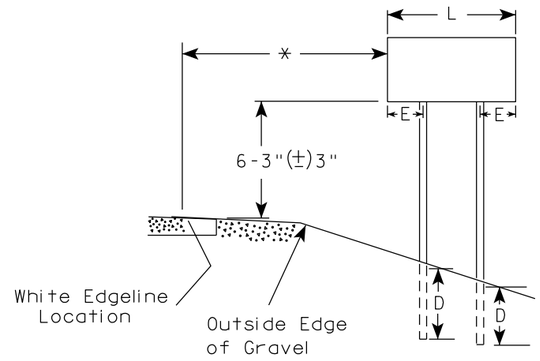
URBAN AREA

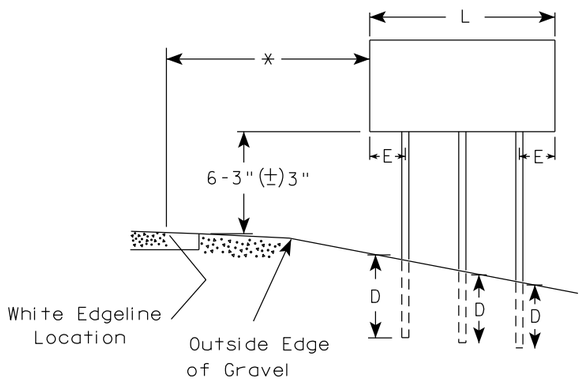


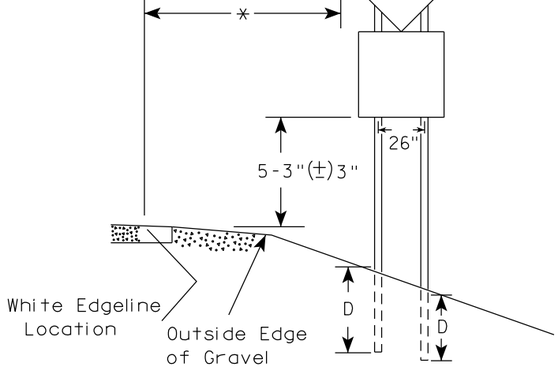


48" DIAMOND WARNING SIGN

RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN

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

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

GENERAL NOTES

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

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

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

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

POST EMBEDMENT DEPTH

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

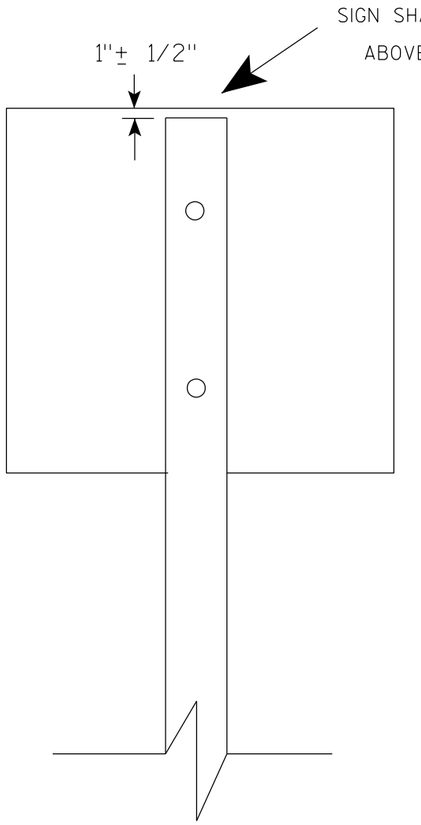
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

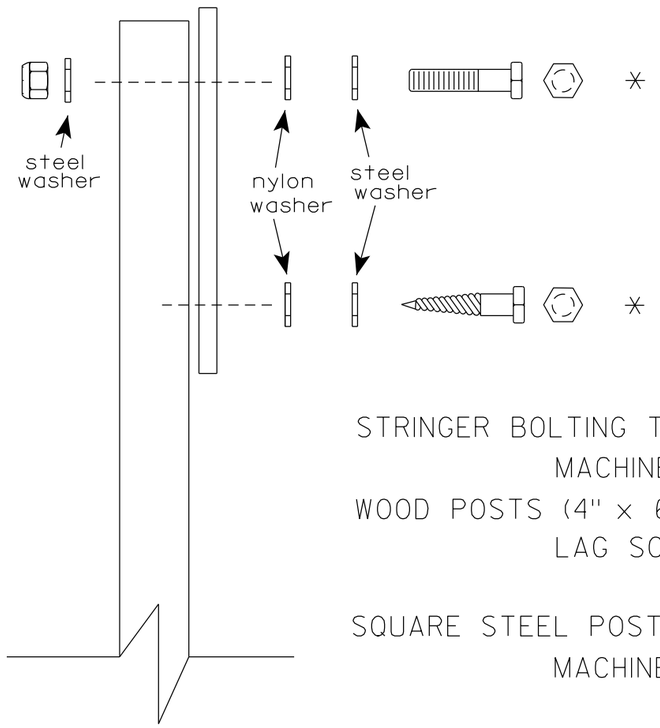
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 46	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

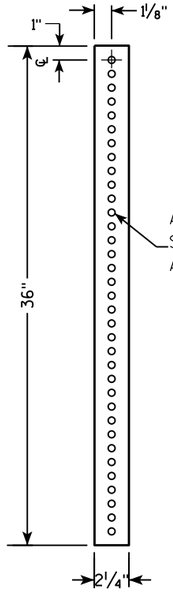
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

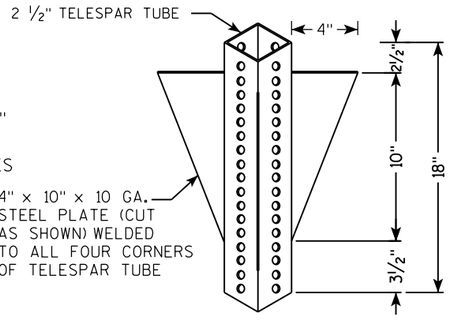
DATE 4/1/2020 PLATE NO. A4-8.9

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

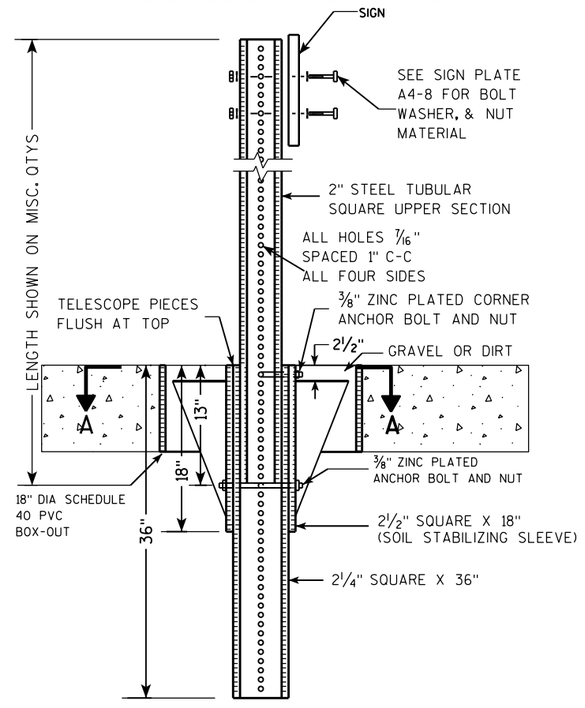
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



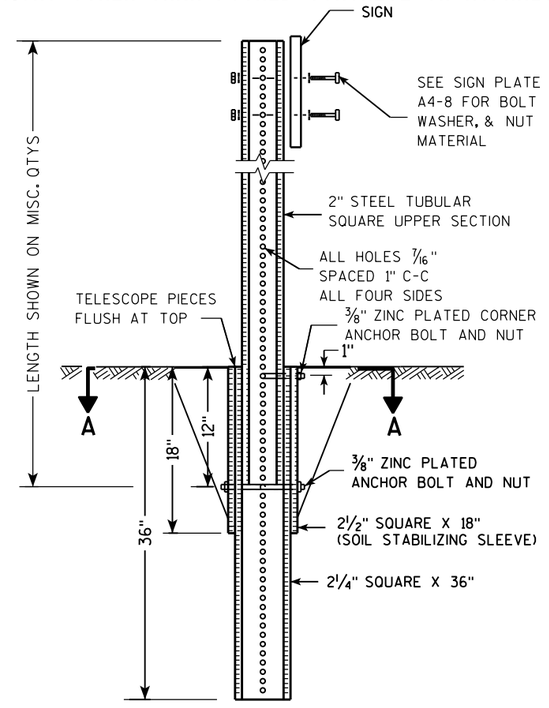
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

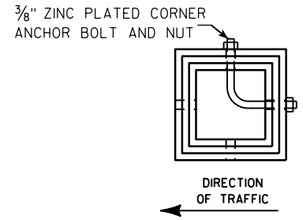


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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).

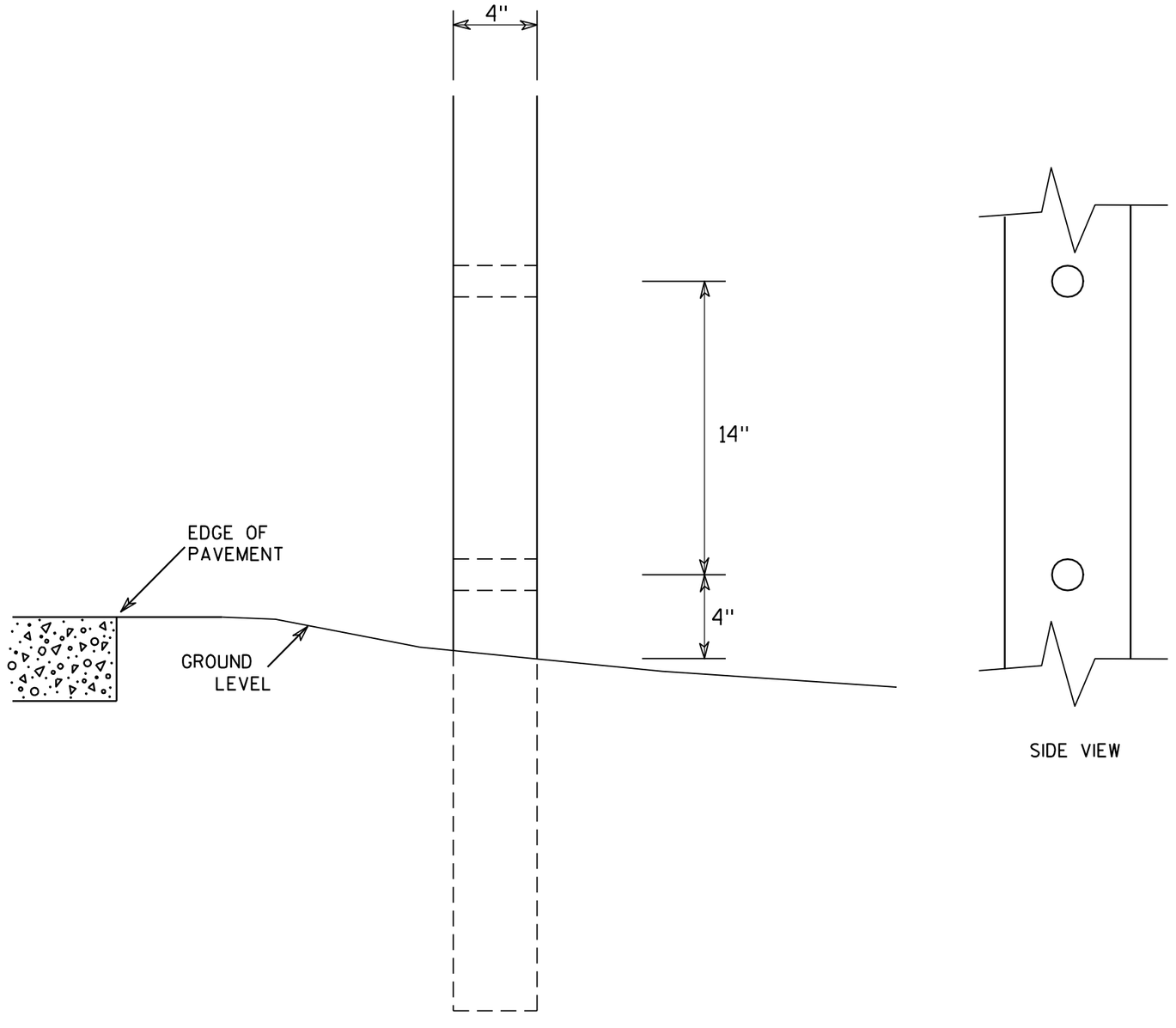
TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE 48 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.

4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

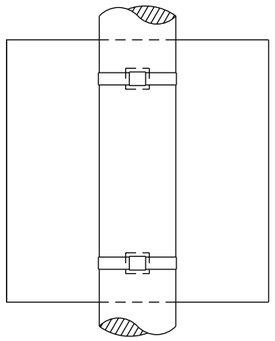
APPROVED Chester J Spang for State Traffic Engineer

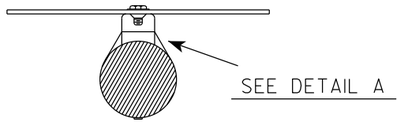
DATE 3/27/97 PLATE NO. A4-11.2

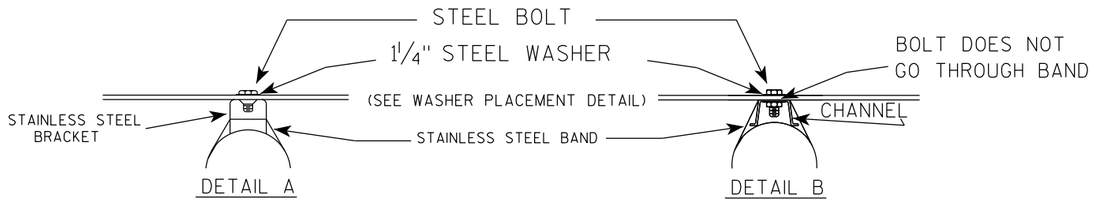
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 49	E

BANDING

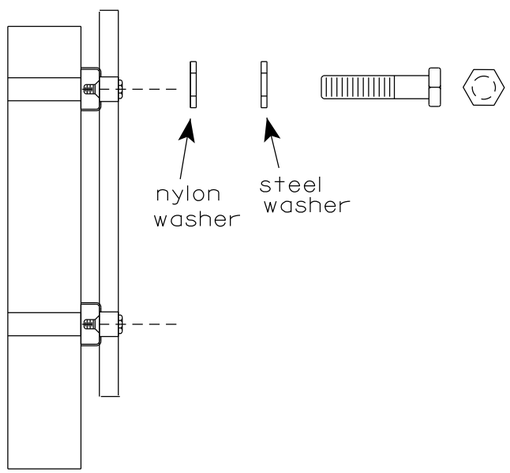
SINGLE SIGN







WASHER PLACEMENT

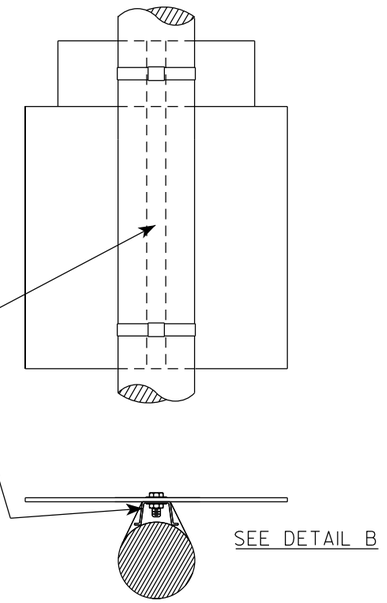


WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

GENERAL NOTES

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

"J" ASSEMBLY



STANDARD SIGN
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

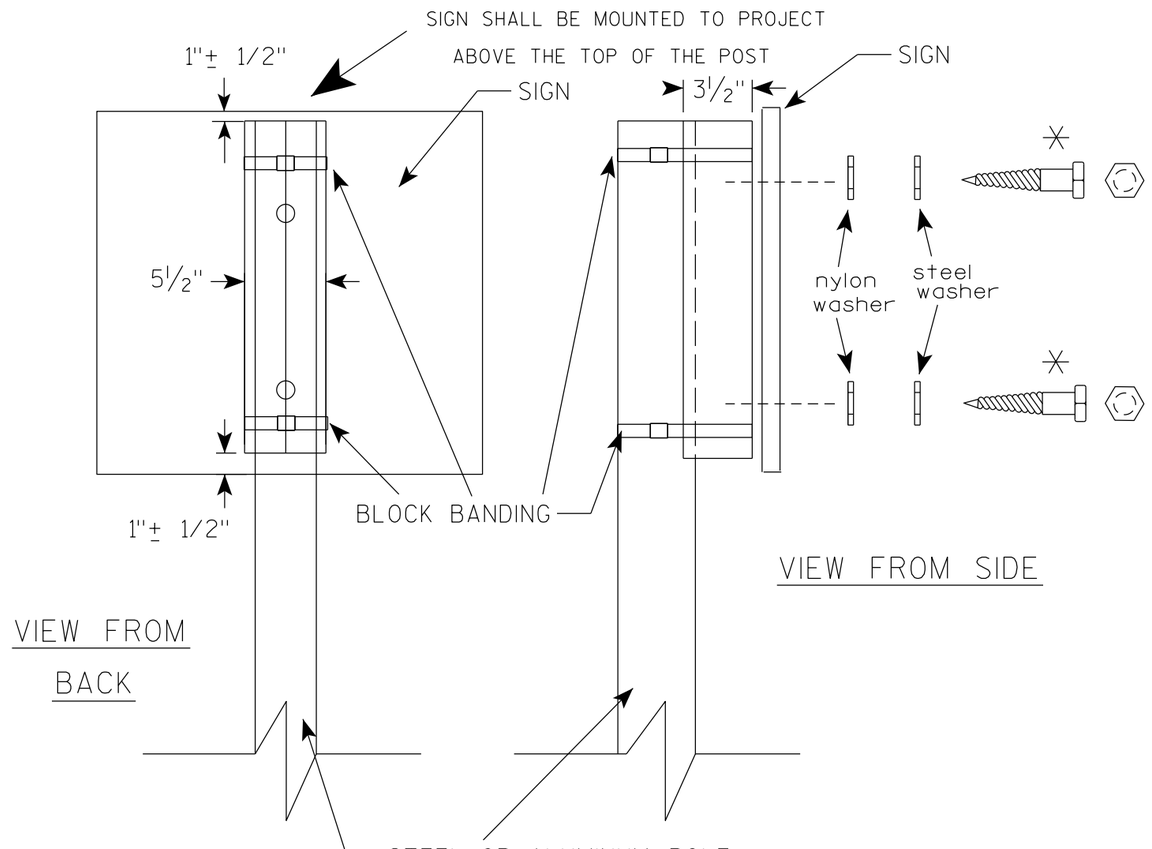
DATE 6/10/19 PLATE NO. A5-9.4

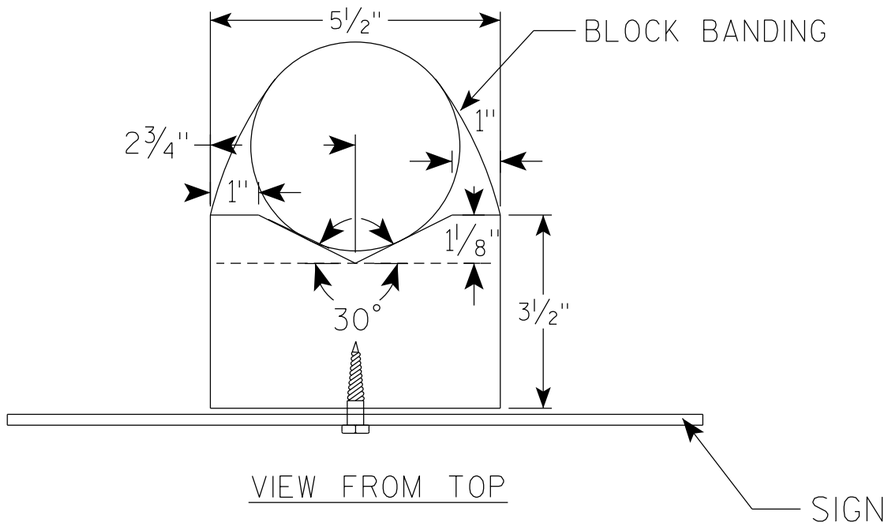
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 50	E

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

7

7





GENERAL NOTES

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

✳ LAG BOLTS SHALL BE ⅜" X 2½"

BLOCK BANDING DETAIL (V-BLOCK OPTION)

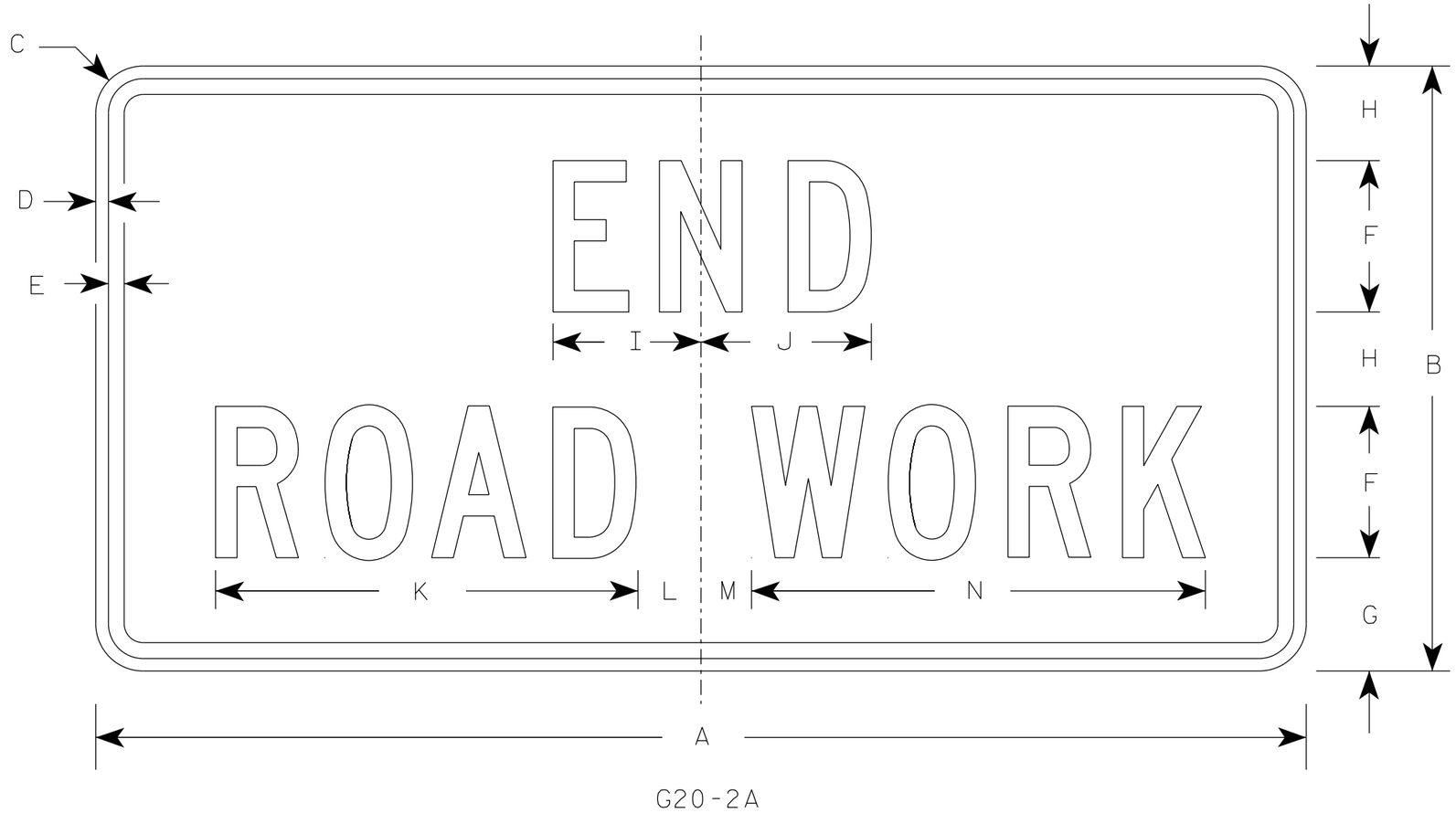
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:

SHEET NO: 51 E



G20-2A

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	18	1 1/2	3/8	1/2	4	3 3/4	2 1/2	4 1/8	4 1/8	11 1/8	2	1	12 1/8													4.5
2	48	24	1 7/8	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0
2M	48	24	1 7/8	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0
3	48	24	1 7/8	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0
4	48	24	1 7/8	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0
5	48	24	1 7/8	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0

STANDARD SIGN

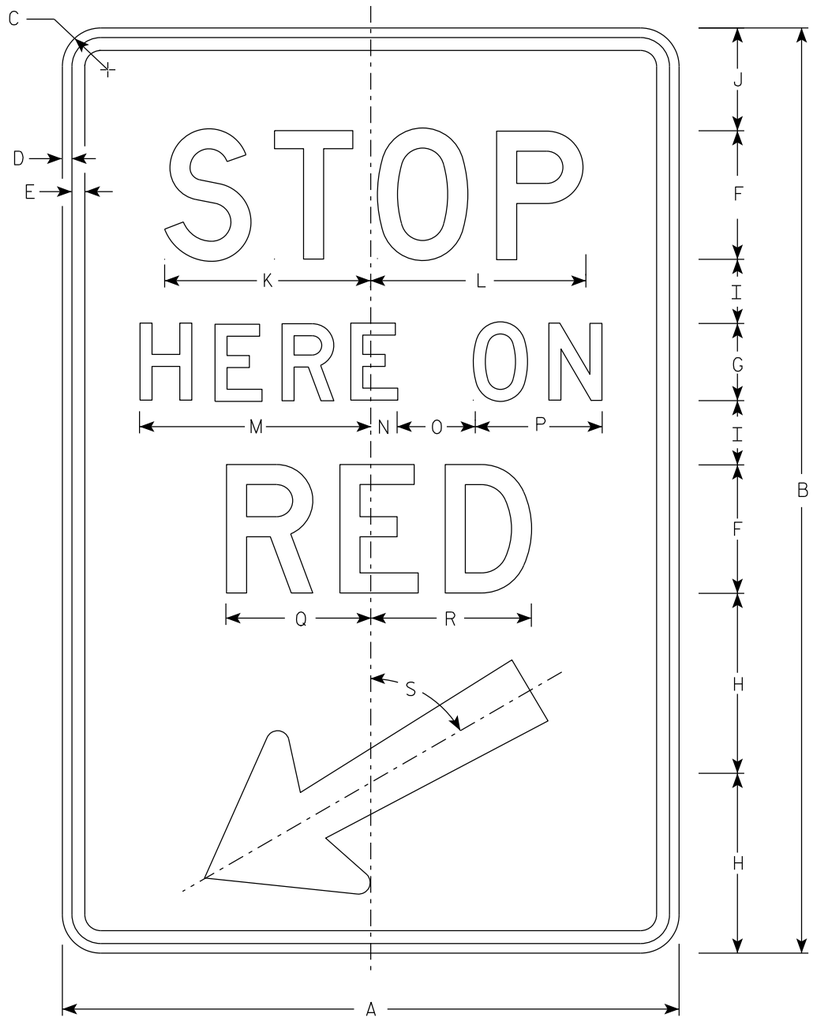
G20-2A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/26/2023 PLATE NO. G20-2A.10

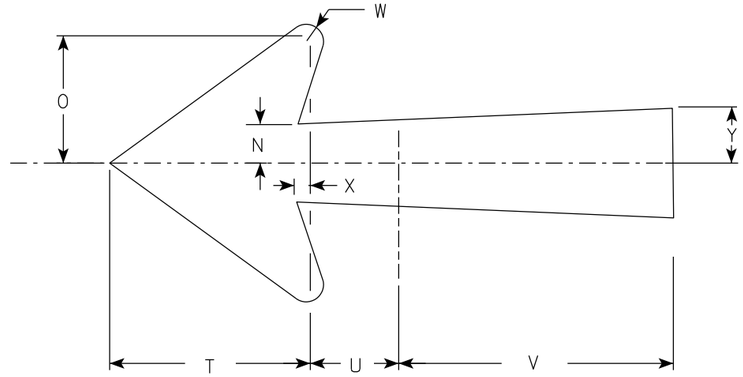
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 52 E



R10-6

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D



Arrow Detail

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Areq sq. ft.
1																											
2S	24	36	1 1/2	3/8	1/2	5	3	7	2 1/2	4	8	8 3/8	9	1	3	5	5 5/8	6 1/4	60°	5 1/4	2 1/4	7 1/8	1/2	3/8	1 3/8		6.0
2M	24	36	1 1/2	3/8	1/2	5	3	7	2 1/2	4	8	8 3/8	9	1	3	5	5 5/8	6 1/4	60°	5 1/4	2 1/4	7 1/8	1/2	3/8	1 3/8		6.0
3																											
4																											
5																											

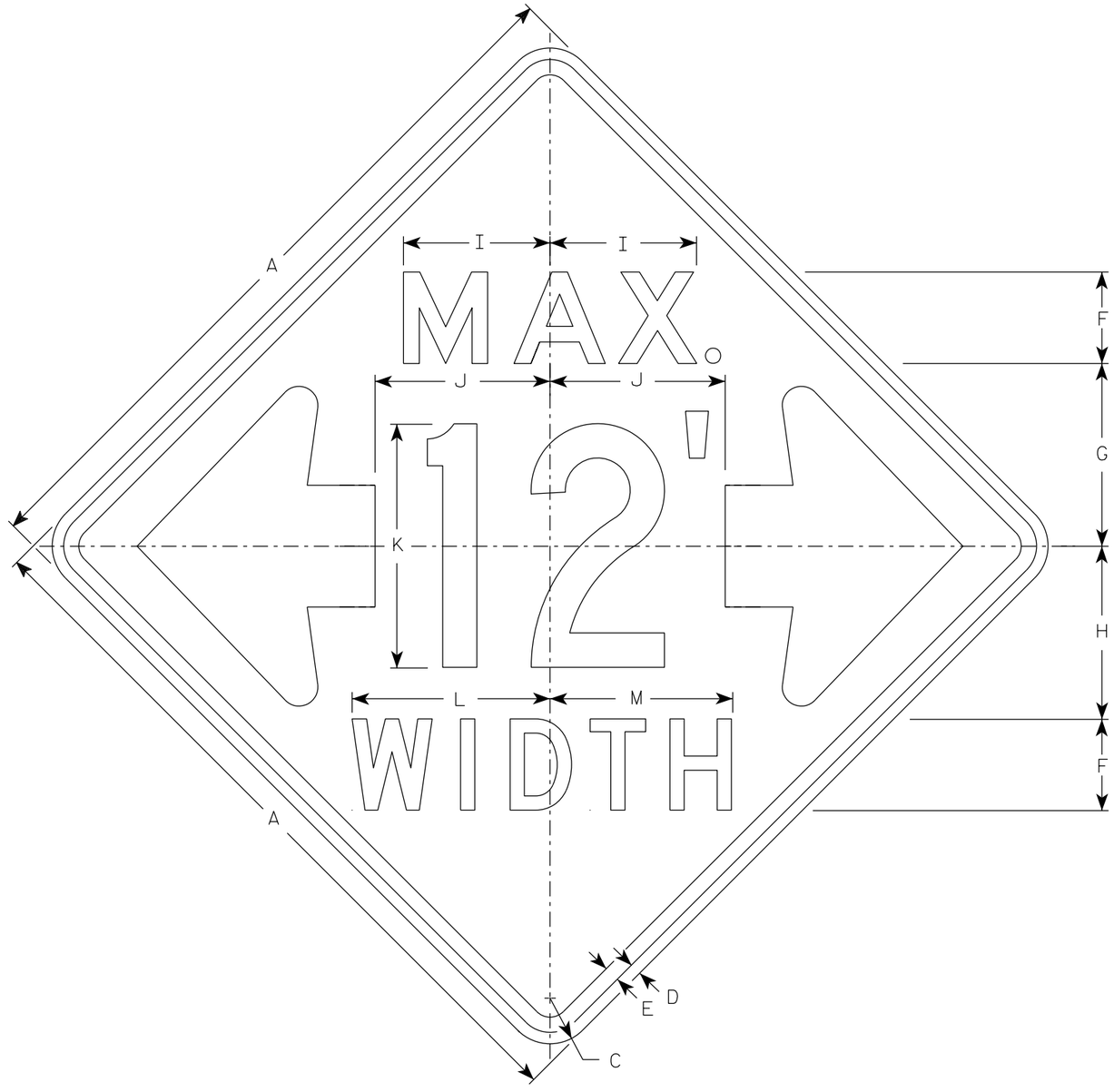
STANDARD SIGN
R10-6

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/25/24 PLATE NO. R10-6.7

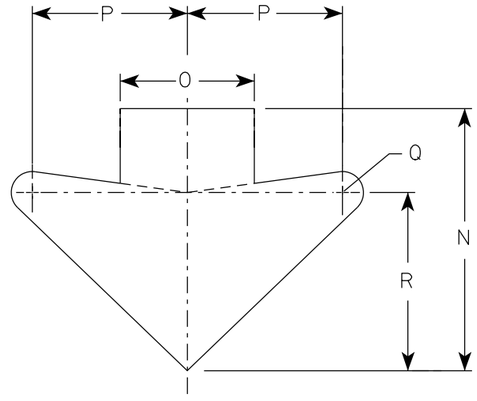
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 53	E



W12-52

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - See note 5
4. The top line is series E, the numerals are series C, and the bottom line is series D.
5. Substitute appropriate numerals and adjust spacing as required.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48		3	¾	1	6	12	11 ⅜	9 ⅝	11 ½	16	13	12	15 ⅝	8	9 ¼	1 ¼	10 ⅝									16.0
2M	48		3	¾	1	6	12	11 ⅜	9 ⅝	11 ½	16	13	12	15 ⅝	8	9 ¼	1 ¼	10 ⅝									16.0
3																											
4																											
5																											

STANDARD SIGN
W12-52

WISCONSIN DEPT OF TRANSPORTATION

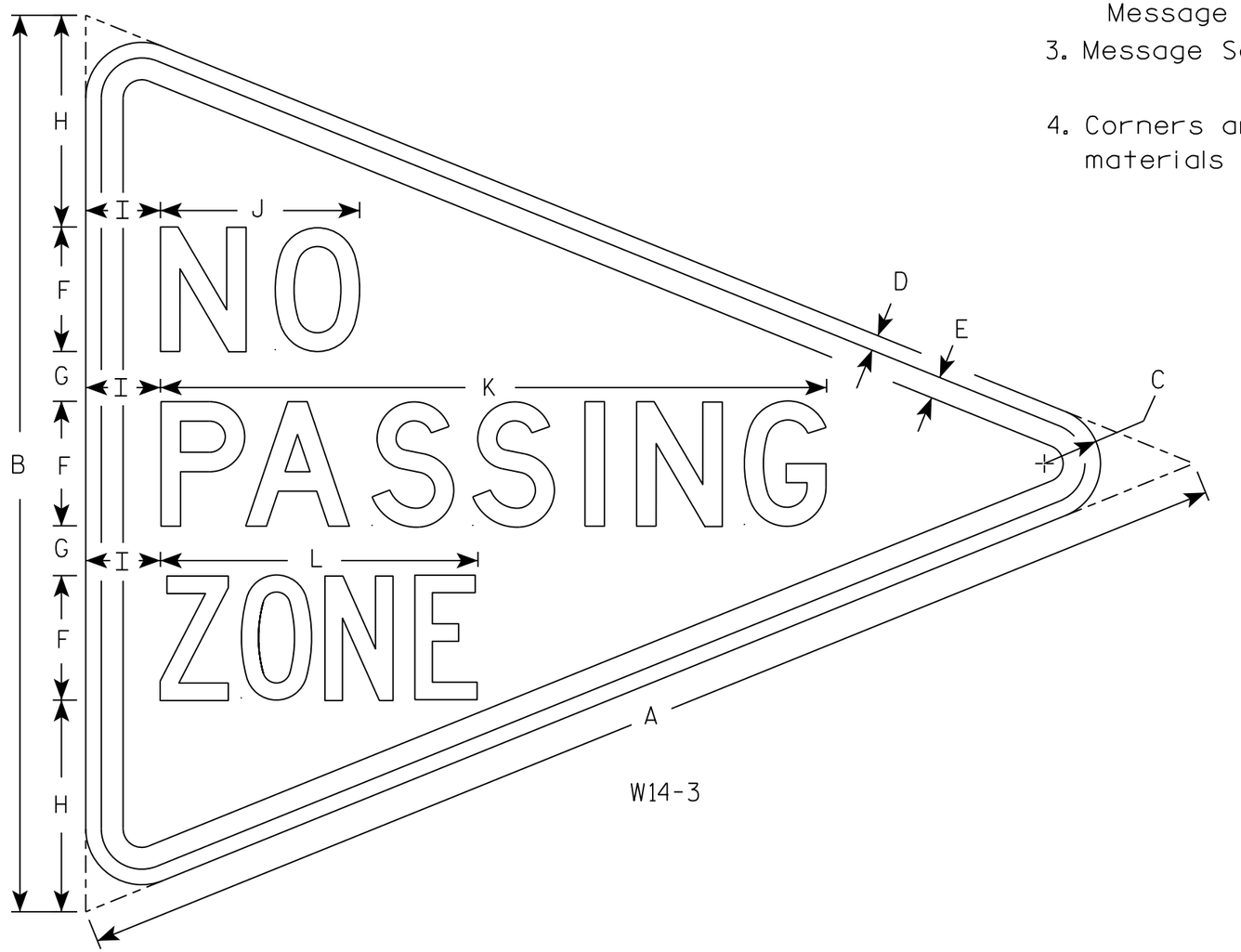
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/10/2024 PLATE NO. W12-52.8

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 54 | E

NOTES

1. Sign is Type II- Type F Reflective
2. Color:
   Background - Yellow
   Message - Black
3. Message Series - Lines 1 and 2 are Series D.
   Line 3 is series C.
4. Corners and borders shall be rounded on all base materials for this sign.



W14-3

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	36	2 1/4	5/8	7/8	5	2	8 1/2	3	8	26 3/4	12 3/4															5.56
2M																											
3																											
4																											
5																											

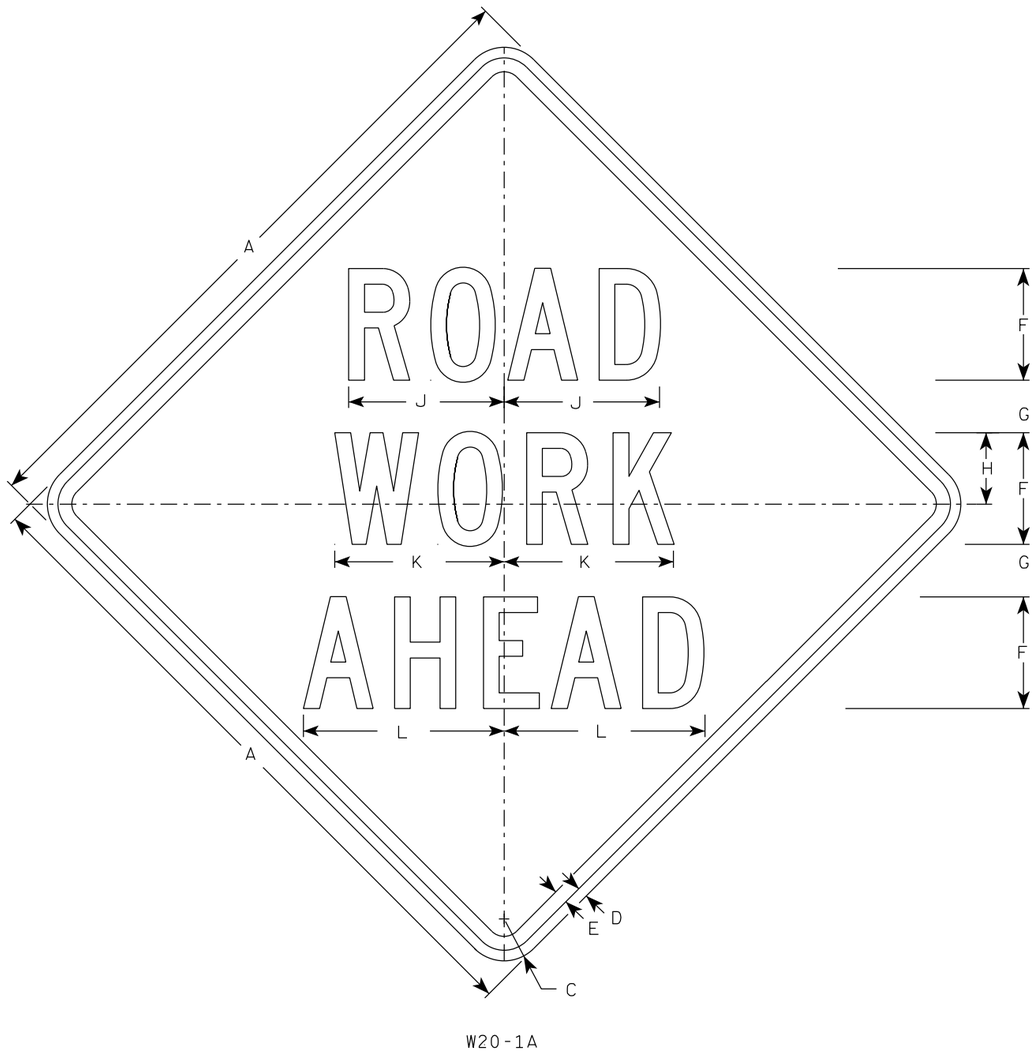
STANDARD SIGN
W14-3

WISCONSIN DEPT OF TRANSPORTATION

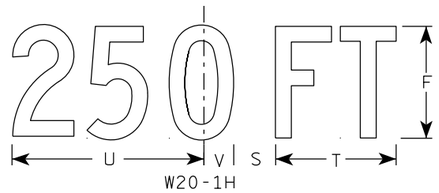
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/21/17 PLATE NO. W14-3.10

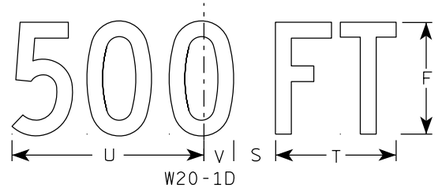
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 55 | E



W20-1A



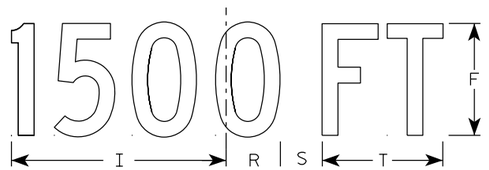
W20-1H



W20-1D



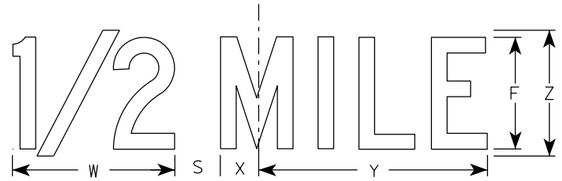
W20-1C



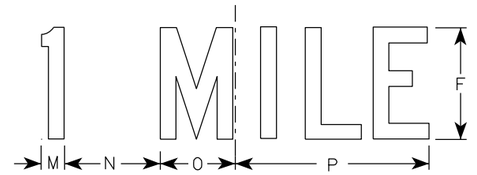
W20-1B

NOTES

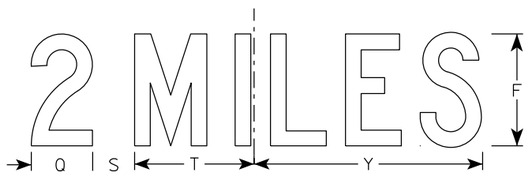
1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



W20-1G



W20-1F



W20-1E

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	36		2 1/4	5/8	3/4	5	2 5/8	3 1/4	10 1/8	7	7 5/8	8 7/8	1 1/8	4 1/2	3 1/2	9	3 1/4	2 1/2	2 1/4	5 5/8	9	1 3/8	8	1 3/4	10 3/4	6	9.0
2S	48		3	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
2M	48		3	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
3	48		3	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
4	48		3	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
5	48		3	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0

STANDARD SIGN
W20-1A, B, C, D, E, F, G & H

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/10/2024 PLATE NO. W20-1.12

PROJECT NO:

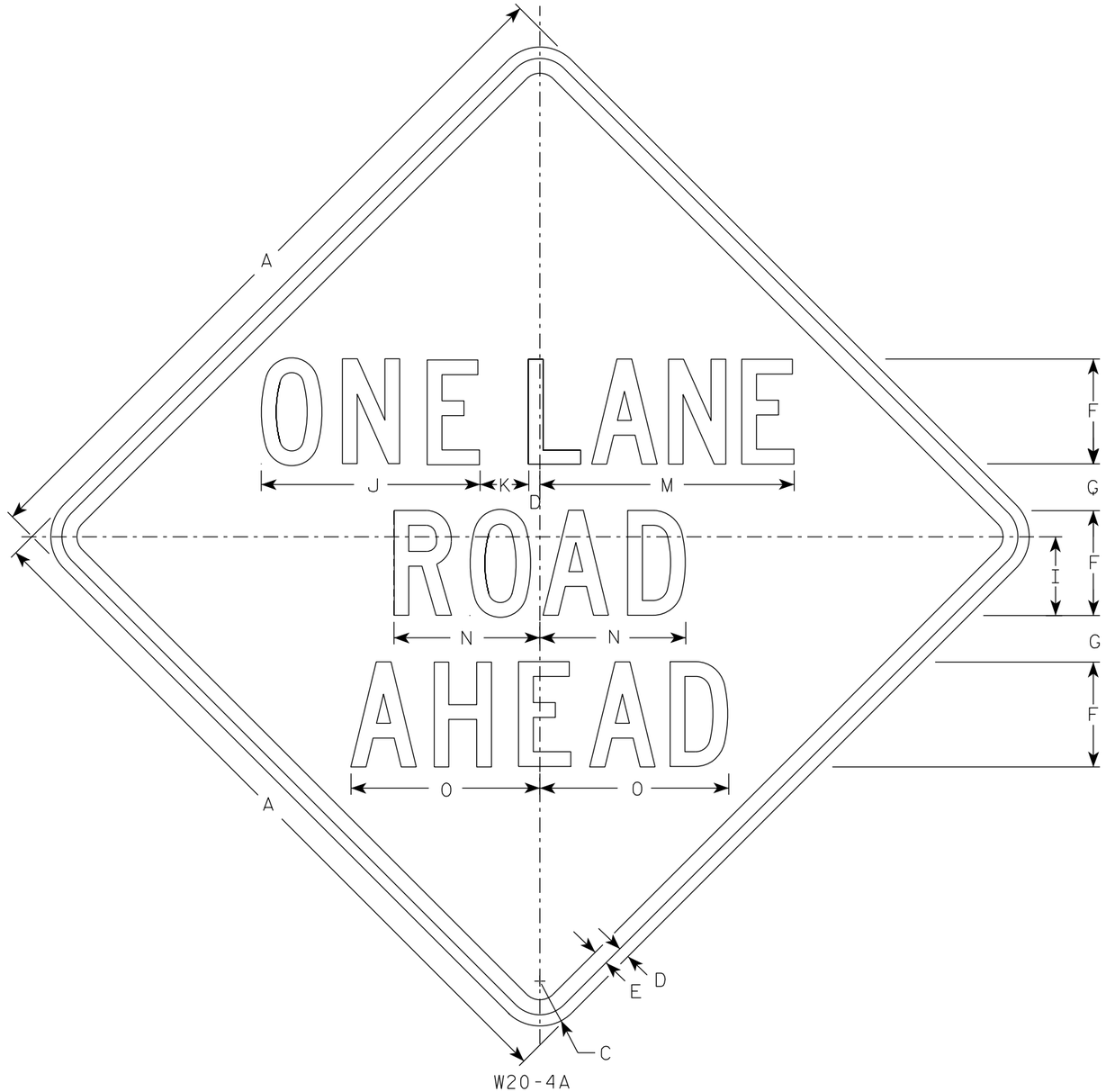
SHEET NO: 56 E

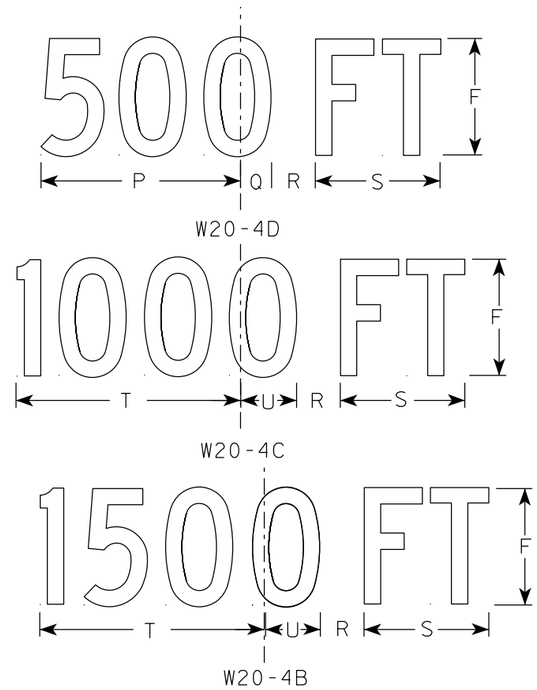
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W201.DGN PLOT DATE : 10-JAN 2024 11:16 PLOT BY : dotc4c

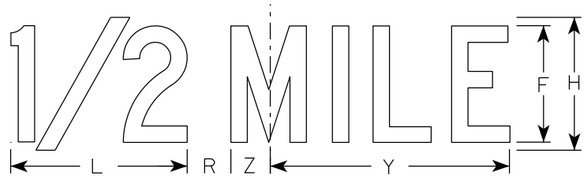
WISDOT/CADDS SHEET 42

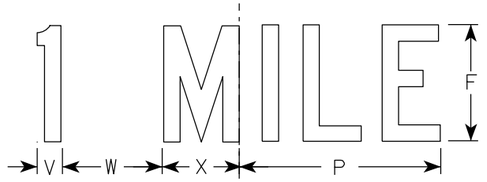
7

7









NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		2 1/4	5/8	3/4	5	2 3/8	6	3 3/4	10 3/8	2 3/8	8	13 1/2	7	8 7/8	9	1 3/8	1 7/8	5 5/8	10 1/8	2 1/2	1 1/8	4 1/2	3 1/2	10 3/4	1 3/4	9.0
2S	48		3	3/4	1	7	3 1/8	8	5 1/4	14 5/8	3 1/4	10 5/8	17 3/4	9 3/4	12 5/8	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	14 3/8	2 3/8	16.0
2M	48		3	3/4	1	7	3 1/8	8	5 1/4	14 5/8	3 1/4	10 5/8	17 3/4	9 3/4	12 5/8	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	14 3/8	2 3/8	16.0
3	48		3	3/4	1	7	3 1/8	8	5 1/4	14 5/8	3 1/4	10 5/8	17 3/4	9 3/4	12 5/8	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	14 3/8	2 3/8	16.0
4	48		3	3/4	1	7	3 1/8	8	5 1/4	14 5/8	3 1/4	10 5/8	17 3/4	9 3/4	12 5/8	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	14 3/8	2 3/8	16.0
5	48		3	3/4	1	7	3 1/8	8	5 1/4	14 5/8	3 1/4	10 5/8	17 3/4	9 3/4	12 5/8	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	14 3/8	2 3/8	16.0

STANDARD SIGN
W20-4A, B, C, D, F & G

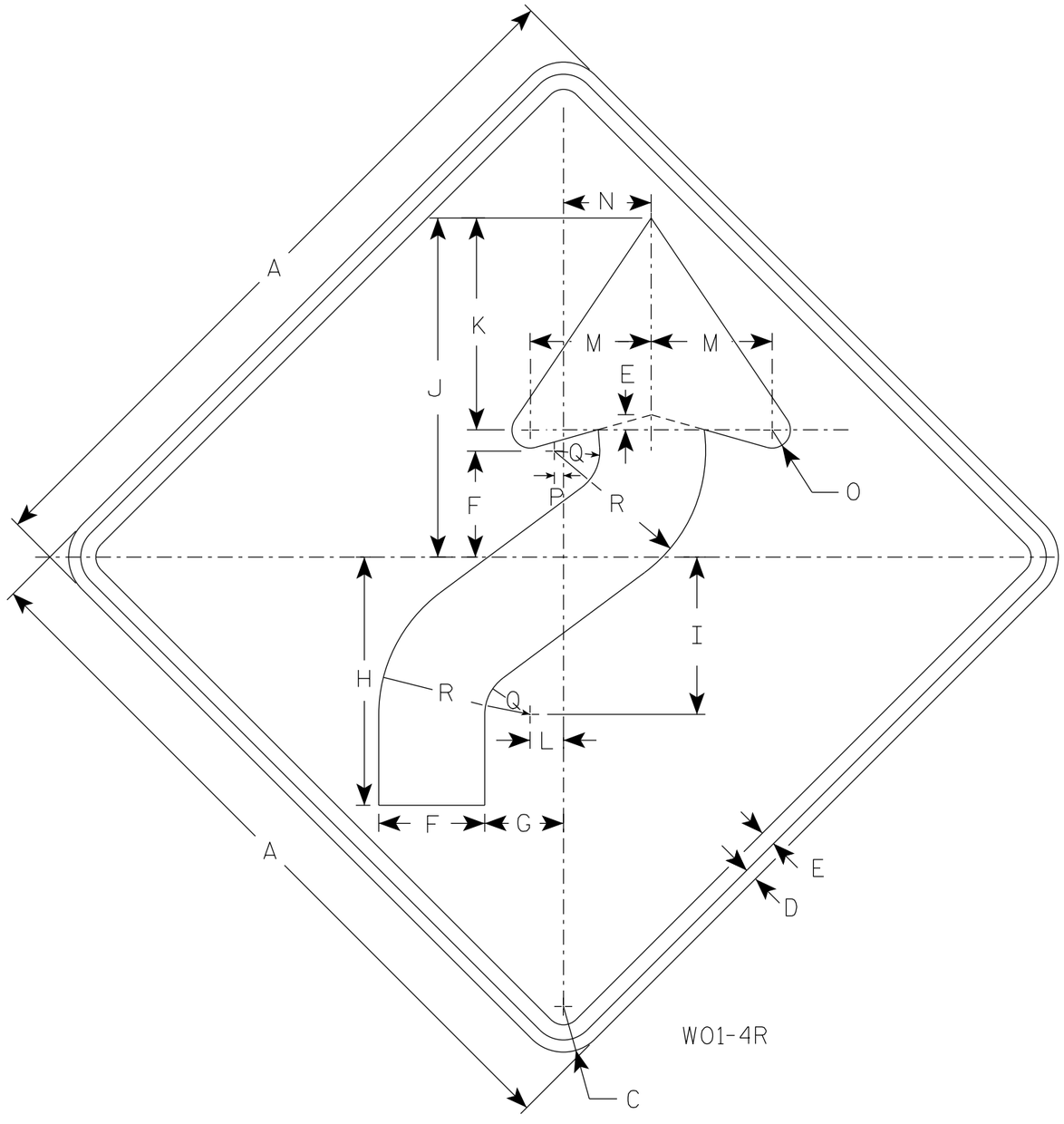
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/10/2024 PLATE NO. W20-4.10

PROJECT NO:

SHEET NO: 57 E



W01-4R

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W01-4L is the same as W01-4R except the arrow is reversed along the vertical centerline.

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	36		2 1/4	5/8	3/4	5 1/4	4	12 3/8	7 7/8	16 7/8	10 1/2	1 5/8	6	4 1/2	1	1/2	2 1/4	7 1/2									9.0
2S	48		3	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
2M	48		3	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
3	48		3	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
4	48		3	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
5	48		3	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0

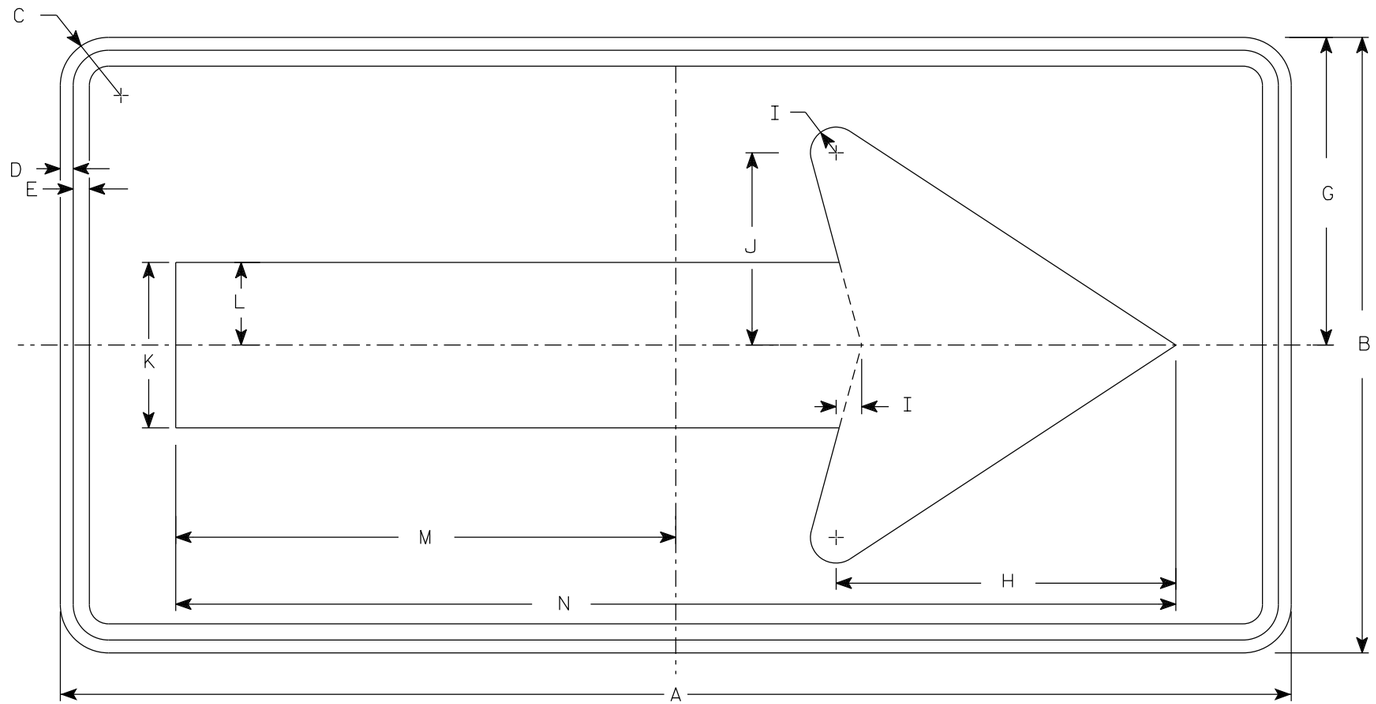
STANDARD SIGN
W01-4

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 1/24/2024 PLATE NO. W01-4.2

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 58 | E



WO1-6

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	24	1 7/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
2M	48	24	1 7/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
3	60	30	1 7/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
4	60	30	1 7/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
5	60	30	1 7/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5

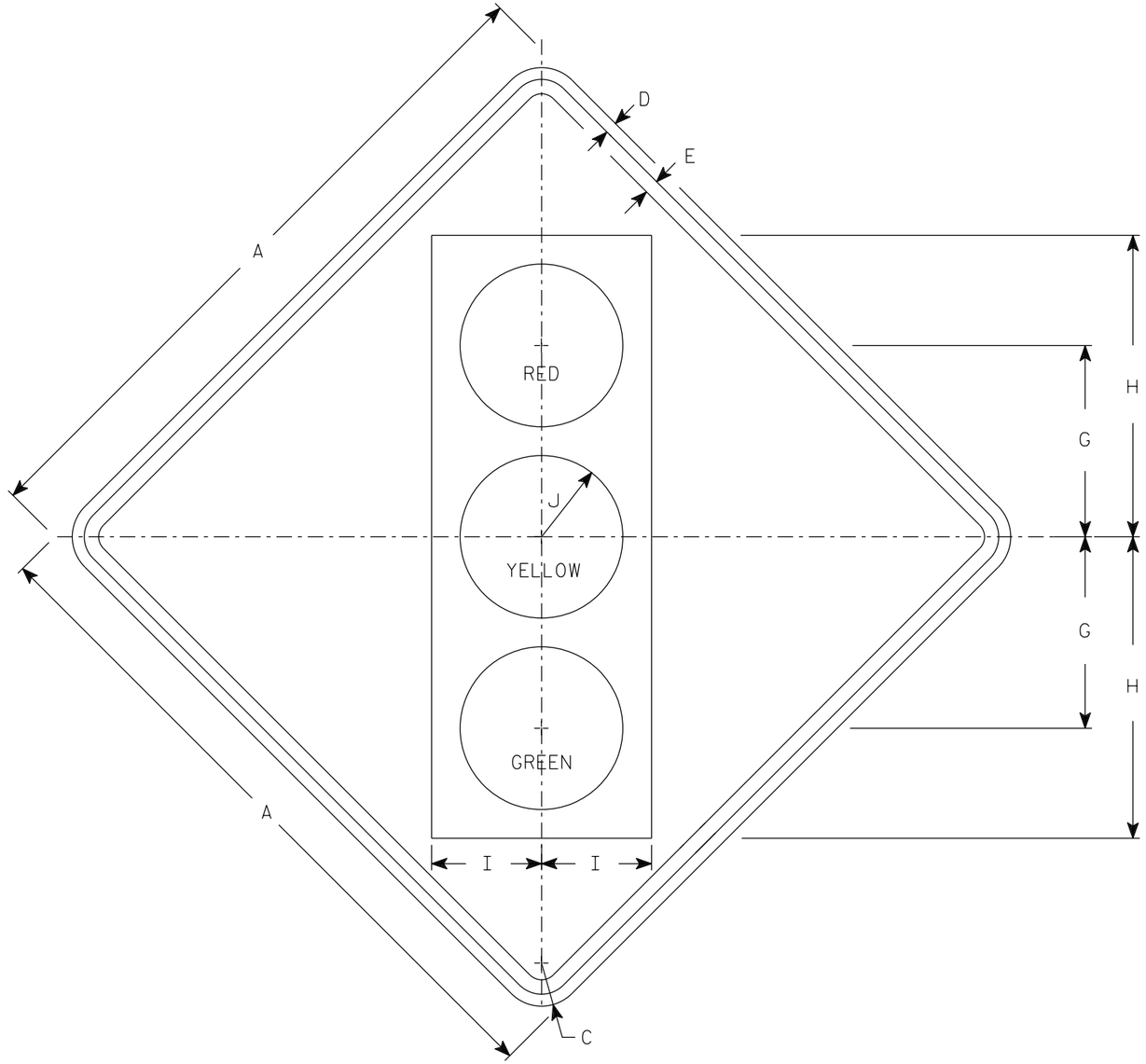
STANDARD SIGN
WO1-6

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/24/2024 PLATE NO. WO1-6.2

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



W03-3

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - See Note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Symbol and border are non-reflective black.
   Top circle - Type H Reflectorized Red
   Center circle - Same as background
   Bottom circle - Type H Reflectorized Green

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	36		2 1/4	5/8	3/4		10	15 3/4	5 3/4	4 1/4																	9.0
2S	48		3	3/4	1		12 1/2	20	7 1/2	5																	16.0
2M	48		3	3/4	1		12 1/2	20	7 1/2	5																	16.0
3	48		3	3/4	1		12 1/2	20	7 1/2	5																	16.0
4	48		3	3/4	1		12 1/2	20	7 1/2	5																	16.0
5	48		3	3/4	1		12 1/2	20	7 1/2	5																	16.0

STANDARD SIGN
W03-3

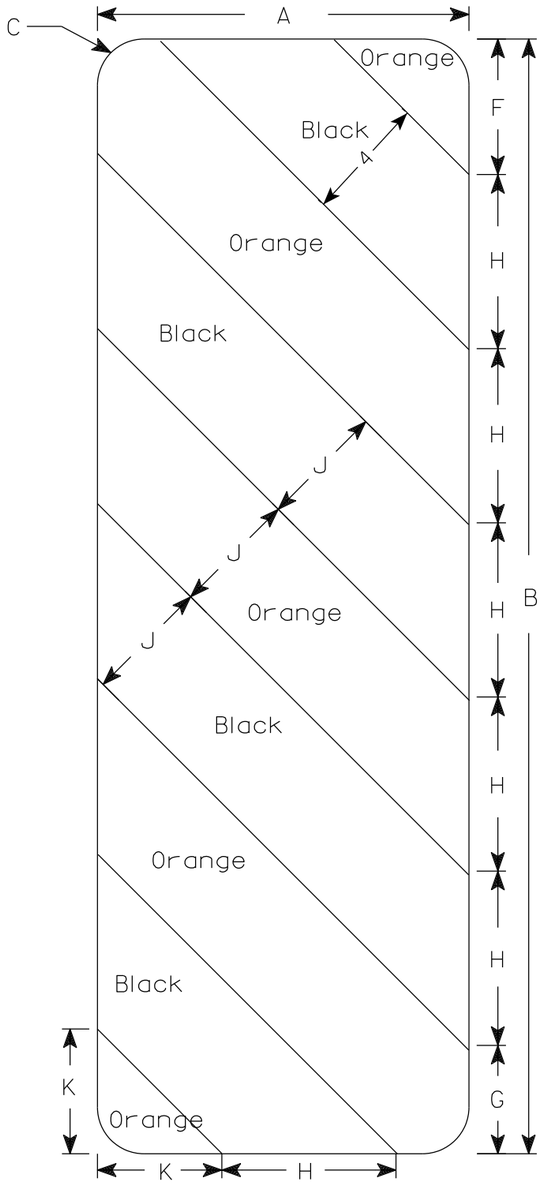
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

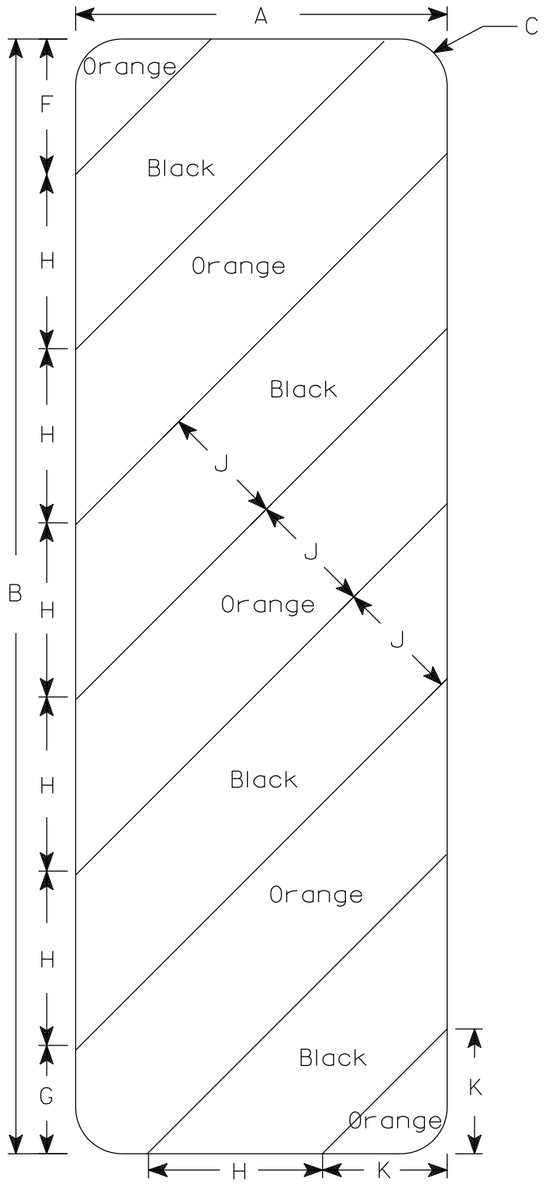
DATE 1/24/2024 PLATE NO. W03-3.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W033.DGN PLOT DATE : 24-JAN 2024 2:07 PLOT BY : dotc4c PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42



W05-52L



W05-52R

NOTES

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

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

STANDARD SIGN

W05-52L & W05-52R

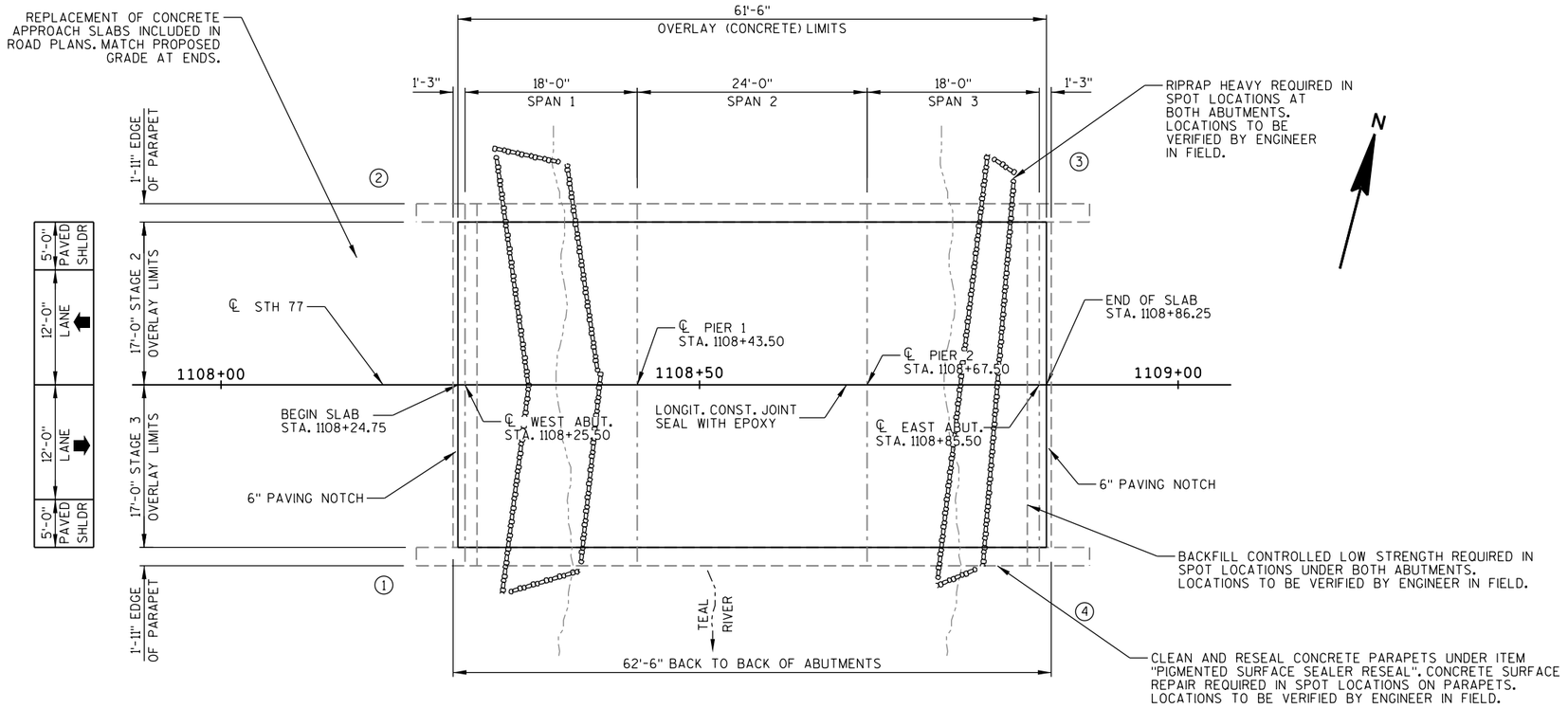
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/13/2024 PLATE NO. W05-52.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 61	E

STATE PROJECT NUMBER
8520-02-71

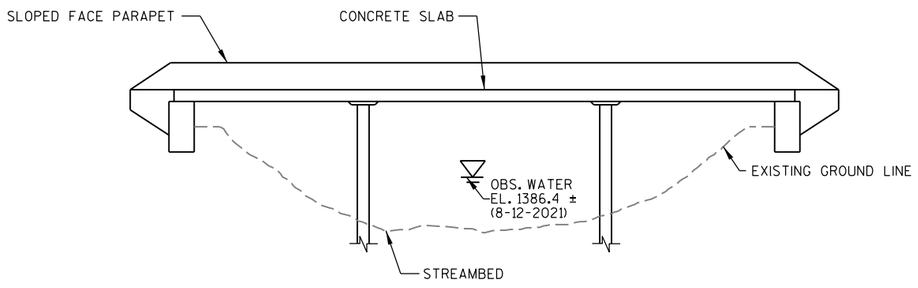


◯ — INDICATES WING NUMBER

EXISTING APPROACH GUARDRAIL ATTACHED TO ALL FOUR CORNERS OF THE BRIDGE PARAPETS, TO REMAIN.

PLAN

(REHAB - CONCRETE OVERLAY ON EXISTING THREE SPAN FLAT SLAB)



ELEVATION

(LOOKING NORTH)

DESIGN DATA

LIVE LOAD:

DESIGN LOADING	HS20
INVENTORY RATING	HS-24
OPERATING RATING	HS-41
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV)	250 KIPS

TRAFFIC DATA:

A.A.D.T. (2026) = 610
A.A.D.T. (2046) = 610
DESIGN SPEED = 55 MPH

MATERIAL PROPERTIES:

CONCRETE MASONRY - OVERLAY DECKS — f'c = 4,000 P.S.I.

LIST OF DRAWINGS

1. REHAB GENERAL PLAN
2. TYPICAL SECTION, QUANTITIES & NOTES

WISCONSIN PROFESSIONAL ENGINEER
JULIA I. ZEHNER
E-50015
PRAIRIE DU SAC
WI

11.21.2024

DESIGN CONTACT:
JULIA ZEHNER
(608) 355-8878

BRIDGE OFFICE CONTACT:
AARON BONK
(608) 261-0261

NO.	DATE	REVISION	BY

MSA
ENGINEERING | ARCHITECTURE | SURVEYING
FUNDING | PLANNING | ENVIRONMENTAL
1702 Pankratz St Madison, WI 53704
(608) 242-7779 www.msa-ps.com

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED SDR 02/18/25
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-57-25

STH 77 OVER TEAL RIVER

COUNTY	TOWN ~~/CITY/VILLAGE~~
SAWYER	SPIDER LAKE

DESIGN SPEC.
REHABILITATION - N/A

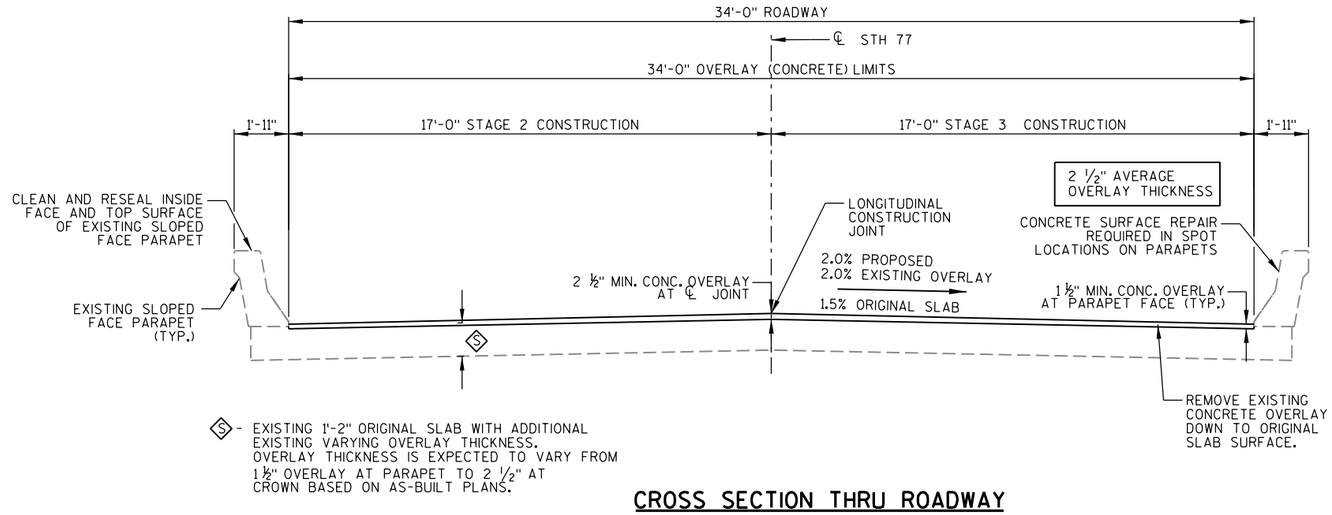
DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
ANC	JZ	CAR	JZ

REHAB GENERAL PLAN

SHEET 1 OF 2
62

FILE= 93673_B-57-25_01.DGN

STATE PROJECT NUMBER
8520-02-71



CROSS SECTION THRU ROADWAY

(LOOKING EAST)

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

SEE ROAD PLANS FOR TRAFFIC CONTROL.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS. ORIGINAL 1978 PLANS, 1997 OVERLAY PLANS, AND 2023 INFRARED SCAN RESULTS, ARE AVAILABLE FROM THE WISDOT HSI DATABASE.

THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE NOT SHOWN.

IMPROVEMENTS INCLUDE A CONCRETE DECK OVERLAY OF THE BRIDGE SLAB, DECK PREPARATION, FULL DEPTH DECK REPAIR, SPOT PARAPET SURFACE REPAIRS AND RESEALING, GROUTING AND RIPRAP HEAVY AT THE ABUTMENTS.

THIS PROJECT WILL REHABILITATE THE EXISTING STRUCTURE, B-57-25, A THREE SPAN, 62.5' CONCRETE SLAB BRIDGE SET ON CONCRETE SILL ABUTMENTS AND CIP PILE BENT PIERS.

PREPARATION DECKS TYPE 1, PREPARATION DECKS TYPE 2 AND FULL-DEPTH DECK REPAIR AREAS ARE BASED ON 2023 DECK SCANS AND AS DETERMINED BY THE ENGINEER. DECK PREPARATION AND FULL-DEPTH DECK REPAIRS SHALL BE FILLED WITH "CONCRETE MASONRY OVERLAY DECKS".

APPLY PIGMENTED SURFACE SEALER TO THE TOP AND ROADWAY FACE OF THE PARAPET. SURFACE PREPARATION IS INCLUDED IN THE BID ITEM "PIGMENTED SURFACE SEALER RESEAL."

PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE ENTIRE TOP SURFACE OF THE NEW CONCRETE OVERLAY.

SEAL OVERLAY CONSTRUCTION JOINTS ACCORDING TO SECTION 502.3.13.1 OF THE STANDARD SPECIFICATIONS. COST INCIDENTAL TO BID ITEM "CONCRETE MASONRY OVERLAY DECKS".

THE AVERAGE OVERLAY THICKNESS IS BASED ON THE CALCULATED MINIMUM OVERLAY THICKNESS PLUS ½-INCH TO ACCOUNT FOR VARIATIONS IN THE DECK SURFACE.

PROFILE GRADE LINE SHALL BE DETERMINED IN THE FIELD BASED ON A MINIMUM OVERLAY THICKNESS OF 1½" AT THE PARAPETS AND A MINIMUM OVERLAY THICKNESS OF 2 ½" AT THE CROWN PLACED ABOVE THE DECK SURFACE AFTER SURFACE PREPARATION. THE MINIMUM OVERLAY THICKNESS ACCOUNTS FOR THE CROSS SLOPE CORRECTION FROM THE ORIGINAL CROSS SLOPE OF 1.5% TO THE PROPOSED CROSS SLOPE OF 2.0%. EXPECTED AVERAGE OVERLAY THICKNESS IS 2 ½". IF EXPECTED AVERAGE OVERLAY THICKNESS IS EXCEEDED BY MORE THAN ½", CONTACT THE STRUCTURES DESIGN SECTION.

ANY EXCAVATION REQUIRED TO COMPLETE THE OVERLAY AT THE ABUTMENTS TO BE CONSIDERED INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY OVERLAY DECKS".

THE EXISTING CONCRETE OVERLAY SHALL BE REMOVED FROM THE BRIDGE UNDER THE BID ITEM "REMOVING CONCRETE MASONRY DECK OVERLAY B-57-25".

TOTAL ESTIMATED QUANTITIES

	ITEM NUMBER	BID ITEM	UNIT	WEST ABUT.	EAST ABUT.	SUPER	TOTAL
	203.0335.01	DEBRIS CONTANMENT OVER WATERWAY B-57-25	EACH	-	-	1	1
	209.0200.S	BACKFILL CONTROLLED LOW STRENGTH	CY	3	2	-	5
	502.3200	PROTECTIVE SURFACE TREATMENT	SY	-	-	232	232
	502.3205	PIGMENTED SURFACE SEALER RESEAL	SY	-	-	56	56
*	509.0301	PREPARATION DECKS TYPE 1	SY	-	-	65	65
*	509.0302	PREPARATION DECKS TYPE 2	SY	-	-	26	26
	509.0505.S	CLEANING DECKS TO REAPPLY CONCRETE MASONRY OVERLAY	SY	-	-	232	232
**	509.1500	CONCRETE SURFACE REPAIR	SF	-	-	70	70
*	509.2000	FULL-DEPTH DECK REPAIR	SY	-	-	7	7
	509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	-	-	21	21
	509.9005.S.01	REMOVING CONCRETE MASONRY DECK OVERLAY B-57-25	SY	-	-	232	232
	606.0300	RIPRAP HEAVY	CY	5	5	-	10
		NON-BID ITEMS					

* QUANTITY LISTED IS AN ESTIMATE. CONTRACTOR SHALL COORDINATE THE FIELD IDENTIFICATION OF ALL DECK REPAIR LOCATIONS WITH THE ENGINEER.

** CONCRETE SURFACE REPAIR SHALL BE USED FOR NEEDED REPAIRS. LOCATIONS AND LIMITS OF REPAIR SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-57-25

DRAWN BY CAR | PLANS CK'D. JZ

TYPICAL SECTION, QUANTITIES & NOTES

SHEET 2 OF 2
63

FILE= 93673_B-57-25_02.DGN

93673_B-57-25_02.dgn 11/21/2024 9:52:10 AM crooyakkers

Wisconsin Department of Transportation

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