

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 = 440

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

ELLSWORTH - DURAND

PIERCE/PEPIN COUNTY LINE TO COUNTY P

USH 10

PEPIN COUNTY

STATE PROJECT NUMBER
1530-05-73

ELLSWORTH - DURAND

DURAND STREET TO 950' EAST OF DURAND STREET

USH 10

PEPIN COUNTY

STATE PROJECT NUMBER
1530-05-83

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1530-05-73	WISC 2024077	1
1530-05-83	WISC 2024078	1

PROJECT ID:
1530-05-73

WITH: 1530-05-83

COUNTY:
PEPIN

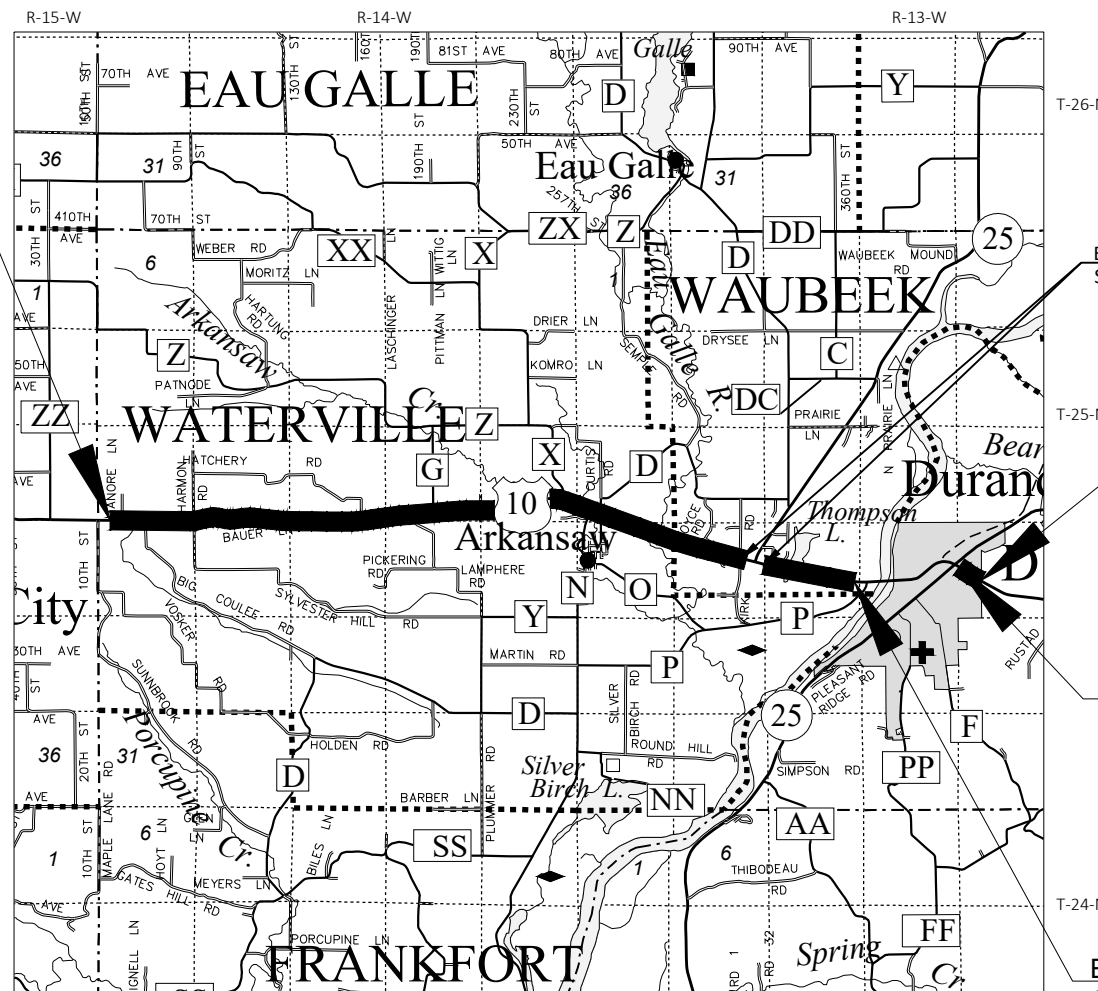


BEGIN PROJECT 1530-05-73
STA 15+98.10
Y= 283870.503
X= 574636.640

DESIGN DESIGNATION	1530-05-73	DESIGN DESIGNATION	1530-05-83
A.A.D.T.	2024 = 6,700	A.A.D.T.	2024 = 2,000
A.A.D.T.	2044 = 7,580	A.A.D.T.	2044 = 2,900
D.H.V.	= 670	D.H.V.	= 280
D.D.	= 50/50	D.D.	= 50/50
T.	= 14.6%	T.	= 27.6%
DESIGN SPEED	= 60 MPH	DESIGN SPEED	= 45 MPH
ESALS	= 1,710,000	ESALS	= 1,180,400

CONVENTIONAL SYMBOLS

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



TOTAL NET LENGTH OF CENTERLINE = 7.612 MI PROJECT I.D. 1530-05-73
TOTAL NET LENGTH OF CENTERLINE = 0.193 MI PROJECT I.D. 1530-05-83

EXCEPTION TO CL LENGTH
STA 376+00 - STA 390+00

END PROJECT 1530-05-83
STA 515+26.61

BEGIN PROJECT 1530-05-83
STA 505+05.46
Y= 281218.765
X= 621637.904

END PROJECT 1530-05-73
STA 431+91.60

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

ORIGINAL PLANS PREPARED BY



DATE: 7/12/2023

Tammy Tucker
(Professional Engineer Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY	
Surveyor	CBS SQUARED, INC.
Designer	CBS SQUARED, INC.
Project Manager	NW REGION
Regional Examiner	JENNIFER OLDENBURG
Regional Supervisor	JAMES KOENIG

APPROVED FOR THE DEPARTMENT
DATE: 7/13/2023 **JAMES KOENIG**
(Signature)

E

GENERAL NOTES

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

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

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

DISTURBED AREAS WITHIN THE RIGHT OF WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS, SHALL BE FERTILIZED, SEEDED AND E-MAT AS SPECIFIED IN PLANS.

WHEN PORTIONS OF EXISTING ASPHALTIC SURFACES ARE TO BE REMOVED TO ACCOMMODATE NEW CONSTRUCTION, THE LINE OF SUCH REMOVAL SHALL BE NEATLY DELINEATED WITH A SAW CUT JOINT THROUGH THE ASPHALTIC SURFACE SO THAT REMOVAL OF THE ASPHALT SHALL BE ACCOMPLISHED WITHOUT DAMAGE TO REMAINING PORTIONS. THE LOCATION OF SAW JOINTS AND THE AMOUNT REMOVED AT SIDE ROADS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.

CROSS SLOPES AS SHOWN ON THE TYPICAL SECTION WILL VARY AT THE INTERSECTIONS.

APPLY TACK COAT AT A RATE OF 0.07 GAL/SY TO MILLED PAVEMENT SURFACES AND 0.05 GAL/SY BETWEEN LAYERS OF HMA PAVEMENT.

HMA PAVEMENT WEIGHT CALCULATIONS ARE BASED ON 112 LB/SY/IN.

THE CONTRACTOR'S PAVING OPERATIONS SHALL BE CONSISTENT WITH THE PLAN TYPICAL SECTIONS AND CONSTRUCTED TO PREVENT HMA LONGITUDINAL JOINTS FROM BEING LOCATED WITHIN A DRIVING, TURNING, PASSING OR PARKING LANE.

STANDARD ABBREVIATIONS

Table with 2 columns: Abbreviation and Full Name. Includes terms like AC (ACRE), AGG (AGGREGATE), INL (INLET), INV (INVERT), etc.

UTILITY CONTACTS

PROJECT ID 1530-05-73

ELECTRIC

PIERCE PEPIN COOP
BRAD RISTOW
W7725 US HWY 10
P.O. BOX 420
ELLSWORTH, WI 54011
(715) 273-2473
(715) 307-1904 - MOBILE
BRISTOW@PIERCEPEPIN.COOP

XCEL ENERGY
MEGAN BOLDIG
320 HELLER RD
MENOMONIE, WI 54751
(715) 232-7412
(715) 308-6211 - MOBILE
MEGAN.M.BOLDIG@XCELENERGY.COM

DAIRYLAND POWER COOP
MICHAEL LYDON
3200 EAST AVE S
P.O. BOX 817
LA CROSSE, WI 54602-0817
(608) 787-1381
MICHAEL.LYDON@DAIRYLANDPOWER.COM

GAS/PETROLEUM

WE ENERGIES
STEVEN CHAVERS
104 W SOUTH ST
RICE LAKE, WI54868
(715) 234-9605
(715) 213-4327 - MOBILE
STEVEN.CHAVERS@WE-ENERGIES.COM

NORTHERN NATURAL GAS COMPANY
MITCH KLEIST
1120 CENTRE POINTE DR STE 400
MENDOTA HEIGHTS, MN 55120
(651) 456-1766
(507) 340-0081 - MOBILE
MITCHELL.KLEIST@NNGCO.COM

COMMUNICATIONS

NTEC
MATT HOYT
318 3RD AVE W
DURAND, WI 54736
(715) 672-4204
(715) 495-7440 - MOBILE
MATT@NTEC.NET

CHIPPEWA VALLEY CABLE, INC
MATT HOYT
318 3RD AVE W
DURAND, WI 54736
(715) 672-4204
(715) 495-7440 - MOBILE
MATT@NTEC.NET

ELECTRICITY TRANSMISSION

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

PROJECT ID 1530-05-83

ELECTRIC

XCEL ENERGY - ELECTRICITY
MEGAN BOLDIG
320 HELLER RD
MENOMONIE, WI 54751
(715) 232-7412
(715) 308-6211 - MOBILE
MEGAN.M.BOLDIG@XCELENERGY.COM

GAS/PETROLEUM

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STEVEN CHAVERS
104 W SOUTH ST
RICE LAKE, WI 54868
(715) 234-9605
(715) 213-4327 - MOBILE
STEVEN.CHAVERS@WE-ENERGIES.COM

COMMUNICATIONS

NTEC - COMMUNICATION LINE
MATT HOYT
318 3RD AVE W
DURAND, WI 54736
(715) 672-4204
(715) 495-7440 - MOBILE
MATT@NTEC.NET

RUNOFF COEFFICIENT TABLE

Table with columns for Land Use, Hydrologic Soil Group (A, B, C, D), and Slope Range (Percent). Includes rows for Land Use, Row Crops, Median Strip-Turf, Side Slope-Turf, and Pavement types.

TOTAL PROJECT AREA = 172.24 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 3.55 ACRES

AREA CONTACTS

WISDOT CONTACT

LANCE WILLISTON
WISDOT NORTHWEST REGION
718 W CLAIREMONT AVENUE
EAU CLAIRE, WI 53701
(608) 663-1218
LWILLISTON@KLENGINEERING.COM

DESIGN CONTACT

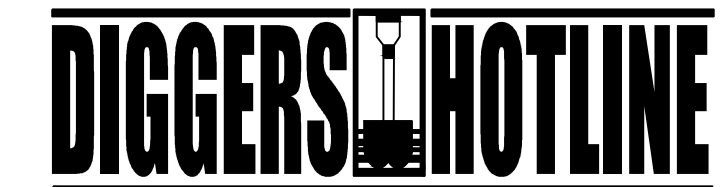
TAMMY TUCKER
CBS SQUARED, INC.
2500 E. ENTERPRISE AVE, SUITE A
APPLETON, WI 54913
(262) 613-8999
TTUCKER@CBSQUAREDINC.COM

WISCONSIN DNR CONTACT

AMY LESIK
DNR NORTHWEST REGION
1300 WEST CLAIREMONT AVE
EAU CLAIRE, WI 54701
(715)836-6571
(715)495-1903
AMYL.LESIK@WISCONSIN.GOV

ORDER OF SECTION 2 SHEETS

- PROJECT OVERVIEW
TYPICAL SECTIONS
CONSTRUCTION DETAILS
GUARDRAIL DETAILS
PLAN DETAILS - CULVERT REPLACEMENTS
PAVEMENT MARKING
ADVANCED WARNING SIGNING
TRAFFIC CONTROL AND STAGING
DETOUR



Dial 811 or (800)242-8511

www.DiggersHotline.com



PROJECT NO: 1530-05-73/1530-05-83

HWY: USH 10

COUNTY: PEPIN

PROJECT OVERVIEW

SHEET

E

FILE NAME : O:\PDS\C3D\15300503\SHEETSPLAN\020201-PO.DWG
LAYOUT NAME - 01

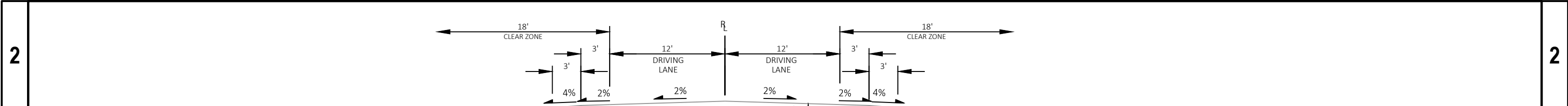
PLOT DATE : 6/1/2023 9:55 AM

PLOT BY : CORY IHDE

PLOT NAME :

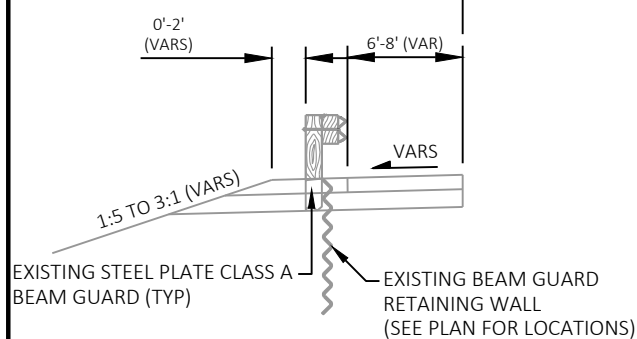
PLOT SCALE : 1 IN:1000 FT

WISDOT/CADDs SHEET 42



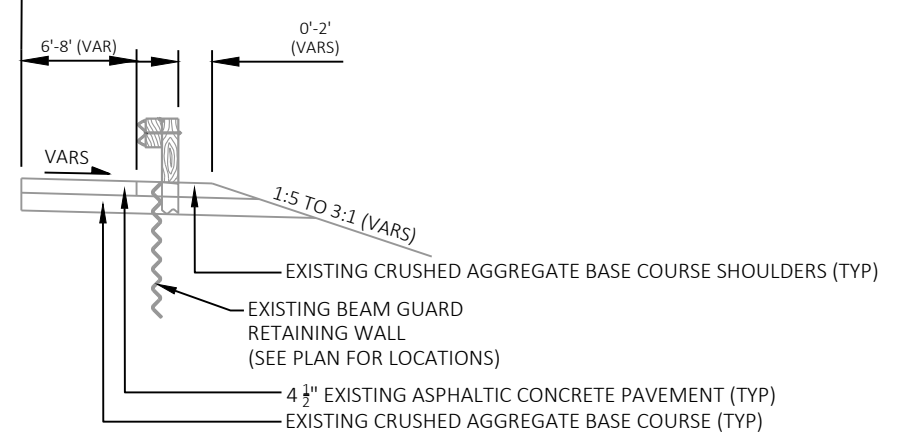
TYPICAL EXISTING SECTION
 USH 10
 STA 15+98.10 - 376+00
 10TH ST (WEST COUNTY LINE) TO STH 25

- EXISTING CRUSHED AGGREGATE BASE COURSE SHOULDERS (TYP)
- EXISTING CHIP SEAL
- 4 1/2" EXISTING ASPHALTIC CONCRETE PAVEMENT
- 6" - 18" (VARIES) EXISTING PULVERIZED BASE COURSE
- EXISTING CRUSHED AGGREGATE BASE COURSE



TYPICAL EXISTING PARTIAL SECTION - GUARDRAIL LT

- USH 10
- STA 66+92 LT TO STA 69+95 LT
 - STA 91+40 LT TO STA 94+14 LT
 - STA 203+85 LT TO STA 205+62 LT
 - STA 225+20 LT TO STA 226+73 LT
 - STA 237+41 LT TO STA 240+84 LT
 - STA 258+72 LT TO STA 264+86 LT
 - STA 266+38 LT TO STA 267+07 LT
 - STA 279+14 LT TO STA 281+93 LT
 - STA 320+07 LT TO STA 320+77 LT
 - STA 322+34 LT TO STA 323+29 LT
 - STA 323+56 LT TO STA 324+00 LT
 - STA 325+92 LT TO STA 326+60 LT

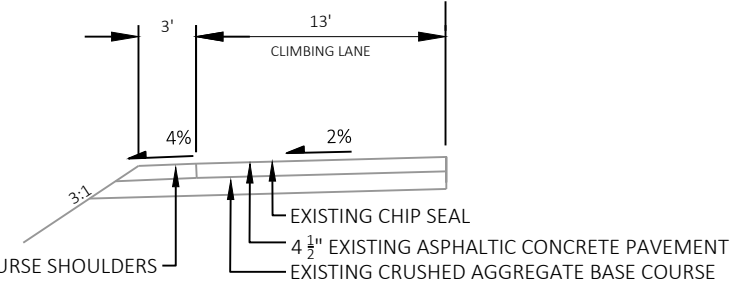


TYPICAL EXISTING PARTIAL SECTION - GUARDRAIL RT

- USH 10
- STA 67+80 RT TO STA 71+19 RT
 - STA 73+20 RT TO STA 78+25 RT
 - STA 80+58 RT TO STA 86+03 RT
 - STA 89+75 RT TO STA 114+15 RT *
 - STA 116+08 RT TO STA 122+60 RT
 - STA 224+65 RT TO STA 226+44 RT
 - STA 236+89 RT TO STA 240+03 RT
 - STA 257+26 RT TO STA 264+89 RT **
 - STA 266+37 RT TO STA 267+07 RT
 - STA 279+15 RT TO STA 282+43 RT
 - STA 320+07 RT TO STA 320+77 RT
 - STA 322+34 RT TO STA 324+00 RT
 - STA 325+91 RT TO STA 326+60 RT
 - STA 340+07 RT TO STA 344+96 RT

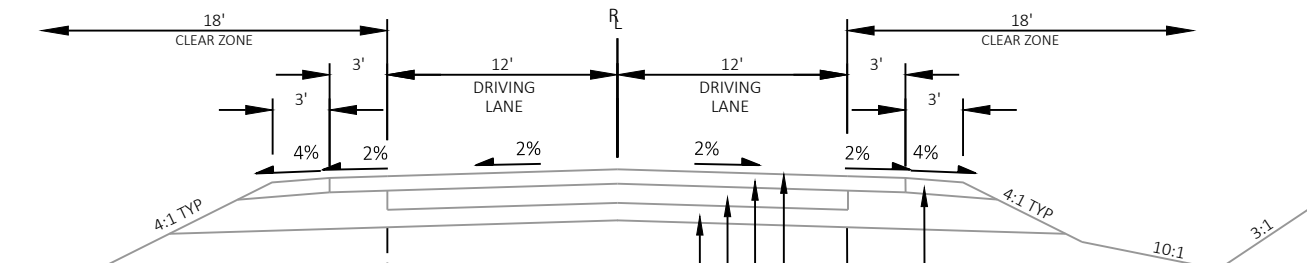
*EXISTING SHOULDER WIDTH VARIES
 4' TO 6' STA 92+50 TO STA 105+00

**EXISTING SHOULDER WIDTH VARIES
 4' TO 6' STA 259+00 TO STA 263+00



TYPICAL EXISTING PARTIAL SECTION - CLIMBING LANE

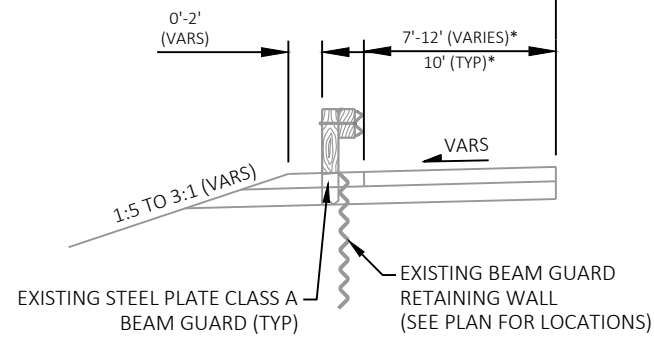
- USH 10
- STA 34+86 - 115+49 LT
 - EAST OF MANORE LANE TO BAUER LANE



TYPICAL EXISTING SECTION

USH 10
STA 390+00.00 - 431+91.60
STH 25 TO CTH P

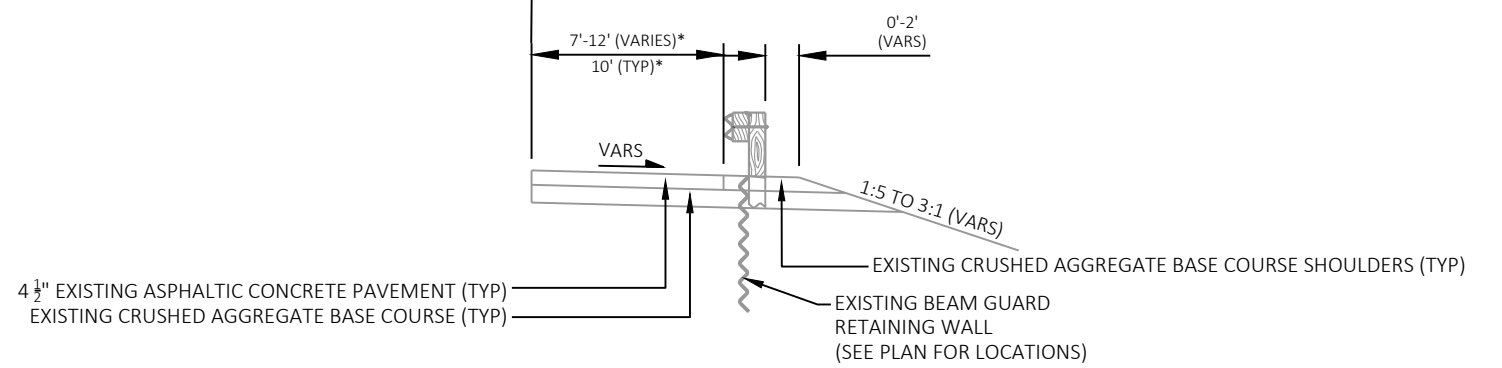
- EXISTING CRUSHED AGGREGATE BASE COURSE SHOULDERS (TYP)
- EXISTING CHIP SEAL
- 4 1/2" EXISTING ASPHALTIC CONCRETE PAVEMENT
- 6" - 18" (VARIES) EXISTING PULVERIZED BASE COURSE
- EXISTING CRUSHED AGGREGATE BASE COURSE



TYPICAL EXISTING PARTIAL SECTION - GUARDRAIL LT

USH 10
STA 397+56 LT TO STA 406+46 LT*
STA 409+17 LT TO STA 410+88 LT
STA 421+96 LT TO STA 422+66 LT
STA 424+71 LT TO STA 425+42 LT

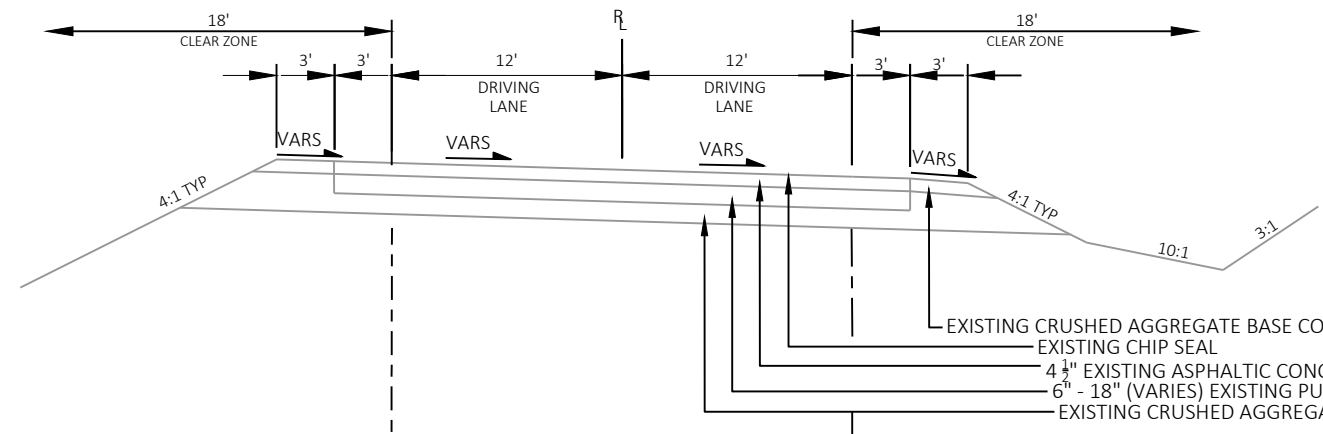
*7' SHOULDER WIDTH (TYP) STA 397+95 TO STA 404+20
*SHOULDER WIDTH VARIES 7' TO 10' STA 404+20 TO STA 406+46



TYPICAL EXISTING PARTIAL SECTION - GUARDRAIL RT

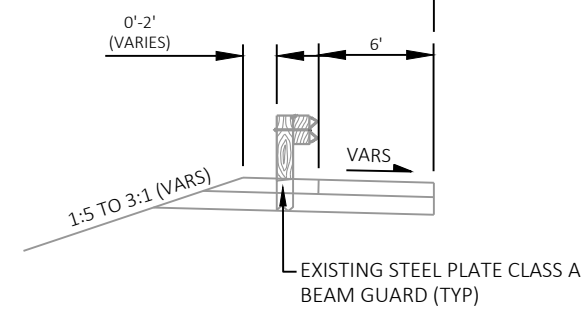
USH 10
STA 397+69 RT TO STA 406+46 RT*
STA 409+18 RT TO STA 411+26 RT
STA 421+98 RT TO STA 422+67 RT
STA 424+72 RT TO STA 426+43 RT

*SHOULDER WIDTH VARIES 7' TO 8' STA 398+33 TO STA 399+70
*8' SHOULDER WIDTH (TYP) STA 399+70 TO STA 404+58
*SHOULDER WIDTH VARIES 8' TO 10' STA 404+58 TO STA 406+46

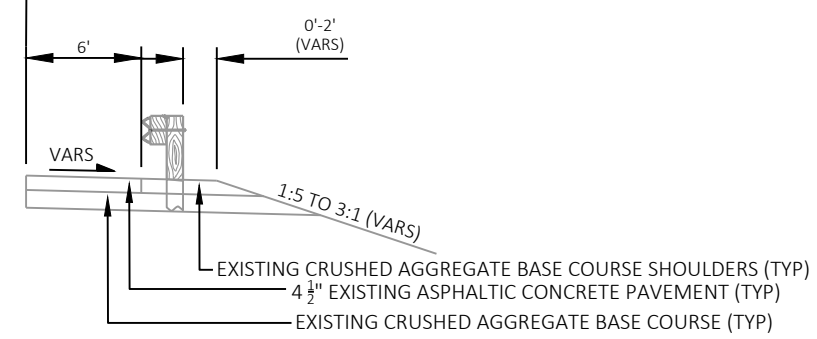


- EXISTING CRUSHED AGGREGATE BASE COURSE SHOULDERS (TYP)
- EXISTING CHIP SEAL
- 4 1/2" EXISTING ASPHALTIC CONCRETE PAVEMENT
- 6" - 18" (VARIES) EXISTING PULVERIZED BASE COURSE
- EXISTING CRUSHED AGGREGATE BASE COURSE

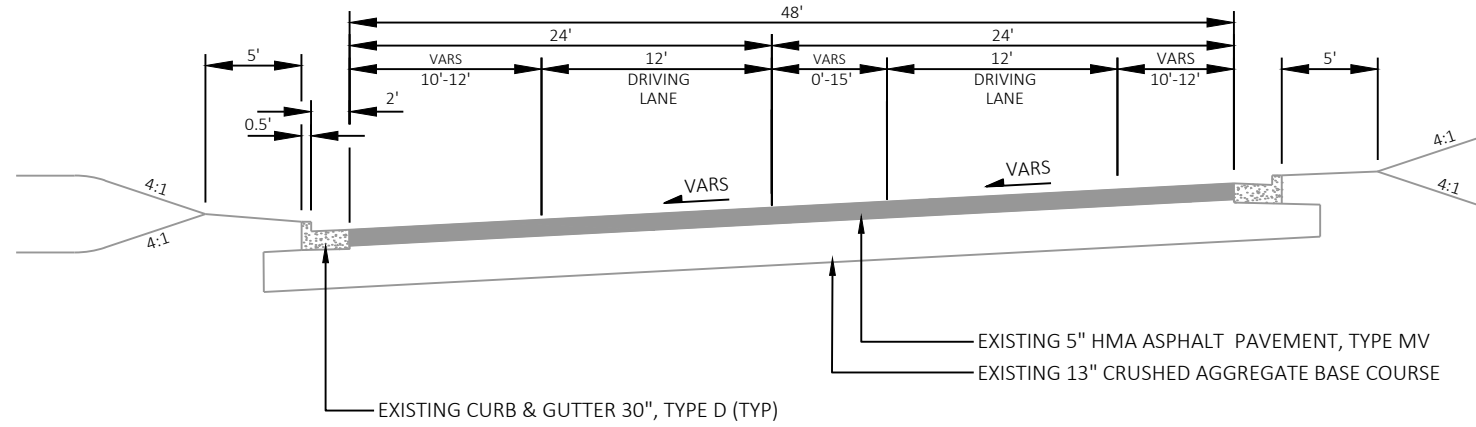
TYPICAL EXISTING SUPER ELEVATED SECTION
 USH 10
 10TH ST (WEST COUNTY LINE) TO CTH P



TYPICAL EXISTING PARTIAL SECTION - GUARDRAIL LT
 USH 10
 SEE GUARDRAIL DETAILS FOR SPECIFIC LOCATIONS

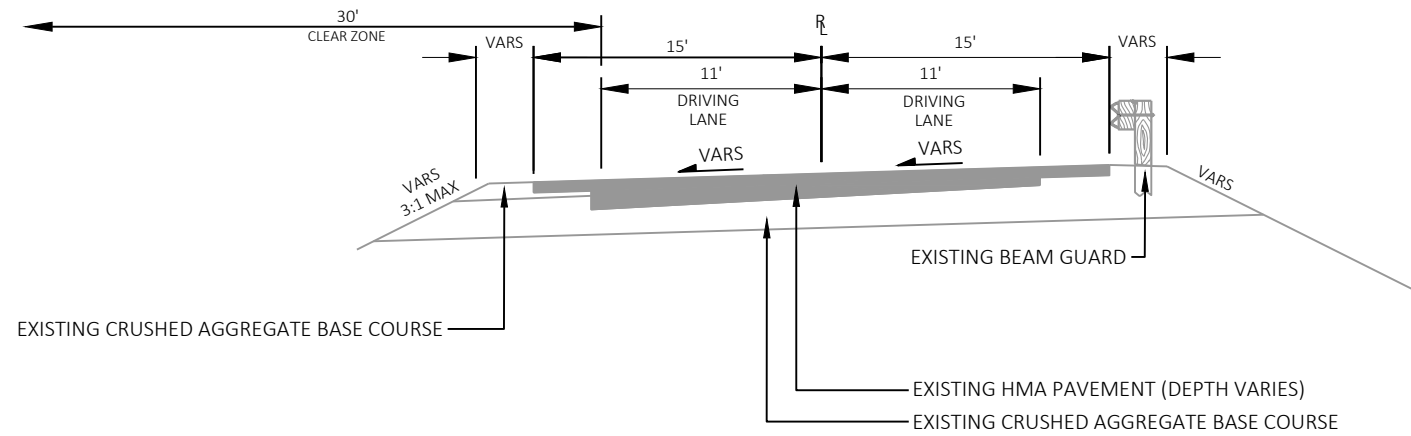


TYPICAL EXISTING PARTIAL SECTION - GUARDRAIL RT
 USH 10
 SEE GUARDRAIL DETAILS FOR SPECIFIC LOCATIONS



EXISTING URBAN TYPICAL SECTION

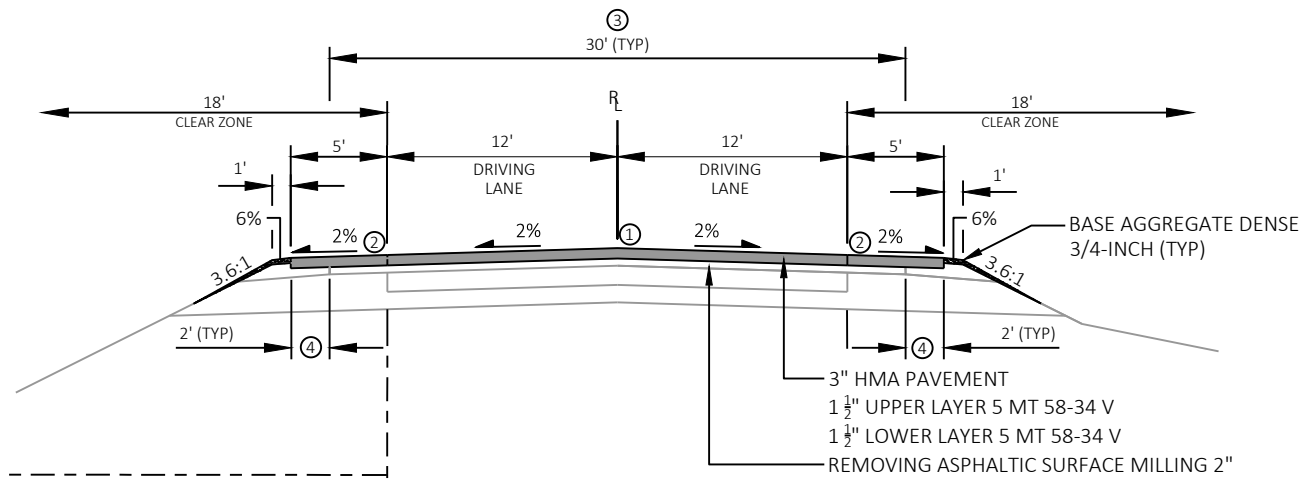
USH 10
STA 505+05.46 TO STA 512+32.45



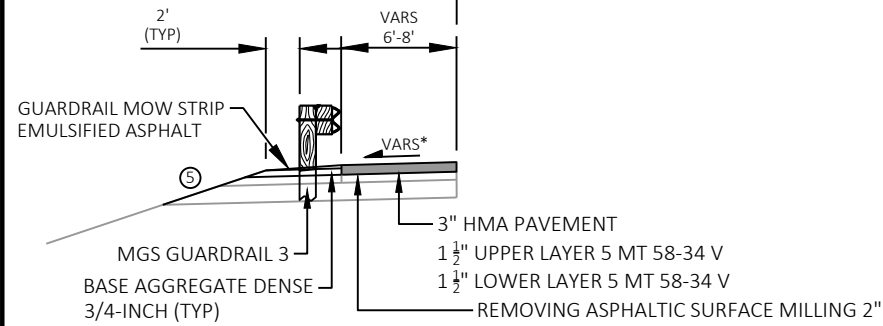
EXISTING RURAL TYPICAL SECTION

USH 10
STA 512+32.45 TO STA 515+26.61

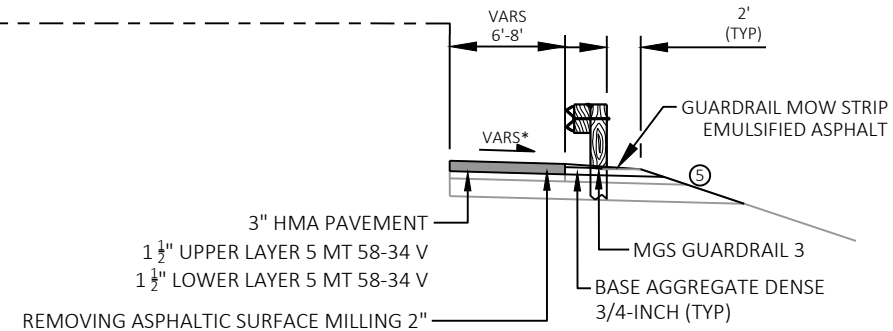
- LEGEND:
- ① ASPHALTIC CENTERLINE RUMBLE STRIPS 2-LANE RURAL
 - ② ASPHALTIC RUMBLE STRIPS, SHOULDER
 - ③ "PREPARING FOUNDATION FOR ASPHALTIC PAVING" PAY LIMITS
 - ④ "PREPARING FOUNDATION FOR ASPHALTIC SHOULDER" PAY LIMITS
 - ⑤ SEE CROSS SECTIONS FOR SLOPE GRADING.
- ▨ REMOVING ASPHALTIC SURFACE MILLING (VARIABLE DEPTH)
- * SHOULDER SLOPE VARIES AT GUARDRAIL LOCATIONS. 6% MAX. SEE CROSS SECTIONS.



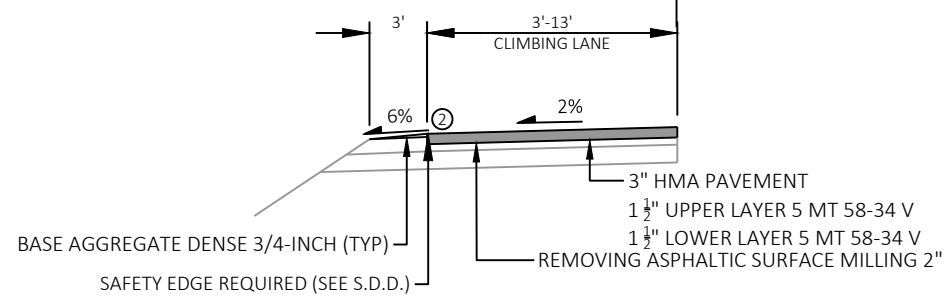
TYPICAL FINISHED SECTION
 USH 10
 STA 15+98.10 - 87+95.00
 STA 126+38.00 - 255+25.00
 STA 266+19.17 - 317+00.00
 STA 325+79.22 - 376+00.00
 10TH ST (WEST COUNTY LINE) TO STH 25



TYPICAL FINISHED PARTIAL SECTION - GUARDRAIL LT
 USH 10
 SEE GUARDRAIL DETAILS FOR SPECIFIC LOCATIONS

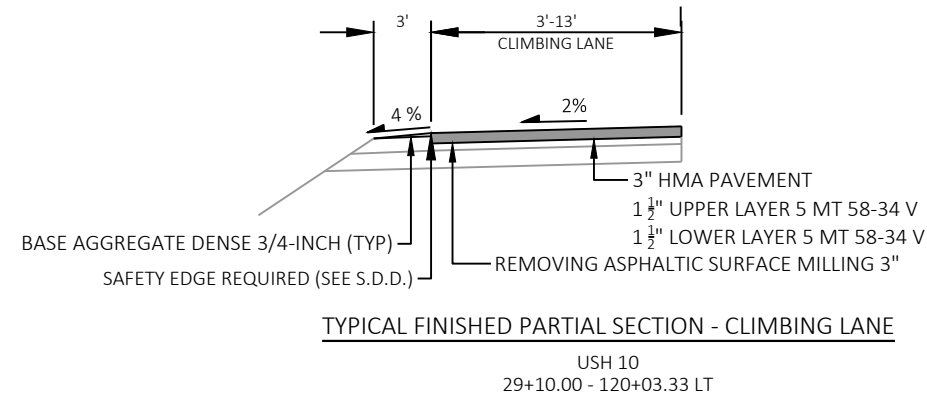
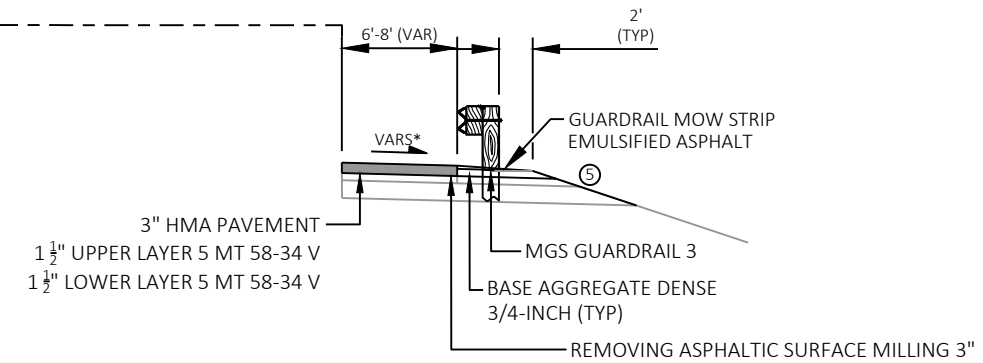
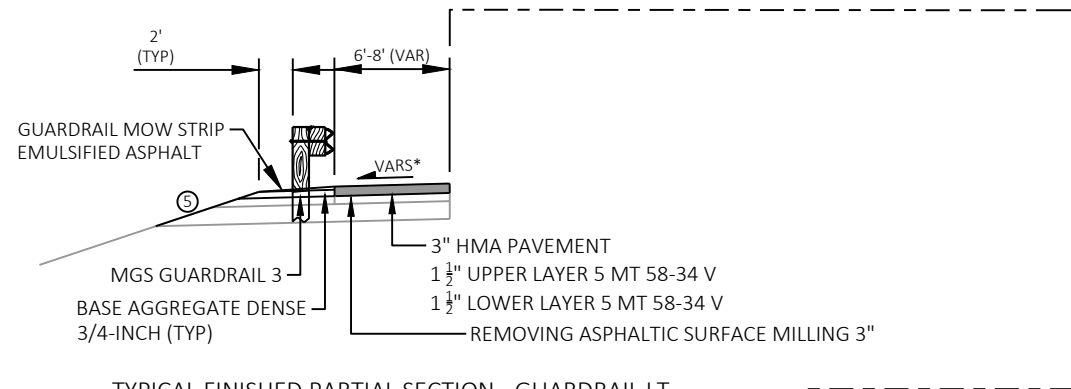
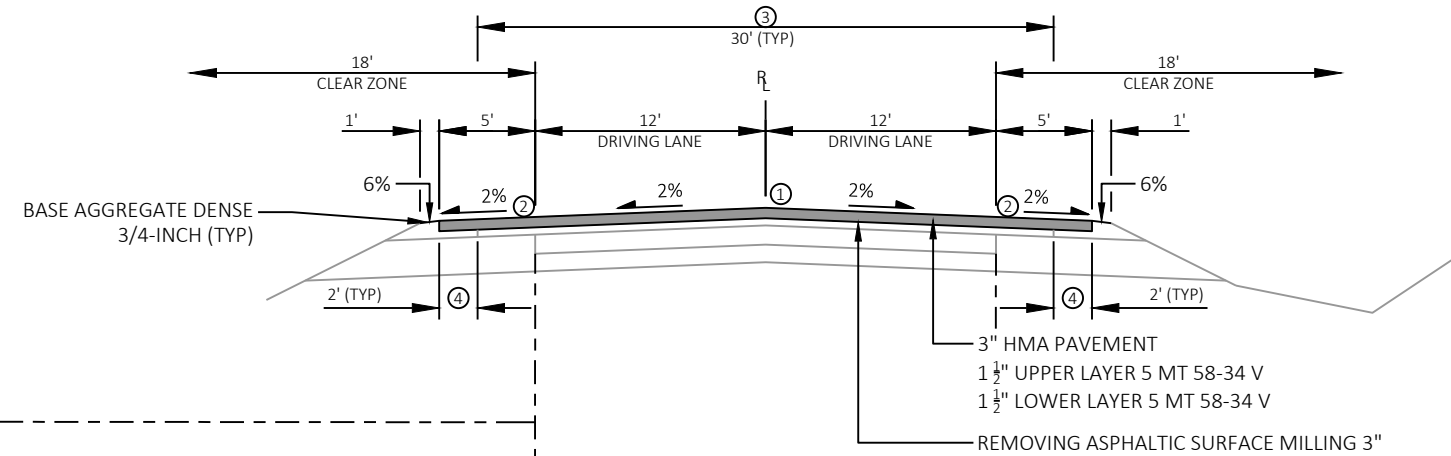


TYPICAL FINISHED PARTIAL SECTION - GUARDRAIL RT
 USH 10
 SEE GUARDRAIL DETAILS FOR SPECIFIC LOCATIONS

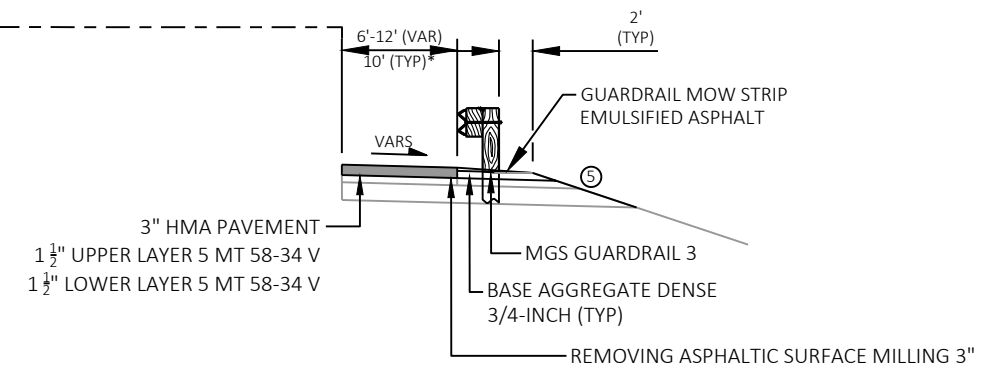
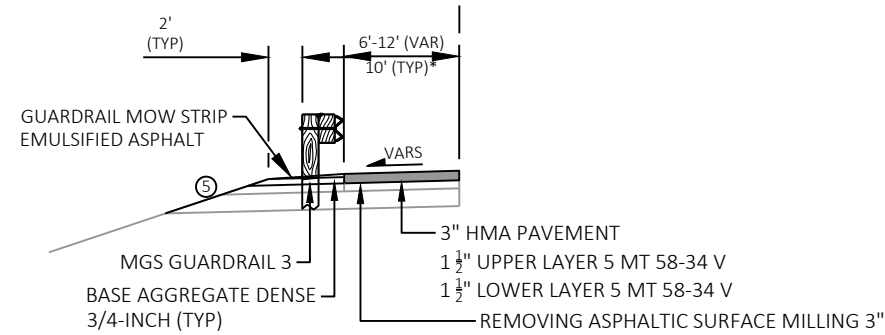
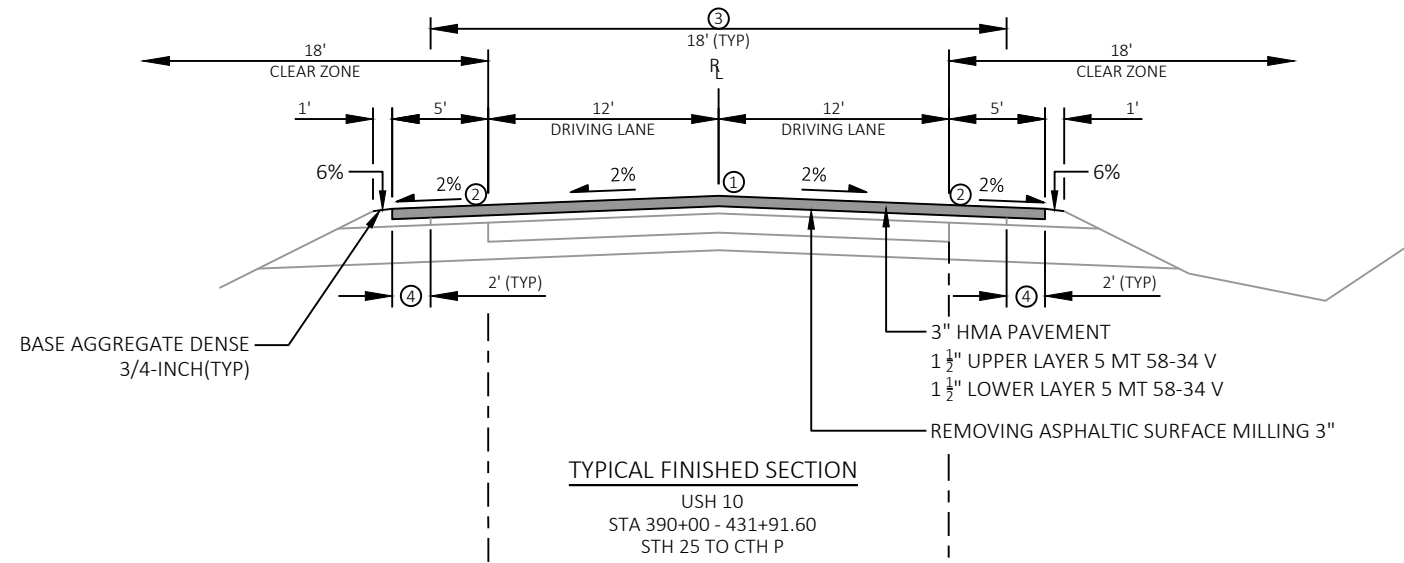


TYPICAL FINISHED PARTIAL SECTION - CLIMBING LANE
 USH 10
 STA 29+10.00 - 87+95.00 LT
 EAST OF MANORE LANE TO BAUER LANE

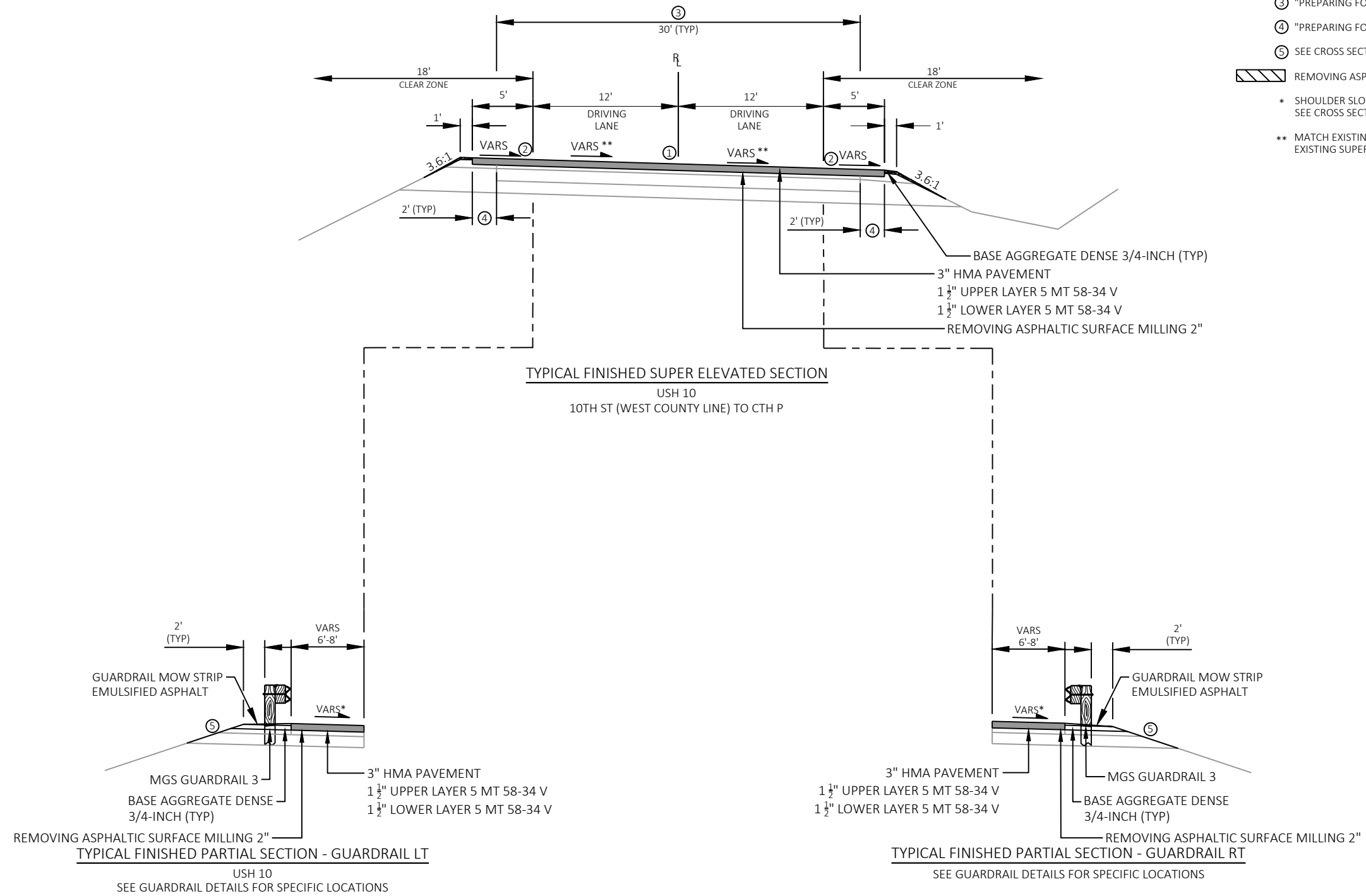
- LEGEND:
- ① ASPHALTIC CENTERLINE RUMBLE STRIPS 2-LANE RURAL
 - ② ASPHALTIC RUMBLE STRIPS, SHOULDER
 - ③ "PREPARING FOUNDATION FOR ASPHALTIC PAVING" PAY LIMITS
 - ④ "PREPARING FOUNDATION FOR ASPHALTIC SHOULDER" PAY LIMITS
 - ⑤ SEE CROSS SECTIONS FOR SLOPE GRADING.
- ▨ REMOVING ASPHALTIC SURFACE MILLING (VARIABLE DEPTH)
- * SHOULDER SLOPE VARIES AT GUARDRAIL LOCATIONS. 6% MAX. SEE CROSS SECTIONS.



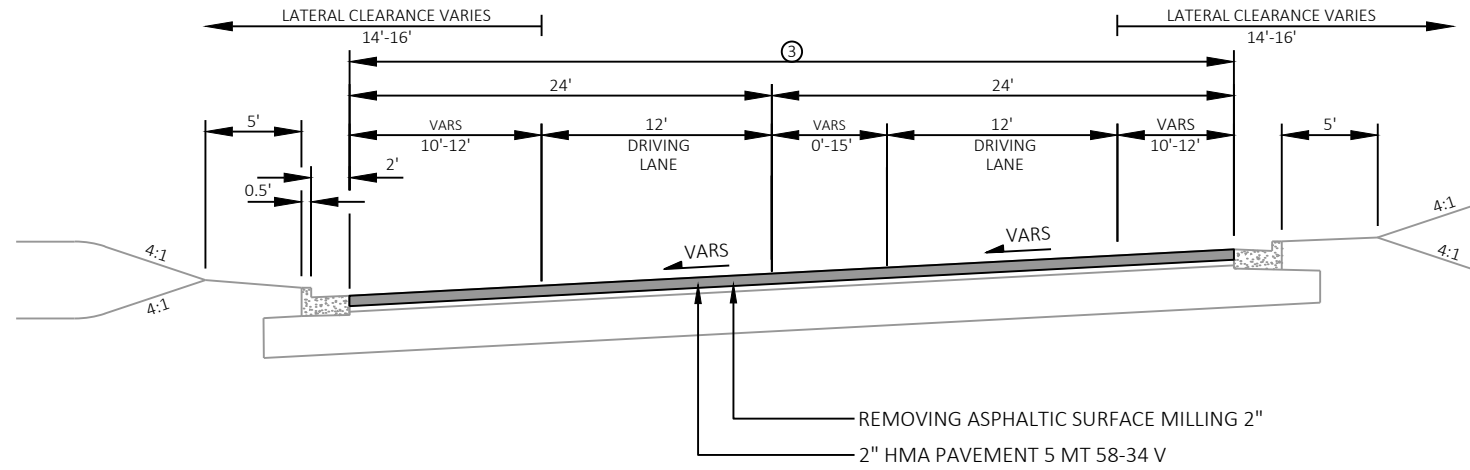
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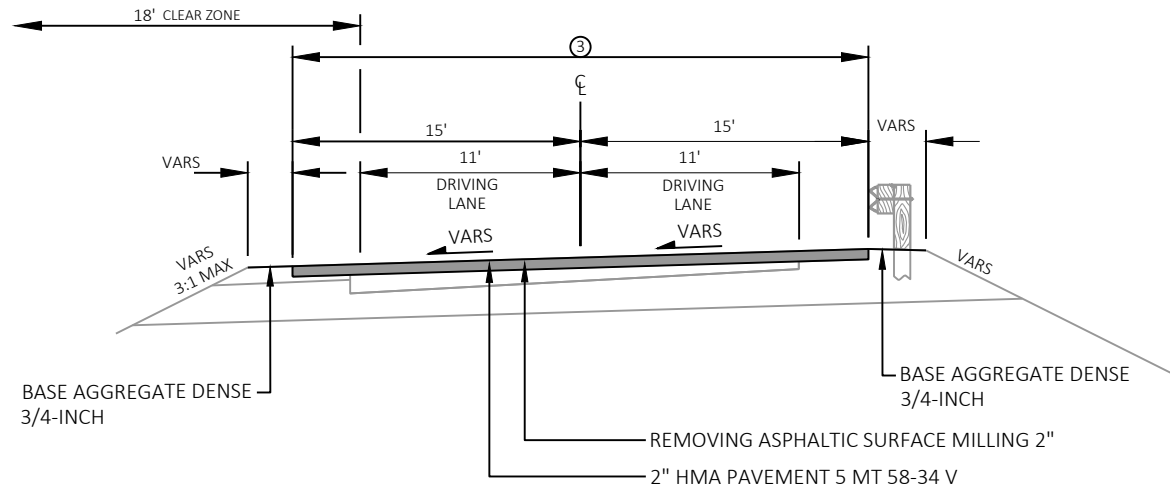
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 - ④ "PREPARING FOUNDATION FOR ASPHALTIC SHOULDER" PAY LIMITS
 - ⑤ SEE CROSS SECTIONS FOR SLOPE GRADING.
- ▨ REMOVING ASPHALTIC SURFACE MILLING (VARIABLE DEPTH)
- * SHOULDER SLOPE VARIES AT GUARDRAIL LOCATIONS. SEE CROSS SECTIONS.
- ** MATCH EXISTING LANE SUPERELEVATION. SEE PLANS FOR EXISTING SUPERELEVATION RATE.



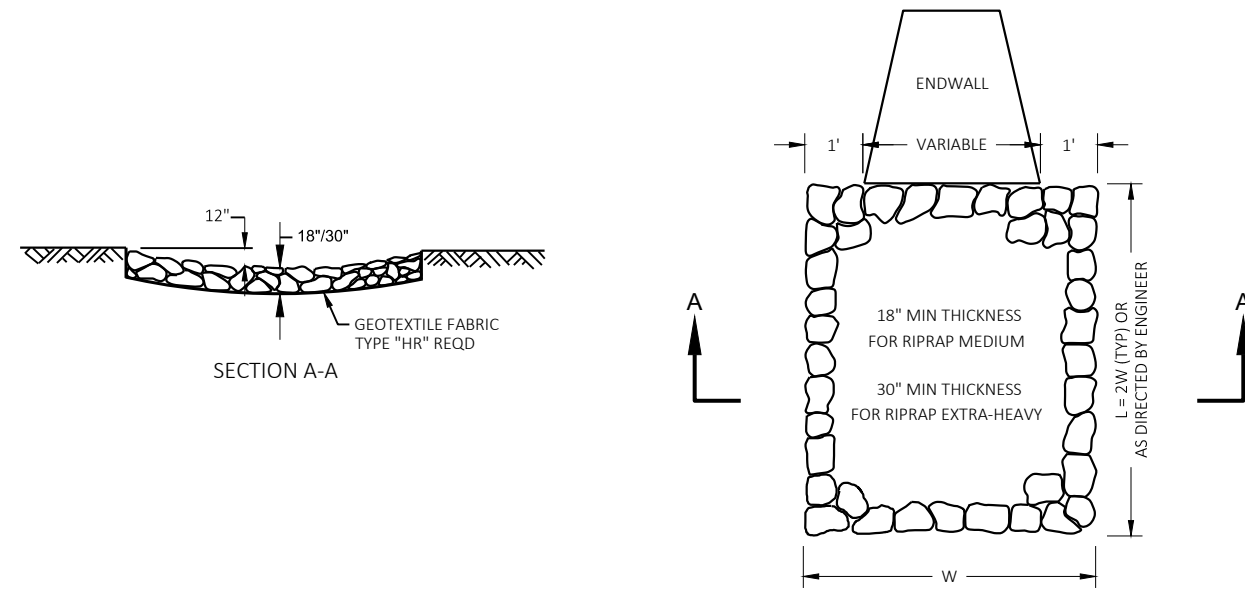
- LEGEND:
- ① ASPHALTIC CENTERLINE RUMBLE STRIPS 2-LANE RURAL
 - ② ASPHALTIC RUMBLE STRIPS, SHOULDER
 - ③ "PREPARING FOUNDATION FOR ASPHALTIC PAVING" PAY LIMITS
 - ④ "PREPARING FOUNDATION FOR ASPHALTIC SHOULDER" PAY LIMITS
 - ▨ REMOVING ASPHALTIC SURFACE MILLING (VARIABLE DEPTH)



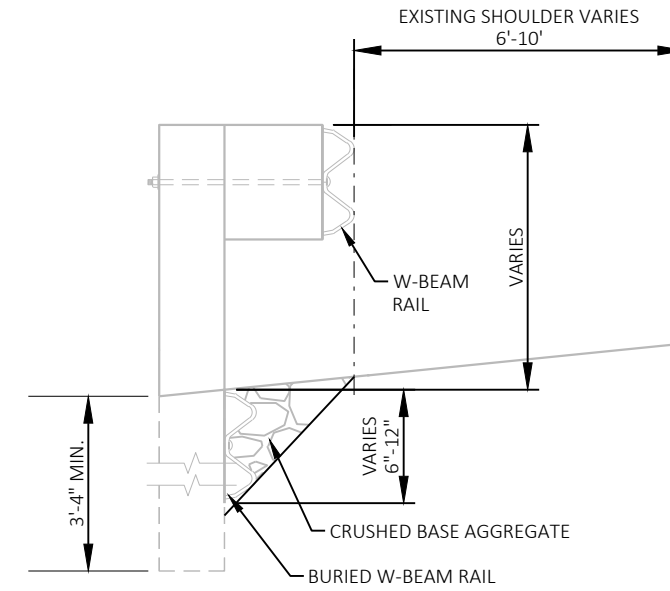
TYPICAL FINISHED URBAN SECTION
 USH 10
 STA 505+05.46 TO STA 512+32.45



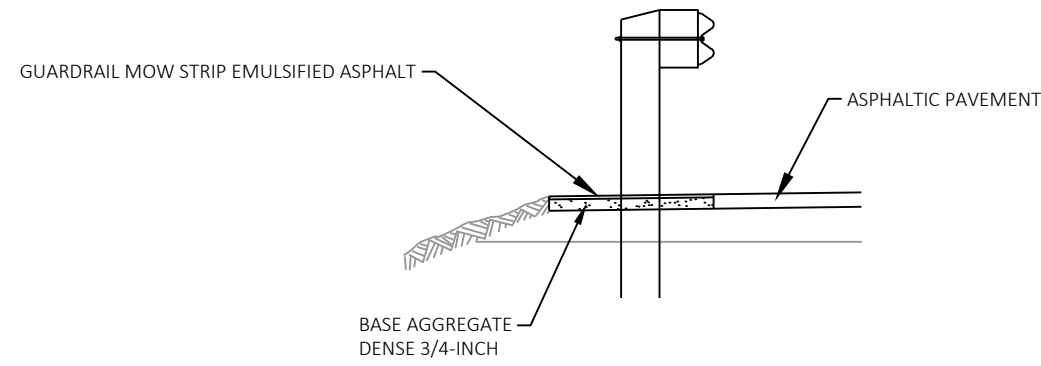
TYPICAL FINISHED RURAL SECTION
 USH 10
 STA 512+32.45 TO STA 515+26.61



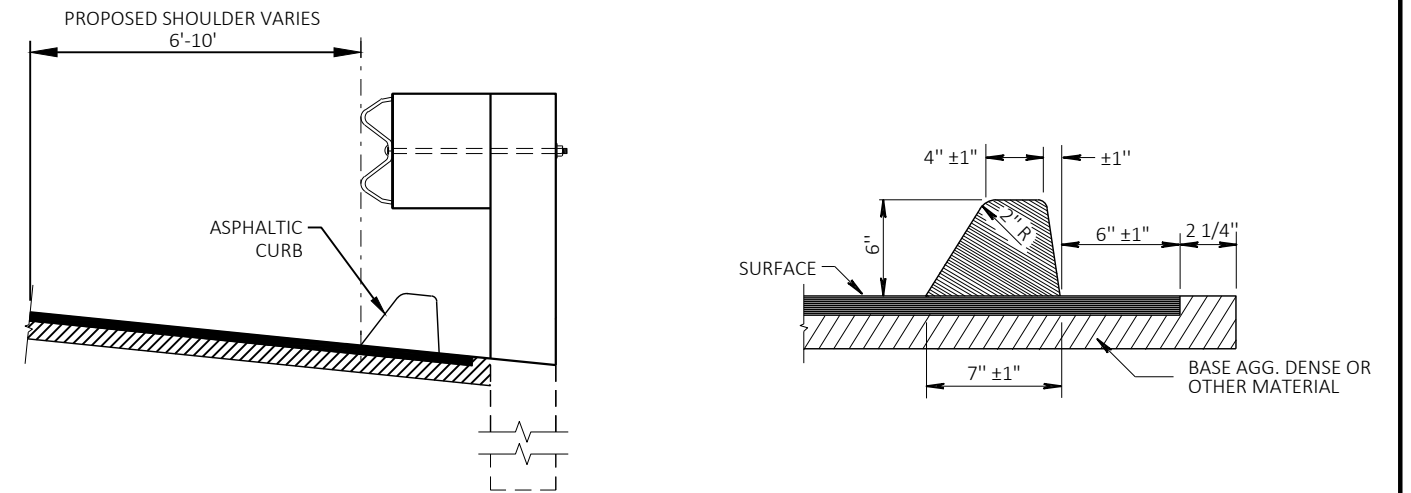
RIPRAP TREATMENT AT CULVERTS



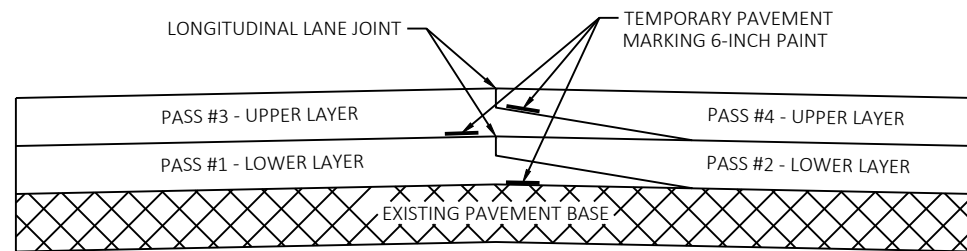
REMOVING BEAMGUARD RETAINING WALL DETAIL
USH 10



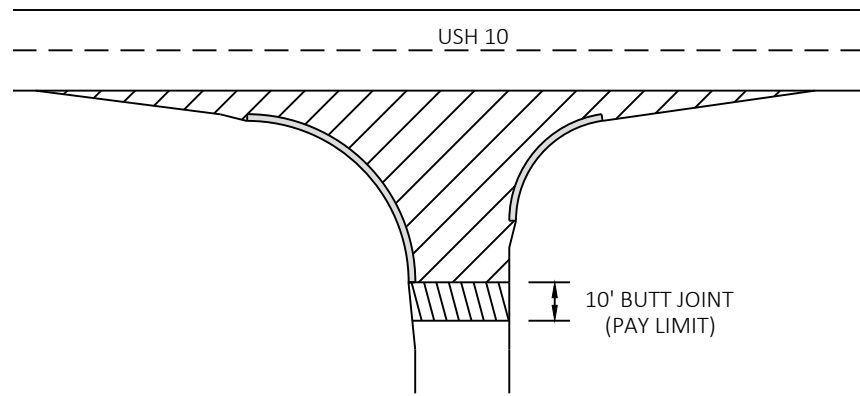
MOW STRIP DETAIL
USH 10



ASPHALTIC CURB DETAIL
USH 10



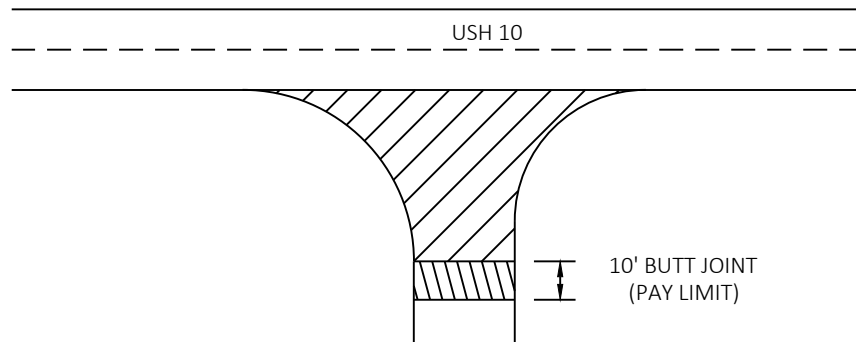
PAVEMENT MARKING DETAIL FOR TAPERED OVERLAPPING JOINTS IN HMA PAVEMENTS



- REMOVING ASPHALTIC SURFACE MILLING
- REMOVING ASPHALTIC SURFACE BUTT JOINTS SEE BUTT JOINT DETAIL

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

SIDE ROADS
WITH CURB AND GUTTER

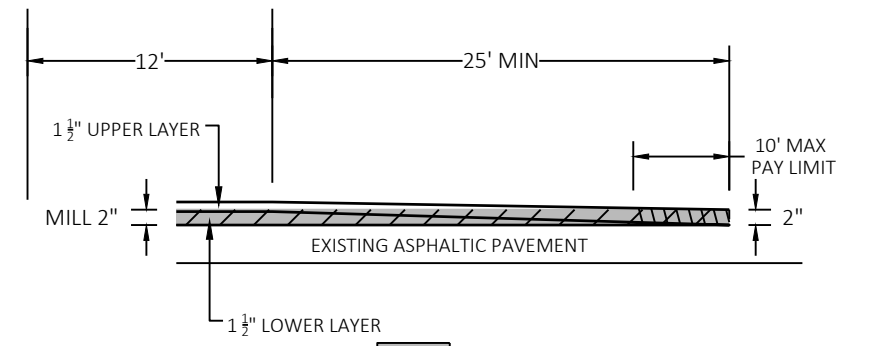


- REMOVING ASPHALTIC SURFACE MILLING
- REMOVING ASPHALTIC SURFACE BUTT JOINTS SEE BUTT JOINT DETAIL

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

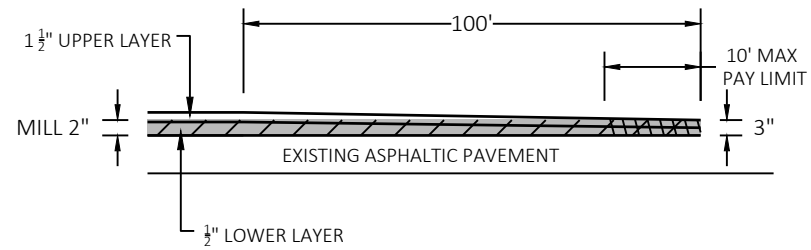
SIDE ROADS
WITHOUT CURB AND GUTTER

USH 10 C/L



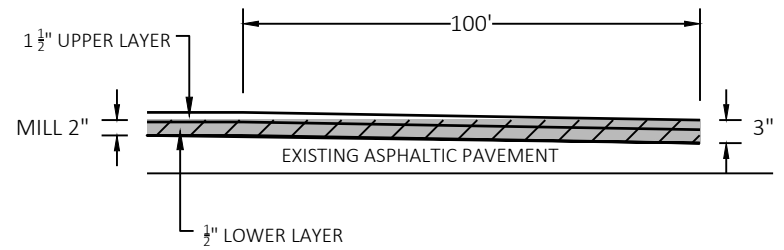
- EXISTING HMA PAVEMENT
- REMOVING ASPHALTIC SURFACE MILLING
- REMOVING ASPHALTIC SURFACE BUTT JOINTS

BUTT JOINT DETAIL
SIDE ROADS



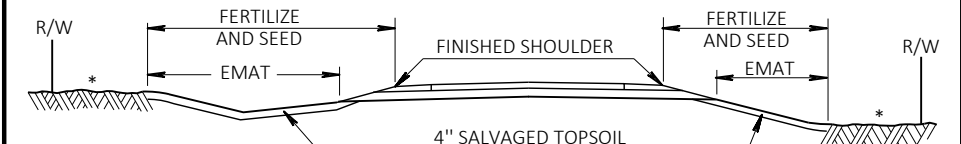
- EXISTING HMA PAVEMENT
- REMOVING ASPHALTIC SURFACE MILLING
- REMOVING ASPHALTIC SURFACE BUTT JOINTS

BUTT JOINT DETAIL
USH 10



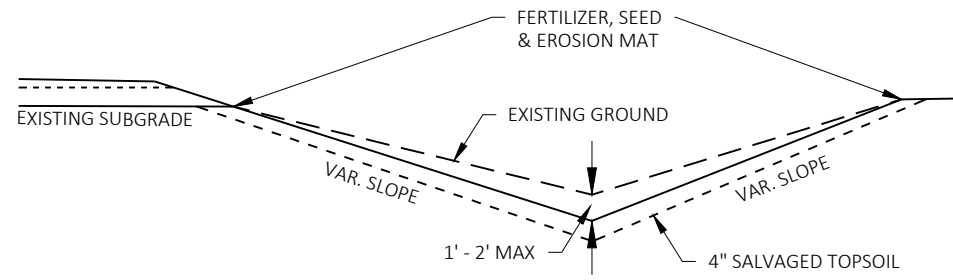
- EXISTING HMA PAVEMENT
- REMOVING ASPHALTIC SURFACE MILLING

MILL DEPTH TRANSITION DETAIL
USH 10

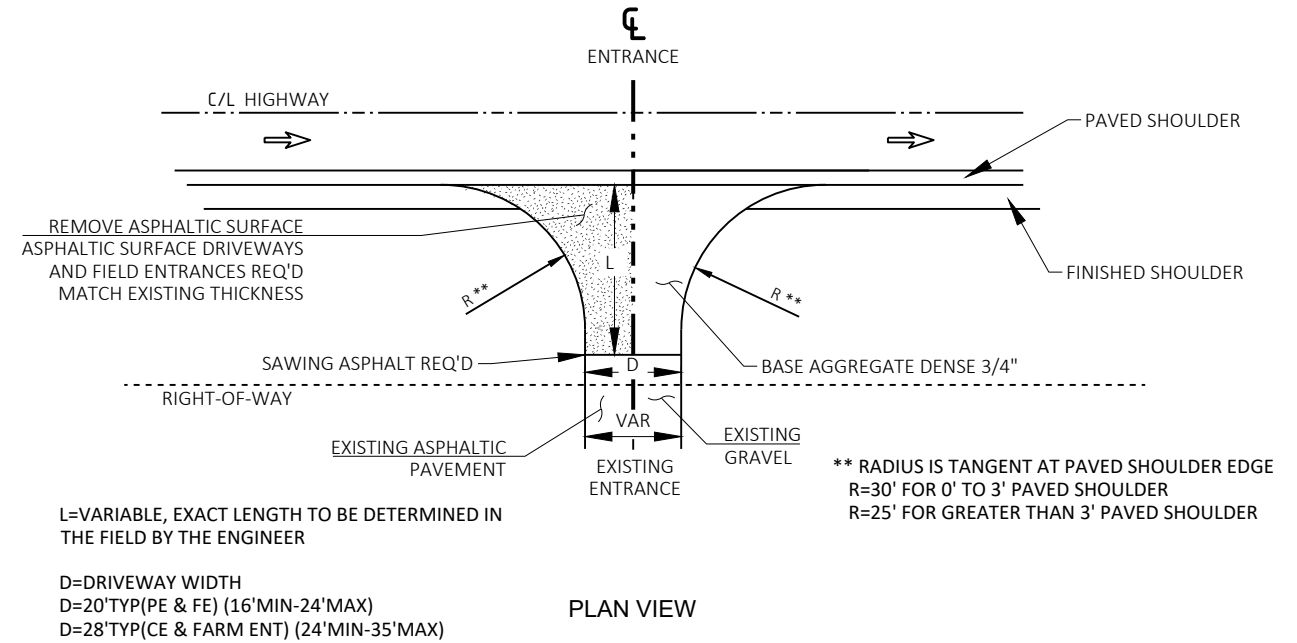
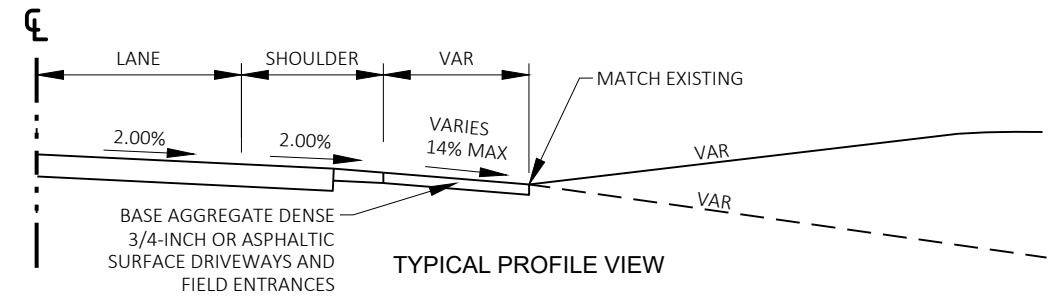


* DISTURBED AREAS TO BE EMAT & SEEDED

DETAIL FOR FINISHING ITEMS



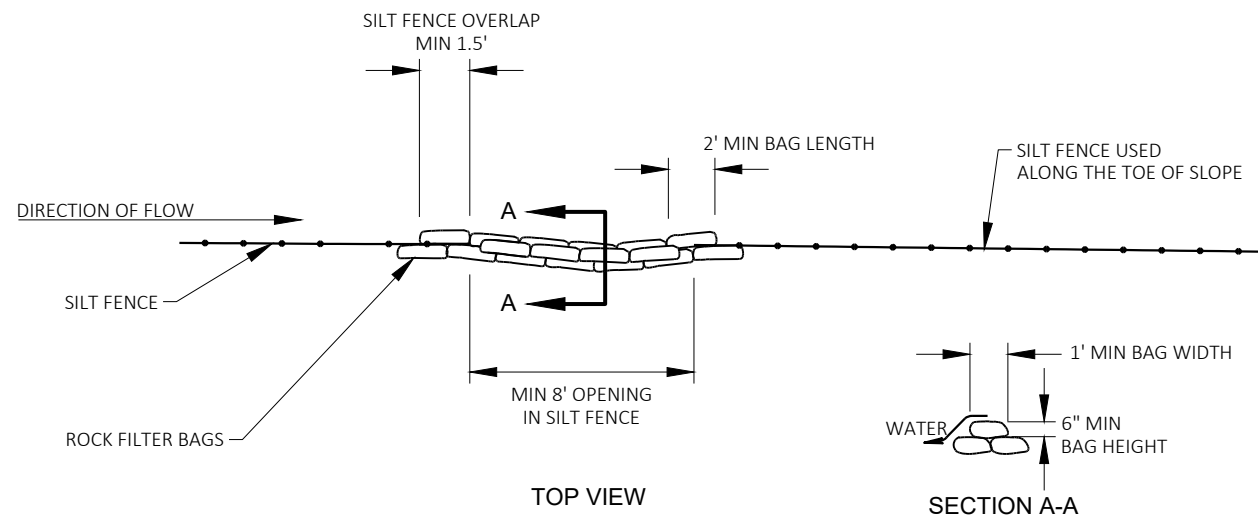
DITCH CLEANING DETAIL
STA 284+00 - STA 286+00 LT



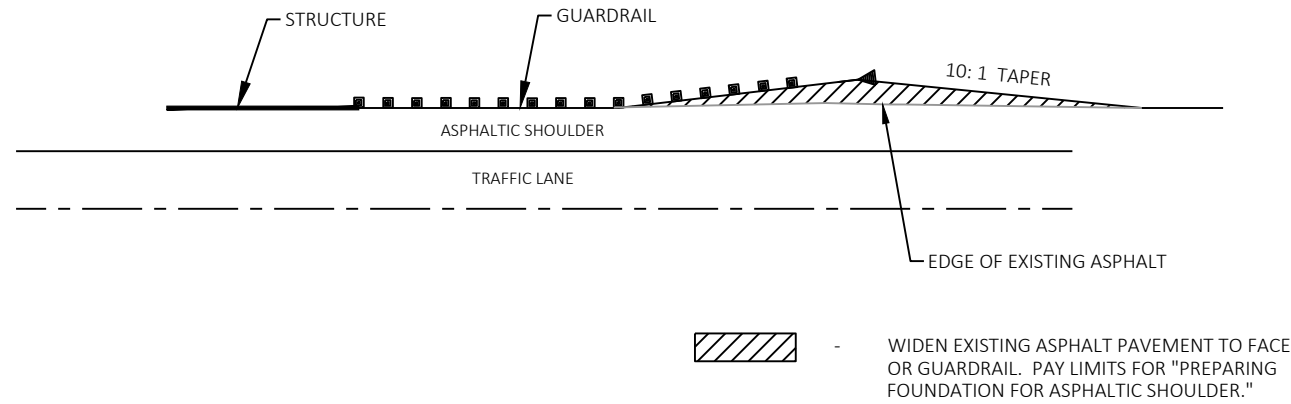
RURAL DRIVEWAY INTERSECTION (PE, FE & CE)
STA 323+50 LT (AGG)
STA 411+10 LT (ASPH)

SEE S.D.D. "DRIVEWAYS WITHOUT CURB AND GUTTER RESURFACING PROJECTS RURAL" FOR DRIVEWAYS LOCATED WITHIN 2" MILL AND 3" OVERLAY SEGMENTS.

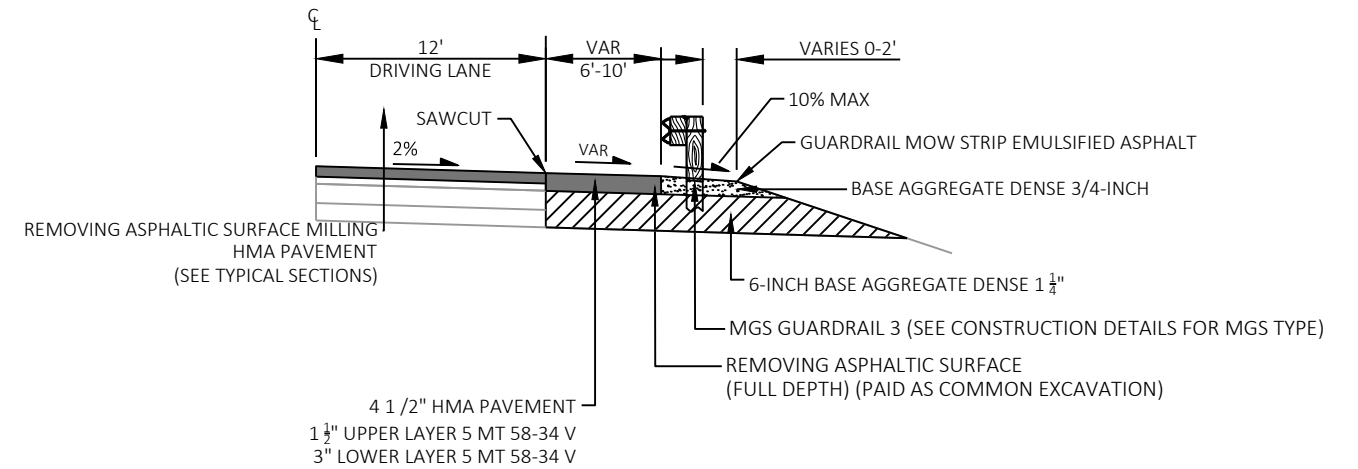
MILL THROUGH ASPHALT DRIVEWAYS AT THE EDGE OF PAVED SHOULDER FOR DRIVEWAYS LOCATED WITHIN 3" MILL AND OVERLAY SEGMENTS OTHER THAN THE DRIVEWAY LOCATIONS NOTED IN THE ABOVE DETAIL.



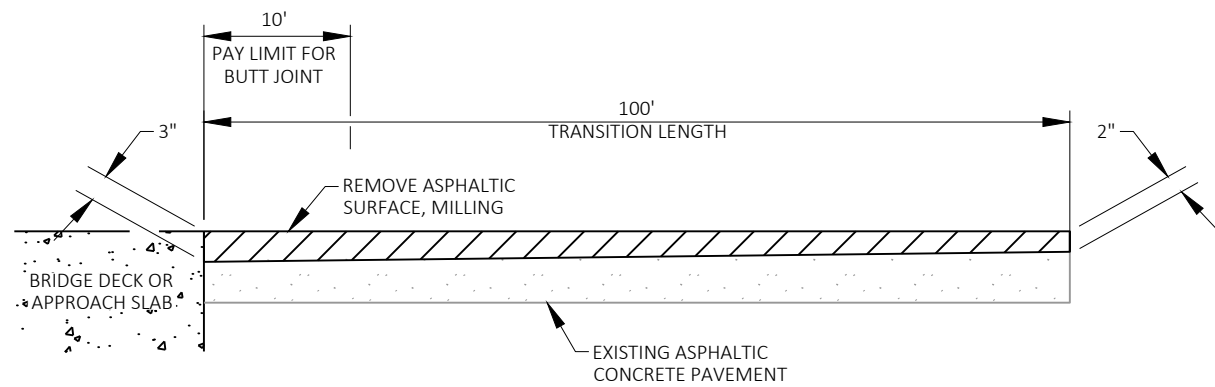
ROCK BAGS USED FOR SILT FENCE RELIEF



DETAIL FOR ASPHALTIC SHOULDER AT GUARDRAIL

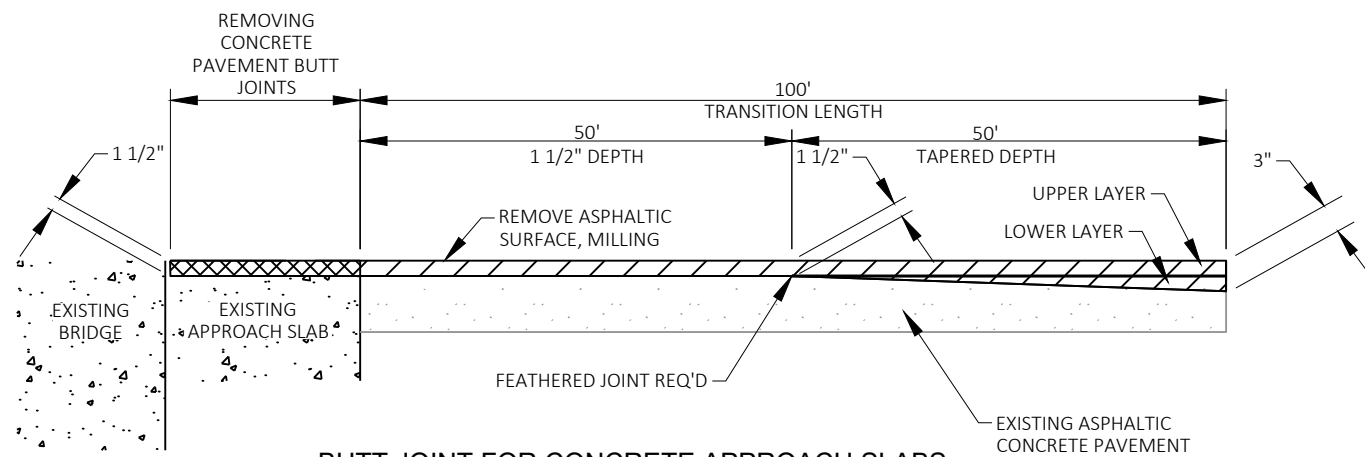


SHOULDER RECONSTRUCTION DETAIL



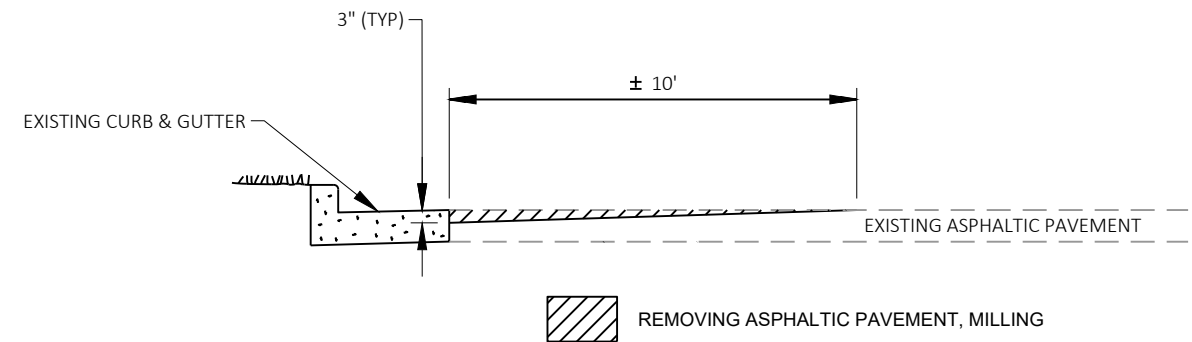
TRANSITION AT STRUCTURES

B-46-30
B-46-35

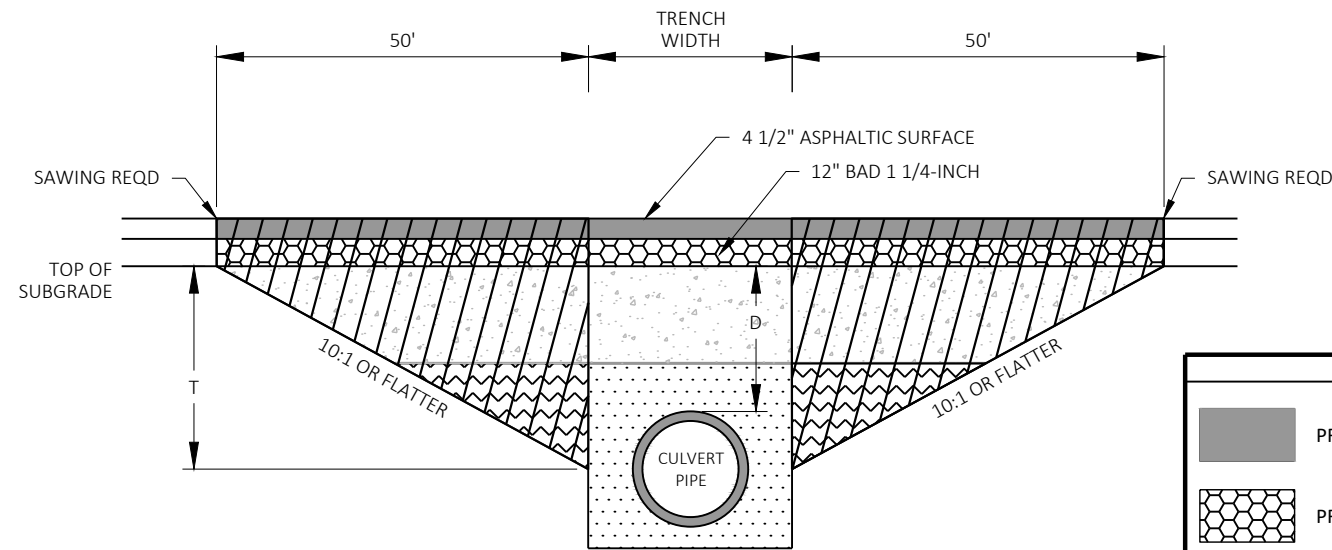


BUTT JOINT FOR CONCRETE APPROACH SLABS

B-46-31
B-46-32
B-46-33
B-46-34

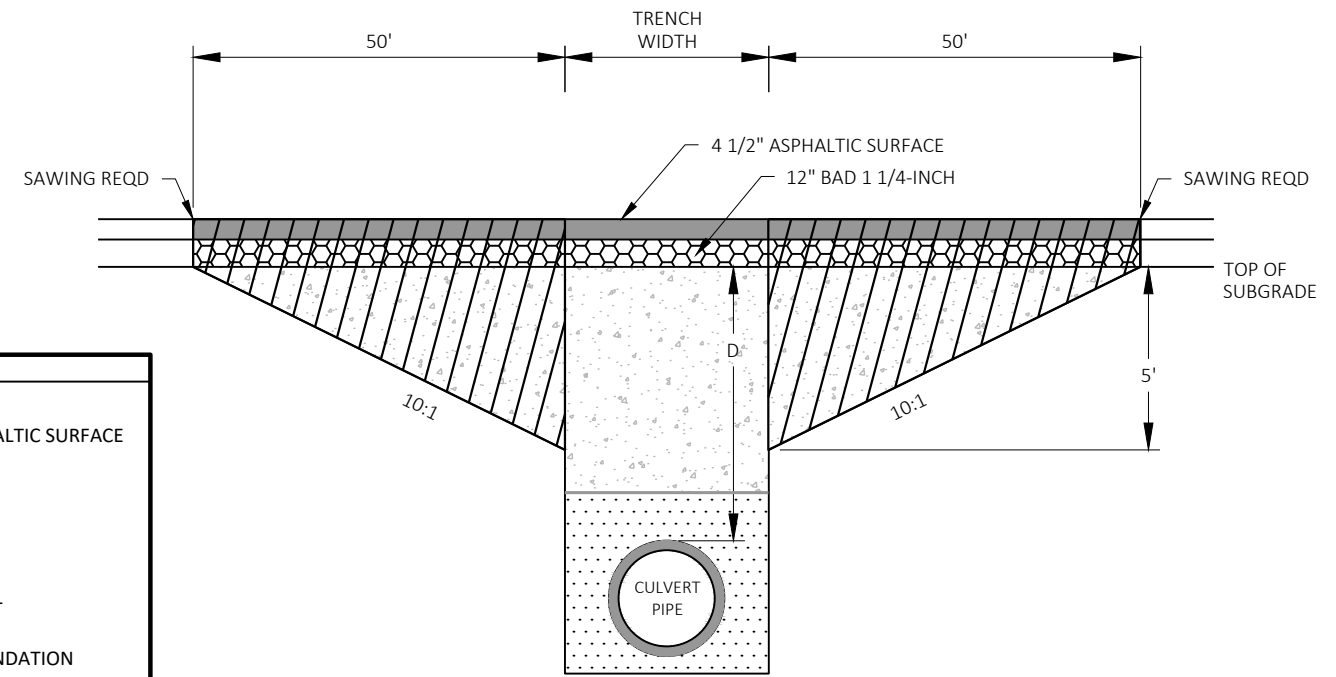
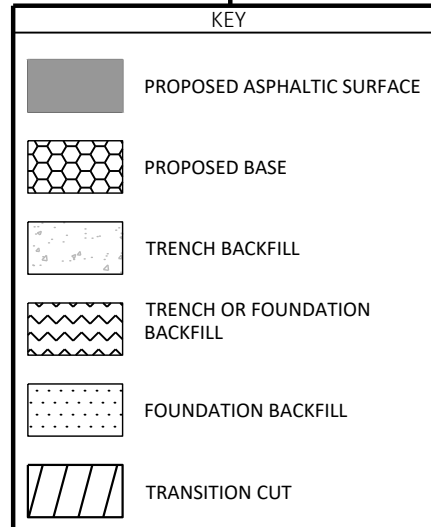


MILLED BUTT JOINT AT CURB & GUTTER



DEPTH D < 6 FT

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



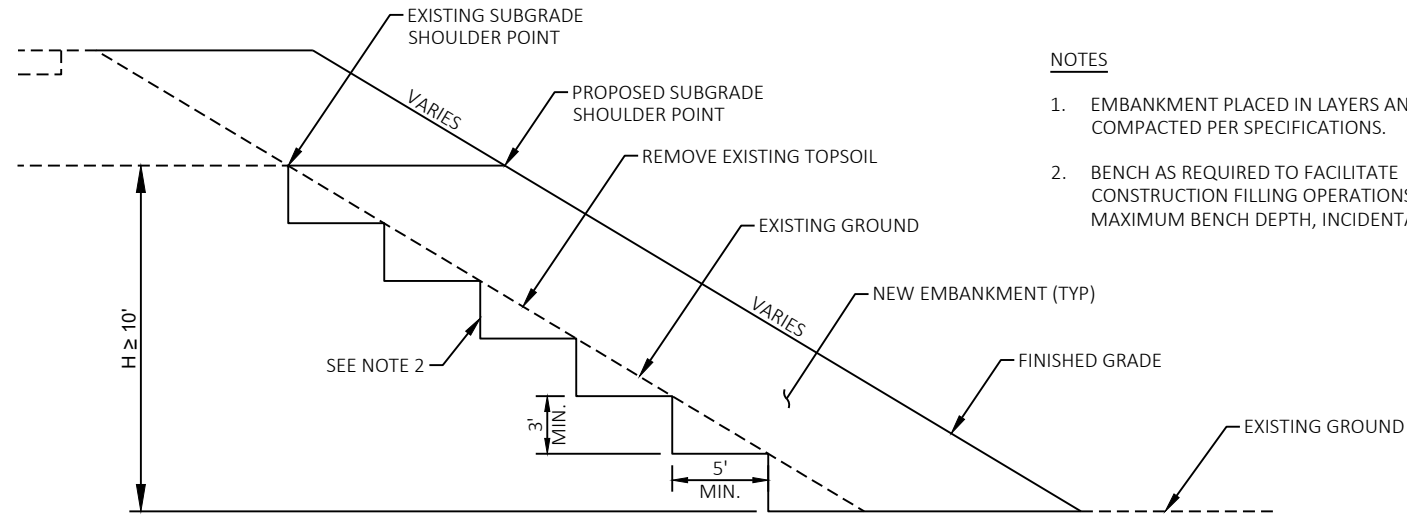
DEPTH D ≥ 6 FT

NOTES

- TRANSITION CUT IS PAID AS EXCAVATION COMMON.
- TRANSITION CUT WIDTH IS FROM SUBGRADE SHOULDER POINT TO SUBGRADE SHOULDER POINT.
- BACKFILL THE TRANSITION CUT AREAS WITH FOUNDATION AND TRENCH BACKFILL AS SPECIFIED IN STANDARD SPEC 520.
- PERFORM CULVERT PIPE INSTALLATION BEFORE MILLING AND PAVING OPERATIONS.
- PLACE ASPHALTIC SURFACE AFTER CULVERT PIPE INSTALLATION AND BEFORE MILLING AND PAVING OPERATION.

CULVERT PIPE TRANSITION

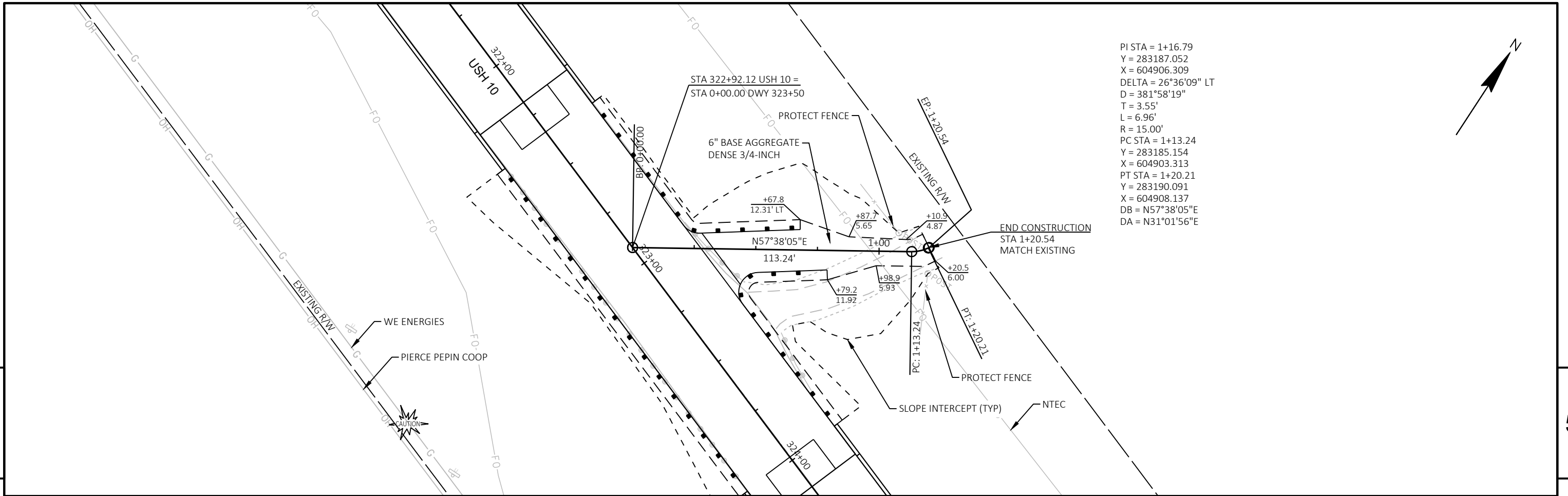
ROUTE	STA (CL)	DEPTH D (FT)	PIPE DIA (IN)	REMARKS
USH 10	259+46	21.9	36	CULVERT 132
USH 10	285+96	0.0	19" X 30"	CULVERT 133



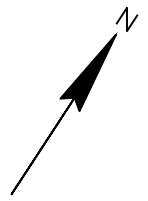
NOTES

1. EMBANKMENT PLACED IN LAYERS AND COMPACTED PER SPECIFICATIONS.
2. BENCH AS REQUIRED TO FACILITATE CONSTRUCTION FILLING OPERATIONS (3' MAXIMUM BENCH DEPTH, INCIDENTAL).

STEPPED EMBANKMENT

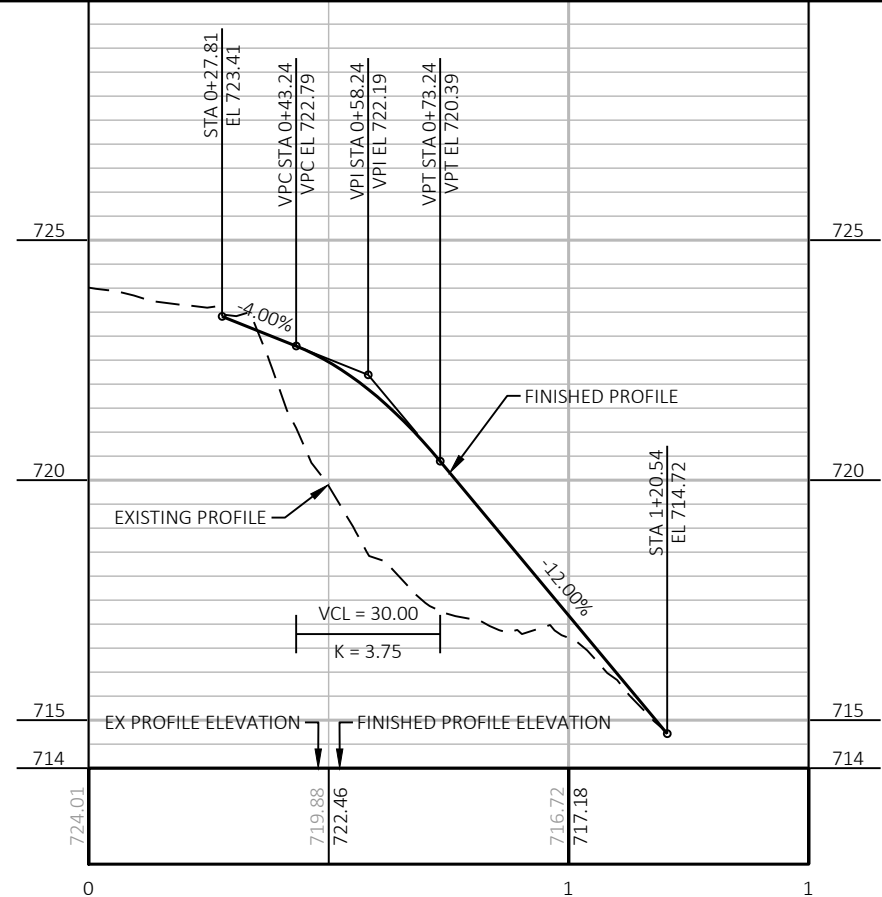


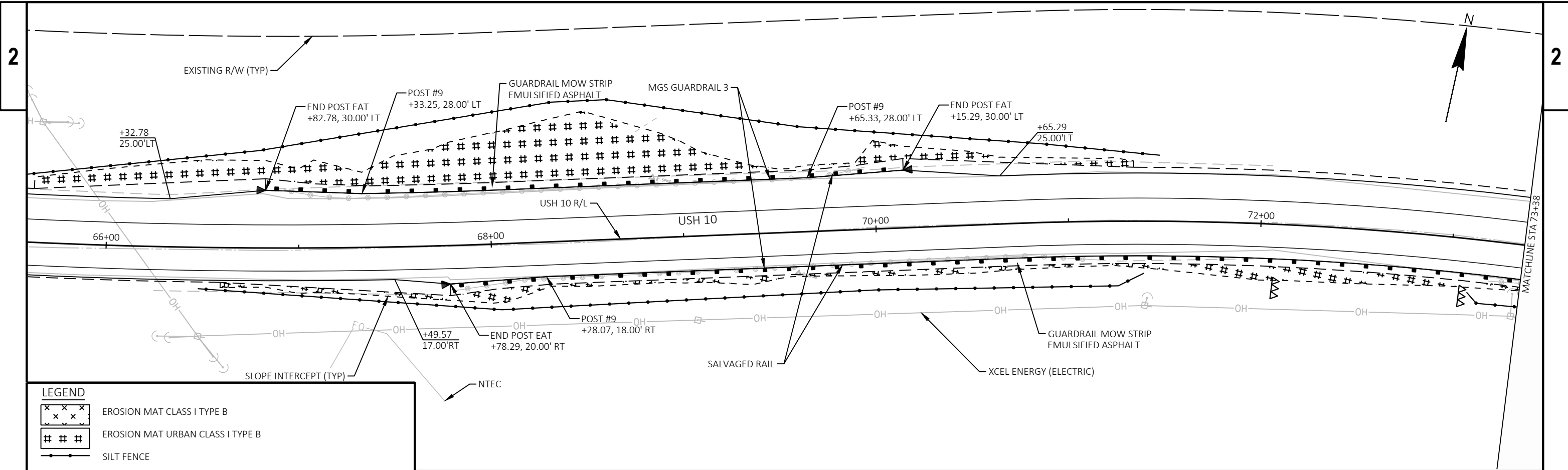
PI STA = 1+16.79
 Y = 283187.052
 X = 604906.309
 DELTA = 26°36'09" LT
 D = 381°58'19"
 T = 3.55'
 L = 6.96'
 R = 15.00'
 PC STA = 1+13.24
 Y = 283185.154
 X = 604903.313
 PT STA = 1+20.21
 Y = 283190.091
 X = 604908.137
 DB = N57°38'05"E
 DA = N31°01'56"E



5

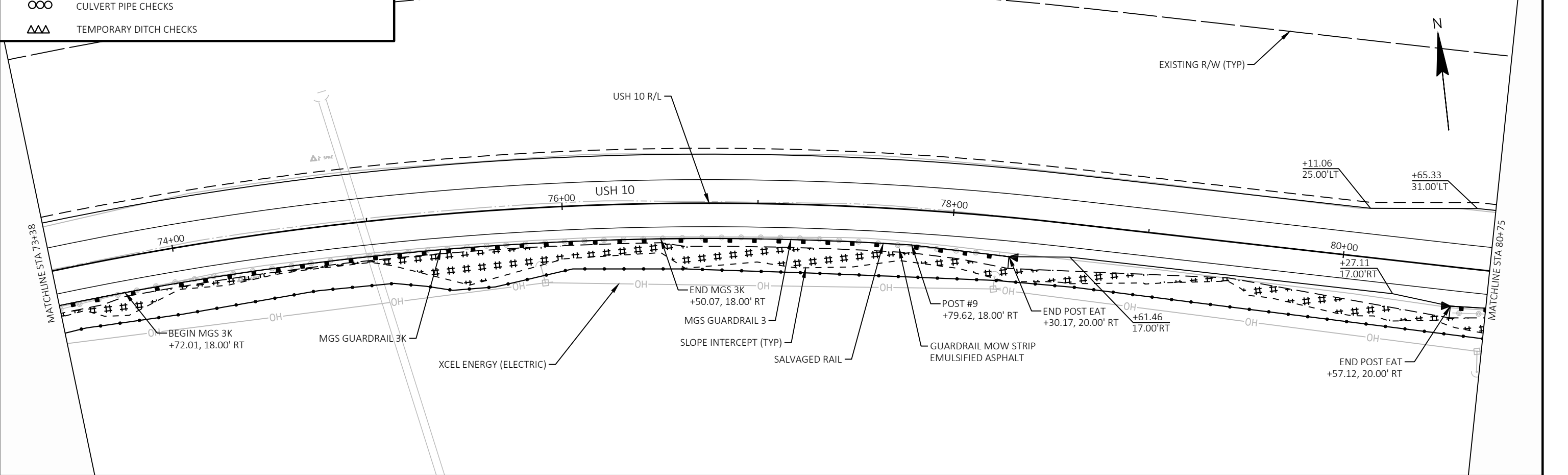
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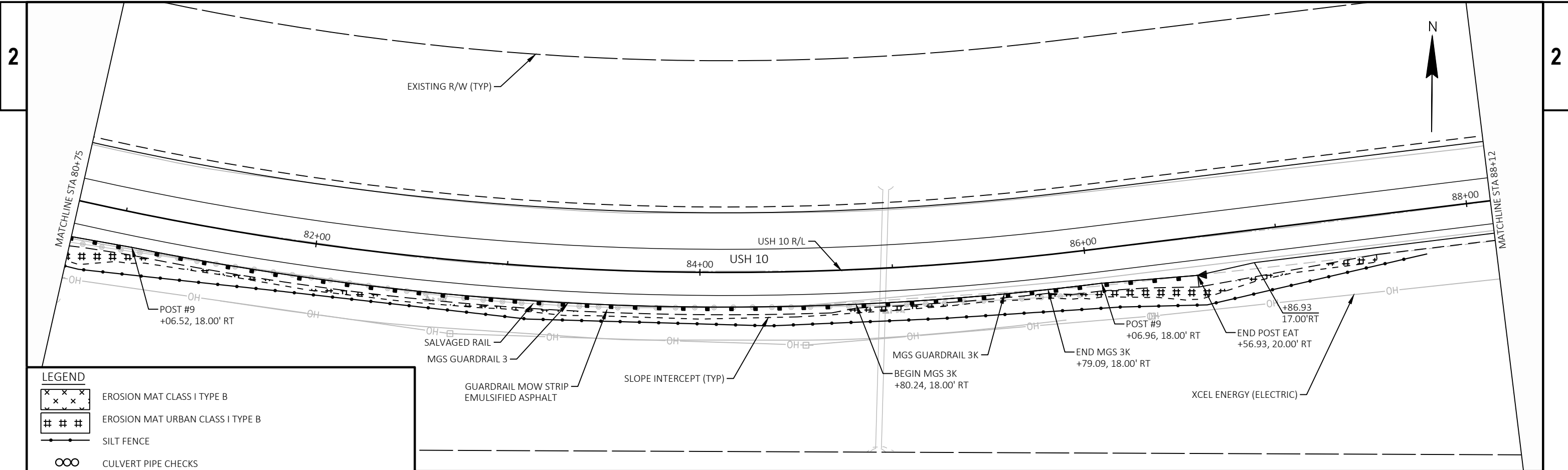


LEGEND

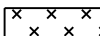

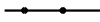


- EROSION MAT CLASS I TYPE B
- EROSION MAT URBAN CLASS I TYPE B
- SILT FENCE
- CULVERT PIPE CHECKS
- TEMPORARY DITCH CHECKS

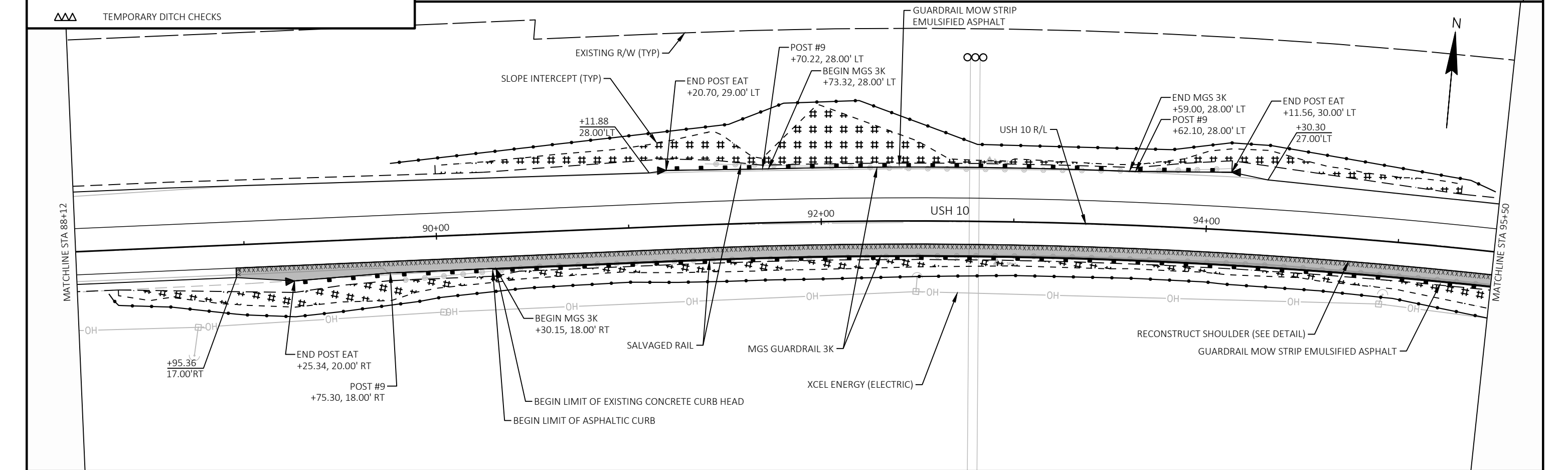


PROJECT NO: 1530-05-73	HWY: USH 10	COUNTY: PEPIN	GUARDRAIL DETAILS	SHEET	E
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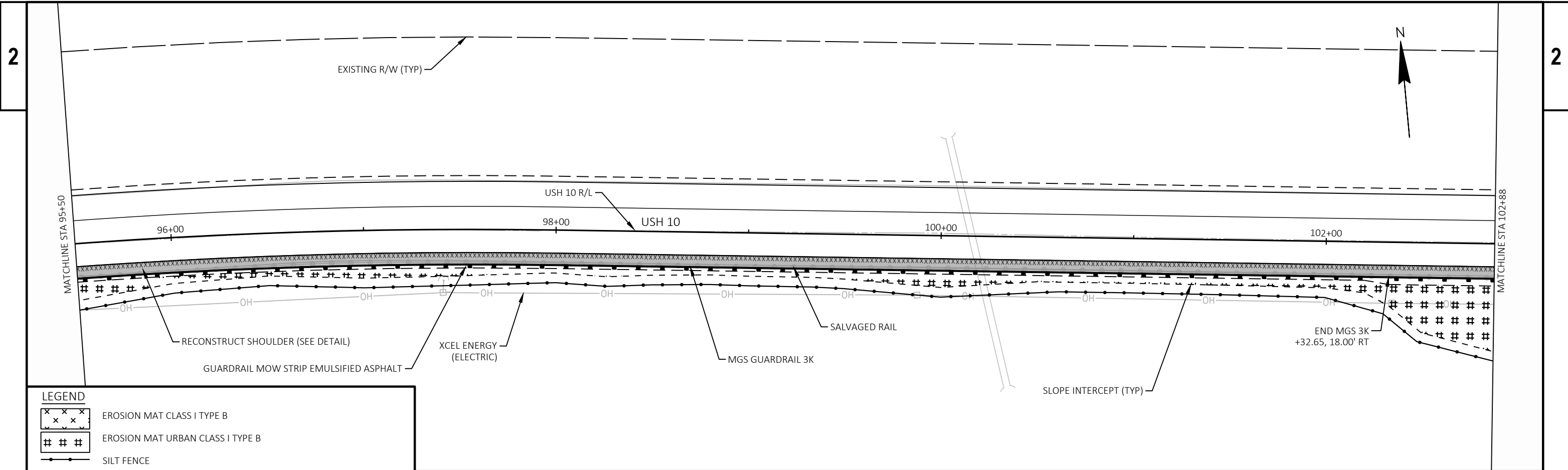


LEGEND

-  EROSION MAT CLASS I TYPE B
-  EROSION MAT URBAN CLASS I TYPE B
-  SILT FENCE
-  CULVERT PIPE CHECKS
-  TEMPORARY DITCH CHECKS

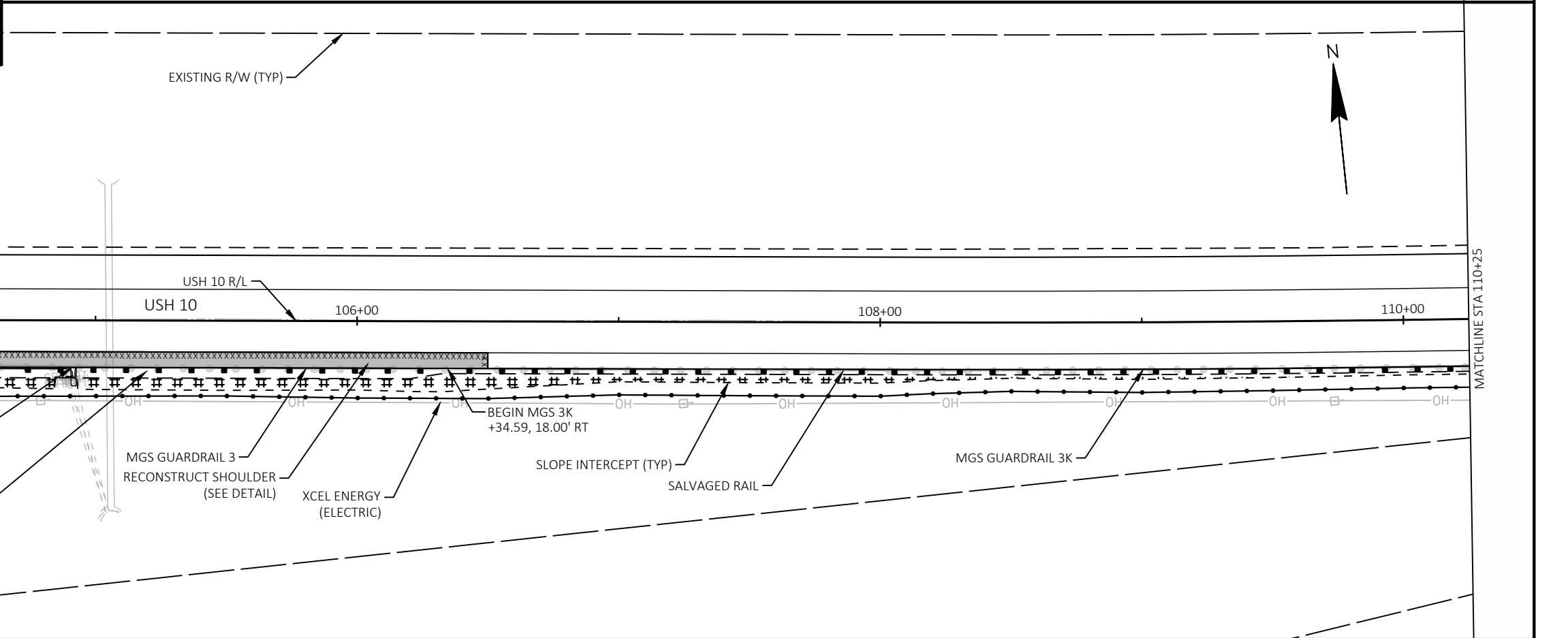


PROJECT NO: 1530-05-73	HWY: USH 10	COUNTY: PEPIN	GUARDRAIL DETAILS	SHEET E
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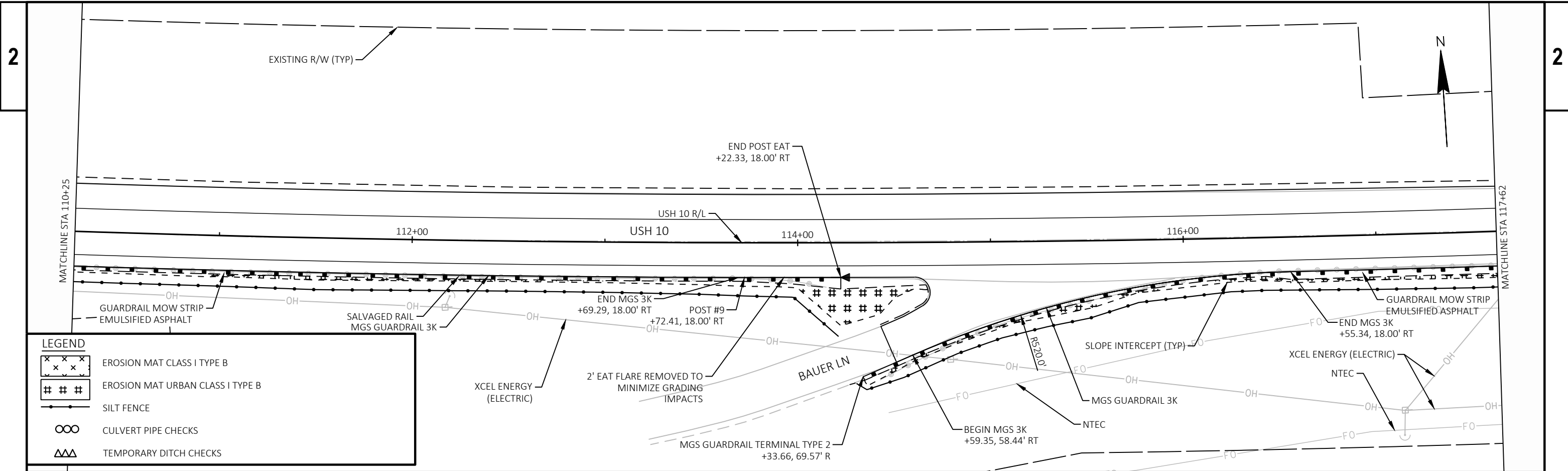


LEGEND

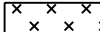
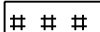
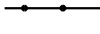

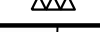
	EROSION MAT CLASS I TYPE B
	EROSION MAT URBAN CLASS I TYPE B
	SILT FENCE
	CULVERT PIPE CHECKS
	TEMPORARY DITCH CHECKS

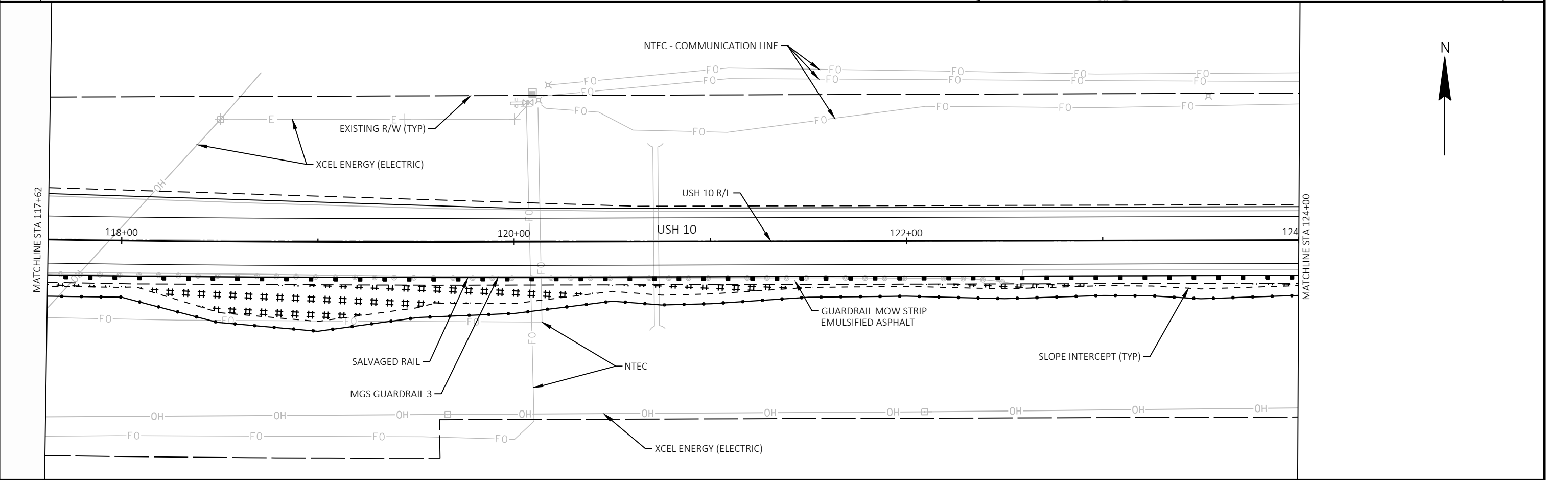


PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN GUARDRAIL DETAILS SHEET E

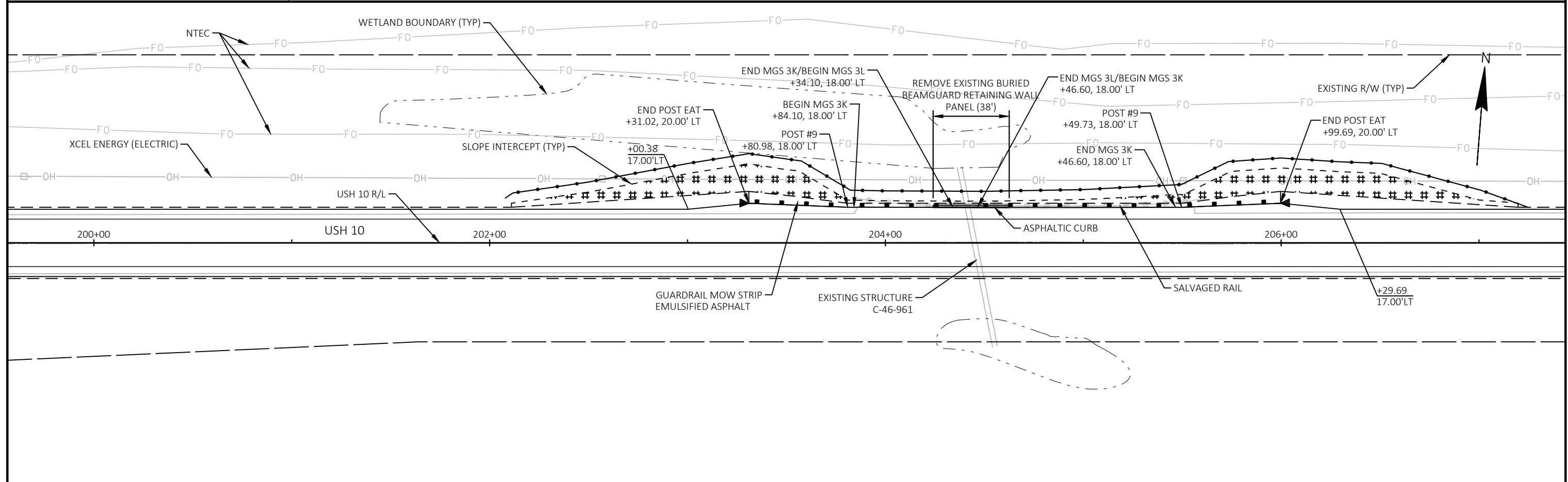
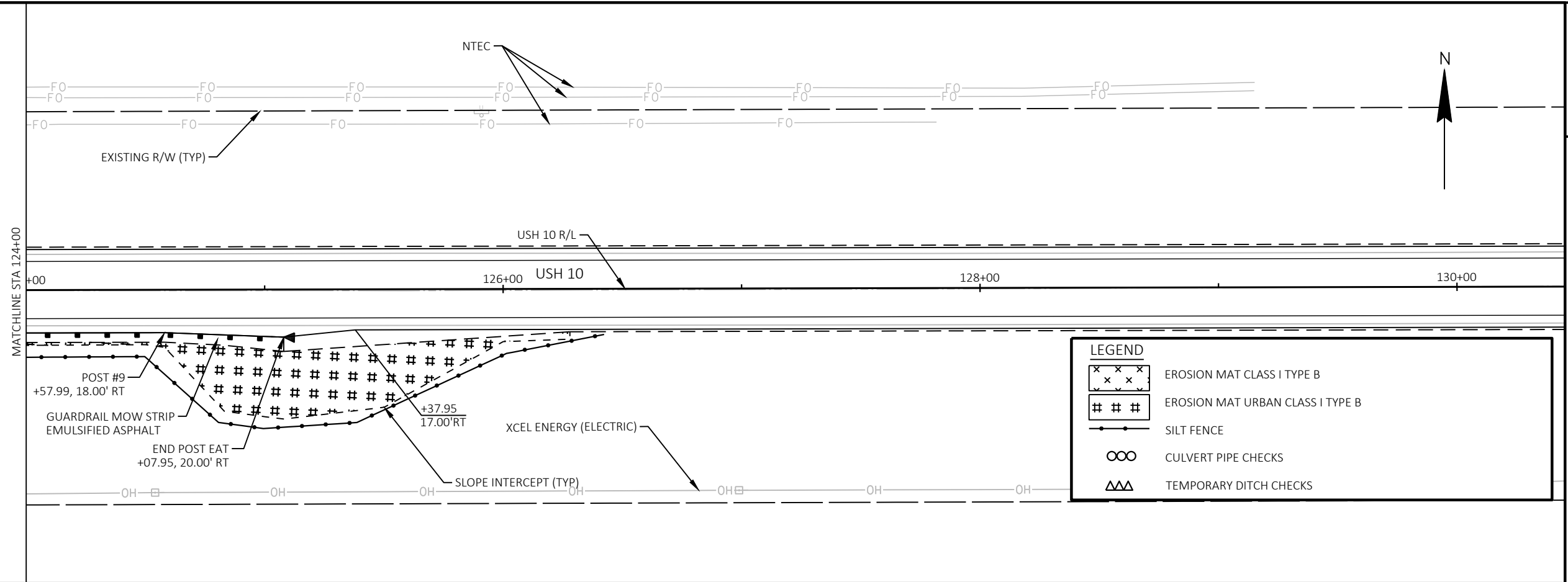


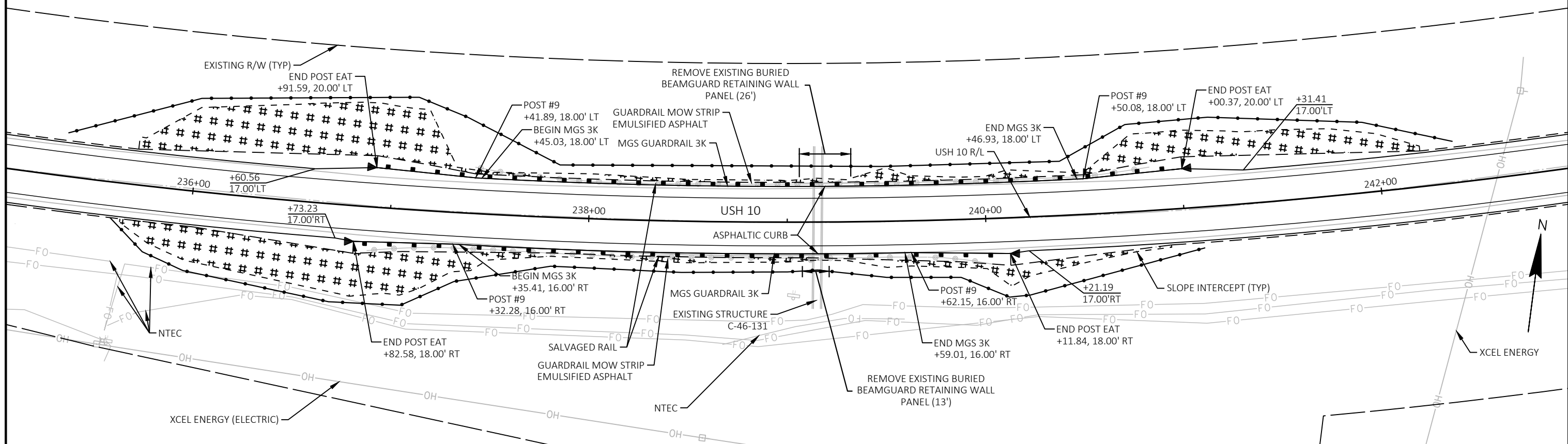
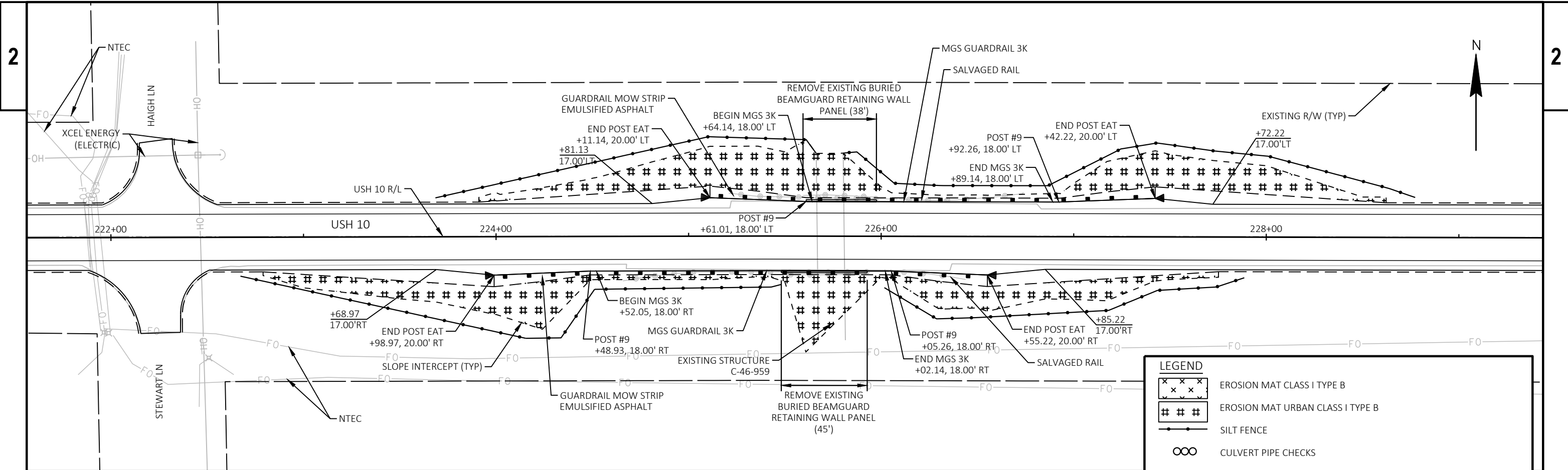
LEGEND

-  EROSION MAT CLASS I TYPE B
-  EROSION MAT URBAN CLASS I TYPE B
-  SILT FENCE
-  CULVERT PIPE CHECKS
-  TEMPORARY DITCH CHECKS

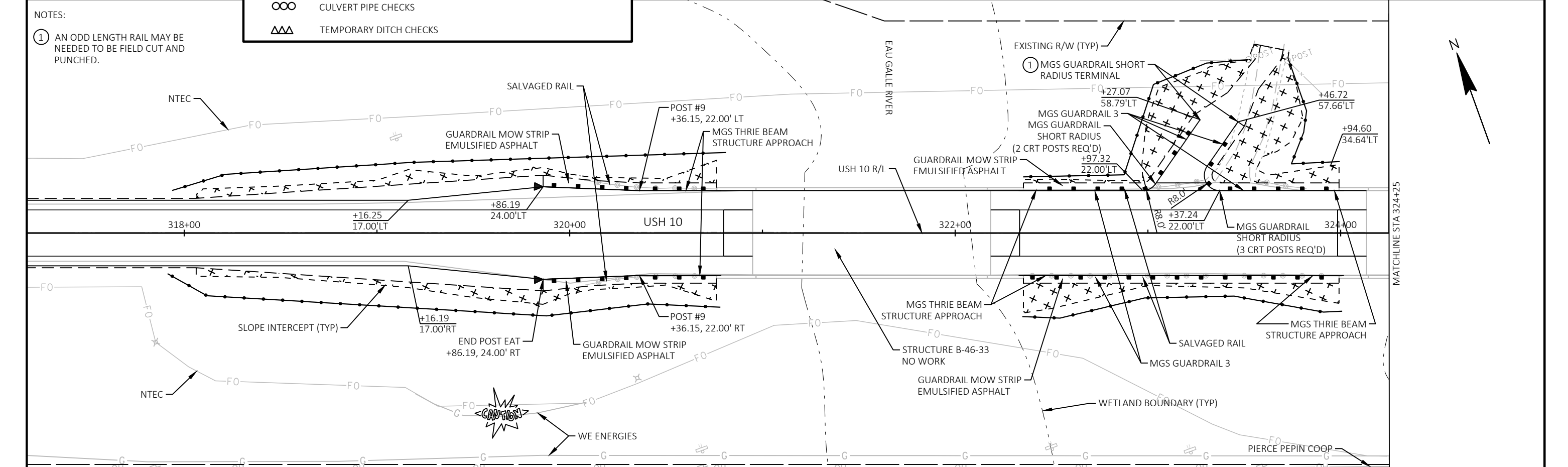
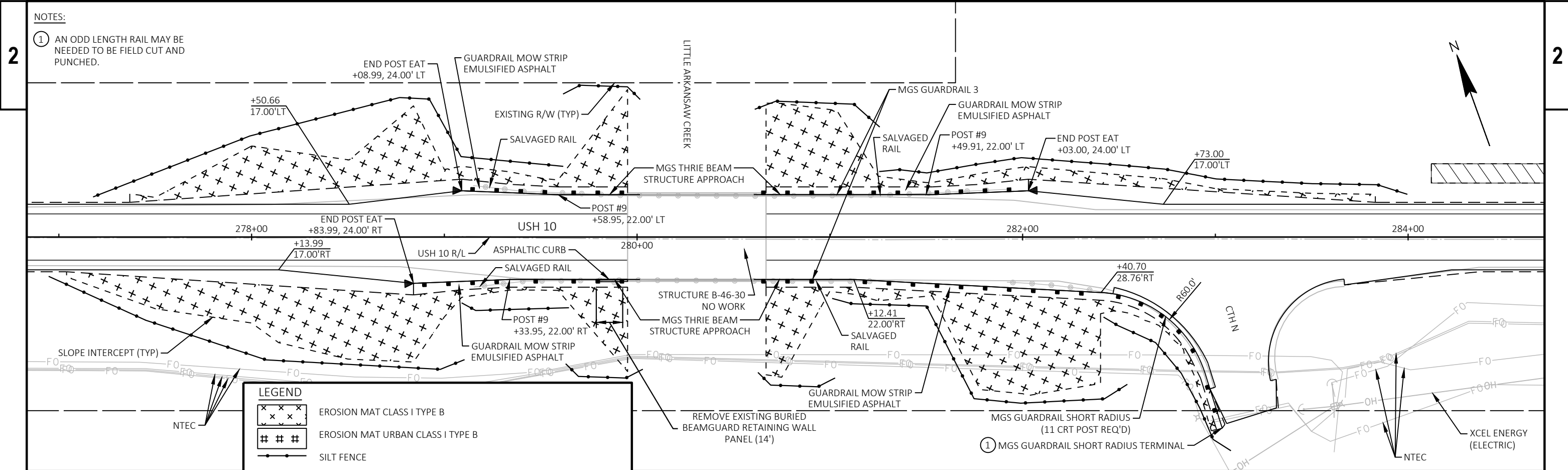


PROJECT NO: 1530-05-73	HWY: USH 10	COUNTY: PEPIN	GUARDRAIL DETAILS	SHEET E
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PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN **GUARDRAIL DETAILS** SHEET **E**

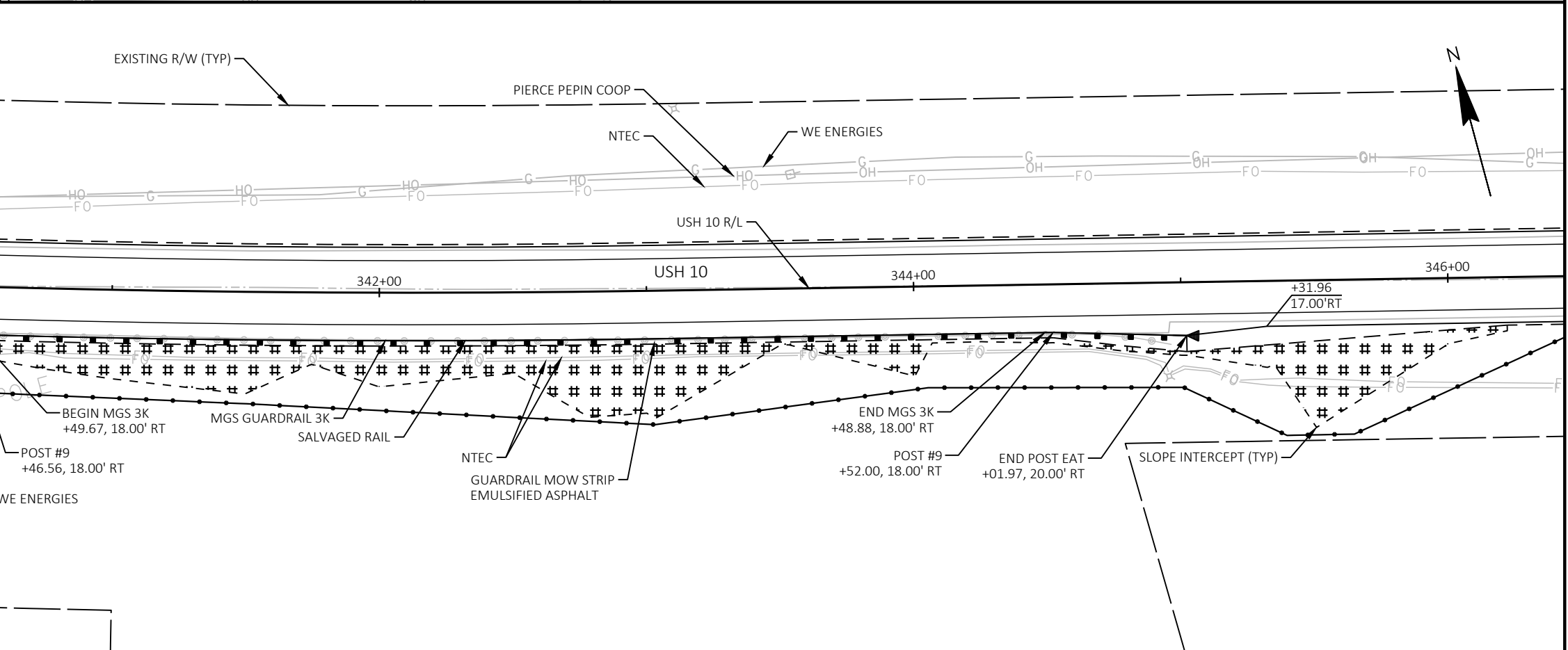
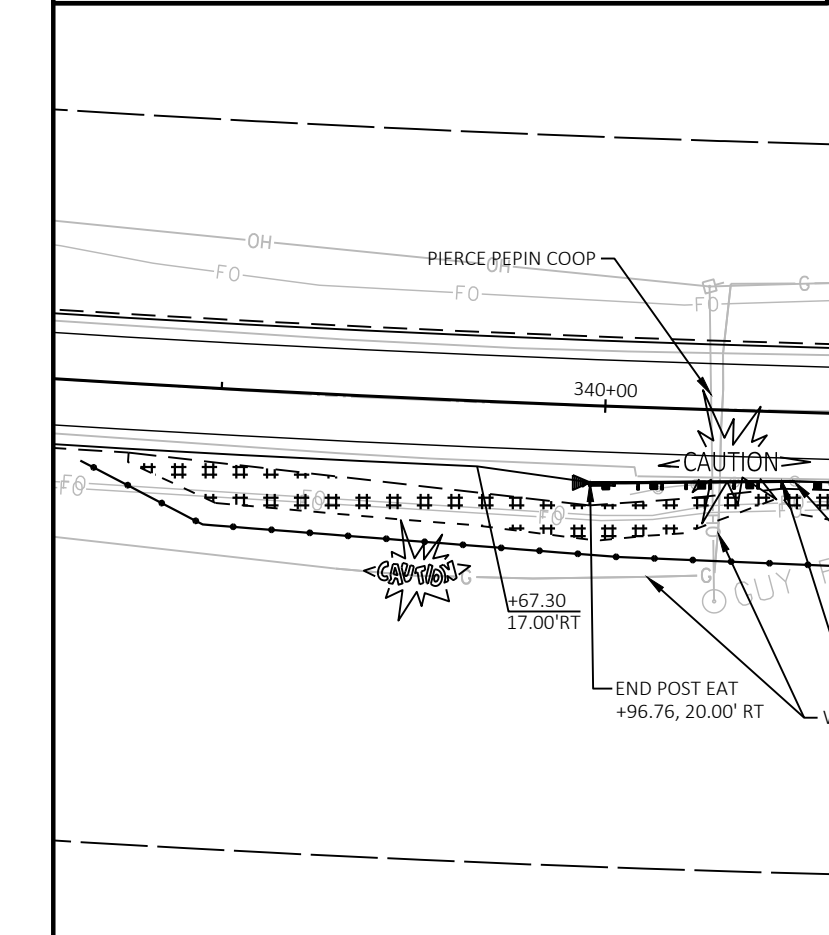
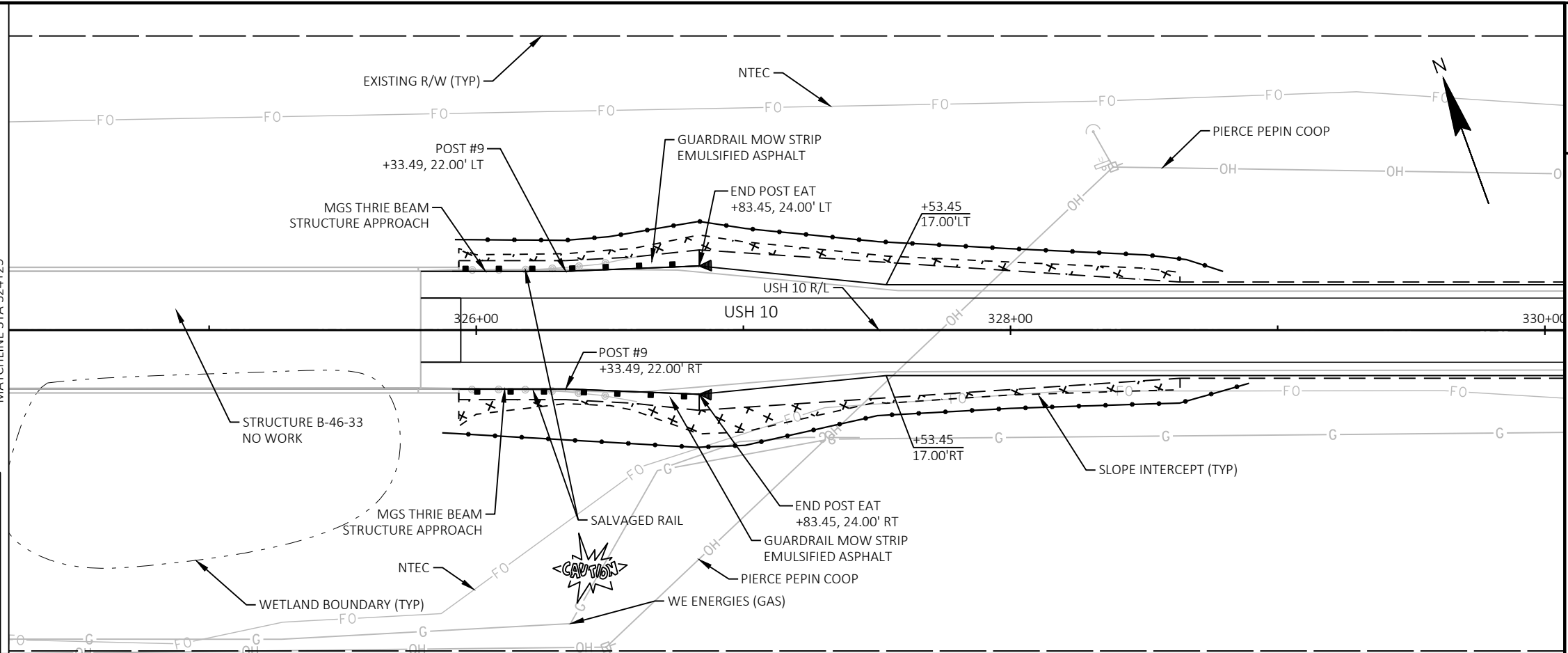


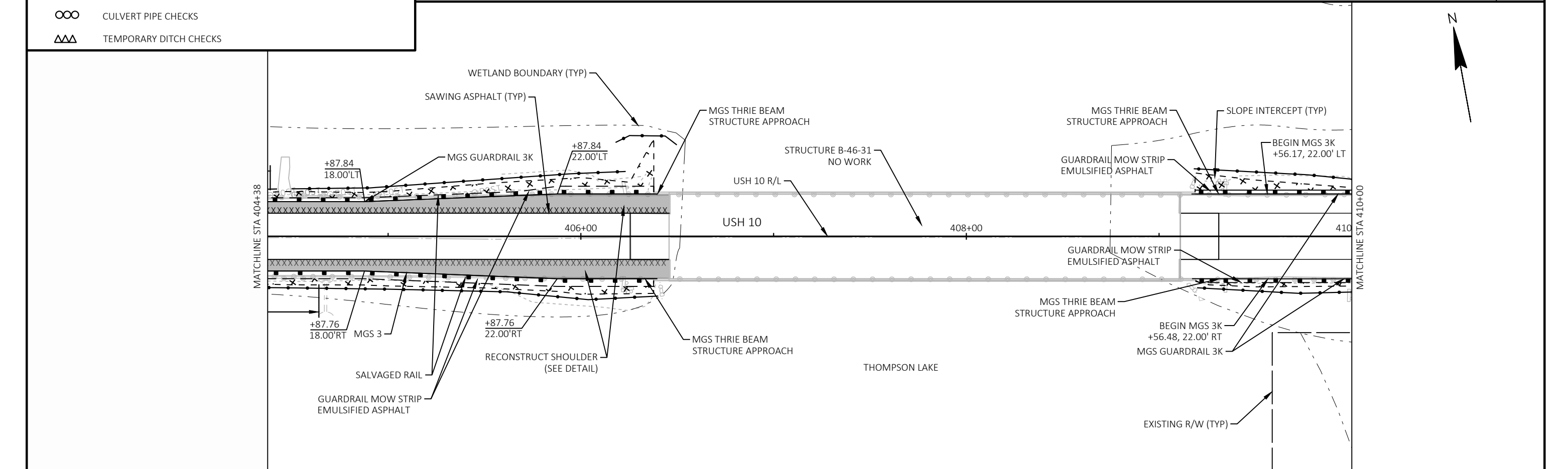
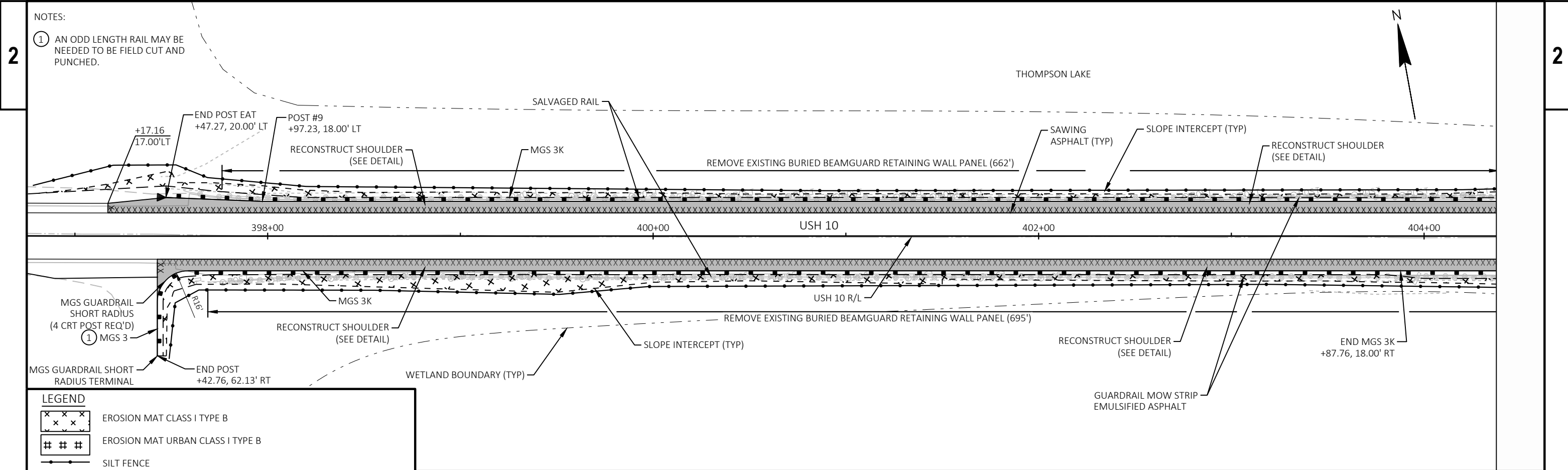
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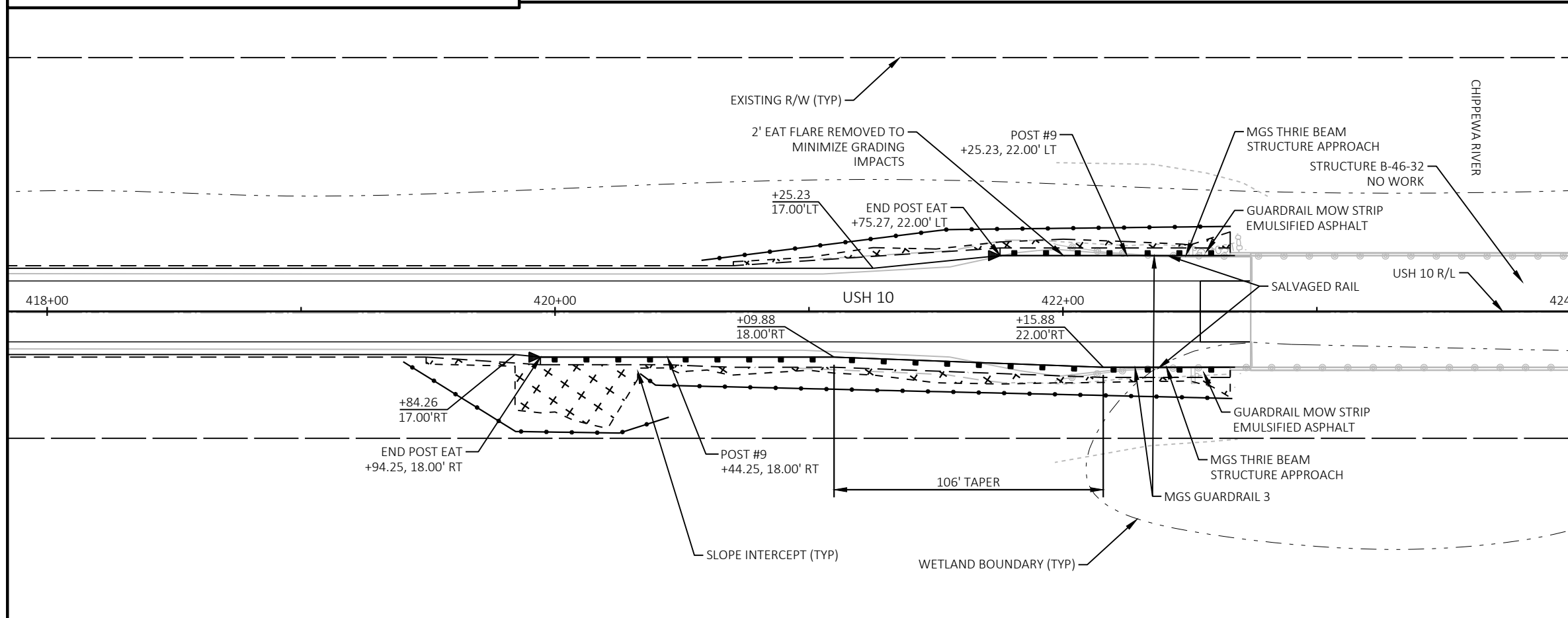
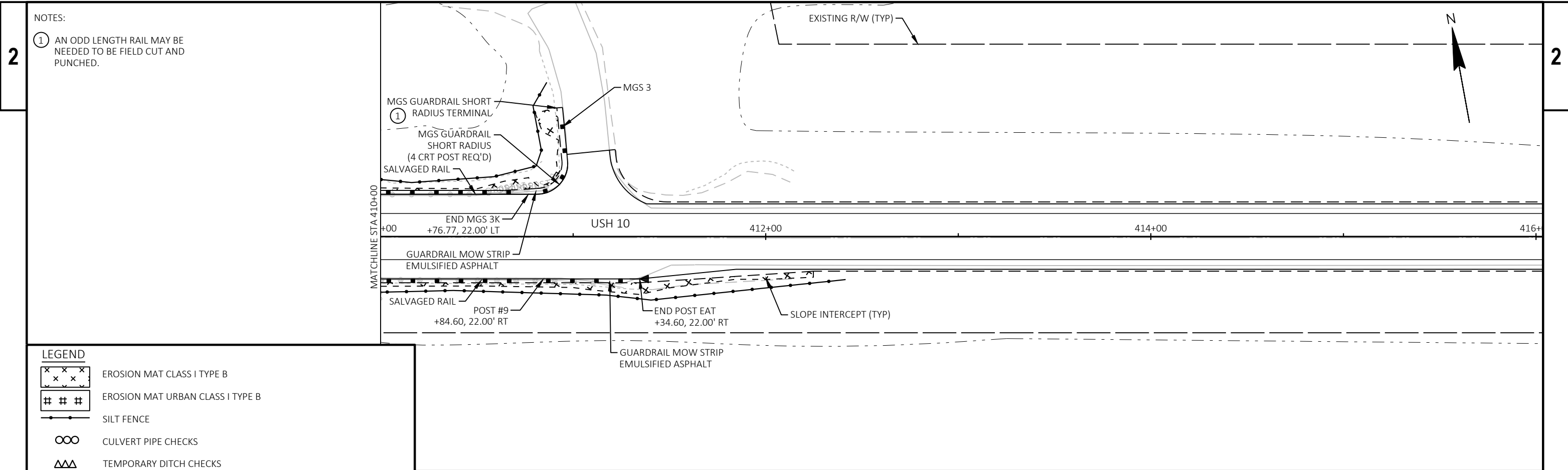
MATCHLINE STA 324+25

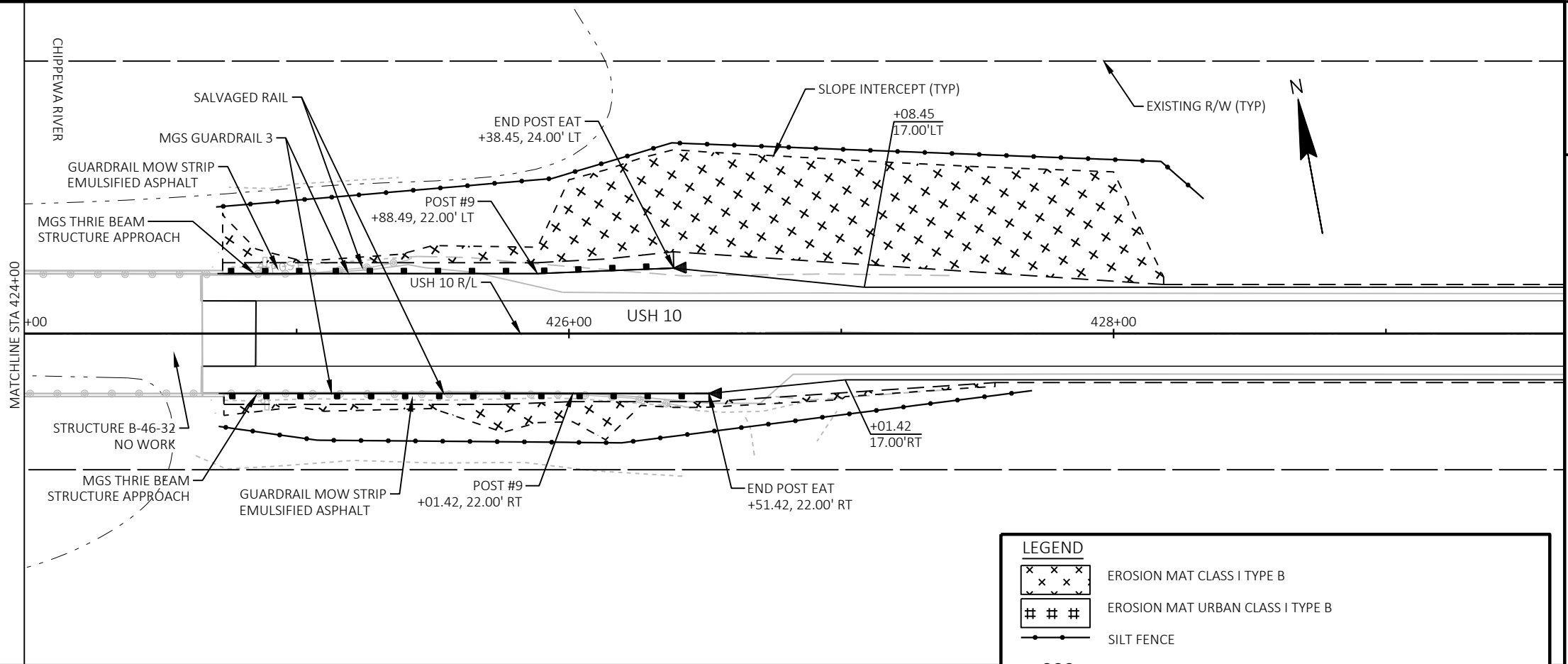
LEGEND

- EROSION MAT CLASS I TYPE B
- EROSION MAT URBAN CLASS I TYPE B
- SILT FENCE
- CULVERT PIPE CHECKS
- TEMPORARY DITCH CHECKS







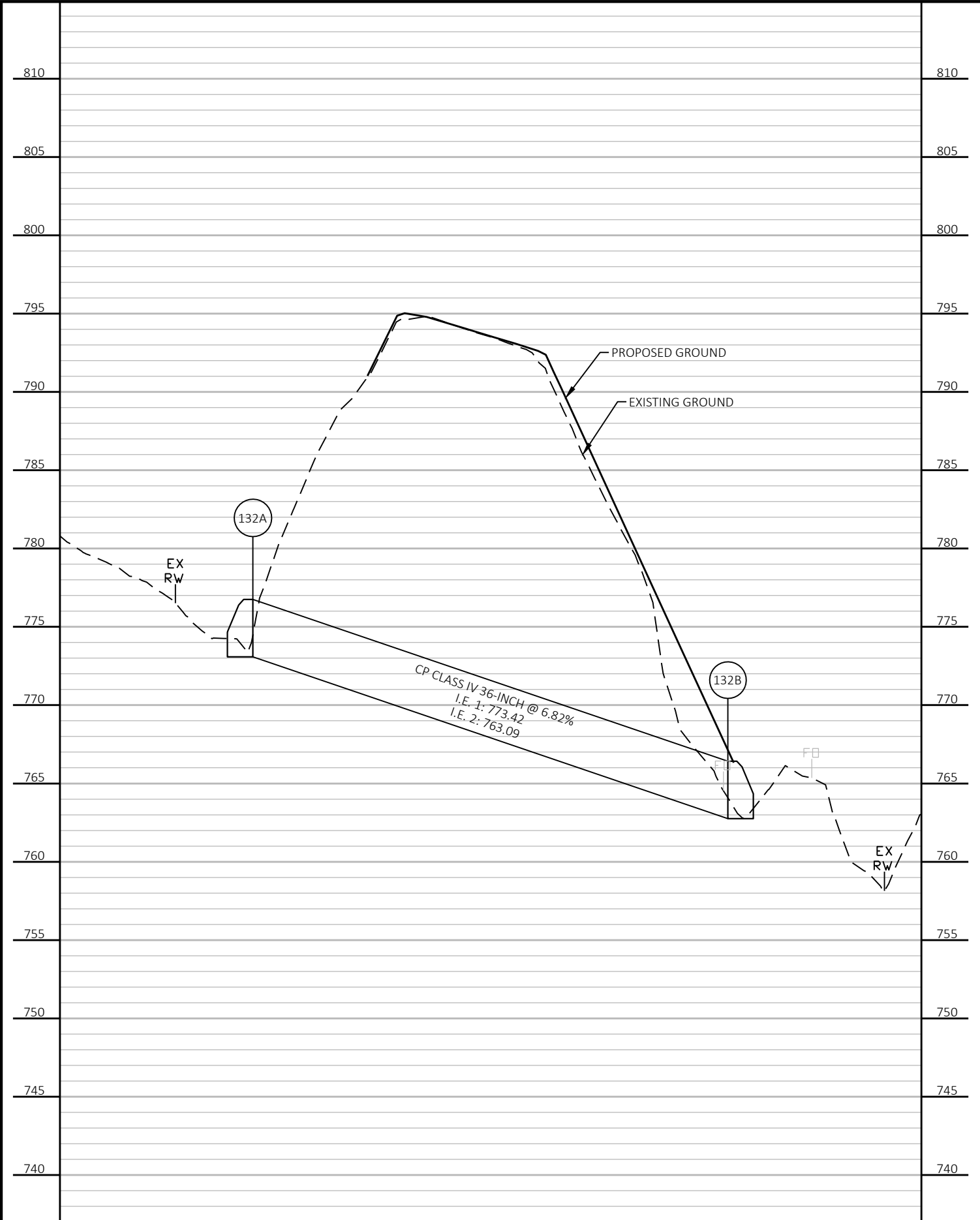
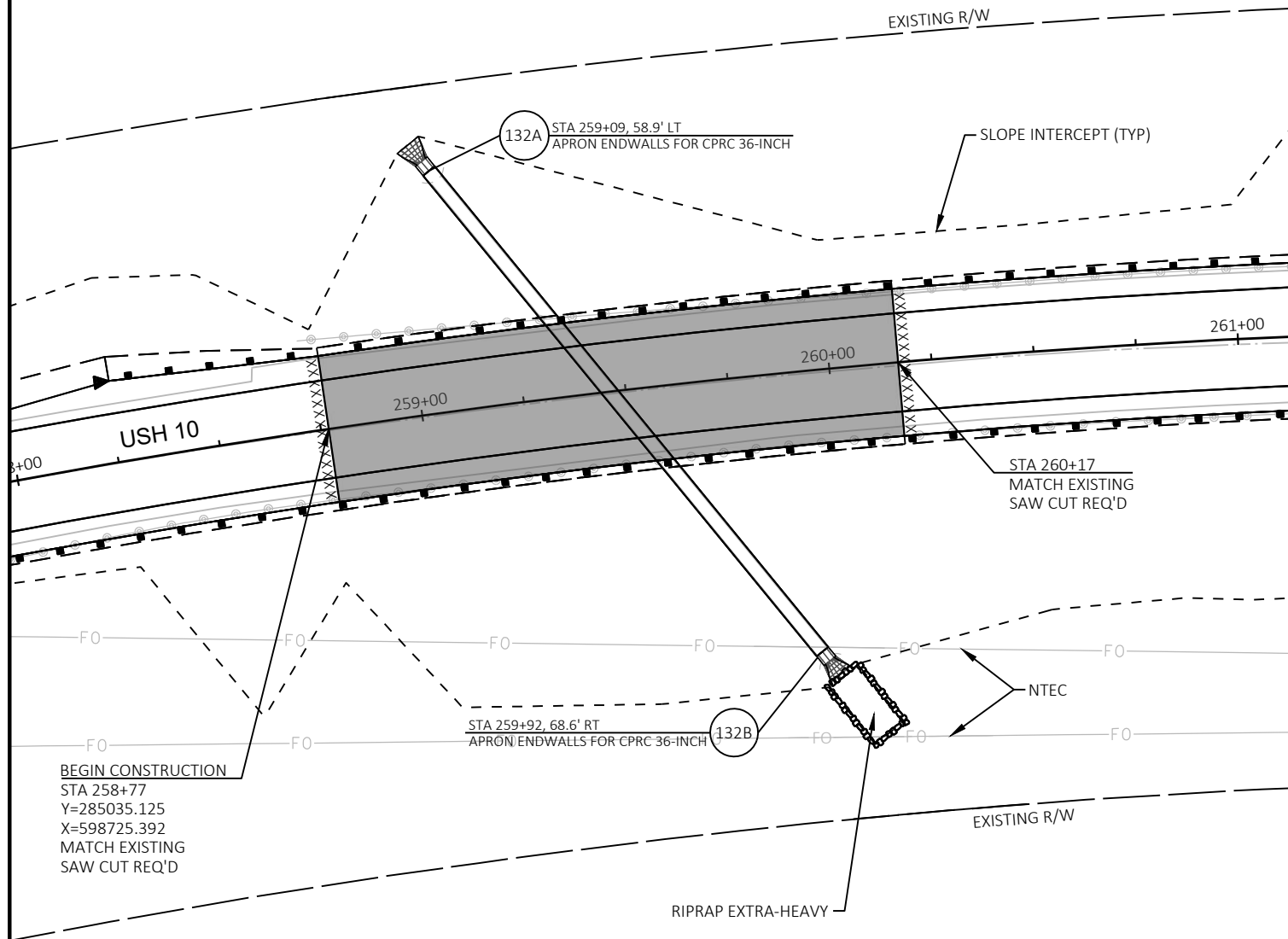


LEGEND	
	EROSION MAT CLASS I TYPE B
	EROSION MAT URBAN CLASS I TYPE B
	SILT FENCE
	CULVERT PIPE CHECKS
	TEMPORARY DITCH CHECKS

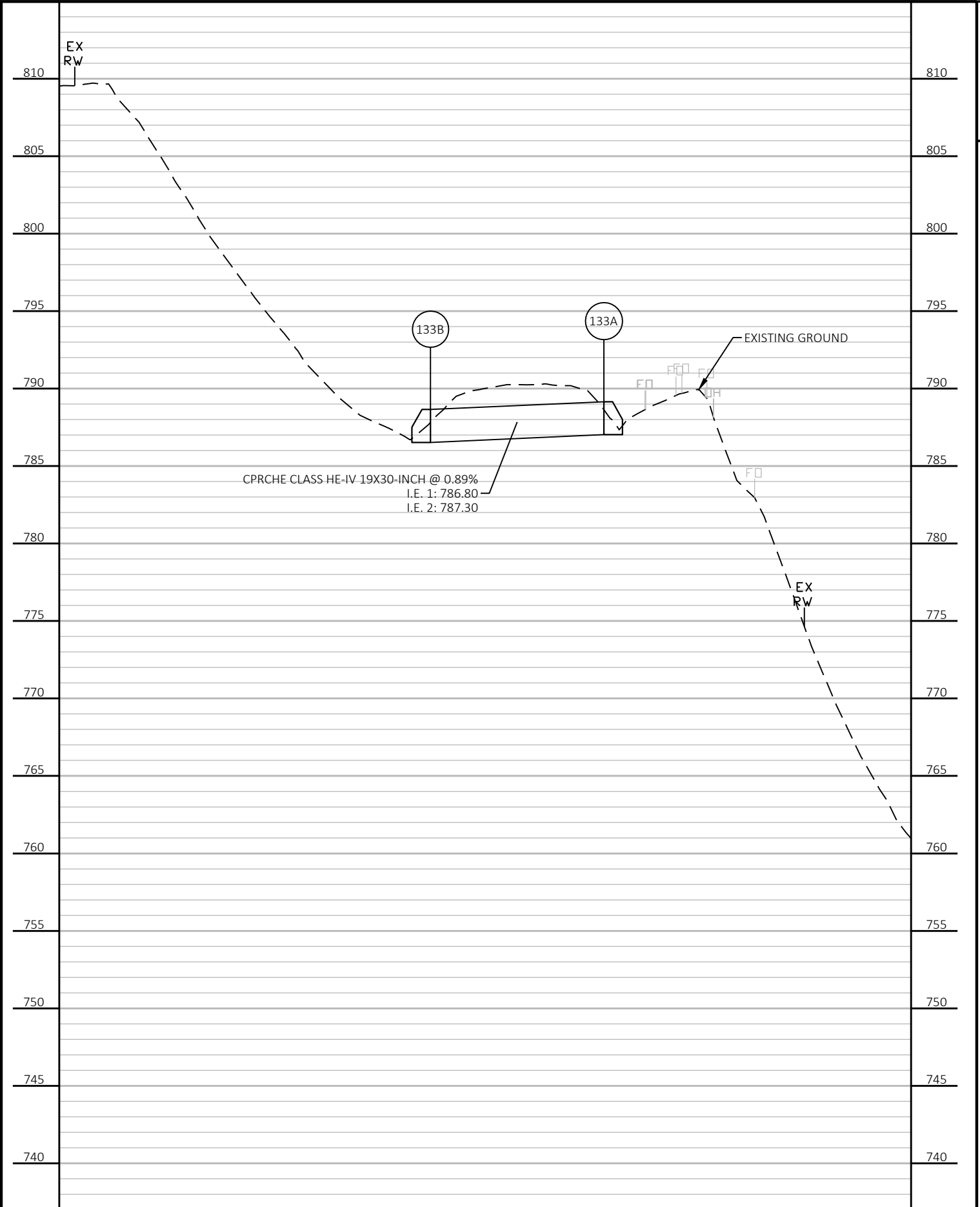
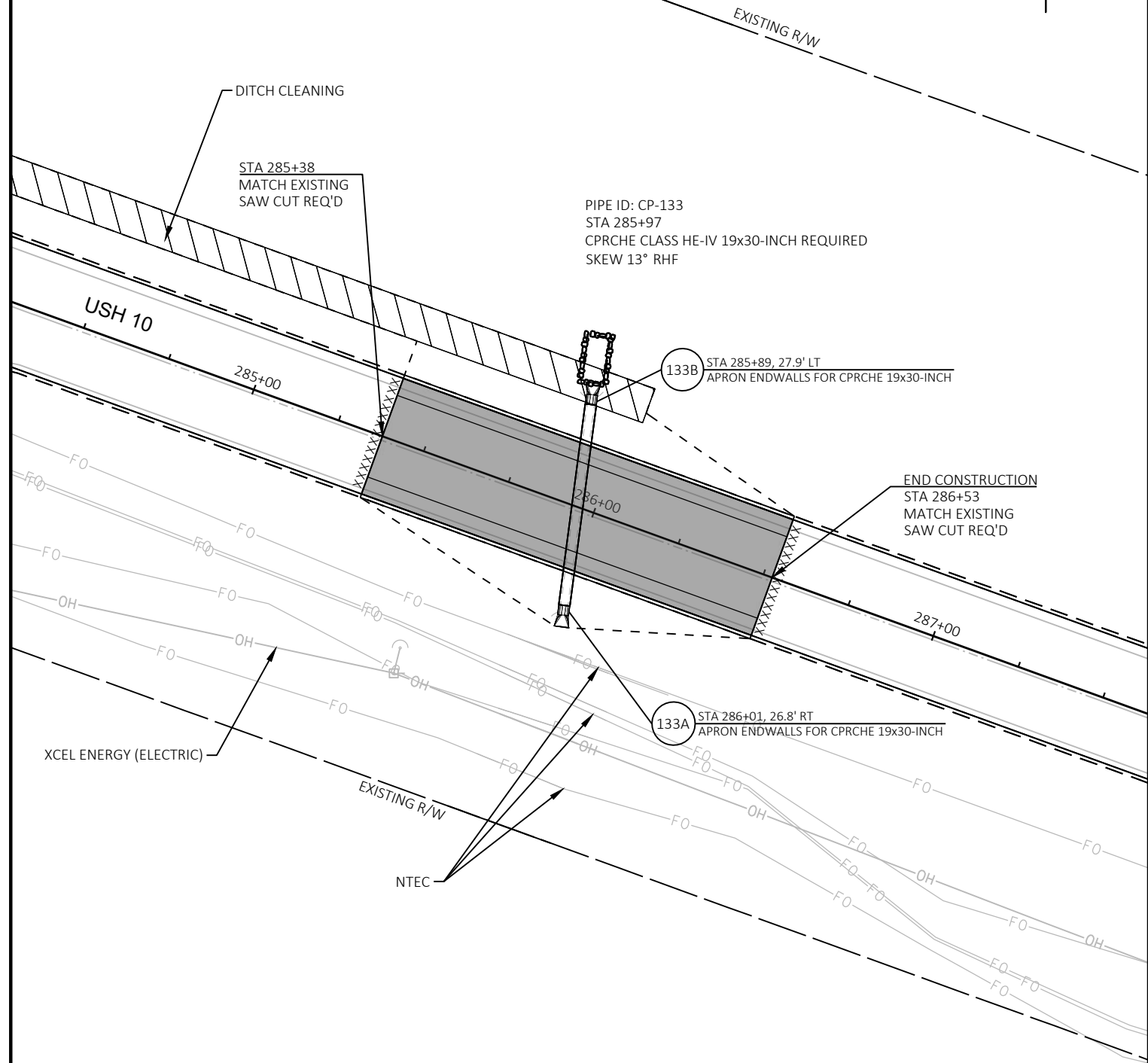
NOTE:
STATION OFFSETS ARE SHOWN TO THE END OF PIPE, NOT THE END OF APRON ENDWALL.
SEE GUARDRAIL DETAILS FOR EROSION CONTROL.

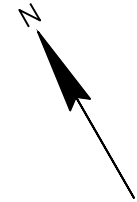


PIPE ID: CP-132
STA 259+48
CP CLASS IV 36-INCH REQUIRED
SKEW 33° RHF



NOTE:
STATION OFFSETS ARE SHOWN TO THE END OF PIPE, NOT THE END OF APRON ENDWALL.
SEE GUARDRAIL DETAILS FOR EROSION CONTROL.

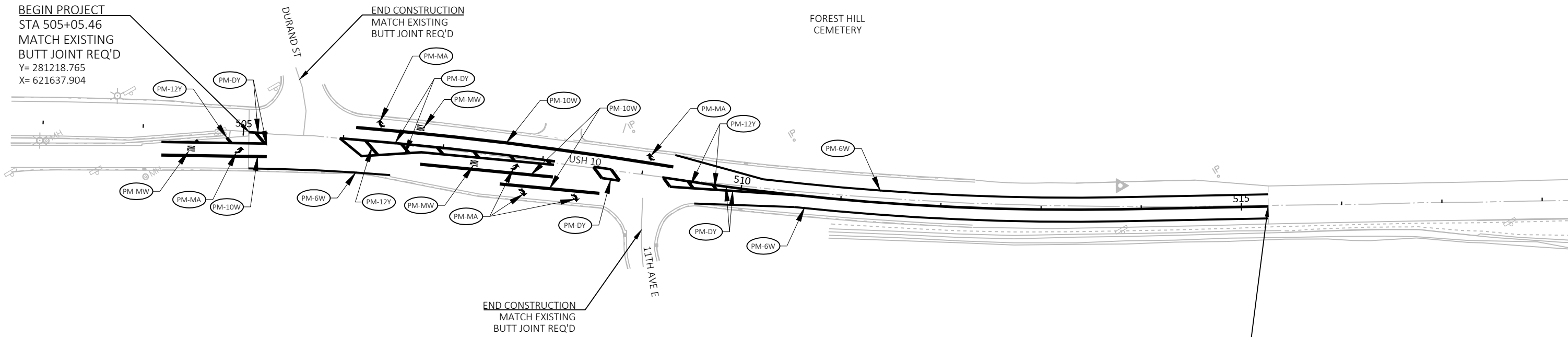












BEGIN PROJECT
 STA 505+05.46
 MATCH EXISTING
 BUTT JOINT REQ'D
 Y= 281218.765
 X= 621637.904

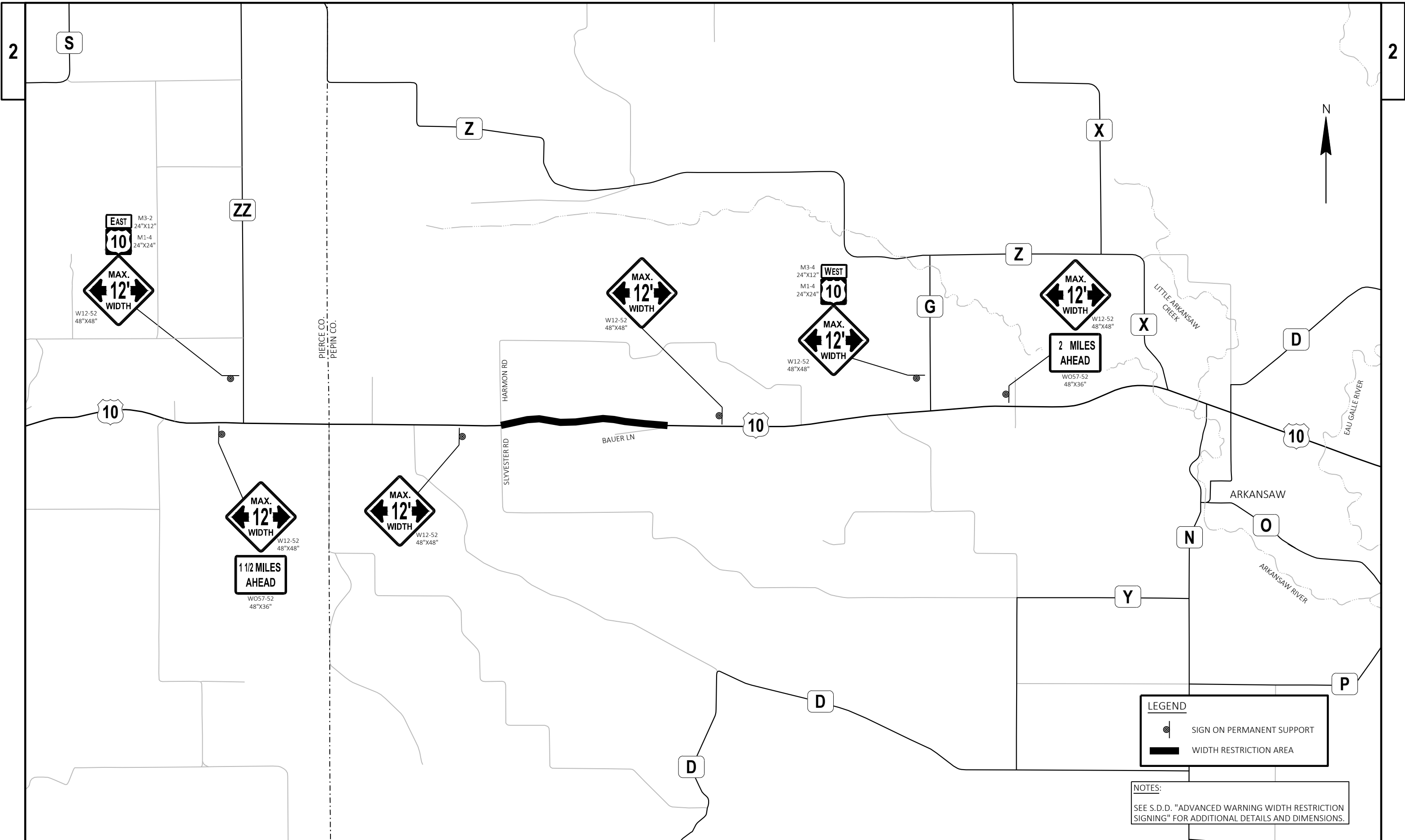
END CONSTRUCTION
 MATCH EXISTING
 BUTT JOINT REQ'D

END PROJECT
 STA 515+26.61
 MATCH EXISTING
 BUTT JOINT REQ'D



LEGEND:

-  MARKING LINE EPOXY 6-INCH (WHITE)
-  MARKING LINE SAME DAY EPOXY 6-INCH (DOUBLE YELLOW)
-  MARKING LINE EPOXY 6-INCH (YELLOW)
-  MARKING LINE SAME DAY EPOXY 10-INCH (WHITE)
-  MARKING ARROW EPOXY
-  MARKING WORD EPOXY
-  MARKING SYMBOL EPOXY
-  MARKING DIAGONAL EPOXY 12-INCH (YELLOW) 25' SPACING C-C



PROJECT NO: 1530-05-73

HWY: USH 10

COUNTY: PEPIN

ADVANCED WARNING SIGNING

SHEET

E

TRAFFIC CONTROL GENERAL NOTES:

TYPICAL SIGN SPACING, CODES, AND SIZES SHALL BE IN ACCORDANCE WITH APPLICABLE SDD'S. REFER TO SDD GENERAL NOTES FOR FURTHER TRAFFIC CONTROL REQUIREMENTS NOT SHOWN IN THE PLANS.

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 ARE 48" X 48" UNLESS OTHERWISE NOTED.

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

ALL SIGNS OR PAVEMENT MARKING, TEMPORARY OR EXISTING, THAT CONFLICT WITH THE CONSTRUCTION TRAFFIC PATTERN SHALL BE COVERED, REMOVED, OR ALTERED AS DIRECTED BY THE ENGINEER.

1530-05-73 MAINTENANCE OF TRAFFIC:

PROVIDE ADVANCED WARNING SIGNING FOR STAGES IN WHICH USH 10 TRAFFIC REMAINS OPEN DURING CONSTRUCTION:

- ① HWY 10 ROAD WORK BEGINS XXX-XX SIGNING TO BE PLACED 7 CALENDAR DAYS PRIOR TO PROJECT START. TO BE REMOVED AFTER PROJECT BEGINS.



G20-57
72"x36"

- ② ADVANCE WARNING SIGNING SHALL BE PER SDD "TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 MPH OR GREATER UNDIVIDED ROAD OPEN TO TRAFFIC".

USH 10 SHALL REMAIN OPEN TO TRAFFIC WITH TEMPORARY SINGLE LANE CLOSURES FOR THE FOLLOWING CONSTRUCTION OPERATIONS:

- ③ MILLING AND PAVING OPERATIONS FROM STA 15+98.10 TO STA 431+91.60. UTILIZE SDD'S "TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION", "TRAFFIC CONTROL, DROP-OFF SIGNING", & "TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH MILLED SURFACES".
- ④ GUARDRAIL REPLACEMENTS EXCLUDING THE DETOUR LOCATIONS AND ADDITIONAL LOCATIONS NOTED SPECIFIED BELOW. UTILIZE SDD "TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION".
- ⑤ GUARDRAIL REPLACEMENTS FROM STA 67+83 TO STA 114+23 LT/RT . SEE TRAFFIC CONTROL: GUARDRAIL WORK AT CLIMBING LANE LOCATIONS.
- ⑥ GUARDRAIL REPLACEMENTS FROM STA 397+47 TO STA 426+51. SEE TRAFFIC CONTROL: TEMPORARY SIGNAL PLAN. UTILIZE SDD "TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS."

USH 10 SHALL REMAIN OPEN TO TRAFFIC WITH NO LANE CLOSURES FOR THE FOLLOWING CONSTRUCTION OPERATIONS:

- ⑦ CULVERT REPAIRS, DITCH CLEANING, & GRUBBING. UTILIZE SDD "TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY".
- ⑧ ALL SIDE ROADS SHALL HAVE TRAFFIC CONTROL AS SHOWN ON TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL PER S.D.D "TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 MPH OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC".

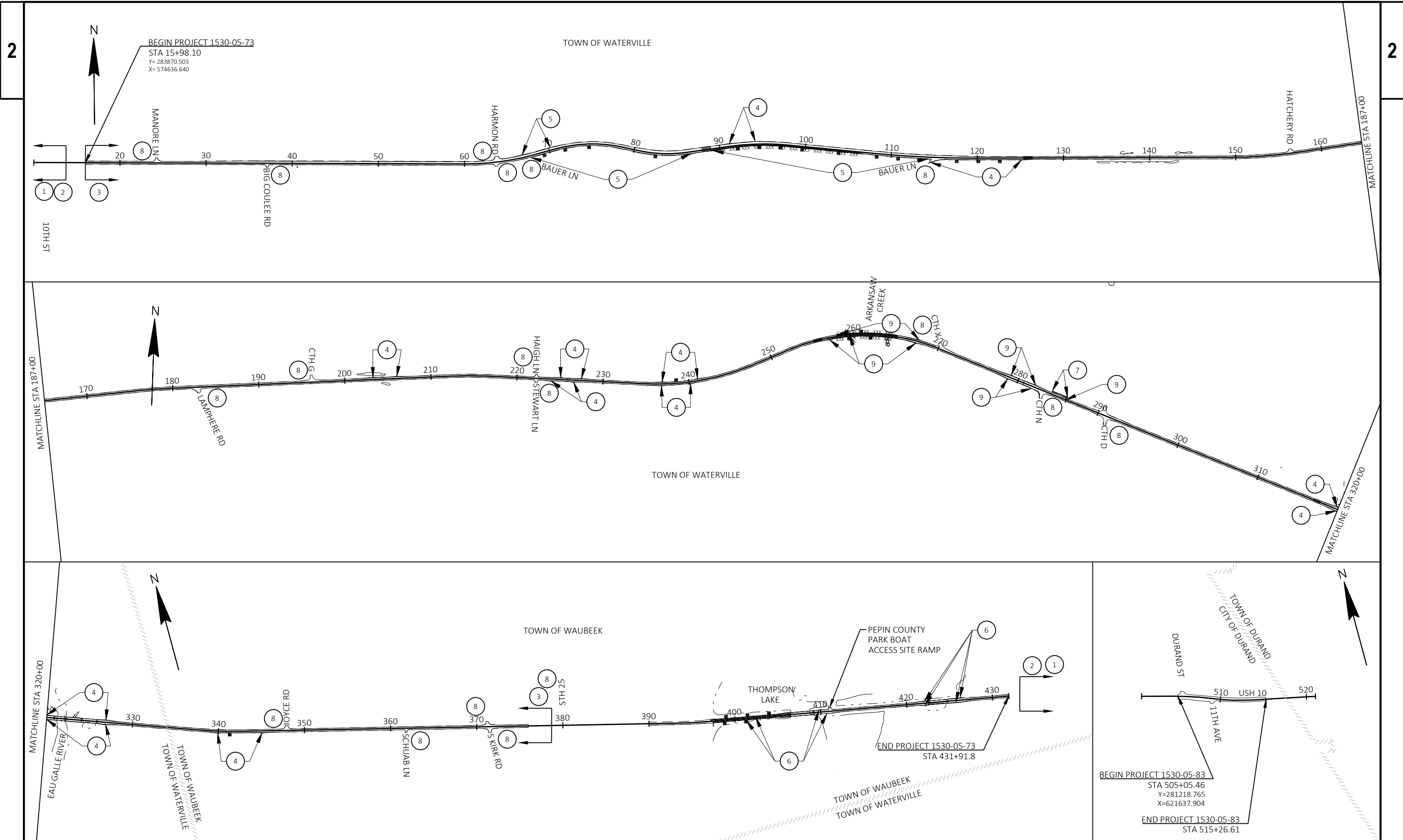
USH 10 SHALL BE CLOSED TO TRAFFIC WITH POSTED DETOUR FOR THE FOLLOWING CONSTRUCTION OPERATIONS:

- ⑨ CULVERT REPLACEMENTS AT STA 259+48 & STA 285+97; GUARDRAIL REPLACEMENTS FROM STA 257+18 TO STA 267+53 & STA 277+04 TO STA 283+83. REFER TO DETOUR SHEETS FOR SIGN AND DEVICE LOCATIONS.

1530-05-83 MAINTENANCE OF TRAFFIC:

USH 10 SHALL REMAIN OPEN TO TRAFFIC AT ALL TIMES WITH TRAFFIC CONTROL AS FOLLOWS:

- BEGINNING OF PROJECT TO 11TH AVE E - REFER TO STAGING PLANS.
- 11TH AVE E TO END OF PROJECT - UTILIZE SDD "TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION".



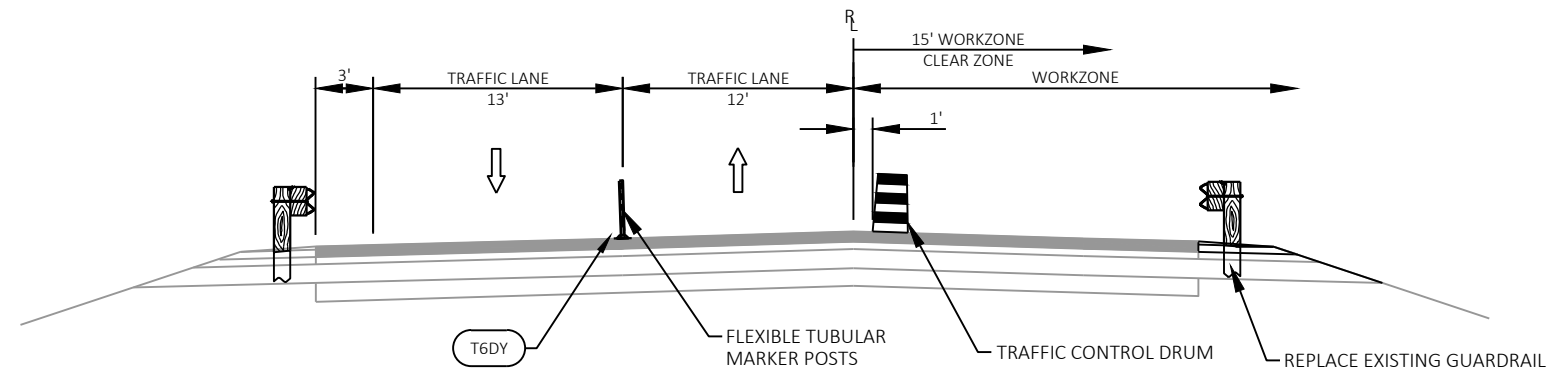
PROJECT NO: 1530-05-73/1530-05-83 HWY: USH 10 COUNTY: PEPIN TRAFFIC CONTROL OVERVIEW SHEET E

NOTES:

- 1. SEE S.D.D. "TRAFFIC CONTROL, WORK ON SHOULDER, UNDIVIDED ROADWAY" AND DETAIL "EASTBOUND TRAFFIC CONTROL LANE SHIFT DETAIL", AND DETAIL "WESTBOUND TRAFFIC CONTROL LANE SHIFT".
- 2. REMOVE ANY CONFLICTING PAVEMENT MARKINGS AND MARK DOUBLE YELLOW

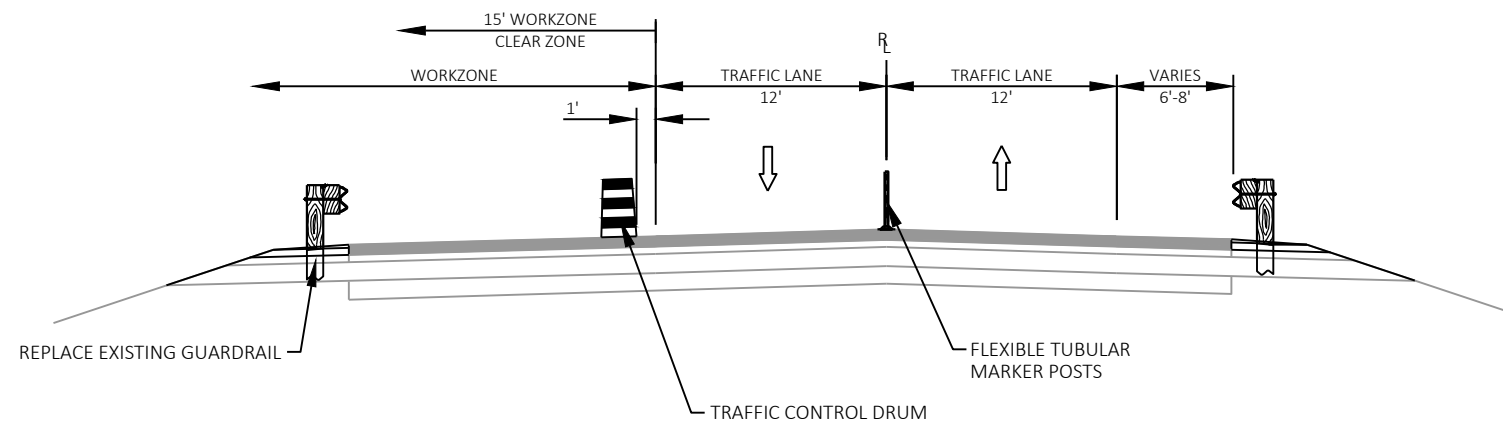
TEMPORARY PAVEMENT MARKING LEGEND

- T6W TEMPORARY MARKING LINE PAINT 6-INCH (WHITE)
- T6DY TEMPORARY MARKING LINE PAINT 6-INCH (DOUBLE YELLOW)



TRAFFIC CONTROL TYPICAL SECTION - CLIMBING LANE

USH 10 (EB LANE CLOSURE)
STA 67+83 - STA 114+23
(GUARDRAIL REPLACEMENT)



TRAFFIC CONTROL TYPICAL SECTION - CLIMBING LANE

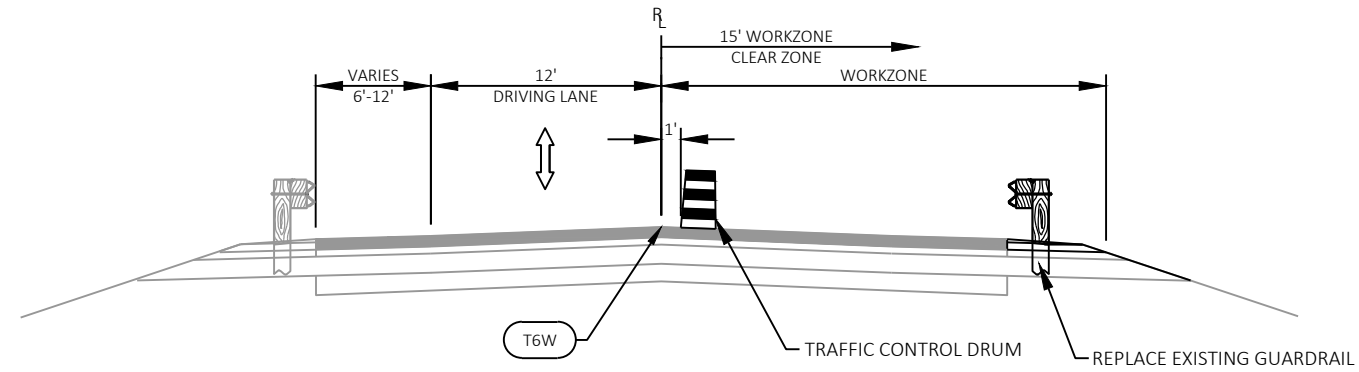
USH 10 (CLIMBING LANE CLOSURE)
STA 67+83 - STA 114+23
(GUARDRAIL REPLACEMENT)

NOTES:

- 1. SEE S.D.D. "TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS" AND DETAIL "TRAFFIC CONTROL - TEMPORARY SIGNAL".
- 2. REMOVE ANY CONFLICTING PAVEMENT MARKINGS

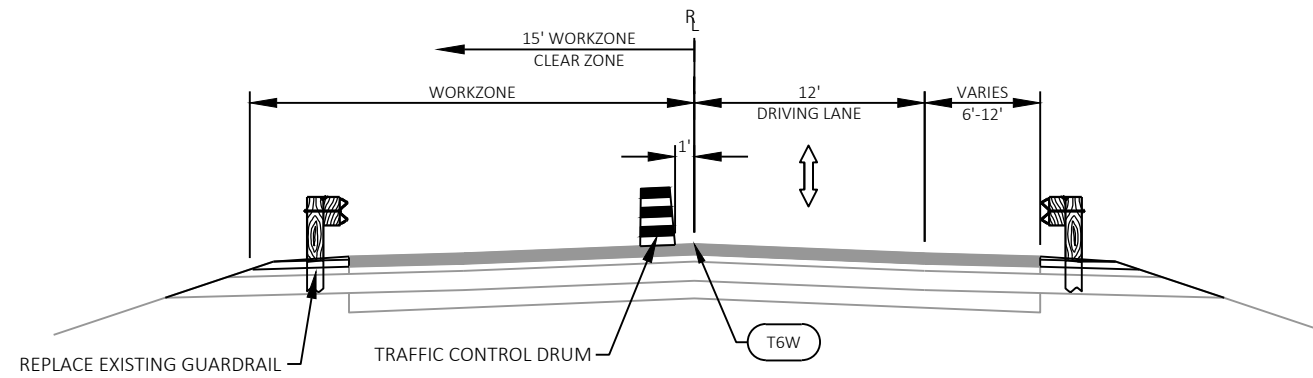
TEMPORARY PAVEMENT MARKING LEGEND

- T6W TEMPORARY MARKING LINE PAINT 6-INCH (WHITE)
- T6DY TEMPORARY MARKING LINE PAINT 6-INCH (DOUBLE YELLOW)



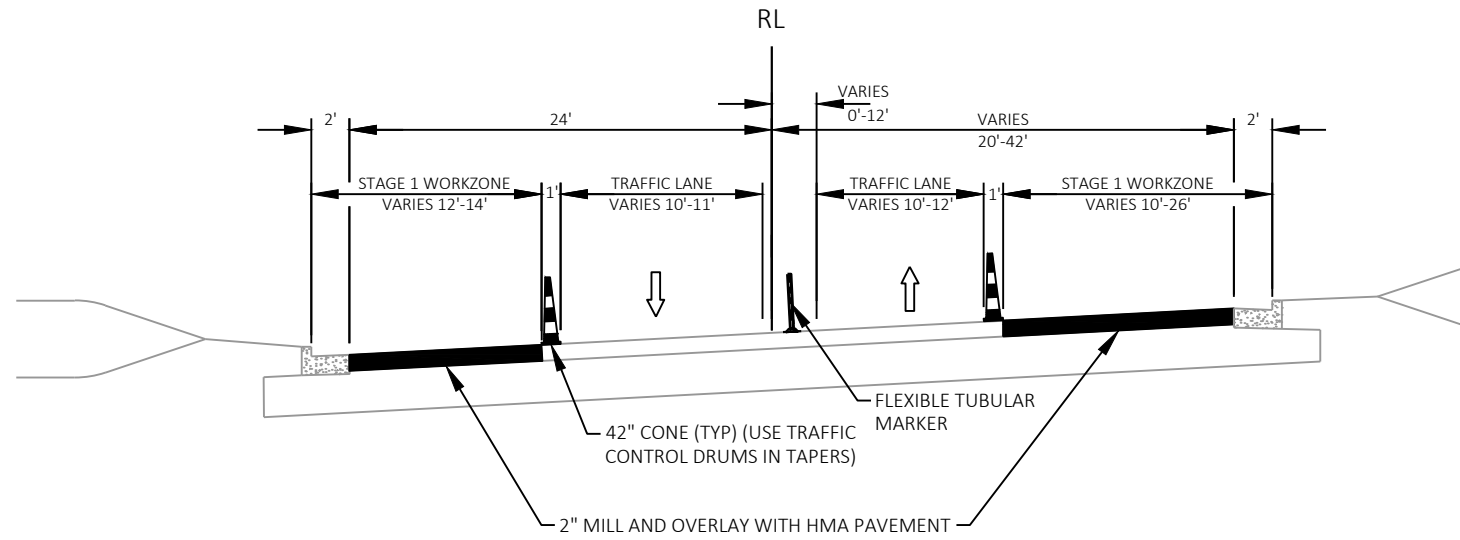
TRAFFIC CONTROL TYPICAL SECTION

USH 10 (EB LANE CLOSURE)
STA 397+47 - STA 426+51
(GUARDRAIL REPLACEMENT)



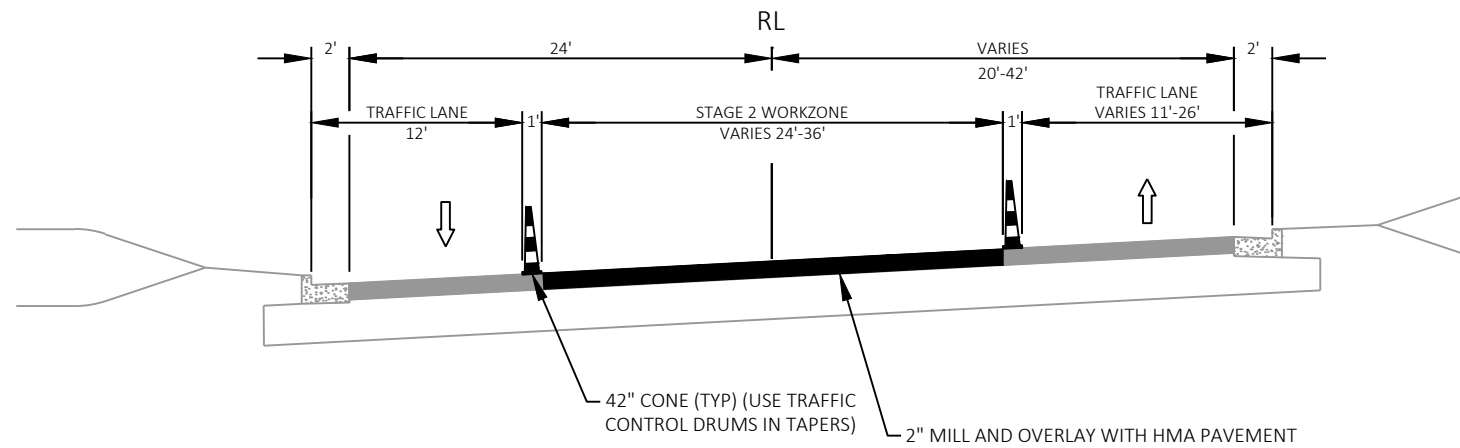
TRAFFIC CONTROL TYPICAL SECTION

USH 10 (WB LANE CLOSURE)
STA 397+47 - STA 426+51
(GUARDRAIL REPLACEMENT)



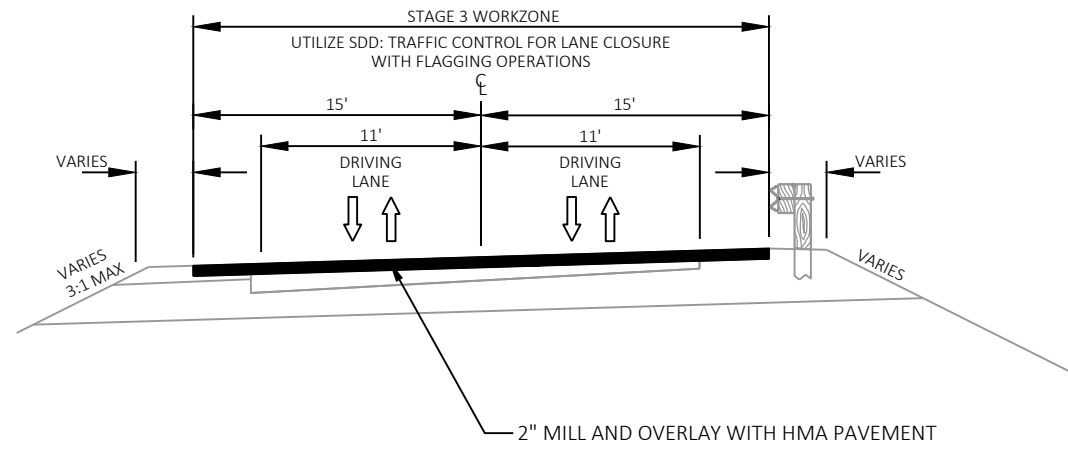
STAGE 1 TRAFFIC CONTROL TYPICAL SECTION

USH 10
STA 505+05.46 TO STA 509+50.00



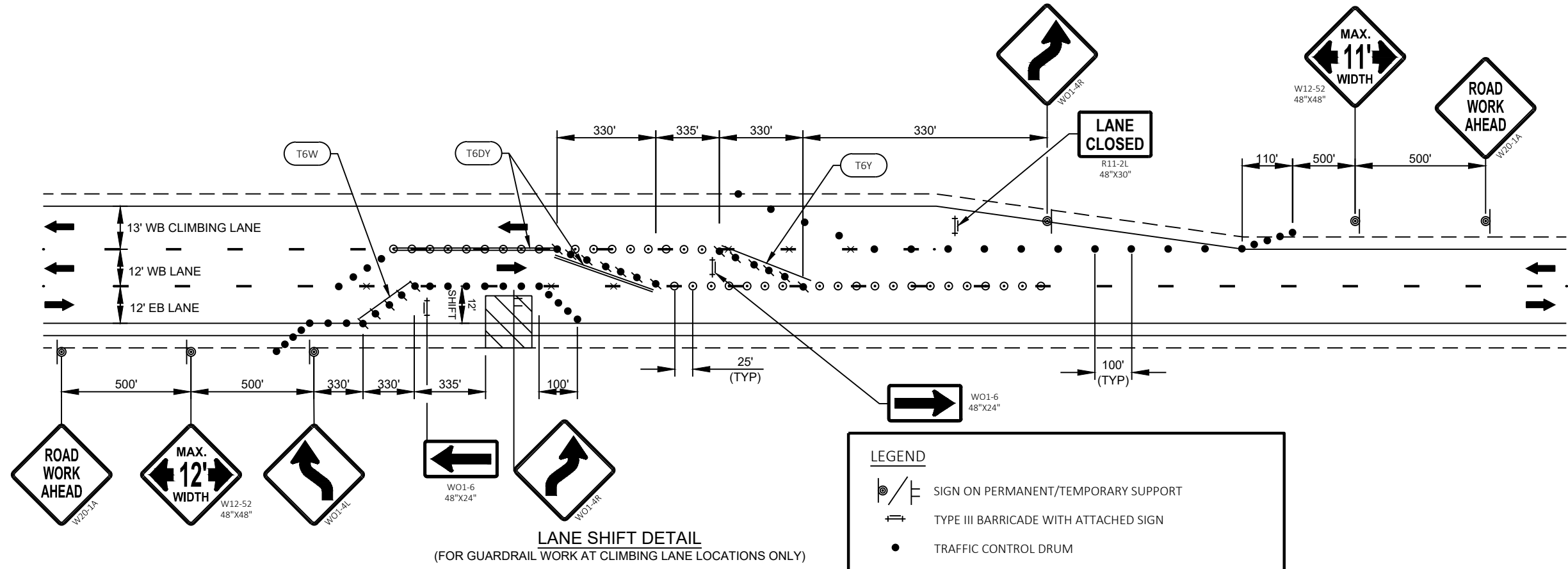
STAGE 2 TRAFFIC CONTROL TYPICAL SECTION

USH 10
STA 505+05.46 TO STA 509+50.00



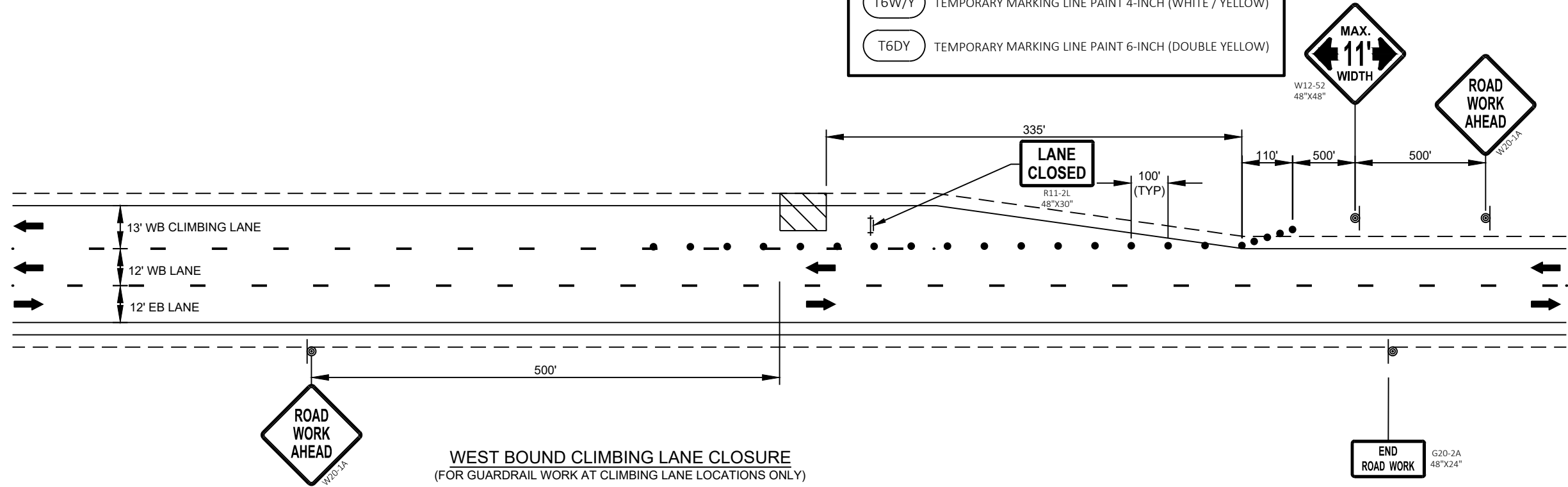
STAGE 3 TRAFFIC CONTROL TYPICAL SECTION

USH 10
STA 509+50.00 TO STA 515+26.61

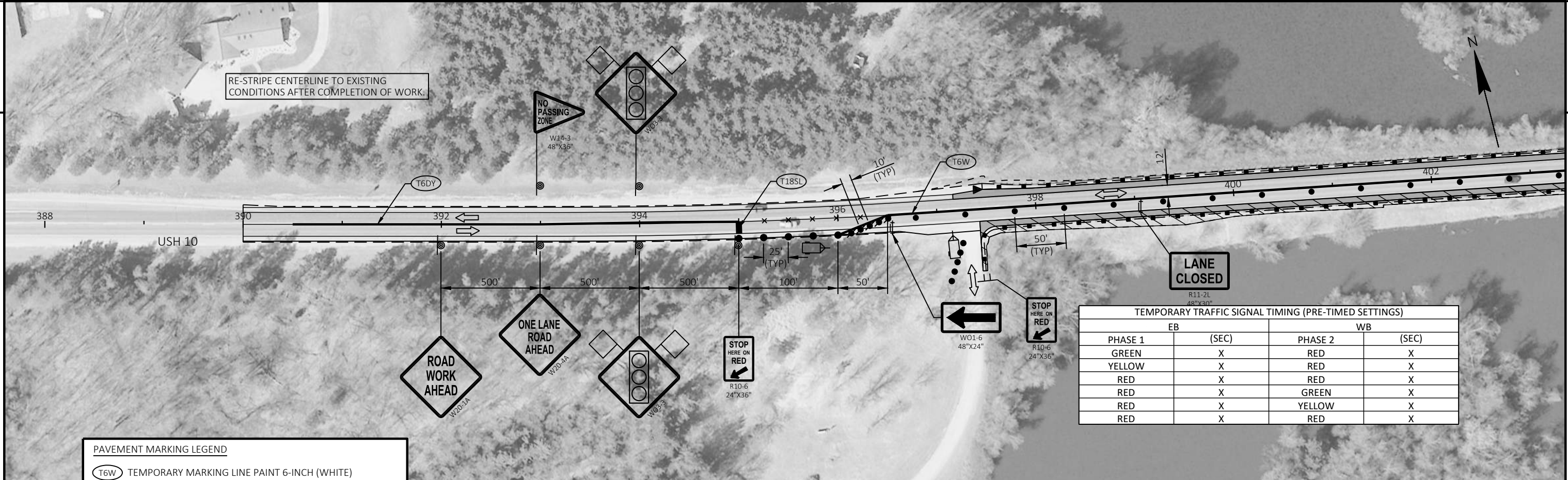


LEGEND

- ⊙ / ⊞ SIGN ON PERMANENT/TEMPORARY SUPPORT
- ⊞ TYPE III BARRICADE WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- ⊙ FLEXIBLE TUBULAR MARKER
- ▨ WORK ZONE
- × × REMOVING PAVEMENT MARKINGS
- (T6W/Y) TEMPORARY MARKING LINE PAINT 4-INCH (WHITE / YELLOW)
- (T6DY) TEMPORARY MARKING LINE PAINT 6-INCH (DOUBLE YELLOW)



RE-STRIPE CENTERLINE TO EXISTING CONDITIONS AFTER COMPLETION OF WORK.

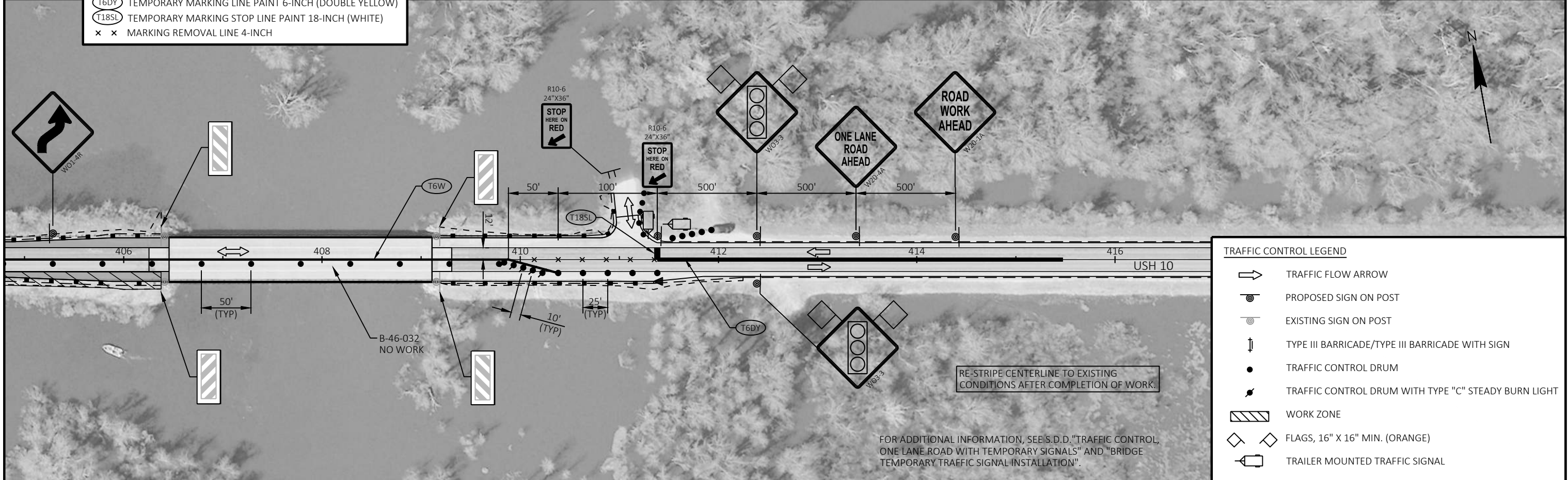


TEMPORARY TRAFFIC SIGNAL TIMING (PRE-TIMED SETTINGS)

EB		WB	
PHASE 1	(SEC)	PHASE 2	(SEC)
GREEN	X	RED	X
YELLOW	X	RED	X
RED	X	RED	X
RED	X	GREEN	X
RED	X	YELLOW	X
RED	X	RED	X

PAVEMENT MARKING LEGEND

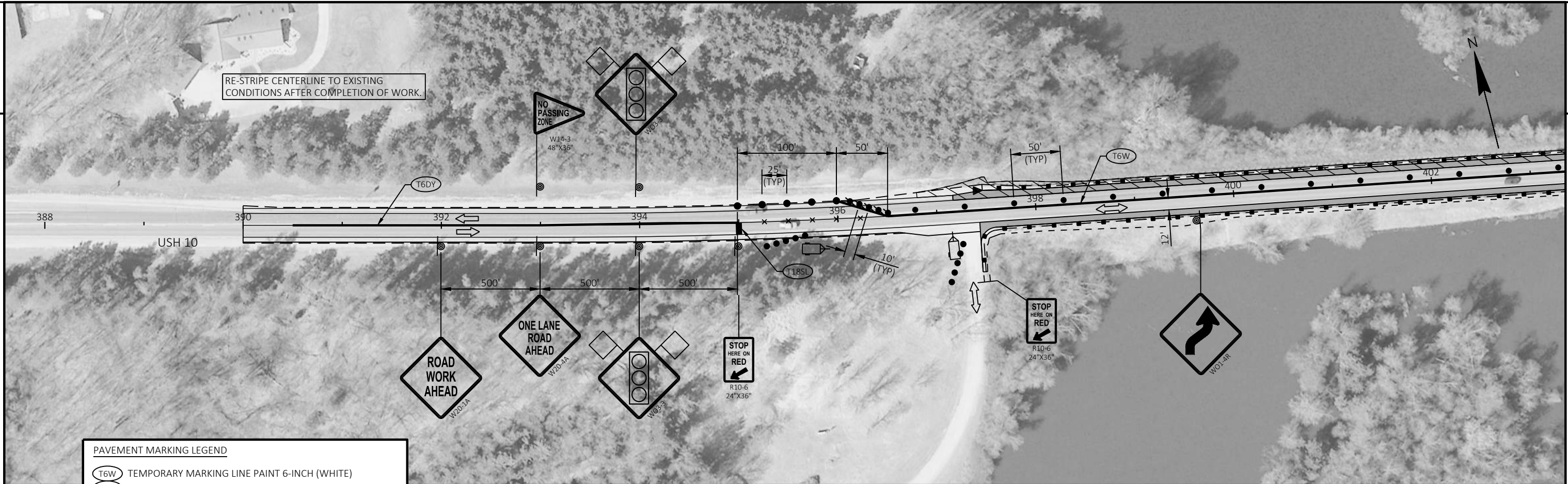
T6W	TEMPORARY MARKING LINE PAINT 6-INCH (WHITE)
T6DY	TEMPORARY MARKING LINE PAINT 6-INCH (DOUBLE YELLOW)
T18SL	TEMPORARY MARKING STOP LINE PAINT 18-INCH (WHITE)
x x	MARKING REMOVAL LINE 4-INCH



TRAFFIC CONTROL LEGEND

	TRAFFIC FLOW ARROW
	PROPOSED SIGN ON POST
	EXISTING SIGN ON POST
	TYPE III BARRICADE/TYPE III BARRICADE WITH SIGN
	TRAFFIC CONTROL DRUM
	TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
	WORK ZONE
	FLAGS, 16" X 16" MIN. (ORANGE)
	TRAILER MOUNTED TRAFFIC SIGNAL

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

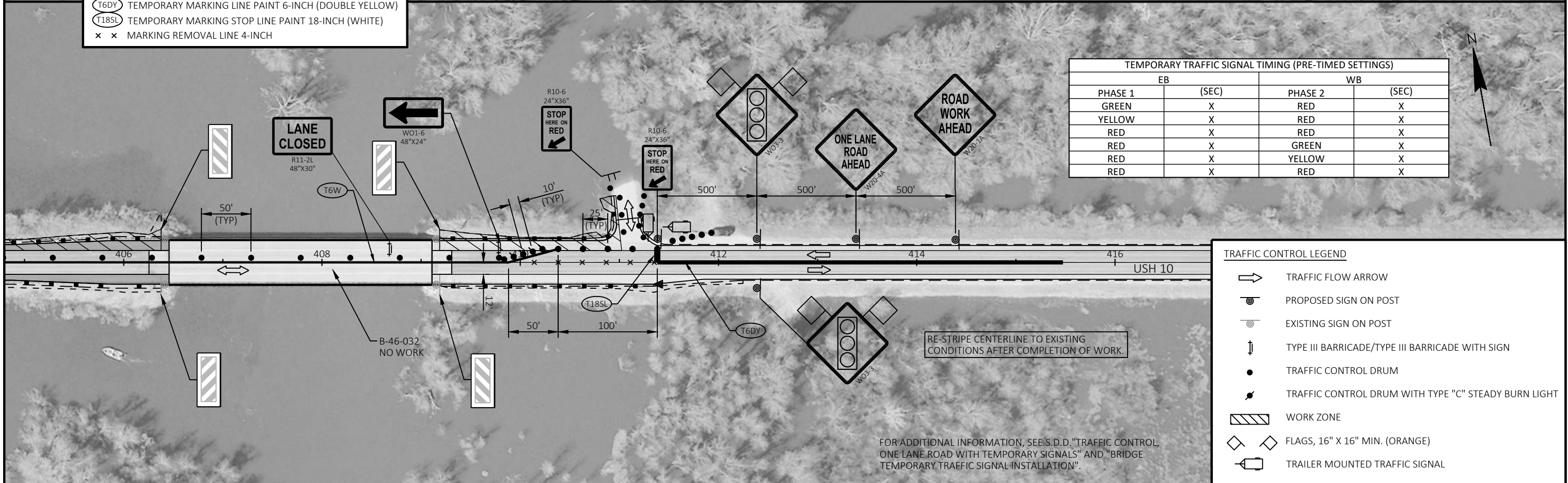


PAVEMENT MARKING LEGEND

- T6W TEMPORARY MARKING LINE PAINT 6-INCH (WHITE)
- T6DY TEMPORARY MARKING LINE PAINT 6-INCH (DOUBLE YELLOW)
- T18SL TEMPORARY MARKING STOP LINE PAINT 18-INCH (WHITE)
- x x MARKING REMOVAL LINE 4-INCH

TEMPORARY TRAFFIC SIGNAL TIMING (PRE-TIMED SETTINGS)

EB		WB	
PHASE 1	(SEC)	PHASE 2	(SEC)
GREEN	X	RED	X
YELLOW	X	RED	X
RED	X	RED	X
RED	X	GREEN	X
RED	X	YELLOW	X
RED	X	RED	X



TRAFFIC CONTROL LEGEND

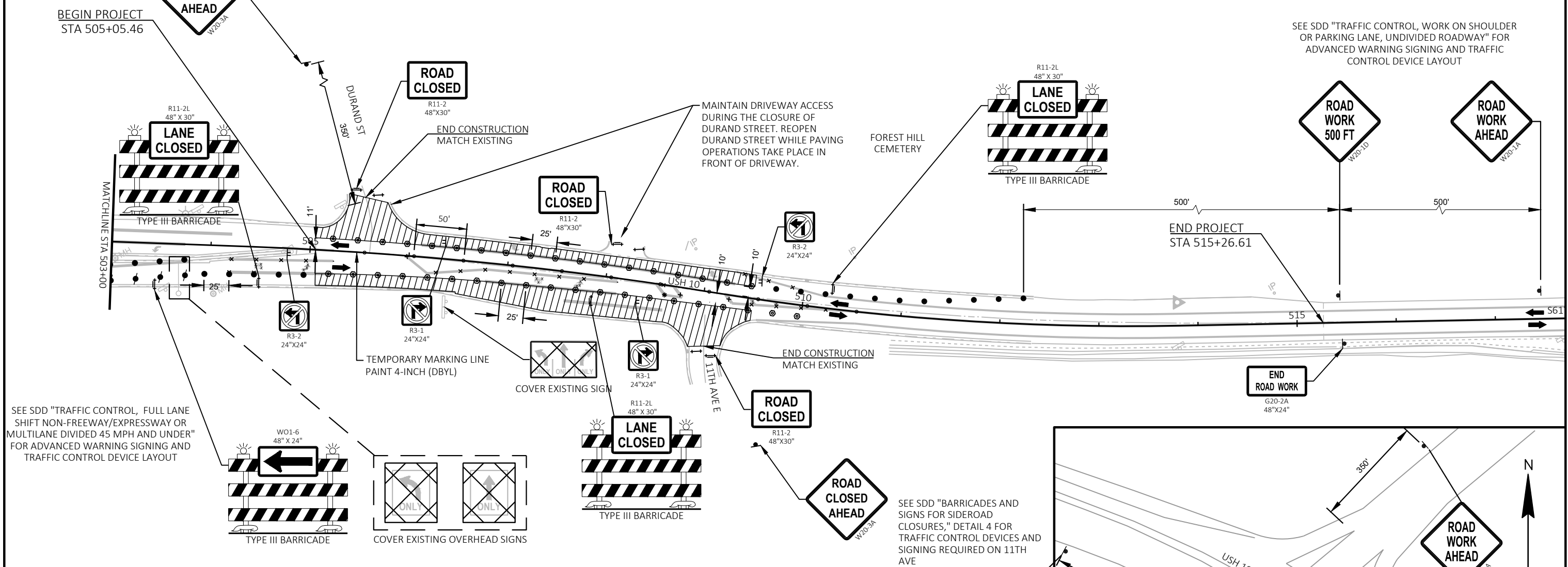
- TRAFFIC FLOW ARROW
- ⊙ PROPOSED SIGN ON POST
- ⊙ EXISTING SIGN ON POST
- ⊥ TYPE III BARRICADE/TYPE III BARRICADE WITH SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- ▨ WORK ZONE
- ◇ FLAGS, 16" X 16" MIN. (ORANGE)
- ⇄ TRAILER MOUNTED TRAFFIC SIGNAL

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

STAGE 1:
 CLOSE OUTSIDE LANES AND SHOULDER. SHIFT TRAFFIC TO INSIDE LANES AND MEDIAN. MILL AND RESURFACE WITH 2" ASPHALTIC PAVEMENT. MAINTAIN 10' MINIMUM TRAVEL LANE IN EACH DIRECTION.

SEE SDD "BARRICADES AND SIGNS FOR SIDEROAD CLOSURES," DETAIL 4 FOR FOR TRAFFIC CONTROL DEVICES AND SIGNING REQUIRED ON DURAND ST

SEE SDD "TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY" FOR ADVANCED WARNING SIGNING AND TRAFFIC CONTROL DEVICE LAYOUT



SEE SDD "TRAFFIC CONTROL, FULL LANE SHIFT NON-FREEWAY/EXPRESSWAY OR MULTILANE DIVIDED 45 MPH AND UNDER" FOR ADVANCED WARNING SIGNING AND TRAFFIC CONTROL DEVICE LAYOUT

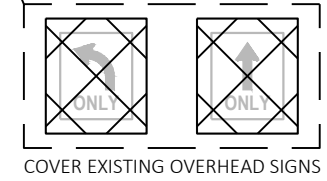
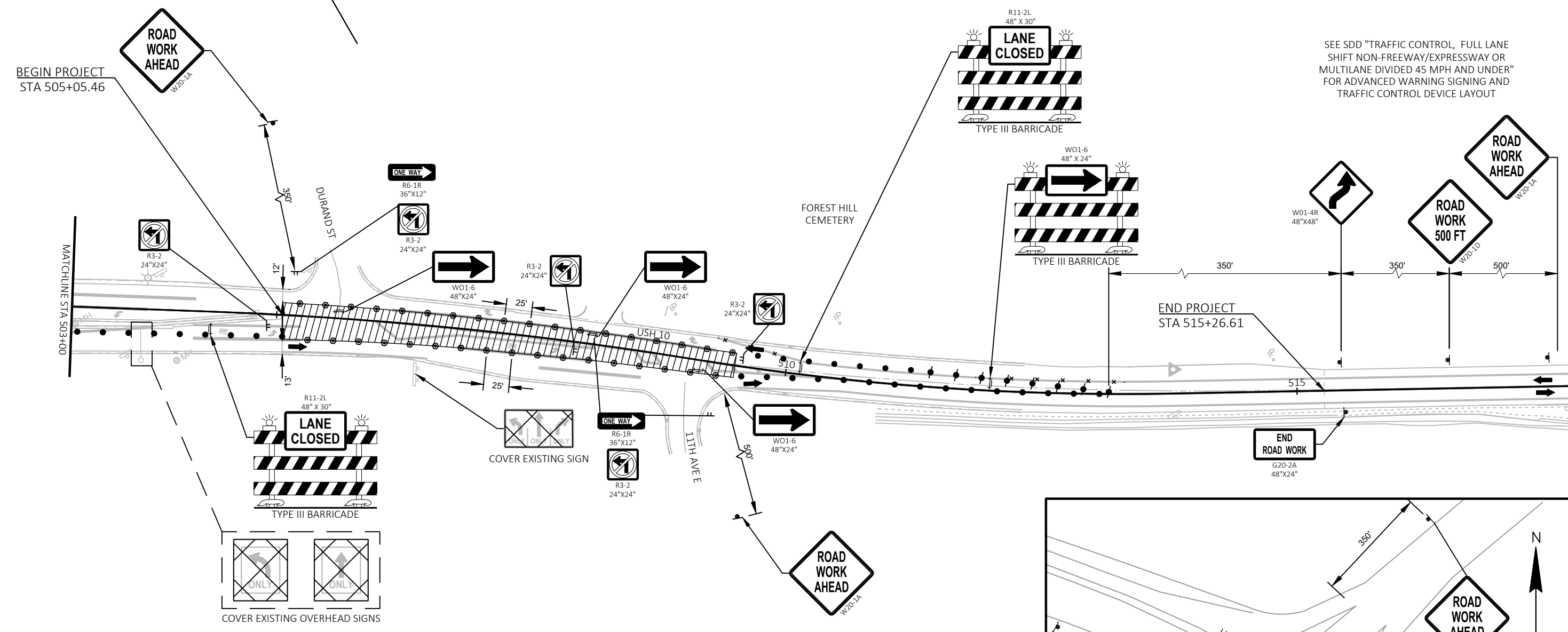
SEE SDD "BARRICADES AND SIGNS FOR SIDEROAD CLOSURES," DETAIL 4 FOR TRAFFIC CONTROL DEVICES AND SIGNING REQUIRED ON 11TH AVE

LEGEND

	TYPE II/TYPE III BARRICADE
	TYPE II/TYPE III BARRICADE WITH ATTACHED SIGN
	TRAFFIC CONTROL DRUM
	TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
	TRAFFIC CONTROL CONES 42-INCH
	SIGN ON PERMANENT SUPPORT
	SIGN ON TEMPORARY SUPPORT
	WORK AREA
	DIRECTION OF TRAFFIC
	MARKING REMOVAL

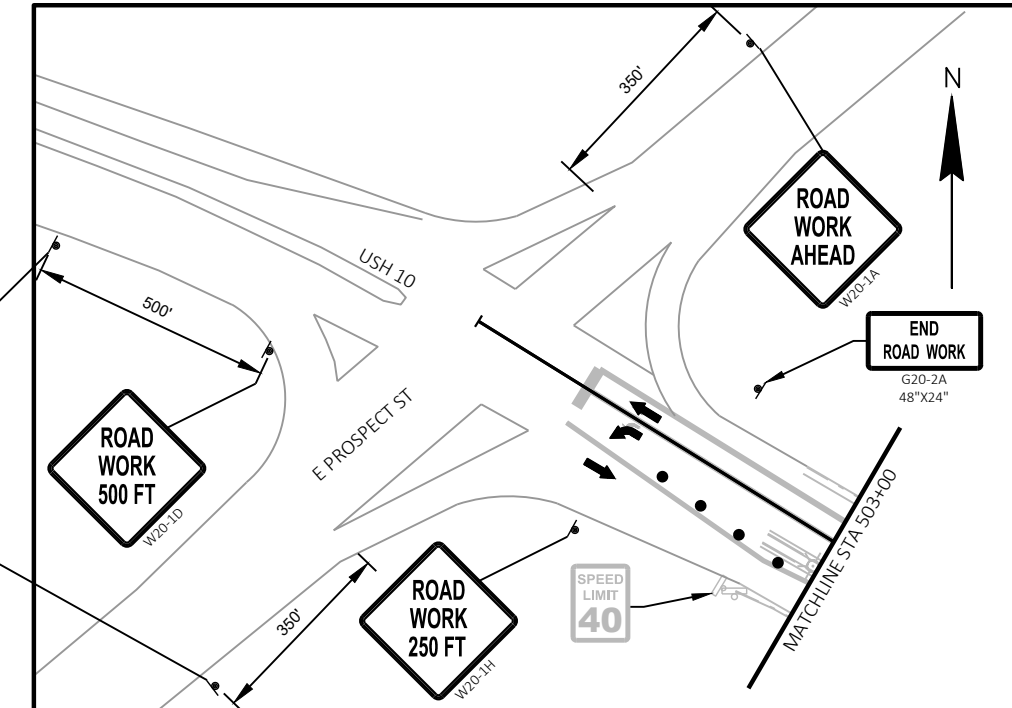
STAGE 2:
 CLOSE INSIDE LANES AND MEDIAN. SHIFT TRAFFIC TO OUTSIDE LANES AND SHOULDER. MILL AND RESURFACE WITH 2" ASPHALTIC PAVEMENT. MAINTAIN 10' MINIMUM TRAVEL LANE IN EACH DIRECTION.

SEE SDD "TRAFFIC CONTROL, FULL LANE SHIFT NON-FREEWAY/EXPRESSWAY OR MULTILANE DIVIDED 45 MPH AND UNDER" FOR ADVANCED WARNING SIGNING AND TRAFFIC CONTROL DEVICE LAYOUT



LEGEND

	TYPE II/TYPE III BARRICADE
	TYPE II/TYPE III BARRICADE WITH ATTACHED SIGN
	TRAFFIC CONTROL DRUM
	TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
	TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POST
	TRAFFIC CONTROL CONES 42-INCH
	SIGN ON PERMANENT SUPPORT
	SIGN ON TEMPORARY SUPPORT
	WORK AREA
	DIRECTION OF TRAFFIC
	MARKING REMOVAL

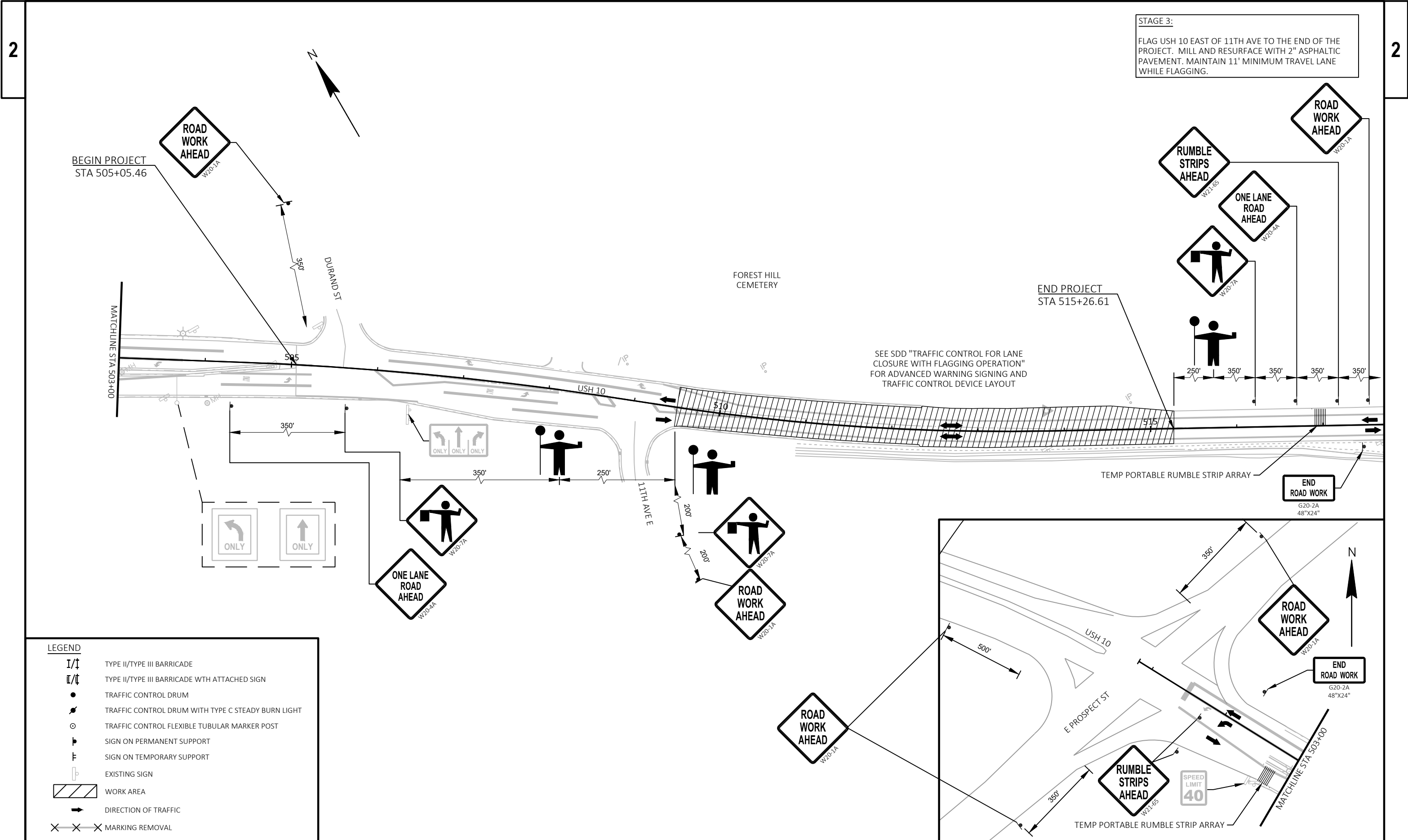


STAGE 3:
 FLAG USH 10 EAST OF 11TH AVE TO THE END OF THE PROJECT. MILL AND RESURFACE WITH 2" ASPHALTIC PAVEMENT. MAINTAIN 11' MINIMUM TRAVEL LANE WHILE FLAGGING.

BEGIN PROJECT
 STA 505+05.46

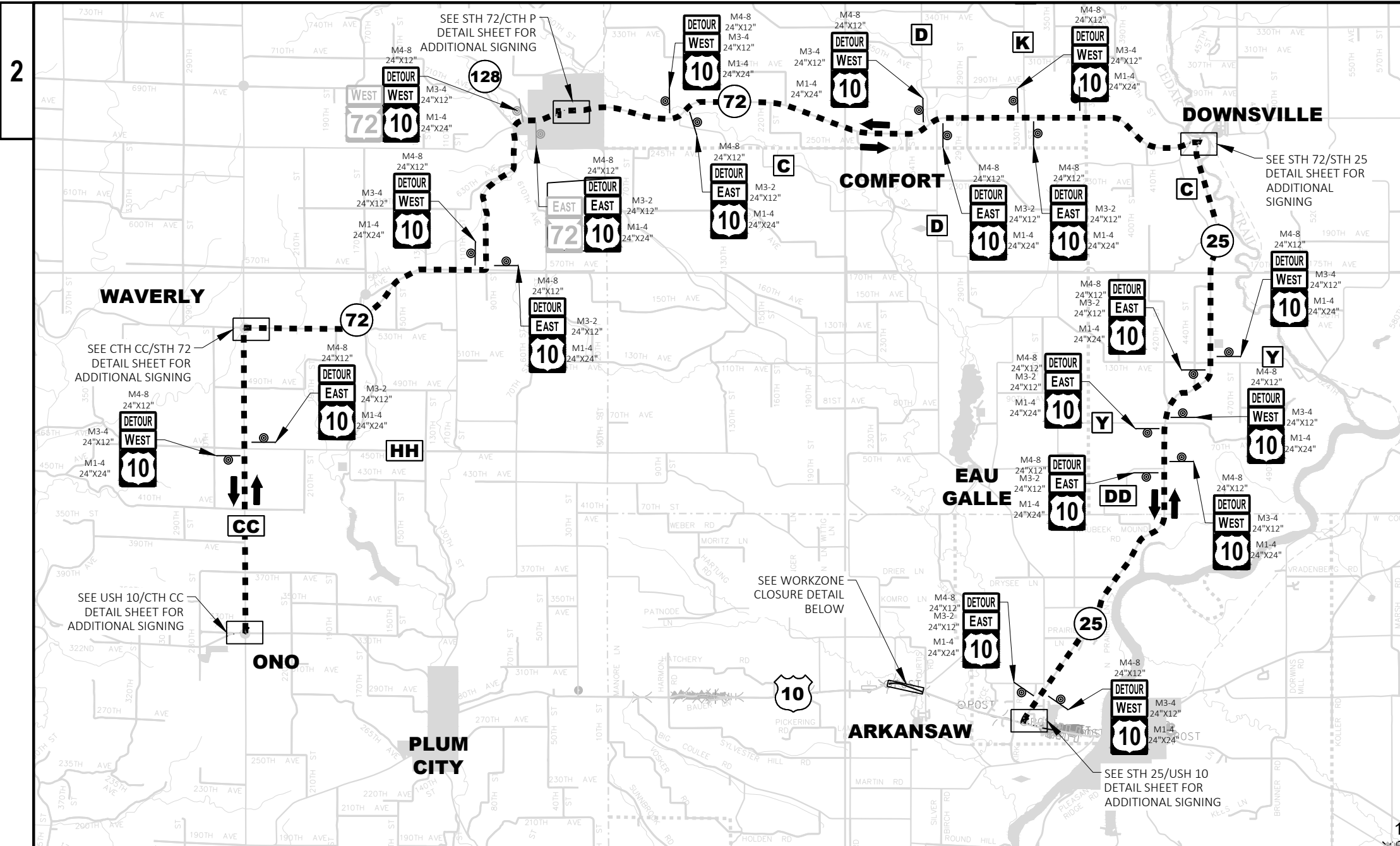
END PROJECT
 STA 515+26.61

SEE SDD "TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION" FOR ADVANCED WARNING SIGNING AND TRAFFIC CONTROL DEVICE LAYOUT



LEGEND

	TYPE II/TYPE III BARRICADE
	TYPE II/TYPE III BARRICADE WITH ATTACHED SIGN
	TRAFFIC CONTROL DRUM
	TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
	TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POST
	SIGN ON PERMANENT SUPPORT
	SIGN ON TEMPORARY SUPPORT
	EXISTING SIGN
	WORK AREA
	DIRECTION OF TRAFFIC
	MARKING REMOVAL



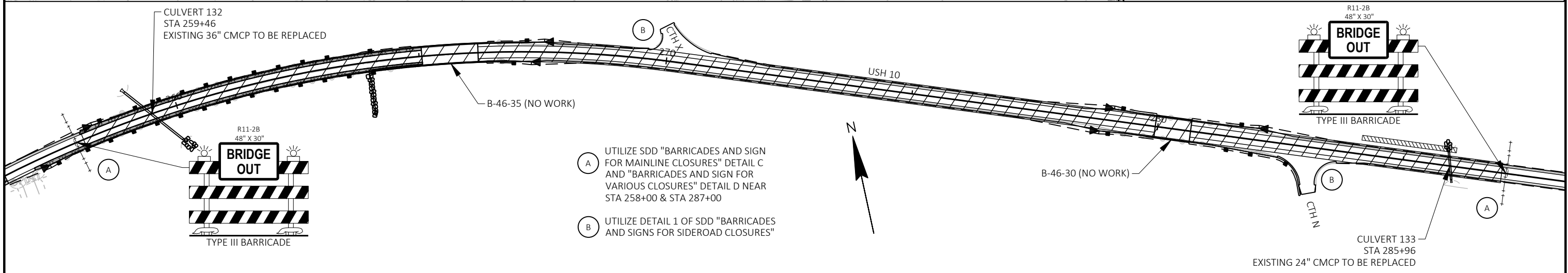
LEGEND:

- TRAFFIC FLOW ARROW
- PROPOSED SIGN ON POST
- EXISTING SIGN ON POST
- COVER EXISTING SIGN
- WORK ZONE
- USH 10 DETOUR ROUTE









NOTES:

1. USH 10 SHALL ONLY BE CLOSED TO TRAFFIC FOR THE CULVERT REPLACEMENTS AT STA 259+46 & STA 285+96.
2. THE TRAFFIC CONTROL AND DETOUR SIGNING SHOWN ON THIS SHEET SHALL BE IN PLACE PRIOR TO CLOSING USH 10.
3. UTILIZE SDD "DETOUR SIGNING FOR MAINLINE CLOSURES" FOR DETOUR SIGN SPACING.
4. AFTER CULVERT REPLACEMENTS HAVE BEEN COMPLETED, UTILIZE SDD "TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH LOOSE GRAVEL" FOR ADVANCE SIGNING ON EACH END OF THE CULVERT REPLACEMENTS ALONG USH 10.
5. ALL SIGNS SHALL BE PLACED IN ACCORDANCE WITH THE WISCONSIN MANUAL ON UNIFORM TRAFFIC CONTROL.
6. THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
7. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES.
8. THE SPACING BETWEEN TRAFFIC CONTROL AND DETOUR SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.
9. "WO" SIGNS ARE THE SAME AS "W" AND "MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.
10. ALL EXISTING SIGNS THAT NEED TO BE COVERED SHALL BE COVERED WITH A BLANK BLACK PANEL UNLESS OTHERWISE NOTED.



PROJECT NO: 1530-05-73	HWY: USH 10	COUNTY: PEPIN	DETOUR PLAN OVERVIEW
SHEET			E

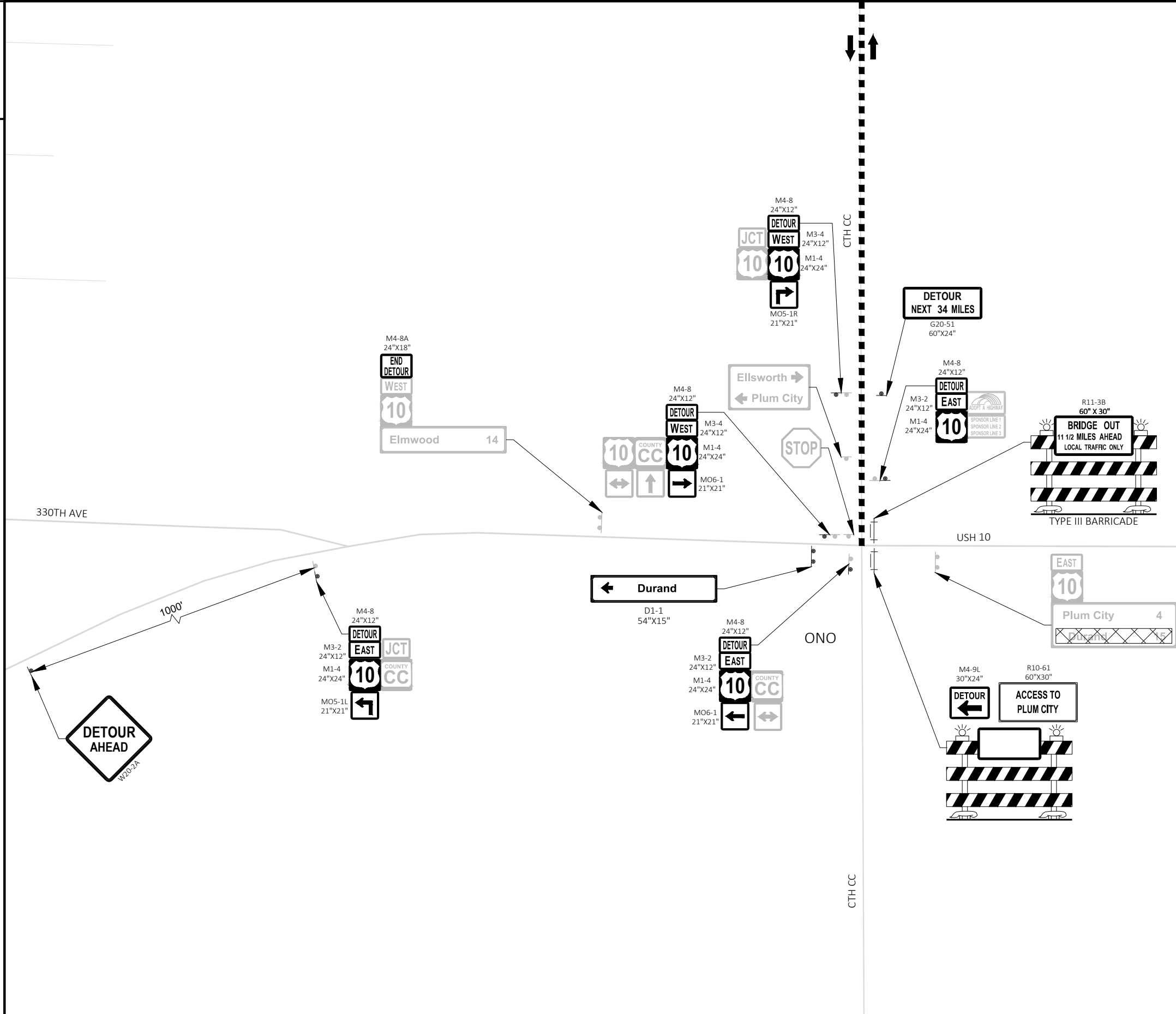
LEGEND:

-  TRAFFIC FLOW ARROW
-  PROPOSED SIGN ON POST
-  EXISTING SIGN ON POST
-  COVER EXISTING SIGN
-  WORK ZONE
-  USH 10 DETOUR ROUTE









NOTES:

1. USH 10 SHALL ONLY BE CLOSED TO TRAFFIC FOR THE CULVERT REPLACEMENTS AT STA 259+46 & STA 285+96.
2. THE TRAFFIC CONTROL AND DETOUR SIGNING SHOWN ON THIS SHEET SHALL BE IN PLACE PRIOR TO CLOSING USH 10.
3. UTILIZE SDD "DETOUR SIGNING FOR MAINLINE CLOSURES" FOR DETOUR SIGN SPACING.
4. AFTER CULVERT REPLACEMENTS HAVE BEEN COMPLETED, UTILIZE SDD "TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH LOOSE GRAVEL" FOR ADVANCE SIGNING ON EACH END OF THE CULVERT REPLACEMENTS ALONG USH 10.
5. ALL SIGNS SHALL BE PLACED IN ACCORDANCE WITH THE WISCONSIN MANUAL ON UNIFORM TRAFFIC CONTROL.
6. THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
7. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES.
8. THE SPACING BETWEEN TRAFFIC CONTROL AND DETOUR SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.
9. "WO" SIGNS ARE THE SAME AS "W" AND "MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.
10. ALL EXISTING SIGNS THAT NEED TO BE COVERED SHALL BE COVERED WITH A BLANK BLACK PANEL UNLESS OTHERWISE NOTED.



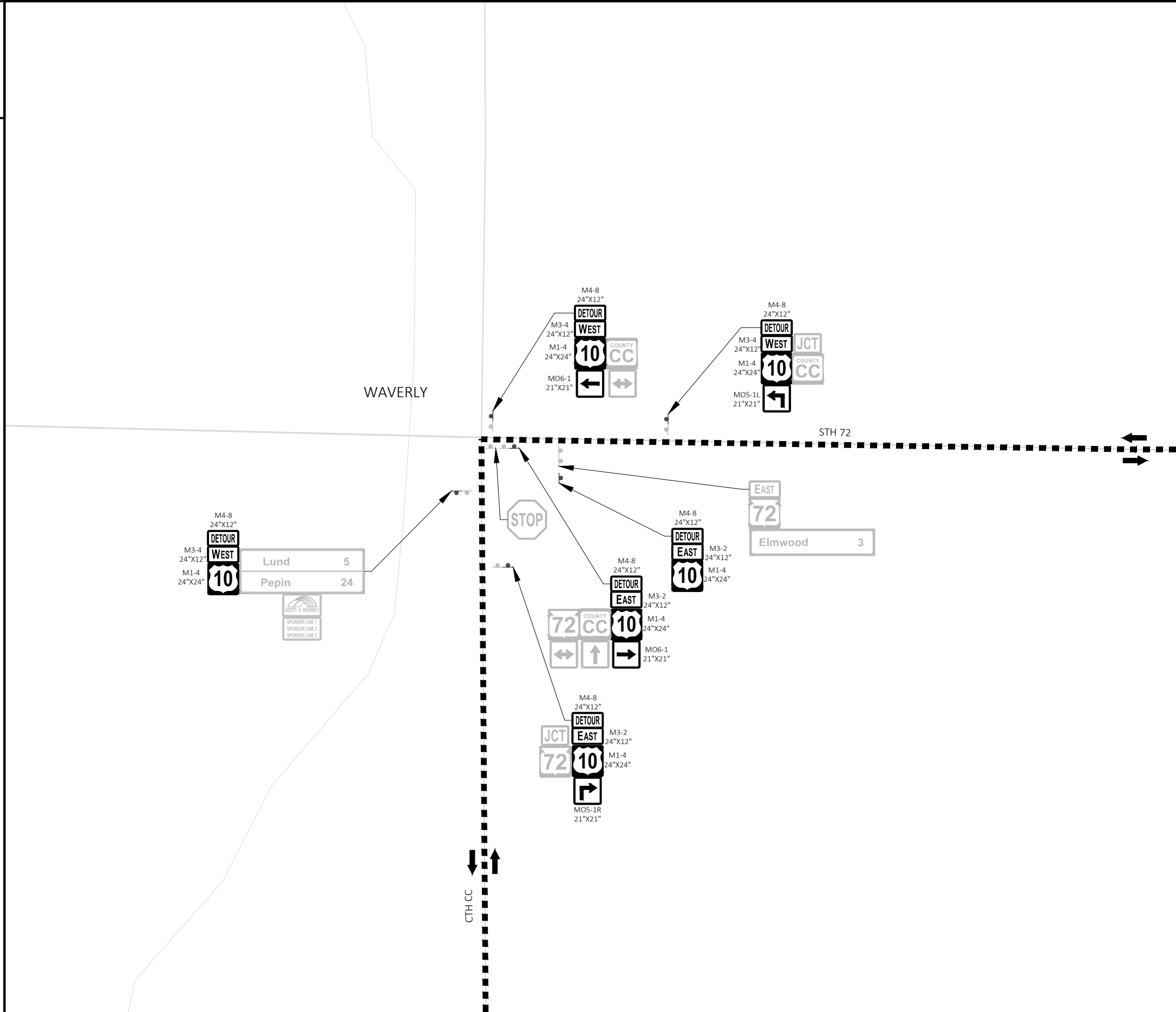
LEGEND:

-  TRAFFIC FLOW ARROW
-  PROPOSED SIGN ON POST
-  EXISTING SIGN ON POST
-  COVER EXISTING SIGN
-  WORK ZONE
-  USH 10 DETOUR ROUTE

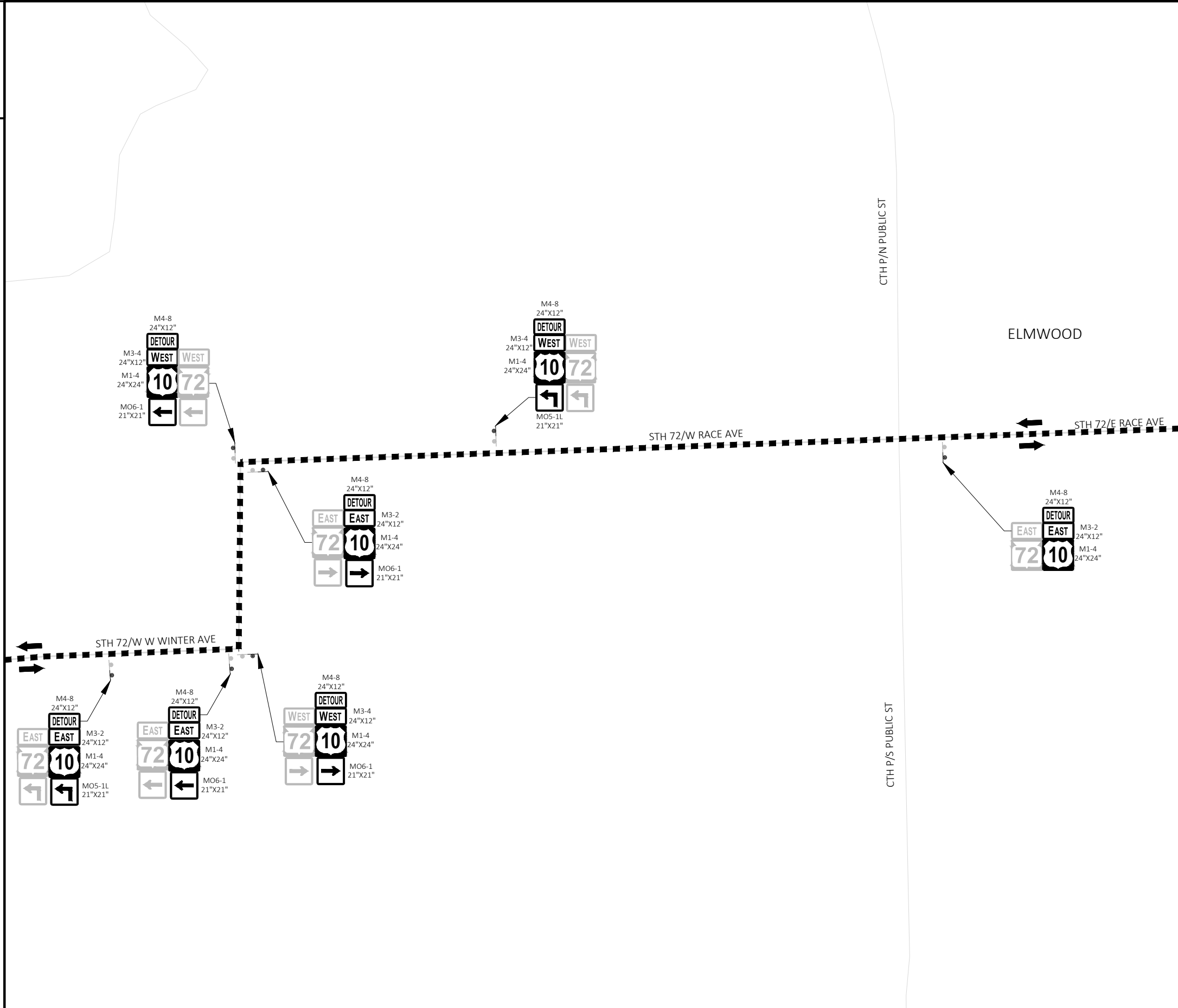


NOTES:







1. USH 10 SHALL ONLY BE CLOSED TO TRAFFIC FOR THE CULVERT REPLACEMENTS AT STA 259+46 & STA 285+96.
2. THE TRAFFIC CONTROL AND DETOUR SIGNING SHOWN ON THIS SHEET SHALL BE IN PLACE PRIOR TO CLOSING USH 10.
3. UTILIZE SDD "DETOUR SIGNING FOR MAINLINE CLOSURES" FOR DETOUR SIGN SPACING.
4. AFTER CULVERT REPLACEMENTS HAVE BEEN COMPLETED, UTILIZE SDD "TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH LOOSE GRAVEL" FOR ADVANCE SIGNING ON EACH END OF THE CULVERT REPLACEMENTS ALONG USH 10.
5. ALL SIGNS SHALL BE PLACED IN ACCORDANCE WITH THE WISCONSIN MANUAL ON UNIFORM TRAFFIC CONTROL.
6. THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
7. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES.
8. THE SPACING BETWEEN TRAFFIC CONTROL AND DETOUR SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.
9. "WO" SIGNS ARE THE SAME AS "W" AND "MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.
10. ALL EXISTING SIGNS THAT NEED TO BE COVERED SHALL BE COVERED WITH A BLANK BLACK PANEL UNLESS OTHERWISE NOTED.



PROJECT NO: 1530-05-73	HWY: USH 10	COUNTY: PEPIN	DETOUR PLAN: CTH CC/STH 72	SHEET	E
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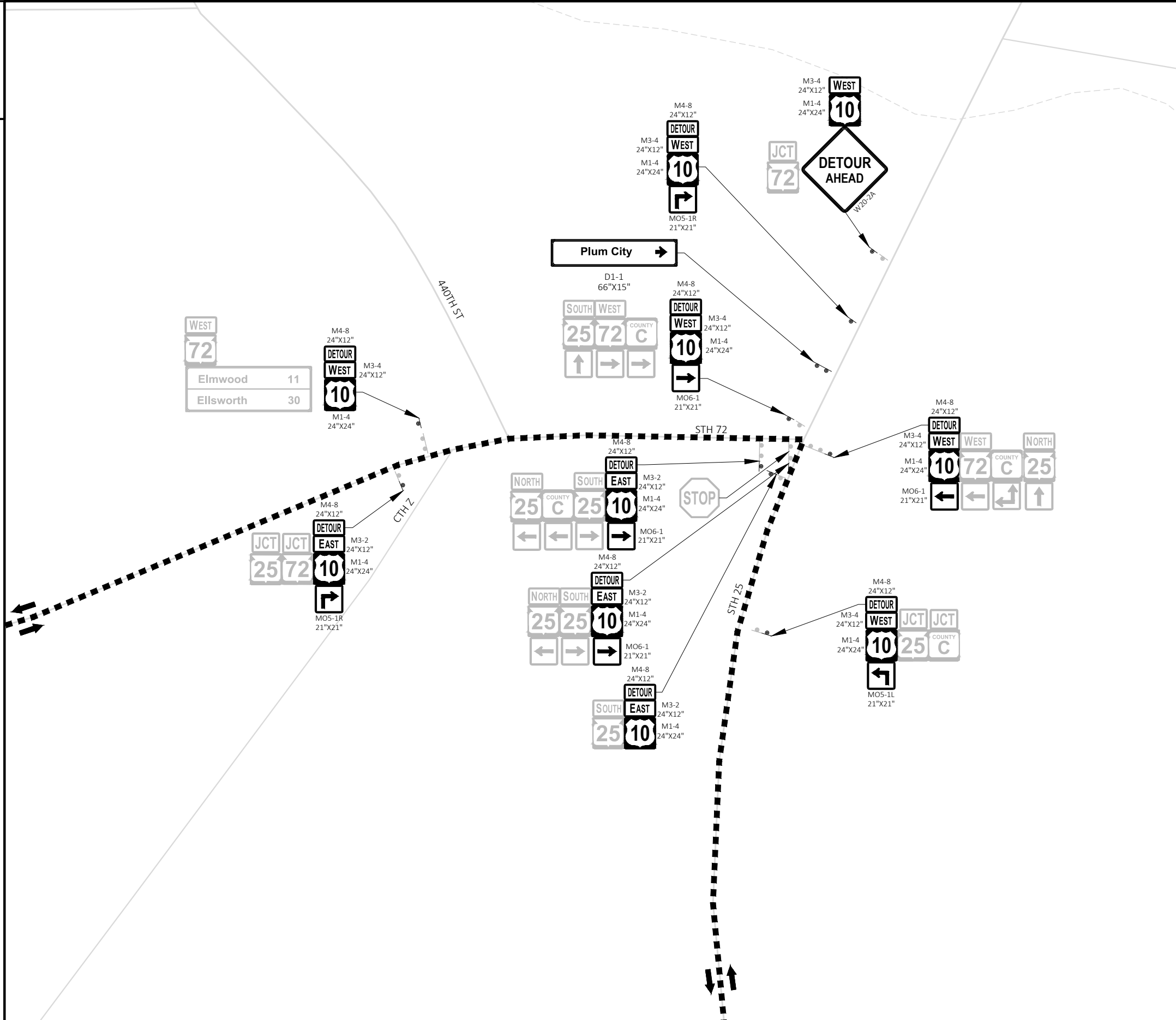
LEGEND:

-  TRAFFIC FLOW ARROW
-  PROPOSED SIGN ON POST
-  EXISTING SIGN ON POST
-  COVER EXISTING SIGN
-  WORK ZONE
-  USH 10 DETOUR ROUTE



NOTES:

1. USH 10 SHALL ONLY BE CLOSED TO TRAFFIC FOR THE CULVERT REPLACEMENTS AT STA 259+46 & STA 285+96.
2. THE TRAFFIC CONTROL AND DETOUR SIGNING SHOWN ON THIS SHEET SHALL BE IN PLACE PRIOR TO CLOSING USH 10.
3. UTILIZE SDD "DETOUR SIGNING FOR MAINLINE CLOSURES" FOR DETOUR SIGN SPACING.
4. AFTER CULVERT REPLACEMENTS HAVE BEEN COMPLETED, UTILIZE SDD "TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH LOOSE GRAVEL" FOR ADVANCE SIGNING ON EACH END OF THE CULVERT REPLACEMENTS ALONG USH 10.
5. ALL SIGNS SHALL BE PLACED IN ACCORDANCE WITH THE WISCONSIN MANUAL ON UNIFORM TRAFFIC CONTROL.
6. THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
7. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES.
8. THE SPACING BETWEEN TRAFFIC CONTROL AND DETOUR SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.
9. "WO" SIGNS ARE THE SAME AS "W" AND "MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.
10. ALL EXISTING SIGNS THAT NEED TO BE COVERED SHALL BE COVERED WITH A BLANK BLACK PANEL UNLESS OTHERWISE NOTED.



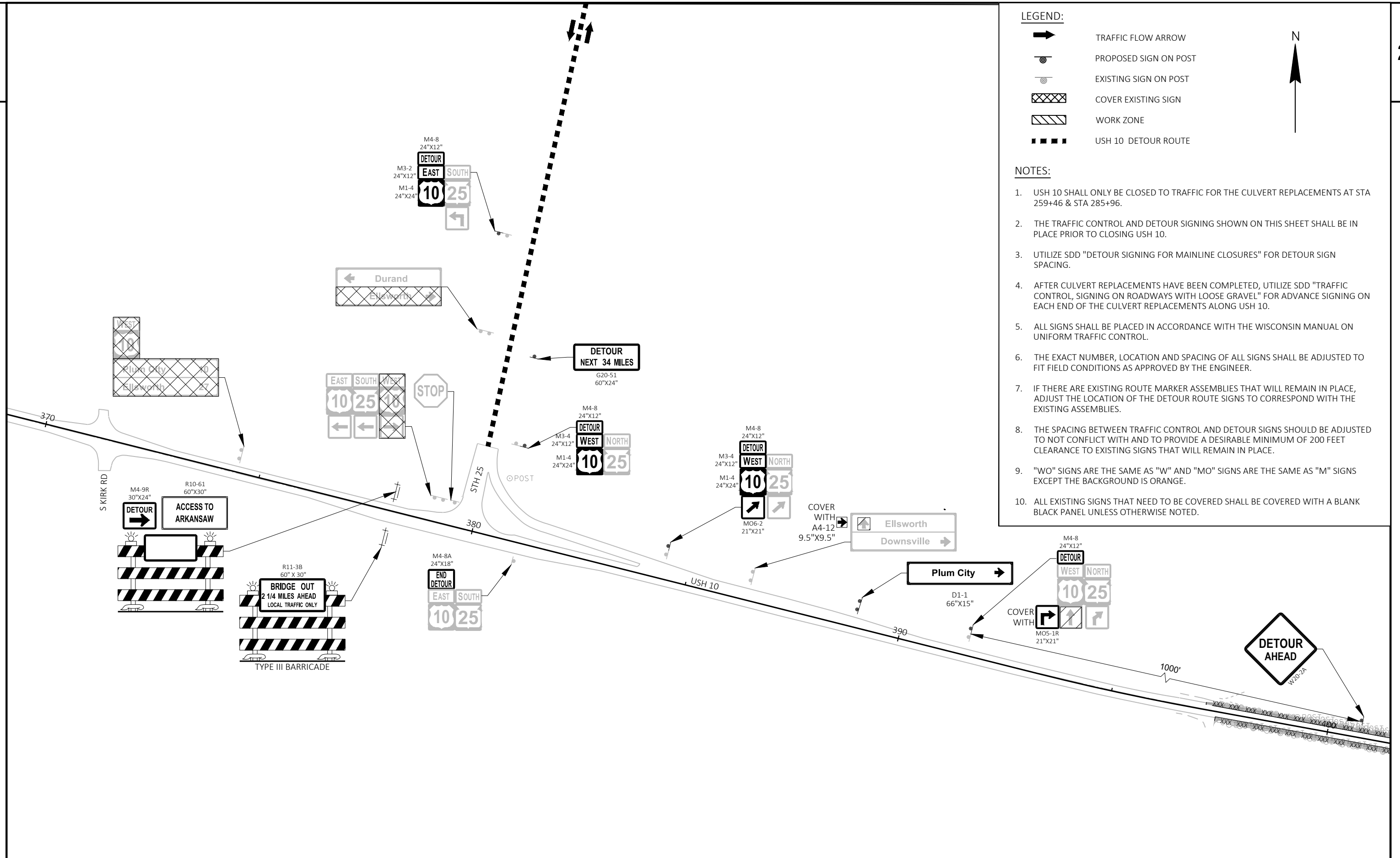
LEGEND:

- TRAFFIC FLOW ARROW
- PROPOSED SIGN ON POST
- EXISTING SIGN ON POST
- COVER EXISTING SIGN
- WORK ZONE
- USH 10 DETOUR ROUTE

NOTES:

1. USH 10 SHALL ONLY BE CLOSED TO TRAFFIC FOR THE CULVERT REPLACEMENTS AT STA 259+46 & STA 285+96.
2. THE TRAFFIC CONTROL AND DETOUR SIGNING SHOWN ON THIS SHEET SHALL BE IN PLACE PRIOR TO CLOSING USH 10.
3. UTILIZE SDD "DETOUR SIGNING FOR MAINLINE CLOSURES" FOR DETOUR SIGN SPACING.
4. AFTER CULVERT REPLACEMENTS HAVE BEEN COMPLETED, UTILIZE SDD "TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH LOOSE GRAVEL" FOR ADVANCE SIGNING ON EACH END OF THE CULVERT REPLACEMENTS ALONG USH 10.
5. ALL SIGNS SHALL BE PLACED IN ACCORDANCE WITH THE WISCONSIN MANUAL ON UNIFORM TRAFFIC CONTROL.
6. THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
7. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES.
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Estimate Of Quantities

1530-05-73 1530-05-83

Line	Item	Item Description	Unit	Total	Qty	Qty
0002	201.0205	Grubbing	STA	18.000	18.000	
0004	203.0100	Removing Small Pipe Culverts	EACH	2.000	2.000	
0006	204.0105	Removing Concrete Pavement Butt Joints	SY	373.000	373.000	
0008	204.0110	Removing Asphaltic Surface	SY	456.000	456.000	
0010	204.0115	Removing Asphaltic Surface Butt Joints	SY	1,484.000	1,294.000	190.000
0012	204.0120	Removing Asphaltic Surface Milling	SY	153,460.000	147,440.000	6,020.000
0014	204.0130	Removing Curb	LF	1,461.000	1,461.000	
0016	204.9090.S	Removing (item description) 01. Removing Beam Guard Retaining Wall	LF	1,584.000	1,584.000	
0018	204.9090.S	Removing (item description) 02. Removing Reinforced Concrete Culvert Pipe 24-Inch	LF	16.000	16.000	
0020	205.0100	Excavation Common	CY	3,615.000	3,615.000	
0022	206.2001	Excavation for Structures Culverts (structure) 01. C-46-131	EACH	1.000	1.000	
0024	208.0100	Borrow	CY	4,589.000	4,589.000	
0026	211.0101	Prepare Foundation for Asphaltic Paving (project) 01. 1530-05-73	EACH	1.000	1.000	
0028	211.0101	Prepare Foundation for Asphaltic Paving (project) 02. 1530-05-83	EACH	1.000		1.000
0030	211.0400	Prepare Foundation for Asphaltic Shoulders	STA	539.000	539.000	
0032	213.0100	Finishing Roadway (project) 01. 1530-05-73	EACH	1.000	1.000	
0034	213.0100	Finishing Roadway (project) 02. 1530-05-83	EACH	1.000		1.000
0036	305.0110	Base Aggregate Dense 3/4-Inch	TON	3,683.000	3,673.000	10.000
0038	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	2,500.000	2,500.000	
0040	455.0605	Tack Coat	GAL	11,641.000	11,219.000	422.000
0042	460.0105.S	HMA Percent Within Limits (PWL) Test Strip Volumetrics	EACH	1.000	1.000	
0044	460.2000	Incentive Density HMA Pavement	DOL	445.000		445.000
0046	460.6645	HMA Pavement 5 MT 58-34 V	TON	27,860.000	27,180.000	680.000
0048	460.9000.S	Material Transfer Vehicle	EACH	1.000	1.000	
0050	465.0105	Asphaltic Surface	TON	250.000	250.000	
0052	465.0110	Asphaltic Surface Patching	TON	500.000	500.000	
0054	465.0120	Asphaltic Surface Driveways and Field Entrances	TON	75.000	75.000	
0056	465.0310	Asphaltic Curb	LF	1,671.000	1,671.000	
0058	465.0315	Asphaltic Flumes	SY	2.000	2.000	
0060	465.0520	Asphaltic Rumble Strips, Shoulder	LF	61,992.000	61,992.000	
0062	465.0540	Asphaltic Rumble Strips, Edge Line	LF	9,000.000	9,000.000	
0064	465.0560	Asphaltic Rumble Strips, Centerline	LF	33,582.000	33,582.000	
0066	502.4205	Adhesive Anchors No. 5 Bar	EACH	16.000	16.000	
0068	504.0100	Concrete Masonry Culverts	CY	3.000	3.000	
0070	505.0400	Bar Steel Reinforcement HS Structures	LB	90.000	90.000	
0072	509.1500	Concrete Surface Repair	SF	20.000	20.000	
0074	520.4136	Culvert Pipe Class IV 36-Inch	LF	150.000	150.000	
0076	520.8700	Cleaning Culvert Pipes	EACH	2.000	2.000	
0078	522.0124	Culvert Pipe Reinforced Concrete Class III 24-Inch	LF	16.000	16.000	
0080	522.1024	Apron Endwalls for Culvert Pipe Reinforced Concrete 24-Inch	EACH	1.000	1.000	
0082	522.1036	Apron Endwalls for Culvert Pipe Reinforced Concrete 36-Inch	EACH	2.000	2.000	
0084	522.1042	Apron Endwalls for Culvert Pipe Reinforced Concrete 42-Inch	EACH	1.000	1.000	
0086	522.2419	Culvert Pipe Reinforced Concrete Horizontal Elliptical Class HE-IV 19x30-Inch	LF	56.000	56.000	
0088	522.2619	Apron Endwalls for Culvert Pipe Reinforced Concrete Horizontal Elliptical 19x30-Inch	EACH	2.000	2.000	
0090	601.0588	Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type TBT	LF	101.000	101.000	
0092	602.3010	Concrete Surface Drains	CY	2.000	2.000	
0094	606.0200	Riprap Medium	CY	23.000	23.000	
0096	606.0400	Riprap Extra-Heavy	CY	15.000	15.000	
0098	614.0397	Guardrail Mow Strip Emulsified Asphalt	SY	4,550.000	4,550.000	
0100	614.0920	Salvaged Rail	LF	13,163.000	13,163.000	

Estimate Of Quantities

1530-05-73 1530-05-83

Line	Item	Item Description	Unit	Total	Qty	Qty
0102	614.2300	MGS Guardrail 3	LF	3,562.000	3,562.000	
0104	614.2330	MGS Guardrail 3 K	LF	6,906.000	6,906.000	
0106	614.2340	MGS Guardrail 3 L	LF	12.500	12.500	
0108	614.2350	MGS Guardrail Short Radius	LF	152.000	152.000	
0110	614.2500	MGS Thrie Beam Transition	LF	960.000	960.000	
0112	614.2610	MGS Guardrail Terminal EAT	EACH	40.000	40.000	
0114	614.2620	MGS Guardrail Terminal Type 2	EACH	1.000	1.000	
0116	614.2630	MGS Guardrail Short Radius Terminal	EACH	5.000	5.000	
0118	618.0100	Maintenance and Repair of Haul Roads (project) 01. 1530-05-73	EACH	1.000	1.000	
0120	618.0100	Maintenance and Repair of Haul Roads (project) 02. 1530-05-83	EACH	1.000		1.000
0122	619.1000	Mobilization	EACH	1.000	0.900	0.100
0124	621.0100	Landmark Reference Monuments	EACH	3.000	3.000	
0126	624.0100	Water	MGAL	98.000	98.000	
0128	625.0500	Salvaged Topsoil	SY	21,450.000	21,450.000	
0130	628.1504	Silt Fence	LF	24,360.000	24,360.000	
0132	628.1520	Silt Fence Maintenance	LF	24,360.000	24,360.000	
0134	628.1905	Mobilizations Erosion Control	EACH	6.000	6.000	
0136	628.1910	Mobilizations Emergency Erosion Control	EACH	3.000	3.000	
0138	628.2004	Erosion Mat Class I Type B	SY	15,100.000	15,100.000	
0140	628.2008	Erosion Mat Urban Class I Type B	SY	6,375.000	6,375.000	
0142	628.7010	Inlet Protection Type B	EACH	6.000		6.000
0144	628.7504	Temporary Ditch Checks	LF	60.000	60.000	
0146	628.7555	Culvert Pipe Checks	EACH	5.000	5.000	
0148	628.7570	Rock Bags	EACH	35.000	35.000	
0150	629.0210	Fertilizer Type B	CWT	14.700	14.700	
0152	630.0120	Seeding Mixture No. 20	LB	579.000	579.000	
0154	630.0200	Seeding Temporary	LB	150.000	150.000	
0156	630.0500	Seed Water	MGAL	17.000	17.000	
0158	633.5200	Markers Culvert End	EACH	22.000	22.000	
0160	642.5001	Field Office Type B	EACH	1.000	0.900	0.100
0162	643.0300	Traffic Control Drums	DAY	3,614.000	3,450.000	164.000
0164	643.0420	Traffic Control Barricades Type III	DAY	1,203.000	1,167.000	36.000
0166	643.0500	Traffic Control Flexible Tubular Marker Posts	EACH	1,310.000	1,300.000	10.000
0168	643.0600	Traffic Control Flexible Tubular Marker Bases	EACH	1,310.000	1,300.000	10.000
0170	643.0705	Traffic Control Warning Lights Type A	DAY	524.000	452.000	72.000
0172	643.0715	Traffic Control Warning Lights Type C	DAY	381.000	350.000	31.000
0174	643.0900	Traffic Control Signs	DAY	6,475.000	6,358.000	117.000
0176	643.0920	Traffic Control Covering Signs Type II	EACH	23.000	20.000	3.000
0178	643.1000	Traffic Control Signs Fixed Message	SF	204.000	204.000	
0180	643.1070	Traffic Control Cones 42-Inch	DAY	184.000		184.000
0182	643.3165	Temporary Marking Line Paint 6-Inch	LF	119,843.000	119,298.000	545.000
0184	643.3170	Temporary Marking Line Epoxy 6-Inch	LF	44,097.000	44,097.000	
0186	643.3805	Temporary Marking Stop Line Paint 18-Inch	LF	24.000	24.000	
0188	643.5000	Traffic Control	EACH	1.000	0.900	0.100
0190	645.0120	Geotextile Type HR	SY	131.000	131.000	
0192	646.2020	Marking Line Epoxy 6-Inch	LF	3,171.000	1,860.000	1,311.000
0194	646.2040	Marking Line Grooved Wet Ref Epoxy 6-Inch	LF	122,191.000	122,191.000	
0196	646.4040	Marking Line Grooved Wet Ref Epoxy 10-Inch	LF	632.000	632.000	
0198	646.4720	Marking Line Same Day Epoxy 6-Inch	LF	2,655.000		2,655.000
0200	646.4820	Marking Line Same Day Epoxy 10-Inch	LF	657.000		657.000

Estimate Of Quantities

1530-05-73 1530-05-83

Line	Item	Item Description	Unit	Total	Qty	Qty
0202	646.5020	Marking Arrow Epoxy	EACH	6.000		6.000
0204	646.5120	Marking Word Epoxy	EACH	3.000		3.000
0206	646.7120	Marking Diagonal Epoxy 12-Inch	LF	134.000		134.000
0208	646.9000	Marking Removal Line 4-Inch	LF	820.000	820.000	
0210	646.9002	Marking Removal Line 6-Inch	LF	772.000		772.000
0212	646.9100	Marking Removal Line 8-Inch	LF	25.000		25.000
0214	646.9200	Marking Removal Line Wide	LF	55.000		55.000
0216	646.9300	Marking Removal Special Marking	EACH	4.000		4.000
0218	650.5000	Construction Staking Base	LF	3,504.000	3,504.000	
0220	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	101.000	101.000	
0222	650.6000	Construction Staking Pipe Culverts	EACH	2.000	2.000	
0224	650.8000	Construction Staking Resurfacing Reference	LF	41,221.000	40,200.000	1,021.000
0226	650.9911	Construction Staking Supplemental Control (project) 01. 1530-05-73	EACH	1.000	1.000	
0228	650.9911	Construction Staking Supplemental Control (project) 02. 1530-05-83	EACH	1.000		1.000
0230	650.9920	Construction Staking Slope Stakes	LF	13,191.000	13,191.000	
0232	661.0101	Temporary Traffic Signals for Bridges (structure) 01. B-46-31	EACH	1.000	1.000	
0234	690.0150	Sawing Asphalt	LF	5,526.000	5,526.000	
0236	715.0502	Incentive Strength Concrete Structures	DOL	500.000	500.000	
0238	740.0440	Incentive IRI Ride	DOL	33,200.000	33,200.000	
0240	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	2,400.000	2,400.000	
0242	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	2,000.000	2,000.000	
0244	SPV.0055	Special 01. Incentive Density PWL HMA Pavement	DOL	19,590.000	19,590.000	
0246	SPV.0055	Special 02. Incentive Air Voids HMA Pavement	DOL	27,180.000	27,180.000	
0248	SPV.0055	Special 03. Incentive Density HMA Pavement Longitudinal Joints	DOL	43,555.000	43,555.000	
0250	SPV.0060	Special 01. Grading and Shaping Endwall Installation	EACH	1.000	1.000	
0252	SPV.0090	Special 01. Ditch Cleaning	LF	200.000	200.000	

EARTHWORK SUMMARY												
DIVISION	FROM/TO STATION	LOCATION	205.0100 COMMON EXCAVATION (1)		SALVAGED/UNUSABLE PAVEMENT MATERIAL (4)	AVAILABLE MATERIAL (5)	UNEXPANDED FILL	EXPANDED FILL (6)	MASS ORDINATE +/- (7)	WASTE	208.0100 BORROW	COMMENT
			CUT (2)	EBS EXCAVATION (3)				FACTOR 1.25				
DIVISION 1												
CULVERT 132 REPLACEMENT	258+77/260+17	USH 10	979	0	0	979	0	0	979	0	0	
CULVERT 133 REPLACEMENT	285+38/286+53	USH 10	345	0	0	345	0	0	345	0	0	
DIVISION 1 SUBTOTAL			1,324							0	0	
DIVISION 2												
GUARDRAIL	65+61.43/87+50.00	USH 10	67	0	0	67	274	343	-276	0	276	
GUARDRAIL	88+33.80/114+22.33	USH 10	774	0	115	659	94	118	657	657	0	
GUARDRAIL	117+00.00/126+27.94	USH 10	25	0	0	25	101	126	-101	0	101	
GUARDRAIL	202+11.02/207+19.67	USH 10	14	0	0	14	67	84	-70	0	70	
GUARDRAIL	222+78.96/228+62.19	USH 10	16	0	0	16	311	389	-373	0	373	
GUARDRAIL	235+65.09/242+21.40	USH 10	16	0	0	16	335	419	-403	0	403	
GUARDRAIL	256+85.37/268+71.82	USH 10	414	0	90	324	993	1,241	-827	0	827	
GUARDRAIL	277+03.99/283+83.01	USH 10	39	0	0	39	930	1,163	-1,124	0	1,124	
GUARDRAIL	318+06.20/328+63.45	USH 10	108	0	0	108	258	323	-215	0	215	
GUARDRAIL	338+76.76/346+21.96	USH 10	25	0	0	25	120	150	-125	0	125	
GUARDRAIL	396+19.29/412+24.75	USH 10	690	0	195	495	37	46	644	644	0	
GUARDRAIL	419+50.00/428+00.00	USH 10	40	0	0	40	770	963	-923	0	923	
GUARDRAIL	0+00.13/2+17.56	BAUER LN	4	0	0	4	0	0	4	4	0	
GUARDRAIL	0+35.00/1+10.00	DRIVEWAY	59	0	0	59	169	211	-152	0	152	
DIVISION 2 SUBTOTAL			2,291	0	400	1,891	4,459	5,574	-3,284	1,305	4,589	
GRAND TOTAL			3,615	0	400	1,891	4,459	5,574	-3,284	1,305	4,589	
TOTAL COMMON EXC			3,615									

NOTES:

- (1) COMMON EXCAVATION IS THE SUM OF THE CUT AND EBS EXCAVATION COLUMNS. ITEM NUMBER 205.0100
- (2) SALVAGED/UNUSABLE PAVEMENT MATERIAL IS INCLUDED IN CUT.
- (3) EBS EXCAVATION TO BE BACKFILLED WITH SELECT BORROW MATERIAL. NOTE: THIS IS DESIGNERS CHOICE, CAN BE BACKFILLED WITH BORROW, OR CUT AS WELL.
- (4) SALVAGED/UNUSABLE PAVEMENT MATERIAL
- 5) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSABLE PAVEMENT MATERIAL
- (6) EXPANDED FILL FACTOR = 1.25
- EXPANDED FILL = UNEXPANDED FILL * FILL FACTOR**
- (7) 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.
- (8) FACTORS USED TO COMPUTE ANTICIPATED WASTE AND THE COMPUTED WASTE VOLUME IDENTIFIED ARE FOR GENERAL INFORMATION ONLY.

201.0205 - GRUBBING

CATEGORY	STATION	TO	STATION	LOCATION	201.0205 GRUBBING STA	REMARKS
0010	69+50	-	70+50	USH 10 RT	2	PIPE #117
0010	100+00	-	101+00	USH 10 LT & RT	1	PIPE #121
0010	104+50	-	105+50	USH 10 LT & RT	2	PIPE #122
0010	118+00	-	119+00	USH 10 RT	1	BEAMGUARD GRADING
0010	225+00	-	226+00	USH 10 LT & RT	2	PIPE #130
0010	258+00	-	263+00	USH 10 LT & RT	5	BEAMGUARD GRADING/PIPE #132
0010	263+50	-	264+50	USH 10 RT	2	SURFACE DRAIN
0010	419+50	-	420+50	USH 10 RT	2	BEAMGUARD GRADING
0010	426+00	-	427+00	USH 10 LT	1	BEAMGUARD GRADING
TOTAL 0010					18	

204 - REMOVALS

CATEGORY	STATION	TO	STATION	LOCATION	204.0105 REMOVING PAVEMENT BUTT JOINTS SY	204.0115 REMOVING ASPHALTIC SURFACE BUTT JOINTS SY	204.0120 REMOVING ASPHALTIC SURFACE MILLING SY	REMARKS
0010	15+98	-	87+95	USH 10	--	34	31,000	BOP TO 2" MILL LIMITS
0010	87+95	-	126+38	USH 10	--	--	16,500	3" MILL AREA
0010	126+38	-	196+00	USH 10	--	--	24,100	3" MILL AREA TO CTH G
0010	196+00	-	255+25	USH 10	--	--	19,900	CTH G - 3" MILL LIMITS
0010	255+25	-	265+06	USH 10	--	40	2,700	3" MILL LIMITS - B-46-35
0010	266+19	-	320+95	USH 10	--	189	19,400	B-46-35 - B-46-33
0010	322+18	-	324+13	USH 10	160	44	920	B-46-33 - B-46-34
0010	325+79	-	376+00	USH 10	--	82	16,900	B-46-34 TO STH 25
0010	390+00	-	431+92	USH 10	213	421	11,900	STH 25 TO EOP
0010	15+98	-	431+92	USH 10	--	484	4,120	INTERSECTIONS
TOTAL 0010					373	1,294	147,440	

460 - HMA

CATEGORY	STATION	TO	STATION	LOCATION	455.0605 TACK COAT GAL	460.6645 HMA PAVEMENT 5 MT 58-34 V TON	465.0105 ASPHALTIC SURFACE TON	465.0110 ASPHALTIC SURFACE PATCHING TON	465.0560 ASPHALTIC RUMBLE STRIPS, CENTERLINE LF	465.0520 ASPHALTIC RUMBLE STRIPS, SHOULDER LF	465.0540 ASPHALTIC RUMBLE STRIPS, EDGE LINE LF	REMARKS
0010	15+98	-	87+95	USH 10	2,215	5,320	--	--	5,952	--	--	BOP TO 2" MILL/3" OVERLAY
0010	87+95	-	126+38	USH 10	1,244	3,090	--	--	3,443	--	--	3" MILL/3" OVERLAY
0010	126+38	-	196+00	USH 10	1,633	3,920	--	--	5,981	--	--	3" MILL/3" OVERLAY LIMITS TO CTH G
0010	196+00	-	255+25	USH 10	1,425	3,420	--	--	5,306	--	--	CTH G TO 2" MILL/3" OVERLAY LIMITS
0010	255+25	-	265+06	USH 10	230	600	--	--	956	--	--	3" MILL/3" OVERLAY LIMITS TO B-46-35
0010	258+77	-	260+17	USH 10	--	--	141	--	--	--	--	CULVERT REPLACEMENT
0010	266+19	-	320+95	USH 10	1,390	3,340	--	--	4,191	--	--	B-46-35 TO B-46-33
0010	285+38	-	286+53	USH 10	--	--	109	--	--	--	--	CULVERT REPLACEMENT
0010	322+19	-	324+14	USH 10	67	160	--	--	145	--	--	B-46-33 TO B-46-34
0010	325+79	-	376+00	USH 10	1,213	2,920	--	--	3,796	--	--	B-46-34 TO STH 25
0010	390+00	-	431+92	USH 10	978	2,460	--	--	3,812	--	--	STH 25 TO EOP
0010	PROJECT			USH 10	--	--	--	500	--	--	--	MISC WEDGING, REPAIRS, ETC.
TOTAL 0010					10,395	25,230	250	500	33,582	0	0	
0030	15+98	-	431+91	USH 10	824	1,950	--	--	--	--	--	HSIP SHOULDER
0030	15+98	-	87+95	USH 10	--	--	--	--	--	7,298	6,030	EDGE LINE RUMBLE STRIPS REQUIRED WITHIN
0030	87+95	-	126+38	USH 10	--	--	--	--	--	4,365	2,970	CLIMBING LANE
0030	126+38	-	196+00	USH 10	--	--	--	--	--	13,173	--	3" MILL/3" OVERLAY LIMITS TO CTH G
0030	196+00	-	255+25	USH 10	--	--	--	--	--	10,684	--	CTH G TO 2" MILL/3" OVERLAY LIMITS
0030	255+25	-	265+06	USH 10	--	--	--	--	--	1786	--	3" MILL/3" OVERLAY LIMITS TO B-46-35
0030	266+19	-	320+95	USH 10	--	--	--	--	--	9,527	--	B-46-35 TO B-46-33
0030	322+19	-	324+14	USH 10	--	--	--	--	--	290	--	B-46-33 TO B-46-34
0030	325+79	-	376+00	USH 10	--	--	--	--	--	7999	--	B-46-34 TO STH 25
0030	390+00	-	431+92	USH 10	--	--	--	--	--	6,870	--	STH 25 TO EOP
TOTAL 0030					824	1,950	0	0	0	61,992	9,000	
PROJECT TOTAL					11,219	27,180	250	500	33,582	61,992	9,000	

211.0400 - ASP SHOULDERS

211.0400 PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS					
CATEGORY	STATION	TO	STATION	LOCATION	STA
0030	15+98	-	23+87	USH 10 LT	8
0030	24+92	-	29+10	USH 10 LT	5
0030	15+98	-	36+77	USH 10 RT	21
0030	37+38	-	62+73	USH 10 RT	26
0030	64+42	-	67+50	USH 10 RT	4
0030	78+61	-	80+27	USH 10 RT	2
0030	86+87	-	88+95	USH 10 RT	3
0030	120+03	-	155+77	USH 10 LT	36
0030	125+38	-	182+12	USH 10 RT	57
0030	156+85	-	195+11	USH 10 LT	39
0030	183+41	-	219+41	USH 10 RT	36
0030	197+33	-	203+00	USH 10 LT	6
0030	206+30	-	221+95	USH 10 LT	16
0030	219+73	-	221+88	USH 10 RT	3
0030	222+51	-	223+69	USH 10 RT	2
0030	222+55	-	224+81	USH 10 LT	3
0030	226+85	-	235+10	USH 10 RT	9
0030	227+72	-	236+61	USH 10 LT	9
0030	235+39	-	236+73	USH 10 RT	2
0030	240+21	-	256+86	USH 10 RT	17
0030	241+31	-	243+38	USH 10 LT	3
0030	243+94	-	257+97	USH 10 LT	15
0030	267+58	-	278+14	USH 10 RT	11
0030	267+82	-	269+31	USH 10 LT	2
0030	272+04	-	278+51	USH 10 LT	7
0030	282+73	-	288+65	USH 10 LT	6
0030	284+23	-	289+51	USH 10 RT	6
0030	292+25	-	319+16	USH 10 RT	27
0030	293+42	-	319+16	USH 10 LT	26
0030	327+53	-	339+67	USH 10 RT	13
0030	327+53	-	347+24	USH 10 LT	20
0030	345+32	-	361+63	USH 10 RT	17
0030	348+78	-	370+45	USH 10 LT	22
0030	362+04	-	370+34	USH 10 RT	9
0030	372+49	-	376+00	USH 10 LT	4
0030	372+56	-	376+00	USH 10 RT	4
0030	390+00	-	396+62	USH 10 RT	7
0030	390+00	-	397+17	USH 10 LT	8
0030	411+38	-	421+25	USH 10 LT	10
0030	411+85	-	419+84	USH 10 RT	8
0030	427+01	-	431+92	USH 10 RT	5
0030	427+08	-	431+92	USH 10 LT	5
TOTAL 0030					539

305 - AGGREGATES

CATEGORY	STATION	TO	STATION	LOCATION	305.0110	305.0120	624.0100	REMARKS
					BASE AGGREGATE DENSE 3/4-INCH TON	BASE AGGREGATE DENSE 1 1/4- INCH TON	WATER MGAL	
0010	15+98	-	65+61	USH 10 LT	341	---	5.2	
0010	15+98	-	66+59	USH 10 RT	139	---	2.1	
0010	65+61	-	71+34	USH 10 LT	55	---	0.9	GUARDRAIL REPLACEMENT
0010	66+59	-	88+34	USH 10 RT	195	---	3.3	GUARDRAIL REPLACEMENT
0010	71+34	-	90+26	USH 10 LT	37	---	0.6	
0010	88+34	-	107+00	USH 10 RT	160	600	12.0	SHOULDER RECONSTRUCTION
0010	90+26	-	95+30	USH 10 LT	38	---	0.6	GUARDRAIL REPLACEMENT
0010	95+30	-	202+11	USH 10 LT	427	---	6.5	
0010	107+00	-	126+28	USH 10 RT	260	---	3.9	GUARDRAIL REPLACEMENT
0010	126+28	-	222+79	USH 10 RT	265	---	4.0	
0010	202+11	-	207+20	USH 10 LT	35	---	0.6	GUARDRAIL REPLACEMENT
0010	207+20	-	223+91	USH 10 LT	46	---	0.7	
0010	222+79	-	227+75	USH 10 RT	35	---	0.6	GUARDRAIL REPLACEMENT
0010	223+91	-	228+62	USH 10 LT	34	---	0.6	GUARDRAIL REPLACEMENT
0010	227+75	-	236+02	USH 10 RT	22	---	0.4	
0010	228+62	-	235+71	USH 10 LT	19	---	0.3	
0010	235+71	-	242+21	USH 10 LT	43	---	0.7	GUARDRAIL REPLACEMENT
0010	236+02	-	240+93	USH 10 RT	31	---	0.5	GUARDRAIL REPLACEMENT
0010	240+93	-	255+96	USH 10 RT	41	---	0.7	
0010	242+21	-	256+78	USH 10 LT	40	---	0.6	
0010	255+96	-	265+06	USH 10 RT	60	275	5.6	SHOULDER RECONSTRUCTION
0010	256+78	-	265+06	USH 10 LT	65	250	5.0	SHOULDER RECONSTRUCTION
0010	258+77	-	260+17	USH 10	64	400	7.0	CULVERT REPLACEMENT
0010	266+36	-	268+48	USH 10 RT	19	---	0.3	GUARDRAIL REPLACEMENT
0010	266+39	-	269+63	USH 10 LT	21	---	0.4	GUARDRAIL REPLACEMENT
0010	268+48	-	277+04	USH 10 RT	23	---	0.4	
0010	270+88	-	277+37	USH 10 LT	18	---	0.3	
0010	277+04	-	282+97	USH 10 RT	52	---	0.8	GUARDRAIL REPLACEMENT
0010	277+37	-	283+83	USH 10 LT	58	---	0.9	GUARDRAIL REPLACEMENT
0010	283+67	-	318+06	USH 10 RT	91	---	1.4	
0010	283+83	-	318+06	USH 10 LT	90	---	1.4	
0010	285+38	-	286+53	USH 10	52	325	6.0	CULVERT REPLACEMENT
0010	318+06	-	328+63	USH 10 RT	67	---	1.1	GUARDRAIL REPLACEMENT
0010	318+06	-	328+63	USH 10 LT	65	---	1.0	GUARDRAIL REPLACEMENT
0010	322+97	-	323+70	USH 10 LT	69	---	1.1	FIELD ENTRANCE
0010	328+63	-	338+77	USH 10 RT	28	---	0.5	
0010	328+63	-	376+00	USH 10 LT	131	---	2.0	
0010	338+77	-	346+22	USH 10 RT	45	---	0.7	GUARDRAIL REPLACEMENT
0010	346+22	-	376+00	USH 10 RT	83	---	1.3	
0010	390+00	-	396+19	USH 10 LT	17	---	0.3	
0010	390+00	-	396+67	USH 10 RT	18	---	0.3	
0010	396+19	-	406+46	USH 10 LT	79	335	7.0	SHOULDER RECONSTRUCTION
0010	397+43	-	406+46	USH 10 RT	70	315	6.0	SHOULDER RECONSTRUCTION
0010	409+16	-	410+94	USH 10 LT	10	---	0.2	GUARDRAIL REPLACEMENT
0010	409+16	-	412+25	USH 10 RT	13	---	0.2	GUARDRAIL REPLACEMENT
0010	410+94	-	420+70	USH 10 LT	6	---	0.1	
0010	412+25	-	419+49	USH 10 RT	5	---	0.1	
0010	419+49	-	427+56	USH 10 RT	41	---	0.7	GUARDRAIL REPLACEMENT
0010	419+49	-	428+18	USH 10 LT	45	---	0.7	GUARDRAIL REPLACEMENT
0010	427+56	-	431+92	USH 10 RT	3	---	0.2	
0010	428+18	-	431+92	USH 10 LT	2	---	0.2	
TOTAL 0010					3,673	2,500	98.0	

PWL TABLE								
Location	Station	Mixture Use	Underlying Surface	Bid Item	Tons	Thickness	Quality Management Program to be used for:	
							Mixture Acceptance	Density Acceptance
12-Ft Driving Lanes - USH 10	15+98 - 87+95	Lower Layer	Milled Existing HMA Surface	5 MT 58-34 V	1,615	1.5"	PWL Incentive Air Voids Item SPV.0055.02	Incentive Density PWL HMA Pavement Item SPV.0055.01
12-Ft Driving Lanes - USH 10	15+98 - 87+95	Upper Layer	5 MT 58-34 V	5 MT 58-34 V	1,615	1.5"	PWL Incentive Air Voids Item SPV.0055.02	Incentive Density PWL HMA Pavement Item SPV.0055.01
13-Ft Climbing Lane - USH 10	34+86 - 87+95	Lower Layer	Milled Existing HMA Surface	5 MT 58-34 V	645	1.5"	PWL Incentive Air Voids Item SPV.0055.02	Incentive Density PWL HMA Pavement Item SPV.0055.01
13-Ft Climbing Lane - USH 10	34+86 - 87+95	Upper Layer	Milled Existing HMA Surface	5 MT 58-34 V	645	1.5"	PWL Incentive Air Voids Item SPV.0055.02	Incentive Density PWL HMA Pavement Item SPV.0055.01
Shoulders - USH 10	15+98 - 87+95	Lower Layer	Milled Existing HMA Surface	5 MT 58-34 V	520	1.5"	PWL Incentive Air Voids Item SPV.0055.02	Acceptance testing by the Department; Not eligible for incentive
Shoulders - USH 10	15+98 - 87+95	Upper Layer	5 MT 58-34 V	5 MT 58-34 V	520	1.5"	PWL Incentive Air Voids Item SPV.0055.02	Acceptance testing by the Department; Not eligible for incentive
12-Ft Driving Lanes - USH 10	87+95 - 126+38	Lower Layer	Milled Existing HMA Surface	5 MT 58-34 V	865	1.5"	PWL Incentive Air Voids Item SPV.0055.02	Incentive Density PWL HMA Pavement Item SPV.0055.01
12-Ft Driving Lanes - USH 10	87+95 - 126+38	Upper Layer	5 MT 58-34 V	5 MT 58-34 V	865	1.5"	PWL Incentive Air Voids Item SPV.0055.02	Incentive Density PWL HMA Pavement Item SPV.0055.01
13-Ft Climbing Lane - USH 10	87+95 - 115+49	Lower Layer	Milled Existing HMA Surface	5 MT 58-34 V	340	1.5"	PWL Incentive Air Voids Item SPV.0055.02	Incentive Density PWL HMA Pavement Item SPV.0055.01
13-Ft Climbing Lane - USH 10	87+95 - 115+49	Upper Layer	5 MT 58-34 V	5 MT 58-34 V	340	1.5"	PWL Incentive Air Voids Item SPV.0055.02	Incentive Density PWL HMA Pavement Item SPV.0055.01
Shoulders - USH 10	87+95 - 126+38	Lower Layer	Milled Existing HMA Surface	5 MT 58-34 V	360	1.5"	PWL Incentive Air Voids Item SPV.0055.02	Acceptance testing by the Department; Not eligible for incentive
Shoulders - USH 10	87+95 - 126+38	Upper Layer	5 MT 58-34 V	5 MT 58-34 V	360	1.5"	PWL Incentive Air Voids Item SPV.0055.02	Acceptance testing by the Department; Not eligible for incentive
12-Ft Driving Lanes - USH 10	126+38 - 255+25	Lower Layer	Milled Existing HMA Surface	5 MT 58-34 V	2,890	1.5"	PWL Incentive Air Voids Item SPV.0055.02	Incentive Density PWL HMA Pavement Item SPV.0055.01
12-Ft Driving Lanes - USH 10	126+38 - 255+25	Upper Layer	5 MT 58-34 V	5 MT 58-34 V	2,890	1.5"	PWL Incentive Air Voids Item SPV.0055.02	Incentive Density PWL HMA Pavement Item SPV.0055.01
Shoulders - USH 10	126+38 - 255+25	Lower Layer	Milled Existing HMA Surface	5 MT 58-34 V	1,215	1.5"	PWL Incentive Air Voids Item SPV.0055.02	Acceptance testing by the Department; Not eligible for incentive
Shoulders - USH 10	126+38 - 255+25	Upper Layer	5 MT 58-34 V	5 MT 58-34 V	1,215	1.5"	PWL Incentive Air Voids Item SPV.0055.02	Acceptance testing by the Department; Not eligible for incentive
12-Ft Driving Lanes - USH 10	255+25 - 265+06	Lower Layer	Milled Existing HMA Surface	5 MT 58-34 V	220	1.5"	PWL Incentive Air Voids Item SPV.0055.02	Incentive Density PWL HMA Pavement Item SPV.0055.01
12-Ft Driving Lanes - USH 10	255+25 - 265+06	Upper Layer	5 MT 58-34 V	5 MT 58-34 V	220	1.5"	PWL Incentive Air Voids Item SPV.0055.02	Incentive Density PWL HMA Pavement Item SPV.0055.01
Shoulders - USH 10	255+25 - 265+06	Lower Layer	Milled Existing HMA Surface	5 MT 58-34 V	90	1.5"	PWL Incentive Air Voids Item SPV.0055.02	Acceptance testing by the Department; Not eligible for incentive
Shoulders - USH 10	255+25 - 265+06	Upper Layer	5 MT 58-34 V	5 MT 58-34 V	90	1.5"	PWL Incentive Air Voids Item SPV.0055.02	Acceptance testing by the Department; Not eligible for incentive
12-Ft Driving Lanes - USH 10	266+19 - 376+00	Lower Layer	Milled Existing HMA Surface	5 MT 58-34 V	2,380	1.5"	PWL Incentive Air Voids Item SPV.0055.02	Incentive Density PWL HMA Pavement Item SPV.0055.01
12-Ft Driving Lanes - USH 10	266+19 - 376+00	Upper Layer	5 MT 58-34 V	5 MT 58-34 V	2,380	1.5"	PWL Incentive Air Voids Item SPV.0055.02	Incentive Density PWL HMA Pavement Item SPV.0055.01
Shoulders - USH 10	266+19 - 376+00	Lower Layer	Milled Existing HMA Surface	5 MT 58-34 V	1,140	1.5"	PWL Incentive Air Voids Item SPV.0055.02	Acceptance testing by the Department; Not eligible for incentive
Shoulders - USH 10	266+19 - 376+00	Upper Layer	5 MT 58-34 V	5 MT 58-34 V	1,140	1.5"	PWL Incentive Air Voids Item SPV.0055.02	Acceptance testing by the Department; Not eligible for incentive
12-Ft Driving Lanes - USH 10	390+00 - 431+92	Lower Layer	Milled Existing HMA Surface	5 MT 58-34 V	840	1.5"	PWL Incentive Air Voids Item SPV.0055.02	Incentive Density PWL HMA Pavement Item SPV.0055.01
12-Ft Driving Lanes - USH 10	390+00 - 431+92	Upper Layer	5 MT 58-34 V	5 MT 58-34 V	840	1.5"	PWL Incentive Air Voids Item SPV.0055.02	Incentive Density PWL HMA Pavement Item SPV.0055.01
Shoulders - USH 10	390+00 - 431+92	Lower Layer	Milled Existing HMA Surface	5 MT 58-34 V	470	1.5"	PWL Incentive Air Voids Item SPV.0055.02	Acceptance testing by the Department; Not eligible for incentive
Shoulders - USH 10	390+00 - 431+92	Upper Layer	5 MT 58-34 V	5 MT 58-34 V	470	1.5"	PWL Incentive Air Voids Item SPV.0055.02	Acceptance testing by the Department; Not eligible for incentive
Project		Culvert Patches	Base Aggregate	Asphaltic Surface	250	4.5" Total	QMP as per SS 465.	Acceptance by ordinary compaction.
Project	15+98 - 431+92	Patching	Milled Existing HMA Surface	Asphaltic Surface Patching	500	Varies	QMP as per SS 460.	Acceptance by ordinary compaction

- Indicates non PWL.

465 - DRIVEWAYS

CATEGORY	STATION	LOCATION	204.0110 REMOVING ASPHALTIC SURFACE SY	465.0120 ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES TON	690.0150 * SAWING ASPHALT LF
0010	219+57	USH 10 RT	25	4	14
0010	235+24	USH 10 RT	25	4	14
0010	243+66	USH 10 LT	75	13	20
0010	254+25	USH 10 LT	25	4	14
0010	255+24	USH 10 LT	25	4	14
0010	256+60	USH 10 RT	25	4	14
0010	345+54	USH 10 LT & RT	50	8	28
0010	347+67	USH 10 RT	25	4	14
0010	358+96	USH 10 RT	25	4	14
0010	361+86	USH 10 RT	25	4	14
0010	368+95	USH 10 RT	25	4	14
0010	375+05	USH 10 LT	25	4	14
0010	411+10	USH 10 LT	81	14	20
TOTAL 0010			456	75	208

*ADDITIONAL QUANTITIES LISTED ELSEWHERE

465 - ASPHALT C&G

CATEGORY	STATION	TO	STATION	LOCATION	204.0130 REMOVING CURB LF	465.0310 ASPHALTIC CURB LF	465.0315 ASPHALTIC FLUMES SY	REMARKS
0010	90+28	-	104+93	USH 10 RT	1,461	1,456	2	SHOULDER RECONSTRUCTION
0010	204+24	-	204+63	USH 10 LT	--	38	--	C-46-961
0010	225+48	-	225+98	USH 10 LT & RT	--	81	--	C-46-959
0010	239+06	-	239+32	USH 10 LT & RT	--	39	--	C-46-131
0010	266+36	-	266+78	USH 10 RT	--	41	--	B-46-35 SE QUADRANT
0010	279+79	-	279+95	USH 10 RT	--	16	--	B-46-30 SW QUADRANT
TOTAL 0010					1,461	1,671	2	

520 - CULVERT PIPES

CATEGORY	STATION	LOCATION	203.0100 REMOVING SMALL PIPE CULVERTS EACH	204.9090.S.02 REMOVING (ITEM DESCRIPTION) (02. REINFORCED CONCRETE CULVERT PIPE 24-INCH) LF	520.8700 CLEANING CULVERT PIPES EACH	522.0124 CULVERT PIPE REINFORCED CONCRETE CLASS III 24-INCH LF	522.1024 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24- INCH EACH	522.1042 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 42- INCH EACH	606.0200 * RIPRAP MEDIUM CY	606.0400 RIPRAP EXTRA- HEAVY CY	633.5200 MARKERS CULVERT END EACH	645.0120 * GEOTEXTILE TYPE HR SY	SPV.0060.01 SPECIAL (01. GRADING AND SHAPING ENDWALL INSTALLATION) EACH	SPV.0090.01 SPECIAL (01. DITCH CLEANING) LF	REMARKS
0010	40+58	USH 10 RT	--	16	--	16	1	--	--	--	--	--	--	--	PIPE #116
0010	84+99	USH 10 LT	--	--	--	--	--	--	--	--	1	--	--	--	PIPE #119
0010	92+80	USH 10 LT & RT	--	--	--	--	--	--	--	--	2	--	--	--	PIPE #120
0010	100+02	USH 10 RT	--	--	--	--	--	1	--	--	--	--	1	--	PIPE #121
0010	105+01	USH 10 LT & RT	--	--	--	--	--	--	--	--	2	--	--	--	PIPE #122
0010	169+72	USH 10 RT	--	--	--	--	--	--	--	--	1	--	--	--	PIPE #126
0010	179+03	USH 10 RT	--	--	--	--	--	--	--	--	1	--	--	--	PIPE #127
0010	184+90	USH 10 RT	--	--	--	--	--	--	--	--	1	--	--	--	PIPE #128
0010	204+46	USH 10 LT & RT	--	--	--	--	--	--	--	--	4	--	--	--	PIPE #129 MARKER AT EACH CORNER
0010	225+74	USH 10 LT & RT	--	--	--	--	--	--	--	--	4	--	--	--	PIPE #130 MARKER AT EACH CORNER
0010	239+15	USH 10 LT & RT	--	--	--	--	--	--	--	--	2	--	--	--	PIPE #131
0010	259+46	USH 10 LT & RT	1	--	--	--	--	--	--	15	2	33	--	--	PIPE #132
0010	285+96	USH 10 LT & RT	1	--	--	--	--	--	5	--	2	16	--	200	PIPE #133
0010	292+68	USH 10 LT & RT	--	--	1	--	--	--	--	--	--	--	--	--	PIPE #134
0010	359+17	USH 10 LT & RT	--	--	1	--	--	--	--	--	--	--	--	--	PIPE #135
TOTAL 0010			2	16	2	16	1	1	5	15	22	49	1	200	

*ADDITIONAL QUANTITIES LISTED ELSEWHERE

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CULVERT PIPE SUMMARY

STATION	LOCATION	520.4136	522.1036	522.2419	522.2619	INLET** ELEVATION	OUTLET** ELEVATION
		CULVERT PIPE CLASS IV 36-INCH	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 36-INCH 36-INCH	CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-IV 19X30-INCH	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL 19X30-INCH		
259+50.54	10	150	2	--	--	773.42	763.09
285+95.08	10	--	--	56	2	787.30	786.80
TOTALS		150	2	56	2		

**PIPE INVERT AT END OF PIPE FOR INFORMATION ONLY. FIELD VERIFY

JOINT TIES FOR CONCRETE PIPE SHALL BE PROVIDED AT ALL CONCRETE APRON ENDWALLS. APRON ENDWALLS SHALL BE TIED FOR THE LAST THREE JOINTS AT PIPE ENDS. THE COST OF THESE TIES SAHLL BE INCIDENTAL TO THE COST OF THE PIPE.

509.1500 CULVERT REPAIR WORK

509.1500

CONCRETE
SURFACE REPAIR

CATEGORY	STATION	LOCATION	SF	REMARKS
0010	69+19	USH 10 RT	10	PIPE #117 -- 3.5' X 3.5' BOX CULVERT
0010	225+74	USH 10 LT & RT	10	PIPE #130 -- 10' X 14' BOX CULVERT
TOTAL 0010			20	

601 - CONCRETE C&G

CATEGORY	STATION	TO	STATION	LOCATION	LF	CY	CY	SY	REMARKS
0010	264+00 RT	-	265+05 RT	USH 10	101	2	18	82	B-46-35 SW QUADRANT
TOTAL 0010					101	2	18	82	

*ADDITIONAL QUANTITIES LISTED ELSEWHERE

628 - EROSION CONTROL

CATEGORY	STATION	TO	STATION	LOCATION	SALVAGED TOPSOIL SY	SILT FENCE LF	SILT FENCE MAINTENANCE LF	MOBILIZATIONS EROSION CONTROL EACH	MOBILIZATIONS EMERGENCY EROSION CONTROL EACH	EROSION MAT CLASS I TYPE B SY	EROSION MAT URBAN CLASS I TYPE B SY	TEMPORARY DITCH CHECKS LF	CULVERT PIPE CHECKS EACH	ROCK BAGS EACH	FERTILIZER TYPE B CWT	SEEDING MIXTURE NO. 20 LB	SEEDING TEMPORARY LB	SEED WATER MGAL	REMARKS
0010	65+47	-	71+47	USH 10 LT	745	603	603	--	--	745	--	--	--	--	0.5	20	5	0.5	
0010	66+48	-	87+77	USH 10 RT	931	2127	2127	--	--	931	--	10	--	--	0.6	25	6	0.7	
0010	88+29	-	114+67	USH 10 RT	1380	2615	2615	--	--	1380	--	--	--	--	0.9	37	9	1.0	
0010	89+78	-	95+48	USH 10 LT	441	585	585	--	--	441	--	--	1	13	0.3	12	3	0.3	PIPE #120
0010	114+30	-	126+42	USH 10 RT	809	1243	1243	--	--	809	--	--	--	--	0.6	22	6	0.6	
0010	202+08	-	207+25	USH 10 LT	367	530	530	--	--	367	--	--	--	--	0.3	10	3	0.3	
0010	222+67	-	228+77	USH 10 LT & RT	1102	1008	1008	--	--	1102	--	--	--	--	0.7	30	8	0.8	
0010	235+34	-	242+38	USH 10 LT & RT	1128	1285	1285	--	--	1128	--	--	--	--	0.8	30	8	0.8	
0010	256+53	-	264+94	USH 10 LT & RT	4,113	1,660	1,660	--	--	4,113	--	--	1	7	2.6	111	28	2.8	PIPE #132
0010	266+33	-	268+91	USH 10 LT & RT	175	497	497	--	--	175	--	--	--	--	0.2	5	1	0.2	
0010	276+95	-	279+97	USH 10 LT & RT	--	640	640	--	--	--	1,077	--	--	--	0.7	29	7	0.8	
0010	280+61	-	286+01	USH 10 LT & RT	--	676	676	--	--	--	924	20	1	5	0.6	25	6	0.7	DITCH CLEANING, PIPE #133
0010	317+91	-	320+81	USH 10 LT & RT	--	579	579	--	--	--	226	--	--	--	0.2	6	2	0.2	
0010	322+35	-	324+00	USH 10 LT & RT	--	404	404	--	--	--	452	--	--	--	0.3	12	3	0.3	
0010	325+87	-	328+89	USH 10 LT & RT	--	594	594	--	--	--	219	--	--	--	0.2	6	2	0.2	
0010	338+64	-	346+48	USH 10 RT	874	803	803	--	--	874	--	--	--	--	0.6	24	6	0.6	
0010	396+78	-	406+40	USH 10 LT & RT	--	1,876	1,876	--	--	--	706	--	--	--	0.5	19	5	0.5	
0010	409+18	-	412+42	USH 10 LT & RT	--	533	533	--	--	--	181	--	--	--	0.2	5	1	0.2	
0010	419+40	-	422+67	USH 10 LT & RT	--	557	557	--	--	--	234	--	--	--	0.2	6	2	0.2	
0010	424+70	-	428+33	USH 10 LT & RT	--	670	670	--	--	--	1,070	--	--	--	0.7	29	7	0.8	
0010	15+98	-	431+92	USH 10	3,035	4,875	4,875	6	3	3,035	1,286	30	2	10	3.0	116	32	4.5	25% UNDISTRIBUTED
TOTAL 0010					15,100	24,360	24,360	6	3	15,100	6,375	60	5	35	14.7	579	150	17.0	

614 - MGS GUARDRAIL

CATEGORY	STATION	TO	STATION	LOCATION	204.9090.S.01	614.0397	614.0920	614.2300	614.2330	614.2340	614.2350	614.2500	614.2610	614.2620	614.2630
					REMOVING (ITEM DESCRIPTION) (01. REMOVING BEAM GUARD RETAINING WALL) LF	GUARDRAIL MOW STRIP EMULSIFIED ASPHALT SY	SALVAGED RAIL LF	MGS GUARDRAIL 3 LF	MGS GUARDRAIL 3 K LF	MGS GUARDRAIL 3 L LF	MGS GUARDRAIL SHORT RADIUS LF	MGS THRIE BEAM TRANSITION LF	MGS GUARDRAIL TERMINAL EAT EACH	MGS GUARDRAIL TERMINAL TYPE 2 EACH	MGS GUARDRAIL SHORT RADIUS TERMINAL EACH
0010	66+83 LT	-	70+15 LT	USH 10	--	150	303	225.0	--	--	--	--	2	--	--
0010	67+78 RT	-	78+30 RT	USH 10	--	410	970	662.5	275.0	--	--	--	2	--	--
0010	80+57 RT	-	86+57 RT	USH 10	--	250	653	400.0	100.0	--	--	--	2	--	--
0010	89+25 RT	-	114+22 RT	USH 10	--	680	2,436	450.0	1,937.5	--	--	--	2	--	--
0010	91+20 LT	-	94+12 LT	USH 10	--	90	277	--	187.5	--	--	--	2	--	--
0010	114+34 RT	-	125+08 RT	USH 10	--	440	828	800.0	202.0	--	--	--	1	1	--
0010	203+31 LT	-	206+00 LT	USH 10	39	80	177	--	150.0	12.5	--	--	2	--	--
0010	223+99 RT	-	226+55 RT	USH 10	45	80	178	--	150.0	--	--	--	2	--	--
0010	225+11 LT	-	227+42 LT	USH 10	38	80	153	--	125.0	--	--	--	2	--	--
0010	236+83 RT	-	240+12 RT	USH 10	13	110	316	--	225.0	--	--	--	2	--	--
0010	236+92 LT	-	241+00 LT	USH 10	26	110	340	--	300.0	--	--	--	2	--	--
0010	257+18 RT	-	264+91 RT	USH 10	--	160	757	--	675.0	--	--	40	1	--	--
0010	258+26 LT	-	264+88 LT	USH 10	--	180	619	75.0	500.0	--	--	40	1	--	--
0010	266+34 RT	-	267+27 RT	USH 10	40	40	69	--	--	--	--	40	1	--	--
0010	266+37 LT	-	267+53 LT	USH 10	--	60	69	25.0	--	--	--	40	1	--	--
0010	278+84 RT	-	280+01 RT	USH 10	14	50	114	25.0	--	--	--	40	1	--	--
0010	279+09 LT	-	280+01 LT	USH 10	--	40	114	--	--	--	--	40	1	--	--
0010	280+61 LT	-	282+03 LT	USH 10	--	60	164	50.0	--	--	--	40	1	--	--
0010	280+61 RT	-	283+04 RT	USH 10	--	120	153	141.0	--	--	73	40	--	--	1
0010	319+86 LT	-	320+79 LT	USH 10	--	40	70	--	--	--	--	40	1	--	--
0010	319+86 RT	-	320+79 RT	USH 10	--	40	70	--	--	--	--	40	1	--	--
0010	322+33 RT	-	324+02 RT	USH 10	--	70	166	90.0	--	--	--	80	--	--	--
0010	322+33 LT	-	323+27 LT	USH 10 & FE	--	50	33	37.5	--	--	8	40	--	--	1
0010	323+47 LT	-	324+02 LT	USH 10 & FE	--	50	27	25.0	--	--	18	40	--	--	1
0010	325+91 LT	-	326+83 LT	USH 10	--	40	70	--	--	--	--	40	1	--	--
0010	325+91 RT	-	326+83 RT	USH 10	--	40	69	--	--	--	--	40	1	--	--
0010	339+97 RT	-	345+02 RT	USH 10	--	140	490	--	400.0	--	--	--	2	--	--
0010	397+42 RT	-	406+40 RT	USH 10 & DRIVEWAY	681	270	1,009	212.5	629.0	--	26	40	--	--	1
0010	397+47 LT	-	406+40 LT	USH 10	688	230	1,023	--	800.0	--	--	40	1	--	--
0010	409+17 LT	-	410+94 LT	USH 10 & BOAT LANDING	--	50	310	--	125.0	--	27	40	--	--	1
0010	409+17 RT	-	411+35 RT	USH 10	--	50	347	--	125.0	--	--	40	1	--	--
0010	419+94 RT	-	422+68 RT	USH 10	--	110	172	181.0	--	--	--	40	1	--	--
0010	421+75 LT	-	422+68 LT	USH 10	--	30	173	--	--	--	--	40	1	--	--
0010	424+71 LT	-	426+38 LT	USH 10	--	80	172	75.0	--	--	--	40	1	--	--
0010	424+71 RT	-	426+52 RT	USH 10	--	70	273	87.5	--	--	--	40	1	--	--
TOTAL 0010					1,584	4,550	13,163	3,562.0	6,906.0	12.5	152	960	40	1	5

3

621.0100 - MONUMENTS

CATEGORY	STATION	LOCATION	EACH
0010	37+14	USH 10	1
0010	63+57	USH 10	1
0010	116+95	USH 10	1
TOTAL 0010			3

621.0100
LANDMARK
REFERENCE
MONUMENTS

643 - DETOUR

CATEGORY	STATION	TO	STATION	LOCATION	DURATION DAYS	TRAFFIC CONTROL BARRICADES TYPE III		TRAFFIC CONTROL WARNING LIGHTS TYPE A		TRAFFIC CONTROL SIGNS		TRAFFIC CONTROL COVERING SIGNS TYPE II		TRAFFIC CONTROL SIGNS FIXED MESSAGE		REMARKS	
						EACH**	DAY	EACH**	DAY	EACH**	DAY	EACH**	CYCLES	DAY	EACH**		SF
0010	258+00	-	286+00	USH 10	14	14	196	20	280	4	56	--	--	--	--	WORKZONE	
0010			DETOUR	USH 10	14	0	840	--	--	60	840	--	--	--	--	DETOUR ROUTE	
0010			DETOUR	USH 10	14	2	28	4	56	24	336	1	1	14	4	56	USH 10 / CTH CC
0010			DETOUR	USH 10	14	--	--	--	--	22	308	--	--	--	--	--	CTH CC / STH 72
0010			DETOUR	USH 10	14	--	--	--	--	27	378	--	--	--	--	--	W WINTER AVE / MAIN ST
0010			DETOUR	USH 10	14	--	--	--	--	37	518	--	--	--	4	56	STH 72 / STH 25
0010			DETOUR	USH 10	14	2	28	4	56	18	252	6	1	6	4	56	STH 25 / USH 10
TOTAL 0010							1,092		392		2,688		20		168		

*ADDITIONAL QUANTITIES LISTED ELSEWHERE
**FOR INFORMATIONAL USE ONLY

3

643 - TRAFFIC CONTROL

CATEGORY	STATION	TO	STATION	LOCATION	DURATION DAYS	TRAFFIC CONTROL DRUMS		TRAFFIC CONTROL BARRICADES TYPE III		TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS		TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER BASES		TRAFFIC CONTROL WARNING LIGHTS TYPE A		TRAFFIC CONTROL WARNING LIGHTS TYPE C		TRAFFIC CONTROL SIGNS MESSAGE		TRAFFIC CONTROL SIGNS FIXED MESSAGE		REMARKS	
						EACH**	DAY	EACH**	DAY	EACH**	EACH	EACH**	EACH	EACH**	DAY	EACH**	DAY	EACH**	DAY	SF	EACH		EACH
0010	66+59	-	112+00	USH 10	10	96	960	3	30	118	1,180	118	1,180	2	20	18	180	11	110	--	--	CLIMBING LANE EB LANE SHIFT	
0010	65+61	-	95+30	USH 10	5	64	320	1	5	0	0	0	0	2	10	0	0	8	40	--	--	CLIMBING LANE WB LANE CLOSURE	
0010	396+19	-	412+25	USH 10	7	54	378	2	14	0	0	0	0	0	0	10	70	15	105	--	--	THOMPSON LAKE EB LANE CLOSURE	
0010	396+19	-	412+25	USH 10	7	57	399	2	14	0	0	0	0	0	0	10	70	15	105	--	--	THOMPSON LAKE WB LANE CLOSURE	
0010			PROJECT	USH 10	30	36	1,080	0	0	0	0	0	0	0	0	5	150	--	--	--	--	VARIOUS SHOULDER WORK	
0010			PROJECT	USH 10	7	0	0	0	0	0	0	0	0	0	0	0	0	36	--	--	--	ROAD WORK BEGIN/END	
0010			PROJECT	USH 10	101	0	0	0	0	0	0	0	0	0	0	28	2,828	--	--	1	--	FLAGGING OPERATION + MISC	
0010	UNDISTRIBUTED (10%)			USH 10		313		12		120		120		30		30		332		--	--		
TOTAL 0010						3,450		75		1,300		1,300		60		350		3,670		36		1	1

*ADDITIONAL QUANTITIES LISTED ELSEWHERE
**FOR INFORMATIONAL USE ONLY

643 - TEMP P.M

*

643.3165 643.3805 646.9000
 TEMPORARY TEMPORARY
 TEMPORARY MARKING STOP MARKING
 MARKING LINE LINE PAINT 18- REMOVAL LINE 4-
 PAINT 6-INCH INCH INCH
 WHITE YELLOW

CATEGORY	STATION	TO	STATION	LOCATION	LF	LF	LF	LF	REMARKS
0010	390+50	-	415+50	USH 10	1,540	1,720	24	75	THOMPSON LAKE LANE CLOSURES
0010	390+50	-	415+50	USH 10	--	625	--	--	RE-STRIPING C/L
0010	66+59	-	112+00	USH 10	165	2,640	--	745	CLIMBING LANE EB SHIFT
SUBTOTAL					1,705	4,985	24	820	
TOTAL 0010					6,690		24	820	

*ADDITIONAL QUANTITIES LISTED ELSEWHERE

646 - PAVEMENT MARKING

*

643.3165 643.3170 646.2020 646.2040 646.4040
 TEMPORARY MARKING LINE TEMPORARY MARKING LINE EPOXY MARKING LINE MARKING LINE GROOVED WET REF EPOXY 6-INCH MARKING LINE
 PAINT 6-INCH 6-INCH EPOXY 6-INCH MARKING LINE GROOVED WET REF EPOXY 6-INCH GROOVED WET
 SOLID 4'SKIPS 4'SKIPS SOLID 12.5'SKIPS 12.5'SKIPS SOLID SOLID 12.5'SKIPS SOLID 12.5'SKIPS 3'SKIPS REF EPOXY 10-
 YELLOW YELLOW WHITE YELLOW YELLOW WHITE WHITE YELLOW YELLOW WHITE WHITE WHITE INCH

CATEGORY	STATION	TO	STATION	LOCATION	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	REMARKS	
0010	15+98	-	64+00	USH 10	24,312	360	700	8,104	375	729	--	8,104	375	9,244	729	52	BOP - HARMON/SYLVESTER RD	
0010	64+00	-	116+00	USH 10	24,600	528	1,247	8,200	550	1,299	--	8,200	550	10,176	1,299	56	HARMON/SYLVESTER RD - BAUER LN	
0010	116+00	-	222+00	USH 10	--	2,544	--	--	2,650	--	--	--	2,650	20,630	--	52	BAUER LN - HAIGH/STEWART LN	
0010	222+00	-	291+00	USH 10	25,950	996	--	8,650	1,038	--	370	8,650	1,038	12,485	--	108	HAIGH/STEWART LN - CTH D	
0010	291+00	-	371+50	USH 10	18,750	1,596	--	6,250	1,663	--	578	6,250	1,663	14,722	--	112	CTH D - S KIRK RD	
0010	371+50	-	431+92	USH 10	9,735	1,290	--	3,245	1,344	--	912	3,245	1,344	10,331	94	32	S KIRK RD - EOP	
SUBTOTAL					103,347	7,314	1,947	34,449	7,620	2,028	1,860	34,449	7,620	77,588	2,122	412	632	
TOTAL 0010					112,608			44,097			1,860			122,191			632	

*ADDITIONAL QUANTITIES LISTED ELSEWHERE

650 - CONSTRUCTION STAKING

CATEGORY	STATION	TO	STATION	LOCATION	650.5000	650.5500	650.6000	650.8000	650.9911.01	650.9920	REMARKS
					CONSTRUCTION STAKING BASE LF	CONSTRUCTION STAKING CURB GUTTER AND LF	CONSTRUCTION STAKING PIPE CULVERTS EACH	CONSTRUCTION STAKING RESURFACING REFERENCE LF	CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) (01. 1530-05-73) EACH	CONSTRUCTION STAKING SLOPE STAKES LF	
0010	65+61		87+50	USH 10	--	--	--	--	--	2189	
0010	88+34		126+28	USH 10	--	--	--	--	--	3794	
0010	88+95	-	106+50	USH 10	1755	--	--	--	--	--	SHOULDER RECONSTRUCTION
0010	202+11		207+20	USH 10	--	--	--	--	--	509	
0010	222+79		228+62	USH 10	--	--	--	--	--	583	
0010	235+65		242+21	USH 10	--	--	--	--	--	656	
0010	256+86		264+89	USH 10	--	--	--	--	--	803	
0010	256+86	-	265+06	USH 10	820	--	--	--	--	--	SHOULDER RECONSTRUCTION
0010	258+77	-	260+17	USH 10	--	--	1	--	--	--	PIPE #132
0010	264+04	-	265+05	USH 10	--	101	--	--	--	--	B-46-35 SW QUADRANT
0010	266+36		268+72	USH 10	--	--	--	--	--	236	
0010	277+04		279+95	USH 10	--	--	--	--	--	291	
0010	280+67		283+83	USH 10	--	--	--	--	--	316	
0010	284+12		286+53	USH 10	--	--	--	--	--	241	
0010	285+38	-	286+53	USH 10	--	--	1	--	--	--	PIPE #133
0010	318+06		320+76	USH 10	--	--	--	--	--	270	
0010	322+35		323+99	USH 10	--	--	--	--	--	164	
0010	323+95		328+63	USH 10	--	--	--	--	--	468	
0010	338+77		346+22	USH 10	--	--	--	--	--	745	
0010	396+81		406+38	USH 10	--	--	--	--	--	957	
0010	397+17	-	406+46	USH 10	929	--	--	--	--	--	SHOULDER RECONSTRUCTION
0010	409+19		412+25	USH 10	--	--	--	--	--	306	
0010	419+49		422+66	USH 10	--	--	--	--	--	317	
0010	424+73		428+18	USH 10	--	--	--	--	--	346	
0010	15+98	-	431+92	USH 10	--	--	--	40,200	1	--	PROJECT
TOTAL 0010					3,504	101	2	40,200	1	13,191	

690 - SAWING ASPHALT

CATEGORY	STATION	TO	STATION	LOCATION	690.0150	REMARKS
					SAWING ASPHALT LF	
0010	88+95	-	106+50	USH 10 RT	1763	SHOULDER RECONSTRUCTION
0010	256+86	-	265+06	USH 10 RT	824	SHOULDER RECONSTRUCTION
0010	257+97	-	265+06	USH 10 LT	723	SHOULDER RECONSTRUCTION
0010	258+77	-	260+17	USH 10	72	CULVERT REPLACEMENT
0010	285+38	-	286+53	USH 10	68	CULVERT REPLACEMENT
0010	397+17	-	406+46	USH 10 LT	934	SHOULDER RECONSTRUCTION
0010	397+43	-	406+46	USH 10 RT	912	SHOULDER RECONSTRUCTION
0010	410+97	-	411+19	USH 10 LT	22	ASPH CE
TOTAL 0010					5,318	

*ADDITIONAL QUANTITIES LISTED ELSEWHERE

3

204-HMA MILLING

CATEGORY	STATION	TO	STATION	LOCATION	204.0115	204.0120	REMARKS
					REMOVING ASPHALTIC SURFACE BUTT JOINTS SY	REMOVING ASPHALTIC SURFACE MILLING SY	
0010	505+05	-	509+51	USH 10	110	1770	STAGE 1
0010	505+05	-	509+51	USH 10	40	1440	STAGE 2
0010	509+51	-	515+27	USH 10	40	2810	STAGE 3 FLAGGING
TOTAL 0010					190	6,020	

305-BASE AGG

CATEGORY	STATION	TO	STATION	LOCATION	305.0110
					BASE AGGREGATE DENSE 3/4-INCH TON
0010	512+32	-	515+26	USH 10	10
TOTAL 0010					10

3

460-HMA

CATEGORY	STATION	TO	STATION	LOCATION	455.0605	460.6645	REMARKS
					TACK COAT GAL	HMA PAVEMENT 5 MT 58-34 V TON	
0010	505+05	-	509+51	USH 10	124	200	STAGE 1
0010	505+05	-	509+51	USH 10	101	165	STAGE 2
0010	509+51	-	515+27	USH 10	197	315	STAGE 3 FLAGGING
TOTAL 0010					422	680	

628.7010 - INLET PROTECTION

CATEGORY	STATION	TO	STATION	LOCATION	628.7010
					INLET PROTECTION TYPE B EACH
0010	504+00	-	510+25	USH 10	6
TOTAL 0010					6

650-CONSTRUCTION STAKING

CATEGORY	STATION	TO	STATION	LOCATION	650.8000	650.9911.01
					CONSTRUCTION STAKING RESURFACING REFERENCE LF	CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) (01. 1530-05-83) EACH
0010	505+05	-	515+26	USH 10	1,021	1
TOTAL 0010					1,021	1

643-TRAFFIC CONTROL

CATEGORY	STATION TO STATION	LOCATION	DURATION DAY	643.0300 TRAFFIC CONTROL DRUMS		643.0420 TRAFFIC CONTROL BARRICADES		643.0500 TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS		643.0600 TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER BASES		643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A		643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C		643.0900 TRAFFIC CONTROL SIGNS		643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II		643.1070 TRAFFIC CONTROL CONES 42-INCH		643.5000 TRAFFIC CONTROL	
				EACH*	DAY	EACH**	DAY	EACH	EACH	EACH*	DAY	EACH*	DAY	EACH*	DAY	EACH*	DAY	CYCLES**	EACH	EACH	DAY	EACH	
0010	PROJECT	USH 10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.1
		SUBTOTAL			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1
STAGE 1																							
0010	PROJECT	USH 10	3	26	78	10	30	10	10	20	60	5	15	21	63	1	3	38	114	—	—	—	—
		SUBTOTAL			78	30	10	10	10	60	15	63	3	114	0	0	0	0	0	0	0	0	0
STAGE 2																							
0010	PROJECT	USH 10	2	43	86	3	6	—	—	6	12	8	16	19	38	—	—	35	70	—	—	—	—
		SUBTOTAL			86	6	0	0	0	12	16	38	0	70	0	0	0	0	0	0	0	0	0
STAGE 3																							
0010	PROJECT	USH 10	2	—	—	—	—	—	—	—	—	—	—	8	16	—	—	—	—	—	—	—	—
		SUBTOTAL			0	0	0	0	0	0	0	0	0	16	0	0	0	0	0	0	0	0	0
		TOTAL 0010			164	36	10	10	10	72	31	117	3	184	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1

**FOR INFORMATION ONLY

646-TEMPORARY PM

CATEGORY	STATION	TO	STATION	LOCATION	643.3165 TEMPORARY MARKING LINE PAINT 6-INCH		646.9002 MARKING REMOVAL LINE 6-INCH		646.9100 MARKING REMOVAL LINE 8-INCH		646.9200 MARKING REMOVAL LINE WIDE		646.9300 MARKING REMOVAL SPECIAL MARKING		REMARKS
					LF	LF	LF	LF	LF	LF	EACH				
0010	505+05	-	515+26	USH 10	545	547	25	55	4	—	—	—	—	—	STAGE 1
0010	505+05	-	515+26	USH 10	—	225	—	—	—	—	—	—	—	—	STAGE 2
				TOTAL 0010	545	772	25	55	4	—	—	—	—	—	

646-PAVEMENT MARKING

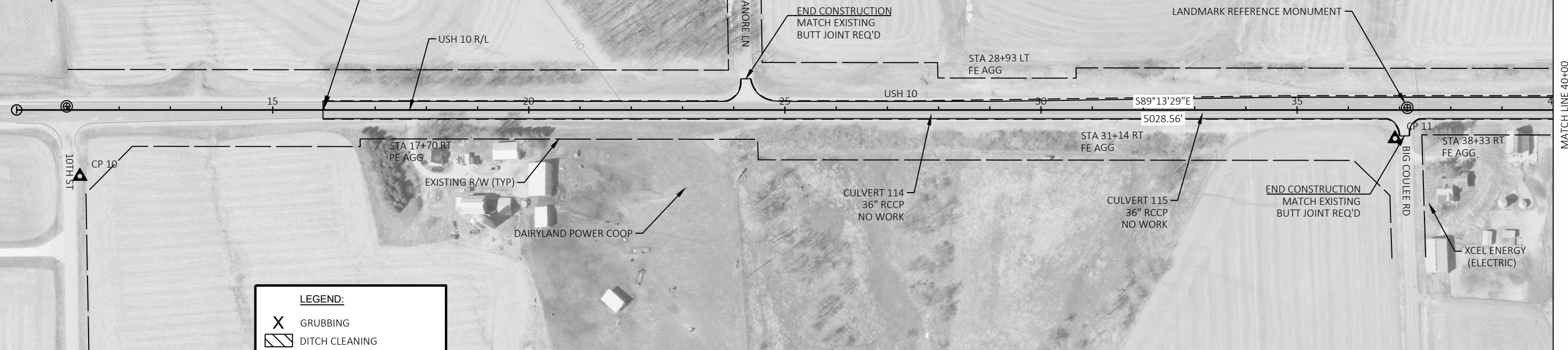
CATEGORY	STATION	TO	STATION	LOCATION	646.2020 MARKING LINE EPOXY 6-INCH		646.4720 SAME DAY EPOXY 6-INCH		646.4820 SAME DAY EPOXY 10-INCH		646.5020 MARKING ARROW EPOXY		646.5120 MARKING WORD EPOXY		646.7120 DIAGONAL EPOXY 12-INCH	
					WHITE LF	YELLOW LF	YELLOW LF	LF	LF	EACH	EACH	LF				
0010	505+05	-	515+26	USH 10	1,311	0	2,655	657	6	3	134	—	—	—	—	
				TOTAL 0010	1,311	0	2,655	657	6	3	134	—	—	—	—	



NOTE:
SEE GUARDRAIL DETAILS FOR ADDITIONAL
EROSION CONTROL FOR PROJECT ID
1530-05-73.

BEGIN PROJECT
STA 15+98.10
MATCH EXISTING
BUTT JOINT REQ'D
Y=283870.503
X=574636.640

CONTROL POINT & BENCHMARK TABLE				
POINT	Y COORDS	X COORDS	ELEVATION	DESC
10	283747.582	574160.225	1183.02	3/4" REBAR W/ CAP
11	283786.319	576728.492	1175.28	3/4" REBAR W/ CAP



LEGEND:

- X GRUBBING
- ▨ DITCH CLEANING
- △△ TEMPORARY DITCH CHECKS
- ∞ CULVERT PIPE CHECKS
- ⊗ INLET PROTECTION TYPE B
- XXXXX SAWING ASPHALT

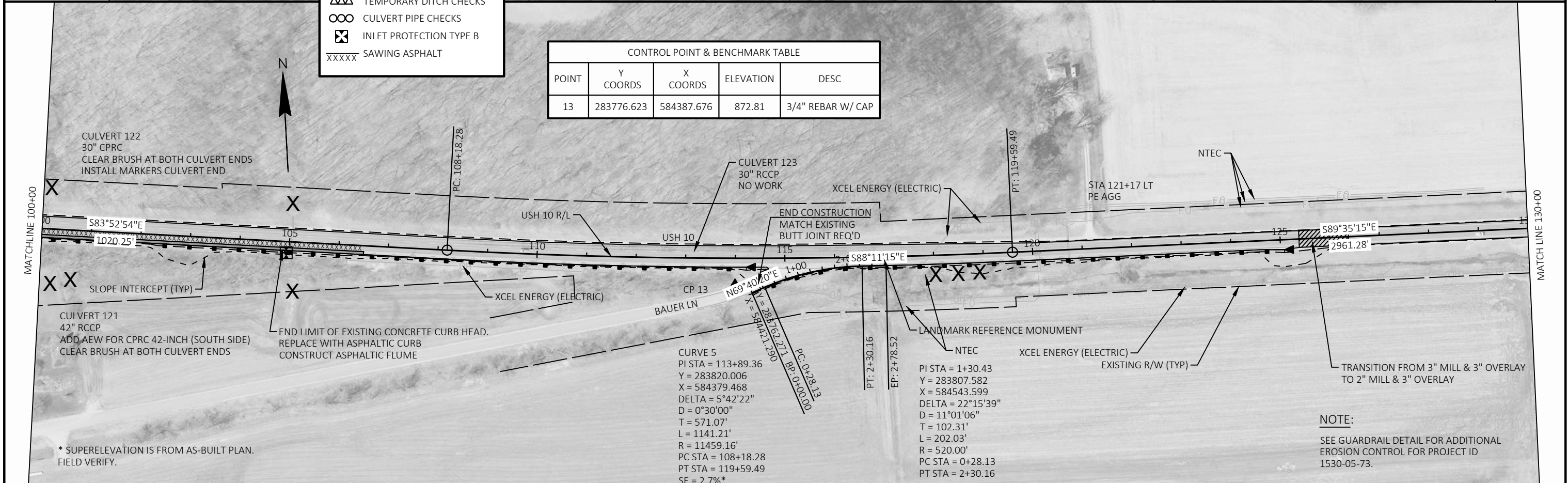
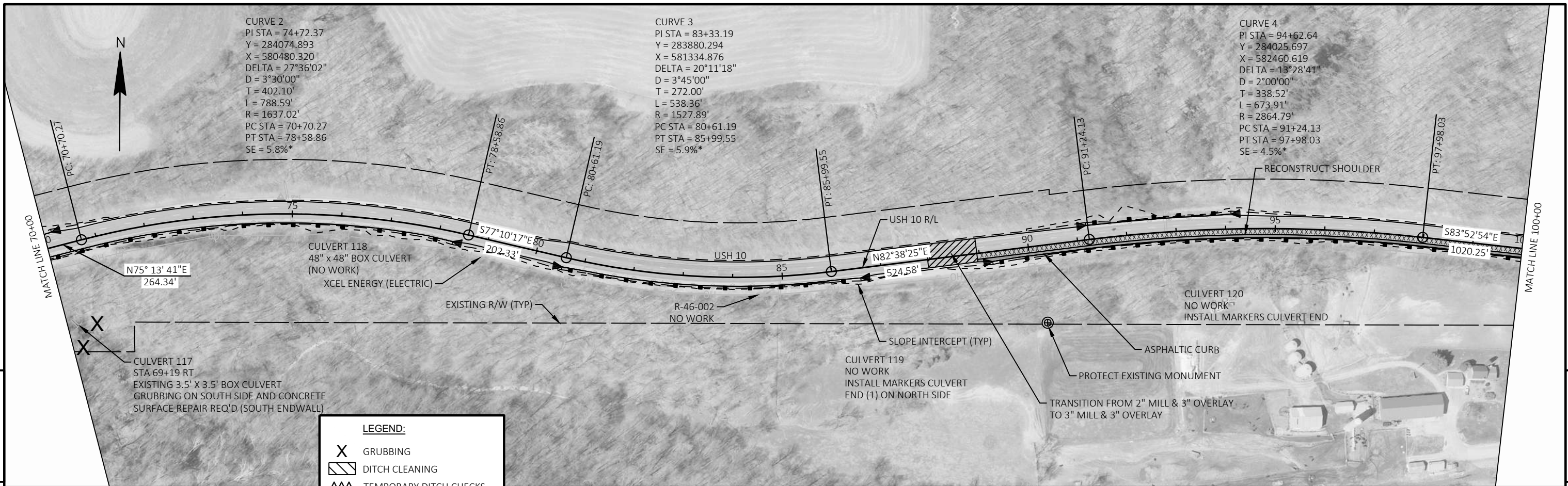
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CONTROL POINT & BENCHMARK TABLE				
POINT	Y COORDS	X COORDS	ELEVATION	DESC
12	283717.881	579388.195	1130.97	3/4" REBAR W/ CAP

* SUPERELEVATION IS FROM AS-BUILT PLAN.
FIELD VERIFY.





CONTROL POINT & BENCHMARK TABLE				
POINT	Y COORDS	X COORDS	ELEVATION	DESC
14	284024.345	588628.836	827.54	3/4" REBAR W/ CAP

CURVE 6
 PI STA = 153+45.45
 Y = 283791.523
 X = 588336.403
 DELTA = 8°28'42"
 D = 1°00'00"
 T = 424.69'
 L = 847.82'
 R = 5729.58'
 PC STA = 149+20.77
 PT STA = 157+68.59
 SE = 2.7%*

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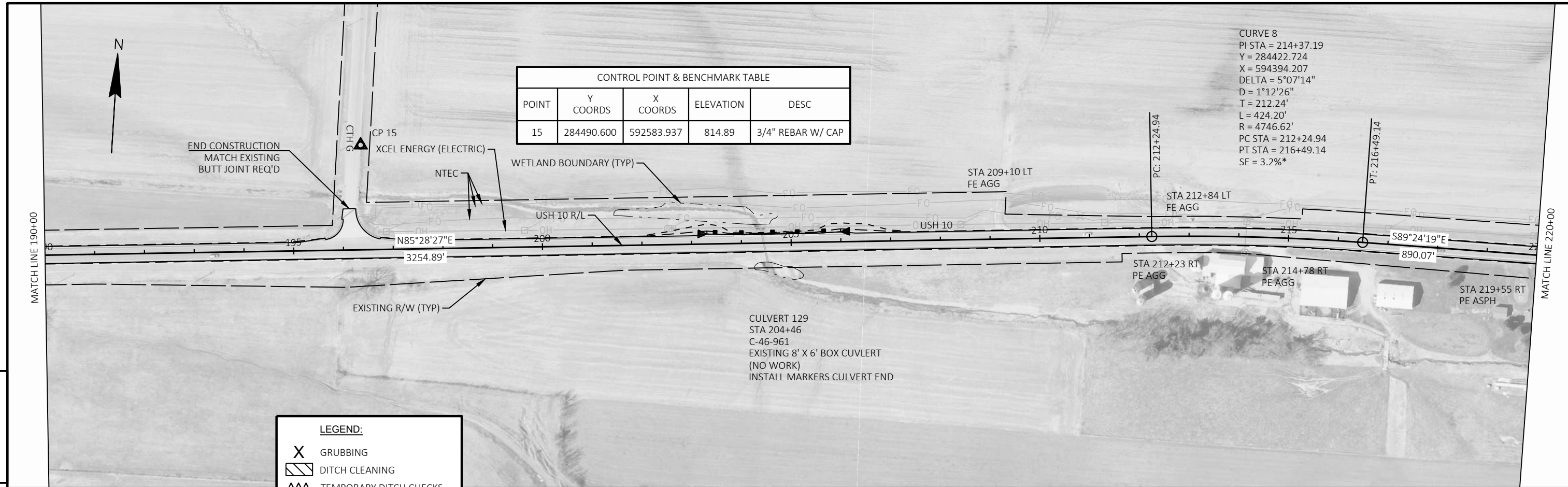
LEGEND:	
X	GRUBBING
▨	DITCH CLEANING
△△△	TEMPORARY DITCH CHECKS
∞	CULVERT PIPE CHECKS
⊗	INLET PROTECTION TYPE B
XXXXX	SAWING ASPHALT



CURVE 7
 PI STA = 177+93.11
 Y = 284135.171
 X = 590761.378
 DELTA = 3°32'24"
 D = 1°00'00"
 T = 177.06'
 L = 354.00'
 R = 5729.58'
 PC STA = 176+16.05
 PT STA = 179+70.05
 SE = 2.7%*

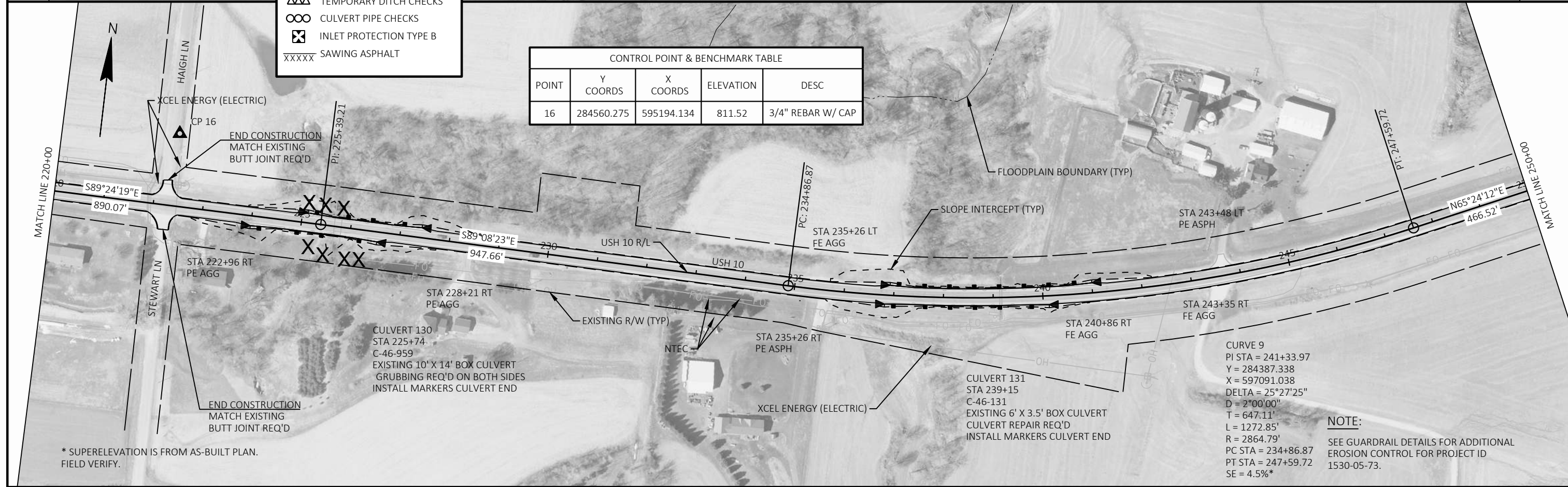
NOTE:
 SEE GUARDRAIL DETAILS FOR ADDITIONAL
 EROSION CONTROL FOR PROJECT ID
 1530-05-73.

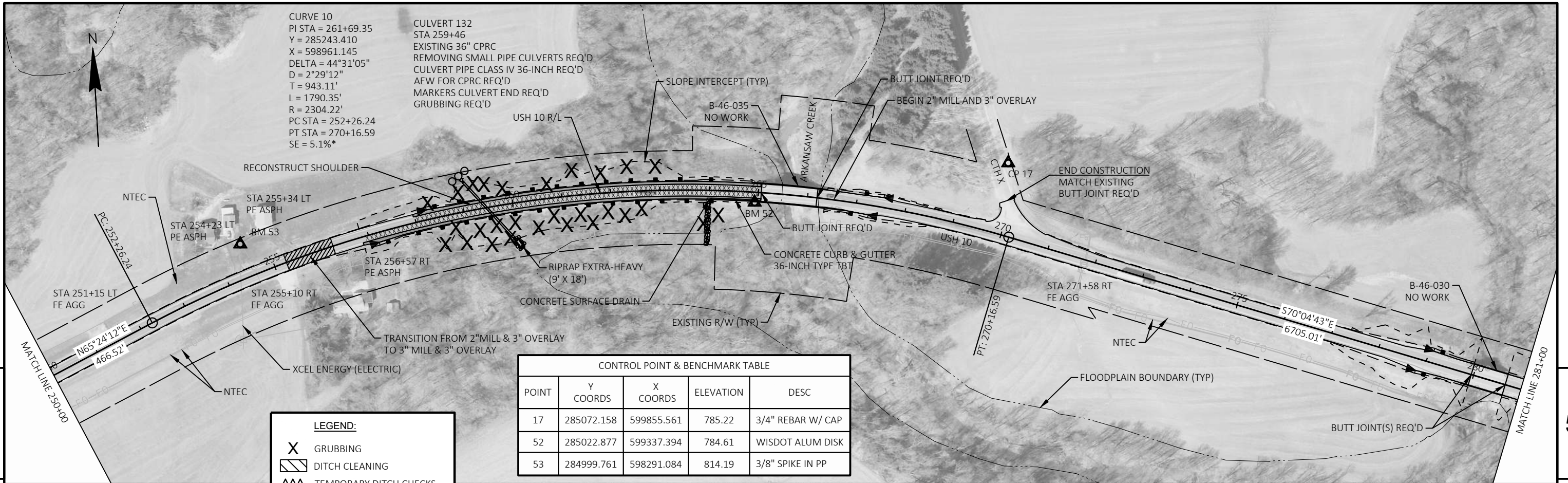
* SUPERELEVATION IS FROM AS-BUILT PLAN.
 FIELD VERIFY.



LEGEND:

- X GRUBBING
- ▨ DITCH CLEANING
- △△△ TEMPORARY DITCH CHECKS
- ∞ CULVERT PIPE CHECKS
- ⊗ INLET PROTECTION TYPE B
- XXXXX SAWING ASPHALT





CURVE 10
 PI STA = 261+69.35
 Y = 285243.410
 X = 598961.145
 DELTA = 44°31'05"
 D = 2°29'12"
 T = 943.11'
 L = 1790.35'
 R = 2304.22'
 PC STA = 252+26.24
 PT STA = 270+16.59
 SE = 5.1%*

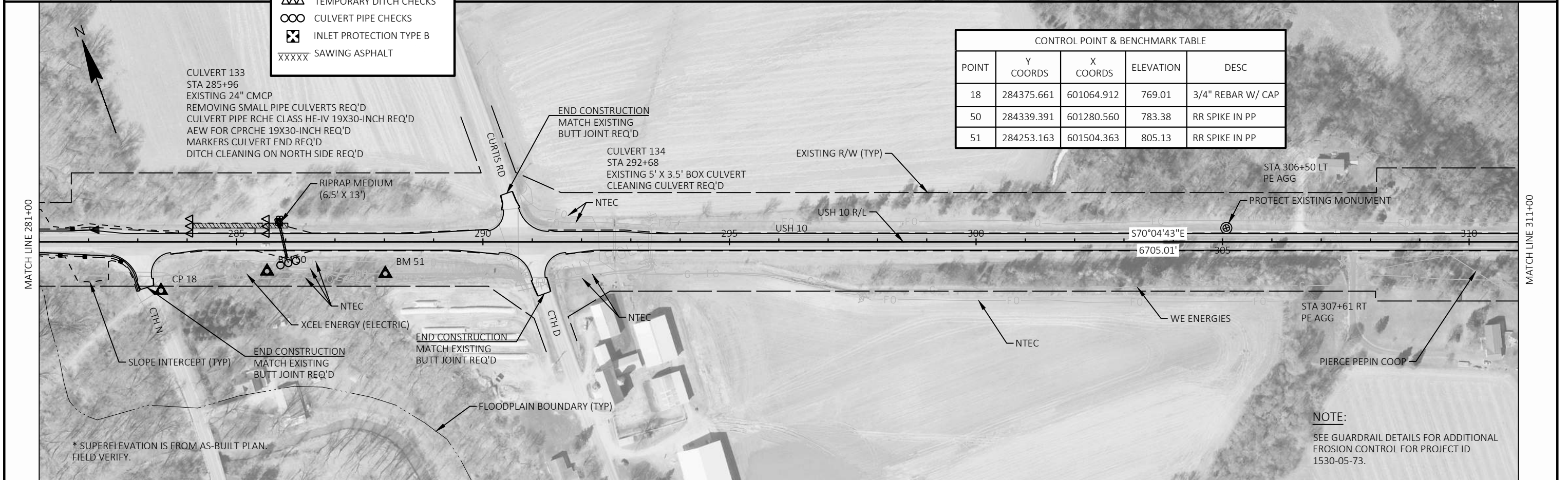
CULVERT 132
 STA 259+46
 EXISTING 36" CPRC
 REMOVING SMALL PIPE CULVERTS REQ'D
 CULVERT PIPE CLASS IV 36-INCH REQ'D
 AEW FOR CPRC REQ'D
 MARKERS CULVERT END REQ'D
 GRUBBING REQ'D

CONTROL POINT & BENCHMARK TABLE				
POINT	Y COORDS	X COORDS	ELEVATION	DESC
17	285072.158	599855.561	785.22	3/4" REBAR W/ CAP
52	285022.877	599337.394	784.61	WISDOT ALUM DISK
53	284999.761	598291.084	814.19	3/8" SPIKE IN PP

LEGEND:

- X GRUBBING
- ▨ DITCH CLEANING
- △△ TEMPORARY DITCH CHECKS
- ∞ CULVERT PIPE CHECKS
- ⊗ INLET PROTECTION TYPE B
- XXXXX SAWING ASPHALT

CONTROL POINT & BENCHMARK TABLE				
POINT	Y COORDS	X COORDS	ELEVATION	DESC
18	284375.661	601064.912	769.01	3/4" REBAR W/ CAP
50	284339.391	601280.560	783.38	RR SPIKE IN PP
51	284253.163	601504.363	805.13	RR SPIKE IN PP



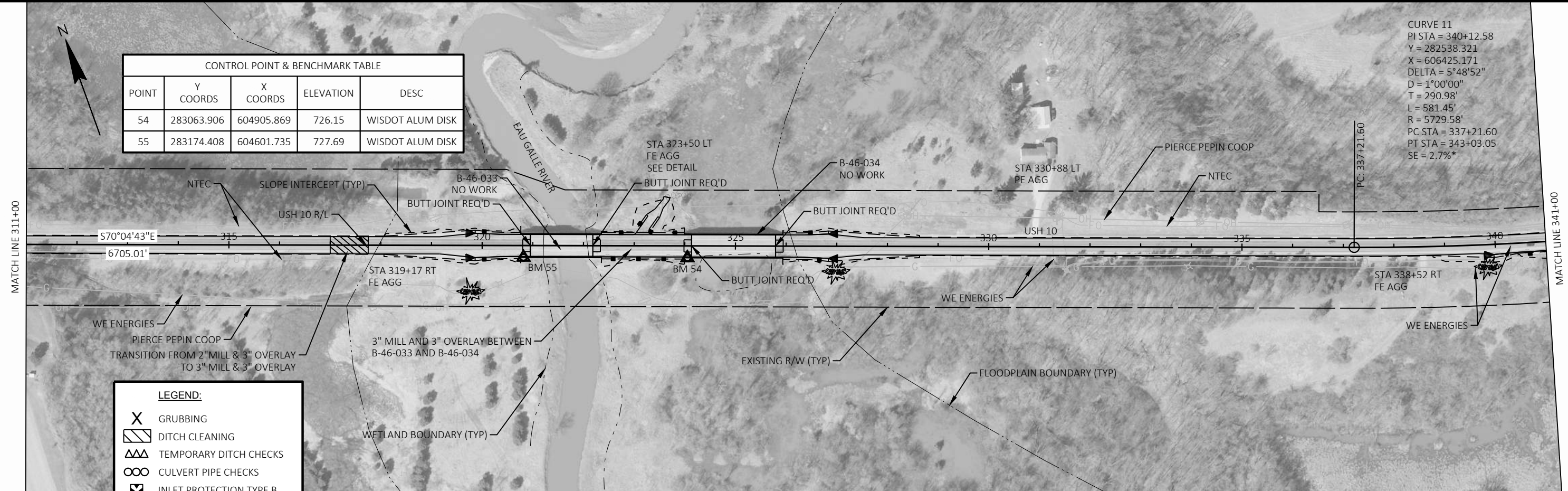
CULVERT 133
 STA 285+96
 EXISTING 24" CMCP
 REMOVING SMALL PIPE CULVERTS REQ'D
 CULVERT PIPE RCHC CLASS HE-IV 19X30-INCH REQ'D
 AEW FOR CPRCHE 19X30-INCH REQ'D
 MARKERS CULVERT END REQ'D
 DITCH CLEANING ON NORTH SIDE REQ'D

CULVERT 134
 STA 292+68
 EXISTING 5' X 3.5' BOX CULVERT
 CLEANING CULVERT REQ'D

NOTE:
 SEE GUARDRAIL DETAILS FOR ADDITIONAL
 EROSION CONTROL FOR PROJECT ID
 1530-05-73.

CONTROL POINT & BENCHMARK TABLE				
POINT	Y COORDS	X COORDS	ELEVATION	DESC
54	283063.906	604905.869	726.15	WISDOT ALUM DISK
55	283174.408	604601.735	727.69	WISDOT ALUM DISK

CURVE 11
 PI STA = 340+12.58
 Y = 282538.321
 X = 606425.171
 DELTA = 5°48'52"
 D = 1°00'00"
 T = 290.98'
 L = 581.45'
 R = 5729.58'
 PC STA = 337+21.60
 PT STA = 343+03.05
 SE = 2.7%*

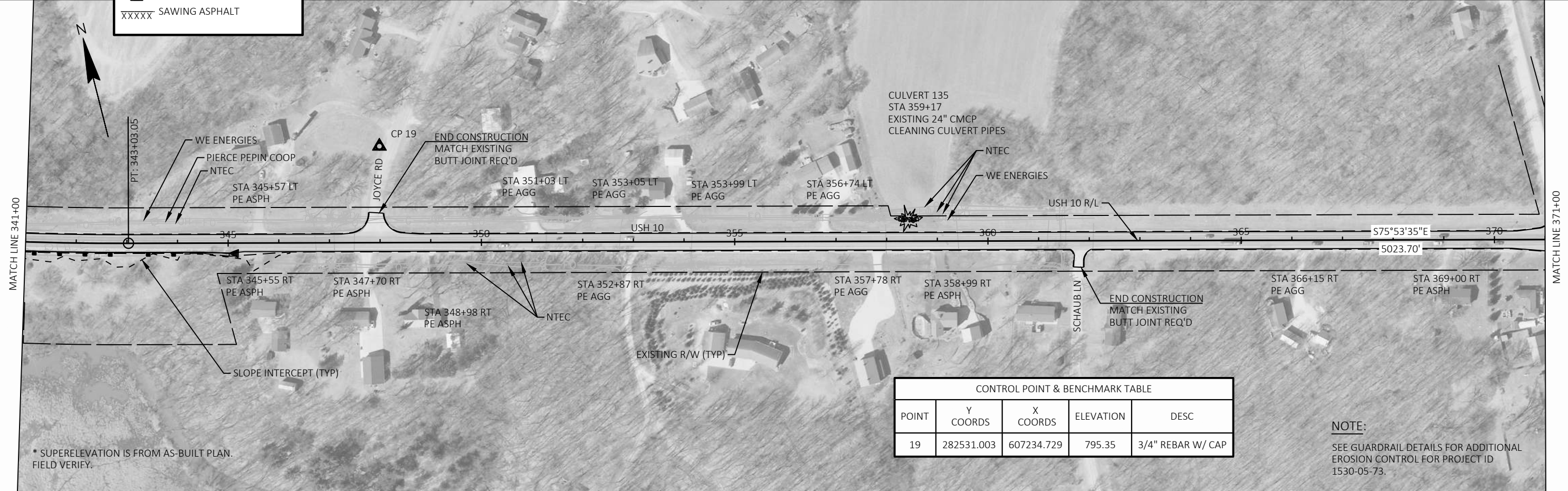


LEGEND:

X	GRUBBING
▨	DITCH CLEANING
△△	TEMPORARY DITCH CHECKS
∞	CULVERT PIPE CHECKS
⊠	INLET PROTECTION TYPE B
XXXXX	SAWING ASPHALT

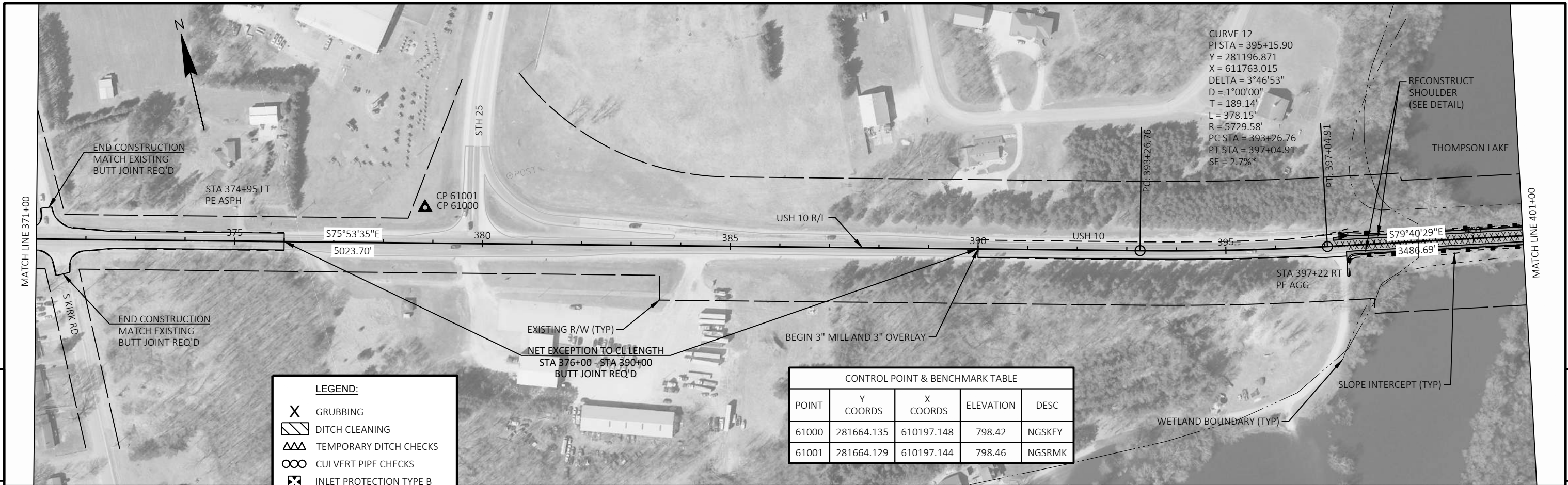
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CONTROL POINT & BENCHMARK TABLE				
POINT	Y COORDS	X COORDS	ELEVATION	DESC
19	282531.003	607234.729	795.35	3/4" REBAR W/ CAP

NOTE:
 SEE GUARDRAIL DETAILS FOR ADDITIONAL EROSION CONTROL FOR PROJECT ID 1530-05-73.



CURVE 12
 PI STA = 395+15.90
 Y = 281196.871
 X = 611763.015
 DELTA = 3°46'53"
 D = 1°00'00"
 T = 189.14'
 L = 378.15'
 R = 5729.58'
 PC STA = 393+26.76
 PT STA = 397+04.91
 SE = 2.7%*

LEGEND:

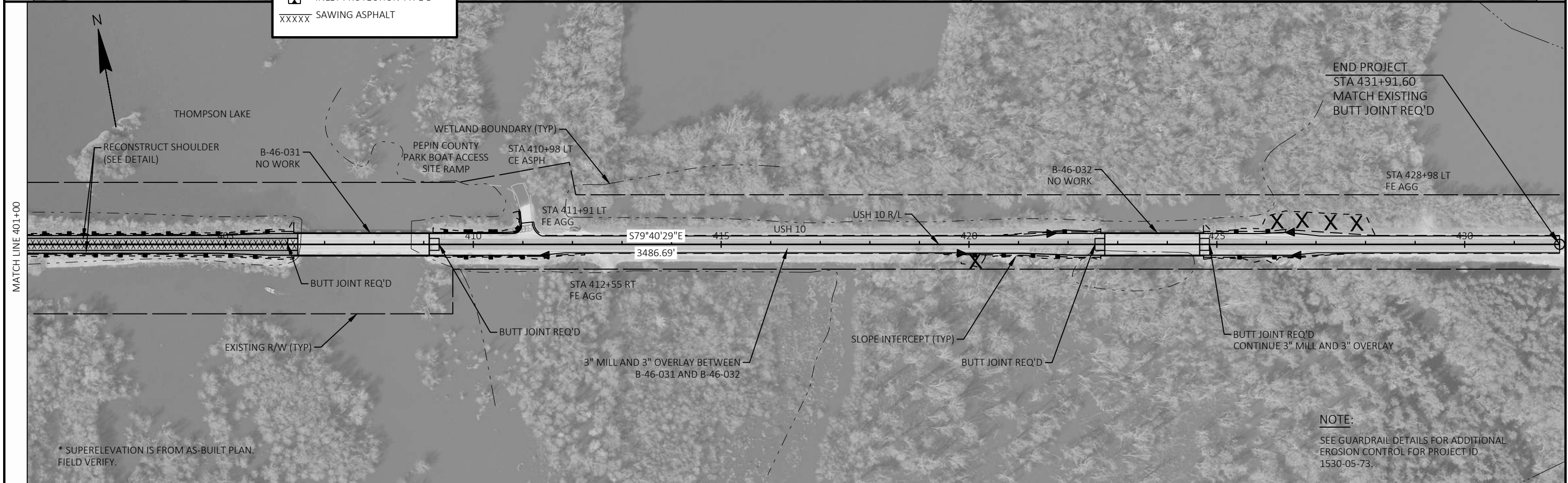
- X GRUBBING
- ▨ DITCH CLEANING
- ▲▲▲ TEMPORARY DITCH CHECKS
- ∞ CULVERT PIPE CHECKS
- ⊠ INLET PROTECTION TYPE B
- XXXXX SAWING ASPHALT

CONTROL POINT & BENCHMARK TABLE

POINT	Y COORDS	X COORDS	ELEVATION	DESC
61000	281664.135	610197.148	798.42	NGSKEY
61001	281664.129	610197.144	798.46	NGSRMK

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NOTE:
 SEE GUARDRAIL DETAILS FOR ADDITIONAL
 EROSION CONTROL FOR PROJECT ID
 1530-05-73.

* SUPERELEVATION IS FROM AS-BUILT PLAN.
 FIELD VERIFY.

PROJECT NO: 1530-05-73	HWY: USH 10	COUNTY: PEPIN	PLAN	SHEET	E
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CONTROL POINT & BENCHMARK TABLE				
POINT	Y COORDS	X COORDS	ELEVATION	DESC
21	281264.841	621659.768	761.64	3/4" REBAR W/ CAP

PI STA = 506+74.59
 Y = 281130.079
 X = 621781.924
 DELTA = 7°07'47"
 D = 1°30'00"
 T = 237.96'
 L = 475.31'
 R = 3819.72'
 PC STA = 504+36.63
 Y = 281255.595
 X = 621579.759
 PT STA = 509+11.94
 Y = 280980.441
 X = 621966.948
 BK = S58°09'56.1"E
 AH = S51°02'09.6"E
 SE = NC
 DELTA = 7°07'47" RT
 D = 1°30'00"
 T = 237.96'
 L = 475.31'
 R = 3819.72'
 PC STA = 504+36.63
 Y = 281255.595
 X = 621579.759
 PT STA = 509+11.94
 Y = 280980.441
 X = 621966.948
 DB = S58°09'56"E
 DA = S51°02'10"E

PI STA = 511+46.80
 Y = 280832.750
 X = 622149.567
 DELTA = 10°18'26"
 D = 2°12'01"
 T = 234.87'
 L = 468.47'
 R = 2604.14'
 PC STA = 509+11.94
 Y = 280980.441
 X = 621966.948
 PT STA = 513+80.40
 Y = 280720.116
 X = 622355.664
 BK = S51°02'09.6"E
 AH = S61°20'35.2"E
 SE = NC
 DELTA = 10°18'26" LT
 D = 2°12'01"
 T = 234.87'
 L = 468.47'
 R = 2604.14'
 PC STA = 509+11.94
 Y = 280980.441
 X = 621966.948
 PT STA = 513+80.40
 Y = 280720.116
 X = 622355.664
 DB = S51°02'10"E
 DA = S61°20'35"E

PC: 504+36.63
 DURAND ST
 CP 21

END CONSTRUCTION
 MATCH EXISTING
 BUTT JOINT REQ'D

FOREST HILL
 CEMETERY

EXISTING STONE RETAINING WALL TO REMAIN

WE ENERGIES

USH 10

S61°20'35"E

BEGIN PROJECT
 STA 505+05.46
 MATCH EXISTING
 BUTT JOINT REQ'D
 Y = 281218.765
 X = 621637.904

END CONSTRUCTION
 MATCH EXISTING
 BUTT JOINT REQ'D

LITH AVE

EXISTING GUARDRAIL TO REMAIN

PT: 513+80.40

XCEL ENERGY - ELECTRICITY

END PROJECT
 STA 515+26.61
 MATCH EXISTING
 BUTT JOINT REQ'D

LEGEND:	
X	GRUBBING
▨	DITCH CLEANING
▲▲	TEMPORARY DITCH CHECKS
○○	CULVERT PIPE CHECKS
⊠	INLET PROTECTION TYPE B
XXXXX	SAWING ASPHALT

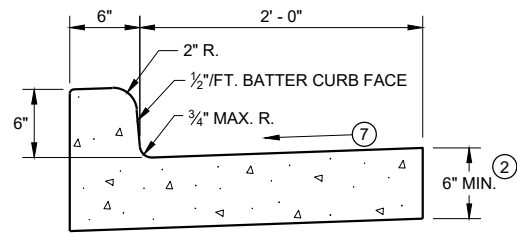
NOTE:
 SEE GUARDRAIL DETAILS FOR ADDITIONAL
 EROSION CONTROL FOR PROJECT ID
 1530-05-73.

Standard Detail Drawing List

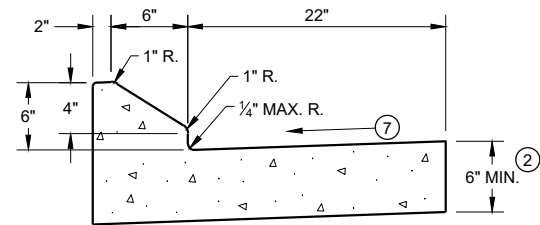
08D01-23A	CONCRETE CURB & GUTTER
08D01-23B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D02-08A	CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES
08D02-08B	CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES
08D02-08C	CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES
08D04-07	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08D22-01	DRIVEWAYS WITHOUT CURB & GUTTER RESURFACING PROJECTS RURAL
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08E15-01	CULVERT PIPE CHECK
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F02-01	APRON ENDWALLS FOR PIPE ARCH AND ELLIPTICAL PIPE
08F04-08	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
09G02-05B	BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION
09G02-05C	BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION
13A10-03A	SHOULDER RUMBLE STRIPS - ASPHALT
13A10-03E	EDGE LINE RUMBLE STRIPS - ASPHALT
13A10-03G	SHOULDER AND EDGE LINE RUMBLE STRIPS - CROSSINGS, INTERSECTIONS, BRIDGES, DRIVEWAYS
13A10-03H	SHOULDER AND EDGE LINE RUMBLE STRIPS - RAILROAD, PASSING, CLIMBING AND BYPASS LANES
13A11-04A	CENTERLINE RUMBLE STRIPS - ASPHALT
13A11-04B	CENTERLINE RUMBLE STRIPS - CONCRETE
13A11-04D	CENTERLINE RUMBLE STRIPS - INTERSECTIONS, DRIVEWAYS, BRIDGES, RAILROADS
13C19-03	HMA LONGITUDINAL JOINTS
14B28-04A	GUARDRAIL MOW STRIP
14B28-04B	GUARDRAIL MOW STRIP
14B29-01	SAFETY EDGE
14B42-07A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07D	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B43-04A	MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L)
14B43-04B	MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L)
14B43-04C	MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L)
14B44-04A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B45-05A	MIDWEST GUARDRAIL SYSTEM THREE BEAM TRANSITION (MGS)
14B45-05B	MIDWEST GUARDRAIL SYSTEM THREE BEAM TRANSITION (MGS)
14B45-05C	MIDWEST GUARDRAIL SYSTEM THREE BEAM TRANSITION (MGS)
14B45-05D	MIDWEST GUARDRAIL SYSTEM THREE BEAM TRANSITION (MGS)
14B45-05E	MIDWEST GUARDRAIL SYSTEM THREE BEAM TRANSITION (MGS)
14B45-05F	MIDWEST GUARDRAIL SYSTEM THREE BEAM TRANSITION (MGS)
14B45-05G	MIDWEST GUARDRAIL SYSTEM THREE BEAM TRANSITION (MGS)
14B45-05H	MIDWEST GUARDRAIL SYSTEM THREE BEAM TRANSITION (MGS)
14B45-05I	MIDWEST GUARDRAIL SYSTEM THREE BEAM TRANSITION (MGS)
14B45-05J	MIDWEST GUARDRAIL SYSTEM THREE BEAM TRANSITION (MGS)
14B45-05K	MIDWEST GUARDRAIL SYSTEM THREE BEAM TRANSITION (MGS)
14B45-05L	MIDWEST GUARDRAIL SYSTEM THREE BEAM TRANSITION (MGS)
14B47-05A	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-05B	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-05C	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-05D	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-05E	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-05F	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-05G	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B53-02A	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-02B	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-02C	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-02D	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-02E	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-02F	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-02G	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-02H	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-02I	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END

Standard Detail Drawing List

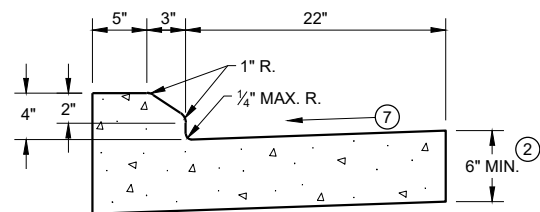
15C02-09A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-09B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C02-09C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C02-09F	ADVANCED WIDTH RESTRICTION SIGNING
15C02-09H	MODIFIED ROUTE ASSEMBLY FOR DETOUR SIGNING
15C03-05	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C04-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M. P. H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C05-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M. P. H. OR LESS
15C07-15B	PAVEMENT MARKING WORDS
15C07-15C	PAVEMENT MARKING ARROWS
15C08-23A	PERMANENT LONGITUDINAL PAVEMENT MARKINGS
15C08-23B	TEMPORARY LONGITUDINAL PAVEMENT MARKING
15C08-23D	PAVEMENT MARKING (TURN LANES)
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
15C12-09B	TRAFFIC CONTROL, LANE CLOSURE WITH AUTOMATED FLAGGER ASSISTANCE DEVICE
15C18-08A	MEDIAN ISLAND MARKING PAVEMENT MARKINGS
15C19-08A	MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY
15C35-06A	PAVEMENT MARKING (INTERSECTIONS)
15C35-06B	PAVEMENT MARKING AND SIGNING (CLIMBING LANE & PASSING LANE)
15C35-06C	PAVEMENT MARKING AND SIGNING (CLIMBING LANE & PASSING LANE)
15D12-11A	TRAFFIC CONTROL, LANE CLOSURE
15D21-07A	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
15D21-07B	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
15D28-04	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
15D33-09	TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS
15D39-02	TRAFFIC CONTROL, DROP-OFF SIGNING
15D40-05A	TRAFFIC CONTROL, FULL LANE SHIFT NON-FREEWAY OR MULTILANE DIVIDED 45 MPH AND UNDER
15D44-02	TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH MILLED SURFACES
15D45-03	TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH LOOSE GRAVEL
15D46-01	TRAFFIC CONTROL, ONE - WAY SIGNING
15D50-03A	TRAFFIC CONTROL, ADDED LANE CLOSURE WITHOUT LANE SHIFT
15D51-01	TRAFFIC CONTROL, MOBILE OPERATIONS ON AN UNDIVIDED ROADWAY
16A01-07	LANDMARK REFERENCE MONUMENTS AND COVERS



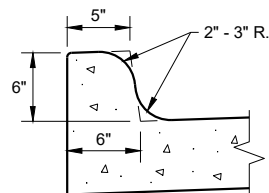
TYPES A^① & D



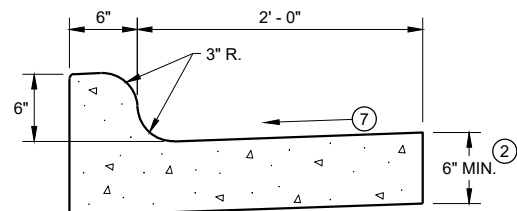
6" SLOPED CURB TYPES G^① & J



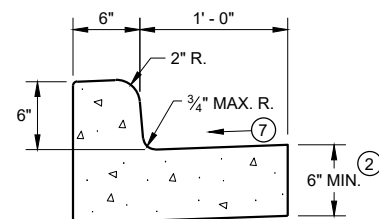
4" SLOPED CURB TYPES G^① & J



TYPES K^① & L
(OPTIONAL CURB SHAPE)

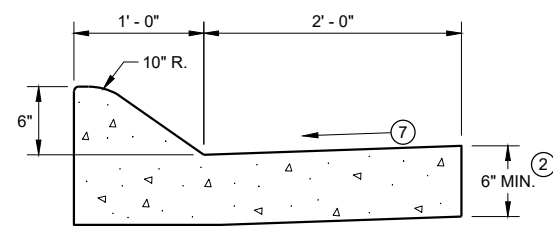


TYPES K^① & L
CONCRETE CURB AND GUTTER 30"

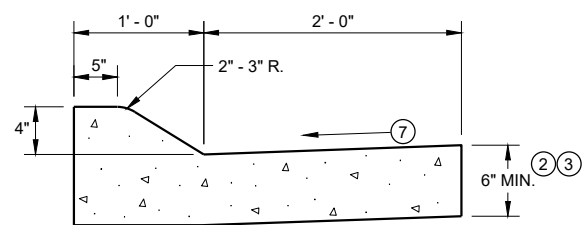


TYPES A^① & D

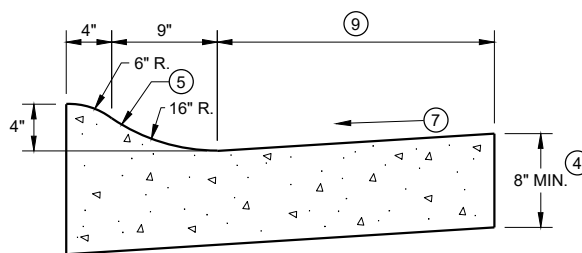
CONCRETE CURB AND GUTTER 18"



6" SLOPED CURB TYPES A^① & D

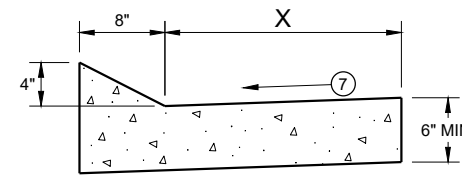


4" SLOPED CURB TYPES A^① & D
CONCRETE CURB AND GUTTER 36"



4" SLOPED CURB TYPES R^① & T

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

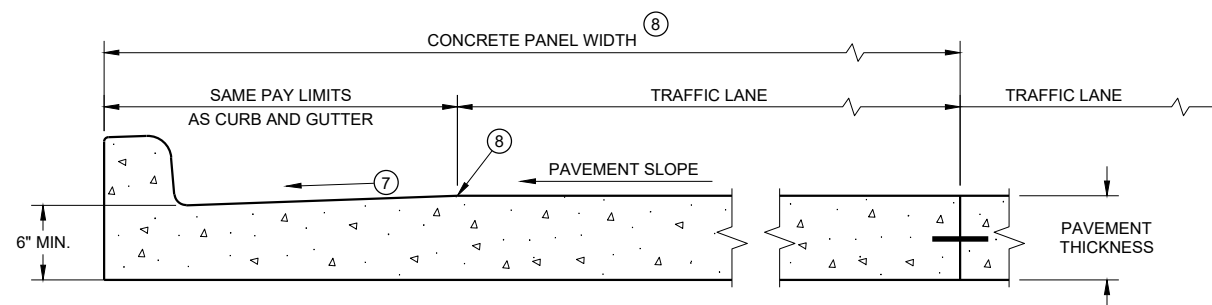


TYPES TBT & TBTT^①

CONCRETE CURB AND GUTTER

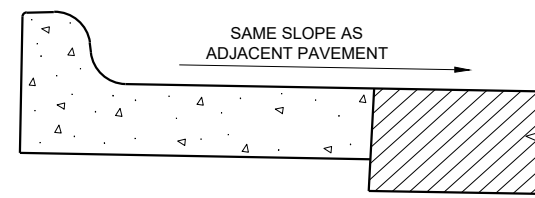
PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE

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



PARTIAL SECTION OF PAVEMENT* WITH INTEGRAL CURB AND GUTTER

* BIKE LANE IS NOT SHOWN



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

GENERAL NOTES

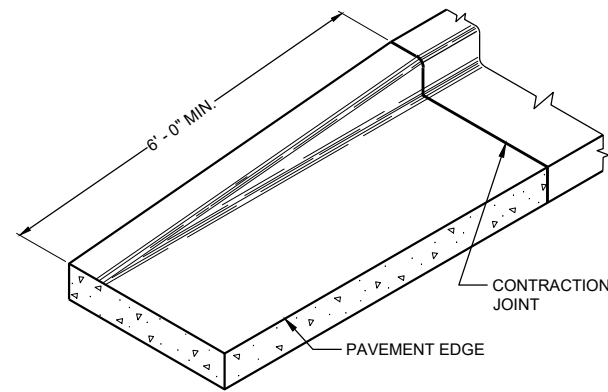
DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

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

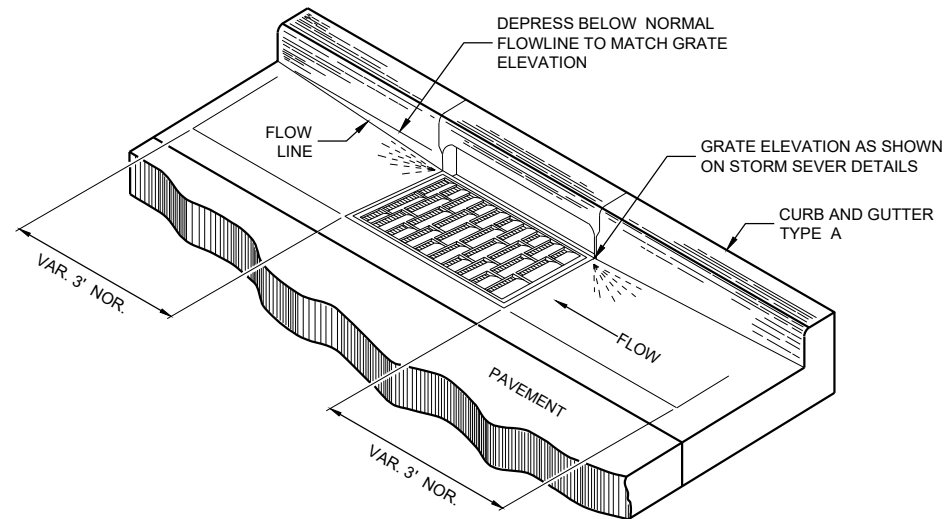
INTEGRAL CURB AND GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB AND GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE.

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

- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ③ USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH AN ADJACENT CONCRETE TRUCK APRON PLACED BEHIND BACK OF CURB.
- ④ THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ⑤ UNLESS OTHERWISE NOTED, FOR STAKING PURPOSES THE FACE OF CURB IS 6" FROM THE BACK OF CURB.
- ⑥ WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.
- ⑦ USE 4% GUTTER CROSS SLOPE UNLESS OTHERWISE NOTED IN THE PLANS.
- ⑧ INCLUDE LONGITUDINAL JOINT AND TIE BARS ALONG LANE EDGE WHEN CONCRETE PANEL WIDTH EXCEEDS THE MAXIMUM WIDTH PER TABLE BELOW. LONGITUDINAL JOINT(S) ARE NOT ALLOWED WITHIN TRAFFIC LANES AND BIKE LANES. LONGITUDINAL JOINT MAY BE SAWED.
- ⑨ CONCRETE CURB AND GUTTER 4-INCH SLOPED 30-INCH TYPE "R" AND "T" = 17 INCHES
CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE "R" AND "T" = 23 INCHES



END SECTION CURB AND GUTTER



DETAIL OF CURB AND GUTTER AT INLETS

(TYPICAL H INLET COVER SHOWN)

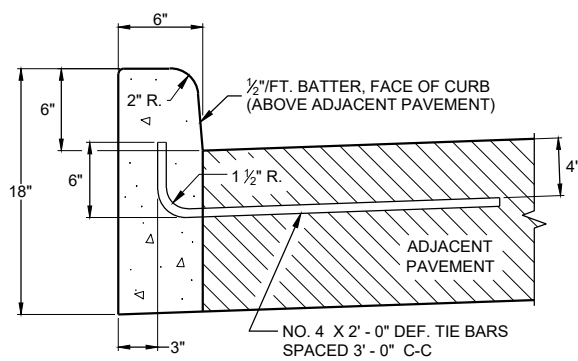
GENERAL NOTES

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

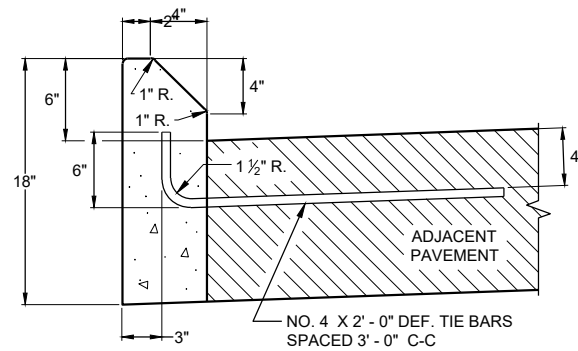
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

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

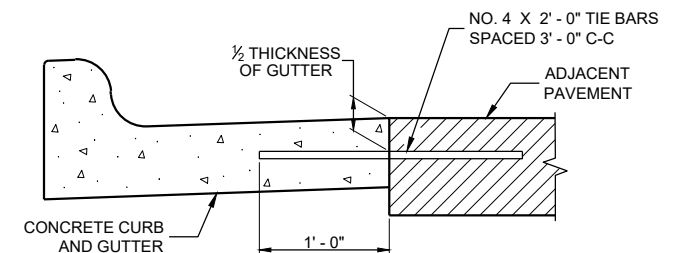
- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ⑩ REFER TO SDD 08D18 AND 08D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.
- ⑪ PLACE 1" THICK EXPANSION JOINT MATERIAL BETWEEN VERTICAL FACE CURB TYPES EXTENDING FROM THE TOP OF CURB TO 1 INCH BELOW THE ADJOINING CONCRETE SURFACE. RIGID CONCRETE STRUCTURES INCLUDE RAISED CONCRETE MEDIANS, CONCRETE SAFETY ISLANDS, SPLITTER ISLANDS, OR LOCATIONS IDENTIFIED ON THE PLANS.



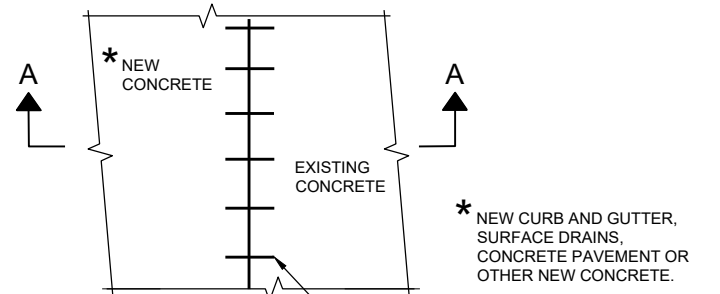
TYPES A^① & D



**TYPES G^① & J
CONCRETE CURB**

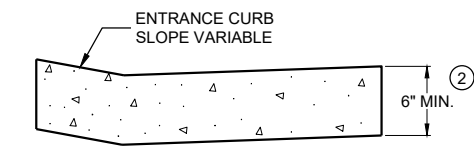


TYPICAL TIE BAR LOCATION^①

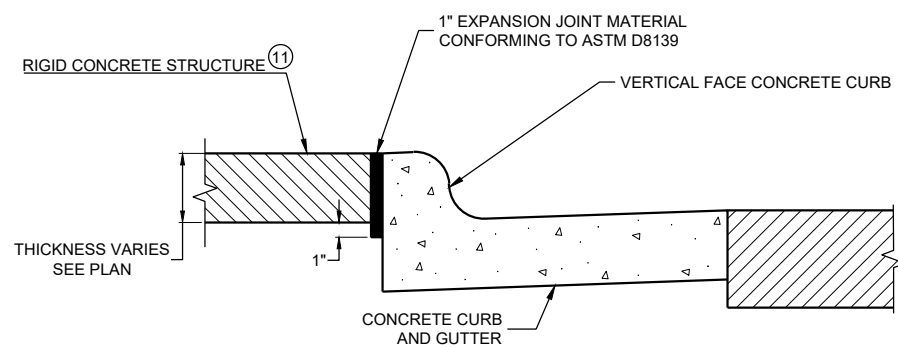


PLAN VIEW

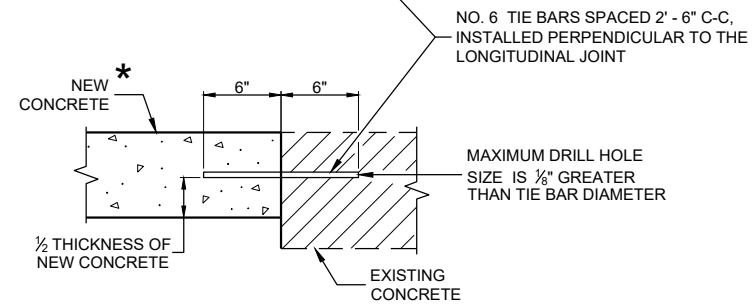
* NEW CURB AND GUTTER, SURFACE DRAINS, CONCRETE PAVEMENT OR OTHER NEW CONCRETE.



**DRIVEWAY ENTRANCE CURB^⑩
(WHEN DIRECTED BY THE ENGINEER)**



EXPANSION JOINT DETAIL FOR VERTICAL CURB ABUTTING A RIGID STRUCTURE^⑪



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

CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
DATE May 2023 /S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

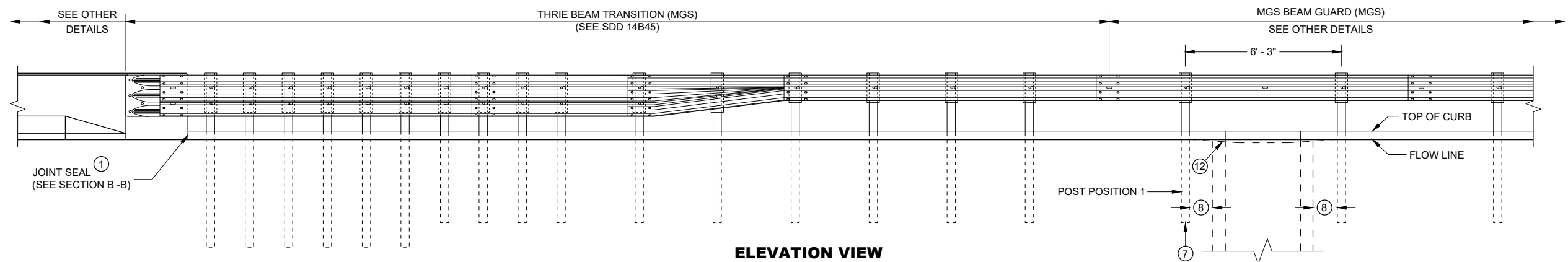
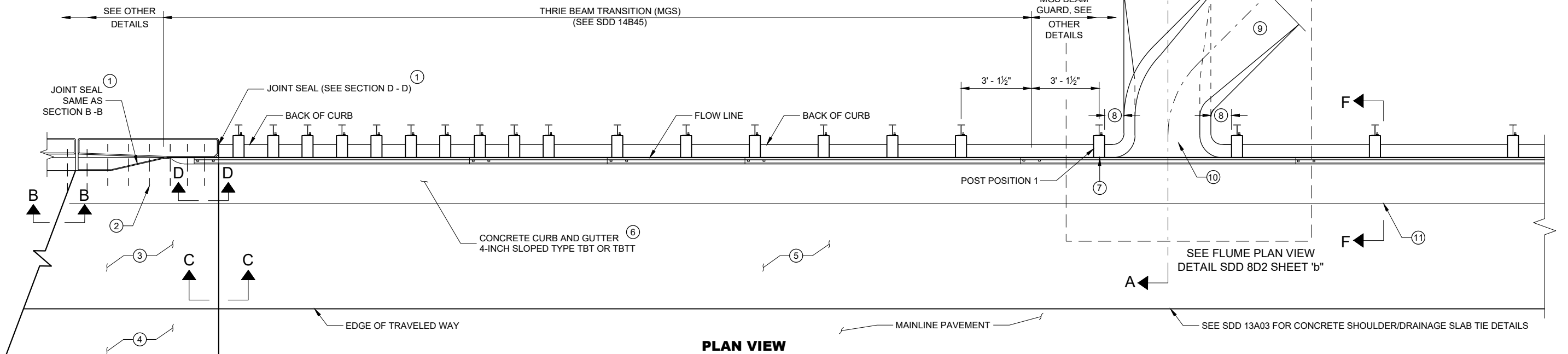
GENERAL NOTES

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.

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

- ① USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.
- ② NO. 4 X 2' - 0" TIE BARS SPACED AT 12" C-C TO BE PLACED BY BRIDGE CONTRACTOR OR DRILLED TIE BARS PLACED AS DIRECTED BY THE ENGINEER.
- ③ PAVED CONCRETE SHOULDER (SDD 13A03) OR CONCRETE DRAINAGE SLAB.
- ④ CONCRETE PAVEMENT APPROACH SLAB (SHOWN) OR STRUCTURE APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB. SEE SDD 13B02.
- ⑤ PAVED CONCRETE SHOULDER (SDD 13A03) OR ASPHALT SHOULDER.

- ⑥ CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE TBT OR TBTT. USE TYPE TBTT CURB WITH NO. 4 X 2' - 0" TIE BARS SPACED AT 3' - 0" C-C ONLY WHEN ADJACENT TO CONCRETE PAVEMENTS.
- ⑦ PLACE FLUME BEFORE MSG THRIE BEAM TRANSITION POST 1 (SEE SDD 14B45)
- ⑧ CENTER FLUME BETWEEN POSTS. 6-INCH MINIMUM SEPARATION FROM OUTSIDE EDGE OF FLUME TO POSTS.
- ⑨ MINIMUM REINFORCEMENT SHALL BE 4" X 4" - W3.0 X W3.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C-C.
- ⑩ SEE ROADWAY PLANS FOR FLUME LOCATION.
- ⑪ START CURB AND GUTTER TRANSITION OR END SECTION.
- ⑫ DEPRESS FLOW LINE (SEE DETAIL)



**CONCRETE SURFACE
DRAINS FLUME TYPE
AT STRUCTURES**

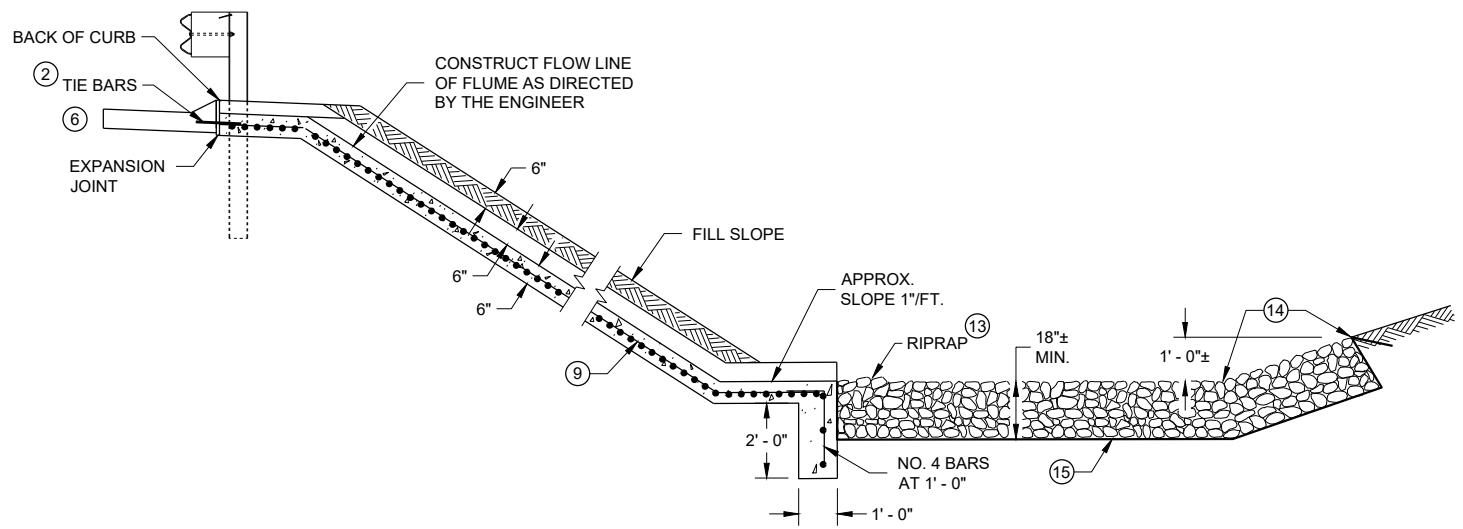
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

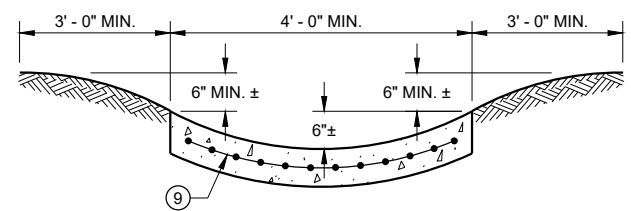
6

SDD 08D02 - 08a

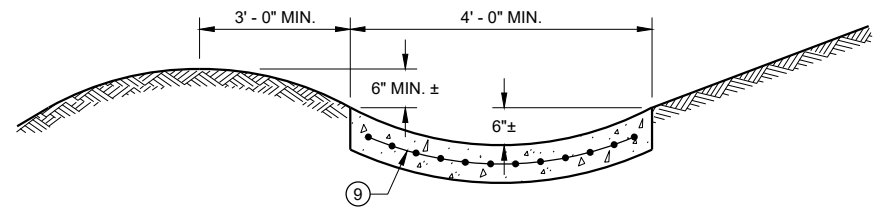
SDD 08D02 - 08a



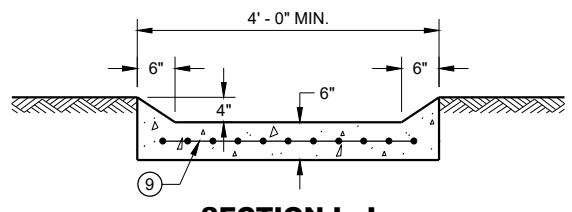
SECTION A - A



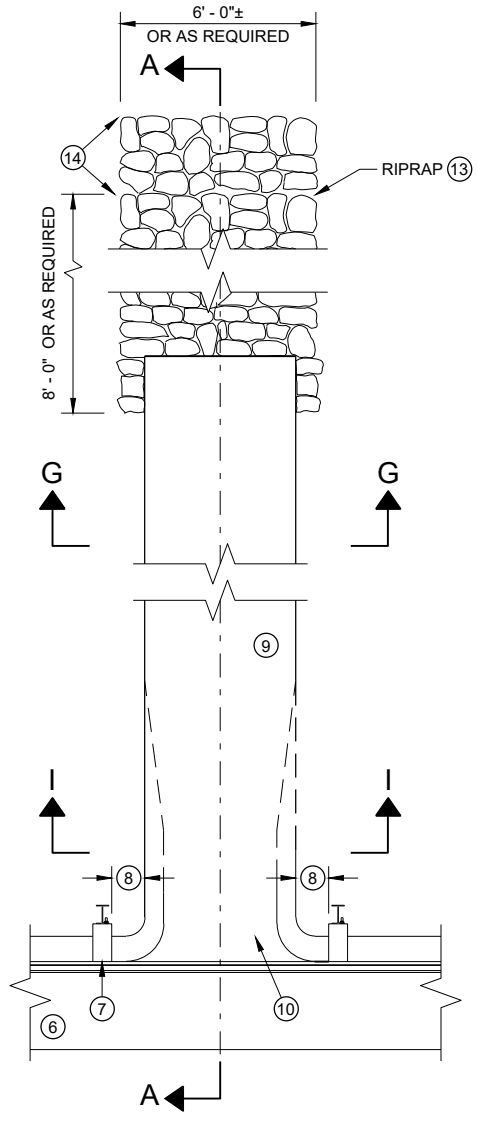
SECTION G - G



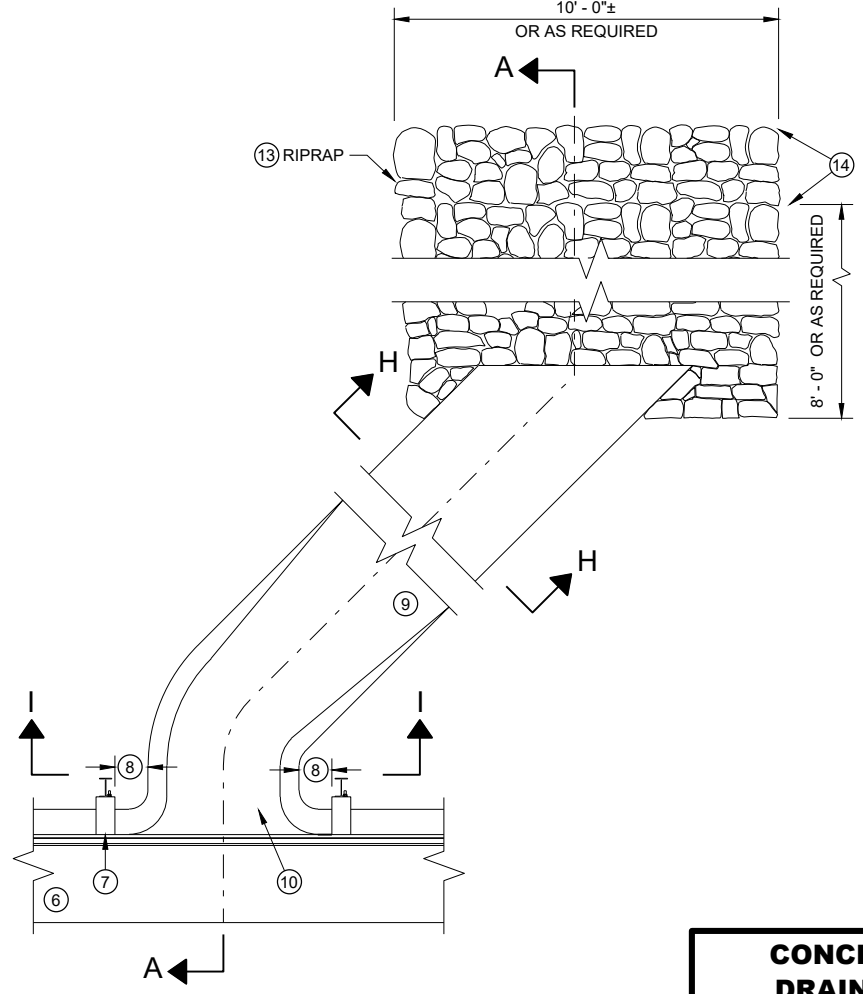
SECTION H - H



SECTION I - I



PLAN VIEW PERPENDICULAR FLUME



PLAN VIEW SKEWED FLUME

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.

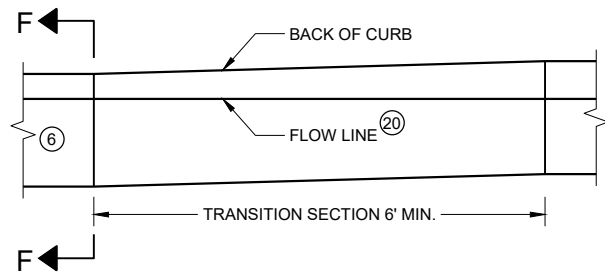
ALL STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

- ① USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.
- ② NO. 4 X 2'-0" TIE BARS SPACED AT 12" C-C TO BE PLACED BY BRIDGE CONTRACTOR OR DRILLED TIE BARS PLACED AS DIRECTED BY THE ENGINEER.
- ③ PAVED CONCRETE SHOULDER (SDD 13A03) OR CONCRETE DRAINAGE SLAB.
- ④ CONCRETE PAVEMENT APPROACH SLAB (SHOWN) OR STRUCTURE APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB. SEE SDD 13B02 AND STRUCTURE PLANS.
- ⑤ PAVED CONCRETE SHOULDER (SDD 13A03) OR ASPHALT SHOULDER.
- ⑥ CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE TBT OR TBTT. USE TYPE TBTT CURB WITH NO. 4 X 2'-0" TIE BARS SPACED AT 3'-0" C-C ONLY WHEN ADJACENT TO CONCRETE PAVEMENTS.

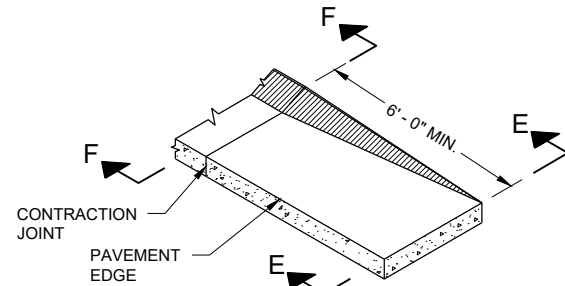
- ⑦ PLACE FLUME BEFORE MSG THRIE BEAM TRANSITION POST 1 (SEE SDD 14B45)
- ⑧ CENTER FLUME BETWEEN POSTS. 6-INCH MINIMUM SEPARATION FROM OUTSIDE EDGE OF FLUME TO POSTS.
- ⑨ MINIMUM REINFORCEMENT SHALL BE 4" X 4" - W3.0 X W3.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C -C.
- ⑩ SEE ROADWAY PLANS FOR FLUME LOCATION.
- ⑪ START CURB AND GUTTER TRANSITION OR END SECTION.
- ⑫ DEPRESS FLOW LINE (SEE DETAIL)
- ⑬ MEDIUM RIPRAP UNLESS OTHERWISE SPECIFIED.
- ⑭ LIMITS OF ADDITIONAL RIPRAP WHEN SPECIAL DITCH AS REQUIRED.
- ⑮ GEOTEXTILE TYPE HR.

CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES

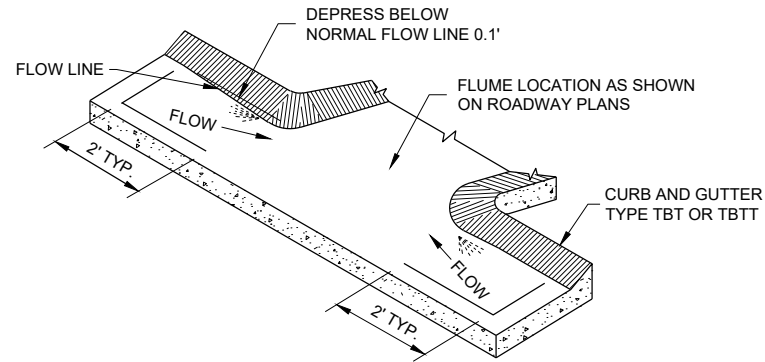
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



**CURB AND GUTTER TRANSITION SECTION
CONCRETE CURB AND GUTTER 4-INCH SLOPED
36 INCH TYPE TBT OR TBTT**



**CURB AND GUTTER END SECTION
CONCRETE CURB AND GUTTER 4-INCH SLOPED
36 INCH TYPE TBT OR TBTT**



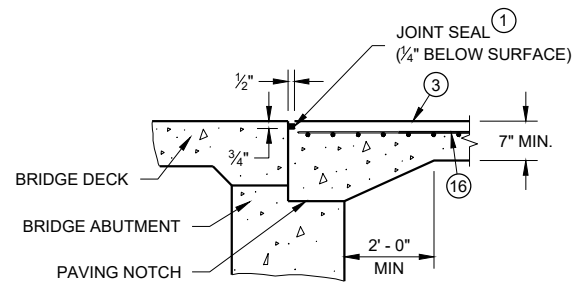
**CURB AND GUTTER FLOW LINE DEPRESSION
AT FLUMES CONCRETE CURB AND GUTTER
4-INCH SLOPED 36 INCH TYPE TBT OR TBTT**

GENERAL NOTES

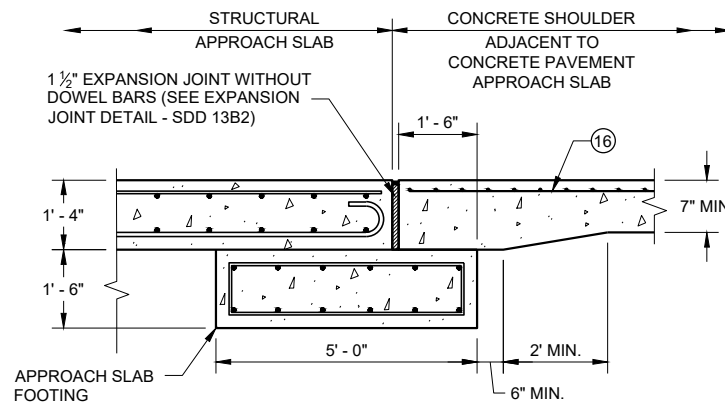
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ALL STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

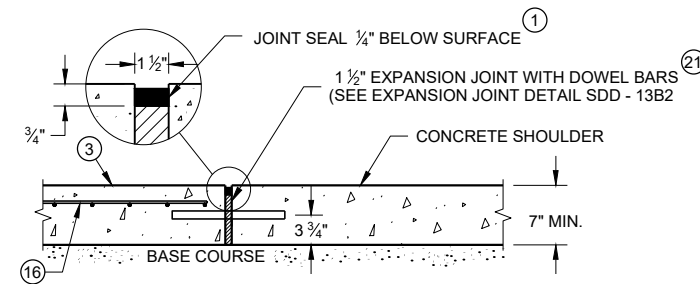
- ① USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.
- ② NO. 4 X 2' - 0" TIE BARS SPACED AT 12" C-C TO BE PLACED BY BRIDGE CONTRACTOR OR DRILLED TIE BARS PLACED AS DIRECTED BY THE ENGINEER.
- ③ PAVED CONCRETE SHOULDER (SDD 13A03) OR CONCRETE DRAINAGE SLAB.
- ④ CONCRETE PAVEMENT APPROACH SLAB (SHOWN) OR STRUCTURE APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB. SEE SDD 13B02 AND STRUCTURE PLANS.
- ⑤ PAVED CONCRETE SHOULDER (SDD 13A03) OR ASPHALT SHOULDER.
- ⑥ CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE TBT OR TBTT. USE TYPE TBTT CURB WITH NO. 4 X 2' - 0" TIE BARS SPACED AT 3' - 0" C-C ONLY WHEN ADJACENT TO CONCRETE PAVEMENTS.
- ⑦ PLACE FLUME BEFORE MSG THRIE BEAM TRANSITION POST 1 (SEE SDD 14B45)
- ⑧ CENTER FLUME BETWEEN POSTS. 6-INCH MINIMUM SEPARATION FROM OUTSIDE EDGE OF FLUME TO POSTS.
- ⑨ MINIMUM REINFORCEMENT SHALL BE 4" X 4" - W3.0 X W3.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C-C.
- ⑩ SEE ROADWAY PLANS FOR FLUME LOCATION.
- ⑪ START CURB AND GUTTER TRANSITION OR END SECTION.
- ⑫ DEPRESS FLOW LINE (SEE DETAIL)
- ⑬ MEDIUM RIPRAP UNLESS OTHERWISE SPECIFIED.
- ⑭ LIMITS OF ADDITIONAL RIPRAP WHEN SPECIAL DITCH IS REQUIRED.
- ⑮ GEOTEXTILE TYPE HR.
- ⑯ MINIMUM REINFORCEMENT SHALL BE 6" X 6" - W4.0 X W4.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C-C.
- ⑰ MSG THRIE BEAM TRANSITION POST 1. SEE SDD 14B45 FOR ADDITIONAL CONSTRUCTION DETAILS AND ACCEPTABLE MATERIALS.
- ⑱ MAINTAIN WIDTH, THICKNESS AND CROSS SLOPE OF ADJACENT TYPE TBT OR TBTT CURB. SEE NOTE 6 FOR TIE BAR SPACING.
- ⑲ ALIGN FACE OF POST BLOCK WITH FLOW LINE.
- ⑳ MAINTAIN FLOW LINE AT EDGE OF PAVEMENT/FACE OF BEAM GUARD AS APPLICABLE.
- ㉑ DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING HMA PAVEMENTS.



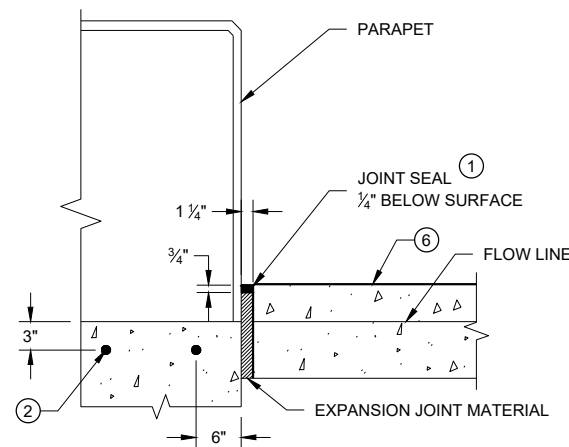
SECTION B-B



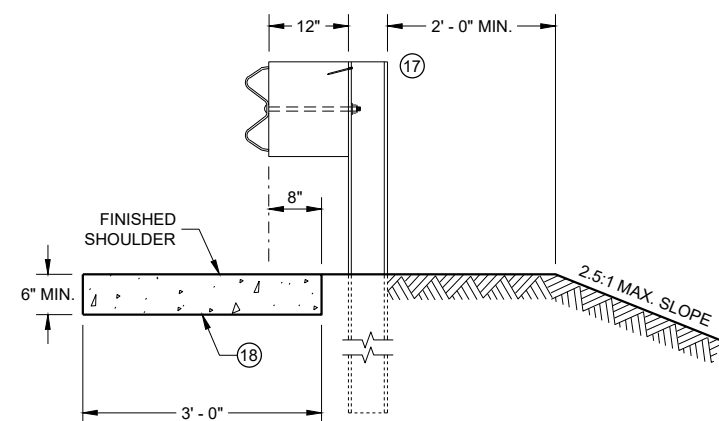
**SECTION C - C
JOINT DETAIL FOR BRIDGE WITH STRUCTURAL
APPROACH SLAB AND CONCRETE APPROACH SLAB**



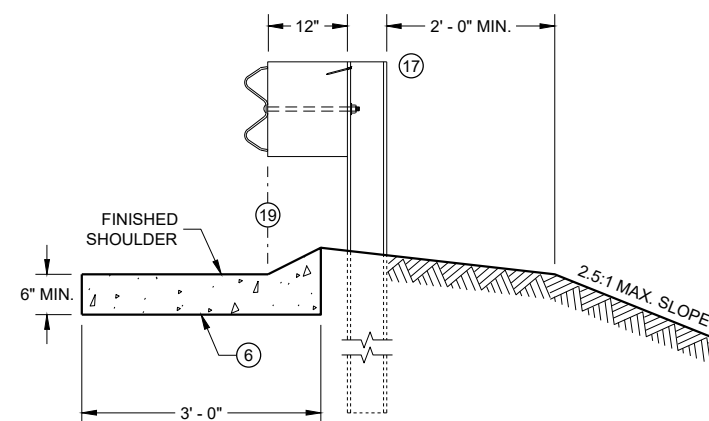
**SECTION C - C
JOINT DETAIL FOR BRIDGE APPROACH
WITH CONCRETE SHOULDERS**



SECTION D - D



SECTION E - E



SECTION F - F

6

6

SDD08D02 - 08C

SDD08D02 - 08C

**CONCRETE SURFACE
DRAINS FLUME TYPE
AT STRUCTURES**

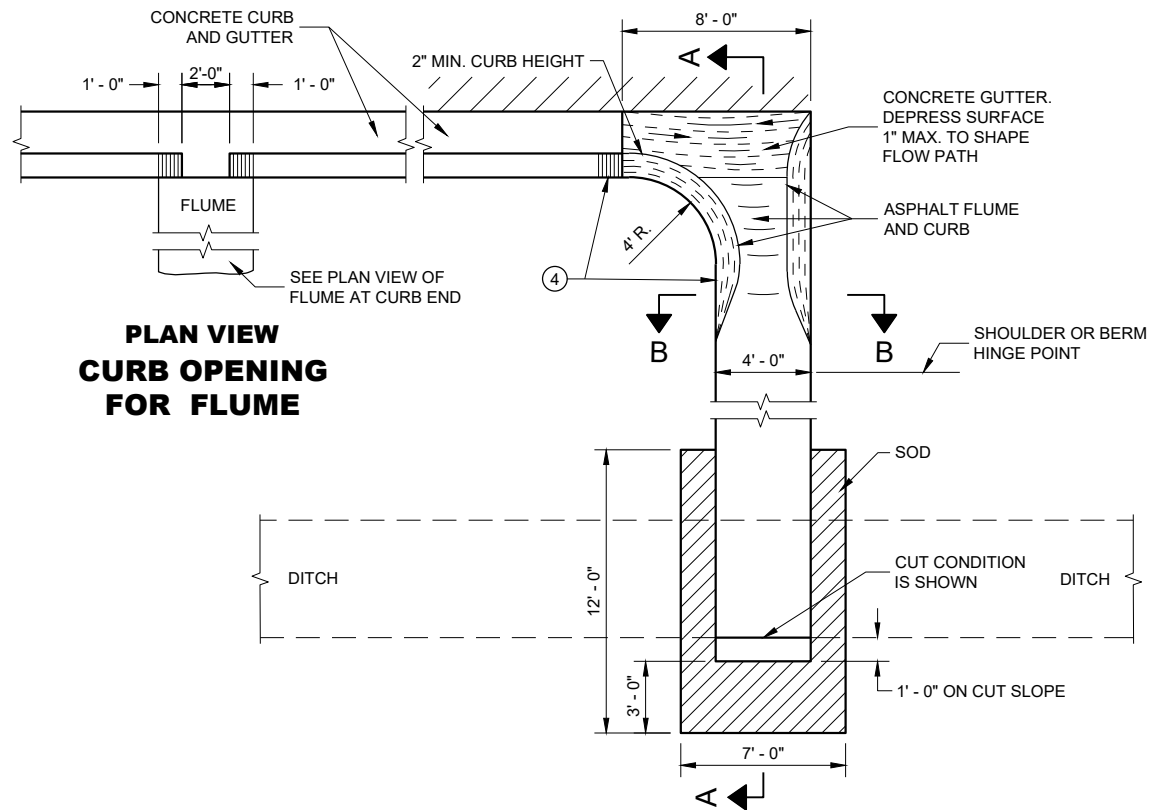
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT
ENGINEER

FHWA

NOTE: TAPER CURB ENDS TO GUTTER IN 1' - 0"

ASPHALTIC FLUME



**PLAN VIEW
CURB OPENING
FOR FLUME**

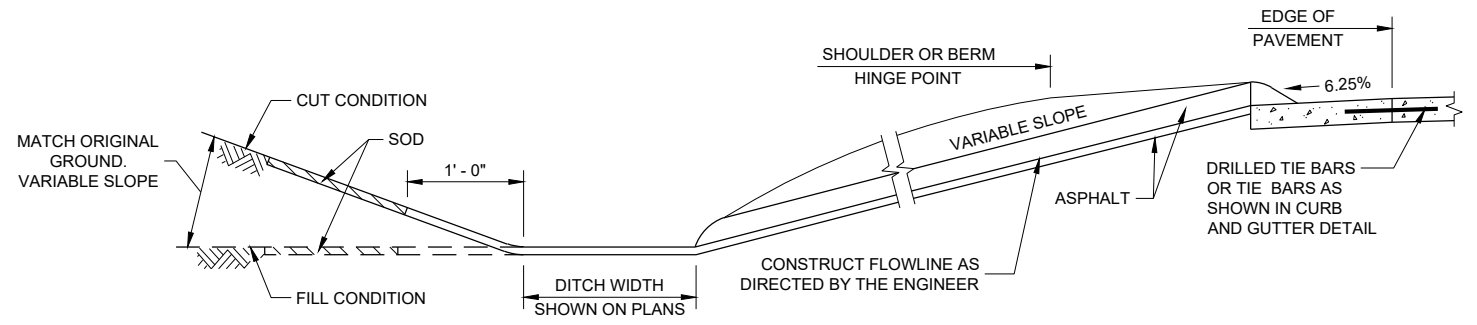
**PLAN VIEW
FLUME AT CURB END**

GENERAL NOTES

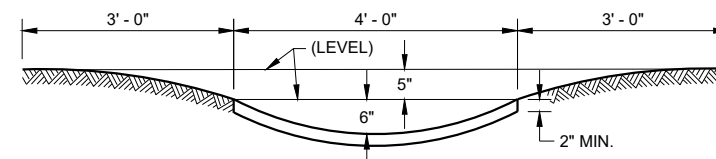
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

4" X 4" - W3.0 X W3.0 CONCRETE REINFORCEMENT SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

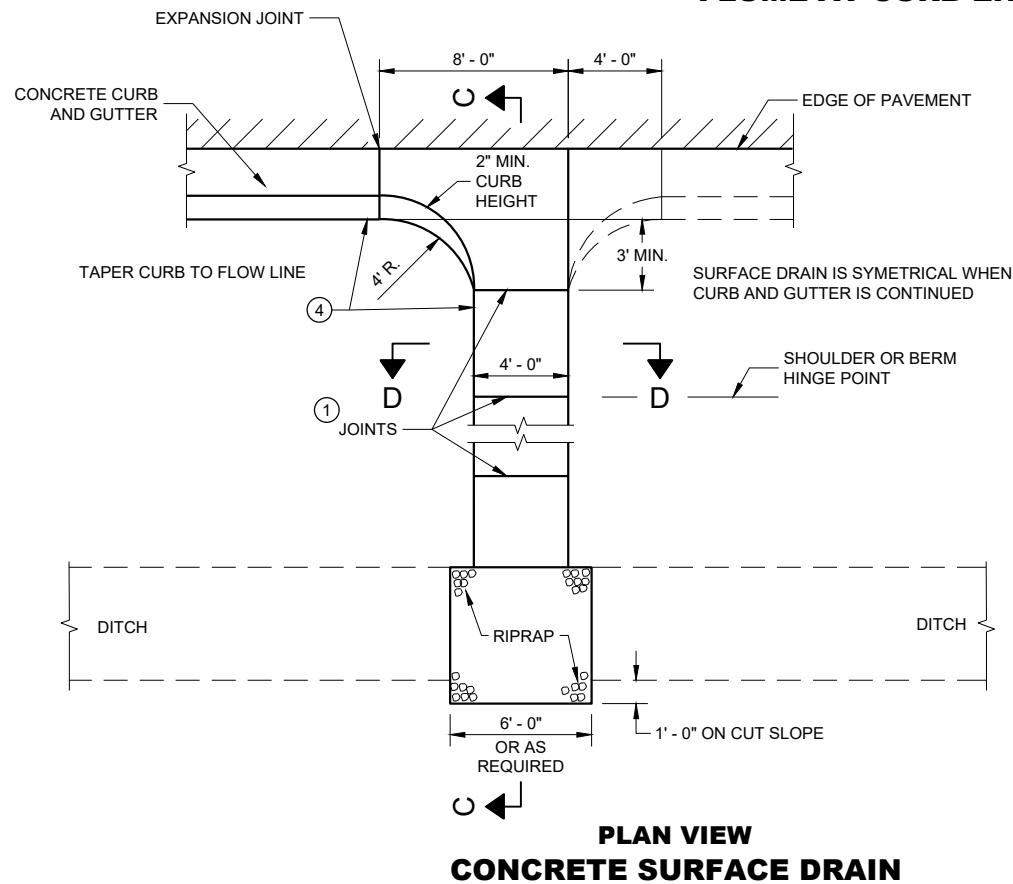
- ① JOINTS SHALL BE 1/8" TO 1/4" WIDE BY 1 1/2" DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.
- ② GEOTEXTILE TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.
- ③ CONCRETE SURFACE DRAIN WITHOUT CURB AND GUTTER MAY BE USED ON BACKSLOPES WHEN SPECIFIED.
- ④ ANGLE OF FLUME IN RELATION TO BACK OF CURB TO BE CONSTRUCTED PER THE PLAN DETAILS OR AS DIRECTED BY THE ENGINEER. ANGLE OF FLUME MAY BE OTHER THAN 90 DEGREES AS SHOWN.



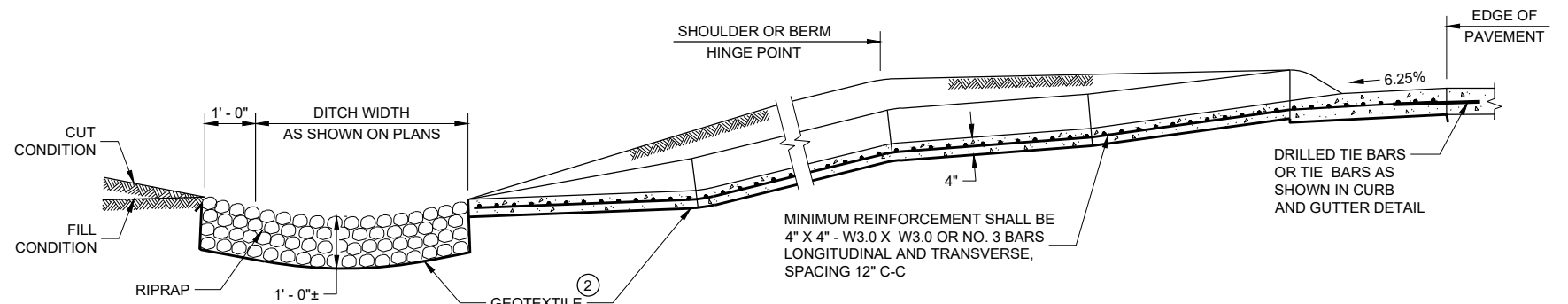
SECTION A - A



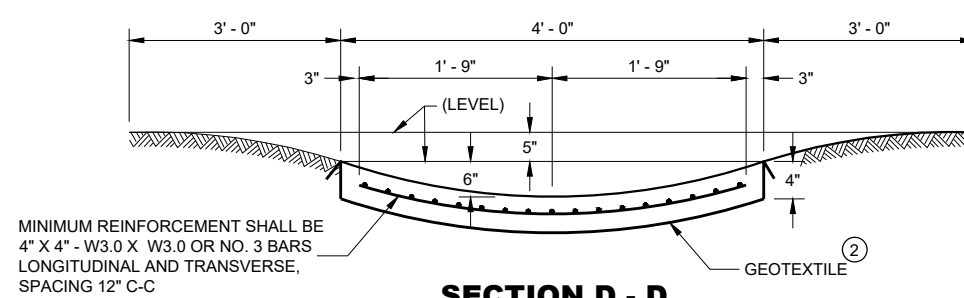
SECTION B - B



**PLAN VIEW
CONCRETE SURFACE DRAIN**



SECTION C - C



SECTION D - D

CONCRETE SURFACE DRAINS AND ASPHALTIC FLUMES

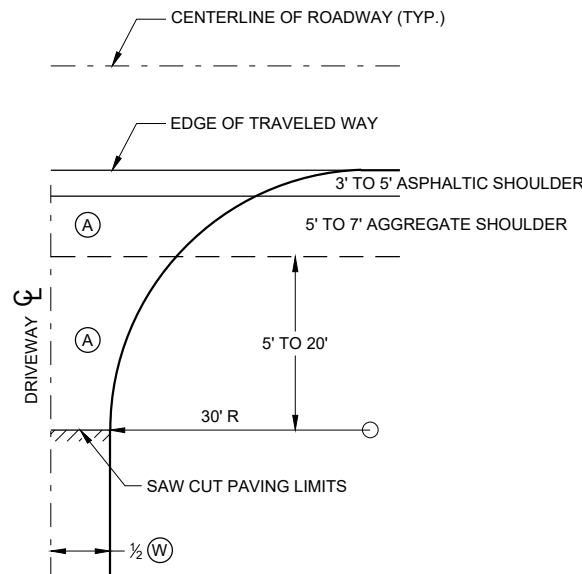
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
DATE May 2023 /S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
ENGINEER

FHWA

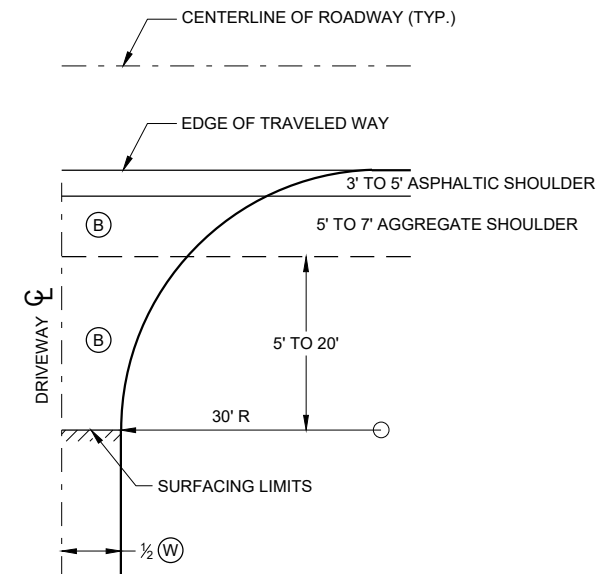
GENERAL NOTES

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

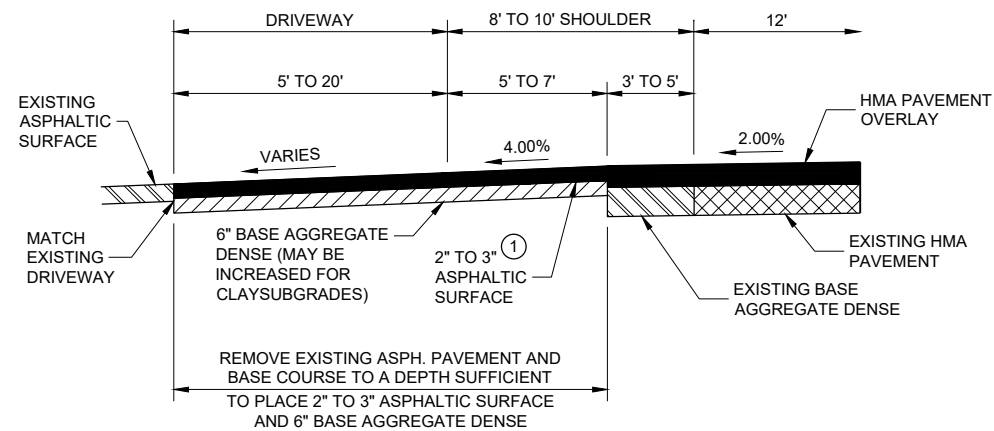


- Ⓐ : PAID FOR AS ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES. (TON)
- Ⓑ : PAID FOR AS BASE AGGREGATE DENSE 1 1/4" (TON)
- ⒲ : DRIVEWAY WIDTH 16' MIN. - 24' MAX.

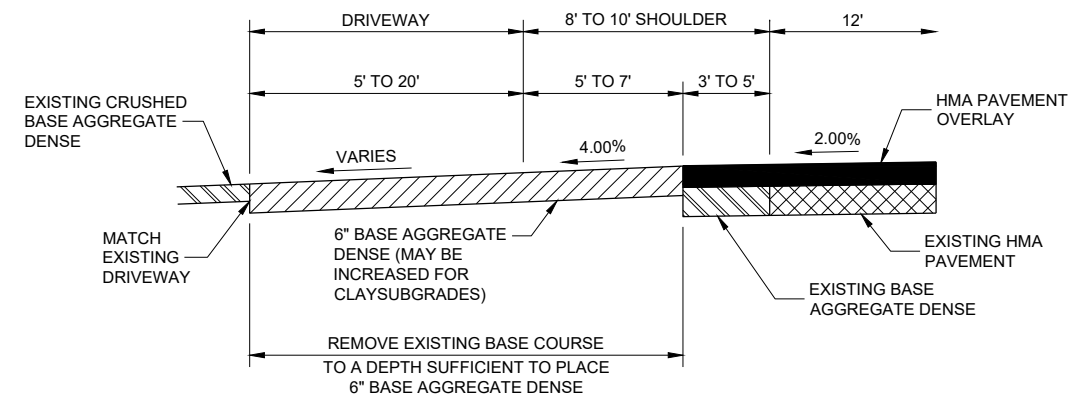
**PLAN VIEW
HALF SECTION**



**PLAN VIEW
HALF SECTION**



**PROFILE VIEW
RURAL ENTRANCE
WITH ASPHALTIC SURFACE
RESURFACING PROJECTS**



**PROFILE VIEW
RURAL ENTRANCE
WITH AGGREGATE SURFACE
6" BASE AGGREGATE DENSE
RESURFACING PROJECTS**

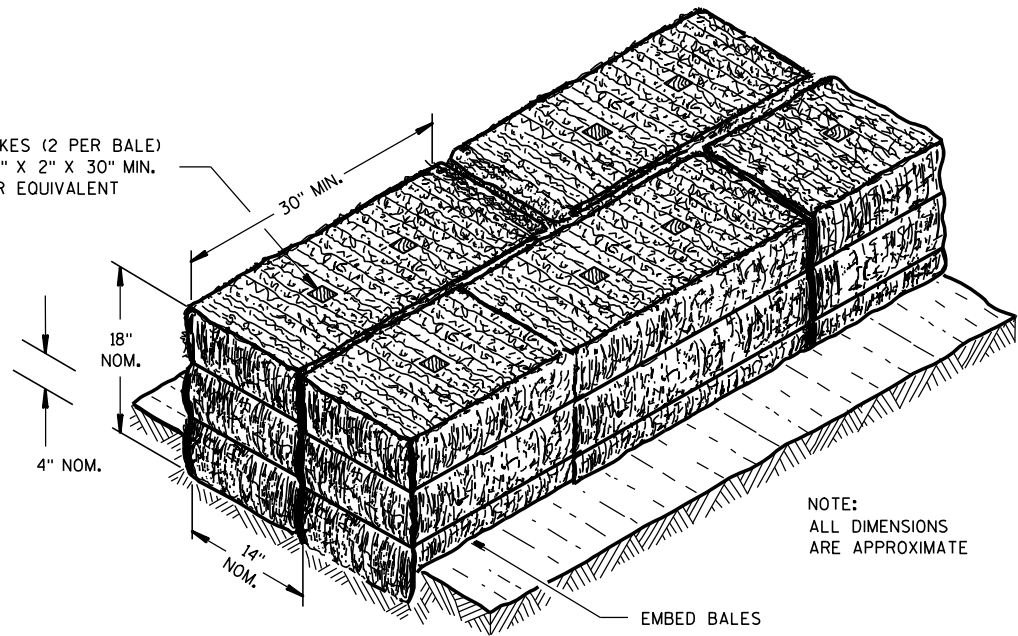
**DRIVEWAYS WITHOUT CURB
AND GUTTER RESURFACING
PROJECTS RURAL**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
December 2016 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT
ENGINEER

FHWA

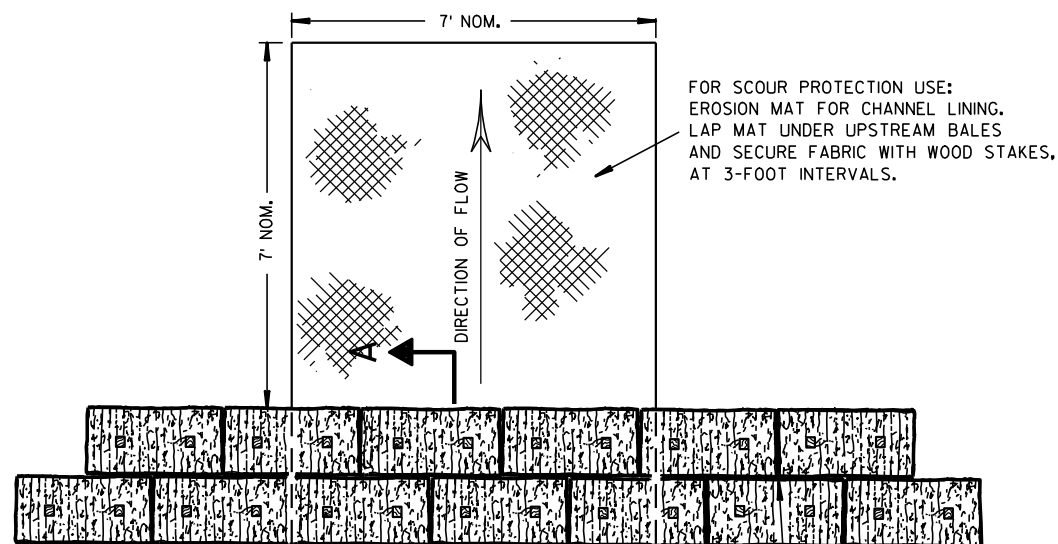
WOOD STAKES (2 PER BALE)
NOMINAL 2" X 2" X 30" MIN.
LENGTH OR EQUIVALENT



NOTE:
ALL DIMENSIONS
ARE APPROXIMATE

EMBED BALES

SECTION A-A

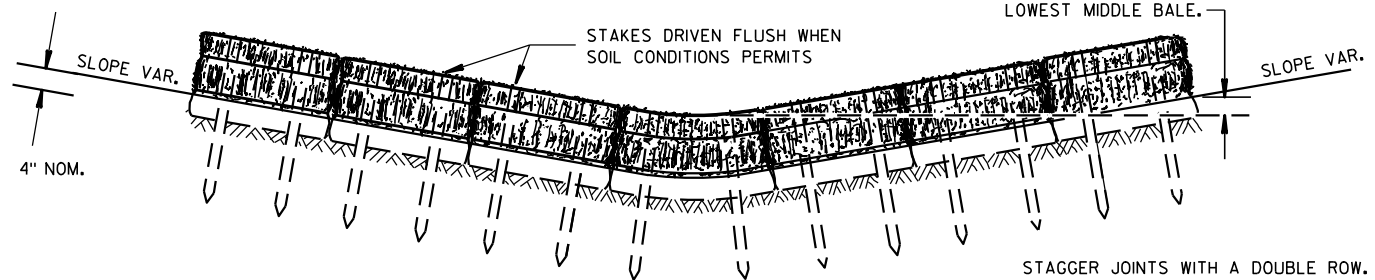


FOR SCOUR PROTECTION USE:
EROSION MAT FOR CHANNEL LINING.
LAP MAT UNDER UPSTREAM BALES
AND SECURE FABRIC WITH WOOD STAKES,
AT 3-FOOT INTERVALS.

STAGGER JOINTS BETWEEN ADJACENT
ROWS OF BALES.

PLAN VIEW

BOTTOM ELEVATION OF END BALE SHALL
BE EQUAL TO OR GREATER THAN TOP OF
LOWEST MIDDLE BALE.



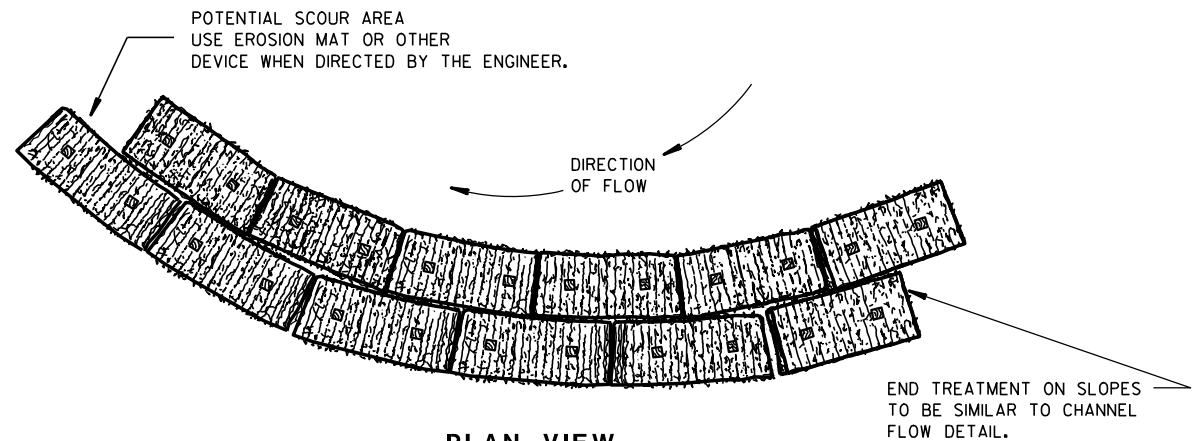
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

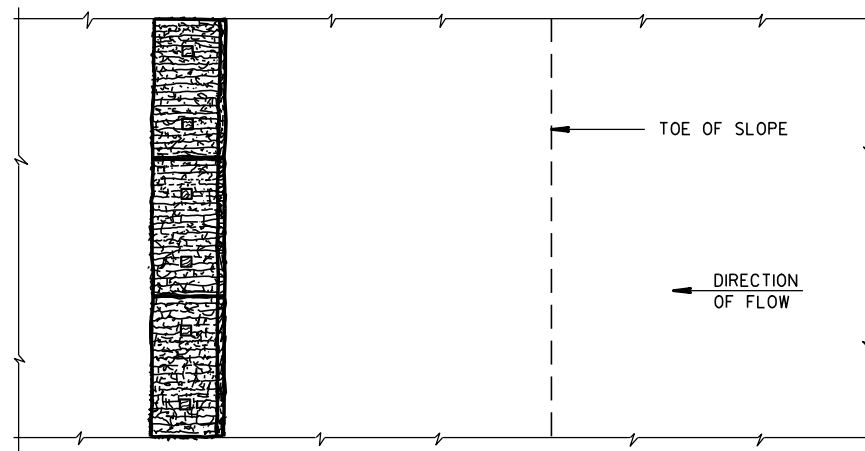
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

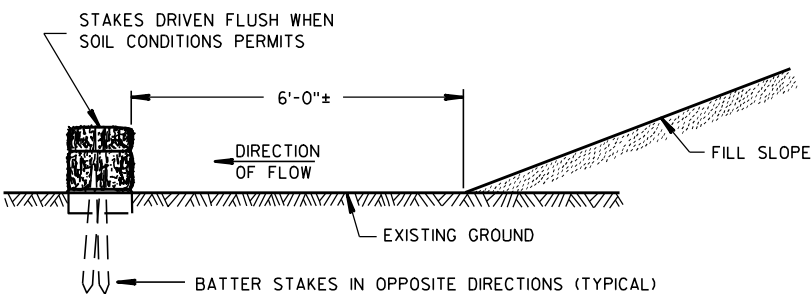


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

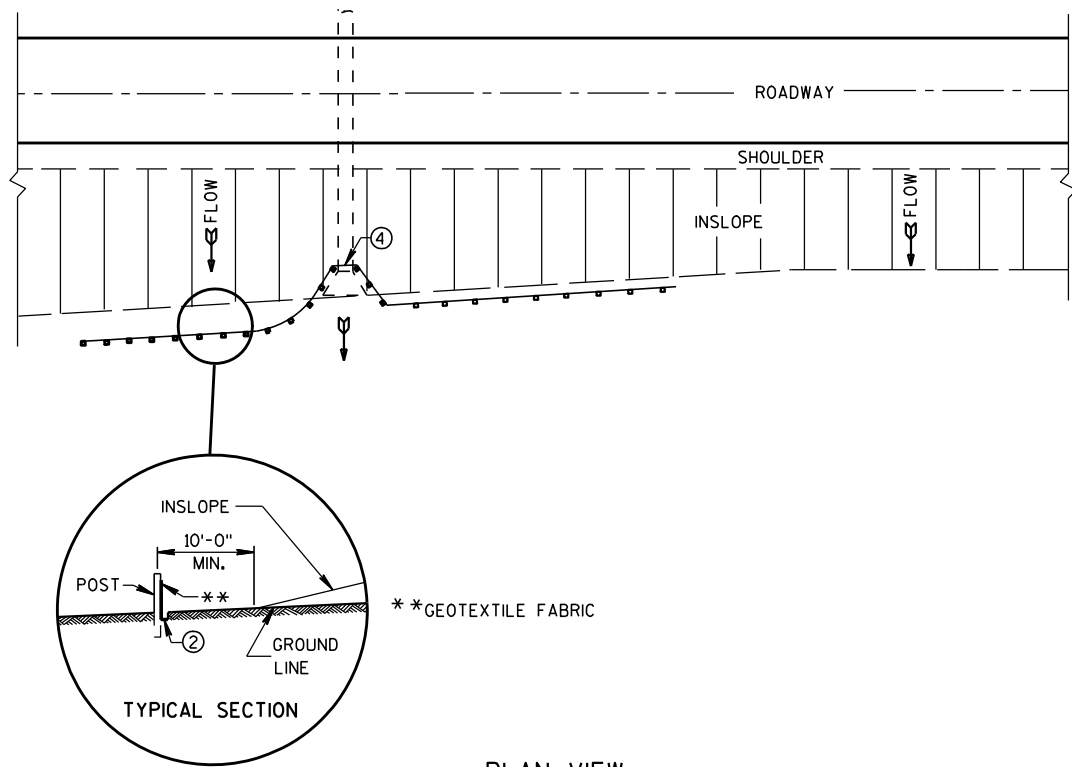
WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

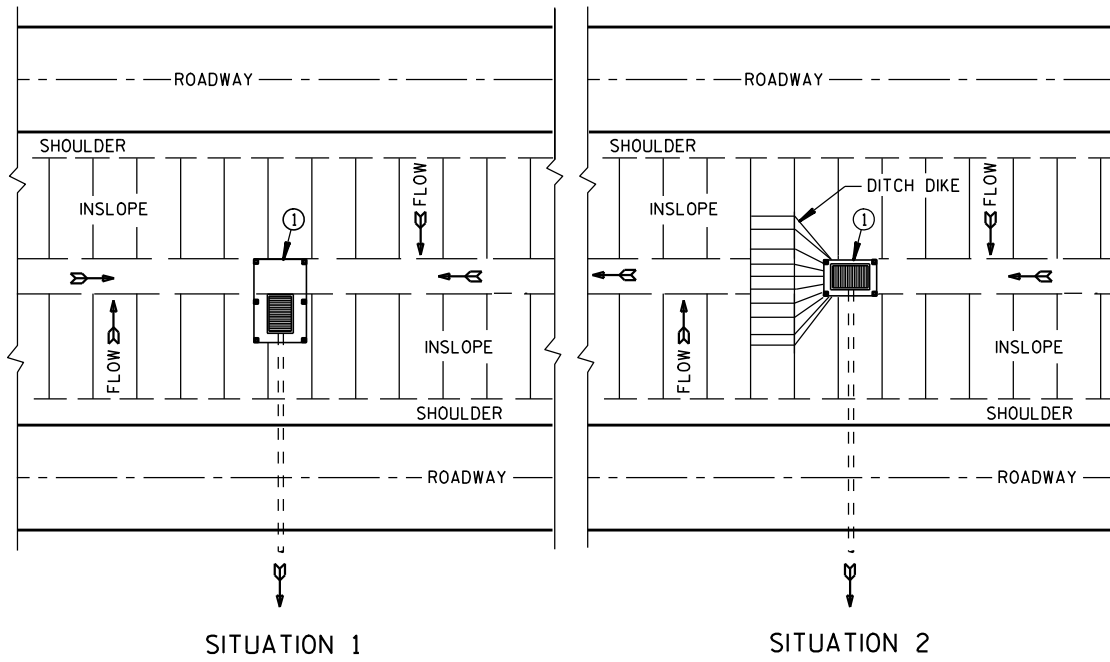
TYPICAL INSTALLATIONS OF
EROSION BALES / TEMPORARY
DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



PLAN VIEW
TYPICAL APPLICATION OF SILT FENCE

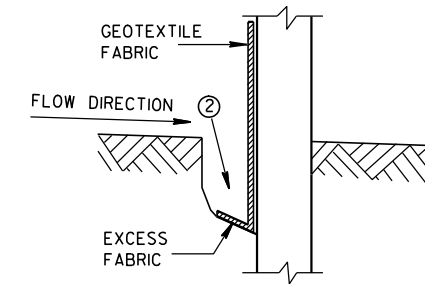


SITUATION 1 SITUATION 2
PLAN VIEW
SILT FENCE AT MEDIAN SURFACE DRAINS

GENERAL NOTES

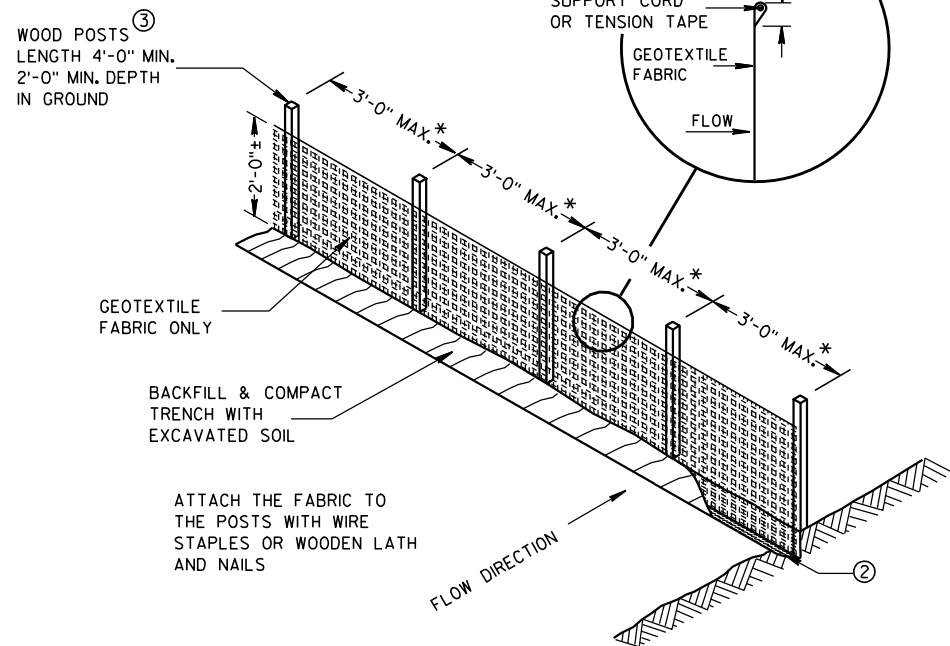
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

- 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 1 1/8" X 1 1/8" OF OAK OR HICKORY.
- ④ SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
- ⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



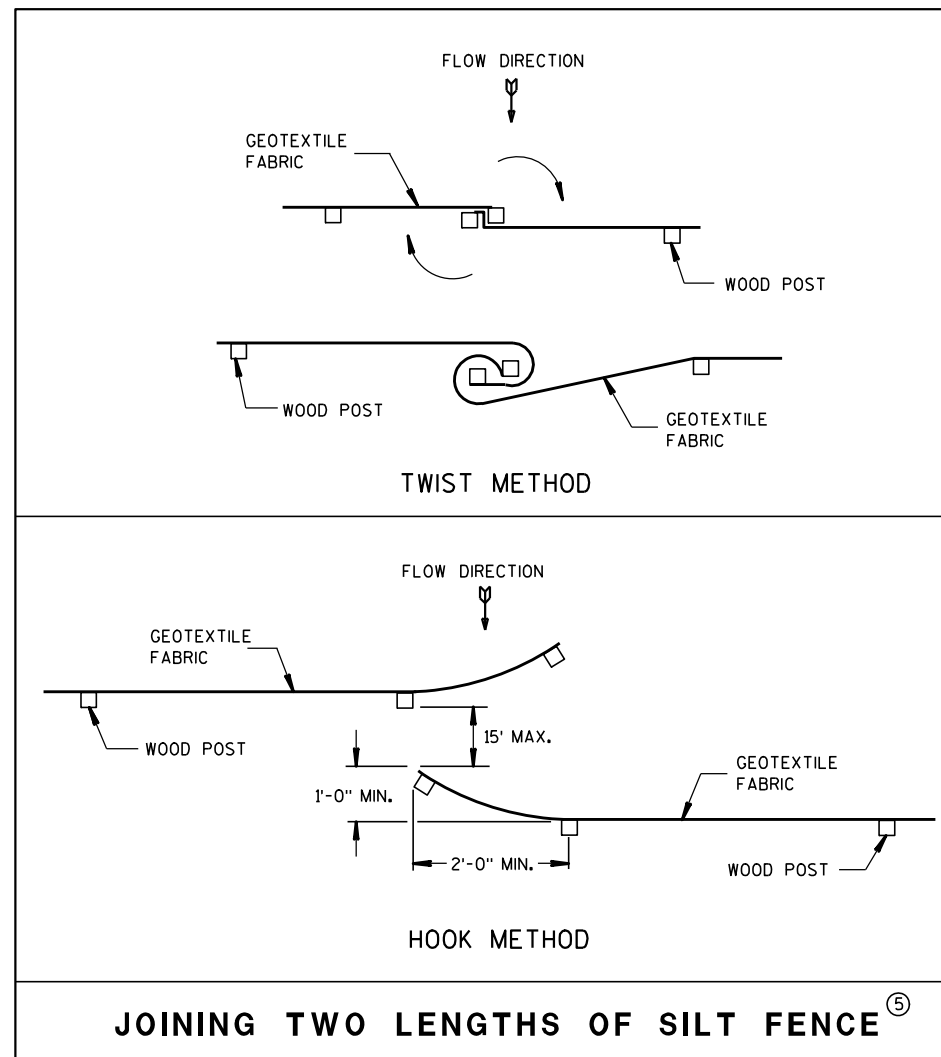
TRENCH DETAIL

NOTE: ADDITIONAL POST DEPTH OR TIE BACKS MAY BE REQUIRED IN UNSTABLE SOILS

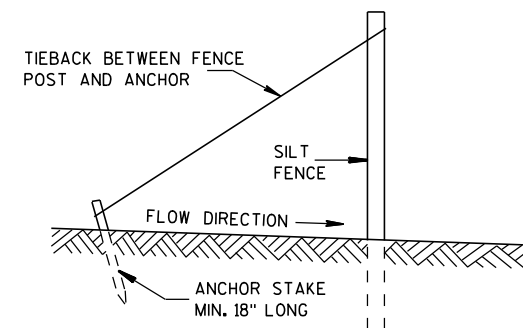


SILT FENCE

* NOTE: 8'-0" POST SPACING ALLOWED IF A WOVEN GEOTEXTILE FABRIC IS USED.



JOINING TWO LENGTHS OF SILT FENCE ⑤

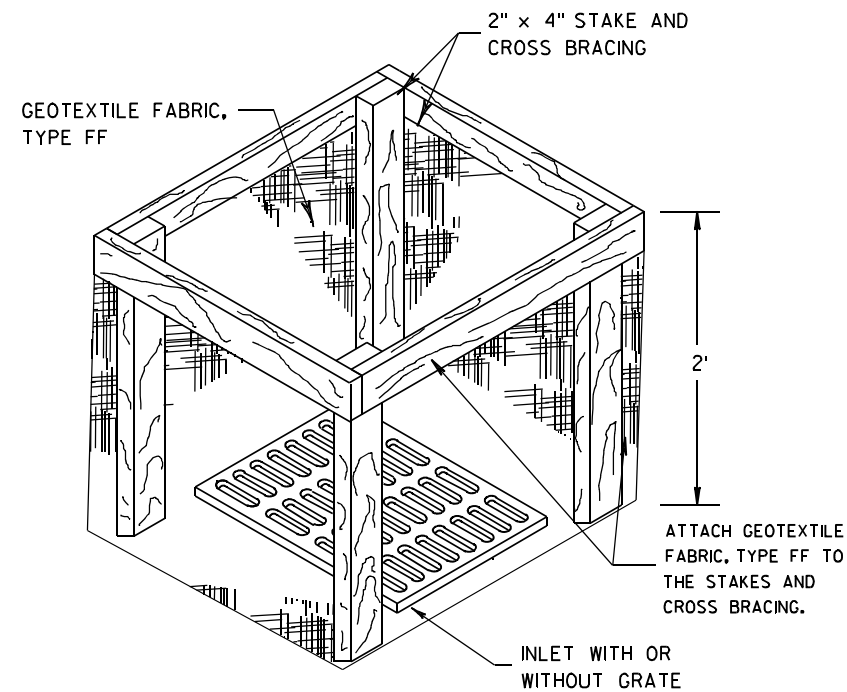
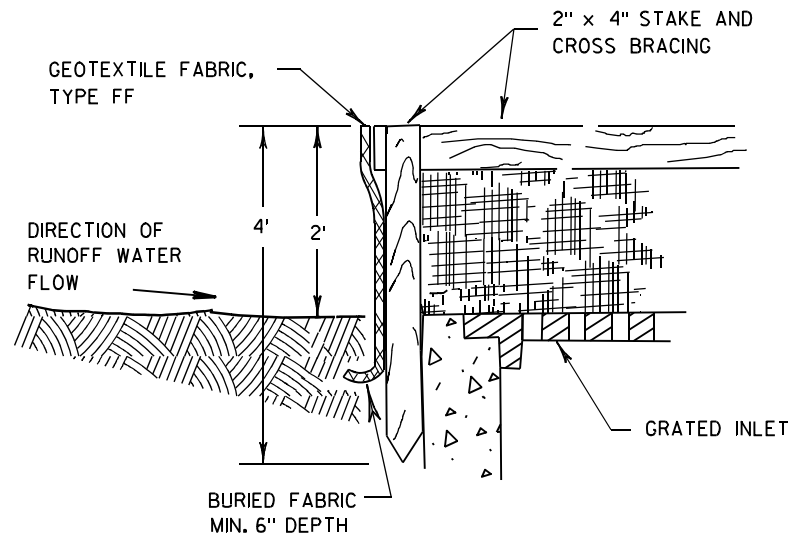


SILT FENCE TIE BACK
(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



INLET PROTECTION, TYPE A

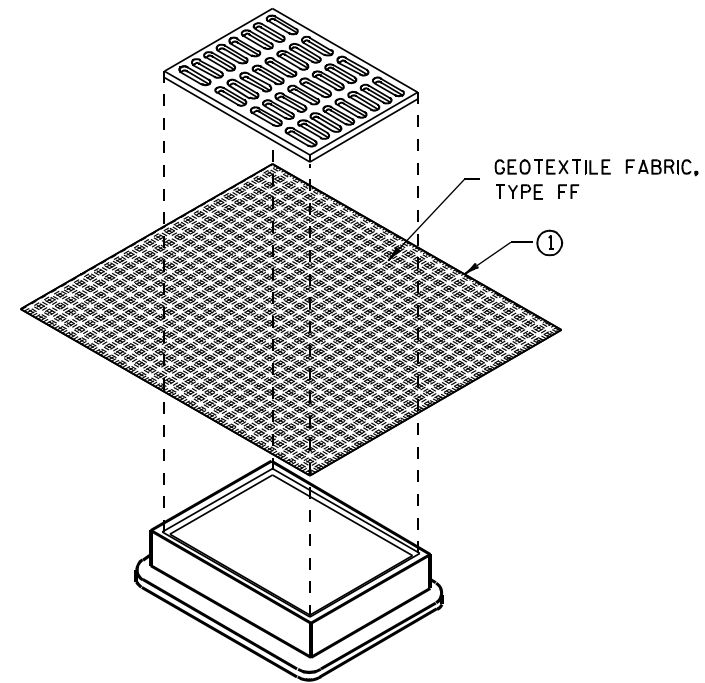
GENERAL NOTES

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

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

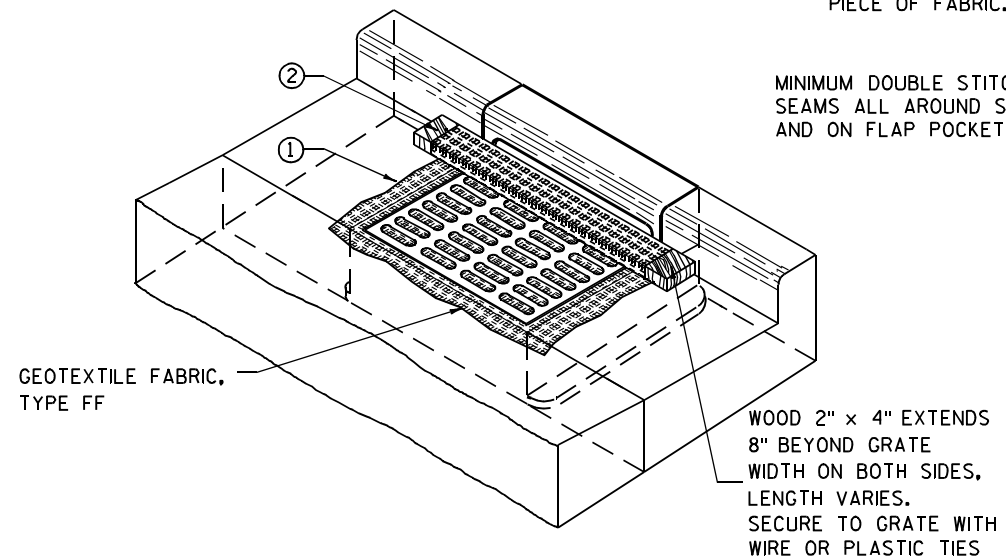
WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

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



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

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



INLET PROTECTION, TYPE C (WITH CURB BOX)

INSTALLATION NOTES

TYPE B & C

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

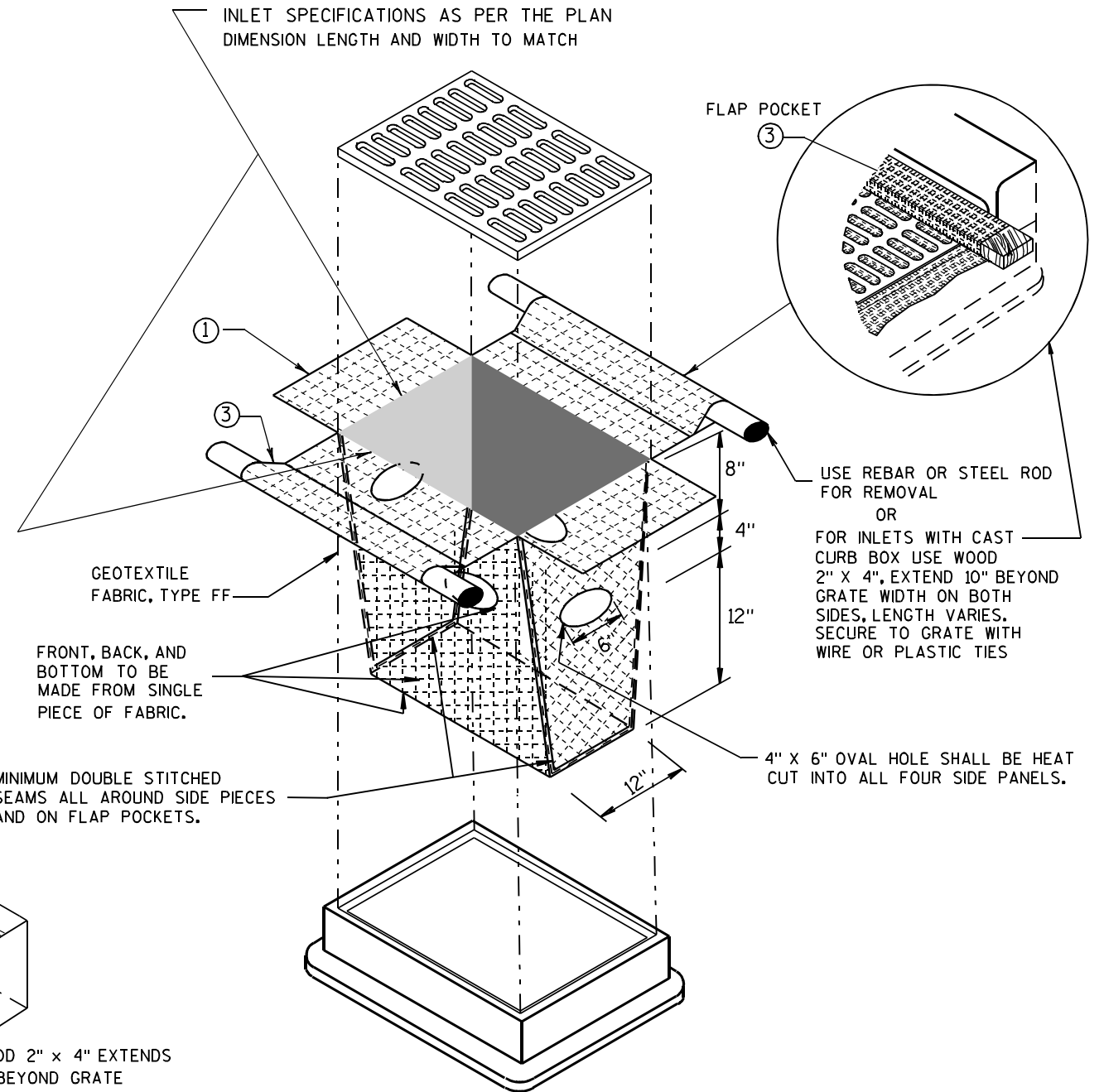
THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

TYPE D

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

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

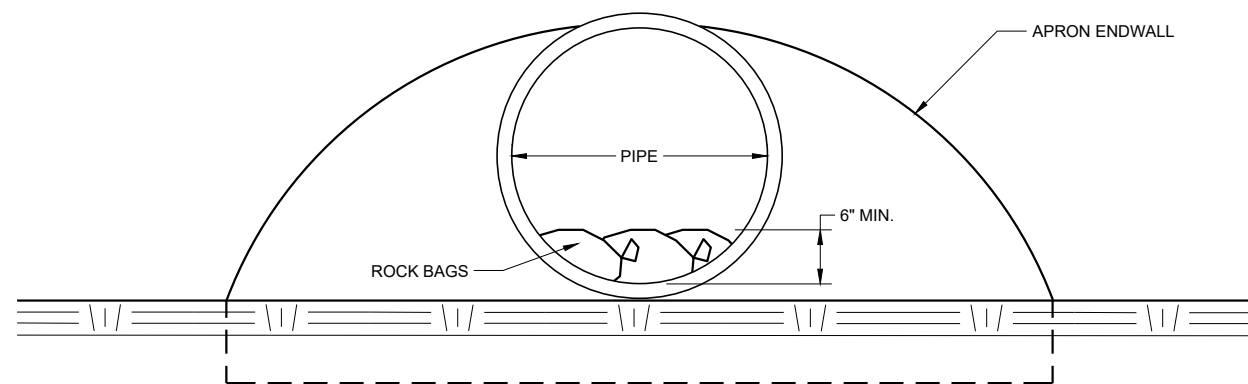
THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE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



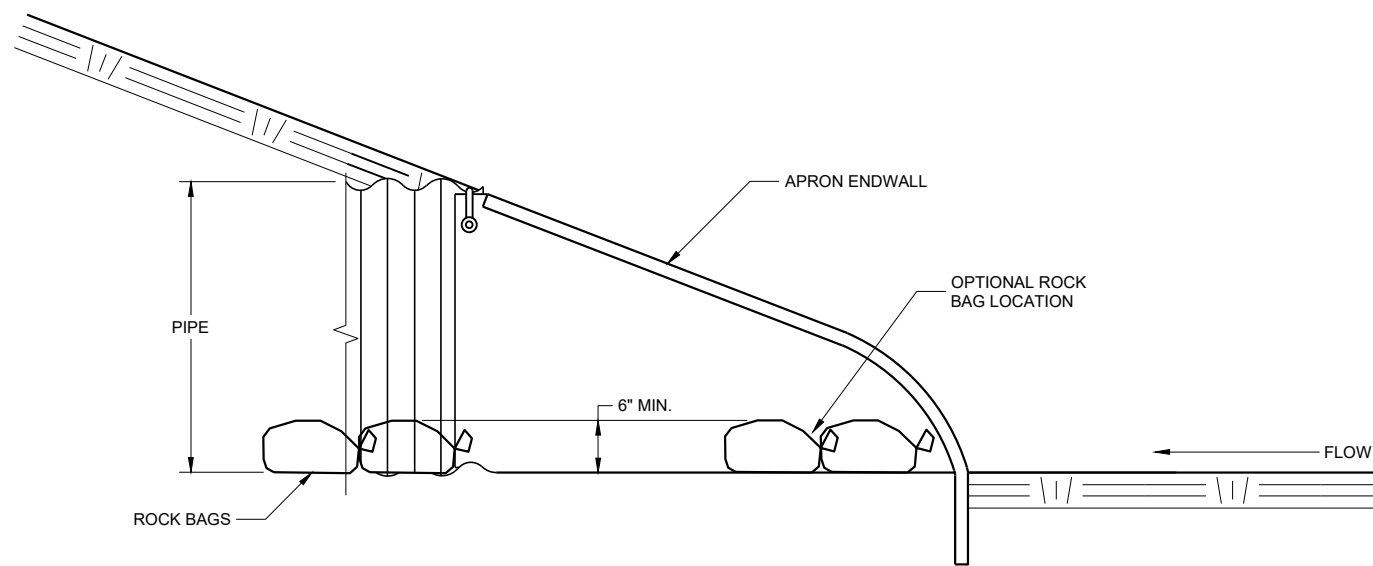
INLET PROTECTION, TYPE D

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

INLET PROTECTION TYPE A, B, C, AND D	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 10/16/02 DATE	/S/ Beth Connestra CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA	



END VIEW



SIDE VIEW

CULVERT PIPE CHECK
 (INSTALL ON INLET END ONLY)

CULVERT PIPE CHECK

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
 May 2019 /S/ Daniel Schave
 DATE EROSION CONTROL ENGINEER

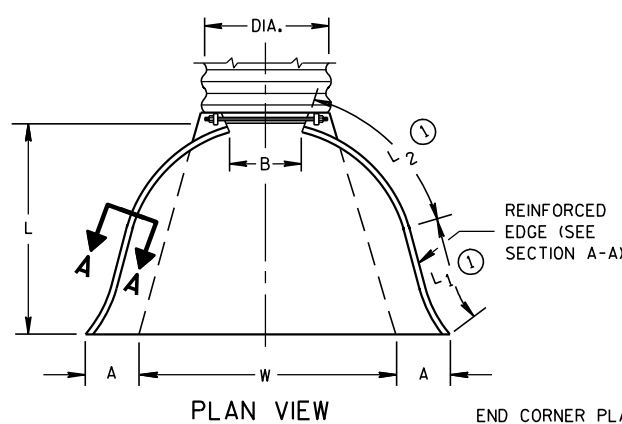
FHWA

METAL APRON ENDWALLS											
PIPE DIA. (IN.)	MIN. THICK. (Inches)		DIMENSIONS (Inches)							APPROX. SLOPE	BODY
	STEEL	ALUM.	A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1	L2	W (±2")		
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	.109x	.105x	18	33	12	87	—	—	114	2 to 1	3 Pc.
66	.109x	.105x	18	36	12	87	—	—	120	2 to 1	3 Pc.
72	.109x	.105x	18	39	12	87	—	—	126	2 to 1	3 Pc.
78	.109x	.105x	18	42	12	87	—	—	132	1 1/2 to 1	3 Pc.
84	.109x	.105x	18	45	12	87	—	—	138	1 1/2 to 1	3 Pc.
90	.109x	.105x	18	37	12	87	—	—	144	1 1/2 to 1	3 Pc.
96	.109x	.105x	18	35	12	87	—	—	150	1 1/2 to 1	3 Pc.

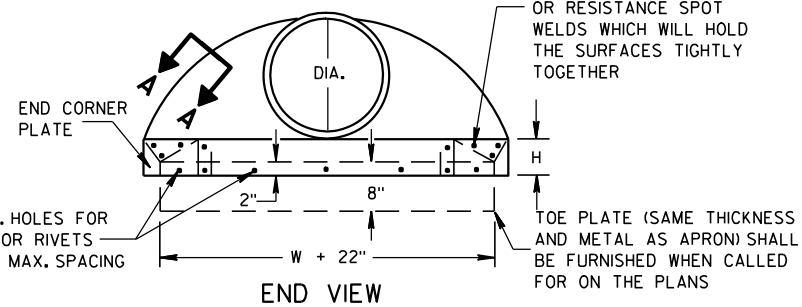
* EXCEPT CENTER PANEL SEE GENERAL NOTES

REINFORCED CONCRETE APRON ENDWALLS									
PIPE DIA. (IN.)	DIMENSIONS (Inches)							APPROX. SLOPE	
	T	A	B	C	D	E	G		
12	2	4	24	48 1/8	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 1/2 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	

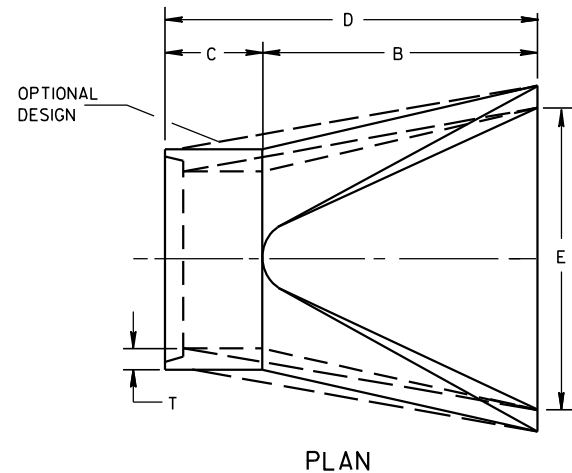
* MINIMUM
** MAXIMUM



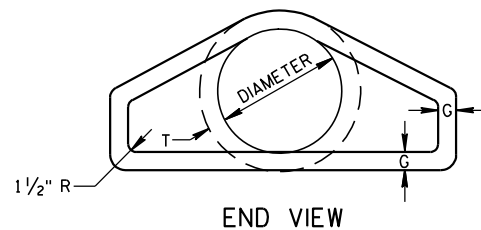
END CORNER PLATES MAY BE FASTENED TO APRON PROPER BY BOLTS, RIVETS, OR RESISTANCE SPOT WELDS WHICH WILL HOLD THE SURFACES TIGHTLY TOGETHER



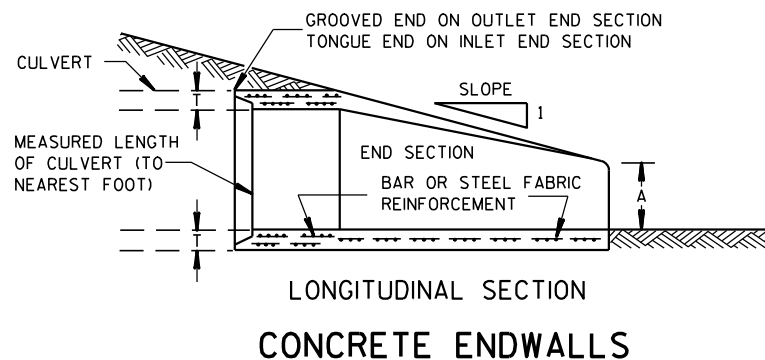
SIDE ELEVATION
METAL ENDWALLS



PLAN

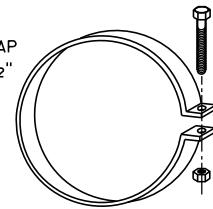


END VIEW

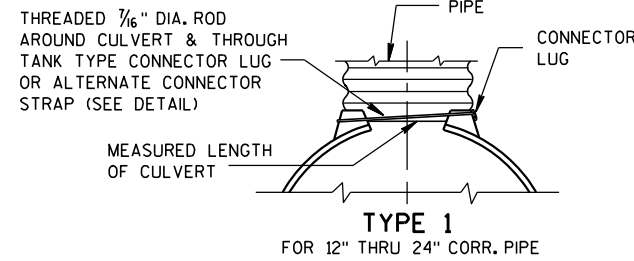


LONGITUDINAL SECTION
CONCRETE ENDWALLS

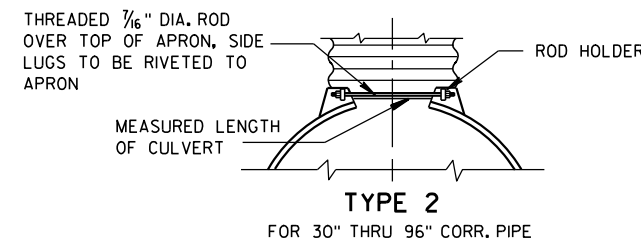
1" WIDE, 12 GA. (0.109" THICK) GALVANIZED STRAP WITH STANDARD 6" X 1/2" BAND BOLT AND NUT



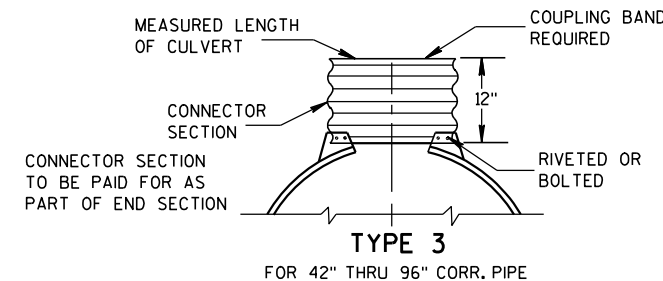
ALTERNATE FOR TYPE 1 CONNECTION
END SECTION CONNECTOR STRAP



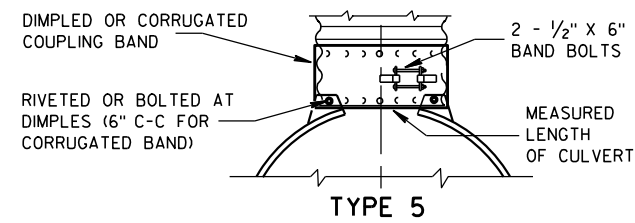
TYPE 1
FOR 12" THRU 24" CORR. PIPE



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

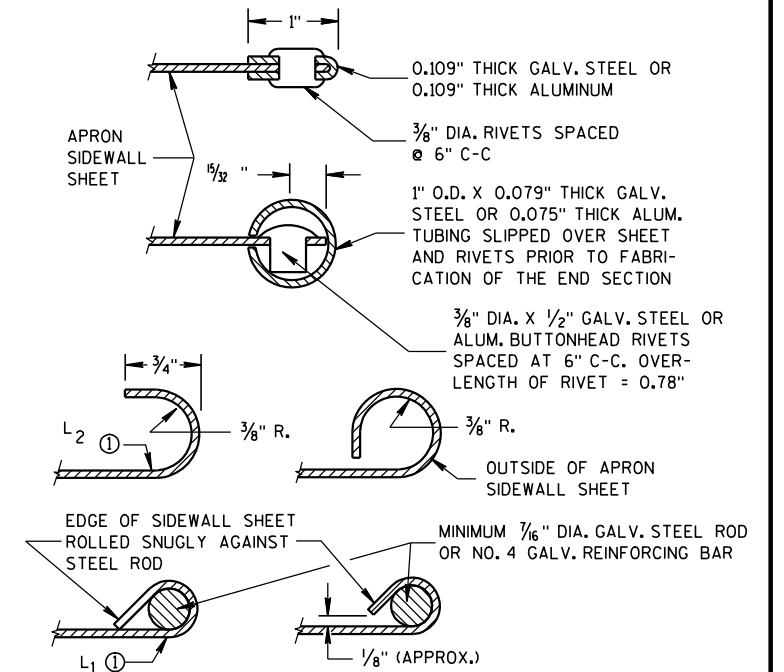
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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 VICE 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.

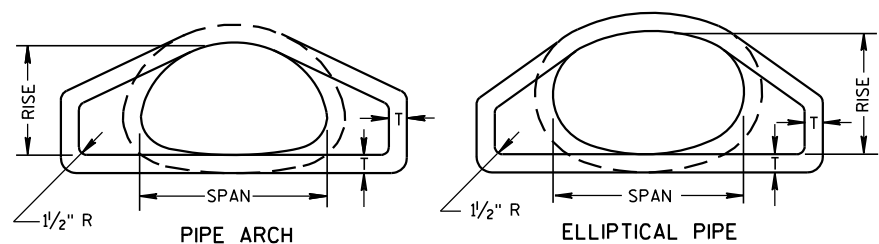
WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

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

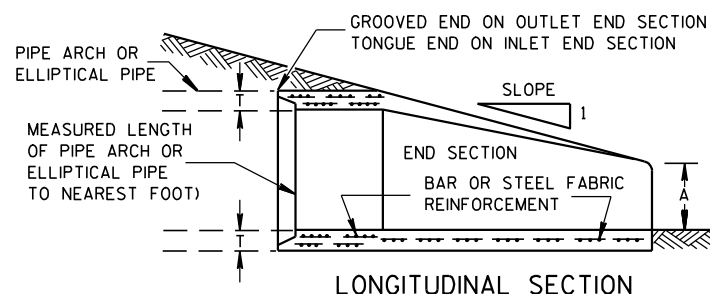
APRON ENDWALLS FOR
CULVERT PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

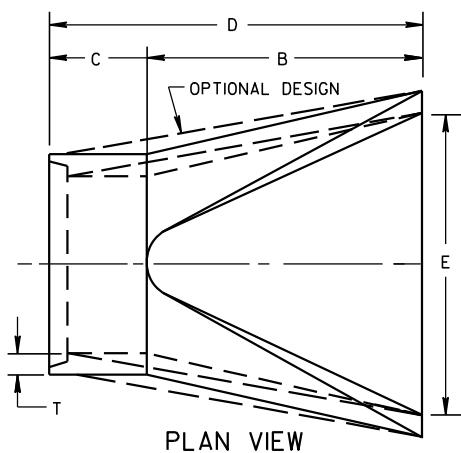


END VIEW



LONGITUDINAL SECTION

CONCRETE ENDWALLS



PLAN VIEW

2- 2/3" X 1/2" CORRUGATIONS													
EQUIV. DIA. (Inches)	(Inches)		MIN. THICK. (Inches)		DIMENSIONS (Inches)							APPROX. SLOPE	BODY
	SPAN	RISE	STEEL	ALUM.	A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 (±1")	L2 (±1")	W (±2")		
15	17	13	.064	.060	7	9	6	19	14	16	30	2 1/2 to 1	1 Pc.
18	21	15	.064	.060	7	10	6	23	14	19 3/8	36	2 1/2 to 1	1 Pc.
21	24	18	.064	.060	8	12	6	28	18	21 3/4	42	2 1/2 to 1	1 Pc.
24	28	20	.064	.060	9	14	6	32	18	27 1/2	48	2 1/2 to 1	1 Pc.
30	35	24	.079	.075	10	16	6	39	18	37 5/8	60	2 1/2 to 1	1 Pc.
36	42	29	.079	.075	12	18	8	46	24	45 3/8	75	2 1/2 to 1	1 Pc.
42	49	33	.109	.105	13	21	9	53	24	54 3/4	85	2 1/2 to 1	2 Pc.
48	57	38	.109	.105	18	26	12	63	24	68	90	2 1/2 to 1	3 Pc.
54	64	43	.109	.105	18	30	12	70	24	72 3/4	102	2 1/4 to 1	3 Pc.
60	71	47	.109*	.105*	18	33	12	77	30	82 1/4	114	2 1/4 to 1	3 Pc.
66	77	52	.109*	.105*	18	36	12	77	—	—	126	2 to 1	3 Pc.
72	83	57	.109*	.105*	18	39	12	77	—	—	138	2 to 1	3 Pc.

3" X 1" CORRUGATIONS													
EQUIV. DIA. (Inches)	(Inches)		MIN. THICK. (Inches)		DIMENSIONS (Inches)							APPROX. SLOPE	BODY
	SPAN	RISE	STEEL	ALUM.	A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 (±1")	L2 (±1")	W (±2")		
48	53	41	.109	.105	18	26	12	63	24	72 3/4	90	2 1/2 to 1	2 Pc.
54	60	46	.109	.105	18	30	12	70	30	82 1/4	102	2 to 1	2 Pc.
60	66	51	.109*	.105*	18	33	12	77	—	—	114	1 1/2 to 1	3 Pc.
66	73	55	.109*	.105*	18	36	12	77	—	—	126	1 1/2 to 1	3 Pc.
72	81	59	.109*	.105*	18	39	12	77	—	—	138	2 to 1	3 Pc.
78	87	63	.109*	.105*	22	38	12	77	—	—	148	1 1/2 to 1	3 Pc.
84	95	67	.109*	.105*	22	34	12	77	—	—	162	1 1/2 to 1	3 Pc.
90	103	71	.109*	.105*	22	38	12	77	—	—	174	1 1/2 to 1	3 Pc.
96	112	75	.109*	.105*	24	40	12	77	—	—	174	1 1/2 to 1	3 Pc.

NOTE: ALL SPLICES TO BE LAP RIVETED OR BOLTED. * EXCEPT CENTER PANEL SEE GENERAL NOTES

REINFORCED CONCRETE PIPE ARCH										
EQUIV. DIA. (Inches)	DIMENSIONS (Inches)									APPROX. SLOPE
	**SPAN	**RISE	T	A	B	C	D	E		
24	29	18	3	8 1/2	39	33	72	48	3 to 1	
30	36	22	3 1/2	9 1/2	50	46	96	60	3 to 1	
36	44	27	4	11 1/8	60	36	96	72	3 to 1	
42	51	31	4 1/2	15 1/8	60	36	96	78	3 to 1	
48	58	36	5	21	60	36	96	84	3 to 1	
54	65	40	5 1/2	25 1/2	60	36	96	90	3 to 1	
60	73	45	6	31	60	36	96	96	3 to 1	
72	88	54	7	31	60	39	99	120	2 to 1	
84	102	62	8	28 1/2	83	19	102	144	2 to 1	

REINFORCED CONCRETE ELLIPTICAL PIPE										
EQUIV. DIA. (Inches)	DIMENSIONS (Inches)									APPROX. SLOPE
	**SPAN	**RISE	T	A	B	C	D	E		
24	30	19	3 1/4	8 1/2	39	33	72	48	3 to 1	
30	38	24	3 3/4	9 1/2	54	18	72	60	3 to 1	
36	45	29	4 1/2	11 1/8	60	24	84	72	2 1/2 to 1	
42	53	34	5	15 3/4	60	36	96	78	2 1/2 to 1	
48	60	38	5 1/2	21	60	36	96	84	2 1/2 to 1	
54	68	43	6	25 1/2	60	36	96	90	2 1/2 to 1	
60	76	48	6 1/2	30	60	36	96	96	2 1/2 to 1	

**NOMINAL SIZE

GENERAL NOTES

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

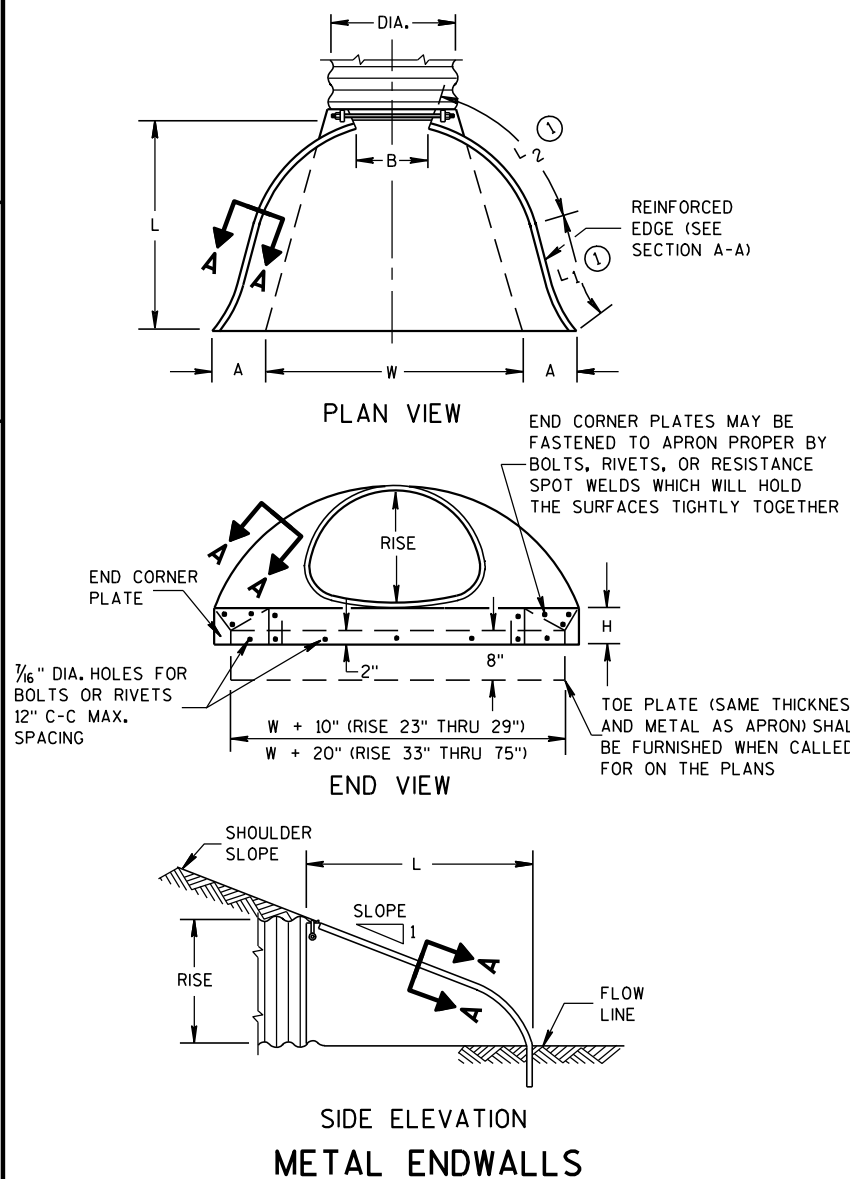
CONCRETE APRON ENDWALLS MAY NOT BE USED WITH GALVANIZED STEEL OR ALUMINUM CULVERT PIPE OR VISE VERSA. GALVANIZED STEEL OR ALUMINUM APRON ENDWALLS SHALL NORMALLY BE INSTALLED ON CULVERT PIPE OF THE SAME METAL.

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

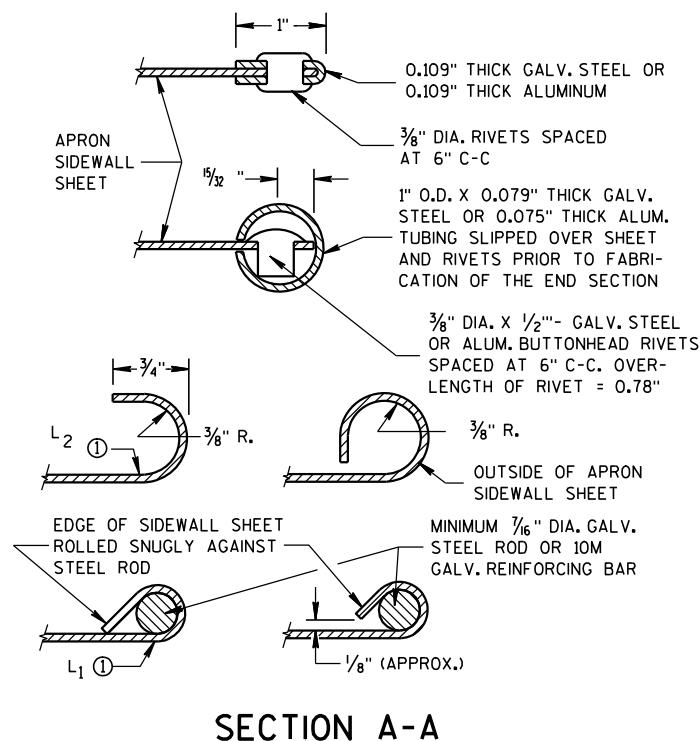
LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS. FOR THE 77" X 52" THROUGH 112" X 75" APRON ENDWALL SIZES, THE REINFORCED EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH GALVANIZED STEEL OR ALUMINUM STIFFENER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

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

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



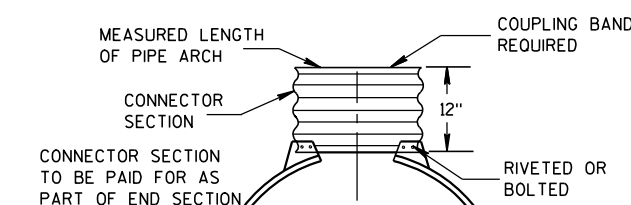
METAL ENDWALLS



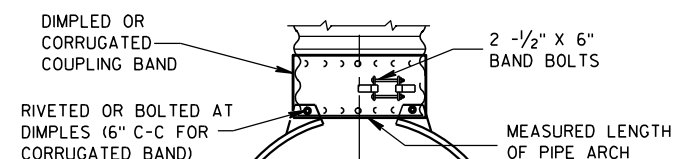
SECTION A-A



TYPE 2 FOR 17" X 13" THRU 112" X 75" PIPE ARCH



TYPE 3 FOR 64" X 43" THRU 112" X 75" PIPE ARCH



TYPE 5 ALTERNATE FOR: ALL SIZES CORRUGATED PIPE ARCHES

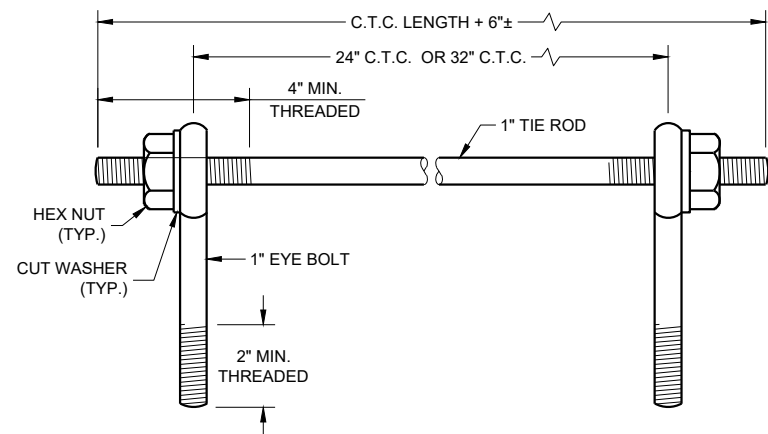
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL.

CONNECTION DETAILS

APRON ENDWALLS FOR PIPE ARCH AND ELLIPTICAL PIPE

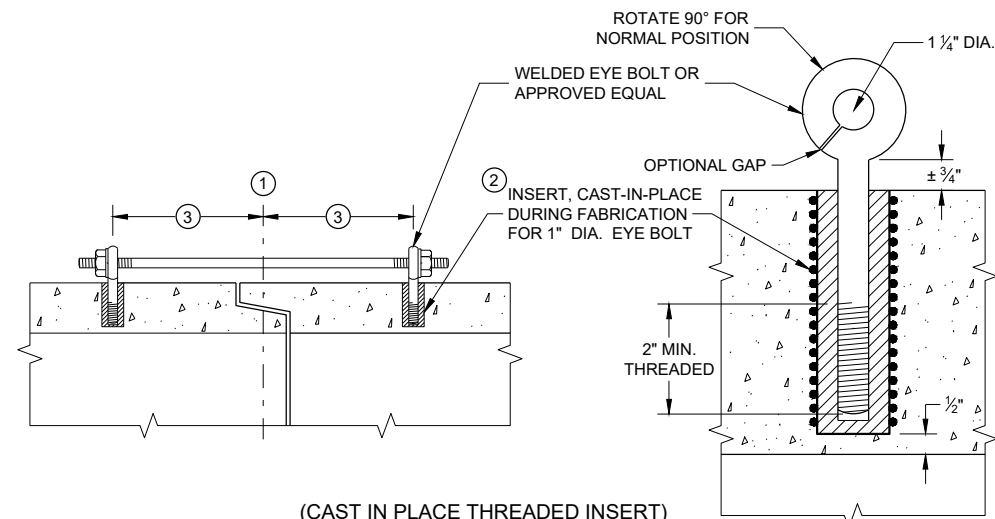
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



EYE BOLTS AND TIE ROD

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



(CAST IN PLACE THREADED INSERT)
LONGITUDINAL SECTIONS

GENERAL NOTES

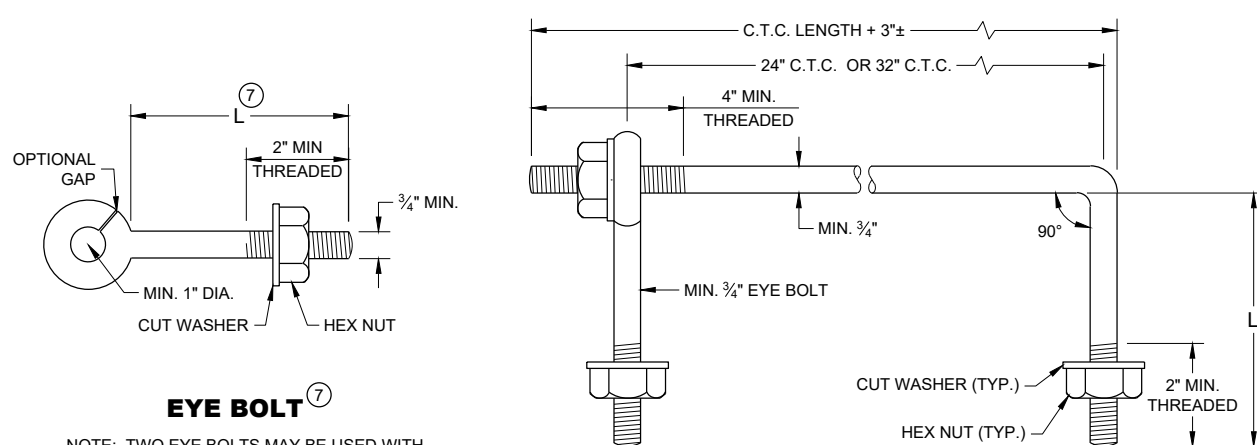
DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

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.

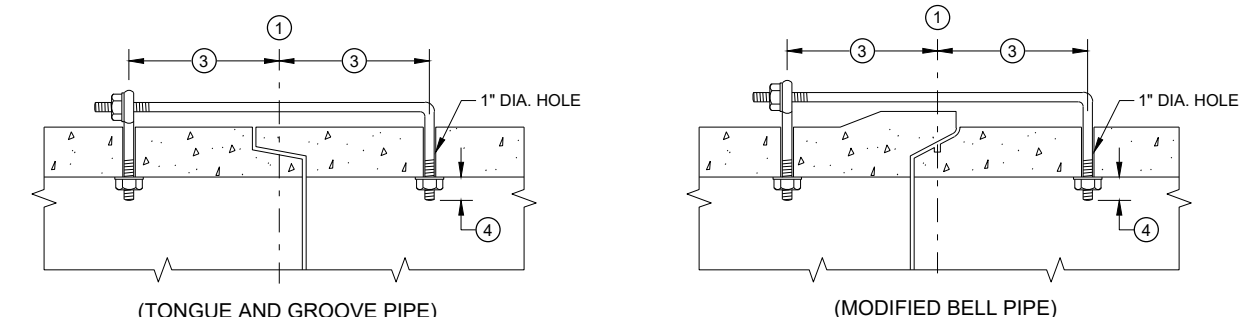
- ① CENTER LINE OF TONGUE AND GROOVE OR BELL AND SPIGOT JOINTS.
- ② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.
- ③ HOLES SHALL BE CAST-IN-PLACE OR DRILLED PER THE APPLICABLE DETAIL, AND EQUAL DISTANCE FROM THE CENTERLINE OF THE JOINT.
- ④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.
- ⑤ OPENING TO BE ROD DIAMETER PLUS 1 INCH.
- ⑥ LENGTH ADEQUATE TO EXTEND TO WITHIN 1/2 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



LONGITUDINAL SECTION

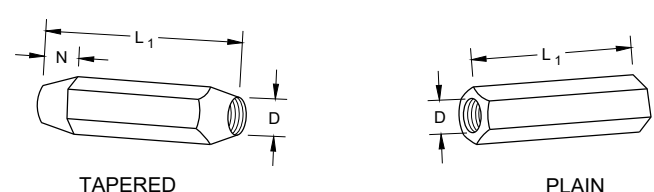
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

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

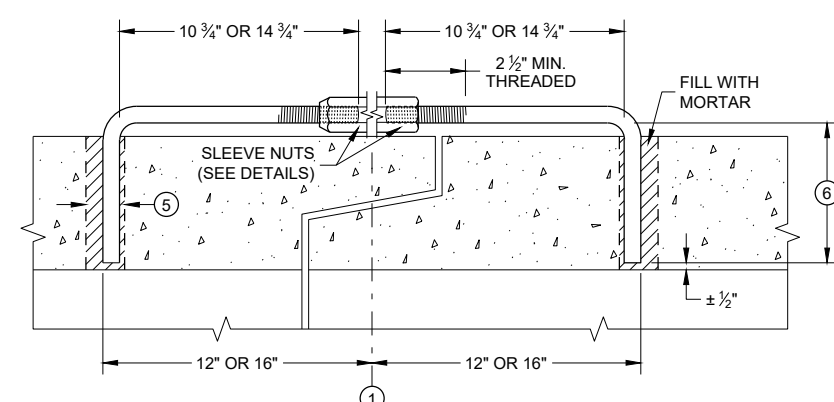
ADJUSTABLE TIE ROD TABLE

PIPE DIAMETER	TIE ROD DIAMETER	D	L ₁	N
12 - 60	5/8	5/8	5	1/2
66 - 84	3/4	3/4	5	1/2
90 - 144	1	1	7	1 1/16

DIMENSIONS SHOWN ARE IN INCHES

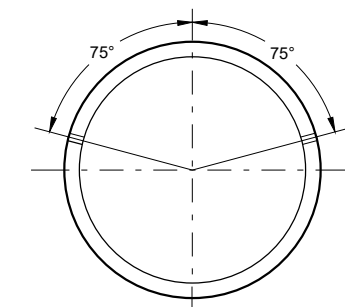


RIGHT AND LEFT THREADS SLEEVE NUTS



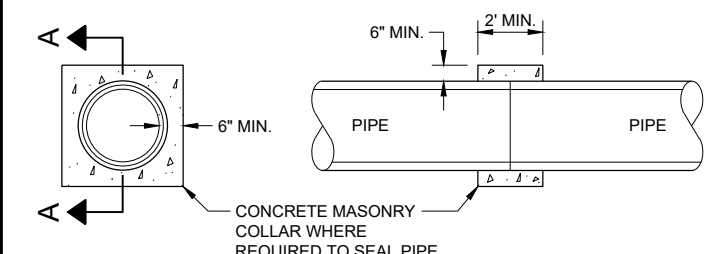
LONGITUDINAL SECTION

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**

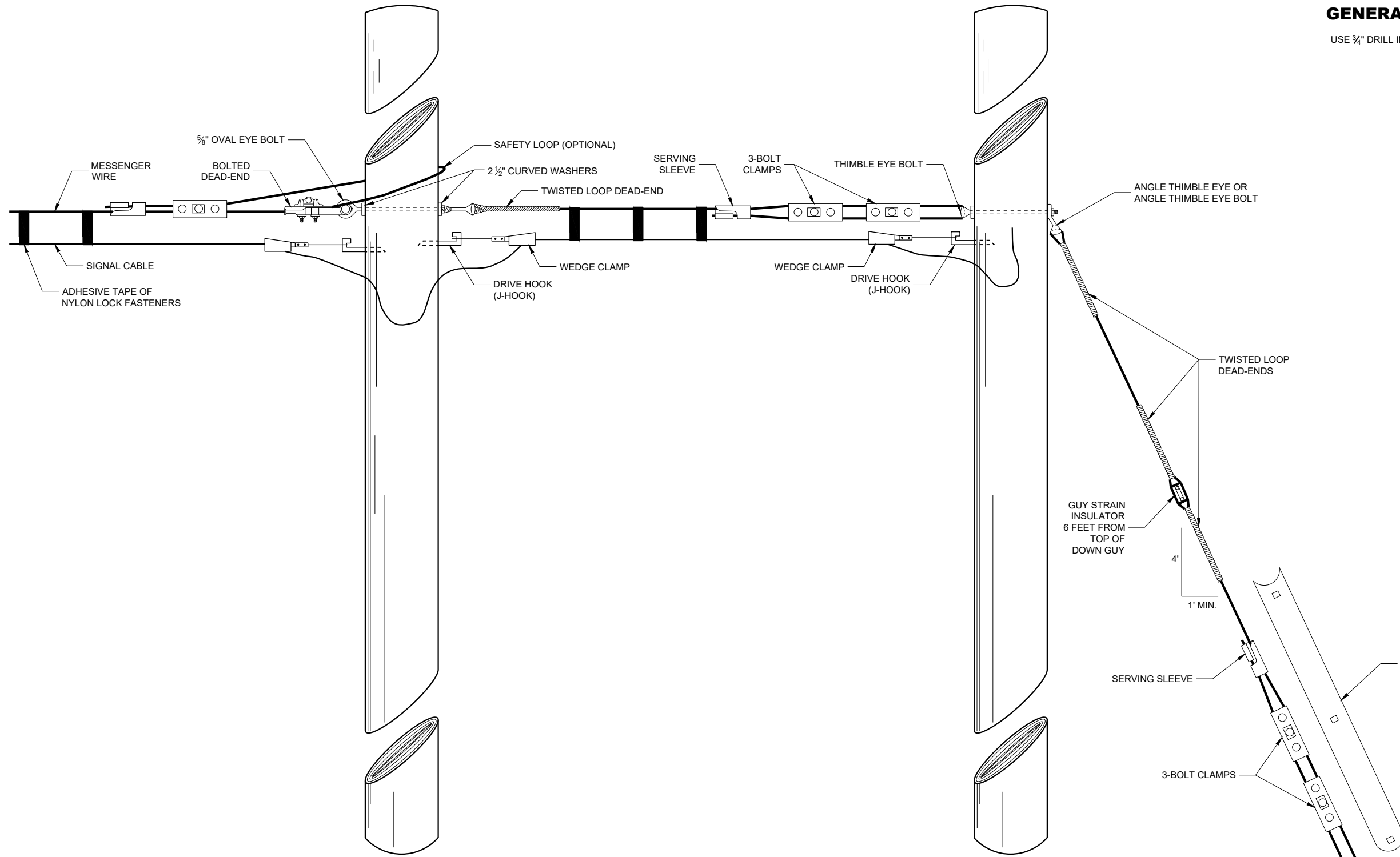
JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

GENERAL NOTES

USE 3/4" DRILL IN WOOD POLE TO PROVIDE FOR 5/8" BOLTS.



SPAN WIRE POLE

GUY POLE

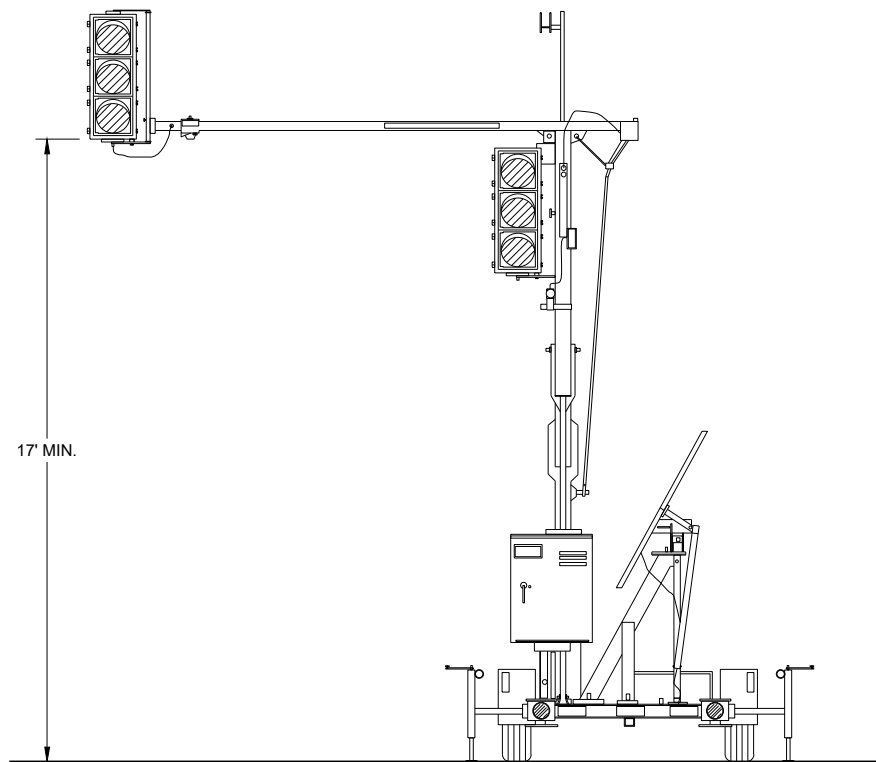
TYPICAL DEAD-ENDINGS OR GUYING

BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2015 /S/ Ahmet Demerbilek
DATE ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

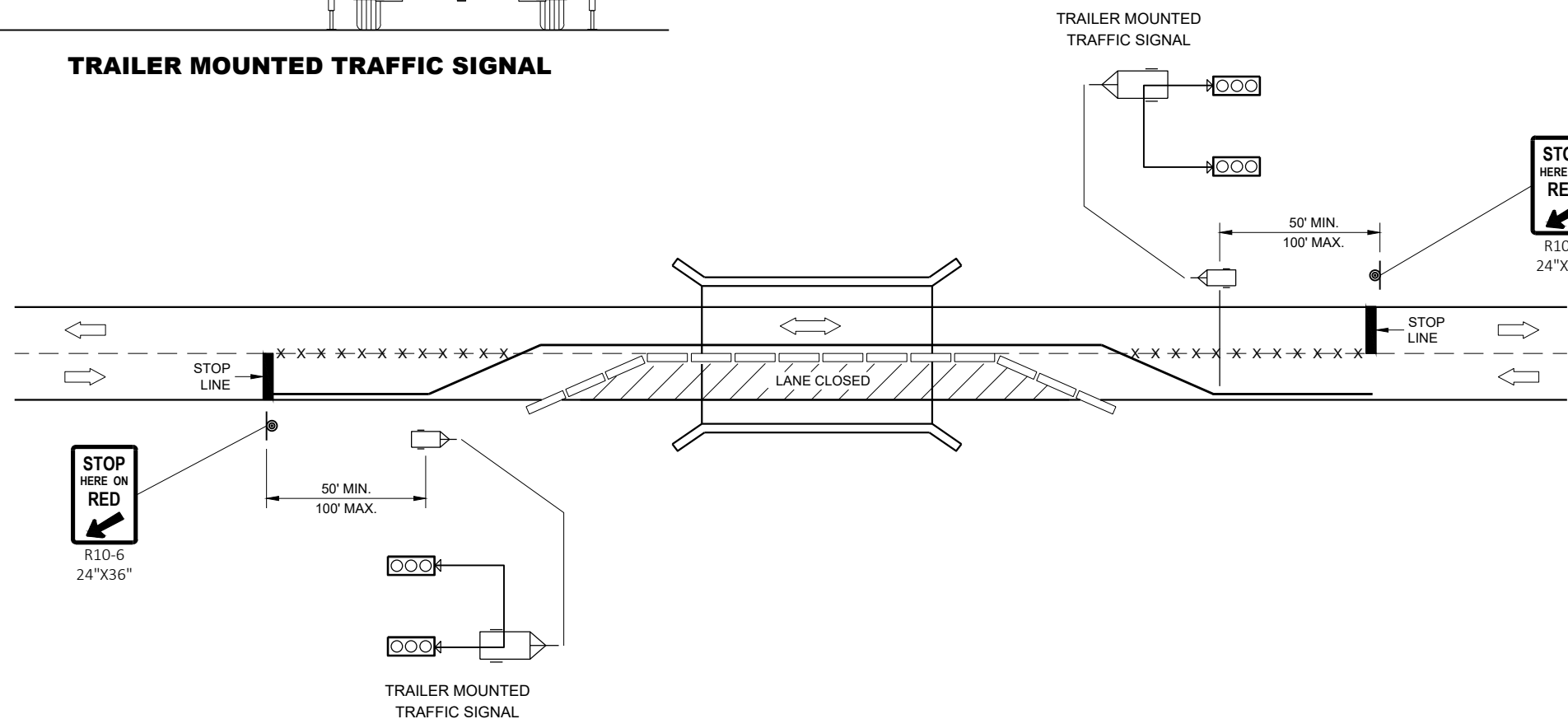


TRAILER MOUNTED TRAFFIC SIGNAL

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

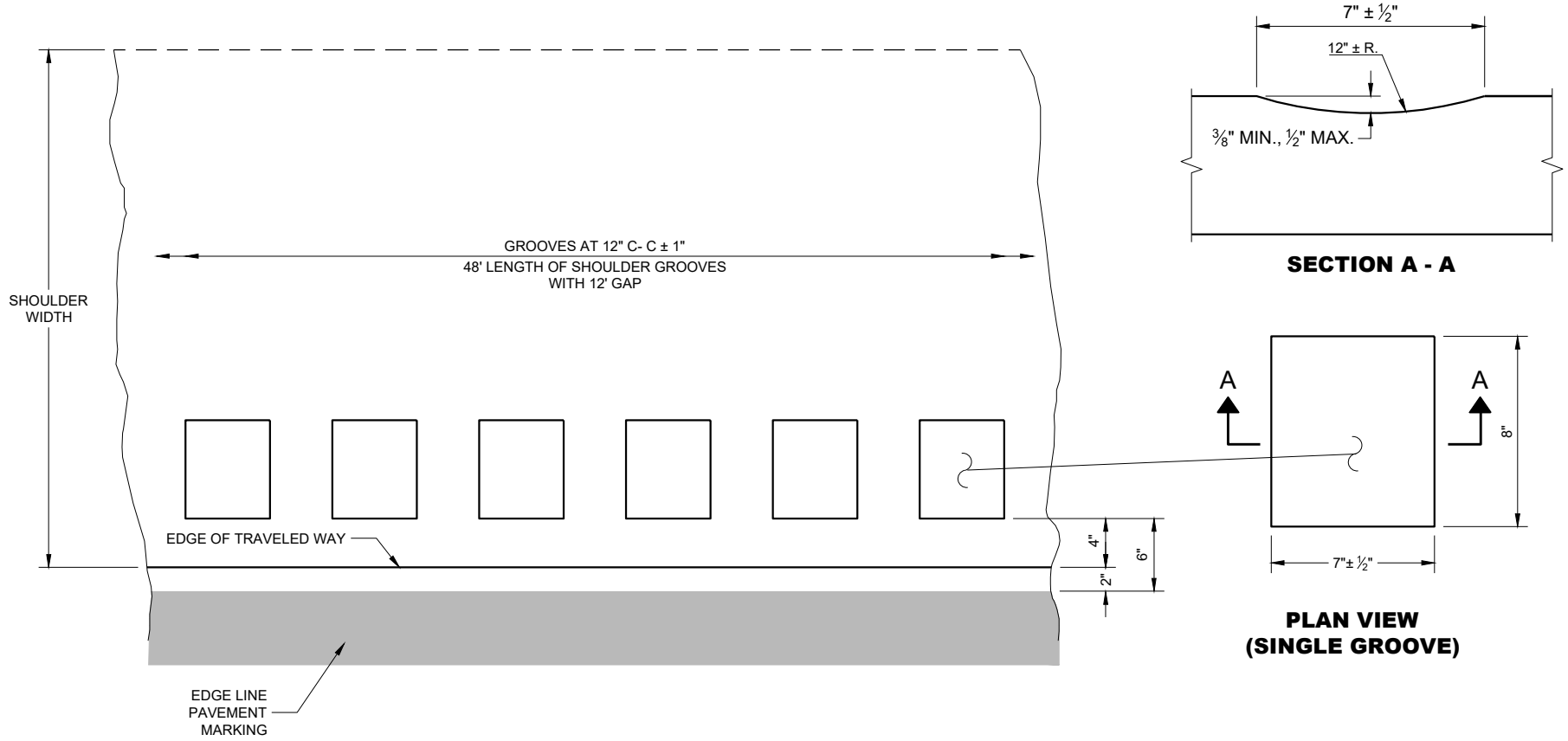
APPROVED
June 2015 /S/ Ahmet Demerbilek
DATE ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

GENERAL NOTES

DO NOT MILL SHOULDER GROOVES THROUGH INTERSECTIONS, MARKED CROSSWALKS, NON-MOTORIZED PATH CROSSINGS, ETC. REFER TO SDD 13A10 SHEETS "g" AND "h".

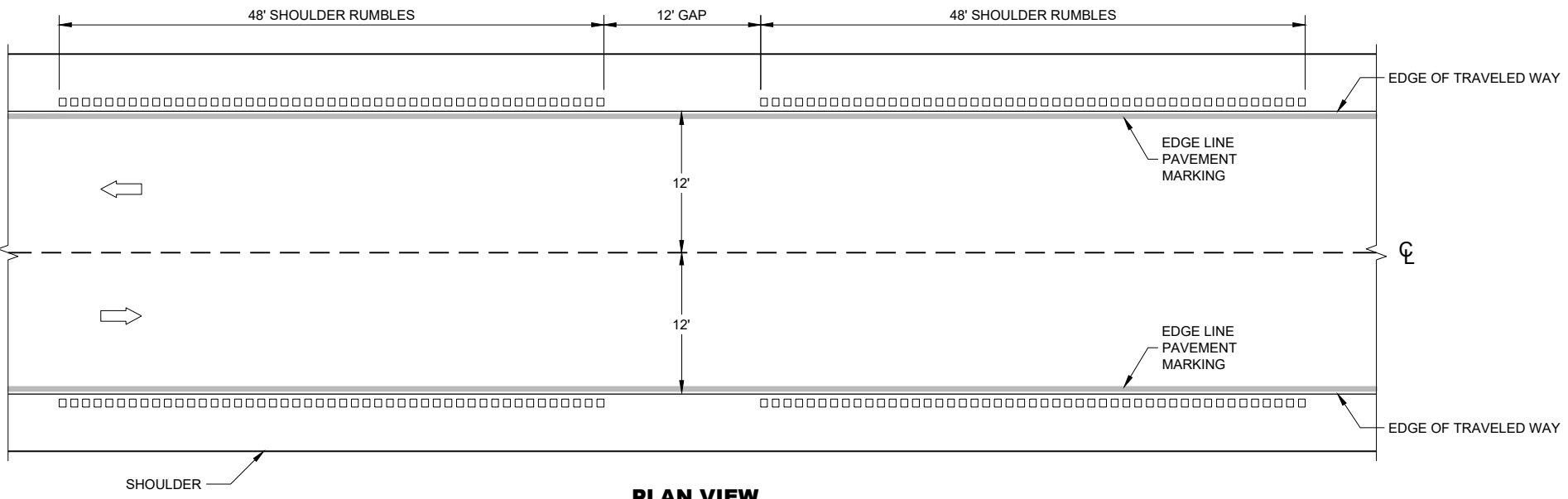
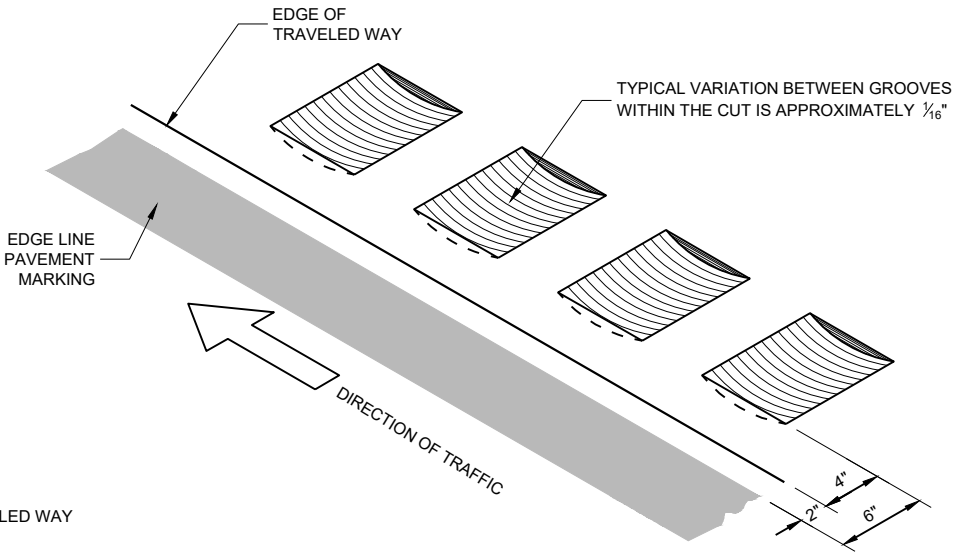
SHOULDER GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS WHEN DIRECTED BY THE ENGINEER.



SECTION A - A

PLAN VIEW (SINGLE GROOVE)

PLAN DETAIL VIEW SHOULDER WITH GROOVES



PLAN VIEW

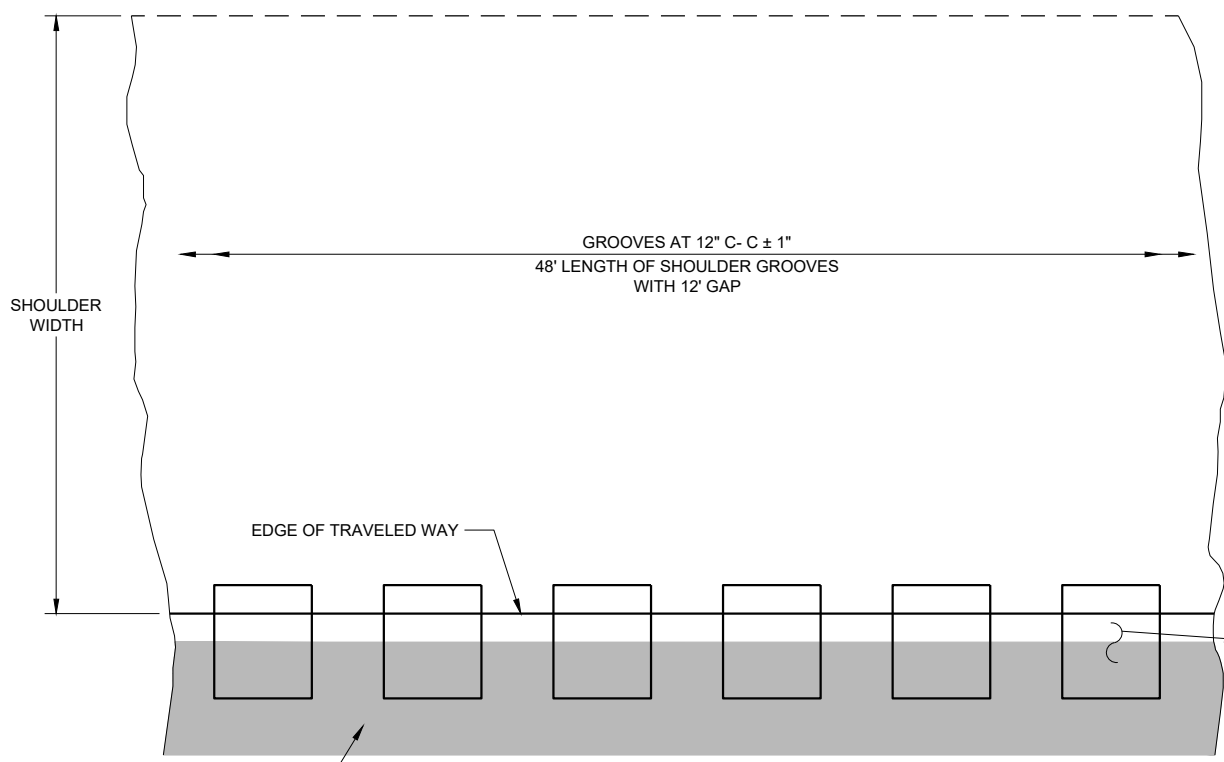
SHOULDER RUMBLE STRIPS - ASPHALT

SHOULDER RUMBLE STRIPS ASPHALT
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

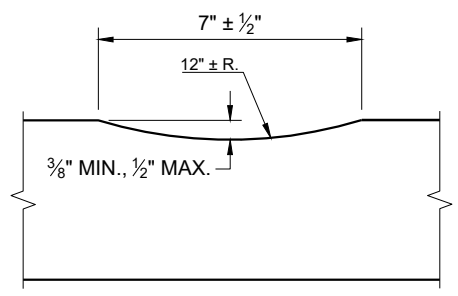
GENERAL NOTES

DO NOT MILL SHOULDER GROOVES THROUGH INTERSECTIONS, MARKED CROSSWALKS, NON-MOTORIZED PATH CROSSINGS, ETC. REFER TO SDD 13A10 SHEETS "g" AND "h".

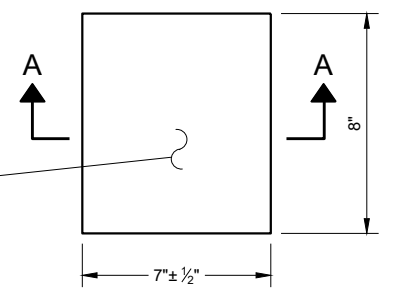
SHOULDER GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS WHEN DIRECTED BY THE ENGINEER.



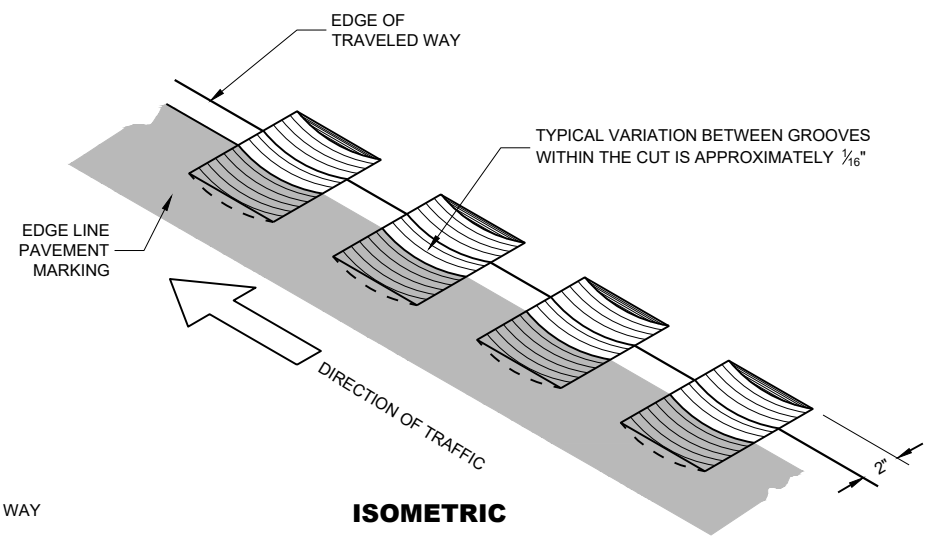
PLAN DETAIL VIEW SHOULDER WITH GROOVES



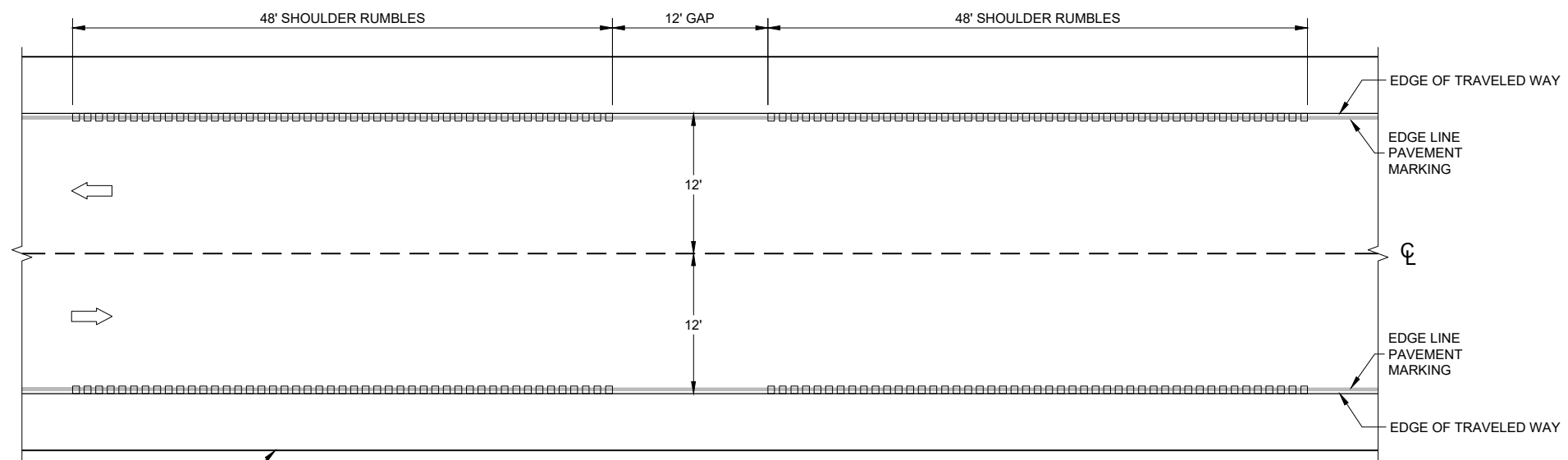
SECTION A - A



PLAN VIEW (SINGLE GROOVE)



ISOMETRIC



PLAN VIEW

EDGE LINE RUMBLE STRIPS - ASPHALT

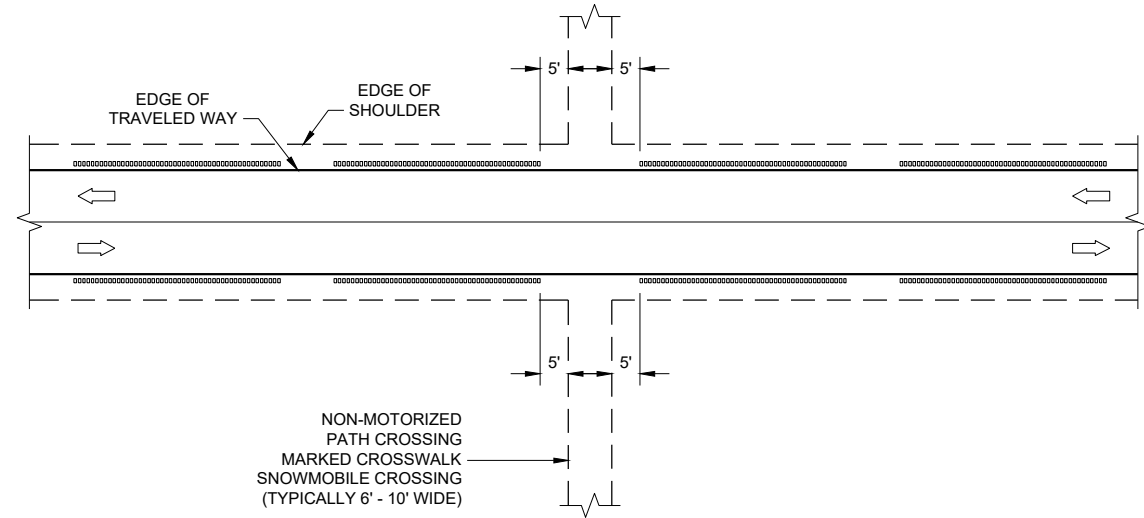
EDGE LINE RUMBLE STRIPS - ASPHALT
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

6

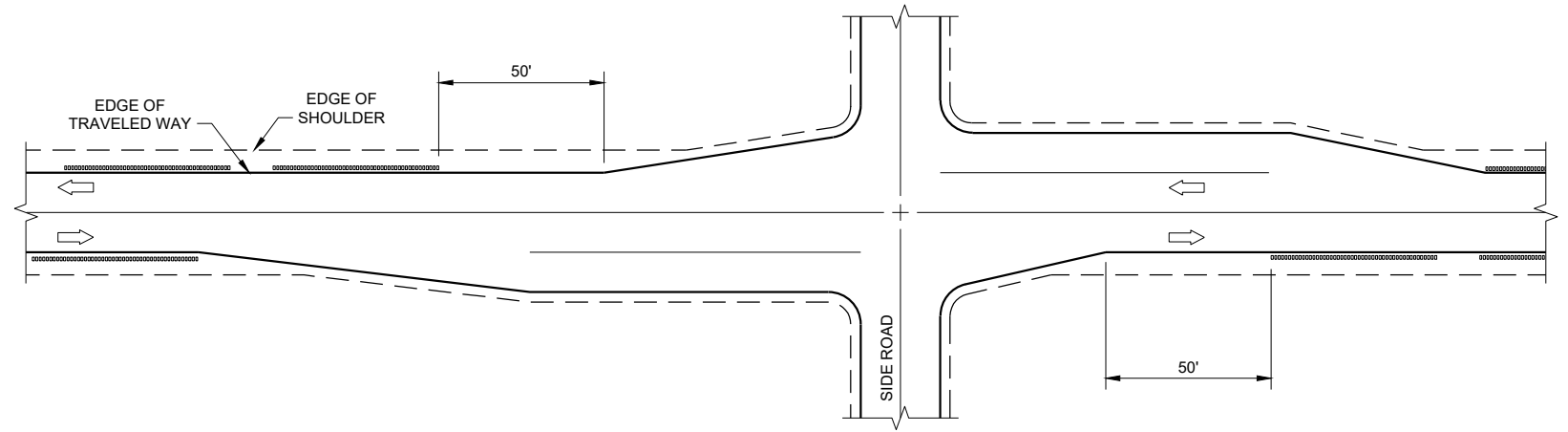
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SDD 13A10 - 03e

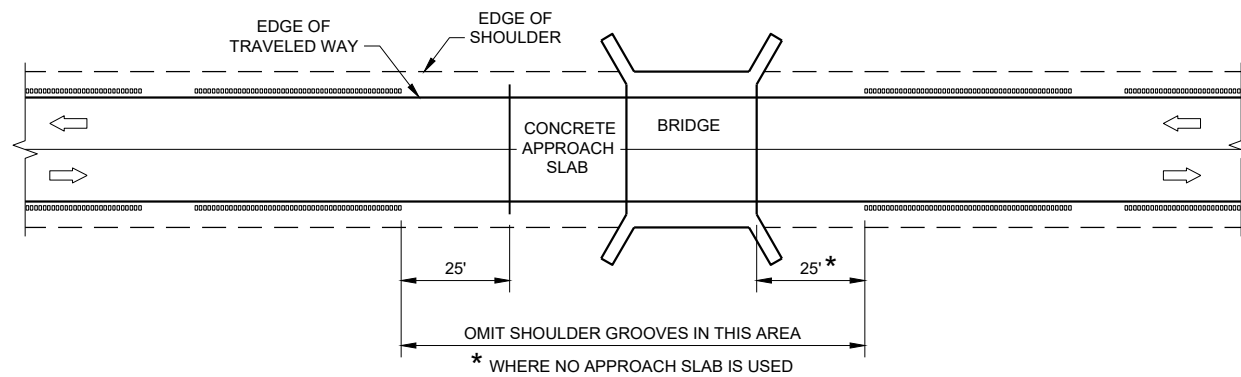
SDD 13A10 - 03e



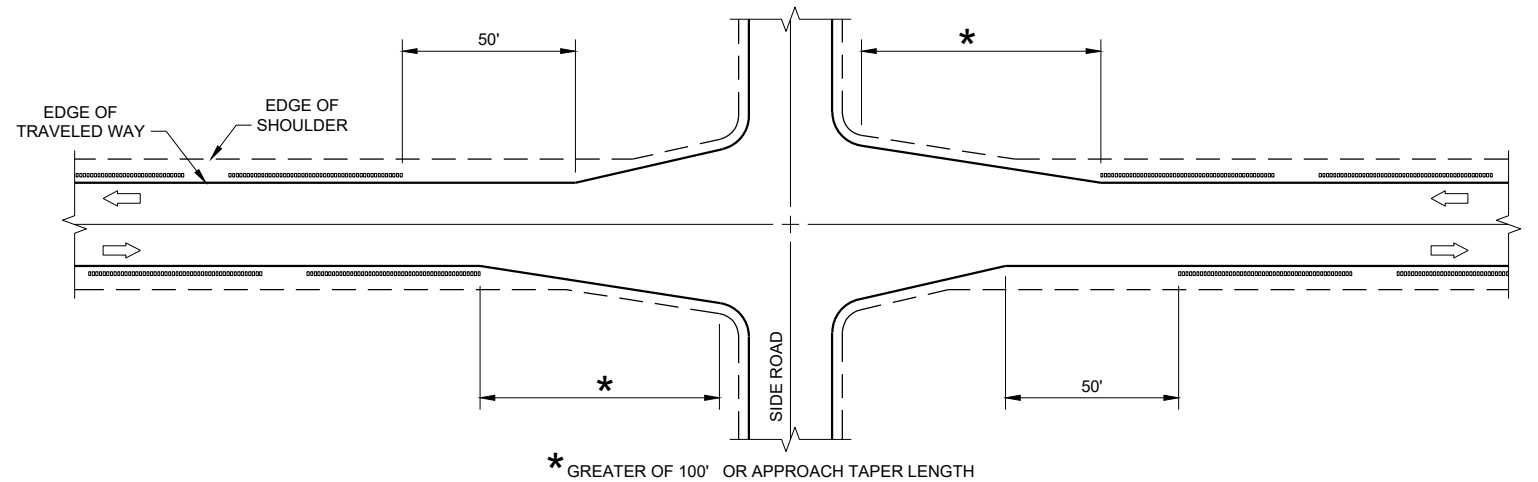
GROOVES AT MISCELLANEOUS CROSSINGS



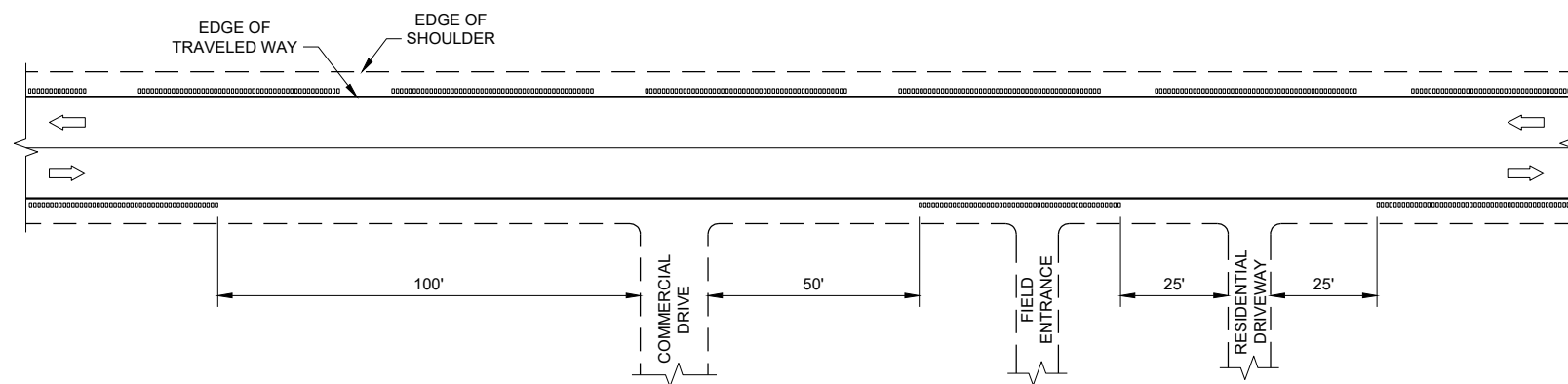
GROOVES AT RIGHT TURN LANE



GROOVES AT BRIDGES



GROOVES AT INTERSECTIONS WITH APPROACH TAPER



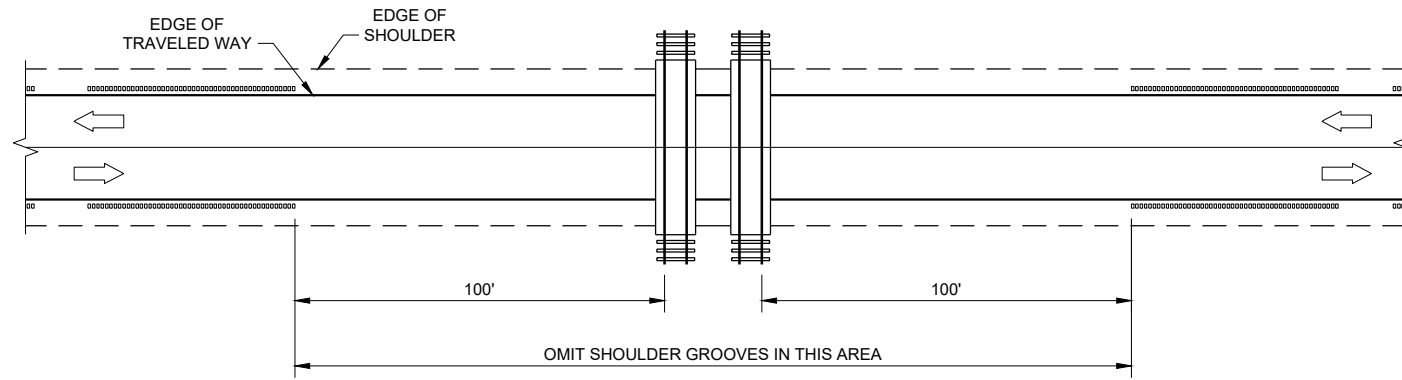
GROOVES AT DRIVEWAYS

GENERAL NOTES

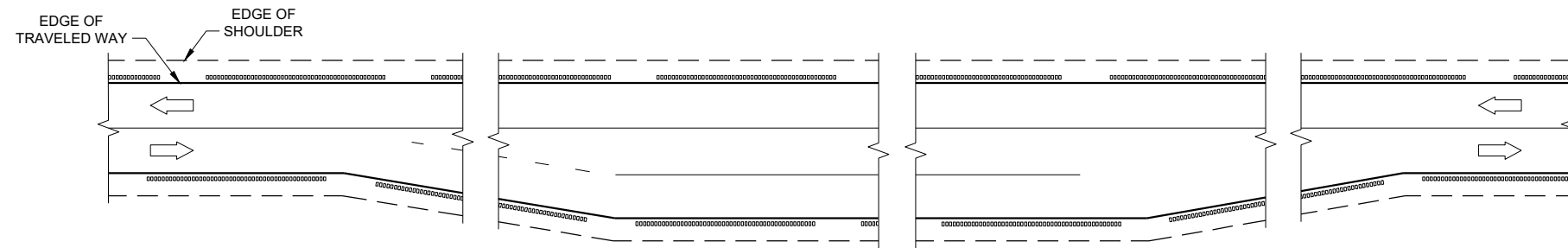
- ① SHOULDER GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS. WHEN DIRECTED BY THE ENGINEER.

**SHOULDER AND EDGE LINE
RUMBLE STRIPS
CROSSINGS, INTERSECTIONS,
BRIDGES, DRIVEWAYS**

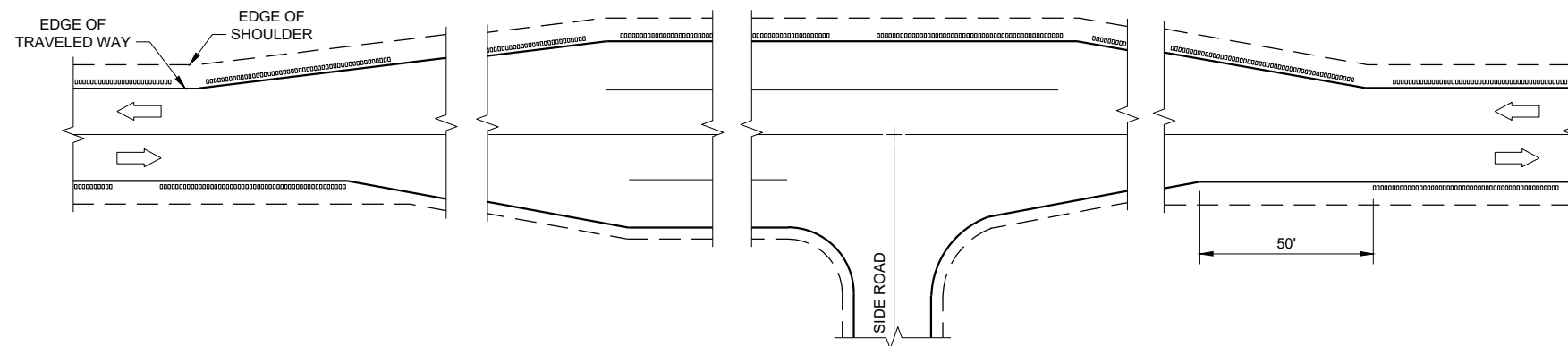
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



GROOVES AT RAILROADS



GROOVES AT PASSING AND CLIMBING LANES



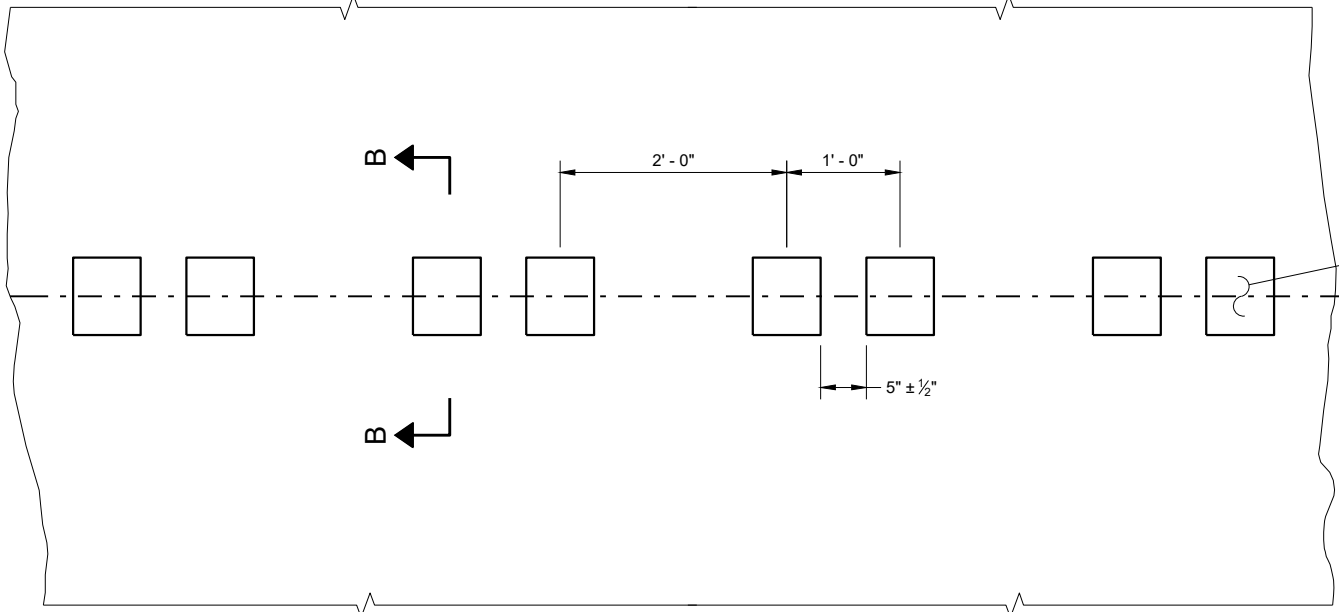
GROOVES AT BYPASS LANES

SHOULDER AND EDGE LINE RUMBLE STRIPS - RAILROAD, PASSING, CLIMBING AND BYPASS LANES	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2023 DATE	/S/ John Jenkins ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA	

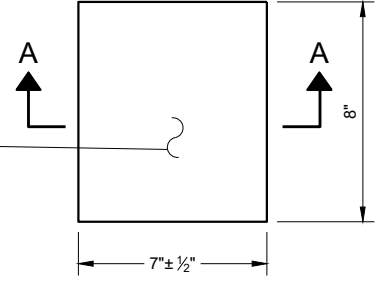
GENERAL NOTES

DO NOT MILL SHOULDER GROOVES THROUGH INTERSECTIONS, MARKED CROSSWALKS, NON-MOTORIZED PATH CROSSINGS, ETC. REFER TO SDD 13A11 SHEETS "d" AND "e".

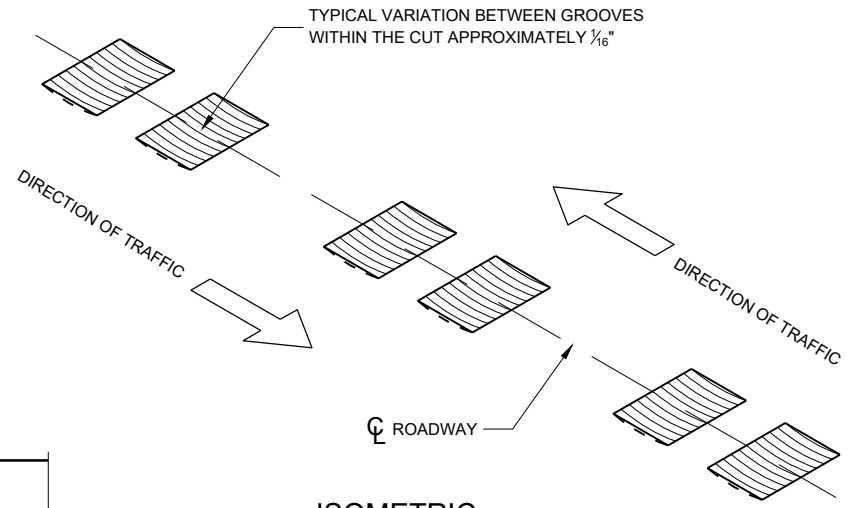
CENTERLINE GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS WHEN DIRECTED BY THE ENGINEER.



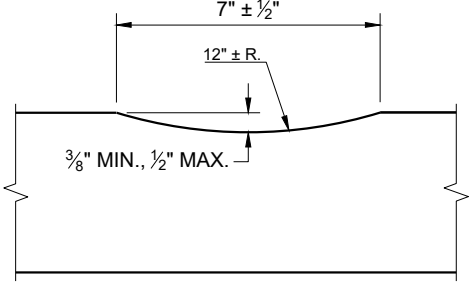
PLAN DETAIL VIEW



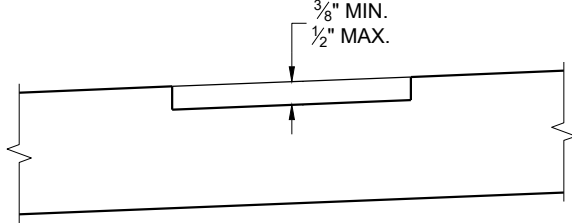
PLAN VIEW (SINGLE GROOVE)



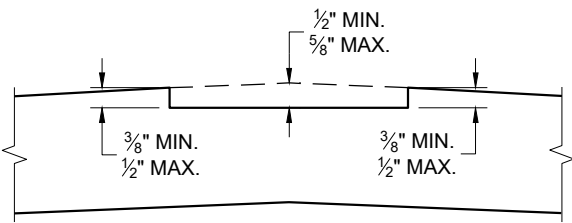
ISOMETRIC



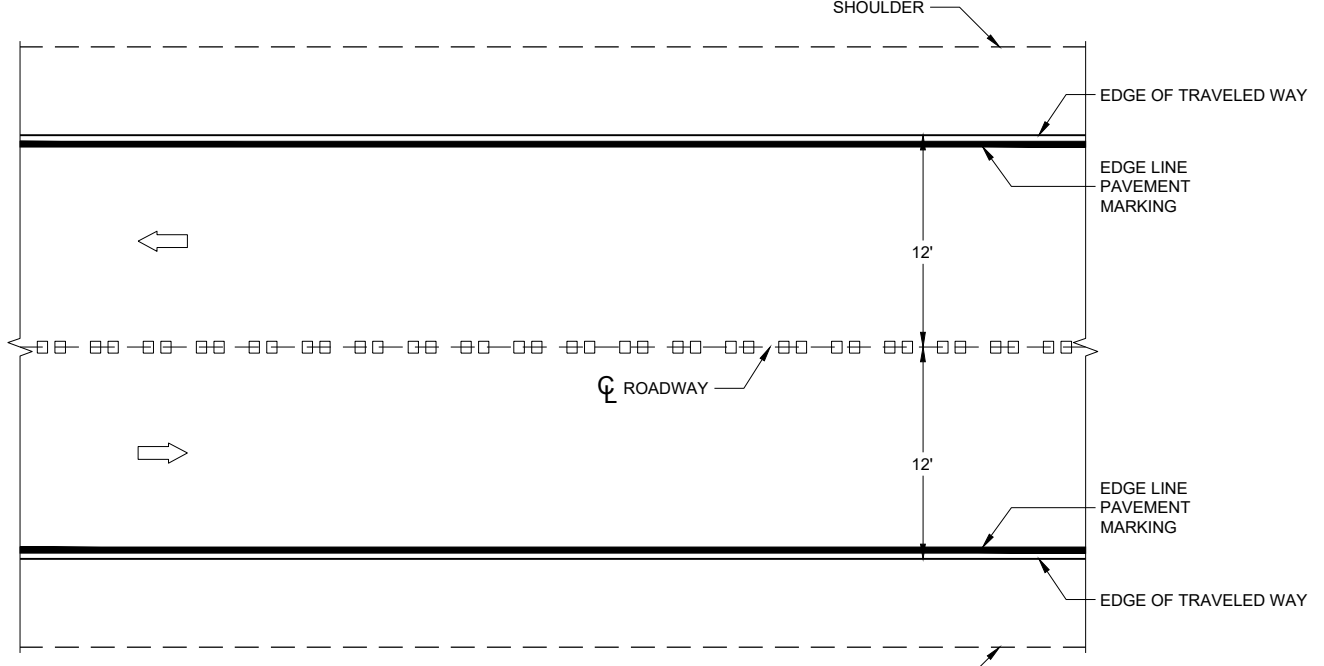
SECTION A - A



SECTION B - B SUPERELEVATED ROADWAY



SECTION B - B CROWNED ROADWAY



PLAN VIEW

CENTERLINE RUMBLE STRIPS - ASPHALT

CENTERLINE RUMBLE STRIPS - ASPHALT
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

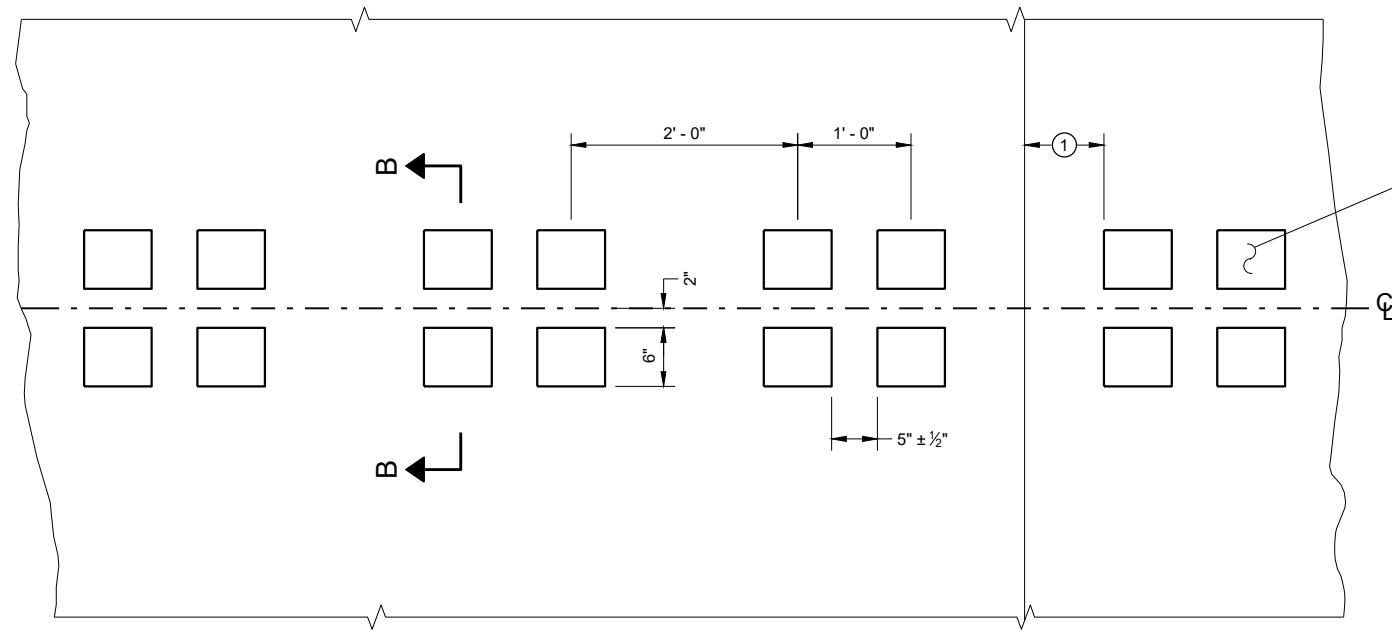
GENERAL NOTES

SDD 13A11, SHEET "d" SHOWS THE LOCATION OF RUMBLE STRIPS AT INTERSECTIONS, INTERSECTIONS WITH LEFT TURN LANES, BRIDGES, COMMERCIAL AND RESIDENTIAL DRIVEWAYS AND RAILROAD CROSSINGS.

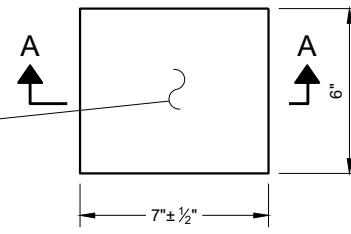
TEMPORARY PAVEMENT MARKINGS ARE TYPICALLY PLACED PRIOR TO RUMBLE STRIP INSTALLATION. PERMANENT MARKINGS ARE INSTALLED AFTER RUMBLE STRIP INSTALLATION.

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

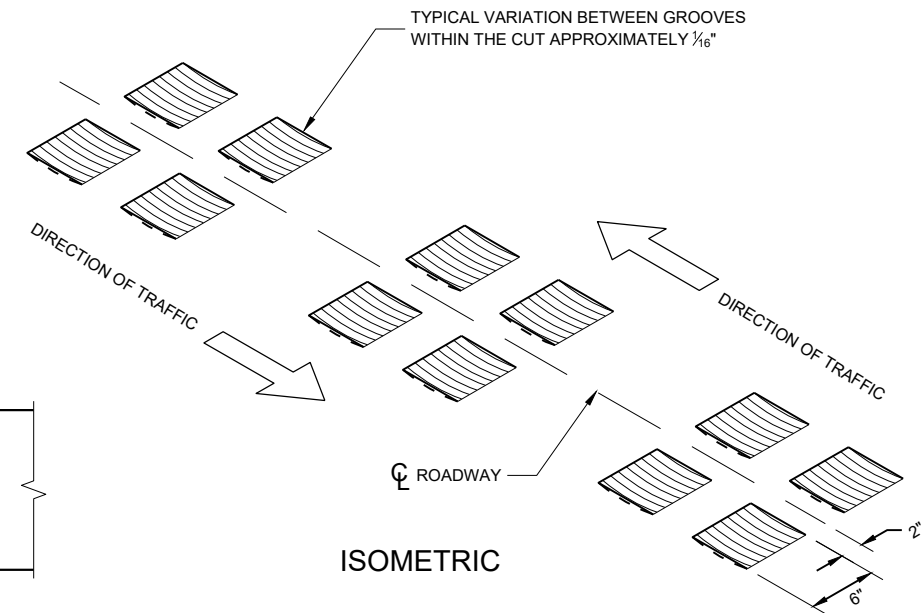
① CONCRETE PAVEMENT RUMBLE STRIPS SHALL BE A MINIMUM OF 6 INCHES FROM TRANSVERSE JOINTS.



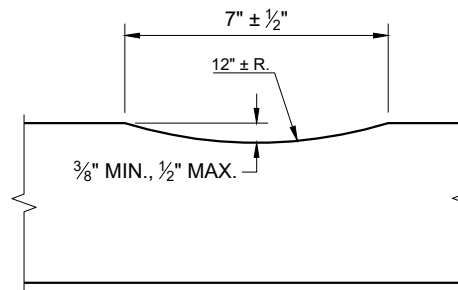
PLAN DETAIL VIEW



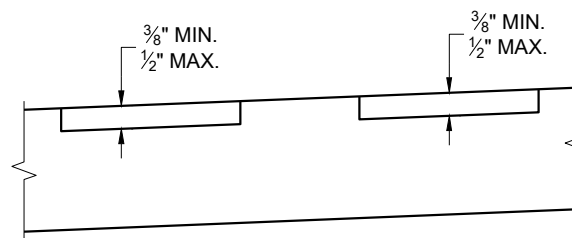
**PLAN VIEW
(SINGLE GROOVE)**



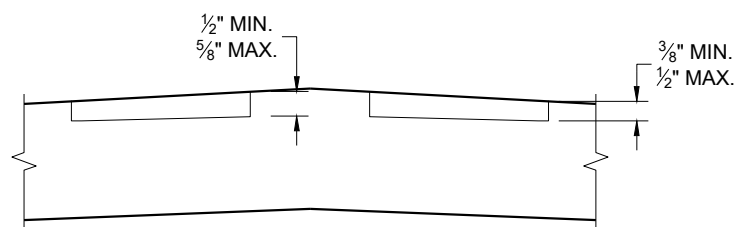
ISOMETRIC



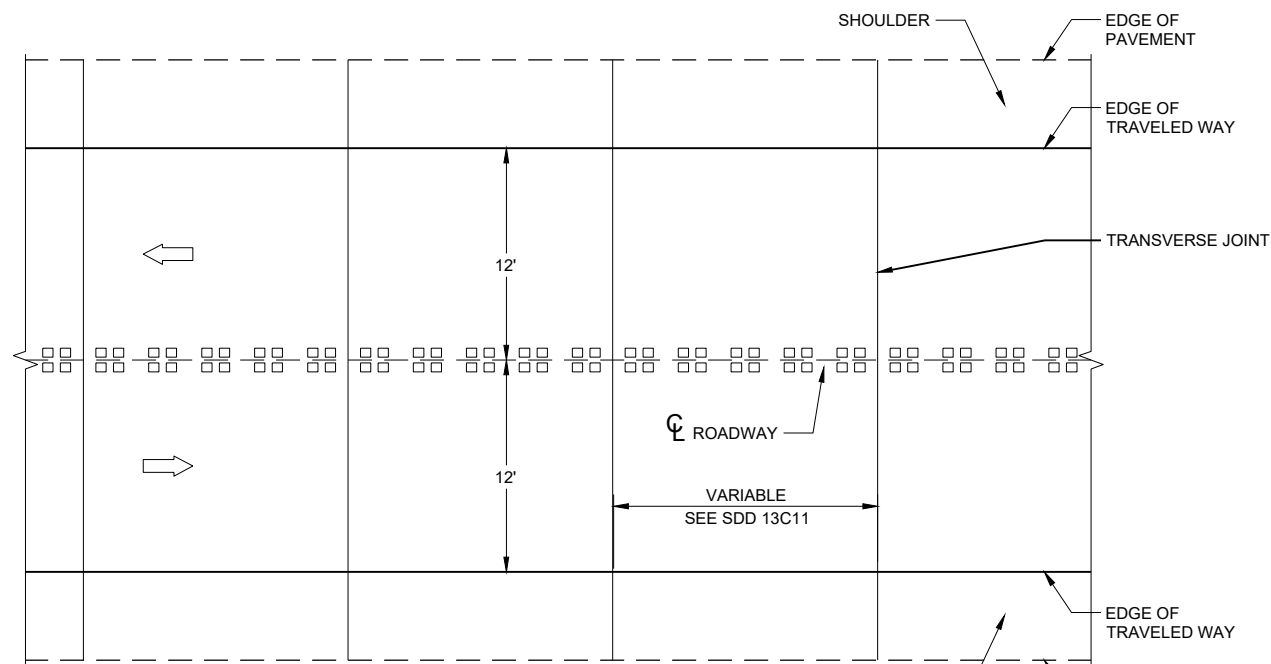
SECTION A - A



**SECTION B - B
SUPERELEVATED ROADWAY**



**SECTION B - B
CROWNED ROADWAY**

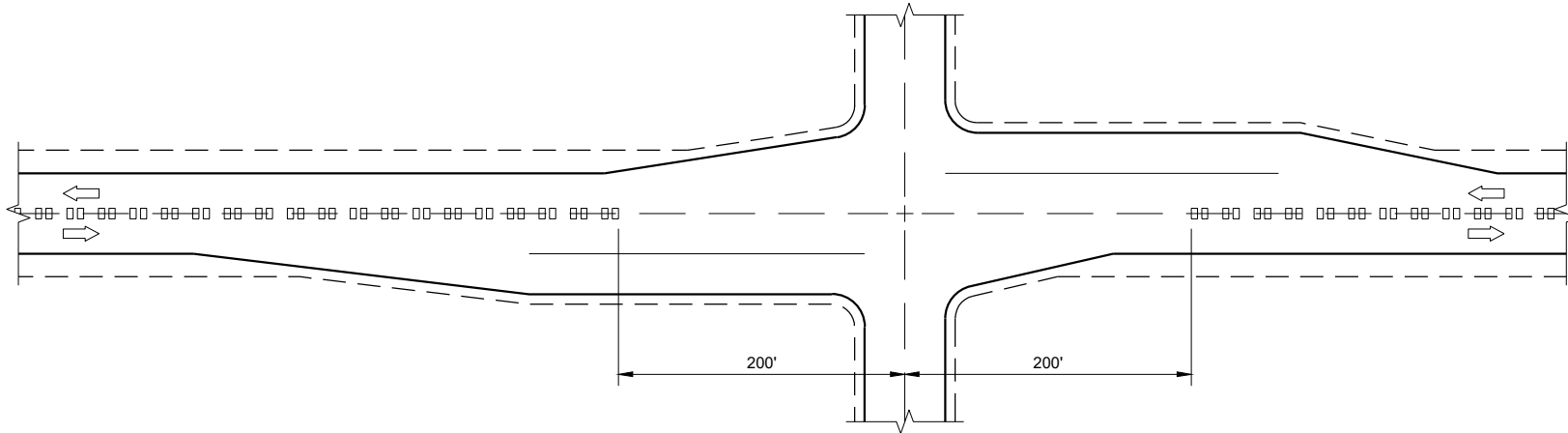


PLAN VIEW

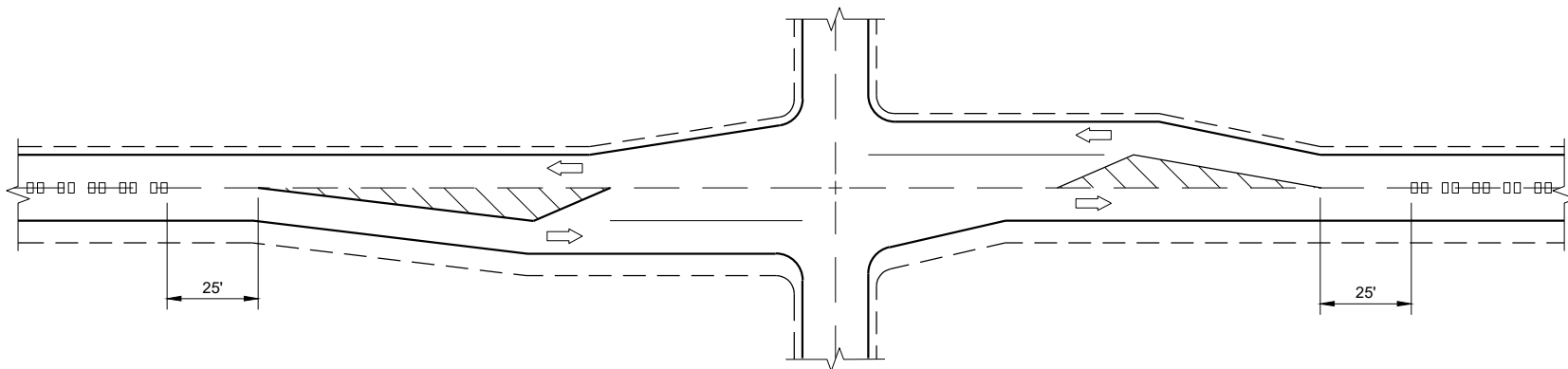
CENTERLINE RUMBLE STRIPS - CONCRETE

CENTERLINE RUMBLE STRIPS - CONCRETE

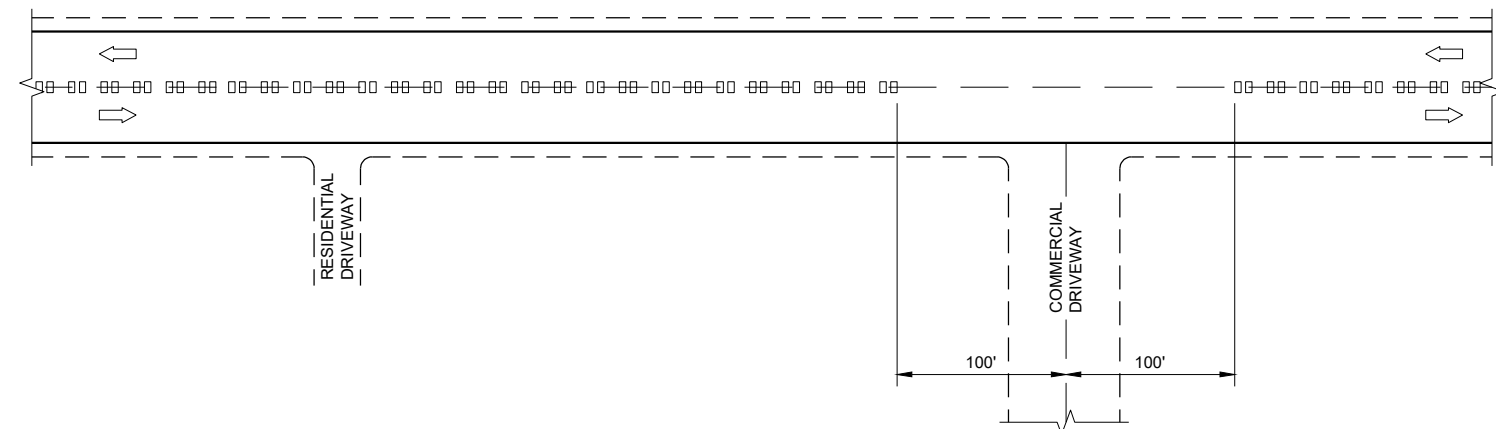
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



CENTERLINE GROOVES AT INTERSECTIONS



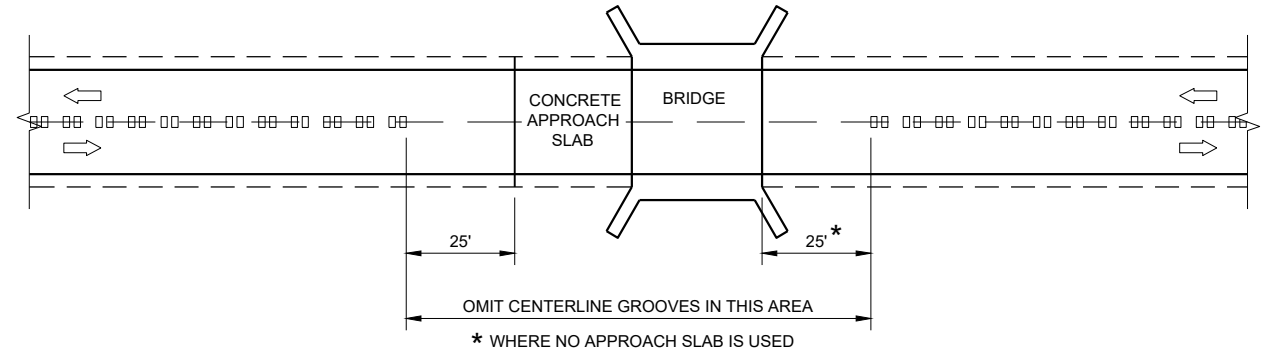
**CENTERLINE GROOVES AT INTERSECTIONS
(WITH LEFT TURN LANES)**



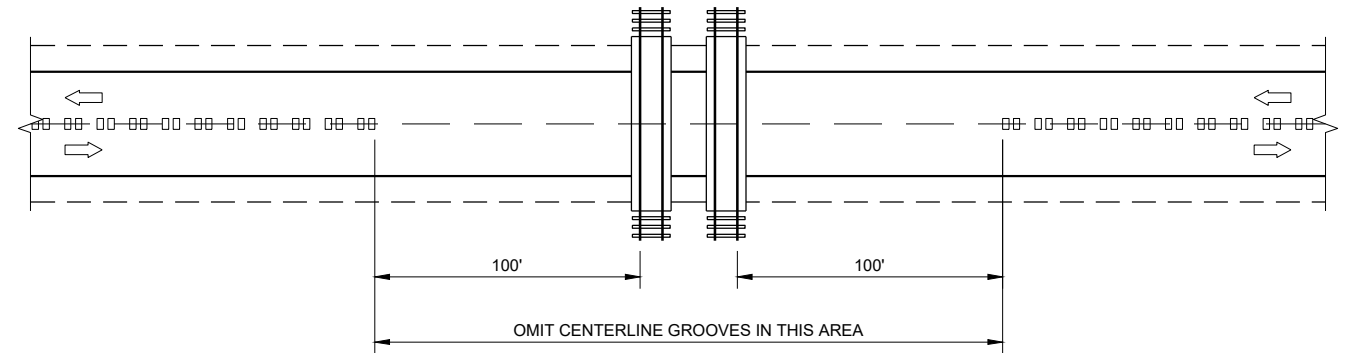
CENTERLINE GROOVES AT DRIVEWAYS^①

GENERAL NOTES

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

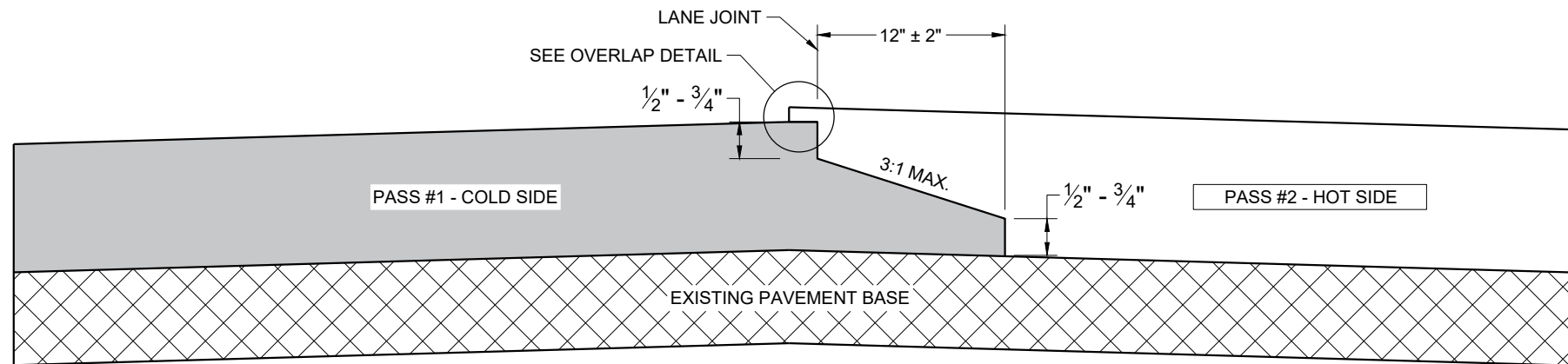


CENTERLINE GROOVES AT BRIDGES

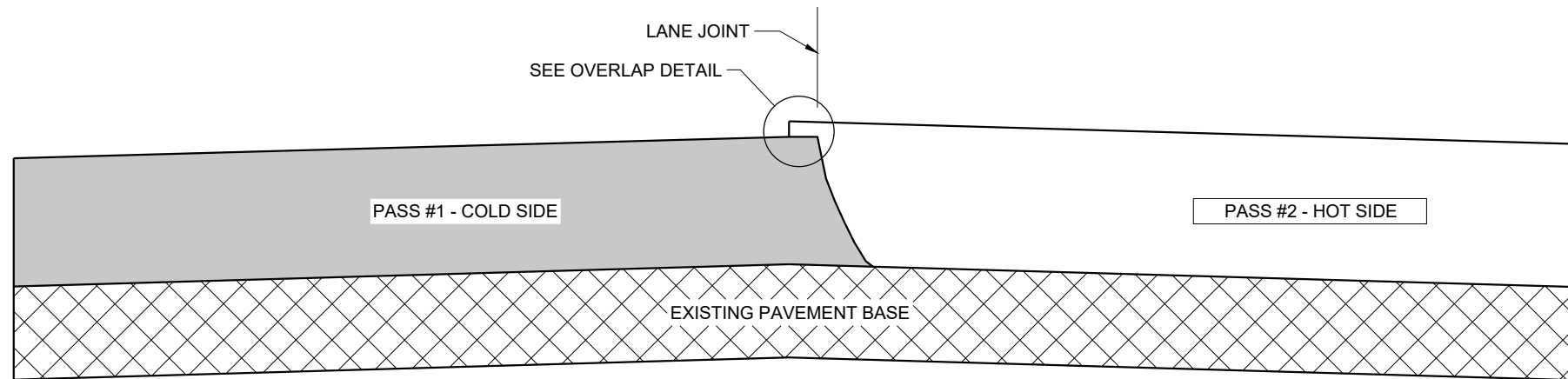


CENTERLINE GROOVES AT RAILROADS

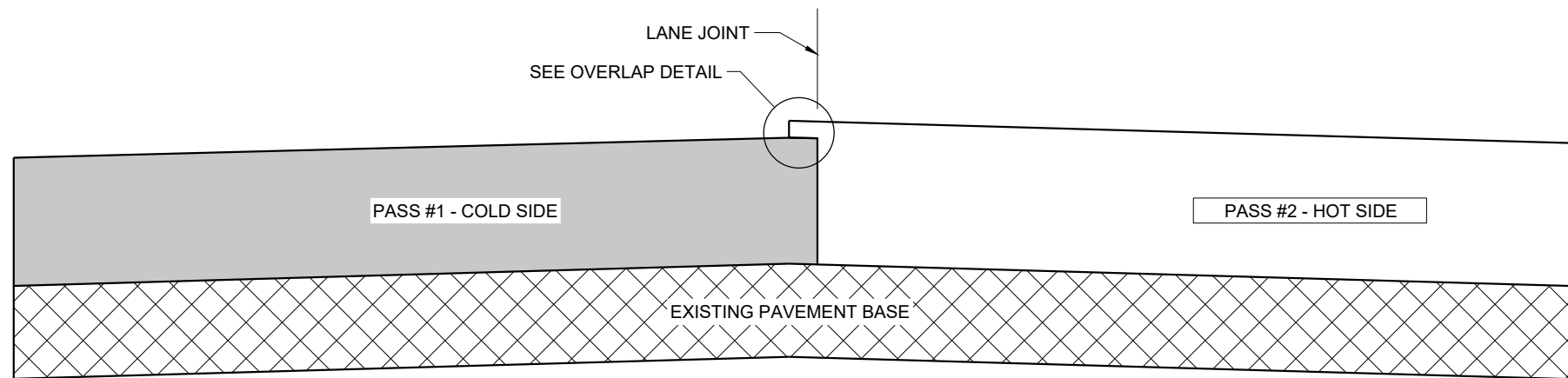
CENTER LINE RUMBLE STRIPS - INTERSECTIONS, DRIVEWAYS, BRIDGES, RAIL ROADS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2023 DATE	/S/ John Jenkins ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA	



**TYPICAL PAVEMENT CROSS SECTION
NOTCHED WEDGE JOINT**



**TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT**



**TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT (MILLED)**

GENERAL NOTES

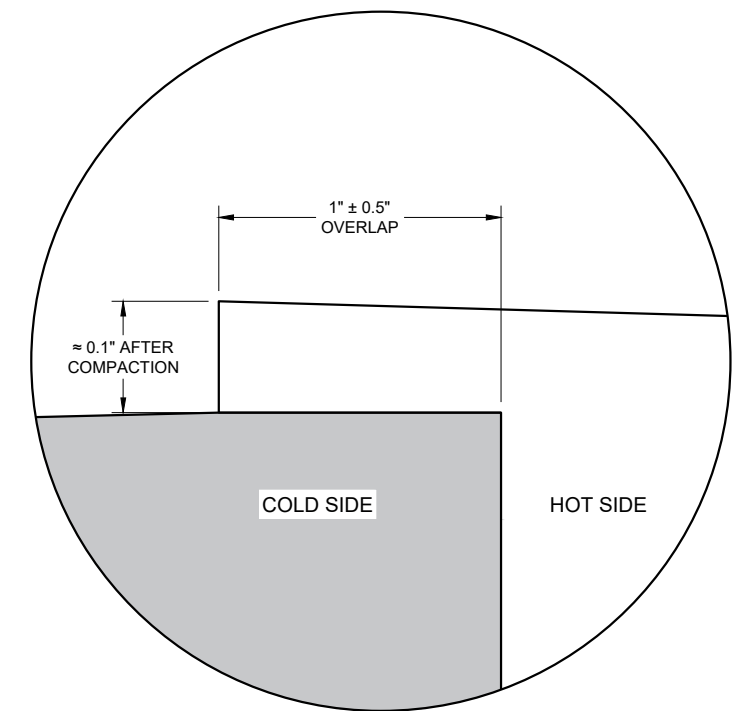
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

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

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

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

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



OVERLAP DETAIL (TYPICAL)

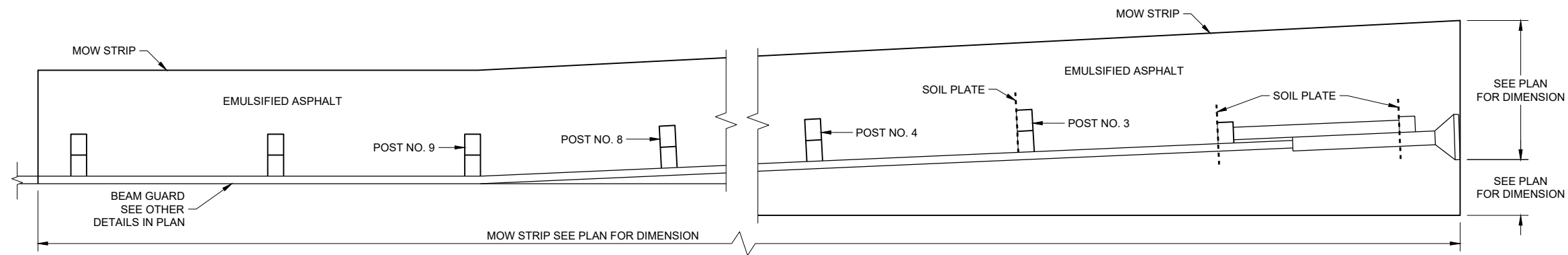
6

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SDD 13C19 - 03

SDD 13C19 - 03

HMA LONGITUDINAL JOINTS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED November 2020 DATE	/S/ Steven Hefel HMA PAVEMENT ENGINEER
FHWA	

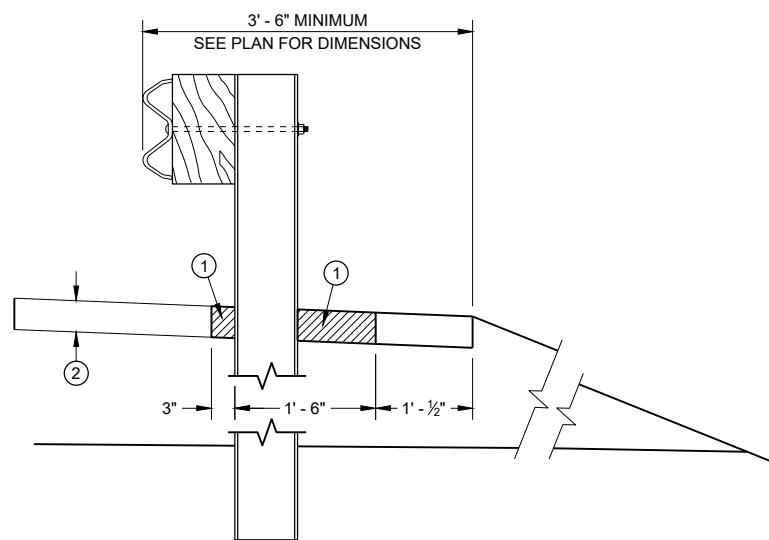


PLAN VIEW
MOW STRIP LAYOUT FOR ENERGY ABSORBING TERMINAL

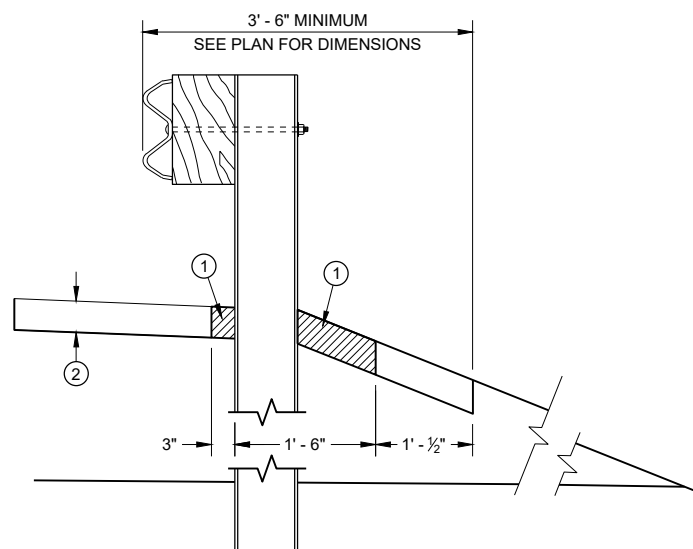
GENERAL NOTES

ONLY USE STEEL POSTS IN CONCRETE AND ASPHALT MOW STRIPS.

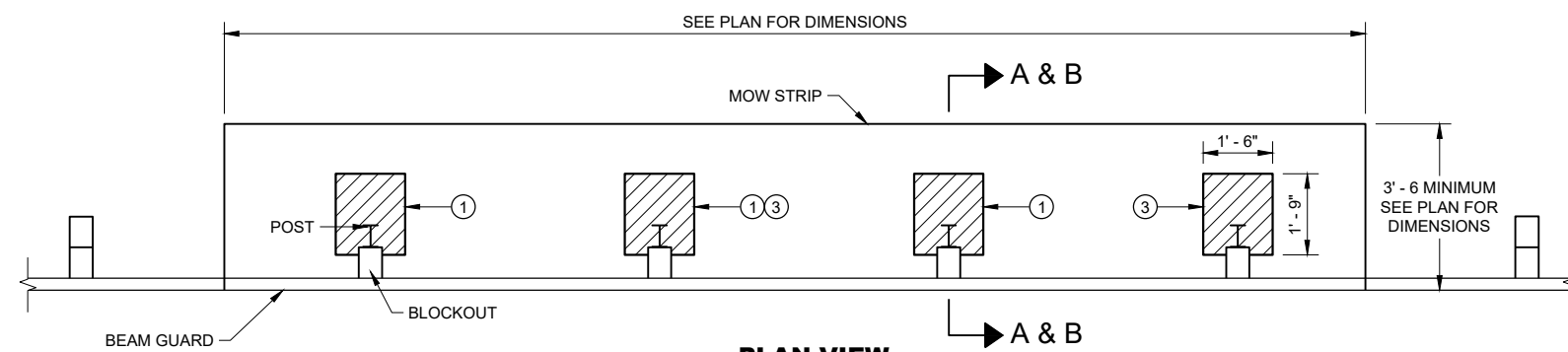
- ① CONTROLLED LOW-STRENGTH BACKFILL OR EMULSIFIED ASPHALT.
- ② DEPTH OF MOW STRIP:
ASPHALT - 4"
CONCRETE - 4"
EMULSIFIED ASPHALT - 1" OR LESS
- ③ FOR EMULSIFIED ASPHALT, MOW STRIP STRIP LEAVE OUTS NOT REQUIRED. (TYPICAL FOR ALL POSTS)



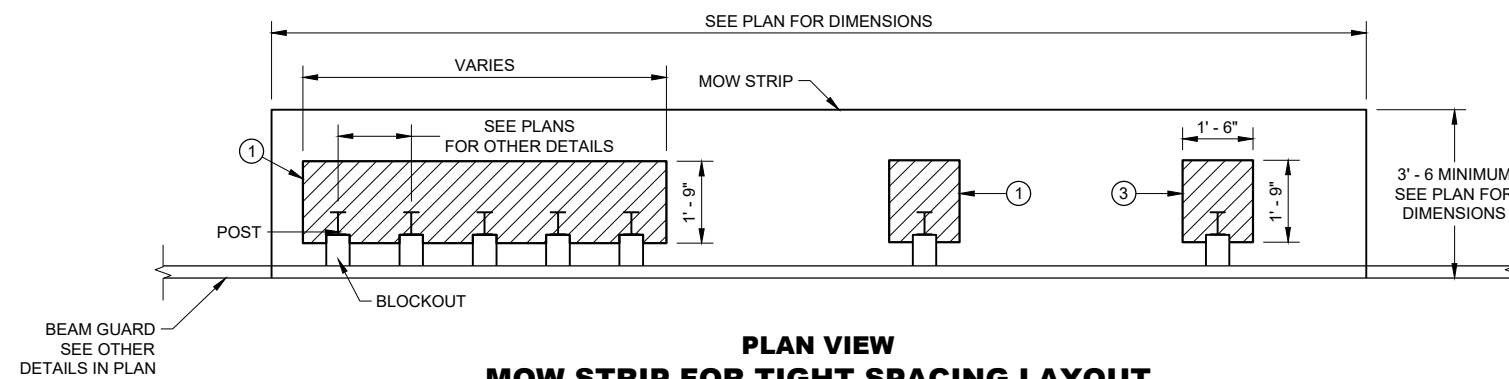
SECTION A - A



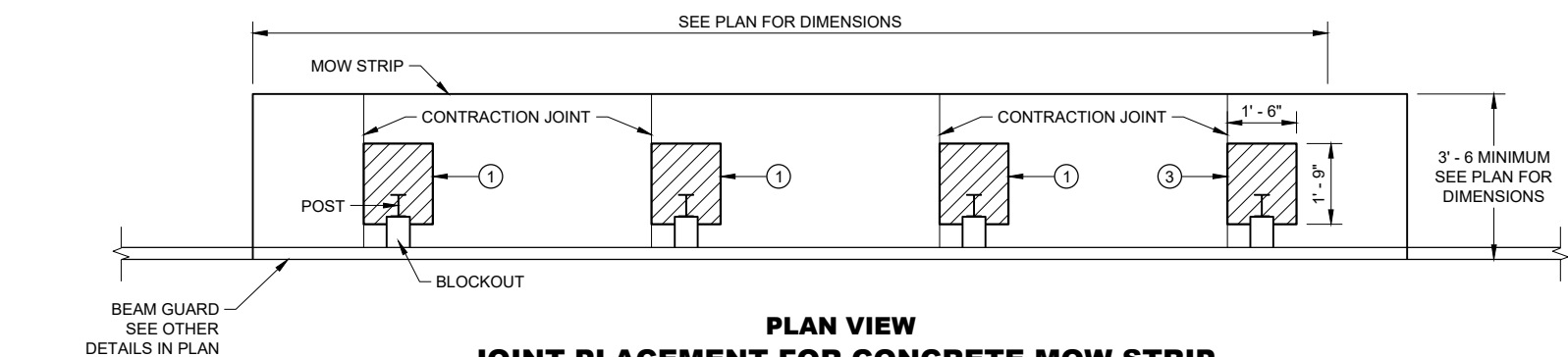
SECTION B - B



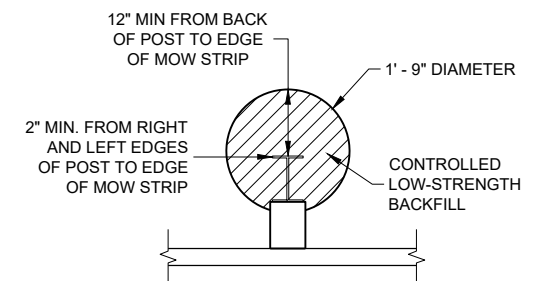
PLAN VIEW
MOW STRIP FOR TYPICAL BLOCKOUT LAYOUT



PLAN VIEW
MOW STRIP FOR TIGHT SPACING LAYOUT



PLAN VIEW
JOINT PLACEMENT FOR CONCRETE MOW STRIP



ALTERNATIVE HMA
MOW STRIP DESIGN

GUARDRAIL MOW STRIP

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

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SDD 14B28 - 04a

SDD 14B28 - 04a

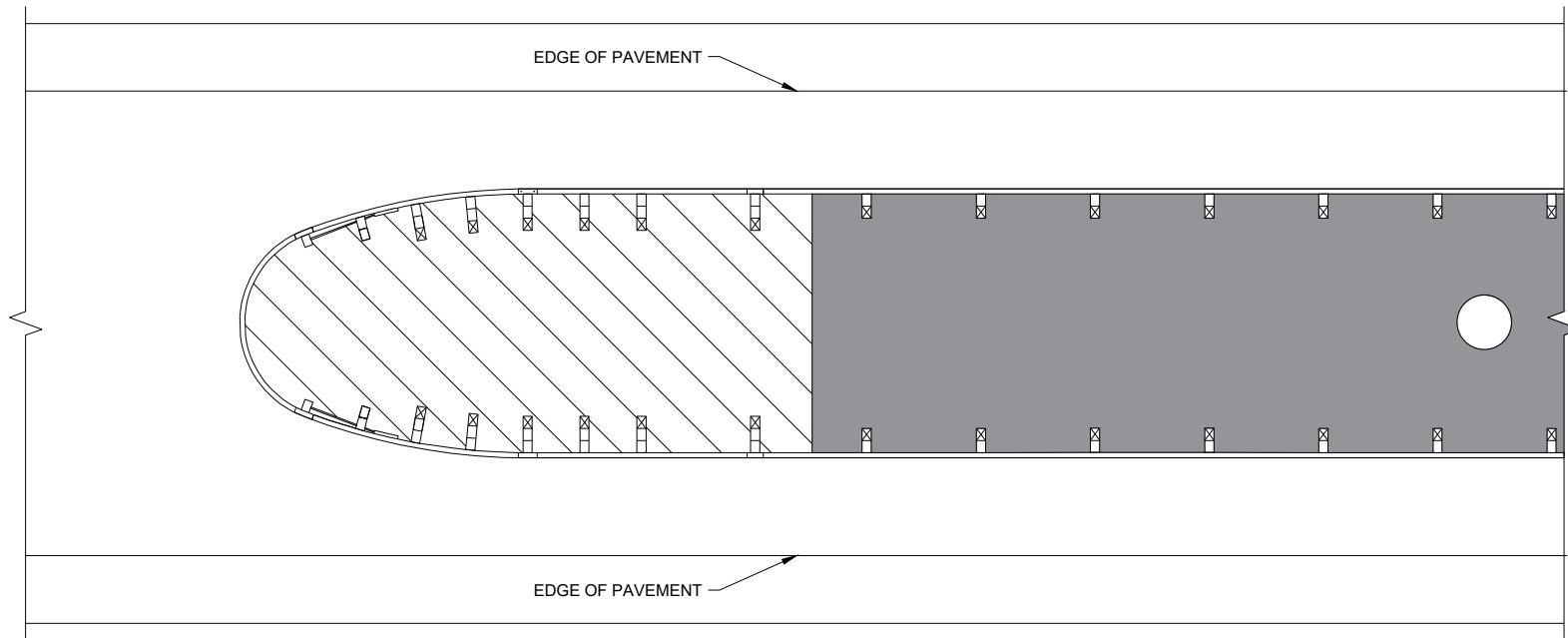
LEGEND

 CONCRETE, ASPHALT, OR EMULSIFIED ASPHALT MOW STRIP (SEE OTHER DETAILS)

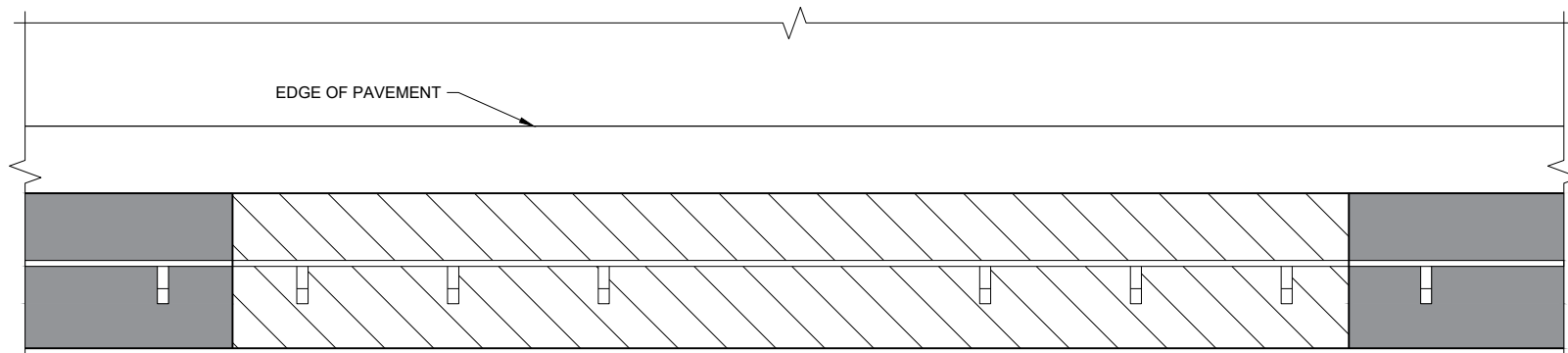
 EMULSIFIED ASPHALT MOW STRIP (SEE OTHER DETAILS)

GENERAL NOTES

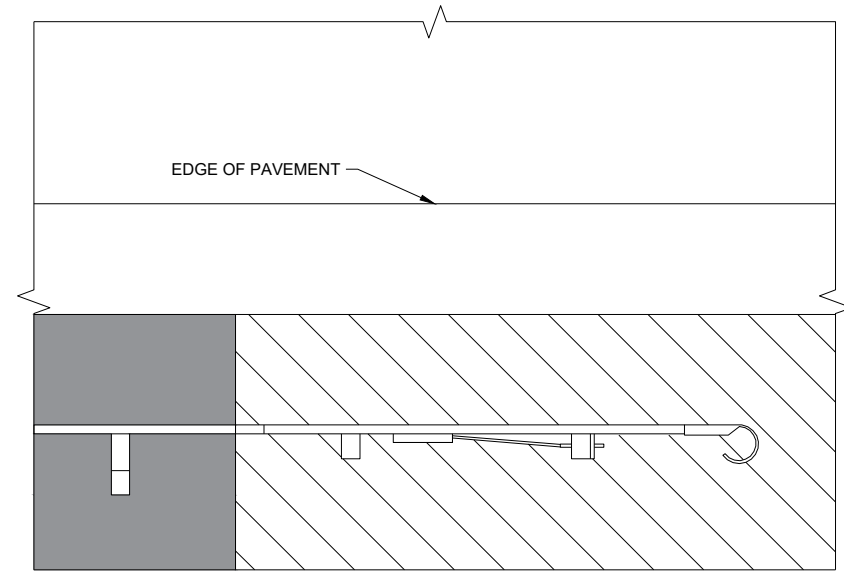
EXISTING THRIE BEAM BULLNOSES MAY HAVE WOOD POSTS. NEW THRIE BEAM BULLNOSE WILL HAVE STEEL POSTS.



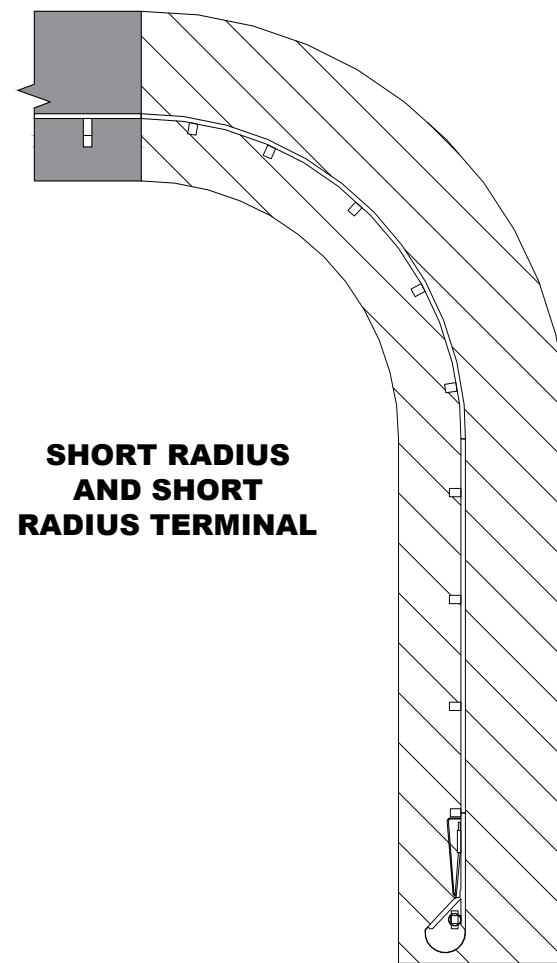
THRIE BEAM BULLNOSE



LONG - SPAN



TYPE 2 TERMINAL



**SHORT RADIUS
AND SHORT
RADIUS TERMINAL**

6

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SDD 14B28 - 04b

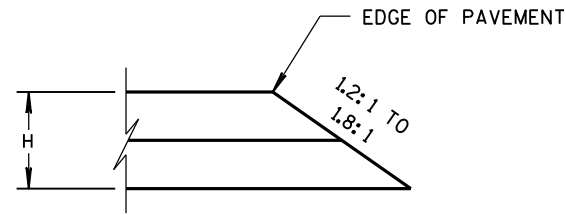
SDD 14B28 - 04b

GUARDRAIL MOW STRIP

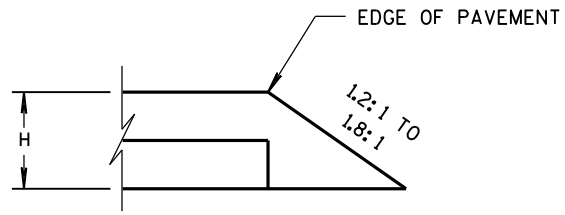
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
August 2020 DATE /S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
ENGINEER

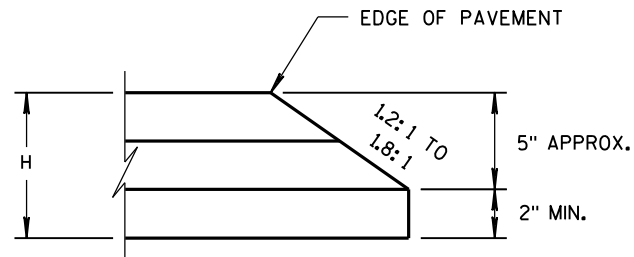
FHWA



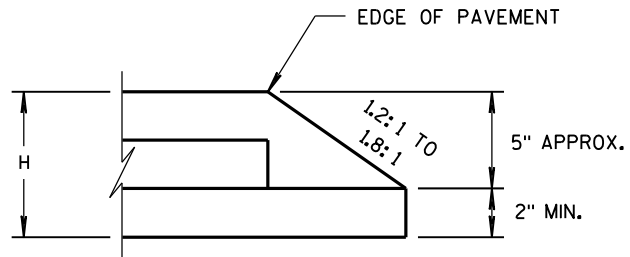
CONSTRUCTED WITH FINAL TWO LAYERS
FOR H 5" OR LESS



CONSTRUCTED WITH FINAL LAYER
FOR H 5" OR LESS

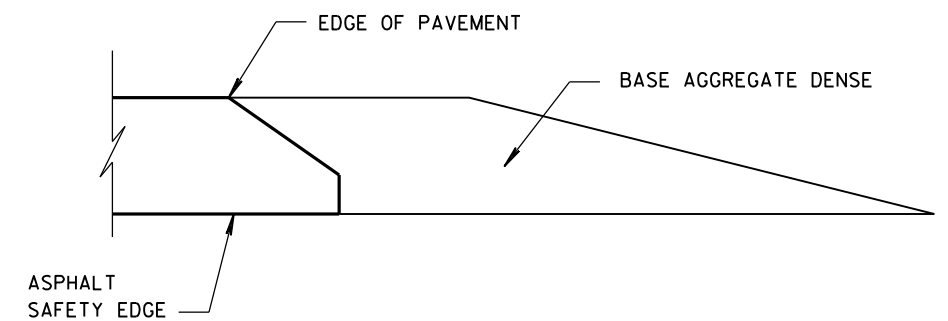


CONSTRUCTED WITH FINAL TWO LAYERS
FOR H GREATER THAN 5"



CONSTRUCTED WITH FINAL LAYER
FOR H GREATER THAN 5"

HMA PAVEMENT AND HMA OVERLAYS



FINISHED SHOULDER AGGREGATE PLACEMENT

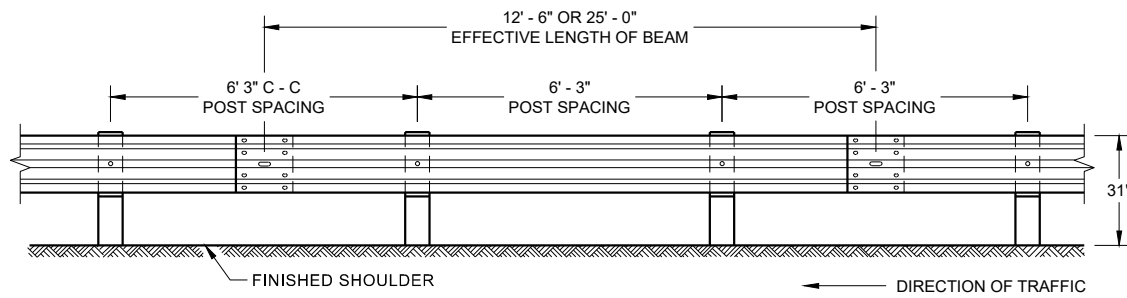
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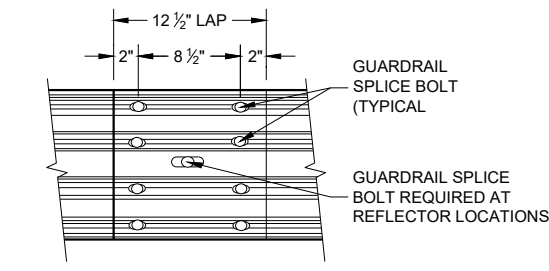
S.D.D. 14 B 29-1

S.D.D. 14 B 29-1

SAFETY EDGE _{SM}	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED DATE	/s/ Jerry H. Zogg ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA	



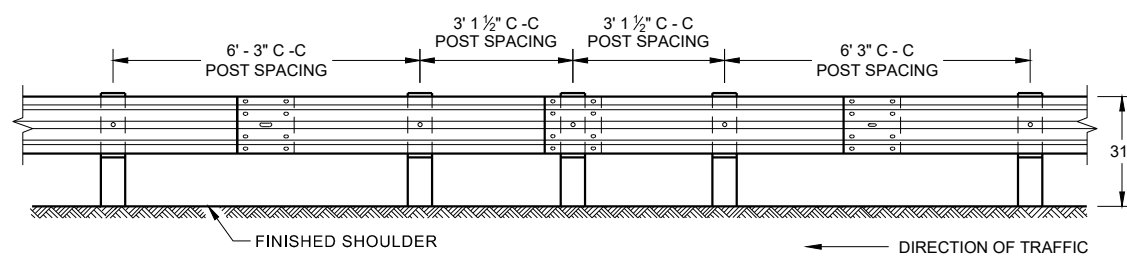
**FRONT VIEW
POST SPACING STANDARD INSTALLATION**



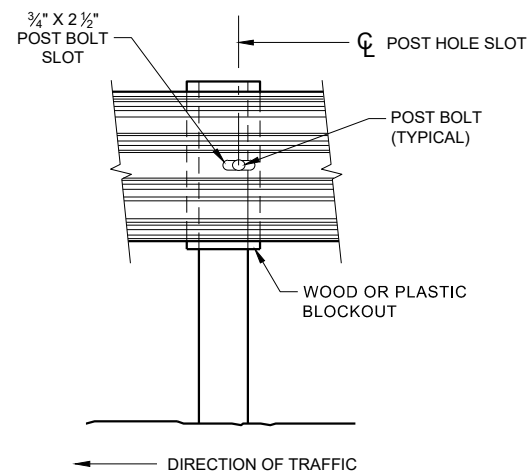
**FRONT VIEW
MID-SPAN BEAM SPLICE**

GENERAL NOTES

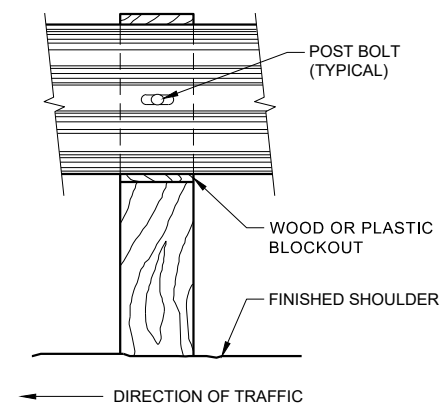
- ⑧ DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.
 - ⑨ 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.
- POST BOLTS ARE A 3/8" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES 3/4" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND 3/8" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.
- GUARD RAIL SPLICE BOLTS ARE A 3/8" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES 3/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.



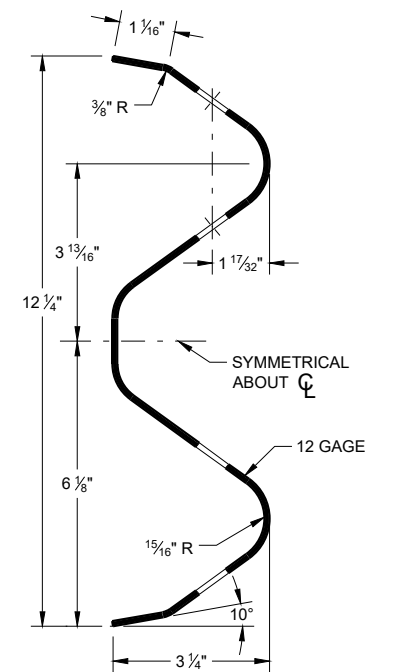
**FRONT VIEW
HALF POST SPACING (HS) AND
HALF POST SPACING WITH LONGER POSTS (K)**



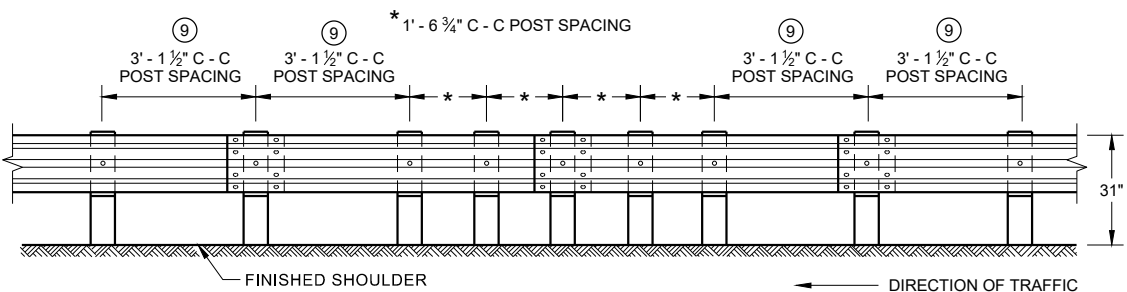
FRONT VIEW AT STEEL POST



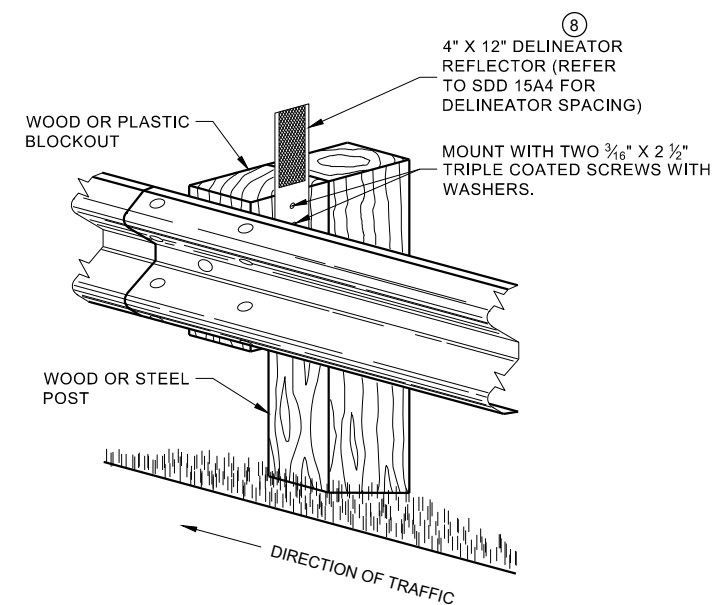
FRONT VIEW AT WOOD POST



SECTION THRU W-BEAM RAIL



**FRONT VIEW
QUARTER POST SPACING (QS)**



**ONE SIDED REFLECTOR DETAIL
AND TYPICAL INSTALLATION**

**MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL**

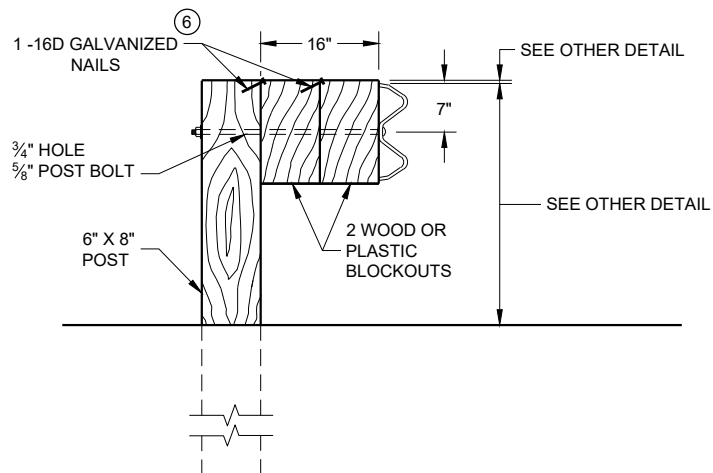
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

6

SDD 14B42 - 07b

SDD 14B42 - 07b

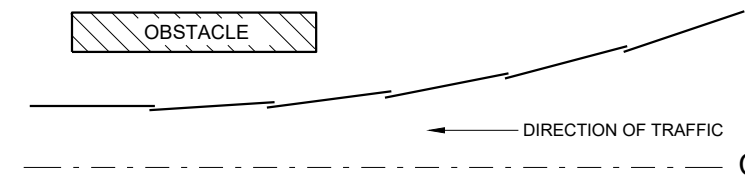
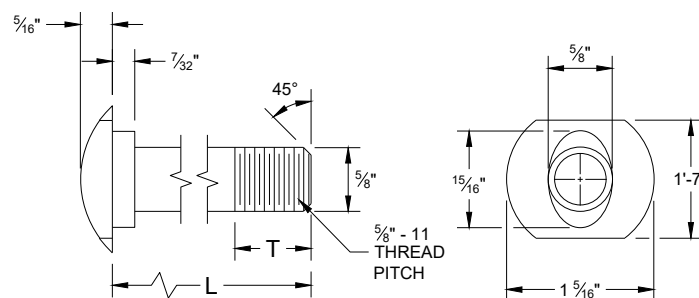


DETAIL FOR 16" BLOCKOUT DEPTH

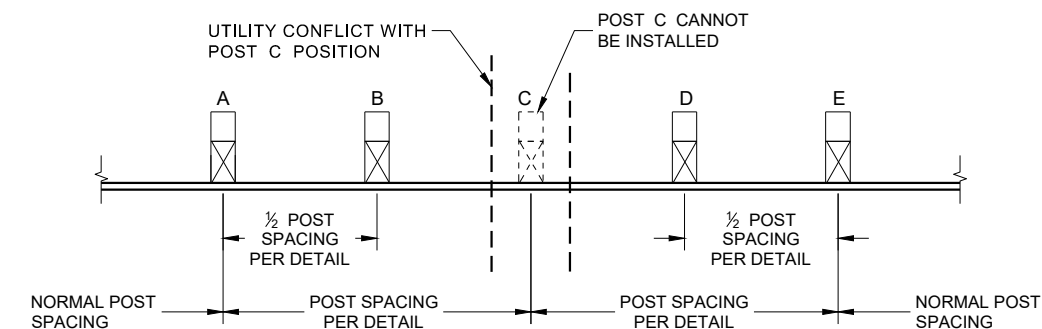
IT IS ACCEPTABLE TO USE BLOCKOUTS UP TO 16" DEEP TO INCREASE THE POST OFFSET TO AVOID UNDERGROUND OBSTACLES. THERE IS NO LIMIT TO THE NUMBER OF POSTS THAT CAN HAVE ADDITIONAL BLOCKOUTS UP TO 16" DEEP.

NOTE:

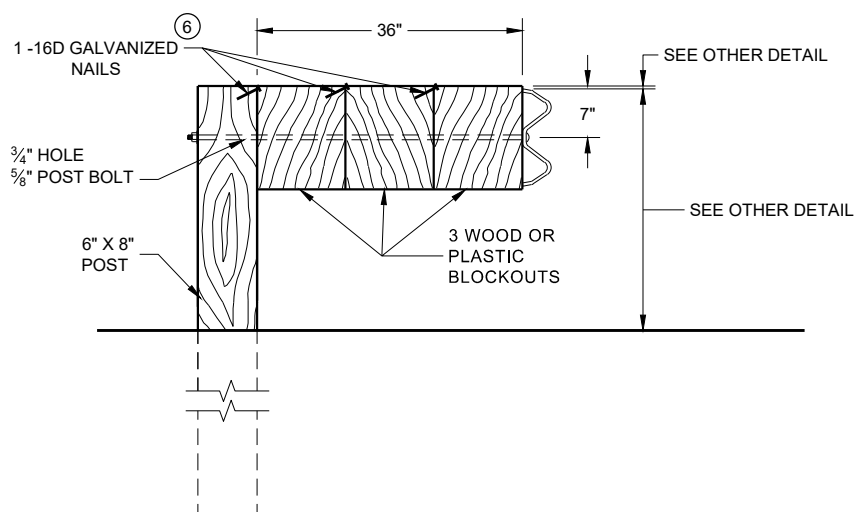
1. ALL FILLETS SHALL HAVE A MINIMUM RADIUS OF 3/16".
2. IF THE BOLT EXTENDS MORE THAN 1/4" FROM THE NUT THE BOLT SHOULD BE TRIMMED BACK.



**PLAN VIEW
BEAM LAPPING DETAIL**



**POST DRIVING FOR CONTINUOUS
UNDERGROUND OBSTRUCTION**

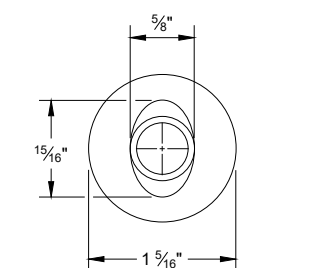


DETAIL FOR 36" BLOCKOUT DEPTH

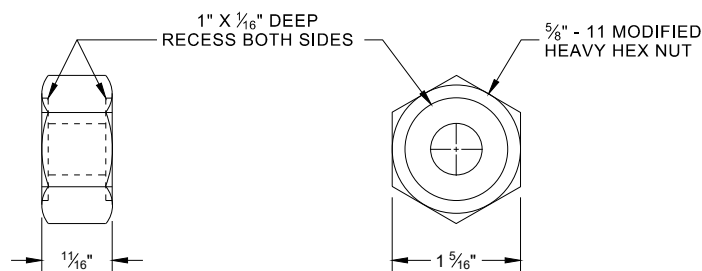
NOTES: UNDER SPECIAL CIRCUMSTANCES, SUCH AS AVOIDING OBSTACLES THAT ARE NOT RELOCATED, IT IS ACCEPTABLE TO INSTALL ADDITIONAL BLOCKOUTS TO OBTAIN UP TO 36" DEPTH FOR ONE OR TWO POSTS IN A SECTION OF GUARDRAIL.
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

POST BOLT TABLE

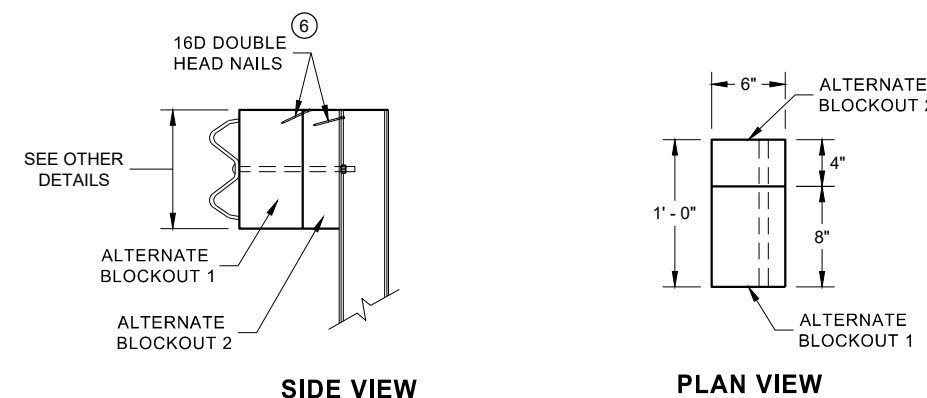
L	T (MIN.)
1 1/4"	1 1/8"
2"	1 3/4"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"



ALTERNATE BOLT HEAD



**POST BOLT, SPLICE BOLT
AND RECESS NUT**

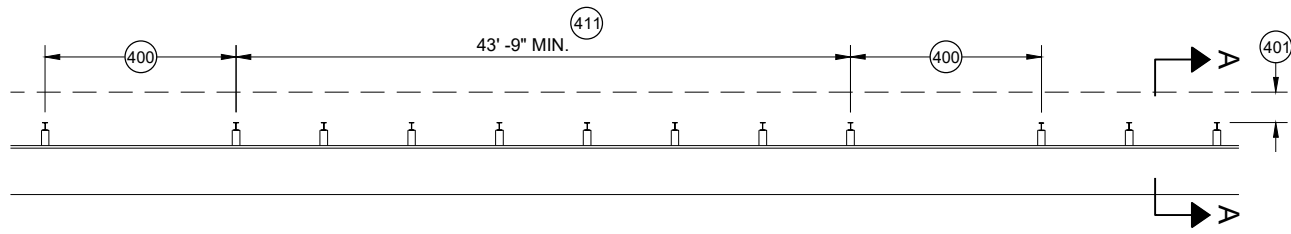


**ALTERNATE WOOD
BLOCKOUT DETAIL**

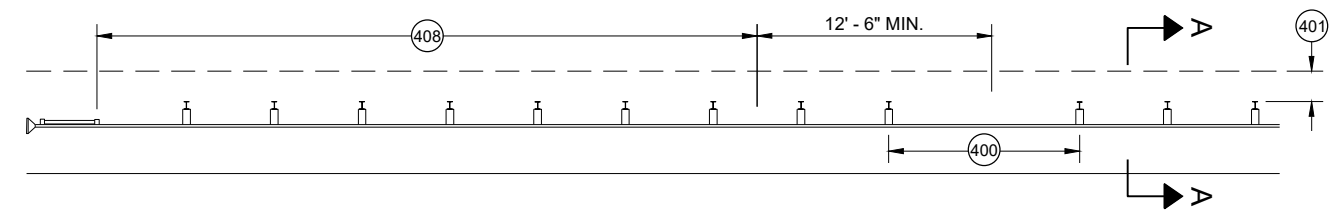
6 WHEN USING STEEL POST AND WOOD BLOCKOUTS, INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

**MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL**

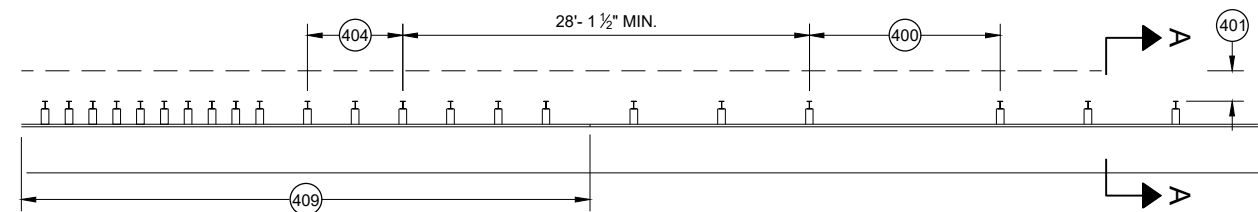
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



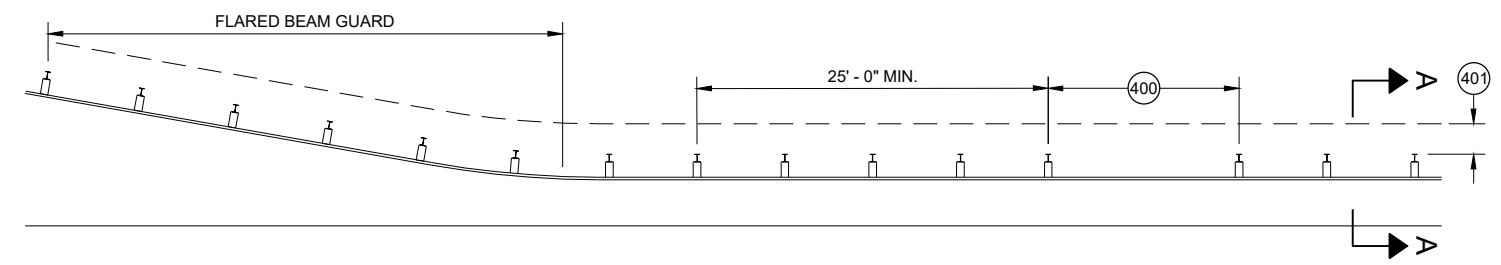
MISSING POST IN MGS GUARDRAIL



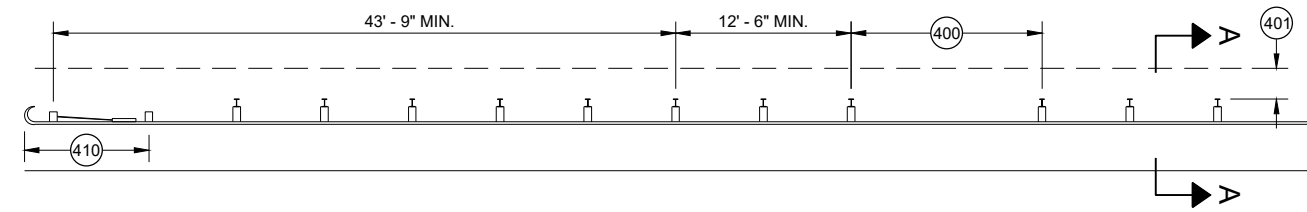
MISSING POST IN MGS GUARDRAIL NEAR EAT



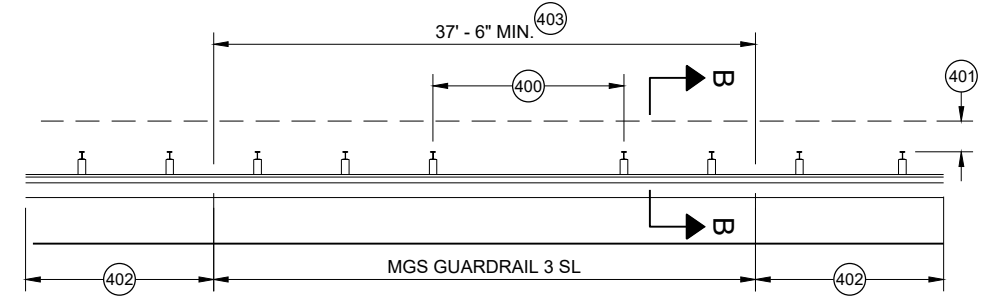
MISSING POST IN MGS GUARDRAIL NEAR AN APPROACH TRANSITION



MISSING POST IN MGS GUARDRAIL NEAR FLARED BEAM GUARD

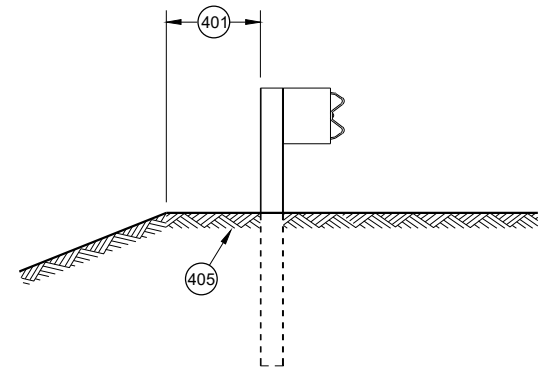


MISSING POST IN MGS GUARDRAIL NEAR A TYPE 2 END TERMINAL

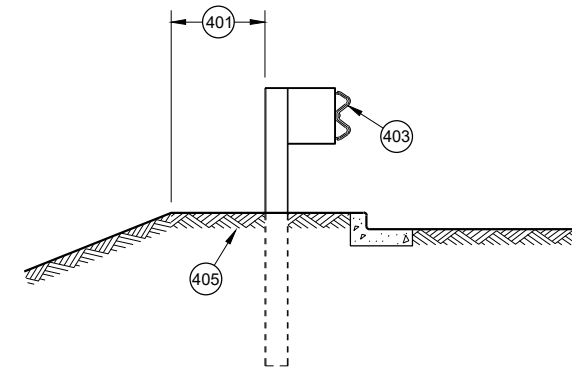


MISSING POST IN SHORT SPAN MGS GUARDRAIL NEAR CURB (SL)

- 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



SECTION B - B

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2021 DATE	/S/ Rodney Taylor ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
<small>FHWA</small>	

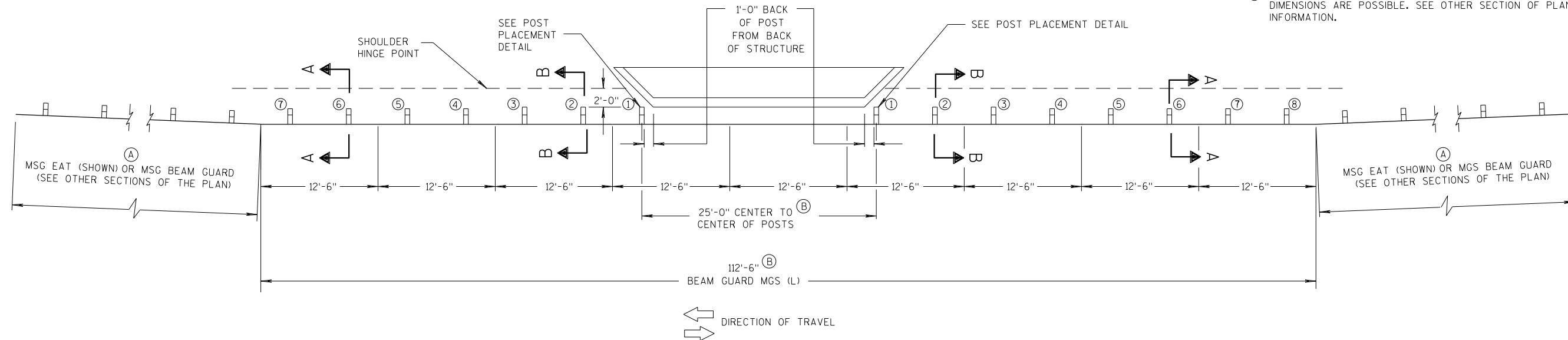
GENERAL NOTES

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

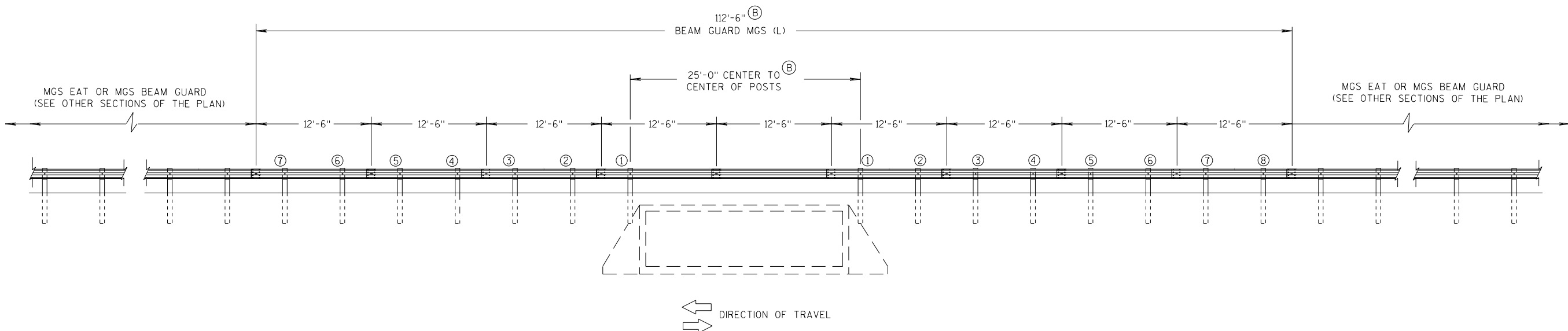
SEE SDD 14 B 42 FOR MORE DETAILS.

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

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



PLAN VIEW



ELEVATION VIEW

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

**MIDWEST GUARDRAIL SYSTEM
LONG SPAN MGS (L)**

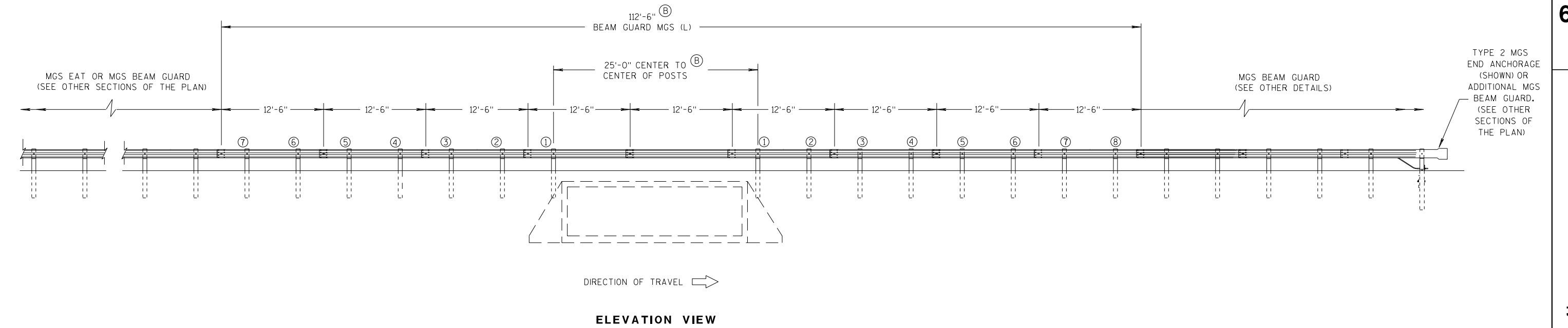
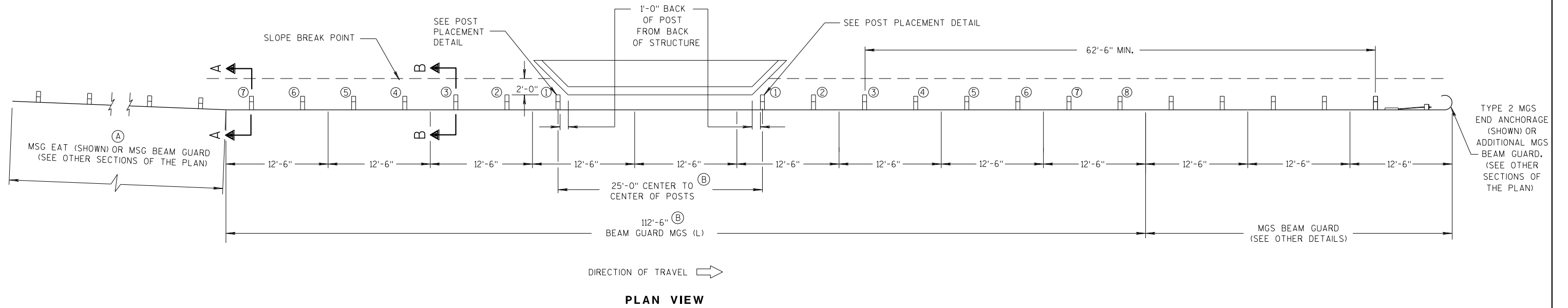
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

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

SEE SDD 14 B 42 FOR MORE DETAILS.

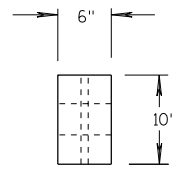
- (A) FLARE FOR MGS EAT SHOWN. IF INSTALLING MGS NO FLARE NEEDED.
- (B) VALUES SHOWN ON DRAWING REPRESENT THE MAXIMUM LENGTH. SHORTER DIMENSIONS ARE POSSIBLE. SEE OTHER SECTION OF PLAN FOR MORE INFORMATION.



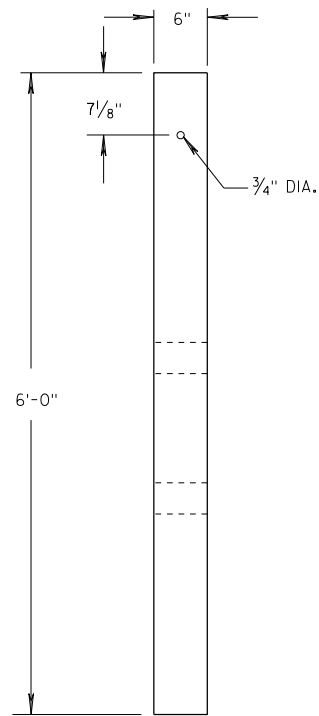
MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L) ONE-WAY TRAFFIC

**MIDWEST GUARDRAIL SYSTEM
LONG SPAN MGS (L)**

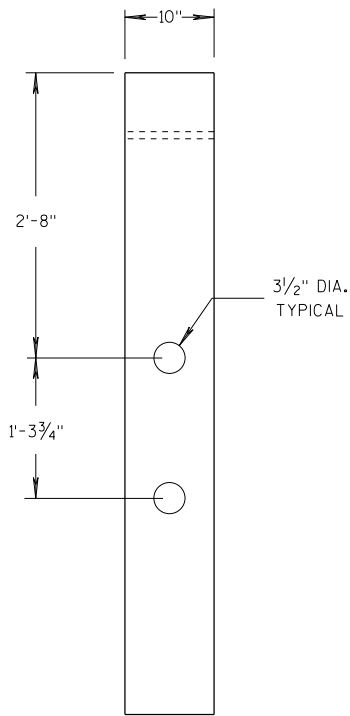
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



PLAN VIEW

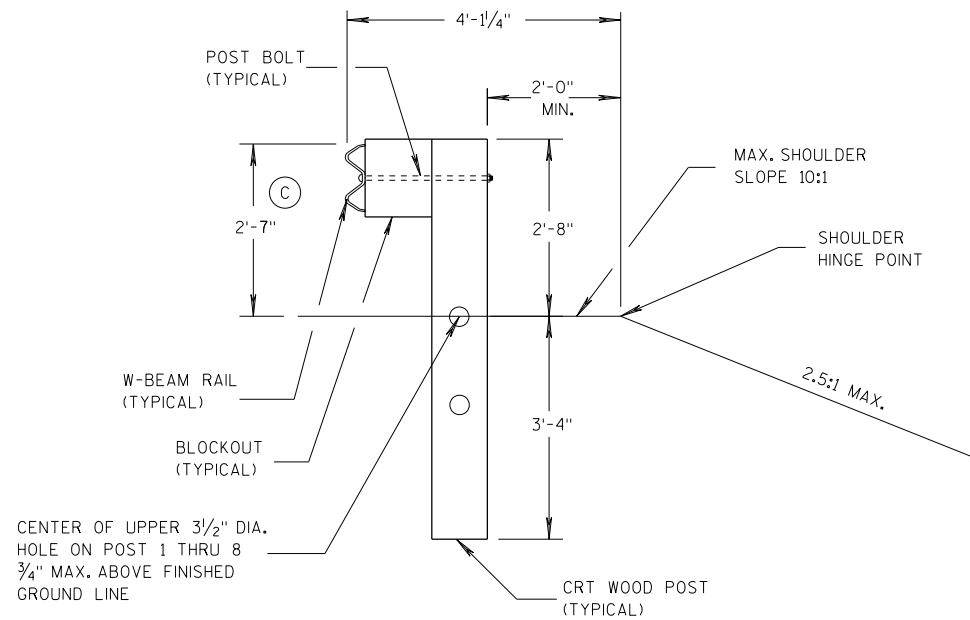


FRONT VIEW

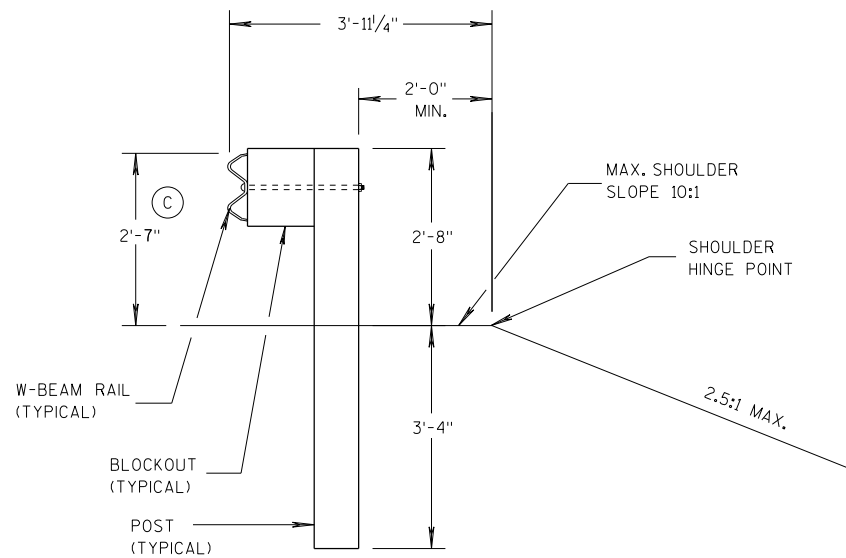


SIDE VIEW

CRT WOOD POST



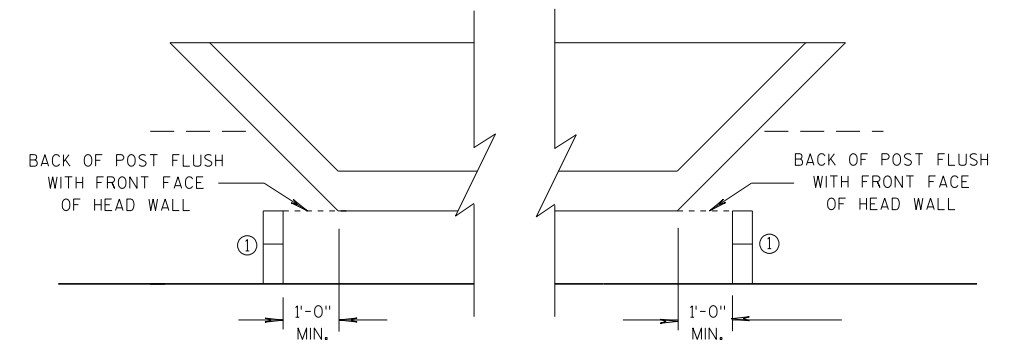
SECTION B-B
POSTS NO. 1-3
SEE OTHER DETAILS



SECTION A-A
POSTS NO. 4-8
SEE OTHER DETAILS

GENERAL NOTES

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



POST PLACEMENT DETAIL

MIDWEST GUARDRAIL SYSTEM
LONG SPAN MGS (L)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED	/S/ Rodney Taylor
DATE	07/2018
FHWA	ROADWAY STANDARDS DEVELOPMENT ENGINEER

GENERAL NOTES

- (A) THE SLOPE IN THE AREA BOUNDED BY THE GRADELINE, THE HINGE POINT LINE 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.

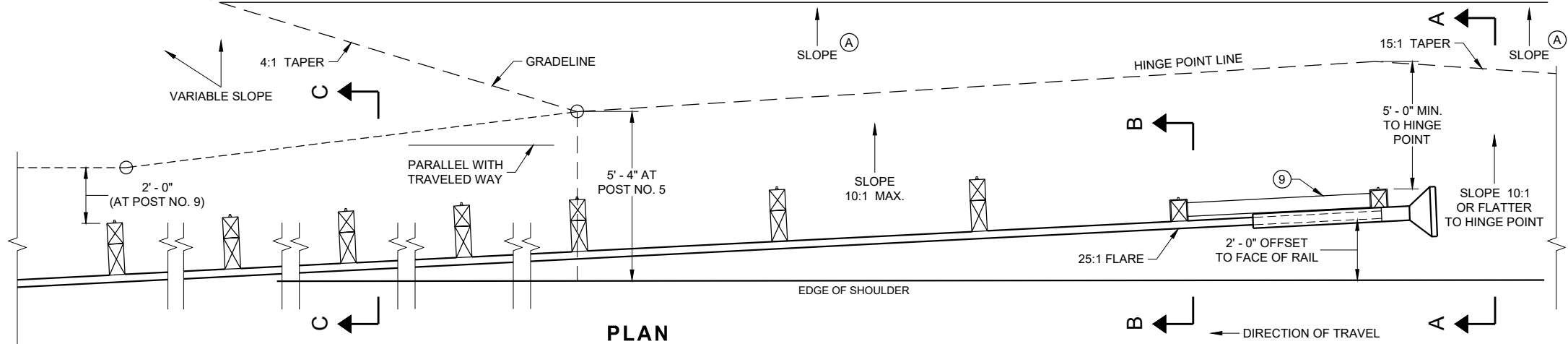
* DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.

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

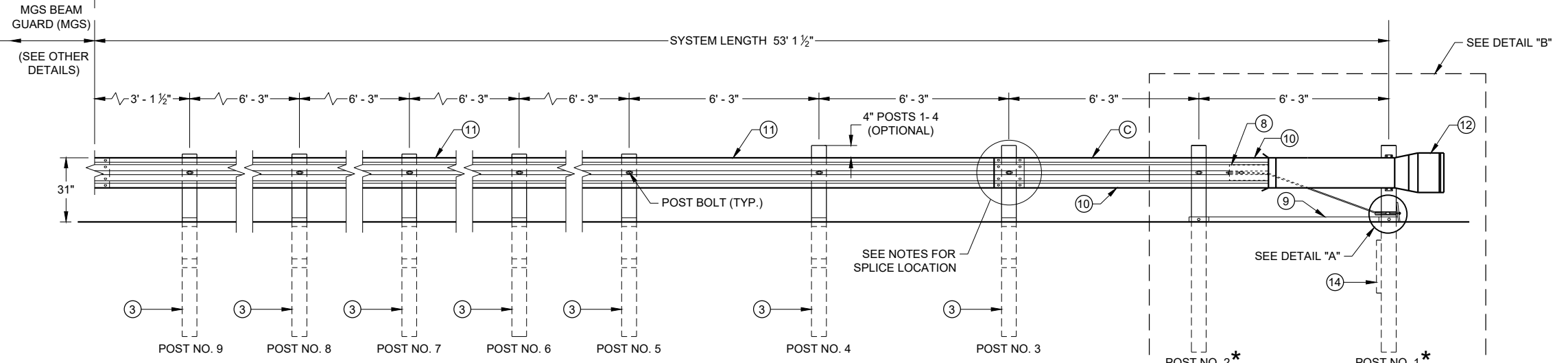
SEE MANUFACTURER'S DRAWING FOR SPLICE LOCATION, HARDWARE DIMENSIONS AND INSTALLATION INSTRUCTIONS.

THE CENTER OF THE UPPER 3 1/2" 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.

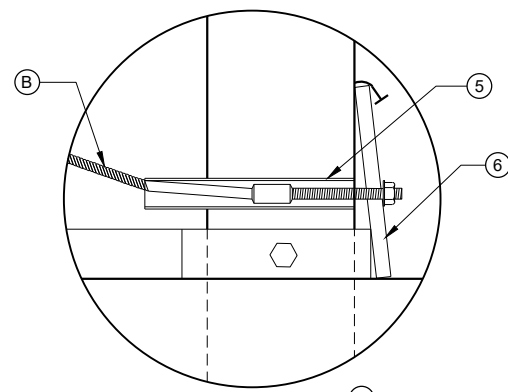
CLEAR ZONE LIMITS, EITHER AS SHOWN ELSEWHERE IN THE PLANS OR, IF NOT SHOWN ELSEWHERE IN THE PLANS, 15 FEET BEYOND THE HINGE POINT LINE



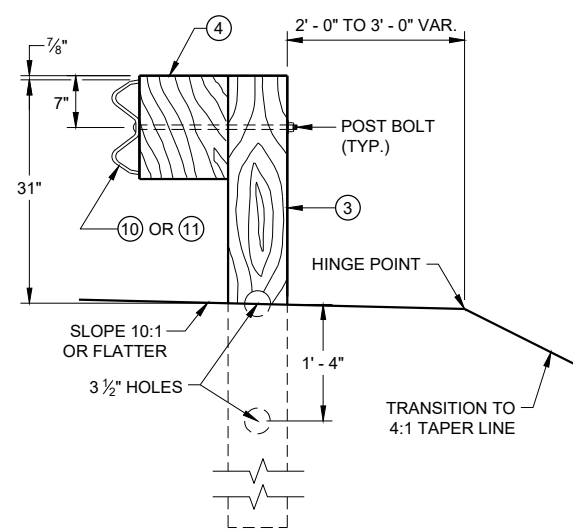
PLAN



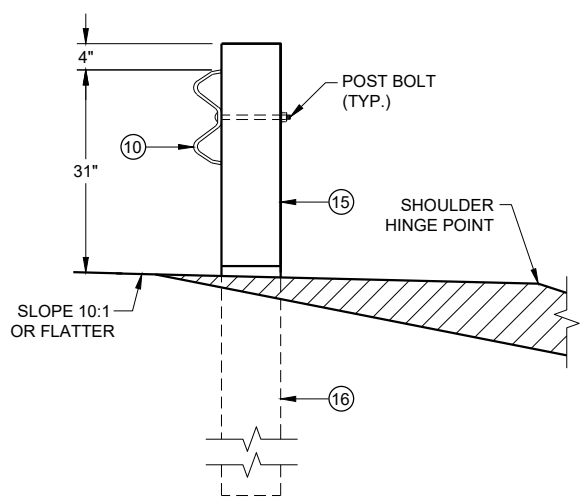
ELEVATION



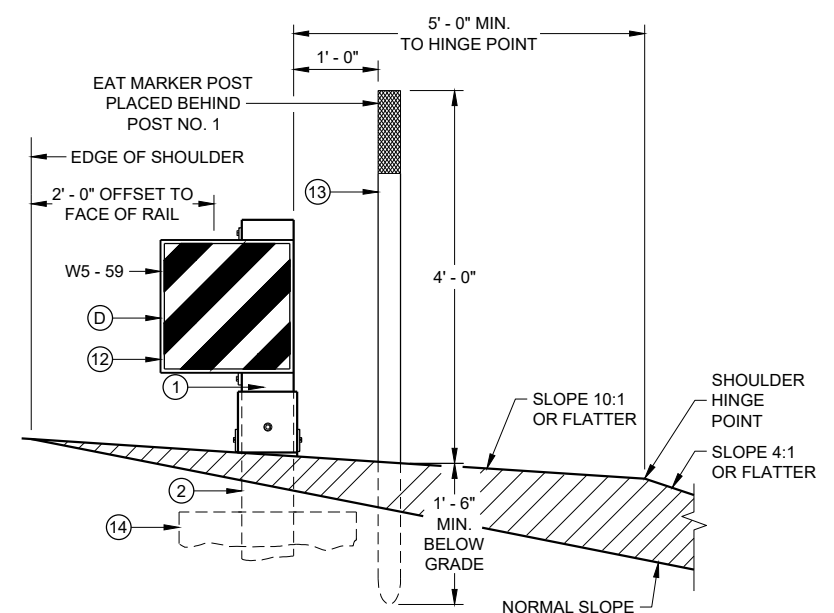
DETAIL "A"



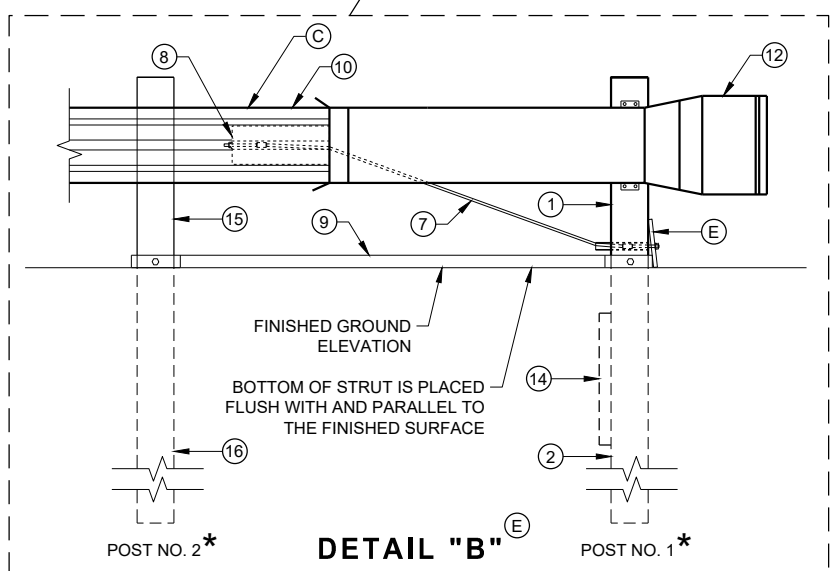
**SECTION C - C
TYPICAL AT POST NOS. 3 - 9**



**SECTION B - B
TYPICAL AT POST NO. 2***



**SECTION A - A
TYPICAL AT POST NO. 1***



DETAIL "B"

**MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

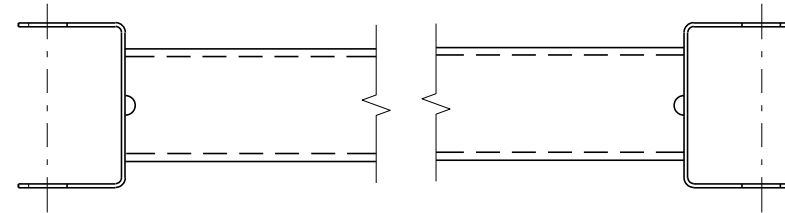
6

SDD 14B44 - 04a

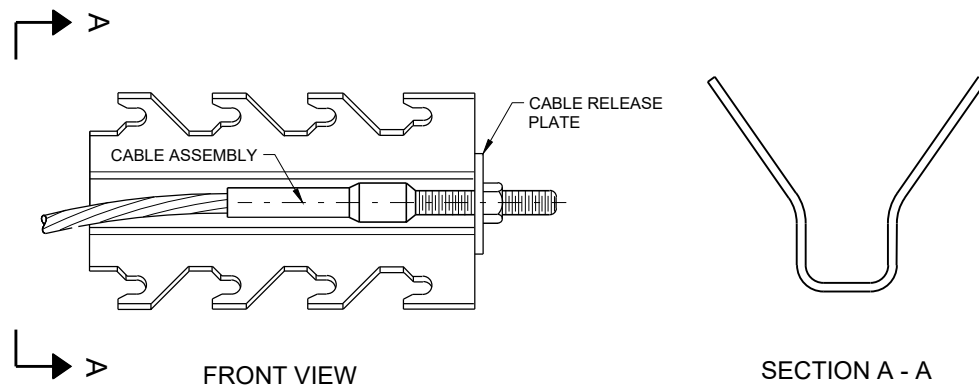
SDD 14B44 - 04a

BILL OF MATERIALS

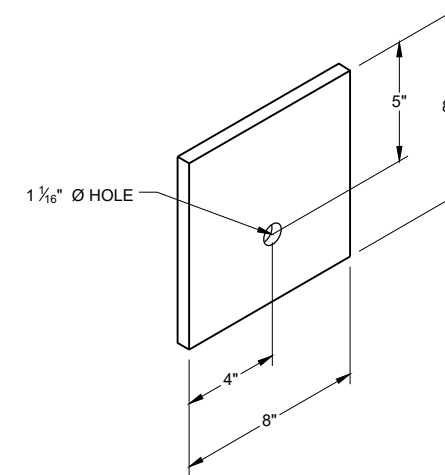
PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.
①	UPPER POST NO. 1 6" X 6" TUBE
②	LOWER POST NO. 1
③	WOOD CRT
④	WOOD BLOCKOUT
⑤	PIPE SLEEVE
⑥	BEARING PLATE
⑦	BCT CABLE ASSEMBLY
⑧	ANCHOR CABLE BOX
⑨	GROUND STRUT
⑩	PERFORATED W-BEAM RAIL 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



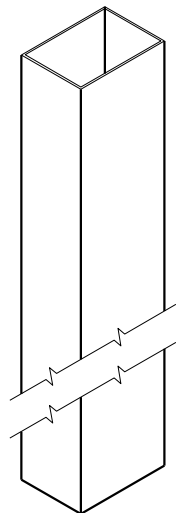
GENERIC GROUND STRUT ⑨ ⑤



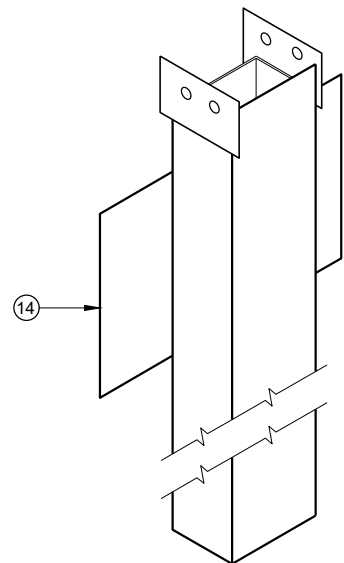
GENERIC ANCHOR CABLE BOX ⑨ ⑤



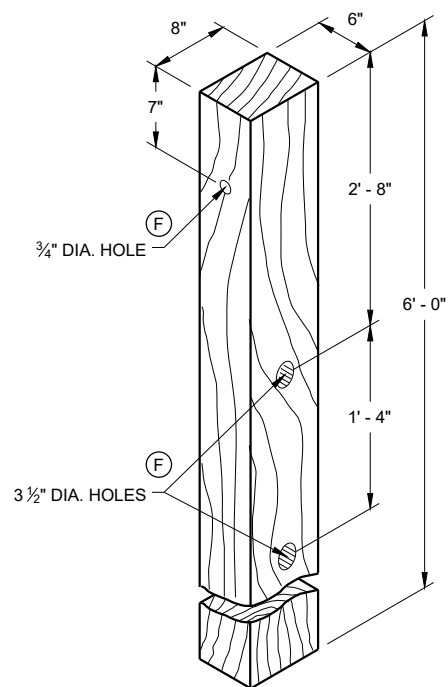
BEARING PLATE ⑥ ⑤



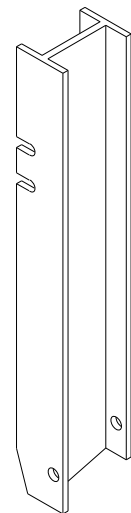
UPPER POST NO. 1 ⁽¹⁾ (E)



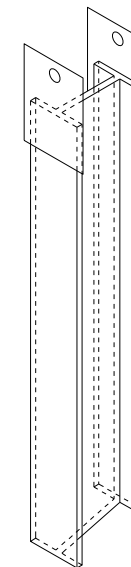
LOWER POST NO. 1 ⁽²⁾ (E)



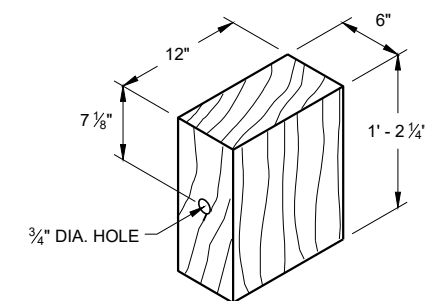
WOOD CRT POST ⁽³⁾ (E)
POSTS NUMBER 3-9



UPPER POST NO. 2 ⁽¹⁵⁾ (E)

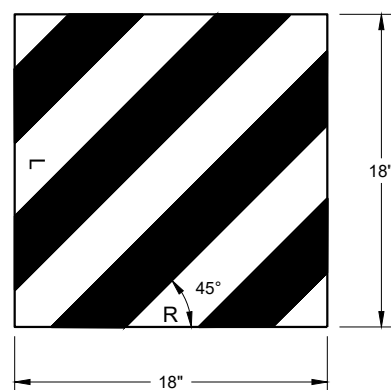


LOWER POST NO. 2 ⁽¹⁶⁾ (E)



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

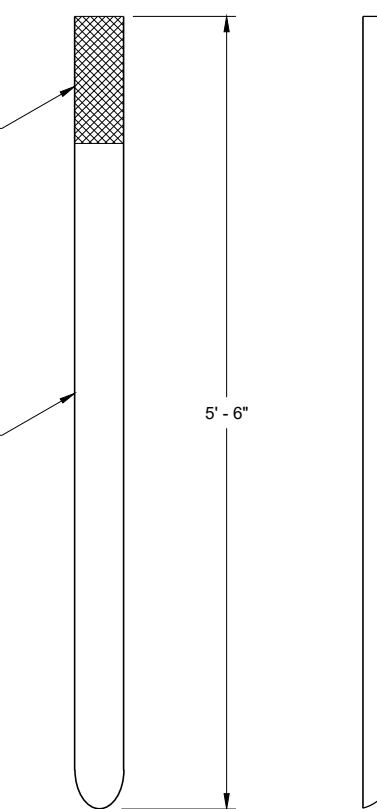
6



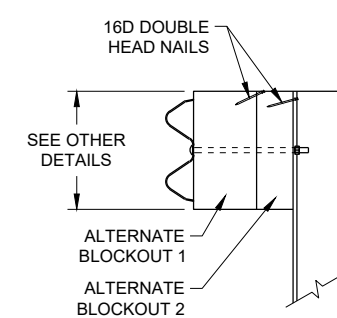
REFLECTIVE SHEETING DETAIL ^(E)

TYPE H
YELLOW REFLECTIVE
SHEETING 3" X 9".
SEE STANDARD
SPECIFICATION 637.

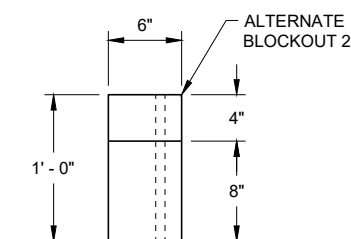
E.A.T. MARKER
POST (YELLOW)



FRONT VIEW SIDE VIEW
E.A.T. MARKER POST ⁽¹³⁾



SIDE VIEW



TOP VIEW

ALTERNATE WOOD
BLOCKOUT DETAIL

6

SDD 14B44 - 04c

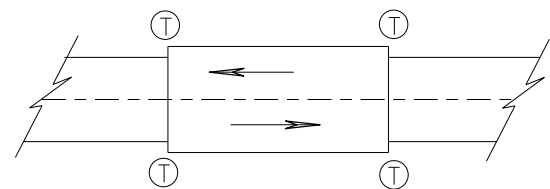
SDD 14B44 - 04c

**MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)**

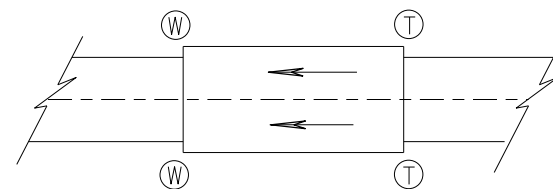
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA



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

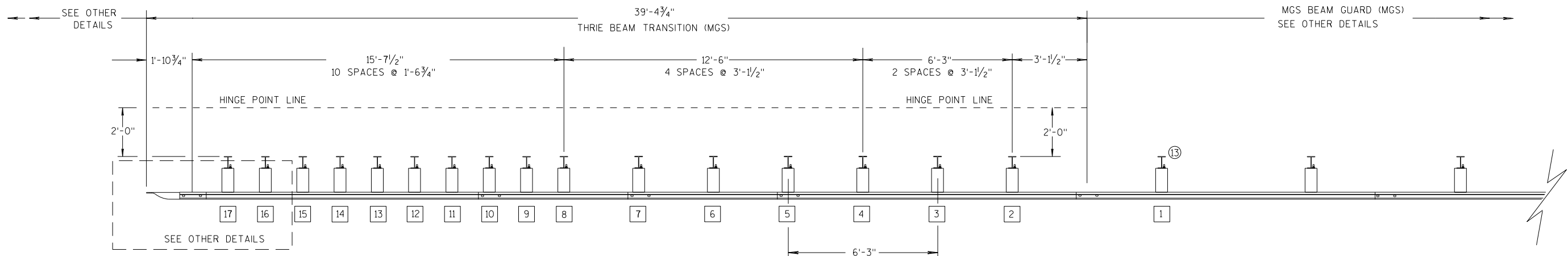
IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2 1/2", AND 12" DIAMETER AROUND POST. SEE 14B42 FOR MORE DETAILS.

TRANSITION USES STEEL POSTS ONLY.

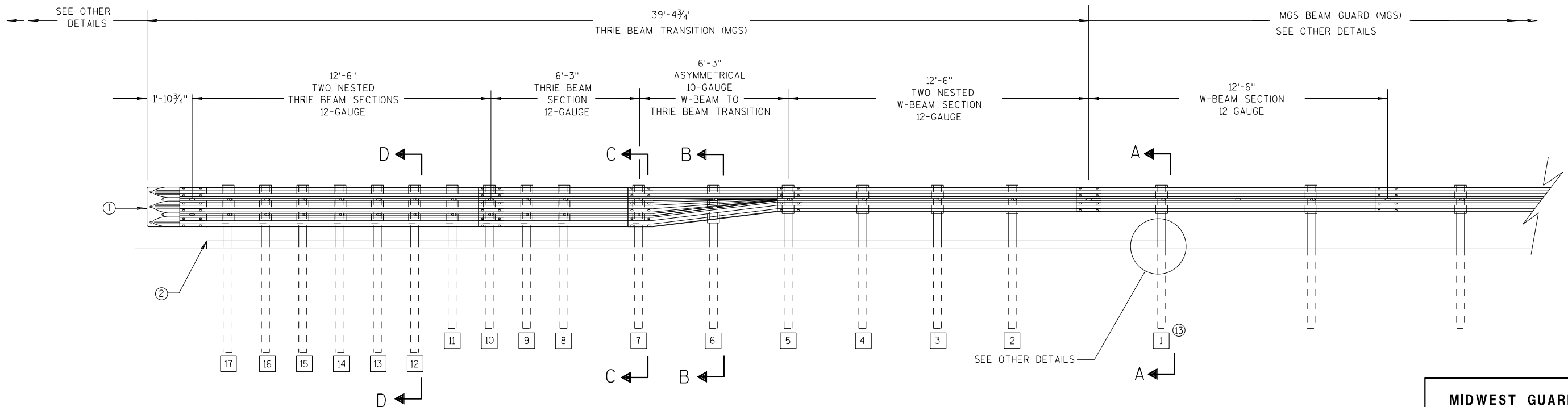
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

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

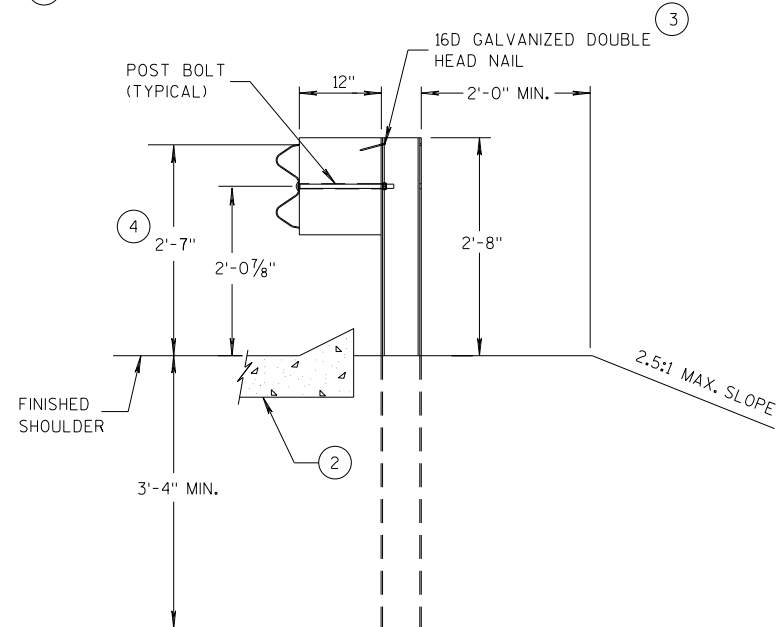
MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

**MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)**

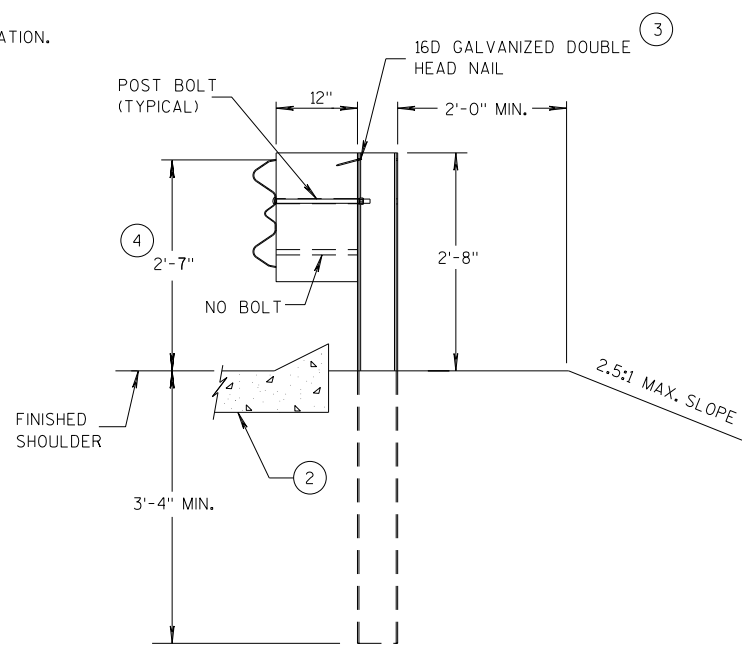
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

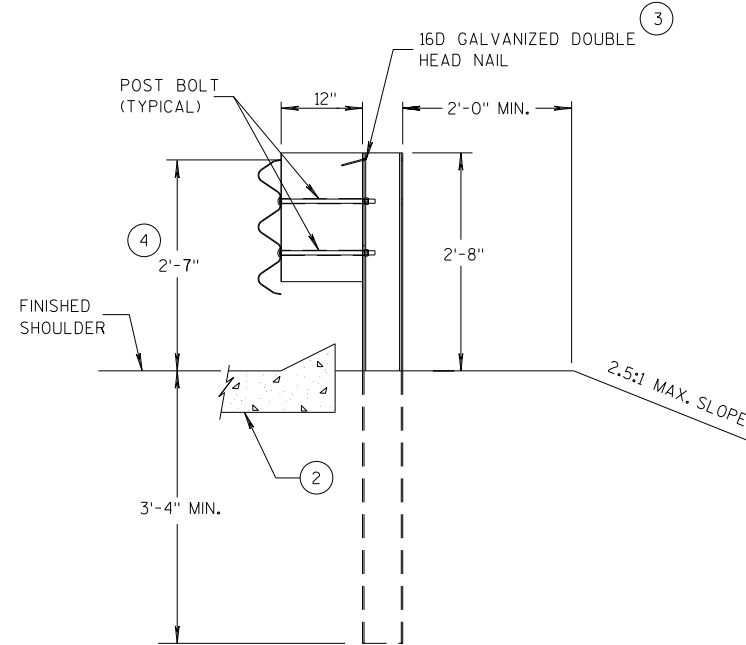
- ② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.
- ③ WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 10D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.
- ④ TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".
- ⑬ STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD 14B42



**SECTION A-A
POSTS 1-5**



**SECTION B-B
POST 6**



**SECTION C-C
POSTS 7-11**

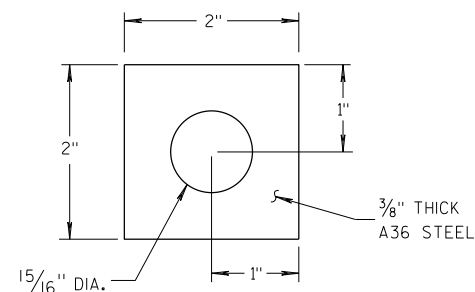
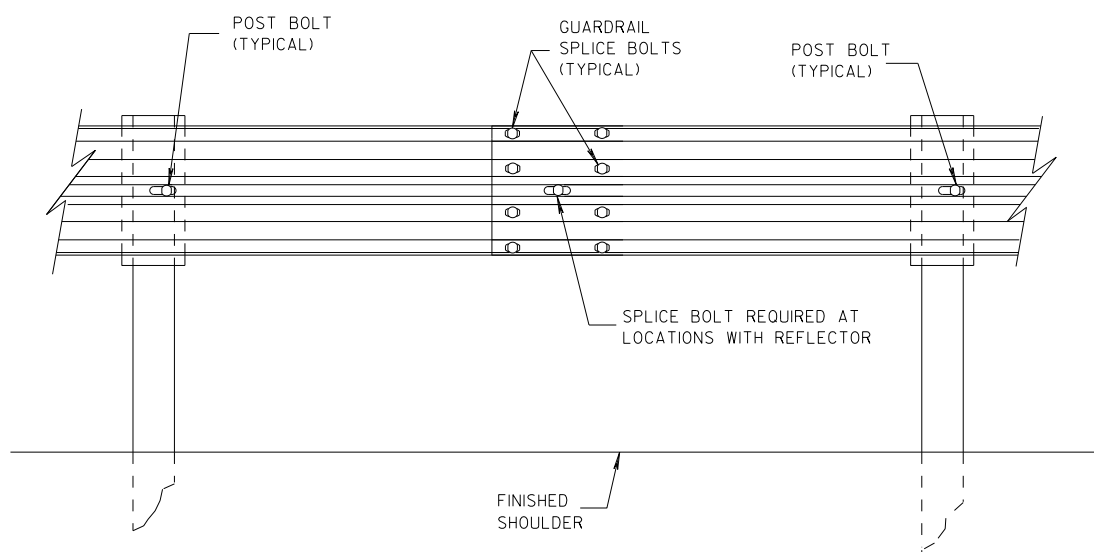
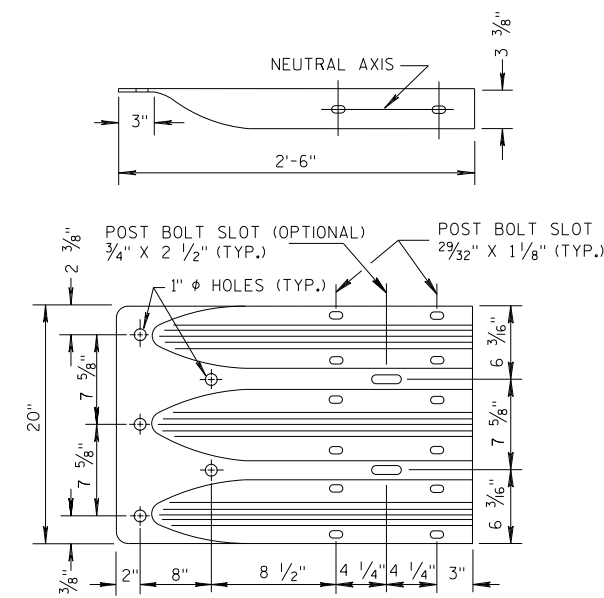


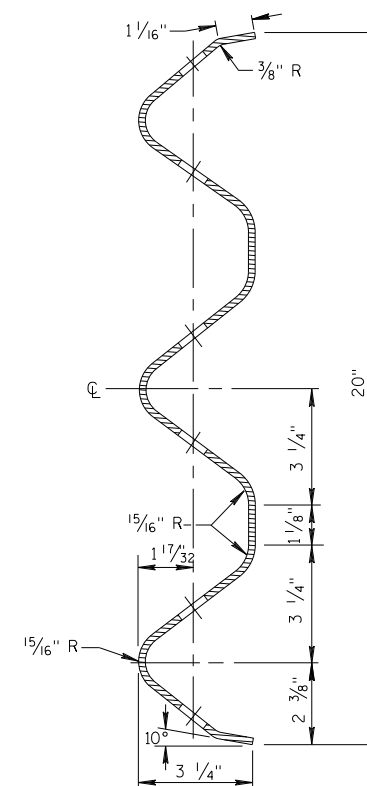
PLATE WASHER DETAIL



SPLICE DETAIL



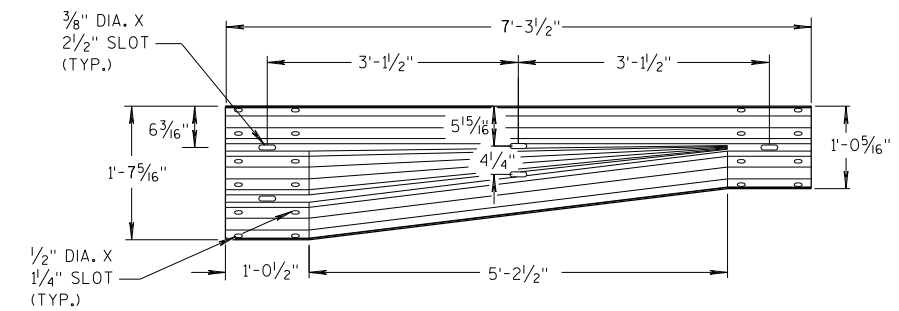
**THRIE BEAM
TERMINAL CONNECTOR**



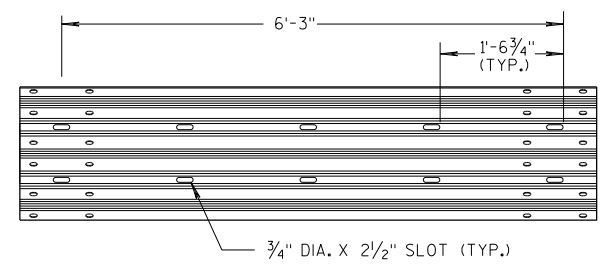
**SECTION THRU THRIE
BEAM RAIL ELEMENT**

**MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)**

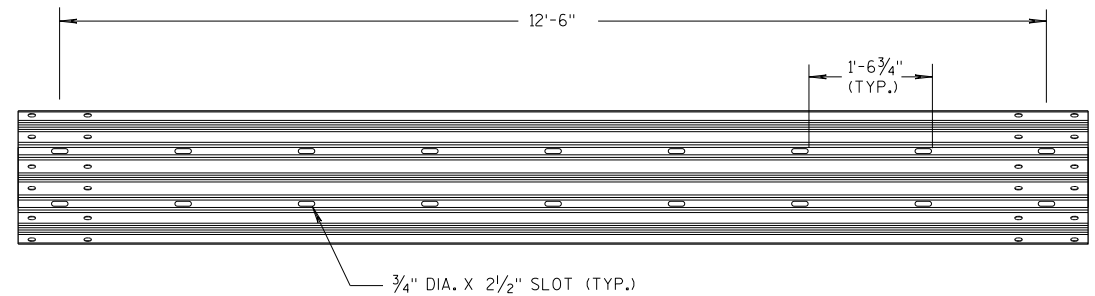
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



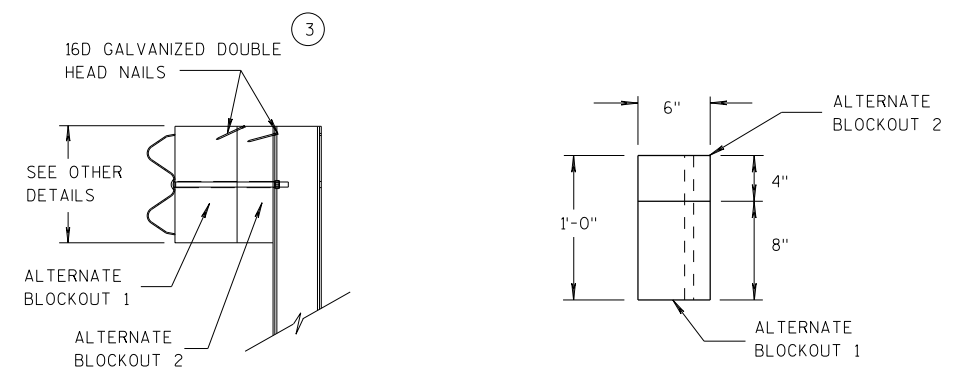
W-BEAM TO THRIE BEAM TRANSITION SECTION



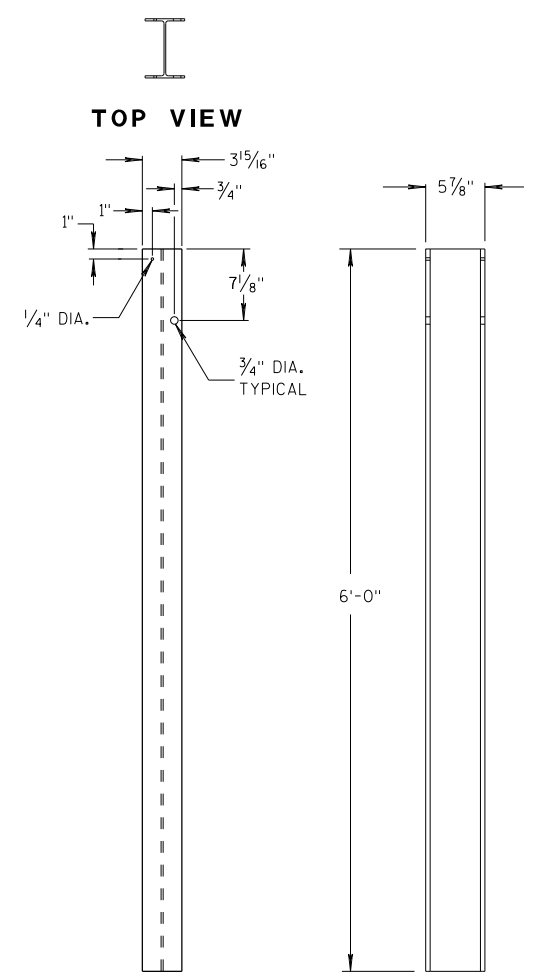
6'-3\"/>



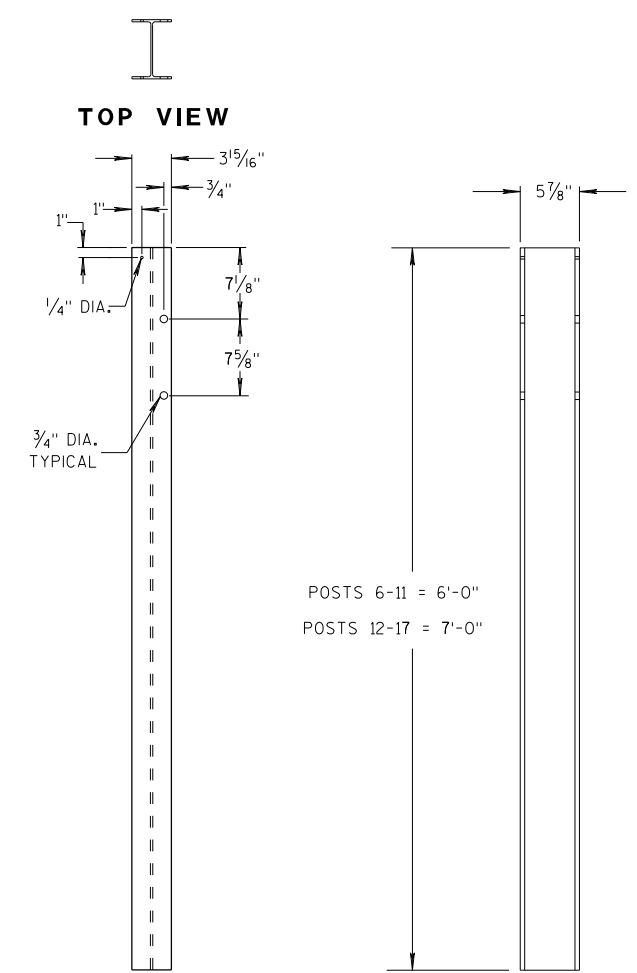
12'-6\"/>



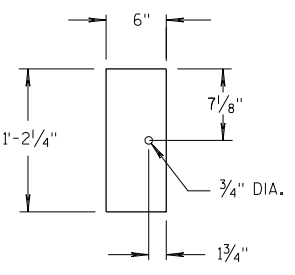
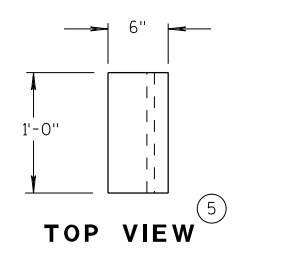
ALTERNATE WOOD BLOCKOUT DETAIL



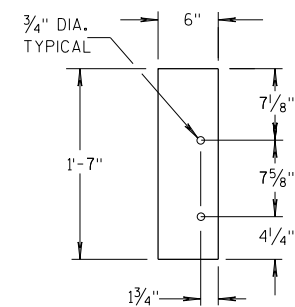
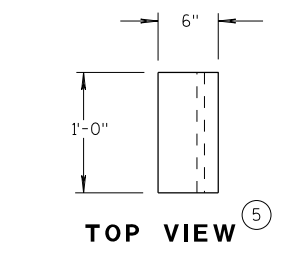
STEEL POSTS 1-5



STEEL POSTS 6-17



BLOCKOUT POSTS 1-5



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)**

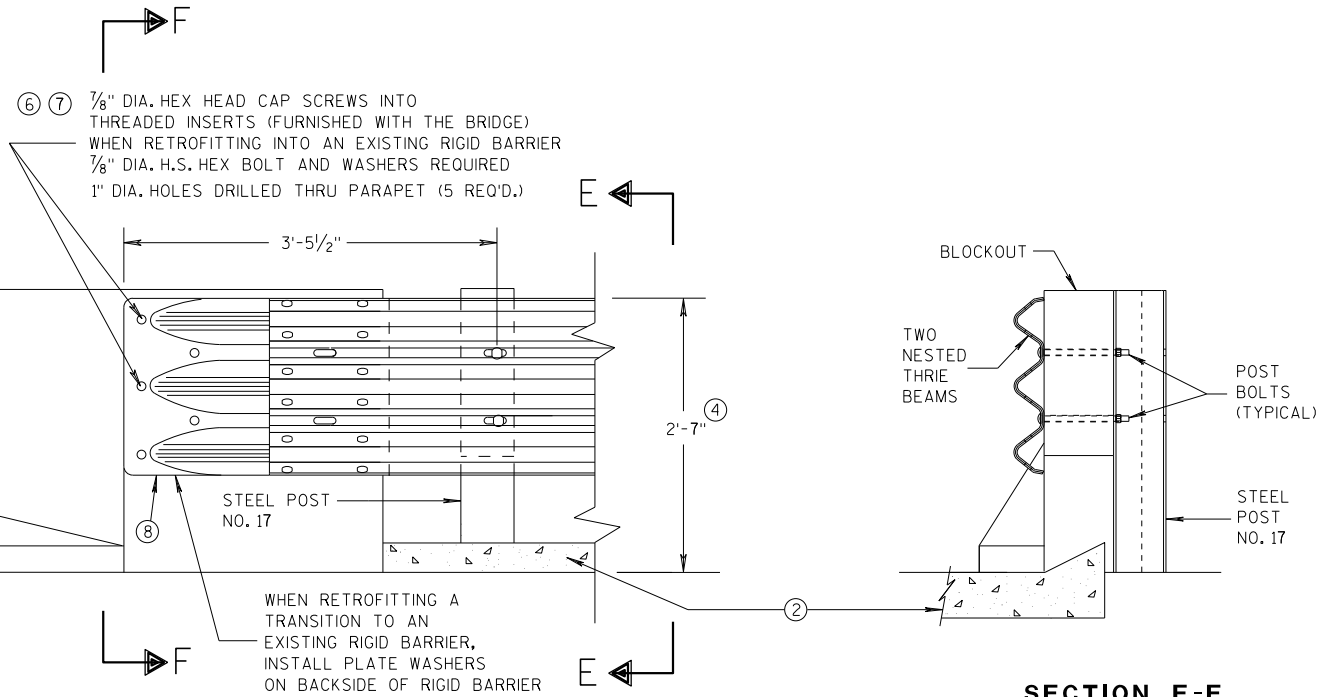
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

6

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

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



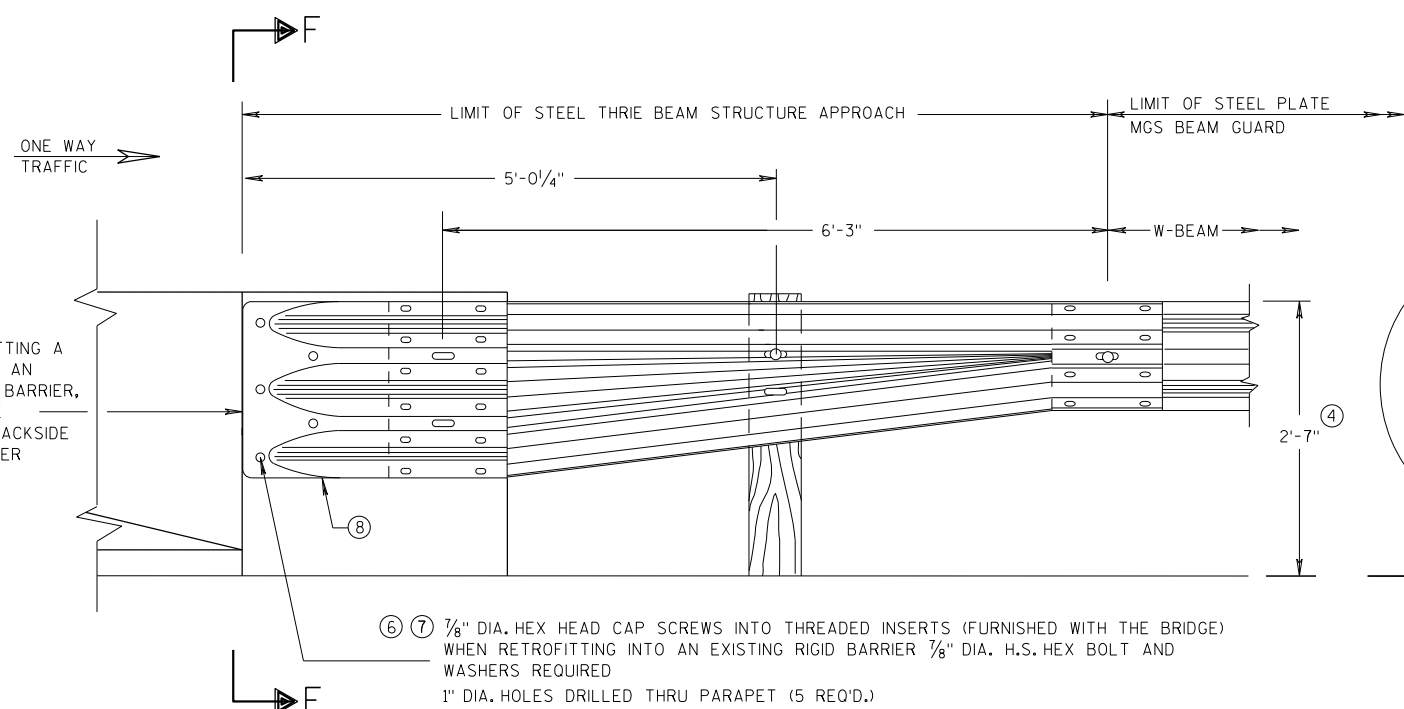
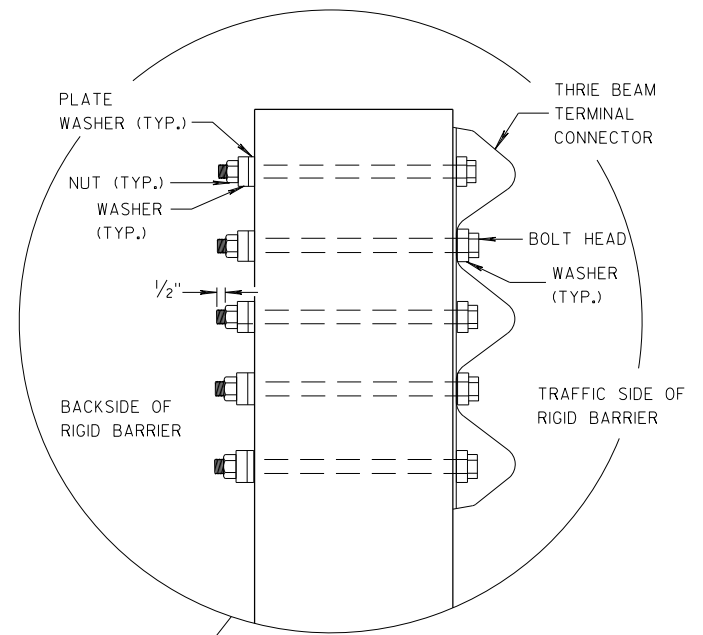
FRONT VIEW

THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS

SECTION E-E

GENERAL NOTES

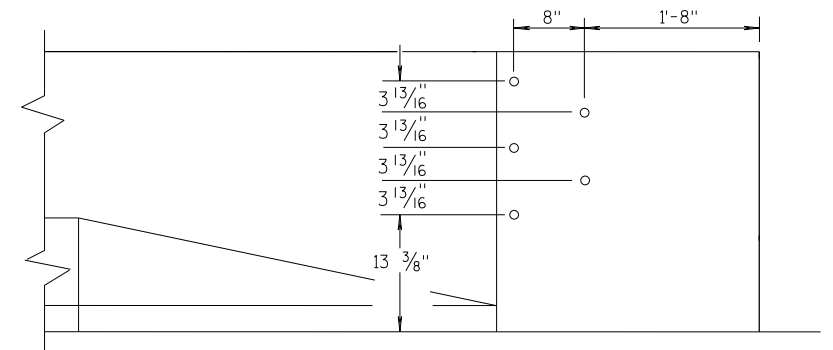
- THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSITION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.
- (2) OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.
- (4) TOLERANCE FOR TOP OF BEAM IS $\pm 1"$.
- (6) DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.
- (7) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/32" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.
- (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

**W BEAM TRANSITION AND CONNECTION TO BRIDGE PARAPETS WITH SQUARE ENDS
(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)**

SECTION F-F



DRILL HOLE LOCATION

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
FHWA	

6

6

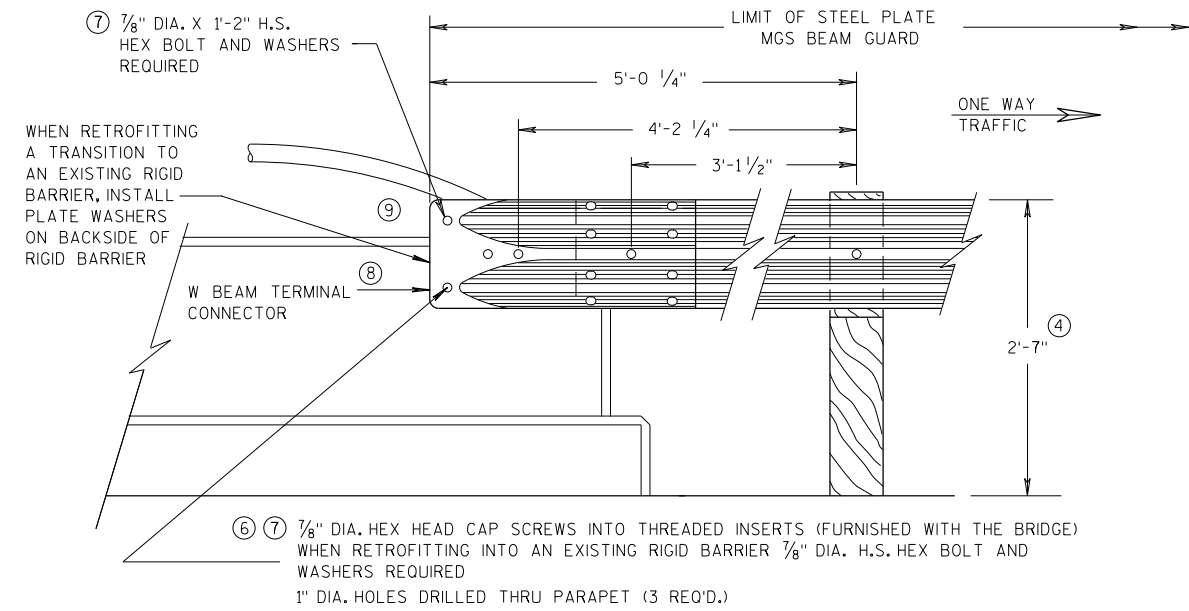
S.D.D. 14 B 45-5d

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

GENERAL NOTES

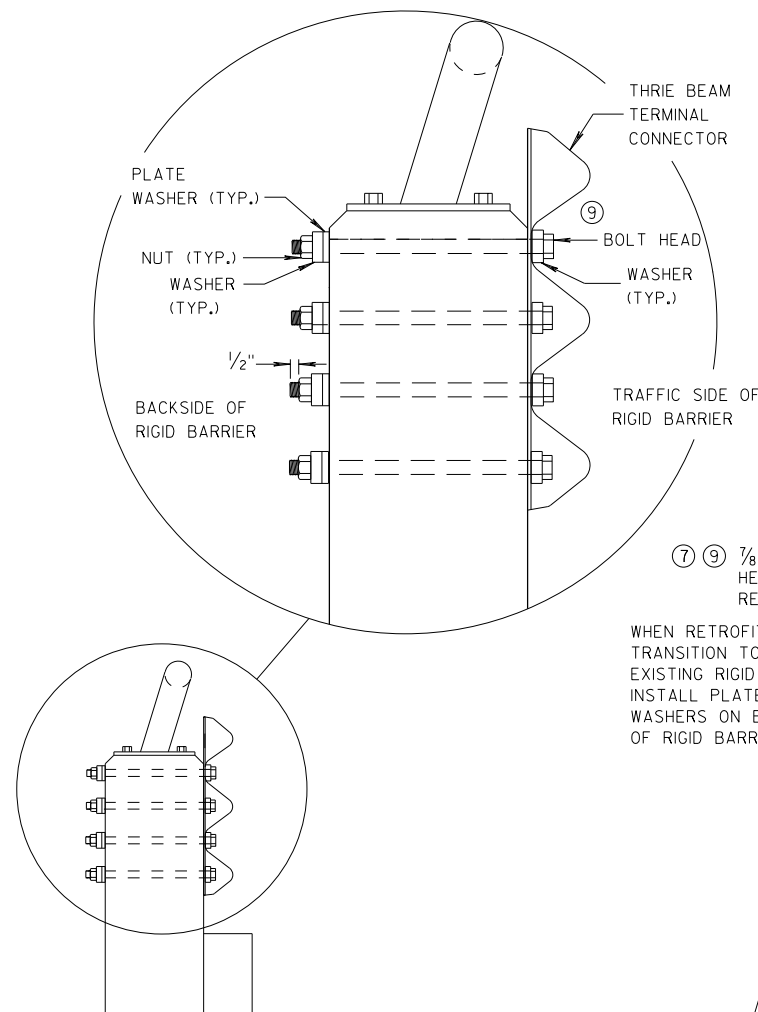
THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSITION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.

- ② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.
- ④ TOLERANCE FOR TOP OF BEAM IS $\pm 1"$.
- ⑥ DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.
- ⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/32" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.
- 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".
- 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.

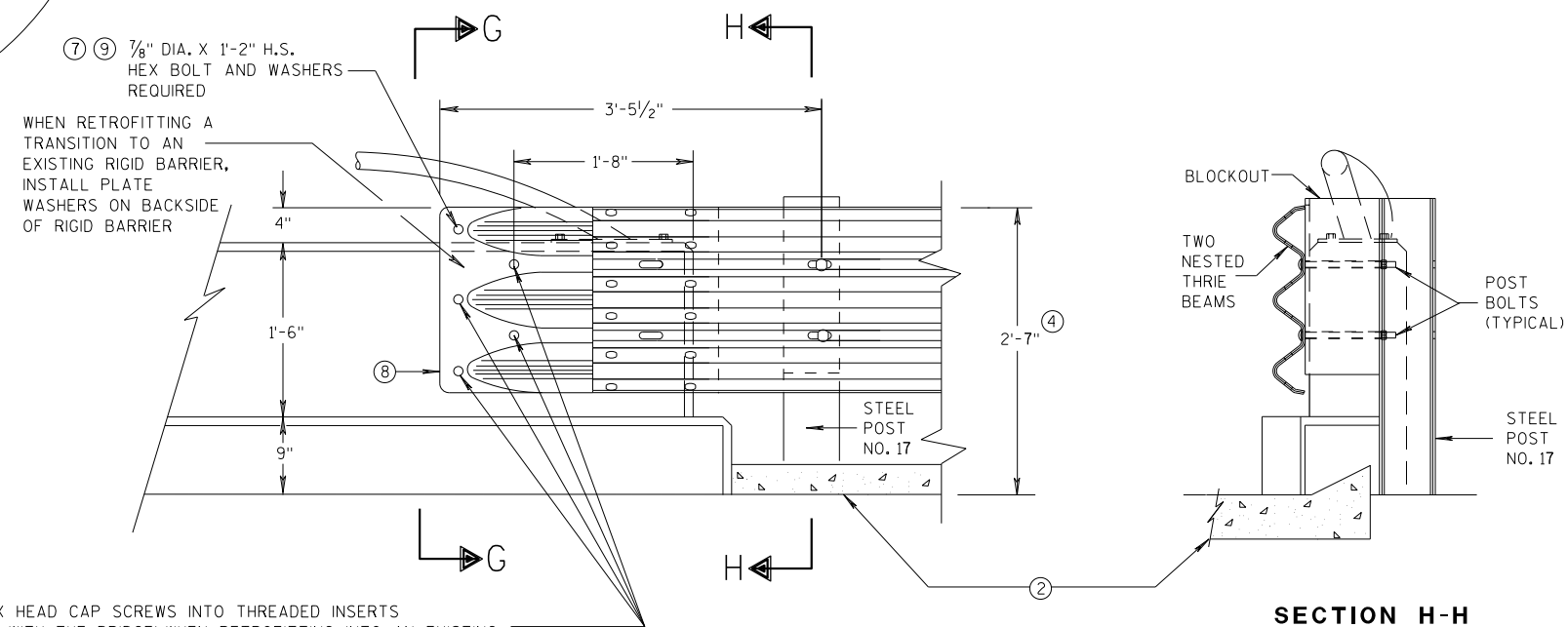


FRONT VIEW

W BEAM CONNECTION TO VERTICAL FACE PARAPET (USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)



SECTION G-G



FRONT VIEW

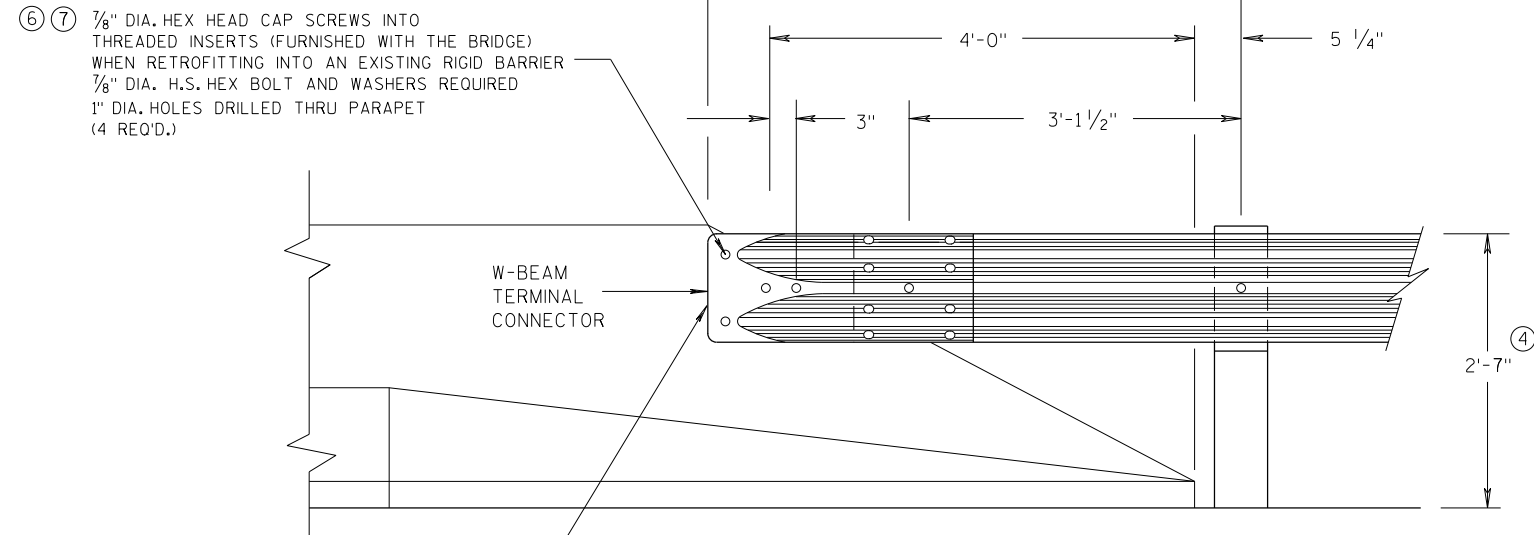
THRIE BEAM CONNECTION TO VERTICAL FACED PARAPETS

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
07/2018 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT
FHWA UNIT SUPERVISOR

ONE WAY
TRAFFIC



WHEN RETROFITTING A TRANSITION TO AN EXISTING RIGID BARRIER, INSTALL PLATE WASHERS ON BACKSIDE OF RIGID BARRIER.

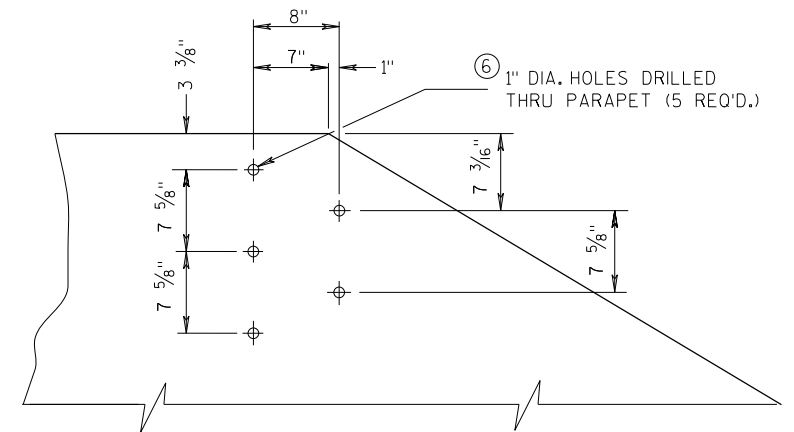
FRONT VIEW

W BEAM CONNECTION TO PARAPETS WITH SLOPED ENDS

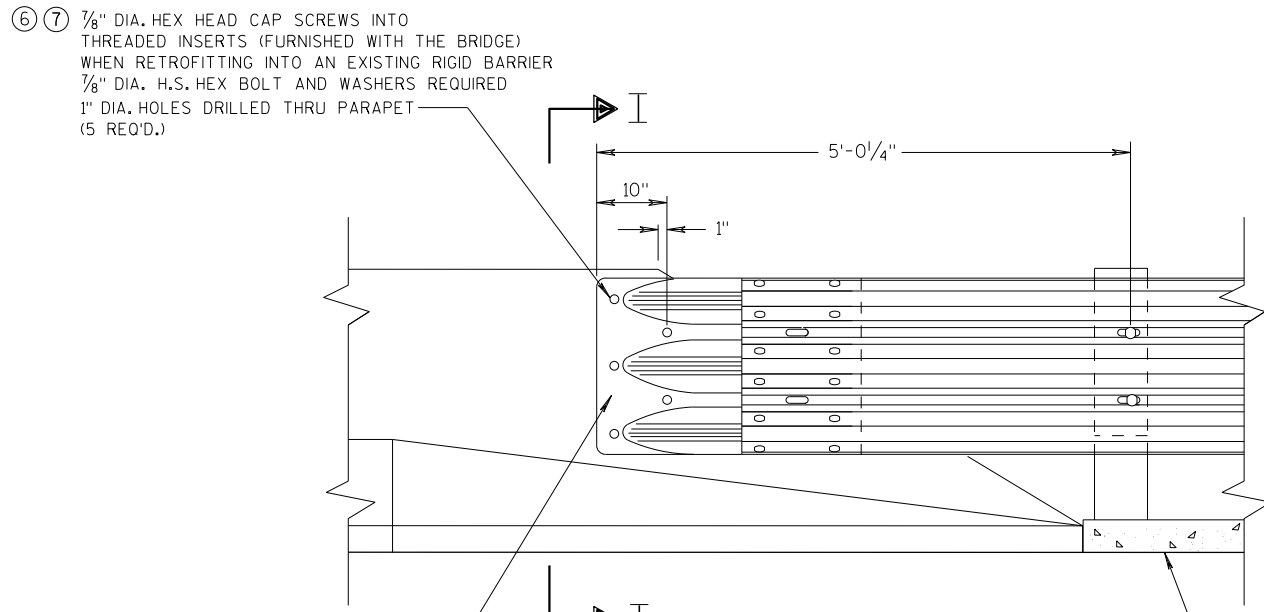
(USE ONLY AT TRAFFIC EXIT END OF ONE WAY BRIDGE)

GENERAL NOTES

- ② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.
- ④ TOLERANCE FOR TOP OF BEAM IS ± 1 ".
- ⑥ DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.
- ⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/32" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.



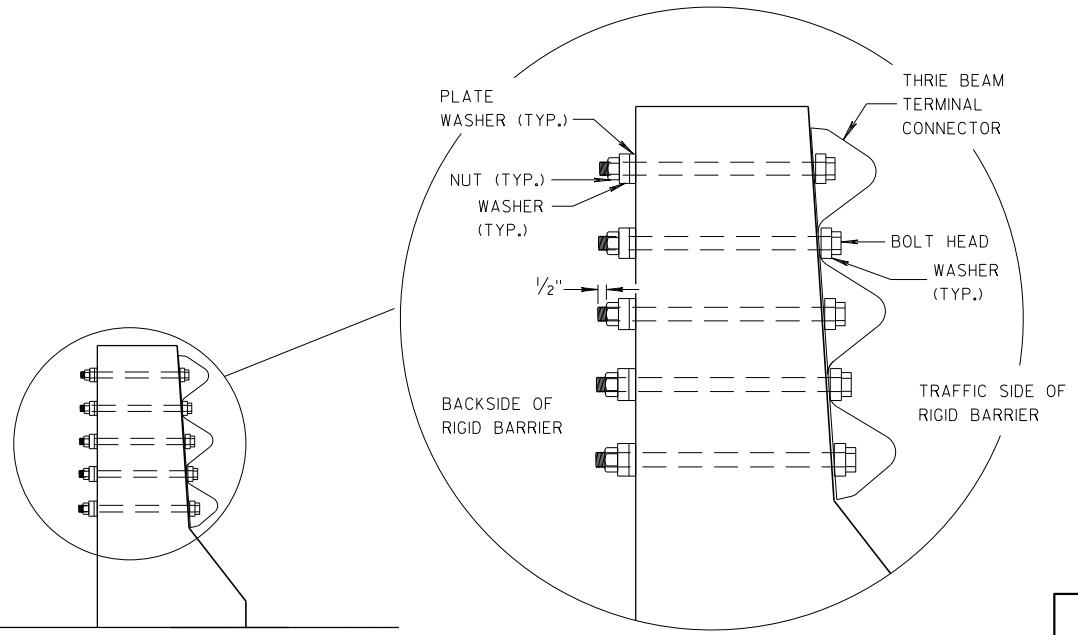
DRILL HOLE LOCATION AND PATTERN FOR THRIE BEAM CONNECTION



WHEN RETROFITTING A TRANSITION TO AN EXISTING RIGID BARRIER, INSTALL PLATE WASHERS ON BACKSIDE OF RIGID BARRIER.

FRONT VIEW

THRIE BEAM CONNECTION TO BRIDGE PARAPETS WITH SLOPED ENDS

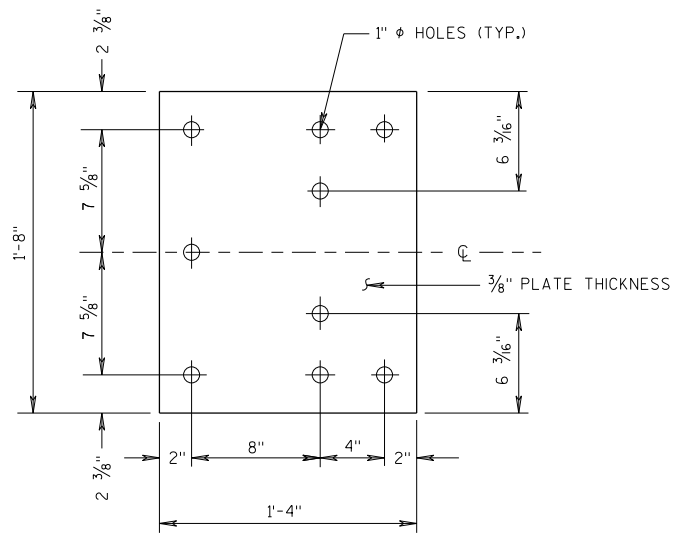


SECTION I-I

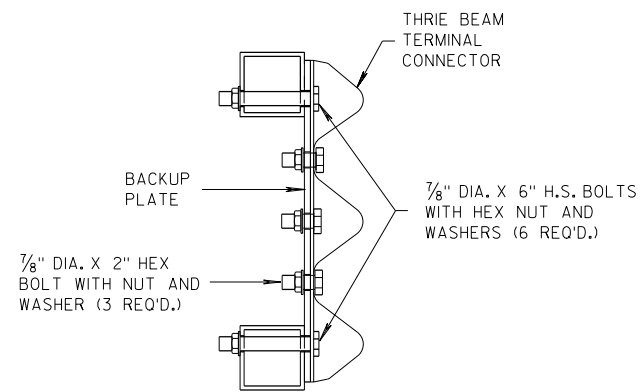
**MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

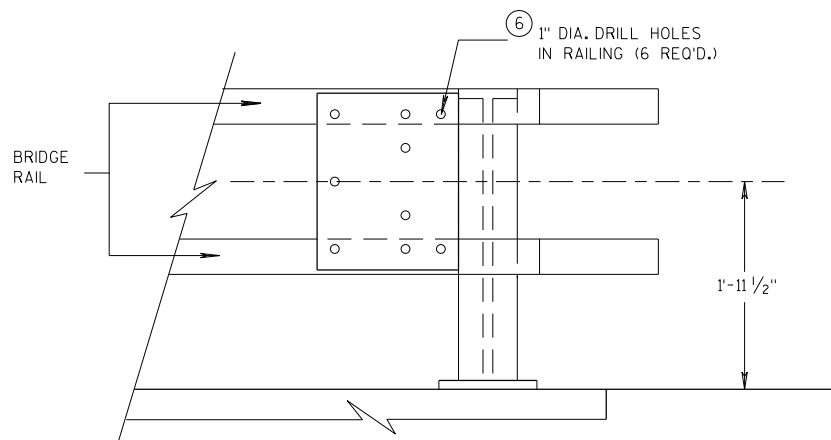
APPROVED
DATE 07/2018 /S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR
FHWA



BACK-UP PLATE DETAIL



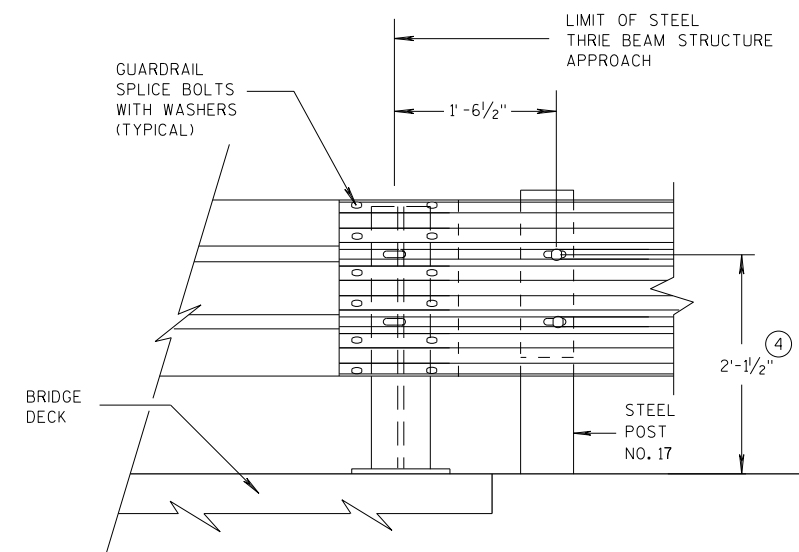
SECTION J-J



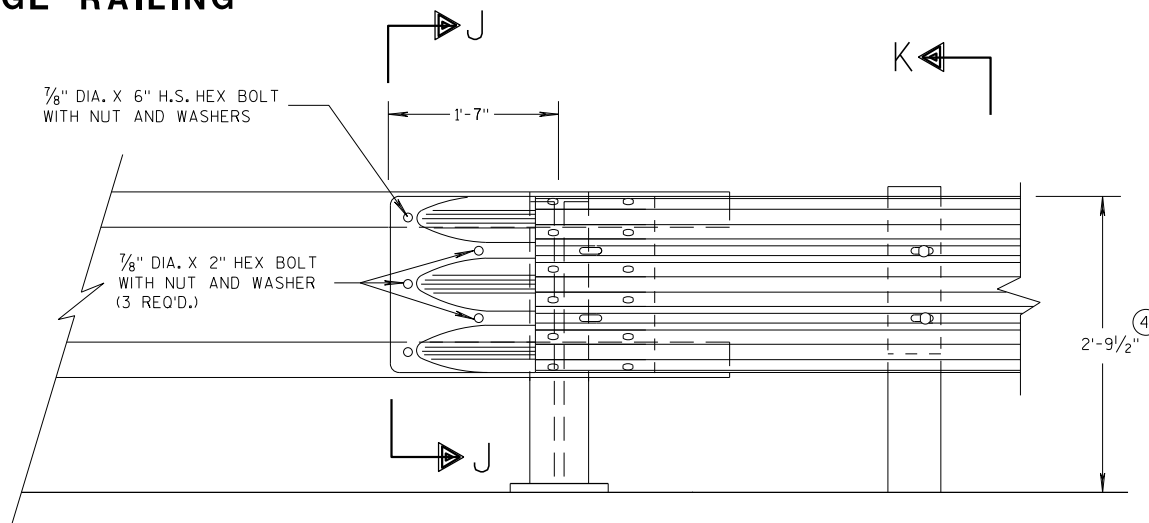
BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING

GENERAL NOTES

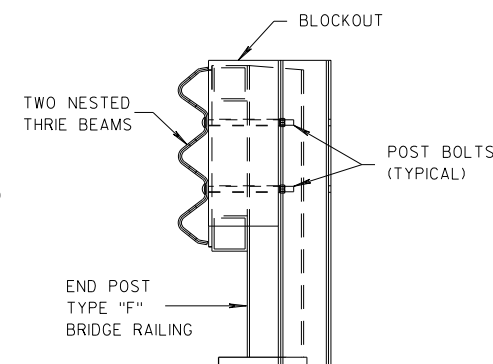
- ④ TOLERANCE FOR TOP OF BEAM IS $\pm 1'$.
- ⑥ DRILLING HOLES THROUGH THE PAPER, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.



FRONT VIEW THRIE BEAM CONNECTION TO STEEL RAILING TYPE "W"



FRONT VIEW THRIE BEAM CONNECTION TO TUBULAR RAILING TYPE "F"



SECTION K-K

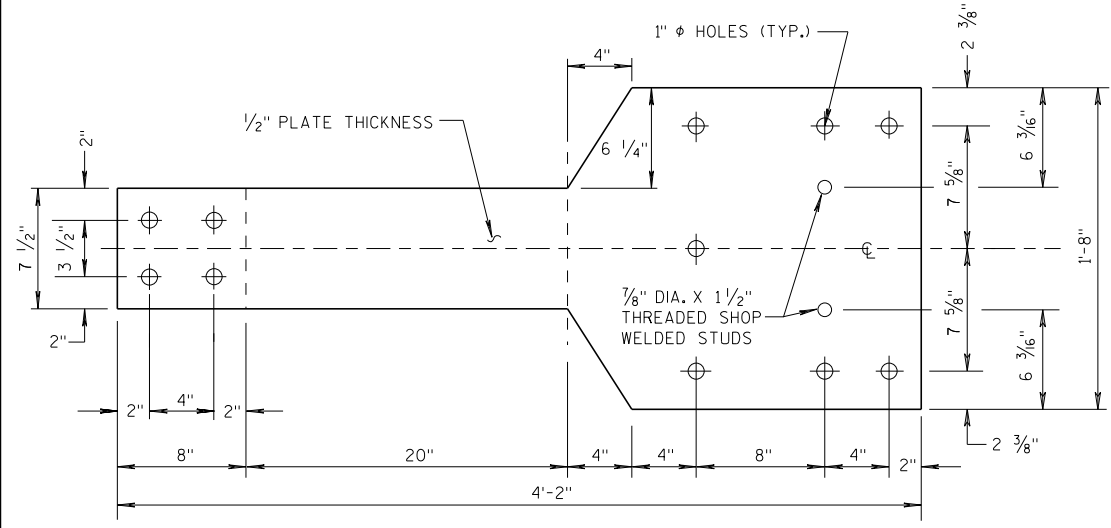
MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 07/2018 DATE	/S/ Rodney Taylor ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
FHWA	

6

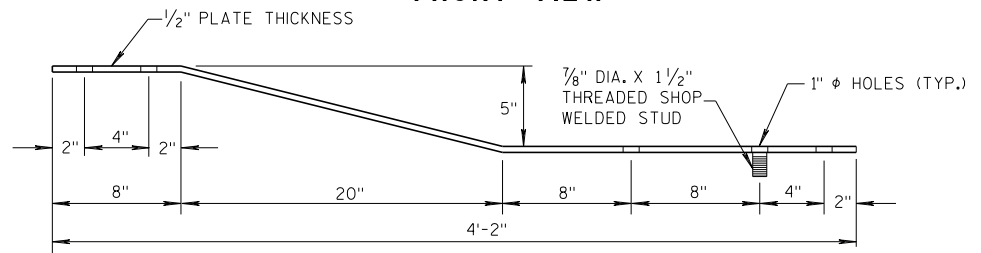
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GENERAL NOTES

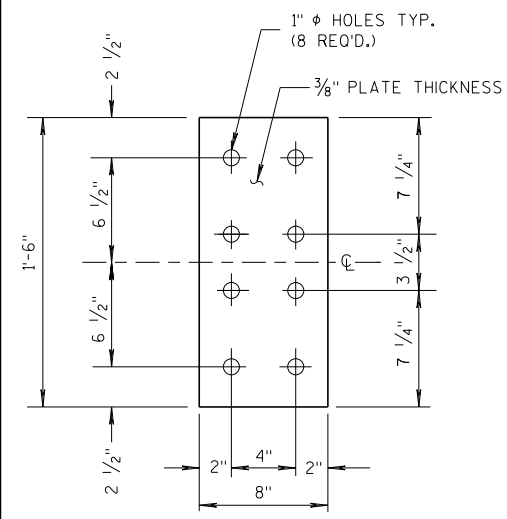
(4) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".



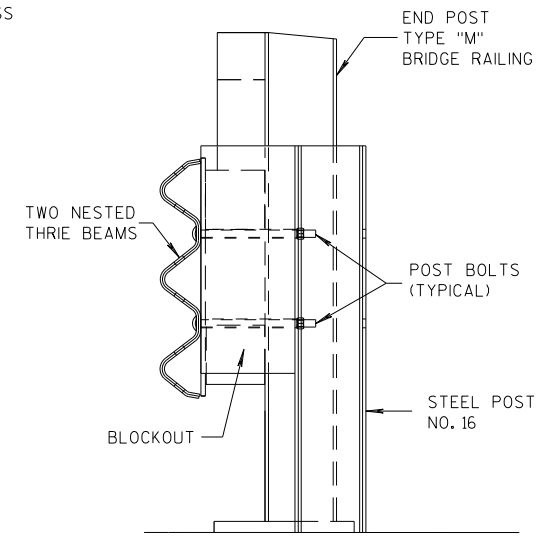
FRONT VIEW



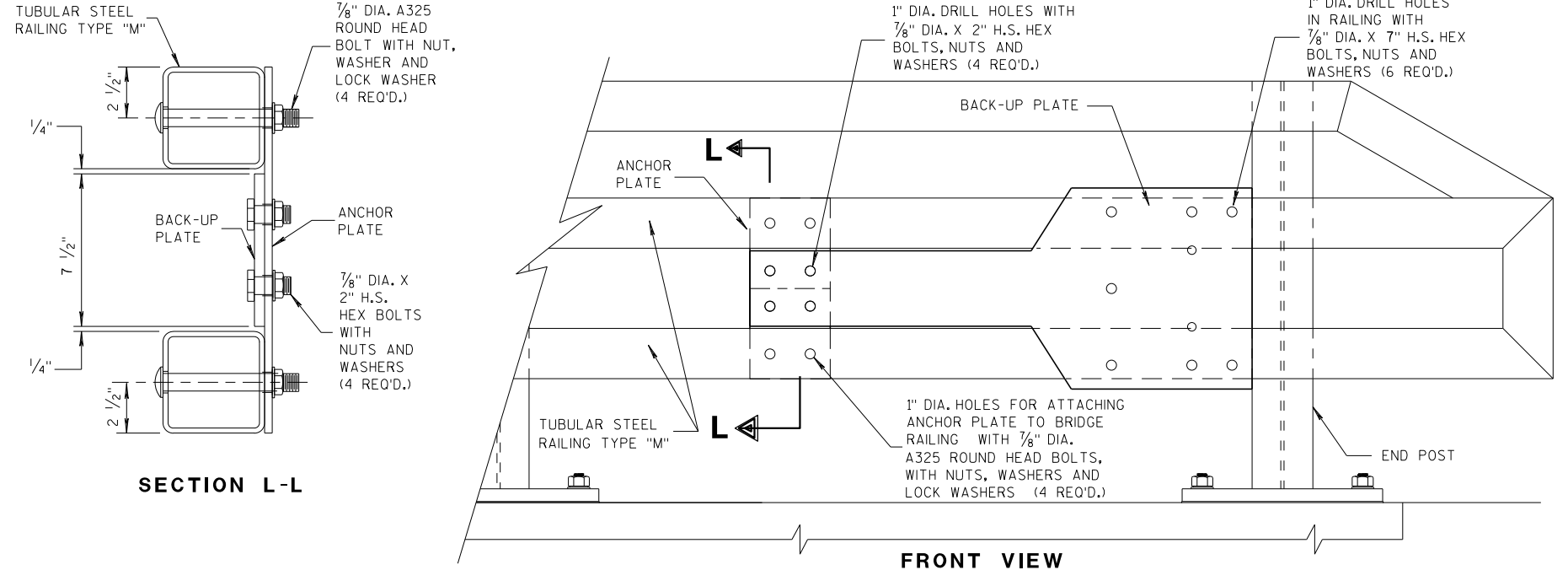
**PLAN VIEW
BACK-UP PLATE DETAIL, TYPE "M"**



**FRONT VIEW
ANCHOR PLATE DETAIL,
TYPE "M"**



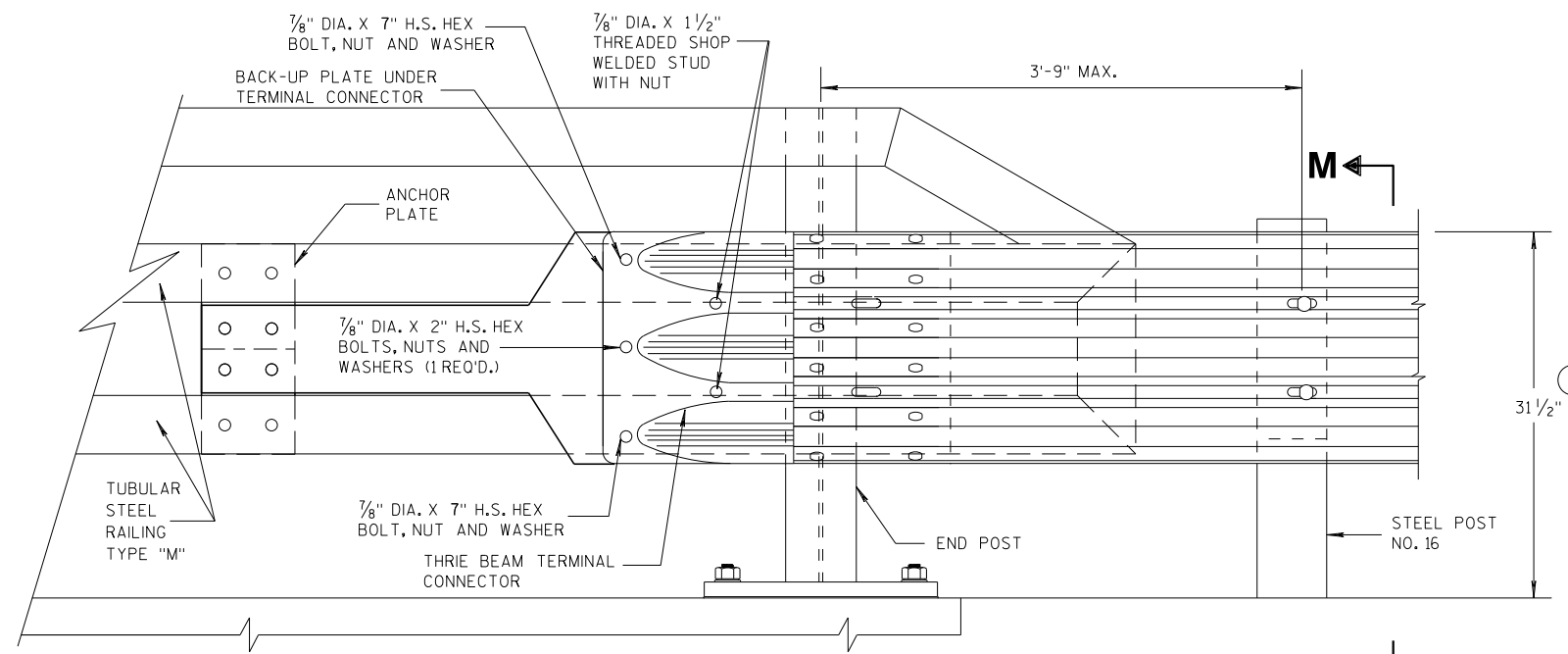
SECTION M-M



SECTION L-L

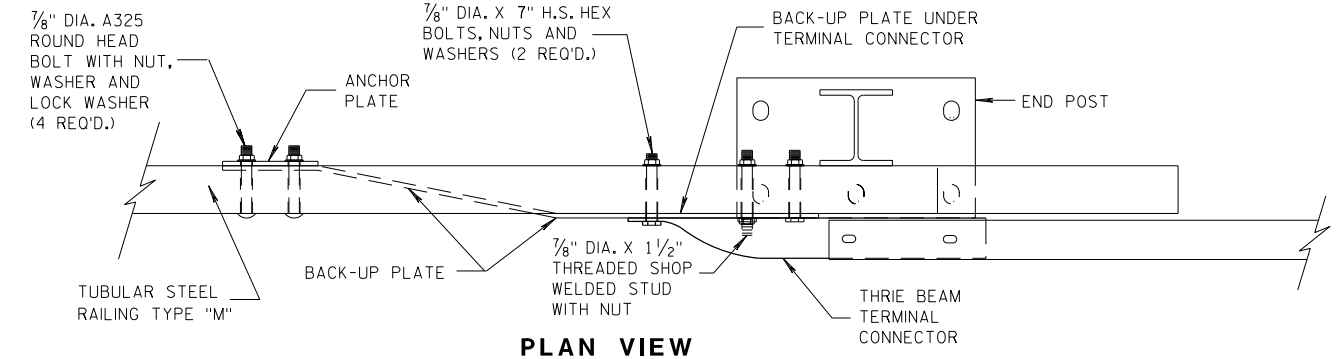
FRONT VIEW

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



FRONT VIEW

M



PLAN VIEW

THRIE BEAM CONNECTION TO TUBULAR RAILING, TYPE "M"

**MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)**

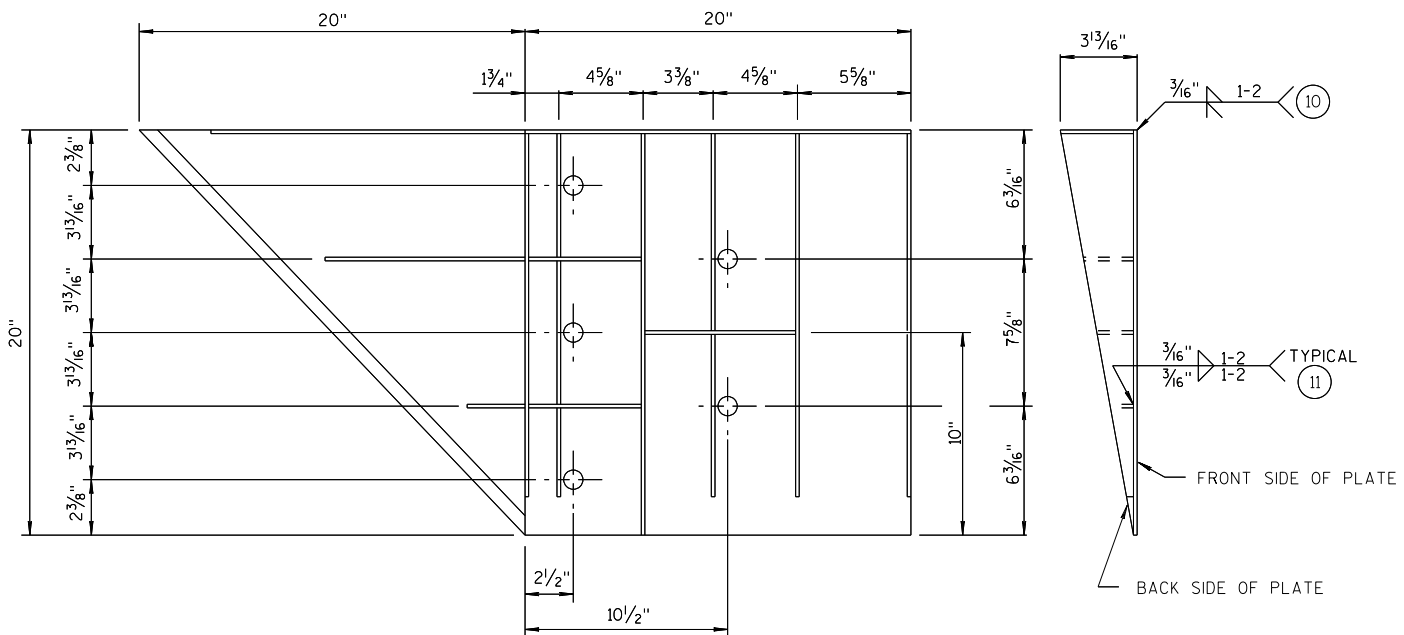
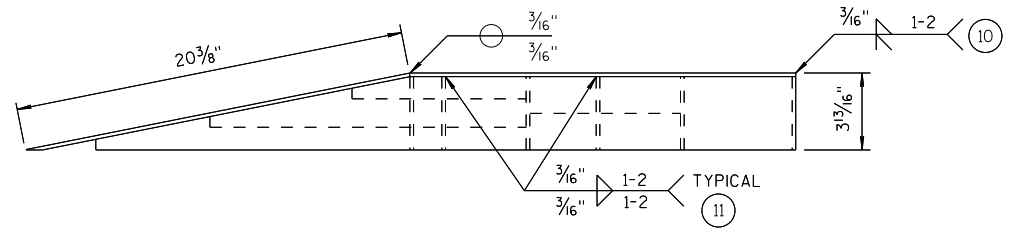
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
DATE 07/2018 /S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR
FHWA

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)

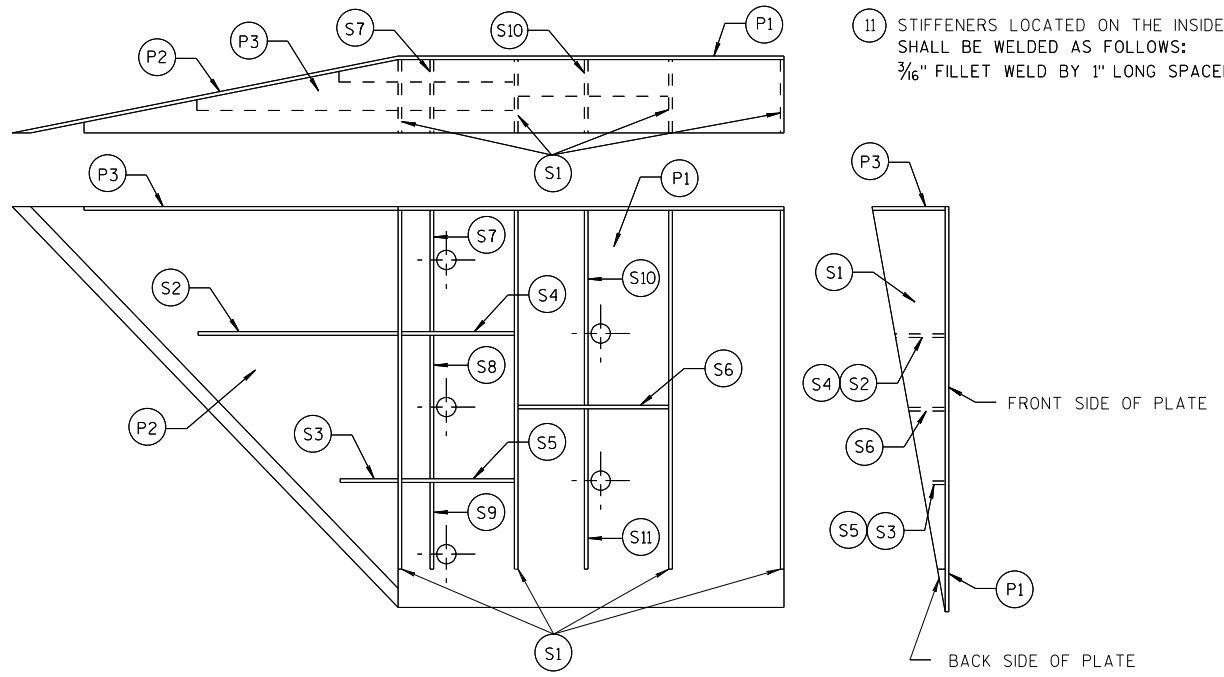


PLATE AND STIFFENER IDENTIFICATION
(VIEWED FROM BACK SIDE OF PLATE)

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 3/16"	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 1/16" x 10 3/8" x 1/2"	1/4"
S3	1		3" x 1 1/16" x 3 3/8" x 1/2"	1/4"
S4	1		6 1/8" x 2 1/16"	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 3/16" x 6" x 3 5/8" x 5 1/8"	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 3/8" x 9 11/16"	1/4"
S11	1		8 1/2" x 8 3/4" x 1 3/16"	1/4"

SINGLE SLOPE CONNECTION PLATE

**MIDWEST GUARDRAIL SYSTEM
THREE BEAM TRANSITION (MGS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

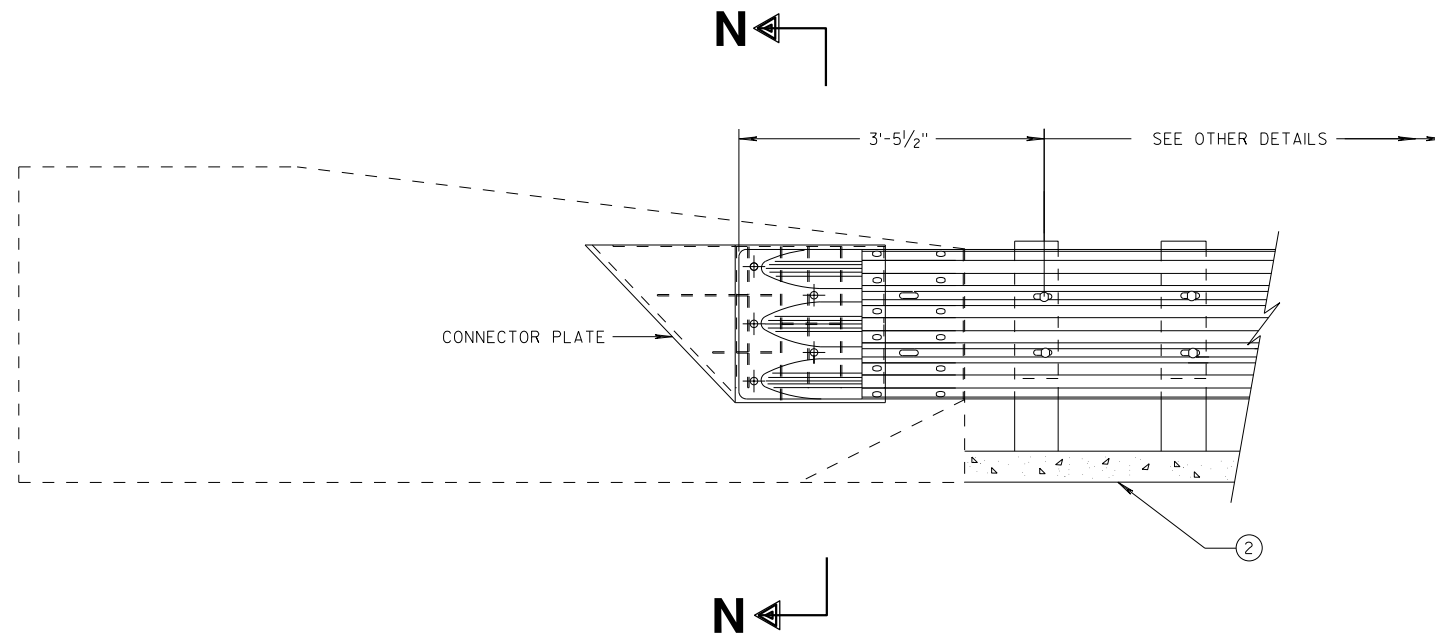
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GENERAL NOTES

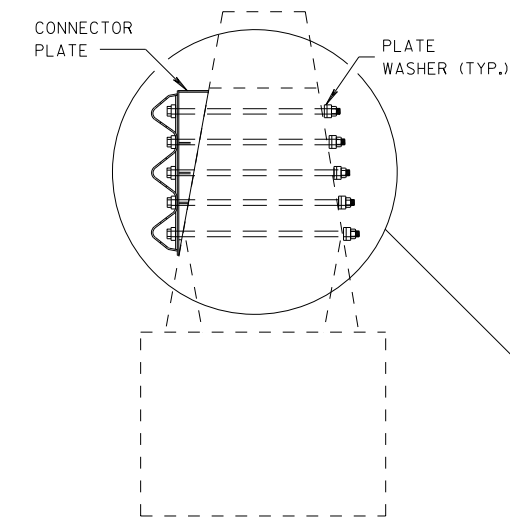
CONNECTOR PLATE, DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

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

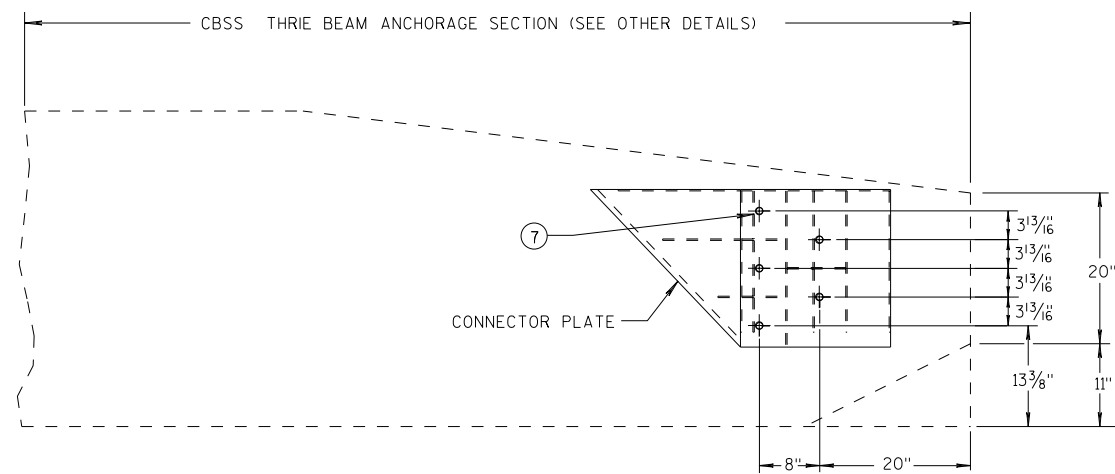
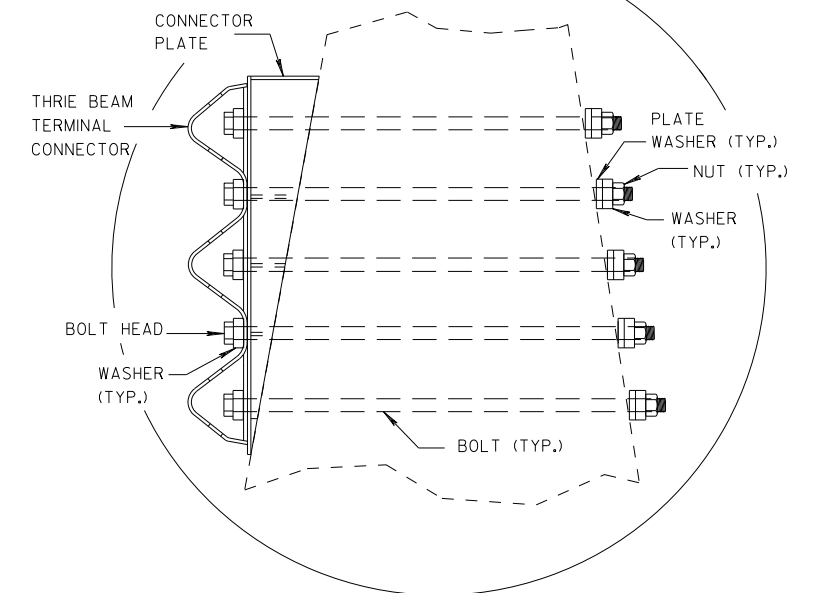
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTION PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/32" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.



THRIE BEAM CONNECTION TO SINGLE SLOPE BARRIER



SECTION N-N

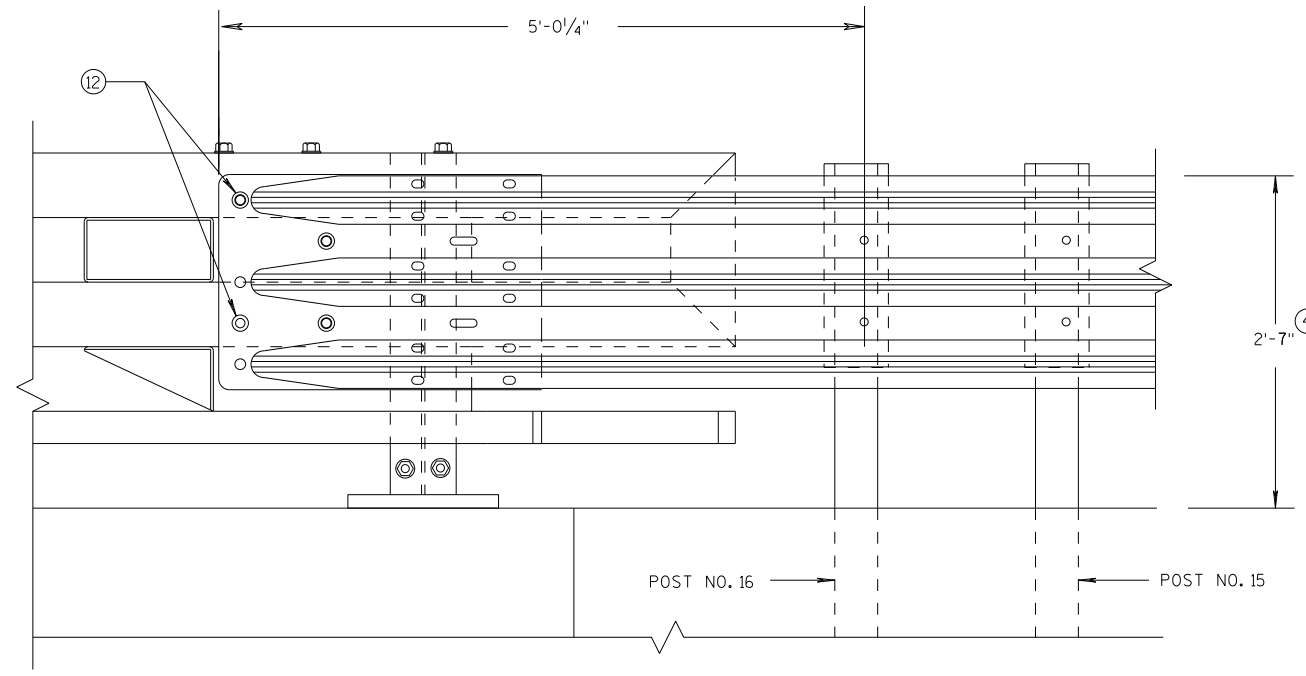


SINGLE SLOPE CONNECTION PLATE PLACEMENT

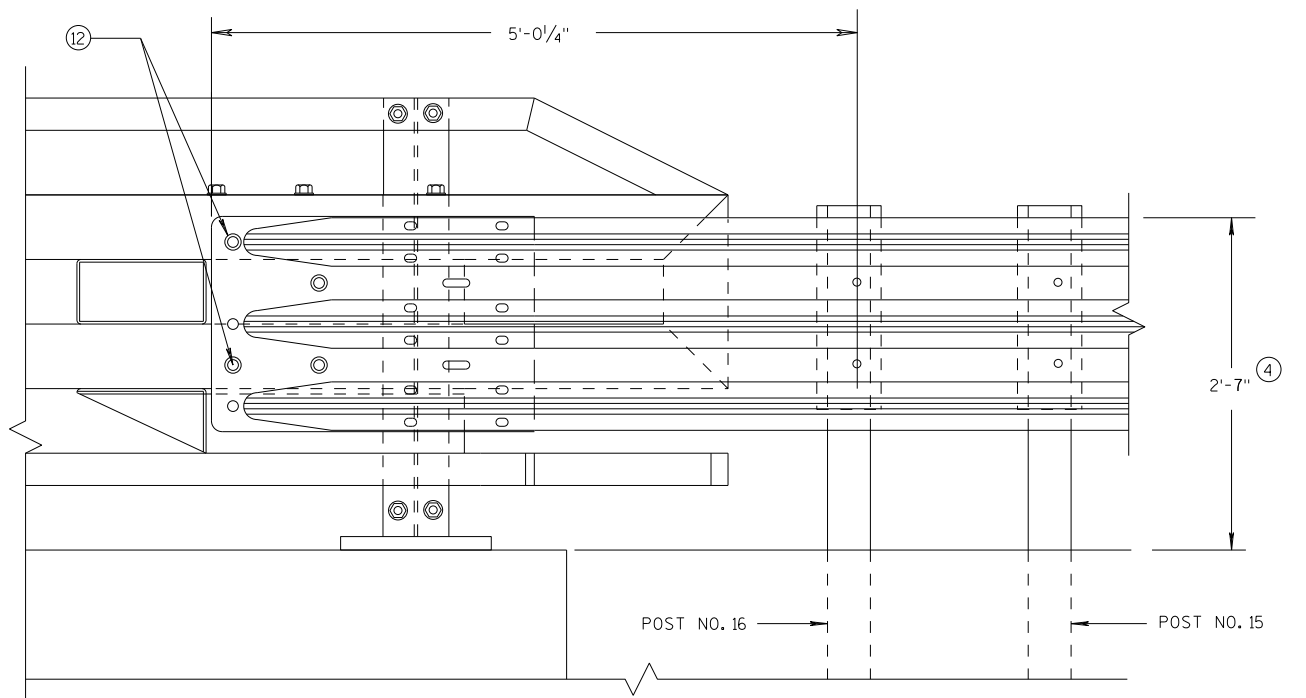
**MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
DATE 7/2018 /S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR
FHWA



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.

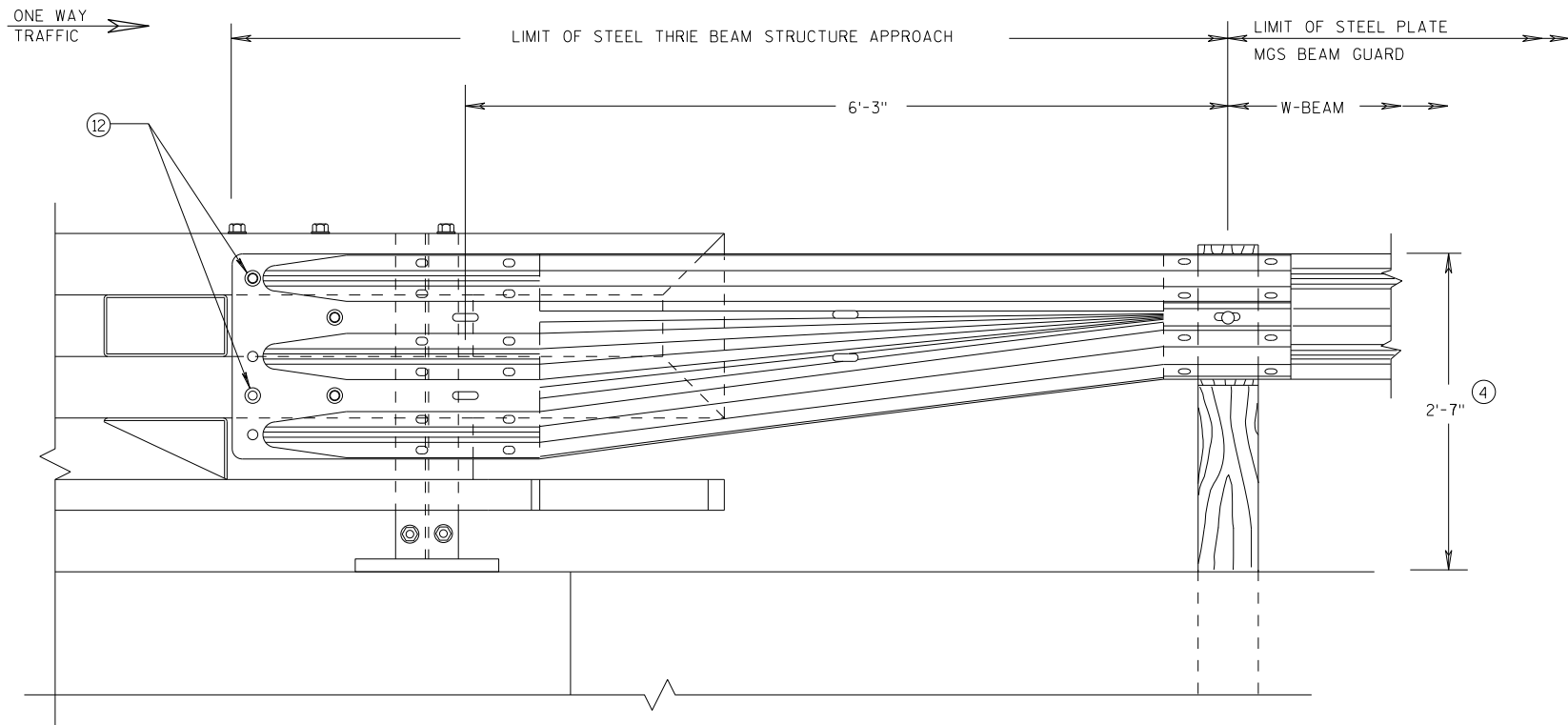
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S.D.D. 14 B 45-5k

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

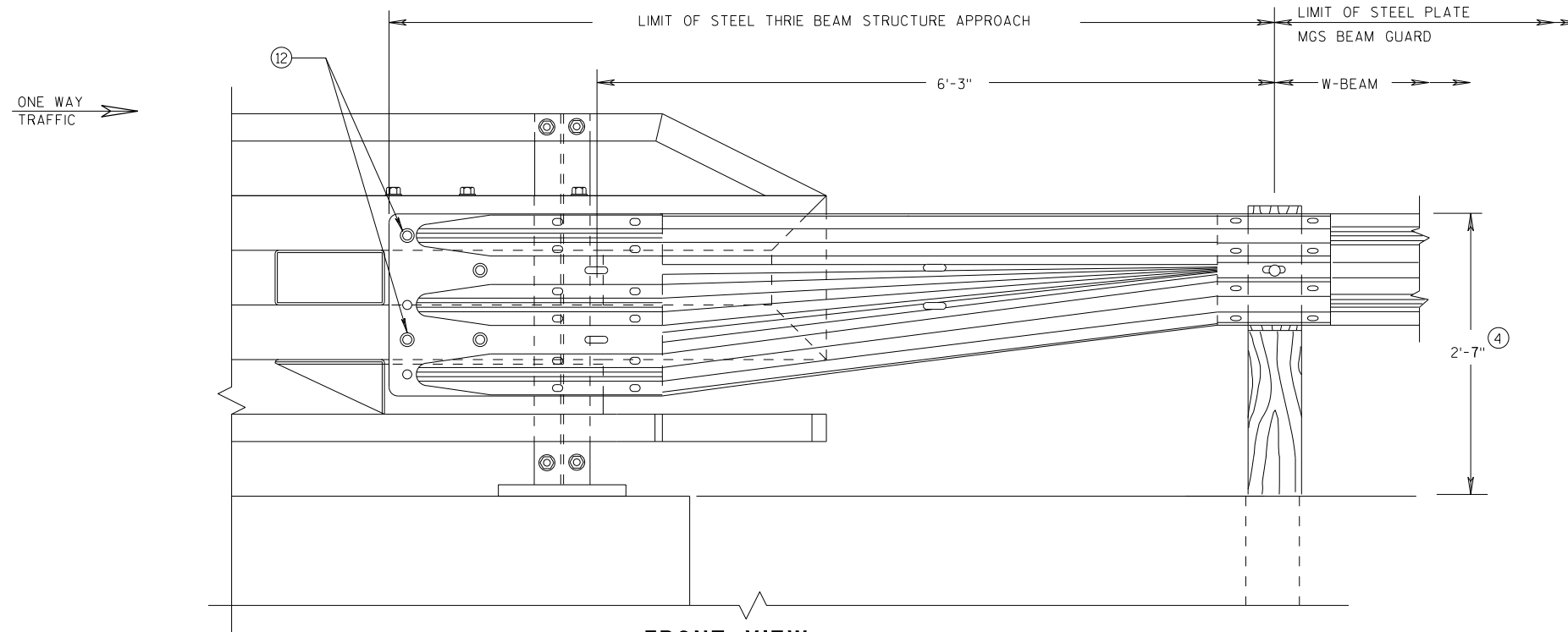
MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED DATE	/S/ Rodney Taylor ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
FHWA	



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 $\pm 1"$.
- 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 $\frac{1}{2}$ -INCH BEYOND NUT.

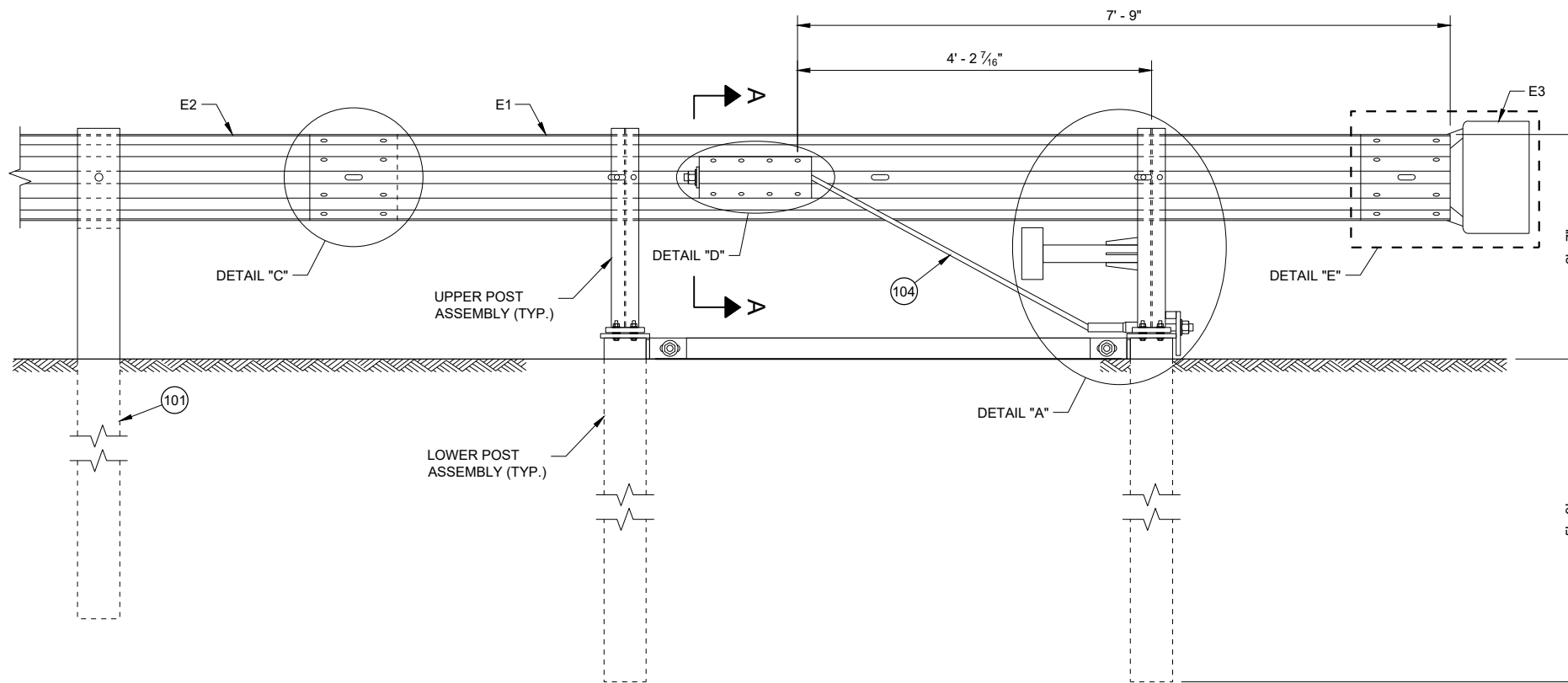


FRONT VIEW
W BEAM TRANSITION AND
CONNECTION TO BRIDGE RAILING TYPE "NY4"
 (USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

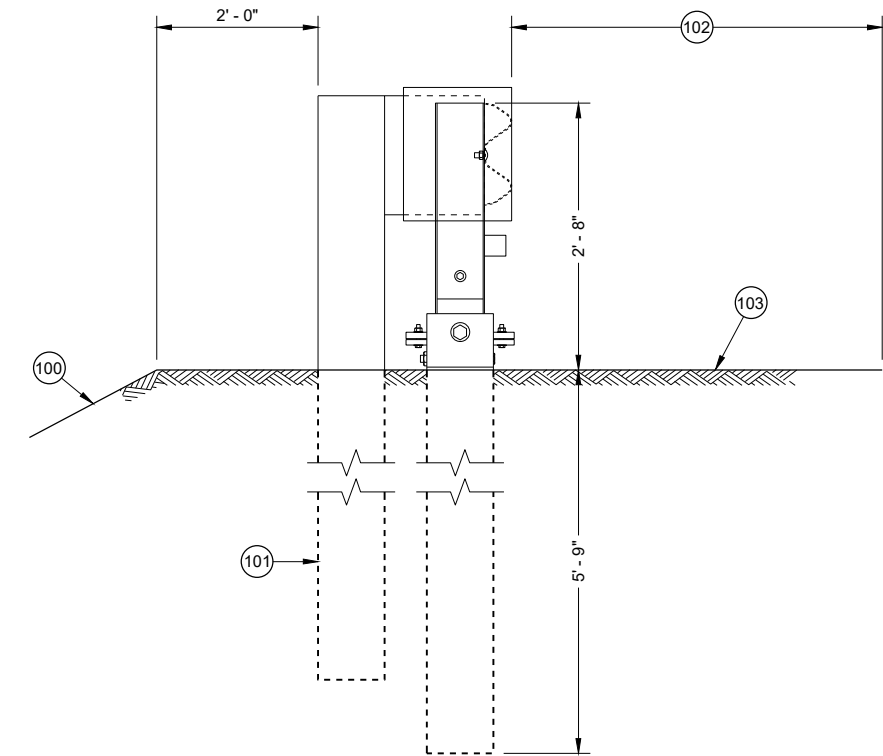
MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION

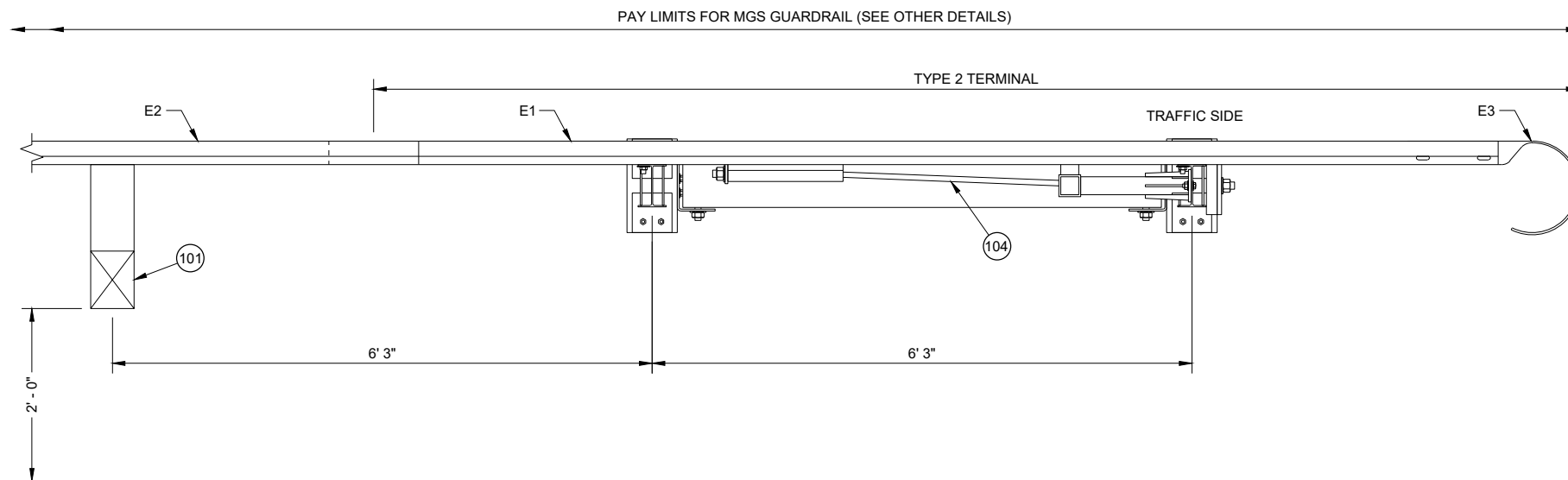
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**BACK VIEW
TYPE 2 TERMINAL**



**SIDE VIEW
TYPE 2 TERMINAL**



**TOP VIEW
TYPE 2 TERMINAL**

- GENERAL NOTES**
- (100) MAXIMUM SLOPE IS 2.5:1.
 - (101) SEE SDD 14B42 FOR MORE INFORMATION.
 - (102) SHOULDER
 - (103) MAXIMUM SLOPE IS 10:1.
 - (104) AFTER ASSEMBLY, CABLE IS TO BE TIGHTENED WITHOUT TWISTING THE CABLE.

**MIDWEST GUARDRAIL
SYSTEM (MGS)
TYPE 2 TERMINAL**

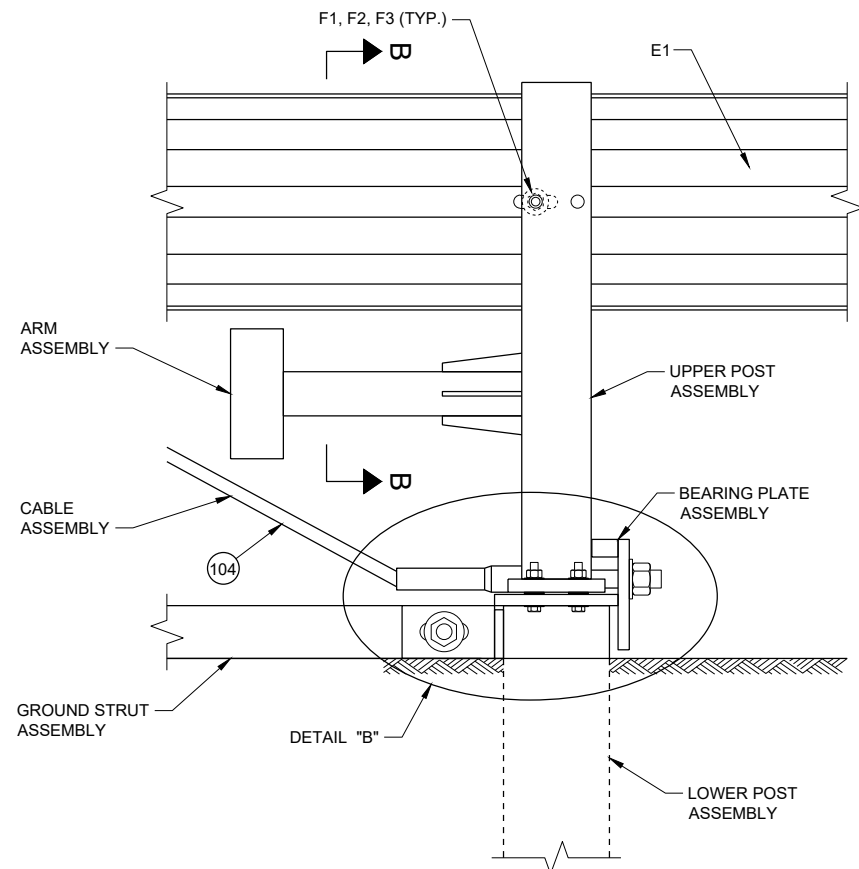
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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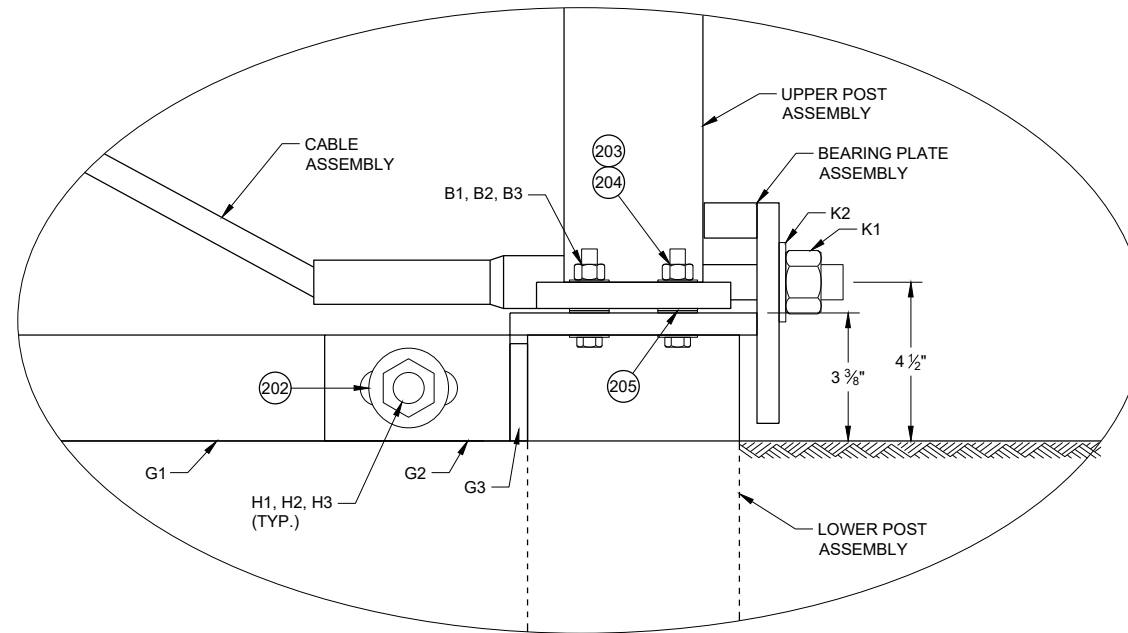
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SDD 14B47 - 05a

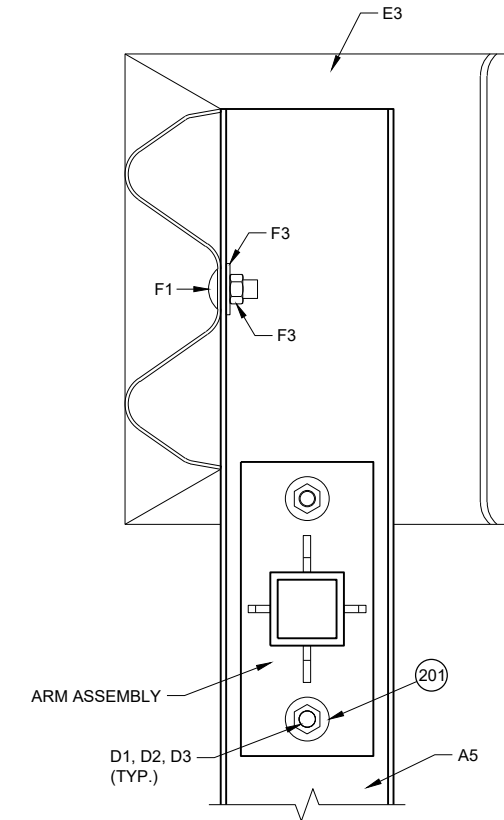
SDD 14B47 - 05a



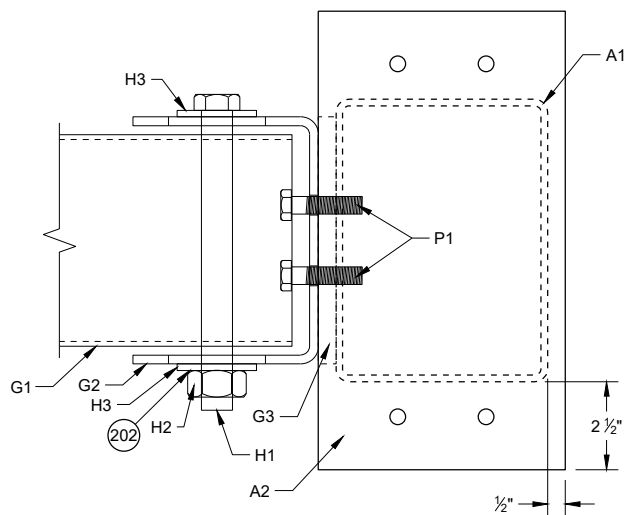
DETAIL "A"



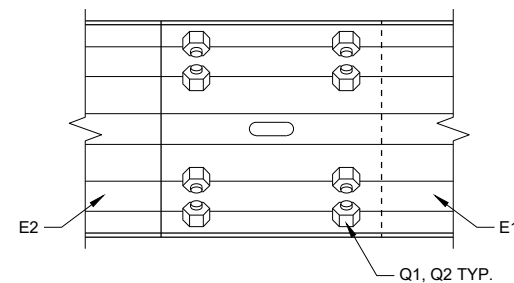
DETAIL "B"



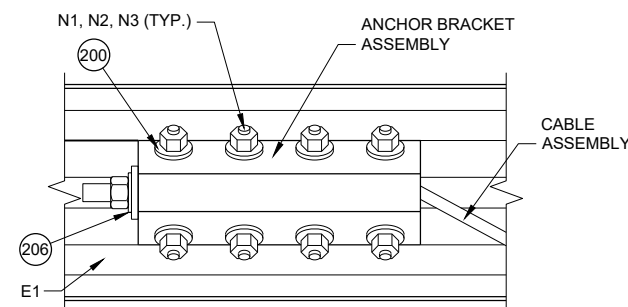
SECTION B - B



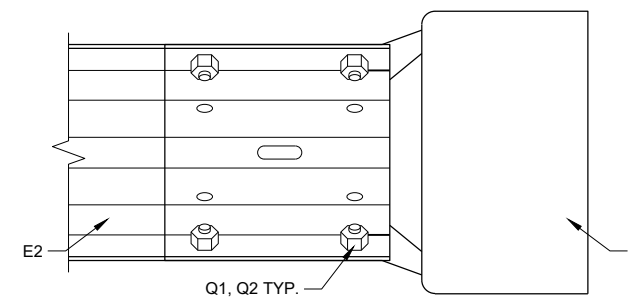
**TOP VIEW
GROUND STRUT
CONNECTION DETAIL**



DETAIL "C"



DETAIL "D"



DETAIL "E"

GENERAL NOTES

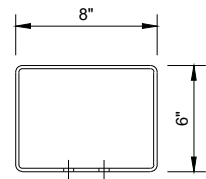
- 200 INSTALL ONE WASHER UNDER BOLT HEAD AND RAIL AND ON WASHER BETWEEN NUT AND ANCHOR BRACKET ASSEMBLY.
- 201 INSTALL ONE WASHER UNDER BOLT HEAD AND UPPER POST ASSEMBLY AND ONE WASHER BETWEEN NUT AND ARM PLATE.
- 202 INSTALL ONE WASHER UNDER BOLT HEAD AND GROUND STRUT CONNECTOR AND ONE WASHER BETWEEN NUT AND GROUND STRUT CONNECTOR.
- 203 INSTALL ONE WASHER UNDER BOLT HEAD AND LOWER POST ASSEMBLY AND ONE WASHER BETWEEN NUT AND UPPER POST ASSEMBLY.
- 204 TORQUE VALUE IS BETWEEN 60 - 75 FT-LB.
- 205 TWO WASHERS BETWEEN UPPER AND LOWER POST ASSEMBLY.
- 206 INSTALL ONE WASHER BETWEEN NUT AND ANCHOR BRACKET ASSEMBLY.

**MIDWEST GUARDRAIL
SYSTEM (MGS)
TYPE 2 TERMINAL**

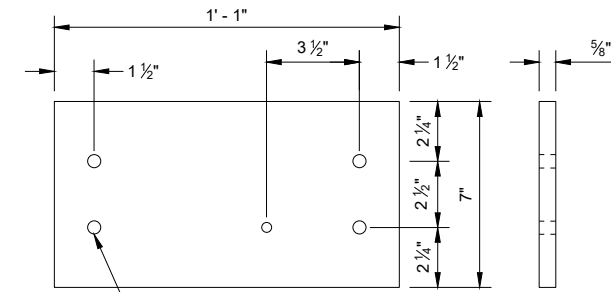
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

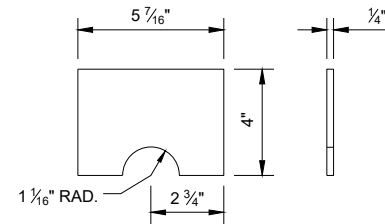
(300) TAP FOR 1/2" AFTER GALVANIZATION



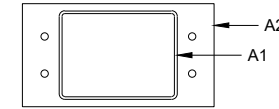
TOP VIEW



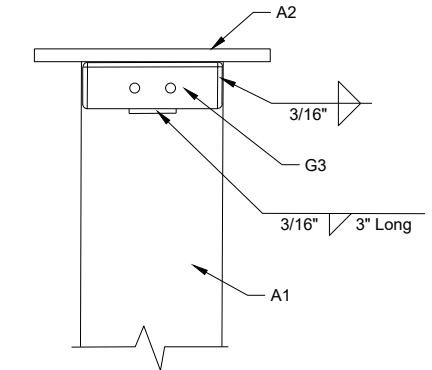
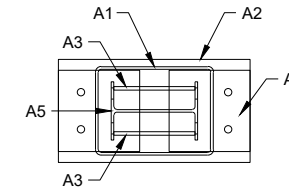
LOWER PLATE (A2)



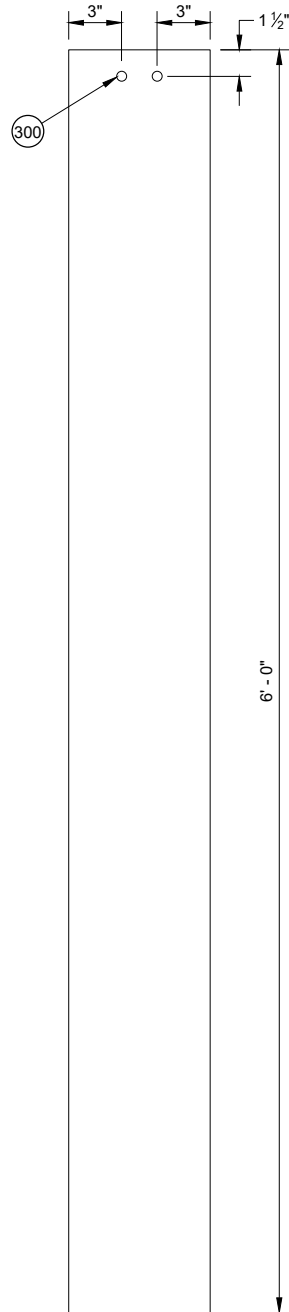
POST GUSSET (A3)



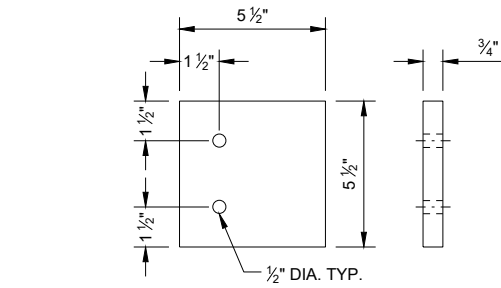
PLAN VIEW



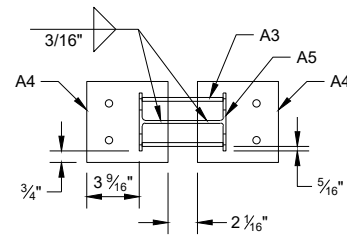
WELDING DETAIL G3 AND A1



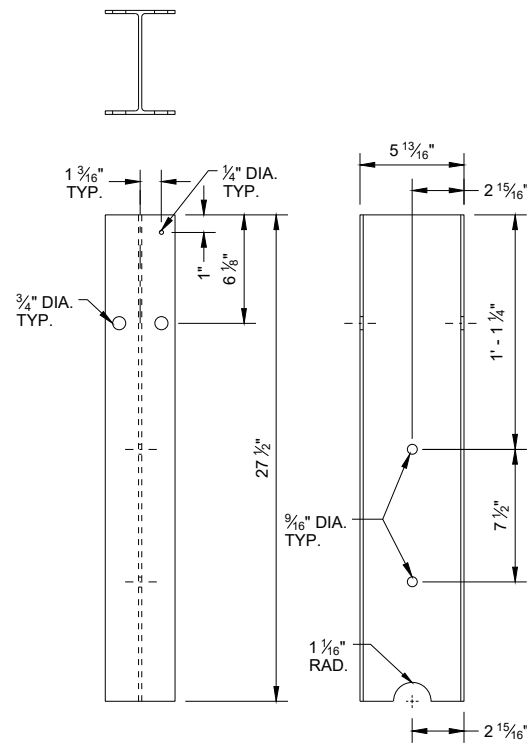
FOUNDATION TUBE (A1)



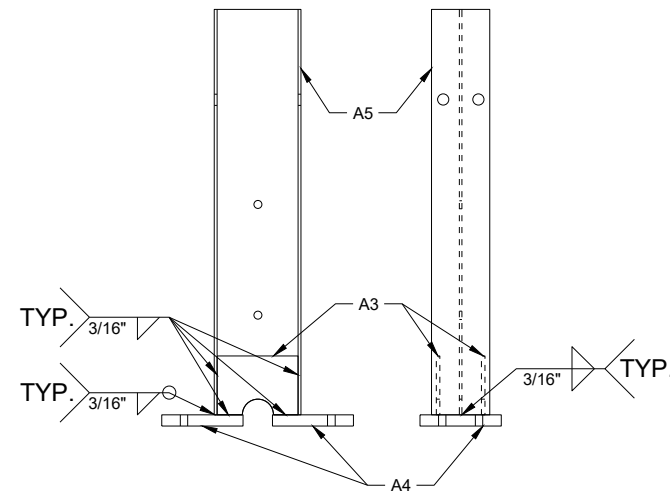
UPPER PLATE (A4)



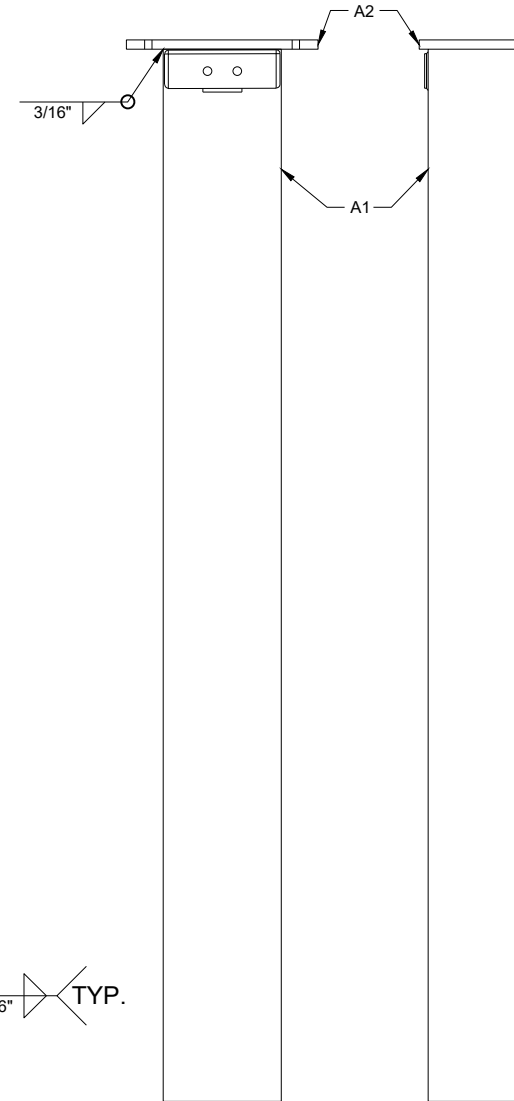
PLAN VIEW



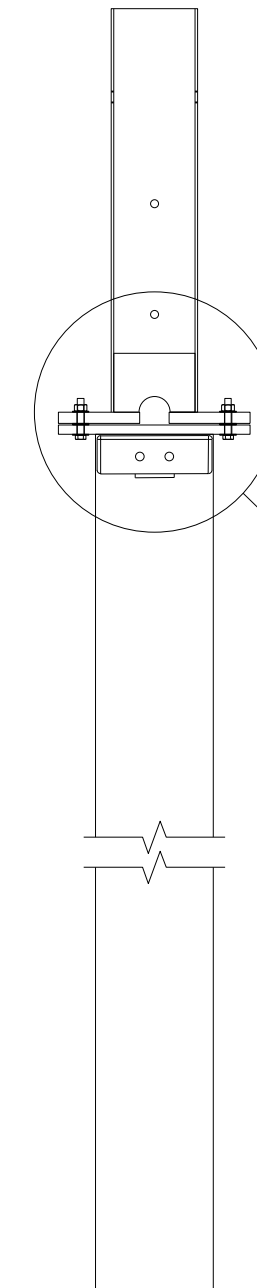
TYPE 2 POST (A5)



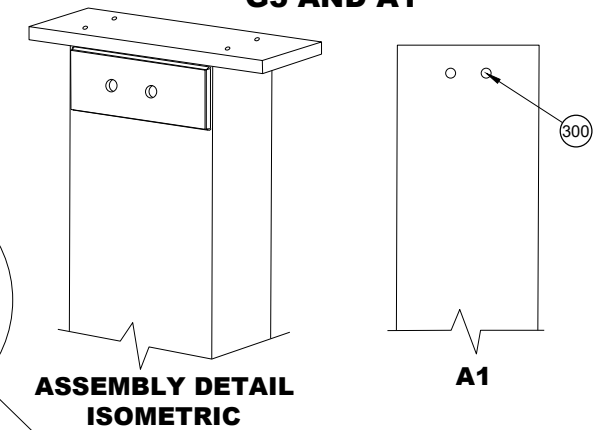
UPPER POST ASSEMBLY



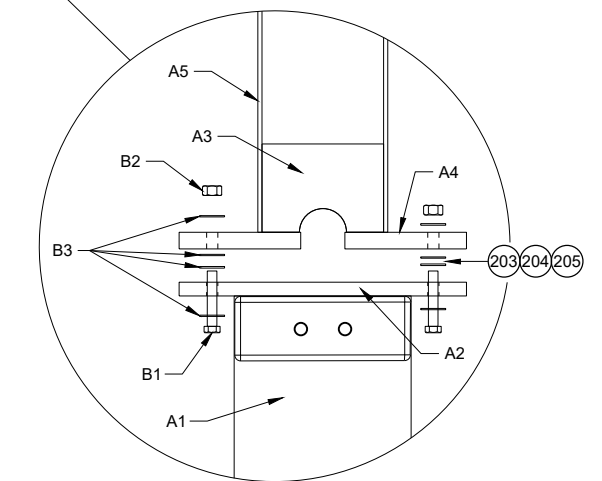
LOWER POST ASSEMBLY



ASSEMBLED POST



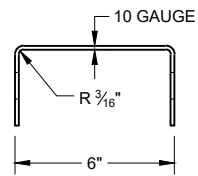
ASSEMBLY DETAIL ISOMETRIC



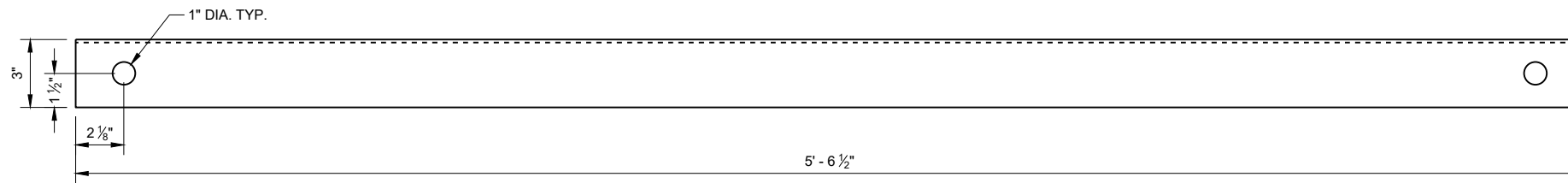
POST CONNECTION DETAIL

MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

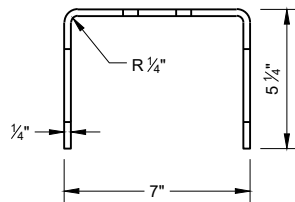


SIDE VIEW

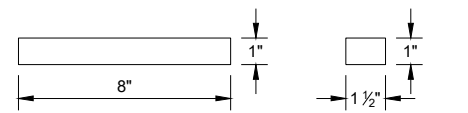


FRONT VIEW

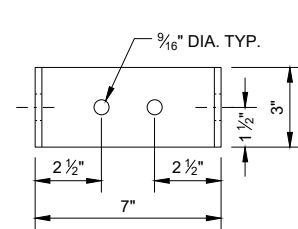
GROUND STRUT CHANNEL (G1)



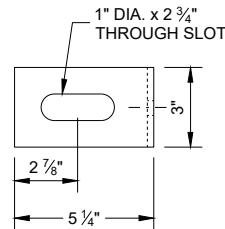
TOP VIEW



BEARING PLATE FLANGE (L2)

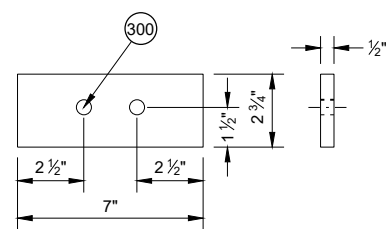


FRONT VIEW

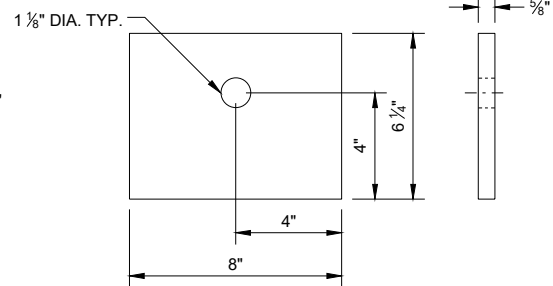


SIDE VIEW

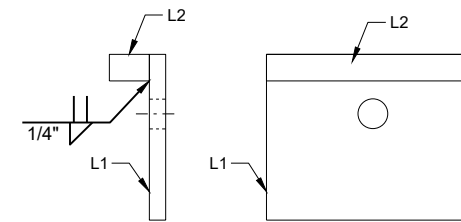
GROUND STRUT CONNECTOR (G2)



GROUND STRUT PLATE (G3)



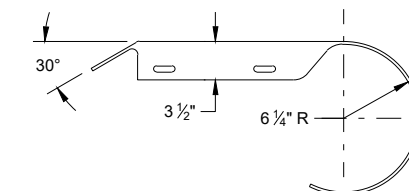
BEARING PLATE (L1)



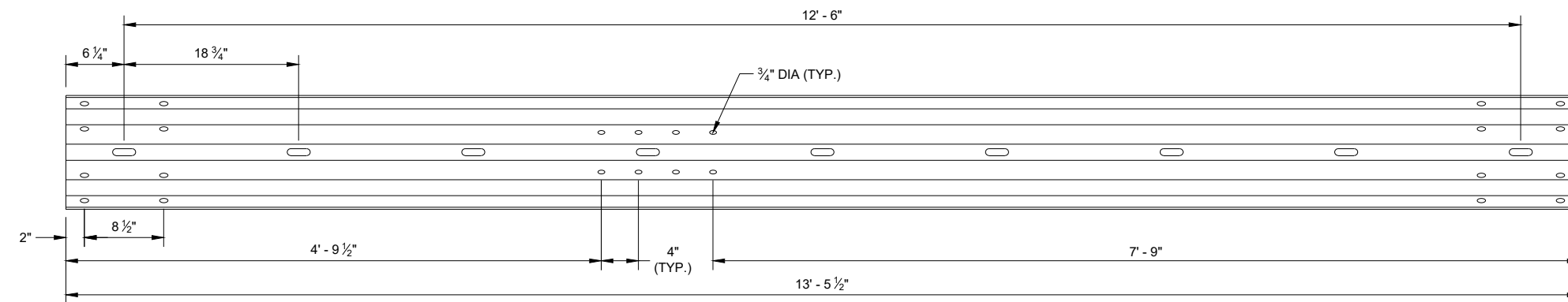
SIDE VIEW

FRONT VIEW

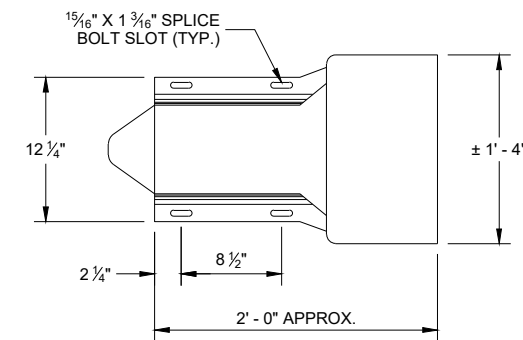
BEARING PLATE ASSEMBLY



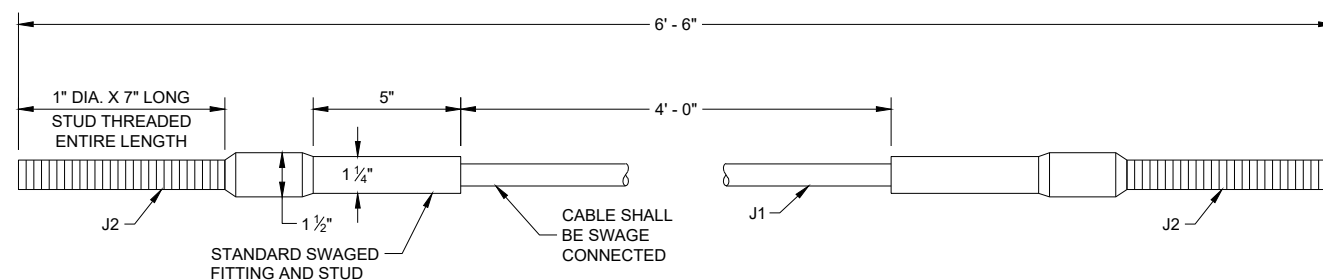
PLAN VIEW



TYPE 2 GUARDRAIL (E1)



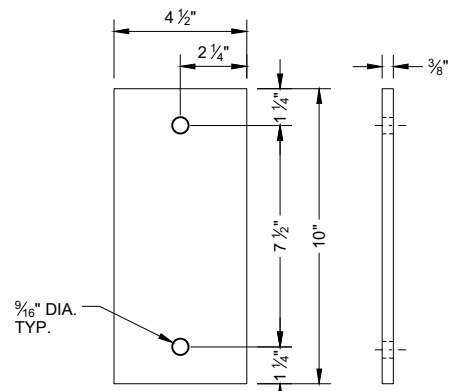
**ELEVATION VIEW
ROUNDED BUFFER END (E3)**



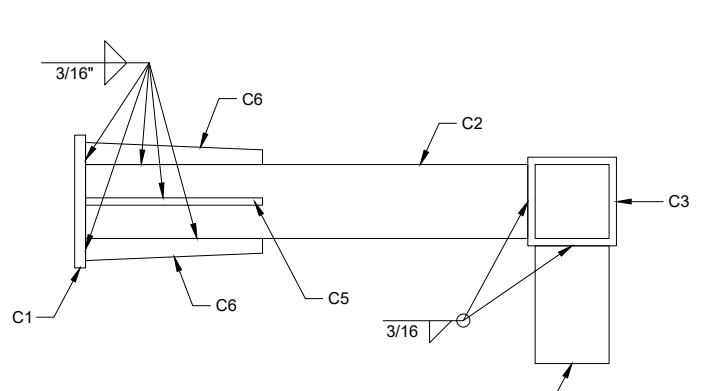
CABLE ASSEMBLY

**MIDWEST GUARDRAIL
SYSTEM (MGS)
TYPE 2 TERMINAL**

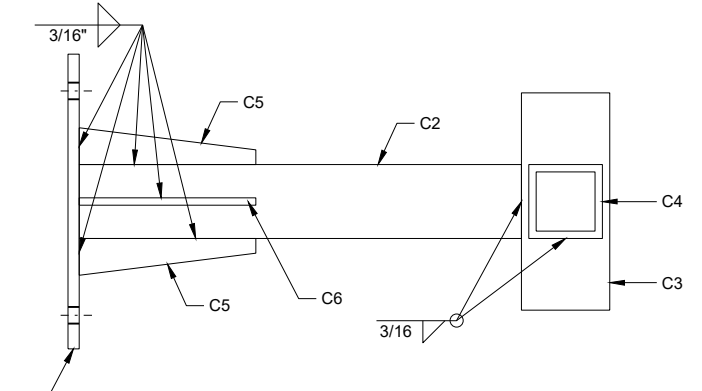
STATE OF WISCONSIN
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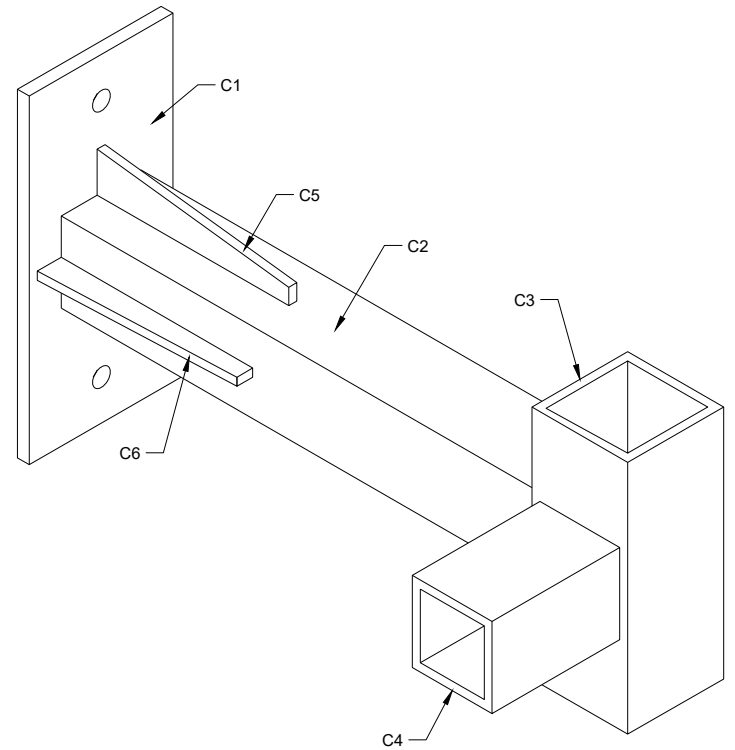
ARM PLATE (C1)



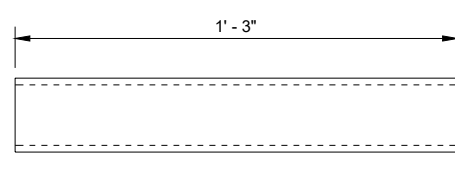
**TOP VIEW
ARM ASSEMBLY**



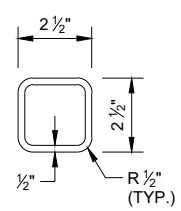
**SIDE VIEW
ARM ASSEMBLY**



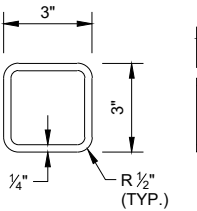
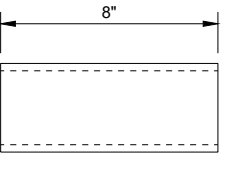
**ISOMETRIC VIEW
ARM ASSEMBLY**



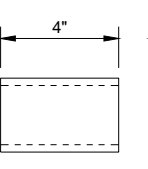
ARM TUBE 1 (C2)



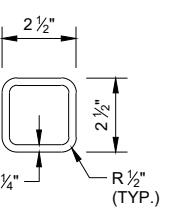
ARM TUBE 2 (C3)



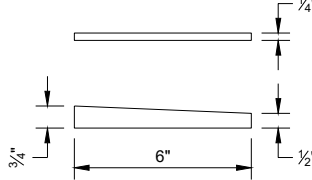
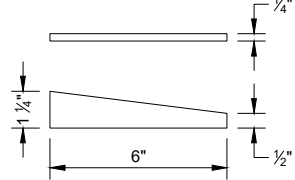
ARM TUBE 3 (C4)



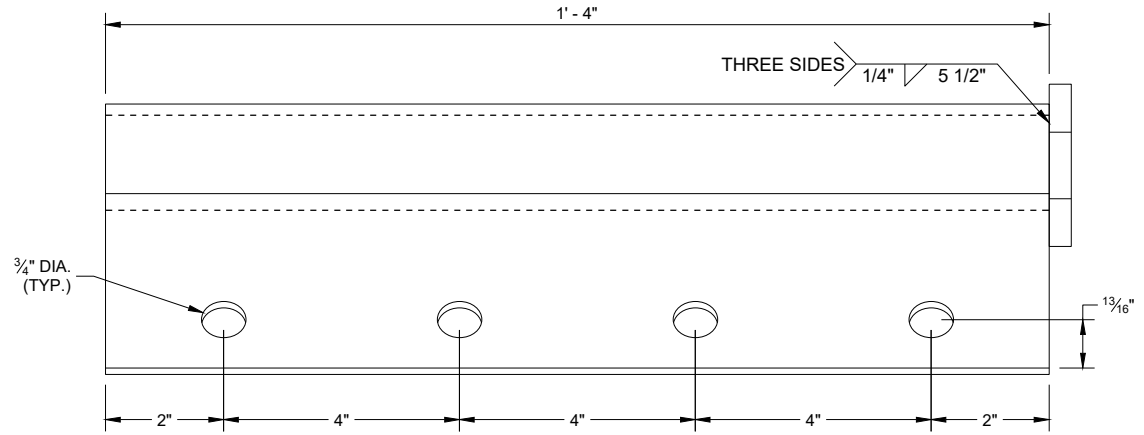
**ARM GUSSET
PLATE 1 (C5)**



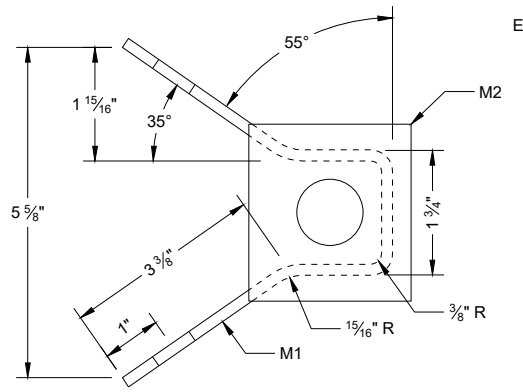
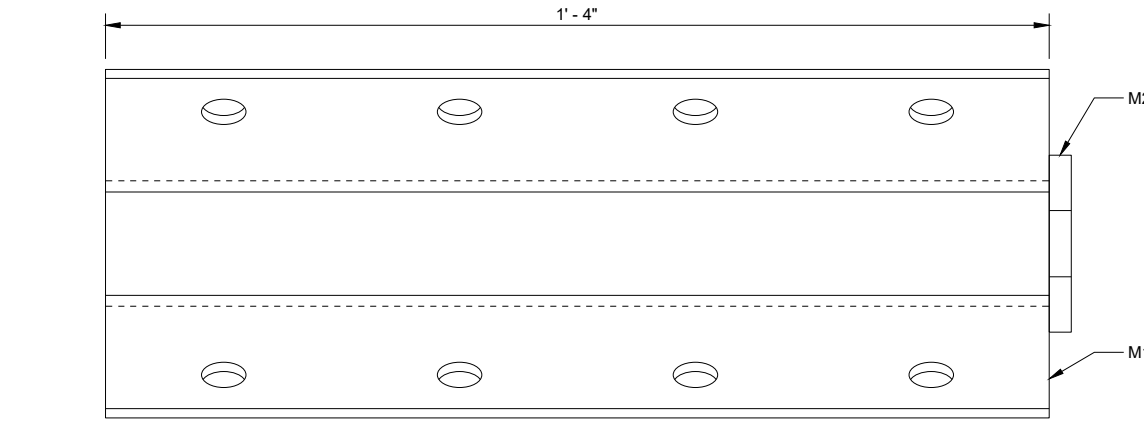
**ARM GUSSET
PLATE 2 (C6)**



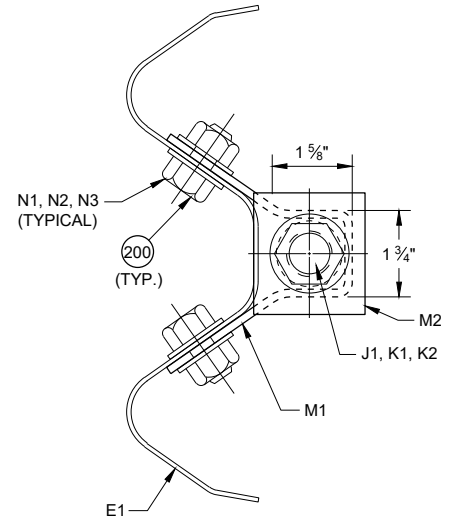
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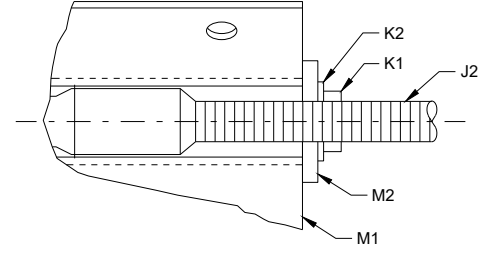
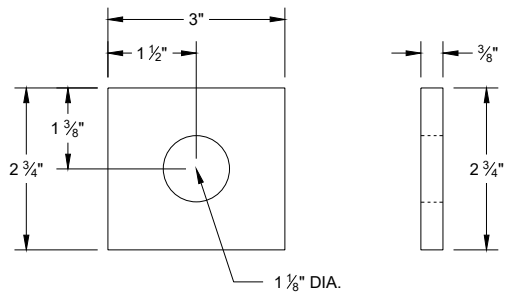
ANCHOR BRACKET (M1, M2)



ANCHOR BRACKET BEARING PLATE (M2)



SECTION A - A



SDD 14B47 - 05e

**MIDWEST GUARDRAIL
SYSTEM (MGS)
TYPE 2 TERMINAL**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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SDD 14B47 - 05e

BILL OF MATERIALS - TYPE 2 TERMINAL (MGS)

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
A1	TYPE 2 FOUNDATION TUBE	AASHTO M111 / ASTM A123 ASTM A500 GRADE B OR ASTM A-501	TS 8" x 6" x 3/16"
A2	LOWER 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	5/8" THICKNESS
A3	POST GUSSET	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	1/4" THICKNESS
A4	UPPER 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	3/4" THICKNESS
A5	TYPE 2 POST	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, w6x9 or w6x8.5	
B1	BREAKAWAY BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC HEAVY HEX 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.	7/16" DIA.
B2	BREAKAWAY BOLT WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER ONLY)	7/16" DIA.
B3	BREAKAWAY BOLT NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. 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	
C1	ARM ASSEMBLY 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	5/8" THICKNESS
C2	ARM ASSEMBLY TUBE 1	AASHTO M111 / ASTM A123 ASTM A500 GRADE B OR ASTM A-501	TS 8" x 6" x 3/16"
C3	ARM ASSEMBLY TUBE 2	AASHTO M111 / ASTM A123 ASTM A500 GRADE B OR ASTM A-501	TS 3" x 3" x 1/4"
C4	ARM ASSEMBLY TUBE 3	AASHTO M111 / ASTM A123 ASTM A500 GRADE B OR ASTM A-501	TS 2 1/2" x 2 1/2" X 1/4"
C5	ARM ASSEMBLY GUSSET 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	1/4" THICKNESS
C6	ARM ASSEMBLY GUSSET 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	1/4" THICKNESS
D1	ARM ASSEMBLY BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC HEAVY HEX HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36	1/2" DIA.
D2	ARM ASSEMBLY WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER ONLY)	1/2" DIA.
D3	ARM ASSEMBLY NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. 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	1/2" DIA.
E1	TYPE 2 GUARD RAIL	AASHTO M180 CLASS A TYPE 2 12 GAUGE APPROVED PRODUCER	
E2	BEAM GUARD RAIL	AASHTO M180 CLASS A TYPE 2 12 GAUGE APPROVED PRODUCER	
E3	BEAM GUARD ROUNDED BUFFER END	AASHTO M180 CLASS A TYPE 2 12 GAUGE APPROVED PRODUCER	
F1	POST BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC HEAVY HEX HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36	5/8" DIA.
F2	POST BOLT WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER ONLY)	5/8" DIA.
F3	POST BOLT NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. 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 AASHTO M180 RECESSED HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	
G1	GROUND STRUT CHANNEL	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	1/2" x 11 3/4" x 10 GAUGE
G2	GROUND STRUT CONNECTOR	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	1/4" THICKNESS
G3	GROUND STRUT 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	1/2" THICKNESS

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**MIDWEST GUARDRAIL
SYSTEM (MGS)
TYPE 2 TERMINAL**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

BILL OF MATERIALS - TYPE 2 TERMINAL (MGS)

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
H1	GROUND STRUT BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC HEAVY HEX HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36	7/8" DIA.
H2	GROUND STRUT BOLT WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER ONLY)	7/8" DIA.
H3	GROUND STRUT BOLT NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC HEAVY HEX HEAD 5/8" ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36	
J1	BCT CABLE	AASHTO M30 / ASTM A741 6 x 19 INDEPENDENT WIRE CORE (IWRC) IMPROVED PLOW STEEL (IPS), 6 x 19 INDEPENDENT WIRE CORE (IWRC) IMPROVED PLOW STEEL (IPS) TYPE II OR IIC, CLASS C ZINC COATED MIN. BREAKING STRENGTH OF 42.7 KIPS	3/4" DIA.
J2	BCT CABLE	UNC 1" ASTM A576 GRADE 1035 SWAGE FITTINGS ARE TO BE FACTORY SWEDGED. MIN BREAKING STRENGTH OF 42.7 KIPS ASME B30.26 "FORGED, CAST, OR DIE STAMPED WITH THE FOLLOWING IN TO CONNECTION: NAME OF MANUFACTURE OR TRADEMARK OF CONNECTION'S MANUFACTURER, SIZE OR RATED LOAD, GRADE FOR ALLOY EYEBOLTS."	
K1	CABLE ASSEMBLY NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. 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	1" DIA.
K2	CABLE ASSEMBLY WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1	1" DIA.
L1	BEARING 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	5/8" THICKNESS
L2	BEARING PLATE FLANGE	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	1" THICKNESS
M1	BEAM GUARD ANCHOR BRACKET	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	
M2	BEAM GUARD ANCHOR 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	3/8" THICKNESS
N1	ANCHOR BRACKET BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC AASHTO M180 HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36	5/8" DIA.
N2	ANCHOR BRACKET BOLT WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER ONLY)	5/8" DIA.
N3	ANCHOR BRACKET BOLT NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. 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	
P1	FOUNDATION TUBE BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. 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	1/2" DIA.
Q1	SPLICE BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC AASHTO M180 HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36	
Q2	SPLICE NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. 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 AASHTO M180 RECESSED HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	5/8" DIA.

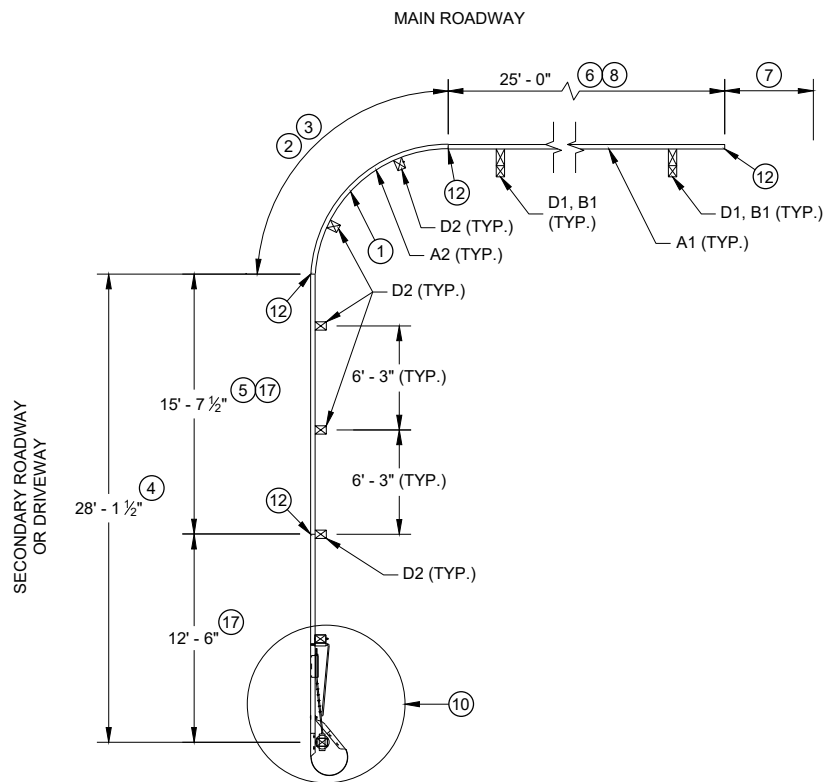
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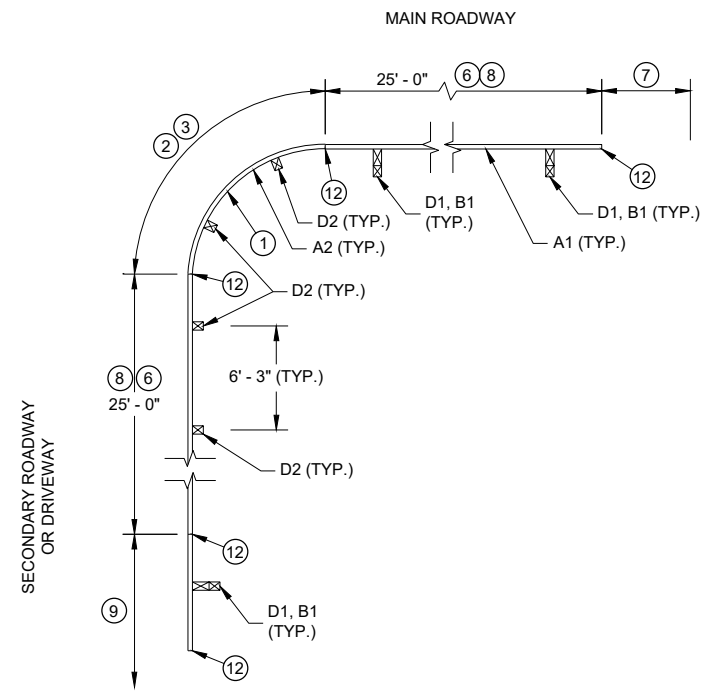
SDD 14B47 - 05g

SDD 14B47 - 05g

MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2023 DATE	/S/ Rodney Taylor ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA	



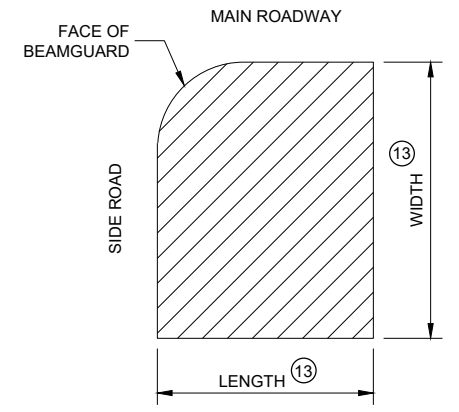
PLAN VIEW
SHORT RADIUS BEAM GUARD WITH
SHORT RADIUS TERMINAL ON
SECONDARY ROAD OR DRIVEWAY



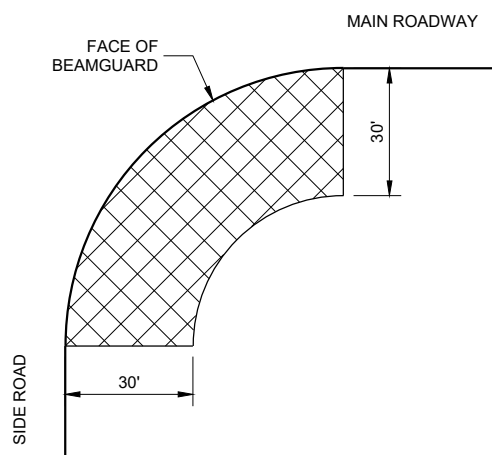
PLAN VIEW
SHORT RADIUS BEAM GUARD WITH
EAT, ADDITIONAL BEAM GUARD
OR
TRANSITION TO RIGID BARRIER ON
SECONDARY ROAD OR DRIVEWAY

TABLE FOR RADIUS OF 32' AND LESS

RADIUS (FT)	LENGTH (FT)	WIDTH (FT)
8	25	15
16	30	15
24	40	20
32	50	30



AREA FREE OF FIXED
OBJECTS FOR RADIUS
32' AND LESS

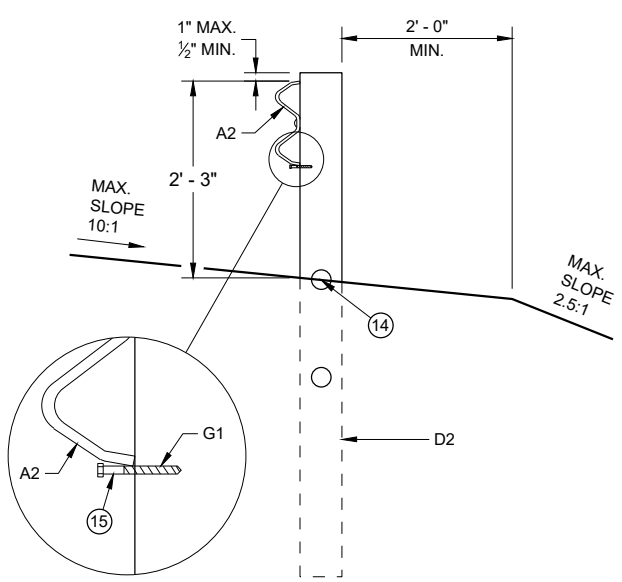


AREA FREE OF FIXED
OBJECTS FOR RADIUS
GREATER THAN 32'

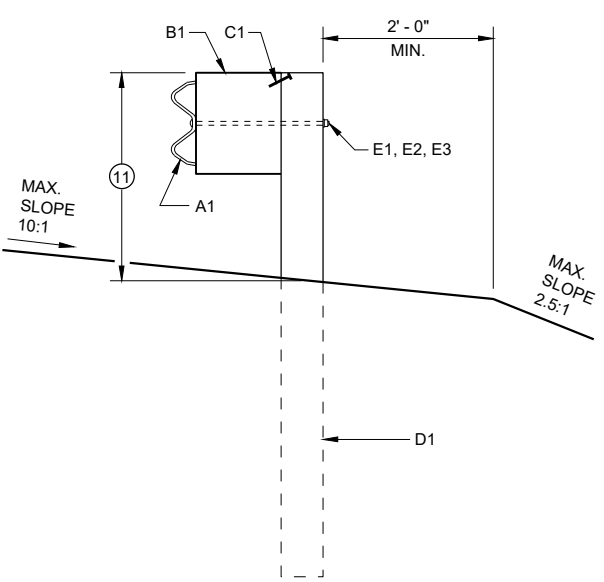
GENERAL NOTES

- SEE PLANS FOR OTHER BARRIER SYSTEM AND LOCATION SPECIFICS.
- SEE SDD 14B42 FOR MORE INFORMATION ON BEAM GUARD INSTALLATION, PARTS, MATERIALS, AND INSTALLATION INFORMATION.
- GALVANIZE PARTS AFTER FABRICATION.
- WELDING TO FOLLOW CURRENT REQUIREMENTS OF THE AMERICAN WELDING SOCIETY STRUCTURAL WELDING CODE ANSI / AWS D1.1.
- UNLESS NOTED OTHERWISE, ALL PLATES ARE FLAT AND FREE OF WARP.
- UNLESS NOTED OTHERWISE, ALL EDGES ARE SMOOTH, STRAIGHT AND VERTICAL.
- ALL CUTS AND HOLES, EXCEPT IN BEAM GUARD RAIL ARE TO BE MACHINED OR MACHINE FLAME CUT.
- UNLESS NOTED OTHERWISE, CUT OR PROVIDE BOLTS THAT ARE 1/4" TO 1/2" BEYOND THE NUT.
- DRAWINGS ARE NOT TO SCALE.

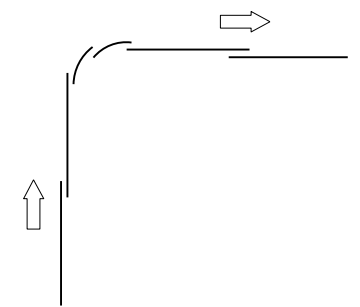
- ① RADIUS MEASURE FROM INSIDE OF RAIL. LENGTH OF BEAM GUARD SHORT RADIUS GUARD MEASURED ALONG TRAFFIC SIDE OF RAIL. RADIUS BETWEEN 8 FEET TO 150 FEET. SEE PLAN FOR REQUIRED RADIUS. BEAM GUARD RAIL IN RADIUS IS SHOP BENT. ODD RAIL LENGTH OR FIELD CUTS MAY BE REQUIRED.
- ② CONTROLLED RELEASE TERMINAL (CRT) POSTS ARE USED IN THE RADIUS. CONTROLLED RELEASE TERMINAL (CRT) POSTS ARE SPACED 6' - 3". SEE PLAN FOR NUMBER OF CONTROLLED RELEASE (CRT) POSTS.
- ③ WITHIN RADIUS BEAM GUARD RAILS ARE NOT BOLTED TO POSTS. BEAM GUARD RAIL IS RESTED ON TOP OF LAG SCREW.
- ④ MINIMUM LENGTH OF BEAM GUARD ALONG SIDE ROAD OR DRIVEWAY TO INSTALL SHORT RADIUS TERMINAL. BEAM GUARD IS PAID WITH BEAM GUARD ITEM.
- ⑤ ODD LENGTH OF BEAM GUARD REQUIRED TO INSTALL SHORT RADIUS TERMINAL.
- ⑥ MINIMUM AMOUNT OF BEAM GUARD TO BE INSTALLED PRIOR TO TRANSITION TO RIGID BARRIER, ADDITIONAL BEAM GUARD, OR EAT. BEAM GUARD PAID FOR WITH BEAM GUARD ITEM. SEE PLANS FOR MORE DETAIL.
- ⑦ BEAM GUARD, EAT, OR TRANSITION TO RIGID BARRIER. SEE PLAN.
- ⑧ TOP OF BEAM GUARD BY THE RADIUS IS 27". HEIGHT OF BEAM GUARD IS 31" BY TRANSITION TO RIGID BARRIER, ADDITIONAL BEAM GUARD OR EAT.
- ⑨ ADDITIONAL BEAM GUARD, EAT OR TRANSITION TO RIGID BARRIER. BEAM GUARD SHOWN. SEE PLAN FOR DETAILS.
- ⑩ SHORT RADIUS TERMINAL (SEE OTHER DETAILS).
- ⑪ HEIGHT VARIES. SEE NOTE ⑧ AND ⑧.
- ⑫ BEAM GUARD RAIL SPLICE LOCATION. SPLICE LOCATION REQUIRES PART F1 AND F2. SEE SDD 14B42 FOR DETAILS.
- ⑬ SEE TABLE FOR VALUES.
- ⑭ MAXIMUM HEIGHT FOR CENTER OF HOLE IS 3/4" ABOVE FINISHED GROUND ±1".
- ⑮ DRILL POST 1 5/8" DIA. PILOT HOLE. DO NOT HAMMER LAG SCREW INTO POST.
- ⑯ SMALL SIGNS ON BREAKAWAY HARDWARE ARE ACCEPTABLE.
- ⑰ TOP OF RAIL HEIGHT IS 27" WHEN USING A SHORT RADIUS TERMINAL (CRT).



CONTROLLED RELEASE
TERMINAL POST (CRT) IN RADIUS



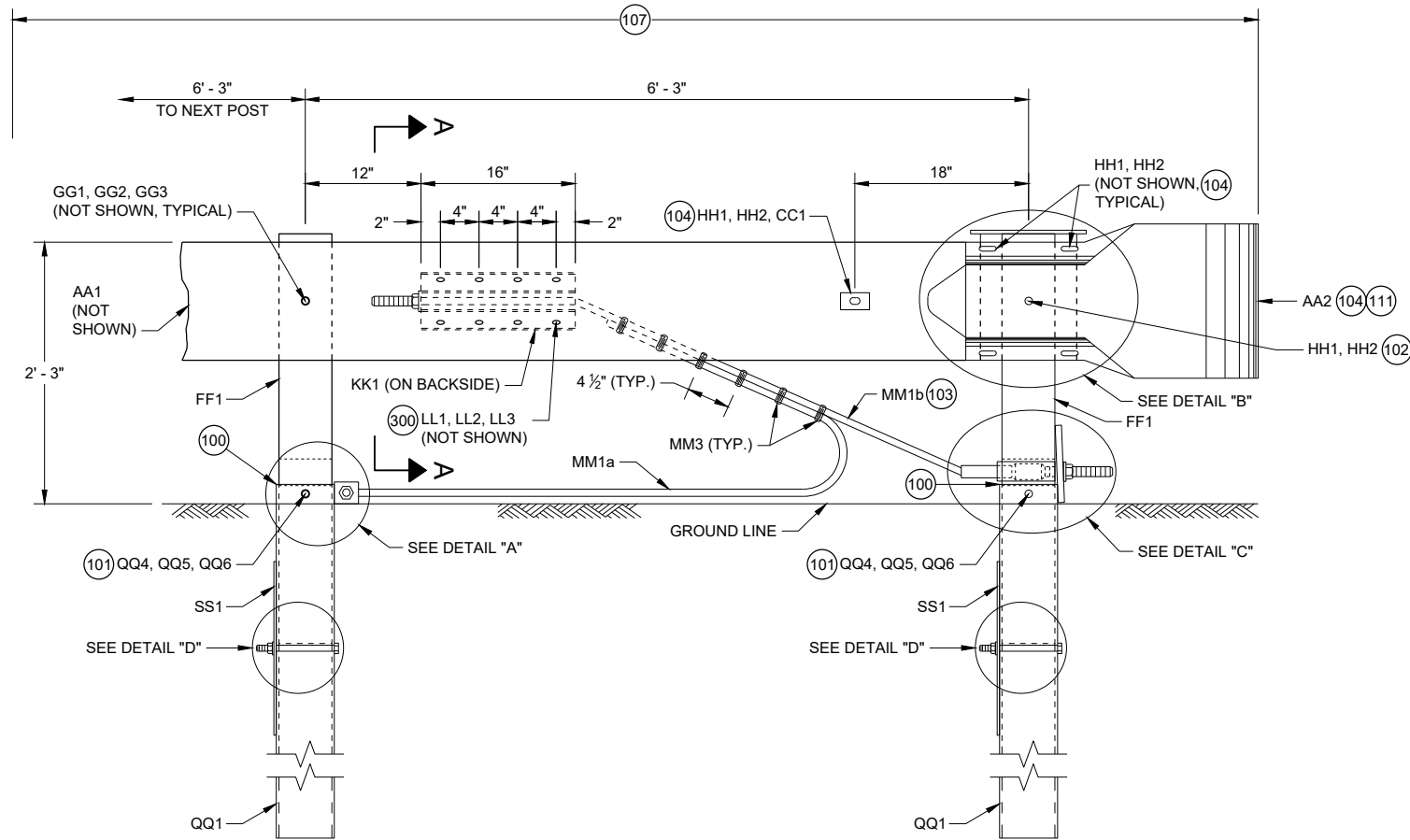
BEAM GUARD POSTS
IN HEIGHT TRANSITION



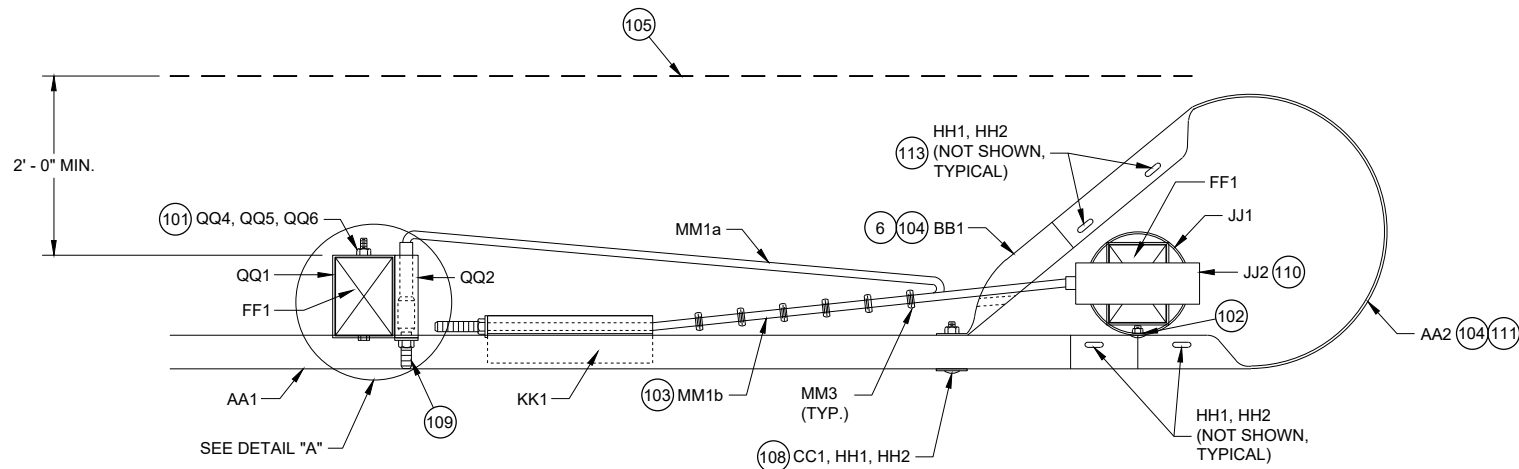
LAP SPLICE DETAIL

SHORT RADIUS BEAM
GUARD (MGS) SHORT
RADIUS TERMINAL (MGS)

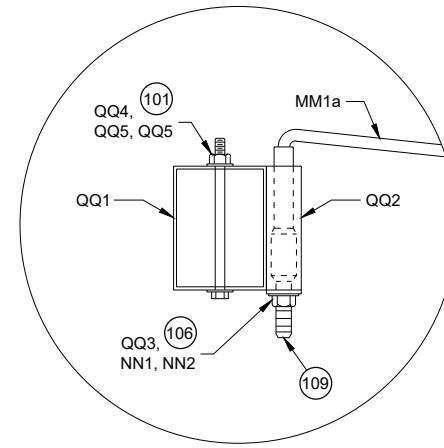
STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION



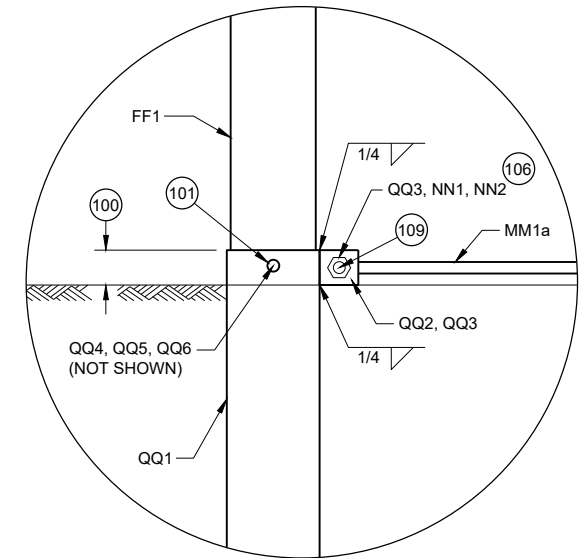
**PROFILE VIEW
SHORT RADIUS TERMINAL**



**TOP VIEW
SHORT RADIUS TERMINAL**



**TOP VIEW
DETAIL "A"
(WOOD BREAKAWAY AND BEAM
GUARD RAIL POSTS NOT SHOWN)**



**PROFILE VIEW
DETAIL "A"**

GENERAL NOTES

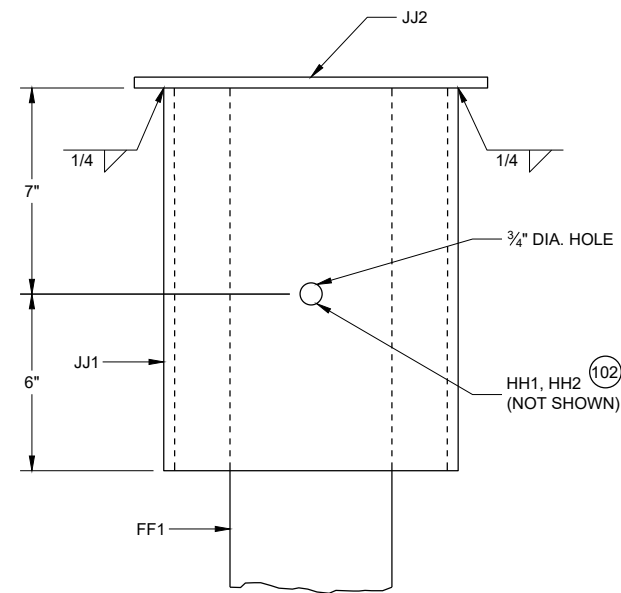
- (100) TOP OF FOUNDATION TUBE 2 INCHES MAXIMUM ABOVE FINISHED GROUND.
- (101) WASHERS REQUIRED BETWEEN BOLT HEAD AND FOUNDATION TUBE AND BETWEEN NUT AND FOUNDATION TUBE.
- (102) SPLICE BOLT AND NUT CONNECTS BEAM GUARD RAIL, W-BEAM SECTION BUFFER, AND STEEL PIPE ASSEMBLY. NO WASHER REQUIRED. SEE DETAIL "B".
- (103) CABLE IS TAUT.
- (104) ADJUST AA2 AND BB1 TO FIT.
- (105) BREAK POINT OF SHOULDER.
- (106) TACK WELD CABLE CONNECTOR TUBE PLATE TO CABLE CONNECTION TUBE. SEE DETAIL "A" PROFILE VIEW.
- (107) PAY LIMIT FOR BEAM GUARD.
- (108) SQUARE WASHER BETWEEN HEAD OF BOLT AND TRAFFIC FACE OF BEAM GUARD. ROUND WASHER REQUIRED BETWEEN NUT AND BB1.
- (109) CUT OR PROVIDE THREADED STUD THAT IS FLUSH WITH FACE OF BEAM GUARD RAIL KK1 (PLUS OR MINUS 1/2" TOLERANCE). DEBURR AFTER CUTTING.
- (110) SEE STEEL PIPE ASSEMBLY DETAILS.
- (111) ATTACH UU2 WITH UU3. SHOP APPLY UU1 TO UU2.
- (112) FOUR (4) HH1 AND HH2 REQUIRED TO ATTACH AA1 TO AA2.
- (113) FOUR (4) HH1 AND HH2 REQUIRED TO ATTACH AA2 TO BB1.

**SHORT RADIUS BEAM
GUARD (MGS) SHORT
RADIUS TERMINAL (MGS)**

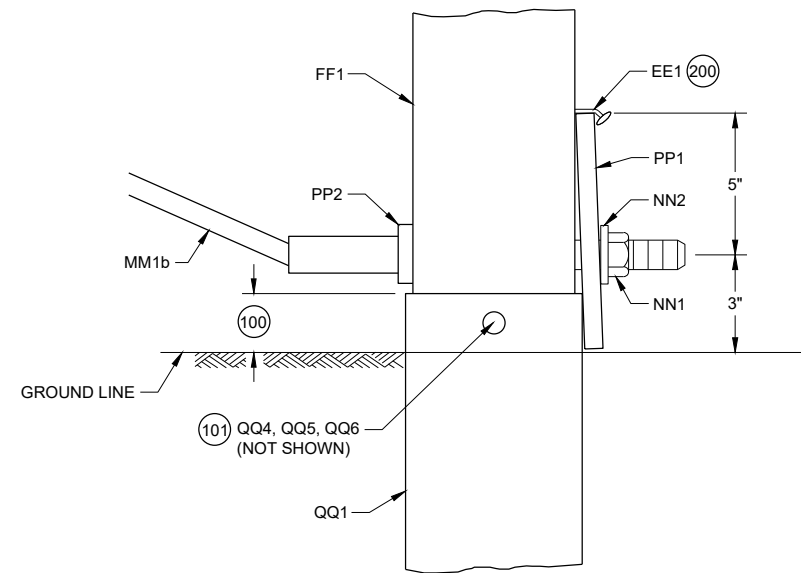
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

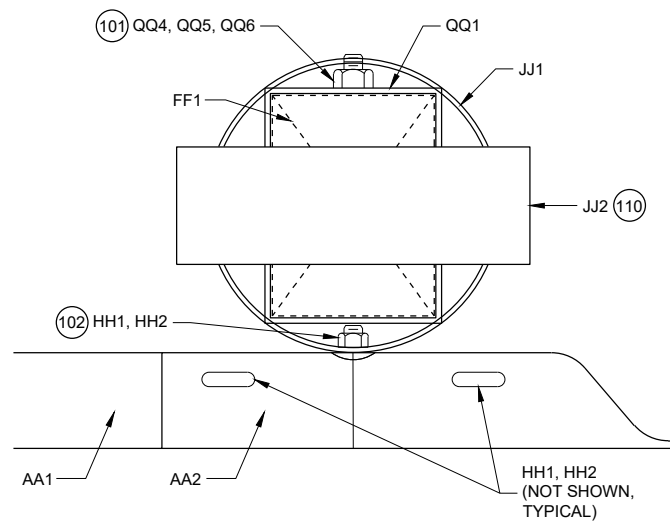
(200) TWO (2) NAILS SPACED 4 INCHES CENTER TO CENTER.



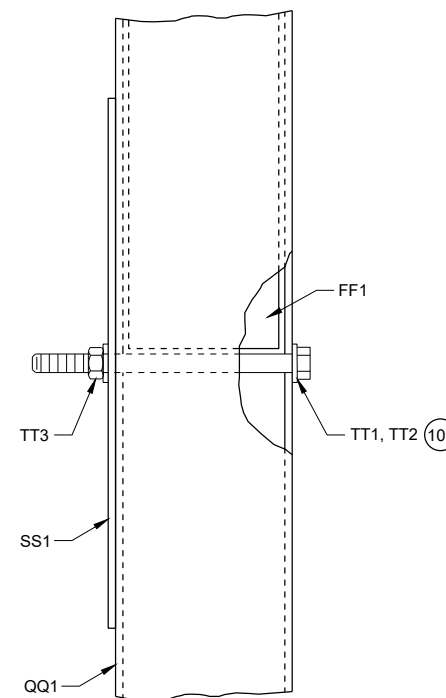
**PROFILE VIEW
DETAIL "B"
STEEL PIPE ASSEMBLY
(BEAM GUARD AND W BEAM
END SECTION NOT SHOWN)**



**PROFILE VIEW
DETAIL "C"**



**PLAN VIEW
DETAIL "B"
STEEL PIPE ASSEMBLY**



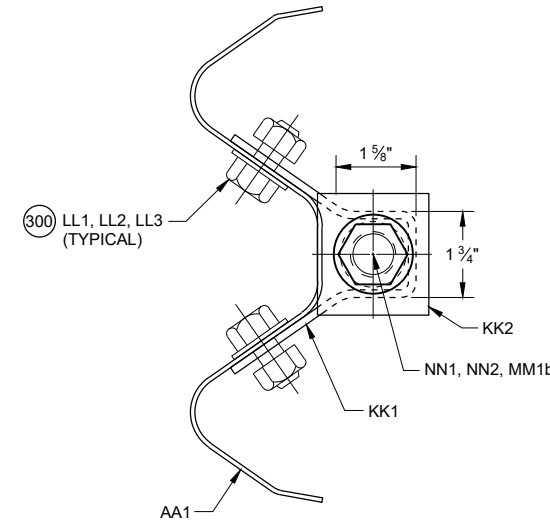
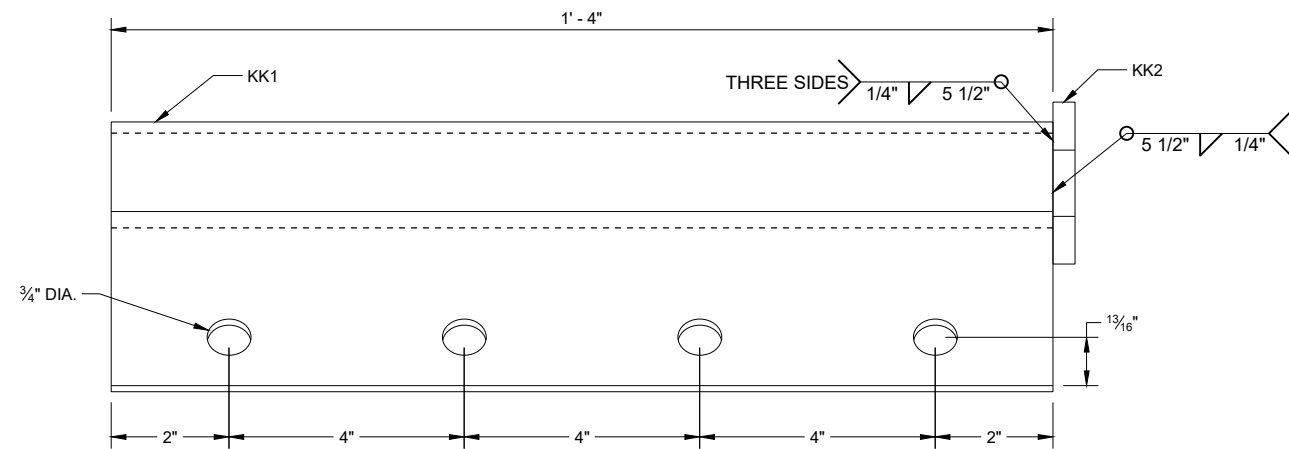
**PROFILE VIEW
DETAIL "D"**

**SHORT RADIUS BEAM
GUARD (MGS) SHORT
RADIUS TERMINAL (MGS)**

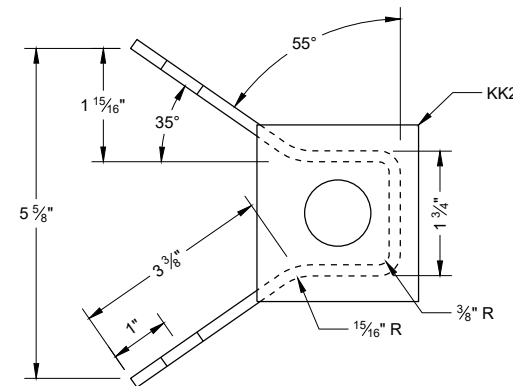
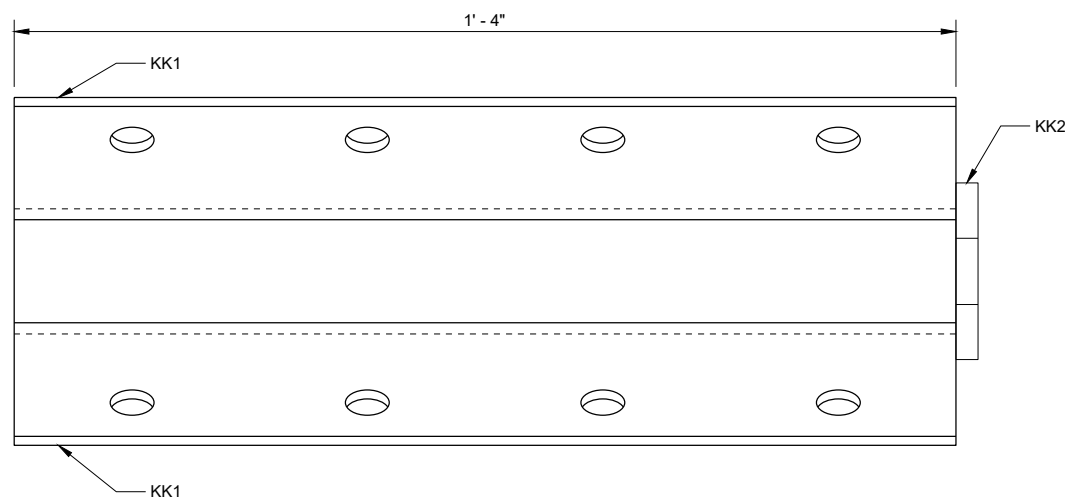
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

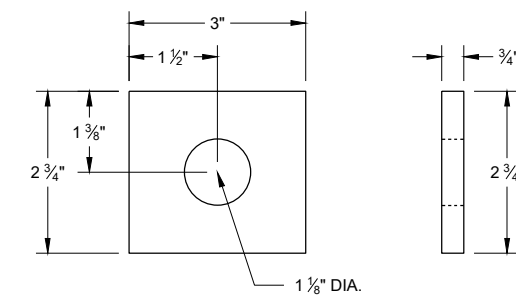
300 WASHERS REQUIRED BETWEEN BOLT HEAD AND BEAM GUARD RAIL AND BETWEEN NUT AND ANCHOR BRACKET. EIGHT (8) LL1 AND LL3 REQUIRED. SIXTEEN (16) LL2 REQUIRED.



SECTION A - A



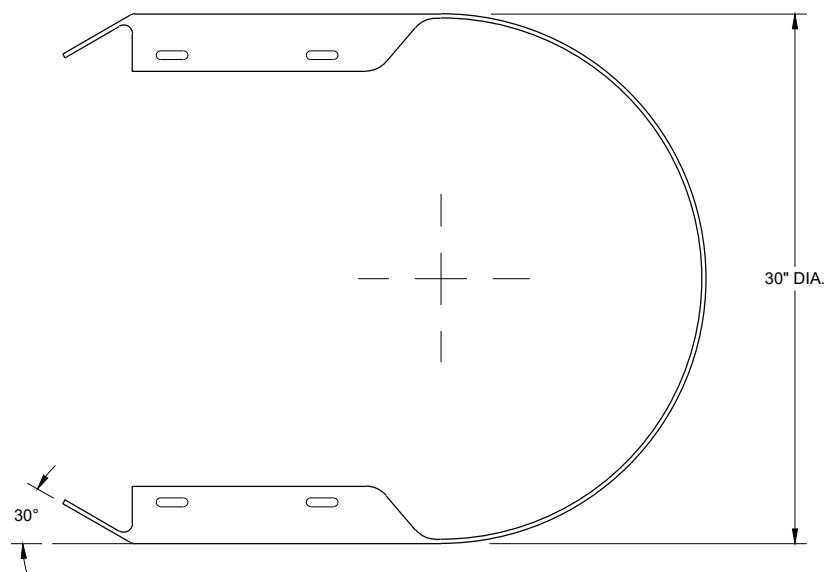
ANCHOR BRACKET BEARING PLATE (KK2)



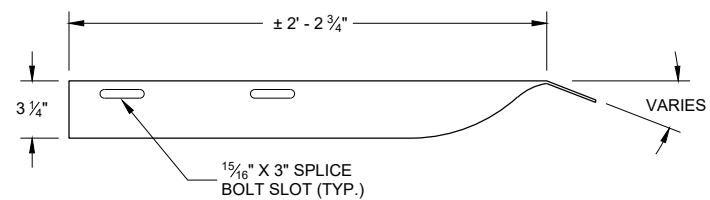
ANCHOR BRACKET (KK1, KK2)

**SHORT RADIUS BEAM
GUARD (MGS) SHORT
RADIUS TERMINAL (MGS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



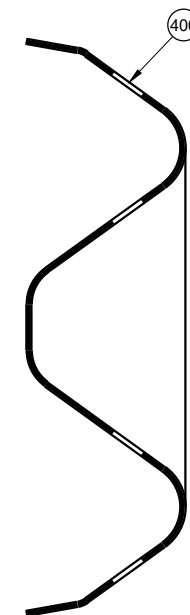
TOP VIEW



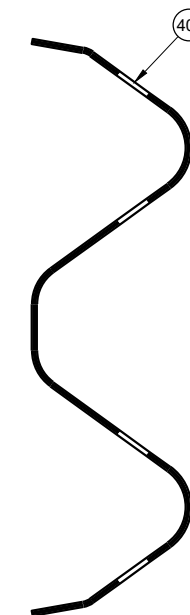
TOP VIEW

GENERAL NOTES

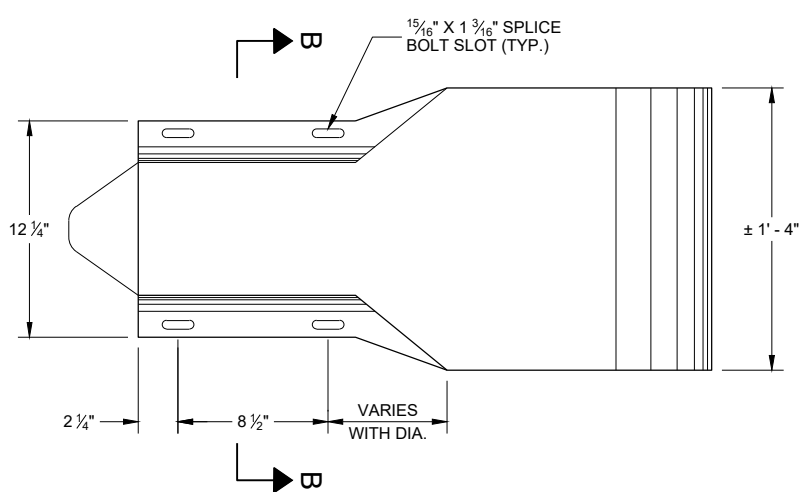
- (400) CROSS SECTION OF PART IS TO FIT OVER AA1 .
- (401) CROSS SECTION OF PART IS TO FIT OVER OR UNDER AA1 .



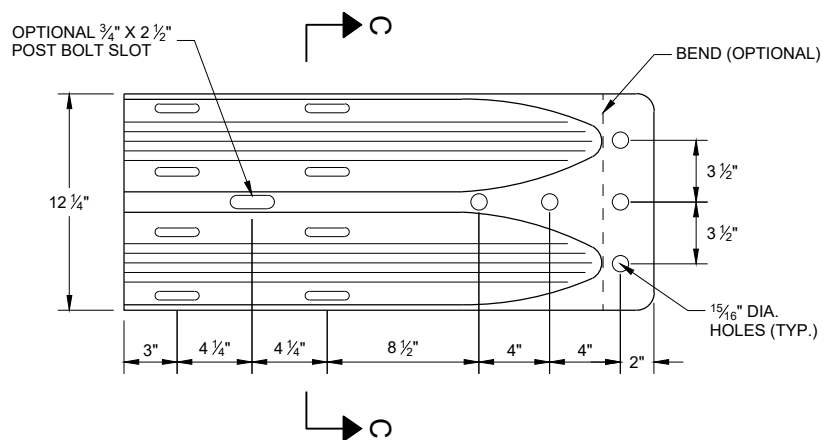
SECTION B - B



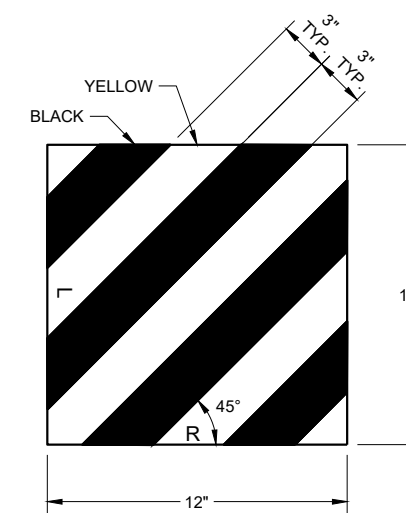
SECTION C - C



**PROFILE VIEW
W BEAM
END SECTION BUFFER (AA2)**



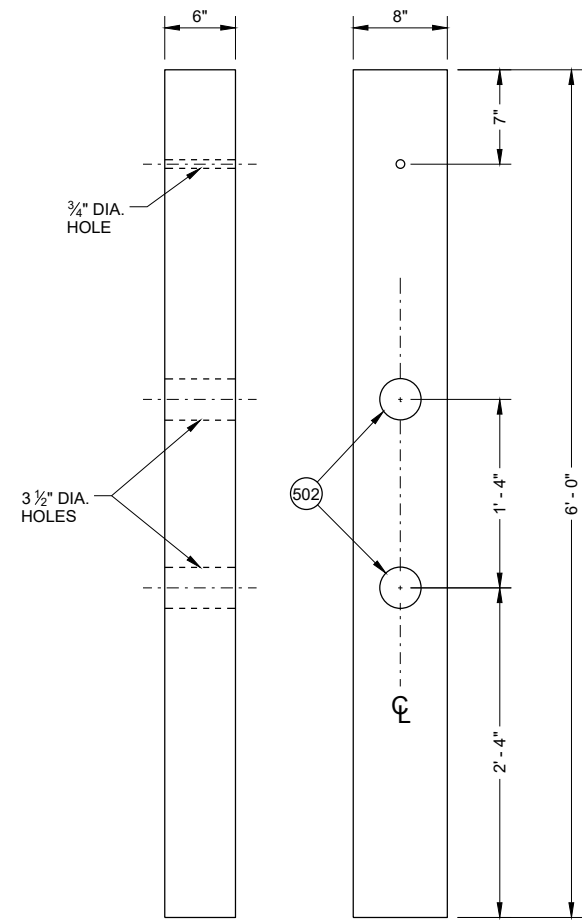
**PROFILE VIEW
W BEAM
TERMINAL CONNECTOR (BB1)**



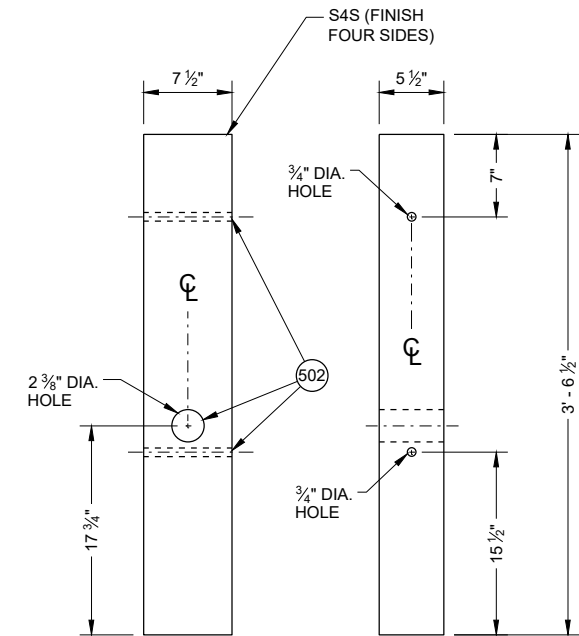
REFLECTIVE SHEETING (UU1, UU2)

**SHORT RADIUS BEAM
GUARD (MGS) SHORT
RADIUS TERMINAL (MGS)**

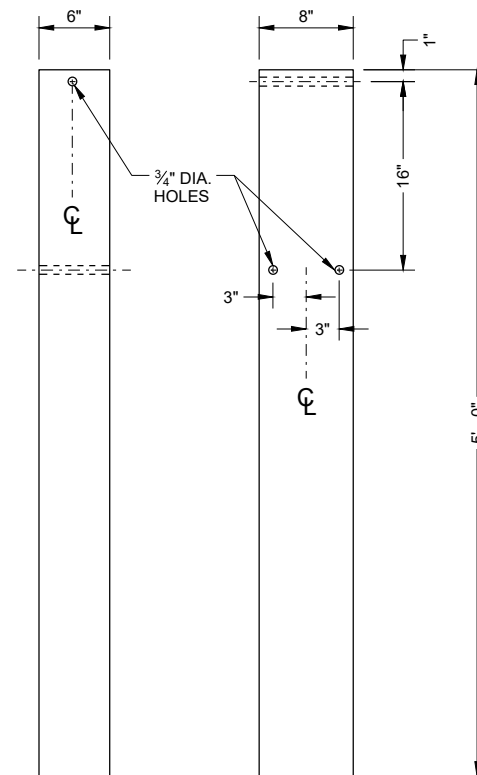
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



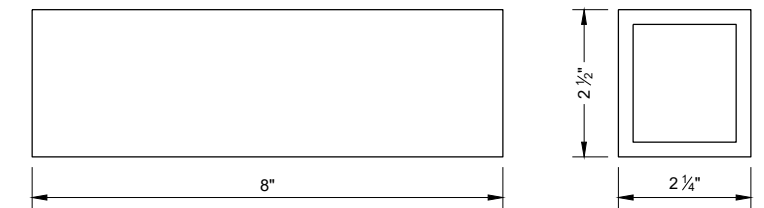
**FRONT VIEW SIDE VIEW
CONTROLLED RELEASE
POST (CRT) (DD2)**



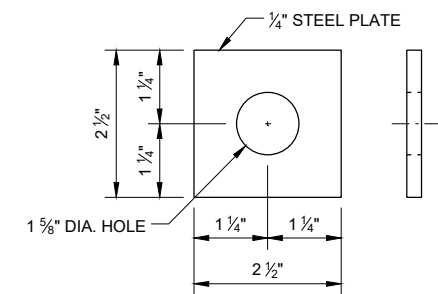
**FRONT VIEW SIDE VIEW
WOOD BREAKAWAY POST (FF1)**



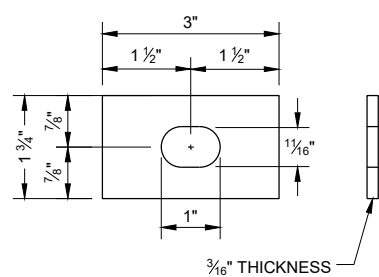
**FRONT VIEW SIDE VIEW
FOUNDATION TUBE (QQ1)**



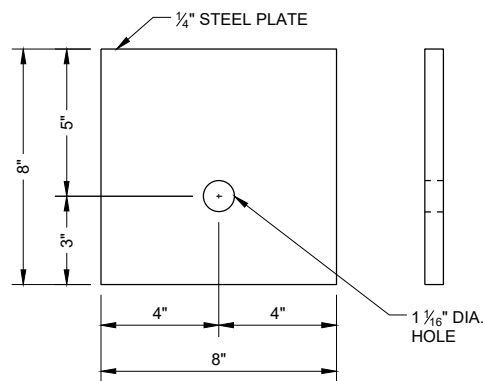
**FOUNDATION TUBE -
ANCHOR CABLE TUBE (QQ2)**



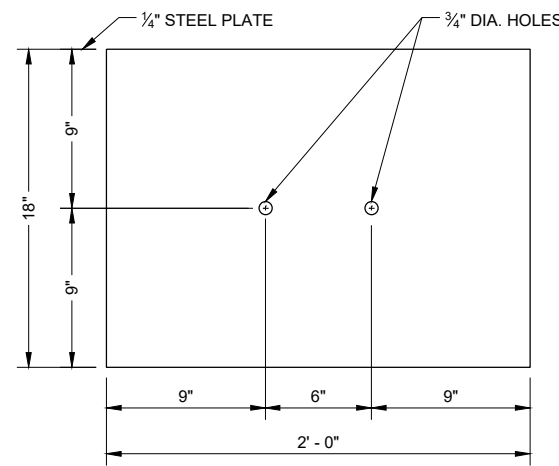
**ANCHOR CABLE TUBE
END PLATE (QQ3)**



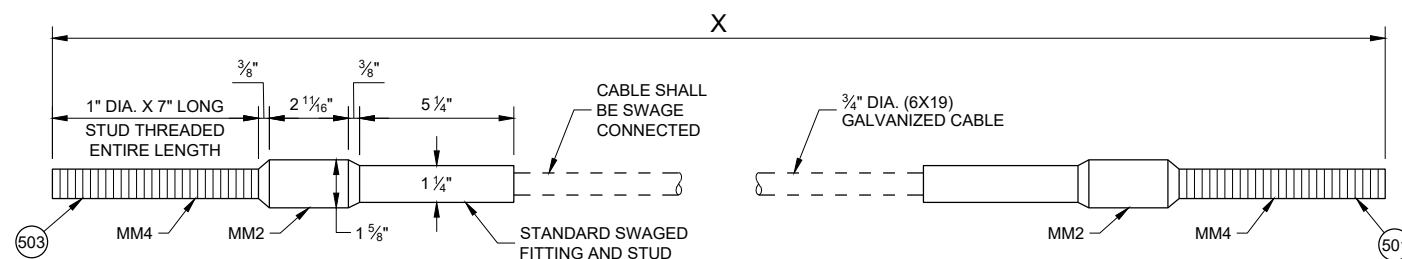
**RECTANGULAR PLATE
WASHER (CC1)**



BEARING PLATE (PP1)



SOIL PLATE (SS1)



CABLE ASSEMBLY (MM1a, MM1b)

"X" LENGTH

MM1b	9' - 0"
MM1b	6' - 8"

GENERAL NOTES

- (500) SEE DETAIL "D" FOR LOCATION AND ATTACHMENT OF SS1.
- (501) FOR MM1a THREADED STUD ONLY REQUIRED ON ONE END. SWAGED FITTING REQUIRED.
- (502) LOCATE HOLES ON THE CENTERLINE OF THE SIDE OF THE POST.
- (503) MM1a MAY HAVE ONE THREADED STUD 4 INCHES LONG. SEE NOTE (109).

**SHORT RADIUS BEAM
GUARD (MGS) SHORT
RADIUS TERMINAL (MGS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

BILL OF MATERIALS - SHORT RADIUS BEAM GUARD (MGS)

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
A1	BEAM GUARD RAIL	AASHTO M180, CLASS A, TYPE 2	
		APPROVED PRODUCER	
A2	BEAM GUARD RAIL - SHOP BENT	INDICATE ON BACK OF RAIL THE RADIUS THAT RAIL WAS BENT TO. SHOP BEND RADIUS IS TO THE NEAREST FOOT. FOLLOW AASHTO M180 ON HOW TO MARK RADIUS INFORMATION.	
		AASHTO M180, CLASS A, TYPE 2	
		APPROVED PRODUCER	
B1	BLOCK - WOOD	WISDOT SPEC. 614	SEE SDD 14B42
C1	NAIL	ASTM A153 HOT DIP CLASS D	
		ASTM F1667 TYPE 1 STYLE 12 (16 DOUBLE HEAD)	
D1	POST-STRONG POST-WOOD	WISDOT SPEC. 614	SEE SDD 14B42
D2	POST-CRT-WOOD	WISDOT SPEC. 614	
E1	POST BOLT	ASTM A307 GRADE A OR SAE J429 GRADE 2	5/8" DIA. SEE SDD 14B42 FOR BOLT GEOMETRY
		AASHTO M180	
		GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	
		UNC	
E2	POST BOLT - WASHER	ASTM F436 TYPE 1 (HARDEN TYPICALLY USED WITH STEEL) OR ASTM F844 (UNHARDENED TYPICALLY WITH WOOD)	5/8" DIA.
		GALV. AASHTO M111 / ASTM A 123 OR GALV. HOT DIP. TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329	
E3	POST BOLT - NUT	AASHTO M180 DOUBLE RECESSED HEAVY HEX HEAD	5/8" DIA. SEE SDD 14B42 FOR BOLT GEOMETRY
		GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	
		UNC	
		OVER TAPPED NUTS OVER-SIZE AS SPECIFIED IN AASHTO 291 / ASTM A 563	
		ASTM A563 GRADE A HEAVY HEX HEAD	
F1	SPLICE BOLT	GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	5/8" DIA. SEE SDD 14B42 FOR BOLT GEOMETRY
		ASTM A307 GRADE A OR SAE J429 GRADE 2	
		UNC	
		AASHTO M180	

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
F2	SPLICE BOLT - NUT	ASTM A563 GRADE A	5/8" DIA. SEE SDD 14B42 FOR BOLT GEOMETRY
		AASHTO M180 DOUBLE RECESSED HEAVY HEX HEAD	
		GALV. HOT DIP TO AASHTO M232 CLASS C/ASTM A153 CLASS C/ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1/ASTM B695 CLASS 50, TYPE 1	
		OVER TAPPED NUTS OVER-SIZE AS SPECIFIED IN AASHTO 291 / ASTM A 563	
		UNC	
G1	LAG SCREW	ASTM A308 GRADE A ASTM A153 CLASS D	1/2" DIA. 6" LONG
H1	DELINEATOR - BEAM GUARD		SEE SDD 14B42 FOR MORE INFORMATION
H2	DELINEATION - SHEETING	YELLOW OR WHITE	
		WISDOT SPEC 637 TYPE SH	
		APPROVED PRODUCT LIST	
J1	FOUNDATION BACKFILL	STANDARD SPEC. 614	
AA1	BEAM GUARD RAIL - PUNCHED	AASHTO M180, CLASS A, TYPE 2	
		APPROVED PRODUCER	
AA2	BEAM GUARD RAIL - END SECTION BUFFER	AASHTO M180, CLASS A, TYPE 2	
		APPROVED PRODUCER	
BB1	BEAM GUARD RAIL - TERMINAL CONNECTOR MODIFIED	AASHTO M180, CLASS A, TYPE 2	
		APPROVED PRODUCER	
CC1	SHORT RADIUS - SQUARE WASHER	AASHTO M180	
		GALV. AASHTO M111 / ASTM A123	
EE1	NAIL	ASTM A153 HOT DIP CLASS D	
		ASTM F1667 TYPE 1 STYLE 12 (16 DOUBLE HEADED)	
FF1	POST - BCT - WOOD	S4S FINISH ON 4 SIDES	
		WISDOT SPEC. 614	
GG1	POST BOLT	ASTM A307 GRADE A OR SAE J429 GRADE 2	5/8" DIA. SEE SDD 14B42 FOR BOLT GEOMETRY
		AASHTO M180	
		GALV. HOT DIP TO AASHTO M232 CLASS C/ASTM A153 CLASS C/ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1/ASTM B695 CLASS 50, TYPE 1	
		UNC	
GG2	POST BOLT - WASHER	ASTM F436 TYPE 1 (HARDEN TYPICALLY USED WITH STEEL) OR ASTM F844 (UNHARDENED TYPICALLY WITH WOOD)	5/8" DIA.
		GALV. AASHTO M111 / ASTM A 123 OR GALV. HOT DIP. TO AASHTO M232 CLASS C/ASTM A153 CLASS C / ASTM F2329	

6

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SDD 14B53 - 02g

SDD 14B53 - 02g

SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

BILL OF MATERIALS - SHORT RADIUS BEAM GUARD (MGS)

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
GG3	POST BOLT - NUT	ASTM A563 GRADE A	$\frac{3}{8}$ " DIA. SEE 14B42 FOR GEOMETRY
		AASHTO M180 DOUBLE RECESSED HEAVY HEX HEAD	
		GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	
		UNC	
		OVER TAPPED NUTS OVER-SIZE AS SPECIFIED IN AASHTO 291 / ASTM A 563	
ASTM A563 GRADE A HEAVY HEX HEAD			
HH1	SPLICE BOLT	GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	$\frac{3}{8}$ " DIA. SEE SDD 14B42 FOR BOLT GEOMETRY
		ASTM A307 GRADE A OR SAE J429 GRADE 2	
		UNC	
		AASHTO M180 HEAD GEOMETRY	
HH2	SPLICE BOLT - NUT	ASTM A563 GRADE A	$\frac{3}{8}$ " DIA. SEE SDD 14B42 FOR BOLT GEOMETRY
		AASHTO M180 DOUBLE RECESSED HEAVY HEX HEAD	
		GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	
		OVER TAPPED NUTS OVER-SIZE AS SPECIFIED IN AASHTO 291 / ASTM A 563	
		UNC	
JJ1	PIPE - STEEL	ASTM A53 GALVANIZED GRADE B SCHEDULE 40	10" O.D.
JJ2	TOP PLATE	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	DIMENSIONS $\frac{3}{8}$ " X 4" X 1' - 0"
		GALV. AASHTO M111 / ASTM A123	
KK1	ANCHOR BRACKET	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	
		GALV. AASHTO M111 / ASTM A123	
KK2	ANCHOR BRACKET - BEARING PLATE	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	
		GALV. AASHTO M111 / ASTM A123	
LL1	ANCHOR BRACKET - BOLT	ASTM A307 GRADE B HEAVY HEX HEAD OR SAE J429 GRADE 2 HEAVY HEX HEAD	$\frac{3}{8}$ " DIA.
		GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	
		UNC	

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
LL2	ANCHOR BRACKET - WASHER	ASTM F436 TYPE 1 (HARDEN WASHER ONLY)	$\frac{3}{8}$ " DIA.
		GALV. AASHTO M111 / ASTM A123 OR GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329	
LL3	ANCHOR BRACKET - NUT	ASTM A563 GRADE A	$\frac{3}{8}$ " DIA.
		GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	
		OVER TAPPED NUTS OVER-SIZE AS SPECIFIED IN AASHTO 291 / ASTM A 563	
		UNC	
MM1a	ANCHOR CABLE	AASHTO M30 / ASTM A741 INDEPENDENT WIRE CORE (IWRC) OR WIRE STRAND CORE (WCS), IMPROVED PLOW STEEL (IPS), 6X19, TYPE II OR IIc CLASS C ZINC COATED	
MM1b	ANCHOR CABLE	AASHTO M30 / ASTM A741 INDEPENDENT WIRE CORE (IWRC) OR WIRE STRAND CORE (WCS), IMPROVED PLOW STEEL (IPS), 6X19, TYPE II OR IIc CLASS C ZINC COATED	
MM2	ANCHOR CABLE - SWAGE FITTING	ASTM A576 GRADE 1035	
		SWAGE FITTINGS ARE TO BE FACTORY SWEDGED. WITH A BREAKING STRENGTH 40,000 LBS.	
		GALV. AASHTO M111 / ASTM A123	
		ASME B30.26 FORGED, CAST, OR DIE STAMPED WITH THE FOLLOWING INTO CONNECTION: NAME OF MANUFACTURER OR TRADEMARK OF CONNECTION'S MANUFACTURER, SIZE OR RATED LOAD, GRADE.	
MM3	WIRE ROPE CABLE CLAMPS	FF-C-450D TYPE 1 CLASS 1	$\frac{3}{4}$ "
		ASTM A153 HOT DIP CLASS D	
MM4	ANCHOR CABLE - SWAGE FITTING - STUD	ASTM F3125 GRADE A325 TYPE 1 OR SAE GRADE 5 OR ASTM A449 TYPE 1 HEAVY HEX HEAD	
		GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	
		UNC	
NN1	ANCHOR CABLE - NUT	ASTM A563 GRADE A	1" DIA.
		AASHTO M180 DOUBLE RECESSED HEAVY HEX HEAD	
		GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	
		OVER TAPPED NUTS OVER-SIZE AS SPECIFIED IN AASHTO 291 / ASTM A 563	
NN2	ANCHOR CABLE - NUT - WASHER	UNC	1" DIA.
		ASTM F436 TYPE 1 (HARDEN WASHER ONLY)	
		GALV. AASHTO M111 / ASTM A123 OR GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329	

6

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SDD 14B53 - 02h

SDD 14B53 - 02h

**SHORT RADIUS BEAM
GUARD (MGS) SHORT
RADIUS TERMINAL (MGS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

BILL OF MATERIALS - SHORT RADIUS BEAM GUARD (MGS)

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
PP1	BEARING PLATE AT POST	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	
		GALV. AASHTO M111 / ASTM A123	
PP2	PIPE - STEEL	ASTM A53 GALVANIZED GRADE B SCHEDULE 40	2" DIA. x 6" LONG
QQ1	FOUNDATION TUBE	ASTM A500 GRADE B	8" X 6" X 3/8"
		GALV. AASHTO M111 / ASTM A123	
QQ2	SHORT RADIUS - FOUNDATION TUBE - ANCHOR CABLE - TUBE	ASTM A500 GRADE B	DIMENSIONS 2 1/2" X 2 1/4" X 1/4" X 8"
		GALV. AASHTO M111 / ASTM A123	
QQ3	SHORT RADIUS - SOIL TUBE - ANCHOR CABLE - TUBE - END PLATE	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	DIMENSIONS 2 1/2" X 2 1/2" X 1/4"
		GALV. AASHTO M111 / ASTM A123	
QQ4	GROUND STRUT AND YOKE - BOLT	GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	5/8 DIA.
		ASTM A307 GRADE B HEAVY HEX HEAD OR SAE J429 GRADE 2 HEAVY HEX HEAD	
		UNC	
QQ5	GROUND PLATE AND YOKE - WASHER	ASTM F436 TYPE 1 (HARDEN WASHER ONLY)	5/8 DIA.
		GALV. AASHTO M111 / ASTM A123 OR GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329	
QQ6	GROUND STRUT AND YOKE - NUT	HEAVY HEX	5/8 DIA.
		UNC	
		ASTM A563 GRADE A	
		OVER TAPPED NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563	
		GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
SS1	SOIL PLATE	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	
		GALV. AASHTO M111 / A123	
TT1	SOIL PLATE - BOLT	ASTM A307 GRADE B HEAVY HEX HEAD OR SAE J429 GRADE 2 HEAVY HEX HEAD	5/8 DIA.
		GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	
		UNC	
TT2	SOIL PLATE - WASHER	ASTM F436 TYPE 1 (HARDEN WASHER ONLY)	5/8 DIA.
		GALV. AASHTO M111 / ASTM A123 OR GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329	
TT3	SOIL PLATE - NUT	GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	5/8 DIA.
UU1	OBJECT MARKER - SHEETING	MUTCD / WISDOT OBJECT MARKER TYPE 3	PATTERN AND COLOR FOR SHEETING. SHEETING TYPE FOR MARKER.
		WISDOT SPEC 637 TYPE F	
		APPROVED PRODUCT LIST	
UU2	OBJECT MARKER - ALUMINUM PLATE	WISDOT SPEC 637 ALUMINUM PLATE	MATERIAL AND THICKNESS OF MATERIALS
UU3	OBJECT MARKER - SCREWS	STAINLESS SELF-TAPPING SCREWS	
VV1	FOUNDATION BACKFILL	WISDOT SPEC 614	

6

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SDD 14B53 - 02i

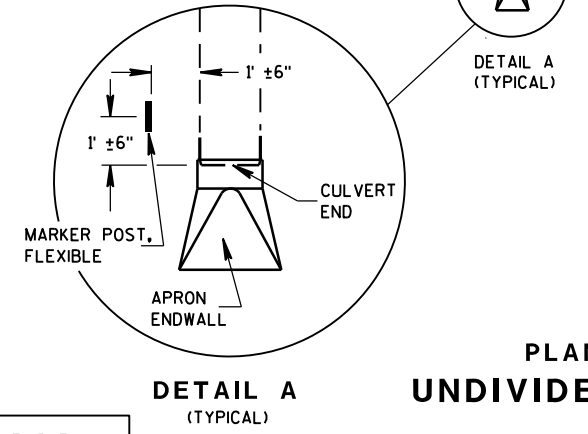
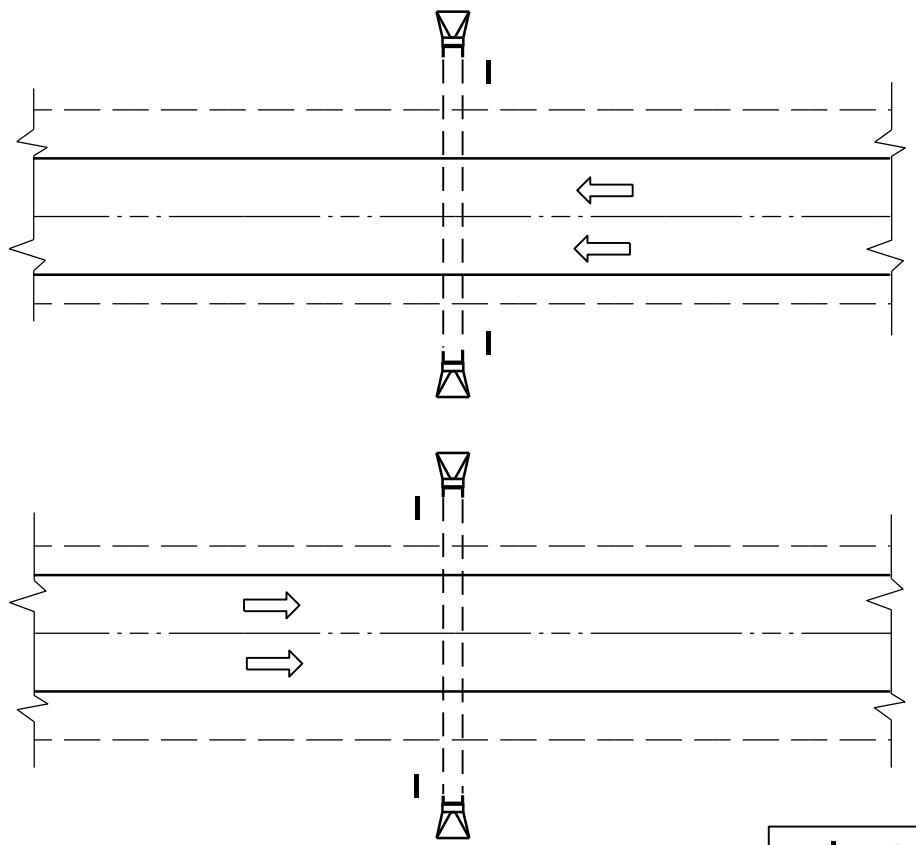
SDD 14B53 - 02i

**SHORT RADIUS BEAM
GUARD (MGS) SHORT
RADIUS TERMINAL (MGS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2022 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT
ENGINEER

FHWA



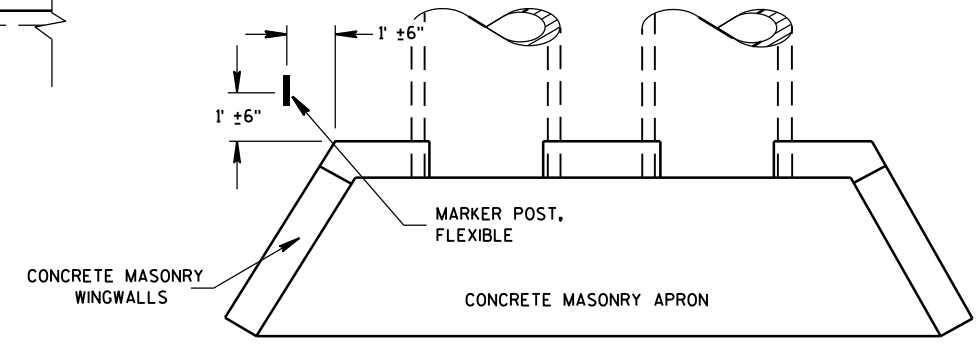
MARKER POST, FLEXIBLE

DIRECTION OF TRAFFIC FLOW

FLEXIBLE MARKER POST LOCATION

GENERAL NOTES

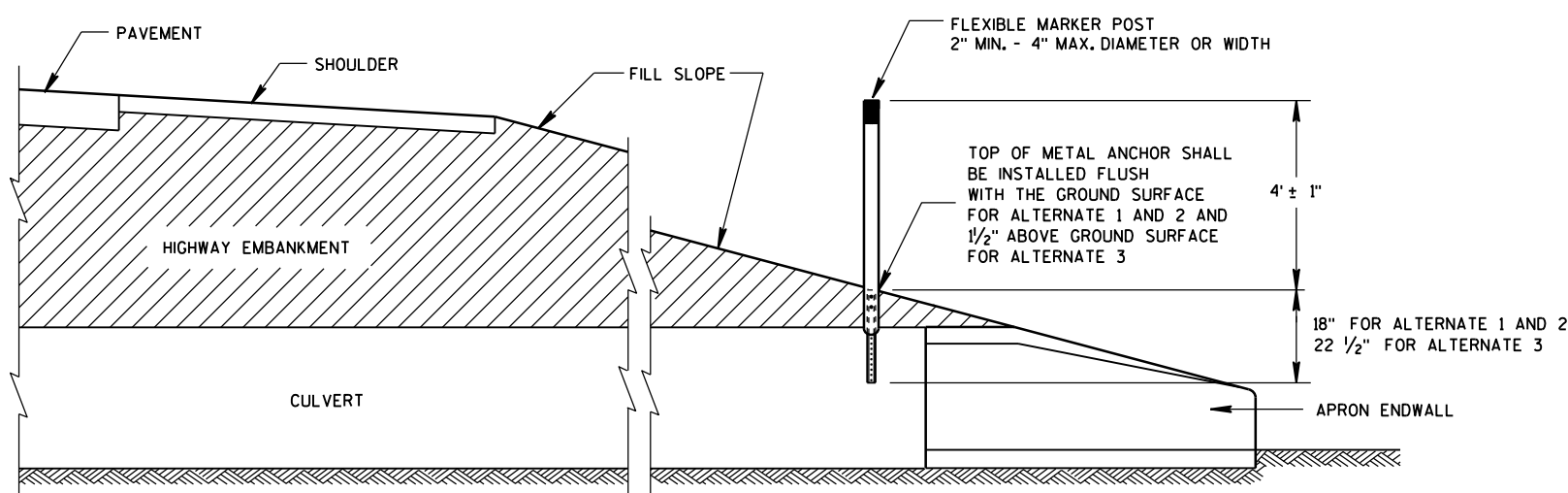
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



**PLAN VIEW
CONCRETE MASONRY ENDWALLS FOR
CULVERT PIPE AND PIPE ARCH**

6

6



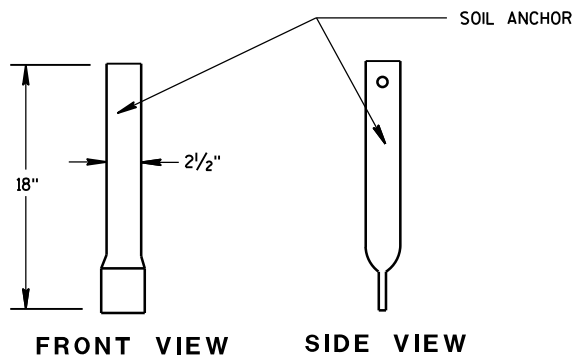
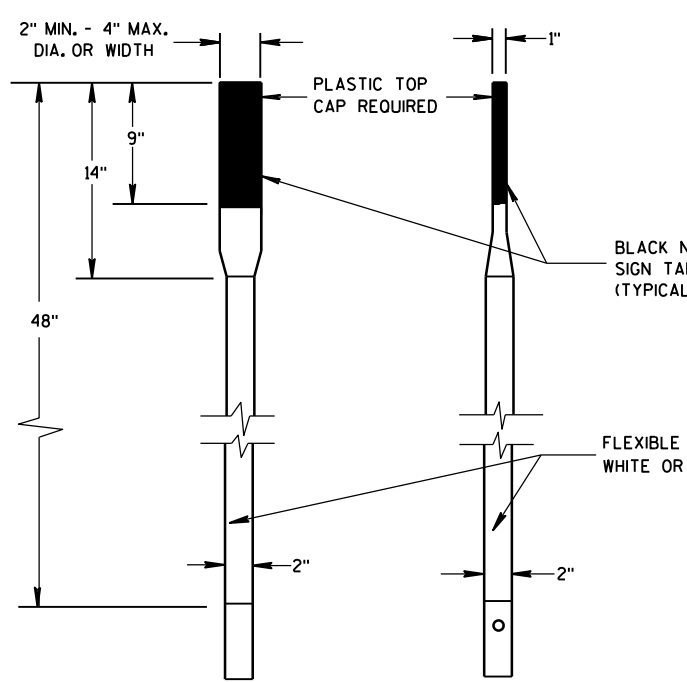
**CROSS SECTION
FLEXIBLE MARKER POST**

**FLEXIBLE MARKER POST
FOR CULVERT END**

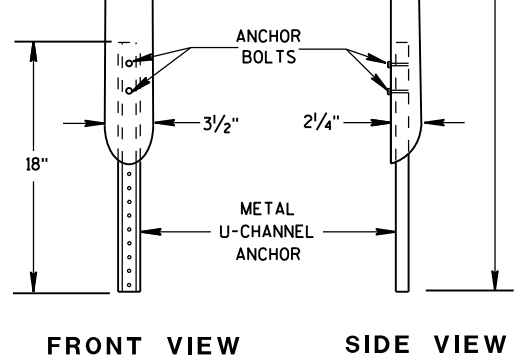
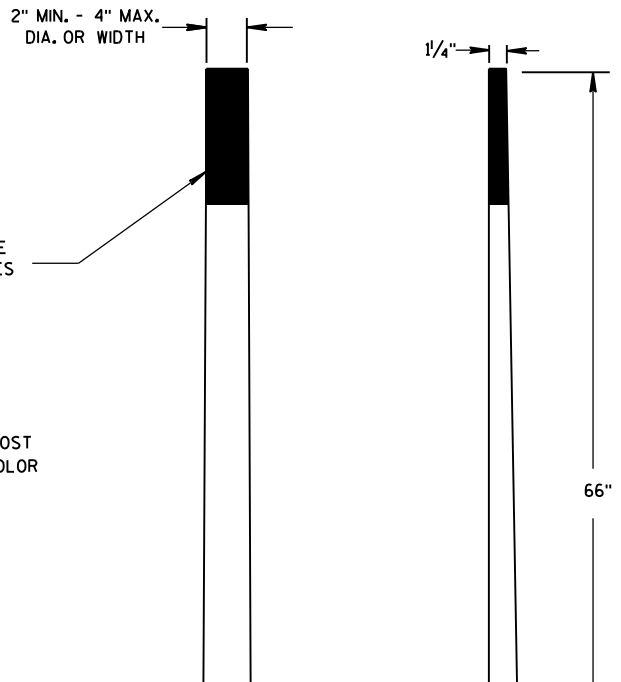
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

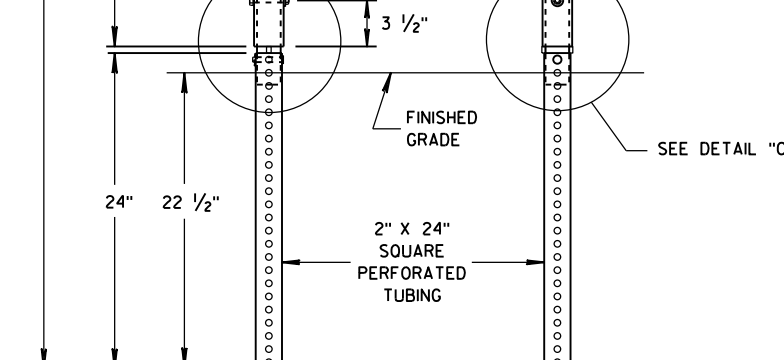
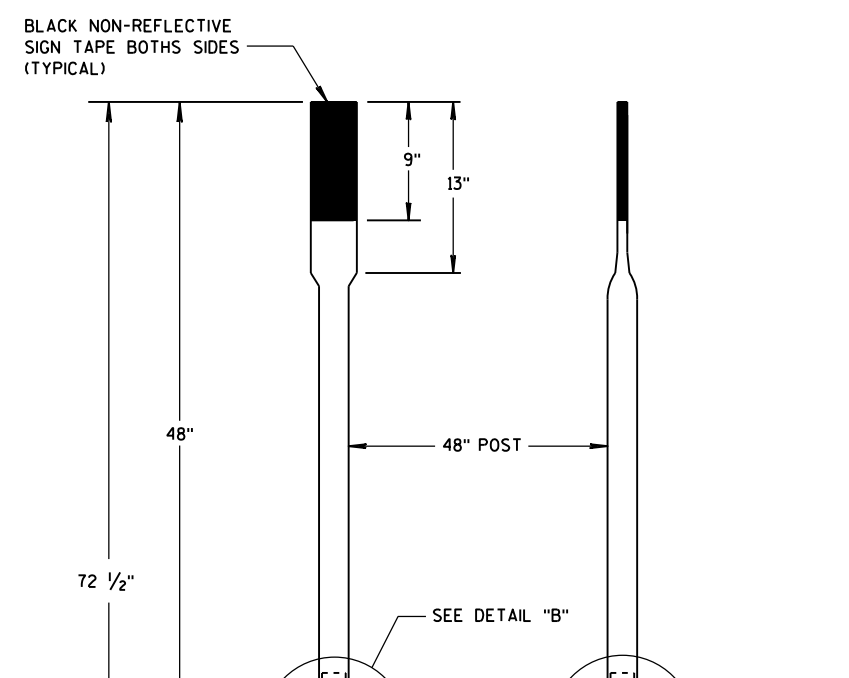
S.D.D. 15 A 3-2a



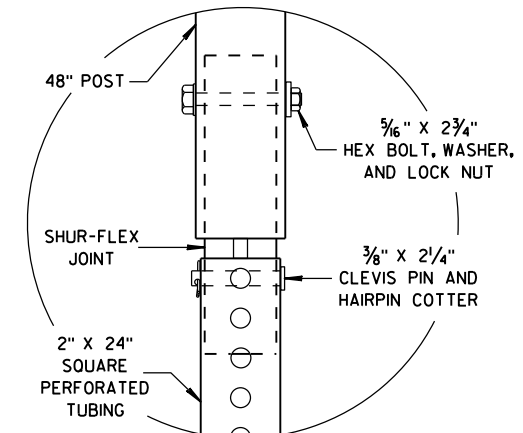
FRONT VIEW SIDE VIEW
ALTERNATE 1



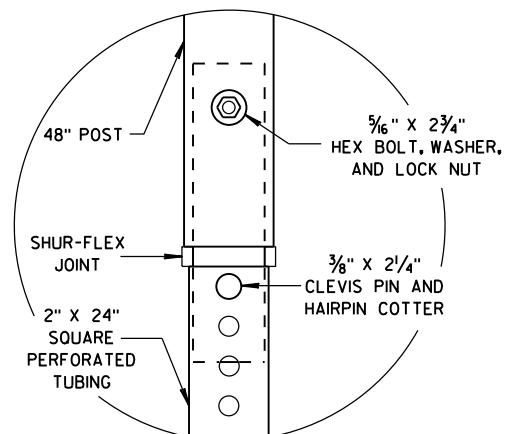
FRONT VIEW SIDE VIEW
ALTERNATE 2



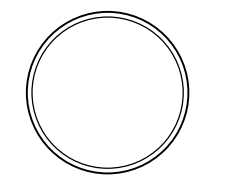
FRONT VIEW SIDE VIEW
ALTERNATE 3



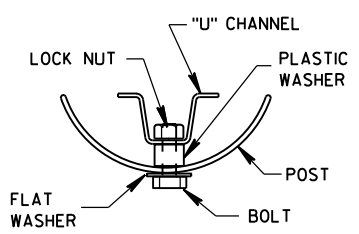
DETAIL B



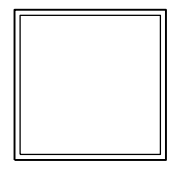
DETAIL C



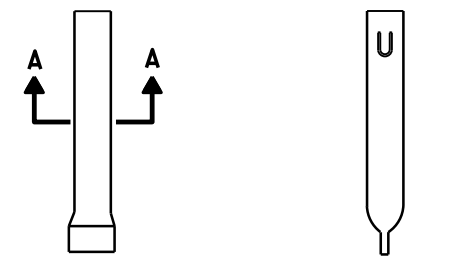
SECTION A-A



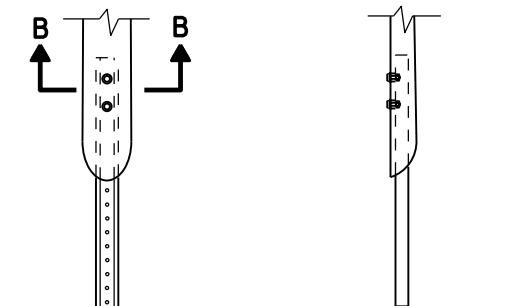
SECTION B-B



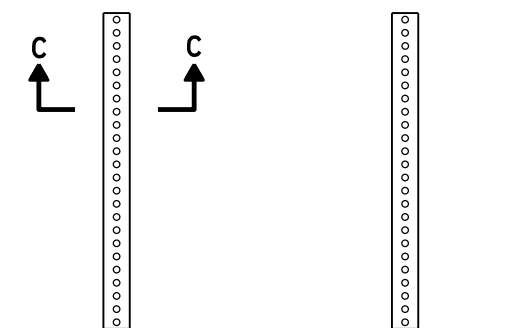
SECTION C-C



FRONT VIEW SIDE VIEW
ALTERNATE 1



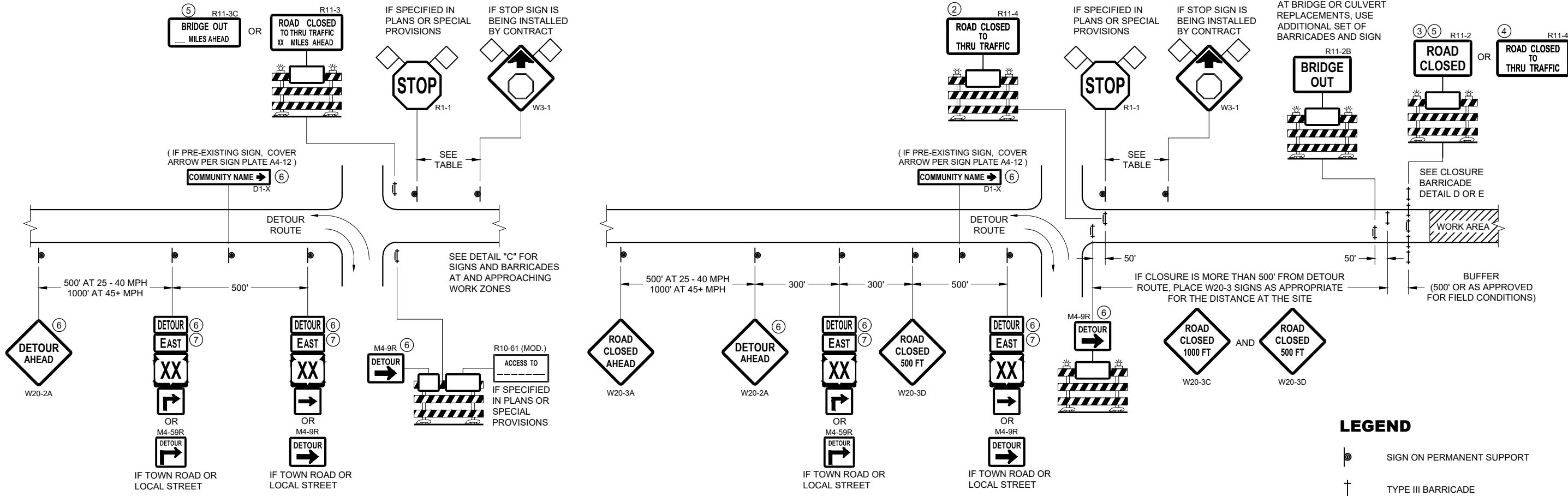
FRONT VIEW SIDE VIEW
ALTERNATE 2



FRONT VIEW SIDE VIEW
ALTERNATE 3

FLEXIBLE MARKER POST ANCHORS

FLEXIBLE MARKER POST FOR CULVERT END	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 10/1/2012 DATE	/S/ Travis Feltes STATE TRAFFIC ENGINEER OF DESIGN
FHWA	



**DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR**

WORK ZONE GREATER THAN OR EQUAL TO 1/2 MILE FROM
DETOUR ROUTE (1000 FEET IF URBAN)

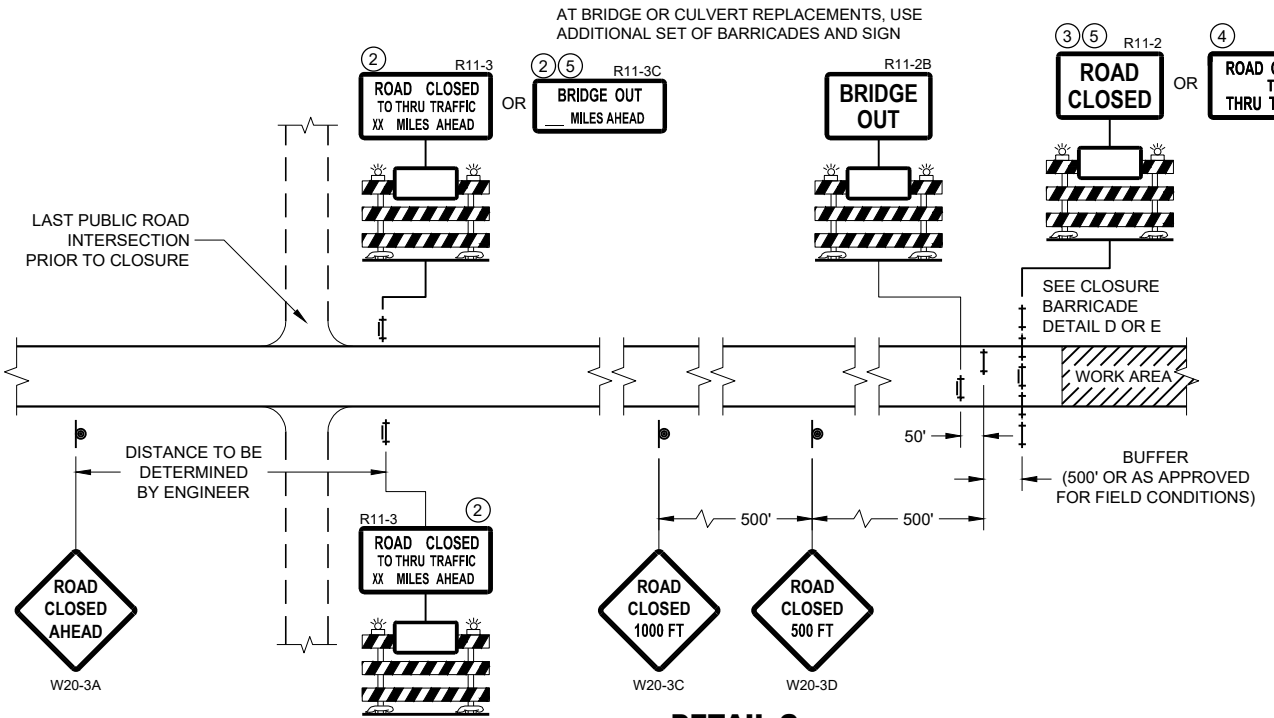
**DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR**

WORK ZONE LESS THAN 1/2 MILE FROM
DETOUR ROUTE (1000 FEET IF URBAN)

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

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

- M4 - 8
- M3 - X
- M1 - 4
- M1 - 6
- M1 - 5A
- M05 - 1
- M06 - 1



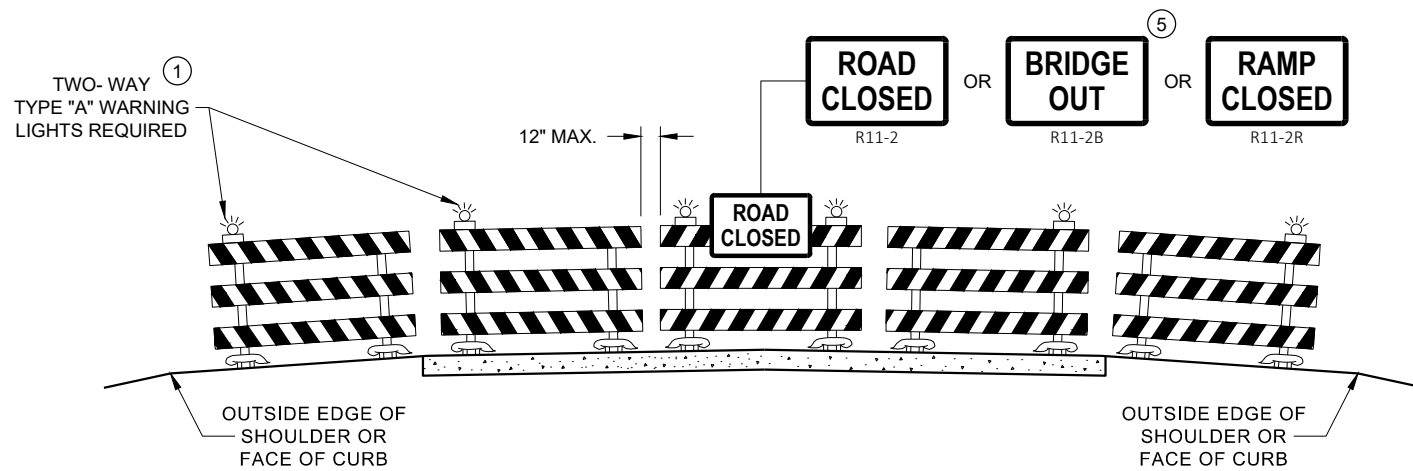
**DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR**

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

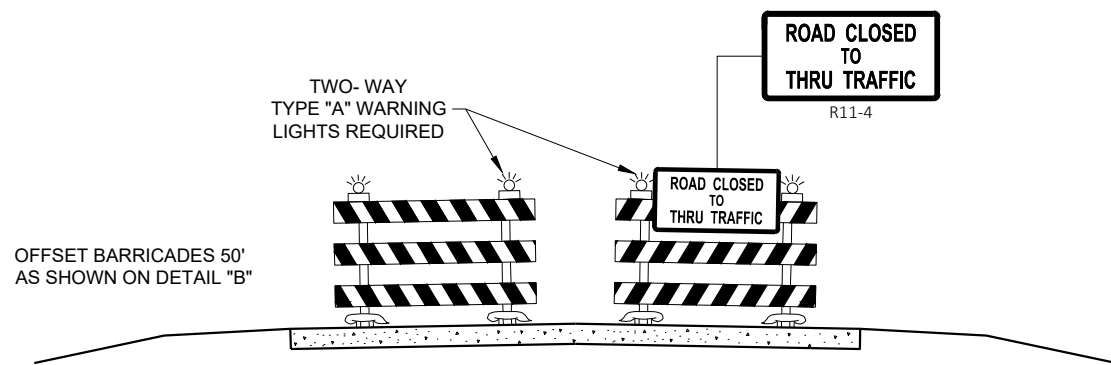
**BARRICADES AND SIGNS
FOR MAINLINE CLOSURES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



**DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW**



**DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW**

SEE SDD 15C2 - SHEET "a" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

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

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

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:

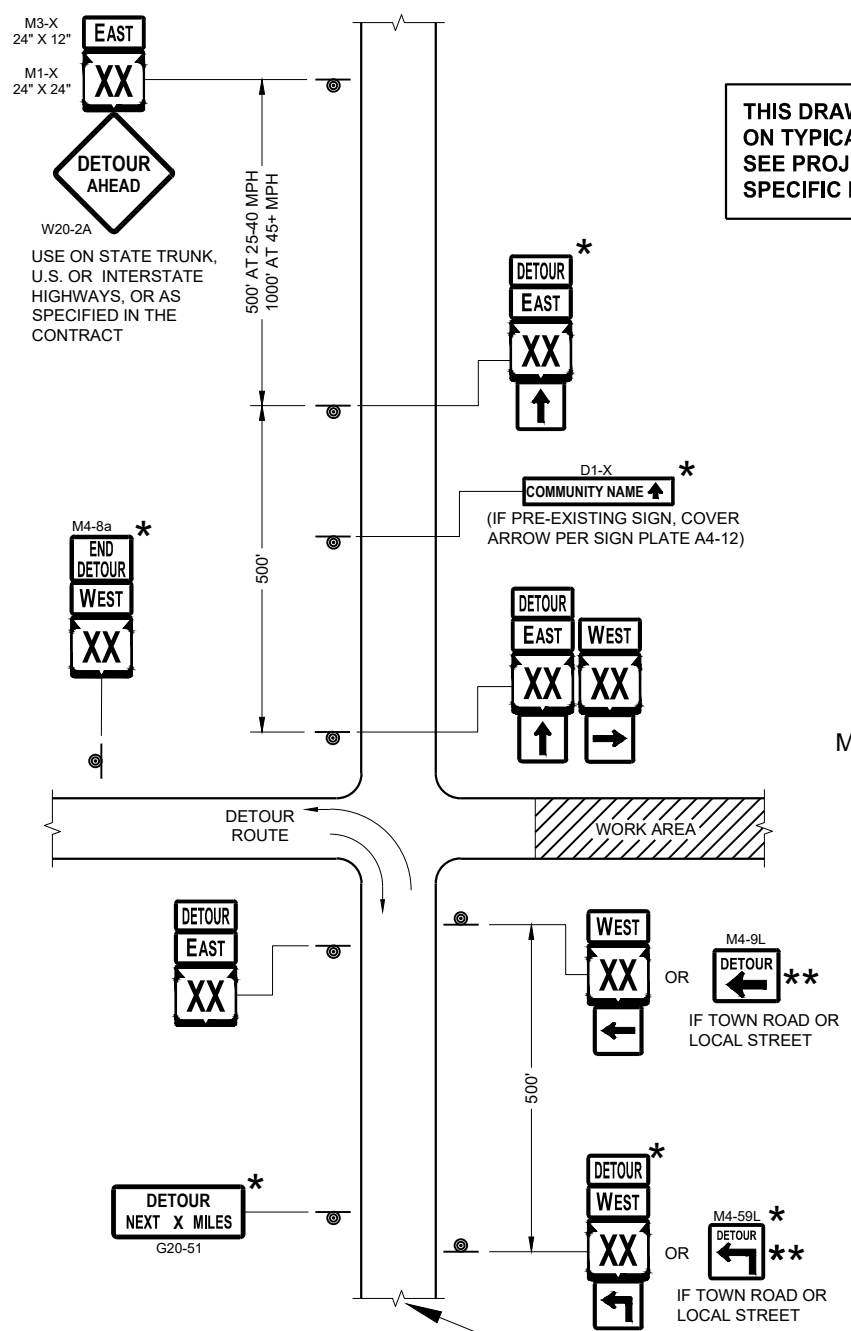
- R11 - 2 SHALL BE 48" X 30"
- R11 - 3 SHALL, R11 - 4 AND R10 - 61 SHALL BE 60" X 30"
- M4 - 9 SHALL BE 30" X 24"
- M3 - X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4 - 8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1 - 4, M1 - 5A AND M1 - 6 SHALL BE 24"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

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

**BARRICADES AND SIGNS
FOR
VARIOUS CLOSURES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



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

LEGEND

- SIGN ON PERMANENT SUPPORT
- WORK AREA
- M4 - 8
- M3 - X
- M1 - 4
- M1 - 6
- M1 - 5A
- M05 - 1
- M06 - 1
- M06 - 1

GENERAL NOTES

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

IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. MODIFY EXISTING SIGNS WHERE POSSIBLE.

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

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

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

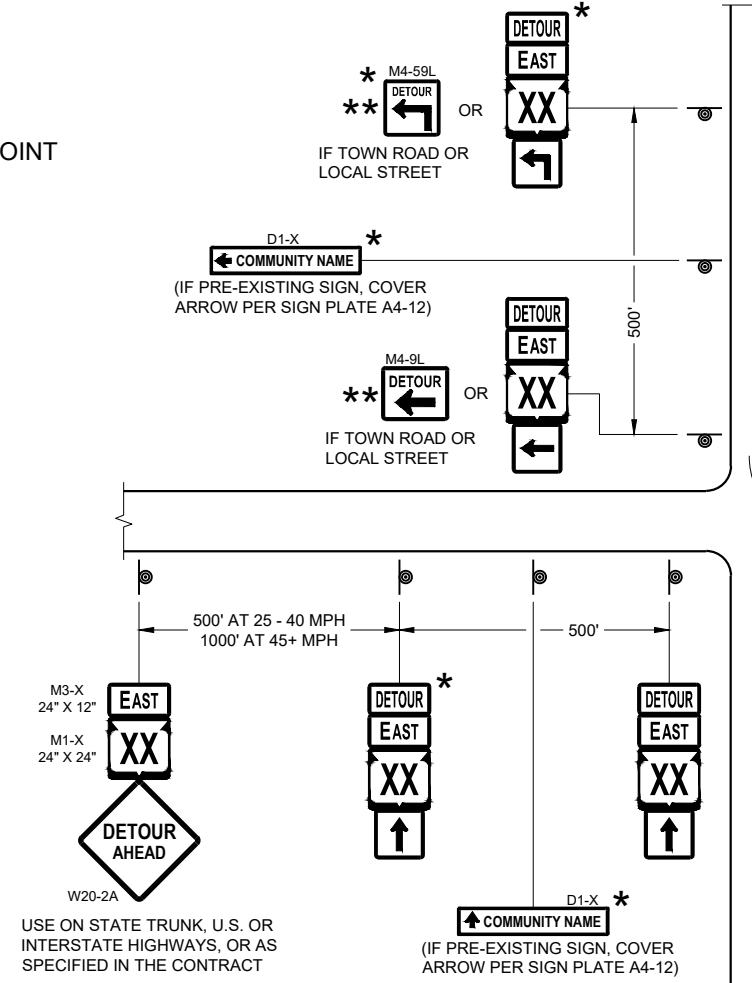
"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGN SIZES SHALL BE AS FOLLOWS:

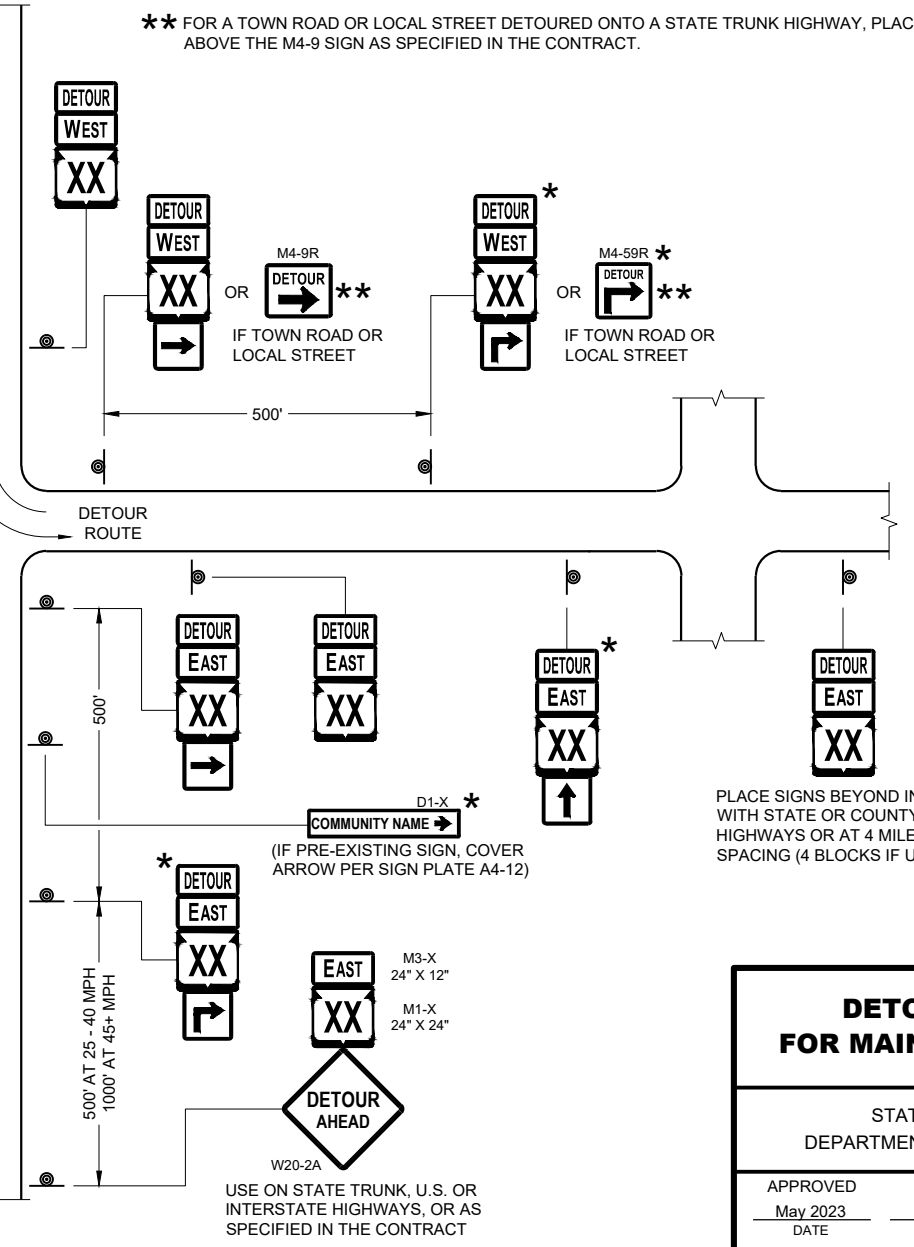
- M3-X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4-8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1-4, M1-5A AND M1-6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS)
- M05-1 AND M06-1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING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

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

MATCH POINT



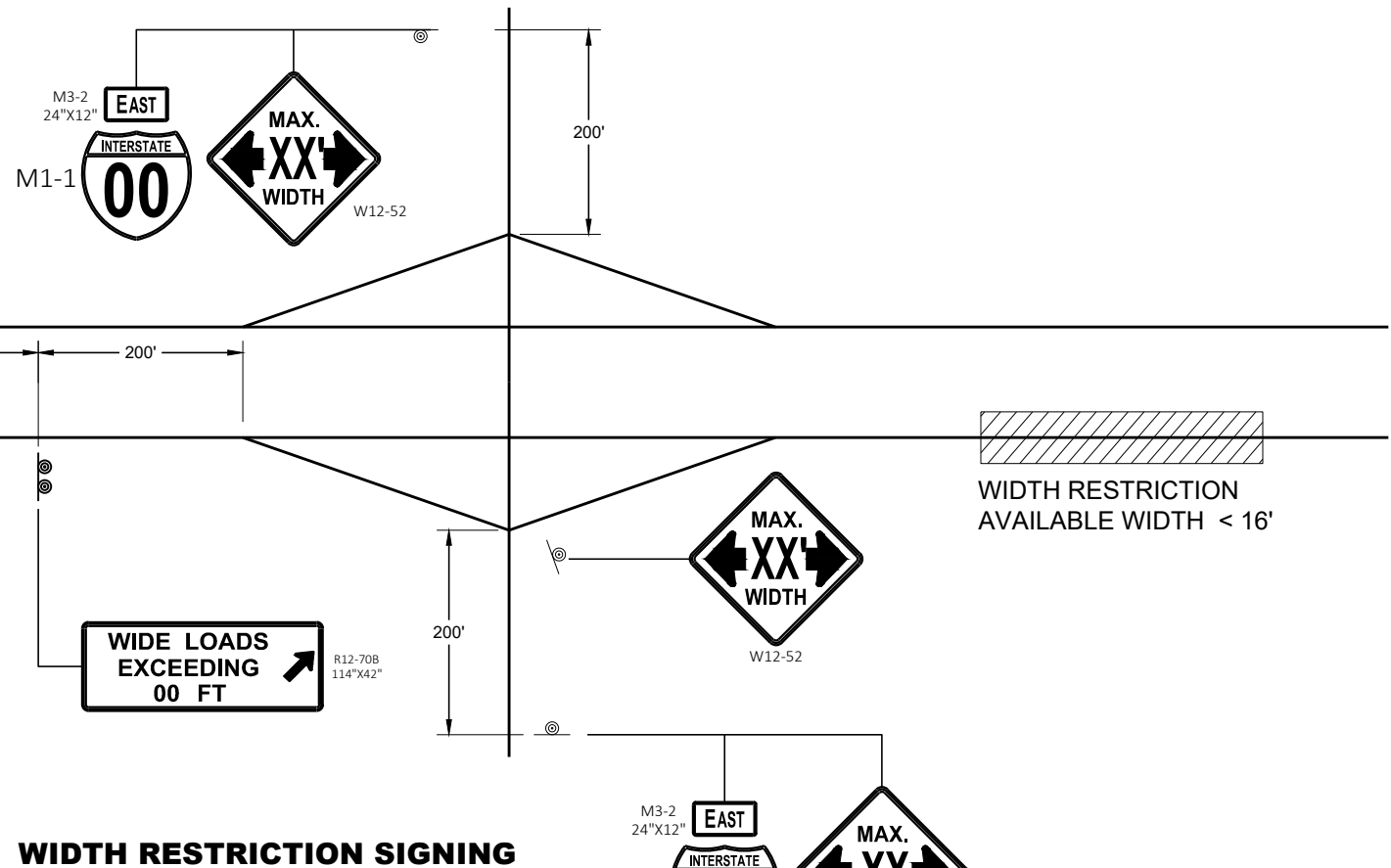
**DETAIL F
DETOUR SIGNING**



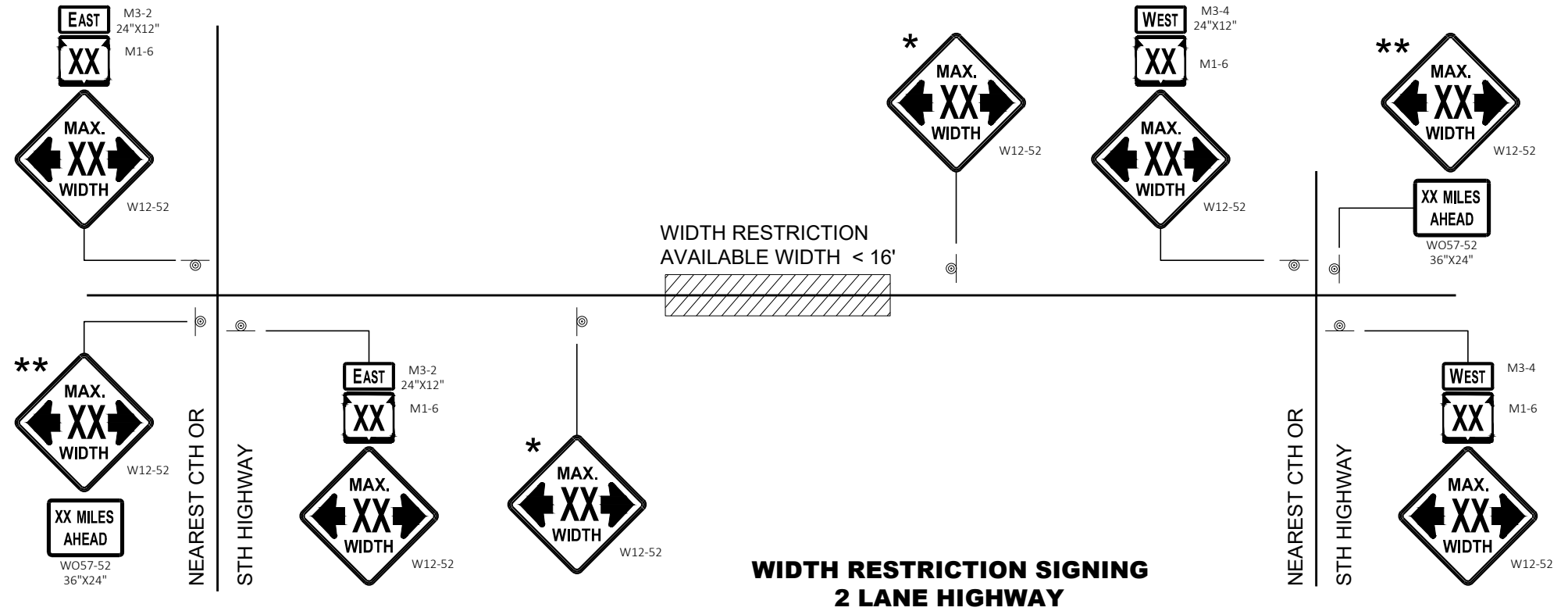
PLACE SIGNS BEYOND INTERSECTIONS WITH STATE OR COUNTY TRUNK HIGHWAYS OR AT 4 MILE MAXIMUM SPACING (4 BLOCKS IF URBAN AREA)

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

DETOUR SIGNING FOR MAINLINE CLOSURES	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2023 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	



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.

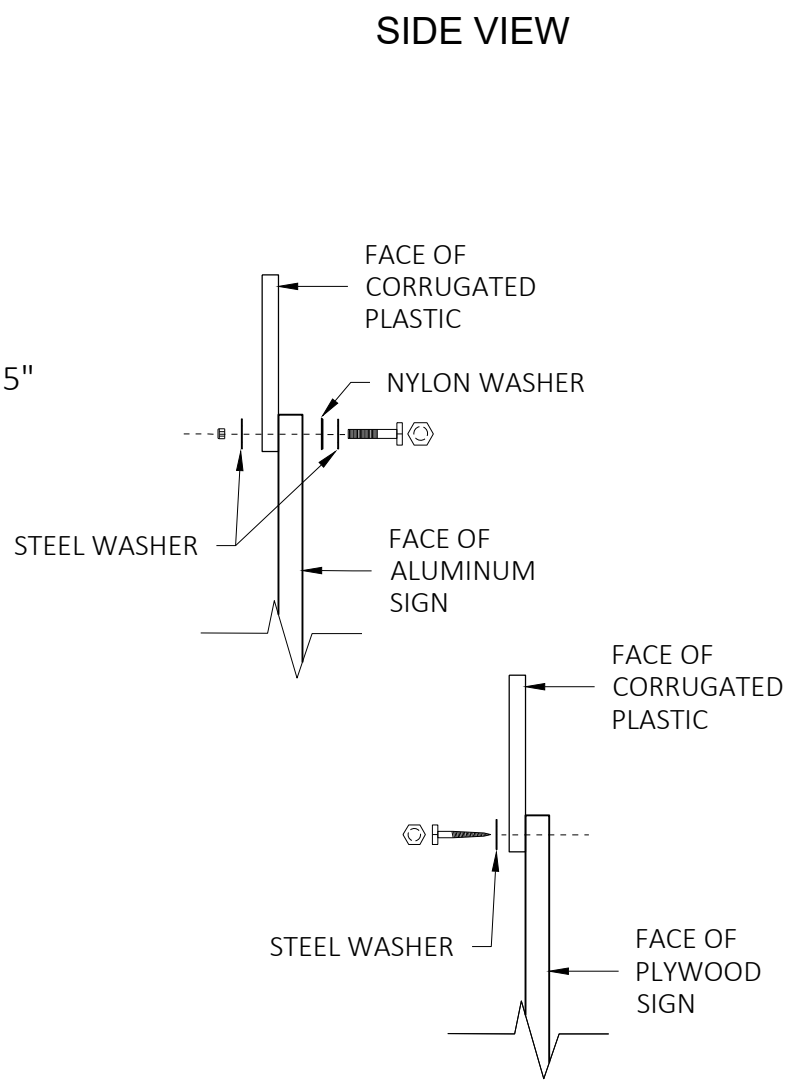
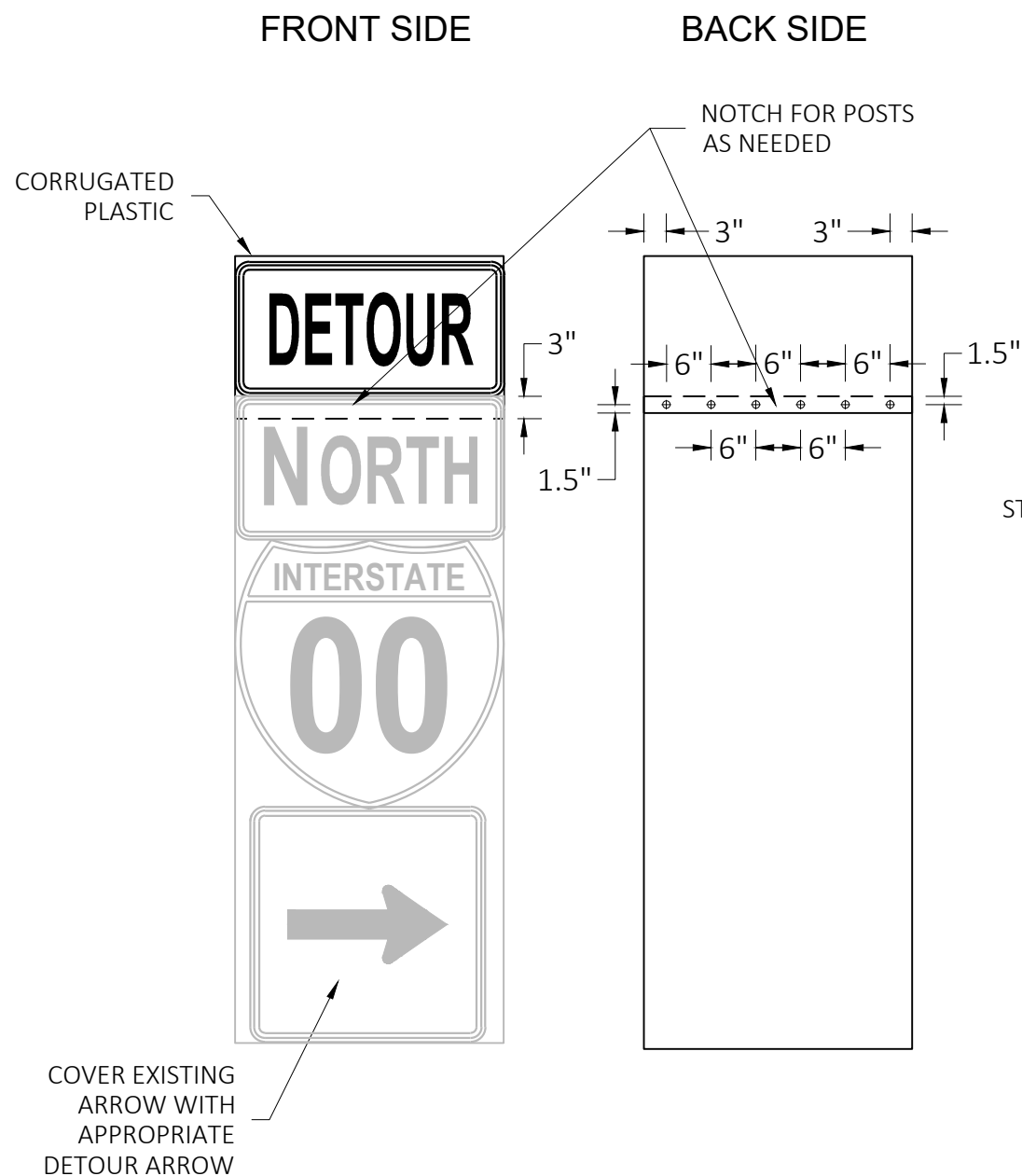


WIDTH ON SIGN TO BE APPROX. 1 - FOOT LESS THAN AVAILABLE WIDTH

ADVANCED WIDTH RESTRICTION SIGNING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



GENERAL NOTES

- CELLS OF CORRUGATED PLASTIC SHALL BE VERTICALLY ORIENTED.
- PROVIDE A 0.4-INCH THICK BASE CORRUGATED PLASTIC WITH A 0.035-INCH WALL THICKNESS AND 0.4-INCH CELL SIZE.
- FOR 36" WIDE SIGNS: USE 6 FASTENERS AS SHOWN.
- FOR 24" WIDE SIGNS: USE 4 FASTENERS WITH EDGE SPACING AS SHOWN AND 6" SPACING BETWEEN FASTENERS.
- METAL WASHERS, NUTS, BOLTS AND LAGS 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, SC3
- 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.
- PLYWOOD SIGNS:
 - LAG SCREWS - 5/16" x 1"
- ALUMINUM SIGNS:
 - MACHINE BOLTS - 5/16" x 1-1/4" LENGTH W/NUTS
- WASHERS:
 - 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

MODIFIED ROUTE ASSEMBLY FOR DETOUR SIGNING

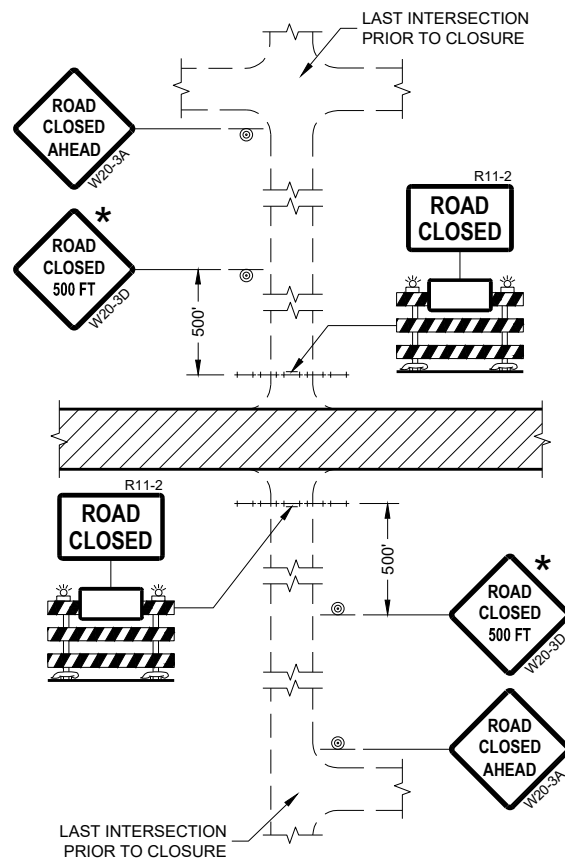
MODIFIED ROUTE ASSEMBLY FOR DETOUR SIGNING	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2023 DATE	/S/ Andrew Heidtke ROADWAY STANDARDS DEVELOPMENT ENGINEER

6

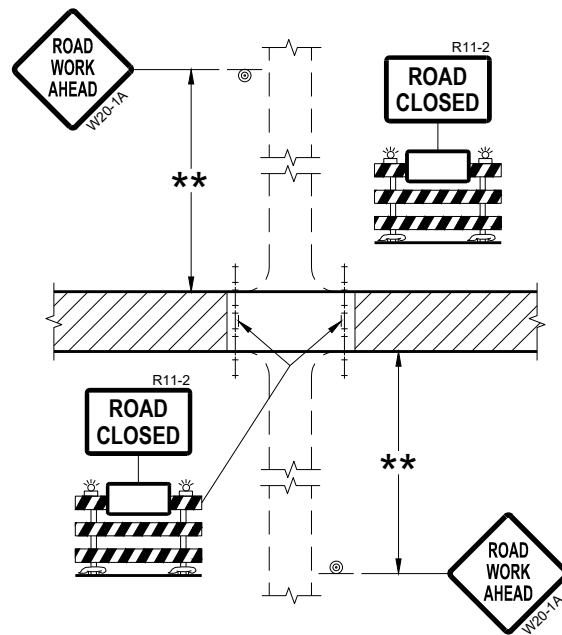
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SDD 15C02-09h

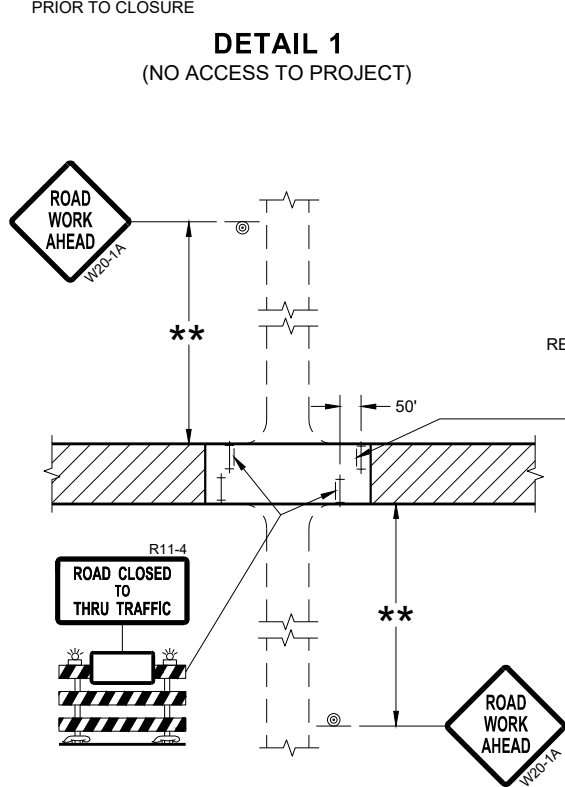
SDD 15C02-09h



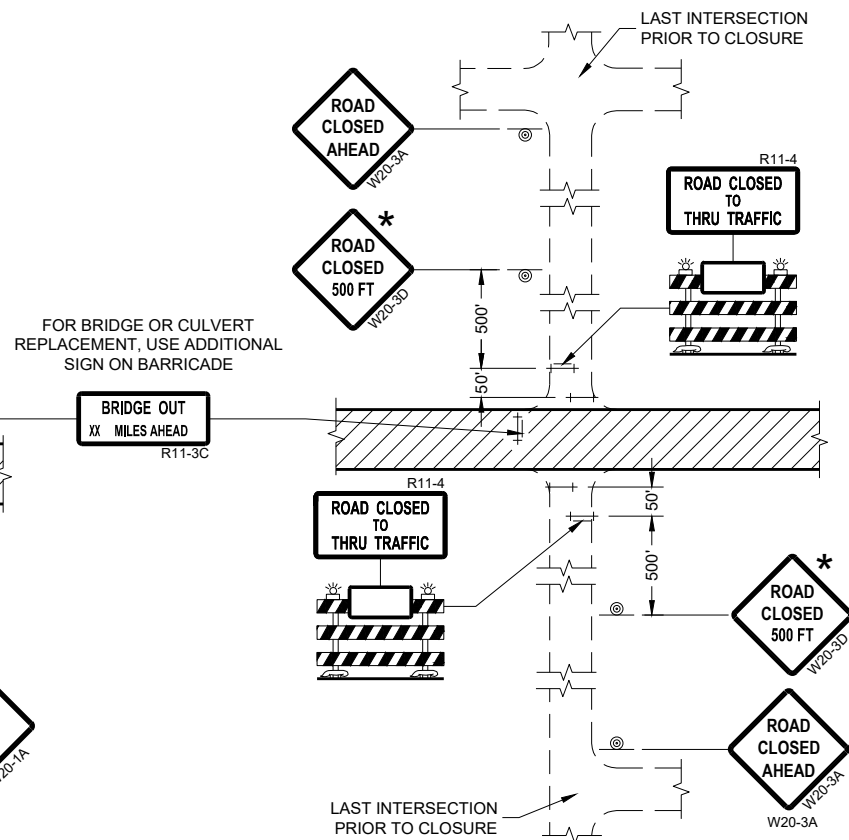
DETAIL 1
(NO ACCESS TO PROJECT)



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



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



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

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

- * OMIT THE "ROAD CLOSED 500 FT." SIGN IF THE LAST INTERSECTION IS 500 FEET OR LESS FROM THE WORK ZONE.
- ** 500' MAX. OR AT LAST INTERSECTION, WHICHEVER IS CLOSEST.

LEGEND

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

**BARRICADES AND SIGNS
FOR
SIDEROAD CLOSURES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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.

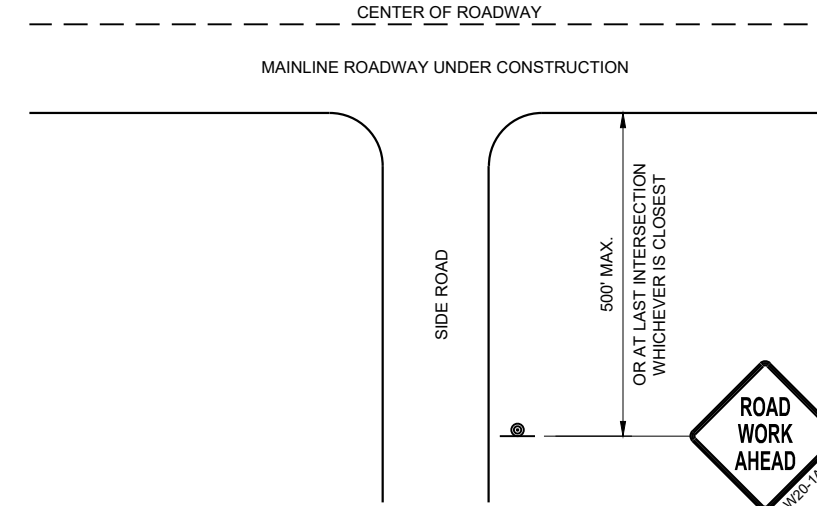
SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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.

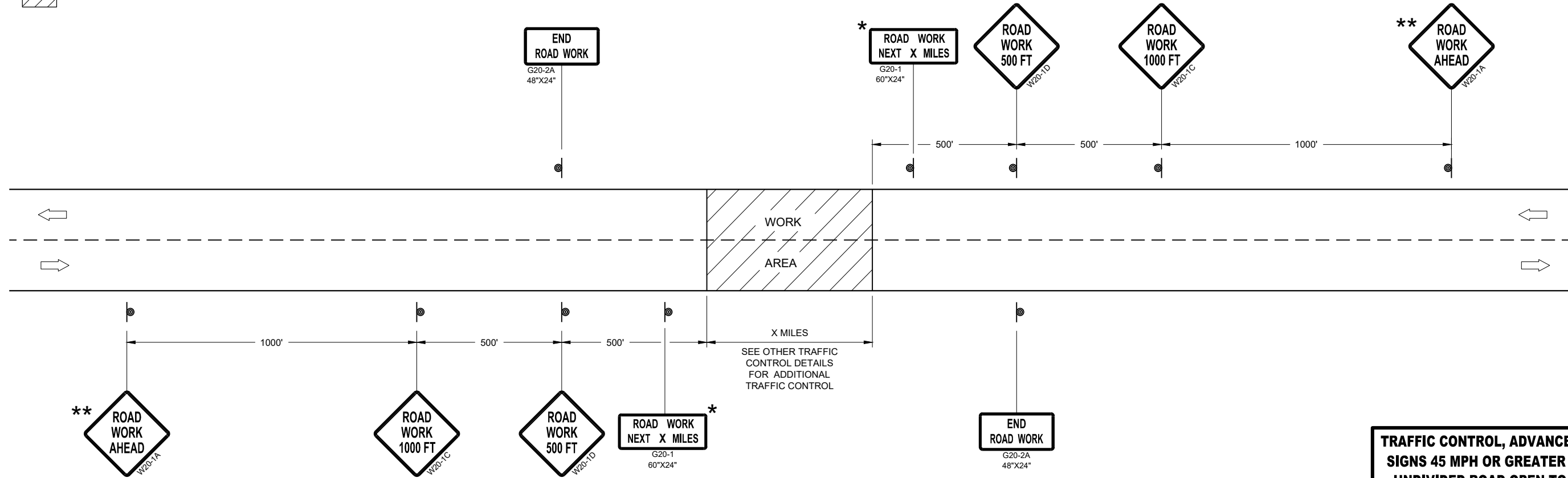
- * OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS
- ** PLACE AN ADDITIONAL W20-1A "ROAD WORK AHEAD" SIGN IF WORK AREA WITHIN THE PROJECT IS SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA.

LEGEND

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



**TYPICAL SIDE ROAD APPROACH
WARNING SIGN DETAIL**



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 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	

GENERAL NOTES

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

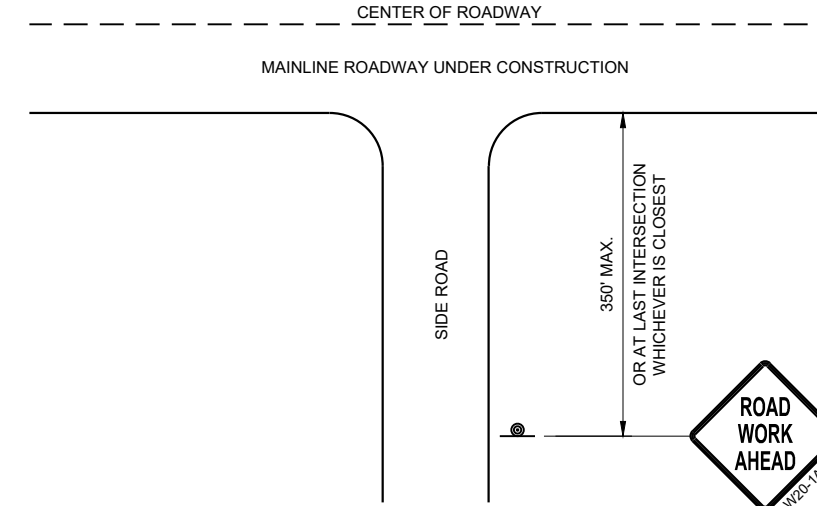
THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS, 36"X36" SIGNS MAY BE USED INSTEAD OF 48" X 48" SIGNS.

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.

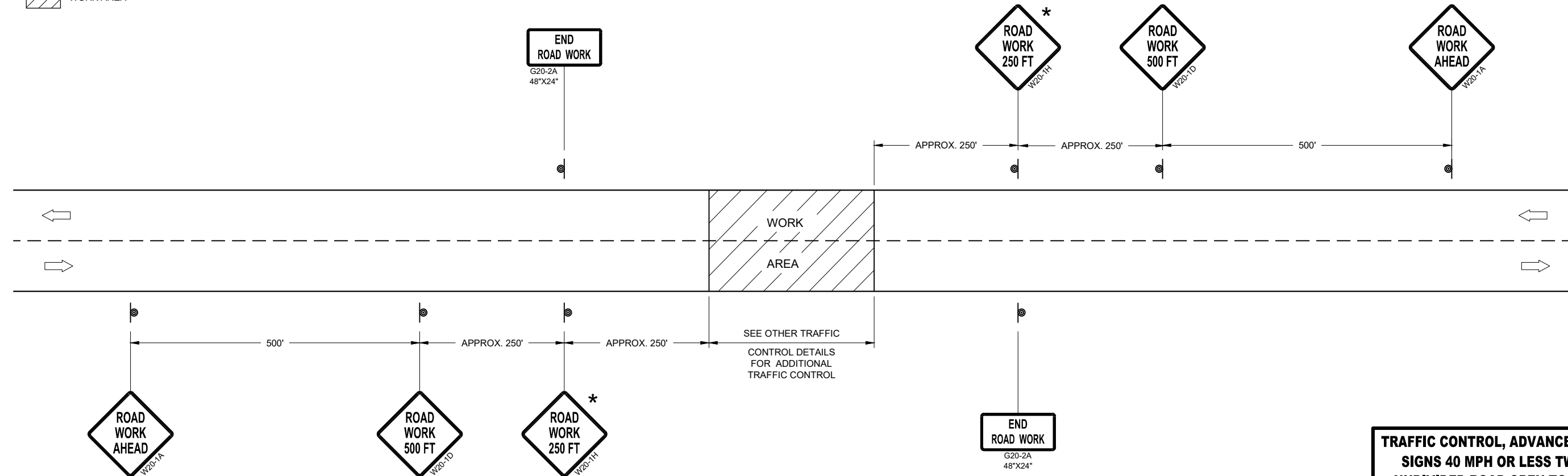
* THE THIRD W20-1 SIGN IS REQUIRED ONLY IF THERE IS AN INTERSECTION BETWEEN THE "ROAD WORK 500 FEET" SIGN AND THE WORK ZONE. ADJUST THE PLACEMENT OF THIS SIGN BASED ON INTERSECTION LOCATION AND OTHER FIELD CONDITIONS.



**TYPICAL SIDE ROAD APPROACH
WARNING SIGN DETAIL**

LEGEND

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



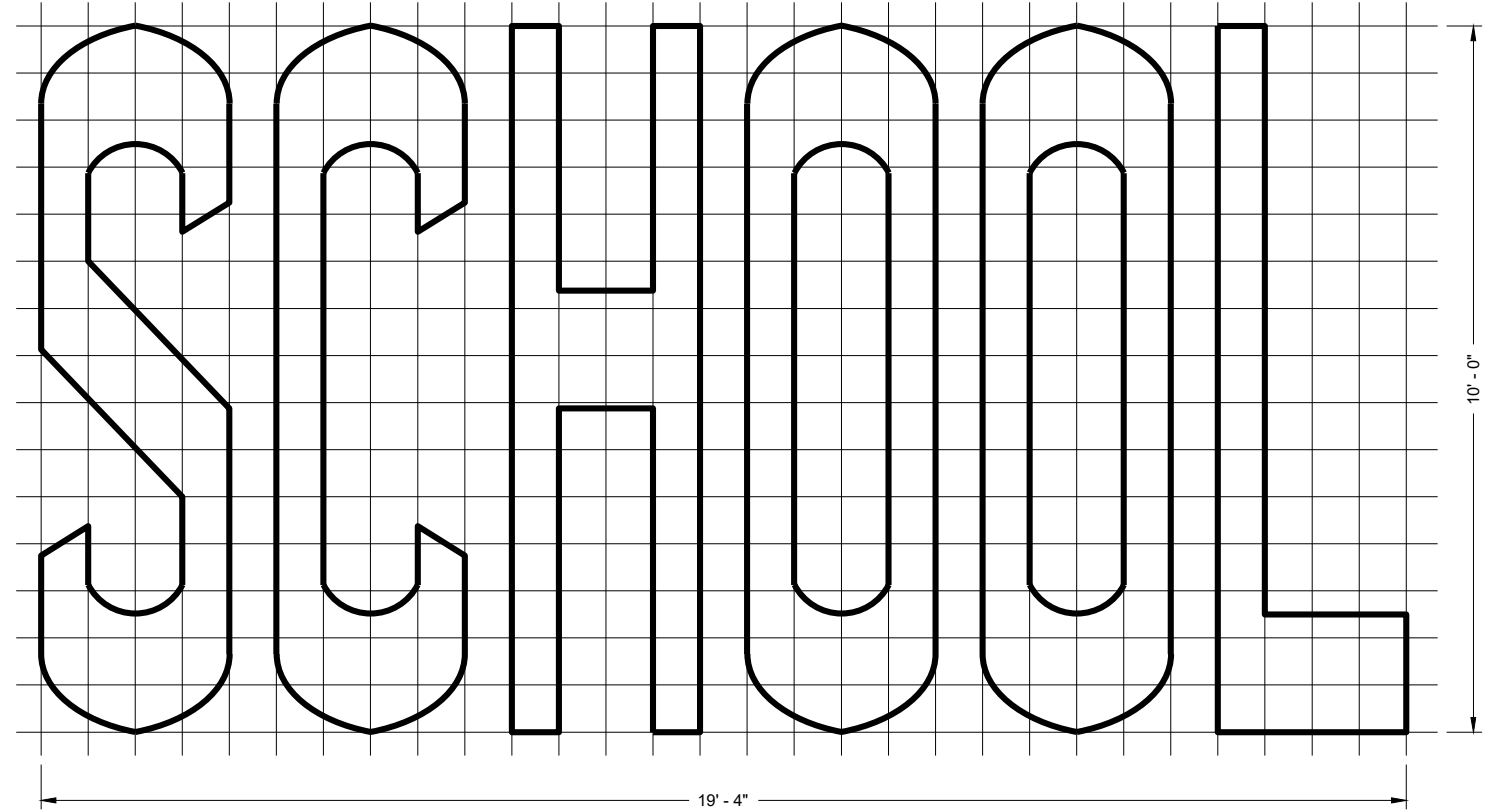
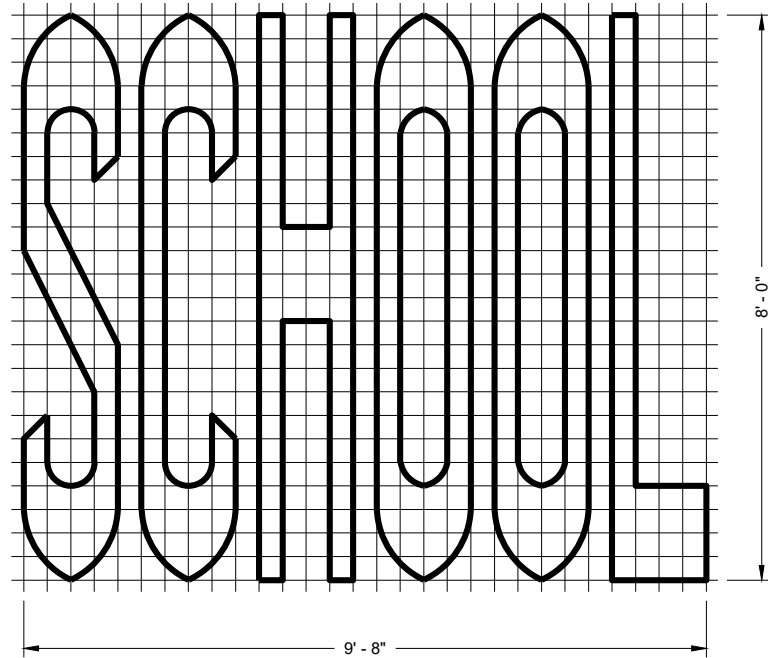
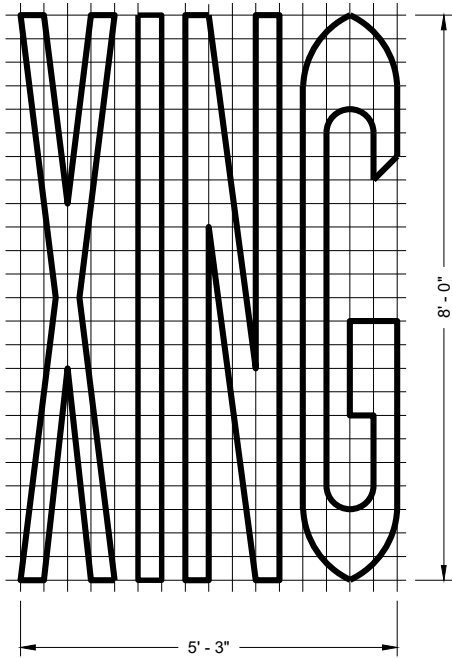
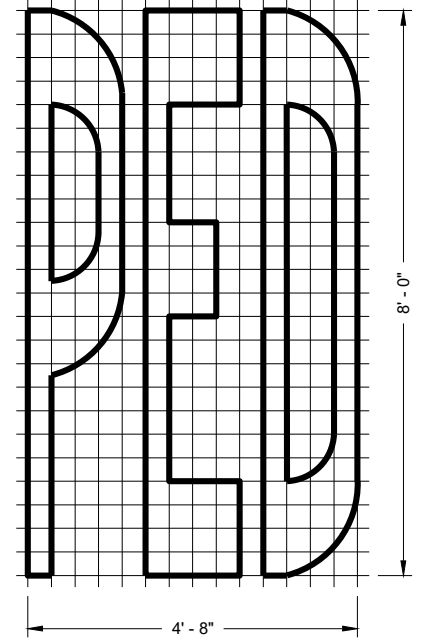
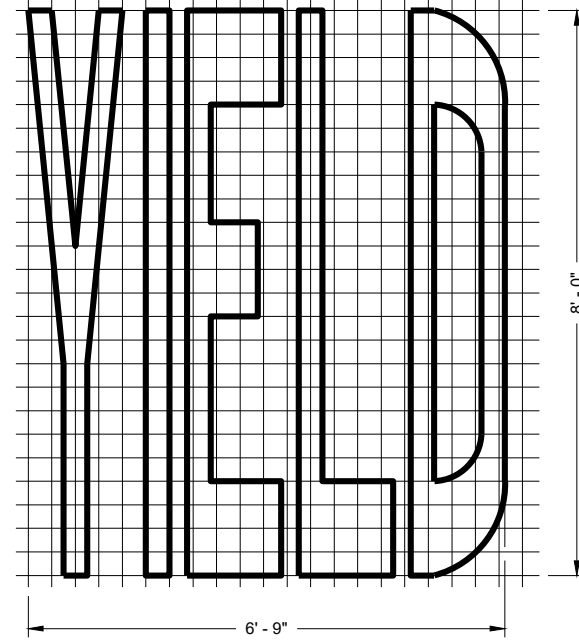
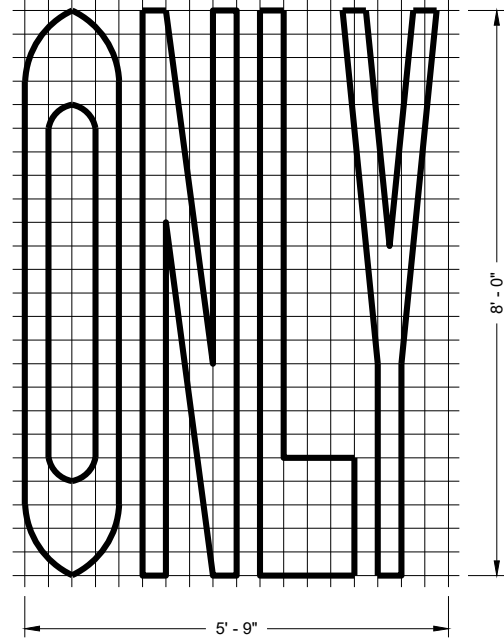
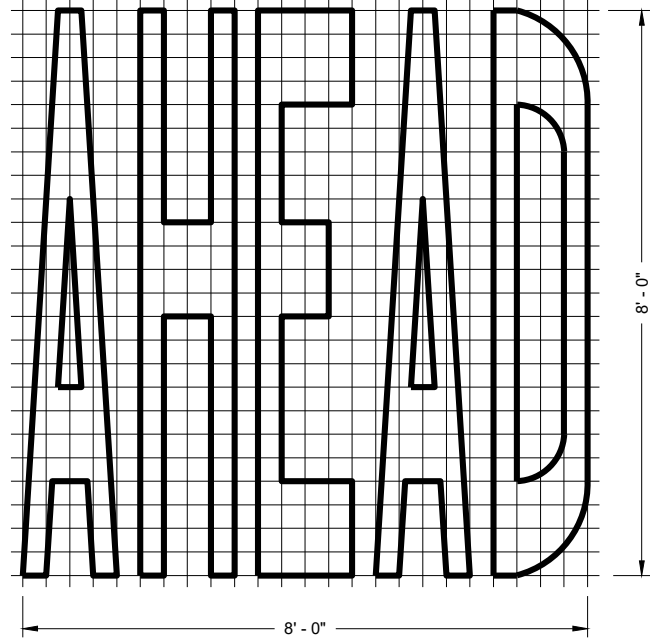
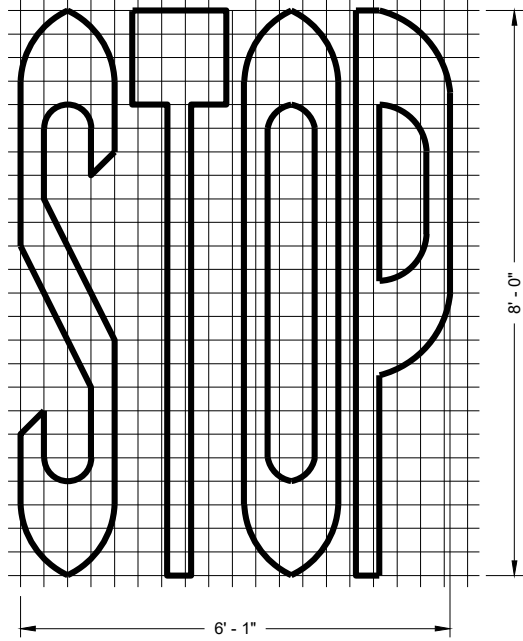
TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40MPH OR LESS

**TRAFFIC CONTROL, ADVANCE WARNING
SIGNS 40 MPH OR LESS TWO-WAY
UNDIVIDED ROAD OPEN TO TRAFFIC**

STATE OF WISCONSIN
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DATE WORK ZONE ENGINEER

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SINGLE LANE

TWO - LANE

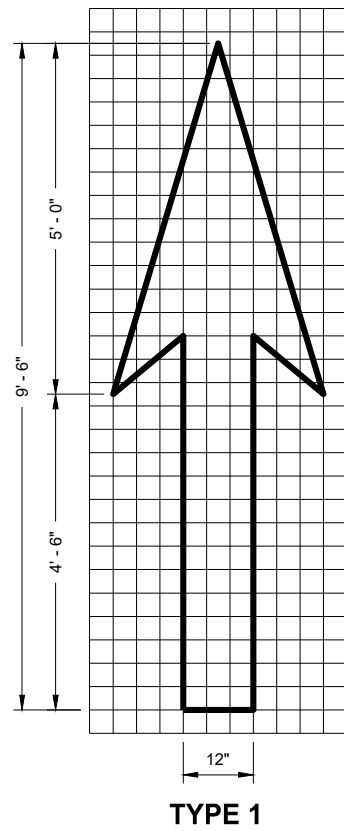
GENERAL NOTES

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

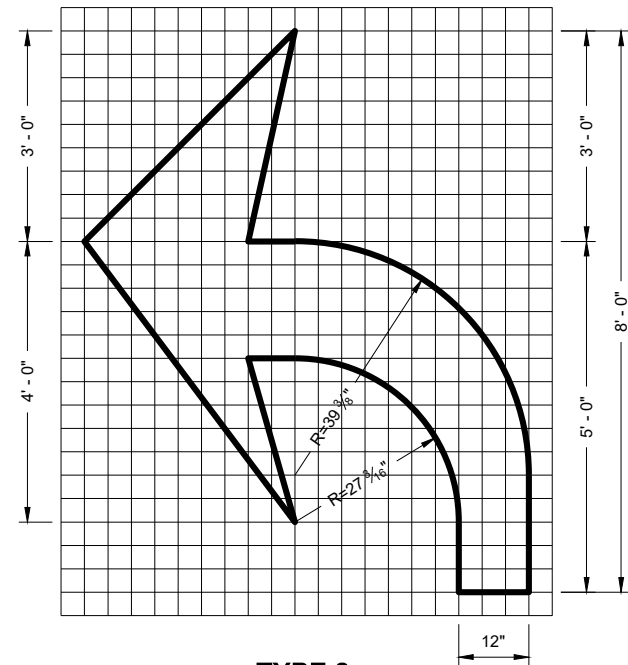
PAVEMENT MARKING WORDS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

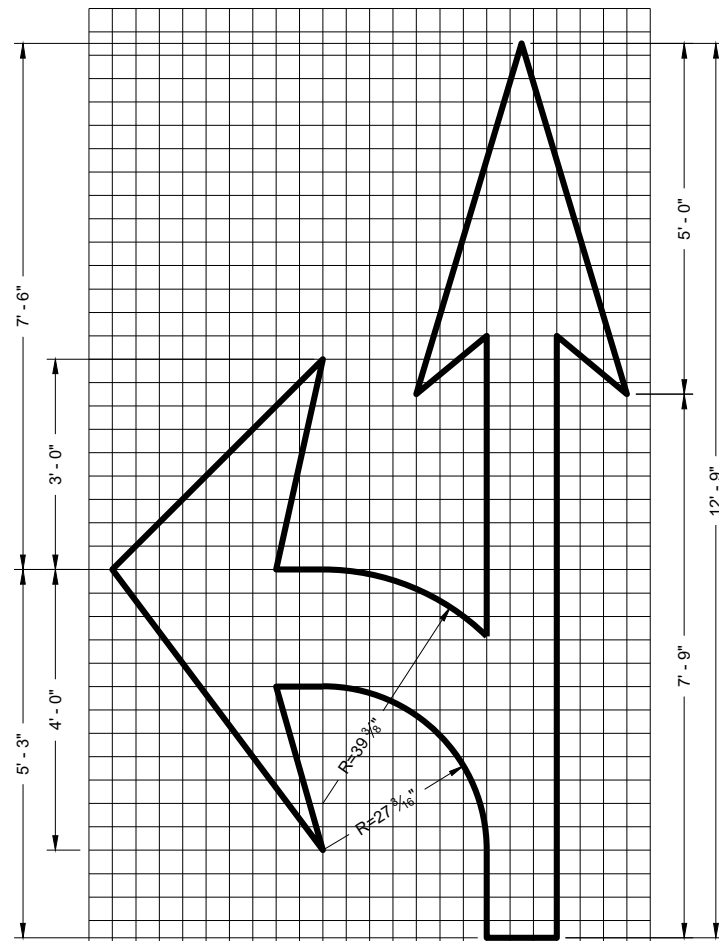
APPROVED
November 2019 /S/ Matthew Rauch
DATE STATE SIGNING AND MARKING
ENGINEER



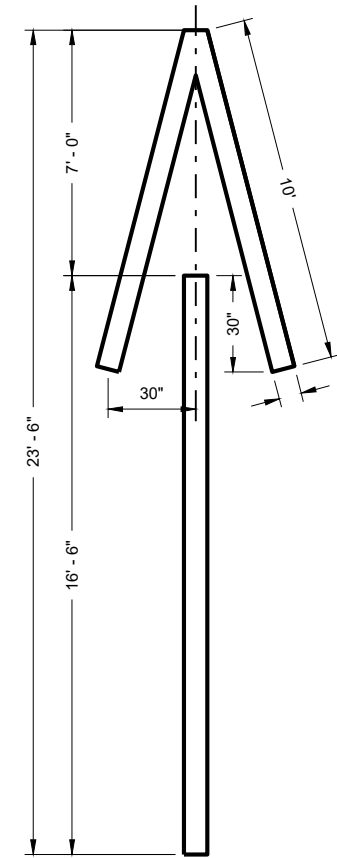
TYPE 1



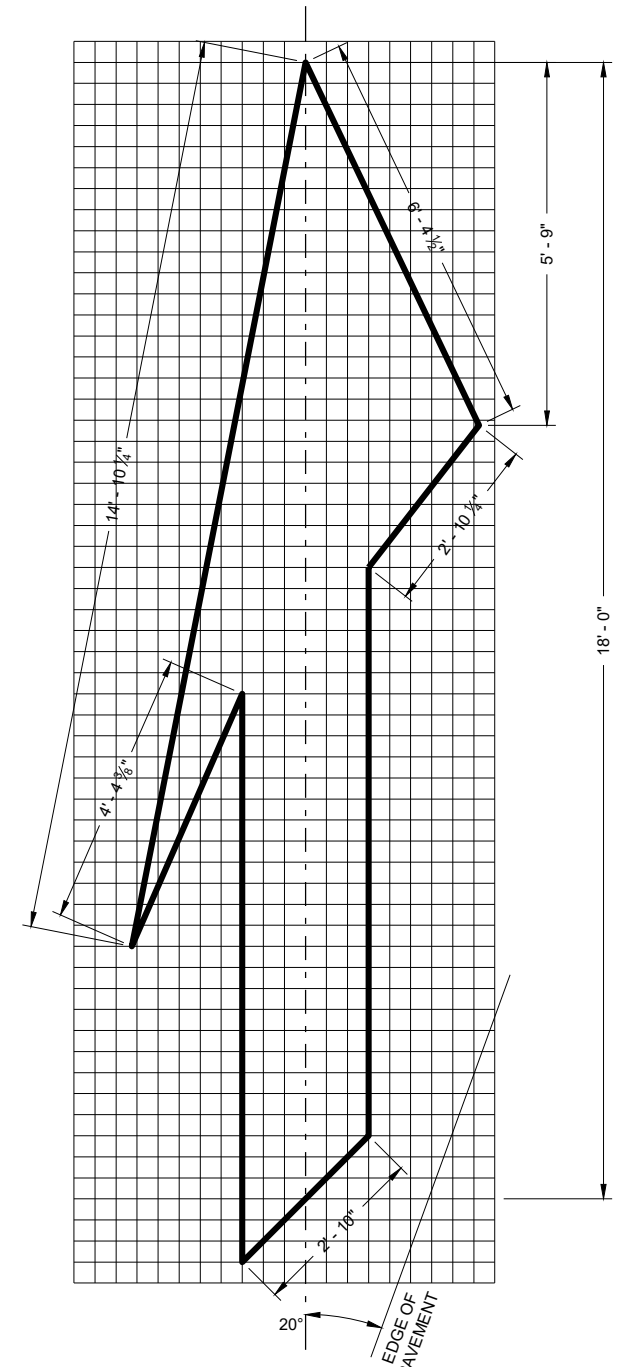
TYPE 2



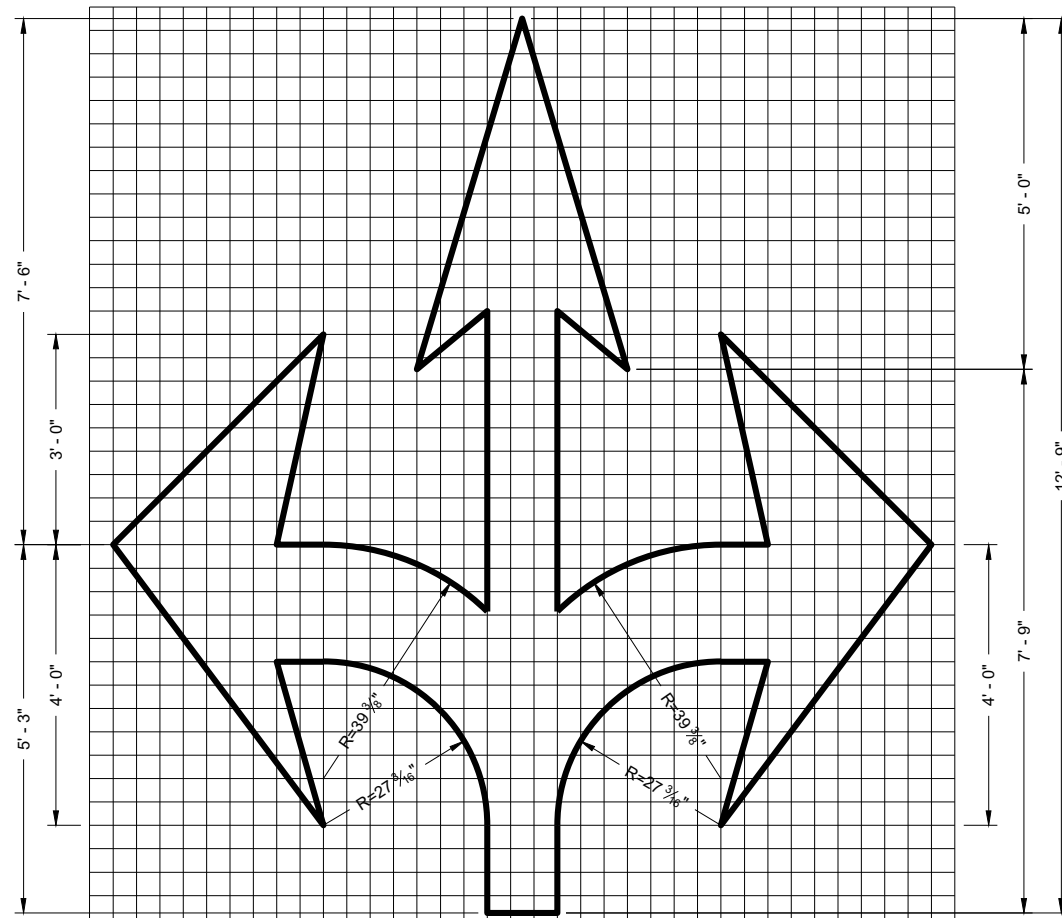
TYPE 3



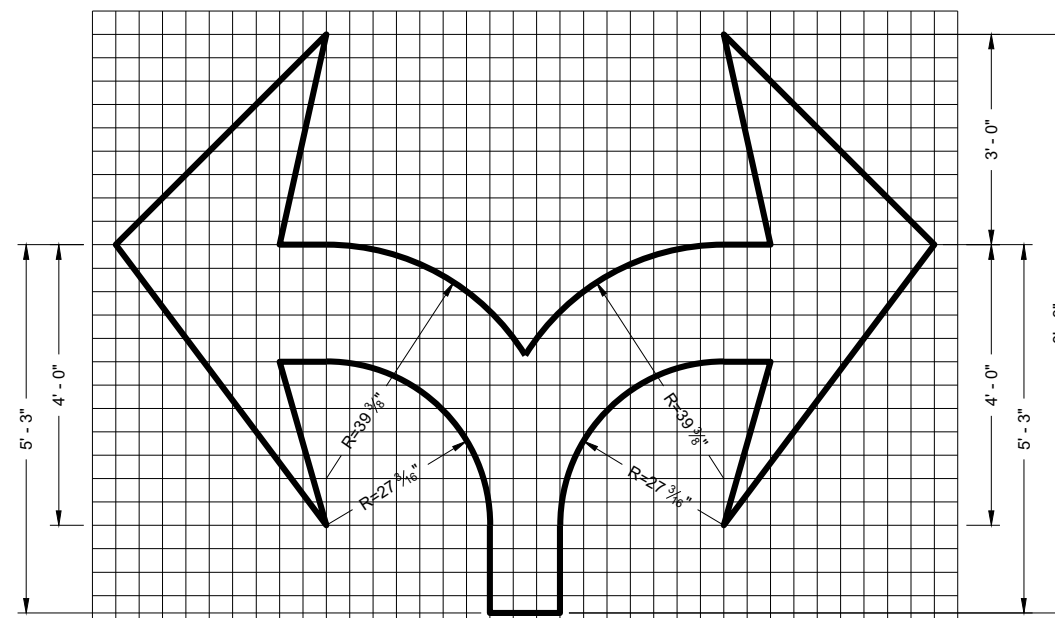
TYPE 4



TYPE 5 LANE DROP ARROW



TYPE 6



TYPE 7

GENERAL NOTES

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

PAVEMENT MARKING ARROWS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION




APPROVED
November 2019
DATE /S/ Matthew Rauch
STATE SIGNING AND MARKING
ENGINEER
FHWA

GENERAL NOTES

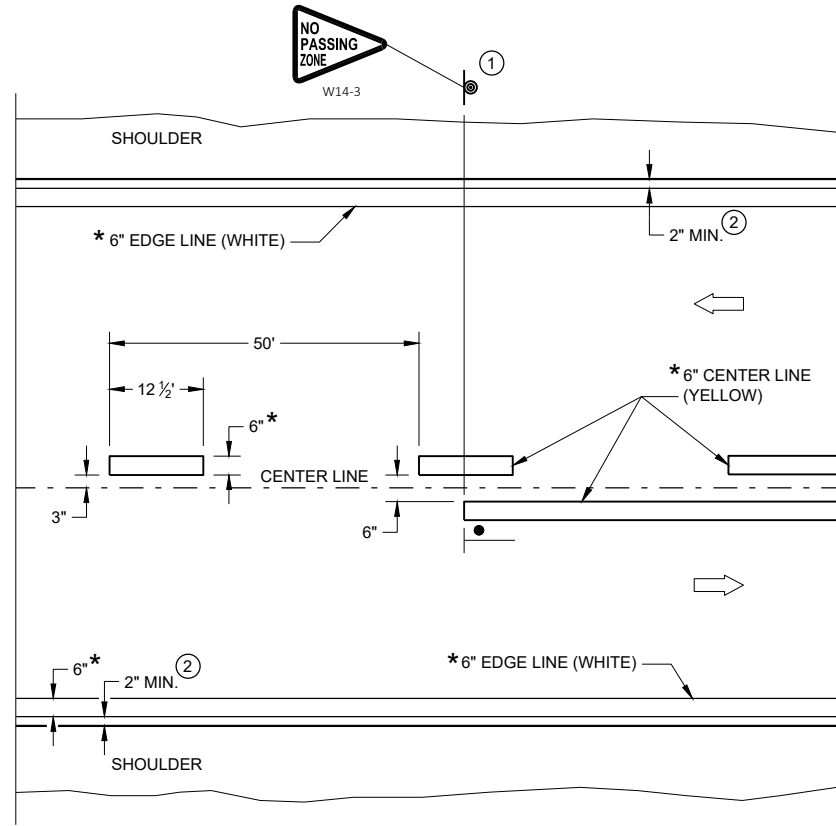
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

- 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.

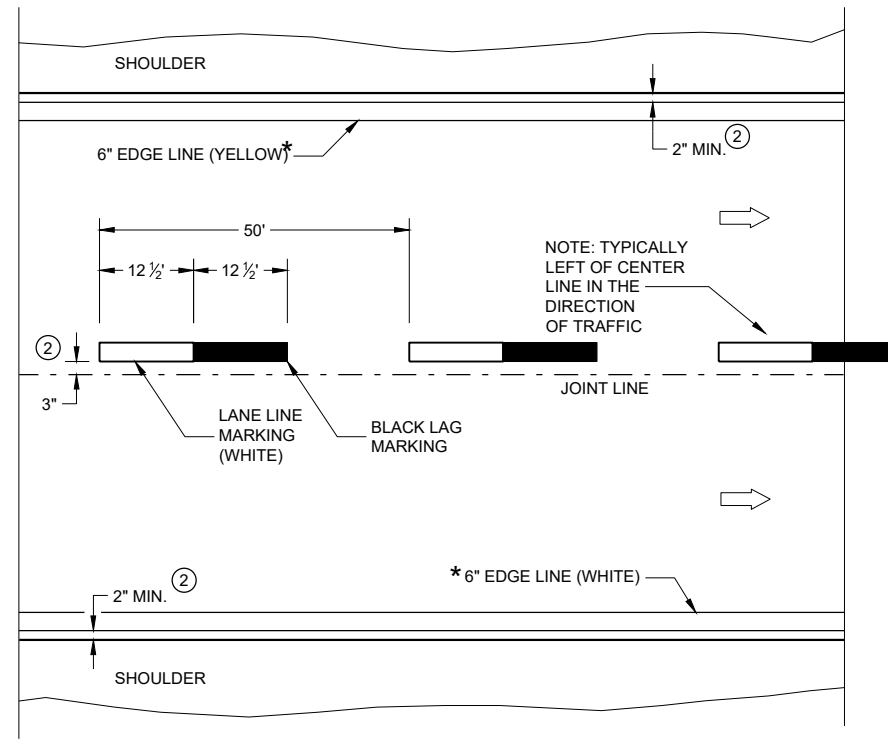
LEGEND

-  "T" MARKING
-  SIGN ON PERMANENT SUPPORT
-  DIRECTION OF TRAFFIC

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



TWO WAY TRAFFIC



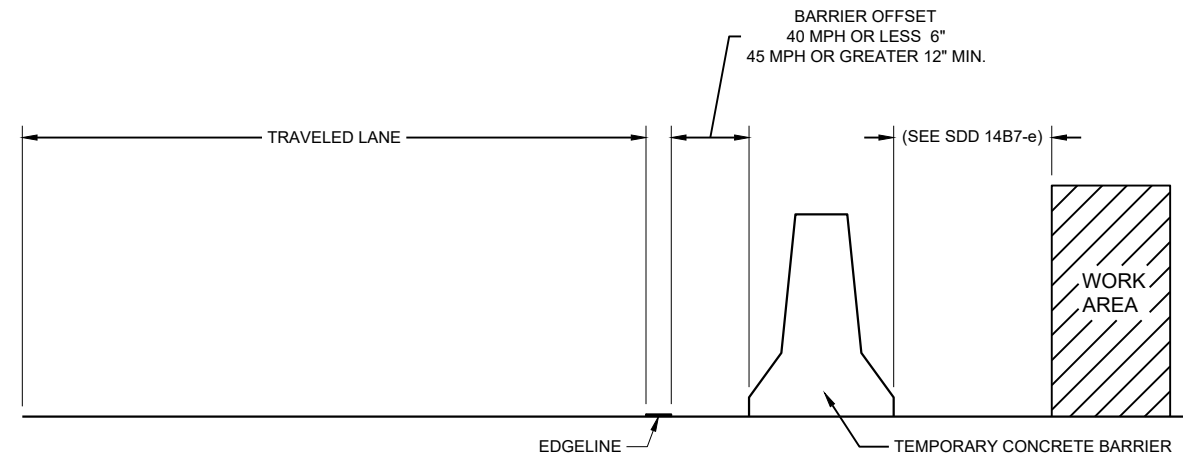
ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

PERMANENT LONGITUDINAL PAVEMENT MARKINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 /S/ Jeannie Silver
DATE STATEWIDE SIGNING AND MARKING ENGINEER



TEMPORARY BARRIER OFFSET FROM EDGELINE

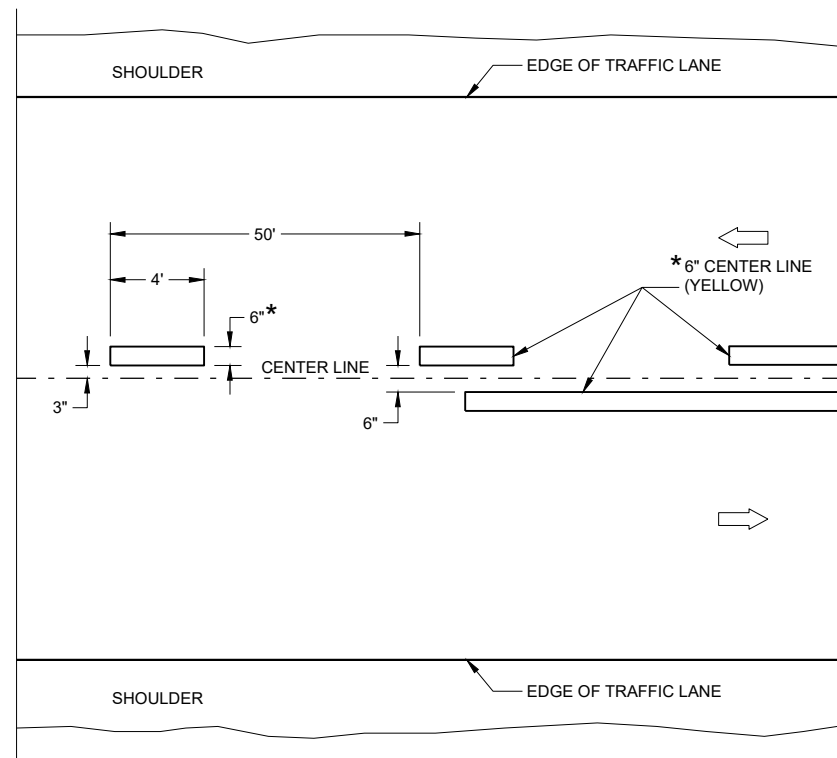
GENERAL NOTES

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

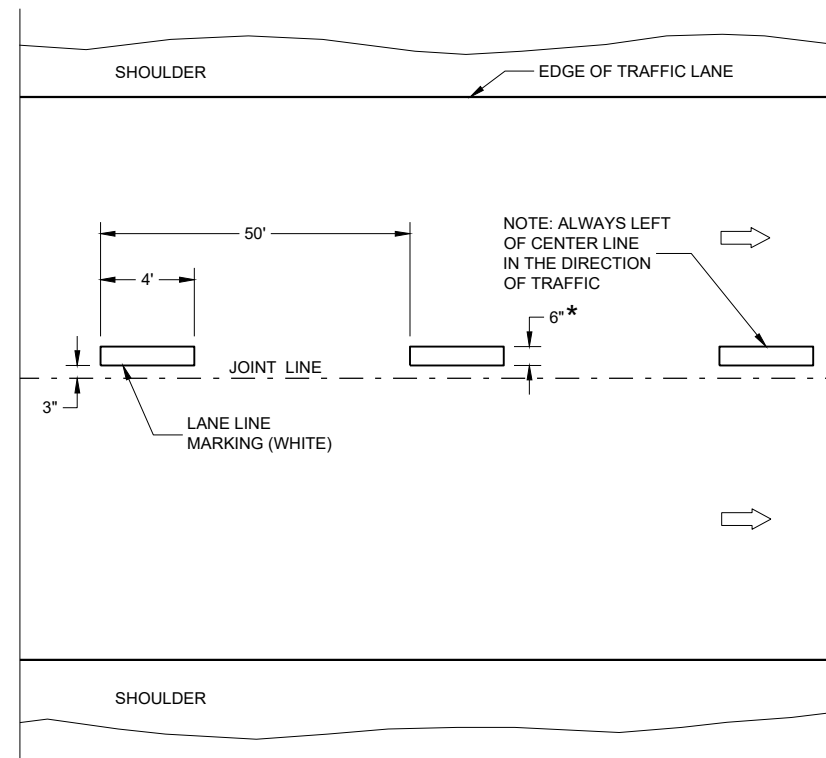
LEGEND

➡ DIRECTION OF TRAFFIC

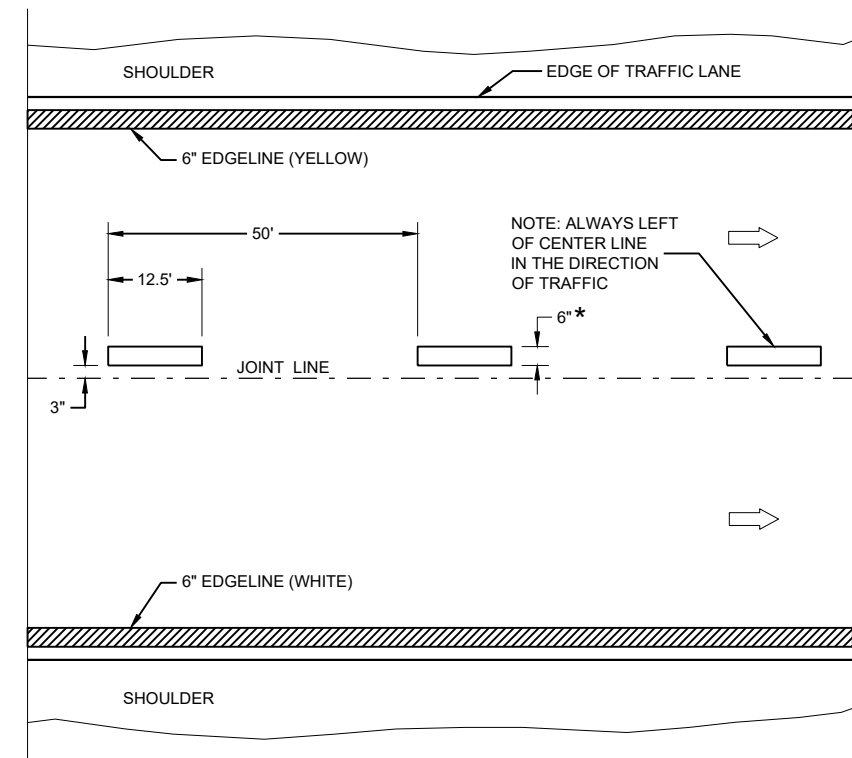
* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



TWO WAY TRAFFIC



ONE WAY TRAFFIC



FREEWAYS AND EXPRESSWAYS

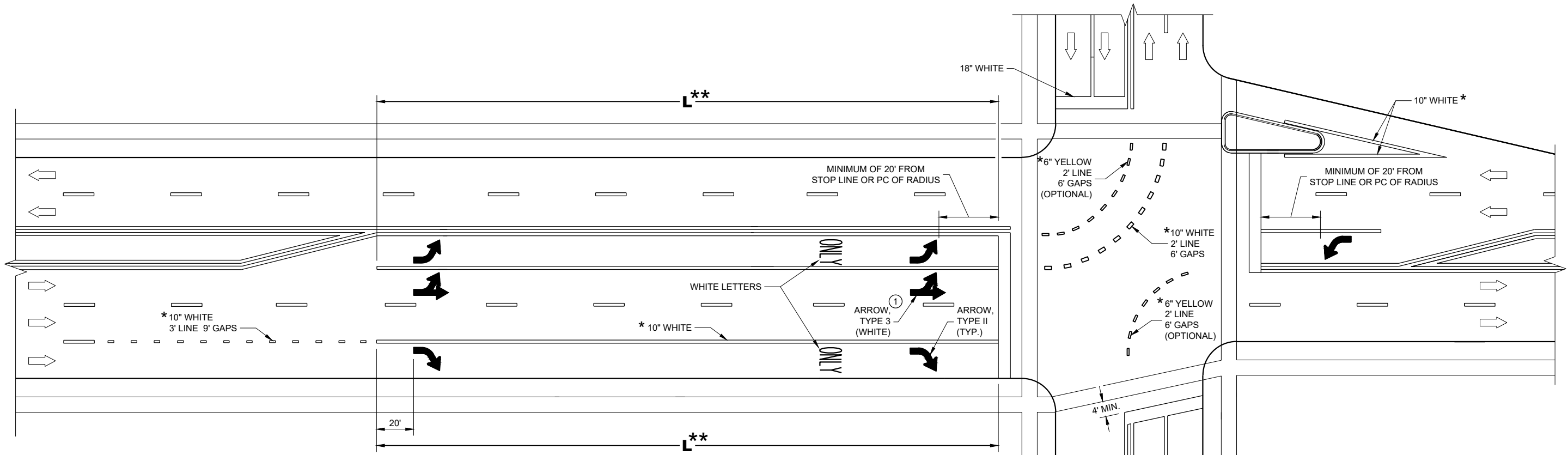
TEMPORARY PAVEMENT MARKING

TEMPORARY LONGITUDINAL PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

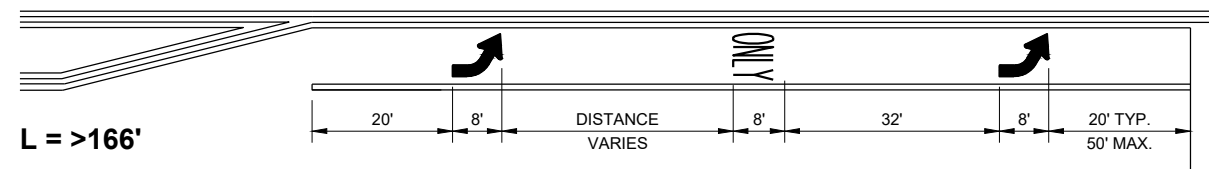
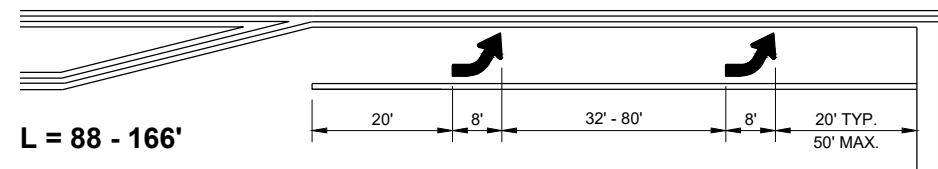
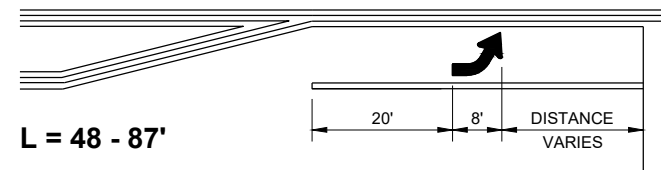
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DATE STATEWIDE SIGNING AND MARKING ENGINEER

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TURN LANE OPTIONS

LENGTH OF TURN BAY (**L**) OF 0 - 47' DOES NOT REQUIRE PAVEMENT MARKING ARROWS OR WORDS



** (SEE TURN LANE OPTIONS FOR PLACEMENT OF PAVEMENT MARKING ARROWS AND WORDS)

GENERAL NOTES

① QUANTITY AND LOCATION OF TYPE 3 ARROWS ARE THE SAME AS THE TYPE II ARROWS IN THE ADJACENT TURN LANE. FOR TURN LANES WITH A PHYSICAL SEPARATION IN THE SAME DIRECTION OF TRAVEL, THE ARROWS AND "ONLY" MARKING MAY BE ELIMINATED.

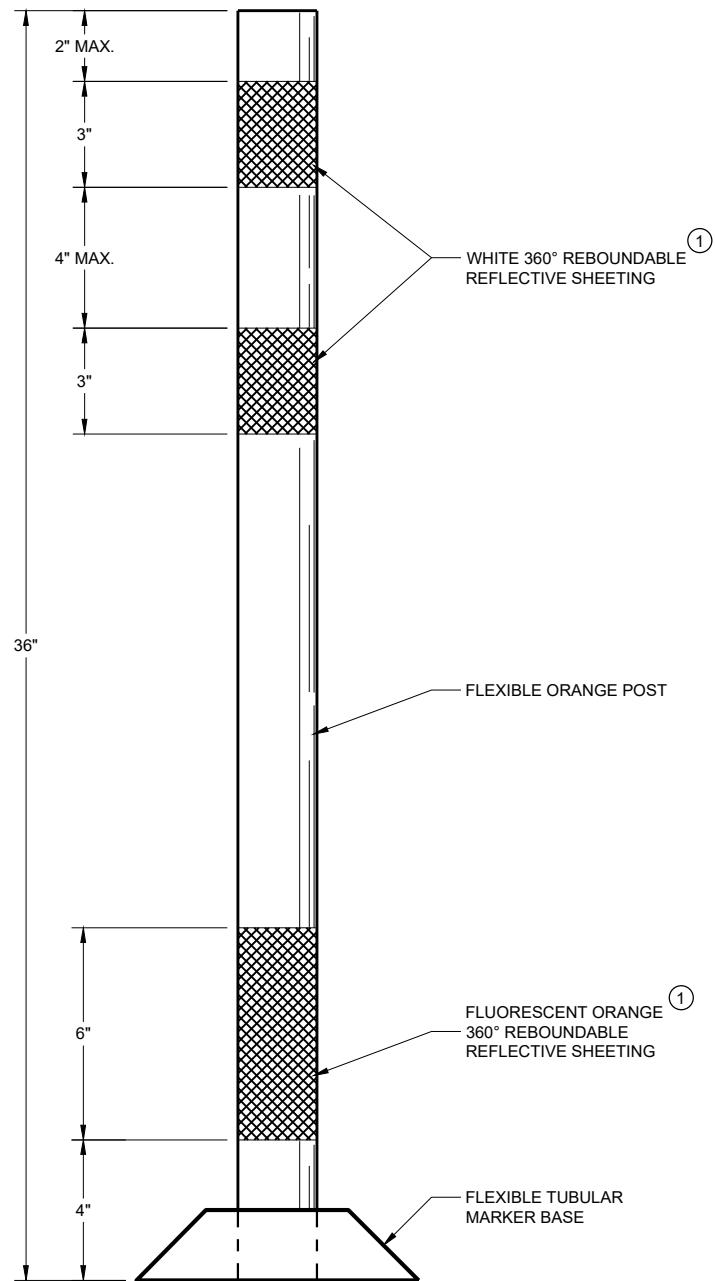
➡ DIRECTION OF TRAFFIC

L = LENGTH OF TURN BAY

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

PAVEMENT MARKING (TURN LANES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



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.

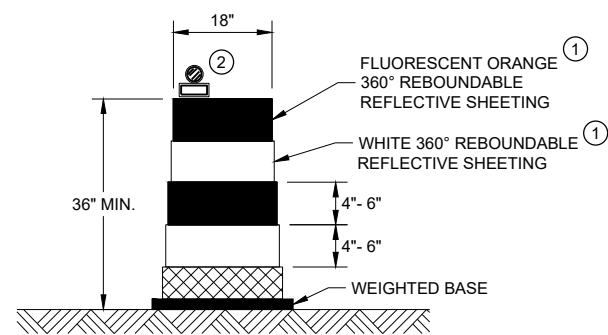
① REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.

**CHANNELIZING DEVICES
FLEXIBLE TUBULAR
MARKER POST**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

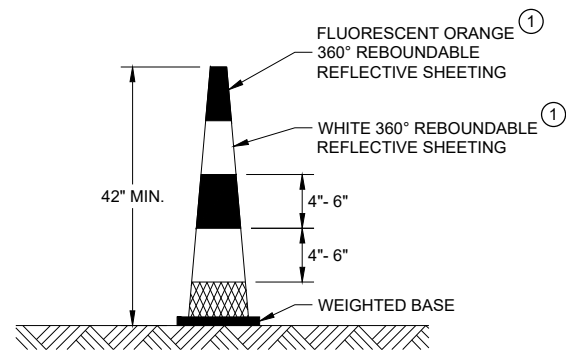
APPROVED
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DATE WORK ZONE ENGINEER

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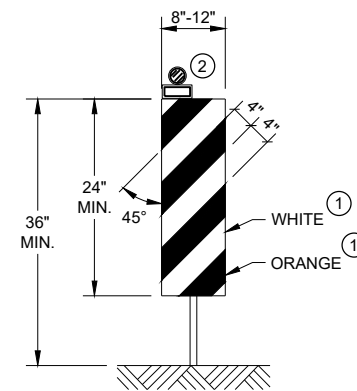
DRUM

BALLAST WIDTHS
RANGE FROM 24"-36"



42" CONE

DO NOT USE IN TAPERS
½ SPACING OF DRUMS
BALLAST WIDTHS
RANGE FROM 14"-20"

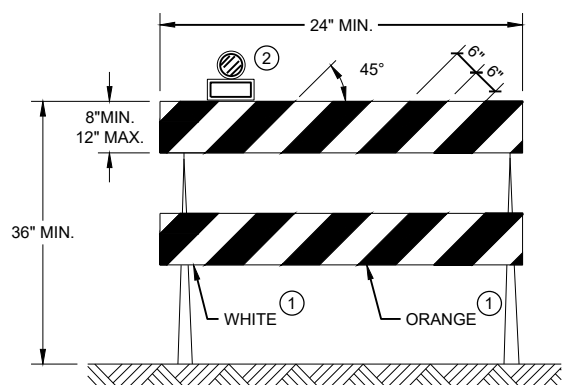


VERTICAL PANEL

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

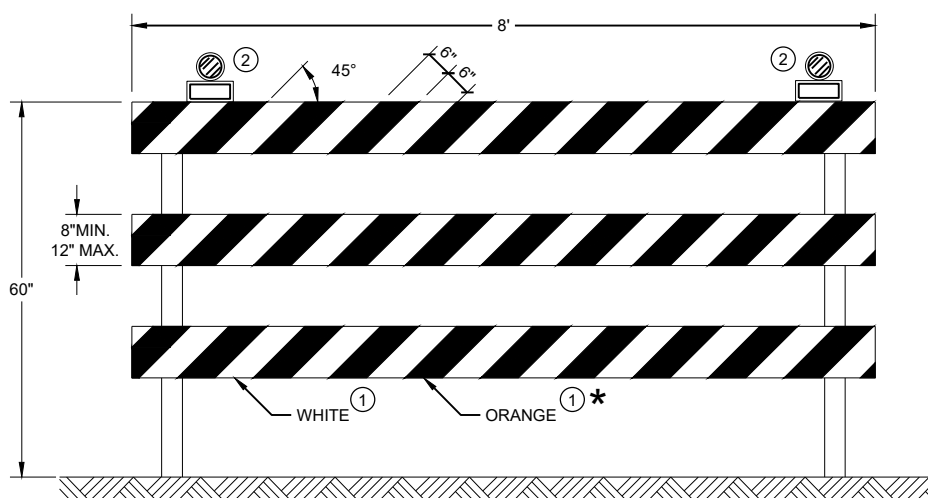
GENERAL NOTES

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



TYPE 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 /S/ Andrew Heidtke
 DATE WORK ZONE ENGINEER
 FHWA

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.

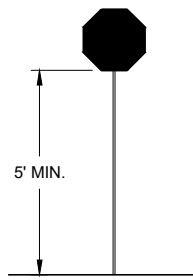
- ③ EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS PLACED TRANSVERSE ACROSS THE LANE AT THE LOCATIONS SHOWN. WITHIN EACH ARRAY, SPACING BETWEEN RUMBLE STRIPS SHALL BE 15 FEET ON CENTER

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

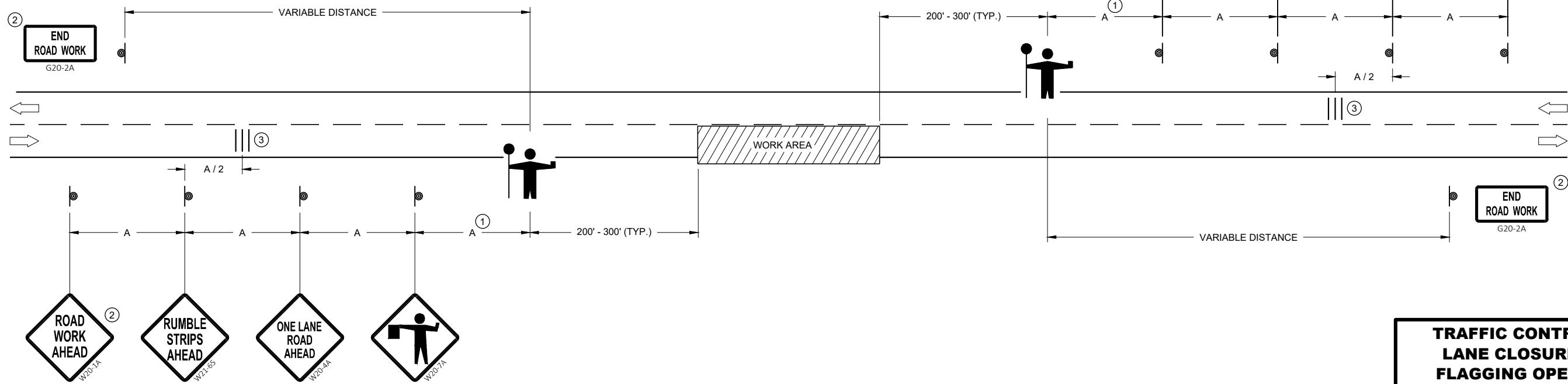
SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

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



W03-4

USE OF W03-4 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
DATE: May 2022 /S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

GENERAL NOTES

-  SIGN ON PERMANENT SUPPORT
-  TRAFFIC CONTROL CONE 42-INCH
-  TRAFFIC CONTROL DRUM
-  TEMPORARY PORTABLE RUMBLE STRIP ARRAY
-  DIRECTION OF TRAFFIC
-  WORK AREA
-  AUTOMATED FLAGGER ASSISTANCE DEVICE (AFAD)

GENERAL NOTES

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

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

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

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

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

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

FLAGGING

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

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

- ① SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.
- ② IF FLAGGERS ARE PHYSICALLY NEEDED TO FLAG, REPLACE WO3-4 SIGNS WITH W20-7A SIGNS.

TEMPORARY PORTABLE RUMBLE STRIPS

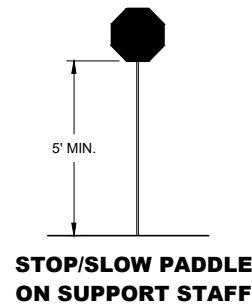
UTILIZE TEMPORARY PORTABLE RUMBLE STRIPS ON ALL FLAGGING OPERATIONS.

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

PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.

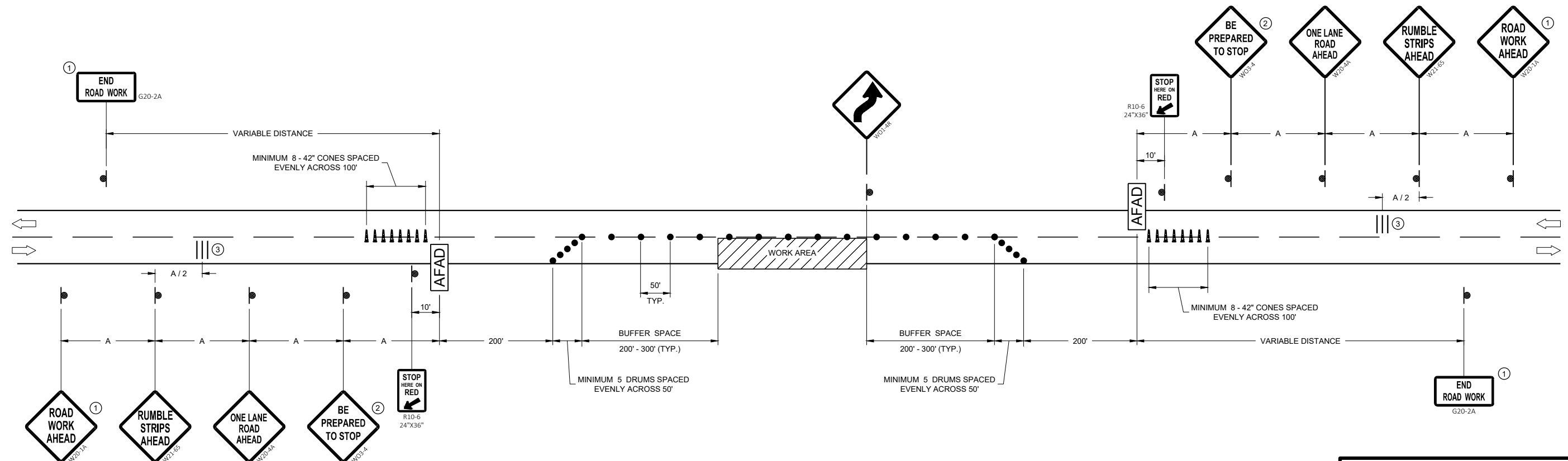
DO NOT INSTALL TEMPORARY PORTABLE RUMBLE STRIPS ON GRAVEL, MILLED SURFACES, OR ASPHALT THAT HAS BEEN PAVED LESS THAN 12 HOURS.

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



SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

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



TRAFFIC CONTROL, LANE CLOSURE WITH AUTOMATED FLAGGER ASSISTANCE DEVICE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2022 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER

FHWA

6

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SDD 15C12 - 09b

SDD 15C12 - 09b

GENERAL NOTES

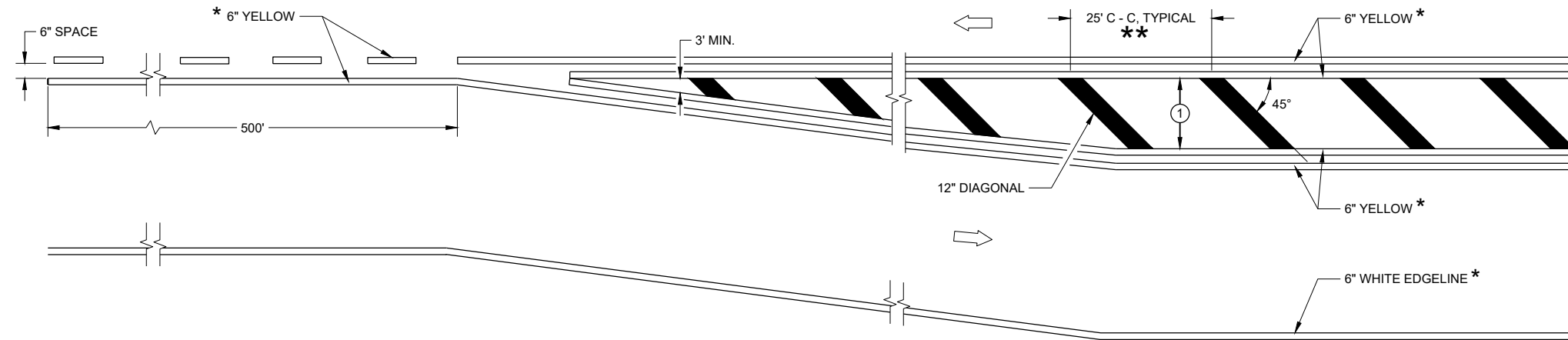
- ① DIAGONALS ARE OPTIONAL WHEN PAINTED ISLAND IS LESS THAN 6 FEET AT THE WIDEST POINT. OMIT DIAGONALS IF WIDTH IS LESS THAN 4 FEET.

➔ DIRECTION OF TRAVEL

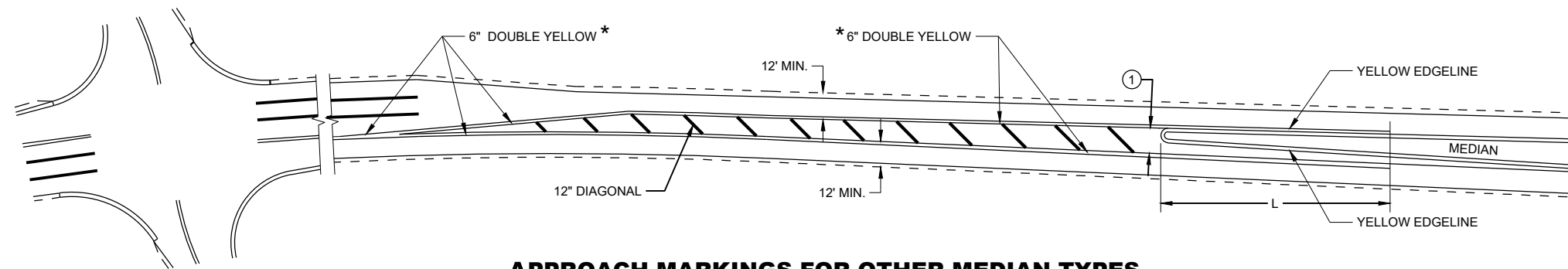
* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

SPEED LIMIT	L
<35 MPH	5'
35> MPH	50'

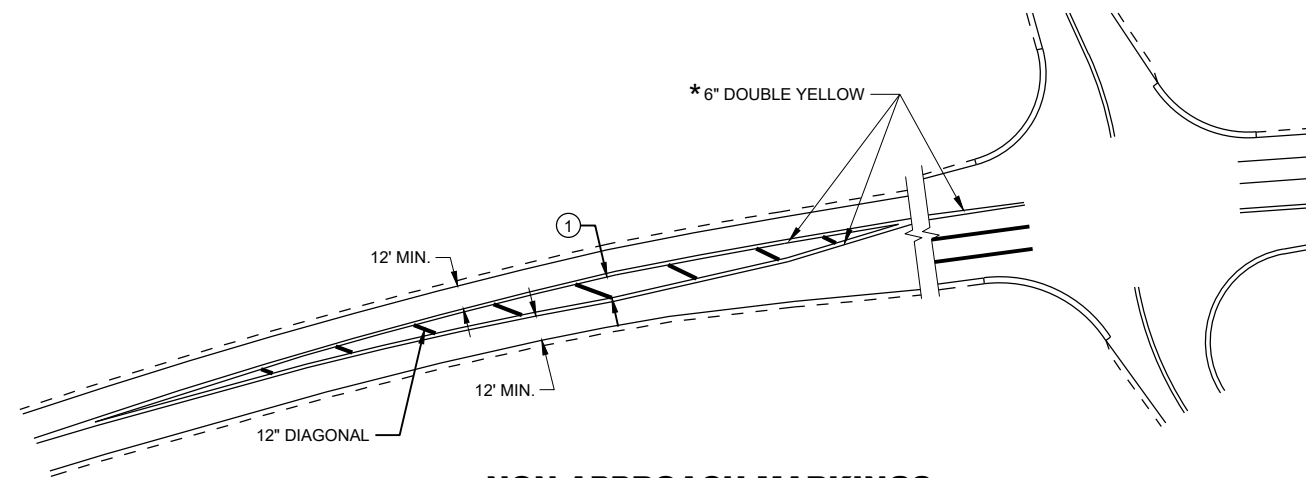
** WHEN THE PAINTED MEDIAN LENGTH IS LESS THAN 50 FEET THE SPACING IS 10'.



MEDIAN ISLAND DETAIL



APPROACH MARKINGS FOR OTHER MEDIAN TYPES



NON-APPROACH MARKINGS





MEDIAN ISLAND PAVEMENT MARKINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 DATE /S/ Jeannie Silver
STATE SIGNING AND MARKING ENGINEER

FHWA

LEGEND

- V1 LEAD VEHICLE
- V2 MARKING VEHICLE
- V3 SHADOW VEHICLE
-  TRUCK MOUNTED ATTENUATOR (TMA)
-  SIGN ON TEMPORARY SUPPORT
-  DIRECTION OF TRAFFIC
-  FLASHING ARROW PANEL (CAUTION)

GENERAL NOTES

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

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

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

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

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

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

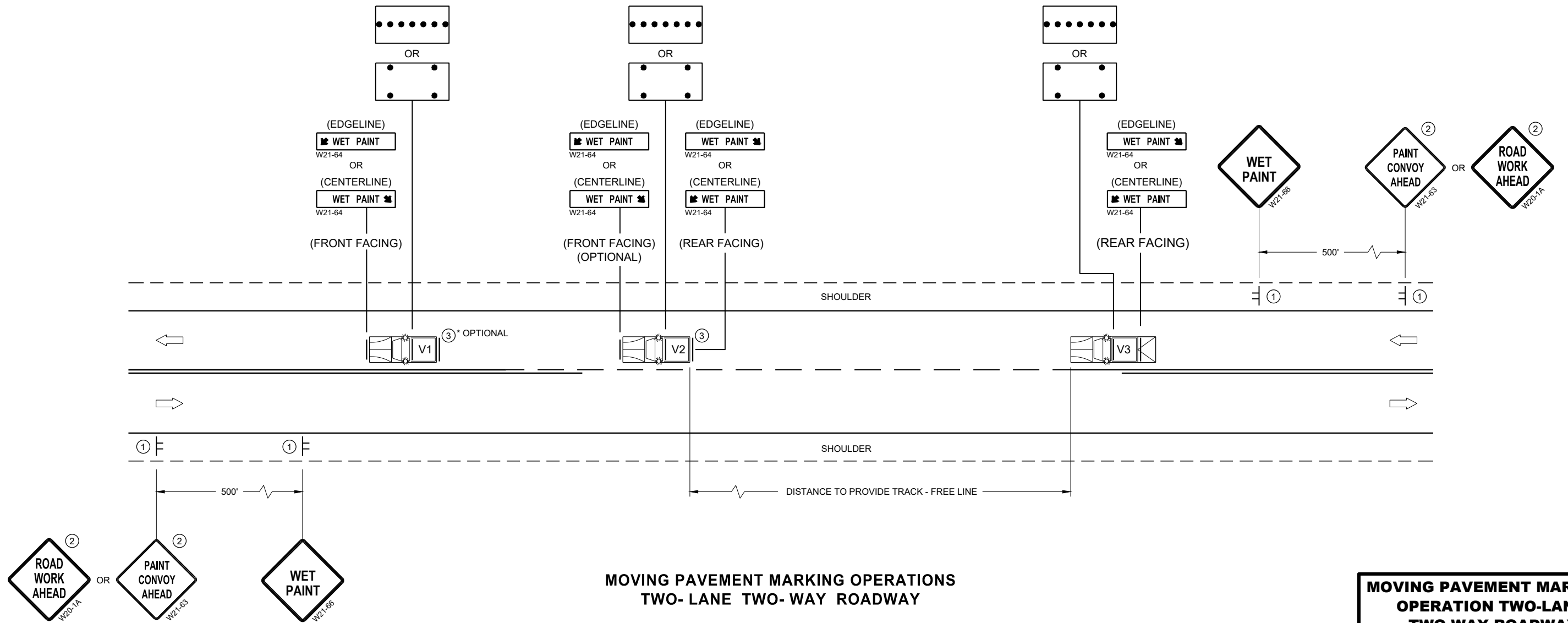
CONES SHOULD BE USED BETWEEN THE MARKING AND SHADOW VEHICLE AT 100 FOOT SPACING. CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.

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

- ① SIGNS SHALL BE REPEATED APPROXIMATELY EVERY THREE MILES.
- ② IF CONSTRUCTION WORK ZONE SIGNS ARE IN PLACE, W20-1A OR W21-63 ARE NOT REQUIRED.
- ③ V1 AND V2 CAN BE SWITCHED SO THAT THE MARKER IS THE LEAD VEHICLE.

6

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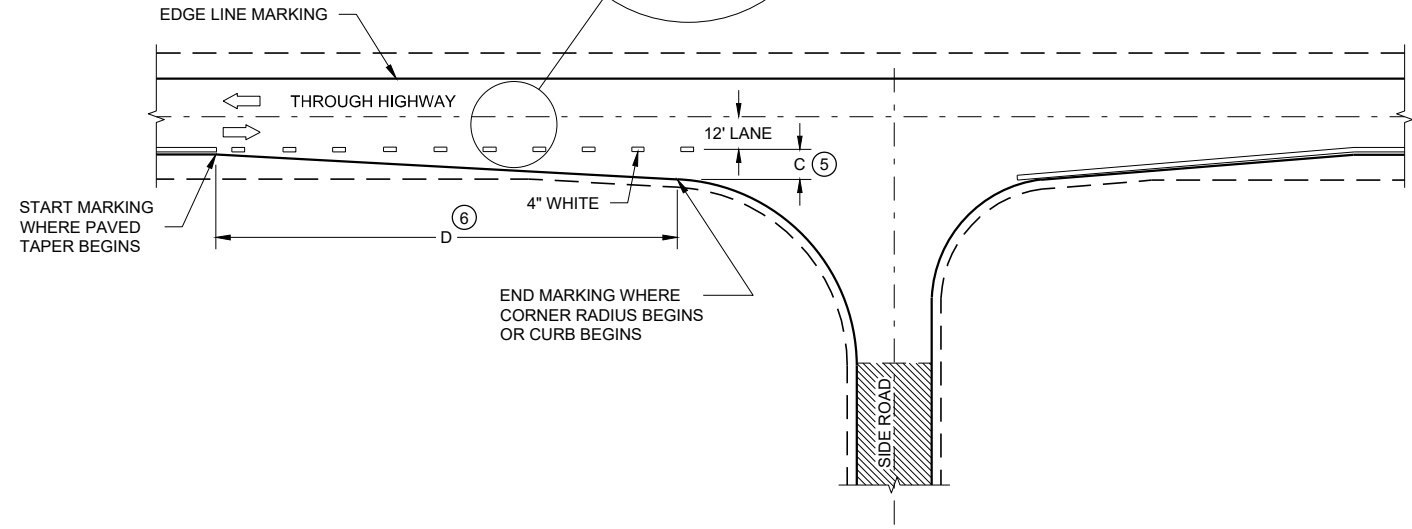
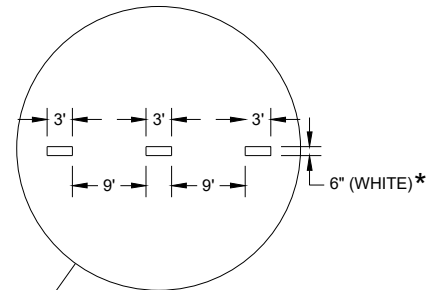


**MOVING PAVEMENT MARKING OPERATIONS
TWO-LANE TWO-WAY ROADWAY**

SDD 15C19-08a

SDD 15C19-08a

MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED February 2023 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	



MINOR INTERSECTION

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

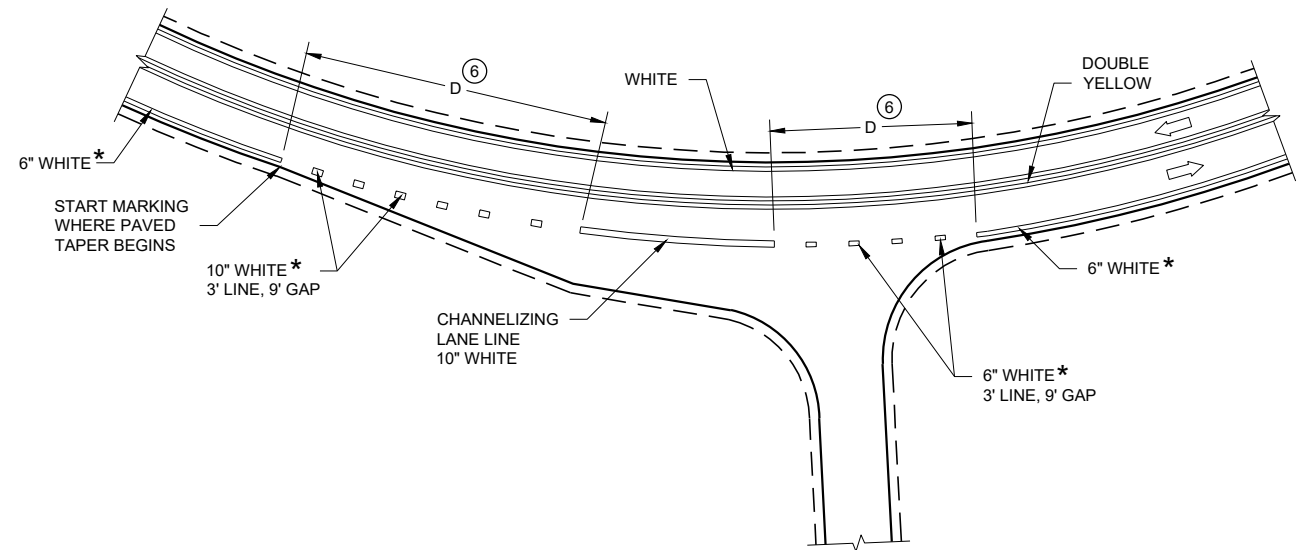
GENERAL NOTES

OMIT EDGE LINES THROUGH INTERSECTIONS. CONTINUE EDGE LINES THROUGH DRIVEWAYS.

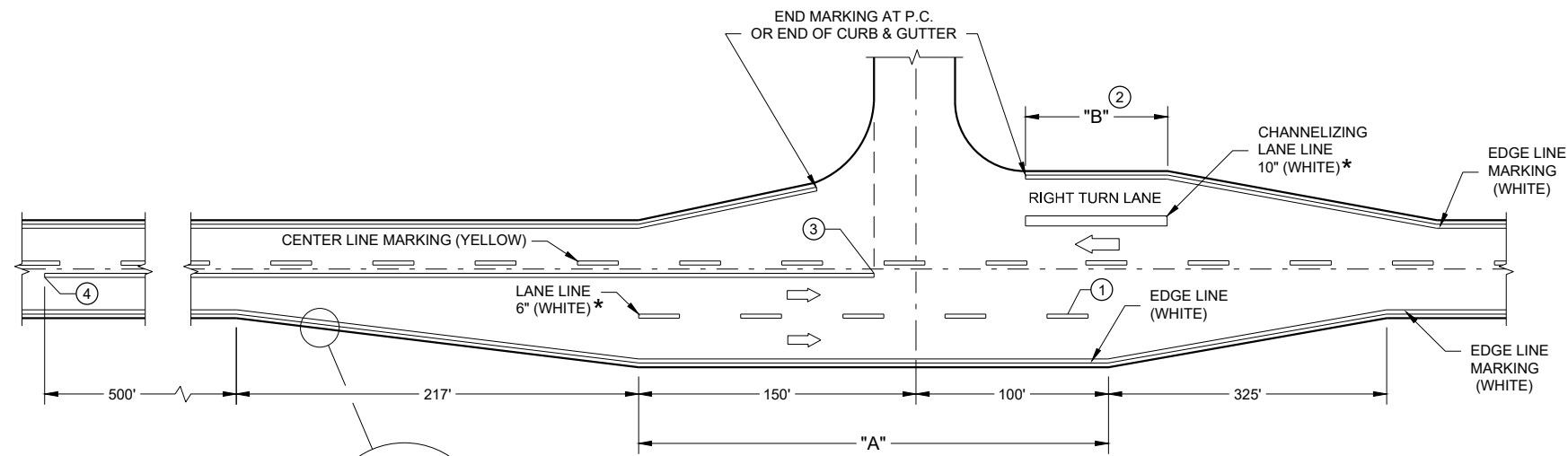
- ① WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.
- ② WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.
- ③ BARRIER LINE ENDS AT SIDE ROAD PAVEMENT / SURFACE EDGE EXTENSION.
- ④ BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.
- ⑤ WHEN DISTANCE "C" IS LESS THAN 4 FEET, OMIT DOTTED EXTENSION.
- ⑥ WHEN DISTANCE "D" IS LESS THAN 50 FEET, OMIT DOTTED EXTENSION.

LEGEND

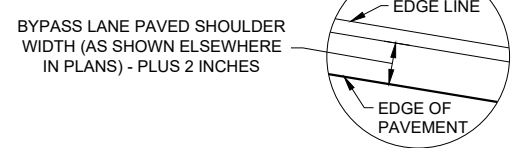
➔ DIRECTION OF TRAVEL



INTERSECTION ON OUTSIDE OF CURVE



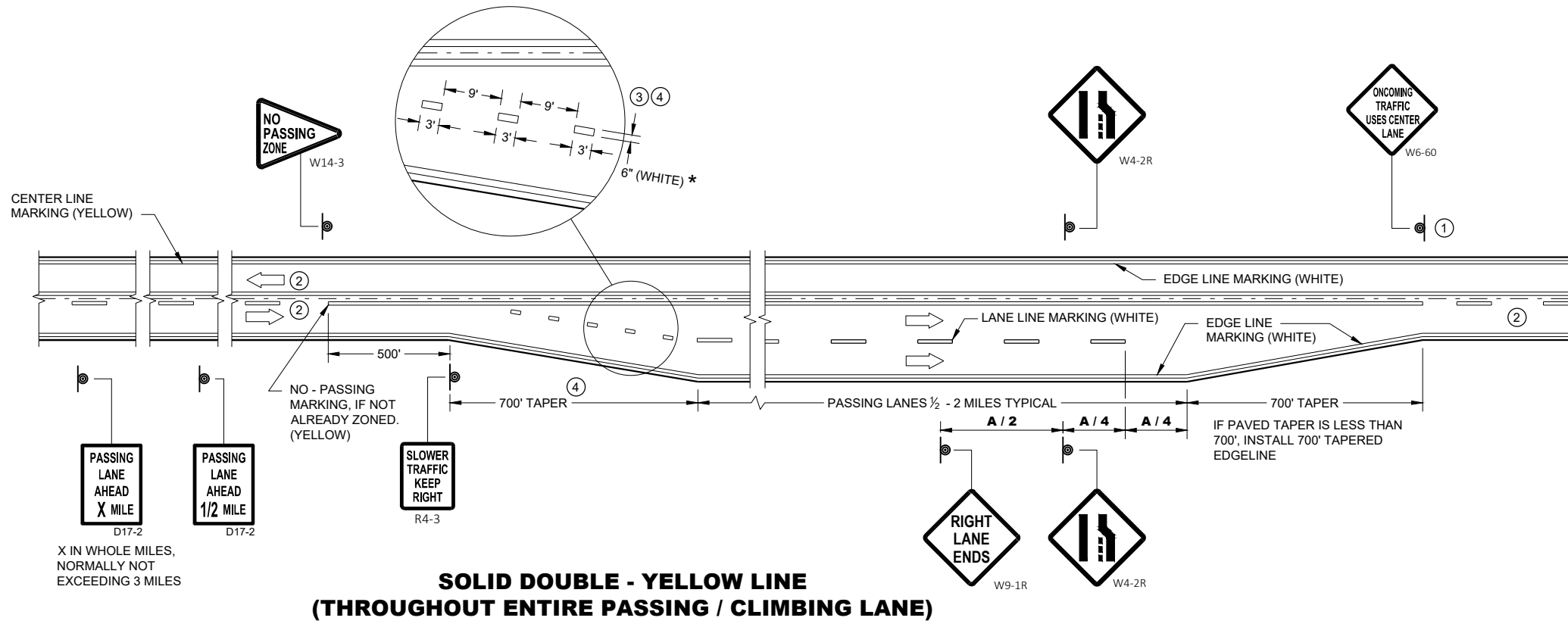
**MAJOR INTERSECTIONS
(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANE)**



BYPASS LANE PAVED SHOULDER WIDTH (AS SHOWN ELSEWHERE IN PLANS) - PLUS 2 INCHES

**PAVEMENT MARKING
(INTERSECTIONS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



GENERAL NOTES

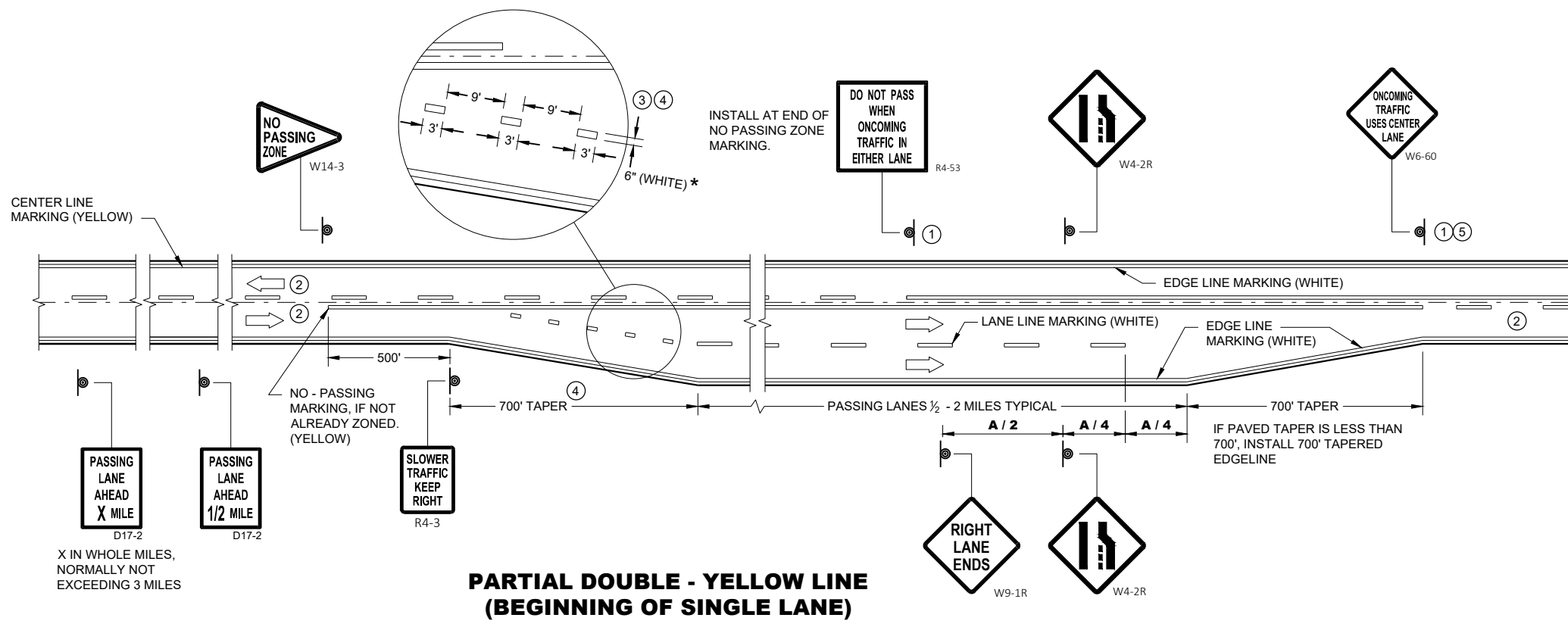
- SIGN SHALL BE REPEATED AT 1 MILE INCREMENTS OR AT THE DISCRETION OF THE REGIONAL TRAFFIC ENGINEER.
- THERE MAY BE SOLID YELLOW ON THE CENTERLINE DUE TO SIGHT CONDITIONS.
- THE TAPER LENGTH OF THE DOTTED LINE PAVEMENT MARKING SHALL BE 700 FEET, 3' LINE, 9' GAP, EXCEPT RETRACE THE EXISTING LINE - GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.
- WHEN THE ENTRANCE TAPER IS LESS THAN 700 FEET OR THE SHOULDER WIDTH IN THE PASSING / CLIMBING LANE IS LESS THAN THE ADJACENT HIGHWAY, DO NOT INSTALL DOTTED LINE PAVEMENT MARKING.
- REPEAT EVERY 1 MILE UP UNTIL R4-53.

ARROW SYMBOL (→) SHOWS DIRECTION OF TRAVEL

DISTANCE TABLE

POSTED OR 85th PERCENTILE SPEED	DISTANCE "A"
45	775
50	885
55	990

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



6

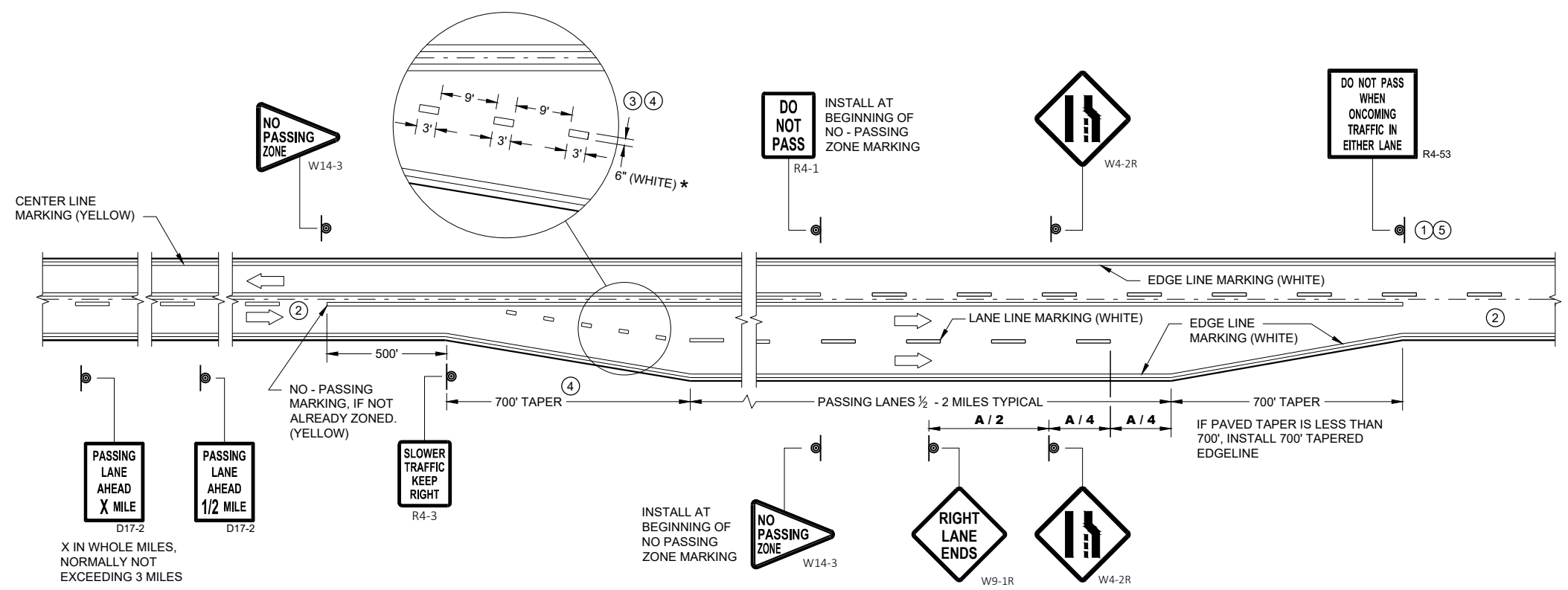
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SDD 15C35-06b

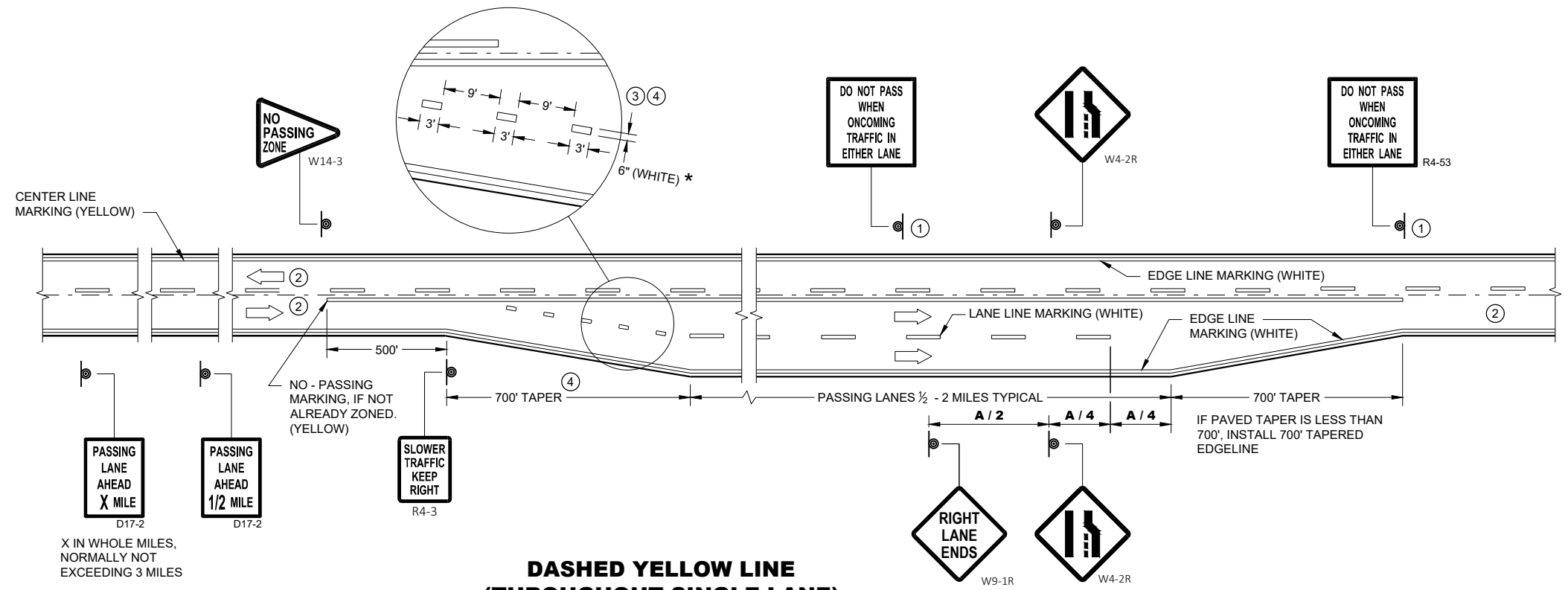
SDD 15C35-06b

**PAVEMENT MARKING & SIGNING
(CLIMBING LANE & PASSING LANE)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



**SOLID DOUBLE - YELLOW LINE
(END OF SINGLE LANE)**



**DASHED YELLOW LINE
(THROUGHOUT SINGLE LANE)**

GENERAL NOTES

- ① SIGN SHALL BE REPEATED AT 1 MILE INCREMENTS OR AT THE DISCRETION OF THE REGIONAL TRAFFIC ENGINEER.
- ② THERE MAY BE SOLID YELLOW ON THE CENTERLINE DUE TO SIGHT CONDITIONS.
- ③ THE TAPER LENGTH OF THE DOTTED LINE PAVEMENT MARKING SHALL BE 700 FEET, 3' LINE, 9' GAP, EXCEPT RETRACE THE EXISTING LINE - GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.
- ④ WHEN THE ENTRANCE TAPER IS LESS THAN 700 FEET OR THE SHOULDER WIDTH IN THE PASSING / CLIMBING LANE IS LESS THAN THE ADJACENT HIGHWAY, DO NOT INSTALL DOTTED LINE PAVEMENT MARKING.
- ⑤ REPEAT EVERY ONE MILE UP UNTIL NO PASSING ZONE.

ARROW SYMBOL () SHOWS DIRECTION OF TRAVEL

DISTANCE TABLE

POSTED OR 85th PERCENTILE SPEED	DISTANCE "A"
45	775
50	885
55	990

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

**PAVEMENT MARKING & SIGNING
(CLIMBING LANE & PASSING LANE)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
DATE May 2023 /S/ Jeannie Silver
STATE SIGNING AND MARKING ENGINEER

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 SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS.

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.

FOR A LANE CLOSURE THAT IS IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING LINE IF LANE CLOSURE IS TO BE IN PLACE 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.










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

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS

NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP OR INTERSECTION. THE LANE CLOSURE MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE ONE HALF THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.

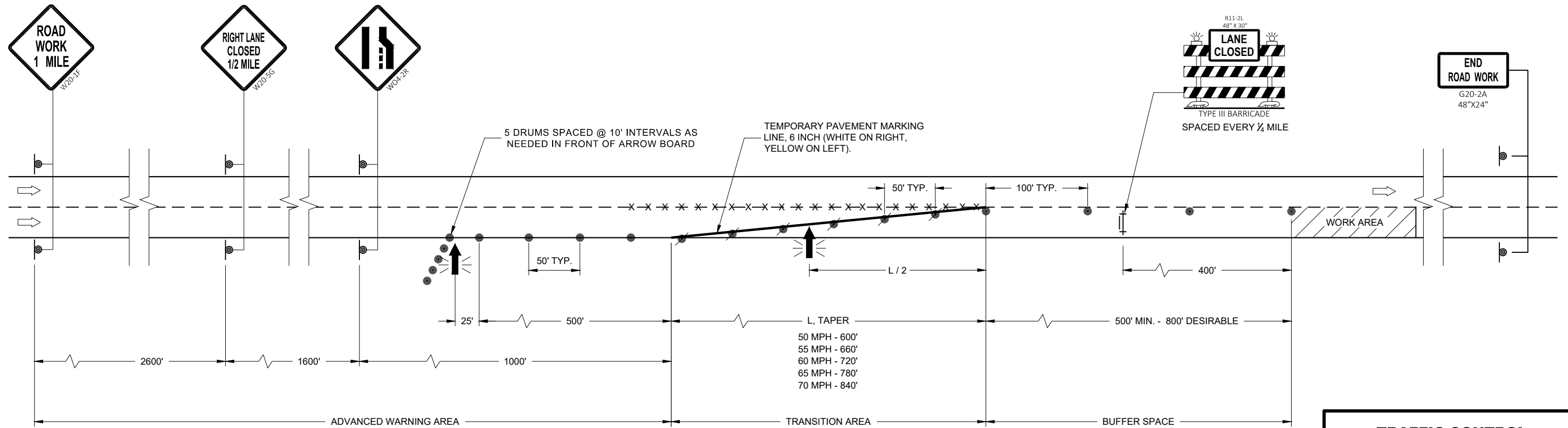
CONSIDER ROADWAY GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS.

LEGEND

-  SIGN ON PERMANENT SUPPORT
-  TRAFFIC CONTROL DRUM
-  TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
-  TYPE III BARRICADE WITH ATTACHED SIGN
-  TYPE "A" WARNING LIGHT (FLASHING)
-  REMOVING PAVEMENT MARKINGS
-  DIRECTION OF TRAFFIC
-  WORK AREA
-  FLASHING ARROW BOARD

6

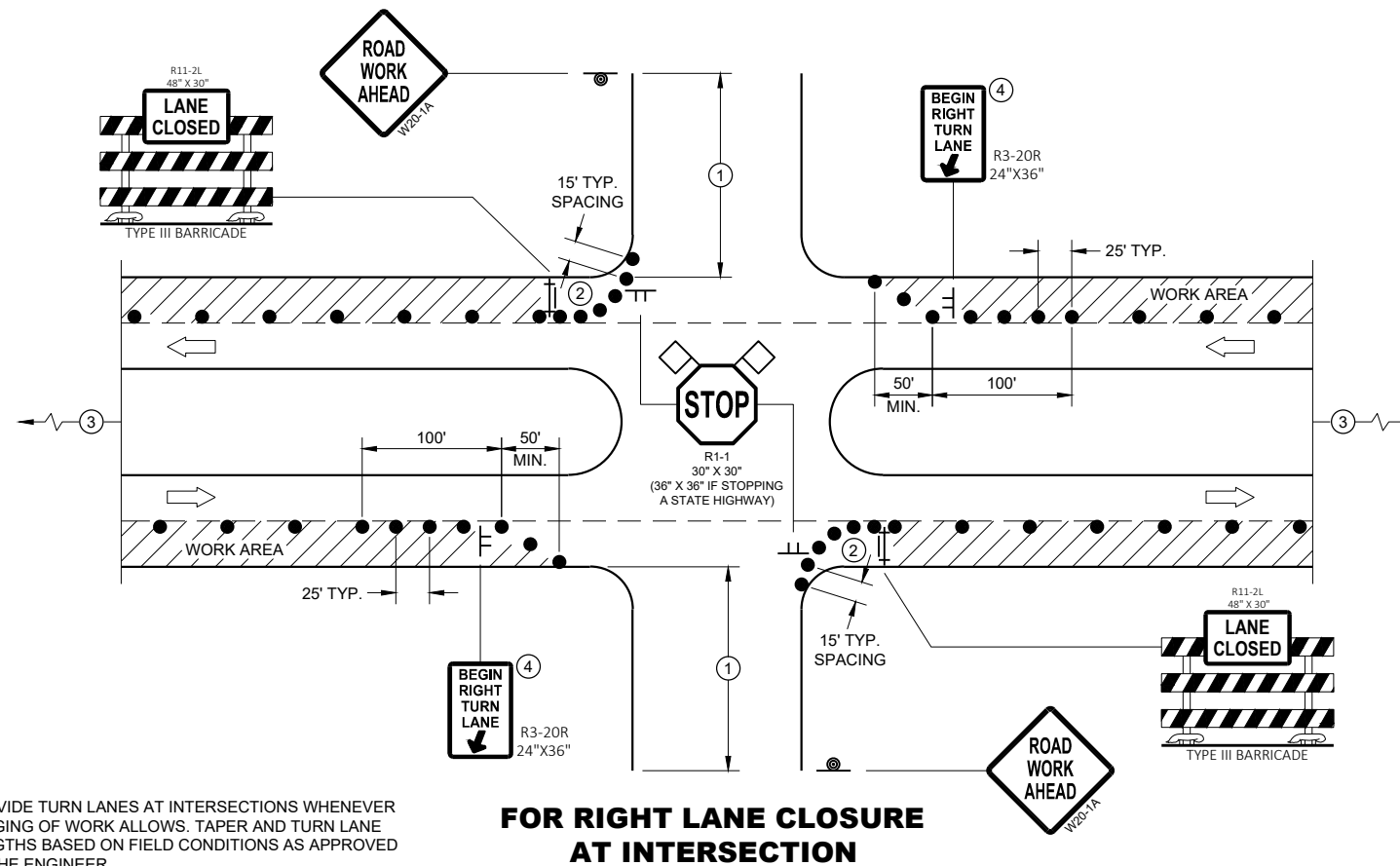
SDD 15D12 - 11a



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SDD 15D12 - 11a

TRAFFIC CONTROL LANE CLOSURE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2023 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	



PROVIDE TURN LANES AT INTERSECTIONS WHENEVER STAGING OF WORK ALLOWS. TAPER AND TURN LANE LENGTHS BASED ON FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

GENERAL NOTES

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" MAY BE USED IF APPROVED BY THE DISTRICT 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. NO WARNING LIGHTS SHALL BE WORKING ON COVERED OR "DOWNED" SIGNS.

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' DESIRABLE) DISTANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE

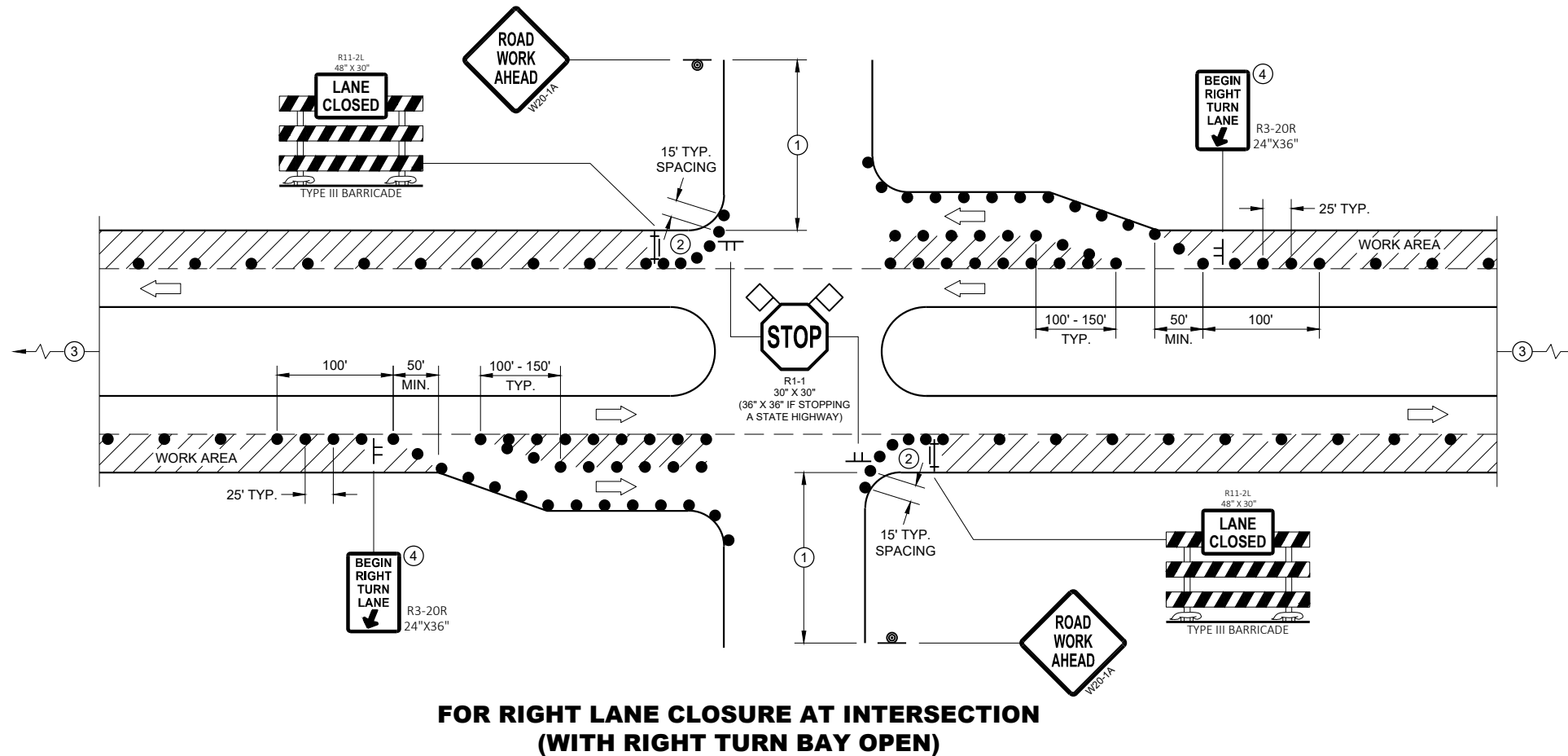
SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

SIGNS THAT WILL REMAIN IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

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

- ① 500' TYPICAL OR AT LAST INTERSECTION, WHICHEVER IS CLOSER.
350' IF 35 - 40 MPH.
200' IF 25 - 30 MPH.
- ② ALSO USE BARRICADE AND 15 FOOT TYPICAL DRUM SPACING AT COMMERCIAL DRIVEWAYS
- ③ SEE SEPARATE LANE CLOSURE DETAIL FOR ADDITIONAL TRAFFIC CONTROL.
- ④ MINIMUM MOUNTING HEIGHT OF 5 FEET FROM EDGE OF PAVEMENT (AT EDGE LINE LOCATION) TO BOTTOM OF SIGN.

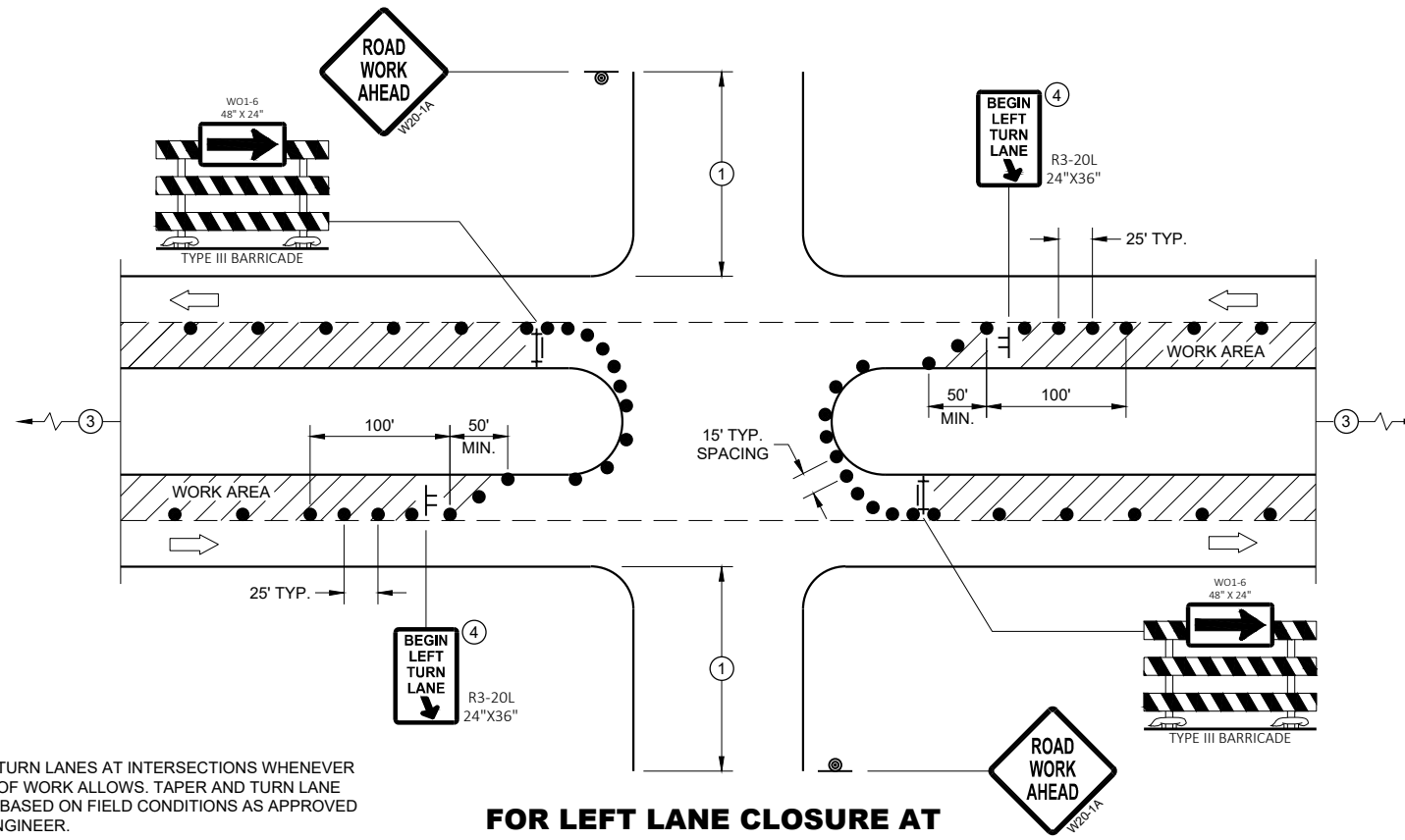


LEGEND

- SIGN ON TEMPORARY SUPPORT
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TYPE III BARRICADE WITH ATTACHED SIGN
- DIRECTION OF TRAFFIC
- FLAGS, 16" X 16" MIN., ORANGE
- WORK AREA

**TRAFFIC CONTROL,
INTERSECTION WITHIN SINGLE
RIGHT LANE CLOSURE**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



PROVIDE TURN LANES AT INTERSECTIONS WHENEVER STAGING OF WORK ALLOWS. TAPER AND TURN LANE LENGTHS BASED ON FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

FOR LEFT LANE CLOSURE AT INTERSECTION OR MEDIAN OPENING

GENERAL NOTES

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" MAY BE USED IF APPROVED BY THE DISTRICT 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. NO WARNING LIGHTS SHALL BE WORKING ON COVERED OR "DOWNED" SIGNS.

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' DESIRABLE) DISTANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE

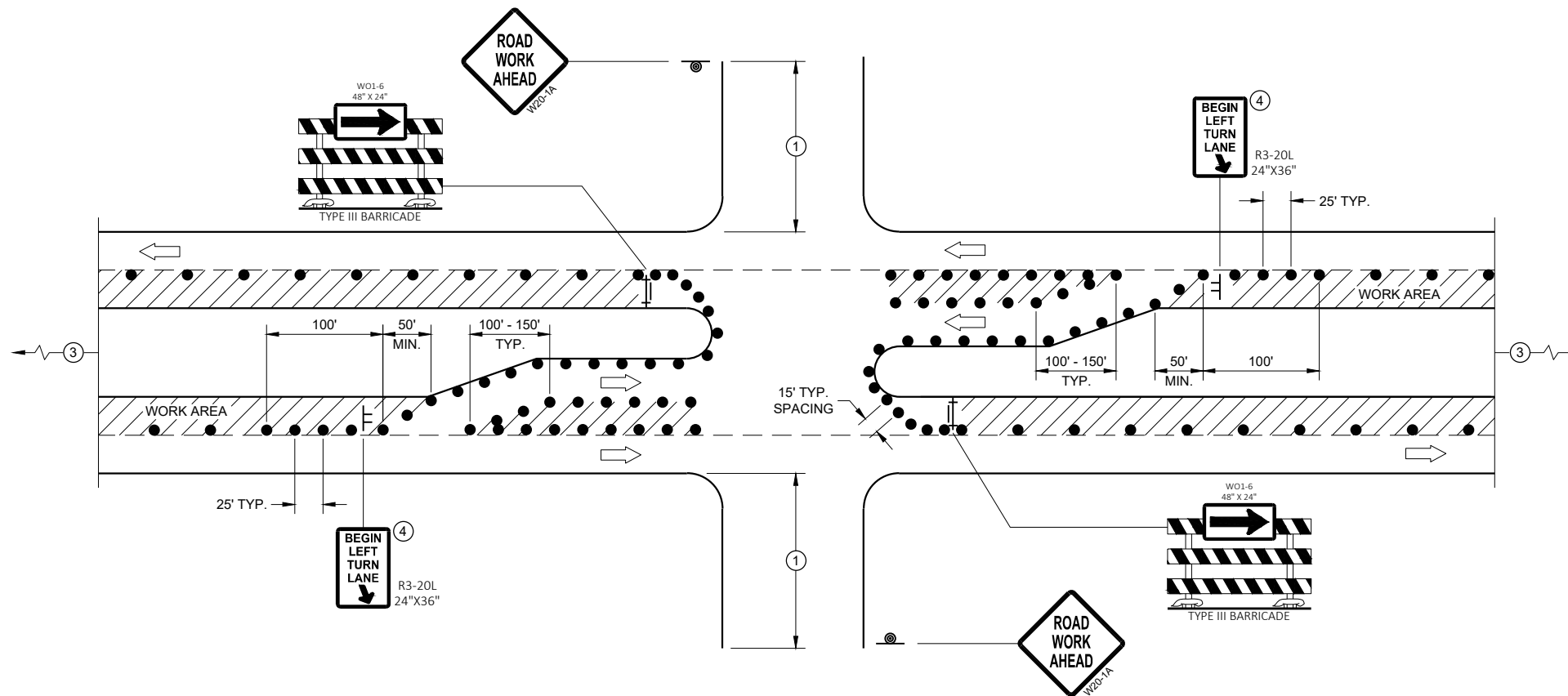
SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

SIGNS THAT WILL REMAIN IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

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

- ① 500' TYPICAL OR AT LAST INTERSECTION, WHICHEVER IS CLOSER.
350' IF 35 - 40 MPH.
200' IF 25 - 30 MPH.
- ② ALSO USE BARRICADE AND 15 FOOT TYPICAL DRUM SPACING AT COMMERCIAL DRIVEWAYS
- ③ SEE SEPARATE LANE CLOSURE DETAIL FOR ADDITIONAL TRAFFIC CONTROL.
- ④ MINIMUM MOUNTING HEIGHT OF 5 FEET FROM EDGE OF PAVEMENT (AT EDGE LINE LOCATION) TO BOTTOM OF SIGN.







FOR LEFT LANE CLOSURE AT INTERSECTION OR MEDIAN OPENING (WITH LEFT TURN BAY OPEN)

LEGEND

- SIGN ON TEMPORARY SUPPORT
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TYPE III BARRICADE WITH ATTACHED SIGN
- DIRECTION OF TRAFFIC
- FLAGS, 16" X 16" MIN., ORANGE
- WORK AREA

TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LEFT LANE CLOSURE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED August 2020 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	

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.

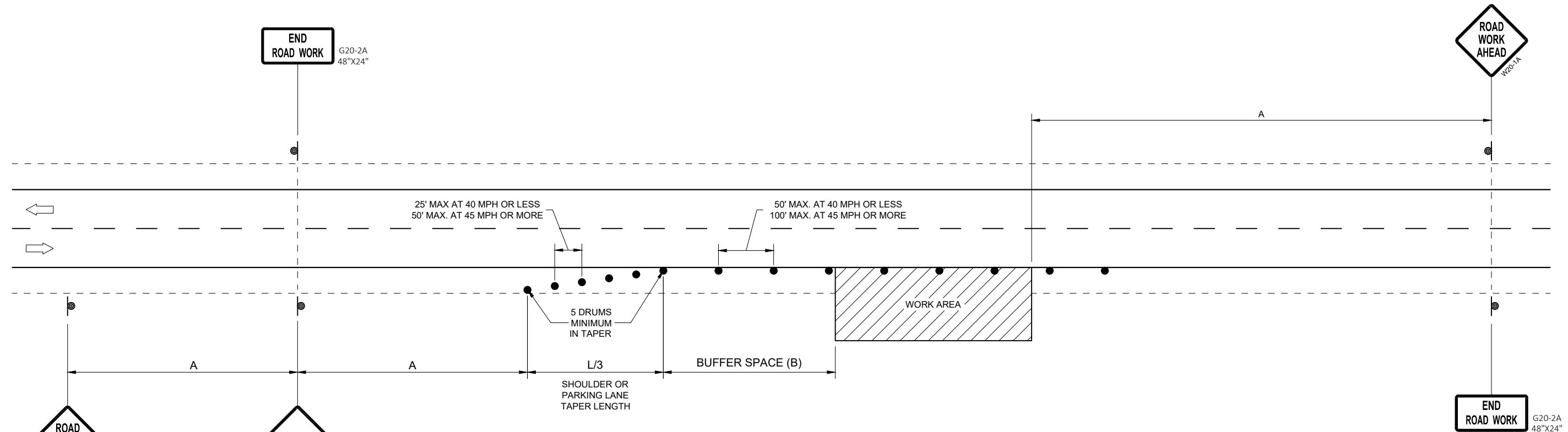
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

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.

6

6



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'

OR
IF TRAFFIC CONTROL DEVICES
ENCROACH ONTO TRAVELED WAY, USE



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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION











APPROVED
May 2020 /S/ Andrew Heidtke
DATE STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER

FHWA

SDD 15D28 - 04

SDD 15D28 - 04

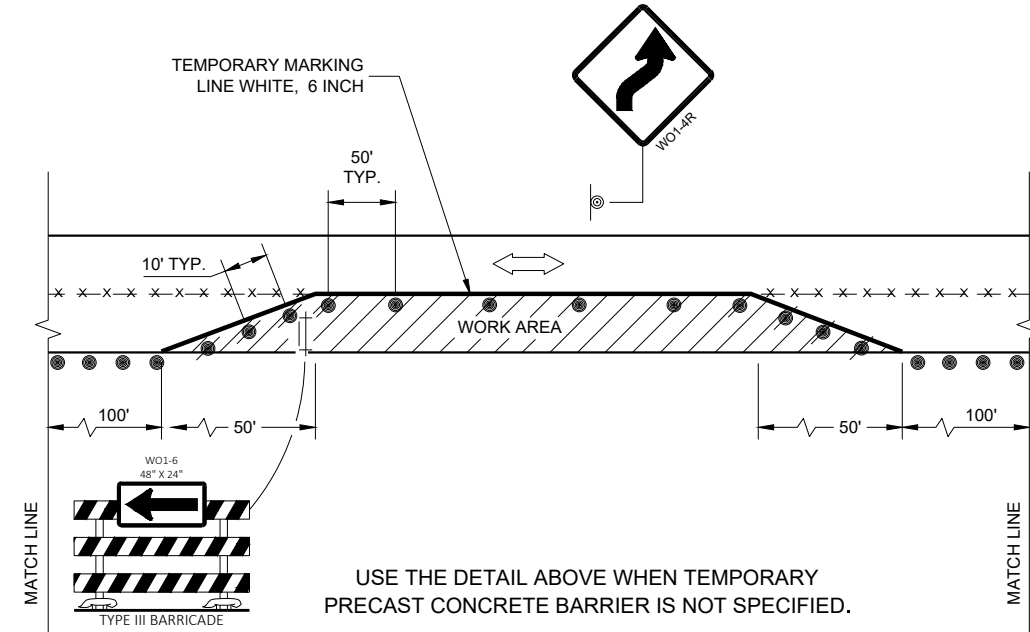
LEGEND

-  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

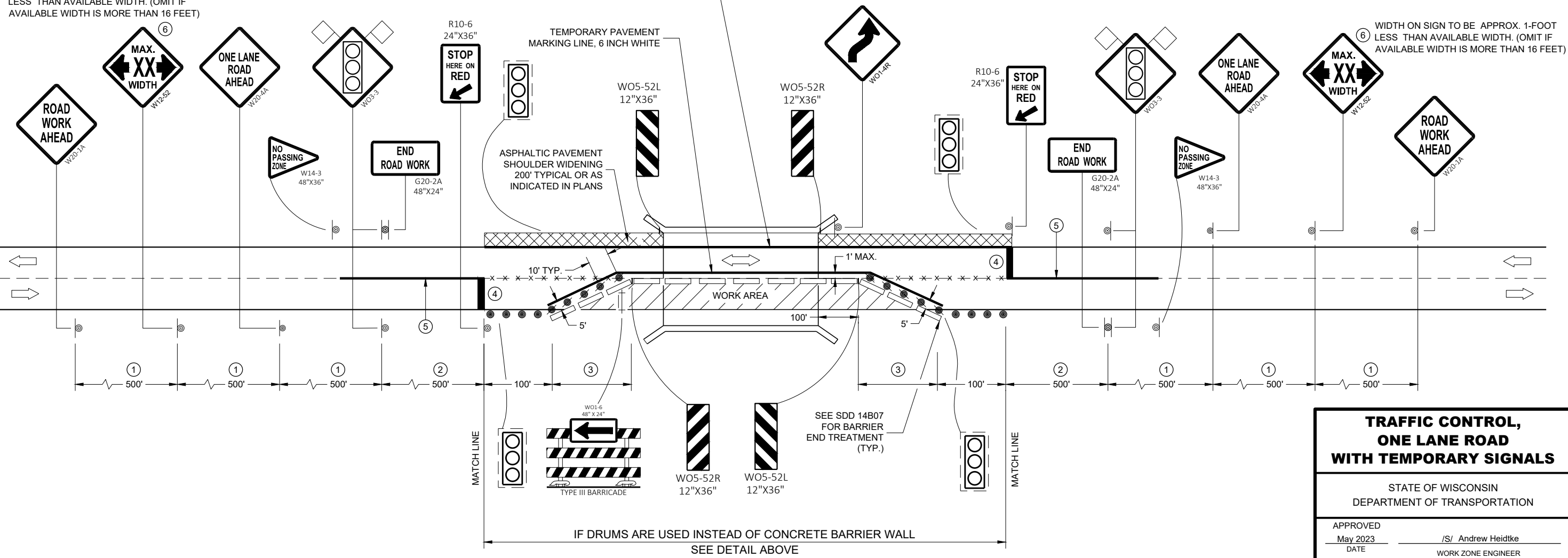
WIDTH ON SIGN TO BE APPROX. 1-FOOT LESS THAN AVAILABLE WIDTH. (OMIT IF AVAILABLE WIDTH IS MORE THAN 16 FEET)

GENERAL NOTES

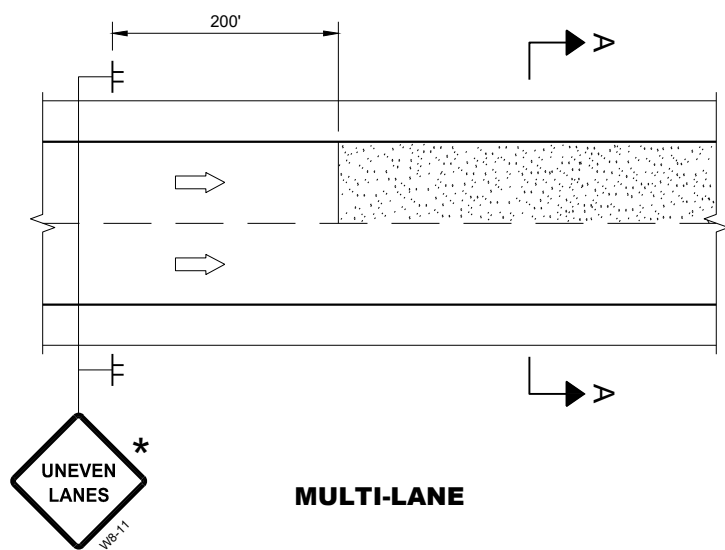
- THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
- THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING 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.



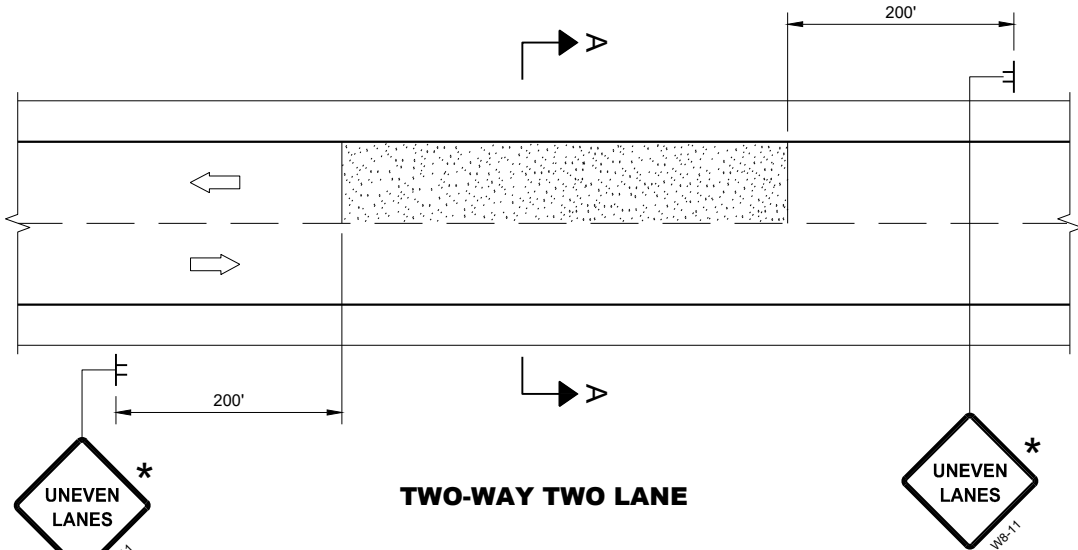
TEMPORARY PAVEMENT MARKING LINE, 6 INCH WHITE (STOPLINE TO STOPLINE). REMOVE EXISTING EDGELINE AND OFFSET THE TEMPORARY EDGELINE IF THE DISTANCE FROM THE EDGELINE TO CONCRETE BARRIER WALL IS LESS THAN 9 FEET.



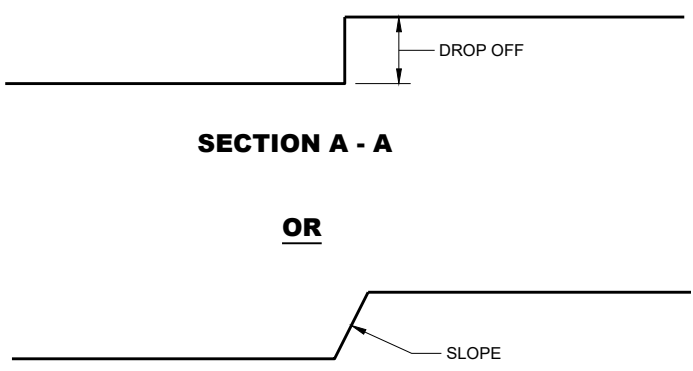
TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
APPROVED May 2023 DATE /S/ Andrew Heidtke WORK ZONE ENGINEER	



MULTI-LANE



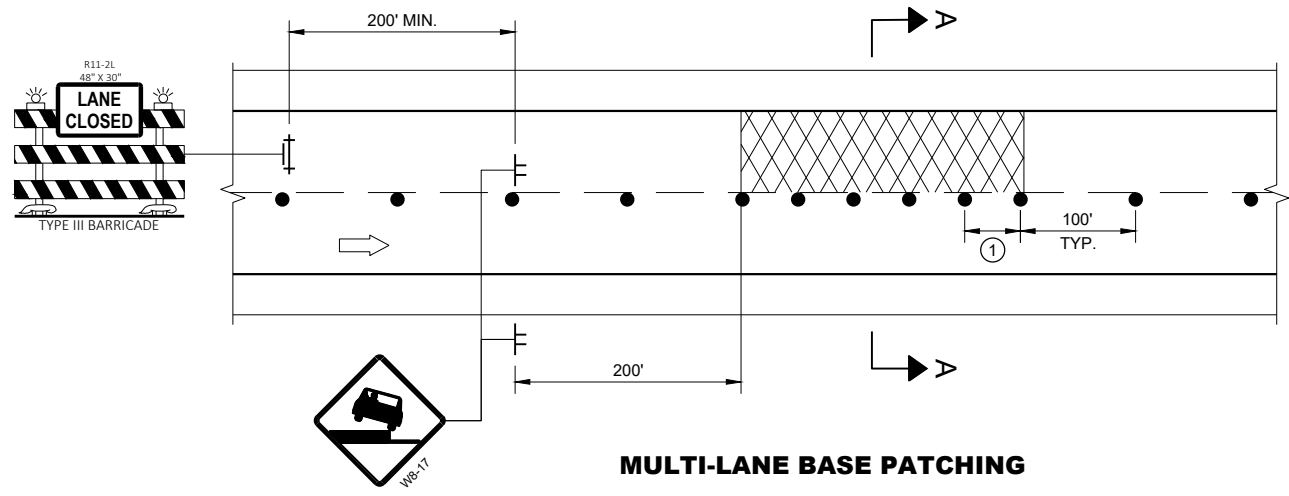
TWO-WAY TWO LANE



SECTION A - A

OR

SECTION A - A



MULTI-LANE BASE PATCHING

ADJACENT LANE DROP-OFFS

GENERAL NOTES

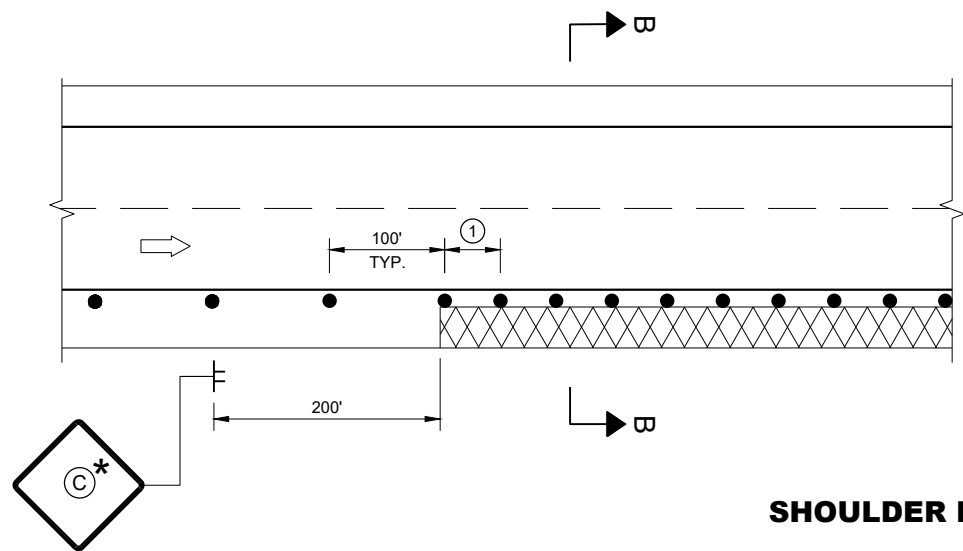
- FOR SPOT LOCATIONS USE ENGINEERING JUDGEMENT WHEN PLACING ADDITIONAL SIGNS.
- ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.
- "WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.
- WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.
- * IF THE DROP-OFF IS CONTINUOUS ALONG THE PROJECT, PLACE ADDITIONAL SIGNS EVERY 1 MILE AND AFTER EVERY ENTRANCE RAMP.
- ① USE CLOSER SPACING WHEN DELINEATING DROP-OFF.

LEGEND

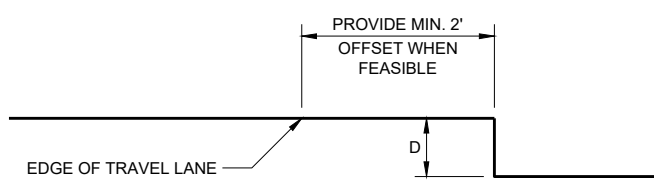
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC
- WORK AREA WITH DROP-OFF
- MILLED SURFACE

6

6



SHOULDER DROP-OFFS



SECTION B - B

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

SDD 15D39 - 02

SDD 15D39 - 02








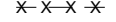

**TRAFFIC CONTROL,
DROP-OFF SIGNING**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

LEGEND

-  TYPE III BARRICADE WITH ATTACHED SIGN
-  SIGN ON PERMANENT SUPPORT
-  TRAFFIC CONTROL DRUM
-  TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
-  TYPE "A" WARNING LIGHT (FLASHING)
-  DIRECTION OF TRAFFIC
-  WORK AREA
-  REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)
-  CONCRETE BARRIER TEMPORARY PRECAST

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 SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET, (500 FEET DESIRABLE) DISTANCE TO EXISTING SIGNS.

THIS LANE CLOSURE IS TYPICAL FOR LANE SHIFT RIGHT - REVERSE FOR SHIFTING LEFT.

ALL SIGNS ARE 48"x48" 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 AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON ANY "COVERED" OR "DOWNED" SIGNS.

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARDS SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUMS.

FOR A LANE CLOSURE THAT IS IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

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

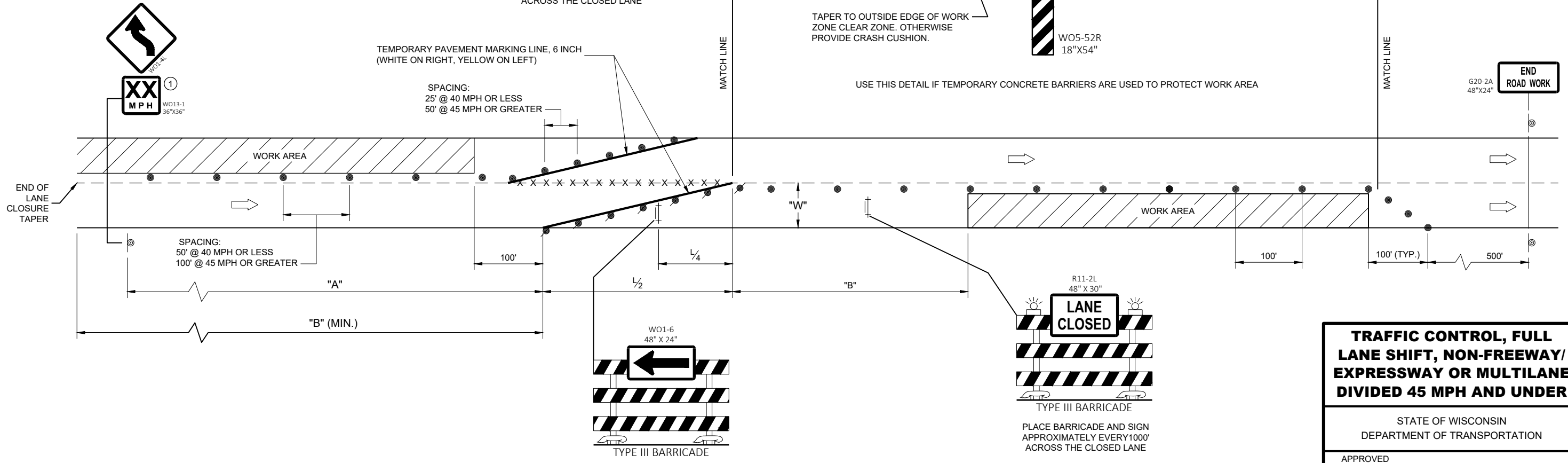
IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE SHIFT OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP. THE LANE SHIFT MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE 1/2 THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.

① USE ONLY IF DESIGN SPEED IS 10 MPH BELOW POSTED SPEED.

② BARRIER FLARE RATE: 6:1 @ 40 MPH OR LESS
8:1 @ 45 MPH OR GREATER

POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	SHIFTING TAPER $\frac{L}{2}$ W, LATERAL OFFSET (FT)					BUFFER SPACE (B) FEET
		10	11	12	13	14	
25	200	52	57	63	68	73	55
30	200	75	83	90	98	105	85
35	350	102	112	123	133	143	120
40	350	133	147	160	173	187	170
45	500	225	248	270	293	315	220



TRAFFIC CONTROL, FULL LANE SHIFT, NON-FREEWAY/ EXPRESSWAY OR MULTILANE DIVIDED 45 MPH AND UNDER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

6

6

SDD 15D40-05a

SDD 15D40-05a

GENERAL NOTES

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

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

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

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



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

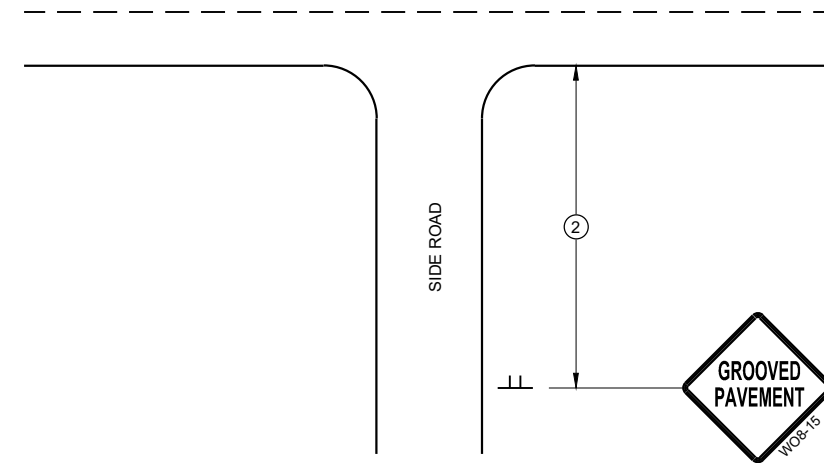
ALL SIGNS INAPPROPRIATE TO THE STATUS OF THE CONTROL ZONE, INCLUDING PRE-EXISTING SIGNS IN THE VICINITY, SHALL BE COVERED OR REMOVED AS DIRECTED BY THE ENGINEER.

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

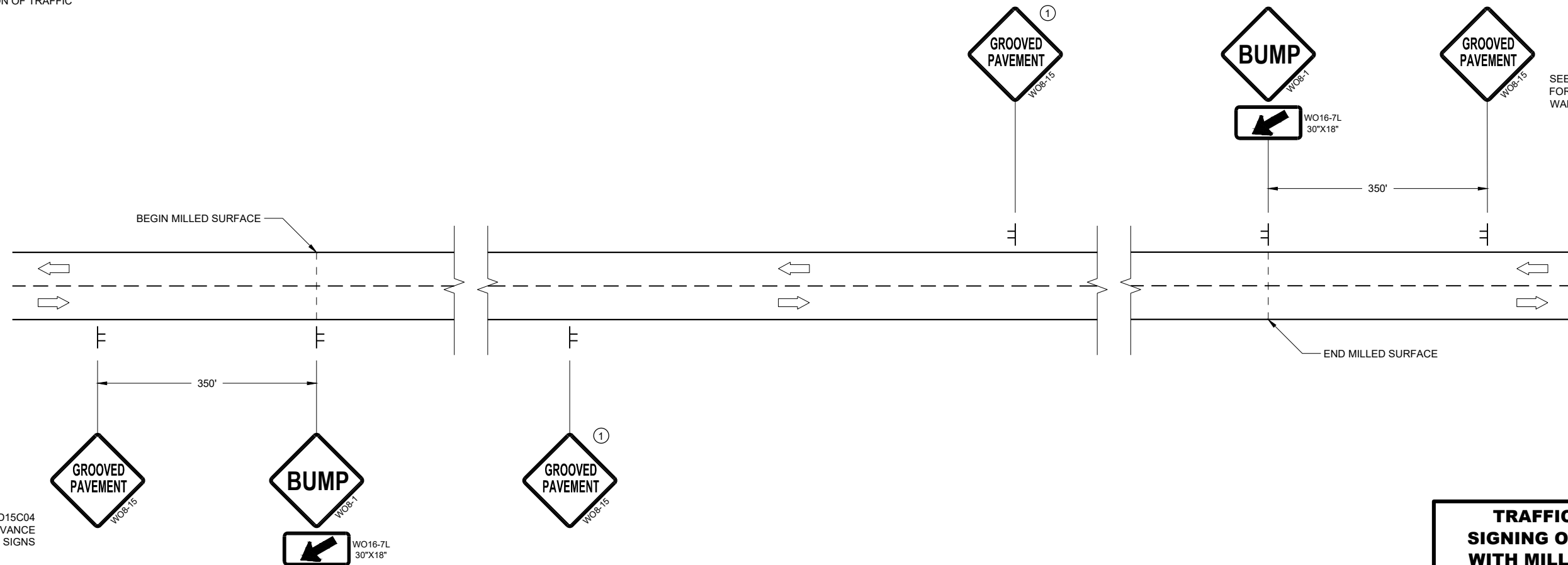
- ① PLACE SIGNS 350' IN ADVANCE OF MILLED SURFACES AND AT 1 MILE INTERVALS, OR AS DIRECTED BY THE ENGINEER.
- ② PLACE SIGN 200' MIN. FROM INTERSECTION AND 200' MIN. AFTER ADVANCE WARNING SIGN SHOWN IN SDD 15C04.

LEGEND

-  SIGN ON TEMPORARY SUPPORT
-  DIRECTION OF TRAFFIC



TYPICAL SIDE ROAD APPROACH SIGN DETAIL



DETAIL FOR SIGNING ON MILLED SURFACES

SEE SDD15C04 FOR ADVANCE WARNING SIGNS

SEE SDD15C04 FOR ADVANCE WARNING SIGNS

TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH MILLED SURFACES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

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.

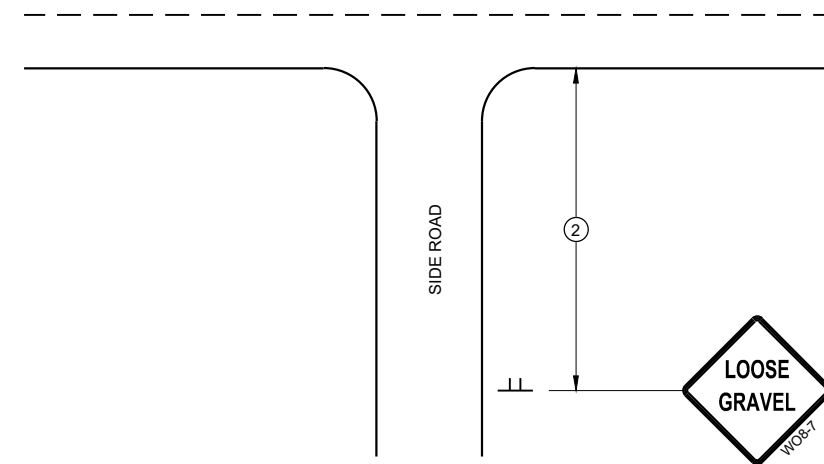
ALL SIGNS INAPPROPRIATE TO THE STATUS OF THE CONTROL ZONE, INCLUDING PRE-EXISTING SIGNS IN THE VICINITY, SHALL BE COVERED OR REMOVED AS DIRECTED BY THE ENGINEER.

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.

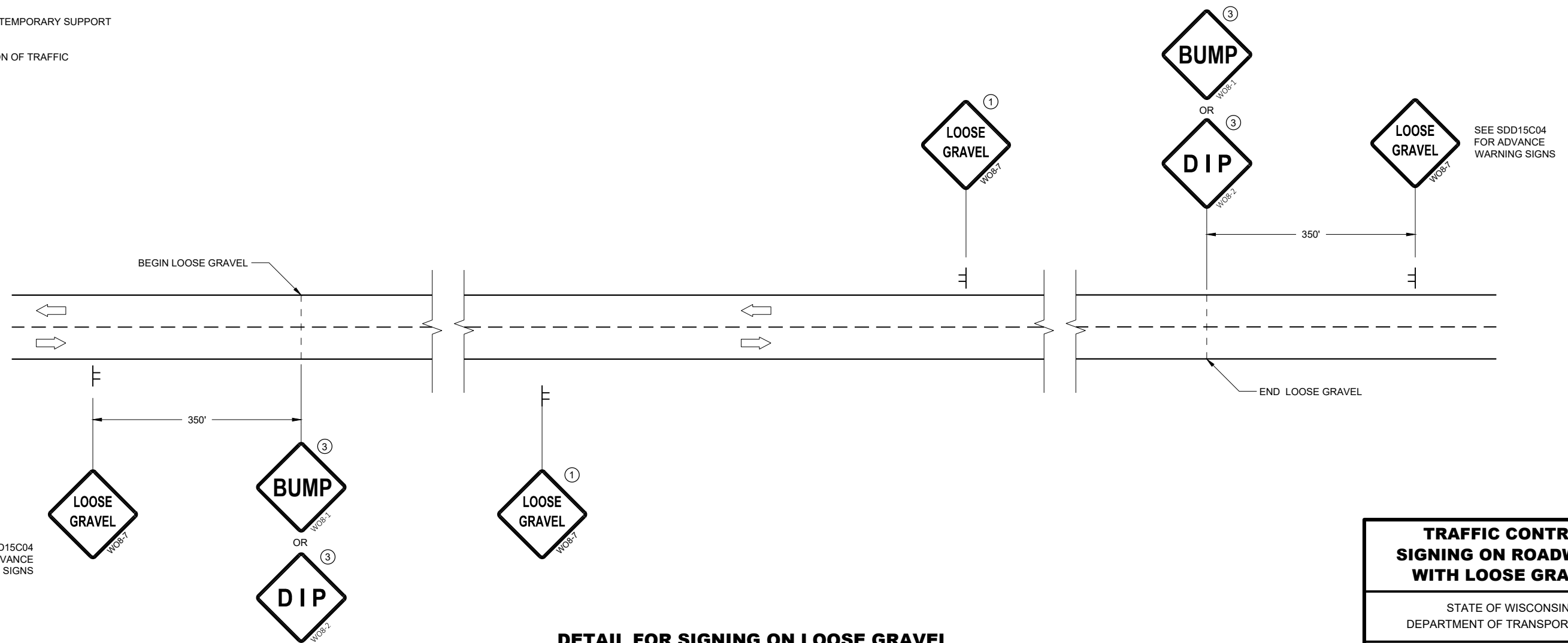
- ① PLACE SIGNS 350' IN ADVANCE OF CHIP SEALED OR LOOSE GRAVEL SURFACES AND AT 1 MILE INTERVALS, OR AS DIRECTED BY THE ENGINEER.
- ② PLACE SIGN 200' MIN. FROM INTERSECTION AND 200' MIN. AFTER ADVANCE WARNING SIGN SHOWN IN SDD 15C04.
- ③ ADD WO8-1 OR WO8-2 SIGN WHEN THE CONDITION IS PRESENT.

LEGEND

- ⊥ SIGN ON TEMPORARY SUPPORT
- ➡ DIRECTION OF TRAFFIC



TYPICAL SIDE ROAD APPROACH SIGN DETAIL



DETAIL FOR SIGNING ON LOOSE GRAVEL OR CHIP SEALED SURFACES

SEE SDD15C04 FOR ADVANCE WARNING SIGNS








TRAFFIC CONTROL SIGNING ON ROADWAYS WITH LOOSE GRAVEL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

LEGEND

-  EXISTING SIGN ON PERMANENT SUPPORT
-  NEW SIGN ON PERMANENT SUPPORT
-  TRAFFIC CONTROL DRUM
-  TYPE III BARRICADE WITH ATTACHED SIGN
-  TYPE "A" WARNING LIGHT (FLASHING)
-  DIRECTION OF TRAFFIC
-  WORK ZONE

GENERAL NOTES

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

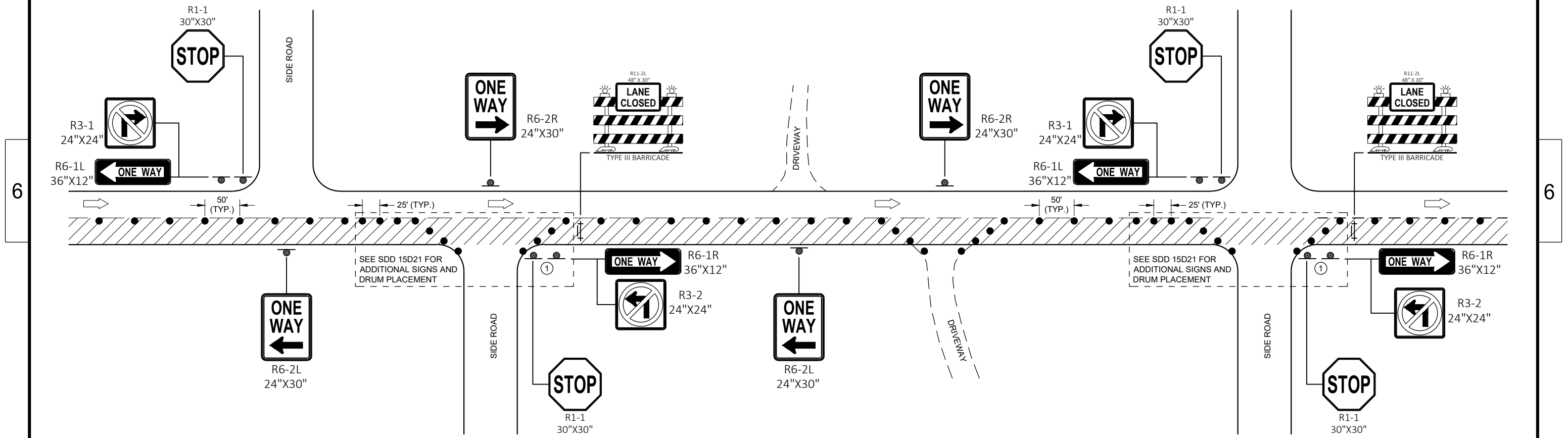
ALL SIGNS AND DEVICES SHALL BE IN CONFORMANCE WITH THE WISCONSIN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (WMUTCD). SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE WISDOT STANDARD SIGN PLATES.

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. NO WARNING LIGHTS SHALL BE WORKING ON COVERED OR "DOWNED" SIGNS.

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

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

① IF WORK OPERATIONS ALLOWS, MOVE R1-1, R6-1R, AND R3-2 CLOSER TO INTERSECTION.



**TRAFFIC CONTROL
ONE - WAY SIGNING**








**TRAFFIC CONTROL
ONE-WAY SIGNING**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
DATE: May 2020 /S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

LEGEND

-  TYPE III BARRICADE WITH ATTACHED SIGN
-  SIGN ON PERMANENT SUPPORT
-  TRAFFIC CONTROL DRUM
-  TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
-  TYPE "A" WARNING LIGHT (FLASHING)
-  DIRECTION OF TRAFFIC
-  WORK AREA

POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	SHIFTING TAPER $L/2$					
		W, LATERAL OFFSET (FT)					
		3	4	5	6	7	8
25	200	10	14	17	21	24	28
30	200	15	20	25	30	35	40
35	350	20	27	34	40	47	54
40	350	26	35	44	53	62	70
45	500	45	59	74	89	104	119
50	500	50	66	83	99	116	132
55	500	54	73	91	109	127	145

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.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36"x36" SIGNS MAY BE USED IF APPROVED BY THE REGIONAL TRAFFIC UNIT.

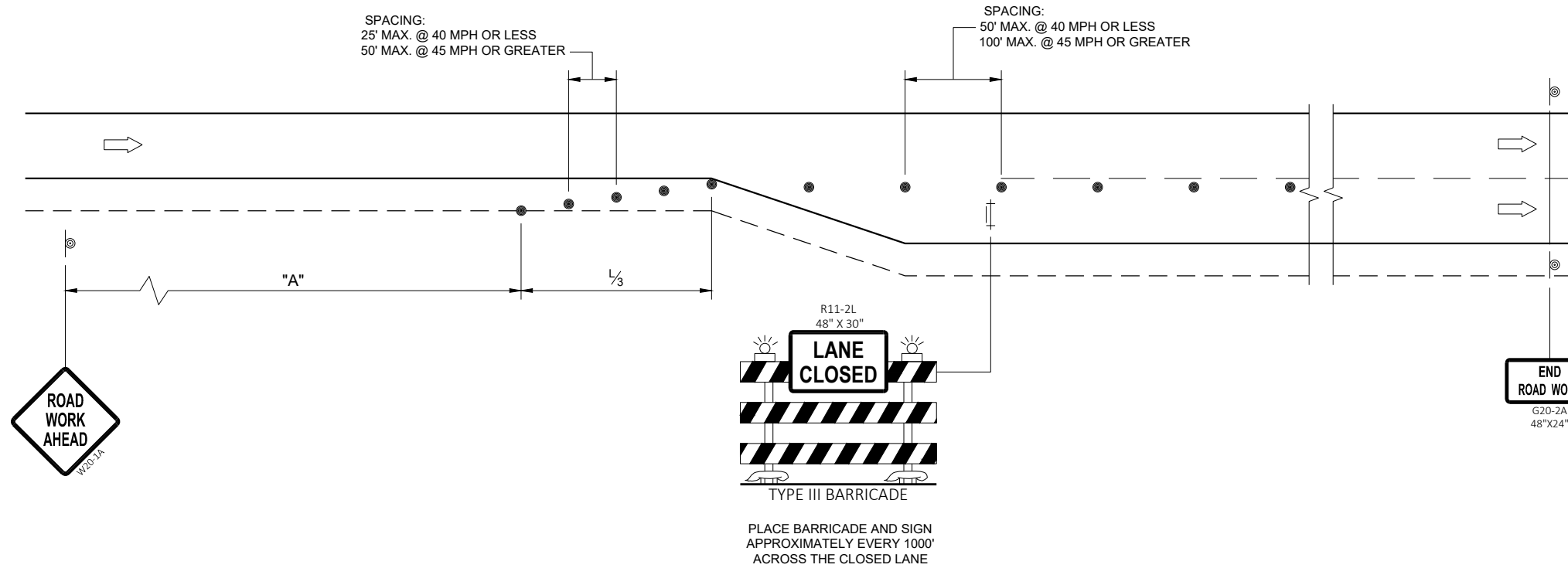
"WO" IS THE SAME AS "W" EXCEPT THE BACKGROUND IS ORANGE.

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

W20-1 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 WORK IS LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS.



6

6

SDD 15D50-03a

SDD 15D50-03a





**TRAFFIC CONTROL
ADDED LANE CLOSURE
WITHOUT LANE SHIFT**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

LEGEND

- V1 WORK VEHICLE
- V2 SHADOW VEHICLE
-  TRUCK MOUNTED ATTENUATOR (TMA)
-  FLASHING ARROW PANEL (CAUTION)
-  WORK AREA
-  DIRECTION OF TRAFFIC

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

GENERAL NOTES

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.

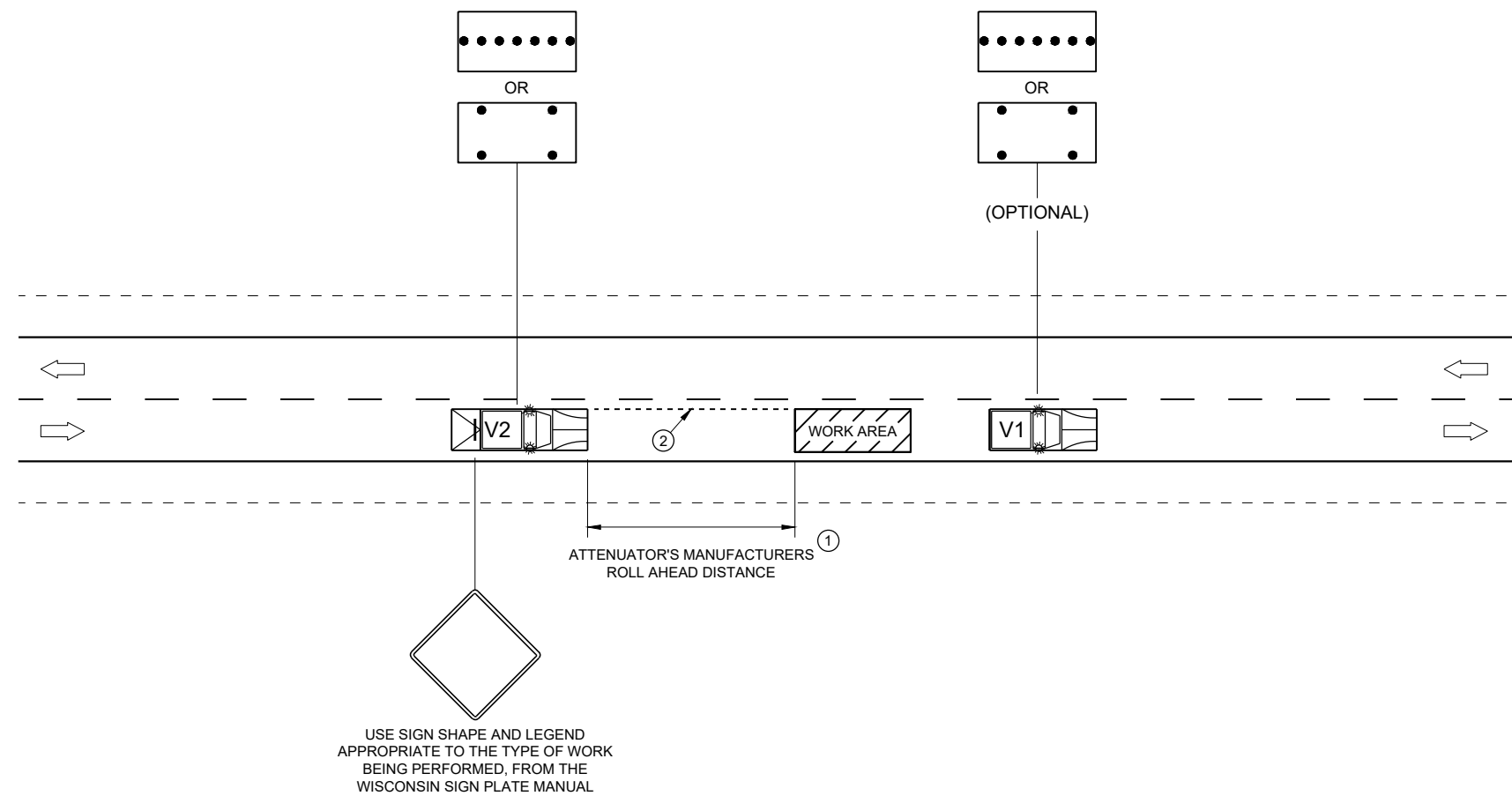
MOBILE IS WORK THAT MOVES CONTINUOUSLY OR MOVES AT LEAST THE DECISION SIGHT DISTANCE EVERY 15 MINUTES.

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

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

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

- ① DISTANCE BETWEEN VEHICLES MAY INCREASE FROM THE ATTENUATOR'S ROLL AHEAD BASED ON TERRAIN, SIGHT DISTANCE, AND OTHER FACTORS. WHENEVER ADEQUATE STOPPING SIGHT DISTANCE EXISTS TO THE REAR, SHADOW VEHICLES SHOULD MAINTAIN THE MINIMUM DISTANCE FROM THE WORK VEHICLE AND PROCEED AT THE SAME SPEED AS THE WORK VEHICLE. SHADOW VEHICLES SHOULD SLOW DOWN IN ADVANCE OF VERTICAL OR HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.
- ② ALIGN LEFT SIDE OF SHADOW VEHICLE WITH EDGE OF WORK AREA.



6

6

SDD 15D51 - 01

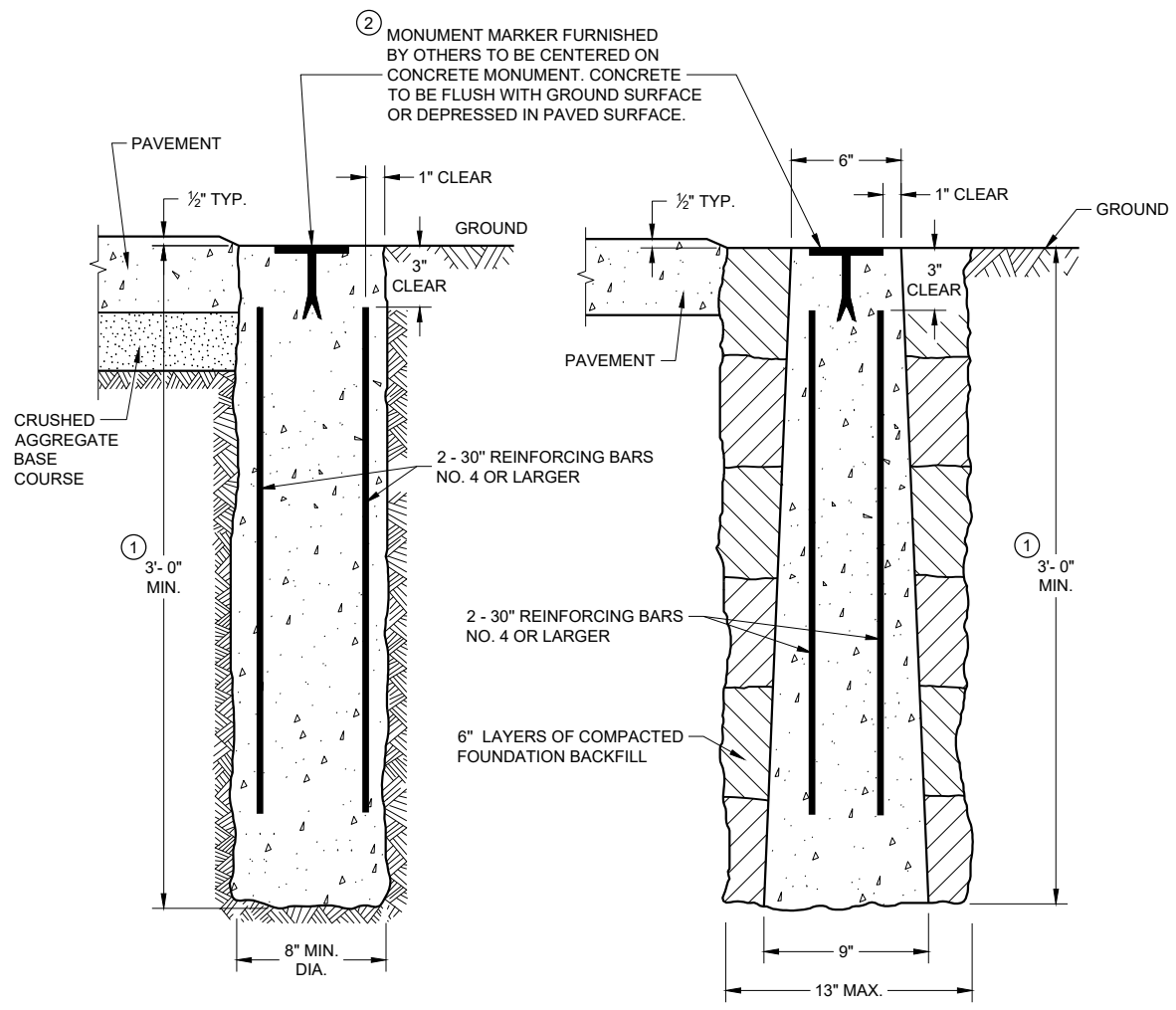
SDD 15D51 - 01

**TRAFFIC CONTROL,
MOBILE OPERATIONS ON
AN UNDIVIDED ROADWAY**

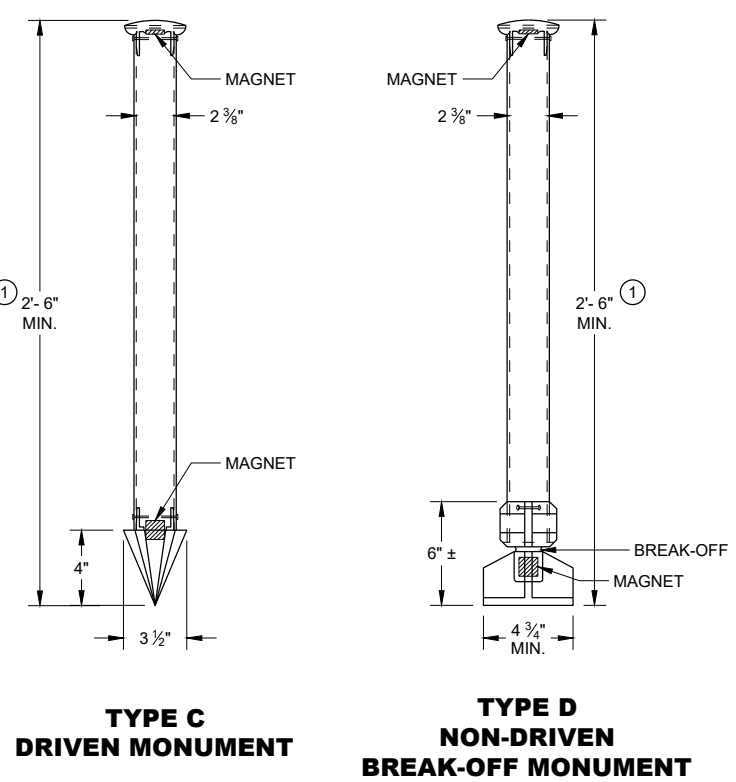
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2021 /S/ Andrew Heidtke
DATE STATEWIDE WORK ZONE TRAFFIC
SAFETY ENGINEER

FHWA



**CAST-IN-PLACE
CONCRETE MONUMENTS
TYPE A**



**TYPE C
DRIVEN MONUMENT**
**TYPE D
NON-DRIVEN
BREAK-OFF MONUMENT**
**ALUMINUM MONUMENTS
(INCLUDES MARKER)**

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.

DETAILED DRAWINGS OF PROPOSED ALTERNATE DESIGNS FOR METAL MONUMENTS OR MONUMENT COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

PERMANENT MAGNETS SHALL BE INSERTED NEAR THE TOP AND BOTTOM OF ALL ALUMINUM MONUMENTS SO THE MONUMENT CAN EASILY BE DETECTED BY A METAL DETECTOR.

THE CAST IRON MONUMENT COVER SHALL BE A "NON-ROCKING" TYPE. ADJUSTMENT OF THE COVER TO GRADE MAY BE ACCOMPLISHED BY THE USE OF MORTAR AND BRICK, OR BY EITHER PRECAST OR CAST-IN-PLACE REINFORCED CONCRETE GRADE RINGS.

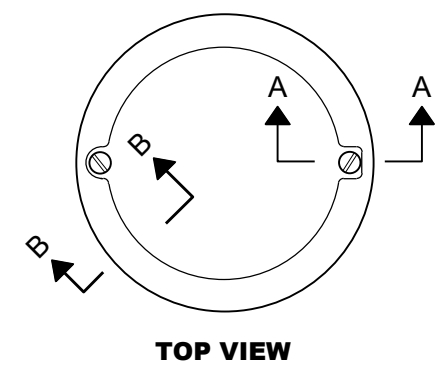
MONUMENTS SHALL BE LOCATED AND PLACED AT THE DIRECTION OF THE ENGINEER.

ALUMINUM MONUMENTS AND MONUMENT COVERS SHALL BE MADE FROM AN ALUMINUM AND MAGNESIUM ALLOY AS DETERMINED BY THE MANUFACTURER.

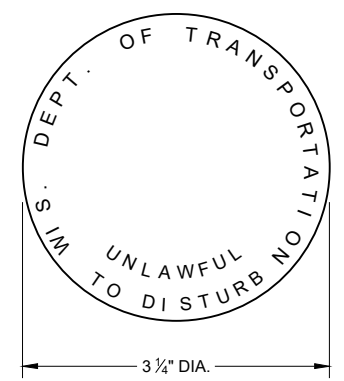
THE MONUMENT COVERS DETAILED ON THIS DRAWING ARE NOT EQUAL ALTERNATES. MONUMENT COVERS SHALL BE CAST IRON UNLESS ALUMINUM IS SPECIFIED ELSEWHERE IN THE CONTRACT.

MONUMENT SHALL BE CAST-IN-PLACE CONCRETE UNLESS PRECAST CONCRETE OR ALUMINUM MONUMENTS ARE SPECIFIED IN THE CONTRACT OR PERMITTED BY THE ENGINEER.

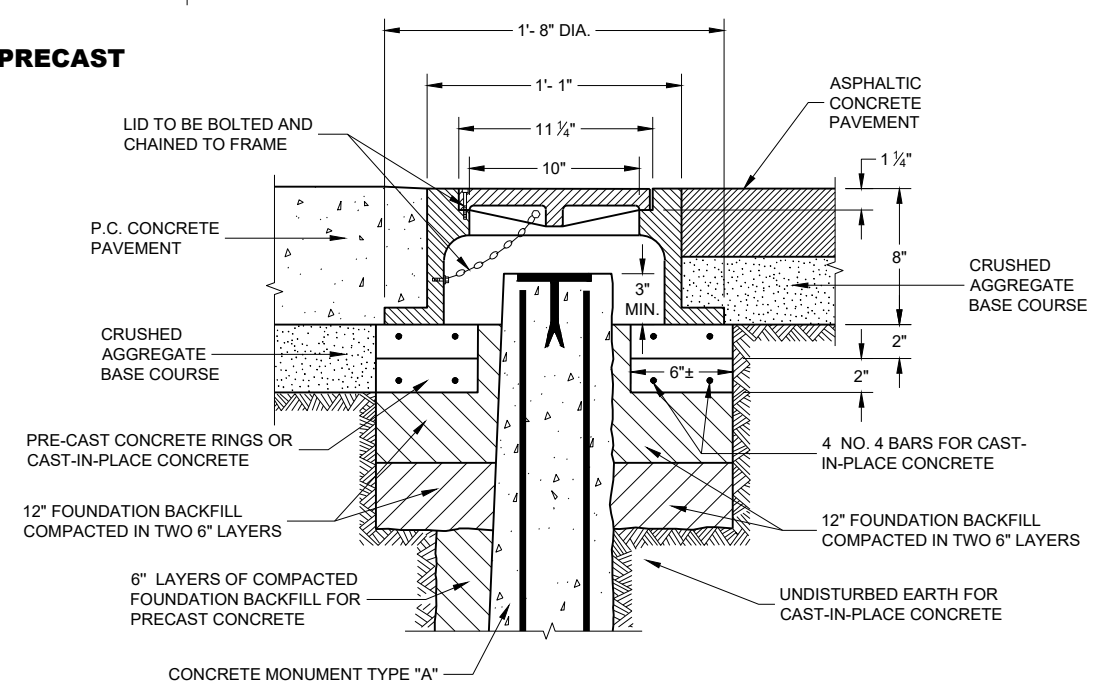
- ① MINIMUM LENGTH SHALL BE 4'-0" FOR MONUMENTS INSTALLED IN PAVED AREAS.
- ② AN OFFICIAL COUNTY MONUMENT MARKER SUPPLIED BY A COUNTY MAY BE REQUIRED FOR SOME SECTION CORNERS AND WITNESS MONUMENTS INSTEAD OF THIS WISDOT MARKER.



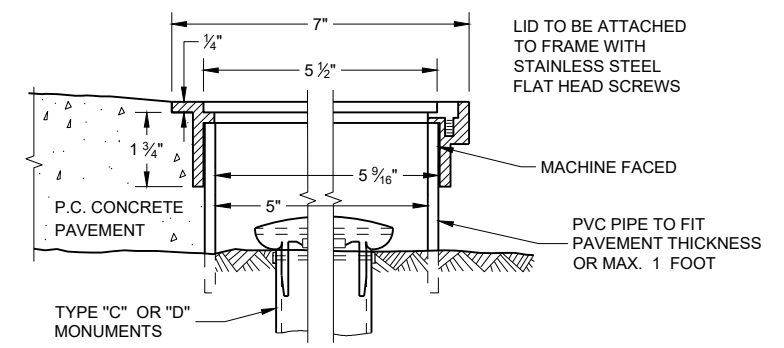
TOP VIEW



② **WIS DOT MONUMENT MARKER LOGO**
FOR TYPES "A", "C" & "D"



CAST IRON MONUMENT COVER
(APPROXIMATE WEIGHT 95 LBS)

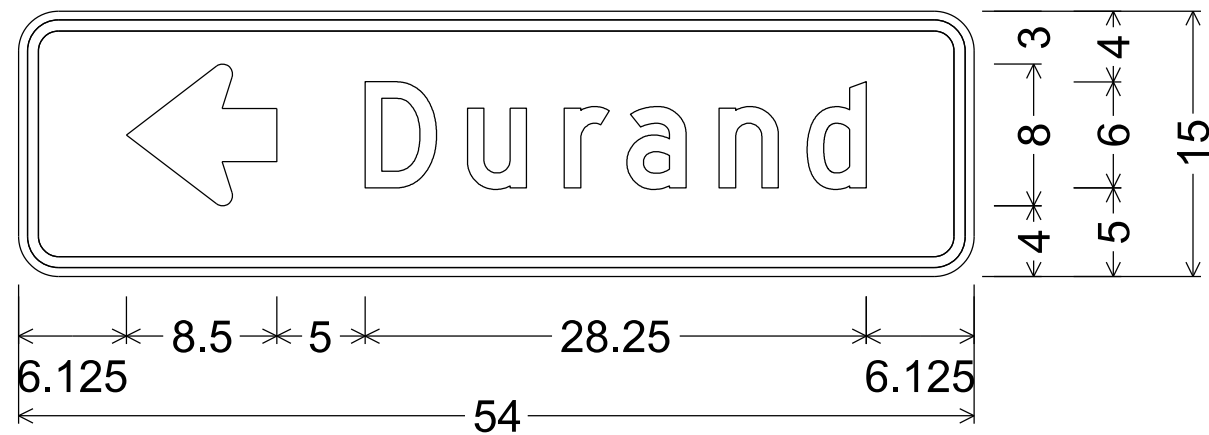


**SECTION B-B SECTION A-A
ALUMINUM MONUMENT COVER**
(APPROXIMATE WEIGHT 2 LBS)
(FOR CONCRETE PAVEMENT ONLY)

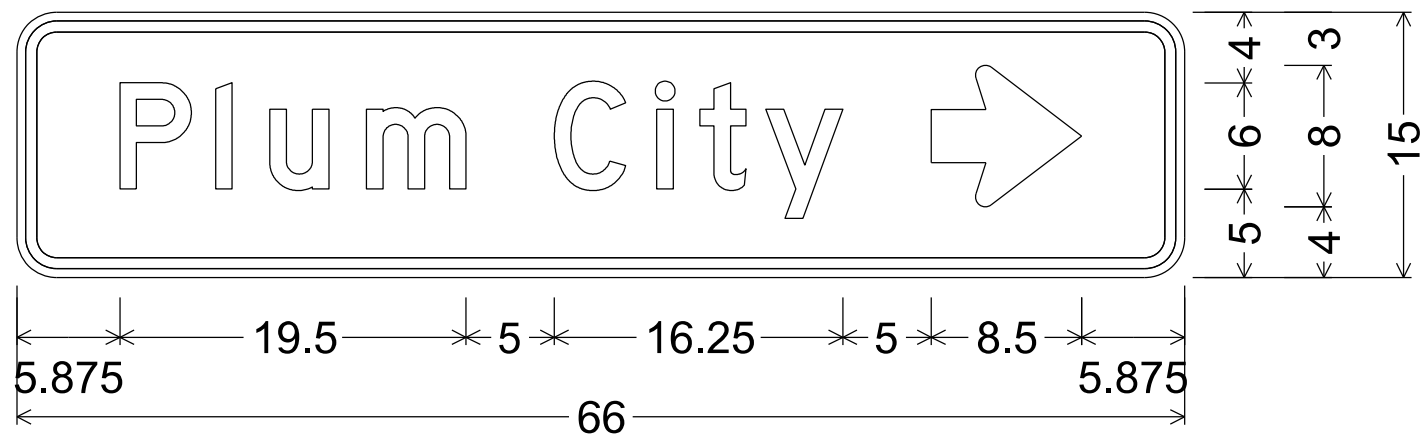
LANDMARK REFERENCE MONUMENTS AND COVERS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED March 2018 DATE	/S/ Raymond A. Kumapayil CHIEF SURVEYING AND MAPPING ENGINEER
FHWA	

NOTES

- 1. Fixed Message Signs Type II - Type F Reflective
- 2. Color:
 - Background - Orange
 - Message - Black
- 3. Message Series - D



D1-1; 2.250" Radius, 0.625" Border, 0.500" Indent



D1-1; 2.250" Radius, 0.625" Border, 0.500" Indent

7

7

NOTE

SEE S.D.D. "MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL" ROADWAY PLANS FOR ADDITIONAL DETAILS.

DESIGN DATA

LIVE LOAD:
 DESIGN LOADING: N/A
 INVENTORY RATING FACTOR: N/A
 OPERATING RATING FACTOR: N/A
 EARTH LOAD:
 EXISTING FILL HEIGHT OF 4'-0"±

MATERIAL PROPERTIES:

CONCRETE MASONRY:
 CULVERTS _____ $f'_c = 3,500$ P.S.I.
 BAR STEEL REINFORCEMENT:
 GRADE 60 _____ $f_y = 60,000$ P.S.I.

GENERAL NOTES

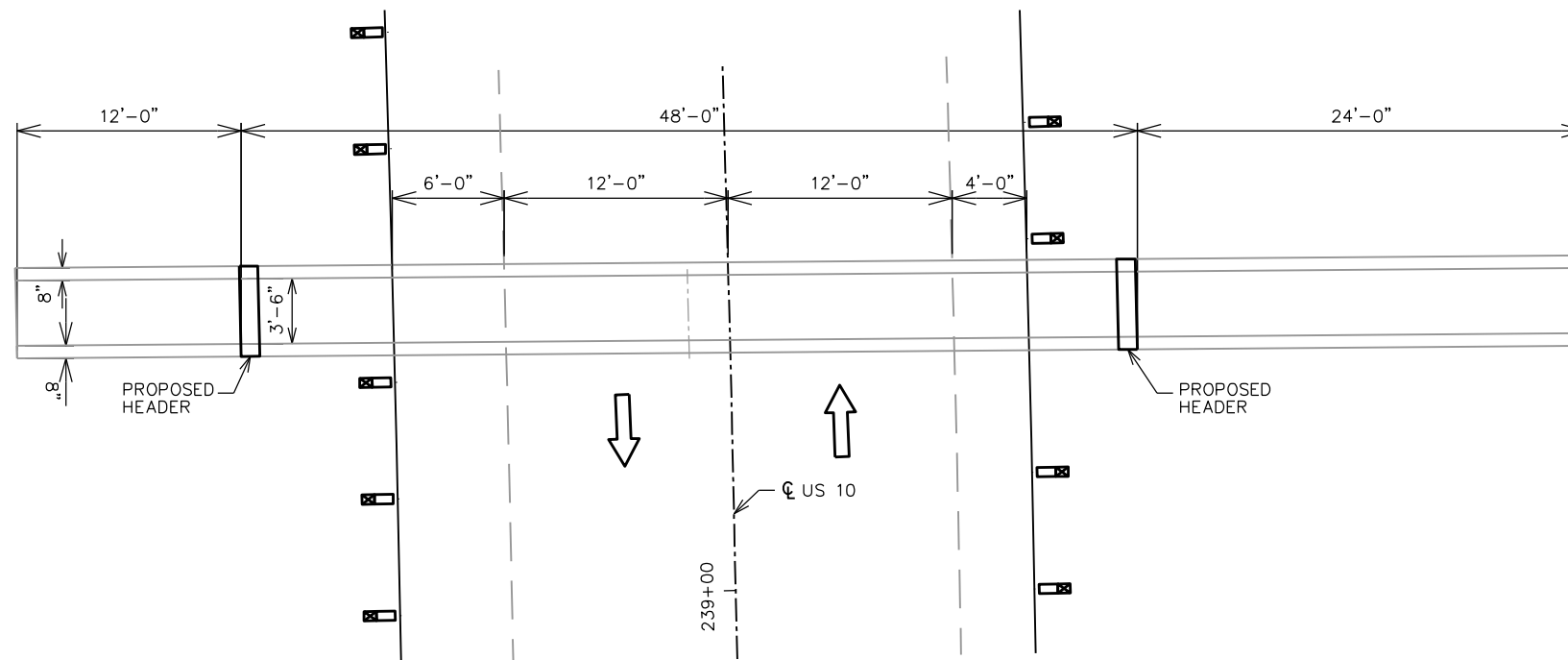
DRAWINGS SHALL NOT BE SCALED.
 BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.
 THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.
 BEVEL EXPOSED EDGES OF CONCRETE 3/4" UNLESS OTHERWISE NOTED.

TRAFFIC DATA

ADT (2024) = 3,910
 RDS = 60 M.P.H.

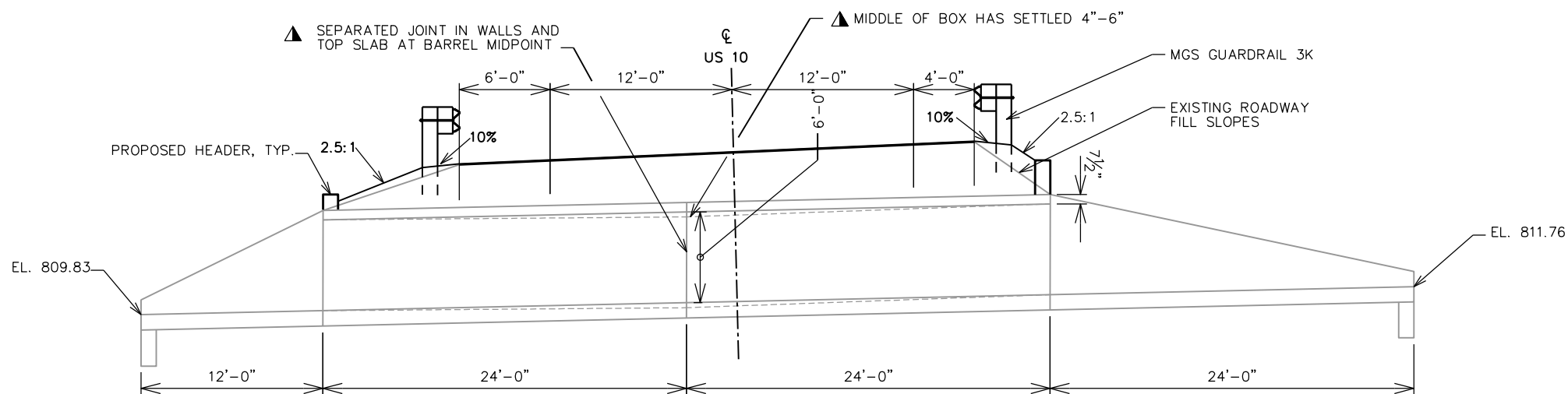
TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	TOTALS
206.2001	EXCAVATION FOR STRUCTURES CULVERTS C-46-131	EACH	1
502.4205	ADHESIVE ANCHORS NO. 5 BAR	EACH	16
504.0100	CONCRETE MASONRY CULVERTS	CY	3
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	90



PLAN

(EXISTING SINGLE CELL BOX CULVERT)



ELEVATION

(LOOKING EAST)




LIST OF DRAWINGS


1. GENERAL PLAN
2. HEADER DETAILS

CONSULTANT DESIGN CONTACTS:
 CRYSTAL MALENOFSKI (920) 224-2244
 BUREAU OF STRUCTURES CONTACTS:
 AARON BONK (608) 261-0261

NO.	DATE	REVISION	BY


 Engineers - Surveyors - Architects
 770 Technology Way
 Chippewa Falls, WI 54729
 Phone: 715.861.5226
 www.cbssquareinc.com

STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION

ACCEPTED  SDR **08/02/23**
 CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE C-46-131

USH 10 OVER CATTLE PASS

COUNTY PEPIN TOWN/CITY/VILLAGE WATERVILLE

DESIGN SPEC. REHABILITATION N/A

DESIGNED BY CM MF DRAWN BY SB PLANS CK'D. MF

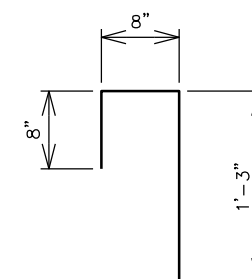
GENERAL PLAN

SHEET 1 OF 2

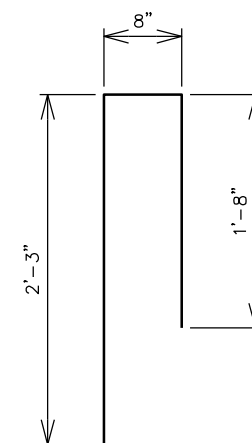
BILL OF BARS

BAR NO.	NO. REQ'D	LENGTH	COATED BAR	BENT	LOCATION
B401	10	4-6	X		HEADERS HORIZ
B502	8	2-4	X	X	HEADERS VERT TIES (NORTH)
B503	8	4-4	X	X	HEADERS VERT TIES (SOUTH)

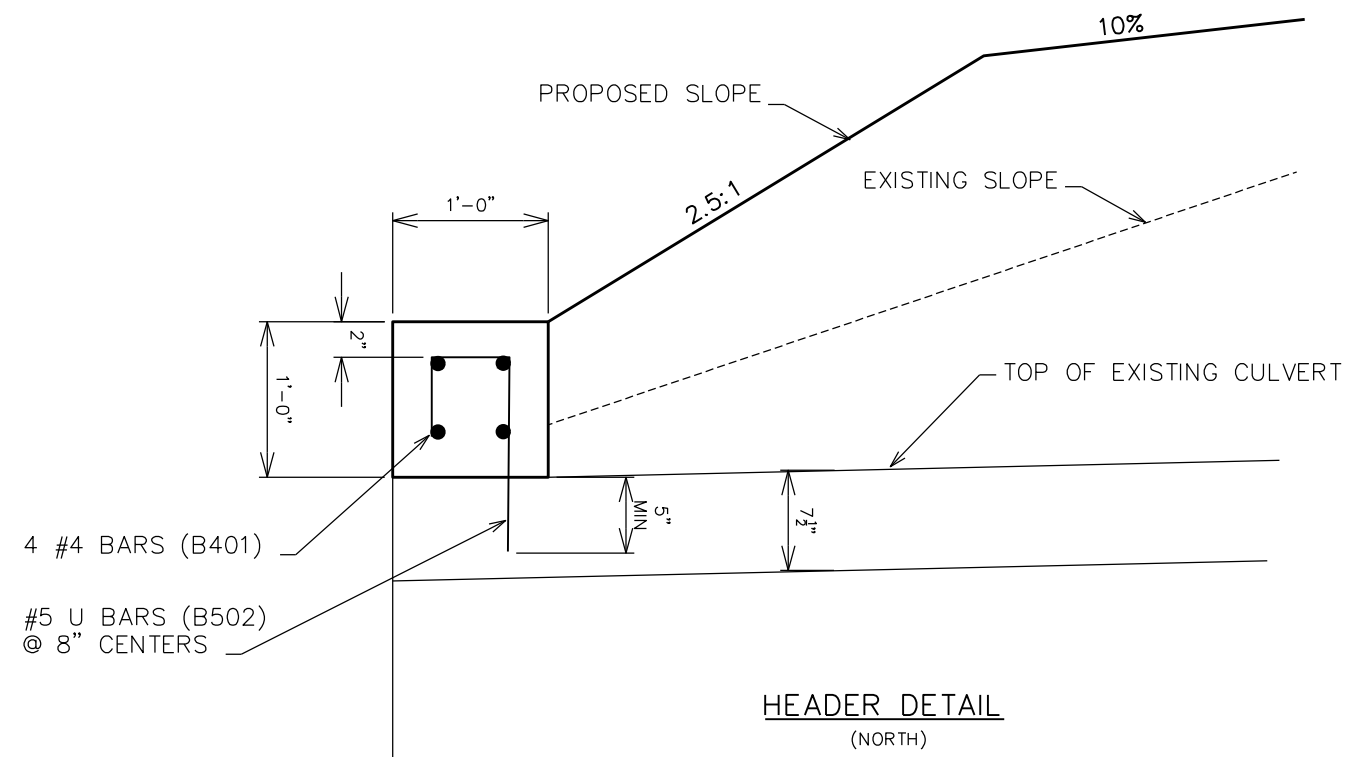
BENDING DIMENSIONS ARE OUT TO OUT OF BARS.



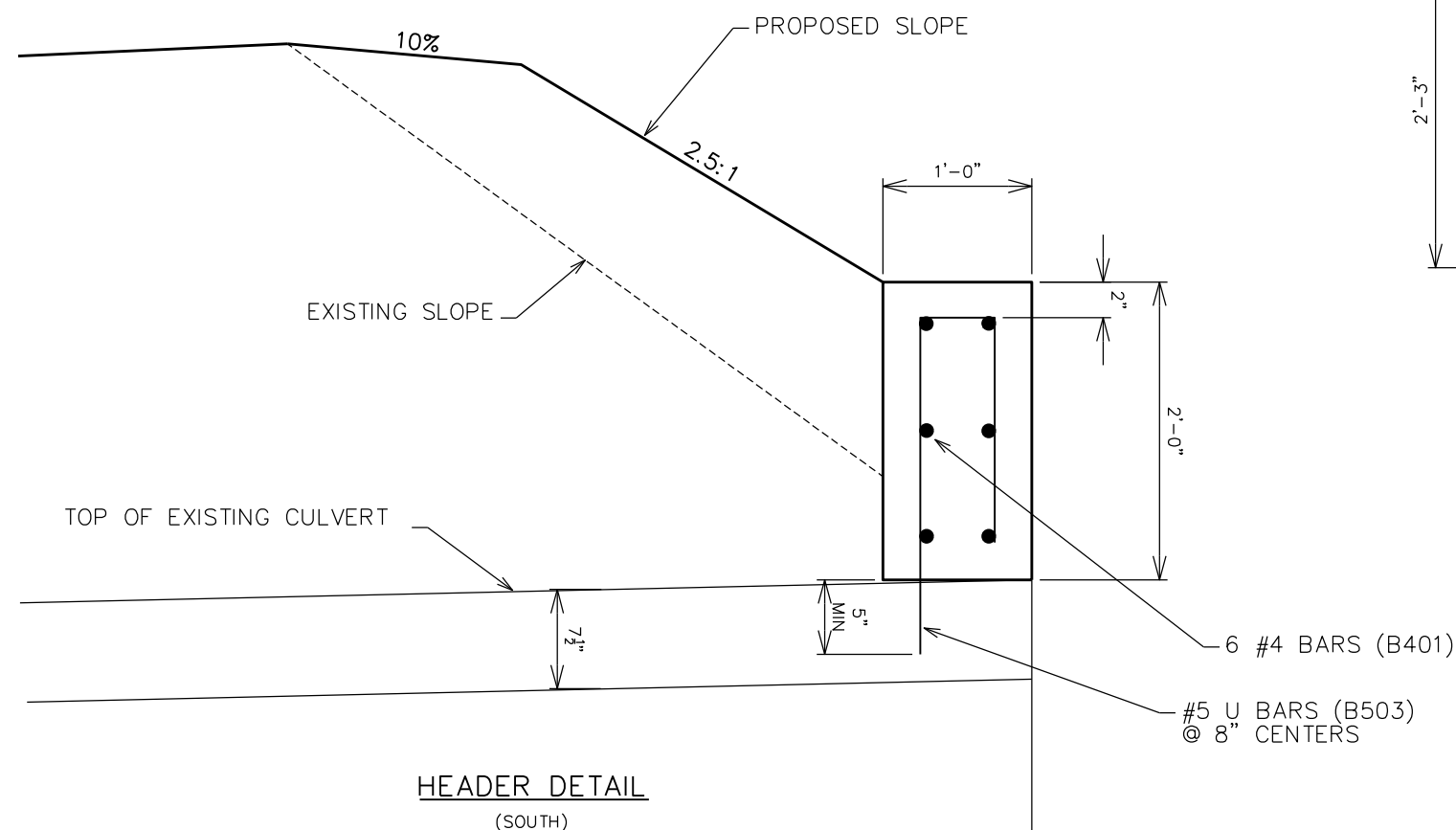
B502



B503




HEADER DETAIL
(NORTH)



HEADER DETAIL
(SOUTH)



NO.	DATE	REVISION	BY
 Engineers - Surveyors - Architects 770 Technology Way Chippewa Falls, WI 54729 Phone: 715.861.5226 www.cbssquareinc.com			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
ACCEPTED _____ CHIEF STRUCTURES DESIGN ENGINEER DATE _____			
STRUCTURE C-46-131			
USH 10 OVER CATTLE PASS			
COUNTY	PEPIN	TOWN/CITY/VILLAGE	WATERVILLE
DESIGN SPEC. REHABILITATION N/A			
DESIGNED BY	CM	DESIGN CK'D. MF	DRAWN BY SB PLANS CK'D. MF
HEADER DETAILS			SHEET 2 OF 2

8

8

STA 65+61 TO 87+50												
STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)			
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL		MASS ORDINATE
										1.00	1.25	
NOTE 1	NOTE 2	NOTE 3	NOTE 1	NOTE 2	NOTE 3	NOTE 1	NOTE 2	NOTE 3	NOTE 4			
65+61.43	6561.43	0.00	0.04	0.00	1.18	0	0	0	0	0	0	0
66+00.00	6600.00	38.57	0.00	0.00	6.69	0	0	6	0	8	-8	-8
66+50.00	6650.00	50.00	0.00	0.00	10.26	0	0	16	0	28	-28	-28
66+82.78	6682.78	32.78	0.06	0.00	3.29	0	0	8	0	38	-38	-38
67+08.02	6708.02	25.24	0.88	0.00	3.53	0	0	3	0	41	-41	-41
67+33.25	6733.25	25.23	0.50	0.00	2.43	1	0	3	1	45	-44	-44
67+50.00	6750.00	16.75	0.15	0.00	10.36	0	0	4	1	50	-49	-49
67+78.24	6778.24	28.24	0.12	0.00	17.07	0	0	14	1	68	-67	-67
68+03.11	6803.11	24.87	1.13	0.00	17.00	1	0	16	2	88	-86	-86
68+28.07	6828.07	24.96	1.65	0.00	27.91	1	0	21	3	114	-111	-111
68+50.00	6850.00	21.93	0.26	0.00	33.47	1	0	25	4	145	-141	-141
69+00.00	6900.00	50.00	0.87	0.00	9.81	1	0	40	5	195	-190	-190
69+50.00	6950.00	50.00	2.32	0.00	0.14	3	0	9	8	206	-198	-198
69+65.33	6965.33	15.33	2.16	0.00	0.00	1	0	0	9	206	-197	-197
69+90.31	6990.31	24.98	1.46	0.00	0.15	2	0	0	11	206	-195	-195
70+15.29	7015.29	24.98	0.46	0.00	6.49	1	0	3	12	210	-198	-198
70+50.00	7050.00	34.71	1.25	0.00	1.95	1	0	5	13	216	-203	-203
71+00.00	7100.00	50.00	2.29	0.00	0.00	3	0	2	16	219	-203	-203
71+50.00	7150.00	50.00	0.00	0.00	2.62	2	0	2	18	221	-203	-203
72+00.00	7200.00	50.00	0.00	0.00	8.25	0	0	10	18	234	-216	-216
72+50.00	7250.00	50.00	0.00	0.00	7.22	0	0	14	18	251	-233	-233
73+00.00	7300.00	50.00	0.00	0.00	2.57	0	0	9	18	263	-245	-245
73+50.00	7350.00	50.00	1.02	0.00	0.00	1	0	2	19	265	-246	-246
74+00.00	7400.00	50.00	0.52	0.00	0.00	1	0	0	20	265	-245	-245
74+50.00	7450.00	50.00	0.50	0.00	0.00	1	0	0	21	265	-244	-244
75+00.00	7500.00	50.00	0.24	0.00	0.00	1	0	0	22	265	-243	-243
75+50.00	7550.00	50.00	0.00	0.00	4.76	0	0	4	22	270	-248	-248
76+00.00	7600.00	50.00	0.00	0.00	2.35	0	0	7	22	279	-257	-257
76+50.00	7650.00	50.00	0.00	0.00	1.47	0	0	4	22	284	-262	-262
77+00.00	7700.00	50.00	0.06	0.00	2.85	0	0	4	22	289	-267	-267
77+50.00	7750.00	50.00	0.00	0.00	5.21	0	0	7	22	298	-276	-276
77+79.62	7779.62	29.62	0.00	0.00	2.94	0	0	4	22	303	-281	-281
78+04.88	7804.88	25.26	0.00	0.00	2.65	0	0	3	22	306	-284	-284
78+30.17	7830.17	25.29	0.00	0.00	4.90	0	0	4	22	311	-289	-289
78+50.00	7850.00	19.83	0.00	0.00	4.47	0	0	3	22	315	-293	-293
79+00.00	7900.00	50.00	0.00	0.00	1.76	0	0	6	22	323	-301	-301
79+50.00	7950.00	50.00	0.00	0.00	0.42	0	0	2	22	325	-303	-303
80+00.00	8000.00	50.00	0.03	0.00	1.88	0	0	2	22	328	-306	-306
80+57.12	8057.12	57.12	3.73	0.00	0.00	4	0	2	26	330	-304	-304
80+81.83	8081.83	24.71	6.97	0.00	0.00	5	0	0	31	330	-299	-299

NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	THIS DOES NOT SHOW UP IN CROSS SECTIONS
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
4 - MASS ORDINATE	(CUT-SALVAGED PAVT)-(FILL-FILL FACTOR)

CONTINUED ON NEXT PAGE

PROJECT NO: 1530-05-73

HWY: USH 10

COUNTY: PEPIN

EARTHWORK DATA

SHEET

E

FILE NAME :

PLOT DATE : 7/24/2023 10:37 AM

PLOT BY : CBS2

PLOT NAME :

PLOT SCALE : 1:1

9

9

CONTINUED FROM PREVIOUS PAGE

STA 65+61 TO 87+50											
STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL	MASS ORDINATE
NOTE 1	NOTE 2	NOTE 3	NOTE 1	NOTE 2	NOTE 3	NOTE 1	NOTE 2	NOTE 3	NOTE 4		
81+06.52	8106.52	24.69	4.04	0.00	0.00	5	0	0	36	330	-294
81+50.00	8150.00	43.48	0.98	0.00	0.00	4	0	0	40	330	-290
82+00.00	8200.00	50.00	1.89	0.00	0.00	3	0	0	43	330	-287
82+50.00	8250.00	50.00	1.64	0.00	0.00	3	0	0	46	330	-284
83+00.00	8300.00	50.00	0.19	0.00	0.05	2	0	0	48	330	-282
83+50.00	8350.00	50.00	2.02	0.00	0.00	2	0	0	50	330	-280
84+00.00	8400.00	50.00	1.81	0.00	0.00	4	0	0	54	330	-276
84+50.00	8450.00	50.00	1.59	0.00	0.00	3	0	0	57	330	-273
85+00.00	8500.00	50.00	1.18	0.00	0.00	3	0	0	60	330	-270
85+50.00	8550.00	50.00	0.47	0.00	0.00	2	0	0	62	330	-268
86+06.96	8606.96	56.96	1.02	0.00	0.00	2	0	0	64	330	-266
86+31.94	8631.94	24.98	0.00	0.00	3.03	0	0	1	64	331	-267
86+56.92	8656.92	24.98	0.00	0.00	6.64	0	0	4	64	336	-272
87+00.00	8700.00	43.08	0.65	0.00	0.13	1	0	5	65	343	-278
87+50.00	8750.00	50.00	1.88	0.00	0.00	2	0	0	67	343	-276
TOTALS						67	0	274			

NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	THIS DOES NOT SHOW UP IN CROSS SECTIONS
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
4 - MASS ORDINATE	(CUT-SALVAGED PAVT)-(FILL-FILL FACTOR)

PROJECT NO: 1530-05-73

HWY: USH 10

COUNTY: PEPIN

EARTHWORK DATA

SHEET

E

FILE NAME :

PLOT DATE : 7/24/2023 10:37 AM

PLOT BY : CBS2

PLOT NAME :

PLOT SCALE : 1:1

9

9

STA 88+34 TO 114+22												
STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)			
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL	MASS ORDINATE	
												1.00
NOTE 1	NOTE 2	NOTE 3	NOTE 1	NOTE 2	NOTE 3	NOTE 1	NOTE 2	NOTE 3	NOTE 4			
88+33.80	8833.80	0.00	1.10	0.00	0.00	0	0	0	0	0	0	
88+50.00	8850.00	16.20	0.48	0.00	0.72	0	0	0	0	0	0	
89+00.00	8900.00	50.00	10.57	0.00	0.15	10	0	1	10	1	9	
89+25.34	8925.34	25.34	11.24	0.00	0.82	10	0	0	20	1	19	
89+50.32	8950.32	24.98	14.83	0.00	0.00	12	0	0	32	1	31	
89+75.30	8975.30	24.98	19.72	0.00	0.00	16	0	0	48	1	47	
90+00.00	9000.00	24.70	12.80	0.00	0.00	15	0	0	63	1	62	
90+50.00	9050.00	50.00	9.79	0.00	6.37	21	0	6	84	9	75	
91+00.00	9100.00	50.00	7.30	0.00	10.67	16	0	16	100	29	71	
91+20.69	9120.69	20.69	10.13	0.00	14.71	7	0	10	107	41	66	
91+45.48	9145.48	24.79	11.75	0.00	10.39	10	0	12	117	56	61	
91+70.19	9170.19	24.71	13.22	0.00	2.29	11	0	6	128	64	64	
92+00.00	9200.00	29.81	10.49	0.00	10.21	13	0	7	141	73	69	
92+50.00	9250.00	50.00	9.32	0.00	4.23	18	0	13	159	89	70	
93+00.00	9300.00	50.00	8.56	0.00	1.80	17	0	6	176	96	80	
93+50.00	9350.00	50.00	8.79	0.00	0.00	16	0	2	192	99	93	
93+62.10	9362.10	12.10	9.53	0.00	0.02	4	0	0	196	99	97	
93+86.83	9386.83	24.73	6.29	0.00	0.31	7	0	0	203	99	104	
94+11.56	9411.56	24.73	14.11	0.00	0.53	9	0	0	212	99	113	
94+50.00	9450.00	38.44	14.66	0.00	0.00	20	0	0	232	99	133	
95+00.00	9500.00	50.00	9.84	0.00	0.59	23	0	1	255	100	155	
95+50.00	9550.00	50.00	7.01	0.00	1.95	16	0	2	271	103	169	
96+00.00	9600.00	50.00	5.94	0.00	0.60	12	0	2	283	105	178	
96+50.00	9650.00	50.00	5.04	0.00	0.00	10	0	1	293	106	187	
97+00.00	9700.00	50.00	11.19	0.00	0.00	15	0	0	308	106	202	
97+50.00	9750.00	50.00	9.94	0.00	0.00	20	0	0	328	106	222	
98+00.00	9800.00	50.00	8.75	0.00	0.00	17	0	0	345	106	239	
98+50.00	9850.00	50.00	7.60	0.00	0.00	15	0	0	360	106	254	
99+00.00	9900.00	50.00	7.67	0.00	0.00	14	0	0	374	106	268	
99+50.00	9950.00	50.00	9.43	0.00	0.00	16	0	0	390	106	284	
100+00.00	10000.00	50.00	8.10	0.00	0.15	16	0	0	406	106	300	
100+50.00	10050.00	50.00	5.37	0.00	0.04	12	0	0	418	106	312	
101+00.00	10100.00	50.00	8.33	0.00	0.00	13	0	0	431	106	325	
101+50.00	10150.00	50.00	8.80	0.00	0.00	16	0	0	447	106	341	
102+00.00	10200.00	50.00	10.59	0.00	0.00	18	0	0	465	106	359	
102+50.00	10250.00	50.00	25.10	0.00	0.00	33	0	0	498	106	392	
103+00.00	10300.00	50.00	39.12	0.00	0.00	59	0	0	557	106	451	
103+50.00	10350.00	50.00	14.00	0.00	0.00	49	0	0	606	106	500	
104+00.00	10400.00	50.00	12.22	0.00	0.00	24	0	0	630	106	524	
104+50.00	10450.00	50.00	12.59	0.00	0.00	23	0	0	653	106	547	

NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	THIS DOES NOT SHOW UP IN CROSS SECTIONS
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
4 - MASS ORDINATE	(CUT-SALVAGED PAVT)-(FILL-FILL FACTOR)

CONTINUED ON NEXT PAGE

PROJECT NO: 1530-05-73

HWY: USH 10

COUNTY: PEPIN

EARTHWORK DATA

SHEET

E

FILE NAME :

PLOT DATE : 7/24/2023 10:37 AM

PLOT BY : CBS2

PLOT NAME :

PLOT SCALE : 1:1

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CONTINUED FROM PREVIOUS PAGE

STA 88+34 TO 114+22											
STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL	MASS ORDINATE
NOTE 1	NOTE 2	NOTE 3	NOTE 1	NOTE 2	NOTE 3	NOTE 1	NOTE 2	NOTE 3	NOTE 4	NOTE 4	
105+00.00	10500.00	50.00	11.04	0.00	0.00	22	0	0	675	106	569
105+50.00	10550.00	50.00	12.59	0.00	0.00	22	0	0	697	106	591
106+00.00	10600.00	50.00	13.12	0.00	0.00	24	0	0	721	106	615
106+50.00	10650.00	50.00	11.55	0.00	0.00	23	0	0	744	106	638
107+00.00	10700.00	50.00	0.89	0.00	0.00	12	0	0	756	106	650
107+50.00	10750.00	50.00	1.71	0.00	0.00	2	0	0	758	106	652
108+00.00	10800.00	50.00	1.44	0.00	0.00	3	0	0	761	106	655
108+50.00	10850.00	50.00	0.95	0.00	0.00	2	0	0	763	106	657
109+00.00	10900.00	50.00	0.52	0.00	0.00	1	0	0	764	106	658
109+50.00	10950.00	50.00	0.73	0.00	0.00	1	0	0	765	106	659
110+00.00	11000.00	50.00	0.47	0.00	0.00	1	0	0	766	106	660
110+50.00	11050.00	50.00	0.50	0.00	0.00	1	0	0	767	106	661
111+00.00	11100.00	50.00	0.84	0.00	0.00	1	0	0	768	106	662
111+50.00	11150.00	50.00	0.71	0.00	0.00	1	0	0	769	106	663
112+00.00	11200.00	50.00	0.41	0.00	0.00	1	0	0	770	106	664
112+50.00	11250.00	50.00	0.06	0.00	0.03	0	0	0	770	106	664
113+00.00	11300.00	50.00	0.01	0.00	0.03	0	0	0	770	106	664
113+50.00	11350.00	50.00	0.74	0.00	0.00	1	0	0	771	106	665
113+72.41	11372.41	22.41	1.26	0.00	0.00	1	0	0	772	106	666
113+97.37	11397.37	24.96	1.42	0.00	0.00	1	0	0	773	106	667
114+22.33	11422.33	24.96	1.05	0.00	19.88	1	0	9	774	118	657
TOTALS						774	115	94			

NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	THIS DOES NOT SHOW UP IN CROSS SECTIONS
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
4 - MASS ORDINATE	(CUT-SALVAGED PAVT)-(FILL-FILL FACTOR)

PROJECT NO: 1530-05-73

HWY: USH 10

COUNTY: PEPIN

EARTHWORK DATA

SHEET

E

FILE NAME :

PLOT DATE : 7/24/2023 10:37 AM

PLOT BY : CBS2

PLOT NAME :

PLOT SCALE : 1:1

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STA 117+00 TO 126+28												
STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)			
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL	MASS ORDINATE	
												1.00
NOTE 1	NOTE 2	NOTE 3	NOTE 1	NOTE 2	NOTE 3	NOTE 1	NOTE 2	NOTE 3	NOTE 4			
117+00.00	11700.00	0.00	1.30	0.00	0.00	0	0	0	0	0	0	
117+50.00	11750.00	50.00	1.95	0.00	0.00	3	0	0	3	0	3	
118+00.00	11800.00	50.00	2.14	0.00	0.00	4	0	0	7	0	7	
118+50.00	11850.00	50.00	0.00	0.00	3.84	2	0	4	9	5	4	
119+00.00	11900.00	50.00	0.11	0.00	7.95	0	0	11	9	19	-10	
119+50.00	11950.00	50.00	0.01	0.00	4.14	0	0	11	9	33	-24	
120+00.00	12000.00	50.00	0.00	0.00	3.05	0	0	7	9	41	-32	
120+50.00	12050.00	50.00	0.21	0.00	0.58	0	0	3	9	45	-36	
121+00.00	12100.00	50.00	0.35	0.00	1.01	1	0	1	10	46	-36	
121+50.00	12150.00	50.00	1.45	0.00	0.00	2	0	1	12	48	-36	
122+00.00	12200.00	50.00	1.11	0.00	0.00	2	0	0	14	48	-34	
122+50.00	12250.00	50.00	2.47	0.00	0.00	3	0	0	17	48	-31	
123+00.00	12300.00	50.00	0.76	0.00	0.00	3	0	0	20	48	-28	
123+50.00	12350.00	50.00	0.57	0.00	0.66	1	0	1	21	49	-28	
124+00.00	12400.00	50.00	1.55	0.00	0.00	2	0	1	23	50	-27	
124+57.99	12457.99	57.99	0.76	0.00	0.12	2	0	0	25	50	-25	
124+82.97	12482.97	24.98	0.04	0.00	13.67	0	0	6	25	58	-33	
125+07.95	12507.95	24.98	0.34	0.00	27.27	0	0	19	25	81	-56	
125+50.00	12550.00	42.05	0.00	0.00	8.59	0	0	28	25	116	-91	
126+00.00	12600.00	50.00	0.14	0.00	0.00	0	0	8	25	126	-101	
126+27.94	12627.94	27.94	0.37	0.00	0.00	0	0	0	25	126	-101	
TOTALS						25	0	101				

NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	THIS DOES NOT SHOW UP IN CROSS SECTIONS
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
4 - MASS ORDINATE	(CUT-SALVAGED PAVT)-(FILL-FILL FACTOR)

PROJECT NO: 1530-05-73

HWY: USH 10

COUNTY: PEPIN

EARTHWORK DATA

SHEET

E

STA 202+11 TO 207+20											
STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL	MASS ORDINATE
NOTE 1	NOTE 2	NOTE 3	NOTE 1	NOTE 2	NOTE 3	NOTE 1	NOTE 2	NOTE 3	NOTE 4	NOTE 4	
202+11.02	20211.02	0.00	0.27	0.00	0.00	0	0	0	0	0	0
202+50.00	20250.00	38.98	0.32	0.00	0.20	0	0	0	0	0	0
203+00.00	20300.00	50.00	0.77	0.00	4.58	1	0	4	1	5	-4
203+31.02	20331.02	31.02	0.00	0.00	16.91	0	0	12	1	20	-19
203+56.00	20356.00	24.98	0.00	0.00	9.88	0	0	12	1	35	-34
203+80.98	20380.98	24.98	0.57	0.00	0.00	0	0	5	1	41	-40
204+00.00	20400.00	19.02	0.85	0.00	0.00	1	0	0	2	41	-39
204+50.00	20450.00	50.00	0.85	0.00	0.00	2	0	0	4	41	-37
205+00.00	20500.00	50.00	1.18	0.00	0.00	2	0	0	6	41	-35
205+50.00	20550.00	50.00	2.77	0.00	0.00	4	0	0	10	41	-31
205+75.00	20575.00	25.00	0.05	0.00	6.63	1	0	3	11	45	-34
205+99.69	20599.69	24.69	0.00	0.00	11.59	0	0	8	11	55	-44
206+50.00	20650.00	50.31	0.75	0.00	6.17	1	0	17	12	76	-64
207+00.00	20700.00	50.00	0.98	0.00	0.00	2	0	6	14	84	-70
207+19.67	20719.67	19.67	0.36	0.00	0.00	0	0	0	14	84	-70
			TOTALS			14	0	67			

NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	THIS DOES NOT SHOW UP IN CROSS SECTIONS
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
4 - MASS ORDINATE	(CUT-SALVAGED PAVT)-(FILL-FILL FACTOR)

PROJECT NO: 1530-05-73

HWY: USH 10

COUNTY: PEPIN

EARTHWORK DATA

SHEET

E

FILE NAME :

PLOT DATE : 7/24/2023 10:37 AM

PLOT BY : CBS2

PLOT NAME :

PLOT SCALE : 1:1

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STA 222+79 TO 228+62												
STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)			
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL		MASS ORDINATE
										1.00	1.25	
						NOTE 1	NOTE 2	NOTE 3	NOTE 1		NOTE 4	
222+78.96	22278.96	0.00	0.04	0.00	0.18	0	0	0	0	0	0	
223+00.00	22300.00	21.04	1.47	0.00	0.00	1	0	0	1	0	1	
223+50.00	22350.00	50.00	0.33	0.00	4.74	2	0	4	3	5	-2	
223+98.96	22398.96	48.96	0.01	0.00	15.11	0	0	18	3	28	-25	
224+23.95	22423.95	24.99	0.44	0.00	19.56	0	0	16	3	48	-45	
224+48.93	22448.93	24.98	1.83	0.00	5.22	1	0	11	4	61	-57	
225+00.00	22500.00	51.07	1.84	0.00	20.47	3	0	24	7	91	-84	
225+11.14	22511.14	11.14	0.07	0.00	27.09	0	0	10	7	104	-97	
225+36.12	22536.12	24.98	0.67	0.00	16.59	0	0	20	7	129	-122	
225+61.01	22561.01	24.89	0.00	0.00	90.92	0	0	50	7	191	-184	
226+00.00	22600.00	38.99	0.10	0.00	1.99	0	0	67	7	275	-268	
226+05.26	22605.26	5.26	1.54	0.00	0.41	0	0	0	7	275	-268	
226+30.24	22630.24	24.98	2.24	0.00	5.00	2	0	3	9	279	-270	
226+55.22	22655.22	24.98	1.01	0.00	9.65	2	0	7	11	288	-277	
226+92.96	22692.96	37.74	1.35	0.00	4.83	2	0	10	13	300	-287	
227+17.24	22717.24	24.28	0.87	0.00	15.41	1	0	9	14	311	-297	
227+42.22	22742.22	24.98	1.56	0.00	19.42	1	0	16	15	331	-316	
227+50.00	22750.00	7.78	1.30	0.00	20.07	0	0	6	15	339	-324	
228+00.00	22800.00	50.00	0.13	0.00	11.48	1	0	29	16	375	-359	
228+50.00	22850.00	50.00	0.25	0.00	0.00	0	0	11	16	389	-373	
228+62.19	22862.19	12.19	0.48	0.00	0.00	0	0	0	16	389	-373	
TOTALS						16	0	311				

NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
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3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
4 - MASS ORDINATE	(CUT-SALVAGED PAVT)-(FILL-FILL FACTOR)

PROJECT NO: 1530-05-73

HWY: USH 10

COUNTY: PEPIN

EARTHWORK DATA

SHEET

E

FILE NAME :

PLOT DATE : 7/24/2023 10:37 AM

PLOT BY : CBS2

PLOT NAME :

PLOT SCALE : 1:1

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STA 235+65 TO 242+21												
STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)			
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL	MASS ORDINATE	
												1.00
NOTE 1	NOTE 2	NOTE 3	NOTE 1	NOTE 2	NOTE 3	NOTE 1	NOTE 2	NOTE 3	NOTE 4			
235+65.09	23565.09	0.00	0.21	0.00	0.01	0	0	0	0	0	0	
236+00.00	23600.00	34.91	0.06	0.00	32.06	0	0	21	0	26	-26	
236+50.00	23650.00	50.00	0.01	0.00	61.16	0	0	86	0	134	-134	
236+82.68	23682.68	32.68	0.45	0.00	77.19	0	0	84	0	239	-239	
236+91.60	23691.60	8.92	1.77	0.00	62.54	0	0	23	0	268	-268	
237+07.48	23707.48	15.88	0.00	0.00	51.62	1	0	34	1	310	-309	
237+16.75	23716.75	9.27	0.00	0.00	41.97	0	0	16	1	330	-329	
237+32.31	23732.31	15.56	0.27	0.00	4.92	0	0	14	1	348	-347	
237+41.89	23741.89	9.58	1.05	0.00	1.79	0	0	1	1	349	-348	
237+50.00	23750.00	8.11	0.50	0.00	0.48	0	0	0	1	349	-348	
238+00.00	23800.00	50.00	0.89	0.00	0.27	1	0	1	2	350	-348	
238+50.00	23850.00	50.00	0.98	0.00	0.02	2	0	0	4	350	-346	
239+00.00	23900.00	50.00	1.44	0.00	0.00	2	0	0	6	350	-344	
239+15.00	23915.00	15.00	0.55	0.00	0.22	1	0	0	7	350	-343	
239+50.00	23950.00	35.00	0.03	0.00	3.76	0	0	3	7	354	-347	
239+62.11	23962.11	12.11	2.78	0.00	0.69	1	0	1	8	355	-347	
239+86.94	23986.94	24.83	3.40	0.00	0.00	3	0	0	11	355	-344	
240+11.74	24011.74	24.80	0.99	0.00	5.18	2	0	2	13	358	-345	
240+50.08	24050.08	38.34	0.65	0.00	1.48	1	0	5	14	364	-350	
240+75.00	24075.00	24.92	1.47	0.00	7.36	1	0	4	15	369	-354	
241+00.37	24100.37	25.37	0.20	0.00	12.58	1	0	9	16	380	-364	
241+50.00	24150.00	49.63	0.23	0.00	9.19	0	0	20	16	405	-389	
242+00.00	24200.00	50.00	0.08	0.00	1.51	0	0	10	16	418	-402	
242+21.40	24221.40	21.40	0.00	0.00	0.42	0	0	1	16	419	-403	
			TOTALS			16	0	335				

NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	THIS DOES NOT SHOW UP IN CROSS SECTIONS
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
4 - MASS ORDINATE	(CUT-SALVAGED PAVT)-(FILL-FILL FACTOR)

PROJECT NO: 1530-05-73

HWY: USH 10

COUNTY: PEPIN

EARTHWORK DATA

SHEET

E

FILE NAME :

PLOT DATE : 7/24/2023 10:37 AM

PLOT BY : CBS2

PLOT NAME :

PLOT SCALE : 1:1

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STA 256+85 TO 268+72												
STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)			
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL	MASS ORDINATE	
												1.00
NOTE 1	NOTE 2	NOTE 3	NOTE 1	NOTE 2	NOTE 3	NOTE 1	NOTE 2	NOTE 3	NOTE 4			
256+85.37	25685.37	0.00	7.07	0.00	7.97	0	0	0	0	0	0	
257+00.00	25700.00	14.63	17.75	0.00	13.05	7	0	6	7	8	-1	
257+17.54	25717.54	17.54	12.64	0.00	19.56	10	0	11	17	21	-4	
257+42.74	25742.74	25.20	12.12	0.00	19.13	12	0	18	29	44	-15	
257+67.92	25767.92	25.18	13.99	0.00	14.88	12	0	16	41	64	-23	
258+00.00	25800.00	32.08	11.64	0.00	18.21	15	0	20	56	89	-33	
258+25.97	25825.97	25.97	11.33	0.00	34.44	11	0	25	67	120	-53	
258+50.76	25850.76	24.79	11.14	0.00	44.15	10	0	36	77	165	-88	
258+75.58	25875.58	24.82	15.95	0.00	9.62	12	0	25	89	196	-107	
259+00.00	25900.00	24.42	10.64	0.00	53.64	12	0	29	101	233	-132	
259+50.00	25950.00	50.00	10.62	0.00	77.45	20	0	121	121	384	-263	
260+00.00	26000.00	50.00	10.17	0.00	49.95	19	0	118	140	531	-391	
260+50.00	26050.00	50.00	12.31	0.00	58.44	21	0	100	161	656	-495	
261+00.00	26100.00	50.00	10.54	0.00	49.43	21	0	100	182	781	-599	
261+50.00	26150.00	50.00	12.77	0.00	38.86	22	0	82	204	884	-680	
262+00.00	26200.00	50.00	8.90	0.00	67.02	20	0	98	224	1,006	-782	
262+50.00	26250.00	50.00	10.53	0.00	45.92	18	0	105	242	1,138	-896	
263+00.00	26300.00	50.00	12.68	0.00	18.01	21	0	59	263	1,211	-948	
263+50.00	26350.00	50.00	20.02	0.00	0.00	30	0	17	293	1,233	-940	
264+00.00	26400.00	50.00	24.64	0.00	0.60	41	0	1	334	1,234	-900	
264+50.00	26450.00	50.00	22.84	0.00	0.48	44	0	1	378	1,235	-857	
264+85.78	26485.78	35.78	15.58	0.00	0.49	25	0	1	403	1,236	-833	
266+39.03	26639.03	0.00	2.50	0.00	0.00	0	0	0	403	1,236	-833	
266+50.00	26650.00	10.97	1.29	0.00	0.00	1	0	0	404	1,236	-832	
266+76.58	26676.58	26.58	1.65	0.00	0.00	1	0	0	405	1,236	-831	
267+01.76	26701.76	25.18	4.86	0.00	0.04	3	0	0	408	1,236	-828	
267+03.57	26703.57	1.81	5.74	0.00	0.07	0	0	0	408	1,236	-828	
267+26.51	26726.51	22.94	2.90	0.00	0.70	4	0	0	412	1,236	-824	
267+26.96	26726.96	0.45	2.79	0.00	0.69	0	0	0	412	1,236	-824	
267+53.11	26753.11	26.15	0.01	0.00	2.08	1	0	1	413	1,238	-825	
268+00.00	26800.00	46.89	0.20	0.00	0.70	0	0	2	413	1,240	-827	
268+50.00	26850.00	50.00	0.54	0.00	0.00	1	0	1	414	1,241	-827	
268+71.82	26871.82	21.82	0.56	0.00	0.00	0	0	0	414	1,241	-827	
			TOTALS			414	90	993				

NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	THIS DOES NOT SHOW UP IN CROSS SECTIONS
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
4 - MASS ORDINATE	(CUT-SALVAGED PAVT)-(FILL-FILL FACTOR)

PROJECT NO: 1530-05-73

HWY: USH 10

COUNTY: PEPIN

EARTHWORK DATA

SHEET

E

FILE NAME :

PLOT DATE : 7/24/2023 10:37 AM

PLOT BY : CBS2

PLOT NAME :

PLOT SCALE : 1:1

9

9

STA 277+04 TO STA 283+83												
STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)			
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL	MASS ORDINATE	
												1.00
NOTE 1	NOTE 2	NOTE 3	NOTE 1	NOTE 2	NOTE 3	NOTE 1	NOTE 2	NOTE 3	NOTE 4			
277+03.99	27703.99	0.00	0.45	0.00	0.00	0	0	0	0	0	0	
277+50.00	27750.00	46.01	0.62	0.00	3.09	1	0	3	1	4	-3	
278+00.00	27800.00	50.00	2.46	0.00	22.04	3	0	23	4	33	-29	
278+50.00	27850.00	50.00	3.79	0.00	30.06	6	0	48	10	93	-83	
278+83.99	27883.99	33.99	2.16	0.00	29.68	4	0	38	14	140	-126	
279+08.97	27908.97	24.98	2.01	0.00	2.65	2	0	15	16	159	-143	
279+33.95	27933.95	24.98	2.29	0.00	1.84	2	0	2	18	161	-143	
279+58.95	27958.95	25.00	2.08	0.00	0.63	2	0	1	20	163	-143	
279+95.07	27995.07	36.12	0.01	0.00	412.12	1	0	276	21	508	-487	
280+66.91	28066.91	0.00	0.45	0.00	188.82	0	0	0	21	508	-487	
281+00.00	28100.00	33.09	0.50	0.00	34.40	1	0	137	22	679	-657	
281+53.04	28153.04	53.04	1.18	0.00	0.68	2	0	34	24	721	-697	
281+78.02	28178.02	24.98	0.40	0.00	109.35	1	0	51	25	785	-760	
282+03.00	28203.00	24.98	0.00	0.00	178.51	0	0	133	25	951	-926	
282+50.00	28250.00	47.00	0.02	0.00	7.45	0	0	162	25	1,154	-1,129	
283+00.00	28300.00	50.00	6.62	0.00	0.00	6	0	7	31	1,163	-1,132	
283+50.00	28350.00	50.00	1.33	0.00	0.00	7	0	0	38	1,163	-1,125	
283+83.01	28383.01	33.01	1.05	0.00	0.00	1	0	0	39	1,163	-1,124	
			TOTALS			39	0	930				

NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	THIS DOES NOT SHOW UP IN CROSS SECTIONS
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
4 - MASS ORDINATE	(CUT-SALVAGED PAVT)-(FILL-FILL FACTOR)

9

9

PROJECT NO: 1530-05-73

HWY: USH 10

COUNTY: PEPIN

EARTHWORK DATA

SHEET

E

FILE NAME :

PLOT DATE : 7/24/2023 10:37 AM

PLOT BY : CBS2

PLOT NAME :

PLOT SCALE : 1:1

STA 318+06 TO 328+63												
STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)			
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL		MASS ORDINATE
										1.00	1.25	
						NOTE 1	NOTE 2	NOTE 3	NOTE 1		NOTE 4	
318+06.20	31806.20	0.00	0.83	0.00	0.00	0	0	0	0	0	0	
318+50.00	31850.00	43.80	3.07	0.00	0.00	3	0	0	3	0	3	
319+00.00	31900.00	50.00	6.07	0.00	0.00	8	0	0	11	0	11	
319+50.00	31950.00	50.00	5.74	0.00	0.79	11	0	1	22	1	21	
319+86.19	31986.19	36.19	2.10	0.00	2.02	5	0	2	27	4	23	
320+11.17	32011.17	24.98	3.36	0.00	0.03	3	0	1	30	5	25	
320+36.15	32036.15	24.98	3.68	0.00	0.00	3	0	0	33	5	28	
320+50.00	32050.00	13.85	2.85	0.00	0.00	2	0	0	35	5	30	
320+76.17	32076.17	26.17	0.00	0.00	26.74	1	0	13	36	21	15	
322+35.42	32235.42	0.00	0.00	0.00	46.45	0	0	0	36	21	15	
322+50.00	32250.00	14.58	2.68	0.00	6.07	1	0	14	37	39	-2	
323+00.00	32300.00	50.00	4.51	0.00	19.24	7	0	23	44	68	-24	
323+25.00	32325.00	25.00	7.55	0.00	170.32	6	0	88	50	178	-128	
323+50.00	32350.00	25.00	24.71	0.00	11.23	15	0	84	65	283	-218	
323+99.14	32399.14	49.14	0.36	0.00	10.58	23	0	20	88	308	-220	
325+93.47	32593.47	0.00	0.48	0.00	5.70	0	0	0	88	308	-220	
326+00.00	32600.00	6.53	1.13	0.00	1.62	0	0	1	88	309	-221	
326+33.49	32633.49	33.49	1.99	0.00	0.00	2	0	1	90	310	-220	
326+58.47	32658.47	24.98	2.91	0.00	0.14	2	0	0	92	310	-218	
326+83.45	32683.45	24.98	0.01	0.00	6.87	1	0	3	93	314	-221	
327+00.00	32700.00	16.55	0.85	0.00	4.30	0	0	3	93	318	-225	
327+50.00	32750.00	50.00	3.65	0.00	0.00	4	0	4	97	323	-226	
328+00.00	32800.00	50.00	2.67	0.00	0.00	6	0	0	103	323	-220	
328+50.00	32850.00	50.00	1.83	0.00	0.00	4	0	0	107	323	-216	
328+63.45	32863.45	13.45	0.64	0.00	0.00	1	0	0	108	323	-215	
TOTALS						108	0	108				

NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	THIS DOES NOT SHOW UP IN CROSS SECTIONS
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
4 - MASS ORDINATE	(CUT-SALVAGED PAVT)-(FILL-FILL FACTOR)

PROJECT NO: 1530-05-73

HWY: USH 10

COUNTY: PEPIN

EARTHWORK DATA

SHEET

E

FILE NAME :

PLOT DATE : 7/24/2023 10:37 AM

PLOT BY : CBS2

PLOT NAME :

PLOT SCALE : 1:1

9

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STA 338+77 TO 346+22												
STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)			
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL		MASS ORDINATE
										1.00	1.25	
						NOTE 1	NOTE 2	NOTE 3	NOTE 1		NOTE 4	
338+76.76	33876.76	0.00	0.00	0.00	0.25	0	0	0	0	0	0	
339+00.00	33900.00	23.24	0.04	0.00	3.01	0	0	1	0	1	-1	
339+50.00	33950.00	50.00	0.10	0.00	6.17	0	0	8	0	11	-11	
339+96.76	33996.76	46.76	0.00	0.00	11.95	0	0	16	0	31	-31	
340+21.66	34021.66	24.90	0.83	0.00	4.15	0	0	7	0	40	-40	
340+46.56	34046.56	24.90	0.00	0.00	1.01	0	0	2	0	43	-43	
341+00.00	34100.00	53.44	0.00	0.00	7.75	0	0	9	0	54	-54	
341+50.00	34150.00	50.00	0.00	0.00	8.43	0	0	15	0	73	-73	
342+00.00	34200.00	50.00	0.33	0.00	4.77	0	0	12	0	88	-88	
342+50.00	34250.00	50.00	0.00	0.00	2.63	0	0	7	0	96	-96	
343+00.00	34300.00	50.00	0.00	0.00	17.15	0	0	18	0	119	-119	
343+50.00	34350.00	50.00	0.55	0.00	0.00	1	0	16	1	139	-138	
344+00.00	34400.00	50.00	0.38	0.00	3.11	1	0	3	2	143	-141	
344+52.00	34452.00	52.00	1.53	0.00	0.00	2	0	3	4	146	-142	
344+76.98	34476.98	24.98	2.10	0.00	0.00	2	0	0	6	146	-140	
345+01.96	34501.96	24.98	1.97	0.00	0.00	2	0	0	8	146	-138	
345+50.00	34550.00	48.04	8.16	0.00	0.00	9	0	0	17	146	-129	
346+00.00	34600.00	50.00	0.00	0.00	2.68	8	0	2	25	149	-124	
346+21.96	34621.96	21.96	0.54	0.00	0.00	0	0	1	25	150	-125	
TOTALS						25	0	120				

NOTES:	
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3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
4 - MASS ORDINATE	(CUT-SALVAGED PAVT)-(FILL-FILL FACTOR)

PROJECT NO: 1530-05-73

HWY: USH 10

COUNTY: PEPIN

EARTHWORK DATA

SHEET

E

FILE NAME :

PLOT DATE : 7/24/2023 10:37 AM

PLOT BY : CBS2

PLOT NAME :

PLOT SCALE : 1:1

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STA 396+19 TO 412+25												
STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)			
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL	MASS ORDINATE	
												1.00
NOTE 1	NOTE 2	NOTE 3	NOTE 1	NOTE 2	NOTE 3	NOTE 1	NOTE 2	NOTE 3	NOTE 4			
396+19.29	39619.29	0.00	0.38	0.00	0.00	0	0	0	0	0	0	
396+50.00	39650.00	30.71	1.44	0.00	0.00	1	0	0	1	0	1	
397+00.00	39700.00	50.00	1.23	0.00	0.01	2	0	0	3	0	3	
397+47.27	39747.27	47.27	22.86	0.00	9.53	21	0	8	24	10	14	
397+72.25	39772.25	24.98	24.92	0.00	0.00	22	0	4	46	15	31	
397+97.23	39797.23	24.98	23.54	0.00	0.00	22	0	0	68	15	53	
398+50.00	39850.00	52.77	17.63	0.00	0.14	40	0	0	108	15	93	
399+00.00	39900.00	50.00	18.67	0.00	0.00	34	0	0	142	15	127	
399+50.00	39950.00	50.00	16.57	0.00	0.00	33	0	0	175	15	160	
400+00.00	40000.00	50.00	17.33	0.00	0.00	31	0	0	206	15	191	
400+50.00	40050.00	50.00	17.25	0.00	0.00	32	0	0	238	15	223	
401+00.00	40100.00	50.00	16.64	0.00	0.04	31	0	0	269	15	254	
401+50.00	40150.00	50.00	16.43	0.00	0.00	31	0	0	300	15	285	
402+00.00	40200.00	50.00	16.43	0.00	0.00	30	0	0	330	15	315	
402+50.00	40250.00	50.00	17.53	0.00	0.00	31	0	0	361	15	346	
403+00.00	40300.00	50.00	18.48	0.00	0.00	33	0	0	394	15	379	
403+50.00	40350.00	50.00	17.31	0.00	0.00	33	0	0	427	15	412	
404+00.00	40400.00	50.00	18.05	0.00	0.00	33	0	0	460	15	445	
404+50.00	40450.00	50.00	19.60	0.00	0.00	35	0	0	495	15	480	
405+00.00	40500.00	50.00	23.80	0.00	0.00	40	0	0	535	15	520	
405+50.00	40550.00	50.00	29.38	0.00	0.00	49	0	0	584	15	569	
406+00.00	40600.00	50.00	30.28	0.00	0.00	55	0	0	639	15	624	
406+37.76	40637.76	37.76	19.37	0.00	26.61	35	0	19	674	39	635	
409+18.98	40918.98	0.00	0.00	0.00	6.98	0	0	0	674	39	635	
409+50.00	40950.00	31.02	3.05	0.00	0.00	2	0	4	676	44	632	
410+00.00	41000.00	50.00	1.57	0.00	0.00	4	0	0	680	44	636	
410+50.00	41050.00	50.00	1.46	0.00	0.00	3	0	0	683	44	639	
410+84.60	41084.60	34.60	2.20	0.00	0.02	2	0	0	685	44	641	
411+08.32	41108.32	23.72	2.87	0.00	0.00	2	0	0	687	44	643	
411+34.56	41134.56	26.24	0.44	0.00	1.36	2	0	1	689	45	644	
411+50.00	41150.00	15.44	1.30	0.00	0.00	0	0	0	689	45	644	
412+00.00	41200.00	50.00	0.00	0.00	0.68	1	0	1	690	46	644	
412+24.75	41224.75	24.75	0.74	0.00	0.00	0	0	0	690	46	644	
TOTALS						690	195	37				

NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	THIS DOES NOT SHOW UP IN CROSS SECTIONS
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
4 - MASS ORDINATE	(CUT-SALVAGED PAVT)-(FILL-FILL FACTOR)

PROJECT NO: 1530-05-73

HWY: USH 10

COUNTY: PEPIN

EARTHWORK DATA

SHEET

E

FILE NAME :

PLOT DATE : 7/24/2023 10:37 AM

PLOT BY : CBS2

PLOT NAME :

PLOT SCALE : 1:1

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STA 419+15 TO 428+00											
STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL	MASS ORDINATE
NOTE 1	NOTE 2	NOTE 3	NOTE 1	NOTE 2	NOTE 3	NOTE 1	NOTE 2	NOTE 3	NOTE 4	NOTE 4	
419+50.00	41950.00	0.00	0.65	0.00	0.00	0	0	0	0	0	0
419+94.25	41994.25	44.25	0.46	0.00	8.11	1	0	7	1	9	-8
420+00.00	42000.00	5.75	0.43	0.00	8.40	0	0	2	1	11	-10
420+19.25	42019.25	19.25	0.96	0.00	11.25	0	0	7	1	20	-19
420+44.25	42044.25	25.00	0.60	0.00	0.00	1	0	5	2	26	-24
420+50.00	42050.00	5.75	0.49	0.00	0.62	0	0	0	2	26	-24
421+00.00	42100.00	50.00	1.50	0.00	0.00	2	0	1	4	28	-24
421+50.00	42150.00	50.00	3.46	0.00	0.02	5	0	0	9	28	-19
421+75.23	42175.23	25.23	4.54	0.00	0.00	4	0	0	13	28	-15
422+00.25	42200.25	25.02	3.09	0.00	0.00	4	0	0	17	28	-11
422+25.23	42225.23	24.98	2.80	0.00	0.00	3	0	0	20	28	-8
422+50.00	42250.00	24.77	1.55	0.00	0.07	2	0	0	22	28	-6
422+65.85	42265.85	15.85	0.04	0.00	9.59	0	0	3	22	31	-9
424+73.29	42473.29	0.00	0.22	0.00	15.58	0	0	0	22	31	-9
425+00.00	42500.00	26.71	2.37	0.00	0.00	1	0	8	23	41	-18
425+38.47	42538.47	38.47	3.34	0.00	0.02	4	0	0	27	41	-14
426+01.42	42601.42	62.95	0.15	0.00	26.97	4	0	31	31	80	-49
426+13.47	42613.47	12.05	0.36	0.00	54.87	0	0	18	31	103	-72
426+26.42	42626.42	12.95	0.63	0.00	96.67	0	0	36	31	148	-117
426+38.45	42638.45	12.03	1.05	0.00	135.54	0	0	52	31	213	-182
426+51.42	42651.42	12.97	1.32	0.00	140.19	1	0	66	32	295	-263
427+00.00	42700.00	48.58	1.93	0.00	92.52	3	0	209	35	556	-521
427+50.00	42750.00	50.00	0.94	0.00	96.10	3	0	175	38	775	-737
428+00.00	42800.00	50.00	0.68	0.00	66.03	2	0	150	40	963	-923
			TOTALS			40	0	770			

NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	THIS DOES NOT SHOW UP IN CROSS SECTIONS
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
4 - MASS ORDINATE	(CUT-SALVAGED PAVT)-(FILL-FILL FACTOR)

PROJECT NO: 1530-05-73

HWY: USH 10

COUNTY: PEPIN

EARTHWORK DATA

SHEET

E

STA 0+00 TO 2+18 BAUER LN											
STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL	MASS ORDINATE
NOTE 1	NOTE 2	NOTE 3	NOTE 1	NOTE 4							
0+00.13	0.13	0.00	0.32	0.00	0.28	0	0	0	0	0	0
0+50.00	50.00	49.87	0.69	0.00	0.00	1	0	0	1	0	1
1+00.00	100.00	50.00	1.03	0.00	0.00	2	0	0	3	0	3
1+50.00	150.00	50.00	0.00	0.00	0.18	1	0	0	4	0	4
2+00.00	200.00	50.00	0.37	0.00	0.00	0	0	0	4	0	4
2+17.56	217.56	17.56	0.64	0.00	0.00	0	0	0	4	0	4
TOTALS						4	0	0			

STA 0+35 TO 1+10 DWY											
STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL	MASS ORDINATE
NOTE 1	NOTE 2	NOTE 3	NOTE 1	NOTE 4							
0+35.00	35.00	0.00	8.11	0.00	23.78	0	0	0	0	0	0
0+75.00	75.00	40.00	28.48	0.00	120.59	27	0	107	27	134	-107
1+00.00	100.00	25.00	25.13	0.00	9.46	25	0	60	52	209	-157
1+10.00	110.00	10.00	12.19	0.00	0.03	7	0	2	59	211	-152
TOTALS						59	0	169			

NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	THIS DOES NOT SHOW UP IN CROSS SECTIONS
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
4 - MASS ORDINATE	(CUT-SALVAGED PAVT)-(FILL-FILL FACTOR)



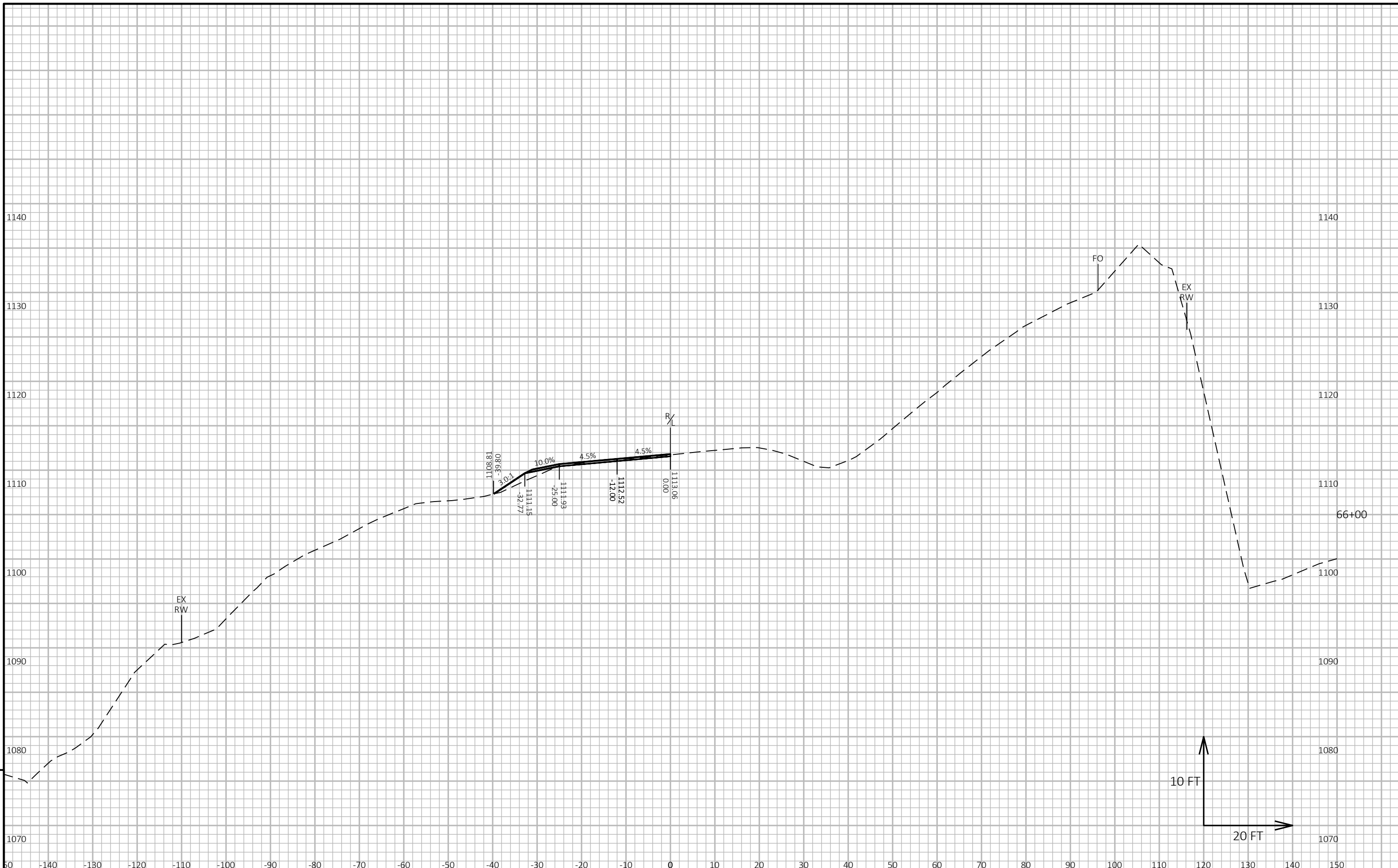
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PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E

FILE NAME : O:\PDS\C3D\15300503\SHEETSPLAN\090201-XS-BEGIN-TO-BAUERLN.DWG PLOT DATE : 7/21/2023 12:08 PM PLOT BY : CORY IHDE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 1



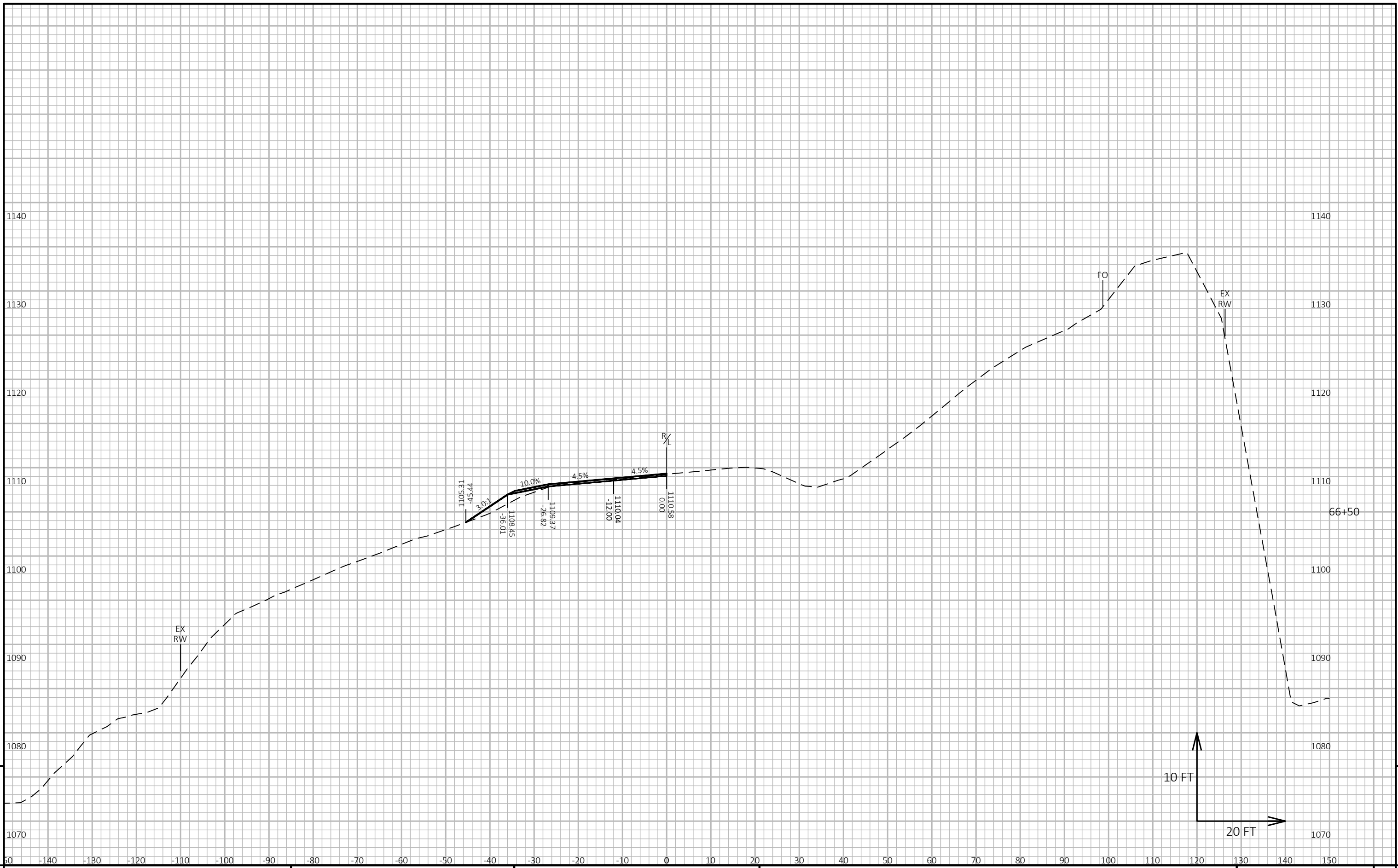
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PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E

FILE NAME : O:\PDS\C3D\15300503\SHEETSPLAN\090201-XS-BEGIN-TO-BAUERLN.DWG PLOT DATE : 7/21/2023 12:09 PM PLOT BY : CORY IHDE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 2



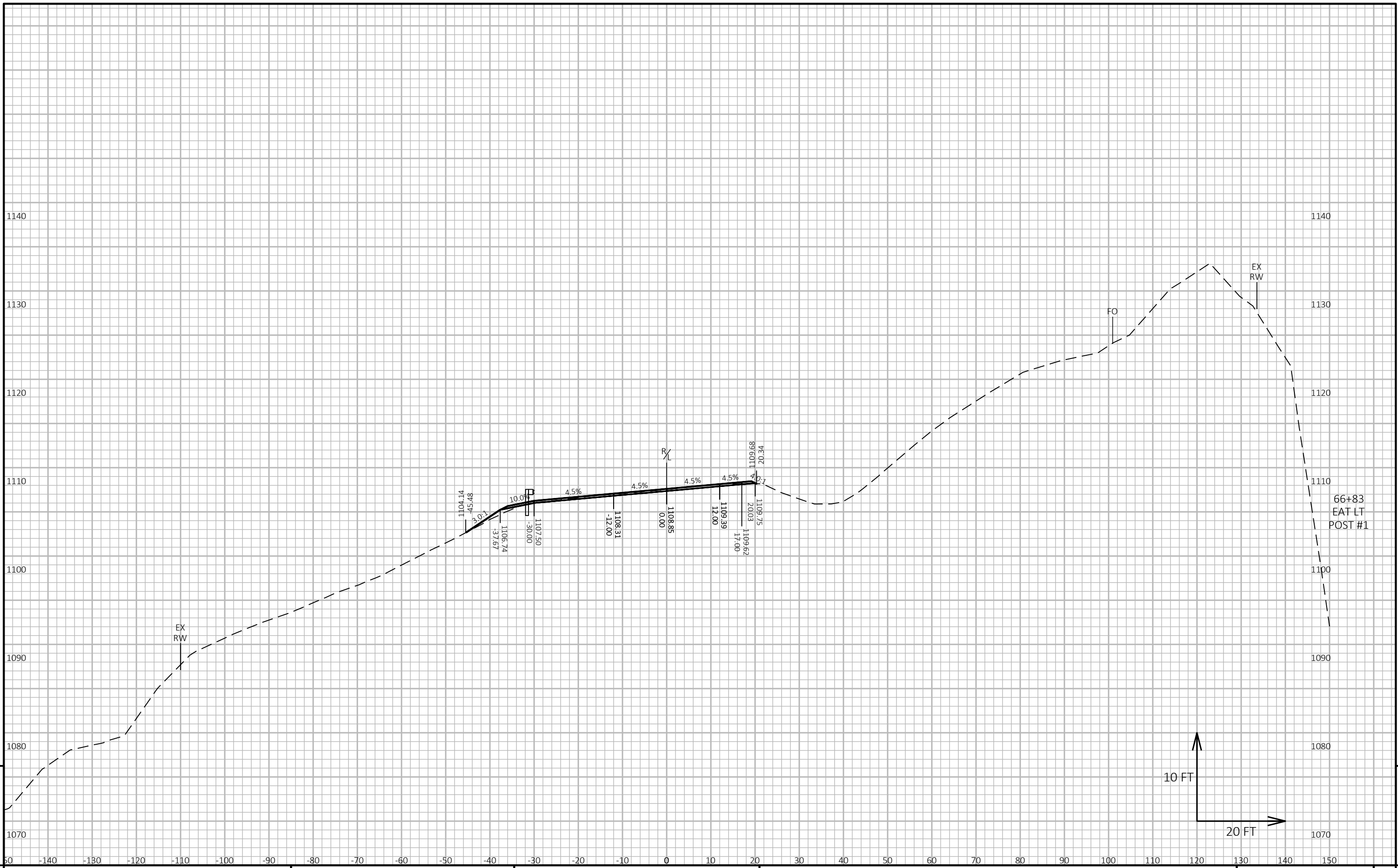
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PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E

FILE NAME : O:\PDS\C3D\15300503\SHEETSPLAN\090201-XS-BEGIN-TO-BAUERLN.DWG PLOT DATE : 7/21/2023 12:09 PM PLOT BY : CORY IHDE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 3



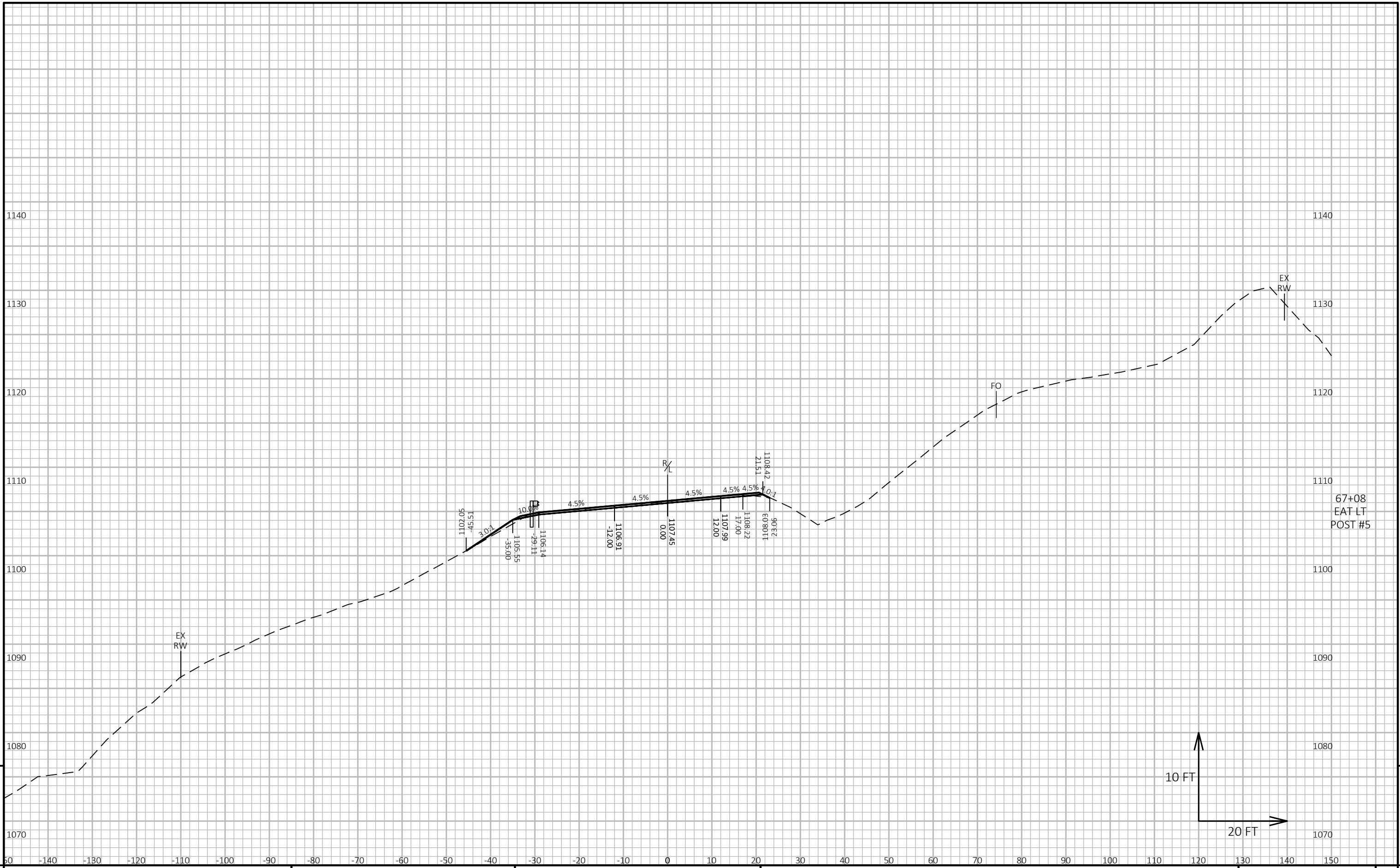
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PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E

FILE NAME : O:\PDS\3D\15300503\SHEETS\PLAN\090201-XS-BEGIN-TO-BAUERLN.DWG PLOT DATE : 7/21/2023 12:10 PM PLOT BY : CORY IHDE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 4



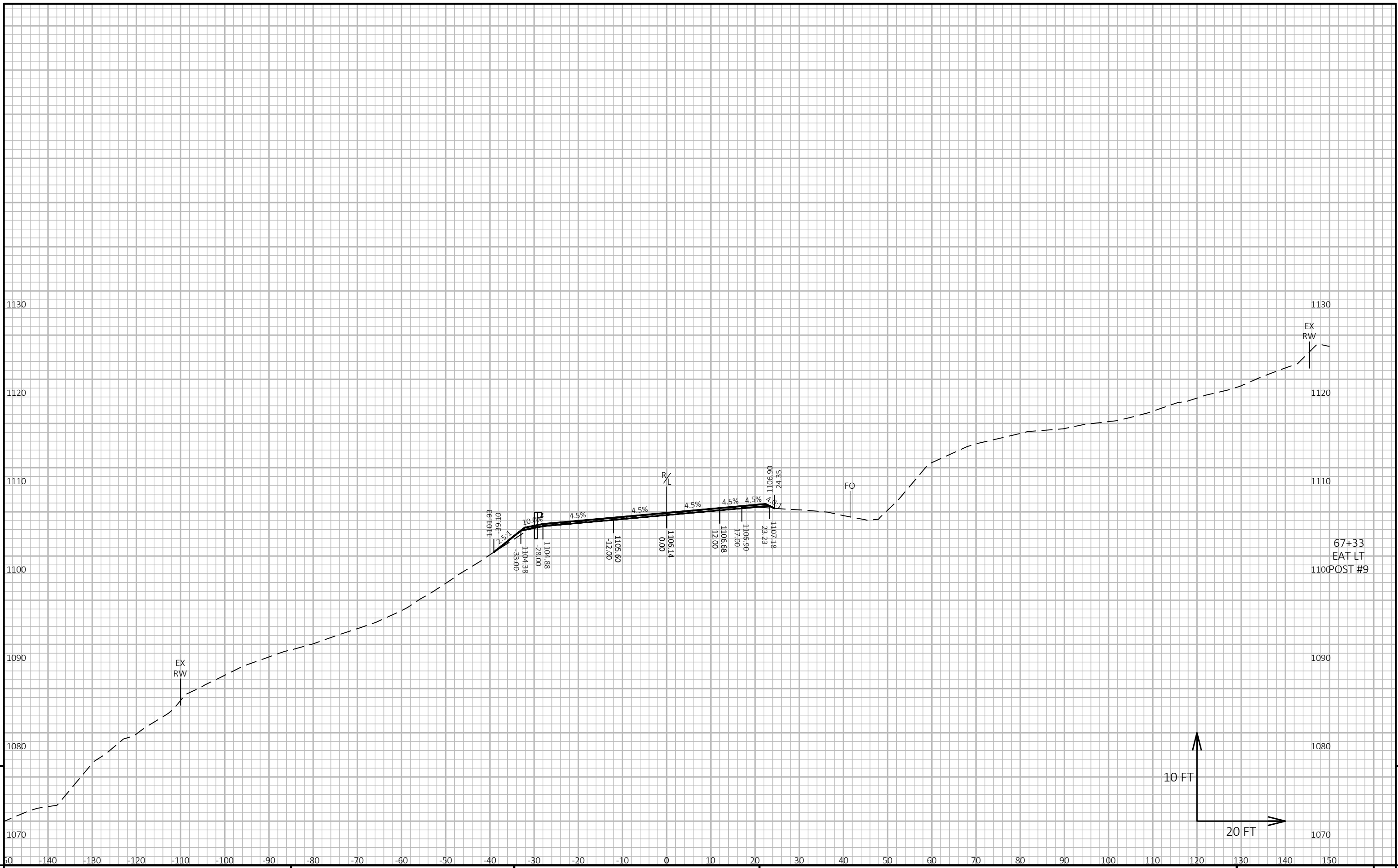
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PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E

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LAYOUT NAME - 5

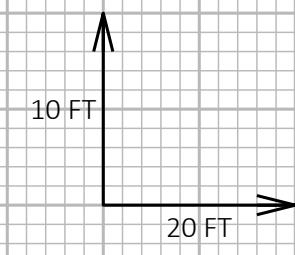


PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E

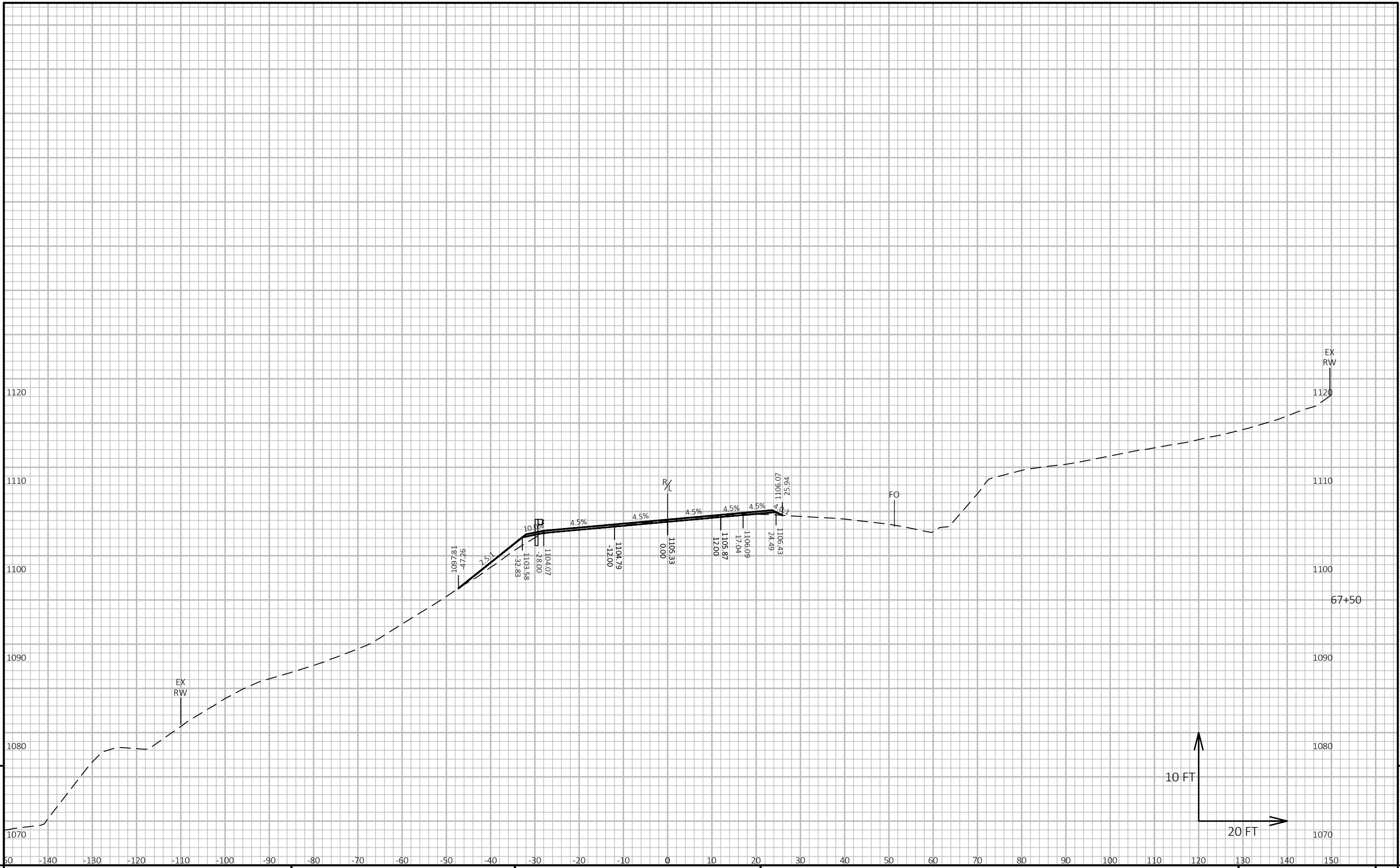
FILE NAME : O:\PDS\C3D\15300503\SHEETSPLAN\090201-XS-BEGIN-TO-BAUERLN.DWG PLOT DATE : 7/21/2023 12:11 PM PLOT BY : CORY IHDE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

9

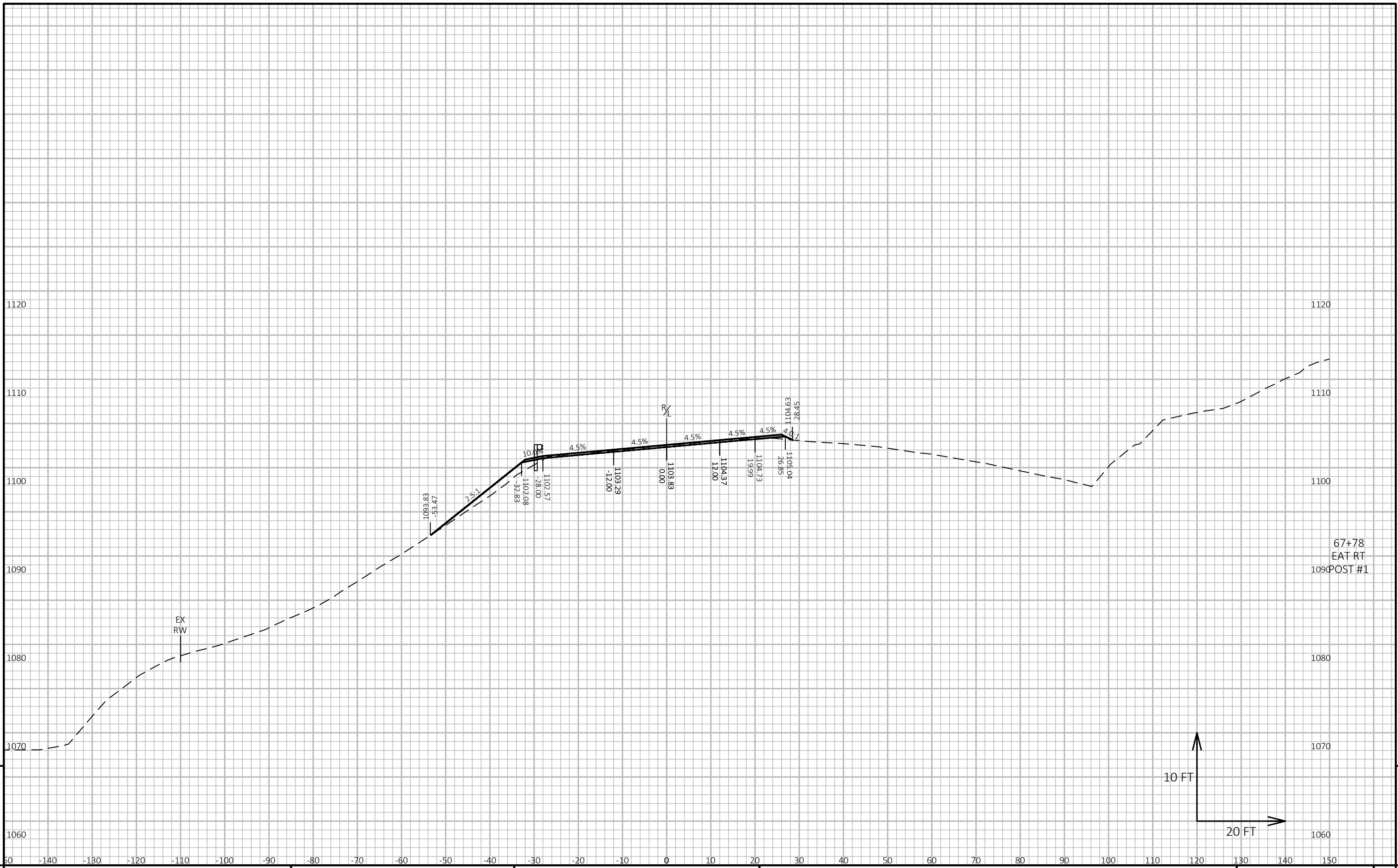
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67+33
EAT LT
POST #9



PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E



9

9

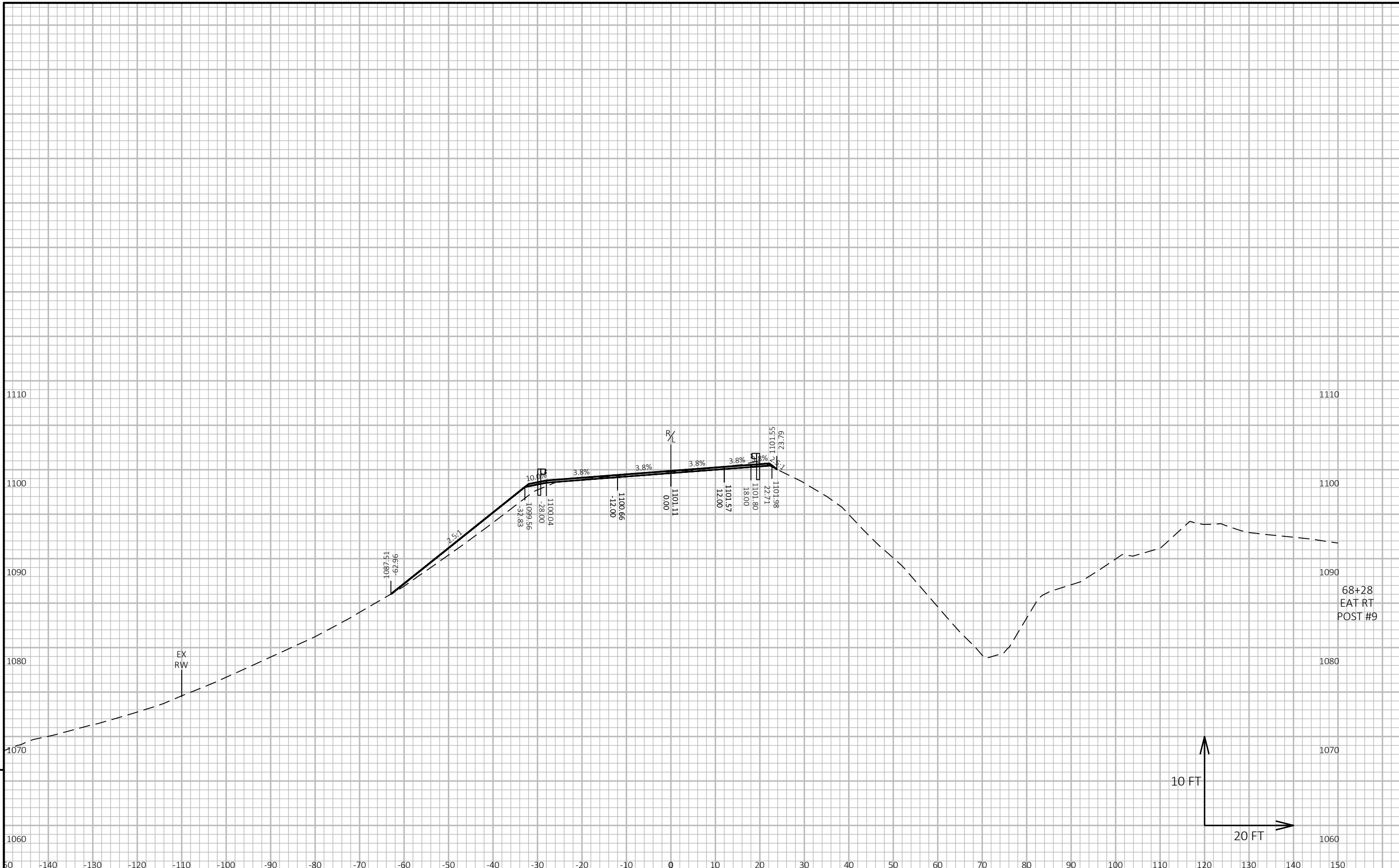
PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E

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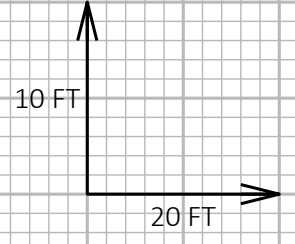
LAYOUT NAME - 8

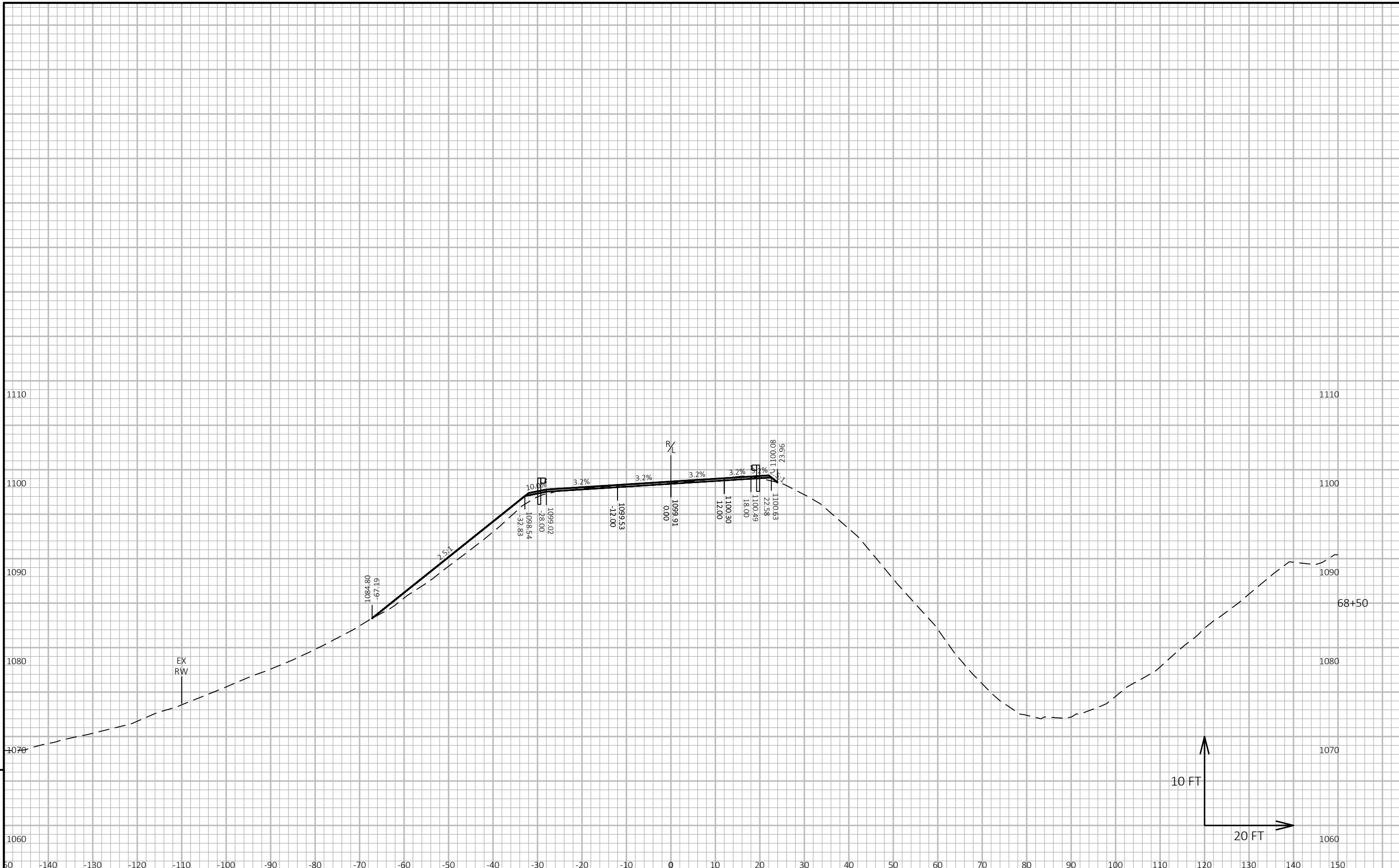


PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E

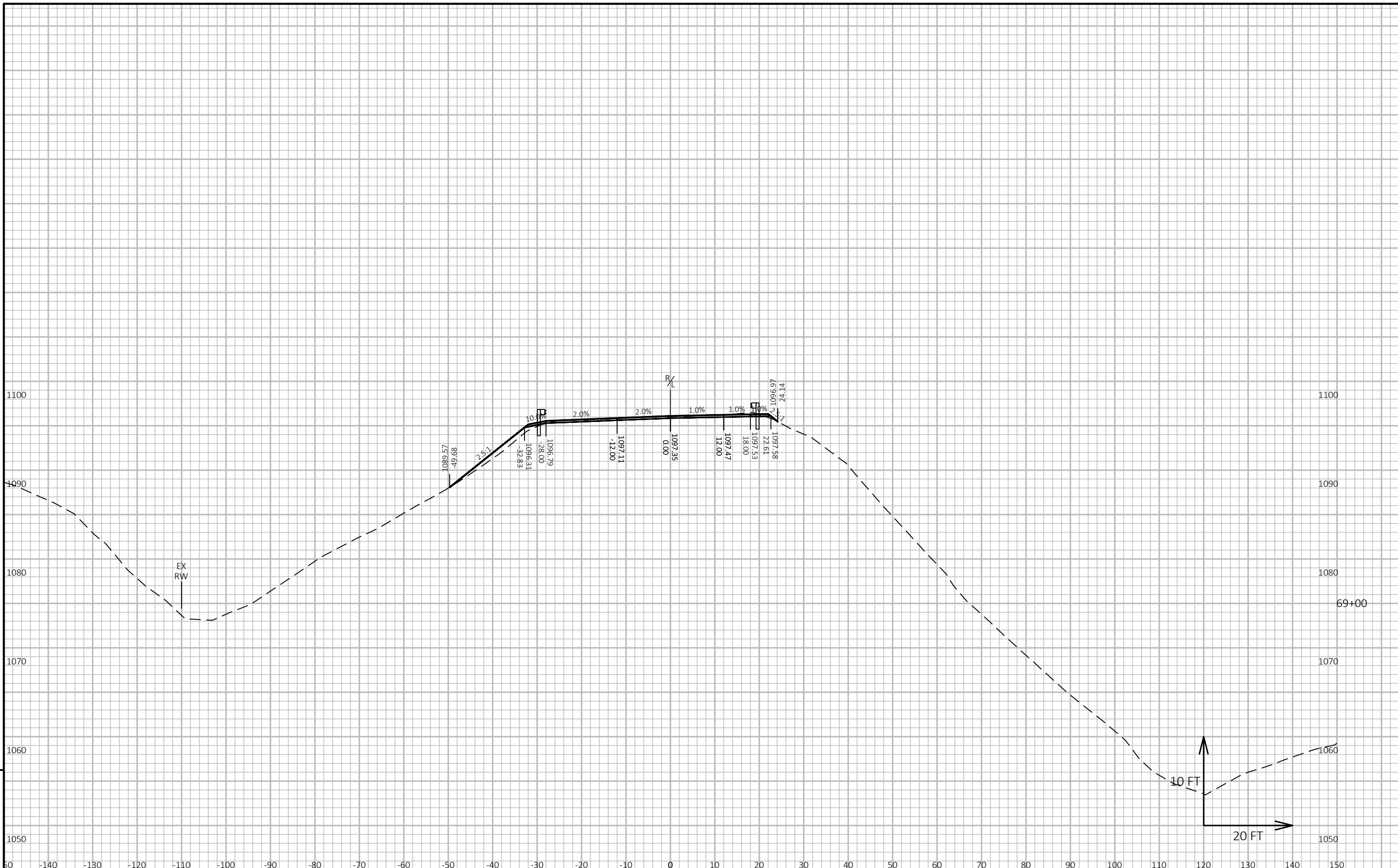


68+28
EAT RT
POST #9





PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET 9



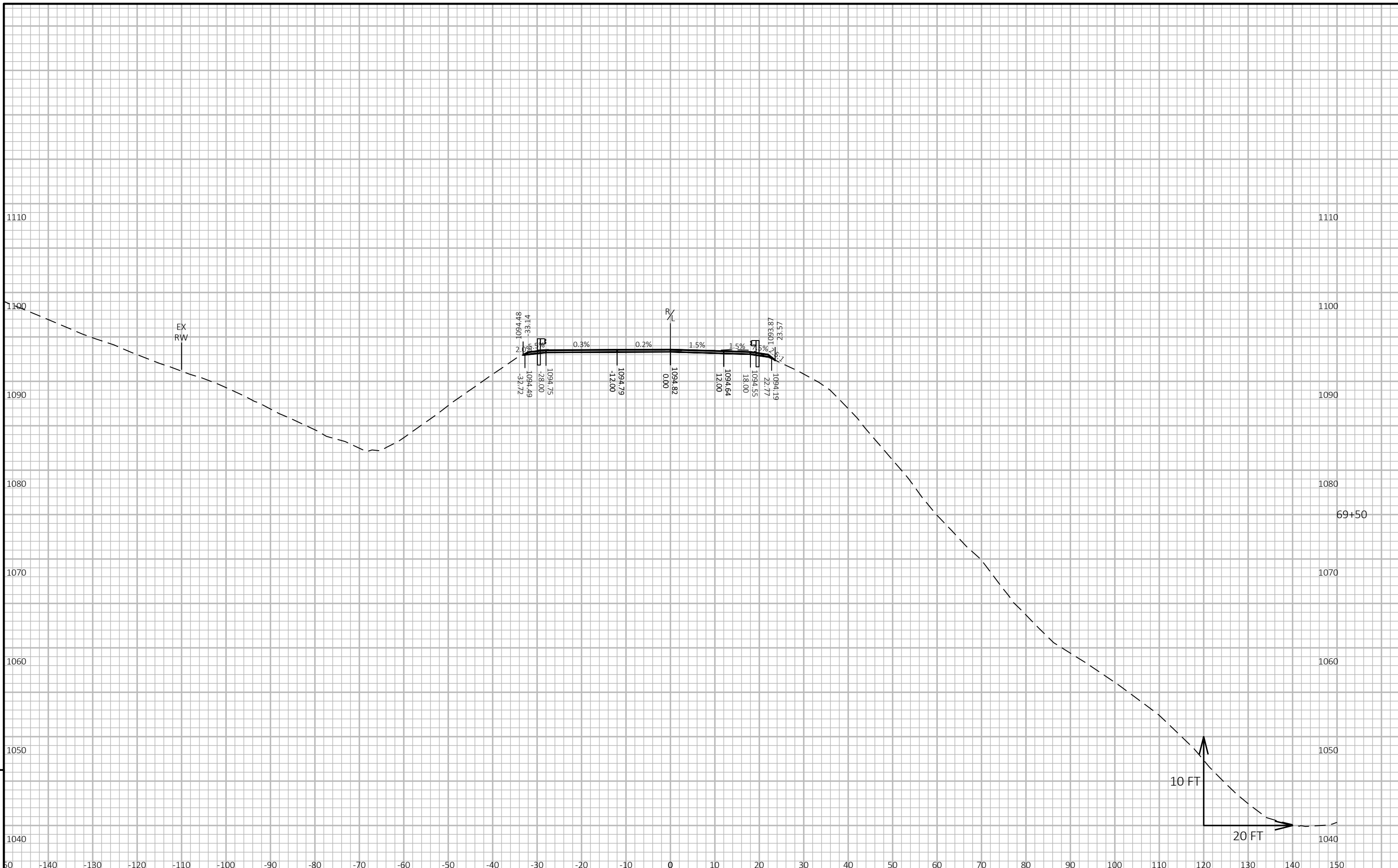
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PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E

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LAYOUT NAME - 12



PROJECT NO: 1530-05-73	HWY: USH 10	COUNTY: PEPIN	CROSS SECTIONS: USH 10	SHEET
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9

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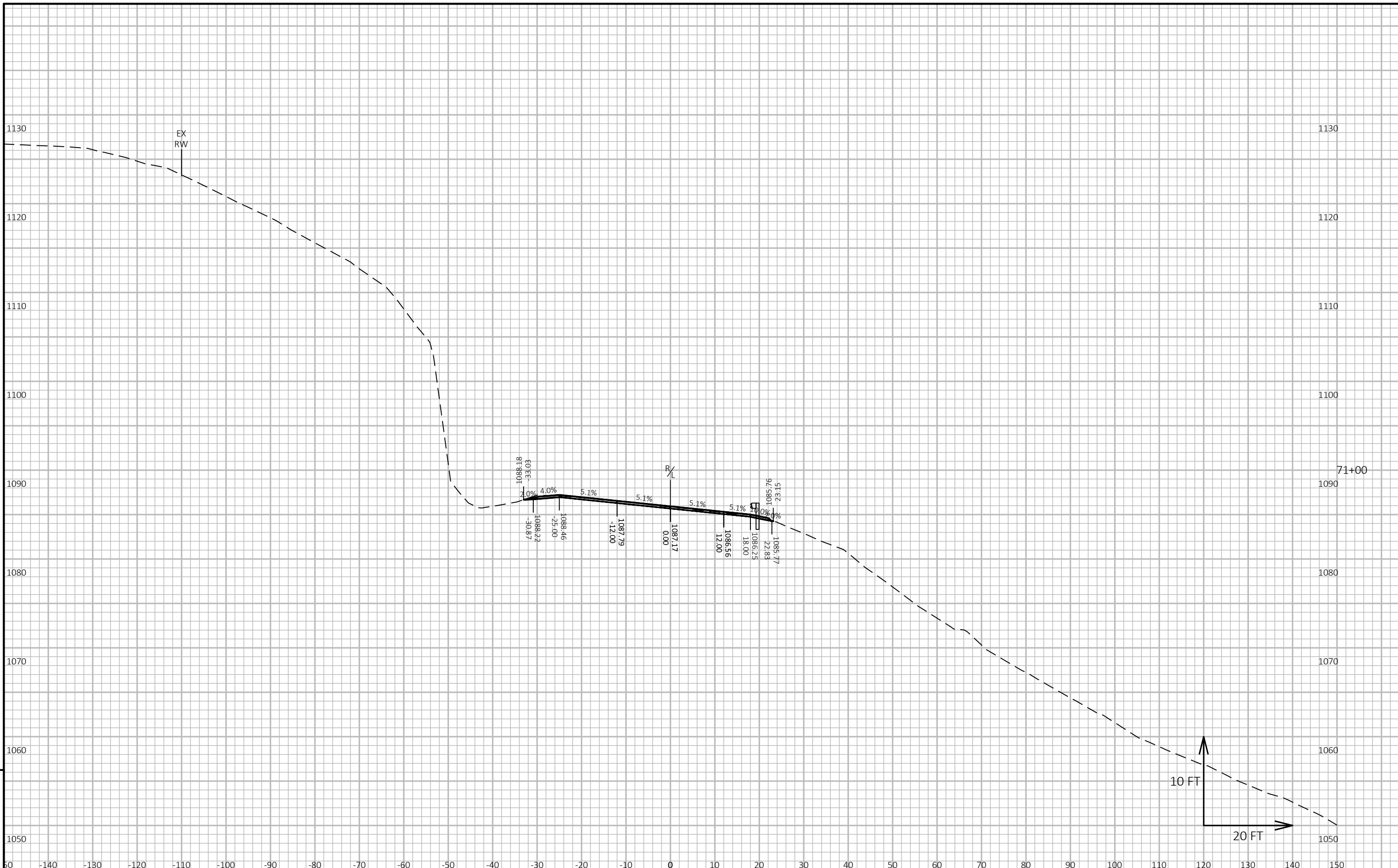
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PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E

FILE NAME : O:\PDS\C3D\15300503\SHEETSPLAN\090201-XS-BEGIN-TO-BAUERLN.DWG PLOT DATE : 7/21/2023 12:16 PM PLOT BY : CORY IHDE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 17



EX
RW

71+00

10 FT

20 FT

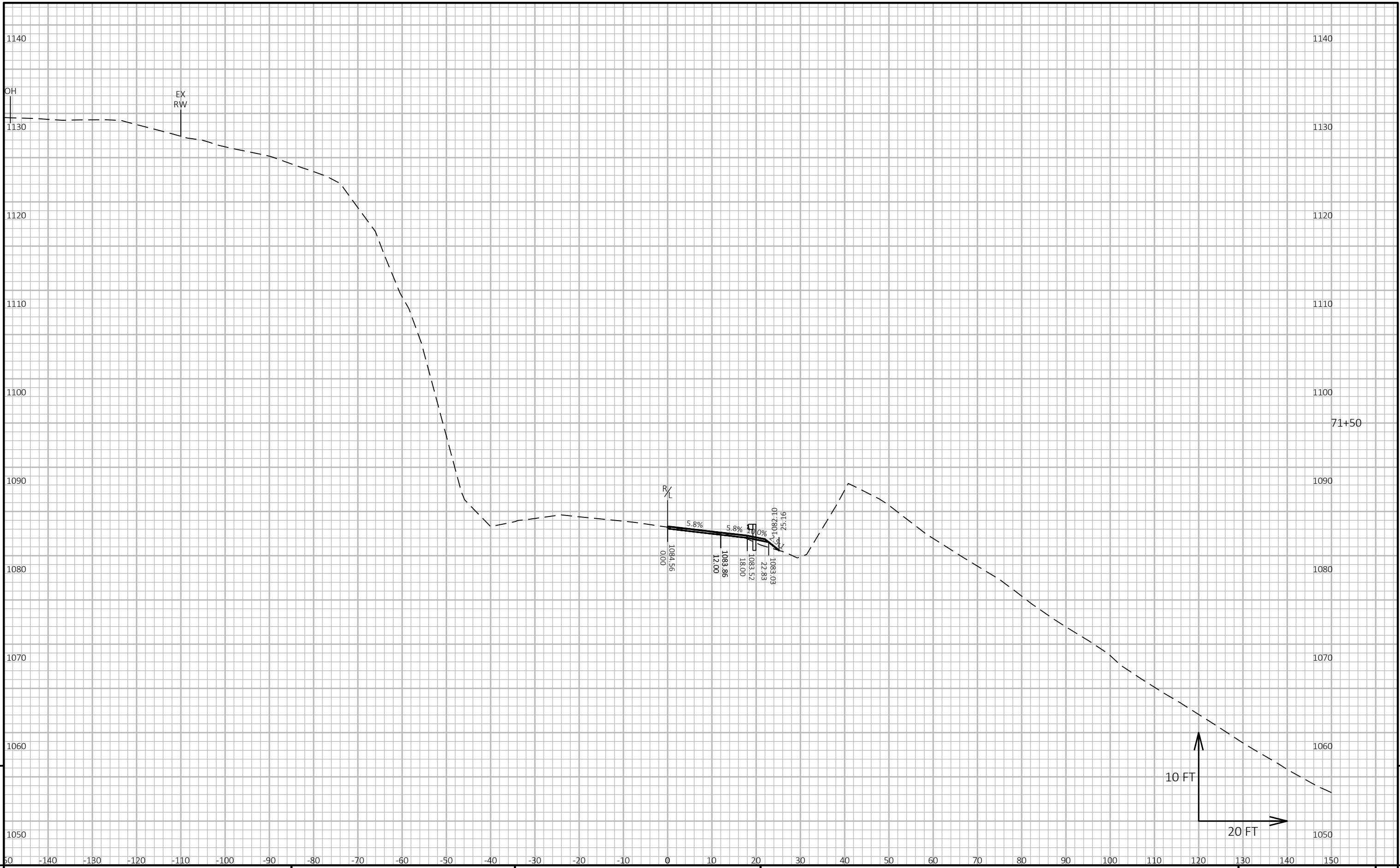
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PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E

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LAYOUT NAME - 18



9

9

PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E

FILE NAME : O:\PDS\C3D\15300503\SHEETSPLAN\090201-XS-BEGIN-TO-BAUERLN.DWG PLOT DATE : 7/21/2023 12:17 PM PLOT BY : CORY IHDE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 19



9

9

PROJECT NO: 1530-05-73	HWY: USH 10	COUNTY: PEPIN	CROSS SECTIONS: USH 10	SHEET	E
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FILE NAME : O:\PDS\C3D\15300503\SHEETSPLAN\090201-XS-BEGIN-TO-BAUERLN.DWG PLOT DATE : 7/21/2023 12:18 PM PLOT BY : CORY IHDE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 20

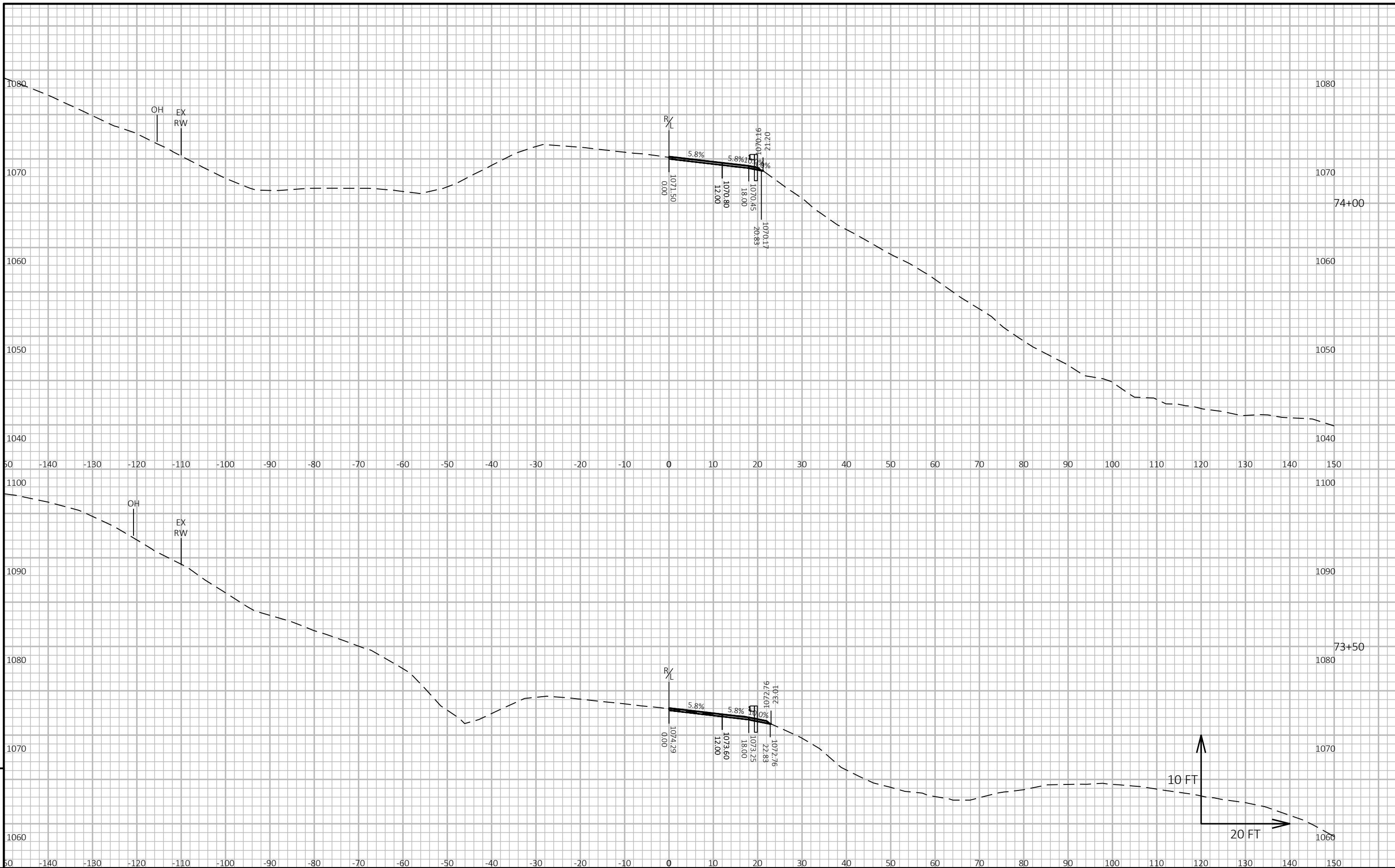


PROJECT NO: 1530-05-73	HWY: USH 10	COUNTY: PEPIN	CROSS SECTIONS: USH 10	SHEET
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9

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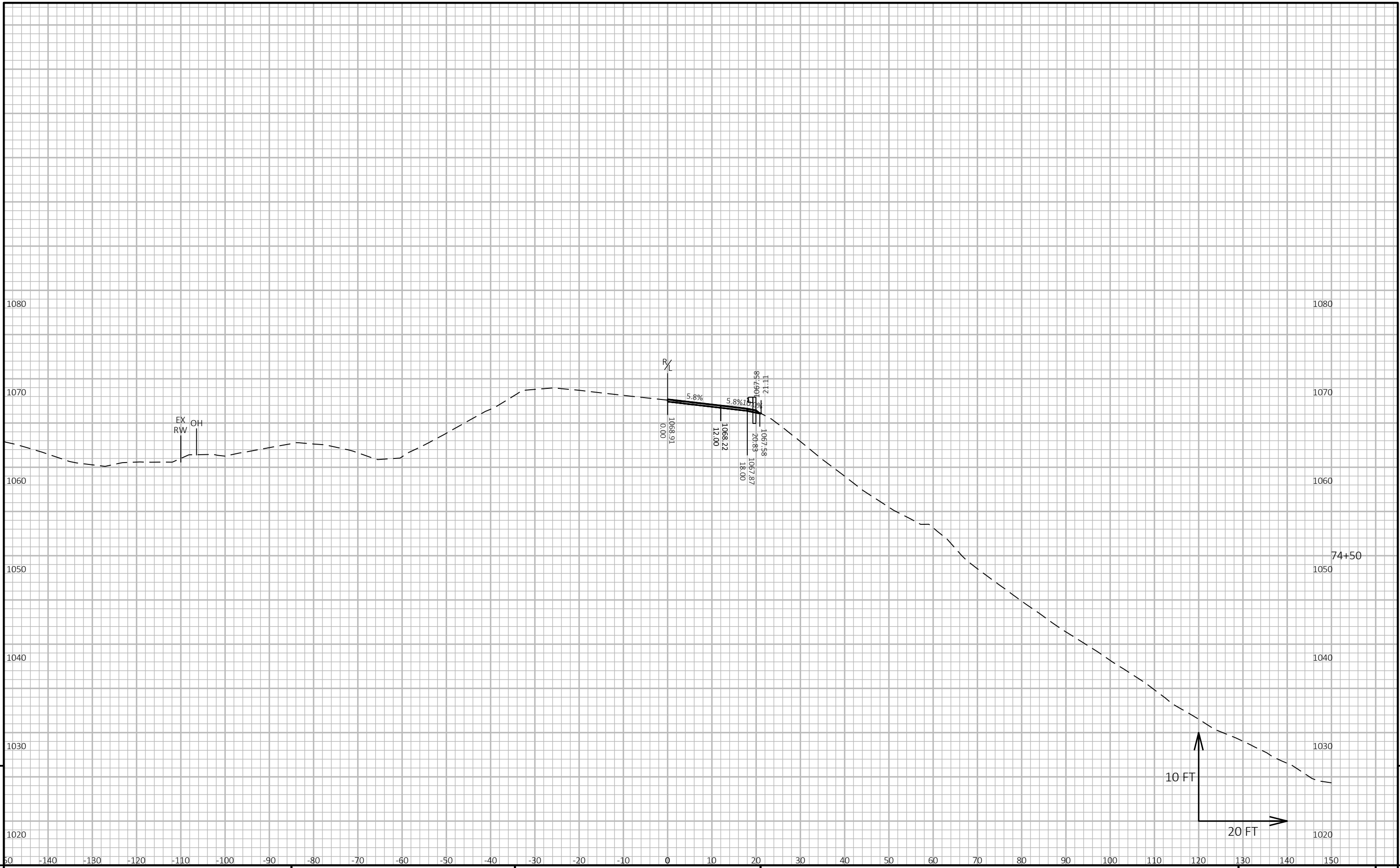
E



9

9

PROJECT NO: 1530-05-73	HWY: USH 10	COUNTY: PEPIN	CROSS SECTIONS: USH 10	SHEET	E
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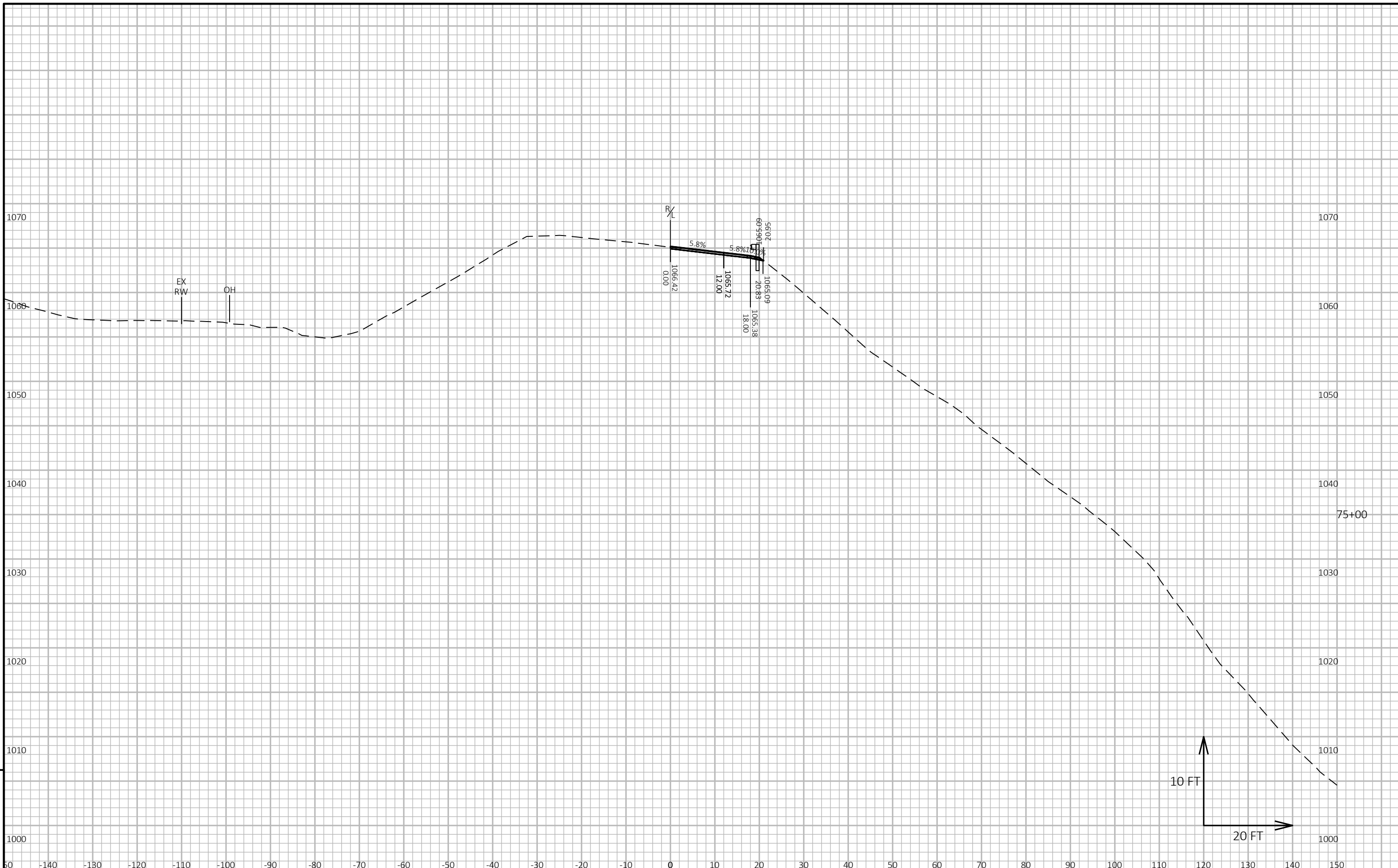
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PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E

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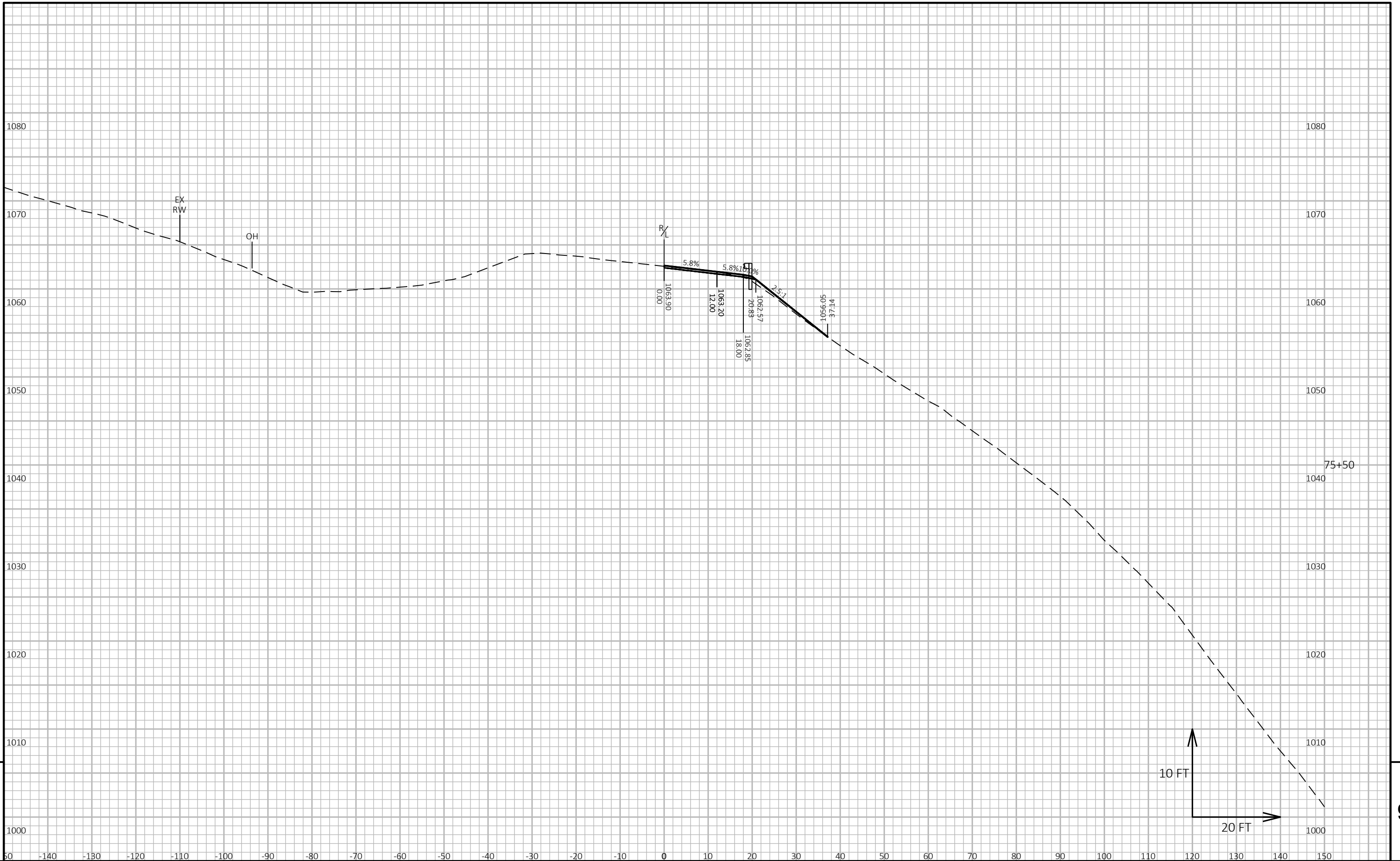
LAYOUT NAME - 24



9

9

PROJECT NO: 1530-05-73	HWY: USH 10	COUNTY: PEPIN	CROSS SECTIONS: USH 10	SHEET	E
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PROJECT NO: 1530-05-73

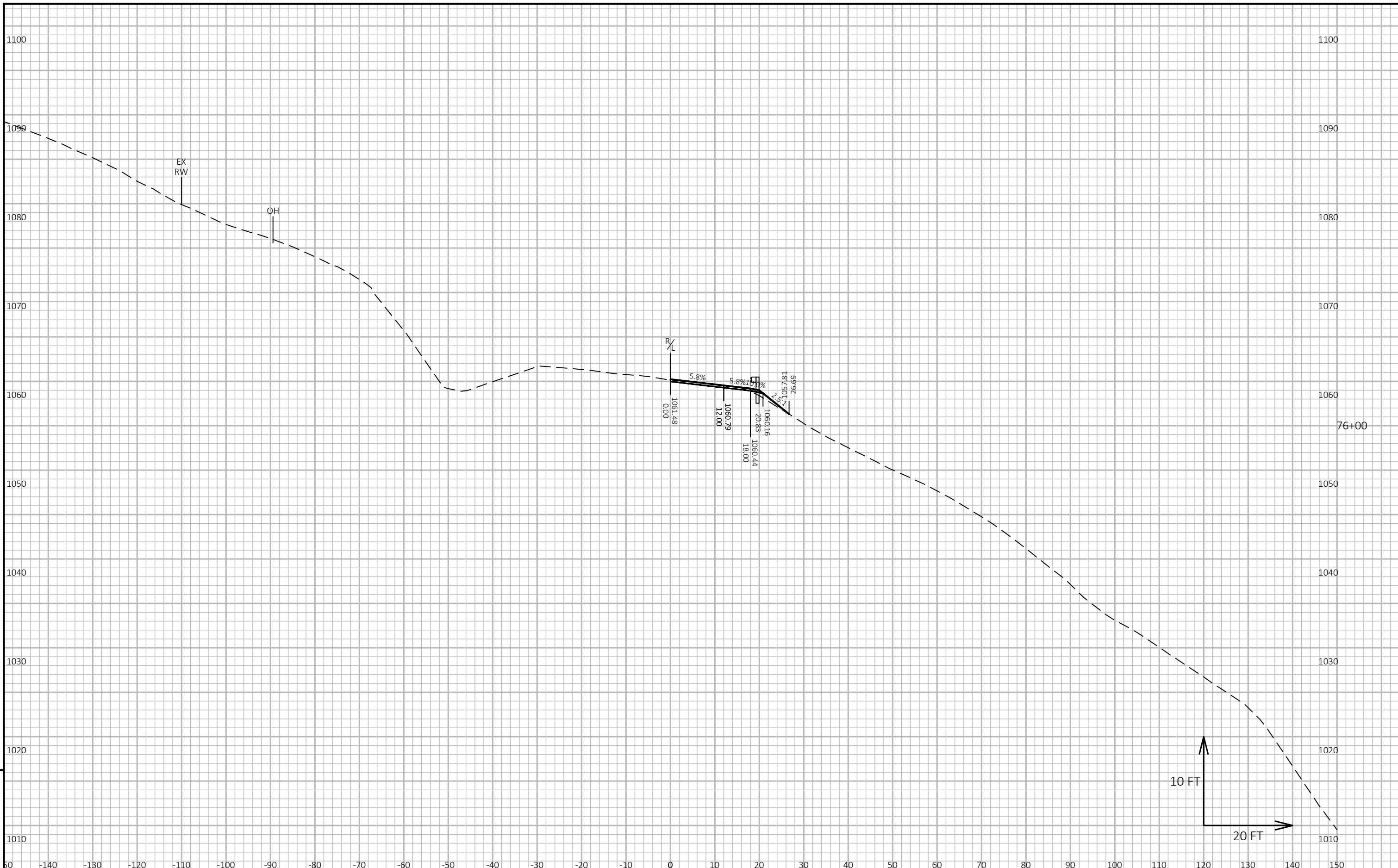
HWY: USH 10

COUNTY: PEPIN

CROSS SECTIONS: USH 10

SHEET

E



9

9

PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E

FILE NAME : O:\PDS\C3D\15300503\SHEETSPLAN\090201-XS-BEGIN-TO-BAUERLN.DWG PLOT DATE : 7/21/2023 12:21 PM PLOT BY : CORY IHDE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 27



9

9

PROJECT NO: 1530-05-73	HWY: USH 10	COUNTY: PEPIN	CROSS SECTIONS: USH 10	SHEET	E
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FILE NAME : O:\PDS\C3D\15300503\SHEETSPLAN\090201-XS-BEGIN-TO-BAUERLN.DWG PLOT DATE : 7/21/2023 12:22 PM PLOT BY : CORY IHDE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 28



PROJECT NO: 1530-05-73

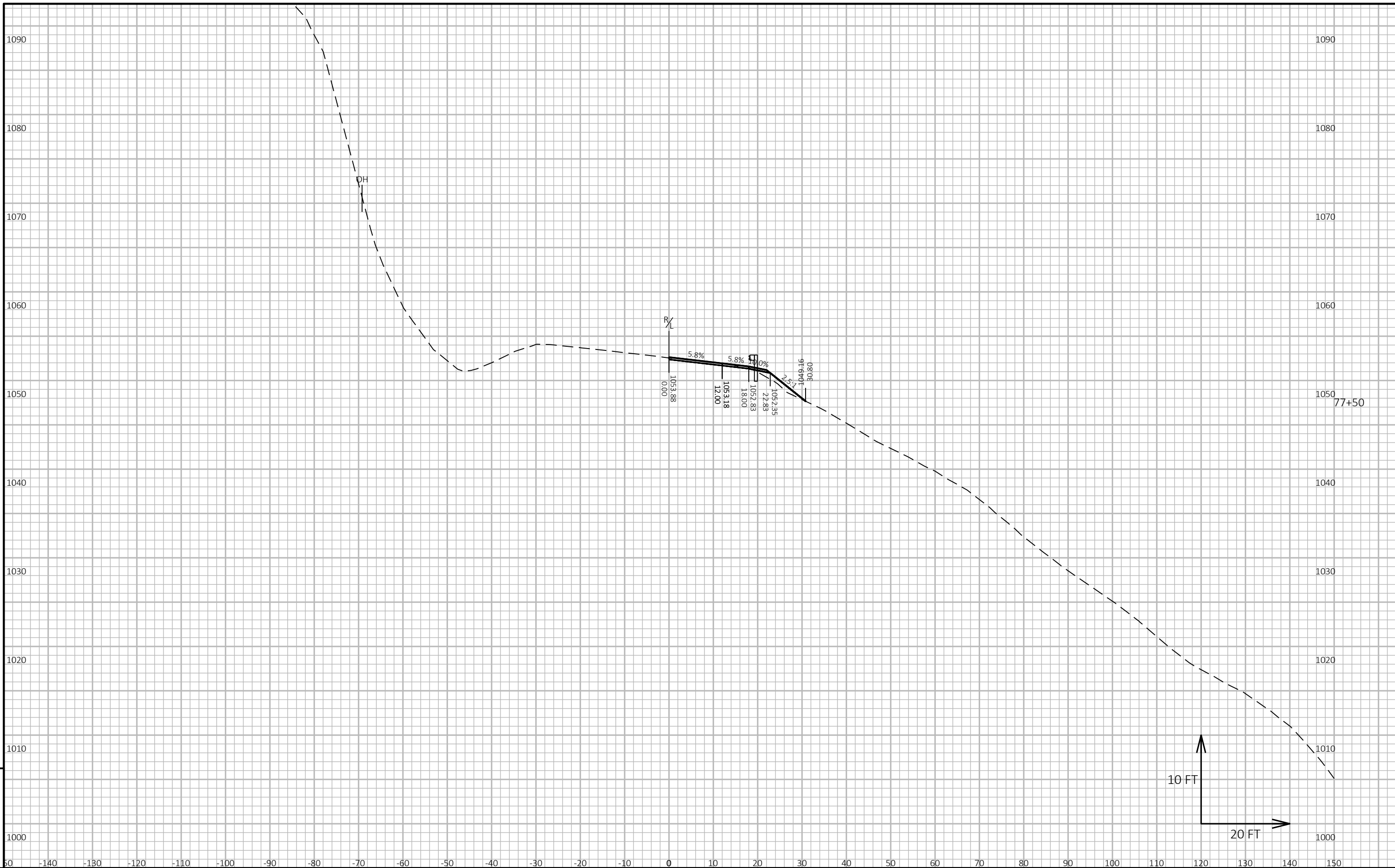
HWY: USH 10

COUNTY: PEPIN

CROSS SECTIONS: USH 10

SHEET

E



PROJECT NO: 1530-05-73

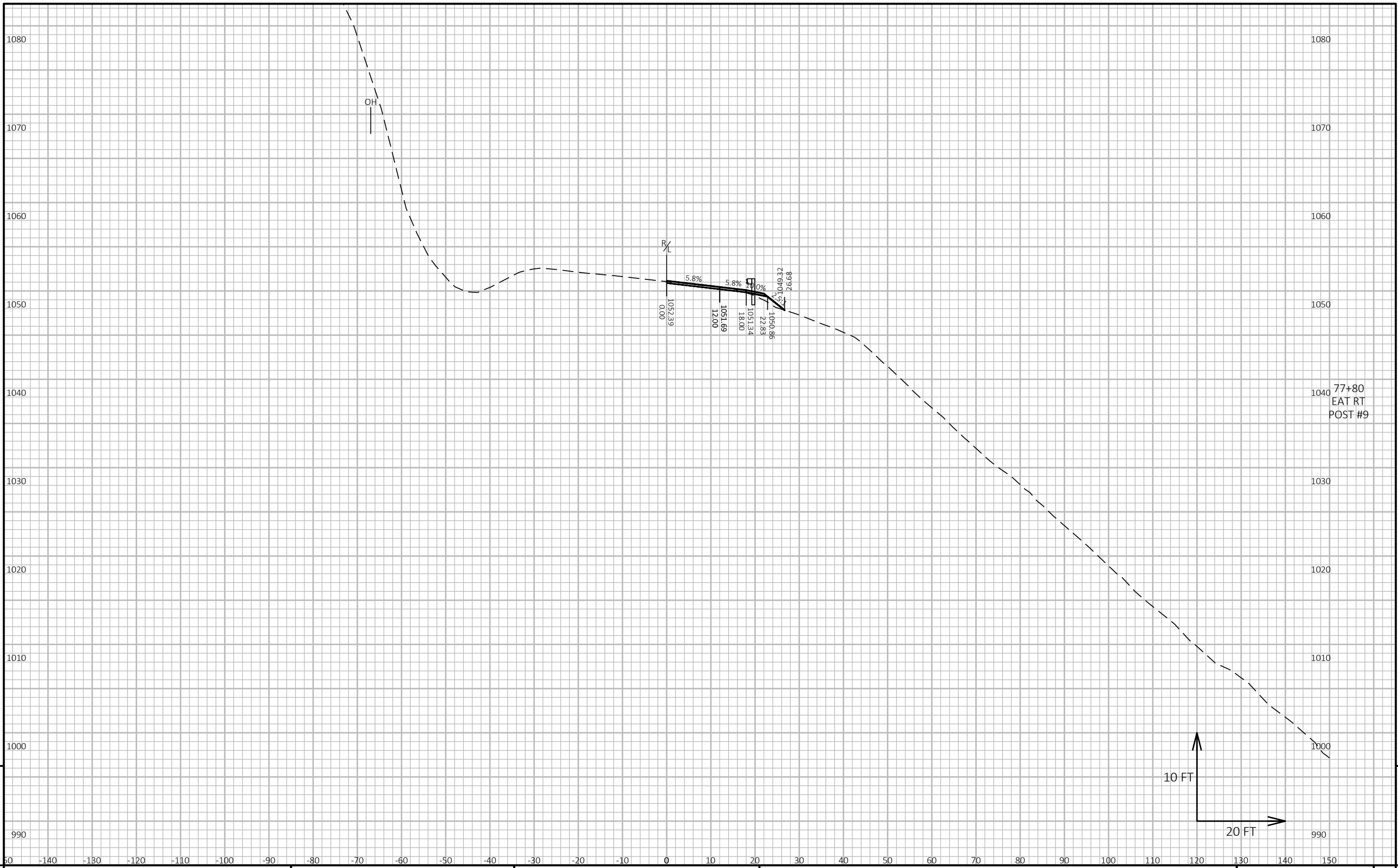
HWY: USH 10

COUNTY: PEPIN

CROSS SECTIONS: USH 10

SHEET

E



77+80
EAT RT
POST #9

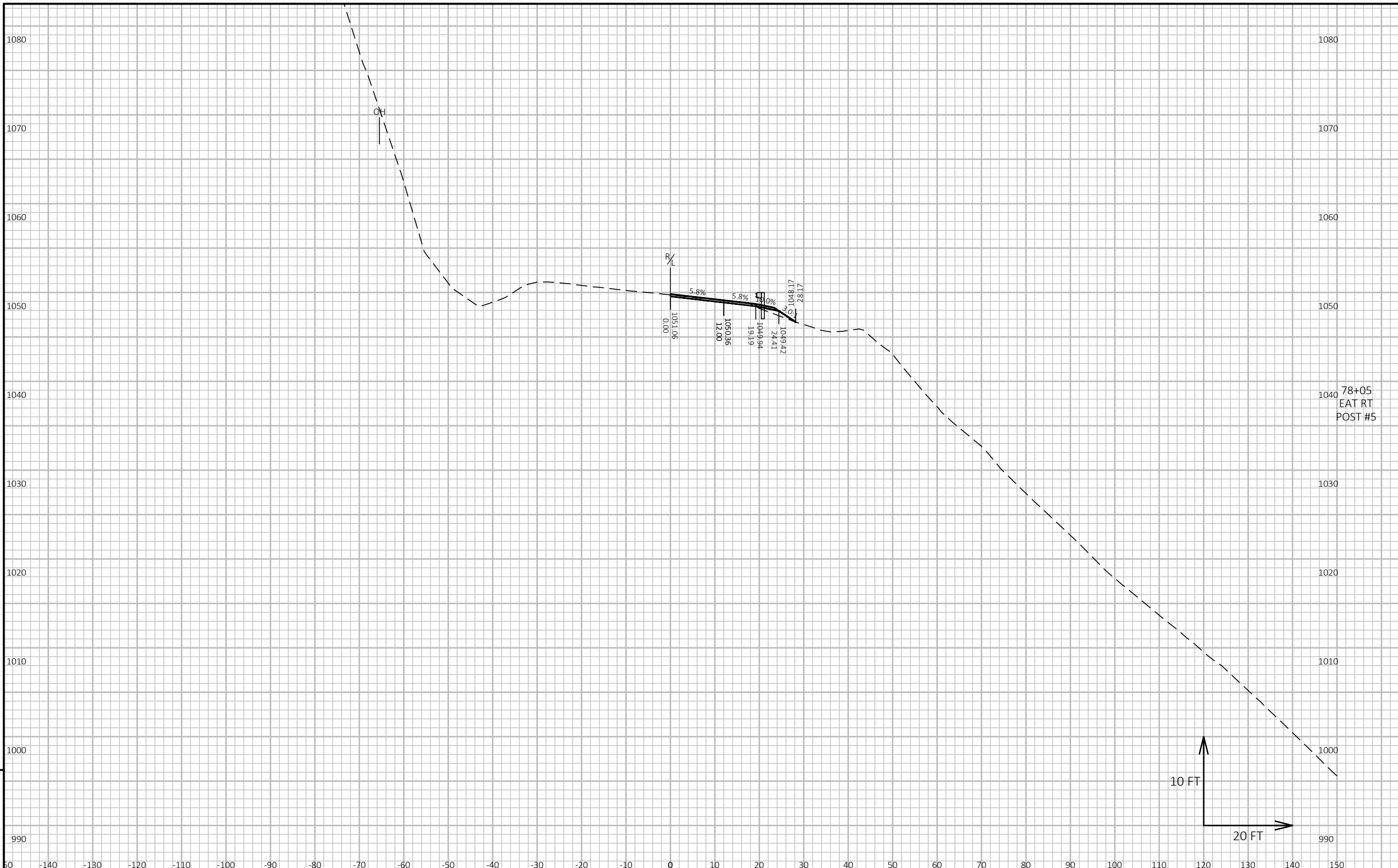
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PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E

FILE NAME : O:\PDS\C3D\15300503\SHEETSPLAN\090201-XS-BEGIN-TO-BAUERLN.DWG PLOT DATE : 7/21/2023 12:23 PM PLOT BY : CORY IHDE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 31



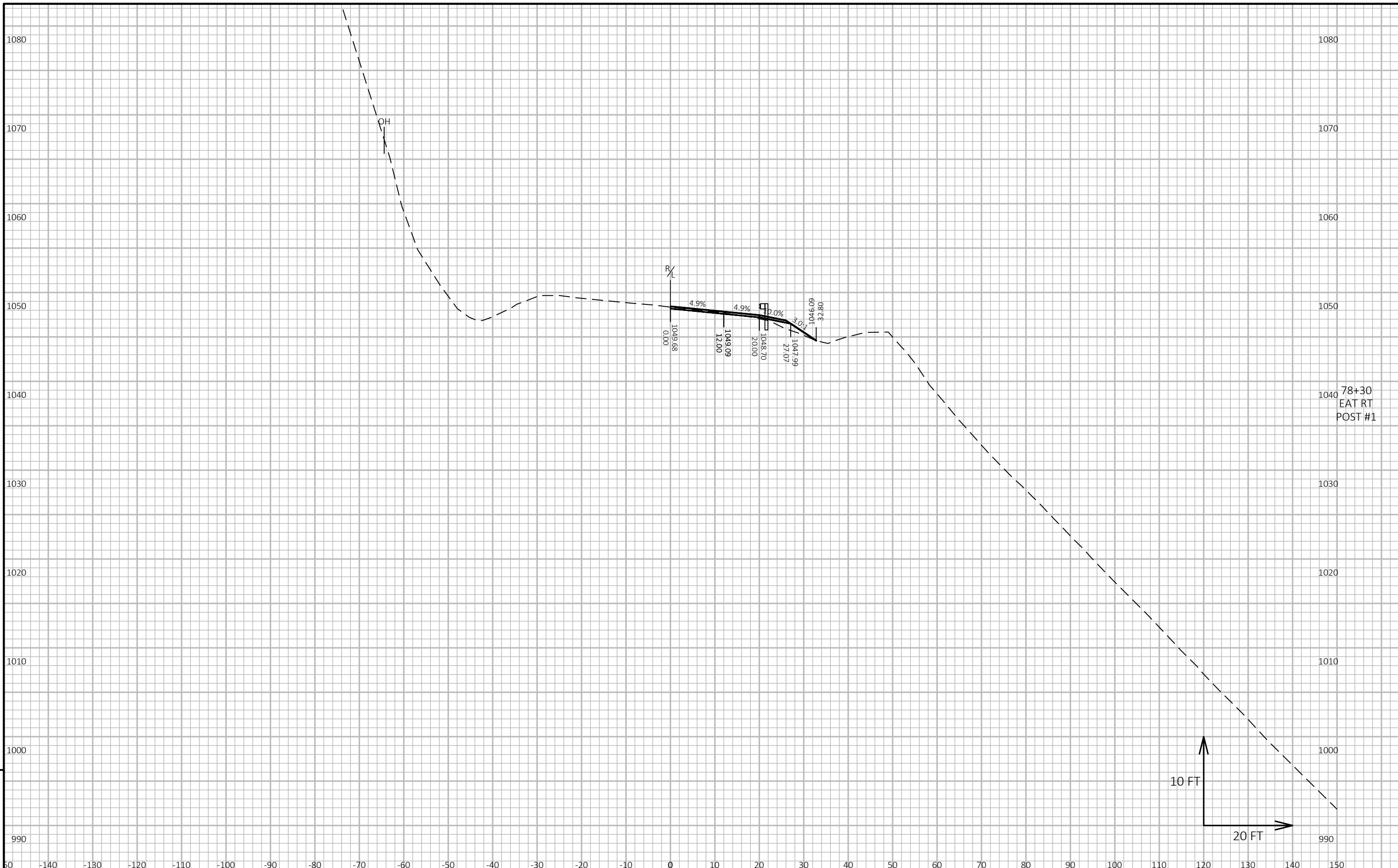
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PROJECT NO: 1530-05-73	HWY: USH 10	COUNTY: PEPIN	CROSS SECTIONS: USH 10	SHEET	E
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FILE NAME : O:\PDS\C3D\15300503\SHEETSPLAN\090201-XS-BEGIN-TO-BAUERLN.DWG PLOT DATE : 7/21/2023 12:24 PM PLOT BY : CORY IHDE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 32



78+30
EAT RT
POST #1

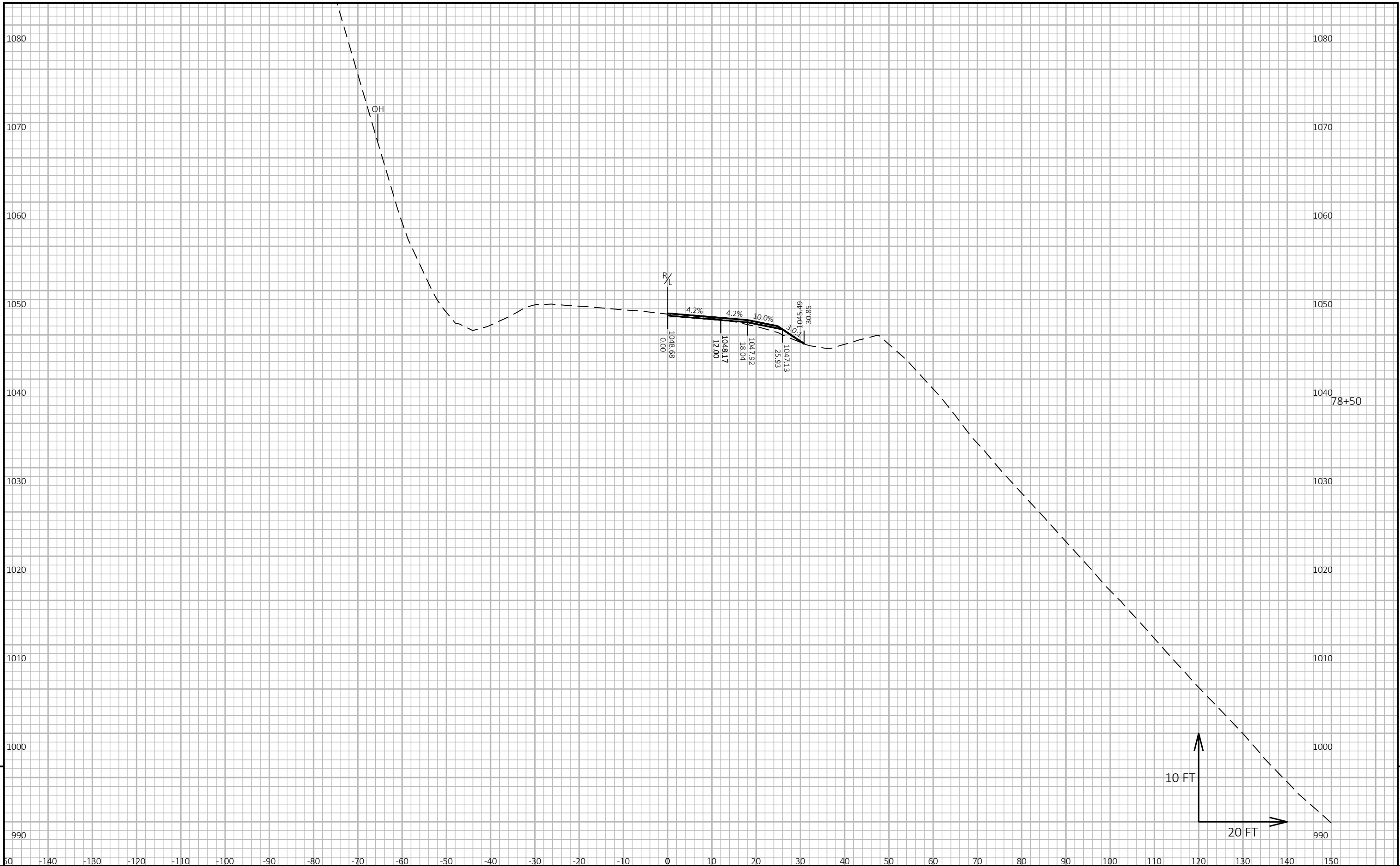
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PROJECT NO: 1530-05-73	HWY: USH 10	COUNTY: PEPIN	CROSS SECTIONS: USH 10	SHEET	E
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FILE NAME : O:\PDS\C3D\15300503\SHEETSPLAN\090201-XS-BEGIN-TO-BAUERLN.DWG PLOT DATE : 7/21/2023 12:24 PM PLOT BY : CORY IHDE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 33



9

9

PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E

FILE NAME : O:\PDS\C3D\15300503\SHEETSPLAN\090201-XS-BEGIN-TO-BAUERLN.DWG PLOT DATE : 7/21/2023 12:25 PM PLOT BY : CORY IHDE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 34



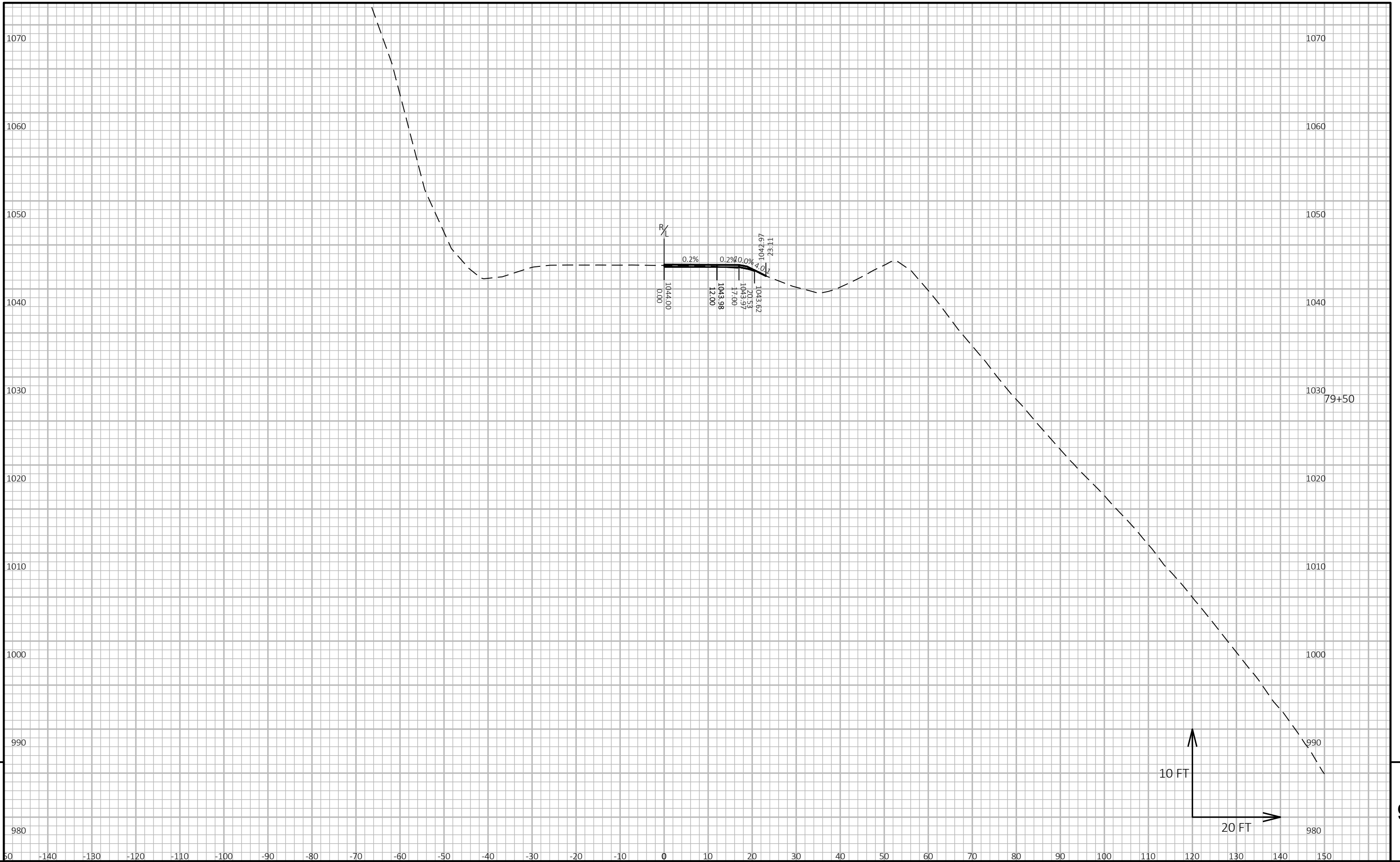
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PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E

FILE NAME : O:\PDS\C3D\15300503\SHEETSPLAN\090201-XS-BEGIN-TO-BAUERLN.DWG PLOT DATE : 7/21/2023 12:25 PM PLOT BY : CORY IHDE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 35



PROJECT NO: 1530-05-73

HWY: USH 10

COUNTY: PEPIN

CROSS SECTIONS: USH 10

SHEET

E



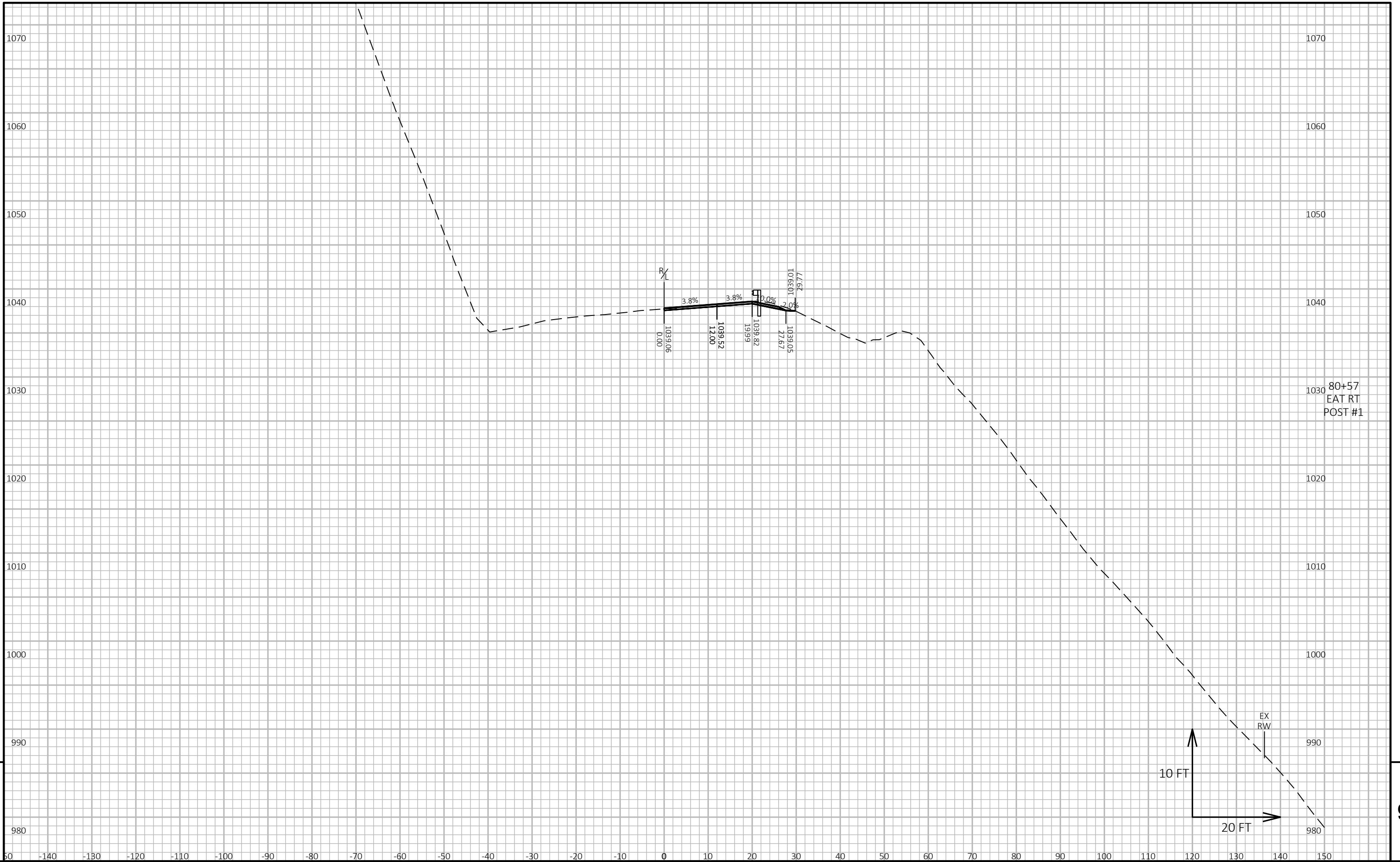
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PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E

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LAYOUT NAME - 37



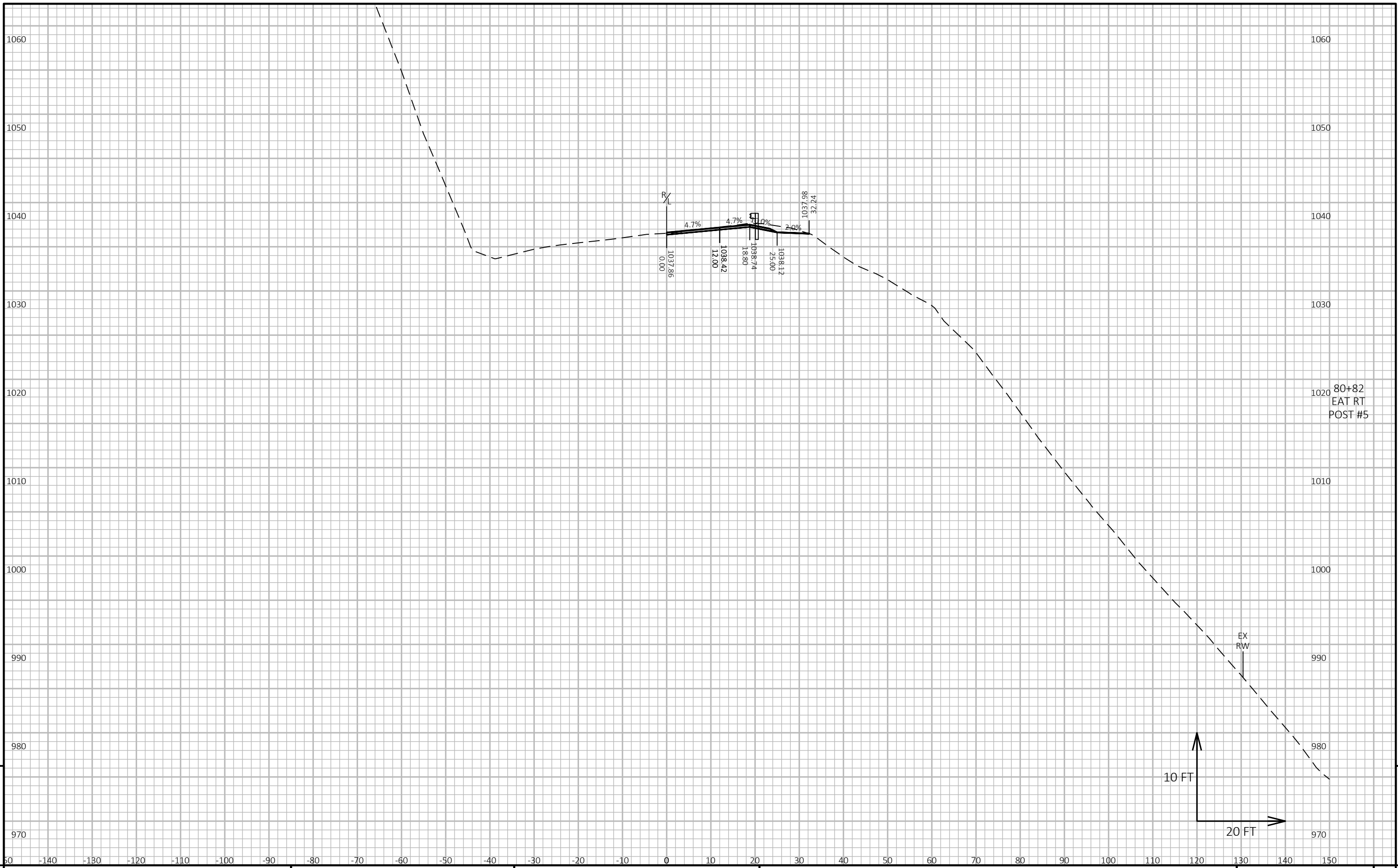
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9

PROJECT NO: 1530-05-73	HWY: USH 10	COUNTY: PEPIN	CROSS SECTIONS: USH 10	SHEET	E
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FILE NAME : O:\PDS\C3D\15300503\SHEETSPLAN\090201-XS-BEGIN-TO-BAUERLN.DWG PLOT DATE : 7/21/2023 12:27 PM PLOT BY : CORY IHDE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 38



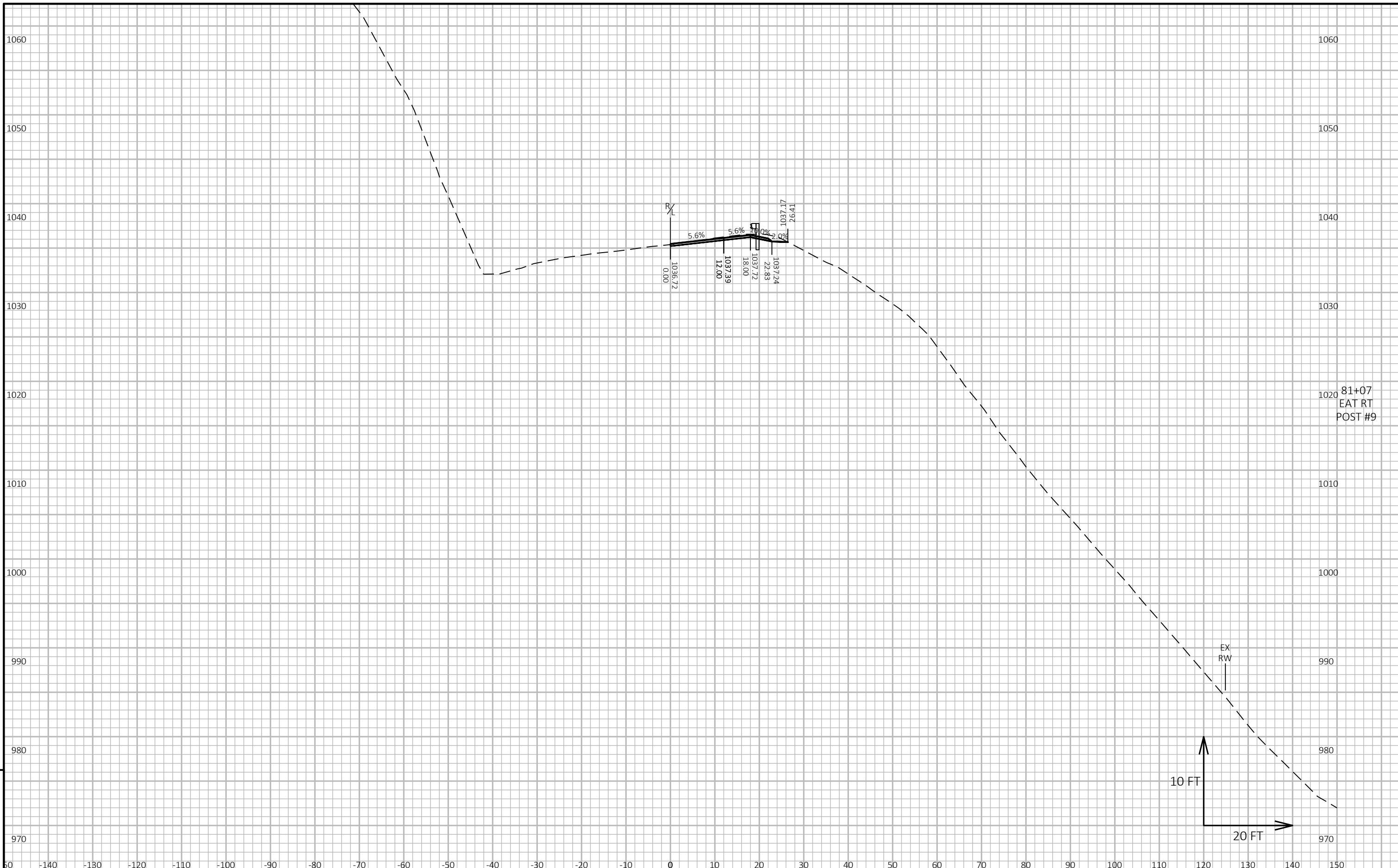
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PROJECT NO: 1530-05-73	HWY: USH 10	COUNTY: PEPIN	CROSS SECTIONS: USH 10	SHEET	E
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FILE NAME : O:\PDS\C3D\15300503\SHEETSPLAN\090201-XS-BEGIN-TO-BAUERLN.DWG PLOT DATE : 7/21/2023 12:27 PM PLOT BY : CORY IHDE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 39



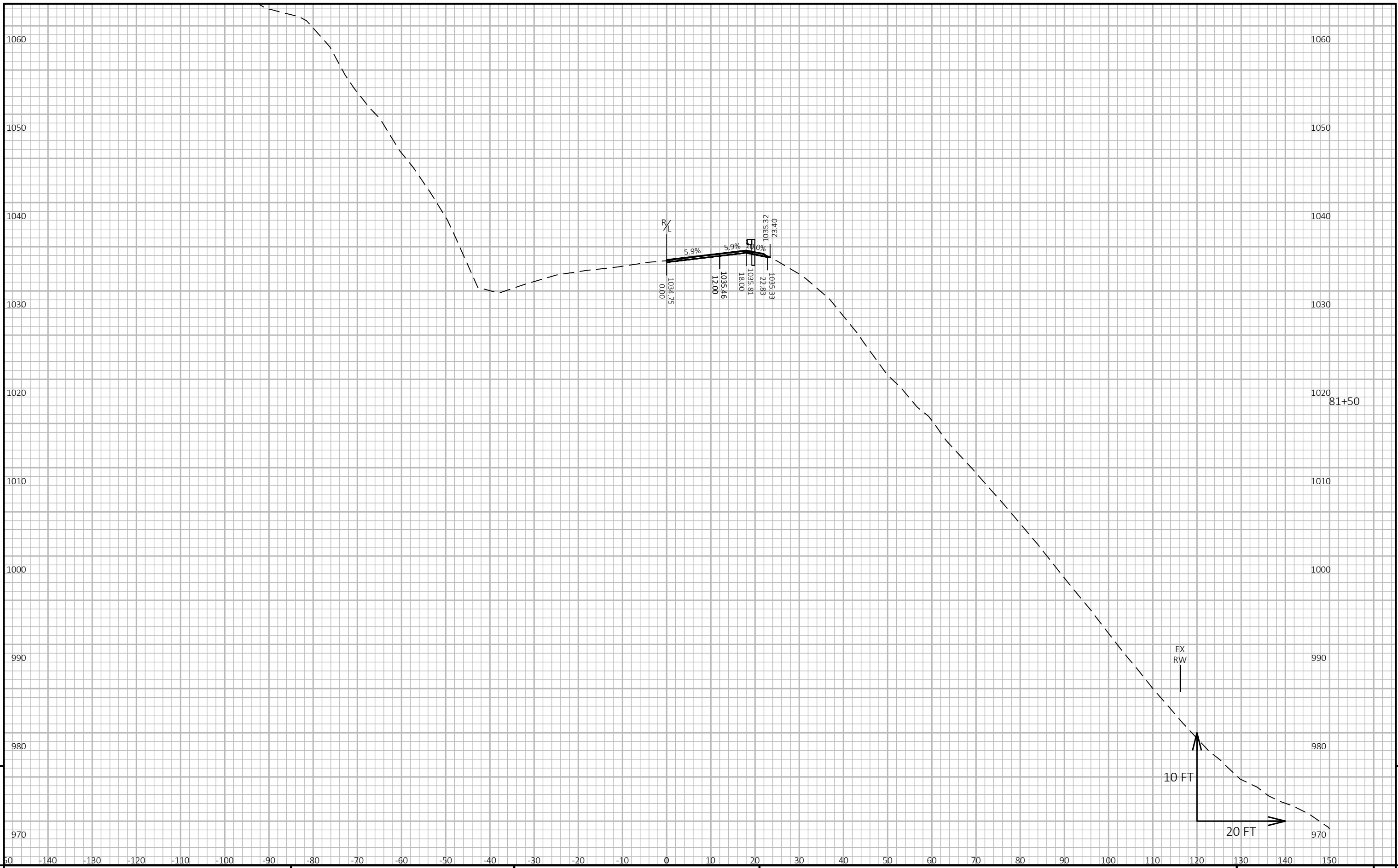
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PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E

FILE NAME : O:\PDS\3D\15300503\SHEETSPLAN\090201-XS-BEGIN-TO-BAUERLN.DWG PLOT DATE : 7/21/2023 12:28 PM PLOT BY : CORY IHDE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 40



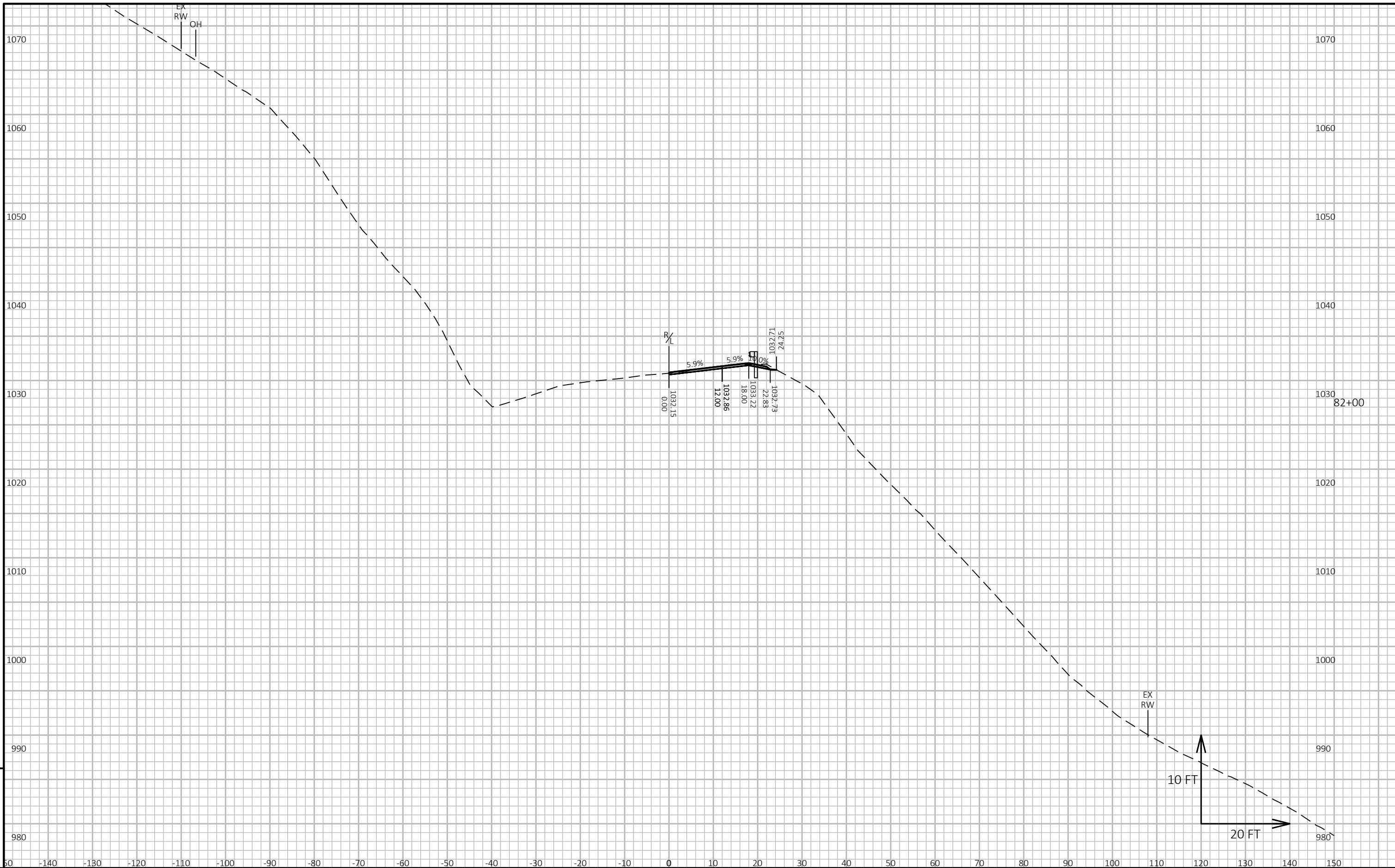
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9

PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E

FILE NAME : O:\PDS\C3D\15300503\SHEETSPLAN\090201-XS-BEGIN-TO-BAUERLN.DWG PLOT DATE : 7/21/2023 12:28 PM PLOT BY : CORY IHDE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 41



9

9

PROJECT NO: 1530-05-73	HWY: USH 10	COUNTY: PEPIN	CROSS SECTIONS: USH 10	SHEET	E
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FILE NAME : O:\PDS\C3D\15300503\SHEETSPLAN\090201-XS-BEGIN-TO-BAUERLN.DWG PLOT DATE : 7/21/2023 12:29 PM PLOT BY : CORY IHDE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 42



9

9

PROJECT NO: 1530-05-73

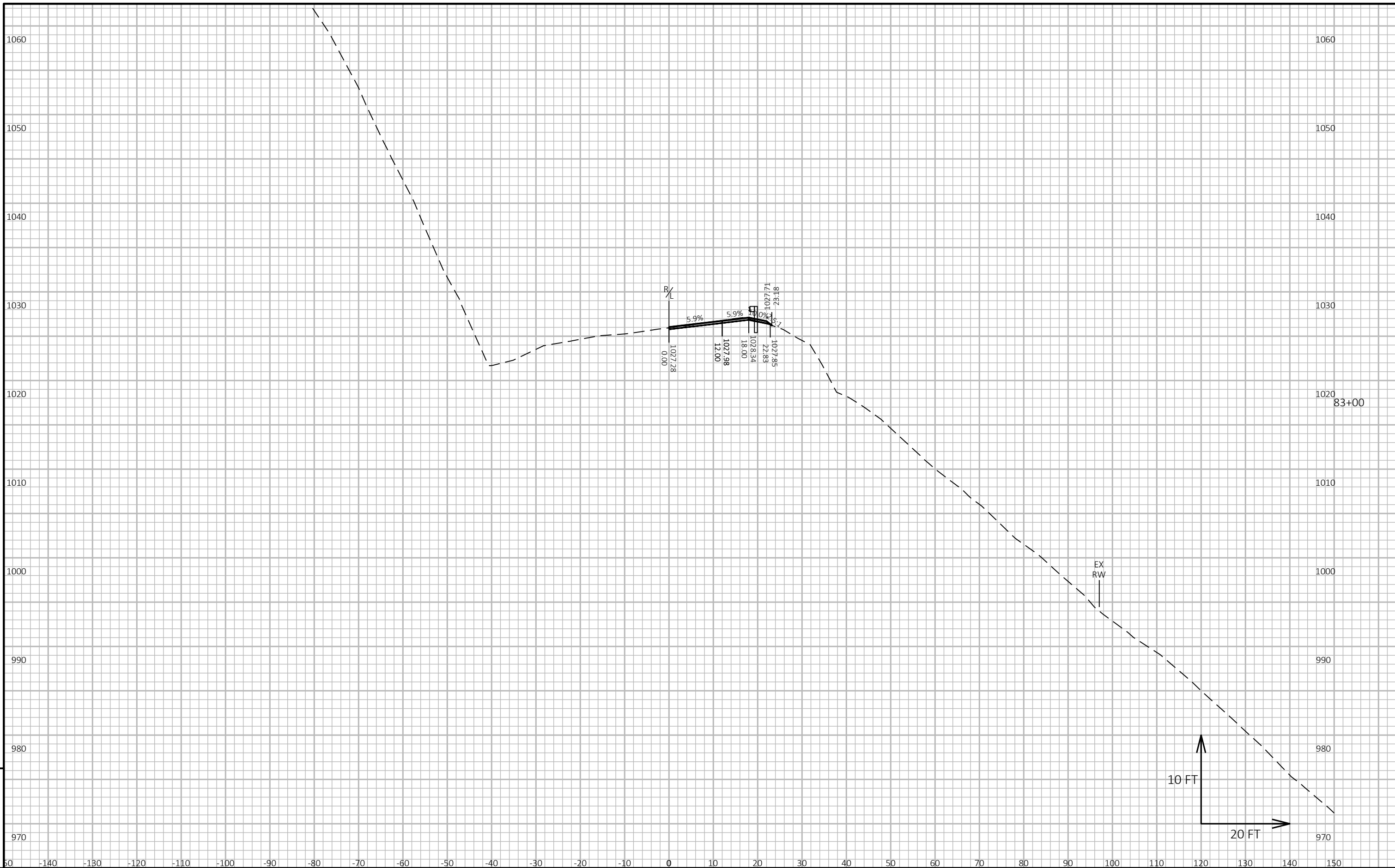
HWY: USH 10

COUNTY: PEPIN

CROSS SECTIONS: USH 10

SHEET

E



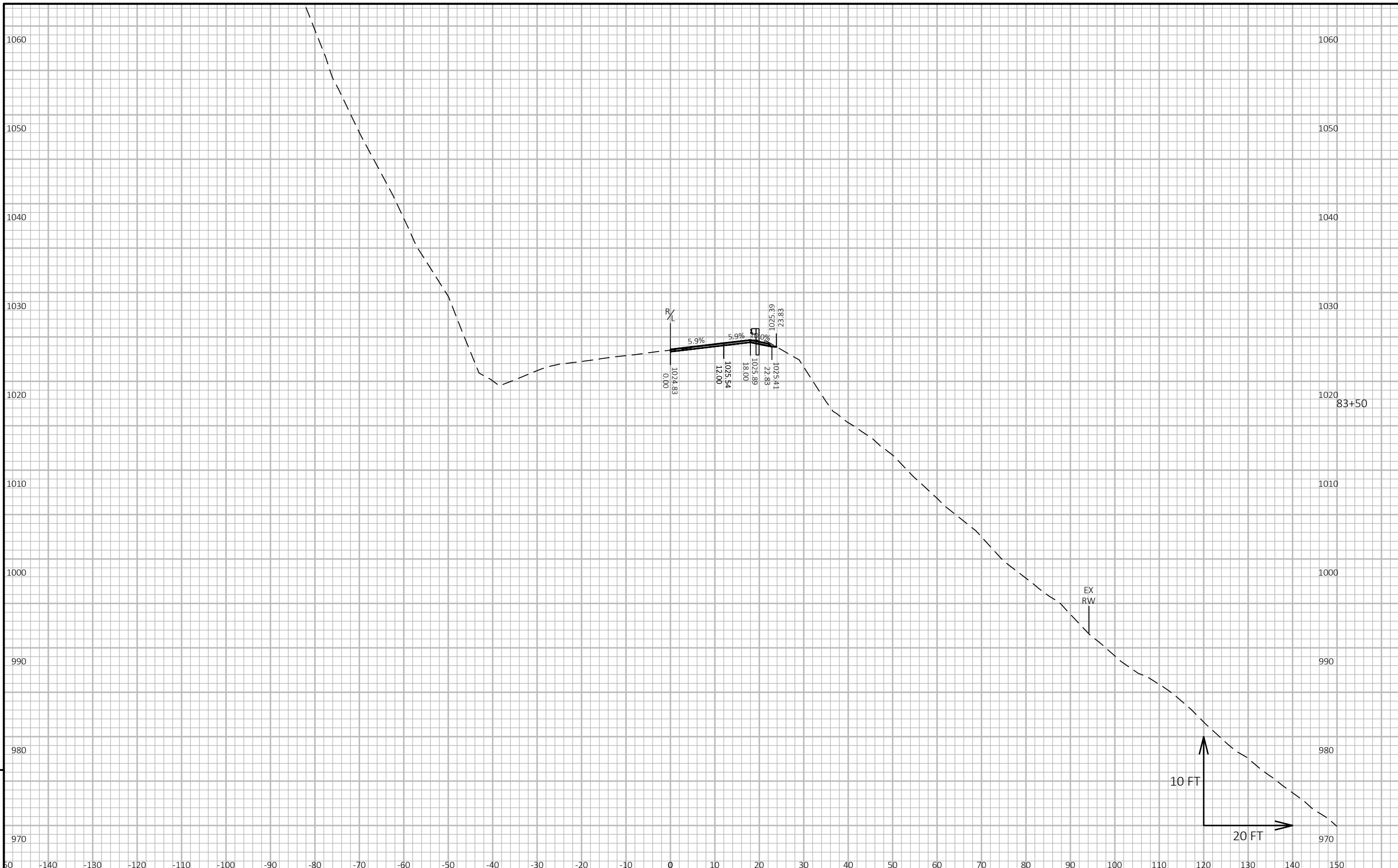
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PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E

FILE NAME : O:\PDS\C3D\15300503\SHEETSPLAN\090201-XS-BEGIN-TO-BAUERLN.DWG PLOT DATE : 7/21/2023 12:30 PM PLOT BY : CORY IHDE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 44



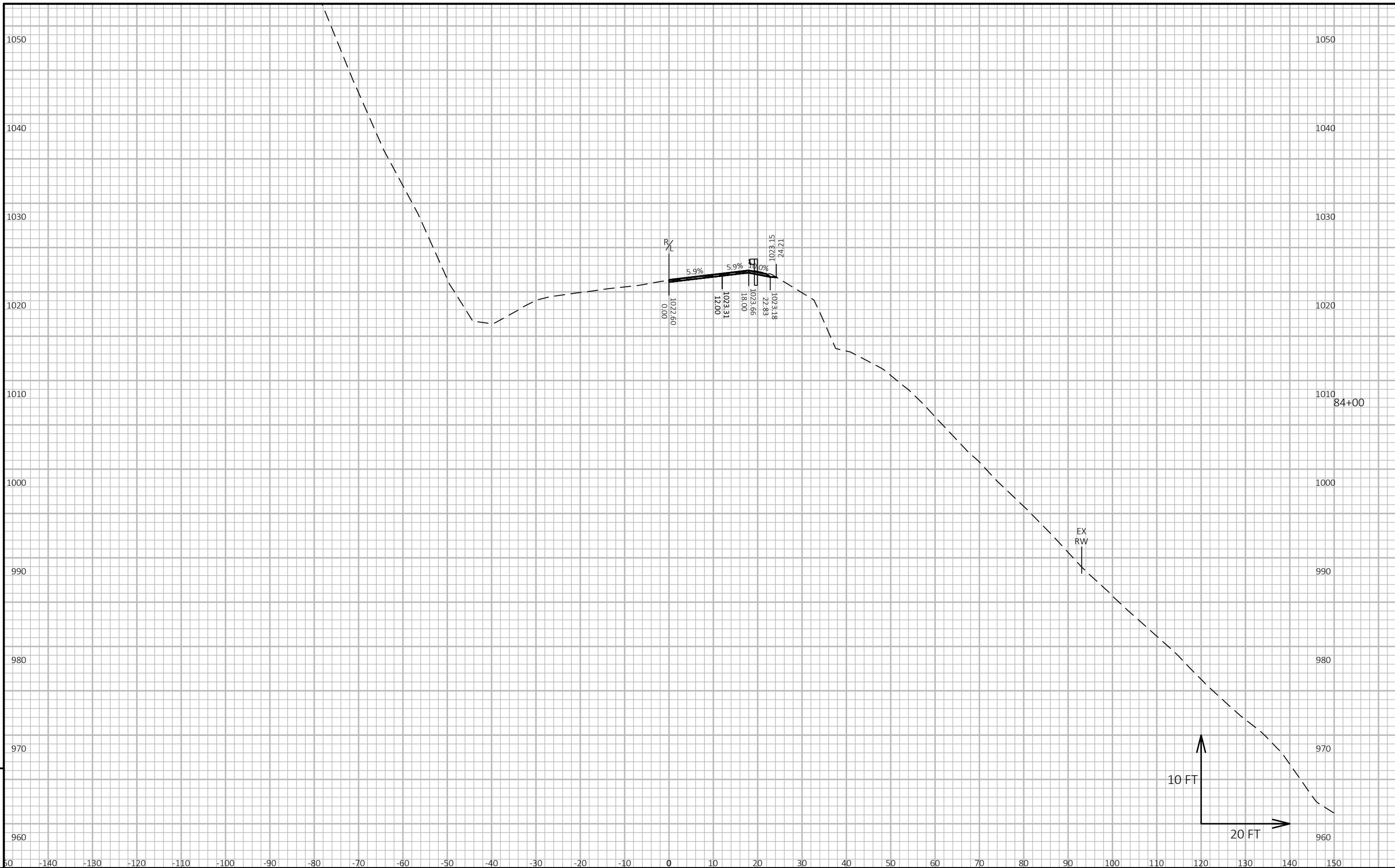
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9

PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E

FILE NAME : O:\PDS\C3D\15300503\SHEETSPLAN\090201-XS-BEGIN-TO-BAUERLN.DWG PLOT DATE : 7/21/2023 12:30 PM PLOT BY : CORY IHDE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 45



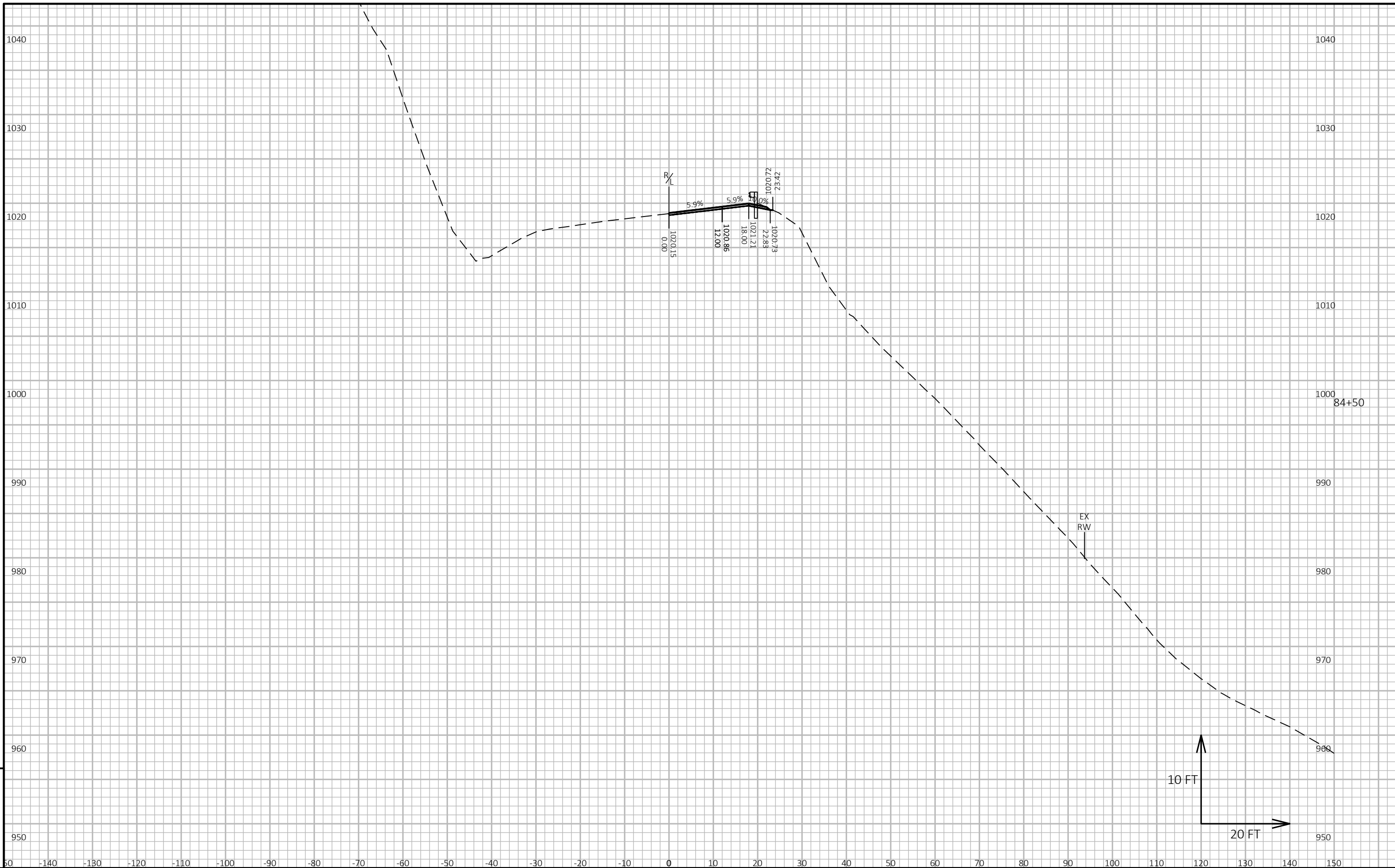
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PROJECT NO: 1530-05-73	HWY: USH 10	COUNTY: PEPIN	CROSS SECTIONS: USH 10	SHEET	E
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FILE NAME : O:\PDS\C3D\15300503\SHEETSPLAN\090201-XS-BEGIN-TO-BAUERLN.DWG PLOT DATE : 7/21/2023 12:31 PM PLOT BY : CORY IHDE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 46



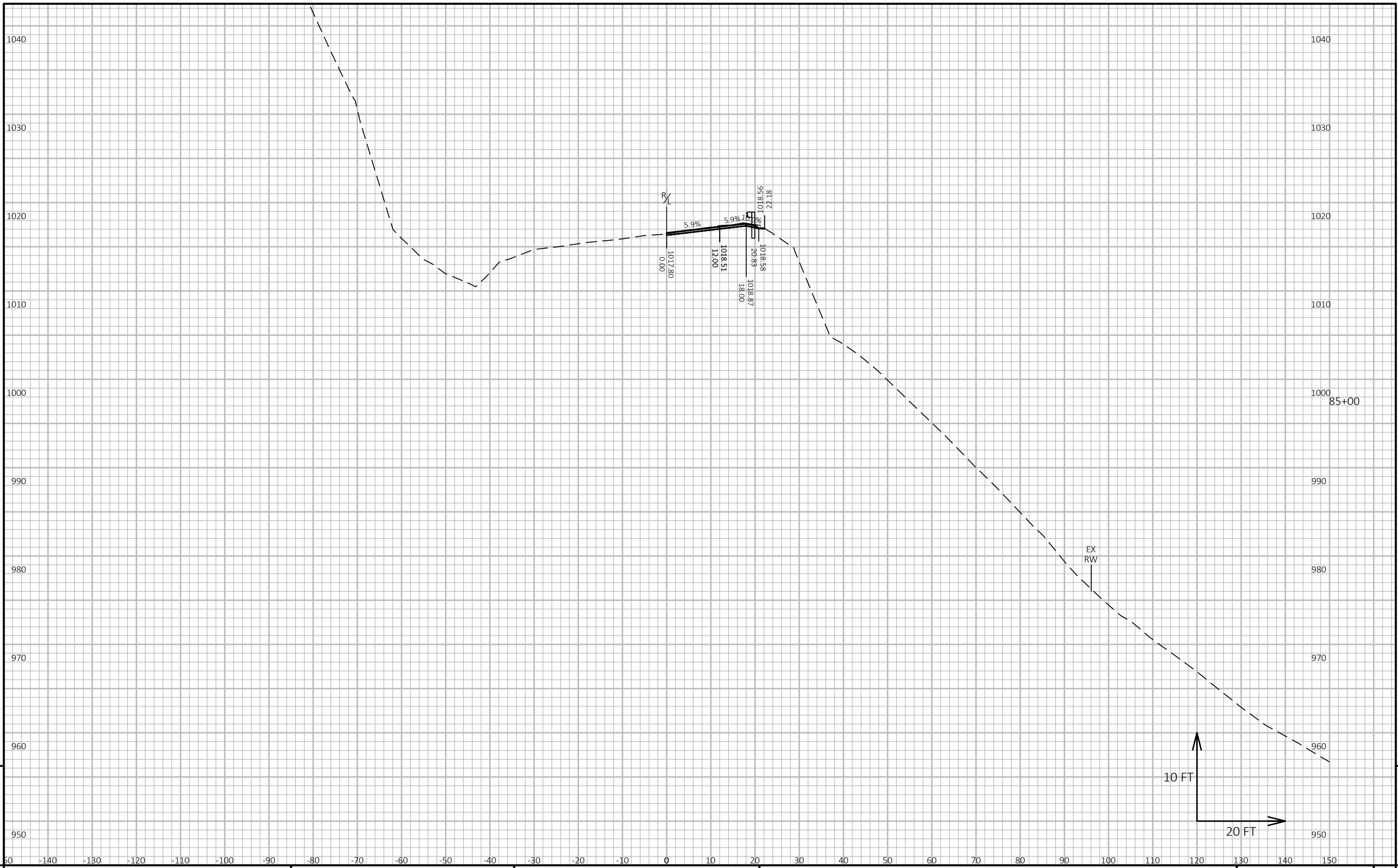
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9

PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E

FILE NAME : O:\PDS\C3D\15300503\SHEETSPLAN\090201-XS-BEGIN-TO-BAUERLN.DWG PLOT DATE : 7/21/2023 12:31 PM PLOT BY : CORY IHDE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 47



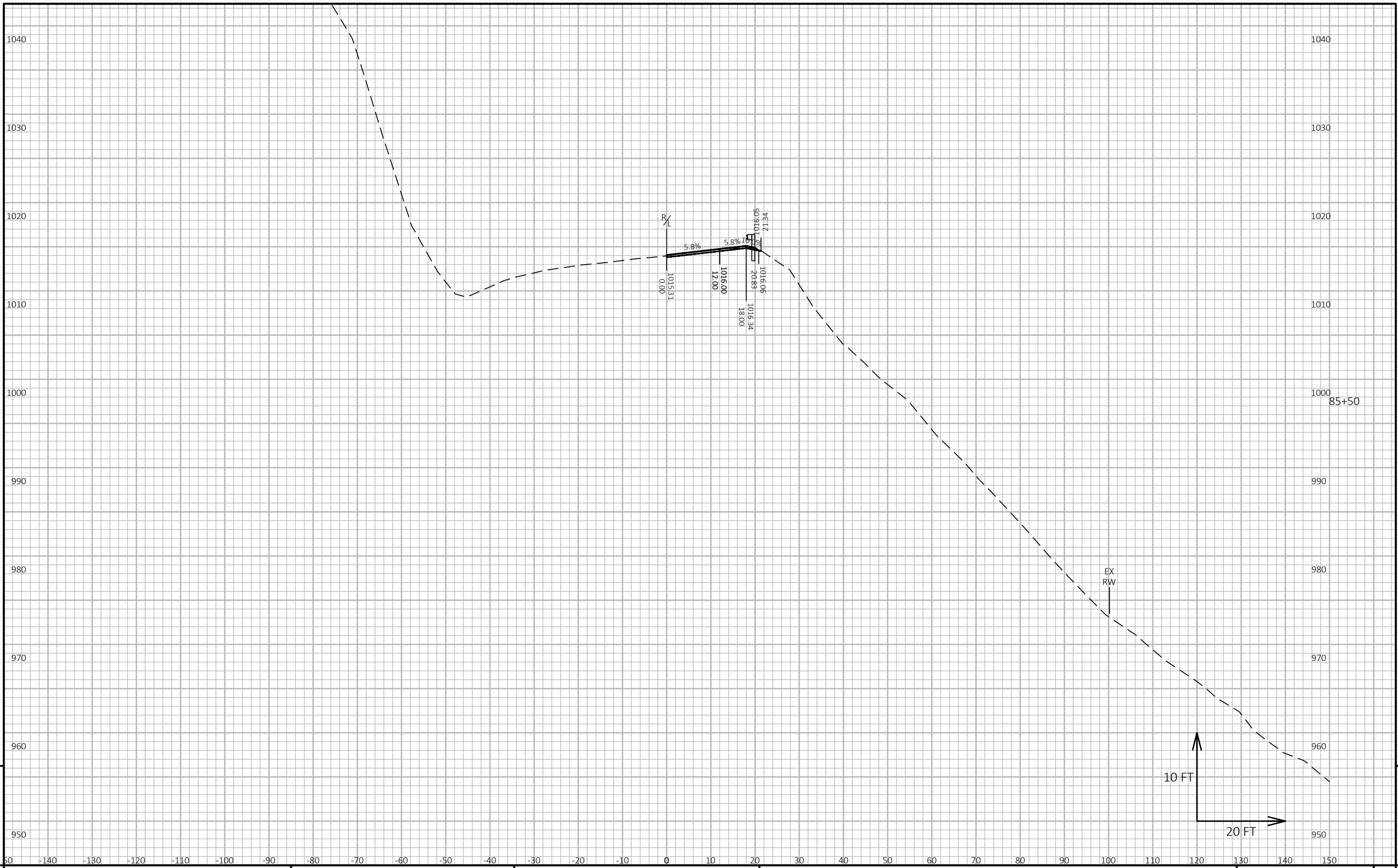
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9

PROJECT NO: 1530-05-73	HWY: USH 10	COUNTY: PEPIN	CROSS SECTIONS: USH 10	SHEET	E
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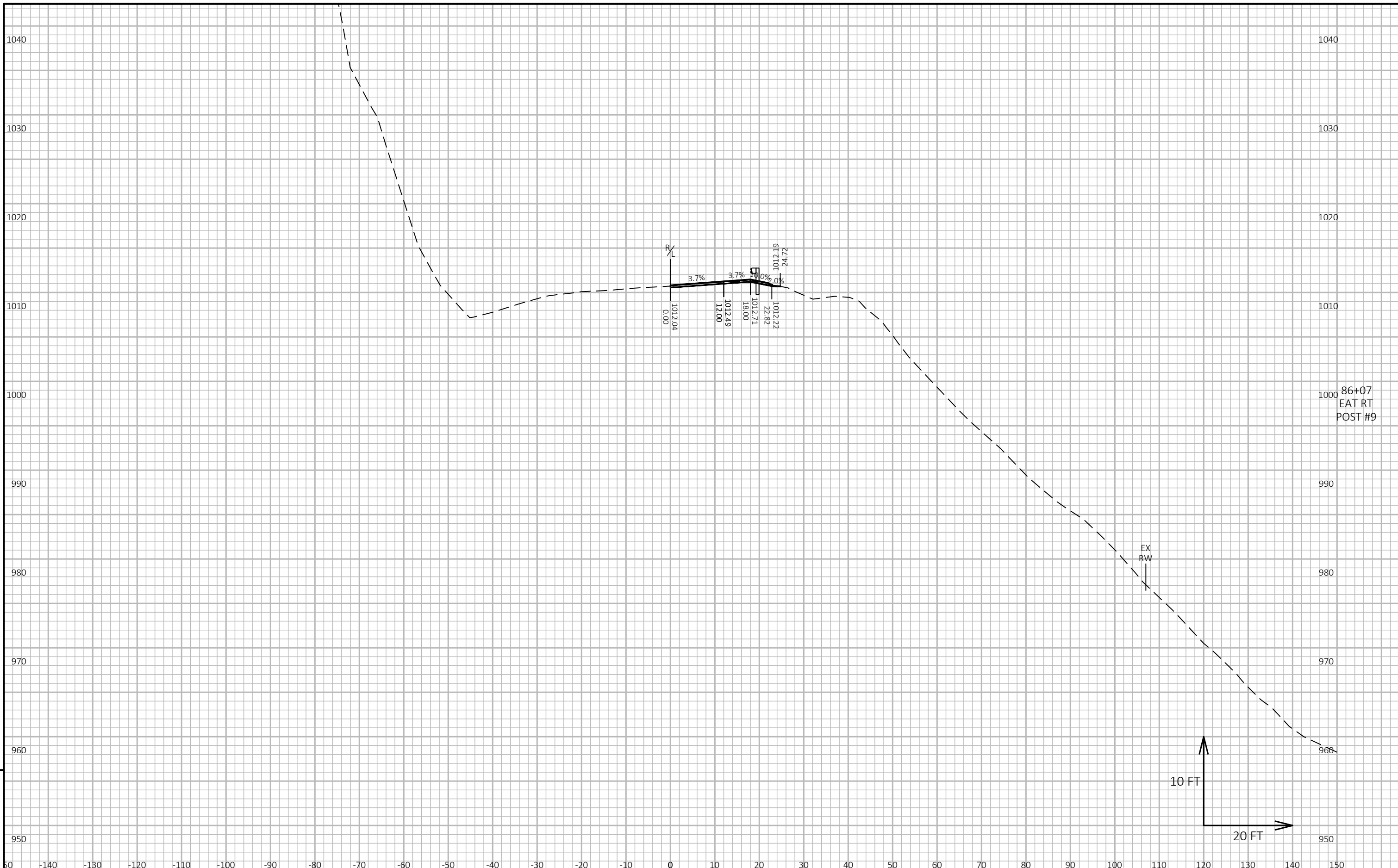
FILE NAME : O:\PDS\C3D\15300503\SHEETSPLAN\090201-XS-BEGIN-TO-BAUERLN.DWG PLOT DATE : 7/21/2023 12:32 PM PLOT BY : CORY IHDE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 48



PROJECT NO: 1530-05-73	HWY: USH 10	COUNTY: PEPIN	CROSS SECTIONS: USH 10	SHEET	E
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FILE NAME : O:\PDS\C3D\15300503\SHEETSPLAN\090201-XS-BEGIN-TO-BAUERLN.DWG
 LAYOUT NAME - 49
 PLOT DATE : 7/21/2023 12:32 PM
 PLOT BY : CORY IHDE
 PLOT NAME :
 PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.
 WISDOT/CADD SHEET 49



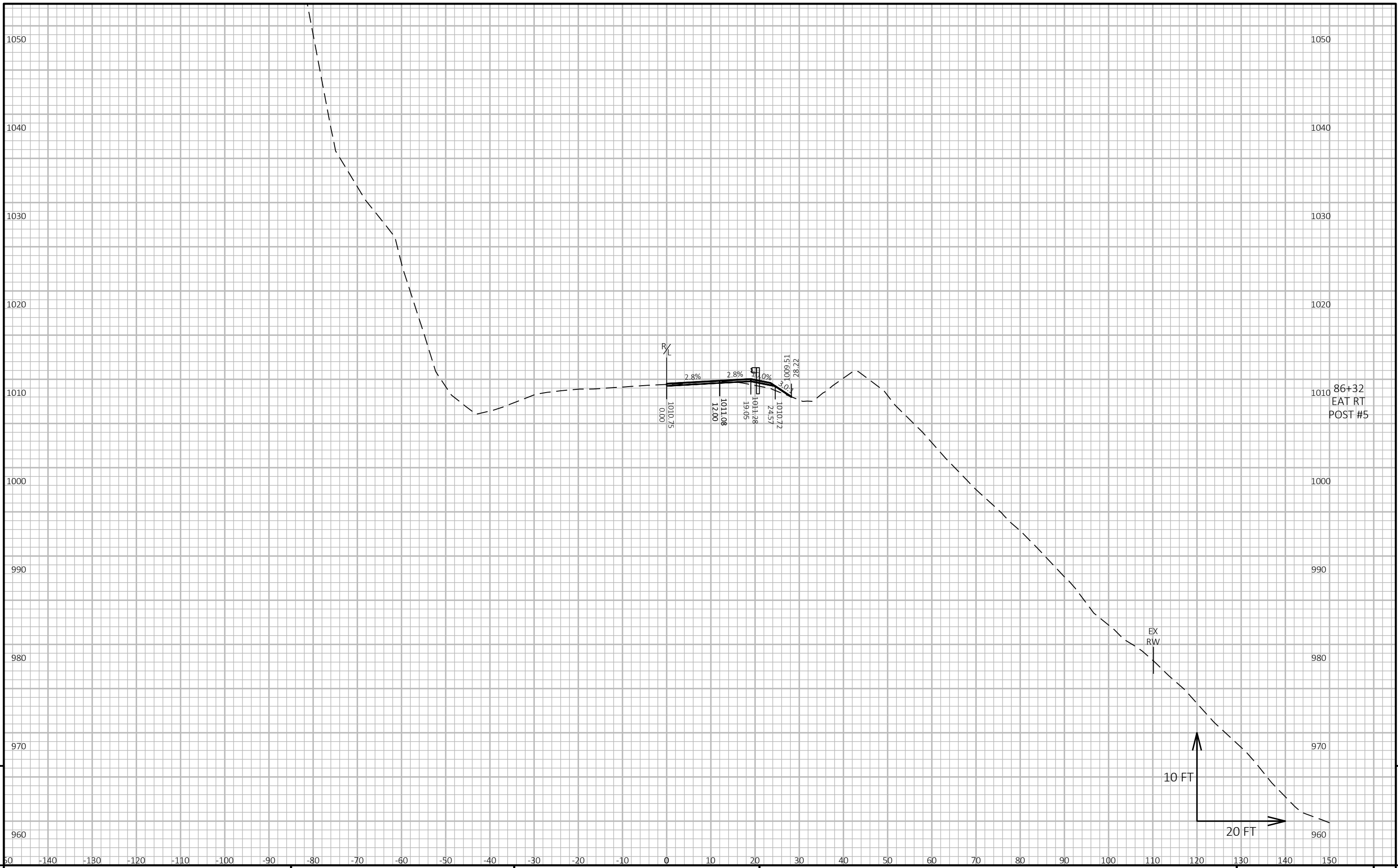
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PROJECT NO: 1530-05-73	HWY: USH 10	COUNTY: PEPIN	CROSS SECTIONS: USH 10	SHEET	E
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FILE NAME : O:\PDS\3D\15300503\SHEETSPLAN\090201-XS-BEGIN-TO-BAUERLN.DWG PLOT DATE : 7/21/2023 12:33 PM PLOT BY : CORY IHDE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 50



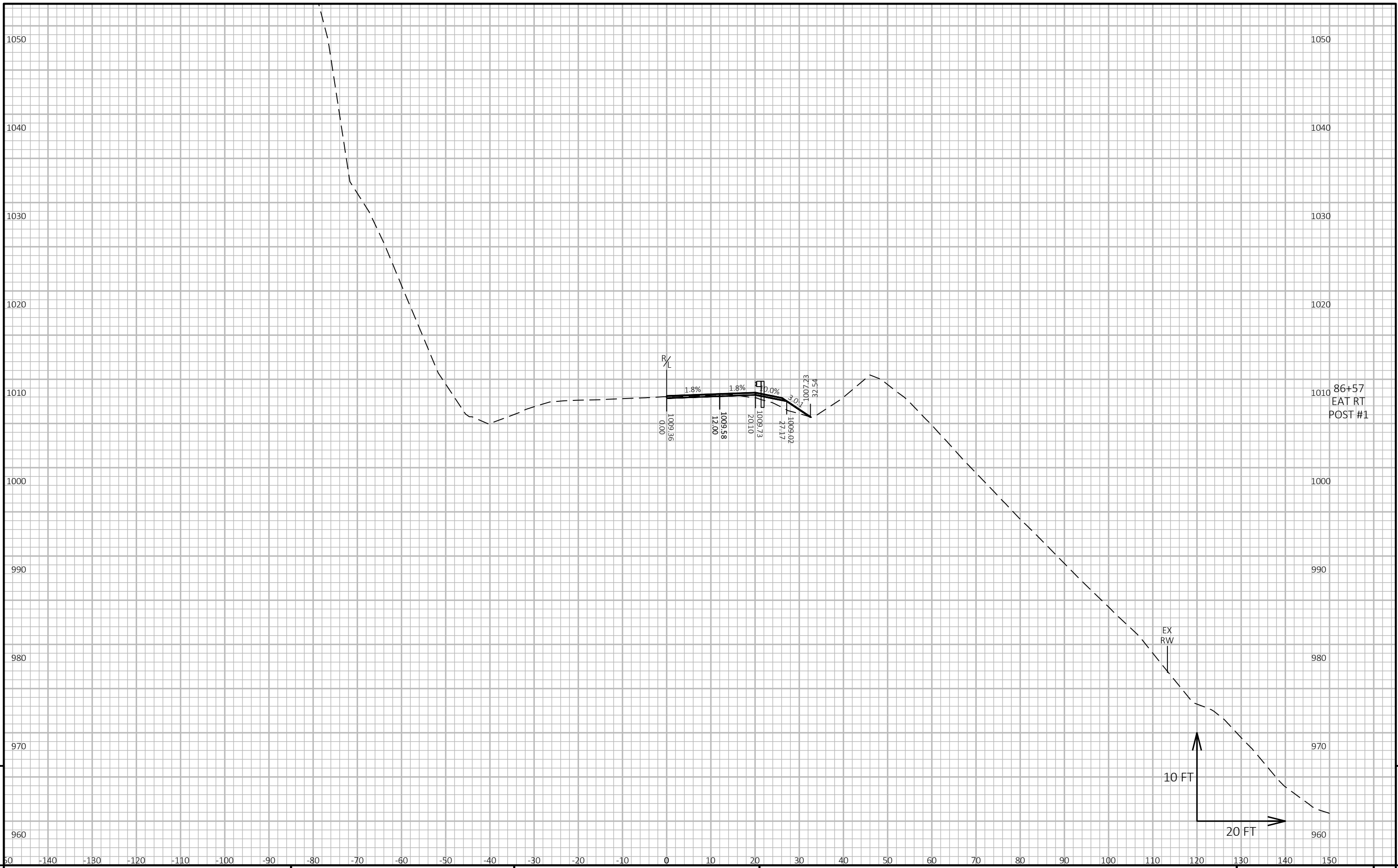
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PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E

FILE NAME : O:\PDS\C3D\15300503\SHEETSPLAN\090201-XS-BEGIN-TO-BAUERLN.DWG PLOT DATE : 7/21/2023 12:33 PM PLOT BY : CORY IHDE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 51



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9

PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E

FILE NAME : O:\PDS\C3D\15300503\SHEETSPLAN\090201-XS-BEGIN-TO-BAUERLN.DWG PLOT DATE : 7/21/2023 12:34 PM PLOT BY : CORY IHDE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 52



PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E

FILE NAME : O:\PDS\C3D\15300503\SHEETSPLAN\090201-XS-BEGIN-TO-BAUERLN.DWG PLOT DATE : 7/21/2023 12:34 PM PLOT BY : CORY IHDE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

9

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PROJECT NO: 1530-05-73

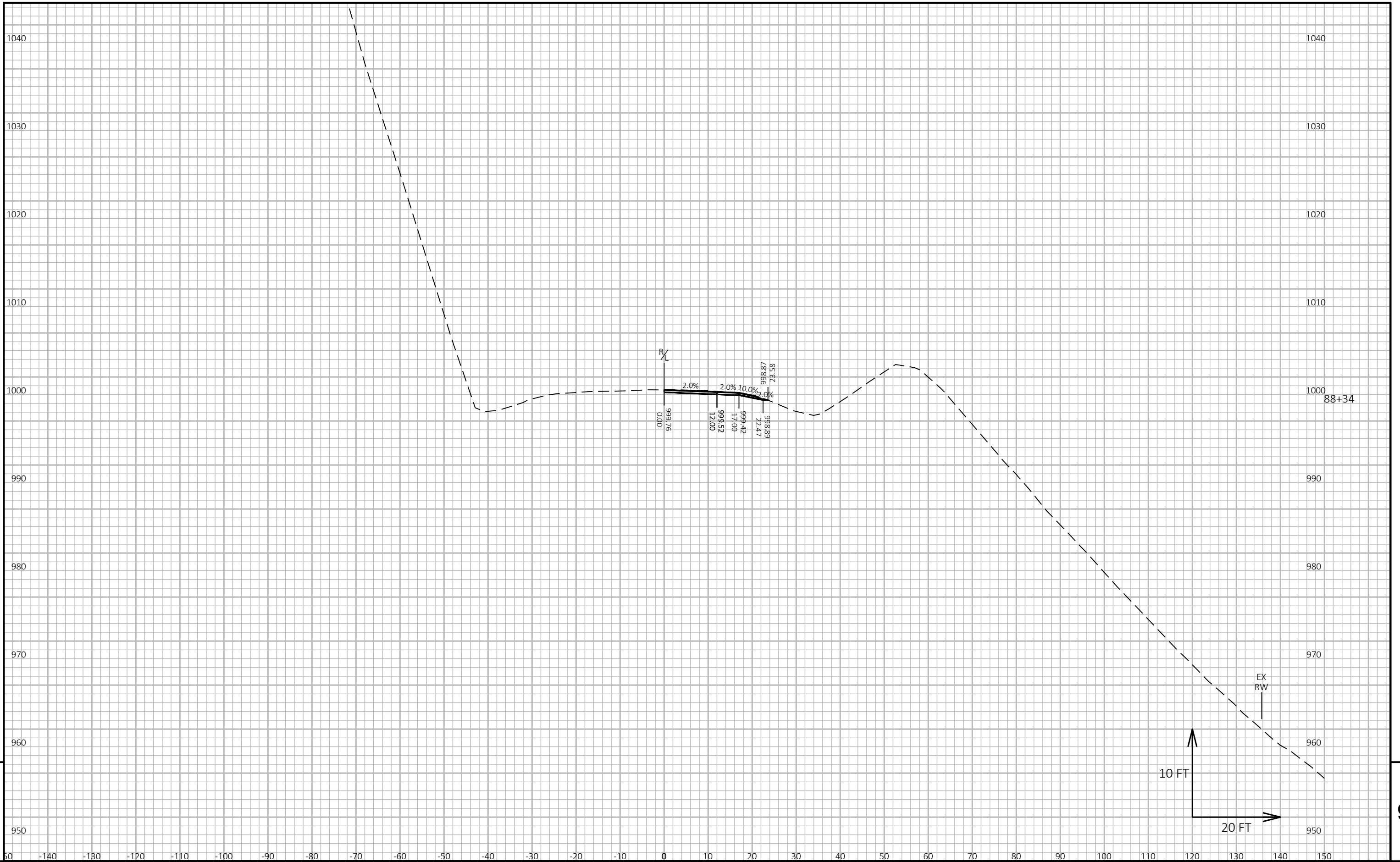
HWY: USH 10

COUNTY: PEPIN

CROSS SECTIONS: USH 10

SHEET

E



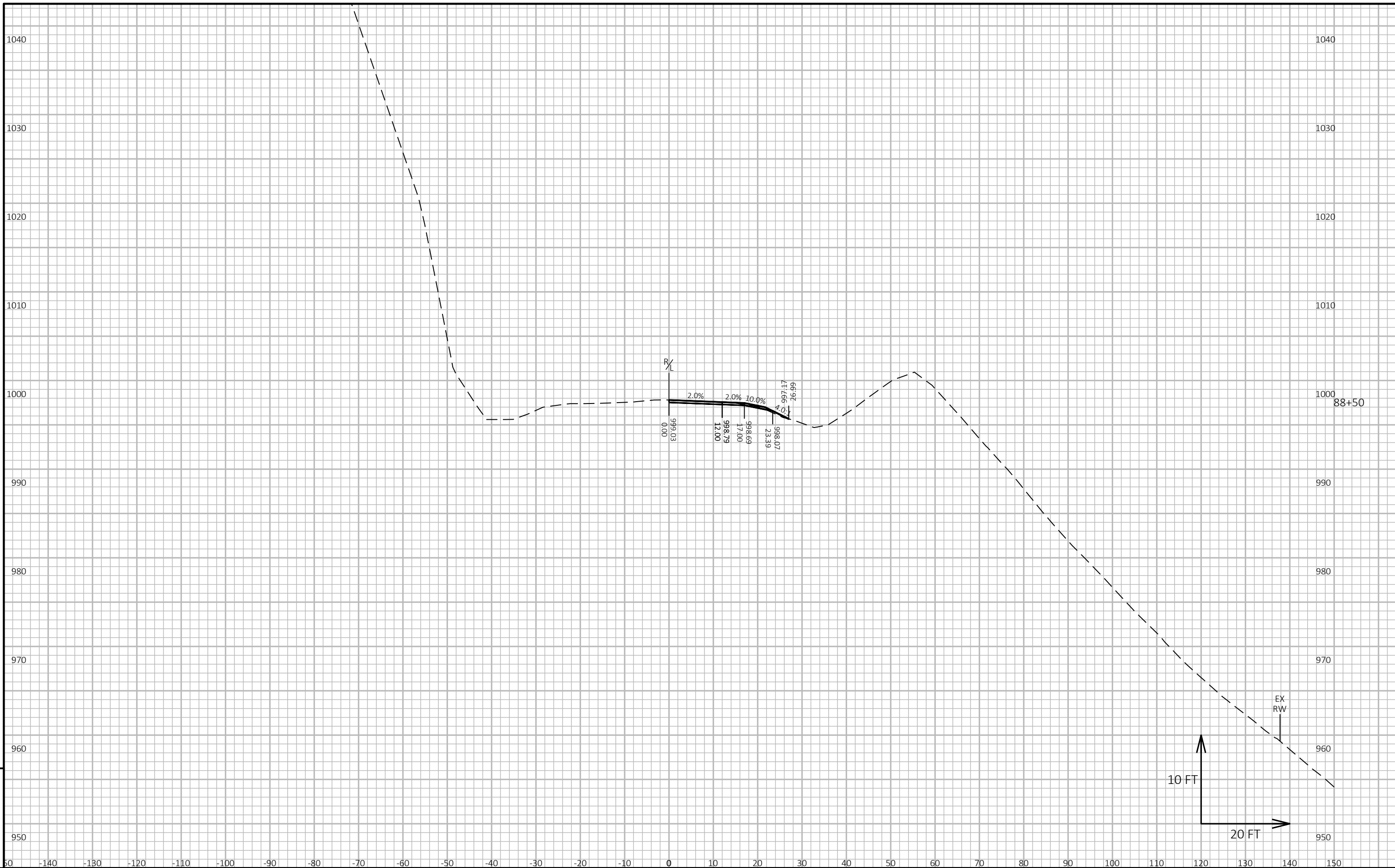
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9

PROJECT NO: 1530-05-73	HWY: USH 10	COUNTY: PEPIN	CROSS SECTIONS: USH 10	SHEET	E
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FILE NAME : O:\PDS\C3D\15300503\SHEETSPLAN\090201-XS-BEGIN-TO-BAUERLN.DWG PLOT DATE : 7/21/2023 12:35 PM PLOT BY : CORY IHDE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 55



9

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PROJECT NO: 1530-05-73	HWY: USH 10	COUNTY: PEPIN	CROSS SECTIONS: USH 10	SHEET	E
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FILE NAME : O:\PDS\C3D\15300503\SHEETSPLAN\090201-XS-BEGIN-TO-BAUERLN.DWG
LAYOUT NAME - 56

PLOT DATE : 7/21/2023 12:36 PM

PLOT BY : CORY IHDE

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADD SHEET 49



PROJECT NO: 1530-05-73

HWY: USH 10

COUNTY: PEPIN

CROSS SECTIONS: USH 10

SHEET

E



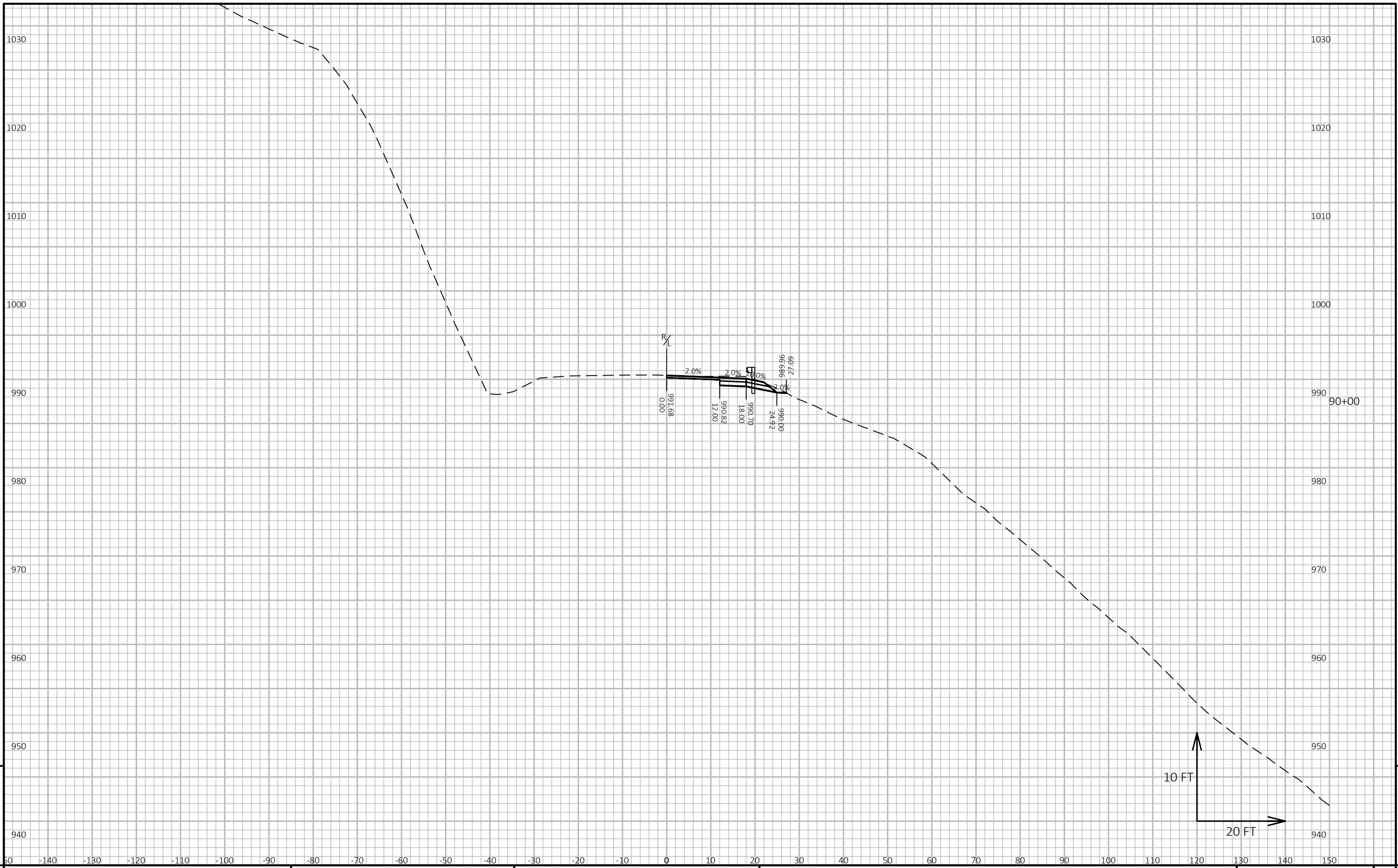
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9

PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E

FILE NAME : O:\PDS\C3D\15300503\SHEETSPLAN\090201-XS-BEGIN-TO-BAUERLN.DWG PLOT DATE : 7/21/2023 12:37 PM PLOT BY : CORY IHDE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 58



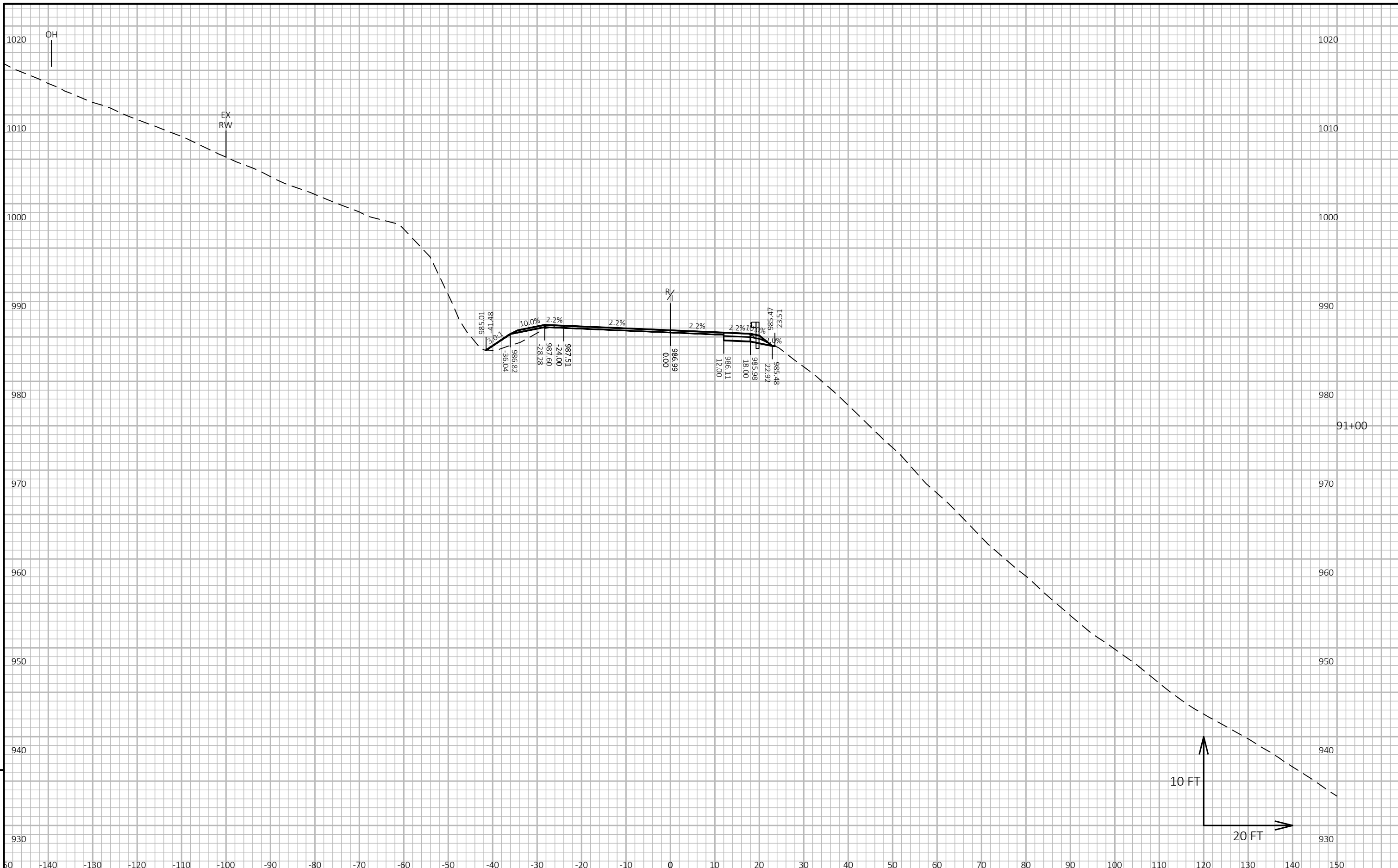
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9

PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E

FILE NAME : O:\PDS\C3D\15300503\SHEETSPLAN\090201-XS-BEGIN-TO-BAUERLN.DWG PLOT DATE : 7/21/2023 12:38 PM PLOT BY : CORY IHDE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 61



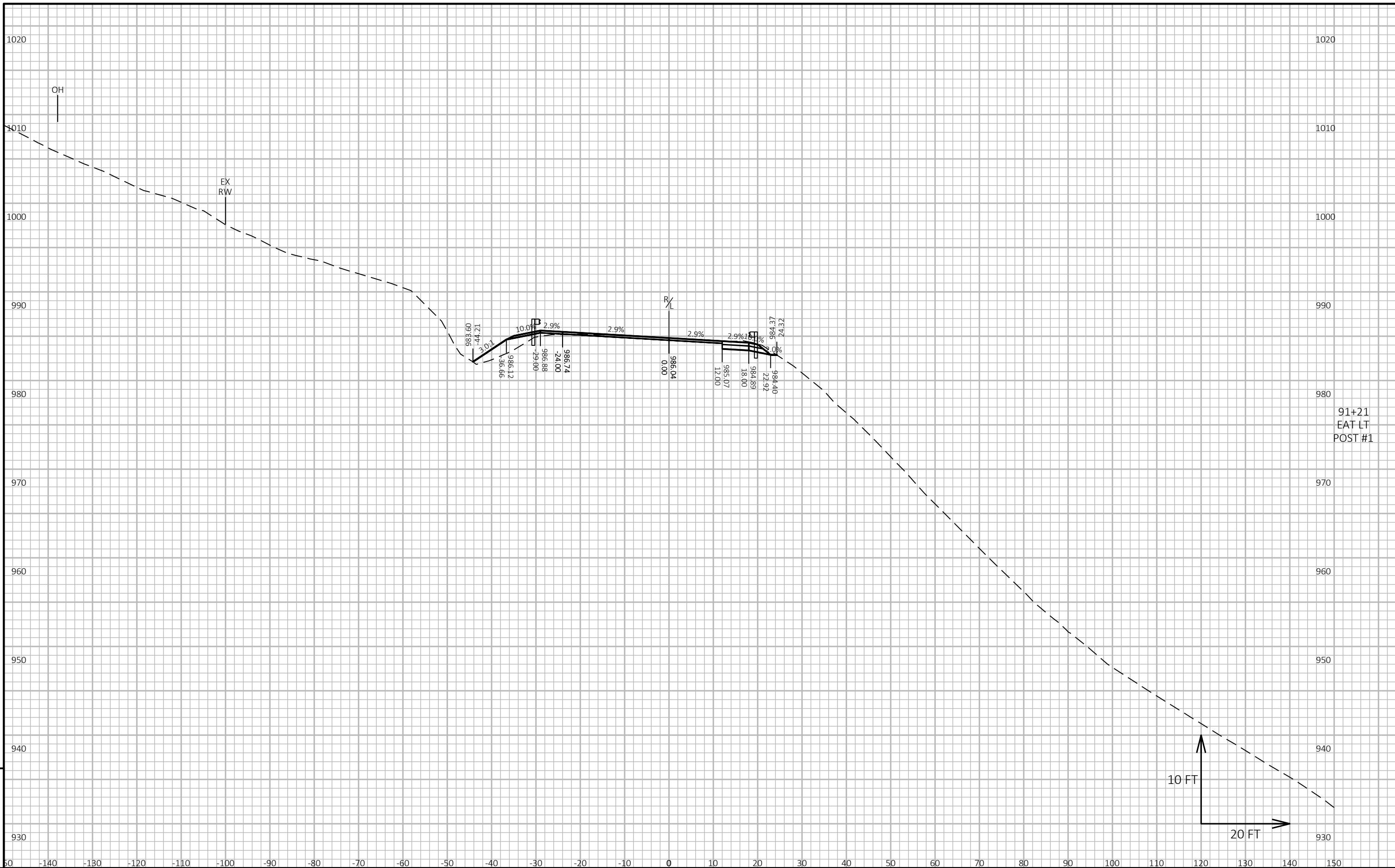
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PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E

FILE NAME : O:\PDS\C3D\15300503\SHEETSPLAN\090201-XS-BEGIN-TO-BAUERLN.DWG PLOT DATE : 7/21/2023 12:39 PM PLOT BY : CORY IHDE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 63



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9

PROJECT NO: 1530-05-73

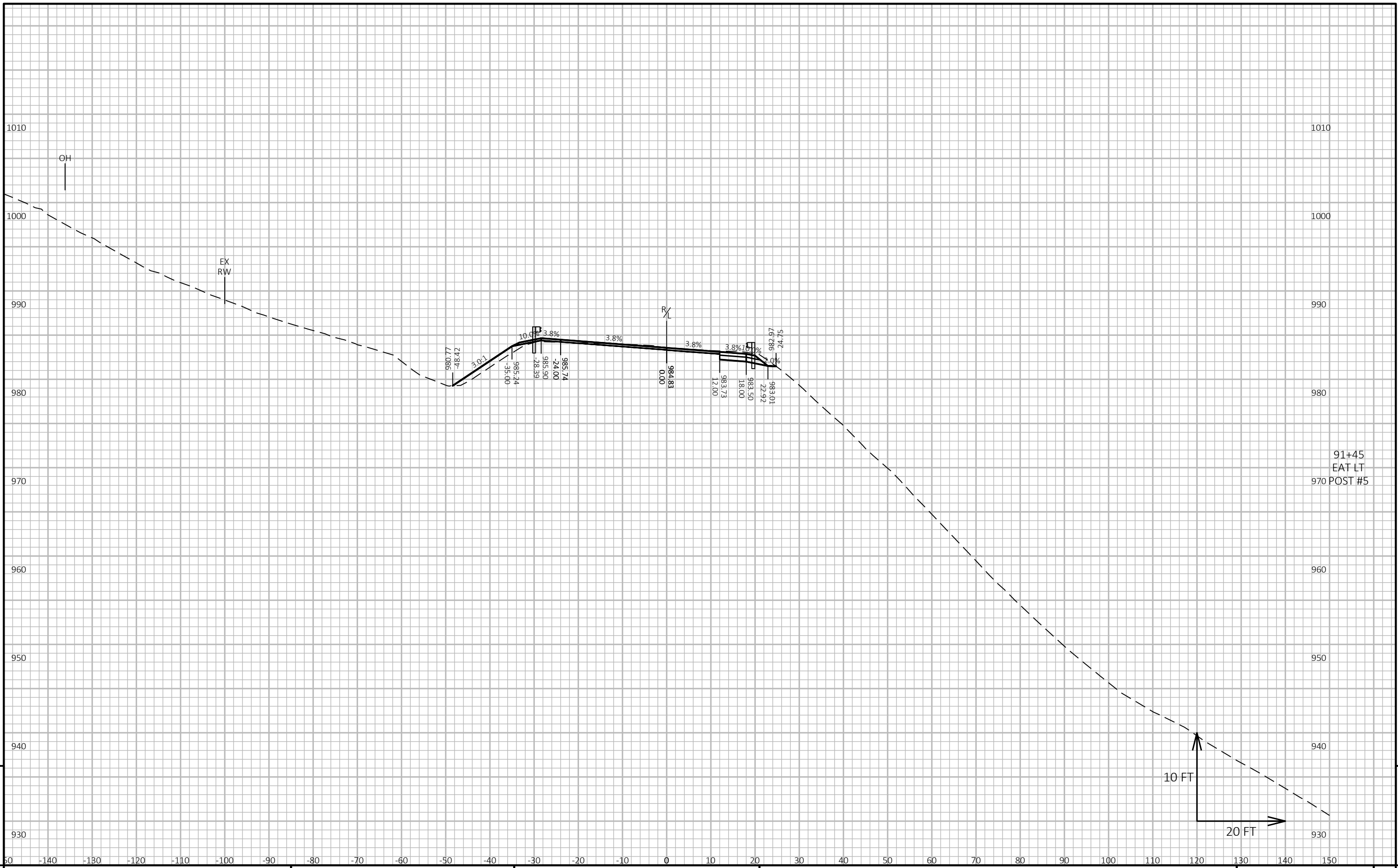
HWY: USH 10

COUNTY: PEPIN

CROSS SECTIONS: USH 10

SHEET

E



91+45
EAT LT
970 POST #5

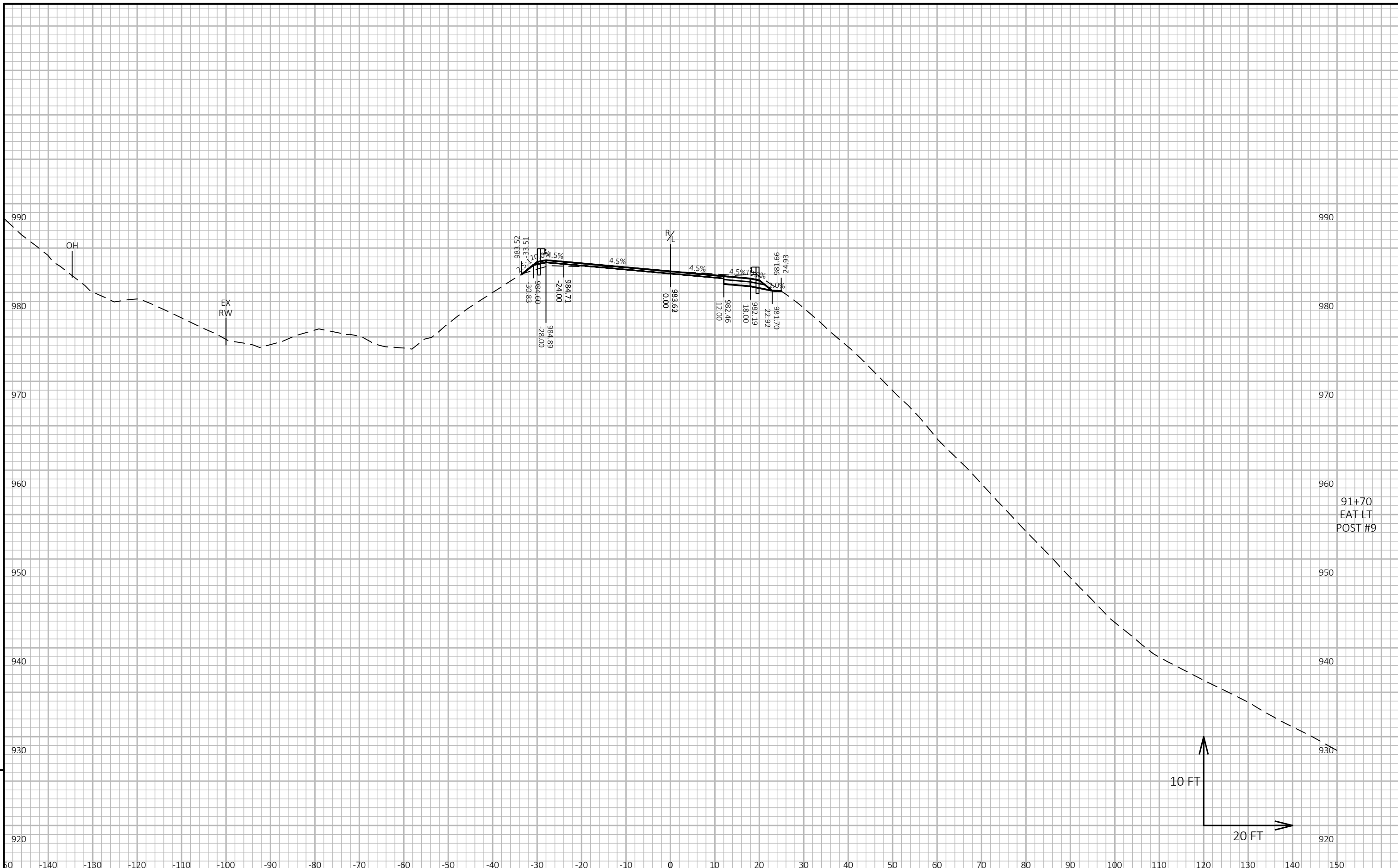
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9

PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E

FILE NAME : O:\PDS\C3D\15300503\SHEETSPLAN\090201-XS-BEGIN-TO-BAUERLN.DWG PLOT DATE : 7/21/2023 12:41 PM PLOT BY : CORY IHDE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 65

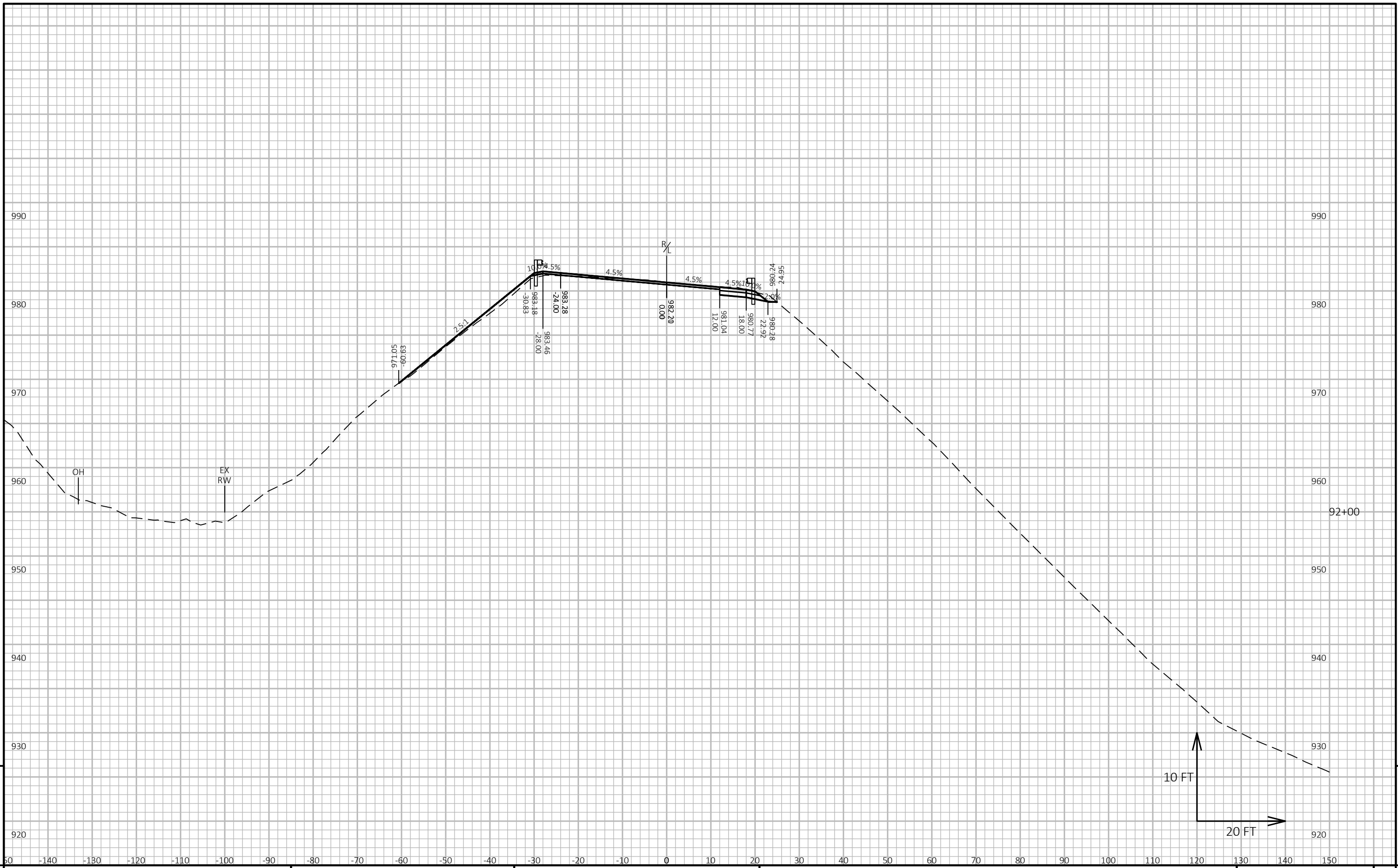


91+70
EAT LT
POST #9

9

9

PROJECT NO: 1530-05-73	HWY: USH 10	COUNTY: PEPIN	CROSS SECTIONS: USH 10	SHEET	E
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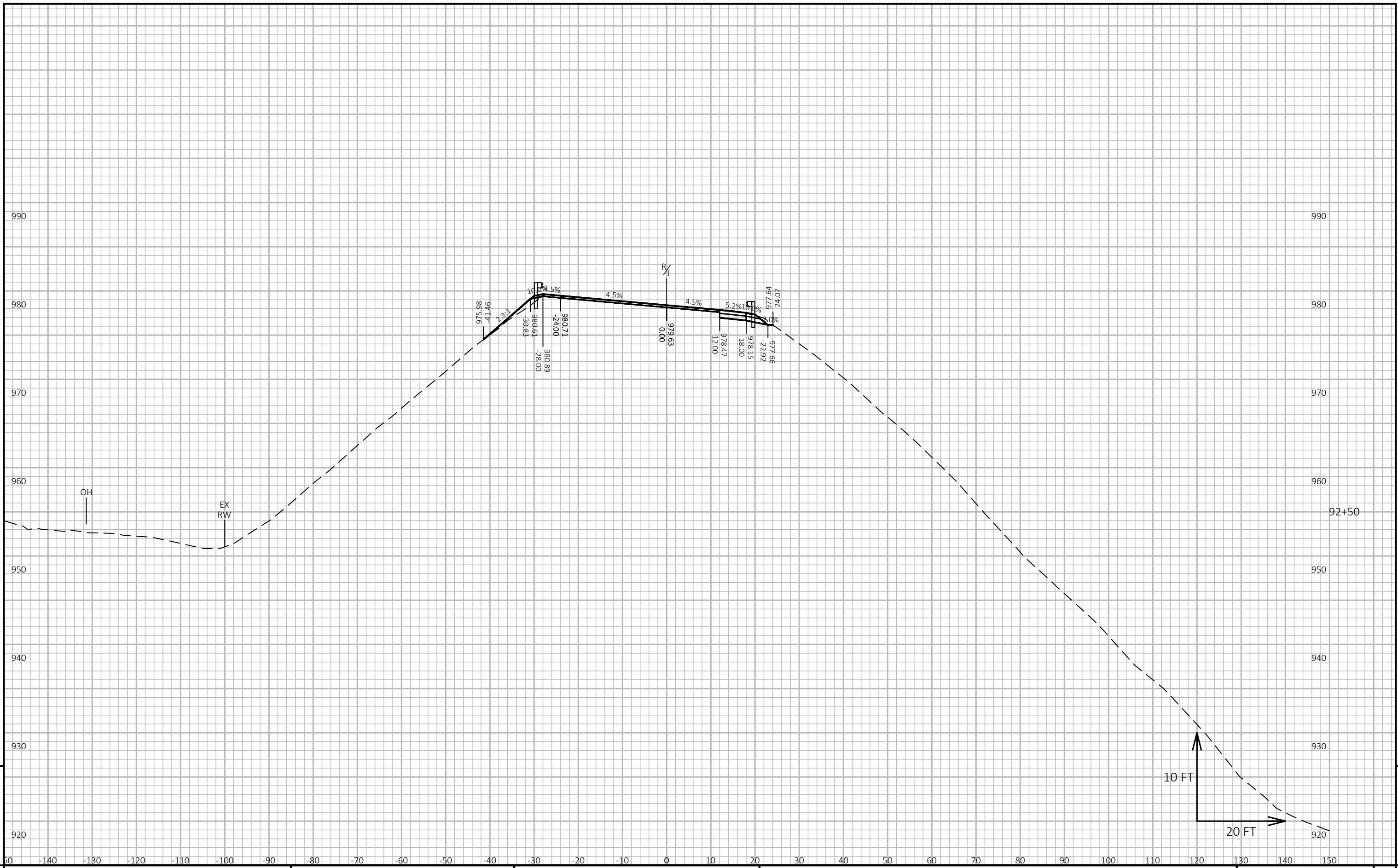
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PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E

FILE NAME : O:\PDS\C3D\15300503\SHEETSPLAN\090201-XS-BEGIN-TO-BAUERLN.DWG PLOT DATE : 7/21/2023 12:42 PM PLOT BY : CORY IHDE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

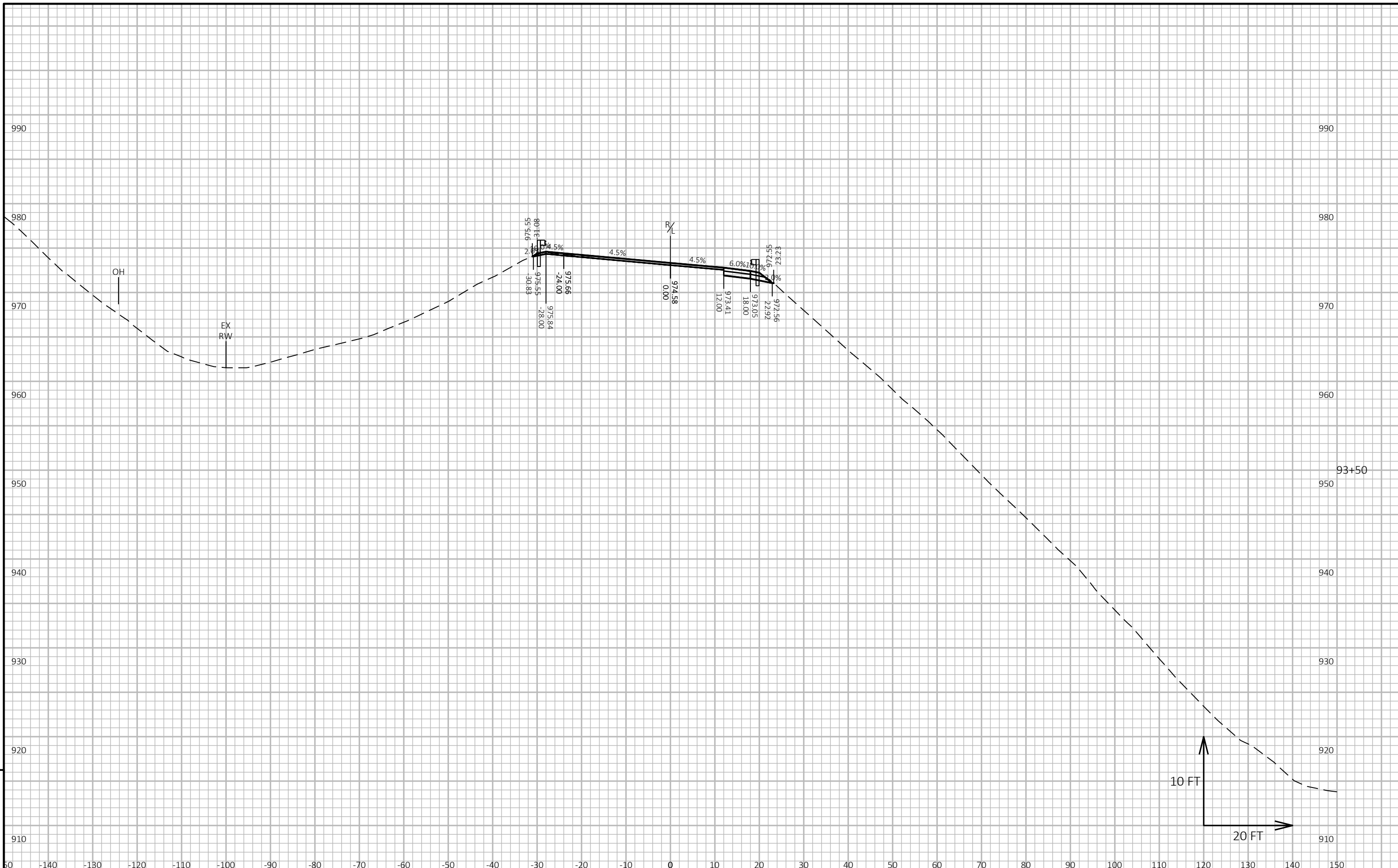
LAYOUT NAME - 67



PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E

9

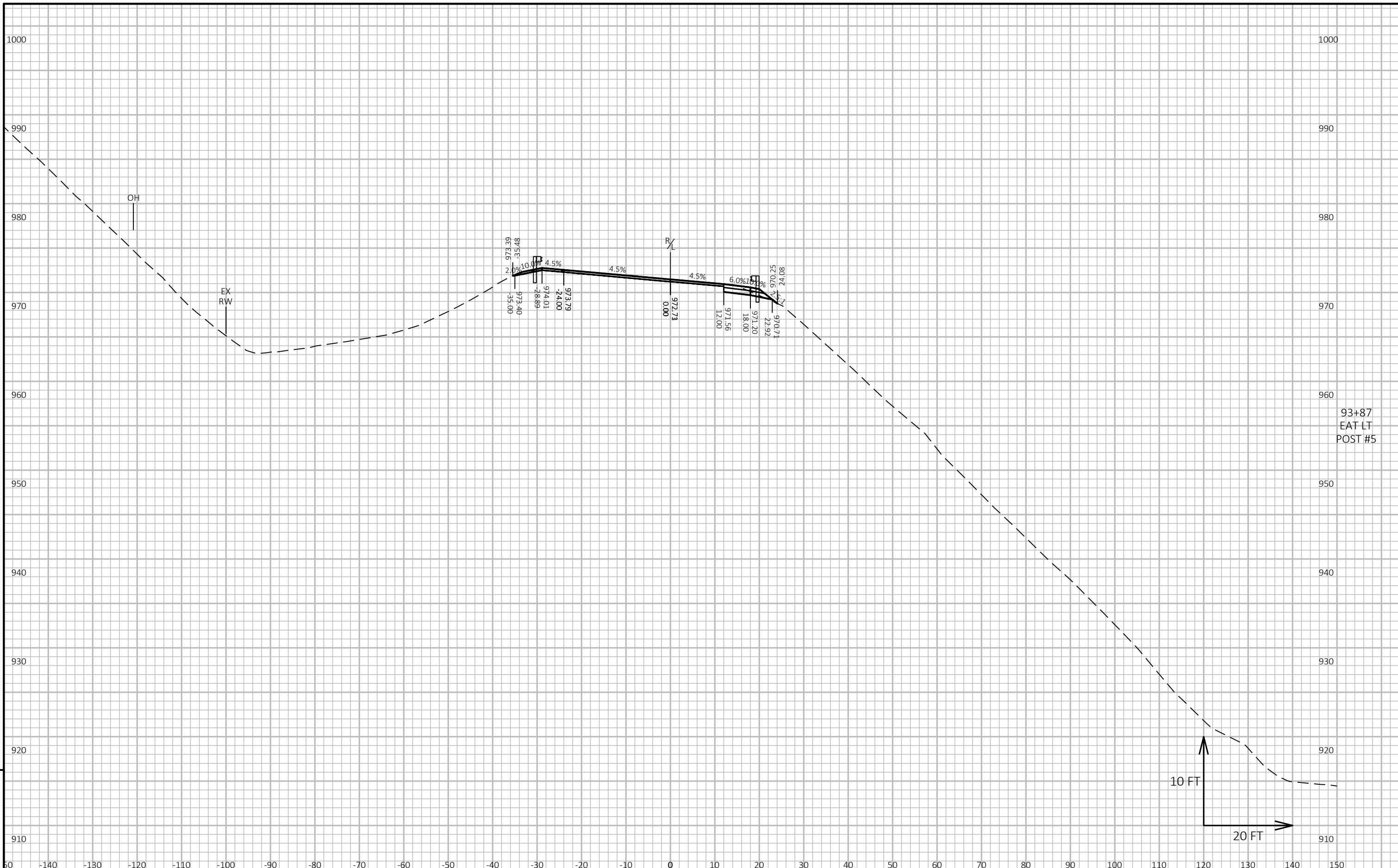
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9

9

PROJECT NO: 1530-05-73	HWY: USH 10	COUNTY: PEPIN	CROSS SECTIONS: USH 10	SHEET	E
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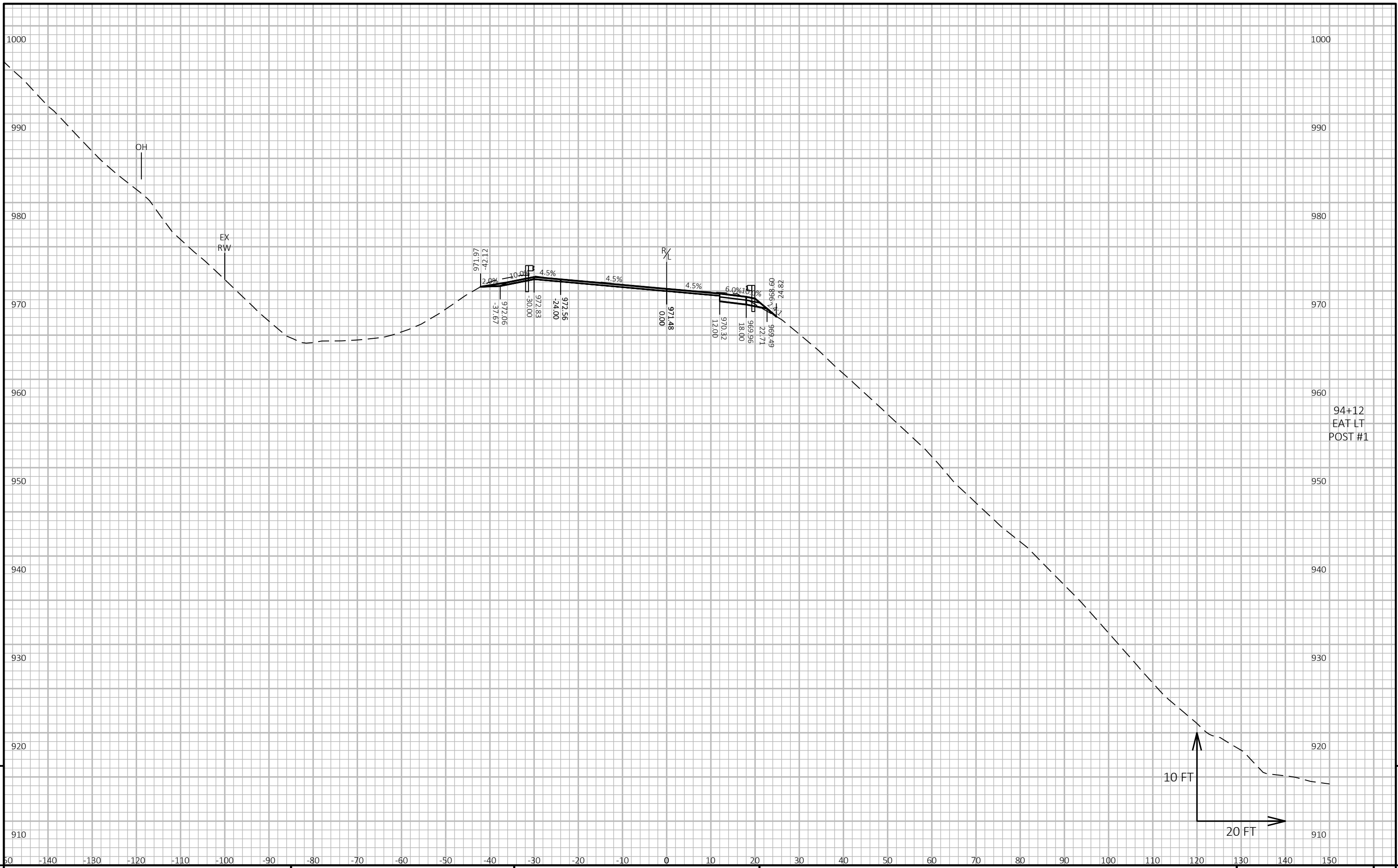
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PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E

FILE NAME : O:\PDS\C3D\15300503\SHEETSPLAN\090201-XS-BEGIN-TO-BAUERLN.DWG PLOT DATE : 7/21/2023 12:44 PM PLOT BY : CORY IHDE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 72



94+12
EAT LT
POST #1

10 FT
20 FT

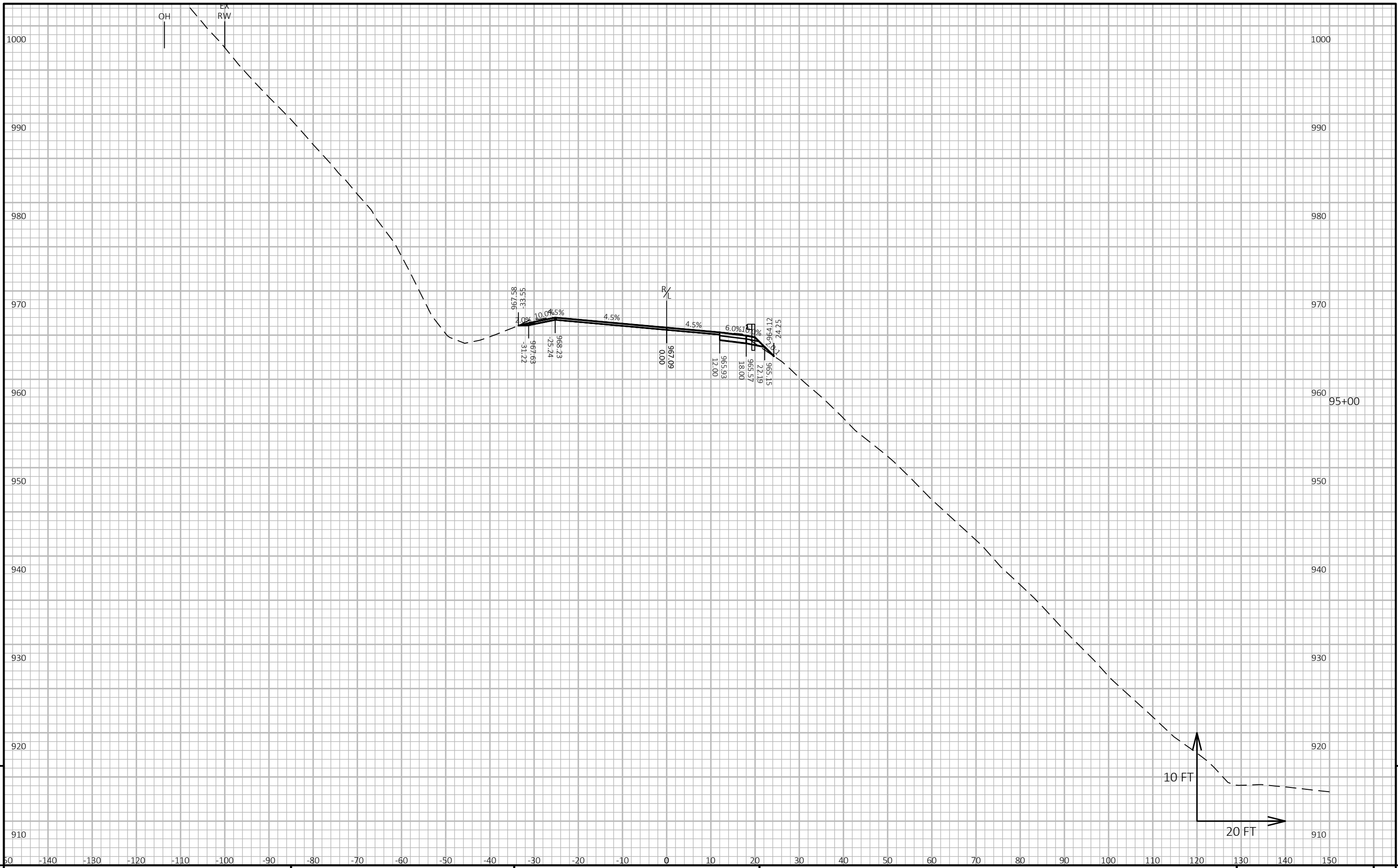
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PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E

FILE NAME : O:\PDS\C3D\15300503\SHEETSPLAN\090201-XS-BEGIN-TO-BAUERLN.DWG PLOT DATE : 7/21/2023 12:45 PM PLOT BY : CORY IHDE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 73



9

9

PROJECT NO: 1530-05-73	HWY: USH 10	COUNTY: PEPIN	CROSS SECTIONS: USH 10	SHEET	E
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9

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PROJECT NO: 1530-05-73	HWY: USH 10	COUNTY: PEPIN	CROSS SECTIONS: USH 10	SHEET	E
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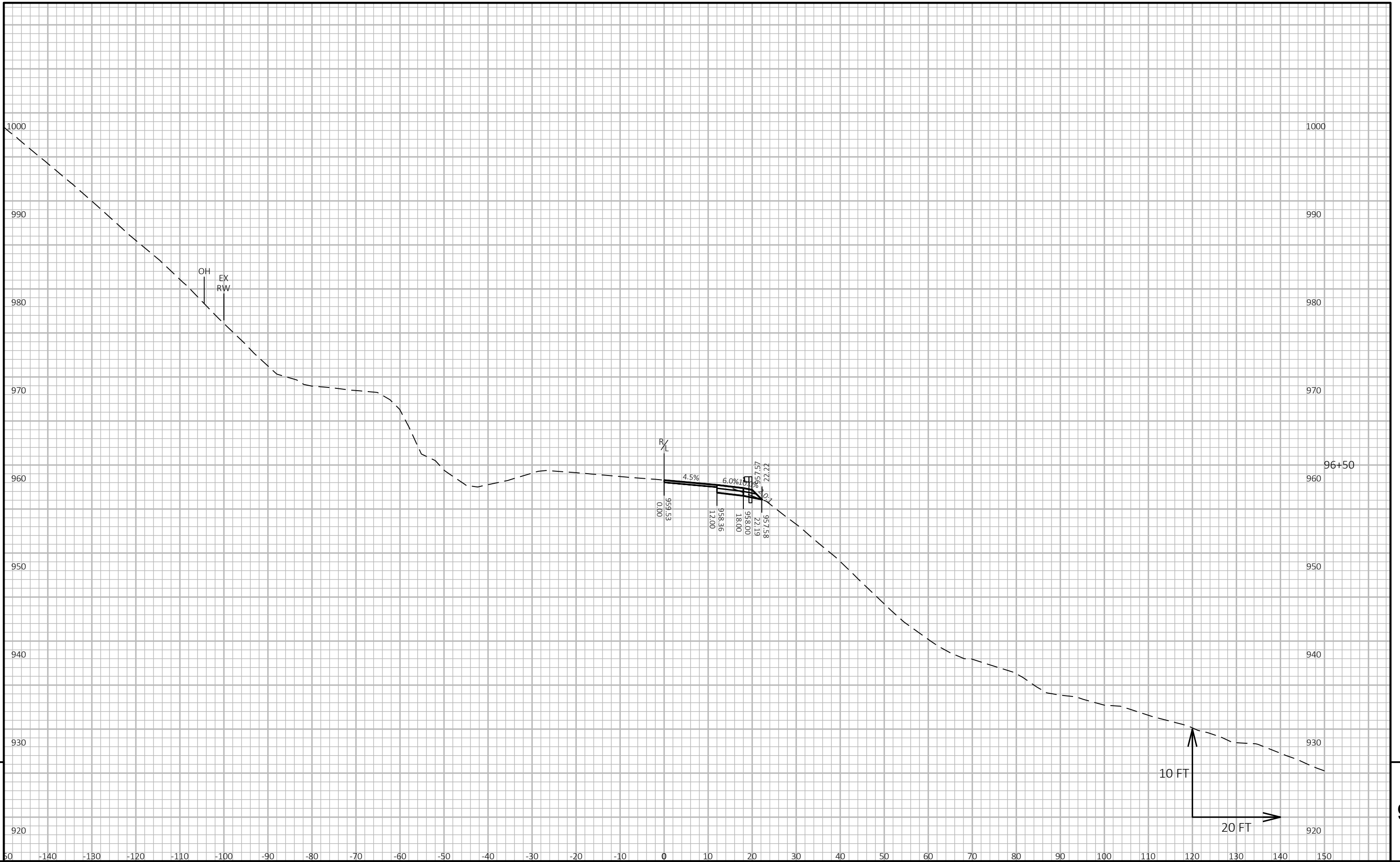
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PROJECT NO: 1530-05-73	HWY: USH 10	COUNTY: PEPIN	CROSS SECTIONS: USH 10	SHEET	E
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FILE NAME : O:\PDS\C3D\15300503\SHEETSPLAN\090201-XS-BEGIN-TO-BAUERLN.DWG PLOT DATE : 7/21/2023 12:47 PM PLOT BY : CORY IHDE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 77



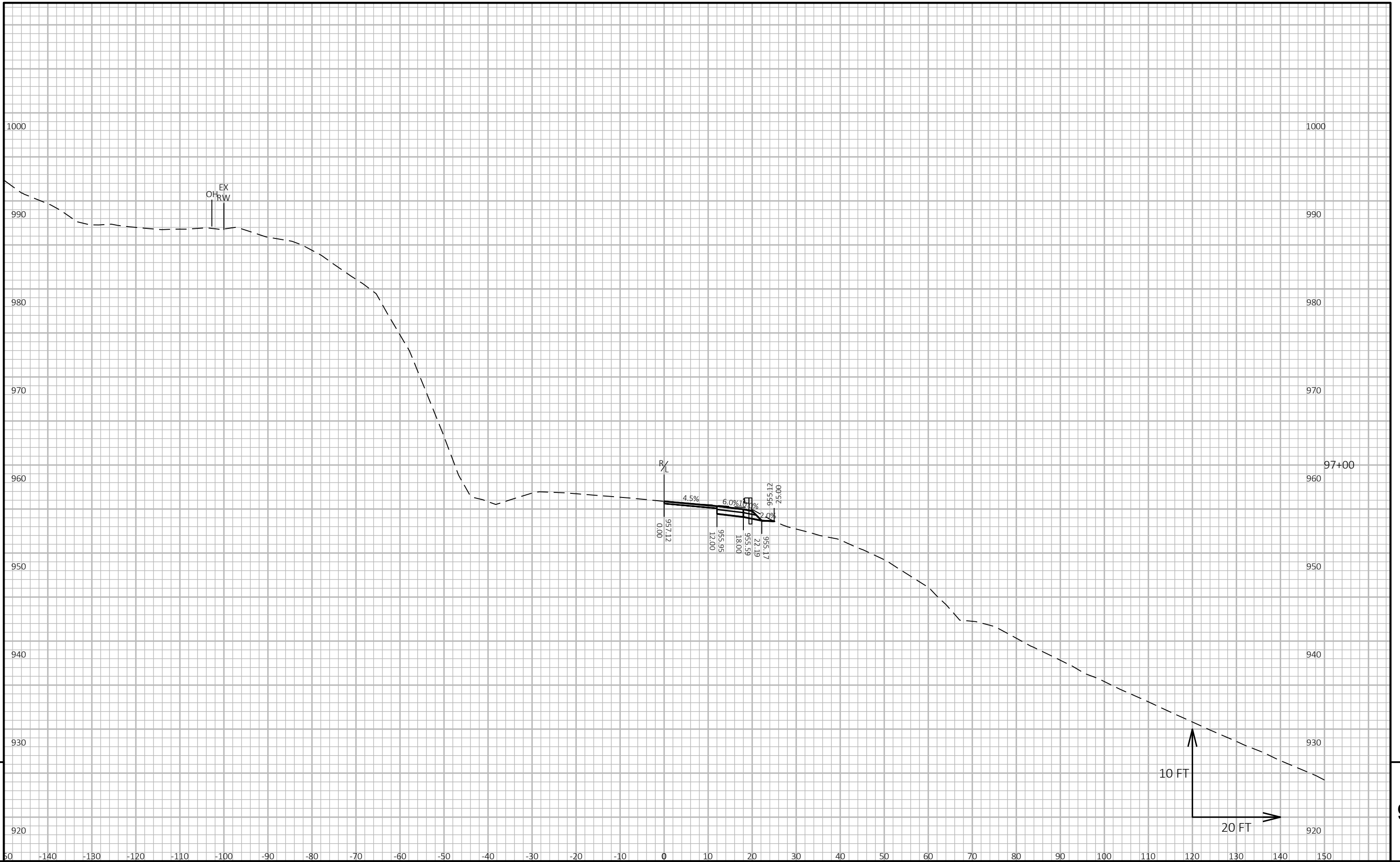
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9

PROJECT NO: 1530-05-73	HWY: USH 10	COUNTY: PEPIN	CROSS SECTIONS: USH 10	SHEET	E
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FILE NAME : O:\PDS\C3D\15300503\SHEETSPLAN\090201-XS-BEGIN-TO-BAUERLN.DWG PLOT DATE : 7/21/2023 12:48 PM PLOT BY : CORY IHDE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 78



PROJECT NO: 1530-05-73

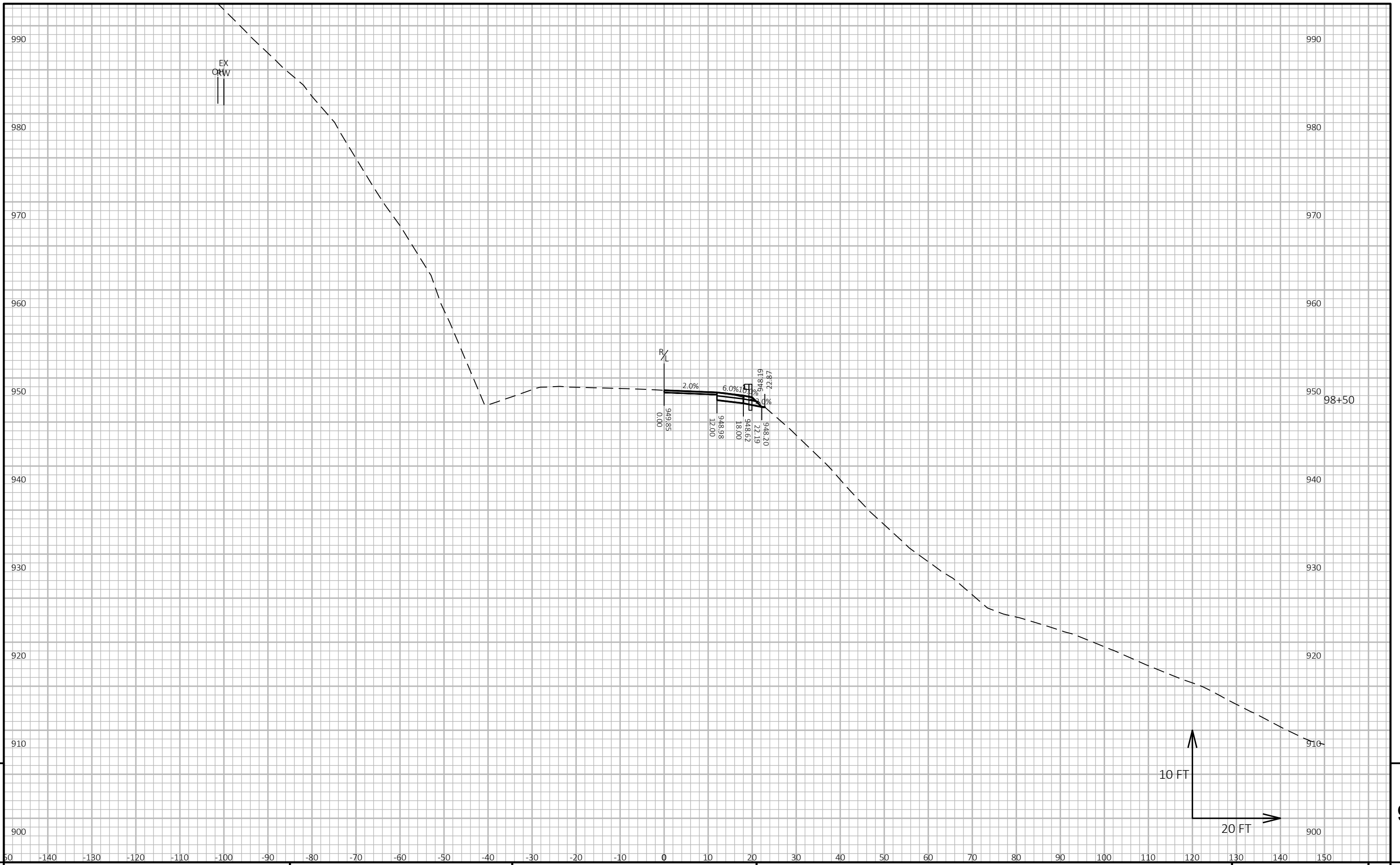
HWY: USH 10

COUNTY: PEPIN

CROSS SECTIONS: USH 10

SHEET

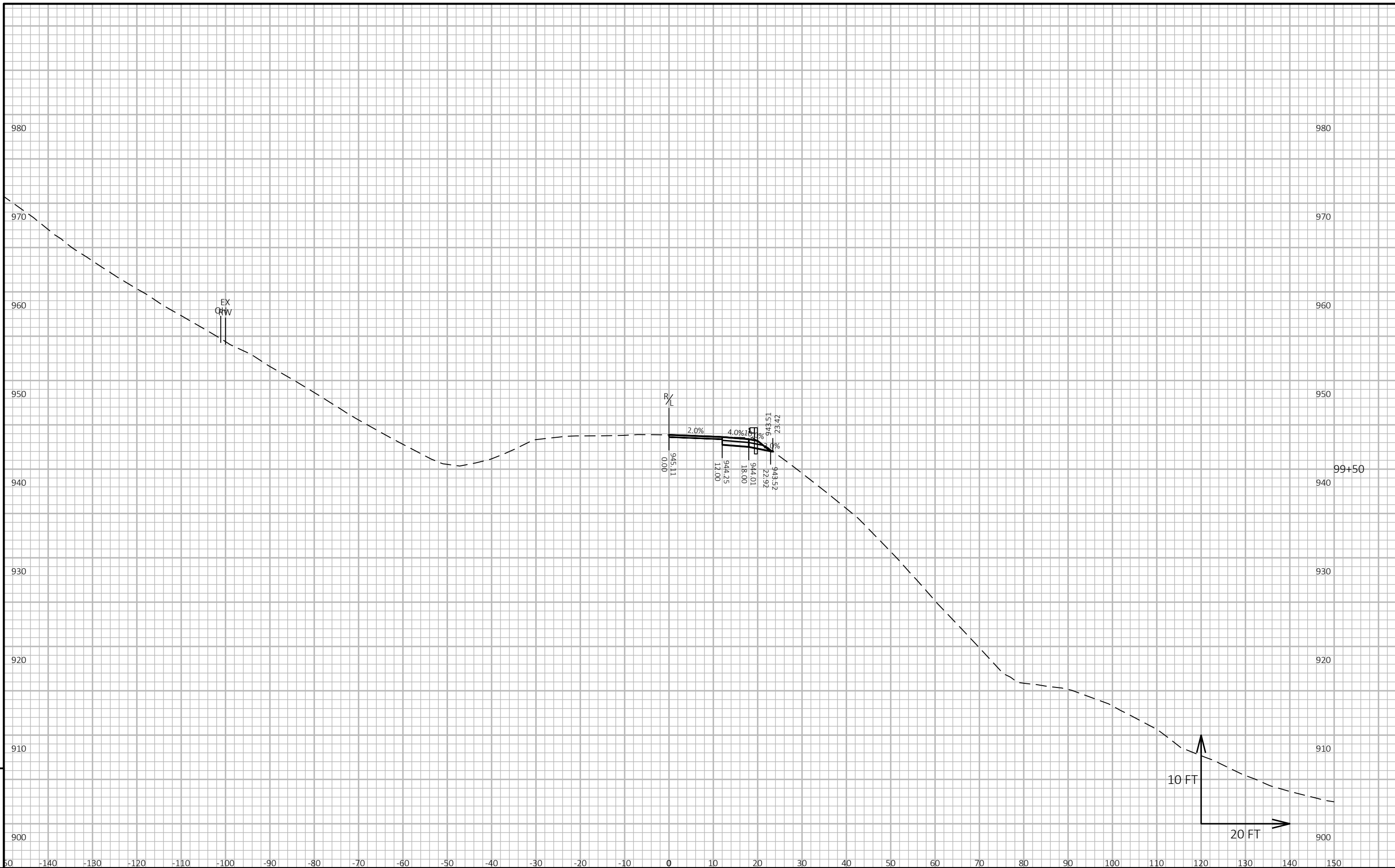
E



PROJECT NO: 1530-05-73	HWY: USH 10	COUNTY: PEPIN	CROSS SECTIONS: USH 10	SHEET	9
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FILE NAME : O:\PDS\C3D\15300503\SHEETSPLAN\090201-XS-BEGIN-TO-BAUERLN.DWG PLOT DATE : 7/21/2023 12:50 PM PLOT BY : CORY IHDE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

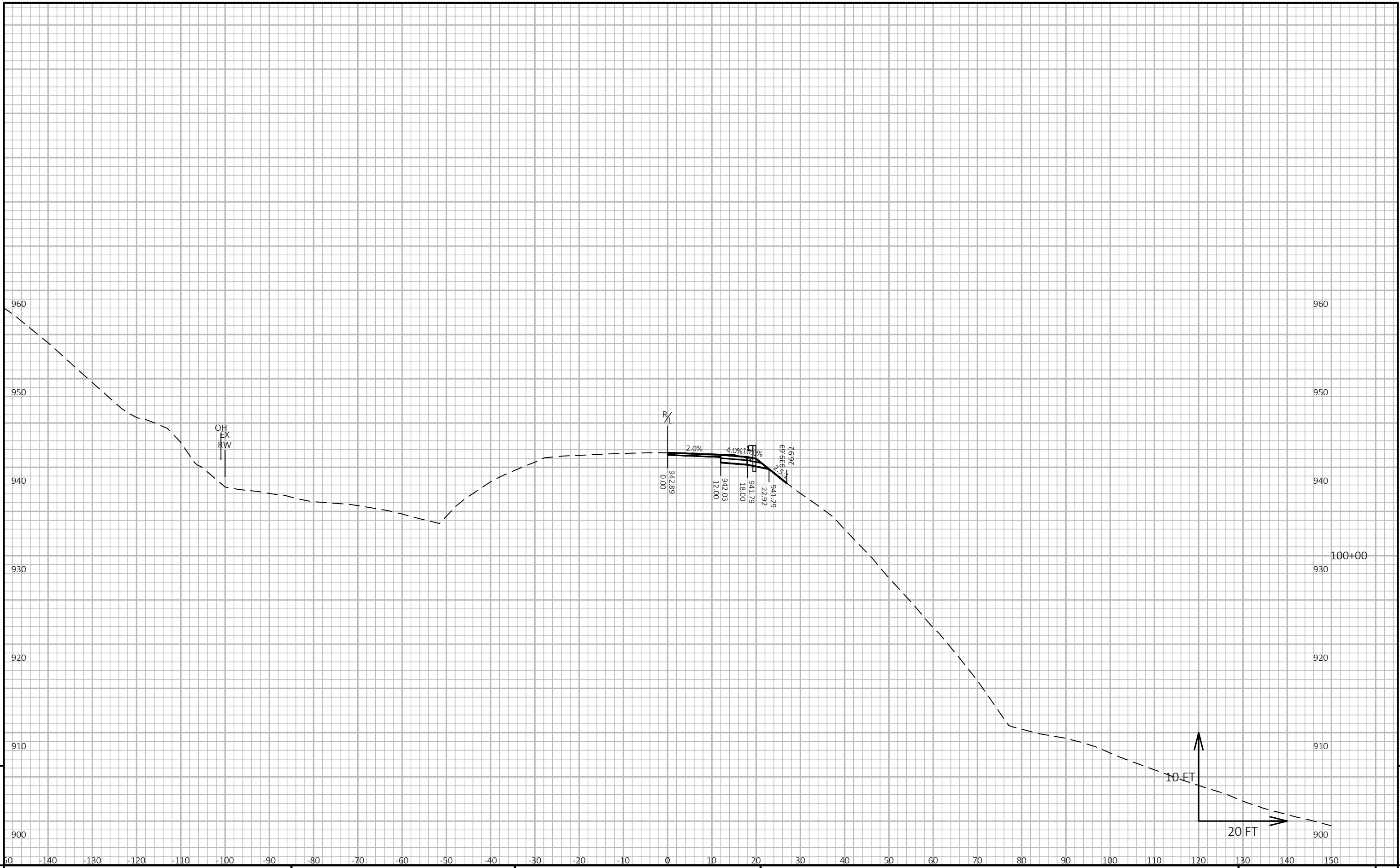
LAYOUT NAME - 82



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9

PROJECT NO: 1530-05-73	HWY: USH 10	COUNTY: PEPIN	CROSS SECTIONS: USH 10	SHEET	E
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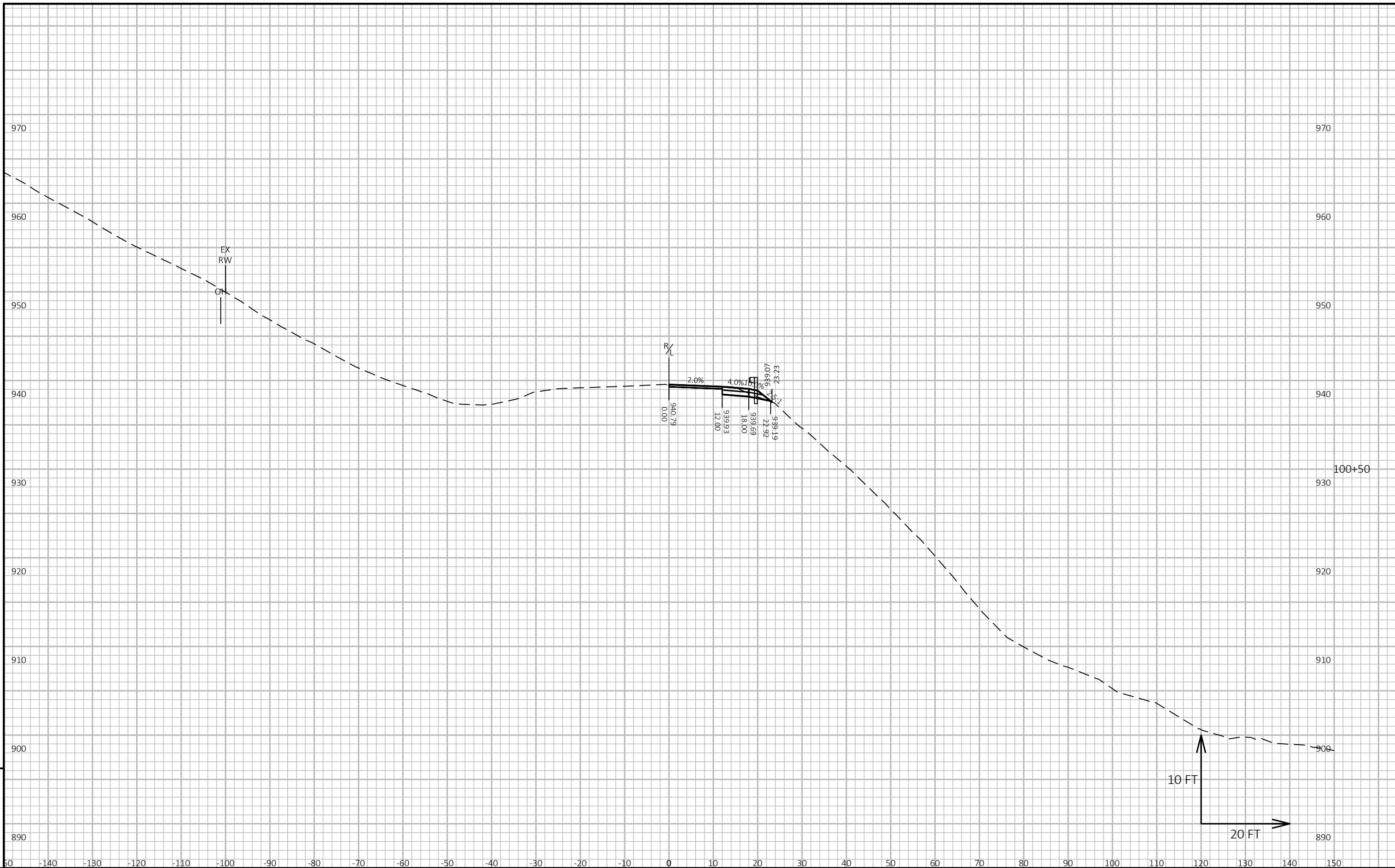
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9

PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E

FILE NAME : O:\PDS\C3D\15300503\SHEETSPLAN\090201-XS-BEGIN-TO-BAUERLN.DWG PLOT DATE : 7/21/2023 12:52 PM PLOT BY : CORY IHDE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 85



PROJECT NO: 1530-05-73

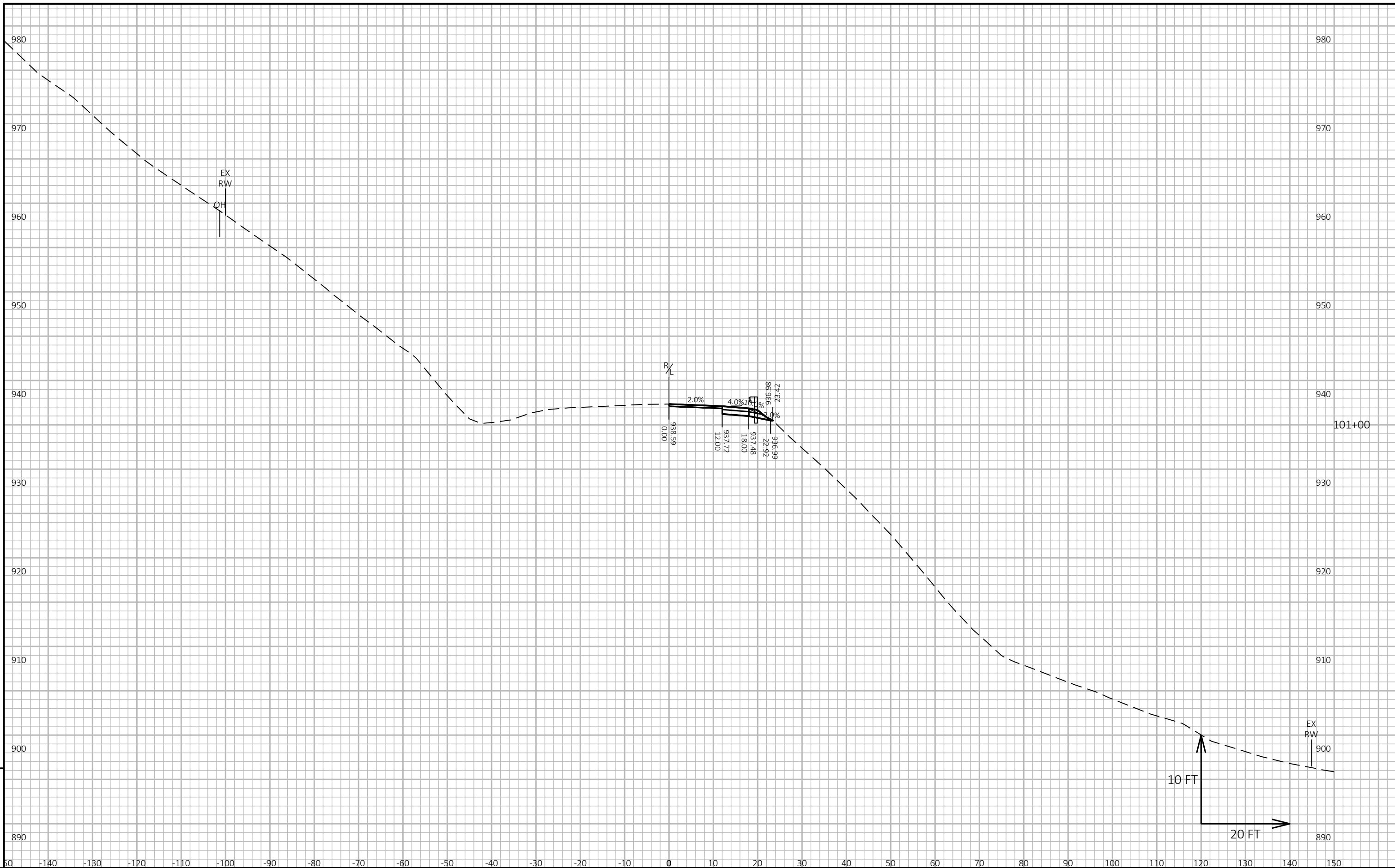
HWY: USH 10

COUNTY: PEPIN

CROSS SECTIONS: USH 10

SHEET

E



PROJECT NO: 1530-05-73

HWY: USH 10

COUNTY: PEPIN

CROSS SECTIONS: USH 10

SHEET

E

9

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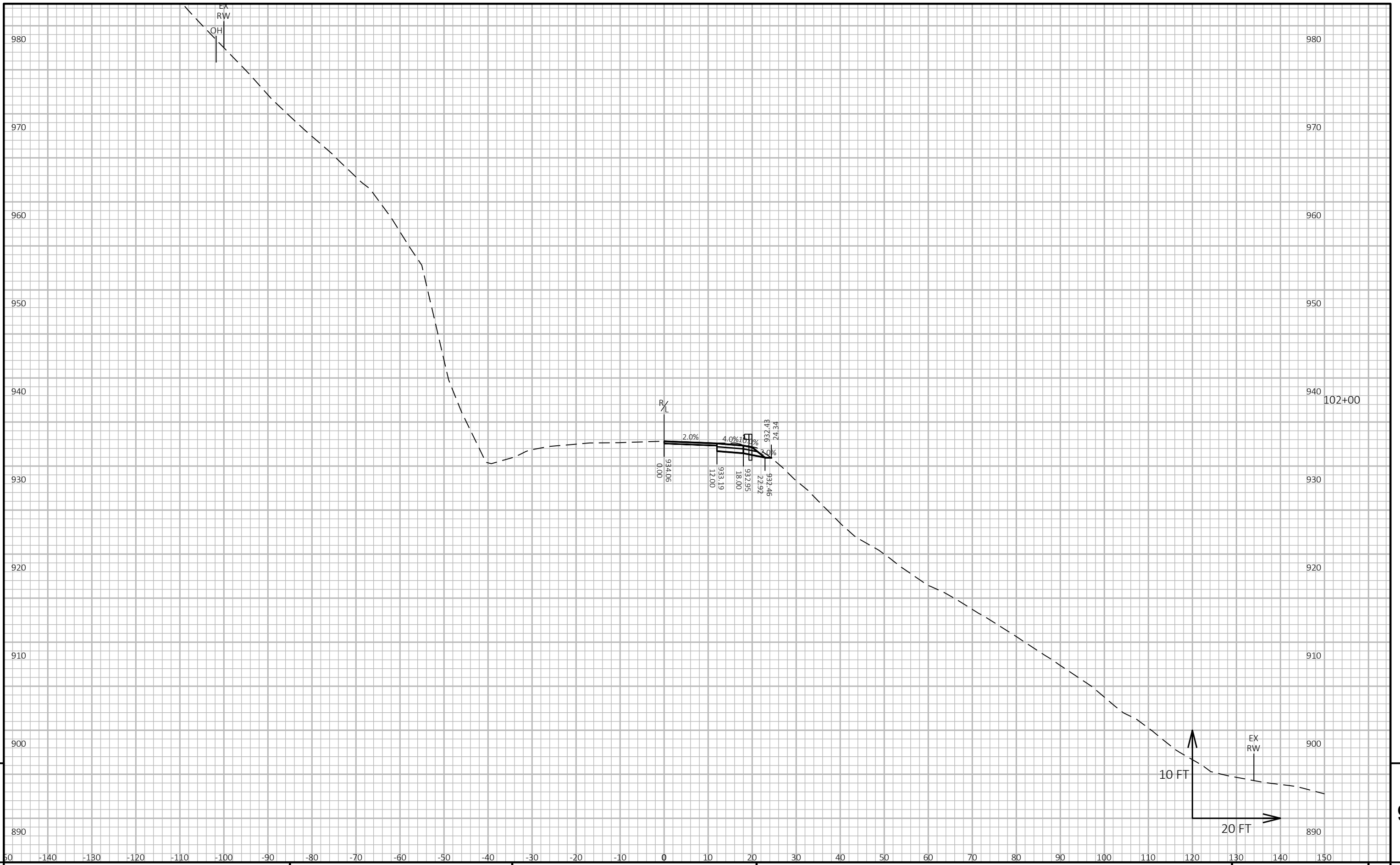
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9

PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E

FILE NAME : O:\PDS\C3D\15300503\SHEETSPLAN\090201-XS-BEGIN-TO-BAUERLN.DWG PLOT DATE : 7/21/2023 12:54 PM PLOT BY : CORY IHDE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 88



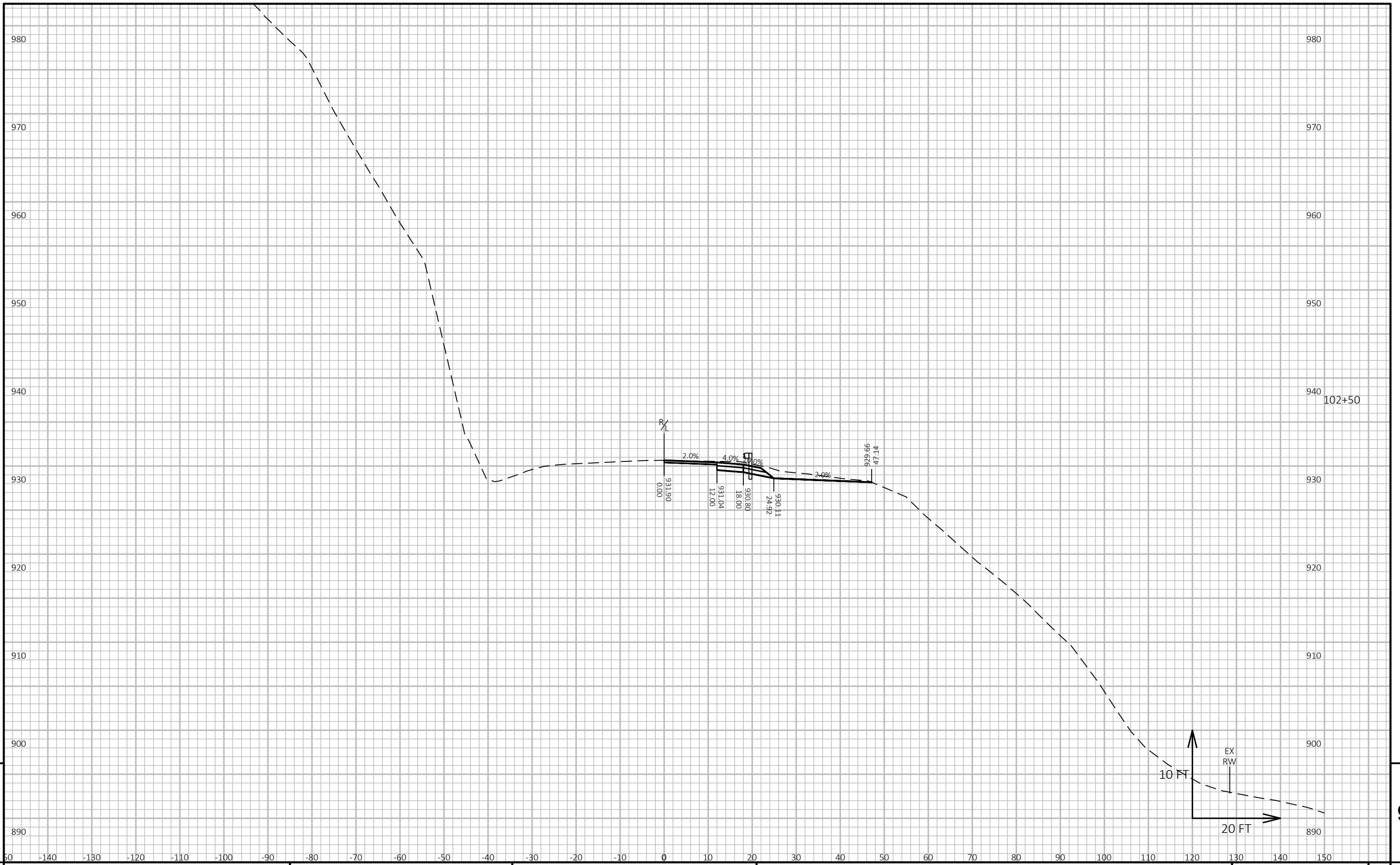
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9

PROJECT NO: 1530-05-73	HWY: USH 10	COUNTY: PEPIN	CROSS SECTIONS: USH 10	SHEET	E
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FILE NAME : O:\PDS\C3D\15300503\SHEETSPLAN\090201-XS-BEGIN-TO-BAUERLN.DWG PLOT DATE : 7/21/2023 12:54 PM PLOT BY : CORY IHDE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

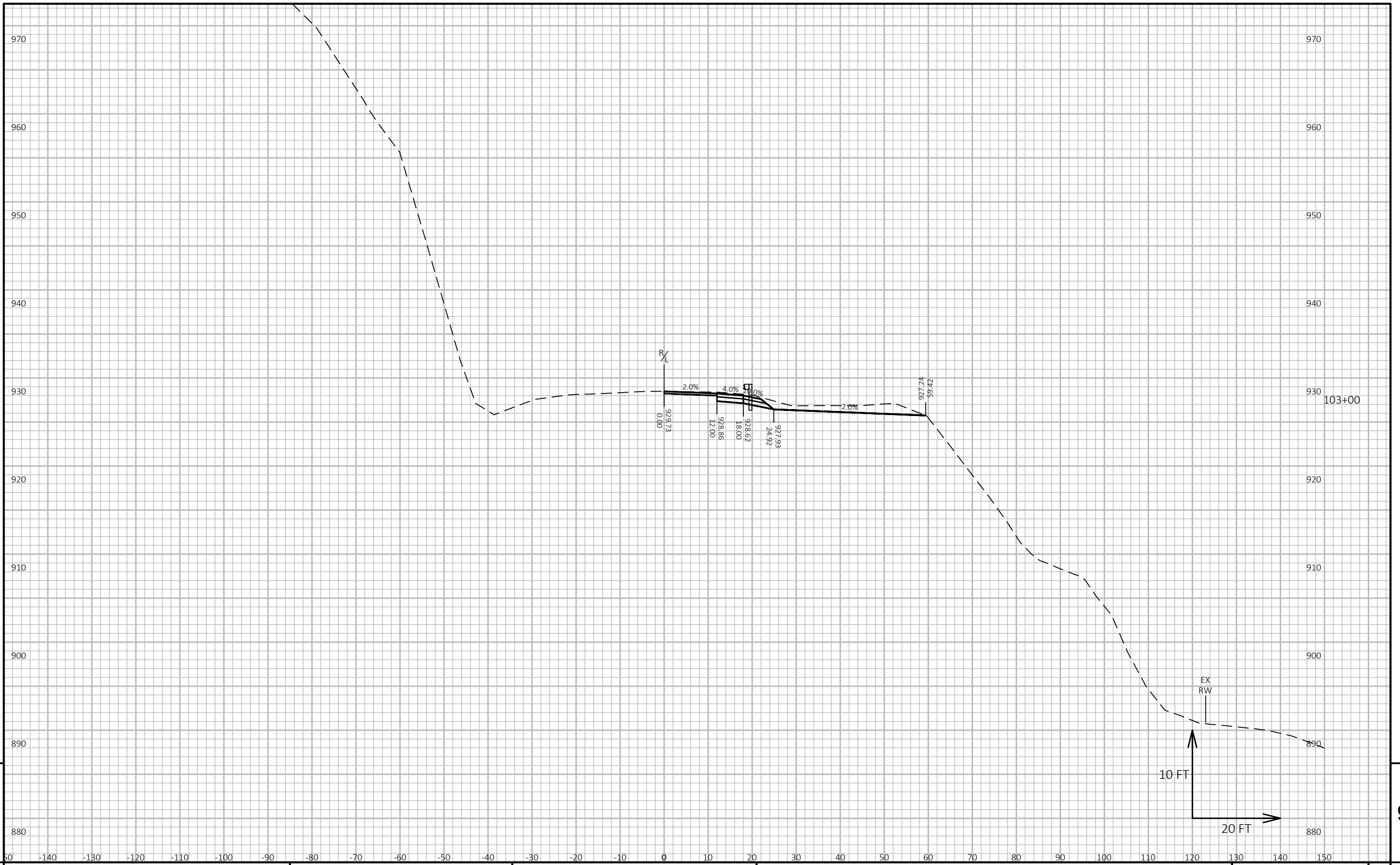
LAYOUT NAME - 89



9

9

PROJECT NO: 1530-05-73	HWY: USH 10	COUNTY: PEPIN	CROSS SECTIONS: USH 10	SHEET	E
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9

PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E

FILE NAME : O:\PDS\C3D\15300503\SHEETSPLAN\090201-XS-BEGIN-TO-BAUERLN.DWG PLOT DATE : 7/21/2023 12:55 PM PLOT BY : CORY IHDE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 91



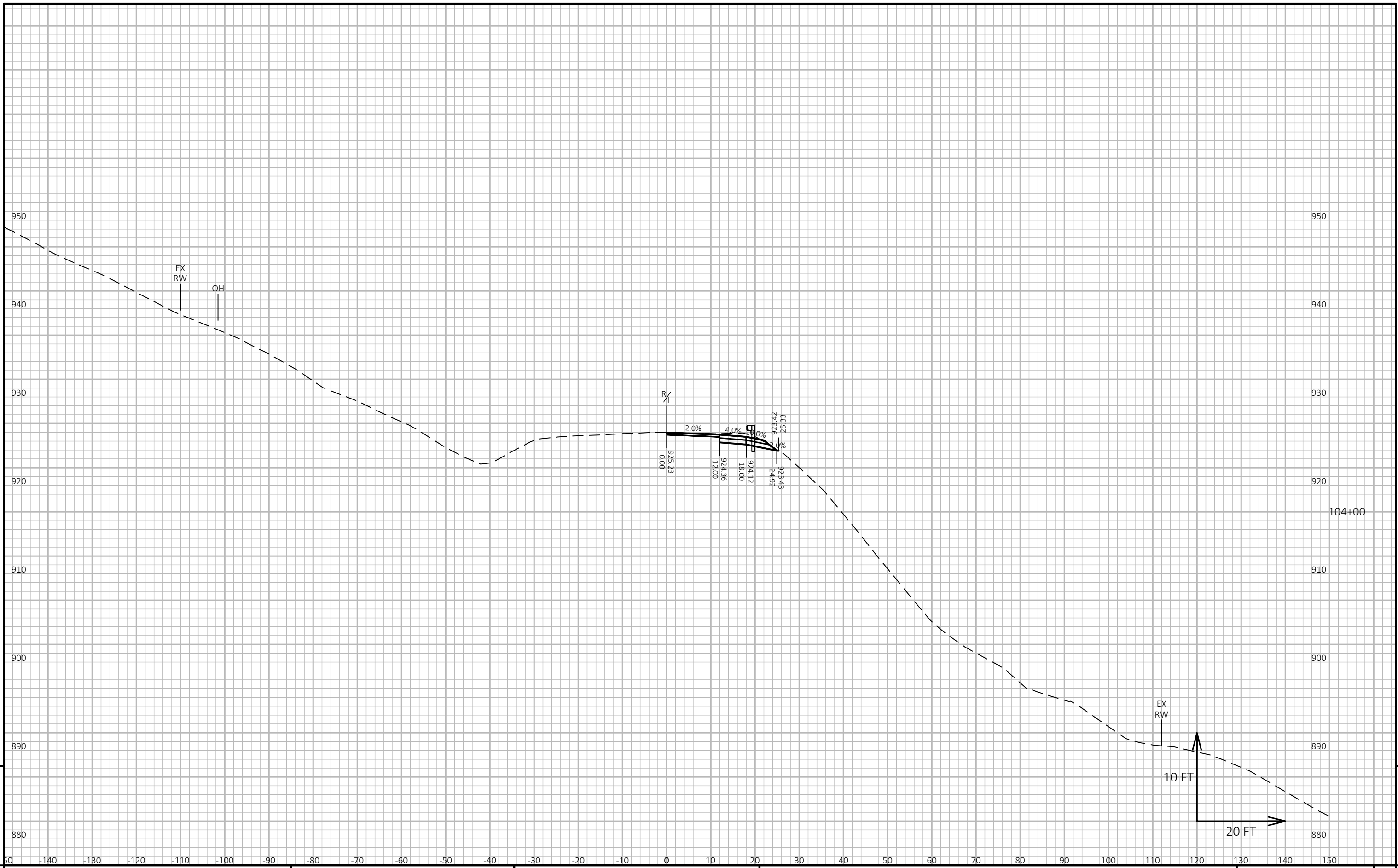
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PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E

FILE NAME : O:\PDS\C3D\15300503\SHEETSPLAN\090201-XS-BEGIN-TO-BAUERLN.DWG PLOT DATE : 7/21/2023 12:56 PM PLOT BY : CORY IHDE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 92



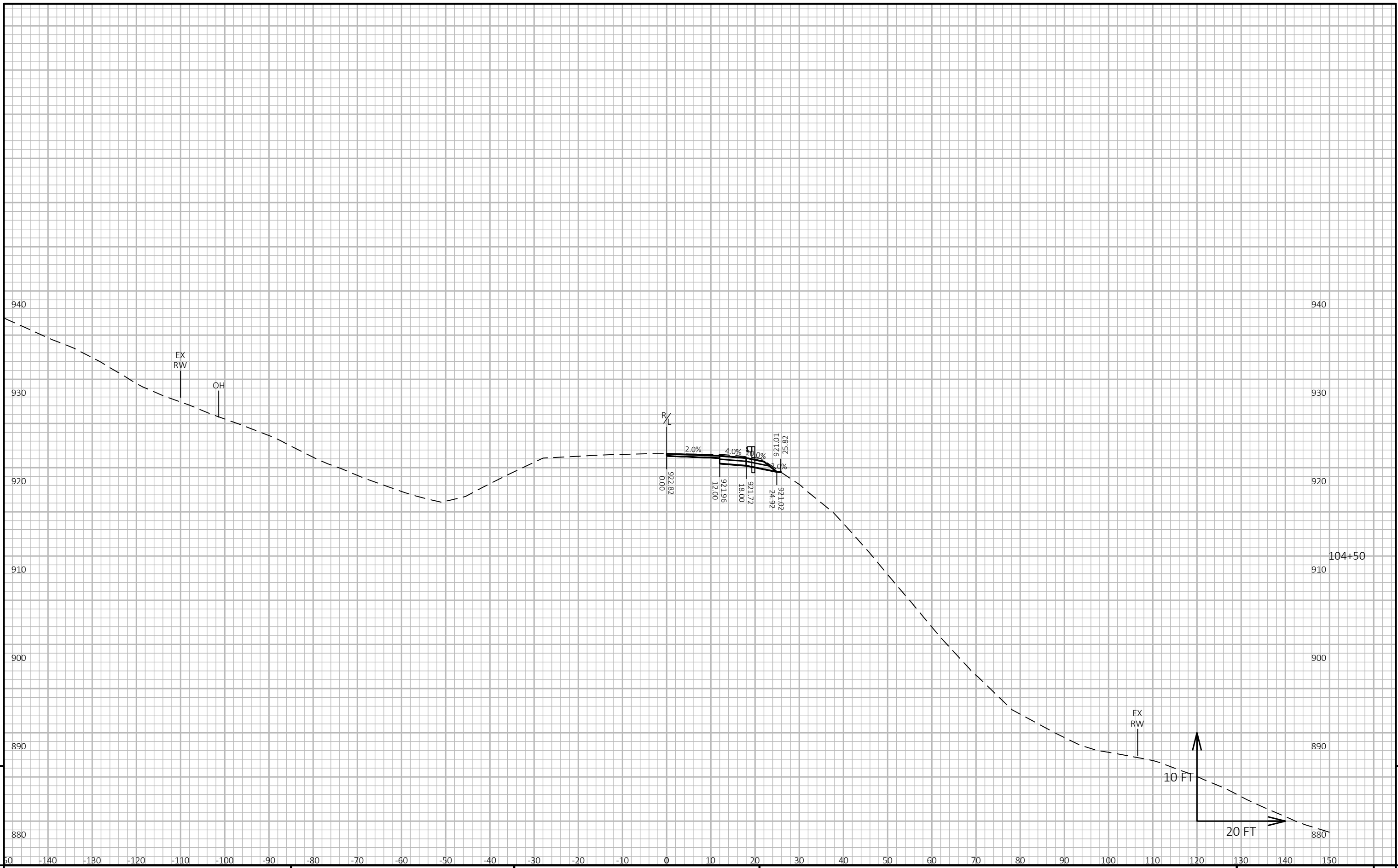
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9

PROJECT NO: 1530-05-73	HWY: USH 10	COUNTY: PEPIN	CROSS SECTIONS: USH 10	SHEET	E
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FILE NAME : O:\PDS\C3D\15300503\SHEETSPLAN\090201-XS-BEGIN-TO-BAUERLN.DWG PLOT DATE : 7/21/2023 12:56 PM PLOT BY : CORY IHDE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 93



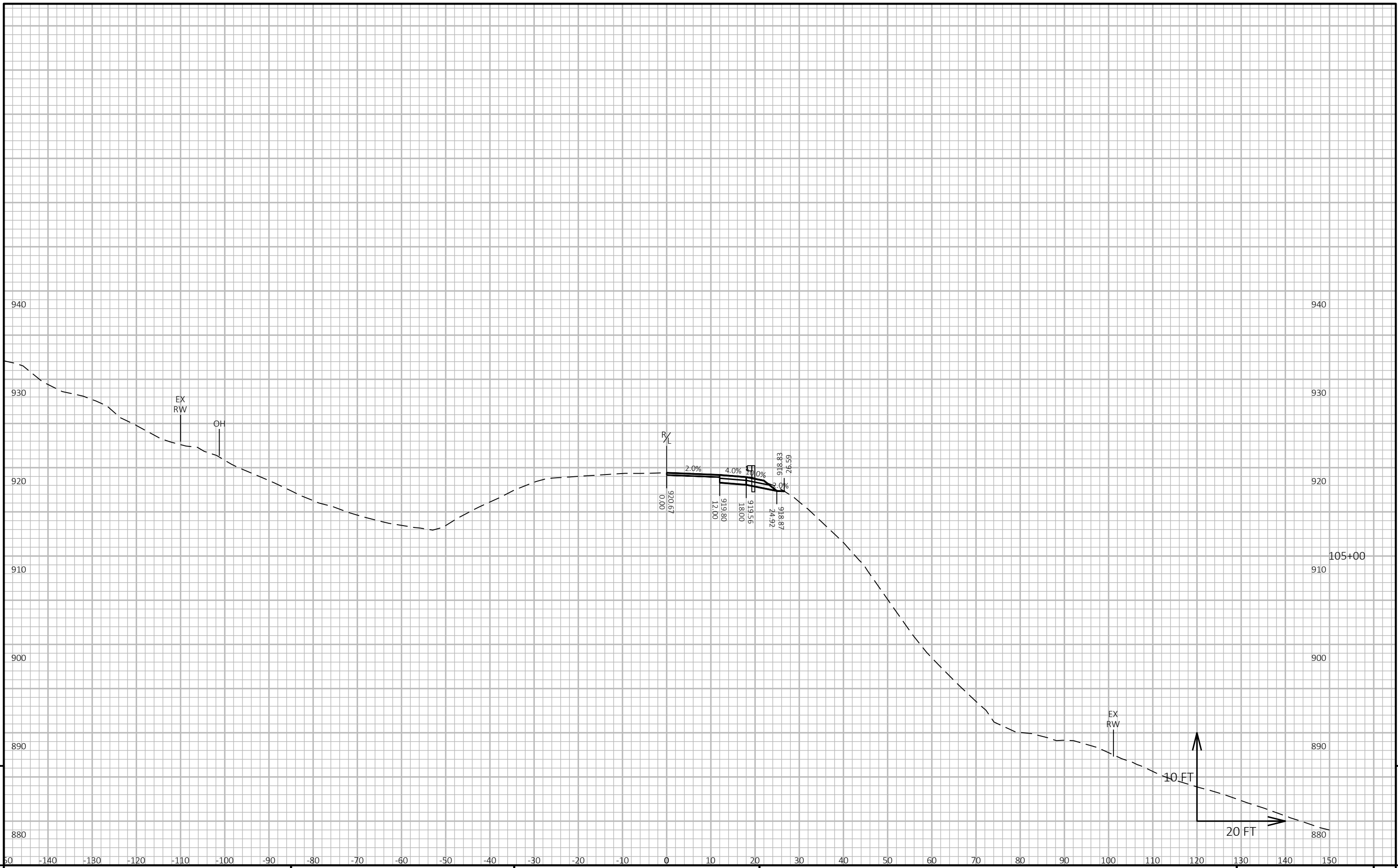
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9

PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E

FILE NAME : O:\PDS\C3D\15300503\SHEETSPLAN\090201-XS-BEGIN-TO-BAUERLN.DWG PLOT DATE : 7/21/2023 12:57 PM PLOT BY : CORY IHDE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 94



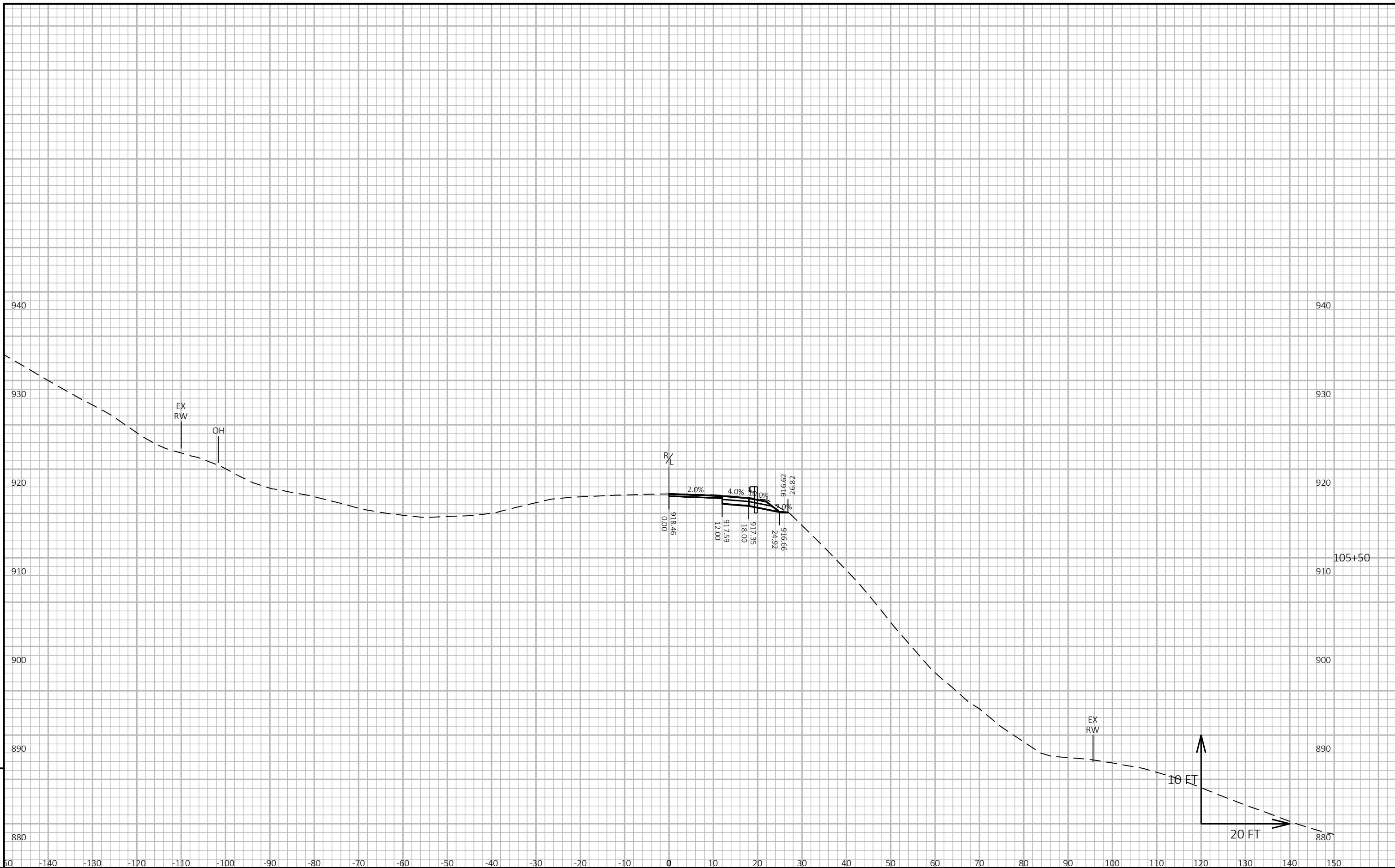
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PROJECT NO: 1530-05-73	HWY: USH 10	COUNTY: PEPIN	CROSS SECTIONS: USH 10	SHEET	E
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FILE NAME : O:\PDS\C3D\15300503\SHEETSPLAN\090201-XS-BEGIN-TO-BAUERLN.DWG PLOT DATE : 7/21/2023 12:57 PM PLOT BY : CORY IHDE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 95



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PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E

FILE NAME : O:\PDS\C3D\15300503\SHEETSPLAN\090201-XS-BEGIN-TO-BAUERLN.DWG PLOT DATE : 7/21/2023 12:58 PM PLOT BY : CORY IHDE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 96



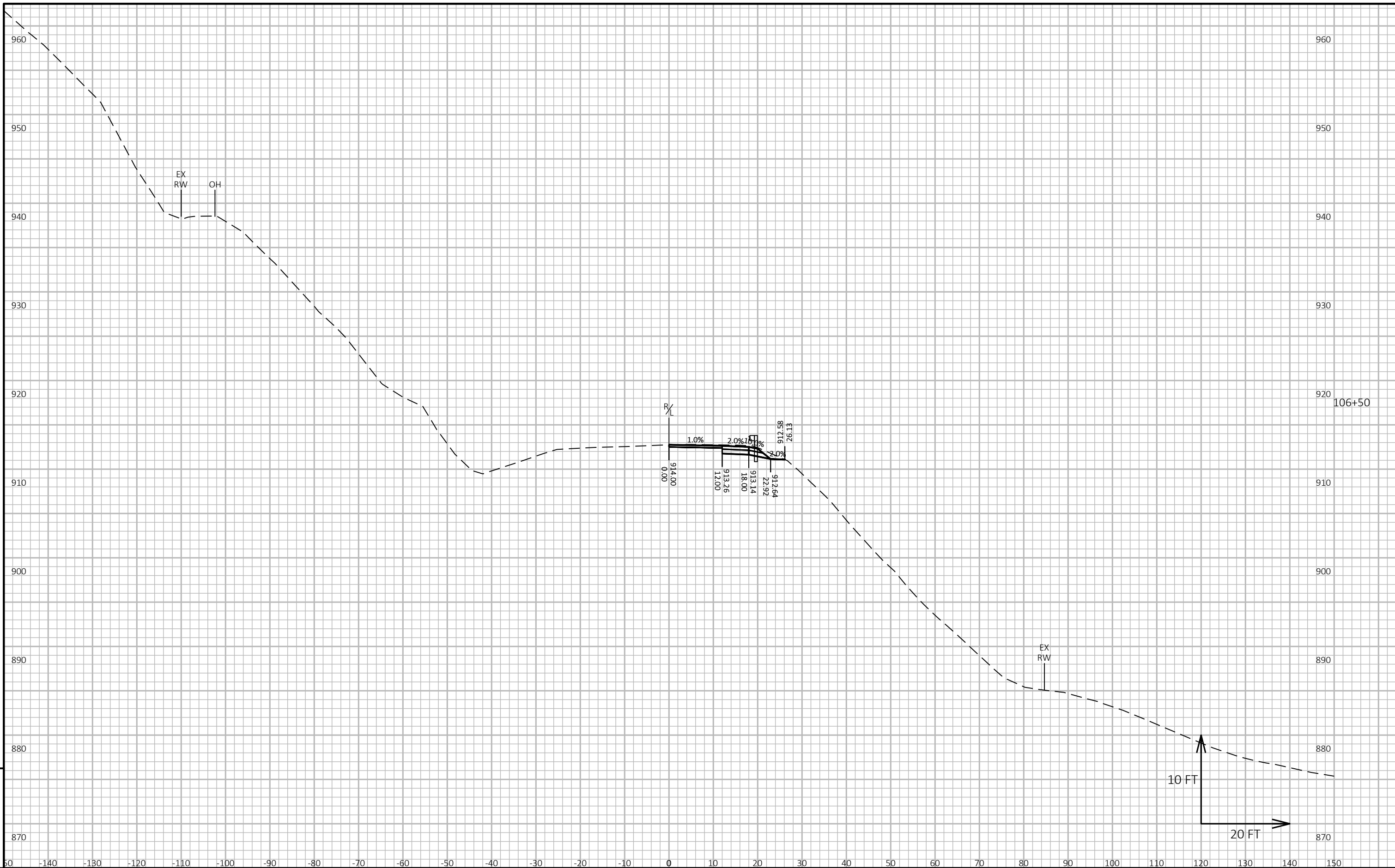
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PROJECT NO: 1530-05-73	HWY: USH 10	COUNTY: PEPIN	CROSS SECTIONS: USH 10	SHEET	E
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FILE NAME : O:\PDS\C3D\15300503\SHEETSPLAN\090201-XS-BEGIN-TO-BAUERLN.DWG PLOT DATE : 7/21/2023 12:58 PM PLOT BY : CORY IHDE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 97



PROJECT NO: 1530-05-73

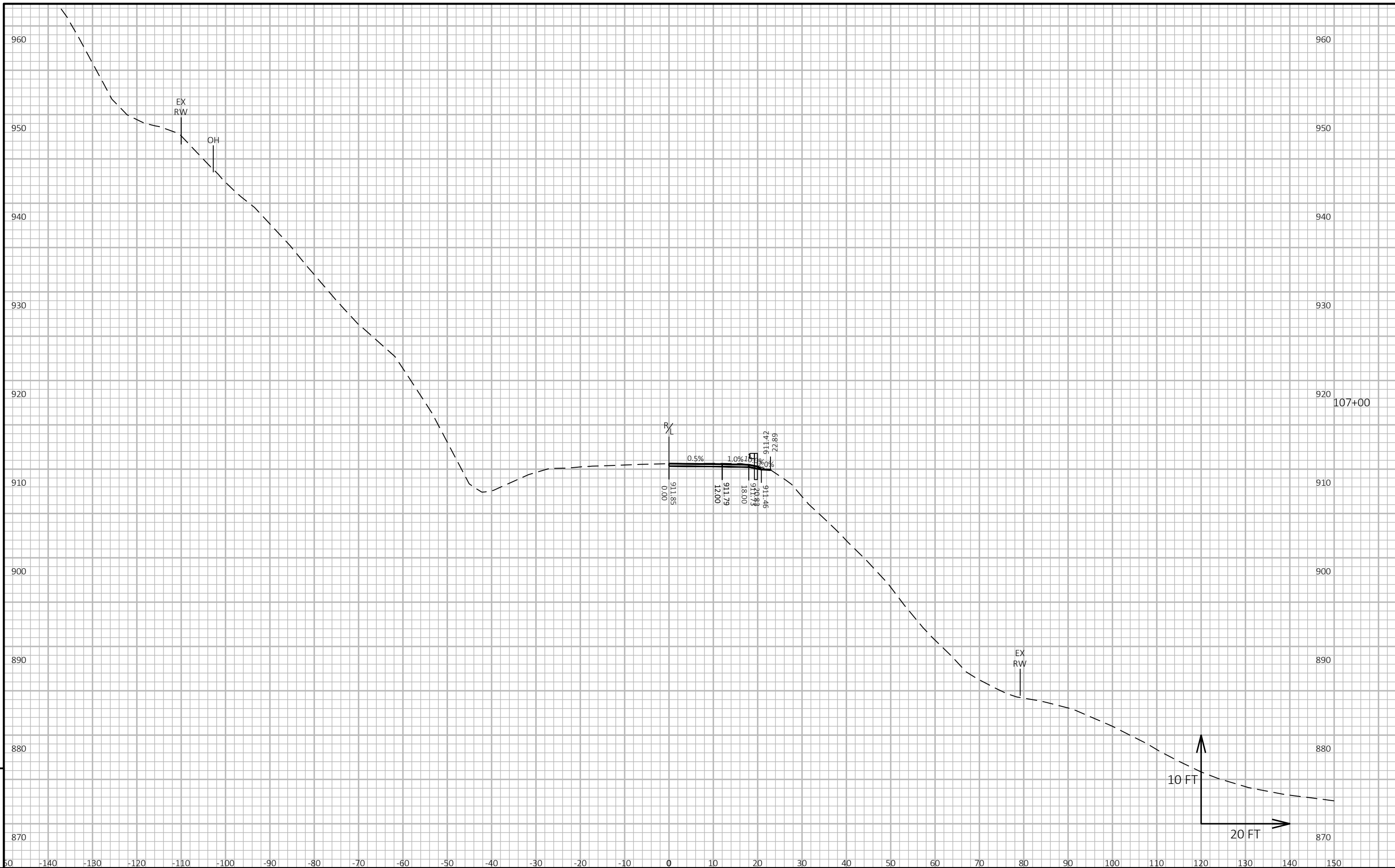
HWY: USH 10

COUNTY: PEPIN

CROSS SECTIONS: USH 10

SHEET

E



PROJECT NO: 1530-05-73

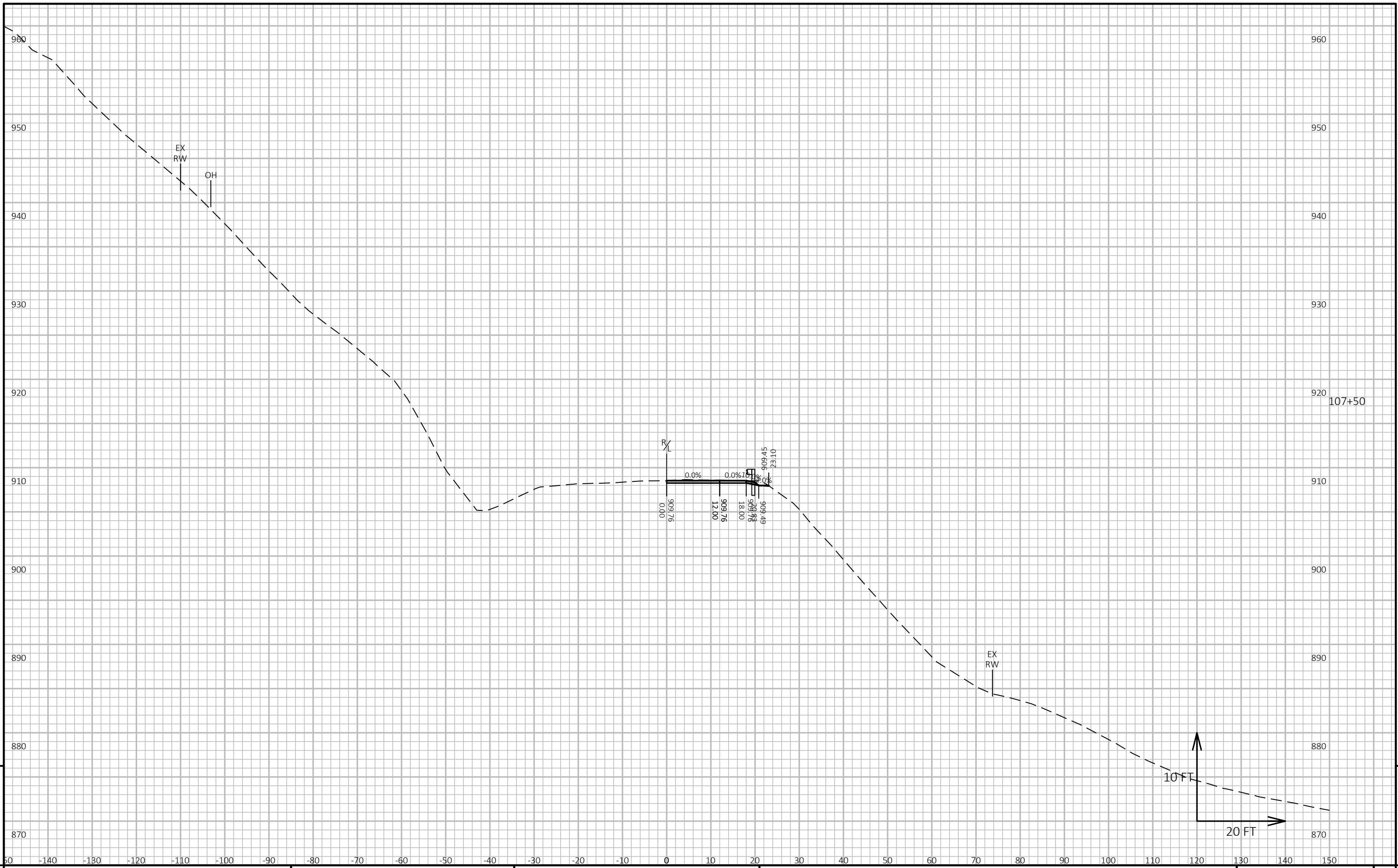
HWY: USH 10

COUNTY: PEPIN

CROSS SECTIONS: USH 10

SHEET

E



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PROJECT NO: 1530-05-73	HWY: USH 10	COUNTY: PEPIN	CROSS SECTIONS: USH 10	SHEET	E
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FILE NAME : O:\PDS\C3D\15300503\SHEETSPLAN\090201-XS-BEGIN-TO-BAUERLN.DWG PLOT DATE : 7/21/2023 1:00 PM PLOT BY : CORY IHDE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

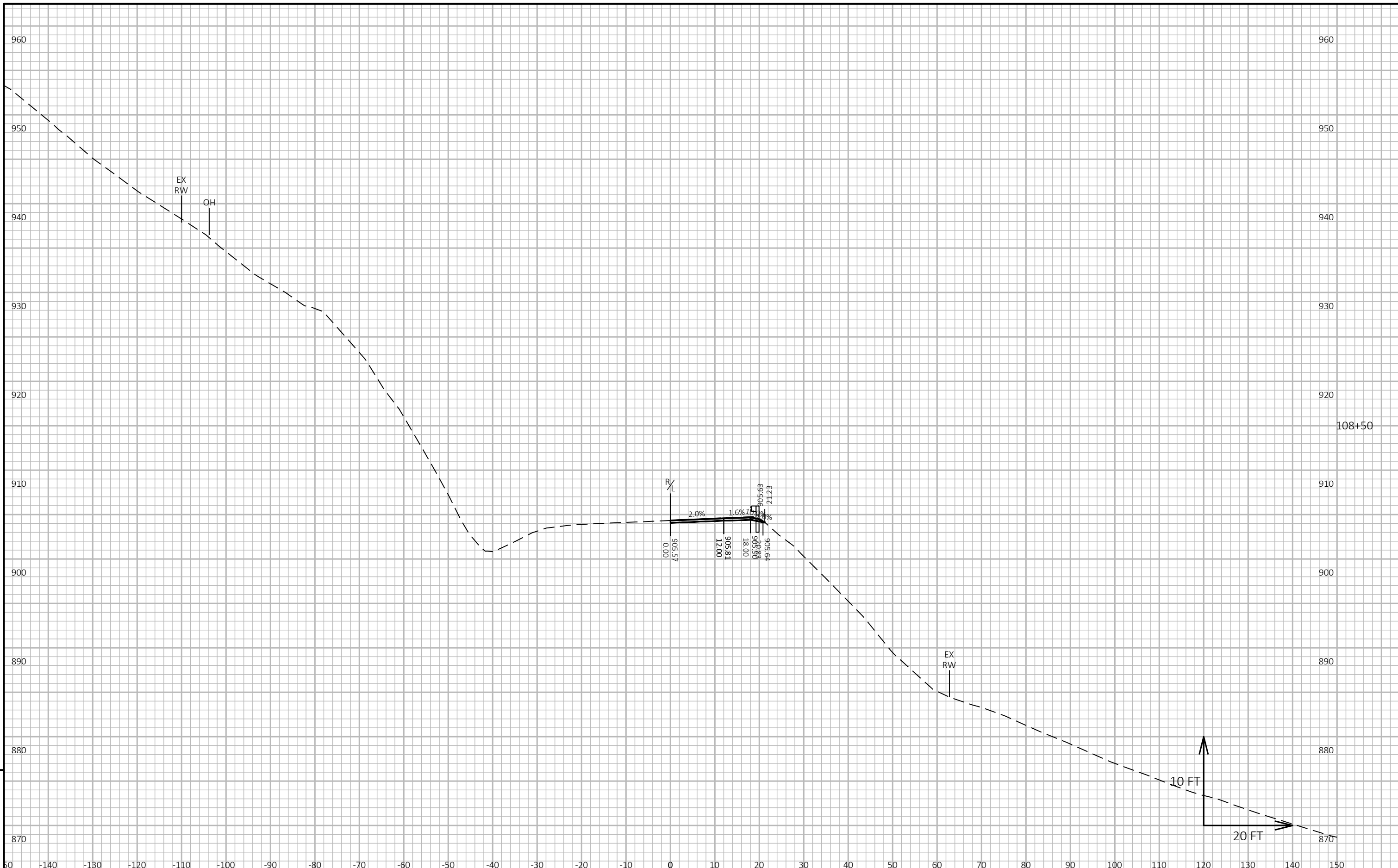
LAYOUT NAME - 100



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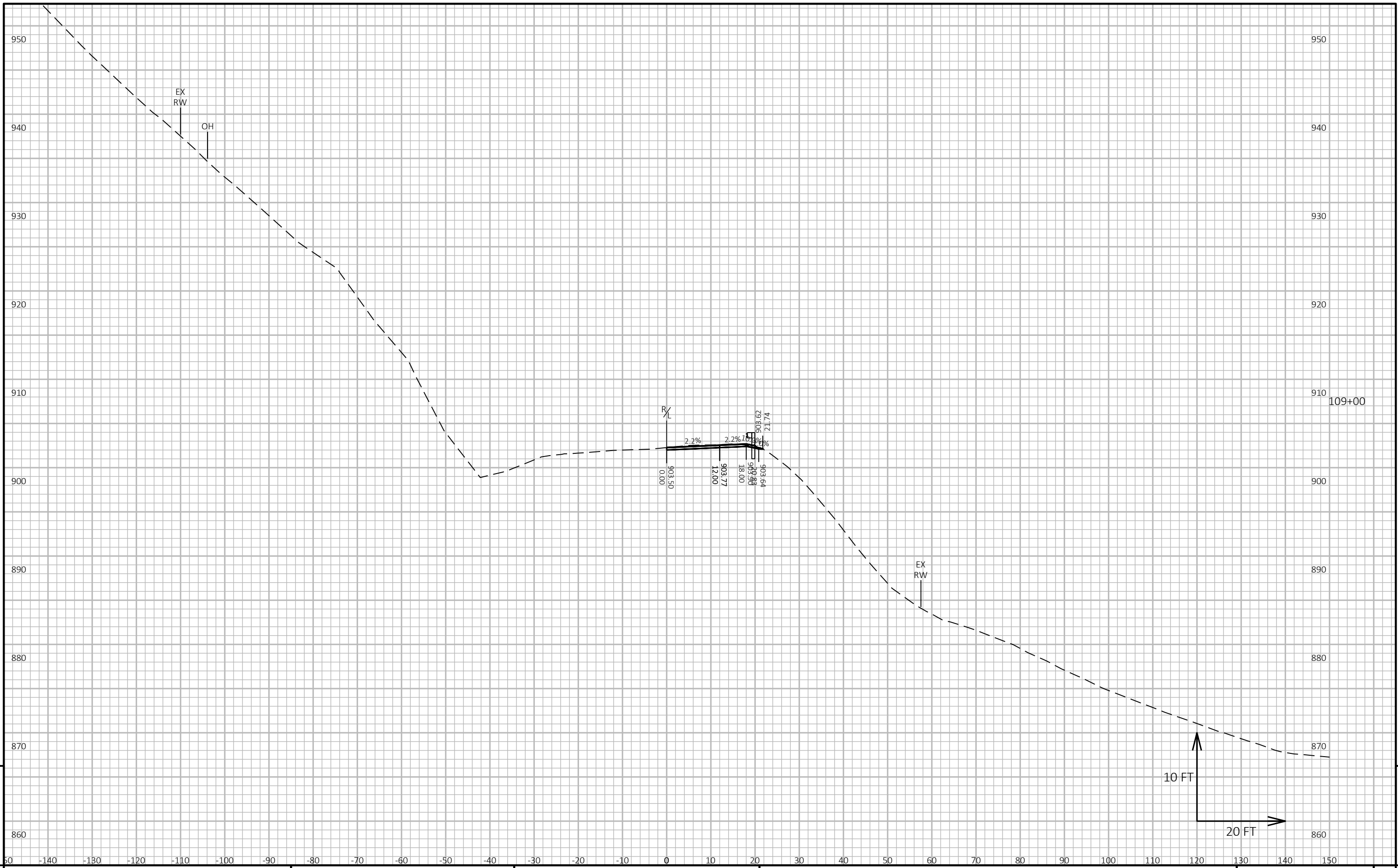
PROJECT NO: 1530-05-73	HWY: USH 10	COUNTY: PEPIN	CROSS SECTIONS: USH 10	SHEET	E
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PROJECT NO: 1530-05-73	HWY: USH 10	COUNTY: PEPIN	CROSS SECTIONS: USH 10	SHEET	E
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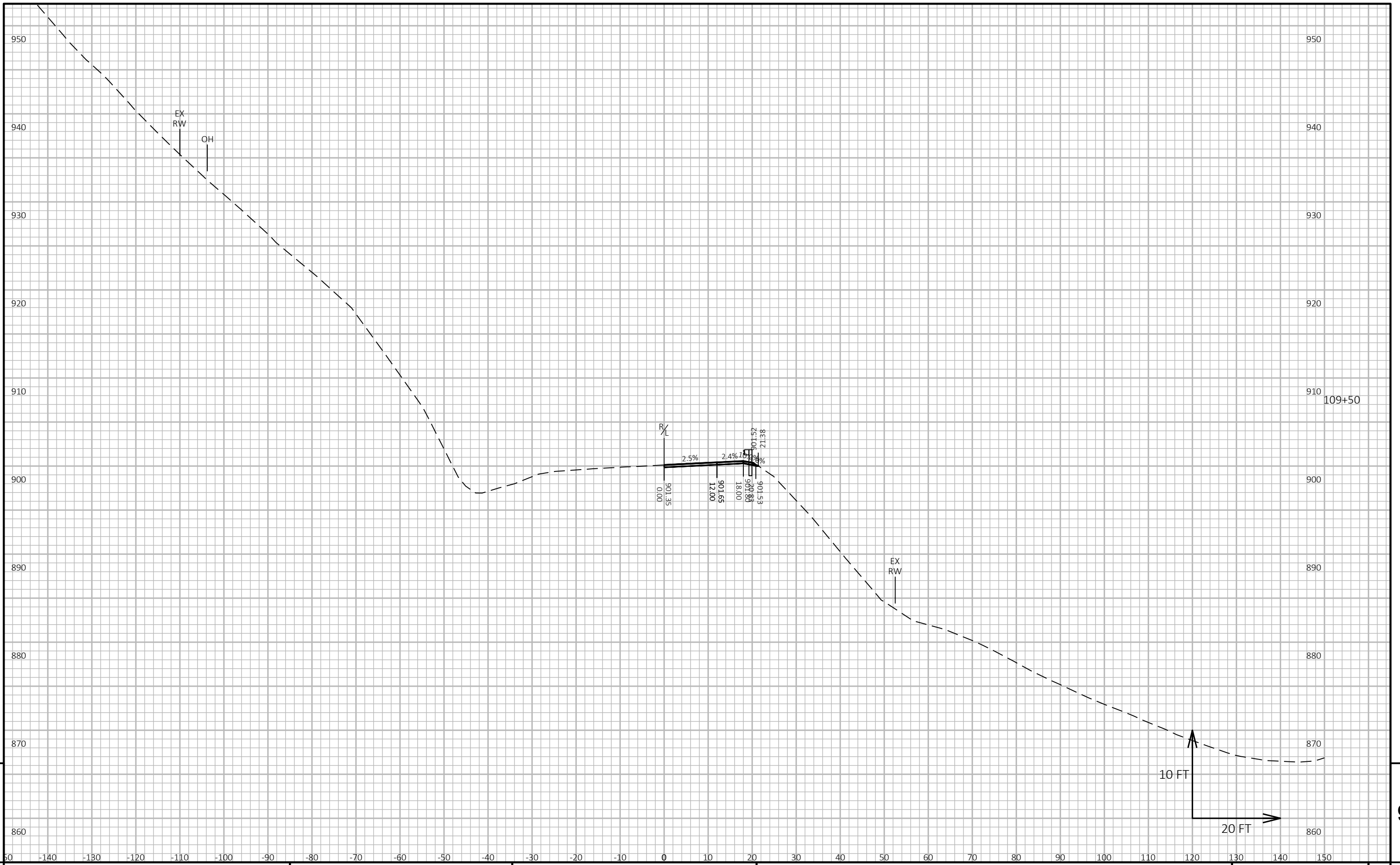
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PROJECT NO: 1530-05-73	HWY: USH 10	COUNTY: PEPIN	CROSS SECTIONS: USH 10	SHEET	E
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FILE NAME : O:\PDS\C3D\15300503\SHEETSPLAN\090201-XS-BEGIN-TO-BAUERLN.DWG PLOT DATE : 7/21/2023 1:01 PM PLOT BY : CORY IHDE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 103



PROJECT NO: 1530-05-73

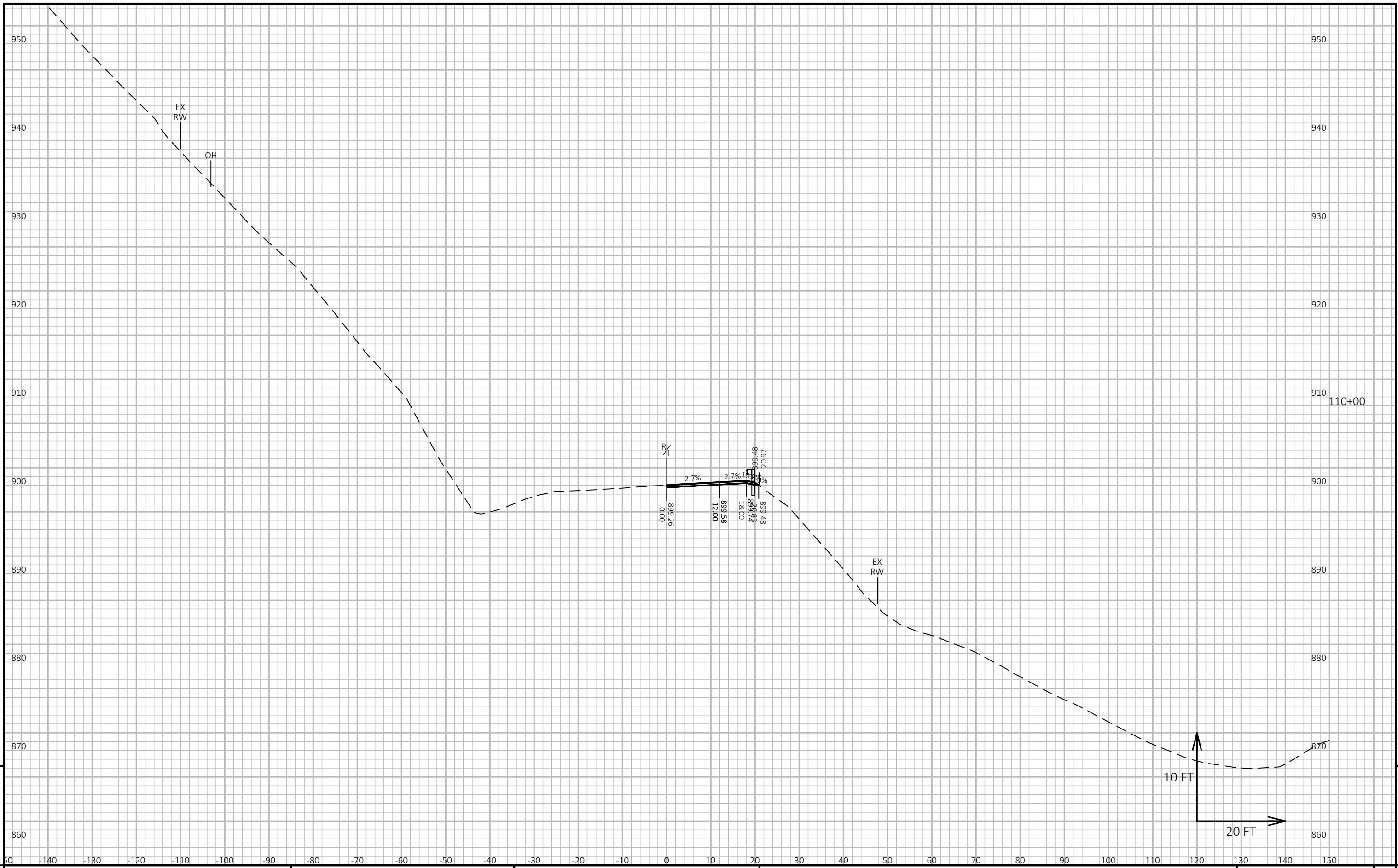
HWY: USH 10

COUNTY: PEPIN

CROSS SECTIONS: USH 10

SHEET

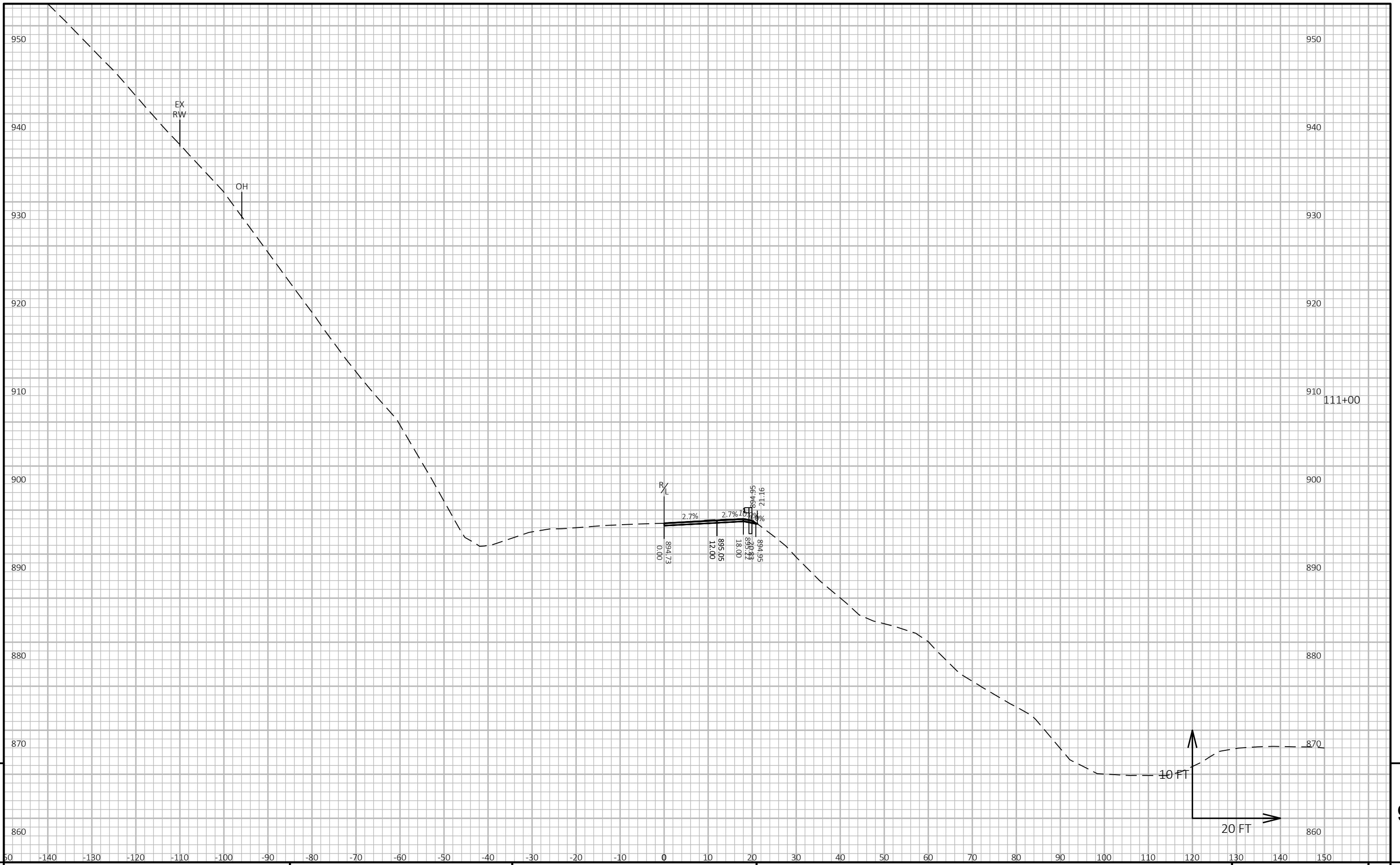
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PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E

9

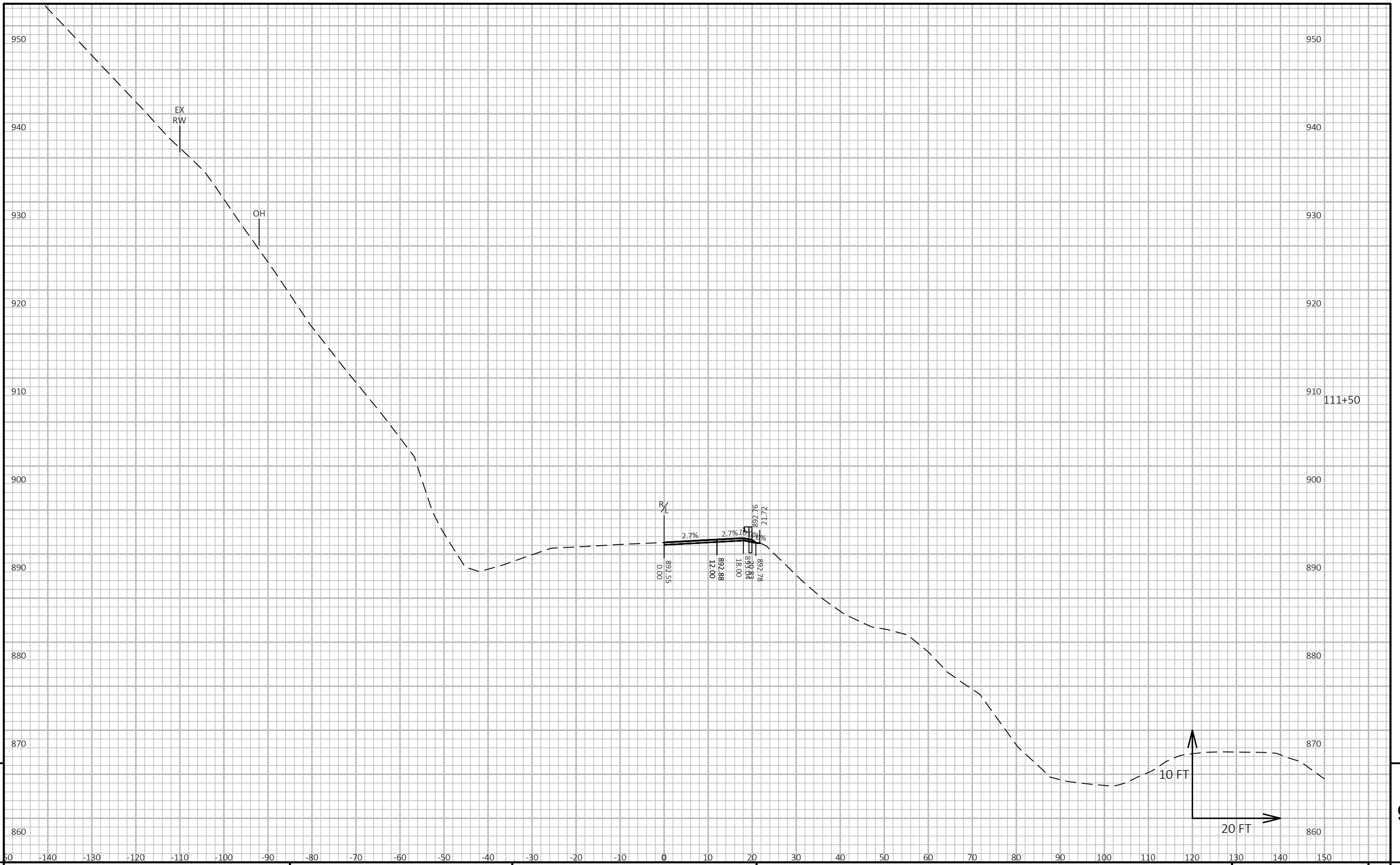
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PROJECT NO: 1530-05-73	HWY: USH 10	COUNTY: PEPIN	CROSS SECTIONS: USH 10	SHEET	E
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PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E

FILE NAME : O:\PDS\C3D\15300503\SHEETSPLAN\090201-XS-BEGIN-TO-BAUERLN.DWG PLOT DATE : 7/21/2023 1:04 PM PLOT BY : CORY IHDE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 108



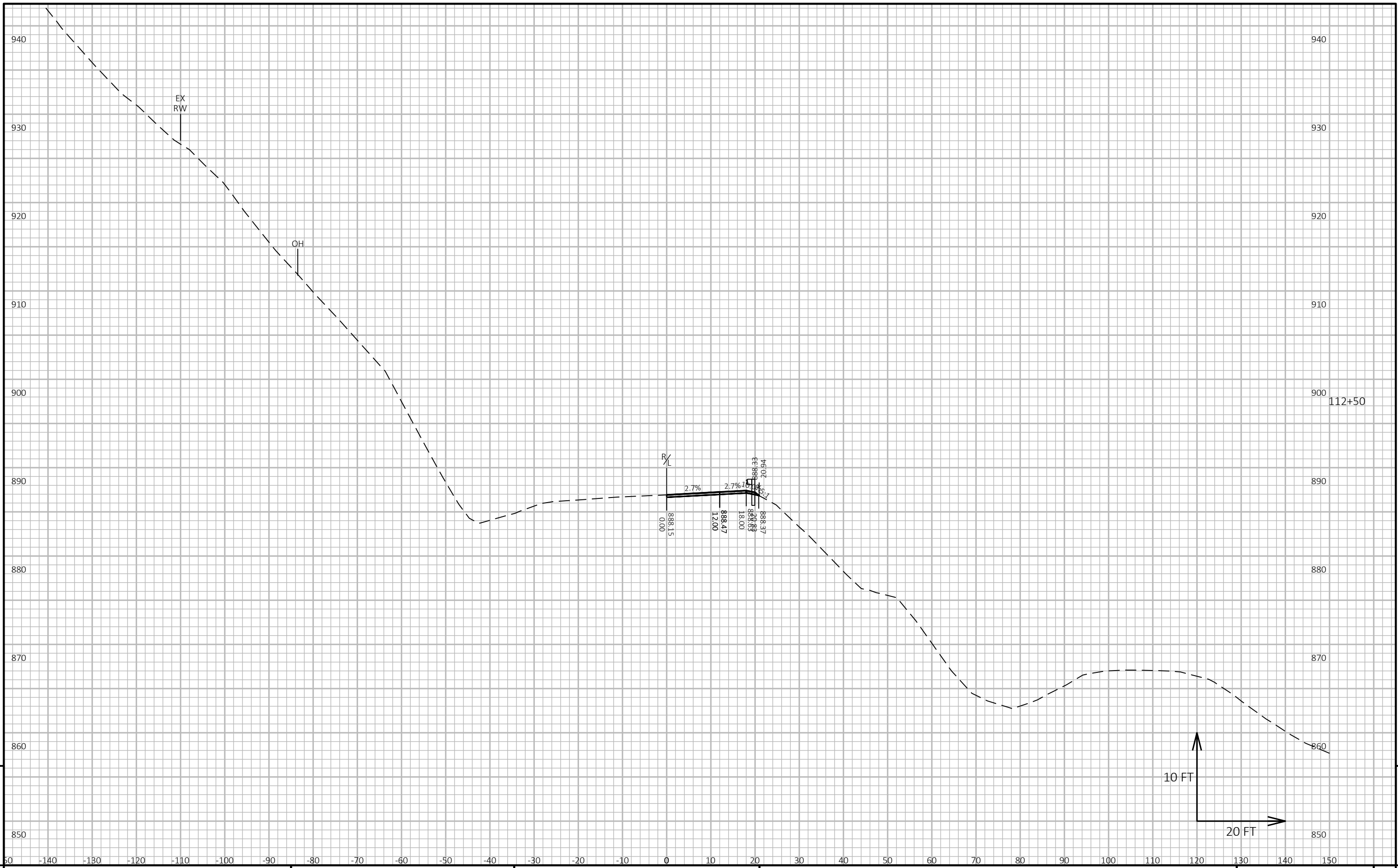
PROJECT NO: 1530-05-73	HWY: USH 10	COUNTY: PEPIN	CROSS SECTIONS: USH 10	SHEET
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112+00

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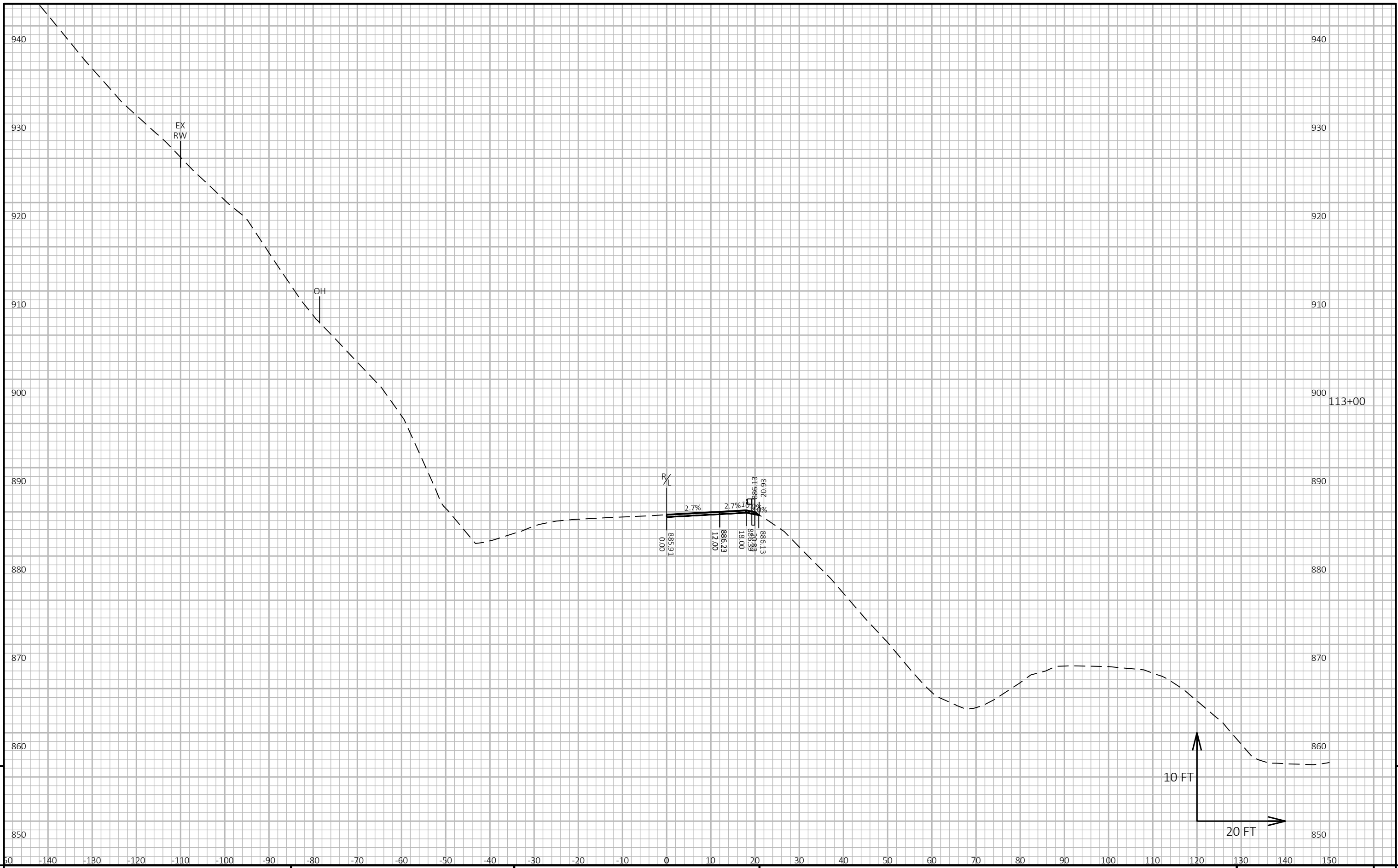
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PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E

FILE NAME : O:\PDS\C3D\15300503\SHEETSPLAN\090201-XS-BEGIN-TO-BAUERLN.DWG PLOT DATE : 7/21/2023 1:05 PM PLOT BY : CORY IHDE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 110



PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E

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PROJECT NO: 1530-05-73	HWY: USH 10	COUNTY: PEPIN	CROSS SECTIONS: USH 10	SHEET	E
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FILE NAME : O:\PDS\C3D\15300503\SHEETSPLAN\090201-XS-BEGIN-TO-BAUERLN.DWG
LAYOUT NAME - 112

PLOT DATE : 7/21/2023 1:06 PM

PLOT BY : CORY IHDE

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADD SHEET 49



PROJECT NO: 1530-05-73	HWY: USH 10	COUNTY: PEPIN	CROSS SECTIONS: USH 10	SHEET	E
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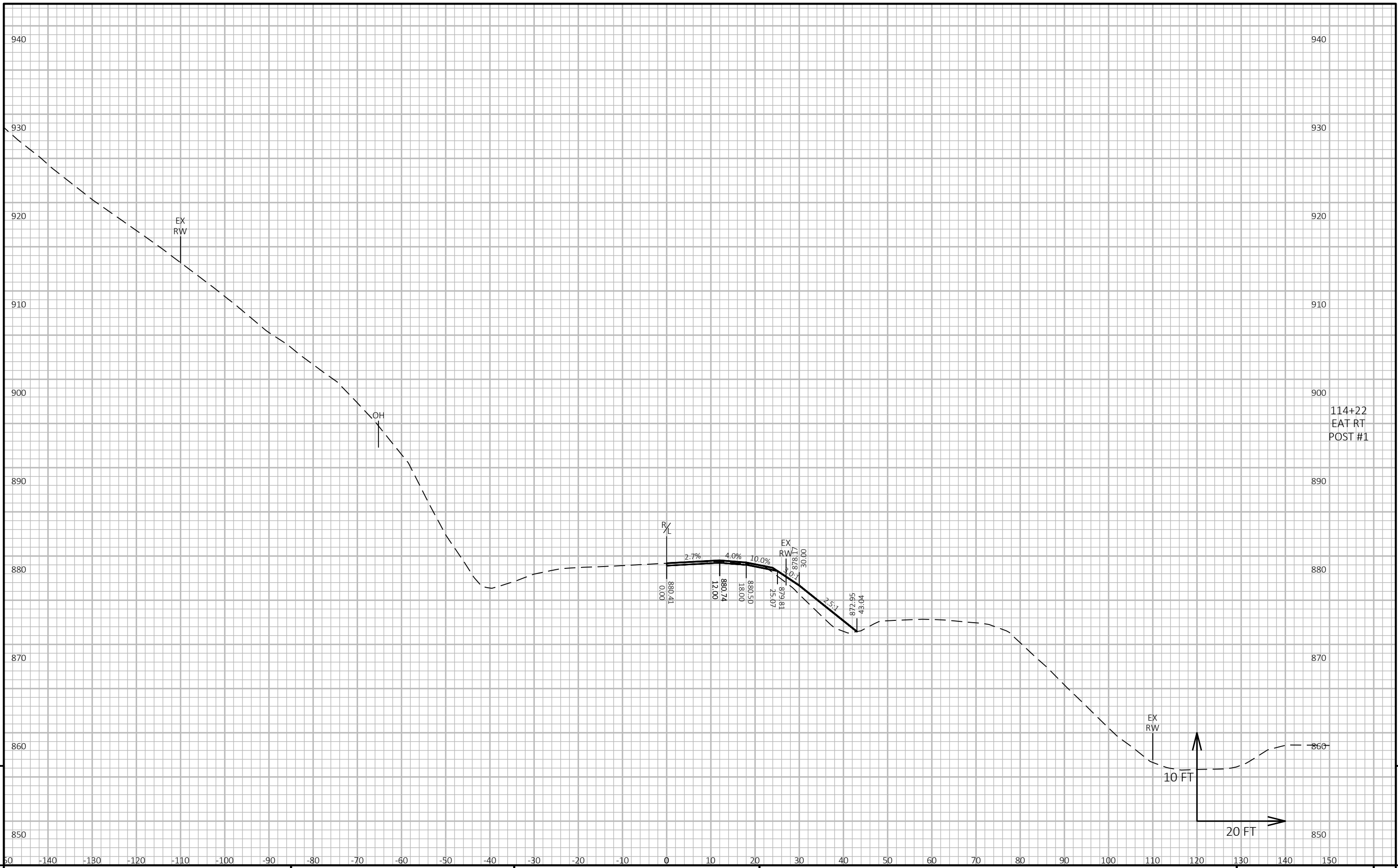
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PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E

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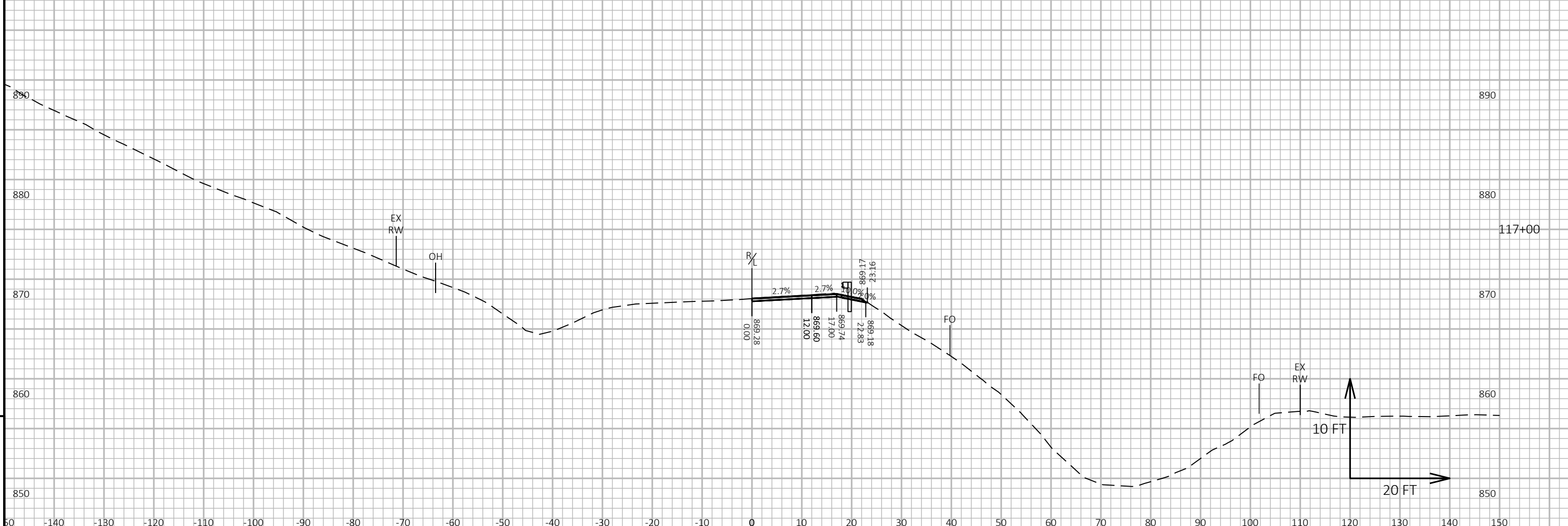
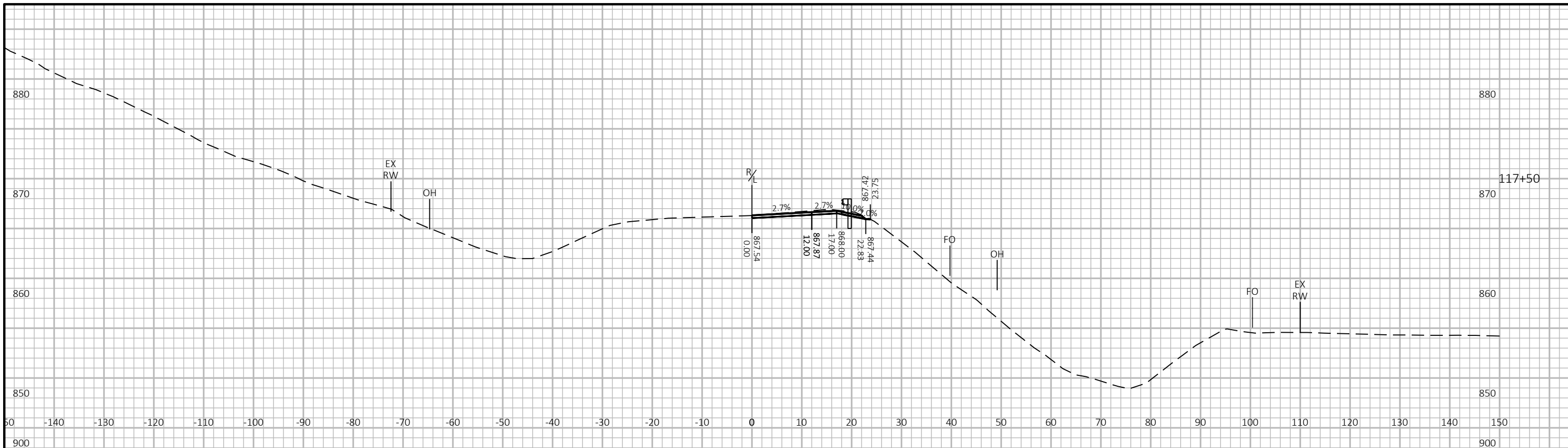
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PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E

FILE NAME : O:\PDS\C3D\15300503\SHEETSPLAN\090201-XS-BEGIN-TO-BAUERLN.DWG PLOT DATE : 7/21/2023 1:07 PM PLOT BY : CORY IHDE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 115



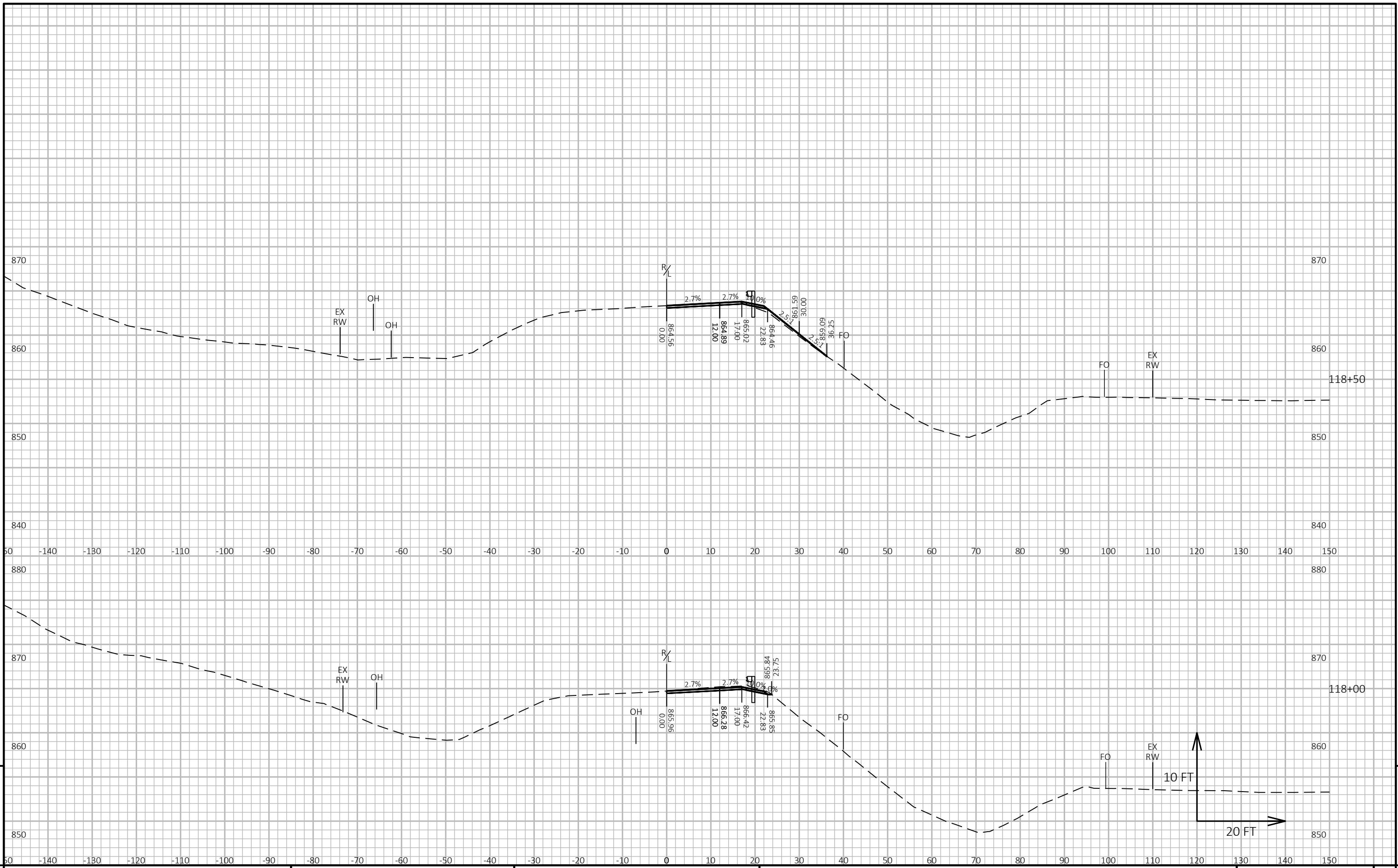
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PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E

FILE NAME : O:\PDS\C3D\15300503\SHEETSPLAN\090201-XS-BEGIN-TO-BAUERLN.DWG PLOT DATE : 7/21/2023 1:08 PM PLOT BY : CORY IHDE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 116



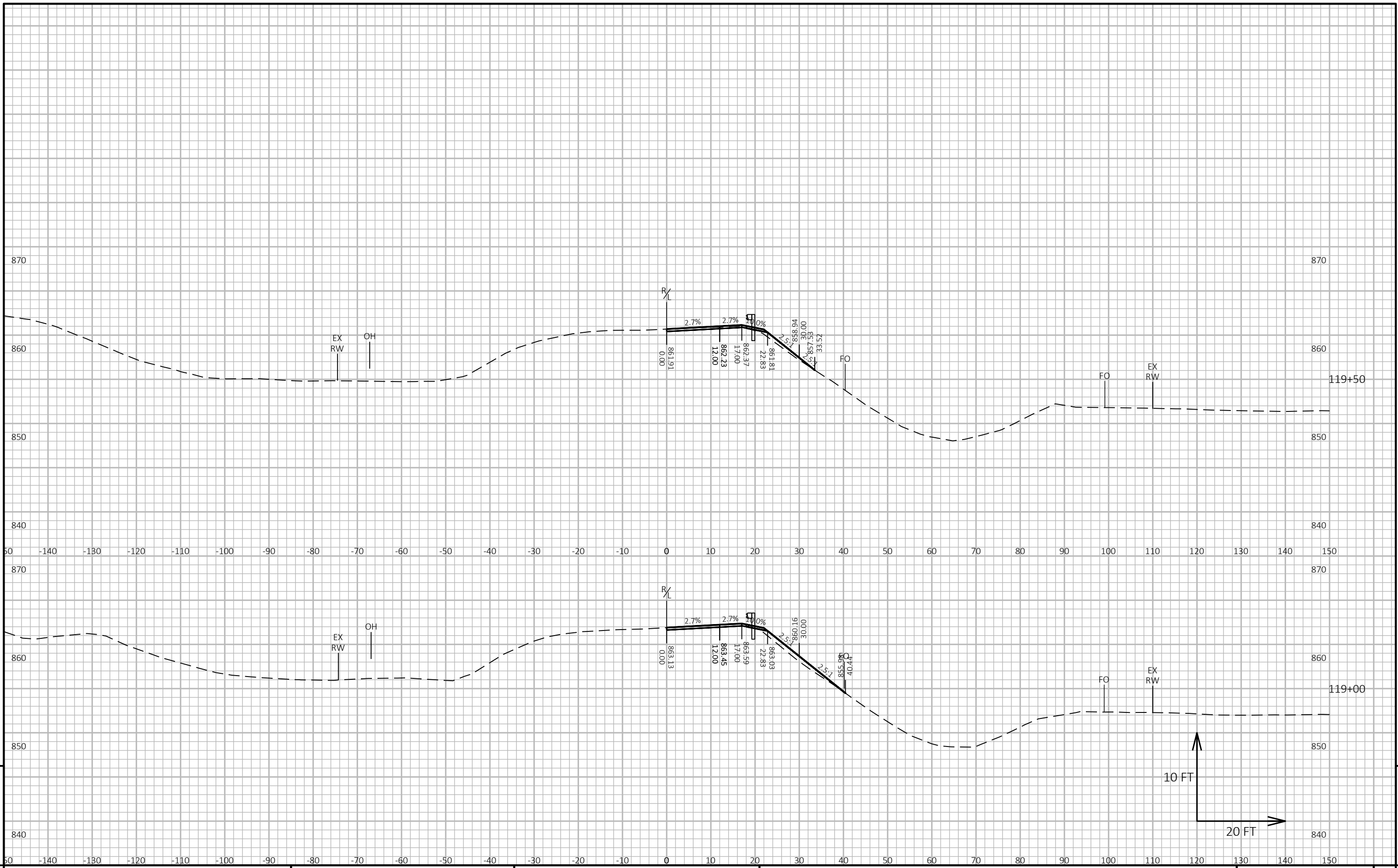
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PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E

FILE NAME : O:\PDS\C3D\15300503\SHEETSPLAN\090201-XS-BEGIN-TO-BAUERLN.DWG PLOT DATE : 7/21/2023 1:08 PM PLOT BY : CORY IHDE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 117



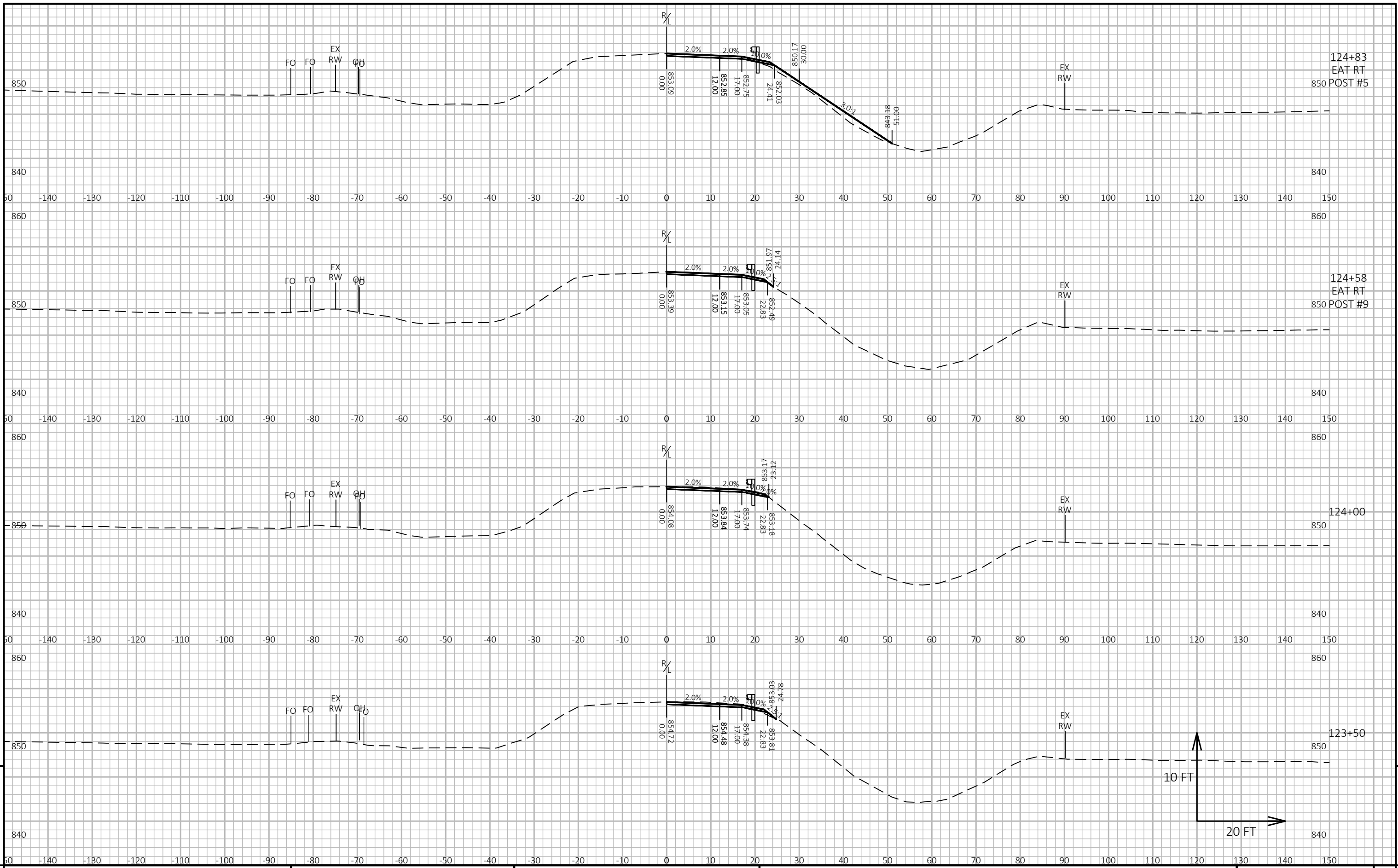
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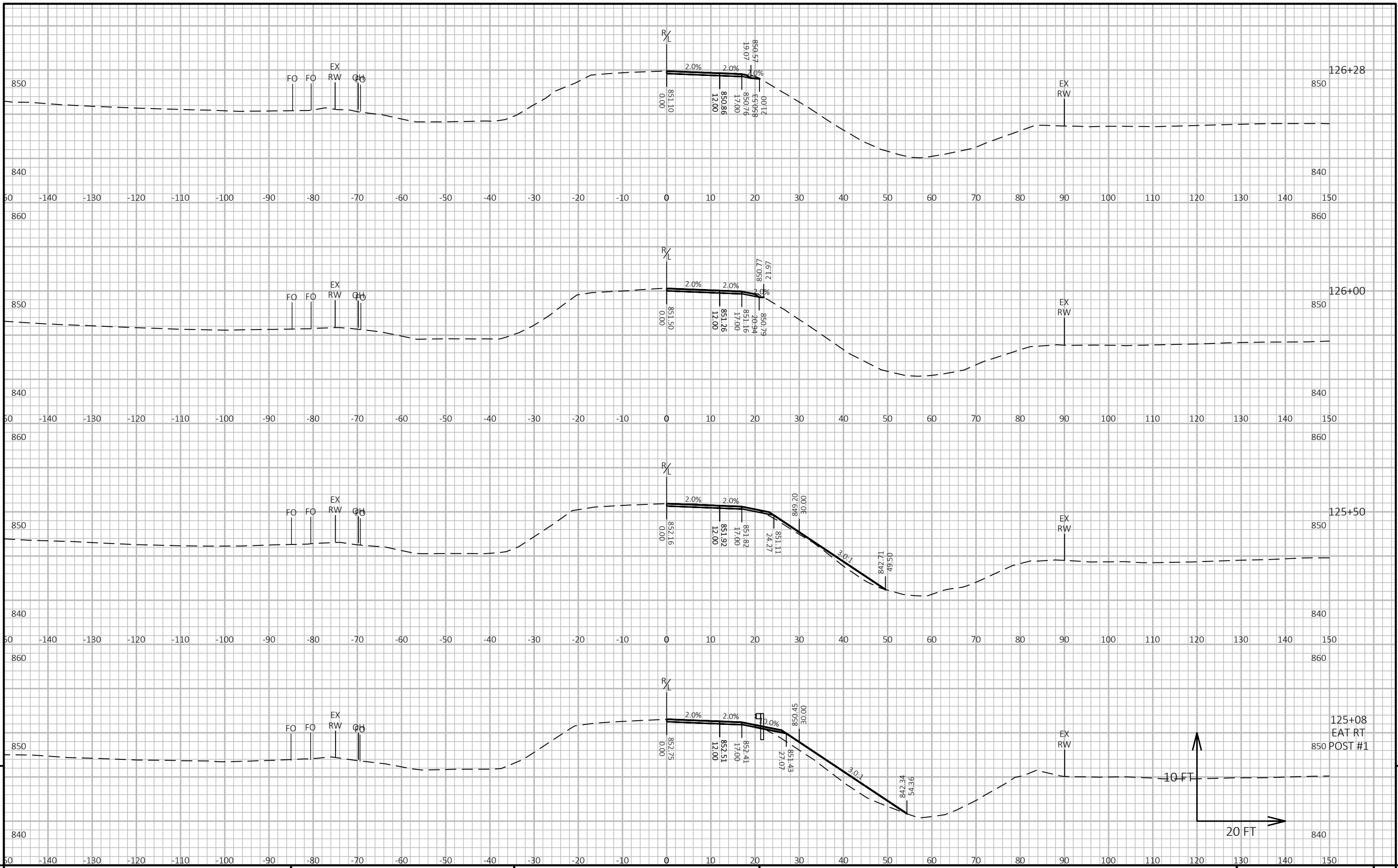
PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E

FILE NAME : O:\PDS\C3D\15300503\SHEETSPLAN\090201-XS-BEGIN-TO-BAUERLN.DWG PLOT DATE : 7/21/2023 1:09 PM PLOT BY : CORY IHDE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 118



PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E



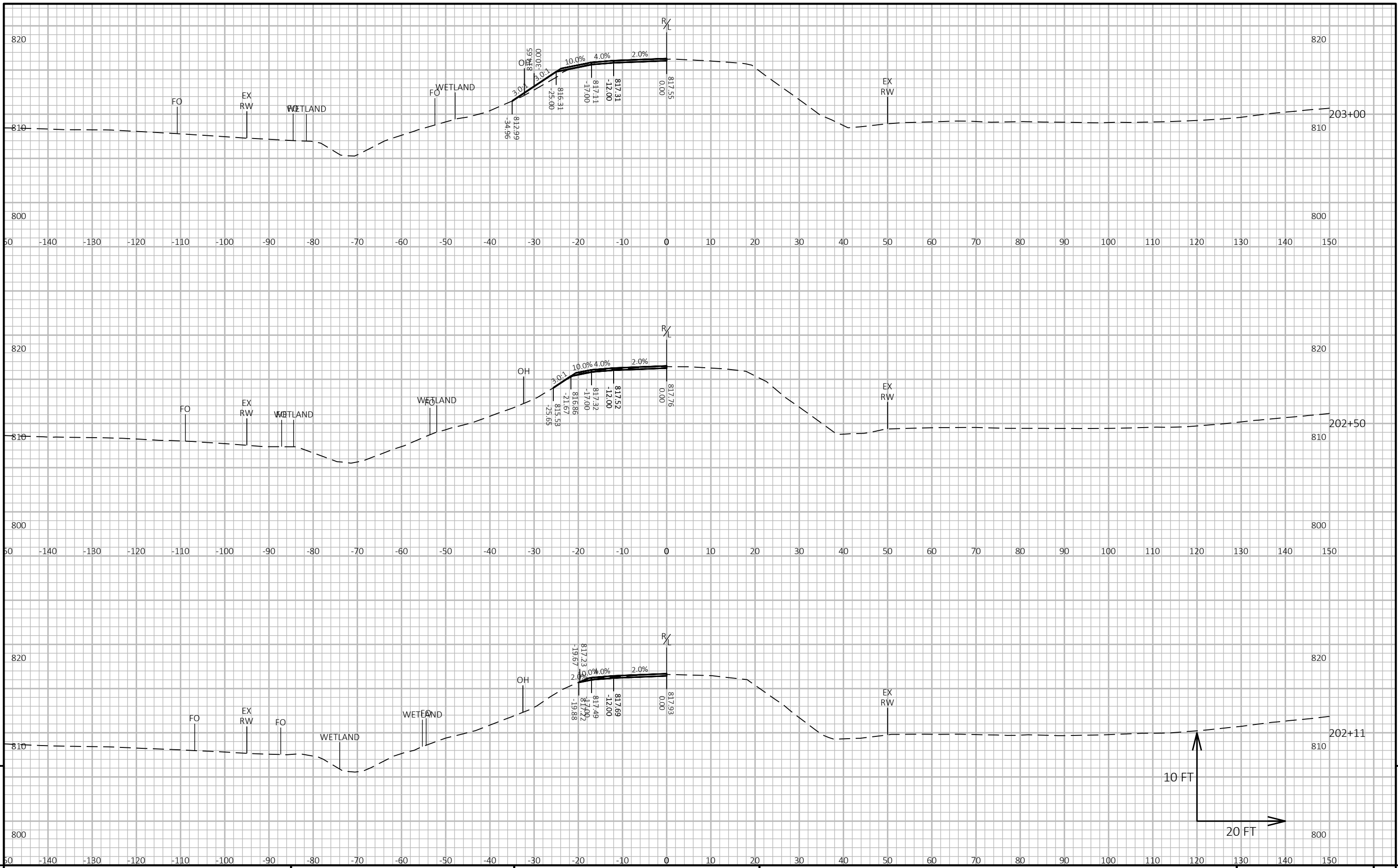
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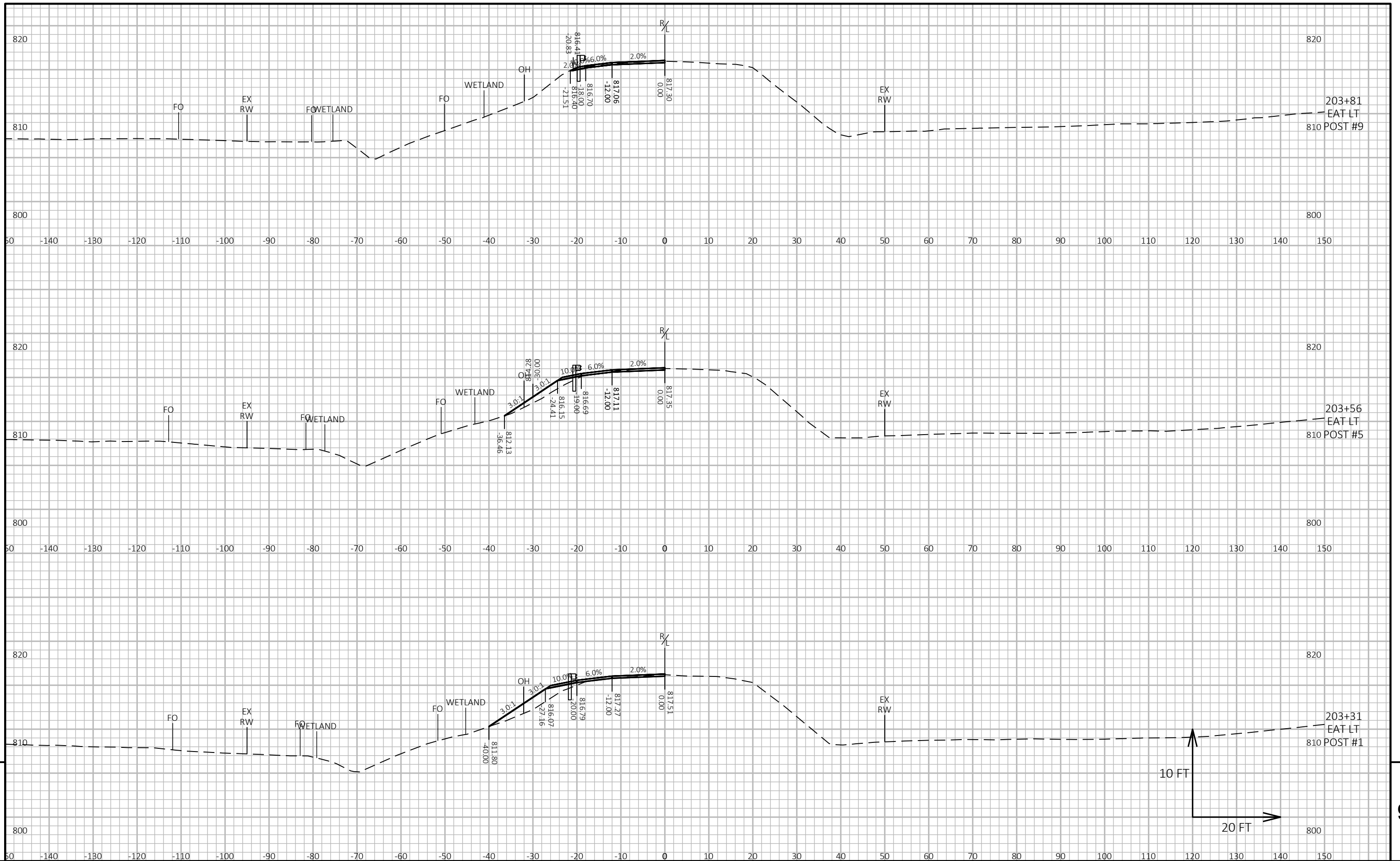
PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E

FILE NAME : O:\PDS\C3D\15300503\SHEETSPLAN\090201-XS-BEGIN-TO-BAUERLN.DWG PLOT DATE : 7/21/2023 1:11 PM PLOT BY : CORY IHDE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 122



PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET 9



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PROJECT NO: 1530-05-73

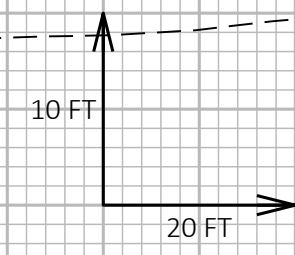
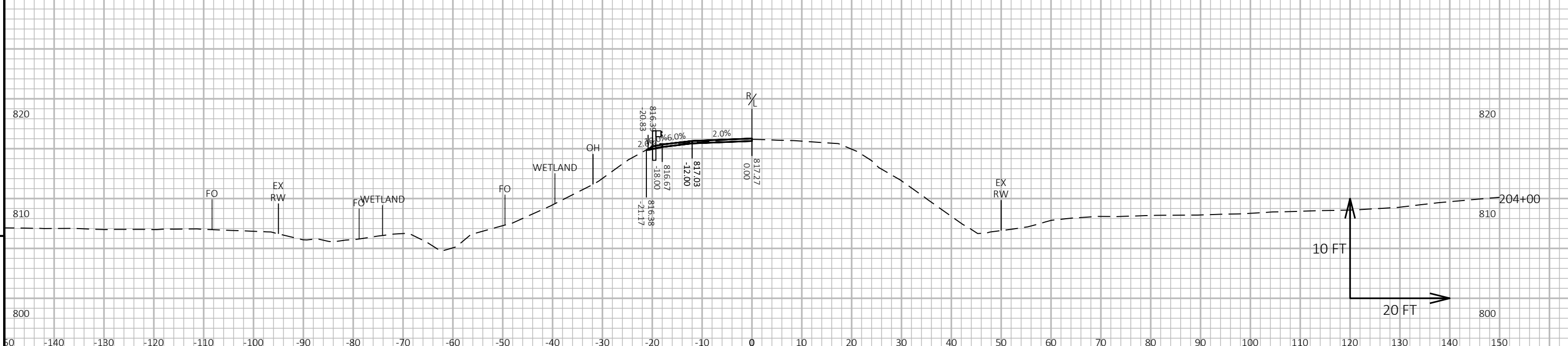
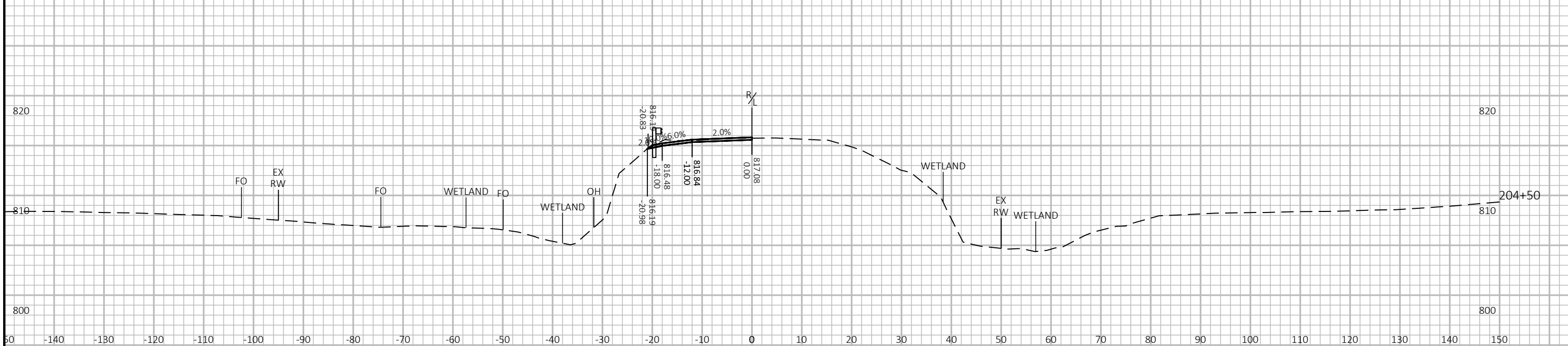
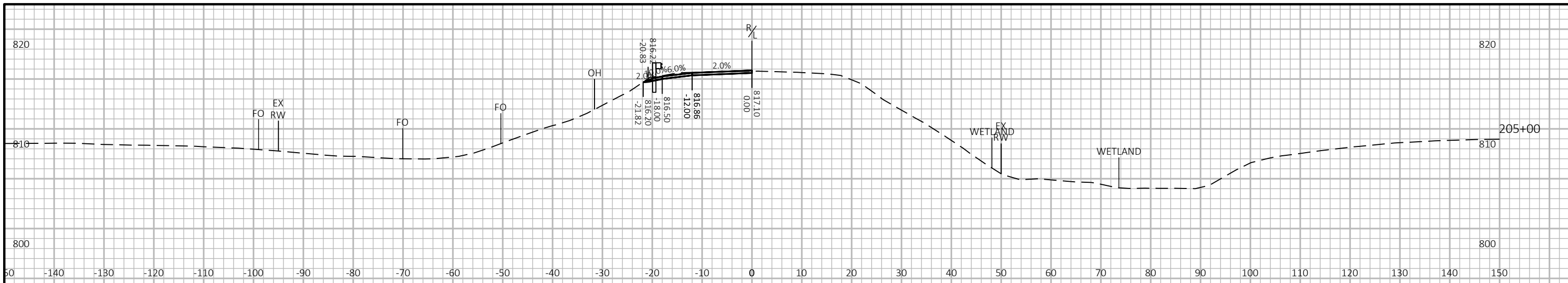
HWY: USH 10

COUNTY: PEPIN

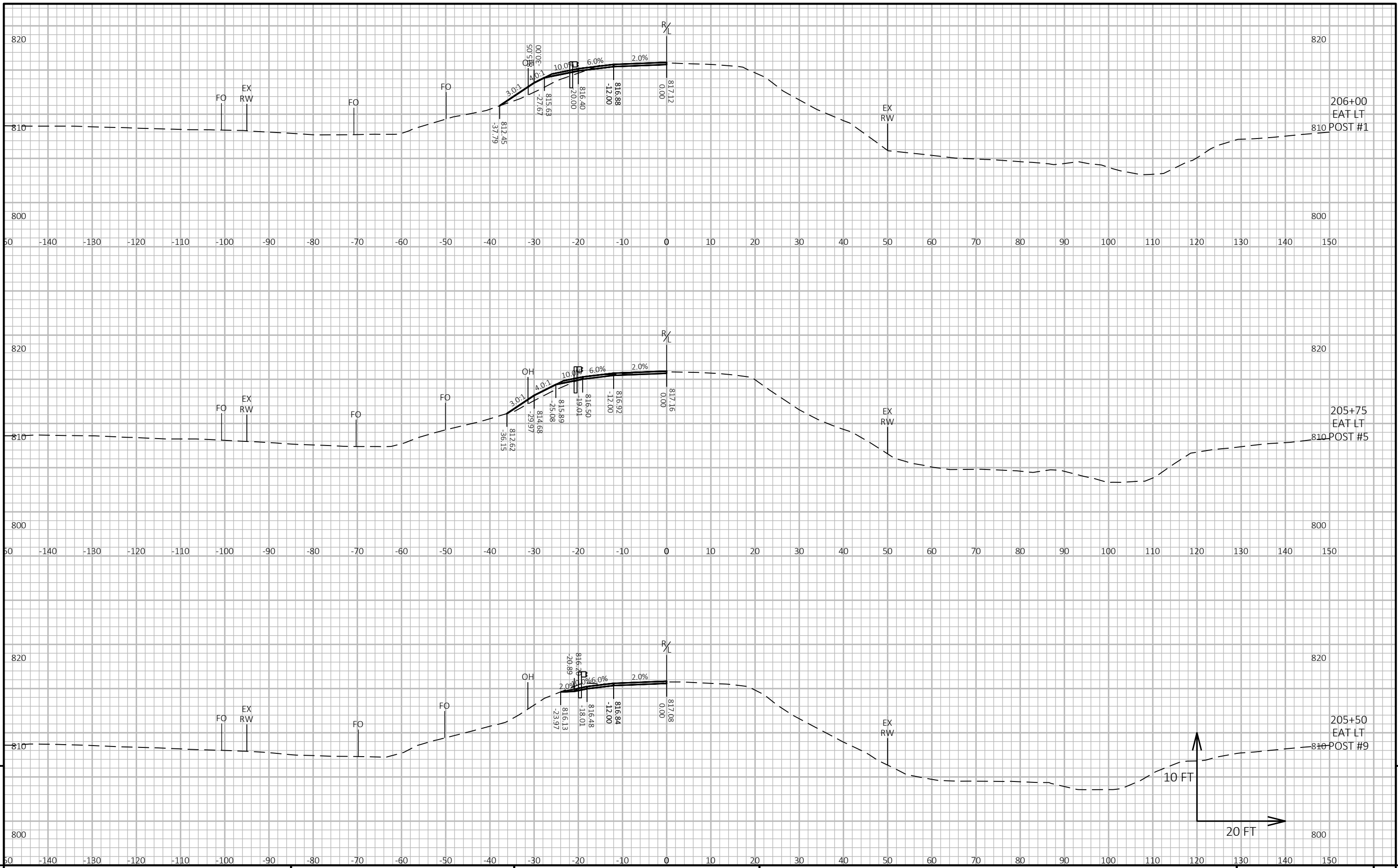
CROSS SECTIONS: USH 10

SHEET

E



PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E



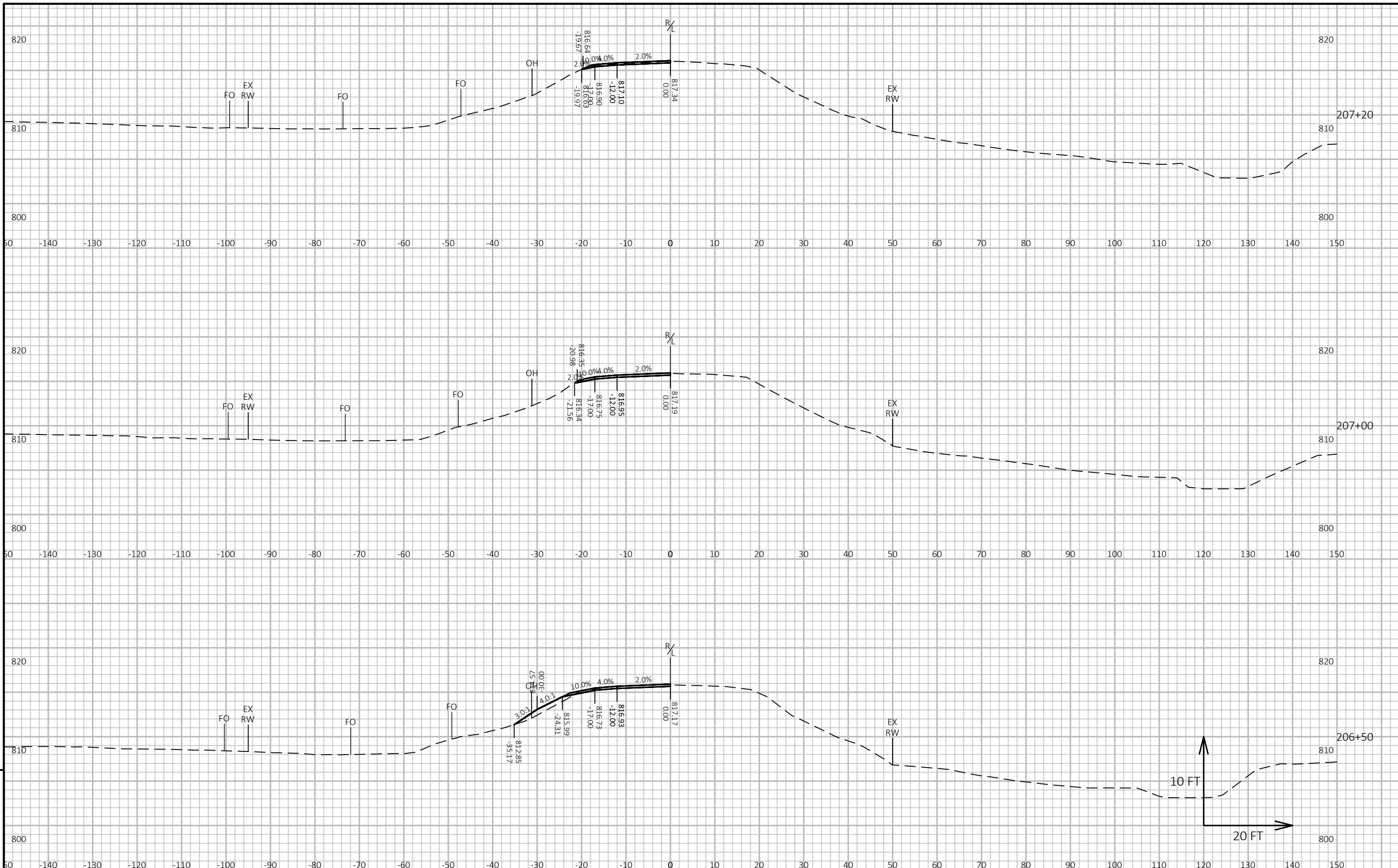
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PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E

FILE NAME : O:\PDS\C3D\15300503\SHEETSPLAN\090202-XS-BAUERLN-TO-CTHX.DWG PLOT DATE : 7/24/2023 9:02 AM PLOT BY : CORY IHDE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 04



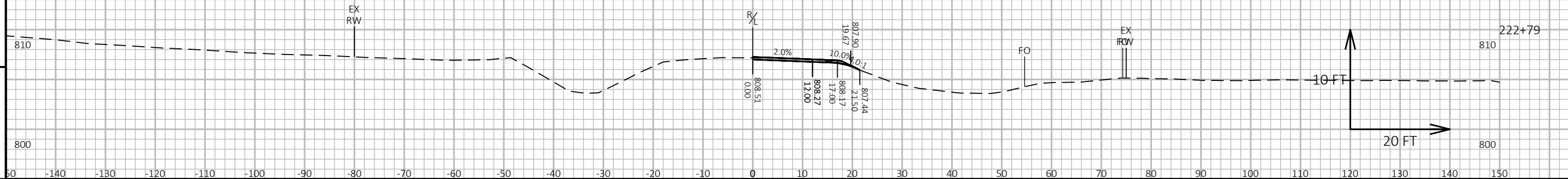
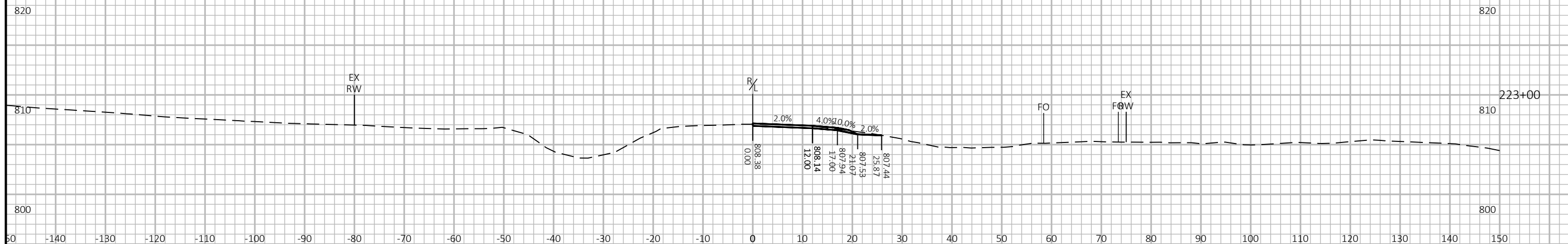
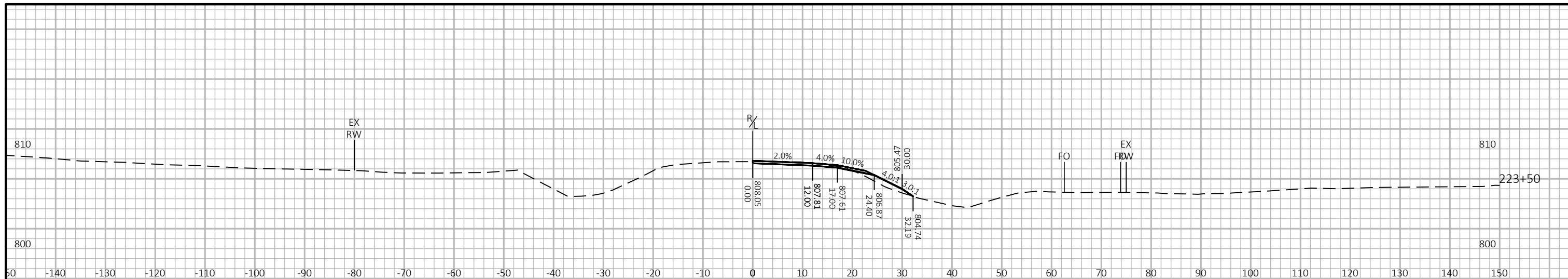
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PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E

FILE NAME : O:\PDS\C3D\15300503\SHEETSPLAN\090202-XS-BAUERLN-TO-CTHX.DWG PLOT DATE : 7/24/2023 9:03 AM PLOT BY : CORY IHDE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 05



PROJECT NO: 1530-05-73

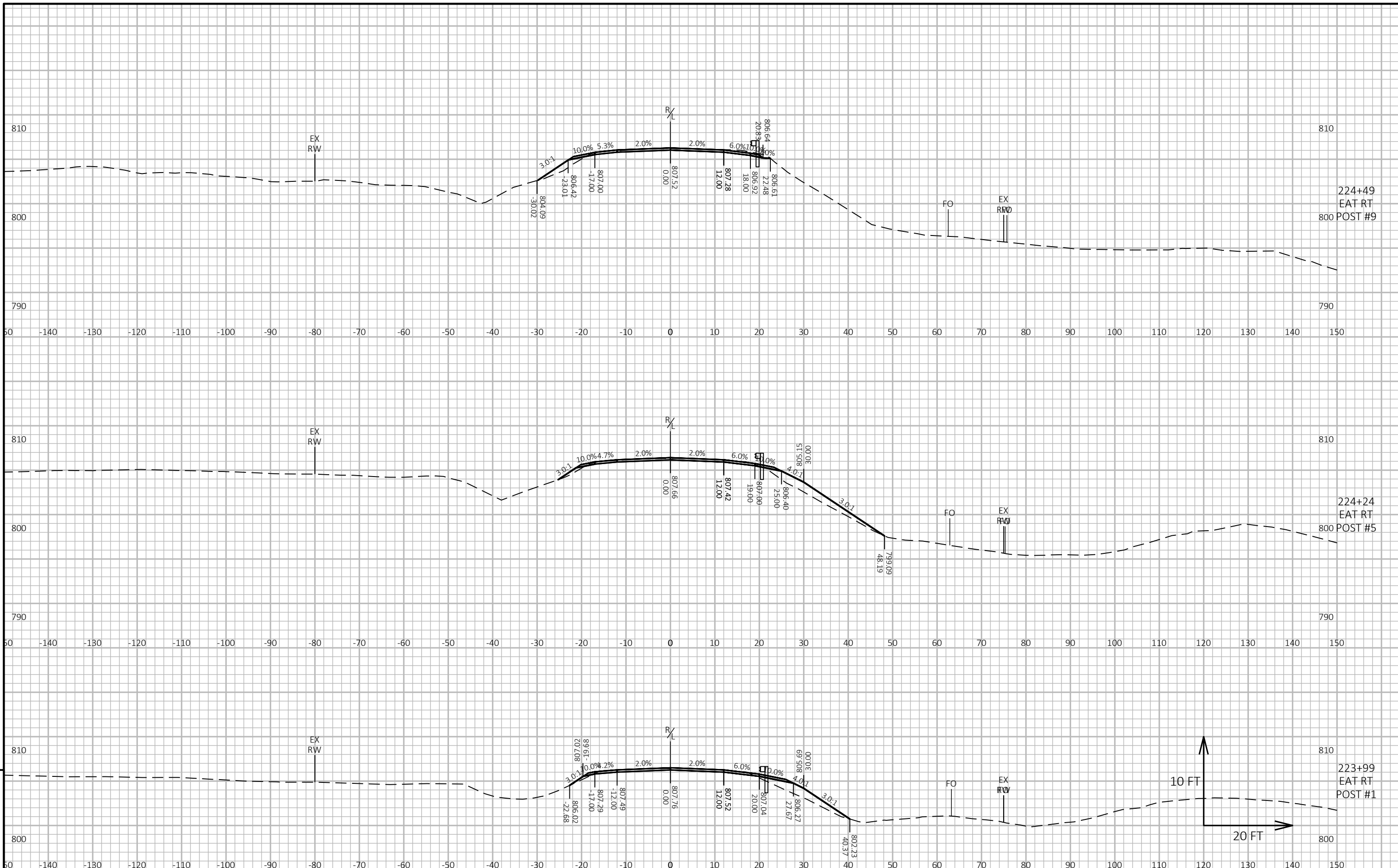
HWY: USH 10

COUNTY: PEPIN

CROSS SECTIONS: USH 10

SHEET

E



PROJECT NO: 1530-05-73

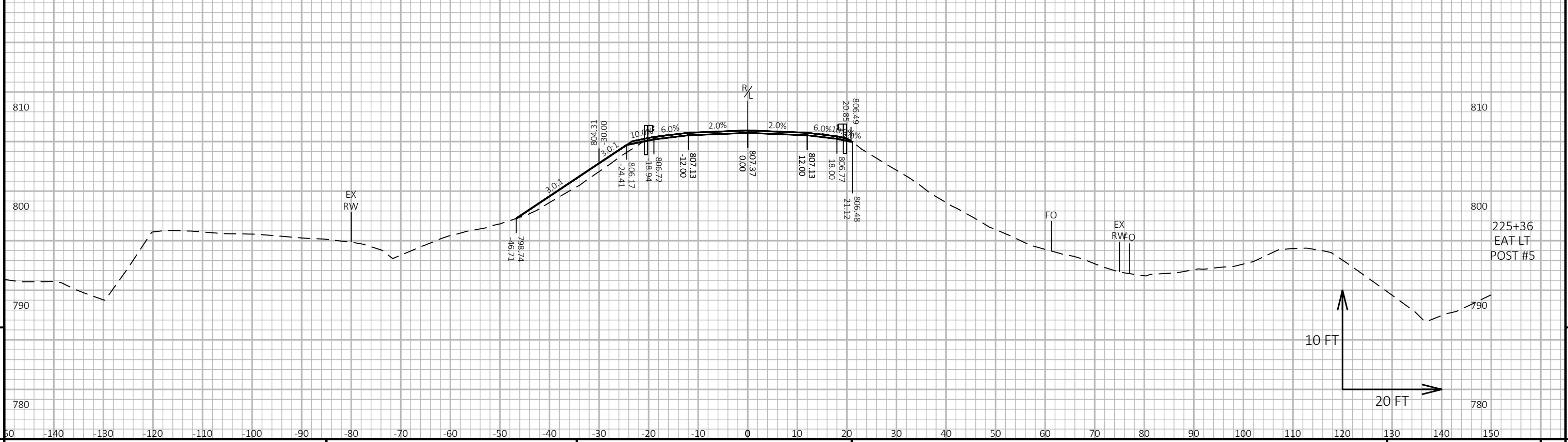
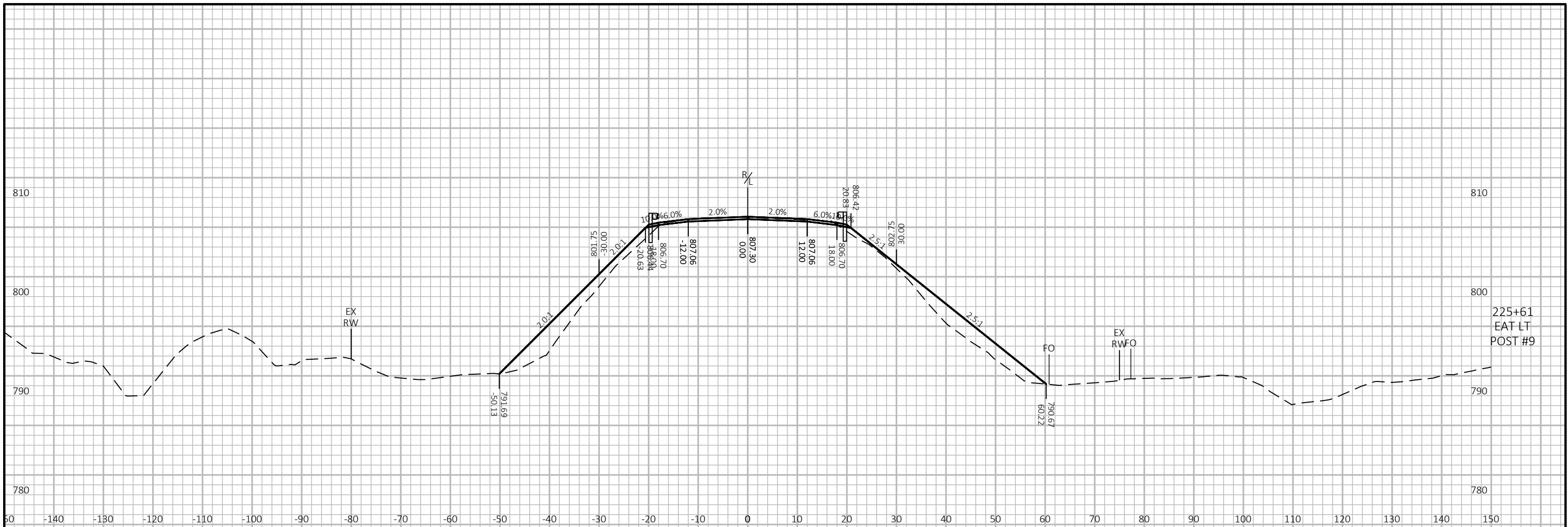
HWY: USH 10

COUNTY: PEPIN

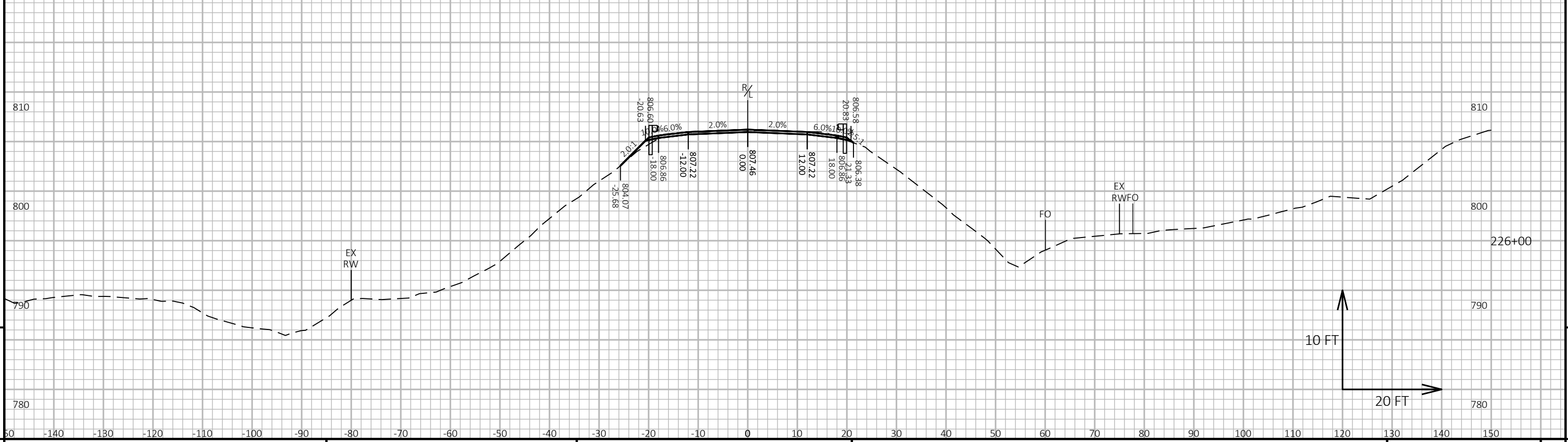
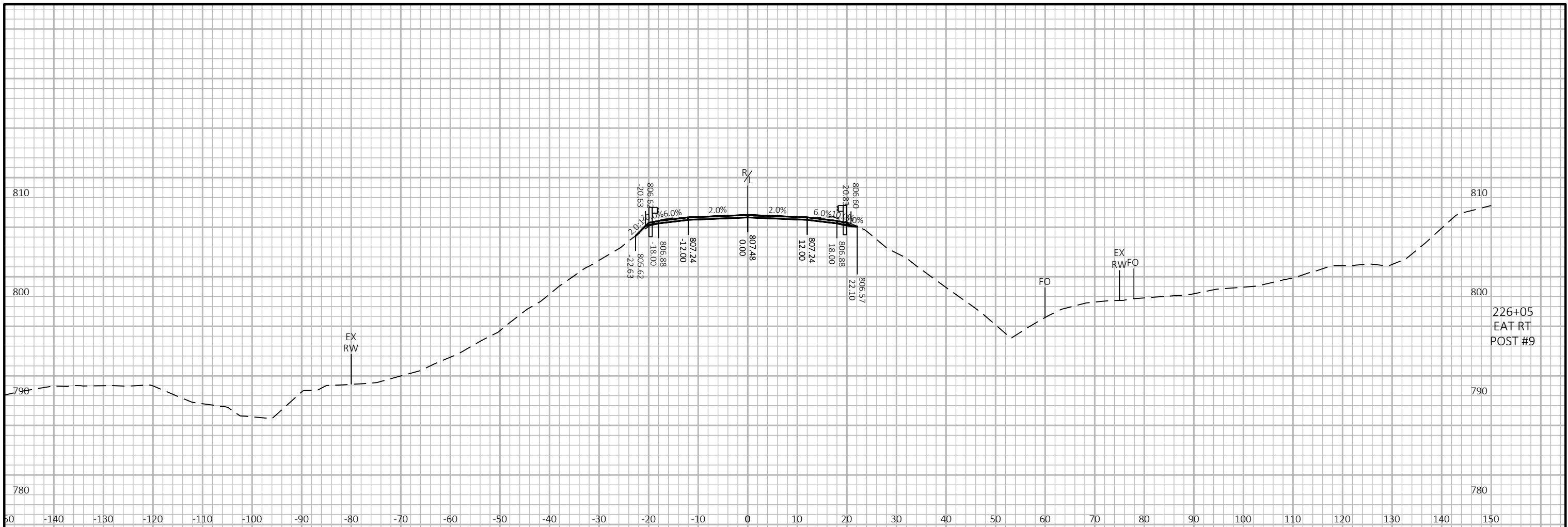
CROSS SECTIONS: USH 10

SHEET

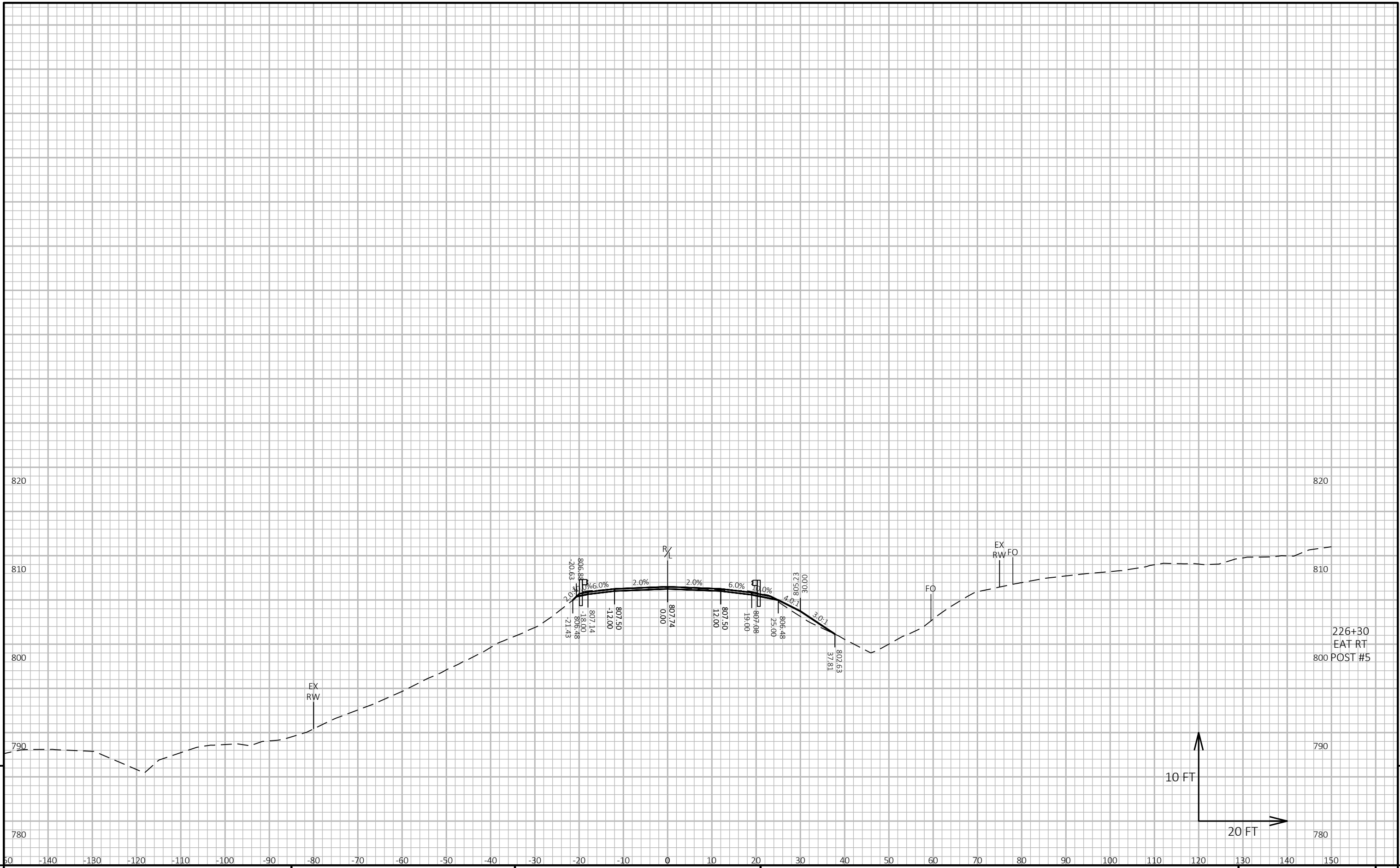
E



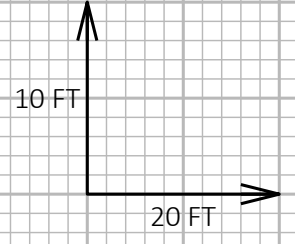
PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E

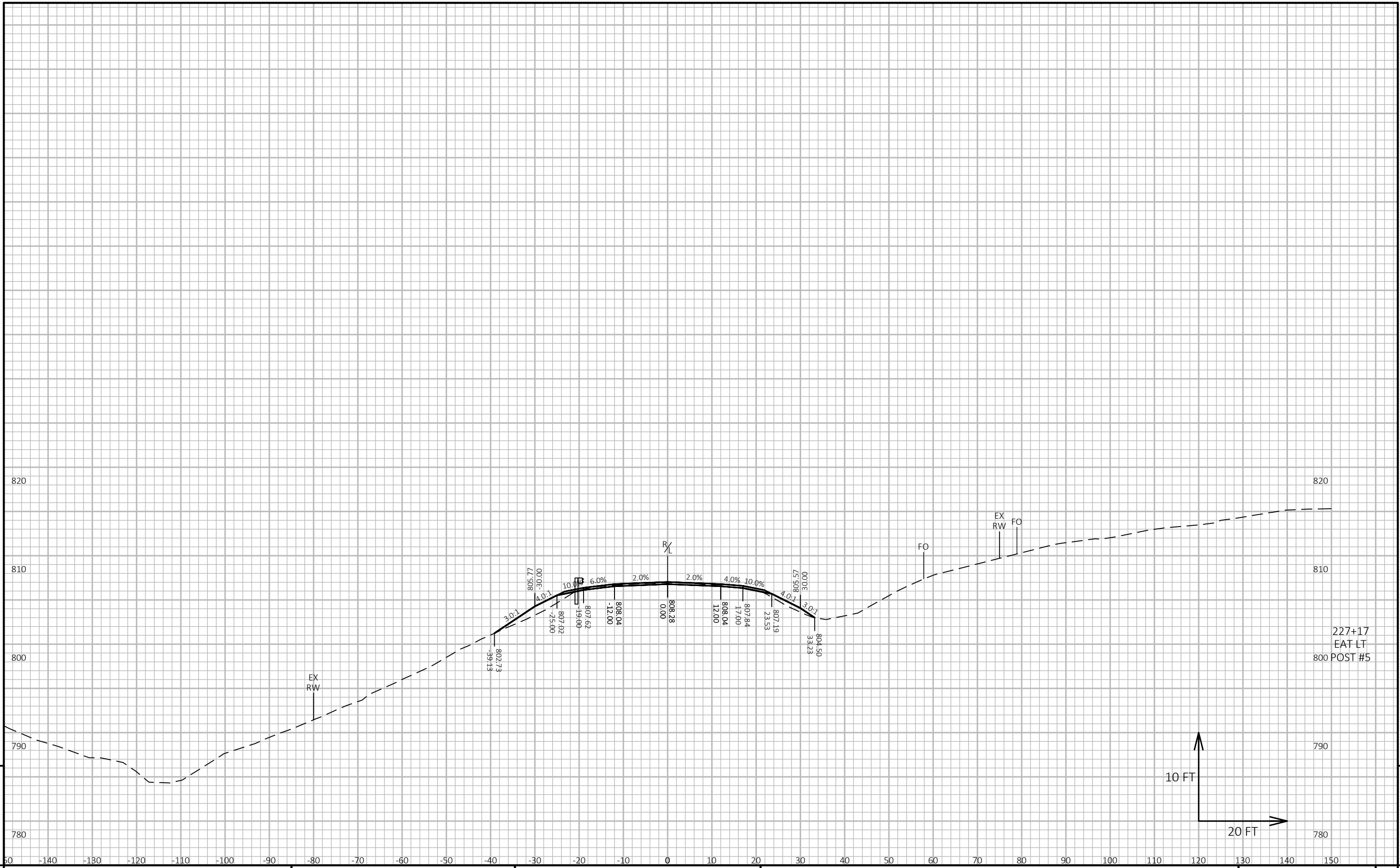


PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET 9

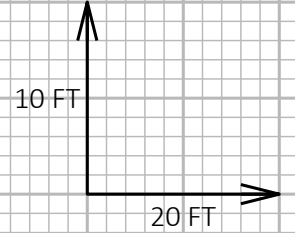


226+30
EAT RT
800 POST #5





227+17
EAT LT
800 POST #5



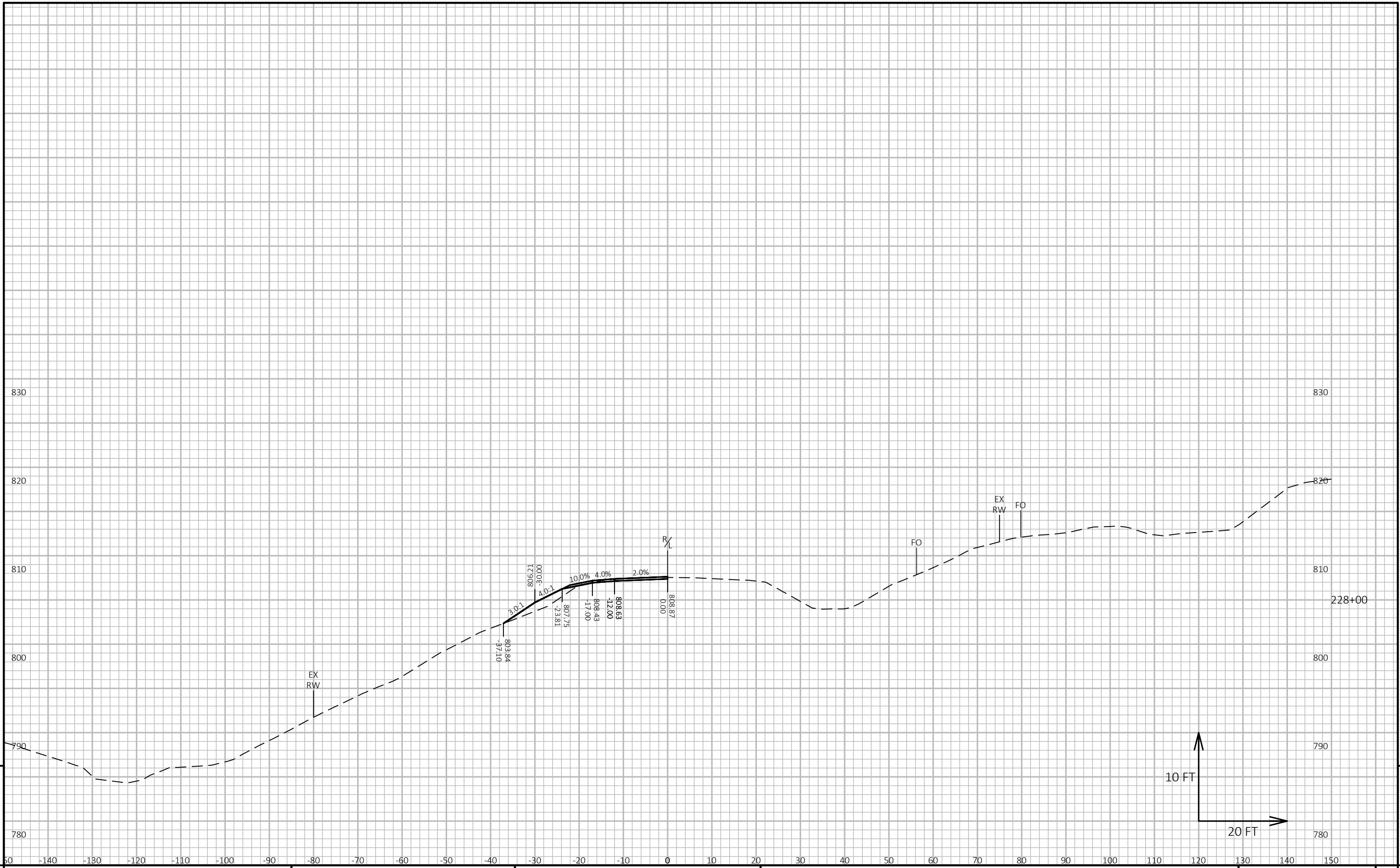
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PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E

FILE NAME : O:\PDS\C3D\15300503\SHEETSPLAN\090202-XS-BAUERLN-TO-CTHX.DWG PLOT DATE : 7/24/2023 9:08 AM PLOT BY : CORY IHDE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 14



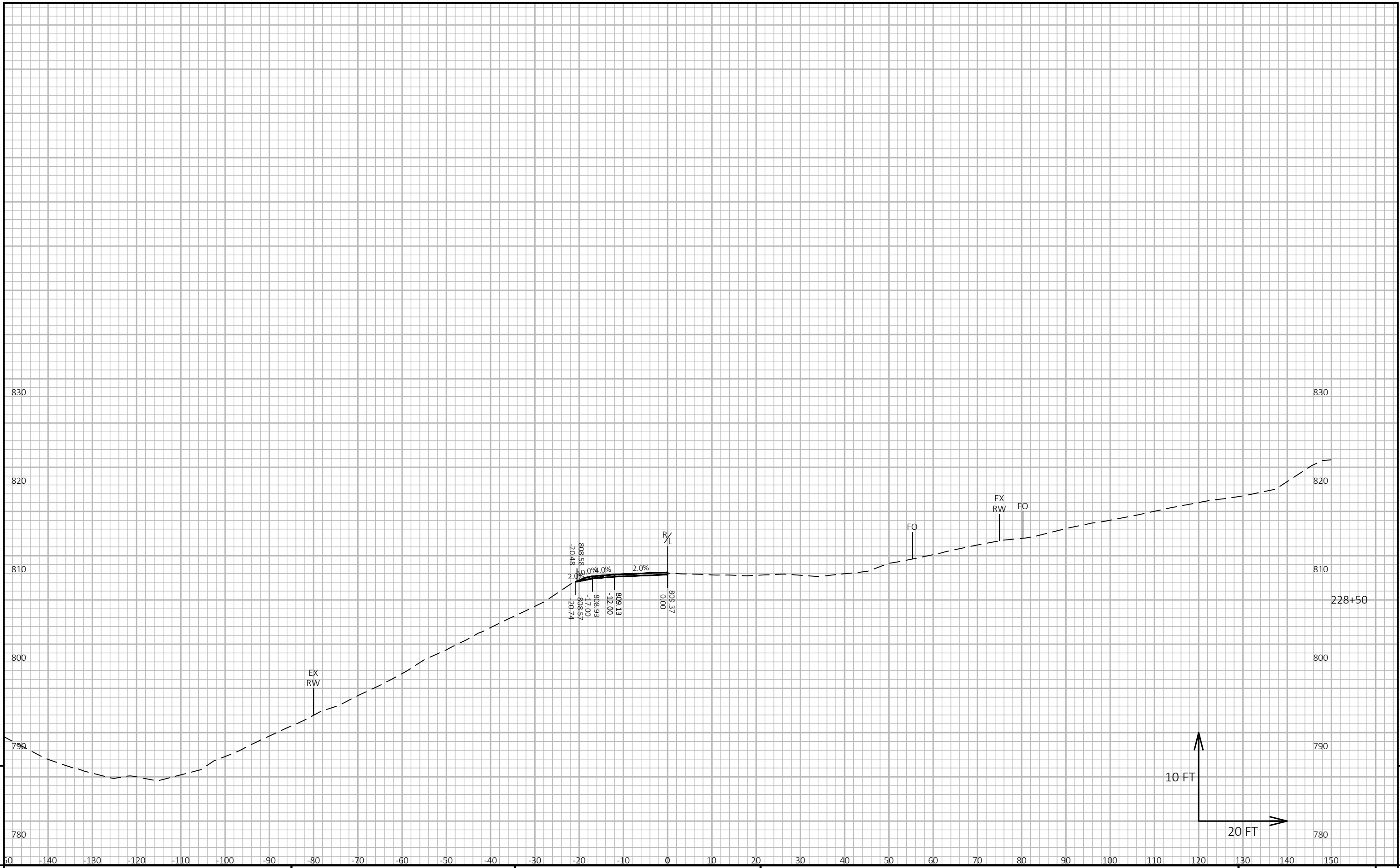
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PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E

FILE NAME : O:\PDS\C3D\15300503\SHEETSPLAN\090202-XS-BAUERLN-TO-CTHX.DWG PLOT DATE : 7/24/2023 9:10 AM PLOT BY : CORY IHDE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

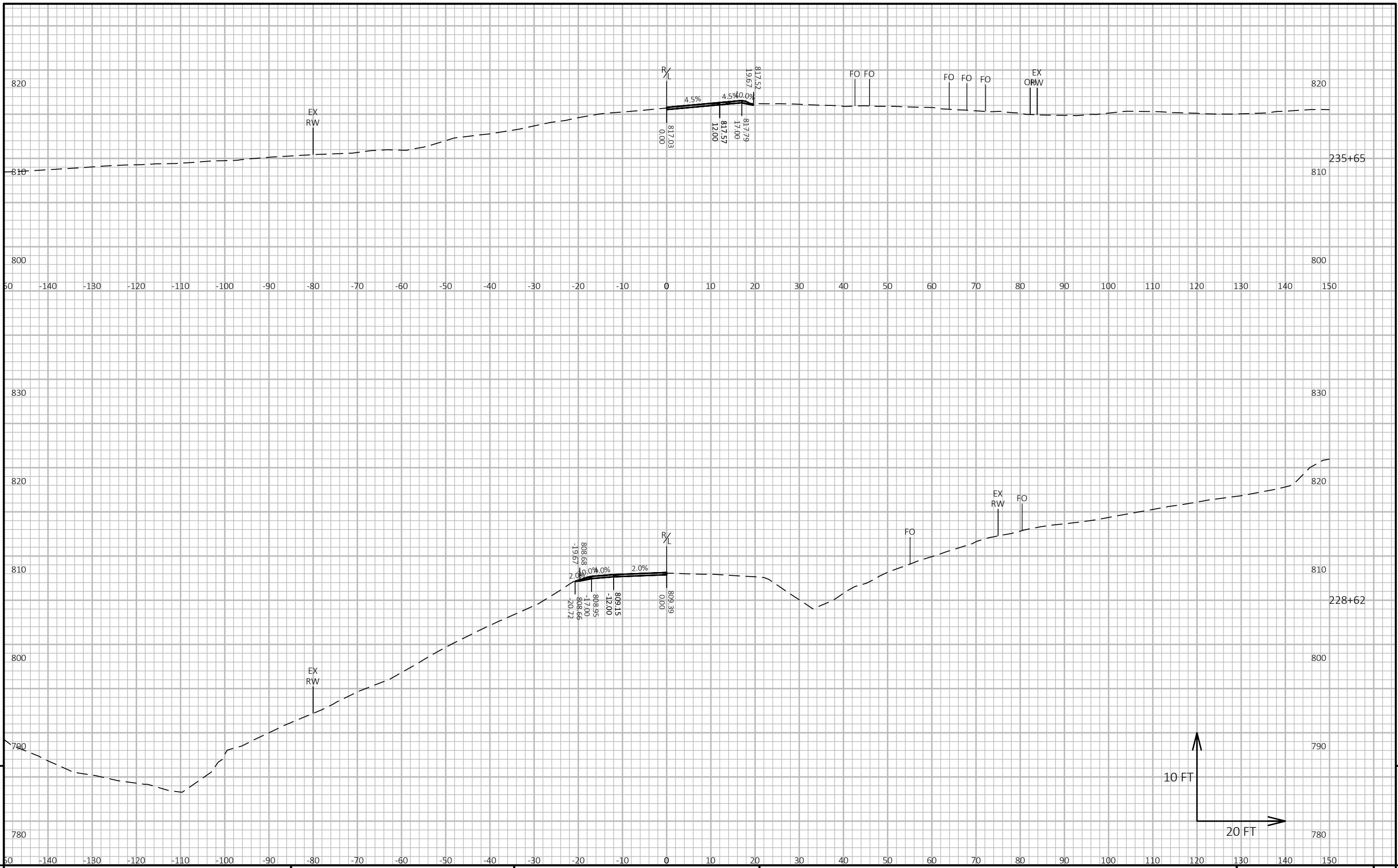
LAYOUT NAME - 17



9

9

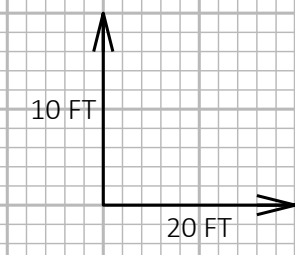
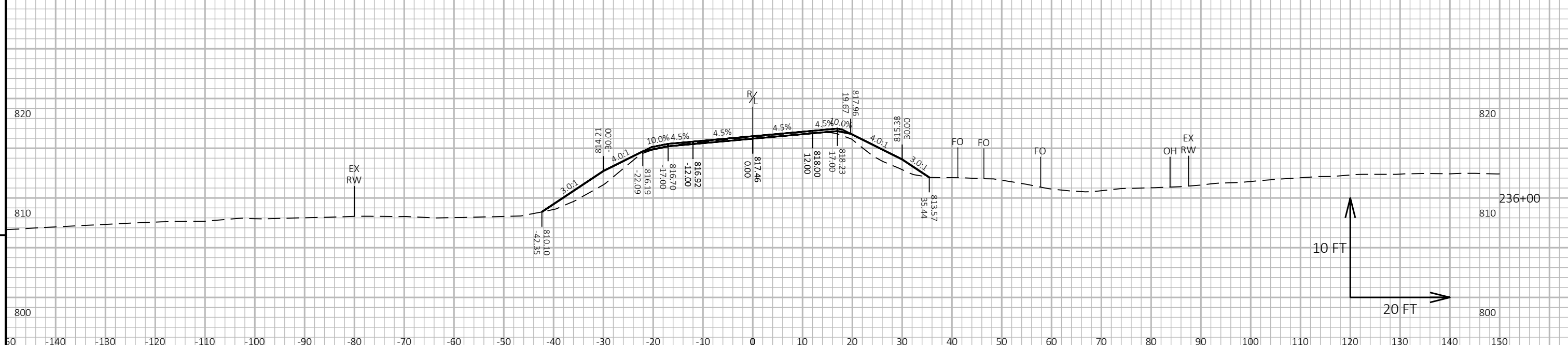
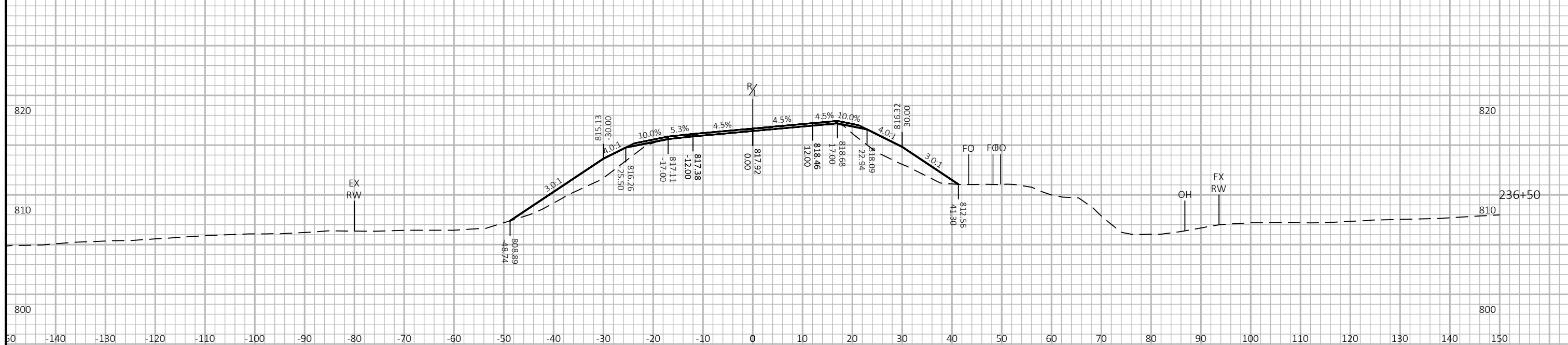
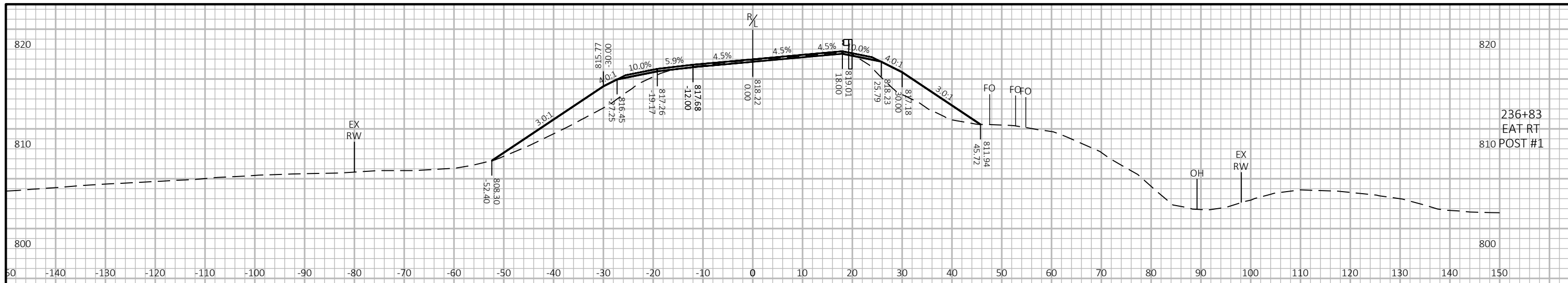
PROJECT NO: 1530-05-73	HWY: USH 10	COUNTY: PEPIN	CROSS SECTIONS: USH 10	SHEET	E
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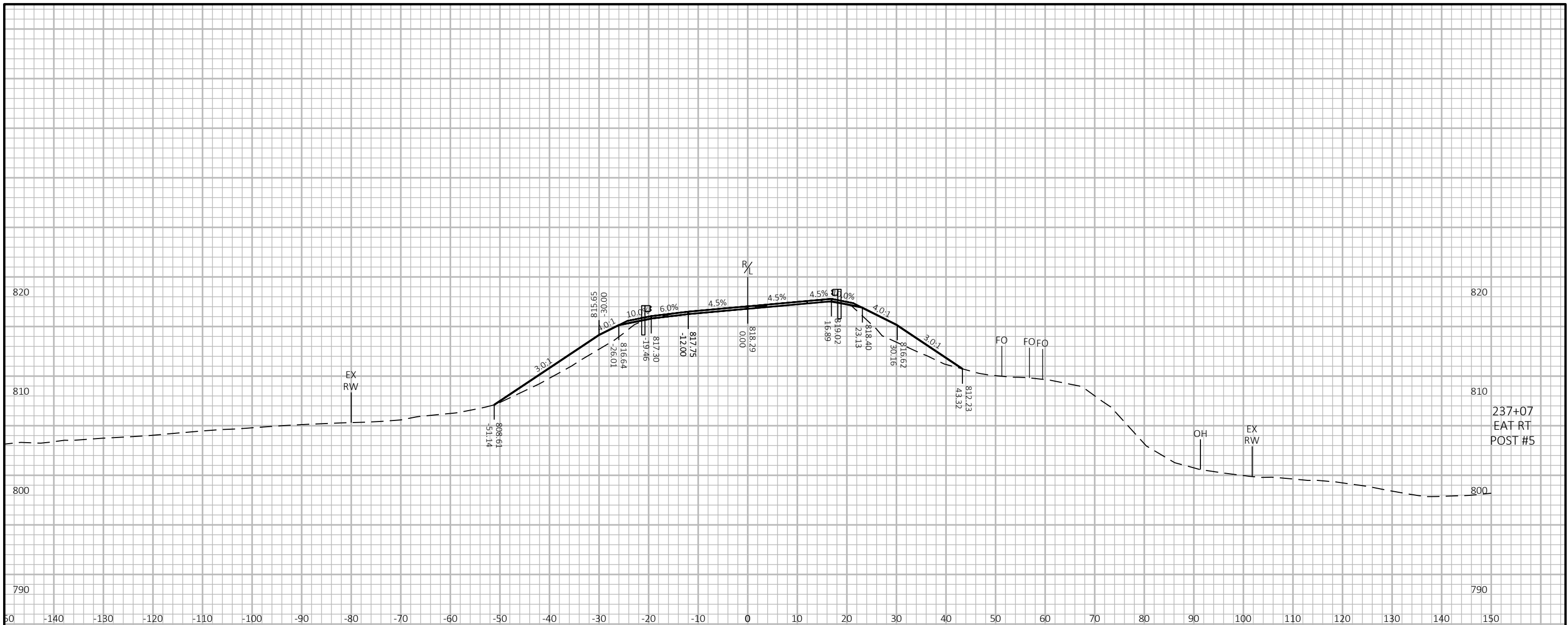
PROJECT NO: 1530-05-73	HWY: USH 10	COUNTY: PEPIN	CROSS SECTIONS: USH 10	SHEET
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9

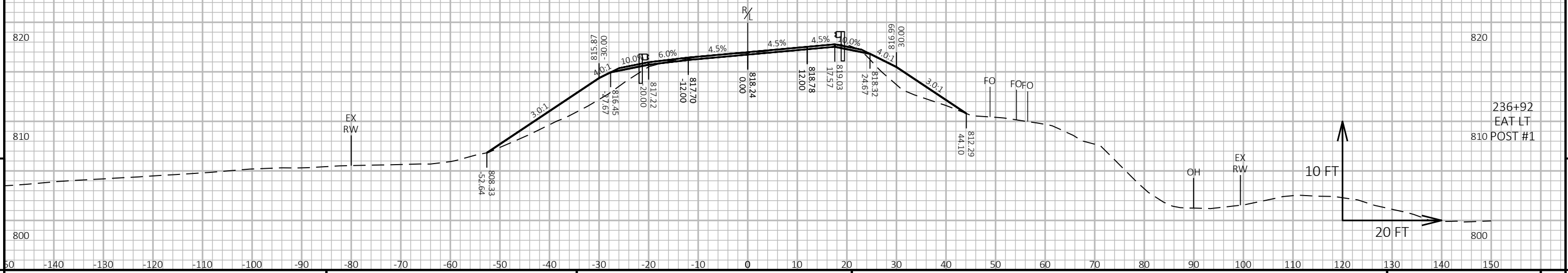
9



PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E



237+07
EAT RT
POST #5

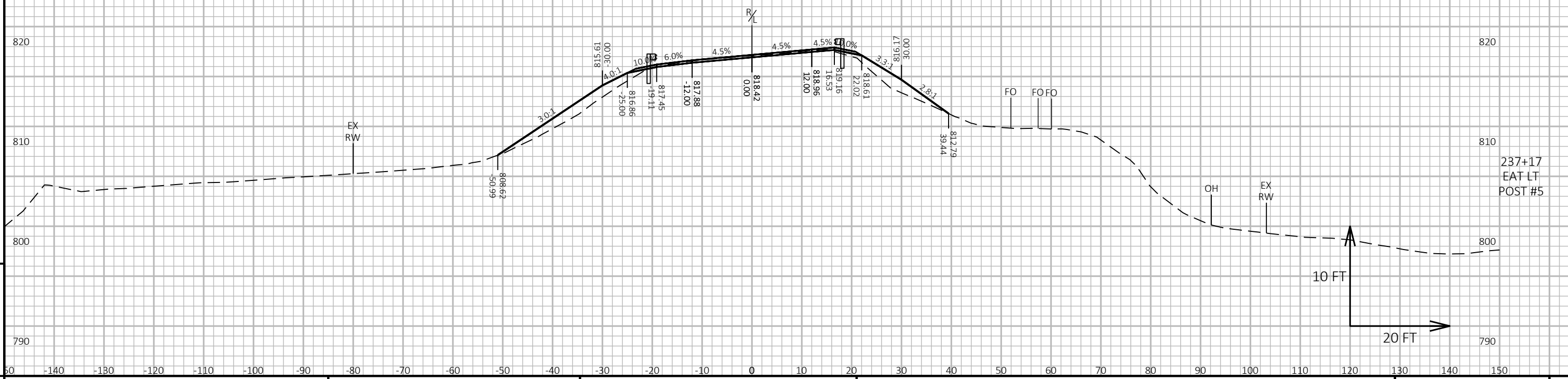
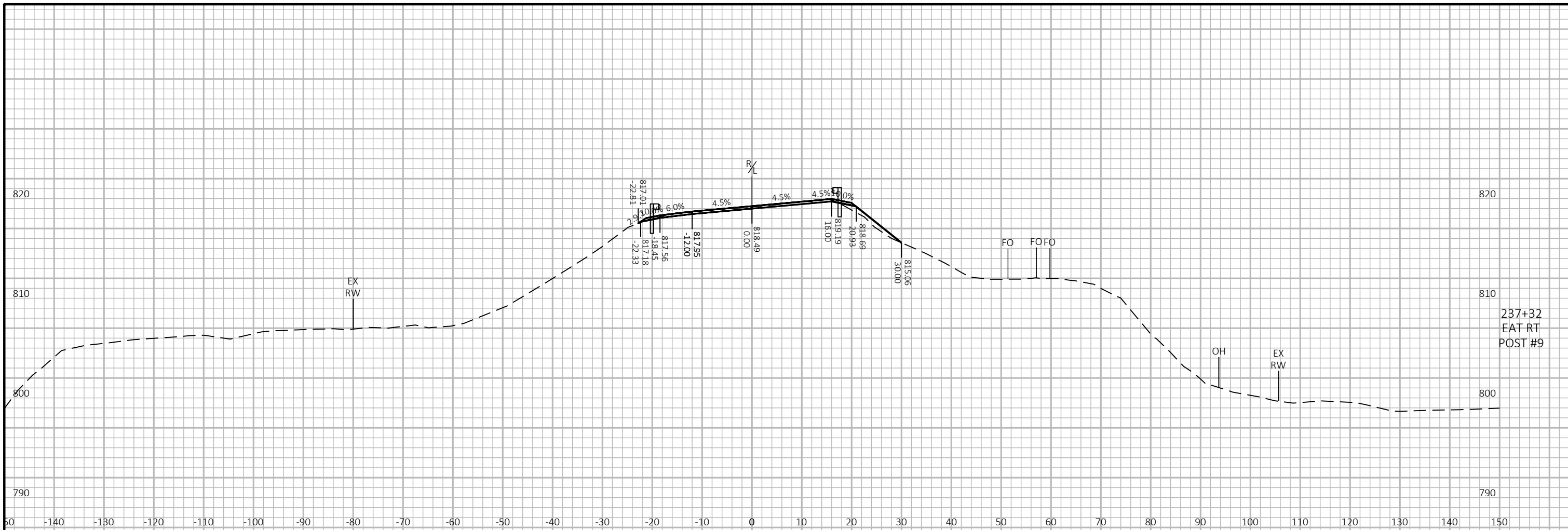


236+92
EAT LT
810 POST #1

PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E

9

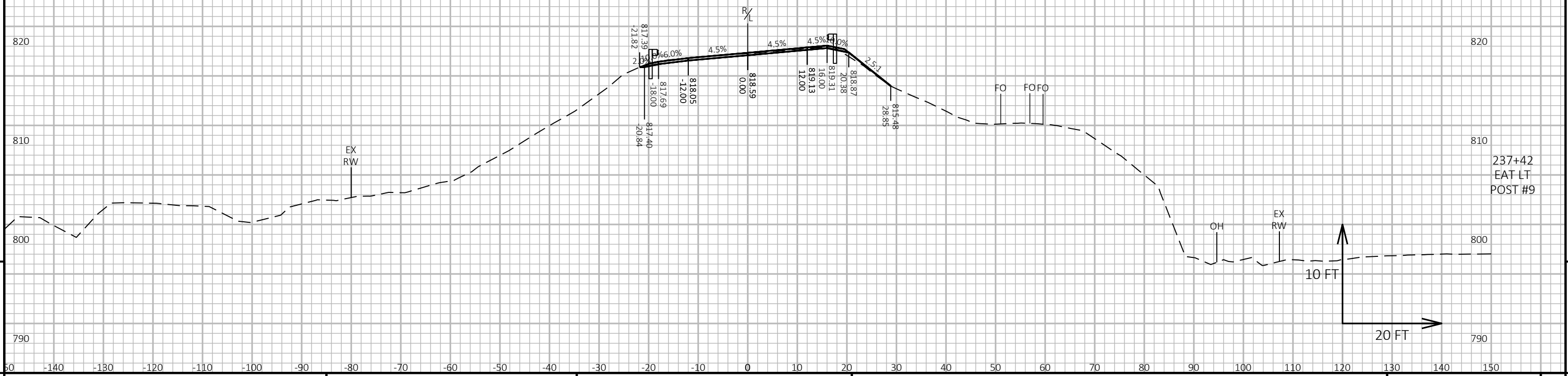
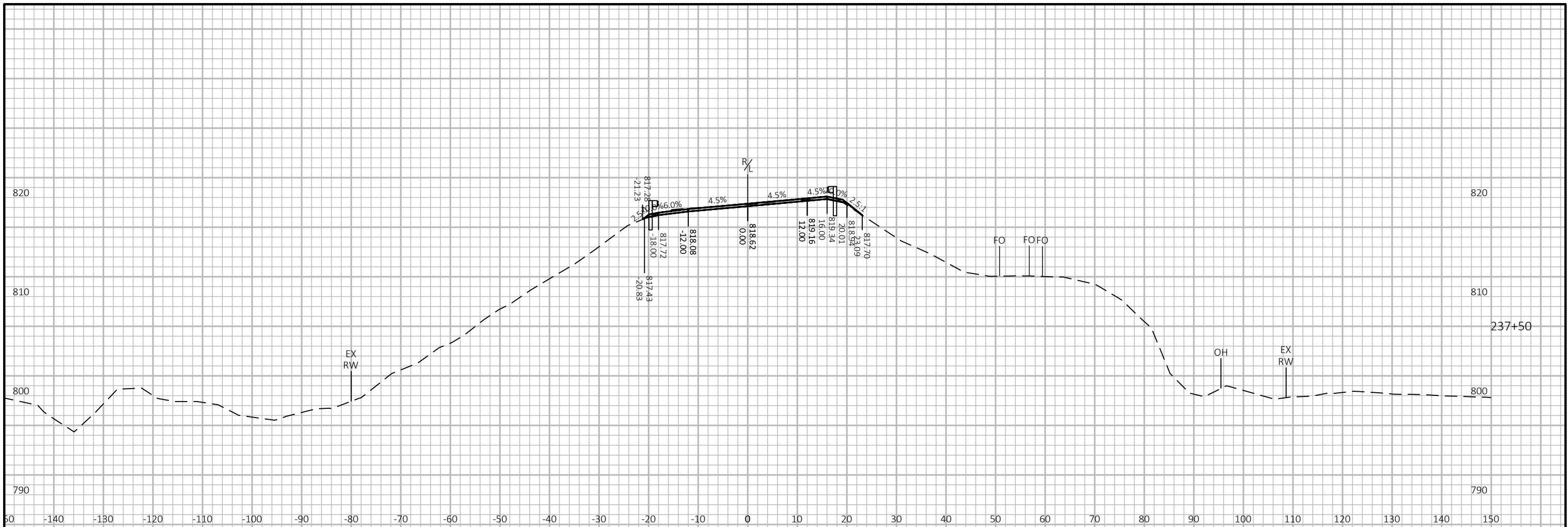
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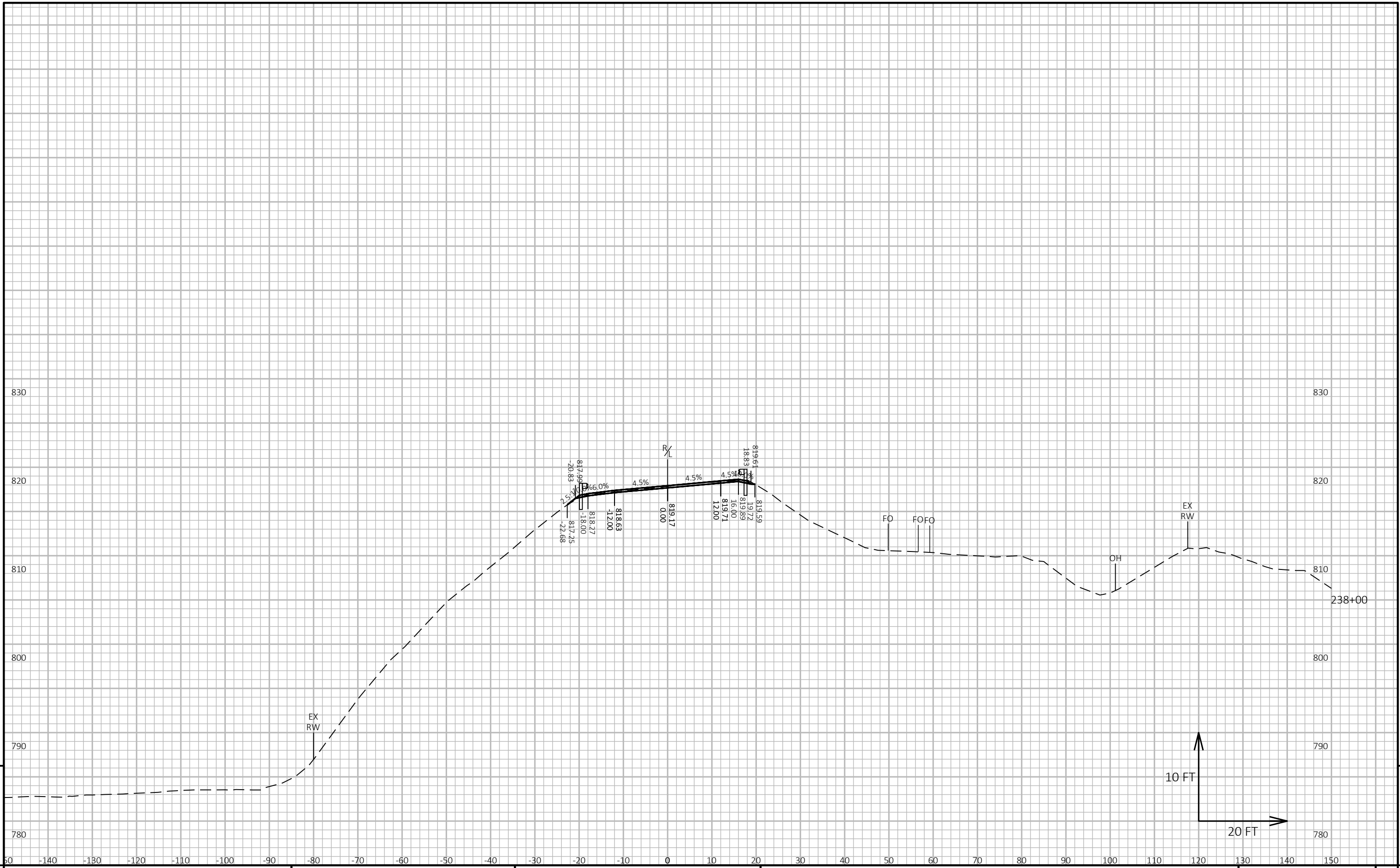
PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E

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PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET 9



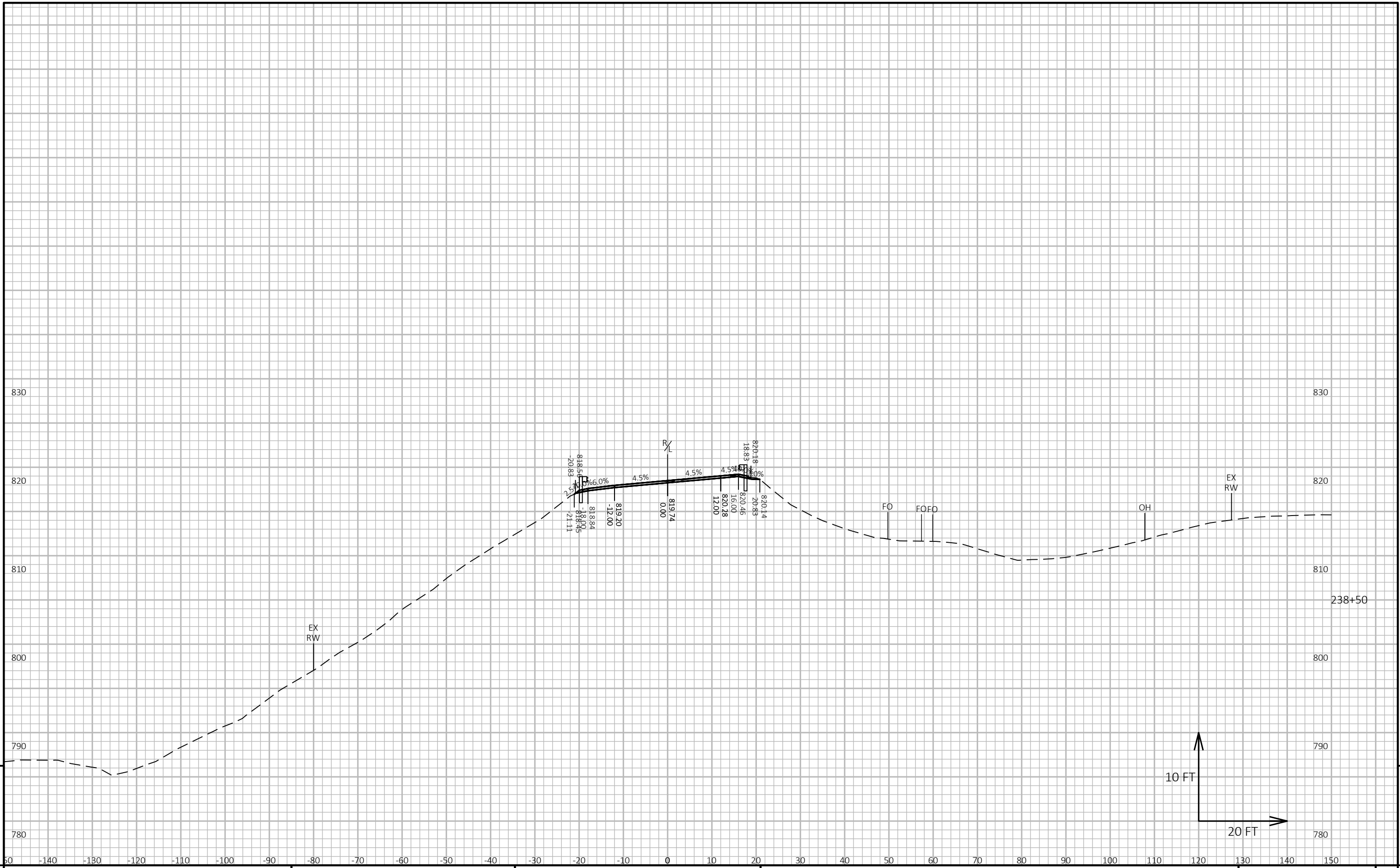
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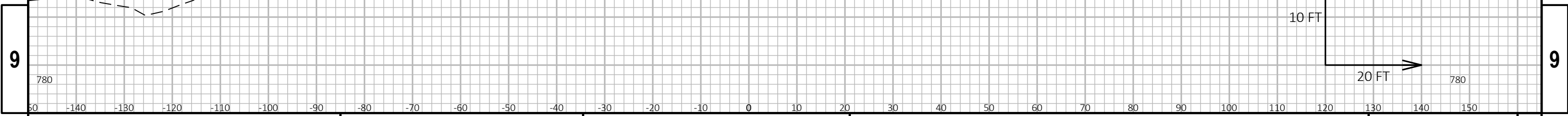
PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E

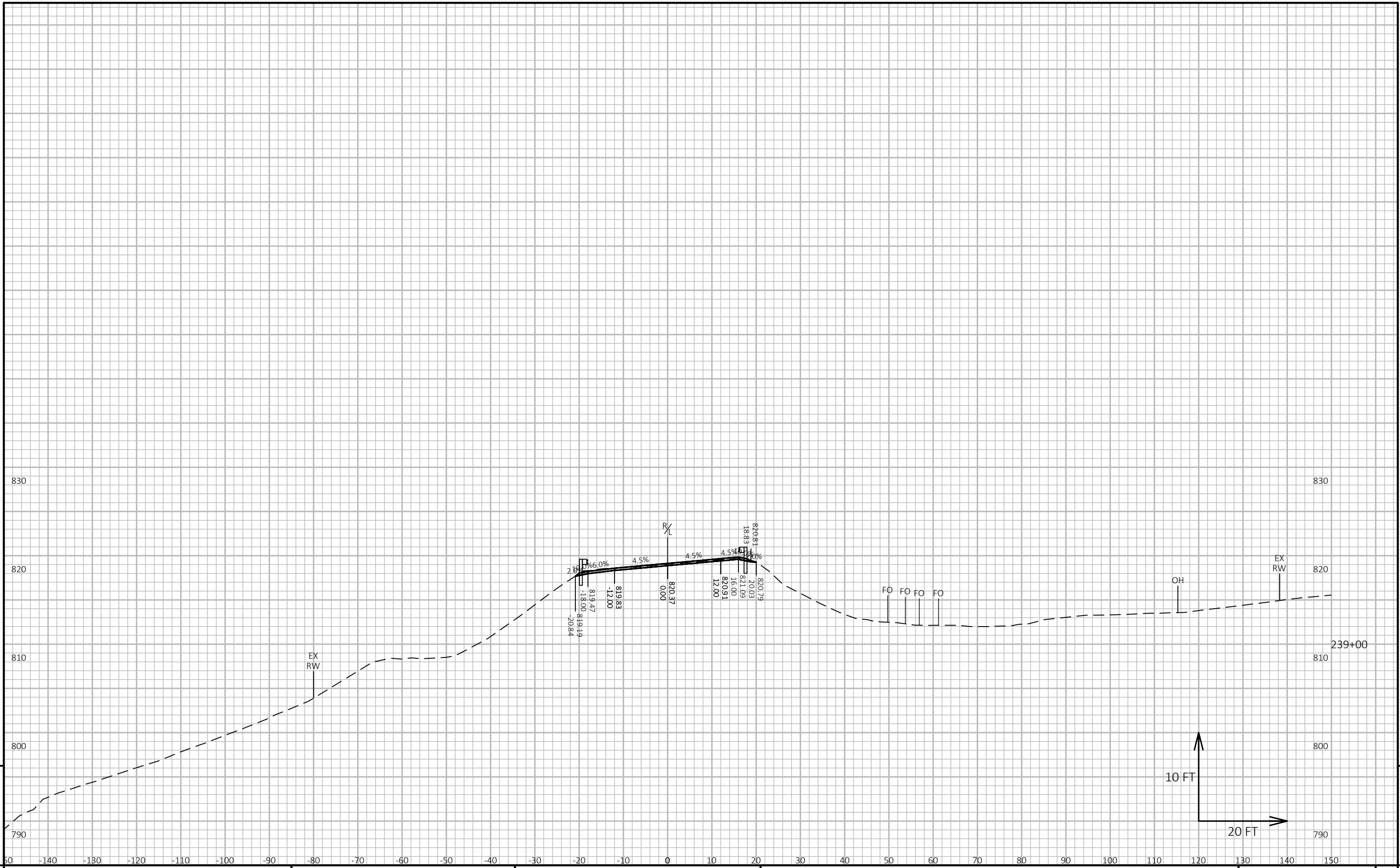
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LAYOUT NAME - 24



PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E





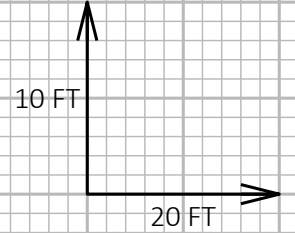
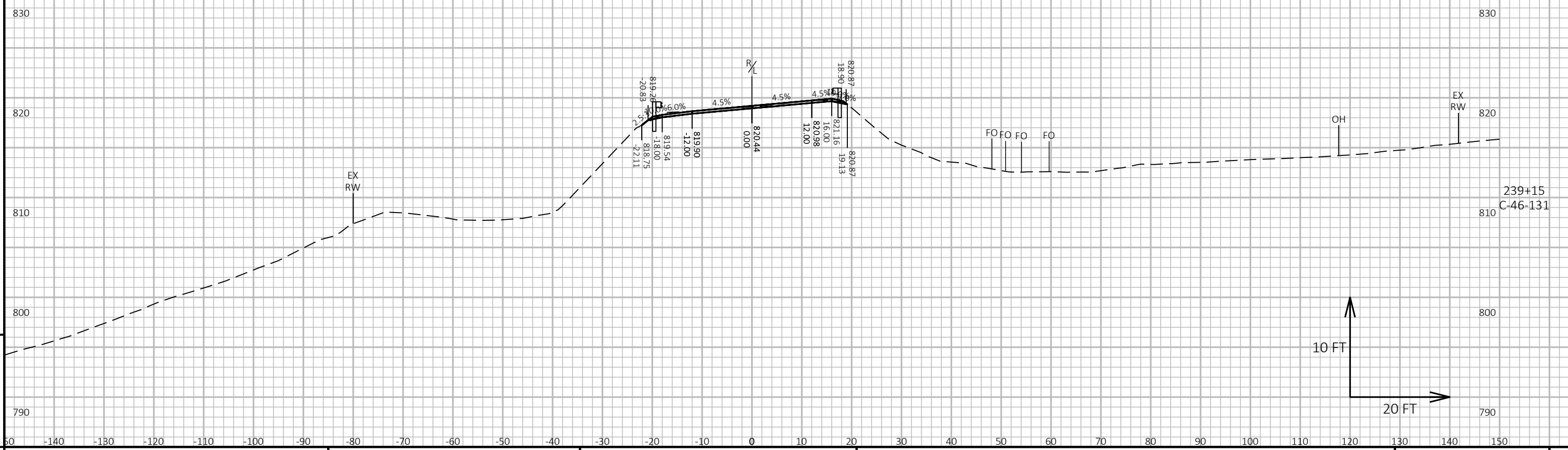
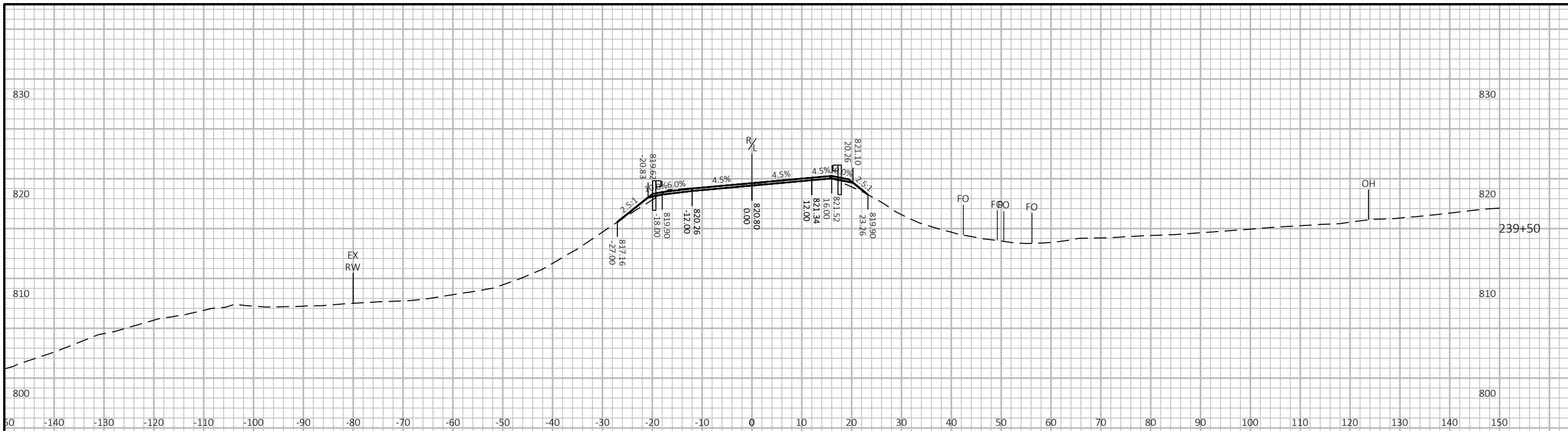
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PROJECT NO: 1530-05-73	HWY: USH 10	COUNTY: PEPIN	CROSS SECTIONS: USH 10	SHEET	E
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FILE NAME : O:\PDS\C3D\15300503\SHEETSPLAN\090202-XS-BAUERLN-TO-CTHX.DWG PLOT DATE : 7/24/2023 9:17 AM PLOT BY : CORY IHDE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 26



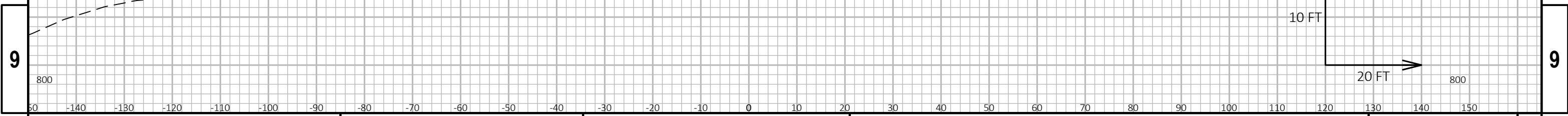
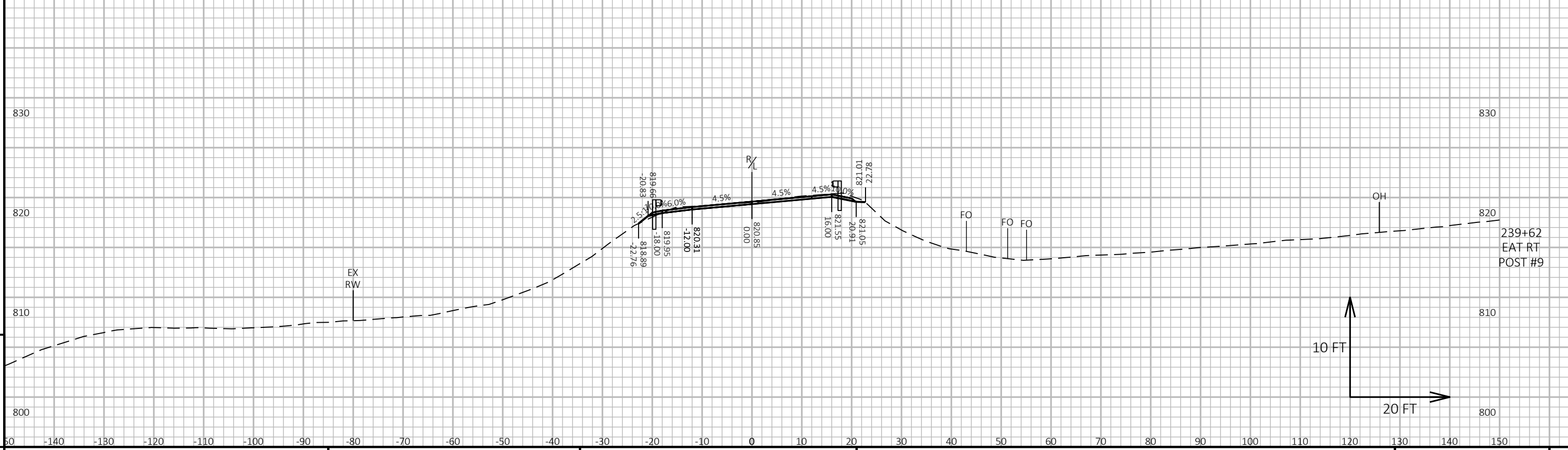
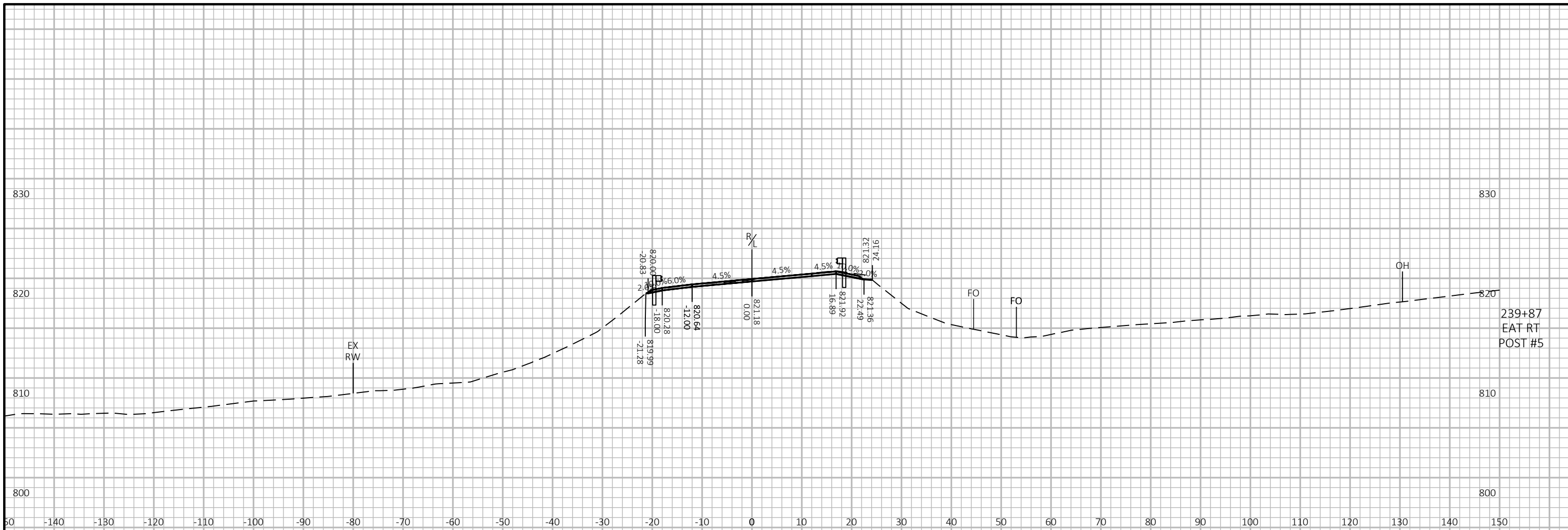
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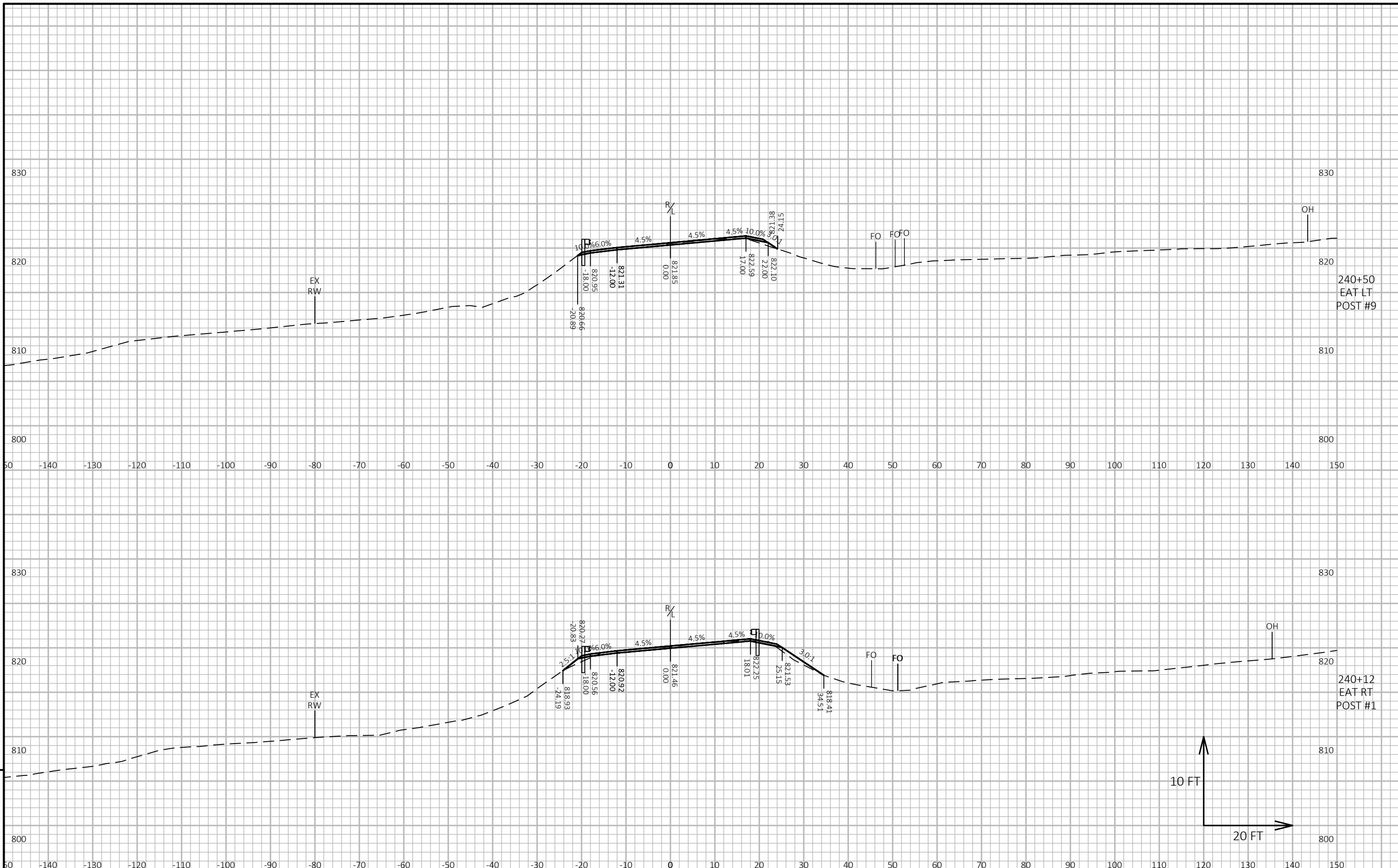
PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E

FILE NAME : O:\PDS\C3D\15300503\SHEETSPLAN\090202-XS-BAUERLN-TO-CTHX.DWG PLOT DATE : 7/24/2023 9:17 AM PLOT BY : CORY IHDE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 27



PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E



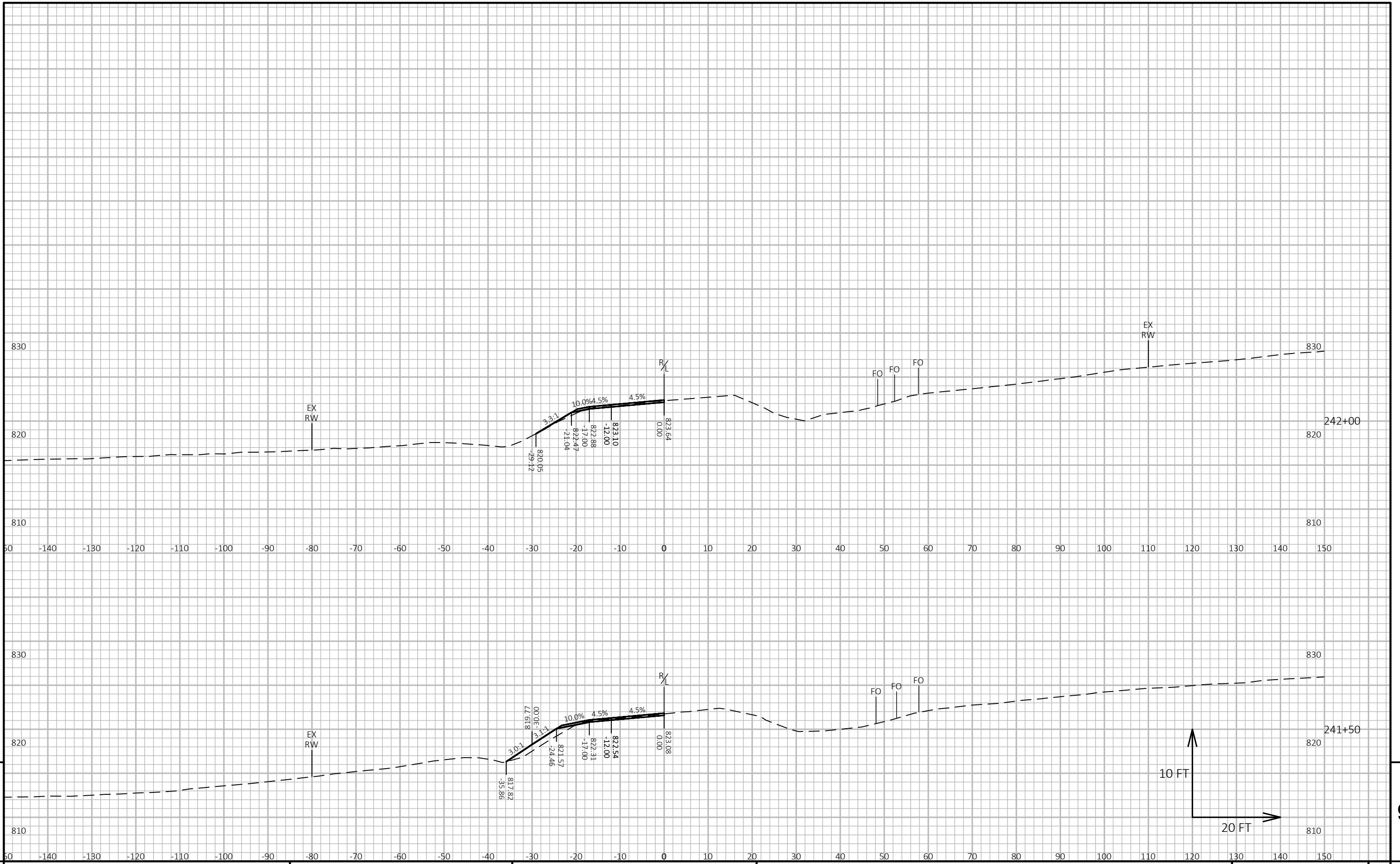
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PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E

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LAYOUT NAME - 29



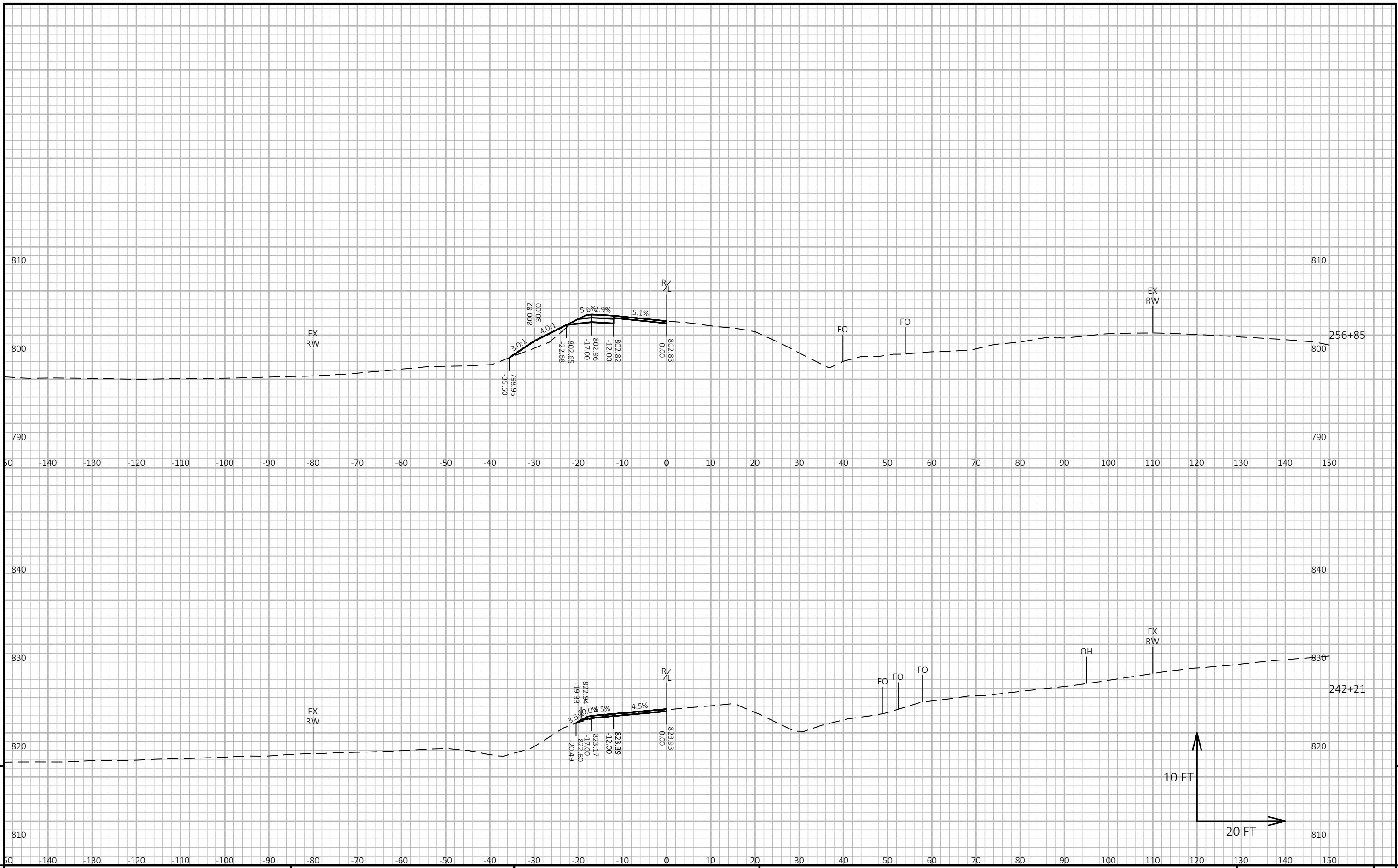
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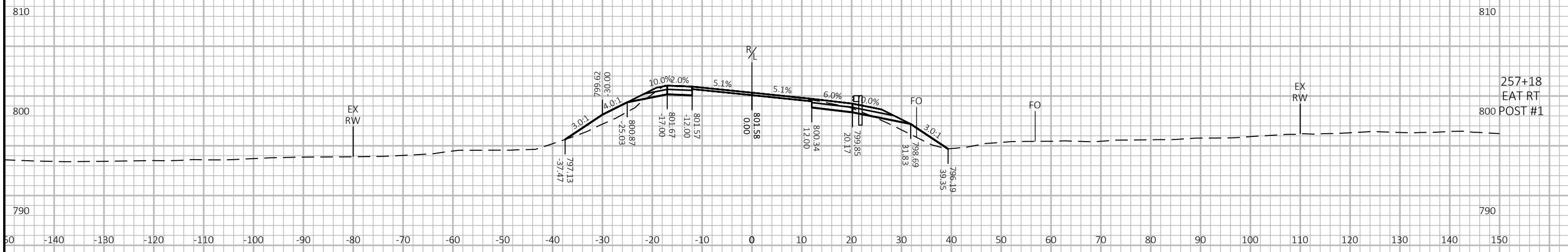
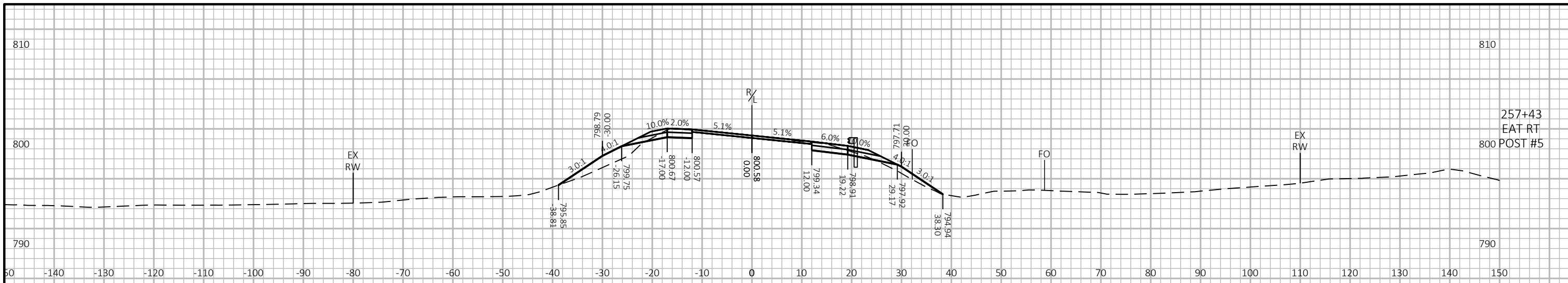
PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E

FILE NAME: O:\PDS\C3D\15300503\SHEETSPLAN\090202-XS-BAUERLN-TO-CTHX.DWG PLOT DATE: 7/24/2023 9:20 AM PLOT BY: CORY IHDE PLOT NAME: PLOT SCALE: 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

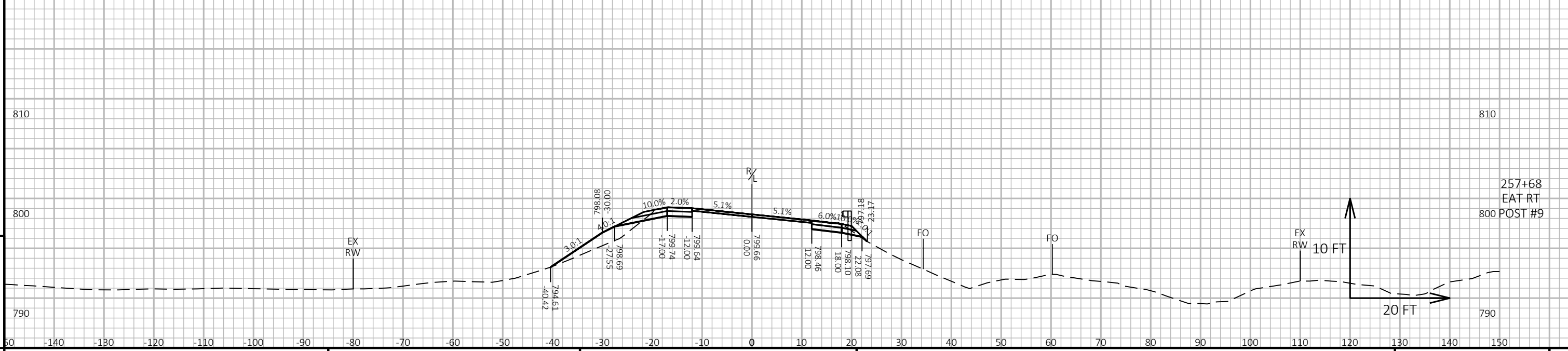
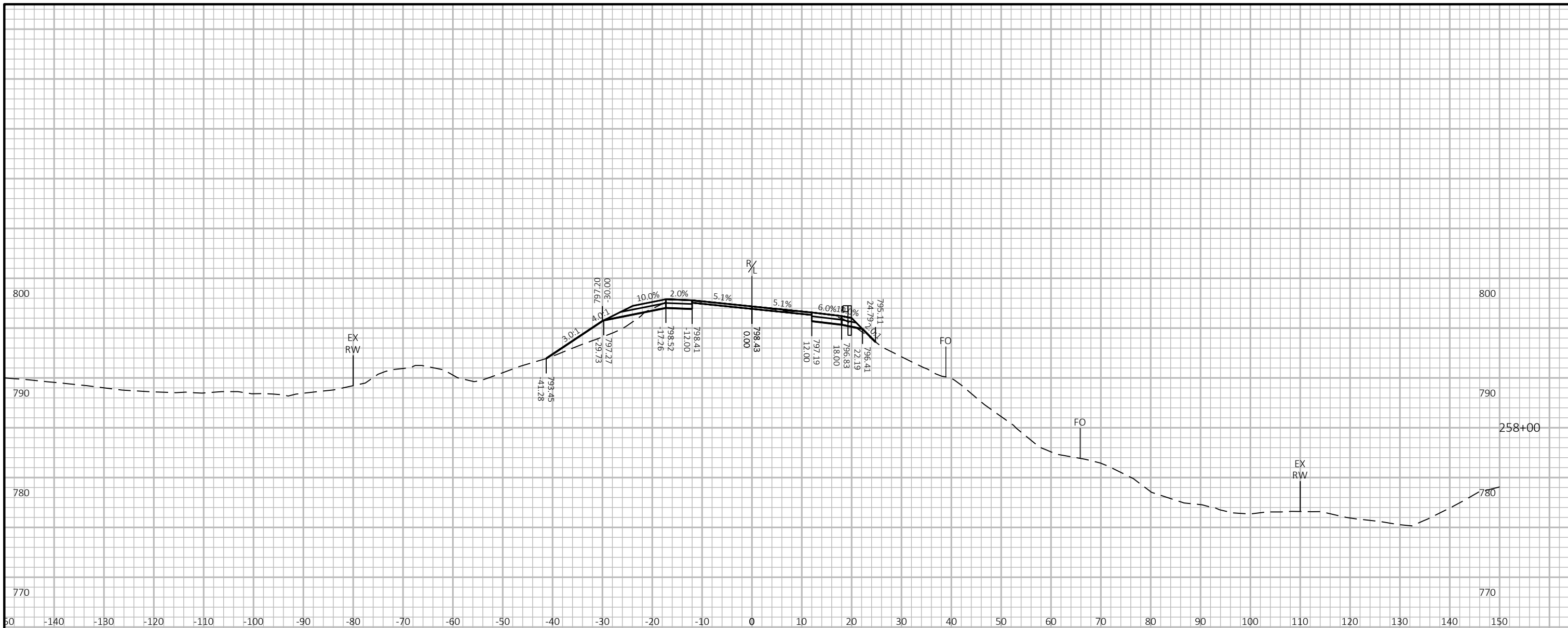
LAYOUT NAME - 31



PROJECT NO: 1530-05-73	HWY: USH 10	COUNTY: PEPIN	CROSS SECTIONS: USH 10
SHEET			E

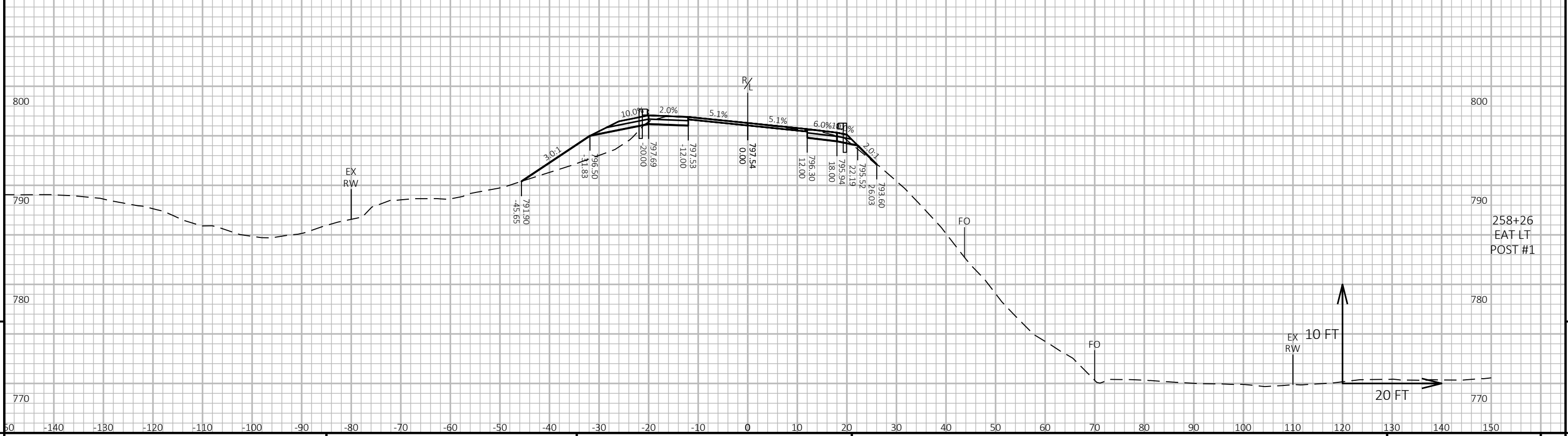


PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E



257+68
EAT RT
800 POST #9

PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E



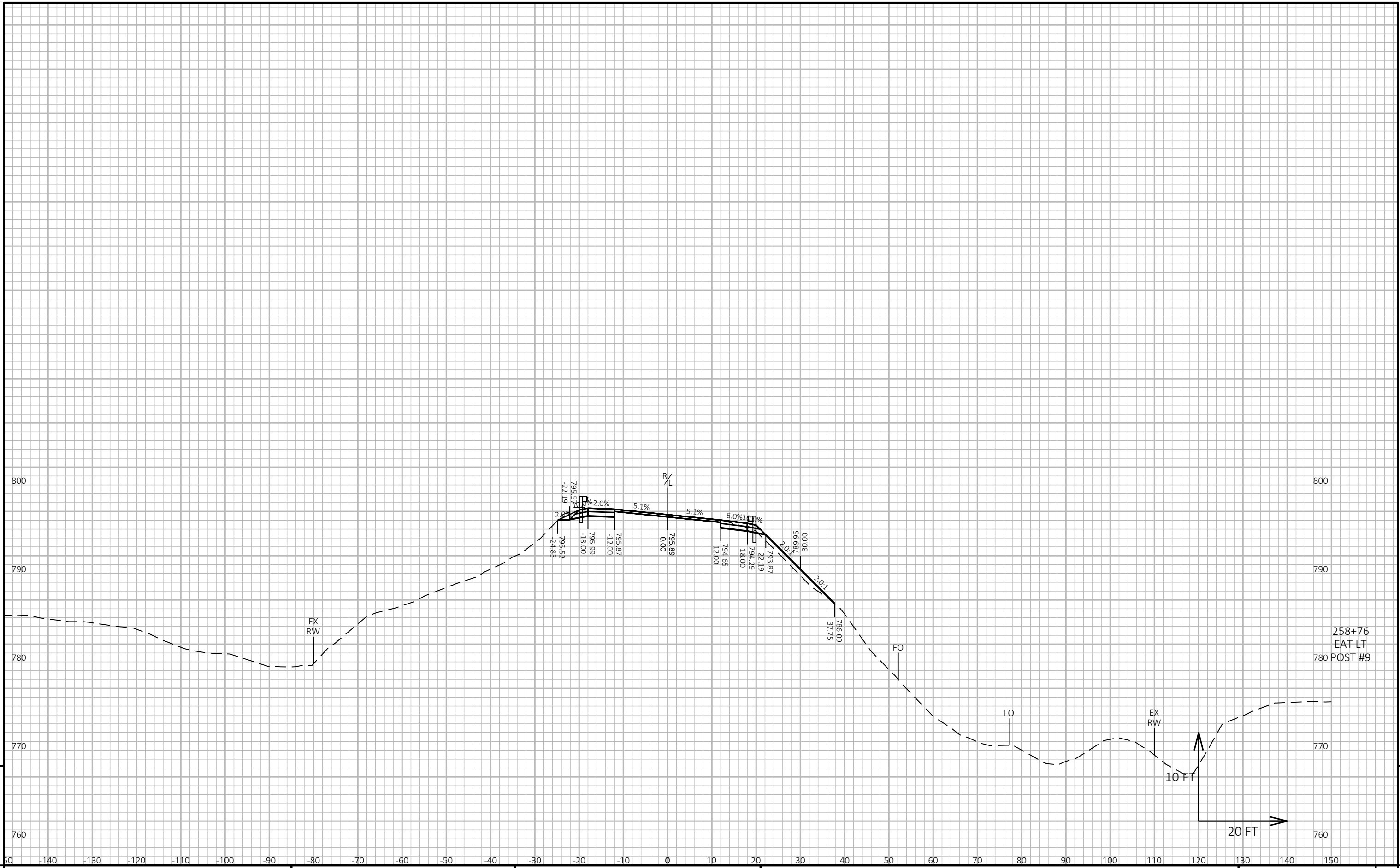
PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET

FILE NAME : O:\PDS\C3D\15300503\SHEETSPLAN\090202-XS-BAUERLN-TO-CTHX.DWG PLOT DATE : 7/24/2023 9:23 AM PLOT BY : CORY IHDE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

9

9

E



258+76
EAT LT
780 POST #9

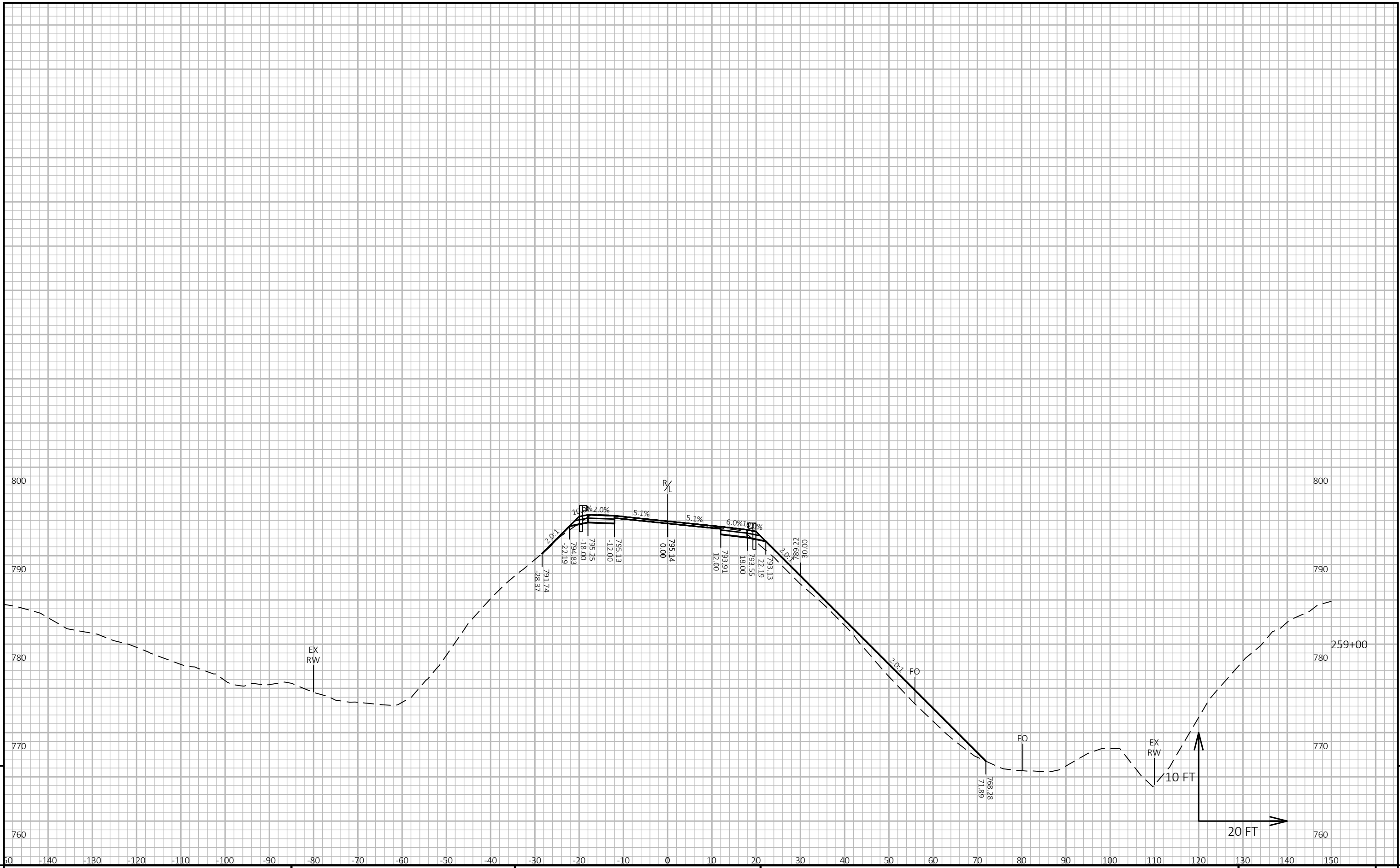
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PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E

FILE NAME : O:\PDS\C3D\15300503\SHEETSPLAN\090202-XS-BAUERLN-TO-CTHX.DWG PLOT DATE : 7/24/2023 9:24 AM PLOT BY : CORY IHDE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 36



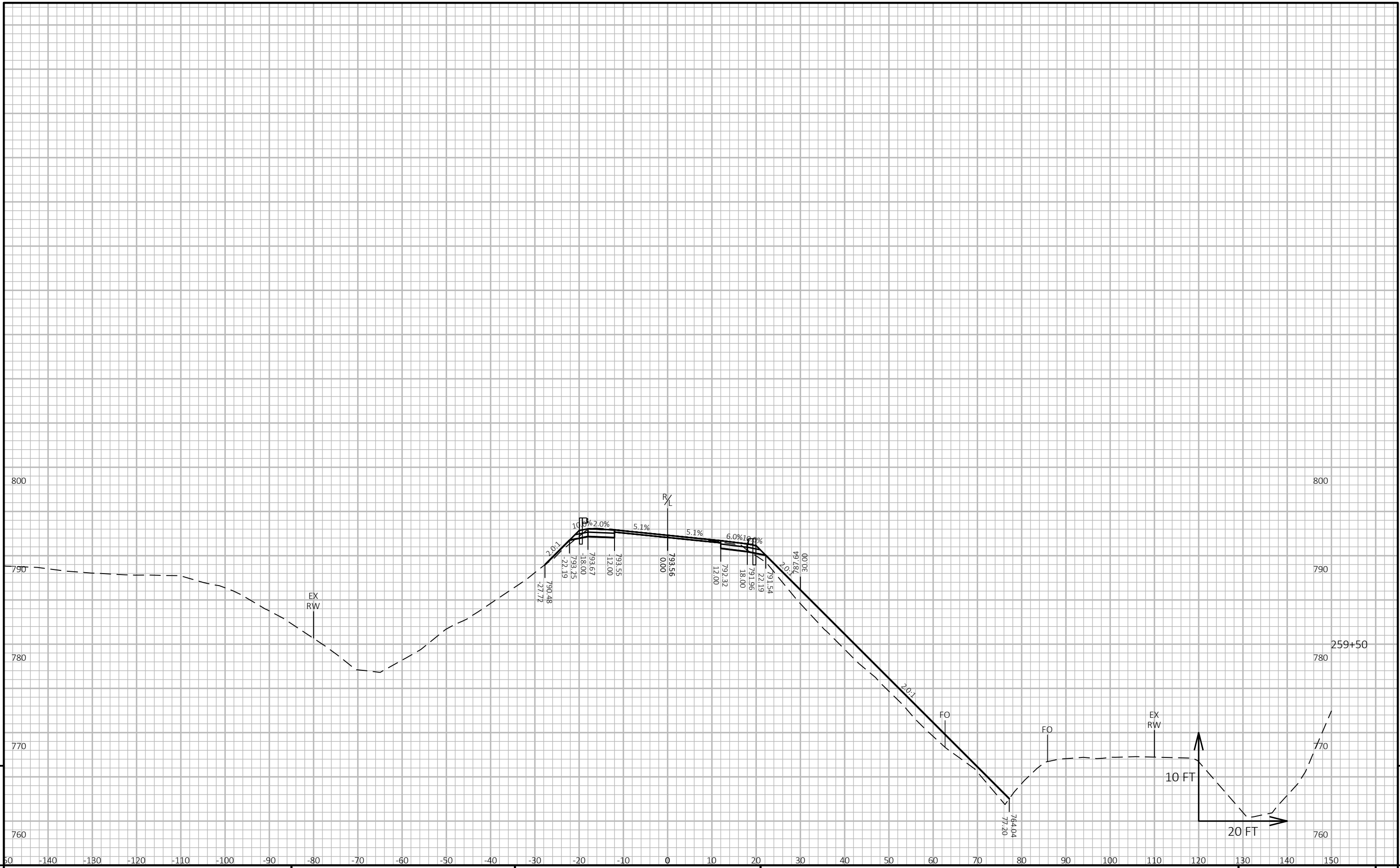
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PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E

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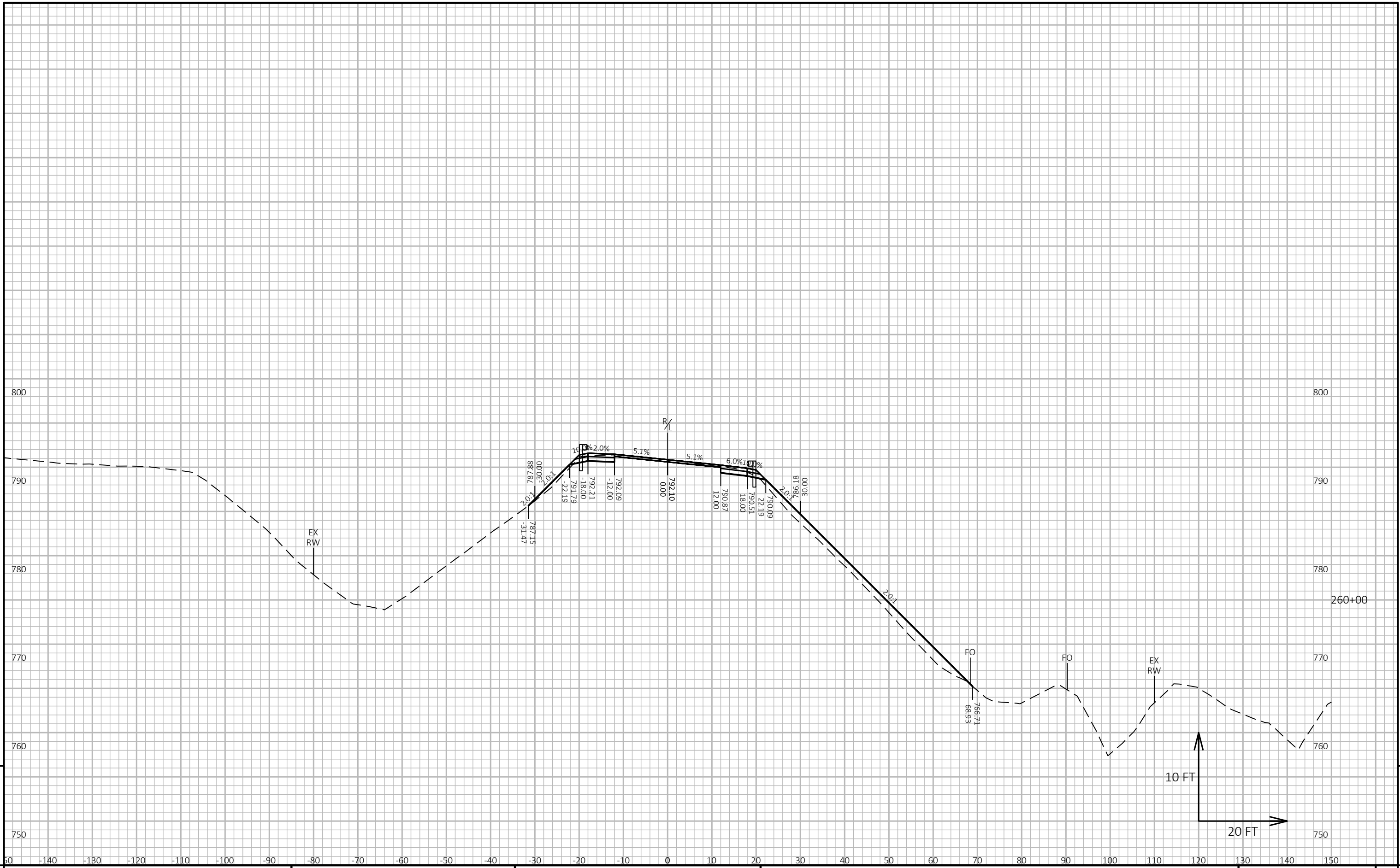
LAYOUT NAME - 37



9

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PROJECT NO: 1530-05-73	HWY: USH 10	COUNTY: PEPIN	CROSS SECTIONS: USH 10	SHEET	E
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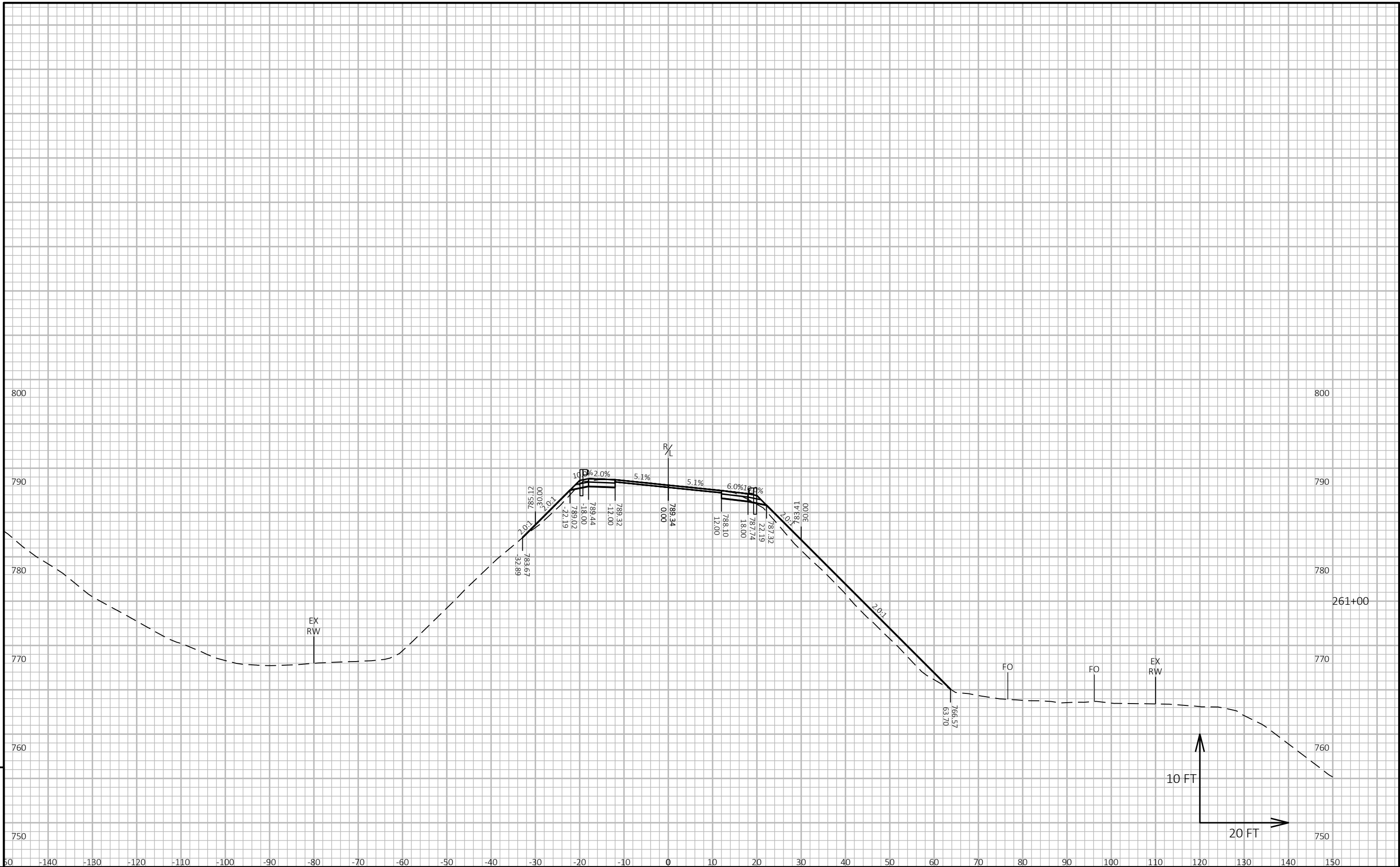
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PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E

FILE NAME : O:\PDS\C3D\15300503\SHEETSPLAN\090202-XS-BAUERLN-TO-CTHX.DWG PLOT DATE : 7/24/2023 9:26 AM PLOT BY : CORY IHDE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 39



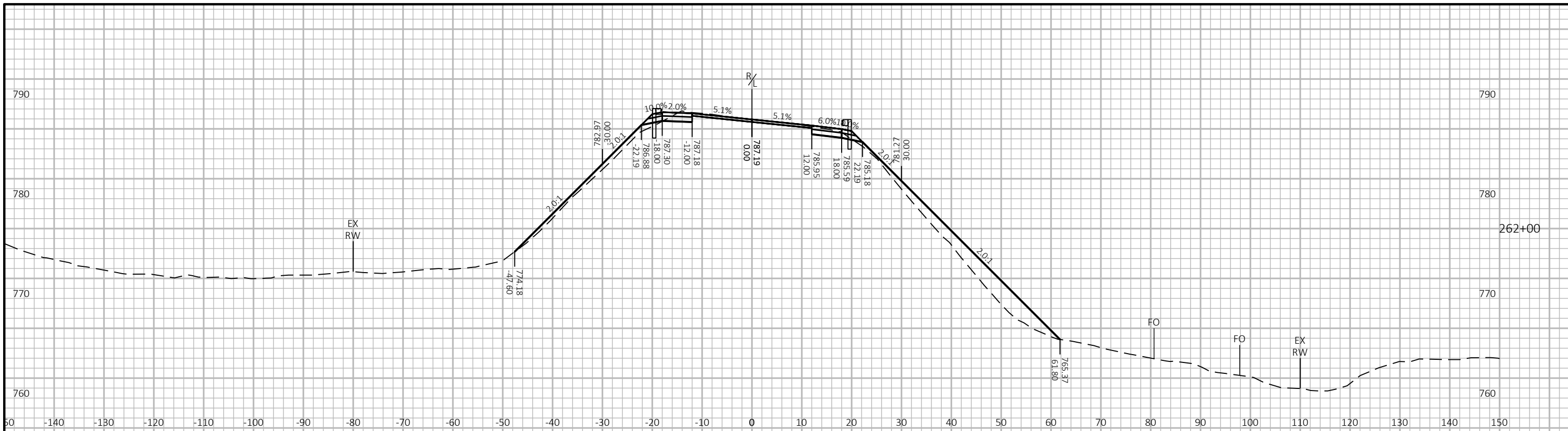
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PROJECT NO: 1530-05-73	HWY: USH 10	COUNTY: PEPIN	CROSS SECTIONS: USH 10	SHEET E
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FILE NAME : O:\PDS\C3D\15300503\SHEETSPLAN\090202-XS-BAUERLN-TO-CTHX.DWG PLOT DATE : 7/24/2023 9:27 AM PLOT BY : CORY IHDE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 41

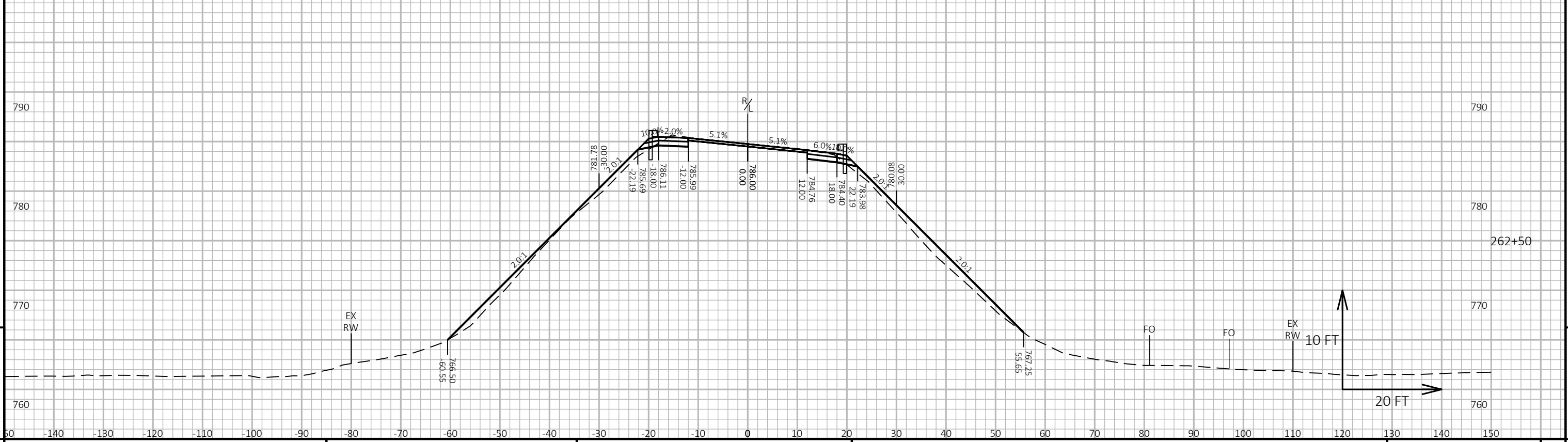
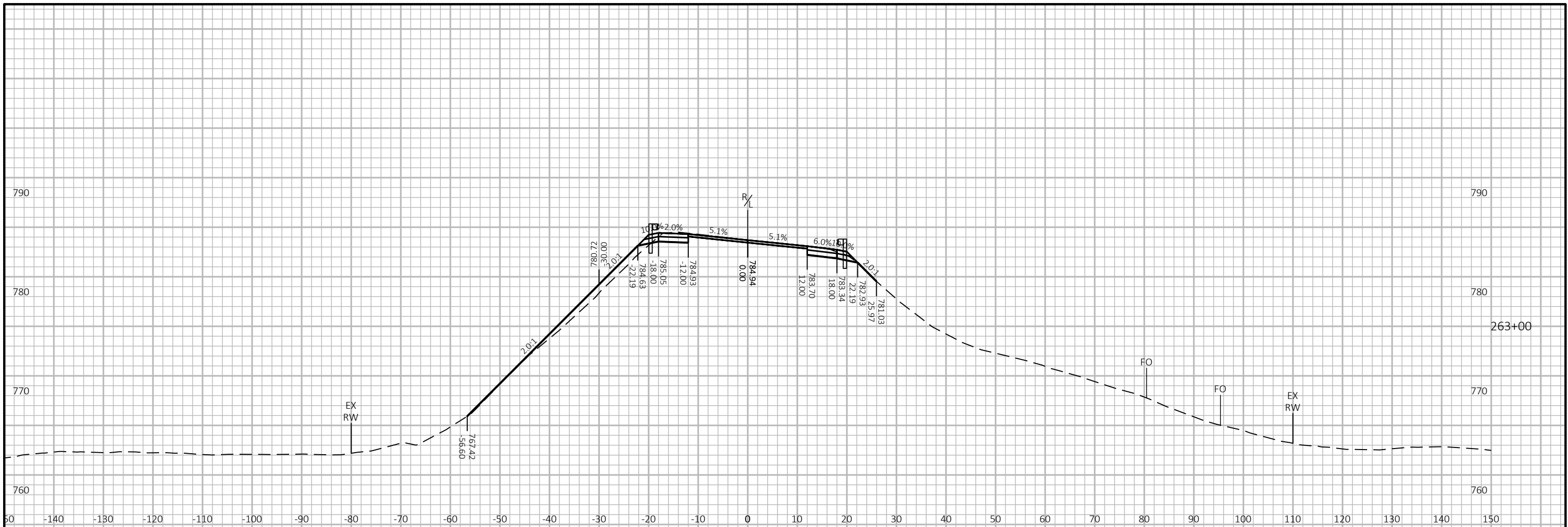


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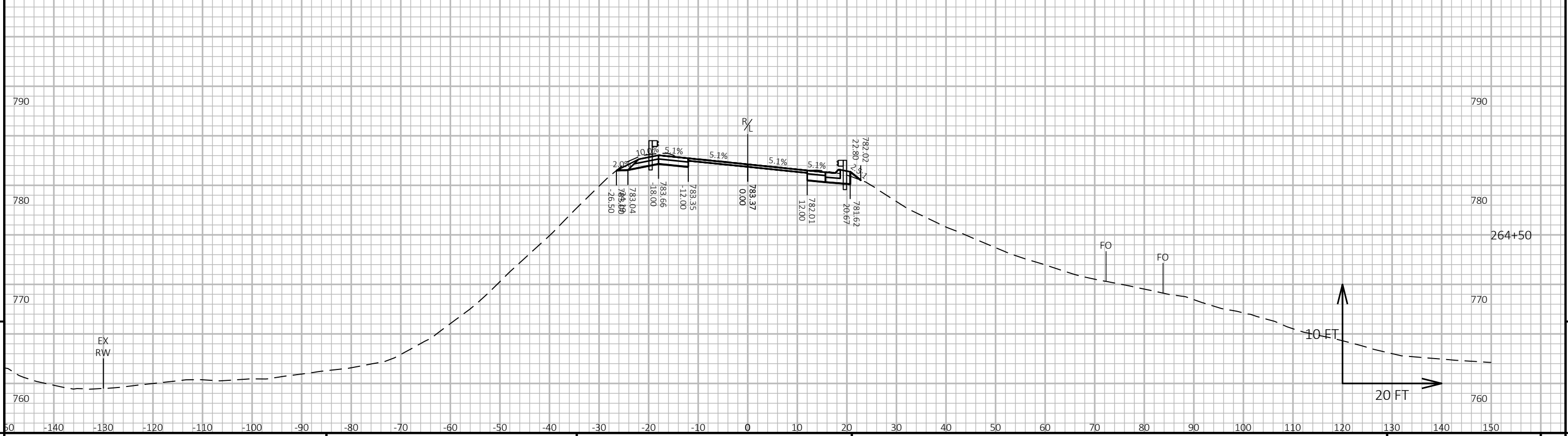
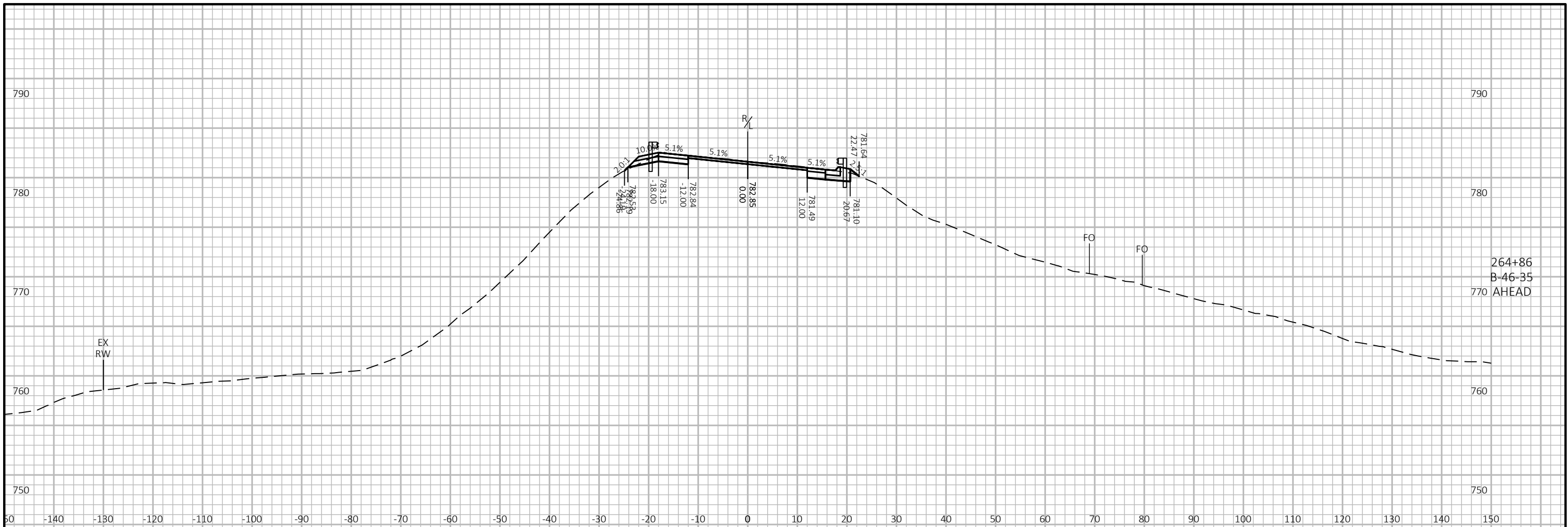
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PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E

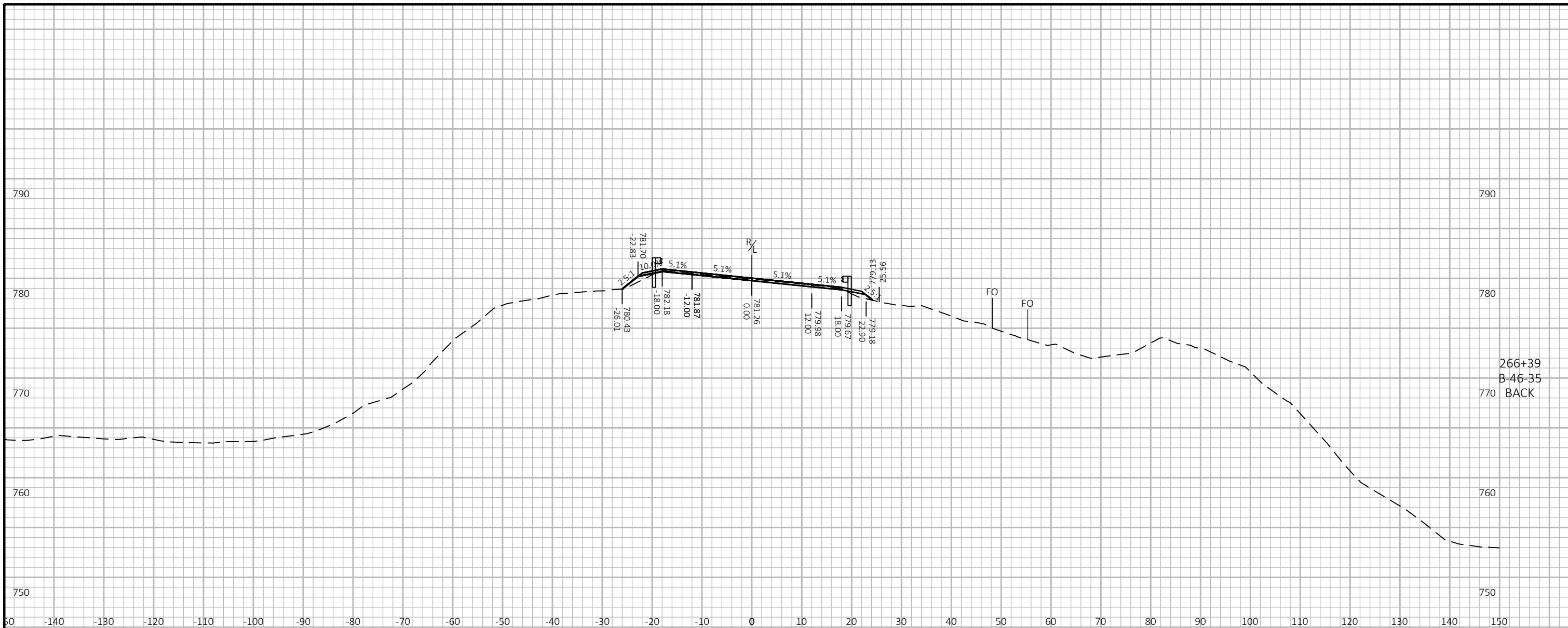
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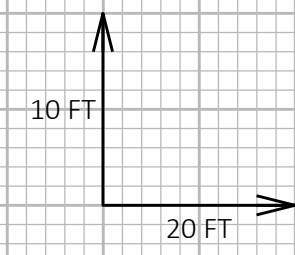
PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET



PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E



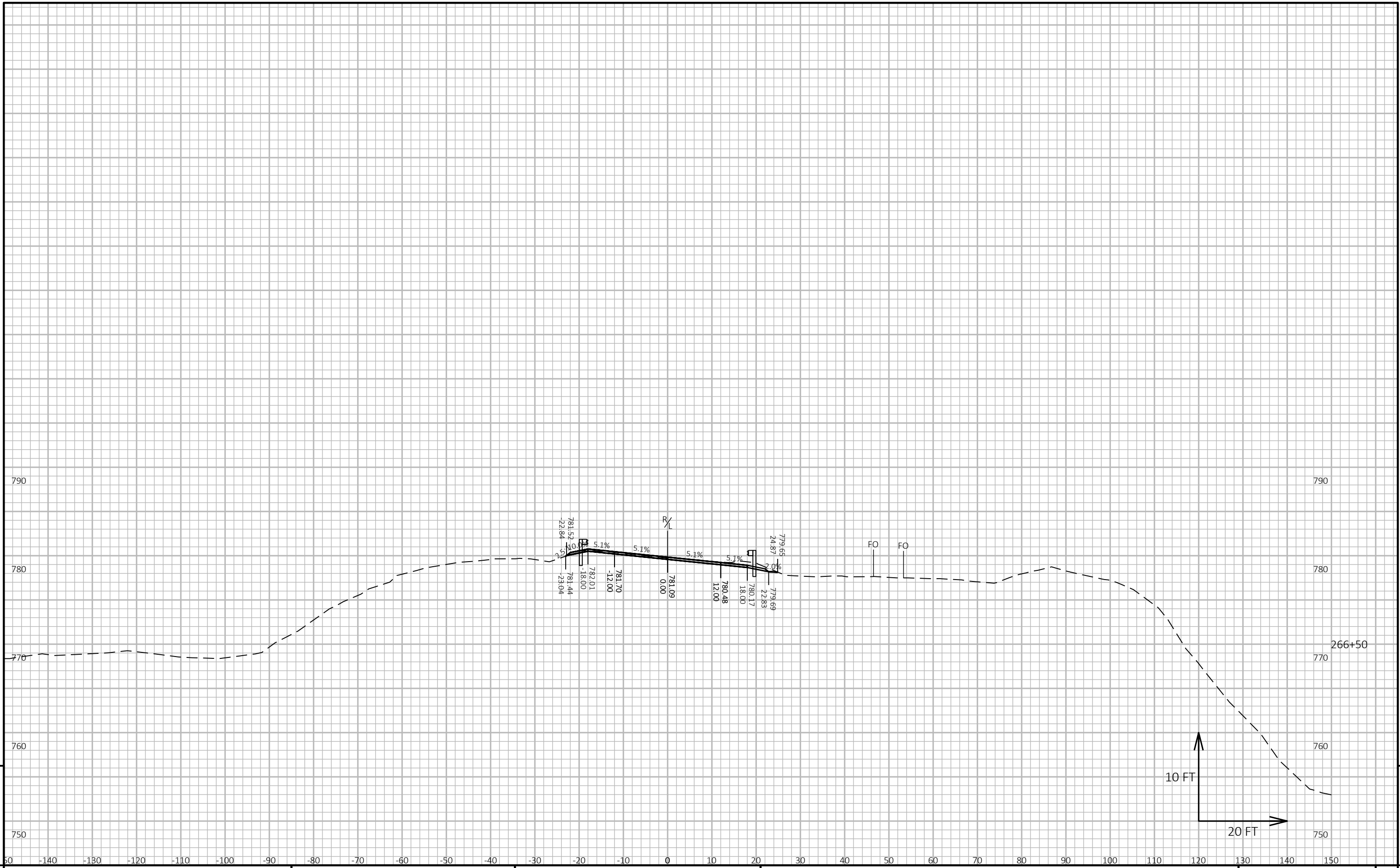
266+39
B-46-35
770 BACK



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PROJECT NO: 1530-05-73	HWY: USH 10	COUNTY: PEPIN	CROSS SECTIONS: USH 10	SHEET	E
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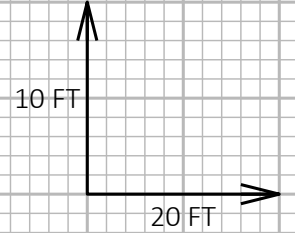
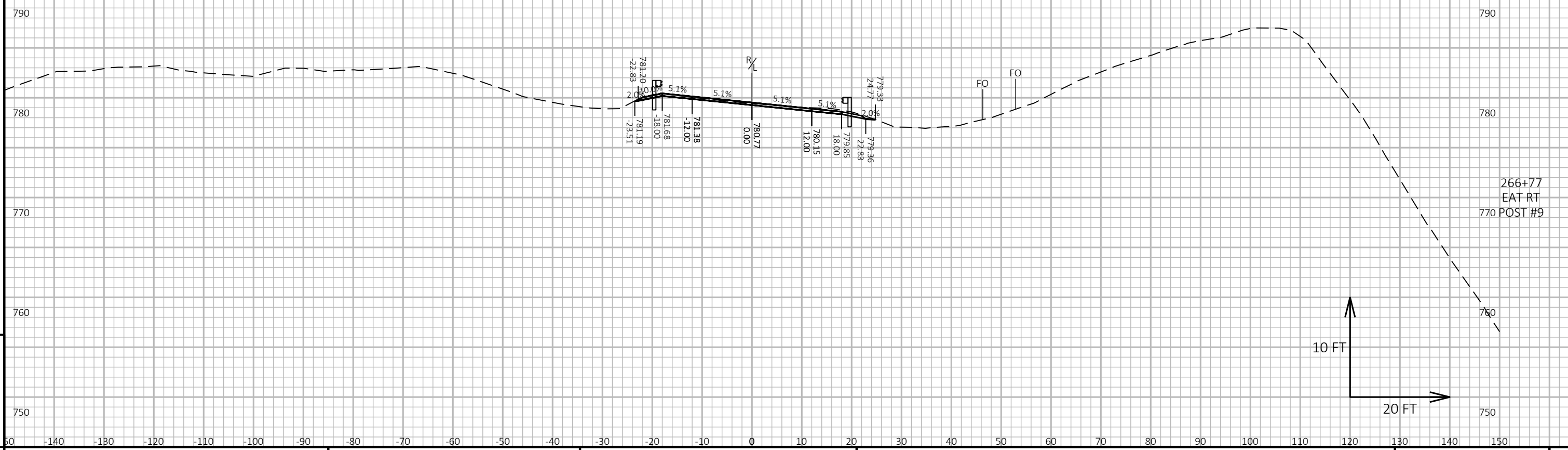
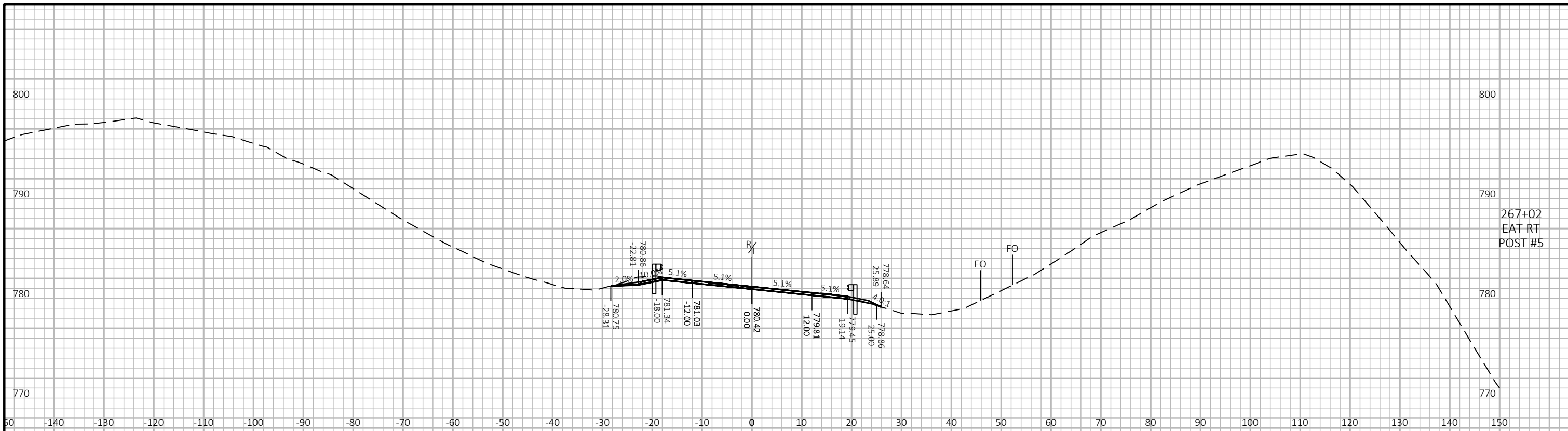
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PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E

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LAYOUT NAME - 47



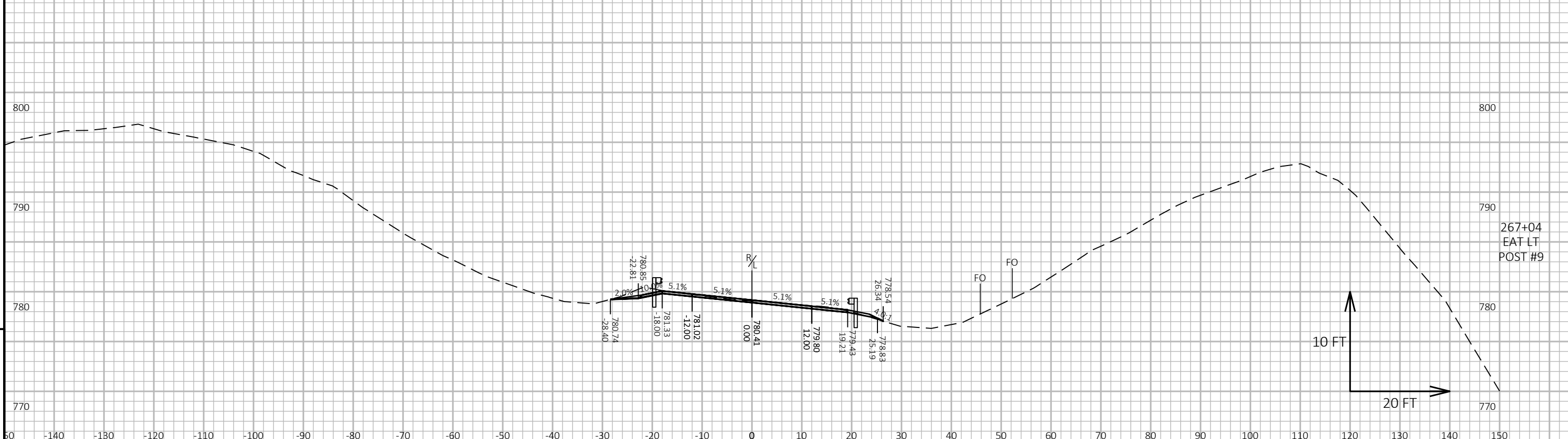
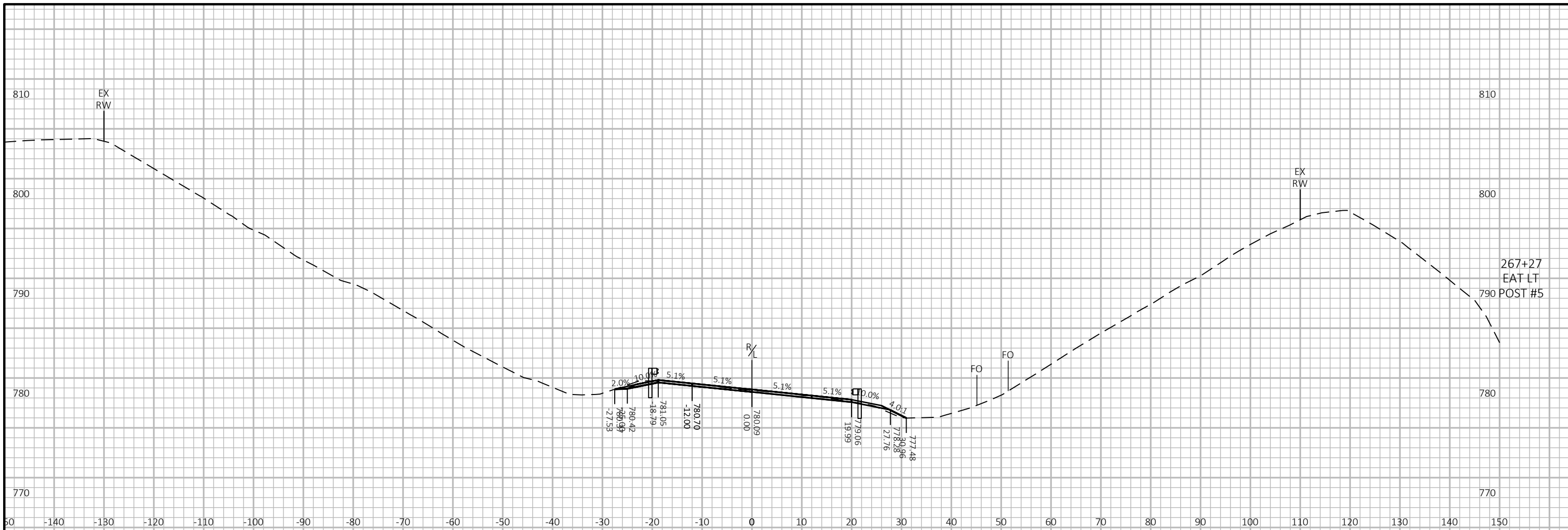
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PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E

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LAYOUT NAME - 48

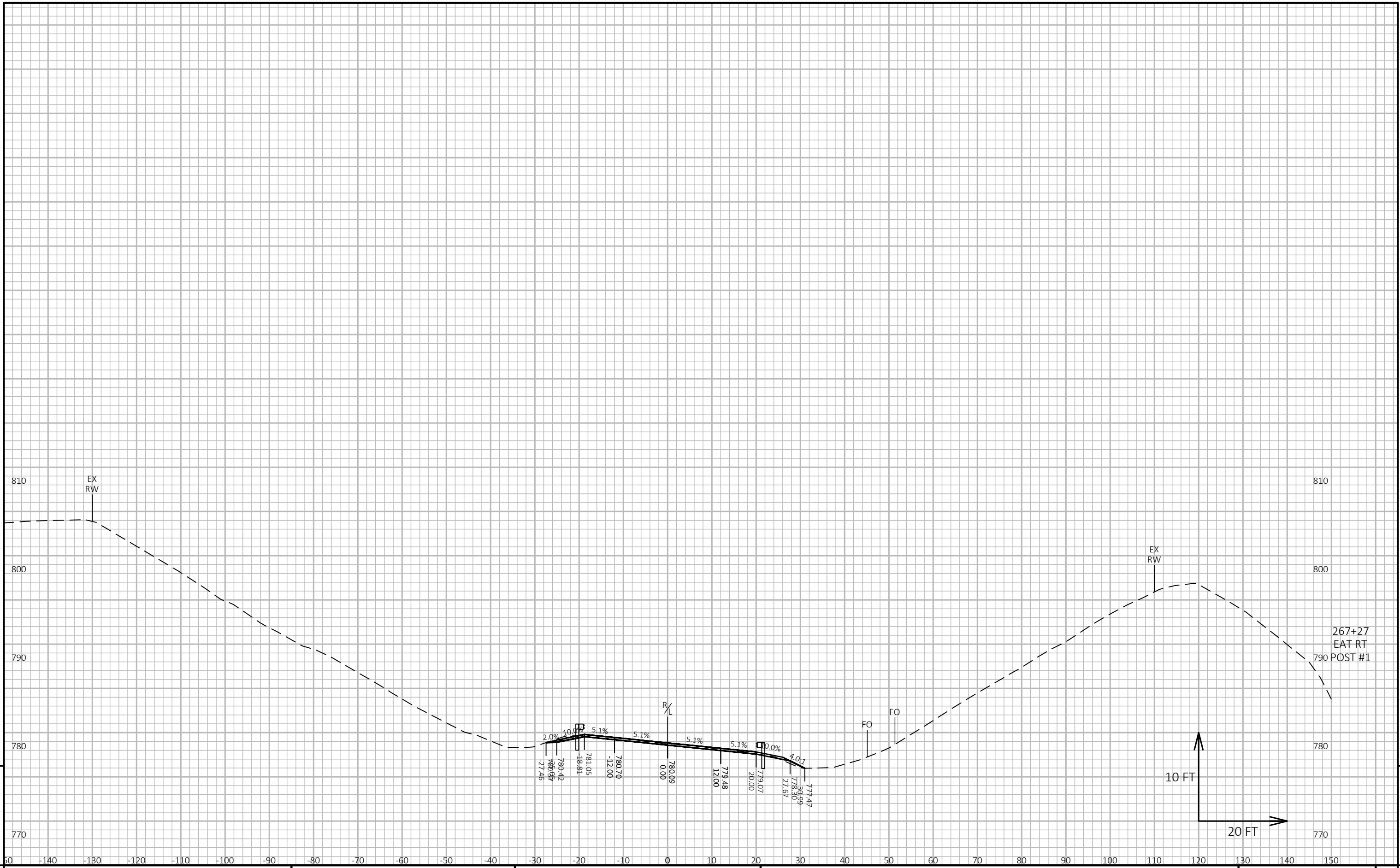


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PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E

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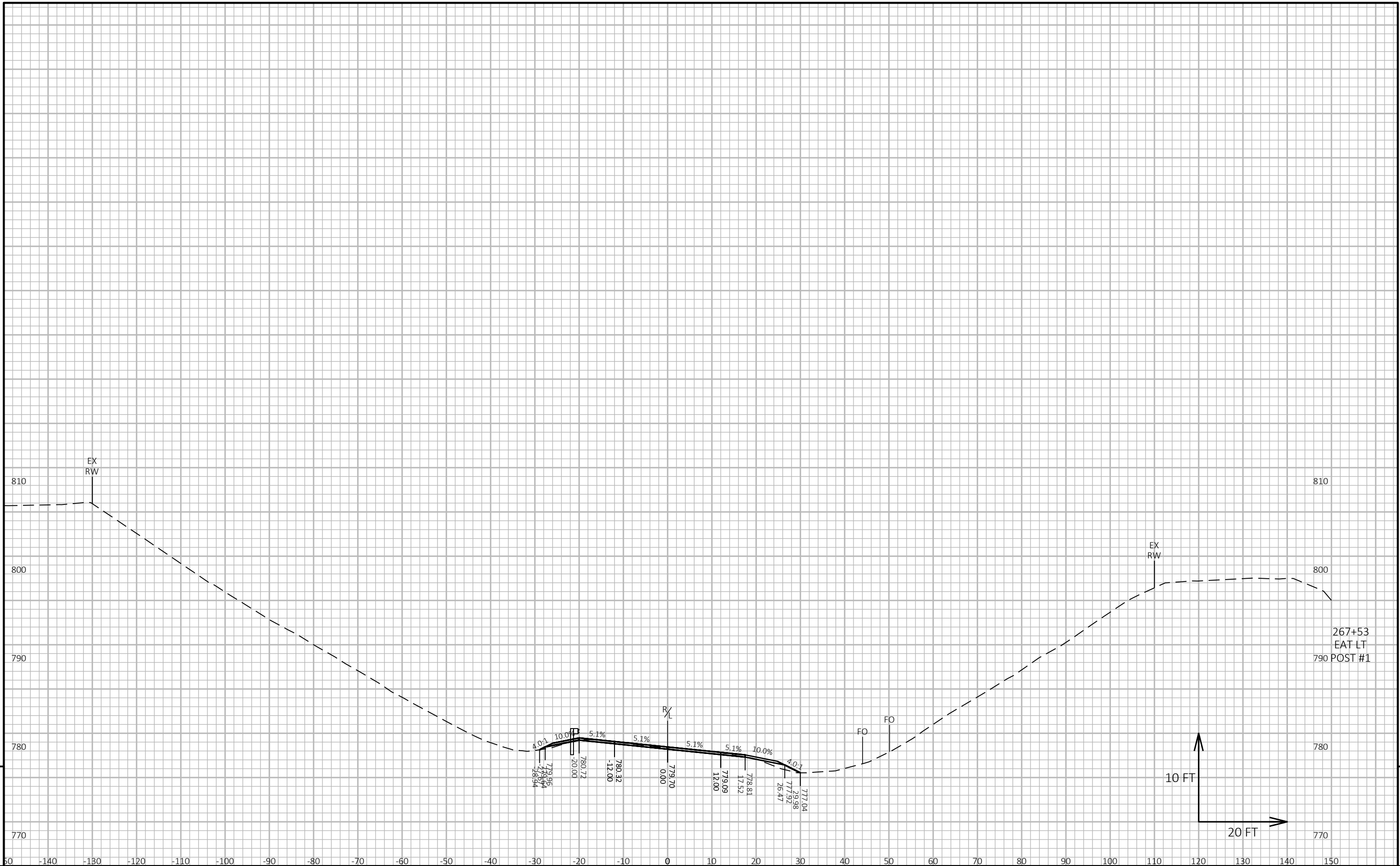
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PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E

FILE NAME : O:\PDS\C3D\15300503\SHEETSPLAN\090202-XS-BAUERLN-TO-CTHX.DWG PLOT DATE : 7/24/2023 9:33 AM PLOT BY : CORY IHDE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

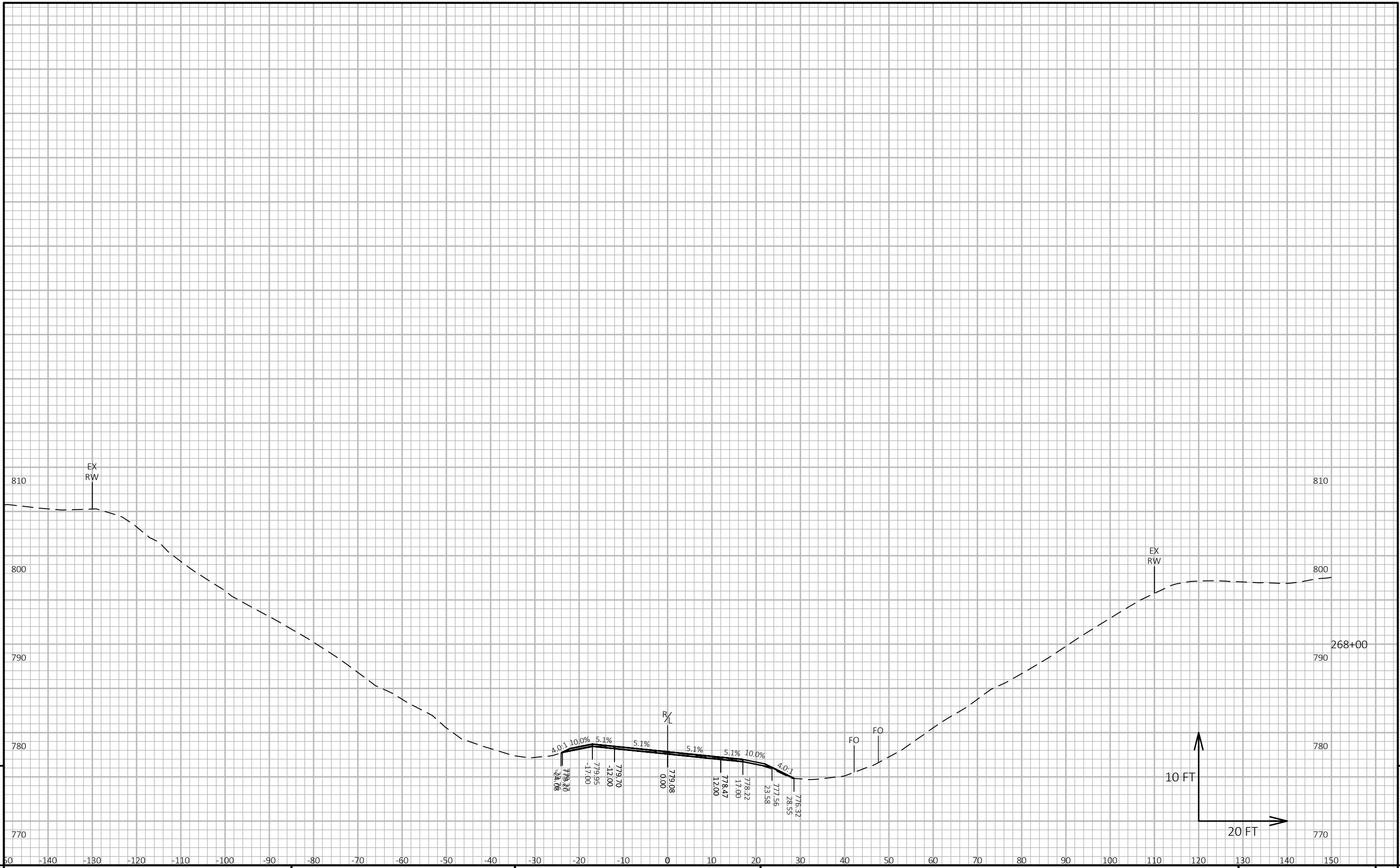
LAYOUT NAME - 50



PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET 9

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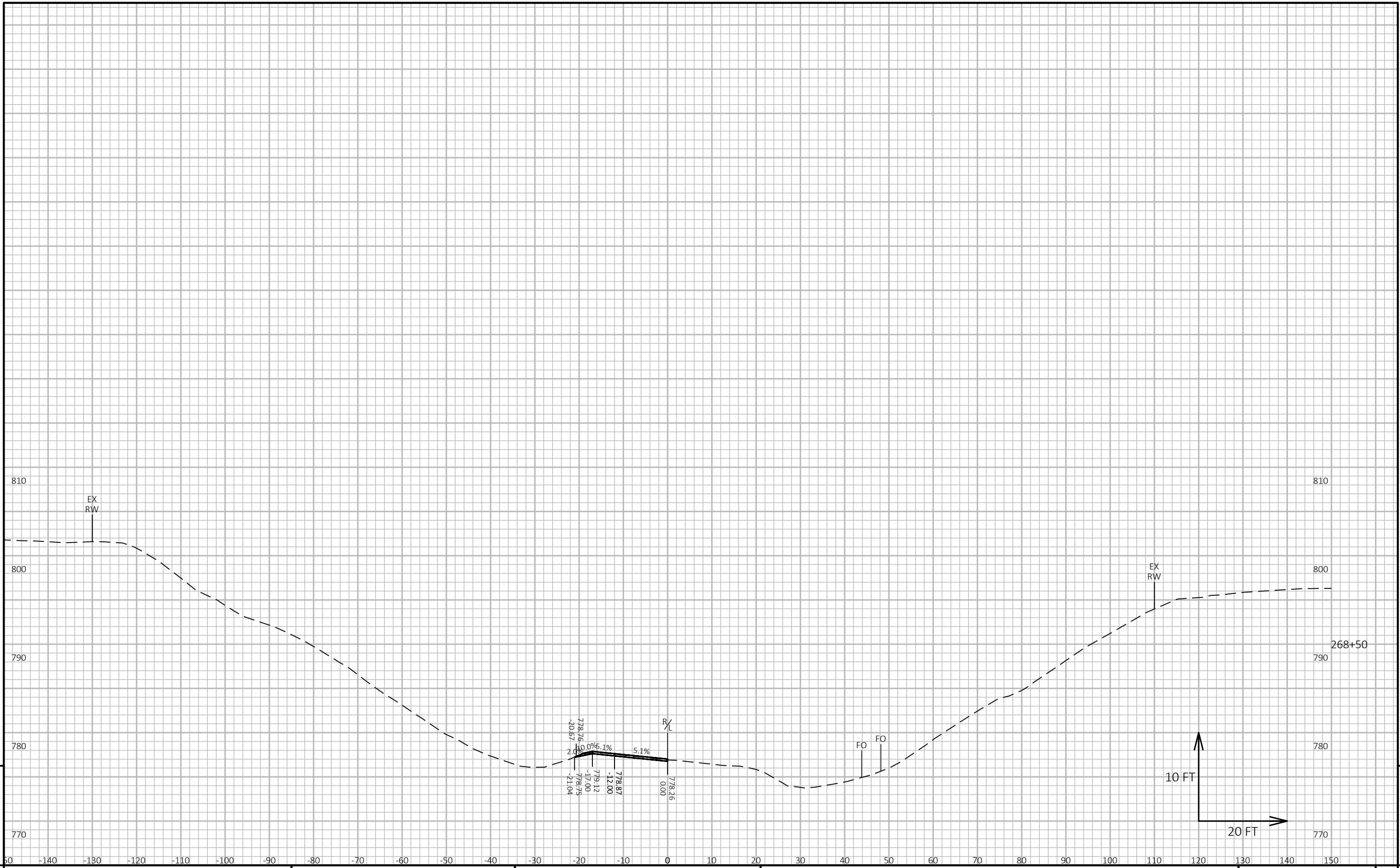
LAYOUT NAME - 51



PROJECT NO: 1530-05-73	HWY: USH 10	COUNTY: PEPIN	CROSS SECTIONS: USH 10	SHEET
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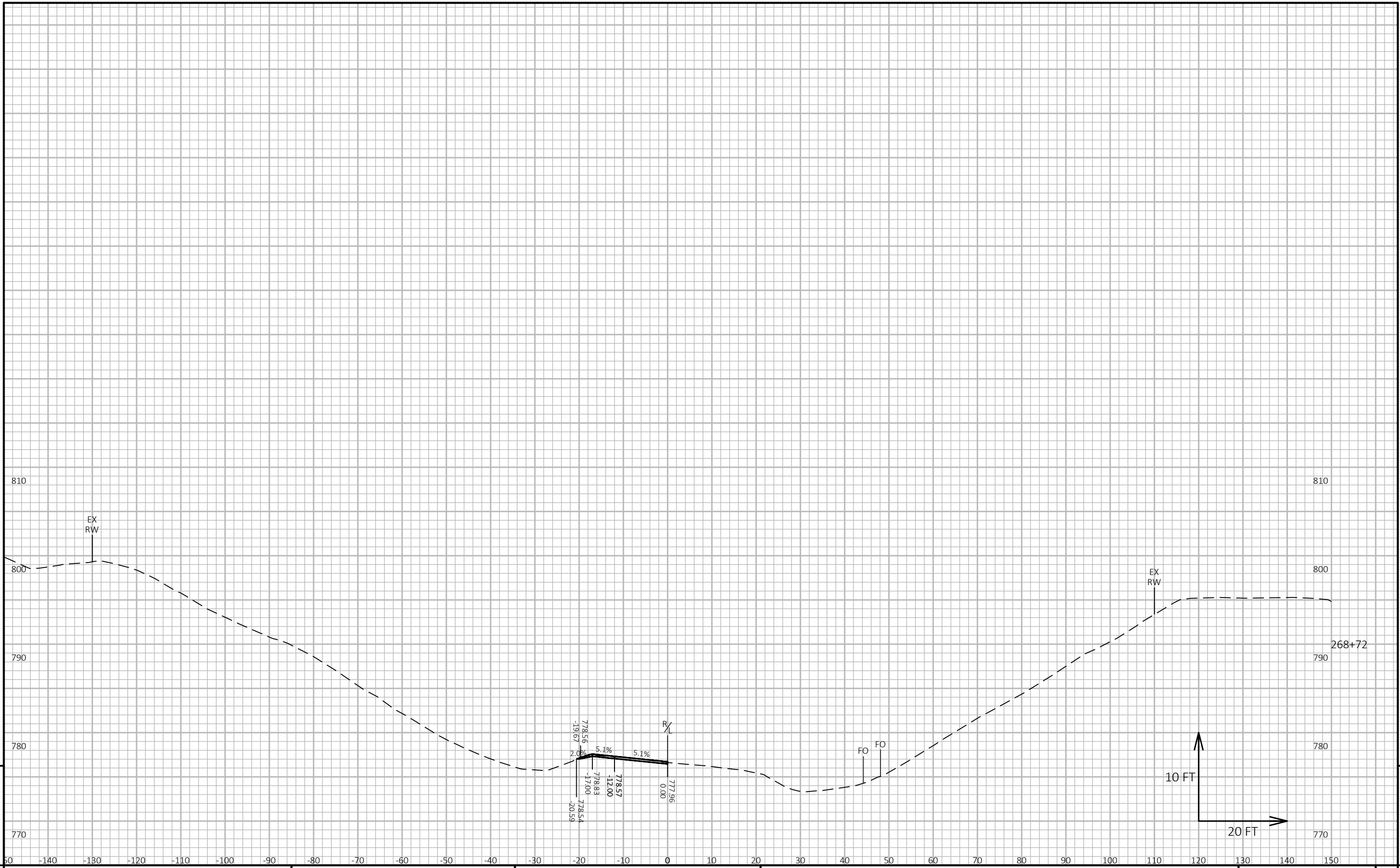
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PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E

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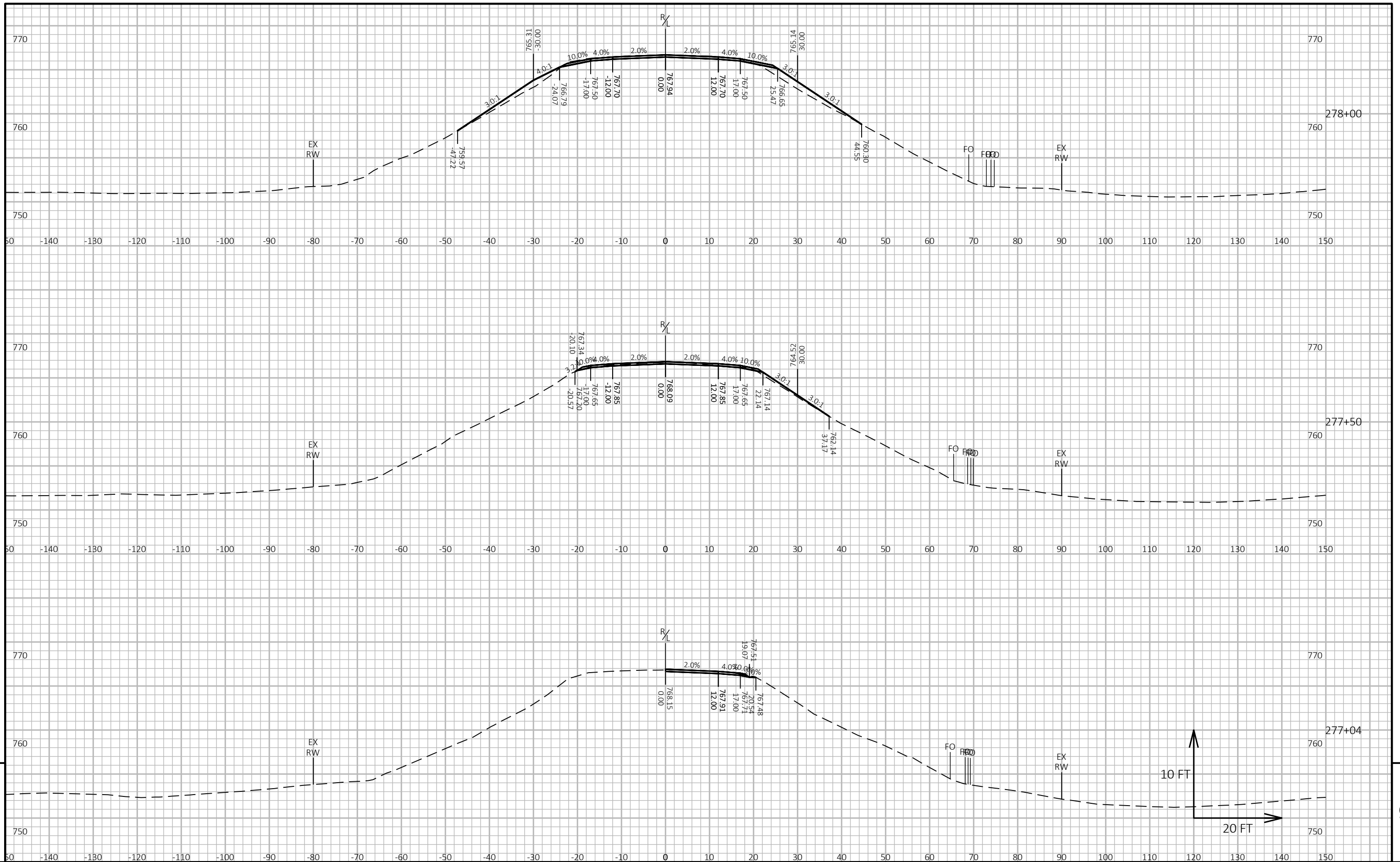
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PROJECT NO: 1530-05-73	HWY: USH 10	COUNTY: PEPIN	CROSS SECTIONS: USH 10	SHEET	E
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FILE NAME : O:\PDS\C3D\15300503\SHEETSPLAN\090202-XS-BAUERLN-TO-CTHX.DWG PLOT DATE : 7/24/2023 9:36 AM PLOT BY : CORY IHDE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 54



PROJECT NO: 1530-05-73

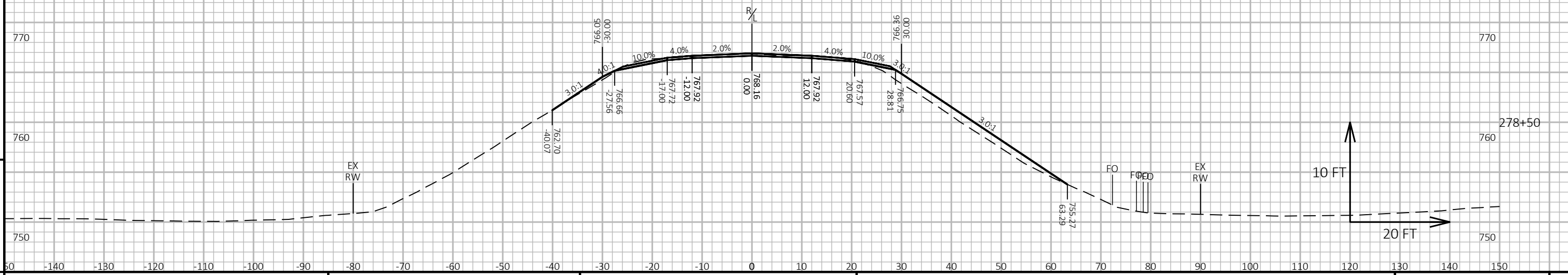
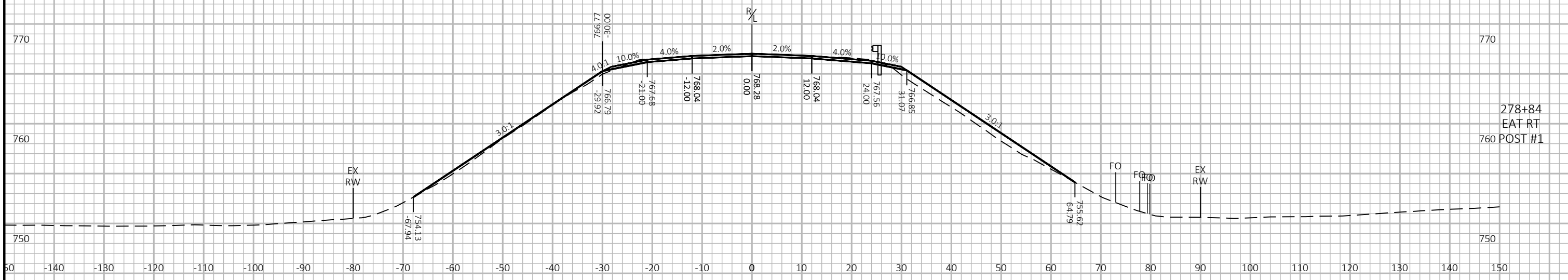
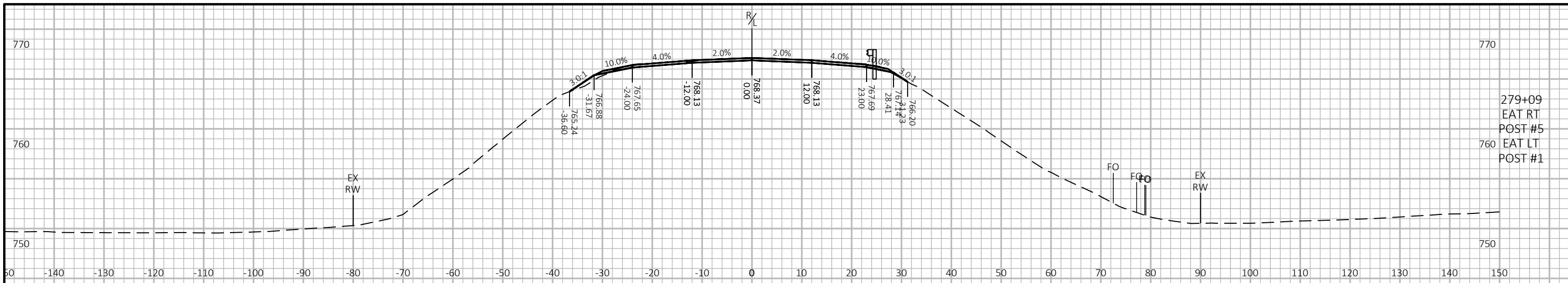
HWY: USH 10

COUNTY: PEPIN

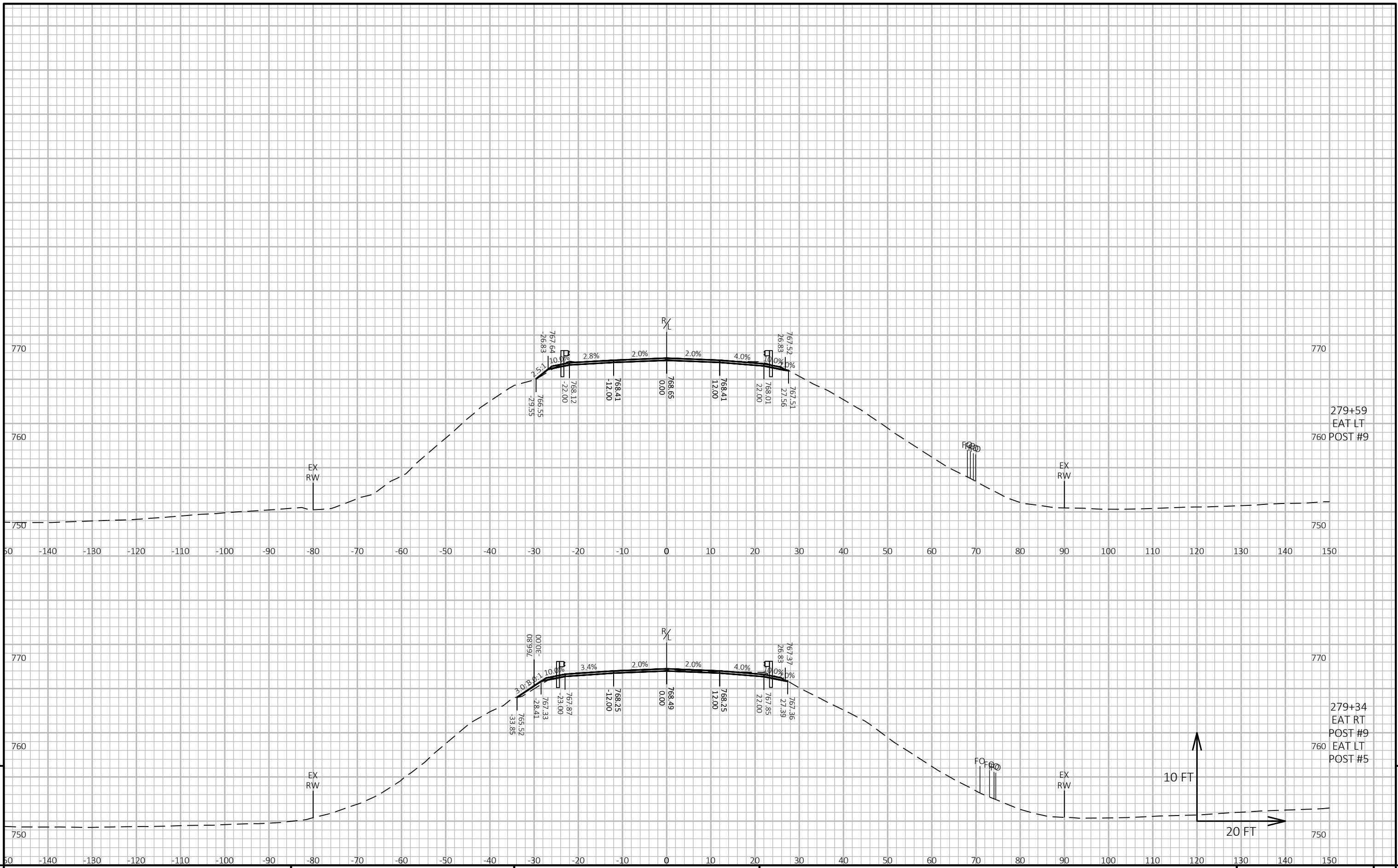
CROSS SECTIONS: USH 10

SHEET

E



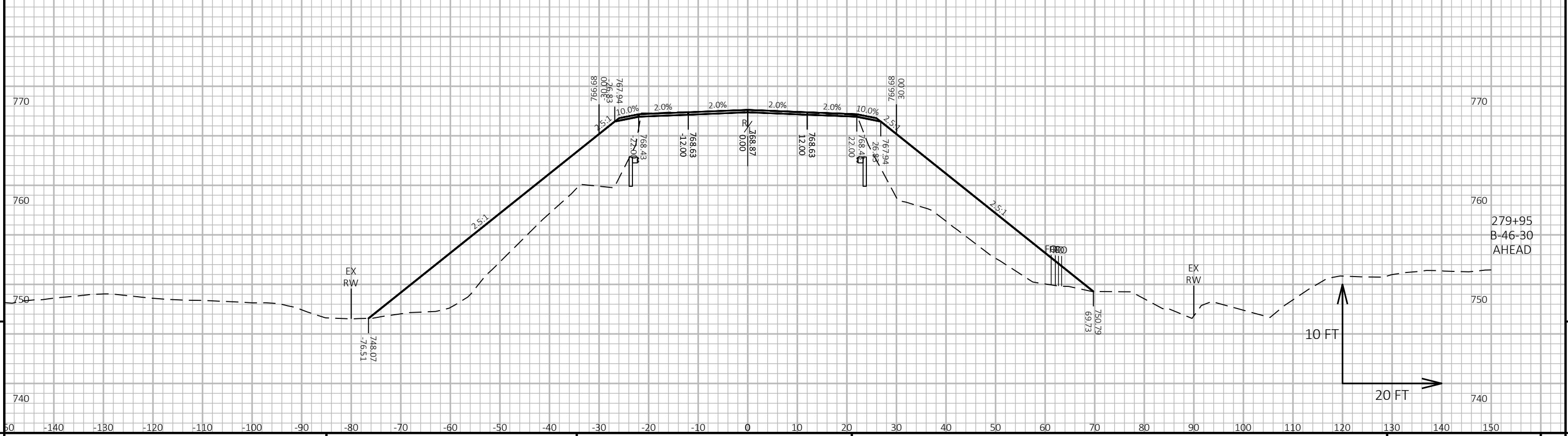
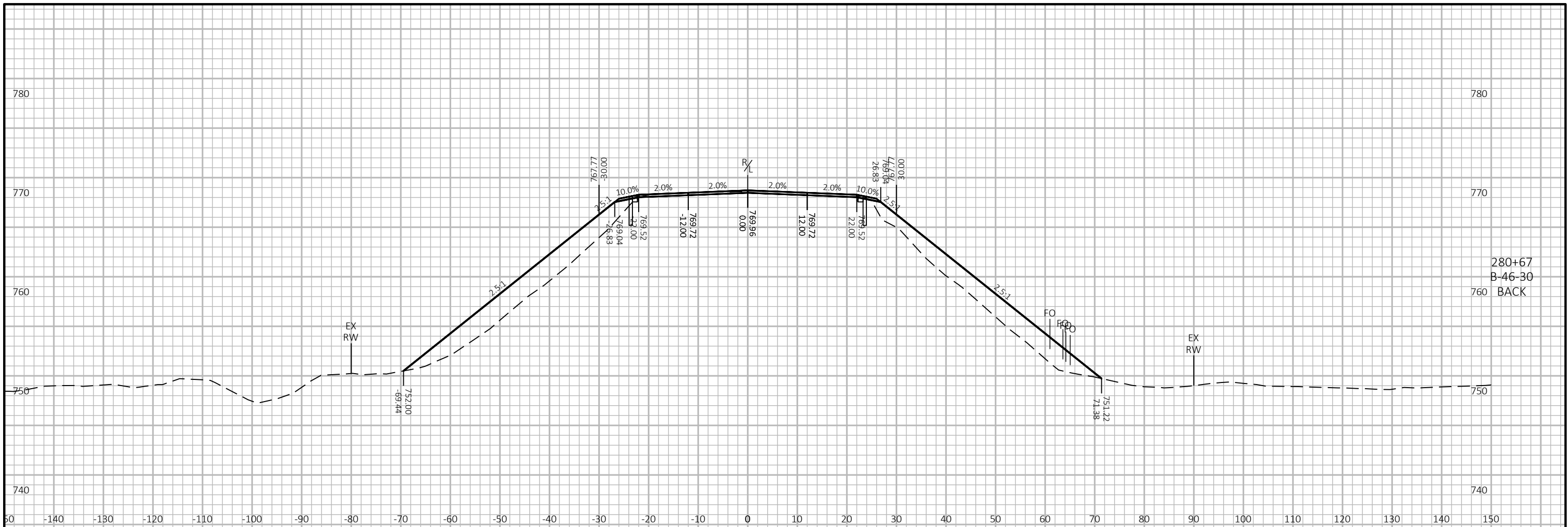
PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E



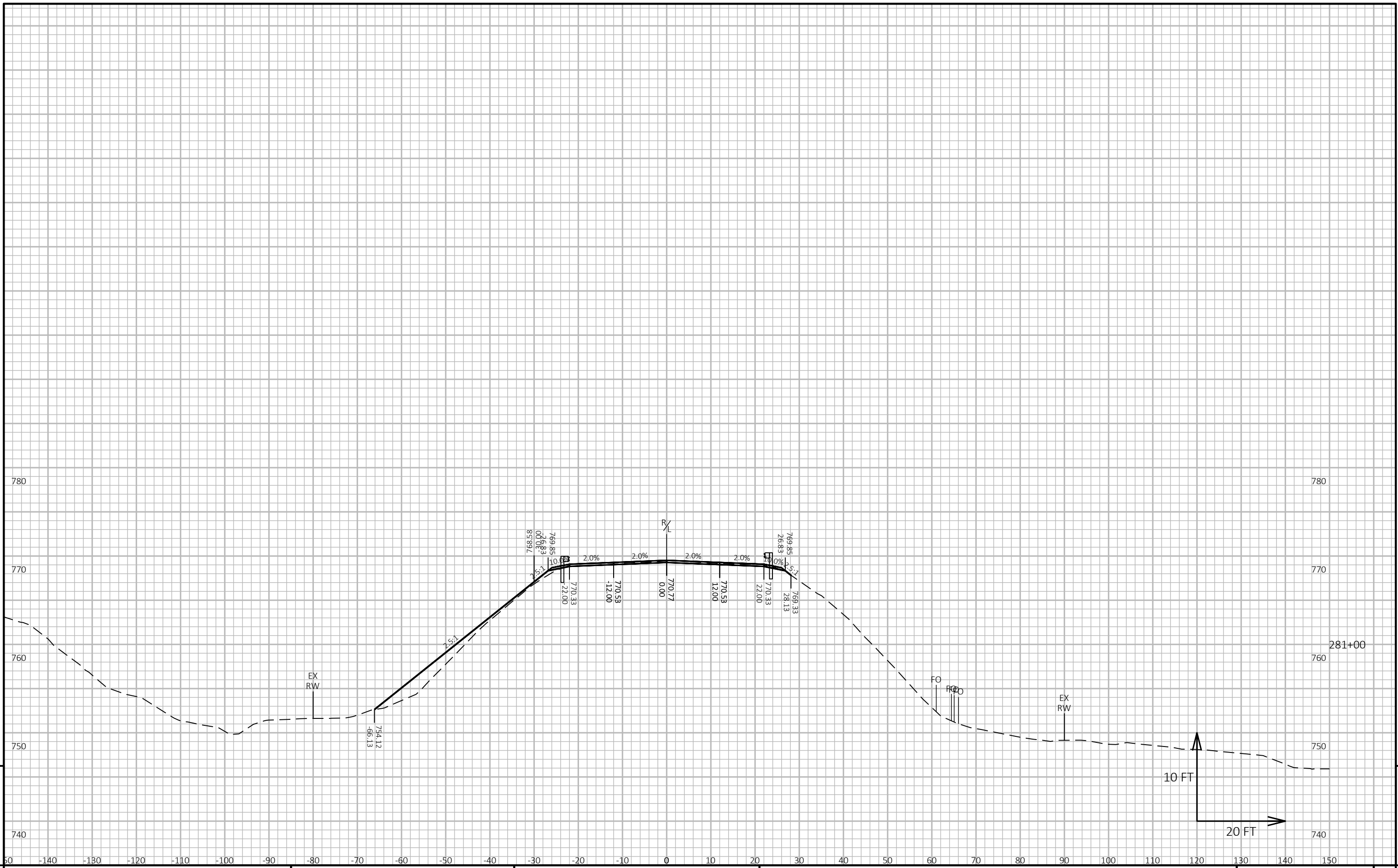
PROJECT NO: 1530-05-73	HWY: USH 10	COUNTY: PEPIN	CROSS SECTIONS: USH 10
SHEET			E

9

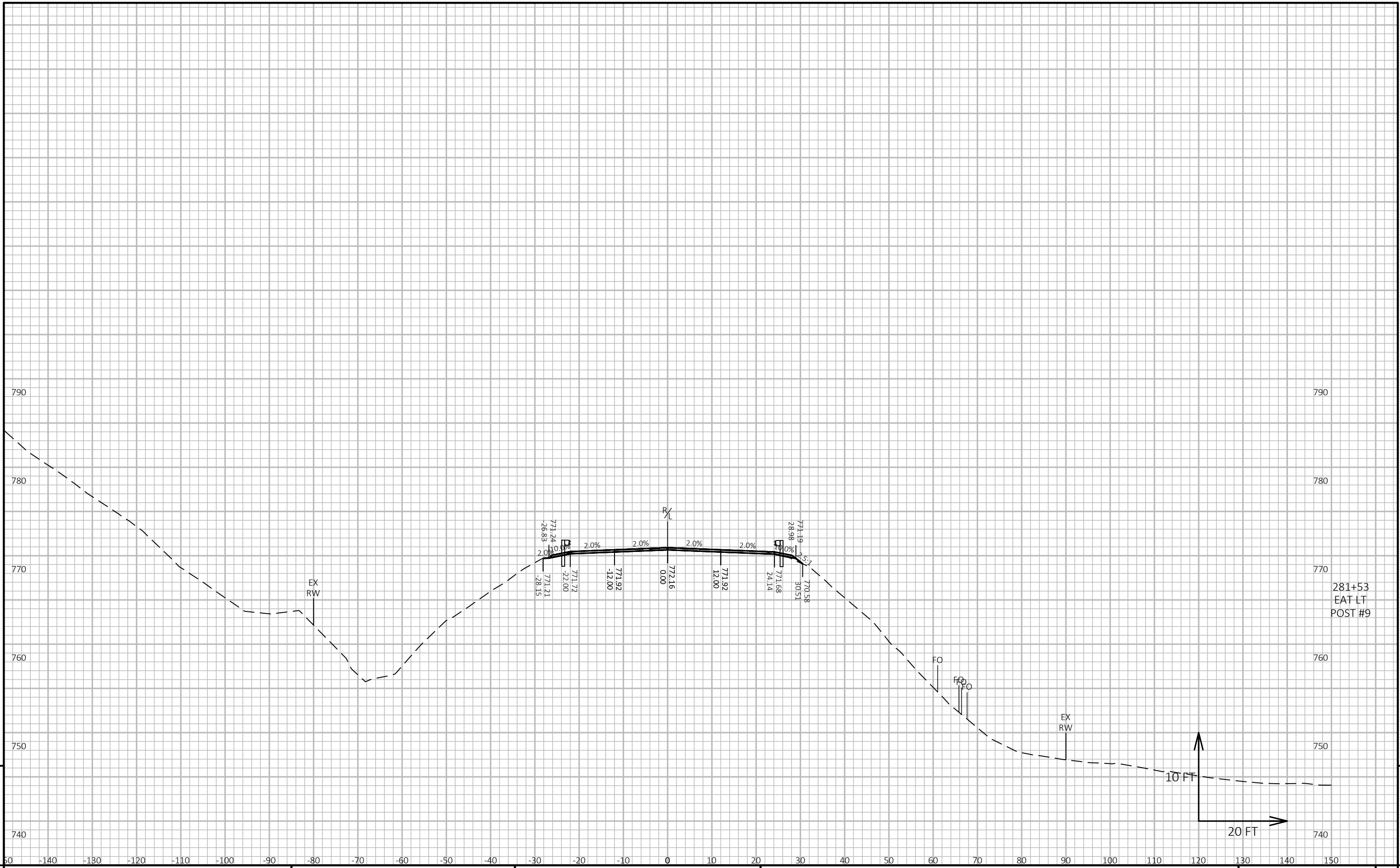
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PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E



PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E



PROJECT NO: 1530-05-73

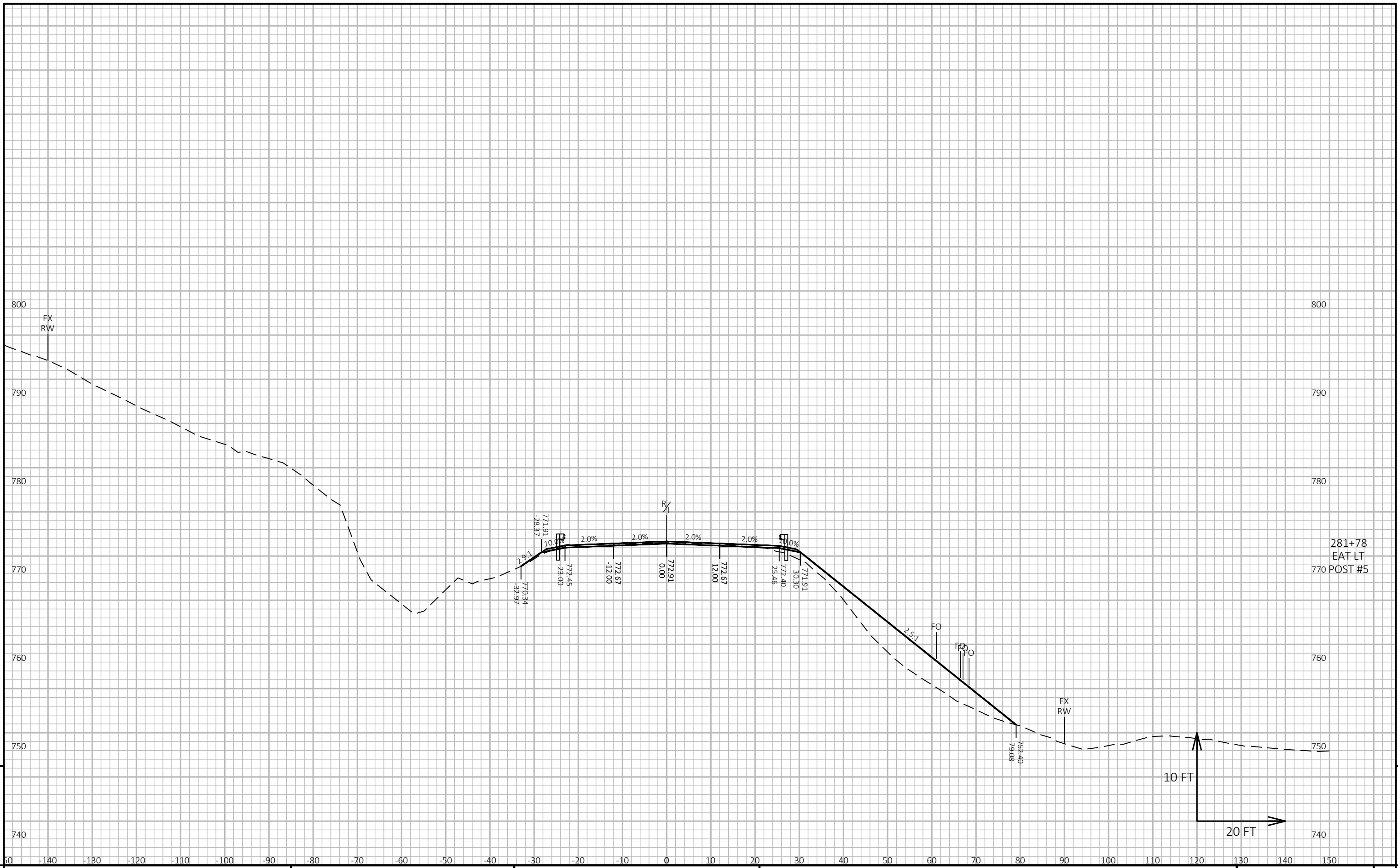
HWY: USH 10

COUNTY: PEPIN

CROSS SECTIONS: USH 10

SHEET

E



281+78
EAT LT
770 POST #5

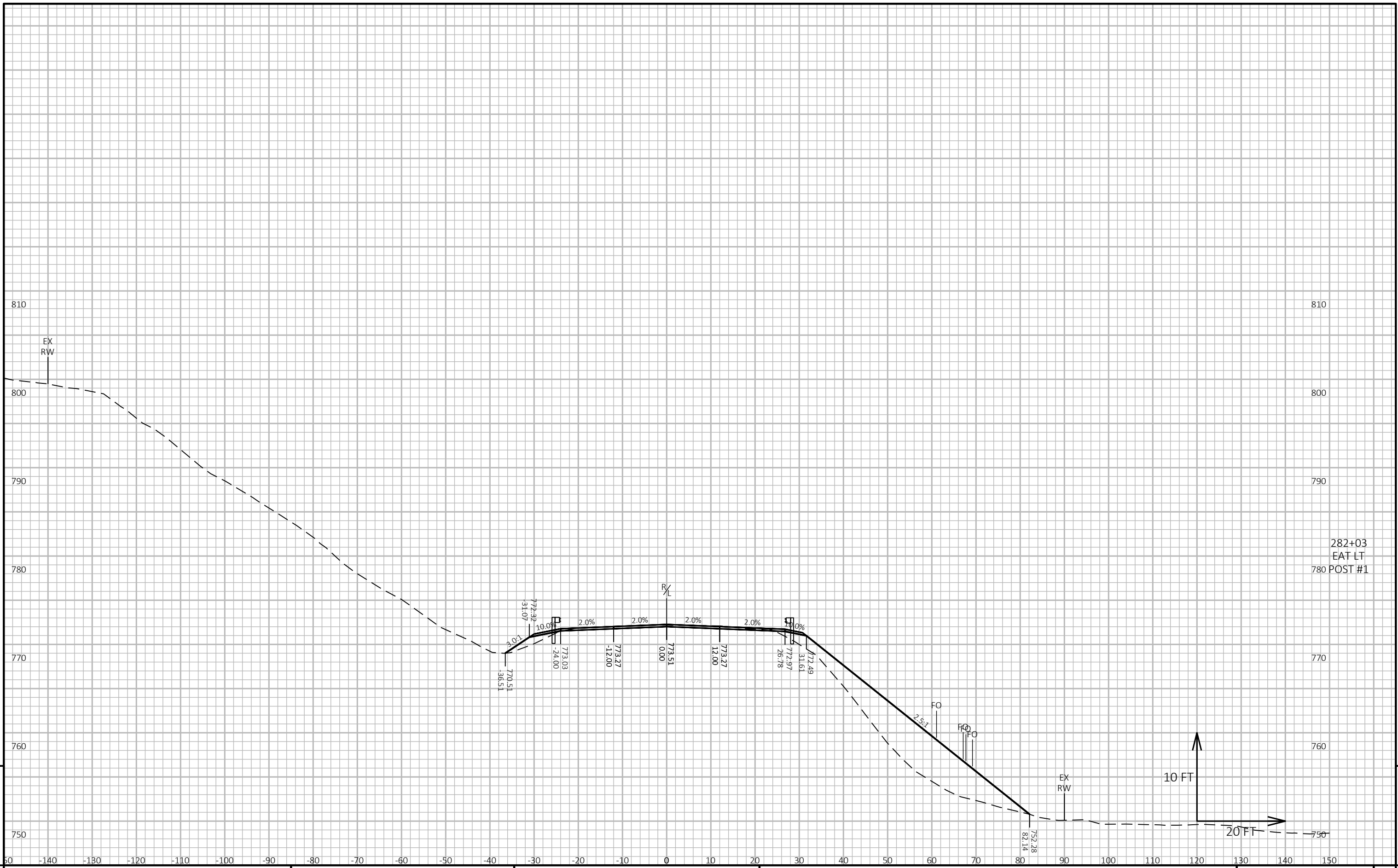
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PROJECT NO: 1530-05-73	HWY: USH 10	COUNTY: PEPIN	CROSS SECTIONS: USH 10	SHEET	E
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FILE NAME : O:\PDS\C3D\15300503\SHEETSPLAN\090203-XS-CTHX-TO-STH23.DWG PLOT DATE : 7/24/2023 9:42 AM PLOT BY : CORY IHDE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 7



282+03
EAT LT
780 POST #1

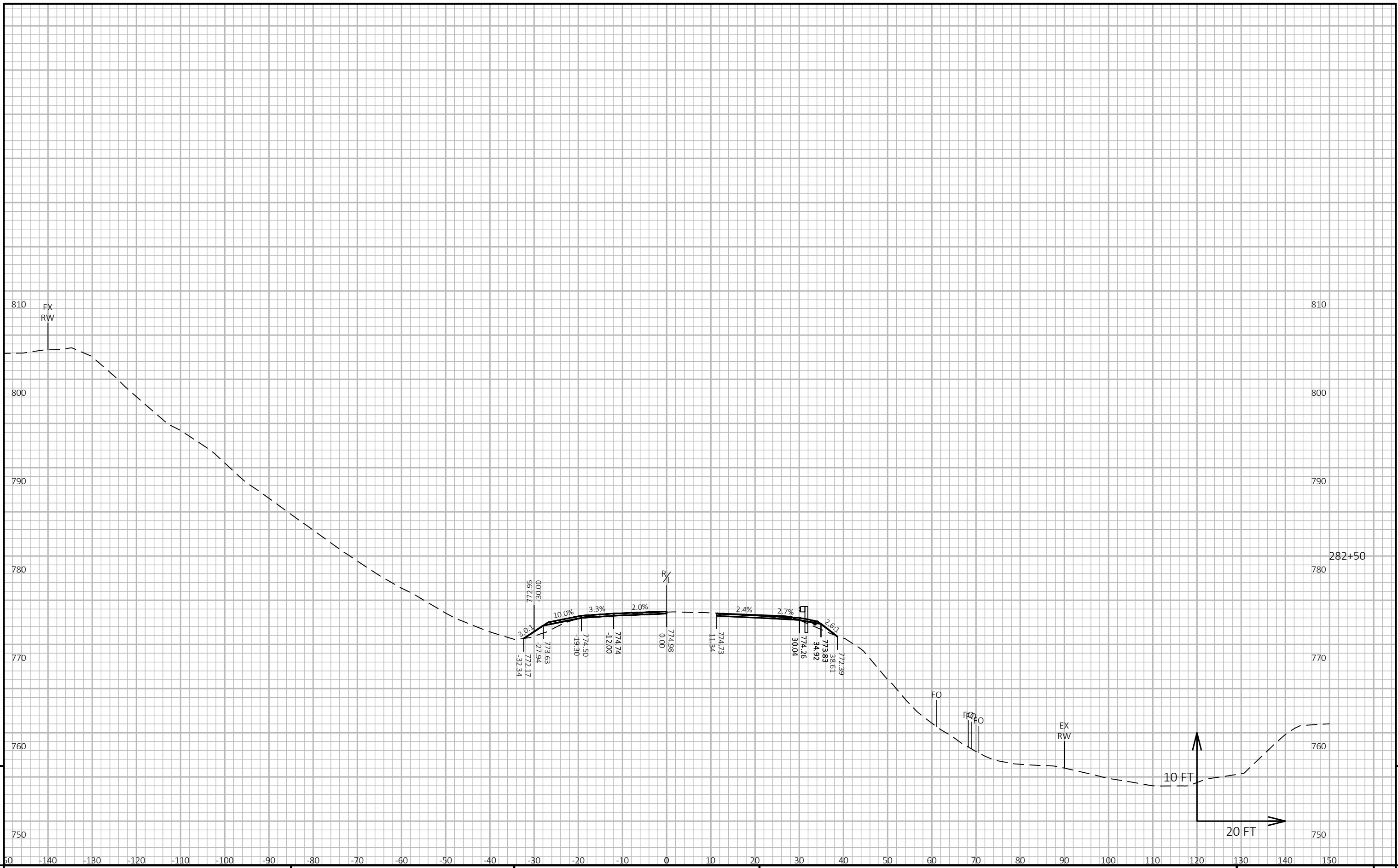
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PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET

FILE NAME: O:\PDS\C3D\15300503\SHEETSPLAN\090203-XS-CTHX-TO-STH23.DWG PLOT DATE: 7/24/2023 9:43 AM PLOT BY: CORY IHDE PLOT NAME: PLOT SCALE: 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 8



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PROJECT NO: 1530-05-73	HWY: USH 10	COUNTY: PEPIN	CROSS SECTIONS: USH 10	SHEET	E
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FILE NAME : O:\PDS\C3D\15300503\SHEETSPLAN\090203-XS-CTHX-TO-STH23.DWG PLOT DATE : 7/24/2023 9:44 AM PLOT BY : CORY IHDE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 9



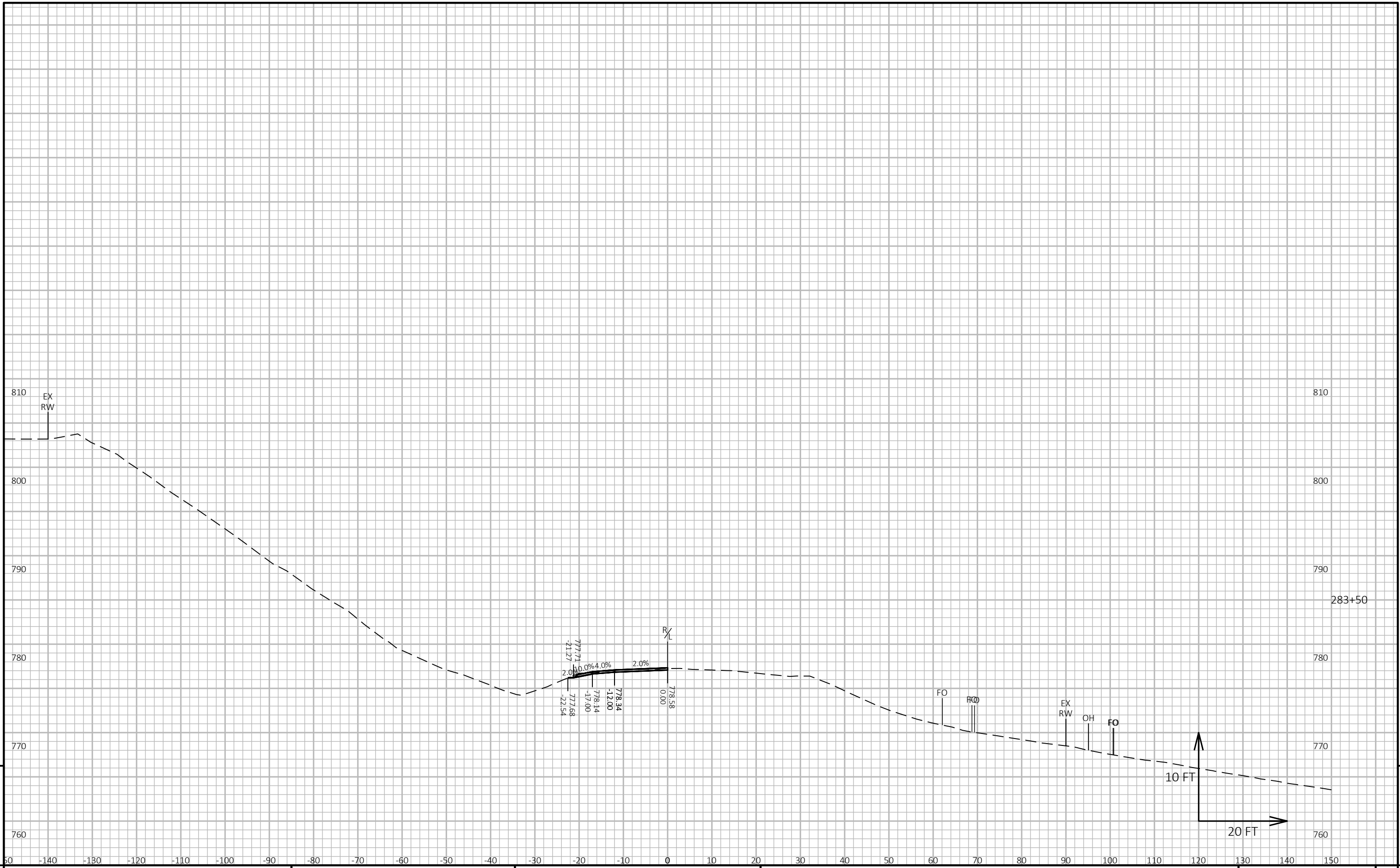
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PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E

FILE NAME: O:\PDS\C3D\15300503\SHEETSPLAN\090203-XS-CTHX-TO-STH23.DWG PLOT DATE: 7/24/2023 9:44 AM PLOT BY: CORY IHDE PLOT NAME: PLOT SCALE: 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

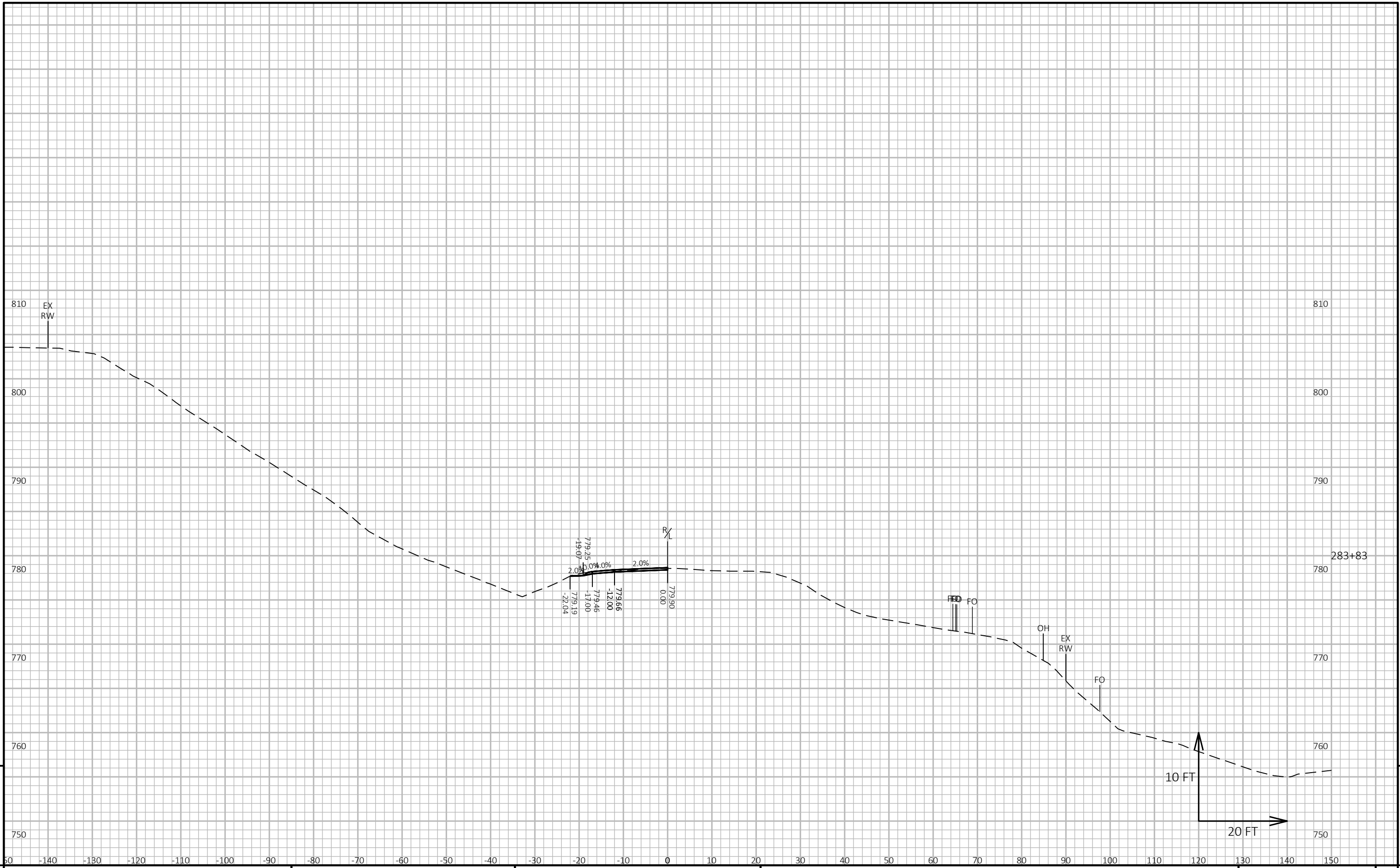
LAYOUT NAME - 10



PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E

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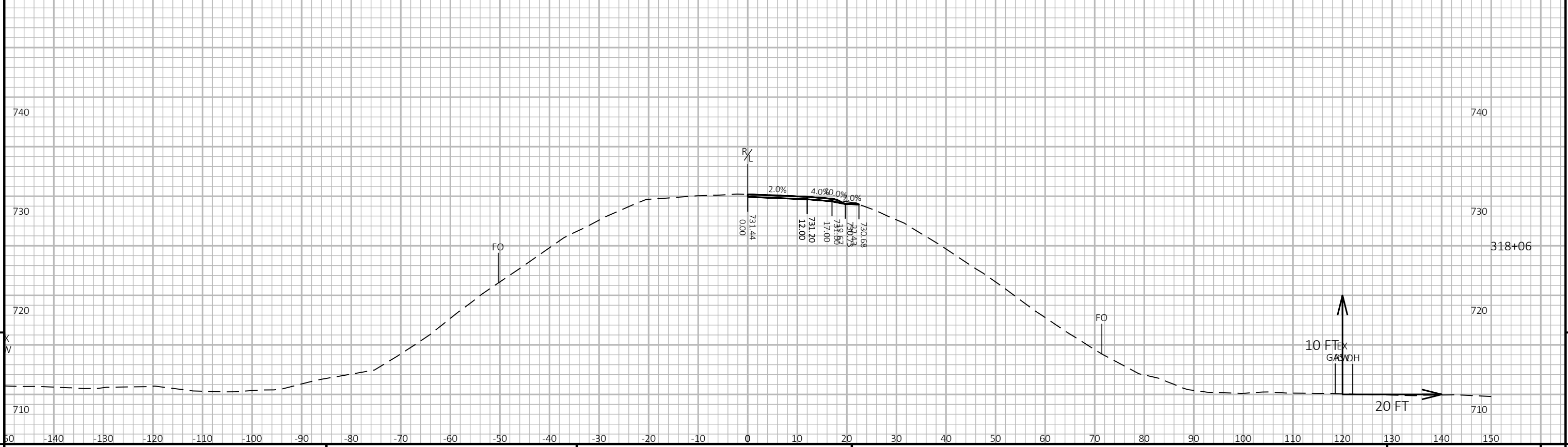
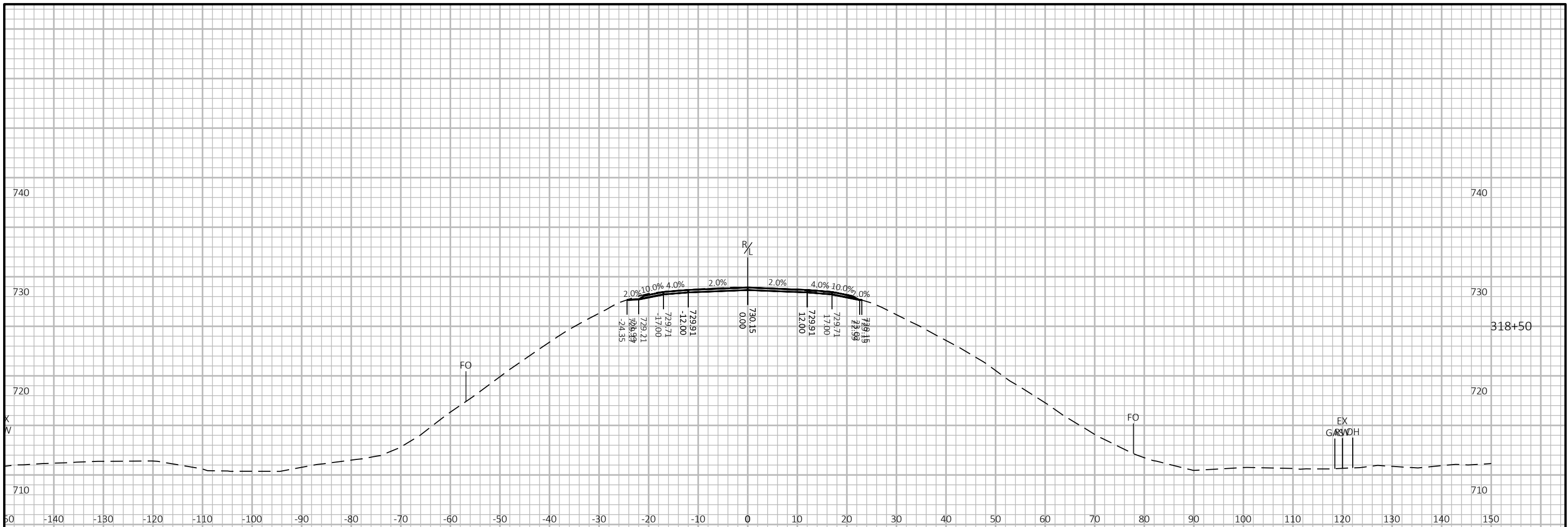
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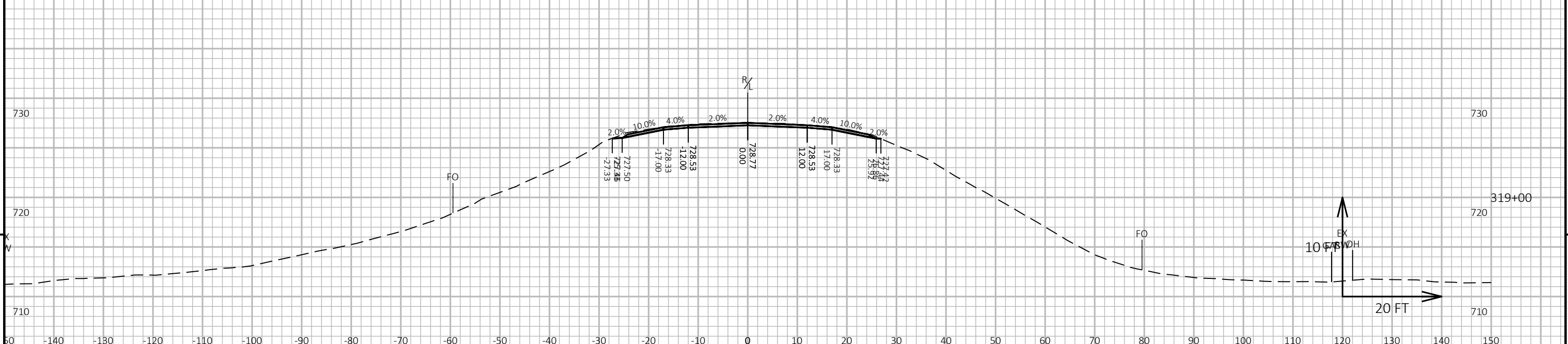
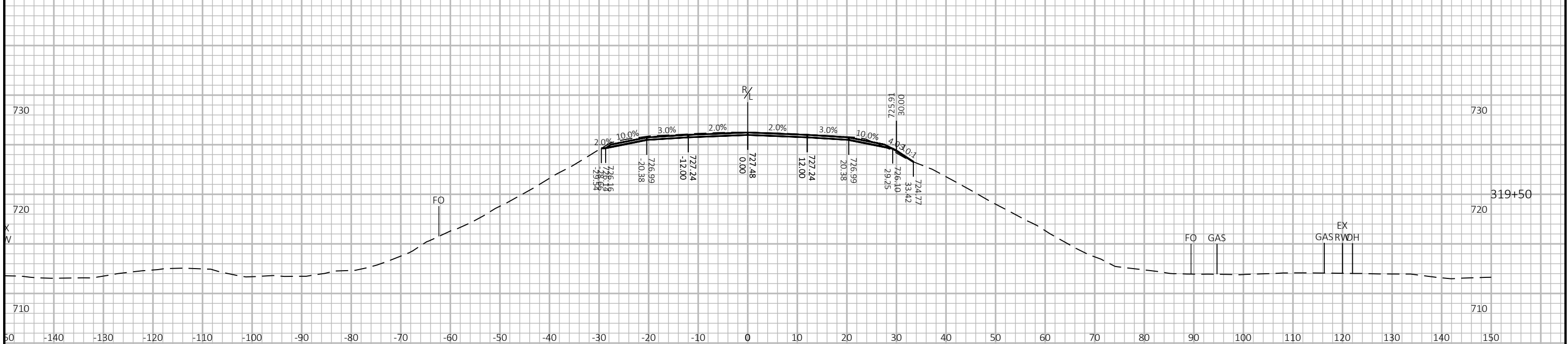
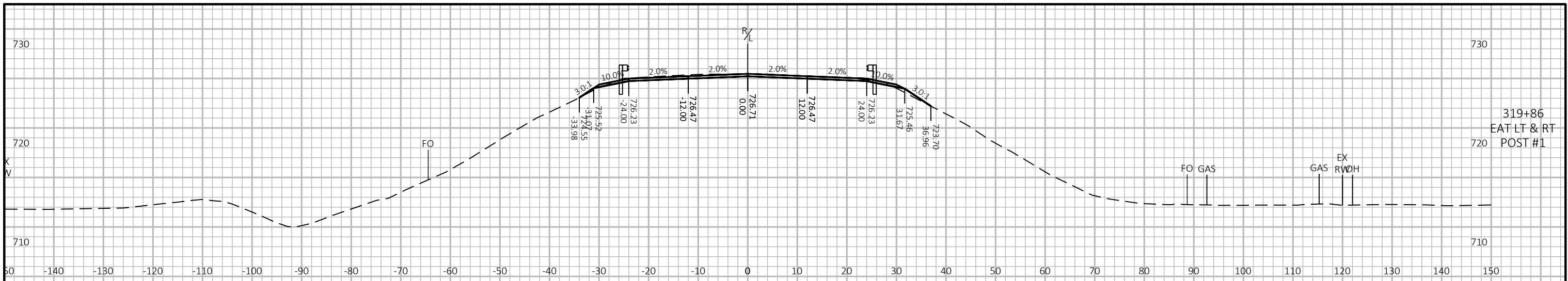
PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E

FILE NAME : O:\PDS\C3D\15300503\SHEETSPLAN\090203-XS-CTHX-TO-STH23.DWG PLOT DATE : 7/24/2023 9:46 AM PLOT BY : CORY IHDE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

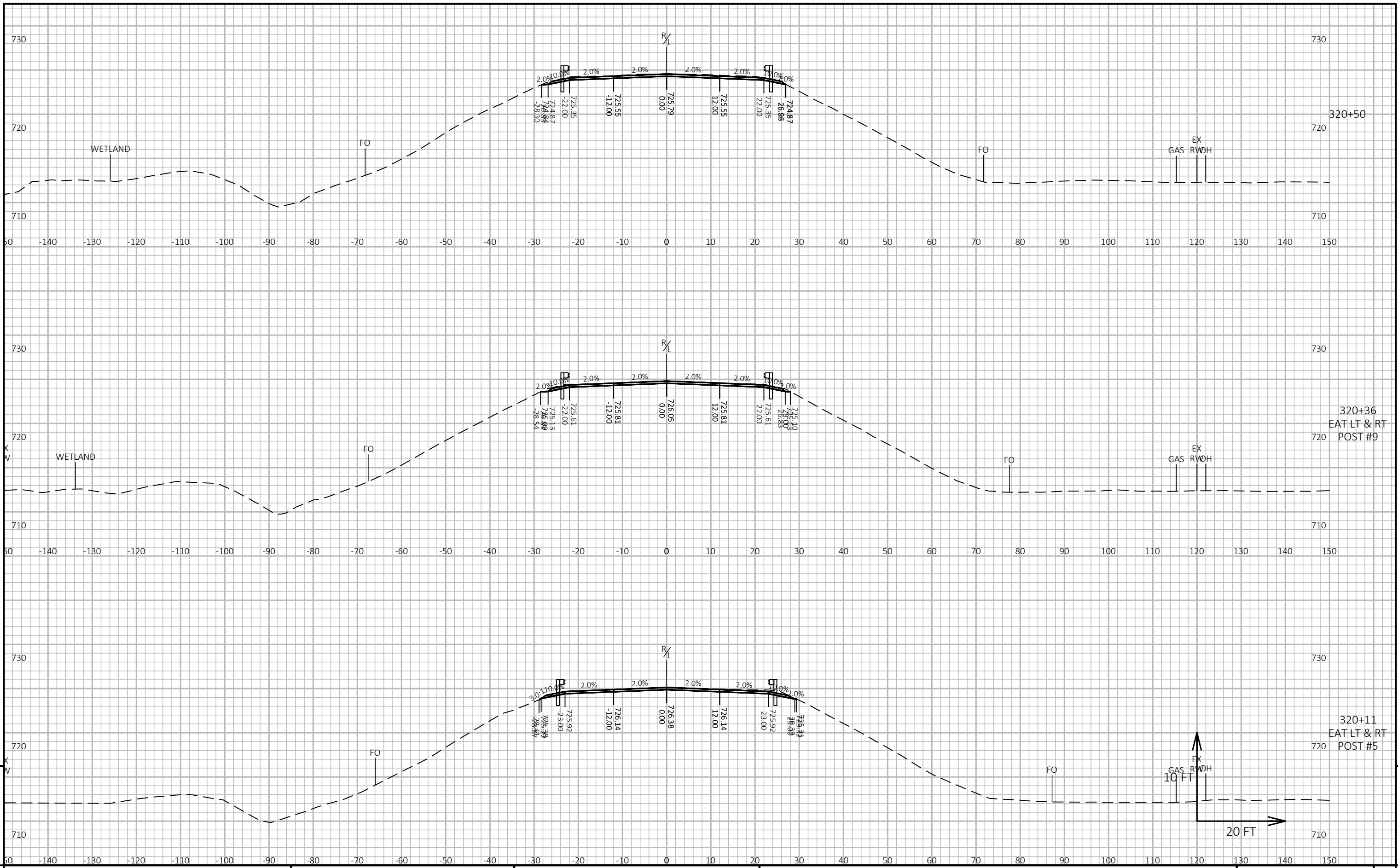
LAYOUT NAME - 12



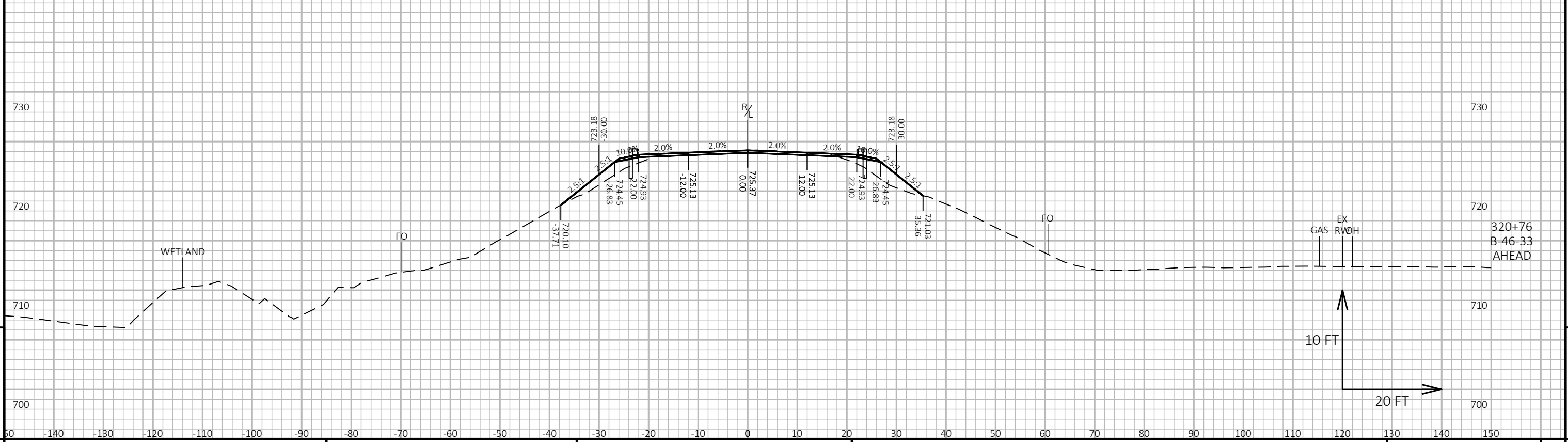
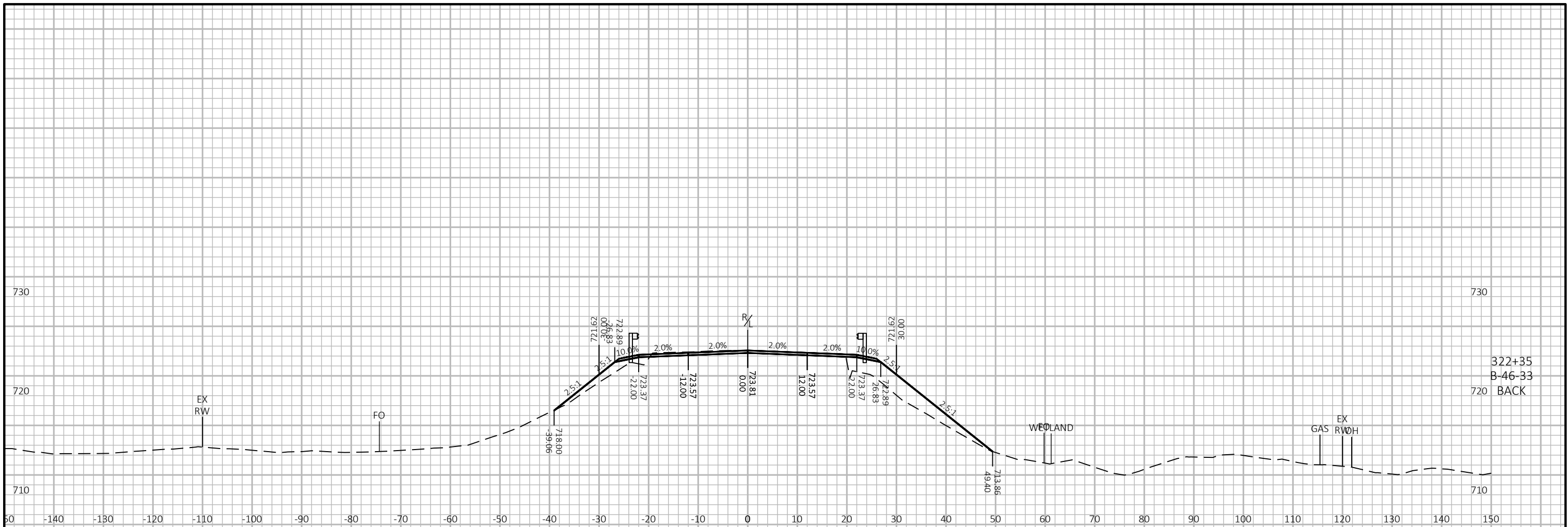
PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET



PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET 9



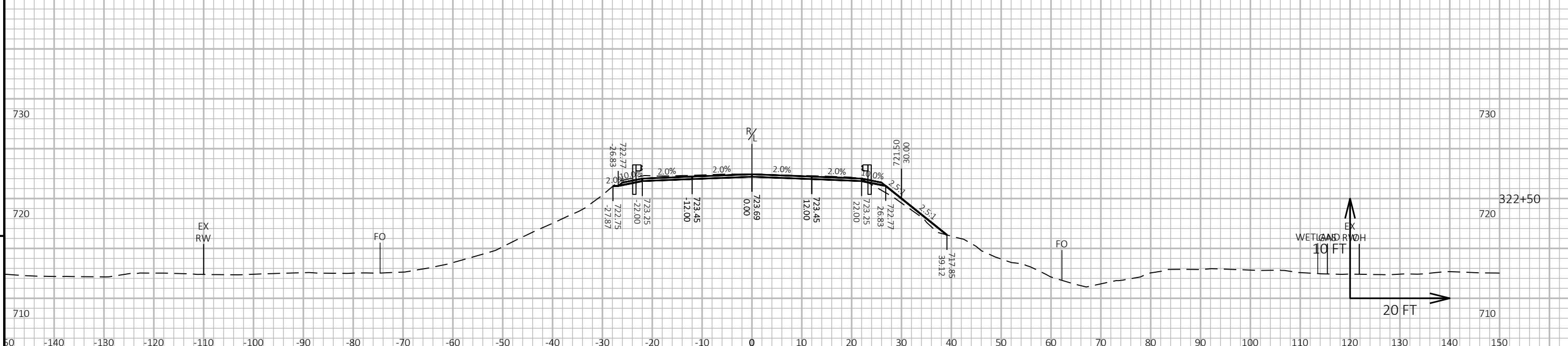
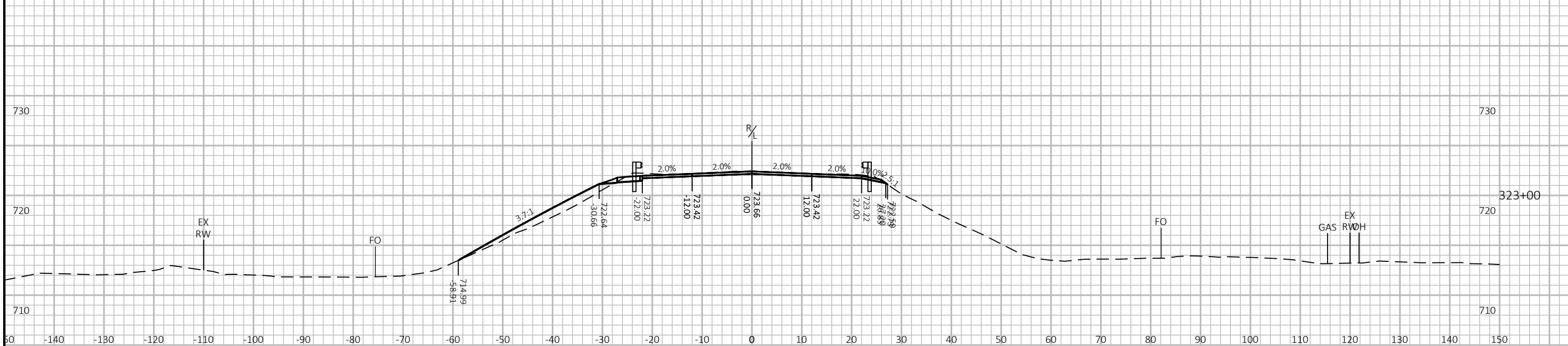
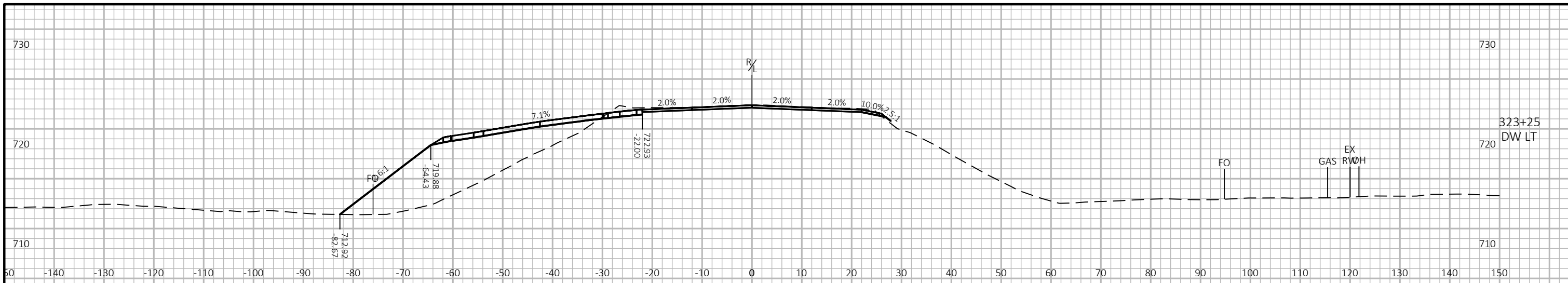
PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E



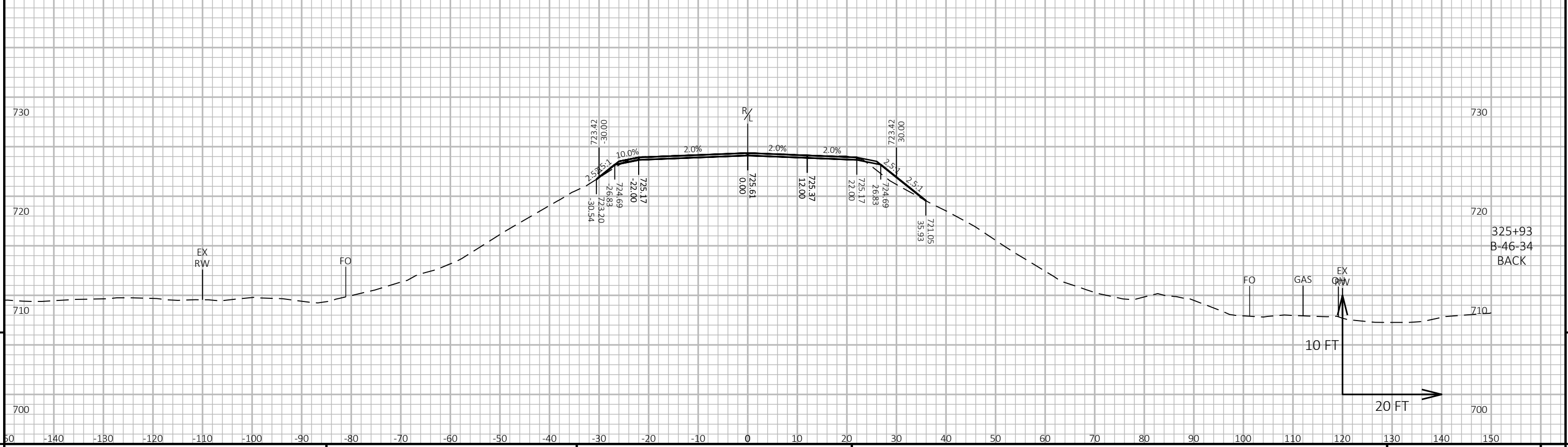
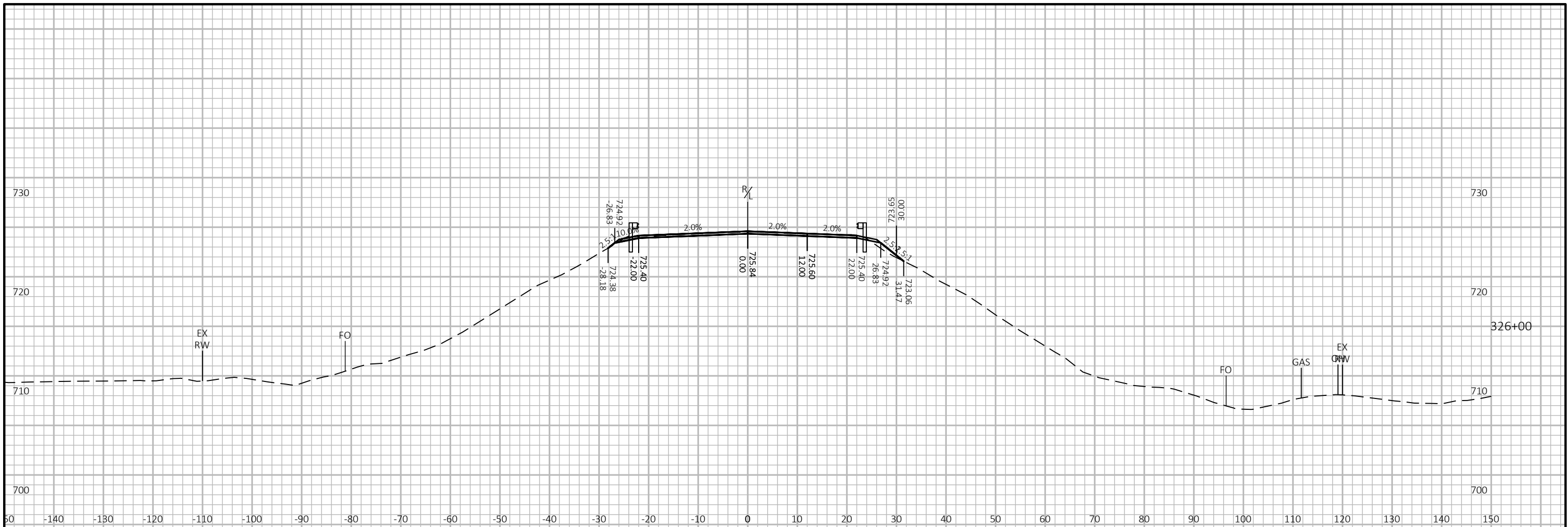
PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E

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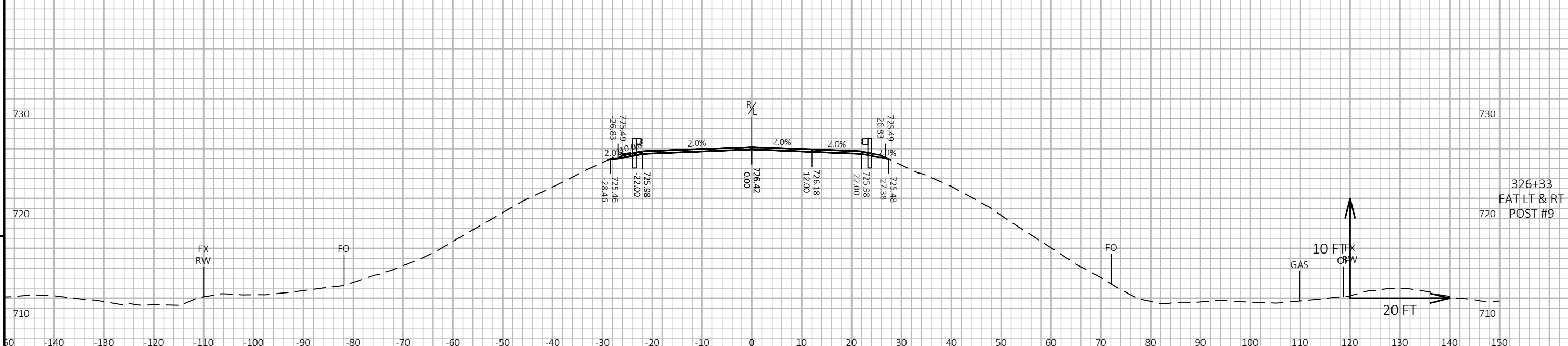
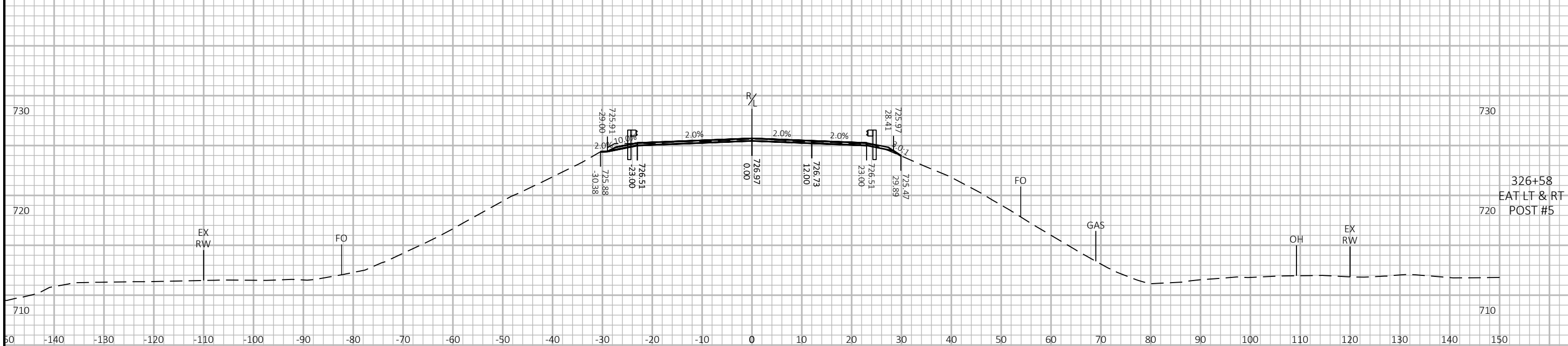
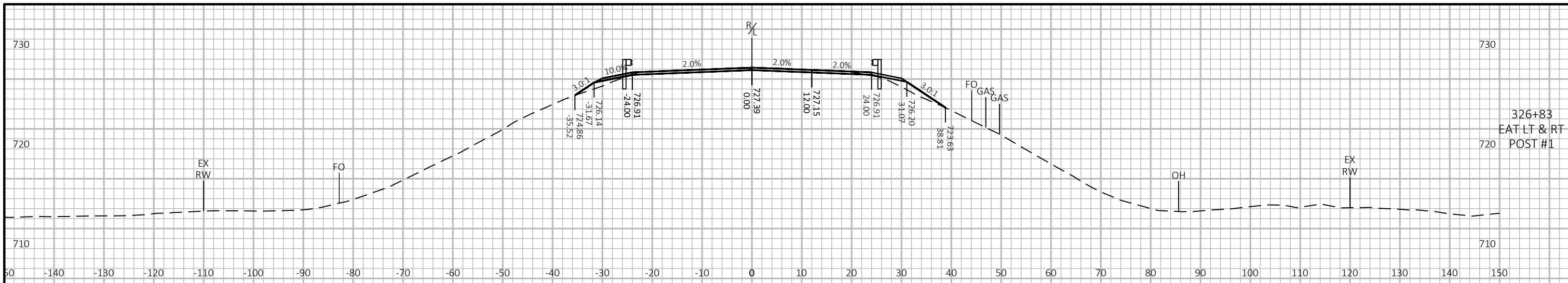
PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET 9



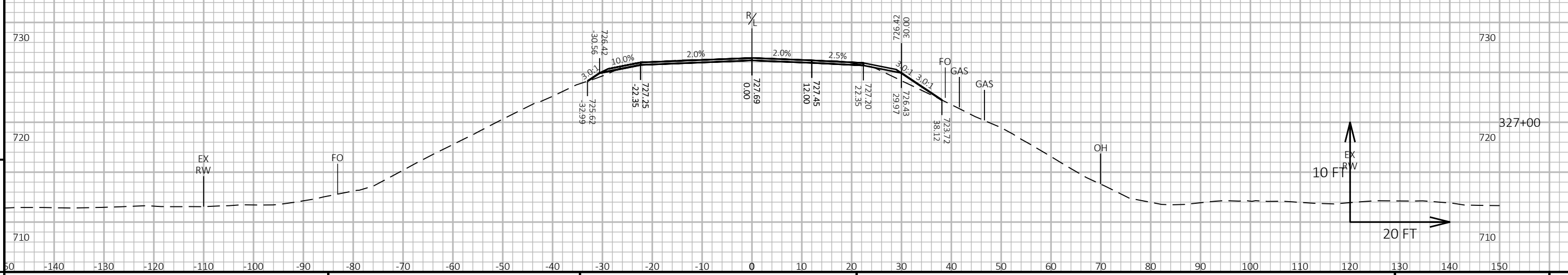
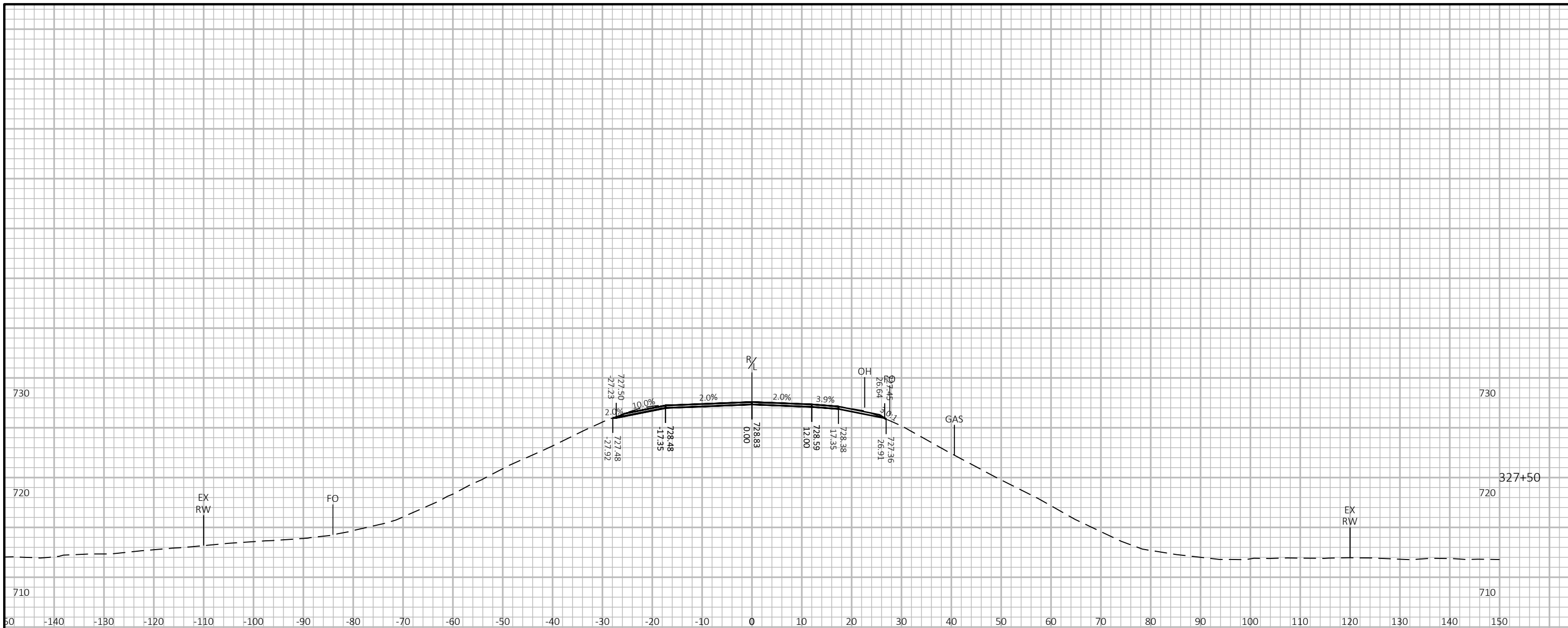
PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E

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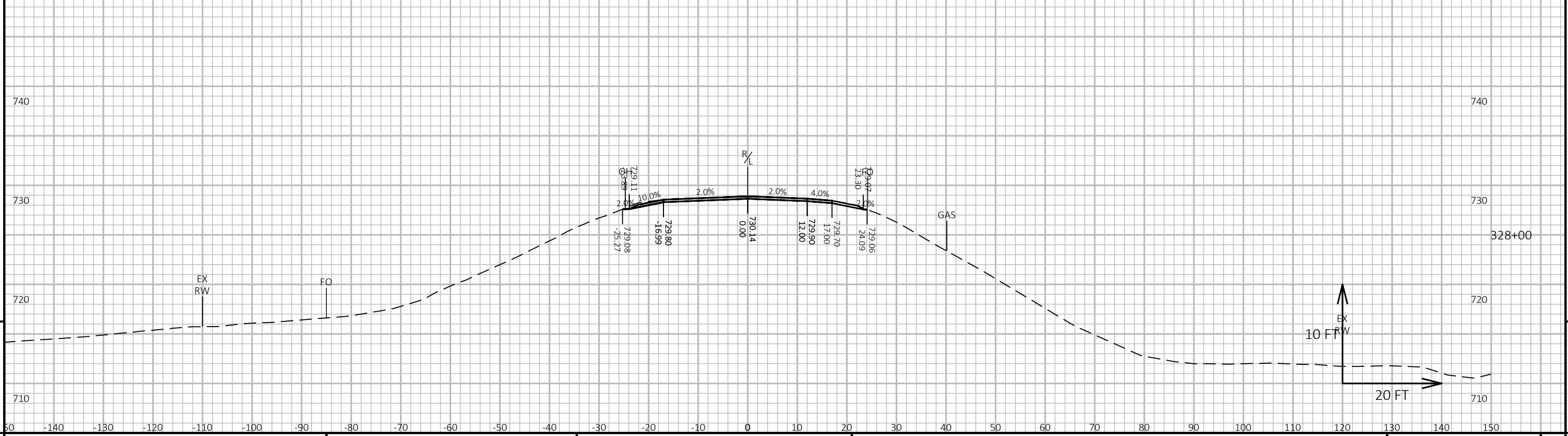
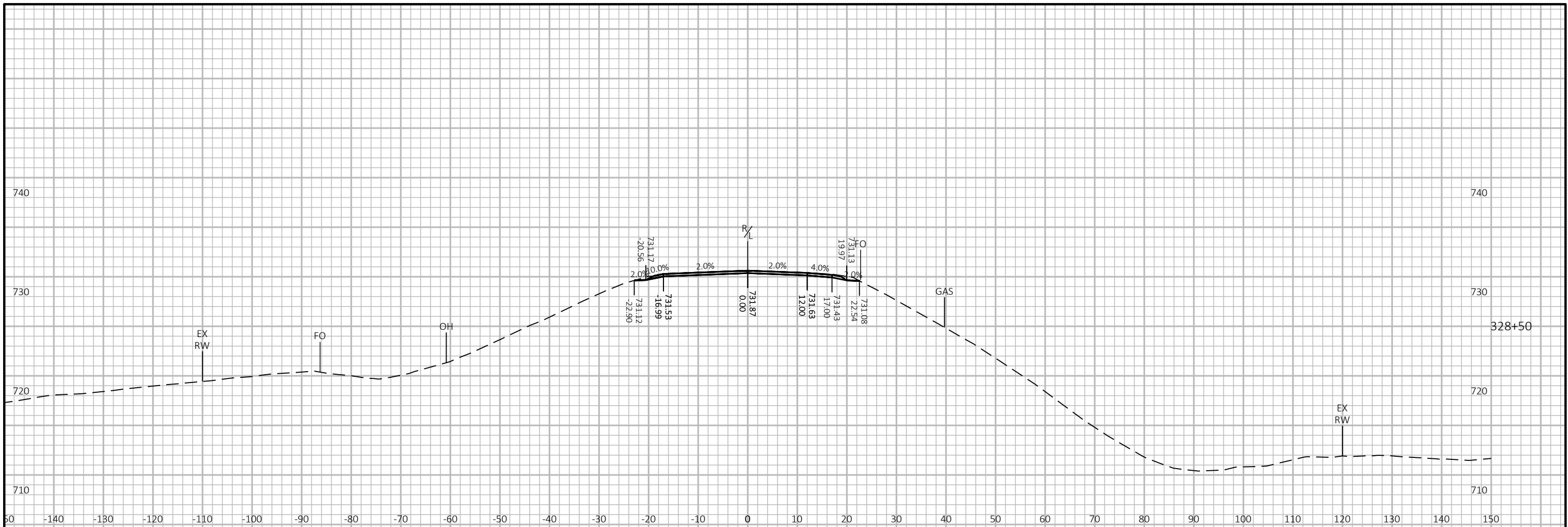
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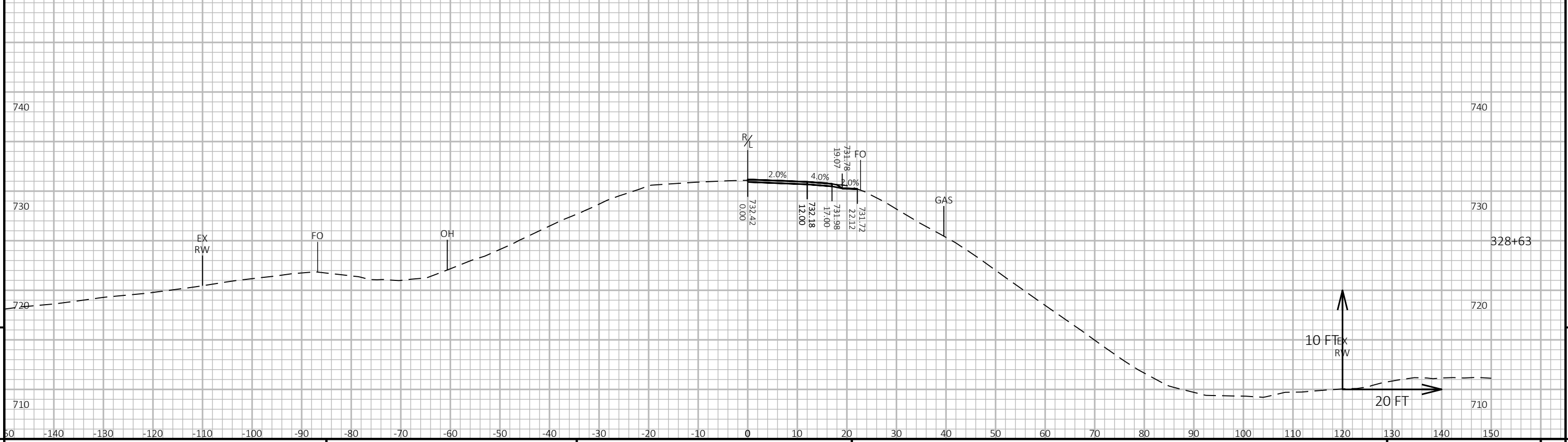
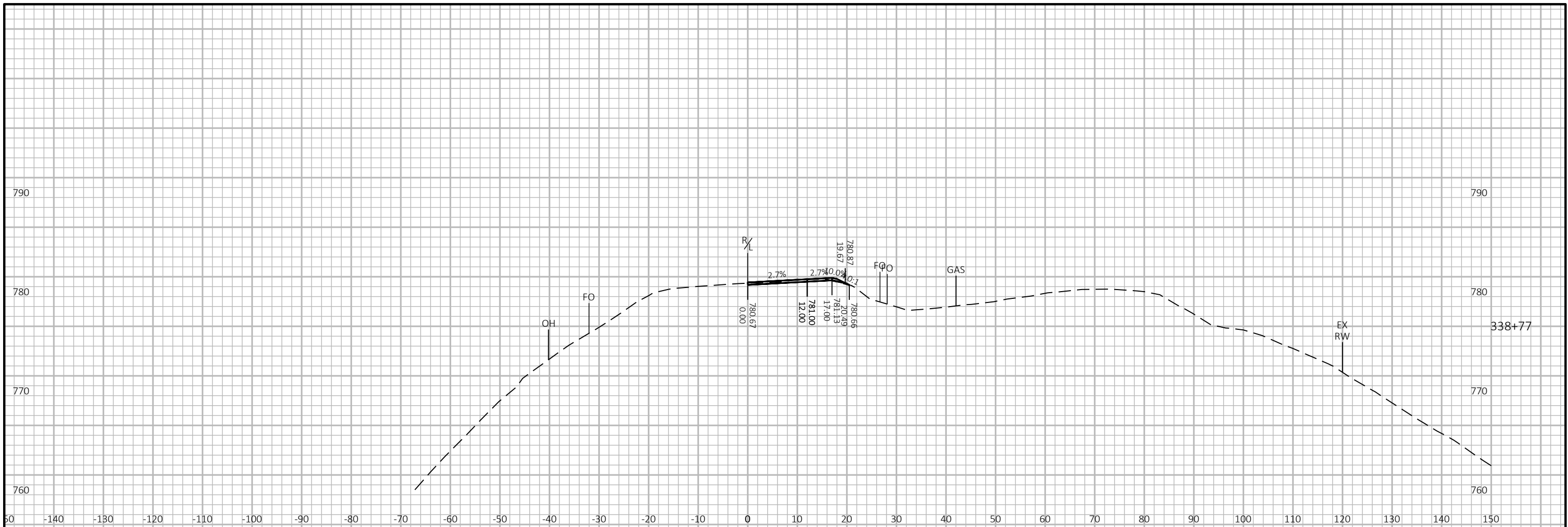
PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET 9



PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E



PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E

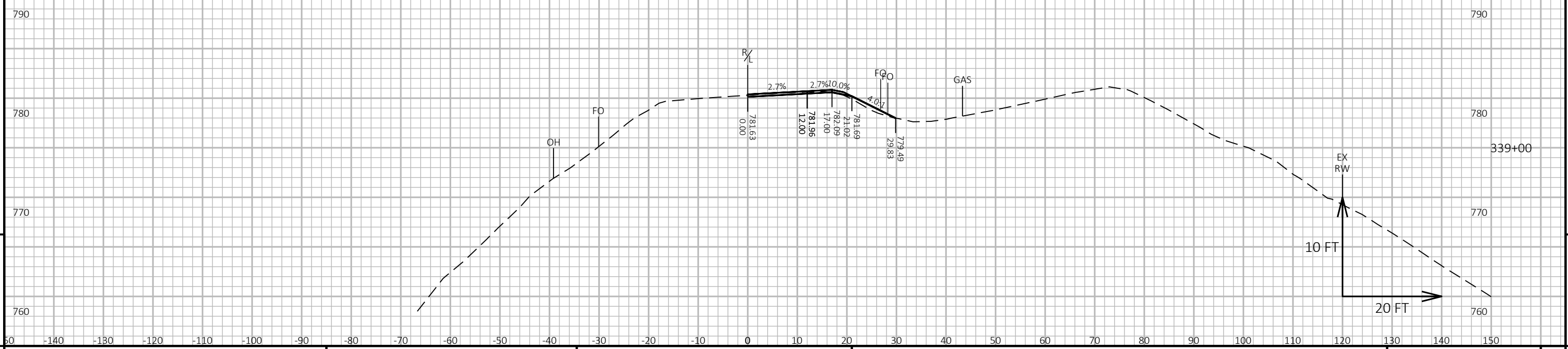
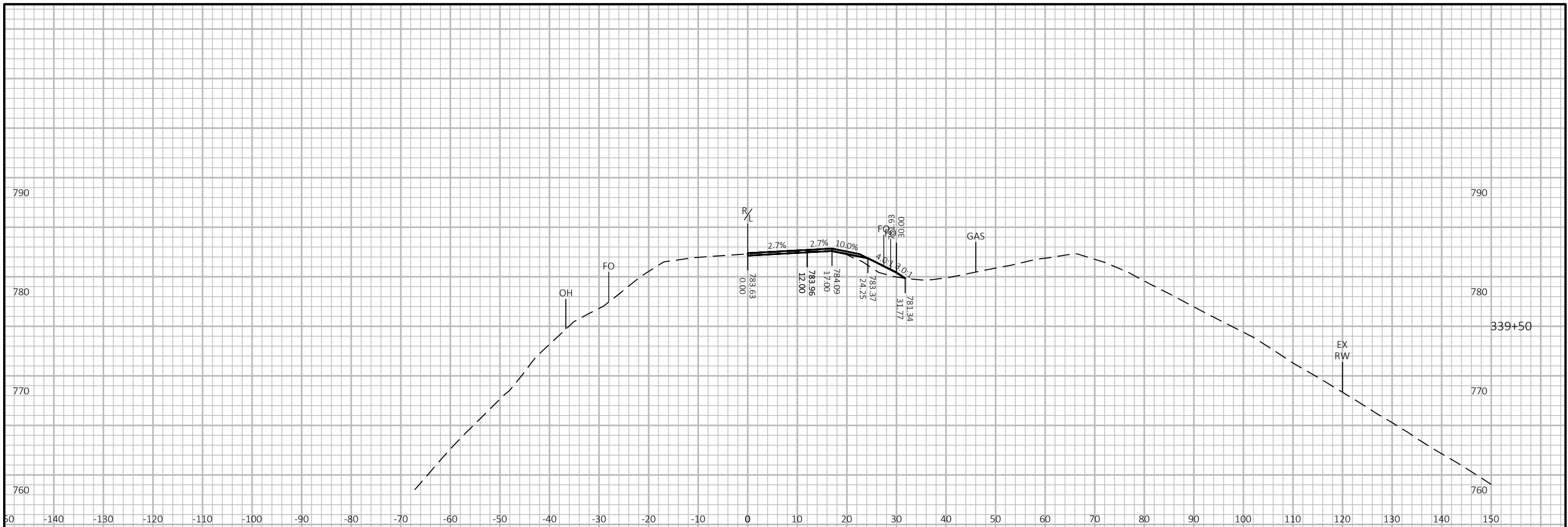


PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET

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E



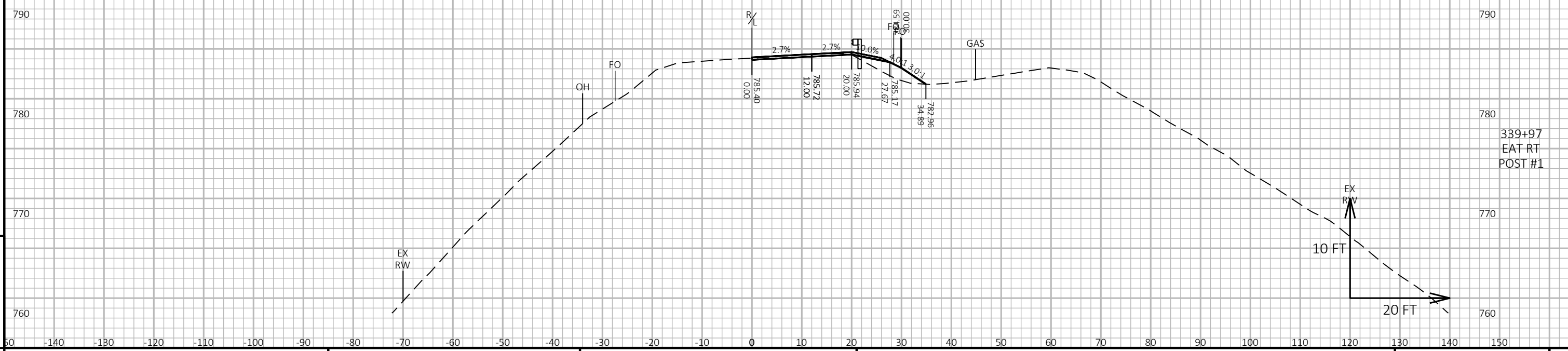
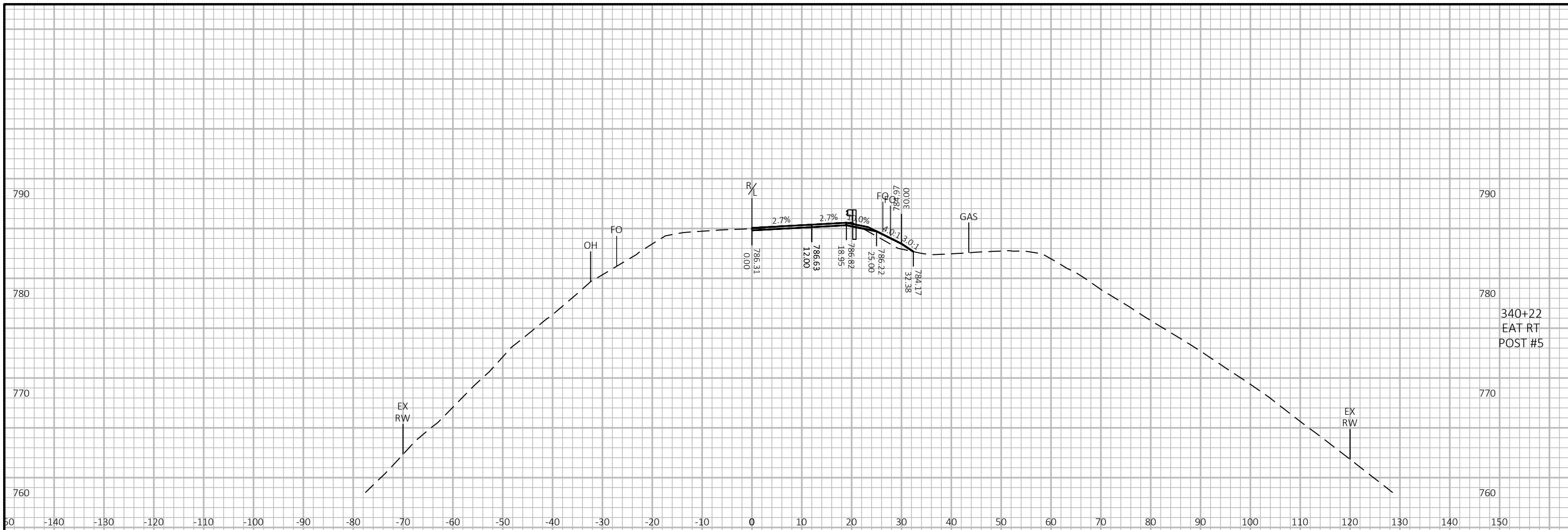
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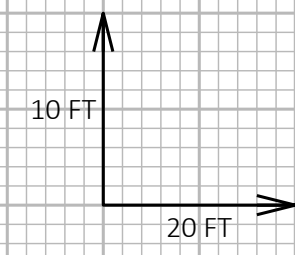
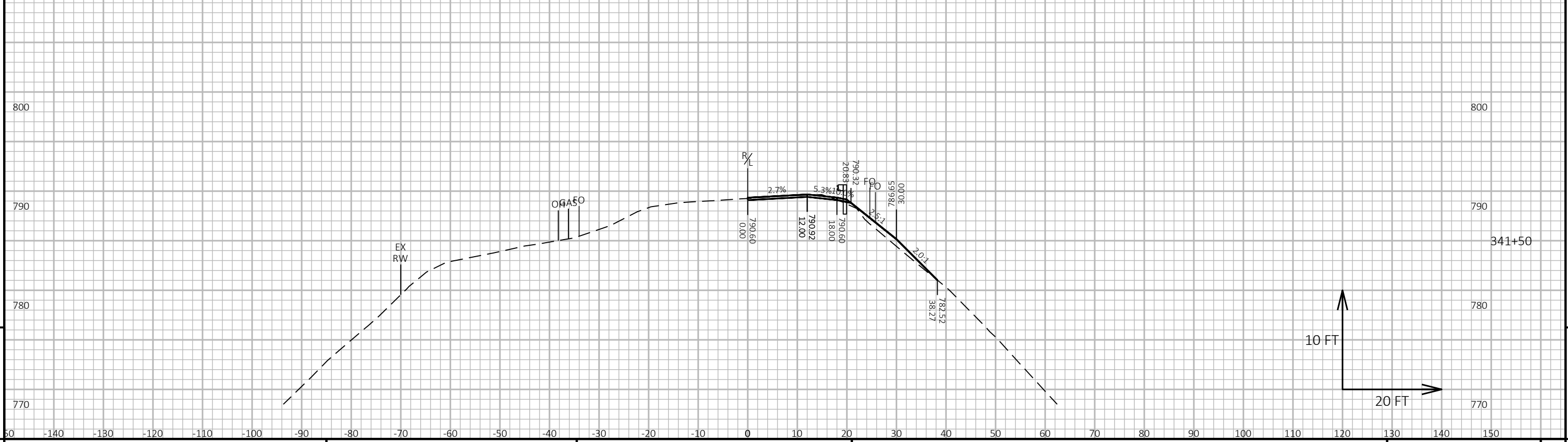
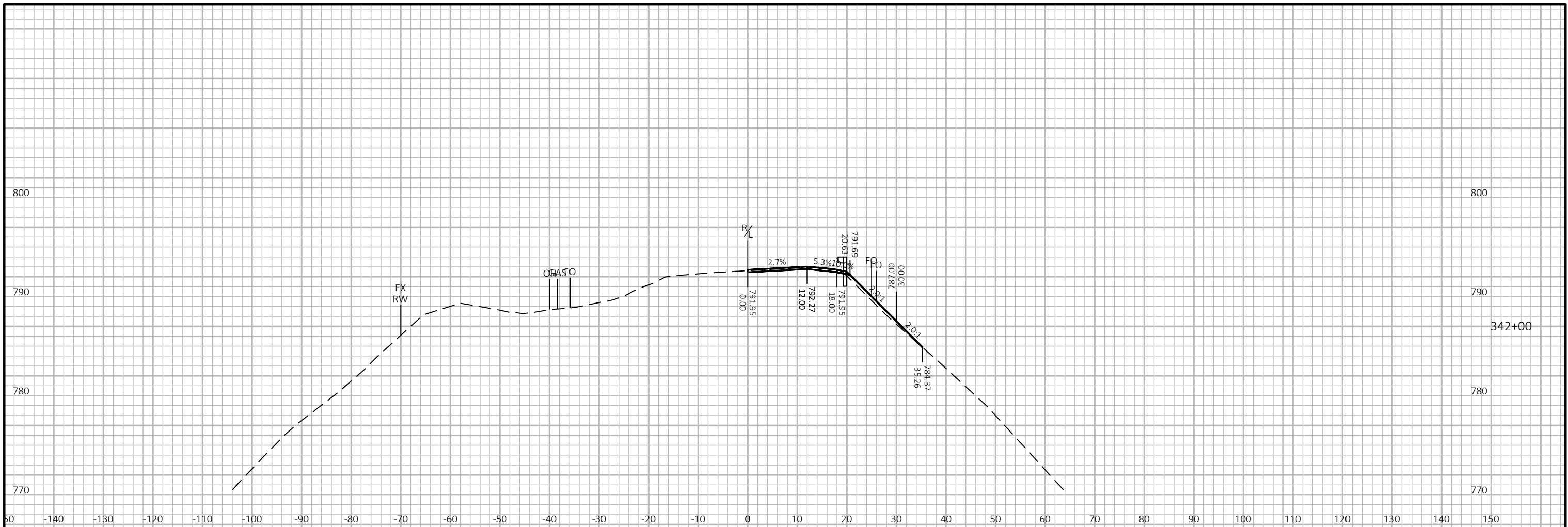
PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E

FILE NAME : O:\PDS\C3D\15300503\SHEETSPLAN\090203-XS-CTHX-TO-STH23.DWG PLOT DATE : 7/24/2023 9:55 AM PLOT BY : CORY IHDE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 24



PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E



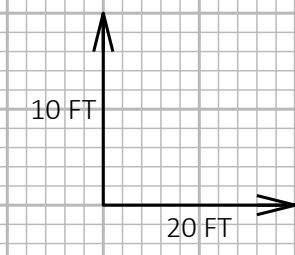
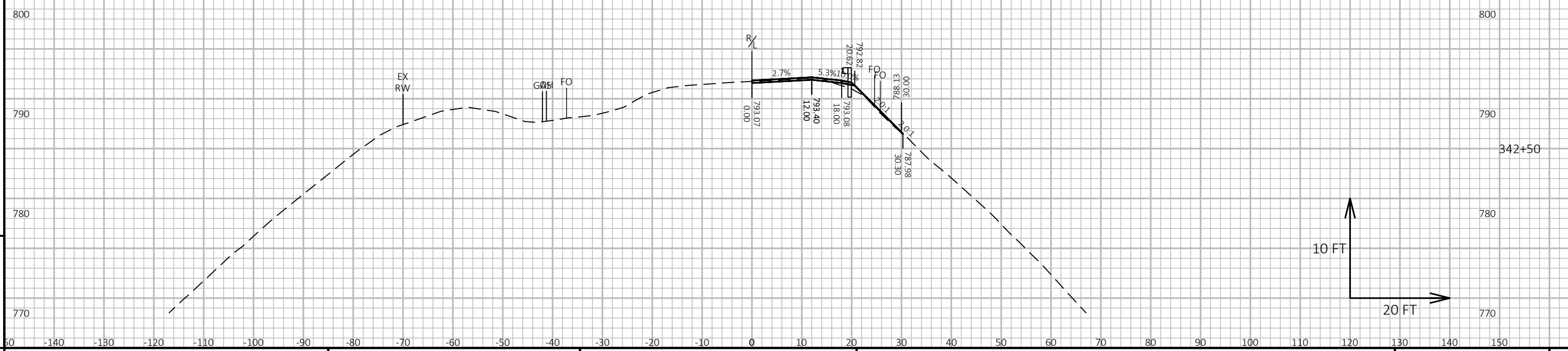
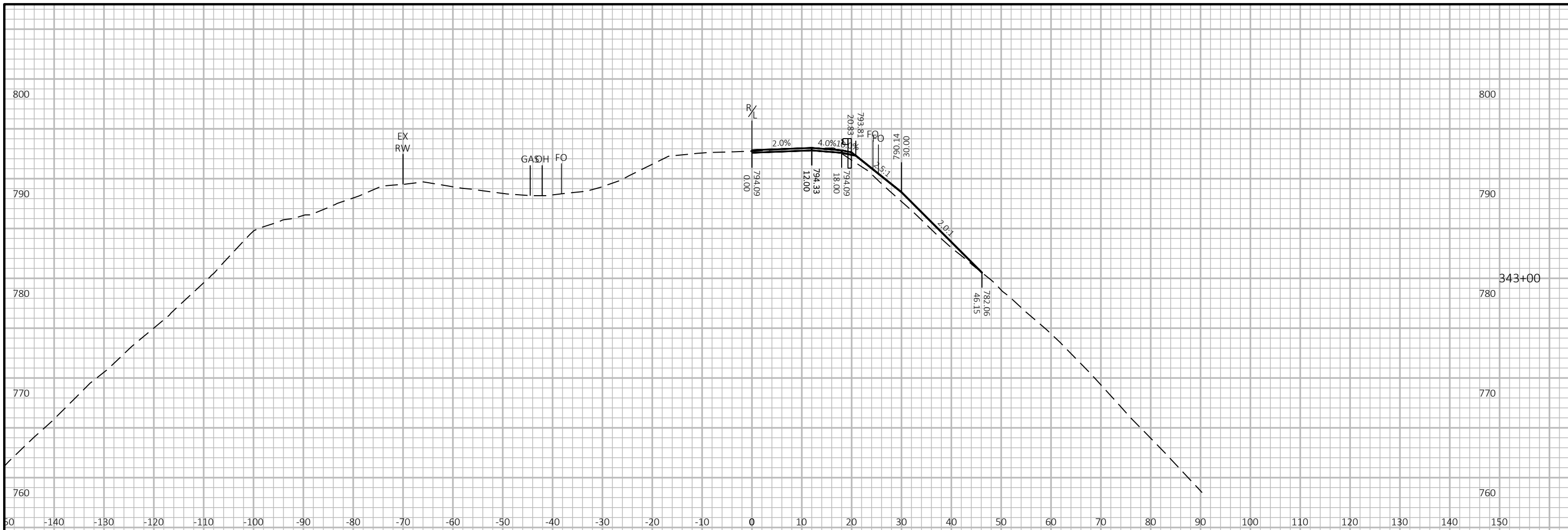
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PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E

FILE NAME : O:\PDS\3D\15300503\SHEETSPLAN\090203-XS-CTHX-TO-STH23.DWG PLOT DATE : 7/24/2023 9:57 AM PLOT BY : CORY IHDE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 27



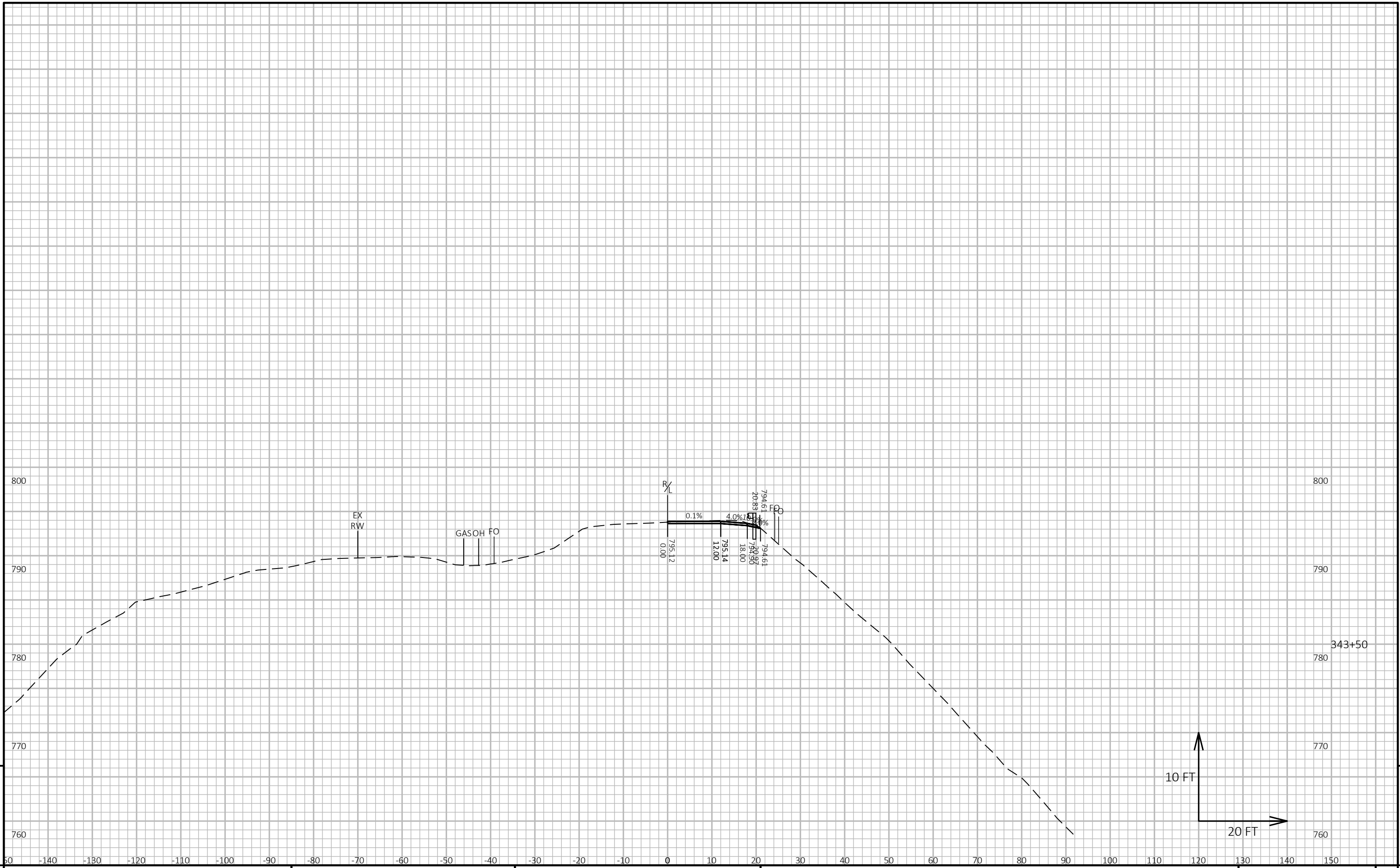
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PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E

FILE NAME : O:\PDS\C3D\15300503\SHEETSPLAN\090203-XS-CTHX-TO-STH23.DWG PLOT DATE : 7/24/2023 9:58 AM PLOT BY : CORY IHDE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 28

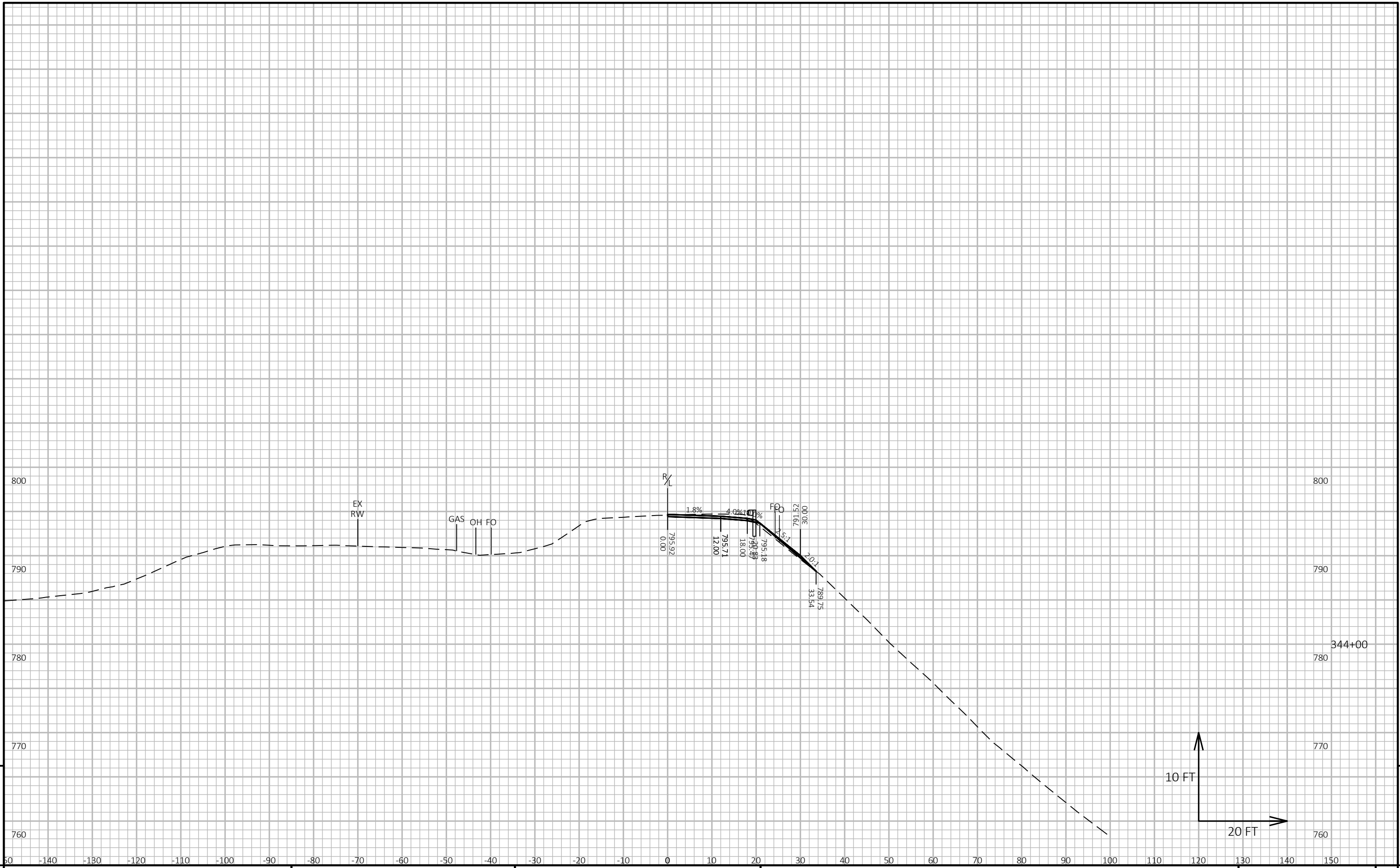


PROJECT NO: 1530-05-73	HWY: USH 10	COUNTY: PEPIN	CROSS SECTIONS: USH 10	SHEET
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E



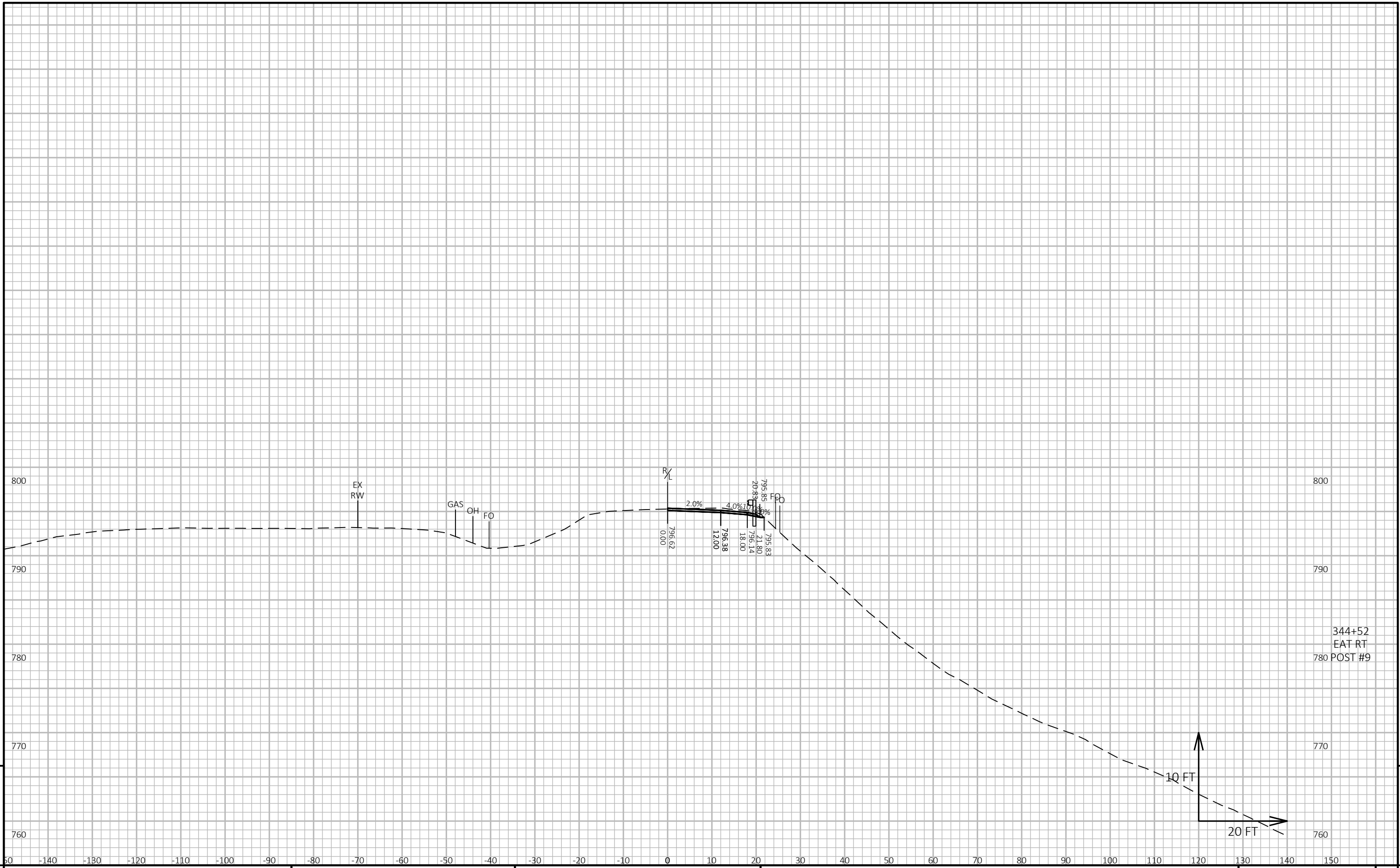
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PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E

FILE NAME : O:\PDS\C3D\15300503\SHEETSPLAN\090203-XS-CTHX-TO-STH23.DWG PLOT DATE : 7/24/2023 9:59 AM PLOT BY : CORY IHDE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 30

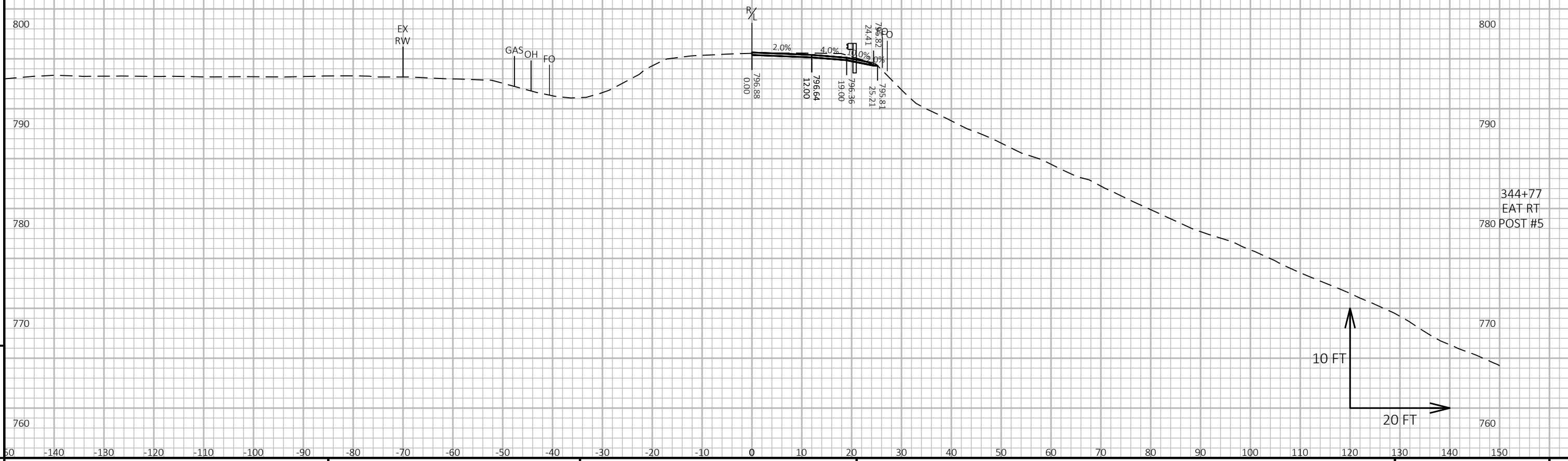
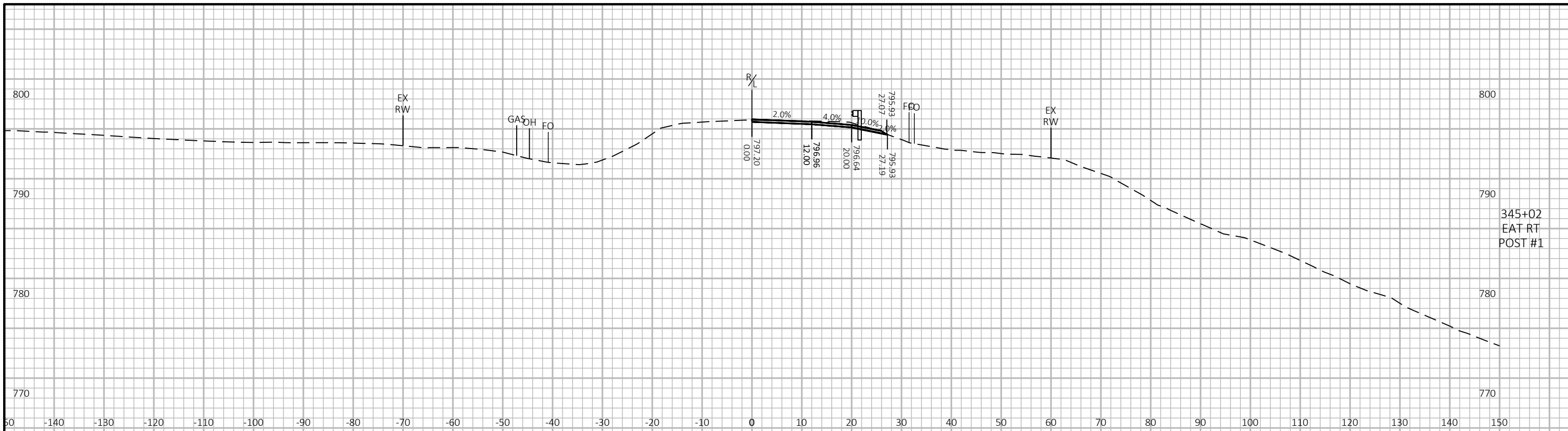


344+52
EAT RT
780 POST #9

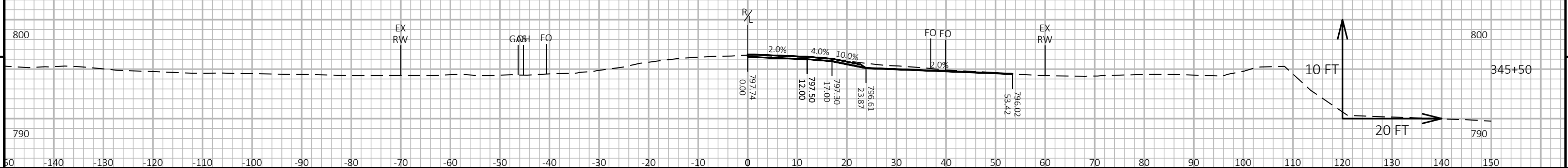
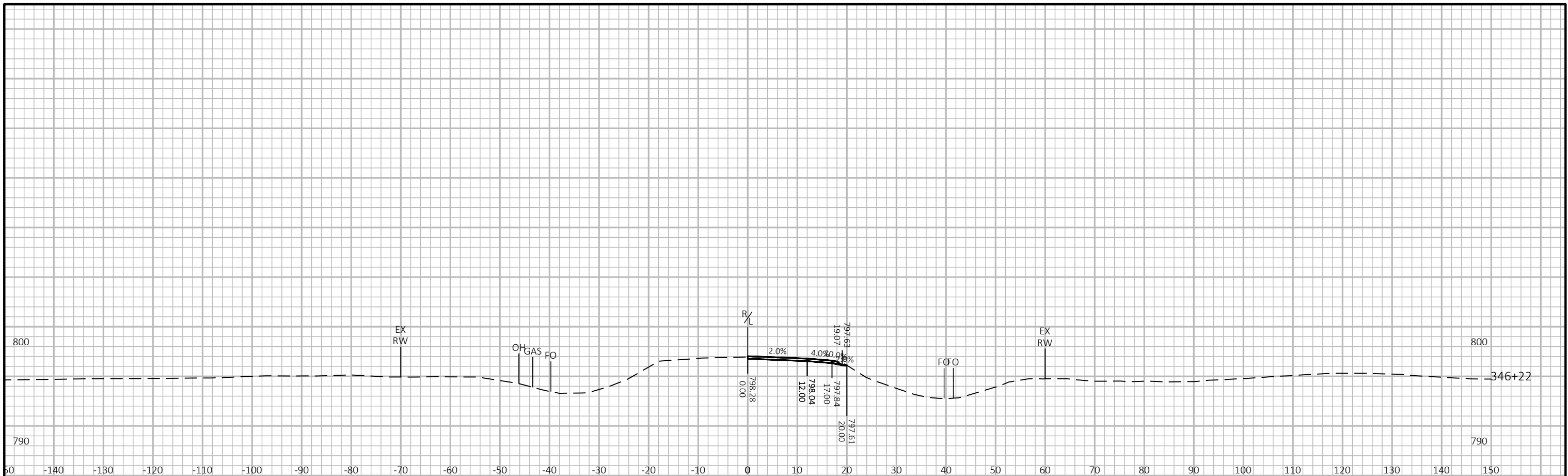
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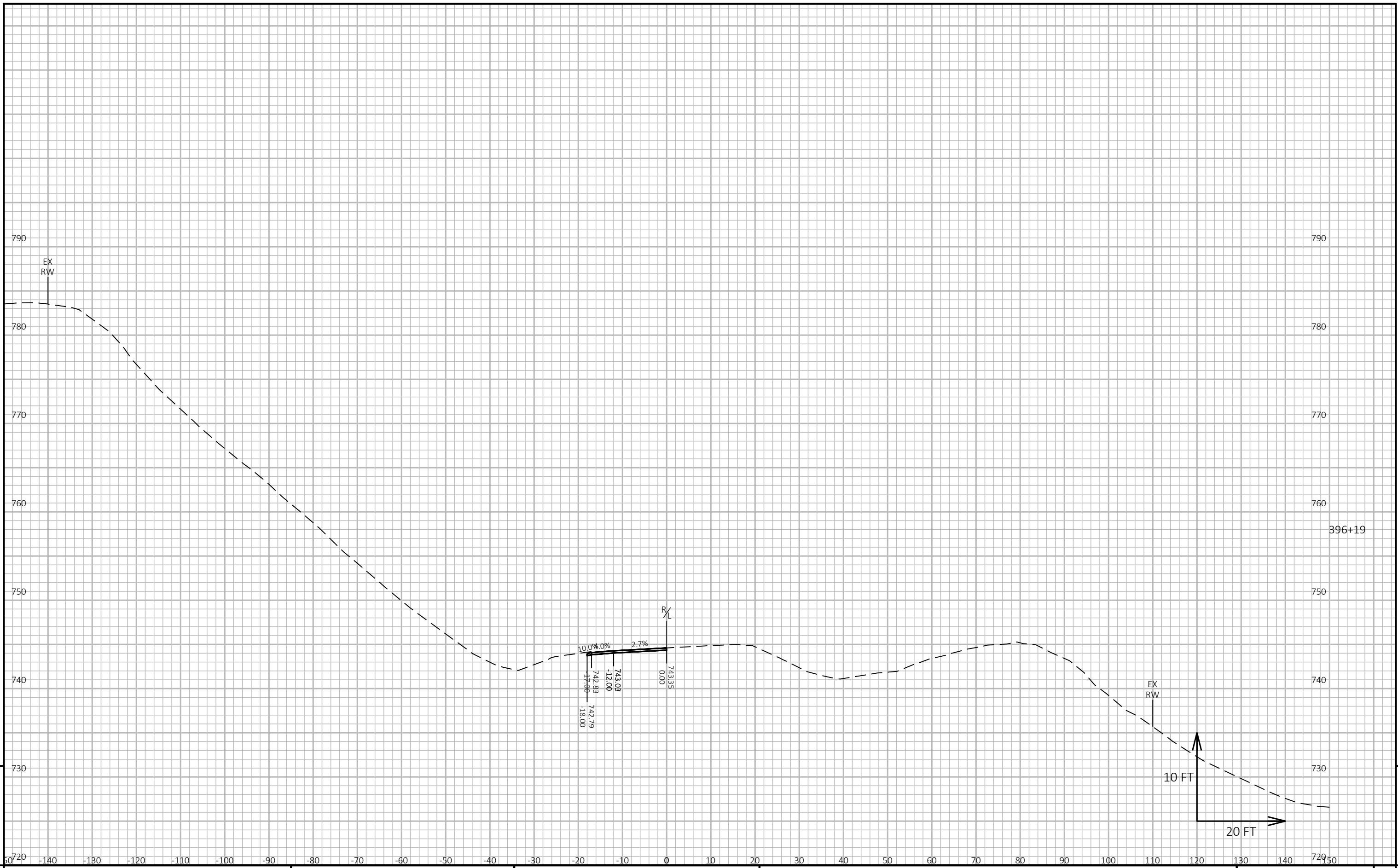
PROJECT NO: 1530-05-73	HWY: USH 10	COUNTY: PEPIN	CROSS SECTIONS: USH 10	SHEET	E
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PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E



PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E



PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET

FILE NAME: O:\PDS\C3D\15300503\SHEETSPLAN\090204-XS-STH23-TO-END.DWG PLOT DATE: 7/24/2023 10:17 AM PLOT BY: CORY IHDE PLOT NAME: PLOT SCALE: 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49



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PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E

FILE NAME : O:\PDS\C3D\15300503\SHEETS\PLAN\090204-XS-STH23-TO-END.DWG PLOT DATE : 7/24/2023 10:18 AM PLOT BY : CORY IHDE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 2



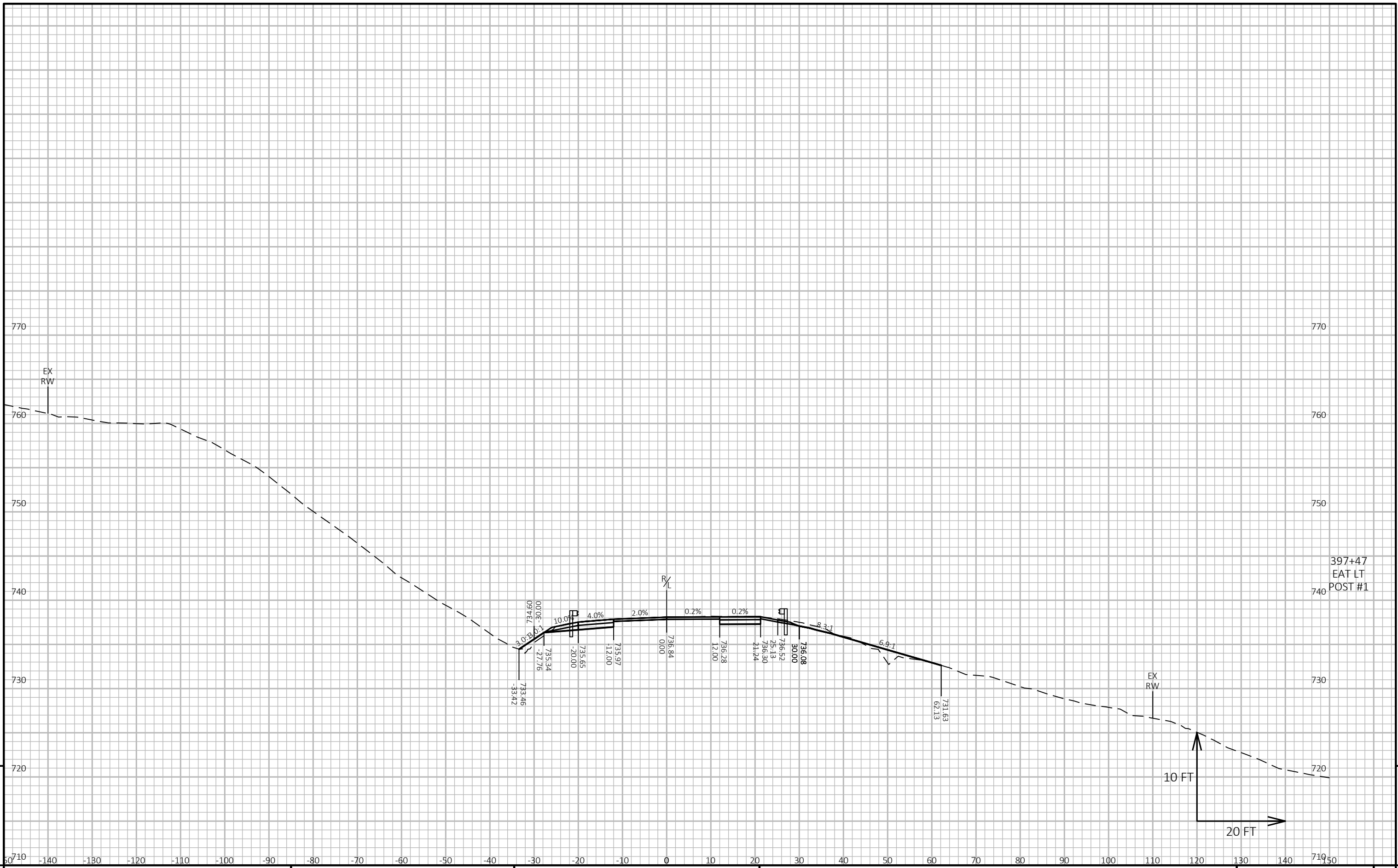
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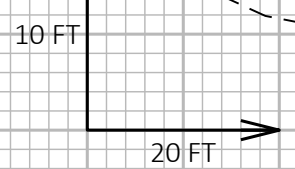
PROJECT NO: 1530-05-73	HWY: USH 10	COUNTY: PEPIN	CROSS SECTIONS: USH 10	SHEET	E
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FILE NAME : O:\PDS\C3D\15300503\SHEETSPLAN\090204-XS-STH23-TO-END.DWG PLOT DATE : 7/24/2023 10:18 AM PLOT BY : CORY IHDE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 3



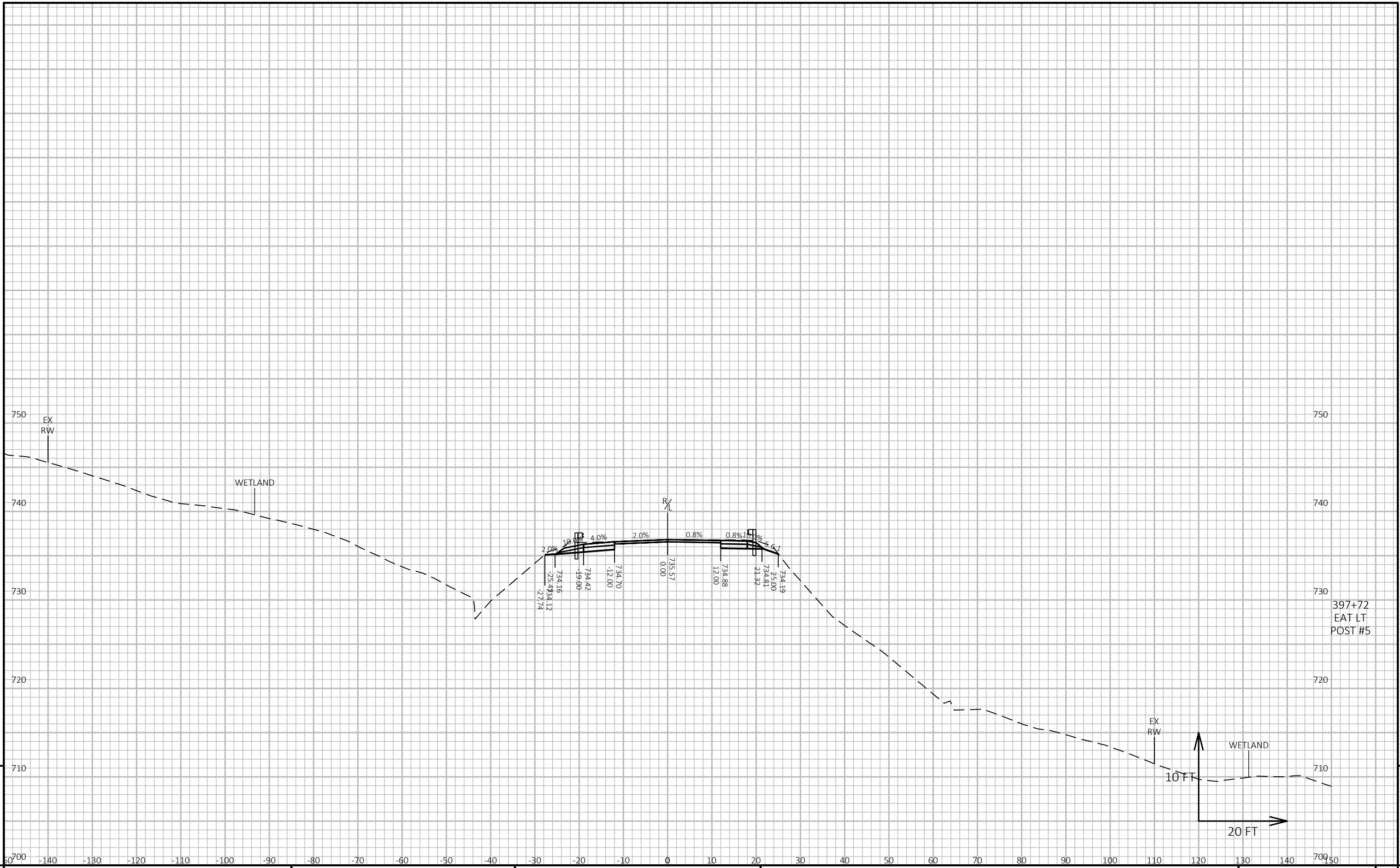
397+47
EAT LT
POST #1



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PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET

9



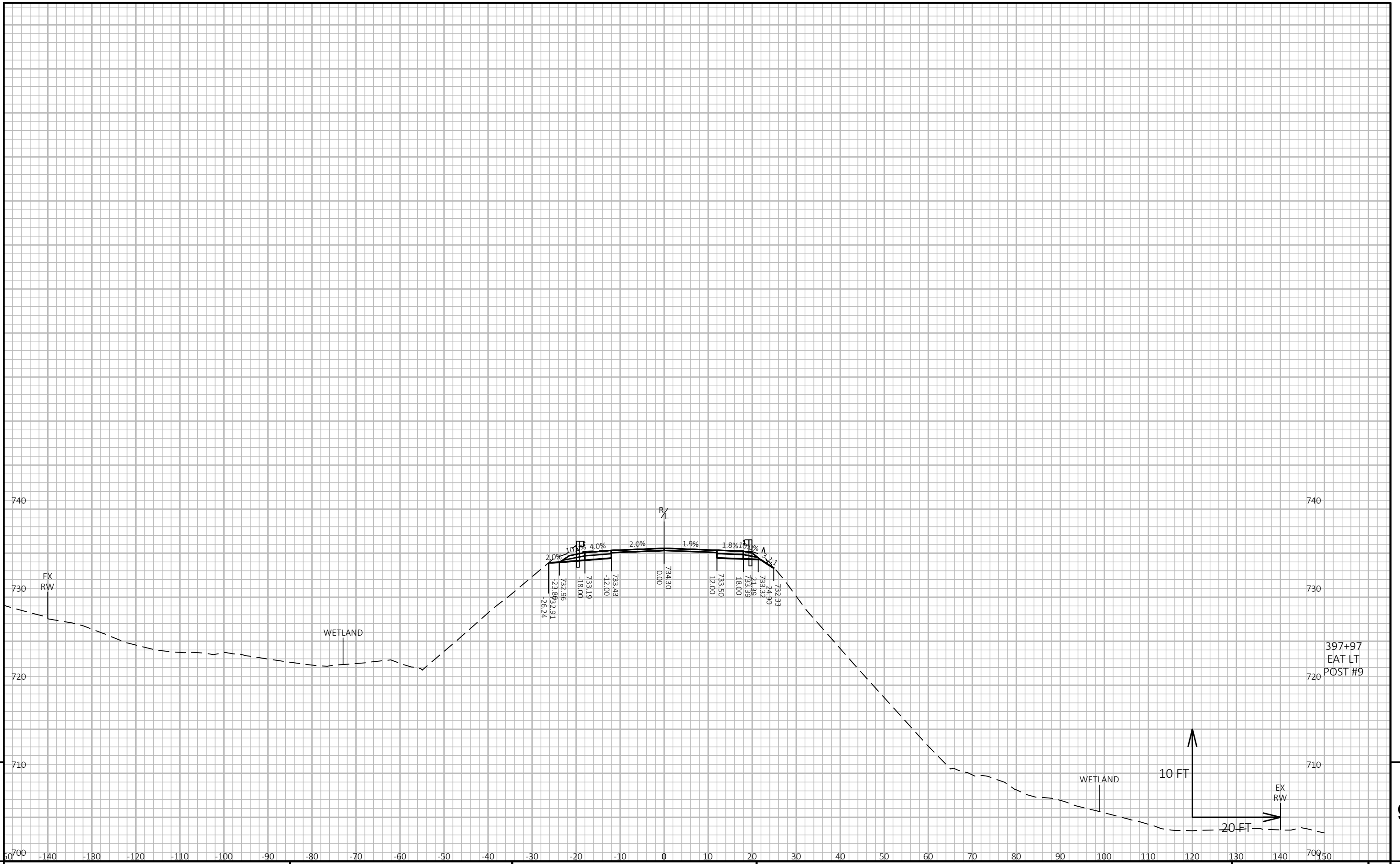
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PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E

FILE NAME : O:\PDS\C3D\15300503\SHEETSPLAN\090204-XS-STH23-TO-END.DWG PLOT DATE : 7/24/2023 10:19 AM PLOT BY : CORY IHDE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADDs SHEET 49

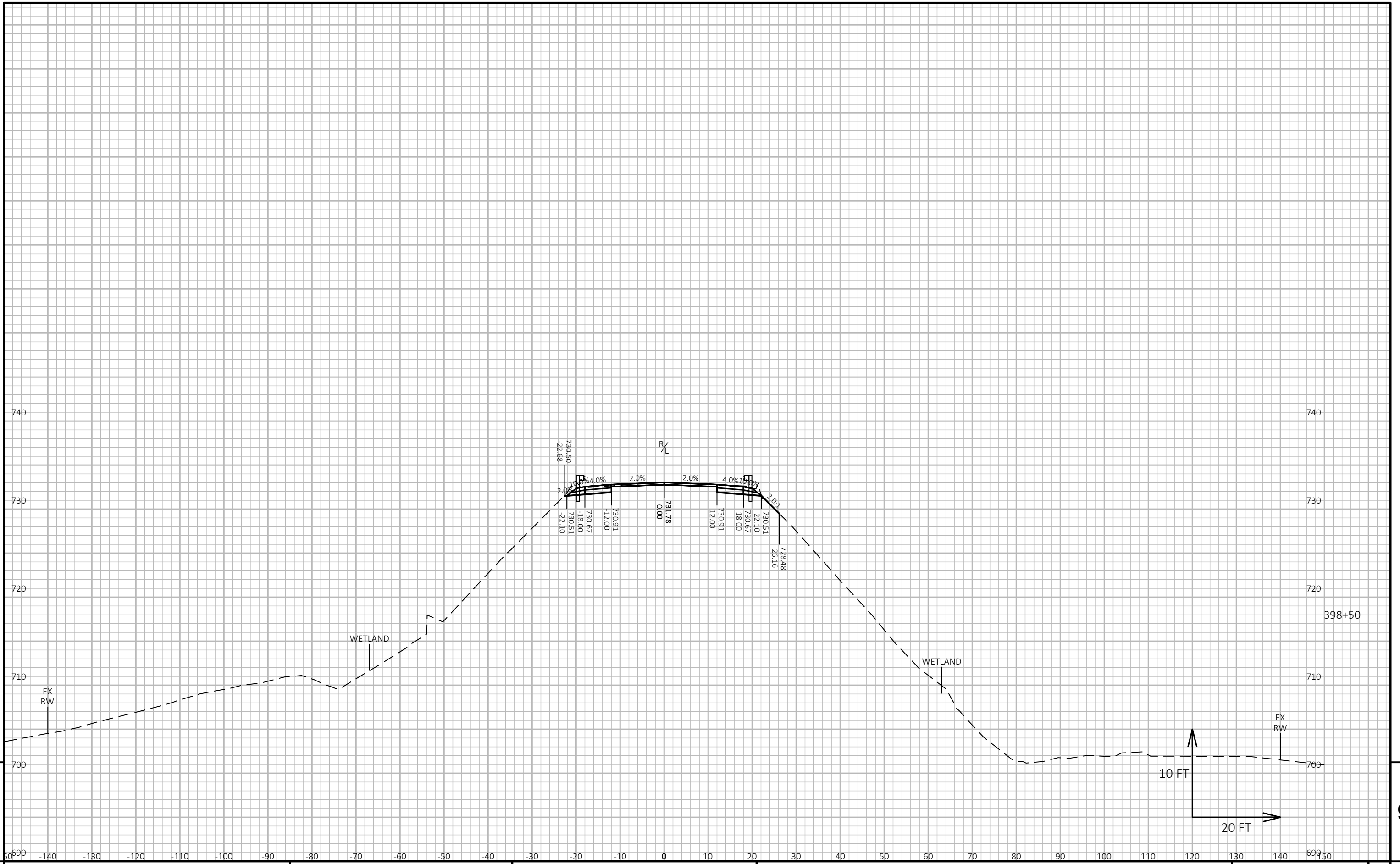
LAYOUT NAME - 5



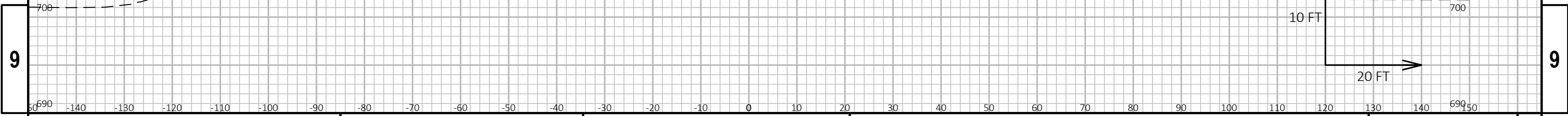
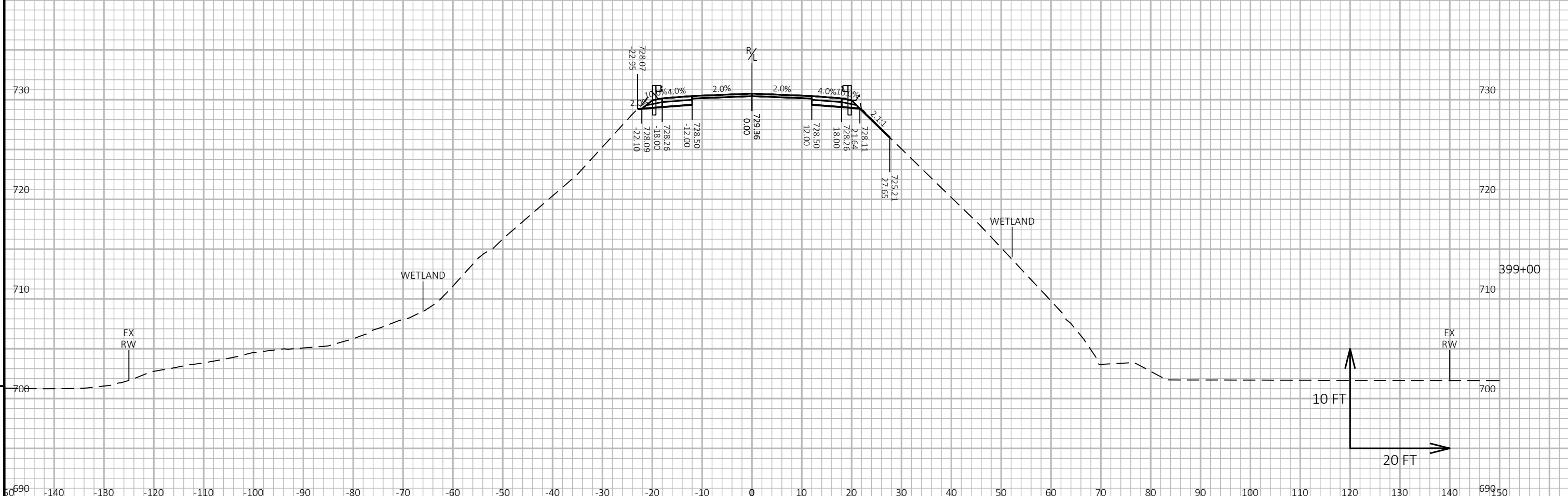
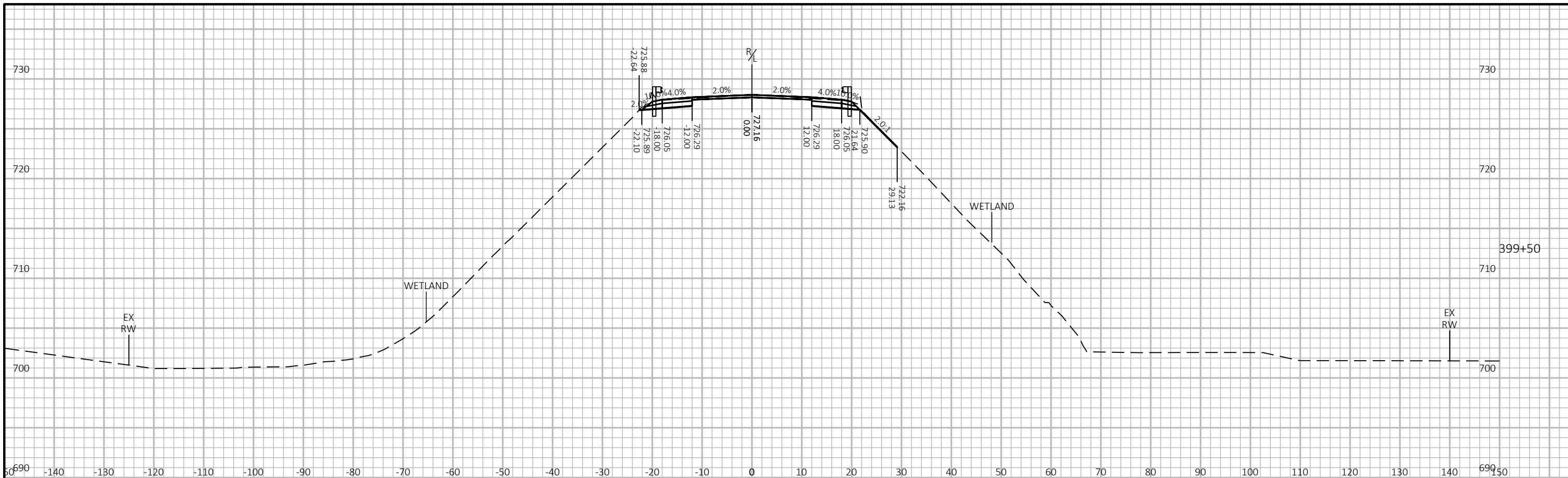
PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET 9

FILE NAME : O:\PDS\C3D\15300503\SHEETSPLAN\090204-XS-STH23-TO-END.DWG PLOT DATE : 7/24/2023 10:19 AM PLOT BY : CORY IHDE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

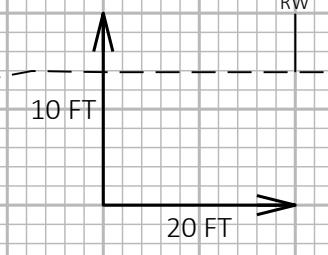
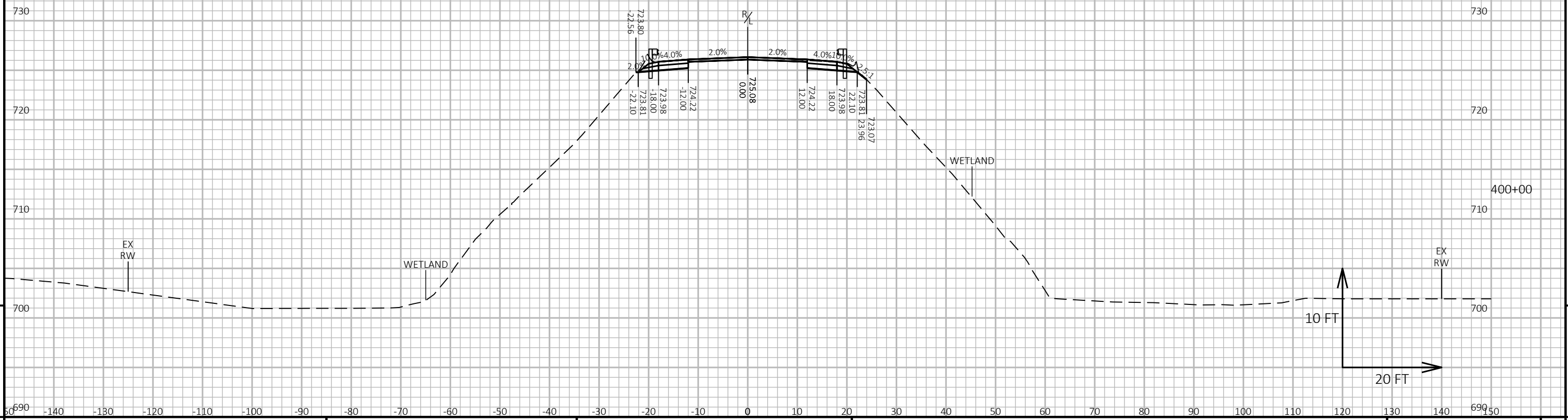
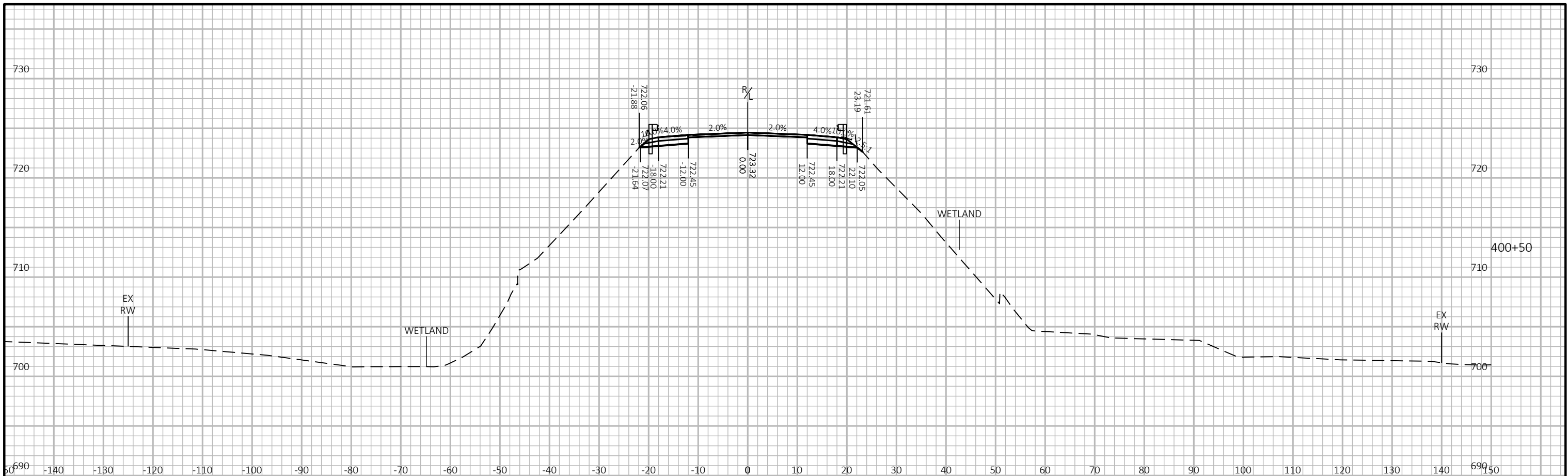
LAYOUT NAME - 6



PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET 9



PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E



9

PROJECT NO: 1530-05-73

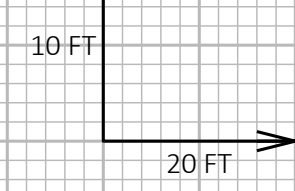
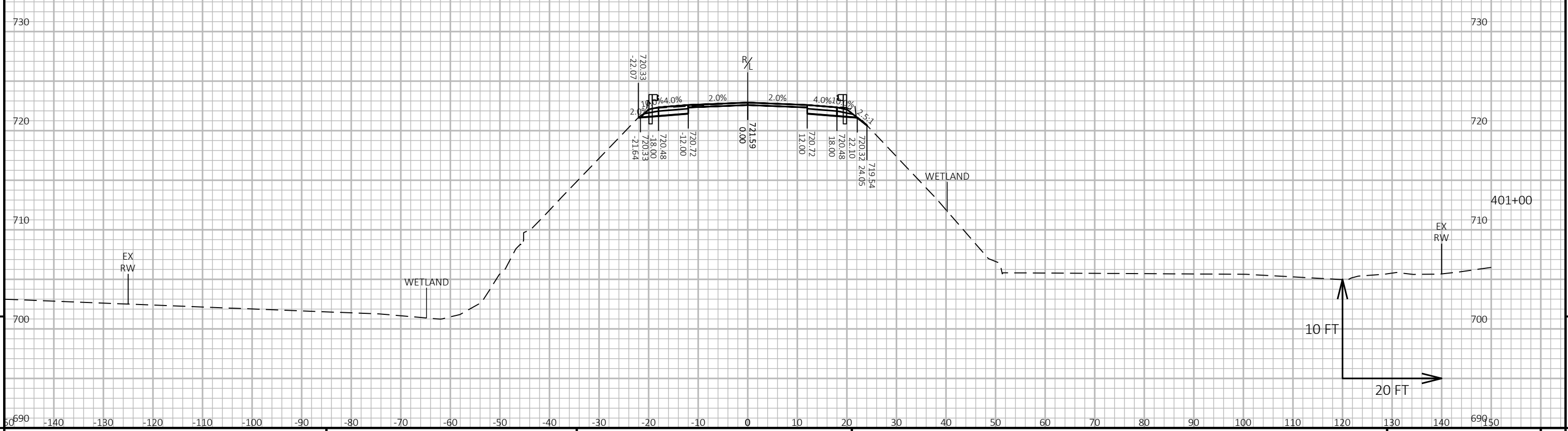
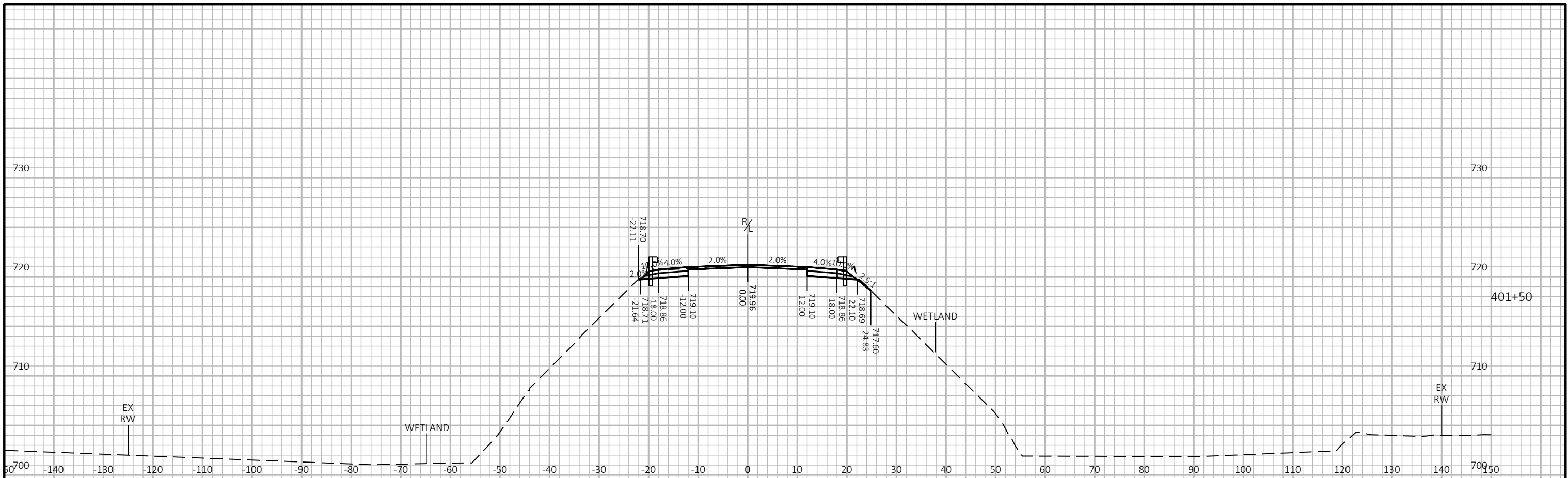
HWY: USH 10

COUNTY: PEPIN

CROSS SECTIONS: USH 10

SHEET

9

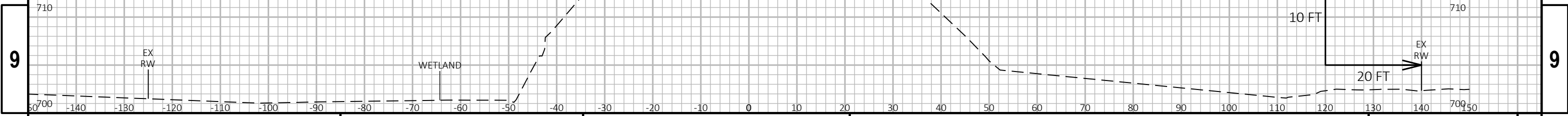
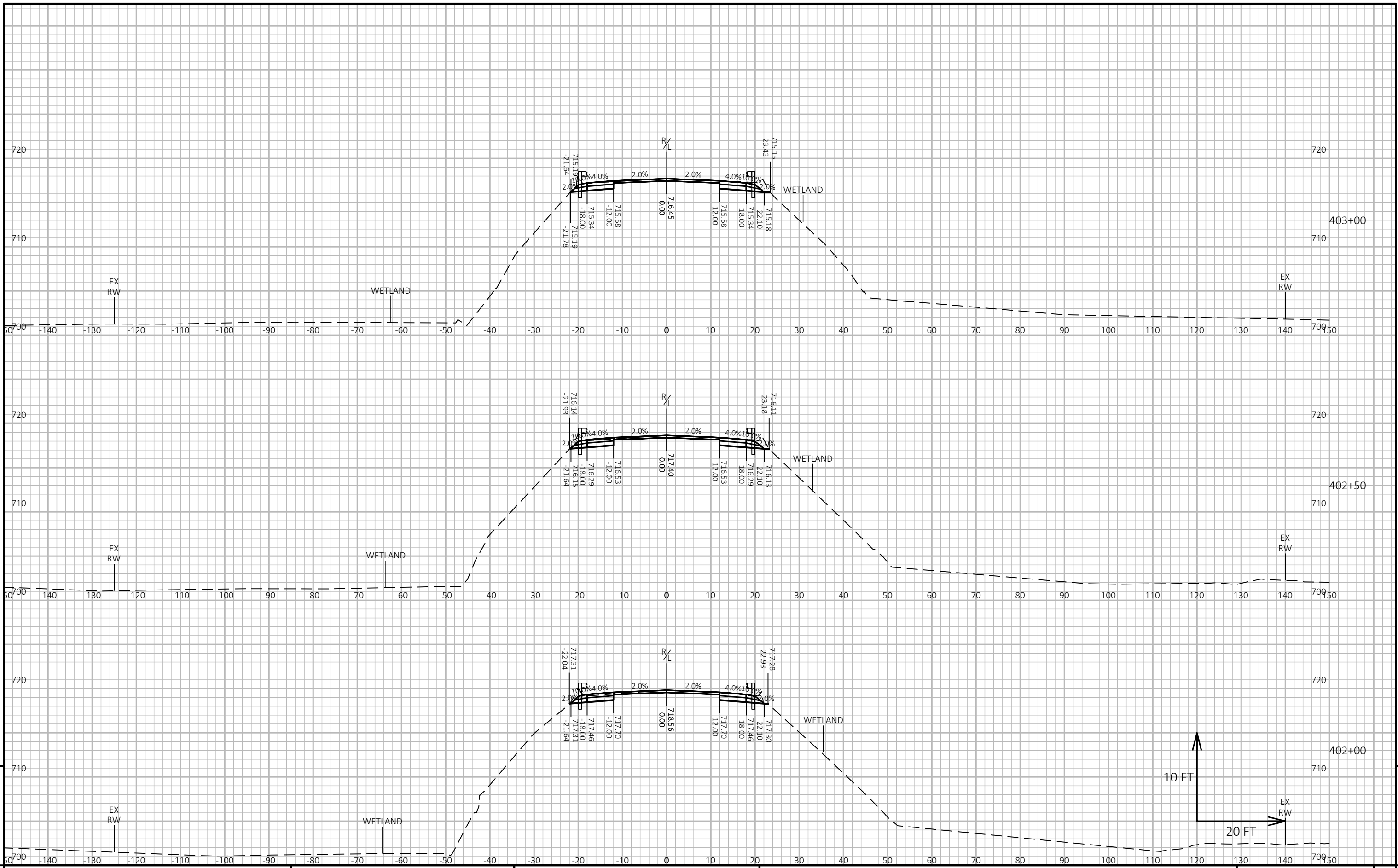


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PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E

FILE NAME : O:\PDS\C3D\15300503\SHEETSPLAN\090204-XS-STH23-TO-END.DWG PLOT DATE : 7/24/2023 10:20 AM PLOT BY : CORY IHDE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

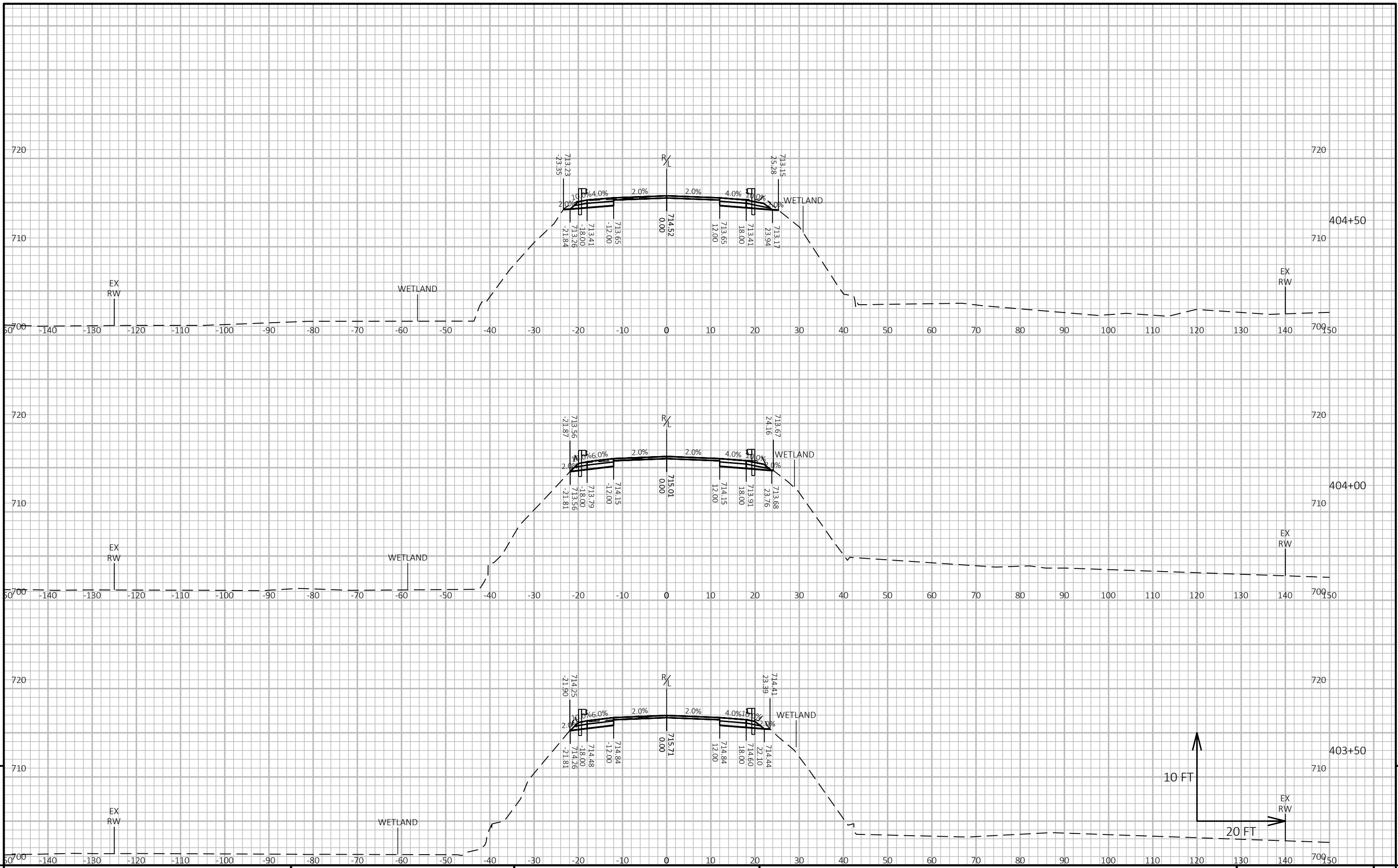
LAYOUT NAME - 10



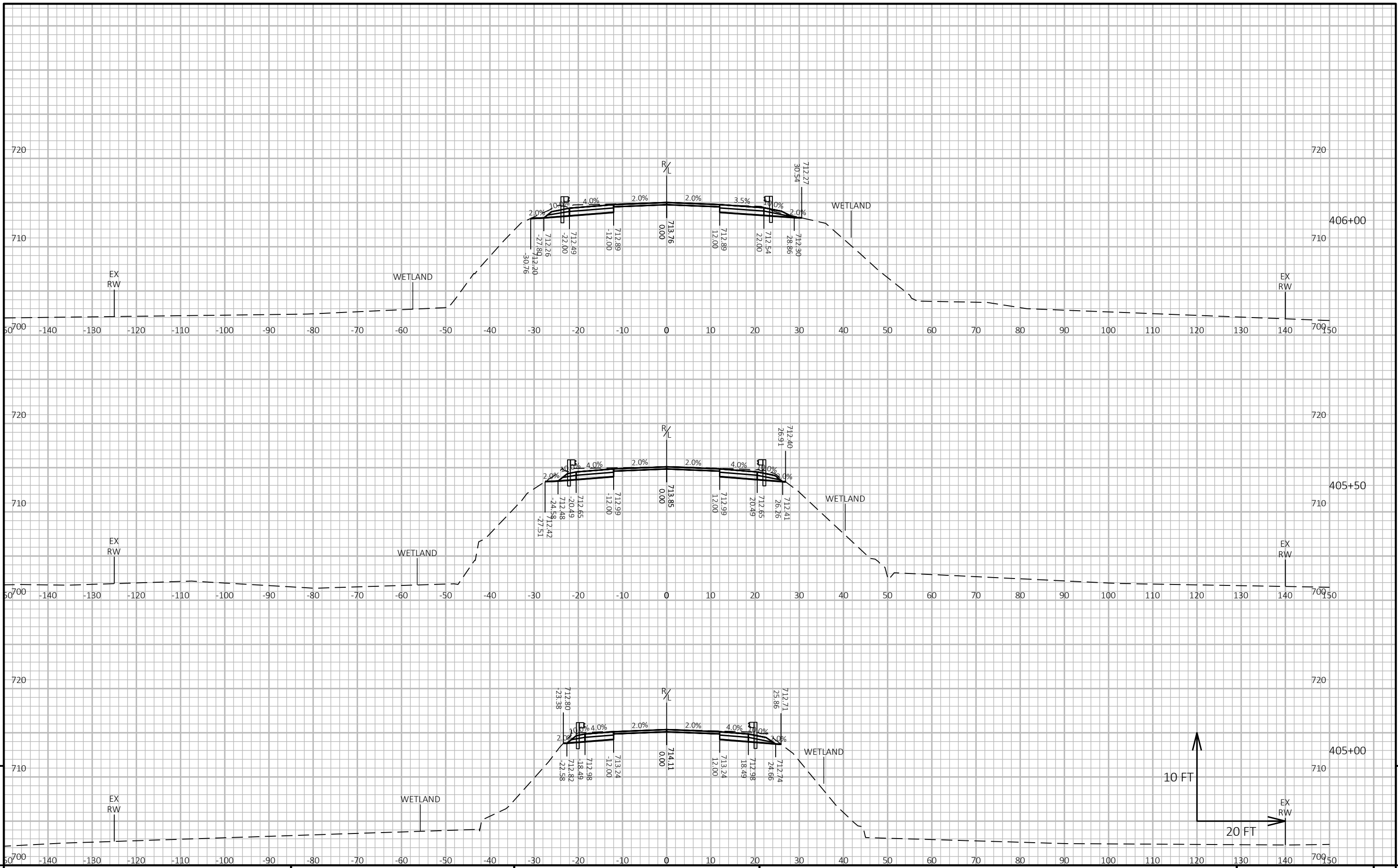
PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E

FILE NAME : O:\PDS\VC3D\15300503\SHEETSPLAN\090204-XS-STH23-TO-END.DWG PLOT DATE : 7/24/2023 10:20 AM PLOT BY : CORY IHDE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 11



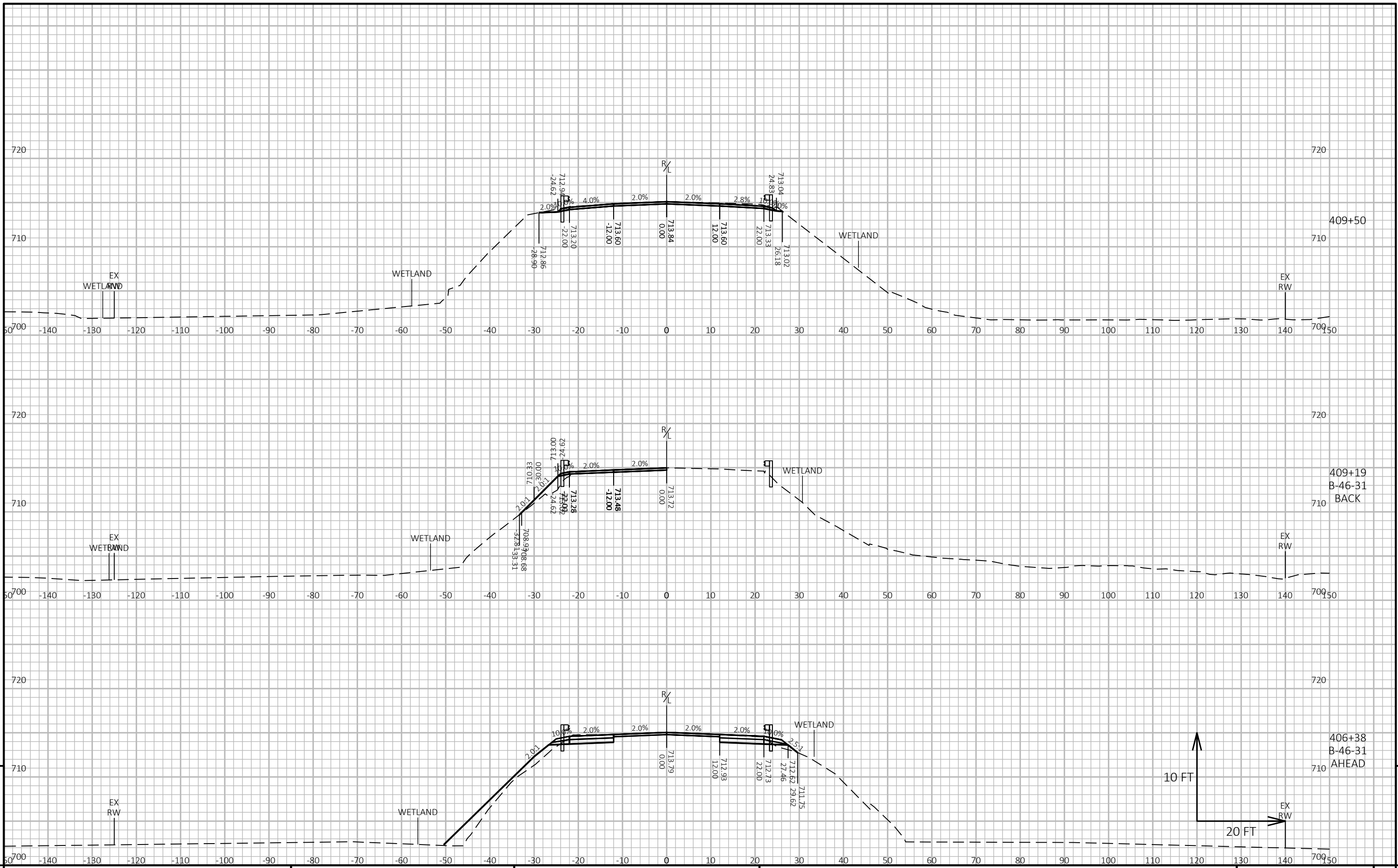
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PROJECT NO: 1530-05-73
HWY: USH 10
COUNTY: PEPIN
CROSS SECTIONS: USH 10
SHEET
9



PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET 9

FILE NAME : O:\PDS\C3D\15300503\SHEETSP\090204-XS-STH23-TO-END.DWG PLOT DATE : 7/24/2023 10:21 AM PLOT BY : CORY IHDE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 13



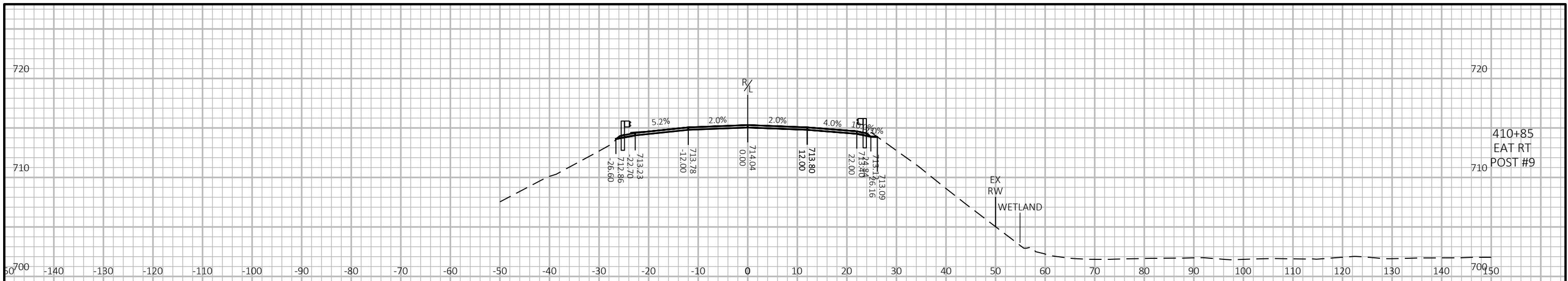
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PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E

FILE NAME: O:\PDS\C3D\15300503\SHEETSPLAN\090204-XS-STH23-TO-END.DWG PLOT DATE: 7/24/2023 10:21 AM PLOT BY: CORY IHDE PLOT NAME: PLOT SCALE: 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

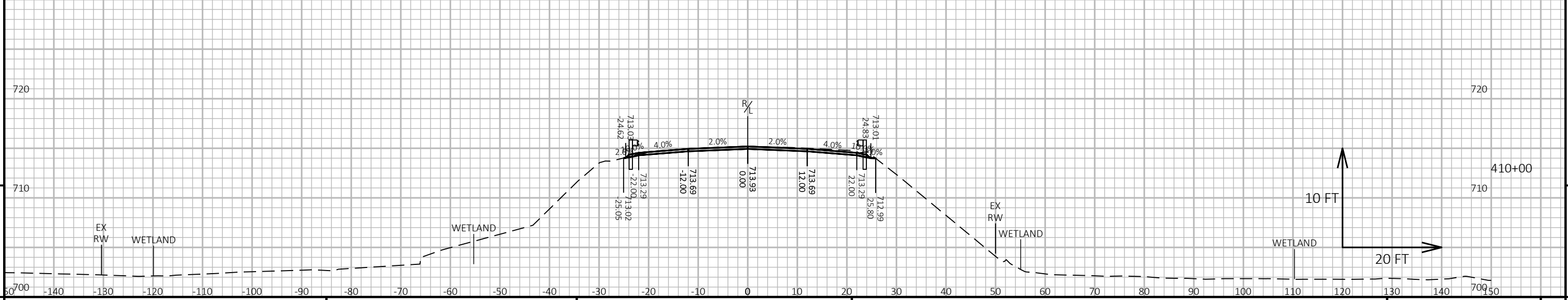
LAYOUT NAME - 14



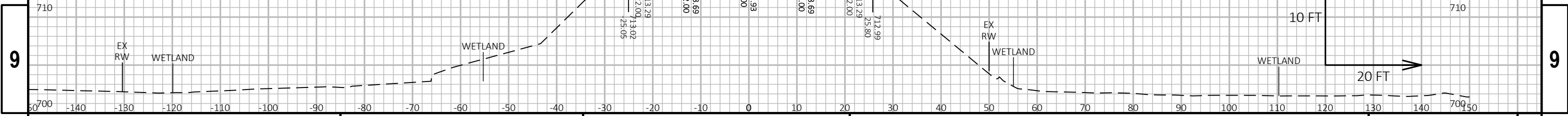
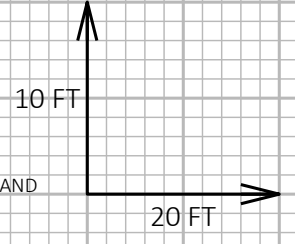
410+85
EAT RT
POST #9

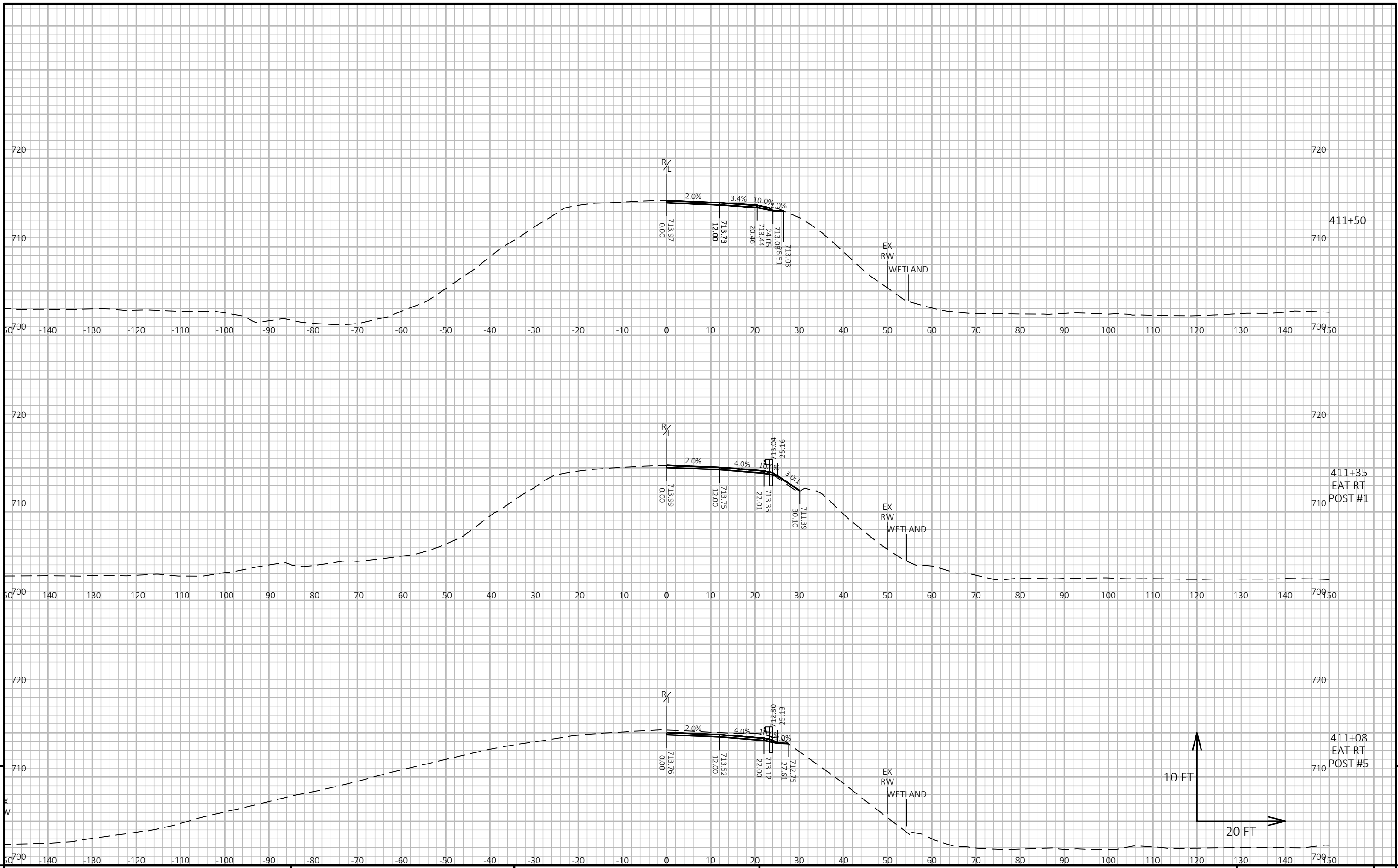


410+50

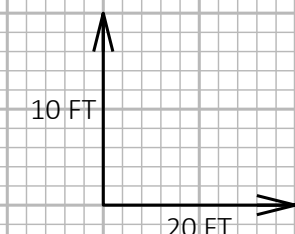
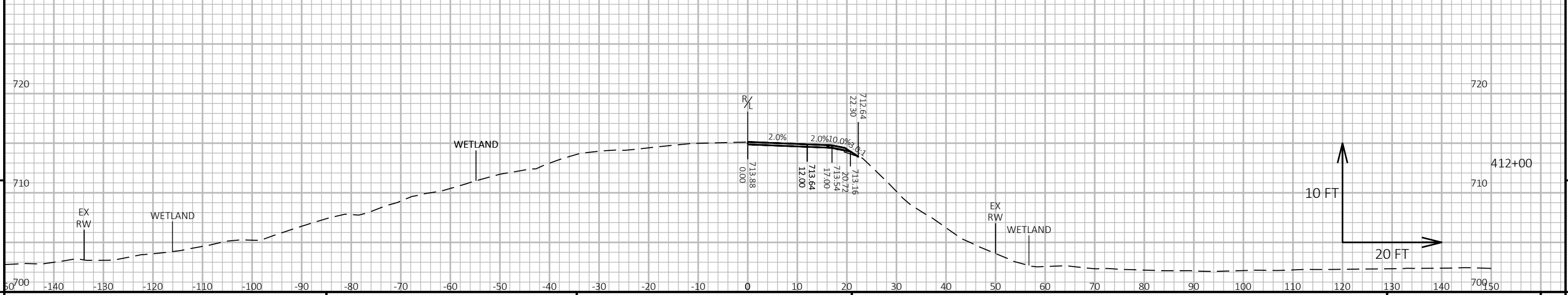
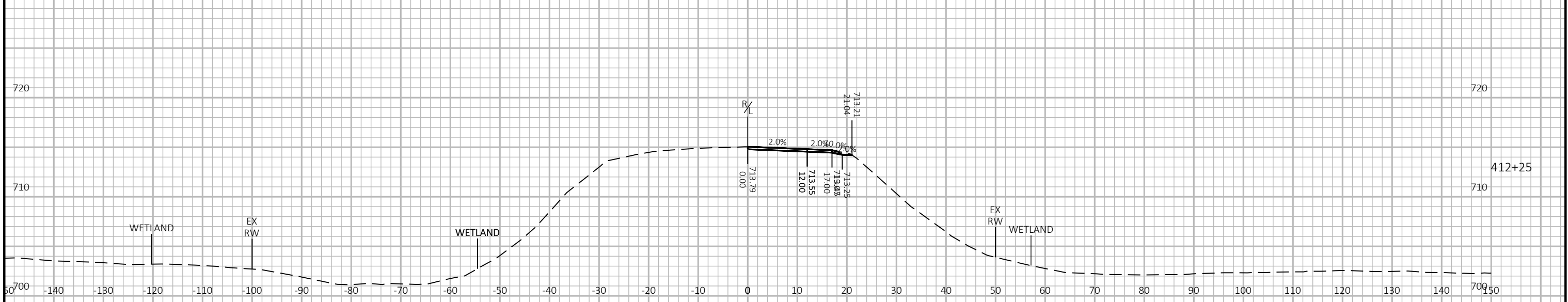
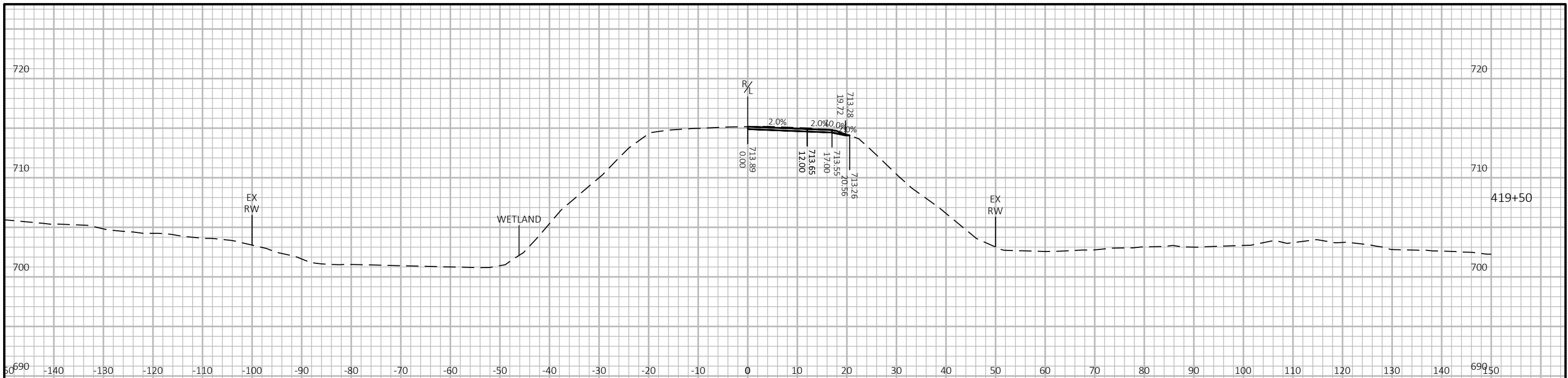


410+00

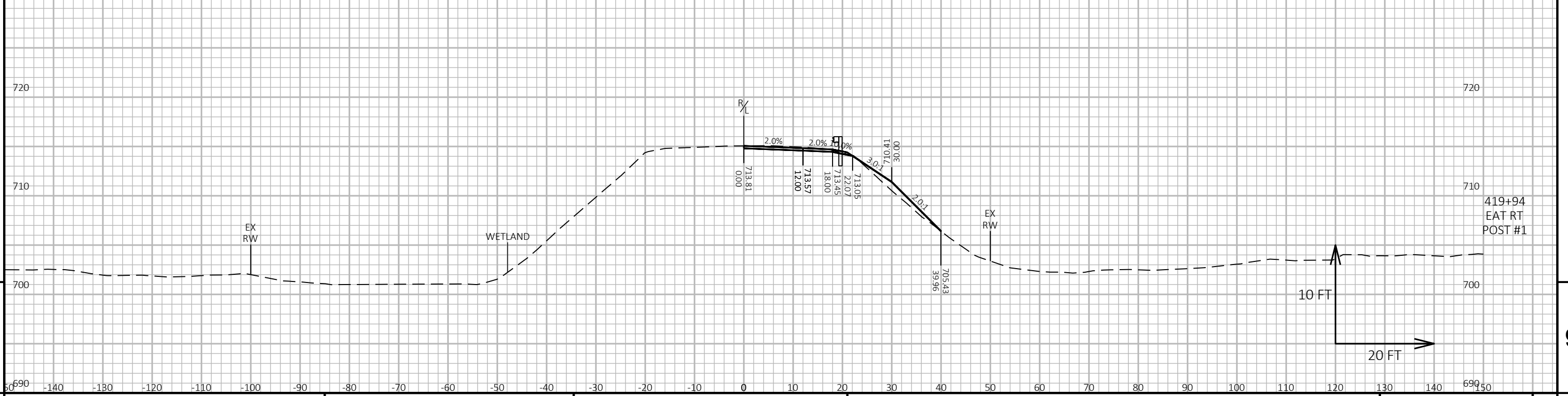
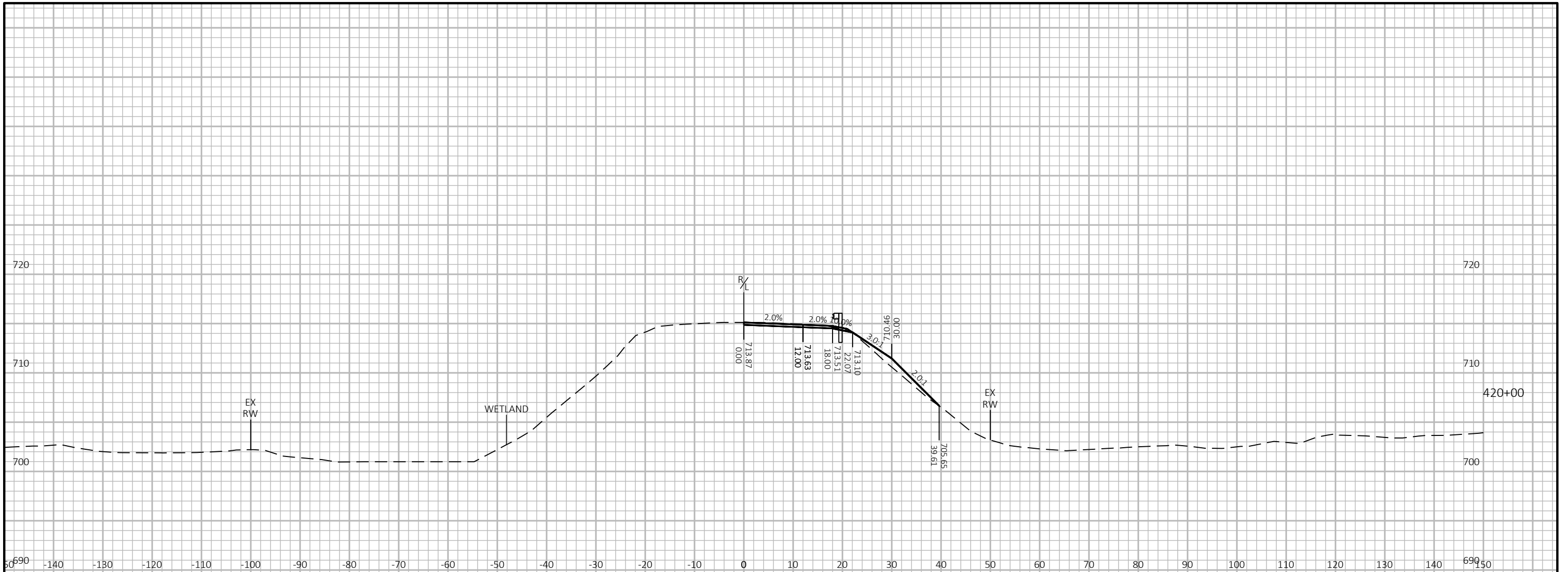




PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E



9
PROJECT NO: 1530-05-73
HWY: USH 10
COUNTY: PEPIN
CROSS SECTIONS: USH 10
SHEET
9

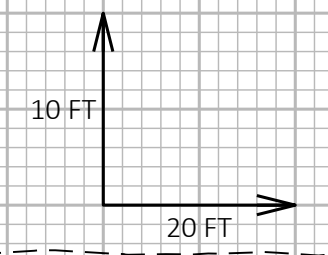
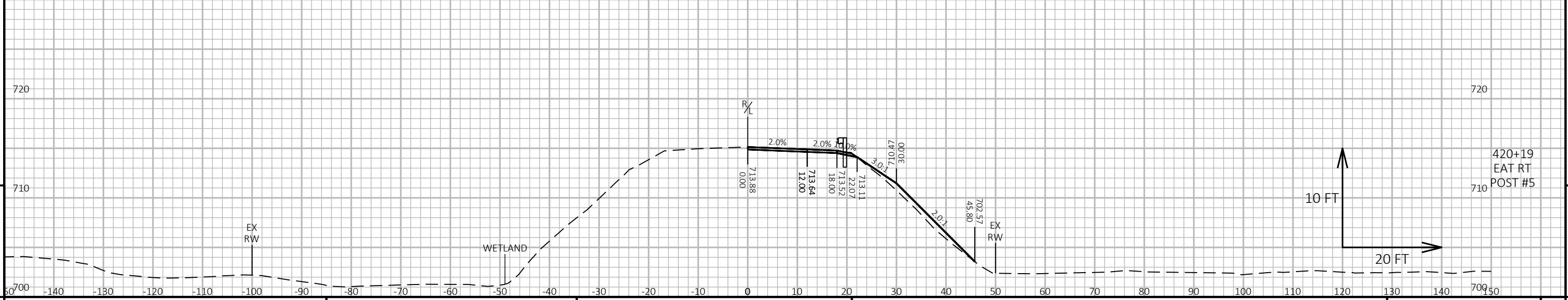
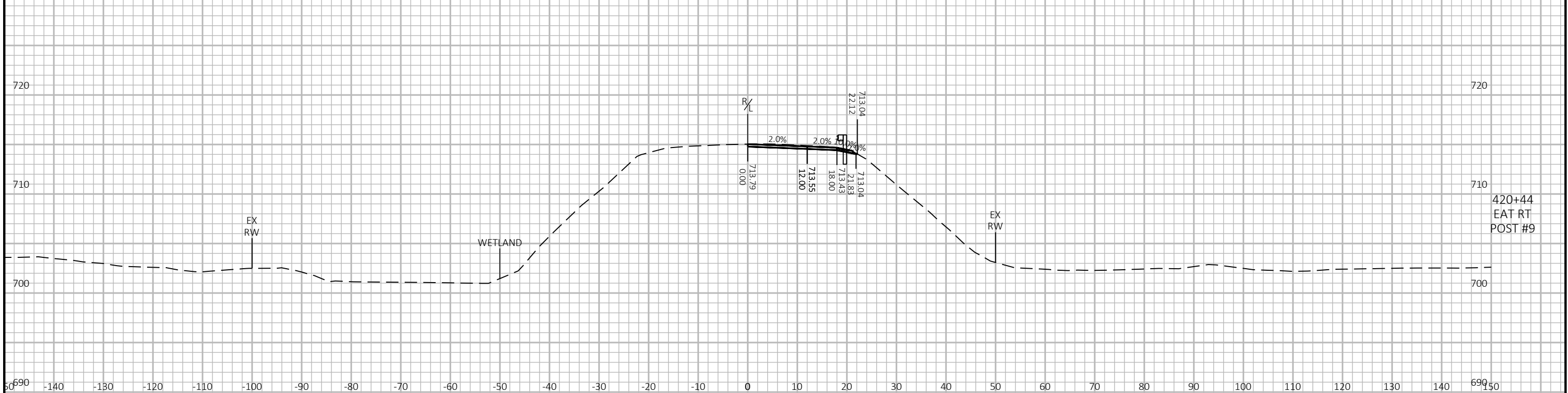
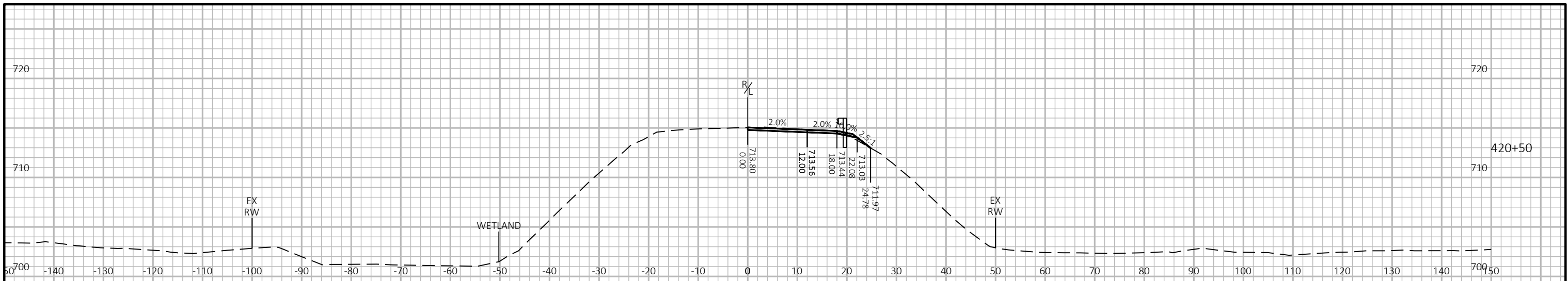


PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET

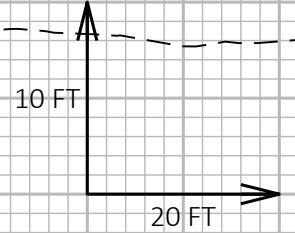
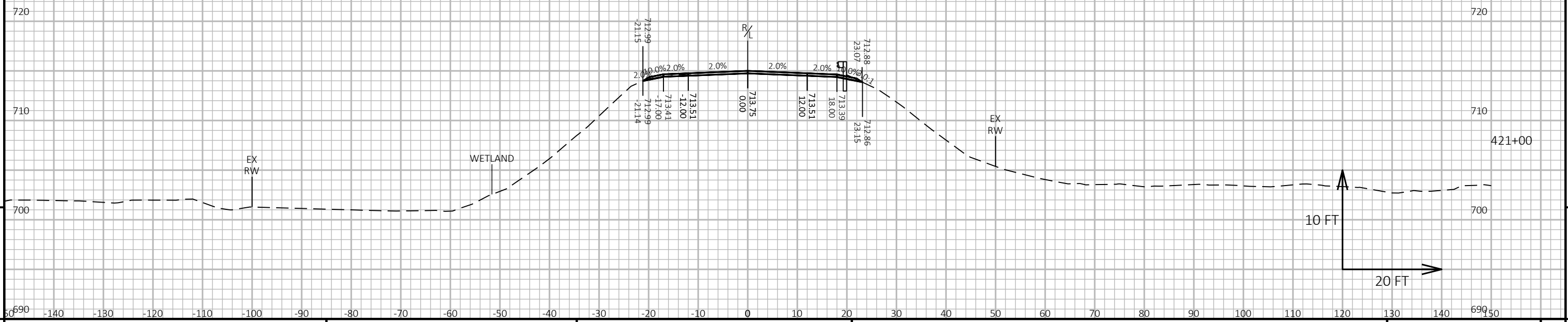
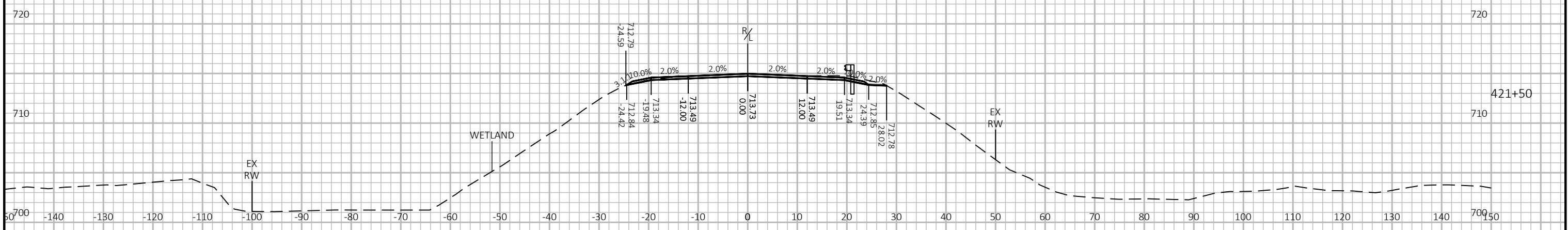
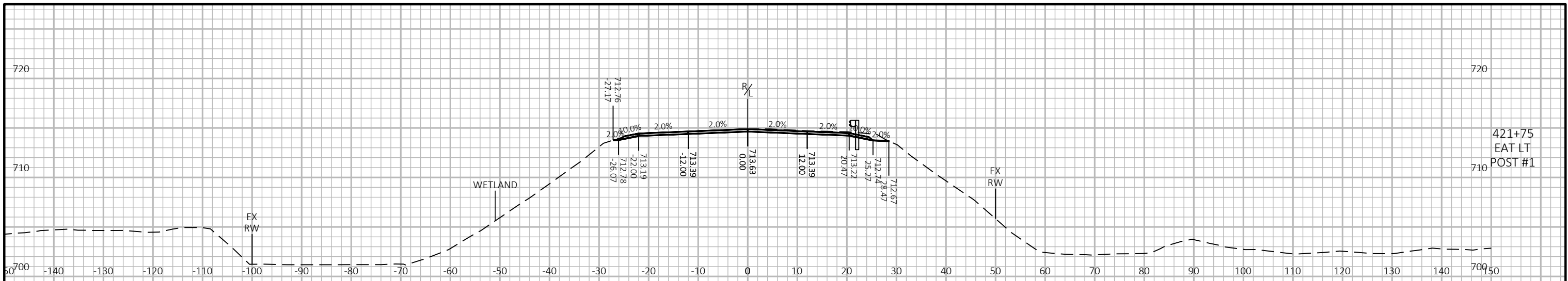
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E



PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E

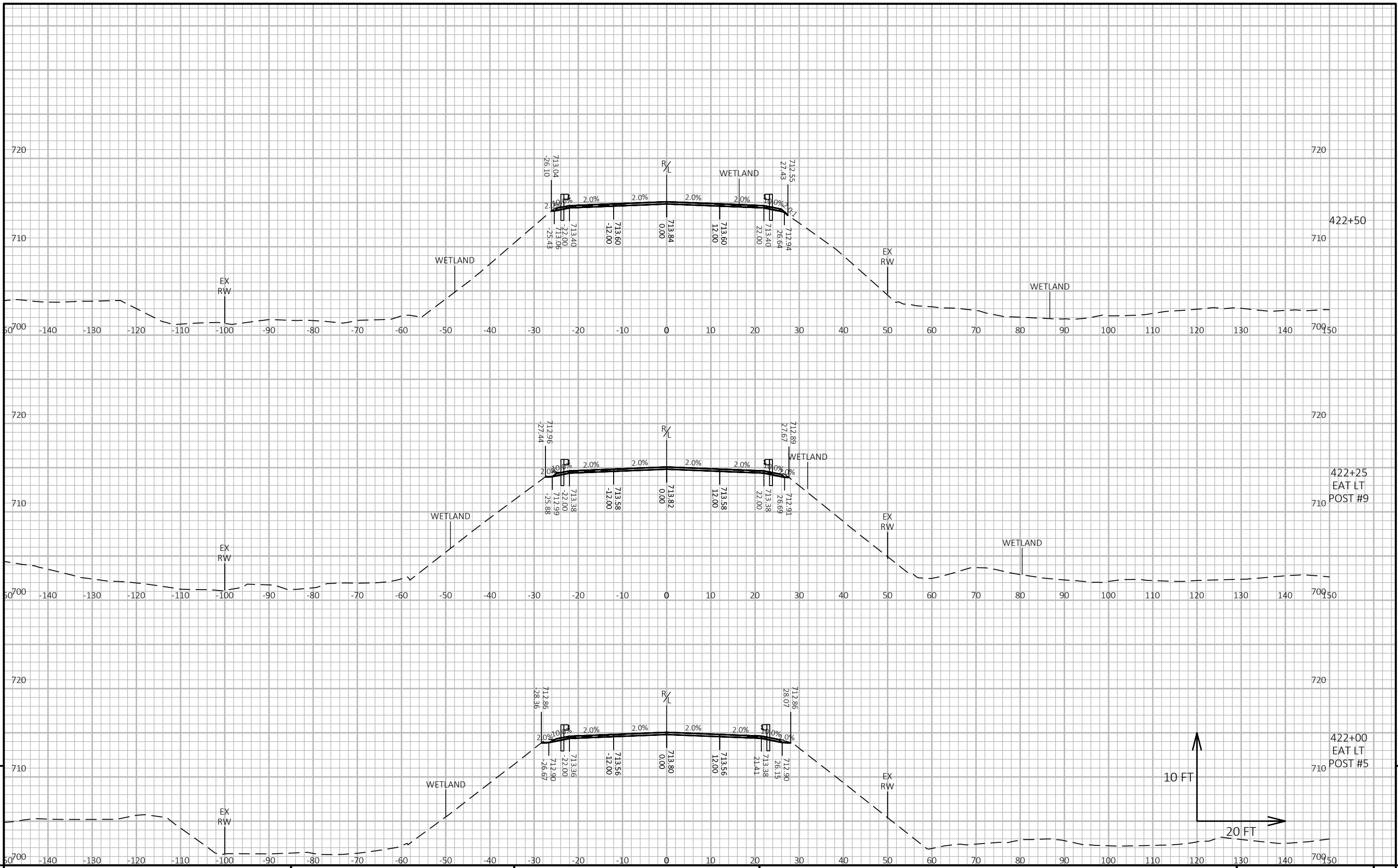


9 9

PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E

FILE NAME: O:\PDS\VC3D\15300503\SHEETSP\AN\090204-XS-STH23-TO-END.DWG PLOT DATE: 7/24/2023 10:23 AM PLOT BY: CORY IHDE PLOT NAME: PLOT SCALE: 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

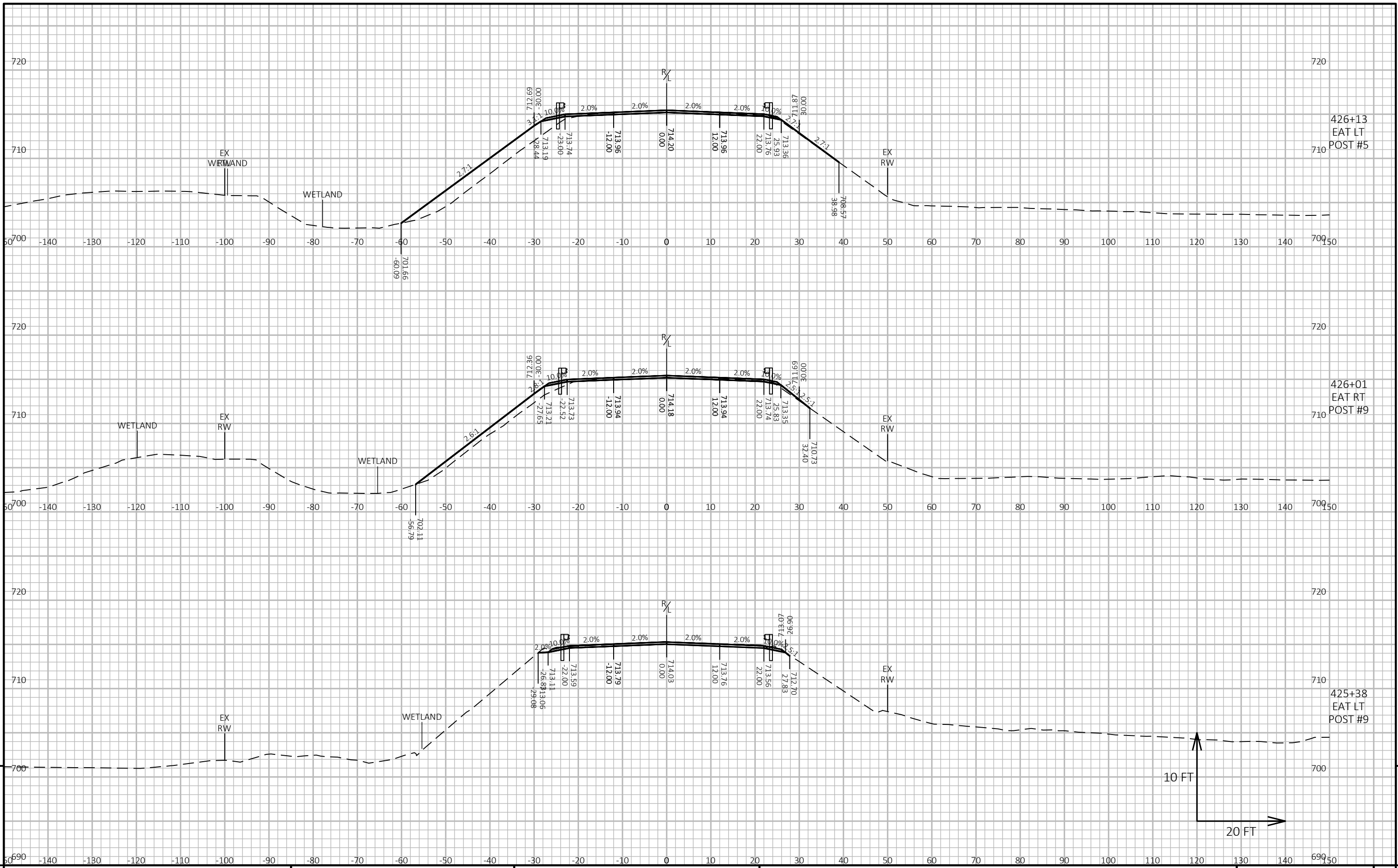
LAYOUT NAME - 20



PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET E

FILE NAME : O:\PDS\C3D\15300503\SHEETSPLAN\090204-XS-STH23-TO-END.DWG PLOT DATE : 7/24/2023 10:24 AM PLOT BY : CORY IHDE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

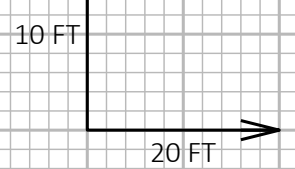
LAYOUT NAME - 21

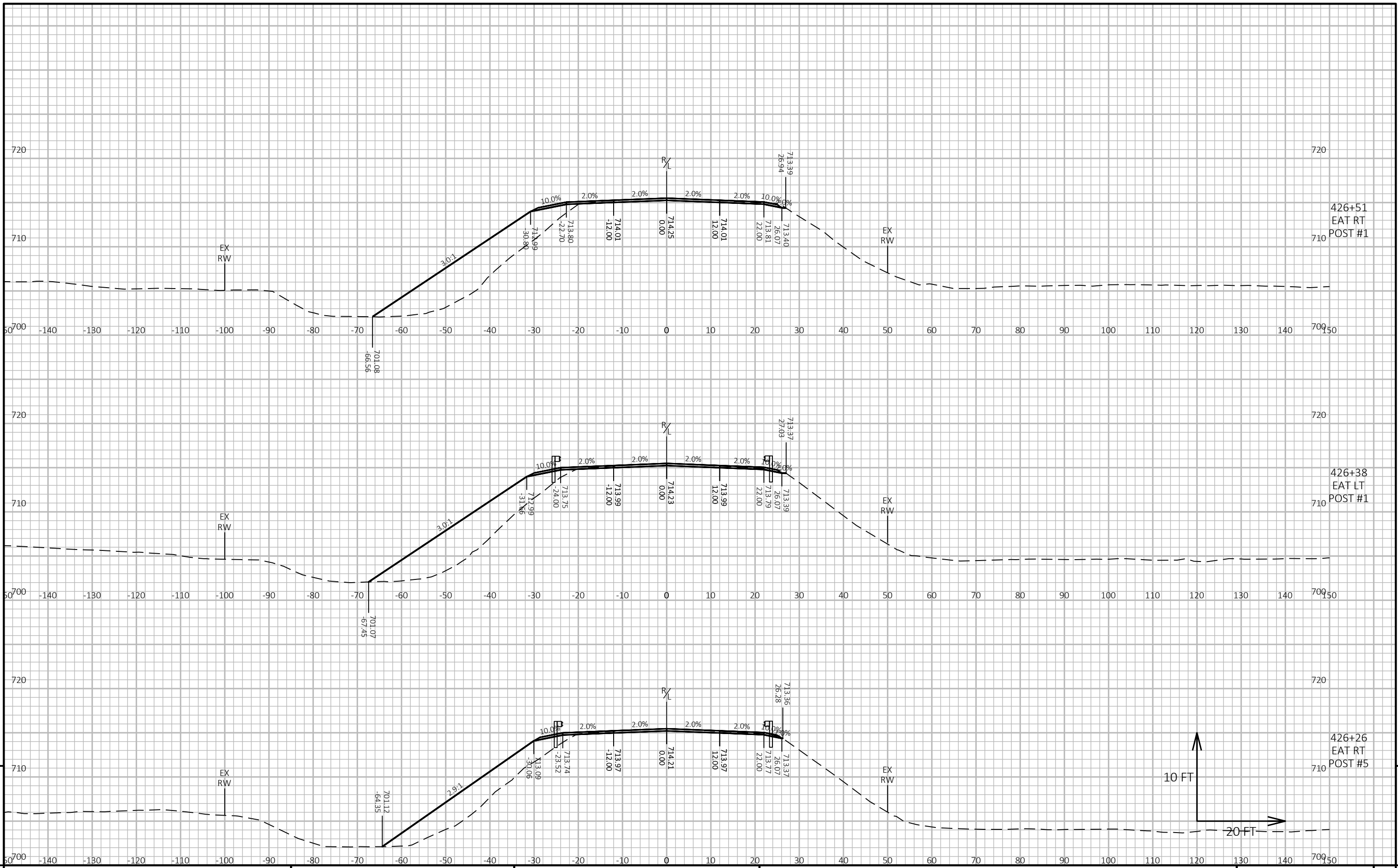


426+13
EAT LT
POST #5

426+01
EAT RT
POST #9

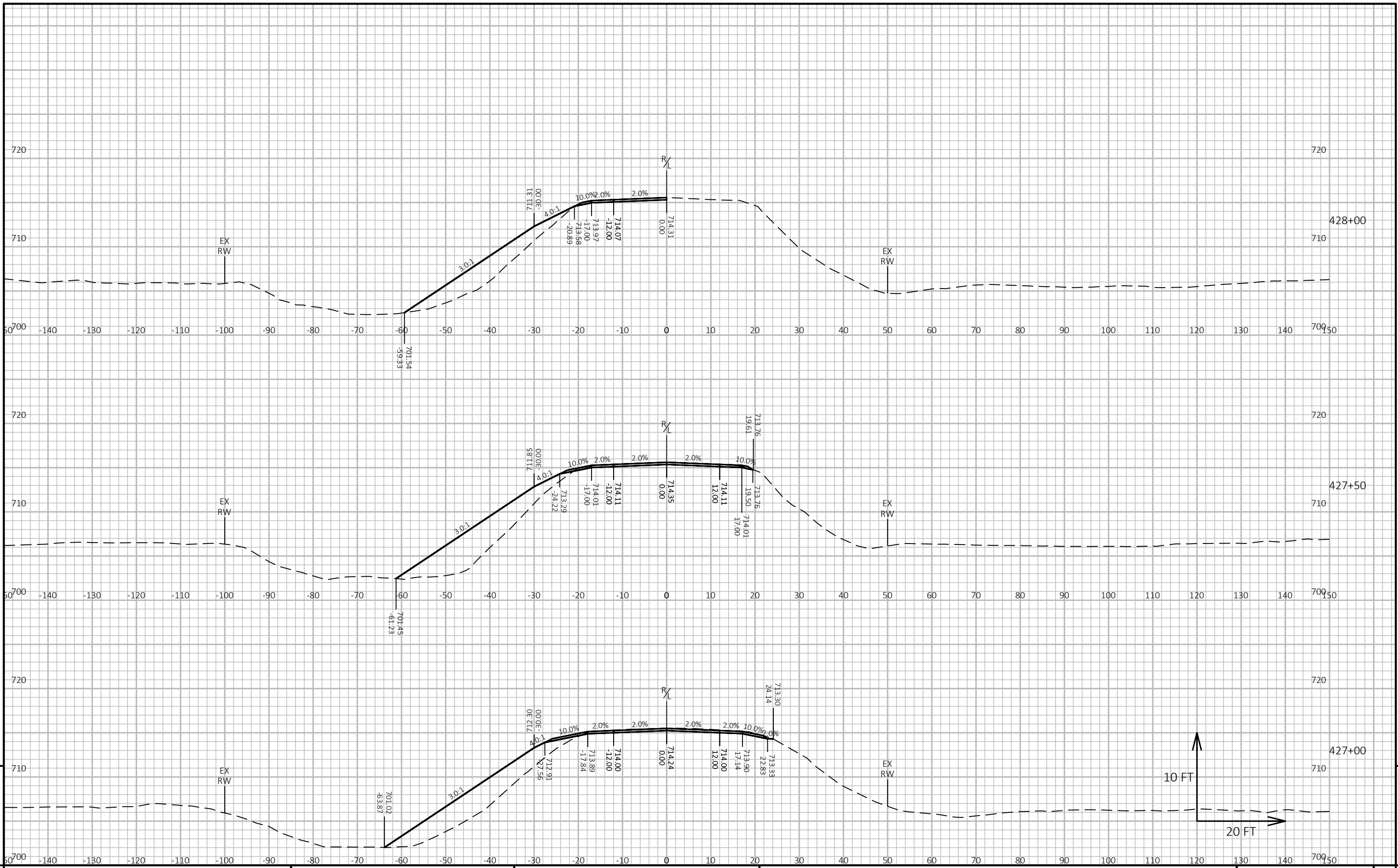
425+38
EAT LT
POST #9



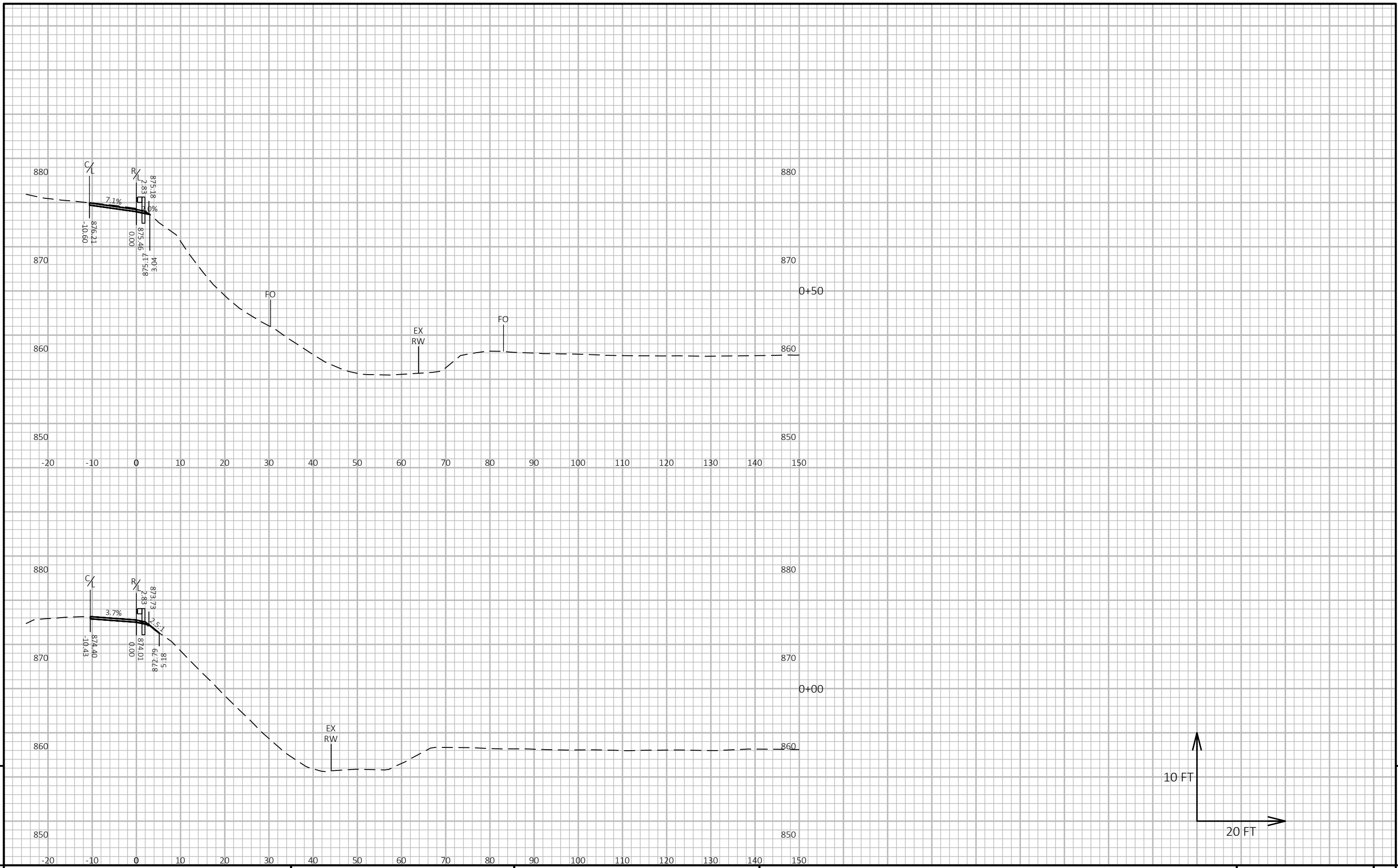


PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET 9

FILE NAME: O:\PDS\3D\15300503\SHEETS\PLAN\090204-XS-STH23-TO-END.DWG PLOT DATE: 7/24/2023 10:25 AM PLOT BY: CORY IHDE PLOT NAME: PLOT SCALE: 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49



PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: USH 10 SHEET 9



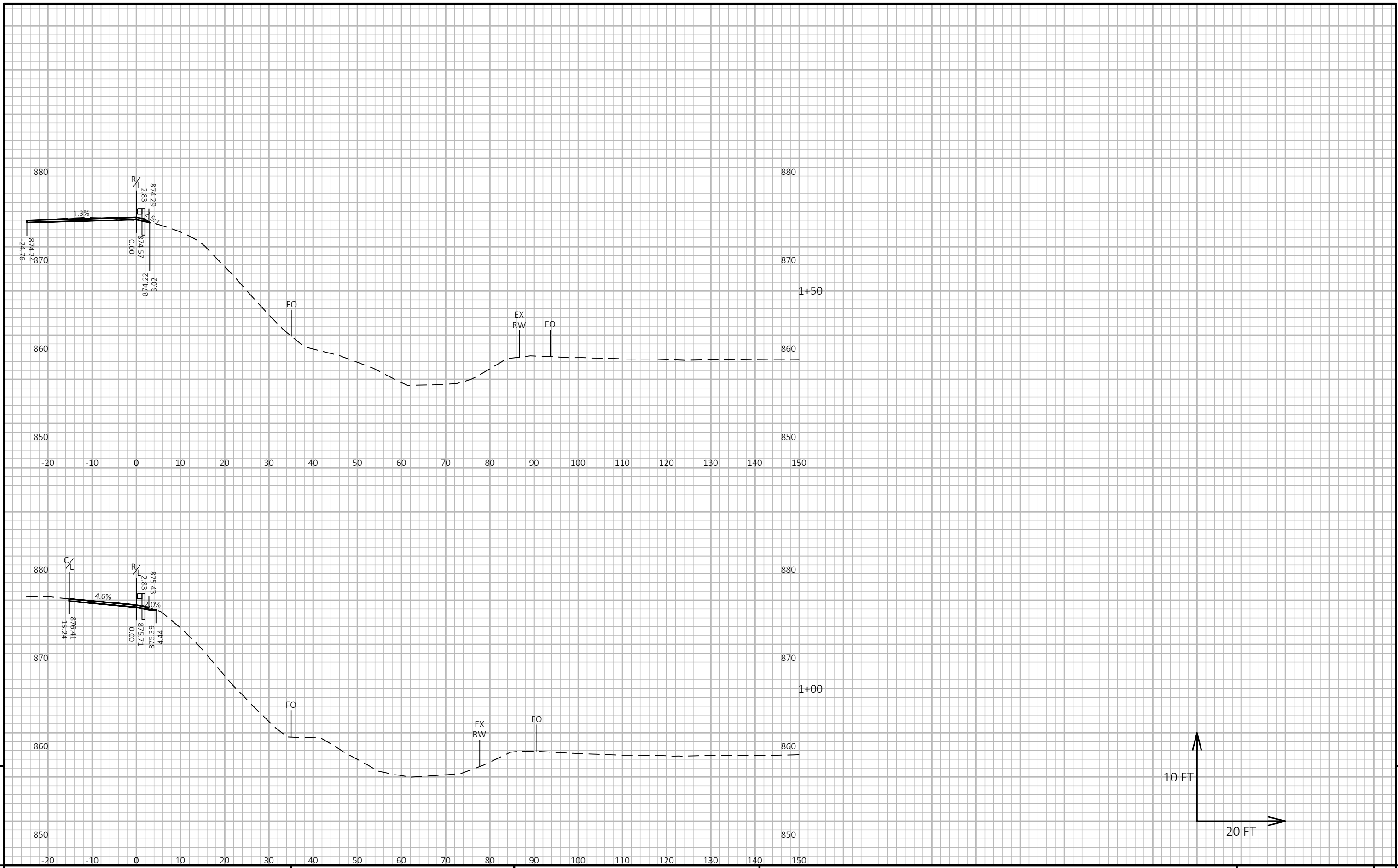
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PROJECT NO: 1530-05-73	HWY: USH 10	COUNTY: PEPIN	CROSS SECTIONS: BAUER LN	SHEET	E
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FILE NAME : O:\PDS\VC3D\15300503\SHETSPLAN\090201-XS-BEGIN-TO-BAUERLN.DWG PLOT DATE : 7/21/2023 1:12 PM PLOT BY : CORY IHDE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 123



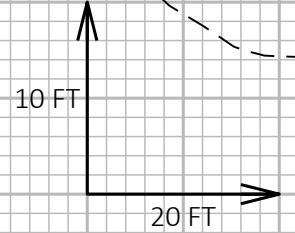
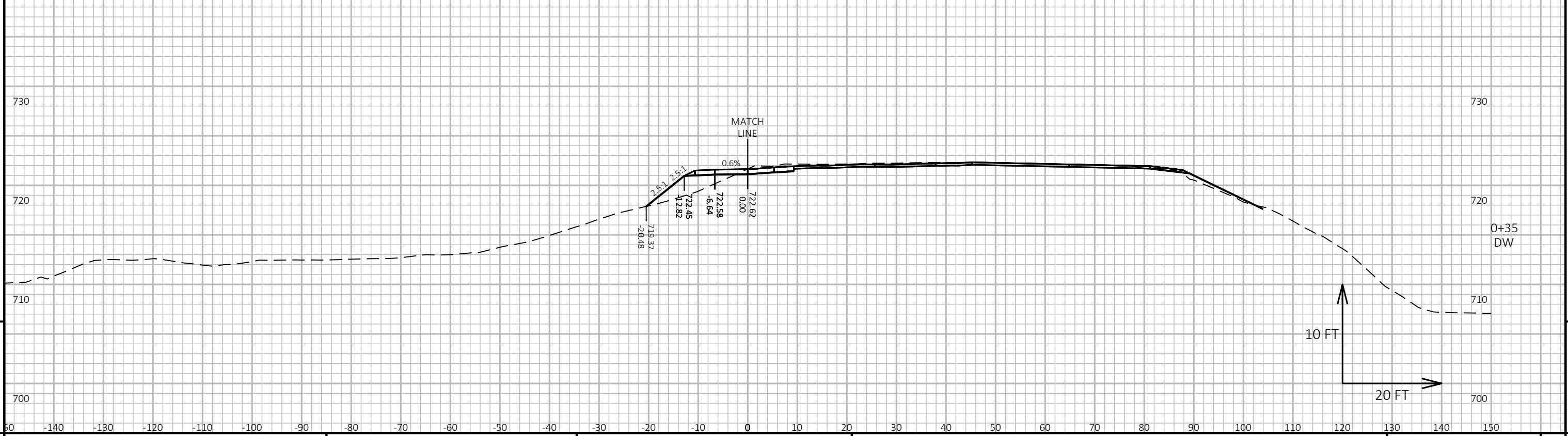
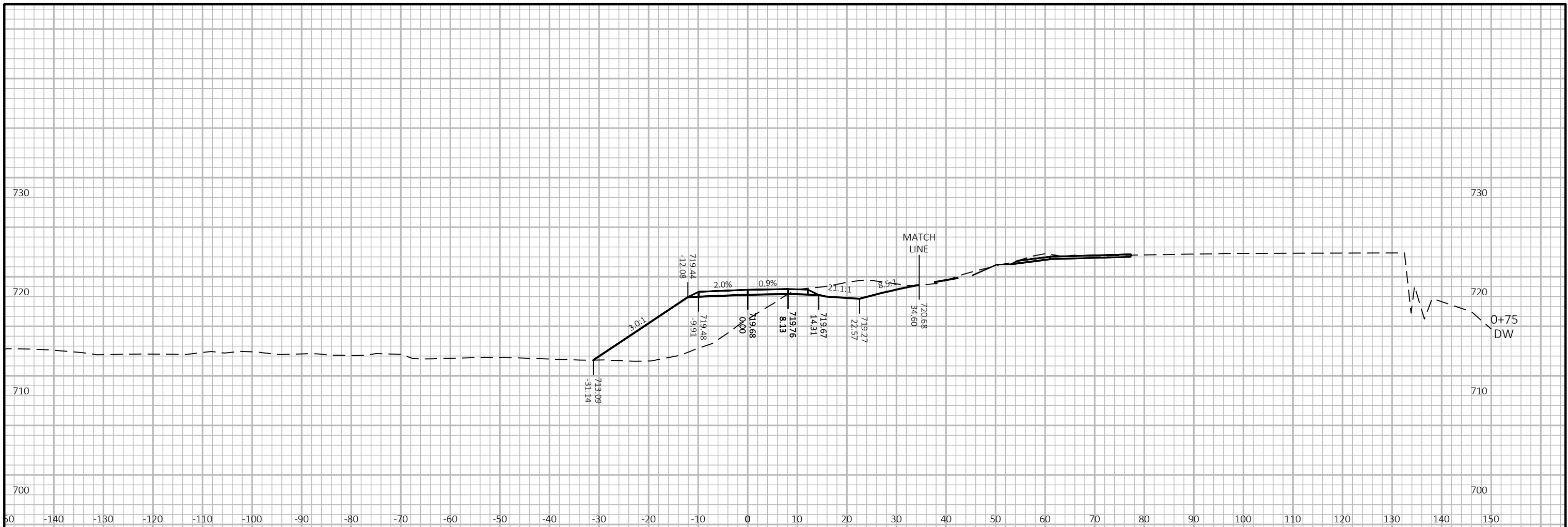
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PROJECT NO: 1530-05-73	HWY: USH 10	COUNTY: PEPIN	CROSS SECTIONS: BAUER LN	SHEET	E
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FILE NAME : O:\PDS\C3D\15300503\SHEETSP\090201-XS-BEGIN-TO-BAUERLN.DWG PLOT DATE : 7/21/2023 1:12 PM PLOT BY : CORY IHDE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 124



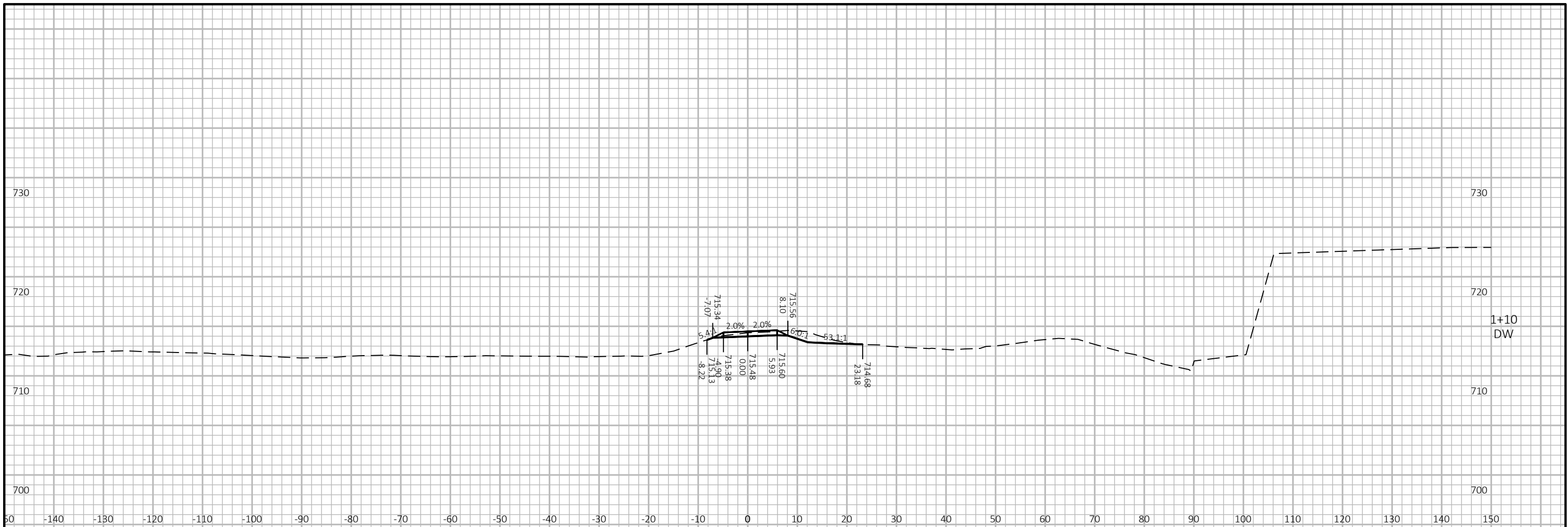
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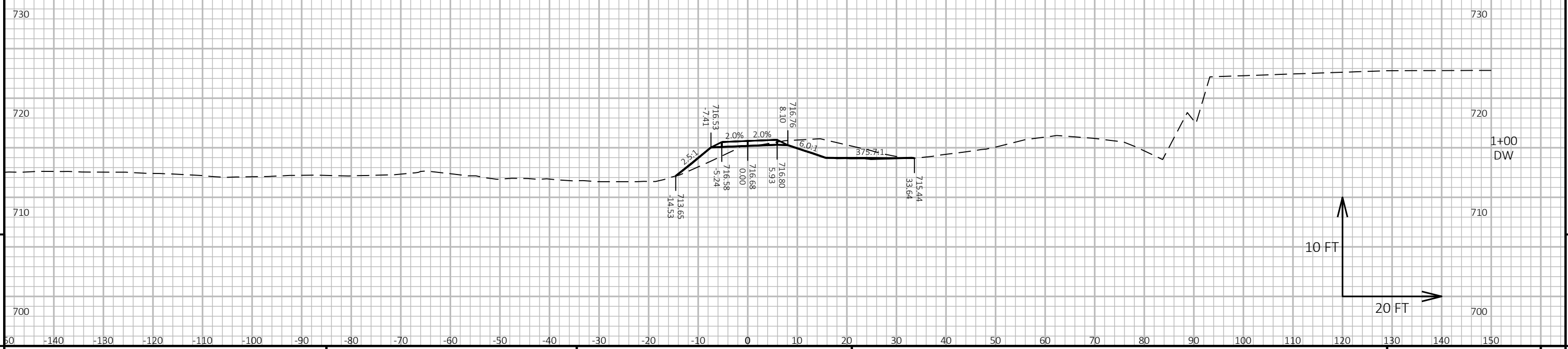
PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: DRIVEWAY STA 323+50 SHEET E

FILE NAME: O:\PDS\3D\15300503\SHEETS\PLAN\090203-XS-CTHX-TO-STH23.DWG PLOT DATE: 7/24/2023 10:30 AM PLOT BY: CORY IHDE PLOT NAME: PLOT SCALE: 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

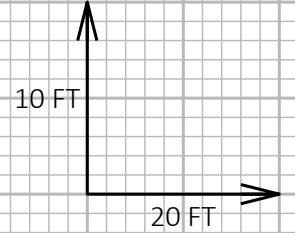
LAYOUT NAME - 50



1+10
DW



1+00
DW



9

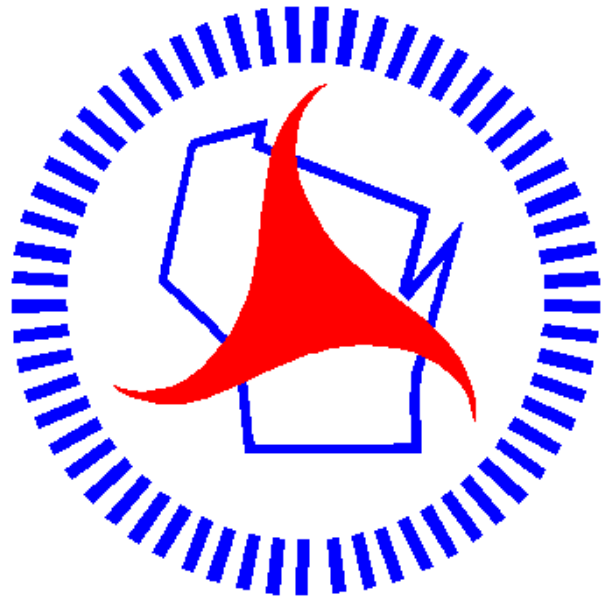
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PROJECT NO: 1530-05-73 HWY: USH 10 COUNTY: PEPIN CROSS SECTIONS: DRIVEWAY STA 323+50 SHEET E

FILE NAME : O:\PDS\C3D\15300503\SHEETSPLAN\090203-XS-CTHX-TO-STH23.DWG PLOT DATE : 7/24/2023 10:31 AM PLOT BY : CORY IHDE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 51

Notes



Wisconsin Department of Transportation

Dedicated people creating transportation solutions through innovation and exceptional service.

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