EAU

DECEMBER 2023

PROJECT ID: 1530-00-79

WITH: 1530-02-70, 1530-02-80

COUNTY: PIERCE

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 (Includes Erosion Control Plans)
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 = 392



30

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1530-00-79	WISC 2024074	1
1530-02-70	WISC 2024075	1
1530-02-80	WISC 2024076	1

PRESCOTT - ELLSWORTH
SPRING CR CULVERTS C-47-0060 & 0061

USH 10
PIERCE COUNTY

STATE PROJECT NUMBER
1530-00-79

PRESCOTT - ELLSWORTH
STH 29 TO SOUTH JUNCTION USH 63

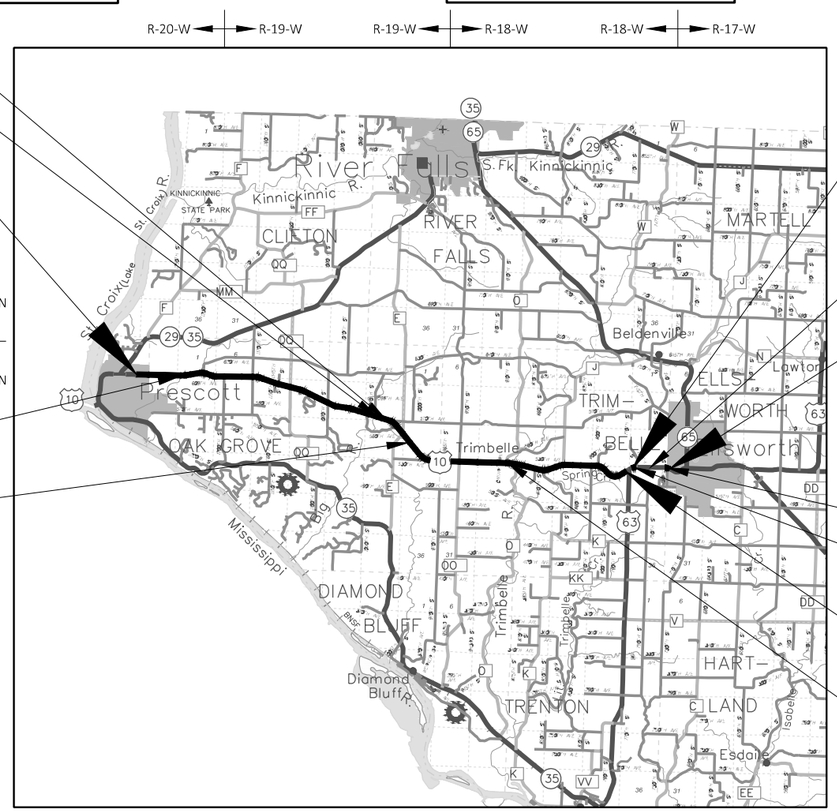
USH 10
PIERCE COUNTY

STATE PROJECT NUMBER
1530-02-70

PRESCOTT - ELLSWORTH
STH 29 TO SOUTH JUNCTION USH 63

USH 10
PIERCE COUNTY

STATE PROJECT NUMBER
1530-02-80



BEGIN PROJECT 1530-02-70
& 1530-02-80
STA. 82+45 'USH 10'
Y= 328333.530
X= 405175.560

EXCEPTION TO NET C/L LENGTH
STA. 147+26 'USH 10' - STA. 147+94 'USH 10'
STRUCTURE B-47-0105

EXCEPTION TO NET C/L LENGTH
STA. 479+52 'USH 10' - STA 490+04 'USH 10'

BEGIN PROJECT 1530-00-79
STA. 246+50
Y= 317,254.69
X= 475245.59

EXCEPTION TO NET C/L LENGTH
STA. 250+37 - STA 289+37

END PROJECT 1530-00-79
STA. 292+66

C-47-0061

C-47-0060

END PROJECT 1530-02-70
& 1530-02-80
STA. 811+81 'USH 10'

EXCEPTION TO NET C/L LENGTH
STA. 641+03 'USH 10' - STA 642+27 'USH 10'
STRUCTURE B-47-0038

DESIGN DESIGNATION			1530-00-79	1530-02-70, 1530-02-80
A.A.D.T.	(2022)	=	6,940	(2022) 3,600-4,500
A.A.D.T.	(2042)	=	7,850	(2042) 4,200-5,300
D.H.V.		=	810	650
D.D.		=	60/40	60/40
T.		=	12.4%	15.4%
DESIGN SPEED		=	55 MPH	55 MPH
ESALS		=	1,679,000	1,800,000

CONVENTIONAL SYMBOLS

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

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

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

LAYOUT
SCALE 0 4 MI

TOTAL NET LENGTH OF CENTERLINE = 0.136 MI (PROJECT 1530-00-79)
TOTAL NET LENGTH OF CENTERLINE = 13.578 MI (PROJECT 1530-02-70/-80)

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

ORIGINAL PLANS PREPARED BY

KL Engineering
[A] Better Experience

WISCONSIN
BRIAN J. ST. VINCENT
44329-6
FITCHBURG, WI
PROFESSIONAL ENGINEER

JULY 12, 2023 (Date)

(Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	QUEST, LLC.
Designer	KL ENGINEERING, INC.
Project Manager	TYLER RONGSTAD, P.E.
Regional Examiner	NW REGION
Regional Supervisor	TYLER RONGSTAD, P.E.

APPROVED FOR THE DEPARTMENT

Tyler Rongstad

DATE: _____ (Signature)

E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\010101-TI.DWG PLOT DATE : 7/12/2023 11:26 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME :

ABBREVIATIONS

BAD	BASE AGGREGATE DENSE
BM	BENCH MARK
BLDG.	BUILDING
CBTP	CONCRETE BARRIER TEMPORARY PRECAST
CTR	CENTER
C/L	CENTERLINE
C.E.	COMMERCIAL ENTRANCE
CONC.	CONCRETE
CSW	CONCRETE SIDEWALK
CMCP	CORRUGATED METAL CULVERT PIPE
CP	CULVERT PIPE
CPCS	CULVERT PIPE CORRUGATED STEEL
CPRC	CULVERT PIPE REINFORCED CONCRETE
CPRCHE	CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL
CPT	CONSTRUCTION PERMIT
DMS	DYNAMIC MESSAGE SIGN
EAT	ENERGY ABSORBING TERMINAL
EB	EASTBOUND
ELEC	ELECTRIC
IE	INVERT ELEVATION
EX. OR EXIST	EXISTING
FO	FIBER OPTIC
F.E.	FIELD ENTRANCE
GAS	GAS
HMA	HOT MIX ASPHALT
HSE.	HOUSE
LHF	LEFT HAND FORWARD
MH	MANHOLE
MAX.	MAXIMUM
MIN.	MINIMUM
NOR.	NORMAL
NTS	NOT TO SCALE
PLE	PERMANENT LIMITED EASEMENT
P.E.	PRIVATE ENTRANCE
P.L.	PROPERTY LINE
PRW	PROPOSED RIGHT-OF-WAY
RAD OR R	RADIUS
R/L	REFERENCE LINE
REQ'D.	REQUIRED
RHF	RIGHT HAND FORWARD
RW	RIGHT-OF-WAY LINE
SAN	SANITARY SEWER
SHLD	SHOULDER
SW	SIDEWALK
SF	SQUARE FEET
SY	SQUARE YARD
S.D.D.	STANDARD DETAIL DRAWING
STA	STATION
SS	STORM SEWER
TEL	TELEPHONE
TLE	TEMPORARY LIMITED EASEMENT
TYP	TYPICAL
WAT	WATER
WB	WESTBOUND

UTILITIES

COMMUNICATIONS

AT&T WISCONSIN - COMMUNICATION LINE
RICK PODOLAK
304 S. DEWEY ST., 4TH FLOOR
EAU CLAIRE, WI 54701
PHONE: (715) 839-5565
MOBILE: (715) 410-0656
EMAIL: RP4514@ATT.COM

CENTURYLINK - COMMUNICATION LINE
KYLE SCHLAMPP
20 S. WILSON AVE.
RICE LAKE, WI 54868
PHONE: (715) 475-2029
MOBILE: (715) 292-0082
EMAIL: KYLE.SCHLAMPP@LUMEN.COM

COMCAST - COMMUNICATION LINE
BENJAMIN UELAND
6746 REDWOOD AVE
ARDEN HILLS, MN 55126
PHONE: (612) 462-7911
EMAIL: BENJAMIN_UELAND@CABLE.COMCAST.COM

GAS - PETROLEUM

ST. CROIX GAS - GAS/PETROLEUM
GREG LEE
415 S. SECOND ST.
RIVER FALLS, WI 54022
PHONE: (715) 425-6177
EMAIL: GREG@STCROIXGAS.COM

ELECTRICITY

DAIRYLAND POWER COOPERATIVE - ELECTRICITY
ROB MALY
3200 EAST AVE. S.
P.O. BOX 817
LA CROSSE, WI 54602
PHONE: (608) 787-1427
MOBILE: (608) 518-2633
EMAIL: ROB.MALY@DAIRYLANDPOWER.COM

PIERCE PEPIN COOPERATIVE SERVICES - ELECTRICITY
BRAD RISTOW
W7725 U.S. HIGHWAY 10
P.O. BOX 420
ELLSWORTH, WI 54011
PHONE: (715) 273-2473
EMAIL: BRISTOW@PIERCEPEPIN.COOP

XCEL ENERGY - ELECTRICITY-DISTRIBUTION
BRIAN MELLO
2001 OLD HWY 35 S
HUDSON, WI 54016
PHONE: (715) 377-1810
EMAIL: BRIAN.M.MELLO@XCELENERGY.COM

XCEL ENERGY - ELECTRICITY-TRANSMISSION
MITCHELL DIENGER
414 NICOLLET MALL, 5TH FLOOR
MINNEAPOLIS, MN 55401
PHONE: (612) 321-3109
MOBILE: (608) 386-2233
EMAIL: MITCHELL.A.DIENGER@XCELENERGY.COM

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

ORDER OF DETAIL SHEETS

PROJECT OVERVIEW
TYPICAL SECTIONS
CONSTRUCTION DETAILS
PAVEMENT MARKING
TRAFFIC CONTROL PLAN
DETOUR PLAN
CONTROL POINTS

AREA CONTACTS

WISDOT - PROJECT MANAGER

TYLER RONGSTAD, P.E.
WISDOT NW REGION
718 W. CLAIREMONT AVE
EAU CLAIRE, WI 54701
PHONE: (715) 461-0372
EMAIL: TYLER.RONGSTAD@DOT.WI.GOV

WISCONSIN DNR - LIASON

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
ATTN: AMY LESIK
ENVIRONMENTAL ANALYSIS AND REVIEW SPECIALIST
1300 WEST CLAIREMONT AVENUE
EAU CLAIRE, WI 54702-4001
PHONE: (715) 836-6571
EMAIL: AMY.LESIK@WISCONSIN.GOV

DESIGN CONTACT

BRIAN ST. VINCENT
KL ENGINEERING, INC.
5400 KING JAMES WAY #200
MADISON WI, 53719
PHONE: (608) 663-1218
EMAIL: BSTVINCENT@KLENGINEERING.COM

GENERAL NOTES

THE LOCATION OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN IN THE PLAN, ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN. CONTACT DIGGERS HOTLINE AND AFFECTED UTILITIES PRIOR TO START OF WORK.

UTILITY LOCATION MARKERS ON THE CROSS SECTIONS ARE FOR APPROXIMATE HORIZONTAL REFERENCE ONLY.

REMOVAL ITEMS REQUIRING RESTORATION OF CONCRETE OR ASPHALT SHALL BE REMOVED TO AN EXISTING JOINT OR SAWED AS DETERMINED BY THE ENGINEER.

EROSION CONTROL FEATURES AS SHOWN IN THE PLANS ARE AT SUGGESTED LOCATIONS. THE ENGINEER MAY MODIFY LOCATIONS AS NEEDED.

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

PIPE ELEVATIONS, LENGTHS, AND LOCATIONS AS SHOWN ON THE PLANS, MAY BE ADJUSTED TO FIT EXISTING FIELD CONDITIONS AS APPROVED BY THE ENGINEER. CPRC SHALL BE JOINT TIED ACROSS ENTIRE LENGTH.

DRIVEWAY RECONSTRUCTION TO FOLLOW SDD 08D22 DRIVEWAYS WITHOUT CURB AND GUTTER RESURFACING PROJECTS RURAL. CONCRETE DRIVEWAYS TO FOLLOW SDD LAYOUT BUT CONSIST OF CONCRETE DRIVEWAY 6-INCH OVER BASE AGGREGATE DENSE 1 1/4-INCH, 6-INCH. DRIVEWAY WIDTHS TO MATCH EXISTING.

FINAL PLACEMENT OF FLUME MUST MAINTAIN MINIMUM POST SEPARATION DISTANCES PER STANDARD DETAIL.

STATIONING AND OFFSETS TO APRON ENDWALLS FOR CULVERT PIPES ARE SHOWN TO THE END OF THE PIPE.

FINAL LOCATIONS OF BUTT JOINTS, CONCRETE PAVEMENT REPAIR/REPLACEMENT, AND ASPHALTIC SURFACE PATCHING SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.

CONCRETE PAVEMENT REPAIR/REPLACEMENT SHALL BE COMPLETED DURING THE SAME DAY OF REMOVAL UNDER FLAGGING OPERATIONS. COMPLETE CONCRETE PAVEMENT REPAIRS/REPLACEMENT PRIOR TO GRINDING OF THE EXISTING PAVEMENT.

CONCRETE PAVEMENT REPAIR/REPLACEMENT ITEMS ARE FOR THE UPPER LAYER OF CONCRETE PAVEMENT ONLY, WITH A DEPTH OF 7 INCHES. LOWER LAYERS OF CONCRETE PAVEMENT SHOULD NOT BE REPAIRED.

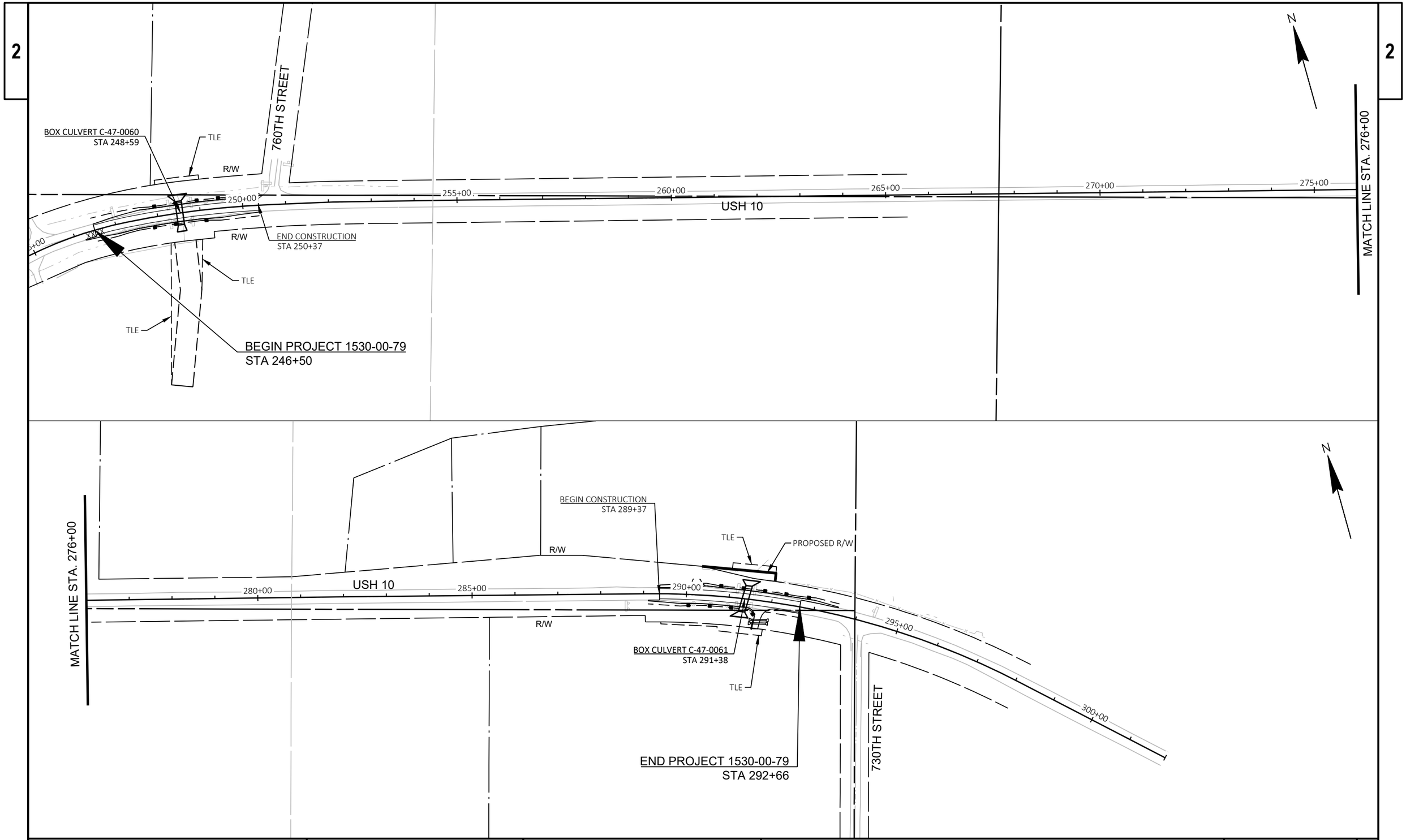
CONTRACTOR IS RESPONSIBLE FOR RESHAPING AND FINISHING ANY PREVIOUSLY GRASSED AREAS WHICH ARE DISTURBED BY THEIR OPERATION OUTSIDE THE NORMAL CONSTRUCTION LIMITS.

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

THE HMA PAVEMENT WEIGHT CALCULATIONS ARE BASED ON 112 LBS/SY/IN. TACK COAT QUANTITIES BASED ON 0.07 GAL/SY APPLICATION RATE.

HMA PAVEMENT, WHEN INDICATED ON THE PLANS, SHALL CONSIST OF COURSES AS FOLLOWS:

LOCATION	TOTAL DEPTH	LAYERS	GRADATION	TRAFFIC	BINDER	DESIGNATION	NOTE
1530-00-79							
USH 10	7-INCH	2.00" UPPER 2.50" LOWER 2.50" LOWER	4 4 4	MT MT MT	58-34 58-34 58-34	S S S	BOX CULVERT FULL DEPTH PAVEMENT
1530-02-70, 1530-02-80							
USH 10	2-INCH	2.00" UPPER	5	MT	58-34	V	OVERLAY PAVEMENT
USH 10	2.75-INCH	1.50" UPPER 1.25" LOWER	5 5	MT MT	58-34 58-34	V V	OVERLAY PAVEMENT
USH 10	4.25-INCH	1.50" UPPER 1.25" LOWER 1.50" LOWER	5 5 ASPHALTIC SURFACE	MT MT	58-34 58-34	V V	SHOULDER WIDENING PAVEMENT
USH 10	7-INCH	1.50" UPPER 1.25" LOWER 2.00" LOWER 2.25" LOWER	5 5 4 4	MT MT MT MT	58-34 58-34 58-34 58-34	V V S S	BRIDGE APPROACH FULL DEPTH PAVEMENT
USH 10	7-INCH	1.50" UPPER 1.25" LOWER 4.25" LOWER	5 5 ASPHALTIC SURFACE	MT MT	58-34 58-34	V V	CULVERT PIPE REPLACEMENT PAVEMENT (SEE DETAIL)

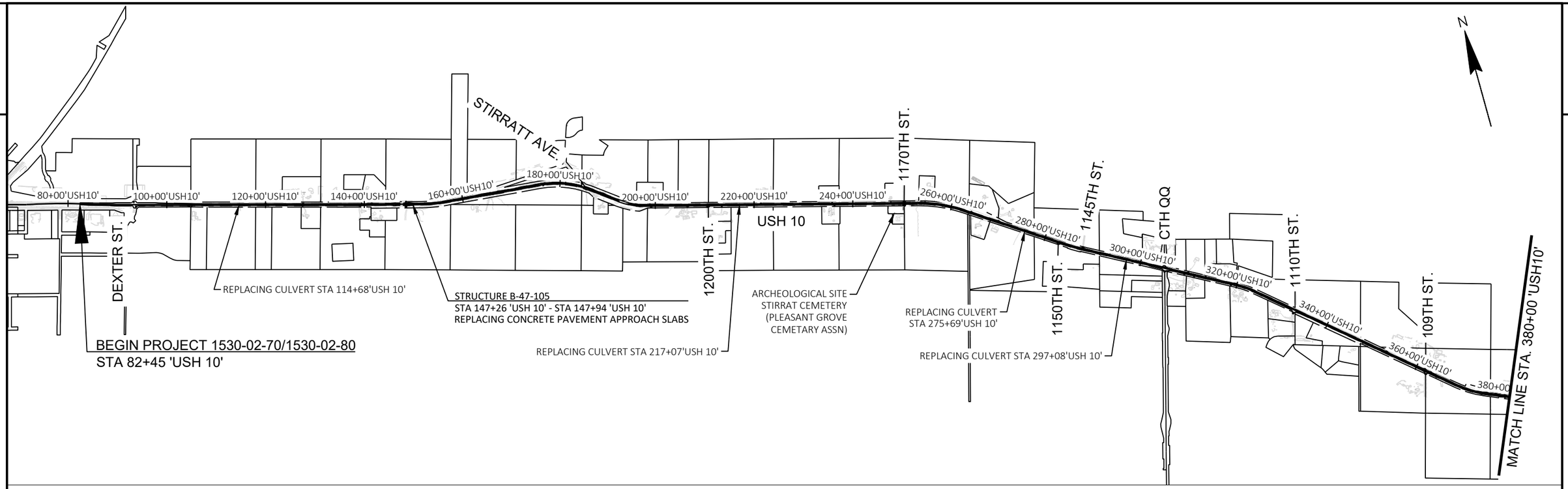


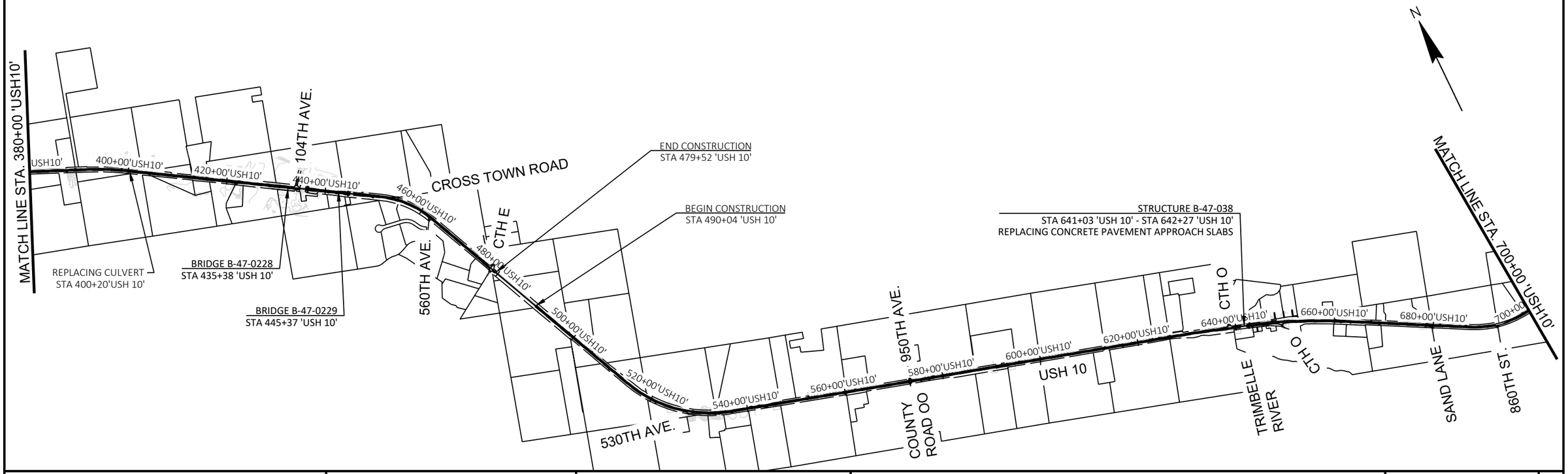
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PROJECT NO: 1530-00-79	HWY: USH 10	COUNTY: PIERCE	PROJECT OVERVIEW	SHEET 3	E

FILE NAME : G:\WDOTNW\19004-007 (USH 10 CULVERTS)\CIVIL 3D\SHEETSPLAN\020201-PO.DWG
LAYOUT NAME - 020201-po
PLOT DATE : 7/17/2023 9:05 AM
PLOT BY : KL ENGINEERING, INC.
PLOT NAME :
PLOT SCALE : ##########
WISDOT/CADDS SHEET 42

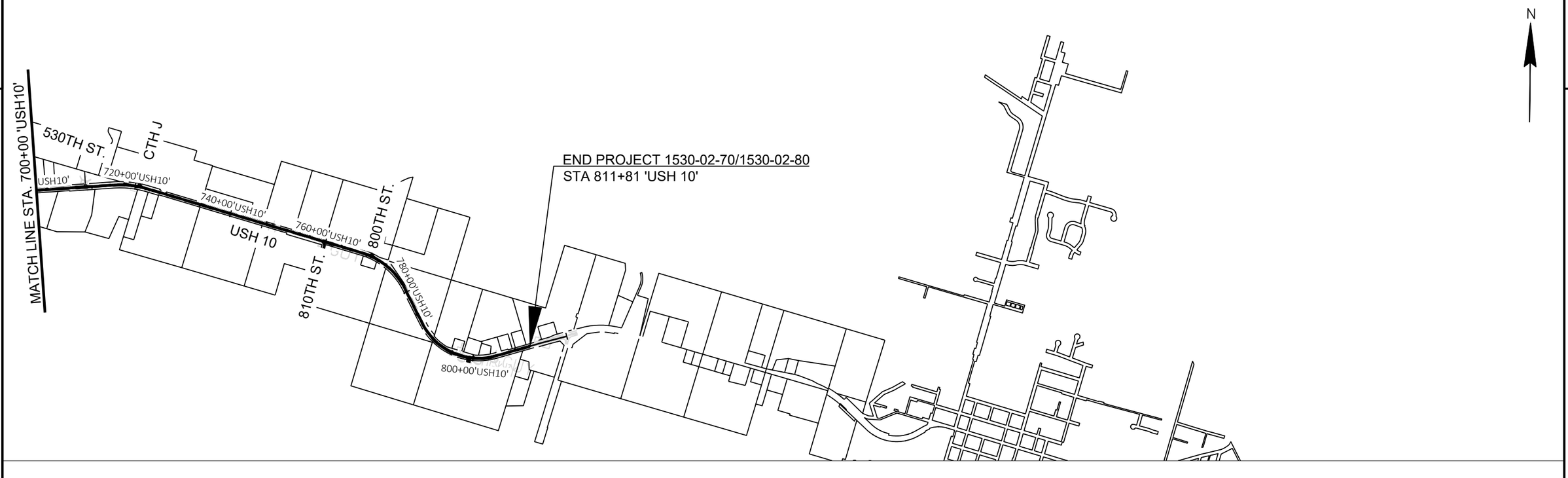
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PROJECT NO: 1530-02-70, 1530-02-80	HWY: USH 10	COUNTY: PIERCE	PROJECT OVERVIEW	SHEET 4	E

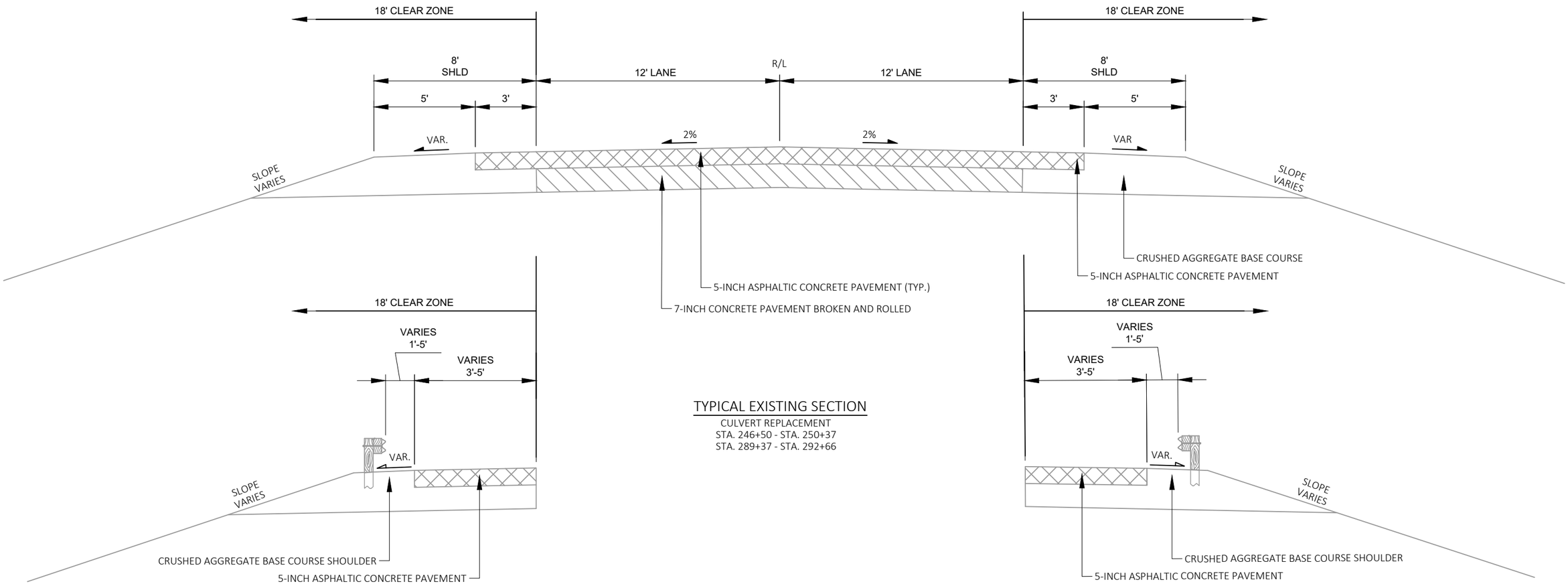
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LAYOUT NAME - 020201-po
PLOT DATE : 10/4/2023 9:57 AM
PLOT BY : KL ENGINEERING, INC.
PLOT NAME :
PLOT SCALE : ##########
WISDOT/CADDS SHEET 42



2

PROJECT NO: 1530-02-70, 1530-02-80	HWY: USH 10	COUNTY: PIERCE	PROJECT OVERVIEW	SHEET 5	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\020201-PO.DWG
LAYOUT NAME - 020201-po (2)
PLOT DATE : 7/14/2023 10:06 AM
PLOT BY : KL ENGINEERING, INC.
PLOT NAME :
PLOT SCALE : ##########
WISDOT/CADDS SHEET 42



TYPICAL EXISTING SECTION

CULVERT REPLACEMENT
STA. 246+50 - STA. 250+37
STA. 289+37 - STA. 292+66

PARTIAL EXISTING SECTION

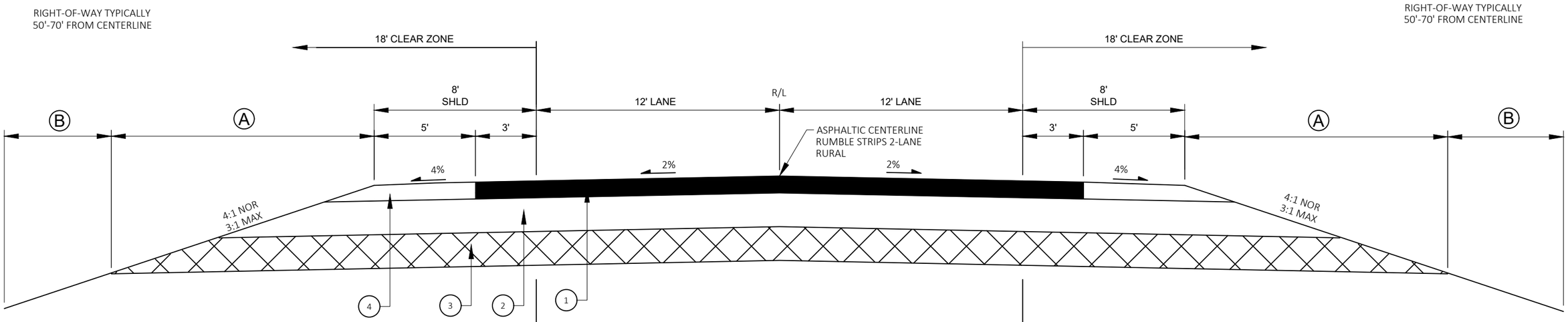
STA. 247+91 - STA. 250+19
STA. 290+46 - STA. 292+36

PARTIAL EXISTING SECTION

STA. 246+91 - STA. 249+23
STA. 289+92 - STA. 291+62

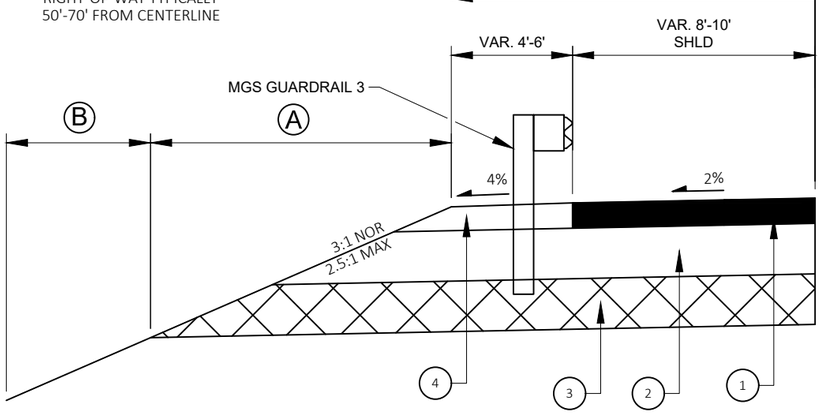
PROJECT NO: 1530-00-79	HWY: USH 10	COUNTY: PIERCE	TYPICAL SECTIONS	SHEET 6	E

FILE NAME : G:\WDOTNW\19004-007 (USH 10 CULVERTS)\CIVIL 3D\SHEETSPLAN\020301_TS.DWG
LAYOUT NAME - 01-Existing
PLOT DATE : 7/17/2023 9:54 AM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : ##########



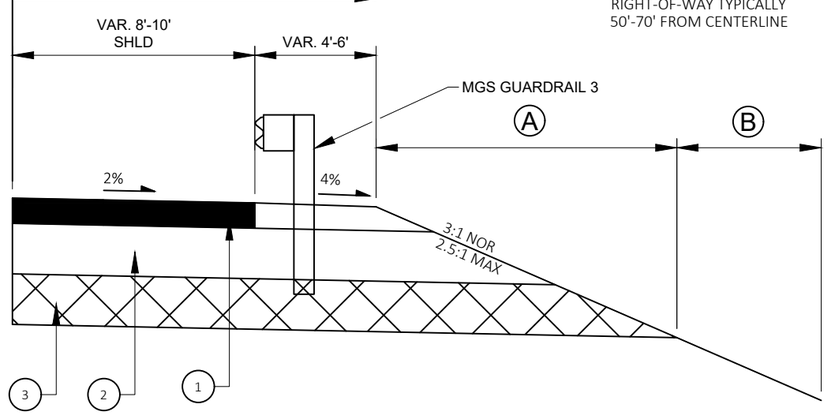
TYPICAL FINISHED SECTION

CULVERT REPLACEMENT
STA. 246+50 - STA. 250+37
STA. 289+37 - STA. 292+66



PARTIAL FINISHED SECTION

STA. 247+59 - STA. 250+13
STA. 290+46 - STA. 292+99



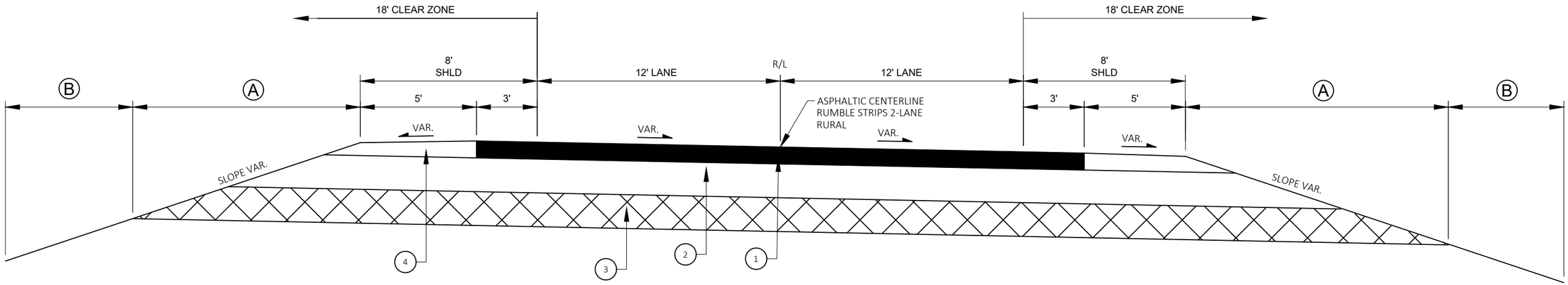
PARTIAL FINISHED SECTION

STA. 247+00 - STA. 249+46
STA. 289+86 - STA. 291+62

A	FERTILIZER TYPE B AND SEEDING MIX #30
B	SALVAGED TOPSOIL, EROSION MAT, FERTILIZER TYPE B, SEEDING MIX #30
1	BOX CULVERT REPLACEMENT HMA PAVEMENT, 7-INCH*
2	BASE AGGREGATE DENSE 1 1/4-INCH, 10-INCH
3	SUBBASE 10-INCH
4	BASE AGGREGATE DENSE 3/4-INCH, 7-INCH

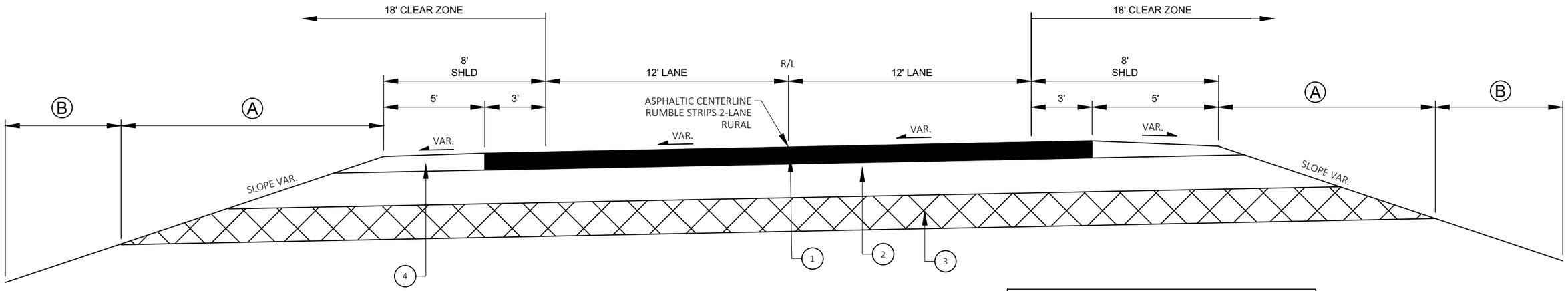
* HMA PAVEMENT 7-INCH, CONSISTING OF THE FOLLOWING LAYERS:
- 2.00-INCH UPPER LAYER, 4 MT 58-34 S
- 2.50-INCH LOWER LAYER, 4 MT 58-34 S
- 2.50-INCH LOWER LAYER, 4 MT 58-34 S

2



TYPICAL FINISHED SECTION

SUPERELEVATED



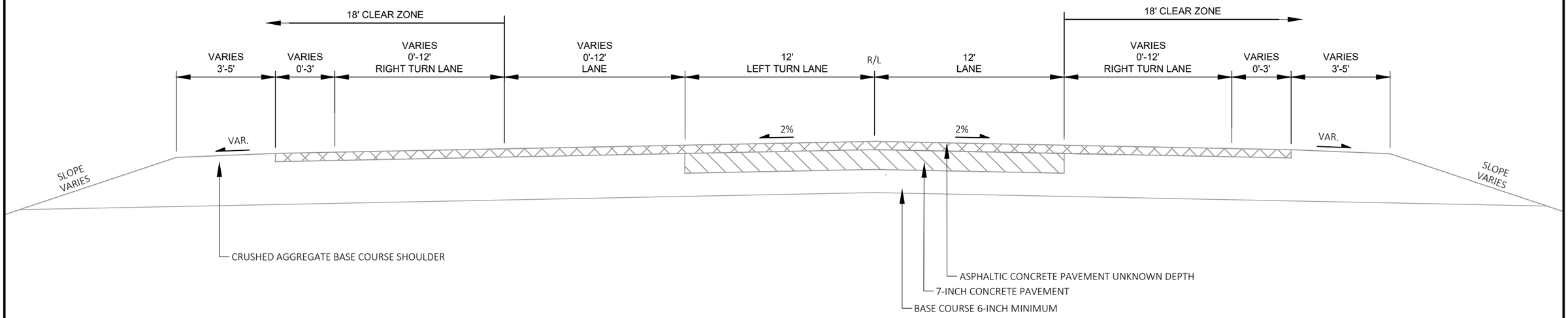
TYPICAL FINISHED SECTION

SUPERELEVATED

A	FERTILIZER TYPE B AND SEEDING MIX #30
B	SALVAGED TOPSOIL, EROSION MAT, FERTILIZER TYPE B, SEEDING MIX #30
1	BOX CULVERT REPLACEMENT HMA PAVEMENT, 7-INCH*
2	BASE AGGREGATE DENSE 1 1/4-INCH, 10-INCH
3	SUBBASE 10-INCH
4	BASE AGGREGATE DENSE 3/4-INCH, 7-INCH

* HMA PAVEMENT 7-INCH, CONSISTING OF THE FOLLOWING LAYERS:
2.00-INCH UPPER LAYER, 4 MT 58-34 S
2.50-INCH LOWER LAYER, 4 MT 58-34 S
2.50-INCH LOWER LAYER, 4 MT 58-34 S

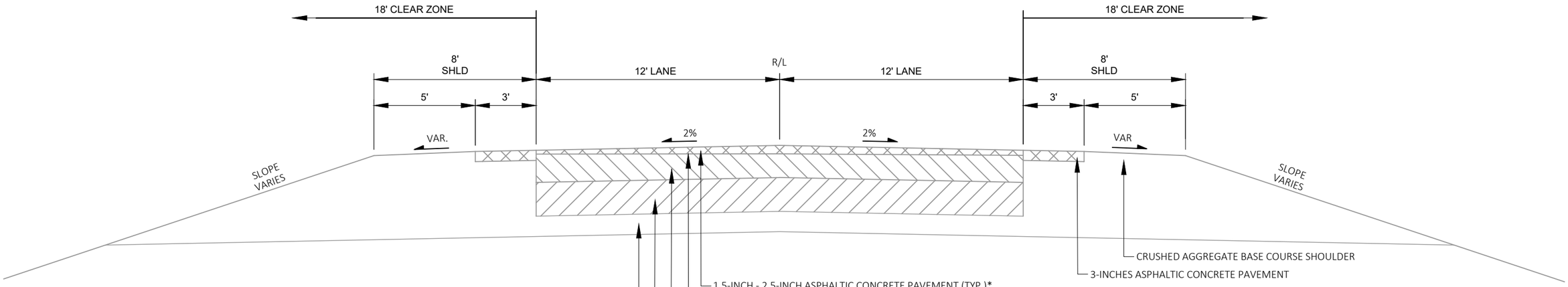
2



TYPICAL EXISTING SECTION

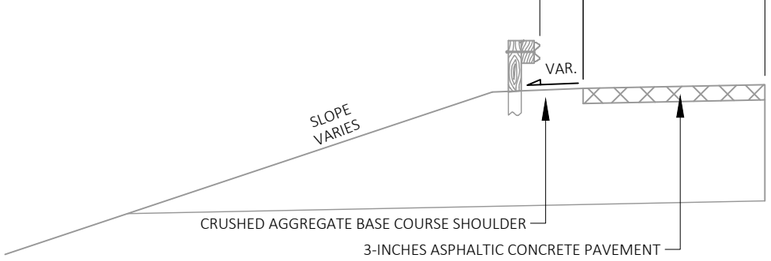
STA. 82+45 'USH 10' - STA. 106+12 'USH 10'

*LOCATIONS VARY ALONG ROADWAY



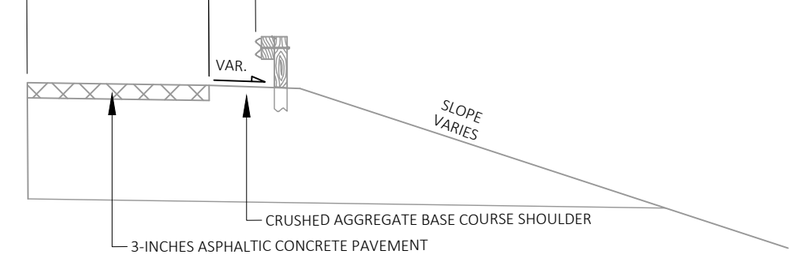
TYPICAL EXISTING SECTION

STA. 106+12 'USH 10' - STA. 811+81 'USH 10'



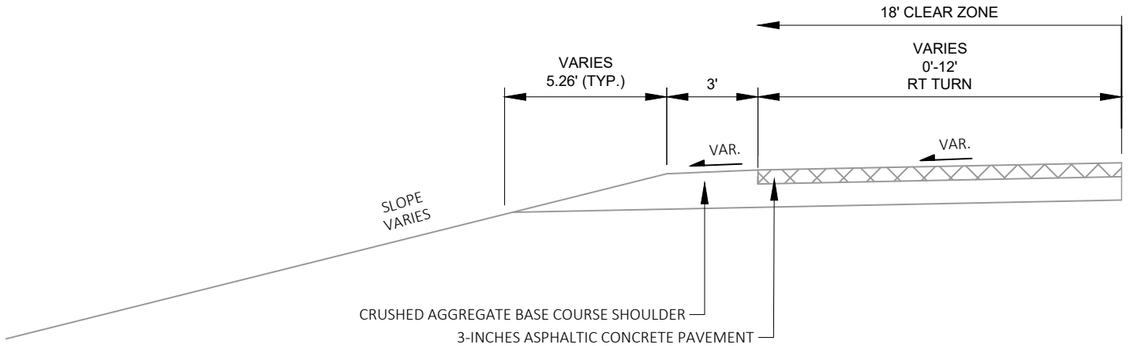
PARTIAL EXISTING SECTION

STA. 146+51 'USH 10' - STA. 148+77 'USH 10'
STA. 163+53 'USH 10' - STA. 166+87 'USH 10'
STA. 172+33 'USH 10' - STA. 176+86 'USH 10'
STA. 184+91 'USH 10' - STA. 188+80 'USH 10'
STA. 252+30 'USH 10' - STA. 253+64 'USH 10'
STA. 375+44 'USH 10' - STA. 376+77 'USH 10'
STA. 419+19 'USH 10' - STA. 422+26 'USH 10'
STA. 428+74 'USH 10' - STA. 433+84 'USH 10'
STA. 434+28 'USH 10' - STA. 437+28 'USH 10'
STA. 444+53 'USH 10' - STA. 447+24 'USH 10'
STA. 474+78 'USH 10' - STA. 476+93 'USH 10'
STA. 530+42 'USH 10' - STA. 535+42 'USH 10'
STA. 545+92 'USH 10' - STA. 547+21 'USH 10'
STA. 591+14 'USH 10' - STA. 593+25 'USH 10'
STA. 640+13 'USH 10' - STA. 643+38 'USH 10'
STA. 708+32 'USH 10' - STA. 709+81 'USH 10'
STA. 759+90 'USH 10' - STA. 761+13 'USH 10'
STA. 797+25 'USH 10' - STA. 798+56 'USH 10'



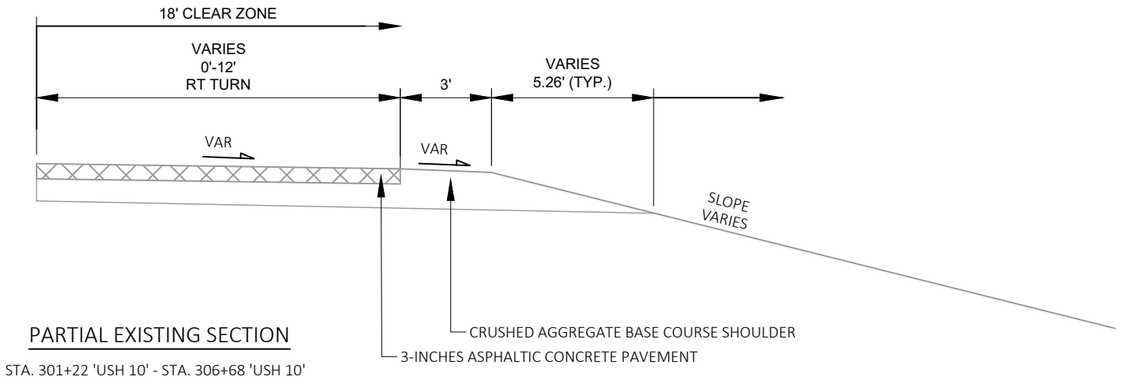
PARTIAL EXISTING SECTION

STA. 146+43 'USH 10' - STA. 148+56 'USH 10'
STA. 165+61 'USH 10' - STA. 167+67 'USH 10'
STA. 185+75 'USH 10' - STA. 196+50 'USH 10'
STA. 252+31 'USH 10' - STA. 253+64 'USH 10'
STA. 374+44 'USH 10' - STA. 377+78 'USH 10'
STA. 414+58 'USH 10' - STA. 421+46 'USH 10'
STA. 428+87 'USH 10' - STA. 433+88 'USH 10'
STA. 434+15 'USH 10' - STA. 438+93 'USH 10'
STA. 444+55 'USH 10' - STA. 449+38 'USH 10'
STA. 474+78 'USH 10' - STA. 477+23 'USH 10'
STA. 529+25 'USH 10' - STA. 533+90 'USH 10'
STA. 545+94 'USH 10' - STA. 547+20 'USH 10'
STA. 591+12 'USH 10' - STA. 593+25 'USH 10'
STA. 639+91 'USH 10' - STA. 643+07 'USH 10'
STA. 646+88 'USH 10' - STA. 649+31 'USH 10'
STA. 708+63 'USH 10' - STA. 709+87 'USH 10'
STA. 759+96 'USH 10' - STA. 761+02 'USH 10'
STA. 791+47 'USH 10' - STA. 795+31 'USH 10'
STA. 796+16 'USH 10' - STA. 803+83 'USH 10'



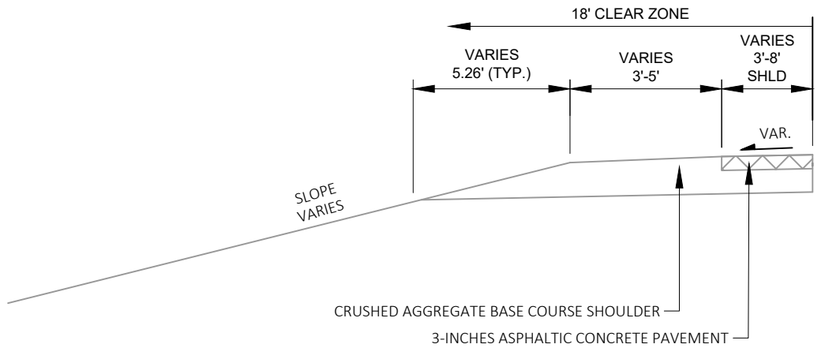
PARTIAL EXISTING SECTION

STA. 477+34 'USH 10' - STA. 482+39 'USH 10'
STA. 636+19 'USH 10' - STA. 652+24 'USH 10'



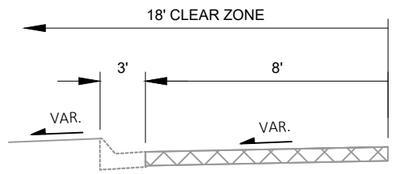
PARTIAL EXISTING SECTION

STA. 301+22 'USH 10' - STA. 306+68 'USH 10'
STA. 328+56 'USH 10' - STA. 334+54 'USH 10'
STA. 634+30 'USH 10' - STA. 650+85 'USH 10'



PARTIAL EXISTING SECTION

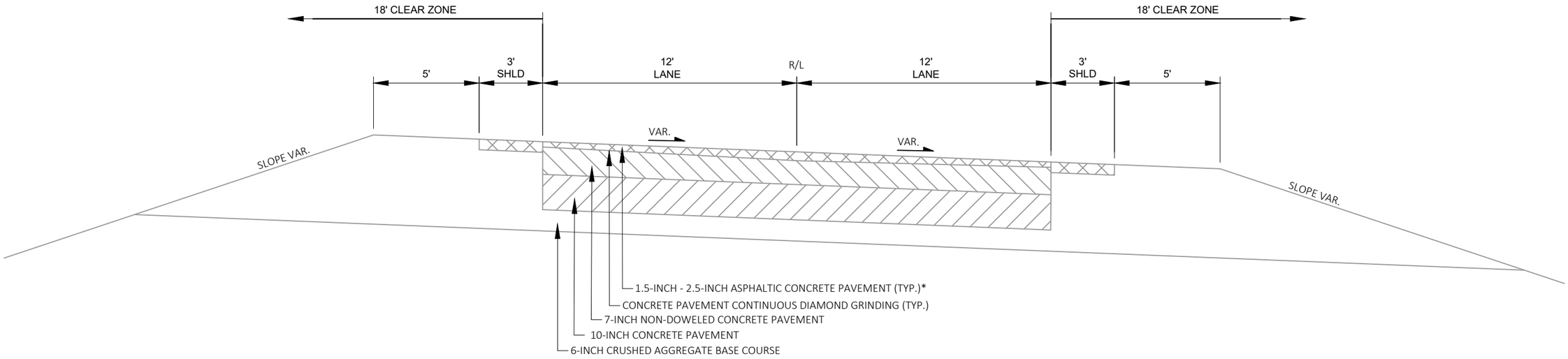
STA. 668+48 'USH 10' - STA. 669+05 'USH 10'
STA. 674+56 'USH 10' - STA. 675+00 'USH 10'



PARTIAL EXISTING SECTION

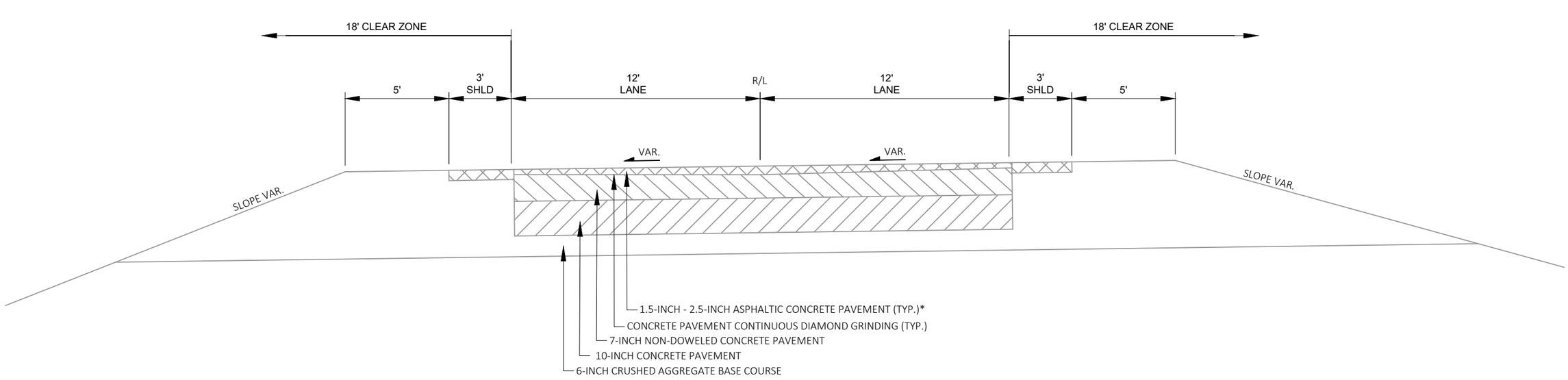
STA. 669+05 'USH 10' - STA. 674+56 'USH 10'

*LOCATIONS VARY ALONG ROADWAY



PARTIAL EXISTING SECTION

SUPERELEVATED



PARTIAL EXISTING SECTION

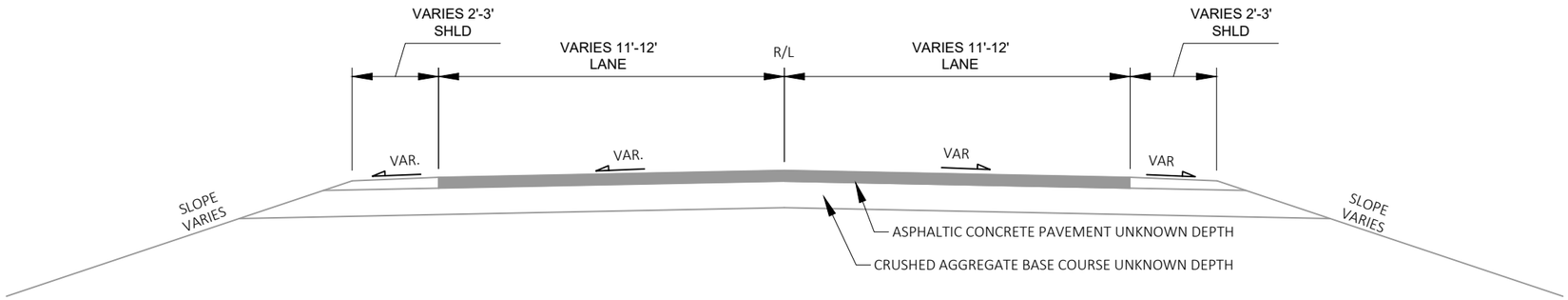
SUPERELEVATED

PROJECT NO: 1530-02-70, 1530-02-80	HWY: USH 10	COUNTY: PIERCE	PLAN: TYPICAL SECTIONS	SHEET 12	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\020301_TS.DWG
LAYOUT NAME - 03-Existing

PLOT DATE : 7/17/2023 9:50 AM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : ##########

2

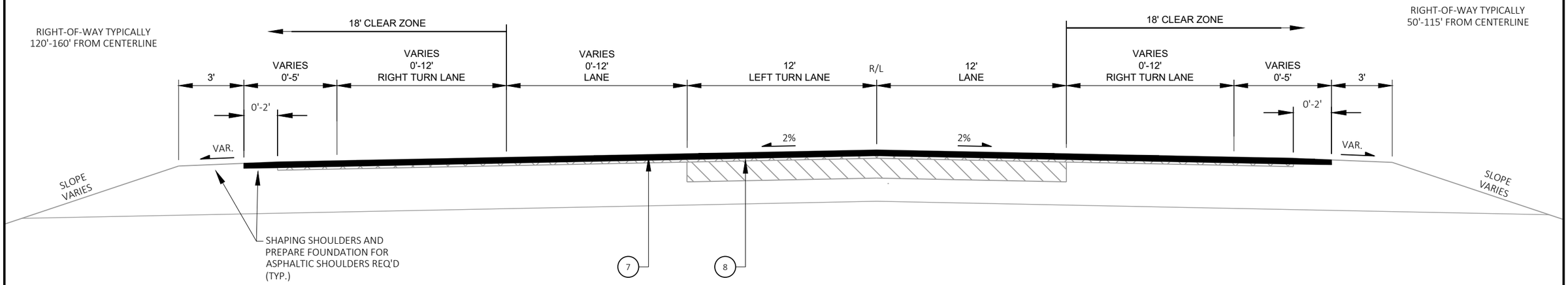


TYPICAL EXISTING SECTION

STIRRATT AVENUE
1040TH STREET
CTH O SOUTH
810TH STREET

PROJECT NO: 1530-02-70, 1530-02-80	HWY: USH 10	COUNTY: PIERCE	PLAN: TYPICAL SECTIONS	SHEET 13	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\020301_TS.DWG
LAYOUT NAME - 03-Existing (SIDE ROADS)
PLOT DATE : 7/17/2023 9:50 AM
PLOT BY : KL ENGINEERING
PLOT NAME :
PLOT SCALE : ##########
WISDOT/CADDS SHEET 42



TYPICAL FINISHED SECTION

STA. 82+45 'USH 10' - STA. 106+12 'USH 10'

(7) REMOVING ASPHALTIC SURFACE MILLING, 2-INCH HMA PAVEMENT 5 MT 58-34 V, 2-INCH

(8) EXISTING ASPHALTIC PAVEMENT OVER EXISTING CONCRETE PAVEMENT

NOTE:

PROJECT 1530-02-80 INCLUDES WIDENING TYPICAL EXISTING HMA SHOULDER FROM 3' TO 5' AND ASSOCIATED ITEMS

STA 99+00 'USH 10' - STA 106+12 'USH 10'
ASPHALTIC RUMBLE STRIPS, SHOULDER TO BE INSTALLED ON USH 10

2

1 REMOVING CONCRETE SURFACE PARTIAL DEPTH, 3/4-INCH * HMA PAVEMENT 5 MT 58-34 V, 2 3/4-INCH **

2 EXISTING 7-INCH NON-DOWELED PCC PAVEMENT OVERLAY OVER 10-INCH PCC PAVEMENT *** (ESTIMATED 17-INCH TOTAL THICKNESS TYP.)

3 BASE AGGREGATE DENSE 3/4-INCH

5 BASE AGGREGATE DENSE 1 1/4-INCH, 8-INCH

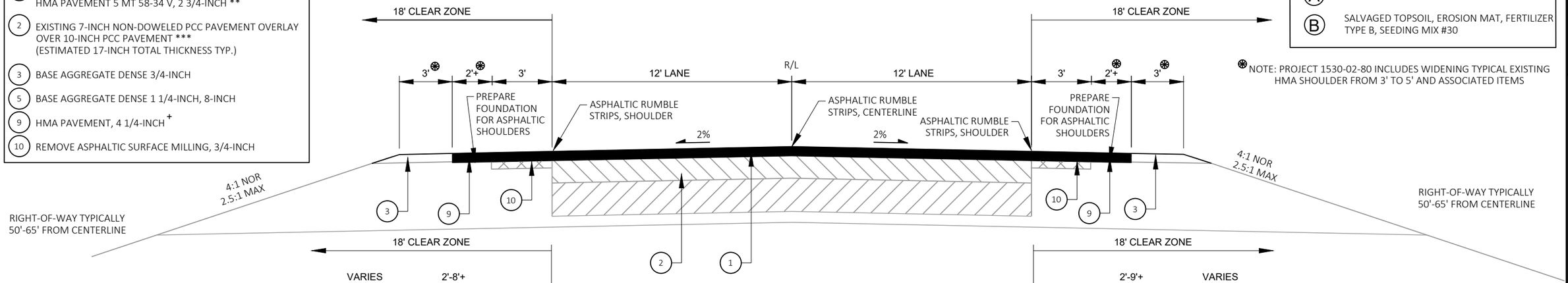
9 HMA PAVEMENT, 4 1/4-INCH +

10 REMOVE ASPHALTIC SURFACE MILLING, 3/4-INCH

A FERTILIZER TYPE B AND SEEDING MIX #30

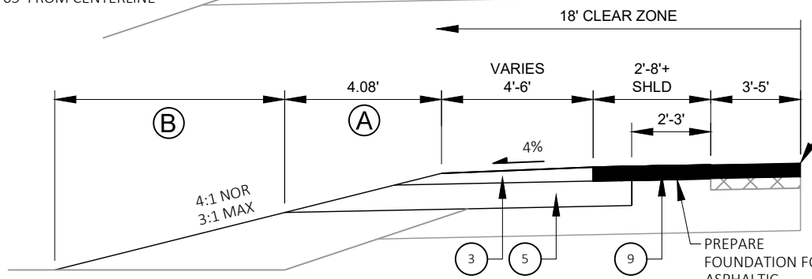
B SALVAGED TOPSOIL, EROSION MAT, FERTILIZER TYPE B, SEEDING MIX #30

❀ NOTE: PROJECT 1530-02-80 INCLUDES WIDENING TYPICAL EXISTING HMA SHOULDER FROM 3' TO 5' AND ASSOCIATED ITEMS



TYPICAL FINISHED SECTION

STA. 106+12 'USH 10' - STA. 479+52 'USH 10'
STA. 490+04 'USH 10' - STA. 811+81 'USH 10'

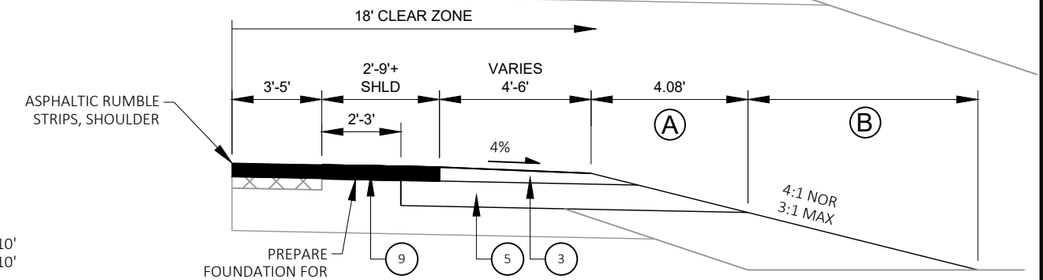


PARTIAL FINISHED SECTION

STA. 145+16 'USH 10' STA. 146+27 'USH 10'
STA. 149+01 'USH 10' - STA. 150+10 'USH 10'
STA. 162+40 'USH 10' - STA. 163+30 'USH 10'
STA. 167+12 'USH 10' - STA. 168+01 'USH 10'
STA. 171+30 'USH 10' - STA. 172+20 'USH 10'
STA. 177+00 'USH 10' - STA. 177+82 'USH 10'
STA. 189+04 'USH 10' - STA. 189+94 'USH 10'
STA. 251+25 'USH 10' - STA. 252+15 'USH 10'
STA. 253+83 'USH 10' - STA. 254+75 'USH 10'
STA. 374+35 'USH 10' - STA. 375+28 'USH 10'

STA. 376+96 'USH 10' - STA. 377+86 'USH 10'
STA. 418+19 'USH 10' - STA. 419+09 'USH 10'
STA. 422+40 'USH 10' - STA. 423+30 'USH 10'
STA. 427+63 'USH 10' - STA. 428+53 'USH 10'
STA. 474+57 'USH 10' - STA. 475+47 'USH 10'
STA. 477+16 'USH 10' - STA. 477+34 'USH 10'
STA. 528+61 'USH 10' - STA. 530+43 'USH 10'
STA. 535+53 'USH 10' - STA. 536+46 'USH 10'
STA. 544+70 'USH 10' - STA. 545+60 'USH 10'
STA. 547+42 'USH 10' - STA. 548+31 'USH 10'

STA. 590+08 'USH 10' - STA. 590+98 'USH 10'
STA. 593+29 'USH 10' - STA. 594+19 'USH 10'
STA. 639+56 'USH 10' - STA. 640+10 'USH 10'
STA. 643+39 'USH 10' - STA. 644+44 'USH 10'
STA. 707+52 'USH 10' - STA. 708+42 'USH 10'
STA. 709+98 'USH 10' - STA. 710+88 'USH 10'
STA. 758+90 'USH 10' - STA. 759+80 'USH 10'
STA. 761+24 'USH 10' - STA. 762+14 'USH 10'
STA. 796+01 'USH 10' - STA. 792+07 'USH 10'
STA. 798+79 'USH 10' - STA. 799+75 'USH 10'

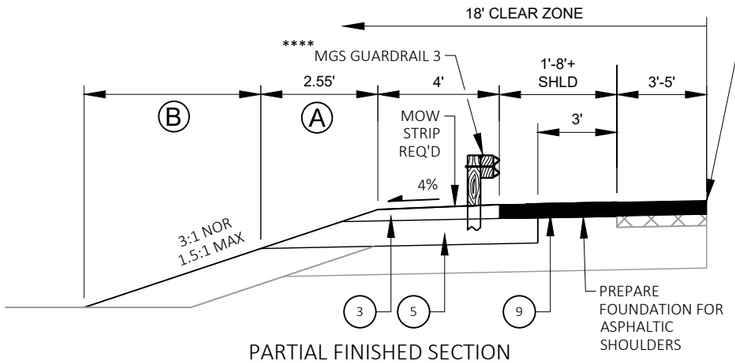


PARTIAL FINISHED SECTION

STA. 145+02 'USH 10' - STA. 146+19 'USH 10'
STA. 148+38 'USH 10' - STA. 150+19 'USH 10'
STA.164+30 'USH 10' - STA. 165+89 'USH 10'
STA. 167+92 'USH 10' - STA. 168+82 'USH 10'
STA. 184+59 'USH 10' - STA. 185+54 'USH 10'
STA. 196+80 'USH 10' - STA. 197+59 'USH 10'
STA. 251+22 'USH 10' - STA. 252+14 'USH 10'
STA. 253+84 'USH 10' - STA. 254+77 'USH 10'
STA. 373+56 'USH 10' - STA. 374+38 'USH 10'

STA. 377+94 'USH 10' - STA. 378+84 'USH 10'
STA. 413+69 'USH 10' - STA. 414+58 'USH 10'
STA. 421+40 'USH 10' - STA. 422+57 'USH 10'
STA. 474+59 'USH 10' - STA. 475+49 'USH 10'
STA. 477+43 'USH 10' - STA. 479+36 'USH 10'
STA. 533+97 'USH 10' - STA. 534+81 'USH 10'
STA. 544+78 'USH 10' - STA. 545+74 'USH 10'
STA. 547+42 'USH 10' - STA. 548+32 'USH 10'
STA. 591+11 'USH 10' - STA. 591+01 'USH 10'

STA. 593+32 'USH 10' - STA. 594+22 'USH 10'
STA. 638+85 'USH 10' - STA. 639+90 'USH 10'
STA. 643+08 'USH 10' - STA. 643+63 'USH 10'
STA. 707+24 'USH 10' - STA. 708+14 'USH 10'
STA. 761+32 'USH 10' - STA. 762+22 'USH 10'
STA. 790+43 'USH 10' - STA. 791+19 'USH 10'
STA. 795+31 'USH 10' - STA. 796+10 'USH 10'
STA. 804+04 'USH 10' - STA. 804+88 'USH 10'



PARTIAL FINISHED SECTION

STA. 146+27 'USH 10' - STA. 147+07 'USH 10'
STA. 148+13 'USH 10' - STA. 149+01 'USH 10'
STA. 163+30 'USH 10' - STA. 167+12 'USH 10'
STA. 172+20 'USH 10' - STA. 177+00 'USH 10'
STA. 185+12 'USH 10' - STA. 189+04 'USH 10'
STA. 252+15 'USH 10' - STA. 253+83 'USH 10'
STA. 375+28 'USH 10' - STA. 376+96 'USH 10'
STA. 419+09 'USH 10' - STA. 422+40 'USH 10'
STA. 428+53 'USH 10' - STA. 433+95 'USH 10'

STA. 475+47 'USH 10' - STA. 477+16 'USH 10'
STA. 530+43 'USH 10' - STA. 535+53 'USH 10'
STA. 545+60 'USH 10' - STA. 547+42 'USH 10'
STA. 590+98 'USH 10' - STA. 593+29 'USH 10'
STA. 640+10 'USH 10' - STA. 640+78 'USH 10'
STA. 642+51 'USH 10' - STA. 643+39 'USH 10'
STA. 708+42 'USH 10' - STA. 709+98 'USH 10'
STA. 759+80 'USH 10' - STA. 761+24 'USH 10'
STA. 797+07 'USH 10' - STA. 798+79 'USH 10'

NOTES:

A LONGITUDINAL HMA WEDGE JOINT **SHALL NOT** BE USED. THE CONTRACTOR SHALL MILL OUT AND REMOVE ANY WEDGE JOINT USED FOR TRAFFIC STAGING PRIOR TO PLACING THE ADJACENT TRAVEL LANE. CONSTRUCT CENTERLINE JOINT VERTICALLY. THE HMA LONGITUDINAL JOINT SHALL REMAIN ON THE LANE LINES AND SHALL NOT BE OFFSET.THE HMA PAVEMENT LONGITUDINAL CONSTRUCTION JOINTS SHALL NOT BE LOCATED WITHIN A TRAVEL LANE.

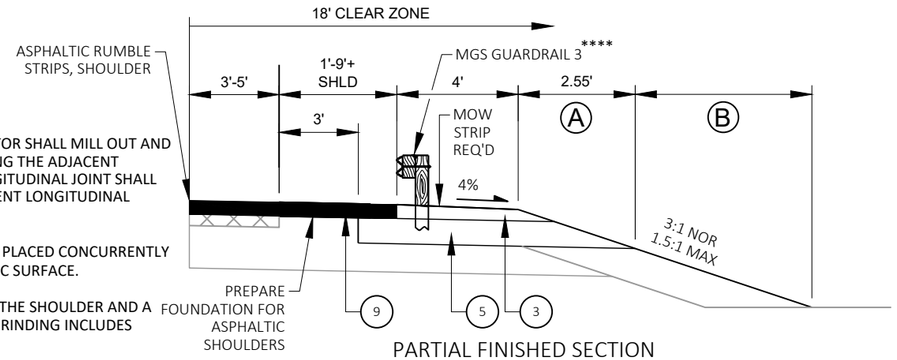
\+ PAVED SHOULDER WIDENING SHALL BE 4 1/4-INCH HMA PAVEMENT PLACED CONCURRENTLY WITH THE MAINLINE, INCLUDING A 1 1/2-INCH LOWER LAYER OF ASPHALTIC SURFACE.

* COARSE GRINDING DEPTH OF THE PCC PAVEMENT IS 3/4" DEPTH AT THE SHOULDER AND A 2% CROWNED CROSS-SLOPE WHERE SLOPE CORRECTION IS NEEDED. PCC GRINDING INCLUDES REMOVAL OF EXISTING ASPHALTIC PAVEMENT OVERLAY WHERE PRESENT.

** HMA PAVEMENT TYPE 5 MT 58-34 V SHALL CONSIST OF A 1 1/4-INCH LOWER LAYER AND A 1 1/2-INCH UPPER LAYER .

*** PREPARATION OF FOUNDATION FOR ASPHALTIC PAVING-SPECIAL. ITEM IS FOR REMOVING ALL CRACK SEALING, JOINT SEALING, AND ASPHALT PATCHING MATERIALS TO A MINIMUM DEPTH OF 2" BELOW THE SURFACE MILLED PAVEMENT. CLEANING AND PATCHING CONCRETE JOINTS AND CRACKS REQUIRED AFTER REMOVING CONCRETE SURFACE PARTIAL DEPTH.

**** SEE NEXT PAGE FOR ADDITIONAL BEAM GUARD AND RESTORATION DETAILS.



PARTIAL FINISHED SECTION

STA. 146+27 'USH 10' - STA. 147+07 'USH 10'
STA. 148+13 'USH 10' - STA. 148+38 'USH 10'
STA. 165+89 'USH 10' - STA. 167+92 'USH 10'
STA. 185+54 'USH 10' - STA. 196+80 'USH 10'
STA. 252+14 'USH 10' - STA. 253+84 'USH 10'
STA. 374+38 'USH 10' - STA. 377+94 'USH 10'
STA. 414+58 'USH 10' - STA. 421+40 'USH 10'
STA. 475+49 'USH 10' - STA. 477+43 'USH 10'
STA. 529+00 'USH 10' - STA. 533+97 'USH 10'

STA. 545+74 'USH 10' - STA. 547+42 'USH 10'
STA. 591+01 'USH 10' - STA. 593+32 'USH 10'
STA. 639+90 'USH 10' - STA. 640+78 'USH 10'
STA. 642+52 'USH 10' - STA. 643+08 'USH 10'
STA. 646+63 'USH 10' - STA. 647+91 'USH 10'
STA. 708+14 'USH 10' - STA. 709+67 'USH 10'
STA. 760+17 'USH 10' - STA. 761+32 'USH 10'
STA. 791+19 'USH 10' - STA. 795+31 'USH 10'
STA. 796+10 'USH 10' - STA. 804+04 'USH 10'

PROJECT NO: 1530-02-70, 1530-02-80	HWY: USH 10	COUNTY: PIERCE	PLAN: TYPICAL SECTIONS	SHEET 15	E

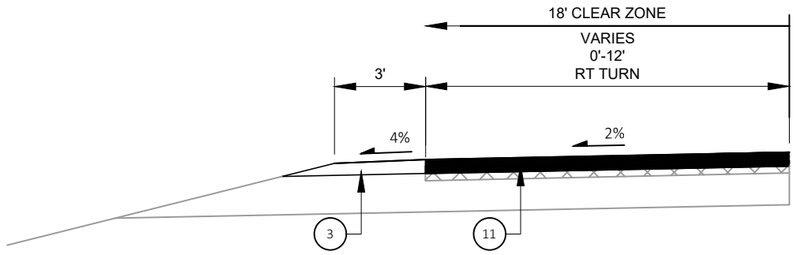
FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\020301_TS.DWG
LAYOUT NAME - 02-Finished
PLOT DATE : 7/18/2023 12:41 PM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : ##########
WISDOT/CADDS SHEET 42

2

2

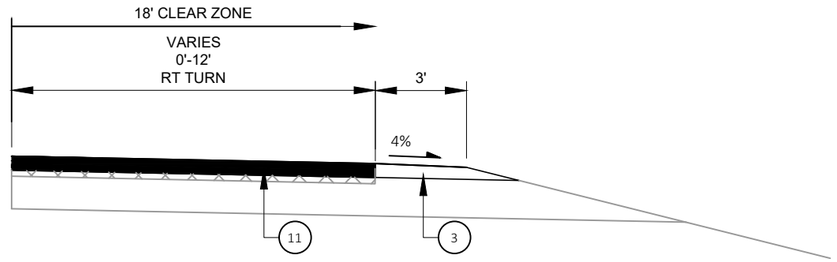
MGS GUARDRAIL 3 K (HALF POST SPACING), EROSION MAT
CLASS III TYPE C, AND SOIL STABILIZER TYPE A REQ'D

STA. 163+83 'USH 10' - STA. 166+58 'USH 10', LT
STA. 165+89 'USH 10' - STA. 167+39 'USH 10', RT
STA. 172+73 'USH 10' - STA. 176+47 'USH 10', LT
STA. 185+10 'USH 10' - STA. 188+51 'USH 10', LT
STA. 186+08 'USH 10' - STA. 195+53 'USH 10', RT
STA. 252+67 'USH 10' - STA. 253+30 'USH 10', RT
STA. 252+68 'USH 10' - STA. 253+30 'USH 10', LT
STA. 374+91 'USH 10' - STA. 377+41 'USH 10', RT
STA. 375+81 'USH 10' - STA. 376+43 'USH 10', LT
STA. 415+11 'USH 10' - STA. 420+86 'USH 10', RT
STA. 419+62 'USH 10' - STA. 421+87 'USH 10', LT
STA. 429+06 'USH 10' - STA. 433+85 'USH 10', LT
STA. 429+10 'USH 10' - STA. 433+35 'USH 10', RT
STA. 476+00 'USH 10' - STA. 476+63 'USH 10', LT
STA. 476+02 'USH 10' - STA. 476+90 'USH 10', RT
STA. 529+72 'USH 10' - STA. 533+44 'USH 10', RT
STA. 530+96 'USH 10' - STA. 534+99 'USH 10', LT
STA. 546+13 'USH 10' - STA. 546+89 'USH 10', LT
STA. 546+27 'USH 10' - STA. 546+90 'USH 10', RT
STA. 591+51 'USH 10' - STA. 592+76 'USH 10', LT
STA. 591+54 'USH 10' - STA. 592+79 'USH 10', RT
STA. 647+16 'USH 10' - STA. 648+90 'USH 10', RT
STA. 708+67 'USH 10' - STA. 709+67 'USH 10', LT
STA. 708+95 'USH 10' - STA. 709+45 'USH 10', RT
STA. 760+33 'USH 10' - STA. 760+71 'USH 10', LT
STA. 760+17 'USH 10' - STA. 760+79 'USH 10', RT
STA. 791+72 'USH 10' - STA. 794+79 'USH 10', RT
STA. 796+62 'USH 10' - STA. 803+51 'USH 10', RT
STA. 797+61 'USH 10' - STA. 798+24 'USH 10', LT



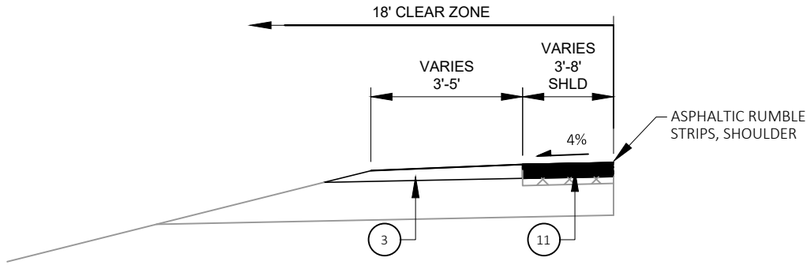
PARTIAL FINISHED SECTION

STA. 477+34 'USH 10' - STA. 479+52 'USH 10'
STA. 636+09 'USH 10' - STA. 638+49 'USH 10'



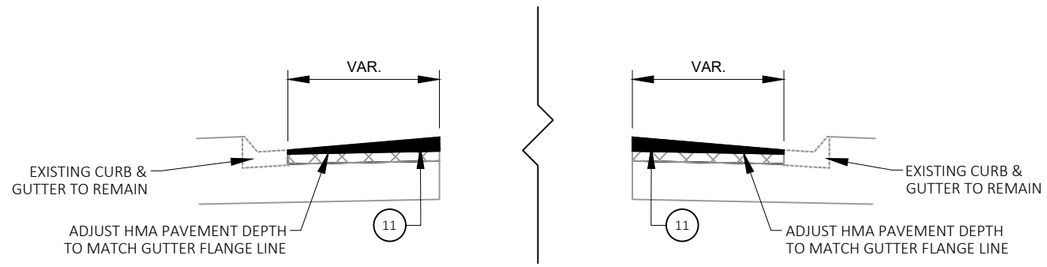
PARTIAL FINISHED SECTION

STA. 301+00 'USH 10' - STA. 306+68 'USH 10'
STA. 328+47 'USH 10' - STA. 334+44 'USH 10'
STA. 635+24 'USH 10' - STA. 638+85 'USH 10'
STA. 643+63 'USH 10' - STA. 646+63 'USH 10'
STA. 647+91 'USH 10' - STA. 650+91 'USH 10'



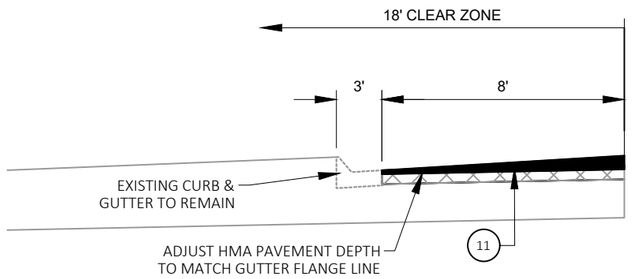
PARTIAL FINISHED SECTION

STA. 668+37 'USH 10' - STA. 669+05 'USH 10'
STA. 674+56 'USH 10' - STA. 674+98 'USH 10'



PARTIAL FINISHED SECTION - INTERSECTIONS WITH CURB & GUTTER

STA. 304+40 'USH 10' - STA. 305+60 'USH 10', RT
STA. 332+00 'USH 10' - STA. 333+30 'USH 10', RT
STA. 477+40 'USH 10' - STA. 479+00 'USH 10', RT & LT



PARTIAL FINISHED SECTION

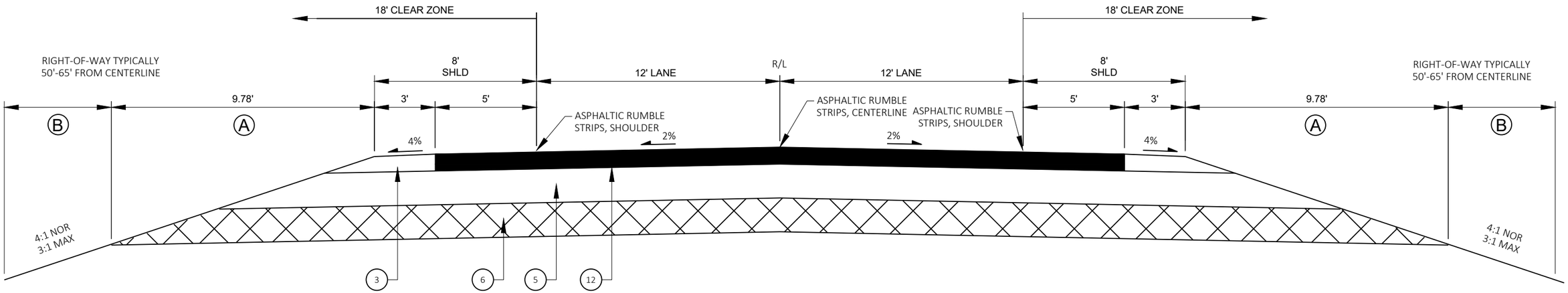
STA. 669+05 'USH 10' - STA. 674+56 'USH 10'

3	BASE AGGREGATE DENSE 3/4-INCH
11	REMOVING ASPHALTIC SURFACE MILLING, 3/4-INCH HMA PAVEMENT 5 MT 58-34 V, 2 3/4-INCH **

NOTES:

A LONGITUDINAL HMA WEDGE JOINT **SHALL NOT** BE USED. THE CONTRACTOR SHALL MILL OUT AND REMOVE ANY WEDGE JOINT USED FOR TRAFFIC STAGING PRIOR TO PLACING THE ADJACENT TRAVEL LANE. CONSTRUCT CENTERLINE JOINT VERTICALLY. THE HMA LONGITUDINAL JOINT SHALL REMAIN ON THE LANE LINES AND SHALL NOT BE OFFSET.THE HMA PAVEMENT LONGITUDINAL CONSTRUCTION JOINTS SHALL NOT BE LOCATED WITHIN A TRAVEL LANE.

** HMA PAVEMENT TYPE 5 MT 58-34 V SHALL CONSIST OF A 1 1/4-INCH LOWER LAYER AND A 1 1/2-INCH UPPER LAYER .



A	FERTILIZER TYPE B AND SEEDING MIX #30
B	SALVAGED TOPSOIL, EROSION MAT, FERTILIZER TYPE B, SEEDING MIX #30
3	BASE AGGREGATE DENSE 3/4-INCH
4	BRIDGE APPROACH HMA PAVEMENT, 7-INCH**
5	BASE AGGREGATE DENSE 1 1/4-INCH, 10-INCH
6	SUBBASE 10-INCH
12	CULVERT PIPE REPLACEMENT HMA PAVEMENT, 7-INCH*

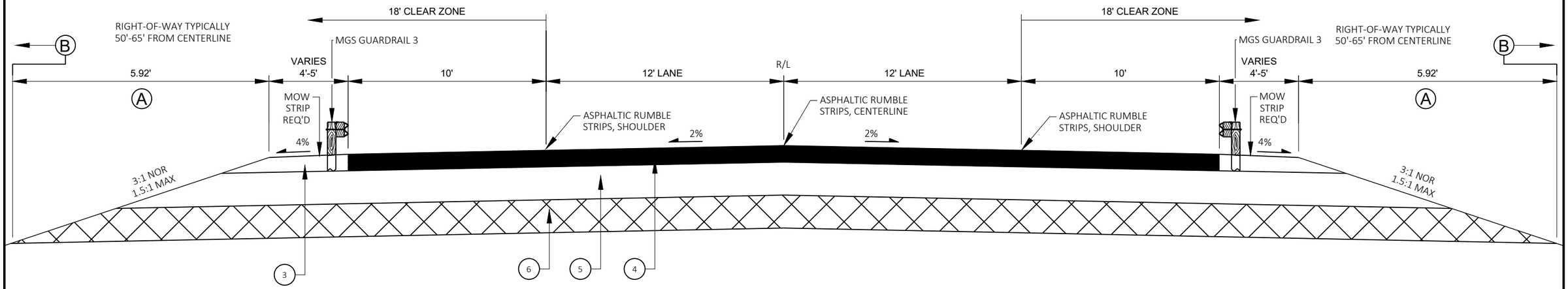
NOTES:

* HMA PAVEMENT 7-INCH, CONSISTING OF THE FOLLOWING LAYERS:
- 1 1/2-INCH UPPER LAYER, 5 MT 58-34 V
- 1 1/4-INCH LOWER LAYER, 5 MT 58-34 V
- 4 1/4-INCH LOWER LAYER ASPHALTIC SURFACE
- SEE CULVERT REPLACEMENT PAVEMENT DETAIL.

** HMA PAVEMENT 7-INCH, CONSISTING OF THE FOLLOWING LAYERS:
- 1 1/2-INCH UPPER LAYER, 5 MT 58-34 V
- 1 1/4-INCH LOWER LAYER, 5 MT 58-34 V
- 2-INCH LOWER LAYER, 4 MT 58-34 S
- 2 1/4-INCH LOWER LAYER, 4 MT 58-34 S

TYPICAL FINISHED SECTION

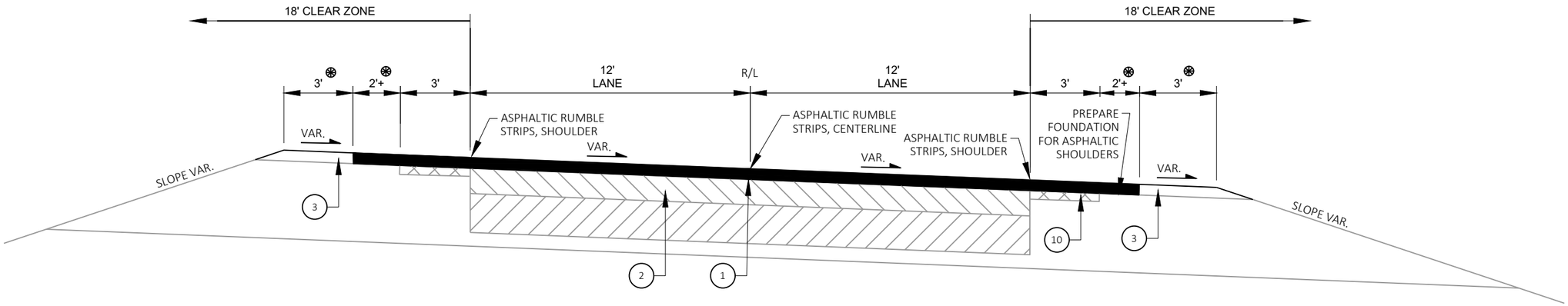
CULVERT REPLACEMENT
STA. 114+15 'USH 10' - STA. 115+21 'USH 10'
STA. 216+56 'USH 10' - STA. 217+58 'USH 10'
STA. 275+17 'USH 10' - STA. 276+21 'USH 10'
STA. 296+57 'USH 10' - STA. 297+60 'USH 10'
STA. 399+68 'USH 10' - STA. 400+72 'USH 10'



TYPICAL FINISHED SECTION

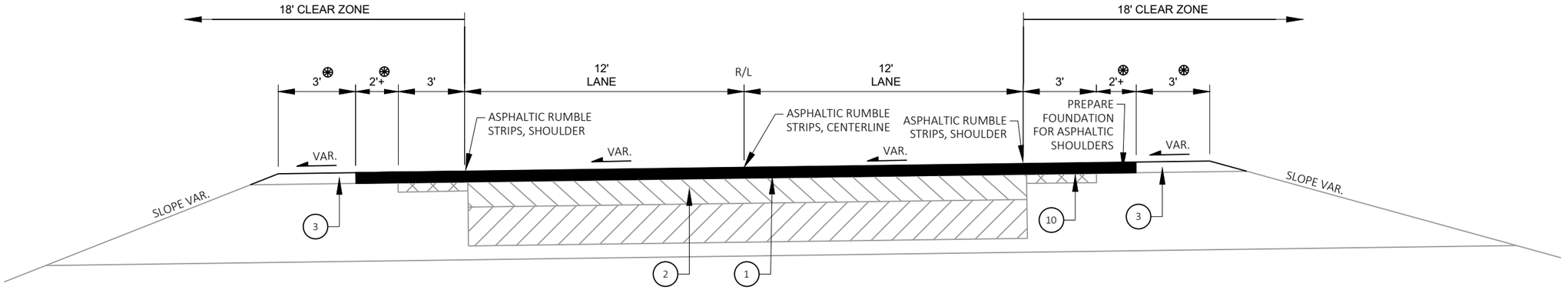
BRIDGE APPROACH REPLACEMENT
STA. 434+66 'USH 10' - STA. 434+83 'USH 10'
STA. 435+95 'USH 10' - STA. 436+59 'USH 10'
STA. 444+35 'USH 10' - STA. 445+02 'USH 10'
STA. 445+74 'USH 10' - STA. 448+32 'USH 10'

PROJECT NO:	HWY:	COUNTY:	PLAN:	SHEET
1530-02-70, 1530-02-80	USH 10	PIERCE	TYPICAL SECTIONS	18 E



TYPICAL FINISHED SECTION

SUPERELEVATED



NOTES:

A LONGITUDINAL HMA WEDGE JOINT **SHALL NOT** BE USED. THE CONTRACTOR SHALL MILL OUT AND REMOVE ANY WEDGE JOINT USED FOR TRAFFIC STAGING PRIOR TO PLACING THE ADJACENT TRAVEL LANE. CONSTRUCT CENTERLINE JOINT VERTICALLY. THE HMA LONGITUDINAL JOINT SHALL REMAIN ON THE LANE LINES AND SHALL NOT BE OFFSET.THE HMA PAVEMENT LONGITUDINAL CONSTRUCTION JOINTS SHALL NOT BE LOCATED WITHIN A TRAVEL LANE.

\+ PAVED SHOULDER WIDENING SHALL BE 4 1/4-INCH HMA PAVEMENT PLACED CONCURRENTLY WITH THE MAINLINE, INCLUDING A 1 1/2-INCH LOWER LAYER OF ASPHALTIC SURFACE.

* COARSE GRINDING DEPTH OF THE PCC PAVEMENT IS 3/4" DEPTH AT THE SHOULDER AND A 2% CROWNED CROSS-SLOPE WHERE SLOPE CORRECTION IS NEEDED. PCC GRINDING INCLUDES REMOVAL OF EXISTING ASPHALTIC PAVEMENT OVERLAY WHERE PRESENT.

** HMA PAVEMENT TYPE 5 MT 58-34 V SHALL CONSIST OF A 1 1/4-INCH LOWER LAYER AND A 1 1/2-INCH UPPER LAYER .

*** PREPARATION OF FOUNDATION FOR ASPHALTIC PAVING-SPECIAL. ITEM IS FOR REMOVING ALL CRACK SEALING, JOINT SEALING, AND ASPHALT PATCHING MATERIALS TO A MINIMUM DEPTH OF 2" BELOW THE SURFACE MILLED PAVEMENT. CLEANING AND PATCHING CONCRETE JOINTS AND CRACKS REQUIRED AFTER REMOVING CONCRETE SURFACE PARTIAL DEPTH.

TYPICAL FINISHED SECTION

SUPERELEVATED

⊛ NOTE: PROJECT 1530-02-80 INCLUDES WIDENING TYPICAL EXISTING HMA SHOULDER FROM 3' TO 5' AND ASSOCIATED ITEMS

1	REMOVING CONCRETE SURFACE PARTIAL DEPTH, 3/4-INCH * HMA PAVEMENT 5 MT 58-34 V, 2 3/4-INCH **
2	EXISTING 7-INCH NON-DOWELED PCC PAVEMENT OVERLAY OVER 10-INCH PCC PAVEMENT *** (ESTIMATED 17-INCH TOTAL THICKNESS TYP.)
3	BASE AGGREGATE DENSE 3/4-INCH
10	REMOVE ASPHALTIC SURFACE MILLING, 3/4-INCH

PROJECT NO: 1530-02-70, 1530-02-80	HWY: USH 10	COUNTY: PIERCE	PLAN: TYPICAL SECTIONS	SHEET 19	E

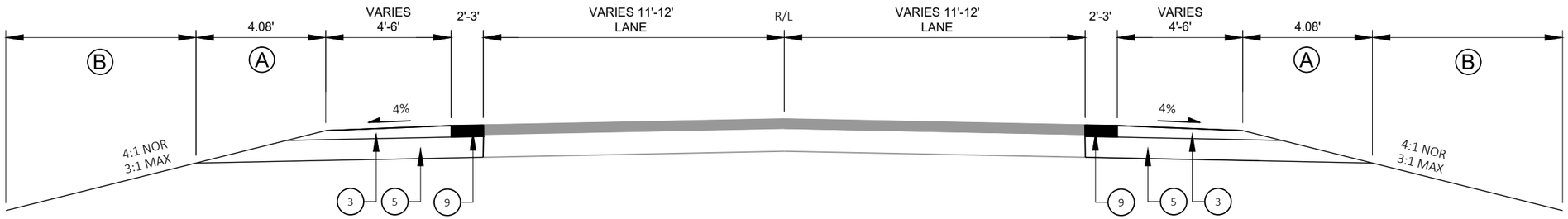
(3) BASE AGGREGATE DENSE 3/4-INCH
(5) BASE AGGREGATE DENSE 1 1/4-INCH, 8-INCH
(9) HMA PAVEMENT, 4 1/4-INCH +

NOTES:

\+ PAVED SHOULDER WIDENING SHALL BE 4 1/4-INCH HMA PAVEMENT PLACED CONCURRENTLY WITH THE MAINLINE, INCLUDING A 1 1/2-INCH LOWER LAYER OF ASPHALTIC SURFACE.

(A) FERTILIZER TYPE B AND SEEDING MIX #30
(B) SALVAGED TOPSOIL, EROSION MAT, FERTILIZER TYPE B, SEEDING MIX #30

2



PARTIAL FINISHED SECTION

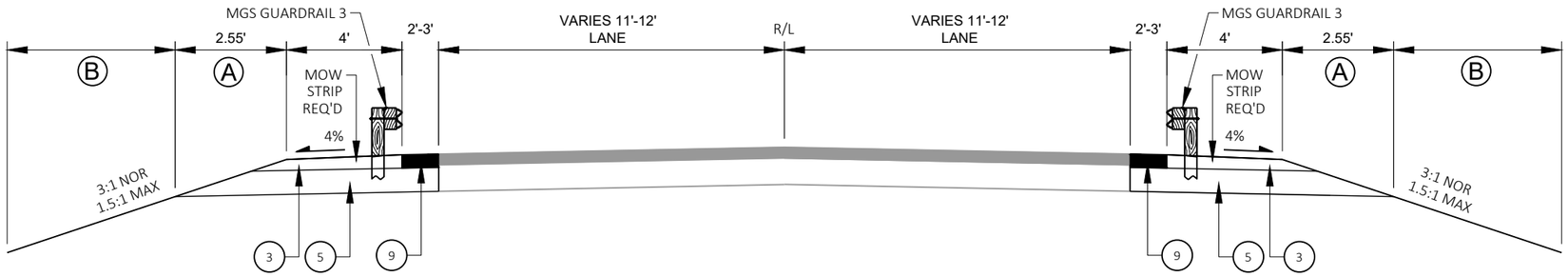
STA. 11+41 'K' - STA. 11+82 'K'
STA. 8+44 'CTHO' - STA. 8+85 'CTHO'

TYPICAL FINISHED SECTION

STIRRATT AVENUE
1040TH STREET
CTH O SOUTH
810TH STREET

PARTIAL FINISHED SECTION

STA. 10+85 'B' - STA. 11+77 'B'
STA. 11+57 'K' - STA. 12+41 'K'
STA. 8+18 'V' - STA. 8+76 'V'



PARTIAL FINISHED SECTION

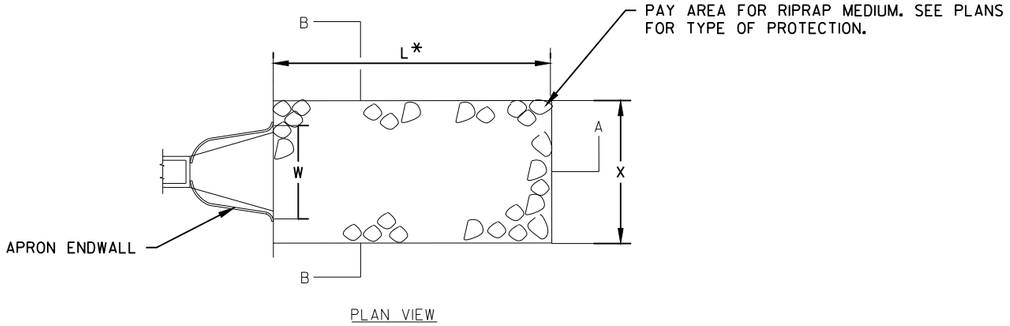
STA. 10+94 'K' - STA. 11+41 'K'
STA. 8+85 'CTHO' - STA. 9+50 'CTHO'

TYPICAL FINISHED SECTION

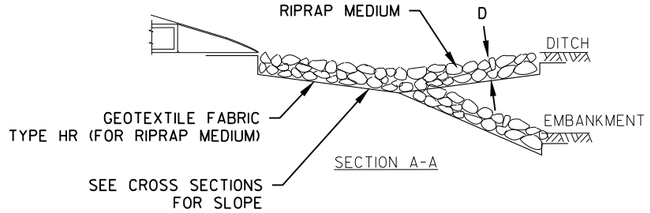
STIRRATT AVENUE
1040TH STREET
CTH O SOUTH
810TH STREET

PARTIAL FINISHED SECTION

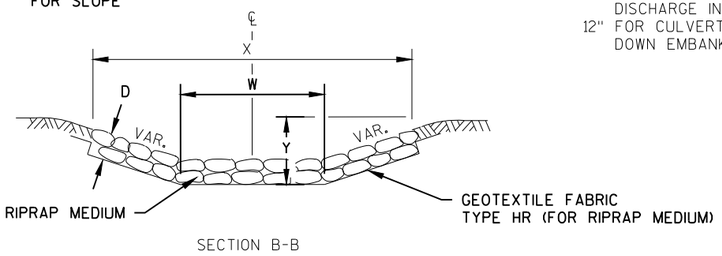
STA. 10+43 'B' - STA. 10+85 'B'
STA. 10+91 'K' - STA. 11+57 'K'
STA. 8+76 'V' - STA. 9+50 'V'



PLAN VIEW



SECTION A-A



SECTION B-B

L^{*} = 3 x W (NOR.) OR 10' MIN. OR AS INDICATED IN THE PLANS OR AS DIRECTED BY THE ENGINEER.

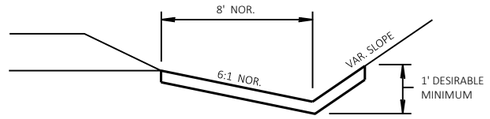
D = 18" FOR RIPRAP MEDIUM

X = W+2' FOR TYPICAL CULVERT DISCHARGE INTO DITCH
W+5' FOR CULVERT DISCHARGE DOWN EMBANKMENT SLOPE

Y = 0' FOR TYPICAL CULVERT DISCHARGE INTO DITCH
12" FOR CULVERT DISCHARGE DOWN EMBANKMENT SLOPE

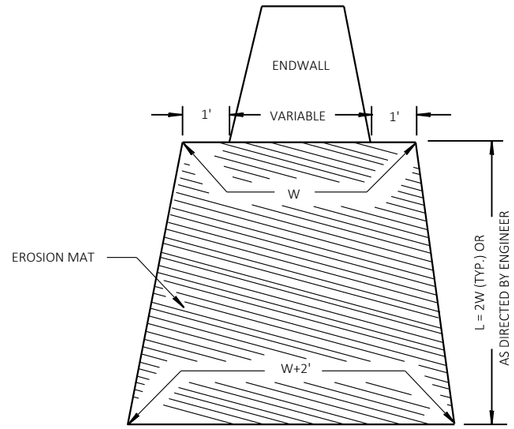
RIPRAP MEDIUM AND GEOTEXTILE FABRIC DETAIL AT APRON ENDWALLS

(SEE MISCELLANEOUS QUANTITY SHEETS FOR LOCATIONS)



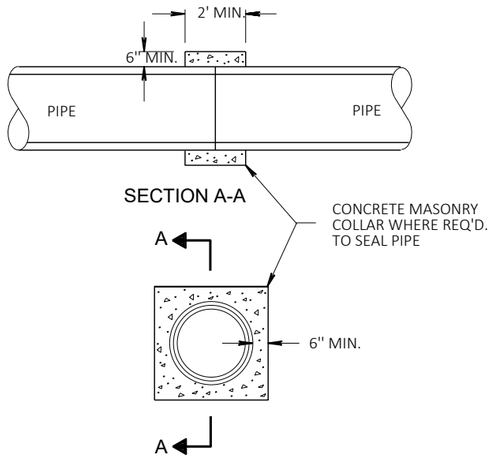
EROSION MAT DETAIL FOR DITCHES

(SEE PLAN SHEETS FOR LOCATIONS)

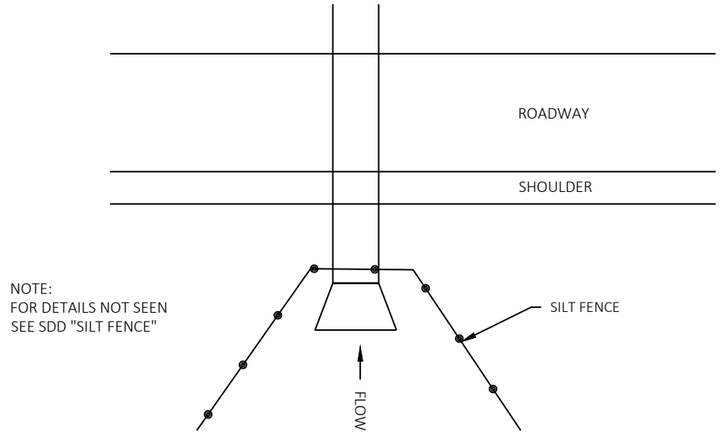


EROSION MAT TREATMENT AT CULVERTS

(SEE PLAN SHEETS FOR LOCATIONS)



CONCRETE COLLAR DETAIL



TYPICAL SILT FENCE DETAIL AT PIPE APRON ENDWALL
(SEE PLAN SHEETS FOR LOCATIONS)

RUNOFF COEFFICIENT TABLE

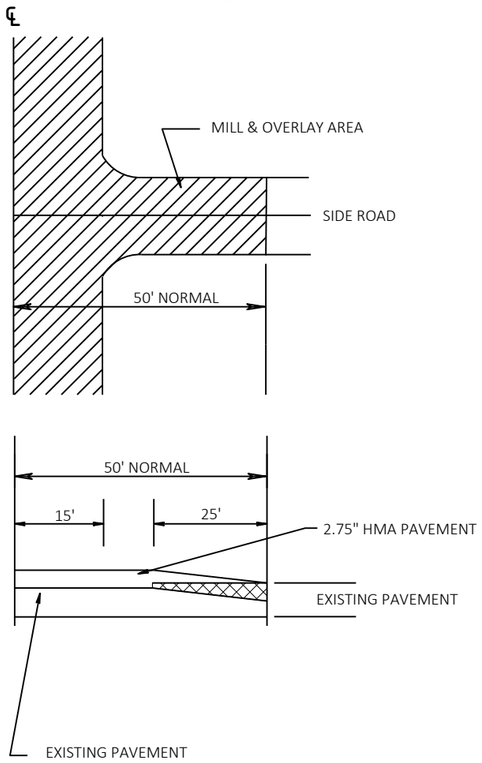
	HYDROLOGIC SOIL GROUP											
	A			B			C			D		
	SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)		
LAND USE:	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER
ROW CROPS	.08 .22	.16 .30	.22 .38	.12 .26	.20 .34	.27 .44	.15 .30	.24 .37	.33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

TOTAL PROJECT AREA = 203.1 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 62.7 ACRES

2

SIDE ROAD DETAIL - NO CURB & GUTTER

NOT TO SCALE



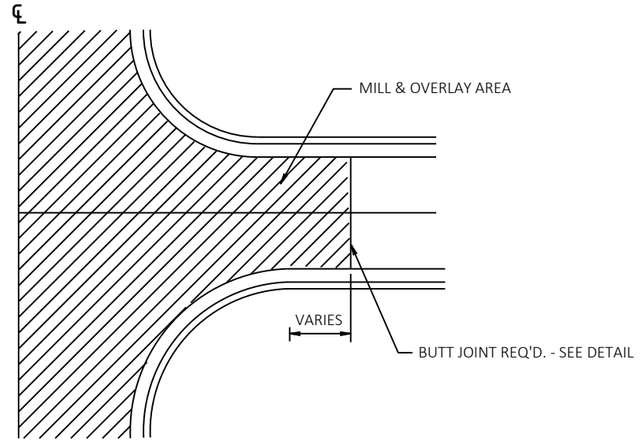
REMOVE MATERIAL UNDER ITEM 'REMOVING ASPHALTIC SURFACE , BUTT JOINTS'
MATERIAL SHALL NOT BE REMOVED UNDER THIS ITEM UNTIL 24 HOURS BEFORE
SIDEROAD PAVING.

SIDEROAD PAVEMENT DEPTH SHALL MATCH AT MAINLINE PAVEMENT EDGE AND BE TAPERED TO 2.75" MINIMUM AT JOINT

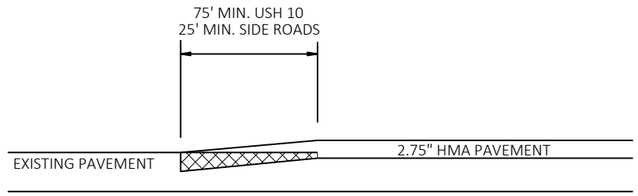
NOTE: ANY SAWCUT USED WILL BE CONSIDERED INCIDENTAL TO THE ITEM "REMOVING ASPHALTIC SURFACE, BUTT JOINTS."

SIDE ROAD DETAIL - CURB & GUTTER TO REMAIN

NOT TO SCALE



BUTT JOINT

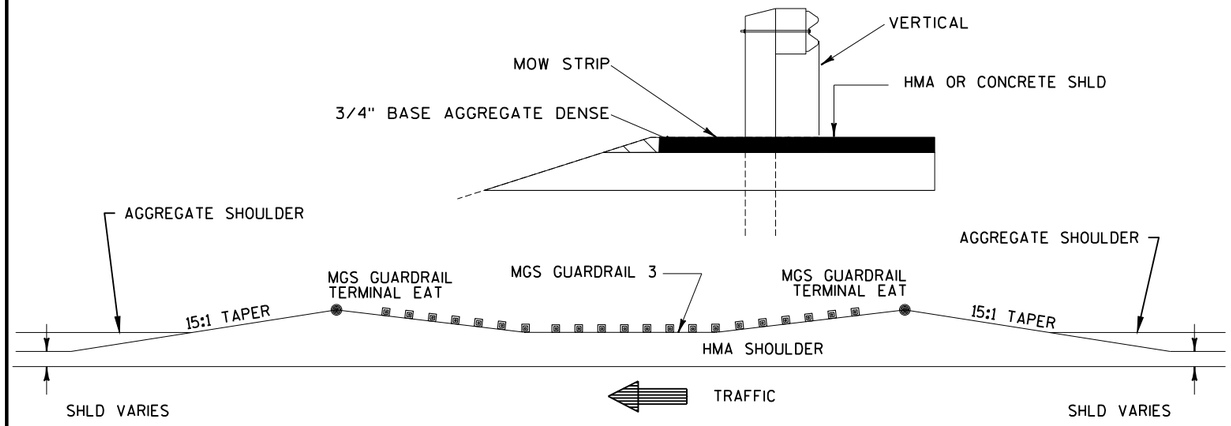


REQUIRED AT BEGIN AND END
PAVING LOCATIONS

PAID FOR AS REMOVING ASPHALTIC
SURFACE BUTT JOINTS

NOTE: ANY SAWCUT USED IN THIS OPERATION
CONSIDERED INCIDENTAL TO THIS ITEM

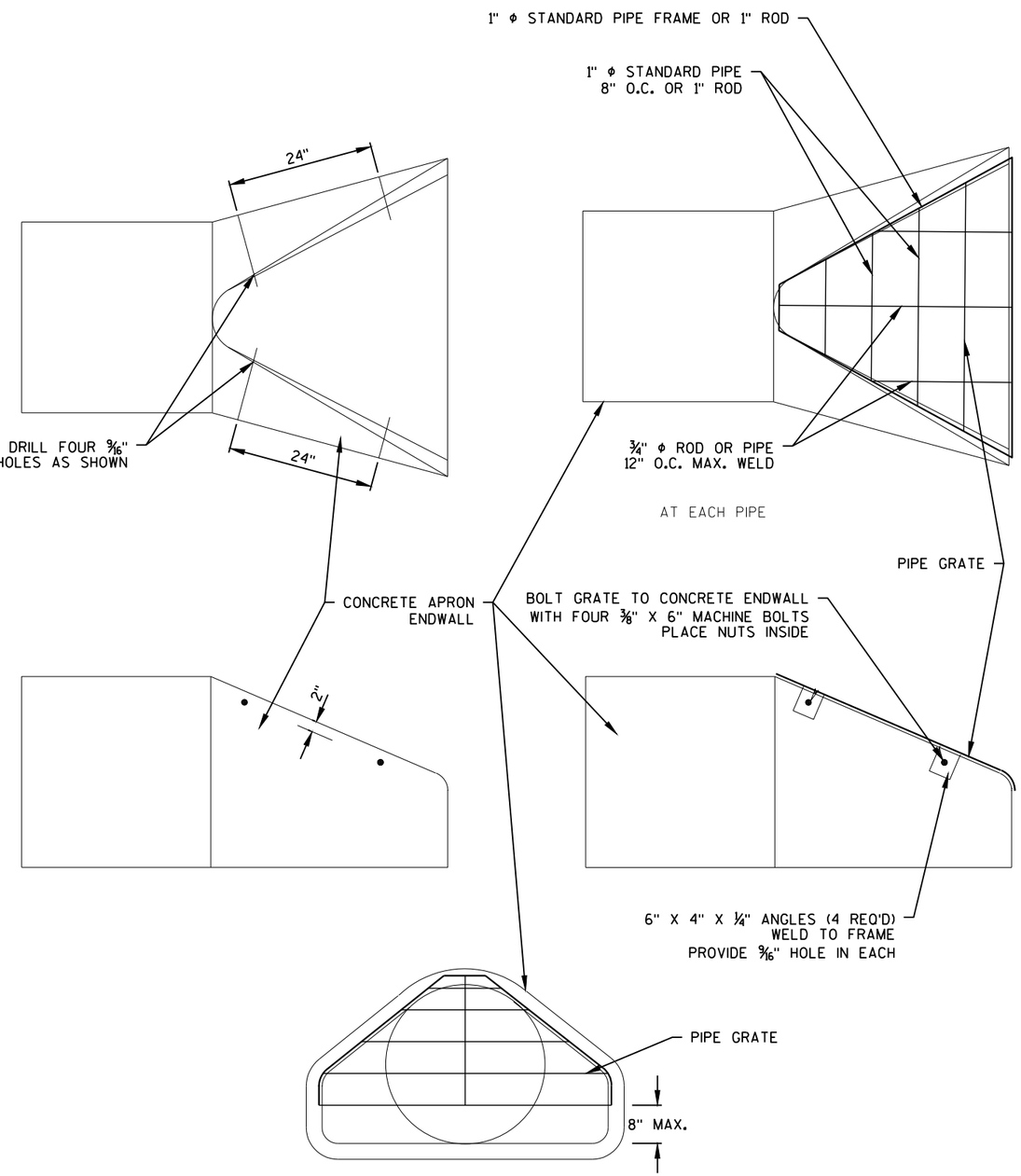
BUTT JOINT DETAIL



DETAIL FOR ASPHALTIC OR CONCRETE SHOULDER AT BEAM GUARD

(SEE PLAN DETAIL SHEETS FOR LOCATIONS)

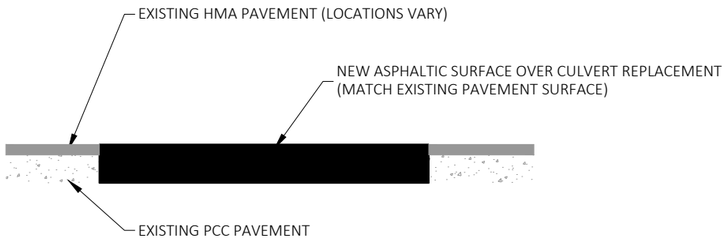
SEE S.D.D. "MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL",
"MIDWEST GUARDRAIL SYSTEM (MGS) ENERGY ABSORBING TERMINAL",
"MIDWEST GUARDRAIL SYSTEM (MGS) THRIE BEAM TRANSITION",
"MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL"
FOR DETAILS NOT SHOWN.



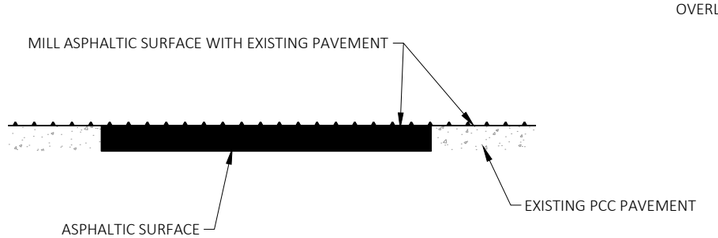
PIPE GRATE DETAIL

(SEE MISCELLANEOUS QUANTITY SHEETS FOR LOCATIONS)

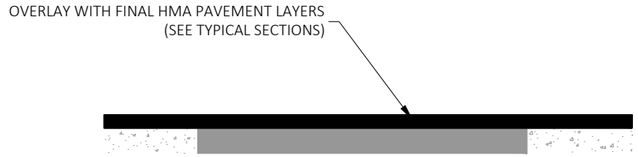
2



CULVERT REPLACEMENT
(PROFILE VIEW)



MILLING
(PROFILE VIEW)

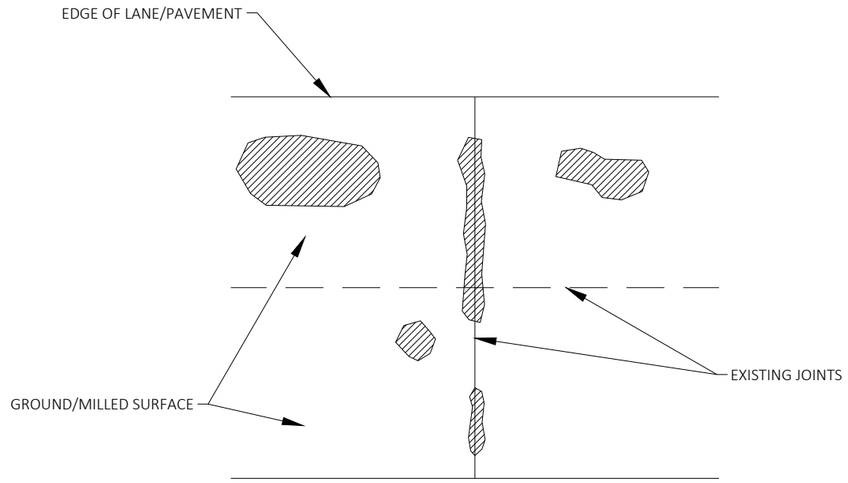


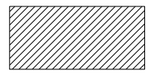
OVERLAY
(PROFILE VIEW)

CULVERT REPLACEMENT PAVEMENT DETAIL

PAVING PROCESS FOR STAND ALONE CULVERT
REPLACEMENTS IN MILL & OVERLAY SECTIONS TO
MATCH PROPOSED OVERLAY

2



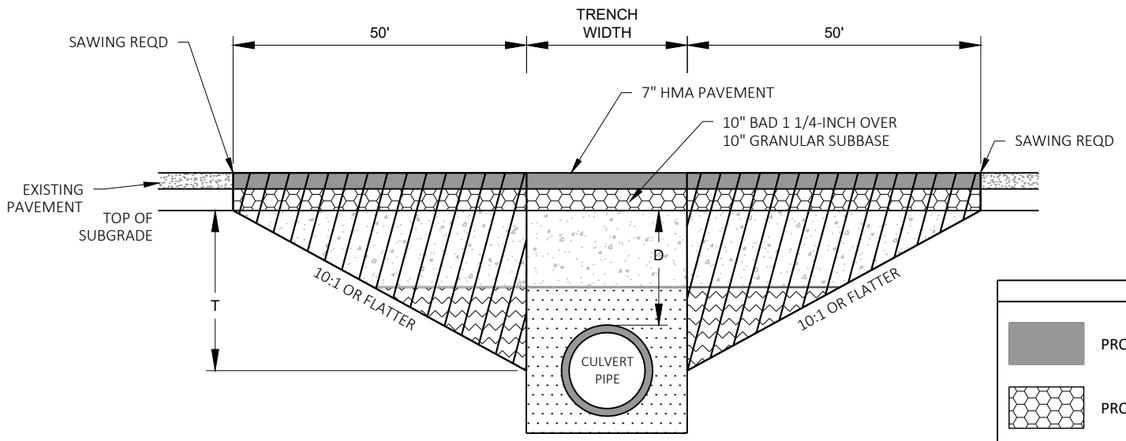


REPAIR AREAS

NOTES

- AFTER THE EXISTING PAVEMENT IS MILLED/GROUND TO DEPTH SPECIFIED ON THE TYPICAL, REMOVE REMAINDER OF CRACKFILL, PATCHING, AND UNSOUND PCC/HMA TO A MAXIMUM DEPTH OF 4" OR FULL DEPTH OF THE REMAINING PAVEMENT, WHICHEVER IS LESS, PAID FOR UNDER PREPARE FOUNDATION FOR ASPHALTIC PAVING SPECIAL ITEM.
- REPAVE AREAS WITH ASPHALTIC SURFACE PATCHING PAID SEPARATELY.

PREPARE FOUNDATION FOR ASPHALTIC PAVING REPAIR AREAS DETAIL

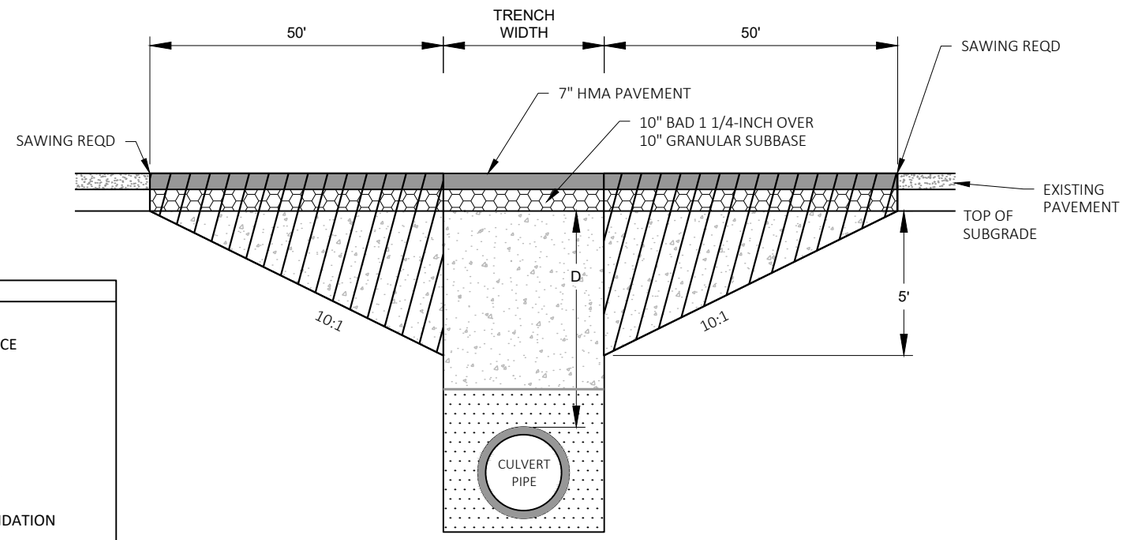


TRANSITION CUT DEPTH (T) = THE LESSER OF DEPTH TO CENTER OF PIPE OR 5 FT.
DO NOT EXTEND TRANSITION CUT BELOW HORIZONTAL CENTER OF PIPE.

DEPTH D < 6 FT

KEY

- PROPOSED SURFACE
- PROPOSED BASE
- TRENCH BACKFILL
- TRENCH OR FOUNDATION BACKFILL
- FOUNDATION BACKFILL
- TRANSITION CUT



DEPTH D ≥ 6 FT

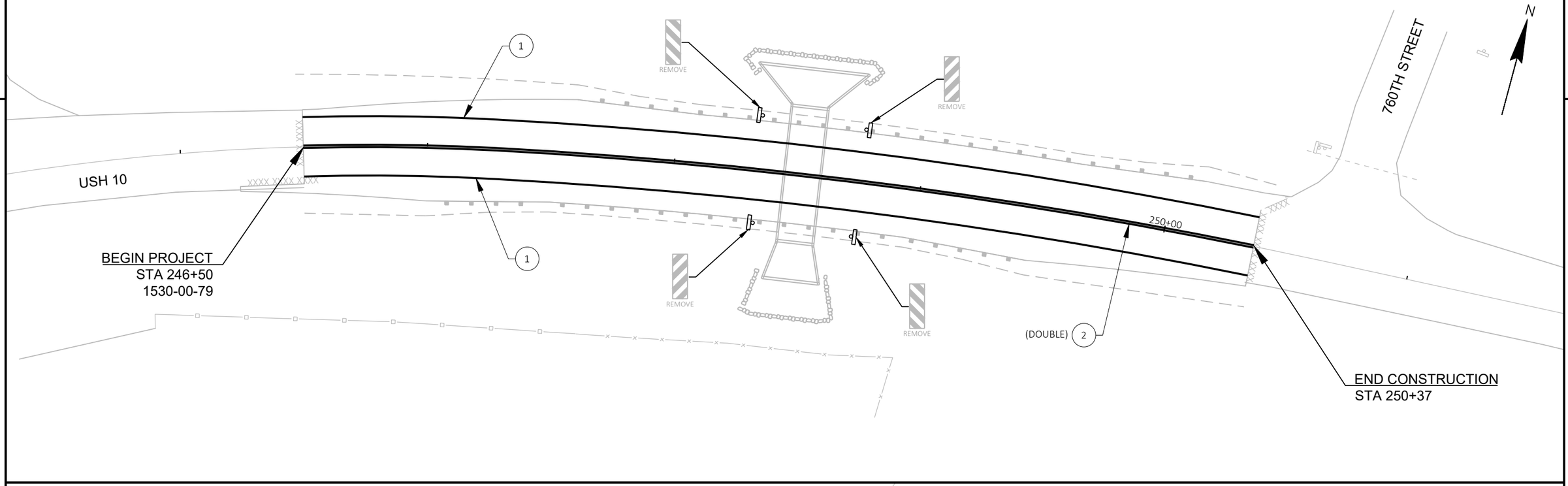
NOTES

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 REMOVING CONCRETE SURFACE PARTIAL DEPTH AND HMA OVERLAY PAVING.
SEE CULVERT REPLACEMENT PAVEMENT DETAIL FOR ADDITIONAL INFORMATION.

CULVERT PIPE TRANSITION

ROUTE	STA (CL)	DEPTH D (FT)	PIPE DIA (IN)
USH 10	114+68'USH10'	0.5	43X64
USH 10	217+07'USH10'	2.0	24
USH 10	275+69'USH10'	0.5	24
USH 10	297+08'USH10'	1.0	30
USH 10	400+20'USH10'	1.0	24

2

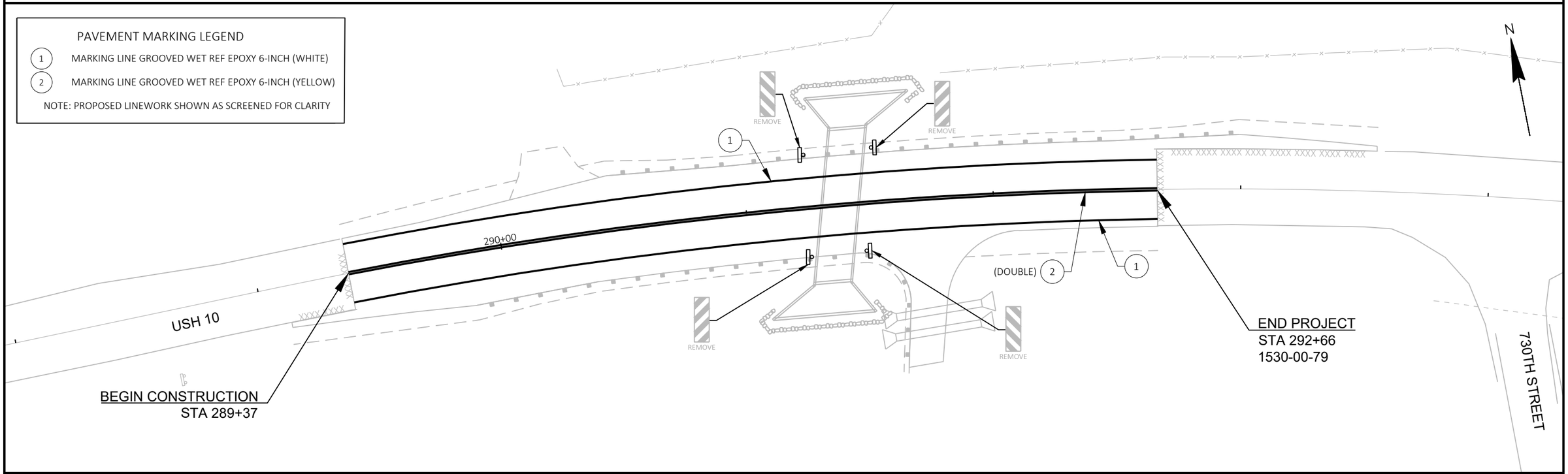


PAVEMENT MARKING LEGEND

1 MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)

2 MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)

NOTE: PROPOSED LINEWORK SHOWN AS SCREENED FOR CLARITY

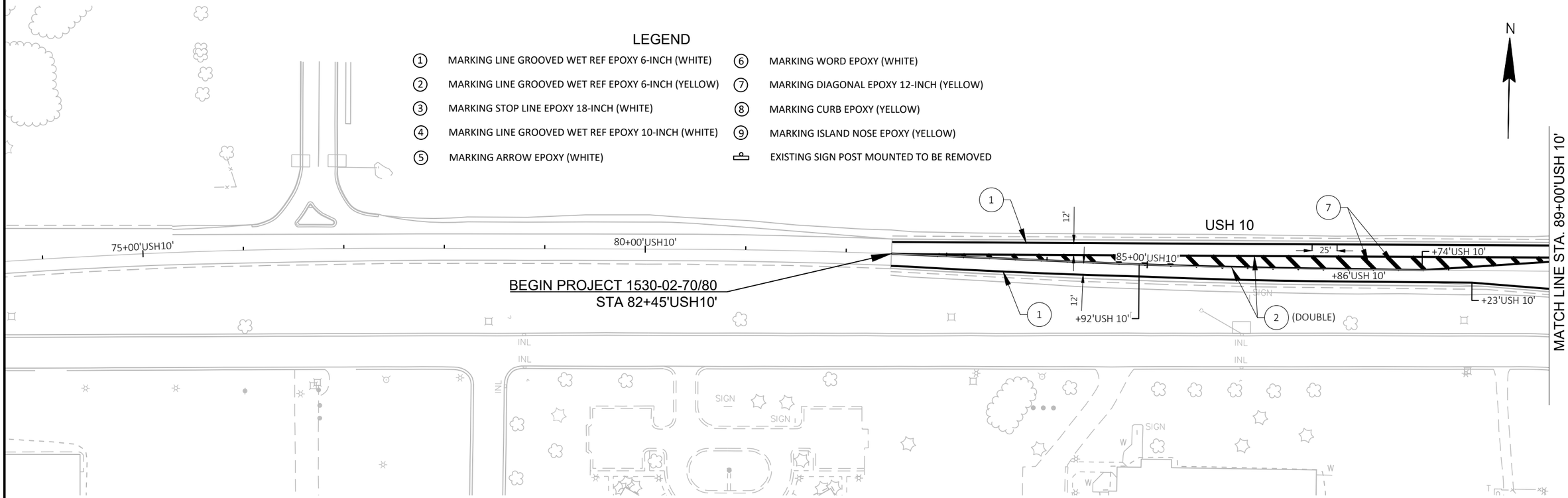


PROJECT NO: 1530-00-79	HWY: USH 10	COUNTY: PIERCE	PAVEMENT MARKING PLAN - USH 10	SHEET 28	E

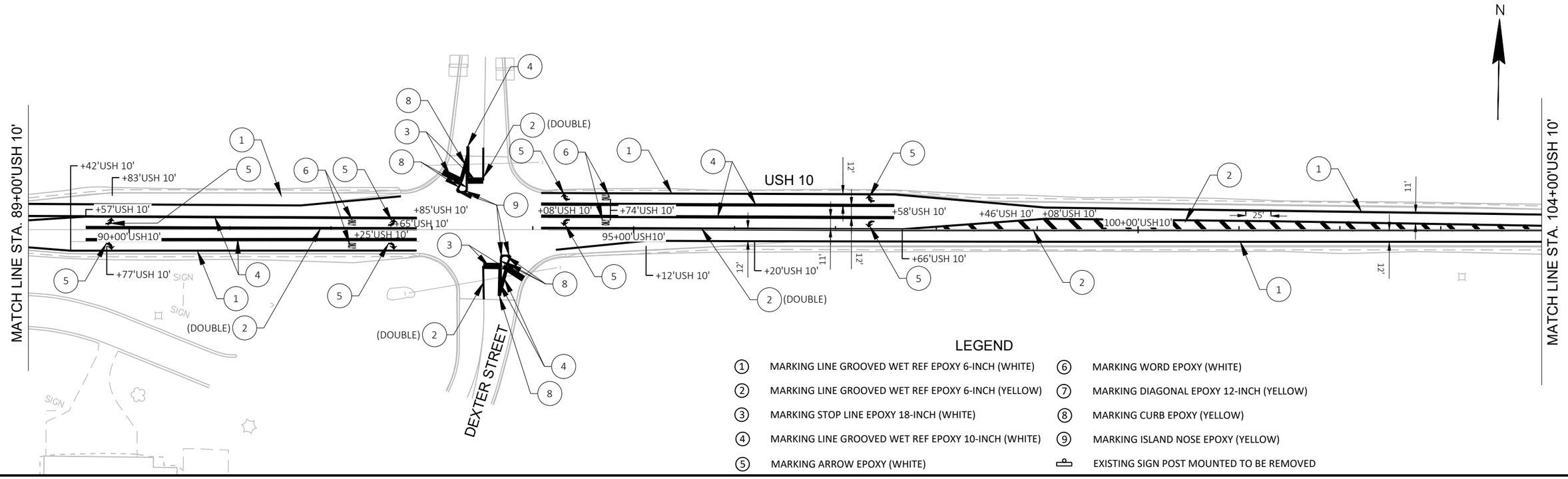
NOTE: DOCUMENT NO PASSING ZONE LOCATIONS PRIOR TO RESURFACING AND RE-MARK NO PASSING ZONES IN EXISTING LOCATIONS.

LEGEND

(1)	MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)	(6)	MARKING WORD EPOXY (WHITE)
(2)	MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)	(7)	MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
(3)	MARKING STOP LINE EPOXY 18-INCH (WHITE)	(8)	MARKING CURB EPOXY (YELLOW)
(4)	MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)	(9)	MARKING ISLAND NOSE EPOXY (YELLOW)
(5)	MARKING ARROW EPOXY (WHITE)		EXISTING SIGN POST MOUNTED TO BE REMOVED

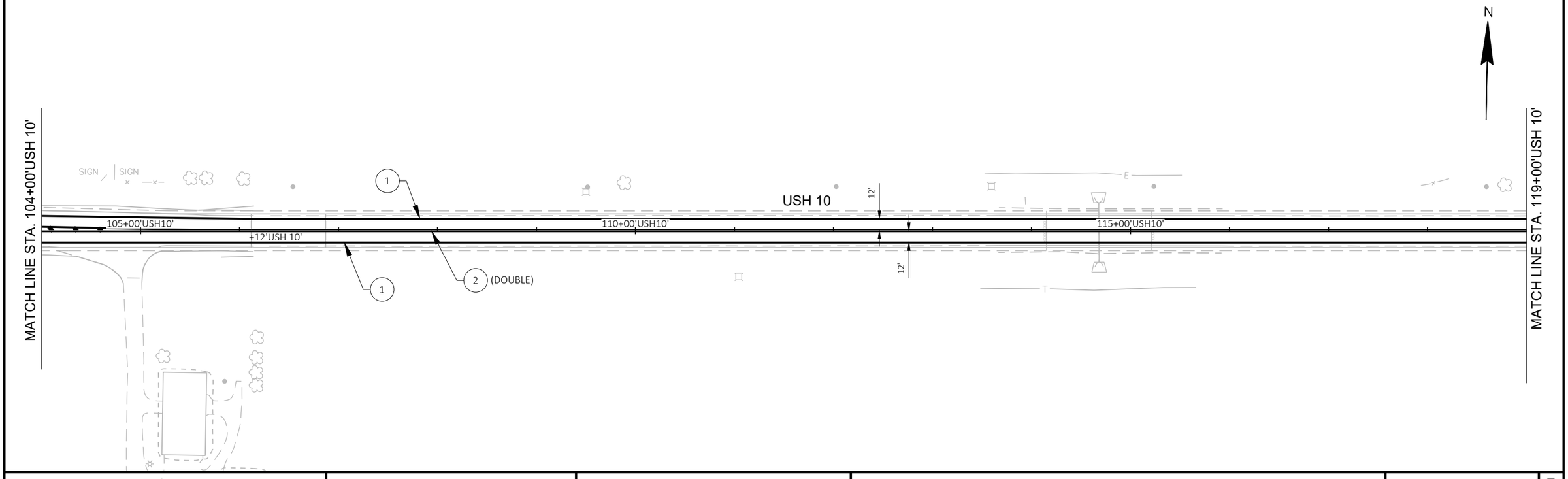


PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	PAVEMENT MARKING PLAN - USH 10	SHEET 29	E



LEGEND

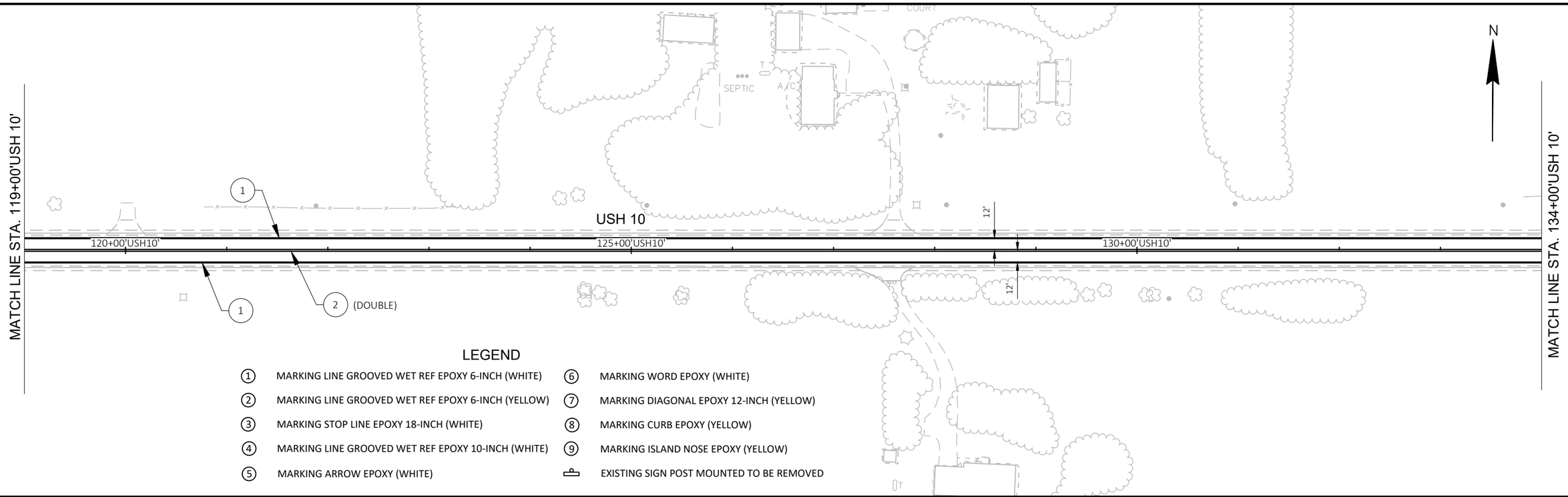
(1)	MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)	(6)	MARKING WORD EPOXY (WHITE)
(2)	MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)	(7)	MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
(3)	MARKING STOP LINE EPOXY 18-INCH (WHITE)	(8)	MARKING CURB EPOXY (YELLOW)
(4)	MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)	(9)	MARKING ISLAND NOSE EPOXY (YELLOW)
(5)	MARKING ARROW EPOXY (WHITE)		EXISTING SIGN POST MOUNTED TO BE REMOVED



PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	PAVEMENT MARKING PLAN - USH 10	SHEET 30 E

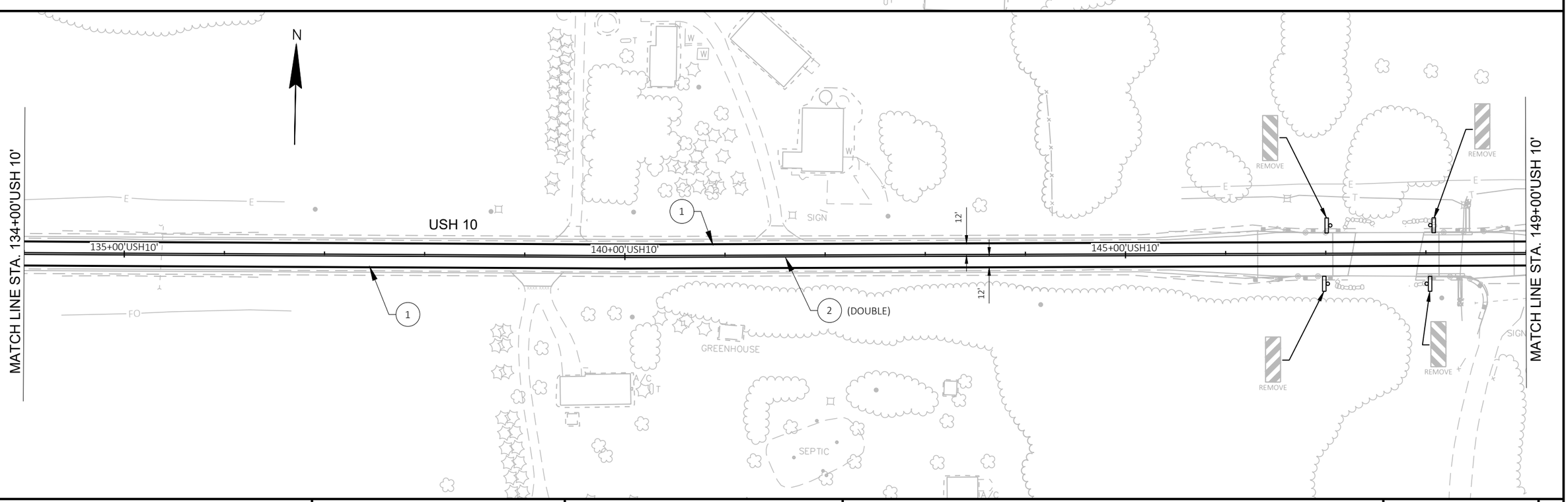
FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\024501-PM.DWG
LAYOUT NAME - 024501
PLOT DATE : 9/29/2023 11:31 AM
PLOT BY : KL ENGINEERING, INC.
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

2



LEGEND

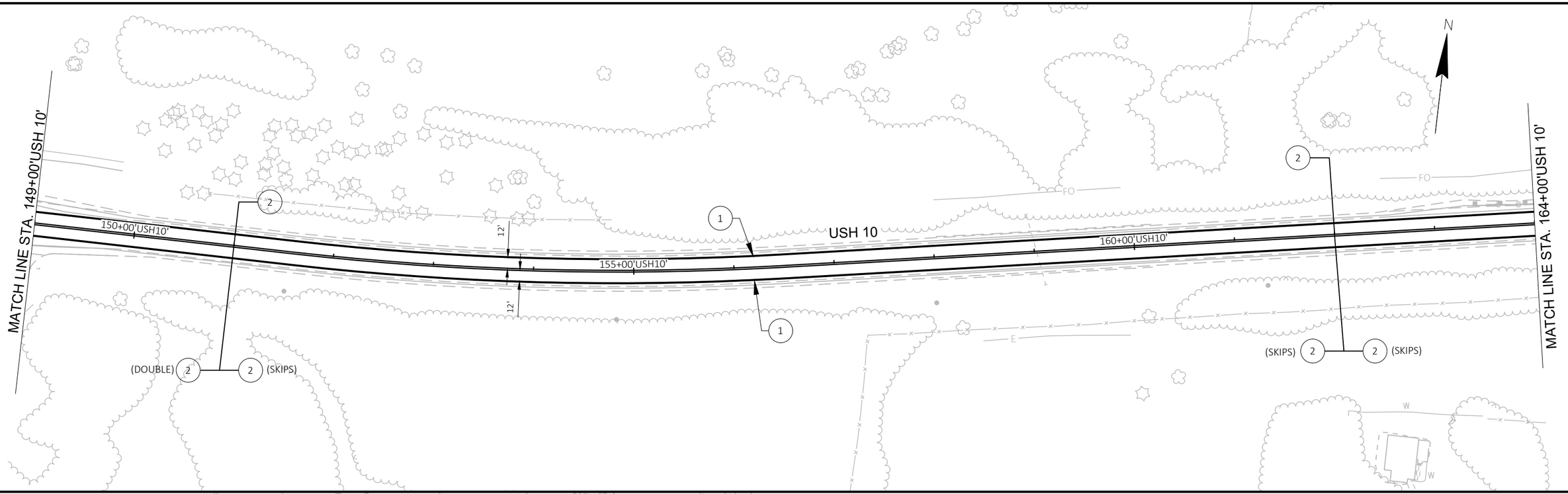
①	MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)	⑥	MARKING WORD EPOXY (WHITE)
②	MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)	⑦	MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
③	MARKING STOP LINE EPOXY 18-INCH (WHITE)	⑧	MARKING CURB EPOXY (YELLOW)
④	MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)	⑨	MARKING ISLAND NOSE EPOXY (YELLOW)
⑤	MARKING ARROW EPOXY (WHITE)		EXISTING SIGN POST MOUNTED TO BE REMOVED



PROJECT NO: 1530-02-70	HWY: USH 10	COUNTY: PIERCE	PAVEMENT MARKING PLAN - USH 10	SHEET 31	E

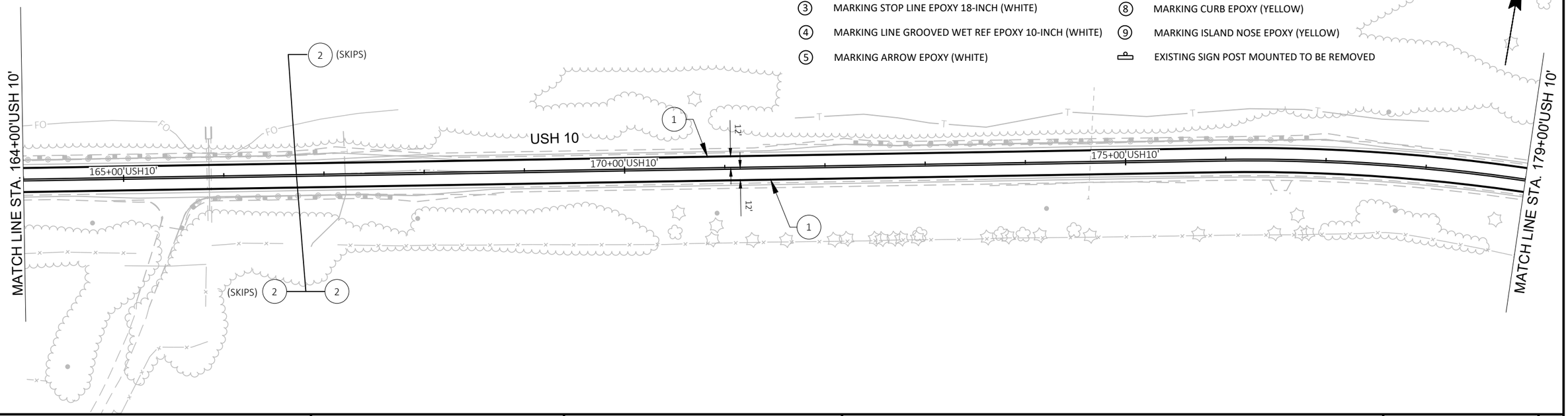
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LAYOUT NAME - 024502
PLOT DATE : 9/29/2023 11:31 AM
PLOT BY : KL ENGINEERING, INC.
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44

2



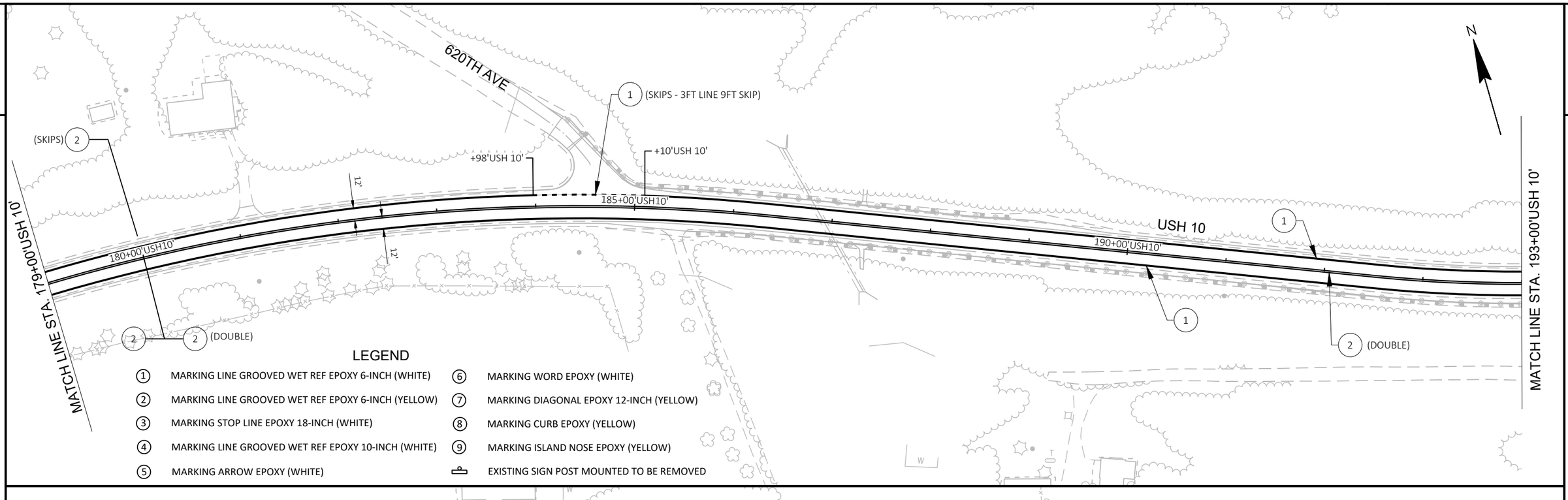
LEGEND

(1)	MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)	(6)	MARKING WORD EPOXY (WHITE)
(2)	MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)	(7)	MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
(3)	MARKING STOP LINE EPOXY 18-INCH (WHITE)	(8)	MARKING CURB EPOXY (YELLOW)
(4)	MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)	(9)	MARKING ISLAND NOSE EPOXY (YELLOW)
(5)	MARKING ARROW EPOXY (WHITE)		EXISTING SIGN POST MOUNTED TO BE REMOVED



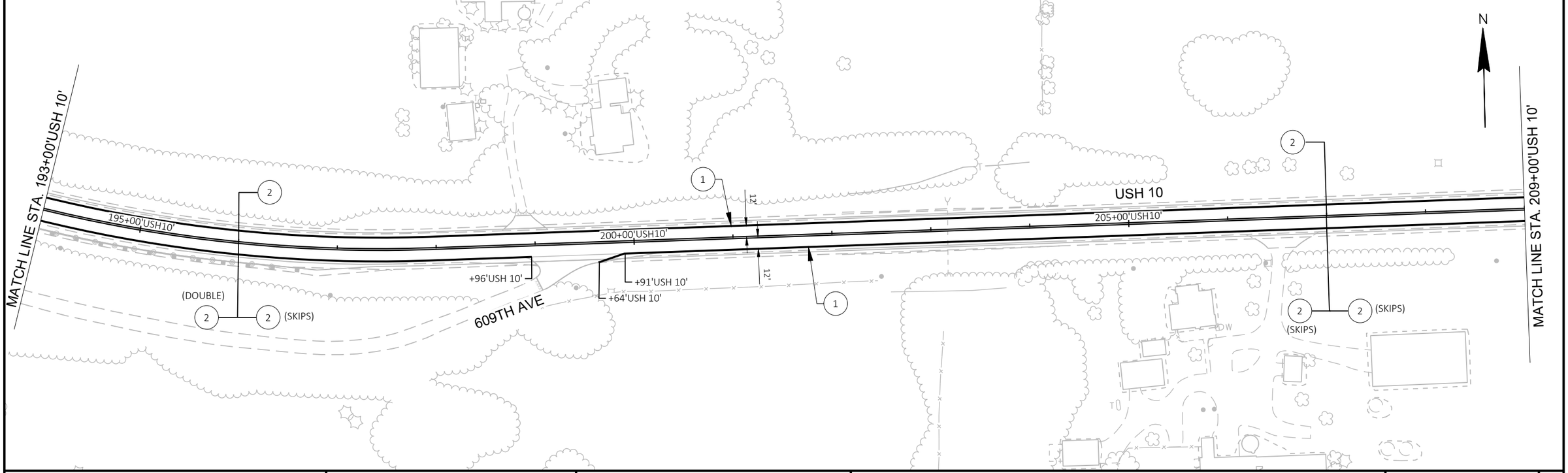
PROJECT NO: 1530-02-70	HWY: USH 10	COUNTY: PIERCE	PAVEMENT MARKING PLAN - USH 10	SHEET 32	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\024501-PM.DWG
LAYOUT NAME - 024503
PLOT DATE : 9/29/2023 11:32 AM
PLOT BY : KL ENGINEERING, INC.
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44



LEGEND

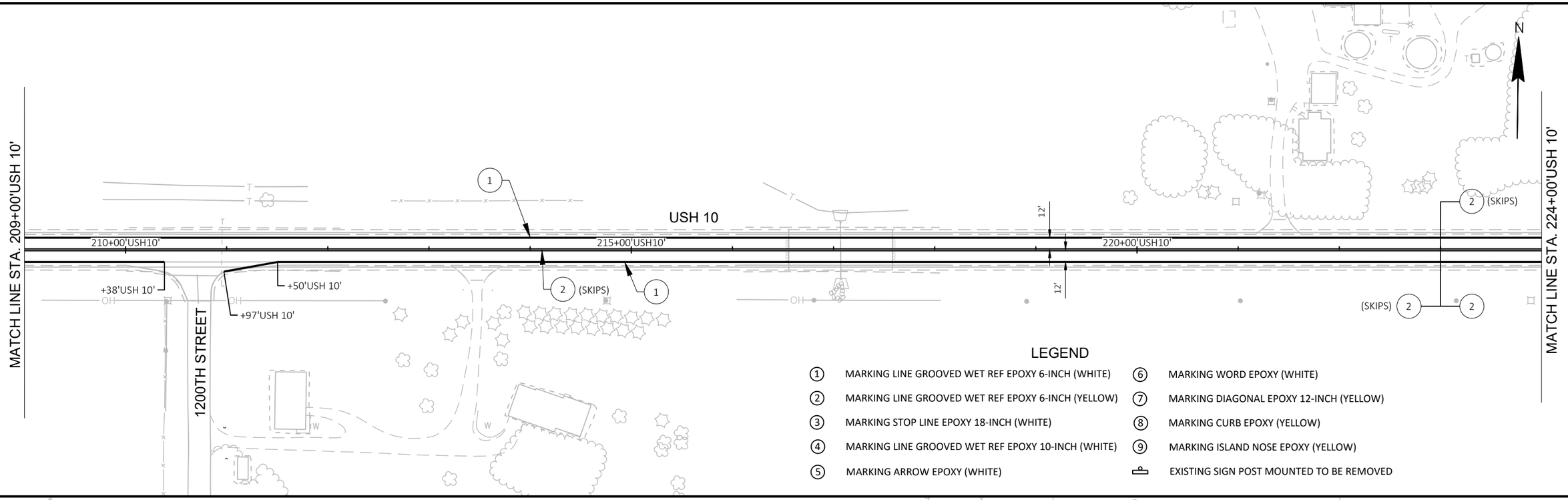
①	MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)	⑥	MARKING WORD EPOXY (WHITE)
②	MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)	⑦	MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
③	MARKING STOP LINE EPOXY 18-INCH (WHITE)	⑧	MARKING CURB EPOXY (YELLOW)
④	MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)	⑨	MARKING ISLAND NOSE EPOXY (YELLOW)
⑤	MARKING ARROW EPOXY (WHITE)		EXISTING SIGN POST MOUNTED TO BE REMOVED



PROJECT NO: 1530-02-70	HWY: USH 10	COUNTY: PIERCE	PAVEMENT MARKING PLAN - USH 10	SHEET 33	E

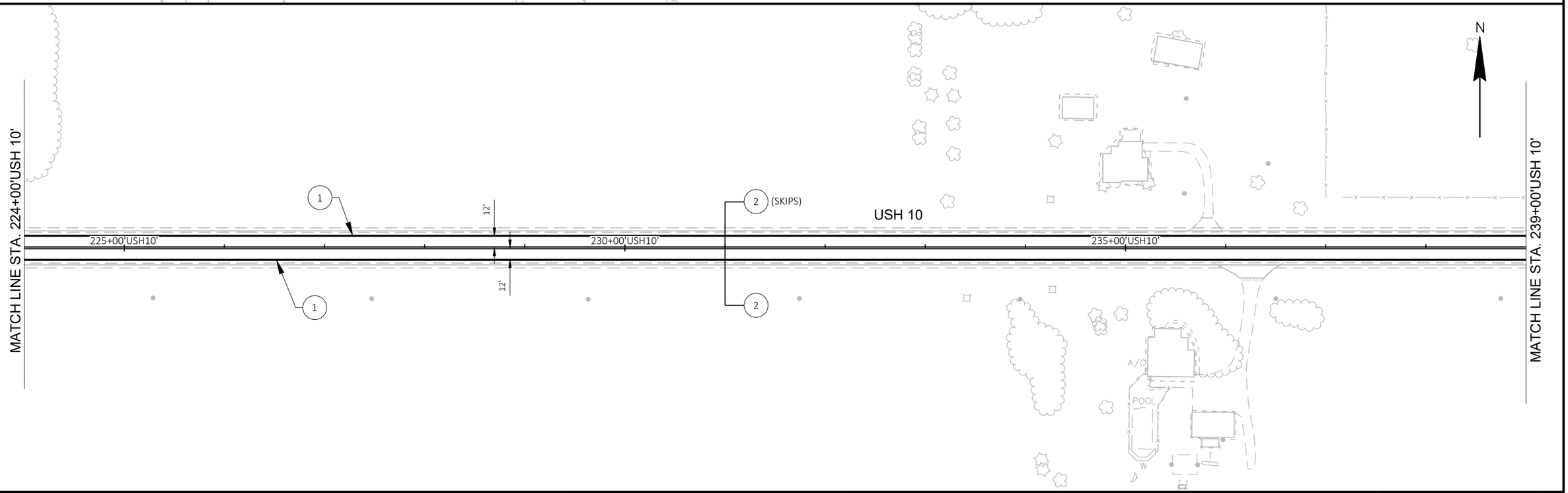
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LAYOUT NAME - 024504
PLOT DATE : 9/29/2023 11:32 AM
PLOT BY : KL ENGINEERING, INC.
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44

2



LEGEND

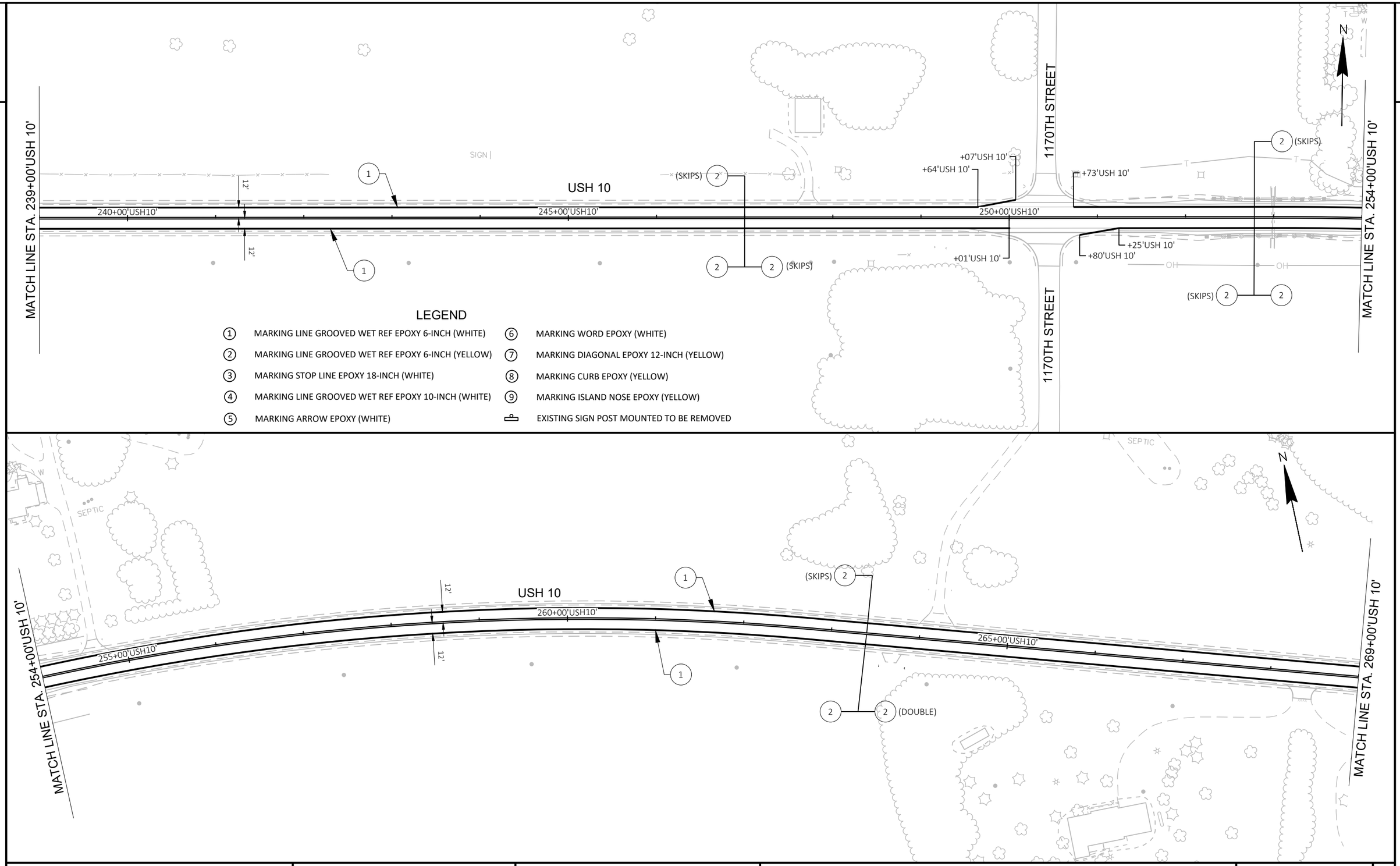
1	MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)	6	MARKING WORD EPOXY (WHITE)
2	MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)	7	MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
3	MARKING STOP LINE EPOXY 18-INCH (WHITE)	8	MARKING CURB EPOXY (YELLOW)
4	MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)	9	MARKING ISLAND NOSE EPOXY (YELLOW)
5	MARKING ARROW EPOXY (WHITE)		EXISTING SIGN POST MOUNTED TO BE REMOVED



PROJECT NO: 1530-02-70	HWY: USH 10	COUNTY: PIERCE	PAVEMENT MARKING PLAN - USH 10	SHEET 34	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\024501-PM.DWG
LAYOUT NAME - 024505
PLOT DATE : 9/29/2023 11:33 AM
PLOT BY : KL ENGINEERING, INC.
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44

2



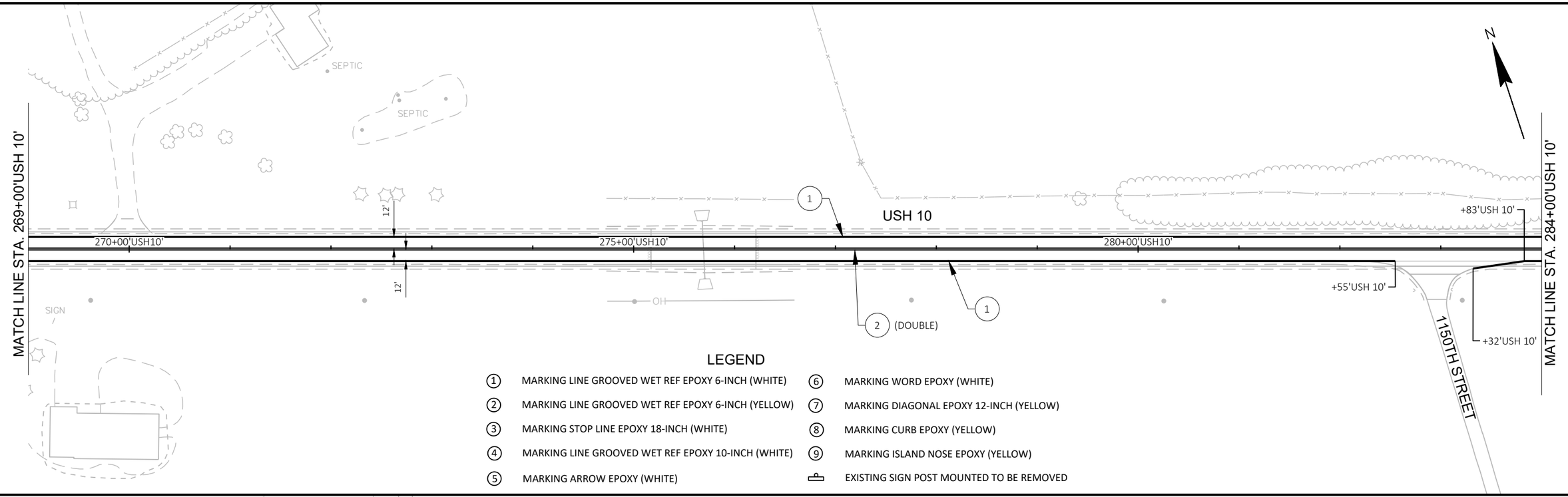
LEGEND

1	MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)	6	MARKING WORD EPOXY (WHITE)
2	MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)	7	MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
3	MARKING STOP LINE EPOXY 18-INCH (WHITE)	8	MARKING CURB EPOXY (YELLOW)
4	MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)	9	MARKING ISLAND NOSE EPOXY (YELLOW)
5	MARKING ARROW EPOXY (WHITE)		EXISTING SIGN POST MOUNTED TO BE REMOVED

PROJECT NO: 1530-02-70	HWY: USH 10	COUNTY: PIERCE	PAVEMENT MARKING PLAN - USH 10	SHEET 35	E

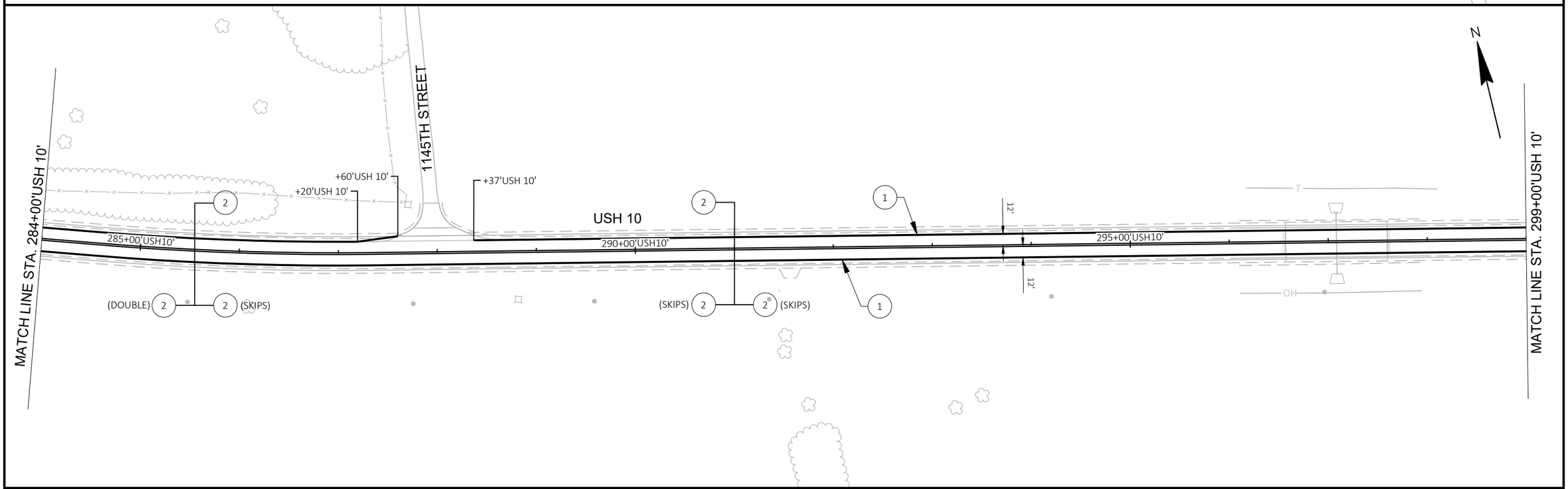
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LAYOUT NAME - 024506
PLOT DATE : 9/29/2023 11:33 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44

2



LEGEND

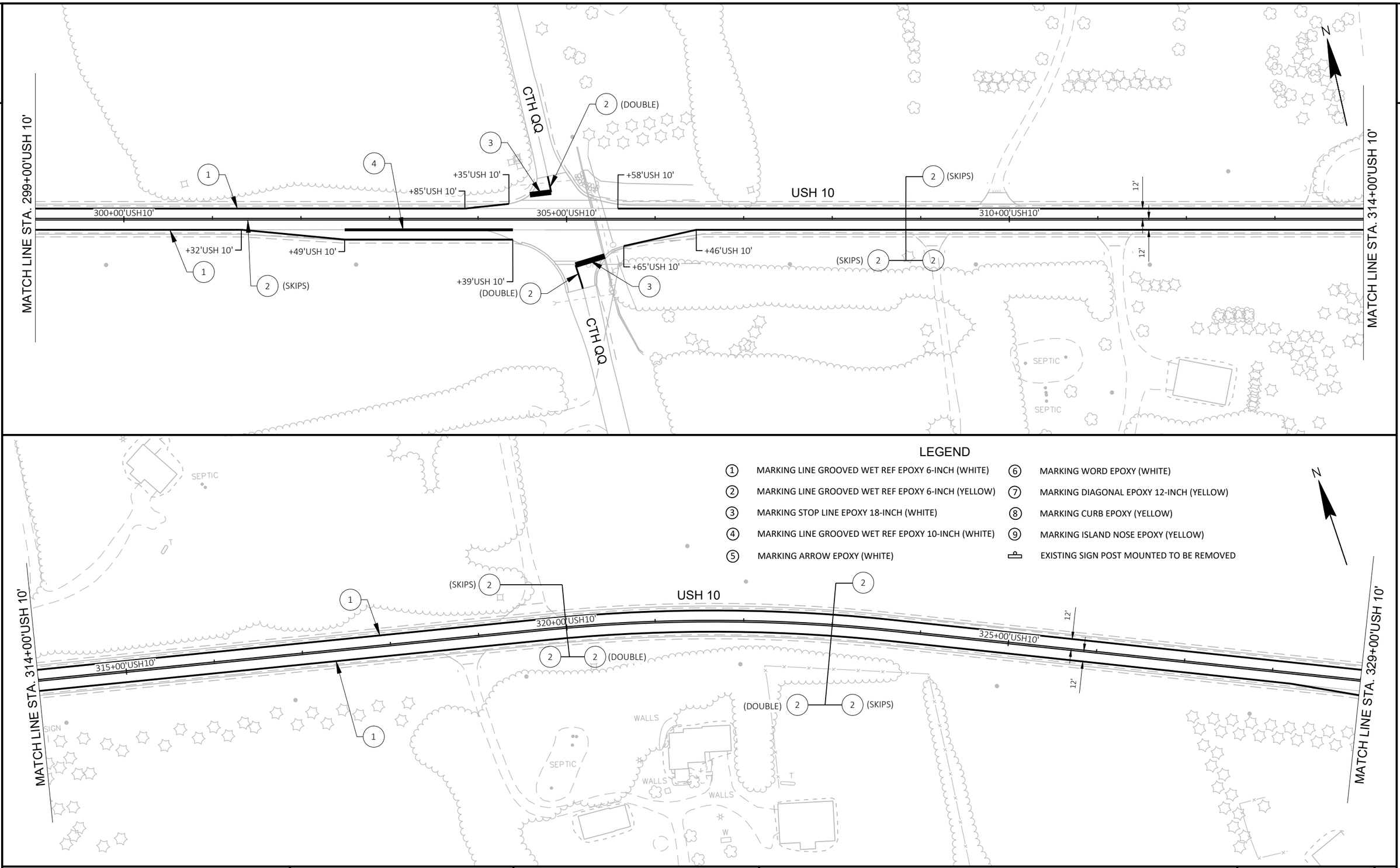
1	MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)	6	MARKING WORD EPOXY (WHITE)
2	MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)	7	MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
3	MARKING STOP LINE EPOXY 18-INCH (WHITE)	8	MARKING CURB EPOXY (YELLOW)
4	MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)	9	MARKING ISLAND NOSE EPOXY (YELLOW)
5	MARKING ARROW EPOXY (WHITE)		EXISTING SIGN POST MOUNTED TO BE REMOVED



PROJECT NO: 1530-02-70	HWY: USH 10	COUNTY: PIERCE	PAVEMENT MARKING PLAN - USH 10	SHEET 36	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\024501-PM.DWG
LAYOUT NAME - 024507
PLOT DATE : 9/29/2023 11:34 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44

2

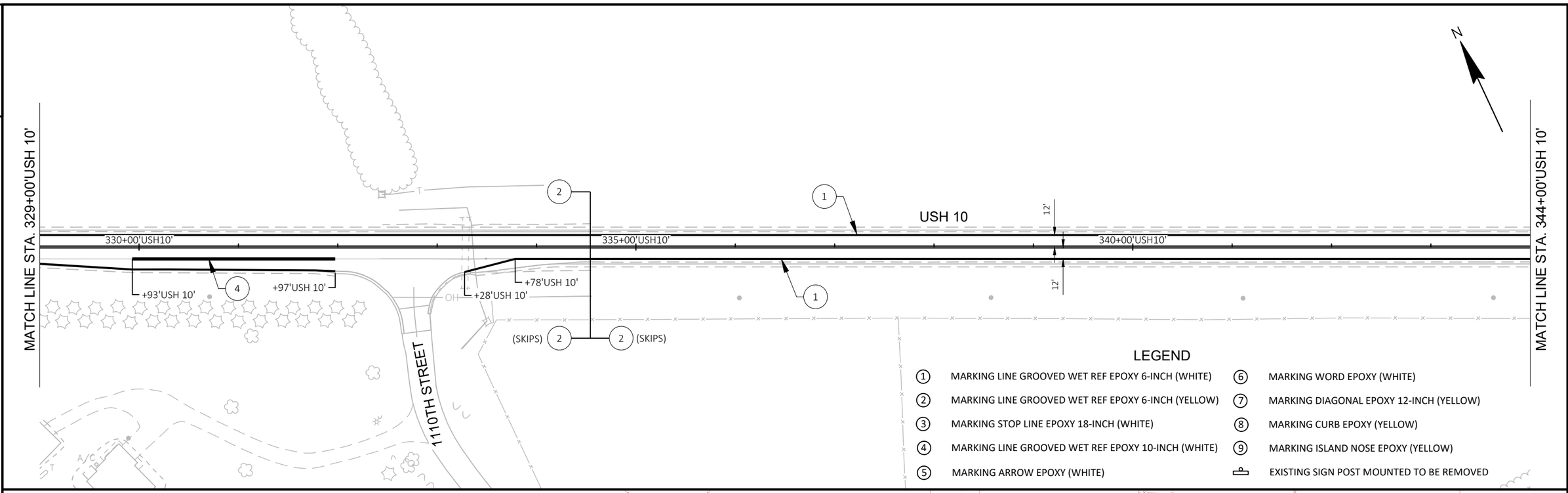


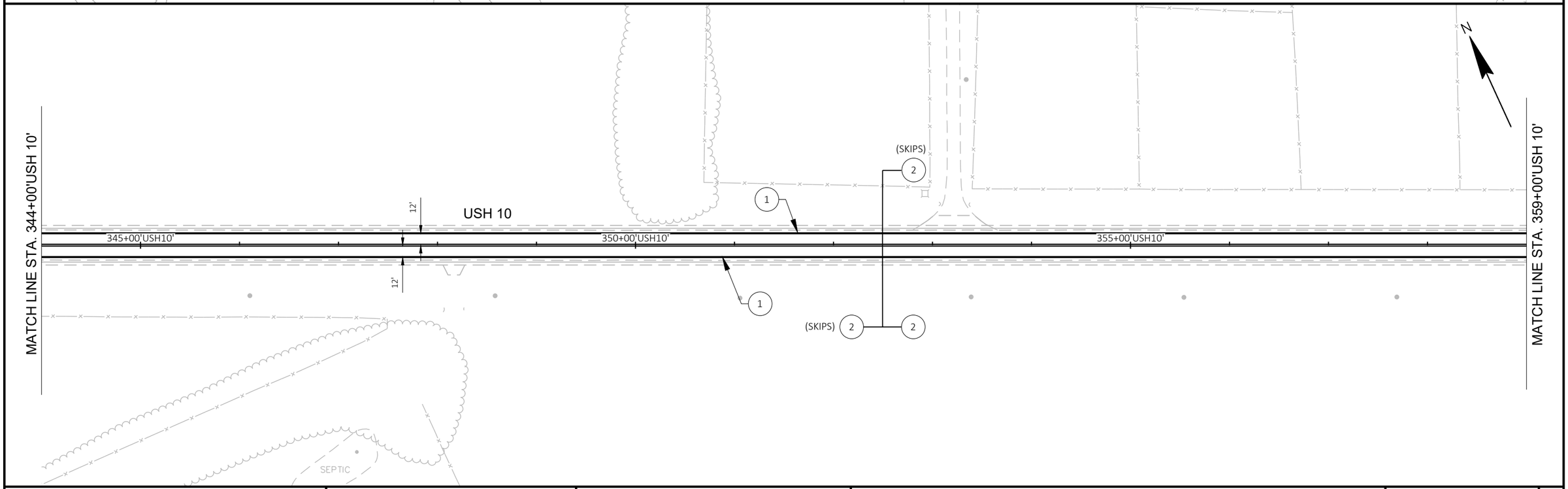
LEGEND

1	MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)	6	MARKING WORD EPOXY (WHITE)
2	MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)	7	MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
3	MARKING STOP LINE EPOXY 18-INCH (WHITE)	8	MARKING CURB EPOXY (YELLOW)
4	MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)	9	MARKING ISLAND NOSE EPOXY (YELLOW)
5	MARKING ARROW EPOXY (WHITE)		EXISTING SIGN POST MOUNTED TO BE REMOVED

PROJECT NO: 1530-02-70	HWY: USH 10	COUNTY: PIERCE	PAVEMENT MARKING PLAN - USH 10	SHEET 37 E

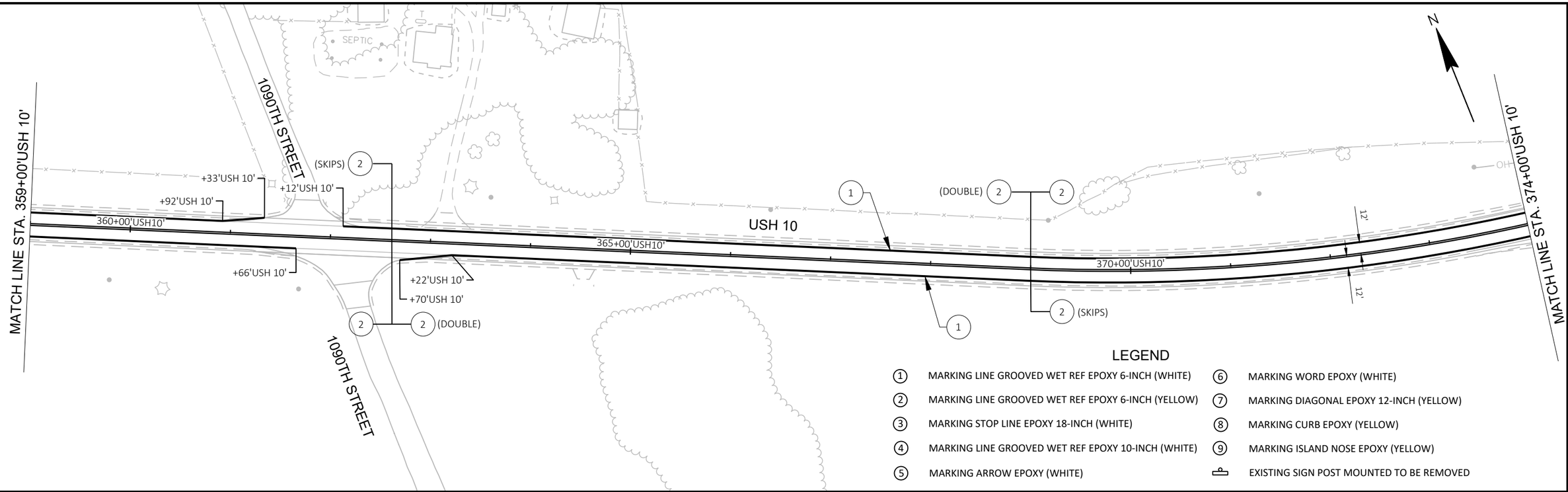
FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\024501-PM.DWG
LAYOUT NAME - 024508
PLOT DATE : 9/29/2023 11:34 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44





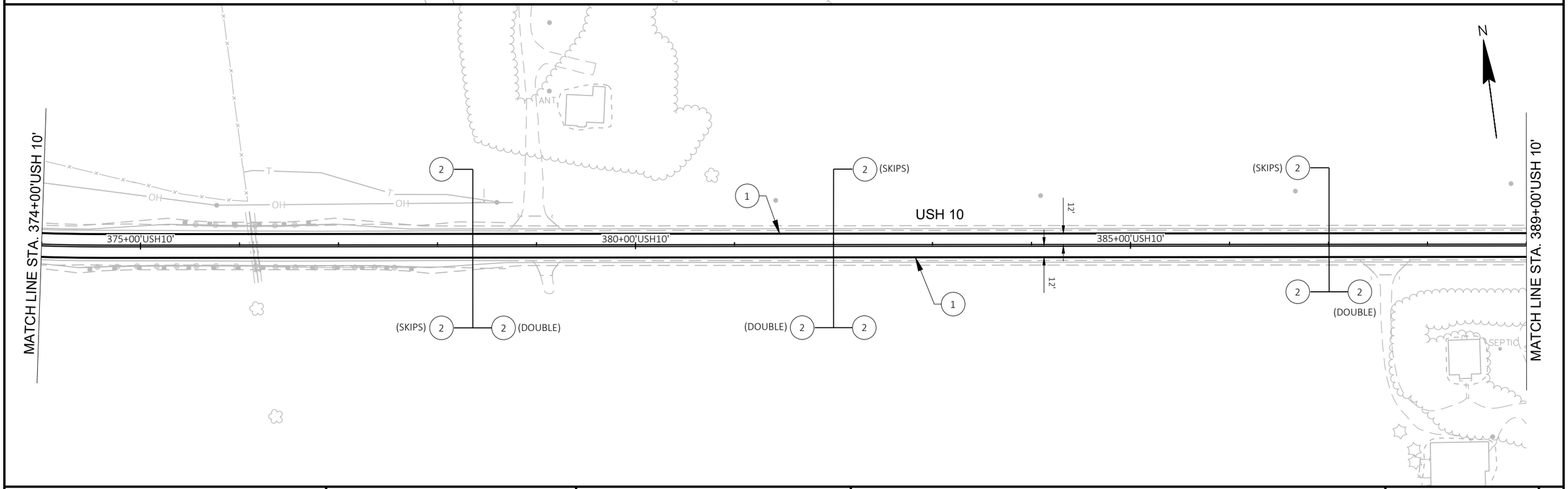
PROJECT NO: 1530-02-70	HWY: USH 10	COUNTY: PIERCE	PAVEMENT MARKING PLAN - USH 10	SHEET 38	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\024501-PM.DWG
LAYOUT NAME - 024509
PLOT DATE : 9/29/2023 11:34 AM
PLOT BY : KL ENGINEERING, INC.
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44



LEGEND

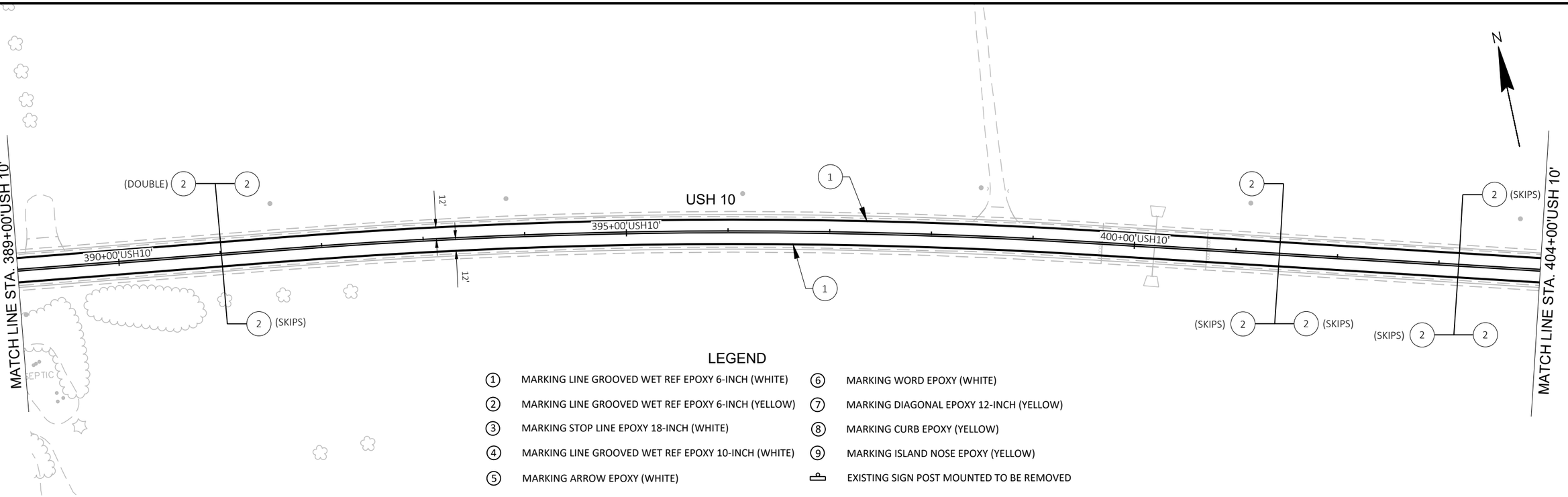
1	MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)	6	MARKING WORD EPOXY (WHITE)
2	MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)	7	MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
3	MARKING STOP LINE EPOXY 18-INCH (WHITE)	8	MARKING CURB EPOXY (YELLOW)
4	MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)	9	MARKING ISLAND NOSE EPOXY (YELLOW)
5	MARKING ARROW EPOXY (WHITE)		EXISTING SIGN POST MOUNTED TO BE REMOVED



PROJECT NO: 1530-02-70	HWY: USH 10	COUNTY: PIERCE	PAVEMENT MARKING PLAN - USH 10	SHEET 39	E

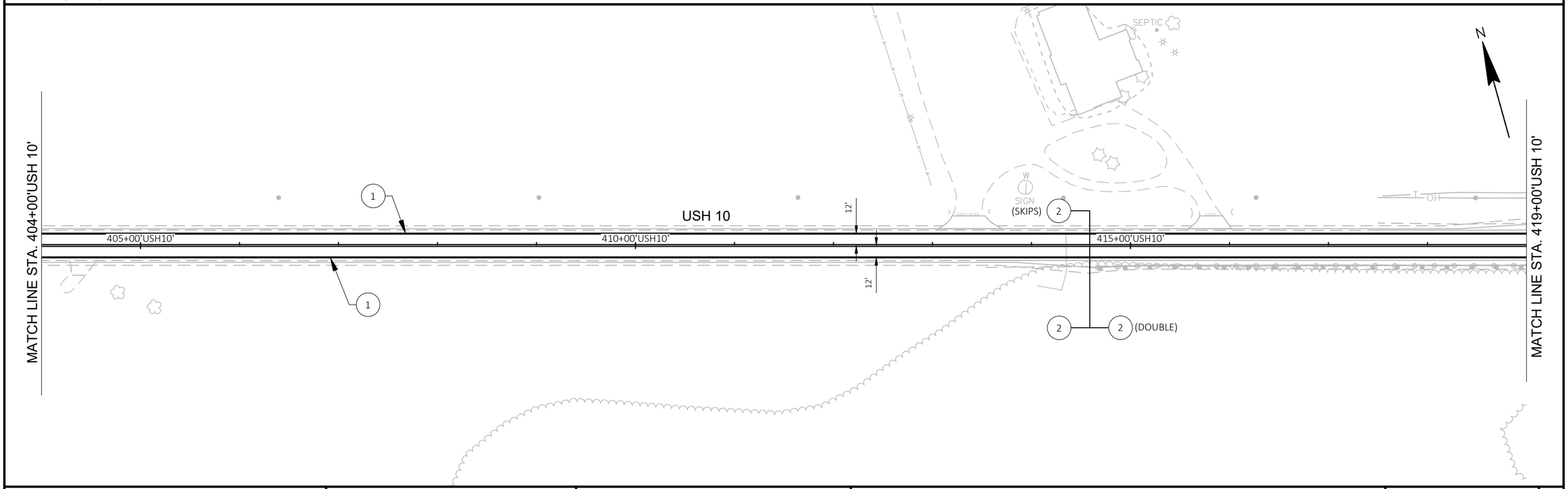
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LAYOUT NAME - 024510
PLOT DATE : 9/29/2023 11:35 AM
PLOT BY : KL ENGINEERING, INC.
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44

2



LEGEND

①	MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)	⑥	MARKING WORD EPOXY (WHITE)
②	MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)	⑦	MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
③	MARKING STOP LINE EPOXY 18-INCH (WHITE)	⑧	MARKING CURB EPOXY (YELLOW)
④	MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)	⑨	MARKING ISLAND NOSE EPOXY (YELLOW)
⑤	MARKING ARROW EPOXY (WHITE)		EXISTING SIGN POST MOUNTED TO BE REMOVED

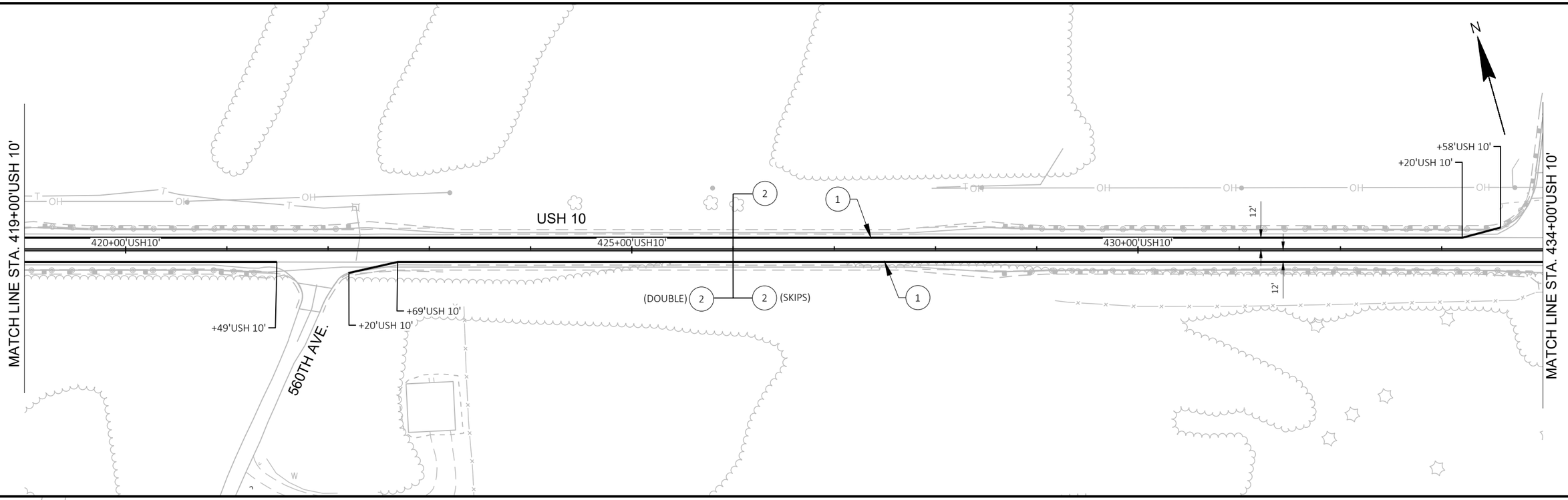


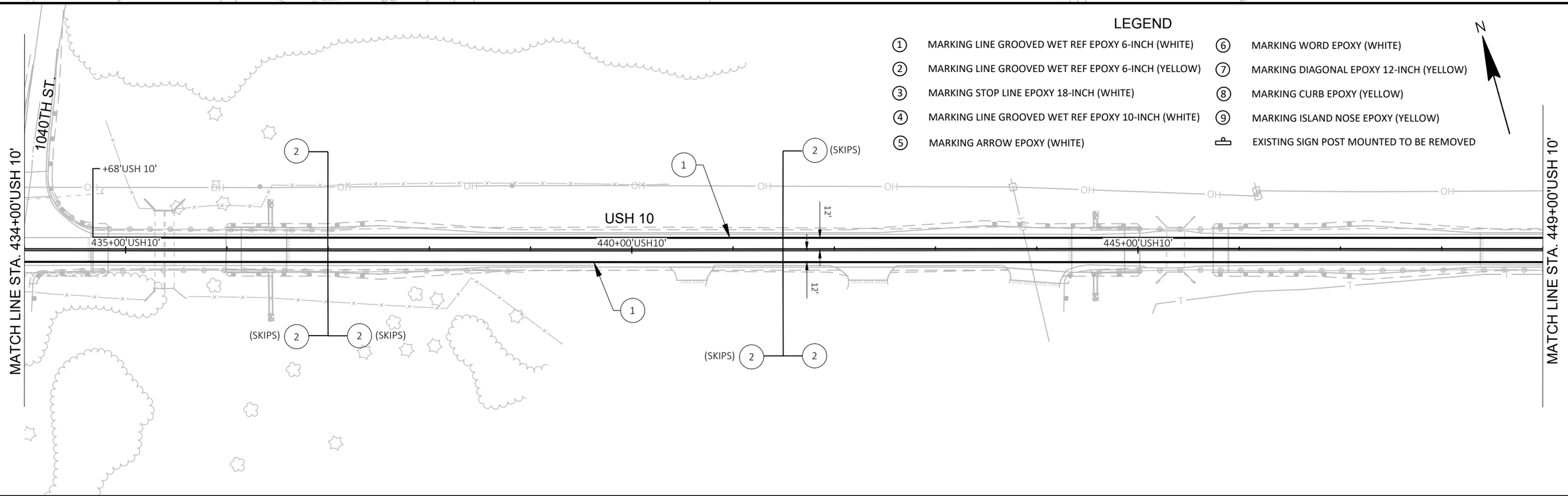
PROJECT NO: 1530-02-70	HWY: USH 10	COUNTY: PIERCE	PAVEMENT MARKING PLAN - USH 10	SHEET 40	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\024501-PM.DWG
LAYOUT NAME - 024511

PLOT DATE : 9/29/2023 11:35 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:100 FT

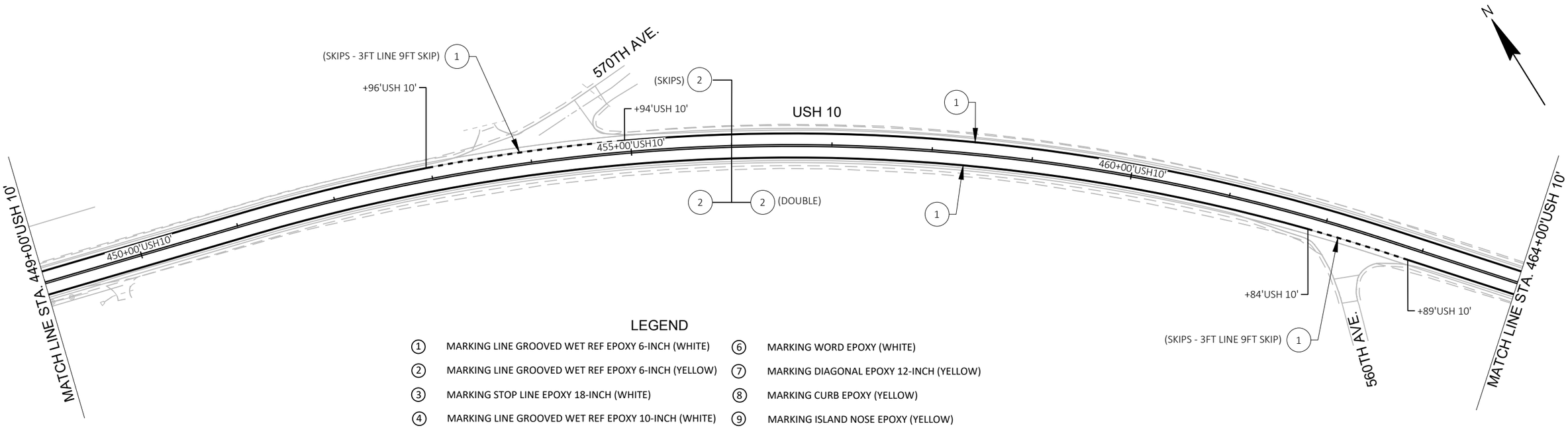
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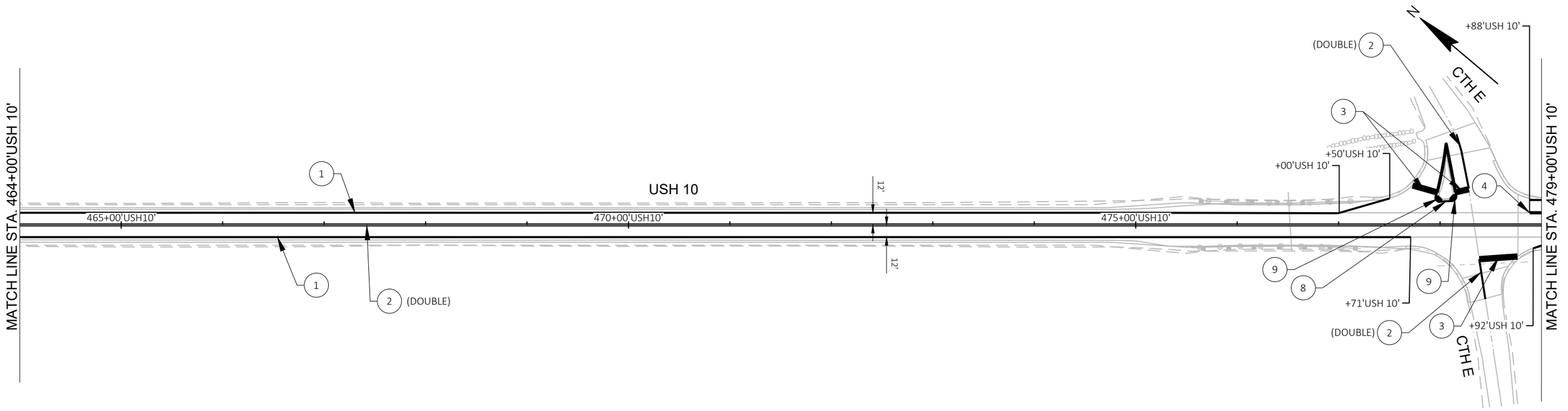
PROJECT NO: 1530-02-70	HWY: USH 10	COUNTY: PIERCE	PAVEMENT MARKING PLAN - USH 10	SHEET 41	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\024501-PM.DWG
LAYOUT NAME - 024512
PLOT DATE : 9/29/2023 11:36 AM
PLOT BY : KL ENGINEERING, INC.
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44



LEGEND

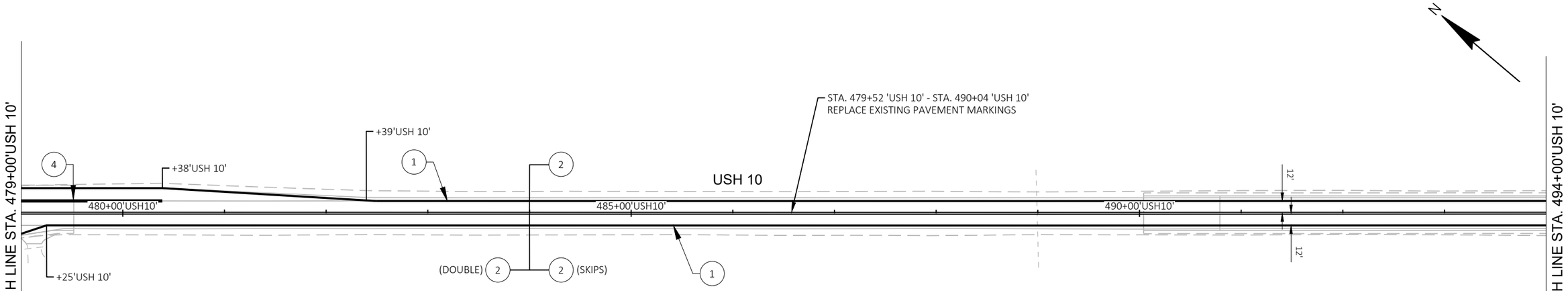
①	MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)	⑥	MARKING WORD EPOXY (WHITE)
②	MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)	⑦	MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
③	MARKING STOP LINE EPOXY 18-INCH (WHITE)	⑧	MARKING CURB EPOXY (YELLOW)
④	MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)	⑨	MARKING ISLAND NOSE EPOXY (YELLOW)
⑤	MARKING ARROW EPOXY (WHITE)		EXISTING SIGN POST MOUNTED TO BE REMOVED



PROJECT NO: 1530-02-70	HWY: USH 10	COUNTY: PIERCE	PAVEMENT MARKING PLAN - USH 10	SHEET 42	E

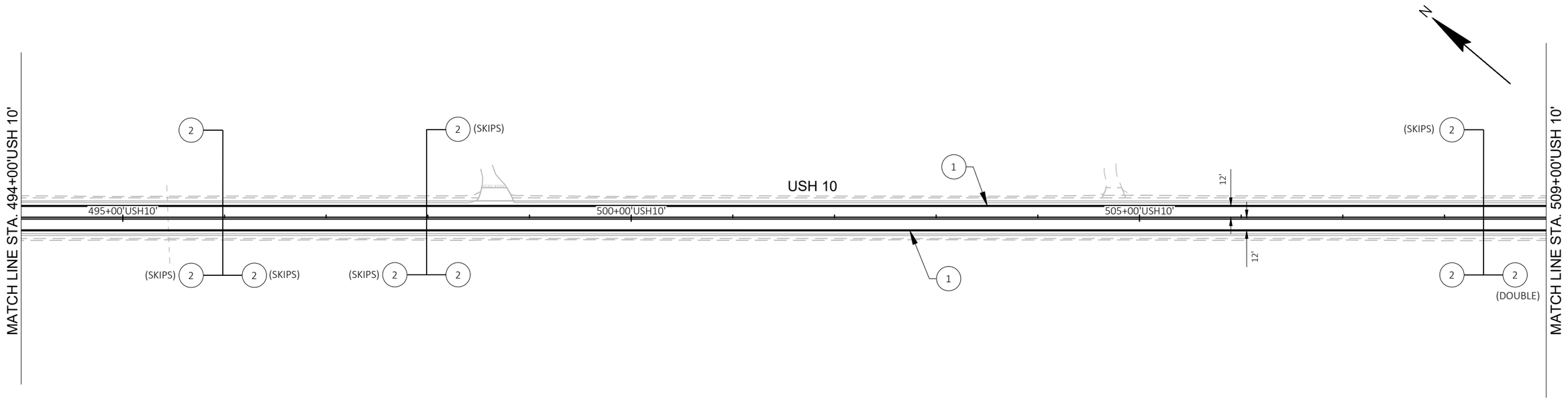
FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\024501-PM.DWG
LAYOUT NAME - 024513
PLOT DATE : 9/29/2023 11:36 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44

2



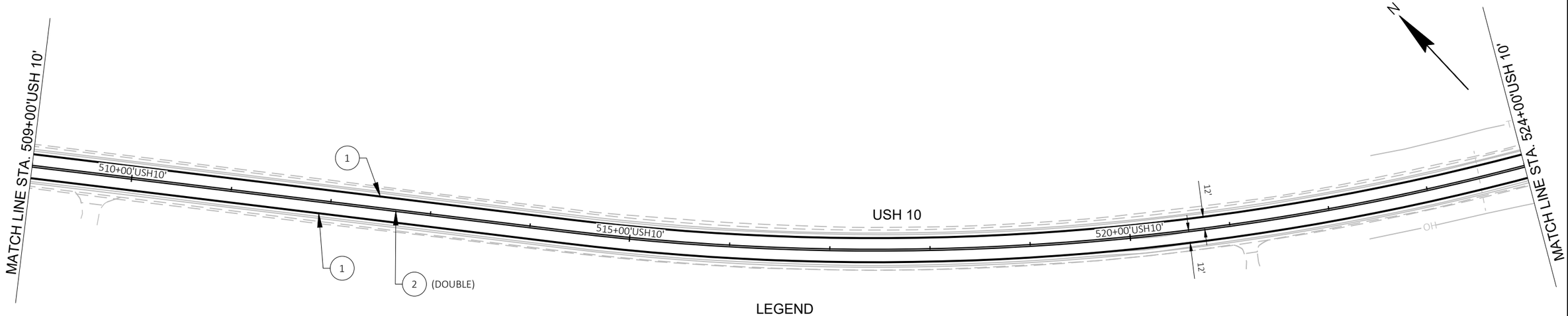
LEGEND

(1)	MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)	(6)	MARKING WORD EPOXY (WHITE)
(2)	MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)	(7)	MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
(3)	MARKING STOP LINE EPOXY 18-INCH (WHITE)	(8)	MARKING CURB EPOXY (YELLOW)
(4)	MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)	(9)	MARKING ISLAND NOSE EPOXY (YELLOW)
(5)	MARKING ARROW EPOXY (WHITE)	▭	EXISTING SIGN POST MOUNTED TO BE REMOVED



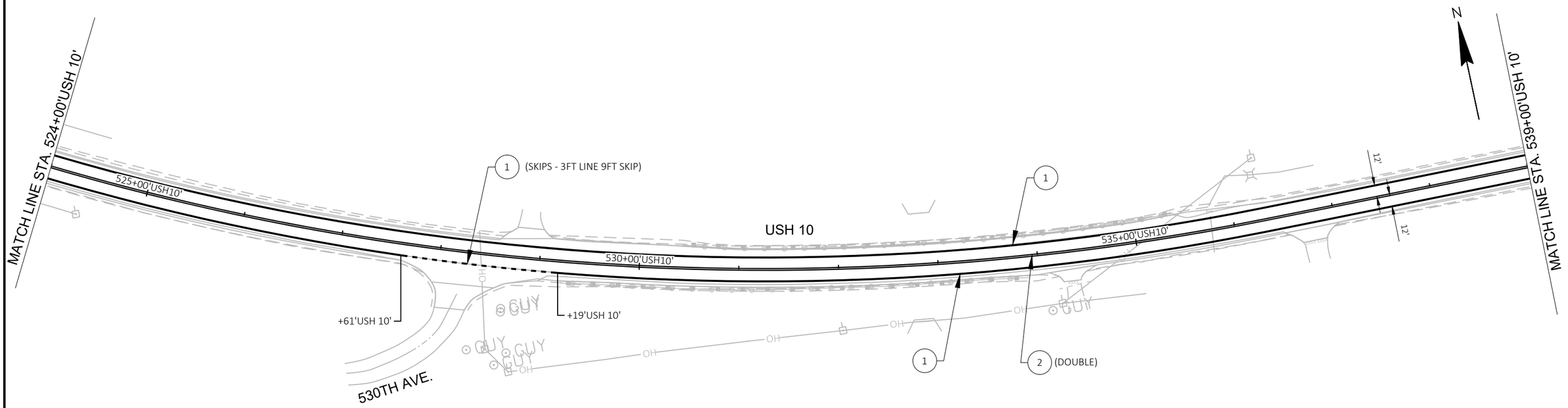
PROJECT NO: 1530-02-70	HWY: USH 10	COUNTY: PIERCE	PAVEMENT MARKING PLAN - USH 10	SHEET 43	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\024501-PM.DWG
LAYOUT NAME - 024514
PLOT DATE : 9/29/2023 11:36 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:100 FT



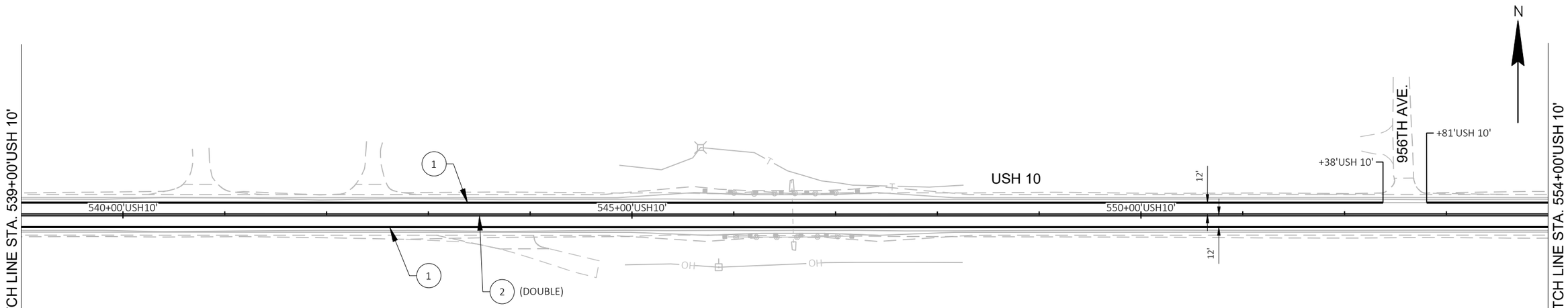
LEGEND

(1)	MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)	(6)	MARKING WORD EPOXY (WHITE)
(2)	MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)	(7)	MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
(3)	MARKING STOP LINE EPOXY 18-INCH (WHITE)	(8)	MARKING CURB EPOXY (YELLOW)
(4)	MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)	(9)	MARKING ISLAND NOSE EPOXY (YELLOW)
(5)	MARKING ARROW EPOXY (WHITE)		EXISTING SIGN POST MOUNTED TO BE REMOVED



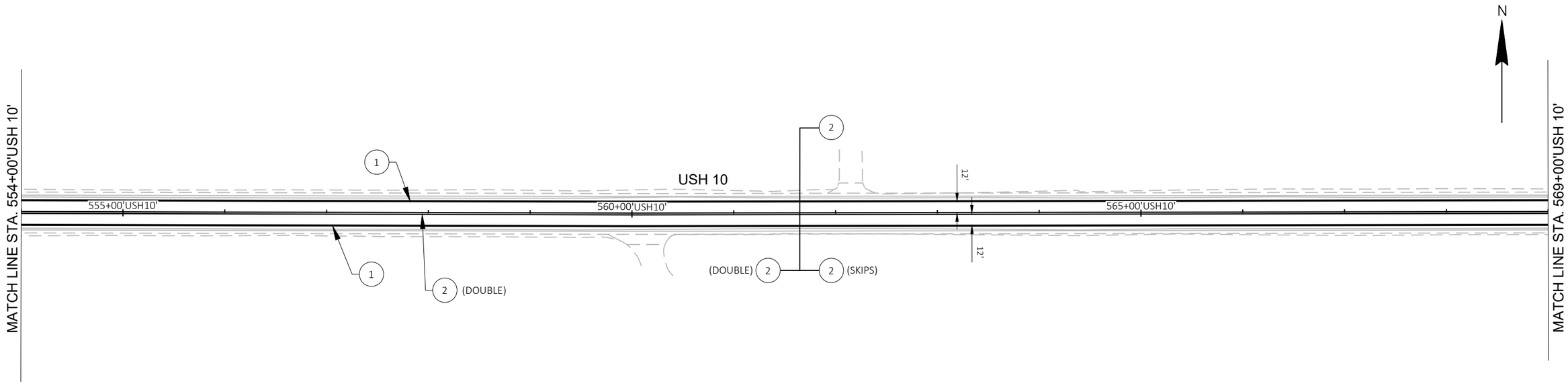
PROJECT NO: 1530-02-70	HWY: USH 10	COUNTY: PIERCE	PAVEMENT MARKING PLAN - USH 10	SHEET 44	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\024501-PM.DWG
LAYOUT NAME - 024515
PLOT DATE : 9/29/2023 11:36 AM
PLOT BY : KL ENGINEERING, INC.
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44



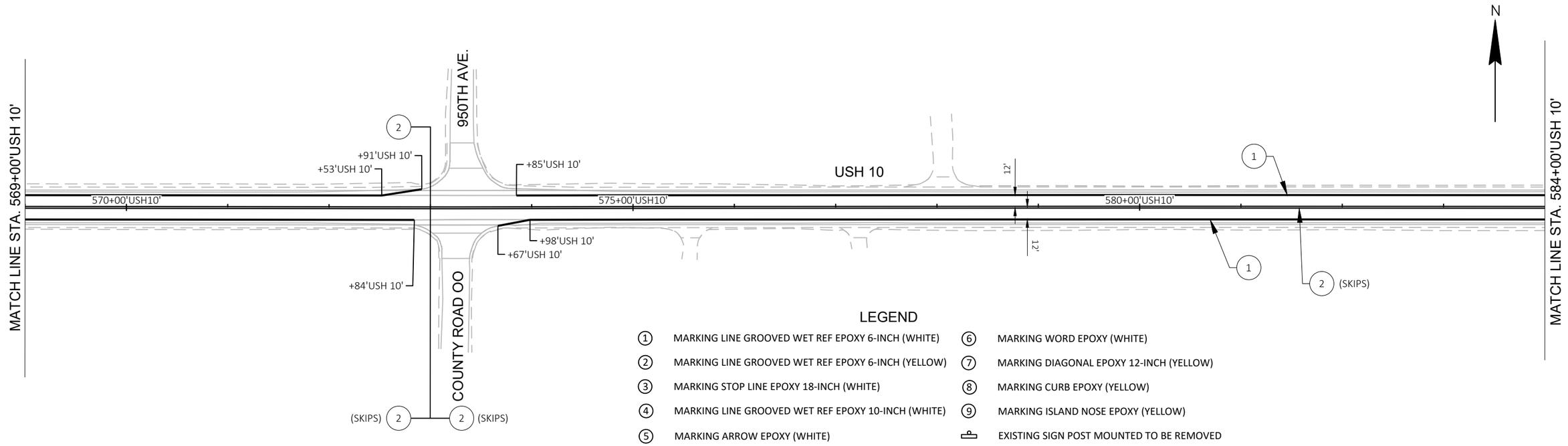
LEGEND

①	MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)	⑥	MARKING WORD EPOXY (WHITE)
②	MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)	⑦	MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
③	MARKING STOP LINE EPOXY 18-INCH (WHITE)	⑧	MARKING CURB EPOXY (YELLOW)
④	MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)	⑨	MARKING ISLAND NOSE EPOXY (YELLOW)
⑤	MARKING ARROW EPOXY (WHITE)		EXISTING SIGN POST MOUNTED TO BE REMOVED



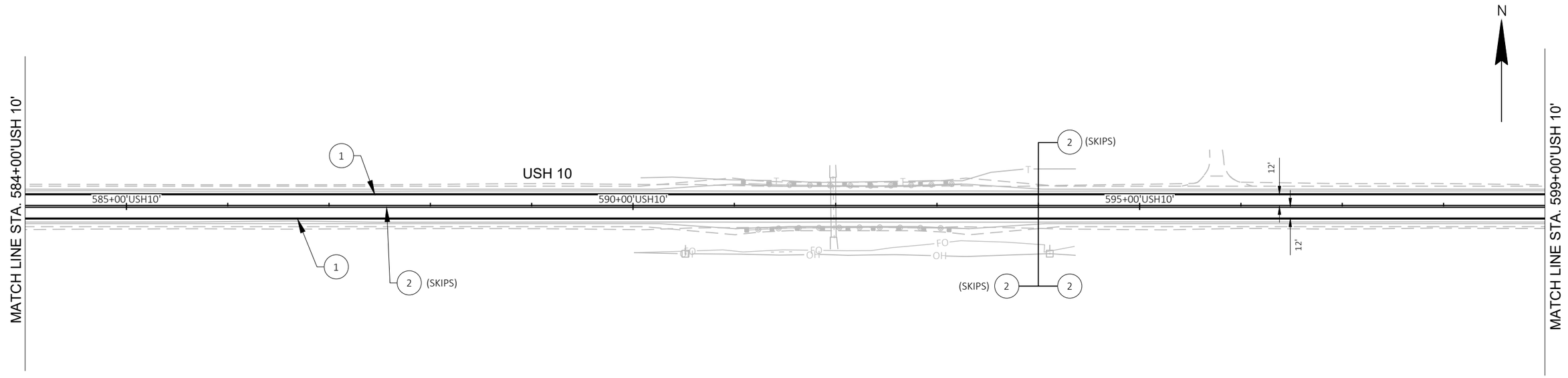
PROJECT NO: 1530-02-70	HWY: USH 10	COUNTY: PIERCE	PAVEMENT MARKING PLAN - USH 10	SHEET 45	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\024501-PM.DWG
LAYOUT NAME - 024516
PLOT DATE : 9/29/2023 11:37 AM
PLOT BY : KL ENGINEERING, INC.
PLOT NAME :
PLOT SCALE : 1 IN:100 FT



LEGEND

(1)	MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)	(6)	MARKING WORD EPOXY (WHITE)
(2)	MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)	(7)	MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
(3)	MARKING STOP LINE EPOXY 18-INCH (WHITE)	(8)	MARKING CURB EPOXY (YELLOW)
(4)	MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)	(9)	MARKING ISLAND NOSE EPOXY (YELLOW)
(5)	MARKING ARROW EPOXY (WHITE)		EXISTING SIGN POST MOUNTED TO BE REMOVED

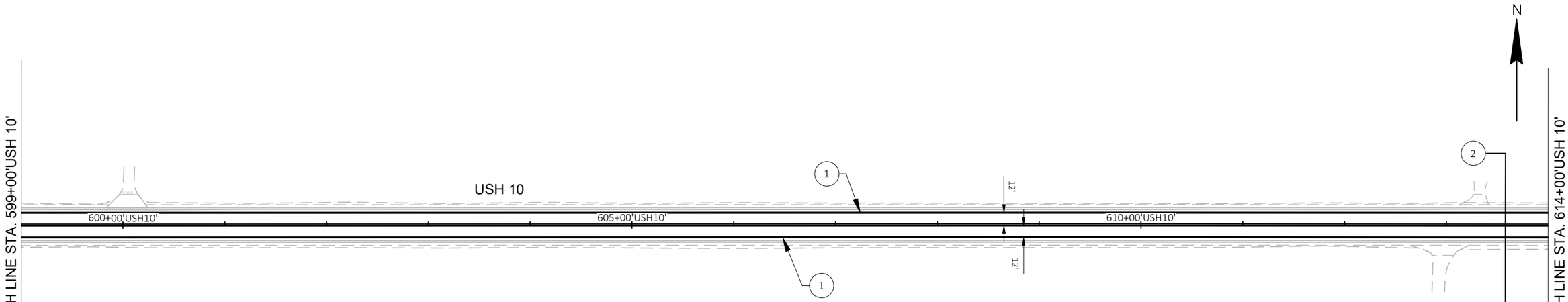


PROJECT NO: 1530-02-70	HWY: USH 10	COUNTY: PIERCE	PAVEMENT MARKING PLAN - USH 10	SHEET 46	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\024501-PM.DWG
LAYOUT NAME - 024517

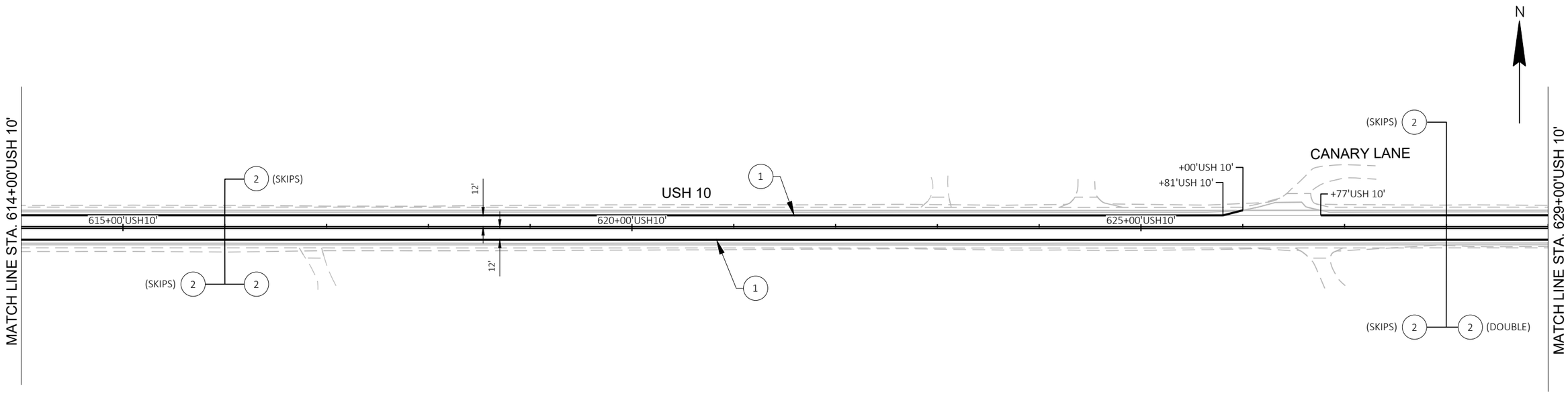
PLOT DATE : 9/29/2023 11:37 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:100 FT

2



LEGEND

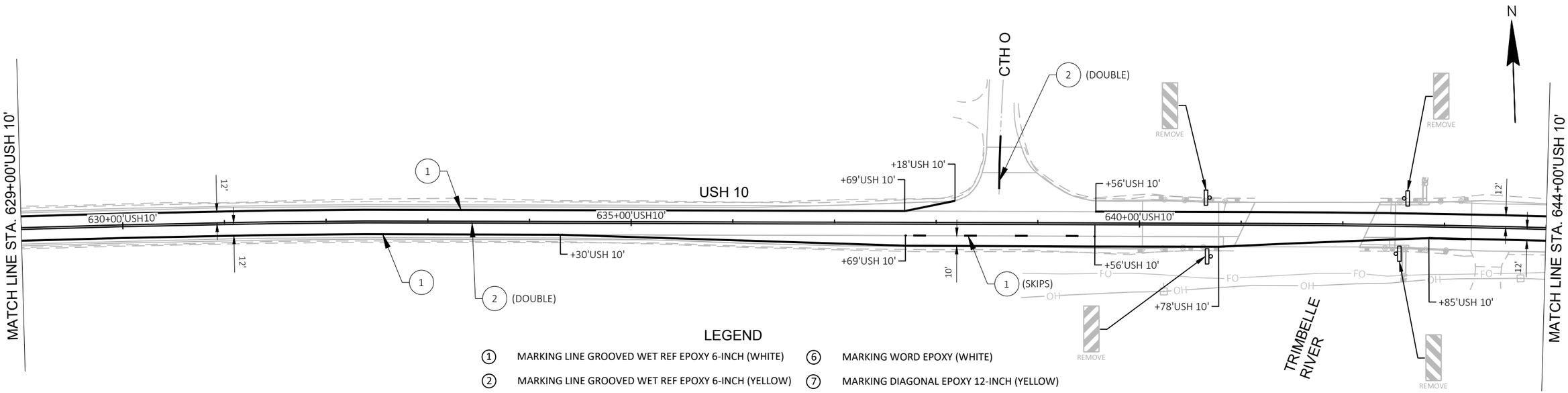
(1)	MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)	(6)	MARKING WORD EPOXY (WHITE)
(2)	MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)	(7)	MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
(3)	MARKING STOP LINE EPOXY 18-INCH (WHITE)	(8)	MARKING CURB EPOXY (YELLOW)
(4)	MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)	(9)	MARKING ISLAND NOSE EPOXY (YELLOW)
(5)	MARKING ARROW EPOXY (WHITE)		EXISTING SIGN POST MOUNTED TO BE REMOVED



PROJECT NO: 1530-02-70	HWY: USH 10	COUNTY: PIERCE	PAVEMENT MARKING PLAN - USH 10	SHEET 47	E

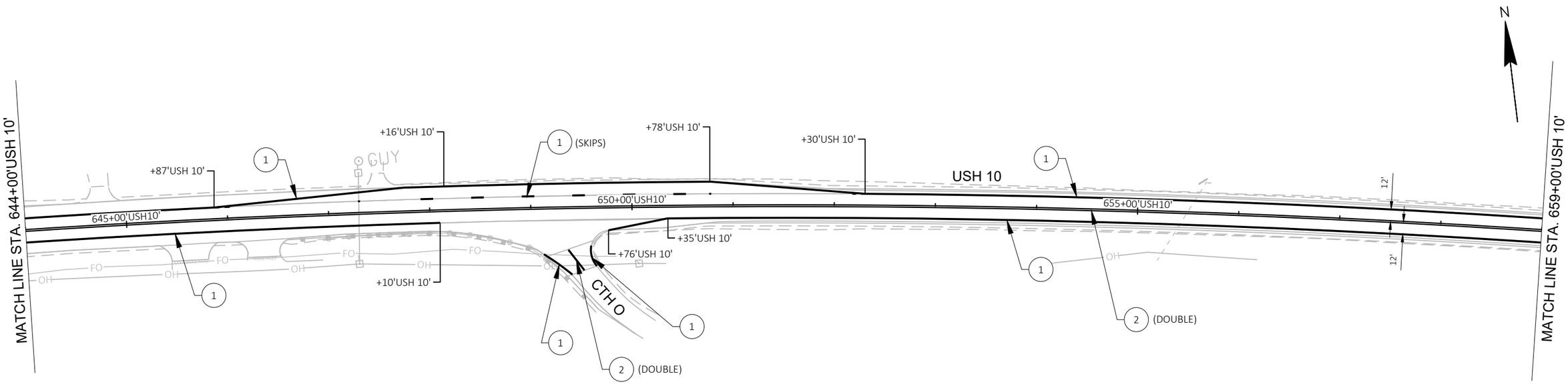
FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\024501-PM.DWG
LAYOUT NAME - 024518
PLOT DATE : 9/29/2023 11:37 AM
PLOT BY : KL ENGINEERING, INC.
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44

2



LEGEND

(1)	MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)	(6)	MARKING WORD EPOXY (WHITE)
(2)	MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)	(7)	MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
(3)	MARKING STOP LINE EPOXY 18-INCH (WHITE)	(8)	MARKING CURB EPOXY (YELLOW)
(4)	MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)	(9)	MARKING ISLAND NOSE EPOXY (YELLOW)
(5)	MARKING ARROW EPOXY (WHITE)		EXISTING SIGN POST MOUNTED TO BE REMOVED

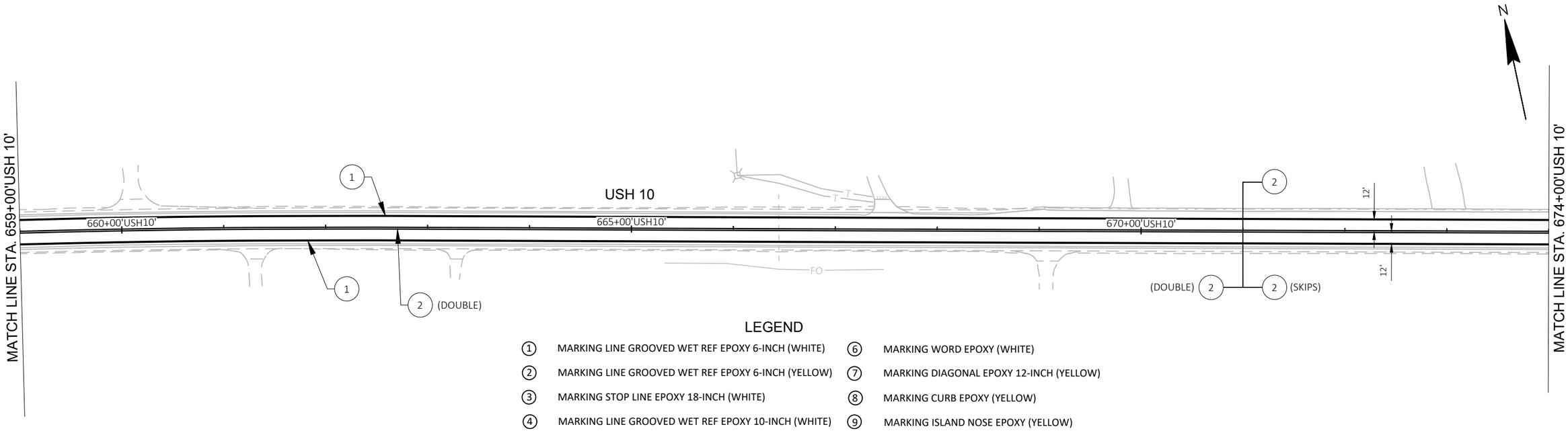


PROJECT NO: 1530-02-70	HWY: USH 10	COUNTY: PIERCE	PAVEMENT MARKING PLAN - USH 10	SHEET 48 E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\024501-PM.DWG
LAYOUT NAME - 024519

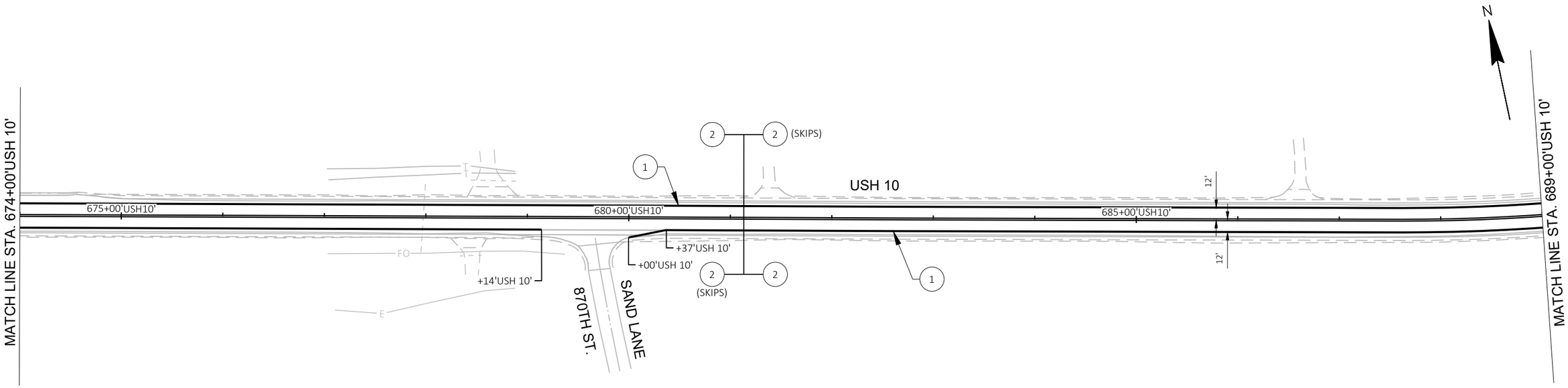
PLOT DATE : 9/29/2023 11:37 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:100 FT

2



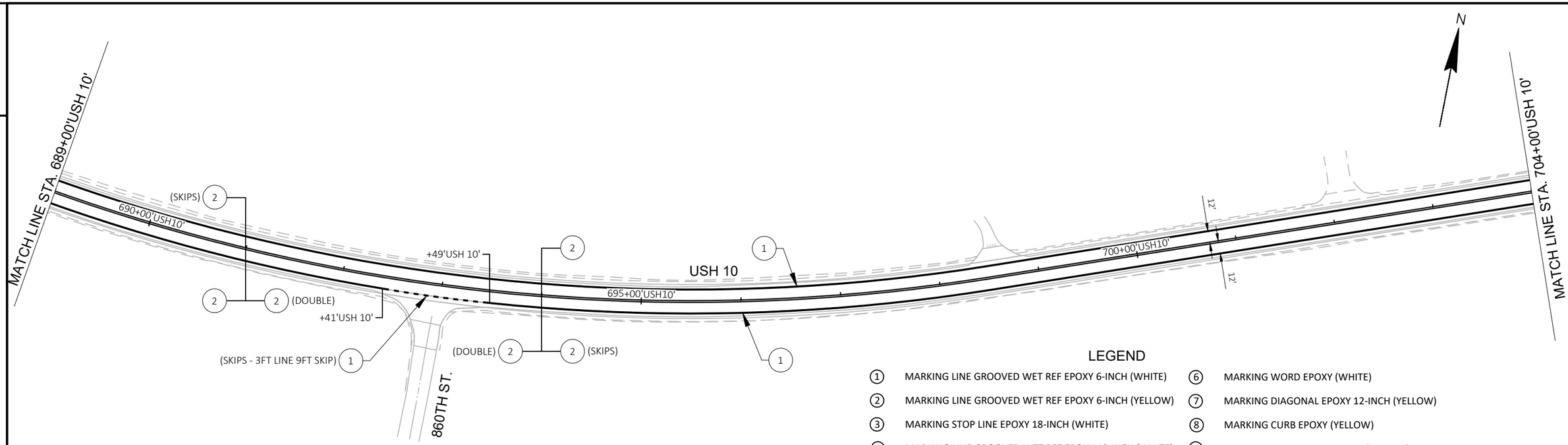
LEGEND

(1)	MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)	(6)	MARKING WORD EPOXY (WHITE)
(2)	MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)	(7)	MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
(3)	MARKING STOP LINE EPOXY 18-INCH (WHITE)	(8)	MARKING CURB EPOXY (YELLOW)
(4)	MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)	(9)	MARKING ISLAND NOSE EPOXY (YELLOW)
(5)	MARKING ARROW EPOXY (WHITE)		EXISTING SIGN POST MOUNTED TO BE REMOVED



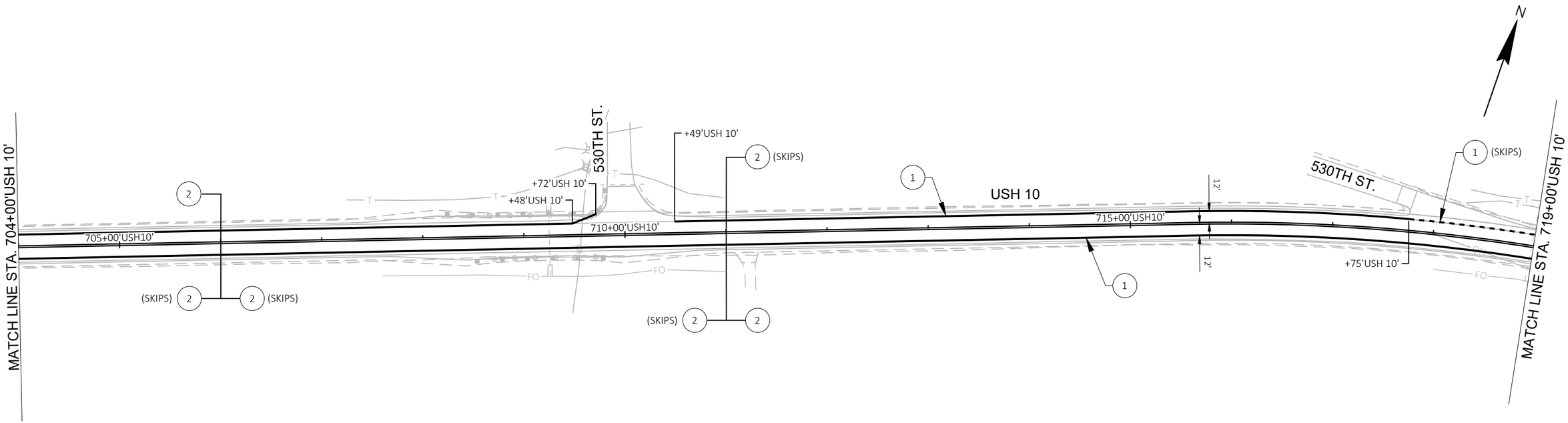
PROJECT NO: 1530-02-70	HWY: USH 10	COUNTY: PIERCE	PAVEMENT MARKING PLAN - USH 10	SHEET 49	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\024501-PM.DWG
LAYOUT NAME - 024520
PLOT DATE : 9/29/2023 11:38 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44

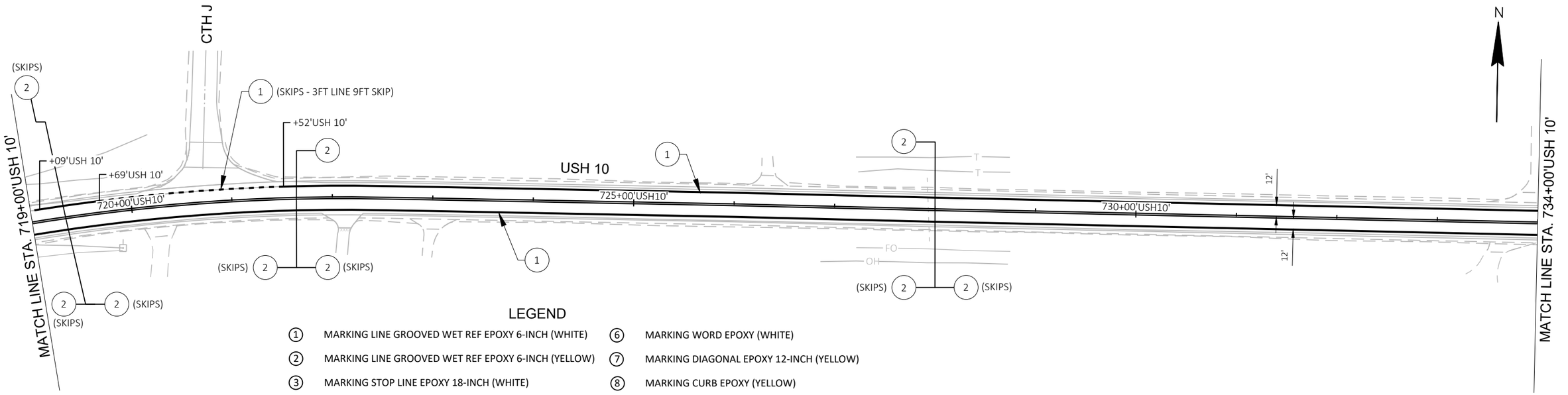


LEGEND

(1)	MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)	(6)	MARKING WORD EPOXY (WHITE)
(2)	MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)	(7)	MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
(3)	MARKING STOP LINE EPOXY 18-INCH (WHITE)	(8)	MARKING CURB EPOXY (YELLOW)
(4)	MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)	(9)	MARKING ISLAND NOSE EPOXY (YELLOW)
(5)	MARKING ARROW EPOXY (WHITE)		EXISTING SIGN POST MOUNTED TO BE REMOVED

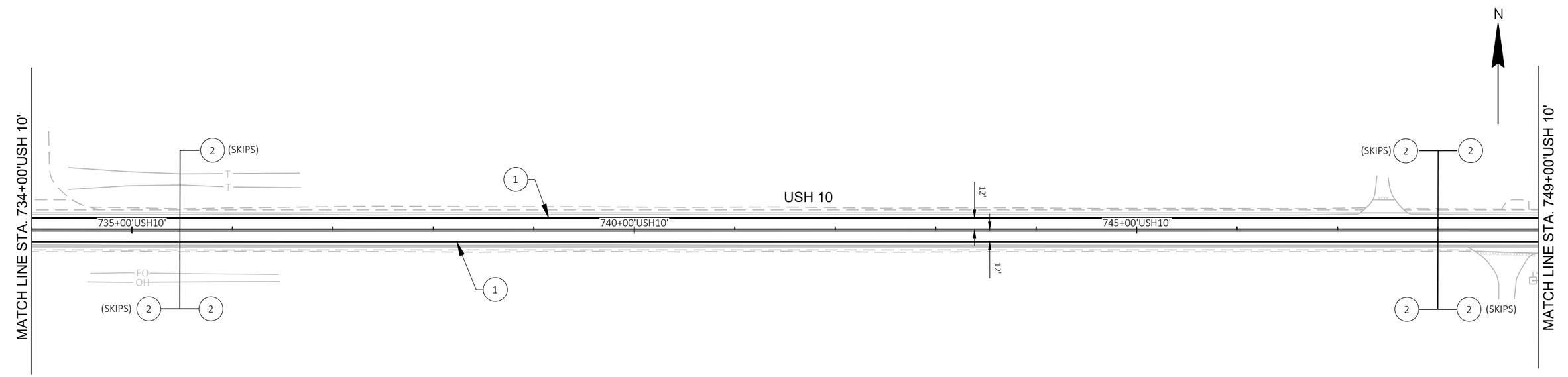


PROJECT NO: 1530-02-70	HWY: USH 10	COUNTY: PIERCE	PAVEMENT MARKING PLAN - USH 10	SHEET 50	E



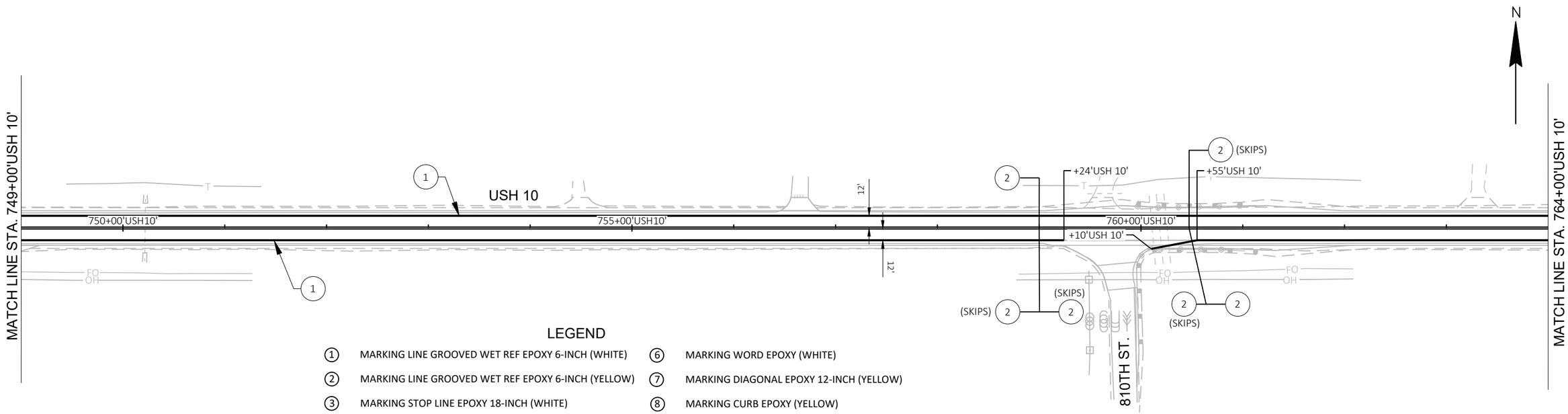
LEGEND

1	MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)	6	MARKING WORD EPOXY (WHITE)
2	MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)	7	MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
3	MARKING STOP LINE EPOXY 18-INCH (WHITE)	8	MARKING CURB EPOXY (YELLOW)
4	MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)	9	MARKING ISLAND NOSE EPOXY (YELLOW)
5	MARKING ARROW EPOXY (WHITE)		EXISTING SIGN POST MOUNTED TO BE REMOVED



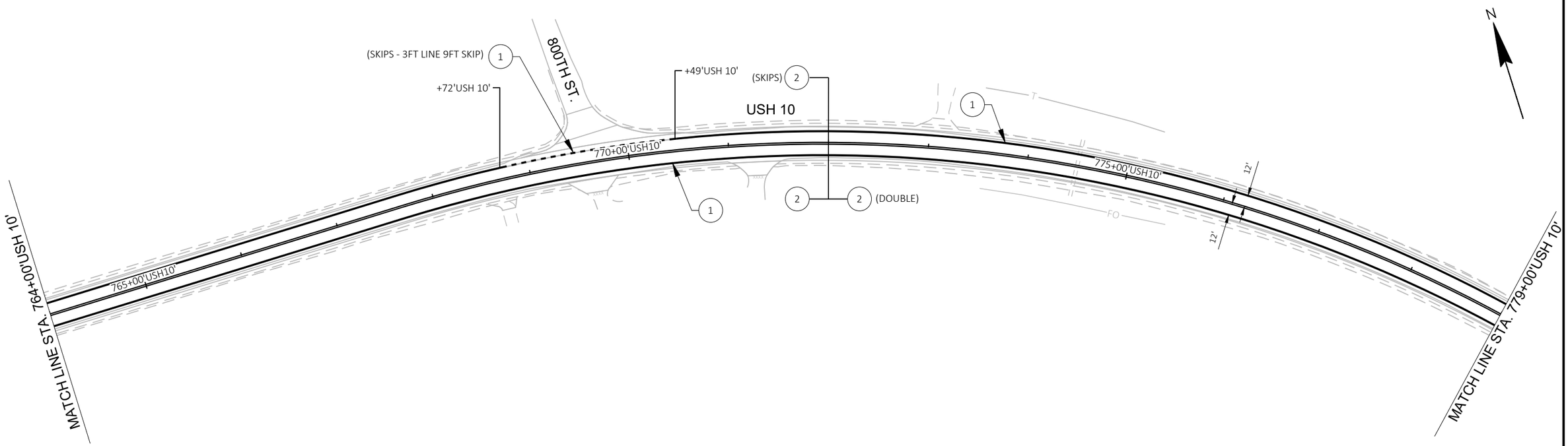
PROJECT NO: 1530-02-70	HWY: USH 10	COUNTY: PIERCE	PAVEMENT MARKING PLAN - USH 10	SHEET 51 E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\024501-PM.DWG
LAYOUT NAME - 024522
PLOT DATE : 9/29/2023 11:38 AM
PLOT BY : KL ENGINEERING, INC.
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44



LEGEND

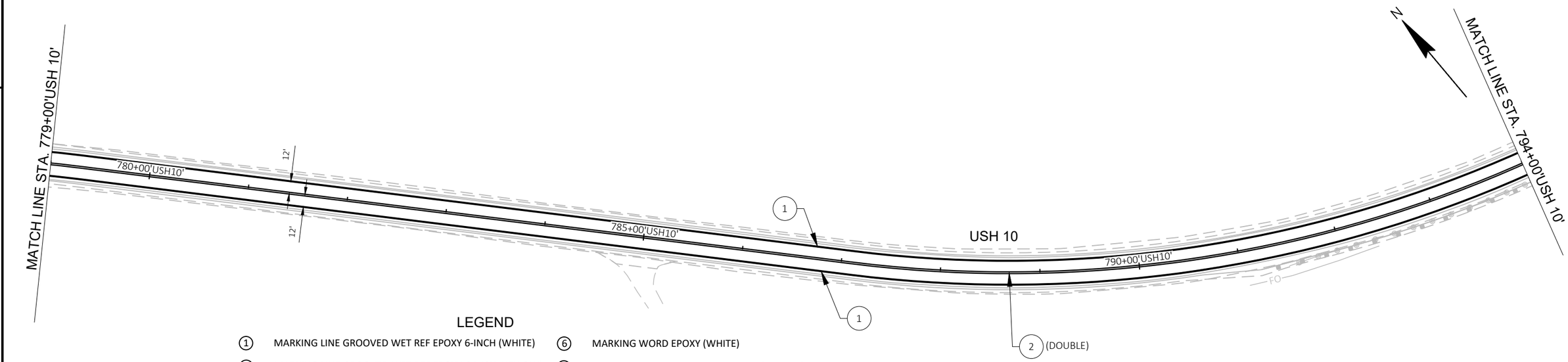
1	MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)	6	MARKING WORD EPOXY (WHITE)
2	MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)	7	MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
3	MARKING STOP LINE EPOXY 18-INCH (WHITE)	8	MARKING CURB EPOXY (YELLOW)
4	MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)	9	MARKING ISLAND NOSE EPOXY (YELLOW)
5	MARKING ARROW EPOXY (WHITE)		EXISTING SIGN POST MOUNTED TO BE REMOVED



PROJECT NO: 1530-02-70	HWY: USH 10	COUNTY: PIERCE	PAVEMENT MARKING PLAN - USH 10	SHEET 52	E

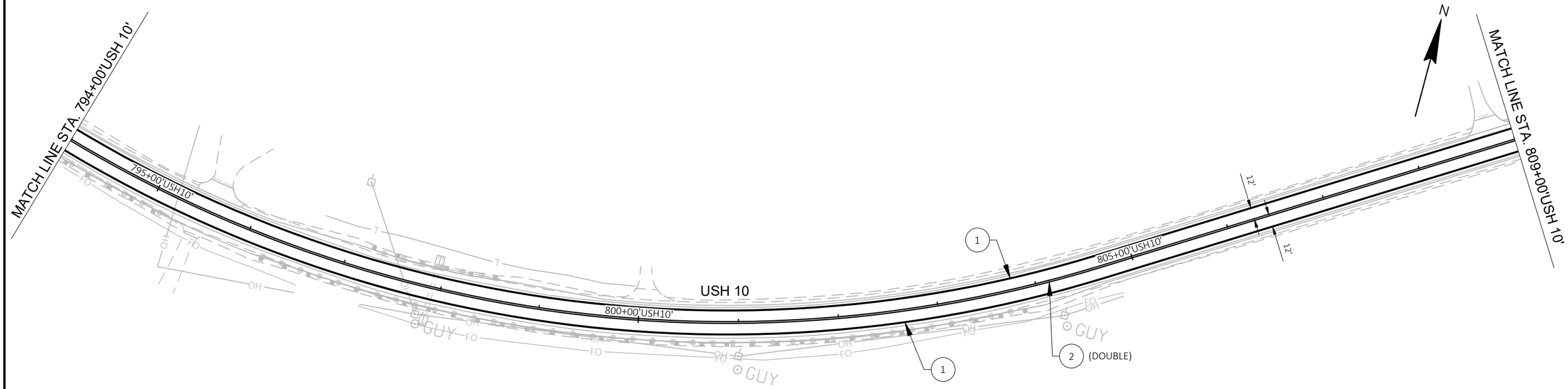
FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\024501-PM.DWG
LAYOUT NAME - 024523
PLOT DATE : 9/29/2023 11:38 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44

2



LEGEND

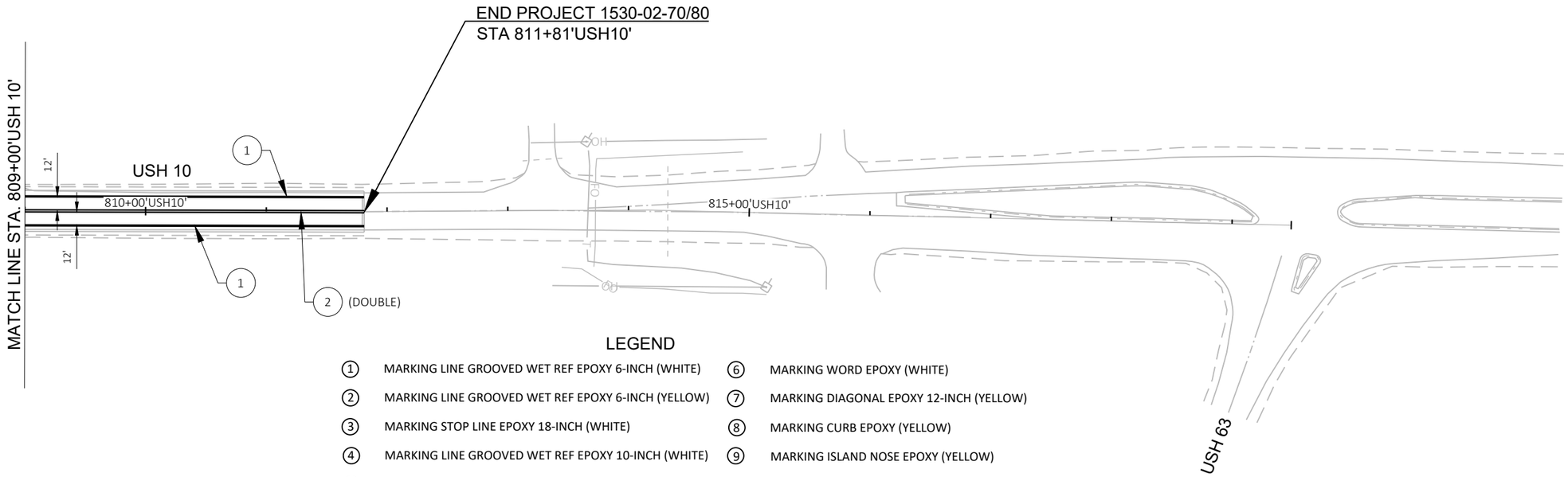
(1)	MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)	(6)	MARKING WORD EPOXY (WHITE)
(2)	MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)	(7)	MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
(3)	MARKING STOP LINE EPOXY 18-INCH (WHITE)	(8)	MARKING CURB EPOXY (YELLOW)
(4)	MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)	(9)	MARKING ISLAND NOSE EPOXY (YELLOW)
(5)	MARKING ARROW EPOXY (WHITE)		EXISTING SIGN POST MOUNTED TO BE REMOVED



PROJECT NO: 1530-02-70	HWY: USH 10	COUNTY: PIERCE	PAVEMENT MARKING PLAN - USH 10	SHEET 53	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\024501-PM.DWG
LAYOUT NAME - 024524
PLOT DATE : 9/29/2023 11:38 AM
PLOT BY : KL ENGINEERING, INC.
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44

2



LEGEND

①	MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)	⑥	MARKING WORD EPOXY (WHITE)
②	MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)	⑦	MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
③	MARKING STOP LINE EPOXY 18-INCH (WHITE)	⑧	MARKING CURB EPOXY (YELLOW)
④	MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)	⑨	MARKING ISLAND NOSE EPOXY (YELLOW)
⑤	MARKING ARROW EPOXY (WHITE)		EXISTING SIGN POST MOUNTED TO BE REMOVED

PROJECT NO: 1530-02-70	HWY: USH 10	COUNTY: PIERCE	PAVEMENT MARKING PLAN - USH 10	SHEET 54	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\024501-PM.DWG
LAYOUT NAME - 024525
PLOT DATE : 9/29/2023 11:39 AM
PLOT BY : KL ENGINEERING, INC.
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44

MAINTENANCE OF TRAFFIC:

USH 10

- USH 10 SHALL BE CLOSED AND DETOURED FOR STRUCTURE, CULVERT, AND APPROACH SLAB REPLACEMENTS AND CONCRETE PAVEMENT REPAIRS AND WILL UTILIZE FLAGGING OPERATIONS AND SHOULDER CLOSURES FOR OTHER WORK AS NOTED IN THE CONTRACT SPECIAL PROVISIONS.

LOCAL ROADS AND DRIVEWAYS

- MAINTAIN LOCAL ACCESS AT ALL TIMES

CONSTRUCTION TO BE COMPLETED:

USH 10

- CONCRETE PAVEMENT REPAIRS
- MILL & OVERLAY
- REPLACE BEAM GUARD
- REPLACE CULVERTS AT STA 114+65 'USH10, STA 217+05 'USH10, STA 275+75 'USH10, STA 297+05 'USH10, STA 400+15 'USH10'
- CONSTRUCT BRIDGES B-47-0228 & B-47-0229
- CONSTRUCT BOX CULVERTS C-47-0060 & C-47-0061
- REPLACE CONCRETE PAVEMENT APPROACH SLABS AT EXISTING STRUCTURES B-47-105 & B-47-038

NOTES:

REFER TO THE FOLLOWING TRAFFIC CONTROL DETAILS, AS WELL AS STANDARD DETAIL DRAWINGS FOR TRAFFIC CONTROL DEVICES AS NECESSARY, UNLESS OTHERWISE DIRECTED BY THE ENGINEER:

- SEE S.D.D. "TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER, TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC"
- SEE S.D.D. "TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS, TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC"
- SEE S.D.D. "TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION"
- SEE S.D.D. "TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY"
- SEE S.D.D. "BARRICADES AND SIGNS FOR MAINLINE CLOSURES"
- SEE S.D.D. "DETOUR SIGNING FOR MAINLINE CLOSURES"
- SEE S.D.D. "TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH MILLED SURFACES"

2

TRAFFIC CONTROL GENERAL NOTES:

- 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. REMOVING/REPLACING OR COVERING/UNCOVERING SIGNS WILL BE INCIDENTAL TO OTHER TRAFFIC CONTROL ITEMS.
- "WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS REFLECTIVE ORANGE.
- CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND SIGN MESSAGE BOARDS SO THE DRIVER HAS A CLEAR VIEW OF THE SIGNS AND SIGN MESSAGE BOARDS.
- IF SIGNS ARE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS WITH A MINIMUM 5' MOUNTING HEIGHT.
- ALL TRAFFIC CONTROL SIGNING SHALL CONFORM TO: PART VI OF THE WISCONSIN MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, TRAFFIC ENGINEERING, OPERATIONS AND SAFETY MANUAL, AND OTHER CONTRACT DOCUMENTS.
- THE TURNING OF TRAFFIC CONTROL DEVICES WHEN NOT IN USE TO OBSCURE THE MESSAGE WILL NOT BE ALLOWED.
- MOVE, REMOVE OR INSTALL ROUTE MARKER SIGNS AS REQUIRED TO MAINTAIN NECESSARY ROUTE GUIDANCE THROUGHOUT CONSTRUCTION.
- CONTRACTORS EQUIPMENT AND MATERIAL STOCKPILES MAY NOT BE STORED WITHIN THE CONSTRUCTION CLEAR ZONE WHILE THE CONTRACTOR IS NOT WORKING, UNLESS THEY ARE PROTECTED BY CONCRETE BARRIER TEMPORARY PRECAST.

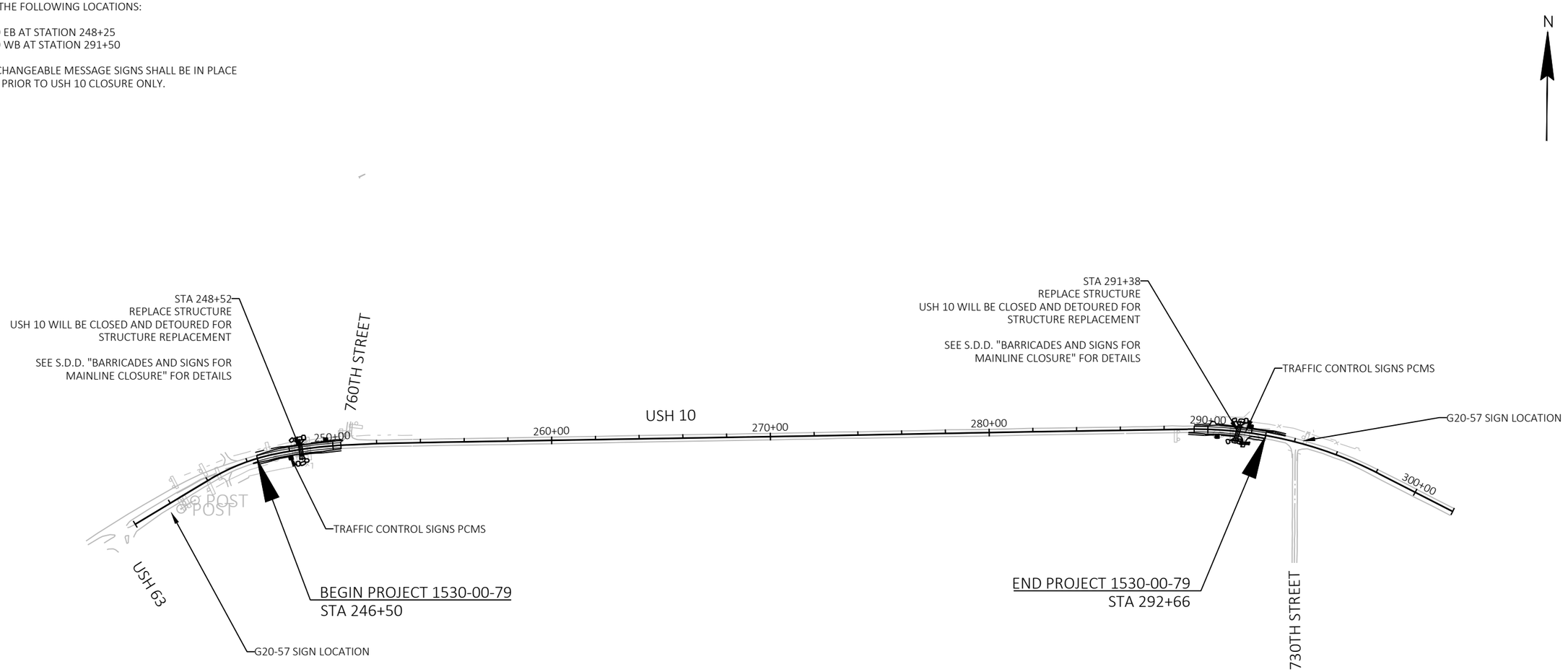
PCMS MESSAGE PLAN

EVENT/LOCATION	PANEL 1	PANEL 2
USH 10 DETOUR 1530-00-79	US 10 TO CLOSE (DATE)	US 10 TO BE DETOURED
USH 10 DETOUR 1530-02-70	US 10 TO CLOSE (DATE)	US 10 TO BE DETOURED

NOTE: PORTABLE CHANGEABLE MESSAGE SIGNS SHALL BE PLACED AT THE FOLLOWING LOCATIONS:

- USH 10 EB AT STATION 248+25
- USH 10 WB AT STATION 291+50

PORTABLE CHANGEABLE MESSAGE SIGNS SHALL BE IN PLACE FOR 7 DAYS PRIOR TO USH 10 CLOSURE ONLY.



HWY 10
ROAD WORK
BEGINS XXX-XX

G20-57
72"X36"

NOTE: G20-57 SIGNS SHALL BE PLACED AT THE FOLLOWING LOCATIONS:

- USH 10 EB AT STATION 241+50
- USH 10 WB AT STATION 294+00

G20-57 SIGNS SHALL BE IN PLACE FOR 7 DAYS PRIOR TO START OF USH 10 CONSTRUCTION ONLY.

2

SEE S.D.D."ADVANCED WIDTH RESTRICTION SIGNING" FOR DETAILS

G20-57 SIGN LOCATION

STA 114+65 'USH 10'
REPLACE CULVERT
USH 10 WILL BE CLOSED AND DETOURED FOR CULVERT REPLACEMENT

SEE S.D.D. "BARRICADES AND SIGNS FOR MAINLINE CLOSURE" FOR DETAILS

STIRRATT AVE.

STA 217+05 'USH 10'
REPLACE CULVERT
USH 10 WILL BE CLOSED AND DETOURED FOR CULVERT REPLACEMENT

SEE S.D.D. "BARRICADES AND SIGNS FOR MAINLINE CLOSURE" FOR DETAILS

STA 297+05 'USH 10'
REPLACE CULVERT
USH 10 WILL BE CLOSED AND DETOURED FOR CULVERT REPLACEMENT

SEE S.D.D. "BARRICADES AND SIGNS FOR MAINLINE CLOSURE" FOR DETAILS

N

80+00'USH10' 100+00'USH10' 120+00'USH10' 140+00'USH10' 160+00'USH10' 180+00'USH10' 200+00'USH10' 220+00'USH10' 240+00'USH10' 260+00'USH10' 280+00'USH10' 300+00'USH10' 320+00'USH10' 340+00'USH10' 360+00'USH10' 380+00

DEXTER ST.

TRAFFIC CONTROL SIGNS PCMS

STA 147+60 'USH 10'
REPLACE CONCRETE PAVEMENT APPROACH SLABS
USH 10 WILL BE CLOSED AND DETOURED FOR REPLACEMENT

SEE S.D.D. "BARRICADES AND SIGNS FOR MAINLINE CLOSURE" FOR DETAILS

1200TH ST.

USH 10

1170TH ST.

1150TH ST.

1145TH ST.

CTH QQ

1110TH ST.

109TH ST.

MATCH LINE STA. 380+00 'USH10'

BEGIN PROJECT 1530-02-70, 1530-02-80
STA 82+45 'USH 10'

STA 275+75 'USH 10'
REPLACE CULVERT
USH 10 WILL BE CLOSED AND DETOURED FOR CULVERT REPLACEMENT

SEE S.D.D. "BARRICADES AND SIGNS FOR MAINLINE CLOSURE" FOR DETAILS

HWY 10
ROAD WORK
BEGINS XXX-XX
G20-57
72"X36"

NOTE: G20-57 SIGNS SHALL BE PLACED AT THE FOLLOWING LOCATIONS:

- USH 10 EB AT STATION 80+00'USH 10'

G20-57 SIGNS SHALL BE IN PLACE FOR 7 DAYS PRIOR TO START OF USH 10 CONSTRUCTION ONLY.

NOTE: STA 106+13 'USH 10'- 811+81 'USH 10' CONCRETE PAVEMENT REPAIRS TO BE COMPLETED DURING USH 10 CLOSURE AND DETOUR.

MAINTAIN LOCAL ACCESS AT ALL TIMES

SEE S.D.D. "BARRICADES AND SIGNS FOR MAINLINE CLOSURE" FOR DETAILS

2

STA 400+15 'USH 10'
REPLACE CULVERT
USH 10 WILL BE CLOSED AND DETOURED FOR CULVERT REPLACEMENT

SEE S.D.D. "BARRICADES AND SIGNS FOR MAINLINE CLOSURE" FOR DETAILS

STA 445+37 'USH 10'
REPLACE STRUCTURE
USH 10 WILL BE CLOSED AND DETOURED FOR STRUCTURE REPLACEMENT

SEE S.D.D. "BARRICADES AND SIGNS FOR MAINLINE CLOSURE" FOR DETAILS

N

MATCH LINE STA. 380+00 'USH10'

USH10' 400+00'USH10' 420+00'USH10' 440+00'USH10' 460+00'USH10' 480+00'USH10' 500+00'USH10' 520+00'USH10' 540+00'USH10' 560+00'USH10' 580+00'USH10' 600+00'USH10' 620+00'USH10' 640+00'USH10' 660+00'USH10' 680+00'USH10' 700+00

104TH AVE.

CROSS TOWN ROAD

560TH AVE.

CTH E

530TH AVE.

950TH AVE.

COUNTY ROAD OO

USH 10

CTH O

TRIMBELLE RIVER

SAND LANE

860TH ST.

MATCH LINE STA. 700+00 'USH10'

STA 435+38 'USH 10'
REPLACE STRUCTURE
USH 10 WILL BE CLOSED AND DETOURED FOR STRUCTURE REPLACEMENT

SEE S.D.D. "BARRICADES AND SIGNS FOR MAINLINE CLOSURE" FOR DETAILS

TRAFFIC CONTROL SIGNS PCMS

NOTE: PORTABLE CHANGEABLE MESSAGE SIGNS SHALL BE PLACED AT THE FOLLOWING LOCATIONS:

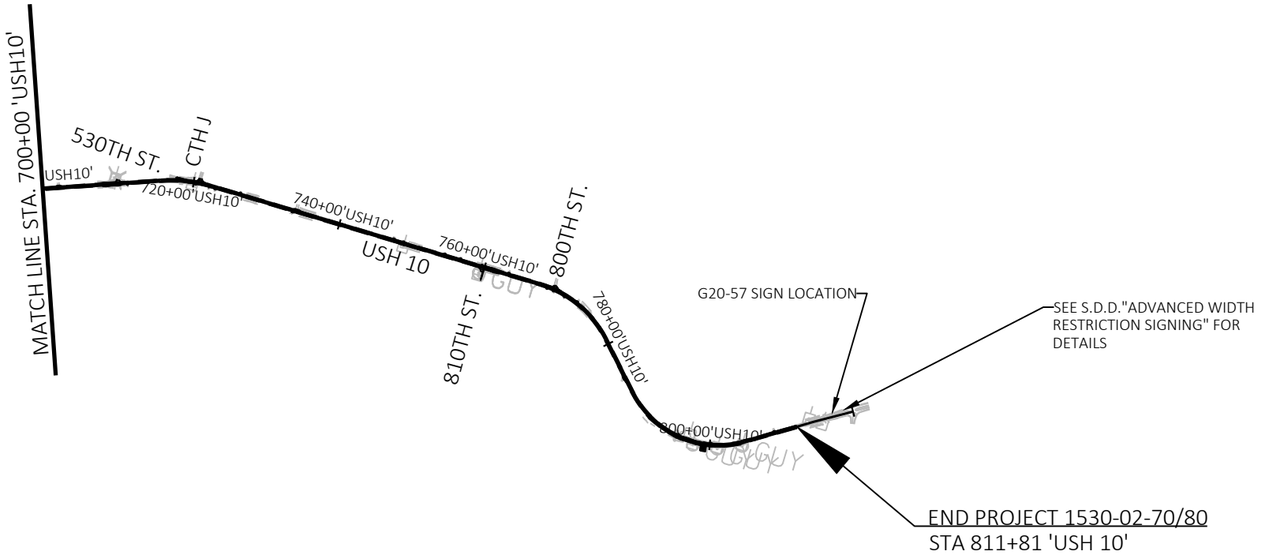
- USH 10 EB AT STATION 110+00'USH 10'
- USH 10 WB AT STATION 648+00'USH 10'

PORTABLE CHANGEABLE MESSAGE SIGNS SHALL BE IN PLACE FOR 7 DAYS PRIOR TO USH 10 CLOSURE ONLY.

STA 641+65'USH 10'
REPLACE CONCRETE PAVEMENT APPROACH SLABS
USH 10 WILL BE CLOSED AND DETOURED FOR REPLACEMENT

SEE S.D.D. "BARRICADES AND SIGNS FOR MAINLINE CLOSURE" FOR DETAILS

PROJECT NO: 1530-02-70, 1530-02-80	HWY: USH 10	COUNTY: PIERCE	TRAFFIC CONTROL OVERVIEW	SHEET 57	E



HWY 10
ROAD WORK
BEGINS XXX-XX

G20-57
72"X36"

NOTE: G20-57 SIGNS SHALL BE PLACED AT THE FOLLOWING LOCATIONS:

- USH 10 WB AT STATION 817+00'USH10'

G20-57 SIGNS SHALL BE IN PLACE FOR 7 DAYS PRIOR TO START OF USH 10 CONSTRUCTION ONLY.

N

2

PROJECT NO: 1530-02-70, 1530-02-80	HWY: USH 10	COUNTY: PIERCE	TRAFFIC CONTROL OVERVIEW	SHEET 58	E

DETOUR PLAN: USH 10

STH 35 - USH 63

N

RIVER FALLS

CEMETERY RD

SEE SHEET 2 MATCH LINE

PRESCOTT

Prescott 12

Ellsworth

Prescott

Hudson

Ellsworth 16

River Falls 12

Spring Valley 33

Menomonie 50

DETOUR NEXT 24 MILES

G20-51

60"X24"

DETOUR AHEAD

W20-2A

48"X48"

COVER EXISTING ARROW

A4-12

9.5"X9.5"

LEGEND

- DETOUR ROUTE
- PROJECT LOCATION
- COVER EXISTING SIGNS

PROJECT NO: 1530-00-79	HWY: USH 10	COUNTY: PIERCE	DETOUR PLAN	SHEET 59	E

2

RIVER FALLS

CEMETERY RD

SEE SHEET 1 MATCH LINE

SEE SHEET 4 - USH 10 AT RIVER FALLS ROUNDABOUT FOR DETOUR DETAILS

N

DETOUR PLAN: USH 10

STH 35 - USH 63

EAST 29 NORTH 35 10 — DETOUR EAST — M4-8 24"X12" — M3-2 24"X12" — M1-4 24"X24"

Ellsworth 12 10 — DETOUR EAST — M4-8 24"X12" — M3-2 24"X12" — M1-4 24"X24" — MO6-1 21"X21"

JCT 29 35

NORTH 65 10 — DETOUR WEST — M4-8 24"X12" — M3-4 24"X12" — M1-4 24"X24"

65

JCT COUNTY O

COUNTY O 10 — DETOUR WEST — M4-8 24"X12" — M3-4 24"X12" — M1-4 24"X24" — MO6-1 21"X21"

COUNTY O 10 — DETOUR EAST — M4-8 24"X12" — M3-2 24"X12" — M1-4 24"X24" — MO6-1 21"X21"

JCT COUNTY W

COUNTY W 10 — DETOUR WEST — M4-8 24"X12" — M3-4 24"X12" — M1-4 24"X24"

JCT COUNTY O

COUNTY W

NORTH 65 River Falls 9 Hudson 22 10 — DETOUR WEST — M4-8 24"X12" — M3-4 24"X12" — M1-4 24"X24"

SOUTH 65 10 — DETOUR EAST — M4-8 24"X12" — M3-2 24"X12" — M1-4 24"X24"

COUNTY W 10 — DETOUR EAST — M4-8 24"X12" — M3-2 24"X12" — M1-4 24"X24" — MO6-1 21"X21"

COUNTY O

JCT COUNTY W

COUNTY J 10 — DETOUR WEST — M4-8 24"X12" — M3-4 24"X12" — M1-4 24"X24" — MO6-1 21"X21"

BELDENVILLE

COUNTY J

COUNTY J 10 — DETOUR WEST — M4-8 24"X12" — M3-4 24"X12" — M1-4 24"X24" — MO6-1 21"X21"

NORTH 65 10 — DETOUR WEST — M4-8 24"X12" — M3-4 24"X12" — M1-4 24"X24"

Beldenville UNINCORPORATED

COUNTY N

Beldenville UNINCORPORATED 10 — DETOUR WEST — M4-8 24"X12" — M3-4 24"X12" — M1-4 24"X24"

10 — DETOUR WEST — M4-8 24"X12" — M3-4 24"X12" — M1-4 24"X24"

M4-8 24"X12" — M4-8 24"X12"

DETOUR EAST 10 — DETOUR WEST 10

NORTH 63 — SOUTH 63

COVER EXISTING ARROW — MO5-1L 21"X21"

COVER EXISTING ARROW — MO6-1 21"X21"

WEST 10 — SOUTH 63 — NORTH 65

COUNTY J 10 — DETOUR EAST — M4-8 24"X12" — M3-2 24"X12" — M1-4 24"X24" — MO6-1 21"X21"

SOUTH 65 Ellsworth 4 10 — DETOUR EAST — M4-8 24"X12" — M3-2 24"X12" — M1-4 24"X24"

COUNTY J

JCT COUNTY J

COUNTY J

JCT 10 63 65 — END

DETOUR NEXT 37 MILES

G20-51 60"X24"

760TH ST

Spring Valley 98"X18"

COUNTY J 10 — DETOUR EAST — M4-8 24"X12" — M3-2 24"X12" — M1-4 24"X24" — MO6-1 21"X21"

Ellsworth POPULATION 3284 10 — DETOUR EAST — M4-8 24"X12" — M3-2 24"X12" — M1-4 24"X24"

END DETOUR — M4-8A 24"X18"

EAST 10 — WEST 10 — NORTH 63 — SOUTH 63

COVER EXISTING ARROW — MO6-1L 21"X21"

SEE SHEET 1 MATCH LINE

TRIMBELLE

SEE SHEET 3 FOR USH 63 DETOUR DETAILS

63

730TH ST

ELLSWORTH

10

USH 10 WORK ZONE AREA

WEST 10 — EAST 10 — NORTH 63

NORTH 65 10 — DETOUR WEST — M4-8 24"X12" — M3-4 24"X12" — M1-4 24"X24" — MO5-1R 21"X21"

DETOUR AHEAD — W20-2A 48"X48"

JCT 65

Prescott Ellsworth — COVER EXISTING ARROW — A4-12 9.5"X9.5"

63

JCT 10

DETOUR AHEAD — W20-2A 48"X48"

DETOUR EAST 10 — M4-8 24"X12" — M3-2 24"X12" — M1-4 24"X24"

LEGEND

- DETOUR ROUTE
- PROJECT LOCATION
- COVER EXISTING SIGNS

PROJECT NO: 1530-00-79	HWY: USH 10	COUNTY: PIERCE	DETOUR PLAN	SHEET 60	E

FILE NAME : G:\WDOTNW\19004-007 (USH 10 CULVERTS)\CIVIL 3D\SHEETSPLAN\027001-DT.DWG
LAYOUT NAME - 027001-dt (2)
PLOT DATE : 7/25/2023 3:18 PM
PLOT BY : KL ENGINEERING, INC.
PLOT NAME :
PLOT SCALE : ##########
WISDOT/CADDS SHEET 42

DETAIL SHEET 3
DETOUR PLAN: USH 63
CTH V - CTH C

N

BELDENVILLE

ELLSWORTH

SEE SHEETS 1 & 2
FOR USH 10
DETOUR DETAILS

USH 10 WORK ZONE AREA

760TH ST

730TH ST

730TH ST

DETOUR AHEAD
W20-2A
48"X48"

DETOUR
NEXT 13 MILES
G20-51
60"X24"

END DETOUR
M4-8A
24"X18"

Red Wing
76"X18"

Ellsworth
Bay City
Red Wing

Ellsworth 2

S & S
SUGAR BUSH
1.4

Ellsworth
72"X18"

COVER EXISTING ARROWS

COVER EXISTING ARROW

COVER EXISTING ARROWS

LEGEND

- DETOUR ROUTE
- PROJECT LOCATION
- COVER EXISTING SIGNS

PROJECT NO: 1530-00-79	HWY: USH 10	COUNTY: PIERCE	DETOUR PLAN	SHEET 61	E

FILE NAME : G:\WDOTNW\19004-007 (USH 10 CULVERTS)\CIVIL 3D\SHEETSPLAN\027001-DT.DWG
LAYOUT NAME - 027001-dt (3)

PLOT DATE : 7/25/2023 3:18 PM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : ##########

WISDOT/CADDS SHEET 42

2

DETAIL SHEET 4
DETOUR PLAN: USH 10
STH 35 - USH 63

RIVER FALLS
CEMETERY RD
29 35

N

WEST SOUTH 29 35 — E Cemetery Rd
DETOUR WEST 10 — M4-8 24"X12" — M3-4 24"X12" — M1-4 24"X24" — MO6-2R 21"X21"

WEST SOUTH 29 35
DETOUR WEST 10 — M4-8 24"X12" — M3-4 24"X12" — M1-4 24"X24" — MO6-1 21"X21"

WEST SOUTH 29 35 — Cemetery Rd
DETOUR WEST 10 — M4-8 24"X12" — M3-4 24"X12" — M1-4 24"X24" — MO6-2R 21"X21"

65

DETOUR WEST 10 — M4-8 24"X12" — M3-4 24"X12" — M1-4 24"X24"

EAST NORTH NORTH 29 35 65
DETOUR WEST 10 — M4-8 24"X12" — M3-4 24"X12" — M1-4 24"X24" — MO6-2L 21"X21"

DETOUR WEST 10 — M4-8 24"X12" — M3-4 24"X12" — M1-4 24"X24" — MO6-2L 21"X21"
830TH Ave

Hudson
Roberts
Spring Valley
Prescott

Cemetery Rd
DETOUR WEST 10 — M4-8 24"X12" — M3-4 24"X12" — M1-4 24"X24" — MO6-1L 21"X21"

EAST NORTH 29 35
DETOUR EAST 10 — M4-8 24"X12" — M3-2 24"X12" — M1-4 24"X24" — MO6-1 21"X21"

EAST NORTH 29 35 — E Cemetery Rd
DETOUR EAST 10 — M4-8 24"X12" — M3-2 24"X12" — M1-4 24"X24" — MO6-2R 21"X21"

SOUTH 65
DETOUR EAST 10 — M4-8 24"X12" — M3-2 24"X12" — M1-4 24"X24" — MO6-2R 21"X21"

65

EAST NORTH NORTH 29 35 65
WEST SOUTH 29 65
830th Ave
DETOUR WEST 10 — M4-8 24"X12" — M3-4 24"X12" — M1-4 24"X24" — MO5-1L 21"X21"

EAST NORTH 29 35
DETOUR EAST 10 — M4-8 24"X12" — M3-2 24"X12" — M1-4 24"X24" — MO6-1 21"X21"

Hudson
Roberts
Spring Valley
Ellsworth
DETOUR EAST 10 — M4-8 24"X12" — M3-2 24"X12" — M1-4 24"X24" — MO6-2R 21"X21"

SOUTH 65
DETOUR EAST 10 — M4-8 24"X12" — M3-2 24"X12" — M1-4 24"X24" — MO6-2R 21"X21"

EAST NORTH NORTH 29 35 65
830th Ave
SOUTH 65
DETOUR EAST 10 — M4-8 24"X12" — M3-2 24"X12" — M1-4 24"X24" — MO6-2R 21"X21"
INSTALL ON SIGN BRIDGE RIGHT SUPPORT

LEGEND
- DETOUR ROUTE
- PROJECT LOCATION
- COVER EXISTING SIGNS

PROJECT NO: 1530-00-79	HWY: USH 10	COUNTY: PIERCE	DETOUR PLAN	SHEET 62	E

FILE NAME : G:\WDOTNW\19004-007 (USH 10 CULVERTS)\CIVIL 3D\SHEETSPLAN\027001-DT.DWG
LAYOUT NAME - 027001-dt (4)
PLOT DATE : 7/25/2023 3:18 PM
PLOT BY : KL ENGINEERING, INC.
PLOT NAME :
PLOT SCALE : ##########
WISDOT/CADDS SHEET 42

2

DETOUR PLAN: USH 10

STH 35 - USH 63

N

RIVER FALLS

CEMETERY RD

SEE SHEET 2 MATCH LINE

Prescott 12

Ellsworth

Prescott

PRESCOTT

Hudson

DETOUR NEXT 24 MILES

G20-51 60"X24"

DETOUR AHEAD

W20-2A 48"X48"

COVER EXISTING ARROW

A4-12 9.5"X9.5"

Ellsworth

River Falls

Ellsworth 16

River Falls 12

Spring Valley 33

Menomonie 50

SEE SHEET 2 MATCH LINE

USH 10 WORK ZONE AREA

LEGEND

- DETOUR ROUTE
- PROJECT LOCATION
- COVER EXISTING SIGNS

PROJECT NO: 1530-02-70, 1530-02-80	HWY: USH 10	COUNTY: PIERCE	DETOUR PLAN	SHEET: 1 OF 3	E

63

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\027001-DT.DWG
LAYOUT NAME - 027001-dt

PLOT DATE : 7/25/2023 3:16 PM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : ##########

WISDOT/CADDS SHEET 42

DETOUR PLAN: USH 10

STH 35 - USH 63

RIVER FALLS

CEMETERY RD

SEE SHEET 1 MATCH LINE

SEE DETAIL SHEET 3 - USH 10 AT RIVER FALLS ROUNDABOUT FOR DETOUR DETAILS

BELDENVILLE

ELLSWORTH

TRIMBELLE

SEE SHEET 1 MATCH LINE

USH 10 WORK ZONE AREA

Spring Valley 98"X18"

Ellsworth POPULATION 3284

Beldenville UNINCORPORATED

Ellsworth 12

Ellsworth 4

Ellsworth 2

River Falls 9

Hudson 22

Prescott

Bay City

Redwing

Baldwin

Durand

River Falls

Prescott 66"X18"

DETOUR NEXT 24 MILES G20-51 60"X24"

COVER EXISTING ARROW

DETOUR AHEAD W20-2A 48"X48"

NO ENGINE BRAKING PER CITY ORDINANCE EMERGENCY ONLY

LEGEND

- DETOUR ROUTE
- PROJECT LOCATION
- COVER EXISTING SIGNS

PROJECT NO: 1530-02-70, 1530-02-80	HWY: USH 10	COUNTY: PIERCE	DETOUR PLAN	SHEET: 2 OF 3	64	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\027001-DT.DWG
LAYOUT NAME - 027001-dt (2)
PLOT DATE : 7/25/2023 3:16 PM
PLOT BY : KL ENGINEERING, INC.
PLOT NAME :
PLOT SCALE : ##########
WISDOT/CADDS SHEET 42

2

DETAIL SHEET 3
DETOUR PLAN: USH 10
STH 35 - USH 63

RIVER FALLS
CEMETERY RD
29 35

N

WEST SOUTH 29 35 — E Cemetery Rd
DETOUR WEST 10 — M4-8 24"X12" M3-4 24"X12" M1-4 24"X24" MO6-2R 21"X21"

WEST SOUTH 29 35
DETOUR WEST 10 — M4-8 24"X12" M3-4 24"X12" M1-4 24"X24" MO6-1 21"X21"

WEST SOUTH 29 35
DETOUR WEST 10 — M4-8 24"X12" M3-4 24"X12" M1-4 24"X24"

65

WEST SOUTH 29 35 — Cemetery Rd
DETOUR WEST 10 — M4-8 24"X12" M3-4 24"X12" M1-4 24"X24" MO6-2R 21"X21"

DETOUR WEST 10 — M4-8 24"X12" M3-4 24"X12" M1-4 24"X24"

EAST NORTH NORTH 29 35 65
DETOUR WEST 10 — M4-8 24"X12" M3-4 24"X12" M1-4 24"X24" MO6-2L 21"X21"

DETOUR WEST 10 — M4-8 24"X12" M3-4 24"X12" M1-4 24"X24" MO6-2L 21"X21"

830TH Ave

Hudson
Roberts
Spring Valley
Prescott

Cemetery Rd
DETOUR WEST 10 — M4-8 24"X12" M3-4 24"X12" M1-4 24"X24" MO6-1L 21"X21"

EAST NORTH 29 35
DETOUR EAST 10 — M4-8 24"X12" M3-2 24"X12" M1-4 24"X24" MO6-1 21"X21"

EAST NORTH 29 35 — E Cemetery Rd
DETOUR EAST 10 — M4-8 24"X12" M3-2 24"X12" M1-4 24"X24" MO6-2R 21"X21"

EAST NORTH 29 35
DETOUR EAST 10 — M4-8 24"X12" M3-2 24"X12" M1-4 24"X24" MO6-1 21"X21"

SOUTH 65
DETOUR EAST 10 — M4-8 24"X12" M3-2 24"X12" M1-4 24"X24" MO6-2R 21"X21"

EAST NORTH NORTH 29 35 65
WEST SOUTH 29 65
830th Ave
DETOUR WEST 10 — M4-8 24"X12" M3-4 24"X12" M1-4 24"X24" MO5-1L 21"X21"

SOUTH 65
DETOUR EAST 10 — M4-8 24"X12" M3-2 24"X12" M1-4 24"X24"

Hudson
Roberts
Spring Valley
Ellsworth
DETOUR EAST 10 — M4-8 24"X12" M3-2 24"X12" M1-4 24"X24" MO6-2R 21"X21"

EAST NORTH NORTH 29 35 65
830th Ave
SOUTH 65
DETOUR EAST 10 — M4-8 24"X12" M3-2 24"X12" M1-4 24"X24" MO6-2R 21"X21"
INSTALL ON SIGN BRIDGE RIGHT SUPPORT

LEGEND
- DETOUR ROUTE
- PROJECT LOCATION
- COVER EXISTING SIGNS

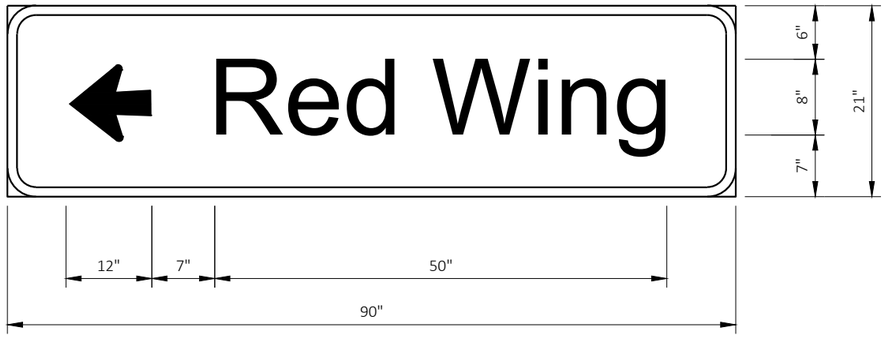
PROJECT NO: 1530-02-70, 1530-02-80	HWY: USH 10	COUNTY: PIERCE	DETOUR PLAN	SHEET: 3 OF 3	65	E

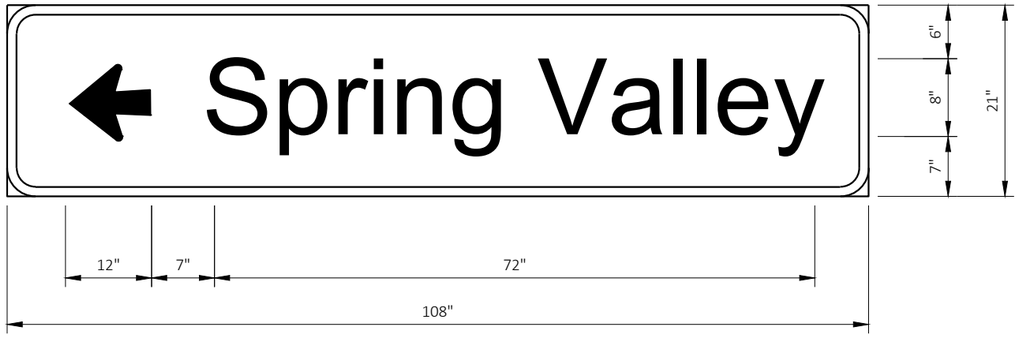
FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\027001-DT.DWG
LAYOUT NAME - 027001-dt (3)
PLOT DATE : 7/25/2023 3:16 PM
PLOT BY : KL ENGINEERING, INC.
PLOT NAME :
PLOT SCALE : ##########
WISDOT/CADDS SHEET 42

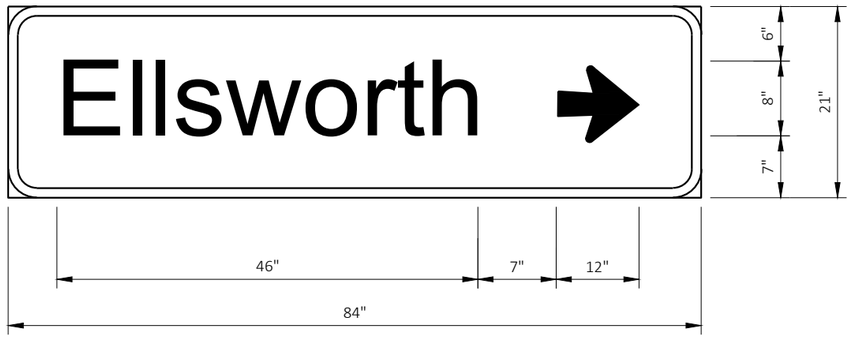
2

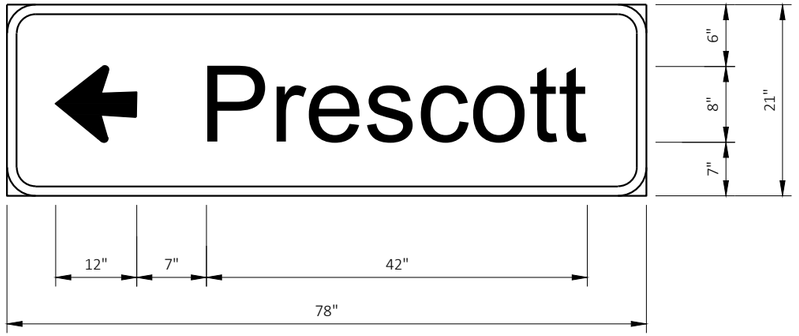
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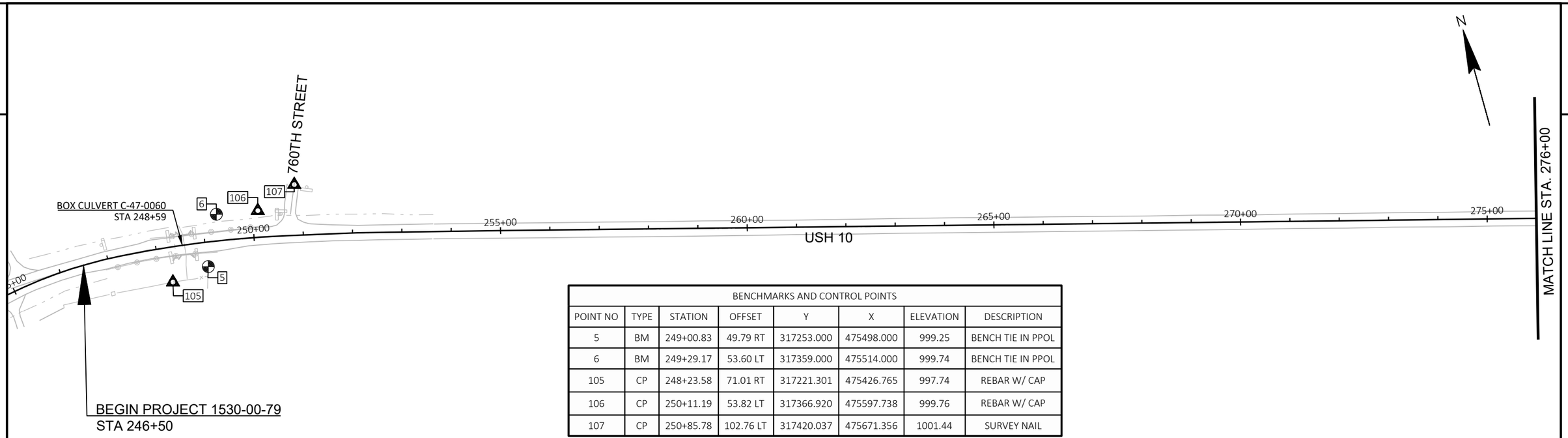
1. FIXED MESSAGE SIGNS TYPE II - TYPE F REFLECTIVE
2. COLOR:
   BACKGROUND - ORANGE
   MESSAGE - BLACK
3. MESSAGE SERIES E



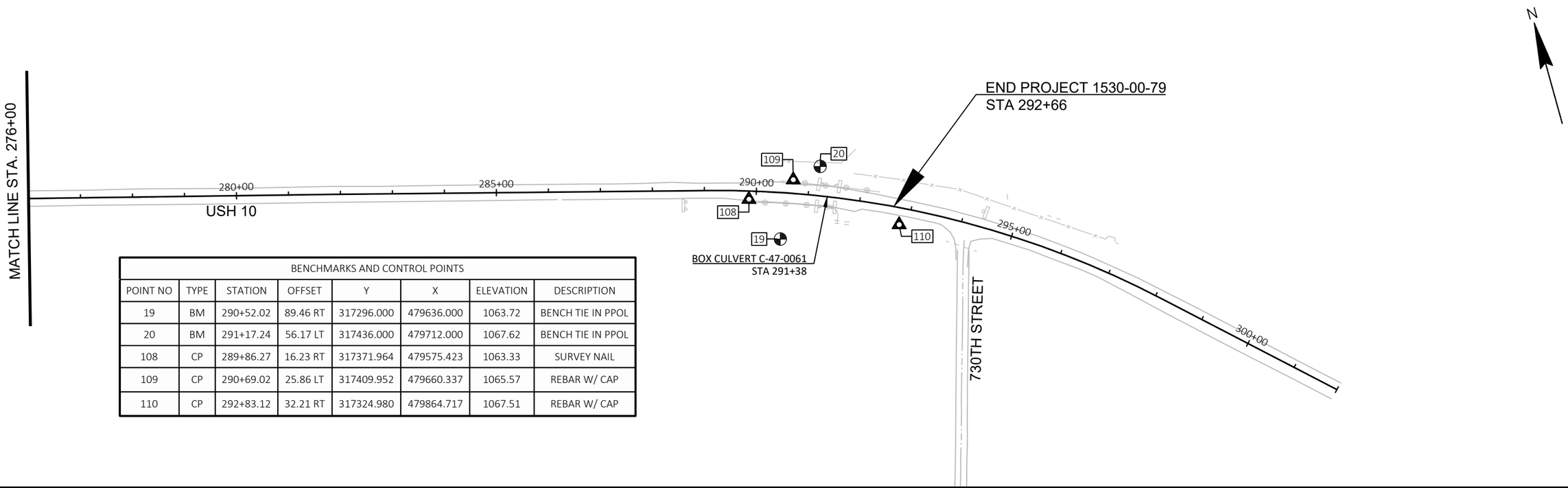








BENCHMARKS AND CONTROL POINTS							
POINT NO	TYPE	STATION	OFFSET	Y	X	ELEVATION	DESCRIPTION
5	BM	249+00.83	49.79 RT	317253.000	475498.000	999.25	BENCH TIE IN PPOL
6	BM	249+29.17	53.60 LT	317359.000	475514.000	999.74	BENCH TIE IN PPOL
105	CP	248+23.58	71.01 RT	317221.301	475426.765	997.74	REBAR W/ CAP
106	CP	250+11.19	53.82 LT	317366.920	475597.738	999.76	REBAR W/ CAP
107	CP	250+85.78	102.76 LT	317420.037	475671.356	1001.44	SURVEY NAIL



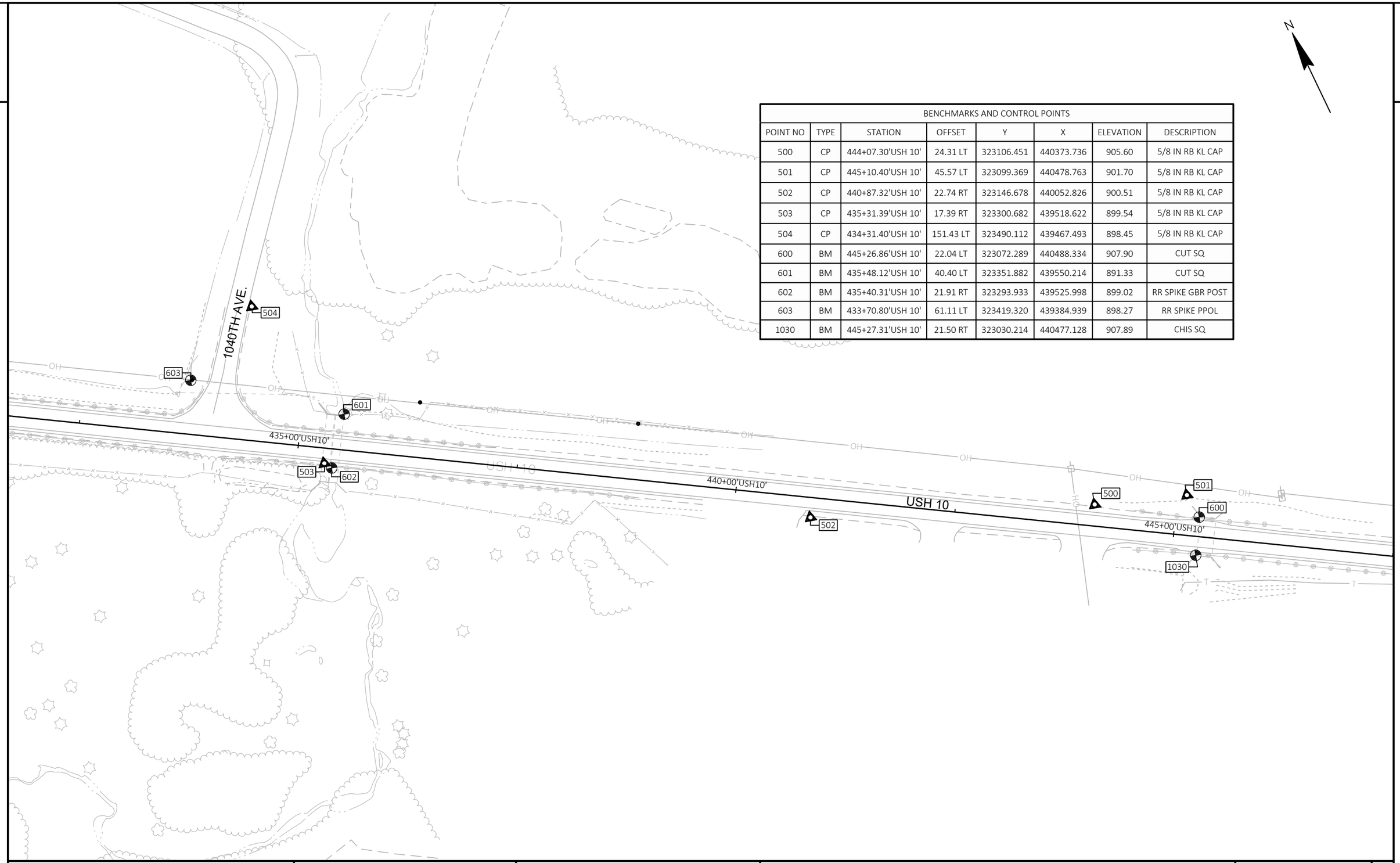
BENCHMARKS AND CONTROL POINTS							
POINT NO	TYPE	STATION	OFFSET	Y	X	ELEVATION	DESCRIPTION
19	BM	290+52.02	89.46 RT	317296.000	479636.000	1063.72	BENCH TIE IN PPOL
20	BM	291+17.24	56.17 LT	317436.000	479712.000	1067.62	BENCH TIE IN PPOL
108	CP	289+86.27	16.23 RT	317371.964	479575.423	1063.33	SURVEY NAIL
109	CP	290+69.02	25.86 LT	317409.952	479660.337	1065.57	REBAR W/ CAP
110	CP	292+83.12	32.21 RT	317324.980	479864.717	1067.51	REBAR W/ CAP

PROJECT NO: 1530-00-79	HWY: USH 10	COUNTY: PIERCE	BENCHMARKS AND CONTROL POINTS	SHEET 67	E

FILE NAME : G:\WDOTNW\19004-007 (USH 10 CULVERTS)\CIVIL 3D\SHEETSPLAN\021003_CP.DWG
LAYOUT NAME - 020201-po
PLOT DATE : 7/12/2023 4:13 PM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:200 FT
WISDOT/CADDS SHEET 42

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BENCHMARKS AND CONTROL POINTS							
POINT NO	TYPE	STATION	OFFSET	Y	X	ELEVATION	DESCRIPTION
500	CP	444+07.30'USH 10'	24.31 LT	323106.451	440373.736	905.60	5/8 IN RB KL CAP
501	CP	445+10.40'USH 10'	45.57 LT	323099.369	440478.763	901.70	5/8 IN RB KL CAP
502	CP	440+87.32'USH 10'	22.74 RT	323146.678	440052.826	900.51	5/8 IN RB KL CAP
503	CP	435+31.39'USH 10'	17.39 RT	323300.682	439518.622	899.54	5/8 IN RB KL CAP
504	CP	434+31.40'USH 10'	151.43 LT	323490.112	439467.493	898.45	5/8 IN RB KL CAP
600	BM	445+26.86'USH 10'	22.04 LT	323072.289	440488.334	907.90	CUT SQ
601	BM	435+48.12'USH 10'	40.40 LT	323351.882	439550.214	891.33	CUT SQ
602	BM	435+40.31'USH 10'	21.91 RT	323293.933	439525.998	899.02	RR SPIKE GBR POST
603	BM	433+70.80'USH 10'	61.11 LT	323419.320	439384.939	898.27	RR SPIKE PPOL
1030	BM	445+27.31'USH 10'	21.50 RT	323030.214	440477.128	907.89	CHIS SQ



PROJECT NO: 1530-02-70, 1530-02-80	HWY: USH 10	COUNTY: PIERCE	BENCHMARKS AND CONTROL POINTS	SHEET 68	E

					1530-00-79	1530-02-70	1530-02-80
Line	Item	Item Description	Unit	Total	Qty	Qty	Qty
0002	201.0105	Clearing	STA	62.000	2.000	60.000	
0004	201.0205	Grubbing	STA	62.000	2.000	60.000	
0006	203.0100	Removing Small Pipe Culverts	EACH	7.000	2.000	5.000	
0008	203.0220	Removing Structure (structure) 01. Existing CPRC 72-Inch	EACH	1.000	1.000		
0010	203.0250	Removing Structure Over Waterway Remove Debris (structure) 01. C-47-183	EACH	1.000		1.000	
0012	203.0250	Removing Structure Over Waterway Remove Debris (structure) 02. C-47-32	EACH	1.000	1.000		
0014	203.0250	Removing Structure Over Waterway Remove Debris (structure) 03. C-47-33	EACH	1.000	1.000		
0016	203.0260	Removing Structure Over Waterway Minimal Debris (structure) 01. C-47-950	EACH	1.000		1.000	
0018	204.0100	Removing Concrete Pavement	SY	4,890.000	1,910.000	2,980.000	
0020	204.0109.S	Removing Concrete Surface Partial Depth	SF	1,631,400.000		1,631,400.000	
0022	204.0110	Removing Asphaltic Surface	SY	510.000		510.000	
0024	204.0115	Removing Asphaltic Surface Butt Joints	SY	5,230.000		5,230.000	
0026	204.0120	Removing Asphaltic Surface Milling	SY	76,400.000		76,400.000	
0028	204.0165	Removing Guardrail	LF	12,301.000	842.000	11,459.000	
0030	204.0170	Removing Fence	LF	1,240.000	60.000	1,180.000	
0032	205.0100	Excavation Common	CY	10,990.000	4,393.000	6,597.000	
0034	206.1001	Excavation for Structures Bridges (structure) 01. B-47-228	EACH	1.000		1.000	
0036	206.1001	Excavation for Structures Bridges (structure) 02. B-47-229	EACH	1.000		1.000	
0038	206.2001	Excavation for Structures Culverts (structure) 01. C-47-60	EACH	1.000	1.000		
0040	206.2001	Excavation for Structures Culverts (structure) 02. C-47-61	EACH	1.000	1.000		
0042	208.0100	Borrow	CY	7,213.000		7,213.000	
0044	208.1100	Select Borrow	CY	498.000	183.000	315.000	
0046	210.1500	Backfill Structure Type A	TON	1,238.000		1,238.000	
0048	210.2500	Backfill Structure Type B	TON	2,040.000	2,040.000		
0050	211.0400	Prepare Foundation for Asphaltic Shoulders	STA	1,414.000		172.000	1,242.000
0052	213.0100	Finishing Roadway (project) 01. 1530-00-79	EACH	1.000	1.000		
0054	213.0100	Finishing Roadway (project) 02. 1530-02-70	EACH	1.000		1.000	
0056	305.0110	Base Aggregate Dense 3/4-Inch	TON	8,525.000	505.000	2,900.000	5,120.000
0058	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	16,128.000	2,670.000	13,458.000	
0060	305.0500	Shaping Shoulders	STA	44.000		44.000	
0062	311.0115	Breaker Run	CY	740.000	740.000		
0064	350.0135	Subbase 10-Inch	SY	11,340.000	5,270.000	6,070.000	
0066	415.0070	Concrete Pavement 7-Inch	SY	291.000		291.000	
0068	415.0410	Concrete Pavement Approach Slab	SY	399.000		399.000	
0070	416.0610	Drilled Tie Bars	EACH	1,602.000		1,602.000	
0072	416.0620	Drilled Dowel Bars	EACH	4,648.000		4,648.000	
0074	450.4000	HMA Cold Weather Paving	TON	7,000.000		6,440.000	560.000
0076	455.0605	Tack Coat	GAL	38,875.000	465.000	36,900.000	1,510.000
0078	460.0105.S	HMA Percent Within Limits (PWL) Test Strip Volumetrics	EACH	1.000		1.000	
0080	460.0110.S	HMA Percent Within Limits (PWL) Test Strip Density	EACH	2.000		2.000	
0082	460.2000	Incentive Density HMA Pavement	DOL	1,080.000	830.000	250.000	
0084	460.2005	Incentive Density PWL HMA Pavement	DOL	29,015.000		29,015.000	
0086	460.2007	Incentive Density HMA Pavement Longitudinal Joints	DOL	28,520.000		28,520.000	
0088	460.2010	Incentive Air Voids HMA Pavement	DOL	43,920.000		40,600.000	3,320.000
0090	460.6244	HMA Pavement 4 MT 58-34 S	TON	1,680.000	1,290.000	390.000	
0092	460.6645	HMA Pavement 5 MT 58-34 V	TON	43,920.000		40,600.000	3,320.000
0094	460.9000.S	Material Transfer Vehicle 01. 1530-00-79	EACH	1.000	1.000		
0096	460.9000.S	Material Transfer Vehicle 02. 1530-02-70	EACH	1.000		1.000	
0098	465.0105	Asphaltic Surface	TON	4,830.000		3,020.000	1,810.000

					1530-00-79	1530-02-70	1530-02-80
Line	Item	Item Description	Unit	Total	Qty	Qty	Qty
0100	465.0110	Asphaltic Surface Patching	TON	200.000		200.000	
0102	465.0120	Asphaltic Surface Driveways and Field Entrances	TON	145.000		145.000	
0104	465.0520	Asphaltic Rumble Strips, Shoulder	LF	112,263.000			112,263.000
0106	465.0560	Asphaltic Rumble Strips, Centerline	LF	59,848.000	716.000	59,132.000	
0108	502.0100	Concrete Masonry Bridges	CY	809.000		809.000	
0110	502.3200	Protective Surface Treatment	SY	967.000		967.000	
0112	502.3210	Pigmented Surface Sealer	SY	181.000		181.000	
0114	503.0137	Prestressed Girder Type I 36W-Inch	LF	450.000		450.000	
0116	504.0100	Concrete Masonry Culverts	CY	273.000	273.000		
0118	505.0400	Bar Steel Reinforcement HS Structures	LB	61,265.000	46,165.000	15,100.000	
0120	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	100,955.000	4,210.000	96,745.000	
0122	505.0800.S	Bar Steel Reinforcement HS Stainless Structures	LB	2,025.000		2,025.000	
0124	506.2605	Bearing Pads Elastomeric Non-Laminated	EACH	12.000		12.000	
0126	506.4000	Steel Diaphragms (structure) 01. B-47-228	EACH	5.000		5.000	
0128	516.0500	Rubberized Membrane Waterproofing	SY	105.000	45.000	60.000	
0130	520.8000	Concrete Collars for Pipe	EACH	1.000		1.000	
0132	520.8700	Cleaning Culvert Pipes	EACH	12.000		12.000	
0134	521.1024	Apron Endwalls for Culvert Pipe Steel 24-Inch	EACH	1.000		1.000	
0136	521.1036	Apron Endwalls for Culvert Pipe Steel 36-Inch	EACH	4.000	4.000		
0138	521.3124	Culvert Pipe Corrugated Steel 24-Inch	LF	12.000		12.000	
0140	521.3136	Culvert Pipe Corrugated Steel 36-Inch	LF	72.000	72.000		
0142	521.3764	Pipe Arch Corrugated Steel 64x43-Inch	LF	60.000		60.000	
0144	522.0524	Culvert Pipe Reinforced Concrete Class V 24-Inch	LF	166.000		166.000	
0146	522.0530	Culvert Pipe Reinforced Concrete Class V 30-Inch	LF	56.000		56.000	
0148	522.1024	Apron Endwalls for Culvert Pipe Reinforced Concrete 24-Inch	EACH	6.000		6.000	
0150	522.1030	Apron Endwalls for Culvert Pipe Reinforced Concrete 30-Inch	EACH	2.000		2.000	
0152	550.0020	Pre-Boring Rock or Consolidated Materials	LF	99.000		99.000	
0154	550.1100	Piling Steel HP 10-Inch X 42 Lb	LF	2,030.000		2,030.000	
0156	601.0588	Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type TBT	LF	172.000		172.000	
0158	601.0590	Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type TBTT	LF	149.000		149.000	
0160	602.0810	Concrete Driveway 6-Inch	SY	35.000		35.000	
0162	602.3010	Concrete Surface Drains	CY	25.000		25.000	
0164	603.8000	Concrete Barrier Temporary Precast Delivered	LF	25.000	25.000		
0166	606.0200	Riprap Medium	CY	106.000	16.000	90.000	
0168	606.0300	Riprap Heavy	CY	835.000	103.000	732.000	
0170	611.9850.S	Pipe Grates (size) 01. 36-Inch	EACH	4.000	4.000		
0172	611.9850.S	Pipe Grates (size) 02. 64x43-Inch	EACH	2.000		2.000	
0174	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	420.000		420.000	
0176	614.0150	Anchor Assemblies for Steel Plate Beam Guard	EACH	8.000		8.000	
0178	614.0397	Guardrail Mow Strip Emulsified Asphalt	SY	5,616.000	23.000	5,593.000	
0180	614.2300	MGS Guardrail 3	LF	1,487.500	512.500	975.000	
0182	614.2330	MGS Guardrail 3 K	LF	6,937.500	50.000	6,887.500	
0184	614.2350	MGS Guardrail Short Radius	LF	468.800	37.500	431.300	
0186	614.2500	MGS Thrie Beam Transition	LF	640.000		640.000	
0188	614.2610	MGS Guardrail Terminal EAT	EACH	76.000	7.000	69.000	
0190	614.2630	MGS Guardrail Short Radius Terminal	EACH	6.000	1.000	5.000	
0192	614.8010	Anchor Post Assembly Top Mount	EACH	20.000	20.000		
0194	616.0100	Fence Woven Wire (height) 01. 4-FT	LF	1,220.000	60.000	1,160.000	
0196	616.0600.S	Fence Temporary	LF	1,220.000	60.000	1,160.000	

					1530-00-79	1530-02-70	1530-02-80
Line	Item	Item Description	Unit	Total	Qty	Qty	Qty
0198	616.0700.S	Fence Safety	LF	1,500.000	500.000	1,000.000	
0200	618.0100	Maintenance And Repair of Haul Roads (project) 01. 1530-00-79	EACH	1.000	1.000		
0202	618.0100	Maintenance And Repair of Haul Roads (project) 02. 1530-02-70	EACH	1.000		1.000	
0204	619.1000	Mobilization	EACH	1.000	0.100	0.900	
0206	624.0100	Water	MGAL	580.000	130.000	340.000	110.000
0208	625.0100	Topsoil	SY	1,640.000	180.000	1,460.000	
0210	625.0500	Salvaged Topsoil	SY	32,700.000	3,500.000	29,200.000	
0212	627.0200	Mulching	SY	1,640.000	180.000	1,460.000	
0214	628.1504	Silt Fence	LF	17,800.000	300.000	17,500.000	
0216	628.1520	Silt Fence Maintenance	LF	53,350.000	850.000	52,500.000	
0218	628.1905	Mobilizations Erosion Control	EACH	24.000	12.000	12.000	
0220	628.1910	Mobilizations Emergency Erosion Control	EACH	12.000	6.000	6.000	
0222	628.2004	Erosion Mat Class I Type B	SY	9,400.000		9,400.000	
0224	628.2008	Erosion Mat Urban Class I Type B	SY	9,650.000	3,500.000	6,150.000	
0226	628.2037	Erosion Mat Class III Type C	SY	13,500.000		13,500.000	
0228	628.6505	Soil Stabilizer Type A	ACRE	2.500		2.500	
0230	628.7504	Temporary Ditch Checks	LF	1,545.000	255.000	1,290.000	
0232	628.7555	Culvert Pipe Checks	EACH	330.000	20.000	310.000	
0234	628.7560	Tracking Pads	EACH	55.000	5.000	50.000	
0236	629.0210	Fertilizer Type B	CWT	21.200	2.500	18.700	
0238	630.0130	Seeding Mixture No. 30	LB	595.000	65.000	530.000	
0240	630.0200	Seeding Temporary	LB	900.000	100.000	800.000	
0242	630.0300	Seeding Borrow Pit	LB	10.000		10.000	
0244	630.0500	Seed Water	MGAL	1,470.000	160.000	1,310.000	
0246	633.5200	Markers Culvert End	EACH	15.000	4.000	11.000	
0248	638.2102	Moving Signs Type II	EACH	38.000	1.000	37.000	
0250	638.2602	Removing Signs Type II	EACH	16.000	8.000	8.000	
0252	638.3000	Removing Small Sign Supports	EACH	16.000	8.000	8.000	
0254	638.4000	Moving Small Sign Supports	EACH	36.000	1.000	35.000	
0256	642.5001	Field Office Type B	EACH	1.000	0.100	0.900	
0258	643.0300	Traffic Control Drums	DAY	157,060.000	1,360.000	155,700.000	
0260	643.0420	Traffic Control Barricades Type III	DAY	11,140.000	3,040.000	8,100.000	
0262	643.0705	Traffic Control Warning Lights Type A	DAY	21,650.000	5,550.000	16,100.000	
0264	643.0900	Traffic Control Signs	DAY	105,000.000	56,100.000	48,900.000	
0266	643.0920	Traffic Control Covering Signs Type II	EACH	50.000	35.000	15.000	
0268	643.1000	Traffic Control Signs Fixed Message	SF	143.000	79.000	64.000	
0270	643.1050	Traffic Control Signs PCMS	DAY	28.000	14.000	14.000	
0272	643.3165	Temporary Marking Line Paint 6-Inch	LF	537,700.000		537,700.000	
0274	643.3170	Temporary Marking Line Epoxy 6-Inch	LF	120,810.000	1,510.000	119,300.000	
0276	643.3265	Temporary Marking Line Paint 10-Inch	LF	4,620.000		4,620.000	
0278	643.3805	Temporary Marking Stop Line Paint 18-Inch	LF	440.000		440.000	
0280	643.5000	Traffic Control	EACH	1.000	0.100	0.900	
0282	645.0105	Geotextile Type C	SY	1,135.000	1,135.000		
0284	645.0111	Geotextile Type DF Schedule A	SY	232.000		232.000	
0286	645.0120	Geotextile Type HR	SY	1,765.000	304.000	1,461.000	
0288	646.2040	Marking Line Grooved Wet Ref Epoxy 6-Inch	LF	275,320.000	3,020.000	272,300.000	
0290	646.4040	Marking Line Grooved Wet Ref Epoxy 10-Inch	LF	2,310.000		2,310.000	
0292	646.5020	Marking Arrow Epoxy	EACH	12.000		12.000	
0294	646.5120	Marking Word Epoxy	EACH	6.000		6.000	

					1530-00-79	1530-02-70	1530-02-80
Line	Item	Item Description	Unit	Total	Qty	Qty	Qty
0296	646.6120	Marking Stop Line Epoxy 18-Inch	LF	220.000		220.000	
0298	646.6466	Cold Weather Marking Epoxy 6-Inch	LF	272,300.000		272,300.000	
0300	646.6470	Cold Weather Marking Epoxy 10-Inch	LF	2,310.000		2,310.000	
0302	646.7120	Marking Diagonal Epoxy 12-Inch	LF	640.000		640.000	
0304	646.8120	Marking Curb Epoxy	LF	140.000		140.000	
0306	646.8220	Marking Island Nose Epoxy	EACH	8.000		8.000	
0308	646.9000	Marking Removal Line 4-Inch	LF	3,200.000		3,200.000	
0310	646.9100	Marking Removal Line 8-Inch	LF	65.000		65.000	
0312	650.4500	Construction Staking Subgrade	LF	1,961.000	834.000	1,127.000	
0314	650.5000	Construction Staking Base	LF	13,335.000	834.000	12,501.000	
0316	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	321.000		321.000	
0318	650.6000	Construction Staking Pipe Culverts	EACH	8.000	2.000	6.000	
0320	650.6501	Construction Staking Structure Layout (structure) 01. C-47-60	EACH	1.000	1.000		
0322	650.6501	Construction Staking Structure Layout (structure) 02. C-47-61	EACH	1.000	1.000		
0324	650.6501	Construction Staking Structure Layout (structure) 03. B-47-0228	EACH	1.000		1.000	
0326	650.6501	Construction Staking Structure Layout (structure) 04. B-47-0229	EACH	1.000		1.000	
0328	650.7000	Construction Staking Concrete Pavement	LF	150.000		150.000	
0330	650.8000	Construction Staking Resurfacing Reference	LF	71,293.000		71,293.000	
0332	650.9911	Construction Staking Supplemental Control (project) 01. 1530-00-79	EACH	1.000	1.000		
0334	650.9911	Construction Staking Supplemental Control (project) 02. 1530-02-70	EACH	1.000		1.000	
0336	650.9920	Construction Staking Slope Stakes	LF	13,335.000	834.000	12,501.000	
0338	690.0150	Sawing Asphalt	LF	1,135.000	165.000	970.000	
0340	690.0250	Sawing Concrete	LF	550.000	100.000	450.000	
0342	715.0502	Incentive Strength Concrete Structures	DOL	6,492.000	1,638.000	4,854.000	
0344	715.0715	Incentive Flexural Strength Concrete Pavement	DOL	500.000		500.000	
0346	715.0720	Incentive Compressive Strength Concrete Pavement	DOL	500.000		500.000	
0348	740.0440	Incentive IRI Ride	DOL	54,170.000		54,170.000	
0350	999.2000.S	Installing and Maintaining Bird Deterrent System (station) 01. 248+59	EACH	1.000	1.000		
0352	999.2000.S	Installing and Maintaining Bird Deterrent System (station) 02. 291+38	EACH	1.000	1.000		
0354	999.2000.S	Installing and Maintaining Bird Deterrent System (station) 03. 435+41'USH 10'	EACH	1.000		1.000	
0356	999.2000.S	Installing and Maintaining Bird Deterrent System (station) 04. 445+38'USH 10'	EACH	1.000		1.000	
0358	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	2,100.000	2,100.000		
0360	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	2,400.000	2,400.000		
0362	SPV.0060	Special 01. Apron Endwalls for Pipe Arch Corrugated Steel Salvaged 64x43-Inch	EACH	2.000		2.000	
0364	SPV.0060	Special 02. Prepare Foundation for Asphaltic Paving Special 1530-02-70	EACH	1.000		1.000	
0366	SPV.0060	Special 03. Temporary Water Diversion - Box Culvert C-47-0060	EACH	1.000	1.000		
0368	SPV.0060	Special 04. Temporary Water Diversion - Box Culvert C-47-0061	EACH	1.000	1.000		
0370	SPV.0090	Special 01. Cleaning Ditch	LF	2,500.000		2,500.000	
0372	SPV.0180	Special 01. Concrete Pavement Repair Doweled	SY	4,670.000		4,670.000	
0374	SPV.0180	Special 02. Concrete Pavement Replacement Doweled	SY	2,710.000		2,710.000	
0376	SPV.0195	Special 01. Select Crushed Material For Travel Corridor	TON	54.000		54.000	

CLEARING & GRUBBING

LOCATION	STATION - STATION		O/S	201.0105 CLEARING (STA)	201.0205 GRUBBING (STA)
PROJECT 1530-00-79					
CATEGORY 0010					
760TH ST - 730TH ST	290+82	292+00	LT	2	2
1530-00-79 PROJECT TOTALS				**2**	**2**
PROJECT 1530-02-70					
CATEGORY 0010					
DEXTER ST - CTH QQ	145+17'USH 10'	147+33'USH 10'	RT	3	3
DEXTER ST - CTH QQ	162+56'USH 10'	168+10'USH 10'	RT/LT	7	7
DEXTER ST - CTH QQ	171+69'USH 10'	176+04'USH 10'	LT	5	5
DEXTER ST - CTH QQ	185+20'USH 10'	196+22'USH 10'	LT	12	12
DEXTER ST - CTH QQ	253+51'USH 10'	253+85'USH 10'	LT	1	1
CTH QQ - 1040TH ST	306+76'USH 10'	307+14'USH 10'	LT	2	2
CTH QQ - 1040TH ST	413+97'USH 10'	421+57'USH 10'	RT	8	8
CTH QQ - 1040TH ST	424+76'USH 10'	434+83'USH 10'	RT	11	11
1040TH ST - CTH E	435+98'USH 10'	438+45'USH 10'	RT	3	3
1040TH ST - CTH E	445+78'USH 10'	449+59'USH 10'	RT	4	4
CTH J - USH 63	792+17'USH 10'	795+30'USH 10'	RT	4	4
1530-02-70 PROJECT TOTALS				**60**	**60**
PROJECT TOTALS				**62**	**62**

REMOVING PAVEMENT

LOCATION	STATION - STATION		204.0100 REMOVING CONCRETE PAVEMENT (SY)	204.0109.S REMOVING CONCRETE SURFACE PARTIAL DEPTH (SF)	204.0110 REMOVING ASPHALTIC SURFACE (SY)	204.0115 REMOVING ASPHALTIC SURFACE BUTT JOINTS (SY)	204.0120* REMOVING ASPHALTIC SURFACE MILLING (SY)
PROJECT 1530-00-79							
CATEGORY 0010							
USH 63 - 760TH ST	246+50	250+37	1,033	--	--	--	--
760TH ST - 730TH ST	289+37	292+66	877	--	--	--	--
1530-00-79 PROJECT TOTALS			**1,910**	**0**	**0**	**0**	**0**
PROJECT 1530-02-70							
CATEGORY 0010							
STH 29 - DEXTER ST	82+45'USH 10'	106+12'USH 10'	--	--	--	--	13,221
DEXTER ST - CTH QQ	106+13'USH 10'	305+00'USH 10'	1,107	464,840	156	1,417	16,936
CTH QQ - 1040TH ST	305+00'USH 10'	435+00'USH 10'	275	308,710	47	592	12,167
1040TH ST - CTH E	435+00'USH 10'	478+50'USH 10'	1,598	90,900	31	123	4,323
CTH E - CTH O	478+50'USH 10'	638+70'USH 10'	--	360,630	47	1,791	13,371
CTH O - CTH J	638+70'USH 10'	720+75'USH 10'	--	187,770	121	714	8,777
CTH J - USH 63	720+75'USH 10	811+81'USH 10	--	218,550	108	593	7,605
1530-02-70 PROJECT TOTALS			**2,980**	**1,631,400**	**510**	**5,230**	**76,400**
PROJECT TOTALS			**4,890**	**1,631,400**	**510**	**5,230**	**76,400**

*NOTE: INCLUDES REMOVAL OF SAFETY WEDGE

REMOVING OLD STRUCTURE

LOCATION	STATION	203.0220.01 REMOVING STRUCTURE EXISTING CPRC 72-INCH (EA)
PROJECT 1530-00-79		
CATEGORY 0010		
USH 63 - 760TH ST	248+35	1
1530-00-79 PROJECT TOTALS		**1**

REMOVING GUARDRAIL

LOCATION	STATION - STATION		O/S	204.0165 REMOVING GUARDRAIL (LF)
PROJECT 1530-00-79				
CATEGORY 0010				
USH 63 - 760TH ST	246+50	250+37	RT	230
USH 63 - 760TH ST	246+50	250+37	LT	230
760TH ST - 730TH ST	289+37	292+66	RT	190
760TH ST - 730TH ST	289+37	292+66	LT	192
1530-00-79 PROJECT TOTALS				**842**
PROJECT 1530-02-70				
CATEGORY 0010				
DEXTER ST - CTH QQ	146+43'USH 10'	147+15'USH 10'	RT	72
DEXTER ST - CTH QQ	146+50'USH 10'	147+22'USH 10'	LT	72
DEXTER ST - CTH QQ	147+98'USH 10'	148+56'USH 10'	RT	60
DEXTER ST - CTH QQ	148+06'USH 10'	148+77'USH 10'	LT	72
DEXTER ST - CTH QQ	163+52'USH 10'	166+88'USH 10'	LT	334
DEXTER ST - CTH QQ	165+61'USH 10'	167+67'USH 10'	RT	216
DEXTER ST - CTH QQ	172+33'USH 10'	176+85'USH 10'	LT	455
DEXTER ST - CTH QQ	184+31'USH 10'	188+79'USH 10'	LT	480
DEXTER ST - CTH QQ	185+78'USH 10'	196+50'USH 10'	RT	1,081
DEXTER ST - CTH QQ	252+30'USH 10'	253+65'USH 10'	LT	135
DEXTER ST - CTH QQ	252+32'USH 10'	253+66'USH 10'	RT	133
CTH QQ - 104TH ST	374+44'USH 10'	377+79'USH 10'	RT	335
CTH QQ - 104TH ST	375+44'USH 10'	376+77'USH 10'	LT	133
CTH QQ - 104TH ST	414+58'USH 10'	421+45'USH 10'	RT	688
CTH QQ - 104TH ST	419+18'USH 10'	422+26'USH 10'	LT	307
CTH QQ - 104TH ST	428+75'USH 10'	733+86'USH 10'	LT	529
CTH QQ - 104TH ST	420+87'USH 10'	433+89'USH 10'	RT	502
104TH ST - CTH E	434+14'USH 10'	438+93'USH 10'	RT	480
104TH ST - CTH E	434+28'USH 10'	437+28'USH 10'	LT	316
104TH ST - CTH E	444+53'USH 10'	446+20'USH 10'	LT	168
104TH ST - CTH E	440+55'USH 10'	449+39'USH 10'	RT	484
104TH ST - CTH E	475+35'USH 10'	477+22'USH 10'	RT	167
104TH ST - CTH E	475+65'USH 10'	477+28'USH 10'	LT	163
CTH E - CTH O	529+25'USH 10'	533+90'USH 10'	RT	469
CTH E - CTH O	530+42'USH 10'	535+42'USH 10'	LT	495
CTH E - CTH O	545+92'USH 10'	547+18'USH 10'	LT	126
CTH E - CTH O	545+93'USH 10'	547+18'USH 10'	RT	124
CTH E - CTH O	591+12'USH 10'	593+25'USH 10'	RT	213
CTH E - CTH O	591+14'USH 10'	593+25'USH 10'	LT	211
CTH O - CTH J	639+91'USH 10'	640+84'USH 10'	RT	93
CTH O - CTH J	640+11'USH 10'	641+07'USH 10'	LT	96
CTH O - CTH J	642+26'USH 10'	643+08'USH 10'	RT	81
CTH O - CTH J	642+44'USH 10'	643+38'USH 10'	LT	95
CTH O - CTH J	646+88'USH 10'	649+31'USH 10'	RT	252
CTH O - CTH J	708+32'USH 10'	709+82'USH 10'	LT	158
CTH O - CTH J	708+63'USH 10'	709+87'USH 10'	RT	124
CTH J - USH 63	759+90'USH 10'	761+13'USH 10'	LT	123
CTH J - USH 63	759+97'USH 10'	761+02'USH 10'	RT	117
CTH J - USH 63	791+47'USH 10'	795+32'USH 10'	RT	391
CTH J - USH 63	796+16'USH 10'	803+84'USH 10'	RT	780
CTH J - USH 63	797+26'USH 10'	798+58'USH 10'	LT	129
1530-02-70 PROJECT TOTALS				**11,459**
PROJECT TOTALS				**12,301**

REMOVING SMALL PIPE CULVERTS

	LOCATION	STATION	203.0100 REMOVING SMALL PIPE CULVERTS (EACH)	NOTES
PROJECT 1530-00-79				
CATEGORY 0010				
	760TH ST - 730TH ST	291+73	2	28 LF - EXISTING 36" CMCP x 2
	1530-00-79 PROJECT TOTALS		**2**	
PROJECT 1530-02-70				
CATEGORY 0010				
	DEXTER ST - CTH QQ	114+69'USH 10'	1	52 LF - EXISTING 43"x64" CMCP ELLIPTICAL
	DEXTER ST - CTH QQ	217+07'USH 10'	1	58 LF - EXISTING 24" CMCP
	DEXTER ST - CTH QQ	275+70'USH 10'	1	58 LF - EXISTING 24" CMCP
	DEXTER ST - CTH QQ	297+08'USH 10'	1	62 LF - EXISTING 30" CMCP
	CTH QQ - 104TH ST	400+20'USH 10'	1	60 LF - EXISTING 24" CVPCP
	1530-02-70 PROJECT TOTALS		**5**	
	PROJECT TOTALS		**7**	

PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS

	LOCATION	STATION - STATION		211.0400 PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS (STA)
PROJECT 1530-02-70				
CATEGORY 0010				
	STH 29 - DEXTER ST	82+45'USH 10'	106+12'USH 10'	44
	DEXTER ST - CTH QQ	106+12'USH 10'	305+00'USH 10'	37
	CTH QQ - 104TH ST	305+00'USH 10'	435+00'USH 10'	31
	104TH ST - CTH E	435+00'USH 10'	478+50'USH 10'	13
	CTH E - CTH O	478+50'USH 10'	638+70'USH 10'	20
	CTH O - CTH J	638+70'USH 10'	720+75'USH 10'	9
	CTH J - USH 63	720+75'USH 10'	811+81'USH 10'	18
	1530-02-70 PROJECT TOTALS			**172**
PROJECT 1530-02-80				
CATEGORY 0010				
	DEXTER ST - CTH QQ	106+12'USH 10'	305+00'USH 10'	361
	CTH QQ - 104TH ST	305+00'USH 10'	435+00'USH 10'	229
	104TH ST - CTH E	435+00'USH 10'	478+50'USH 10'	60
	CTH E - CTH O	478+50'USH 10'	638+70'USH 10'	280
	CTH O - CTH J	638+70'USH 10'	720+75'USH 10'	149
	CTH J - USH 63	720+75'USH 10'	811+81'USH 10'	163
	1530-02-80 PROJECT TOTALS			**1,242**
	PROJECT TOTALS			**1,414**

REMOVING FENCE

	LOCATION	STATION	- STATION	O/S	204.0170 (LF)
PROJECT 1530-00-79					
CATEGORY 0010					
	USH 63 - 760TH ST	248+30	248+82	RT	50
		UNDISTRIBUTED			10
	1530-00-79 PROJECT TOTALS				**60**
PROJECT 1530-02-70					
CATEGORY 0010					
	CTH QQ - 104TH ST	429+09'USH 10'	433+92'USH 10'	RT	476
	104TH ST - CTH E	434+10'USH 10'	435+18'USH 10'	RT	108
	104TH ST - CTH E	435+03'USH 10'	435+27'USH 10'	LT	35
	104TH ST - CTH E	435+49'USH 10'	436+44'USH 10'	LT	108
	104TH ST - CTH E	435+61'USH 10'	438+60'USH 10'	RT	316
	104TH ST - CTH E	444+99'USH 10'	445+77'USH 10'	LT	78
		UNDISTRIBUTED			59
	1530-02-70 PROJECT TOTALS				**1,180**
	PROJECT TOTALS				**1,240**

PROJECT ITEMS

	PROJECT	213.0100.01 FINISHING ROADWAY 1530-00-79 (EACH)	213.0100.02 FINISHING ROADWAY 1530-02-70 (EACH)	618.0100.01 MAINTENANCE AND REPAIR OF HAUL 1530-00-79 (EACH)	618.0100.02 MAINTENANCE AND REPAIR OF HAUL 1530-02-70 (EACH)	619.1000 MOBILIZATION (EACH)	642.5001 FIELD OFFICE TYPE B (EACH)
PROJECT 1530-00-79							
CATEGORY 0010							
	1530-00-79	1	--	1	--	0.1	0.1
	1530-00-79 PROJECT TOTALS	**1**	**0**	**1**	**0**	**0.1**	**0.1**
PROJECT 1530-02-70							
CATEGORY 0010							
	1530-02-70	--	1	--	1	0.9	0.9
	1530-02-70 PROJECT TOTALS	**0**	**1**	**0**	**1**	**0.9**	**0.9**
	PROJECT TOTALS	**1**	**1**	**1**	**1**	**1.0**	**1.0**

EXCAVATION SUMMARY

	FROM / TO STATION	DIVISION	LOCATION	CONSTRUCTION STAGE	205.0100 EXCAVATION COMMON (8) CUT (CY)	205.0100 EXCAVATION COMMON (8) EBS EXCAVATION (CY) (9)	208.1100 SELECT BORROW (CY) (9)	311.0115 BREAKER RUN (10) (CY)	645.0105 GEOTEXTILE TYPE C (10) (SY)	SALVAGED/ UNUSABLE PAVEMENT MATERIAL	AVAILABLE MATERIAL (2)	UNEXPANDED FILL (6)	EXPANDED FILL (3) FACTOR 1.30	MASS ORDINATE +/- (4)	WASTE (5)	208.0100 BORROW (7) (CY)	COMMENT
1530-00-79																	
DIV. 1	246+50 - 250+37	1-1	USH 10	STAGE 1	1,807	90	90	0	0	344	1,508	334	434	1,073	1,073	0	Excess available matertial
	289+37 - 292+66	1-2	USH 10	STAGE 1	1,853	93	93	0	0	289	1,610	174	226	1,384	1,384	0	Excess available matertial
	248+32 - 248+72	1-3	C-47-0060 EBS	STAGE 1	0	410	0	410	330	0	205	0	0	205	205	0	Excess available matertial
	291+18 - 291+58	1-4	C-47-0061 EBS	STAGE 1	0	140	0	140	170	0	70	0	0	70	70	0	Excess available matertial
			DIV 1 SUBTOTAL		3,660	733	183	550	500	633	3,393	508	661	2,732	2,732	0	
	1530-00-79 PROJECT TOTALS				**3,660**	**733**	**183**	**550**	**500**							**0**	
						4,393											
1530-02-70																	
	114+68'USH 10' - CULVERT	2-1	USH 10	STAGE 1	275	14	14	0	0	0	282	0	0	282	0	0	Culvert Transition Cut
	145+17 - 147+22'USH 10'	2-2	USH 10	STAGE 1	83	4	4	0	0	0	85	176	229	-144	0	144	
	147+98 - 149+95'USH 10'	2-3	USH 10	STAGE 1	48	2	2	0	0	0	49	55	72	-23	0	23	
	162+56 - 168+67'USH 10'	2-4	USH 10	STAGE 1	201	10	10	0	0	0	207	465	605	-398	0	398	
	171+45 - 177+64'USH 10'	2-5	USH 10	STAGE 1	144	7	7	0	0	0	148	123	160	-12	0	12	
	184+71 - 197+41'USH 10'	2-6	USH 10	STAGE 1	317	16	16	0	0	0	324	251	326	-1	0	1	
	217+07'USH 10' - CUVLERT	2-7	USH 10	STAGE 1	290	15	15	0	0	0	297	0	0	297	0	0	Culvert Transition Cut
	251+38 - 254+64'USH 10'	2-8	USH 10	STAGE 1	130	7	7	0	0	0	134	172	224	-90	0	90	
	275+69'USH 10' - CULVERT	2-9	USH 10	STAGE 1	290	15	15	0	0	0	297	0	0	297	0	0	Culvert Transition Cut
	297+08'USH 10' - CULVERT	2-10	USH 10	STAGE 1	305	15	15	0	0	0	313	0	0	313	0	0	Culvert Transition Cut
	373+74 - 378+68'USH 10'	2-11	USH 10	STAGE 1	154	8	8	0	0	0	158	728	946	-788	0	788	
	400+20'USH 10' - CULVERT	2-12	USH 10	STAGE 1	290	15	15	0	0	0	297	0	0	297	0	0	Culvert Transition Cut
	413+83 - 423+15'USH 10'	2-13	USH 10	STAGE 1	291	15	15	0	0	0	298	227	295	3	3	0	Excess available matertial
DIV. 2	427+82 - 449+61'USH 10'	2-14	USH 10	STAGE 1	2,016	101	101	0	0	546	1,521	4,062	5,281	-3,760	0	3,760	
	474+74 - 477+71'USH 10'	2-15	USH 10	STAGE 1	65	3	3	0	0	0	66	41	53	13	13	0	Excess available matertial
	529+00 - 536+32'USH 10'	2-16	USH 10	STAGE 1	246	12	12	0	0	0	252	299	389	-137	0	137	
	544+86 - 548+16'USH 10'	2-17	USH 10	STAGE 1	145	7	7	0	0	0	149	331	431	-282	0	282	
	590+26 - 594+04'USH 10'	2-18	USH 10	STAGE 1	247	12	12	0	0	0	253	159	207	46	46	0	Excess available matertial
	638+85 - 647+91'USH 10'	2-19	USH 10	STAGE 1	109	5	5	0	0	0	112	31	41	71	71	0	Excess available matertial
	707+39 - 710+73'USH 10'	2-20	USH 10	STAGE 1	100	5	5	0	0	0	103	312	405	-302	0	302	
	759+05 - 762+07'USH 10'	2-21	USH 10	STAGE 1	95	5	5	0	0	0	97	51	67	31	31	0	Excess available matertial
	790+61 - 804+69'USH 10'	2-22	USH 10	STAGE 1	317	16	16	0	0	0	325	1,155	1,502	-1,177	0	1,177	
	10+43 - 11+77'B'	2-23	USH 10	STAGE 1	19	1	1	0	0	0	20	69	90	-70	0	70	
	10+91 - 12+41'K'	2-24	USH 10	STAGE 1	45	2	2	0	0	0	46	9	11	35	35	0	Excess available matertial
	8+44 - 9+50'CTHO'	2-25	USH 10	STAGE 1	35	2	2	0	0	0	36	3	3	32	32	0	Excess available matertial
	8+18 - 9+50'V'	2-26	USH 10	STAGE 1	25	1	1	0	0	0	25	41	53	-28	0	28	
			DIV 2 SUBTOTAL		6,282	315	315	0	0	546	5,893	8,761	11,389	-5,496	231	7,213	
	1530-02-70 PROJECT TOTALS				**6,282**	**315**	**315**	**0**	**0**							**7,213**	
						6,597											
	PROJECT TOTALS				**9,942**	**1,048**	**498**	**550**	**500**							**7,213**	
						10,990											

Note 1) Salvaged/Unusable Pavement Material is included in Cut.
Note 2) Available Material = Cut - Salvaged/Unusable Pavement Material
Note 3) Expanded Fill Factor = 1.30
Note 4) The Mass Ordinate + or - Qty calculated for the Division.
Positive quantity indicates an excess of material within the Division.
Negative indicates a shortage of material within the Division.
Mass Ordinate = Available Material - Expanded Fill
Note 5) Waste = Positive Division Mass Ordinate
Note 6) Unexpanded Fill = Unexpanded Fill from individual Earthwork tables
Note 7) It was assumed that any excess material used as Fill between Divisions would be counted as Borrow.
Note 8) Excavation common is the sum of the Cut and EBS Excavation columns. Item number 205.0100
Note 9) EBS quantitiy typically estimated to be additional undistributed 5% of Cut volume, to be backfilled with Select Borrow
Note 10) EBS at Box Culverts C-47-0060 & C-47-0061 to be backfilled with Breaker Run and underlaid with Geotextile Type C

BASE AGGREGATE

LOCATION	STATION - STATION		305.0110 BASE AGGREGATE DENSE 3/4-INCH (TON)	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH (TON)
PROJECT 1530-00-79 CATEGORY 0010				
USH 63 - 760TH ST	246+50	250+37	274	1402
760TH ST - 730TH ST	289+37	292+66	231	1268
1530-00-79 PROJECT TOTALS			**505**	**2670**
PROJECT 1530-02-70 CATEGORY 0010				
STH 29 - DEXTER ST	82+45'USH 10'	106+12'USH 10'	--	--
DEXTER ST - CTH QQ	106+13'USH 10'	305+00'USH 10'	909	4,020
CTH QQ - 104TH ST	305+00'USH 10'	435+00'USH 10'	347	1,688
104TH ST - CTH E	435+00'USH 10'	478+50'USH 10'	617	3,015
CTH E - CTH O	478+50'USH 10'	638+70'USH 10'	413	1,632
CTH O - CTH J	638+70'USH 10'	720+75'USH 10'	256	952
CTH J - USH 63	720+75'USH 10	811+81'USH 10	358	1,603
1530-02-70 PROJECT TOTALS			**2,900**	**12,910**
PROJECT 1530-02-80 CATEGORY 0010				
STH 29 - DEXTER ST	82+45'USH 10'	106+12'USH 10'	--	--
DEXTER ST - CTH QQ	106+13'USH 10'	305+00'USH 10'	1,481	--
CTH QQ - 104TH ST	305+00'USH 10'	435+00'USH 10'	929	--
104TH ST - CTH E	435+00'USH 10'	478+50'USH 10'	282	--
CTH E - CTH O	478+50'USH 10'	638+70'USH 10'	1,159	--
CTH O - CTH J	638+70'USH 10'	720+75'USH 10'	601	--
CTH J - USH 63	720+75'USH 10	811+81'USH 10	668	--
1530-02-80 PROJECT TOTALS			**5,120**	**0**
PROJECT TOTALS			**8,525**	**15,580**

SHAPING SHOULDERS

LOCATION	STATION - STATION		305.0500 SHAPING SHOULDERS (STA)
PROJECT 1530-02-70 CATEGORY 0010			
STH 29 - DEXTER ST	82+45'USH 10'	106+12'USH 10'	44
1530-02-70 PROJECT TOTALS			**44**

3

SUBBASE

LOCATION	STATION - STATION		350.0135 10-INCH (SY)
PROJECT 1530-00-79 CATEGORY 0010			
USH 63 - 760TH ST	246+50	250+37	2,747
760TH ST - 730TH ST	289+37	292+66	2,523
1530-00-79 PROJECT TOTALS			**5,270**
PROJECT 1530-02-70 CATEGORY 0010			
DEXTER ST - CTH QQ	106+12'USH 10'	305+00'USH 10'	2,537
CTH QQ - 104TH ST	305+00'USH 10'	435+00'USH 10'	632
104TH ST - CTH E	435+00'USH 10'	478+50'USH 10'	2,901
1530-02-70 PROJECT TOTALS			**6,070**
PROJECT TOTALS			**11,340**

CONCRETE PAVEMENT APPROACH SLAB

LOCATION	STATION-STATION		415.0070 CONCRETE PAVEMENT APPROACH SLAB 7-INCH (SY)	415.0410 CONCRETE PAVEMENT APPROACH SLAB (SY)
PROJECT 1530-02-70 CATEGORY 0010				
DEXTER ST - CTH QQ	147+07'USH 10'	147+26'USH 10'	41	52
DEXTER ST - CTH QQ	147+94'USH 10'	148+13'USH 10'	32	52
1040TH ST - CTH E	434+68'USH 10'	434+83'USH 10'	34	40
1040TH ST - CTH E	436+00'USH 10'	436+14'USH 10'	26	40
1040TH ST - CTH E	444+87'USH 10'	445+02'USH 10'	26	40
1040TH ST - CTH E	445+74'USH 10'	445+89'USH 10'	34	40
CTH O - CTH J	640+78'USH 10'	641+03'USH 10'	56	68
CTH O - CTH J	642+27'USH 10'	642+52'USH 10'	42	67
1530-02-70 PROJECT TOTALS			**291**	**399**

DRILLED BARS

LOCATION	STATION - STATION		416.0610* DRILLED TIE BARS (EACH)	416.0620* DRILLED DOWEL BARS (EACH)
PROJECT 1530-02-70 CATEGORY 0010				
DEXTER ST - CTH QQ	147+07'USH 10'	147+26'USH 10'	4	16
DEXTER ST - CTH QQ	147+94'USH 10'	148+13'USH 10'	4	16
1040TH ST - CTH E	434+68'USH 10'	434+83'USH 10'	4	16
1040TH ST - CTH E	436+00'USH 10'	436+14'USH 10'	4	16
1040TH ST - CTH E	444+87'USH 10'	445+02'USH 10'	4	16
1040TH ST - CTH E	445+74'USH 10'	445+89'USH 10'	4	16
CTH O - CTH J	640+78'USH 10'	641+03'USH 10'	4	16
CTH O - CTH J	642+27'USH 10'	642+52'USH 10'	4	16
1530-02-70 PROJECT TOTALS			**32**	**128**

*ADDITIONAL QUANTITY FOUND IN "CONCRETE PAVEMENT REPAIR" TABLE

CONCRETE PAVEMENT REPAIR

LOCATION	STATION - STATION		416.0610* DRILLED TIE BARS (EACH)	416.0620* DRILLED DOWEL BARS (EACH)	SPV.0180.01 CONCRETE PAVEMENT REPAIR DOWELED (SY)	SPV.0180.02 CONCRETE PAVEMENT REPLACEMENT DOWELED (SY)
PROJECT 1530-02-70						
CATEGORY 0010						
DEXTER ST - CTH QQ	106+13'USH 10'	305+00'USH 10'	343	892	870	747
CTH QQ - 104TH ST	305+00'USH 10'	435+00'USH 10'	212	654	700	299
1040TH ST - CTH E	435+00'USH 10'	478+50'USH 10'	58	134	120	150
CTH E - CTH O	478+50'USH 10'	638+70'USH 10'	264	959	1,100	150
CTH O - CTH J	638+70'USH 10'	720+75'USH 10'	178	519	540	299
CTH J - USH 63	720+75'USH 10	811+81'USH 10	196	449	400	523
UNDISTRIBUTED			319	913	940	542
1530-02-70 PROJECT TOTALS			**1,570**	**4,520**	**4,670**	**2,710**

*ADDITIONAL QUANTITY FOUND IN "DRILLED BARS" TABLE

MATERIAL TRANSFER VEHICLE

PROJECT	460.9000.S.01 1530-00-79 (EACH)	460.9000.S.02 1530-02-70 (EACH)
PROJECT 1530-00-79		
CATEGORY 0010		
1530-00-79	1	--
1530-00-79 PROJECT TOTALS	**1**	**0**
PROJECT 1530-02-70		
CATEGORY 0010		
1530-02-70	--	1
1530-02-70 PROJECT TOTALS	**0**	**1**
PROJECT TOTALS	**1**	**1**

NOTE: TRANSFER VEHICLE FOR PROJECT 1530-02-80 IS INCIDENTAL TO 1530-02-70

HMA PAVEMENT

LOCATION	STATION - STATION		455.0605 TACK COAT (GAL)	460.6244 HMA PAVEMENT 4 MT 58-34 S (TON)	460.6645 HMA PAVEMENT 5 MT 58-34 V (TON)	465.0105 ASPHALTIC SURFACE (TON)	465.0110 ASPHALTIC SURFACE PATCHING (TON)	465.0120 ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES (TON)	450.4000 HMA COLD WEATHER PAVING (TON)
PROJECT 1530-00-79									
CATEGORY 0010									
USH 63 - 760TH ST	246+50	250+37	246	679	--	--	--	--	0
760TH ST - 730TH ST	289+37	292+66	219	611	--	--	--	--	0
1530-00-79 PROJECT TOTALS			**465**	**1,290**	**0**	**0**	**0**	**0**	**0**
PROJECT 1530-02-70									
CATEGORY 0010									
STH 29 - DEXTER ST	82+45'USH 10'	106+12'USH 10'	905	--	1,447	--	--	--	--
DEXTER ST - CTH QQ	106+13'USH 10'	305+00'USH 10'	10,221	--	10,990	787	--	40	--
CTH QQ - 104TH ST	305+00'USH 10'	435+00'USH 10'	6,142	--	6,695	249	--	18	--
104TH ST - CTH E	435+00'USH 10'	478+50'USH 10'	3,068	390	3,248	73	--	21	--
CTH E - CTH O	478+50'USH 10'	638+70'USH 10'	7,564	--	8,321	83	--	20	--
CTH O - CTH J	638+70'USH 10'	720+75'USH 10'	4,387	--	4,824	29	--	10	--
CTH J - USH 63	720+75'USH 10	811+81'USH 10	4,613	--	5,075	109	--	36	--
PROJECT	UNDISTRIBUTED		--	--	--	--	--	--	6,440
LEVELING & WEDGING	UNDISTRIBUTED		--	--	--	1,690	--	--	--
FILLING CONCRETE JOINTS	UNDISTRIBUTED		--	--	--	--	150	--	--
MINOR REPAIRS	UNDISTRIBUTED		--	--	--	--	50	--	--
1530-02-70 PROJECT TOTALS			**36,900**	**390**	**40,600**	**3,020**	**200**	**145**	**6,440**
PROJECT 1530-02-80									
CATEGORY 0010									
STH 29 - DEXTER ST	82+45'USH 10'	106+12'USH 10'	--	--	--	--	--	--	--
DEXTER ST - CTH QQ	106+13'USH 10'	305+00'USH 10'	447	--	984	534	--	--	--
CTH QQ - 104TH ST	305+00'USH 10'	435+00'USH 10'	282	--	619	338	--	--	--
104TH ST - CTH E	435+00'USH 10'	478+50'USH 10'	90	--	197	108	--	--	--
CTH E - CTH O	478+50'USH 10'	638+70'USH 10'	331	--	729	398	--	--	--
CTH O - CTH J	638+70'USH 10'	720+75'USH 10'	157	--	346	189	--	--	--
CTH J - USH 63	720+75'USH 10	811+81'USH 10	203	--	445	243	--	--	--
PROJECT	UNDISTRIBUTED		--	--	--	--	--	--	560
1530-02-80 PROJECT TOTALS			**1,510**	**0**	**3,320**	**1,810**	**0**	**0**	**560**
PROJECT TOTALS			**38,875**	**1,680**	**43,920**	**4,830**	**200**	**145**	**7,000**

ASPHALTIC RUMBLE STRIPS

LOCATION	STATION - STATION		465.0520 ASPHALTIC RUMBLE STRIPS SHOULDER (LF)	465.0560 ASPHALTIC RUMBLE STRIPS CENTERLINE (LF)
PROJECT 1530-00-79				
CATEGORY 0010				
USH 63 - 760TH ST	246+50	250+37	--	387
760TH ST - 730TH ST	289+37	292+66	--	329
1530-00-79 PROJECT TOTALS			**0**	**716**
PROJECT 1530-02-70				
CATEGORY 0010				
DEXTER ST - CTH QQ	106+13'USH 10'	305+00'USH 10'	--	17,684
CTH QQ - 104TH ST	305+00'USH 10'	435+00'USH 10'	--	11,312
104TH ST - CTH E	435+00'USH 10'	478+50'USH 10'	--	3,088
CTH E - CTH O	478+50'USH 10'	638+70'USH 10'	--	13,060
CTH O - CTH J	638+70'USH 10'	720+75'USH 10'	--	5,957
CTH J - USH 63	720+75'USH 10	811+81'USH 10	--	8,031
1530-02-70 PROJECT TOTALS			**0**	**59,132**
PROJECT 1530-02-80				
CATEGORY 0010				
STH 29 - DEXTER ST	82+45'USH 10'	106+12'USH 10'	1,224	--
DEXTER ST - CTH QQ	106+13'USH 10'	305+00'USH 10'	33,793	--
CTH QQ - 104TH ST	305+00'USH 10'	435+00'USH 10'	21,249	--
104TH ST - CTH E	435+00'USH 10'	478+50'USH 10'	6,026	--
CTH E - CTH O	478+50'USH 10'	638+70'USH 10'	24,995	--
CTH O - CTH J	638+70'USH 10'	720+75'USH 10'	9,889	--
CTH J - USH 63	720+75'USH 10	811+81'USH 10	15,087	--
1530-02-90 PROJECT TOTALS			**112,263**	**0**
PROJECT TOTALS			**112,263**	**59,848**

PWL TEST STRIPS AND INCENTIVES

LOCATION	STATION - STATION	460.0105.S HMA PERCENT WITHIN LIMITS (PWL) TEST STRIP VOLUMETRICS (EACH)	460.0110.S HMA PERCENT WITHIN LIMITS (PWL) TEST STRIP DENSITY (EACH)
PROJECT 1530-02-70			
CATEGORY 0010			
PROJECT	UNDISTRIBUTED	1	2
1530-02-70 PROJECT TOTALS		**1**	**2**

NOTE: ONE VOLUMETRICS TEST STRIP PER PWL MIX AND ONE DENTISY TEST STRIP PER PWL HMA LAYER. SEE PWL TABLE FOR DETAILS AND NOTES.

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PROJECT 1530-00-79, 1530-02-70, 1530-02-80 PWL MIXTURE USE TABLE - ACCEPTANCE CRITERIA

LOCATION	PROJECT	MIXTURE USE	STATION	LAYER	UNDERLYING SURFACE	BID ITEM	TONS	THICKNESS	QMP TO BE USED MIXTURE ACCEPTANCE	QMP TO BE USED DENSITY ACCEPTANCE
12' DRIVING LANES	1530-00-79	BOX CULVERT REPLACEMENT	246+50 - 250+37 289+37 - 292+66	UPPER LAYER	4 MT 58-34 S	4 MT 58-34 S	214	2.00"	QMP AS PER SS 465	INCENTIVE DENSITY HMA PAVEMENT 460.2000
12' DRIVING LANES	1530-00-79	BOX CULVERT REPLACEMENT	246+50 - 250+37 289+37 - 292+66	LOWER LAYER	4 MT 58-34 S	4 MT 58-34 S	268	2.50"	QMP AS PER SS 465	INCENTIVE DENSITY HMA PAVEMENT 460.2000
12' DRIVING LANES	1530-00-79	BOX CULVERT REPLACEMENT	246+50 - 250+37 289+37 - 292+66	LOWER LAYER	BASE AGGREGATE	4 MT 58-34 S	268	2.50"	QMP AS PER SS 465	INCENTIVE DENSITY HMA PAVEMENT 460.2000
PAVED SHOULDERS	1530-00-79	BOX CULVERT REPLACEMENT	246+50 - 250+37 289+37 - 292+66	UPPER LAYER	4 MT 58-34 S	4 MT 58-34 S	154	2.00"	QMP AS PER SS 465	INCENTIVE DENSITY HMA PAVEMENT 460.2000
PAVED SHOULDERS	1530-00-79	BOX CULVERT REPLACEMENT	246+50 - 250+37 289+37 - 292+66	LOWER LAYER	4 MT 58-34 S	4 MT 58-34 S	193	2.50"	QMP AS PER SS 465	INCENTIVE DENSITY HMA PAVEMENT 460.2000
PAVED SHOULDERS	1530-00-79	BOX CULVERT REPLACEMENT	246+50 - 250+37 289+37 - 292+66	LOWER LAYER	BASE AGGREGATE	4 MT 58-34 S	193	2.50"	QMP AS PER SS 465	INCENTIVE DENSITY HMA PAVEMENT 460.2000
12' DRIVING LANES	1530-02-70/80	OVERLAY	82+45 - 106+12'USH 10'	UPPER LAYER	MILLED SURFACE	5 MT 58-34 V	709	2.00"	INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT 460.2005
12' DRIVING LANES	1530-02-70/80	OVERLAY	106+12 - 479+75'USH 10' 488+60 - 811+81'USH 10'	UPPER LAYER	5 MT 58-34 V	5 MT 58-34 V	15,440	1.50"	INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT 460.2005
12' DRIVING LANES	1530-02-70/80	OVERLAY	106+12 - 479+75'USH 10' 488+60 - 811+81'USH 10'	LOWER LAYER	MILLED SURFACE / ASPHALTIC SURFACE / 4 MT 58-34 S	5 MT 58-34 V	12,866	1.25"	INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT 460.2005
12' DRIVING LANES	1530-02-70/80	BRIDGE APPROACHES	434+66 - 438+57'USH 10' 444+35 - 448+38'USH 10'	LOWER LAYER	4 MT 58-34 S	4 MT 58-34 S	105	2.00"	QMP AS PER SS 465	INCENTIVE DENSITY HMA PAVEMENT 460.2000
12' DRIVING LANES	1530-02-70/80	BRIDGE APPROACHES	434+66 - 438+57'USH 10' 444+35 - 448+38'USH 10'	LOWER LAYER	BASE AGGREGATE	4 MT 58-34 S	117	2.25"	QMP AS PER SS 465	INCENTIVE DENSITY HMA PAVEMENT 460.2000
12' DRIVING LANES	1530-02-70/80	CULVERT REPLACEMENTS	VARIOUS	LOWER LAYER	BASE AGGREGATE	ASPHALTIC SURFACE	770	4.25"	QMP AS PER SS 465	ACCEPTANCE BY ORDINARY COMPACTION
PAVED SHOULDERS	1530-02-70/80	OVERLAY	82+45 - 106+12'USH 10'	UPPER LAYER	MILLED SURFACE / BASE AGGREGATE	5 MT 58-34 V	195	2.00"	INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY DEPARTMENT; NOT ELIGIBLE FOR INCENTIVES
PAVED SHOULDERS	1530-02-70/80	OVERLAY	106+12 - 479+75'USH 10' 488+60 - 811+81'USH 10'	UPPER LAYER	5 MT 58-34 V	5 MT 58-34 V	6,435	1.50"	INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY DEPARTMENT; NOT ELIGIBLE FOR INCENTIVES
PAVED SHOULDERS	1530-02-70/80	OVERLAY	106+12 - 479+75'USH 10' 488+60 - 811+81'USH 10'	LOWER LAYER	MILLED SURFACE / ASPHALTIC SURFACE / 4 MT 58-34 S	5 MT 58-34 V	5,362	1.25"	INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY DEPARTMENT; NOT ELIGIBLE FOR INCENTIVES
PAVED SHOULDERS	1530-02-70/80	SHOULDER WIDENING AT BEAM GUARD	106+12 - 479+75'USH 10' 488+60 - 811+81'USH 10'	LOWER LAYER	BASE AGGREGATE	ASPHALTIC SURFACE	2,370	1.50"	QMP AS PER SS 465	ACCEPTANCE BY ORDINARY COMPACTION
PAVED SHOULDERS	1530-02-70/80	BRIDGE APPROACHES	434+66 - 438+57'USH 10' 444+35 - 448+38'USH 10'	LOWER LAYER	4 MT 58-34 S	4 MT 58-34 S	80	2.00"	QMP AS PER SS 465	INCENTIVE DENSITY HMA PAVEMENT 460.2000
PAVED SHOULDERS	1530-02-70/80	BRIDGE APPROACHES	434+66 - 438+57'USH 10' 444+35 - 448+38'USH 10'	LOWER LAYER	BASE AGGREGATE	4 MT 58-34 S	88	2.25"	QMP AS PER SS 465	INCENTIVE DENSITY HMA PAVEMENT 460.2000
SIDE ROADS, TURN LANES, INTERSECTIONS	1530-02-70/80	OVERLAY	82+45 - 106+12'USH 10'	UPPER LAYER	MILLED SURFACE	5 MT 58-34 V	543	2.00"	INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY DEPARTMENT; NOT ELIGIBLE FOR INCENTIVES
SIDE ROADS, TURN LANES, INTERSECTIONS	1530-02-70/80	OVERLAY	106+12 - 479+75'USH 10' 488+60 - 811+81'USH 10'	UPPER LAYER	5 MT 58-34 V	5 MT 58-34 V	1,293	1.50"	INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY DEPARTMENT; NOT ELIGIBLE FOR INCENTIVES
SIDE ROADS, TURN LANES, INTERSECTIONS	1530-02-70/80	OVERLAY	106+12 - 479+75'USH 10' 488+60 - 811+81'USH 10'	LOWER LAYER	MILLED SURFACE	5 MT 58-34 V	1,077	1.25"	INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY DEPARTMENT; NOT ELIGIBLE FOR INCENTIVES

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									CULVERT PIPE														
									520.8000	521.1024	521.1036	521.3124	521.3136	522.0524	522.0530	522.1024	522.1030	521.3764	SPV.0060.01	611.9850.S.01	611.9850.S.02	633.5200
	INLET			OUTLET					CONCRETE COLLARS FOR PIPE	APRON ENDWALLS FOR CULVERT PIPE STEEL		CULVERT PIPE CORRUGATED STEEL		CULVERT PIPE REINFORCED CONCRETE CLASS V		APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE		PIPE ARCH CORRUGATED STEEL	APRON ENDWALLS FOR PIPE ARCH CORRUGATED STEEL SALVAGED	PIPE GRATES	PIPE GRATES	MARKERS CULVERT END
	STATION	OFFSET	ELEVATION	STATION	OFFSET	ELEVATION	SKEW	SLOPE %	(EA)	24-INCH (EACH)	36-INCH (EACH)	24-INCH (LF)	36-INCH (LF)	24-INCH (LF)	30-INCH (LF)	24-INCH (EACH)	30-INCH (EACH)	64X43-INCH (LF)	64X43-INCH (EACH)	36-INCH (EACH)	64X43-INCH (EACH)	(EACH)
PROJECT 1530-00-79																						
CATEGORY 0010																						
	291+92	51.7' RT	1061.75	291+57	55.2' RT	1061.11	84.4° LHF	1.78%	--	--	2	--	36	--	--	--	--	--	--	2	--	2
	291+93	43.5' RT	1061.75	291+57	47.0' RT	1061.11	84.4° LHF	1.78%	--	--	2	--	36	--	--	--	--	--	--	2	--	2
	1530-00-79 PROJECT TOTALS								**0**	**0**	**4**	**0**	**72**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**4**
PROJECT 1530-02-70																						
CATEGORY 0010																						
	114+68'USH10'	28.2' LT	884.59	114+68'USH 10'	30.7' RT	883.60	--	1.65%	--	--	--	--	--	--	--	--	--	60	2	--	2	2
	217+07'USH10'	25.5' LT	943.60	217+07'USH 10'	33.5' RT	941.34	--	3.77%	--	--	--	--	--	60	--	2	--	--	--	--	--	2
	275+69'USH10'	22.6' LT	976.41	275+70'USH 10'	24.6' RT	975.98	--	0.86%	--	--	--	--	--	50	--	2	--	--	--	--	--	2
	297+08'USH10'	24.3' LT	968.10	297+08'USH 10'	30.3' RT	966.48	--	2.89%	--	--	--	--	--	--	56	--	2	--	--	--	--	2
	400+20'USH10'	25.0' LT	983.28	400+20'USH 10'	28.9' RT	982.10	--	2.11%	--	--	--	--	--	56	--	2	--	--	--	--	--	2
	449+61'USH10'	31.5' RT	920.36	449+51'USH 10'	34.7' RT	919.65	72.1° LHF	5.92%	1	1	--	12	--	--	--	--	--	--	--	--	--	1
	1530-02-70 PROJECT TOTALS								**1**	**1**	**0**	**12**	**0**	**166**	**56**	**6**	**2**	**60**	**2**	**0**	**2**	**11**
	PROJECT TOTALS								**1**	**1**	**4**	**12**	**72**	**166**	**56**	**6**	**2**	**60**	**2**	**4**	**2**	**15**

NOTE: CPRC SHALL BE JOINT TIED ACROSS ENTIRE LENGTH

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CLEANING CULVERT PIPES

	LOCATION	STATION	520.8700 (EACH)	NOTES
PROJECT 1530-02-70				
CATEGORY 0010				
	DEXTER ST - CTH QQ	186+95'USH 10'	1	7-FTx7-FT (85-FT)
	CTH QQ - 104TH ST	333+25'USH 10'	1	42-IN (70-FT)
	CTH QQ - 104TH ST	333+32'USH 10'	1	42-IN (70-FT)
	CTH QQ - 104TH ST	376+10'USH 10'	2	6-FTx4-FT (50-FT)
	CTH E - CTH O	488+99'USH 10'	1	30-IN (70-FT)
	CTH E - CTH O	495+45'USH 10'	1	30-IN (70-FT)
	CTH E - CTH O	523+53'USH 10'	1	30-IN (63-FT)
	CTH O - CTH J	666+45'USH 10'	1	24-IN (65-FT)
	CTH O - CTH J	677+98'USH 10'	1	30-IN (60-FT)
	CTH J - USH 63	727+93'USH 10'	1	24-IN (66-FT)
	CTH J - USH 63	750+22'USH 10'	1	6-FTx4-FT (48-FT)
1530-02-70 PROJECT TOTALS			**12**	

CONCRETE CURB & GUTTER

	LOCATION	STATION - STATION	O/S	601.0588 CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBT (LF)	601.0590 CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBTT (LF)
PROJECT 1530-02-70					
CATEGORY 0010					
	DEXTER ST - CTH QQ	147+90'USH 10' 148+30'USH 10'	RT	17	23
	DEXTER ST - CTH QQ	147+98'USH 10' 148+37'USH 10'	LT	25	16
	1040TH ST - CTH E	435+99'USH 10' 436+38'USH 10'	RT	25	15
	1040TH ST - CTH E	435+99'USH 10' 436+38'USH 10'	LT	25	15
	1040TH ST - CTH E	444+63'USH 10' 445+01'USH 10'	RT	25	15
	1040TH ST - CTH E	444+63'USH 10' 445+01'USH 10'	LT	25	15
	CTH O - CTH J	642+17'USH 10' 642+52'USH 10'	RT	25	16
	CTH O - CTH J	642+37'USH 10' 642+52'USH 10'	LT	5	34
1530-02-70 PROJECT TOTALS				**172**	**149**

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CONCRETE DRIVEWAY 6-INCH

	LOCATION	STATION	O/S	602.0810 (SY)
PROJECT 1530-02-70				
CATEGORY 0010				
	DEXTER ST - CTH QQ	268+39'USH 10'	RT	35
1530-02-70 PROJECT TOTALS				**35**

CONCRETE SURFACE DRAINS

	LOCATION	STATION	OFFSET	602.3010 CONCRETE SURFACE DRAINS (CY)
PROJECT 1530-02-70				
CATEGORY 0010				
	DEXTER ST - CTH QQ	148+34'USH 10'	RT	3
	DEXTER ST - CTH QQ	148+42'USH 10'	LT	3
	104TH ST - CTH E	436+43'USH 10'	RT	5
	104TH ST - CTH E	436+43'USH 10'	LT	3
	104TH ST - CTH E	444+58'USH 10'	RT	3
	104TH ST - CTH E	444+58'USH 10'	LT	2
	CTH O - CTH J	642+60'USH 10'	RT	3
	CTH O - CTH J	642+80'USH 10'	LT	3
1530-02-70 PROJECT TOTALS				**25**

CONCRETE BARRIER TEMPORARY PRECAST

	LOCATION	STATION - STATION		O/S	603.8000 CONCRETE BARRIER TEMPORARY PRECAST DELIVERED (LF)	NOTE
PROJECT 1530-00-79						
CATEGORY 0010						
	760TH ST - 730TH ST	289+37	292+66	RT	25	EXISTING BARRIER TO BE LOADED ONTO COUNTY VEHICLE OR TRAILER
1530-00-79 PROJECT TOTALS					**25**	

BEAM GUARD - MGS

LOCATION	STATION - STATION		O/S	614.2300 3 (LF)	614.2330 3 K (LF)	614.2350 MGS GUARDRAIL SHORT RADIUS (LF)	614.2610 MGS GUARDRAIL TERMINAL EAT (EACH)	614.2630 MGS GUARDRAIL SHORT RADIUS TERMINAL (EACH)	614.2500 MGS THRIE BEAM TRANSITION (LF)	614.8010 ANCHOR POST ASSEMBLY TOP MOUNT (EACH)	NOTE
PROJECT 1530-00-79											
CATEGORY 0010											
USH 63 - 760TH ST	246+50	250+37	RT	125.0	12.5	--	2	--	--	5	--
USH 63 - 760TH ST	246+50	250+37	LT	137.5	12.5	--	2	--	--	5	--
760TH ST - 730TH ST	289+37	292+66	RT	112.5	12.5	37.5	1	1	--	5	20' RADIUS, 10 CRT POSTS
760TH ST - 730TH ST	289+37	292+66	LT	137.5	12.5	--	2	--	--	5	--
1530-00-79 PROJECT TOTALS				**512.5**	**50.0**	**37.5**	**7**	**1**	**0**	**20**	
PROJECT 1530-02-70											
CATEGORY 0010											
DEXTER ST - CTH QQ	146+19'USH 10'	147+24'USH 10'	RT	12.5	--	--	1	--	40	--	--
DEXTER ST - CTH QQ	146+27'USH 10'	147+32'USH 10'	LT	12.5	--	--	1	--	40	--	--
DEXTER ST - CTH QQ	147+88'USH 10'	148+56'USH 10'	RT	37.5	--	50.0	--	1	40	--	24' RADIUS, 12 CRT POSTS
DEXTER ST - CTH QQ	147+96'USH 10'	149+01'USH 10'	LT	12.5	--	--	1	--	40	--	--
DEXTER ST - CTH QQ	163+30'USH 10'	167+12'USH 10'	LT	--	275.0	--	2	--	--	--	--
DEXTER ST - CTH QQ	165+55'USH 10'	167+92'USH 10'	RT	37.5	150.0	50.0	1	1	--	--	32' RADIUS, 12 CRT POSTS
DEXTER ST - CTH QQ	172+20'USH 10'	176+07'USH 10'	LT	--	375.0	--	2	--	--	--	--
DEXTER ST - CTH QQ	184+29'USH 10'	189+04'USH 10'	LT	37.5	337.5	25.0	2	--	--	--	32' RADIUS, 8 CRT POSTS
DEXTER ST - CTH QQ	185+55'USH 10'	195+81'USH 10'	RT	75.0	950.0	--	2	--	--	--	--
DEXTER ST - CTH QQ	252+12'USH 10'	253+83'USH 10'	RT	--	62.5	--	2	--	--	--	--
DEXTER ST - CTH QQ	252+15'USH 10'	253+83'USH 10'	LT	--	62.5	--	2	--	--	--	--
CTH QQ - 104TH ST	374+38'USH 10'	377+94'USH 10'	RT	--	250.0	--	2	--	--	--	--
CTH QQ - 104TH ST	375+27'USH 10'	376+96'USH 10'	LT	--	62.5	--	2	--	--	--	--
CTH QQ - 104TH ST	414+58'USH 10'	421+40'USH 10'	RT	--	575.0	--	2	--	--	--	--
CTH QQ - 104TH ST	419+09'USH 10'	422+40'USH 10'	LT	--	225.0	--	2	--	--	--	--
CTH QQ - 104TH ST	428+53'USH 10'	433+95'USH 10'	LT	25.0	437.5	75.0	2	--	--	--	48' RADIUS, 16 CRT POSTS
CTH QQ - 104TH ST	428+57'USH 10'	433+88'USH 10'	RT	--	425.0	--	2	--	--	--	--
CTH QQ - 104TH ST	434+09'USH 10'	434+81'USH 10'	RT	62.5	--	25.0	--	1	40	--	12' RADIUS, 8 CRT POSTS
CTH QQ - 104TH ST	434+22'USH 10'	434+81'USH 10'	LT	25.0	--	87.5	1	--	40	--	49' RADIUS, 18 CRT POSTS
104TH ST - CTH E	436+01'USH 10'	437+52'USH 10'	LT	62.5	--	--	1	--	40	--	--
104TH ST - CTH E	436+01'USH 10'	437+52'USH 10'	RT	62.5	--	--	1	--	40	--	--
104TH ST - CTH E	433+49'USH 10'	445+04'USH 10'	LT	62.5	--	--	1	--	40	--	--
104TH ST - CTH E	444+27'USH 10'	445+04'USH 10'	RT	62.5	--	25.0	--	1	40	--	12' RADIUS, 8 CRT POSTS
104TH ST - CTH E	445+72'USH 10'	447+27'USH 10'	LT	62.5	--	--	1	--	40	--	--
104TH ST - CTH E	445+72'USH 10'	447+27'USH 10'	RT	62.5	--	--	1	--	40	--	--
104TH ST - CTH E	475+47'USH 10'	477+16'USH 10'	LT	--	62.5	--	2	--	--	--	--
104TH ST - CTH E	475+49'USH 10'	477+43'USH 10'	RT	--	87.5	--	2	--	--	--	--
CTH E - CTH O	529+19'USH 10'	533+97'USH 10'	RT	--	375.0	--	2	--	--	--	--
CTH E - CTH O	530+40'USH 10'	535+53'USH 10'	LT	100.0	300.0	--	2	--	--	--	--
CTH E - CTH O	545+61'USH 10'	547+42'USH 10'	LT	--	75.0	--	2	--	--	--	--
CTH E - CTH O	545+74'USH 10'	547+42'USH 10'	RT	--	62.5	--	2	--	--	--	--
CTH E - CTH O	590+98'USH 10'	593+29'USH 10'	LT	--	125.0	--	2	--	--	--	--
CTH E - CTH O	591+01'USH 10'	593+32'USH 10'	RT	--	125.0	--	2	--	--	--	--
CTH E - CTH O	639+90'USH 10'	640+95'USH 10'	RT	12.5	--	--	1	--	40	--	--
CTH E - CTH O	640+11'USH 10'	641+16'USH 10'	LT	12.5	--	--	1	--	40	--	--
CTH O - CTH J	642+15'USH 10'	643+08'USH 10'	RT	12.5	--	--	1	--	40	--	--
CTH O - CTH J	642+35'USH 10'	643+39'USH 10'	LT	12.5	--	--	1	--	40	--	--
CTH O - CTH J	646+63'USH 10'	649+39'USH 10'	RT	37.5	175.0	18.8	2	--	--	--	32' RADIUS, 7 CRT POSTS
CTH O - CTH J	708+14'USH 10'	709+33'USH 10'	LT	37.5	100.0	25.0	1	1	--	--	16' RADIUS, 8 CRT POSTS
CTH O - CTH J	708+42'USH 10'	709+98'USH 10'	RT	--	50.0	--	2	--	--	--	--
CTH J - USH 63	759+80'USH 10'	761+24'USH 10'	LT	--	37.5	--	2	--	--	--	--
CTH J - USH 63	759+94'USH 10'	761+32'USH 10'	RT	25.0	62.5	50.0	2	--	--	--	20' RADIUS, 12 CRT POSTS
CTH J - USH 63	791+19'USH 10'	795+31'USH 10'	RT	--	312.5	--	2	--	--	--	--
CTH J - USH 63	796+10'USH 10'	804+03'USH 10'	RT	12.5	687.5	--	2	--	--	--	--
CTH J - USH 63	797+07'USH 10'	798+71'USH 10'	LT	--	62.5	--	2	--	--	--	--
1530-02-70 PROJECT TOTALS				**975.0**	**6,887.5**	**431.3**	**69**	**5**	**640**	**0**	
PROJECT TOTALS				**1,487.5**	**6,937.5**	**468.8**	**76**	**6**	**640**	**20**	

MOW STRIPS

LOCATION	STATION - STATION		OFFSET	614.0397 GUARDRAIL MOW STRIP EMULSIFIED ASPHALT (SY)
PROJECT 1530-00-79				
CATEGORY 0010				
760TH ST - 730TH ST	292+40	292+66	RT	23
1530-00-79 PROJECT TOTALS				**23**
PROJECT 1530-02-70				
CATEGORY 0010				
DEXTER ST - CTH QQ	146+19'USH 10'	147+24'USH 10'	RT	50
DEXTER ST - CTH QQ	146+27'USH 10'	147+32'USH 10'	LT	50
DEXTER ST - CTH QQ	147+88'USH 10'	148+56'USH 10'	RT	46
DEXTER ST - CTH QQ	147+96'USH 10'	149+01'USH 10'	LT	50
DEXTER ST - CTH QQ	163+30'USH 10'	167+12'USH 10'	LT	177
DEXTER ST - CTH QQ	165+55'USH 10'	167+92'USH 10'	RT	116
DEXTER ST - CTH QQ	172+20'USH 10'	176+07'USH 10'	LT	207
DEXTER ST - CTH QQ	184+29'USH 10'	189+04'USH 10'	LT	511
DEXTER ST - CTH QQ	185+55'USH 10'	195+81'USH 10'	RT	235
DEXTER ST - CTH QQ	252+12'USH 10'	253+83'USH 10'	RT	85
DEXTER ST - CTH QQ	252+15'USH 10'	253+83'USH 10'	LT	81
CTH QQ - 104TH ST	374+38'USH 10'	377+94'USH 10'	RT	164
CTH QQ - 104TH ST	375+27'USH 10'	376+96'USH 10'	LT	83
CTH QQ - 104TH ST	414+58'USH 10'	421+40'USH 10'	RT	310
CTH QQ - 104TH ST	419+09'USH 10'	422+40'USH 10'	LT	155
CTH QQ - 104TH ST	428+53'USH 10'	433+95'USH 10'	LT	259
CTH QQ - 104TH ST	428+57'USH 10'	433+88'USH 10'	RT	244
CTH QQ - 104TH ST	434+09'USH 10'	434+81'USH 10'	RT	36
CTH QQ - 104TH ST	434+22'USH 10'	434+81'USH 10'	LT	42
104TH ST - CTH E	436+01'USH 10'	437+52'USH 10'	LT	69
104TH ST - CTH E	436+01'USH 10'	437+52'USH 10'	RT	69
104TH ST - CTH E	433+49'USH 10'	445+04'USH 10'	LT	69
104TH ST - CTH E	444+27'USH 10'	445+04'USH 10'	RT	36
104TH ST - CTH E	445+72'USH 10'	447+27'USH 10'	LT	69
104TH ST - CTH E	445+72'USH 10'	447+27'USH 10'	RT	69
104TH ST - CTH E	475+47'USH 10'	477+16'USH 10'	LT	83
104TH ST - CTH E	475+49'USH 10'	477+43'USH 10'	RT	94
CTH E - CTH O	529+19'USH 10'	533+97'USH 10'	RT	223
CTH E - CTH O	530+40'USH 10'	535+53'USH 10'	LT	232
CTH E - CTH O	545+61'USH 10'	547+42'USH 10'	LT	88
CTH E - CTH O	545+74'USH 10'	547+42'USH 10'	RT	83
CTH E - CTH O	590+98'USH 10'	593+29'USH 10'	LT	110
CTH E - CTH O	591+01'USH 10'	593+32'USH 10'	RT	110
CTH E - CTH O	639+90'USH 10'	640+95'USH 10'	RT	50
CTH E - CTH O	640+11'USH 10'	641+16'USH 10'	LT	50
CTH O - CTH J	642+15'USH 10'	643+08'USH 10'	RT	44
CTH O - CTH J	642+35'USH 10'	643+39'USH 10'	LT	51
CTH O - CTH J	646+63'USH 10'	649+39'USH 10'	RT	135
CTH O - CTH J	708+14'USH 10'	709+33'USH 10'	LT	87
CTH O - CTH J	708+42'USH 10'	709+98'USH 10'	RT	77
CTH J - USH 63	759+80'USH 10'	761+24'USH 10'	LT	72
CTH J - USH 63	759+94'USH 10'	761+32'USH 10'	RT	77
CTH J - USH 63	791+19'USH 10'	795+31'USH 10'	RT	196
CTH J - USH 63	796+10'USH 10'	804+03'USH 10'	RT	368
CTH J - USH 63	797+07'USH 10'	798+71'USH 10'	LT	81
1530-02-70 PROJECT TOTALS				**5,593**
PROJECT TOTALS				**5,616**

RIPRAP

LOCATION	STATION	606.0200 RIPRAP MEDIUM (CY)	645.0120 GEOTEXTILE FABRIC TYPE HR (SY)
PROJECT 1530-00-79			
CATEGORY 0010			
760TH ST - 730TH ST	291+73	16	78
1530-00-79 PROJECT TOTALS		**16**	**78**
PROJECT 1530-02-70			
CATEGORY 0010			
DEXTER ST - CTH QQ	114+69'USH 10'	28	75
DEXTER ST - CTH QQ	148+34'USH 10'	3	6
DEXTER ST - CTH QQ	148+42'USH 10'	3	6
DEXTER ST - CTH QQ	217+07'USH 10'	6	20
DEXTER ST - CTH QQ	275+70'USH 10'	6	20
DEXTER ST - CTH QQ	297+08'USH 10'	9	27
CTH QQ - 104TH ST	400+20'USH 10'	6	20
1040TH ST - CTH E	436+43'USH 10'	3	6
1040TH ST - CTH E	436+43'USH 10'	3	6
1040TH ST - CTH E	444+58'USH 10'	3	6
1040TH ST - CTH E	444+58'USH 10'	3	6
1040TH ST - CTH E	449+52'USH 10'	11	33
CTH O - CTH J	642+61'USH 10'	3	6
CTH O - CTH J	642+80'USH 10'	3	6
1530-02-70 PROJECT TOTALS		**90**	**243**
PROJECT TOTALS		**106**	**321**

FENCE

LOCATION	STATION - STATION	O/S	616.0100 FENCE WOVEN WIRE 4-FT (LF)	616.0600.S FENCE TEMPORARY (LF)
PROJECT 1530-00-79				
CATEGORY 0010				
USH 63 - 760TH ST	248+30 248+82	RT	50	--
UNDISTRIBUTED			10	60
1530-00-79 PROJECT TOTALS			**60**	**60**
PROJECT 1530-02-70				
CATEGORY 0010				
104TH ST - CTH E	429+09'USH 10' 433+92'USH 10'	RT	495	--
104TH ST - CTH E	434+10'USH 10' 435+03'USH 10'	RT	121	--
104TH ST - CTH E	434+91'USH 10' 435+05'USH 10'	LT	60	--
104TH ST - CTH E	435+79'USH 10' 436+44'USH 10'	LT	70	--
104TH ST - CTH E	435+79'USH 10' 438+60'USH 10'	RT	308	--
104TH ST - CTH E	444+99'USH 10' 445+22'USH 10'	LT	24	--
104TH ST - CTH E	445+54'USH 10' 445+77'USH 10'	LT	24	--
UNDISTRIBUTED			58	1,160
1530-05-72 PROJECT TOTALS			**1,160**	**1,160**
PROJECT TOTALS			**1,220**	**1,220**

FENCE SAFETY

LOCATION	STATION - STATION	616.0700.S (LF)
PROJECT 1530-00-79		
CATEGORY 0010		
PROJECT	UNDISTRIBUTED	500
1530-00-79 PROJECT TOTALS		**500**
PROJECT 1530-02-70		
CATEGORY 0010		
PROJECT	UNDISTRIBUTED	1,000
1530-02-70 PROJECT TOTALS		**1,000**
PROJECT TOTALS		**1,500**

WATER

TASK	624.0100 WATER (MGAL)
PROJECT 1530-00-79	
CATEGORY 0010	
DUST CONTROL	10
COMPACTION	120
1530-00-79 PROJECT TOTALS	**130**
PROJECT 1530-02-70	
CATEGORY 0010	
DUST CONTROL	10
COMPACTION	330
1530-02-70 PROJECT TOTALS	**340**
PROJECT 1530-02-80	
CATEGORY 0010	
DUST CONTROL	20
COMPACTION	90
1530-02-80 PROJECT TOTALS	**110**
PROJECT TOTALS	**580**

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EROSION CONTROL

LOCATION	STATION - STATION		628.1504 SILT FENCE (LF)	628.1520 SILT FENCE MAINTENANCE (LF)	628.2004 EROSION MAT CLASS I TYPE B (SY)	628.2008 EROSION MAT URBAN CLASS I TYPE B (SY)	628.2037 EROSION MAT CLASS III TYPE C (SY)	628.7504 TEMPORARY DITCH CHECKS (LF)	628.7555 CULVERT PIPE CHECKS (EACH)	628.7560 TRACKING PADS (EACH)
PROJECT 1530-00-79										
CATEGORY 0010										
USH 63 - 760TH ST	246+50	250+37	--	--	--	1,304	--	132	--	2
760TH ST - 730TH ST	289+37	292+66	224	672	--	1,497	--	72	14	2
UNDISTRIBUTED			76	178	--	699	--	51	6	1
1530-00-79 PROJECT TOTALS			**300**	**850**	**0**	**3,500**	**0**	**255**	**20**	**5**
PROJECT 1530-02-70										
CATEGORY 0010										
STH 29 - DEXTER ST	82+45'USH 10'	106+12'USH 10'	--	--	--	--	--	--	--	--
DEXTER ST - CTH QQ	106+13'USH 10'	305+00'USH 10'	4,177	12,531	2,954	831	2,501	280	65	15
CTH QQ - 1040TH ST	305+00'USH 10'	435+00'USH 10'	1,399	4,197	1,404	--	4,298	150	21	7
1040TH ST - CTH E	435+00'USH 10'	478+50'USH 10'	2,904	8,712	1,054	2,976	96	200	18	6
CTH E - CTH O	478+50'USH 10'	638+70'USH 10'	2,337	7,011	1,204	497	1,233	170	42	6
CTH O - CTH J	638+70'USH 10'	720+75'USH 10'	1,362	4,086	577	416	258	100	18	7
CTH J - USH 63	720+75'USH 10	811+81'USH 10	1,822	5,466	260	175	2,365	130	81	5
UNDISTRIBUTED			3,499	10,497	1,946	1,254	2,749	260	65	4
1530-02-70 PROJECT TOTALS			**17,500**	**52,500**	**9,400**	**6,150**	**13,500**	**1,290**	**310**	**50**
PROJECT TOTALS			**17,800**	**53,350**	**9,400**	**9,649**	**13,500**	**1,545**	**330**	**55**

LANDSCAPING

LOCATION	STATION - STATION		625.0100 TOPSOIL (SY)	625.0500 SALVAGED TOPSOIL (SY)	627.0200 MULCHING (SY)	628.6505 SOIL STABILIZER TYPE A (ACRE)	629.0210 FERTILIZER TYPE B (CWT)	630.0130 SEEDING MIXTURE NO. 30 (LB)	630.0200 SEEDING TEMPORARY (LB)	630.0300 SEEDING BORROW PIT (LB)	630.0500 SEED WATER (MGAL)
PROJECT 1530-00-79											
CATEGORY 0010											
USH 63 - 760TH ST	246+50	250+37	--	1,304	--	--	0.9	24	36	--	59
760TH ST - 730TH ST	289+37	292+66	--	1,497	--	--	1.0	27	41	--	68
UNDISTRIBUTED			180	699	180	--	0.6	14	23	--	33
1530-00-79 PROJECT TOTALS			**180**	**3,500**	**180**	**0.0**	**2.5**	**65**	**100**	**0**	**160**
PROJECT 1530-02-70											
CATEGORY 0010											
STH 29 - DEXTER ST	82+45'USH 10'	106+12'USH 10'	--	--	--	--	--	--	--	--	--
DEXTER ST - CTH QQ	106+13'USH 10'	305+00'USH 10'	--	6,307	--	0.5	4.0	114	171	--	284
CTH QQ - 1040TH ST	305+00'USH 10'	435+00'USH 10'	--	2,447	--	0.8	1.6	45	68	--	110
1040TH ST - CTH E	435+00'USH 10'	478+50'USH 10'	--	7,356	--	0.1	4.7	133	200	--	331
CTH E - CTH O	478+50'USH 10'	640+78'USH 10'	--	2,935	--	0.3	1.9	53	80	--	132
CTH O - CTH J	642+51'USH 10'	720+75'USH 10'	--	1,253	--	0.1	0.8	23	35	--	57
CTH J - USH 63	720+75'USH 10	811+81'USH 10	--	2,983	--	0.3	1.9	54	81	--	134
UNDISTRIBUTED			1,460	5,919	1,460	0.4	3.8	108	165	10	262
1530-02-70 PROJECT TOTALS			**1,460**	**29,200**	**1,460**	**2.5**	**18.7**	**530**	**800**	**10**	**1,310**
PROJECT TOTALS			**1,640**	**32,700**	**1,640**	**2.5**	**21.2**	**595**	**900**	**10**	**1,470**

MOVING SIGNS

LOCATION	638.2102 MOVING SIGNS TYPE II (EACH)	638.4000 MOVING SMALL SIGN SUPPORTS (EACH)
PROJECT 1530-00-79 CATEGORY 0010		
UNDISTRIBUTED	1	1
1530-00-79 PROJECT TOTALS	**1**	**1**
PROJECT 1530-02-70 CATEGORY 0010		
UNDISTRIBUTED	37	35
1530-02-70 PROJECT TOTALS	**37**	**35**
PROJECT TOTALS	**38**	**36**

MOBILIZATIONS EROSION CONTROL

LOCATION	628.1905 MOBILIZATIONS EROSION CONTROL (EACH)	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL (EACH)
PROJECT 1530-00-79 CATEGORY 0010		
PROJECT	12	6
1530-00-79 PROJECT TOTALS	**12**	**6**
PROJECT 1530-02-70 CATEGORY 0010		
PROJECT	12	6
1530-02-70 PROJECT TOTALS	**12**	**6**
PROJECT TOTALS	**24**	**12**

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REMOVING SIGNS

LOCATION	STATION	SIGN CODE	SIGN SIZE W X H IN	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	REMARKS
PROJECT 1530-00-79 CATEGORY 0010						
USH 63 - 760TH ST	248+31	OM3-L	12 X 36	1	1	OBJECT MARKER TYPE 3
USH 63 - 760TH ST	248+31	OM3-R	12 X 36	1	1	OBJECT MARKER TYPE 3
USH 63 - 760TH ST	248+76	OM3-L	12 X 36	1	1	OBJECT MARKER TYPE 3
USH 63 - 760TH ST	248+76	OM3-R	12 X 36	1	1	OBJECT MARKER TYPE 3
760TH ST - 730TH ST	291+23	OM3-L	12 X 36	1	1	OBJECT MARKER TYPE 3
760TH ST - 730TH ST	291+23	OM3-R	12 X 36	1	1	OBJECT MARKER TYPE 3
760TH ST - 730TH ST	291+46	OM3-L	12 X 36	1	1	OBJECT MARKER TYPE 3
760TH ST - 730TH ST	291+52	OM3-R	12 X 36	1	1	OBJECT MARKER TYPE 3
1530-00-79 PROJECT TOTALS				**8**	**8**	
PROJECT 1530-02-70 CATEGORY 0010						
DEXTER ST - CTH QQ	147+00'USH 10'	OM3-L	12 X 36	1	1	OBJECT MARKER TYPE 3
DEXTER ST - CTH QQ	147+00'USH 10'	OM3-R	12 X 36	1	1	OBJECT MARKER TYPE 3
DEXTER ST - CTH QQ	148+00'USH 10'	OM3-L	12 X 36	1	1	OBJECT MARKER TYPE 3
DEXTER ST - CTH QQ	148+00'USH 10'	OM3-R	12 X 36	1	1	OBJECT MARKER TYPE 3
CTH O - CTH J	640+67'USH 10'	OM3-L	12 X 36	1	1	OBJECT MARKER TYPE 3
CTH O - CTH J	640+67'USH 10'	OM3-R	12 X 36	1	1	OBJECT MARKER TYPE 3
CTH O - CTH J	642+52'USH 10'	OM3-L	12 X 36	1	1	OBJECT MARKER TYPE 3
CTH O - CTH J	642+63'USH 10'	OM3-R	12 X 36	1	1	OBJECT MARKER TYPE 3
1530-02-70 PROJECT TOTALS				**8**	**8**	
PROJECT TOTALS				**16**	**16**	

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TRAFFIC CONTROL

LOCATION	DAYS	643.0300 TRAFFIC CONTROL DRUMS (DAY)	643.0420 TRAFFIC CONTROL BARRICADES TYPE III (DAY)	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A (DAY)	643.0900 TRAFFIC CONTROL SIGNS (DAY)	643.1050 TRAFFIC CONTROL SIGNS PCMS (DAY)
PROJECT 1530-00-79						
CATEGORY 0010						
USH 10	136	--	--	--	1,632	--
CLOSURES	120	--	2,160	4,320	1,920	--
DETOUR	120	--	600	720	47,400	14
UNDISTRIBUTED	--	1,360	280	510	5,148	--
1530-00-79 PROJECT TOTALS		**1,360**	**3,040**	**5,550**	**56,100**	**14**
PROJECT 1530-02-70						
CATEGORY 0010						
USH 10	194	141,600	--	--	27,160	--
CLOSURES	160	--	2,880	5,760	2,560	--
CULVERT REPLACEMENTS	50	--	900	1,800	800	--
APPROACH SLAB REPLACEMENTS	30	--	540	1,080	480	--
CONCRETE PAVEMENT REPAIRS	160	--	2,880	5,760	2,560	--
DETOUR	40	--	160	160	10,880	14
UNDISTRIBUTED	--	14,100	740	1,540	4,460	--
1530-02-70 PROJECT TOTALS		**155,700**	**8,100**	**16,100**	**48,900**	**14**
PROJECT TOTALS		**157,060**	**11,140**	**21,650**	**105,000**	**28**

FIXED MESSAGE SIGNS

LOCATION	CODE	W (IN)		H (IN)	MESSAGE	643.1000 TRAFFIC CONTROL SIGNS FIXED MESSAGE (SF)
PROJECT 1530-00-79						
CATEGORY 0010						
PRE-WARNING	G20-57	72	X	36	HWY 10 ROAD WORK BEGINS XXX-XX	18
PRE-WARNING	G20-57	72	X	36	HWY 10 ROAD WORK BEGINS XXX-XX	18
DETOUR	--	90	X	21	RED WING W/ LEFT ARROW	14
DETOUR	--	108	X	21	SPRING VALLEY W/ LEFT ARROW	16
DETOUR	--	84	X	21	ELLSWORTH W/ RIGHT ARROW	13
1530-00-79 PROJECT TOTALS						**79**
PROJECT 1530-02-70						
CATEGORY 0010						
PRE-WARNING	G20-57	72	X	36	HWY 10 ROAD WORK BEGINS XXX-XX	18
PRE-WARNING	G20-57	72	X	36	HWY 10 ROAD WORK BEGINS XXX-XX	18
DETOUR	--	108	X	21	SPRING VALLEY W/ LEFT ARROW	16
DETOUR	--	78	X	21	PRESCOTT W/ LEFT ARROW	12
1530-02-70 PROJECT TOTALS						**64**
PROJECT TOTALS						**143**

TRAFFIC CONTROL - COVERING SIGNS

LOCATION / STAGE	643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II (EA)	NOTES
PROJECT 1530-00-79		
CATEGORY 0010		
DETOUR	26	1 CYCLE
UNDISTRIBUTED	9	--
1530-00-79 PROJECT TOTALS	**35**	
PROJECT 1530-02-70		
CATEGORY 0010		
DETOUR	12	1 CYCLE
UNDISTRIBUTED	3	--
1530-02-70 PROJECT TOTALS	**15**	
PROJECT TOTALS	**50**	

TEMPORARY PAVEMENT MARKING

LOCATION	STATION - STATION		643.3165 TEMPORARY MARKING LINE PAINT 6-INCH (YELLOW) (LF)	643.3165 TEMPORARY MARKING LINE PAINT 6-INCH (WHITE) (LF)	643.3170 TEMPORARY MARKING LINE EPOXY 6-INCH (YELLOW) (LF)	643.3265 TEMPORARY MARKING LINE PAINT 10-INCH (WHITE) (LF)	643.3805 TEMPORARY MARKING STOP LINE PAINT 18-INCH (WHITE) (LF)	NOTE
PROJECT 1530-00-79								
CATEGORY 0010								
USH 63 - 760TH ST	246+50	250+37	--	--	780	--	--	FINAL HMA LAYER PRIOR TO RUMBLES
760TH ST - 730TH ST	289+37	292+66	--	--	660	--	--	FINAL HMA LAYER PRIOR TO RUMBLES
UNDISTRIBUTED			--	--	70	--	--	
1530-00-79 PROJECT TOTALS			**0**	**0**	**1,510**	**0**	**0**	
			0					
PROJECT 1530-02-70								
CATEGORY 0010								
STH 29 - DEXTER ST	82+45'USH 10'	106+12'USH 10'	4,630	4,460	--	1,520	72	MILLED SURFACE
STH 29 - DEXTER ST	82+45'USH 10'	106+12'USH 10'	4,630	4,460	--	1,520	72	LOWER HMA LAYER
STH 29 - DEXTER ST	82+45'USH 10'	106+12'USH 10'	--	--	4,630	--	--	FINAL HMA LAYER PRIOR TO RUMBLES
DEXTER ST - CTH QQ	106+13'USH 10'	305+00'USH 10'	26,980	39,159	--	190	24	MILLED SURFACE
DEXTER ST - CTH QQ	106+13'USH 10'	305+00'USH 10'	26,980	39,159	--	190	24	LOWER HMA LAYER
DEXTER ST - CTH QQ	106+13'USH 10'	305+00'USH 10'	--	--	26,980	--	--	FINAL HMA LAYER PRIOR TO RUMBLES
CTH QQ - 104TH ST	305+00'USH 10'	435+00'USH 10'	16,040	25,330	--	240	35	MILLED SURFACE
CTH QQ - 104TH ST	305+00'USH 10'	435+00'USH 10'	16,040	25,330	--	240	35	LOWER HMA LAYER
CTH QQ - 104TH ST	305+00'USH 10'	435+00'USH 10'	--	--	16,040	--	--	FINAL HMA LAYER PRIOR TO RUMBLES
1040TH ST - CTH E	435+00'USH 10'	478+50'USH 10'	6,680	8,366	--	100	39	MILLED SURFACE
1040TH ST - CTH E	435+00'USH 10'	478+50'USH 10'	6,680	8,366	--	100	39	LOWER HMA LAYER
1040TH ST - CTH E	435+00'USH 10'	478+50'USH 10'	--	--	6,680	--	--	FINAL HMA LAYER PRIOR TO RUMBLES
CTH E - CTH O	478+50'USH 10'	638+70'USH 10'	21,315	30,244	--	150	38	MILLED SURFACE
CTH E - CTH O	478+50'USH 10'	638+70'USH 10'	21,315	30,244	--	150	38	LOWER HMA LAYER
CTH E - CTH O	478+50'USH 10'	638+70'USH 10'	--	--	19,890	--	--	FINAL HMA LAYER PRIOR TO RUMBLES
CTH O - CTH J	638+70'USH 10'	720+75'USH 10'	12,030	15,486	--	--	--	MILLED SURFACE
CTH O - CTH J	638+70'USH 10'	720+75'USH 10'	12,030	15,486	--	--	--	LOWER HMA LAYER
CTH O - CTH J	638+70'USH 10'	720+75'USH 10'	--	--	12,030	--	--	FINAL HMA LAYER PRIOR TO RUMBLES
CTH J - USH 63	720+75'USH 10	811+81'USH 10	27,360	17,925	--	--	--	MILLED SURFACE
CTH J - USH 63	720+75'USH 10	811+81'USH 10	27,360	17,925	--	--	--	LOWER HMA LAYER
CTH J - USH 63	720+75'USH 10	811+81'USH 10	--	--	27,360	--	--	FINAL HMA LAYER PRIOR TO RUMBLES
UNDISTRIBUTED			11,530	14,160	5,690	220	24	
1530-02-70 PROJECT TOTALS			**241,600**	**296,100**	**119,300**	**4,620**	**440**	
			537,700					
PROJECT TOTALS			**537,700**		**120,810**	**4,620**	**440**	

PAVEMENT MARKING

LOCATION	STATION - STATION		646.2040 MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW) (LF)	646.2040 MARKING LINE GROOVED WET REF EPOXY 6-INCH (DASHED YELLOW) (LF)	646.2040 MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE) (LF)	646.2040 MARKING LINE GROOVED WET REF EPOXY 6-INCH (DASHED WHITE) (LF)	646.4040 MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE) (LF)	646.5020 MARKING ARROW EPOXY (EA)	646.5120 MARKING WORD EPOXY (EA)	646.6120 MARKING STOP LINE EPOXY 18-INCH (LF)	646.7120 MARKING DIAGONAL EPOXY 12-INCH (YELLOW) (LF)	646.8120 MARKING CURB EPOXY (LF)	646.8220 MARKING ISLAND NOSE EPOXY (EA)	646.6466 COLD WEATHER MARKING EPOXY 6-INCH WHITE (LF)	646.6466 COLD WEATHER MARKING EPOXY 6-INCH YELLOW (LF)	646.6470 COLD WEATHER MARKING EPOXY 10-INCH (LF)	646.9000 MARKING REMOVAL LINE 4-INCH (LF)	646.9100 MARKING REMOVAL LINE 8-INCH (LF)
PROJECT 1530-00-79																		
CATEGORY 0010																		
USH 63 - 760TH ST	246+50	250+37	780	--	780	--	--	--	--	--	--	--	--	--	--	--	--	--
760TH ST - 730TH ST	289+37	292+66	660	--	660	--	--	--	--	--	--	--	--	--	--	--	--	--
UNDISTRIBUTED			70	--	70	--	--	--	--	--	--	--	--	--	--	--	--	--
1530-00-79 PROJECT TOTALS			**1,510**	**0**	**1,510**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
				3,020										**0**				
PROJECT 1530-02-70																		
CATEGORY 0010																		
STH 29 - DEXTER ST	82+45'USH 10'	106+12'USH 10'	4,630	--	4,460	--	1,520	8	4	72	610	95	6	4,460	4,630	1,520	--	--
DEXTER ST - CTH QQ	106+13'USH 10'	305+00'USH 10'	24,080	2,900	39,130	29	190	2	1	24	--	--	--	39,159	26,980	190	--	--
CTH QQ - 104TH ST	305+00'USH 10'	435+00'USH 10'	13,500	2,540	25,330	--	240	2	1	35	--	--	--	25,330	16,040	240	--	--
104TH ST - CTH E	435+00'USH 10'	478+50'USH 10'	6,150	530	8,290	76	100	--	--	39	--	35	2	8,366	6,680	100	--	--
CTH E - CTH O	478+50'USH 10'	638+70'USH 10'	20,490	2,250	31,920	94	150	--	--	38	--	--	--	32,014	22,740	150	3,200	65
CTH O - CTH J	638+70'USH 10'	720+75'USH 10'	10,810	1,220	15,290	196	--	--	--	--	--	--	--	15,486	12,030	--	--	--
CTH J - USH 63	720+75'USH 10	811+81'USH 10	26,040	1,320	17,880	45	--	--	--	--	--	--	--	17,925	27,360	--	--	--
UNDISTRIBUTED			5,300	540	7,200	60	110	--	--	12	30	10	--	7,260	5,840	110	--	--
1530-02-70 PROJECT TOTALS			**111,000**	**11,300**	**149,500**	**500**	**2,310**	**12**	**6**	**220**	**640**	**140**	**8**	**150,000**	**122,300**	**2,310**	**3,200**	**65**
				272,300										**272,300**				
PROJECT TOTALS				**275,320**			**2,310**	**12**	**6**	**220**	**640**	**140**	**8**	**272,300**		**2,310**	**3,200**	**65**

3

CONSTRUCTION STAKING ITEMS

LOCATION	STATION - STATION		650.4500 SUBGRADE (LF)	650.5000 BASE (LF)	650.5500 CURB GUTTER AND CURB & GUTTER (LF)	650.6000 PIPE CULVERTS (EACH)	650.7000 CONCRETE PAVEMENT (LF)	650.8000 RESURFACING REFERENCE (LF)	650.9920 SLOPE STAKES (LF)
			CONSTRUCTION STAKING						
PROJECT 1530-00-79									
CATEGORY 0010									
USH 63 - 760TH ST	246+50	250+37	387	387	--	--	--	--	387
760TH ST - 730TH ST	289+37	292+66	447	447	--	2	--	--	447
1530-00-79 PROJECT TOTALS			**834**	**834**	**0**	**2**	**0**	**0**	**834**
PROJECT 1530-02-70									
CATEGORY 0010									
STH 29 - DEXTER ST	82+45'USH 10'	106+12'USH 10'	--	--	--	--	--	2,373	--
DEXTER ST - CTH QQ	106+13'USH 10'	305+00'USH 10'	424	3,872	81	4	40	19,888	3,872
CTH QQ - 104TH ST	305+00'USH 10'	435+00'USH 10'	106	2,422	--	1	--	12,000	2,422
104TH ST - CTH E	435+00'USH 10'	478+50'USH 10'	597	1,528	160	1	60	4,753	1,528
CTH E - CTH O	478+50'USH 10'	638+70'USH 10'	--	1,472	--	--	--	14,968	1,472
CTH O - CTH J	638+70'USH 10'	720+75'USH 10'	--	1,240	80	--	50	8,205	1,240
CTH J - USH 63	720+75'USH 10	811+81'USH 10	--	1,967	--	--		9,106	1,967
1530-02-70 PROJECT TOTALS			**1,127**	**12,501**	**321**	**6**	**150**	**71,293**	**12,501**
PROJECT TOTALS			**1,961**	**13,335**	**321**	**8**	**150**	**71,293**	**13,335**

CONSTRUCTION STAKING PROJECT

LOCATION	650.6501.01 STRUCTURE LAYOUT C-47-60 (EACH)	650.6501.02 STRUCTURE LAYOUT C-47-61 (EACH)	650.6501.03 STRUCTURE LAYOUT B-47-228 (EACH)	650.6501.04 STRUCTURE LAYOUT B-47-229 (EACH)	650.9911.01 SUPPLEMENTAL CONTROL 1530-00-79 (EACH)	650.9911.02 SUPPLEMENTAL CONTROL 1530-02-70 (EACH)
	CONSTRUCTION STAKING					
PROJECT 1530-00-79						
CATEGORY 0010						
PROJECT	1	1	--	--	1	--
1530-00-79 PROJECT TOTALS	**1**	**1**	**0**	**0**	**1**	**0**
PROJECT 1530-02-70						
CATEGORY 0010						
PROJECT	--	--	1	1	--	1
1530-02-70 PROJECT TOTALS	**0**	**0**	**1**	**1**	**0**	**1**
PROJECT TOTALS	**1**	**1**	**1**	**1**	**1**	**1**

SAWING

	LOCATION	STATION	STATION	690.0150 SAWING ASPHALT (LF)	690.0250 SAWING CONCRETE (LF)
PROJECT 1530-00-79 CATEGORY 0010					
	USH 63 - 760TH ST	246+50	250+37	28	48
	760TH ST - 730TH ST	289+37	292+66	129	48
		UNDISTRIBUTED		8	4
	1530-00-79 PROJECT TOTALS			**165**	**100**
PROJECT 1530-02-70 CATEGORY 0010					
	STH 29 - DEXTER ST	82+45'USH 10'	106+12'USH 10'	145	--
	DEXTER ST - CTH QQ	106+13'USH 10'	305+00'USH 10'	103	263
	CTH QQ - 104TH ST	305+00'USH 10'	435+00'USH 10'	102	84
	1040TH ST - CTH E	435+00'USH 10'	478+50'USH 10'	149	72
	CTH E - CTH O	478+50'USH 10'	638+70'USH 10'	113	--
	CTH O - CTH J	638+70'USH 10'	720+75'USH 10'	106	0
	CTH J - USH 63	720+75'USH 10	811+81'USH 10	202	--
		UNDISTRIBUTED		50	30
	1530-02-70 PROJECT TOTALS			**970**	**450**
	PROJECT TOTALS			**1,135**	**550**

INSTALLING AND MAINTAINING BIRD DETERRENT SYSTEM

	LOCATION	EXISTING STRUCTURE	999.2000.S.01 248+59 (EACH)	999.2000.S.02 291+38 (EACH)	999.2000.S.03 435+41'USH 10' (EACH)	999.2000.S.04 445+38'USH 10' (EACH)
PROJECT 1530-00-79 CATEGORY 0010						
	DEXTER ST - CTH QQ	C-47-0032	1	--	--	--
	DEXTER ST - CTH QQ	C-47-0033	--	1	--	--
	1530-00-79 PROJECT TOTALS		**1**	**1**	**0**	**0**
PROJECT 1530-02-70 CATEGORY 0010						
	1040TH ST - CTH E	C-47-0183	--	--	1	--
	1040TH ST - CTH E	C-47-0950	--	--	--	1
	1530-02-70 PROJECT TOTALS		**0**	**0**	**1**	**1**
	PROJECT TOTALS		**1**	**1**	**1**	**1**

CLEANING DITCH

	LOCATION	CULVERT STATION	O/S	SPV.0090.01 CLEANING DITCH (LF)
PROJECT 1530-02-70 CATEGORY 0010				
	DEXTER ST - CTH QQ	135+35'USH10'	LT & RT	100
	DEXTER ST - CTH QQ	159+00'USH10'	LT & RT	100
	DEXTER ST - CTH QQ	174+70'USH10'	LT & RT	100
	DEXTER ST - CTH QQ	186+95'USH10'	LT & RT	100
	DEXTER ST - CTH QQ	203+15'USH10'	LT & RT	100
	DEXTER ST - CTH QQ	253+00'USH10'	LT & RT	100
	DEXTER ST - CTH QQ	275+75'USH10'	LT & RT	100
	DEXTER ST - CTH QQ	297+05'USH10'	LT & RT	100
	CTH QQ - 104TH ST	333+25'USH10'	LT & RT	100
	CTH QQ - 104TH ST	376+10'USH10'	RT	50
	CTH QQ - 104TH ST	400+15'USH10'	LT & RT	100
	1040TH ST - CTH E	476+50'USH10'	LT & RT	100
	CTH E - CTH O	489+00'USH10'	LT & RT	100
	CTH E - CTH O	495+45'USH10'	LT & RT	100
	CTH E - CTH O	532+85'USH10'	LT	50
	CTH E - CTH O	546+60'USH10'	LT & RT	100
	CTH E - CTH O	591+95'USH10'	LT & RT	100
	CTH O - CTH J	666+45'USH10'	LT & RT	100
	CTH O - CTH J	678+00'USH10'	LT & RT	100
	CTH O - CTH J	709+25'USH10'	LT & RT	100
	CTH O - CTH J	719+00'USH10'	LT & RT	100
	CTH J - USH 63	727+95'USH10'	LT & RT	100
	CTH J - USH 63	760+15'USH10'	LT & RT	100
	CTH J - USH 63	797+95'USH10'	LT & RT	100
	UNDISTRIBUTED			200
	1530-02-70 PROJECT TOTALS			**2,500**

TRANSPORTATION PROJECT PLAT NO: 1530-00-20 - 4.01 AMENDMENT NO: 1 - AMENDS UTILITY PARCEL 101 OF TRANSPORTATION PROJECT PLAT NO: 1530-00-20 - 4.01 RECORDED AS DOCUMENT NUMBER 596022.

THAT PART OF LOT 2, CSM 5-19 (RECORDED IN V. 5, P. 19 AS DOC. 359521) LOCATED IN THE SW 1/4 OF THE SW 1/4 OF SECTION 13 AND PART OF THE NW 1/4 OF THE NW 1/4 OF SECTION 24, ALL LOCATED IN T26N, R18W, TOWN OF TRIMBELLE, PIERCE COUNTY, WISCONSIN.

RELOCATION ORDER: USH 10, PRESCOTT - ELLSWORTH, (SPRING CREEK CULVERTS C-47-0032 AND C-47-0033), PIERCE COUNTY.

TO PROPERLY ESTABLISH, LAY OUT, WIDEN, ENLARGE, EXTEND, CONSTRUCT, RECONSTRUCT, IMPROVE, OR MAINTAIN A PORTION OF THE HIGHWAY DESIGNATED ABOVE, THE STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DEEMS IT NECESSARY TO RELOCATE OR CHANGE SAID HIGHWAY AND ACQUIRE CERTAIN LANDS AND INTERESTS OR RIGHTS IN LANDS FOR THE ABOVE-NAMED PROJECT.

TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SUBSECTIONS 84.02 (3), 84.09, AND 84.30, WISCONSIN STATUTES, THE DEPARTMENT OF TRANSPORTATION HEREBY ORDERS THAT:
1. THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAT IS LAID OUT AND ESTABLISHED TO THE LINES AND WIDTHS AS SO SHOWN FOR THE ABOVE-NAMED PROJECT.
2. THE LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAT ARE REQUIRED BY THE DEPARTMENT FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF THE STATE OF WISCONSIN, PURSUANT TO THE PROVISIONS OF SUBSECTION 84.09 (1) OR (2), WISCONSIN STATUTES.

FOR ADDITIONAL INFORMATION REFER TO THE TITLE SHEET, RECORDED IN THE OFFICE OF THE REGISTER OF DEEDS IN PIERCE COUNTY AS SHEET 2 OF 2 OF DOCUMENT NO. 596022.

NOTES:

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COORDINATE REFERENCE SYSTEM COORDINATES (WISCRS), PIERCE COUNTY, NAD 83(2011) IN U.S.SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

ALL NEW RIGHT-OF-WAY MONUMENTS ARE TYPE 2 (TYPICALLY 3/4" X 24" REBARS) UNLESS OTHERWISE NOTED, AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

FOR CURRENT ACCESS/DRIVEWAY INFORMATION, CONTACT THE PLANNING UNIT OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION OFFICE IN THE NORTHWEST REGION

EXISTING ACCESS CONTROL SHOWN ALONG USH 10 ESTABLISHED FROM PREVIOUS PROJECT T019-I(38).

UTILITY INTERESTS REQUIRED

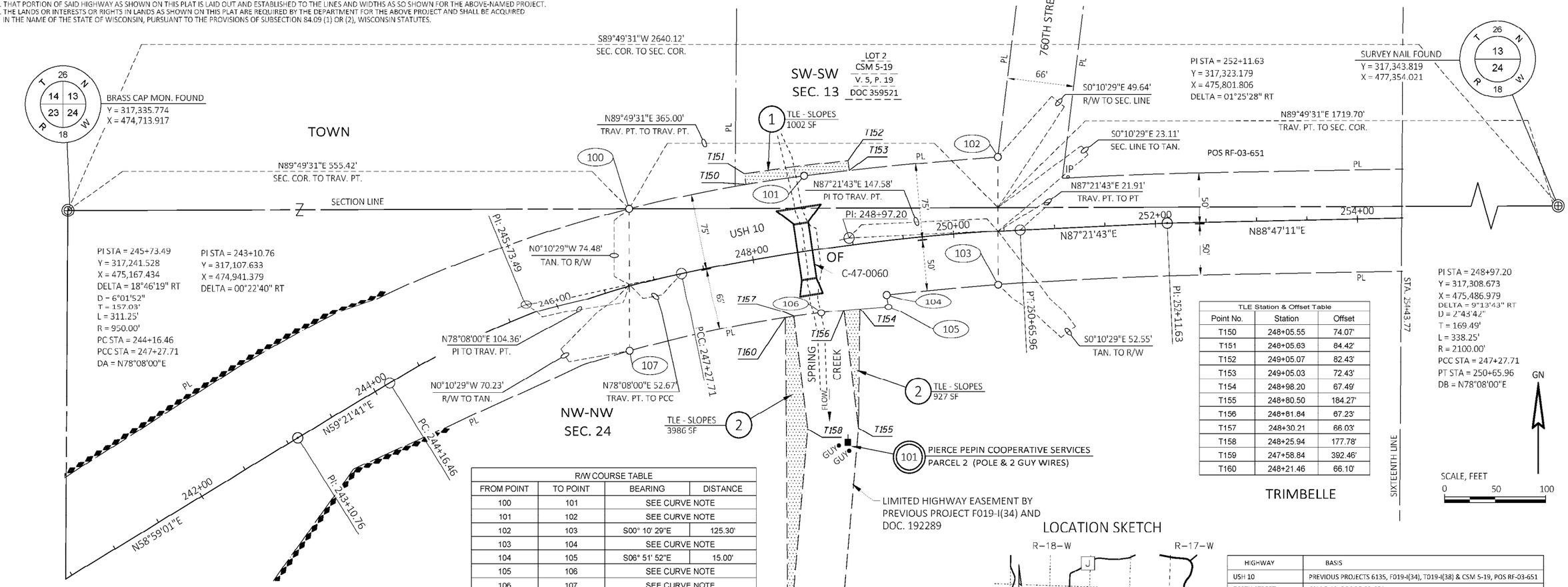
UTILITY NUMBER	UTILITY OWNER(S)	INTEREST REQUIRED
100	XCEL ENERGY	RELEASE OF RIGHTS
101	PIERCE PEPIN COOPERATIVE SERVICES	RELEASE OF RIGHTS

681207
PIERCE COUNTY
REGISTER OF DEEDS
JULIE HINES

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PAGES: 1

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RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER 1530-00-20 - 4.01
AMENDMENT NO. 1



TLE Station & Offset Table		
Point No.	Station	Offset
T150	248+05.55	74.07'
T151	248+05.63	84.42'
T152	249+05.07	82.43'
T153	249+05.03	72.43'
T154	248+98.20	67.49'
T155	248+80.50	184.27'
T156	248+81.84	67.23'
T157	248+30.21	66.03'
T158	248+25.94	177.78'
T159	247+58.84	392.46'
T160	248+21.46	66.10'

R/W COURSE TABLE			
FROM POINT	TO POINT	BEARING	DISTANCE
100	101	SEE CURVE NOTE	
101	102	SEE CURVE NOTE	
102	103	S00° 10' 29"E	125.30'
103	104	SEE CURVE NOTE	
104	105	S06° 51' 52"E	15.00'
105	106	SEE CURVE NOTE	
106	107	SEE CURVE NOTE	
107	100	N00° 10' 29"W	144.71'

R/W Station & Offset Table		
Point No.	Station	Offset
100	246+92.83	73.62'
101	248+61.59	73.21'
102	250+47.81	72.77'
103	250+41.17	52.36'
104	249+27.49	52.81'
105	249+27.61	67.82'
106	248+58.42	66.76'
107	246+55.72	66.24'

EASEMENT TABLE

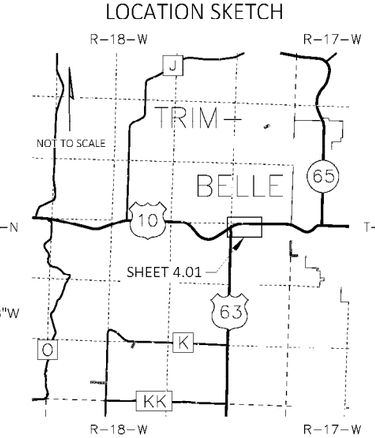
OWNER	RECORDING INFORMATION	LOCATED IN R/W PARCEL NO.
100 XCEL ENERGY	EASEMENT V. S MISC. P. 624, DOC. 151254	1
100 XCEL ENERGY	50' EASEMENT V. 246, P. 450, DOC. 332007 & V. 246, 413, DOC. 331989	2
100 XCEL ENERGY	EASEMENT V. 124, P. 70, DOC. 110602 & V. 16, P. 315, DOC. 225473	2
101 PIERCE PEPIN COOPERATIVE SERVICES	EASEMENT V. B EASEMENTS. P. 487 DOC. 162959	2

SCHEDULE OF LANDS & INTERESTS REQUIRED

OWNERS NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY, AND ARE SUBJECT TO CHANGE PRIOR TO TRANSFER OF LAND INTEREST TO THE WISCONSIN DEPARTMENT OF TRANSPORTATION
ALL AREAS SHOWN IN SQUARE FEET UNLESS OTHERWISE NOTED

PARCEL NUMBER	OWNER(S)	INTEREST REQUIRED	R/W S.F. REQUIRED NEW	EXISTING	TOTAL	TLE S.F.
1	ARIB PROPERTIES, LLC	TLE	----	----	----	1002
2	CHARLENE I. BYSTROM AND JUDY A. STRUSZ	TLE	----	----	----	4913

LOCATION SKETCH



HIGHWAY	BASIS
USH 10	PREVIOUS PROJECTS 6135, F019-I(34), T019-I(38) & CSM 5-19, POS RF-03-651
760TH STREET	CSM 5-19, POS RF-03-651

KL Engineering
[A] Better Experience

I, TIMOTHY M. HELD, PROFESSIONAL LAND SURVEYOR, HEREBY CERTIFY THAT IN FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 84.095 OF THE WISCONSIN STATUTES AND UNDER THE DIRECTION OF THE DEPARTMENT, I HAVE SURVEYED AND MAPPED THIS TRANSPORTATION PROJECT PLAT AND SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.

WISCONSIN TIMOTHY M. HELD S-2591 MADISON, WI LAND SURVEYOR

SIGNATURE: _____ DATE: 03/17/2021
PRINT NAME: TIMOTHY M. HELD
REGISTRATION NUMBER: S-2591

THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR THE DEPARTMENT.

SIGNATURE: _____ DATE: ____/2021
PRINT NAME: DEBRA B. STENSLAND

FILE NAME : G:\WDOTNW\19004-007 (USH 10 CULVERTS)\CIVIL 3D\SHEETSPLAN\040101-RP -4.01- AMEND 1.DWG
APPRAISAL PLAT DATE : 03/17/2021
PLOT DATE : 3/17/2021 11:35 AM
PLOT BY : SCOTT DEMEUSE
PLOT NAME :
PLOT SCALE : 1 IN:100 FT

TRANSPORTATION PROJECT PLAT NO: 1530-00-20 - 4.01

THAT PART OF LOT 2, CSM 5-19 (RECORDED IN V. 5, P. 19 AS DOC. 359521) LOCATED IN THE SW 1/4 OF THE SW 1/4 OF SECTION 13 AND PART OF THE NW 1/4 OF THE NW 1/4 OF SECTION 24, ALL LOCATED IN T26N, R18W, TOWN OF TRIMBELLE, PIERCE COUNTY, WISCONSIN.

RELOCATION ORDER: USH 10, PRESCOTT - ELLSWORTH, (SPRING CREEK CULVERTS C-47-0032 AND C-47-0033), PIERCE COUNTY.

TO PROPERLY ESTABLISH, LAY OUT, WIDEN, ENLARGE, EXTEND, CONSTRUCT, RECONSTRUCT, IMPROVE, OR MAINTAIN A PORTION OF THE HIGHWAY DESIGNATED ABOVE, THE STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DEEMS IT NECESSARY TO RELOCATE OR CHANGE SAID HIGHWAY AND ACQUIRE CERTAIN LANDS AND INTERESTS OR RIGHTS IN LANDS FOR THE ABOVE-NAMED PROJECT.

TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SUBSECTIONS 84.02 (3), 84.09, AND 84.30, WISCONSIN STATUTES, THE DEPARTMENT OF TRANSPORTATION HEREBY ORDERS THAT:
1. THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAT IS LAID OUT AND ESTABLISHED TO THE LINES AND WIDTHS AS SO SHOWN FOR THE ABOVE-NAMED PROJECT.
2. THE LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAT ARE REQUIRED BY THE DEPARTMENT FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF THE STATE OF WISCONSIN, PURSUANT TO THE PROVISIONS OF SUBSECTION 84.09 (1) OR (2), WISCONSIN STATUTES.

FOR ADDITIONAL INFORMATION REFER TO THE TITLE SHEET, RECORDED AS SHEET 2 OF 2.

NOTES:

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COORDINATE REFERENCE SYSTEM COORDINATES (WISCRS), PIERCE COUNTY, NAD 83(2011) IN U.S.SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

ALL NEW RIGHT-OF-WAY MONUMENTS ARE TYPE 2 (TYPICALLY 3/4" X 24" REBARS) UNLESS OTHERWISE NOTED, AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

FOR CURRENT ACCESS/DRIVEWAY INFORMATION, CONTACT THE PLANNING UNIT OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION OFFICE IN THE NORTHWEST REGION

EXISTING ACCESS CONTROL SHOWN ALONG USH 10 ESTABLISHED FROM PREVIOUS PROJECT T019-I(38).

UTILITY INTERESTS REQUIRED

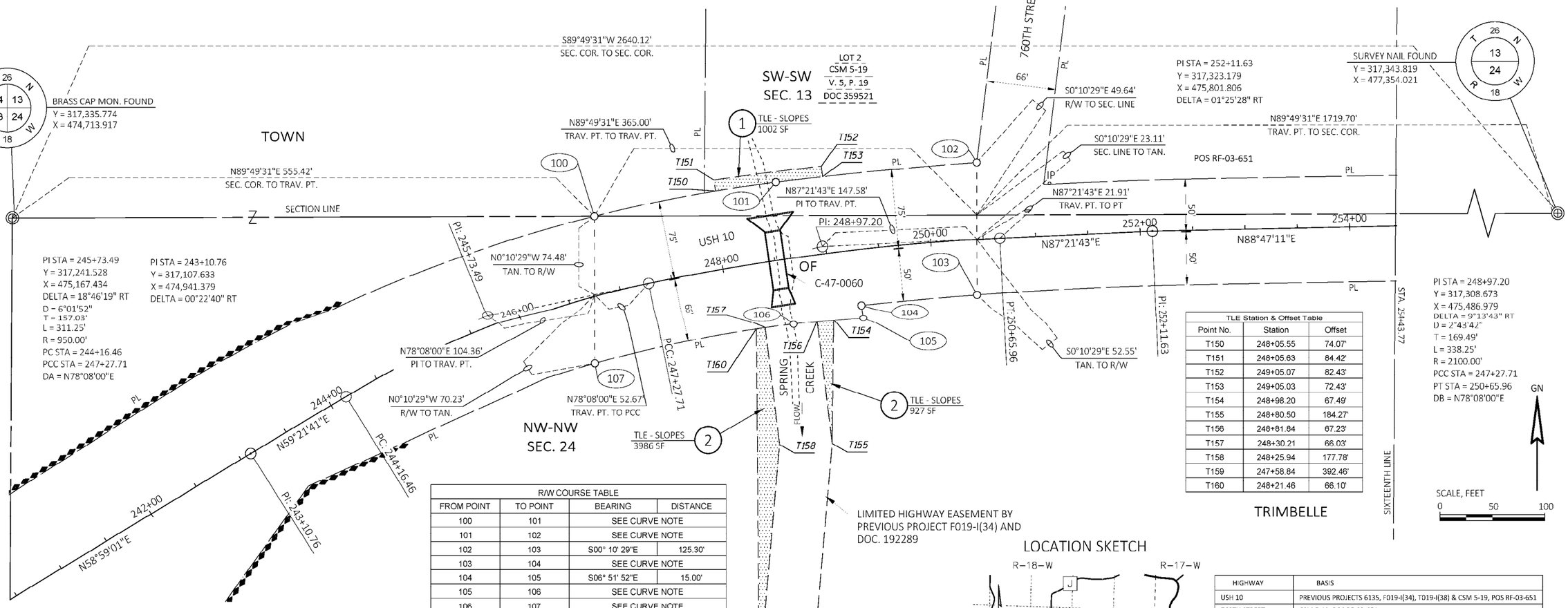
UTILITY NUMBER	UTILITY OWNER(S)	INTEREST REQUIRED
100	XCEL ENERGY	RELEASE OF RIGHTS
101	PIERCE PEPIN COOPERATIVE SERVICES	RELEASE OF RIGHTS

596822
PIERCE COUNTY
REGISTER OF DEEDS
JULIE HINES

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RECORDING FEE: 25.00
PAGES: 2

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RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER 1530-00-20 - 4.01
SHEET 1 OF 2



TLE Station & Offset Table		
Point No.	Station	Offset
T150	248+05.55	74.07'
T151	248+05.63	84.42'
T152	249+05.07	82.43'
T153	249+05.03	72.43'
T154	248+98.20	67.49'
T155	248+80.50	184.27'
T156	248+81.84	67.23'
T157	248+30.21	66.03'
T158	248+25.94	177.78'
T159	247+58.84	392.46'
T160	248+21.46	66.10'

R/W COURSE TABLE			
FROM POINT	TO POINT	BEARING	DISTANCE
100	101	SEE CURVE NOTE	
101	102	SEE CURVE NOTE	
102	103	S00° 10' 29"E	125.30'
103	104	SEE CURVE NOTE	
104	105	S06° 51' 52"E	15.00'
105	106	SEE CURVE NOTE	
106	107	SEE CURVE NOTE	
107	100	N00° 10' 29"W	144.71'

R/W Station & Offset Table		
Point No.	Station	Offset
100	246+92.83	73.62'
101	248+61.59	73.21'
102	250+47.81	72.77'
103	250+41.17	52.36'
104	249+27.49	52.81'
105	249+27.61	67.82'
106	248+58.42	66.76'
107	246+55.72	66.24'

100-101
R=1418.18'
LCH=176.08'
LCB=N79°28'49"E
L=176.19'

101-102
R=3894.83'
LCH=192.63'
LCB=N84°27'23"E
L=192.65'

103-104
R=3769.83'
LCH=110.83'
LCB=S84°54'00"W
L=110.83'

105-106
R=3754.83'
LCH=66.97'
LCB=S83°33'02"W
L=66.98'

106-107
R=1278.18'
LCH=193.39'
LCB=S78°42'03"W
L=193.58'

EASEMENT TABLE

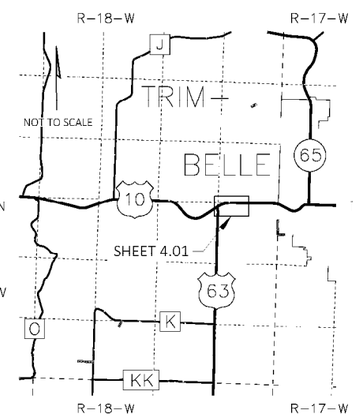
OWNER	RECORDING INFORMATION	LOCATED IN R/W PARCEL NO.
100 XCEL ENERGY	EASEMENT V. S MISC. P. 624, DOC. 151254	1
100 XCEL ENERGY	50' EASEMENT V. 246, P. 450, DOC. 332007 & V. 246, 413, DOC. 331989	2
100 XCEL ENERGY	EASEMENT V. 124, P. 70, DOC. 110602 & V. 16, P. 315, DOC. 225473	2
101 PIERCE PEPIN COOPERATIVE SERVICES	EASEMENT V. B EASEMENTS. P. 487 DOC. 162959	2

SCHEDULE OF LANDS & INTERESTS REQUIRED

OWNERS NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY, AND ARE SUBJECT TO CHANGE PRIOR TO TRANSFER OF LAND INTEREST TO THE WISCONSIN DEPARTMENT OF TRANSPORTATION
ALL AREAS SHOWN IN SQUARE FEET UNLESS OTHERWISE NOTED

PARCEL NUMBER	OWNER(S)	INTEREST REQUIRED	R/W S.F. REQUIRED NEW	EXISTING	TOTAL	TLE S.F.
1	ARIB PROPERTIES, LLC	TLE	----	----	----	1002
2	CHARLENE L. BYSTROM AND JUDY A. STRUSZ	TLE	----	----	----	4913

LOCATION SKETCH



HIGHWAY	BASIS
USH 10	PREVIOUS PROJECTS 6135, F019-I(34), T019-I(38) & CSM 5-19, POS RF-03-651
760TH STREET	CSM 5-19, POS RF-03-651

KL Engineering
[A] Better Experience

I, TIMOTHY M. HELD, PROFESSIONAL LAND SURVEYOR, HEREBY CERTIFY THAT IN FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 84.095 OF THE WISCONSIN STATUTES AND UNDER THE DIRECTION OF THE DEPARTMENT, I HAVE SURVEYED AND MAPPED THIS TRANSPORTATION PROJECT PLAT AND SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.

SIGNATURE: _____ DATE: 09/08/2020
PRINT NAME: TIMOTHY M. HELD
REGISTRATION NUMBER: S-2591

WISCONSIN TIMOTHY M. HELD S-2591 MADISON, WI LAND SURVEYOR

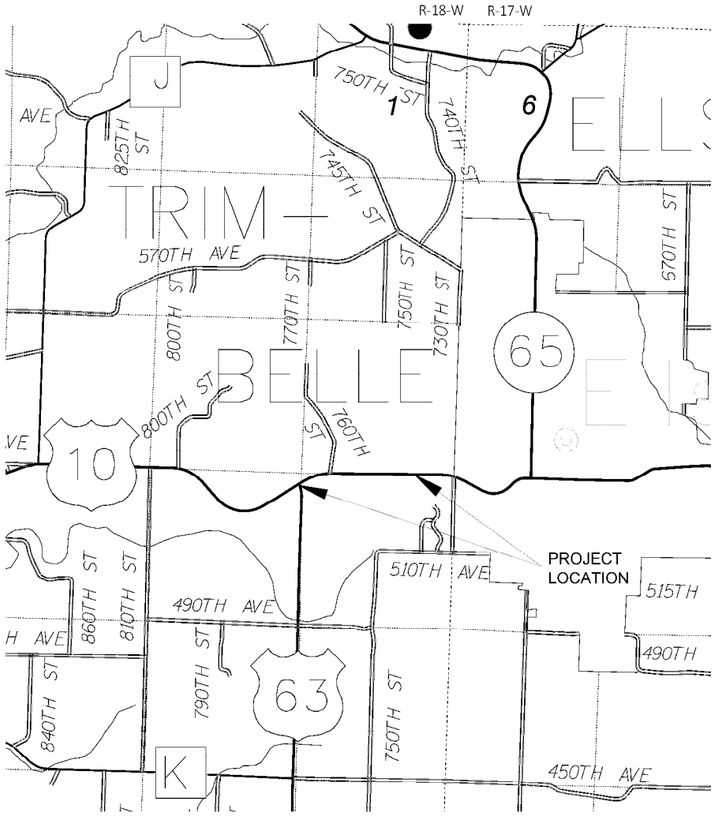
THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR THE DEPARTMENT.

SIGNATURE: _____ PRI 90 /2020
PRINT NAME: DEBRA B. STENSLAND

FILE NAME : G:\WDOTNW\19004-007 (USH 10 CULVERTS)\CIVIL 3D\SHEETSPLAN\040101-RP.DWG
APPRAISAL PLAT DATE : 09/08/2020
PLOT DATE : 9/8/2020 4:55 PM
PLOT BY : TIMOTHY HELD
PLOT NAME :
PLOT SCALE : 1 IN:100 FT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
TRANSPORTATION PROJECT PLAT TITLE SHEET
1530-00-20
PRESCOTT - ELLSWORTH
(SPRING CREEK CULVERTS C-47-0032 AND C-47-0033)
USH 10
PIERCE COUNTY





LAYOUT
SCALE 0 0.5 MI.

THE NOTES,CONVENTIONAL SIGNS, AND ABBREVIATIONS ARE ASSOCIATED WITH EACH TRANSPORTATION PROJECT PLAT FOR PROJECT 1530-00-20

NOTES:

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COORDINATE REFERENCE SYSTEM COORDINATES (WISCRS), PIERCE COUNTY, NAD83 (2011) IN US SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

ALL NEW RIGHT-OF-WAY MONUMENTS WILL BE TYPE 2 (TYPICALLY 3/4"X24" IRON REBARS) UNLESS OTHERWISE NOTED, AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

RIGHT-OF-WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY LANDS REFERENCED TO THE U.S. PUBLIC LAND SURVEY SYSTEM OR OTHER "SURVEYS" OF PUBLIC RECORD.

DIMENSIONING FOR THE NEW RIGHT-OF-WAY IS MEASURED ALONG AND PERPENDICULAR TO NEW REFERENCE LINES.

A TEMPORARY LIMITED EASEMENT (TLE) IS A RIGHT FOR CONSTRUCTION PURPOSES, AS DEFINED HEREIN, INCLUDING THE RIGHT TO OPERATE NECESSARY EQUIPMENT THEREON, THE RIGHT OF INGRESS AND EGRESS, AS LONG AS REQUIRED FOR SUCH PUBLIC PURPOSE, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE, OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM DESIRABLE. ALL (TLEs) ON THIS PLAT EXPIRE AT THE COMPLETION OF THE CONSTRUCTION PROJECT FOR WHICH THIS INSTRUMENT IS GIVEN.

PROPERTY LINES SHOWN ON THIS PLAT ARE DRAWN FROM DATA DERIVED FROM MAPS AND DOCUMENTS OF PUBLIC RECORD AND/OR EXISTING OCCUPATIONAL LINES. THIS PLAT MAY NOT BE A TRUE REPRESENTATION OF EXISTING PROPERTY LINES, EXCLUDING RIGHT-OF-WAY, AND SHOULD NOT BE USED AS A SUBSTITUTE FOR AN ACCURATE FIELD SURVEY.

FOR CURRENT ACCESS/DRIVEWAY INFORMATION, CONTACT THE PLANNING UNIT OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION OFFICE IN THE NORTHWEST REGION.

ALL RIGHT-OF-WAY LINES DEPICTED IN THE NON-ACQUISITION AREAS ARE INTENDED TO RE-ESTABLISH EXISTING RIGHT-OF-WAY LINES AS DETERMINED FROM PREVIOUS PROJECTS, OTHER RECORDED DOCUMENTS, OR FROM CENTERLINE OF EXISTING PAVEMENTS.

PARCEL AND UTILITY IDENTIFICATION NUMBERS MAY NOT POINT TO ALL AREAS OF ACQUISITION, AS NOTED ON THE TPP DETAIL PAGES.

INFORMATION FOR THE BASIS OF EXISTING HIGHWAY RIGHT-OF-WAY POINTS OF REFERENCE AND ACCESS CONTROL ARE LISTED ON THE TPP DETAIL PAGES.

CONVENTIONAL SYMBOLS

SECTION LINE
QUARTER LINE
SIXTEENTH LINE
NEW REFERENCE LINE
NEW R/W LINE
EXISTING R/W OR HE LINE
PROPERTY LINE
LOT, TIE & OTHER MINOR LINES
SLOPE INTERCEPT
CORPORATE LIMITS
UNDERGROUND FACILITY (COMMUNICATIONS, ELECTRIC, ETC)
NEW R/W (FEE OR HE) (HATCHING VARIES BY OWNER)
TEMPORARY LIMITED EASEMENT AREA
EASEMENT AREA (PERMANENT LIMITED OR RESTRICTED DEVELOPMENT)
TRANSMISSION STRUCTURES
BUILDING
TO BE REMOVED
BRIDGE

SECTION CORNER SYMBOL
SECTION CORNER MONUMENT
GEODETIC SURVEY MONUMENT
SIXTEENTH CORNER MONUMENT
SIGN
OFF-PREMISE SIGN
R/W MONUMENT (TO BE SET)
NON-MONUMENTED R/W POINT
FOUND IRON PIN (1-INCH UNLESS NOTED)

	COMPENSABLE	NON-COMPENSABLE
ELECTRIC POLE		
TELEPHONE POLE		
PEDESTAL (LABEL TYPE) (TV, TEL, ELEC, ETC.)		

ACCESS RESTRICTED BY ACQUISITION
NO ACCESS (BY STATUTORY AUTHORITY)
ACCESS RESTRICTED (BY PREVIOUS PROJECT OR CONTROL)
NO ACCESS (NEW HIGHWAY)
PARCEL NUMBER 25
UTILITY NUMBER 40
PARALLEL OFFSETS

CONVENTIONAL ABBREVIATIONS

ACCESS RIGHTS	AR	POINT OF INTERSECTION	PI
ACRES	AC	PROPERTY LINE	PL
AHEAD	AH	RECORDED AS	(100')
ALUMINUM	ALUM	REEL / IMAGE	R/I
AND OTHERS	ET AL	REFERENCE LINE	R/L
BACK	BK	REMAINING	REM
BLOCK	BLK	RESTRICTIVE DEVELOPMENT EASEMENT	RDE
CENTERLINE	C/L	RIGHT	RT
CERTIFIED SURVEY MAP	CSM	RIGHT OF WAY	R/W
CONCRETE	CONC	SECTION	SEC
COUNTY	CO	SEPTIC VENT	SEPV
COUNTY TRUNK HIGHWAY	CTH	SQUARE FEET	SF
DISTANCE	DIST	STATE TRUNK HIGHWAY	STH
CORNER	COR	STATION	STA
DOCUMENT NUMBER	DOC	TELEPHONE PEDESTAL	TP
EASEMENT	EASE	TEMPORARY LIMITED EASEMENT	TLE
EXISTING	EX	TRANSPORTATION PROJECT PLAT	TPP
GAS VALVE	GV	UNITED STATES HIGHWAY	USH
GRID NORTH	GN	VOLUME	V
HIGHWAY EASEMENT	HE		
IDENTIFICATION	ID		
LAND CONTRACT	LC		
LEFT	LT		
MONUMENT	MON		
NATIONAL GEODETIC SURVEY NUMBER	NGS NO		
OUTLOT	OL		
PAGE	P		
POINT OF TANGENCY	PT		
PERMANENT LIMITED EASEMENT	PLE		
POINT OF BEGINNING	POB		
POINT OF CURVATURE	PC		
POINT OF COMPOUND CURVE	PCC		

CURVE DATA

LONG CHORD	LCH
LONG CHORD BEARING	LCB
RADIUS	R
DEGREE OF CURVE	D
CENTRAL ANGLE	Δ/DELTA
LENGTH OF CURVE	L
TANGENT	T
DIRECTION AHEAD	DA
DIRECTION BACK	DB

CONVENTIONAL UTILITY SYMBOLS

W	WATER
G	GAS
T	TELEPHONE
OH	OVERHEAD TRANSMISSION LINES
E	ELECTRIC
TV	CABLE TELEVISION
FO	FIBER OPTIC
SAN	SANITARY SEWER
SS	STORM SEWER

PROJECT NUMBER	1530-00-20 - 4.01
SHEET	2 OF 2
AMENDMENT NO:	PRF - - 91

TRANSPORTATION PROJECT PLAT NO: 1530-00-20 - 4.02

THAT PART OF THE SE 1/4 OF THE SE 1/4 OF SECTION 13 AND PART OF THE NE 1/4 OF THE NE 1/4 OF SECTION 24, ALL LOCATED IN T26N, R18W, TOWN OF TRIMBELLE, PIERCE COUNTY, WISCONSIN.

RELOCATION ORDER: USH 10, PRESCOTT - ELLSWORTH, (SPRING CREEK CULVERTS C-47-0032 AND C-47-0033), PIERCE COUNTY.

TO PROPERLY ESTABLISH, LAY OUT, WIDEN, ENLARGE, EXTEND, CONSTRUCT, RECONSTRUCT, IMPROVE, OR MAINTAIN A PORTION OF THE HIGHWAY DESIGNATED ABOVE, THE STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DEEMS IT NECESSARY TO RELOCATE OR CHANGE SAID HIGHWAY AND ACQUIRE CERTAIN LANDS AND INTERESTS OR RIGHTS IN LANDS FOR THE ABOVE-NAMED PROJECT.

TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SUBSECTIONS 84.02 (3), 84.09, AND 84.30, WISCONSIN STATUTES, THE DEPARTMENT OF TRANSPORTATION HEREBY ORDERS THAT:
1. THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAT IS LAID OUT AND ESTABLISHED TO THE LINES AND WIDTHS AS SO SHOWN FOR THE ABOVE-NAMED PROJECT.
2. THE LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAT ARE REQUIRED BY THE DEPARTMENT FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF THE STATE OF WISCONSIN, PURSUANT TO THE PROVISIONS OF SUBSECTION 84.09 (1) OR (2), WISCONSIN STATUTES.

FOR ADDITIONAL INFORMATION REFER TO THE TITLE SHEET, RECORDED IN THE OFFICE OF THE REGISTER OF DEEDS IN PIERCE COUNTY AS SHEET 2 OF 2 OF DOCUMENT NO. 596022.

NOTES:

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COORDINATE REFERENCE SYSTEM COORDINATES (WISCRS), PIERCE COUNTY, NAD 83(2011) IN U.S.SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

ALL NEW RIGHT-OF-WAY MONUMENTS ARE TYPE 2 (TYPICALLY 3/4" X 24" REBARS) UNLESS OTHERWISE NOTED, AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

FOR CURRENT ACCESS/DRIVEWAY INFORMATION, CONTACT THE PLANNING UNIT OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION OFFICE IN THE NORTHWEST REGION.

UTILITY INTERESTS REQUIRED

UTILITY NUMBER	UTILITY OWNER(S)	INTEREST REQUIRED
100	XCEL ENERGY	RELEASE OF RIGHTS
102	AT&T WISCONSIN	RELEASE OF RIGHTS

EASEMENT TABLE

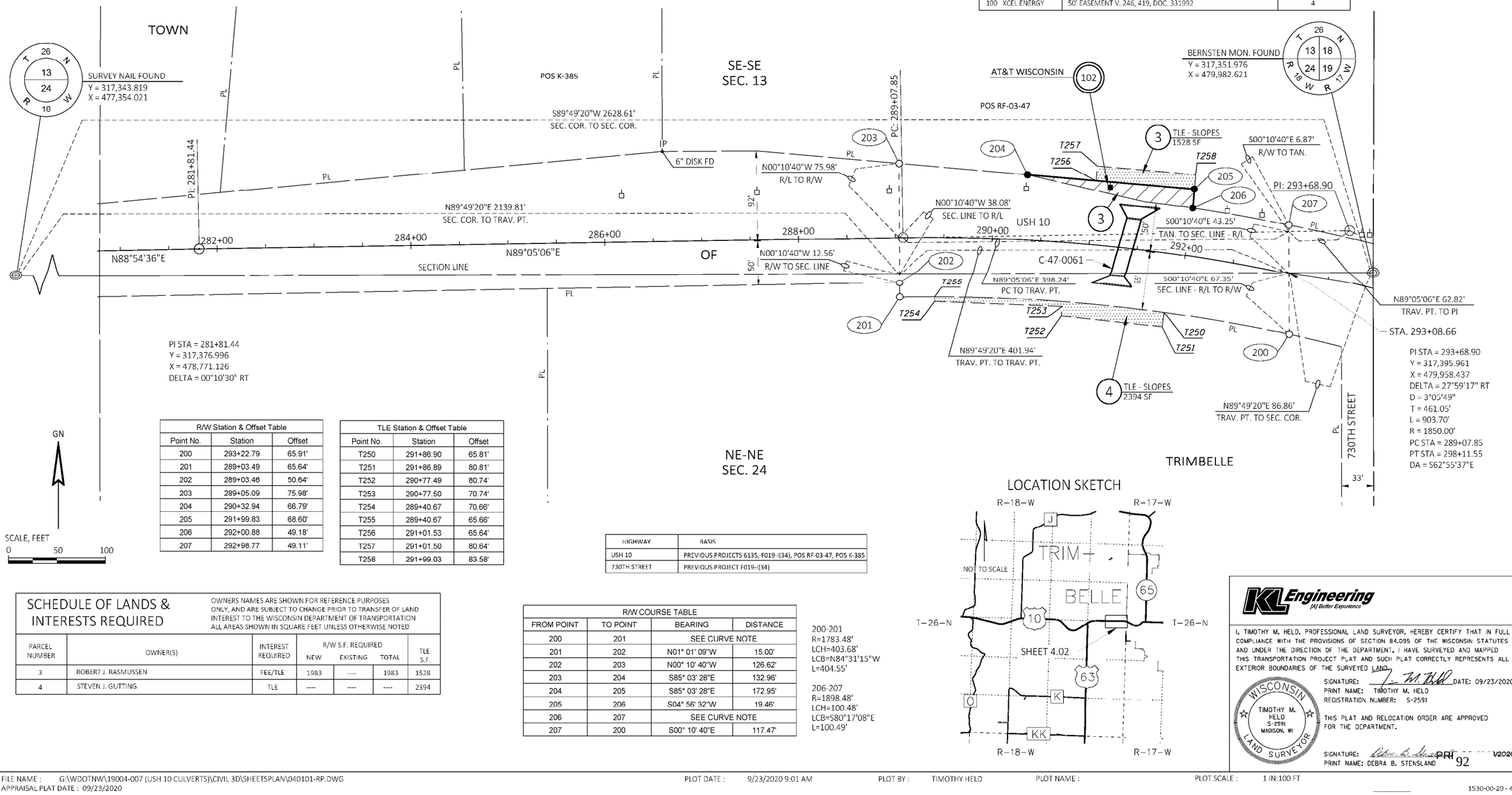
OWNER	RECORDING INFORMATION	LOCATED IN R/W PARCEL NO.
102 AT&T WISCONSIN	EASEMENT DOC. 147994	3
100 XCEL ENERGY	EASEMENT V. 124, P. 116, DOC. 110690, V. 124, P. 67, DOC. 110599, V. 124, P. 135, DOC. 110984, V. 163, P. 378, DOC. 140763 & V. 198, P. 5, DOC. 161518	4
100 XCEL ENERGY	50' EASEMENT V. 246, 419, DOC. 331992	4

596373
PIERCE COUNTY
REGISTER OF DEEDS
JULIE HINES

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PAGES: 1

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RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER 1530-00-20 - 4.02



R/W Station & Offset Table		
Point No.	Station	Offset
200	293+22.79	65.91'
201	289+03.49	65.64'
202	289+03.46	50.64'
203	289+05.09	75.98'
204	290+32.94	66.79'
205	291+99.83	68.60'
206	292+00.88	49.18'
207	292+98.77	49.11'

TLE Station & Offset Table		
Point No.	Station	Offset
T250	291+86.90	65.81'
T251	291+86.89	80.81'
T252	290+77.49	80.74'
T253	290+77.50	70.74'
T254	289+40.67	70.66'
T255	289+40.67	65.66'
T256	291+01.53	65.64'
T257	291+01.50	80.64'
T258	291+99.03	83.58'

HIGHWAY	BASIS
USH 10	PREVIOUS PROJECTS 6135, F019-I(34), POS RF-03-47, POS K-385
730TH STREET	PREVIOUS PROJECT F019-I(34)

SCHEDULE OF LANDS & INTERESTS REQUIRED

OWNERS NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY, AND ARE SUBJECT TO CHANGE PRIOR TO TRANSFER OF LAND INTEREST TO THE WISCONSIN DEPARTMENT OF TRANSPORTATION ALL AREAS SHOWN IN SQUARE FEET UNLESS OTHERWISE NOTED

PARCEL NUMBER	OWNER(S)	INTEREST REQUIRED	R/W S.F. REQUIRED NEW	EXISTING	TOTAL	TLE S.F.
3	ROBERT J. RASMUSSEN	FEE/TLE	1983	----	1983	1528
4	STEVEN J. GUTTING	TLE	----	----	----	2394

R/W COURSE TABLE			
FROM POINT	TO POINT	BEARING	DISTANCE
200	201	SEE CURVE NOTE	
201	202	N01° 01' 09"W	15.00'
202	203	N00° 10' 40"W	126.62'
203	204	S85° 03' 28"E	132.96'
204	205	S85° 03' 28"E	172.95'
205	206	S04° 56' 32"W	19.46'
206	207	SEE CURVE NOTE	
207	200	S00° 10' 40"E	117.47'

200-201
R=1783.48'
LCH=403.68'
LCB=N84°31'15"W
L=404.55'

206-207
R=1898.48'
LCH=100.48'
LCB=S80°17'08"E
L=100.49'

LOCATION SKETCH

KL Engineering
[A] Better Experience

I, TIMOTHY M. HELD, PROFESSIONAL LAND SURVEYOR, HEREBY CERTIFY THAT IN FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 84.095 OF THE WISCONSIN STATUTES AND UNDER THE DIRECTION OF THE DEPARTMENT, I HAVE SURVEYED AND MAPPED THIS TRANSPORTATION PROJECT PLAT AND SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.

SIGNATURE: _____ DATE: 09/23/2020
PRINT NAME: TIMOTHY M. HELD
REGISTRATION NUMBER: S-2591

WISCONSIN TIMOTHY M. HELD S-2591 MADISON, WI LAND SURVEYOR

THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR THE DEPARTMENT.

SIGNATURE: _____ DATE: 9/23/2020
PRINT NAME: DEBRA B. STENSLAND

FILE NAME : G:\WDOTNW\19004-007 (USH 10 CULVERTS)\CIVIL 3D\SHEETSPLAN\040101-RP.DWG
APPRAISAL PLAT DATE : 09/23/2020
PLOT DATE : 9/23/2020 9:01 AM
PLOT BY : TIMOTHY HELD
PLOT NAME :
PLOT SCALE : 1 IN:100 FT

LEGEND

- EROSION MAT URBAN CLASS I TYPE B
- TEMPORARY DITCH CHECK
- SURFACE WATER FLOW
- EXISTING FENCE
- FENCE WOVEN WIRE, 4-FT

MERRY-JOY A FLEMING

R/L
PC STA. 244+16.46
Y:317,161.501
X:475,032.324

R/L
PC STA. 247+27.71
Y:317,273.820
X:475,321.111

MERRY-JOY A FLEMING

SLOPE INTERCEPT (TYP.)

PIERCE PEPIN COOP

EXISTING CPRC 72-INCH CULVERT TO BE REMOVED

HEAVY RIPRAP AND GEOTEXTILE TYPE HR. SEE STRUCTURE PLANS.

STA 247+59 - STA 250+13
MGS GUARDRAIL 3, MGS GUARDRAIL 3 K, MGS GUARDRAIL TERMINAL EAT REQ'D

ANCHOR POST ASSEMBLY TOP MOUNT REQ'D OVER BOX CULVERT

ARJB PROPERTIES LLC

760TH STREET

R/L
PT STA. 250+65.96
Y:317,316.474
X:475,656.290

N

PIERCE PEPIN COOP

DEFTCO INC

PI: 252+11.63

AT&T

PI: 254+95.89

PC: 247+27.71

PI: 244+16.46

PI: 240+13.42

AT&T

246+00

USH 10

248+00

250+00

N87° 21' 43"E
145.67'

252+00

N59° 21' 41"E
105.70'

244+00

XCEL ENERGY

EXISTING R/W

N88° 47' 11"E
284.26'

254+00

BP: 240+13.42

N58° 59' 01"E
297.34'

242+00

BEGIN PROJECT 1530-00-79
STA 246+50
MATCH EXISTING SAW CUT REQ'D

+20.64
71.19'RT

REPLACE EXISTING FENCE

+98.02
68.74'RT

PT: 250+65.96

END CONSTRUCTION
STA 250+37
MATCH EXISTING SAW CUT REQ'D

XCEL ENERGY

N89° 01' 11"E
1720.01'

STA 247+00 - STA 249+46
MGS GUARDRAIL 3, MGS GUARDRAIL 3 K, MGS GUARDRAIL TERMINAL EAT REQ'D

ANCHOR POST ASSEMBLY TOP MOUNT REQ'D OVER BOX CULVERT

HEAVY RIPRAP AND GEOTEXTILE TYPE HR. SEE STRUCTURE PLANS.

TLE AND EXISTING PLE FOR GRADING AND TEMPORARY DIVERSION

PIERCE PEPIN COOP

STA. 248+52
REPLACE BOX CULVERT C-47-0060
SEE STRUCTURE PLANS

R/L
PI STA. 243+10.76
Y:317,107.633
X:474,941.379

R/L
PI STA. 240+13.42
Y:316,954.417
X:474,686.549

DONALD E & AUDREY L GILBERTSON

CURVE DATA
PI STA = 245+73.49
Y = 317,241.528
X = 475,167.434
DELTA = 18°46'19"
D = 6°01'52"
T = 157.03'
L = 311.25'
R = 950.00'
PC STA = 244+16.46
PT STA = 247+27.71
S.E. = 6.0%

CURVE DATA
PI STA = 248+97.20
Y = 317,308.673
X = 475,486.979
DELTA = 9°13'43"
D = 2°43'42"
T = 169.49'
L = 338.25'
R = 2100.00'
PC STA = 247+27.71
PT STA = 250+65.96
S.E. = 4.8%

DONALD E & AUDREY L GILBERTSON

NORTHERN NATURAL GAS CO.

R/L
PI STA. 252+11.63
Y:317,323.179
X:475,801.806

R/L
PI STA. 254+95.89
Y:317,329.199
X:476,086.004

STA 246+49.78
EL 998.32

STA 250+36.68
EL 1000.99

PROPOSED PROFILE

0.69%

EXISTING PROFILE

EXISTING CPRC 72-INCH CULVERT TO BE REMOVED

STRUCTURE C-47-0060 REQUIRED
7'X14' CAST-IN-PLACE BOX CULVERT
NO SKEW
2-YEAR FLOW: 185 CFS
OBS WATER ELEV: 991.83
SEE STRUCTURAL PLANS

EXISTING PROFILE

PROPOSED PROFILE

| | | |

LEGEND

- EROSION MAT URBAN CLASS I TYPE B
- SILT FENCE
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECKS
- SURFACE WATER FLOW

ROBERT J RASMUSSEN

STA 290+10
RECONSTRUCT P.E.
BAD

HEAVY RIPRAP AND GEOTEXTILE TYPE HR. SEE STRUCTURE PLANS.

FEE R/W

SLOPE INTERCEPT (TYP.)

TLE

STA 290+46 - STA 292+99
MGS GUARDRAIL 3, MGS GUARDRAIL 3 K, MGS GUARDRAIL TERMINAL EAT REQ'D

ANCHOR POST ASSEMBLY TOP MOUNT REQ'D OVER BOX CULVERT

END PROJECT 1530-00-79
STA 292+66
MATCH EXISTING
SAW CUT REQ'D

JECP TRUST

XCEL ENERGY

EXISTING R/W

AT&T

PT: 298+11.55

N

AT&T

STA 289+07.85 PC

288+00

286+00 N89° 05' 06"E 726.41'

USH 10

290+00

292+00

294+00

296+00

298+00

S62° 55' 37"E 381.15'

300+00

EXISTING R/W

BEGIN CONSTRUCTION
STA 289+37
MATCH EXISTING
SAW CUT REQ'D

XCEL ENERGY

REMOVE SMALL PIPE CULVERTS
CULVERT PIPES CORR. STEEL 36-INCH
APRON ENDWALLS FOR CULVERT PIPE
STEEL 36-INCH REQ'D
MEDIUM RIPRAP AND GEOTEXTILE
TYPE HR.

730TH STREET

JAN L CRUZ

CURVE DATA
PI STA = 293+68.90
Y = 317,395.961
X = 479,958.437
DELTA = 27°59'17"
D = 3°05'49"
T = 461.05'
L = 903.70'
R = 1850.00'
PC STA = 289+07.85
PT STA = 298+11.55
S.E. = 5.1%

R/L
PT STA. 298+11.55
Y:317,186.124
X:480,368.971

R/L
PC STA. 289+07.85
Y:317,388.598
X:479,497.442

STEVEN J GUTTING

STA 289+86 - STA 291+62
MGS GUARDRAIL 3, MGS GUARDRAIL 3 K, MGS GUARDRAIL TERMINAL EAT, MGS SHORT RADIUS, MGS GUARDRAIL SHORT RADIUS TERMINAL, AND MOW STRIP REQ'D

ANCHOR POST ASSEMBLY TOP MOUNT REQ'D OVER BOX CULVERT

HEAVY RIPRAP AND GEOTEXTILE TYPE HR. SEE STRUCTURE PLANS.

STA 291+70
RECONSTRUCT P.E.
ASPH

STA. 291+38
REPLACE BOX CULVERT C-47-0061
SEE STRUCTURE PLANS

STA 289+37.38
EL 1063.20

STA 292+66.26
EL 1070.17

PROPOSED PROFILE

2.12%

EXISTING PROFILE

EXISTING PROFILE

PROPOSED PROFILE

STRUCTURE C-47-0061 REQUIRED
6'X14' CAST-IN-PLACE BOX CULVERT
SKEW 10°00'00" LHF
2-YEAR FLOW: 55 CFS
OBS WATER ELEV: 1060.69
SEE STRUCTURAL PLANS

1095 1090 1085 1080 1075 1070 1065 1060 1055

1054.38 1055.31 1056.25 1057.25 1058.29 1059.21 1060.14 1061.21 1062.33 1063.48 1063.47 1064.42 1064.53 1065.34 1065.59 1066.32 1066.65 1067.49 1067.71 1068.65 1068.77 1069.80 1069.83 1070.96 1072.14 1073.25 1074.39 1075.96 1077.63 1079.52 1081.65 1084.08 1086.51 1089.02 1091.52 1094.03 1096.54 1098.94

285 286 287 288 289 290 291 292 293 294 295 296 297 298 299 300

PROJECT NO: 1530-00-79	HWY: USH 10	COUNTY: PIERCE	PLAN AND PROFILE: USH 10	SHEET 94	E

FILE NAME : G:\WDOTNW\19004-007 (USH 10 CULVERTS)\CIVIL 3D\SHEETSPLAN\050101-PP.DWG
LAYOUT NAME - 021227

PLOT DATE : 7/28/2022 5:09 PM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

MARK W HUPPERT

1040TH ST.

MARK W HUPPERT

REMOVE BOX CULVERT C-47-0183
CONSTRUCT BRIDGE B-47-0228

EXISTING R/W

PIERCE PEPIN COOP

CONCRETE SURFACE DRAIN
RIPRAP MEDIUM AND GEOTEXTILE TYPE HR

SLOPE INTERCEPTS (TYP.)

N

CONCRETE
PAVEMENT
APPROACH SLAB

S74° 26' 48"E
3440.06'

434+00'USH10'

435+00'USH10'

436+00'USH10'

12'

12'

10'

10'

437+00'USH10'

S74° 27' 59"E
608.09'

438+00'USH10'

439+00'USH10'

USH 10

CONCRETE
PAVEMENT
7-INCH

CONCRETE
PAVEMENT
7-INCH

CONCRETE
PAVEMENT
APPROACH SLAB

CONCRETE SURFACE DRAIN
RIPRAP MEDIUM AND GEOTEXTILE TYPE HR

EXISTING R/W

STA 434+65.95 'USH 10'
MATCH PROPOSED MILL &
OVERLAY PROFILE
SAW CUT REQ'D

MARK W
HUPPERT

SEE PLAN SHEETS FOR
ADDITIONAL INFORMATION

STA 436+59 'USH 10'
MATCH PROPOSED MILL & OVERLAY PROFILE
SAW CUT REQ'D

EXISTING R/W

MARK W
HUPPERT

5

5

VCL = 193.05

K = 176.93

PROPOSED B-47-0228 PROFILE

2.40%

-1.30%

STA 436+59.00
EL 898.15

PROPOSED PROFILE TO BE 2-INCHES ABOVE EXISTING PROFILE

EXISTING PROFILE

STA 434+65.95
EL 901.72

VPC STA 434+65.95
VPC EL 901.72

VPI STA 435+62.47
VPI EL 899.41

STRUCTURE B-47-0228 REQUIRED
CONC. SLAB ON PRESTR. GIRDER
STA 435+03 - STA 435+79
1-SPAN
NO SKEW

VPT STA 436+59.00
VPT EL 898.15

EXISTING PROFILE

PROPOSED PROFILE

904
902
900
898
896
894
892
890

904.99	905.16	904.11	904.29	903.41	903.59	902.70	902.87	901.95	902.13	901.32	901.51	900.75	900.94	900.22	900.41	899.73	899.91	899.27	899.45	898.83	899.02	898.45	898.63	898.10	898.27	897.88	898.05	897.73	897.90	897.72	897.89	897.80	897.97	897.85	898.02	897.88	898.05	897.99	898.16	898.13	898.31	898.34	898.50	898.65	898.82	898.98	899.14	899.31	899.47

433+50 434+00 434+50 435+00 435+50 436+00 436+50 437+00 437+50 438+00 438+50 439+00 439+50

PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	PLAN AND PROFILE: USH 10	SHEET 95	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\050101-PP.DWG
LAYOUT NAME - B-47-228

PLOT DATE : 7/13/2023 1:25 PM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:40 FT

MARK W HUPPERT

PIERCE PEPIN COOP

CONCRETE PAVEMENT APPROACH SLAB

ALLEN C BENSON

REMOVE BOX CULVERT C-47-0950
CONSTRUCT BRIDGE B-47-0229

CONCRETE PAVEMENT APPROACH SLAB

N

EXISTING R/W

SLOPE INTERCEPTS (TYP.)

CONCRETE SURFACE DRAIN RIPRAP MEDIUM AND GEOTEXTILE TYPE HR

10'
12'
12'
10'

443+00'USH10'
S74° 29' 27"E
1105.68'
444+00'USH10'
445+00'USH10'
446+00'USH10'
447+00'USH10'
448+00'USH10'

USH 10

CONCRETE PAVEMENT 7-INCH

CONCRETE SURFACE DRAIN RIPRAP MEDIUM AND GEOTEXTILE TYPE HR

AT&T

CONCRETE PAVEMENT 7-INCH

STA 448+38.08 'USH 10'
MATCH PROPOSED MILL & OVERLAY PROFILE
SAW CUT REQ'D

5

5

KCSWAN HOLDINGS LLC

STA 444+34.59 'USH 10'
MATCH PROPOSED MILL & OVERLAY PROFILE
SAW CUT REQ'D

AMY C HILDEBRANDT

EXISTING R/W

SEE PLAN SHEETS FOR ADDITIONAL INFORMATION

JOSEPH S & KATHERINE L BETZEL

PROPOSED PROFILE TO BE 2-INCHES ABOVE EXISTING PROFILE

STA 442+96.35
EL 904.80

STA 443+70.41
EL 905.88

STA 444+34.59
EL 906.53

VPC STA 444+63.25
VPC EL 907.01

PROPOSED B-47-0229 PROFILE

K = 136.00
VCL = 325.45

4.06%

STA 448+38.08
EL 918.34

VPT STA 447+88.69
VPT EL 916.34

1.43%
1.46%
1.01%
1.67%

EXISTING PROFILE

STRUCTURE B-47-0229 REQUIRED
HAUNCH SLAB
STA 445+22 - STA 445+54
1-SPAN
NO SKEW

VPI STA 446+25.97
VPI EL 909.72

EXISTING PROFILE
PROPOSED PROFILE

| | | |

LEGEND

- SILT FENCE
- EROSION MAT CLASS I TYPE B
- EROSION MAT URBAN CLASS I TYPE B
- EROSION MAT CLASS III TYPE C
- CLEANING DITCH
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECKS
- RIPRAP
- SURFACE WATER FLOW

N

R/L
PI STA. 77+71.71
Y:328,336.376
X:404,702.156

EAGLE RIDGE ROAD

BEGIN PROJECT 1530-02-70, 1530-02-80
STA 82+45 'USH 10'
MATCH EXISTING

CENTURYLINK

EXISTING R/W

PC: 73+78.39'USH10'

PT: 77+71.71'USH10'

PC: 80+35.87'USH10'

PT: 82+61.37'USH10'

PC: 84+91.91'USH10'

PT: 86+86.41'USH10'

75+00'USH10'

N89° 53' 01"E
264.16'

80+00'USH10'

USH 10

85+00'USH10'

S89° 49' 29"E
216.91'

12'
3'
3'
12'

CENTURYLINK

XCEL ENERGY

+38.09
15.62'RT

MATCH LINE STA. 89+00'USH 10'

EXISTING R/W

CURVE DATA
PI STA = 81+48.63'USH10'
Y = 328,337.143
X = 405,079.080
DELTA = 2°14'49"
D = 0°59'47"
T = 112.76'
L = 225.50'
R = 5750.00'
PC STA = 80+35.87'USH10'
PT STA = 82+61.37'USH10'
S.E. = 2.4%

CURVE DATA
PI STA = 85+89.17'USH10'
Y = 328,320.765
X = 405,519.340
DELTA = 1°57'18"
D = 1°00'19"
T = 97.26'
L = 194.50'
R = 5700.00'
PC STA = 84+91.91'USH10'
PT STA = 86+86.41'USH10'
S.E. = 2.4%

DOCK

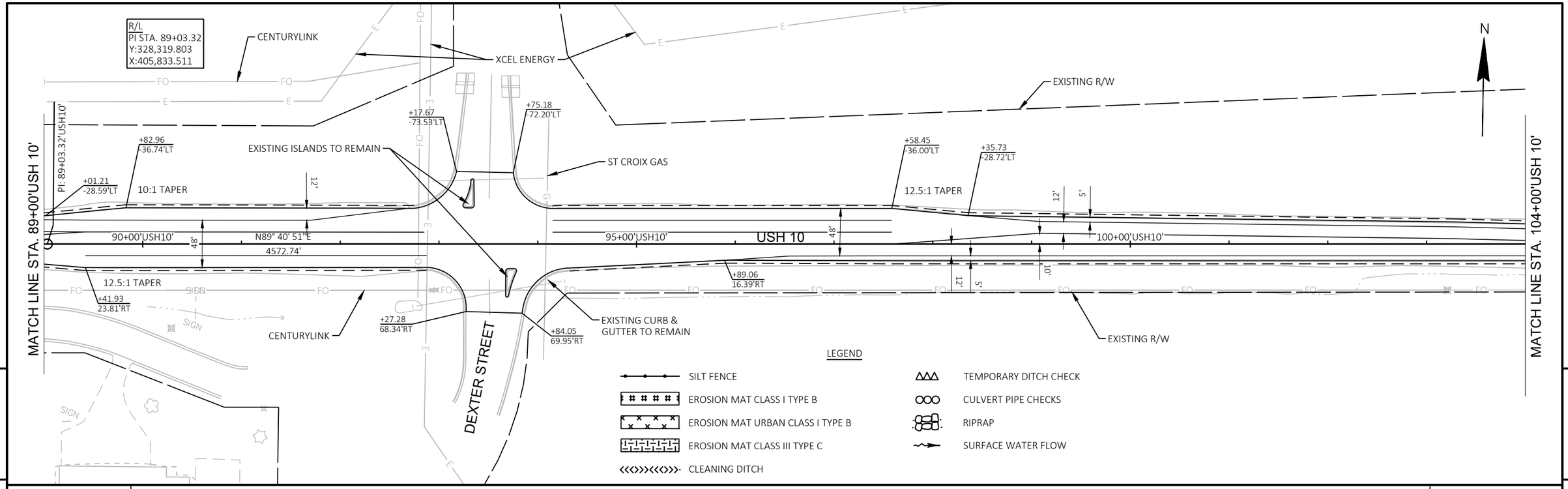
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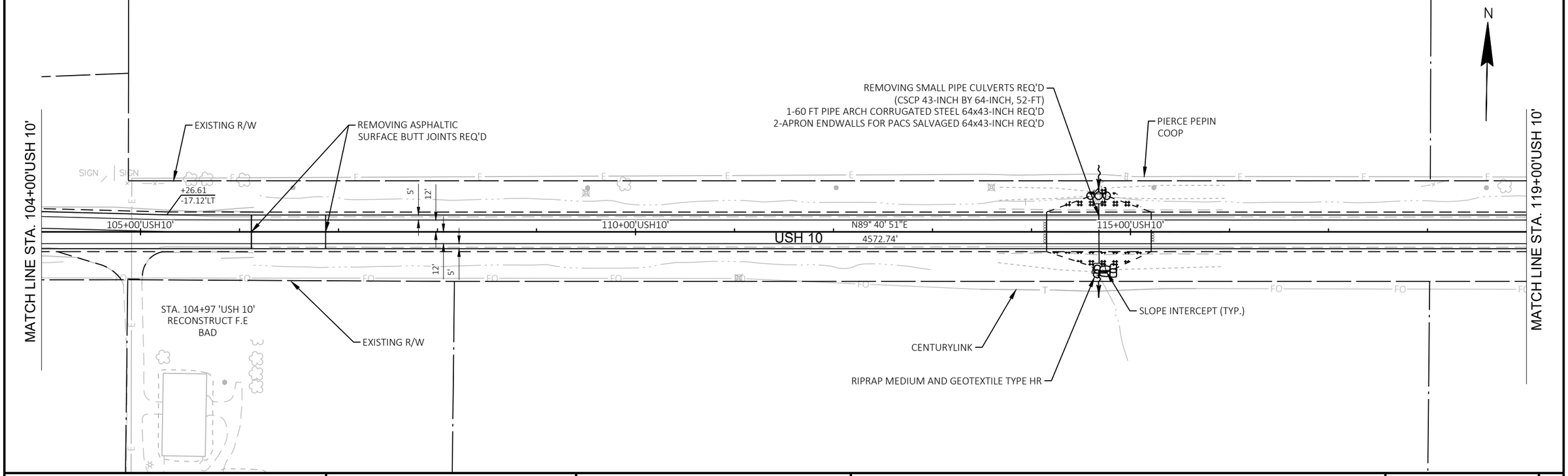
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PROJECT NO: 1530-02-70, 1530-02-80	HWY: USH 10	COUNTY: PIERCE	PLAN SHEETS	SHEET 97	E

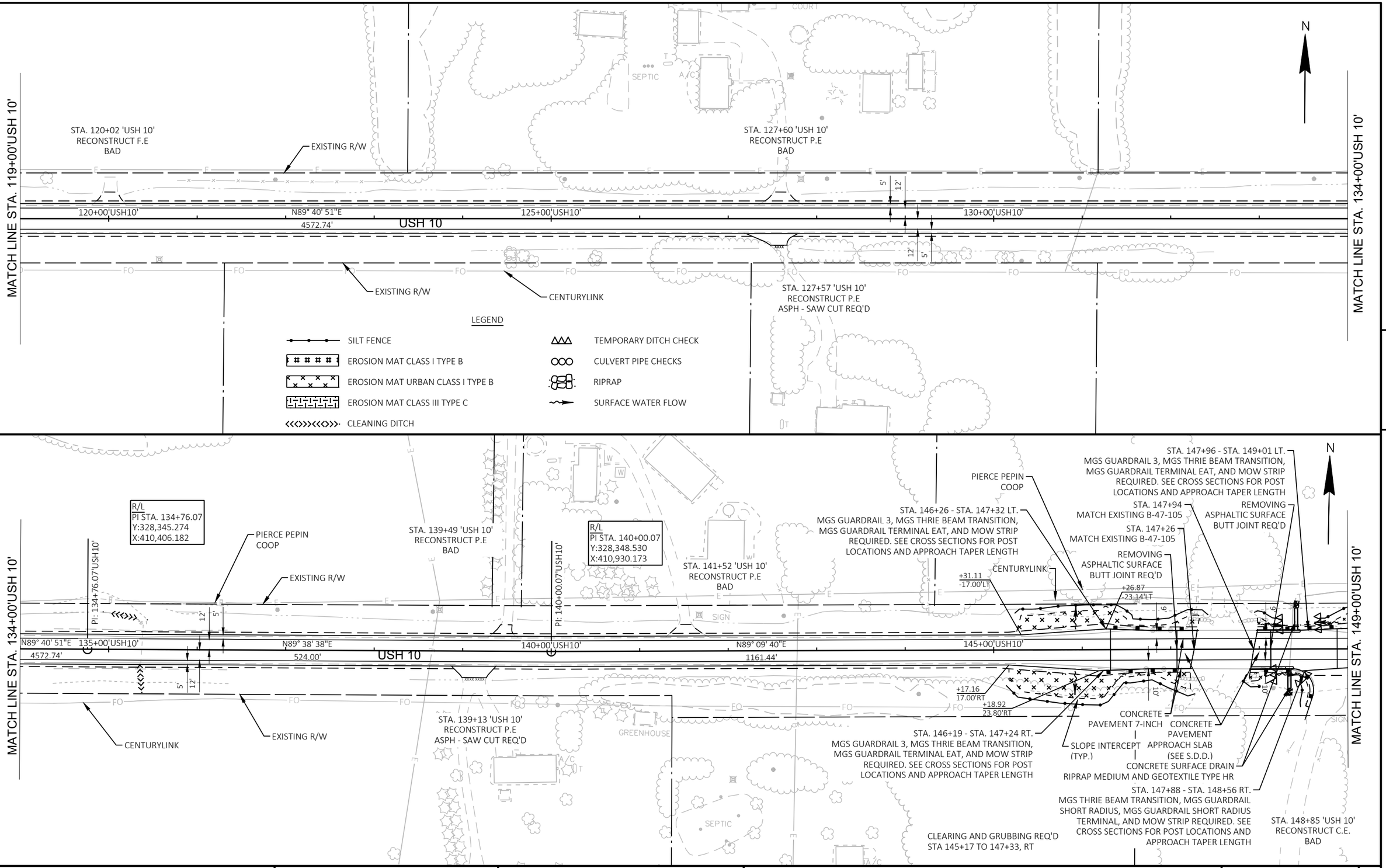
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LAYOUT NAME - 021200

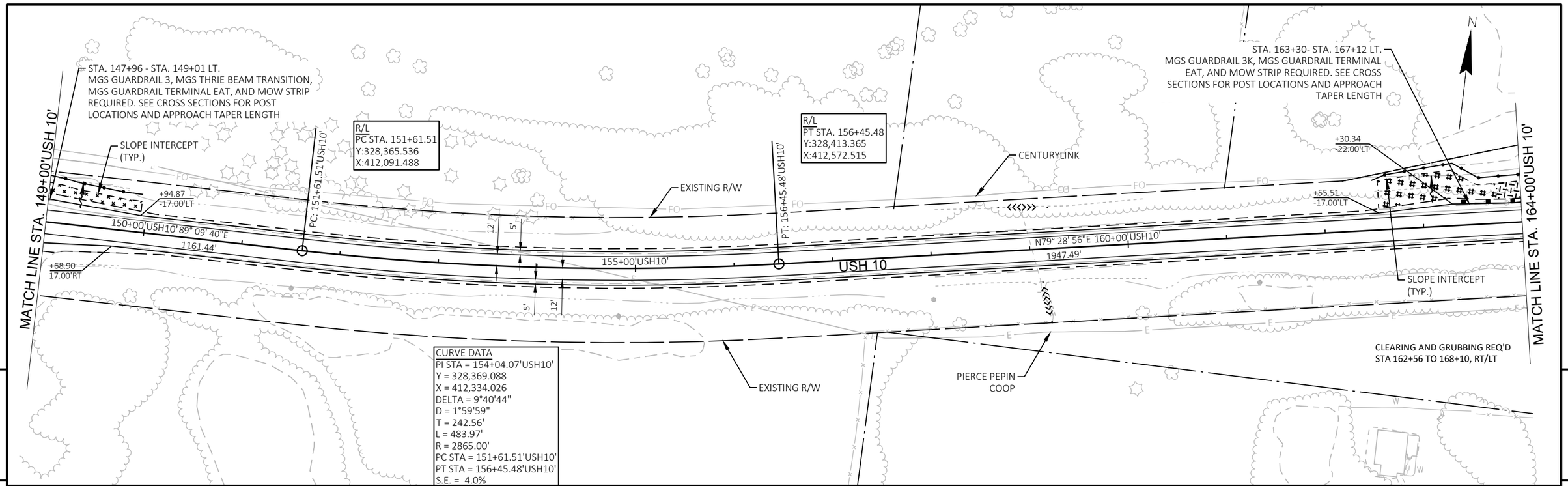
PLOT DATE : 7/14/2023 2:25 PM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : ##########





PROJECT NO: 1530-02-70, 1530-02-80	HWY: USH 10	COUNTY: PIERCE	PLAN SHEETS	SHEET 98	E


MATCH LINE STA. 119+00'USH 10'
MATCH LINE STA. 134+00'USH 10'
MATCH LINE STA. 134+00'USH 10'
MATCH LINE STA. 149+00'USH 10'
N
STA. 120+02 'USH 10'
RECONSTRUCT F.E
BAD
EXISTING R/W
STA. 127+60 'USH 10'
RECONSTRUCT P.E
BAD
120+00'USH10'
N89° 40' 51"E
4572.74'
USH 10
125+00'USH10'
130+00'USH10'
5'
12'
EXISTING R/W
CENTURYLINK
STA. 127+57 'USH 10'
RECONSTRUCT P.E
ASPH - SAW CUT REQ'D
LEGEND
SILT FENCE
EROSION MAT CLASS I TYPE B
EROSION MAT URBAN CLASS I TYPE B
EROSION MAT CLASS III TYPE C
CLEANING DITCH
TEMPORARY DITCH CHECK
CULVERT PIPE CHECKS
RIPRAP
SURFACE WATER FLOW
R/L
PI STA. 134+76.07
Y:328,345.274
X:410,406.182
PI: 134+76.07'USH10'
PIERCE PEPIN
COOP
EXISTING R/W
STA. 139+49 'USH 10'
RECONSTRUCT P.E
BAD
R/L
PI STA. 140+00.07
Y:328,348.530
X:410,930.173
PI: 140+00.07'USH10'
STA. 141+52 'USH 10'
RECONSTRUCT P.E
BAD
N89° 40' 51"E
4572.74'
135+00'USH10'
N89° 38' 38"E
524.00'
140+00'USH10'
N89° 09' 40"E
1161.44'
145+00'USH10'
USH 10
CENTURYLINK
EXISTING R/W
STA. 139+13 'USH 10'
RECONSTRUCT P.E
ASPH - SAW CUT REQ'D
PIERCE PEPIN
COOP
STA. 146+26 - STA. 147+32 LT.
MGS GUARDRAIL 3, MGS THRIE BEAM TRANSITION,
MGS GUARDRAIL TERMINAL EAT, AND MOW STRIP
REQUIRED. SEE CROSS SECTIONS FOR POST
LOCATIONS AND APPROACH TAPER LENGTH
CENTURYLINK
+31.11
-17.00'LT
STA. 147+96 - STA. 149+01 LT.
MGS GUARDRAIL 3, MGS THRIE BEAM TRANSITION,
MGS GUARDRAIL TERMINAL EAT, AND MOW STRIP
REQUIRED. SEE CROSS SECTIONS FOR POST
LOCATIONS AND APPROACH TAPER LENGTH
STA. 147+94
MATCH EXISTING B-47-105
REMOVING
ASPHALTIC SURFACE
BUTT JOINT REQ'D
STA. 147+26
MATCH EXISTING B-47-105
REMOVING
ASPHALTIC SURFACE
BUTT JOINT REQ'D
+26.87
-23.14'LT
+17.16
17.00'RT
+18.92
23.80'RT
STA. 146+19 - STA. 147+24 RT.
MGS GUARDRAIL 3, MGS THRIE BEAM TRANSITION,
MGS GUARDRAIL TERMINAL EAT, AND MOW STRIP
REQUIRED. SEE CROSS SECTIONS FOR POST
LOCATIONS AND APPROACH TAPER LENGTH
SLOPE INTERCEPT
(TYP.)
CONCRETE
PAVEMENT 7-INCH
CONCRETE
PAVEMENT
APPROACH SLAB
(SEE S.D.D.)
CONCRETE SURFACE DRAIN
RIPRAP MEDIUM AND GEOTEXTILE TYPE HR
STA. 147+88 - STA. 148+56 RT.
MGS THRIE BEAM TRANSITION, MGS GUARDRAIL
SHORT RADIUS, MGS GUARDRAIL SHORT RADIUS
TERMINAL, AND MOW STRIP REQUIRED. SEE
CROSS SECTIONS FOR POST LOCATIONS AND
APPROACH TAPER LENGTH
STA. 148+85 'USH 10'
RECONSTRUCT C.E.
BAD
CLEARING AND GRUBBING REQ'D
STA 145+17 TO 147+33, RT



PROJECT NO: 1530-02-70, 1530-02-80	HWY: USH 10	COUNTY: PIERCE	PLAN SHEETS	SHEET 100	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 021203
PLOT DATE : 7/14/2023 2:27 PM
PLOT BY : KL ENGINEERING, INC.
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44

CURVE DATA
PI STA = 10+54.30'B'
Y = 328,783.337
X = 415,358.787
DELTA = 56°42'47"
D = 81°51'04"
T = 37.78'
L = 69.29'
R = 70.00'
PC STA = 10+16.52'B'
PT STA = 10+85.81'B'
S.E. =

R/L
PI STA. 12+05.49'B'
Y:328,901.848
X:415,255.106

R/L
PI STA. 10+00.00'B'
Y:328,731.017
X:415,344.247

STIRRATT AVENUE

N41° 10' 53"W
119.68'

+12.15
12.11'RT

PT: 10+85.81'B'

+84.86
14.47'RT

BUTT JOINT
REQ'D

+95.05
-9.45'LT

PI: 12+05.49'B'

STA. 181+11 'USH 10'
RECONSTRUCT P.E
ASPH - SAW CUT REQ'D

EXISTING R/W

N15° 31' 54"E
16.52'

PC: 10+16.52'B'

BP: 10+00.00'B'

185+00'USH10'

MATCH LINE STA. 179+00'USH 10'

180+00'USH10'

+71.37
17.00'RT

+54.46
22.00'RT

CLEARING AND GRUBBING REQ'D
STA 185+20 TO 189+79, LT

PT: 186+34.66'USH10'

STA. 184+29- STA. 189+04 LT.
MGS GUARDRAIL 3, MGS GUARDRAIL 3K, MGS GUARDRAIL TERMINAL EAT, MGS GUARDRAIL SHORT RADIUS, AND MOW STRIP REQUIRED. SEE CROSS SECTIONS FOR POST LOCATIONS AND APPROACH TAPER LENGTH

SLOPE INTERCEPT
(TYP.)

+03.86
-22.00'LT

+78.69
-17.00'LT

USH 10

190+00'USH10'

S69° 06' 17"E
618.12'

CURVE DATA
PI STA = 195+26.42'USH10'
Y = 328,357.774
X = 416,344.871
DELTA = 21°39'56"
D = 4°00'24"
T = 273.63'
L = 540.73'
R = 1430.00'
PC STA = 192+52.78'USH10'
PT STA = 197+93.51'USH10'
S.E. = 5.7%

R/L
PC STA. 192+52.78
Y:328,455.368
X:416,089.233

PC: 192+52.78'USH10'

MATCH LINE STA. 194+00'USH 10'

CURVE DATA
PI STA = 181+27.27'USH10'
Y = 328,866.390
X = 415,012.604
DELTA = 31°24'47"
D = 3°00'56"
T = 534.30'
L = 1041.69'
R = 1900.00'
PC STA = 175+92.97'USH10'
PT STA = 186+34.66'USH10'
S.E. = 5.0%

EXISTING R/W

PIERCE PEPIN
COOP

CLEANING CULVERT PIPES

STA. 185+55- STA. 196+81 RT.
MGS GUARDRAIL 3, MGS GUARDRAIL 3K, MGS GUARDRAIL TERMINAL EAT, AND MOW STRIP REQUIRED. SEE CROSS SECTIONS FOR POST LOCATIONS AND APPROACH TAPER LENGTH

R/L
PT STA. 186+34.66
Y:328,675.827
X:415,511.763

CLEARING AND GRUBBING REQ'D
STA 186+28 TO 196+22, RT

CURVE DATA
PI STA = 195+26.42'USH10'
Y = 328,357.774
X = 416,344.871
DELTA = 21°39'56"
D = 4°00'24"
T = 273.63'
L = 540.73'
R = 1430.00'
PC STA = 192+52.78'USH10'
PT STA = 197+93.51'USH10'
S.E. = 5.7%

STA. 198+89 'USH 10'
RECONSTRUCT P.E
ASPH - SAW CUT REQ'D

PT: 197+93.51'USH10'

EXISTING R/W

PI: 203+17.03'USH10'

R/L
PI STA. 203+17.03
Y:328,368.489
X:417,141.950

CENTURYLINK

MATCH LINE STA. 194+00'USH 10'

195+00'USH10'

200+00'USH10'

N89° 13' 47"E
523.52'

205+00'USH10'

N89° 11' 36"E
755.71'

USH 10

+40.64
17.00'RT

+80.49
22.00'RT

SLOPE INTERCEPT
(TYP.)

STA. 199+43 'USH 10'
RECONSTRUCT P.E
ASPH - SAW CUT REQ'D

EXISTING R/W

PIERCE PEPIN
COOP

STA. 206+54 'USH 10'
RECONSTRUCT P.E
BAD

MATCH LINE STA. 209+00'USH 10'

STA. 185+55- STA. 196+81 RT.
MGS GUARDRAIL 3, MGS GUARDRAIL 3K, MGS GUARDRAIL TERMINAL EAT, AND MOW STRIP REQUIRED. SEE CROSS SECTIONS FOR POST LOCATIONS AND APPROACH TAPER LENGTH

R/L
PT STA. 197+93.51
Y:328,361.452
X:416,618.480

CLEARING AND GRUBBING REQ'D
STA 186+28 TO 196+22, RT

LEGEND

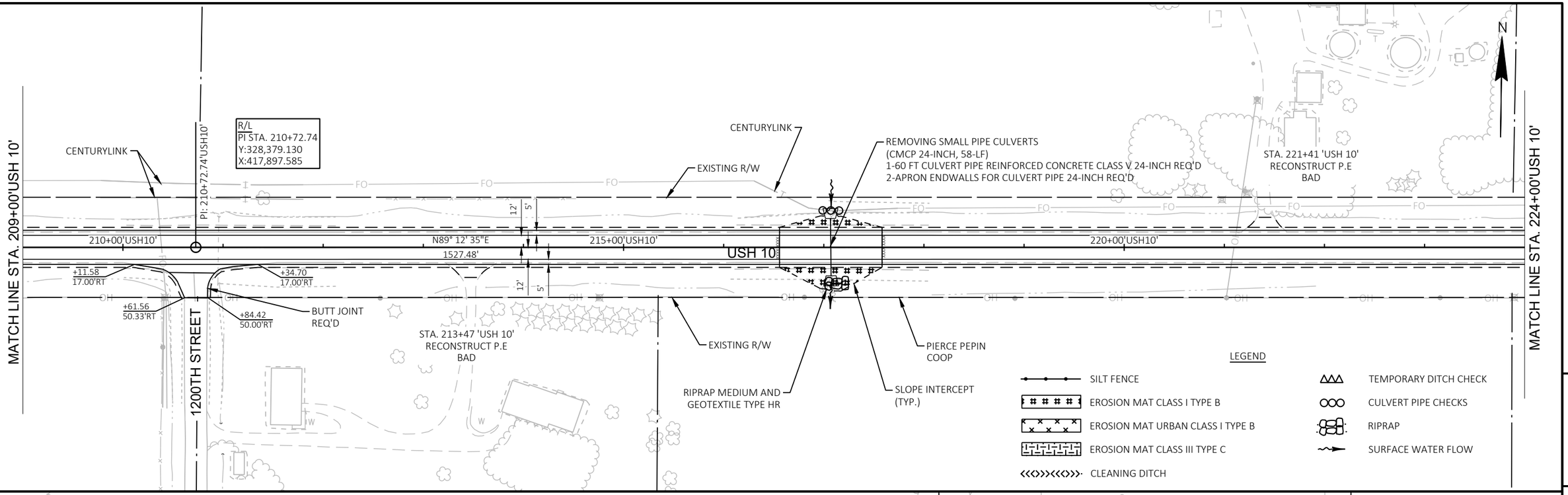
- SILT FENCE
- EROSION MAT CLASS I TYPE B
- EROSION MAT URBAN CLASS I TYPE B
- EROSION MAT CLASS III TYPE C
- CLEANING DITCH
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECKS
- RIPRAP
- SURFACE WATER FLOW

PROJECT NO: 1530-02-70, 1530-02-80	HWY: USH 10	COUNTY: PIERCE	PLAN SHEETS	SHEET 101	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 021204

PLOT DATE : 7/14/2023 2:27 PM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44



PROJECT NO: 1530-02-70, 1530-02-80	HWY: USH 10	COUNTY: PIERCE	PLAN SHEETS	SHEET 102	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 021205

PLOT DATE : 7/14/2023 2:28 PM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

MATCH LINE STA. 239+00'USH 10'

EXISTING R/W

CENTURYLINK

STA. 247+72 'USH 10' RECONSTRUCT P.E BAD

240+00'USH10'

N89° 12' 54"E
2723.59'

245+00'USH10'

USH 10

250+00'USH10'

12'
3'

EXISTING R/W

PIERCE PEPIN COOP

ARCHEOLOGICAL SITE STIRRAT CEMETERY (PLEASANT GROVE CEMETARY ASSN)

BUTT JOINT REQ'D

1170TH STREET

+90.93
-17.00'LT

+30.35
-50.30'LT

+53.37
-50.05'LT

+85.47
-17.00'LT

+70.28
-17.00'LT

+15.00
-20.00'LT

+82.80
-20.00'LT

R/L
PC STA. 253+23.81
Y:328,437.508
X:422,148.253

CLEARING AND GRUBBING REQ'D
STA 253+51 TO 253+85, LT

STA. 252+15 - STA. 253+83 LT.
MGS GUARDRAIL 3K, MGS GUARDRAIL TERMINAL EAT, AND MOW STRIP REQUIRED. SEE CROSS SECTIONS FOR POST LOCATIONS AND APPROACH TAPER LENGTH

PC: 253+23.81'USH10'

9'

+80.84
17.00'RT

+32.92
54.75'RT

+95.58
17.00'RT

+57.38
55.08'RT

+69.35
17.00'RT

+14.35
20.00'RT

+83.40
20.00'RT

STA. 252+14 - STA. 253+83 RT.
MGS GUARDRAIL 3K, MGS GUARDRAIL TERMINAL EAT, AND MOW STRIP REQUIRED. SEE CROSS SECTIONS FOR POST LOCATIONS AND APPROACH TAPER LENGTH

SLOPE INTERCEPT (TYP.)

BUTT JOINT REQ'D

MATCH LINE STA. 254+00'USH 10'

CURVE DATA
PI STA = 258+01.32'USH10'
Y = 328,444.049
X = 422,625.720
DELTA = 18°55'30"
D = 1°59'59"
T = 477.51'
L = 946.32'
R = 2865.00'
PC STA = 253+23.81'USH10'
PT STA = 262+70.13'USH10'
S.E. = 4.0%

LEGEND

- SILT FENCE
- EROSION MAT CLASS I TYPE B
- EROSION MAT URBAN CLASS I TYPE B
- EROSION MAT CLASS III TYPE C
- CLEANING DITCH
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECKS
- RIPRAP
- SURFACE WATER FLOW

5

5

R/L
PT STA. 262+70.13
Y:328,295.379
X:423,079.498

STA. 254+63 'USH 10' RECONSTRUCT P.E BAD

CENTURYLINK

EXISTING R/W

PT: 262+70.13'USH10'

STA. 264+19 'USH 10' RECONSTRUCT P.E BAD

MATCH LINE STA. 254+00'USH 10'

+27.29
-17.00'LT

255+00'USH10'

260+00'USH10'

USH 10

265+00'USH10'

S71° 51' 35"E
2187.50'

5'
12'

+28.35
17.00'RT

SLOPE INTERCEPT (TYP.)

EXISTING R/W

PIERCE PEPIN COOP

STA. 263+70 'USH 10' RECONSTRUCT F.E BAD

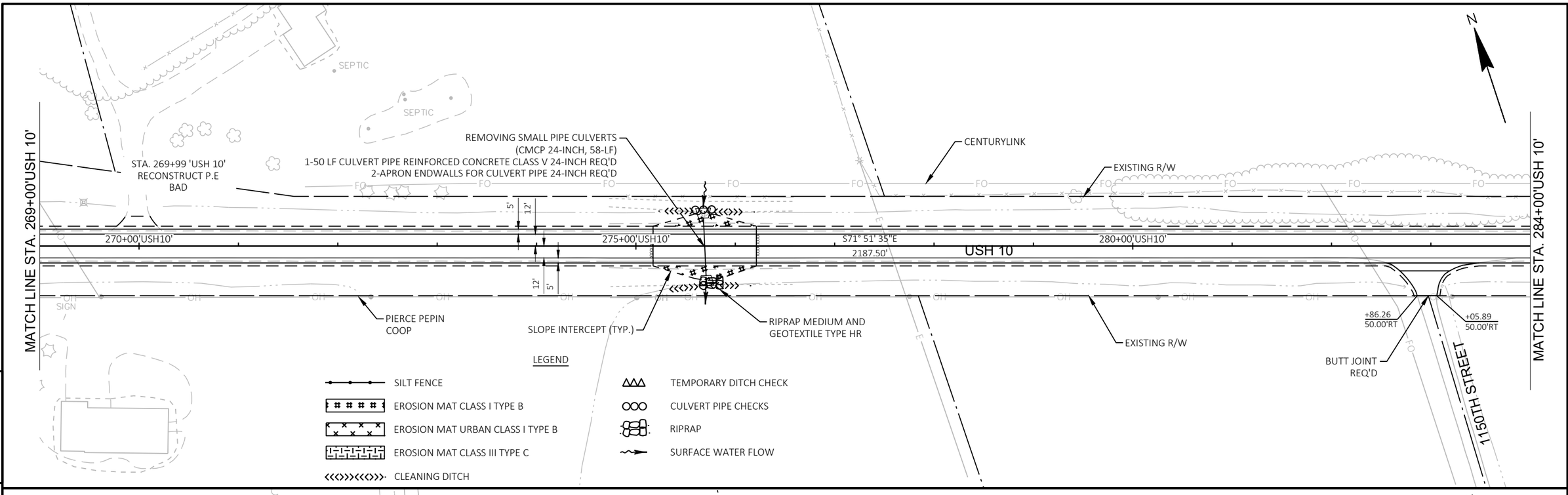
STA. 268+38 'USH 10' RECONSTRUCT P.E CONC - SAW CUT REQ'D

MATCH LINE STA. 269+00'USH 10'

CURVE DATA
PI STA = 258+01.32'USH10'
Y = 328,444.049
X = 422,625.720
DELTA = 18°55'30"
D = 1°59'59"
T = 477.51'
L = 946.32'
R = 2865.00'
PC STA = 253+23.81'USH10'
PT STA = 262+70.13'USH10'
S.E. = 4.0%

PROJECT NO: 1530-02-70, 1530-02-80	HWY: USH 10	COUNTY: PIERCE	PLAN SHEETS	SHEET 103	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 021206
PLOT DATE : 10/4/2023 9:55 AM
PLOT BY : KL ENGINEERING, INC.
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44



PROJECT NO: 1530-02-70, 1530-02-80	HWY: USH 10	COUNTY: PIERCE	PLAN SHEETS	SHEET 104	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 021207

PLOT DATE : 7/14/2023 2:29 PM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

MATCH LINE STA. 299+00'USH 10'

MATCH LINE STA. 314+00'USH 10'

CLEARING AND GRUBBING REQ'D
STA 306+76 TO 307+14, LT

EXISTING R/W

BUTT JOINT REQ'D

CTH QQ

+99.10
-53.00'LT

+57.89
-17.00'LT

+66.53
-45.86'LT

+32.64
-17.00'LT

CENTURYLINK

STA. 309+86 'USH 10'
RECONSTRUCT P.E
ASPH - SAW CUT REQ'D

STA. 313+47 'USH 10'
RECONSTRUCT P.E
BAD

300+00'USH10'

305+00'USH10'

S77° 13' 36"E
3239.87'

310+00'USH10'

USH 10

+32.70
17.00'RT

+49.37
24.00'RT

+53.48
17.00'RT

16.5:1 TAPER
(MATCH EXISTING)

EXISTING R/W

BUTT JOINT REQ'D

PIERCE PEPIN COOP

STA. 309+14 'USH 10'
RECONSTRUCT P.E
BAD

STA. 311+20 'USH 10'
RECONSTRUCT P.E
BAD

+02.13
82.54'RT

+32.15
74.93'RT

LEGEND

- SILT FENCE
- EROSION MAT CLASS I TYPE B
- EROSION MAT URBAN CLASS I TYPE B
- EROSION MAT CLASS III TYPE C
- CLEANING DITCH
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECKS
- RIPRAP
- SURFACE WATER FLOW

STA. 319+61 'USH 10'
RECONSTRUCT P.E
BAD

R/L
PC STA. 319+73.83
Y:326,824.376
X:428,584.195

PC: 319+73.83'USH10'

PT: 323+68.75'USH10'

R/L
PT STA. 323+68.75
Y:326,698.105
X:428,957.646

EXISTING R/W

CENTURYLINK

315+00'USH10'

320+00'USH10'

USH 10

325+00'USH10'

S77° 13' 36"E
3239.87'

S65° 24' 39"E
4526.78'

STA. 318+87 'USH 10'
RECONSTRUCT P.E
BAD

CURVE DATA
PI STA = 321+71.99'USH10'
Y = 326,780.563
X = 428,777.454
DELTA = 11°48'57"
D = 2°59'31"
T = 198.16'
L = 394.92'
R = 1915.00'
PC STA = 319+73.83'USH10'
PT STA = 323+68.75'USH10'
S.E. = 5.0%

PIERCE PEPIN COOP

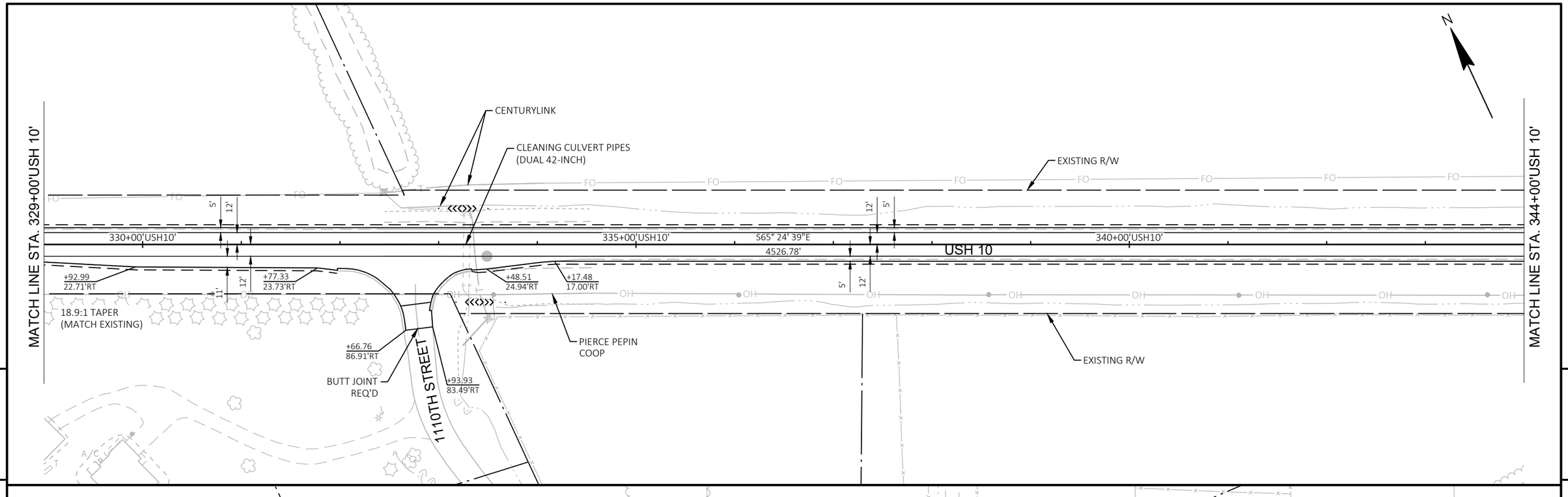
+85.18
17.00'RT

EXISTING R/W

MATCH LINE STA. 314+00'USH 10'

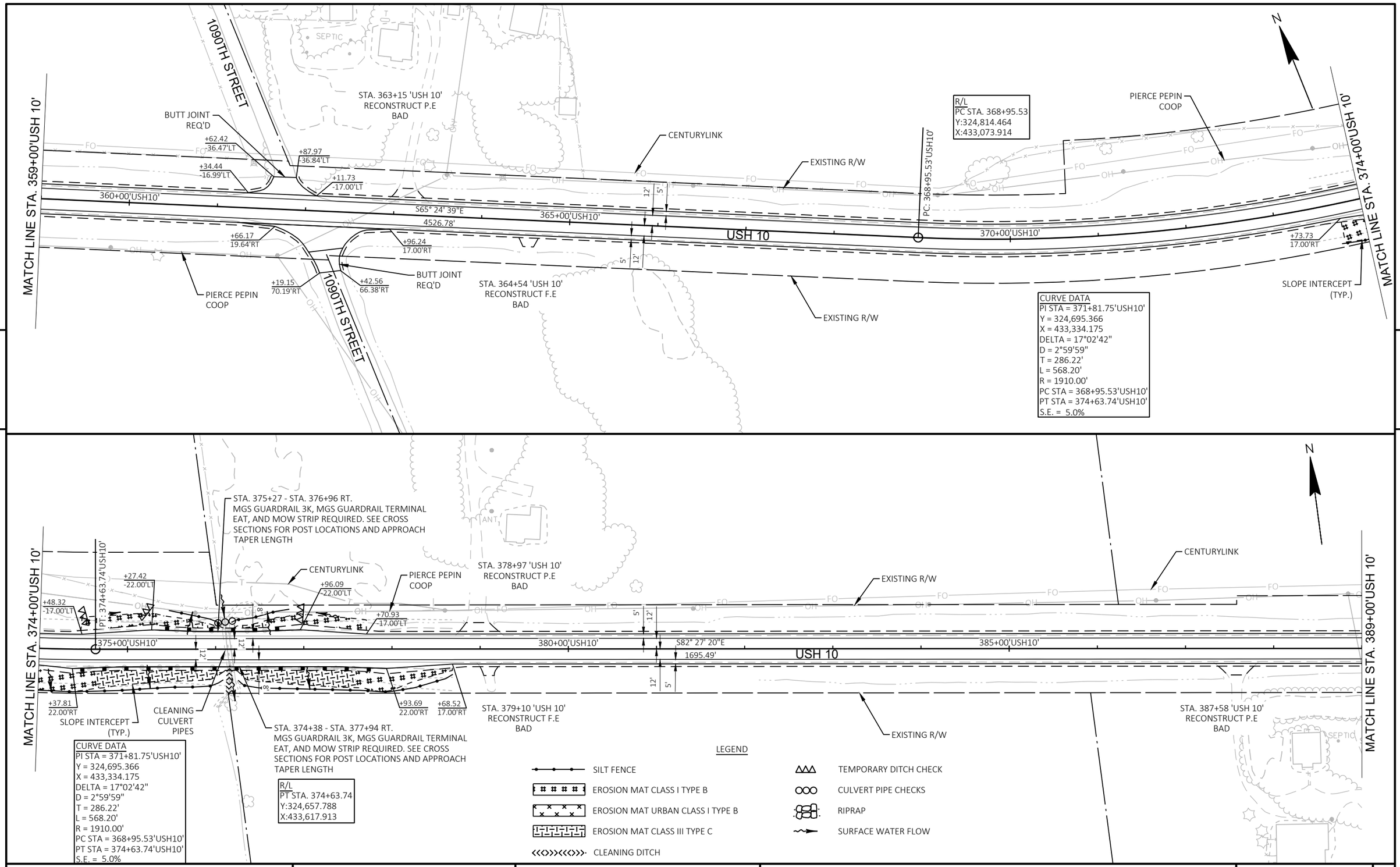
MATCH LINE STA. 329+00'USH 10'

PROJECT NO: 1530-02-70, 1530-02-80	HWY: USH 10	COUNTY: PIERCE	PLAN SHEETS	SHEET 105 E



PROJECT NO: 1530-02-70, 1530-02-80	HWY: USH 10	COUNTY: PIERCE	PLAN SHEETS	SHEET 106	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 021209
PLOT DATE : 7/14/2023 2:29 PM
PLOT BY : KL ENGINEERING, INC.
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44

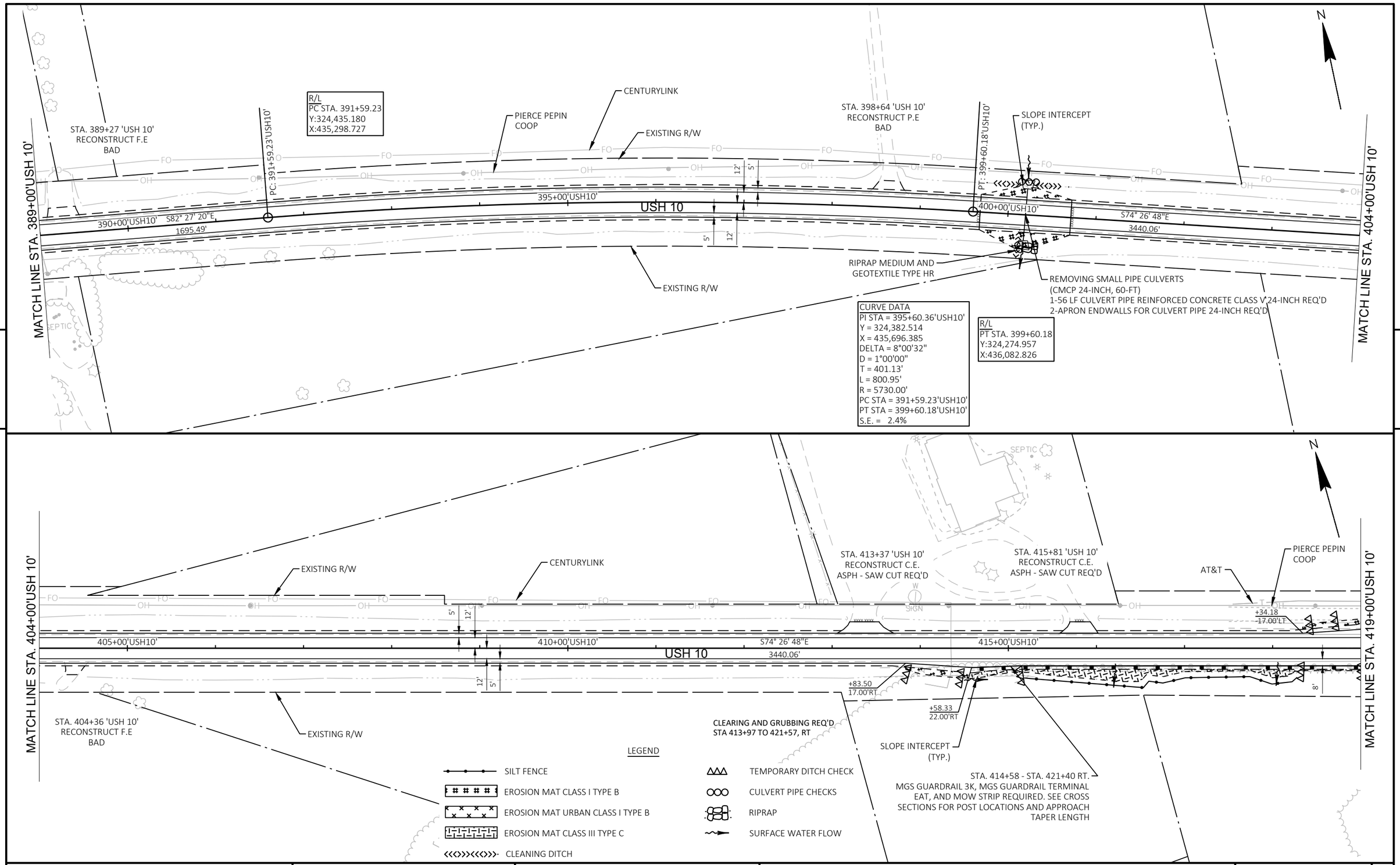


PROJECT NO: 1530-02-70, 1530-02-80	HWY: USH 10	COUNTY: PIERCE	PLAN SHEETS	SHEET 107	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 021210

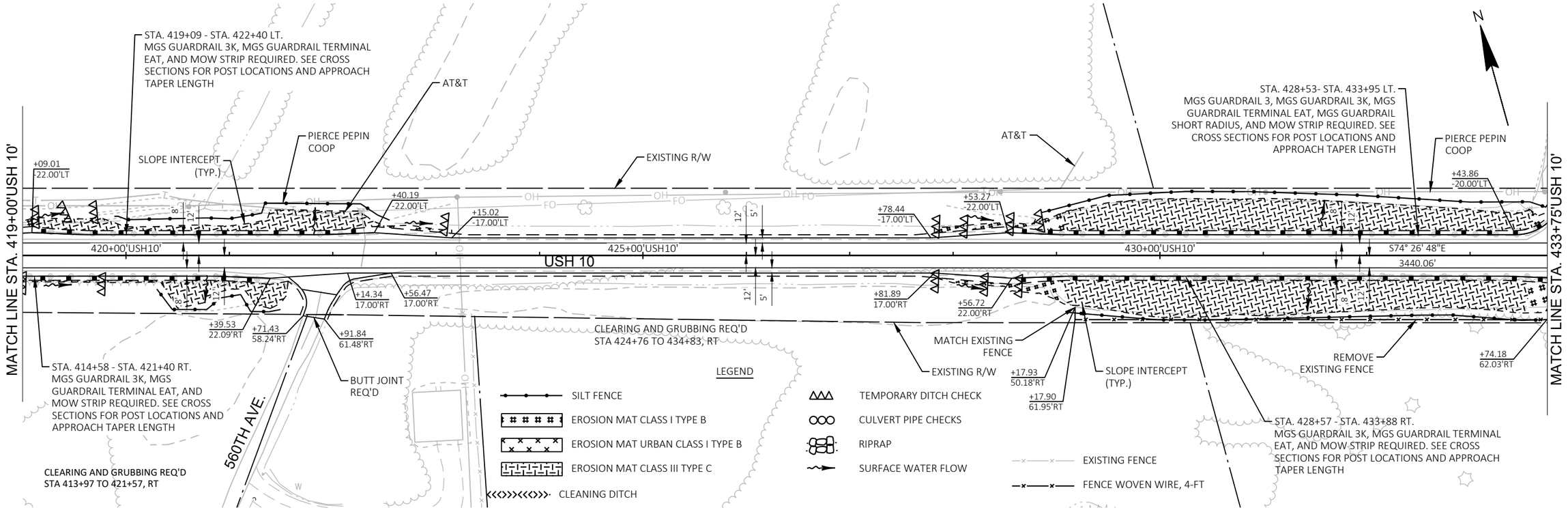
PLOT DATE : 7/14/2023 2:30 PM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44



PROJECT NO: 1530-02-70, 1530-02-80	HWY: USH 10	COUNTY: PIERCE	PLAN SHEETS	SHEET 108	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 021211
PLOT DATE : 7/14/2023 2:30 PM
PLOT BY : KL ENGINEERING, INC.
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44


MATCH LINE STA. 419+00'USH 10'
MATCH LINE STA. 433+75'USH 10'
STA. 419+09 - STA. 422+40 LT.
MGS GUARDRAIL 3K, MGS GUARDRAIL TERMINAL EAT, AND MOW STRIP REQUIRED. SEE CROSS SECTIONS FOR POST LOCATIONS AND APPROACH TAPER LENGTH
AT&T
PIERCE PEPIN COOP
SLOPE INTERCEPT (TYP.)
EXISTING R/W
AT&T
STA. 428+53- STA. 433+95 LT.
MGS GUARDRAIL 3, MGS GUARDRAIL 3K, MGS GUARDRAIL TERMINAL EAT, MGS GUARDRAIL SHORT RADIUS, AND MOW STRIP REQUIRED. SEE CROSS SECTIONS FOR POST LOCATIONS AND APPROACH TAPER LENGTH
PIERCE PEPIN COOP
+09.01 22.00'LT
+40.19 -22.00'LT
+15.02 -17.00'LT
+78.44 -17.00'LT
+53.27 -22.00'LT
+43.86 -20.00'LT
420+00'USH10'
425+00'USH10'
430+00'USH10'
S74° 26' 48"E
3440.06'
USH 10
+14.34 17.00'RT
+56.47 17.00'RT
+81.89 17.00'RT
+56.72 22.00'RT
+39.53 22.09'RT
+71.43 58.24'RT
+91.84 61.48'RT
CLEARING AND GRUBBING REQ'D STA 424+76 TO 434+83, RT
MATCH EXISTING FENCE
EXISTING R/W
+17.93 50.18'RT
+17.90 61.95'RT
SLOPE INTERCEPT (TYP.)
REMOVE EXISTING FENCE
+74.18 62.03'RT
STA. 414+58 - STA. 421+40 RT.
MGS GUARDRAIL 3K, MGS GUARDRAIL TERMINAL EAT, AND MOW STRIP REQUIRED. SEE CROSS SECTIONS FOR POST LOCATIONS AND APPROACH TAPER LENGTH
BUTT JOINT REQ'D
560TH AVE.
CLEARING AND GRUBBING REQ'D STA 413+97 TO 421+57, RT
STA. 428+57 - STA. 433+88 RT.
MGS GUARDRAIL 3K, MGS GUARDRAIL TERMINAL EAT, AND MOW STRIP REQUIRED. SEE CROSS SECTIONS FOR POST LOCATIONS AND APPROACH TAPER LENGTH
LEGEND
SILT FENCE
EROSION MAT CLASS I TYPE B
EROSION MAT URBAN CLASS I TYPE B
EROSION MAT CLASS III TYPE C
CLEANING DITCH
TEMPORARY DITCH CHECK
CULVERT PIPE CHECKS
RIPRAP
SURFACE WATER FLOW
EXISTING FENCE
FENCE WOVEN WIRE, 4-FT
N

5

LEGEND

- SILT FENCE
- EROSION MAT CLASS I TYPE B
- EROSION MAT URBAN CLASS I TYPE B
- EROSION MAT CLASS III TYPE C
- CLEANING DITCH
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECKS
- RIPRAP
- SURFACE WATER FLOW
- EXISTING FENCE
- FENCE WOVEN WIRE, 4-FT

N

R/L
PI STA. 13+75.79'K'
Y:323,699.235
X:439,541.849

R/L
PI STA. 12+00.00'K'
Y:323,538.073
X:439,471.640

R/L
PI STA. 10+00.00'K'
Y:323,352.558
X:439,396.913

R/L
PI STA. 440+08.33
Y:323,189.707
X:439,982.795

R/L
PI STA. 434+00.24
Y:323,352.558
X:439,396.913

1040TH AVE.

PC: 13+75.79'K'

N23° 32' 23"E
175.79'

PI: 12+00.00'K'

N21° 56' 25"E
200.00'

BP: 10+00.00'K'

S74° 29' 27"E
1105.68'

USH 10

MATCH LINE STA. 433+75'USH 10'

MATCH LINE STA. 449+00'USH 10'

435+00'USH10'

440+00'USH10'

445+00'USH10'

PI: 434+00.24'USH10'

PI: 440+08.33'USH10'

STA. 434+22 - STA. 434+81 LT.
MGS GUARDRAIL 3, MGS THRIE BEAM TRANSITION, MGS GUARDRAIL SHORT RADIUS, MGS GUARDRAIL TERMINAL EAT, AND MOW STRIP REQUIRED. SEE CROSS SECTIONS FOR POST LOCATIONS AND APPROACH TAPER LENGTH.

BUTT JOINT REQ'D

STA. 435+38,
REMOVE BOX CULVERT C-47-0183
CONSTRUCT BRIDGE B-47-0228
SEE STRUCTURE PLANS

REMOVE EXISTING FENCE

STA. 435+99 - STA. 437+52 LT.
MGS GUARDRAIL 3, MGS THRIE BEAM TRANSITION, MGS GUARDRAIL TERMINAL EAT, AND MOW STRIP REQUIRED. SEE CROSS SECTIONS FOR POST LOCATIONS AND APPROACH TAPER LENGTH

MATCH EXISTING FENCE

CONCRETE SURFACE DRAIN
RIPRAP MEDIUM AND GEOTEXTILE TYPE HR

EXISTING R/W

STA. 443+49 - STA. 445+02 LT.
MGS GUARDRAIL 3, MGS THRIE BEAM TRANSITION, MGS GUARDRAIL TERMINAL EAT, AND MOW STRIP REQUIRED. SEE CROSS SECTIONS FOR POST LOCATIONS AND APPROACH TAPER LENGTH

PIERCE PEPIN COOP

CONCRETE SURFACE DRAIN
RIPRAP MEDIUM AND GEOTEXTILE TYPE HR

STA. 445+76 - STA. 447+27 LT.
MGS GUARDRAIL 3, MGS THRIE BEAM TRANSITION, MGS GUARDRAIL TERMINAL EAT, AND MOW STRIP REQUIRED. SEE CROSS SECTIONS FOR POST LOCATIONS AND APPROACH TAPER LENGTH

SLOPE INTERCEPT (TYP.)

CONCRETE SURFACE DRAIN
RIPRAP MEDIUM AND GEOTEXTILE TYPE HR

REMOVE EXISTING FENCE

MATCH EXISTING FENCE

STA. 435+99 - STA. 437+52 RT.
MGS GUARDRAIL 3, MGS THRIE BEAM TRANSITION, MGS GUARDRAIL TERMINAL EAT, AND MOW STRIP REQUIRED. SEE CROSS SECTIONS FOR POST LOCATIONS AND APPROACH TAPER LENGTH

CLEARING AND GRUBBING REQ'D
STA 435+98 TO 438+45, RT

STA. 440+59 'USH 10' RECONSTRUCT C.E ASPH - SAW CUT REQ'D

STA. 442+35 'USH 10' RECONSTRUCT C.E ASPH - SAW CUT REQ'D

STA. 443+99 'USH 10' RECONSTRUCT C.E ASPH - SAW CUT REQ'D

EXISTING R/W

MATCH EXISTING FENCE

CONCRETE SURFACE DRAIN
RIPRAP MEDIUM AND GEOTEXTILE TYPE HR

STA. 444+27 - STA. 445+02 RT.
MGS GUARDRAIL 3, MGS THRIE BEAM TRANSITION, MGS GUARDRAIL SHORT RADIUS, MGS GUARDRAIL TERMINAL, AND MOW STRIP REQUIRED. SEE CROSS SECTIONS FOR POST LOCATIONS AND APPROACH TAPER LENGTH

STA. 445+37,
REMOVE BOX CULVERT C-47-0950
CONSTRUCT BRIDGE B-47-0229
SEE STRUCTURE PLANS

AT&T

STA. 445+76 - STA. 447+27 RT.
MGS GUARDRAIL 3, MGS THRIE BEAM TRANSITION, MGS GUARDRAIL TERMINAL EAT, AND MOW STRIP REQUIRED. SEE CROSS SECTIONS FOR POST LOCATIONS AND APPROACH TAPER LENGTH

CLEARING AND GRUBBING REQ'D
STA 445+78 TO 449+59, RT

PROJECT NO: 1530-02-70, 1530-02-80	HWY: USH 10	COUNTY: PIERCE	PLAN SHEETS	SHEET 110	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 021212 (2)
PLOT DATE : 7/14/2023 2:31 PM
PLOT BY : KL ENGINEERING, INC.
PLOT NAME :
PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

STA. 453+62 'USH 10' RECONSTRUCT P.E BAD

570TH AVE

+70.41 -68.88'LT

BUTT JOINT REQ'D

+79.87 -50.25'LT

EXISTING R/W

+25.39 -17.00'LT

+65.02 -29.14'LT

+12.40 -17.00'LT

5'

12'

PIERCE PEPIN COOP

455+00'USH10'

USH 10

460+00'USH10'

R/L
PT STA. 462+60.46
Y:322,284.572
X:441,999.050

R/L
PI STA. 463+00.14
Y:322,254.260
X:442,024.656

PC: 451+14.02'USH10'

PT: 462+60.46'USH10'

PI: 463+00.14'USH10'

MATCH LINE STA. 449+00'USH 10'

450+00'USH10'

S74° 29' 27"E

1105.68'

AT&T

EXISTING R/W

CURVE DATA
PI STA = 457+05.00'USH10'
Y = 322,736.029
X = 441,617.678
DELTA = 34°18'04"
D = 2°59'31"
T = 590.98'
L = 1146.45'
R = 1915.00'
PC STA = 451+14.02'USH10'
PT STA = 462+60.46'USH10'
S.E. = 5.0%

+21.38 17.00'RT

AT&T

S40° 13' 34"E

1533.45'

+88.84 17.00'RT

+38.99 73.16'RT

+53.62 66.10'RT

560TH AVE.

S40° 11' 23"E 39.68'

BUTT JOINT REQ'D

MATCH LINE STA. 464+00'USH 10'

R/L
PC STA. 451+15.83
Y:322,893.567
X:441,049.966

1-12 LF CULVERT PIPE CORRUGATED STEEL 24-INCH REQ'D
1-APRON ENDWALLS FOR CULVERT PIPE STEEL 24-INCH REQ'D
1-CONCRETE COLLARS FOR PIPE REQ'D
CULVERT EXTENSION

CLEARING AND GRUBBING REQ'D
STA 445+78 TO 449+59, RT

STA. 449+72 USH 10' RECONSTRUCT F.E. BAD

MATCH LINE STA. 464+00'USH 10'

EXISTING R/W

12'

5'

465+00'USH10'

470+00'USH10'

S40° 13' 34"E

1533.45'

USH 10

475+00'USH10'

S40° 12' 25"E

1065.74'

EXISTING R/W

STA. 475+47 - STA. 477+16 LT.
MGS GUARDRAIL 3K, MGS GUARDRAIL TERMINAL EAT, AND MOW STRIP REQUIRED. SEE CROSS SECTIONS FOR POST LOCATIONS AND APPROACH TAPER LENGTH

PIERCE PEPIN COOP

BUTT JOINT REQ'D

+85.75 -83.50'LT

CTH E

+34.55 -100.84'LT

EXISTING ISLAND TO REMAIN

SLOPE INTERCEPT (TYP.)

+46.94 -22.00'LT

+15.62 -22.00'LT

+72.11 -17.00'LT

PI: 478+33.60'USH10'

8'

12'

+74.29 17.00'RT

+49.12 22.00'RT

+42.70 22.00'RT

+60.87 68.16'RT

+29.73 76.50'RT

STA. 475+49 - STA. 477+43 RT.
MGS GUARDRAIL 3K, MGS GUARDRAIL TERMINAL EAT, AND MOW STRIP REQUIRED. SEE CROSS SECTIONS FOR POST LOCATIONS AND APPROACH TAPER LENGTH

BUTT JOINT REQ'D

CTH E

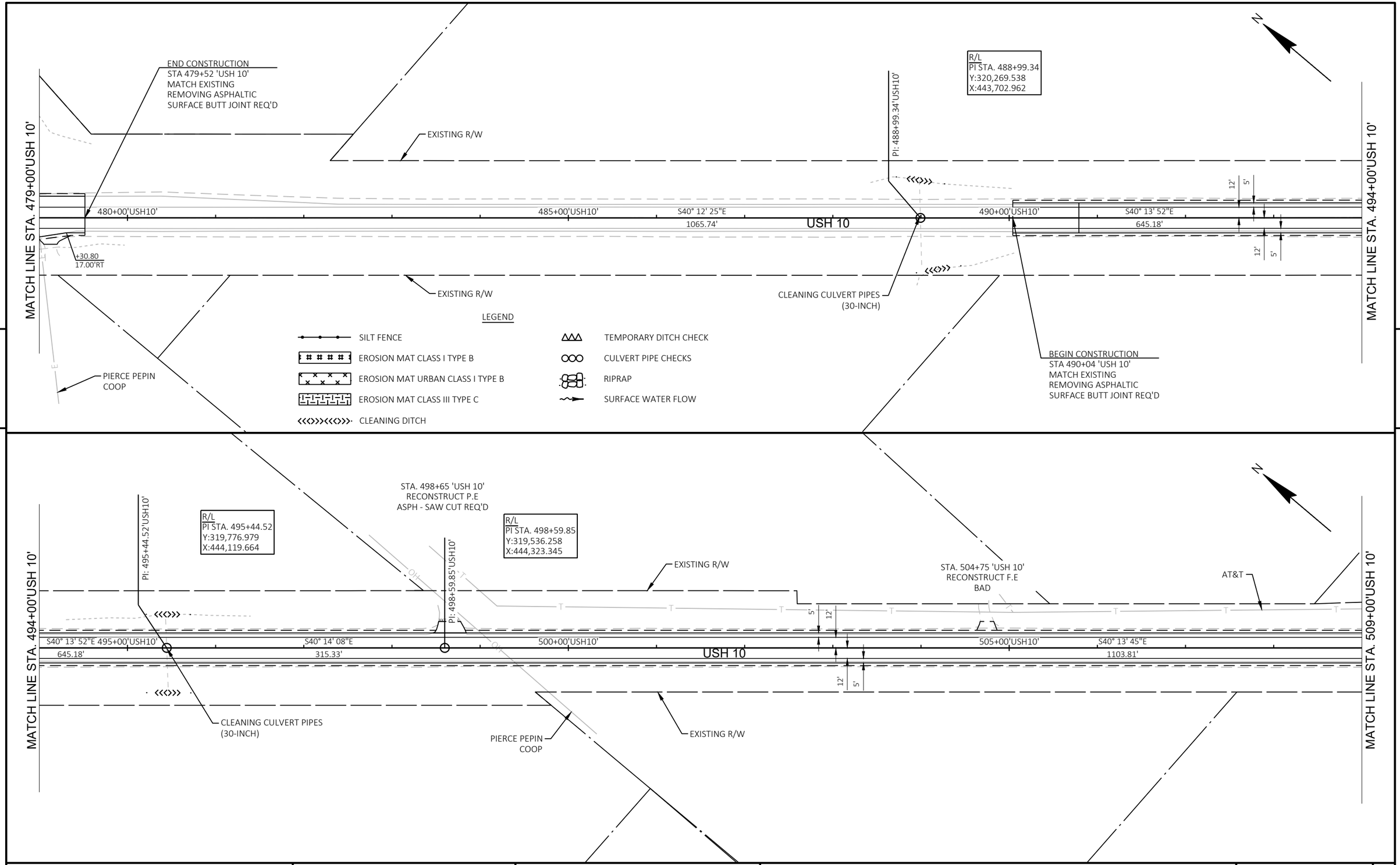
MATCH LINE STA. 479+00'USH 10'

R/L
PI STA. 478+33.60
Y:321,083.466
X:443,014.973

LEGEND

- SILT FENCE
- EROSION MAT CLASS I TYPE B
- EROSION MAT URBAN CLASS I TYPE B
- EROSION MAT CLASS III TYPE C
- CLEANING DITCH
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECKS
- RIPRAP
- SURFACE WATER FLOW

PROJECT NO: 1530-02-70, 1530-02-80	HWY: USH 10	COUNTY: PIERCE	PLAN SHEETS	SHEET 111	E

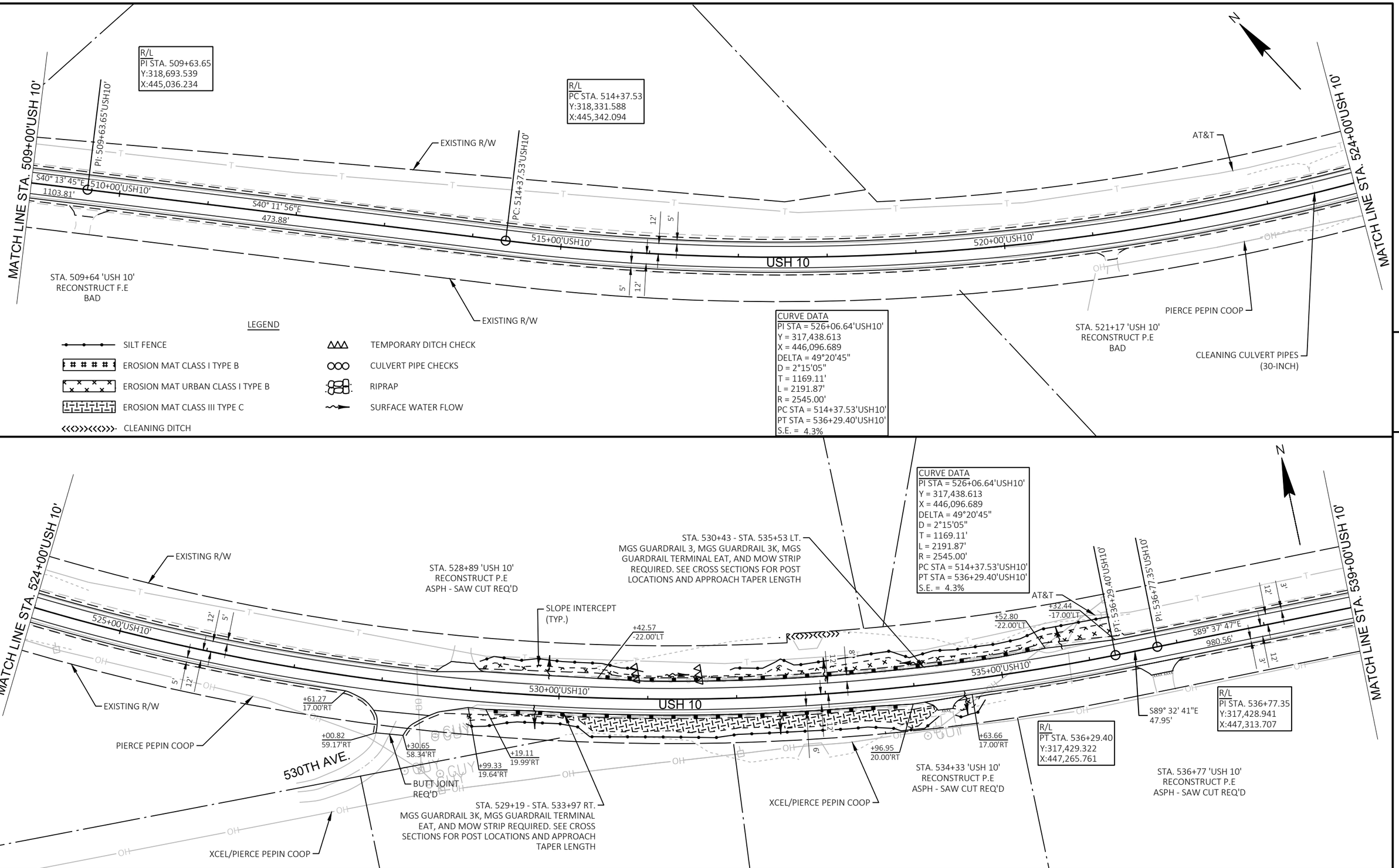


PROJECT NO: 1530-02-70, 1530-02-80	HWY: USH 10	COUNTY: PIERCE	PLAN SHEETS	SHEET 112	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 021214

PLOT DATE : 7/14/2023 2:31 PM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

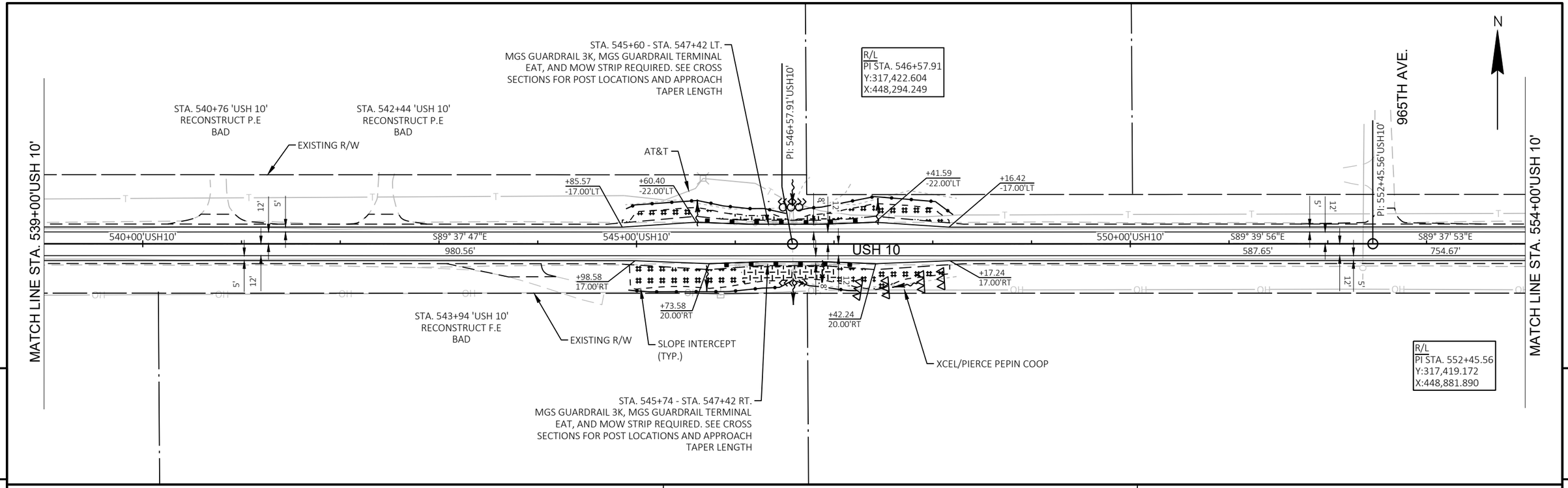


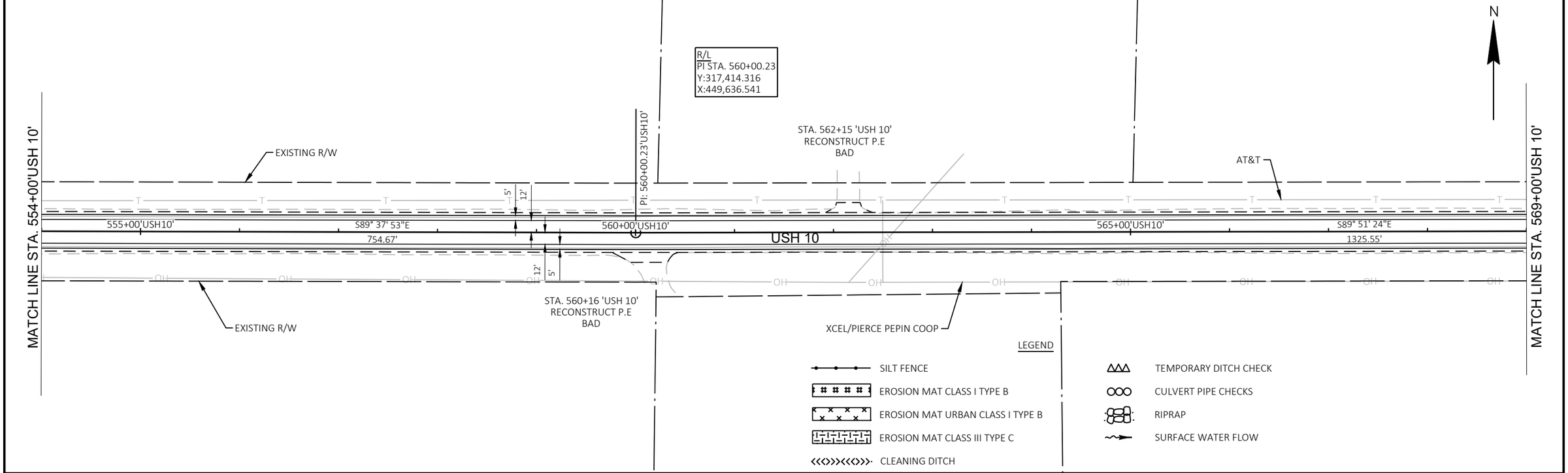
PROJECT NO: 1530-02-70, 1530-02-80	HWY: USH 10	COUNTY: PIERCE	PLAN SHEETS	SHEET 113	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 021215

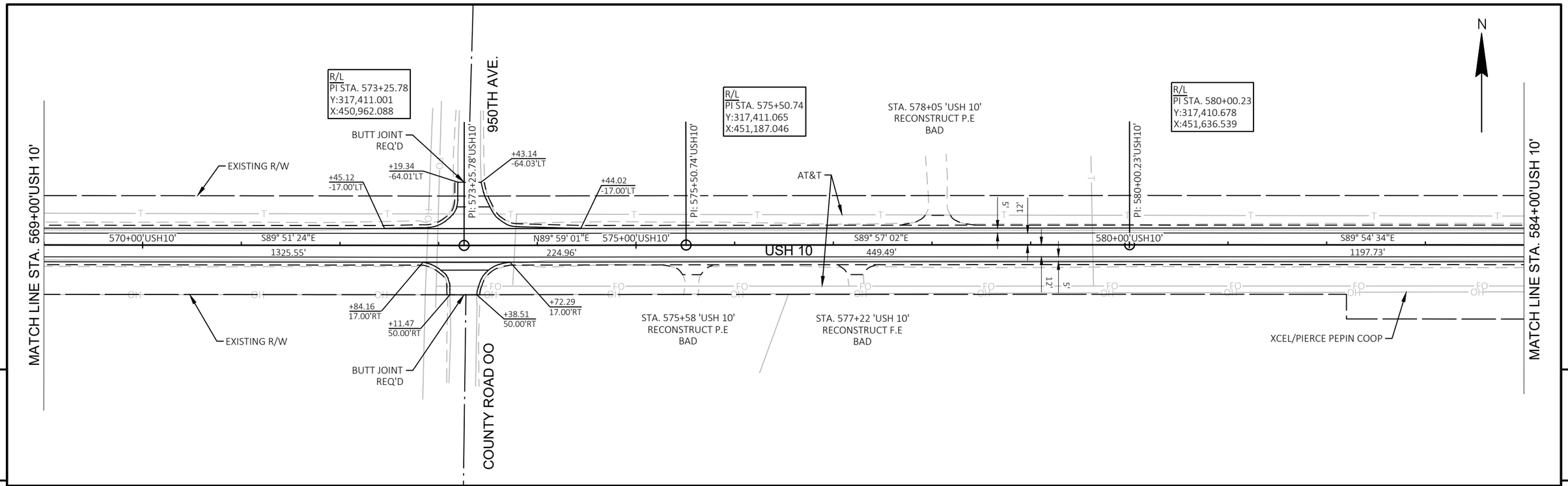
PLOT DATE : 7/14/2023 2:32 PM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:100 FT

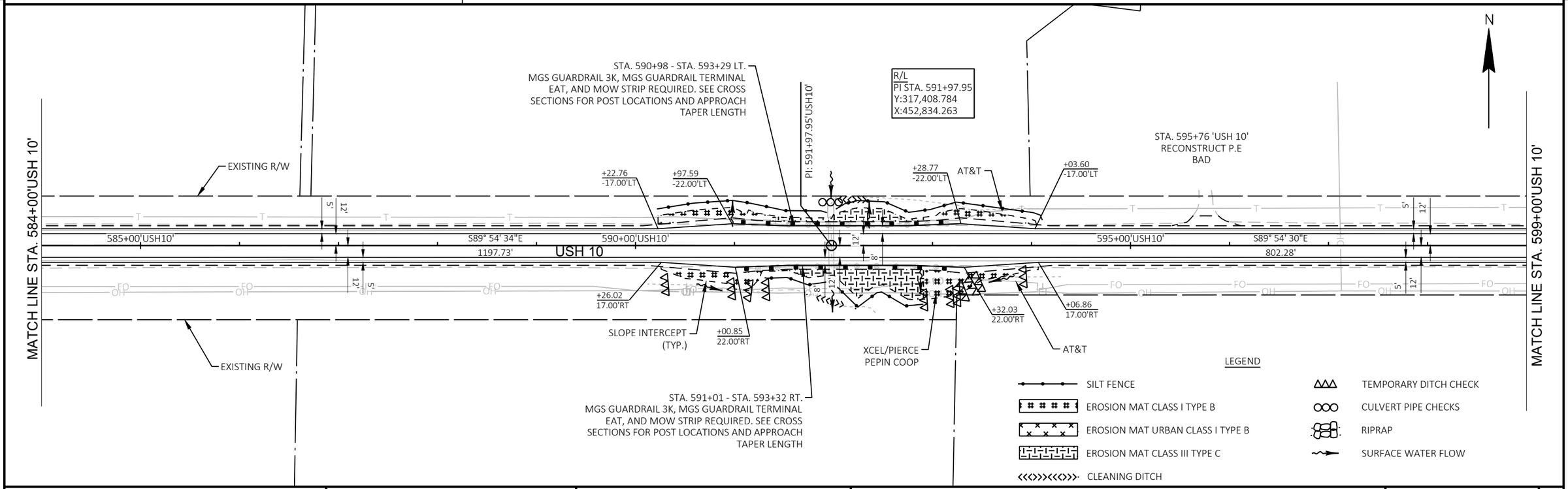
WISDOT/CADDS SHEET 44





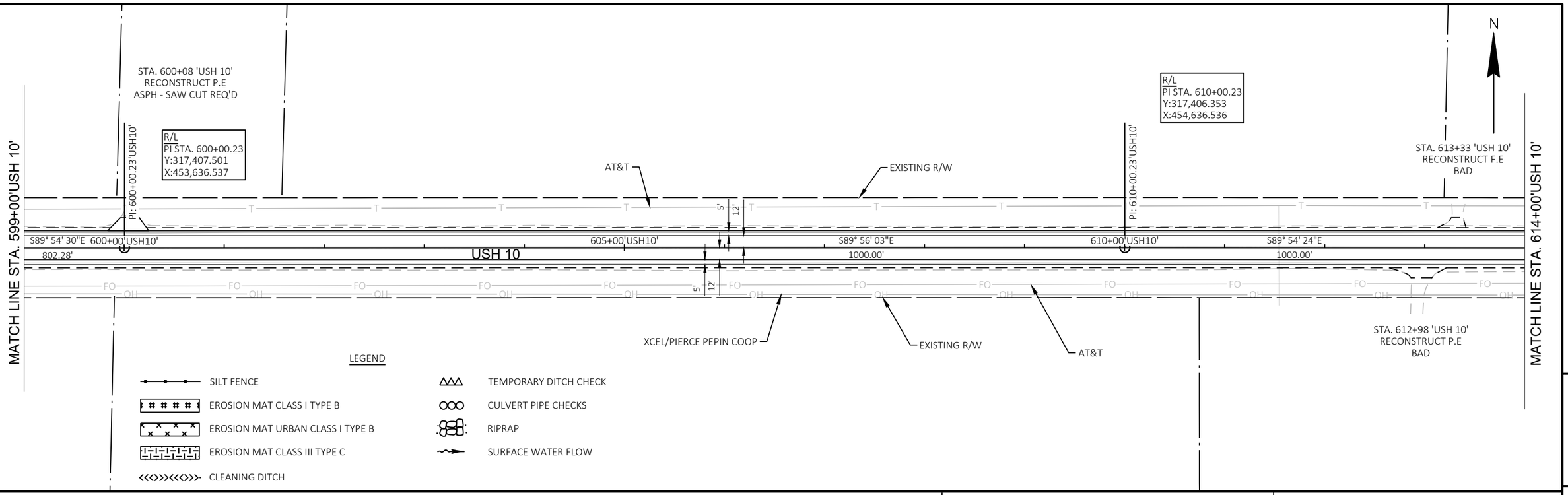
PROJECT NO: 1530-02-70, 1530-02-80	HWY: USH 10	COUNTY: PIERCE	PLAN SHEETS	SHEET 114	E

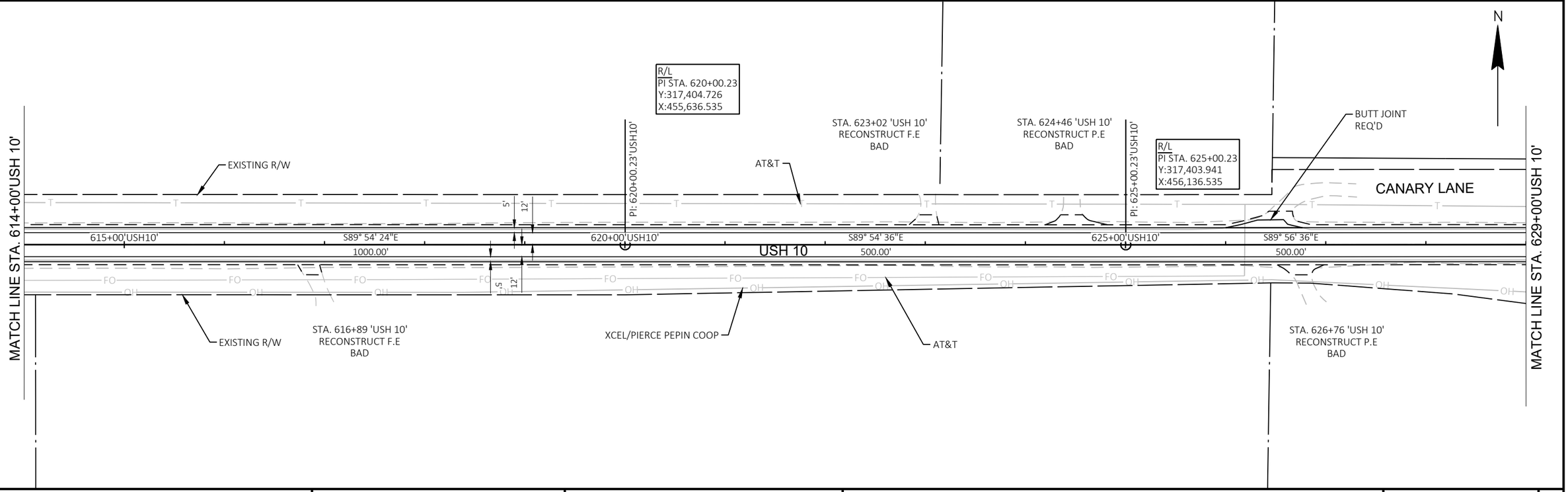


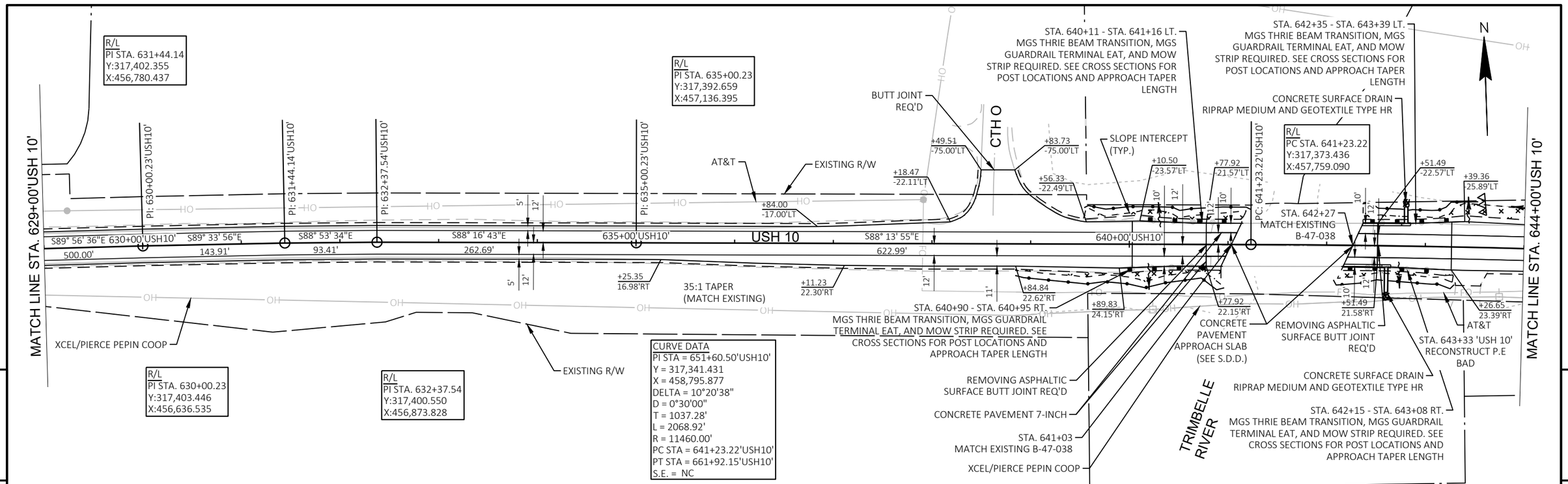


PROJECT NO: 1530-02-70, 1530-02-80	HWY: USH 10	COUNTY: PIERCE	PLAN SHEETS	SHEET 115	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 021217
PLOT DATE : 7/14/2023 2:32 PM
PLOT BY : KL ENGINEERING, INC.
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44


MATCH LINE STA. 599+00'USH 10'
STA. 600+08 'USH 10'
RECONSTRUCT P.E
ASPH - SAW CUT REQ'D
R/L
PI STA. 600+00.23
Y:317,407.501
X:453,636.537
PI: 600+00.23'USH10'
AT&T
EXISTING R/W
5'
12'
PI: 610+00.23'USH10'
R/L
PI STA. 610+00.23
Y:317,406.353
X:454,636.536
N
STA. 613+33 'USH 10'
RECONSTRUCT F.E
BAD
MATCH LINE STA. 614+00'USH 10'
S89° 54' 30"E 600+00'USH10'
802.28'
USH 10
605+00'USH10'
S89° 56' 03"E
1000.00'
610+00'USH10'
S89° 54' 24"E
1000.00'
XCEL/PIERCE PEPIN COOP
EXISTING R/W
AT&T
STA. 612+98 'USH 10'
RECONSTRUCT P.E
BAD
LEGEND
SILT FENCE
EROSION MAT CLASS I TYPE B
EROSION MAT URBAN CLASS I TYPE B
EROSION MAT CLASS III TYPE C
CLEANING DITCH
TEMPORARY DITCH CHECK
CULVERT PIPE CHECKS
RIPRAP
SURFACE WATER FLOW


MATCH LINE STA. 614+00'USH 10'
R/L
PI STA. 620+00.23
Y:317,404.726
X:455,636.535
PI: 620+00.23'USH10'
EXISTING R/W
AT&T
STA. 623+02 'USH 10'
RECONSTRUCT F.E
BAD
STA. 624+46 'USH 10'
RECONSTRUCT P.E
BAD
PI: 625+00.23'USH10'
R/L
PI STA. 625+00.23
Y:317,403.941
X:456,136.535
N
BUTT JOINT
REQ'D
CANARY LANE
MATCH LINE STA. 629+00'USH 10'
615+00'USH10'
S89° 54' 24"E
1000.00'
620+00'USH10'
USH 10
S89° 54' 36"E
500.00'
625+00'USH10'
S89° 56' 36"E
500.00'
EXISTING R/W
STA. 616+89 'USH 10'
RECONSTRUCT F.E
BAD
XCEL/PIERCE PEPIN COOP
AT&T
STA. 626+76 'USH 10'
RECONSTRUCT P.E
BAD



PROJECT NO: 1530-02-70, 1530-02-80	HWY: USH 10	COUNTY: PIERCE	PLAN SHEETS	SHEET 117	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 021219
PLOT DATE : 7/14/2023 2:33 PM
PLOT BY : KL ENGINEERING, INC.
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44

STA. 660+13 'USH 10' RECONSTRUCT P.E BAD

R/L
PT STA. 661+92.15
Y:317,123.785
X:459,810.067

R/L
PI STA. 662+49.82
Y:317,111.683
X:459,866.459

STA. 669+08 'USH 10' RECONSTRUCT P.E ASPH - SAW CUT REQ'D

R/L
PI STA. 666+44.60
Y:317,027.201
X:460,252.090

XCEL/PIERCE PEPIN COOP

PIERCE PEPIN COOP

AT&T

PT: 661+92.15'USH10'

PI: 662+49.82'USH10'

PI: 666+44.60'USH10'

11.7:1 TAPER (MATCH EXISTING)

EXISTING R/W

EXISTING CURB & GUTTER TO REMAIN

+59.78
-17.00'LT

+04.86
-20.85'LT

MATCH LINE STA. 659+00'USH 10'

660+00'USH10'

S77° 53' 17"E
57.68'

S77° 38' 36"E
394.78'

665+00'USH10'

USH 10

670+00'USH10'

S77° 39' 40"E
1319.12'

MATCH LINE STA. 674+00'USH 10'

5'
12'
8'

CURVE DATA
PI STA = 651+60.50'USH10'
Y = 317,341.431
X = 458,795.877
DELTA = 10°20'38"
D = 0°30'00"
T = 1037.28'
L = 2068.92'
R = 11460.00'
PC STA = 641+23.22'USH10'
PT STA = 661+92.15'USH10'
S.E. = NC

STA. 661+31 'USH 10' RECONSTRUCT P.E BAD

STA. 663+29 'USH 10' RECONSTRUCT P.E BAD

AT&T

CLEANING CULVERT PIPES (24-INCH)

STA.669+08 'USH 10' RECONSTRUCT P.E BAD

EXISTING R/W

PIERCE PEPIN COOP

5

5

R/L
PI STA. 679+63.72
Y:316,745.313
X:461,540.737

R/L
PI STA. 682+62.97
Y:316,681.203
X:461,833.044

R/L
PC STA. 687+62.75
Y:316,574.982
X:462,321.405

STA. 678+64 'USH 10' RECONSTRUCT P.E BAD

STA. 681+39 'USH 10' RECONSTRUCT P.E BAD

STA. 686+60 'USH 10' RECONSTRUCT P.E BAD

PIERCE PEPIN COOP

PI: 679+63.72'USH10'

PI: 682+62.97'USH10'

PC: 687+62.75'USH10'

12.5:1 TAPER

+55.48
-20.88'LT

+03.98
-17.00'LT

EXISTING R/W

AT&T

MATCH LINE STA. 674+00'USH 10'

675+00'USH10'

S77° 39' 40"E
1319.12'

680+00'USH10'

S77° 37' 47"E
299.25'

685+00'USH10'

S77° 43' 45"E
499.78'

USH 10

MATCH LINE STA. 689+00'USH 10'

5'
12'

+71.21
17.00'RT

+26.90
17.00'RT

+60.32
52.16'RT

+81.79
50.00'RT

EXISTING R/W

AT&T

CLEANING CULVERT PIPES (30-INCH)

PIERCE PEPIN COOP

STA. 678+44 'USH 10' RECONSTRUCT F.E BAD

BUTT JOINT REQ'D

PIERCE PEPIN COOP

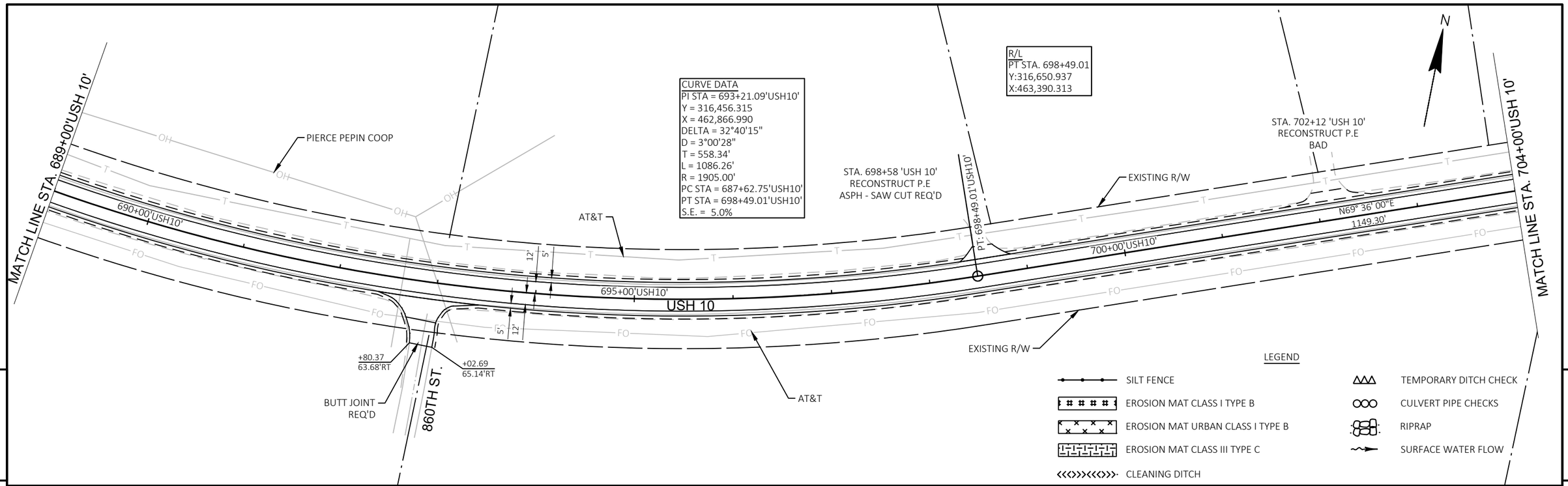
870TH ST

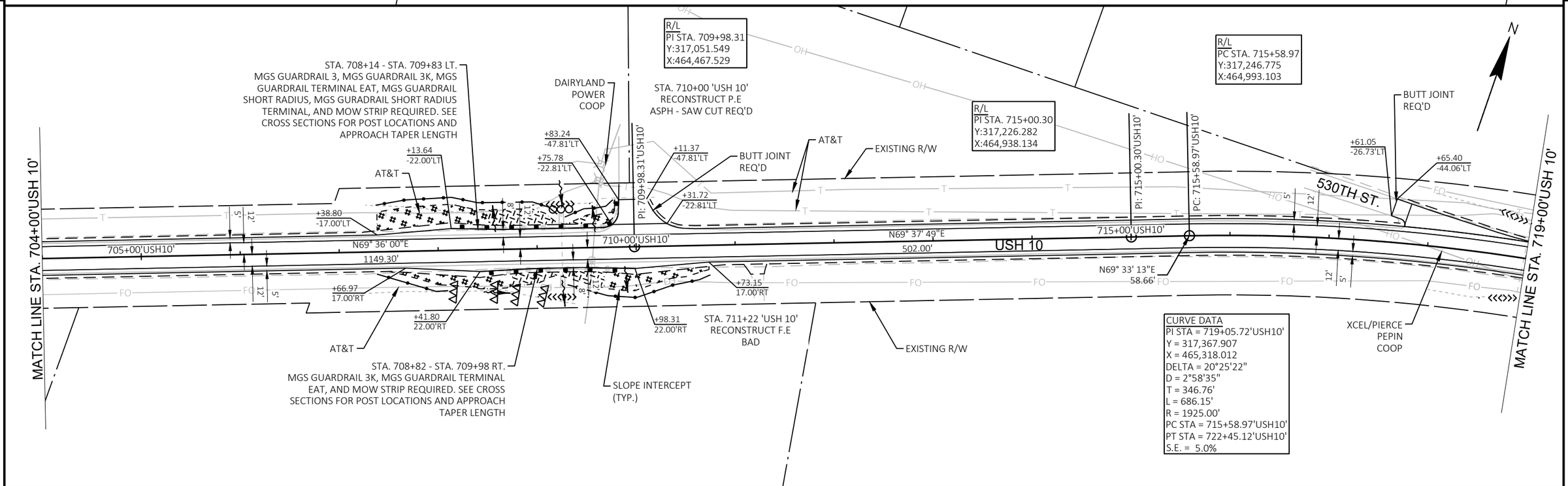
LEGEND

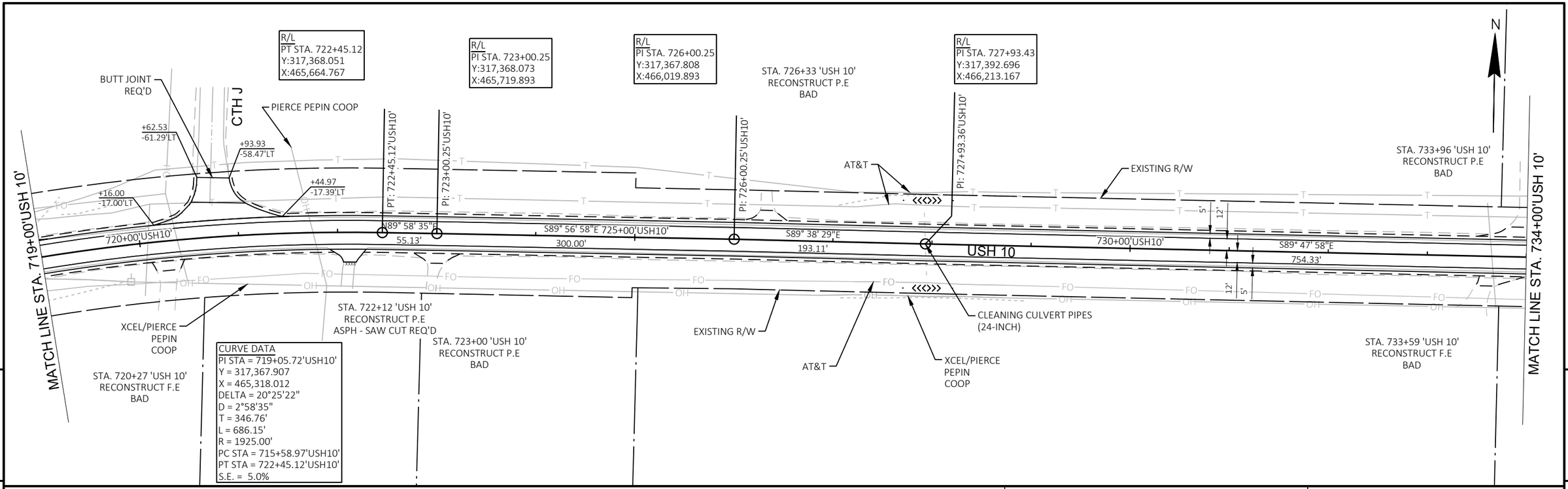
- SILT FENCE
- EROSION MAT CLASS I TYPE B
- EROSION MAT URBAN CLASS I TYPE B
- EROSION MAT CLASS III TYPE C
- CLEANING DITCH
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECKS
- RIPRAP
- SURFACE WATER FLOW

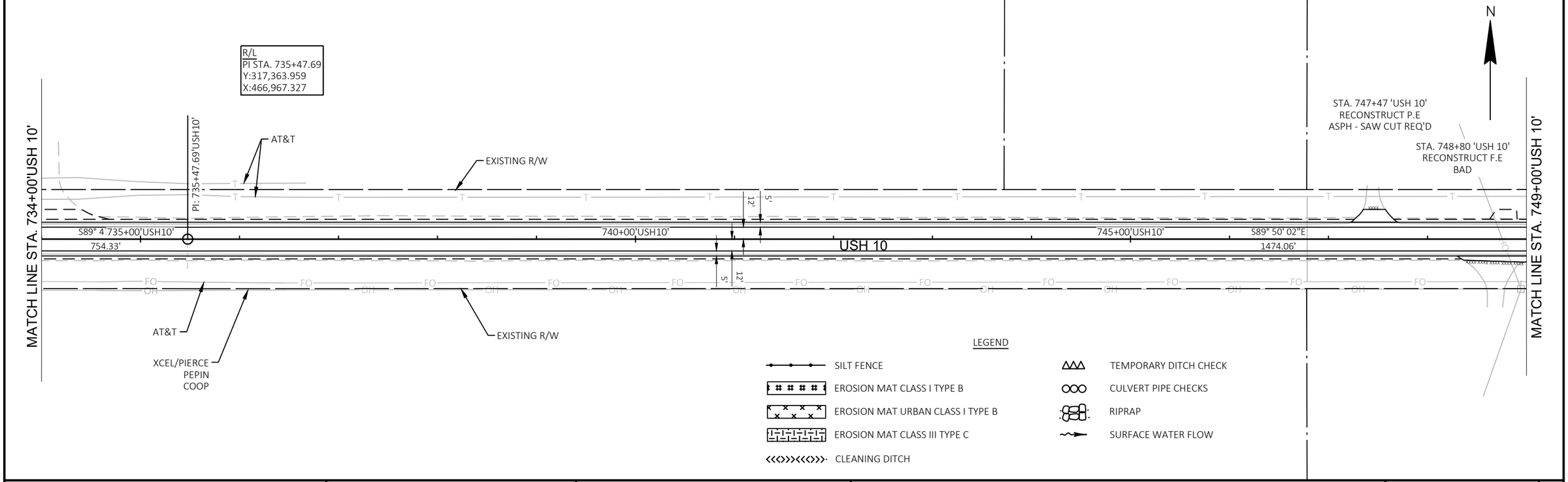
CURVE DATA
PI STA = 693+21.09'USH10'
Y = 316,456.315
X = 462,866.990
DELTA = 32°40'15"
D = 3°00'28"
T = 558.34'
L = 1086.26'
R = 1905.00'
PC STA = 687+62.75'USH10'
PT STA = 698+49.01'USH10'
S.E. = 5.0%

PROJECT NO: 1530-02-70, 1530-02-80	HWY: USH 10	COUNTY: PIERCE	PLAN SHEETS	SHEET 118	E


MATCH LINE STA. 689+00'USH 10'
PIERCE PEPIN COOP
CURVE DATA
PI STA = 693+21.09'USH10'
Y = 316,456.315
X = 462,866.990
DELTA = 32°40'15"
D = 3°00'28"
T = 558.34'
L = 1086.26'
R = 1905.00'
PC STA = 687+62.75'USH10'
PT STA = 698+49.01'USH10'
S.E. = 5.0%
R/L
PT STA. 698+49.01
Y:316,650.937
X:463,390.313
STA. 698+58 'USH 10'
RECONSTRUCT P.E
ASPH - SAW CUT REQ'D
STA. 702+12 'USH 10'
RECONSTRUCT P.E
BAD
N
690+00'USH10'
695+00'USH10'
700+00'USH10'
PT: 698+49.01'USH10'
AT&T
EXISTING R/W
N69° 36' 00"E
1149.30'
USH 10
+80.37
63.68'RT
+02.69
65.14'RT
BUTT JOINT
REQ'D
860TH ST.
MATCH LINE STA. 704+00'USH 10'
LEGEND
SILT FENCE
EROSION MAT CLASS I TYPE B
EROSION MAT URBAN CLASS I TYPE B
EROSION MAT CLASS III TYPE C
CLEANING DITCH
TEMPORARY DITCH CHECK
CULVERT PIPE CHECKS
RIPRAP
SURFACE WATER FLOW

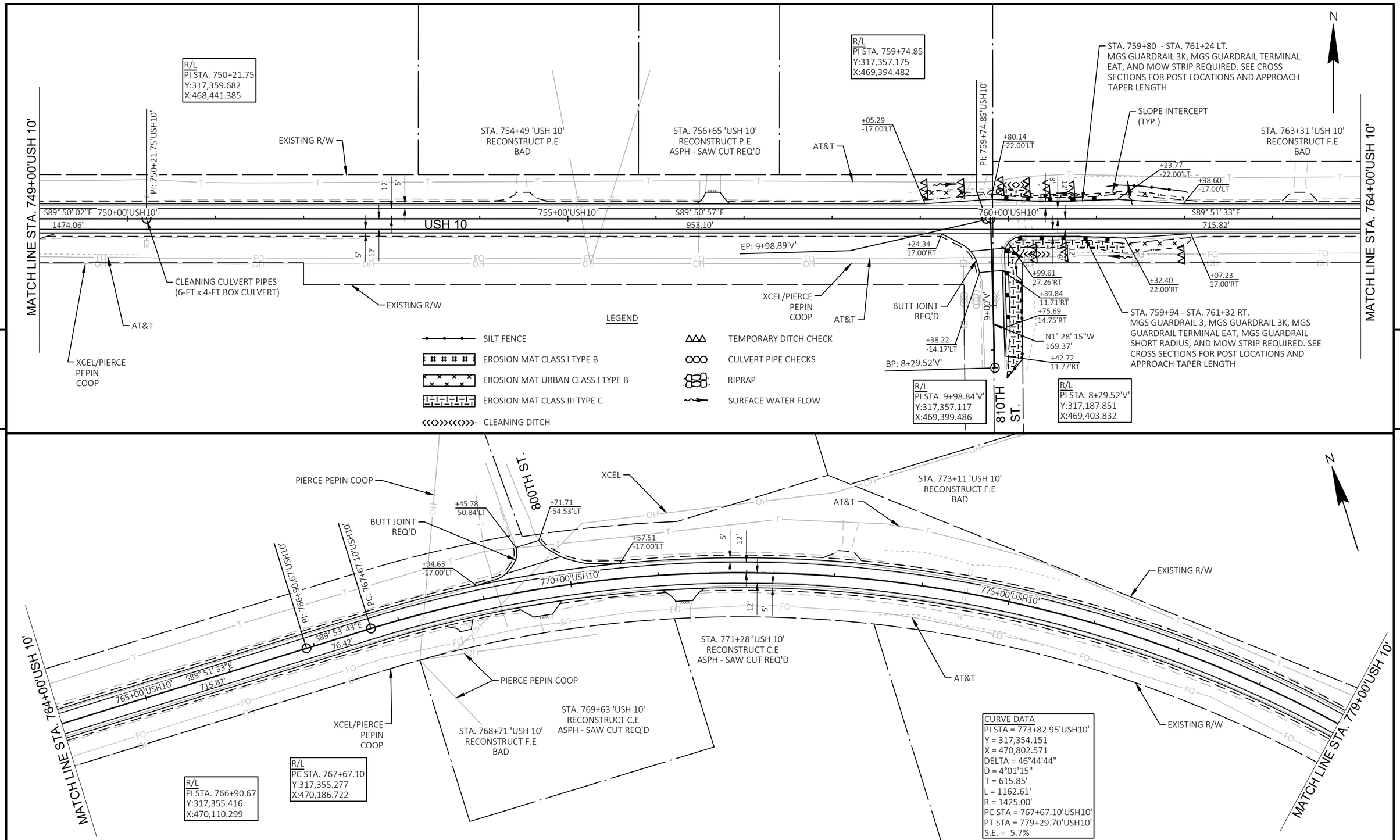

R/L
PI STA. 709+98.31
Y:317,051.549
X:464,467.529
STA. 708+14 - STA. 709+83 LT.
MGS GUARDRAIL 3, MGS GUARDRAIL 3K, MGS GUARDRAIL TERMINAL EAT, MGS GUARDRAIL SHORT RADIUS, MGS GURADRAIL SHORT RADIUS TERMINAL, AND MOW STRIP REQUIRED. SEE CROSS SECTIONS FOR POST LOCATIONS AND APPROACH TAPER LENGTH
DAIRYLAND POWER COOP
STA. 710+00 'USH 10'
RECONSTRUCT P.E
ASPH - SAW CUT REQ'D
R/L
PI STA. 715+00.30
Y:317,226.282
X:464,938.134
R/L
PC STA. 715+58.97
Y:317,246.775
X:464,993.103
N
+83.24
-47.81'LT
+13.64
-22.00'LT
+75.78
-22.81'LT
+11.37
-47.81'LT
+31.72
-22.81'LT
BUTT JOINT
REQ'D
AT&T
EXISTING R/W
+61.05
-26.73'LT
+65.40
-44.06'LT
530TH ST.
+38.80
-17.00'LT
705+00'USH10'
710+00'USH10'
715+00'USH10'
PI: 709+98.31'USH10'
PI: 715+00.30'USH10'
PC: 715+58.97'USH10'
N69° 36' 00"E
1149.30'
N69° 37' 49"E
502.00'
USH 10
N69° 33' 13"E
58.66'
+66.97
17.00'RT
+41.80
22.00'RT
+98.31
22.00'RT
+73.15
17.00'RT
STA. 711+22 'USH 10'
RECONSTRUCT F.E
BAD
AT&T
EXISTING R/W
STA. 708+82 - STA. 709+98 RT.
MGS GUARDRAIL 3K, MGS GUARDRAIL TERMINAL EAT, AND MOW STRIP REQUIRED. SEE CROSS SECTIONS FOR POST LOCATIONS AND APPROACH TAPER LENGTH
SLOPE INTERCEPT
(TYP.)
CURVE DATA
PI STA = 719+05.72'USH10'
Y = 317,367.907
X = 465,318.012
DELTA = 20°25'22"
D = 2°58'35"
T = 346.76'
L = 686.15'
R = 1925.00'
PC STA = 715+58.97'USH10'
PT STA = 722+45.12'USH10'
S.E. = 5.0%
XCEL/PIERCE
PEPIN
COOP
MATCH LINE STA. 719+00'USH 10'





PROJECT NO: 1530-02-70, 1530-02-80	HWY: USH 10	COUNTY: PIERCE	PLAN SHEETS	SHEET 120	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 021222
PLOT DATE : 7/14/2023 2:34 PM
PLOT BY : KL ENGINEERING, INC.
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44



PROJECT NO: 1530-02-70, 1530-02-80	HWY: USH 10	COUNTY: PIERCE	PLAN SHEETS	SHEET 121	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 021223
PLOT DATE : 7/14/2023 2:35 PM
PLOT BY : KL ENGINEERING, INC.
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44

LEGEND

- SILT FENCE
- EROSION MAT CLASS I TYPE B
- EROSION MAT URBAN CLASS I TYPE B
- EROSION MAT CLASS III TYPE C
- CLEANING DITCH
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECKS
- RIPRAP
- SURFACE WATER FLOW

R/L
PT STA. 779+29.70
Y:316,904.845
X:471,223.755

MATCH LINE STA. 779+00'USH 10'

PT: 779+29.70'USH10'

780+00'USH10'

CURVE DATA
PI STA = 773+82.95'USH10'
Y = 317,354.151
X = 470,802.571
DELTA = 46°44'44"
D = 4°01'15"
T = 615.85'
L = 1162.61'
R = 1425.00'
PC STA = 767+67.10'USH10'
PT STA = 779+29.70'USH10'
S.E. = 5.7%

AT&T

EXISTING R/W

R/L
PC STA. 787+12.27
Y:316,333.911
X:471,758.954

PC: 787+12.27'USH10'

S43° 08' 59"E
782.56'

785+00'USH10'

STA. 784+96 'USH 10'
RECONSTRUCT P.E
BAD

EXISTING R/W

AT&T

CURVE DATA
PI STA = 797+61.42'USH10'
Y = 315,568.476
X = 472,476.480
DELTA = 79°07'15"
D = 4°30'41"
T = 1049.16'
L = 1753.77'
R = 1270.00'
PC STA = 787+12.27'USH10'
PT STA = 804+66.03'USH10'
S.E. = 5.9%

N

MATCH LINE STA. 794+00'USH 10'

790+00'USH10'

USH 10

+61.10
17.00'RT

+19.28
22.00'RT

SLOPE INTERCEPT
(TYP.)

STA. 791+19 - STA. 795+31 RT.
MGS GUARDRAIL 3K, MGS GUARDRAIL TERMINAL EAT, AND MOW STRIP REQUIRED. SEE CROSS SECTIONS FOR POST LOCATIONS AND APPROACH TAPER LENGTH

CLEARING AND GRUBBING REQ'D
STA 792+17 TO 795+30, RT

5

5

CURVE DATA
PI STA = 797+61.42'USH10'
Y = 315,568.476
X = 472,476.480
DELTA = 79°07'15"
D = 4°30'41"
T = 1049.16'
L = 1753.77'
R = 1270.00'
PC STA = 787+12.27'USH10'
PT STA = 804+66.03'USH10'
S.E. = 5.9%

R/L
PT STA. 804+66.03
Y:316,128.639
X:473,363.582

STA. 795+57 'USH 10'
RECONSTRUCT P.E
ASPH - SAW CUT REQ'D

STA. 797+07 - STA. 798+78 LT.
MGS GUARDRAIL 3K, MGS GUARDRAIL TERMINAL EAT, AND MOW STRIP REQUIRED. SEE CROSS SECTIONS FOR POST LOCATIONS AND APPROACH TAPER LENGTH

STA. 800+07 'USH 10'
RECONSTRUCT P.E
BAD

STA. 808+77 'USH 10'
RECONSTRUCT P.E
ASPH - SAW CUT REQ'D

N

MATCH LINE STA. 794+00'USH 10'

795+00'USH10'

+20.65
-17.00'LT

+06.94
-22.00'LT

+78.41
-22.00'LT

+64.70
-17.00'LT

+31.39
22.00'RT

+09.81
22.00'RT

AT&T

800+00'USH10'

USH 10

PT: 804+66.03'USH10'

EXISTING R/W

805+00'USH10'

N57° 43' 46"E
713.52'

MATCH LINE STA. 809+00'USH 10'

+68.59
17.00'RT

+03.41
22.00'RT

EXISTING R/W

PIERCE PEPIN COOP

PIERCE PEPIN COOP

SLOPE INTERCEPT
(TYP.)

STA. 791+19 - STA. 795+31 RT.
MGS GUARDRAIL 3K, MGS GUARDRAIL TERMINAL EAT, AND MOW STRIP REQUIRED. SEE CROSS SECTIONS FOR POST LOCATIONS AND APPROACH TAPER LENGTH

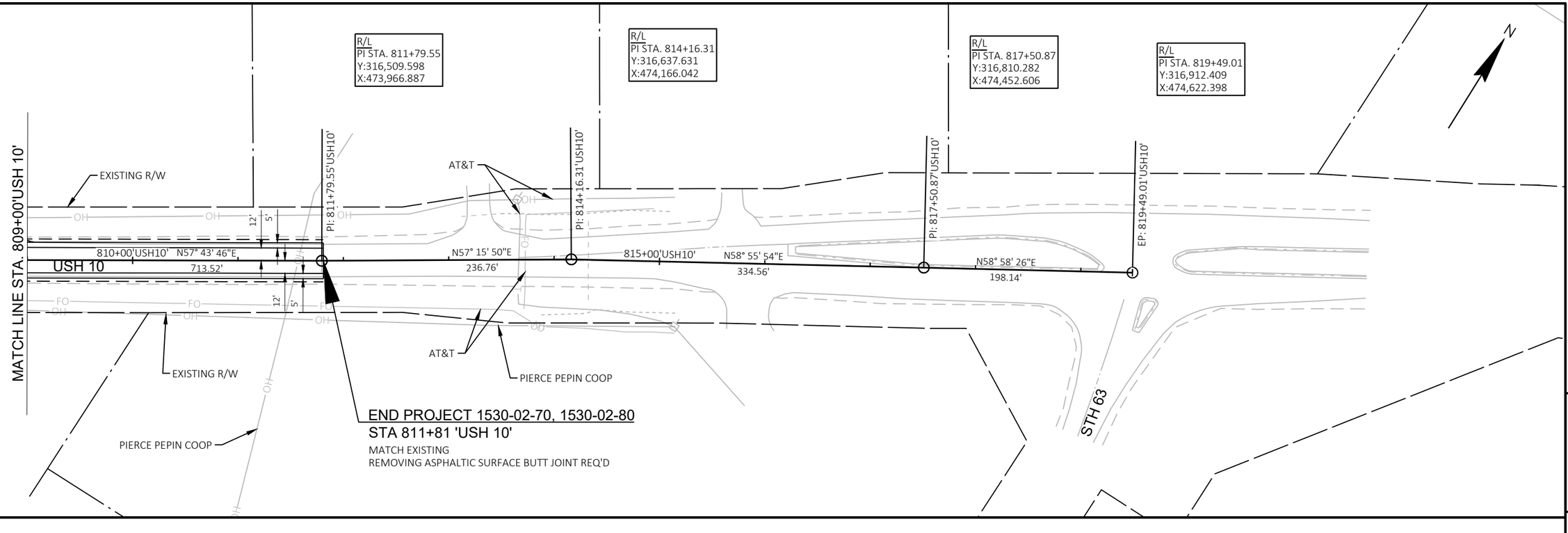
CLEARING AND GRUBBING REQ'D
STA 792+17 TO 795+30, RT

AT&T

STA. 796+10 - STA. 804+03 RT.
MGS GUARDRAIL 3, MGS GUARDRAIL 3K, MGS GUARDRAIL TERMINAL EAT, AND MOW STRIP REQUIRED. SEE CROSS SECTIONS FOR POST LOCATIONS AND APPROACH TAPER LENGTH

PROJECT NO: 1530-02-70, 1530-02-80	HWY: USH 10	COUNTY: PIERCE	PLAN SHEETS	SHEET 122	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 021224
PLOT DATE : 7/14/2023 2:35 PM
PLOT BY : KL ENGINEERING, INC.
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44



5

5

LEGEND

- SILT FENCE
- EROSION MAT CLASS I TYPE B
- EROSION MAT URBAN CLASS I TYPE B
- EROSION MAT CLASS III TYPE C
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECKS
- RIPRAP
- SURFACE WATER FLOW
- CLEANING DITCH

Standard Detail Drawing List

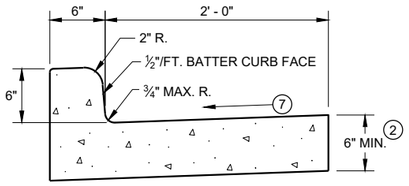
08D01-23A	CONCRETE CURB & GUTTER
08D01-23B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D02-08A	CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES
08D02-08B	CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES
08D02-08C	CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES
08D03-09A	CONCRETE SURFACE DRAINS DROP INLET TYPE AT STRUCTURES
08D03-09B	CONCRETE SURFACE DRAINS DROP INLET 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
08E14-01	TRACKING PAD
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
12A03-10	NAME PLATE (STRUCTURES)
13A03-07	CONCRETE PAVEMENT SHOULDERS
13A08-02	TRANSVERSE RUMBLE STRIPS, ASPHALTIC
13A10-03A	SHOULDER 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
13A11-04D	CENTERLINE RUMBLE STRIPS - INTERSECTIONS, DRIVEWAYS, BRIDGES, RAILROADS
13B02-09A	CONCRETE PAVEMENT APPROACH SLAB
13B02-09B	STRUCTURAL APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB
13C01-19	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
13C08-02	CONCRETE PAVEMENT PARTIAL DEPTH REPAIR
13C09-17A	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C09-17B	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C09-17C	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C18-08A	CONCRETE PAVEMENT JOINTING
13C18-08C	CONCRETE PAVEMENT JOINT TYPES
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 THRIE BEAM TRANSITION (MGS)
14B45-05B	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05C	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05D	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05E	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05F	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05G	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05H	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05I	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05J	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05K	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05L	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
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)

6

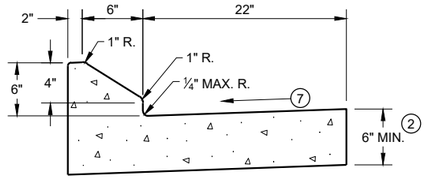
Standard Detail Drawing List

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
15B01-08A	FENCE WOVEN WIRE
15B01-08B	FENCE WOVEN WIRE
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
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
15C06-12	SIGNING & MARKING FOR TWO LANE BRIDGES
15C07-15A	PAVEMENT MARKING SYMBOLS
15C07-15B	PAVEMENT MARKING WORDS
15C07-15C	PAVEMENT MARKING ARROWS
15C08-23A	PERMANENT LONGITUDINAL PAVEMENT MARKINGS
15C08-23B	TEMPORARY LONGITUDINAL PAVEMENT MARKING
15C08-23C	PAVEMENT MARKING (TURN LANES)
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
15C18-08A	MEDIAN ISLAND MARKING PAVEMENT MARKINGS
15C18-08B	MEDIAN ISLAND MARKING MEDIAN ISLAND NOSE
15C18-08C	MEDIAN PAVEMENT MARKINGS DOUBLE ARROW WARNING SIGN PLACEMENT
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)
15D28-04	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
15D39-02	TRAFFIC CONTROL, DROP-OFF SIGNING
15D43-02	TRAFFIC CONTROL, SHORT DURATION MOBILE OPERATIONS
15D44-02	TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH MILLED SURFACES
15D48-01	TRAFFIC CONTROL, LANE SHIFT IN FLAGGING OPERATION
15D51-01	TRAFFIC CONTROL, MOBILE OPERATIONS ON AN UNDIVIDED ROADWAY

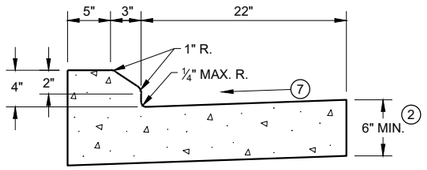
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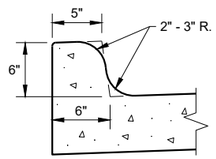
TYPES A (1) & D



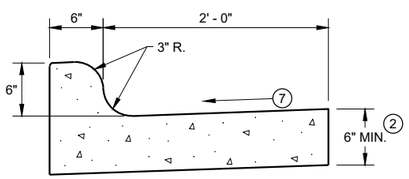
6" SLOPED CURB TYPES G (1) & J



4" SLOPED CURB TYPES G (1) & J

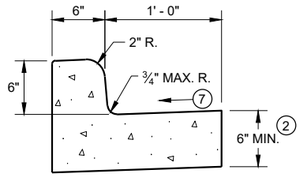


TYPES K (1) & L
(OPTIONAL CURB SHAPE)



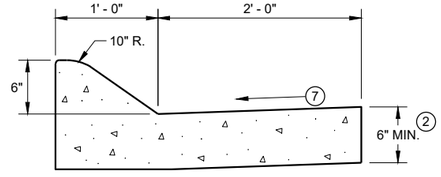
TYPES K (1) & L

CONCRETE CURB AND GUTTER 30"

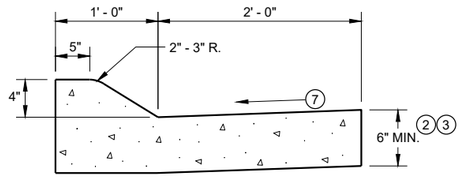


TYPES A (1) & D

CONCRETE CURB AND GUTTER 18"

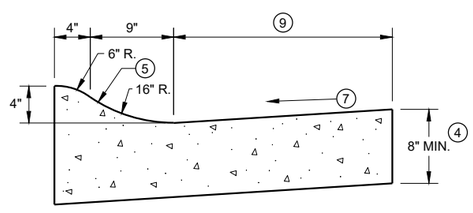


6" SLOPED CURB TYPES A (1) & D



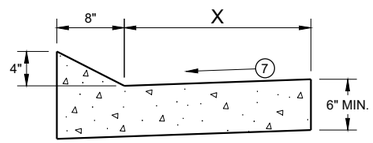
4" SLOPED CURB TYPES A (1) & D

CONCRETE CURB AND GUTTER 36"



4" SLOPED CURB TYPES R (1) & T

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

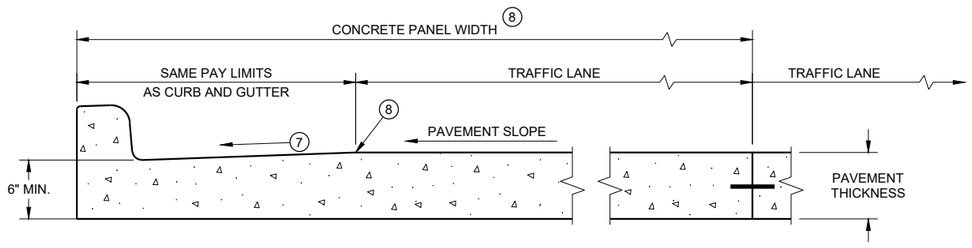


TYPES TBT & TBTT (1)

CONCRETE CURB AND GUTTER

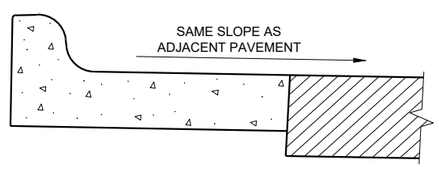
PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE

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



PARTIAL SECTION OF PAVEMENT * WITH INTEGRAL CURB AND GUTTER

* BIKE LANE IS NOT SHOWN



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

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

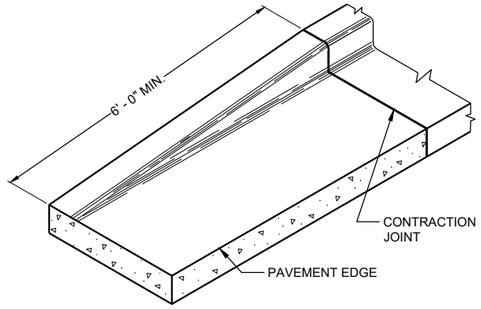
(8) INCLUDE LONGITUDINAL JOINT AND TIE BARS ALONG LANE EDGE WHEN CONCRETE PANEL WIDTH EXCEEDS THE MAXIMUM WIDTH PER TABLE BELOW. LONGITUDINAL JOINT(S) ARE NOT ALLOWED WITHIN TRAFFIC LANES AND BIKE LANES. LONGITUDINAL JOINT MAY BE SAWED.

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

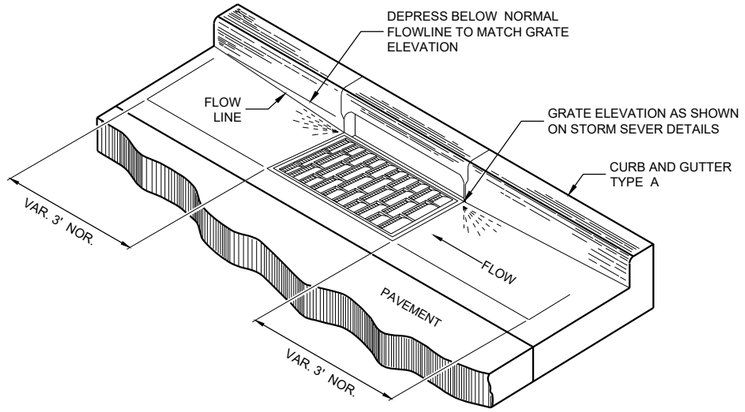
CONCRETE CURB AND GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
SDD 08D01 - 23a



END SECTIONCURB AND GUTTER



DETAIL OF CURB AND GUTTER AT INLETS

(TYPICAL H INLET COVER SHOWN)

GENERAL NOTES

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

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

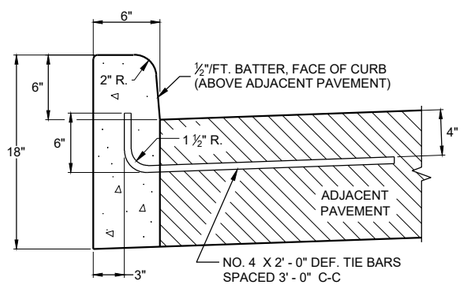
UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2' - 0" BEHIND THE BACK OF CURBS.

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

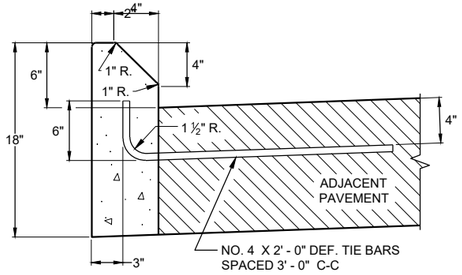
(2) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

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

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

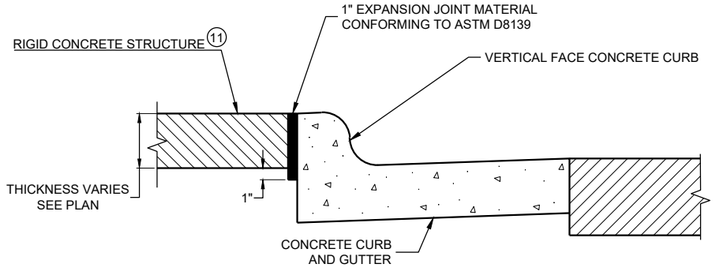


TYPES A (1) & D

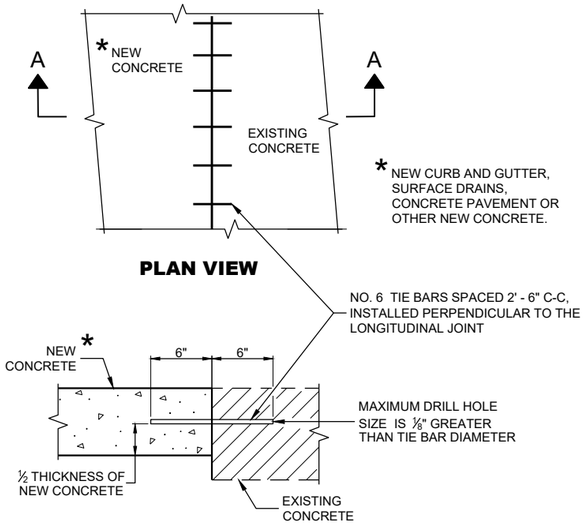


TYPES G (1) & J

CONCRETE CURB



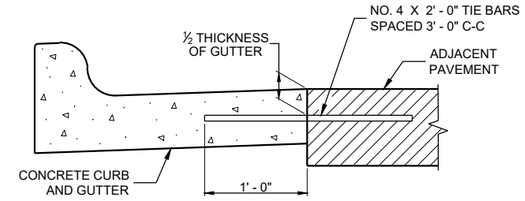
EXPANSION JOINT DETAIL FOR VERTICAL CURB ABUTTING A RIGID STRUCTURE (11)



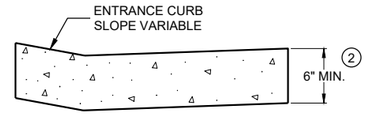
PLAN VIEW

SECTION A - A

TIE BARS DRILLED INTO EXISTING PAVEMENT



TYPICAL TIE BAR LOCATION (1)



DRIVEWAY ENTRANCE CURB (10)

(WHEN DIRECTED BY THE ENGINEER)

CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 — DATE
/S/ Rodnery Taylor — ROADWAY STANDARDS DEVE ENGINEER

FHWA

6

SDD08D01 - 23b

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)

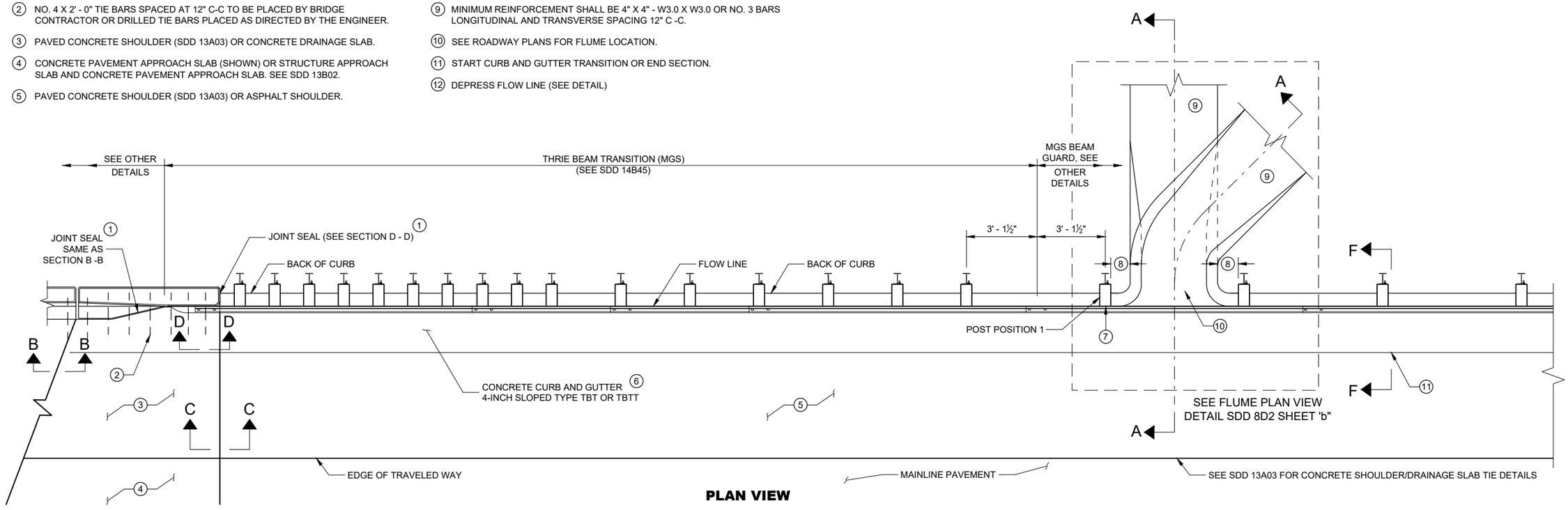
(8) CENTER FLUME BETWEEN POSTS. 6-INCH MINIMUM SEPARATION FROM OUTSIDE EDGE OF FLUME TO POSTS.

(9) MINIMUM REINFORCEMENT SHALL BE 4" X 4" - W3.0 X W3.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C -C.

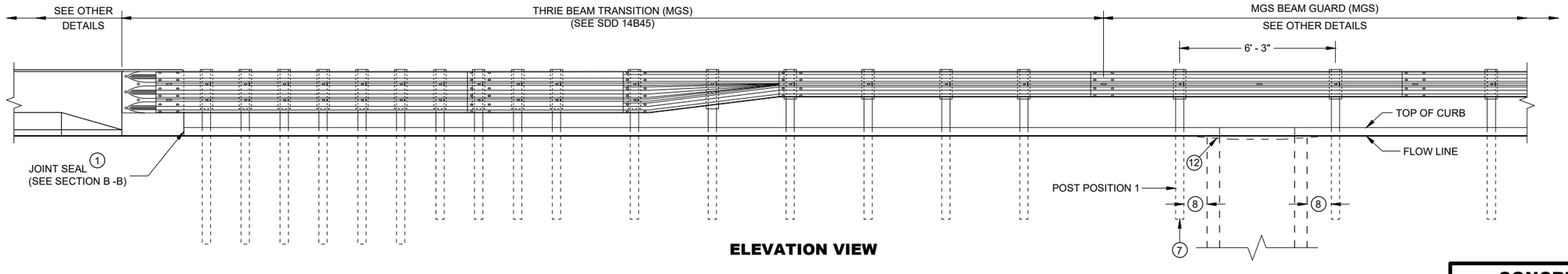
(10) SEE ROADWAY PLANS FOR FLUME LOCATION.

(11) START CURB AND GUTTER TRANSITION OR END SECTION.

(12) DEPRESS FLOW LINE (SEE DETAIL)



PLAN VIEW



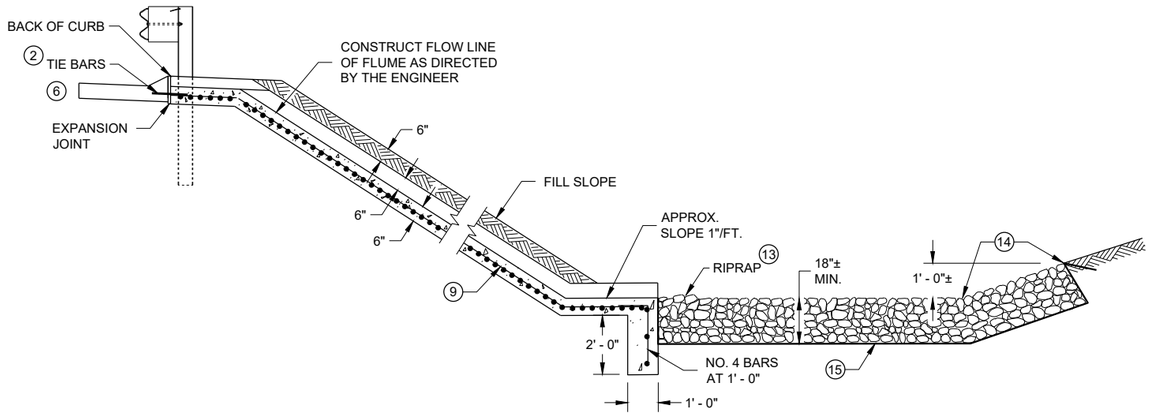
ELEVATION VIEW

CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES

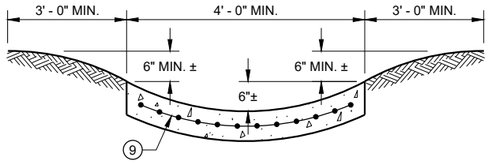
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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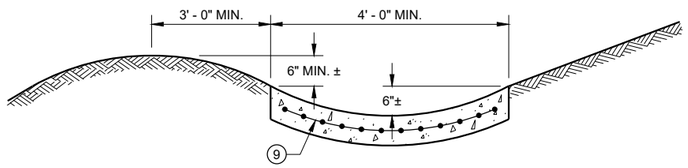
SDD 08D02 - 08a



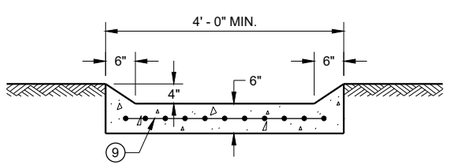
SECTION A - A



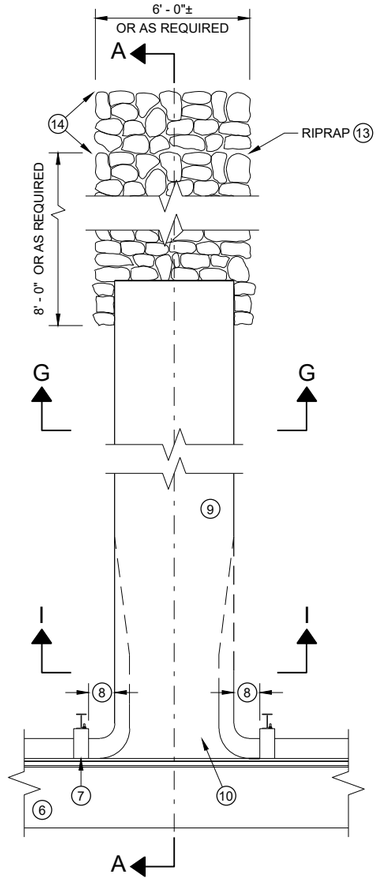
SECTION G - G



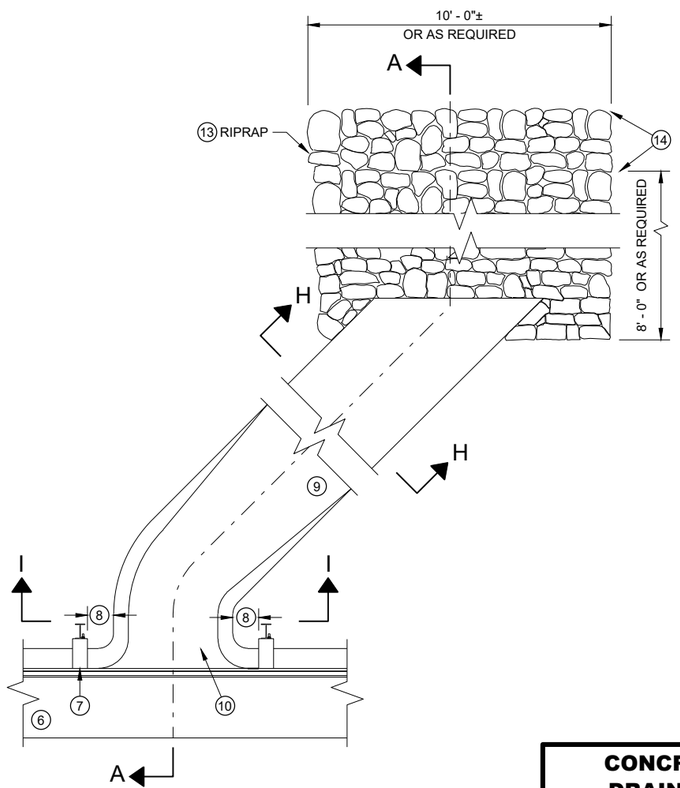
SECTION H - H



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.

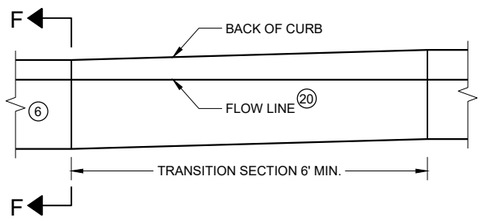
ALL STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

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.

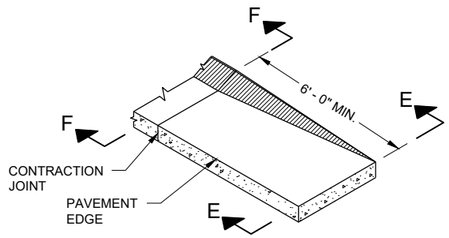
CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

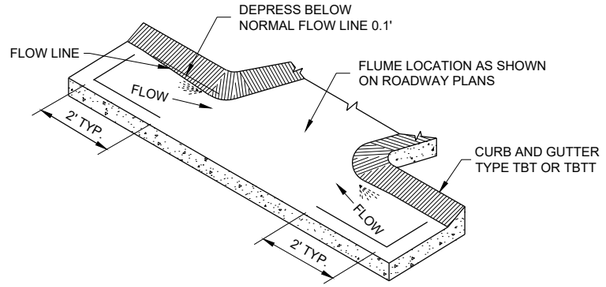
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SDD 08D02 - 08b



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

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.

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(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.

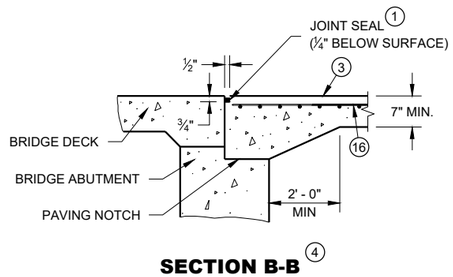
(17) MSG THRIE BEAM TRANSITION POST 1. SEE SDD 14B45 FOR ADDITIONAL CONSTRUCTION DETAILS AND ACCEPTABLE MATERIALS.

(18) MAINTAIN WIDTH, THICKNESS AND CROSS SLOPE OF ADJACENT TYPE TBT OR TBTT CURB. SEE NOTE 6 FOR TIE BAR SPACING.

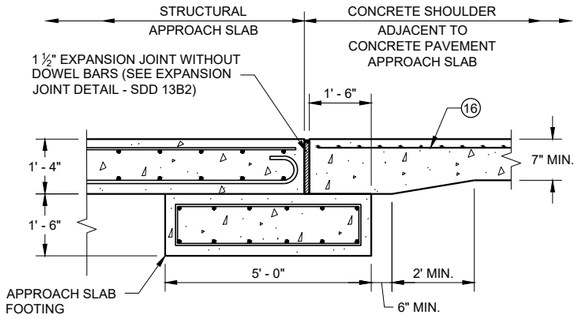
(19) ALIGN FACE OF POST BLOCK WITH FLOW LINE.

(20) MAINTAIN FLOW LINE AT EDGE OF PAVEMENT/FACE OF BEAM GUARD AS APPLICABLE.

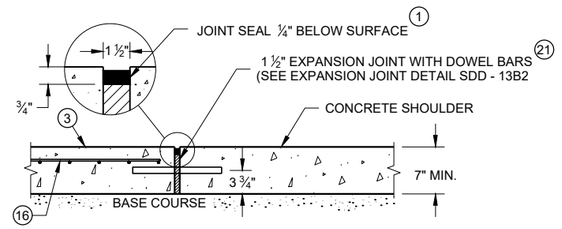
(21) DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING HMA PAVEMENTS.



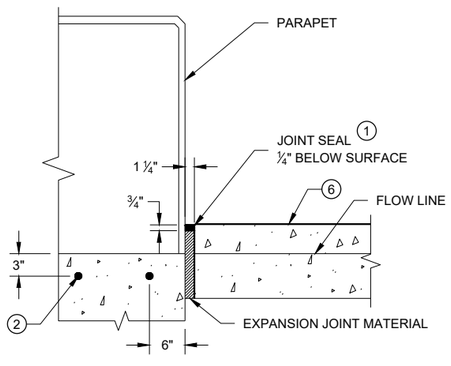
SECTION B-B (4)



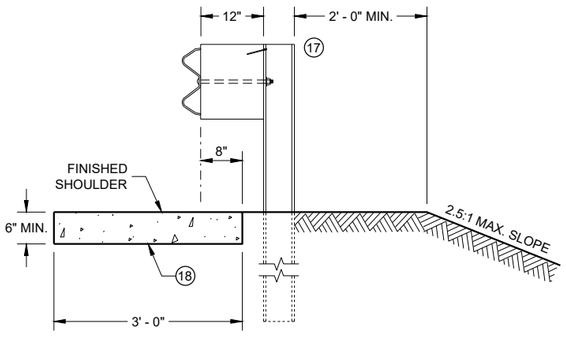
SECTION C - C
JOINT DETAIL FOR BRIDGE WITH STRUCTURAL APPROACH SLAB AND CONCRETE APPROACH SLAB



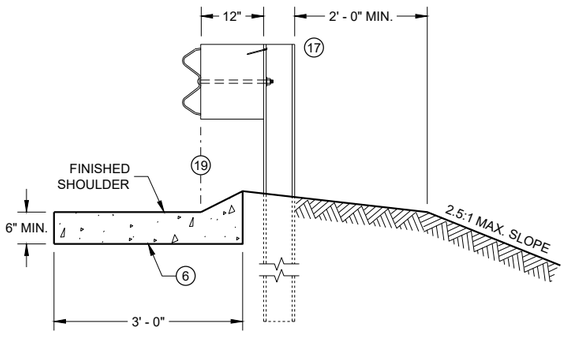
SECTION C - C
JOINT DETAIL FOR BRIDGE APPROACH WITH CONCRETE SHOULDERS



SECTION D - D



SECTION E - E



SECTION F - F

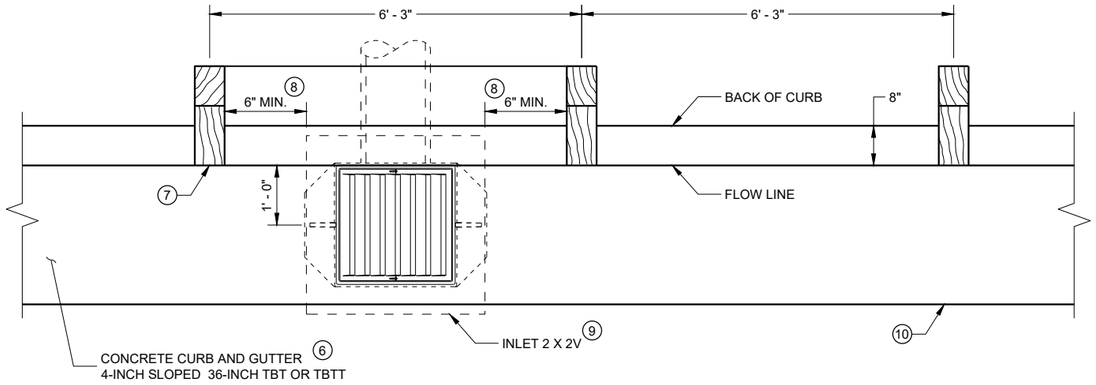
CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

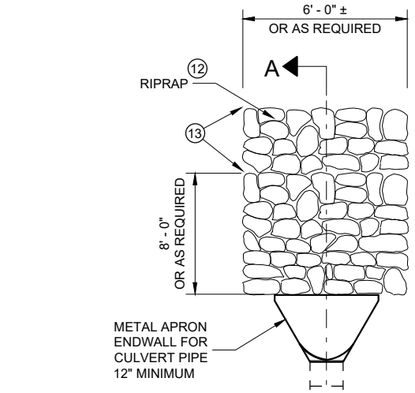
FHWA

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SDD 08D02 - 08c



INLET PLAN VIEW

(NOTE: RAIL NOT SHOWN FOR CLARITY)



GENERAL NOTES

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(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 DRAINAGE STRUCTURE BEFORE MSG THRIE BEAM TRANSITION POST 1 (SEE SDD 14B45)

(8) CENTER DRAINAGE STRUCTURE BETWEEN POSTS. 6-INCH MINIMUM SEPARATION FROM OUTSIDE WALL OF DRAINAGE STRUCTURE TO POSTS.

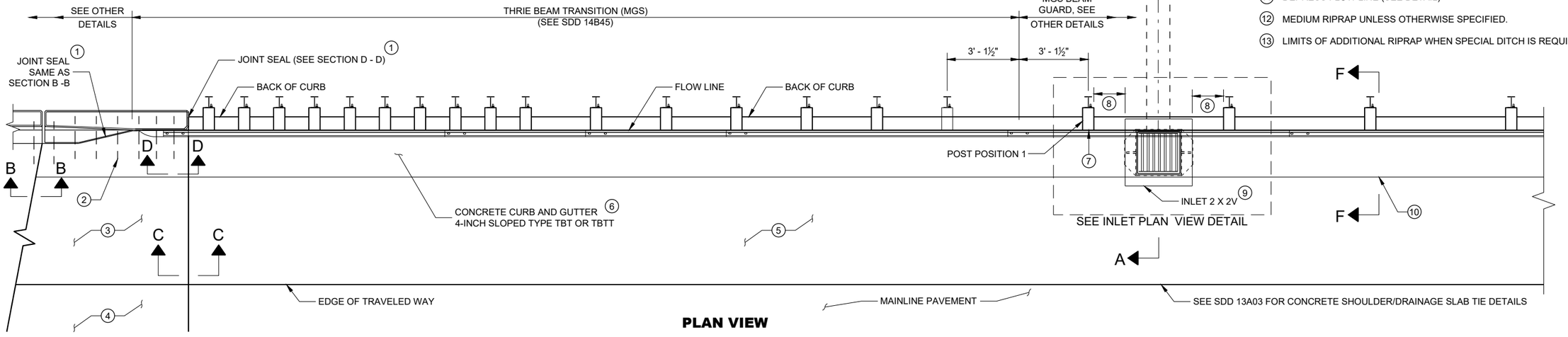
(9) SEE SDD 08A05 AND 08C07 FOR DETAILS. SEE ROADWAY PLANS FOR LOCATION.

(10) START CURB AND GUTTER TRANSITION OR END SECTION.

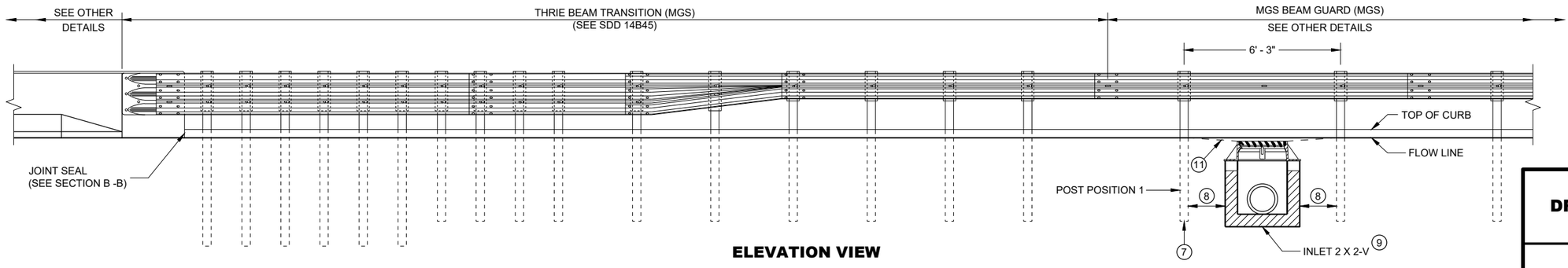
(11) DEPRESS FLOW LINE (SEE DETAIL)

(12) MEDIUM RIPRAP UNLESS OTHERWISE SPECIFIED.

(13) LIMITS OF ADDITIONAL RIPRAP WHEN SPECIAL DITCH IS REQUIRED.



PLAN VIEW



ELEVATION VIEW

CONCRETE SURFACE DRAINS DROP INLET TYPE AT STRUCTURES

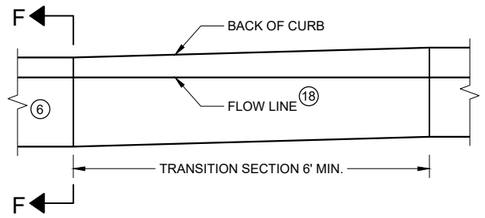
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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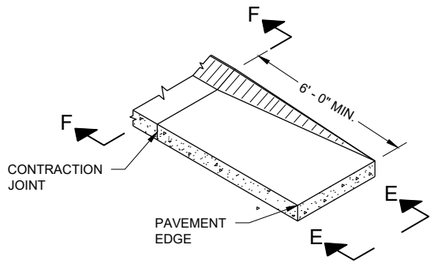
SDD 08D03 - 09a

6

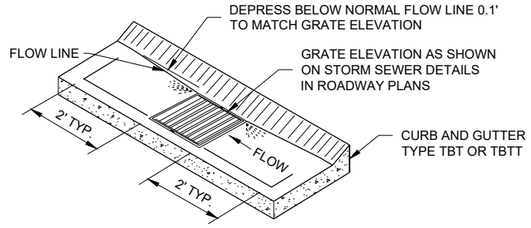
SDD 08D03 - 09a



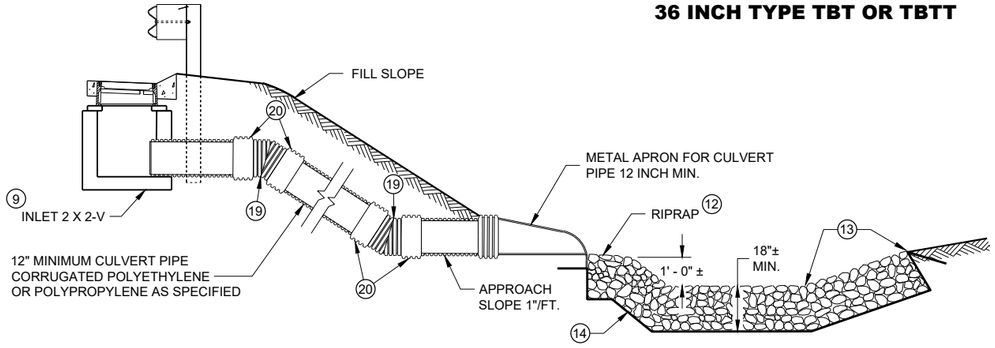
CURB AND GUTTER TRANSITION SECTION CONCRETE CURB AND GUTTER 4-INCH SLOPED 36 INCH TYPE TBT OR TBTT



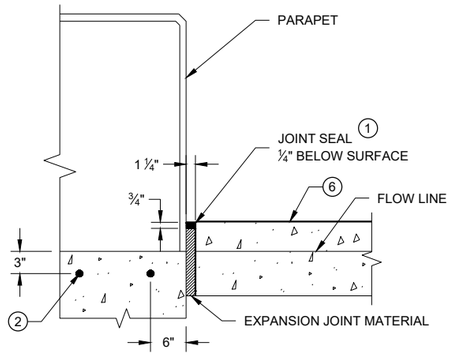
CURB AND GUTTER END SECTION CONCRETE CURB AND GUTTER 4-INCH SLOPED 36 INCH TYPE TBT OR TBTT



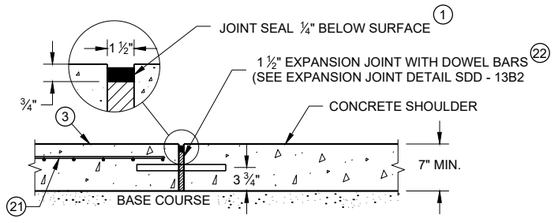
CURB AND GUTTER FLOW LINE DEPRESSION AT INLETS CONCRETE CURB AND GUTTER 4-INCH SLOPED 36 INCH TYPE TBT OR TBTT



SECTION A - A

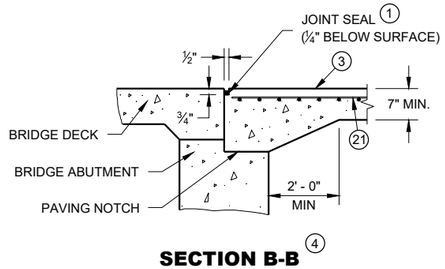


SECTION D - D

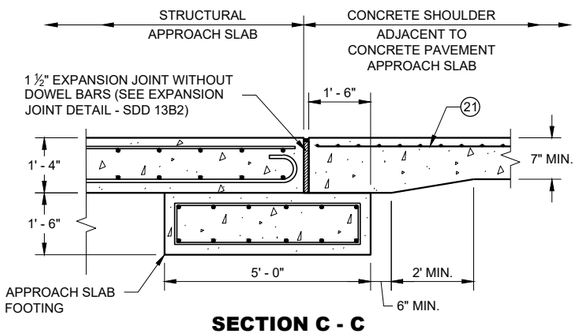


SECTION C - C

JOINT DETAIL FOR BRIDGE APPROACH WITH CONCRETE SHOULDERS

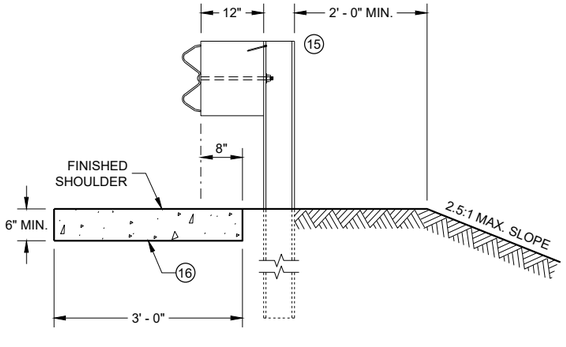


SECTION B-B 4

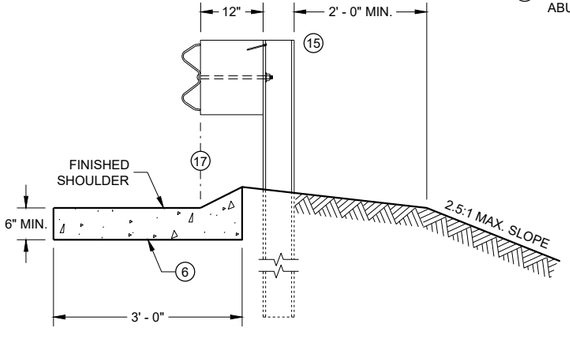


SECTION C - C

JOINT DETAIL FOR BRIDGE WITH STRUCTURAL APPROACH SLAB AND CONCRETE APPROACH SLAB



SECTION E - E



SECTION F - F

GENERAL NOTES

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(7) PLACE DRAINAGE STRUCTURE BEFORE MSG THRIE BEAM TRANSITION POST 1 (SEE SDD 14B45)

(8) CENTER DRAINAGE STRUCTURE BETWEEN POSTS. 6-INCH MINIMUM SEPARATION FROM OUTSIDE WALL OF DRAINAGE STRUCTURE TO POSTS.

(9) SEE SDD 08A05 AND 08C07 FOR DETAILS. SEE ROADWAY PLANS FOR LOCATION.

(10) START CURB AND GUTTER TRANSITION OR END SECTION.

(11) DEPRESS FLOW LINE (SEE DETAIL)

(12) MEDIUM RIPRAP UNLESS OTHERWISE SPECIFIED.

(13) LIMITS OF ADDITIONAL RIPRAP WHEN SPECIAL DITCH IS REQUIRED.

(14) GEOTEXTILE TYPE HR.

(15) MSG THRIE BEAM TRANSITION POST 1. SEE SDD 14B45 FOR ADDITIONAL CONSTRUCTION DETAILS AND ACCEPTABLE MATERIALS.

(16) MAINTAIN WIDTH, THICKNESS AND CROSS SLOPE OF ADJACENT TYPE TBT OR TBTT CURB. SEE NOTE 6 FOR TIE BAR SPACING.

(17) ALIGN FACE OF POST BLOCK WITH FLOW LINE.

(18) MAINTAIN FLOW LINE AT EDGE OF PAVEMENT/FACE OF BEAM GUARD AS APPLICABLE.

(19) MANUFACTURER SUPPLIED BEND.

(20) MANUFACTURER SUPPLIED EXTERNAL MECHANICAL COUPLING OR A MANUFACTURER RECOMMENDED COUPLING WITH A MASTIC IMPREGNATED GEOTEXTILE WRAP AND MECHANICAL FASTENING BANDS.

(21) MINIMUM REINFORCEMENT SHALL BE 6" X 6" - W4.0 X W4.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C - C.

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

CONCRETE SURFACE DRAINS DROP INLET TYPE AT STRUCTURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE ENGINEER

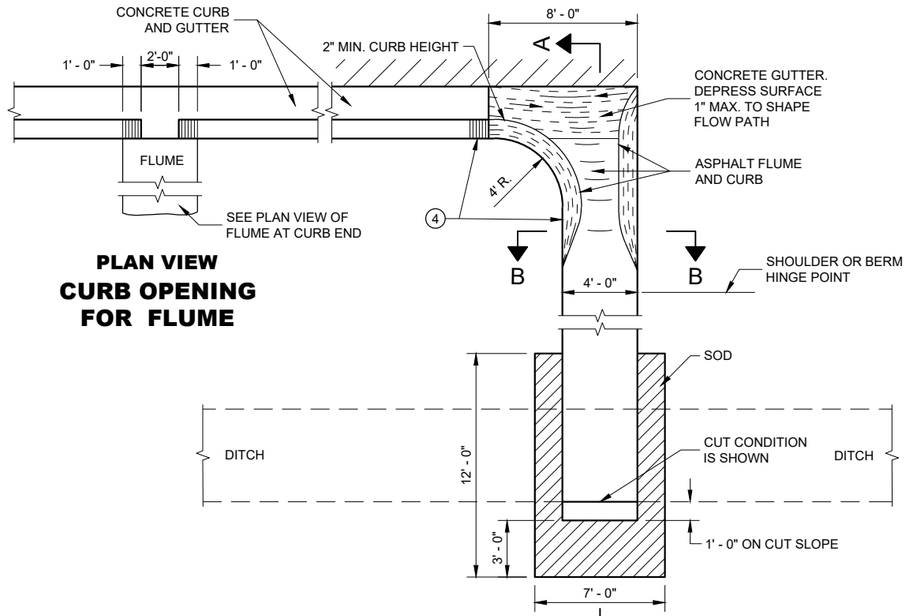
FHWA

6

SDD 08D03 - 09b

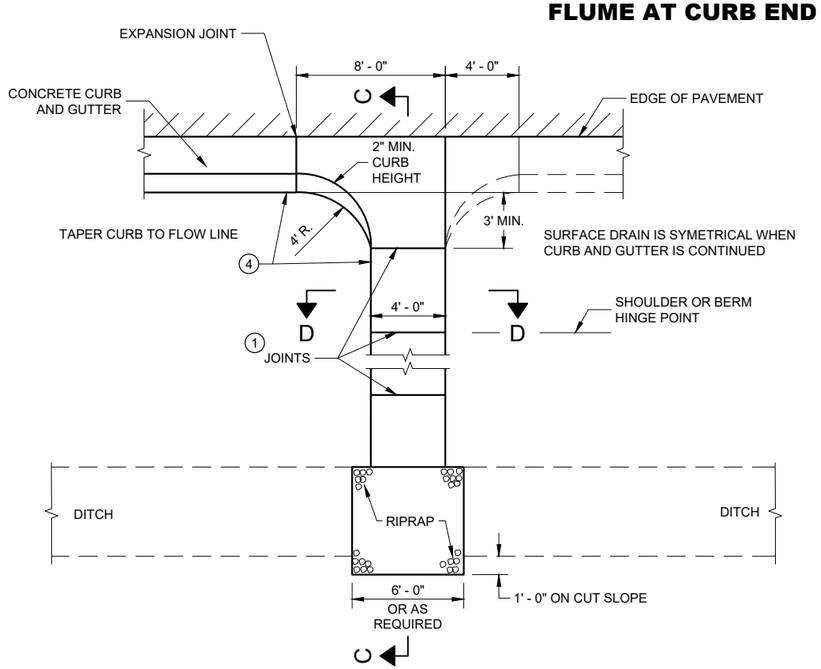
NOTE: TAPER CURB ENDS TO GUTTER IN 1' - 0"

ASPHALTIC FLUME



PLAN VIEW
CURB OPENING FOR FLUME

PLAN VIEW
FLUME AT CURB END



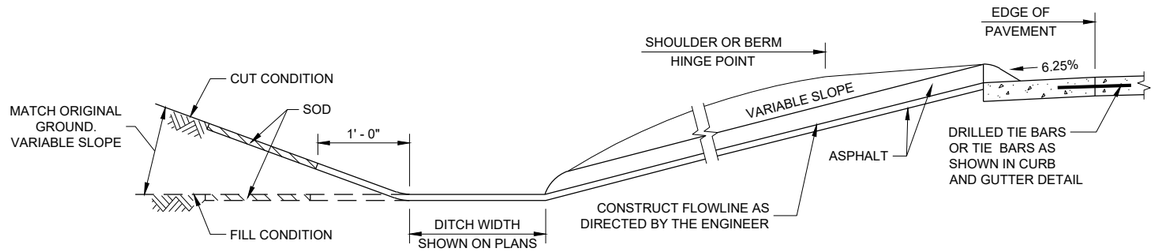
PLAN VIEW
CONCRETE SURFACE DRAIN

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.

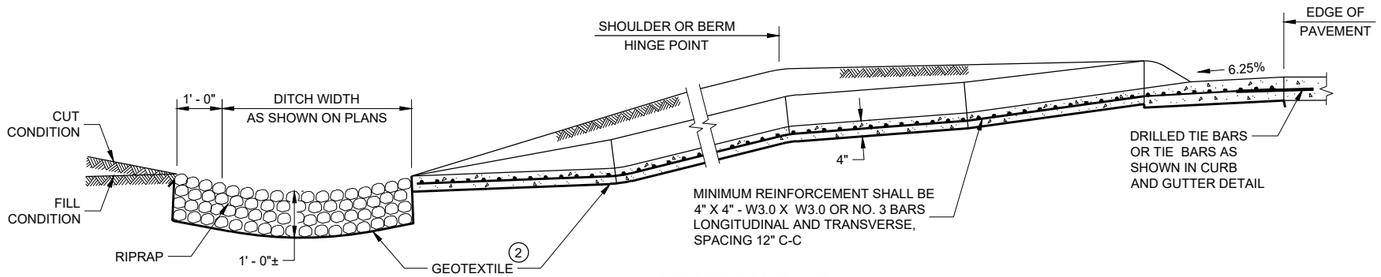
4" X 4" - W3.0 X W3.0 CONCRETE REINFORCEMENT SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

1. JOINTS SHALL BE ⅛" TO ¼" WIDE BY 1½" 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.

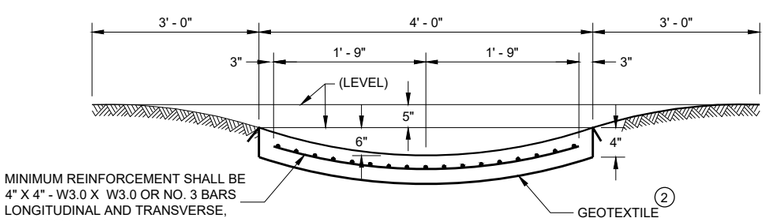


SECTION A - A

SECTION B - B



SECTION C - C



SECTION D - D

CONCRETE SURFACE DRAINS AND ASPHALTIC FLUMES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS DEVE ENGINEER

FHWA

6

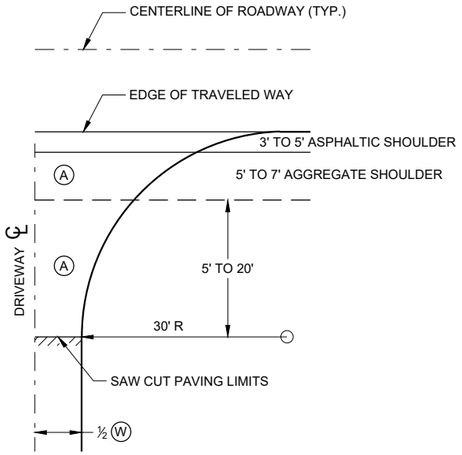
SDD 08D04 - 07

6

SDD 08D04 - 07

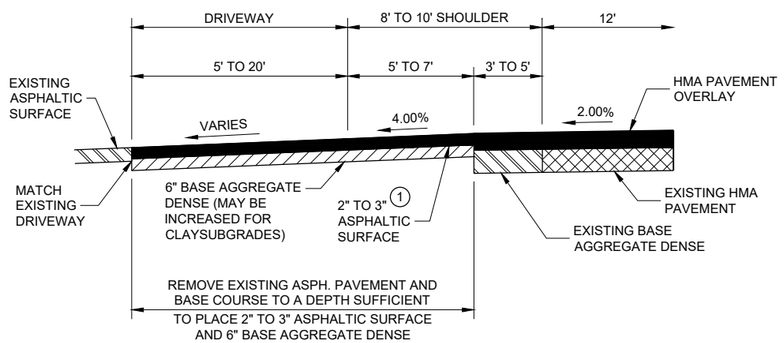
GENERAL NOTES

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



PLAN VIEW

HALF SECTION



PROFILE VIEW

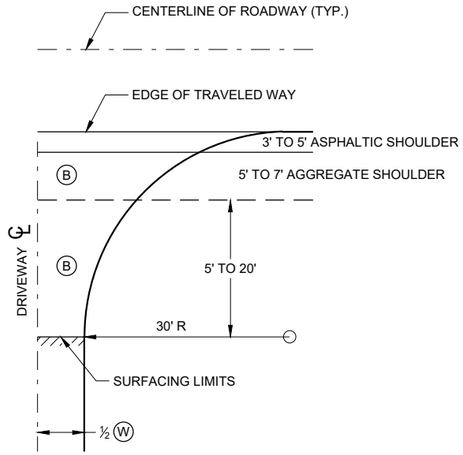
RURAL ENTRANCE WITH ASPHALTIC SURFACE

RESURFACING PROJECTS

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

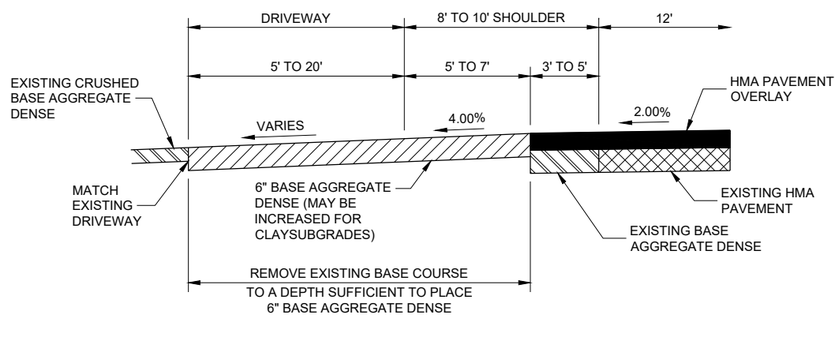
(B) : PAID FOR AS BASE AGGREGATE DENSE 1 ¼" (TON)

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



PLAN VIEW

HALF SECTION



PROFILE VIEW

RURAL ENTRANCE WITH AGGREGATE SURFACE

6" BASE AGGREGATE DENSE

RESURFACING PROJECTS

DRIVEWAYS WITHOUT CURB AND GUTTER RESURFACING PROJECTS RURAL

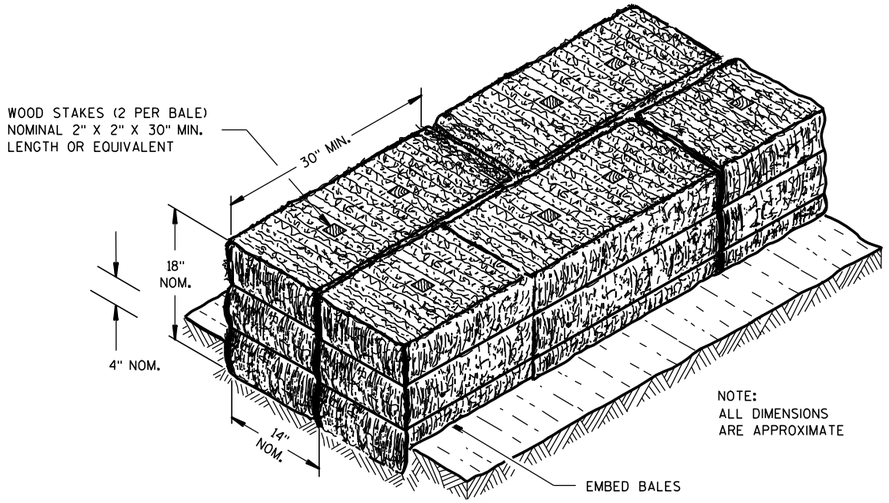
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

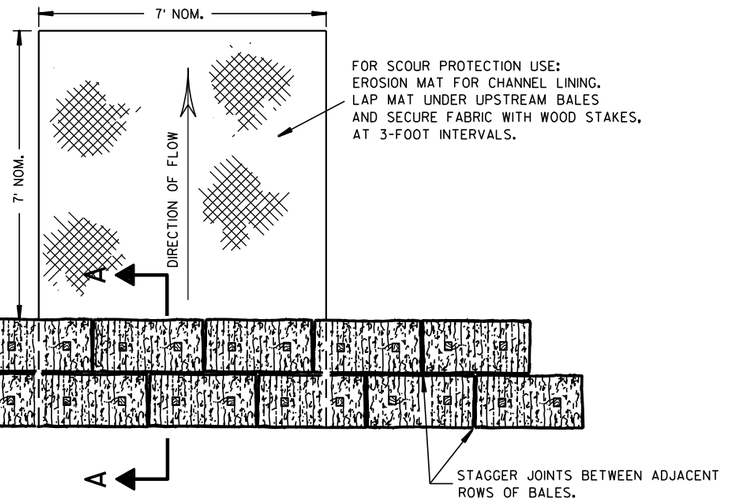
FHWA

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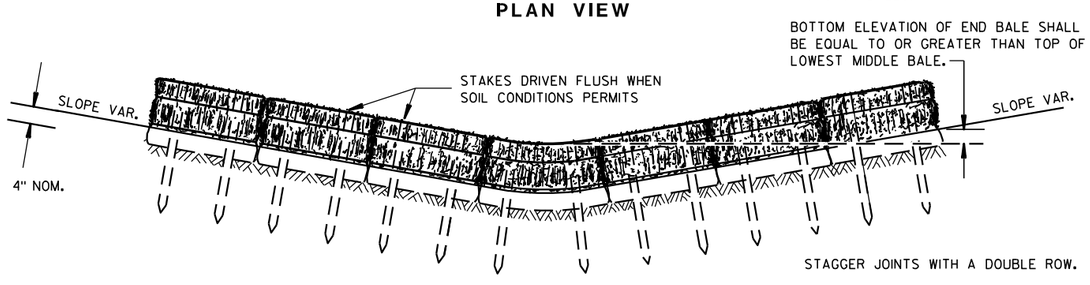
SDD 08D22 - 01



SECTION A-A



PLAN VIEW



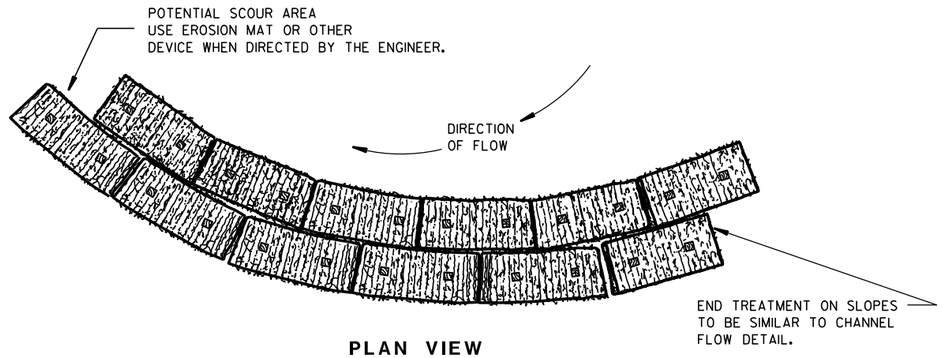
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

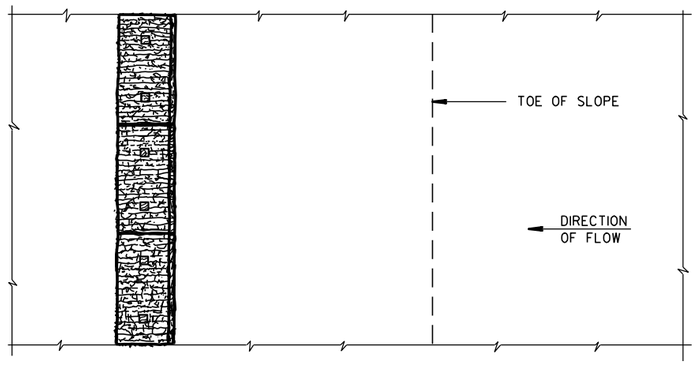
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

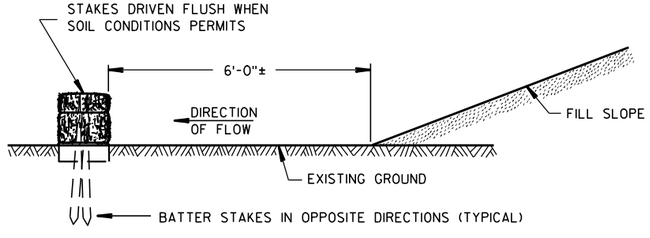


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

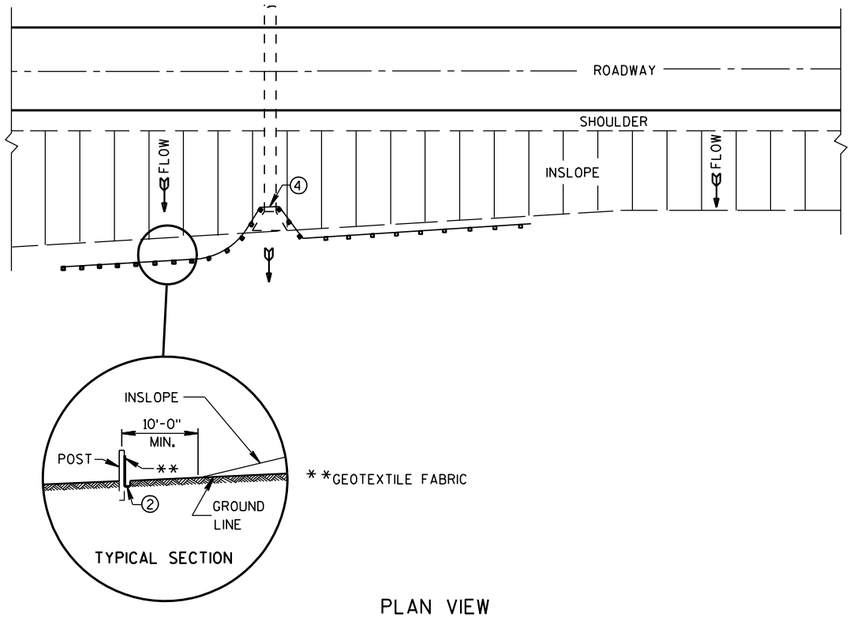
APPROVED
6/04/02 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 8 E 8-3

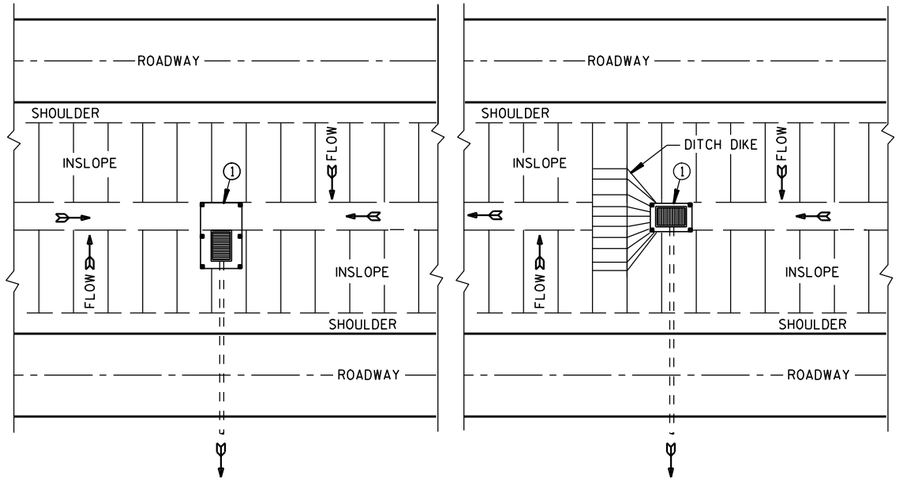
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S.D.D. 8 E 8-3



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

GENERAL NOTES

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

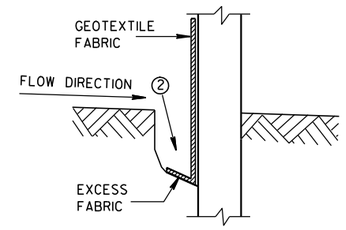
① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

② FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.

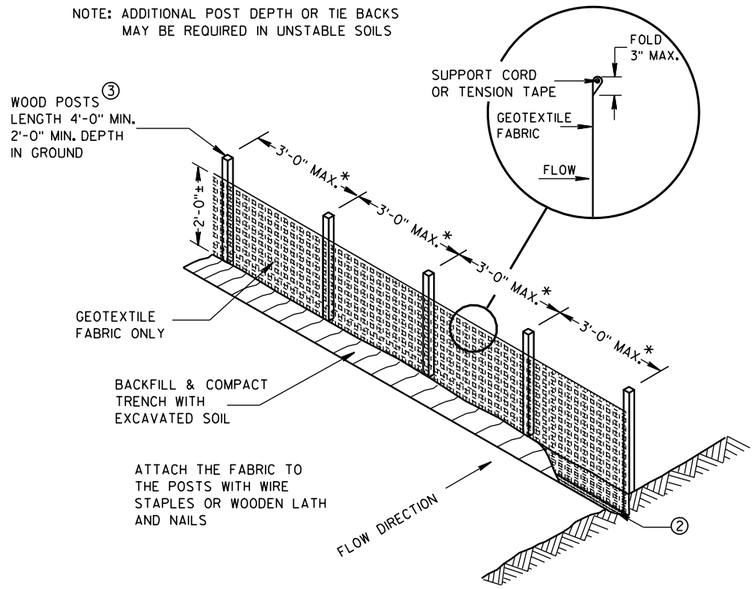
③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

④ SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.

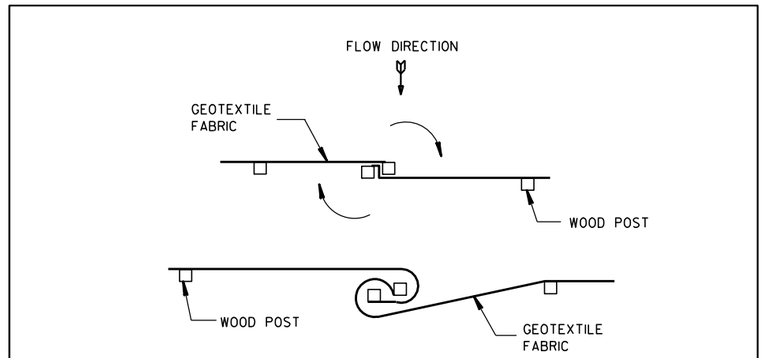
⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



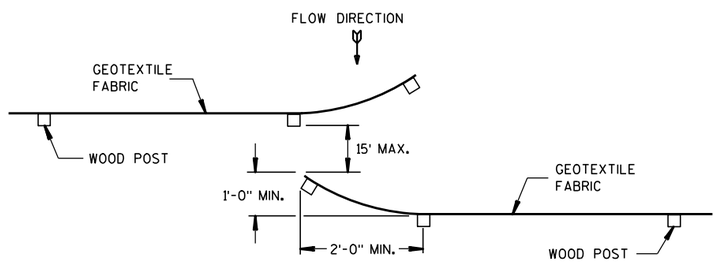
TRENCH DETAIL



SILT FENCE

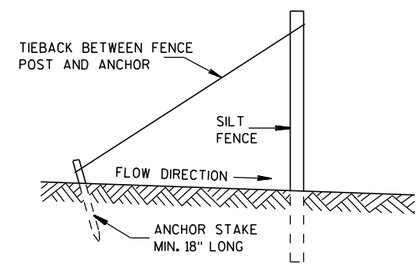


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE ⑤



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

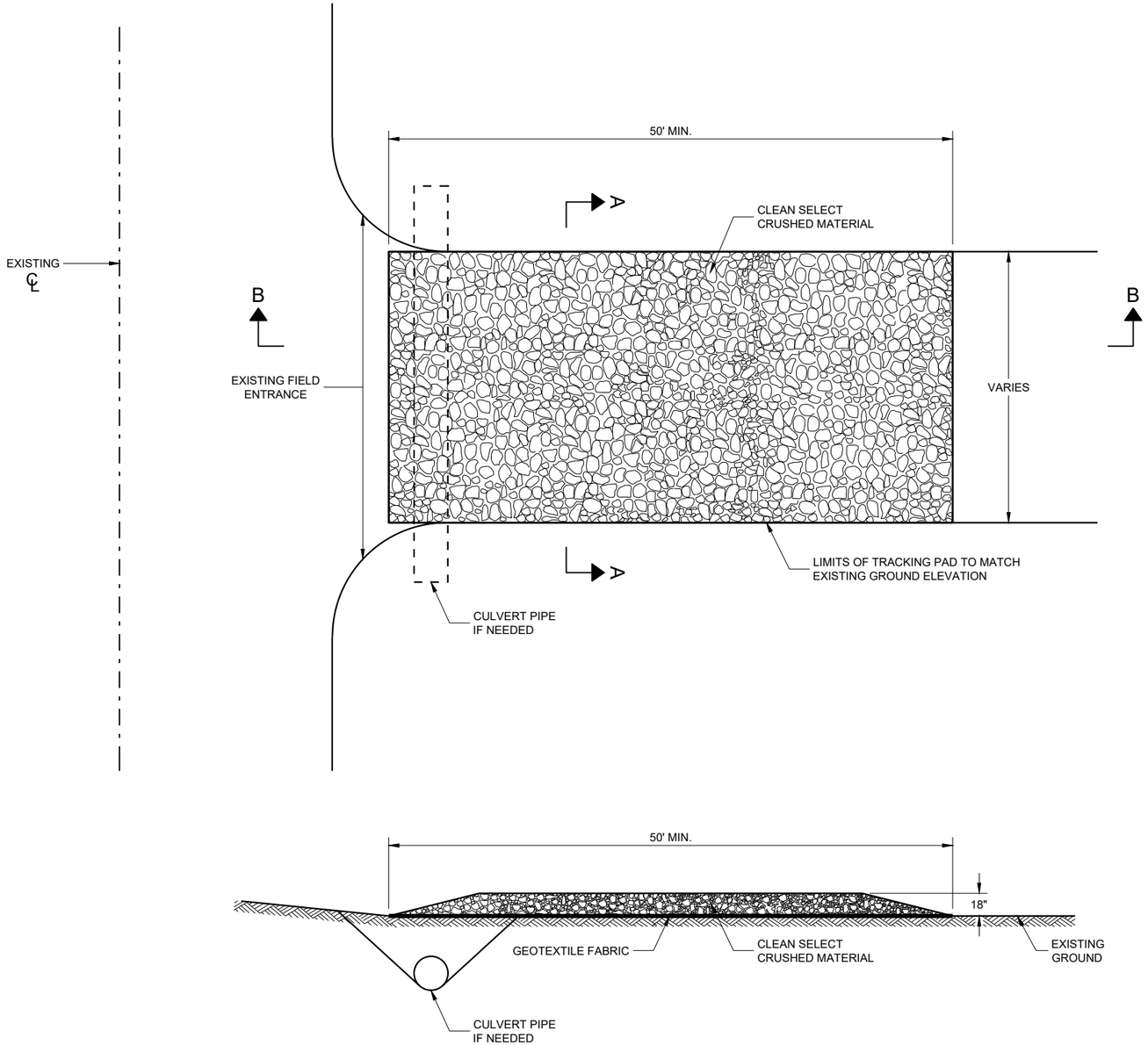
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 8 E 9-6

6

S.D.D. 8 E 9-6



SECTION B - B

GENERAL NOTES

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

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

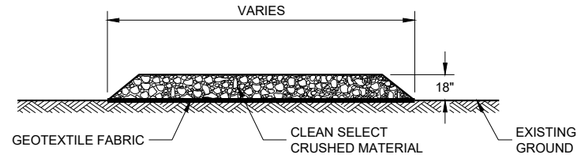
TRACKING PAD TO BE REMOVED AFTER CONSTRUCTION IS COMPLETED.

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

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

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

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



SECTION A - A

TRACKING PAD

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

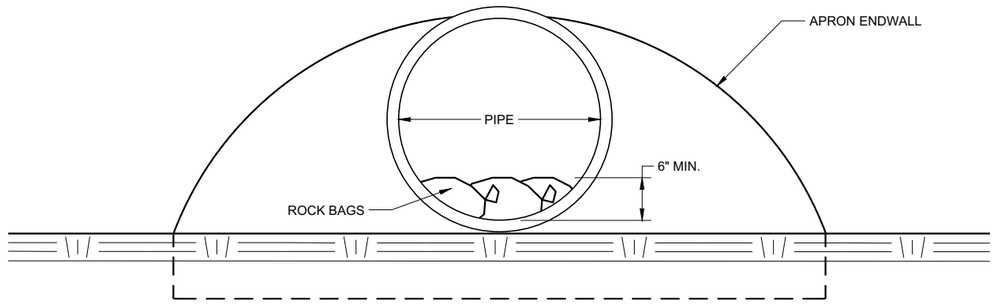
3/24/2011
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVE ENGINEER

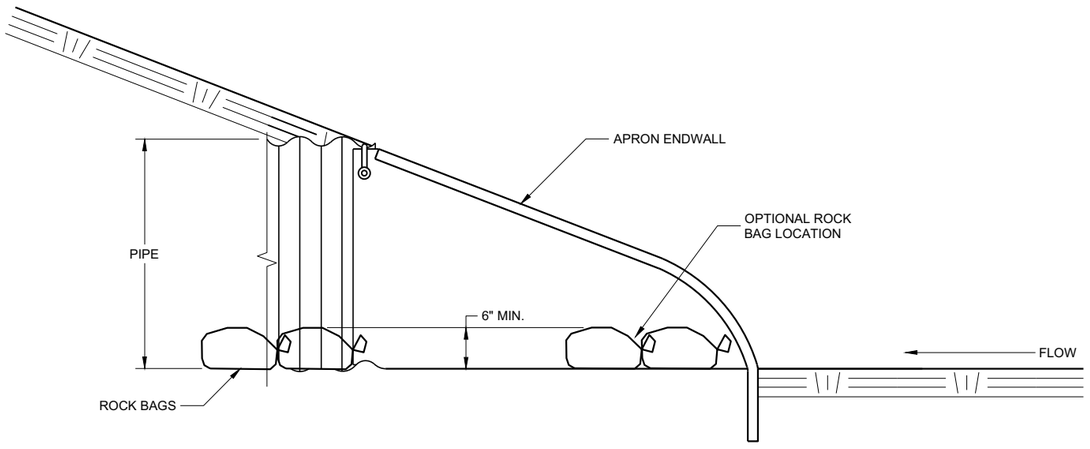
FHWA

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SDD 08E14 - 01



END VIEW



SIDE VIEW

CULVERT PIPE CHECK

(INSTALL ON INLET END ONLY)

CULVERT PIPE CHECK

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2019
DATE

/S/ Daniel Schave
EROSION CONTROL ENGI

FHWA

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SDD 08E15 - 01

6

SDD 08E15 - 01

METAL APRON ENDWALLS

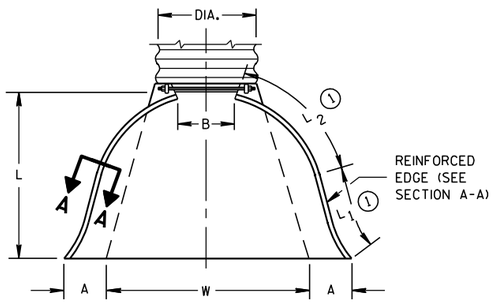
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4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

× EXCEPT CENTER PANEL SEE GENERAL NOTES

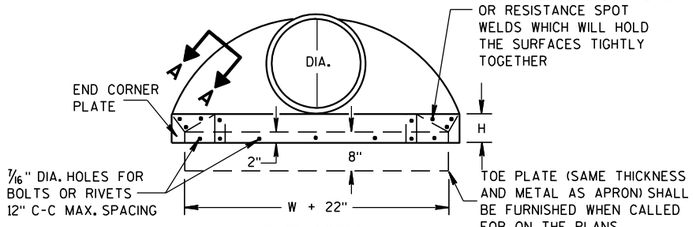
REINFORCED CONCRETE APRON ENDWALLS

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

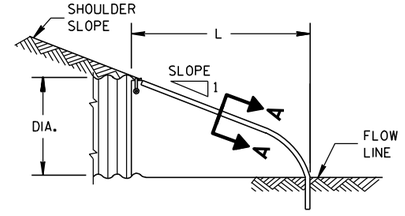
*MINIMUM
**MAXIMUM



PLAN VIEW

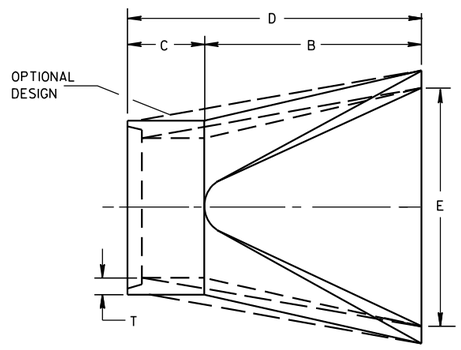


END VIEW

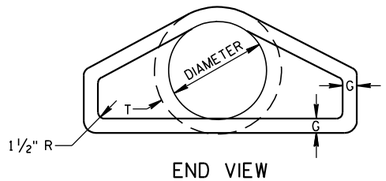


SIDE ELEVATION

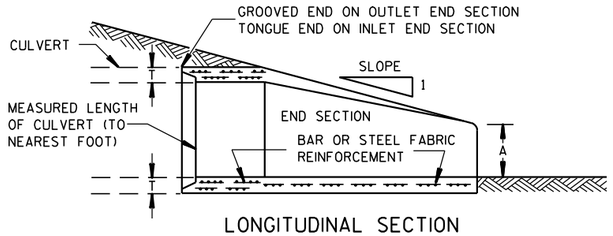
METAL ENDWALLS



PLAN

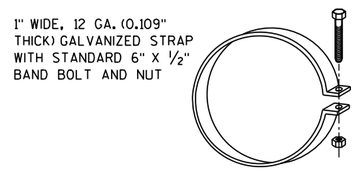


END VIEW



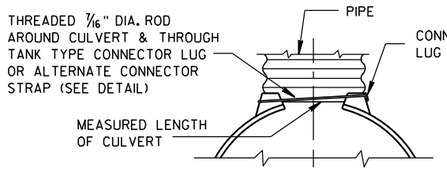
LONGITUDINAL SECTION

CONCRETE ENDWALLS

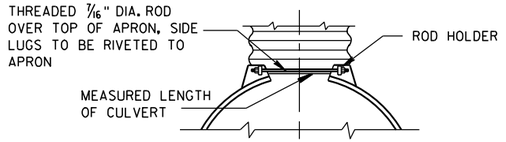


ALTERNATE FOR TYPE 1 CONNECTION

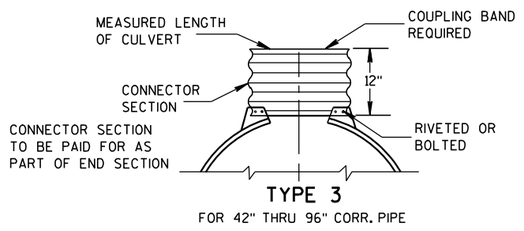
END SECTION CONNECTOR STRAP



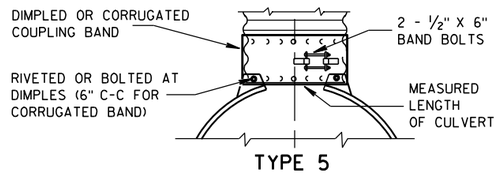
TYPE 1
FOR 12" THRU 24" CORR. PIPE



TYPE 2
FOR 30" THRU 96" CORR. PIPE



TYPE 3
FOR 42" THRU 96" CORR. PIPE



TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

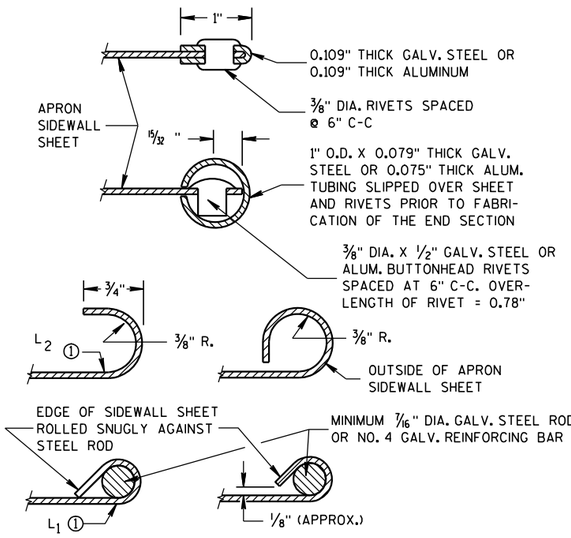
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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

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

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

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

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

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

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

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

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

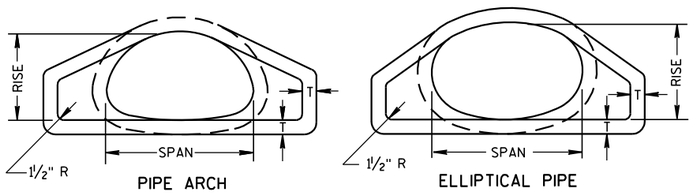
① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR CULVERT PIPE

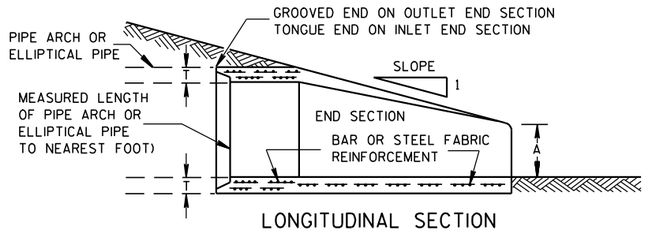
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

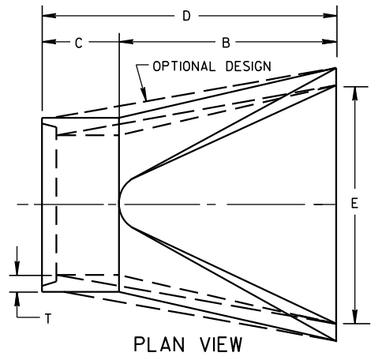
6
S.D.D. 8 F 1-11



END VIEW

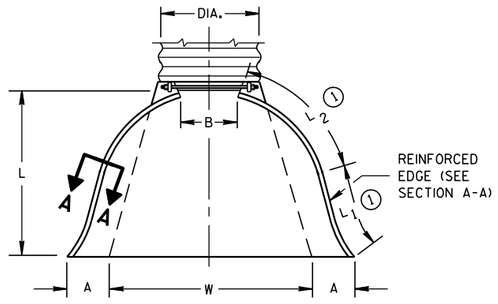


LONGITUDINAL SECTION

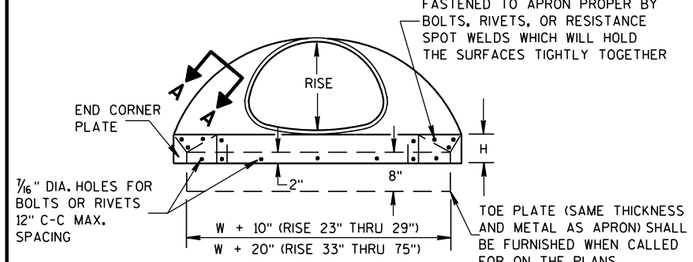


PLAN VIEW

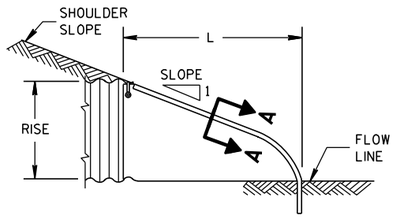
CONCRETE ENDWALLS



PLAN VIEW

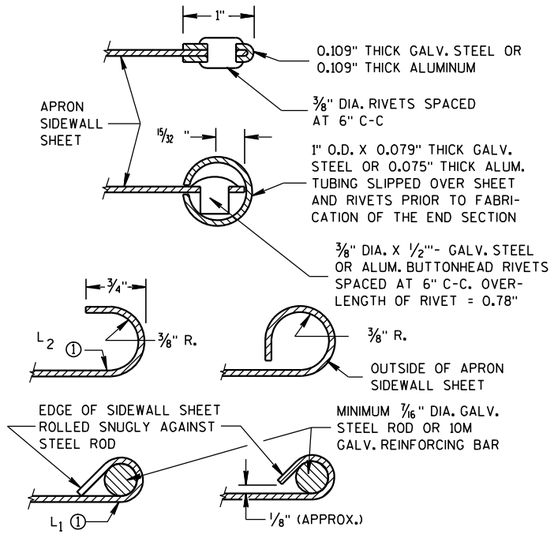


END VIEW



SIDE ELEVATION

METAL ENDWALLS



SECTION A-A

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

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

3" X 1" CORRUGATIONS

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

NOTE: ALL SPLICES TO BE LAP RIVETED OR BOLTED.

* EXCEPT CENTER PANEL SEE GENERAL NOTES

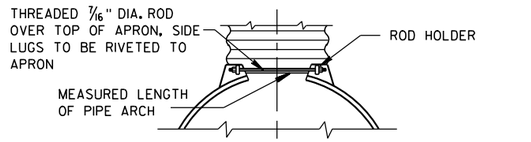
REINFORCED CONCRETE PIPE ARCH

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

REINFORCED CONCRETE ELLIPTICAL PIPE

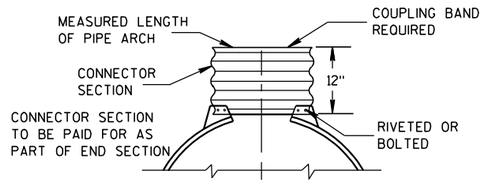
EQUIV. DIA. (Inches)	DIMENSIONS (Inches) ** SPAN	** RISE	T	A	B	C	D	E	APPROX. SLOPE
24	30	19	3¼	8½	39	33	72	48	3 to 1
30	38	24	3¾	9½	54	18	72	60	3 to 1
36	45	29	4½	11⅛	60	24	84	72	2½ to 1
42	53	34	5	15¾	60	36	96	78	2½ to 1
48	60	38	5½	21	60	36	96	84	2½ to 1
54	68	43	6	25½	60	36	96	90	2½ to 1
60	76	48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

**NOMINAL SIZE



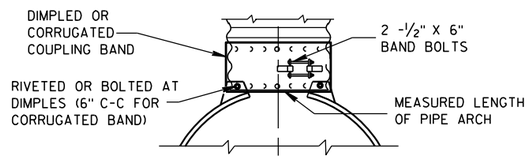
TYPE 2

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



TYPE 3

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



TYPE 5

ALTERNATE FOR:

ALL SIZES CORRUGATED PIPE ARCHES

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

CONNECTION DETAILS

GENERAL NOTES

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

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

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

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

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

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

APRON ENDWALLS FOR PIPE ARCH AND ELLIPTICAL PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

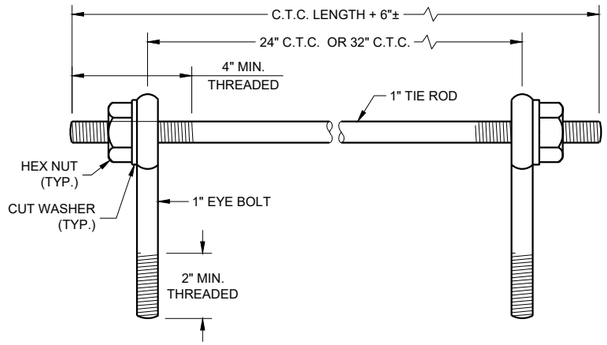
11/30/94 — DATE

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

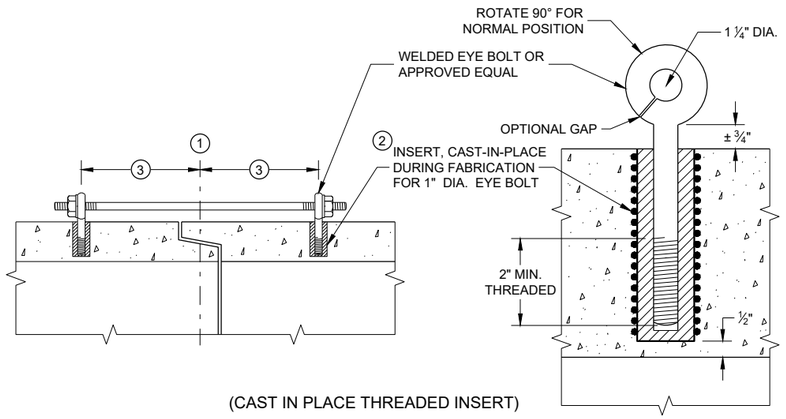
FHWA

6

S.D.D. 8 F 2-1



EYE BOLTS AND TIE ROD



(CAST IN PLACE THREADED INSERT)

LONGITUDINAL SECTIONS

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

GENERAL NOTES

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

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

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

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

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

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

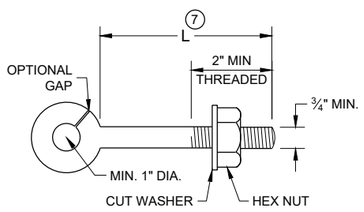
(3) HOLES SHALL BE CAST-IN-PLACE OR DRILLED PER THE APPLICABLE DETAIL, AND EQUAL DISTANCE FROM THE CENTERLINE OF THE JOINT.

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

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

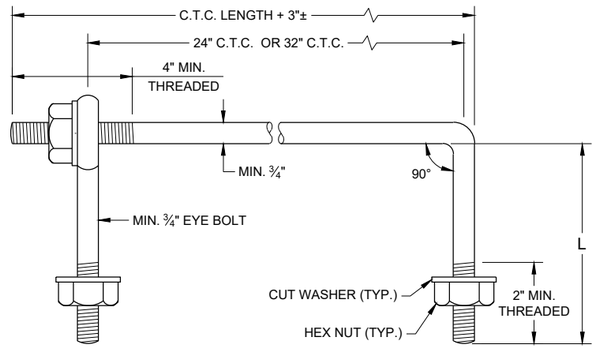
(6) LENGTH ADEQUATE TO EXTEND TO WITHIN ½ INCH OF THE INNER SURFACE OF THE PIPE.

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

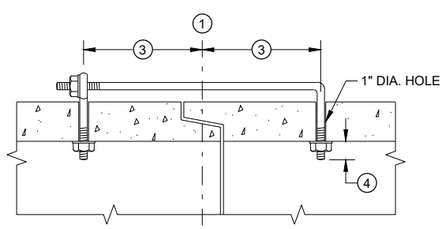


EYE BOLT (7)

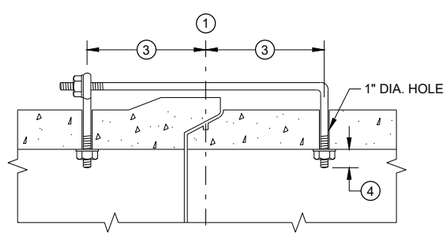
NOTE: TWO EYE BOLTS MAY BE USED WITH A 30" OR 38" LONG THREADED ROD IN LIEU OF THE 90° BENT TIE ROD.



EYE BOLT AND TIE ROD



(TONGUE AND GROOVE PIPE)



(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

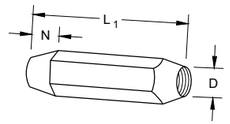
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

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

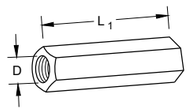
ADJUSTABLE TIE ROD TABLE

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

DIMENSIONS SHOWN ARE IN INCHES



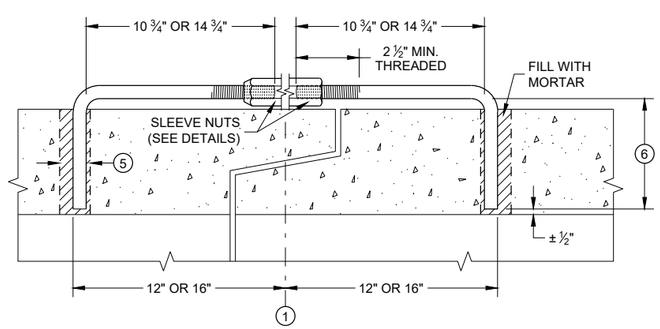
TAPERED



PLAIN

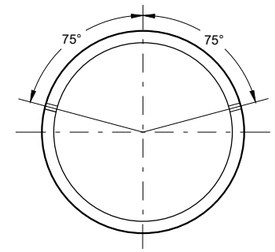
RIGHT AND LEFT THREADS

SLEEVE NUTS



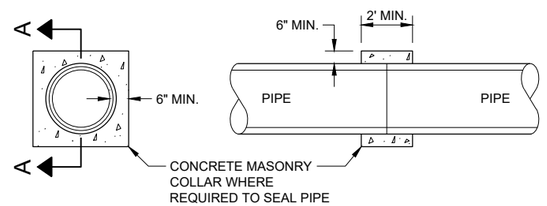
LONGITUDINAL SECTION

ADJUSTABLE TIE ROD (ALTERNATE NO. 3)



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

TRANSVERSE SECTION



SECTION A - A

CONCRETE COLLAR DETAIL

JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

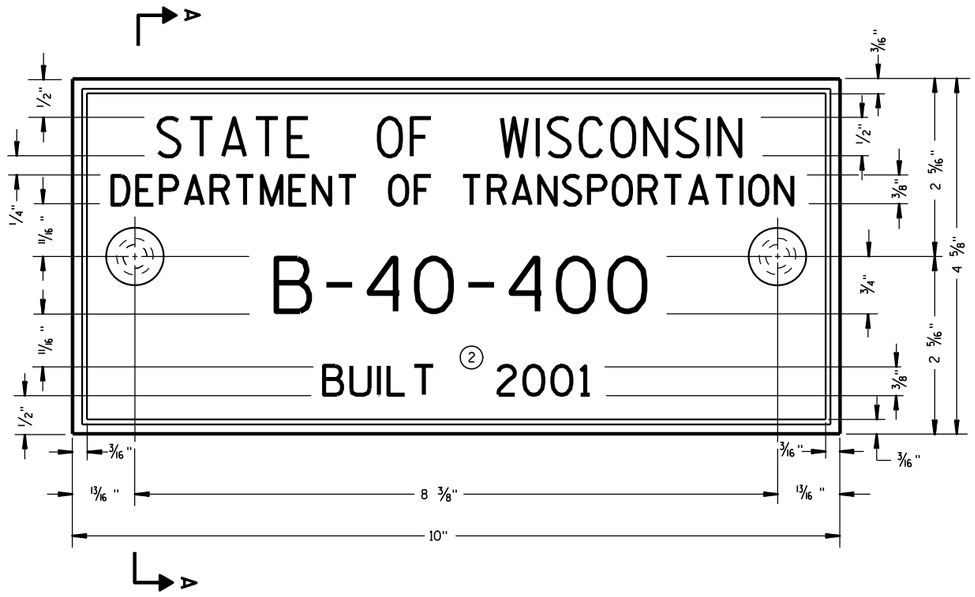
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

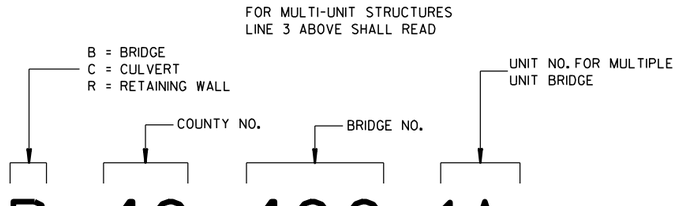
FHWA

SDD 08F04 - 08

SDD 08F04 - 08



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



NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES

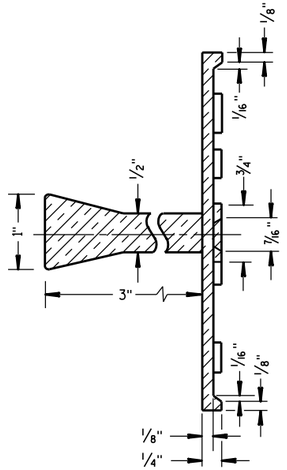
GENERAL NOTES

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

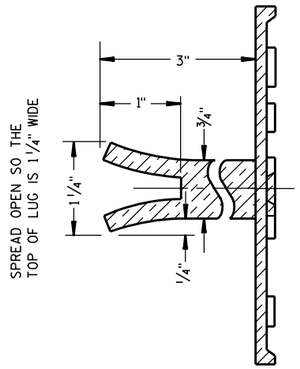
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

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

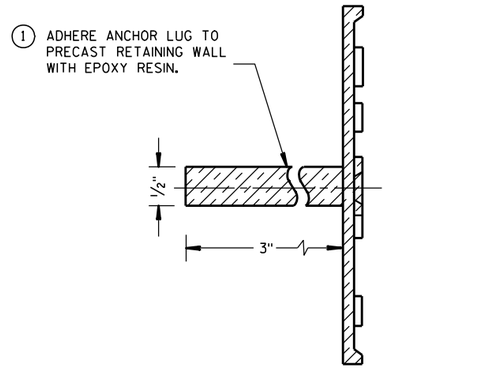
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A



ALTERNATE LUG



ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/26/10 DATE

/S/ Scot Beck -- CHIEF STRUCTURAL DEVELOP ENGINEER

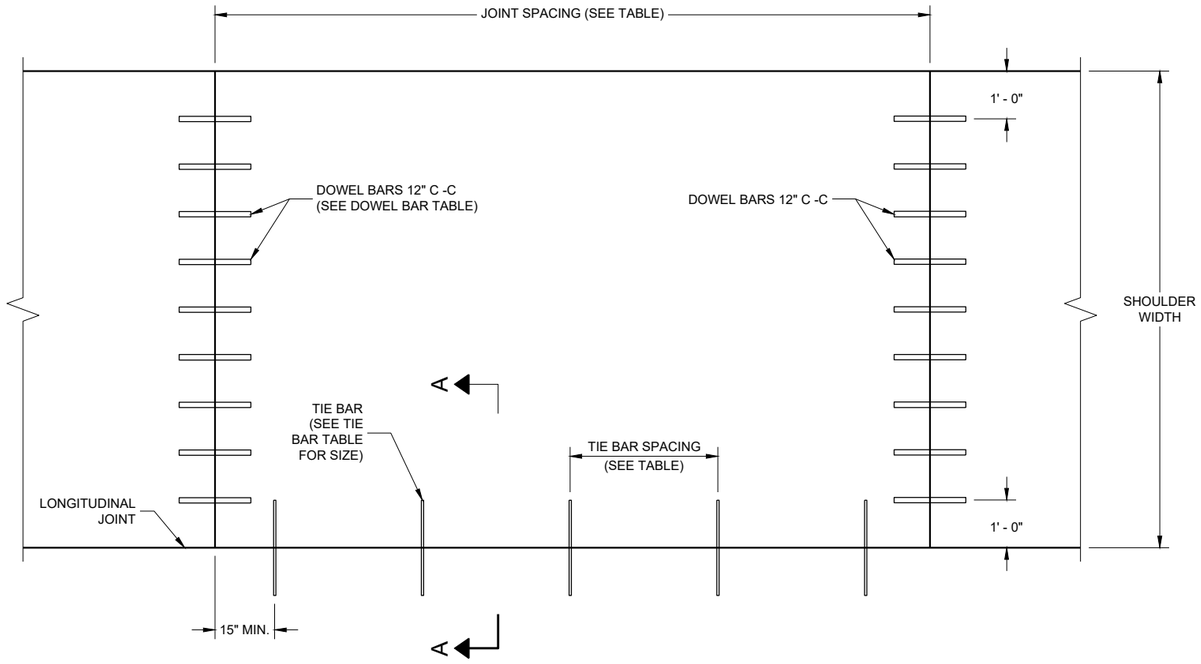
FHWA

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S.D.D. 12 A 3-10

6

S.D.D. 12 A 3-10



PLAN VIEW

CONCRETE PAVEMENT SHOULDER

TIE BAR TABLE

PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
<10 ½"	NO. 4	30"	36"
>10 ½"	NO. 5	36"	36"
	NO. 4*	30"	24"**

* SUBSTITUTE BENT BATS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES.

** CONFORM TO 15" MINIMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.

PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER ***	CONTRACTION JOINT SPACING
6", 6 ½"	NONE	12"
7", 7 ½"	1"	14"
8" & ABOVE	1 ¼"	15"

*** FOR DOWELED CONCRETE SHOULDERS WITH TRAPEZOIDAL CROSS SECTIONS, CHOSE THE APPROPRIATE DOWEL BAR DIAMETER BASED ON THE SMALLER PAVEMENT DEPTH (LIKELY THE OUTSIDE EDGE OF THE SHOULDER). IF USING BASKETS, USE BASKETS FRO THE AVERAGE THICKNESS OF THE CROSS SECTION.

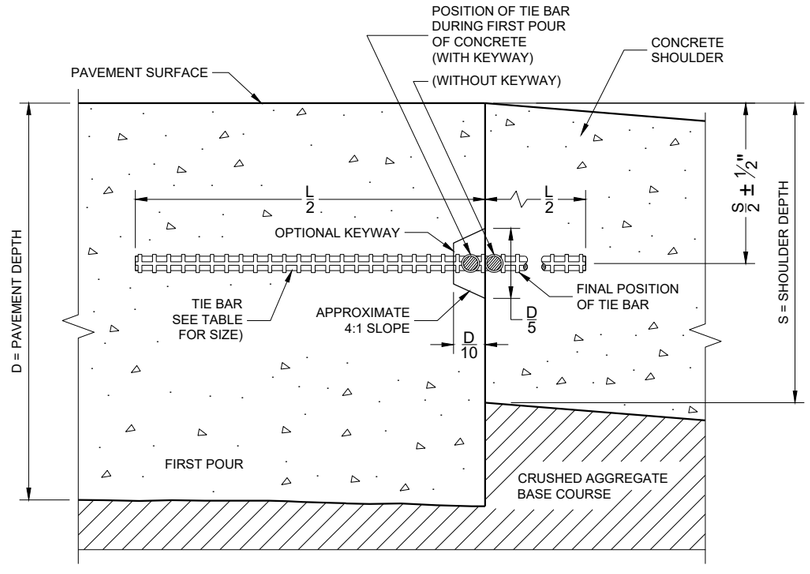
GENERAL NOTES

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

TRANSVERSE JOINT DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.

FINISH THE SHOULDER PAVEMENT CONFORMING TO SUBSECTION 415.3.8 OF THE STANDARD SPECIFICATIONS.

TIE BARS SHALL CONFORM TO SUBSECTION 505.2.4 OF THE STANDARD SPECIFICATIONS.



SECTION A - A

LONGITUDINAL CONSTRUCTION JOINT

CONCRETE PAVEMENT SHOULDERS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2022
DATE

/S/ Peter Kemp
PAVEMENT SUPERVIS

FHWA

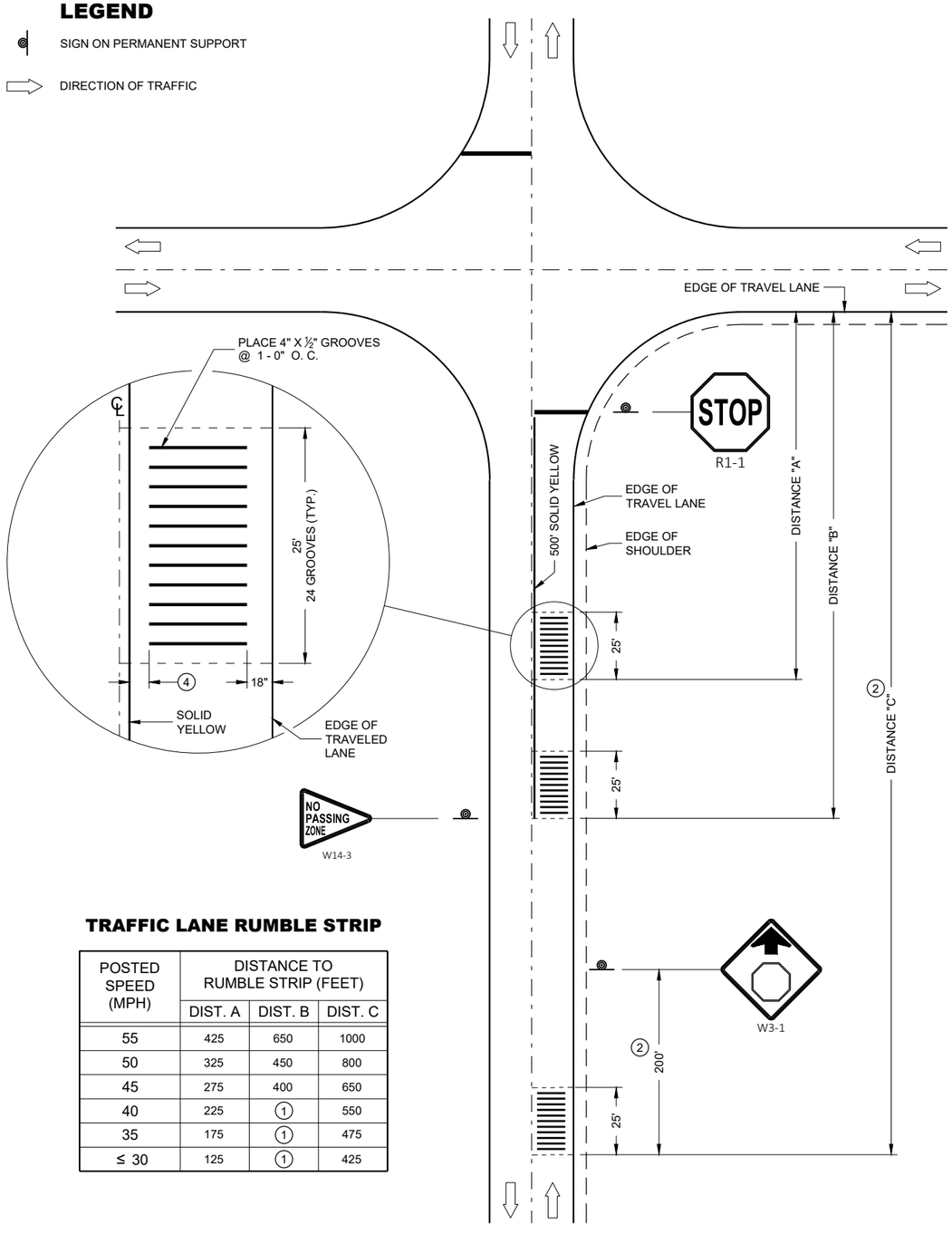
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SDD 13A03 - 07

LEGEND

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC



RUMBLE STRIP LOCATION

TRAFFIC LANE RUMBLE STRIP

POSTED SPEED (MPH)	DISTANCE TO RUMBLE STRIP (FEET)		
	DIST. A	DIST. B	DIST. C
55	425	650	1000
50	325	450	800
45	275	400	650
40	225	(1)	550
35	175	(1)	475
≤ 30	125	(1)	425

GENERAL NOTES

CONTRACTOR SHALL CONFIRM RUMBLE STRIP LOCATION WITH THE ENGINEER PRIOR TO INSTALLATION. THE ENGINEER MAY MODIFY THE RUMBLE STRIP LOCATION AS FIELD CONDITIONS DICTATE.

WHEN ASPHALTIC PAVEMENT IS NEW IN THE RUMBLE AREA, THE CONTRACTOR SHALL ALLOW THE PAVEMENT TO CURE A MINIMUM OF 7 DAYS PRIOR TO RUMBLE INSTALLATION.

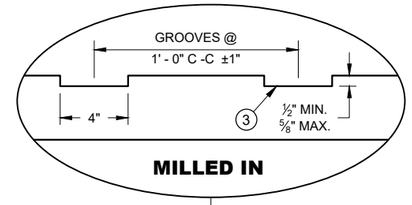
PAVEMENT MARKING AND SIGNING DETAILS AND SPECIFICATIONS ARE PROVIDE ELSEWHERE IN THE CONTRACT.

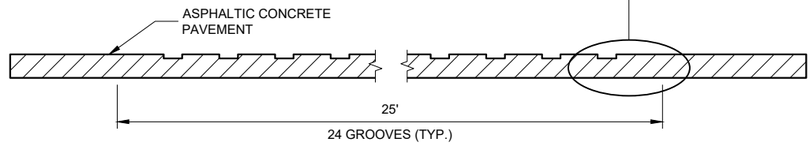
(1) ELIMINATE THE MIDDLE SET OF RUMBLE STRIPS.

(2) LOCATE RUMBLE STRIP 200 FEET IN ADVANCE OF W3-1 SIGN AS SHOWN. IF W3-1 IS NOT IN PLACE, USE DISTANCE "C".

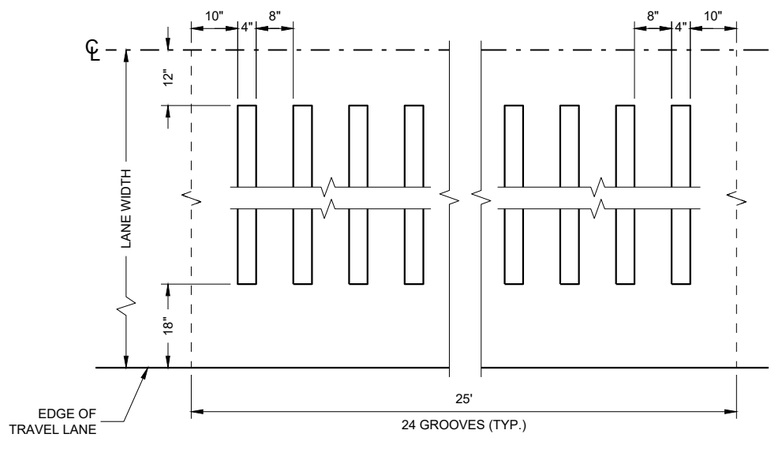
(3) TYPICAL VERTICAL VARIATION BETWEEN PEAKS AND VALLEYS WITHIN THE CUT APPROXIMATELY $\frac{1}{16}$".

(4) 12 INCH CLEAR BETWEEN THE SOLID YELLOW LINE AND THE EDGE OF THE RUMBLE.





ELEVATION VIEW



PLAN VIEW

ASPHALTIC PAVEMENT MILLED IN

TRANSVERSE RUMBLE STRIPS, ASPHALTIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE

/S/ Rodney Taylor
ROADWAY DESIGN STANDARDS
UNIT SUPERVISOR

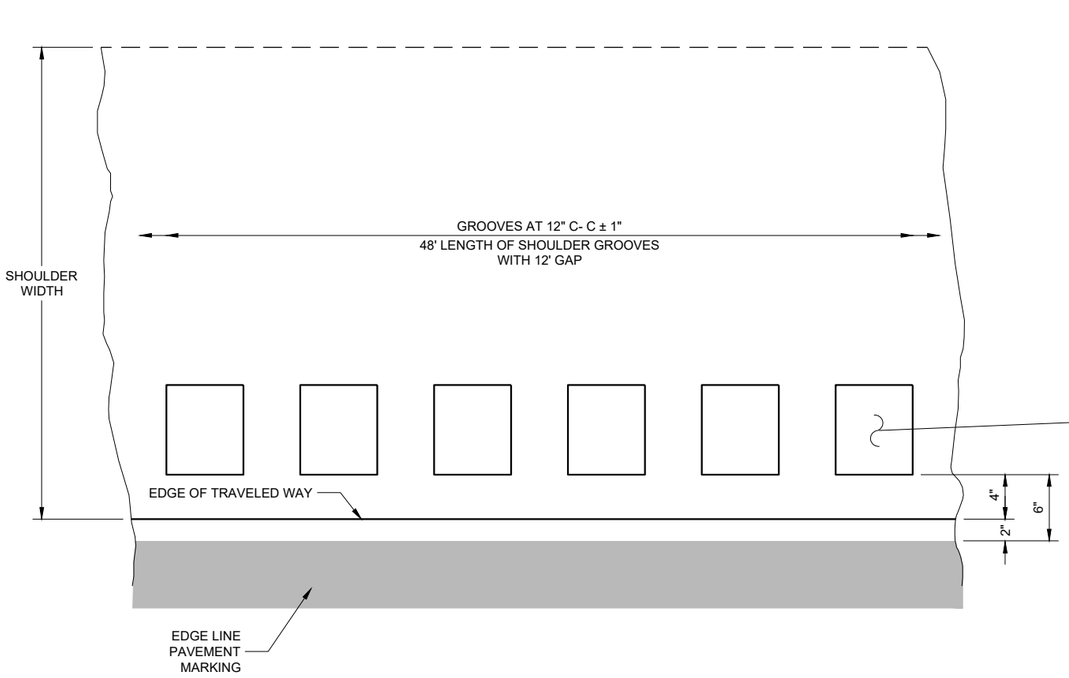
FHWA

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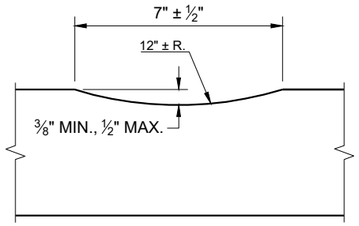
SDD 13A08 - 02

6

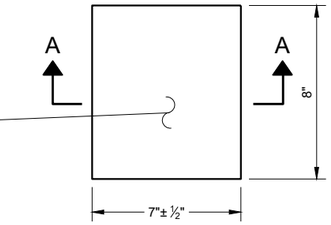
SDD 13A08 - 02



PLAN DETAIL VIEW
SHOULDER WITH GROOVES



SECTION A - A

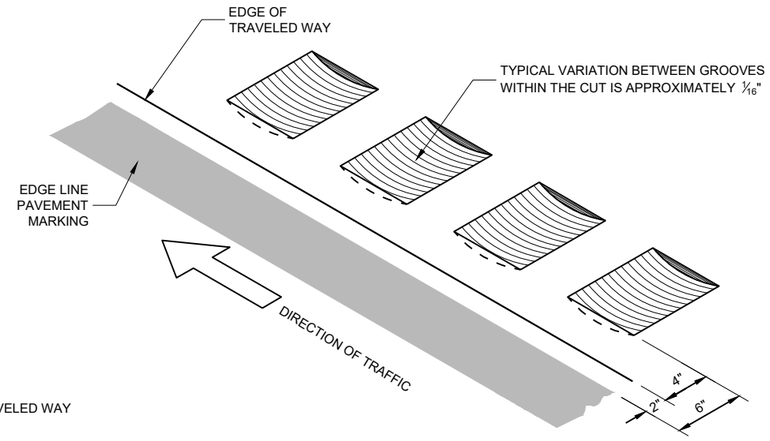


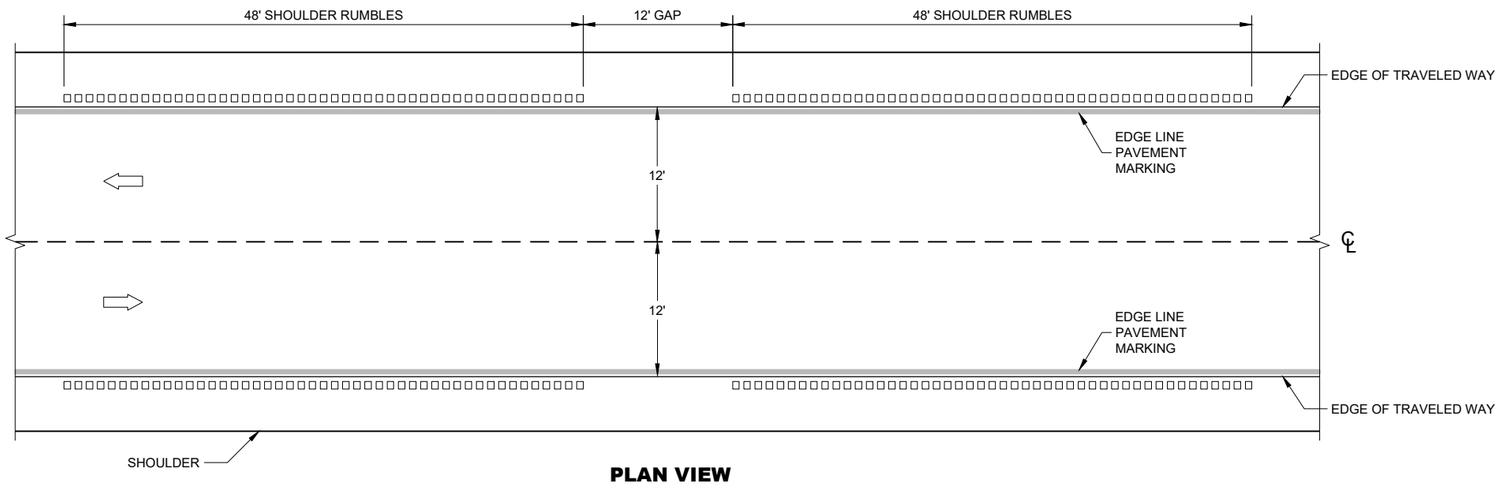
PLAN VIEW
(SINGLE GROOVE)

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 VIEW

SHOULDER RUMBLE STRIPS - ASPHALT

6

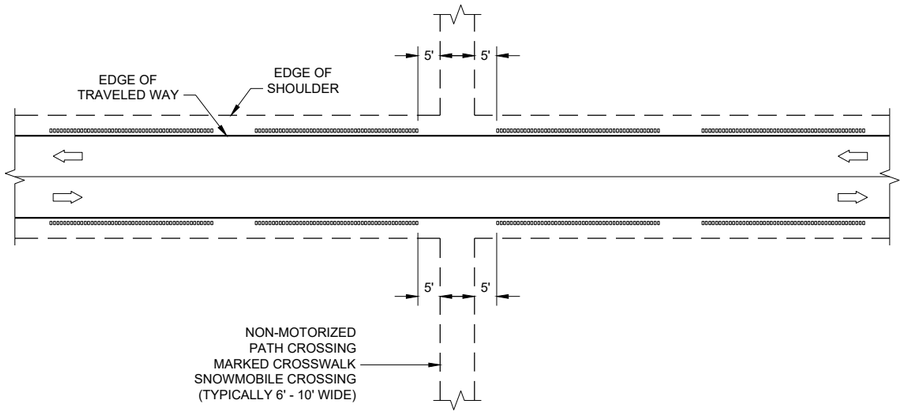
SDD 13A10 - 03a

SHOULDER RUMBLE STRIPS ASPHALT

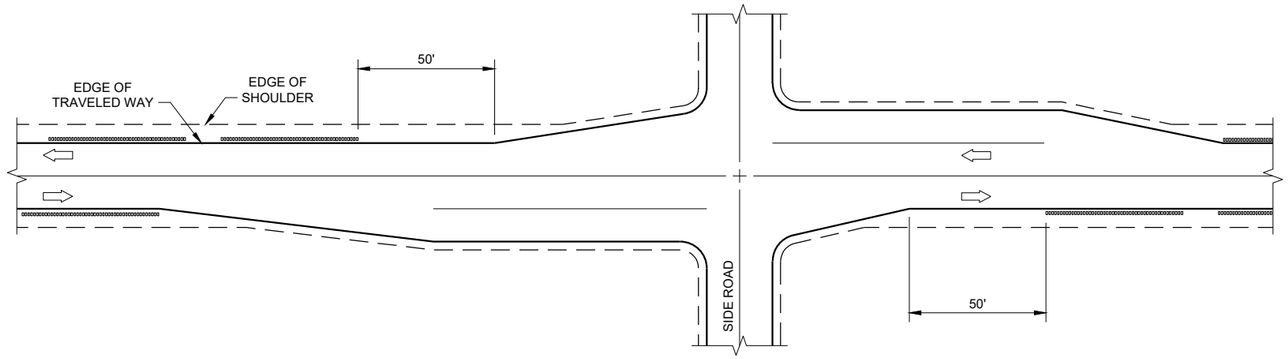
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTA

6

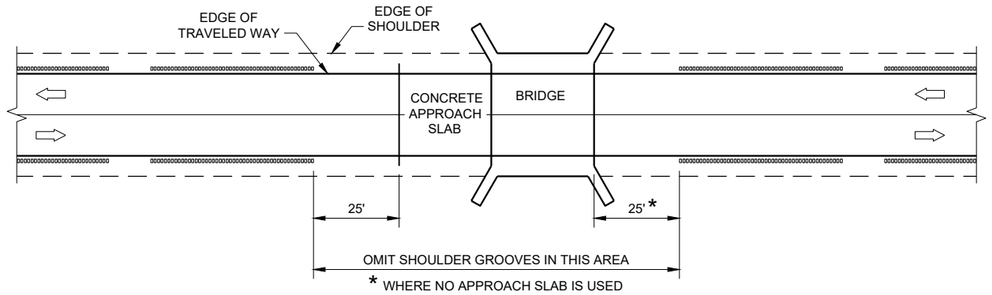
SDD 13A10 - 03a



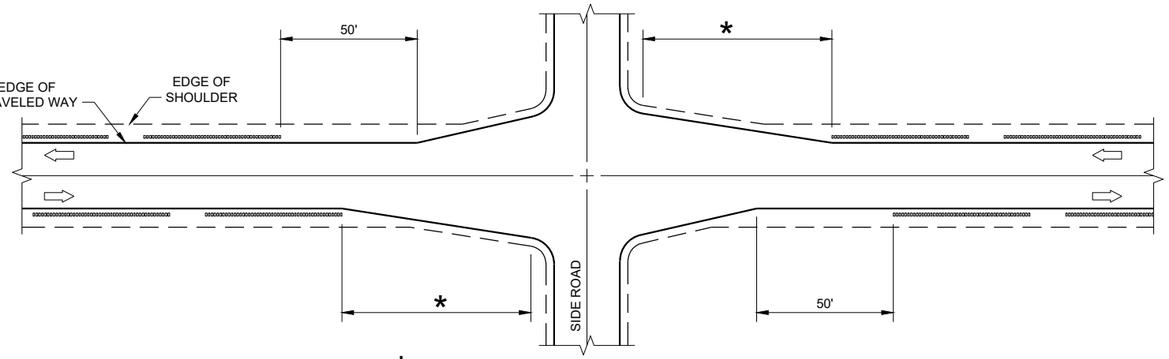
GROOVES AT MISCELLANEOUS CROSSINGS



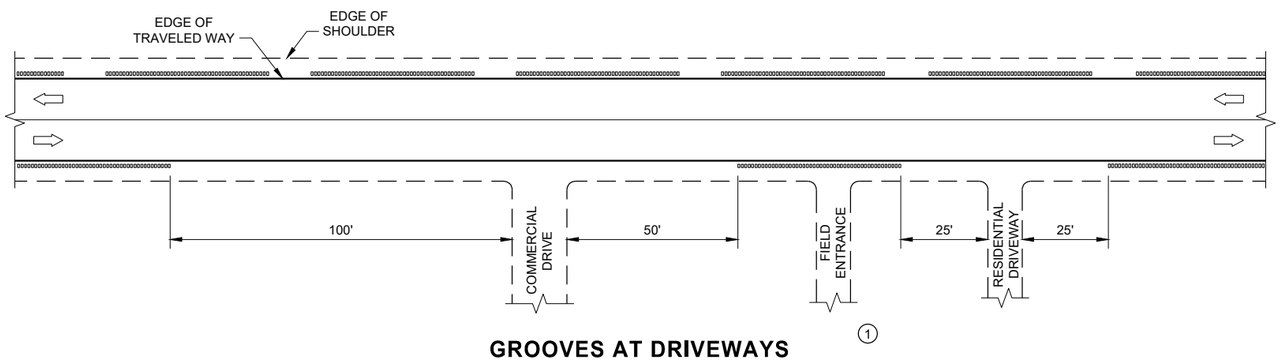
GROOVES AT RIGHT TURN LANE



GROOVES AT BRIDGES



GROOVES AT INTERSECTIONS WITH APPROACH TAPER



GROOVES AT DRIVEWAYS ①

GENERAL NOTES

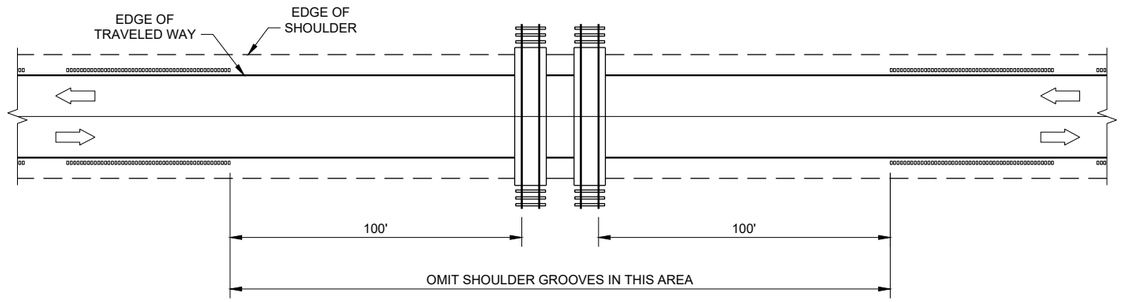
① SHOULDER GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS. WHEN DIRECTED BY THE ENGINEER.

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

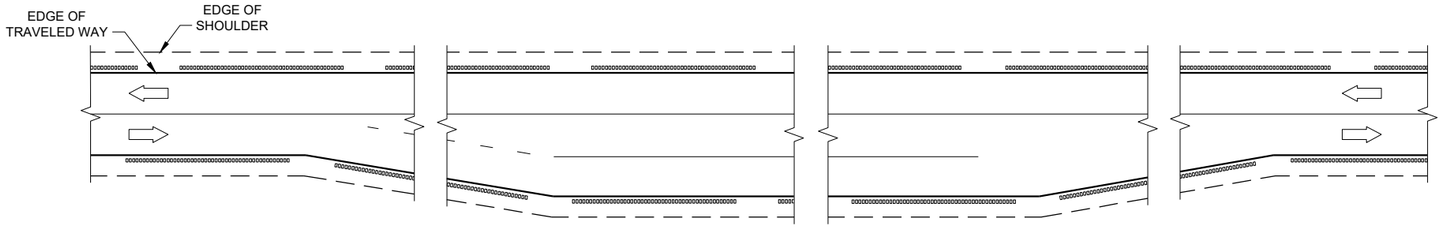
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTA

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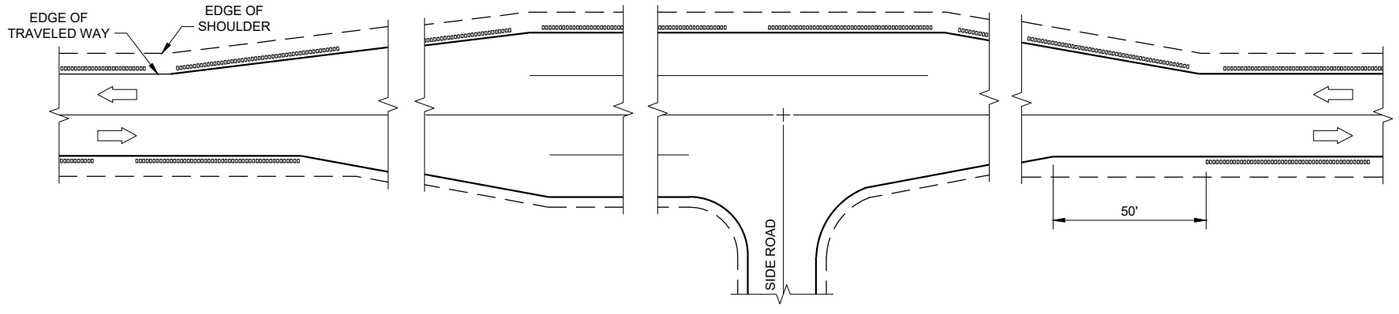
SDD 13A10 - 03g



GROOVES AT RAILROADS



GROOVES AT PASSING AND CLIMBING LANES



GROOVES AT BYPASS LANES

6

SDD 13A10 - 03h

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 DEVE ENGINEER

FHWA

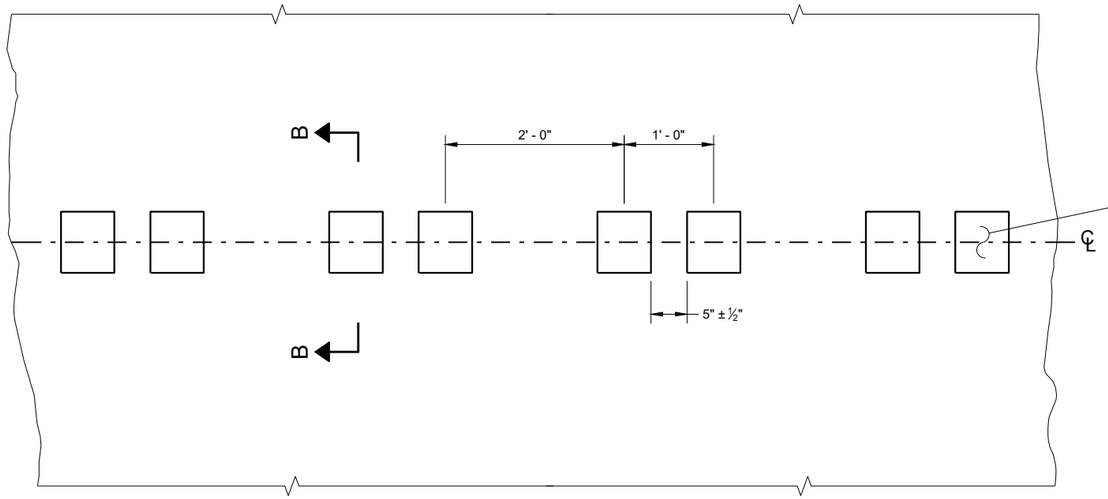
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SDD 13A10 - 03h

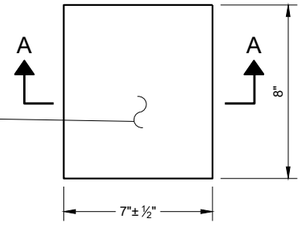
GENERAL NOTES

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

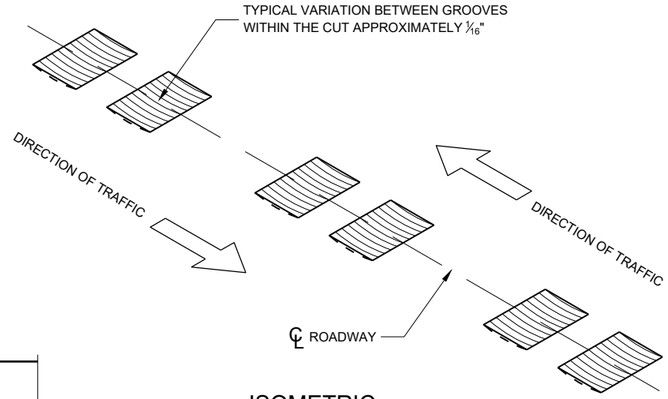
CENTERLINE GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS WHEN DIRECTED BY THE ENGINEER.



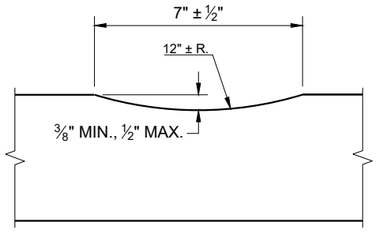
PLAN DETAIL VIEW



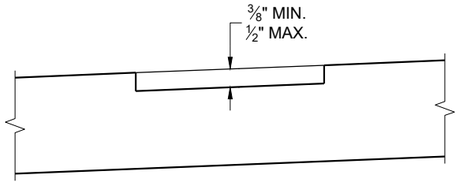
PLAN VIEW
(SINGLE GROOVE)



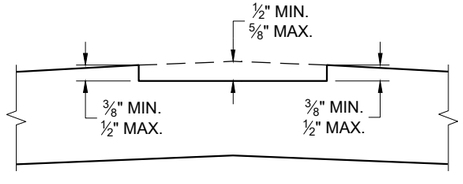
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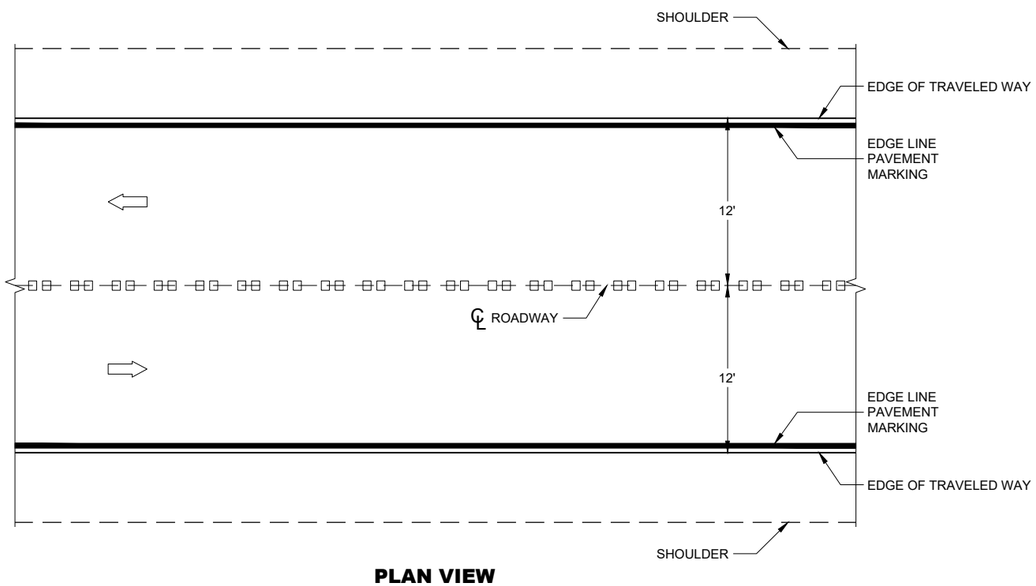
SECTION A - A



SECTION B - B
SUPERELEVATED ROADWAY



SECTION B - B
CROWNED ROADWAY



PLAN VIEW

CENTERLINE RUMBLE STRIPS - ASPHALT

CENTERLINE RUMBLE STRIPS - ASPHALT

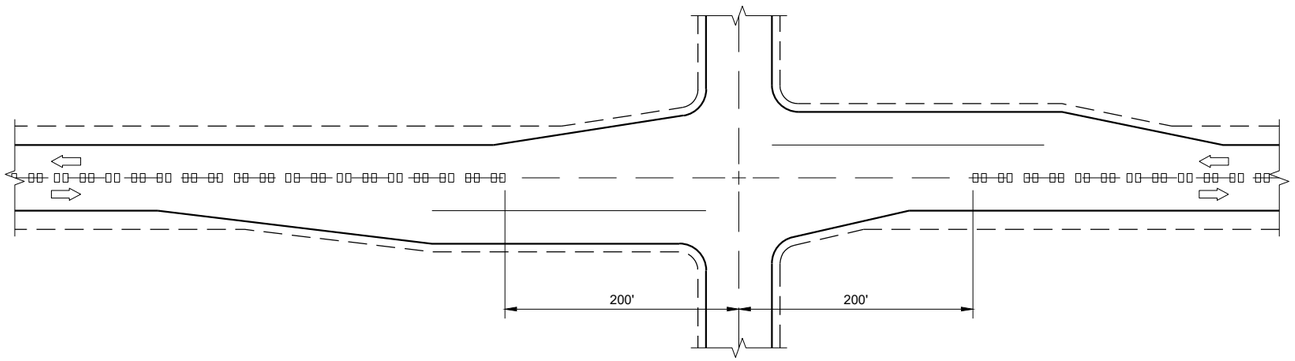
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTA

6

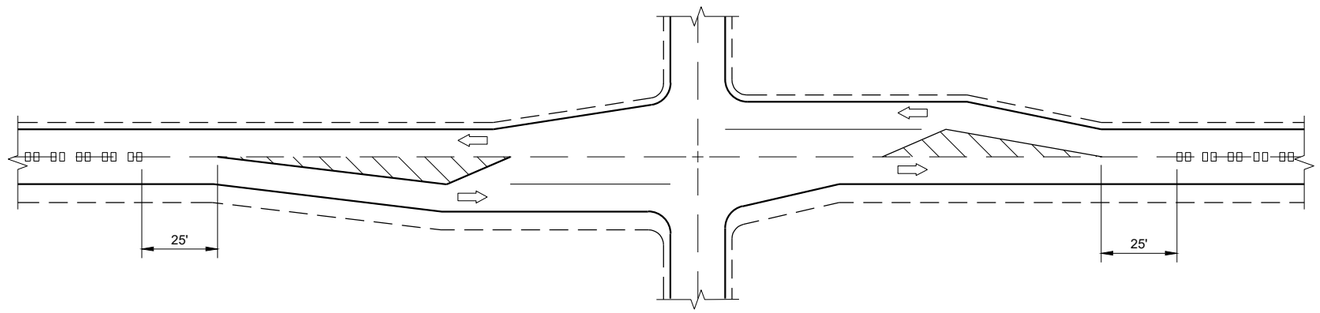
SDD 13A11 - 04a

6

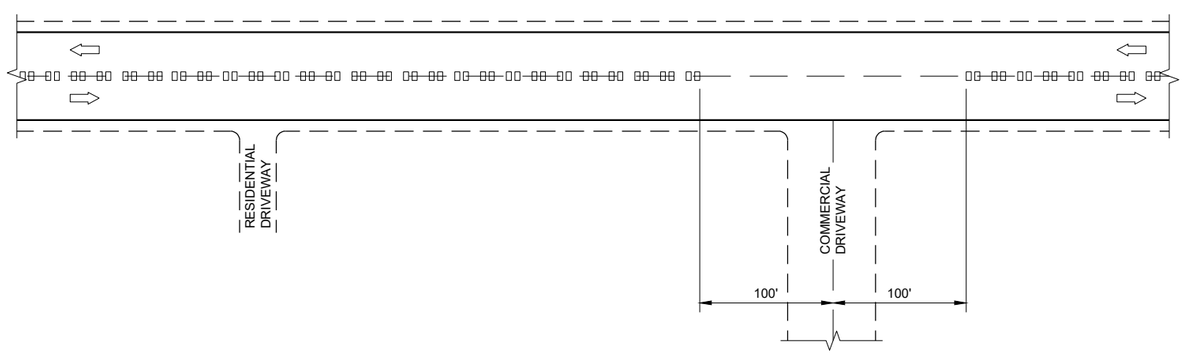
SDD 13A11 - 04a



CENTERLINE GROOVES AT INTERSECTIONS



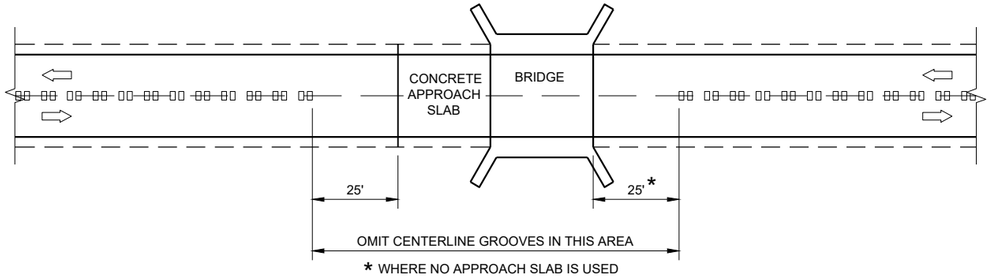
CENTERLINE GROOVES AT INTERSECTIONS (WITH LEFT TURN LANES)



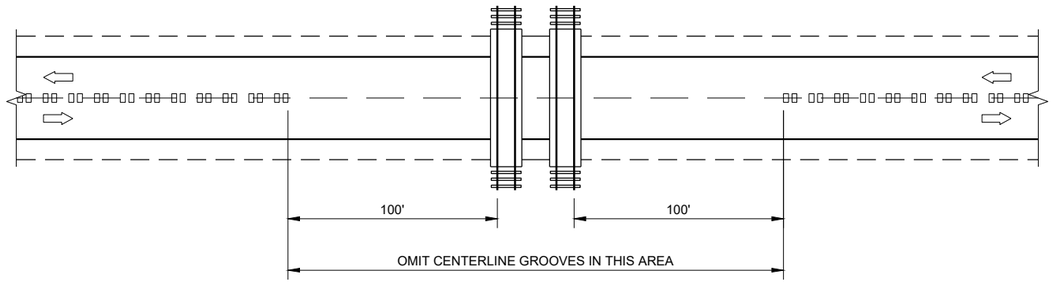
CENTERLINE GROOVES AT DRIVEWAYS (1)

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

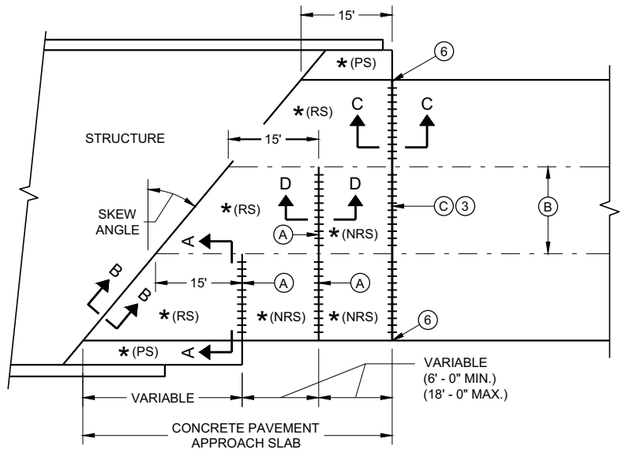
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 — DATE
/S/ John Jenkins — ROADWAY STANDARDS DEVE ENGINEER

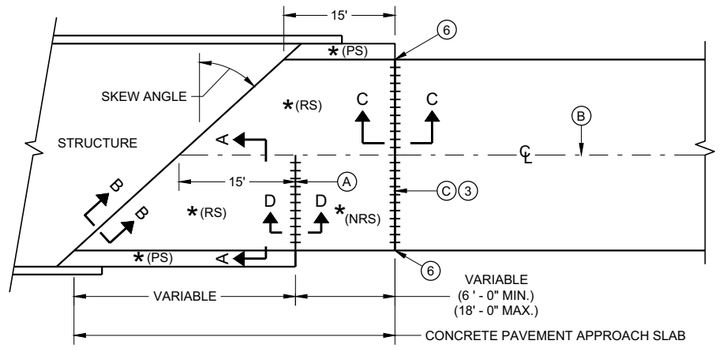
FHWA

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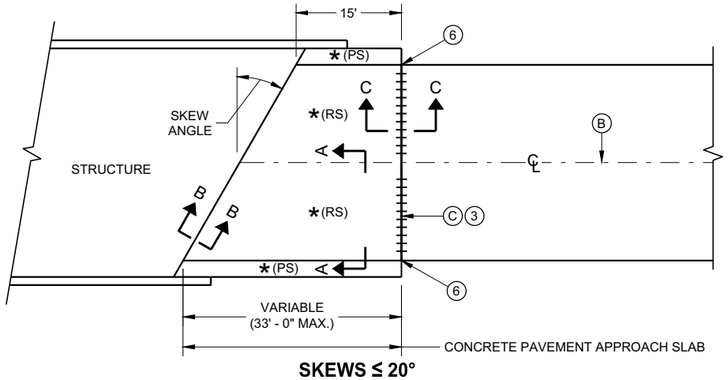
SDD 13A11 - 04d
SDD 13A11 - 04d



SKEWED APPROACH
(PAVEMENT MORE THAN TWO LANES)



SKEWS > 20°
(PAVEMENT WIDTH ≤ 30')



SKEWS ≤ 20°
(PAVEMENT WIDTH ≤ 30')

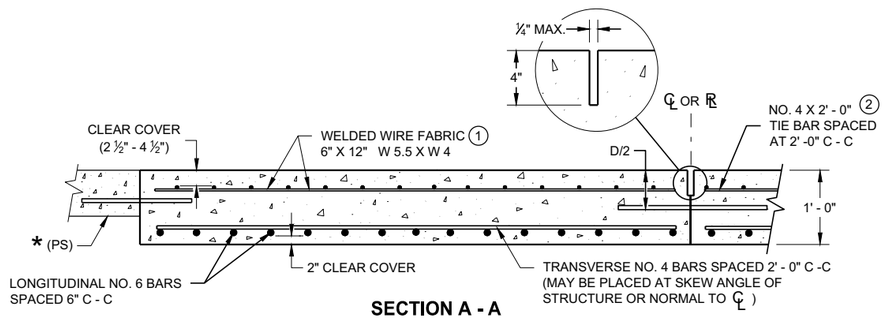
APPROACH SLAB AND ADJACENT PAVEMENT

* (RS) = REINFORCED CONCRETE SLAB

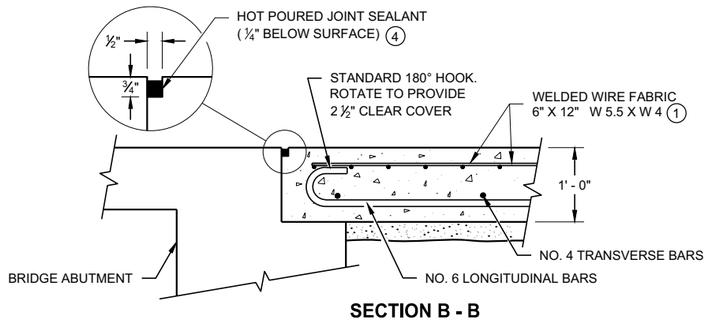
* (PS) = PAVED CONCRETE SHOULDER OR CONCRETE DRAINAGE SLAB

* (NRS) - NON - REINFORCED CONCRETE SLAB

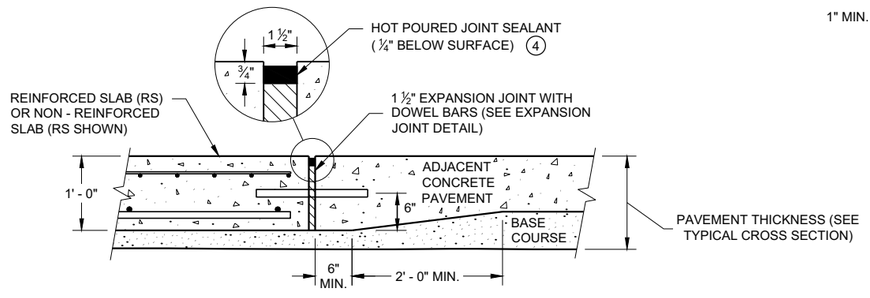
*** STANDARD DOWEL BAR DIAMETER (SEE SDD 13C11 AND SDD 13C13)



SECTION A - A
REINFORCEMENT POSITIONING DETAIL



SECTION B - B
BEND DETAIL
BOTTOM REINFORCEMENT



SECTION C - C
TRANSITION DETAIL
APPROACH SLAB TO ADJACENT PAVEMENT

GENERAL NOTES

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

TACK WELD DOWEL BARS TO THE BASKETS ON ALTERNATE ENDS.

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

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

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

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

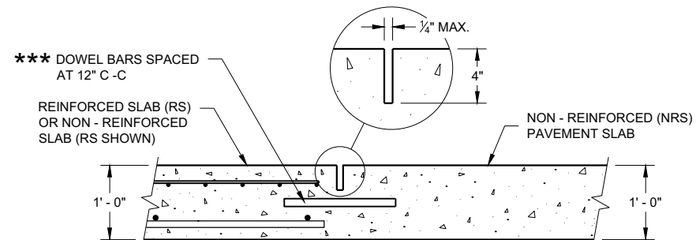
(5) PLACE EXPANSION CAP ON THE END OF THE DOWEL THAT IS NOT TACK WELDED TO THE BASKET. DO NOT FORCE DOWEL BAR PAST THE DOWEL STOP.

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

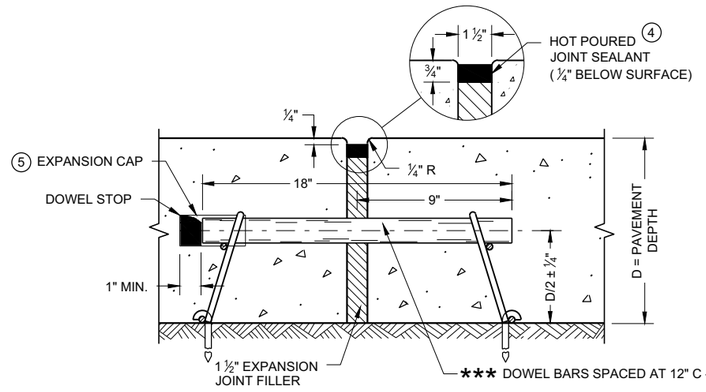
(A) STANDARD CONTRACTION JOINT NORMAL TO ℄ OR ℞.

(B) STANDARD LONGITUDINAL JOINT WITH TIE BARS.

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



SECTION D - D
CONTRACTION JOINT



EXPANSION JOINT DETAIL

CONCRETE PAVEMENT APPROACH SLAB

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

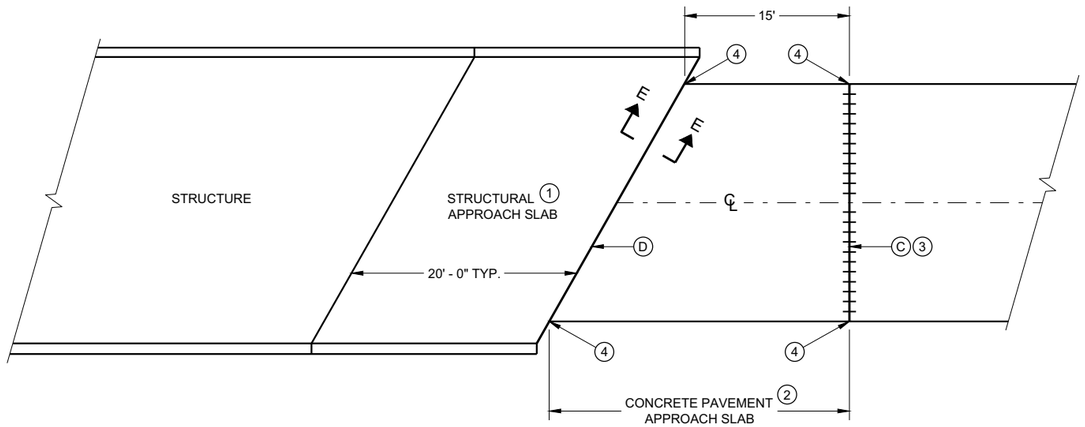
APPROVED
November 2018
DATE

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

FHWA

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SDD 13B02 - 09a



BRIDGE APPROACHES

GENERAL NOTES

ALL PROJECTS THAT INVOLVE A STRUCTURAL APPROACH SLAB WILL ALSO HAVE A CONCRETE PAVEMENT APPROACH SLAB.

(1) SEE BRIDGE PLAN.

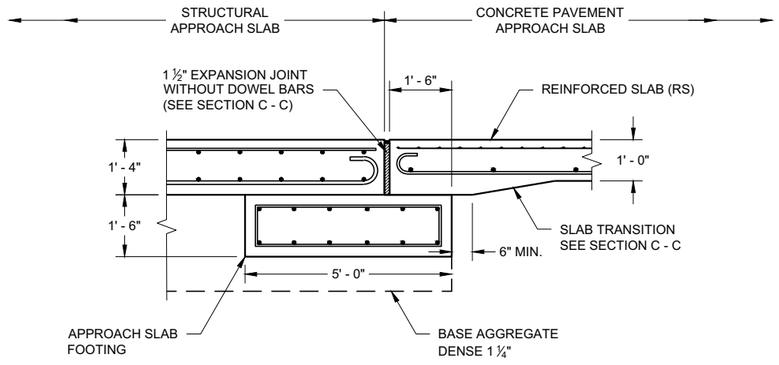
(2) CONFORM TO SDD 13B02 SHEET A FOR CONCRETE PAVEMENT APPROACH SLAB DETAILS

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

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

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

(D) 1 ½" EXPANSION JOINT (NO DOWELS)



SECTION E - E
FOOTING DETAIL
STRUCTURAL APPROACH SLAB TO CONCRETE BRIDGE APPROACH

STRUCTURAL APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB

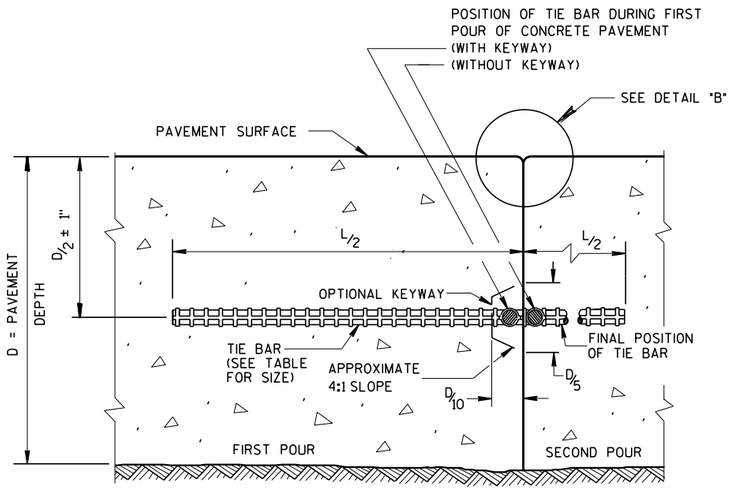
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE
/S/ Peter Kemp P.E.
PAVEMENT SUPERVIS

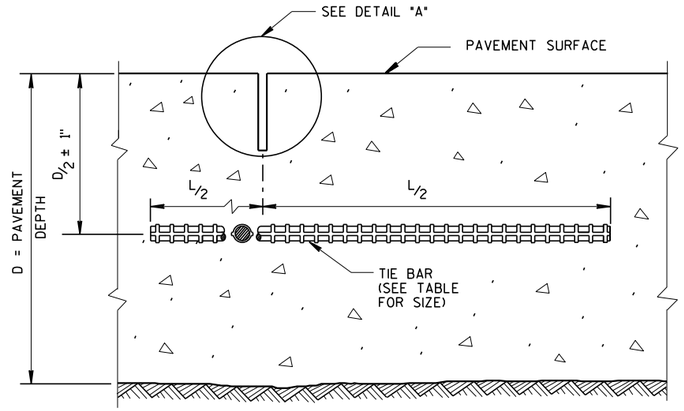
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SDD 13B02 - 09b



CONSTRUCTION JOINT



SAWED JOINT

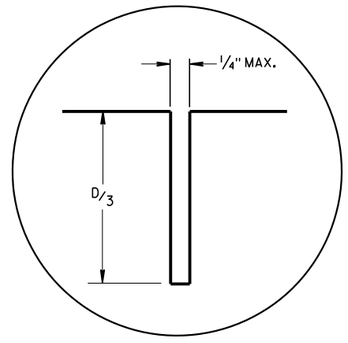
GENERAL NOTES

CREATE A LONGITUDINAL JOINT FOR PAVEMENT WIDTHS GREATER THAN 15 FEET.

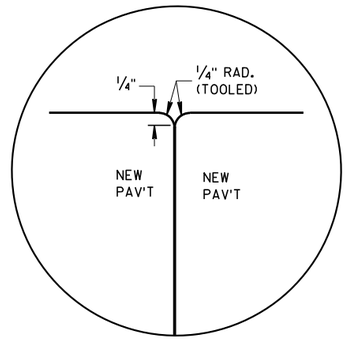
CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

(1) ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

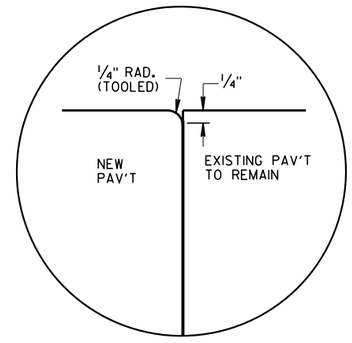
(2) PAVEMENT THAT WAS IN PLACE PRIOR TO THE CONTRACT.



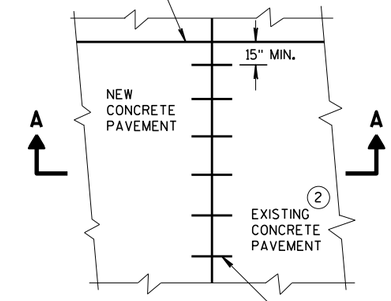
DETAIL "A"



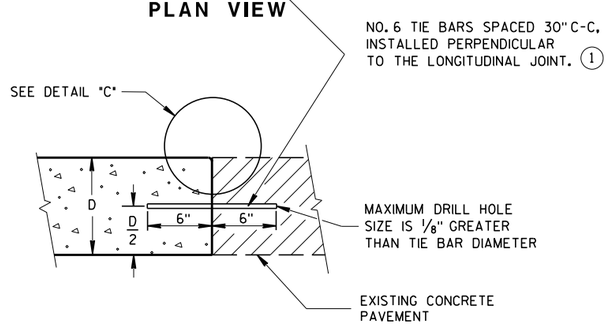
DETAIL "B"



DETAIL "C"



PLAN VIEW



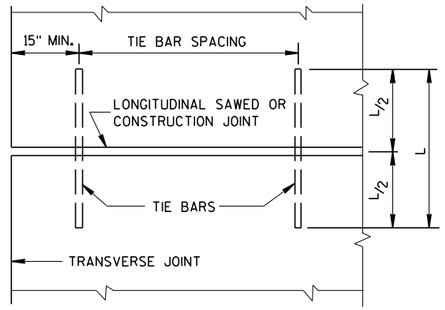
SECTION A-A
LONGITUDINAL CONSTRUCTION JOINT TIE BARS ANCHORED INTO EXISTING PAVEMENT

TIE BAR TABLE

PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 1/2"	NO. 4	30"	36"
≥ 10 1/2"	NO. 5	36"	36"
	NO. 4 *	30"	24" **

* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

** CONFORM TO 15" MINUMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.



PLAN VIEW
SHOWING LOCATION OF TIE BARS

CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

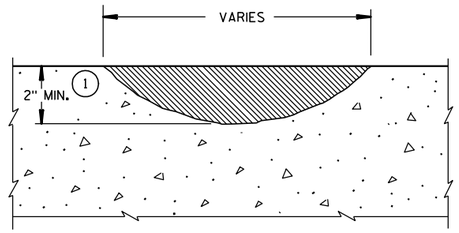
APPROVED
March 2018 — DATE
/S/ Peter Kemp PE — PAVEMENT SUPE
FHWA

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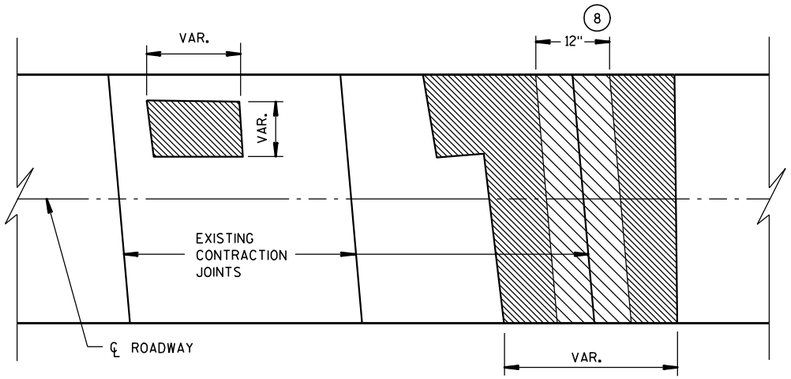
S.D.D. 13 C 1-19

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S.D.D. 13 C 1-19

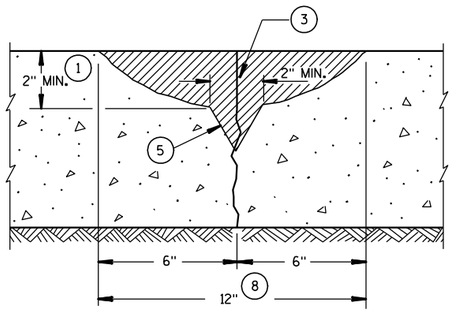


PROFILE VIEW

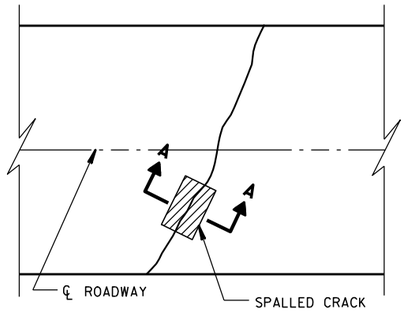


PLAN VIEW

SURFACE REPAIR



SECTION A-A

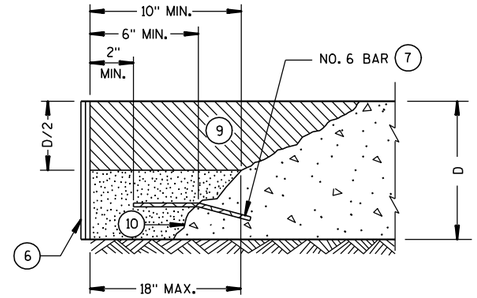


PLAN VIEW

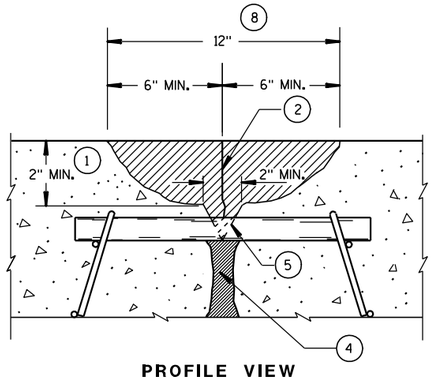
CRACK REPAIR

GENERAL NOTES

1. REMOVE ALL CONCRETE, TO LIMITS SHOWN, TO A MAXIMUM OF ½ THE PAVEMENT DEPTH OR TOP OF DOWELS.
2. IF REPAIR IS DEEPER THAN ANTICIPATED SAWCUT, COMPRESSION RELIEF MATERIAL MUST BE USED. THE THICKNESS OF COMPRESSION RELIEF MATERIAL MUST BE EQUAL TO OR GREATER THAN THE WIDTH OF THE JOINT OR CRACK (1/4"). THIS MATERIAL SHOULD EXTEND FULL DEPTH OF THE REPAIR.
3. COMPRESSION RELIEF MATERIAL MUST BE USED. THE THICKNESS OF COMPRESSION RELIEF MATERIAL MUST BE EQUAL TO OR GREATER THAN THE WIDTH OF THE JOINT OR CRACK (1/4"). THIS MATERIAL SHOULD EXTEND FULL DEPTH OF THE REPAIR.
4. CLEAN, DRY SAND WHEN NECESSARY.
5. REMOVE UNSOUND MATERIAL BY CHIPPING AT 1:1 SLOPE.
6. ¼" MINIMUM PREFORMED JOINT FILLER IF ADJACENT TO CONCRETE. EDGING REQUIRED. FULLY FORMED EDGE IF ADJACENT TO SHOULDER.
7. PAVEMENT TIES AS SHOWN. ALL EMBEDMENTS 6" MINIMUM AND INSTALLED WITH GROUT.
8. OVER 12" (NOMINAL WIDTH) WILL BE PAID AS SURFACE REPAIR.
9. PAID AS JOINT OR CRACK REPAIR.
10. FULL-DEPTH ADJUSTMENT SHALL BE CHIPPED TO BOTTOM OF PCC PAVEMENT AT 1:1 SLOPE.
11. BEYOND 18" WILL BE PAID AS SURFACE REPAIR.

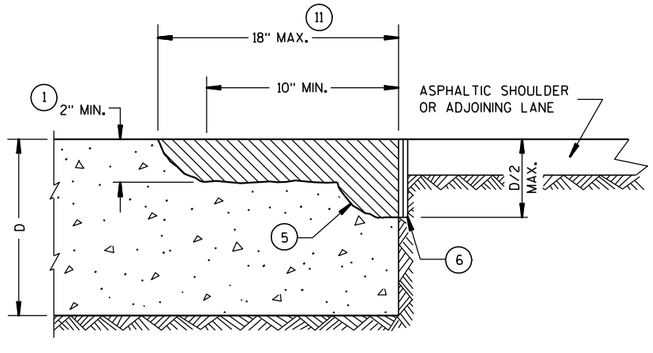


PROFILE VIEW

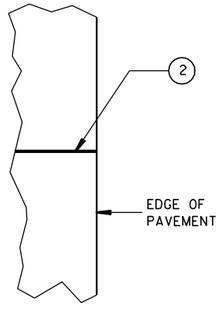


PROFILE VIEW

JOINT REPAIR

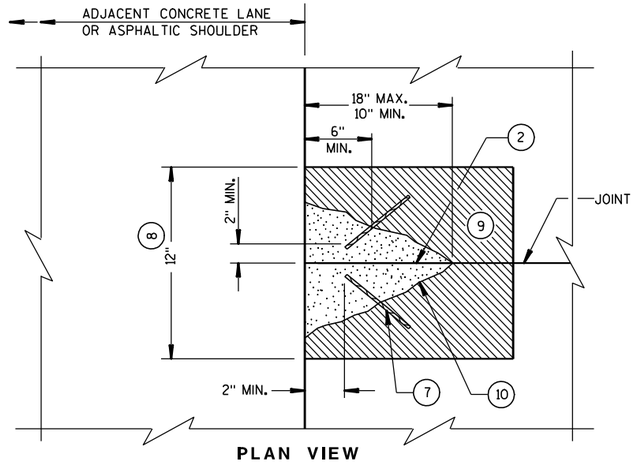


PROFILE VIEW



PLAN VIEW

EDGE REPAIR



PLAN VIEW

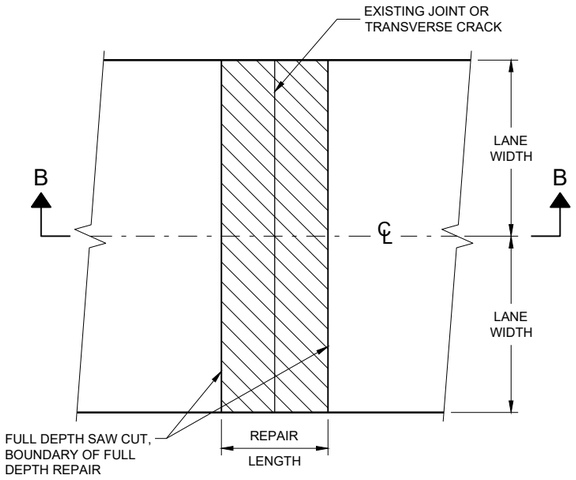
FULL DEPTH REPAIR ADJUSTMENT

CONCRETE PAVEMENT PARTIAL DEPTH REPAIR

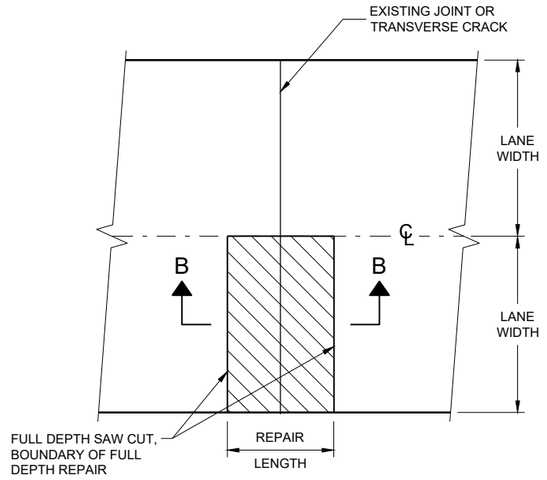
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
3/21/03 DATE
/S/ Bill Ducker PAVEMENT ENGR
FHWA

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S.D.D. 13 C 8-2



PLAN VIEW
(DOUBLE LANE REPAIR)



PLAN VIEW
(SINGLE LANE REPAIR)

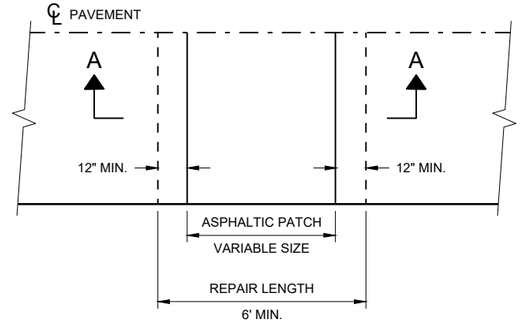
GENERAL NOTES

SAW CUT, DRILL, AND LIFT OUT EXISTING CONCRETE PAVEMENT WITHIN THE BOUNDARIES OF CONCRETE REPAIR AREAS. THE CONTRACTOR MAY MAKE ADDITIONAL SAW CUTS INSIDE THE REPAIR LIMITS TO REDUCE WEIGHT AND SIZE OF CONCRETE PIECES.

PROVIDE A 6 FOOT MINIMUM DISTANCE FROM BOUNDARIES OF CONCRETE REPAIR AREA TO ADJACENT TRANSVERSE JOINT OR CRACK.

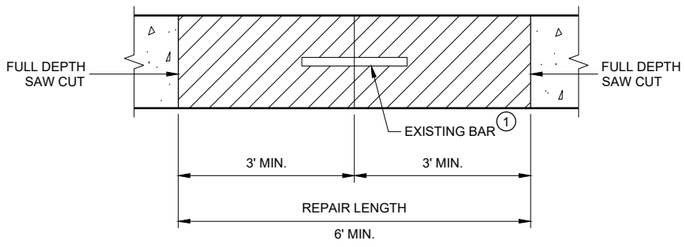
THE LENGTH OF THE REPAIRS MAY VARY FROM THE DIMENSIONS SHOWN IF THE EXISTING CONCRETE PAVEMENT IS NON-DOWELED AND THE PAVEMENT IS TO BE OVERLAID AFTER REPAIRING.

(1) DOWEL BARS MAY NOT BE PRESENT.



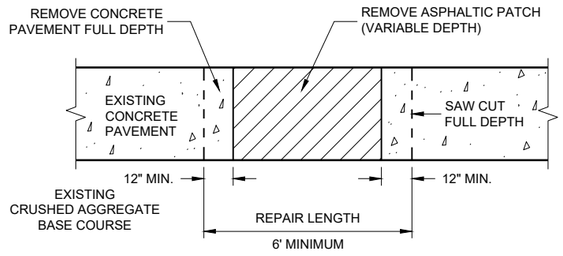
PLAN VIEW

FULL DEPTH CONCRETE PAVEMENT REMOVAL



SECTION B - B

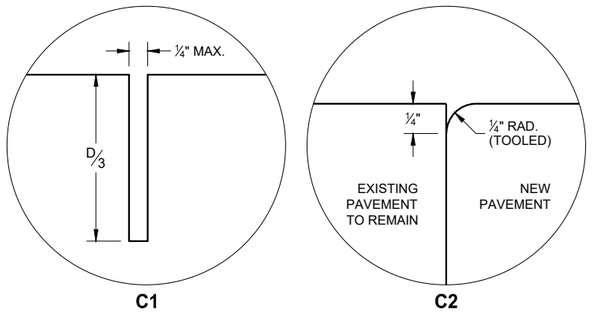
CONCRETE REMOVAL



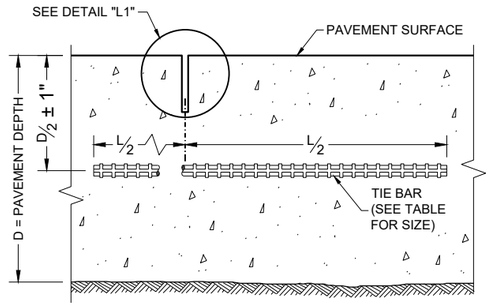
SECTION A - A

HMA PATCH REMOVAL

CONCRETE PAVEMENT REPAIR AND REPLACEMENT

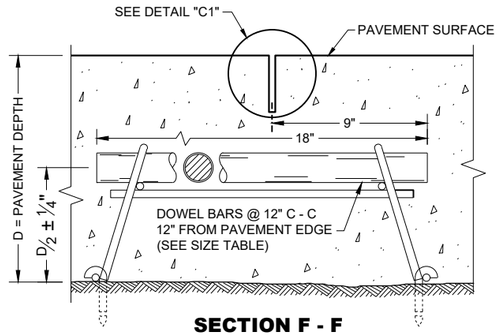


TRANSVERSE JOINTS



SECTION C - C

SAWED LONGITUDINAL JOINT



SECTION F - F

DOWELED CONTRACTION JOINT

GENERAL NOTES

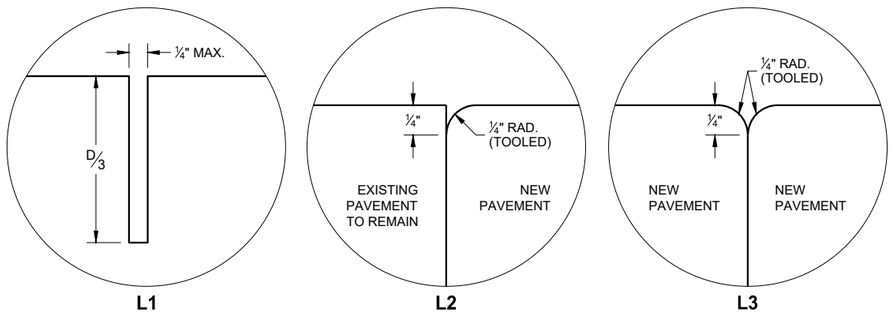
INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

CONCRETE PAVEMENT REPAIRS OF EXISTING NON-DOWELED CONCRETE PAVEMENTS DO NOT NEED TO BE DOWELED.

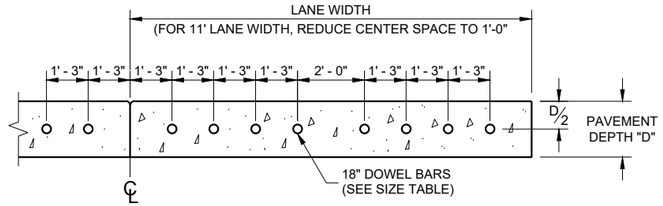
ANCHOR DOWEL BARS AND TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

FOR MULTI-LANE CONCRETE PAVEMENT REPLACEMENTS, PROVIDE A MINIMUM DISTANCE OF 15 INCHES FROM ALL TRANSVERSE JOINTS OR EDGES OF REPLACEMENT TO THE CENTER OF THE TIE BAR NEAREST THAT JOINT OR EDGE.

(1) APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.

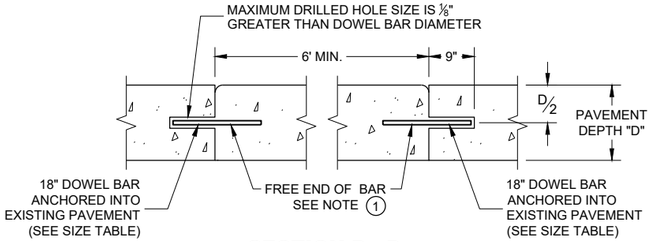


LONGITUDINAL JOINTS



SECTION E - E

DRILLED DOWEL BAR CONSTRUCTION JOINT



SECTION D - D

TIE BAR TABLE

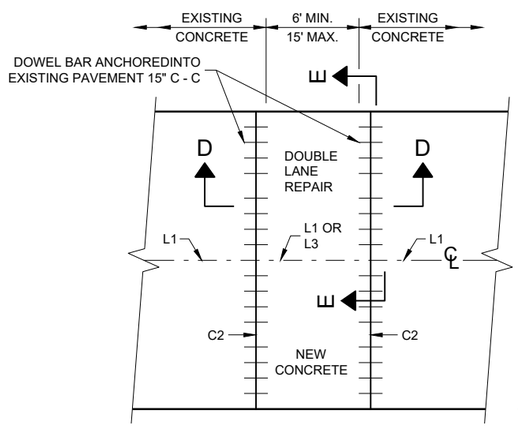
PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 ½"	NO. 4	30"	36"
≥ 10 ½"	NO. 5	36"	36"
	NO. 4 *	30"	24" **

* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

** CONFORM TO 15" MINIMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.

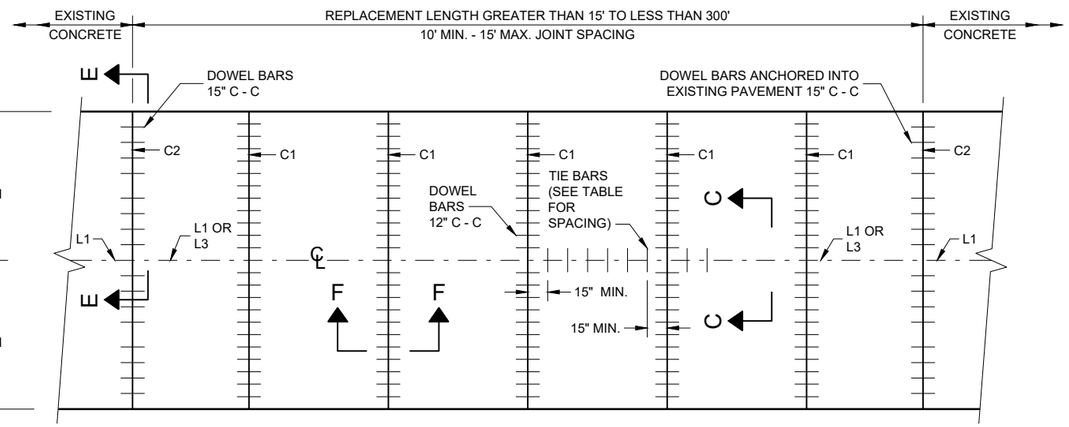
PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	DRILLED DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
6", 6 ½"	NONE	NONE	12'
7", 7 ½"	1"	1"	14'
8" & ABOVE	1 ¼"	1 ¼"	15'



PLAN VIEW

MULTILANE CONCRETE PAVEMENT REPAIR



PLAN VIEW

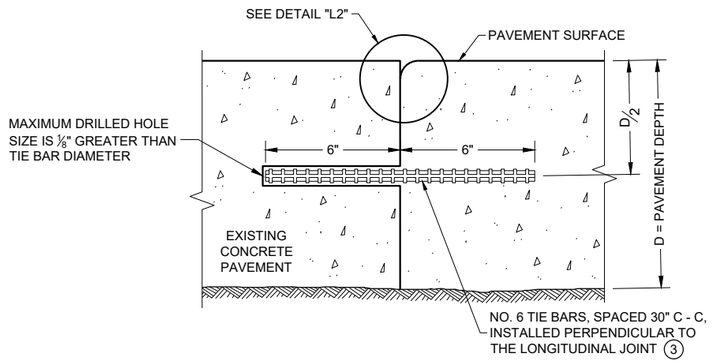
MULTILANE CONCRETE PAVEMENT REPLACEMENT

CONCRETE PAVEMENT REPAIR AND REPLACEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 13C09 - 17b
SDD 13C09 - 17b

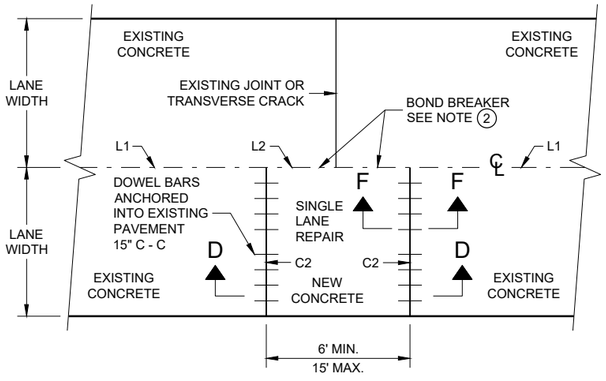


SECTION G - G

TIE BARS ANCHORED INTO EXISTING PAVEMENT

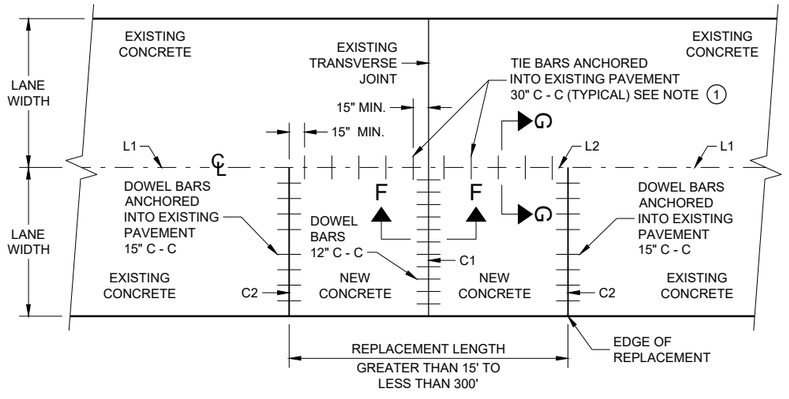
GENERAL NOTES

1. WITH THE APPROVAL OF THE ENGINEER, FOR SINGLE LANE PAVEMENT REPLACEMENTS LESS THAN 30 FEET IN LENGTH, THE CONTRACTOR MAY INSTALL DRILLED TIE BARS ON 6:1 SKEW HORIZONTALLY, DIRECTION OF SKEW ALTERNATING WITH EACH SUCCESSIVE BAR. DRIVE SKEWED TIE BARS TO A DEPTH OF 6 INCHES IN A HOLE OF SUCH A DIAMETER AS TO PROVIDE A TIGHT DRIVEN FIT.
2. USE AN ENGINEER APPROVED BOND BREAKER (E.G. RELEASE AGENT, CURING COMPOUND) FOR SINGLE LANE REPAIRS UP TO 15 FEET IN LENGTH.
3. ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.



PLAN VIEW

SINGLE LANE CONCRETE PAVEMENT REPAIR



PLAN VIEW

SINGLE LANE CONCRETE PAVEMENT REPLACEMENT

CONCRETE REPAIR AND REPLACEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

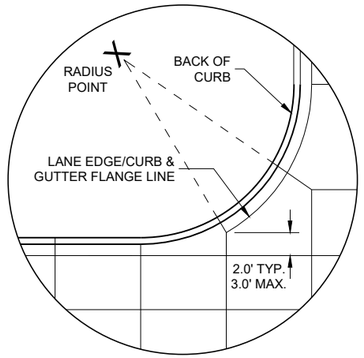
APPROVED
November 2022
DATE

/S/ Peter Kemp P.E.
PAVEMENT SUPERVIS

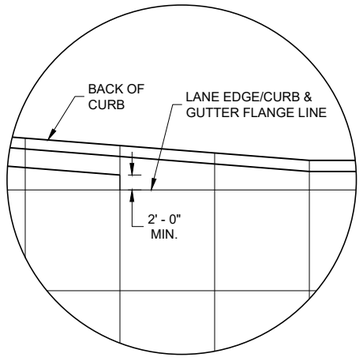
FHWA

6

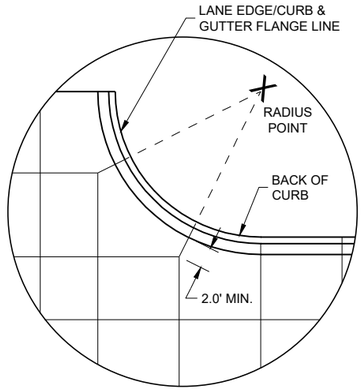
SDD 13C09 - 17c



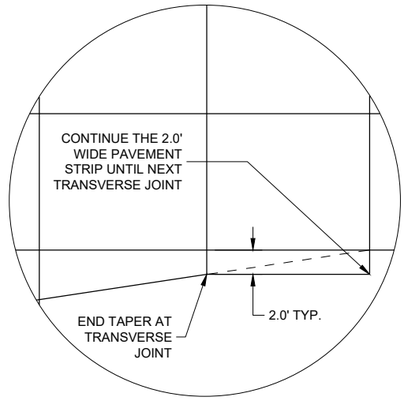
DETAIL "A"



DETAIL "B"



DETAIL "C"



DETAIL "D"

GENERAL NOTES

THE PRIMARY ROADWAY CONTROLS THE TRANSVERSE JOINT PATTERN.

ALIGN NEW JOINTS WITH EXISTING JOINTS OR CRACKS.

CONSTRUCT TRANSVERSE JOINTS PERPENDICULAR TO THE ROADWAY.

ADJUST TRANSVERSE JOINTS TO ALIGN WITH UTILITY FIXTURES (E.G MANHOLES AND INLETS) IN THE PAVEMENT STRUCTURE WHEN POSSIBLE. WATER VALVES DO NOT REQUIRE JOINT ADJUSTMENT.

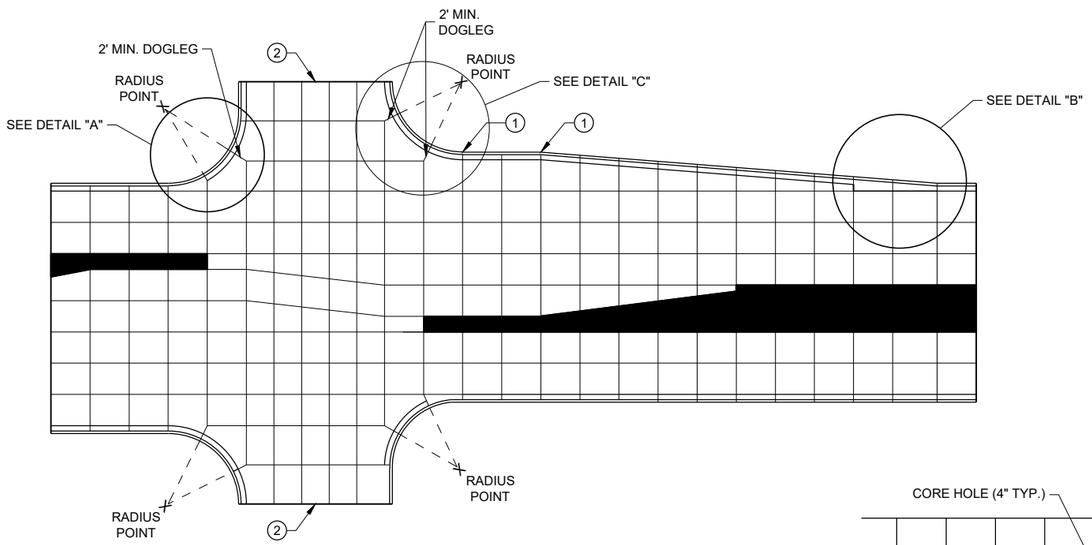
AVOID SLABS LESS THAN 2 FEET WIDE OR GREATER THAN 15 FEET WIDE.

SEE TABLE FOR TRANSVERSE JOINT SPACING. JOINT SPACING SPECIFIED IS MAXIMUM AND ACTUAL SPACING CAN BE ADJUSTED TO ACCOMMODATE INTERSECTIONS.

AVOID ANGLES LESS THAN 60° BY DOGLEGGING JOINTS THROUGH CURVE RADIUS POINTS. USE 90° ANGLES WHEN POSSIBLE.

CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

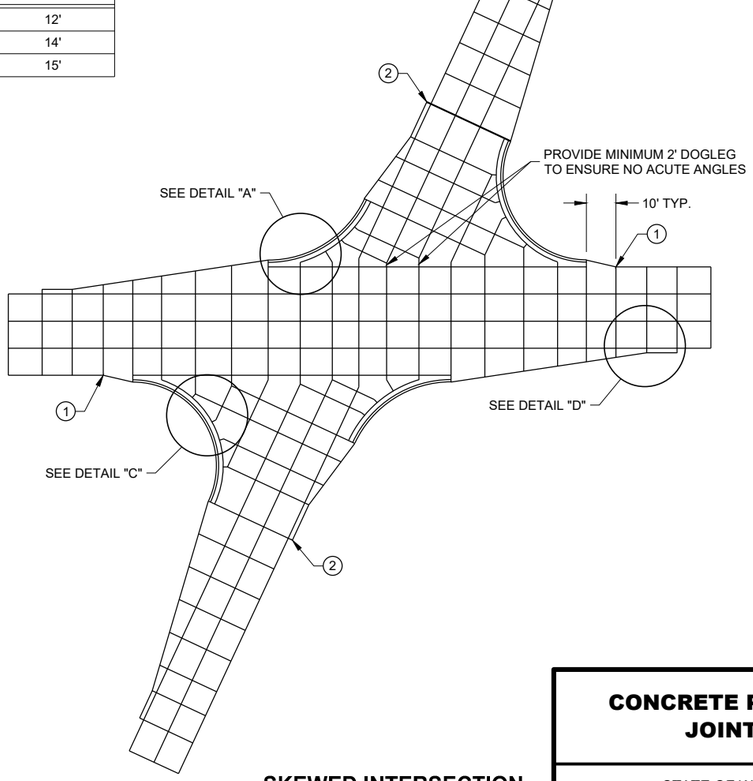
1. PROVIDE TRANSVERSE JOINTS AT ALL PAVEMENT WIDTH CHANGES.
2. CONSTRUCT DOWELED EXPANSION JOINT ON THE SIDE ROAD OF AN INTERSECTION IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH. ALIGN EXPANSION JOINT WITH EDGE OF RADIUS.
3. THE ENGINEER MAY APPROVE SLIGHT VARIATIONS FROM THESE JOINTING DETAILS.



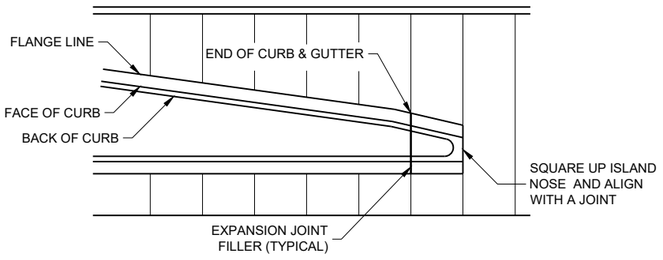
STANDARD INTERSECTION

PAVEMENT DEPTH AND JOINT SPACING TABLE

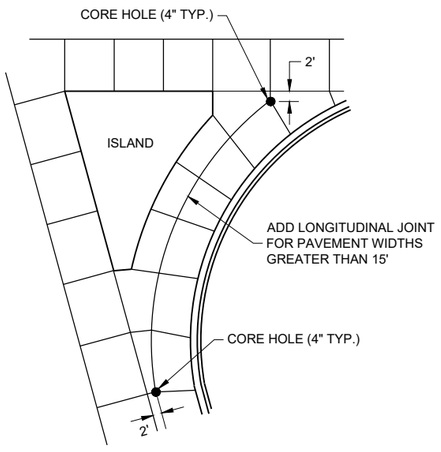
PAVEMENT DEPTH (D)	CONTRACTION JOINT SPACING
6", 6 ½"	12'
7", 7 ½"	14'
8" & ABOVE	15'



SKEWED INTERSECTION



APPROACH TO MEDIAN



LARGE RIGHT TURN

CONCRETE PAVEMENT JOINTING

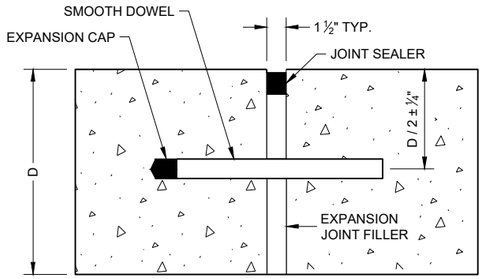
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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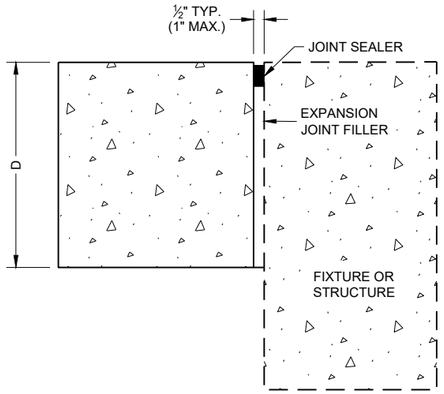
SDD 13C18 - 08a

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SDD 13C18 - 08a



DOWELED TRANSVERSE (1)



UNTIED - LONGITUDINAL

EXPANSION JOINTS

TIE BAR TABLE

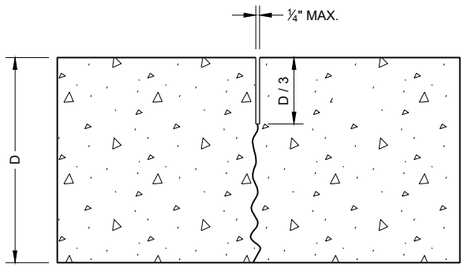
PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 ½"	NO. 4	30"	36"
≥ 10 ½"	NO. 5	36"	36"
	NO. 4 *	30"	24" **

* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

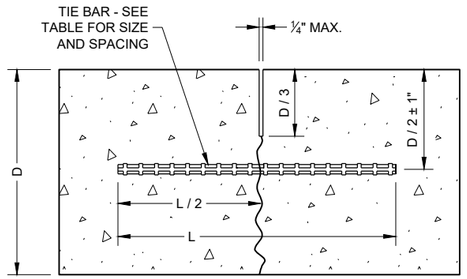
** CONFORM TO 15" MINIMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.

GENERAL NOTES

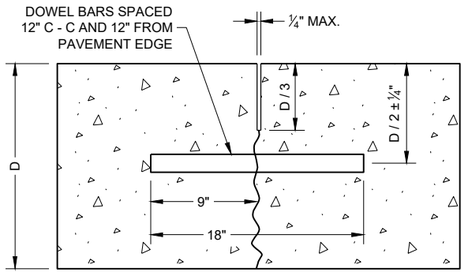
1. USE DOWELED EXPANSION JOINTS ON SIDE ROADS AT INTERSECTIONS (TO ISOLATETHE SIDE ROAD FROM THE THROUGH STREET) IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH.
2. SPACE CONTRACTION JOINTS IN ACCORDANCE WITH SDD 13C4, 13C11 OR 13C13.
3. LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO CONTRACTION JOINTS.
4. CONSTRUCTION JOINTS CAN BE FORMED OR SAWED.
5. IF JOINT IS FORMED, PROVIDE A ¼" RADIUS.
6. ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.



UNDOWELED TRANSVERSE

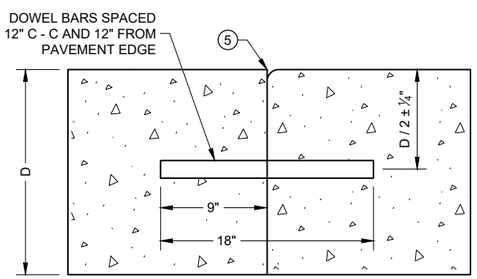


TIED LONGITUDINAL

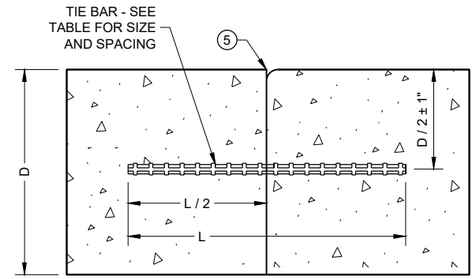


DOWELED TRANSVERSE

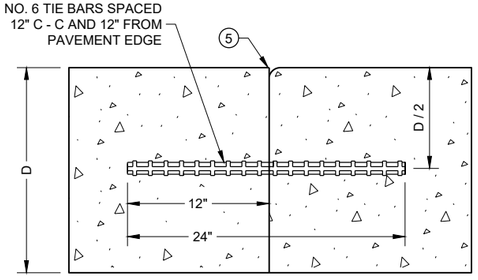
CONTRACTION JOINTS (2)



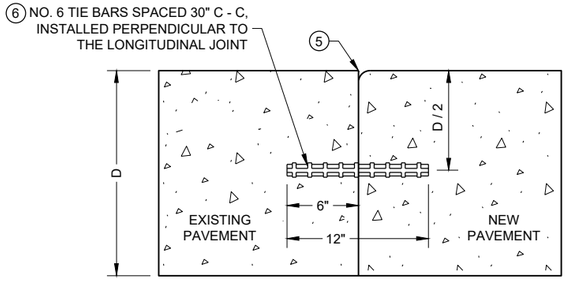
DOWELED TRANSVERSE (3)



TIED LONGITUDINAL



TIED TRANSVERSE (3)
(FOR USE ON NON-DOWELED PAVEMENTS ONLY)



TIED LONGITUDINAL TO EXISTING

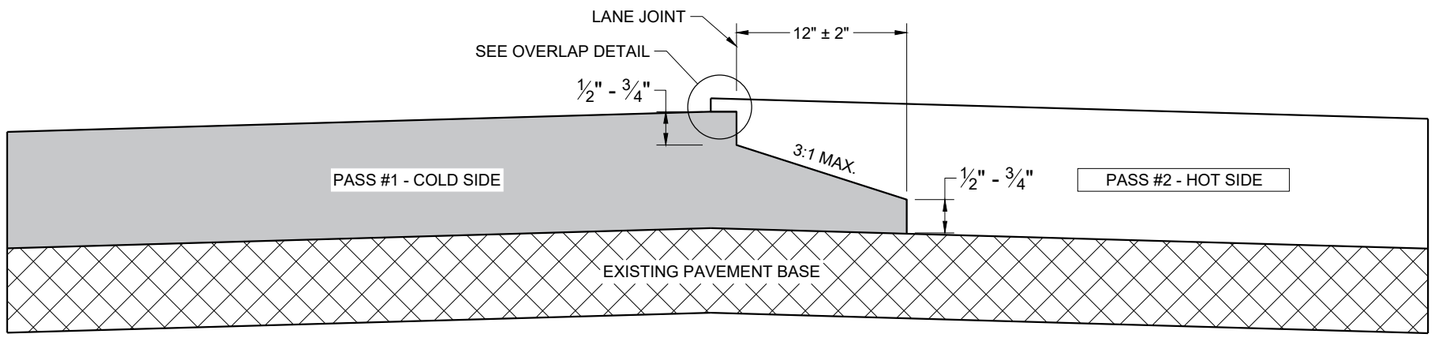
CONSTRUCTION JOINTS (4)

CONCRETE PAVEMENT JOINT TYPES

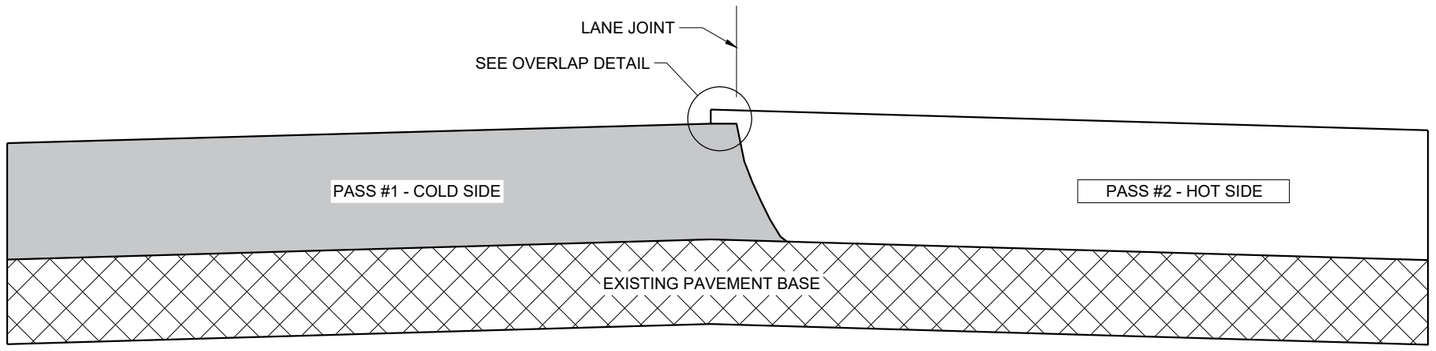
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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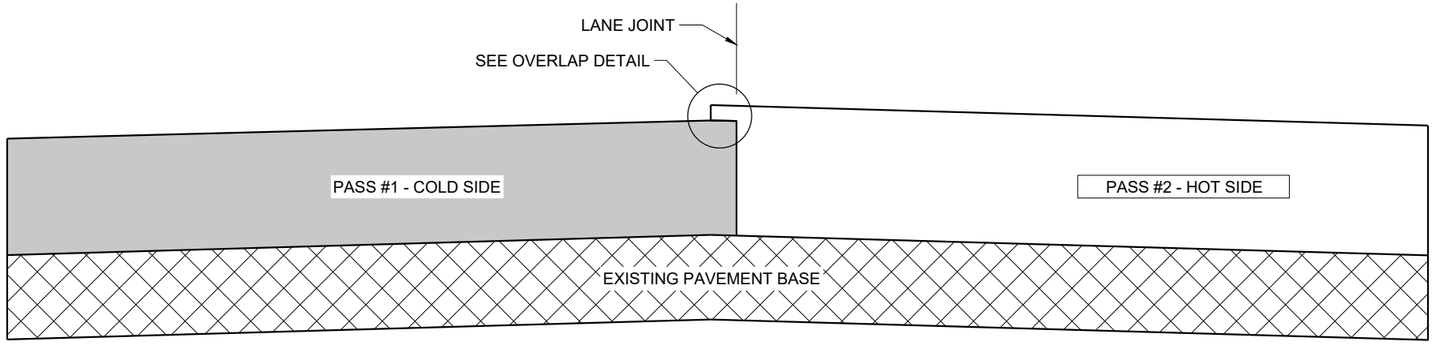
SDD 13C18 - 08c



TYPICAL PAVEMENT CROSS SECTION
NOTCHED WEDGE JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT (MILLED)

GENERAL NOTES

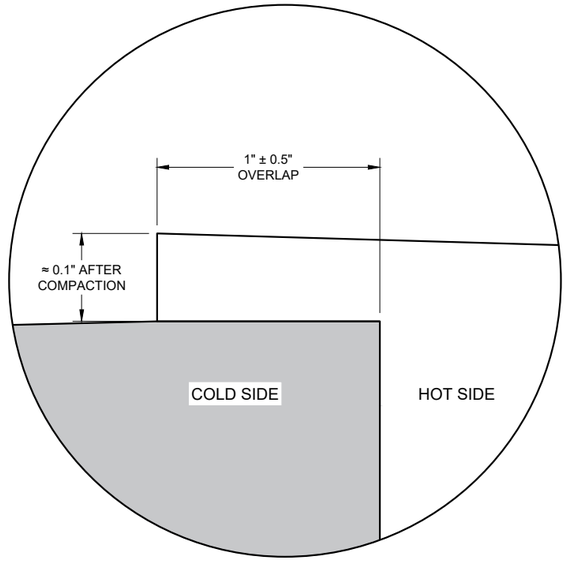
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

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

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

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

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



OVERLAP DETAIL (TYPICAL)

6

6

SDD 13C19 - 03

SDD 13C19 - 03

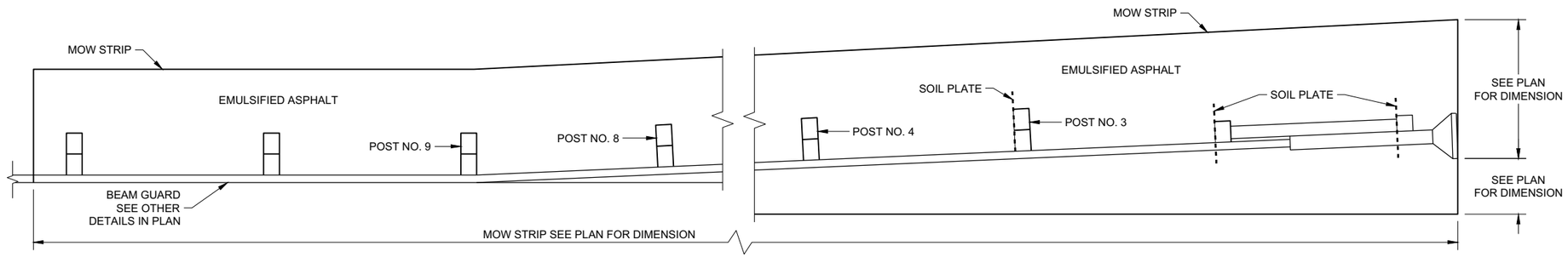
HMA LONGITUDINAL JOINTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2020
DATE

/S/ Steven Hefel
HMA PAVEMENT ENGIN

FHWA



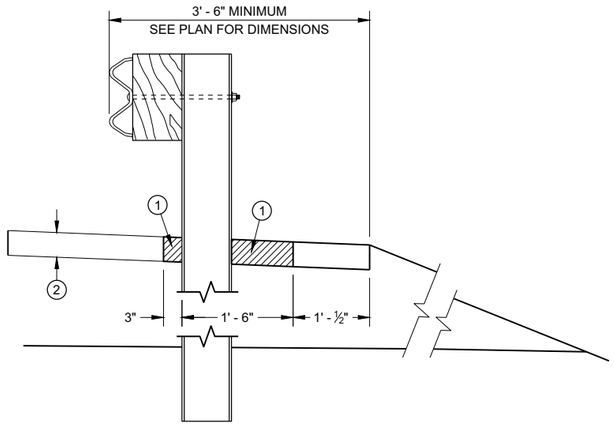
PLAN VIEW

MOW STRIP LAYOUT FOR ENERGY ABSORBING TERMINAL

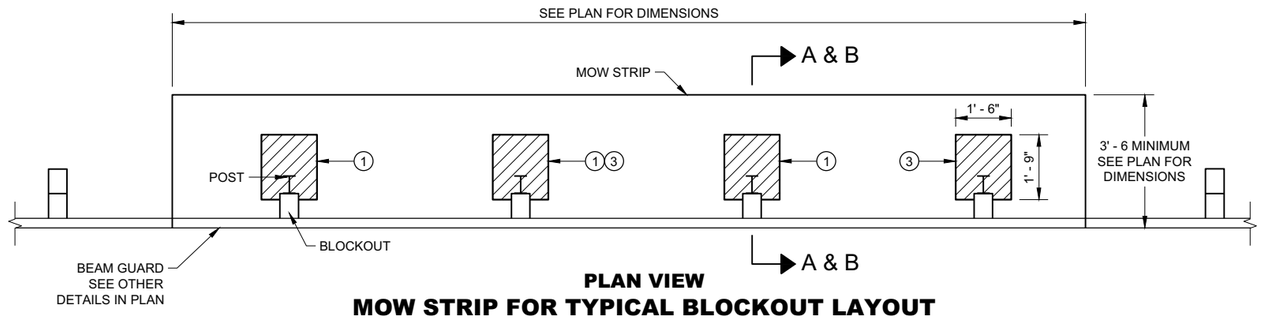
GENERAL NOTES

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)

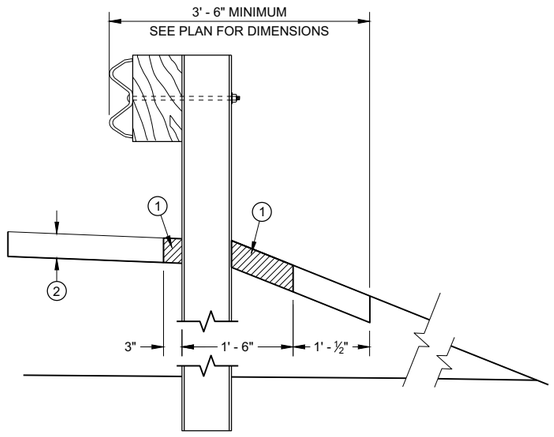


SECTION A - A

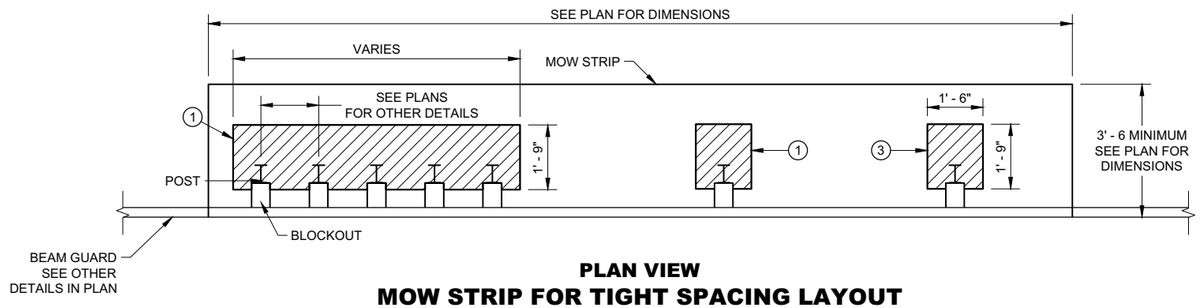


PLAN VIEW

MOW STRIP FOR TYPICAL BLOCKOUT LAYOUT

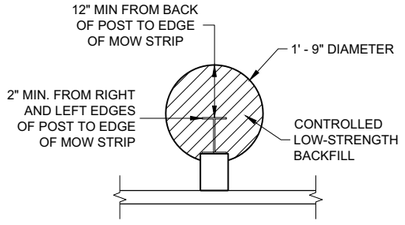


SECTION B - B

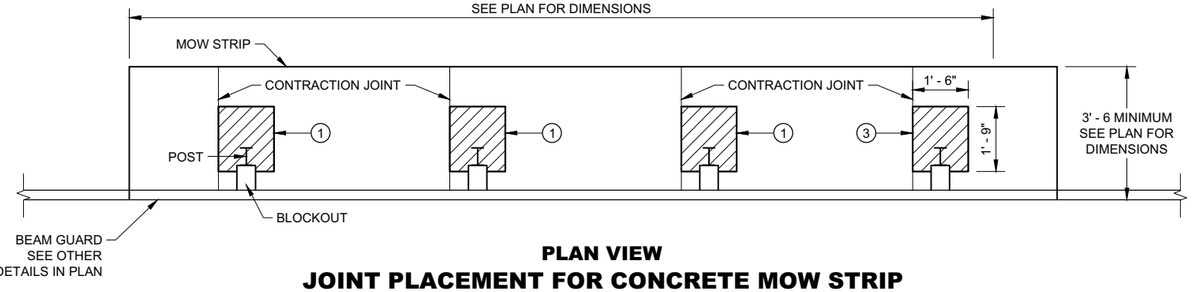


PLAN VIEW

MOW STRIP FOR TIGHT SPACING LAYOUT



ALTERNATIVE HMA MOW STRIP DESIGN



PLAN VIEW

JOINT PLACEMENT FOR CONCRETE MOW STRIP

GUARDRAIL MOW STRIP

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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SDD 14B28 - 04a
SDD 14B28 - 04a

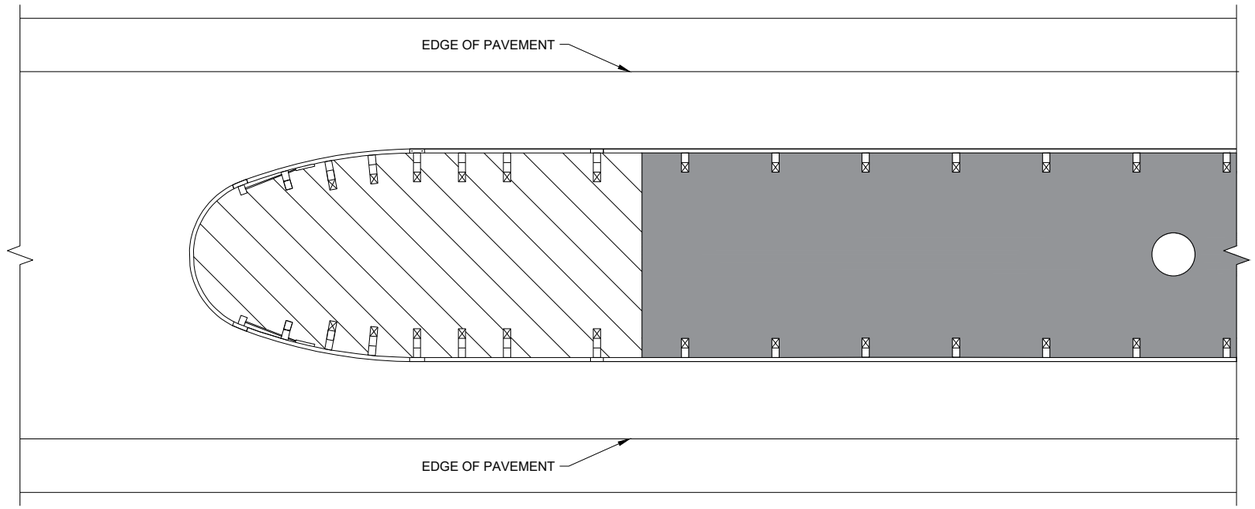
LEGEND

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

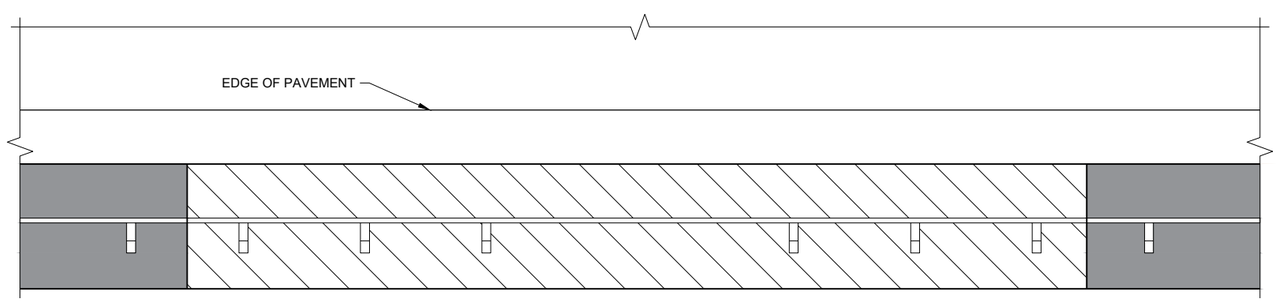
EMULSIFIED ASPHALT MOW STRIP (SEE OTHER DETAILS)

GENERAL NOTES

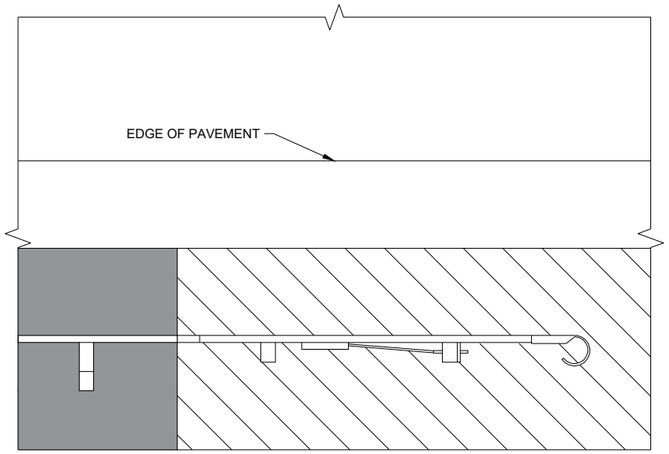
EXISTING THRIE BEAM BULLNOSES MAY HAVE WOOD POSTS. NEW THRIE BEAM BULLNOSE WILL HAVE STEEL POSTS.



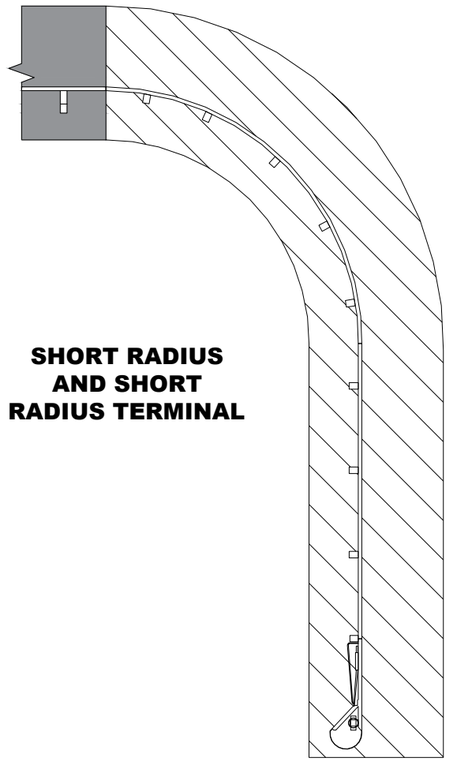
THRIE BEAM BULLNOSE



LONG - SPAN



TYPE 2 TERMINAL



SHORT RADIUS AND SHORT RADIUS TERMINAL

GUARDRAIL MOW STRIP

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
August 2020
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS DEVE
ENGINEER

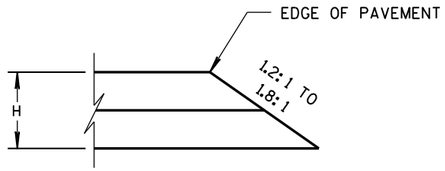
FHWA

6

SDD 14B28 - 04b

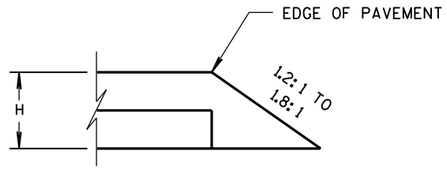
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SDD 14B28 - 04b



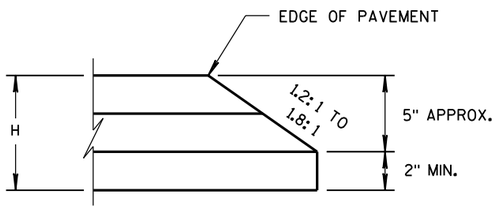
CONSTRUCTED WITH FINAL TWO LAYERS

FOR H 5" OR LESS



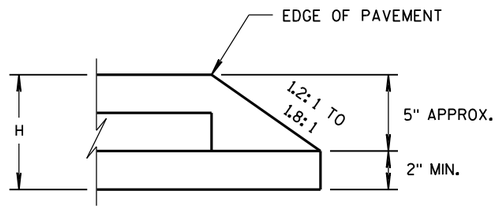
CONSTRUCTED WITH FINAL LAYER

FOR H 5" OR LESS



CONSTRUCTED WITH FINAL TWO LAYERS

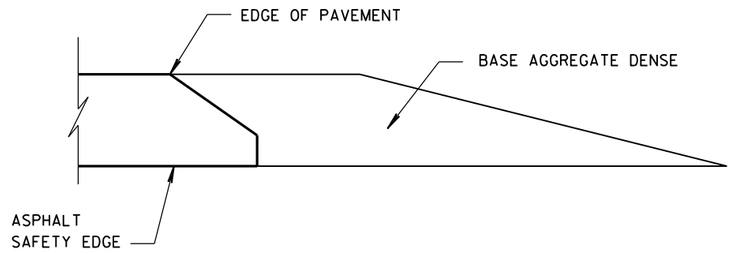
FOR H GREATER THAN 5"



CONSTRUCTED WITH FINAL LAYER

FOR H GREATER THAN 5"

HMA PAVEMENT AND HMA OVERLAYS



FINISHED SHOULDER AGGREGATE PLACEMENT

6

6

S.D.D. 14 B 29-1

S.D.D. 14 B 29-1

SAFETY EDGE SM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

11/30/2012
DATE

/S/ Jerry H. Zoda
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

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

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

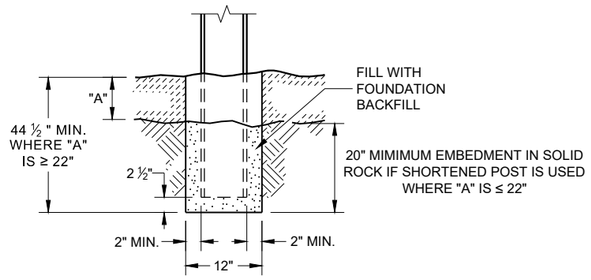
(3) IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL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

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

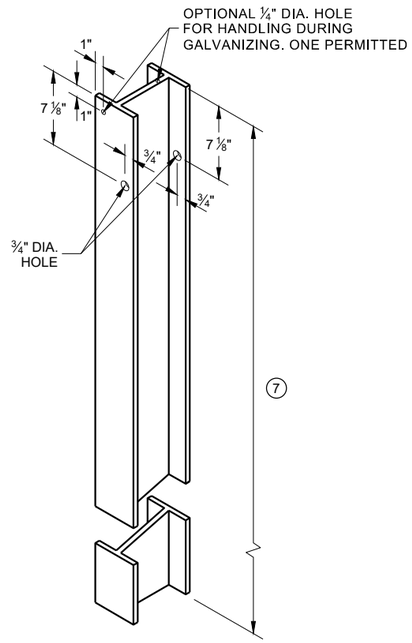
(5) FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ±1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 ¾" TO 32".

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

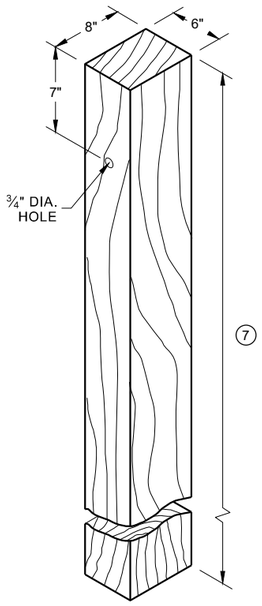
(7) TOTAL POST LENGTH FOR TYPE K IS 7' - 0".
TOTAL POST LENGTH FOR OTHER MGS TYPES IS 6' - 0".



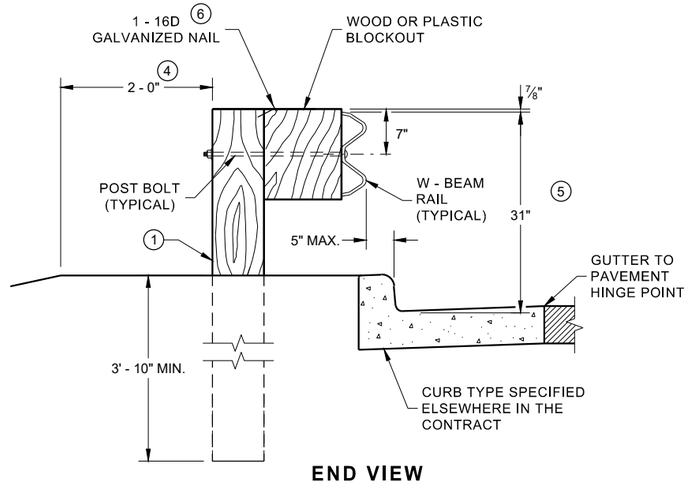
END VIEW
SETTING STEEL OR WOOD POST IN ROCK (3)



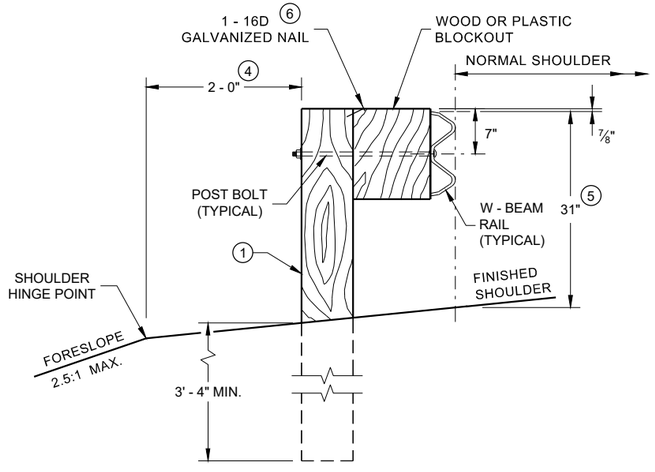
STEEL POST & HOLE PUNCHING DETAIL (W 6 X 9) (1)



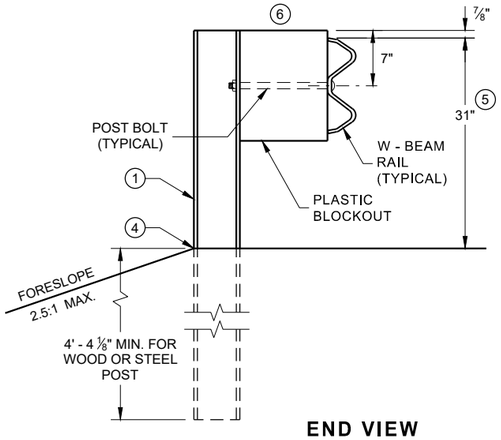
WOOD POST (6" X 8") NOMINAL (1)



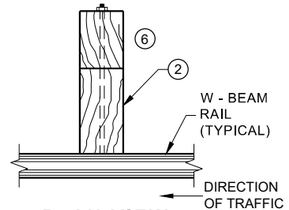
END VIEW
LOCATED ALONG A CURBED ROADWAY



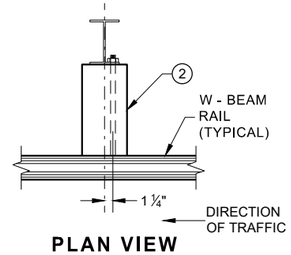
END VIEW
LOCATED ALONG A ROADWAY SHOULDER STANDARD INSTALLATION



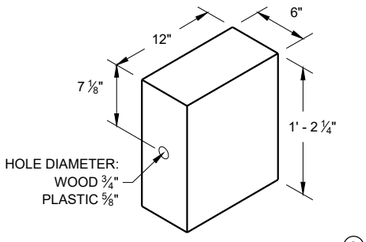
END VIEW
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



PLAN VIEW
WOOD POST, BLOCKOUT & BEAM



PLAN VIEW
STEEL POST, PLASTIC BLOCKOUT & BEAM



WOOD OR PLASTIC BLOCKOUT (2)

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

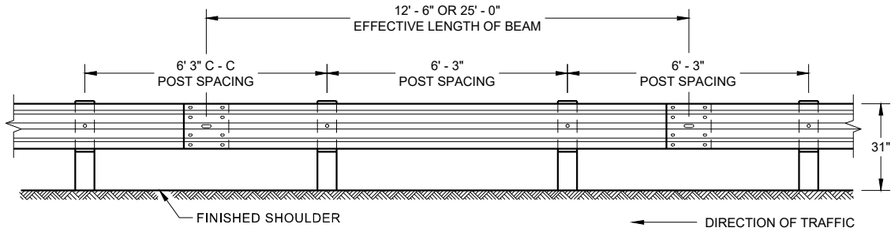
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

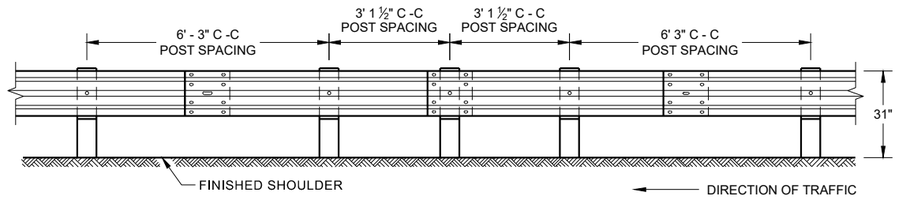
SDD 14B42 - 07a

6

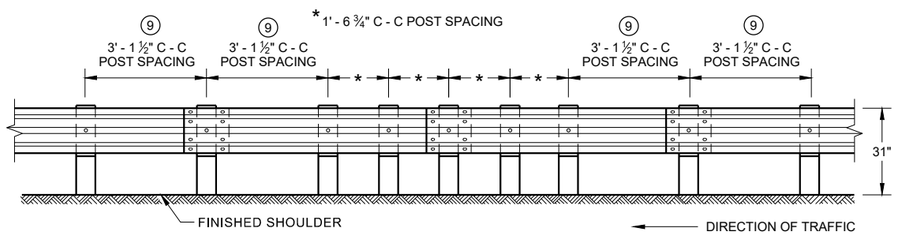
SDD 14B42 - 07a



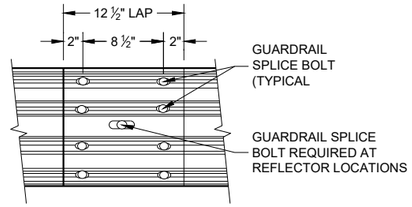
FRONT VIEW
POST SPACING STANDARD INSTALLATION



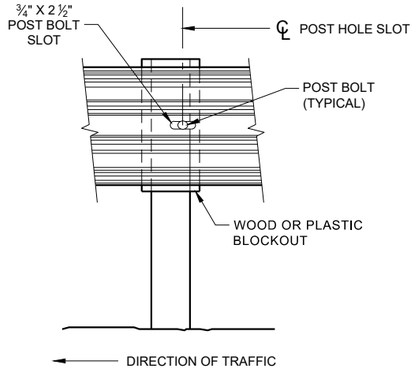
FRONT VIEW
HALF POST SPACING (HS) AND
HALF POST SPACING WITH LONGER POSTS (K)



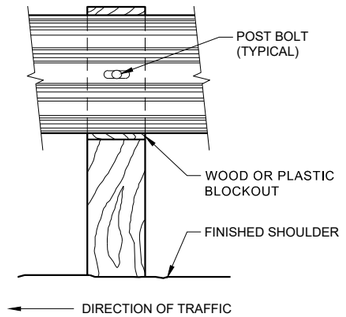
FRONT VIEW
QUARTER POST SPACING (QS)



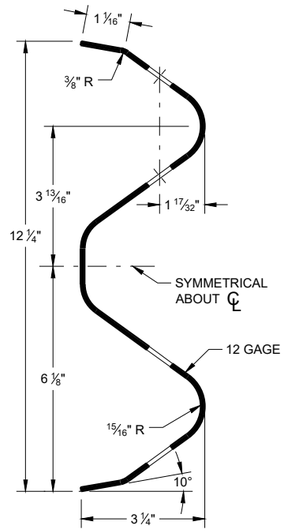
FRONT VIEW
MID-SPAN BEAM SPLICE



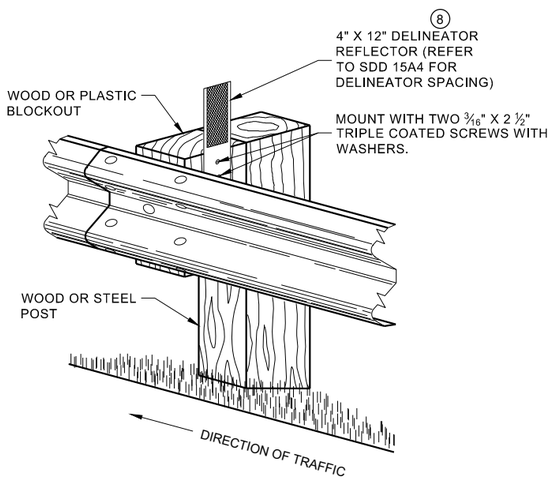
FRONT VIEW AT STEEL POST



FRONT VIEW AT WOOD POST



SECTION THRU W-BEAM RAIL



ONE SIDED REFLECTOR DETAIL
AND TYPICAL INSTALLATION

GENERAL NOTES

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

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

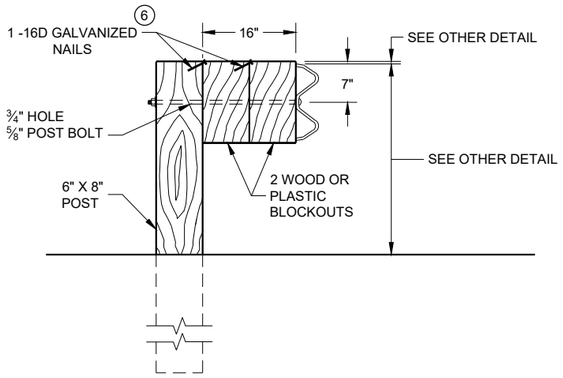
POST BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND ⅝" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

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

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
SDD 14B42 - 07b

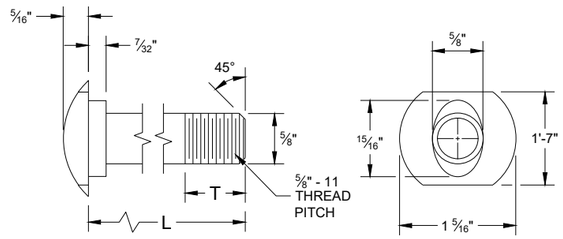


DETAIL FOR 16" BLOCKOUT DEPTH

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

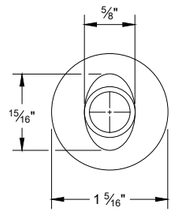
NOTE:

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

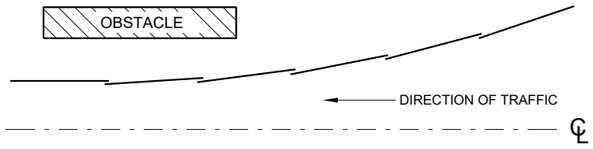


POST BOLT TABLE

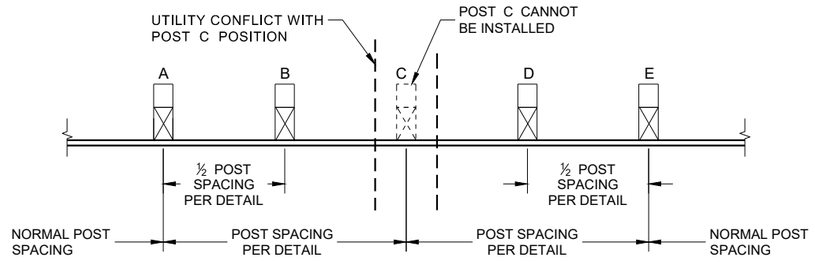
L	T (MIN.)
1 ¼"	1 ⅛"
2"	1 ¾"
10"	4"
14"	4 1⁄16"
18"	4"
21"	4 1⁄16"
25"	4"



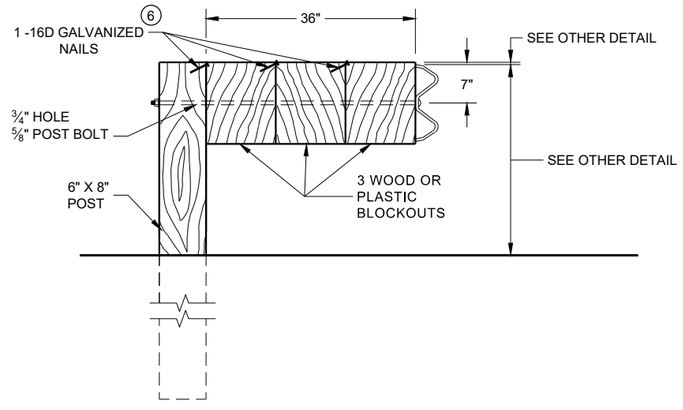
ALTERNATE BOLT HEAD



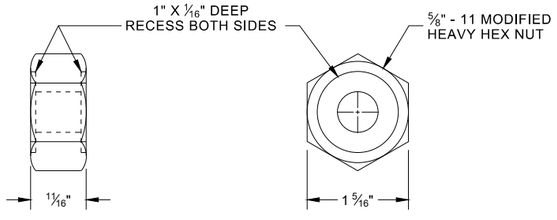
PLAN VIEW
BEAM LAPPING DETAIL



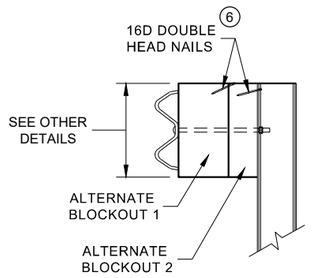
POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



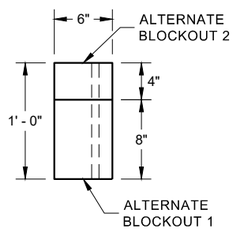
DETAIL FOR 36" BLOCKOUT DEPTH



POST BOLT, SPLICE BOLT AND RECESS NUT



SIDE VIEW



PLAN VIEW

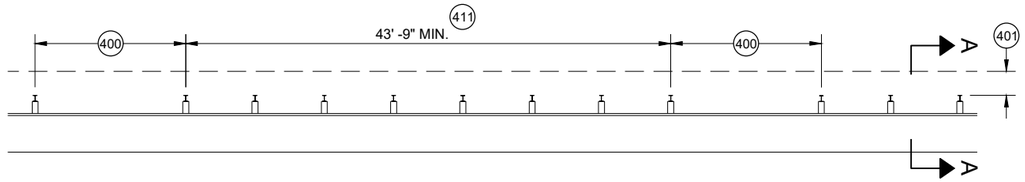
ALTERNATE WOOD BLOCKOUT DETAIL

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

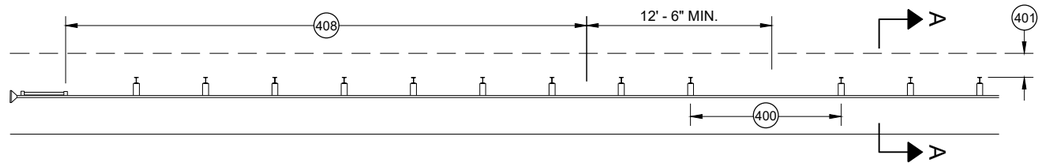
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

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

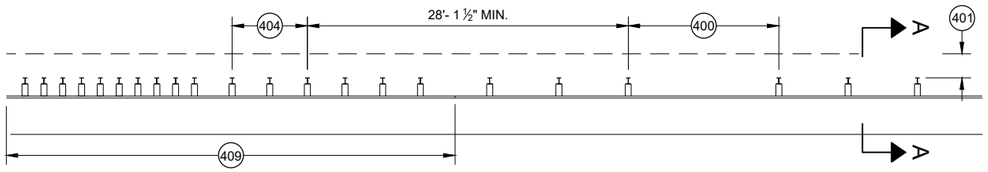
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL



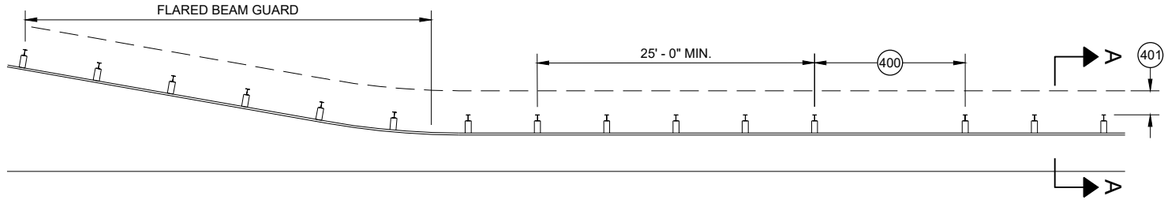
MISSING POST IN MGS GUARDRAIL



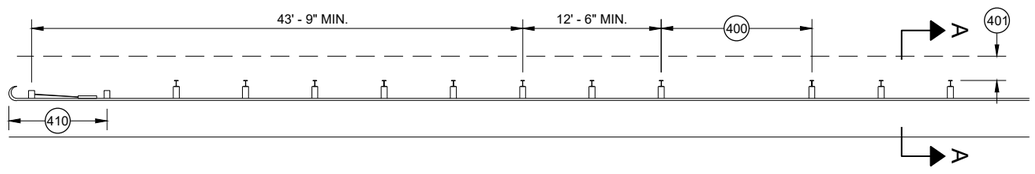
MISSING POST IN MGS GUARDRAIL NEAR EAT



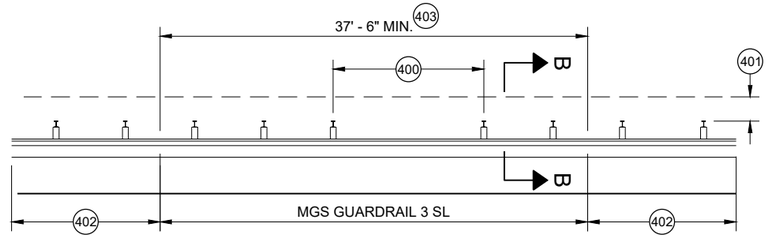
MISSING POST IN MGS GUARDRAIL NEAR AN APPROACH TRANSITION



MISSING POST IN MGS GUARDRAIL NEAR FLARED BEAM GUARD

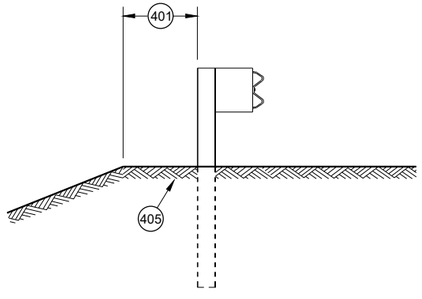


MISSING POST IN MGS GUARDRAIL NEAR A TYPE 2 END TERMINAL

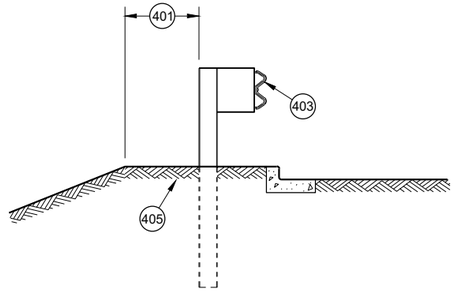


MISSING POST IN SHORT SPAN MGS GUARDRAIL NEAR CURB (SL) 407

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



SECTION A - A 406



SECTION B - B 406

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

6

SDD 14B42 - 07d

SDD 14B42 - 07d

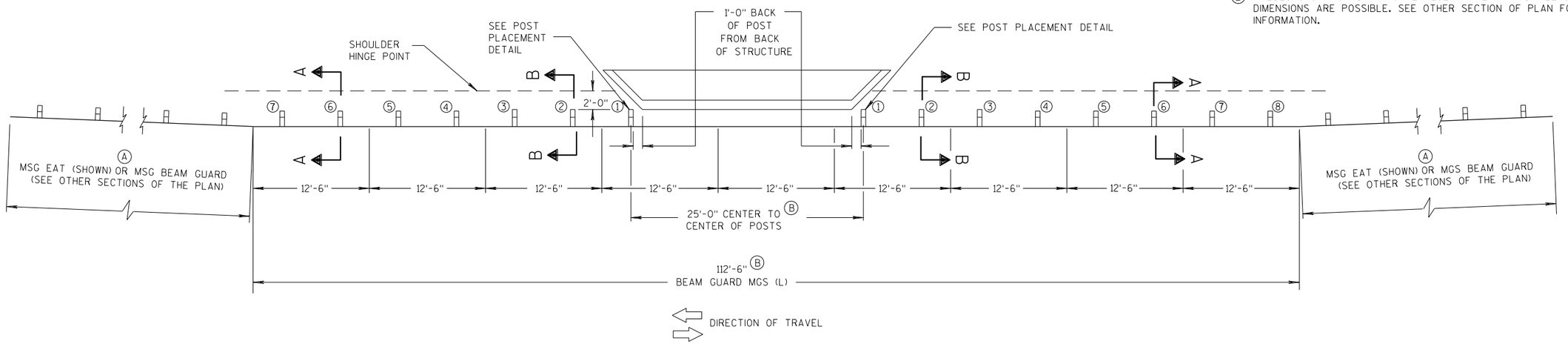
GENERAL NOTES

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

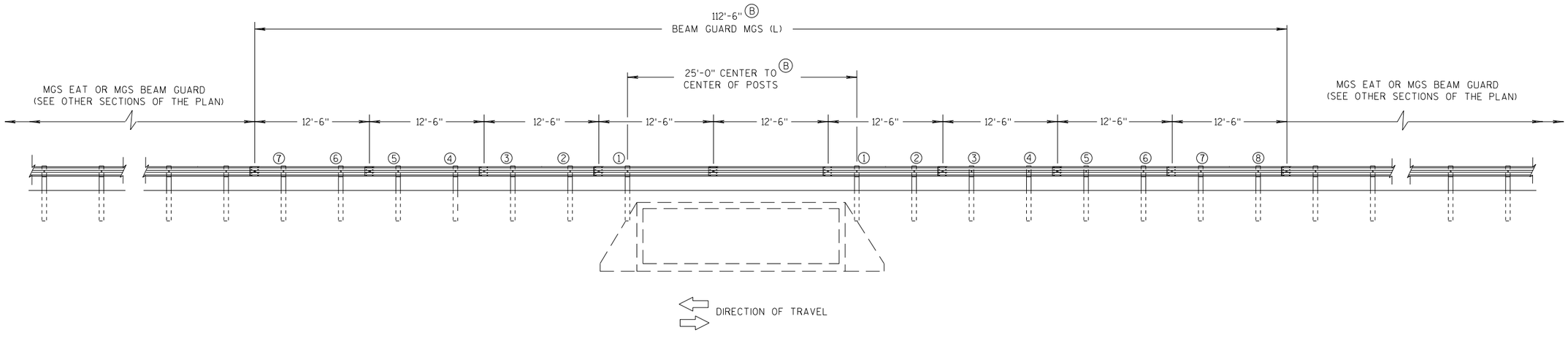
SEE SDD 14 B 42 FOR MORE DETAILS.

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

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



PLAN VIEW



ELEVATION VIEW

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

MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
S.D.D. 14 B 43-4a

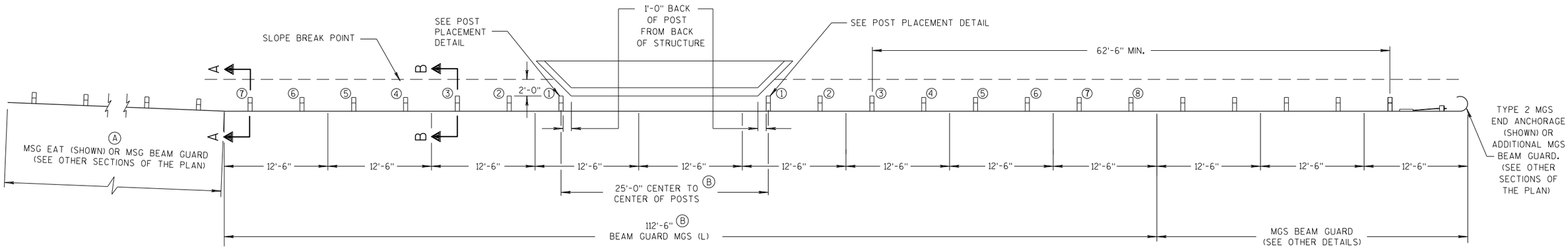
GENERAL NOTES

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

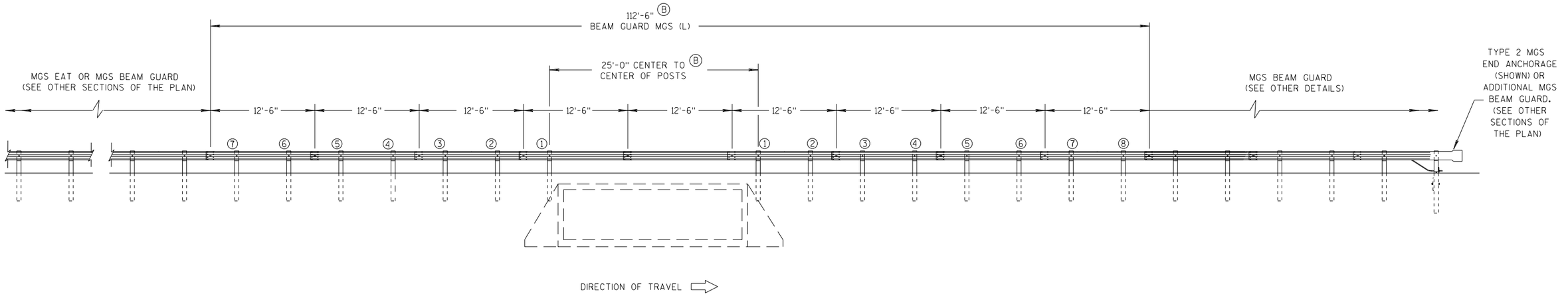
SEE SDD 14 B 42 FOR MORE DETAILS.

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

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



PLAN VIEW



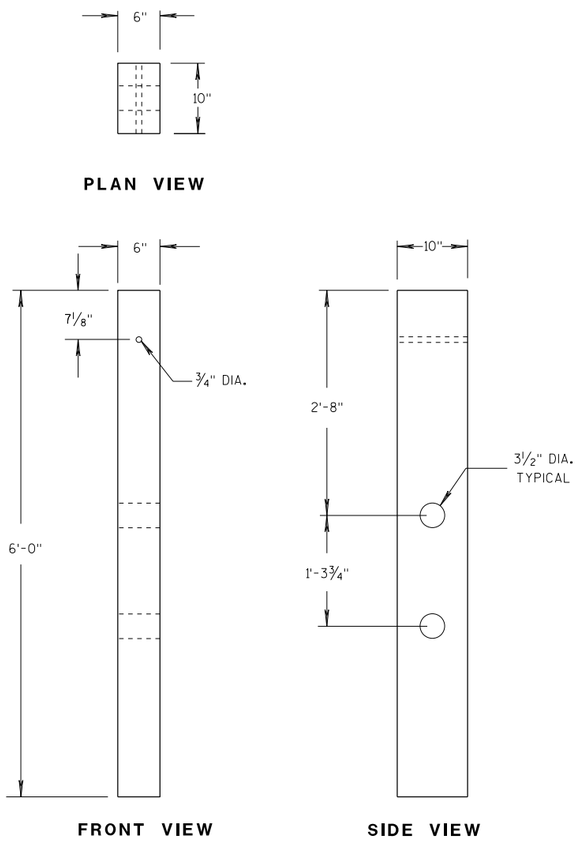
ELEVATION VIEW

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

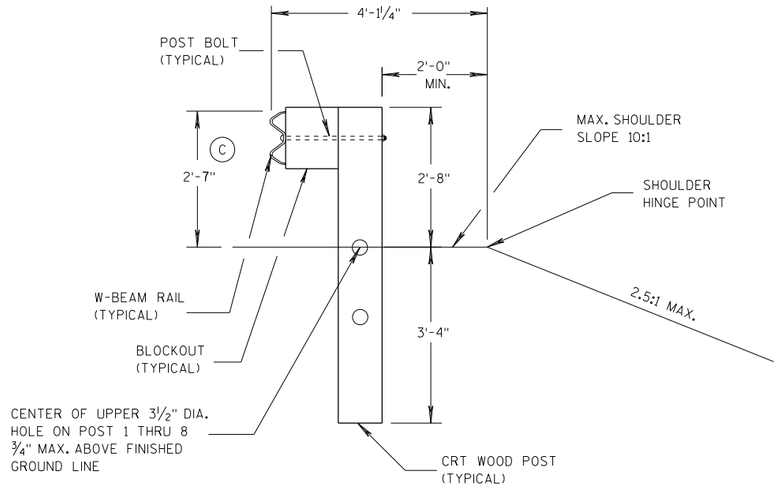
MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	168

6

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



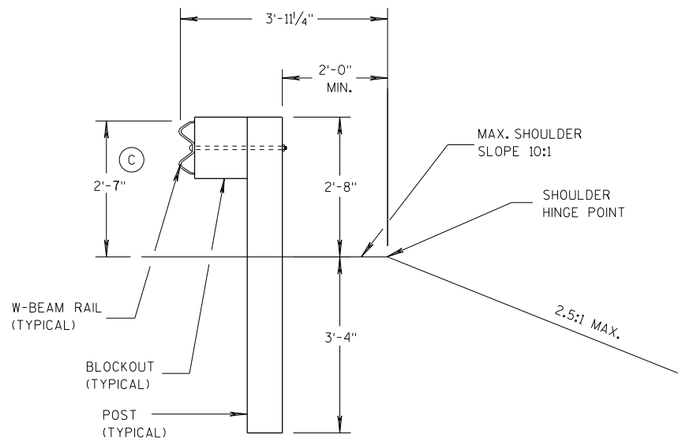
CRT WOOD POST



SECTION B-B

POSTS NO. 1-3

SEE OTHER DETAILS



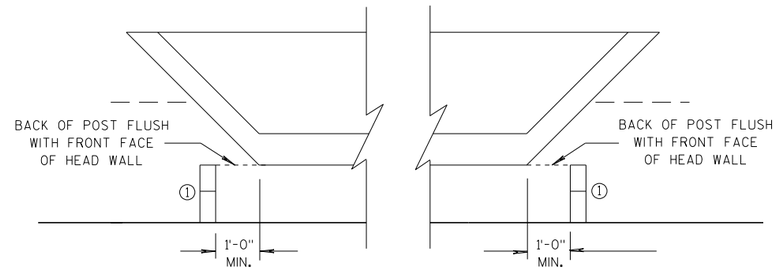
SECTION A-A

POSTS NO. 4-8

SEE OTHER DETAILS

GENERAL NOTES

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



POST PLACEMENT DETAIL

MIDWEST GUARDRAIL SYSTEM
LONG SPAN MGS (L)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
07/2018
DATE
FHWA

/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT ENGINEER

6

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

6

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

GENERAL NOTES

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

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

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

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

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

DIMENSIONS MAY VARY, MANUFACTURER'S INFORMATION.

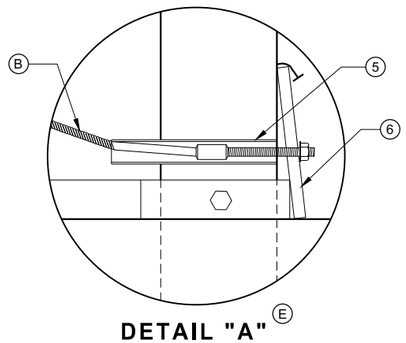
SEE SDD 14B42 FOR MORE INFORMATION.

* DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.

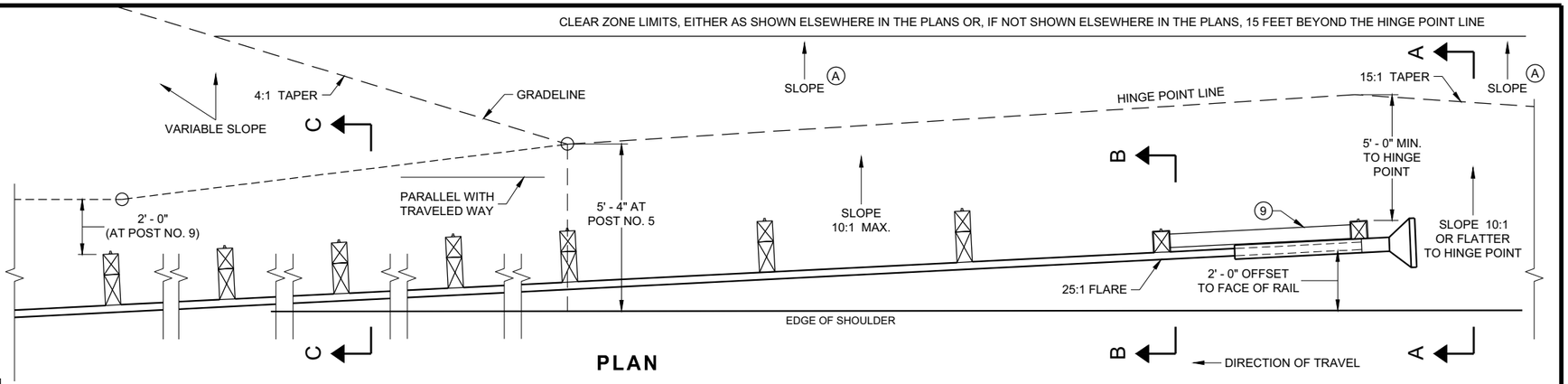
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

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

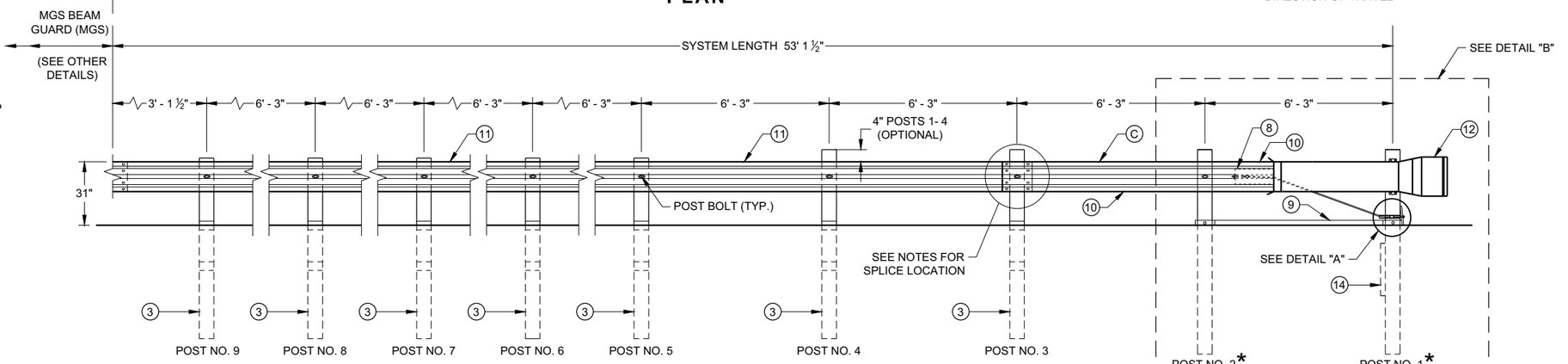
THE CENTER OF THE UPPER 3 ½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE. WOOD BLOCKS ON POSTS NUMBERED 3 THROUGH 9 MAY BE ADJUSTED UP TO 3" ABOVE THE TOP OF POST.



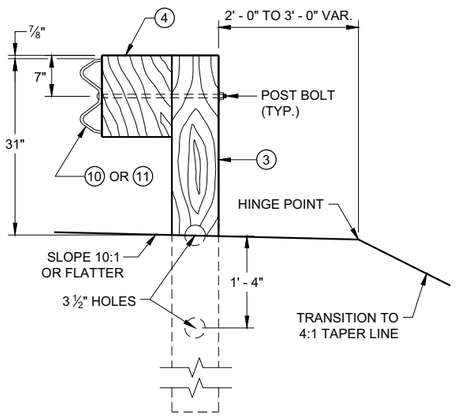
DETAIL "A" (E)



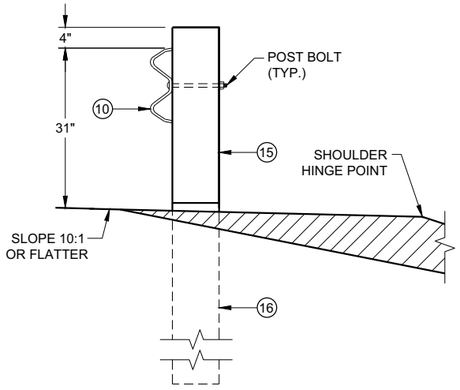
PLAN



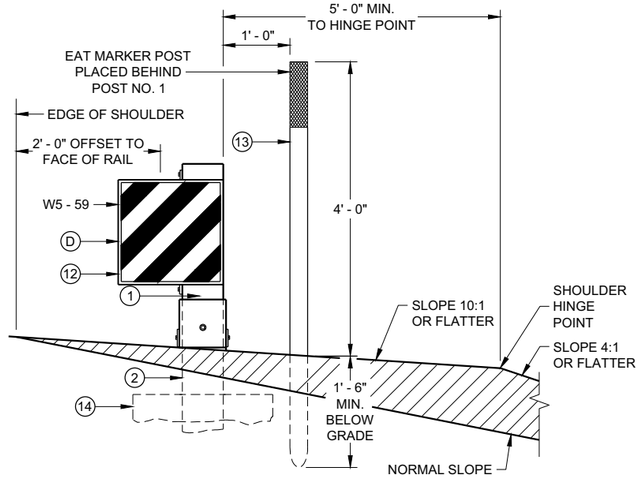
ELEVATION



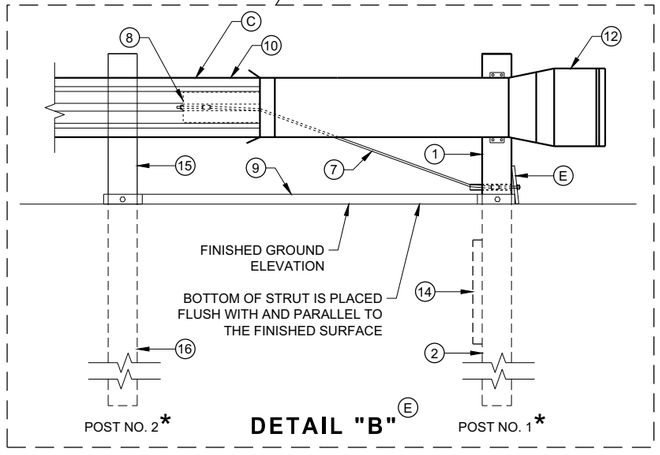
SECTION C - C
TYPICAL AT POST NOS. 3 - 9



SECTION B - B
TYPICAL AT POST NO. 2*



SECTION A - A
TYPICAL AT POST NO. 1*

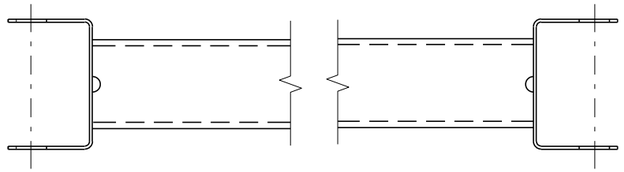


MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B44 - 04a

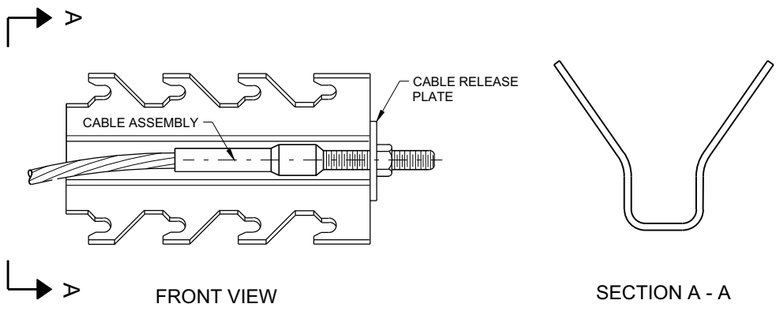
SDD 14B44 - 04a



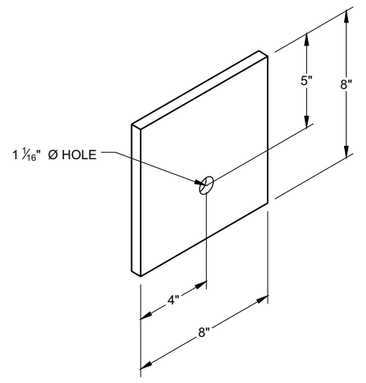
GENERIC GROUND STRUT ⑨ Ⓔ

BILL OF MATERIALS

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



GENERIC ANCHOR CABLE BOX ⑧ Ⓔ



BEARING PLATE ⑥ Ⓔ

6

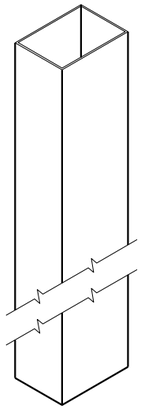
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SDD 14B44 - 04b

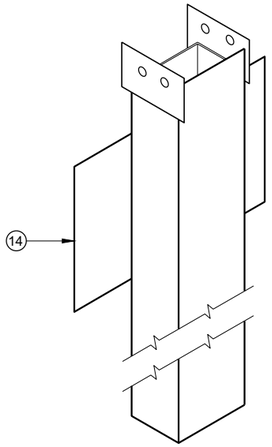
SDD 14B44 - 04b

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

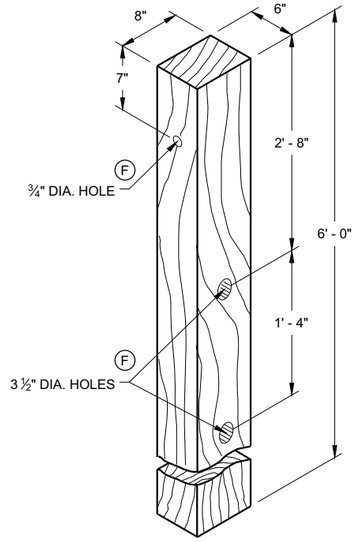
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



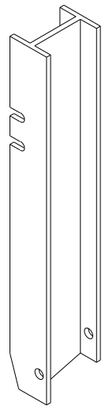
UPPER POST NO. 1 (1) (E)



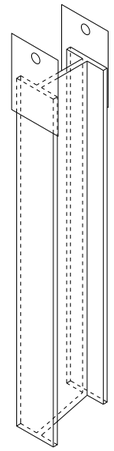
LOWER POST NO. 1 (2) (E)



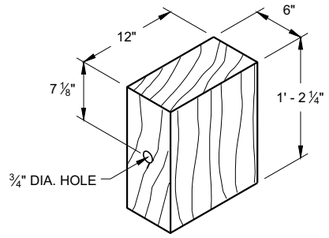
WOOD CRT POST (3) (E)
POSTS NUMBER 3-9



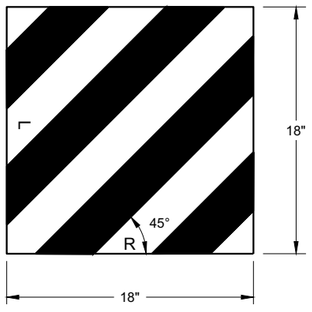
UPPER POST NO. 2 (15) (E)



LOWER POST NO. 2 (16) (E)

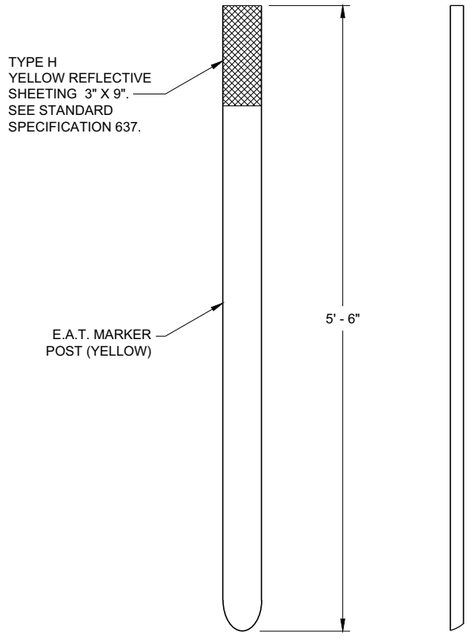


WOOD BLOCKOUT (4)
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



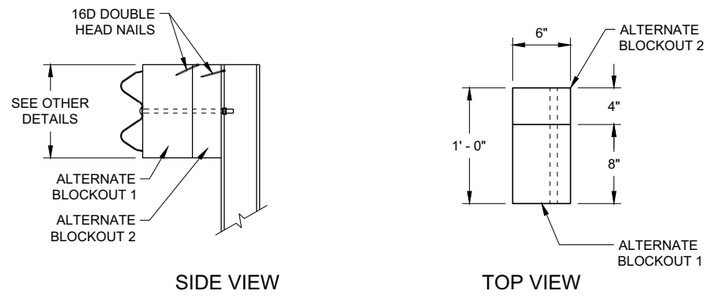
W5 - 59

REFLECTIVE SHEETING DETAIL (E)



FRONT VIEW SIDE VIEW

E.A.T. MARKER POST (13)



SIDE VIEW TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

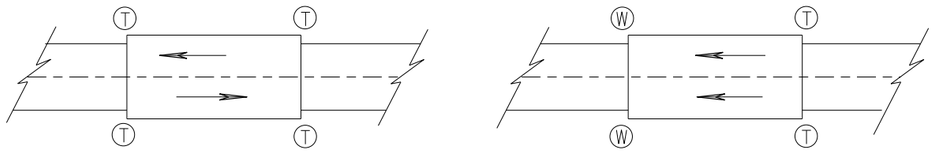
MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

SDD 14B44 - 04c



TWO WAY TRAFFIC

ONE WAY TRAFFIC

(T) THRIE BEAM CONNECTION

(W) W-BEAM CONNECTION WHEN REQUIRED

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

GENERAL NOTES

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

TRANSITION USES STEEL POSTS ONLY.

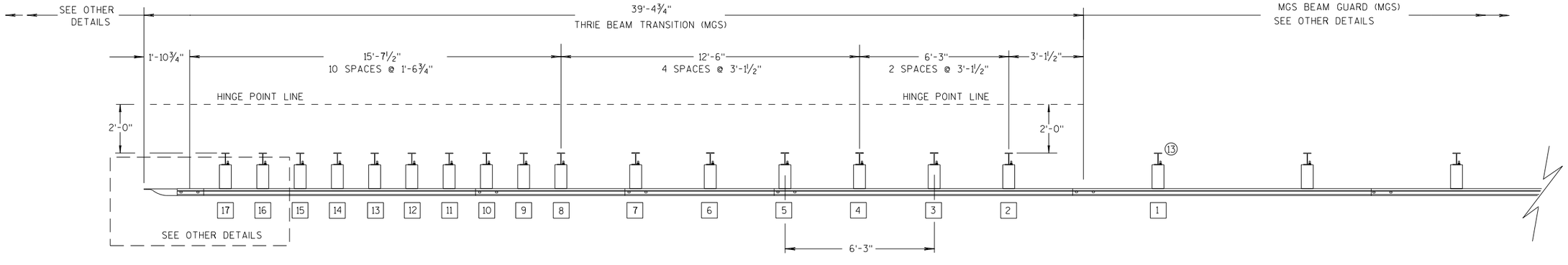
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

POST 2 THROUGH 17 USES STEEL POST ONLY

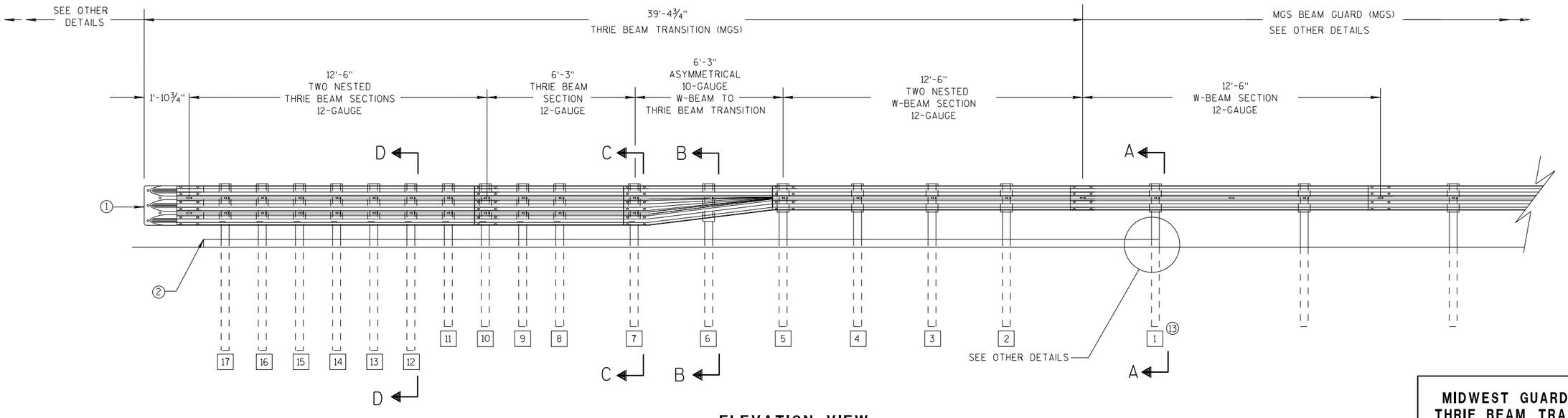
(1) BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.

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

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



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6
S.D.D. 14 B 45-5a

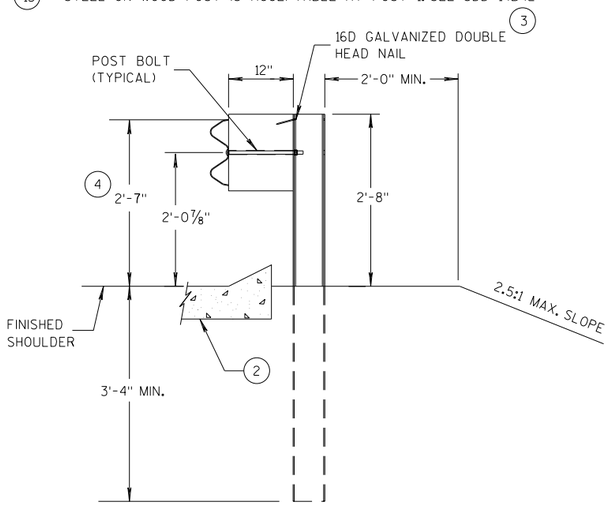
GENERAL NOTES

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

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

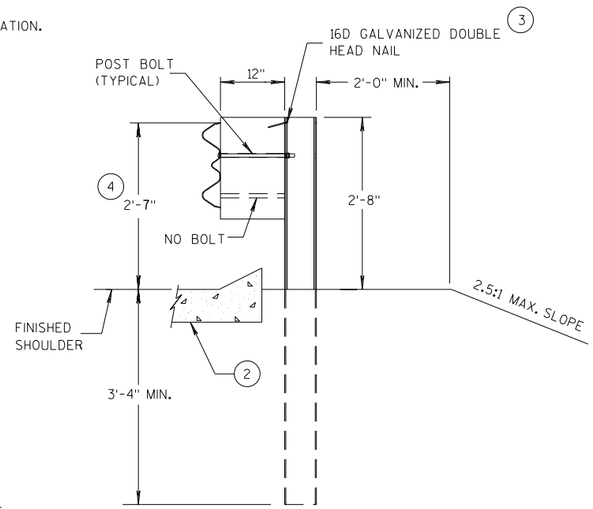
(4) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".

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



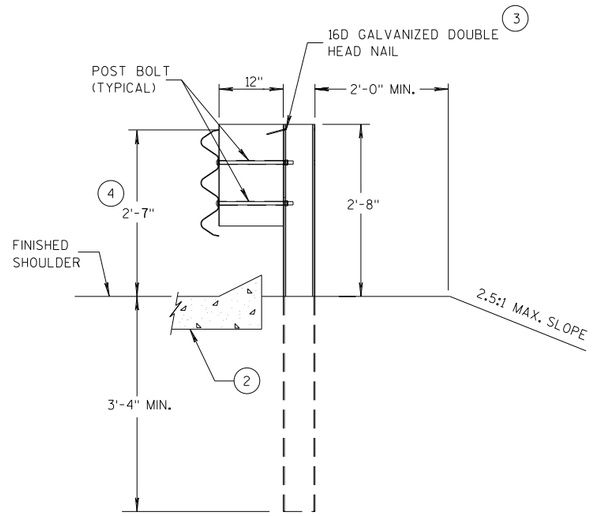
SECTION A-A (13)

POSTS 1-5



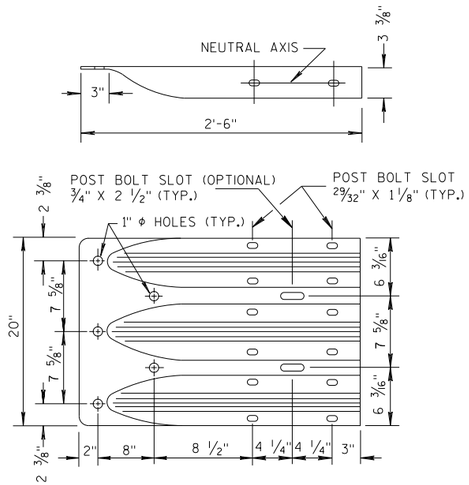
SECTION B-B

POST 6

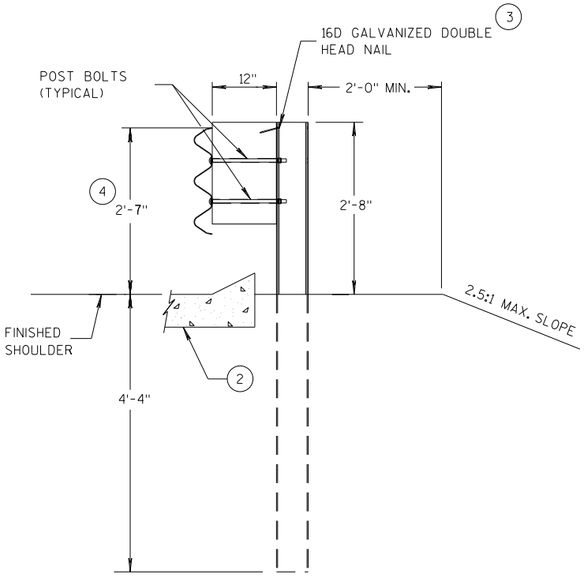


SECTION C-C

POSTS 7-11

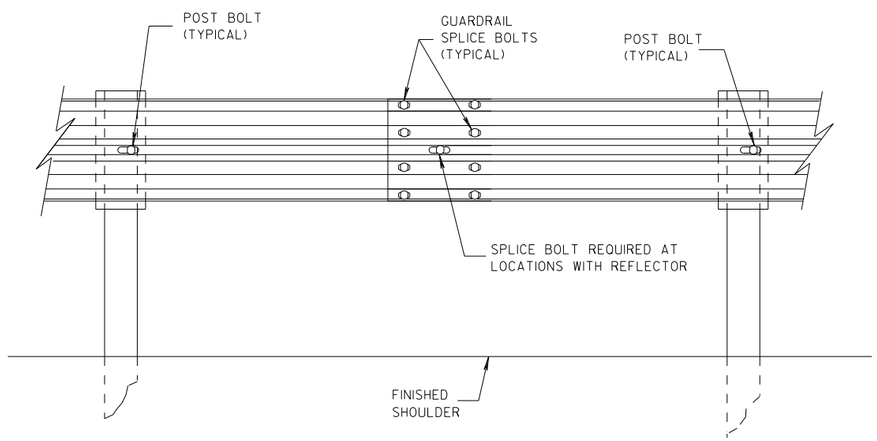


THRIE BEAM TERMINAL CONNECTOR



SECTION D-D

POSTS 12-17



SPLICE DETAIL

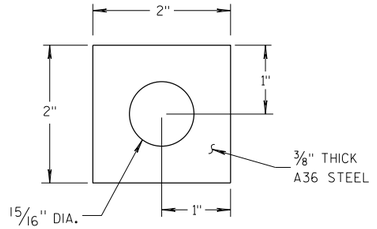
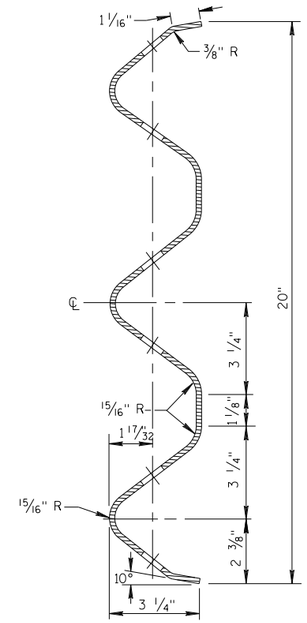


PLATE WASHER DETAIL



SECTION THRU THRIE BEAM RAIL ELEMENT

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

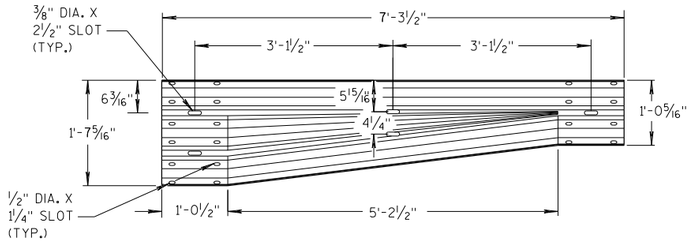
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR 174

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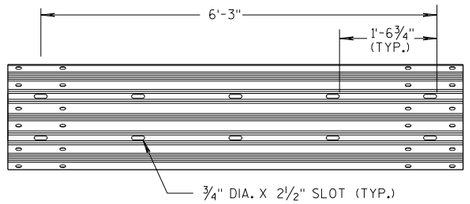
S.D.D. 14 B 45-5b

6

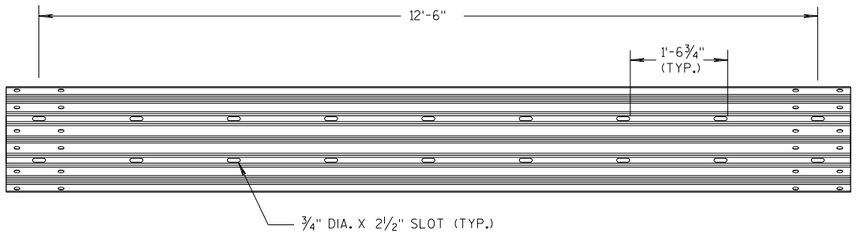
S.D.D. 14 B 45-5b



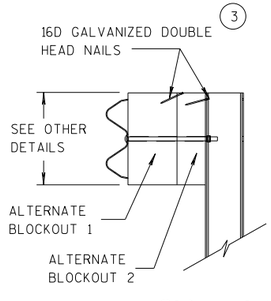
W-BEAM TO THRIE BEAM TRANSITION SECTION



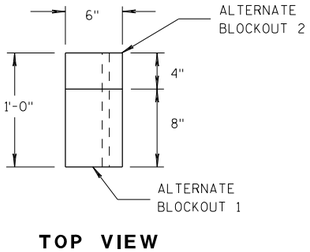
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

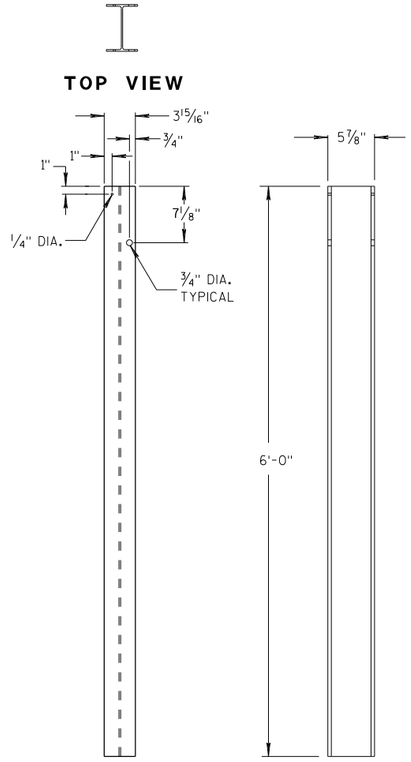


SIDE VIEW



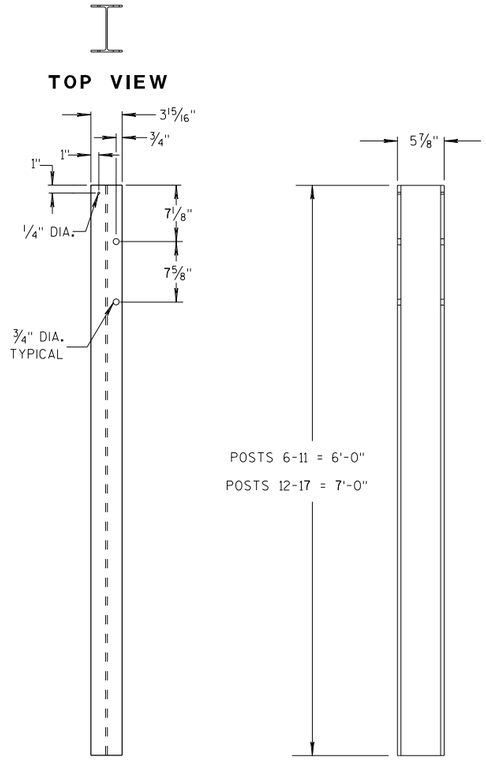
TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL



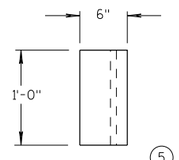
FRONT VIEW SIDE VIEW

STEEL POSTS 1-5 (13)

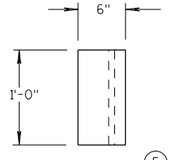


FRONT VIEW SIDE VIEW

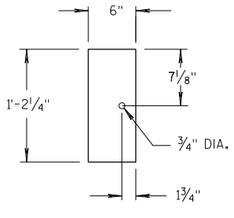
STEEL POSTS 6-17



TOP VIEW (5)

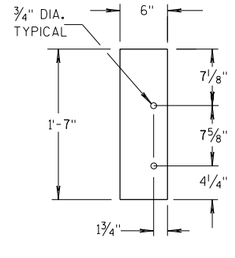


TOP VIEW (5)



FRONT VIEW

BLOCKOUT POSTS 1-5



FRONT VIEW

BLOCKOUT POSTS 6-17

GENERAL NOTES

STEEL POSTS ARE W6X9 OR W6X8.5.

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

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

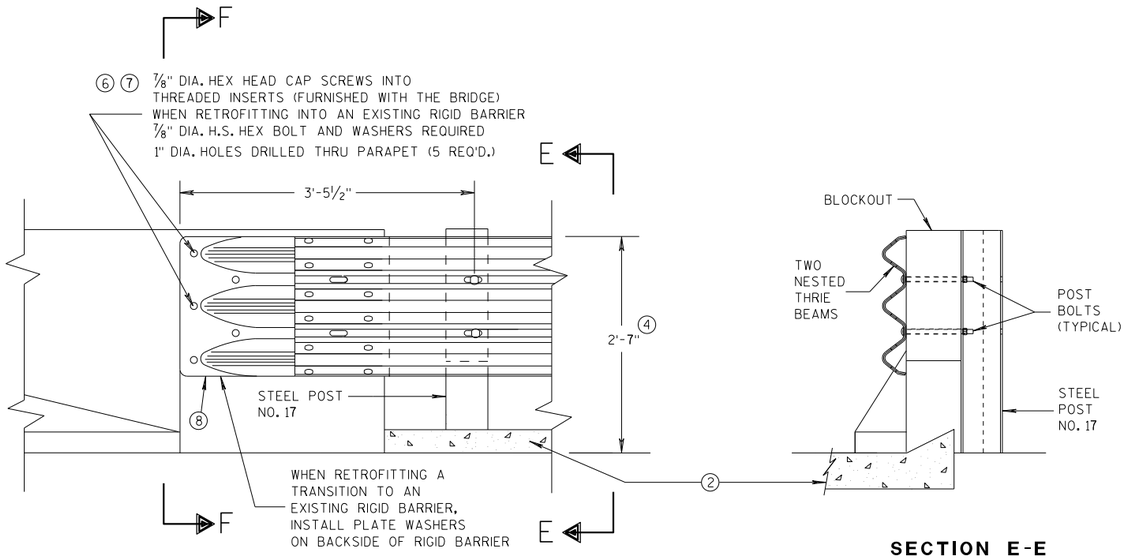
(5) WOOD BLOCKS MAY BE CONSTRUCTED OUT OF 2 WOOD BLOCKS. SEE ALTERNATE WOOD BLOCK DETAIL.

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

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR 175

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



FRONT VIEW

SECTION E-E

THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS

GENERAL NOTES

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

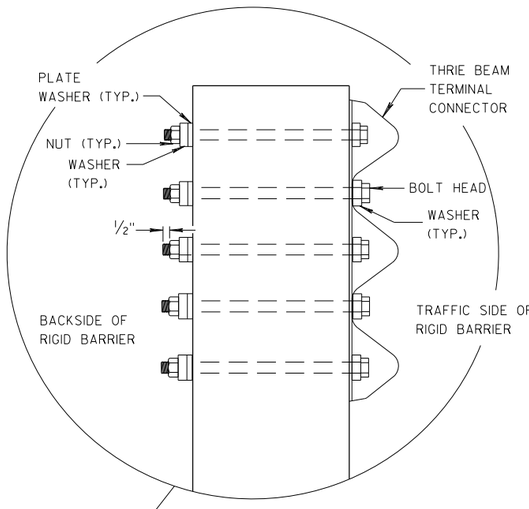
② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

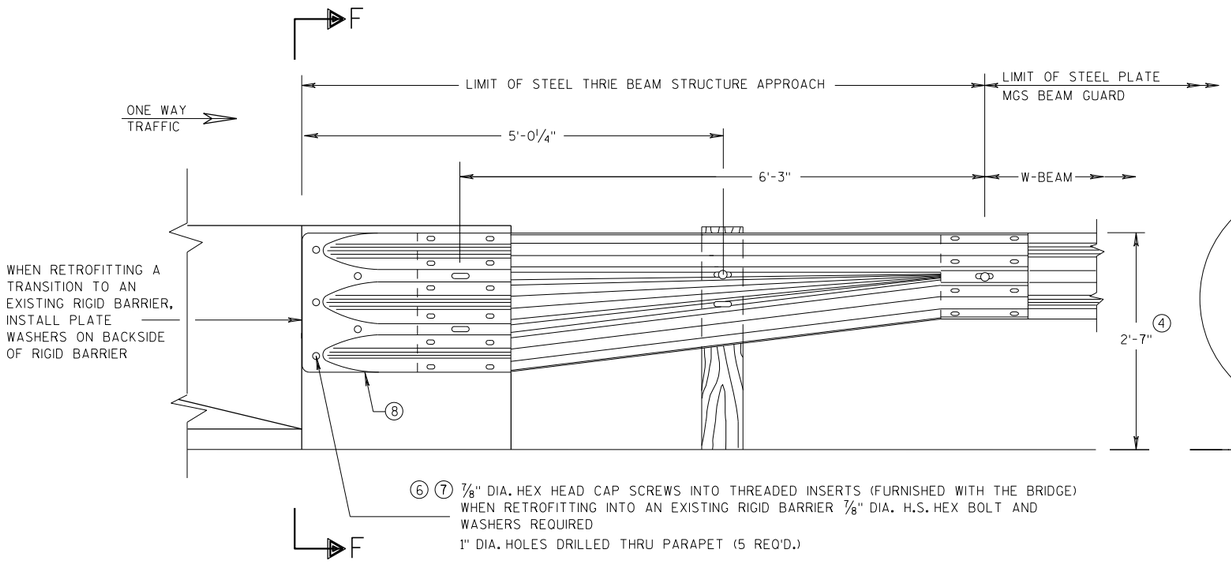
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

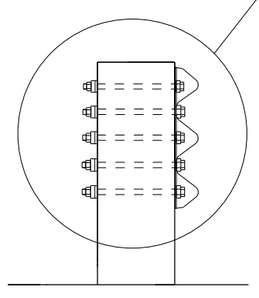
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. 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".

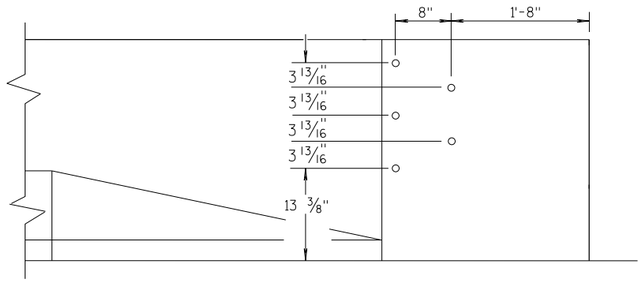




FRONT VIEW



SECTION F-F



DRILL HOLE LOCATION

W BEAM TRANSITION AND CONNECTION TO BRIDGE PARAPETS WITH SQUARE ENDS

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

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
07/2018 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS D[illegible] UNIT SUPERVIS[illegible]NT
FHWA

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

GENERAL NOTES

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

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

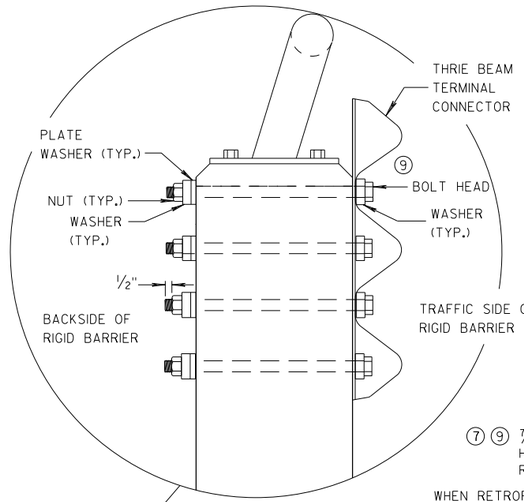
(4) TOLERANCE FOR TOP OF BEAM IS ± 1".

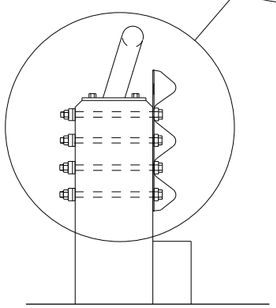
(6) DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

(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.

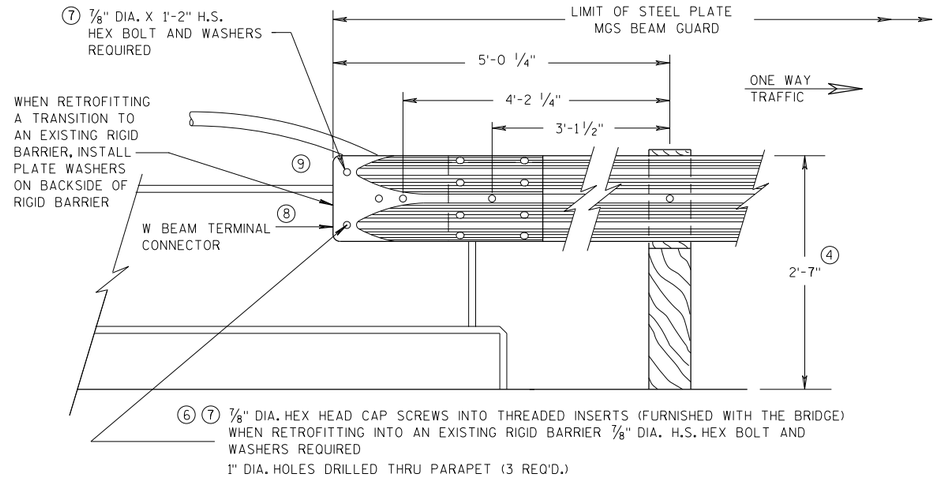
(8) THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 ½".

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





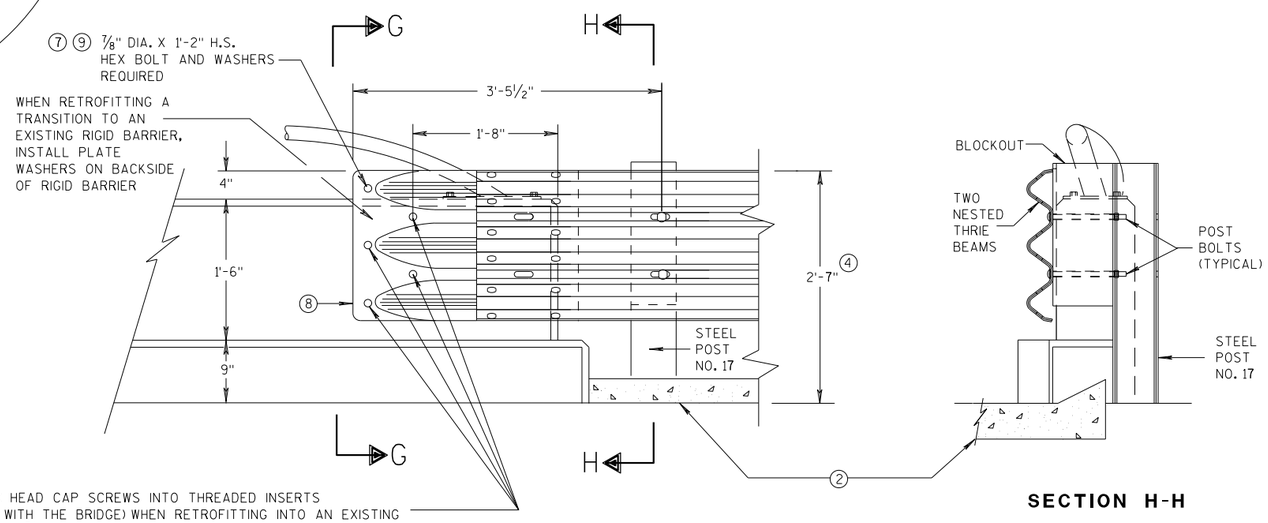
SECTION G-G



FRONT VIEW

W BEAM CONNECTION TO VERTICAL FACE PARAPET

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



FRONT VIEW

SECTION H-H

THRIE BEAM CONNECTION TO VERTICAL FACED PARAPETS

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

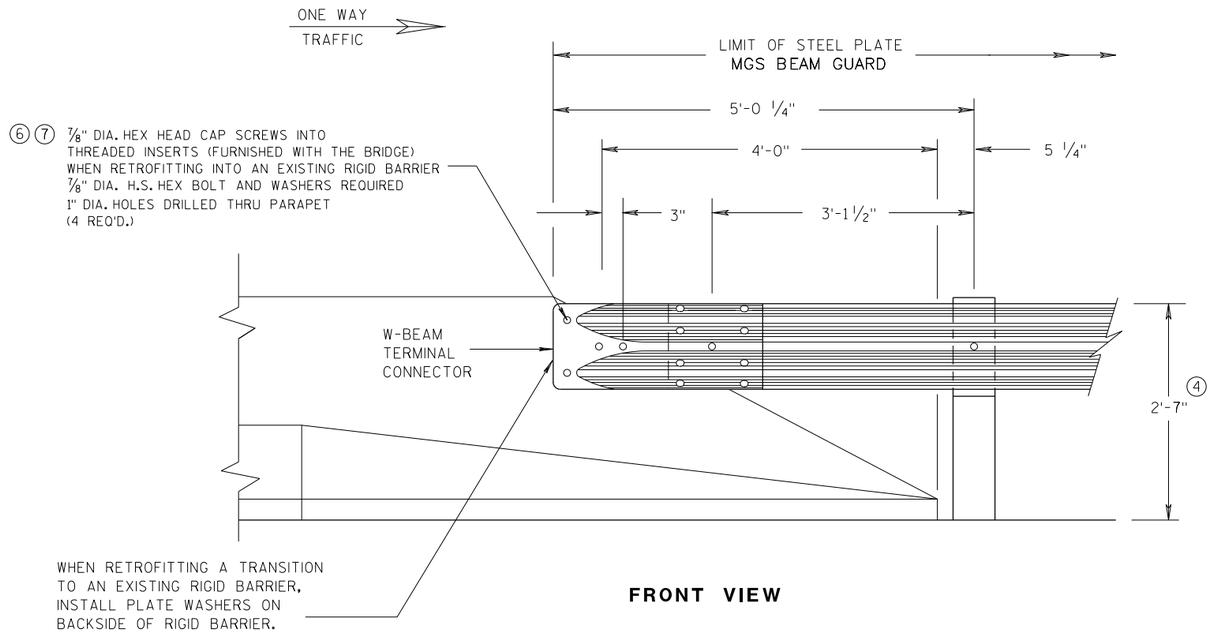
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S.D.D. 14 B 45-5e



FRONT VIEW

W BEAM CONNECTION TO PARAPETS WITH SLOPED ENDS

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

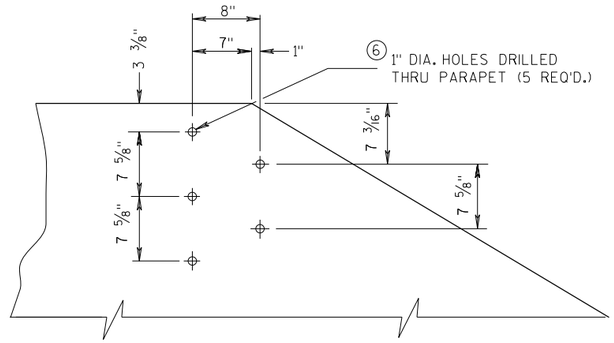
GENERAL NOTES

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

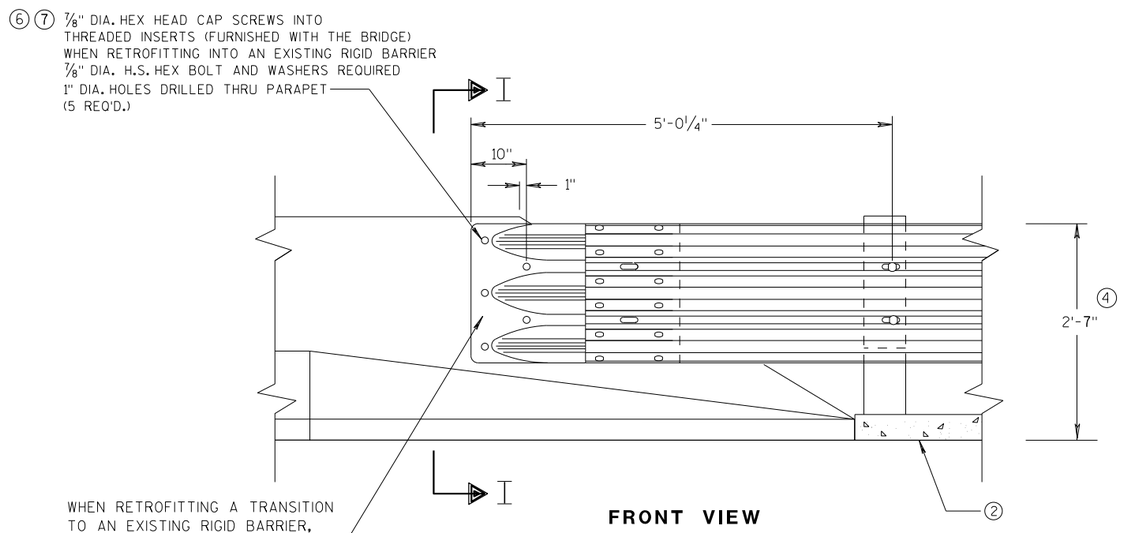
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

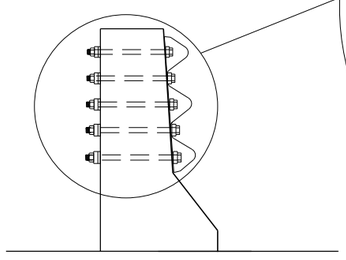
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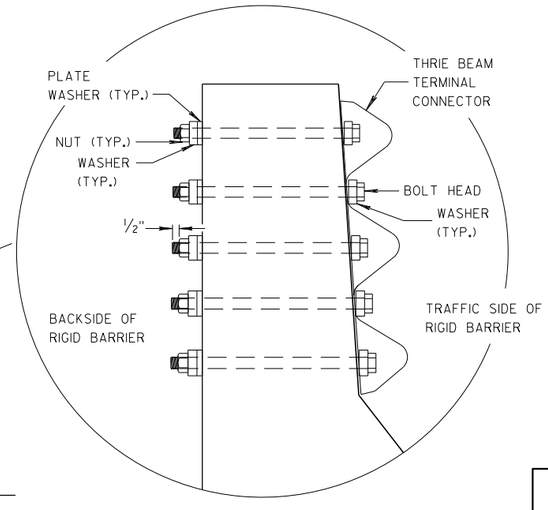
DRILL HOLE LOCATION AND PATTERN
FOR THRIE BEAM CONNECTION



FRONT VIEW



SECTION I-I



THRIE BEAM CONNECTION TO BRIDGE PARAPETS WITH SLOPED ENDS

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

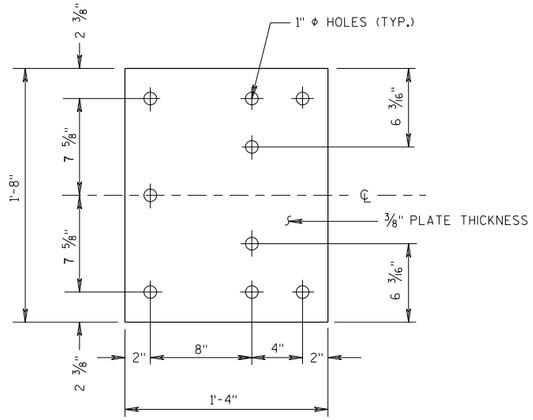
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FHWA

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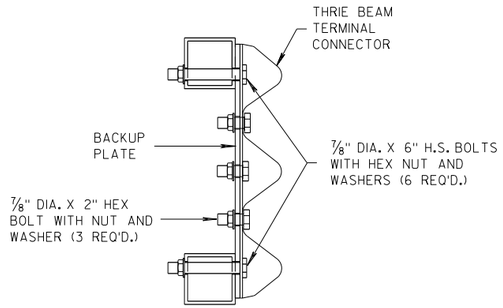
S.D.D. 14 B 45-5f

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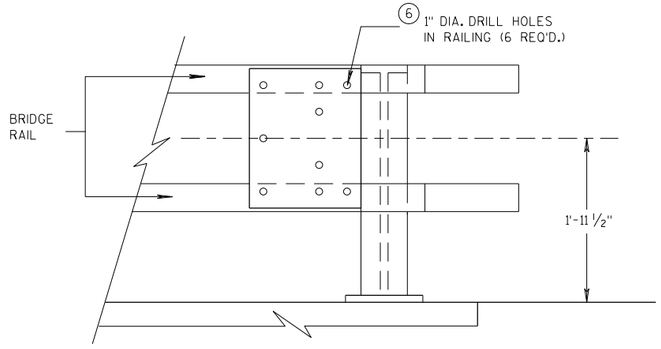
S.D.D. 14 B 45-5f



BACK-UP PLATE DETAIL



SECTION J-J

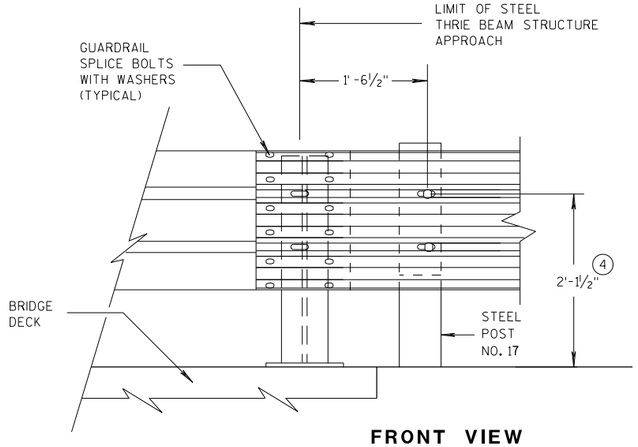


BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING

GENERAL NOTES

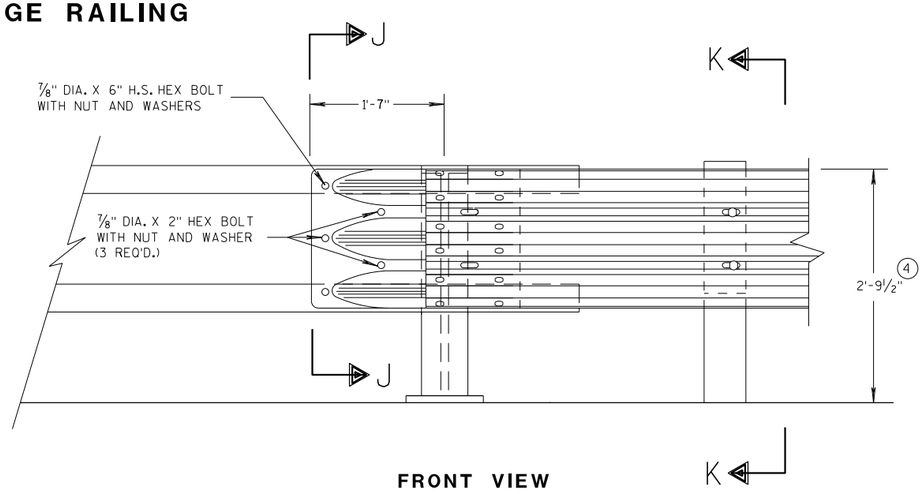
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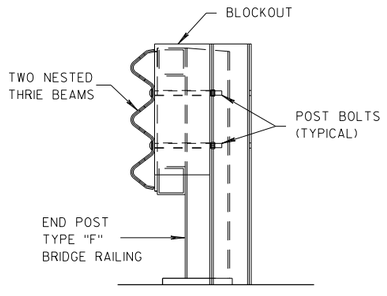


FRONT VIEW

THRIE BEAM CONNECTION TO STEEL RAILING TYPE "W"



FRONT VIEW



SECTION K-K

THRIE BEAM CONNECTION TO TUBULAR RAILING TYPE "F"

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED 07/2018 — DATE — FHWA

/S/ Rodney Taylor — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

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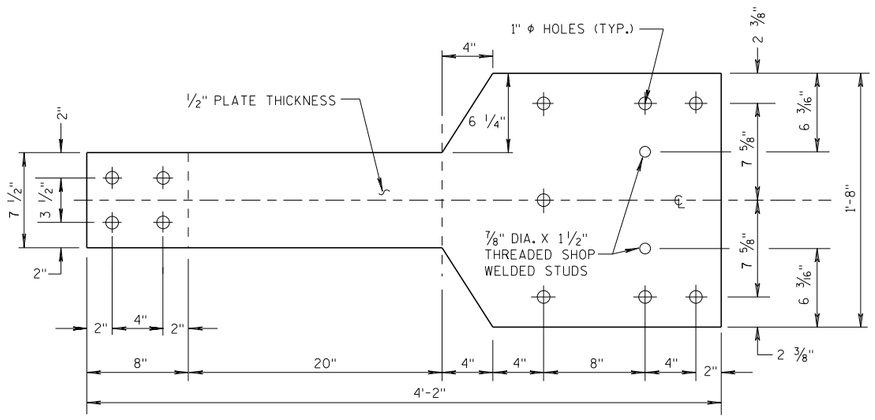
S.D.D. 14 B 45-5g

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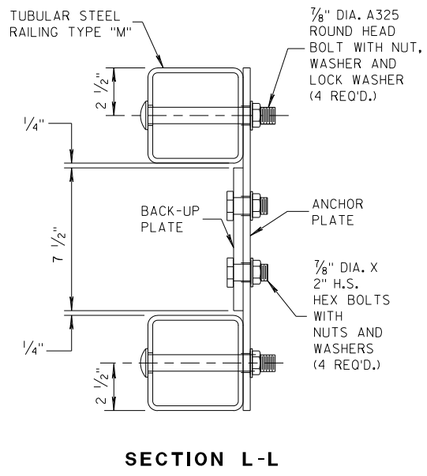
S.D.D. 14 B 45-5g

GENERAL NOTES

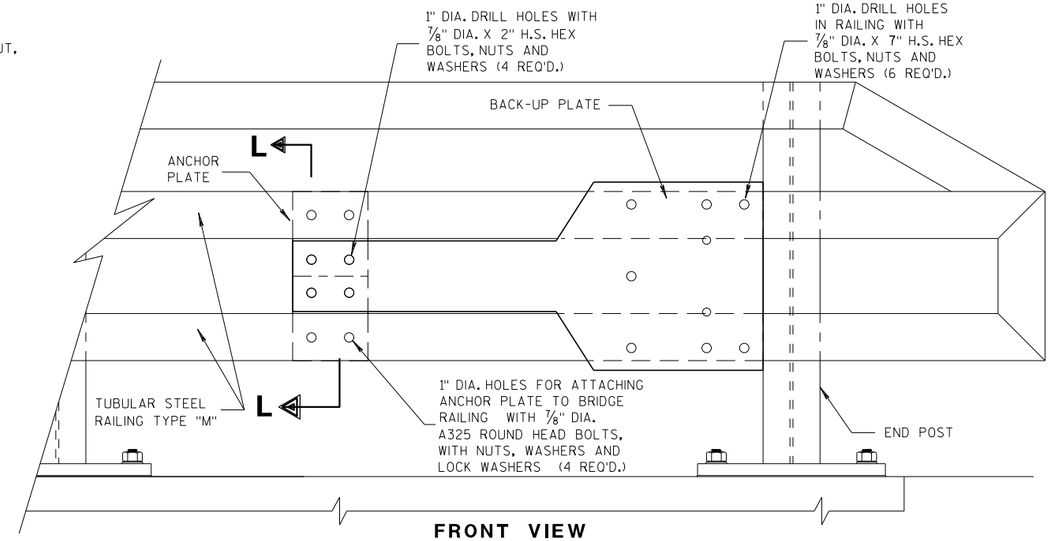
(4) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".



FRONT VIEW

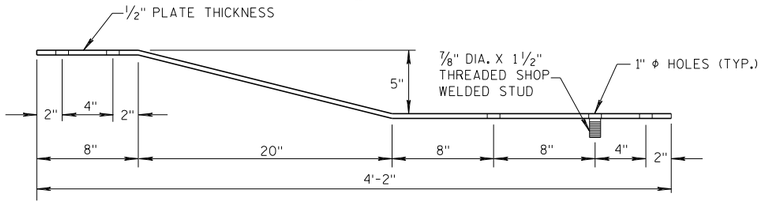


SECTION L-L



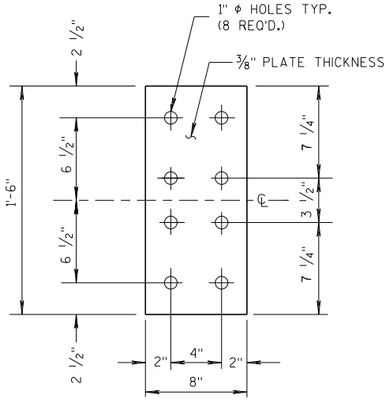
FRONT VIEW

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



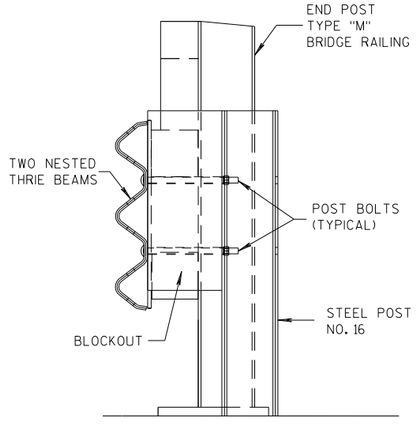
PLAN VIEW

BACK-UP PLATE DETAIL, TYPE "M"

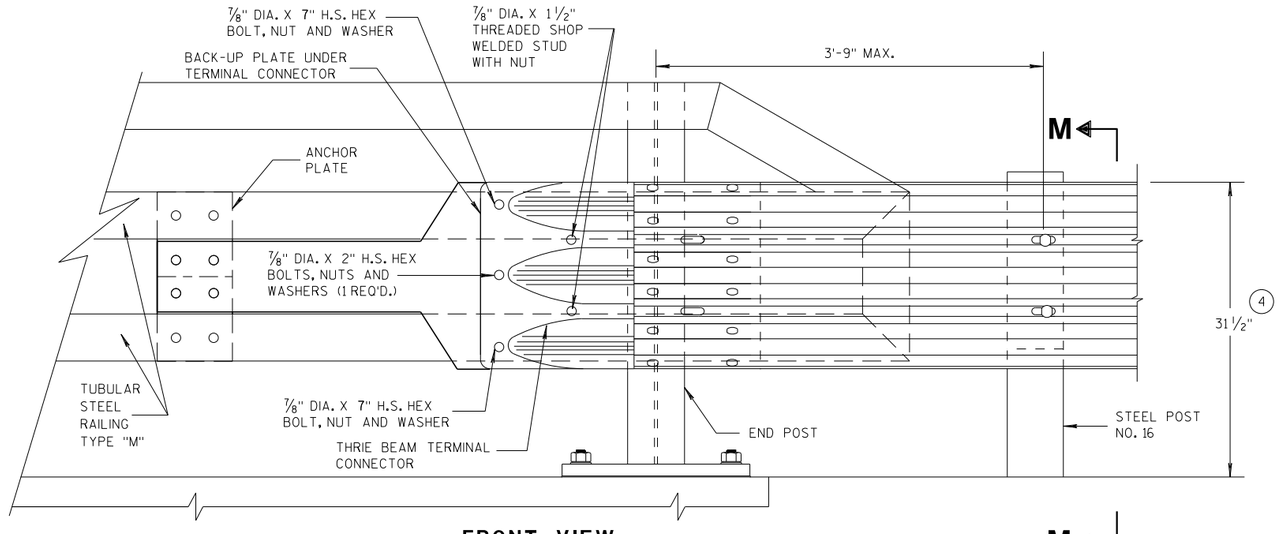


FRONT VIEW

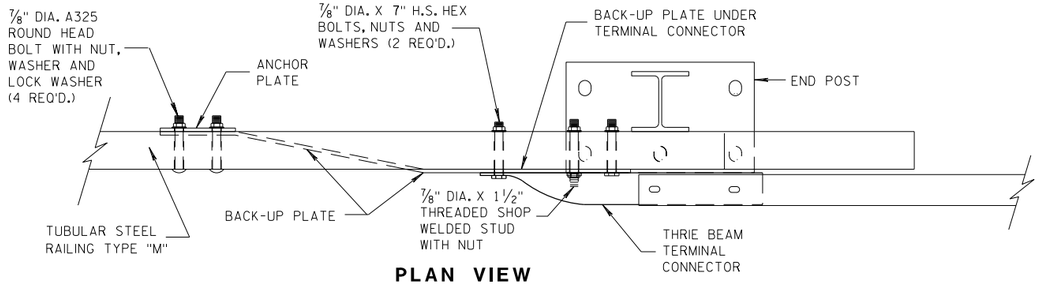
ANCHOR PLATE DETAIL, TYPE "M"



SECTION M-M



FRONT VIEW



PLAN VIEW

THRIE BEAM CONNECTION TO TUBULAR RAILING, TYPE "M"

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

GENERAL NOTES

COVER PLATE PANELS ARE 3/16" THICK.

ALL STIFFENERS ARE 1/4" THICK.

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

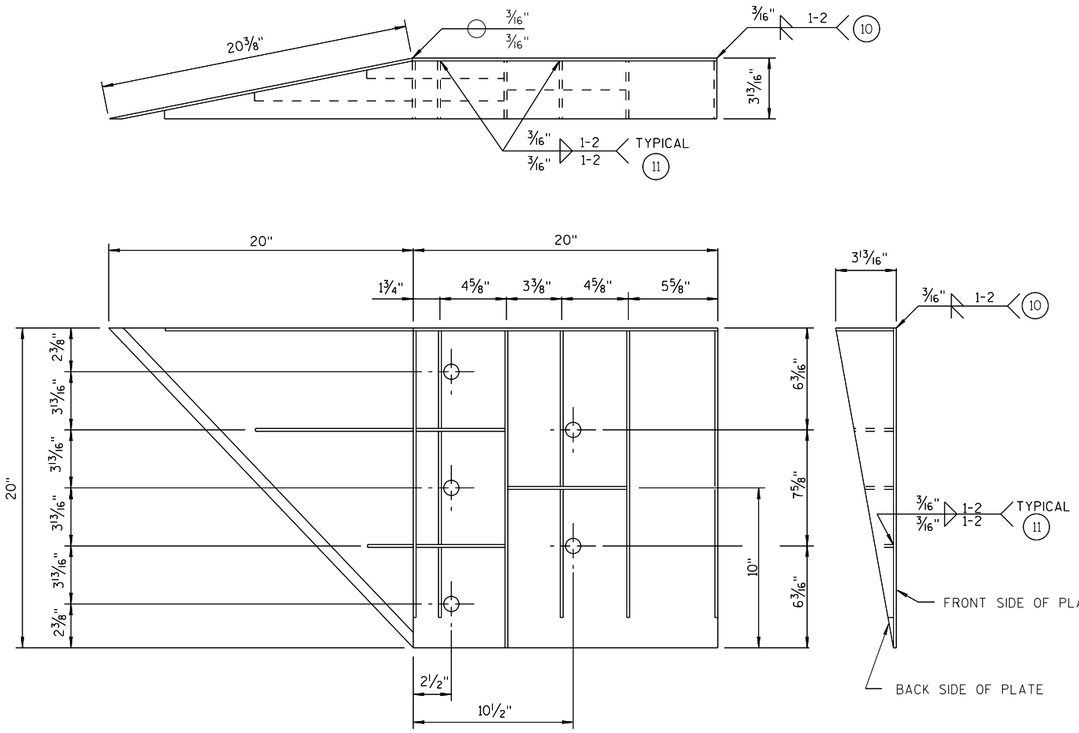
FOR GALVANIZED REQUIREMENTS, SEE SECTION 614 OF THE STANDARD SPECIFICATIONS.

ALL HOLE DIAMETERS SHALL BE 1".

FOR OPPOSITE SIDE INSTALLATION MIRROR DRAWINGS.

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

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



WELDING INSTRUCTION

(VIEWED FROM BACK SIDE OF PLATE)

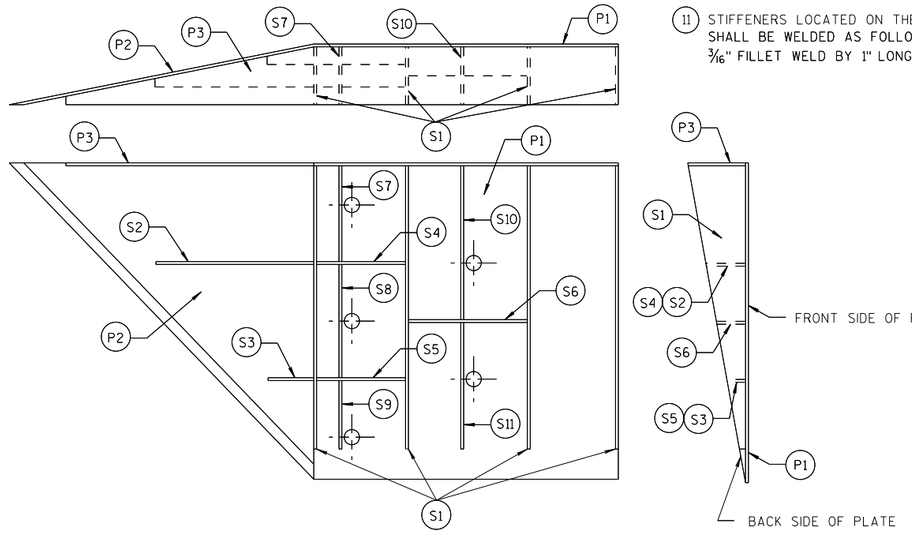


PLATE AND STIFFENER IDENTIFICATION

(VIEWED FROM BACK SIDE OF PLATE)

CONNECTOR PLATE DIMENSION (PER ASSEMBLY)

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

SINGLE SLOPE CONNECTION PLATE

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

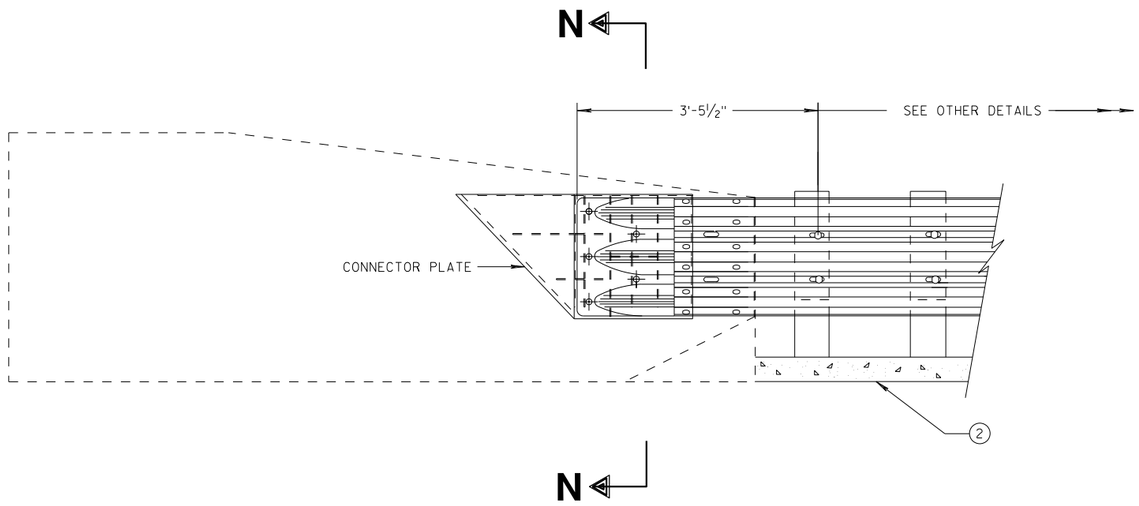
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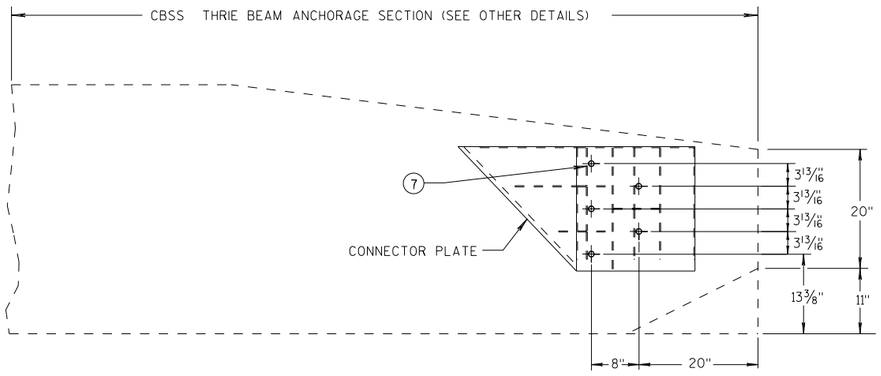
/S/ Rodney Taylor
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THRIE BEAM CONNECTION TO SINGLE SLOPE BARRIER



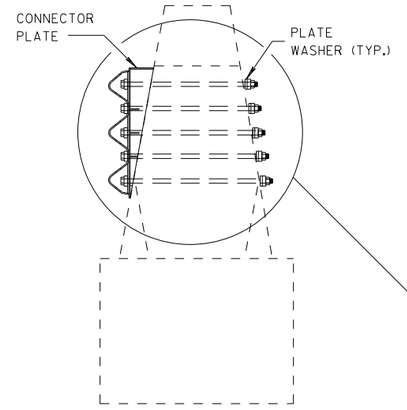
SINGLE SLOPE CONNECTION PLATE PLACEMENT

GENERAL NOTES

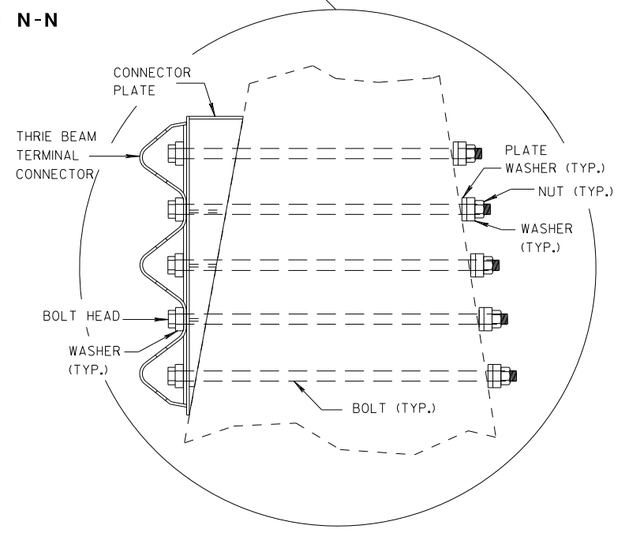
CONNECTOR PLATE, DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

(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 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.



SECTION N-N



MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

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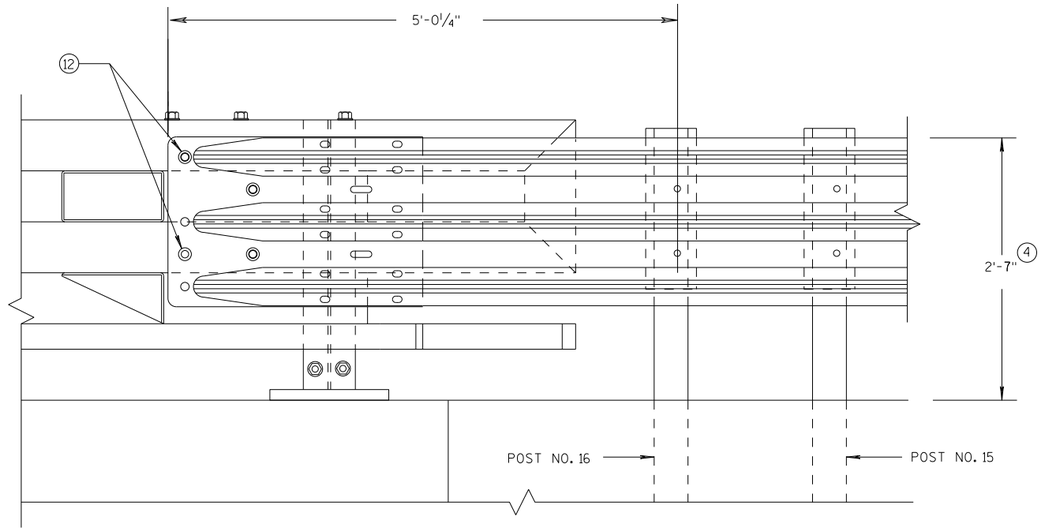
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S.D.D. 14 B 45-5j

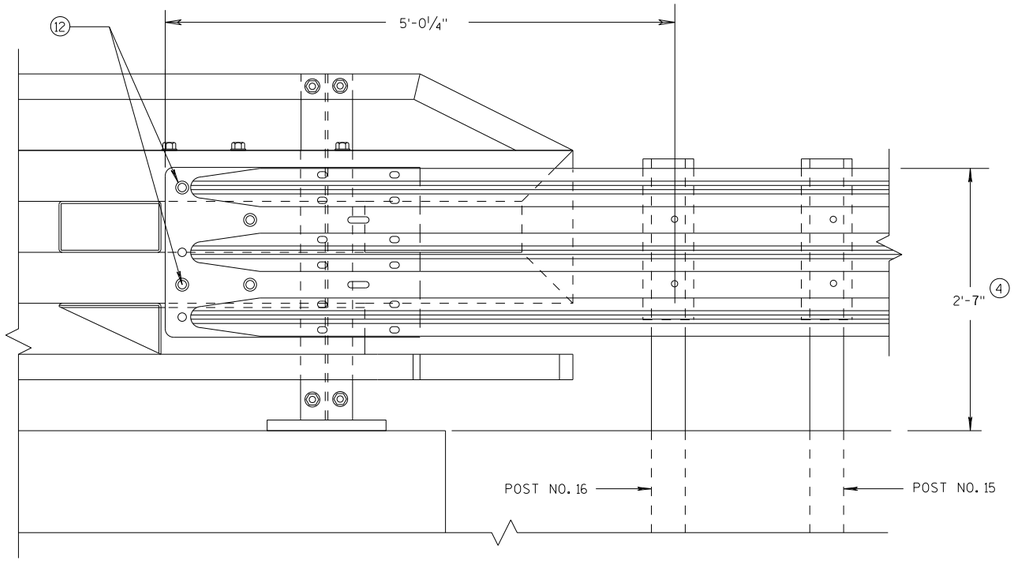
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S.D.D. 14 B 45-5j



ELEVATION OF DETAIL AT NY3 END POST

THRIE BEAM RAIL ATTACHMENT



ELEVATION OF DETAIL AT NY4 END POST

THRIE BEAM RAIL ATTACHMENT

GENERAL NOTES

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

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

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
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UNIT SUPERVIS

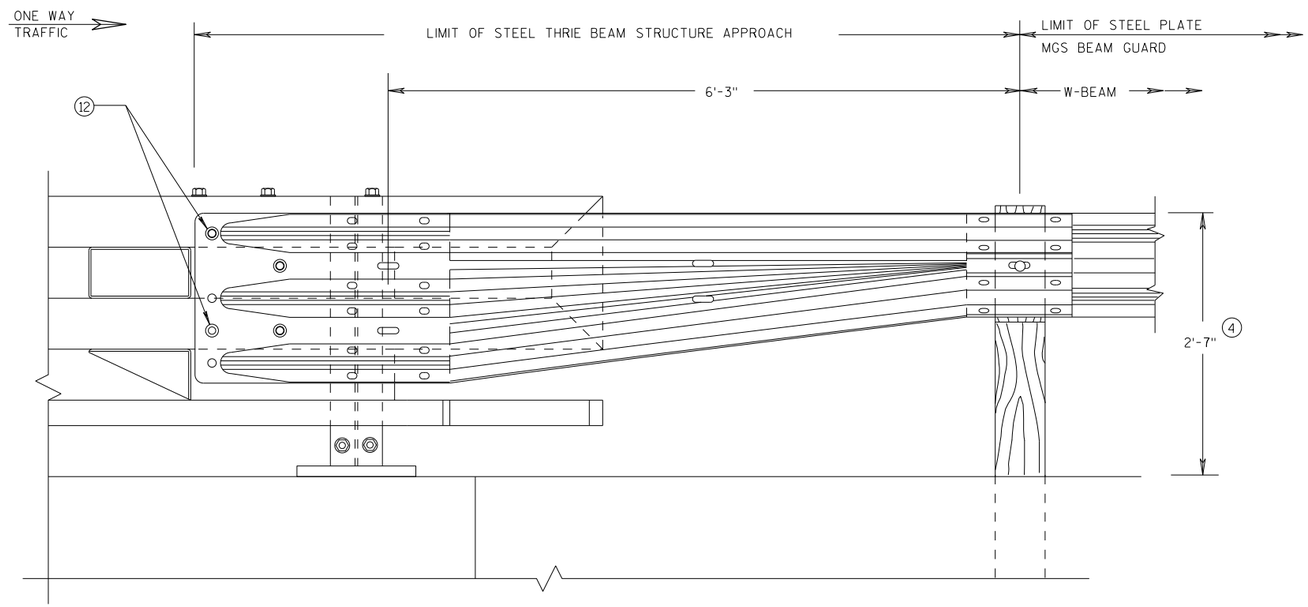
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S.D.D. 14 B 45-5k

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



FRONT VIEW

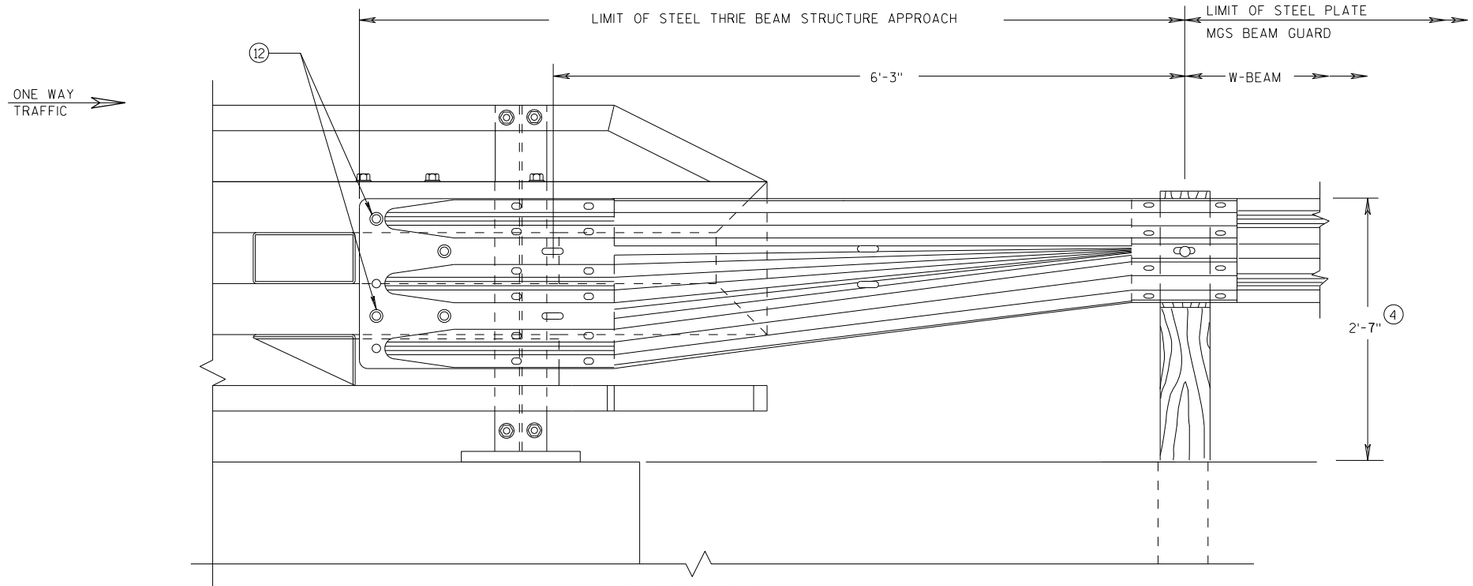
W BEAM TRANSITION AND CONNECTION TO BRIDGE RAILING TYPE "NY3"

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

GENERAL NOTES

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

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



FRONT VIEW

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

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

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

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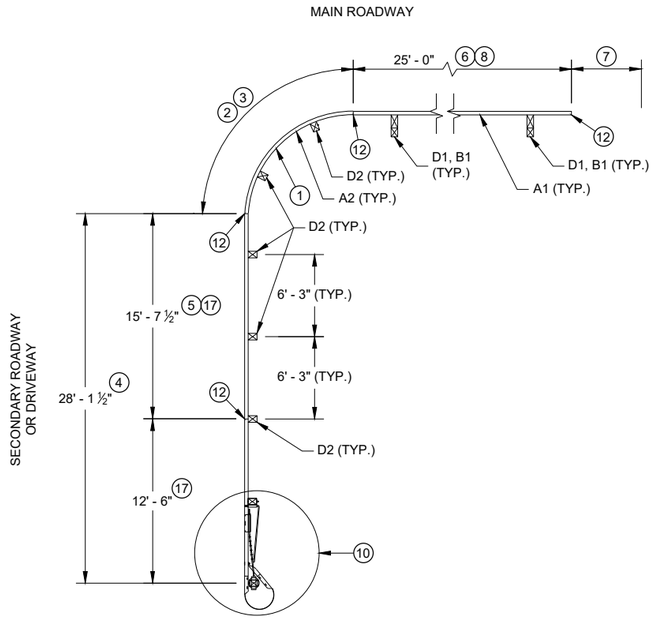
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S.D.D. 14 B 45-5L

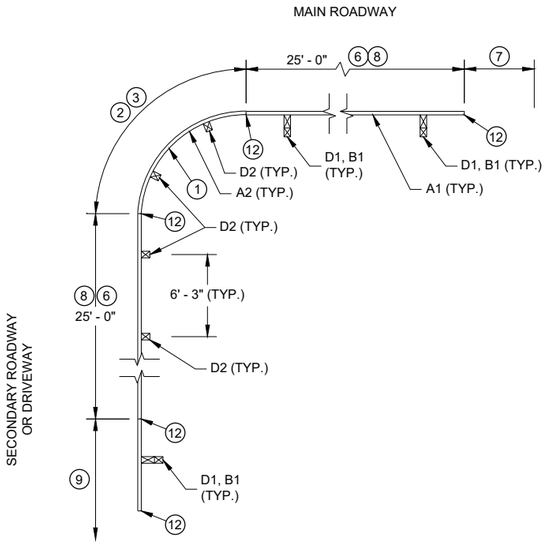
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S.D.D. 14 B 45-5L



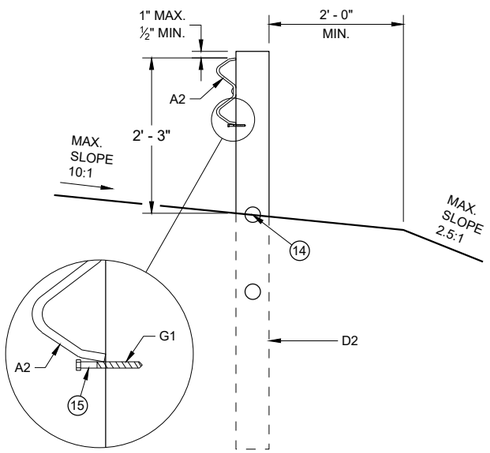
PLAN VIEW

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

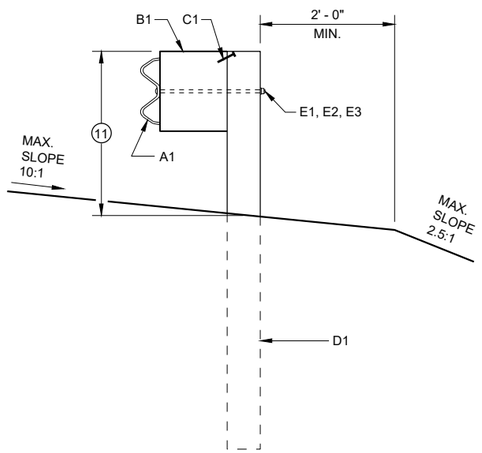


PLAN VIEW

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



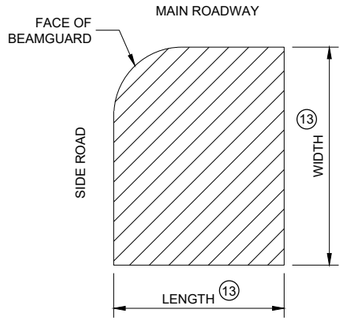
CONTROLLED RELEASE TERMINAL POST (CRT) IN RADIUS



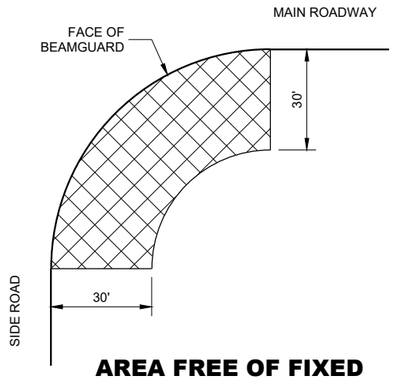
BEAM GUARD POSTS IN HEIGHT TRANSITION

TABLE FOR RADIUS OF 32' AND LESS

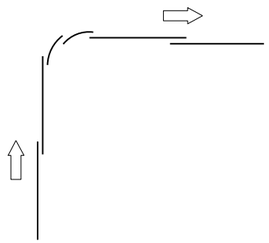
RADIUS (FT)	LENGTH (FT)	WIDTH (FT)
8	25	15
16	30	15
24	40	20
32	50	30



AREA FREE OF FIXED OBJECTS FOR RADIUS 32' AND LESS (16)



AREA FREE OF FIXED OBJECTS FOR RADIUS GREATER THAN 32'



LAP SPLICE DETAIL

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 ¼" TO ½" 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 ¾" ABOVE FINISHED GROUND ±1".

(15) DRILL POST $^{15}/_{64}$" 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).

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

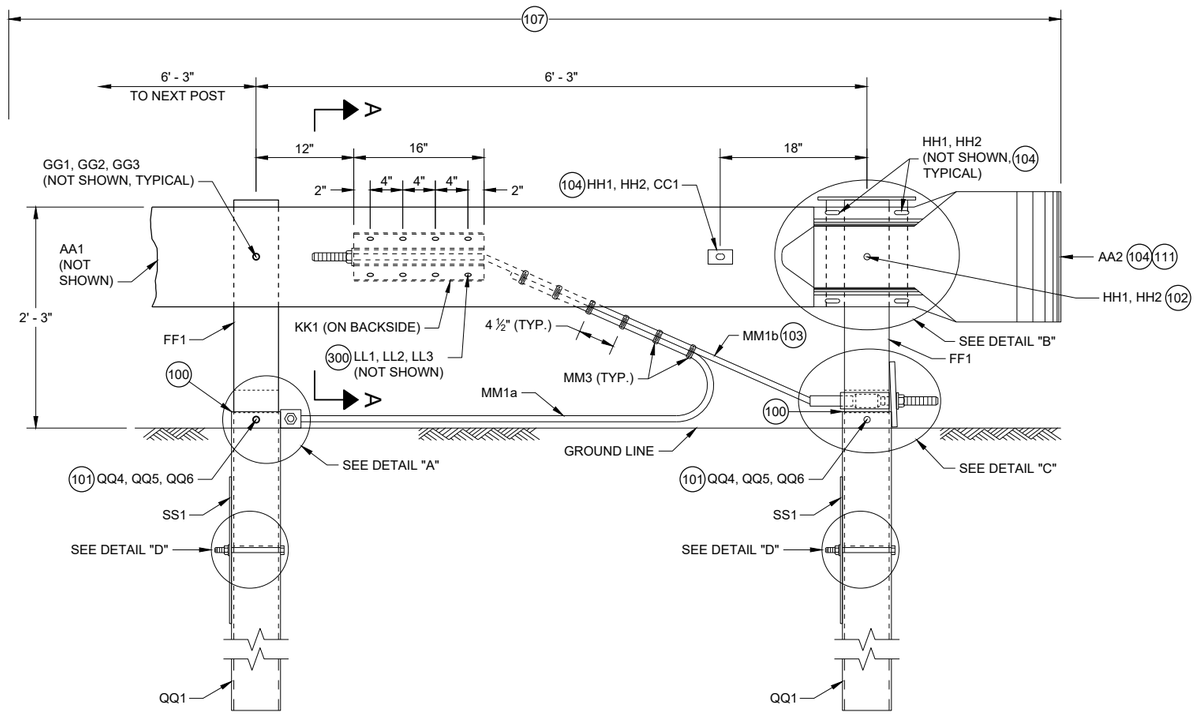
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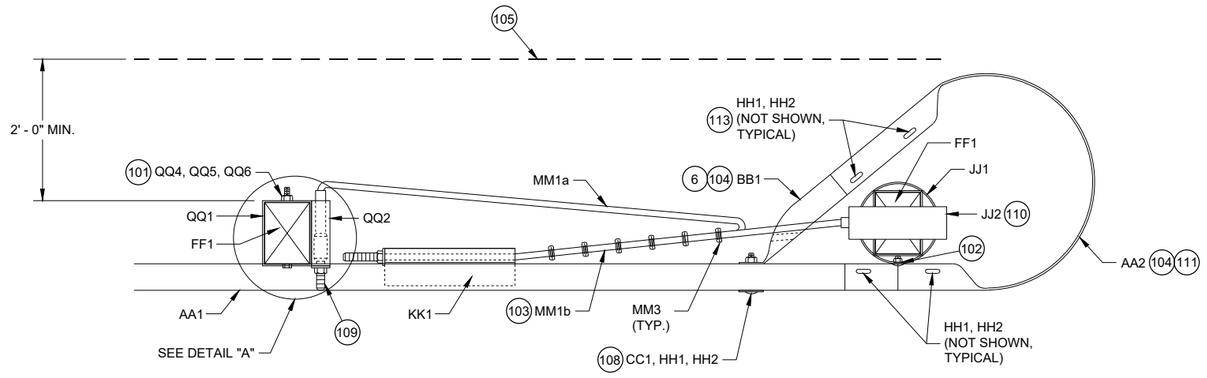
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SDD 14B53 - 02a



PROFILE VIEW

SHORT RADIUS TERMINAL



TOP VIEW

SHORT RADIUS TERMINAL

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.

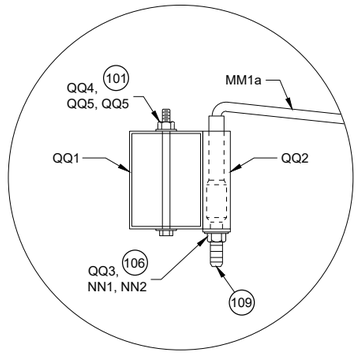
109 CUT OR PROVIDE THREADED STUD THAT IS FLUSH WITH FACE OF BEAM GUARD RAIL KK1 (PLUS OR MINUS ½" TOLERANCE). DEBURR AFTER CUTTING.

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.

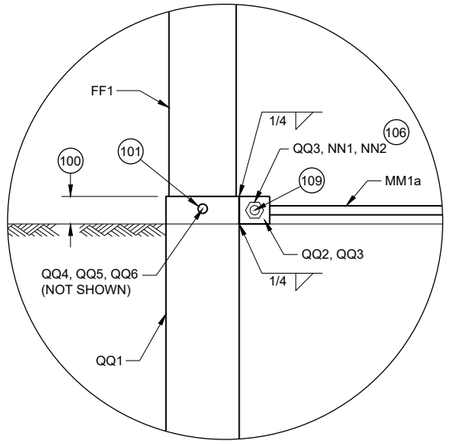
113 FOUR (4) HH1 AND HH2 REQUIRED TO ATTACH AA2 TO BB1.



TOP VIEW

DETAIL "A"

(WOOD BREAKAWAY AND BEAM GUARD RAIL POSTS NOT SHOWN)



PROFILE VIEW

DETAIL "A"

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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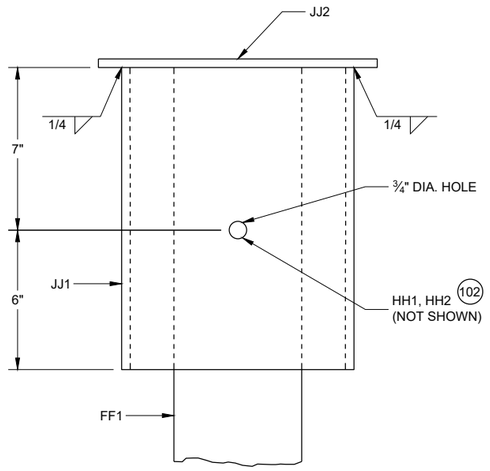
SDD 14B53 - 02b

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SDD 14B53 - 02b

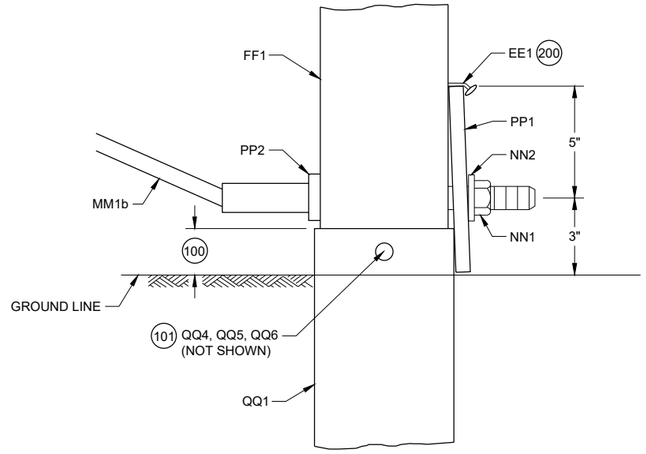
GENERAL NOTES

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



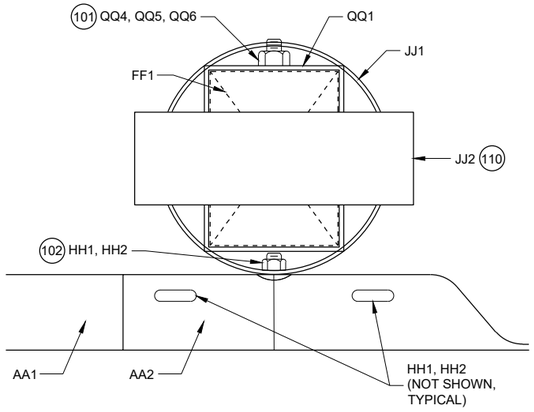
PROFILE VIEW

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



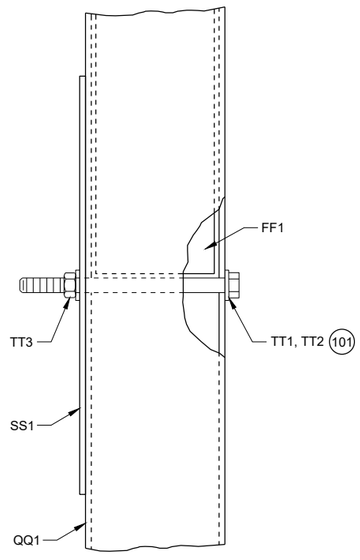
PROFILE VIEW

DETAIL "C"



PLAN VIEW

DETAIL "B"
STEEL PIPE ASSEMBLY



PROFILE VIEW

DETAIL "D"

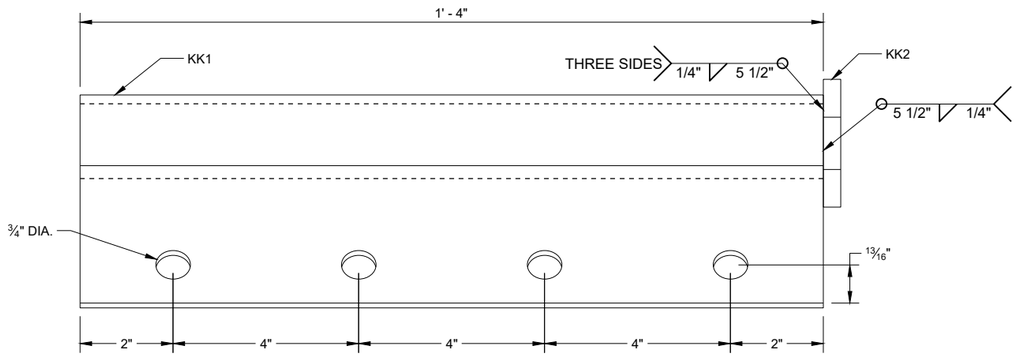
SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)

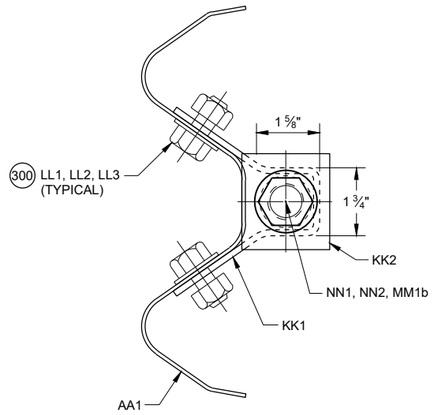
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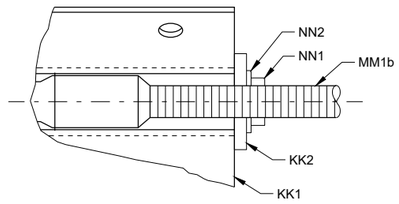
SDD 14B53 - 02c

GENERAL NOTES

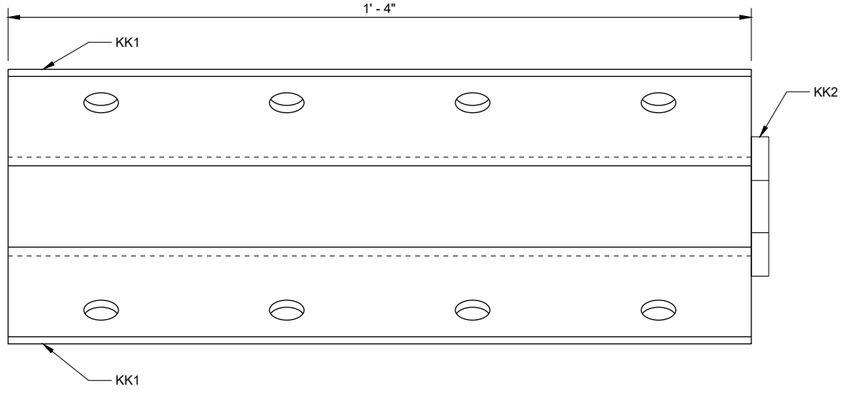
(300) WASHERS REQUIRED BETWEEN BOLT HEAD AND BEAM GUARD RAIL AND BETWEEN NUT AND ANCHOR BRACKET. EIGHT (8) LL1 AND LL3 REQUIRED. SIXTEEN (16) LL2 REQUIRED.

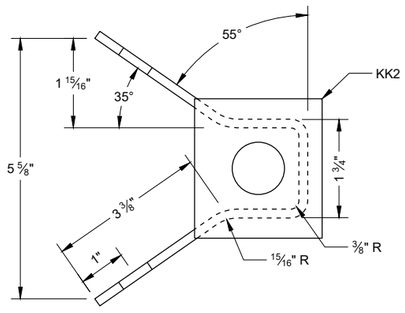




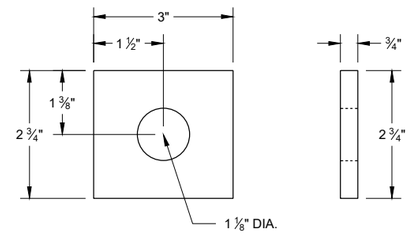


SECTION A - A





ANCHOR BRACKET (KK1, KK2)



ANCHOR BRACKET BEARING PLATE (KK2)

6

6

SDD 14B53 - 02d

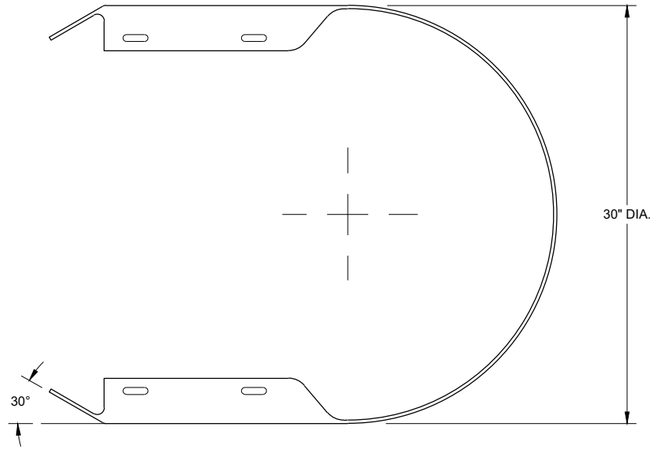
SDD 14B53 - 02d

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

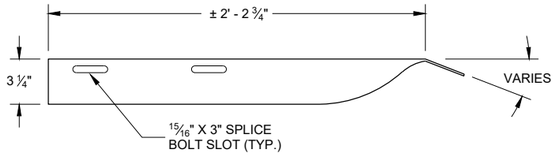
GENERAL NOTES

(400) CROSS SECTION OF PART IS TO FIT OVER AA1 .

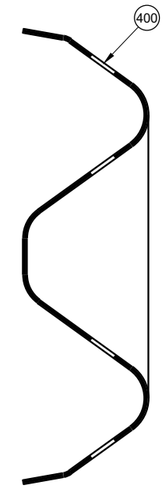
(401) CROSS SECTION OF PART IS TO FIT OVER OR UNDER AA1 .



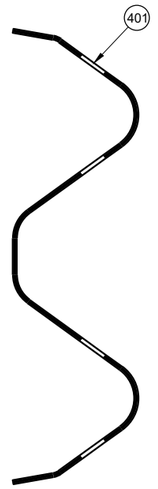
TOP VIEW



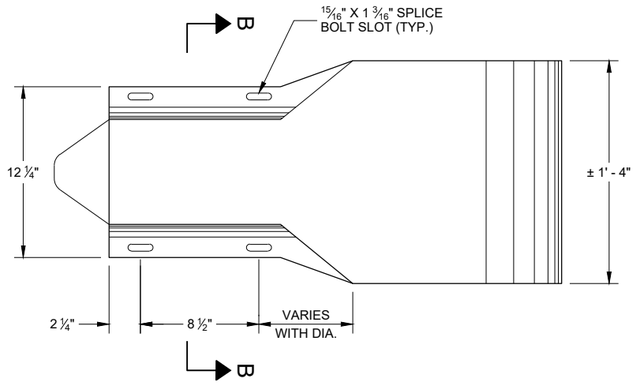
TOP VIEW



SECTION B -B

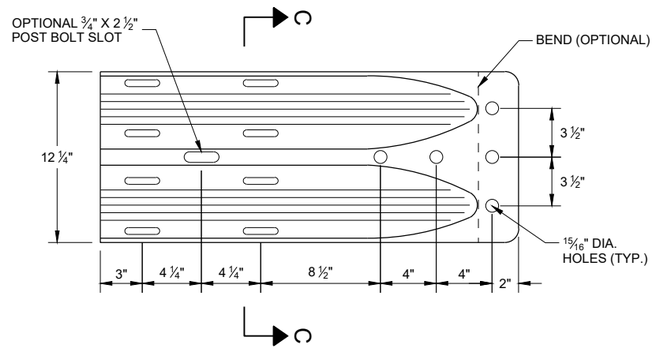


SECTION C -C



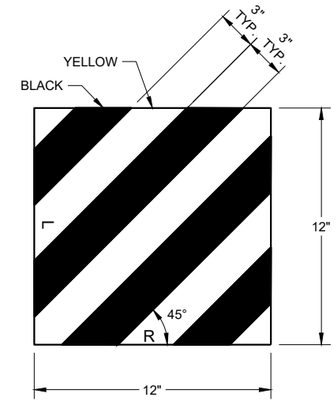
PROFILE VIEW

W BEAM
END SECTION BUFFER (AA2)



PROFILE VIEW

W BEAM
TERMINAL CONNECTOR (BB1)

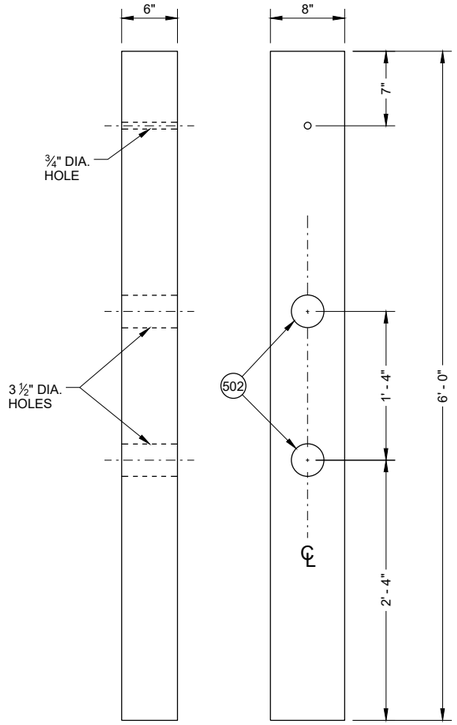


REFLECTIVE SHEETING (UU1, UU2)

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

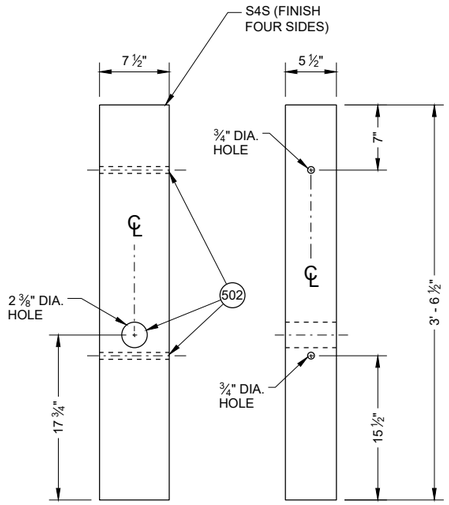
SDD 14B53 - 02e

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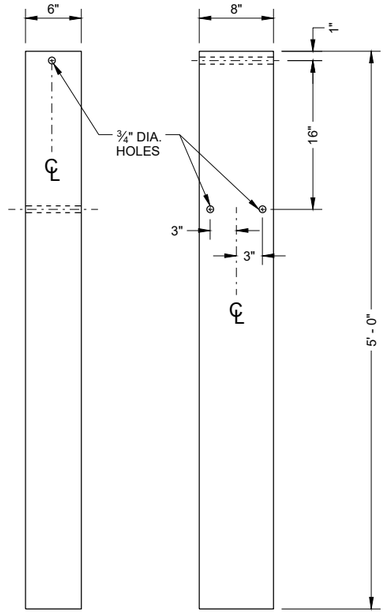
FRONT VIEW SIDE VIEW

CONTROLLED RELEASE POST (CRT) (DD2)



FRONT VIEW SIDE VIEW

WOOD BREAKAWAY POST (FF1)



FRONT VIEW SIDE VIEW

FOUNDATION TUBE (QQ1) (500)

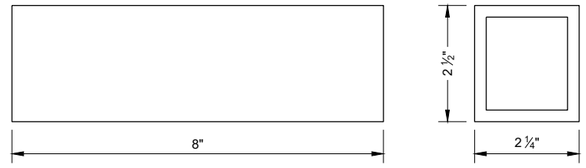
GENERAL NOTES

(500) SEE DETAIL "D" FOR LOCATION AND ATTACHMENT OF SS1.

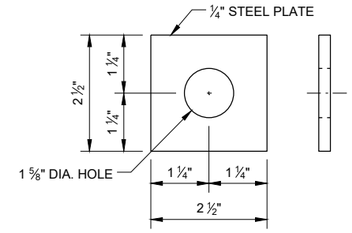
(501) FOR MM1a THREADED STUD ONLY REQUIRED ON ONE END. SWAGED FITTING REQUIRED.

(502) LOCATE HOLES ON THE CENTERLINE OF THE SIDE OF THE POST.

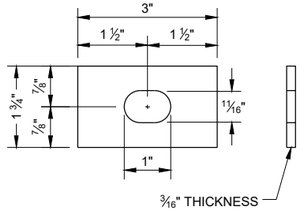
(503) MM1a MAY HAVE ONE THREADED STUD 4 INCHES LONG. SEE NOTE (109).



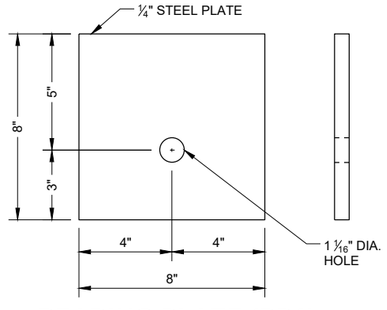
FOUNDATION TUBE - ANCHOR CABLE TUBE (QQ2)



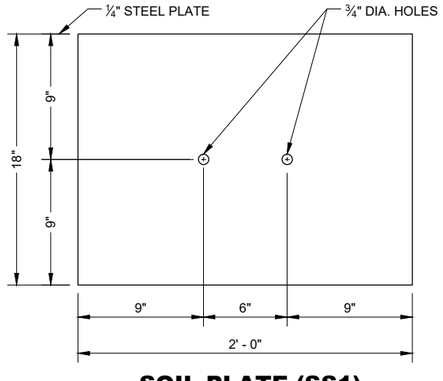
ANCHOR CABLE TUBE END PLATE (QQ3)



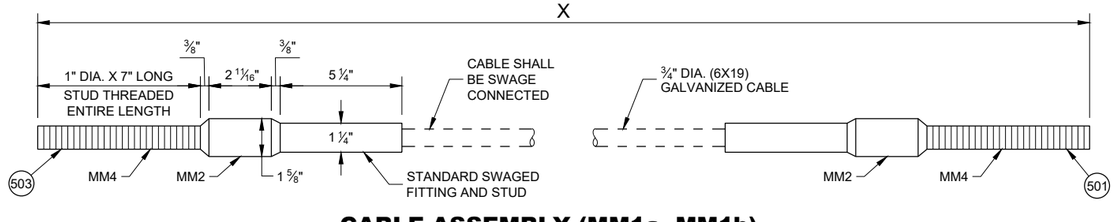
RECTANGULAR PLATE WASHER (CC1)



BEARING PLATE (PP1)



SOIL PLATE (SS1)



CABLE ASSEMBLY (MM1a, MM1b)

"X" LENGTH

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

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

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	3/8" 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)	3/8" DIA.
		GALV. AASHTO M111 / ASTM A 123 OR GALV. HOT DIP. TO AASHTO M232 CLASS C/ASTM A153 CLASS C / ASTM F2329	

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

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SDD 14B53 - 02g

BILL OF MATERIALS - SHORT RADIUS BEAM GUARD (MGS)

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
GG3	POST BOLT - NUT	ASTM A563 GRADE A	⅜" 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	⅜" 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	⅜" 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 ⅜" 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	⅝" 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)	⅝" 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	⅝" 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	¾"
		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	
		UNC	
NN2	ANCHOR CABLE - NUT - WASHER	ASTM F436 TYPE 1 (HARDEN WASHER ONLY)	1" DIA.
		GALV. AASHTO M111 / ASTM A123 OR GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329	

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

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SDD 14B53 - 02h

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 3/16"
		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	

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SDD 14B53 - 02i

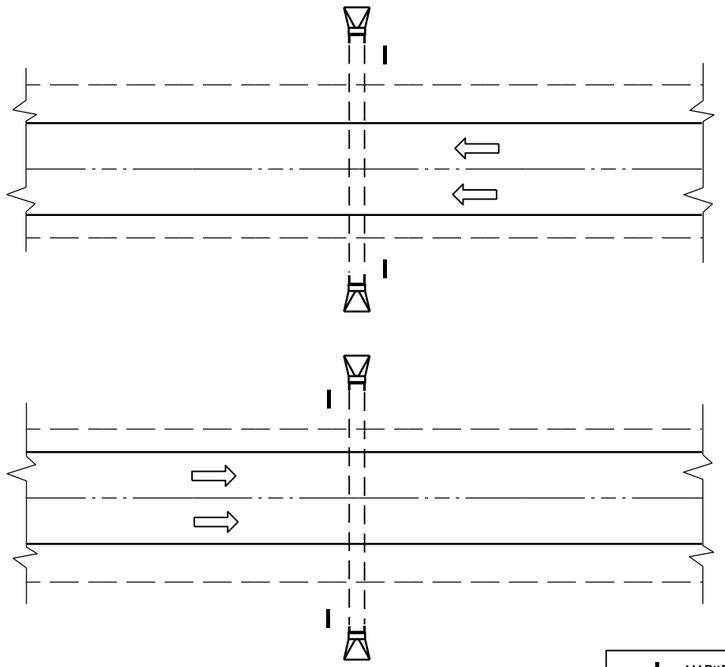
SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2022 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE ENGINEER
FHWA

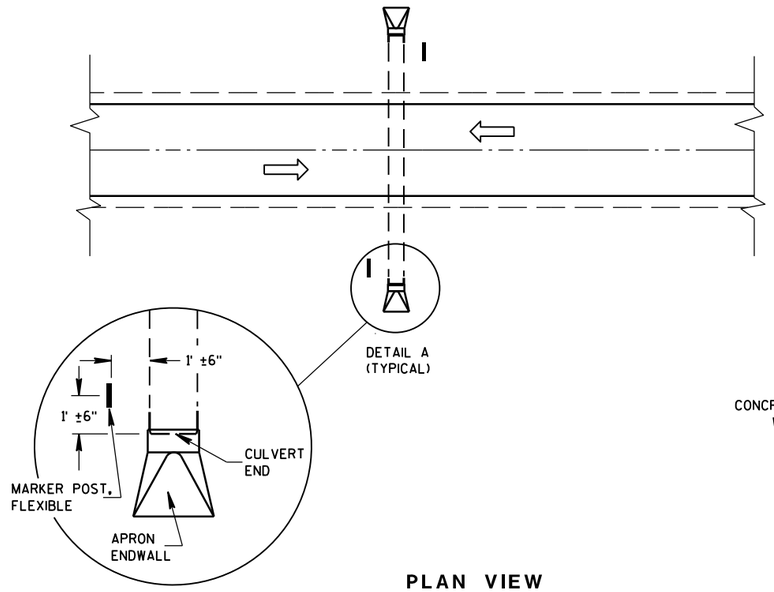
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SDD 14B53 - 02i



PLAN VIEW

DIVIDED HIGHWAY



DETAIL A
(TYPICAL)

PLAN VIEW

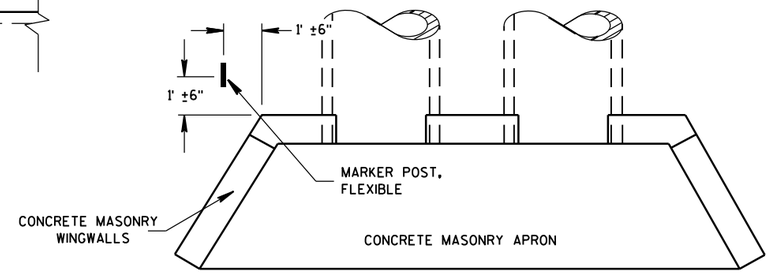
UNDIVIDED HIGHWAY

MARKER POST, FLEXIBLE

DIRECTION OF TRAFFIC FLOW

GENERAL NOTES

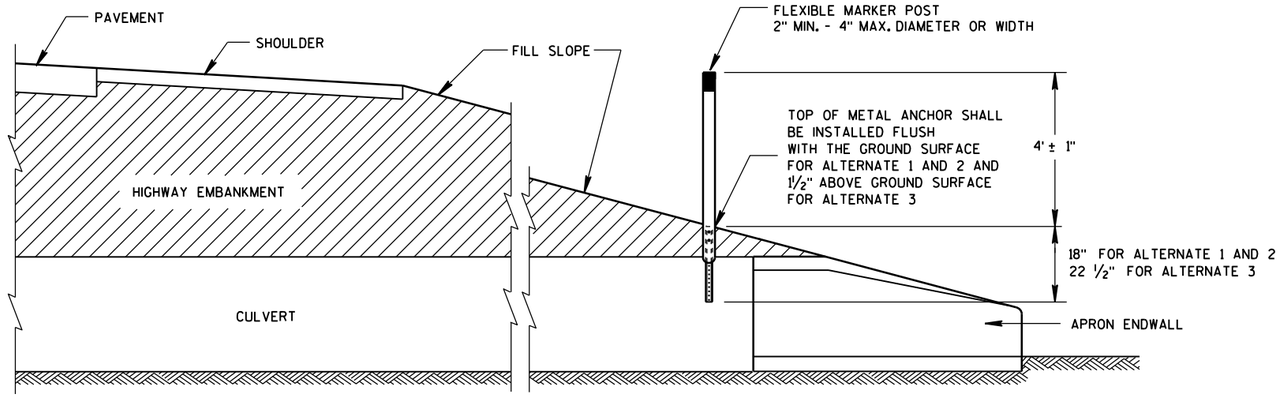
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



PLAN VIEW

CONCRETE MASONRY ENDWALLS FOR CULVERT PIPE AND PIPE ARCH

FLEXIBLE MARKER POST LOCATION



CROSS SECTION

FLEXIBLE MARKER POST

FLEXIBLE MARKER POST FOR CULVERT END

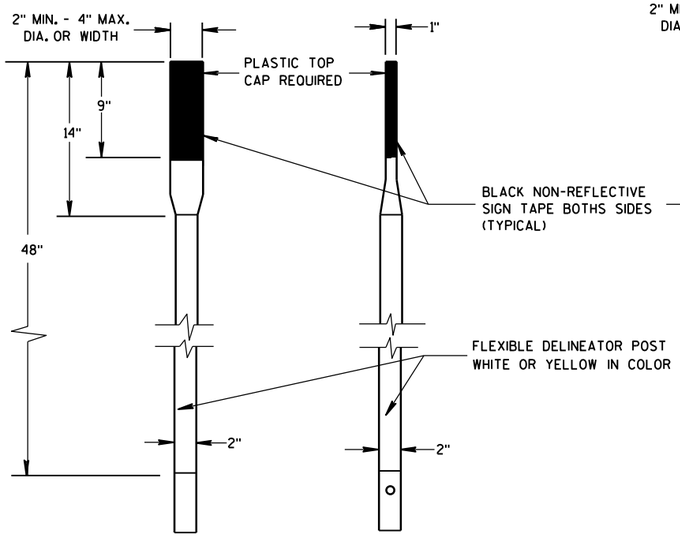
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

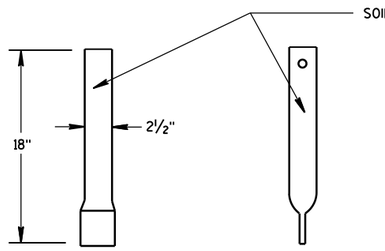
6

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

6

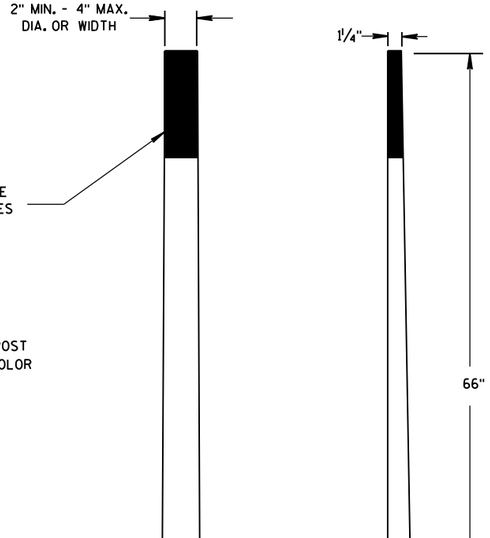
S.D.D. 15 A 3-2a





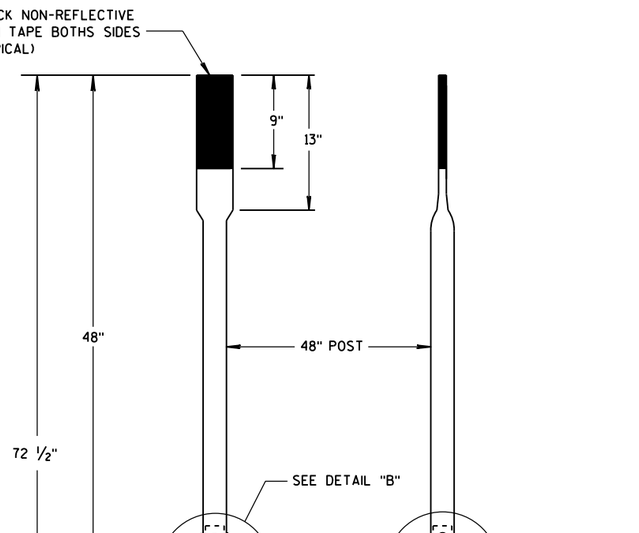
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

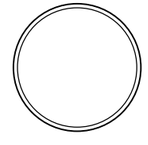
ALTERNATE 2



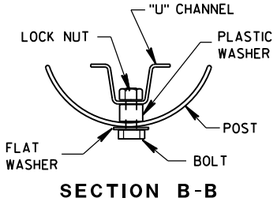
FRONT VIEW SIDE VIEW

ALTERNATE 3

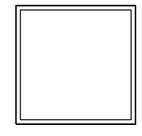
FLEXIBLE MARKER POSTS



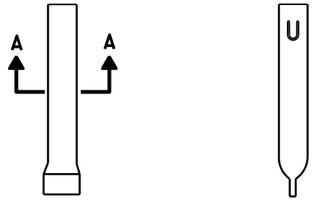
SECTION A-A



SECTION B-B

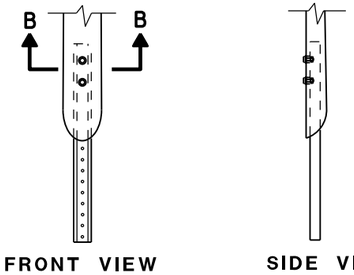


SECTION C-C



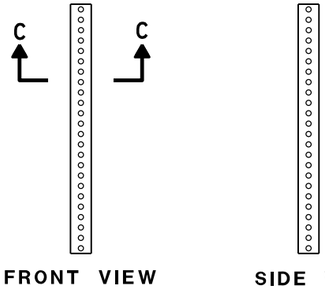
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

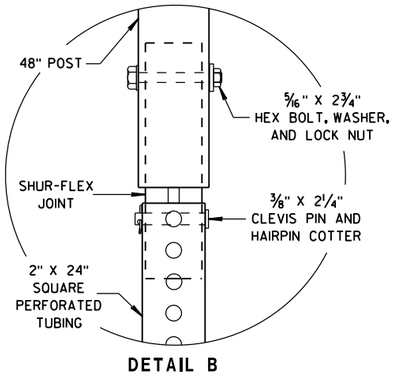
ALTERNATE 2



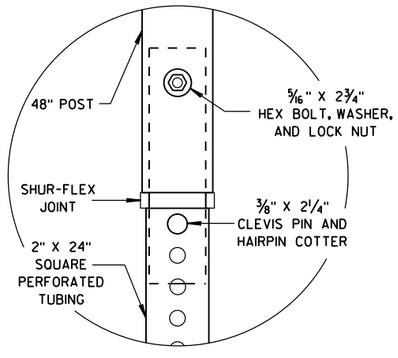
FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POST ANCHORS



DETAIL B



DETAIL C

FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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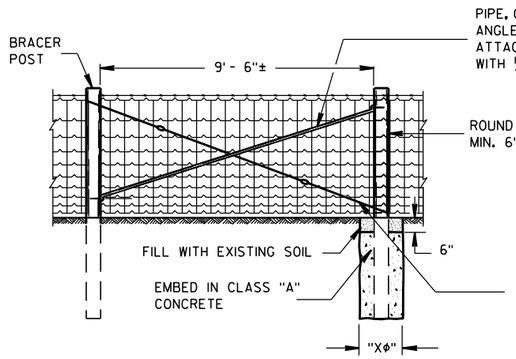
S.D.D. 15 A 3-2b

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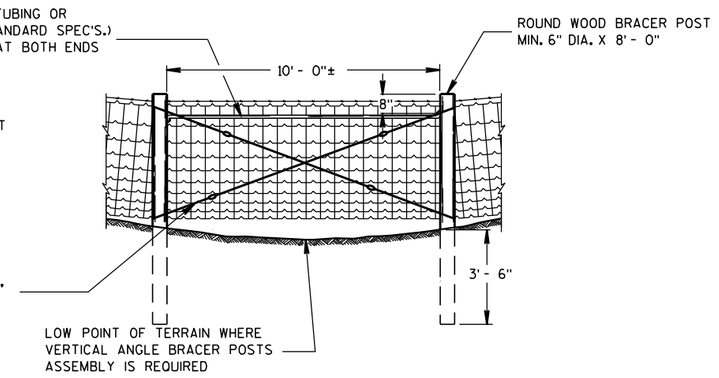
S.D.D. 15 A 3-2b

NOTE: PULL OR STRETCHER POST ASSEMBLIES SHALL BE PLACED MIDWAY BETWEEN END POSTS AND CORNER POSTS WHERE A RUN OF FENCE EXCEEDS 660' BUT IS LESS THAN 1,320'. FOR RUNS OF FENCE IN EXCESS OF 1,320' MAXIMUM SPACING OF PULL OR STRETCHER POST ASSEMBLIES SHALL BE 660'± C-C.

ILLUSTRATION SHOWS POSITION OF STANDARD STEEL BRACE, DOUBLE STRAND GALVANIZED WIRE, AND THE POST TO BE EMBEDDED IN CONCRETE WHEN WIRE FENCE IS INSTALLED FROM LEFT TO RIGHT. THE BRACES SHALL BE POSITIONED ON THE OPPOSITE DIAGONALS AND THE OPPOSITE POST SHALL BE EMBEDDED IN CONCRETE WHEN WIRE FENCE IS INSTALLED FROM RIGHT TO LEFT.



PULL OR STRETCHER POSTS ASSEMBLY



VERTICAL ANGLE BRACER POSTS ASSEMBLY

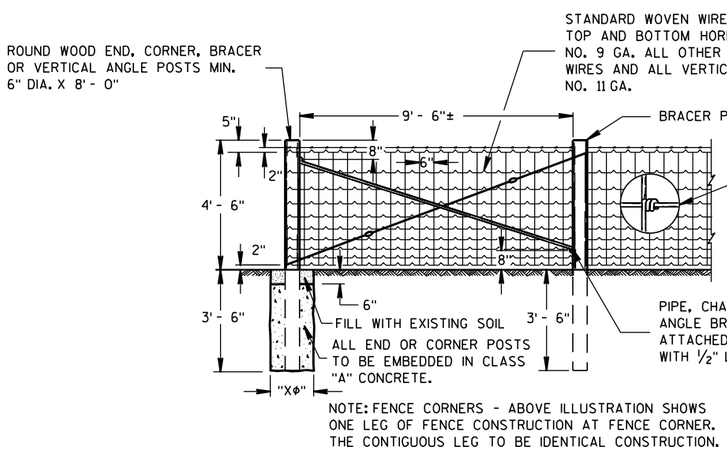
GENERAL NOTES

"XΦ" = DIAMETER OF THE POST PLUS 12".

FENCE STAPLES SHOULD NEVER BE DRIVEN VERTICALLY INTO WOOD POSTS (WITH BOTH LEGS PARALLEL WITH THE WOOD GRAIN). DOING SO CAN SEPARATE THE GRAIN AND SIGNIFICANTLY REDUCE THE HOLDING POWER. ROTATING THE STAPLES SLIGHTLY OFF VERTICAL STRADDLES THE GRAIN AND PROVIDES MORE RESISTANCE TO PULL-OUT.

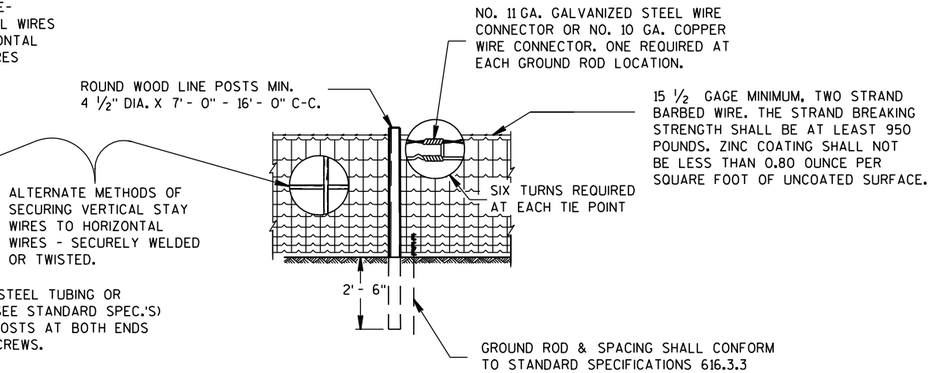
DO NOT STAPLE WIRE TIGHT TO THE LINE POSTS. ALLOW MOVEMENT OF WIRE FOR EXPANSION AND CONTRACTION. STAPLE ARRANGEMENT SHALL BE THE SAME FOR ALL OTHER POSTS EXCEPT THAT THEY SHALL BE DRIVEN TIGHT TO POSTS. ALL STAPLES SHALL BE 2" X 9 GAGE AND SHALL BE MANUFACTURED FROM GALVANIZED WIRE OR HOT DIP GALVANIZED AFTER FORMING. STAPLES SHALL HAVE SLASH-CUT POINTS.

FENCE SHALL BE LOCATED 3'-0" INSIDE THE RIGHT OF WAY LINE UNLESS OTHERWISE INDICATED ON THE PLANS.



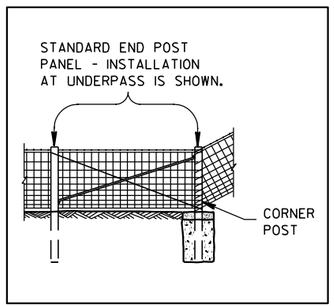
NOTE: FENCE CORNERS - ABOVE ILLUSTRATION SHOWS ONE LEG OF FENCE CONSTRUCTION AT FENCE CORNER. THE CONTIGUOUS LEG TO BE IDENTICAL CONSTRUCTION.

END OR CORNER POSTS ASSEMBLY

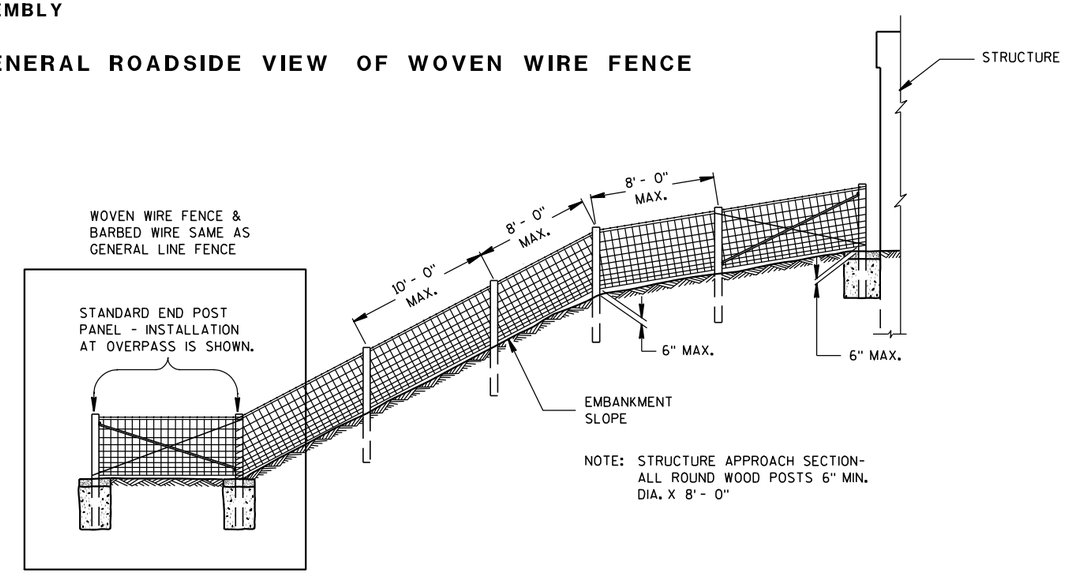


LINE FENCE CONSTRUCTION

GENERAL ROADSIDE VIEW OF WOVEN WIRE FENCE



ALTERNATE FENCE DESIGN AT STRUCTURE



NOTE: STRUCTURE APPROACH SECTION- ALL ROUND WOOD POSTS 6" MIN. DIA. X 8' - 0"

FENCE DESIGN AT STRUCTURE APPROACH

FENCE WOVEN WIRE

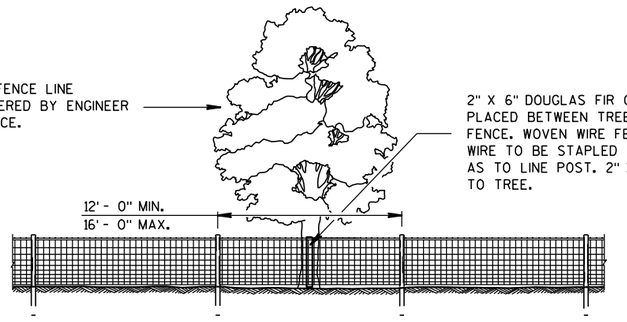
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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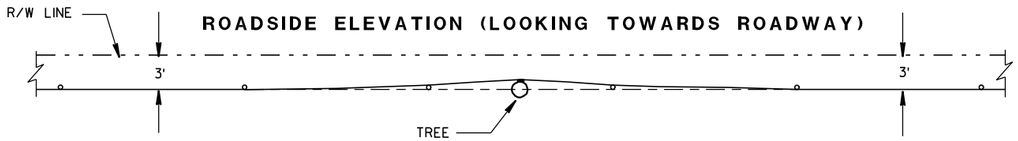
S.D.D. 15 B 1-8a

NOTE: TREE IN NORMAL FENCE LINE SPECIFICALLY ORDERED BY ENGINEER TO REMAIN IN PLACE.

2" X 6" DOUGLAS FIR OR SO. YELLOW PINE PLACED BETWEEN TREE AND WOVEN WIRE FENCE. WOVEN WIRE FENCE AND BARBED WIRE TO BE STAPLED TO 2" X 6" LIKE AS TO LINE POST. 2" X 6" NOT FASTENED TO TREE.

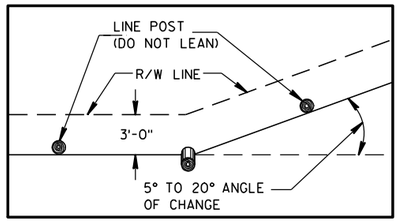


ROADSIDE ELEVATION (LOOKING TOWARDS ROADWAY)

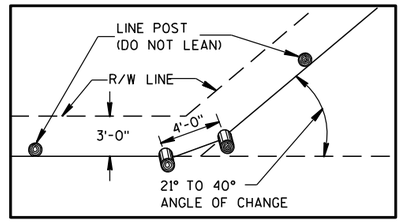


PLAN VIEW

FENCE DESIGN AT TREES REMAINING IN NORMAL FENCE LINE



PLAN VIEW
SINGLE POST CORNER

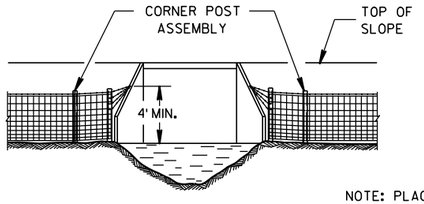


PLAN VIEW
DOUBLE POST CORNER

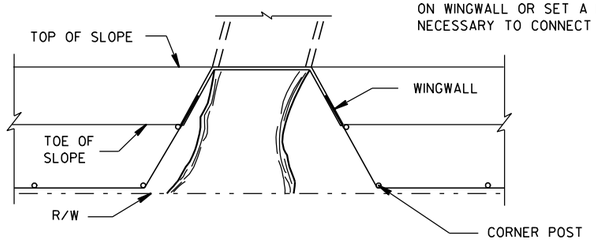
RIGHT OF WAY LINE CHANGE 40° AND LESS

NOTE: SINGLE AND DOUBLE POSTS SHALL BE A MIN. 6" DIA. X 8'-0" WITH A LEAN OF 4" TOWARD THE OUTSIDE OF THE CURVE.

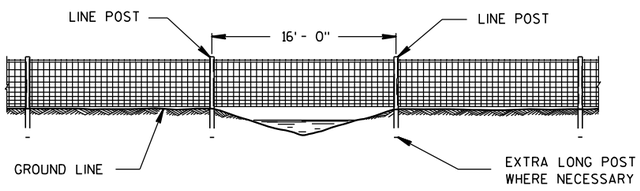
WHEN THE RIGHT OF WAY LINE CHANGE IS MORE THAN 40° USE THE CORNER OR STRETCHER POSTS ASSEMBLY.



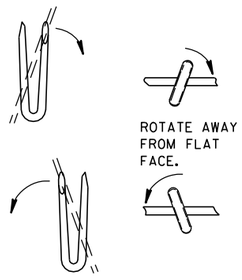
NOTE: PLACE A MINIMUM OF 4 STRANDS OF BARBED WIRE, 6" MAXIMUM CENTERS IN FAN SHAPE CONNECTED TO AN EYE BOLT ON WINGWALL OR SET A LONE POST WHEN NECESSARY TO CONNECT BARBED WIRE.



FENCE INSTALLATION TO WINGWALLS

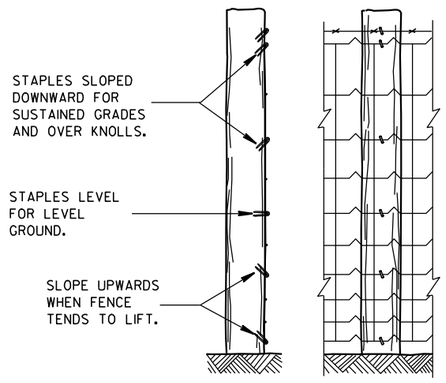


FENCE CONSTRUCTION OVER STREAM COURSES OF 15 FT. OR LESS IN WIDTH



LINE POST

NOTE: WHEN POSTS ARE DRIVEN THE SMALL END SHALL BE DOWN.

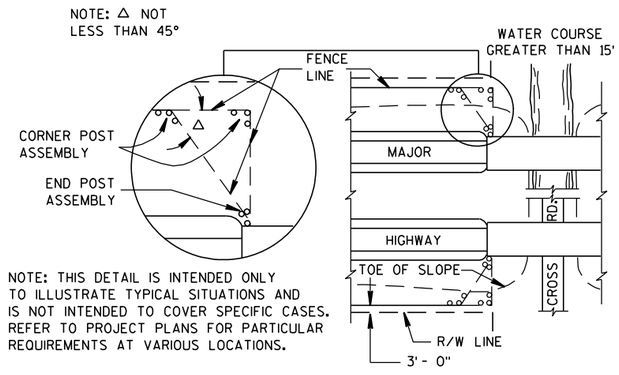


END ELEVATION

FARM SIDE ELEVATION

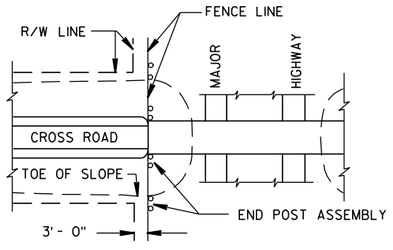
FENCE MOUNTING DETAIL

NOTE: △ NOT LESS THAN 45°



NOTE: THIS DETAIL IS INTENDED ONLY TO ILLUSTRATE TYPICAL SITUATIONS AND IS NOT INTENDED TO COVER SPECIFIC CASES. REFER TO PROJECT PLANS FOR PARTICULAR REQUIREMENTS AT VARIOUS LOCATIONS.

PLAN VIEW
MAJOR HIGHWAY OVERPASS OR STREAM COURSE CROSSING OF GREATER THAN 15 FT. IN WIDTH



PLAN VIEW
MAJOR HIGHWAY UNDERPASS

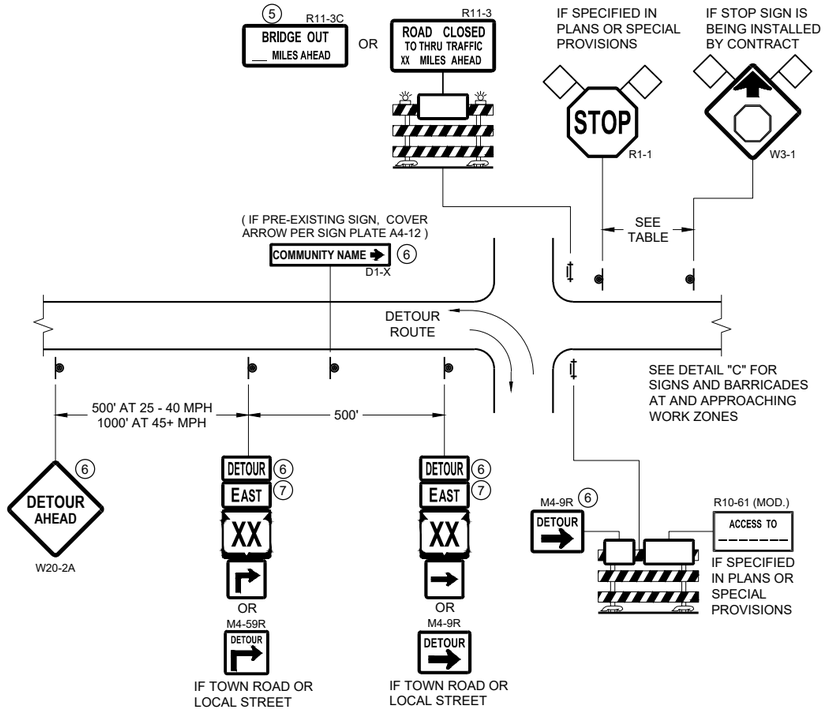
FENCE LOCATION AT STRUCTURES

FENCE WOVEN WIRE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

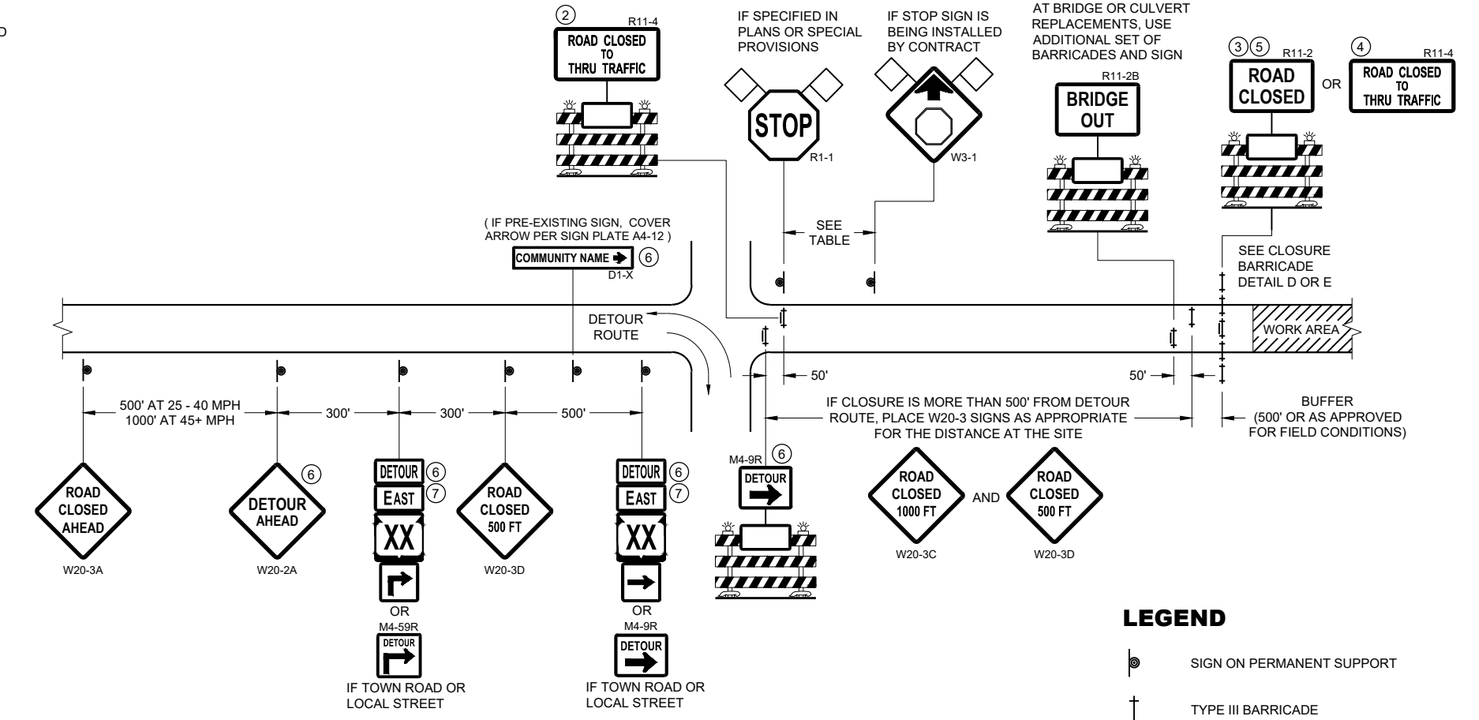
APPROVED
4/4/2008
DATE
/S/ Jerry H. [illegible]
ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6
S.D.D. 15 B 1-8b



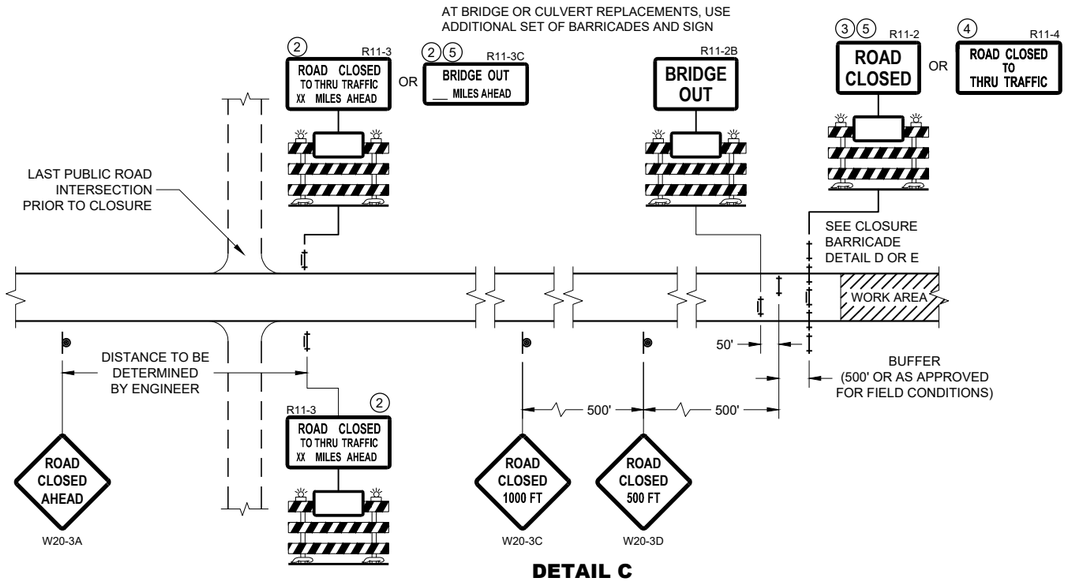
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

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



DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE LESS THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

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

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

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA
- FLAGS, 16" X 16" MIN. (ORANGE)
- DETOUR — M4 - 8
- EAST — M3 - X
- XX — M1 - 4 OR XX — M1 - 6 OR COUNTY X — M1 - 5A
- M05 - 1 OR M06 - 1

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
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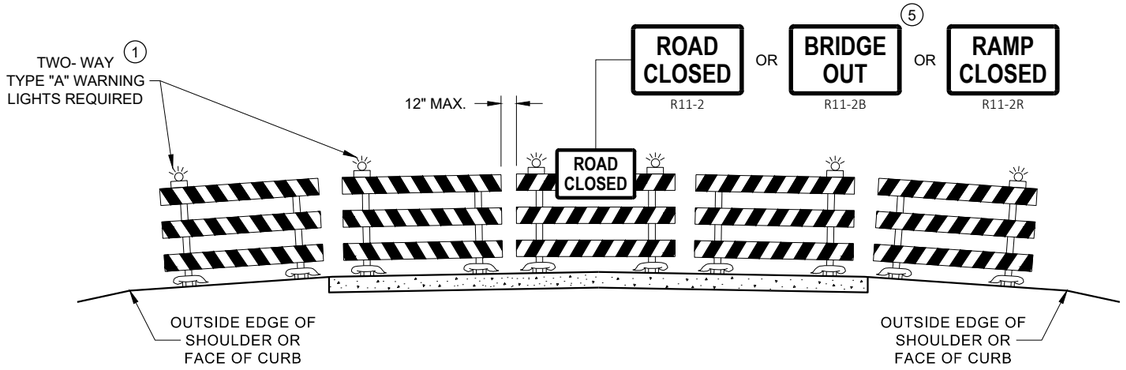
APPROVED
May 2023
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

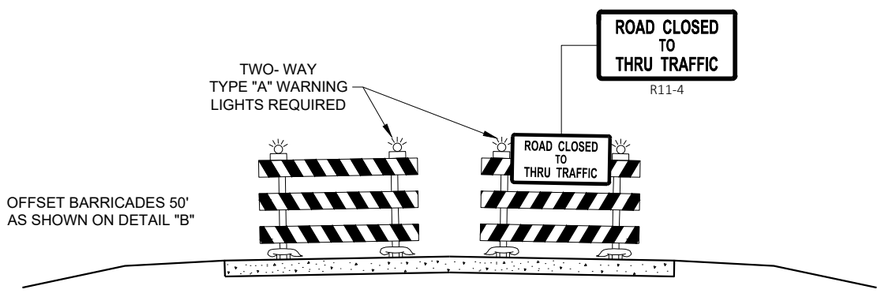
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SDD 15C02 - 09a

SDD 15C02 - 09a



DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW



DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW

SEE SDD 15C2 - SHEET "a" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

(1) TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8 FOOT LIGHT SPACING.

(2) THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT AN INTERSECTION.

(3) FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "D".

(4) FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "E".

(5) FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11 - 2 AND R11 - 3 SIGNS.

(6) INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.

(7) "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

BARRICADES AND SIGNS FOR VARIOUS CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEE
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SDD 15C02 - 09b

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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
- DETOUR / EAST — M4 - 8, M3 - X
- XX — M1 - 4
- OR XX — M1 - 6
- OR COUNTY X — M1 - 5A
- OR — M05 - 1
- OR — M06 - 1
- OR — 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.

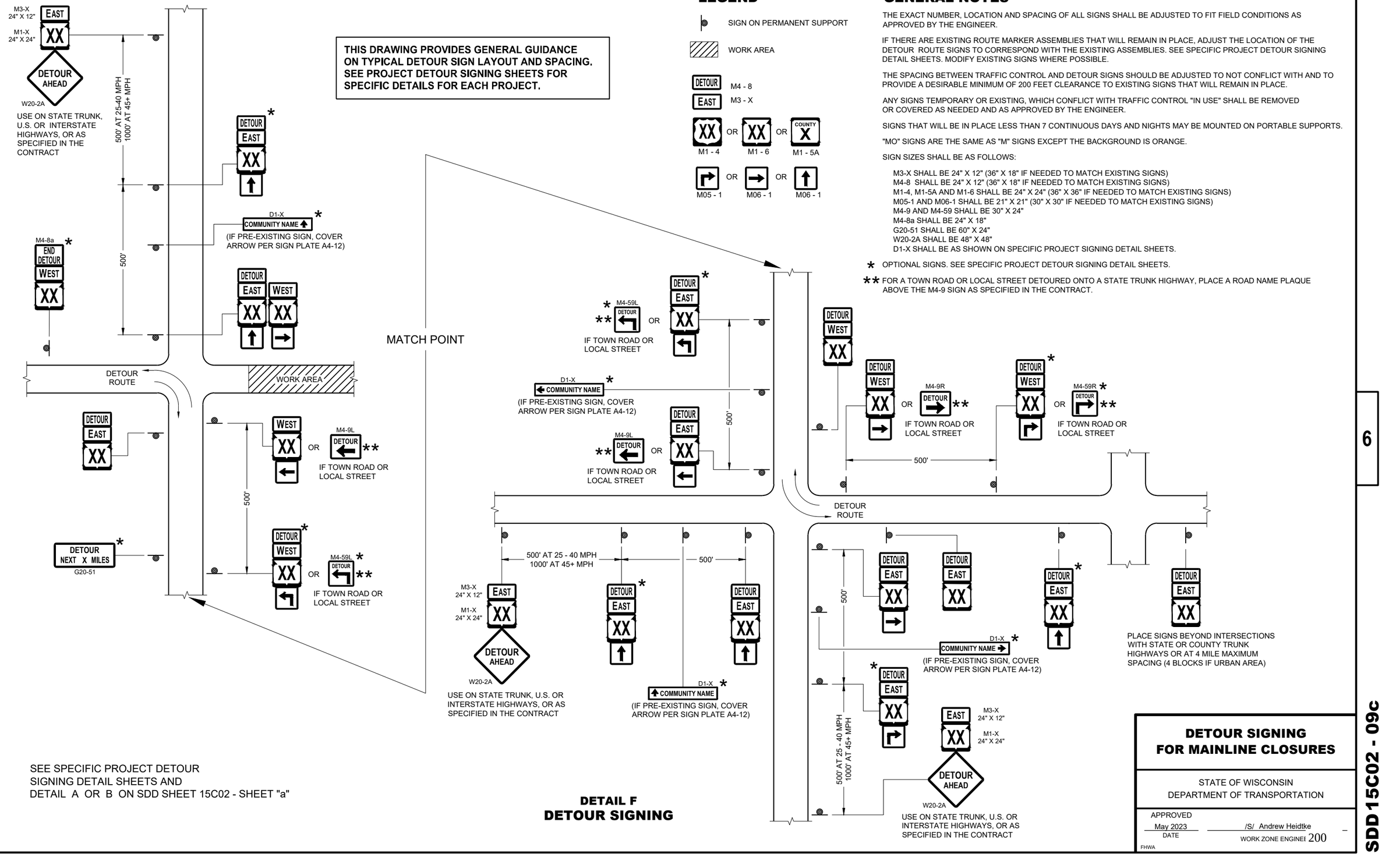
"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

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 M4-59 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



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

DETAIL F
DETOUR SIGNING

DETOUR SIGNING FOR MAINLINE CLOSURES

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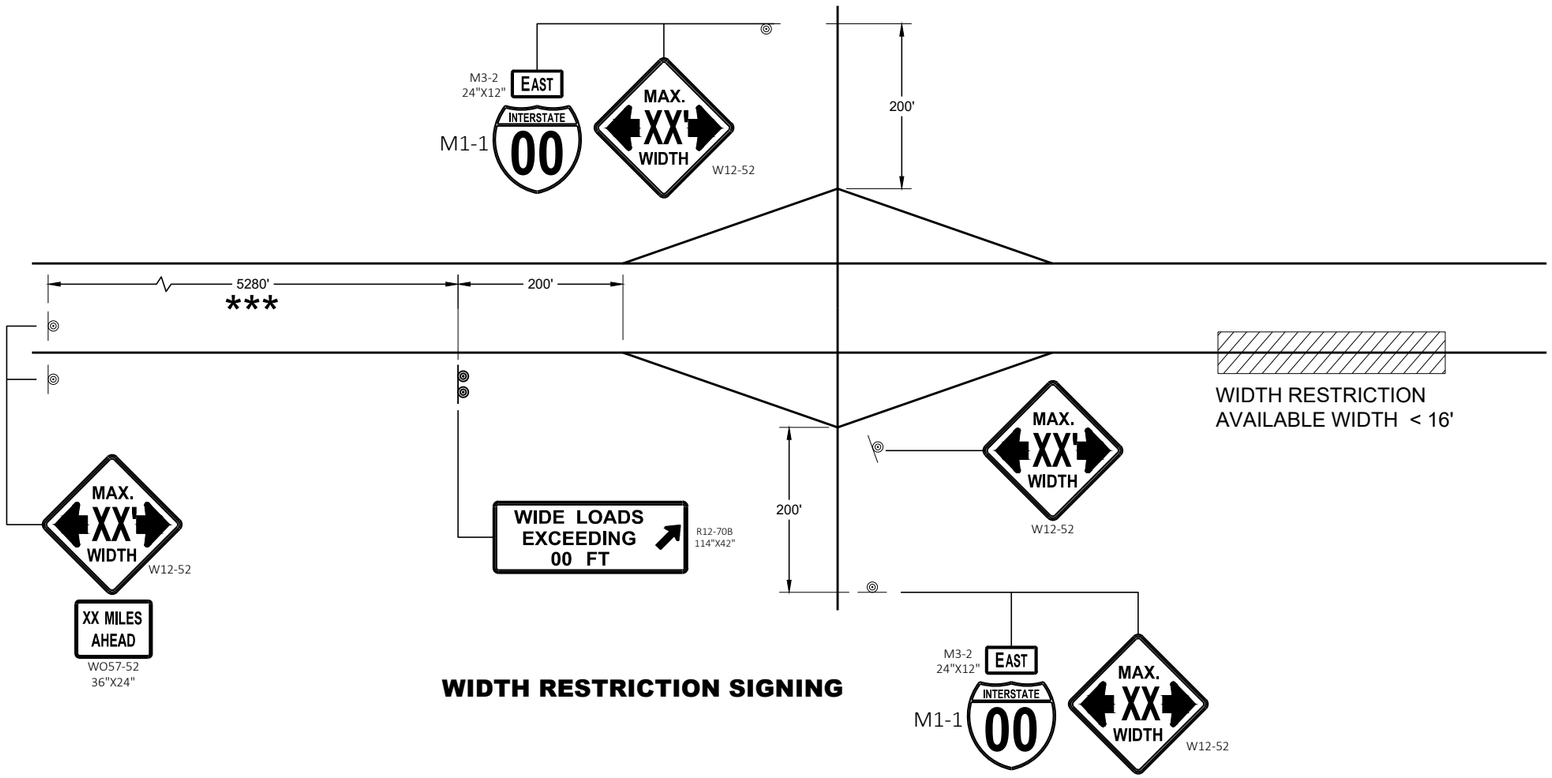
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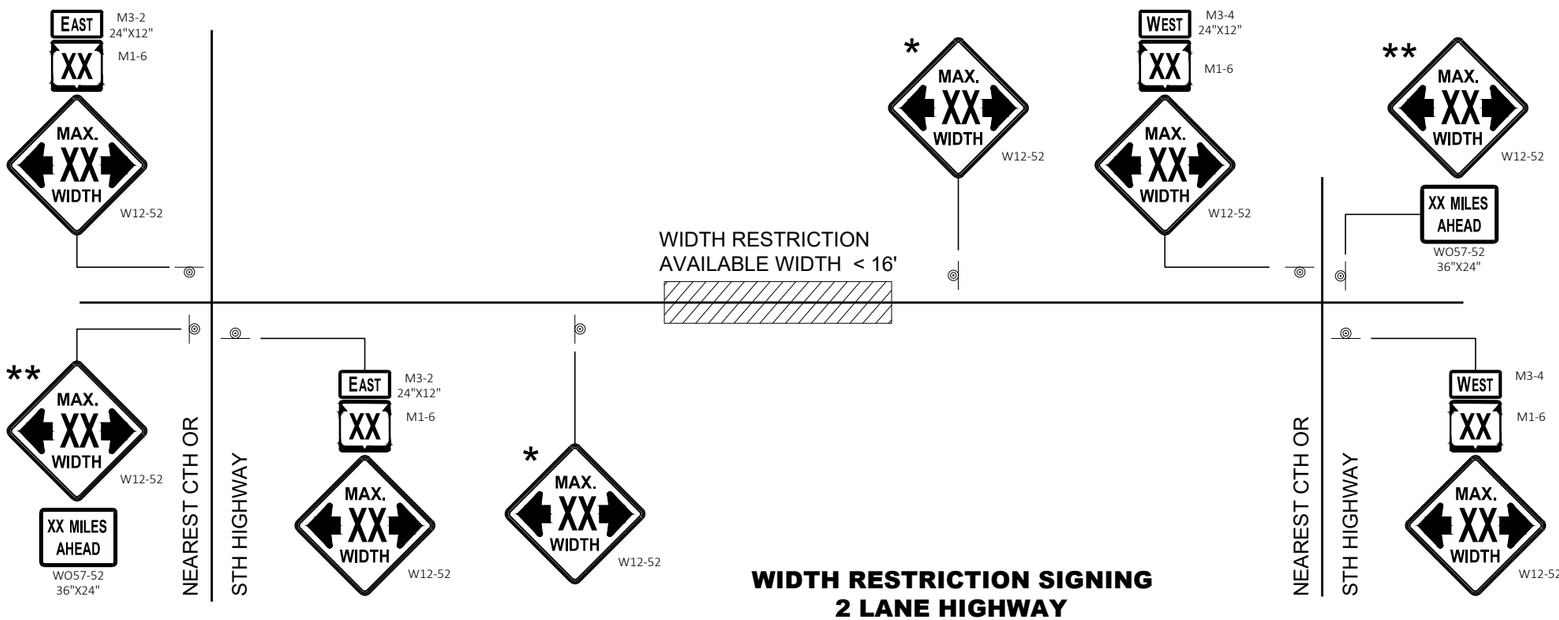
200

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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

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GENERAL NOTES

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

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

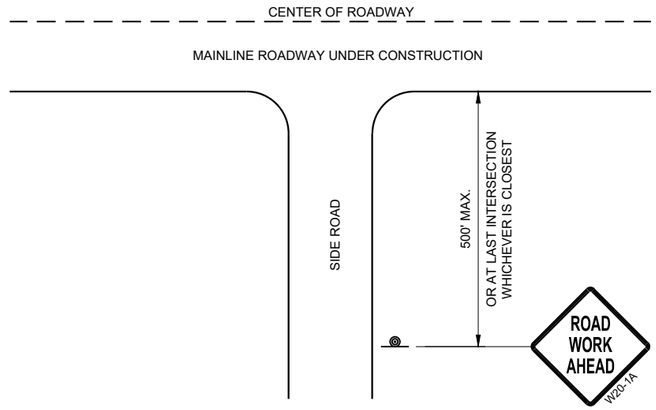
ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

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

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

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

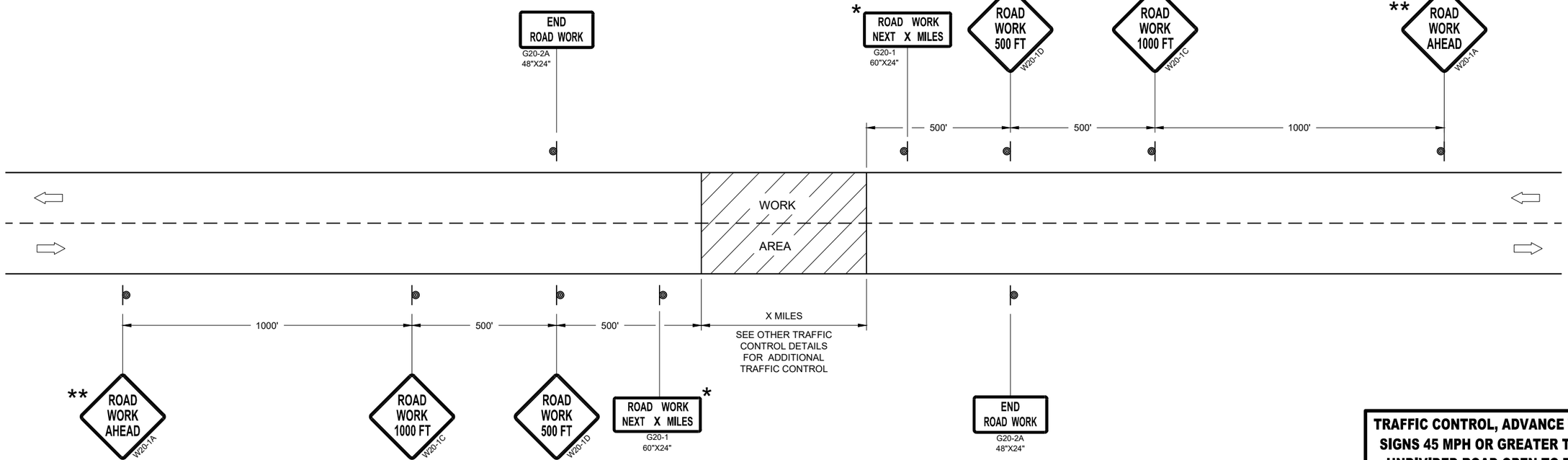
** PLACE AN ADDITIONAL W20-1A "ROAD WORK AHEAD" SIGN IF WORK AREA WITHIN THE PROJECT IS SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA.



TYPICAL SIDE ROAD APPROACH WARNING SIGN DETAIL

LEGEND

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



TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45MPH OR GREATER

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

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SDD 15C04 - 05

GENERAL NOTES

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

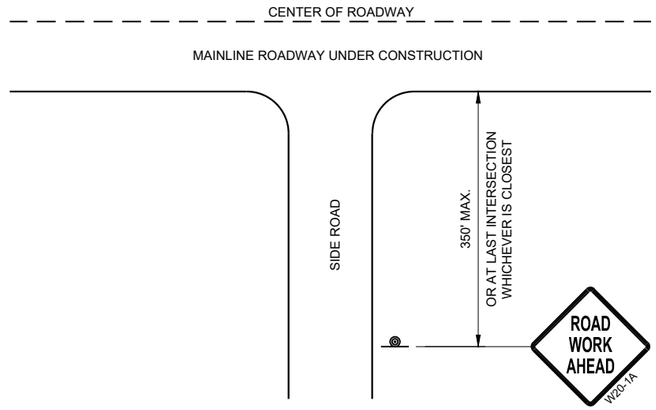
THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

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.



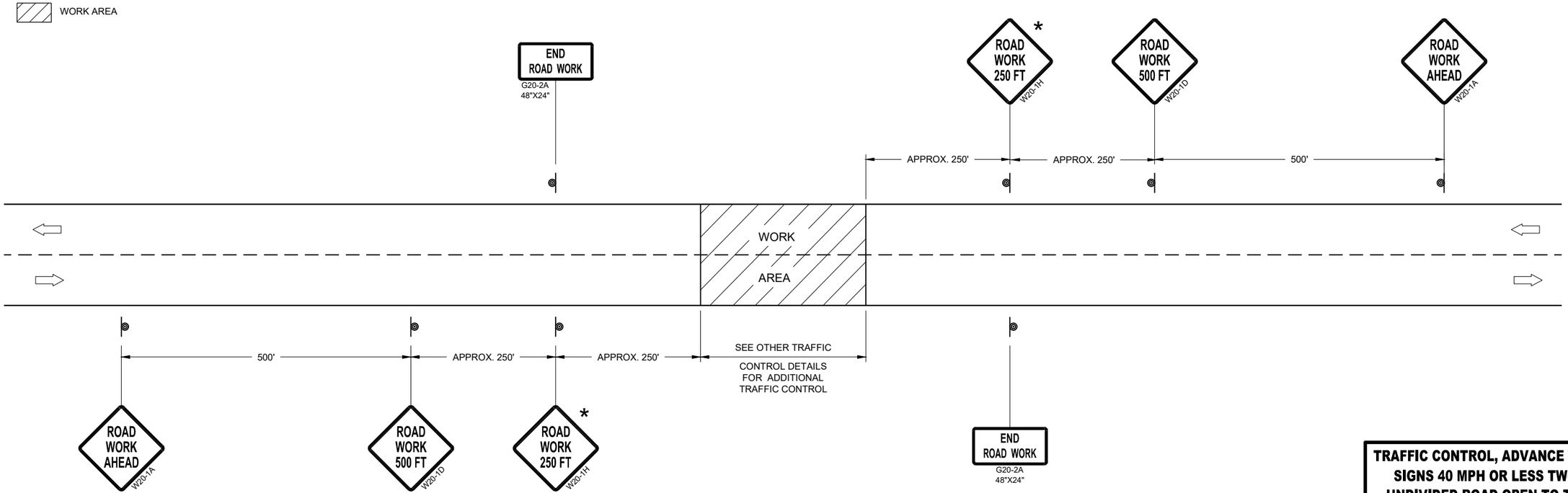
TYPICAL SIDE ROAD APPROACH WARNING SIGN DETAIL

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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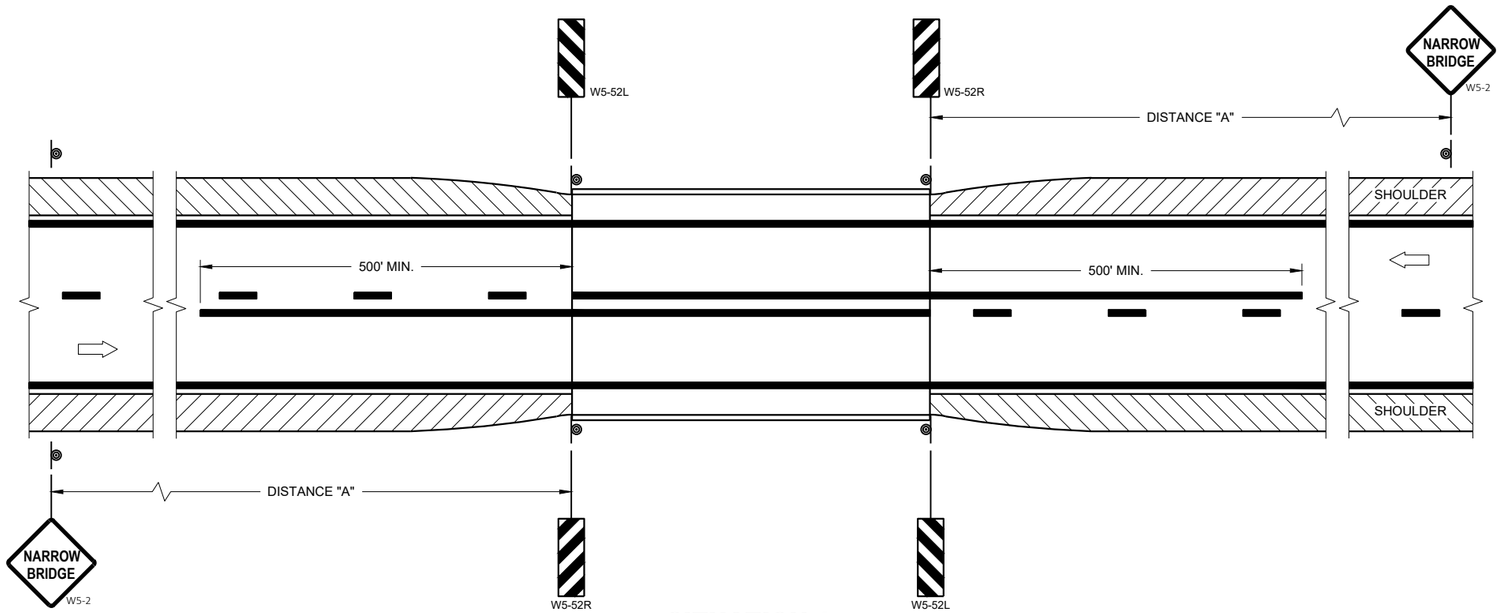
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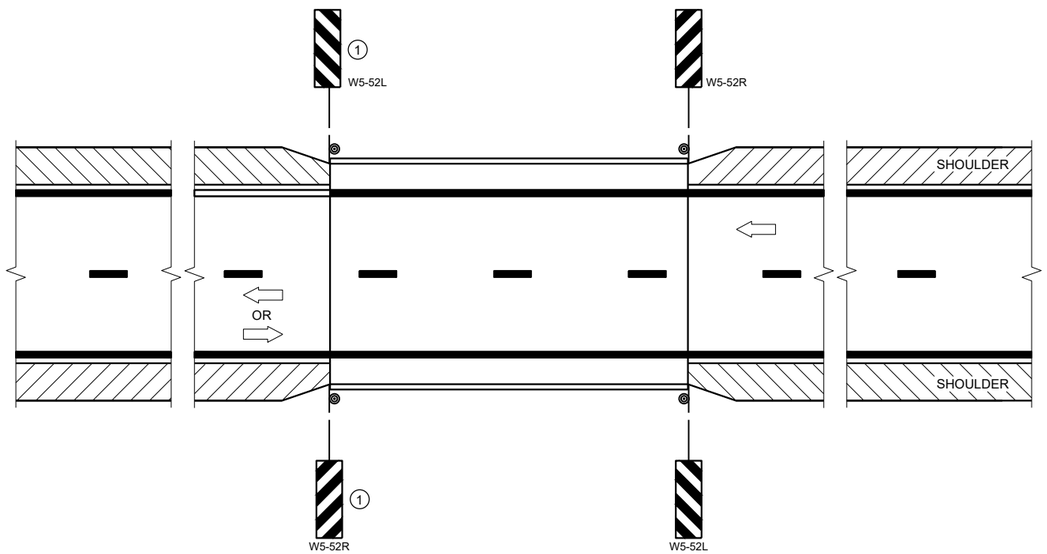
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SDD 15C05 - 05



SITUATION 1

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



SITUATION 2

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

GENERAL NOTES

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

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

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

ON BRIDGE ONLY PROJECTS, PLACE 300 FEET OF EDGELINE.

OMIT EDGELINES ON ROADWAYS WITHOUT EXISTING EDGELINES.

(1) OMIT ON ONE-WAY TRAVELED WAYS.

LEGEND

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC

DISTANCE TABLE

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

SIGNING AND MARKING FOR TWO LANE BRIDGES

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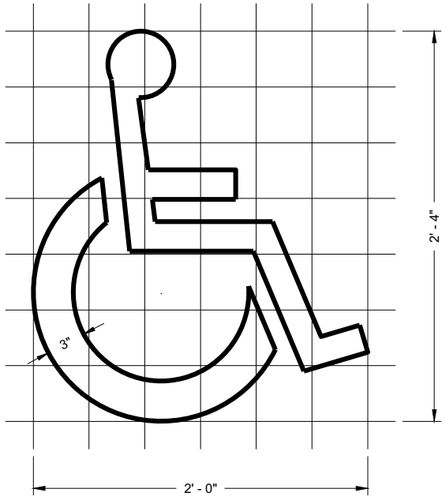
/S/ Jeannie Silver
STATE SIGNING AND MAF ENGINEER

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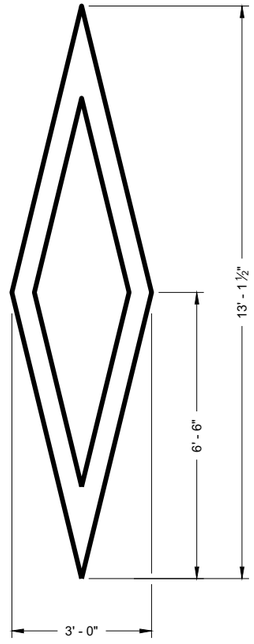
6
SDD 15C06-12

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.



HANDICAP SYMBOL



PREFERENTIAL LANE SYMBOL

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SDD 15C07 - 15a

SDD 15C07 - 15a

PAVEMENT MARKING SYMBOLS

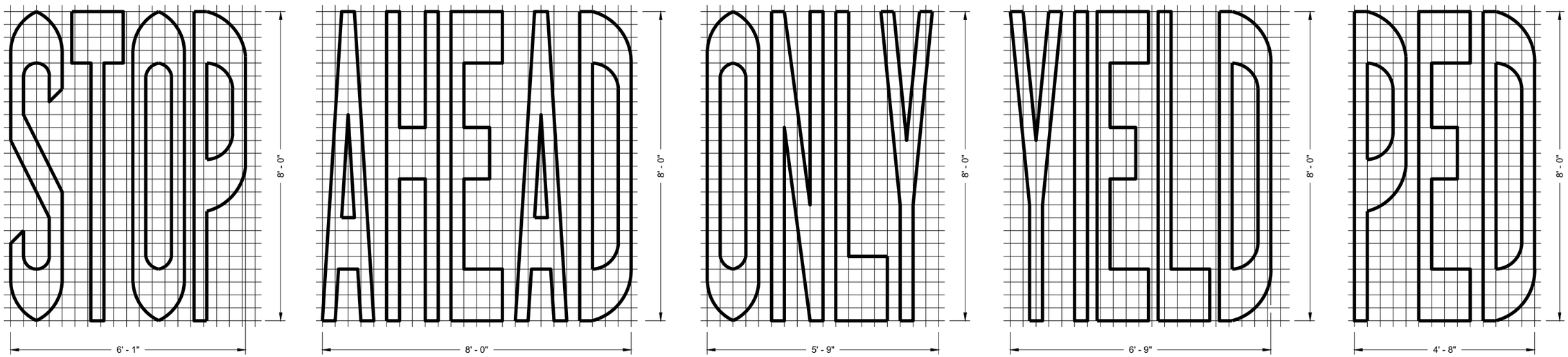
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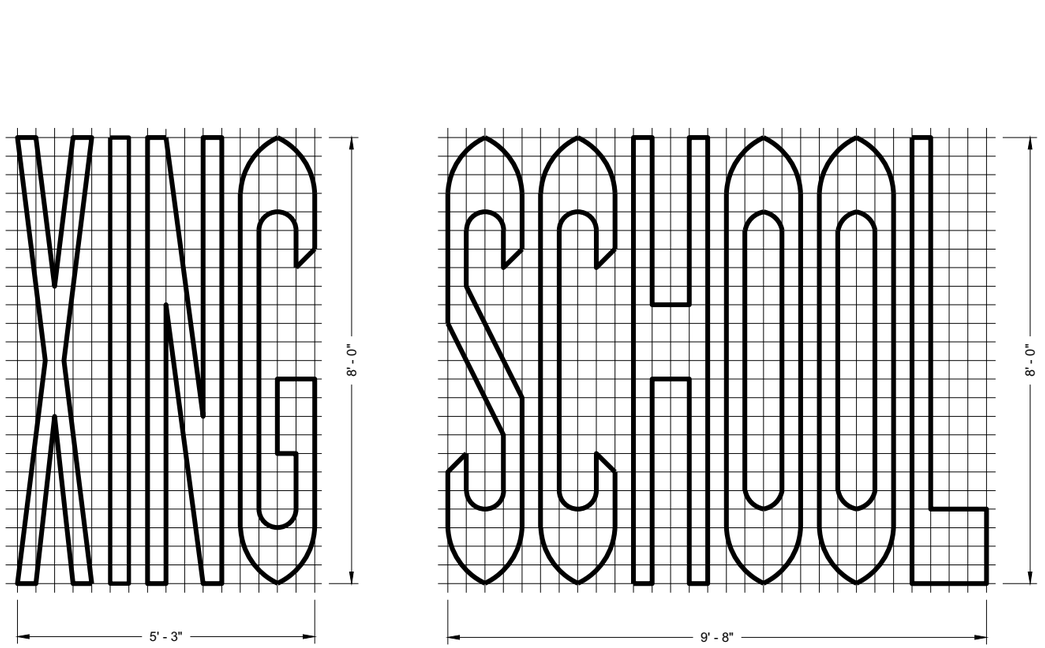
APPROVED

November 2019
DATE

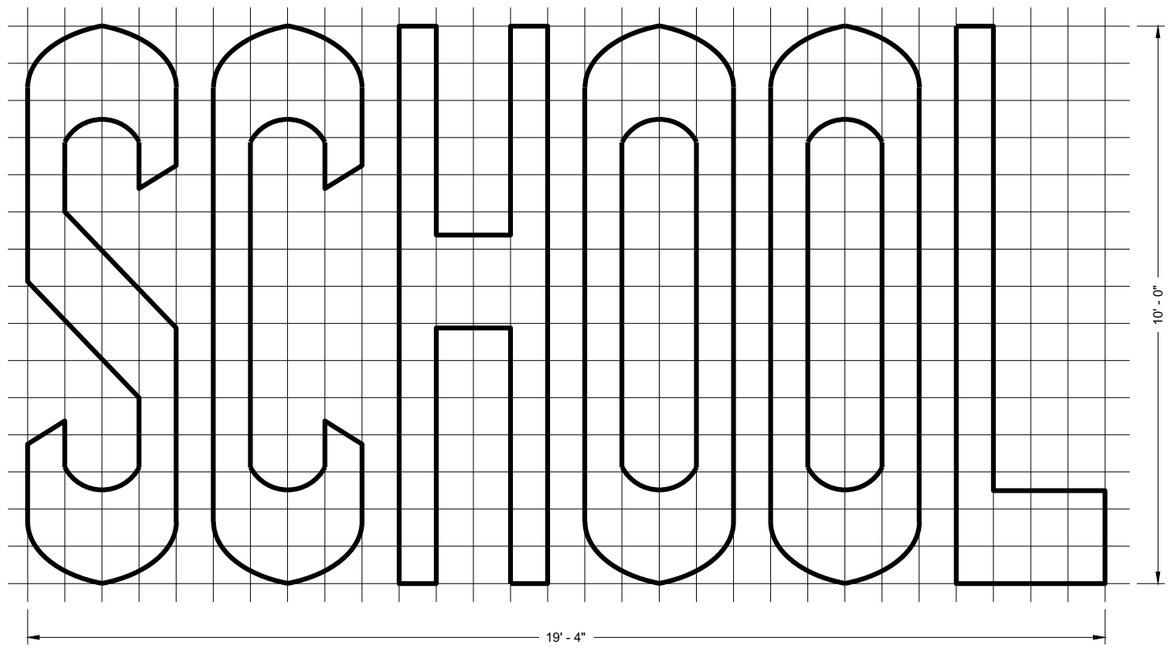
/S/ Matthew Rauch
STATE SIGNING AND MAR ENGINEER

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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

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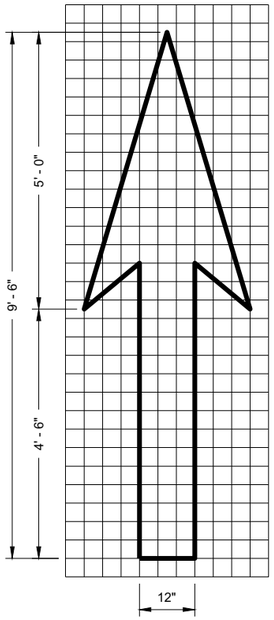
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SDD 15C07 - 15b

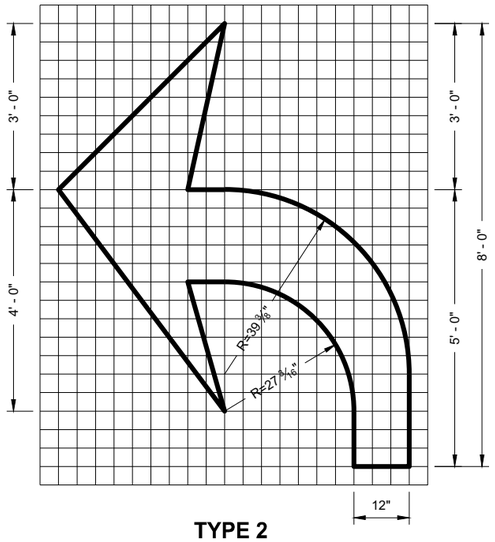
SDD 15C07 - 15b

GENERAL NOTES

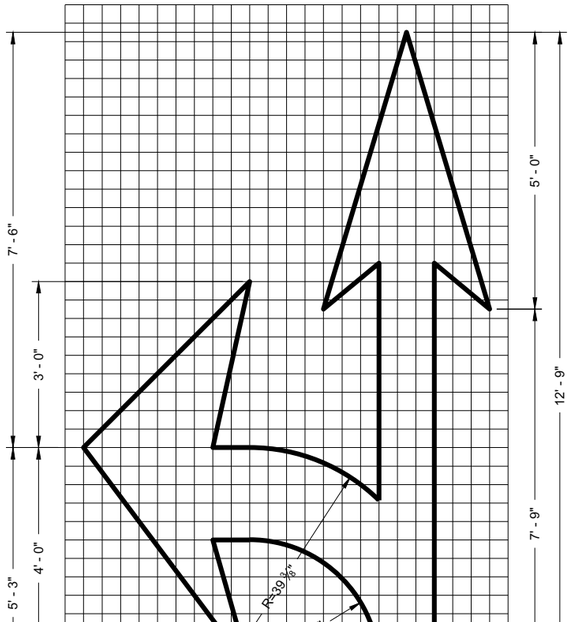
DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.



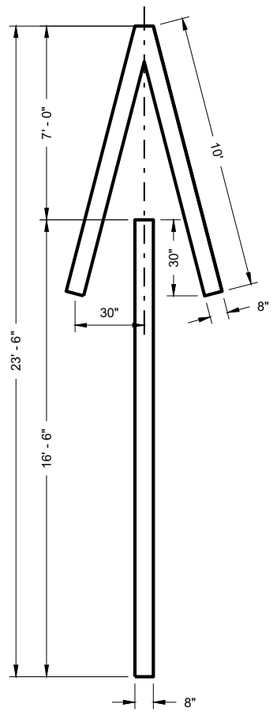
TYPE 1



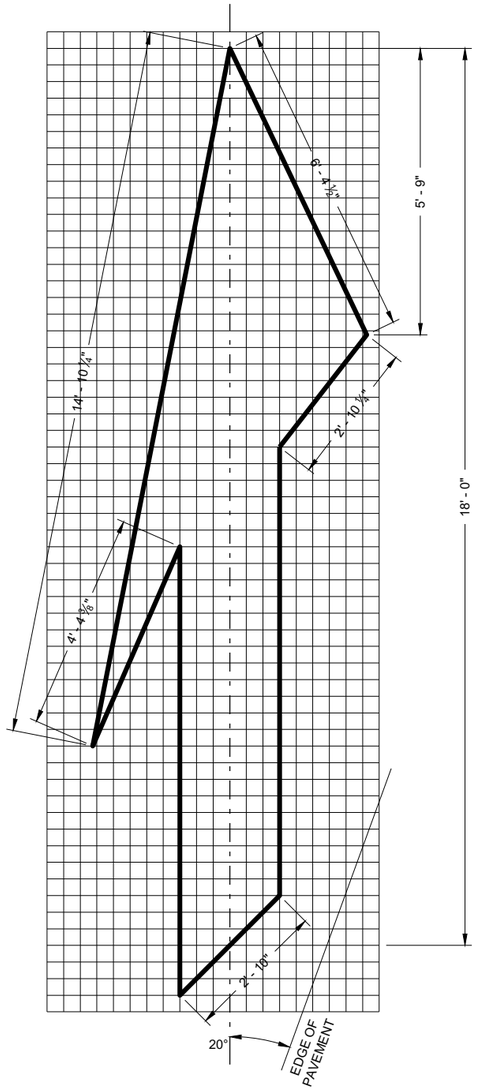
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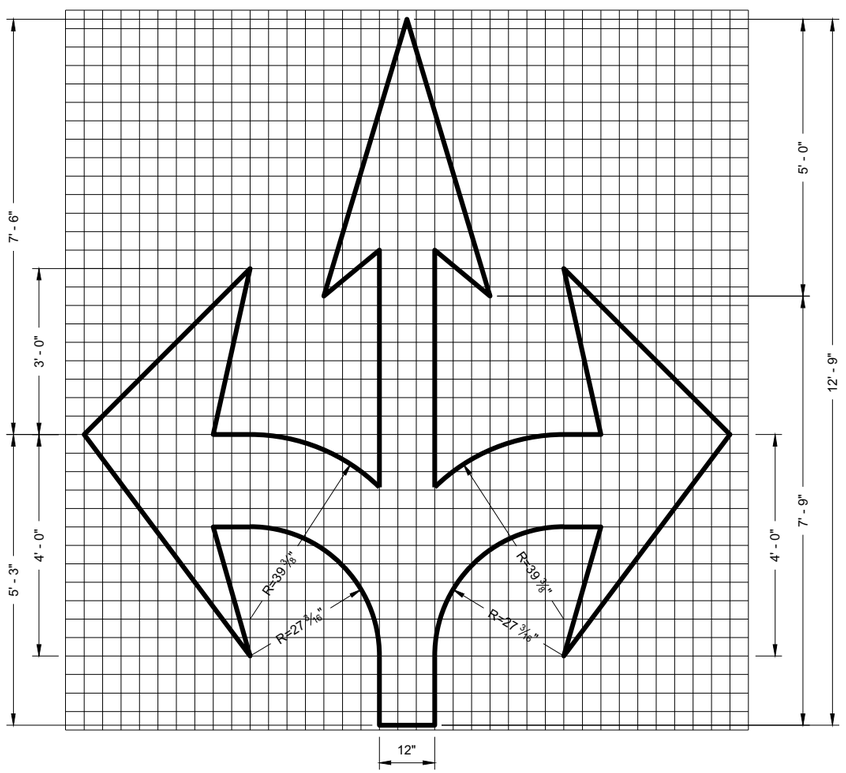
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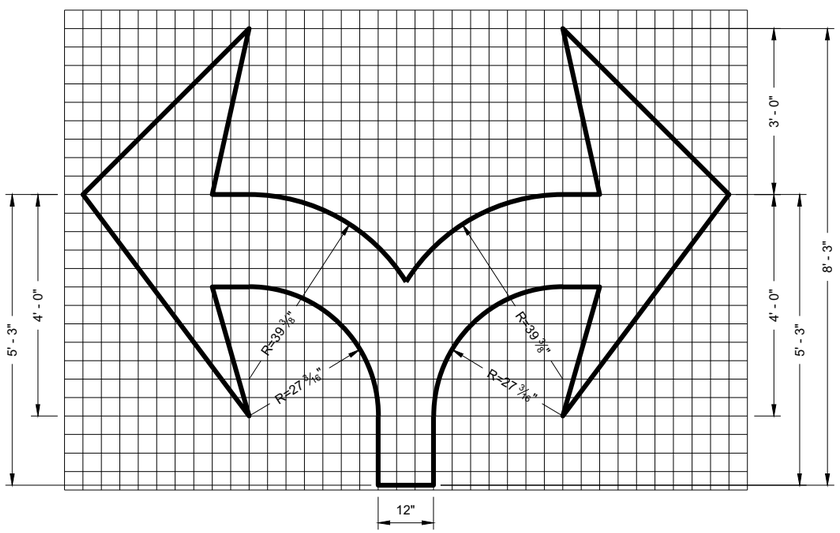
TYPE 4



TYPE 5 LANE DROP ARROW



TYPE 6



TYPE 7

PAVEMENT MARKING ARROWS

STATE OF WISCONSIN
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DATE

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STATE SIGNING AND MAF ENGINEER

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6

SDD 15C07 - 15c

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

GENERAL NOTES

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

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

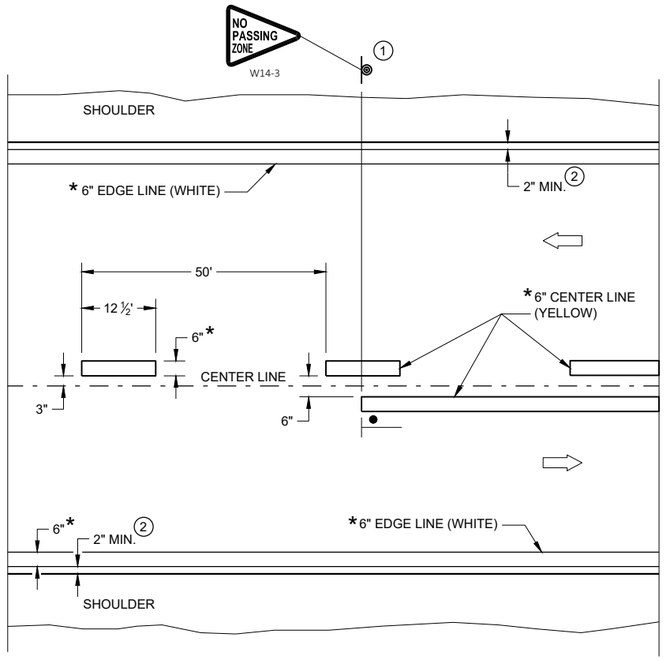
(2) MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

LEGEND

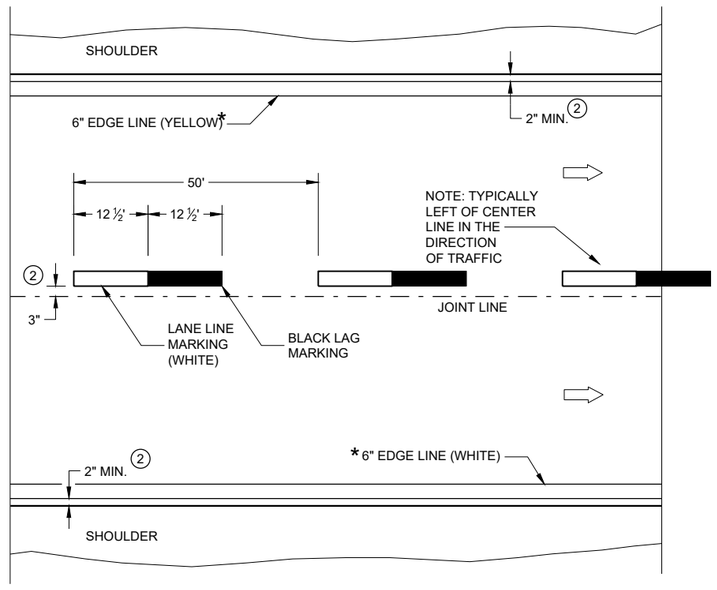
"T" MARKING

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

PERMANENT LONGITUDINAL PAVEMENT MARKINGS

STATE OF WISCONSIN
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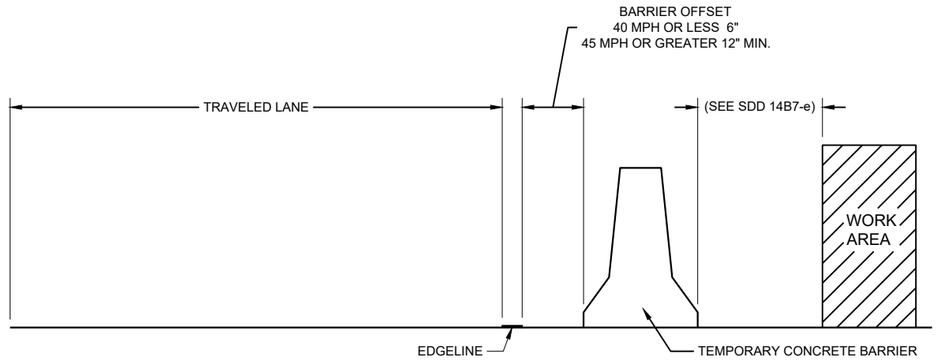
May 2023
DATE

/S/ Jeannie Silver
STATEWIDE SIGNING AND M ENGINEER

FHWA

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SDD 15C08-23a



TEMPORARY BARRIER OFFSET FROM EDGELINE

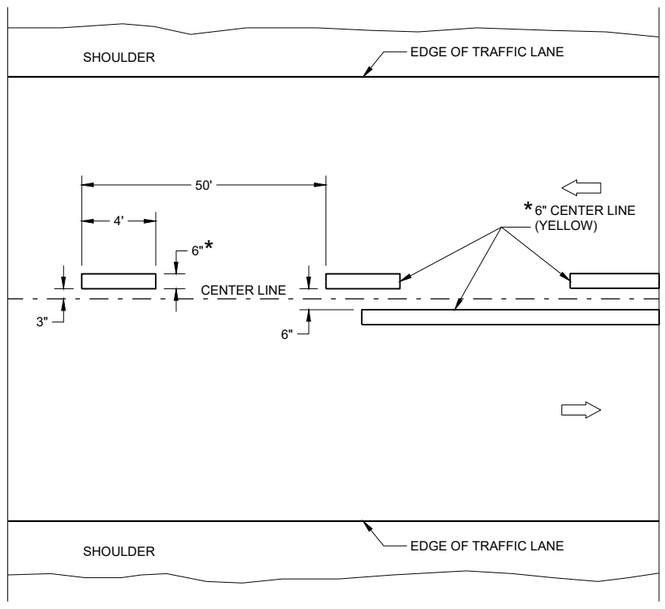
GENERAL NOTES

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

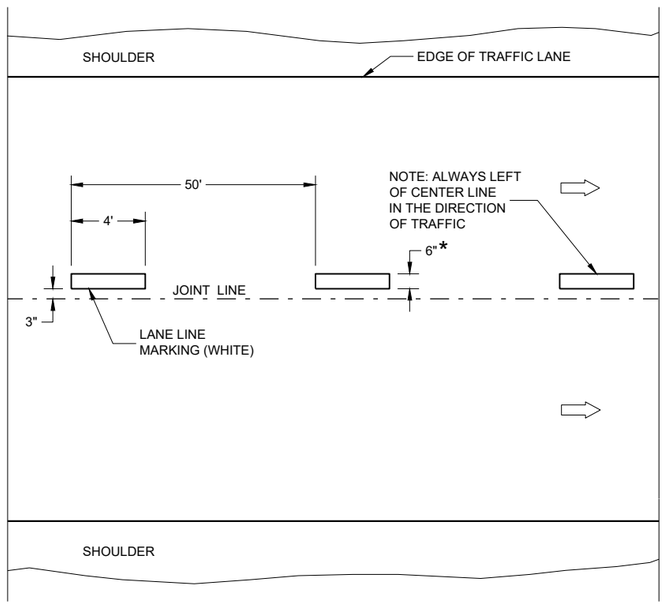
LEGEND

⇨ DIRECTION OF TRAFFIC

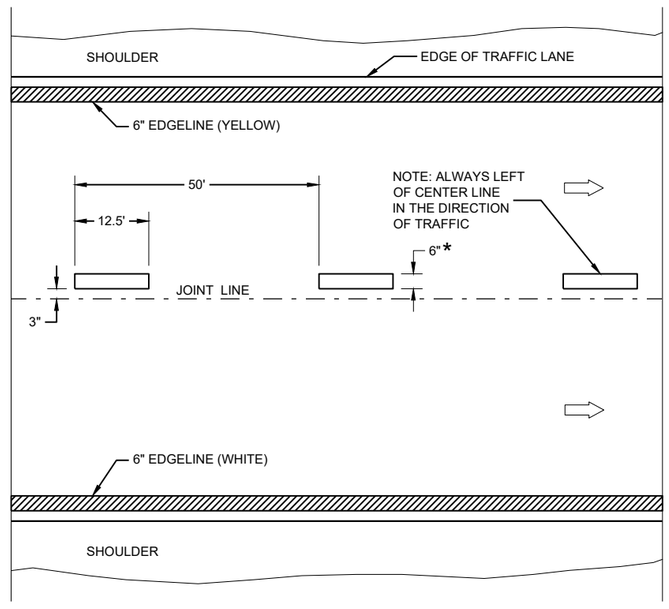
* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



TWO WAY TRAFFIC



ONE WAY TRAFFIC



FREEWAYS AND EXPRESSWAYS

TEMPORARY PAVEMENT MARKING

TEMPORARY LONGITUDINAL PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

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SDD 15C08-23b

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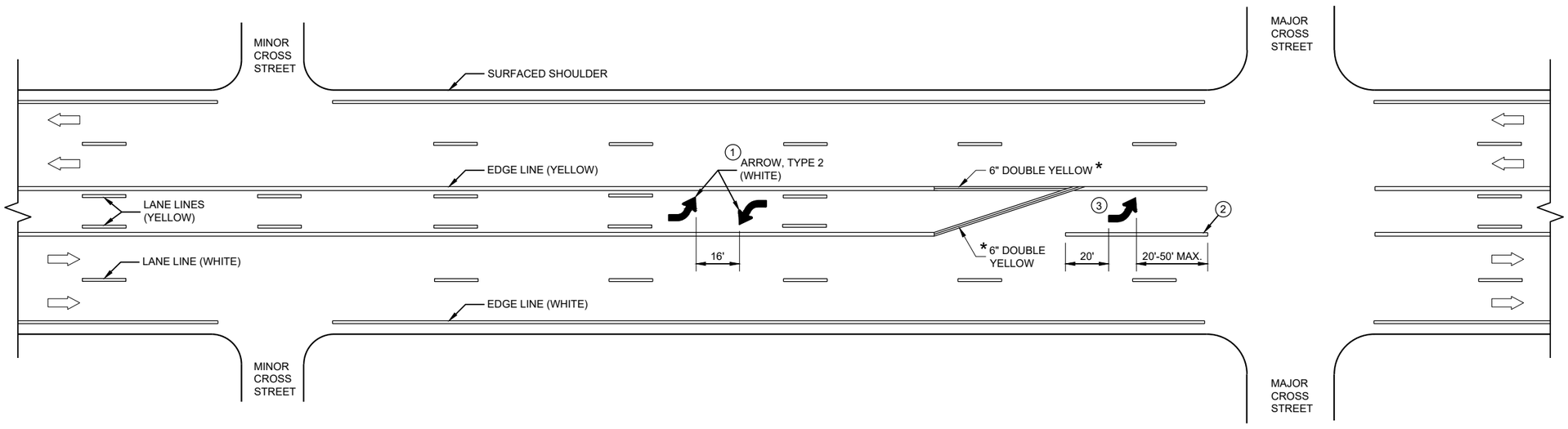
SDD 15C08-23b

GENERAL NOTES

1. A SET OF ARROWS IS REQUIRED EVERY 400 FEET OR NEAR INTERSECTIONS OR DRIVEWAYS WITH TURNING TRAFFIC.
2. 10" WHITE
3. TURN BAY LENGTH OF LESS THAN 48' DOES NOT REQUIRE PAVEMENT ARROWS OR TEXT.

⇨ DIRECTION OF TRAFFIC

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



TWO WAY LEFT TURN LANE

6

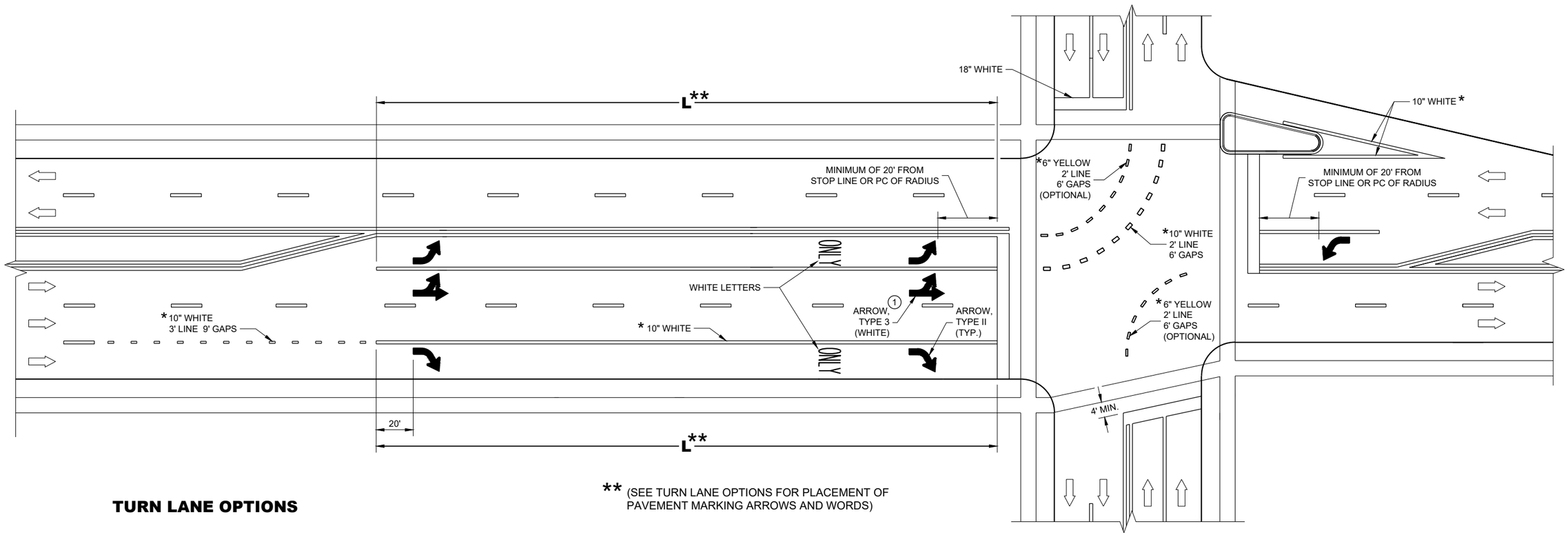
SDD 15C08-23c

PAVEMENT MARKING (TURN LANES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTA· 210

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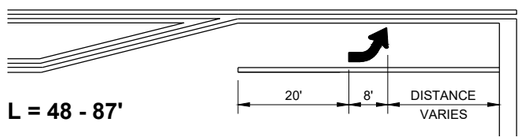
SDD 15C08-23c



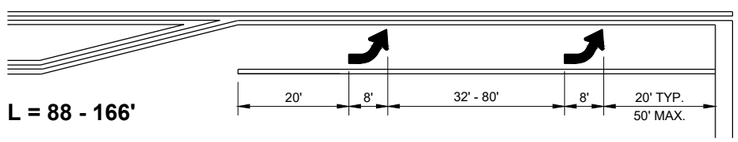
** (SEE TURN LANE OPTIONS FOR PLACEMENT OF PAVEMENT MARKING ARROWS AND WORDS)

TURN LANE OPTIONS

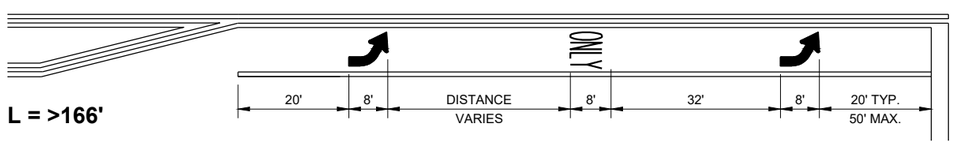
LENGTH OF TURN BAY (**L**) OF 0 - 47' DOES NOT REQUIRE PAVEMENT MARKING ARROWS OR WORDS



L = 48 - 87'



L = 88 - 166'



L = >166'

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

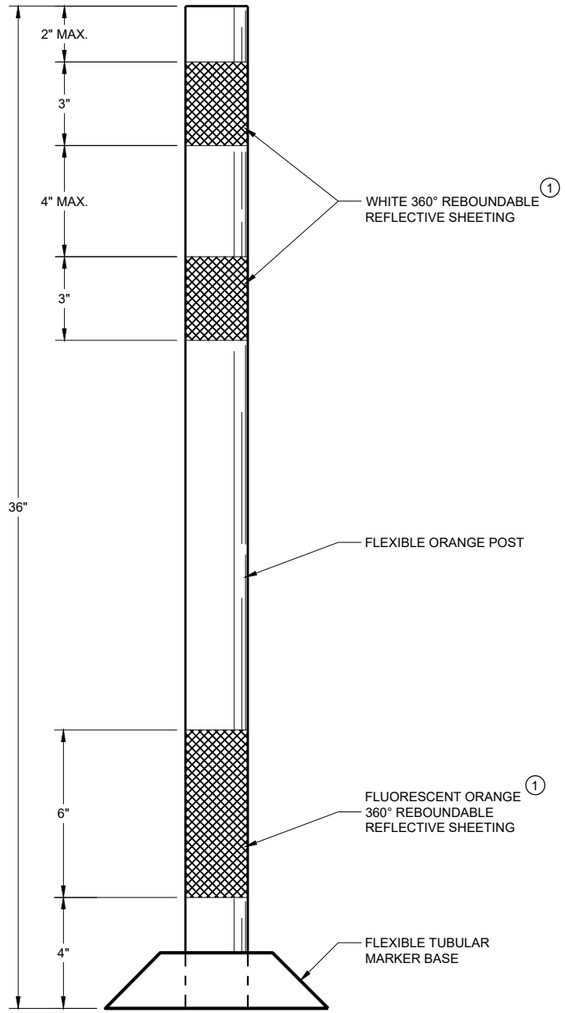
PAVEMENT MARKING (TURN LANES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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SDD 15C08-23d

SDD 15C08-23d



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

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November 2022 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINEER
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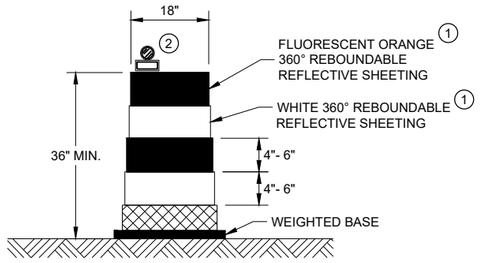
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SDD 15C11 - 10a

SDD 15C11 - 10a

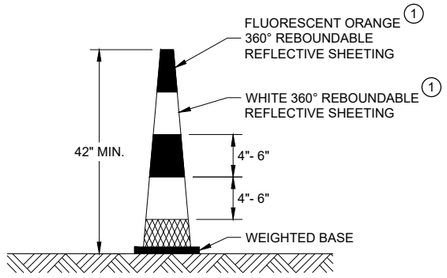
GENERAL NOTES

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



DRUM

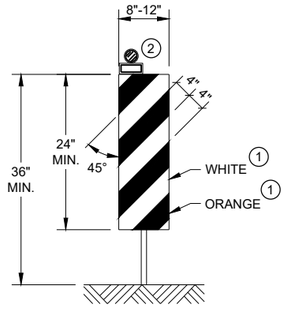
BALLAST WIDTHS
RANGE FROM 24"-36"



42" CONE

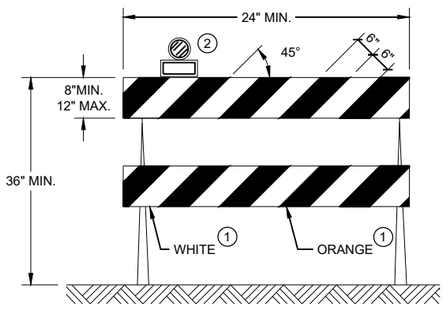
DO NOT USE IN TAPERS
½ SPACING OF DRUMS

BALLAST WIDTHS
RANGE FROM 14"-20"



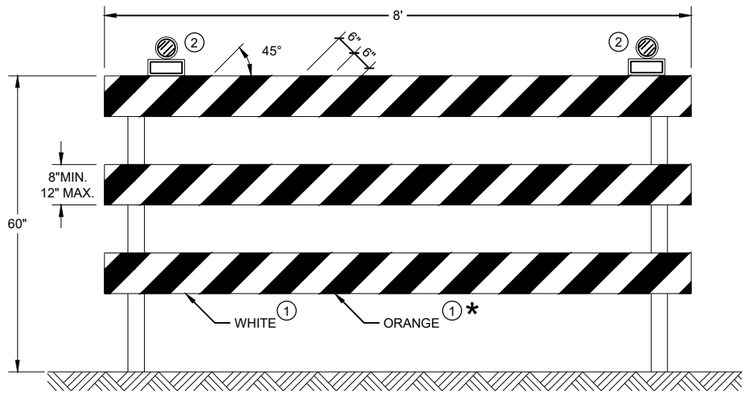
VERTICAL PANEL

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



TYPE II BARRICADE

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



TYPE III BARRICADE

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

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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November 2022
DATE

/S/ Andrew Heidtke
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LEGEND

SIGN ON PORTABLE OR PERMANENT SUPPORT

TEMPORARY PORTABLE RUMBLE STRIP ARRAY

DIRECTION OF TRAFFIC

WORK AREA

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

GENERAL NOTES

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

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

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

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

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

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

FLAGGING

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

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

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

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

TEMPORARY PORTABLE RUMBLE STRIPS

UTILIZE TEMPORARY PORTABLE RUMBLE STRIPS ON ALL FLAGGING OPERATIONS.

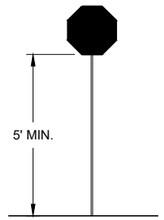
(3) EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS PLACED TRANSVERSE ACROSS THE LANE AT THE LOCATIONS SHOWN. WITHIN EACH ARRAY, SPACING BETWEEN RUMBLE STRIPS SHALL BE 15 FEET ON CENTER

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

INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS.

PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.

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



STOP/SLOW PADDLE ON SUPPORT STAFF

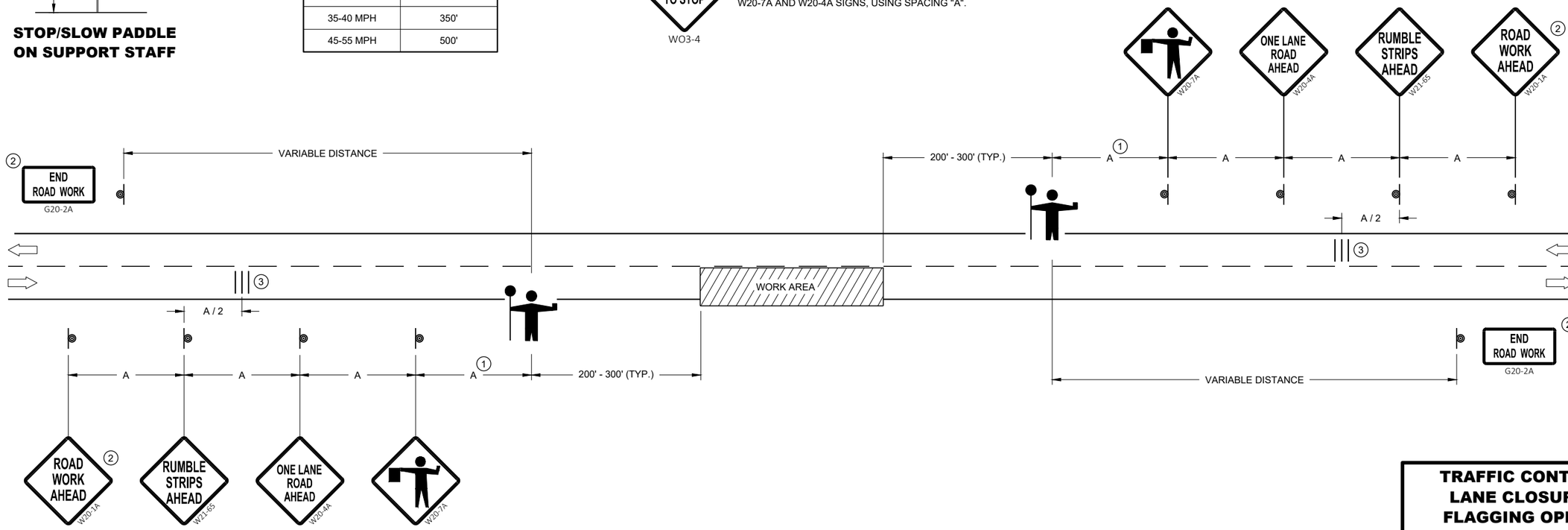
SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

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



WO3-4

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



TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

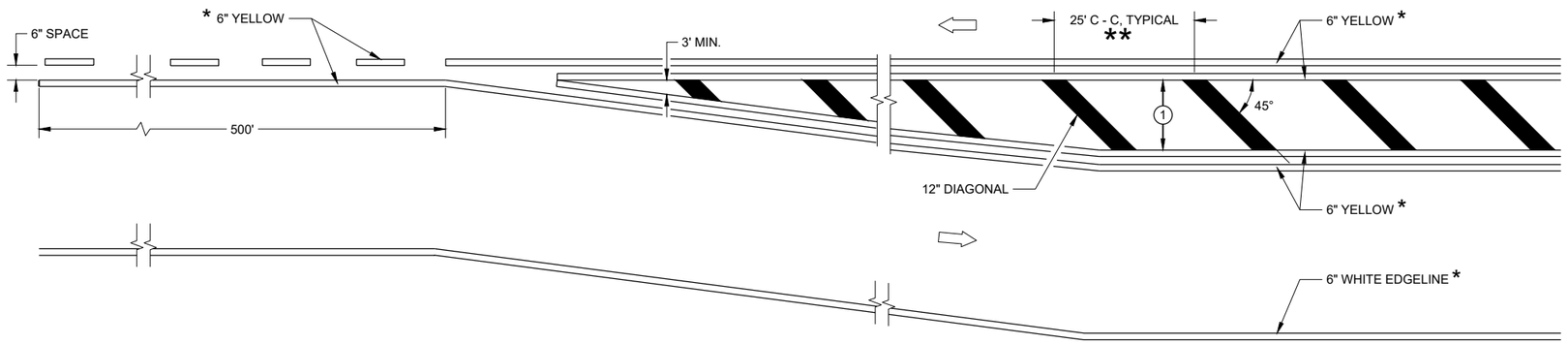
FHWA

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SDD 15C12 - 09a

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SDD 15C12 - 09a



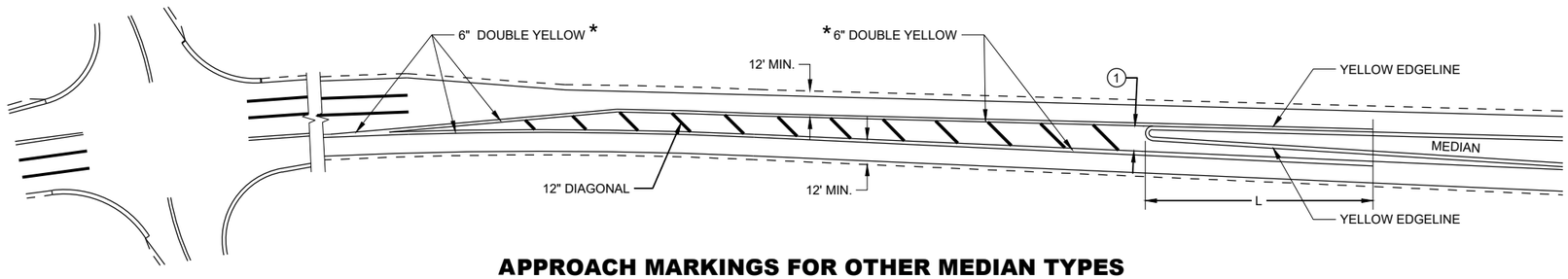
MEDIAN ISLAND DETAIL

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.

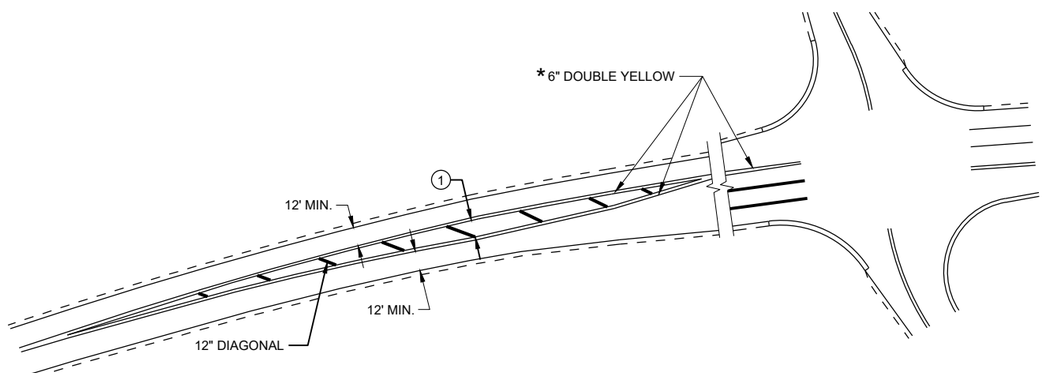
⇨ DIRECTION OF TRAVEL

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



APPROACH MARKINGS FOR OTHER MEDIAN TYPES

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



NON-APPROACH MARKINGS

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SDD 15C18-08a

SDD 15C18-08a

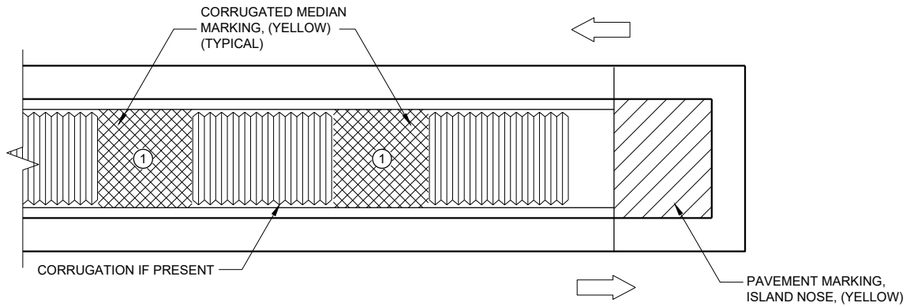
MEDIAN ISLAND PAVEMENT MARKINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

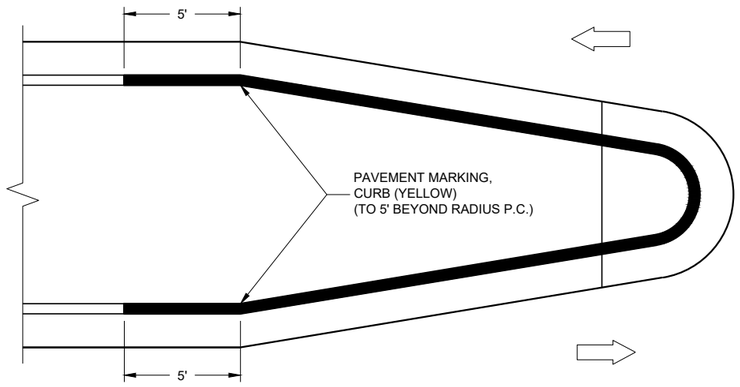
APPROVED
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/S/ Jeannie Silver
STATE SIGNING AND MAR ENGINEER

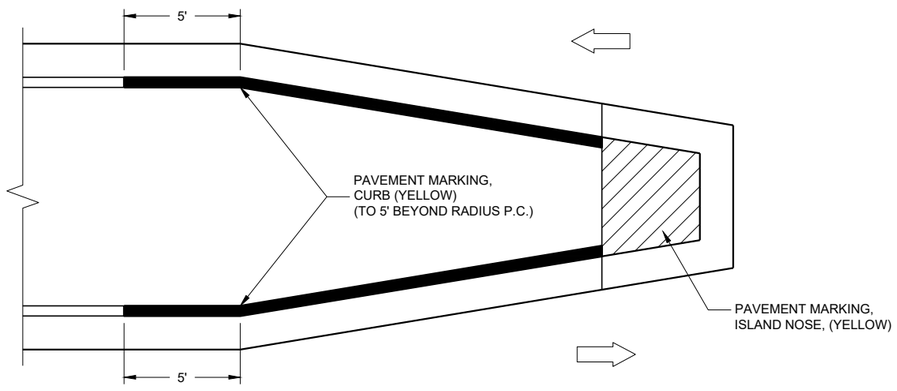
FHWA



MEDIAN ISLAND WITH SQUARE BLUNT NOSE



MEDIAN ISLAND WITH ROUND BLUNT NOSE



MEDIAN ISLAND WITH SLOPED NOSE

TYPICAL PLACEMENT OF PAVEMENT MARKING ON MEDIAN ISLANDS

GENERAL NOTES

WHEN CONCRETE CORRUGATED MEDIAN IS CONSTRUCTED TO SEPARATE TRAFFIC OPERATING IN THE OPPOSING DIRECTION, YELLOW PAVEMENT MARKING SHALL BE APPLIED TO THE FLAT PORTION OF THE CONCRETE CORRUGATED MEDIAN. THE ITEM OF PAVEMENT MARKING, CONCRETE CORRUGATED MEDIAN, WILL BE MEASURED IN PLACE AND ACCEPTED IN ACCORDANCE WITH THE CONTRACT AND PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE FOOT.

(1) APPLY PAVEMENT MARKING TO THE FLAT PORTION OF CORRUGATED MEDIAN.

ISLAND NOSE MARKING

CURB MARKING

CORRUGATED MEDIAN MARKING

DIRECTION OF TRAVEL

PAVEMENT MARKINGS, MEDIAN ISLAND NOSE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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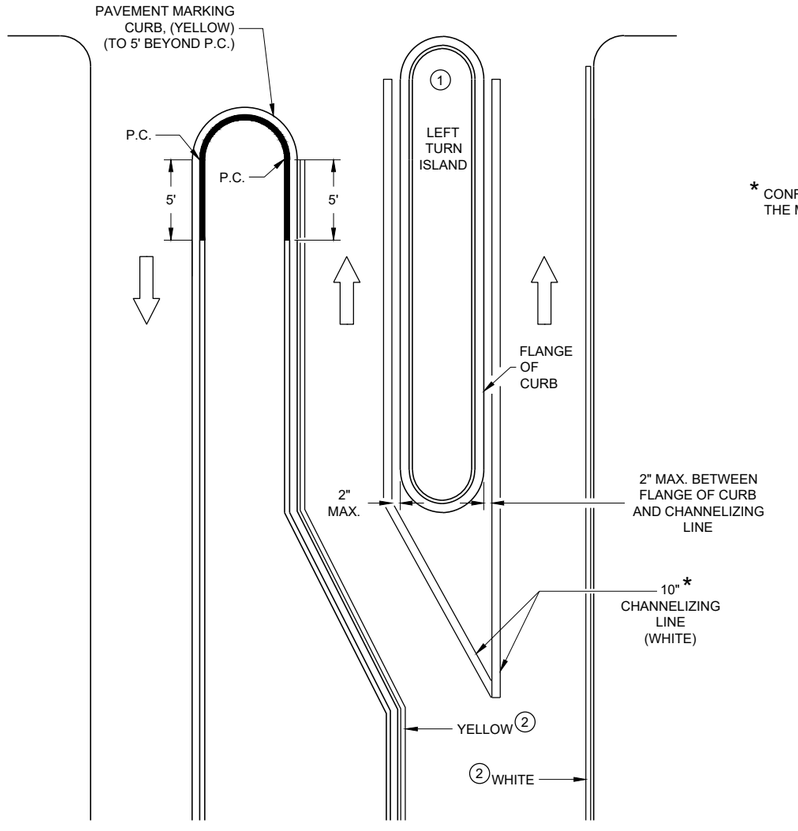
/S/ Jeannie Silver
STATE SIGNING AND MAR ENGINEER

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SDD 15C18-08b

REQUIREMENTS FOR EDGE LINES		
POSTED SPEED	IS THERE CONTINUOUS LIGHTING?	
	YES	NO
≤ 30 MPH	NO	OPTIONAL
35 OR 40 MPH	OPTIONAL	RECOMMENDED
≥ 45 MPH	RECOMMENDED	REQUIRED



* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

LEFT TURN & MEDIAN ISLAND

GENERAL NOTES

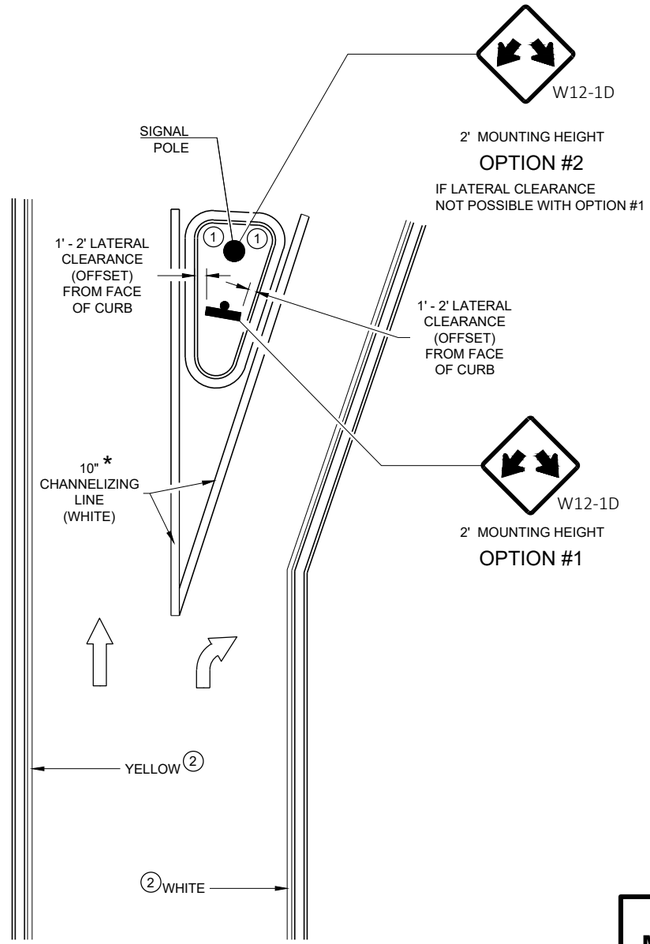
APPLIES TO ISLANDS AT LEFT TURNS AT ONE WAY ROADWAYS AS WELL.

SEE MISCELLANEOUS QUANTITIES FOR SIGN SIZE.

(1) MARK CURB NOSES YELLOW.

(2) MARK ACCORDING TO TABLE.

DIRECTION OF TRAVEL



RIGHT TURN ISLAND

MEDIAN PAVEMENT MARKINGS, DOUBLE ARROW WARNING SIGN PLACEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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/S/ Jeannie Silver — STATE SIGNING AND MAF ENGINEER

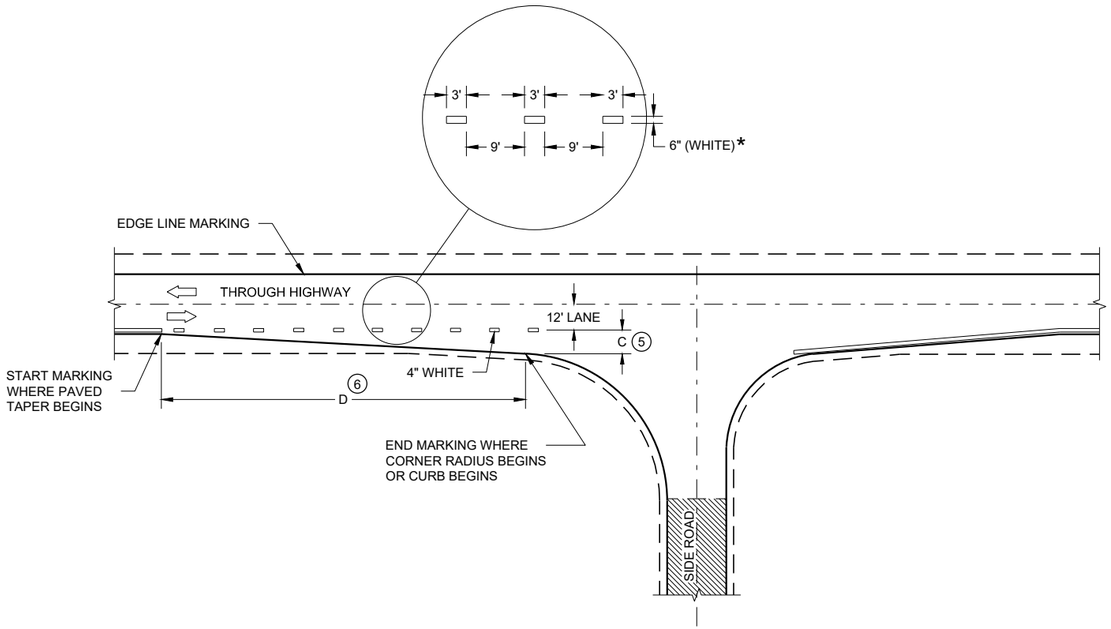
FHWA

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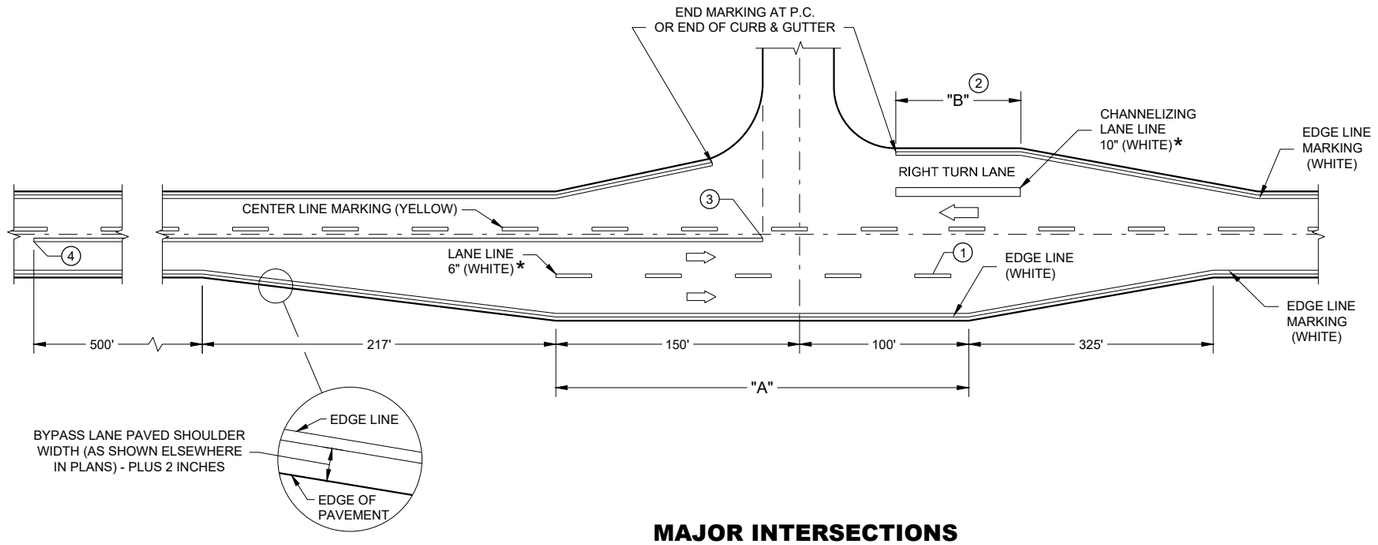
SDD 15C18-08c

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SDD 15C18-08c



MINOR INTERSECTION



MAJOR INTERSECTIONS

(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANE)

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

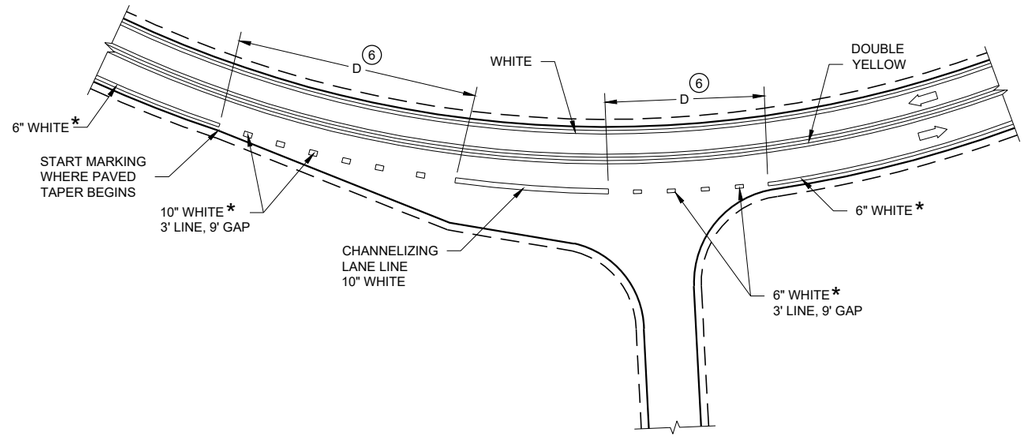
GENERAL NOTES

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

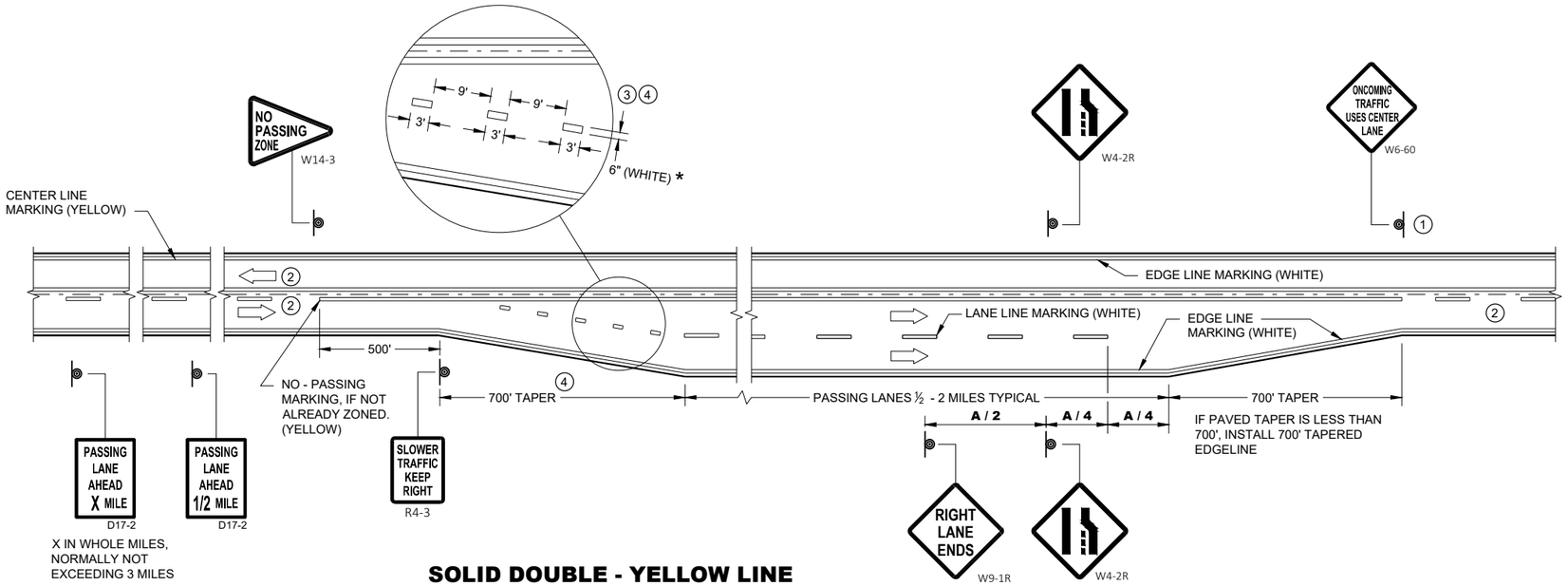


INTERSECTION ON OUTSIDE OF CURVE

PAVEMENT MARKING (INTERSECTIONS)

SDD 15C35-06a

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SOLID DOUBLE - YELLOW LINE
(THROUGHOUT ENTIRE PASSING / CLIMBING LANE)

GENERAL NOTES

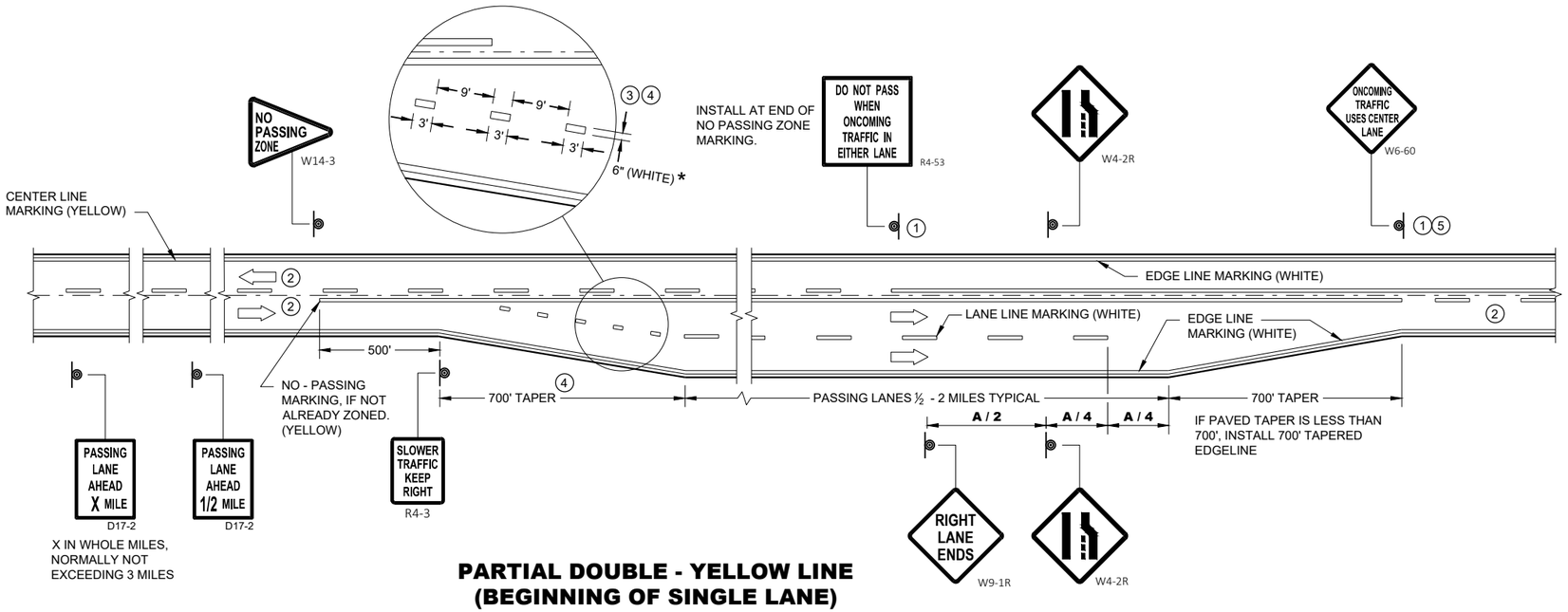
1. SIGN SHALL BE REPEATED AT 1 MILE INCREMENTS OR AT THE DISCRETION OF THE REGIONAL TRAFFIC ENGINEER.
2. THERE MAY BE SOLID YELLOW ON THE CENTERLINE DUE TO SIGHT CONDITIONS.
3. THE TAPER LENGTH OF THE DOTTED LINE PAVEMENT MARKING SHALL BE 700 FEET, 3' LINE, 9' GAP, EXCEPT RETRACE THE EXISTING LINE - 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 1 MILE UP UNTIL R4-53.

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

DISTANCE TABLE

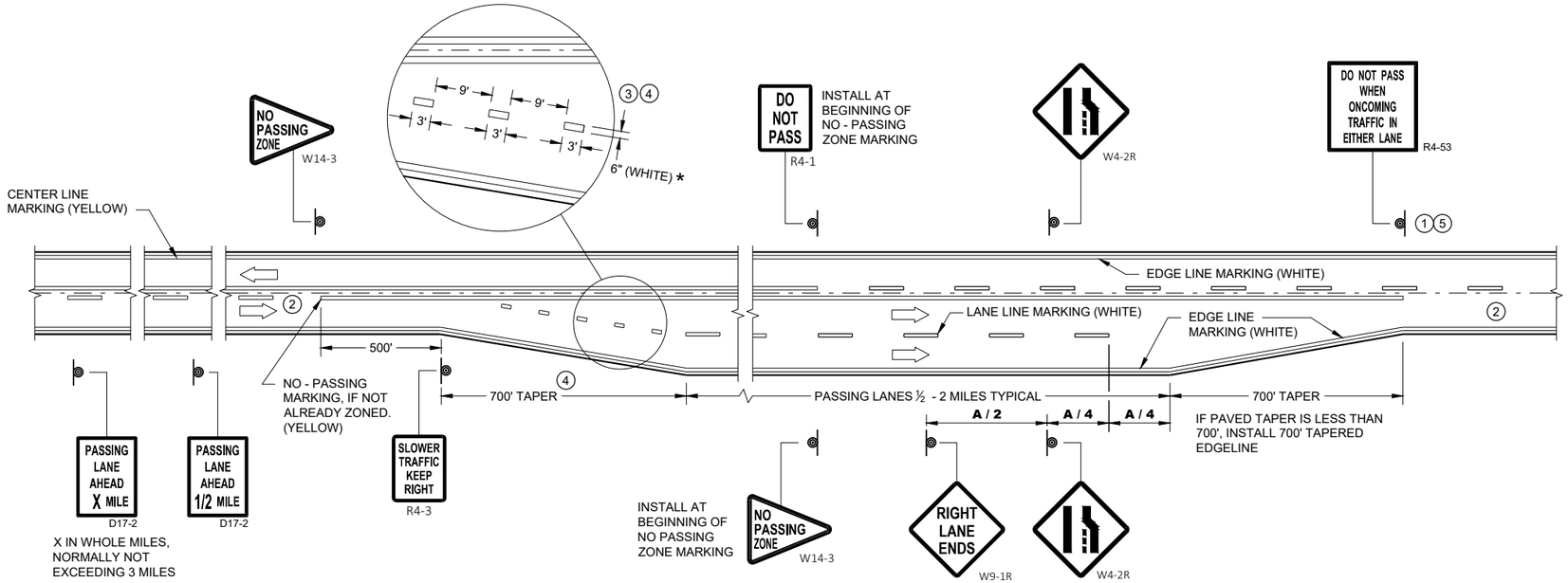
POSTED OR 85th PERCENTILE SPEED	DISTANCE "A"
45	775
50	885
55	990

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



PARTIAL DOUBLE - YELLOW LINE
(BEGINNING OF SINGLE LANE)

PAVEMENT MARKING & SIGNING (CLIMBING LANE & PASSING LANE)



SOLID DOUBLE - YELLOW LINE
(END OF SINGLE LANE)

GENERAL NOTES

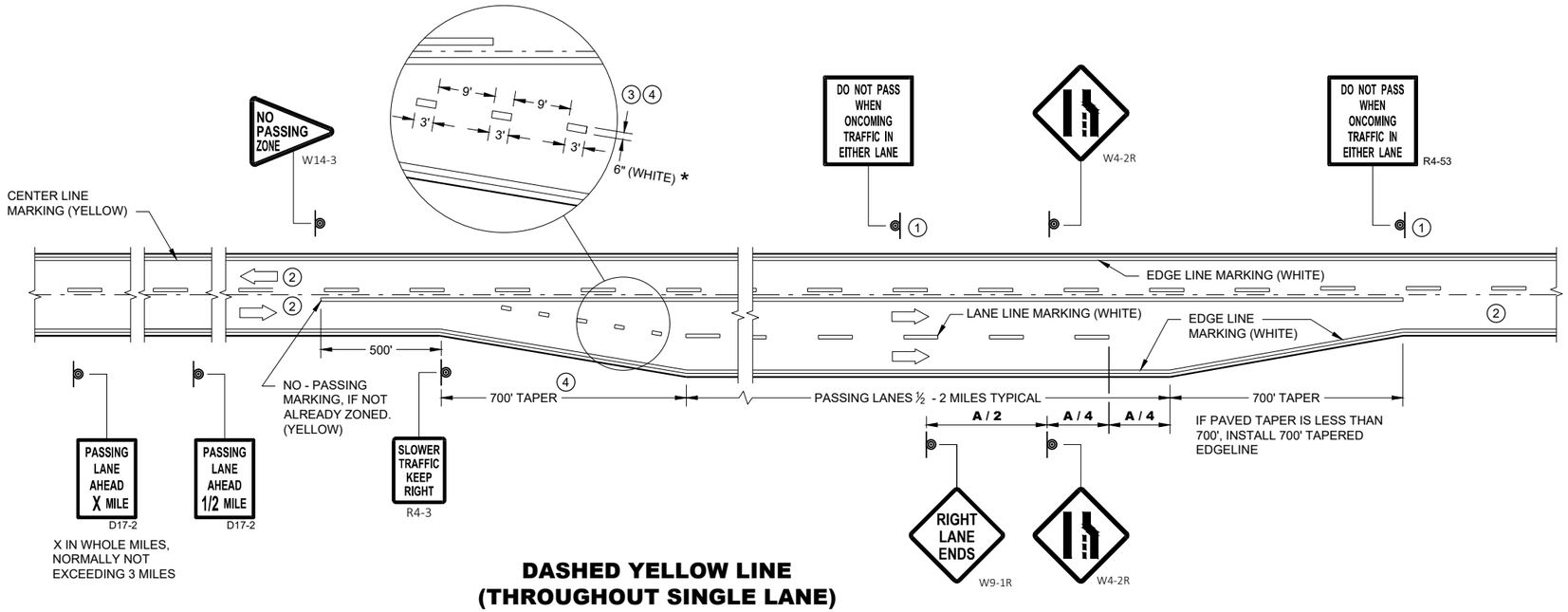
1. SIGN SHALL BE REPEATED AT 1 MILE INCREMENTS OR AT THE DISCRETION OF THE REGIONAL TRAFFIC ENGINEER.
2. THERE MAY BE SOLID YELLOW ON THE CENTERLINE DUE TO SIGHT CONDITIONS.
3. THE TAPER LENGTH OF THE DOTTED LINE PAVEMENT MARKING SHALL BE 700 FEET, 3' LINE, 9' GAP, EXCEPT RETRACE THE EXISTING LINE - 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



DASHED YELLOW LINE
(THROUGHOUT SINGLE LANE)

PAVEMENT MARKING & SIGNING (CLIMBING LANE & PASSING LANE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 — DATE
/S/ Jeannie Silver — STATE SIGNING AND MAI ENGINEER
FHWA

6

SDD 15C35-06c

6

SDD 15C35-06c

LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- DIRECTION OF TRAFFIC
- WORK ZONE

GENERAL NOTES

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

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

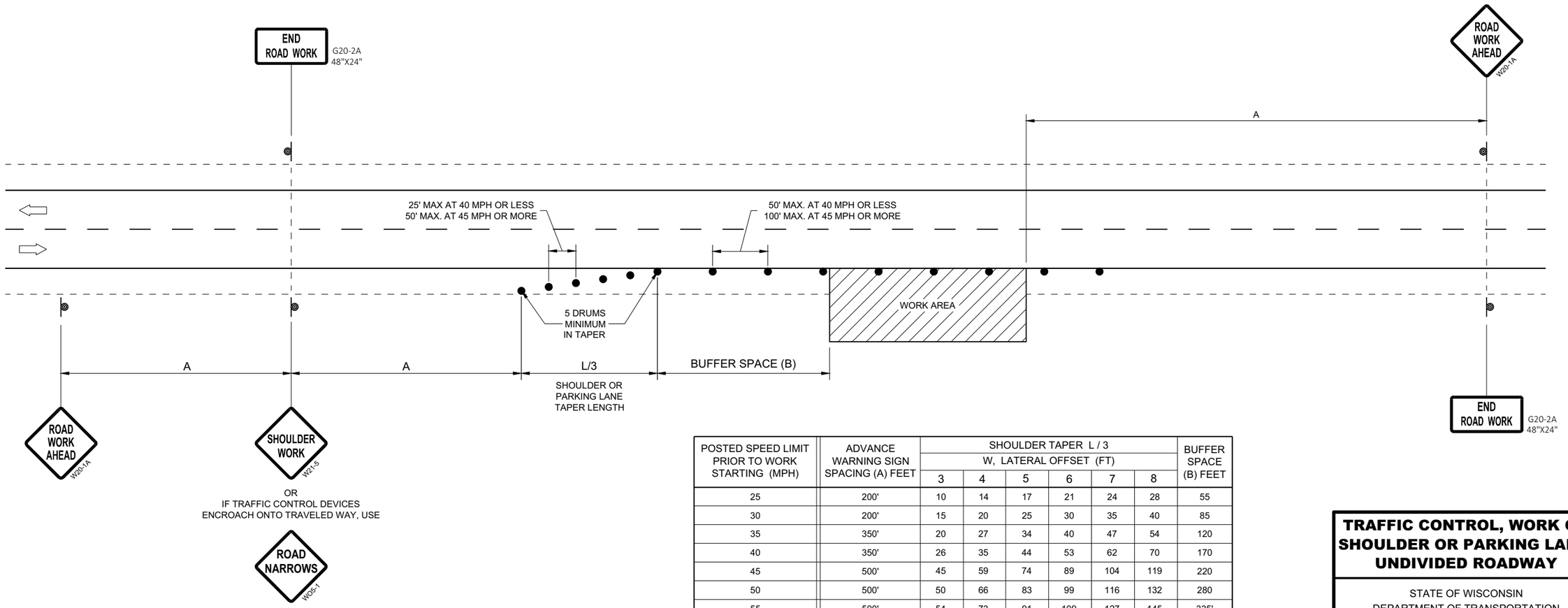
ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

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

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

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

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



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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

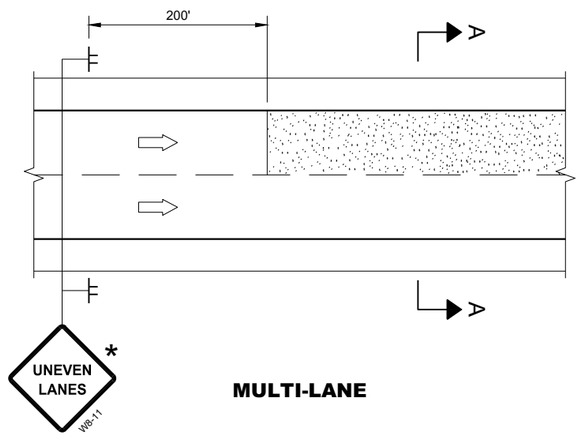
APPROVED
May 2020
DATE

/S/ Andrew Heidtke
STATEWIDE WORK ZONE T SAFETY ENGINEER

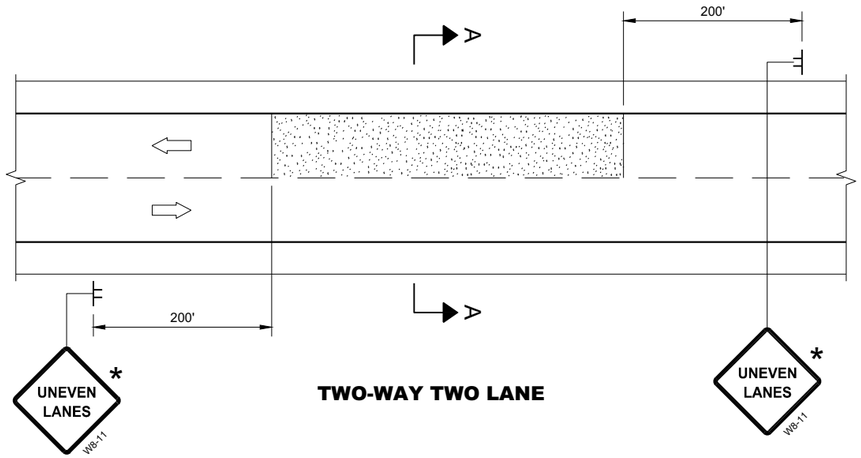
FHWA

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SDD 15D28 - 04



MULTI-LANE



TWO-WAY TWO LANE

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.

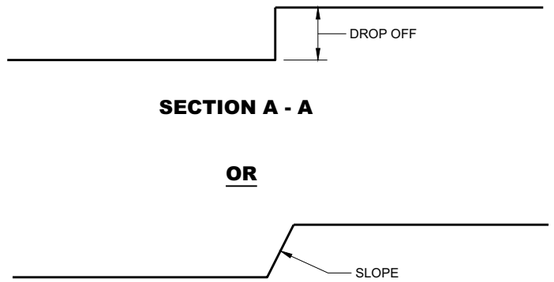
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

* 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.

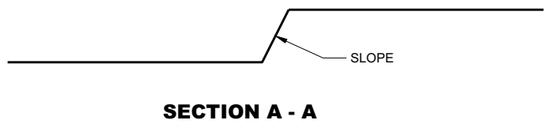
LEGEND

- 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

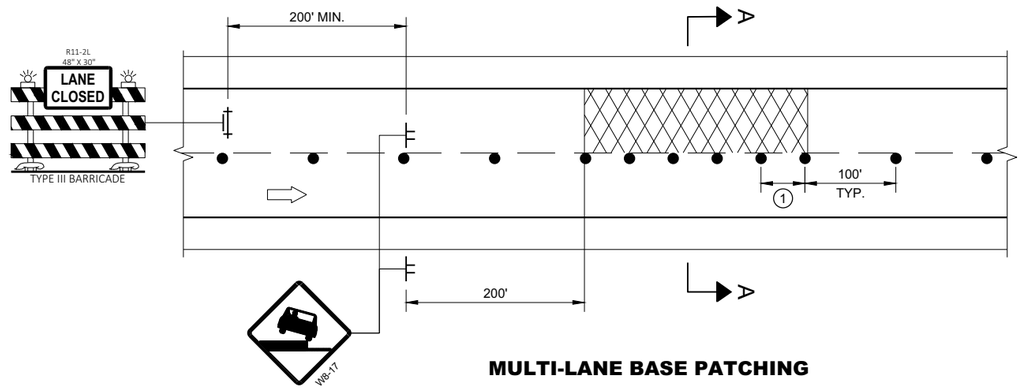


SECTION A - A

OR

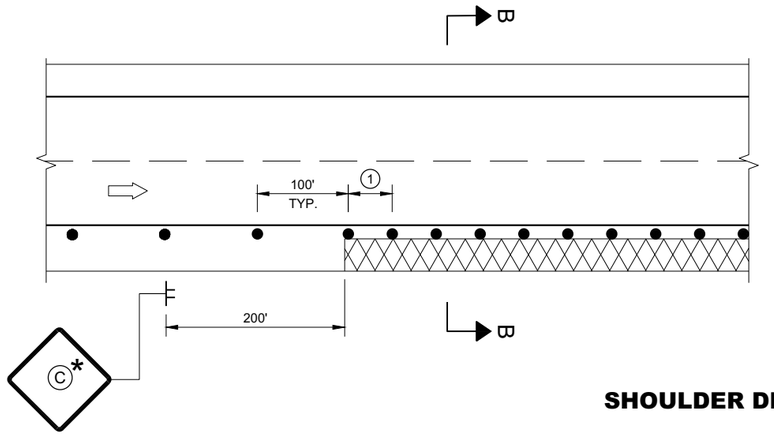


SECTION A - A

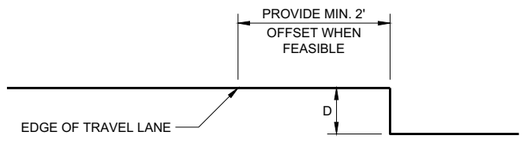


MULTI-LANE BASE PATCHING

ADJACENT LANE DROP-OFFS



SHOULDER DROP-OFFS



SECTION B - B

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

TRAFFIC CONTROL, DROP-OFF SIGNING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

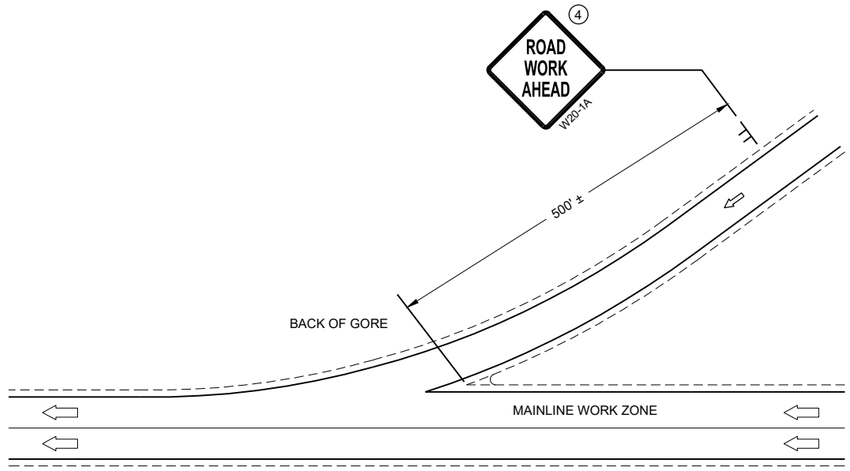
FHWA

6

SDD 15D39 - 02

LEGEND

- V1 SHADOW VEHICLE 1
- V2 SHADOW VEHICLE 2
- V3 ADVANCE WARNING TRUCK
- ● TRAFFIC CONTROL DRUM
- TRUCK MOUNTED ATTENUATOR (TMA)
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC
- FLASHING ARROW PANEL (MERGE)
- FLASHING ARROW PANEL (CAUTION)
- PCMS PORTABLE CHANGEABLE MESSAGE SIGN
- WORK AREA



GENERAL NOTES

SHORT DURATION IS WORK THAT OCCUPIES A LOCATION UP TO 1 HOUR.

MOBILE IS WORK THAT MOVES INTERMITTENTLY OR CONTINUOUSLY.

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. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE ARROW PANEL.

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

WHEN WORK ACTIVITY BLOCKS THE RIGHT LANE, REVERSE TRAFFIC CONTROL.

WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, PROVIDE ADDITIONAL TRAFFIC CONTROLS AS SPECIFIED IN THE CONTRACT OR AS APPROVED BY THE ENGINEER.

USE DOUBLE ARROWS WHEN CONVOY IS IN CENTER LANE ONLY.

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

(1) DISTANCE BETWEEN VEHICLES MAY VARY ACCORDING TO 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 AND HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.

(2) DRUMS ARE TO BE USED FOR BRIDGE DECK SEALING AND OTHER PROJECTS THAT REQUIRE DELINEATION.

(3) WITHIN 5 MILES, RELOCATE SIGNS AS WORK PROGRESSES AND NECESSARY OR AS DIRECTED BY THE ENGINEER.

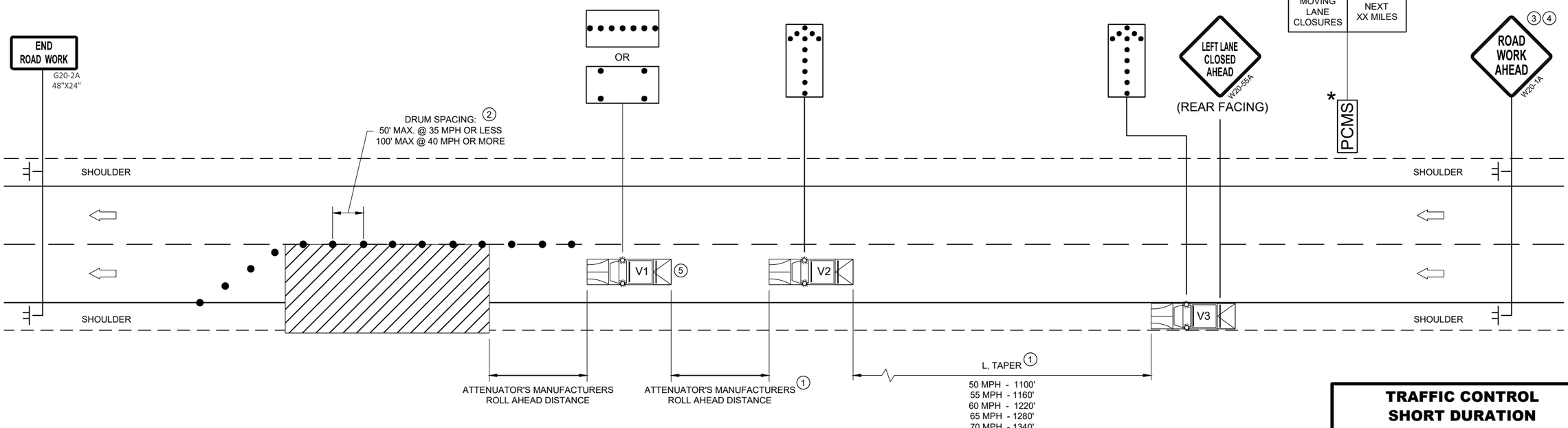
(4) SIGN NOT REQUIRED IF MOVING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

(5) SHADOW VEHICLE 1 (V1) IS OPTIONAL

* PCMS OPTIONAL

PCMS MESSAGING

FRAME 1	FRAME 2
MOVING LANE CLOSURES	NEXT XX MILES



TRAFFIC CONTROL SHORT DURATION MOBILE OPERATIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
August 2021
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15D43 - 02

6

SDD 15D43 - 02

GENERAL NOTES

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

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

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

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

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

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

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

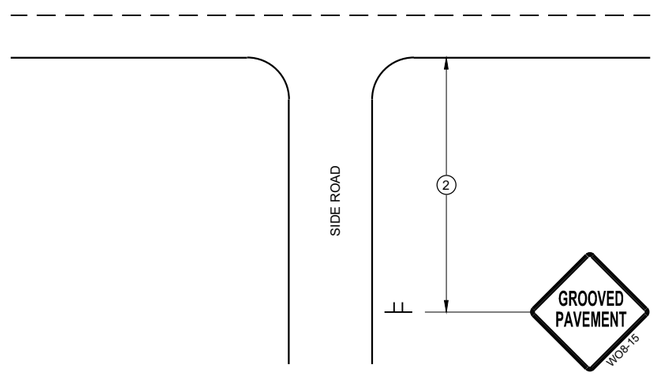
(1) PLACE SIGNS 350' IN ADVANCE OF MILLED SURFACES AND AT 1 MILE INTERVALS, OR AS DIRECTED BY THE ENGINEER.

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

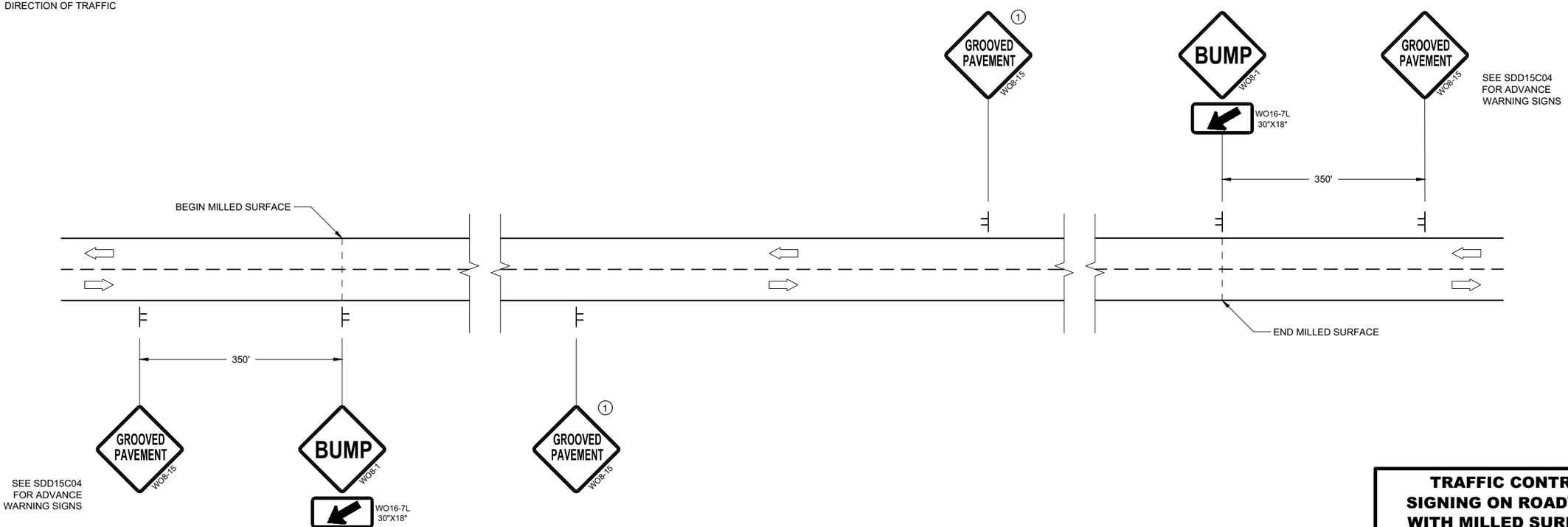
LEGEND

SIGN ON TEMPORARY SUPPORT

DIRECTION OF TRAFFIC



TYPICAL SIDE ROAD APPROACH SIGN DETAIL



DETAIL FOR SIGNING ON MILLED SURFACES

TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH MILLED SURFACES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

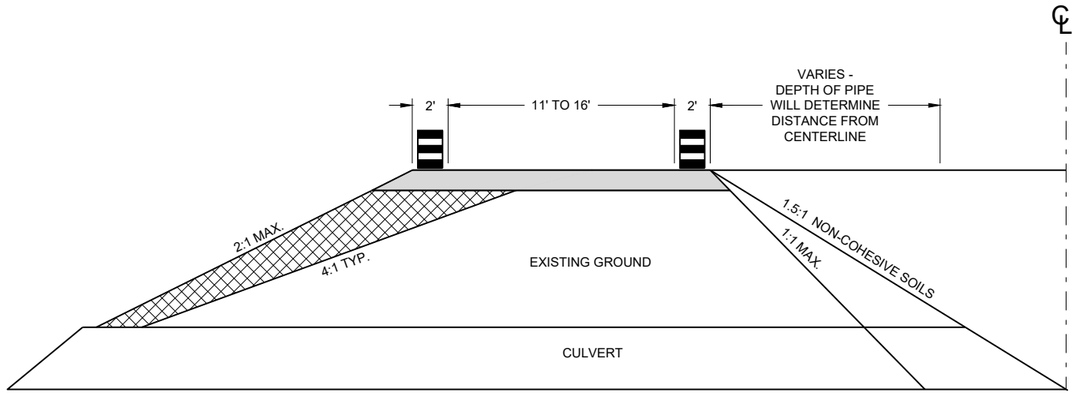
APPROVED
February 2020
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

SDD 15D44 - 02

SDD 15D44 - 02



CROSS SECTION

GENERAL NOTES

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

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

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

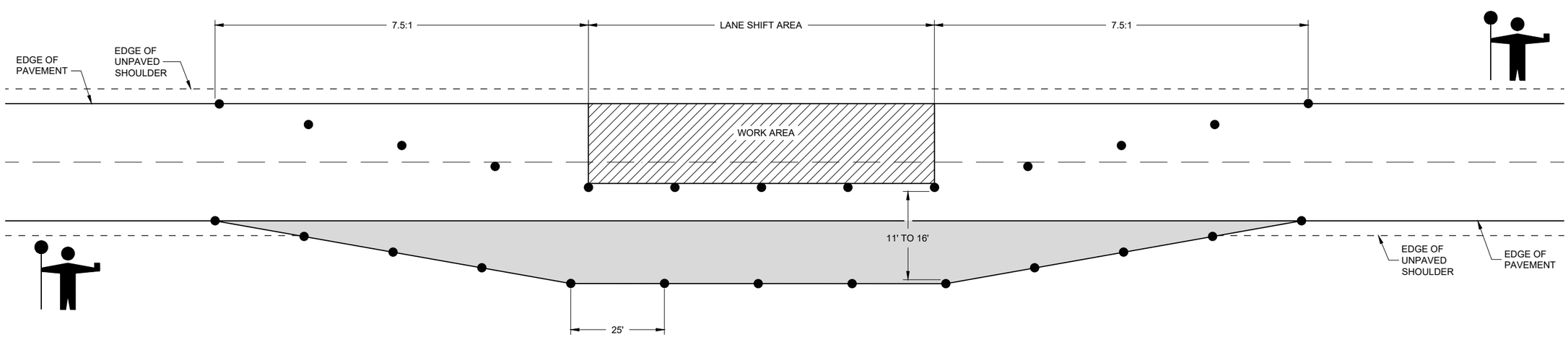
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

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

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

LEGEND

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



LANE SHIFT IN FLAGGING OPERATION

TRAFFIC CONTROL, TEMPORARY LANE SHIFT DURING CULVERT WORK

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2021
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15D48 - 01

6

SDD 15D48 - 01

LEGEND

V1 WORK VEHICLE

V2 SHADOW VEHICLE

TRUCK MOUNTED ATTENUATOR (TMA)

FLASHING ARROW PANEL (CAUTION)

WORK AREA

DIRECTION OF TRAFFIC

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

GENERAL NOTES

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.

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

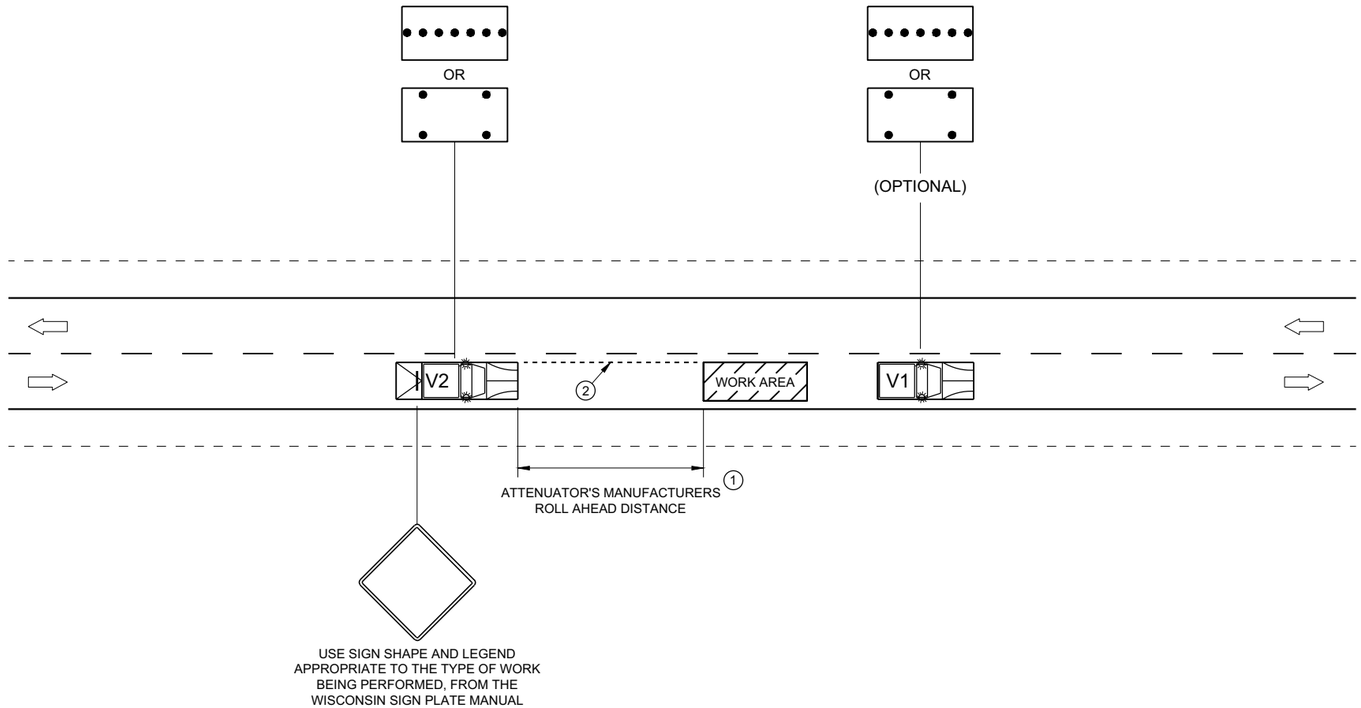
ALL VEHICLES SHALL BE EQUIPPED WITH TWO 360 DEGREE HIGH INTENSITY YELLOW FLASHING LIGHTS OR STROBE LIGHTS AND OPERATED WITH HEADLIGHTS TURNED ON.

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

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

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

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



TRAFFIC CONTROL, MOBILE OPERATIONS ON AN UNDIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6
SDD 15D51 - 01

STATE PROJECT NUMBER

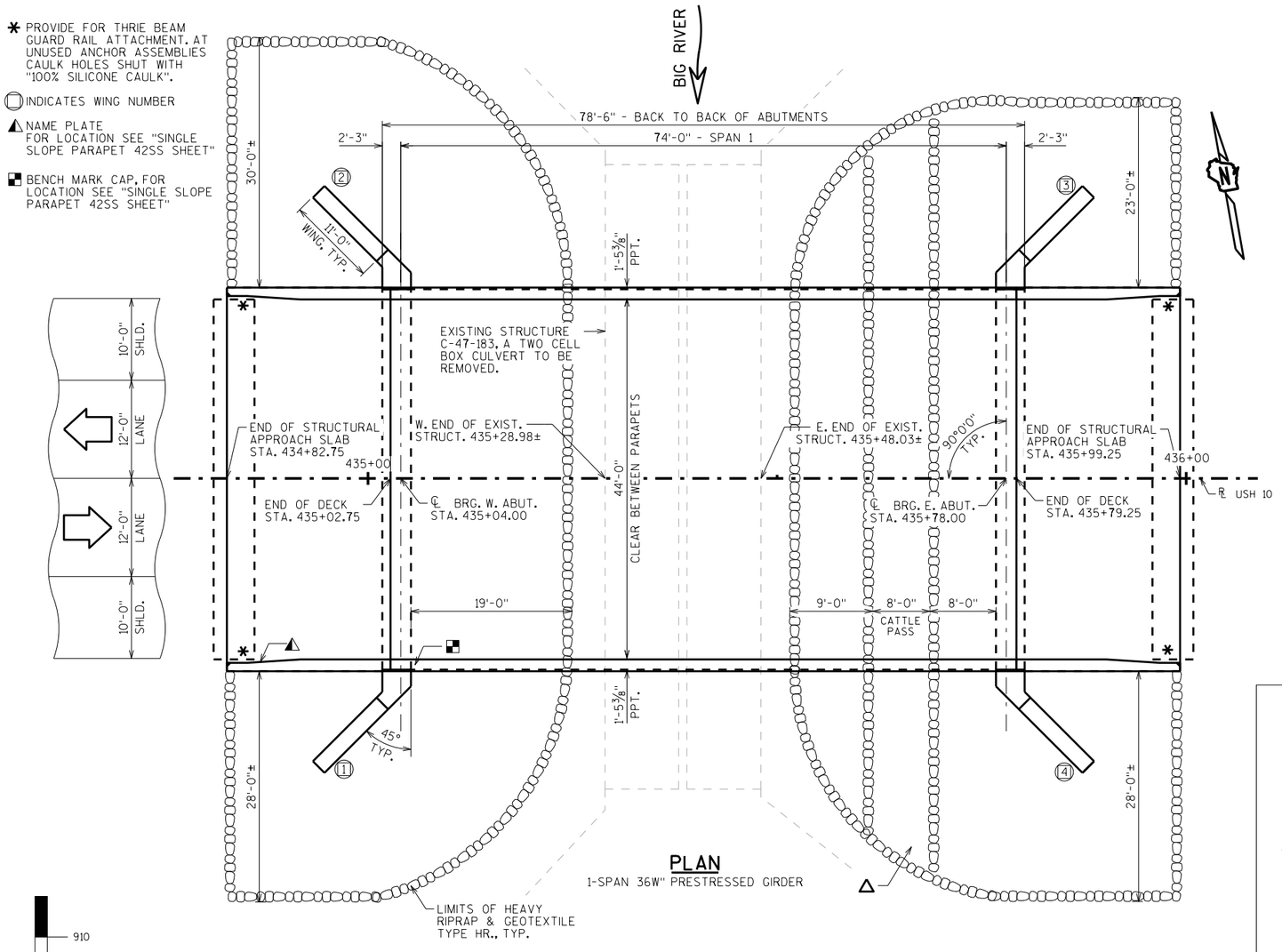
1530-02-70

* PROVIDE FOR THRIE BEAM GUARD RAIL ATTACHMENT. AT UNUSED ANCHOR ASSEMBLIES CAULK HOLES SHUT WITH "100% SILICONE CAULK".

(n) INDICATES WING NUMBER

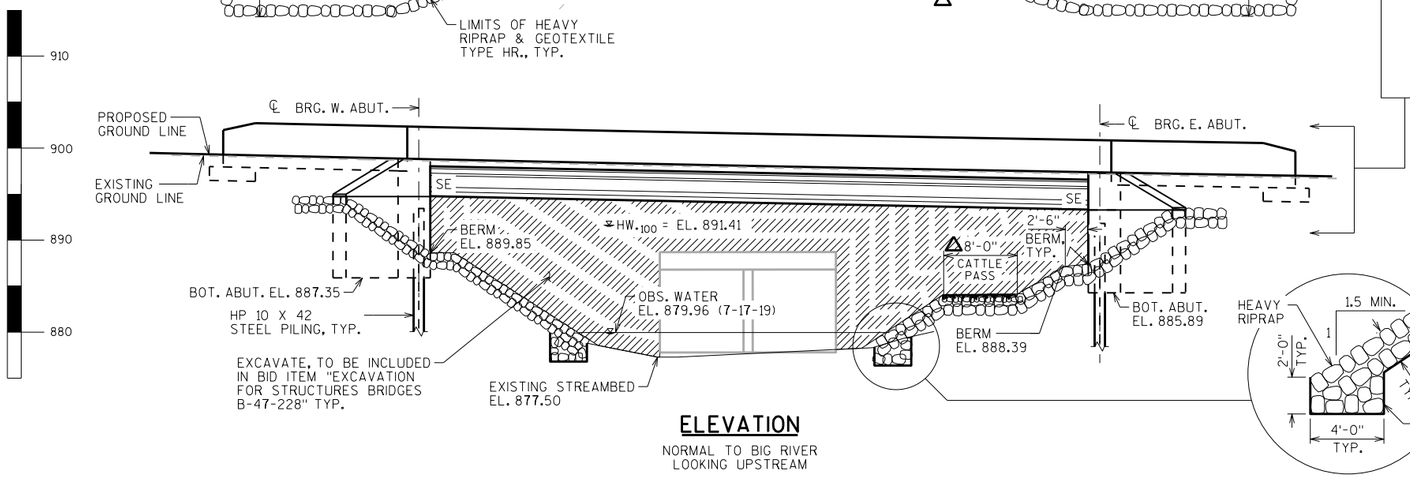
NAME PLATE FOR LOCATION SEE "SINGLE SLOPE PARAPET 42SS SHEET"

BENCH MARK CAP, FOR LOCATION SEE "SINGLE SLOPE PARAPET 42SS SHEET"



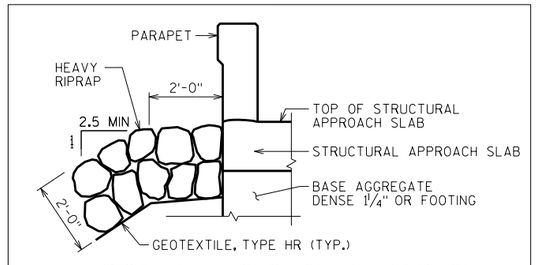
PLAN

1-SPAN 36W" PRESTRESSED GIRDER

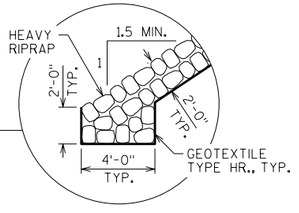


ELEVATION

NORMAL TO BIG RIVER LOOKING UPSTREAM



TYPICAL FILL SECTION AT END OF STRUCTURAL APPROACH SLABS



△ FILL RIPRAP VOIDS AT CATTLE PASS WITH SELECT CRUSHED MATERIAL.

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: RF = 1.16
OPERATING RATING FACTOR: RF = 1.56
WISCONSIN STANDARD PERMIT VEHICLE (WIS.-SPV): 250 (KIPS)

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

MATERIAL PROPERTIES:

CONCRETE MASONRY:
SUPERSTRUCTURE & STRUCTURAL APPROACH SLAB — f'c = 4,000 P.S.I.
ALL OTHER — f'c = 3,500 P.S.I.

BAR STEEL REINFORCEMENT:
GRADE 60 — fy = 60,000 P.S.I.
STAINLESS, GRADE 60 — fy = 60,000 P.S.I.

36W" PRESTRESSED GIRDERS:
CONCRETE MASONRY — f'c = 8000 P.S.I.
STRANDS: 0.6" DIA. WITH ULTIMATE TENSILE STRENGTH OF 270,000 P.S.I.

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON HP 10 X 42 PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 180 TONS ✱✱ PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA.
ESTIMATED 70'-0" LONG AT THE WEST ABUTMENT.
ESTIMATED 65'-0" LONG AT THE WEST ABUTMENT WING WALLS.
ESTIMATED 65'-0" LONG AT THE EAST ABUTMENT.
ESTIMATED 60'-0" LONG AT THE EAST ABUTMENT WING WALLS.

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

TRAFFIC VOLUME

USH 10

ADT = 4,500 (2042)
R.D.S. = 55 M.P.H.

HYDRAULIC DATA

100 YEAR FREQUENCY

Q_{100} = 6000 C.F.S.
$VEL._{100}$ = 14.45 F.P.S.
$HW._{100}$ = EL. 891.41
WATERWAY AREA = 415.23 SQ. FT.
DRAINAGE AREA = 10.3 SQ. MI.
ROADWAY OVERTOPPING = N/A
SCOUR CRITICAL CODE = 5

2 YEAR FREQUENCY

Q_2 = 1050 C.F.S.
$VEL._2$ = 5.30 F.P.S.
$HW._2$ = EL. 886.81

LIST OF DRAWINGS

1. GENERAL PLAN
2. CROSS SECTION & QUANTITIES
3. SUBSURFACE EXPLORATION
4. WEST ABUTMENT
5. WEST ABUTMENT DETAILS
6. EAST ABUTMENT
7. EAST ABUTMENT DETAILS
8. 36W" PRESTRESSED GIRDER DETAILS 1
9. 36W" PRESTRESSED GIRDER DETAILS 2
10. STEEL DIAPHRAGMS
11. SUPERSTRUCTURE
12. SUPERSTRUCTURE DETAILS
13. STRUCTURAL APPROACH SLABS
14. SINGLE SLOPE PARAPET 36SS
15. SINGLE SLOPE PARAPET 42SS
16. ALTERNATE CONSTRUCTION JOINT

STRUCTURE DESIGN CONTACTS:

SHANNON LIPE (608) 266-2369
DOMINIQUE BECHLE (608) 261-8205

NO.	DATE	REVISION	BY

BUREAU OF STRUCTURES

ACCEPTED DMB 08/18/22
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-47-228

USH 10 OVER BIG RIVER

COUNTY	TOWN
PIERCE	OAK GROVE

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGNED CK'D.	DRAWN BY	PLANS CK'D.
SCL	SEW	SCL	SEW

GENERAL PLAN

SHEET 1 OF 16

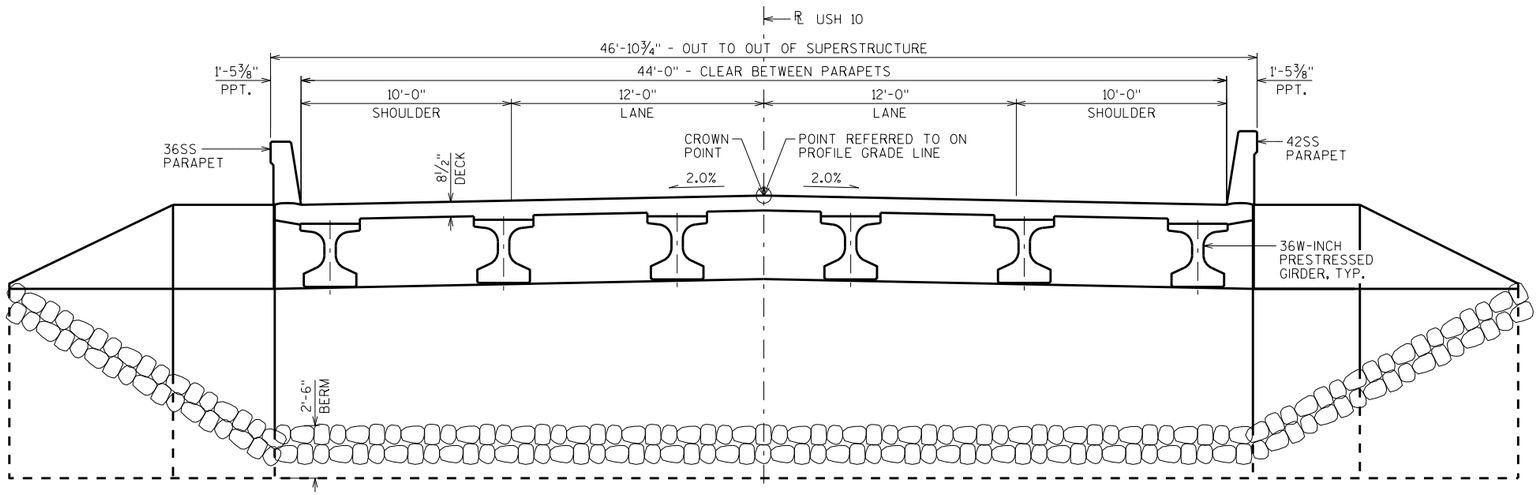
227

I.D. 1530-02-00A DATE: AUG. 2022

SCALE = 8.00

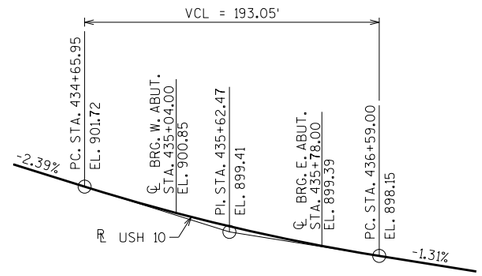
STATE PROJECT NUMBER

1530-02-70



CROSS SECTION THRU BRIDGE

LOOKING EAST
PILING NOT SHOWN



PROFILE GRADE LINE - USH 10

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	SUPER	W. STRUCT. APP. SLAB	WEST ABUT.	EAST ABUT.	E. STRUCT. APP. SLAB	TOTALS
203.0250	REMOVING STRUCTURE OVER WATERWAY REMOVE DEBRIS C-47-183	EACH	---	---	---	---	---	1
206.1001	EXCAVATION FOR STRUCTURES BRIDGES B-47-228	EACH	---	---	---	---	---	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	---	---	364	364	---	728
305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	---	144	---	---	144	288
502.0100	CONCRETE MASONRY BRIDGES	CY	148.9	63.4	85.9	85.9	63.4	448
502.3200	PROTECTIVE SURFACE TREATMENT	SY	399	98	---	---	98	595
502.3210	PIGMENTED SURFACE SEALER	SY	72	19	---	---	19	110
503.0137	PRESTRESSED GIRDER TYPE I 36W-INCH	LF	450	---	---	---	---	450
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	---	---	3,760	3,760	---	7,520
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	25,240	10,660	2,145	2,155	10,660	50,860
505.0800.S	BAR STEEL REINFORCEMENT HS STAINLESS STRUCTURES	LB	1,600	---	---	---	---	1,600
506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	---	---	6	6	---	12
506.4000	STEEL DIAPHRAGMS B-47-228	EACH	5	---	---	---	---	5
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	---	---	16	16	---	32
550.1100	PILING STEEL HP 10-INCH X 42 LB	LF	---	---	830	770	---	1,600
606.0300	RIPRAP HEAVY	CY	---	---	262	290	---	552
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	---	---	110	110	---	220
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	---	2	---	---	2	4
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	---	---	44	44	---	88
645.0120	GEOTEXTILE TYPE HR	SY	---	---	405	448	---	853
★ SPV.0195	SELECT CRUSHED MATERIAL FOR TRAVEL CORRIDOR	TON	---	---	---	54	---	54
	NON-BID ITEMS							
	FILLER	SIZE	---	---	---	---	---	½", ¾", 1½"

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

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

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES B-47-228" SHALL BE THE EXISTING GROUNDLINE.

AT THE BACK FACE OF ABUTMENT ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL TYPE A. ALSO EXCLUDED IS THE "BASE AGGREGATE DENSE 1 1/4-INCH" AS DETAILED ON THE STRUCTURAL APPROACH SLAB SHEETS.

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

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

ELASTOMERIC BEARING PADS NEED NOT BE INDIVIDUALLY MOLDED PROVIDED THE CUT EDGES ARE SMOOTH AND TRUE.

PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE ENTIRE EXPOSED TOP OF DECK AND APPROACH SLAB SURFACES AND TO THE VERTICAL AND HORIZONTAL SURFACES OF THE PAVING NOTCHES AT ABUTMENT DIAPHRAGMS.

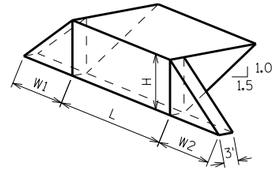
PIGMENTED SURFACE SEALER TO BE APPLIED TO THE FRONT FACE AND THE TOP OF THE PARAPETS, INCLUDING PARAPETS ON APPROACH SLABS.

THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH HEAVY RIPRAP AND GEOTEXTILE TYPE "HR" TO THE EXTENT SHOWN ON SHEET 1 AND THE ABUTMENT DETAILS.

THE HAUNCH CONCRETE QUANTITY IS BASED ON THE AVERAGE HAUNCH SHOWN ON THE "36W PRESTRESSED GIRDER DETAILS 2" SHEET.

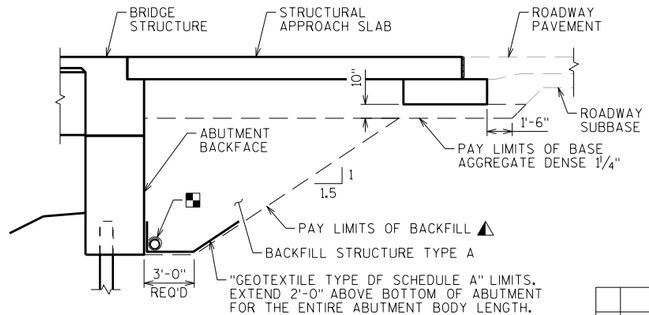
AT ABUTMENTS CONCRETE POURED UNDER WATER WILL BE ALLOWED AND SHALL BE DONE IN ACCORDANCE WITH SECTION 502.3.5.3 OF THE STANDARD SPECIFICATIONS.

★ THE QUANTITY FOR BID ITEM "SELECT CRUSHED MATERIAL FOR TRAVEL CORRIDOR" IS CALCULATED BASED ON THE CATTLE PASS WIDTH SHOWN ON THE "GENERAL PLAN" SHEET, WITH A THICKNESS OF 1'-0".



L = OUT TO OUT OF ABUTMENT BODY (FT)
H = AVERAGE ABUTMENT FILL HEIGHT (FT)
W1 = WING 1 LENGTH (FT)
W2 = WING 2 LENGTH (FT)
EF = EXPANSION FACTOR (1.20 FOR CY BID ITEMS AND 1.00 FOR TON BID ITEMS)
V_{CF} = (L)(3.0')(H) + (L)(0.5)(1.5H)(H) + (3.0')(0.5)(W1+W2)(H)
V_{CY} = V_{CF} (EF)/27
V_{TON} = V_{CY} (2.0)

ABUTMENT BACKFILL DIAGRAM



TYPICAL SECTION THRU ABUTMENT

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

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-47-228

DRAWN BY SCL | PLANS CK'D. SEW

CROSS SECTION & QUANTITIES

SHEET 2

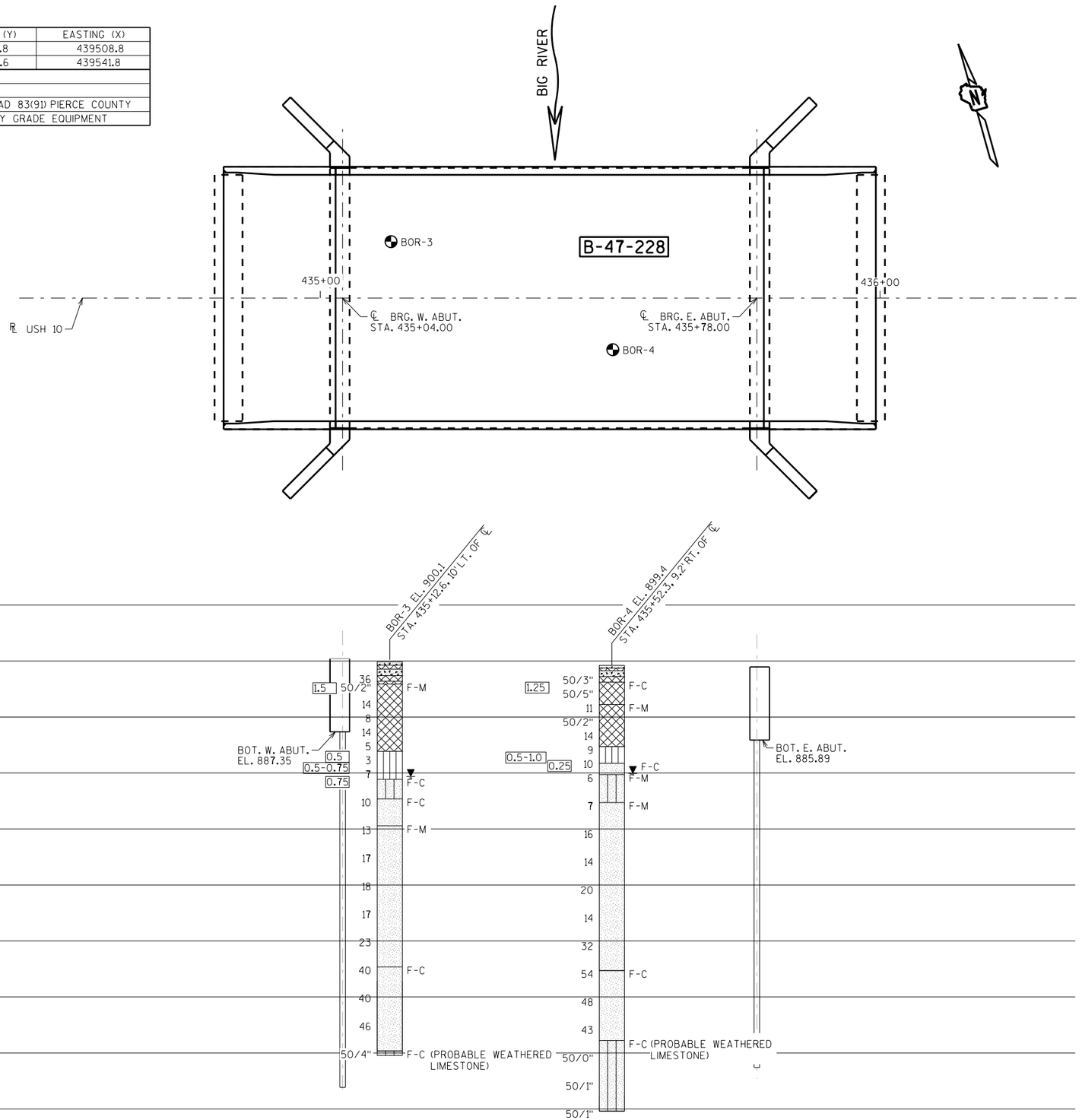
228

SCALE = 3.50

8

8

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
3	3/03/2021	323332.8	439508.8
4	3/04/2021	323303.6	439541.8
BORINGS COMPLETED BY: AET			
REPORT COMPLETED BY: WISDOT			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) PIERCE COUNTY			
COORDINATES COLLECTED USING NON-SURVEY GRADE EQUIPMENT			



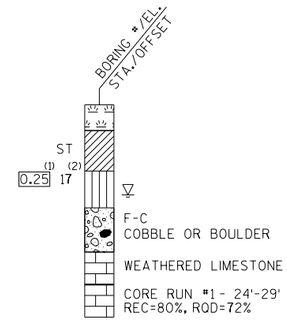
STATE PROJECT NUMBER

1530-02-70

MATERIAL SYMBOLS

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

LEGEND OF BORING



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

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

GROUND WATER ELEVATION

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

ABBREVIATIONS

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

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-47-228

DRAWN BY TLP/SCL | PLANS CK'D. SEW

SUBSURFACE EXPLORATION

SHEET 3

229

8

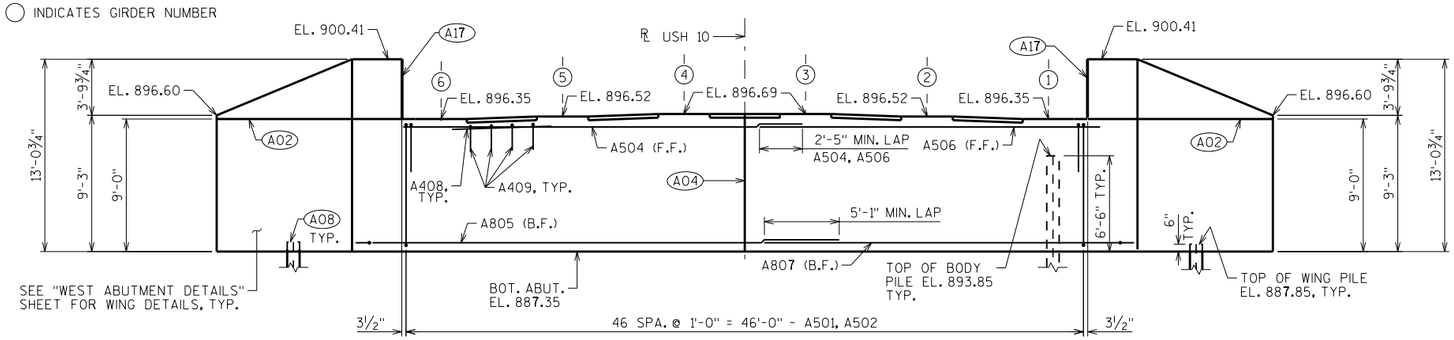
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STATE PROJECT NUMBER

1530-02-70

INDICATES GIRDER NUMBER

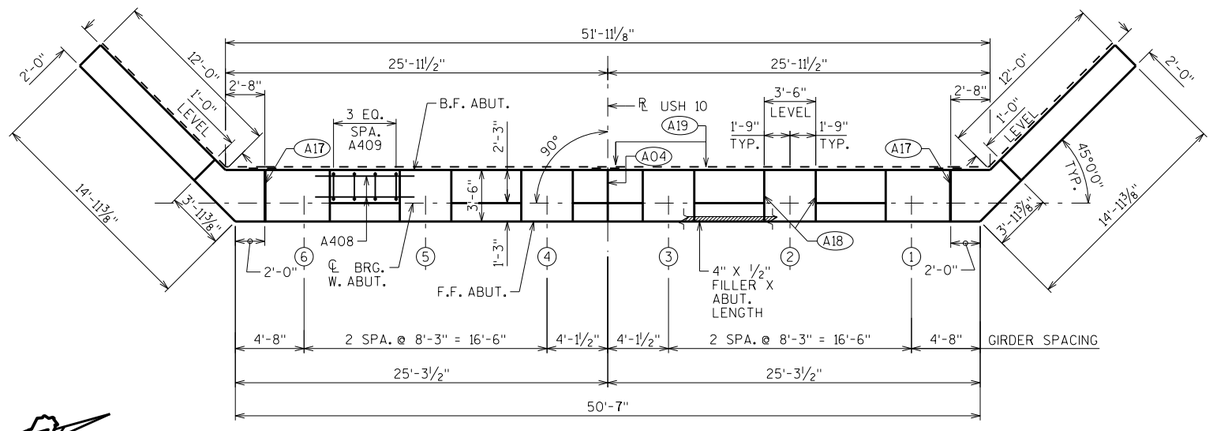


ELEVATION

LOOKING WEST

WING 1

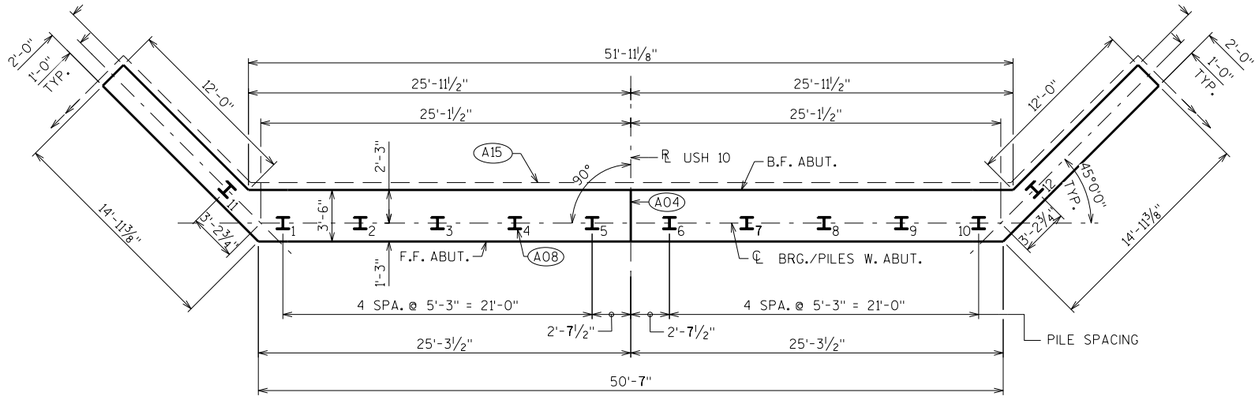
WING 2



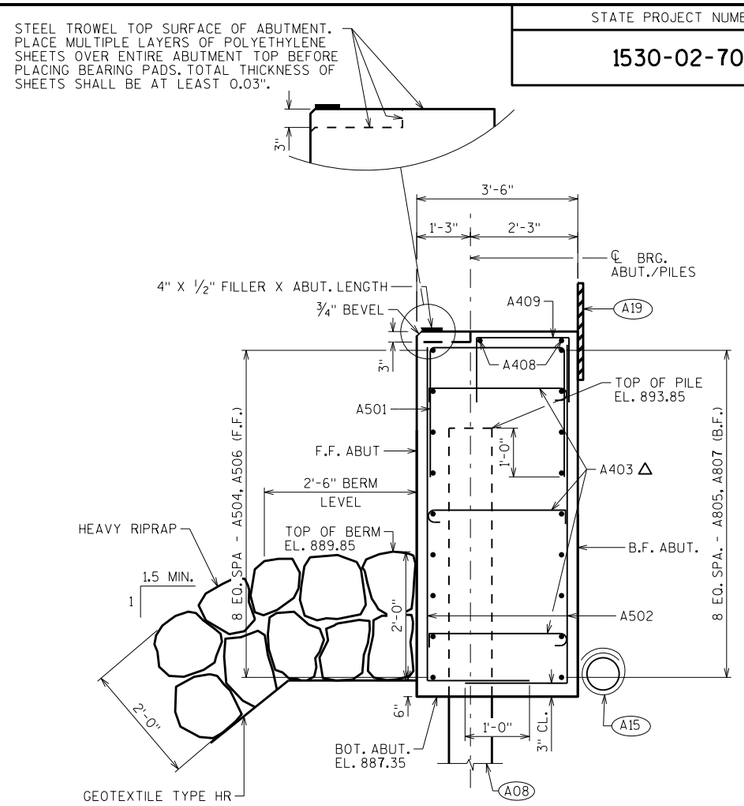
PLAN

WING 1

WING 2

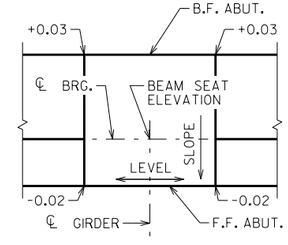


PILE PLAN



SECTION THRU BODY

△ ALTERNATE THE POSITION OF THE 90 AND 180 HOOKS AT EACH VERTICAL LAYER OF TIES. HORIZONTAL SPACING AT 4'-0".



SLOPED BEAM SEAT DETAIL

A02 OPTIONAL CONSTRUCTION JOINT: KEYWAY FORMED BY BEVELED 2" X 6". (18" R.M.W. @ B.F. WING & ¾" "V" GROVE @ F.F. WING IF JOINT IS USED.)

A04 VERT. CONSTRUCTION JOINT: KEYWAY FORMED BY BEVELED 2" X 8". ¾" "V" GROOVE @ THE FRONT FACE AND 18" R.M.W. @ BACKFACE. FOR OPTIONAL DETAILS SEE "ALTERNATE CONSTRUCTION JOINT" SHEET.

A08 SUPPORT ABUTMENT ON HP 10 X 42 STEEL PILING, WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE. ESTIMATED 70'-0" LONG FOR THE ABUTMENT PILES. ESTIMATED 65'-0" LONG FOR THE WING PILES.

A15 PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN.

A17 ½" FILLER: SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF ½" FILLER WITH NON-STAINING GRAY ON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

A18 3/4" CORK FILLER UP VERT. BEAM SEAT FACES ONLY.

A19 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-47-228

DRAWN BY SCL | PLANS CK'D. SEW

WEST ABUTMENT

SHEET 4

230

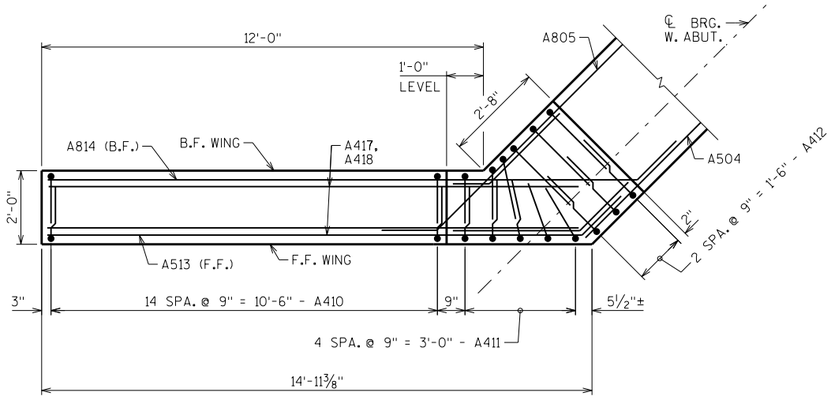
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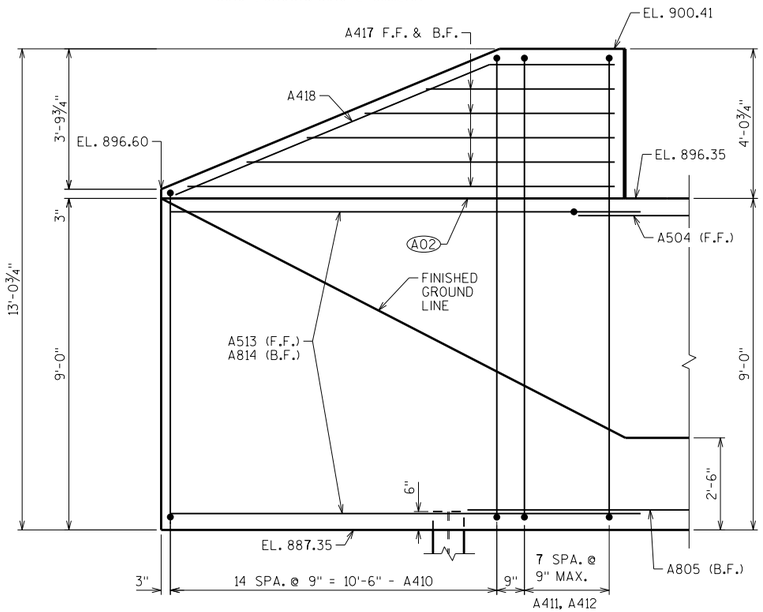
STATE PROJECT NUMBER

1530-02-70



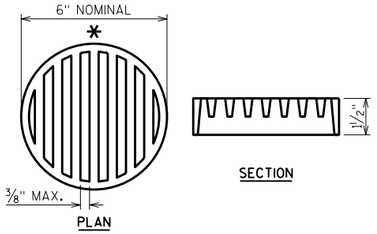
WING PLAN

WING 1 SHOWN, WING 2 SIMILAR



WING ELEVATION

WING 1 SHOWN, WING 2 SIMILAR

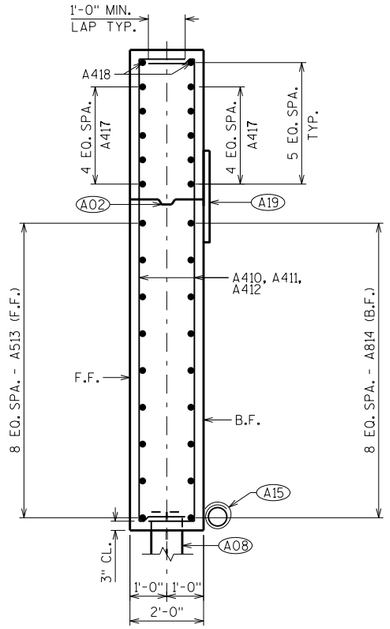


RODENT SHIELD DETAIL

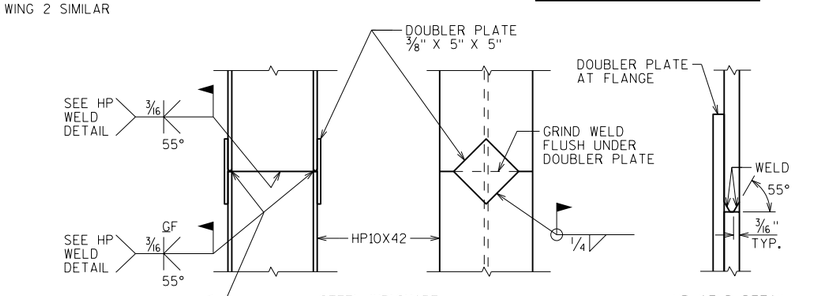
* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

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

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



SECTION THRU WING



STEEL 'HP' SHAPE

HP WELD DETAIL

FLANGE SHOWN, WEB SIMILAR

PILE DETAILS

BILL OF BARS

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

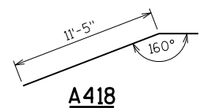
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A501		47	9'-11"	X		ABUT. BODY - VERT.- TOP
A502		94	10'-4"	X		ABUT. BODY - VERT.
A403		39	4'-0"	X		ABUT. BODY - HORIZ. - TIE BAR
A504		9	30'-4"			ABUT. BODY - HORIZ. - F.F.
A805		9	36'-3"	X		ABUT. BODY - HORIZ. - B.F.
A506		9	22'-8"			ABUT. BODY - HORIZ. - F.F.
A807		9	28'-6"	X		ABUT. BODY - HORIZ. - B.F.
A408		10	6'-9"			ABUT. BODY - HORIZ. - BTWN BEAM SEATS
A409		20	4'-5"	X		ABUT. BODY - VERT. - BTWN BEAM SEATS
A410	X	60	12'-11	X	◭	WINGS 1 & 2 - VERT.
A411	X	18	15'-3"	X		WINGS 1 & 2 - VERT.
A412	X	12	16'-5"	X		WINGS 1 & 2 - VERT.
A513	X	18	16'-0"	X		WINGS 1 & 2 - HORIZ. - BOT. - F.F.
A814	X	18	17'-6"	X		WINGS 1 & 2 - HORIZ. - BOT. - B.F.
						NOT USED
						NOT USED
A417	X	20	9'-6"		◭	WINGS 1 & 2 - HORIZ. - TOP - F.F. & B.F.
A418	X	4	15'-0"	X		WINGS 1 & 2 - HORIZ. - TOP - F.F. & B.F.

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

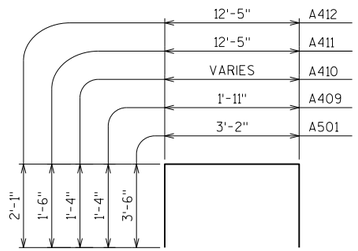
BAR SERIES TABLE

BAR MARK	NO. REQ'D.	LENGTH
A410	4 SERIES OF 15	11'-1" TO 14'-10"
A417	4 SERIES OF 5	5'-5" TO 13'-6"

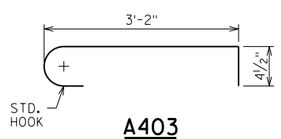
BUNDLE AND TAG EACH SERIES SEPARATELY.



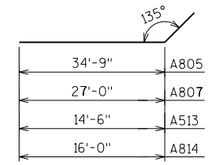
A418



A501, A409, A410, A411, A412



A403



A805, A807, A513, A814



A502

(A02) OPTIONAL CONSTRUCTION JOINT: KEYWAY FORMED BY BEVELED 2" X 6". (18" R.M.W. @ B.F. WING & ¾" "V" GROVE @ F.F. WING IF JOINT IS USED.)

(A08) SUPPORT ABUTMENT ON HP 10 X 42 STEEL PILING, WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE. ESTIMATED 70'-0" LONG FOR THE ABUTMENT PILES. ESTIMATED 65'-0" LONG FOR THE WING PILES.

(A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN.

(A19) 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-47-228

DRAWN BY SCL | PLANS CK'D. SEW

WEST ABUTMENT DETAILS

SHEET 5

231

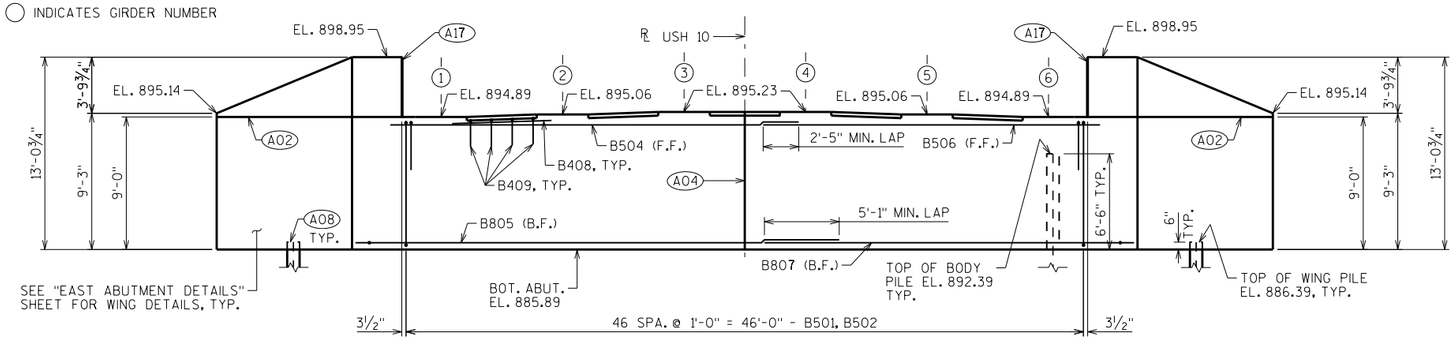
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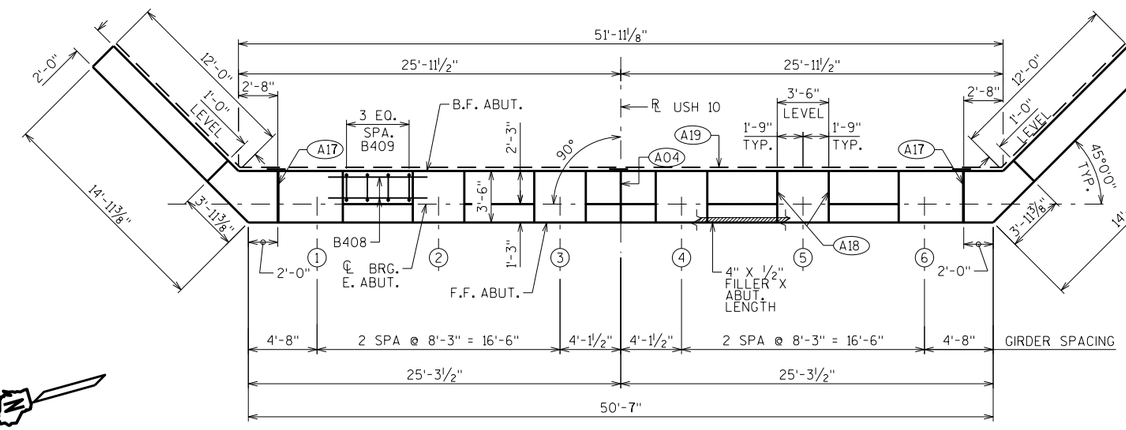
STATE PROJECT NUMBER

1530-02-70

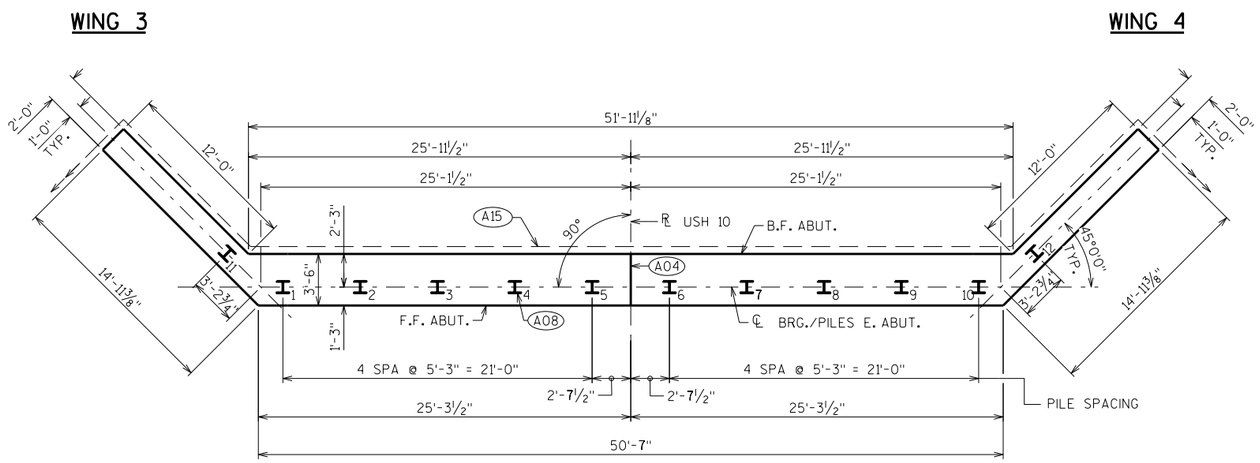


ELEVATION

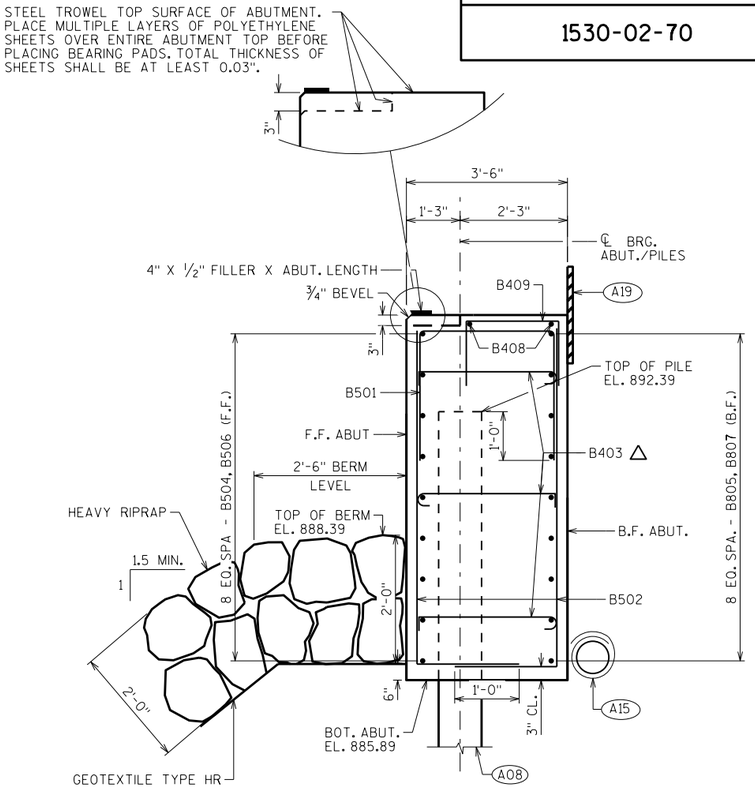
LOOKING EAST



PLAN

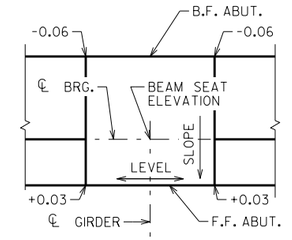


PILE PLAN



SECTION THRU BODY

△ ALTERNATE THE POSITION OF THE 90 AND 180 HOOKS AT EACH VERTICAL LAYER OF TIES. HORIZONTAL SPACING AT 4'-0".



SLOPED BEAM SEAT DETAIL

(A02) OPTIONAL CONSTRUCTION JOINT: KEYWAY FORMED BY BEVELED 2" X 6". (18" R.M.W. @ B.F. WING & ¾" "V" GROVE @ F.F. WING IF JOINT IS USED.)

(A04) VERT. CONSTRUCTION JOINT: KEYWAY FORMED BY BEVELED 2" X 8". 3/4" "V" GROOVE @ THE FRONT FACE AND 18" R.M.W. @ BACKFACE. FOR OPTIONAL DETAILS SEE "ALTERNATE CONSTRUCTION JOINT" SHEET.

(A08) SUPPORT ABUTMENT ON HP 10 X 42 STEEL PILING, WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE. ESTIMATED 65'-0" LONG FOR THE ABUTMENT PILES. ESTIMATED 60'-0" LONG FOR THE WING PILES.

(A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN.

(A17) ½" FILLER: SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF ½" FILLER WITH NON-STAINING GRAY ON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

(A18) 3/4" CORK FILLER UP VERT. BEAM SEAT FACES ONLY.

(A19) 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE

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STRUCTURE B-47-228

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EAST ABUTMENT

SHEET 6

232

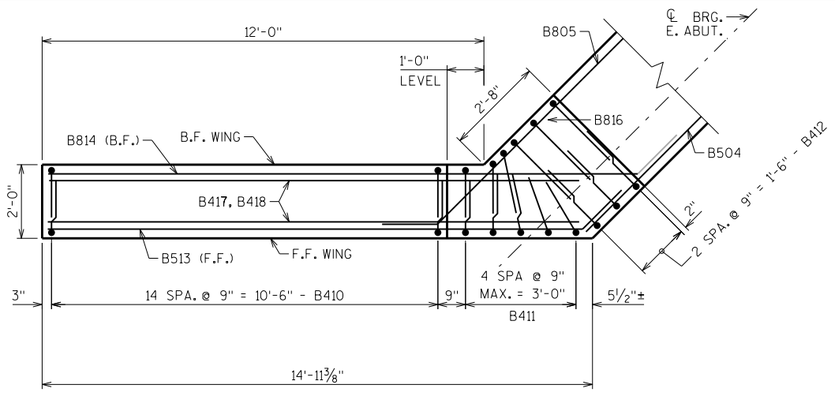
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8

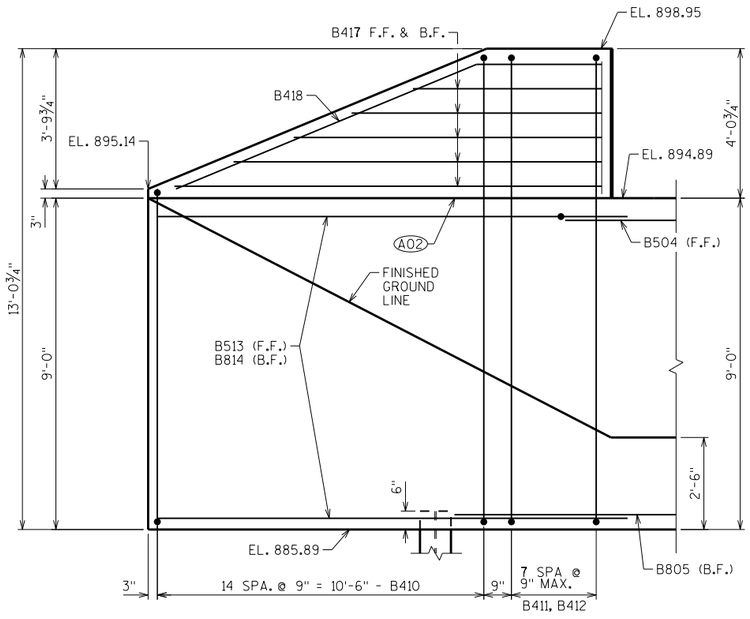
STATE PROJECT NUMBER

1530-02-70



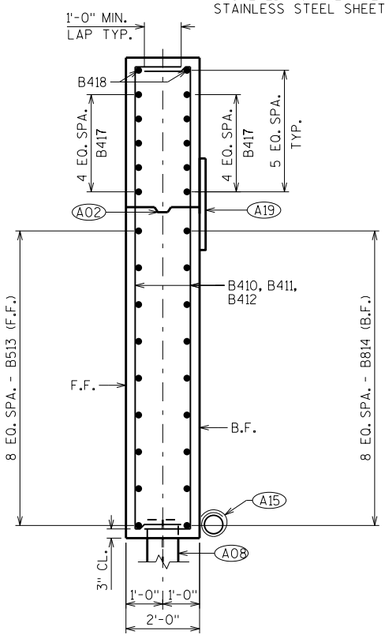
WING PLAN

WING 3 SHOWN, WING 4 SIMILAR

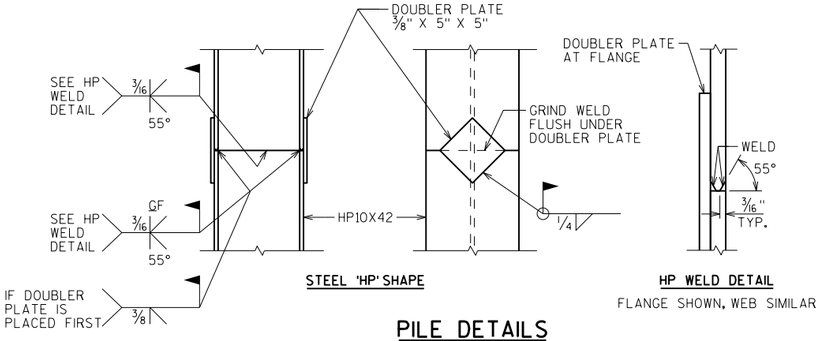


WING ELEVATION

WING 3 SHOWN, WING 4 SIMILAR



SECTION THRU WING

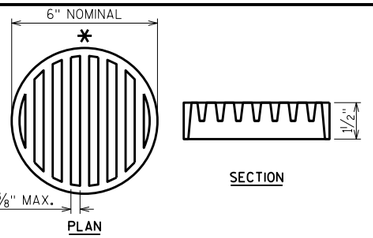


STEEL 'HP' SHAPE

HP WELD DETAIL

FLANGE SHOWN, WEB SIMILAR

PILE DETAILS



RODENT SHIELD DETAIL

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

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

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

BILL OF BARS

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

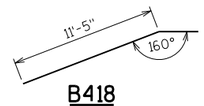
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
B501		47	9'-11"	X		ABUT. BODY - VERT.- TOP
B502		94	10'-4"	X		ABUT. BODY - VERT.
B403		39	4'-0"	X		ABUT. BODY - HORIZ. - TIE BAR
B504		9	30'-4"			ABUT. BODY - HORIZ. - F.F.
B805		9	36'-3"	X		ABUT. BODY - HORIZ. - B.F.
B506		9	22'-8"			ABUT. BODY - HORIZ. - F.F.
B807		9	28'-6"	X		ABUT. BODY - HORIZ. - B.F.
B408		10	6'-9"			ABUT. BODY - HORIZ. - BTWN BEAM SEATS
B409		20	4'-3"	X		ABUT. BODY - VERT. - BTWN BEAM SEATS
B410	X	60	13'-2"	X	◭	WINGS 3 & 4 - VERT.
B411	X	18	15'-5"	X		WINGS 3 & 4 - VERT.
B412	X	12	16'-7"	X		WINGS 3 & 4 - VERT.
B513	X	18	16'-0"	X		WINGS 3 & 4 - HORIZ. - BOT. - F.F.
B814	X	18	17'-6"	X		WINGS 3 & 4 - HORIZ. - BOT. - B.F.
						NOT USED
						NOT USED
B417	X	20	9'-6"		◭	WINGS 3 & 4 - HORIZ. - TOP - F.F. & B.F.
B418	X	4	15'-0"	X		WINGS 3 & 4 - HORIZ. - TOP - F.F. & B.F.

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

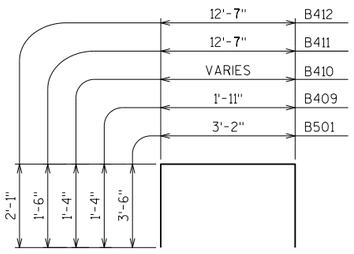
BAR SERIES TABLE

BAR MARK	NO. REQ'D.	LENGTH
B410	4 SERIES OF 15	11'-3" TO 15'-0"
B417	4 SERIES OF 5	5'-5" TO 13'-6"

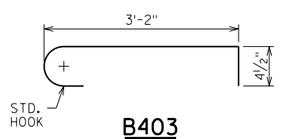
BUNDLE AND TAG EACH SERIES SEPARATELY.



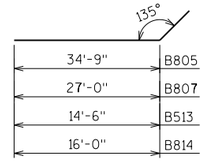
B418



B501, B409, B410, B411, B412



B403



B805, B807, B513, B814



B502

(A02) OPTIONAL CONSTRUCTION JOINT: KEYWAY FORMED BY BEVELED 2" X 6". (18" R.M.W. @ B.F. WING & ¾" "V" GROVE @ F.F. WING IF JOINT IS USED.)

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(A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN.

(A19) 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

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EAST ABUTMENT DETAILS

SHEET 7

233

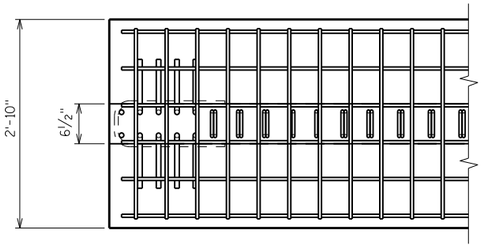
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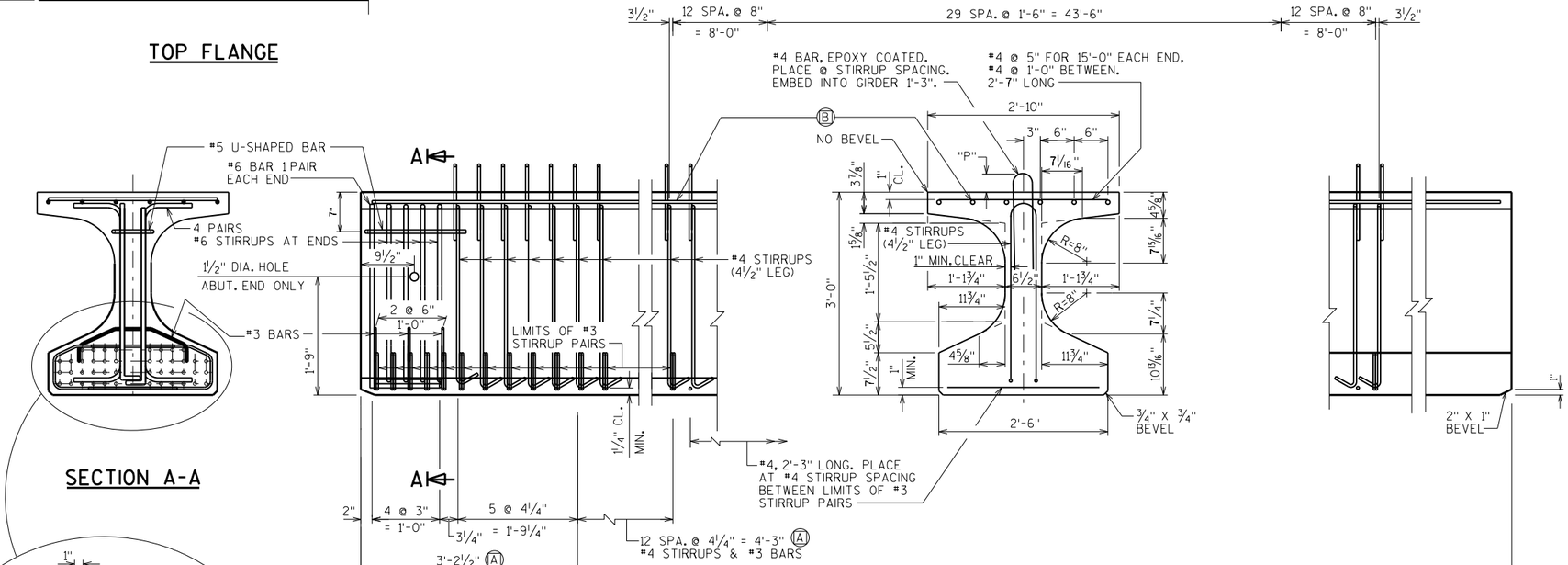
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STATE PROJECT NUMBER

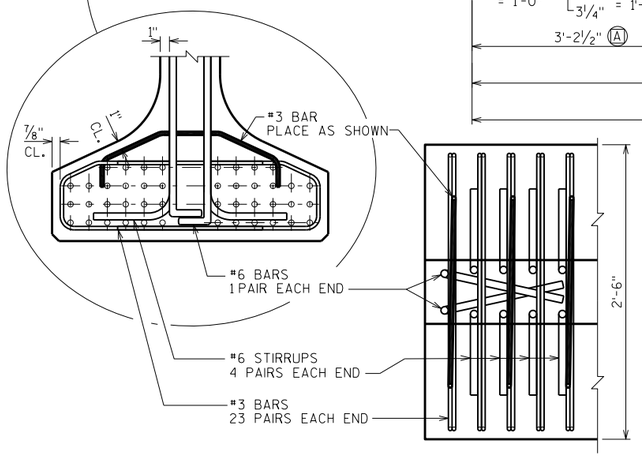
1530-02-70



TOP FLANGE



SECTION A-A



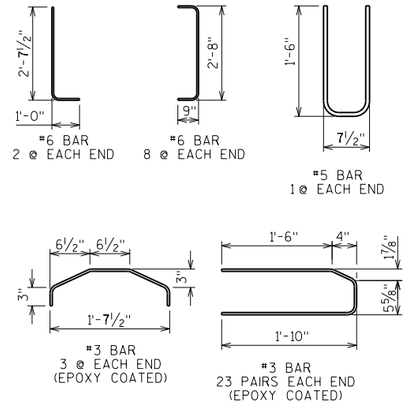
BOTTOM FLANGE

SIDE VIEW & TYPICAL SECTION IN SPAN

(A) DETAIL TYP. AT EACH END

(B) 6 #4 BARS, FULL LENGTH, MIN. LAP = 1'-11"

◆ INSERT/HOLES SPACING FOR STEEL DIAPHRAGMS TO GIRDER WEB CONNECTION FOR ALL GIRDERS



NOTES

TOP OF GIRDER TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY, EXCEPT THE OUTSIDE 8" OF GIRDER, WHICH SHALL RECEIVE A SMOOTH FINISH. AN APPROVED CONCRETE SEALER SHALL BE APPLIED TO ALL SMOOTH SURFACES INCLUDING THE OUTSIDE 8" OF THE TOP FLANGE.

DO NOT APPLY CONCRETE SEALER OR EPOXY TO SURFACES RECEIVING APPLICATION OF CONCRETE STAINING.

THE GIRDERS SHALL BE PROVIDED WITH A SUITABLE LIFTING DEVICE FOR HANDLING AND ERECTING THE GIRDERS. SEE SECT. 503.3.3 OF STANDARD SPECIFICATIONS FOR GUIDANCE.

STRANDS SHALL BE FLUSH WITH END OF GIRDER. FOR GIRDER ENDS EMBEDDED COMPLETELY IN CONCRETE, END OF STRANDS SHALL BE COATED WITH NON-BITUMINOUS JOINT SEALER. FOR GIRDER ENDS THAT ARE FINALLY EXPOSED, COAT THE GIRDER ENDS, EXPOSED STRAND ENDS AND ALL NON-BONDING SURFACES WITHIN 2 FEET OF THE GIRDER ENDS WITH A NON-PIGMENTED EPOXY CONFORMING TO AASHTO M-235 TYPE III, GRADE 2, CLASS B OR C. THE EPOXY SHALL BE APPLIED AT LEAST 3 DAYS AFTER MOIST CURING HAS CEASED AND PRIOR TO THE APPLICATION OF THE SEALER.

ALL GIRDERS SHALL BE CAST FULL LENGTH AS SHOWN.

SPACING SHOWN FOR #4 STIRRUPS IS FOR GRADE 60 REINFORCEMENT.

AN EQUIVALENT OF WELDED WIRE FABRIC (WWF) ASTM A1064 MAY BE SUBSTITUTED FOR THE STIRRUP REINFORCEMENT SHOWN, UPON ACCEPTANCE OF THE STRUCTURES MAINTENANCE SECTION. IF USED, WWF SUBSTITUTION DETAILS SHALL BE SUBMITTED ELECTRONICALLY TO THE WISDOT FABRICATION LIBRARY AND ACCEPTED PRIOR TO SHOP DRAWING SUBMITTAL.

PRESTRESSING STRANDS SHALL BE (0.6" DIA.)-7 WIRE LOW-RELAXATION STRANDS WITH AN ULTIMATE STRENGTH OF 270,000 PSI.

FOR DIAPHRAGM INSERT & CONNECTION DETAILS SEE "STEEL DIAPHRAGM" SHEET.

✳ MINIMUM CYLINDER STRENGTH OF CONCRETE @ TIME OF TRANSFER OF PRESTRESS FORCE.

GIRDER DATA

SPAN	GIRDER	GIRDER LENGTH "L" (FEET)	DEAD LOAD DEFL. (IN.) 1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	CONC. STRGTH. f'c (P.S.I.)	"P" (IN.) 1ST 1/3 OF GIRDER	MID 1/3 OF GIRDER	END 1/3 OF GIRDER	DIA. OF STRAND (IN.)	DRAPED PATTERN TOTAL NO. OF STRANDS	f'ci (P.S.I.) ✳	(IN.) "A"	"B" MIN.	"B" MAX.	"C"	UNDRAPED PATTERN TOTAL NO. OF STRANDS	f'ci (P.S.I.) ✳
1	1&6	75	0.3	0.6	0.8	0.9	1.0	0.9	0.8	0.6	0.3	8000	8	7	8	0.6	24	6400	32	11	14	4		
1	2-5	75	0.4	0.7	0.9	1.1	1.1	1.1	0.9	0.7	0.4	8000	8	7	8	0.6	24	6400	32	11	14	4		

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36W" PRESTRESSED GIRDER DETAILS 1

SHEET 8

234

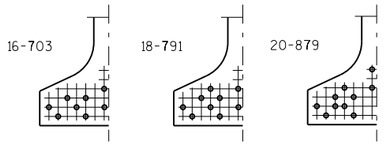
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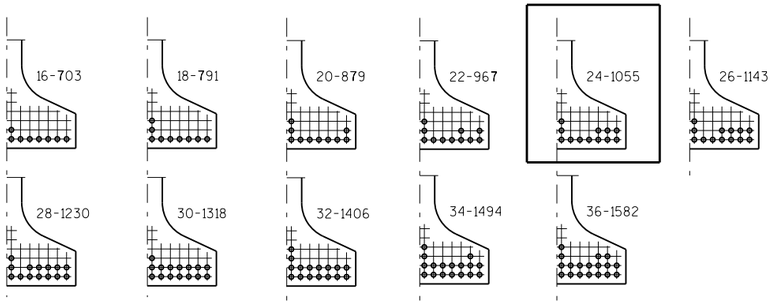
STATE PROJECT NUMBER

1530-02-70



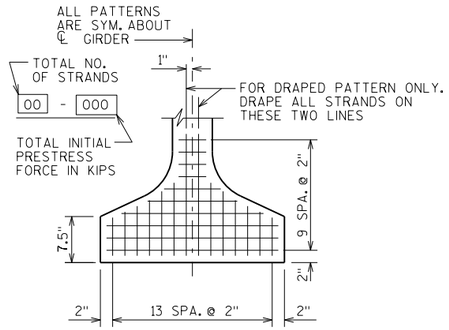
STANDARD ARRANGEMENTS TO RAISE CENTER OF GRAVITY TO AVOID DRAPING OF STRANDS

0.6" DIA. STRANDS

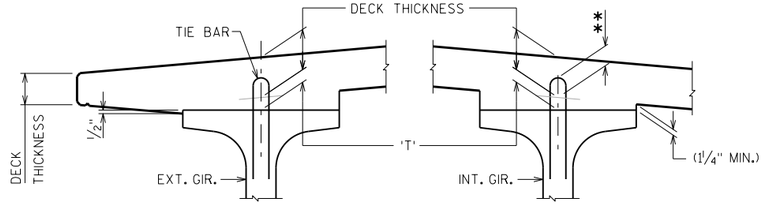


ARRANGEMENT AT ℄ SPAN - FOR GIRDERS WITH DRAPED STRANDS

0.6" DIA. STRANDS



TYP. STRAND PATTERN



DECK HAUNCH DETAIL

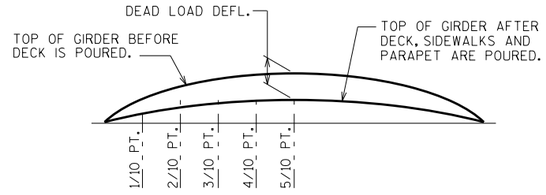
IF 1¼" MINIMUM HAUNCH HEIGHT AT EDGE OF GIRDER CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR, THE PLAN DECK THICKNESS SHALL BE HELD. NOTIFY THE STRUCTURES SECTION IF THE GRADE LINE IS RAISED FROM THE PLAN PROFILE BY MORE THAN ½" OR,

** IF 3" MINIMUM DECK EMBEDMENT OF TIE BAR CANNOT BE OBTAINED.

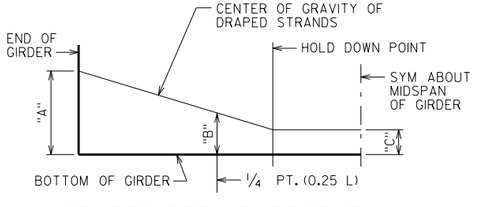
TO DETERMINE 'T', ELEV. OF TOP OF GIR'S. AT ℄ OF SUBSTRUCTURE UNITS & AT 1/10 POINTS OF EACH SPAN SHALL BE TAKEN. THEN FOLLOW THIS PROCESS:

TOP OF DECK ELEV. AT FINAL GRADE
- TOP OF GIRDER ELEVATION
+ DEAD LOAD DEFLECTION
- DECK THICKNESS
= HAUNCH HEIGHT 'T'

NOTE: AN AVERAGE HAUNCH ('T') OF 3.2" WAS USED IN THE QUANTITY "CONCRETE MASONRY BRIDGES".



DEAD LOAD DEFLECTION DIAGRAM



DRAPED STRAND PROFILE

*THE THEORETICAL INITIAL CAMBER VALUE AT THE TIME OF STRAND RELEASE AT MIDSPAN MULTIPLIED BY A FACTOR OF 1.4 TO ACCOUNT FOR CAMBER GROWTH FROM THE TIME OF STRAND RELEASE TO JOBSITE PLACEMENT.

SPAN	CAMBER (IN.) *
1	2.23

THESE VALUES ARE NOT TO BE USED IN DETERMINING 'T', USE ACTUAL GIRDER SHOTS.

THESE VALUES ARE FOR INFORMATIONAL PURPOSES ONLY.

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STRUCTURE B-47-228

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36W" PRESTRESSED GIRDER DETAILS 2

SHEET 9

235

SCALE = 1.00

8

8

STATE PROJECT NUMBER

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NOTES

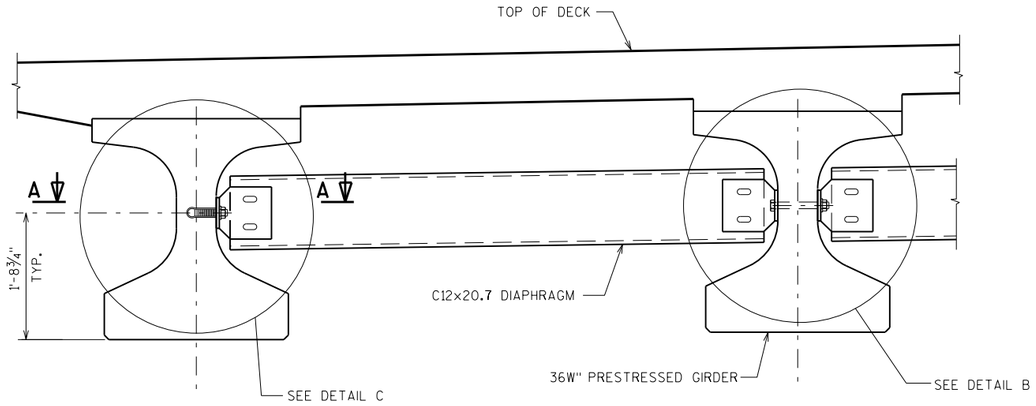
ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-47-228", EACH.

EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

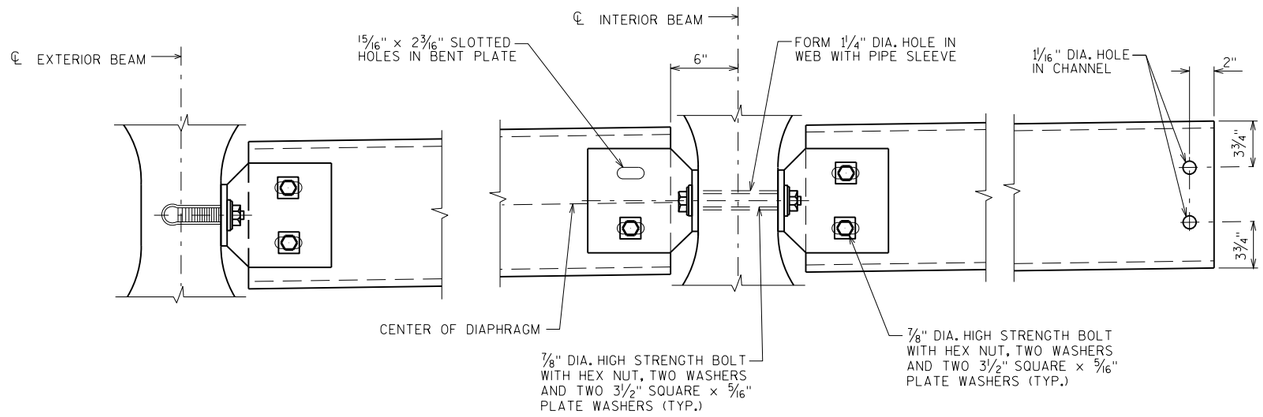
ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36.

ALL DIAPHRAGM MATERIAL INCLUDING BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED AFTER FABRICATION.

STEEL DIAPHRAGM TO CONCRETE WEB CONNECTION SHALL BE SNUG-TIGHT PLUS 1/4 TURN, UNLESS NOTED OTHERWISE. HIGH STRENGTH BOLTS FOR WEB CONNECTION SHALL MEET THE REQUIREMENTS FOR ASTM A325 OR ASTM A449.

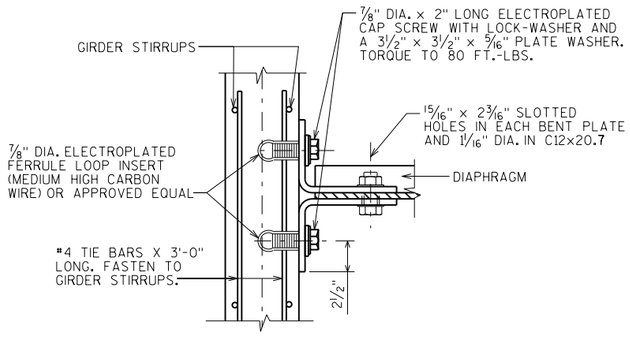


PART TRANSVERSE SECTION AT DIAPHRAGM



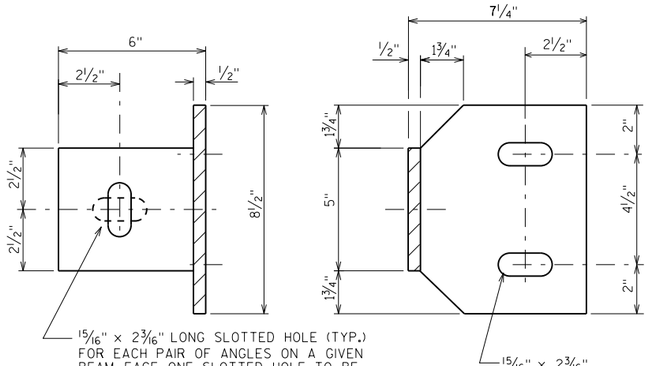
DETAIL C

DETAIL B



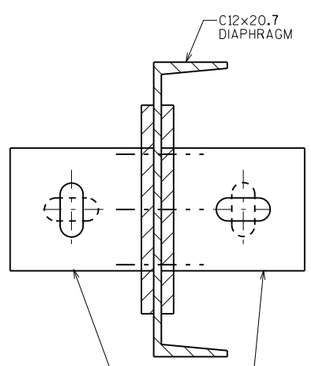
SECTION A-A

(FOR EXTERIOR ATTACHMENT)



BEAM FACE

DIAPHRAGM FACE



ATTACHMENT TO CHANNEL

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STEEL DIAPHRAGMS

SHEET 10

236

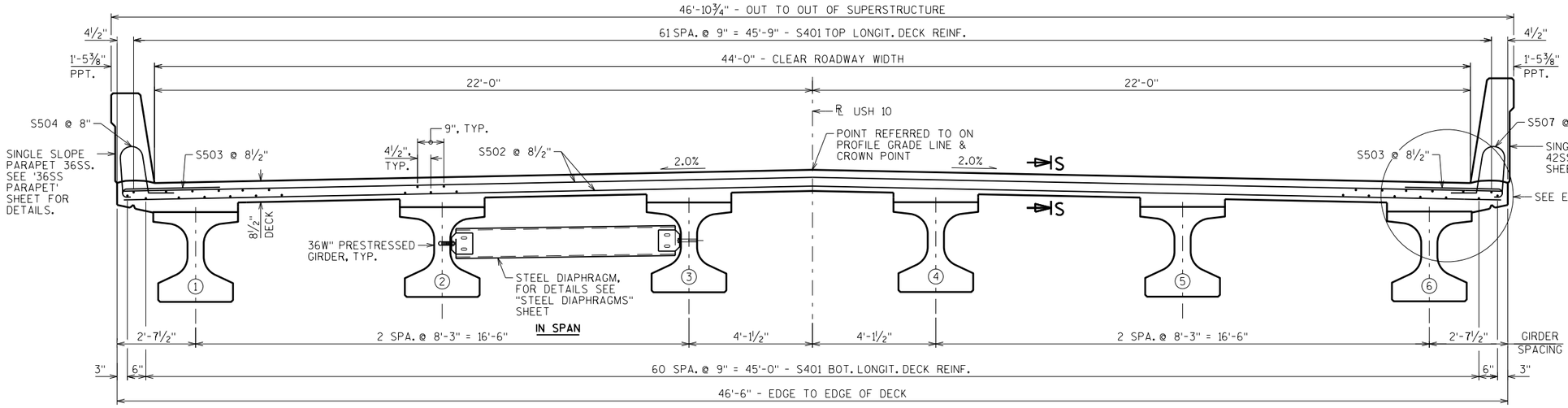
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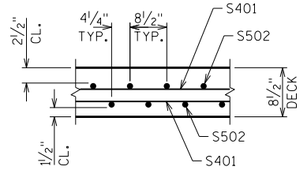
STATE PROJECT NUMBER

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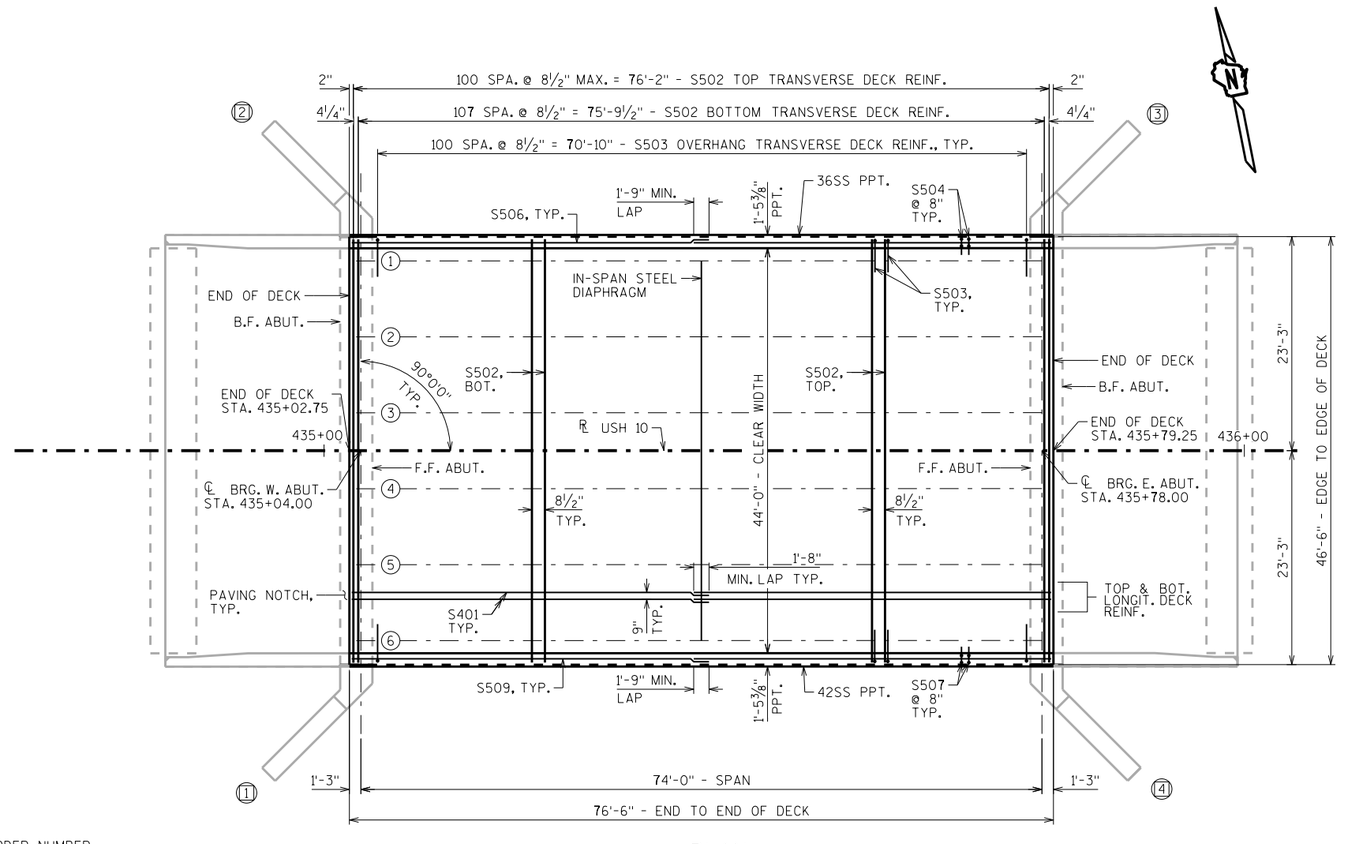


CROSS SECTION THRU ROADWAY

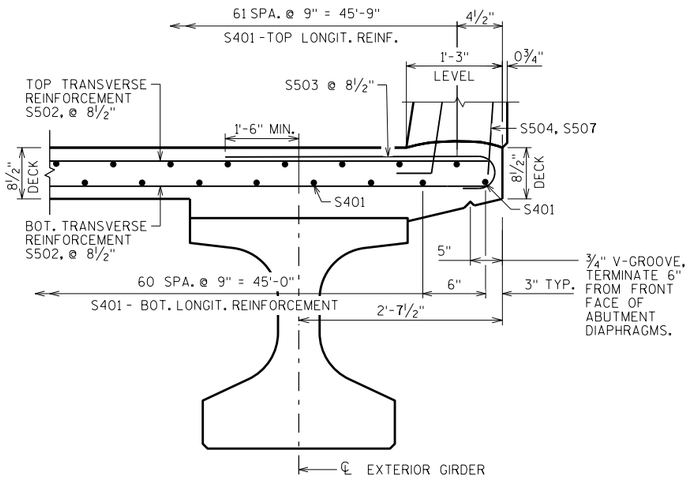
LOOKING EAST



SECTION S-S



PLAN



EDGE OF DECK STEEL DETAIL

(TYP. AT BOTH EDGES)

◯ INDICATES GIRDER NUMBER

⬡ INDICATES WING NUMBER

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-47-228

DRAWN BY SCL | PLANS CK'D. SEW

SUPERSTRUCTURE

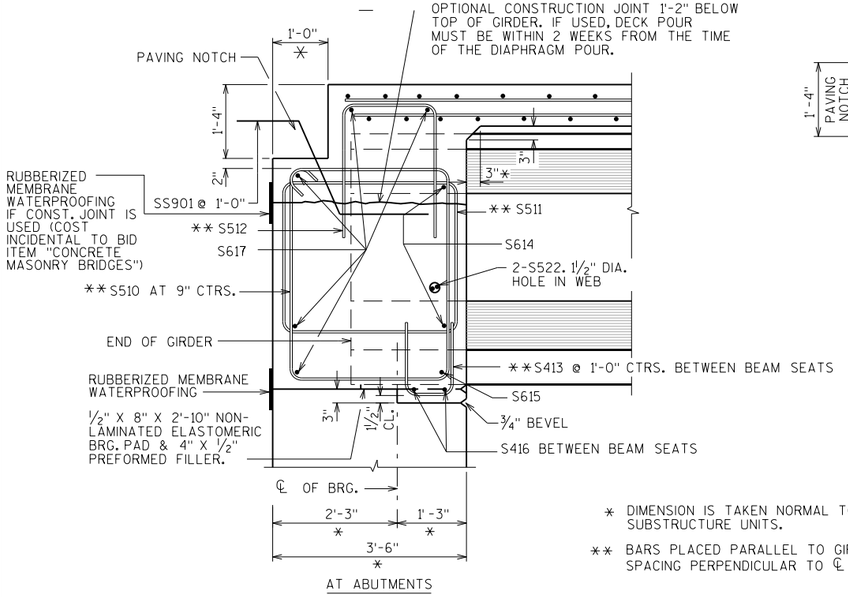
SHEET 11

237

SCALE = 8.00

STATE PROJECT NUMBER

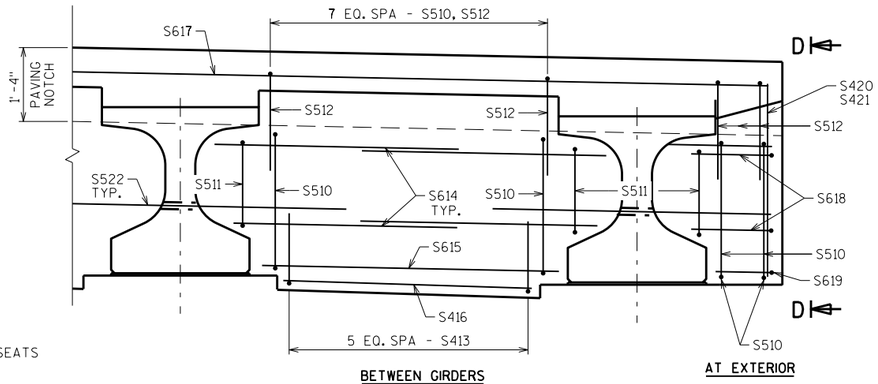
1530-02-70



PART LONGIT. SECTION

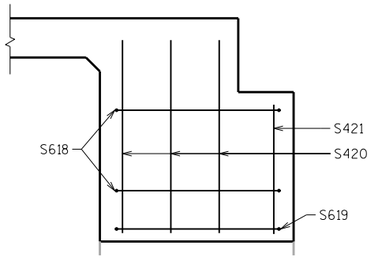
* DIMENSION IS TAKEN NORMAL TO ℄ SUBSTRUCTURE UNITS.

** BARS PLACED PARALLEL TO GIRDERS SPACING PERPENDICULAR TO ℄ GIRDERS



ABUTMENT DIAPHRAGM REINFORCEMENT

TYP. AT BOTH ABUTMENTS



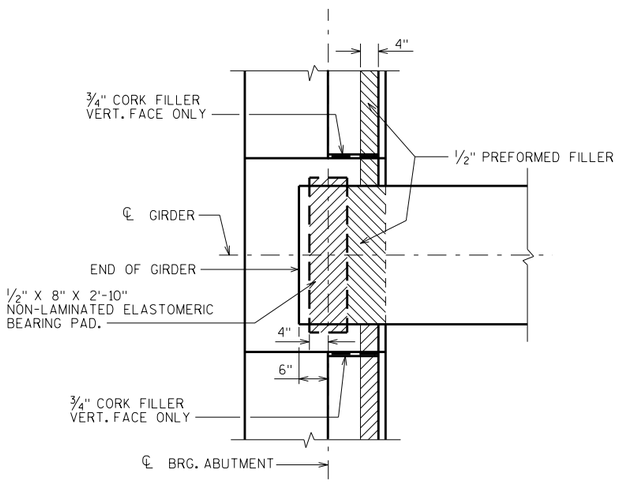
SECTION D-D

SHOWING VERT. & HORIZ. END BARS IN DIAPH. ONLY

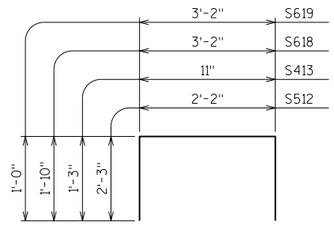
BILL OF BARS

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

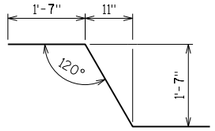
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
S401	X	250	38'-11"			DECK - LONGIT. - TOP & BOT.
S502	X	217	46'-2"			DECK - TRANS. - TOP & BOT.
S503	X	202	4'-9"	X		DECK - TRANSVERSE - OVERHANG
S504	X	115	4'-5"	X		36SS PARAPET - VERT.
S505	X	115	5'-8"	X		36SS PARAPET - VERT.
S506	X	16	39'-0"			36SS PARAPET - HORIZ.
S507	X	115	4'-5"	X		42SS PARAPET - VERT.
S508	X	115	6'-8"	X		42SS PARAPET - VERT.
S509	X	16	39'-0"			42SS PARAPET - HORIZ.
S510	X	88	11'-10"	X		DIAPHRAGM - STIRRUP
S511	X	24	9'-10"	X		DIAPHRAGM - STIRRUP AT GIRDER
S512	X	88	6'-5"	X		DIAPHRAGM - TOP - VERT.
S413	X	60	3'-3"	X		DIAPHRAGM - VERT. - BTWN BEAM SEATS
S614	X	40	4'-6"			DIAPHRAGM - HORIZ. - F.F.
S615	X	10	5'-8"			DIAPHRAGM - HORIZ. - F.F.
S416	X	20	4'-5"			DIAPHRAGM - HORIZ. - BTWN BEAM SEATS
S617	X	10	46'-2"			DIAPHRAGM - HORIZ.
S618	X	8	6'-5"	X		DIAPHRAGM - EXTERIOR - HORIZ.
S619	X	4	4'-10"	X		DIAPHRAGM - EXTERIOR - BOT. - HORIZ.
S420	X	12	3'-6"			DIAPHRAGM - EXTERIOR - VERT.
S421	X	4	2'-2"			DIAPHRAGM - EXTERIOR - VERT.
S522	X	24	6'-0"			DIAPHRAGM - HORIZ. THRU GIRDER
STAINLESS STEEL → SS901		94	5'-0"	X		DIAPHRAGM - PAVING NOTCH - VERT.



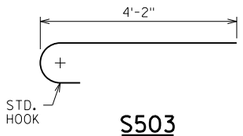
BEARING PAD DETAIL



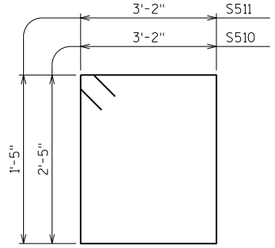
S512, S413, S618, S619



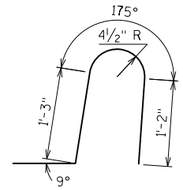
SS901



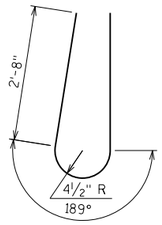
S503



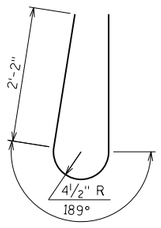
S510, S511



S504, S507



S508



S505

TOP OF DECK ELEVATIONS

EOD = EDGE OF DECK

	℄ BRG. W. ABUT.	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	℄ BRG. E. ABUT.
N. EOD	900.41	900.25	900.09	899.94	899.79	899.64	899.50	899.36	899.22	899.08	898.95
G1	900.44	900.28	900.12	899.97	899.82	899.67	899.52	899.38	899.24	899.11	898.98
G2	900.60	900.44	900.28	900.13	899.98	899.83	899.69	899.55	899.41	899.27	899.14
G3	900.77	900.61	900.45	900.30	900.15	900.00	899.85	899.71	899.57	899.44	899.31
℄ USH 10	900.85	900.69	900.53	900.38	900.23	900.08	899.94	899.80	899.66	899.52	899.39
G4	900.77	900.61	900.45	900.30	900.15	900.00	899.85	899.71	899.57	899.44	899.31
G5	900.60	900.44	900.28	900.13	899.98	899.83	899.69	899.55	899.41	899.27	899.14
G6	900.44	900.28	900.12	899.97	899.82	899.67	899.52	899.38	899.24	899.11	898.98
S. EOD	900.41	900.25	900.09	899.94	899.79	899.64	899.50	899.36	899.22	899.08	898.95

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-47-228

DRAWN BY SCL | PLANS CK'D. SEW

SUPERSTRUCTURE DETAILS

SHEET 12

238

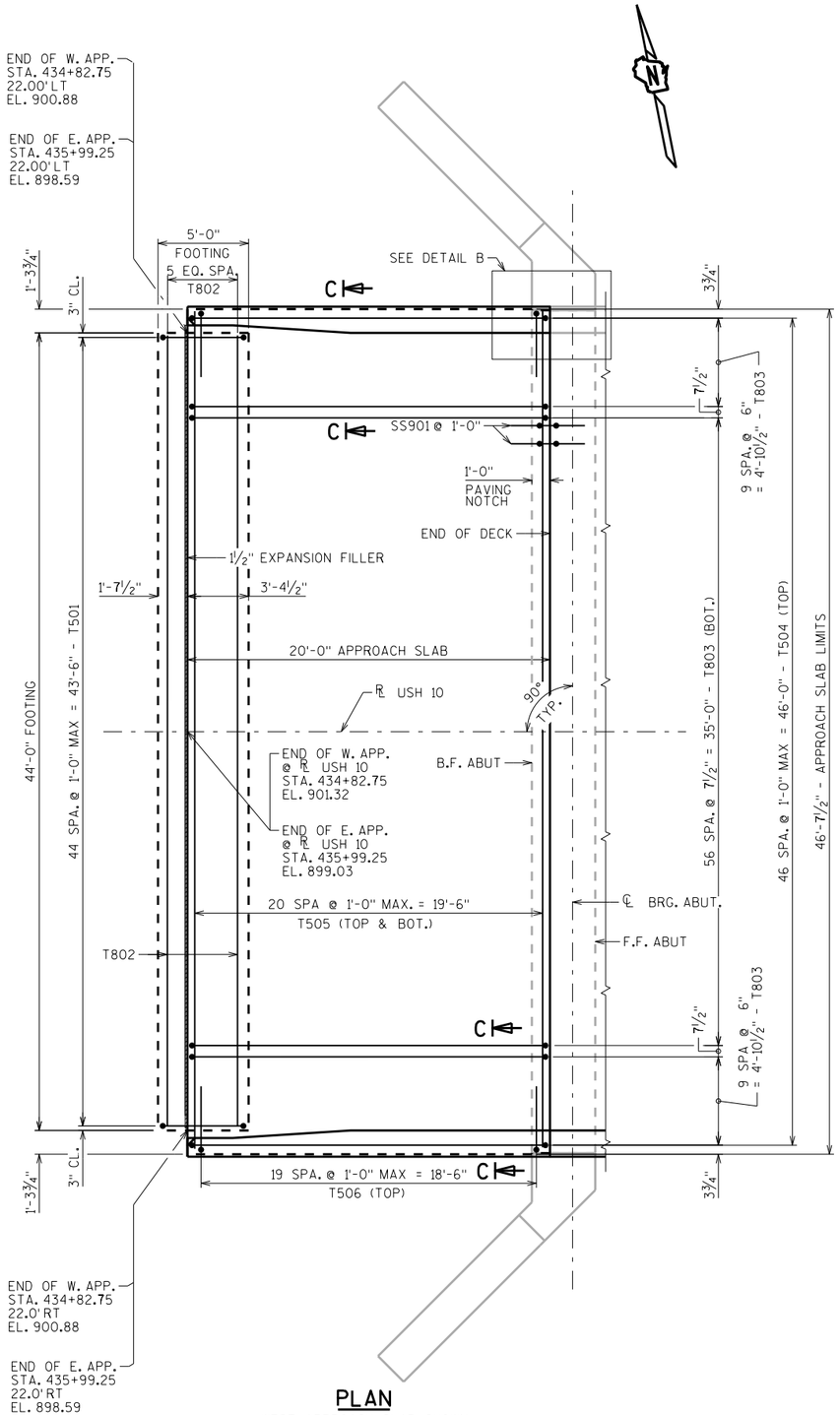
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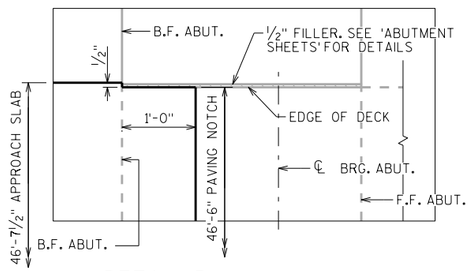
STATE PROJECT NUMBER

1530-02-70



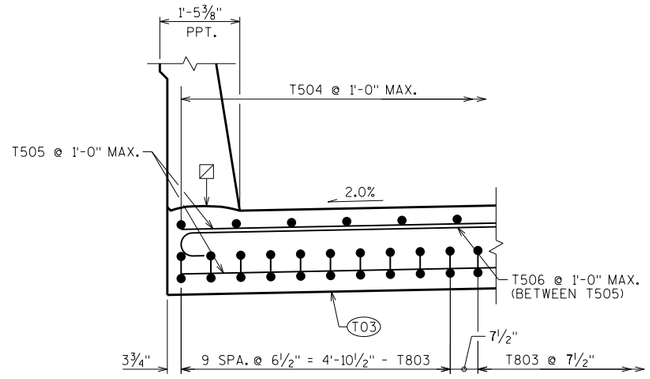
PLAN

WEST APPROACH SLAB SHOWN
EAST APPROACH SLAB SIMILAR



DETAIL B

TYP. BOTH SIDES
PARAPET NOT SHOWN FOR CLARITY



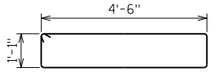
SECTION C-C

TYP. BOTH SIDES

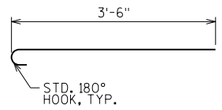
BILL OF BARS

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

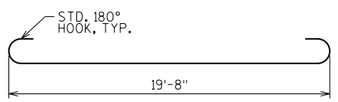
BAR MARK	COAT	NO. REQ'D. WEST APP.	NO. REQ'D. EAST APP.	LENGTH	BENT	BAR SERIES	LOCATION
T501	X	45	45	11'-10"	X		FOOTING - VERT. - STIRRUP
T802	X	12	12	43'-6"			FOOTING - HORIZ. - TRANS.
T803	X	77	77	21'-6"	X		APP. SLAB - LONGIT. - BOT.
T504	X	47	47	19'-8"			APP. SLAB - LONGIT. - TOP
T505	X	42	42	46'-3"			APP. SLAB - TRANS. - TOP & BOT.
T506	X	40	40	4'-1"	X		APP. SLAB - EDGES - TRANS - TOP



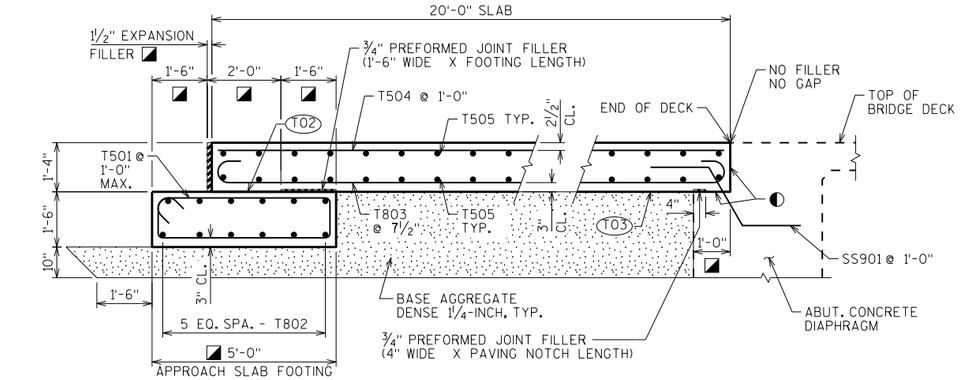
T501



T506



T803



SECTION THRU APPROACH SLAB

- ▨ CONST. JOINT - STRIKE OFF AS SHOWN AND LEAVE ROUGH.
- ◐ APPLY PROTECTIVE SURFACE TREATMENT TO PAVING NOTCH SURFACES PRIOR TO POURING STRUCTURAL APPROACH SLAB.
- ◪ MEASURED NORMAL TO ABUTMENT
- (T02) STEEL TROWEL TOP SURFACE OF FOOTING AND PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE LENGTH OF THE FOOTING.
- (T03) PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE LENGTH OF THE SUBGRADE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-47-228

DRAWN BY SCL | PLANS CK'D. SEW

STRUCTURAL APPROACH SLABS

SHEET 13

239

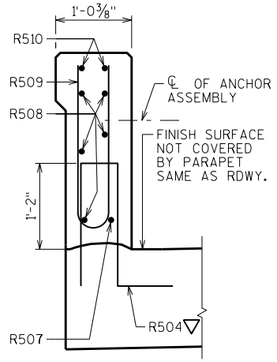
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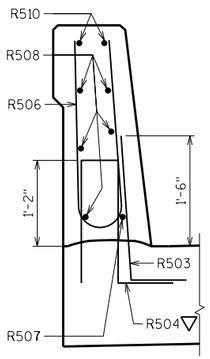
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STATE PROJECT NUMBER

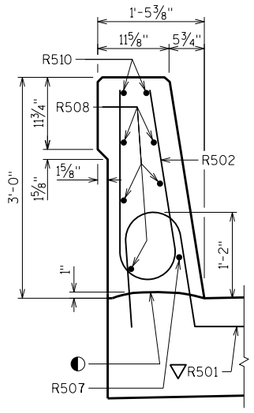
1530-02-70



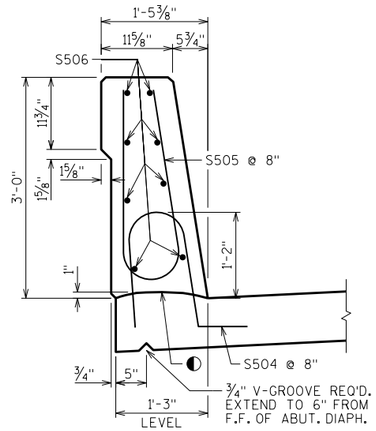
SECTION A-A



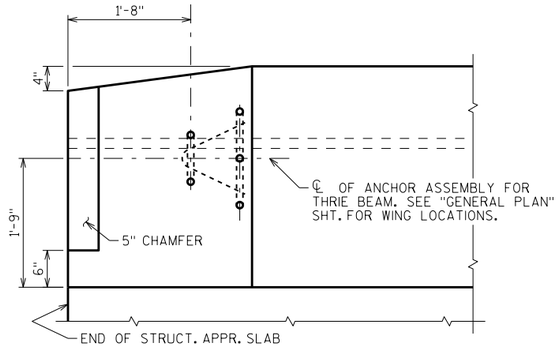
SECTION B-B



SECTION C-C



SECTION THRU PARAPET ON DECK



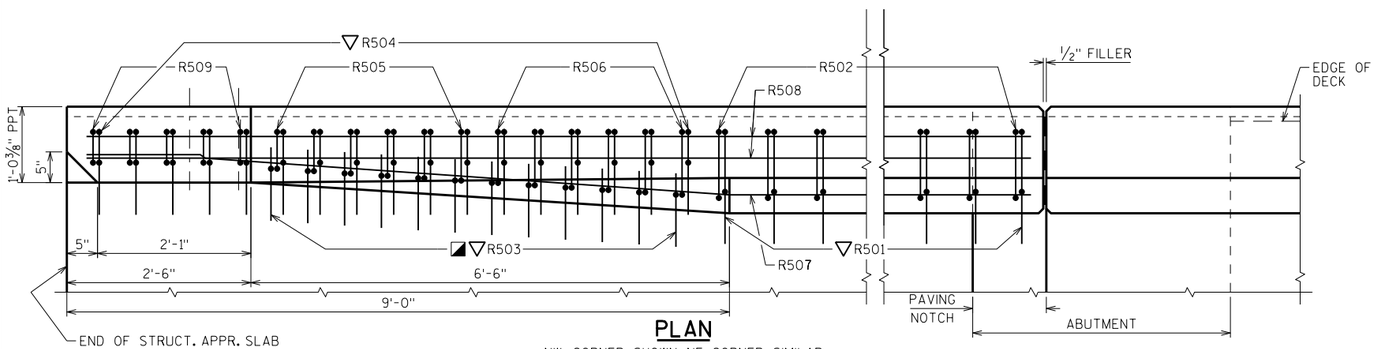
PARAPET END TREATMENT DETAIL

LOOKING AT INSIDE FACE OF PARAPET

BILL OF BARS

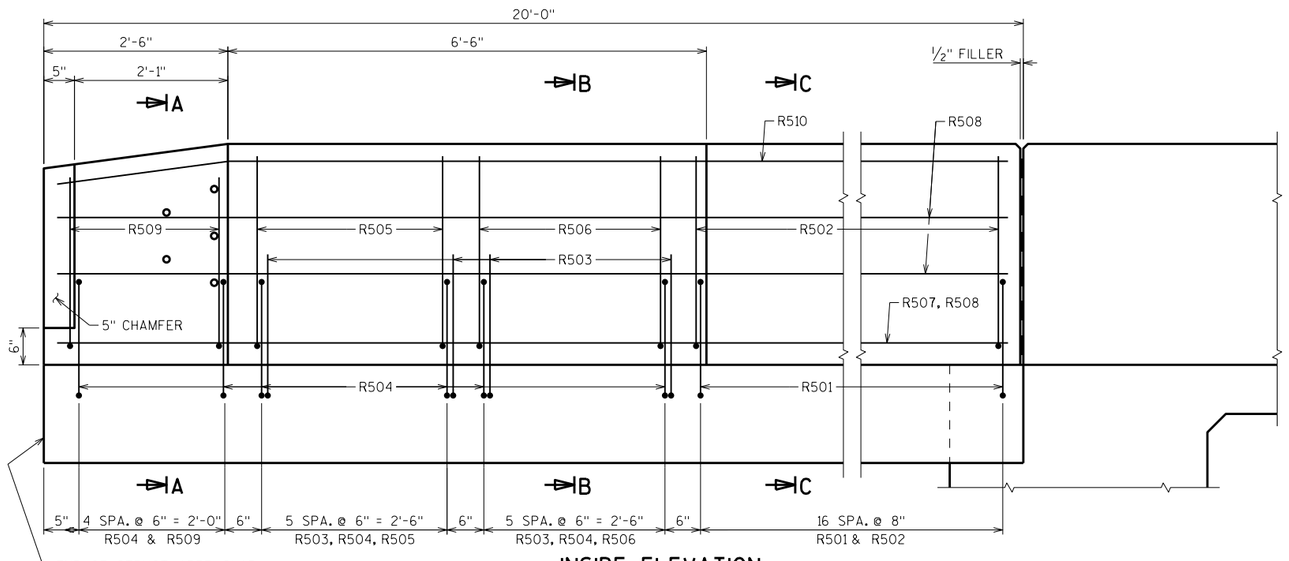
FOR APPROACH SLAB PARAPETS

BAR MARK	COAT	WEST APP.	EAST APP.	LENGTH	BENT	BAR SERIES	LOCATION
R501	X	17	17	4'-5"	X		PARAPET VERT.
R502	X	17	17	5'-8"	X		PARAPET VERT.
R503	X	12	12	2'-9"	X		PARAPET VERT.
R504	X	17	17	4'-4"	X		PARAPET VERT.
R505	X	6	6	5'-5"	X		PARAPET VERT.
R506	X	6	6	5'-6"	X		PARAPET VERT.
R507	X	1	1	19'-7"	X		PARAPET HORIZ.
R508	X	5	5	19'-7"			PARAPET HORIZ.
R509	X	5	5	4'-9"	X		PARAPET VERT.
R510	X	2	2	19'-7"	X		PARAPET HORIZ.



PLAN

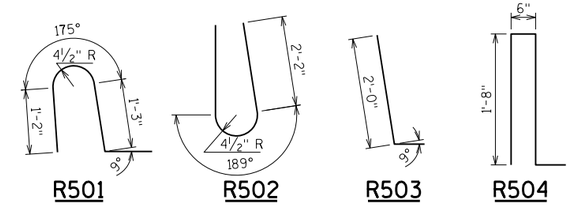
NW CORNER SHOWN, NE CORNER SIMILAR

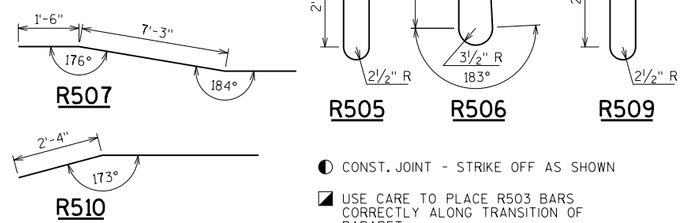


INSIDE ELEVATION

NW CORNER SHOWN, NE CORNER SIMILAR

STRUCTURAL APPROACH SLAB FOOTING NOT SHOWN FOR CLARITY

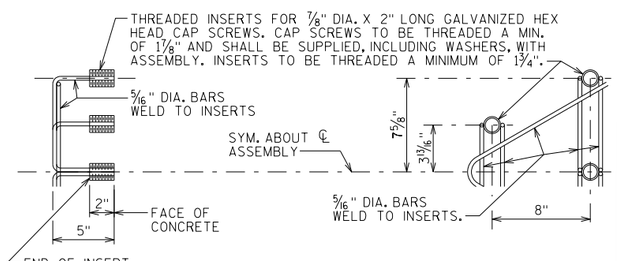




◐ CONST. JOINT - STRIKE OFF AS SHOWN

◪ USE CARE TO PLACE R503 BARS CORRECTLY ALONG TRANSITION OF PARAPET.

▽ R501, R503, AND R504 BARS TO BE TIED TO STRUCTURAL APPROACH SLAB STEEL BEFORE STRUCTURAL APPROACH SLAB IS POURED.



DETAIL OF ANCHOR ASSEMBLY

NOTE: HEX HEAD CAP SCREWS & WASHERS TO BE GALVANIZED IN ACCORDANCE WITH AASHTO M232 CLASS C.

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-47-228

DRAWN BY SCL | PLANS CK'D. SEW

SINGLE SLOPE PARAPET 36SS

SHEET 14

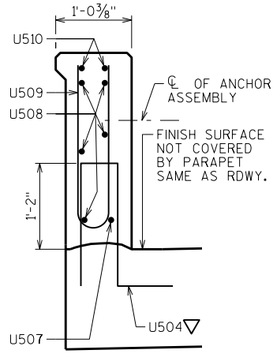
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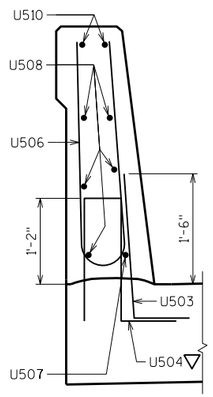
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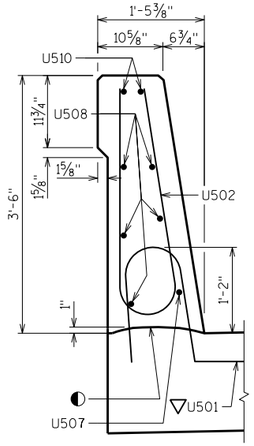
STATE PROJECT NUMBER
1530-02-70



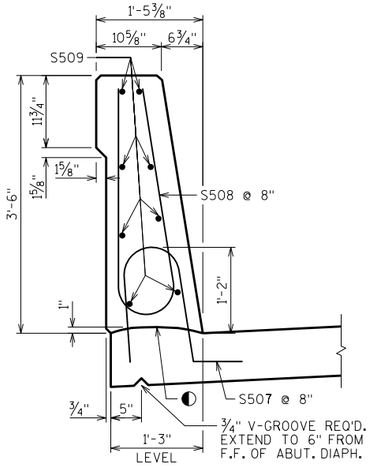
SECTION A-A



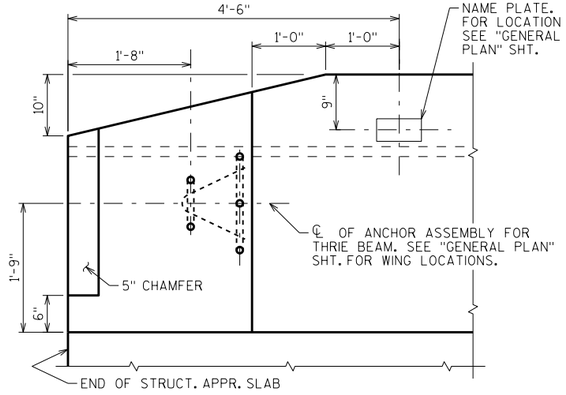
SECTION B-B



SECTION C-C



SECTION THRU PARAPET ON DECK



PARAPET END TREATMENT DETAIL

LOOKING AT INSIDE FACE OF PARAPET

BILL OF BARS

FOR APPROACH SLAB PARAPETS

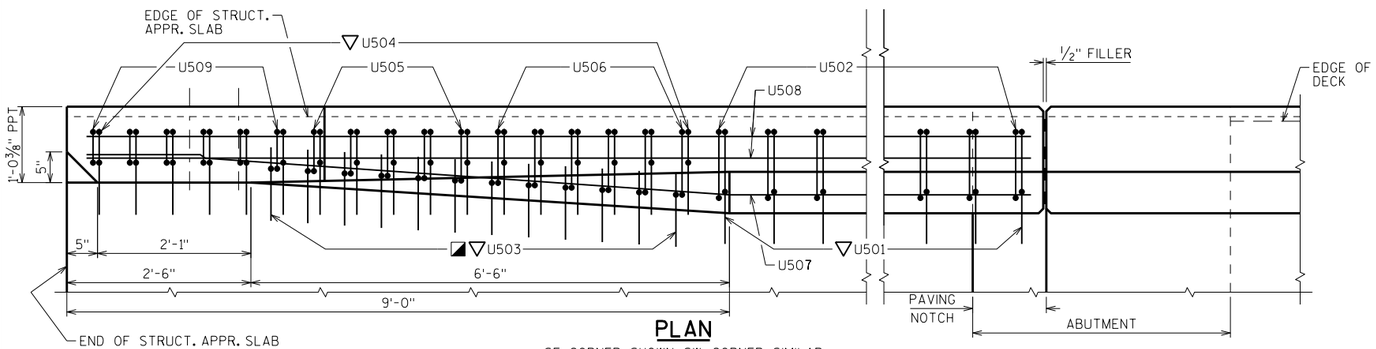
BAR MARK	COAT	EAST APP.	WEST APP.	LENGTH	BENT	BAR SERIES	LOCATION
U501	X	17	17	4'-5"	X		PARAPET VERT.
U502	X	17	17	6'-8"	X		PARAPET VERT.
U503	X	12	12	2'-9"	X		PARAPET VERT.
U504	X	17	17	4'-4"	X		PARAPET VERT.
U505	X	5	5	6'-5"	X		PARAPET VERT.
U506	X	6	6	6'-6"	X		PARAPET VERT.
U507	X	1	1	19'-7"	X		PARAPET HORIZ.
U508	X	5	5	19'-7"			PARAPET HORIZ.
U509	X	6	6	5'-5"	X	⚠	PARAPET VERT.
U510	X	2	2	19'-7"	X		PARAPET HORIZ.

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

BAR SERIES TABLE

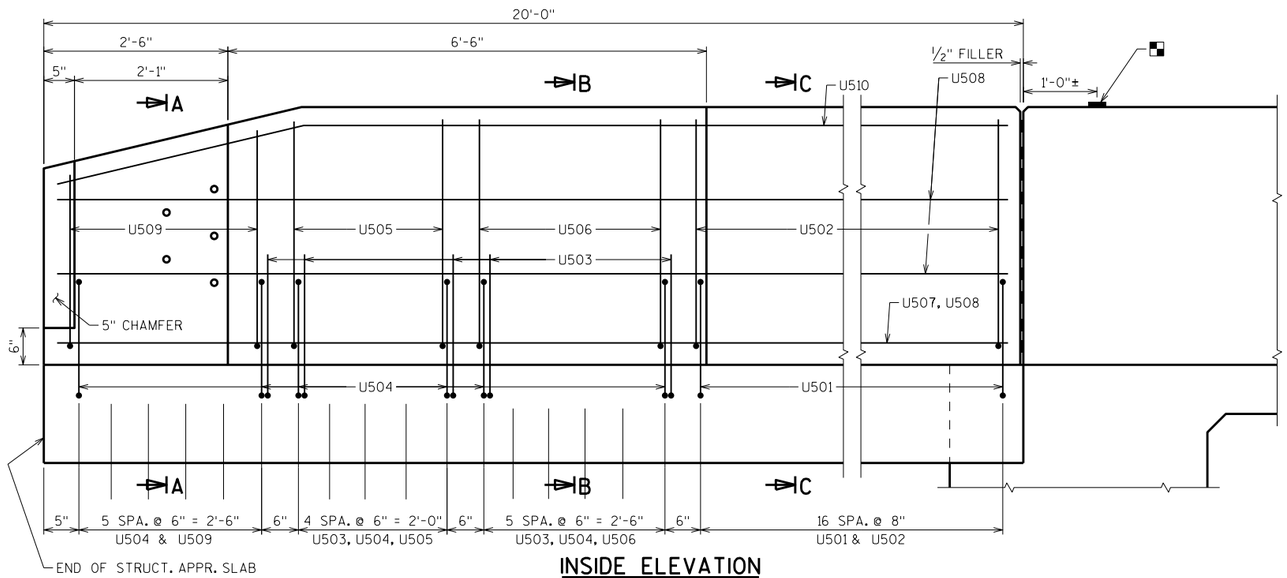
BAR MARK	NO. REQ'D	LENGTH
U509	2 SERIES OF 6	4'-9" TO 6'-1"

BUNDLE AND TAG EACH SERIES SEPARATELY.



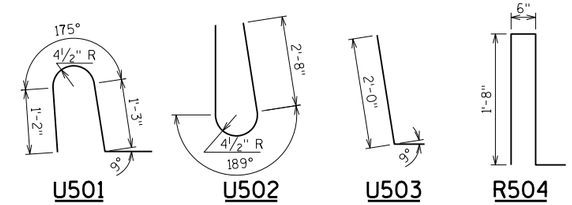
PLAN

SE CORNER SHOWN, SW CORNER SIMILAR



INSIDE ELEVATION

SE CORNER SHOWN, SW CORNER SIMILAR
STRUCTURAL APPROACH SLAB FOOTING NOT SHOWN FOR CLARITY

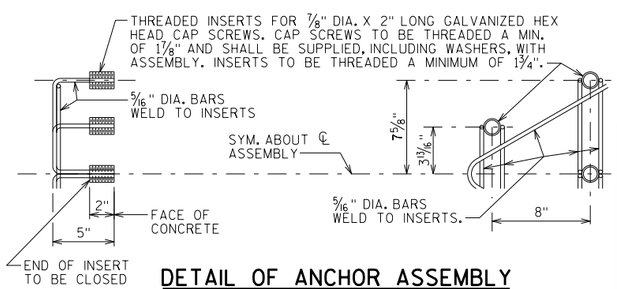


BENCH MARK CAP, AVOID PLACING A BENCH MARK CAP BELOW A RAIL OR FENCE SYSTEM THAT IS ATTACHED TO THE TOP OF THE PARAPET.

◐ CONST. JOINT - STRIKE OFF AS SHOWN

◪ USE CARE TO PLACE R503 BARS CORRECTLY ALONG TRANSITION OF PARAPET.

▽ R501, R503, AND R504 BARS TO BE TIED TO STRUCTURAL APPROACH SLAB STEEL BEFORE STRUCTURAL APPROACH SLAB IS POURED.



DETAIL OF ANCHOR ASSEMBLY

NOTE: HEX HEAD CAP SCREWS & WASHERS TO BE GALVANIZED IN ACCORDANCE WITH AASHTO M232 CLASS C.

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-47-228

DRAWN BY SCL | PLANS CK'D. SEW

SINGLE SLOPE PARAPET 42SS

SHEET 15

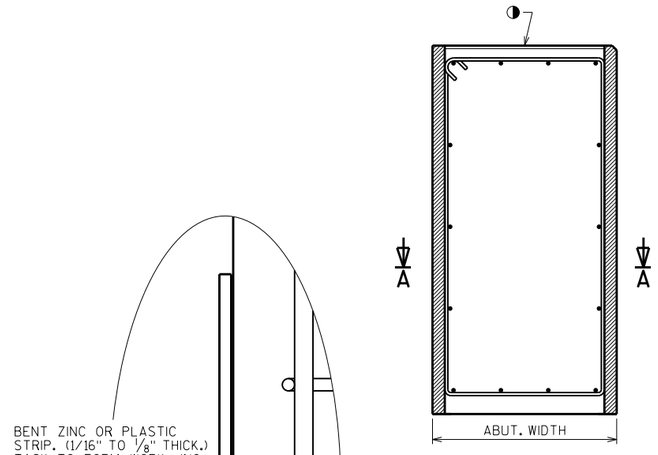
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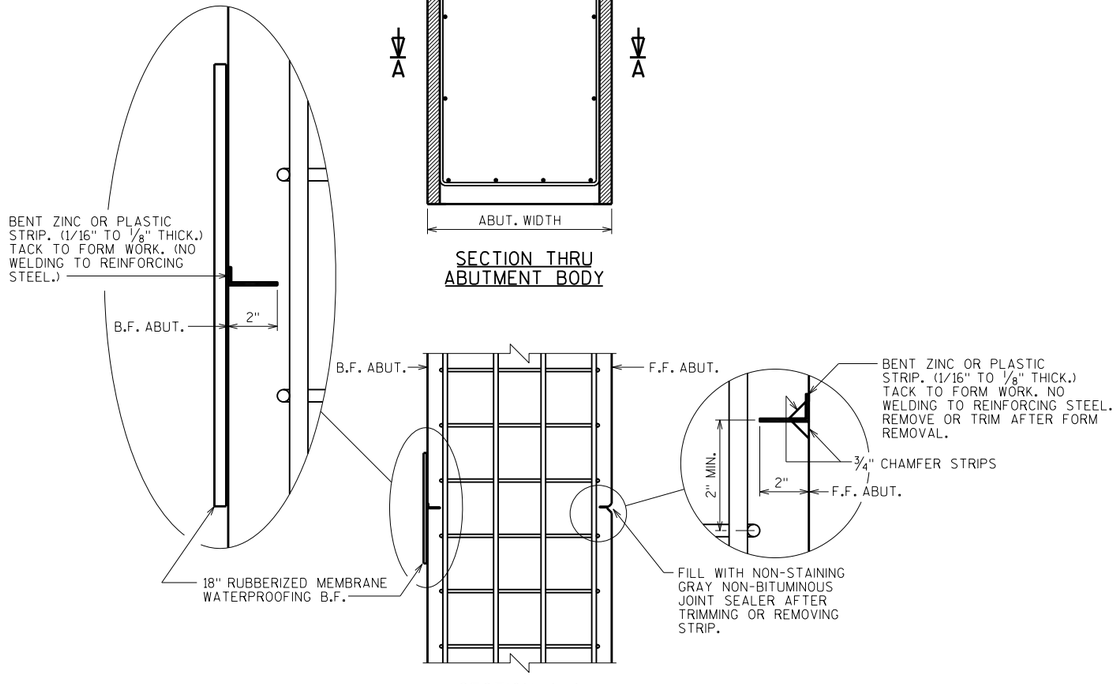
8

8

STATE PROJECT NUMBER
1530-02-70



SECTION THRU ABUTMENT BODY



SECTION A-A

ALTERNATE CONSTRUCTION JOINT AT ABUTMENT

NOTES

PARTIAL ZINC OR PLASTIC BULKHEAD MAY BE USED AS ALTERNATE CONSTRUCTION JOINT, WITH THE PERMISSION OF THE ENGINEER, AT THE CONTRACTOR'S EXPENSE.

VERTICAL CONSTRUCTION JOINT KEYWAY IS NOT REQUIRED WHEN USING ALTERNATE CONSTRUCTION JOINT.

CARE IS TO BE USED IN CASTING CONCRETE AROUND BULKHEAD TO PREVENT DISLOCATION OR MISALIGNMENT OF THE BULKHEAD.

SAW CUTTING JOINT IS NOT ALLOWED.

◑ USE A JOINT TOOL TO CONSTRUCT A CONTRACTION JOINT APPROXIMATELY 1/2" DEEP.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-47-228

DRAWN BY	SCL	PLANS CK'D.	SEW

ALTERNATE CONSTRUCTION JOINT

SHEET 16

242

8

8

SCALE = 1.00

STATE PROJECT NUMBER

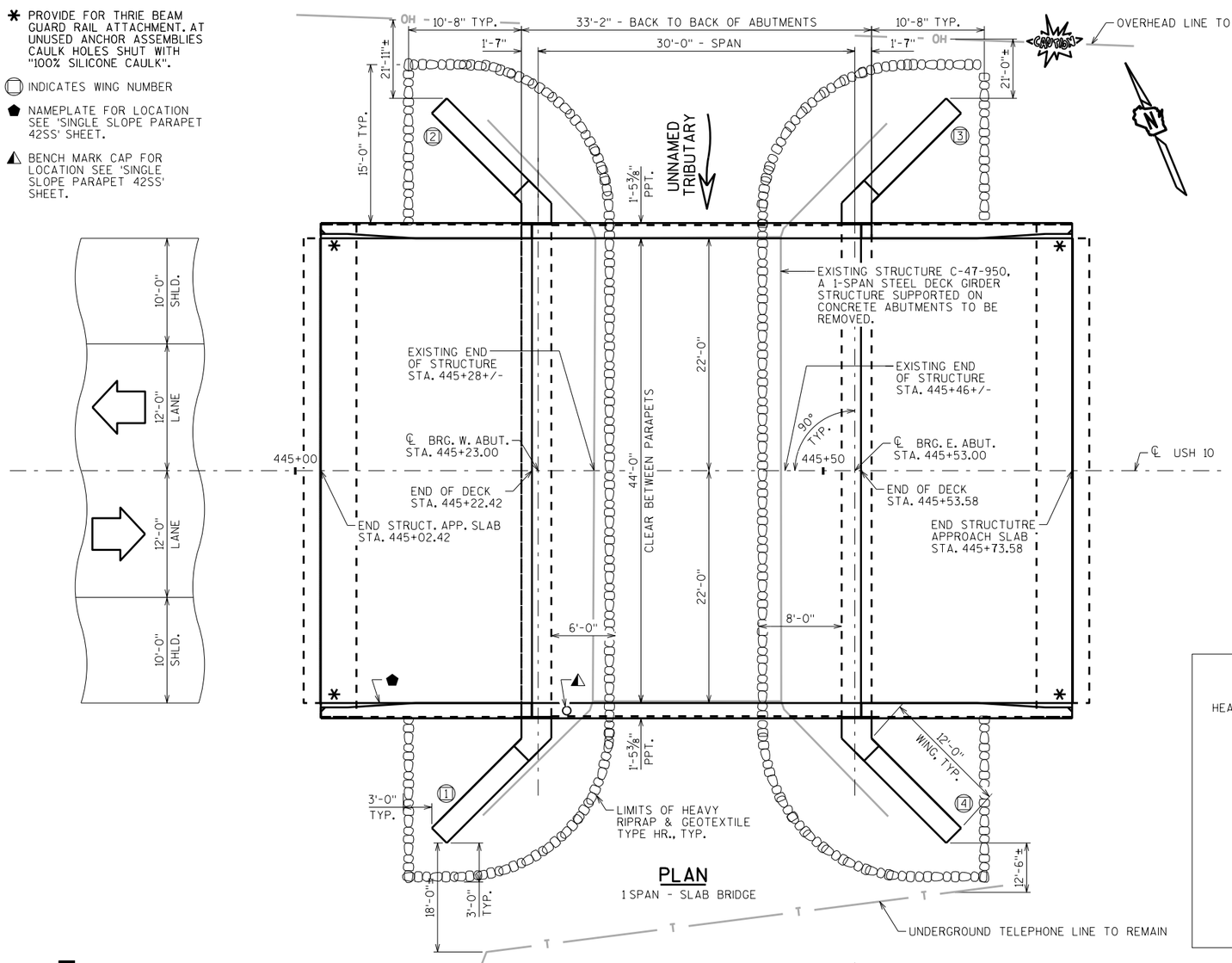
1530-02-70

* PROVIDE FOR THRIE BEAM GUARD RAIL ATTACHMENT. AT UNUSED ANCHOR ASSEMBLIES CAULK HOLES SHUT WITH "100% SILICONE CAULK".

◯ INDICATES WING NUMBER

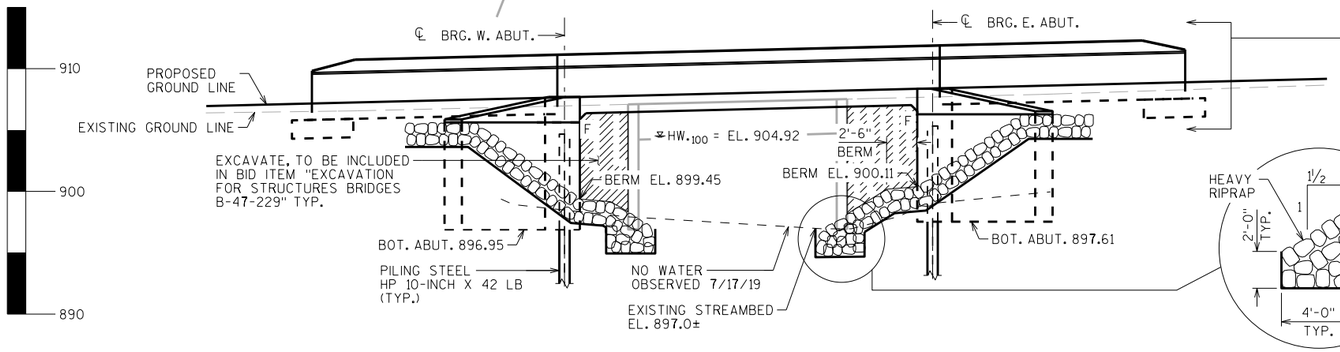
⬟ NAMEPLATE FOR LOCATION SEE 'SINGLE SLOPE PARAPET 42SS' SHEET.

⚠ BENCH MARK CAP FOR LOCATION SEE 'SINGLE SLOPE PARAPET 42SS' SHEET.



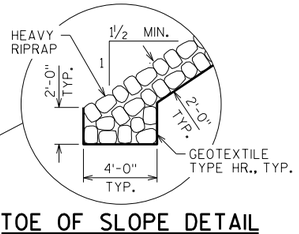
PLAN

1 SPAN - SLAB BRIDGE

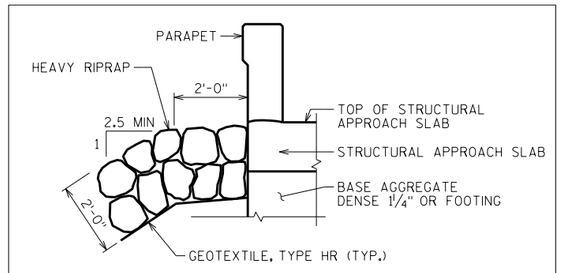


ELEVATION

NORMAL TO UNNAMED TRIBUTARY
LOOKING UPSTREAM



TOE OF SLOPE DETAIL



TYPICAL FILL SECTION THRU STRUCTURAL APPROACH SLABS

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: RF = 1.29
OPERATING RATING FACTOR: RF = 1.68
WISCONSIN STANDARD PERMIT VEHICLE (WIS.-SPV): 250 (KIPS)

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

MATERIAL PROPERTIES:

CONCRETE MASONRY:
SUPERSTRUCTURE & STRUCTURAL APPROACH SLAB — f'c = 4,000 P.S.I.
ALL OTHER — f'c = 3,500 P.S.I.

BAR STEEL REINFORCEMENT:
GRADE 60 — fy = 60,000 P.S.I.
STAINLESS, GRADE 60 — fy = 60,000 P.S.I.

FOUNDATION DATA

WEST ABUTMENT TO BE SUPPORTED ON HP 10-INCH X 42 LB STEEL PILING SEATED IN PRE-BORED HOLES, CORED 3 FEET MINIMUM INTO ROCK. PILE DRIVING IS NOT REQUIRED. THE FACTORED AXIAL RESISTANCE OF THE PILES IN COMPRESSION USED FOR DESIGN IS 180 TONS MULTIPLIED BY A RESISTANCE FACTOR OF 0.5.
ESTIMATED 20'-0" LONG AT WEST ABUTMENT BODY.
ESTIMATED 15'-0" LONG AT WEST ABUTMENT WINGS.

EAST ABUTMENT TO BE SUPPORTED ON HP 10-INCH X 42 LB STEEL PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 180 TONS ** PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA.
ESTIMATED 30'-0" LONG AT EAST ABUTMENT BODY.
ESTIMATED 25'-0" LONG AT EAST ABUTMENT WINGS.

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

TRAFFIC VOLUME

USH 10
ADT = 4,500 (2042)
R.D.S. = 55 M.P.H.

HYDRAULIC DATA

100 YEAR FREQUENCY
Q_{100} = 1300 C.F.S.
$VEL._{100}$ = 11.53 F.P.S.
$HW._{100}$ = EL. 904.92
WATERWAY AREA = 112.75 SQ. FT.
DRAINAGE AREA = 2.44 SQ. MI.
ROADWAY OVERTOPPING = N/A
SCOUR CRITICAL CODE = 5

2 YEAR FREQUENCY
Q_2 = 250 C.F.S.
$VEL._2$ = 7.30 F.P.S.
$HW._2$ = EL. 901.12

LIST OF DRAWINGS

1. GENERAL PLAN
2. CROSS SECTION & QUANTITIES
3. SUBSURFACE EXPLORATION
4. WEST ABUTMENT
5. WEST ABUTMENT DETAILS
6. EAST ABUTMENT
7. EAST ABUTMENT DETAILS
8. SUPERSTRUCTURE
9. SUPERSTRUCTURE DETAILS
10. APPROACH SLAB DETAILS
11. SINGLE SLOPE PARAPET 42SS
12. ALTERNATE CONSTRUCTION JOINT

STRUCTURE DESIGN CONTACTS:
AIHAM ALSKIF (608) 261-6113
DOMINIQUE BECHLE (608) 261-8205

NO.	DATE	REVISION	BY

WISCONSIN DEPARTMENT OF TRANSPORTATION — BUREAU OF STRUCTURES

ACCEPTED DMB 08/18/22
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-47-229

USH 10 OVER UNNAMED TRIBUTARY

COUNTY	TOWN
PIERCE	OAK GROVE

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGNED CK'D.	DRAWN BY	PLANS CK'D.
AA	ABS	DDS/EMK	AA

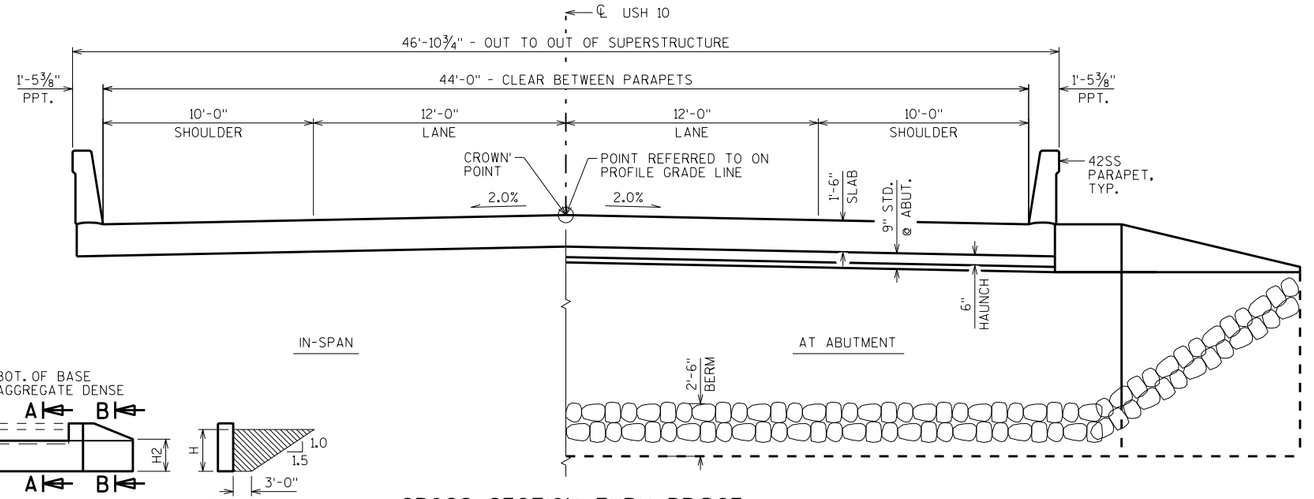
GENERAL PLAN

SHEET 1 OF 12

243

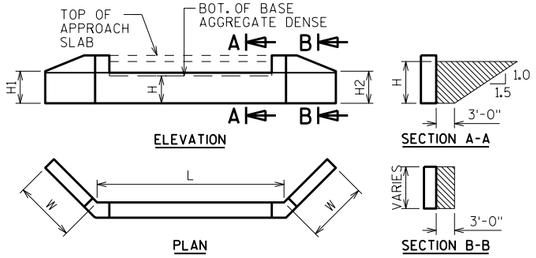
I.D. 1530-02-00B DATE: AUG. 2022

SCALE = 6.00



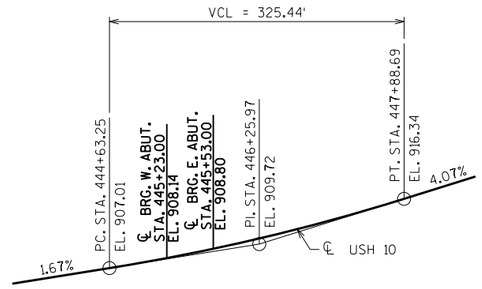
CROSS SECTION THRU BRIDGE

LOOKING EAST AT EAST ABUTMENT
PILING NOT SHOWN



ABUTMENT BACKFILL DIAGRAM

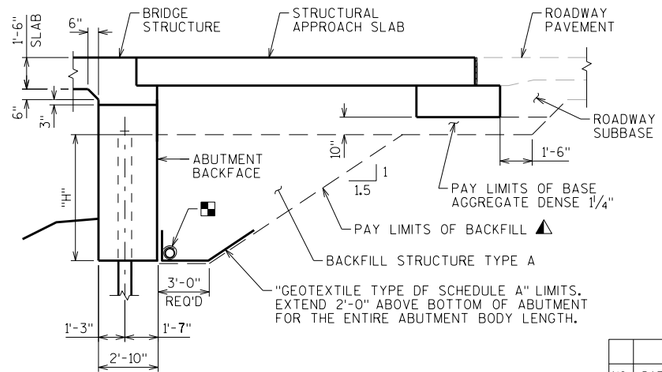
L = ABUTMENT BODY LENGTH AT BACKFACE (FT)
H = AVERAGE ABUTMENT FILL HEIGHT (FT)
H1 = WING 1 HEIGHT AT TIP (FT)
H2 = WING 2 HEIGHT AT TIP (FT)
W = WING LENGTH (FT)
EF = EXPANSION FACTOR (1.20 FOR CY BID ITEMS AND 1.00 FOR TON BID ITEMS)
V_{CF} = (L)(3.0')(H) + (L)(0.5)(1.5H)(H) + (3')(0.5)(H1+H2+H+H)(W)
V_{CY} = V_{CF} (EF)/27
V_{TON} = V_{CY} (2.0)



PROFILE GRADE LINE - USH 10

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	SUPER	W. STRUCT. APP. SLAB	WEST ABUT.	EAST ABUT.	E. STRUCT. APP. SLAB	TOTALS
203.0260	REMOVING STRUCTURE OVER WATERWAY MINIMAL DEBRIS C-47-950	EACH	---	---	---	---	---	1
206.1001	EXCAVATION FOR STRUCTURES BRIDGES B-47-229	EACH	---	---	---	---	---	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	---	---	255	255	---	510
305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	---	160	---	---	160	320
502.0100	CONCRETE MASONRY BRIDGES	CY	97	64	68	68	64	361
502.3200	PROTECTIVE SURFACE TREATMENT	SY	176	98	---	---	98	372
502.3210	PIGMENTED SURFACE SEALER	SY	31	20	---	---	20	71
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	---	---	3,790	3,790	---	7,580
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	19,265	10,875	2,435	2,435	10,875	45,885
505.0800.S	BAR STEEL REINFORCEMENT HS STAINLESS STRUCTURES	LB	425	---	---	---	---	425
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	---	---	14	14	---	28
550.0020	PRE-BORING ROCK OR CONSOLIDATED MATERIAL	LF	---	---	99	---	---	99
550.1100	PILING STEEL HP 10-INCH X 42 LB	LF	---	---	170	260	---	430
606.0300	RIPRAP HEAVY	CY	---	---	85	95	---	180
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	---	---	100	100	---	200
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	4	---	---	---	---	4
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	---	---	72	72	---	144
645.0120	GEOTEXTILE TYPE HR	SY	---	---	175	190	---	365
	NON-BID ITEMS							
	FILLER	SIZE	---	---	---	---	---	½", ¾", 1½"



TYPICAL SECTION THRU A5 ABUTMENT WITH STRUCTURAL APPROACH SLAB

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

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

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

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

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES B-47-229" SHALL BE THE EXISTING GROUNDLINE.

AT THE BACK FACE OF ABUTMENT ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL TYPE A. ALSO EXCLUDED IS THE "BASE AGGREGATE DENSE 1 1/4-INCH" AS DETAILED ON THE STRUCTURAL APPROACH SLAB SHEETS.

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

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

PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE ENTIRE EXPOSED TOP OF SLAB AND APPROACH SLAB SURFACES AND TO THE VERTICAL AND HORIZONTAL SURFACES OF THE PAVING NOTCHES AT THE ABUTMENTS.

PIGMENTED SURFACE SEALER TO BE APPLIED TO THE FRONT FACE AND THE TOP OF THE PARAPETS, INCLUDING PARAPETS ON APPROACH SLABS.

THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH HEAVY RIPRAP AND GEOTEXTILE TYPE HR TO THE EXTENT SHOWN ON SHEET 1 AND THE ABUTMENT DETAILS.

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

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

STATE PROJECT NUMBER
1530-02-70

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-47-229

DRAWN BY DDS/EMK | PLANS CK'D. AA

CROSS SECTION & QUANTITIES

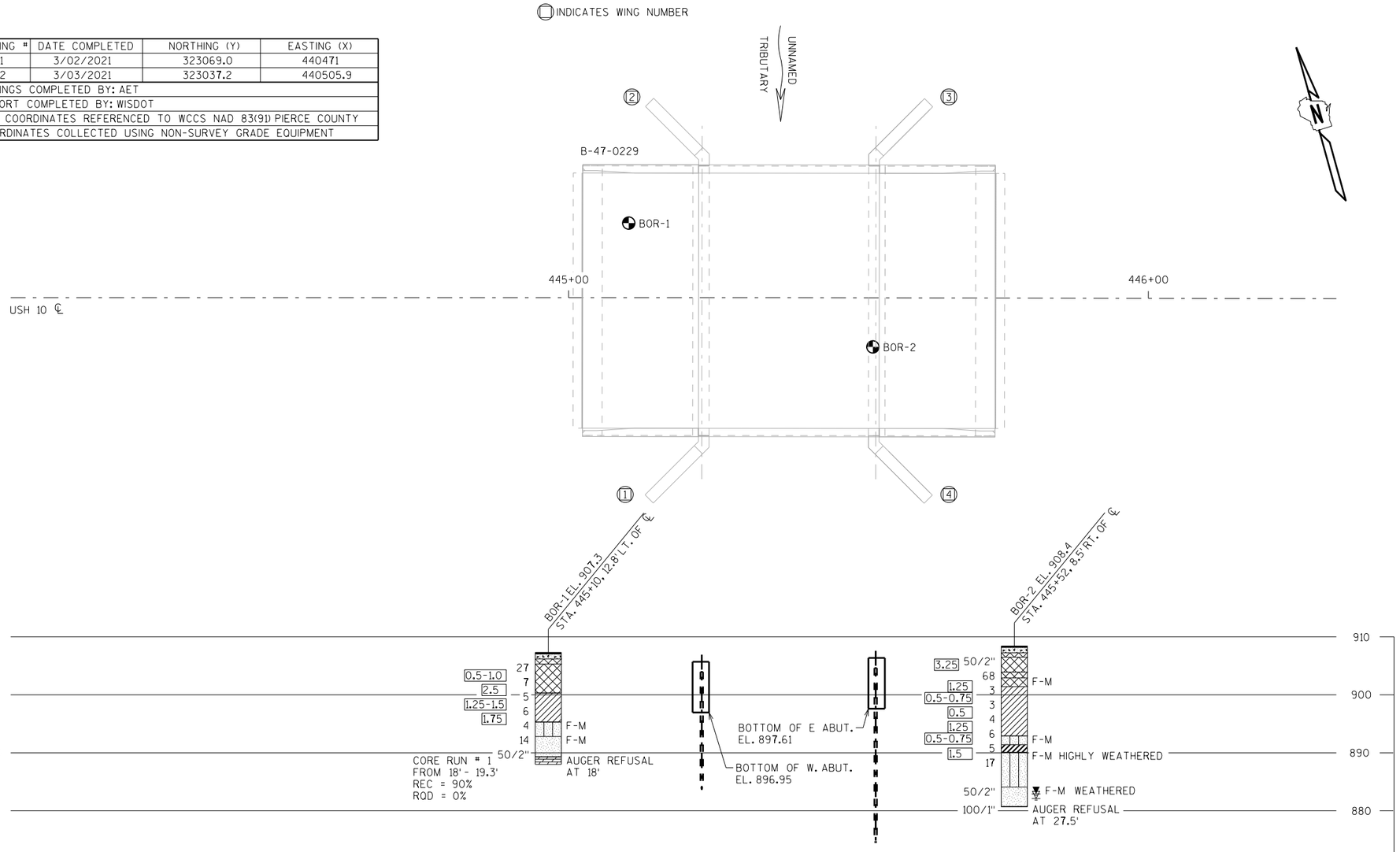
SHEET 2
244

8

8

SCALE = 3.50

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	3/02/2021	323069.0	440471
2	3/03/2021	323037.2	440505.9
BORINGS COMPLETED BY: AET			
REPORT COMPLETED BY: WISDOT			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) PIERCE COUNTY			
COORDINATES COLLECTED USING NON-SURVEY GRADE EQUIPMENT			



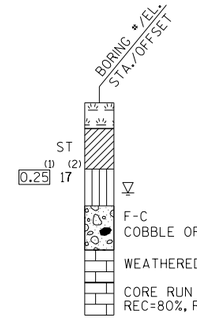
STATE PROJECT NUMBER

1530-02-70

MATERIAL SYMBOLS

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

LEGEND OF BORING



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

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

GROUND WATER ELEVATION

- ▽ AT TIME OF DRILLING
- ▼ END OF DRILLING
- ▽ AFTER DRILLING

ABBREVIATIONS

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

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-47-229

DRAWN BY TLP/DDS | PLANS CK'D. AA

SUBSURFACE EXPLORATION

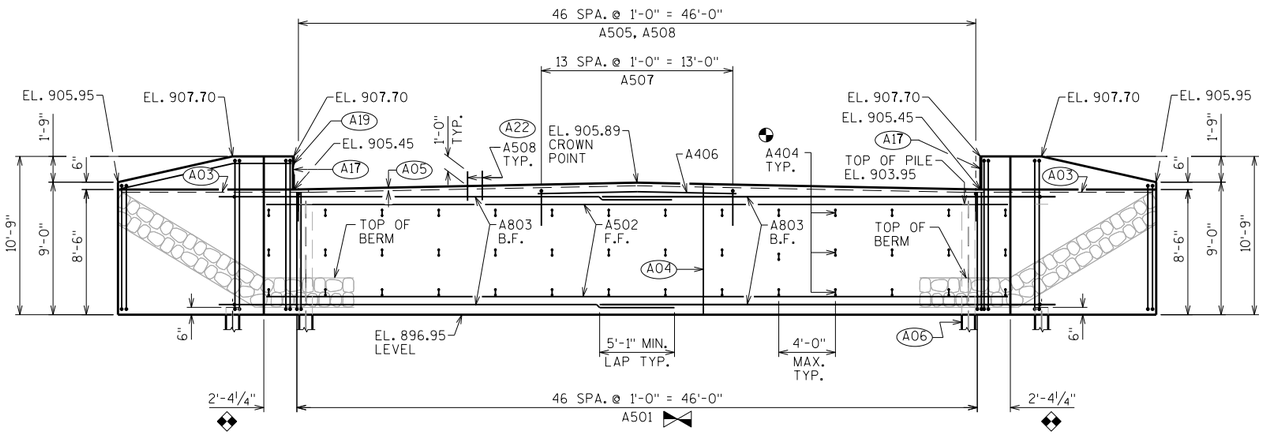
SHEET 3

245

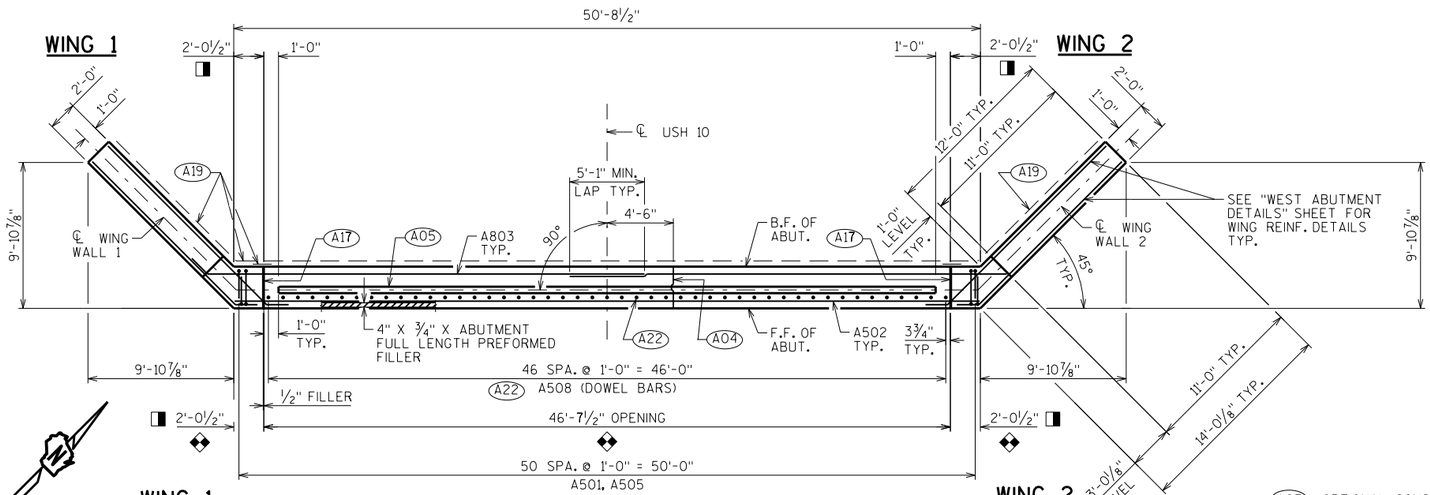
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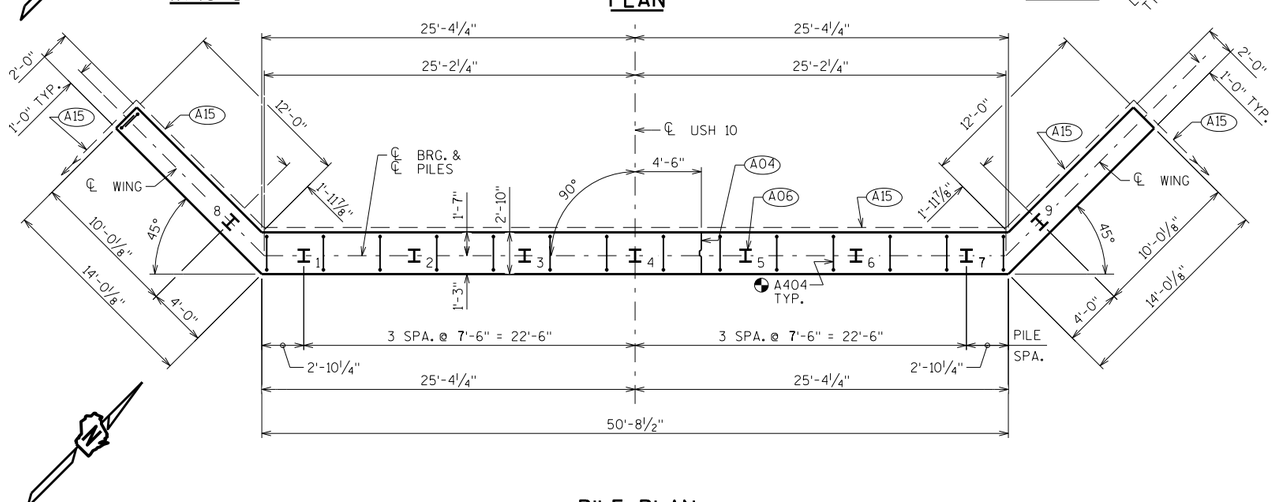
8

8



ELEVATION - LOOKING WEST





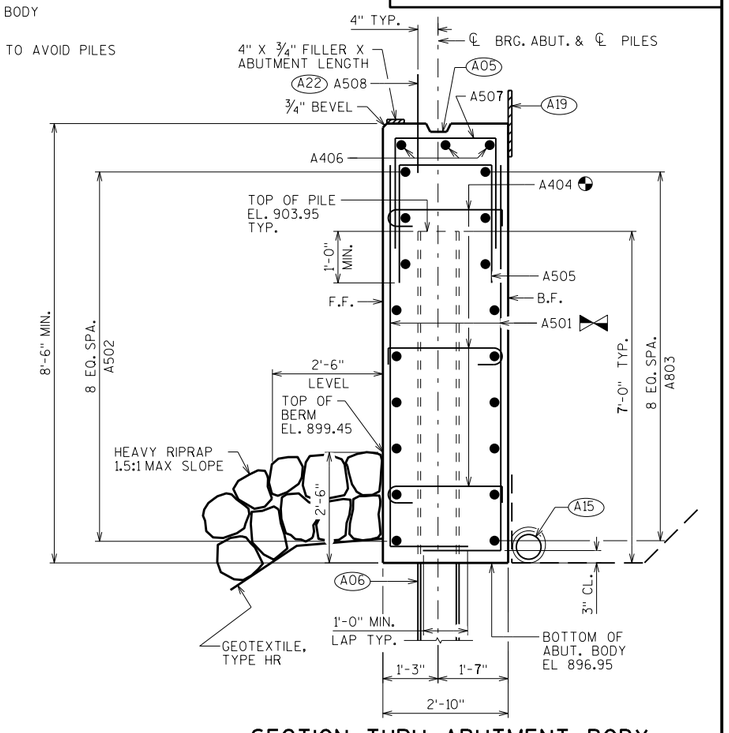
PILE PLAN

A404 BARS - 2 EQ. VERTICAL SPA. @ 4'-0" MAX. HORIZONTAL SPA. ADJUST LOCATIONS TO AVOID PILES - TYP. ALTERNATE THE POSITION OF THE 90° AND 180° HOOKS AT EACH VERTICAL LAYER OF TIES.

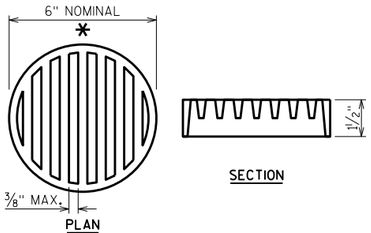
MEASURED ALONG F.F. OF BODY

MOVE/ADJUST LOCATIONS TO AVOID PILES

INCLUDES ½" FILLER



SECTION THRU ABUTMENT BODY



RODENT SHIELD DETAIL

(A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 X 6. (18" RWM @ B.F. & ¾" "V" GROOVE @ F.F. IF JOINT IS USED.

(A04) VERT. CONST. JOINT: KEYWAY FORMED BY A BEVELED 2 x 8. 3/4" "V" GROOVE @ THE FRONT FACE AND 18" RMW @ BACKFACE. FOR OPTIONAL DETAILS SEE "ALTERNATE CONSTRUCTION JOINT" SHEET.

(A05) CONST. JOINT-FORMED BY BEVELED 2 X 6.

(A06) **WEST ABUTMENT TO BE SUPPORTED ON HP 10-INCH X 42 LB STEEL PILING SEATED IN PRE-BORED HOLES. CORED 3 FEET MINIMUM INTO ROCK. PILE DRIVING IS NOT REQUIRED. THE FACTORED AXIAL RESISTANCE OF THE PILES IN COMPRESSION USED FOR DESIGN IS 180 TONS MULTIPLIED BY A RESISTANCE FACTOR OF 0.5.**
ESTIMATED 20'-0" LONG AT WEST ABUTMENT BODY.
ESTIMATED 15'-0" LONG AT WEST ABUTMENT WINGS.

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

(A17) ½" FILLER: SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

(A22) A508 BARS @ 1'-0" CTRS. MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONC.)

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

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

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-47-229

DRAWN BY	DDS	PLANS CK'D.	AA

WEST ABUTMENT

SHEET 4

246

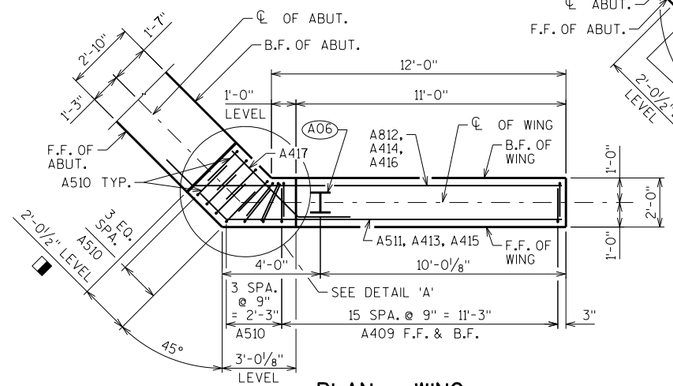
STATE PROJECT NUMBER

1530-02-70

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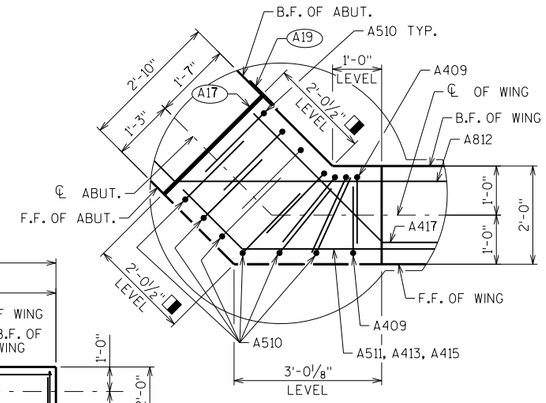
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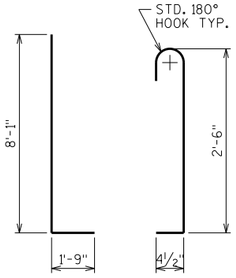


PLAN - WING

WING 2 SHOWN, WING 1 SIMILAR

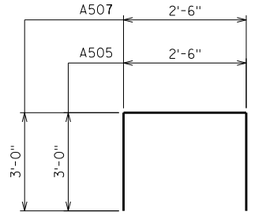


DETAIL 'A'

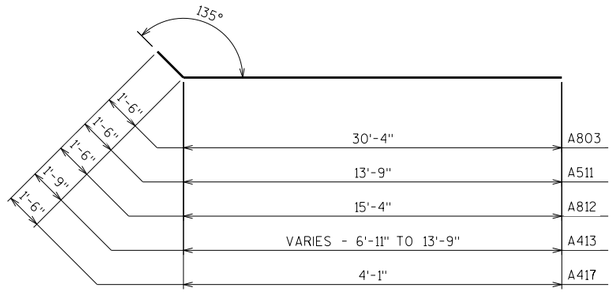


A501

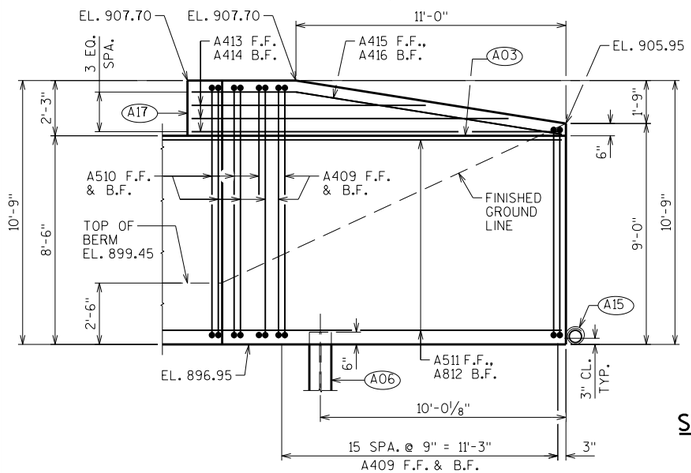
A404



A505, A507

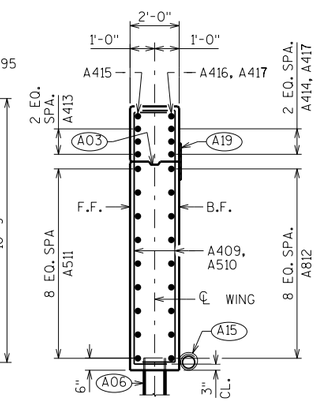


A803, A511, A812, A413, A417

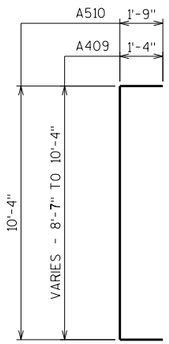


ELEVATION - WINGS 1&2

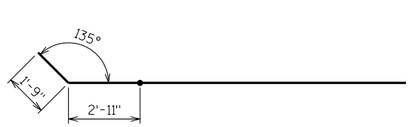
F.F. WING 2 SHOWN, WING 1 SIMILAR



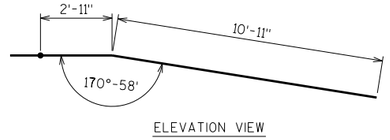
SECTION THRU WINGS 1&2



A409, A510

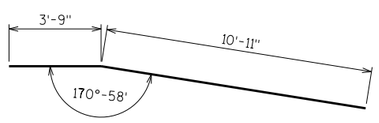


PLAN VIEW



ELEVATION VIEW

A415



ELEVATION VIEW

A416

STATE PROJECT NUMBER

1530-02-70

BILL OF BARS

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

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A501		94	9'-9"	X		BODY - VERTICAL - F.F. & B.F.
A502		9	50'-8"			BODY - HORIZONTAL - F.F.
A803		18	31'-8"	X		BODY - HORIZONTAL - B.F.
A404		42	3'-4"	X		BODY - TIE BARS
A505		47	8'-3"	X		BODY - VERTICAL
A406		3	13'-6"			BODY - HORIZONTAL - TOP
A507		14	8'-3"	X		BODY - VERTICAL - TOP
A508		47	2'-0"			DOWEL BARS - ABUT./DECK
A409	X	64	12'-0"	X	◭	WINGS - VERTICAL
A510	X	24	13'-7"	X		WINGS - VERTICAL
A511	X	18	15'-2"	X		LOWER WINGS - HORIZONTAL - F.F.
A812	X	18	16'-8"	X		LOWER WINGS - HORIZONTAL - B.F.
A413	X	6	12'-0"	X	◭	UPPER WINGS - HORIZONTAL - F.F.
A414	X	6	11'-3"		◭	UPPER WINGS - HORIZONTAL - B.F.
A415	X	2	15'-4"	X		UPPER WINGS - HORIZONTAL - TOP - F.F.
A416	X	2	14'-7"	X		UPPER WINGS - HORIZONTAL - TOP - B.F.
A417	X	8	5'-6"	X		UPPER WINGS - HORIZONTAL - B.F.

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

BAR SERIES TABLE

BAR MARK	NO. REQ'D.	LENGTH
A409	4 SERIES OF 16	11'-1" TO 12'-10"
A413	2 SERIES OF 3	8'-7" TO 15'-5"
A414	2 SERIES OF 3	7'-8" TO 14'-8"

BUNDLE AND TAG EACH SERIES SEPARATELY.

◨ INCLUDES ½" FILLER

(A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 x 6. (18" RMW @ B.F. & 3/4" "V" GROOVE @ F.F. IF JOINT IS USED).

(A06) **WEST ABUTMENT TO BE SUPPORTED ON HP 10-INCH X 42 LB STEEL PILING SEATED IN PRE-BORED HOLES, CORED 3 FEET MINIMUM INTO ROCK. PILE DRIVING IS NOT REQUIRED. THE FACTORED AXIAL RESISTANCE OF THE PILES IN COMPRESSION USED FOR DESIGN IS 180 TONS MULTIPLIED BY A RESISTANCE FACTOR OF 0.5. ESTIMATED 20'-0" LONG AT WEST ABUTMENT BODY. ESTIMATED 15'-0" LONG AT WEST ABUTMENT WINGS.**

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

(A17) ½" FILLER SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-47-229

DRAWN BY DDS | PLANS CK'D. AA

WEST ABUTMENT DETAILS

SHEET 5

247

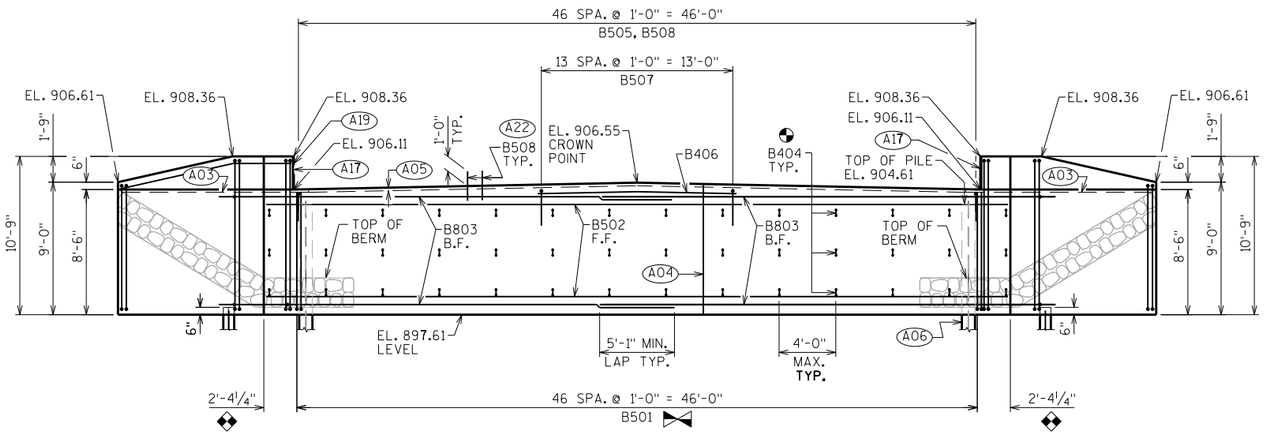
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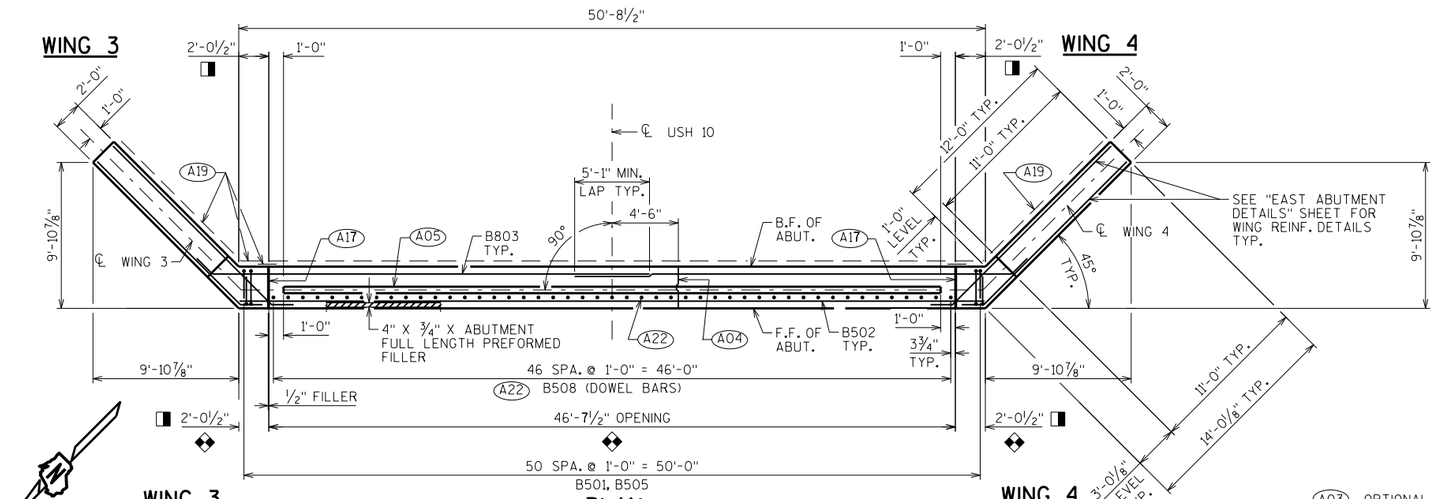
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STATE PROJECT NUMBER

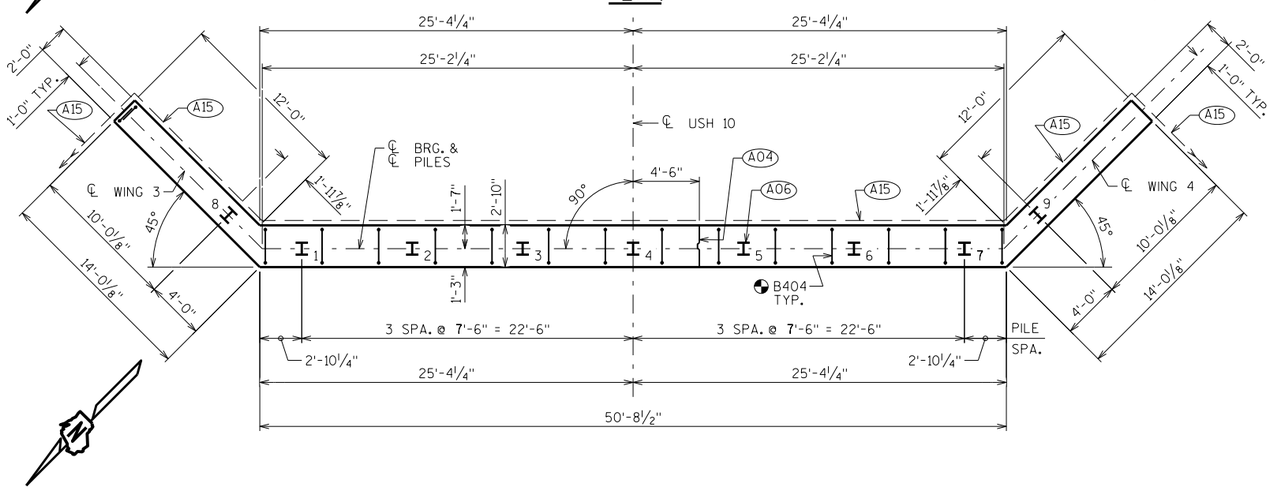
1530-02-70



ELEVATION - LOOKING EAST



WING 3 PLAN — WING 4



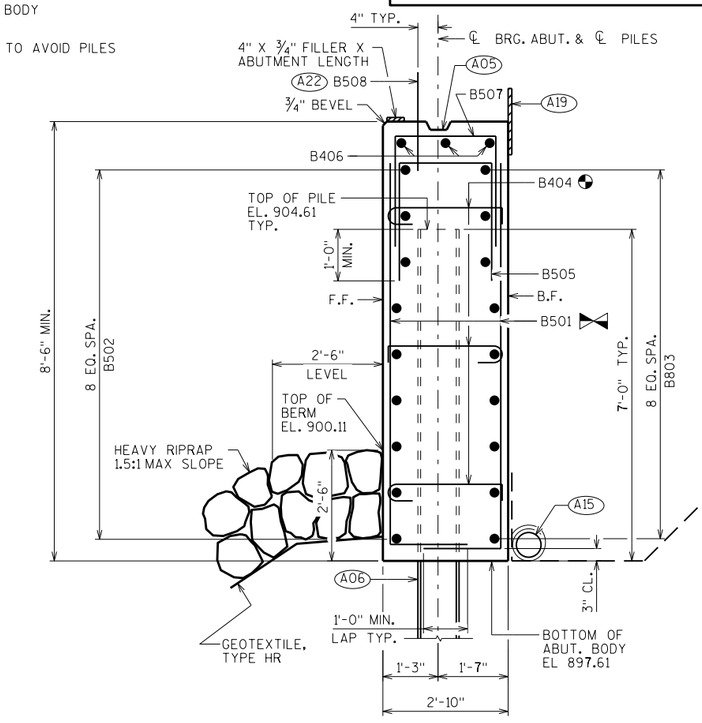
PILE PLAN

B404 BARS - 2 EQ. VERTICAL SPA. @ 4'-0" MAX. HORIZONTAL SPA. ADJUST LOCATIONS TO AVOID PILES - TYP. ALTERNATE THE POSITION OF THE 90° AND 180° HOOKS AT EACH VERTICAL LAYER OF TIES.

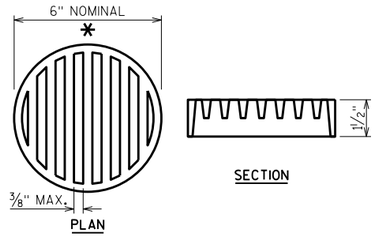
MEASURED ALONG F.F. OF BODY

MOVE/ADJUST LOCATIONS TO AVOID PILES

INCLUDES ½" FILLER



SECTION THRU ABUTMENT BODY



RODENT SHIELD DETAIL

(A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 x 6. (18" RMW @ B.F. & 3/4" "V" GROOVE @ F.F. IF JOINT IS USED).

(A04) VERT. CONST. JOINT: KEYWAY FORMED BY A BEVELED 2 x 8. 3/4" "V" GROOVE @ THE FRONT FACE AND 18" RMW @ BACKFACE. FOR OPTIONAL DETAILS SEE "ALTERNATE CONSTRUCTION JOINT" SHEET.

(A05) CONST. JOINT-FORMED BY BEVELED 2 X 6.

(A06) **EAST ABUTMENT TO BE SUPPORTED ON HP 10-INCH X 42 LB STEEL PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED 30'-0" LONG AT EAST ABUTMENT BODY. ESTIMATED 25'-0" LONG AT EAST ABUTMENT WINGS.**

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

(A17) ½" FILLER: SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

(A22) B508 BARS @ 1'-0" CTRS. MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONC.)

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

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

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-47-229

	DRAWN BY	DDS	PLANS CK'D.	AA

EAST ABUTMENT

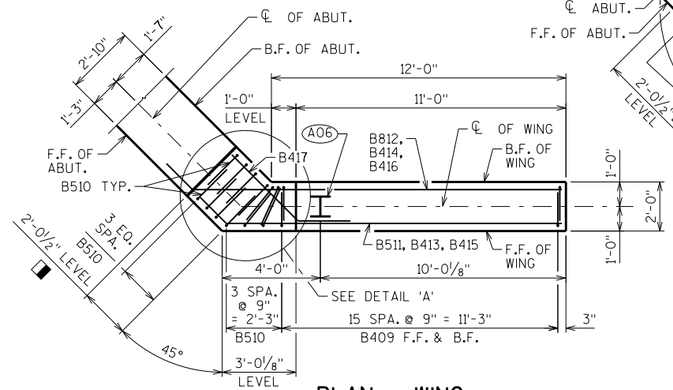
SHEET 6

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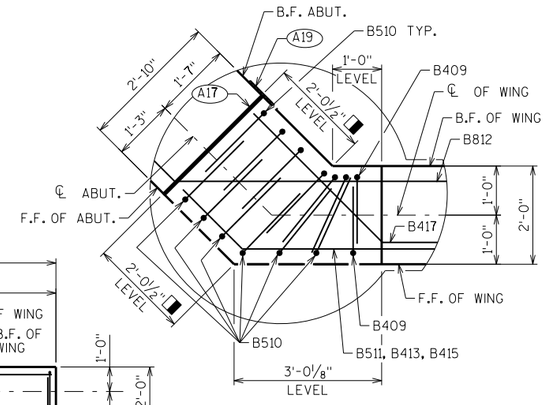
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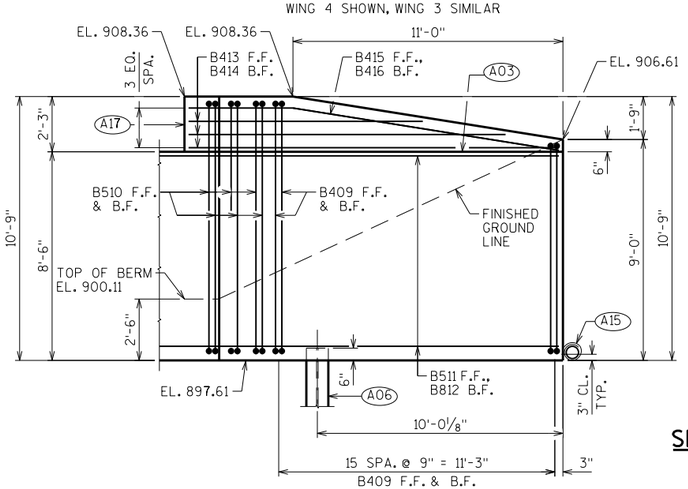


PLAN - WING



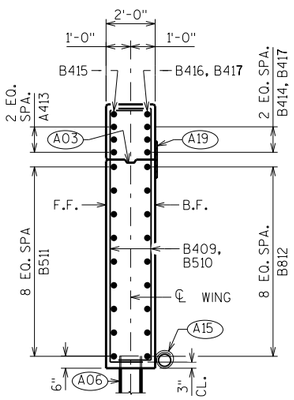
DETAIL 'A'

WING 4 SHOWN, WING 3 SIMILAR



ELEVATION - WINGS 3&4

F.F. WING 4 SHOWN, WING 3 SIMILAR



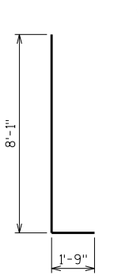
SECTION THRU WINGS 3&4

STEEL 'HP' SHAPE

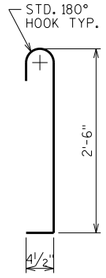
HP WELD DETAIL

FLANGE SHOWN, WEB SIMILAR

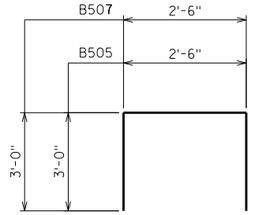
PILE DETAILS



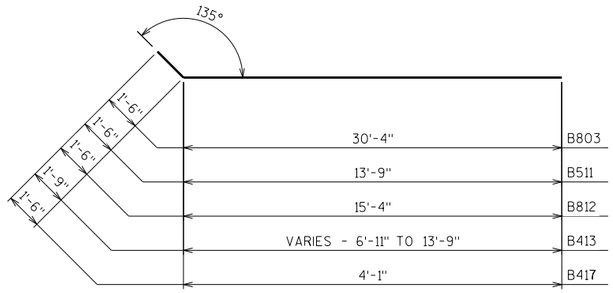
B501



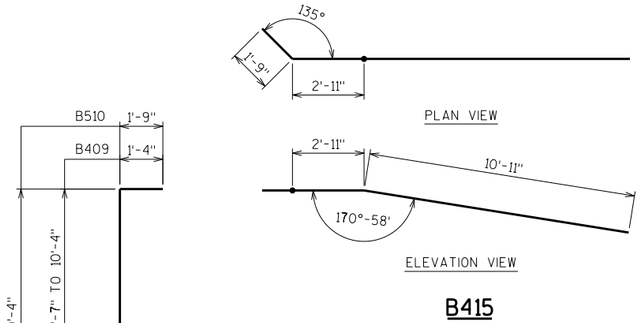
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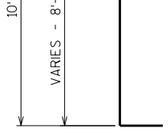
B505, B507



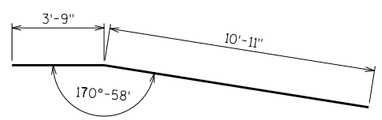
B803, B511, B812, B413, B417



B415



B409, B510



B416

STATE PROJECT NUMBER

1530-02-70

BILL OF BARS

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

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
B501		94	9'-9"	X		BODY - VERTICAL - F.F. & B.F.
B502		9	50'-8"			BODY - HORIZONTAL - F.F.
B803		18	31'-8"	X		BODY - HORIZONTAL - B.F.
B404		42	3'-4"	X		BODY - TIE BARS
B505		47	8'-3"	X		BODY - VERTICAL
B406		3	13'-6"			BODY - HORIZONTAL - TOP
B507		14	8'-3"	X		BODY - VERTICAL - TOP
B508		47	2'-0"			DOWEL BARS - ABUT./DECK
B409	X	64	12'-0"	X	◭	WINGS - VERTICAL
B510	X	24	13'-7"	X		WINGS - VERTICAL
B511	X	18	15'-2"	X		LOWER WINGS - HORIZONTAL - F.F.
B812	X	18	16'-8"	X		LOWER WINGS - HORIZONTAL - B.F.
B413	X	6	12'-0"	X	◭	UPPER WINGS - HORIZONTAL - F.F.
B414	X	6	11'-3"		◭	UPPER WINGS - HORIZONTAL - B.F.
B415	X	2	15'-4"	X		UPPER WINGS - HORIZONTAL - TOP - F.F.
B416	X	2	14'-7"	X		UPPER WINGS - HORIZONTAL - TOP - B.F.
B417	X	8	5'-6"	X		UPPER WINGS - HORIZONTAL - B.F.

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

BAR SERIES TABLE

BAR MARK	NO. REQ'D.	LENGTH
B409	4 SERIES OF 16	11'-1" TO 12'-10"
B413	2 SERIES OF 3	8'-7" TO 15'-5"
B414	2 SERIES OF 3	7'-8" TO 14'-8"

BUNDLE AND TAG EACH SERIES SEPARATELY.

◨ INCLUDES ½" FILLER

(A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 x 6. (18" RMW @ B.F. & 3/4" "V" GROOVE @ F.F. IF JOINT IS USED).

(A06) **EAST ABUTMENT TO BE SUPPORTED ON HP 10-INCH X 42 LB STEEL PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED 30'-0" LONG AT EAST ABUTMENT BODY. ESTIMATED 25'-0" LONG AT EAST ABUTMENT WINGS.**

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

(A17) 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-47-229

DRAWN BY DDS | PLANS CK'D. AA

EAST ABUTMENT DETAILS

SHEET 7

249

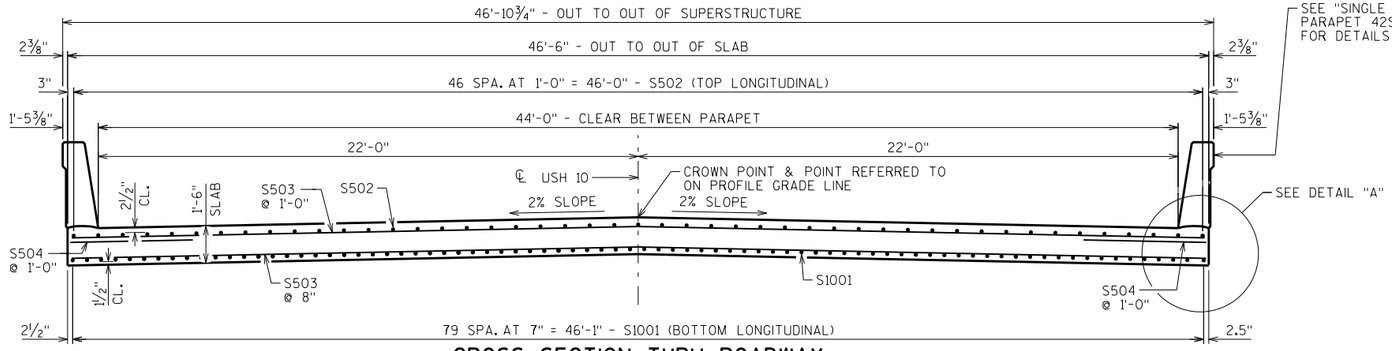
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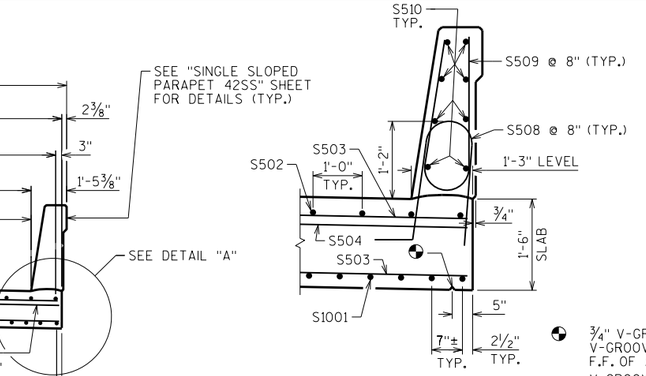
STATE PROJECT NUMBER

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CROSS SECTION THRU ROADWAY

LOOKING EAST



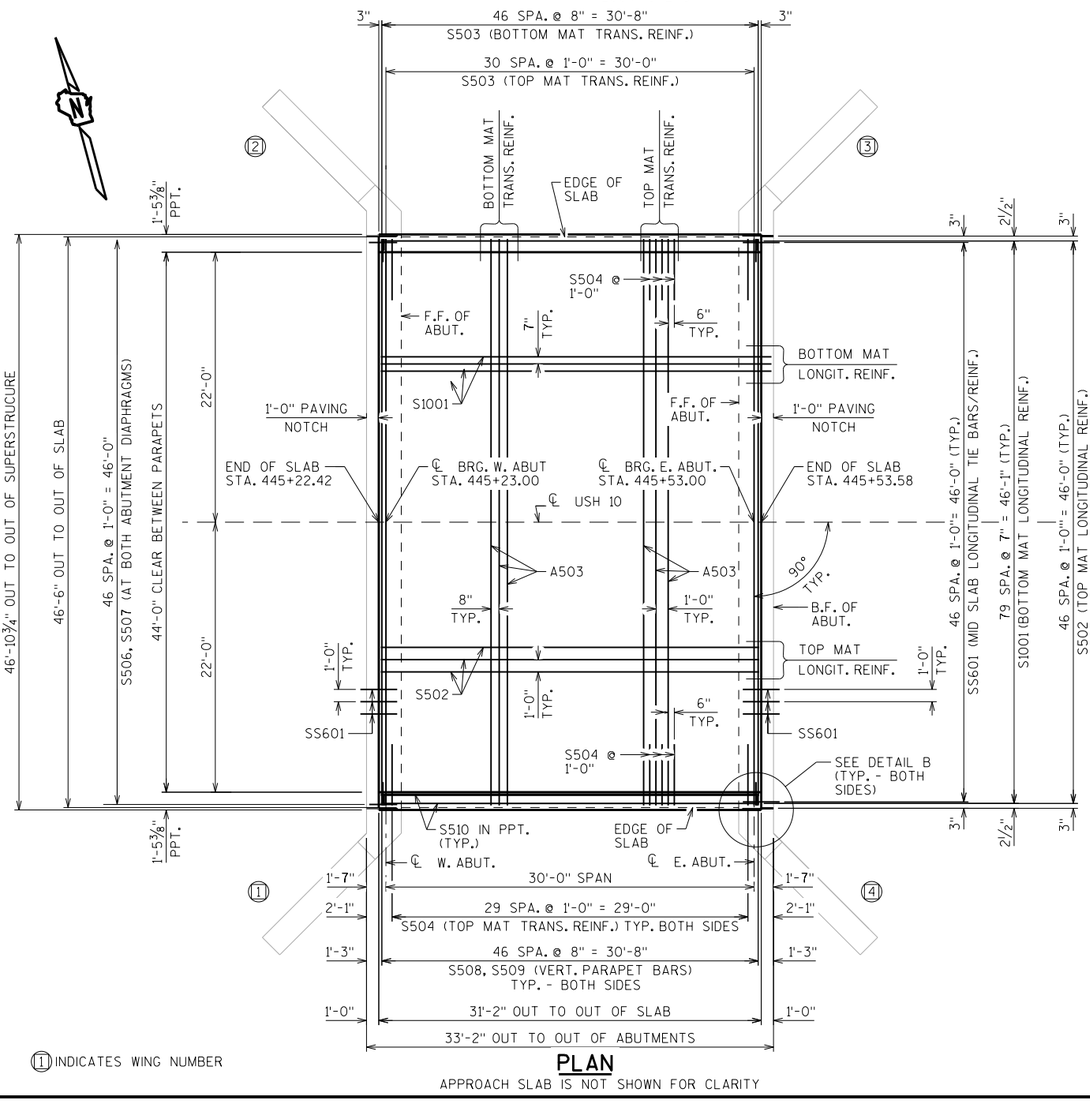
DETAIL A

NOTES

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

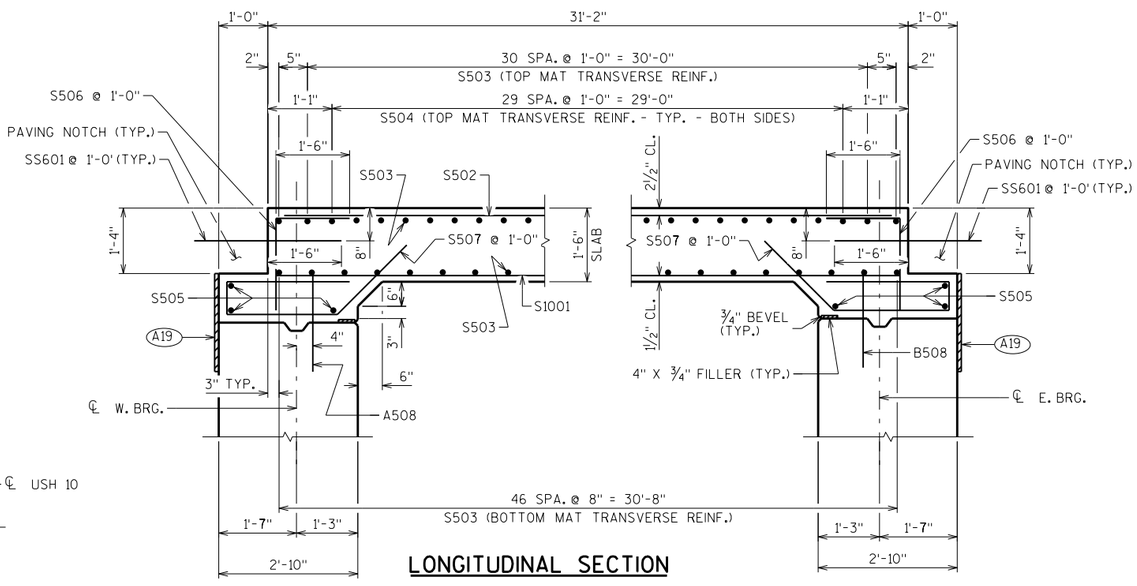
ALL SLAB THICKNESS DIMENSIONS ARE MINIMUM. ANY TOLERANCES NECESSARY TO CORRECT CONSTRUCTION DISCREPANCIES ARE TO BE PLUS (+).

PARAPETS PLACED ON TOP OF THE SLAB SHALL BE POURED AFTER THE FALSEWORK HAS BEEN RELEASED.



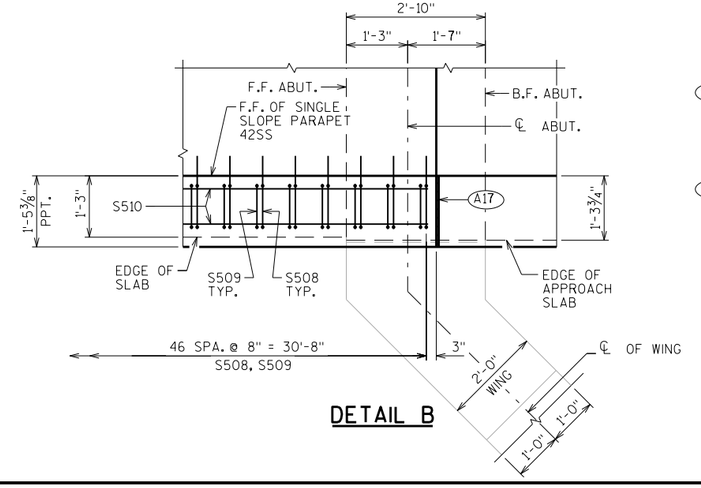
PLAN

APPROACH SLAB IS NOT SHOWN FOR CLARITY



LONGITUDINAL SECTION

LOOKING NORTH



DETAIL B

A17 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

A19 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

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STRUCTURES DESIGN SECTION

STRUCTURE B-47-229

DRAWN BY DDS | PLANS CK'D. AA

SUPERSTRUCTURE

SHEET 8

250

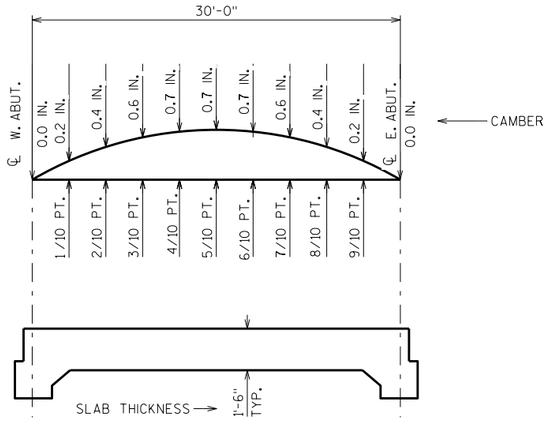
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8

8

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CAMBER AND SLAB THICKNESS DIAGRAM

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

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

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

SURVEY TOP OF SLAB ELEVATIONS

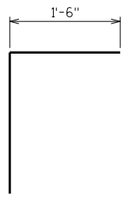
	WEST ABUTMENT	5/10 PT.	EAST ABUTMENT
N. GUTTER			
℄ USH 10			
S. GUTTER			

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

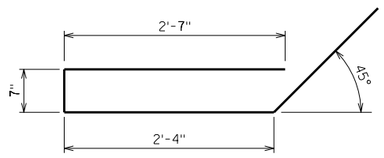
BILL OF BARS

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

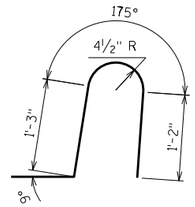
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
S1001	X	80	30'-10"			SLAB - LONGITUDINAL - BOTTOM
S502	X	47	30'-10"			SLAB - LONGITUDINAL - TOP
S503	X	80	46'-2"			SLAB - TRANSVERSE - TOP & BOTTOM
S504	X	60	5'-0"			SLAB - TRANSVERSE - BOTH SIDES
S505	X	6	46'-2"	X		ABUTMENT DIAPHRAGM - TRANSVERSE
S506	X	94	3'-3"	X		DIAPHRAGM/SLAB - VERTICAL
S507	X	94	7'-5"	X		ABUTMENT DIAPHRAGM - VERTICAL
S508	X	97	4'-5"	X		PARAPET - VERTICAL
S509	X	97	6'-8"	X		PARAPET - VERTICAL
S510	X	16	30'-10"			PARAPET - HORIZONTAL
STAINLESS STEEL → SS601	X	94	3'-0"			STRUCTURAL SLAB/APPROACH SLAB - TIE BARS



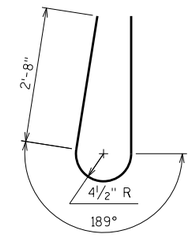
S506



S507



S508



S509

TOP OF SLAB ELEVATIONS

LOCATION	℄ BRG. W. ABUT.	1/10 PT.	2/10 PT.	3/10 PT.	4/10 PT.	5/10 PT.	6/10 PT.	7/10 PT.	8/10 PT.	9/10 PT.	℄ BRG. E. ABUT.
N. EDGE OF DECK	907.70	907.76	907.82	907.89	907.96	908.02	908.09	908.16	908.22	908.29	908.36
CROWN	908.14	908.20	908.26	908.33	908.40	908.46	908.53	908.60	908.66	908.73	908.80
S. EDGE OF DECK	907.70	907.76	907.82	907.89	907.96	908.02	908.09	908.16	908.22	908.29	908.36

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STRUCTURES DESIGN SECTION

STRUCTURE B-47-229

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SUPERSTRUCTURE DETAILS

SHEET 9

251

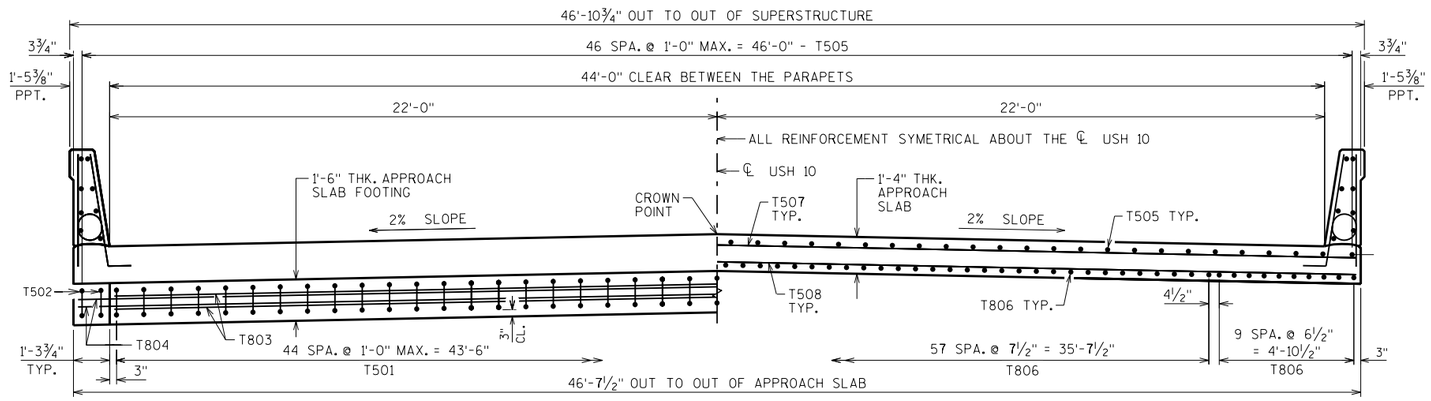
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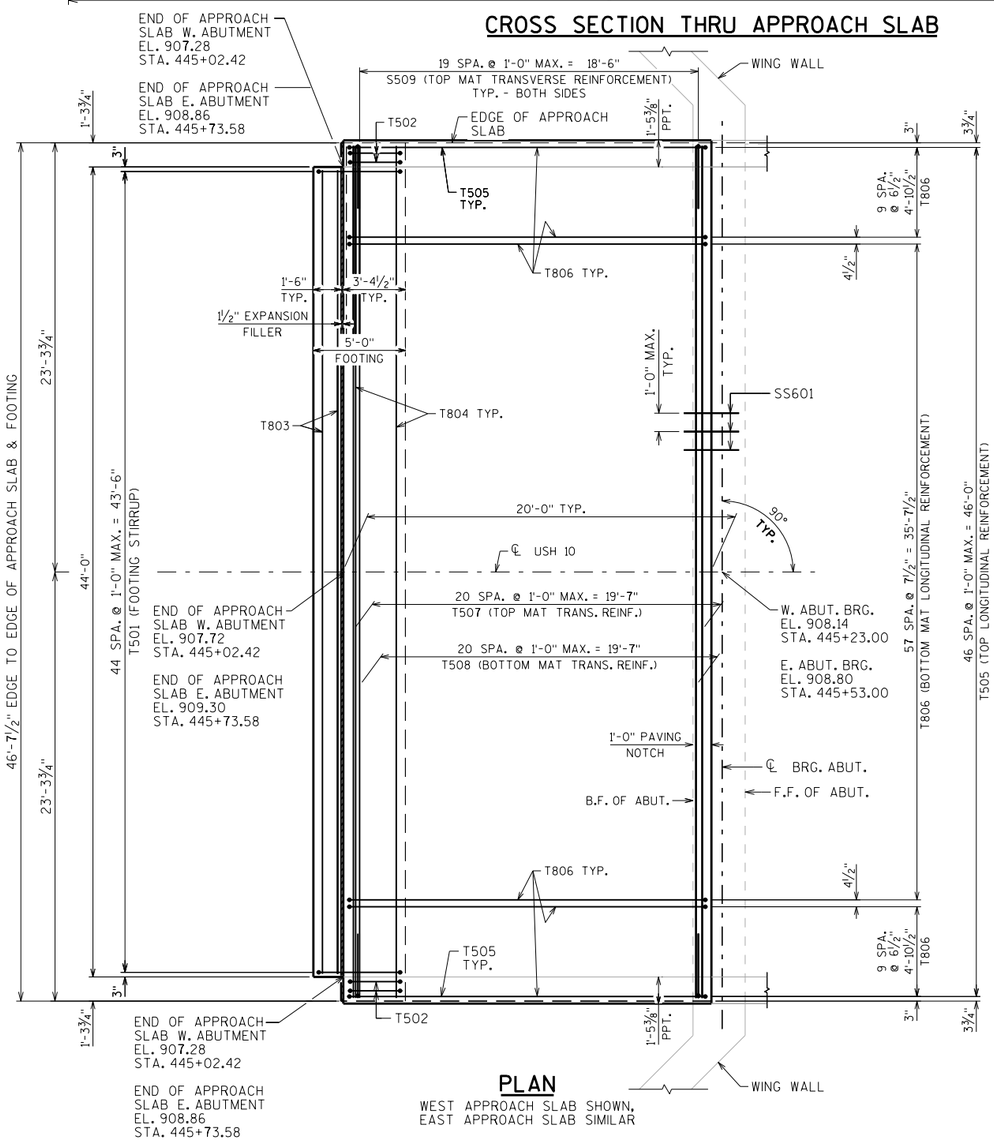
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CROSS SECTION THRU APPROACH SLAB



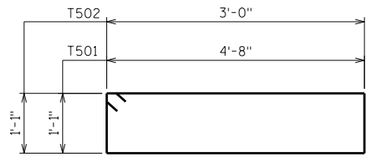
PLAN

WEST APPROACH SLAB SHOWN.
EAST APPROACH SLAB SIMILAR

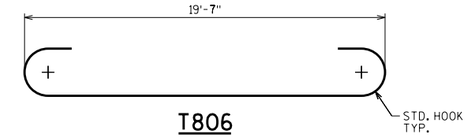
BILL OF BARS

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

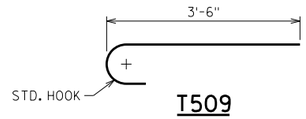
BAR MARK	COAT	WEST APPR. SLAB NO. REQ'D.	EAST APPR. SLAB NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
T501	X	45	45	12'-2"	X		FOOTING - STIRRUP
T502	X	4	4	8'-10"	X		FOOTING - STIRRUP
T803	X	4	4	43'-8"			FOOTING - TRANSVERSE
T804	X	8	8	46'-3"			FOOTING - TRANSVERSE
T505	X	48	48	19'-7"			SLAB - LONGITUDINAL - TOP
T806	X	78	78	21'-5"	X		SLAB - LONGITUDINAL - BOTTOM
T507	X	21	21	46'-3"			SLAB - TRANSVESRE - TOP
T508	X	21	21	46'-3"			SLAB - TRANSVERSE - BOTTOM
T509	X	40	40	4'-1"	X		SLAB - TRANSVERSE - TOP - EDGES



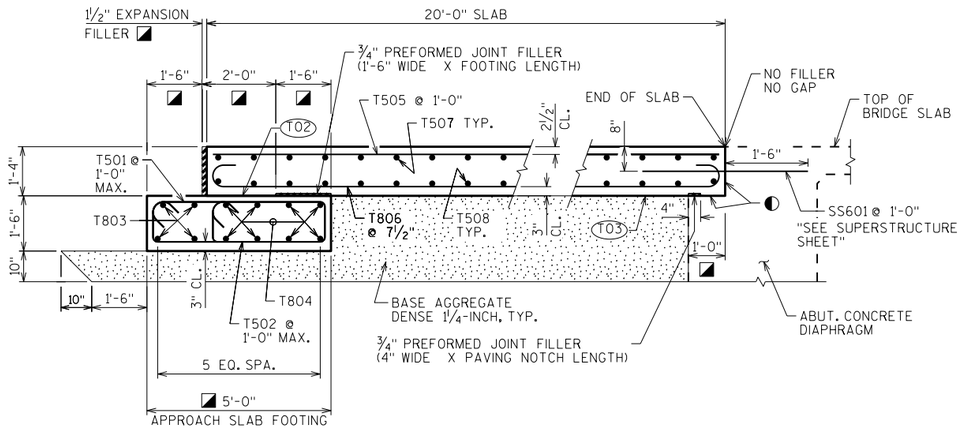
T501, T502



T806



T509



SECTION THRU APPROACH SLAB

◐ APPLY PROTECTIVE SURFACE TREATMENT TO PAVING NOTCH SURFACES PRIOR TO POURING STRUCTURAL APPROACH SLAB.

◪ MEASURED NORMAL TO ABUTMENT

(T02) STEEL TROWEL TOP SURFACE OF FOOTING AND PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE LENGTH OF THE FOOTING.

(T03) PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE LENGTH OF THE SUBGRADE.

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STRUCTURE B-47-229

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APPROACH SLAB DETAILS

SHEET 10

252

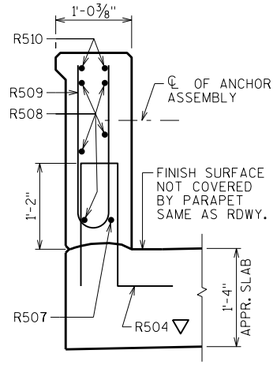
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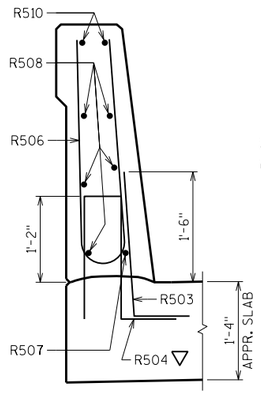
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STATE PROJECT NUMBER

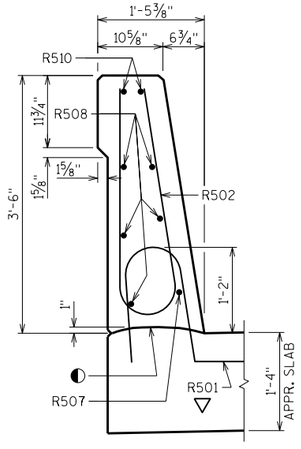
1530-02-70



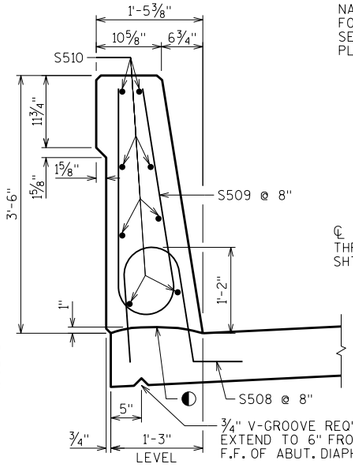
SECTION A-A



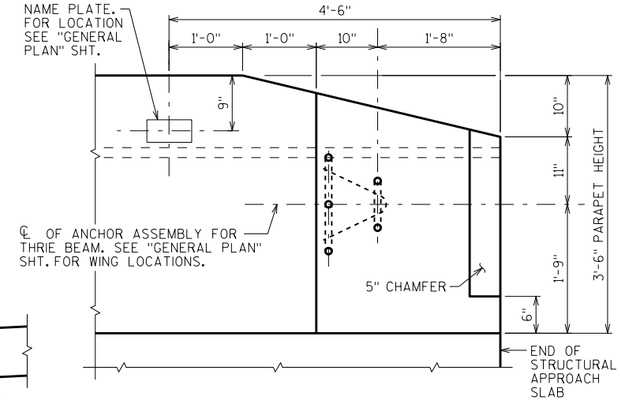
SECTION B-B



SECTION C-C



SECTION THRU PARAPET ON SLAB



PARAPET END TREATMENT DETAIL

LOOKING AT INSIDE FACE OF PARAPET

BILL OF BARS

FOR STRUCTURAL APPROACH SLAB PARAPETS

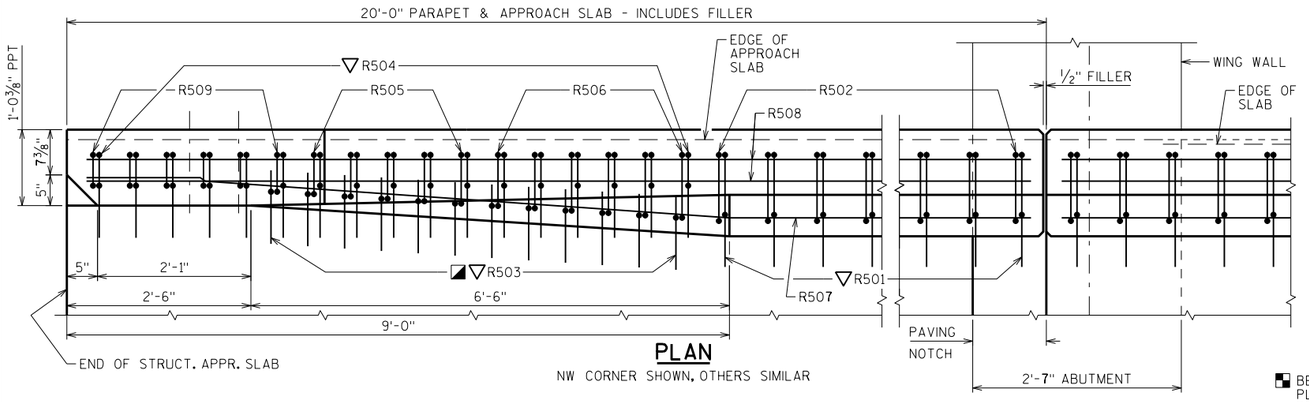
BAR MARK	COAT	WEST ABUT.	EAST ABUT.	LENGTH	BENT	BAR SERIES	LOCATION
R501	X	34	34	4'-5"	X		PARAPET VERT.
R502	X	34	34	6'-8"	X		PARAPET VERT.
R503	X	24	24	2'-9"	X		PARAPET VERT.
R504	X	34	34	4'-4"	X		PARAPET VERT.
R505	X	10	10	6'-5"	X		PARAPET VERT.
R506	X	12	12	6'-6"	X		PARAPET VERT.
R507	X	2	2	19'-7"	X		PARAPET HORIZ.
R508	X	10	10	19'-7"			PARAPET HORIZ.
R509	X	12	12	5'-5"	X	⚠	PARAPET VERT.
R510	X	4	4	19'-7"	X		PARAPET HORIZ.

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

BAR SERIES TABLE

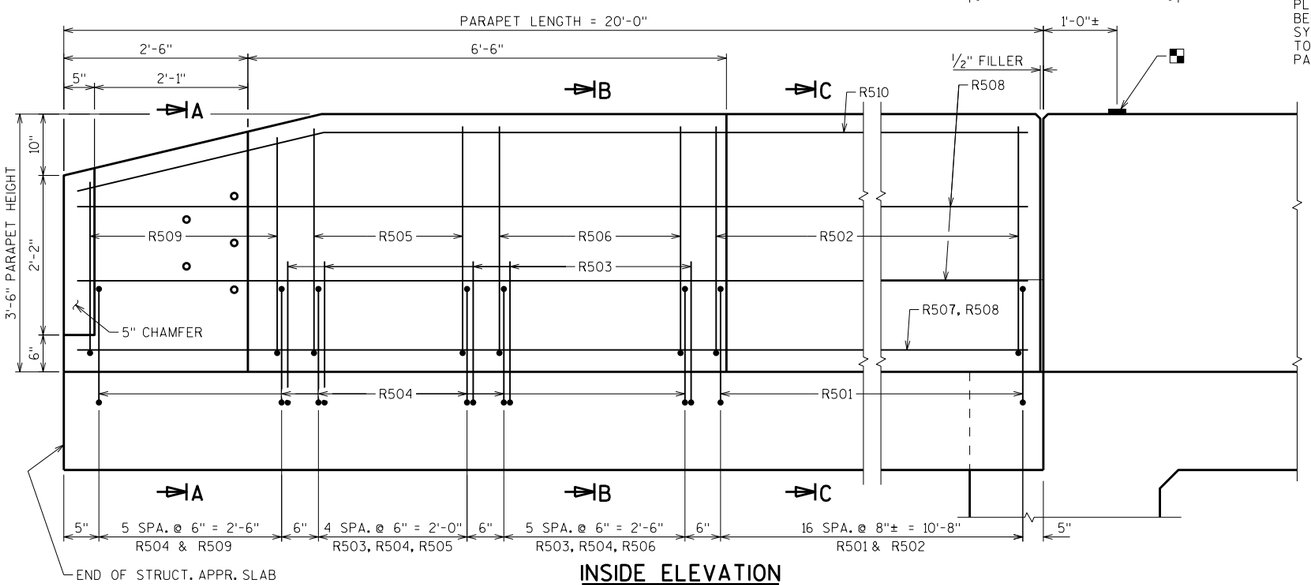
BAR MARK	NO. REQ'D	LENGTH
R509	4 SERIES OF 6	4'-9" TO 6'-1"

BUNDLE AND TAG EACH SERIES SEPARATELY.



PLAN

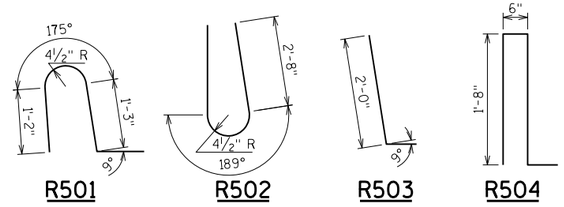
NW CORNER SHOWN, OTHERS SIMILAR

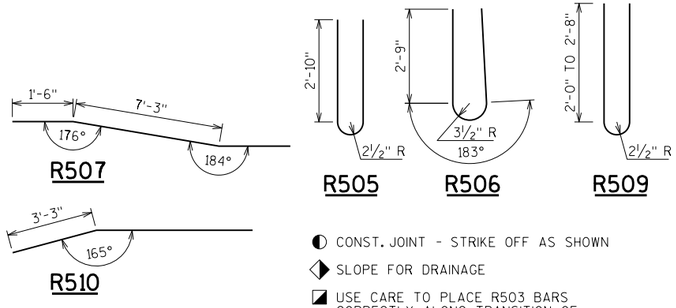


INSIDE ELEVATION

NW CORNER SHOWN, OTHERS SIMILAR
WING & STRUCTURAL APPROACH SLAB FOOTING NOT SHOWN FOR CLARITY

■ BENCH MARK CAP. AVOID PLACING A BENCH MARK CAP BELOW A RAIL OR FENCE SYSTEM THAT IS ATTACHED TO THE TOP OF THE PARAPET.



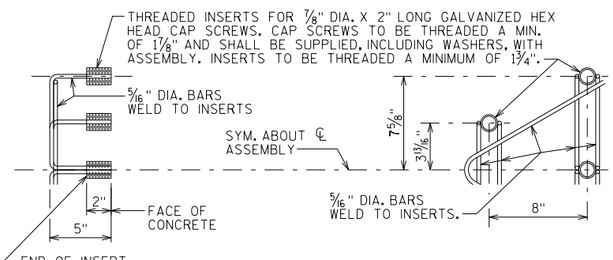


◐ CONST. JOINT - STRIKE OFF AS SHOWN

◆ SLOPE FOR DRAINAGE

◪ USE CARE TO PLACE R503 BARS CORRECTLY ALONG TRANSITION OF PARAPET.

▽ R501, R503, AND R504 BARS TO BE TIED TO STRUCTURAL APPROACH SLAB STEEL BEFORE STRUCTURAL APPROACH SLAB IS POURED.



DETAIL OF ANCHOR ASSEMBLY

NOTE: HEX HEAD CAP SCREWS & WASHERS TO BE GALVANIZED IN ACCORDANCE WITH AASHTO M232 CLASS C.

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

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STRUCTURES DESIGN SECTION

STRUCTURE B-47-229

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SINGLE SLOPE PARAPET 42SS

SHEET 11

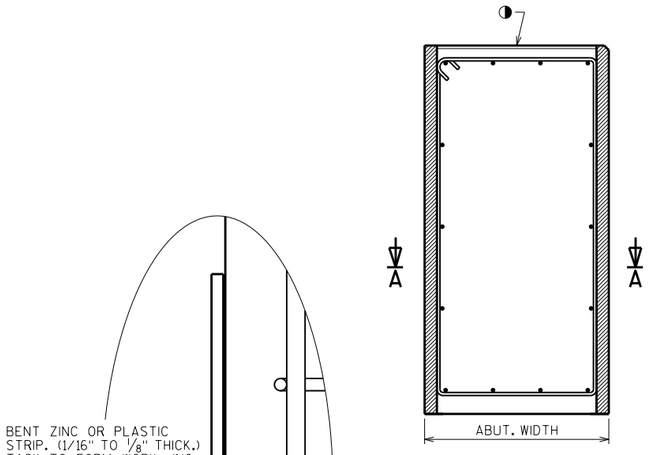
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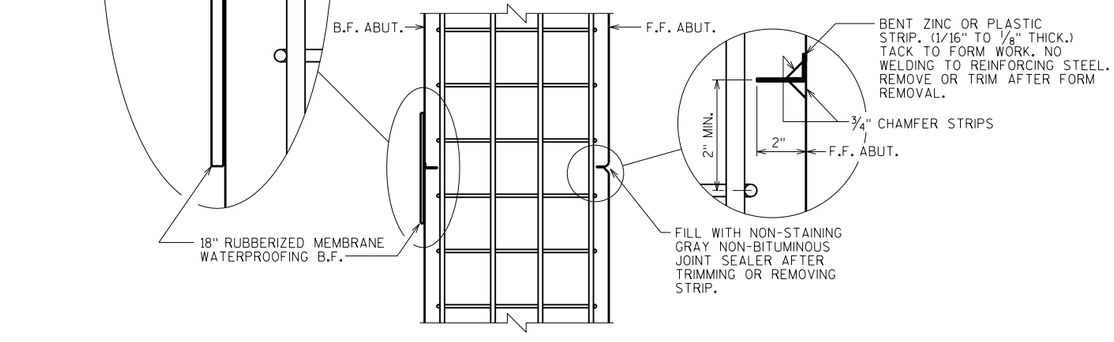
8

8

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SECTION THRU ABUTMENT BODY



SECTION A-A

ALTERNATE CONSTRUCTION JOINT AT ABUTMENT

NOTES

PARTIAL ZINC OR PLASTIC BULKHEAD MAY BE USED AS ALTERNATE CONSTRUCTION JOINT, WITH THE PERMISSION OF THE ENGINEER, AT THE CONTRACTOR'S EXPENSE.

VERTICAL CONSTRUCTION JOINT KEYWAY IS NOT REQUIRED WHEN USING ALTERNATE CONSTRUCTION JOINT.

CARE IS TO BE USED IN CASTING CONCRETE AROUND BULKHEAD TO PREVENT DISLOCATION OR MISALIGNMENT OF THE BULKHEAD.

SAW CUTTING JOINT IS NOT ALLOWED.

◑ USE A JOINT TOOL TO CONSTRUCT A CONTRACTION JOINT APPROXIMATELY 1/2" DEEP.

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STRUCTURE B-47-229

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ALTERNATE CONSTRUCTION JOINT

SHEET 12

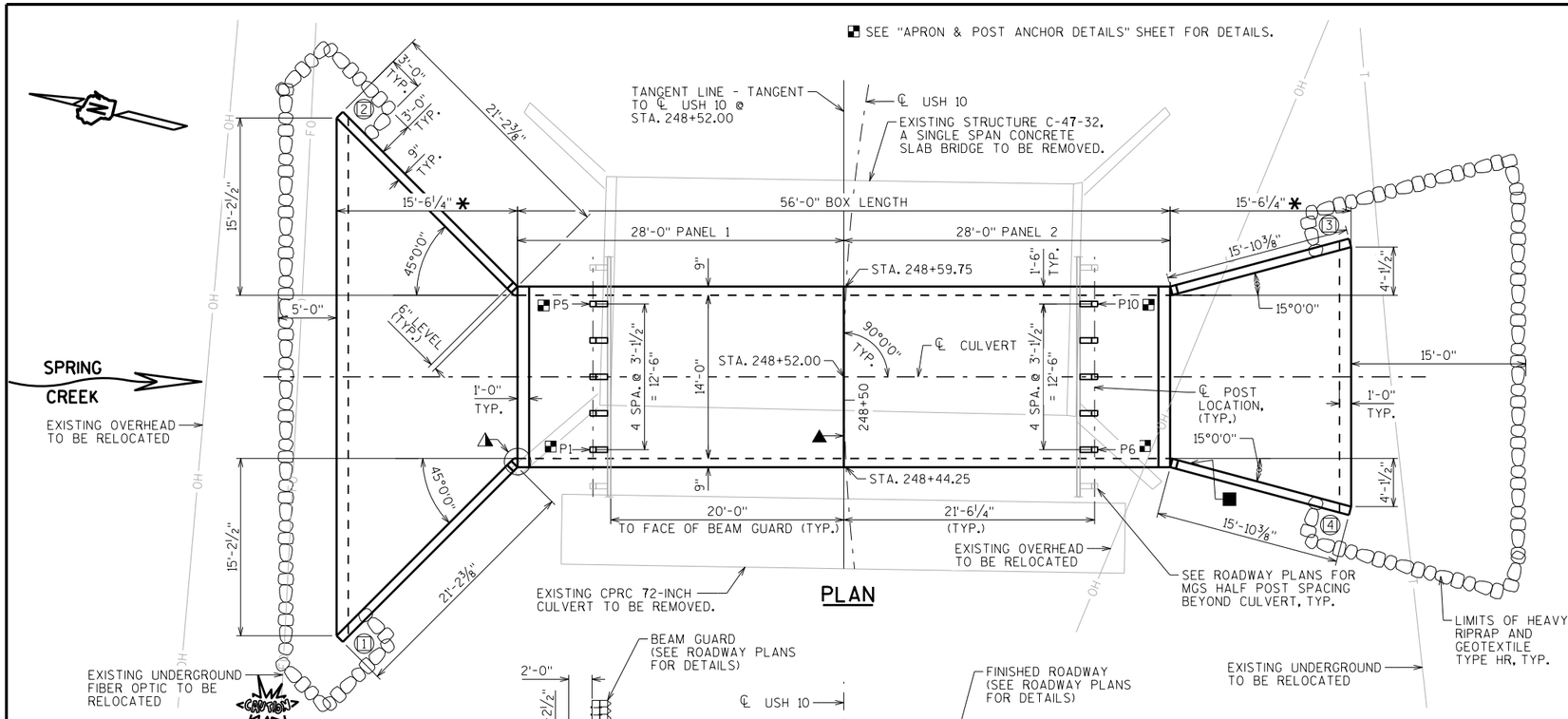
254

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SCALE = 1.00

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EXCAVATION BELOW SUBGRADE (EBS) REQUIRED AT THE OUTLET AND INLET. USE BREAKER RUN TO FILL IN AREAS OF EBS. SEE ROADWAY PLANS FOR QUANTITIES.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

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

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES CULVERTS C-47-60" SHALL BE THE EXISTING GROUNDLINE.

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

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

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

PLACE 18" (MIN.) WIDE SHEET OF "RUBBERIZED MEMBRANE WATERPROOFING" ON TOP SLAB OVER ALL CONSTRUCTION JOINTS AND EXTEND DOWN TO BOTTOM OF OUTSIDE WALLS.

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

THE CONTRACTOR MAY ELECT TO SUBSTITUTE #1 OR #2 CONCRETE COARSE AGGREGATE, SELECT CRUSHED MATERIAL OR OTHER GRANULAR MATERIAL AS APPROVED BY THE FIELD ENGINEER, IN LIEU OF THE BREAKER RUN, TO BE UTILIZED AS A CONSTRUCTION PLATFORM FOR THE BOX. THE CONTRACTOR IS RESPONSIBLE FOR BASE STABILITY WITH ANY SUBSTITUTED MATERIAL.

THE NORTHWEST REGION SOILS ENGINEER SHOULD BE PRESENT TO EVALUATE THE SUBSURFACE CONDITIONS AT THE TIME OF CONSTRUCTION.

GUARDRAIL POST ANCHORAGE NOTES

DETAILS SHOWN FOR POSTS, PLATES, ANCHORAGE SYSTEM AND INSTALLATION, BLOCKS, AND GUARD RAIL ARE NOT PART OF THE STRUCTURE CONTRACT, BUT ARE BID PER THE ROADWAY DESIGN PLANS.

POST BASE PLATES (AND BOTTOM PLATES IF USED) SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.

CUT BOTTOM OF POST SO THAT POST WILL BE VERTICAL WHEN POST ASSEMBLY IS PLACED ON TOP OF THE CULVERT. ALONG THE ROADWAY THE POST WILL BE NORMAL TO GRADE LINE. HEX BOLTS AND THREADED RODS ARE TO BE PLACED PERPENDICULAR TO THE BASE PLATE.

POST, BASE PLATE (AND BOTTOM PLATE IF USED), AND SHIMS SHALL BE GALVANIZED AFTER FABRICATION.

PRIOR TO GALVANIZING, ALL STEEL POSTS AND PLATES SHALL BE GIVEN A NO. 6 COMMERCIAL BLAST CLEANING BY SSPC SPECS.

ALL MATERIAL USED IN POSTS AND PLATES SHALL BE MADE FROM MATERIAL CONFORMING TO ASTM DESIGNATION A709 GRADE 50 OR 50S.

HEX BOLTS, THREADED RODS, HEX NUTS AND WASHERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F1554 GRADE 36, AND SHALL BE GALVANIZED. RODS ARE TO BE FULLY THREADED AND BOLTS TO BE THREADED 3". CHAMFER TOP OF BOLTS AND RODS BEFORE THREADING.

STEEL SHIMS MAY BE USED BETWEEN PLATES AND SLAB WHERE REQUIRED FOR ALIGNMENT.

DESIGN DATA

LIVE LOAD:
DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: RF = 1.05
OPERATING RATING FACTOR: RF = 1.35
WISCONSIN STANDARD PERMIT VEHICLE (WIS.-SPV): 255(KIPS)

EARTHLOAD:
DESIGNED FOR 0.5 TO 2.0 FT. OF FILL.

MATERIAL PROPERTIES:
CONCRETE MASONRY: ——— f'c = 3,500 P.S.I.
BAR STEEL REINFORCEMENT: ——— fy = 60,000 P.S.I.

HYDRAULIC DATA

100 YEAR FREQUENCY
Q_{100} = 1100 C.F.S.
VEL.$_{100}$ = 11.46 F.P.S.
HW.$_{100}$ = EL. 1000.69
WATERWAY AREA = 95.99 SQ. FT.
DRAINAGE AREA = 1.6 SQ. MI.
SCOUR CRITICAL CODE = 8

2 YEAR FREQUENCY
Q_2 = 185 C.F.S.
VEL.$_2$ = 3.66 F.P.S.
HW.$_2$ = EL. 995.80

TRAFFIC VOLUME

USH 10
ADT = 7800 (2041)
R.D.S. = 55 M.P.H.

ROADWAY OVERTOPPING
FREQUENCY = 65 YEARS
Q_{65} = 960 C.F.S.
HW.$_{65}$ = EL. 1000.01

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	TOTALS
203.0250	REMOVING STRUCTURE OVER WATERWAY REMOVE DEBRIS (C-47-32)	EACH	1
206.2001	EXCAVATION FOR STRUCTURES CULVERTS C-47-60	EACH	1
210.2500	BACKFILL STRUCTURE TYPE B	TON	1,040
311.0115	BREAKER RUN	CY	91
504.0100	CONCRETE MASONRY CULVERTS	CY	131
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	20,940
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	2,600
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	23
606.0300	RIPRAP HEAVY	CY	61
645.0105	GEOTEXTILE TYPE C	SY	305
645.0120	GEOTEXTILE TYPE HR	SY	128
	NON-BID ITEMS		
	FILLER	SIZE	¾"

▲ SEE CORNER DETAILS ON "APRON DETAILS" SHEET
■ NAME PLATE LOCATION (SEE "APRON DETAILS" SHEET)
✱ BUILD APRON AND END OF BOX LEVEL
⬡ INDICATES WING NUMBER
▲ VERT. CONST. JOINT (TYP.)

NOTE: STRUCTURE BACKFILL REQUIRED BEHIND ALL WING WALLS.

LIST OF DRAWINGS

1. LAYOUT
2. BOX DETAILS
3. APRON
4. APRON & POST ANCHOR DETAILS
5. SUBSURFACE EXPLORATION

STRUCTURE DESIGN CONTACTS:
STACIE WEIS (608) 261-6109
DOMINIQUE BECHLE (608) 261-8205

NO.	DATE	REVISION	BY

BUREAU OF STRUCTURES
WISCONSIN DEPARTMENT OF TRANSPORTATION

ACCEPTED DMB 08/18/22
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE C-47-60

USH 10 OVER SPRING CREEK

COUNTY	TOWN
PIERCE	TRIMBELLE

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGNED CK'D.	DRAWN BY	PLANS CK'D.
SEW	AA	JPH	SEW

LAYOUT

SHEET 1 OF 5

255

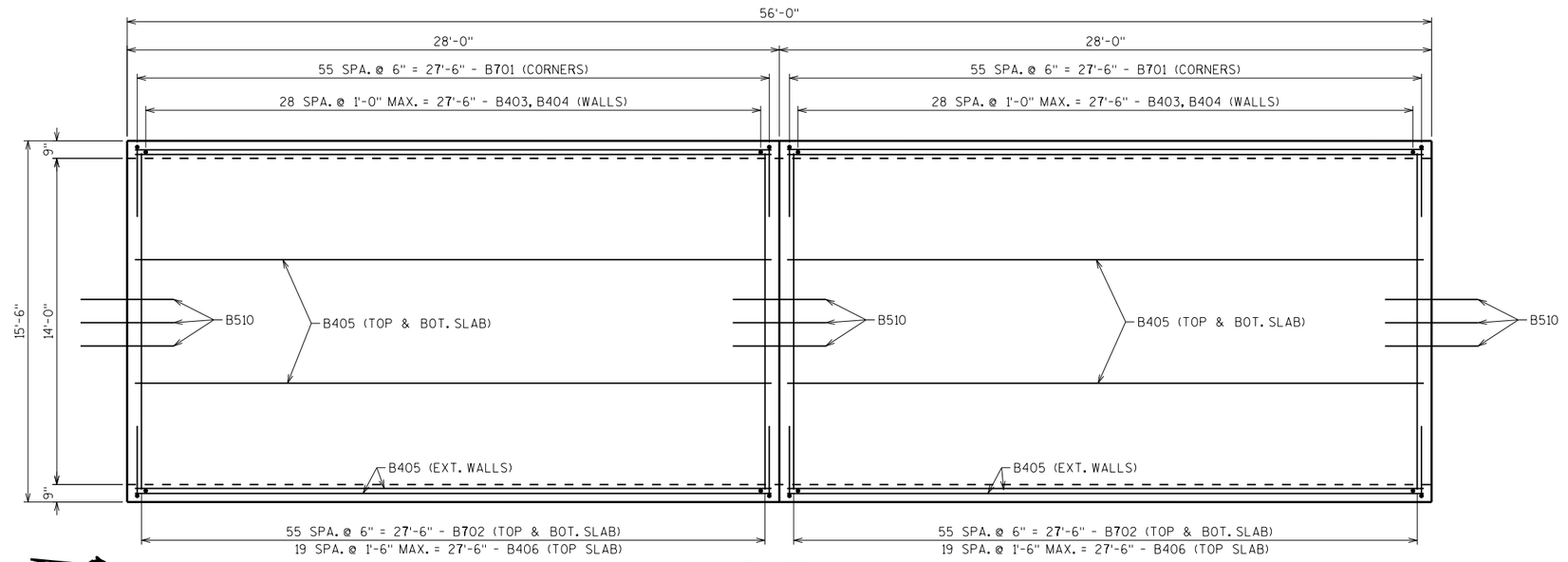
I.D. 1530-00-09A

DATE: JULY 2022

SCALE = 6.00

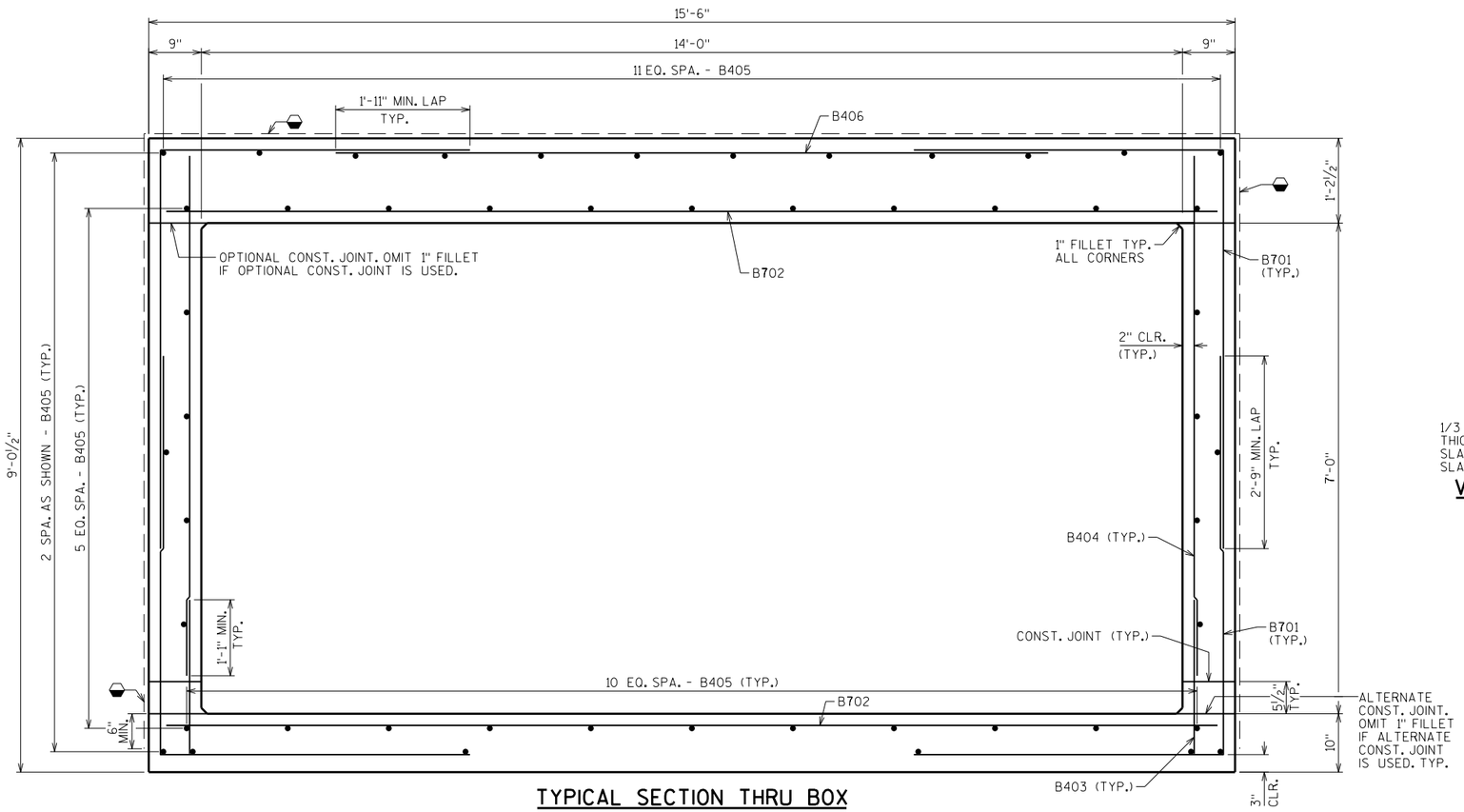
STATE PROJECT NUMBER

1530-00-79



PLAN

APRON AND HEADER ARE NOT SHOWN FOR CLARITY



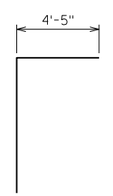
TYPICAL SECTION THRU BOX

ALL LONGITUDINAL BARS NOT LABELED ARE B405 AS SHOWN

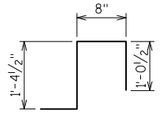
BILL OF BARS

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

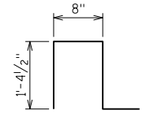
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
B701		448	10'-0"	X		CORNERS
B702		224	15'-2"			BOT. & TOP SLAB - TRANSVERSE
B403		116	2'-4"			WALL - DOWELS
B404		116	7'-5"			WALLS - VERT.
B405		100	27'-8"			TOP & BOT. SLAB & WALLS - LONGIT.
B406		40	10'-3"			TOP SLAB - HORIZ. - TRANS.
B307		21	3'-5"	X		HEADER - VERT. - INLET
B308		21	3'-9"	X		HEADER - VERT. - OUTLET
B409		4	15'-2"			HEADERS - TRANSVERSE
B510		78	4'-0"			VERT. CONST. JOINT



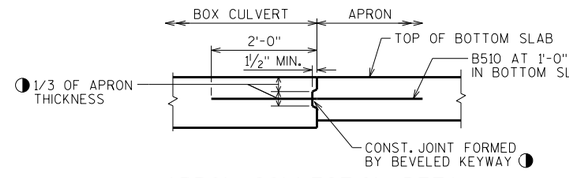
B701



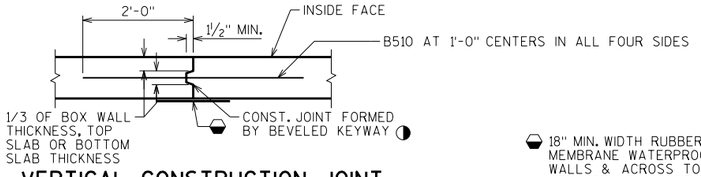
B307



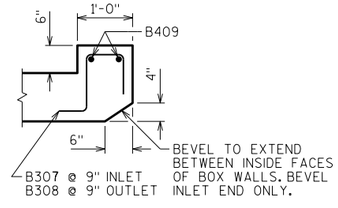
B308



APRON CONNECTION DETAIL



VERTICAL CONSTRUCTION JOINT



SECTION THRU HEADER

◓ 18" MIN. WIDTH RUBBERIZED MEMBRANE WATERPROOFING UP WALLS & ACROSS TOP SLAB AT VERTICAL CONST. JOINTS. EXTEND 6" MIN. BELOW TOP OF BOTTOM SLAB.

◑ IN LIEU OF CONSTRUCTION JOINTS IN THE BOTTOM SLAB, THE CONTRACTOR MAY USE 2" DEEP SAW CUTS WITHIN 12 HOURS AFTER POURING.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE C-47-60

DRAWN BY JPH | PLANS CK'D. SEW

BOX DETAILS

SHEET 2

256

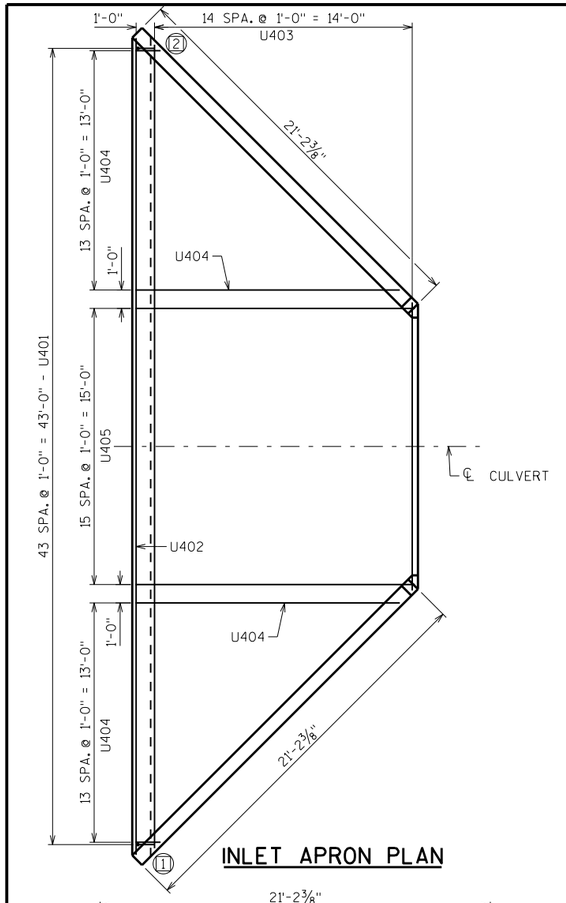
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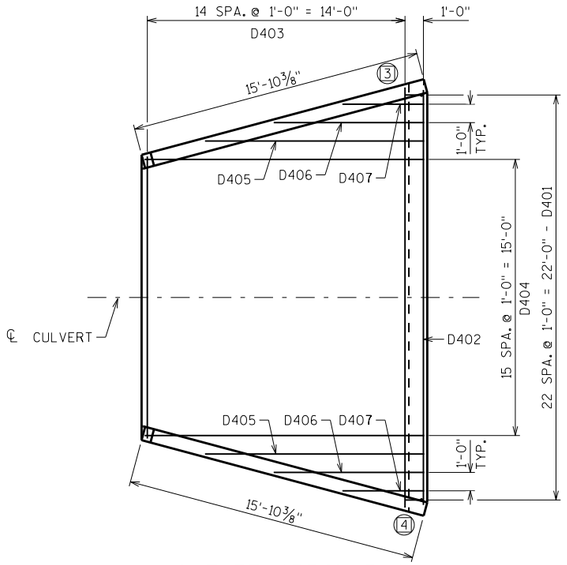
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STATE PROJECT NUMBER

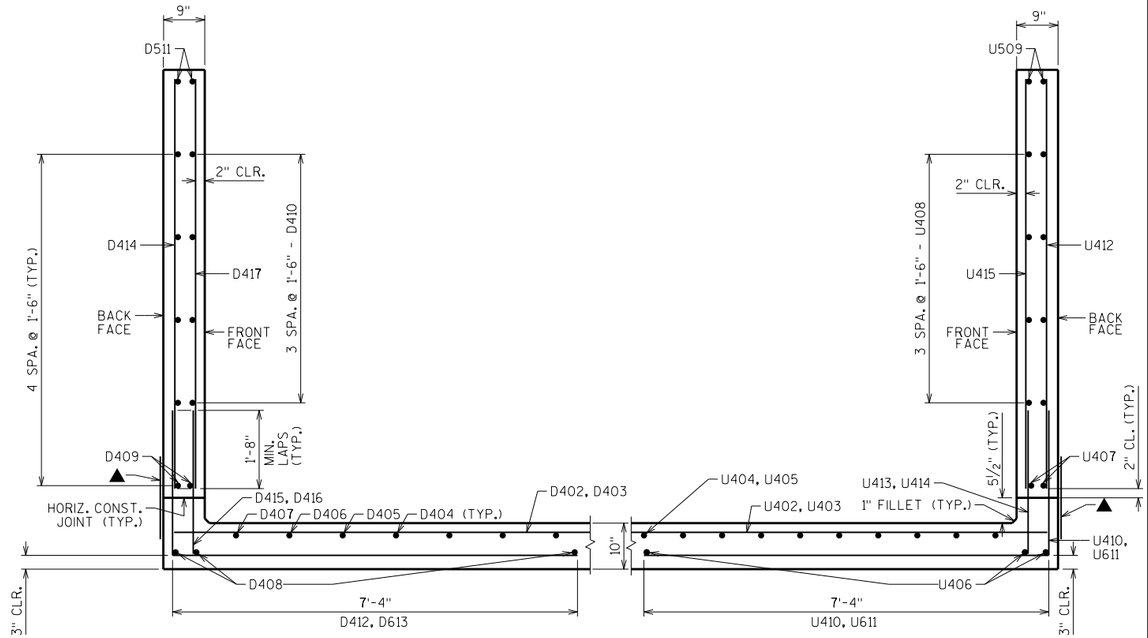
1530-00-79



INLET APRON PLAN

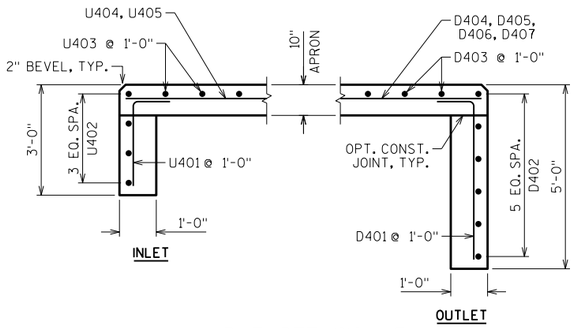


OUTLET APRON PLAN

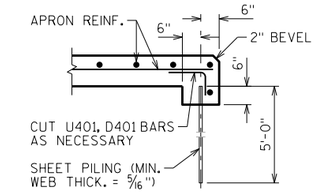


SECTION THRU WINGS

AT RIGHT ANGLE TO WING WALLS

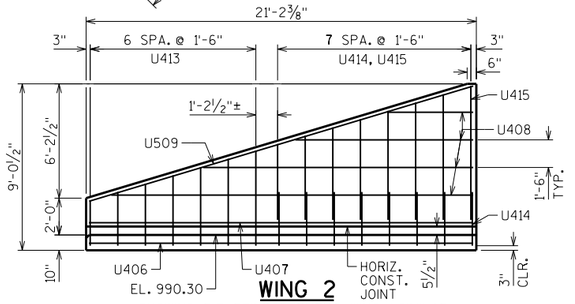


CUT-OFF WALLS



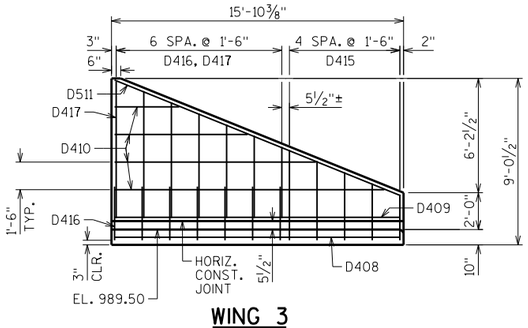
ALTERNATE CUT-OFF WALLS

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



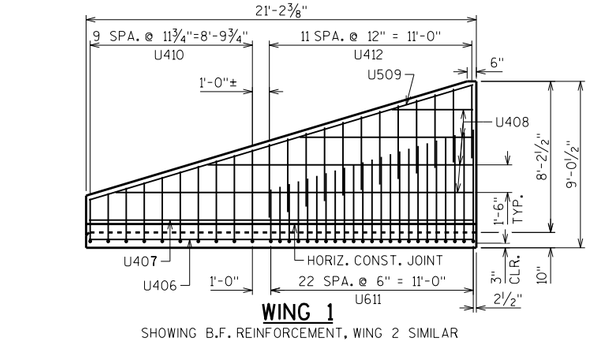
WING 2

SHOWING F.F. REINFORCEMENT, WING 1 SIMILAR



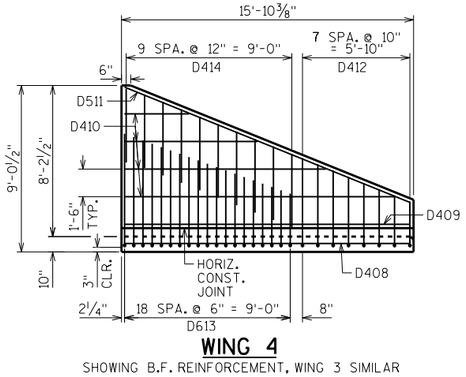
WING 3

SHOWING F.F. REINFORCEMENT, WING 4 SIMILAR



WING 1

SHOWING B.F. REINFORCEMENT, WING 2 SIMILAR



WING 4

SHOWING B.F. REINFORCEMENT, WING 3 SIMILAR

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE C-47-60

DRAWN BY JPH | PLANS CK'D. SEW

APRON

SHEET 3

257

SCALE = 4.00

8

8

STATE PROJECT NUMBER

1530-00-79

BILL OF BARS

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

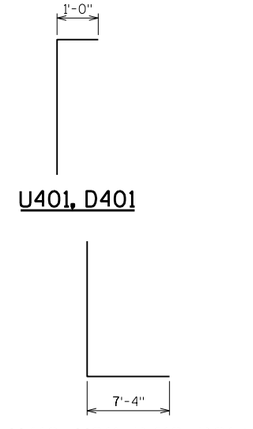
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
U401		44	3'-6"	X		INLET APRON CUTOFF - VERT.
U402		4	44'-3"			INLET APRON CUTOFF - HORIZ.
U403		15	29'-8"		⚠	INLET APRON - HORIZ.
U404		28	7'-10"		⚠	INLET APRON - LONGIT.
U405		16	15'-2"			INLET APRON - LONGIT.
U406		6	20'-10"			WINGS 1 & 2 - HORIZ. - BOT.
U407	X	4	20'-10"			WINGS 1 & 2 - HORIZ.
U408	X	16	12'-6"		⚠	WINGS 1 & 2 - HORIZ.
U509	X	4	21'-8"			WINGS 1 & 2 - HORIZ. - TOP
U410	X	20	11'-0"	X	⚠	WINGS 1 & 2 - VERT. - B.F.
U611	X	46	11'-9"	X	⚠	WINGS 1 & 2 - VERT. - B.F.
U412	X	24	4'-2"			WINGS 1 & 2 - VERT. - B.F.
U413	X	14	3'-10"		⚠	WINGS 1 & 2 - VERT - F.F.
U414	X	16	2'-11"			WINGS 1 & 2 - DOWELS - F.F.
U415	X	16	5'-11"		⚠	WINGS 1 & 2 - VERT. - F.F.
D401		23	5'-6"	X		OUTLET APRON CUTOFF - VERT.
D402		6	22'-6"			OUTLET APRON CUTOFF - HORIZ.
D403		15	19'-1"		⚠	OUTLET APRON - HORIZ.
D404		16	15'-2"			OUTLET APRON - LONGIT.
D405		2	11'-11"			OUTLET APRON - LONGIT.
D406		2	8'-1"			OUTLET APRON - LONGIT.
D407		2	4'-5"			OUTLET APRON - LONGIT.
D408		6	15'-6"			WINGS 3 & 4 - HORIZ. - BOT.
D409	X	4	15'-6"			WINGS 3 & 4 - HORIZ.
D410	X	16	9'-4"		⚠	WINGS 3 & 4 - HORIZ.
D511	X	4	16'-8"			WINGS 3 & 4 - HORIZ. - TOP
D412	X	16	10'-11"	X	⚠	WINGS 3 & 4 - VERT. - B.F.
D613	X	38	11'-11"	X	⚠	WINGS 3 & 4 - VERT. - B.F.
D414	X	20	3'-11"			WINGS 3 & 4 - VERT. - B.F.
D415	X	10	3'-8"		⚠	WINGS 3 & 4 - VERT. - F.F.
D416	X	14	2'-11"			WINGS 3 & 4 - DOWELS - F.F.
D417	X	14	5'-8"		⚠	WINGS 3 & 4 - VERT. - F.F.

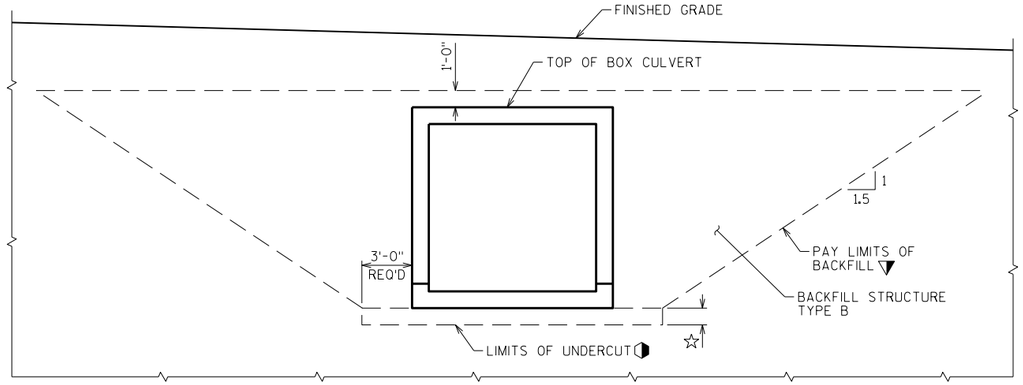
⚠ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

BAR SERIES TABLE

BAR MARK	NO. REQ'D.	LENGTH
U403	1 SERIES OF 15 BARS	15'-8" TO 43'-8"
U404	2 SERIES OF 14 BARS	1'-4" TO 14'-4"
U408	4 SERIES OF 4 BARS	4'-11" TO 20'-0"
U410	2 SERIES OF 10 BARS	9'-8" TO 12'-4"
U611	2 SERIES OF 23 BARS	10'-1" TO 13'-5"
U413	2 SERIES OF 7 BARS	2'-6" TO 5'-2"
U415	2 SERIES OF 8 BARS	4'-4" TO 7'-5"
D403	1 SERIES OF 15 BARS	15'-4" TO 22'-10"
D410	4 SERIES OF 4 BARS	3'-9" TO 14'-11"
D412	2 SERIES OF 8 BARS	9'-9" TO 12'-1"
D613	2 SERIES OF 19 BARS	10'-1" TO 13'-8"
D415	2 SERIES OF 5 BARS	2'-5" TO 4'-10"
D417	2 SERIES OF 7 BARS	3'-10" TO 7'-5"

BUNDLE AND TAG EACH SERIES SEPARATELY.



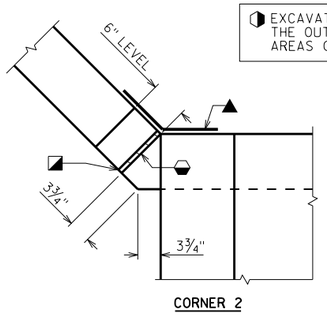


TYPICAL SECTION THRU BOX CULVERT

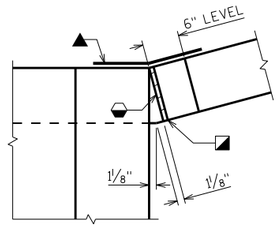
▼ BACKFILL PAY LIMITS. BACKFILL BEYOND BACKFILL PAY LIMITS SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES. LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.

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

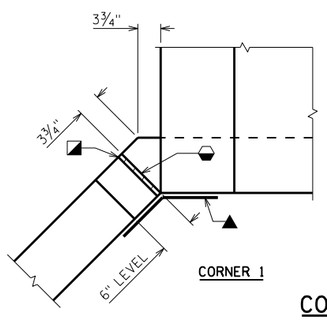
◐ EXCAVATION BELOW SUBGRADE (EBS) REQUIRED AT THE OUTLET AND INLET. USE BREAKER RUN TO FILL IN AREAS OF EBS. SEE ROADWAY PLANS FOR QUANTITIES.



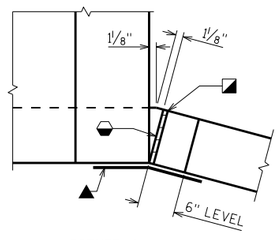
CORNER 2



CORNER 3



CORNER 1



CORNER 4

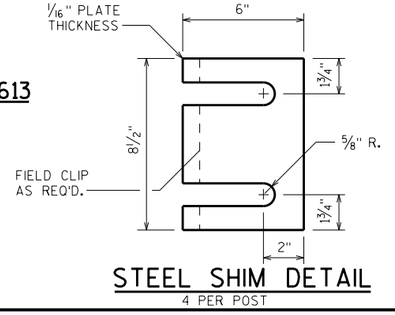
CORNER DETAILS

◒ ¾" FILLER TO EXTEND FROM HORIZ. CONST. JOINT TO TOP OF WING.

◪ 1" BEVEL TYP.

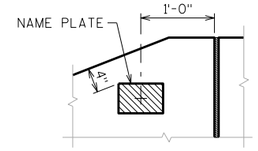
▲ 18" WIDE RUBBERIZED MEMBRANE WATERPROOFING. EXTEND FROM HORIZ. CONST. JOINT TO TOP OF WING.

	"L"	"B"	"X"	"Y"
MGS GUARDRAIL	2'-7⅞"	12"	7⅛"	¾"



STEEL SHIM DETAIL

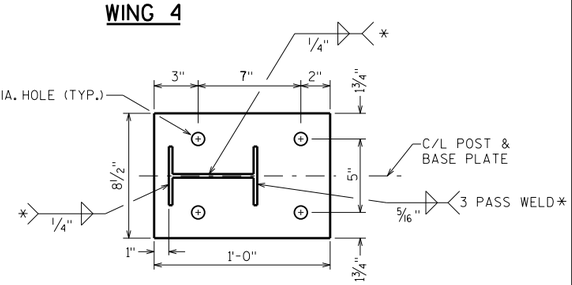
4 PER POST



NAME PLATE LOCATION WING 4

POST HEIGHT

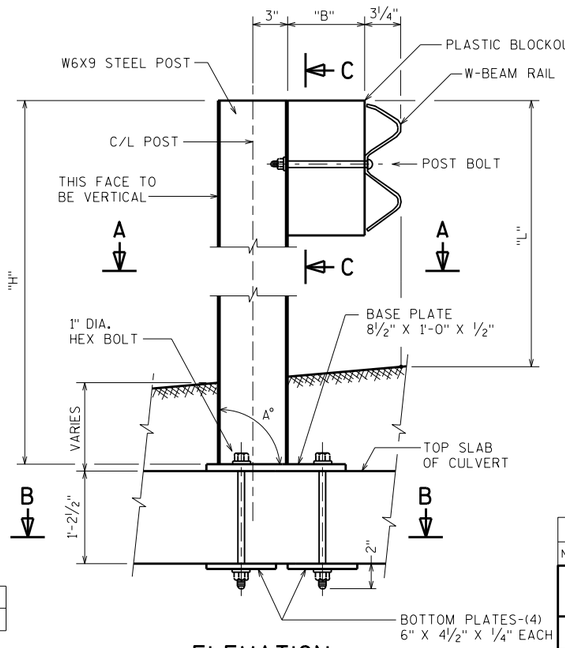
POST. NO.	"H"	"A"
P1	52.00"	90°44'
P2	52.00"	90°44'
P3	52.25"	90°44'
P4	52.50"	90°44'
P5	52.75"	90°44'
P6	40.50"	89°15'
P7	40.75"	89°15'
P8	41.00"	89°15'
P9	41.00"	89°15'
P10	41.25"	89°15'



SECTION A-A

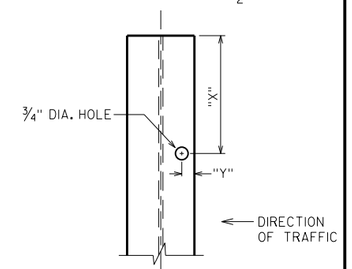
POST & BASE PLATE

* WELDING IS TO BE COMPLETED USING THE GAS-METAL ARC WELDING (GMAW) PROCESS WITH ER70S-3 WELDING WIRE AND ARGON-OXYGEN OR CO_2 COVER GAS.



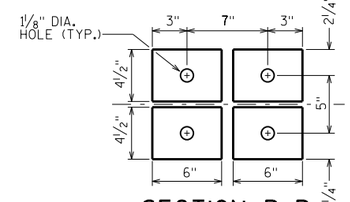
ELEVATION

GUARDRAIL POST ANCHORS



SECTION C-C

HOLE IN POST FLANGE ON APPROACHING TRAFFIC SIDE



SECTION B-B

(4)-BOTTOM PLATES

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE C-47-60

DRAWN BY JPH | PLANS CK'D. SEW

APRON & POST ANCHOR DETAILS

SHEET 4

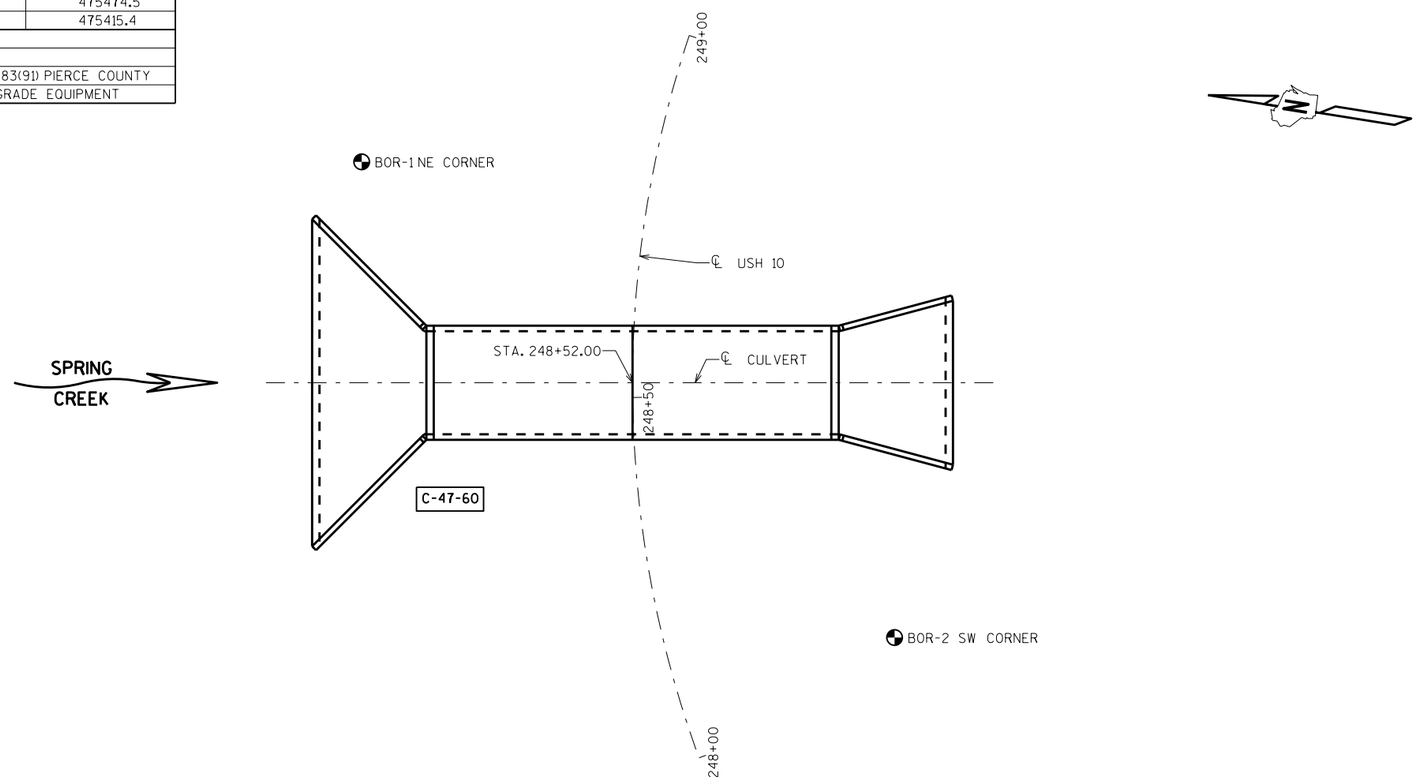
258

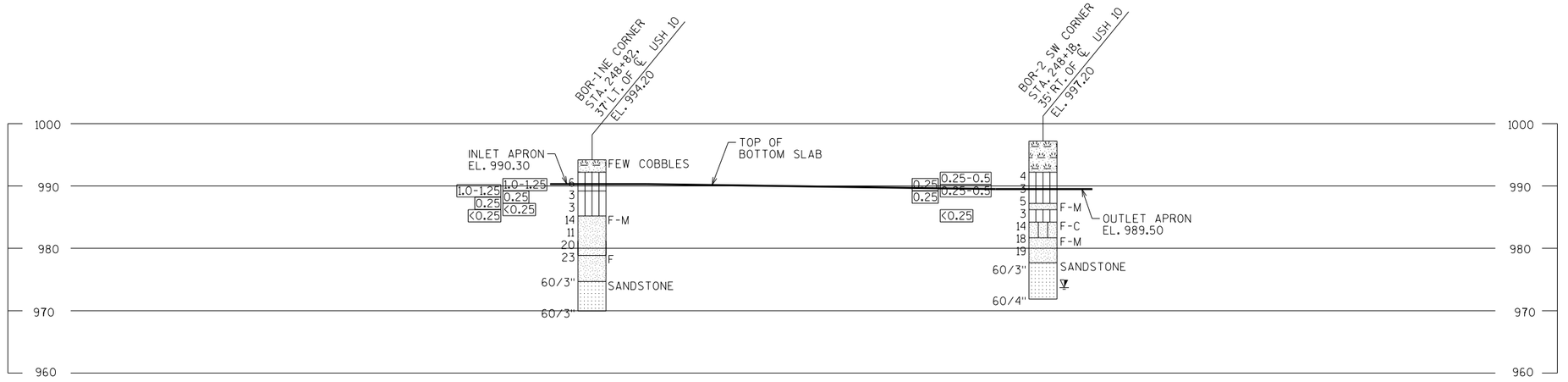
SCALE = 1.00

8

8

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	10/13/2020	317337.5	475474.5
2	10/13/2020	317256.1	475415.4
BORINGS COMPLETED BY: WISDOT			
REPORT COMPLETED BY: WISDOT			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) PIERCE COUNTY			
COORDINATES COLLECTED USING NON-SURVEY GRADE EQUIPMENT			





STATE PROJECT NUMBER

1530-00-79

MATERIAL SYMBOLS

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

LEGEND OF BORING

BORING #/EL.
STA./OFFSET
ST
0.25 (1) (2) 17
F-C
COBBLE OR BOULDER
WEATHERED LIMESTONE
CORE RUN #1 - 24'-29'
REC=80%, RQD=72%

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

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

GROUND WATER ELEVATION

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

ABBREVIATIONS

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

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE C-47-60

DRAWN BY TLP/JPH | PLANS CK'D. SEW

SUBSURFACE EXPLORATION

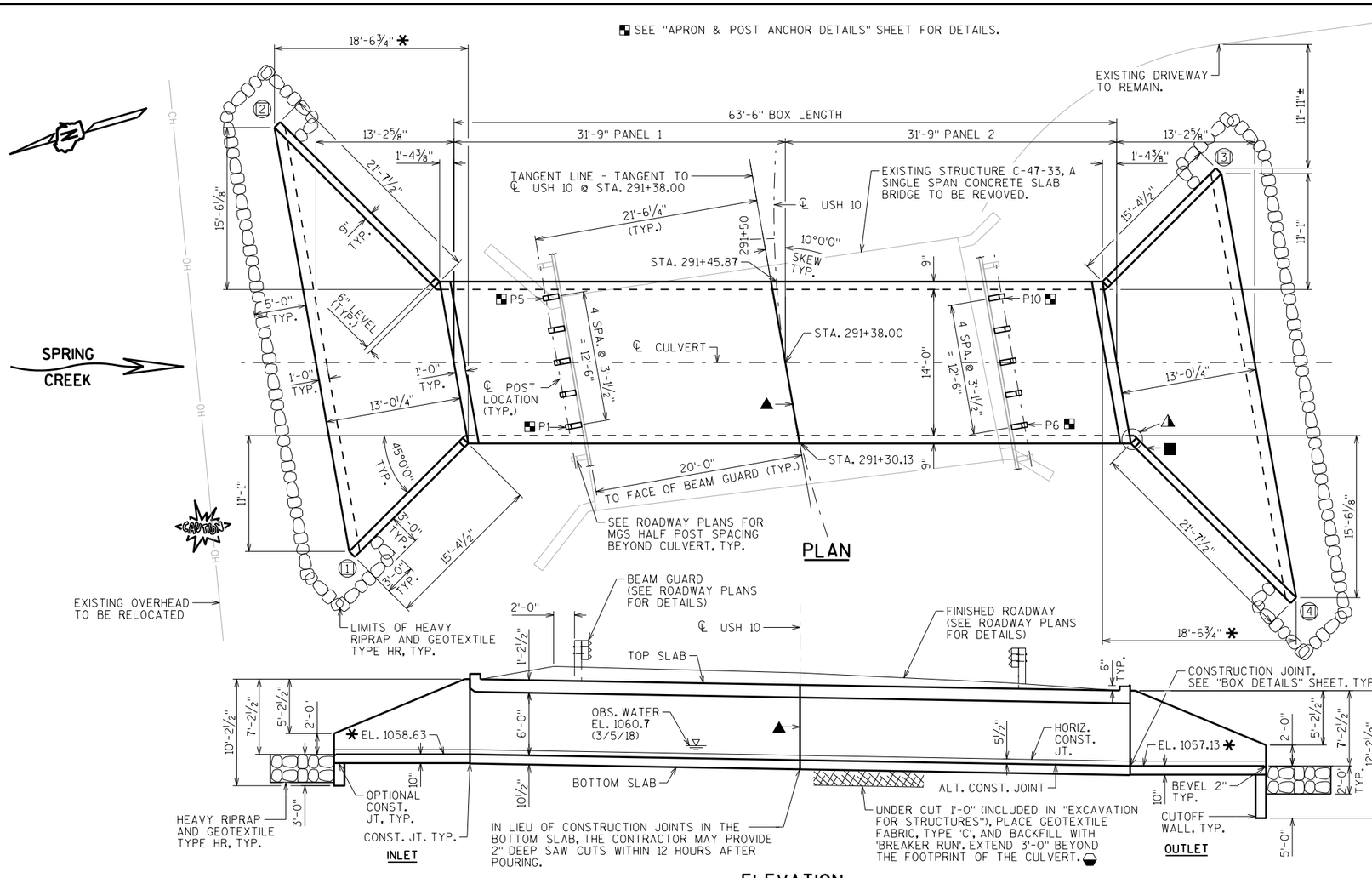
SHEET 5

259

SCALE = 10

STATE PROJECT NUMBER

1530-00-79



ELEVATION

EXCAVATION BELOW SUBGRADE (EBS) REQUIRED AT THE OUTLET AND INLET. USE BREAKER RUN TO FILL IN AREAS OF EBS. SEE ROADWAY PLANS FOR QUANTITIES.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

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

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES CULVERTS C-47-61" SHALL BE THE EXISTING GROUNDLINE.

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

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

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

PLACE 18" (MIN.) WIDE SHEET OF "RUBBERIZED MEMBRANE WATERPROOFING" ON TOP SLAB OVER ALL CONSTRUCTION JOINTS AND EXTEND DOWN TO BOTTOM OF OUTSIDE WALLS.

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

THE CONTRACTOR MAY ELECT TO SUBSTITUTE #1 OR #2 CONCRETE COARSE AGGREGATE, SELECT CRUSHED MATERIAL OR OTHER GRANULAR MATERIAL AS APPROVED BY THE FIELD ENGINEER, IN LIEU OF THE BREAKER RUN, TO BE UTILIZED AS A CONSTRUCTION PLATFORM FOR THE BOX. THE CONTRACTOR IS RESPONSIBLE FOR BASE STABILITY WITH ANY SUBSTITUTED MATERIAL.

THE NORTHWEST REGION SOILS ENGINEER SHOULD BE PRESENT TO EVALUATE THE SUBSURFACE CONDITIONS AT THE TIME OF CONSTRUCTION.

GUARDRAIL POST ANCHORAGE NOTES

DETAILS SHOWN FOR POSTS, PLATES, ANCHORAGE SYSTEM AND INSTALLATION, BLOCKS, AND GUARD RAIL ARE NOT PART OF THE STRUCTURE CONTRACT, BUT ARE BID PER THE ROADWAY DESIGN PLANS.

POST BASE PLATES (AND BOTTOM PLATES IF USED) SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.

CUT BOTTOM OF POST SO THAT POST WILL BE VERTICAL WHEN POST ASSEMBLY IS PLACED ON TOP OF THE CULVERT. ALONG THE ROADWAY THE POST WILL BE NORMAL TO GRADE LINE. HEX BOLTS AND THREADED RODS ARE TO BE PLACED PERPENDICULAR TO THE BASE PLATE.

POST, BASE PLATE (AND BOTTOM PLATE IF USED), AND SHIMS SHALL BE GALVANIZED AFTER FABRICATION.

PRIOR TO GALVANIZING, ALL STEEL POSTS AND PLATES SHALL BE GIVEN A NO. 6 COMMERCIAL BLAST CLEANING BY SSPC SPECS.

ALL MATERIAL USED IN POSTS AND PLATES SHALL BE MADE FROM MATERIAL CONFORMING TO ASTM DESIGNATION A709 GRADE 50 OR 50S.

HEX BOLTS, THREADED RODS, HEX NUTS AND WASHERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F1554 GRADE 36, AND SHALL BE GALVANIZED. RODS ARE TO BE FULLY THREADED AND BOLTS TO BE THREADED 3". CHAMFER TOP OF BOLTS AND RODS BEFORE THREADING.

STEEL SHIMS MAY BE USED BETWEEN PLATES AND SLAB WHERE REQUIRED FOR ALIGNMENT.

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: RF = 1.05
OPERATING RATING FACTOR: RF = 1.35
WISCONSIN STANDARD PERMIT VEHICLE (WIS.-SPV): 255(KIPS)

EARTHLOAD:

DESIGNED FOR 1.5 TO 3.0 FT. OF FILL.

MATERIAL PROPERTIES:

CONCRETE MASONRY: ——— f'c = 3,500 P.S.I.
BAR STEEL REINFORCEMENT: ——— fy = 60,000 P.S.I.

HYDRAULIC DATA

100 YEAR FREQUENCY

Q_{100} = 350 C.F.S.
VEL.$_{100}$ = 9.82 F.P.S.
HW.$_{100}$ = EL. 1065.46
WATERWAY AREA = 35.64 SQ. FT.
DRAINAGE AREA = 0.2 SQ. MI.
ROADWAY OVERTOPPING = N/A
SCOUR CRITICAL CODE = 8

2 YEAR FREQUENCY

Q_2 = 55 C.F.S.
VEL.$_2$ = 5.02 F.P.S.
HW.$_2$ = EL. 1063.86

TRAFFIC VOLUME

USH 10

ADT = 7800 (2041)
R.D.S. = 55 M.P.H.

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	TOTALS
203.0250	REMOVING STRUCTURE OVER WATERWAY REMOVE DEBRIS (C-47-33)	EACH	1
206.2001	EXCAVATION FOR STRUCTURES CULVERTS C-47-61	EACH	1
210.2500	BACKFILL STRUCTURE TYPE B	TON	1000
311.0115	BREAKER RUN	CY	99
504.0100	CONCRETE MASONRY CULVERTS	CY	142
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	25,225
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	1,610
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	22
606.0300	RIPRAP HEAVY	CY	42
645.0105	GEOTEXTILE TYPE C	SY	330
645.0120	GEOTEXTILE TYPE HR	SY	98
	NON-BID ITEMS		
	FILLER	SIZE	¾"

STRUCTURE DESIGN CONTACTS:

STACIE WEIS (608) 261-6109
DOMINIQUE BECHLE (608) 261-8205

- ◭ SEE CORNER DETAILS ON "APRON DETAILS" SHEET
- ■ NAME PLATE LOCATION (SEE "APRON DETAILS" SHEET)
- * BUILD APRON AND END OF BOX LEVEL
- ⬡ INDICATES WING NUMBER
- ▲ VERT. CONST. JOINT (TYP.)

NOTE: STRUCTURE BACKFILL REQUIRED BEHIND ALL WING WALLS.

LIST OF DRAWINGS

1. LAYOUT
2. BOX DETAILS
3. APRON
4. APRON & POST ANCHOR DETAILS
5. SUBSURFACE EXPLORATION

NO.	DATE	REVISION	BY

WISCONSIN DEPARTMENT OF TRANSPORTATION — BUREAU OF STRUCTURES

ACCEPTED DMB 08/18/22
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE C-47-61

USH 10 OVER SPRING CREEK

COUNTY	TOWN
PIERCE	TRIMBELLE

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGNED CK'D.	DRAWN BY	PLANS CK'D.
SEW	AA	JPH	SEW

LAYOUT

SHEET 1 OF 5

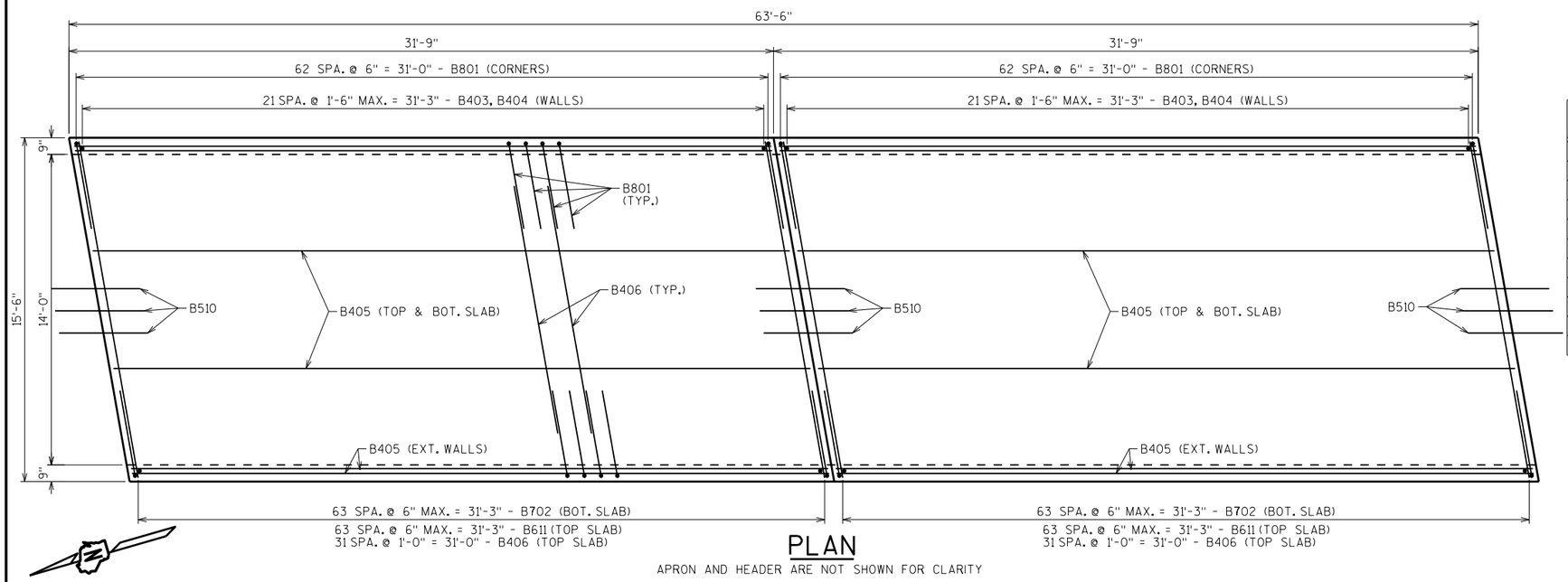
260

I.D. 1530-00-09B

DATE: JULY 2022

SCALE = 6.00

STATE PROJECT NUMBER
1530-00-79



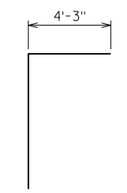
PLAN

APRON AND HEADER ARE NOT SHOWN FOR CLARITY

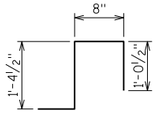
BILL OF BARS

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

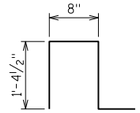
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
B801		504	9'-9"	X		CORNERS
B702		128	15'-4"			BOT. SLAB - TRANSVERSE
B403		88	2'-4"			WALL - DOWELS
B404		88	6'-5"			WALLS - VERT.
B405		100	31'-5"			TOP & BOT. SLAB & WALLS - LONGIT.
B406		64	11'-0"			TOP SLAB - HORIZ. - TRANS.
B307		21	3'-5"	X		HEADER - VERT. - INLET
B308		21	3'-9"	X		HEADER - VERT. - OUTLET
B409		4	15'-4"			HEADERS - TRANSVERSE
B510		76	4'-0"			VERT. CONST. JOINT & APRON CONNECTION
B611		128	15'-4"			TOP SLAB - TRANSVERSE



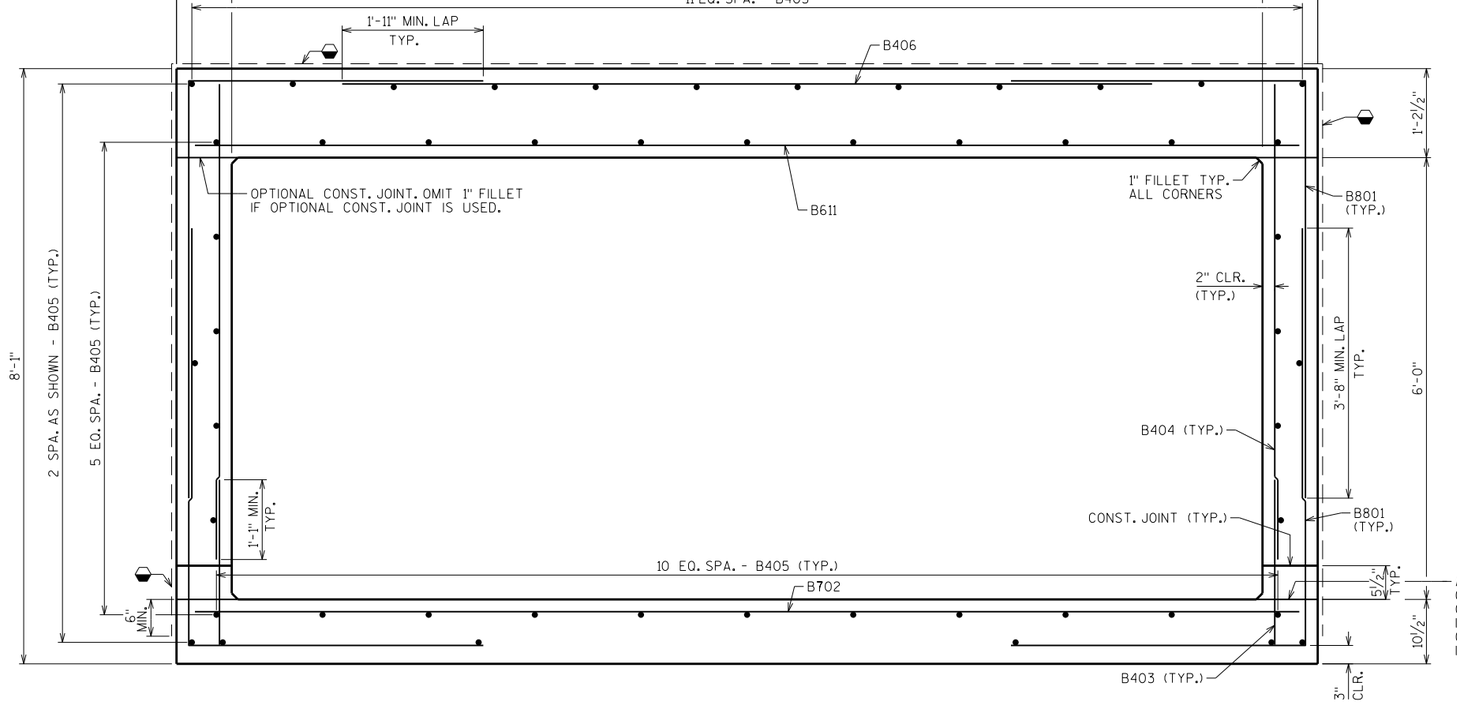
B801



B307

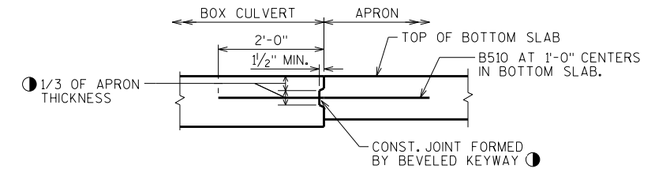


B308

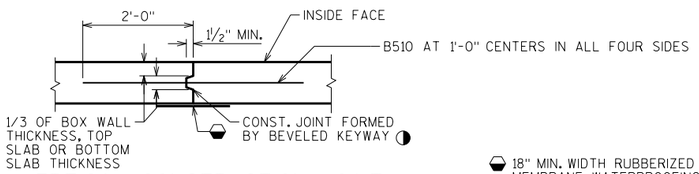


TYPICAL SECTION THRU BOX

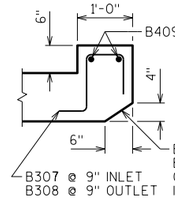
ALL LONGITUDINAL BARS NOT LABELED ARE B405 AS SHOWN



APRON CONNECTION DETAIL



VERTICAL CONSTRUCTION JOINT



SECTION THRU HEADER

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

IN LIEU OF CONSTRUCTION JOINTS IN THE BOTTOM SLAB, THE CONTRACTOR MAY USE 2" DEEP SAW CUTS WITHIN 12 HOURS AFTER POURING.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE C-47-61

DRAWN BY JPH | PLANS CK'D. SEW

BOX DETAILS

SHEET 2

261

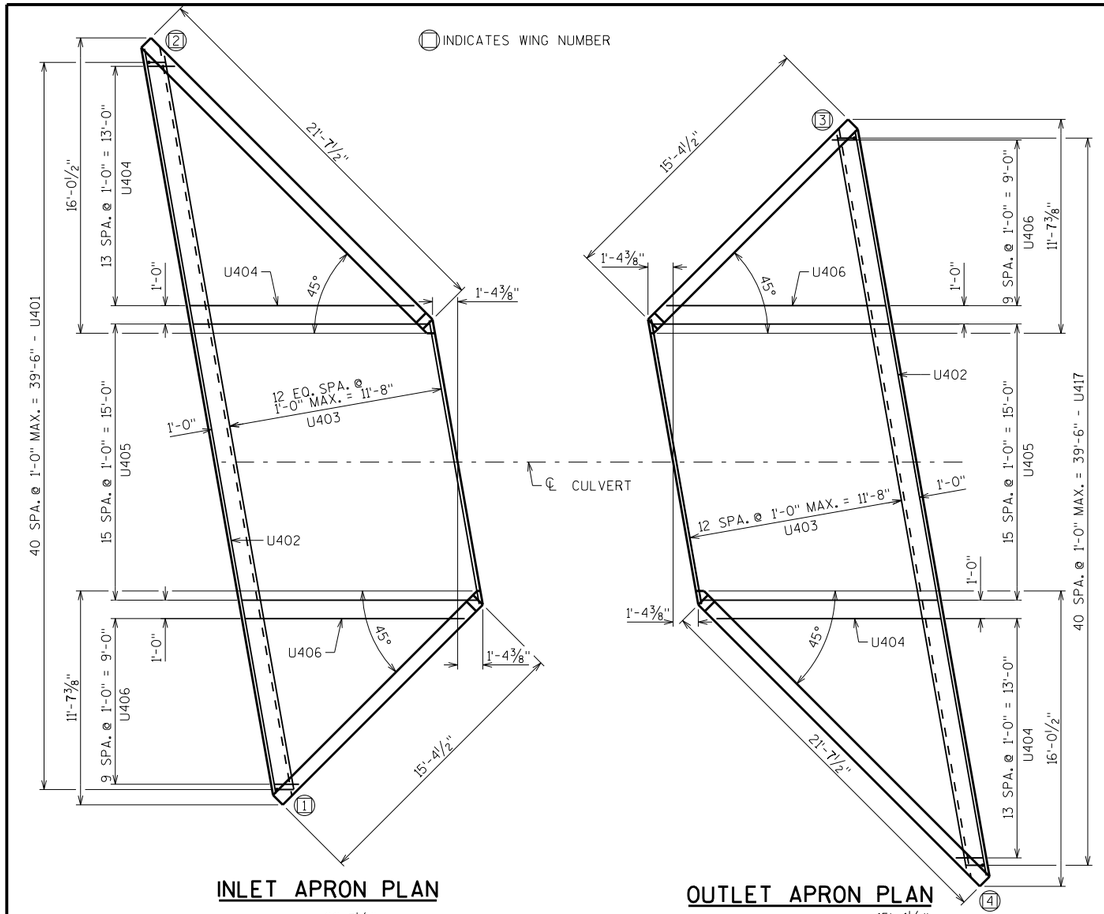
SCALE = 1.00

8

8

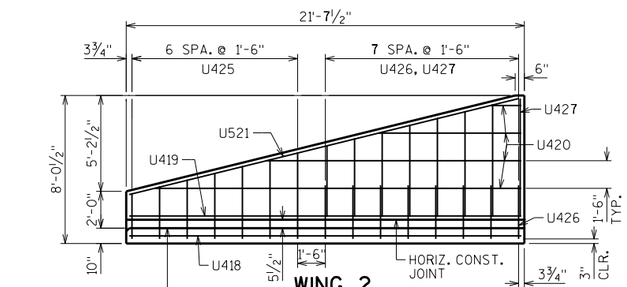
STATE PROJECT NUMBER

1530-00-79



INLET APRON PLAN

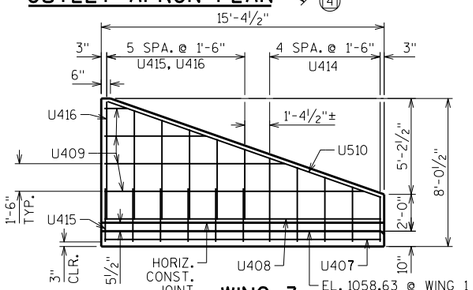
OUTLET APRON PLAN



EL. 1058.63 @ WING 2
EL. 1057.13 @ WING 4

WING 2

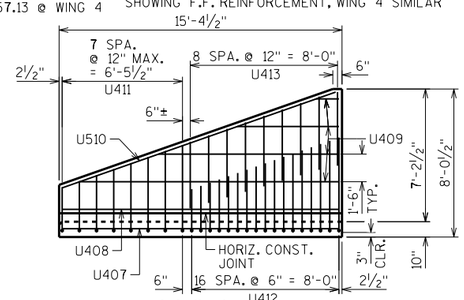
SHOWING F.F. REINFORCEMENT, WING 4 SIMILAR



EL. 1058.63 @ WING 1
EL. 1057.13 @ WING 3

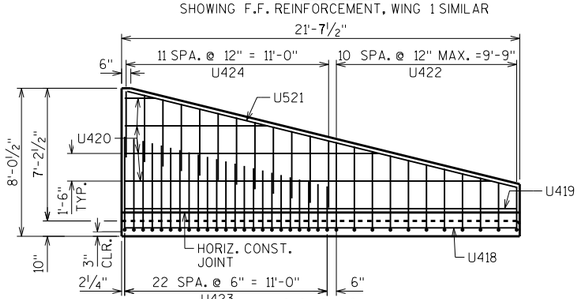
WING 3

SHOWING F.F. REINFORCEMENT, WING 1 SIMILAR



WING 1

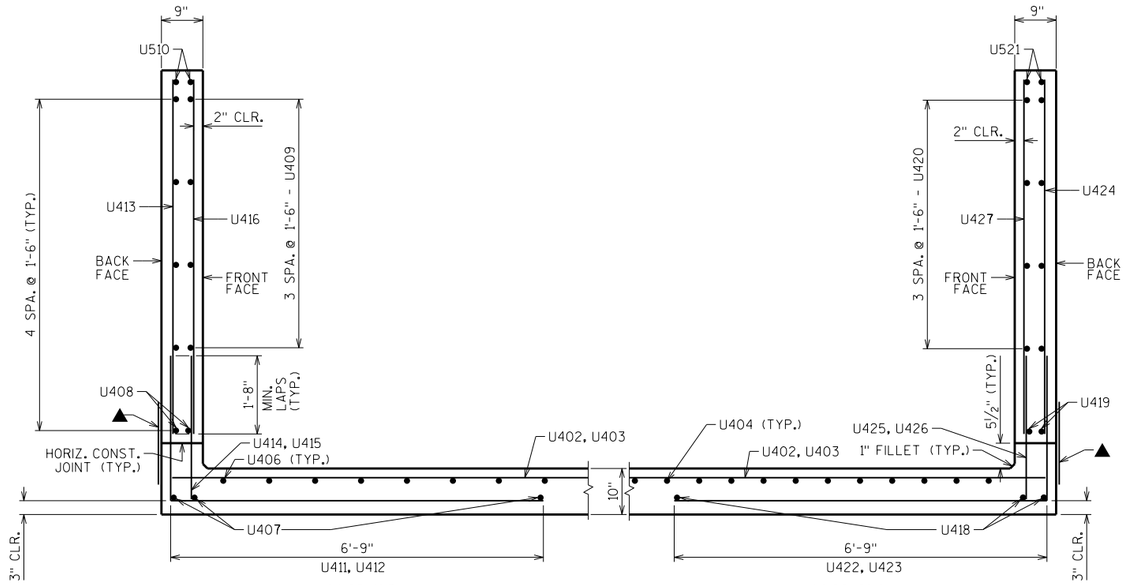
SHOWING B.F. REINFORCEMENT, WING 3 SIMILAR



WING 4

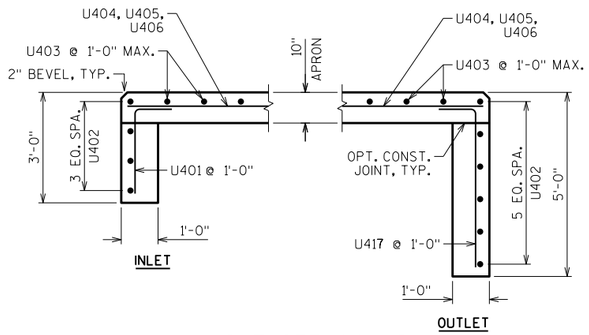
SHOWING B.F. REINFORCEMENT, WING 2 SIMILAR

▲ 18" WIDE RUBBERIZED MEMBRANE WATERPROOFING. PLACE ALONG HORIZ. CONST. JOINT FOR ENTIRE LENGTH OF WING.

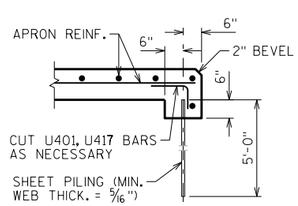


SECTION THRU WINGS

AT RIGHT ANGLE TO WING WALLS



CUT-OFF WALLS



ALTERNATE CUT-OFF WALLS

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE C-47-61

DRAWN BY JPH | PLANS CK'D. SEW

APRON

SHEET 3

262

8

8

SCALE = 4.00

STATE PROJECT NUMBER

1530-00-79

BILL OF BARS

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

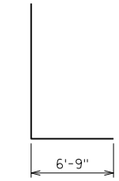
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
U401		41	3'-6"	X		INLET APRON CUTOFF - VERT.
U402		10	41'-1"			INLET & OUTLET APRONS CUTOFF - HORIZ.
U403		26	28'-0"		⚠	INLET & OUTLET APRONS - HORIZ.
U404		28	6'-10"		⚠	INLET & OUTLET APRONS - LONGIT.
U405		32	12'-10"			INLET & OUTLET APRONS - LONGIT.
U406		20	6'-8"		⚠	INLET & OUTLET APRONS - LONGIT.
U407		6	15'-0"			WINGS 1 & 3 - HORIZ. - BOT.
U408	X	4	15'-0"			WINGS 1 & 3 - HORIZ.
U409	X	16	7'-7"		⚠	WINGS 1 & 3 - HORIZ.
U510	X	4	15'-7"			WINGS 1 & 3 - HORIZ. - TOP
U411	X	16	10'-4"	X	⚠	WINGS 1 & 3 - VERT. - B.F.
U412	X	34	10'-11"	X	⚠	WINGS 1 & 3 - VERT. - B.F.
U413	X	18	3'-9"			WINGS 1 & 3 - VERT. - B.F.
U414	X	10	3'-7"		⚠	WINGS 1 & 3 - VERT - F.F.
U415	X	12	2'-11"			WINGS 1 & 3 - DOWELS - F.F.
U416	X	12	5'-2"		⚠	WINGS 1 & 3 - VERT. - F.F.
U417		41	5'-6"	X		OUTLET APRON CUTOFF - VERT.
U418		6	21'-3"			WINGS 2 & 4 - HORIZ. - BOT.
U419	X	4	21'-3"			WINGS 2 & 4 - HORIZ.
U420	X	16	10'-9"		⚠	WINGS 2 & 4 - HORIZ.
U521	X	4	21'-7"			WINGS 2 & 4 - HORIZ. - TOP
U422	X	22	10'-4"	X	⚠	WINGS 2 & 4 - VERT. - B.F.
U423	X	46	10'-11"	X	⚠	WINGS 2 & 4 - VERT. - B.F.
U424	X	24	3'-9"			WINGS 2 & 4 - VERT. - B.F.
U425	X	14	3'-7"		⚠	WINGS 2 & 4 - VERT. - F.F.
U426	X	16	2'-11"			WINGS 2 & 4 - DOWELS - F.F.
U427	X	16	5'-2"		⚠	WINGS 2 & 4 - VERT. - F.F.

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

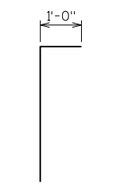
BAR SERIES TABLE

BAR MARK	NO. REQ'D.	LENGTH
U403	2 SERIES OF 13 BARS	15'-7" TO 40'-5"
U404	2 SERIES OF 14 BARS	1'-6" TO 12'-2"
U406	2 SERIES OF 10 BARS	1'-4" TO 11'-11"
U409	4 SERIES OF 4 BARS	1'-2" TO 14'-0"
U411	2 SERIES OF 8 BARS	9'-2" TO 11'-5"
U412	2 SERIES OF 17 BARS	9'-7" TO 12'-3"
U414	2 SERIES OF 5 BARS	2'-6" TO 4'-7"
U416	2 SERIES OF 6 BARS	3'-11" TO 6'-5"
U420	4 SERIES OF 4 BARS	1'-7" TO 19'-10"
U422	2 SERIES OF 11 BARS	9'-2" TO 11'-6"
U423	2 SERIES OF 23 BARS	9'-7" TO 12'-3"
U425	2 SERIES OF 7 BARS	2'-6" TO 4'-8"
U427	2 SERIES OF 8 BARS	3'-10" TO 6'-5"

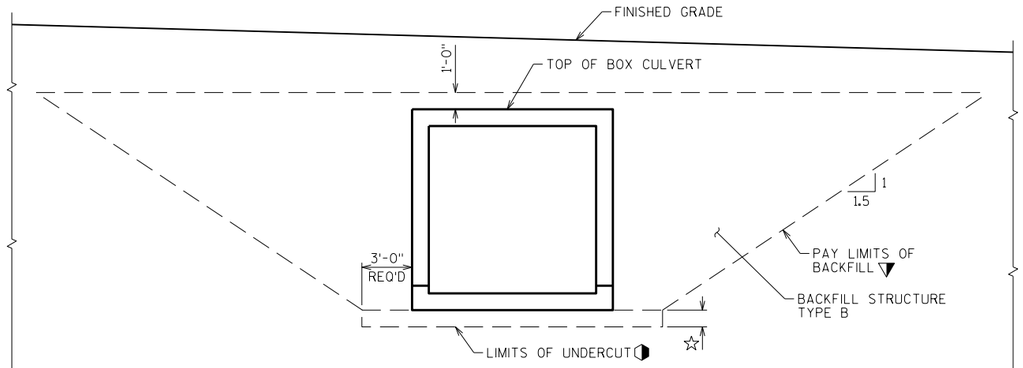
BUNDLE AND TAG EACH SERIES SEPARATELY.



U411, U412, U422, U423



U401, U417

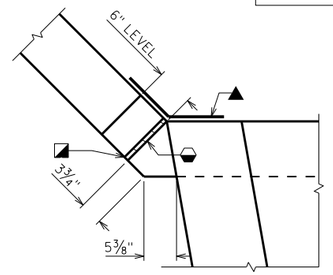


TYPICAL SECTION THRU BOX CULVERT

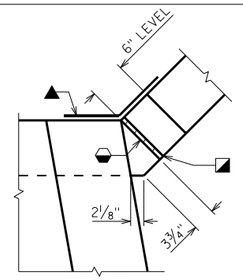
▼ BACKFILL PAY LIMITS. BACKFILL BEYOND BACKFILL PAY LIMITS SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES. LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.

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

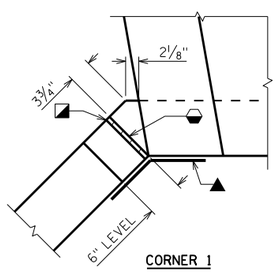
◐ EXCAVATION BELOW SUBGRADE (EBS) REQUIRED AT THE OUTLET AND INLET. USE BREAKER RUN TO FILL IN AREAS OF EBS. SEE ROADWAY PLANS FOR QUANTITIES.



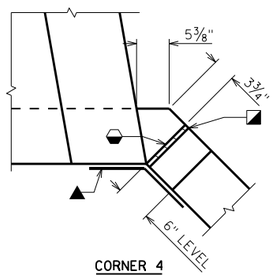
CORNER 2



CORNER 3



CORNER 1



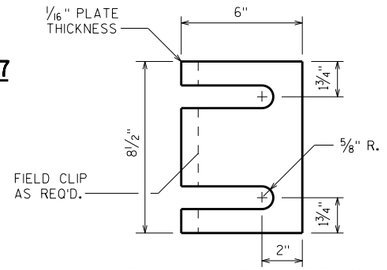
CORNER 4

CORNER DETAILS

◓ ¾" FILLER TO EXTEND FROM HORIZ. CONST. JOINT TO TOP OF WING.

◪ 1" BEVEL TYP.

▲ 18" WIDE RUBBERIZE MEMBRANE WATERPROOFING. EXTEND FROM HORIZ. CONST. JOINT TO TOP OF WING.

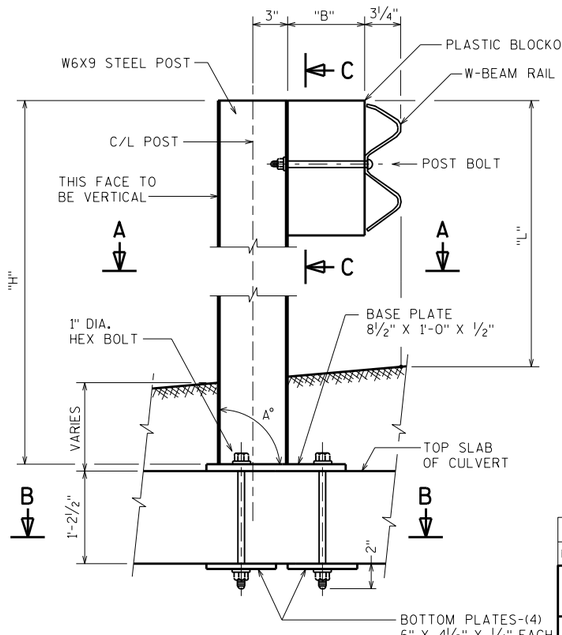


STEEL SHIM DETAIL

4 PER POST

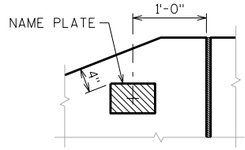
POST HEIGHT

POST. NO.	"H"	"A"
P1	63.50"	91°21'
P2	64.25"	91°21'
P3	64.75"	91°21'
P4	65.50"	91°21'
P5	66.00"	91°21'
P6	54.25"	88°38'
P7	55.00"	88°38'
P8	55.75"	88°38'
P9	56.50"	88°38'
P10	57.25"	88°38'

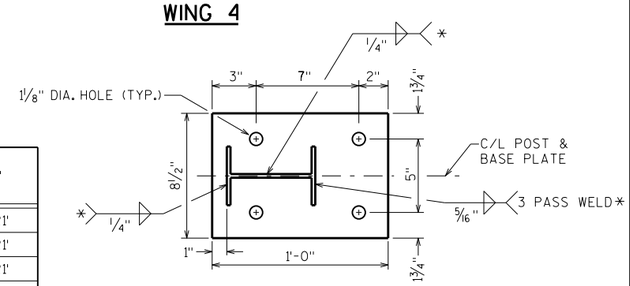


ELEVATION
GUARDRAIL POST ANCHORS

	"L"	"B"	"X"	"Y"
MGS GUARDRAIL	2'-7⅞"	12"	7⅛"	¾"

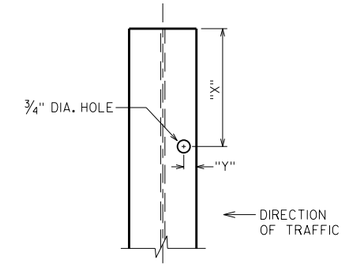


NAME PLATE LOCATION
WING 4

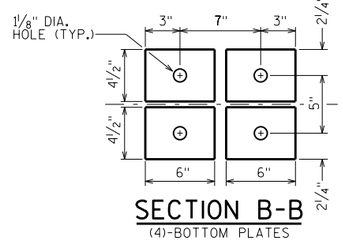


SECTION A-A
POST & BASE PLATE

* WELDING IS TO BE COMPLETED USING THE GAS-METAL ARC WELDING (GMAW) PROCESS WITH ER70S-3 WELDING WIRE AND ARGON-OXYGEN OR CO_2 COVER GAS.



SECTION C-C
HOLE IN POST FLANGE ON APPROACHING TRAFFIC SIDE



SECTION B-B
(4)-BOTTOM PLATES

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE C-47-61

DRAWN BY JPH | PLANS CK'D. SEW

APRON & POST ANCHOR DETAILS

SHEET 4

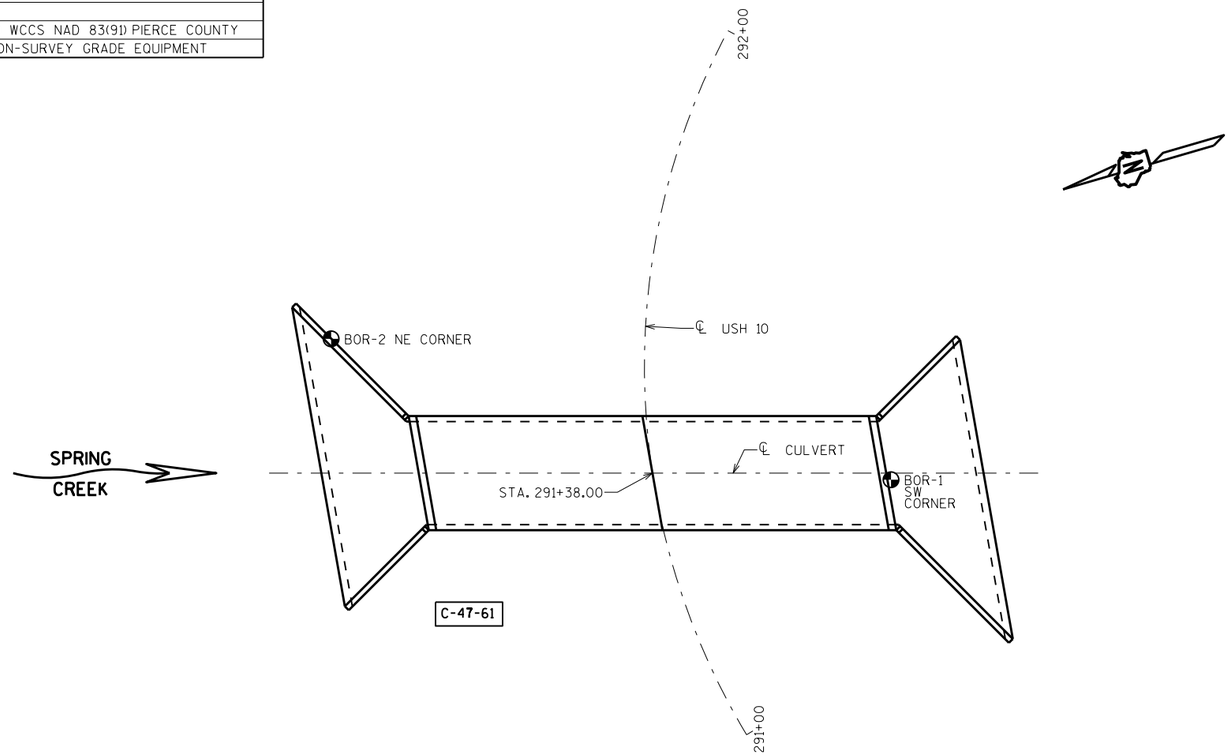
263

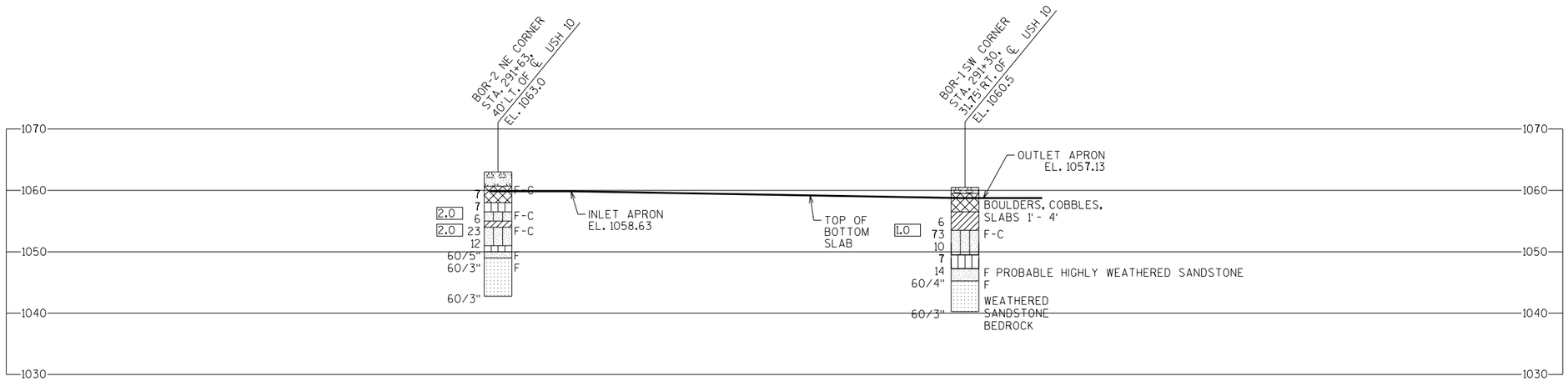
SCALE = 1.00

8

8

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	10/14/2020	317347.1	479717.3
2	10/14/2020	317414.8	479756.9
BORINGS COMPLETED BY: WISDOT			
REPORT COMPLETED BY: WISDOT			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) PIERCE COUNTY			
COORDINATES COLLECTED USING NON-SURVEY GRADE EQUIPMENT			





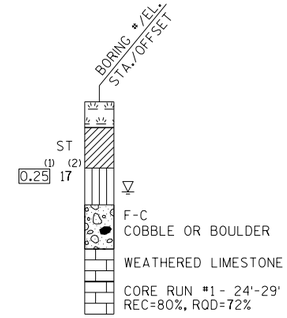
STATE PROJECT NUMBER

1530-00-79

MATERIAL SYMBOLS

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

LEGEND OF BORING



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

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

GROUND WATER ELEVATION

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

ABBREVIATIONS

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

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE C-47-61

DRAWN BY TLP/JPH | PLANS CK'D. SEW

SUBSURFACE EXPLORATION

SHEET 5

264

SCALE = 10.00

DIVISION 1-1/CAT. 1000 (STA 246+50 - STA 250+37): STAGE 1 CONSTRUCTION - USH 10

STATION	Distance	Area Cut (SF)	Area Fill (SF)	Incremental Cut Note 1 (CY)	Incremental Fill Note 2 (CY)	Cumulative Vol (CY) Cut 1.00 Note 3	Cumulative Vol (CY) Fill 1.00 Note 4	Cumulative Vol (CY) Expanded Fill 1.3	Mass Ordinate Note 5
246+50		141.3	0.0						
246+50	0	141.3	0.0	0	0	0	0	0	0
247+00	50	130.4	0.0	252	0	252	0	0	252
247+25	25	121.7	0.2	117	0	368	0	0	368
247+50	25	111.6	0.1	108	0	476	0	0	476
247+59	9	110.0	0.4	37	0	513	0	0	513
247+84	25	109.4	0.0	102	0	615	0	1	614
248+00	16	103.8	0.0	63	0	678	0	1	677
248+09	9	106.5	0.1	35	0	713	0	1	712
248+50	41	128.6	135.9	179	103	891	104	135	757
248+52	2	118.3	168.0	9	11	901	115	149	751
248+96	44	175.5	14.5	239	149	1,140	264	343	797
249+00	4	165.0	13.7	25	2	1,165	266	346	820
249+21	21	126.0	12.8	113	10	1,278	276	359	919
249+46	25	123.1	17.2	115	14	1,394	290	377	1,017
249+50	4	123.9	16.4	18	2	1,412	292	380	1,032
249+64	14	124.4	13.7	64	8	1,476	300	390	1,086
249+88	24	128.6	11.5	112	11	1,589	311	405	1,184
250+00	12	126.8	13.9	57	6	1,646	317	412	1,233
250+13	13	121.2	16.2	60	7	1,705	324	422	1,284
250+37	24	106.8	6.0	101	10	1,807	334	434	1,372
		Column totals		1,807	334				

Notes:
1 - Cut: Cut includes Salvaged/Unusable Pavement Material
2 - Fill: Does not include Unusable Pavement Excavation volume
3 - Cut: Cut includes Salvaged/Unusable Pavement Material
4 - Fill: Does not include Unusable Pavement Excavation volume
5 - Mass Ordinate: [Cut - Expanded Fill] (Fill Factor Adjusted)

DIVISION 1-2/CAT. 1000 (STA 289+37 - STA 292+66): STAGE 1 CONSTRUCTION - USH 10

STATION	Distance	Area Cut (SF)	Area Fill (SF)	Incremental Cut Note 1 (CY)	Incremental Fill Note 2 (CY)	Cumulative Vol (CY) Cut 1.00 Note 3	Cumulative Vol (CY) Fill 1.00 Note 4	Cumulative Vol (CY) Expanded Fill 1.3	Mass Ordinate Note 5
289+37		113.5	6.7						
289+50	13	113.5	6.7	55	3	55	3	4	50
289+86	36	123.9	17.1	158	16	213	19	25	188
290+00	14	122.3	13.4	64	8	277	27	35	242
290+12	12	129.5	9.5	56	5	333	32	42	291
290+37	25	118.9	0.1	115	4	448	37	47	400
290+46	9	115.0	0.2	39	0	487	37	48	439
290+50	4	114.6	0.1	17	0	504	37	48	456
290+71	21	113.6	4.1	89	2	592	38	50	543
290+95	24	111.0	12.7	100	7	692	46	59	633
291+00	5	159.2	15.0	25	3	717	48	63	655
291+38	38	281.4	92.5	310	76	1,027	124	161	866
291+50	12	291.2	47.4	127	31	1,155	155	201	953
291+70	20	261.1	1.5	205	18	1,359	173	225	1,134
292+00	30	115.6	0.0	209	1	1,568	174	226	1,342
292+50	50	128.9	0.0	226	0	1,795	174	226	1,569
292+50	0	128.9	0.0	0	0	1,795	174	226	1,569
292+75	25	29.0	0.0	73	0	1,868	174	226	1,642
292+99	24	25.8	0.0	24	0	1,892	174	226	1,666
293+00	1	25.7	0.0	1	0	1,893	174	226	1,667
293+50	50	29.3	0.0	51	0	1,944	174	226	1,718
292+66	-84	29.3	0.0	-91	0	1,853	174	226	1,627
		Column totals		1,853	174				

Notes:
1 - Cut: Cut includes Salvaged/Unusable Pavement Material
2 - Fill: Does not include Unusable Pavement Excavation volume
3 - Cut: Cut includes Salvaged/Unusable Pavement Material
4 - Fill: Does not include Unusable Pavement Excavation volume
5 - Mass Ordinate: [Cut - Expanded Fill] (Fill Factor Adjusted)

DIVISION 2-4/CAT. 1000 (STA 162+56 - STA 168+67'USH 10'): STAGE 1 CONSTRUCTION - USH 10

STATION	Distance	Area Cut (SF)	Area Fill (SF)	Incremental Cut Note 1 (CY)	Incremental Fill Note 2 (CY)	Cumulative Vol (CY) Cut 1.00 Note 3	Cumulative Vol (CY) Fill 1.00 Note 4	Cumulative Vol (CY) Expanded Fill 1.3	Mass Ordinate Note 5
162+56		4.6	55.8						
163+00	44	5.0	67.6	8	101	8	101	131	-123
163+30	30	5.1	78.9	6	81	13	182	237	-223
163+50	20	5.6	21.1	4	37	17	219	285	-267
163+57	7	6.0	10.5	2	4	19	223	290	-271
163+83	26	7.7	6.5	7	8	26	231	301	-275
164+00	17	6.8	8.8	5	5	30	236	307	-277
164+50	50	6.1	12.5	12	20	42	256	333	-290
165+00	50	9.1	0.0	14	12	56	267	348	-291
165+50	50	7.2	8.0	15	7	71	275	357	-286
166+00	50	15.4	0.2	21	8	92	282	367	-275
166+50	50	11.6	64.8	25	60	117	343	445	-328
166+58	8	11.9	61.7	3	19	121	361	470	-349
166+85	27	11.8	39.3	12	51	132	412	535	-403
167+00	15	11.9	31.0	7	20	139	431	561	-422
167+12	12	13.3	19.2	6	11	145	442	575	-431
167+39	27	12.5	2.5	13	11	158	453	589	-432
167+50	11	12.3	1.2	5	1	163	454	590	-428
167+66	16	12.5	0.0	7	0	170	454	591	-421
167+86	20	12.6	3.3	9	1	179	456	592	-413
167+92	6	6.7	6.3	2	1	181	457	594	-412
168+00	8	6.7	7.4	2	2	183	459	596	-413
168+25	25	7.5	3.4	7	5	190	464	603	-413
168+50	25	7.6	0.0	7	2	197	465	605	-408
168+67	17	6.8	0.0	5	0	201	465	605	-403
		Column totals		201	465				

Notes:
1 - Cut: Cut includes Salvaged/Unusable Pavement Material
2 - Fill: Does not include Unusable Pavement Excavation volume
3 - Cut: Cut includes Salvaged/Unusable Pavement Material
4 - Fill: Does not include Unusable Pavement Excavation volume
5 - Mass Ordinate: [Cut - Expanded Fill] (Fill Factor Adjusted)

DIVISION 2-2/CAT. 1000 (STA 145+17 - STA 147+22'USH 10'): STAGE 1 CONSTRUCTION - USH 10

STATION	Distance	Area Cut (SF)	Area Fill (SF)	Incremental Cut Note 1 (CY)	Incremental Fill Note 2 (CY)	Cumulative Vol (CY) Cut 1.00 Note 3	Cumulative Vol (CY) Fill 1.00 Note 4	Cumulative Vol (CY) Expanded Fill 1.3	Mass Ordinate Note 5
145+17		4.4	1.8						
145+31	14	11.3	12.9	4	4	4	4	5	-1
145+50	19	11.8	23.9	8	13	12	17	22	-10
146+00	50	6.0	62.7	17	80	29	97	126	-97
146+19	19	7.1	59.2	5	43	33	140	182	-149
146+27	8	8.4	45.7	2	16	36	155	202	-166
146+45	18	10.5	4.0	6	17	42	172	224	-182
146+50	5	10.8	0.8	2	0	44	172	224	-180
146+53	3	11.1	0.0	1	0	45	172	224	-179
146+72	19	17.7	0.0	10	0	55	172	224	-169
146+80	8	17.0	0.0	5	0	60	172	224	-164
147+00	20	14.0	3.1	12	1	72	174	226	-154
147+22	22	14.0	3.1	11	3	83	176	229	-146
		Column totals		83	176				

Notes:
1 - Cut: Cut includes Salvaged/Unusable Pavement Material
2 - Fill: Does not include Unusable Pavement Excavation volume
3 - Cut: Cut includes Salvaged/Unusable Pavement Material
4 - Fill: Does not include Unusable Pavement Excavation volume
5 - Mass Ordinate: [Cut - Expanded Fill] (Fill Factor Adjusted)

DIVISION 2-3/CAT. 1000 (STA 147+98 - STA 149+95'USH 10'): STAGE 1 CONSTRUCTION - USH 10

STATION	Distance	Area Cut (SF)	Area Fill (SF)	Incremental Cut Note 1 (CY)	Incremental Fill Note 2 (CY)	Cumulative Vol (CY) Cut 1.00 Note 3	Cumulative Vol (CY) Fill 1.00 Note 4	Cumulative Vol (CY) Expanded Fill 1.3	Mass Ordinate Note 5
147+98		10.6	30.8						
148+00	2	10.6	30.8	1	2	1	2	3	-2
148+48	48	9.3	0.0	18	27	18	30	39	-20
148+50	2	9.5	0.0	1	0	19	30	39	-19
148+75	25	5.5	0.0	7	0	26	30	39	-12
149+00	25	5.1	8.9	5	4	31	34	44	-13
149+01	1	5.1	9.6	0	0	31	34	44	-13
149+50	49	4.6	6.1	9	14	40	48	63	-23
149+95	45	4.3	2.5	7	7	48	55	72	-25
		Column totals		48	55				

Notes:
1 - Cut: Cut includes Salvaged/Unusable Pavement Material
2 - Fill: Does not include Unusable Pavement Excavation volume
3 - Cut: Cut includes Salvaged/Unusable Pavement Material
4 - Fill: Does not include Unusable Pavement Excavation volume
5 - Mass Ordinate: [Cut - Expanded Fill] (Fill Factor Adjusted)

DIVISION 2-5/CAT. 1000 (STA 171+45 - STA 177+64'USH 10'): STAGE 1 CONSTRUCTION - USH 10

STATION	Distance	Area Cut (SF)	Area Fill (SF)	Incremental Cut Note 1 (CY)	Incremental Fill Note 2 (CY)	Cumulative Vol (CY) Cut 1.00 Note 3	Cumulative Vol (CY) Fill 1.00 Note 4	Cumulative Vol (CY) Expanded Fill 1.3	Mass Ordinate Note 5
171+45		6.2	0.0						
171+50	5	6.2	0.3	1	0	1	0	0	1
172+00	50	7.2	2.9	12	3	14	3	4	10
172+20	20	7.4	3.7	5	2	19	5	7	12
172+46	26	6.2	0.7	7	2	26	8	10	16
172+50	4	6.3	0.7	1	0	26	8	10	17
172+73	23	6.5	0.4	5	0	32	8	11	21
173+00	27	6.4	0.0	6	0	38	8	11	28
173+50	50	8.1	0.0	13	0	52	8	11	41
174+00	50	5.5	17.2	13	16	64	24	31	33
174+50	50	7.3	0.0	12	16	76	40	52	24
175+00	50	7.1	0.0	13	0	90	40	52	37
175+50	50	4.9	10.1	11	9	101	50	64	36
176+00	50	4.7	5.3	9	14	109	64	83	26
176+47	47	4.9	3.6	8	8	118	72	93	25
176+50	3	4.9	4.3	1	0	118	72	94	25
176+74	24	5.8	6.5	5	5	123	77	100	23
176+99	25	6.7	24.6	6	14	129	91	119	10
177+00	1	6.7	24.6	0	1	129	92	120	9
177+50	50	6.2	5.8	12	28	141	120	156	-15
177+64	14	5.1	3.3	3	2	144	123	160	-16
			Column Totals	144	123				

Notes:
1 - Cut: Cut includes Salvaged/Unusable Pavement Material
2 - Fill: Does not include Unusable Pavement Excavation volume
3 - Cut: Cut includes Salvaged/Unusable Pavement Material
4 - Fill: Does not include Unusable Pavement Excavation volume
5 - Mass Ordinate: [Cut - Expanded Fill] (Fill Factor Adjusted)

DIVISION 2-6/CAT. 1000 (STA 184+71 - STA 197+41'USH 10'): STAGE 1 CONSTRUCTION - USH 10

STATION	Distance	Area Cut (SF)	Area Fill (SF)	Incremental Cut Note 1 (CY)	Incremental Fill Note 2 (CY)	Cumulative Vol (CY) Cut 1.00 Note 3	Cumulative Vol (CY) Fill 1.00 Note 4	Cumulative Vol (CY) Expanded Fill 1.3	Mass Ordinate Note 5
184+71		1.3	0.0						
185+00	29	2.9	1.8	2	1	2	1	1	1
185+50	50	5.4	3.1	8	5	10	5	7	3
185+54	4	5.7	3.2	1	0	11	6	8	3
185+81	27	10.0	6.0	8	5	19	11	14	5
186+00	19	9.3	6.9	7	5	25	15	20	6
186+08	8	8.6	8.2	3	2	28	17	23	5
186+50	42	7.7	9.9	13	14	41	31	41	0
187+00	50	7.9	5.5	14	14	55	46	59	-4
187+50	50	12.0	1.6	18	6	74	52	68	6
188+00	50	13.5	11.1	24	12	97	64	83	14
188+50	50	12.5	1.3	24	11	121	75	98	24
188+51	1	12.5	1.2	0	0	122	75	98	24
188+77	26	13.8	2.6	13	2	134	77	100	34
189+00	23	11.1	0.7	11	1	145	79	102	43
189+04	4	9.2	0.8	1	0	147	79	102	44
189+50	46	9.7	3.5	16	4	163	82	107	56
189+79	29	8.8	1.8	10	3	173	85	111	62
190+00	21	7.6	0.0	6	1	179	86	112	67
190+07	7	7.8	0.0	2	0	181	86	112	69
190+50	43	8.0	0.0	13	0	193	86	112	82
191+00	50	6.7	0.0	14	0	207	86	112	96
191+50	50	5.4	13.2	11	12	218	98	127	91
192+00	50	3.8	18.7	8	30	227	127	166	61
192+50	50	4.0	7.2	7	24	234	151	197	37
193+00	50	3.5	2.9	7	9	241	161	209	32
193+50	50	3.6	2.2	7	5	247	165	215	32
194+00	50	4.4	3.1	7	5	255	170	221	33
194+50	50	4.7	2.3	8	5	263	175	228	35
195+00	50	4.2	3.6	8	5	272	181	235	37
195+50	50	4.8	4.1	8	7	280	188	244	36
196+00	50	5.4	9.9	9	13	289	201	261	28
196+28	28	6.4	3.7	6	7	295	208	270	25
196+50	22	5.6	5.1	5	4	300	211	275	25
196+54	4	5.7	5.2	1	1	301	212	276	25
196+80	26	4.5	17.4	5	11	306	223	290	16
197+00	20	4.9	13.7	3	11	309	235	305	5
197+41	41	4.4	7.4	7	16	317	251	326	-9
			Column totals	317	251				

Notes:
1 - Cut: Cut includes Salvaged/Unusable Pavement Material
2 - Fill: Does not include Unusable Pavement Excavation volume
3 - Cut: Cut includes Salvaged/Unusable Pavement Material
4 - Fill: Does not include Unusable Pavement Excavation volume
5 - Mass Ordinate: [Cut - Expanded Fill] (Fill Factor Adjusted)

DIVISION 2-8/CAT. 1000 (STA 251+38 - STA 254+64'USH 10'): STAGE 1 CONSTRUCTION - USH 10

STATION	Distance	Area Cut (SF)	Area Fill (SF)	Incremental Cut Note 1 (CY)	Incremental Fill Note 2 (CY)	Cumulative Vol (CY) Cut 1.00 Note 3	Cumulative Vol (CY) Fill 1.00 Note 4	Cumulative Vol (CY) Expanded Fill 1.3	Mass Ordinate Note 5
251+38		5.6	14.8						
251+40	2	12.5	17.4	1	1	1	1	2	-1
251+50	10	12.1	18.9	5	7	5	8	10	-5
252+00	50	10.1	32.4	21	48	26	55	72	-46
252+14	14	10.1	37.5	5	18	31	74	96	-65
252+15	1	10.1	36.7	0	1	31	75	97	-66
252+41	26	10.4	8.6	10	22	41	97	126	-84
252+42	1	10.4	8.2	0	0	42	97	126	-85
252+50	8	10.8	4.3	3	2	45	99	129	-84
252+67	17	11.0	0.2	7	1	52	100	130	-79
252+68	1	11.0	0.1	0	0	52	100	130	-78
253+00	32	9.4	1.1	12	1	64	101	131	-67
253+30	30	10.4	2.9	11	2	75	103	134	-59
253+30	0	10.4	2.9	0	0	75	103	134	-59
253+50	20	11.1	5.2	8	3	83	106	138	-55
253+56	6	11.6	7.4	3	1	86	108	140	-54
253+57	1	11.6	7.6	0	0	86	108	140	-54
253+83	26	11.2	30.2	11	18	97	126	164	-67
253+84	1	11.2	30.3	0	1	97	127	165	-68
254+00	16	10.2	29.4	6	18	104	145	188	-85
254+50	50	13.2	0.0	22	27	125	172	224	-98
254+64	14	5.9	0.0	5	0	130	172	224	-93
			Column totals	130	172				

Notes:
1 - Cut: Cut includes Salvaged/Unusable Pavement Material
2 - Fill: Does not include Unusable Pavement Excavation volume
3 - Cut: Cut includes Salvaged/Unusable Pavement Material
4 - Fill: Does not include Unusable Pavement Excavation volume
5 - Mass Ordinate: [Cut - Expanded Fill] (Fill Factor Adjusted)

DIVISION 2-11/CAT. 1000 (STA 373+74 - STA 378+68'USH 10'): STAGE 1 CONSTRUCTION - USH 10

STATION	Distance	Area Cut (SF)	Area Fill (SF)	Incremental Cut Note 1 (CY)	Incremental Fill Note 2 (CY)	Cumulative Vol (CY) Cut 1.00 Note 3	Cumulative Vol (CY) Fill 1.00 Note 4	Cumulative Vol (CY) Expanded Fill 1.3	Mass Ordinate Note 5
373+74		4.4	50.7						
374+00	26	3.6	71.9	4	59	4	59	77	-73
374+22	22	3.6	82.1	3	63	7	122	158	-151
374+38	16	3.4	83.0	2	49	9	171	222	-213
374+50	12	7.3	78.9	2	36	11	207	269	-257
374+64	14	6.9	62.7	4	37	15	243	316	-301
374+91	27	7.7	49.1	7	56	22	299	389	-367
375+00	9	6.8	48.9	2	16	25	316	410	-385
375+27	27	7.4	53.3	7	51	32	367	477	-445
375+50	23	10.2	34.7	7	38	39	404	525	-486
375+54	4	10.3	32.9	2	5	41	409	532	-491
375+81	27	11.1	15.5	11	24	51	433	563	-512
376+00	19	10.0	5.2	7	7	59	441	573	-514
376+43	43	11.2	18.8	17	19	76	460	598	-522
376+50	7	11.0	24.1	3	6	79	465	605	-526
376+70	20	10.8	31.5	8	21	87	486	632	-545
376+96	26	10.9	47.7	10	38	97	524	681	-584
377+00	4	11.1	45.9	2	7	99	531	690	-591
377+41	41	11.3	44.7	17	69	116	600	780	-664
377+50	9	12.0	41.6	4	14	120	614	798	-679
377+67	17	13.9	39.2	8	25	128	640	832	-704
377+71	4	14.3	41.7	2	6	130	646	839	-709
377+94	23	5.3	46.4	8	38	138	683	888	-750
378+00	6	5.3	38.2	1	9	139	693	900	-761
378+01	1	5.3	36.9	0	1	140	694	902	-763
378+50	49	6.3	0.2	10	34	150	728	946	-796
378+68	18	6.5	0.0	4	0	154	728	946	-792
			Column totals	154	728				

Notes:
1 - Cut: Cut includes Salvaged/Unusable Pavement Material
2 - Fill: Does not include Unusable Pavement Excavation volume
3 - Cut: Cut includes Salvaged/Unusable Pavement Material
4 - Fill: Does not include Unusable Pavement Excavation volume
5 - Mass Ordinate: [Cut - Expanded Fill] (Fill Factor Adjusted)

DIVISION 2-13/CAT. 1000 (STA 413+83 - STA 423+15'USH 10'): STAGE 1 CONSTRUCTION - USH 10

STATION	Distance	Area Cut (SF)	Area Fill (SF)	Incremental Cut Note 1 (CY)	Incremental Fill Note 2 (CY)	Cumulative Vol (CY) Cut 1.00 Note 3	Cumulative Vol (CY) Fill 1.00 Note 4	Cumulative Vol (CY) Expanded Fill 1.3	Mass Ordinate Note 5
413+83		6.0	0.0						
414+00	17	5.8	0.3	4	0	4	0	0	4
414+50	50	3.9	6.7	9	6	13	7	8	4
414+58	8	4.5	8.0	1	2	14	9	11	3
414+85	27	6.5	1.3	5	5	19	13	17	2
415+00	15	7.0	0.3	4	0	23	14	18	5
415+11	11	6.5	0.3	3	0	26	14	18	8
415+50	39	6.7	1.5	10	1	35	15	20	16
416+00	50	6.1	7.4	12	8	47	23	30	17
416+50	50	6.8	4.9	12	11	59	35	45	14
417+00	50	7.2	0.1	13	5	72	39	51	21
417+50	50	7.1	0.0	13	0	85	39	51	34
418+00	50	8.0	0.0	14	0	99	39	51	48
418+04	4	8.0	0.0	1	0	100	39	51	49
418+34	30	9.9	0.0	10	0	110	39	51	59
418+50	16	11.2	0.4	6	0	117	40	51	65
419+00	50	13.5	7.9	23	8	140	47	61	78
419+09	9	12.2	11.6	4	3	144	50	66	78
419+36	27	12.5	12.1	12	12	156	62	81	75
419+50	14	13.0	9.9	7	6	163	68	88	74
419+62	12	13.7	8.5	6	4	169	72	94	75
420+00	38	14.5	0.6	20	6	188	79	102	86
420+50	50	11.3	25.6	24	24	212	103	134	79
420+86	36	11.9	4.0	15	20	228	123	159	68
421+00	14	11.6	2.7	6	2	234	124	162	72
421+13	13	11.1	4.1	5	2	239	126	164	76
421+40	27	11.1	51.9	11	28	250	154	200	50
421+50	10	9.8	35.7	4	16	254	170	221	33
421+57	7	7.2	17.5	2	7	257	177	230	26
421+87	30	4.7	20.2	7	21	263	198	257	6
422+00	13	5.0	18.7	2	9	266	207	270	-4
422+14	14	4.7	19.3	3	10	268	217	282	-14
422+40	26	4.3	1.1	4	10	272	227	295	-23
422+50	10	6.9	0.0	2	0	274	227	295	-21
423+00	50	6.6	0.0	13	0	287	227	295	-8
423+15	15	7.1	0.0	4	0	291	227	295	-5
			Column totals	291	227				

Notes:
1 - Cut: Cut includes Salvaged/Unusable Pavement Material
2 - Fill: Does not include Unusable Pavement Excavation volume
3 - Cut: Cut includes Salvaged/Unusable Pavement Material
4 - Fill: Does not include Unusable Pavement Excavation volume
5 - Mass Ordinate: [Cut - Expanded Fill] (Fill Factor Adjusted)

DIVISION 2-14/CAT. 1000 (STA 427+82 - STA 449+61'USH 10'): STAGE 1 CONSTRUCTION - USH 10

STATION	Distance	Area Cut (SF)	Area Fill (SF)	Incremental Cut Note 1 (CY)	Incremental Fill Note 2 (CY)	Cumulative Vol (CY) Cut 1.00 Note 3	Cumulative Vol (CY) Fill 1.00 Note 4	Cumulative Vol (CY) Expanded Fill 1.3	Mass Ordinate Note 5
427+82		9.1	0.5						
428+00	18	10.9	0.2	7	0	7	0	0	6
428+50	50	8.2	1.6	18	2	24	2	2	22
428+53	3	8.5	2.4	1	0	25	2	3	23
428+57	4	8.8	3.2	1	0	27	2	3	23
428+80	23	9.8	9.3	8	5	35	8	10	24
428+83	3	8.3	11.8	1	1	36	9	12	24
429+00	17	6.4	40.0	5	16	40	25	33	7
429+06	6	6.3	42.9	1	9	42	34	45	-3
429+10	4	6.3	48.4	1	7	42	41	54	-11
429+50	40	5.8	89.5	9	102	51	143	186	-135
430+00	50	6.3	104.8	11	180	63	323	420	-358
430+50	50	7.1	109.6	12	199	75	522	678	-604
431+00	50	7.8	115.6	14	209	89	730	950	-861
431+50	50	7.4	97.7	14	198	103	928	1,206	-1,104
432+00	50	9.3	97.9	15	181	118	1,109	1,442	-1,324
432+50	50	7.9	89.5	16	174	134	1,283	1,667	-1,533
433+00	50	8.0	88.7	15	165	149	1,448	1,882	-1,733
433+35	35	6.8	107.4	10	127	158	1,575	2,047	-1,889
433+50	15	4.0	126.9	3	65	161	1,640	2,132	-1,971
433+61	11	2.8	117.5	1	50	163	1,690	2,197	-2,034
433+88	27	23.7	10.7	13	64	176	1,754	2,280	-2,104
434+00	12	0.0	0.0	5	2	181	1,756	2,283	-2,102
434+50	50	1.8	60.3	2	56	183	1,812	2,356	-2,173
434+83	33	88.0	87.0	55	90	238	1,902	2,473	-2,235
436+02		86.7	85.2						
436+50	48	86.3	121.6	154	184	392	2,086	2,712	-2,320
437+00	50	2.0	188.2	82	287	473	2,373	3,084	-2,611
437+02	2	1.9	190.6	0	14	473	2,387	3,103	-2,629
437+27	25	3.2	222.6	2	191	476	2,578	3,351	-2,876
437+50	23	4.5	226.9	3	191	479	2,769	3,600	-3,121
437+52	2	4.7	226.8	0	17	479	2,786	3,622	-3,143
438+00	48	5.6	153.1	9	338	489	3,124	4,061	-3,573
438+50	50	5.7	5.9	10	147	499	3,271	4,252	-3,753
438+57	7	5.8	4.8	1	1	500	3,272	4,254	-3,754
442+48		8.9	0.3						
442+50	2	8.9	0.3	1	0	501	3,272	4,254	-3,753
443+00	50	10.4	0.3	18	1	519	3,273	4,255	-3,736
443+49	49	12.1	0.9	20	1	539	3,274	4,256	-3,717
443+50	1	12.1	0.9	0	0	540	3,274	4,256	-3,717
443+74	24	12.2	0.0	11	0	551	3,275	4,257	-3,706
443+99	25	11.3	0.0	11	0	561	3,275	4,257	-3,695
444+00	1	11.0	0.0	0	0	562	3,275	4,257	-3,695
444+50	50	112.9	2.3	115	2	677	3,277	4,260	-3,583
445+00	50	81.2	22.2	180	23	856	3,299	4,289	-3,433
445+02	2	81.2	22.2	6	2	862	3,301	4,291	-3,429
445+74		97.9	36.9						
446+00	26	97.9	36.9	94	35	957	3,336	4,337	-3,381
446+50	50	102.9	64.9	186	94	1,143	3,431	4,460	-3,317
446+77	27	111.4	90.1	107	77	1,250	3,508	4,561	-3,311
447+00	23	109.4	106.2	94	84	1,344	3,592	4,669	-3,326
447+02	2	110.4	106.3	8	8	1,352	3,600	4,679	-3,328
447+27	25	131.7	105.1	112	98	1,464	3,697	4,807	-3,343
447+50	23	132.0	95.4	112	85	1,576	3,783	4,918	-3,342
448+00	50	125.9	56.4	239	141	1,815	3,923	5,101	-3,286
448+32	32	101.2	58.4	135	68	1,950	3,992	5,189	-3,239
448+50	18	3.9	26.6	35	28	1,985	4,020	5,226	-3,241
449+00	50	9.7	4.3	13	29	1,997	4,048	5,263	-3,266
449+50	50	6.6	7.6	15	11	2,012	4,059	5,277	-3,265
449+61	11	13.4	4.6	4	2	2,016	4,062	5,281	-3,264
			Column totals	2,016	4,062				

Notes:
1 - Cut: Cut includes Salvaged/Unusable Pavement Material
2 - Fill: Does not include Unusable Pavement Excavation volume
3 - Cut: Cut includes Salvaged/Unusable Pavement Material
4 - Fill: Does not include Unusable Pavement Excavation volume
5 - Mass Ordinate: [Cut - Expanded Fill] (Fill Factor Adjusted)

DIVISION 2-15/CAT. 1000 (STA 474+74 - STA 477+71'USH 10'): STAGE 1 CONSTRUCTION - USH 10

STATION	Distance	Area Cut (SF)	Area Fill (SF)	Incremental Cut Note 1 (CY)	Incremental Fill Note 2 (CY)	Cumulative Vol (CY) Cut 1.00 Note 3	Cumulative Vol (CY) Fill 1.00 Note 4	Cumulative Vol (CY) Expanded Fill 1.3	Mass Ordinate Note 5
474+74		6.3	0.4						
475+00	26	5.6	2.9	6	2	6	2	2	4
475+47	47	13.5	6.4	17	8	22	10	13	10
475+49	2	13.4	5.7	1	0	23	10	13	10
475+50	1	13.4	5.4	0	0	24	10	13	10
475+73	23	4.3	0.8	8	3	31	13	17	14
475+76	3	3.8	0.7	0	0	32	13	17	15
476+00	24	2.8	0.0	3	0	35	13	17	17
476+00	0	2.8	0.0	0	0	35	13	17	17
476+02	2	2.8	0.0	0	0	35	13	17	17
476+50	48	2.2	16.0	4	14	39	28	36	3
476+63	13	2.2	2.5	1	4	40	32	42	-1
476+89	26	2.3	1.4	2	2	43	34	44	-2
476+90	1	2.4	1.3	0	0	43	34	44	-1
477+00	10	2.8	2.1	1	1	44	35	45	-1
477+16	16	3.3	3.0	2	2	45	36	47	-2
477+16	0	3.3	2.9	0	0	45	36	47	-2
477+34	18	36.1	0.9	13	1	59	37	49	10
477+43	9	0.0	2.6	6	1	65	38	49	15
477+50	7	0.0	2.6	0	1	65	39	50	14
477+71	21	0.1	2.8	0	2	65	41	53	12
		Column totals		65	41				

Notes:
1 - Cut: Cut includes Salvaged/Unusable Pavement Material
2 - Fill: Does not include Unusable Pavement Excavation volume
3 - Cut: Cut includes Salvaged/Unusable Pavement Material
4 - Fill: Does not include Unusable Pavement Excavation volume
5 - Mass Ordinate: [Cut - Expanded Fill] (Fill Factor Adjusted)

DIVISION 2-18/CAT. 1000 (STA 590+26 - STA 594+04'USH 10'): STAGE 1 CONSTRUCTION - USH 10

STATION	Distance	Area Cut (SF)	Area Fill (SF)	Incremental Cut Note 1 (CY)	Incremental Fill Note 2 (CY)	Cumulative Vol (CY) Cut 1.00 Note 3	Cumulative Vol (CY) Fill 1.00 Note 4	Cumulative Vol (CY) Expanded Fill 1.3	Mass Ordinate Note 5
590+26		11.6	1.0						
590+50	24	11.0	6.8	10	3	10	3	4	6
590+98	48	11.3	23.2	20	27	30	30	39	-9
591+00	2	11.4	23.5	1	2	31	32	41	-11
591+01	1	11.4	23.7	0	1	31	33	43	-11
591+24	23	44.7	2.7	24	11	55	44	57	-2
591+27	3	44.5	2.3	5	0	60	44	58	2
591+50	23	43.4	0.7	37	1	97	46	59	38
591+51	1	43.3	0.7	2	0	99	46	59	40
591+54	3	42.8	0.7	5	0	104	46	59	45
592+00	46	11.8	0.0	47	1	150	46	60	90
592+50	50	13.0	3.4	23	3	173	49	64	109
592+76	26	11.8	18.9	12	11	185	60	78	107
592+79	3	11.9	21.0	1	2	187	62	81	105
593+00	21	12.6	37.8	10	23	196	85	111	85
593+02	2	12.7	37.2	1	3	197	88	114	83
593+05	3	12.9	36.9	1	4	199	92	120	79
593+29	24	14.3	50.4	12	39	211	131	170	40
593+32	3	14.4	39.4	2	5	212	136	177	35
593+50	18	13.0	8.0	9	16	221	152	197	24
594+00	50	12.8	0.0	24	7	245	159	207	38
594+04	4	6.5	0.0	1	0	247	159	207	40
		Column totals		247	159				

Notes:
1 - Cut: Cut includes Salvaged/Unusable Pavement Material
2 - Fill: Does not include Unusable Pavement Excavation volume
3 - Cut: Cut includes Salvaged/Unusable Pavement Material
4 - Fill: Does not include Unusable Pavement Excavation volume
5 - Mass Ordinate: [Cut - Expanded Fill] (Fill Factor Adjusted)

DIVISION 2-16/CAT. 1000 (STA 529+00 - STA 536+32'USH 10'): STAGE 1 CONSTRUCTION - USH 10

STATION	Distance	Area Cut (SF)	Area Fill (SF)	Incremental Cut Note 1 (CY)	Incremental Fill Note 2 (CY)	Cumulative Vol (CY) Cut 1.00 Note 3	Cumulative Vol (CY) Fill 1.00 Note 4	Cumulative Vol (CY) Expanded Fill 1.3	Mass Ordinate Note 5
529+00		0.2	0.0						
529+13	13	5.9	0.0	1	0	1	0	0	1
529+19	6	5.5	0.0	1	0	3	0	0	3
529+44	25	6.5	0.0	6	0	8	0	0	8
529+50	6	6.8	0.0	1	0	10	0	0	10
529+72	22	6.2	0.0	5	0	15	0	0	15
530+00	28	5.8	0.0	6	0	21	0	0	21
530+43	43	4.9	14.0	8	11	30	11	15	15
530+50	7	10.5	14.0	2	4	32	15	19	12
530+68	18	9.8	15.3	7	10	39	25	32	7
530+96	28	9.8	15.1	10	16	49	40	53	-4
531+00	4	9.8	14.7	1	2	50	43	55	-5
531+50	50	10.5	15.8	19	28	69	71	92	-23
532+00	50	11.3	9.9	20	24	89	95	123	-34
532+50	50	11.6	15.0	21	23	110	118	153	-43
533+00	50	11.6	17.6	21	30	132	148	192	-60
533+44	44	15.8	9.2	22	22	154	170	220	-66
533+50	6	16.1	11.0	4	2	158	172	223	-66
533+71	21	15.5	17.4	12	11	170	183	238	-68
533+97	26	11.4	57.3	13	36	183	219	285	-102
534+00	3	11.2	45.0	1	6	184	225	292	-108
534+50	50	8.9	5.5	19	47	203	271	353	-150
534+64	14	8.5	4.8	4	3	207	274	356	-149
534+99	35	4.7	0.8	9	4	216	278	361	-145
535+00	1	4.7	0.8	0	0	216	278	361	-145
535+01	1	4.7	0.9	0	0	216	278	361	-145
535+27	26	5.8	0.9	5	1	221	279	362	-141
535+50	23	5.8	5.2	5	3	226	281	366	-140
535+53	3	5.9	6.2	1	1	227	282	366	-140
536+00	47	7.4	6.6	12	11	238	293	381	-143
536+32	32	5.6	4.4	8	6	246	299	389	-143
		Column totals		246	299				

Notes:
1 - Cut: Cut includes Salvaged/Unusable Pavement Material
2 - Fill: Does not include Unusable Pavement Excavation volume
3 - Cut: Cut includes Salvaged/Unusable Pavement Material
4 - Fill: Does not include Unusable Pavement Excavation volume
5 - Mass Ordinate: [Cut - Expanded Fill] (Fill Factor Adjusted)

DIVISION 2-17/CAT. 1000 (STA 544+86 - STA 548+16'USH 10'): STAGE 1 CONSTRUCTION - USH 10

STATION	Distance	Area Cut (SF)	Area Fill (SF)	Incremental Cut Note 1 (CY)	Incremental Fill Note 2 (CY)	Cumulative Vol (CY) Cut 1.00 Note 3	Cumulative Vol (CY) Fill 1.00 Note 4	Cumulative Vol (CY) Expanded Fill 1.3	Mass Ordinate Note 5
544+86		8.2	0.0						
544+94	8	8.2	0.0	2	0	2	0	0	2
545+00	6	14.1	20.4	2	2	5	2	3	2
545+50	50	10.6	45.8	23	61	28	64	83	-55
545+60	10	10.2	51.9	4	18	32	82	106	-74
545+74	14	9.8	53.8	5	27	37	109	142	-105
545+87	13	9.6	44.4	5	24	42	133	173	-131
546+00	13	10.3	32.6	5	19	46	151	197	-150
546+00	0	10.3	32.4	0	0	46	151	197	-150
546+13	13	12.1	20.9	5	13	52	164	213	-162
546+27	14	14.1	12.0	7	9	59	173	224	-166
546+50	23	12.0	9.5	11	9	70	182	236	-167
546+88	38	11.4	13.2	16	16	86	198	257	-171
546+89	1	11.5	13.5	0	0	87	198	258	-171
547+00	11	11.7	22.4	5	7	91	206	267	-176
547+15	15	12.1	33.9	7	16	98	221	288	-190
547+16	1	12.1	34.4	0	1	98	222	289	-191
547+41	25	12.2	55.1	11	41	110	264	343	-234
547+42	1	12.2	54.9	0	2	110	266	346	-236
547+50	8	12.0	43.9	4	15	114	281	365	-251
548+00	50	13.1	8.2	23	48	137	329	427	-291
548+16	16	15.0	0.0	8	2	145	331	431	-285
		Column totals		145	331				

Notes:
1 - Cut: Cut includes Salvaged/Unusable Pavement Material
2 - Fill: Does not include Unusable Pavement Excavation volume
3 - Cut: Cut includes Salvaged/Unusable Pavement Material
4 - Fill: Does not include Unusable Pavement Excavation volume
5 - Mass Ordinate: [Cut - Expanded Fill] (Fill Factor Adjusted)

DIVISION 2-19/CAT. 1000 (STA 638+85 - STA 647+91'USH 10'): STAGE 1 CONSTRUCTION - USH 10

STATION	Distance	Area Cut (SF)	Area Fill (SF)	Incremental Cut Note 1 (CY)	Incremental Fill Note 2 (CY)	Cumulative Vol (CY) Cut 1.00 Note 3	Cumulative Vol (CY) Fill 1.00 Note 4	Cumulative Vol (CY) Expanded Fill 1.3	Mass Ordinate Note 5
638+85									
639+00		0.6	0.0						
639+50	50	1.4	1.5	2	1	2	1	2	0
639+56	6	2.3	4.7	0	1	2	2	3	0
639+90	34	8.3	0.0	7	3	9	5	7	2
640+00	10	8.4	0.0	3	0	12	5	7	6
640+10	10	8.7	0.0	3	0	15	5	7	9
640+16	6	9.5	0.0	2	0	17	5	7	11
640+37	21	6.7	0.0	6	0	24	5	7	17
640+43	6	6.8	0.0	2	0	25	5	7	19
640+50	7	5.8	0.0	2	0	27	5	7	20
640+64	14	5.4	0.0	3	0	30	5	7	23
640+93	29	5.4	0.0	6	0	35	5	7	29
642+36		11.0	0.0						
642+50	14	11.0	0.0	6	0	41	5	7	35
642+54	4	11.3	0.0	2	0	43	5	7	36
642+81	27	9.2	0.1	10	0	53	5	7	46
642+86	5	8.9	0.0	2	0	55	5	7	48
643+00	14	8.2	0.0	4	0	59	5	7	53
643+08	8	9.0	0.0	3	0	62	5	7	55
643+13	5	10.0	0.0	2	0	63	5	7	57
643+39	26	8.6	7.2	9	3	72	9	11	61
643+50	11	7.3	7.6	3	3	76	12	15	61
644+00	50	3.6	6.4	10	13	86	24	32	54
644+44	44	3.0	1.8	5	7	91	31	41	51
646+63									
646+89	26	4.2	0.0	4	0	95	31	41	55
647+00	11	4.0	0.0	2	0	97	31	41	56
647+16	16	3.7	0.0	2	0	99	31	41	59
647+50	34	3.2	0.0	4	0	103	31	41	63
647+91	41	4.0	0.0	5	0	109	31	41	68
		Column totals		109	31				

Notes:
1 - Cut: Cut includes Salvaged/Unusable Pavement Material
2 - Fill: Does not include Unusable Pavement Excavation volume
3 - Cut: Cut includes Salvaged/Unusable Pavement Material
4 - Fill: Does not include Unusable Pavement Excavation volume
5 - Mass Ordinate: [Cut - Expanded Fill] (Fill Factor Adjusted)

DIVISION 2-20/CAT. 1000 (STA 707+39 - STA 710+73'USH 10'): STAGE 1 CONSTRUCTION - USH 10

STATION	Distance	Area Cut (SF)	Area Fill (SF)	Incremental Cut Note 1 (CY)	Incremental Fill Note 2 (CY)	Cumulative Vol (CY) Cut 1.00 Note 3	Cumulative Vol (CY) Fill 1.00 Note 4	Cumulative Vol (CY) Expanded Fill 1.3	Mass Ordinate Note 5
707+39		4.0	14.4						
707+50	11	4.1	18.0	2	7	2	7	9	-7
707+67	17	4.2	24.7	3	13	4	20	26	-22
708+00	33	10.3	42.7	9	41	13	61	80	-67
708+14	14	10.1	51.3	5	24	18	86	111	-93
708+40	26	9.6	42.1	9	45	28	131	170	-142
708+42	2	9.7	42.9	1	3	29	134	174	-145
708+50	8	10.0	41.9	3	13	32	146	190	-159
708+67	17	10.9	34.8	7	24	38	170	222	-184
708+68	1	10.9	34.7	0	1	38	172	223	-185
708+95	27	10.7	26.7	11	31	49	202	263	-214
709+00	5	10.2	21.3	2	4	51	207	269	-218
709+45	45	9.6	10.9	16	27	68	234	304	-236
709+50	5	9.6	15.8	2	2	69	236	307	-238
709+72	22	11.0	26.3	8	17	78	253	329	-251
709+98	26	5.1	30.4	8	27	86	281	365	-279
710+00	2	5.1	28.4	0	2	86	283	368	-282
710+50	50	5.2	1.9	9	28	95	311	404	-309
710+73	23	6.6	0.0	5	1	100	312	405	-305
		Column totals		100	312				

Notes:
1 - Cut: Cut includes Salvaged/Unusable Pavement Material
2 - Fill: Does not include Unusable Pavement Excavation volume
3 - Cut: Cut includes Salvaged/Unusable Pavement Material
4 - Fill: Does not include Unusable Pavement Excavation volume
5 - Mass Ordinate: [Cut - Expanded Fill] (Fill Factor Adjusted)

DIVISION 2-21/CAT. 1000 (STA 759+05 - STA 762+07'USH 10'): STAGE 1 CONSTRUCTION - USH 10

STATION	Distance	Area Cut (SF)	Area Fill (SF)	Incremental Cut Note 1 (CY)	Incremental Fill Note 2 (CY)	Cumulative Vol (CY) Cut 1.00 Note 3	Cumulative Vol (CY) Fill 1.00 Note 4	Cumulative Vol (CY) Expanded Fill 1.3	Mass Ordinate Note 5
759+05		5.0	2.3						
759+50	45	2.1	0.1	6	2	6	2	3	3
759+80	30	8.3	0.2	6	0	12	2	3	9
760+00	20	5.1	11.9	5	5	17	7	9	8
760+07	7	4.7	10.6	1	3	18	10	12	5
760+33	26	8.7	5.4	6	8	24	17	23	2
760+50	17	10.3	4.3	6	3	30	20	26	4
760+71	21	12.3	4.1	9	3	39	24	31	8
760+79	8	12.9	3.8	4	1	43	25	32	11
760+97	18	13.0	5.4	9	3	52	28	36	15
761+00	3	13.0	5.6	1	1	53	29	37	16
761+06	6	13.1	5.9	3	1	56	30	39	17
761+24	18	12.8	10.4	9	5	64	35	46	19
761+32	8	12.6	12.2	4	3	68	39	50	18
761+50	18	12.3	6.9	8	6	77	45	58	18
762+00	50	6.1	0.0	17	6	94	51	67	27
762+07	7	4.4	0.0	1	0	95	51	67	28
		Column totals		95	51				

Notes:
1 - Cut: Cut includes Salvaged/Unusable Pavement Material
2 - Fill: Does not include Unusable Pavement Excavation volume
3 - Cut: Cut includes Salvaged/Unusable Pavement Material
4 - Fill: Does not include Unusable Pavement Excavation volume
5 - Mass Ordinate: [Cut - Expanded Fill] (Fill Factor Adjusted)

DIVISION 2-22/CAT. 1000 (STA 790+61 - STA 804+69'USH 10'): STAGE 1 CONSTRUCTION - USH 10

STATION	Distance	Area Cut (SF)	Area Fill (SF)	Incremental Cut Note 1 (CY)	Incremental Fill Note 2 (CY)	Cumulative Vol (CY) Cut 1.00 Note 3	Cumulative Vol (CY) Fill 1.00 Note 4	Cumulative Vol (CY) Expanded Fill 1.3	Mass Ordinate Note 5
790+61		3.8	0.0						
791+00	39	4.1	2.3	6	2	6	2	2	3
791+19	19	6.0	5.2	4	3	9	4	6	4
791+45	26	9.0	1.4	7	3	16	8	10	7
791+50	5	9.5	0.8	2	0	18	8	10	8
791+72	22	8.1	0.1	7	0	25	8	11	15
792+00	28	6.4	1.6	8	1	33	9	12	21
792+50	50	3.6	6.6	9	8	42	17	22	21
793+00	50	7.5	6.0	10	12	52	28	37	16
793+50	50	6.0	7.9	13	13	65	41	53	11
794+00	50	4.6	7.5	10	14	75	55	72	3
794+50	50	4.1	9.4	8	16	83	71	92	-9
794+79	29	3.8	28.8	4	21	87	91	119	-32
795+00	21	3.9	46.5	3	29	90	121	157	-67
795+05	5	4.1	47.6	1	9	91	129	168	-78
795+31	26	4.3	35.2	4	40	95	169	220	-125
795+50	19	3.0	0.5	3	13	97	182	236	-139
796+00	50	4.1	64.8	7	60	104	242	315	-211
796+01	1	4.1	65.1	0	2	104	245	318	-214
796+10	9	4.2	70.0	1	23	105	267	347	-242
796+21	11	12.9	62.8	3	27	109	294	383	-274
796+36	15	12.7	45.5	7	30	116	324	422	-306
796+50	14	12.2	38.0	6	22	122	346	450	-327
796+62	12	12.0	32.0	5	16	128	362	470	-342
797+00	38	11.1	41.9	16	52	144	414	538	-394
797+07	7	10.9	42.9	3	11	147	425	552	-405
797+34	27	10.9	30.6	11	37	158	461	600	-442
797+50	16	9.8	20.3	6	15	164	476	619	-455
797+61	11	9.1	11.9	4	7	168	483	628	-460
798+00	39	7.2	5.3	12	12	180	495	644	-464
798+24	24	7.3	14.0	6	9	186	504	655	-469
798+50	26	7.8	22.8	7	18	193	522	678	-485
798+51	1	7.9	22.8	0	1	194	522	679	-486
798+78	27	9.7	37.7	9	30	202	553	719	-516
799+00	22	11.5	39.0	9	31	211	584	759	-548
799+50	50	9.9	36.9	20	70	231	654	850	-620
799+65	15	4.0	32.0	4	19	235	673	875	-641
799+85	20	3.9	35.6	3	25	238	698	908	-670
800+00	15	4.0	36.3	2	20	240	718	934	-694
800+50	50	4.6	27.7	8	59	248	778	1,011	-763
801+00	50	4.7	15.6	9	40	256	818	1,063	-807
801+50	50	4.4	22.1	8	35	265	853	1,108	-844
802+00	50	4.4	37.5	8	55	273	908	1,180	-907
802+50	50	5.0	23.6	9	57	282	964	1,254	-972
803+00	50	4.9	16.0	9	37	291	1,001	1,301	-1,011
803+50	50	4.5	15.2	9	29	299	1,030	1,339	-1,039
803+51	1	4.5	15.3	0	1	299	1,030	1,339	-1,040
803+77	26	4.7	23.5	4	19	304	1,049	1,364	-1,060
804+00	23	3.5	41.8	4	28	307	1,077	1,400	-1,093
804+03	3	3.4	44.1	0	5	308	1,082	1,406	-1,098
804+50	47	3.7	24.3	6	60	314	1,141	1,483	-1,170
804+69	19	4.4	15.4	3	14	317	1,155	1,502	-1,185
		Column totals		317	1,155				

Notes:
1 - Cut: Cut includes Salvaged/Unusable Pavement Material
2 - Fill: Does not include Unusable Pavement Excavation volume
3 - Cut: Cut includes Salvaged/Unusable Pavement Material
4 - Fill: Does not include Unusable Pavement Excavation volume
5 - Mass Ordinate: [Cut - Expanded Fill] (Fill Factor Adjusted)

DIVISION 2-23/CAT. 1000 (STA 10+43 - STA 11+77'B'): STAGE 1 CONSTRUCTION - STIRRATT AVE

STATION	Distance	Area		Incremental		Cumulative Vol (CY)			Mass Ordinate
		Cut (SF)	Fill (SF)	Cut Note 1 (CY)	Fill Note 2 (CY)	Cut 1.00 Note 3	Fill 1.00 Note 4	Expanded Fill 1.3	Note 5
10+43		3.1	2.7						
10+50	7	2.8	8.4	1	1	1	1	2	-1
10+64	14	2.6	15.6	1	6	2	8	10	-8
10+85	21	3.3	31.1	2	18	4	26	34	-29
11+00	15	3.0	17.3	2	13	6	39	51	-45
11+50	50	4.6	7.5	7	23	13	62	81	-68
11+77	27	7.6	6.2	6	7	19	69	90	-70
			Column totals	19	69				

Notes:
1 - Cut: Cut includes Salvaged/Unusable Pavement Material
2 - Fill: Does not include Unusable Pavement Excavation volume
3 - Cut: Cut includes Salvaged/Unusable Pavement Material
4 - Fill: Does not include Unusable Pavement Excavation volume
5 - Mass Ordinate: [Cut - Expanded Fill] (Fill Factor Adjusted)

DIVISION 2-24/CAT. 1000 (STA 10+91 - STA 12+41'K'): STAGE 1 CONSTRUCTION - 1040TH STREET

STATION	Distance	Area		Incremental		Cumulative Vol (CY)			Mass Ordinate
		Cut (SF)	Fill (SF)	Cut Note 1 (CY)	Fill Note 2 (CY)	Cut 1.00 Note 3	Fill 1.00 Note 4	Expanded Fill 1.3	Note 5
10+91		8.5	2.7						
11+00	9	9.1	2.7	3	1	3	1	1	2
11+04	4	9.3	2.4	1	0	4	1	2	3
11+16	12	9.2	2.9	4	1	8	2	3	5
11+30	14	8.6	3.4	5	2	13	4	5	8
11+41	11	8.8	2.8	4	1	17	5	7	10
11+50	9	9.1	3.0	3	1	20	6	8	11
11+57	7	9.3	2.5	2	1	22	7	9	13
11+82	25	10.5	0.7	9	1	31	8	11	20
12+00	18	5.5	0.0	5	0	36	9	11	25
12+01	1	5.6	0.0	0	0	37	9	11	25
12+41	40	5.6	0.0	8	0	45	9	11	34
			Column totals	45	9				

Notes:
1 - Cut: Cut includes Salvaged/Unusable Pavement Material
2 - Fill: Does not include Unusable Pavement Excavation volume
3 - Cut: Cut includes Salvaged/Unusable Pavement Material
4 - Fill: Does not include Unusable Pavement Excavation volume
5 - Mass Ordinate: [Cut - Expanded Fill] (Fill Factor Adjusted)

DIVISION 2-25/CAT. 1000 (STA 8+44 - STA 9+50'CTHO'): STAGE 1 CONSTRUCTION - CTH O

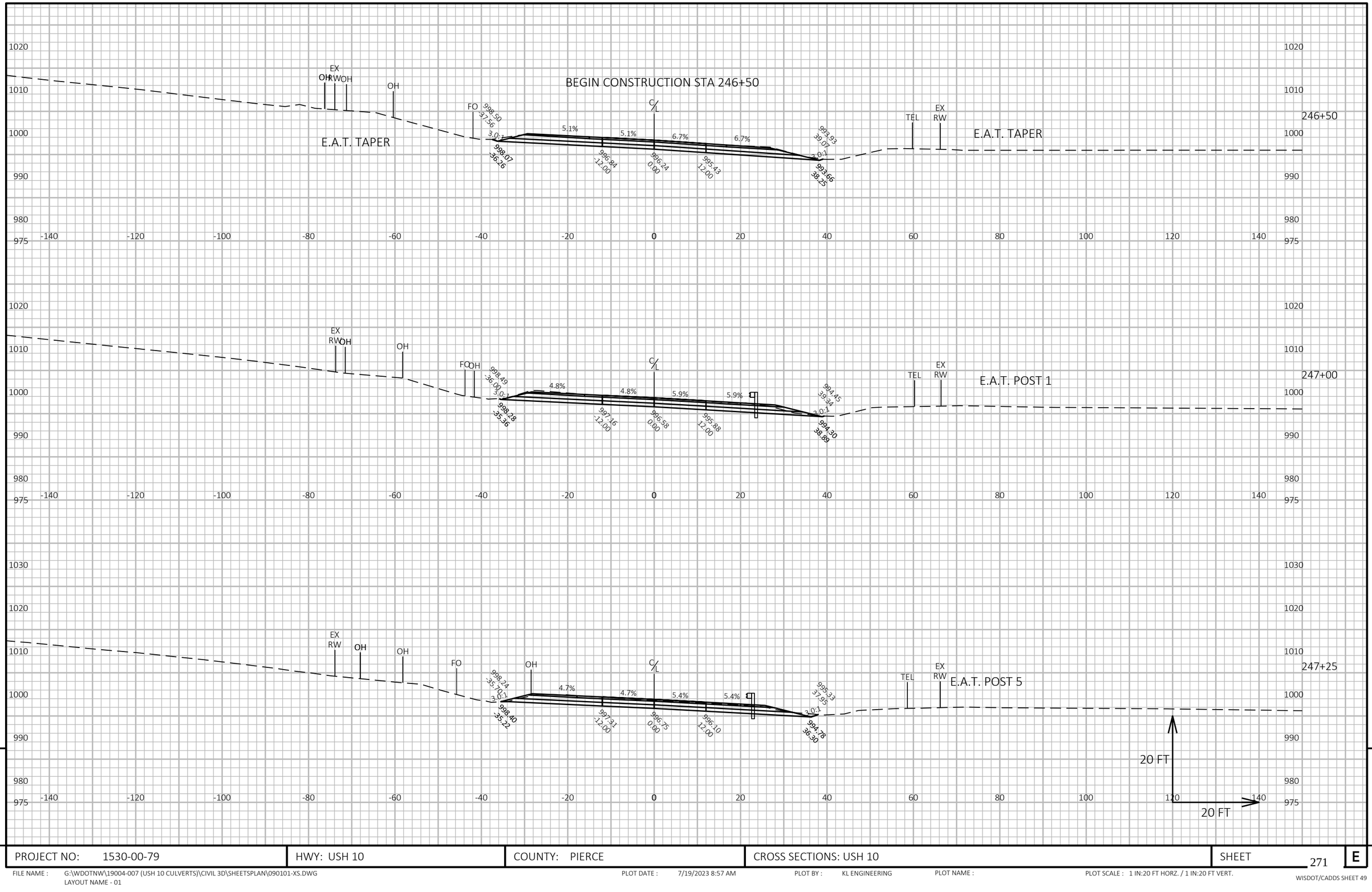
STATION	Distance	Area		Incremental		Cumulative Vol (CY)			Mass Ordinate
		Cut (SF)	Fill (SF)	Cut Note 1 (CY)	Fill Note 2 (CY)	Cut 1.00 Note 3	Fill 1.00 Note 4	Expanded Fill 1.3	Note 5
8+44		10.6	0.0						
8+85	41	10.6	0.0	16	0	16	0	0	16
9+00	15	8.4	0.0	5	0	21	0	0	21
9+08	8	8.3	0.0	2	0	24	0	0	24
9+33	25	6.7	3.4	7	2	31	2	2	29
9+50	17	6.2	0.0	4	1	35	3	3	31
			Column totals	35	3				

Notes:
1 - Cut: Cut includes Salvaged/Unusable Pavement Material
2 - Fill: Does not include Unusable Pavement Excavation volume
3 - Cut: Cut includes Salvaged/Unusable Pavement Material
4 - Fill: Does not include Unusable Pavement Excavation volume
5 - Mass Ordinate: [Cut - Expanded Fill] (Fill Factor Adjusted)

DIVISION 2-26/CAT. 1000 (STA 8+18 - STA 9+50'V'): STAGE 1 CONSTRUCTION - 810TH STREET

STATION	Distance	Area		Incremental		Cumulative Vol (CY)			Mass Ordinate
		Cut (SF)	Fill (SF)	Cut Note 1 (CY)	Fill Note 2 (CY)	Cut 1.00 Note 3	Fill 1.00 Note 4	Expanded Fill 1.3	Note 5
8+18		4.3	9.5						
8+43	25	4.3	9.5	4	9	4	9	11	-7
8+50	7	4.5	10.1	1	3	5	11	15	-10
8+76	26	5.1	13.1	5	11	10	22	29	-19
9+00	24	4.9	8.1	4	9	14	32	41	-27
9+01	1	4.9	8.0	0	0	14	32	42	-28
9+26	25	4.7	5.6	4	6	19	38	50	-31
9+50	24	8.6	0.0	6	2	25	41	53	-29
			Column totals	25	41				

Notes:
1 - Cut: Cut includes Salvaged/Unusable Pavement Material
2 - Fill: Does not include Unusable Pavement Excavation volume
3 - Cut: Cut includes Salvaged/Unusable Pavement Material
4 - Fill: Does not include Unusable Pavement Excavation volume
5 - Mass Ordinate: [Cut - Expanded Fill] (Fill Factor Adjusted)



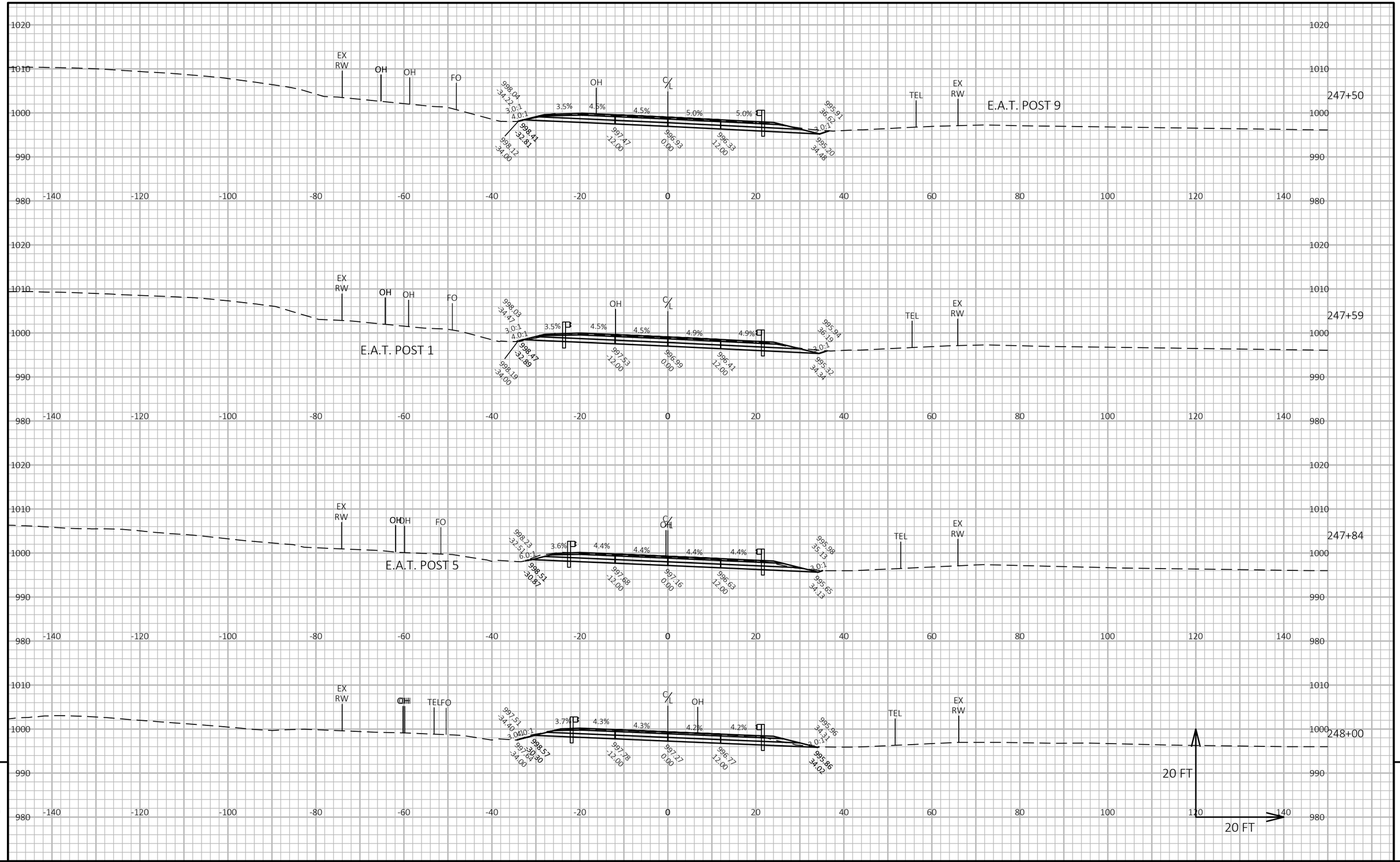
9

PROJECT NO: 1530-00-79	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 271	E

FILE NAME : G:\WDOTNW\19004-007 (USH 10 CULVERTS)\CIVIL 3D\SHEETSPLAN\090101-XS.DWG
LAYOUT NAME - 01

PLOT DATE : 7/19/2023 8:57 AM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

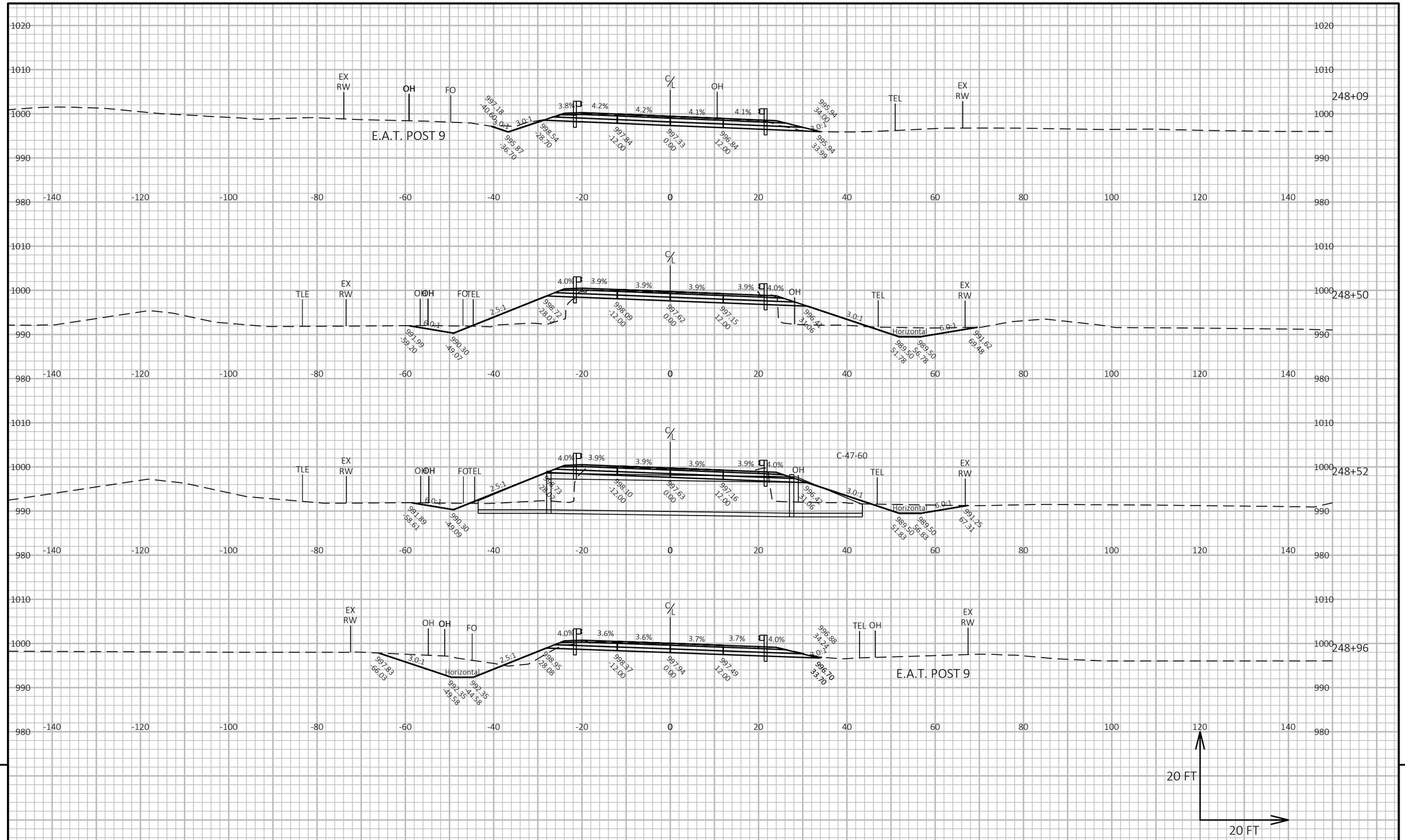
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PROJECT NO: 1530-00-79	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 272	E

FILE NAME : G:\WDOTNW\19004-007 (USH 10 CULVERTS)\CIVIL 3D\SHEETSPLAN\090101-XS.DWG
LAYOUT NAME - 02

PLOT DATE : 7/19/2023 8:57 AM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

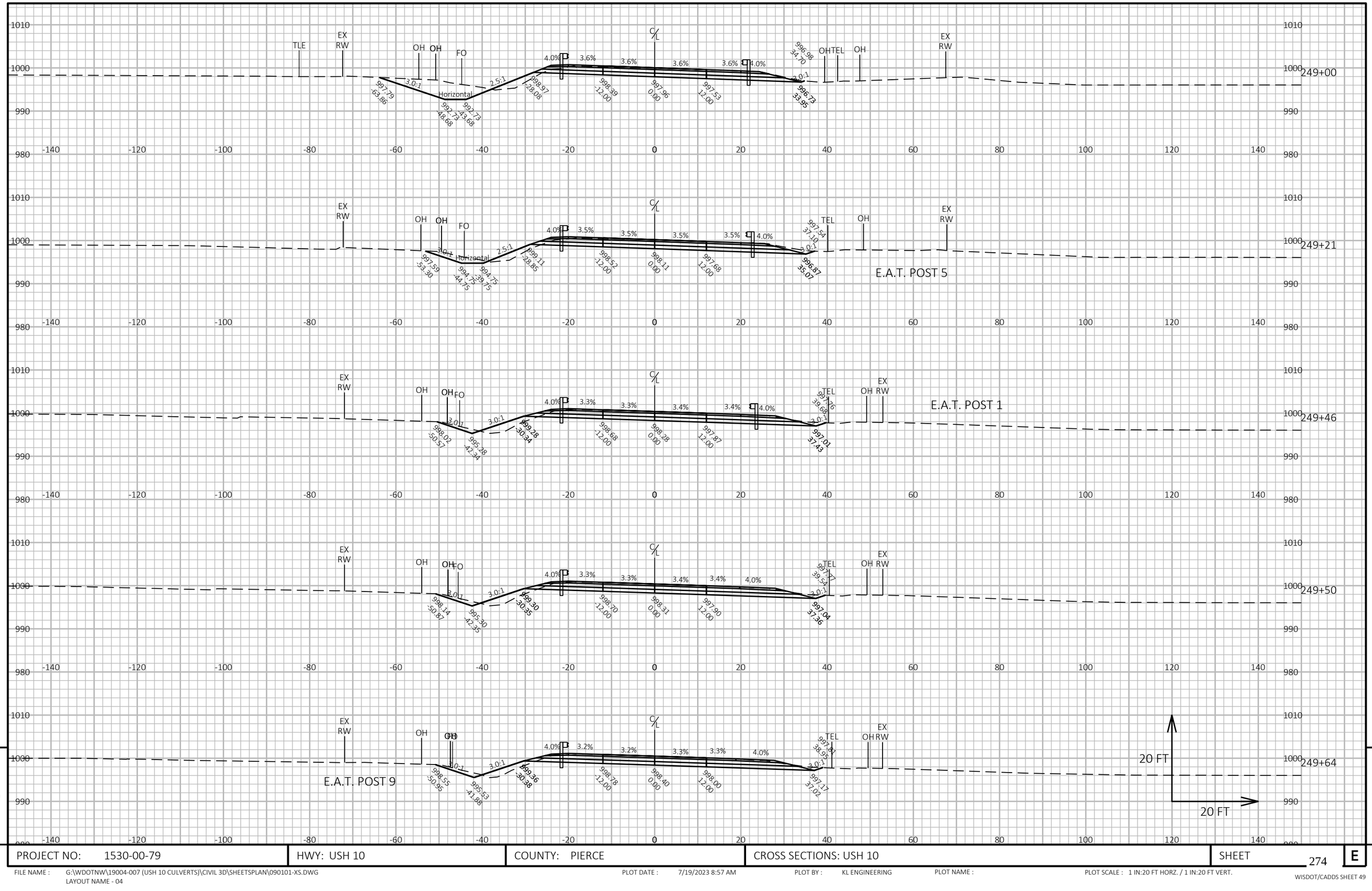


PROJECT NO: 1530-00-79	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 273	E

FILE NAME : G:\WDOTNW\19004-007 (USH 10 CULVERTS)\CIVIL 3D\SHEETSPLAN\090101-XS.DWG
LAYOUT NAME - 03

PLOT DATE : 7/19/2023 8:57 AM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

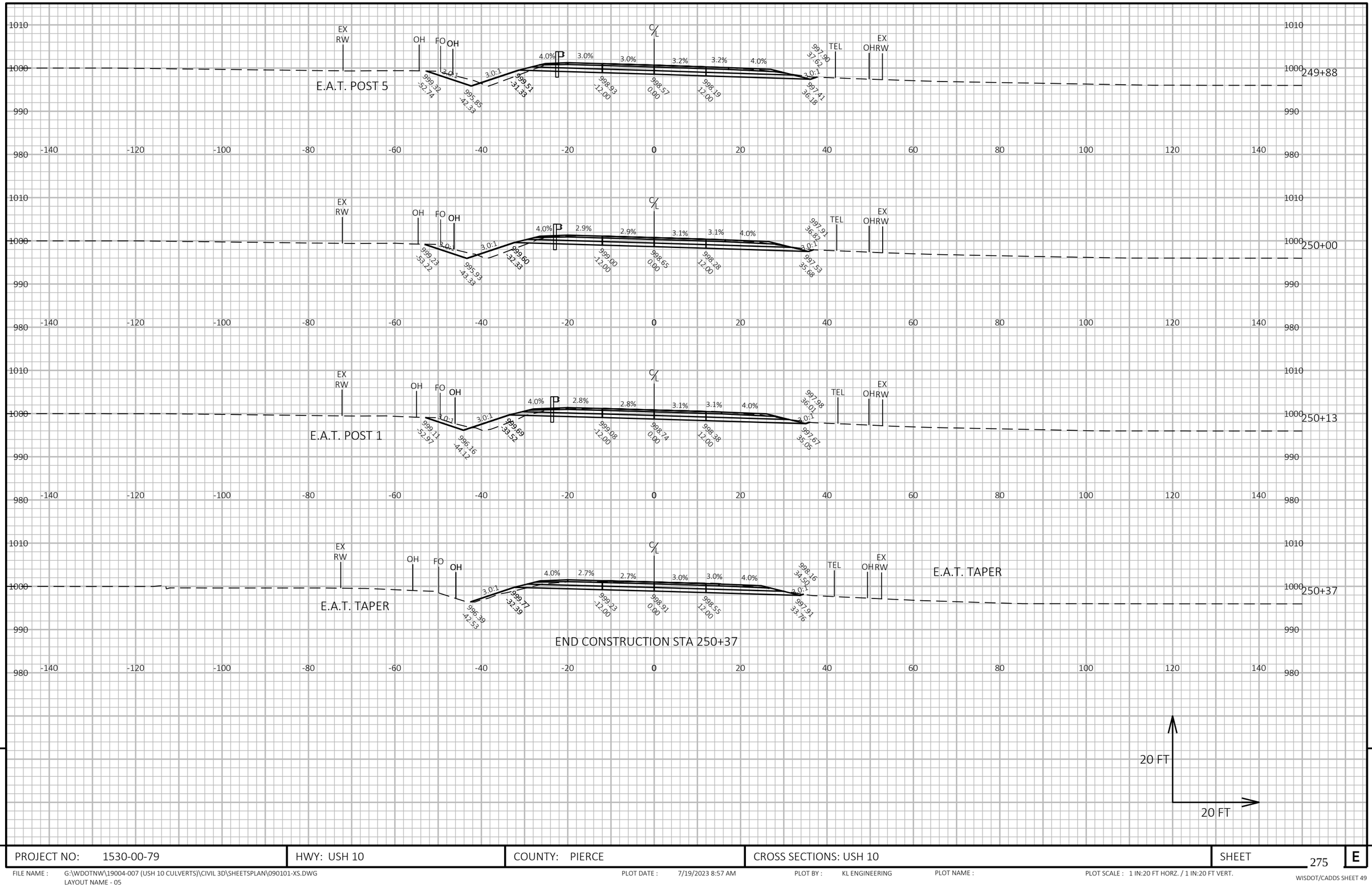
9

PROJECT NO: 1530-00-79	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 274	E

FILE NAME : G:\WDOTNW\19004-007 (USH 10 CULVERTS)\CIVIL 3D\SHEETSPLAN\090101-XS.DWG
LAYOUT NAME - 04

PLOT DATE : 7/19/2023 8:57 AM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

9

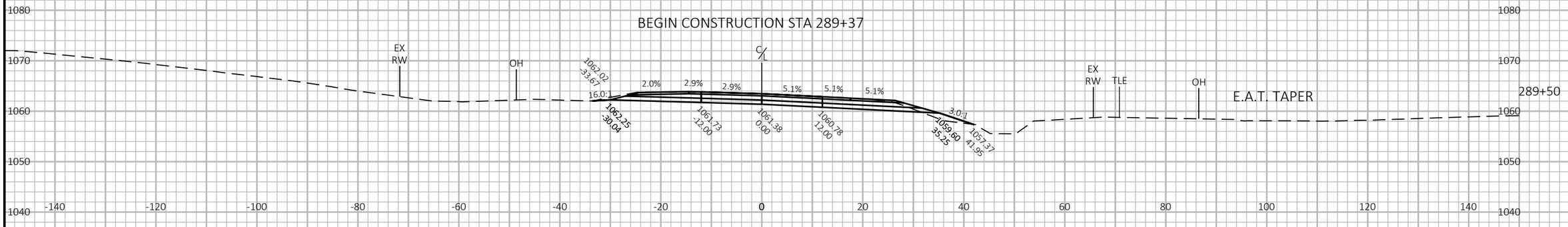
PROJECT NO: 1530-00-79	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 275	E

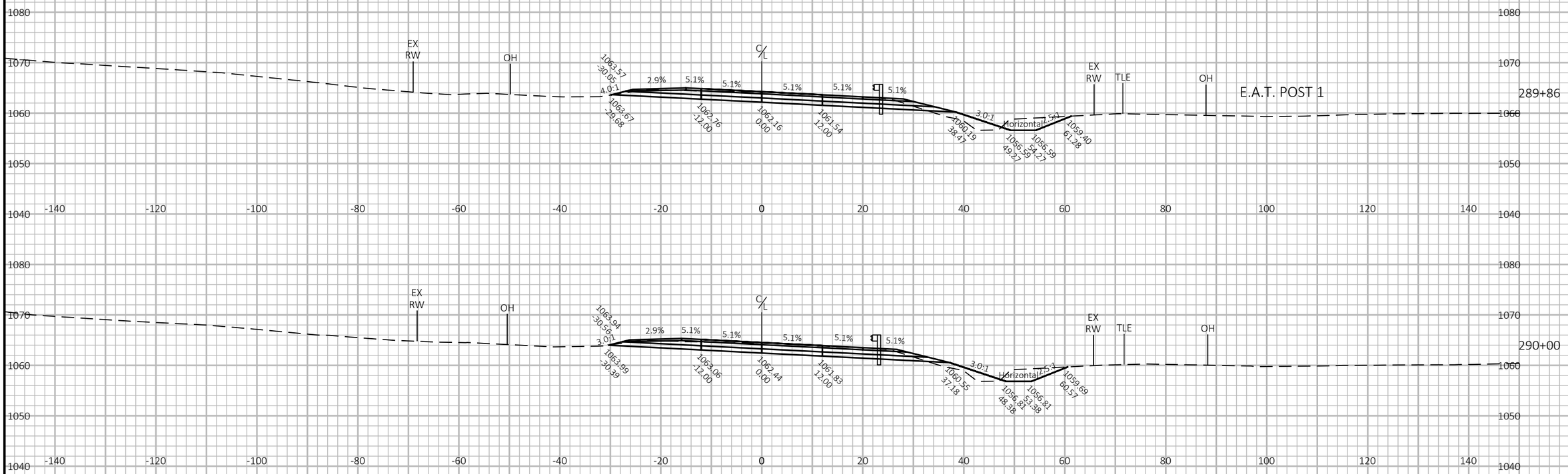
FILE NAME : G:\WDOTNW\19004-007 (USH 10 CULVERTS)\CIVIL 3D\SHEETSPLAN\090101-XS.DWG
LAYOUT NAME - 05

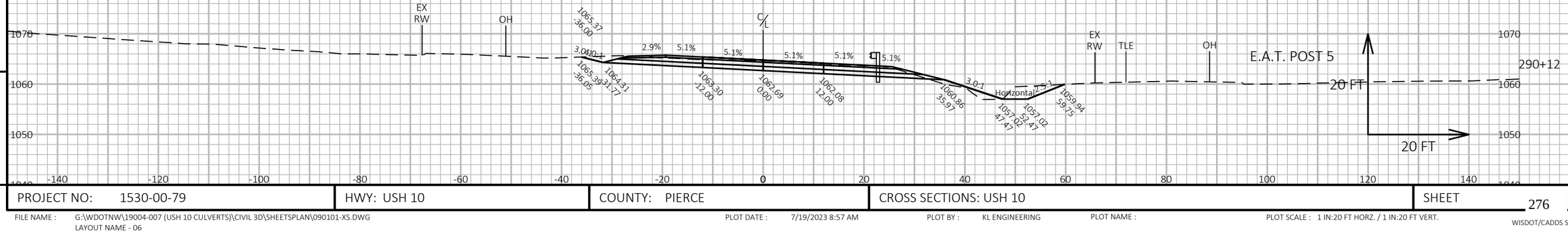
PLOT DATE : 7/19/2023 8:57 AM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

BEGIN CONSTRUCTION STA 289+37





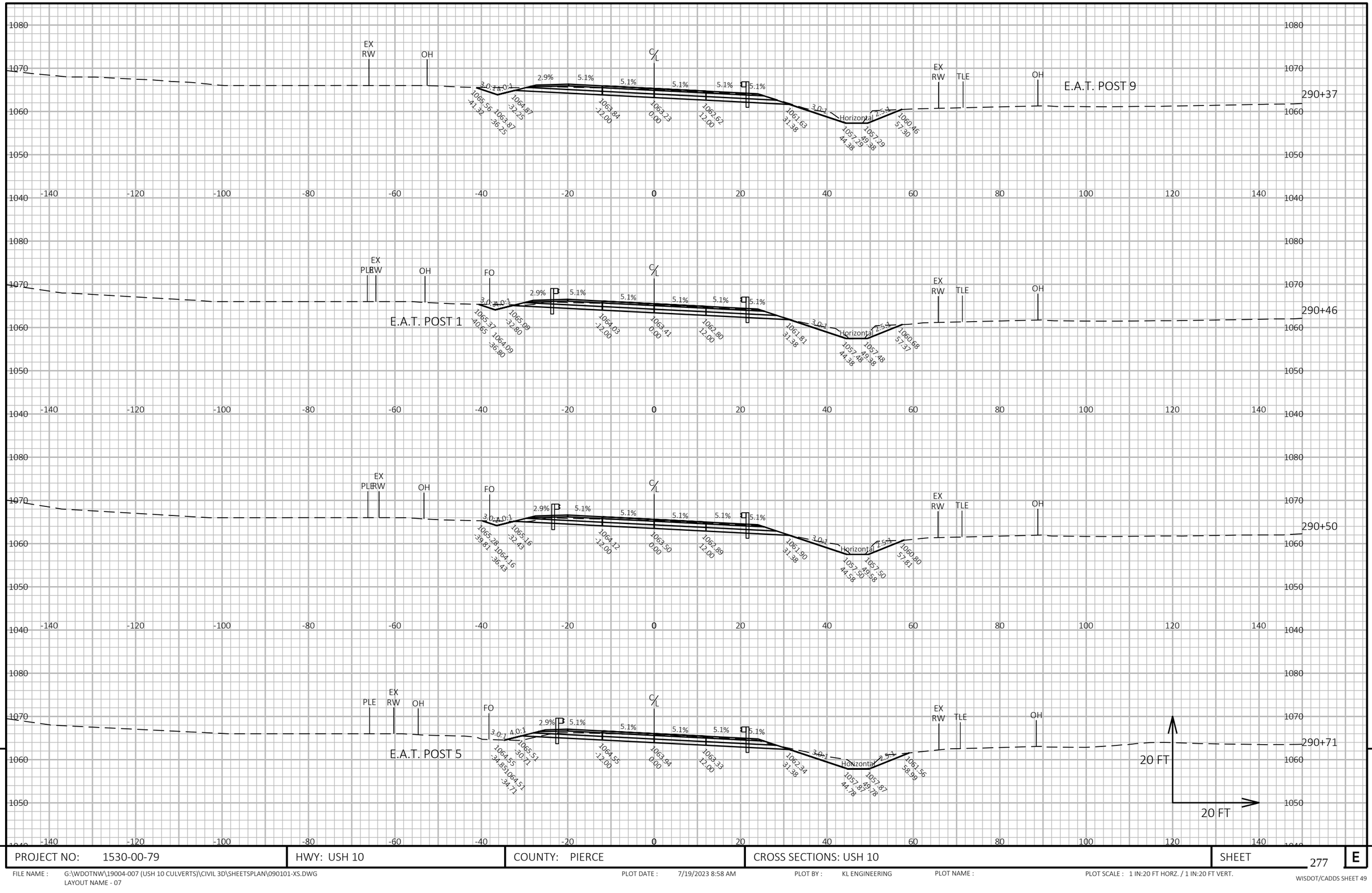


9

9

PROJECT NO: 1530-00-79	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 276	E

FILE NAME : G:\WDOTNW\19004-007 (USH 10 CULVERTS)\CIVIL 3D\SHEETSPLAN\090101-XS.DWG
LAYOUT NAME - 06
PLOT DATE : 7/19/2023 8:57 AM
PLOT BY : KL ENGINEERING
PLOT NAME :
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.
WISDOT/CADDS SHEET 49

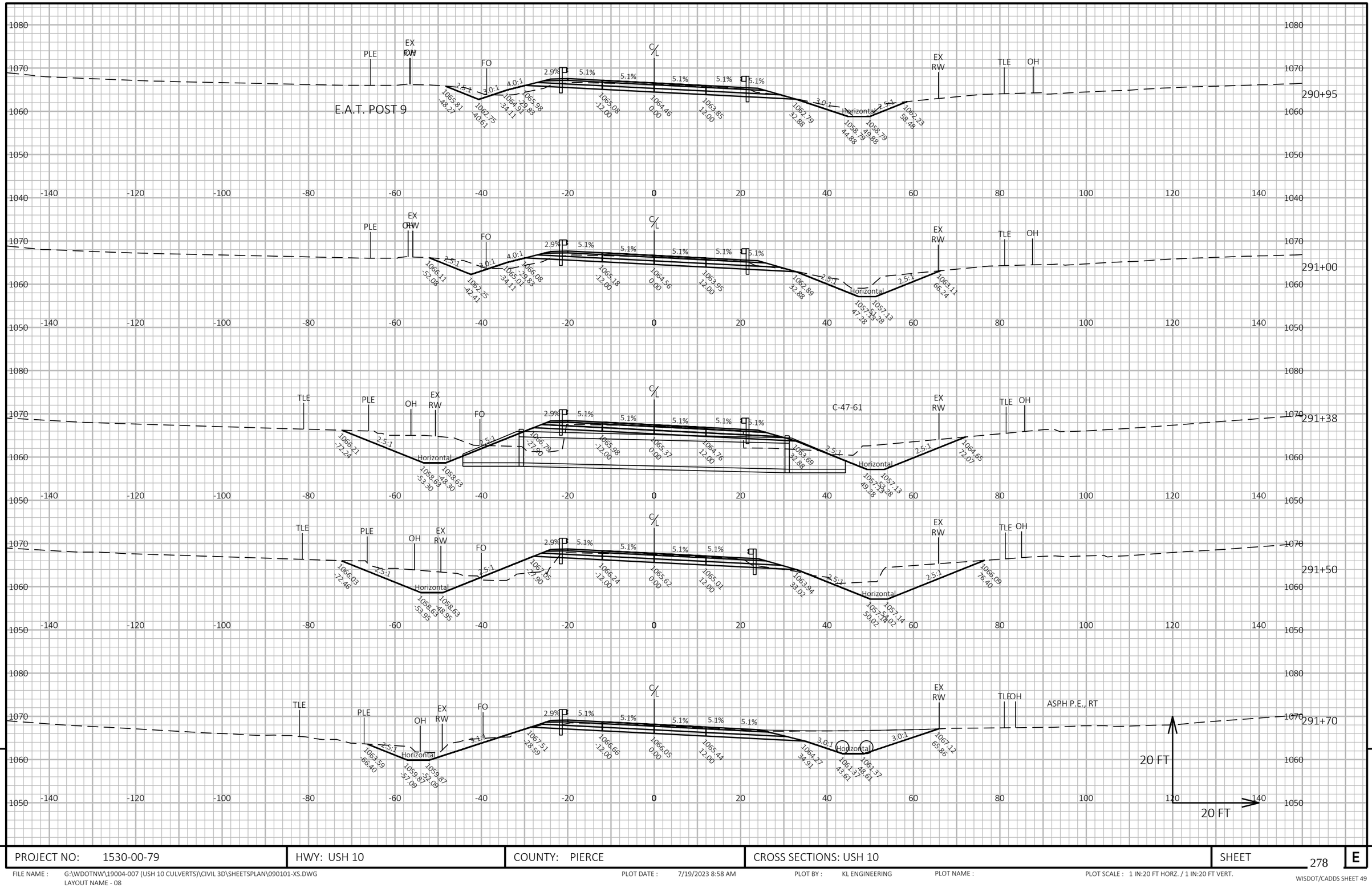


PROJECT NO: 1530-00-79	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 277	E

FILE NAME : G:\WDOTNW\19004-007 (USH 10 CULVERTS)\CIVIL 3D\SHEETSPLAN\090101-XS.DWG
LAYOUT NAME - 07

PLOT DATE : 7/19/2023 8:58 AM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

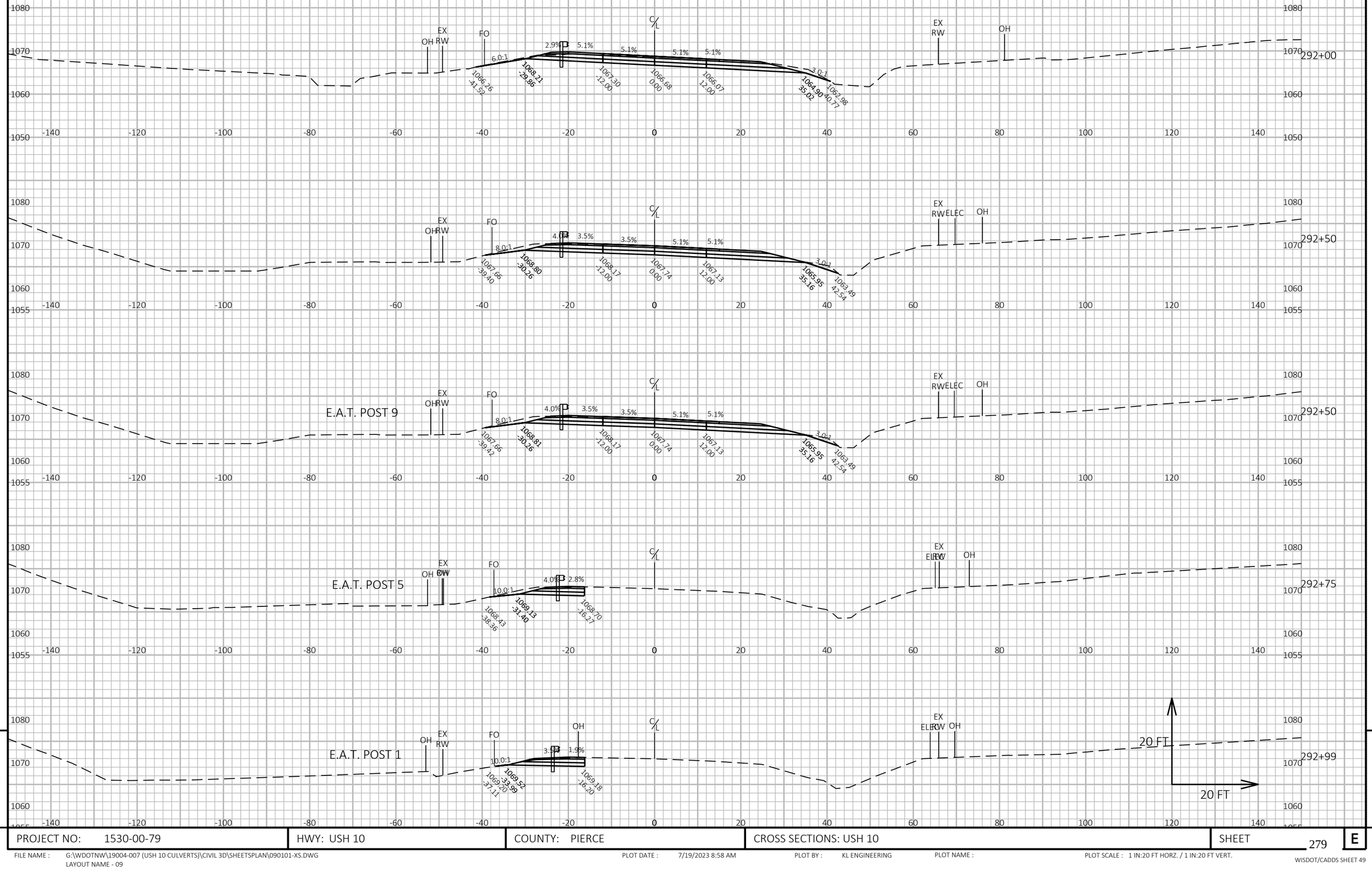
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PROJECT NO: 1530-00-79	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 278	E

FILE NAME : G:\WDOTNW\19004-007 (USH 10 CULVERTS)\CIVIL 3D\SHEETSPLAN\090101-XS.DWG
LAYOUT NAME - 08

PLOT DATE : 7/19/2023 8:58 AM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1530-00-79	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 279	E

FILE NAME : G:\WDOTNW\19004-007 (USH 10 CULVERTS)\CIVIL 3D\SHEETSPLAN\090101-XS.DWG
LAYOUT NAME - 09

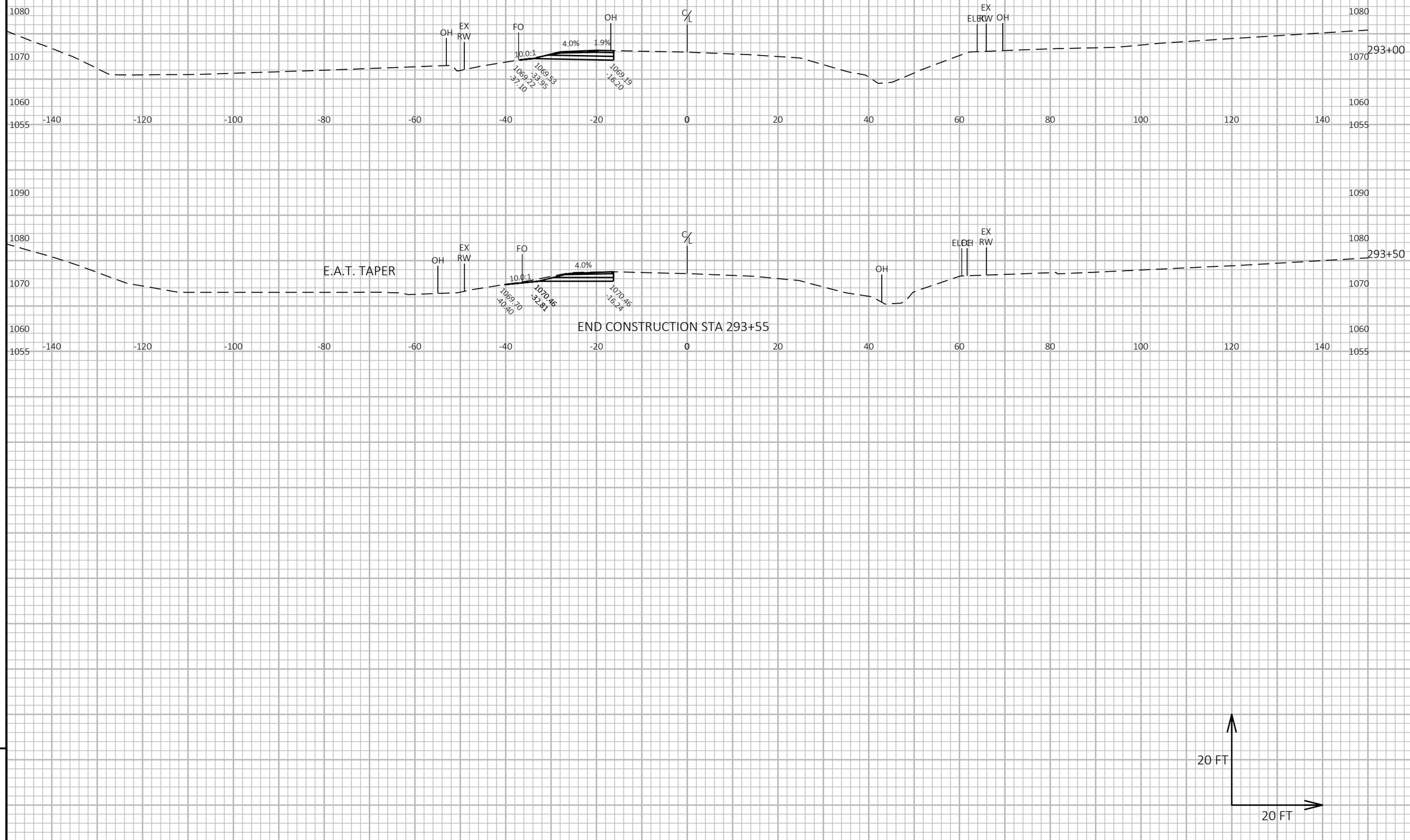
PLOT DATE : 7/19/2023 8:58 AM

PLOT BY : KL ENGINEERING

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

9

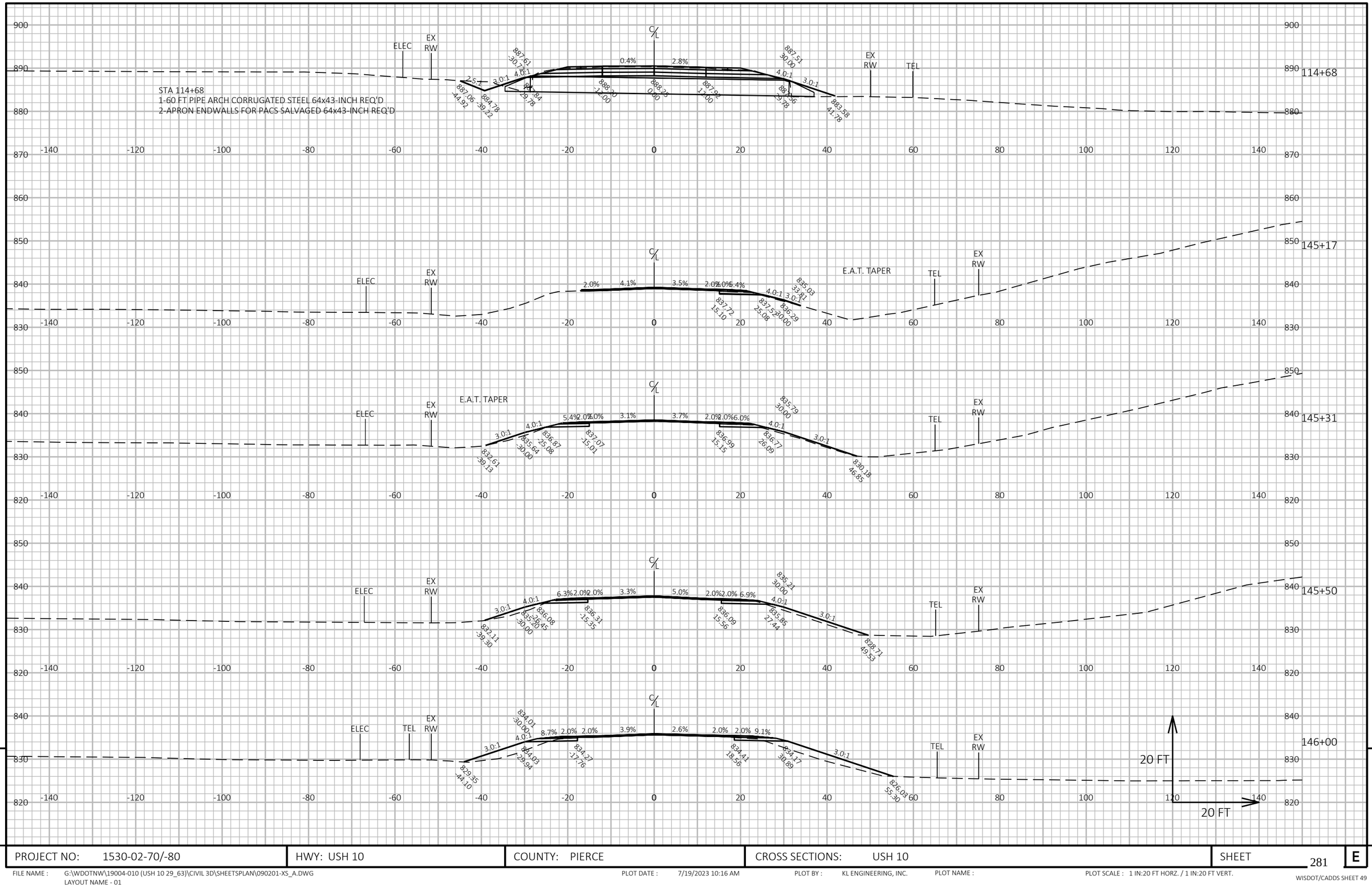
PROJECT NO: 1530-00-79	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 280	E

FILE NAME : G:\WDOTNW\19004-007 (USH 10 CULVERTS)\CIVIL 3D\SHEETSPLAN\090101-XS.DWG
LAYOUT NAME - 10

PLOT DATE : 7/19/2023 8:58 AM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

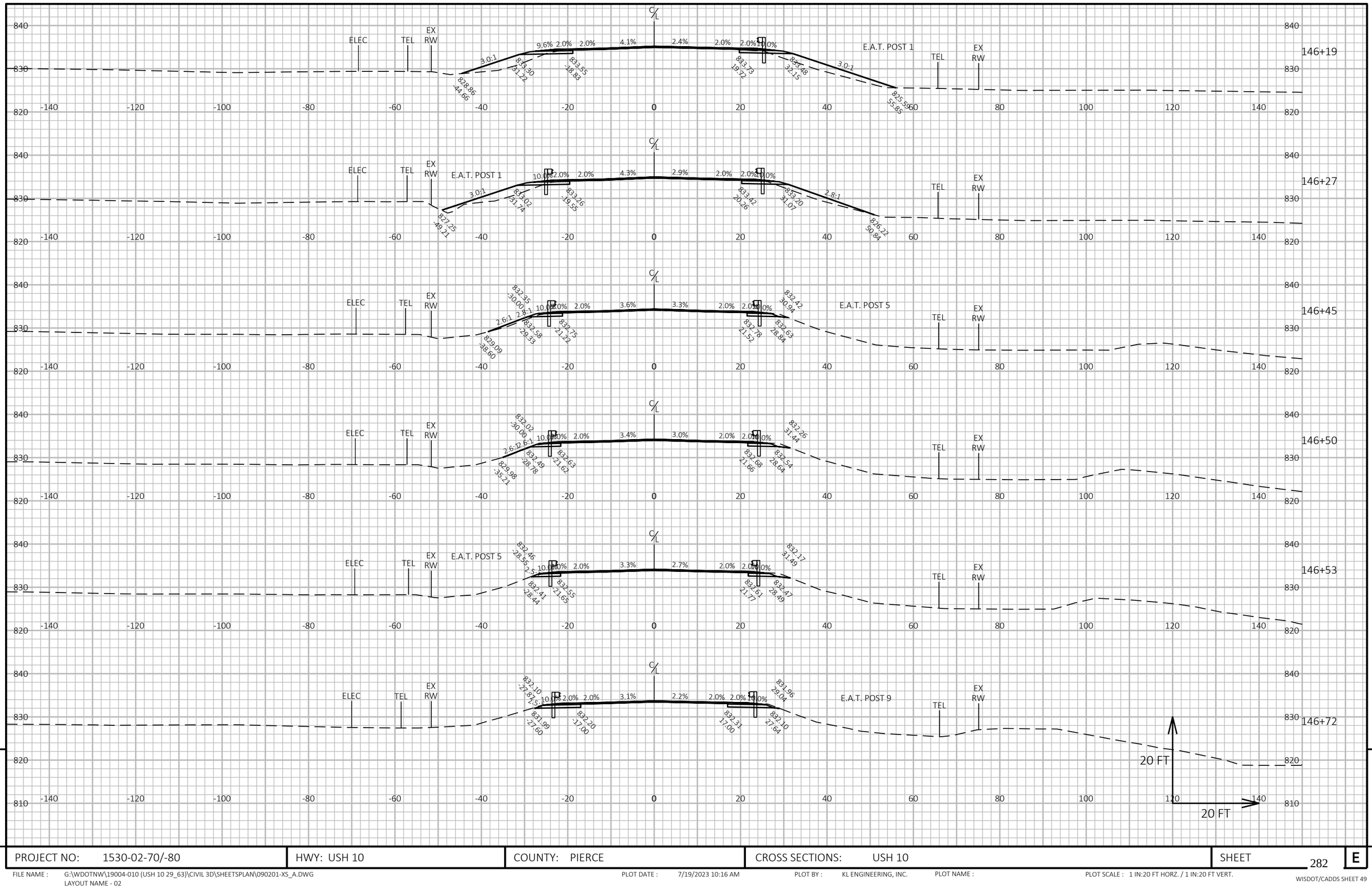
WISDOT/CADDS SHEET 49

STA 114+68
1-60 FT PIPE ARCH CORRUGATED STEEL 64x43-INCH REQ'D
2-APRON ENDWALLS FOR PACS SALVAGED 64x43-INCH REQ'D



PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 281	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_A.DWG
LAYOUT NAME - 01
PLOT DATE : 7/19/2023 10:16 AM
PLOT BY : KL ENGINEERING, INC.
PLOT NAME :
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.
WISDOT/CADDS SHEET 49



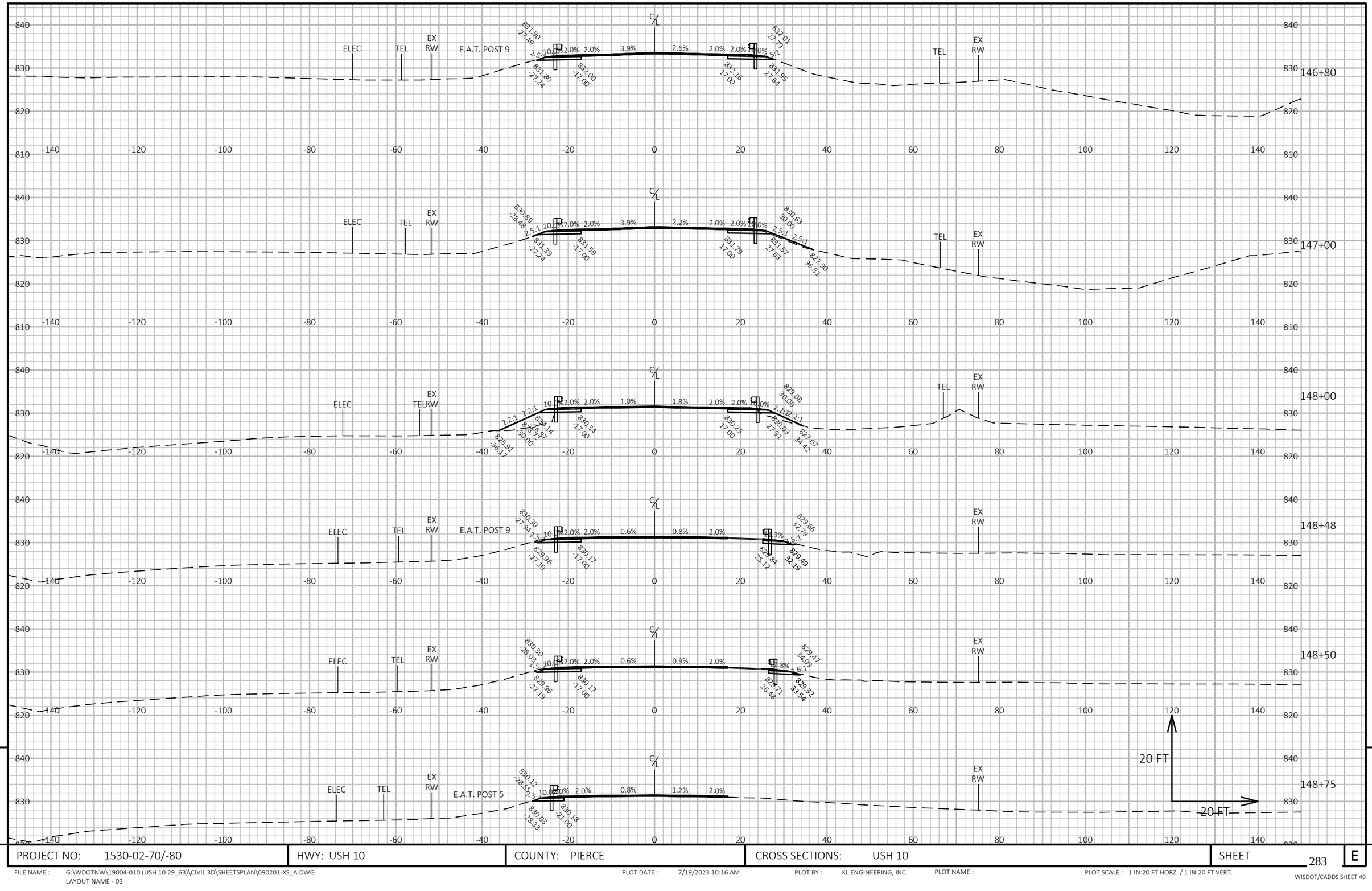
9 9

PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 282	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_A.DWG
LAYOUT NAME - 02

PLOT DATE : 7/19/2023 10:16 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 283	E

9

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_A.DWG
LAYOUT NAME - 03

PLOT DATE : 7/19/2023 10:16 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

149+00

ELEC
TEL
EX RW
C/L
EX RW
827.20
-40.30
3.0:1
830.20
-31.44
10.0%
2.0%
2.0%
0.2%
2.0%
2.0%
830.46
-18.39

149+01

ELEC
TEL
EX RW
E.A.T. POST 1
827.18
-40.61
3.0:1
830.20
-31.61
10.0%
2.0%
2.0%
0.3%
2.1%
2.0%
830.47
-18.25

149+50

ELEC
TEL
EX RW
C/L
EX RW
828.79
-34.45
3.0:1
830.28
-30.00
4.0:1
830.70
-28.30
7.6%
2.0%
2.0%
1.4%
2.4%
2.0%
830.97
-14.74

149+95

ELEC
TEL
EX RW
E.A.T. TAPER
829.90
-31.57
3.0:1
830.43
-30.00
4.0:1
831.66
-25.08
5.5%
2.0%
2.0%
0.9%
1.8%
2.0%
831.87
-14.27

162+56

EX RW
ELEC
EX RWTEL
E.A.T. TAPER
837.35
-19.85
3.0:1
843.96
-10.00
4.0:1
845.19
-25.08
5.7%
2.0%
2.0%
2.2%
1.3%
2.0%
845.39
-15.14
20 FT
20 FT

9

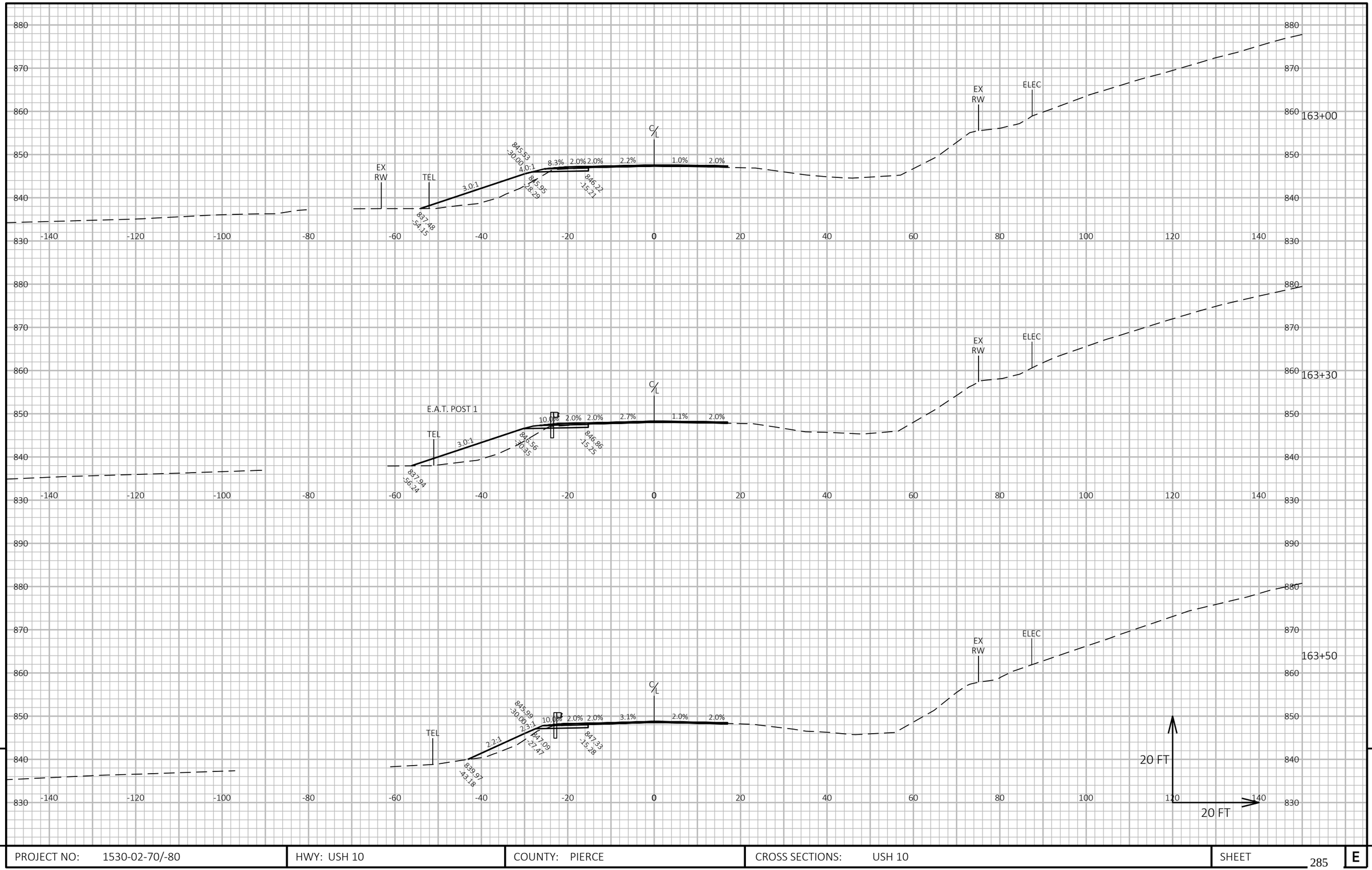
9

PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 284	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_A.DWG
LAYOUT NAME - 04

PLOT DATE : 7/19/2023 10:17 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

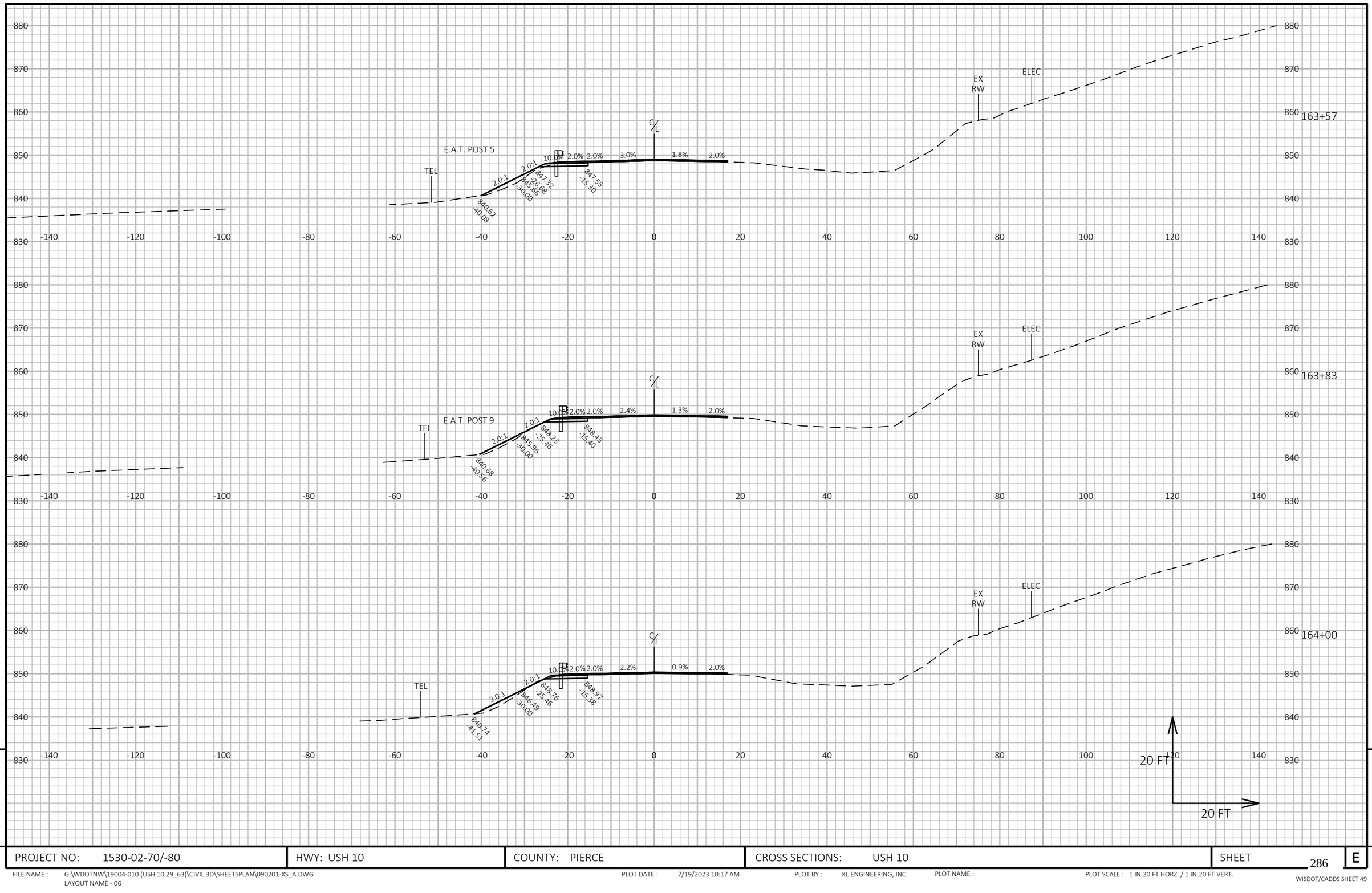
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PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 285	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_A.DWG
LAYOUT NAME - 05

PLOT DATE : 7/19/2023 10:17 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



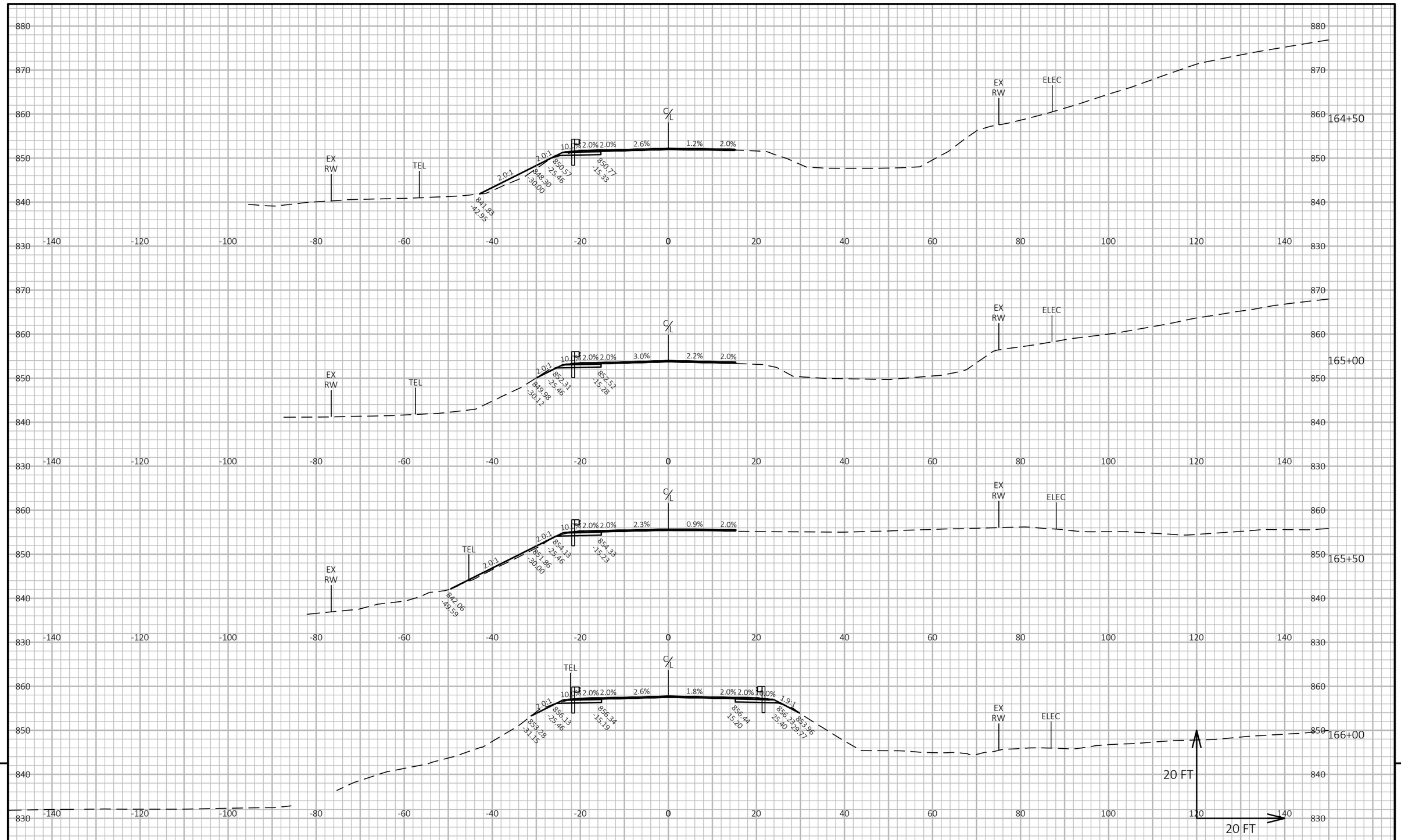
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9

PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 286	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_A.DWG
LAYOUT NAME - 06

PLOT DATE : 7/19/2023 10:17 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



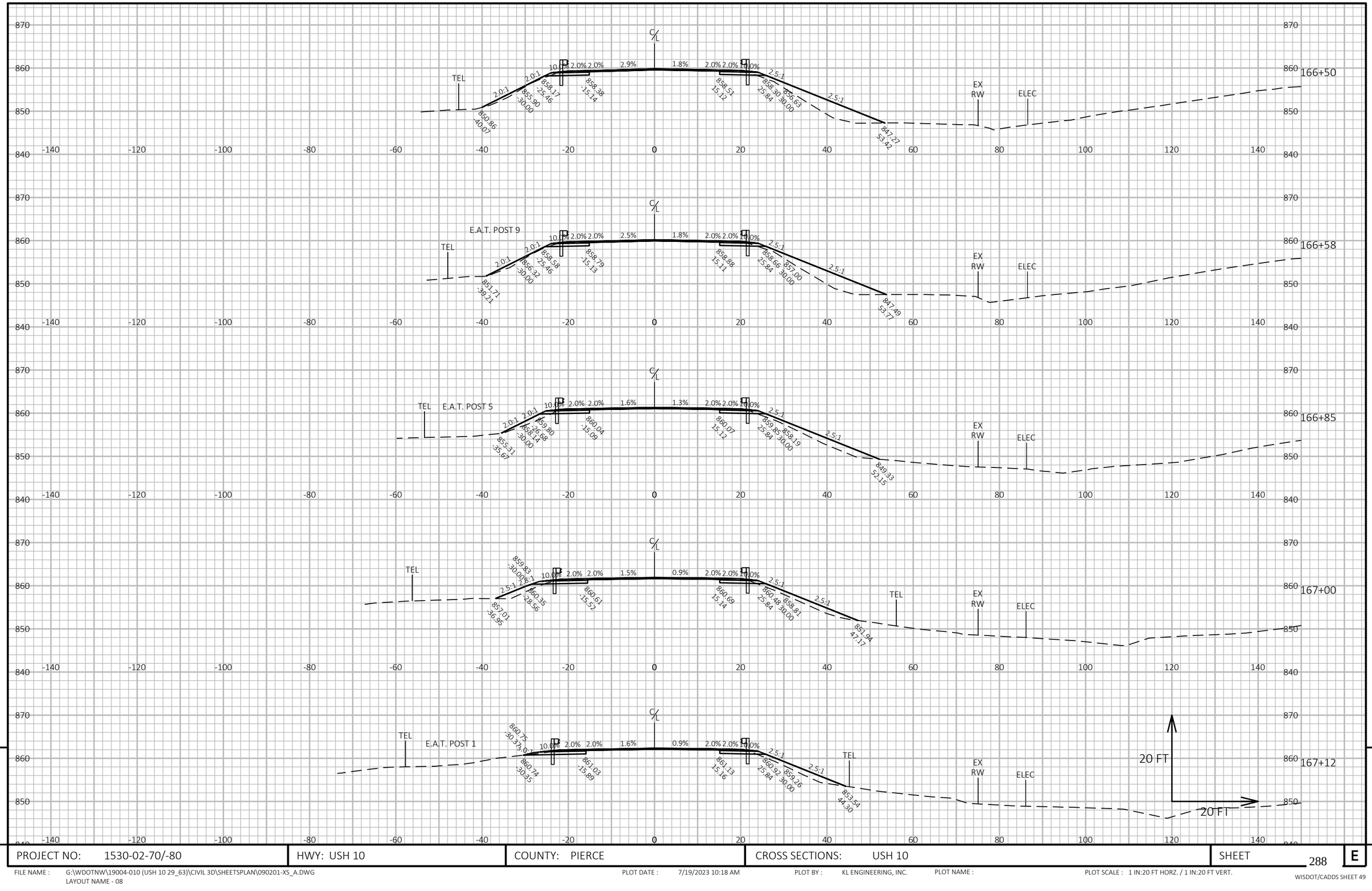
9 9

PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 287	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_A.DWG
LAYOUT NAME - 07

PLOT DATE : 7/19/2023 10:18 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



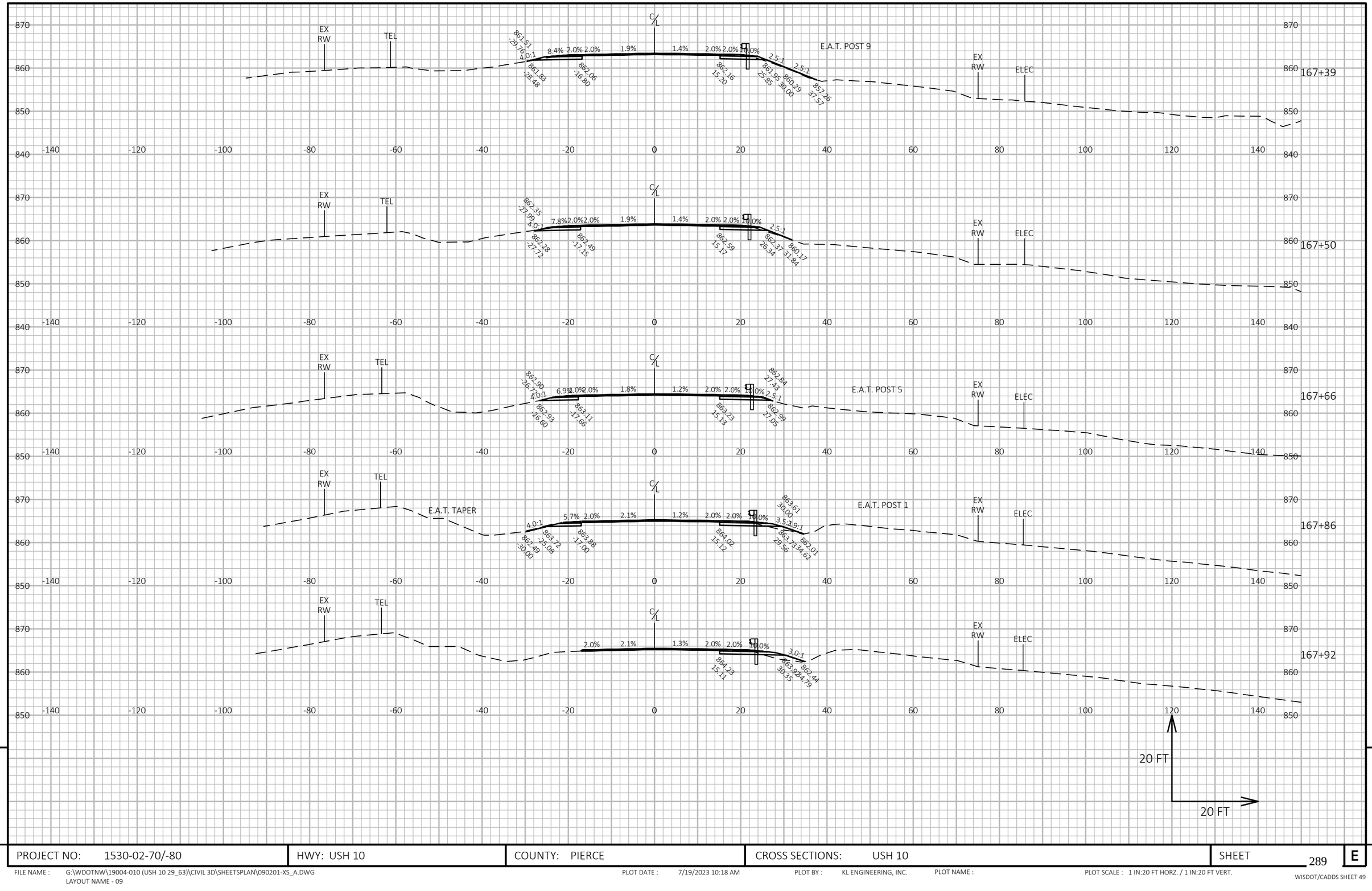
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PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 288	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_A.DWG
LAYOUT NAME - 08

PLOT DATE : 7/19/2023 10:18 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

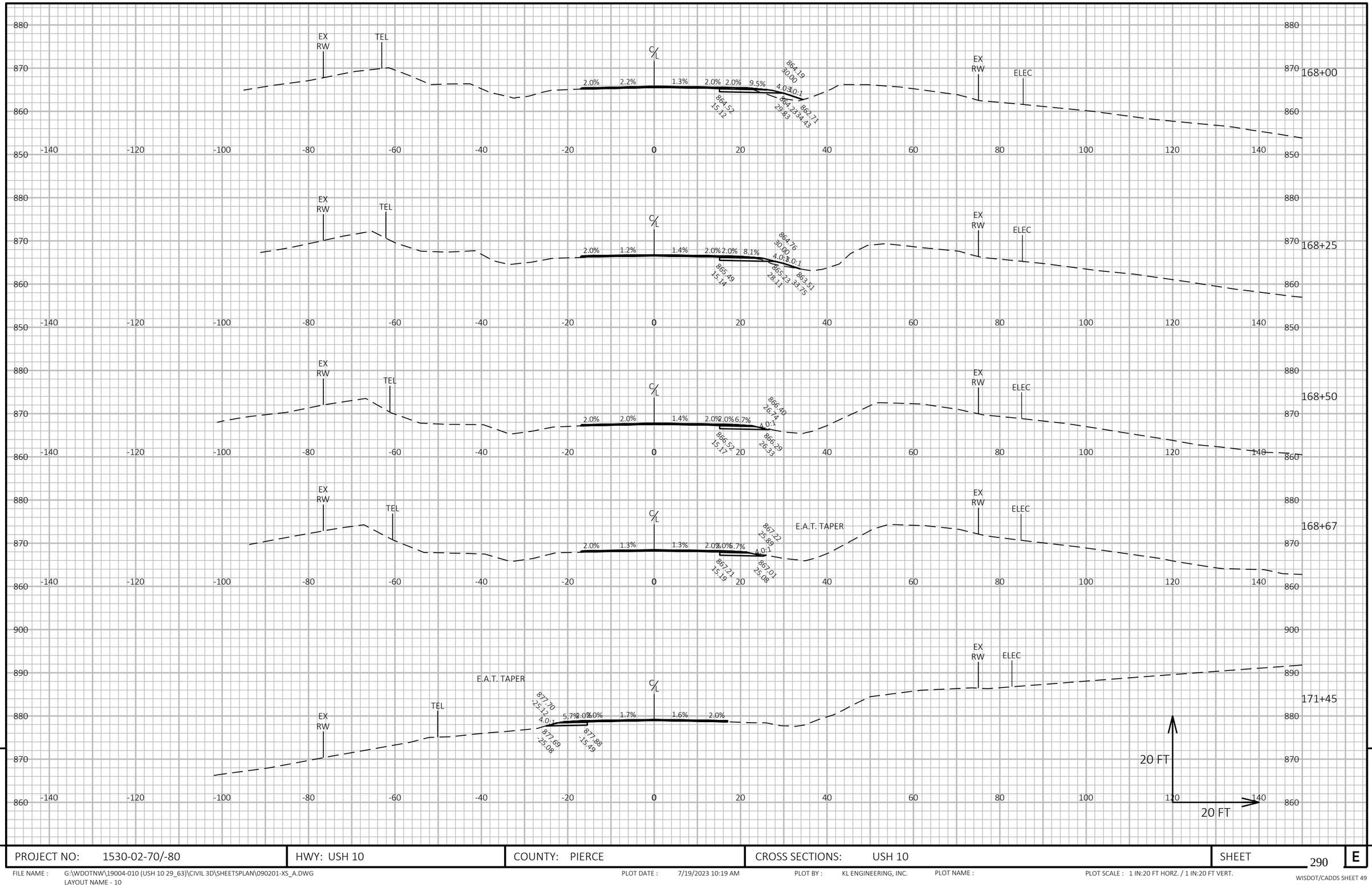
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PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 289	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_A.DWG
LAYOUT NAME - 09

PLOT DATE : 7/19/2023 10:18 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

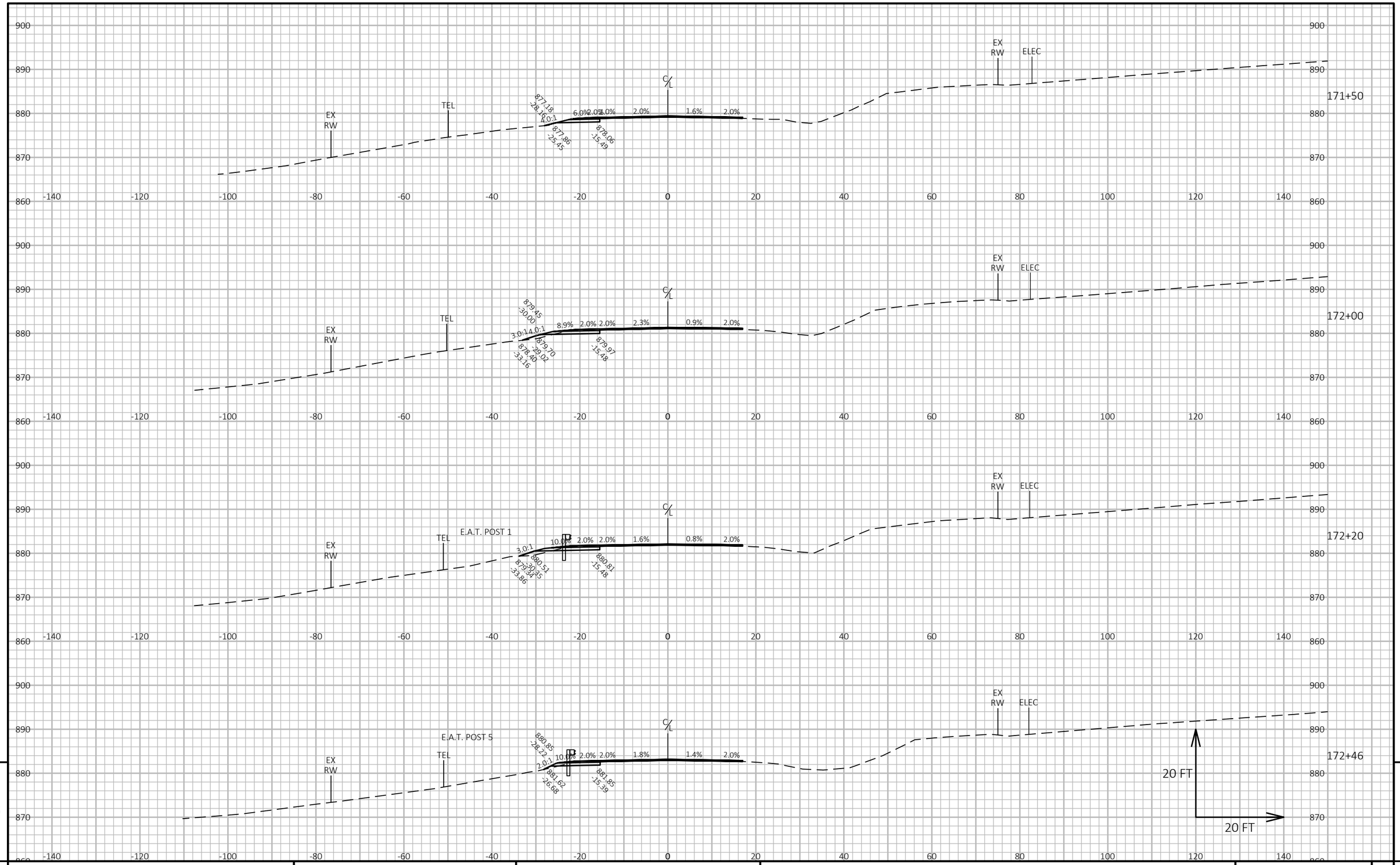
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PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 290	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_A.DWG
LAYOUT NAME - 10

PLOT DATE : 7/19/2023 10:19 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

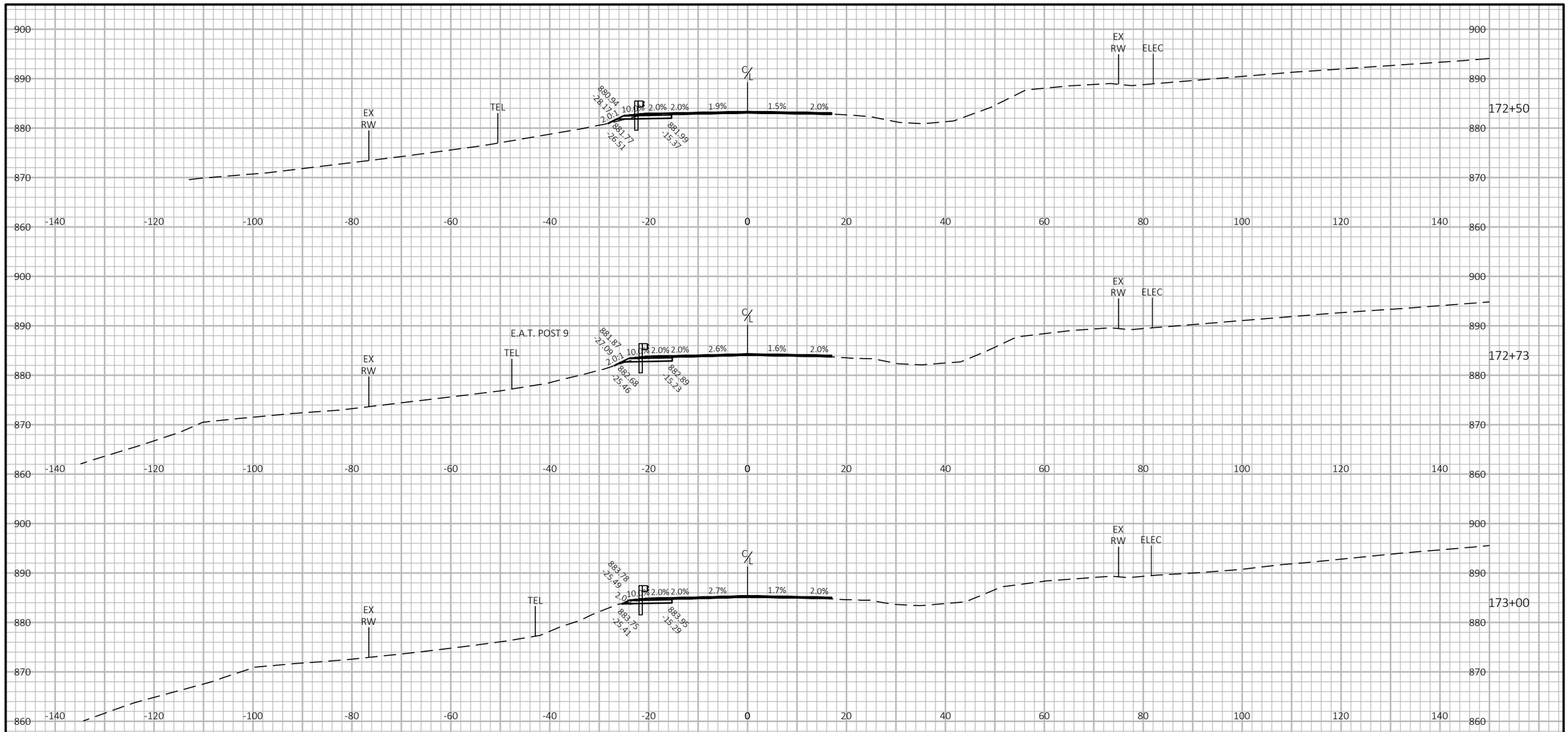
9

PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 291	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_A.DWG
LAYOUT NAME - 11

PLOT DATE : 7/19/2023 10:19 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



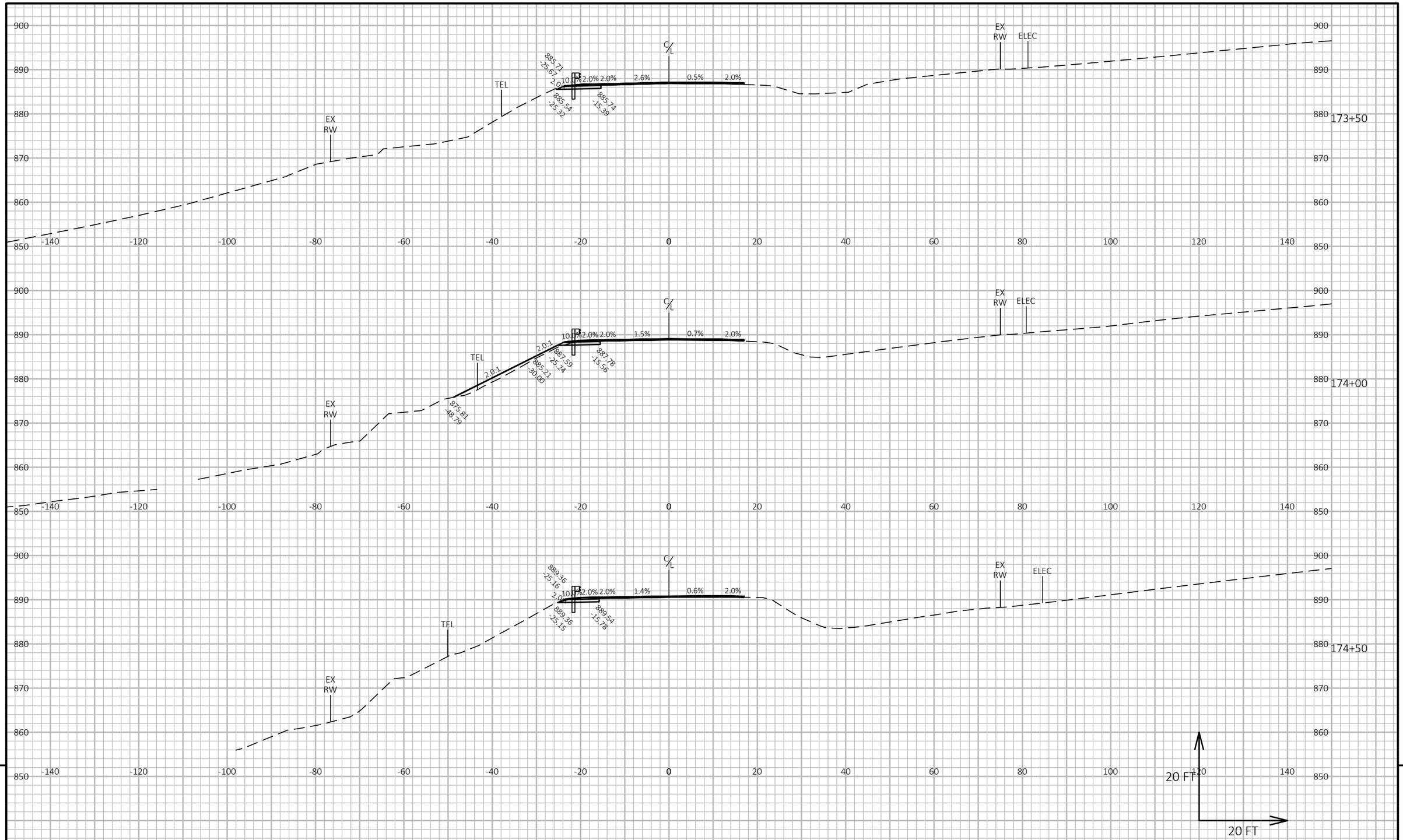
9

9

PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 292	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_A.DWG
LAYOUT NAME - 12

PLOT DATE : 7/19/2023 10:19 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



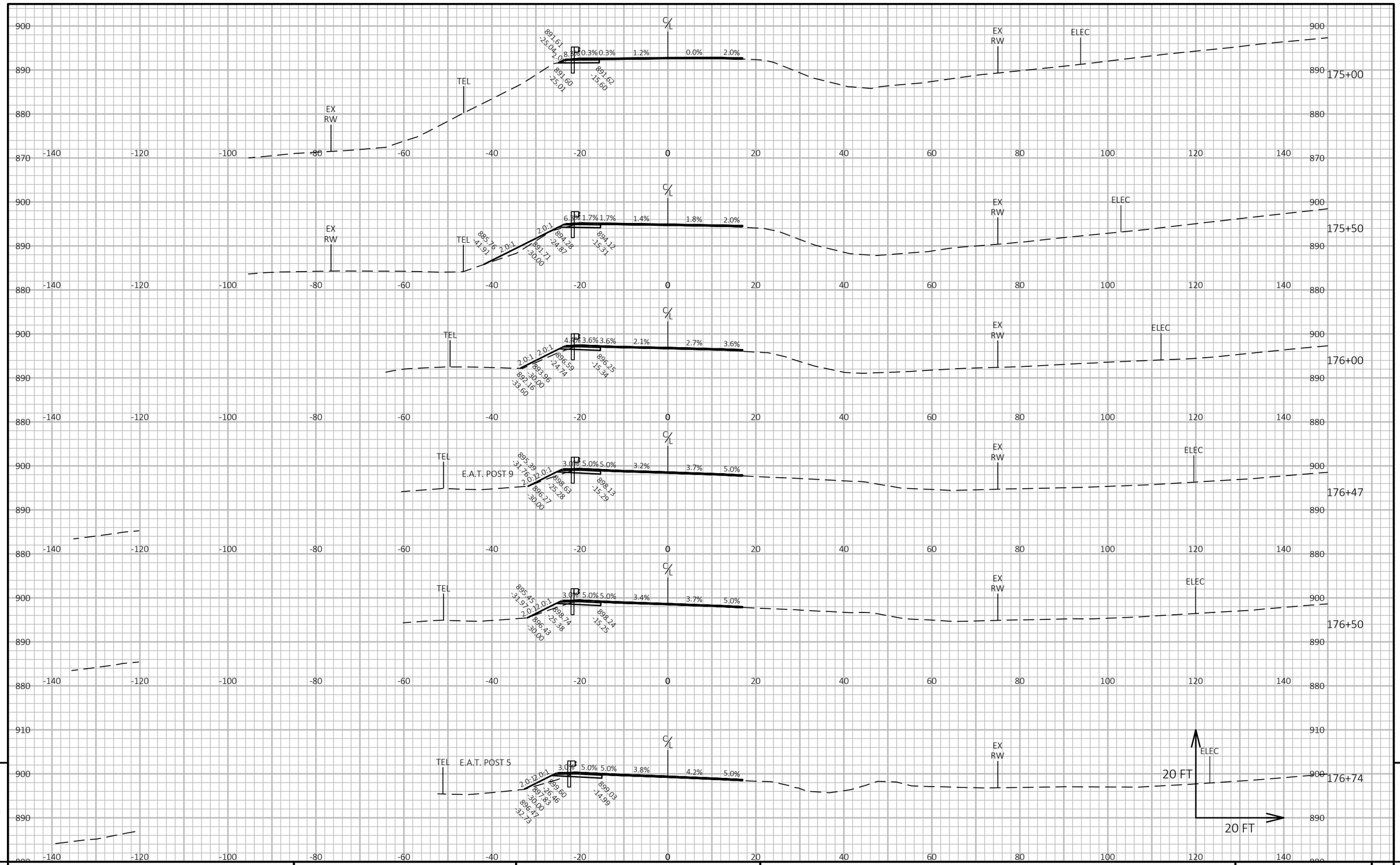
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9

PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 293	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_A.DWG
LAYOUT NAME - 13

PLOT DATE : 7/19/2023 10:20 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



9

9

PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 294	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_A.DWG
LAYOUT NAME - 14

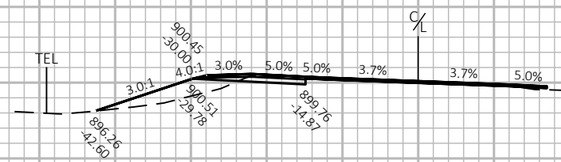
PLOT DATE : 7/19/2023 10:20 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

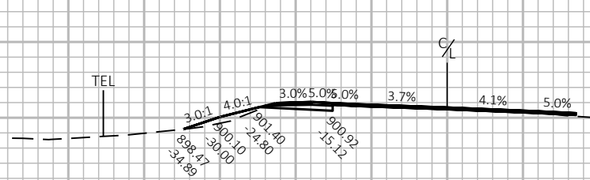
E.A.T. POST 1



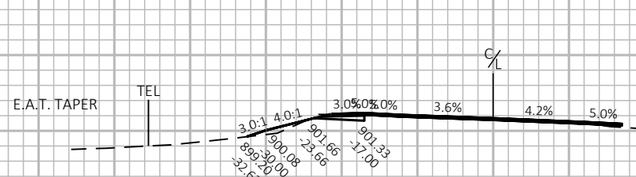
177+00



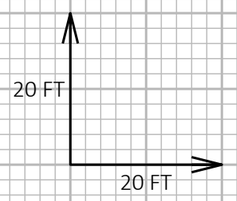
177+00



177+50



177+64

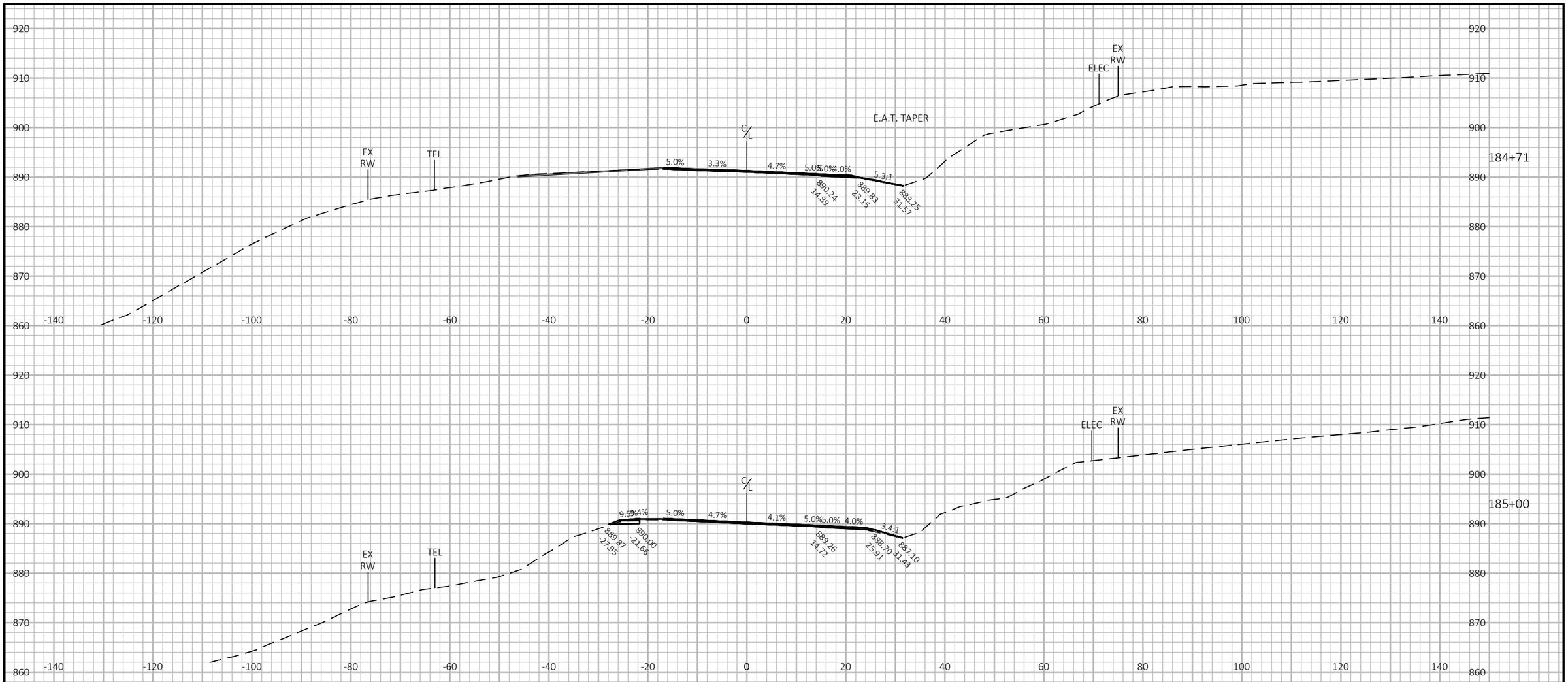


PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 295	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_A.DWG
LAYOUT NAME - 15

PLOT DATE : 7/19/2023 10:20 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

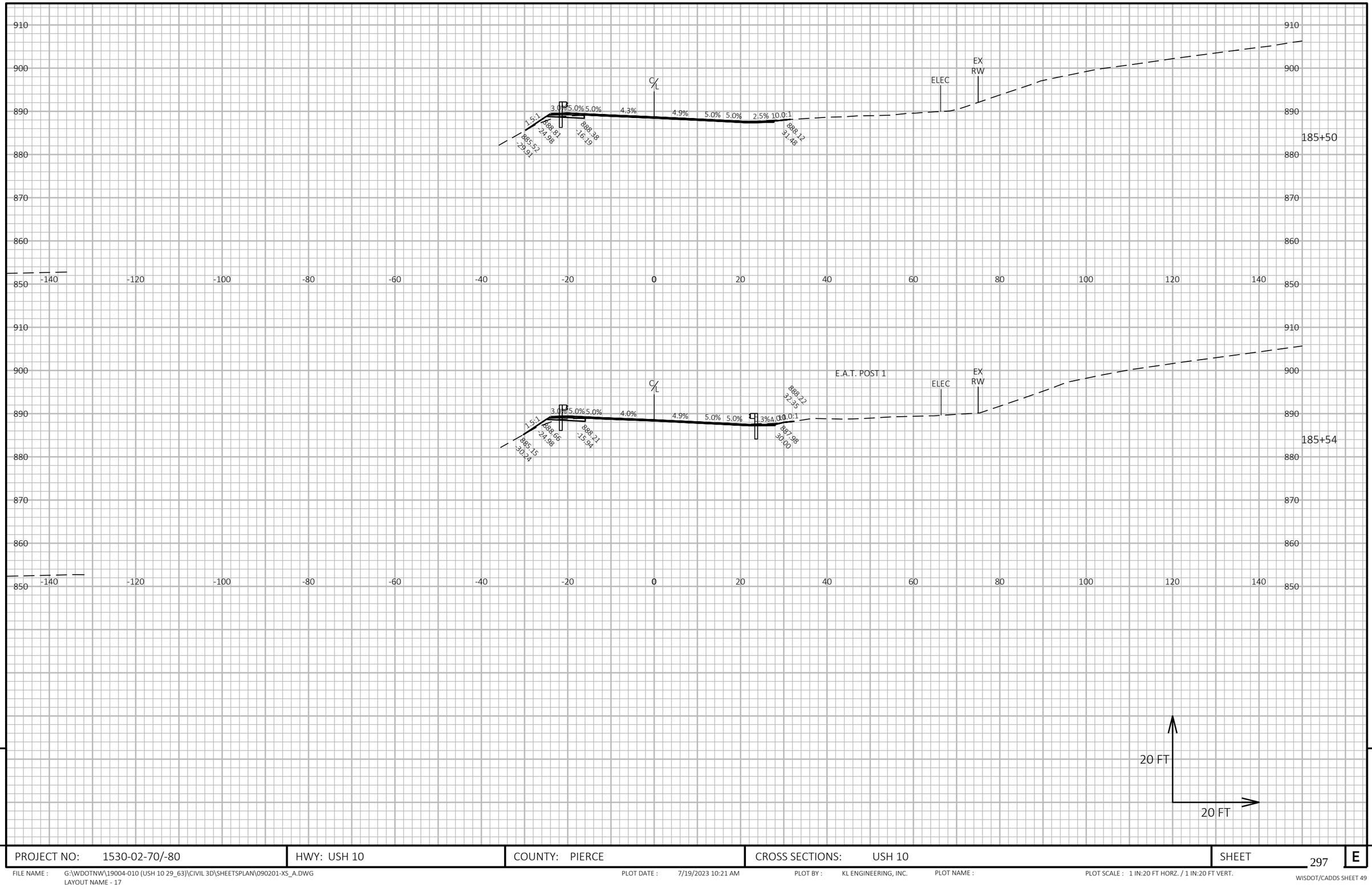
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PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 296	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_A.DWG
LAYOUT NAME - 16

PLOT DATE : 7/19/2023 10:21 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

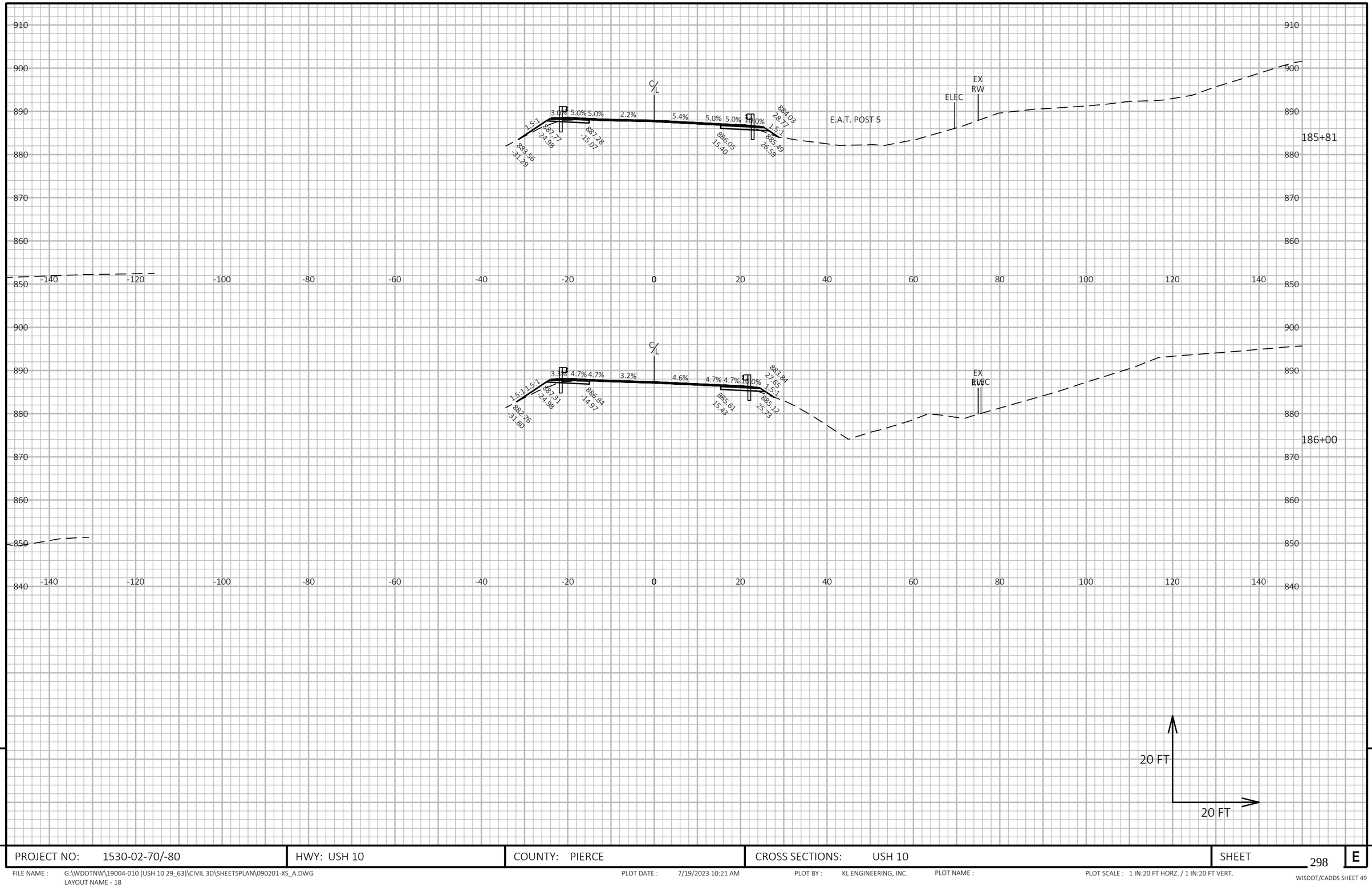
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PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 297	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_A.DWG
LAYOUT NAME - 17

PLOT DATE : 7/19/2023 10:21 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



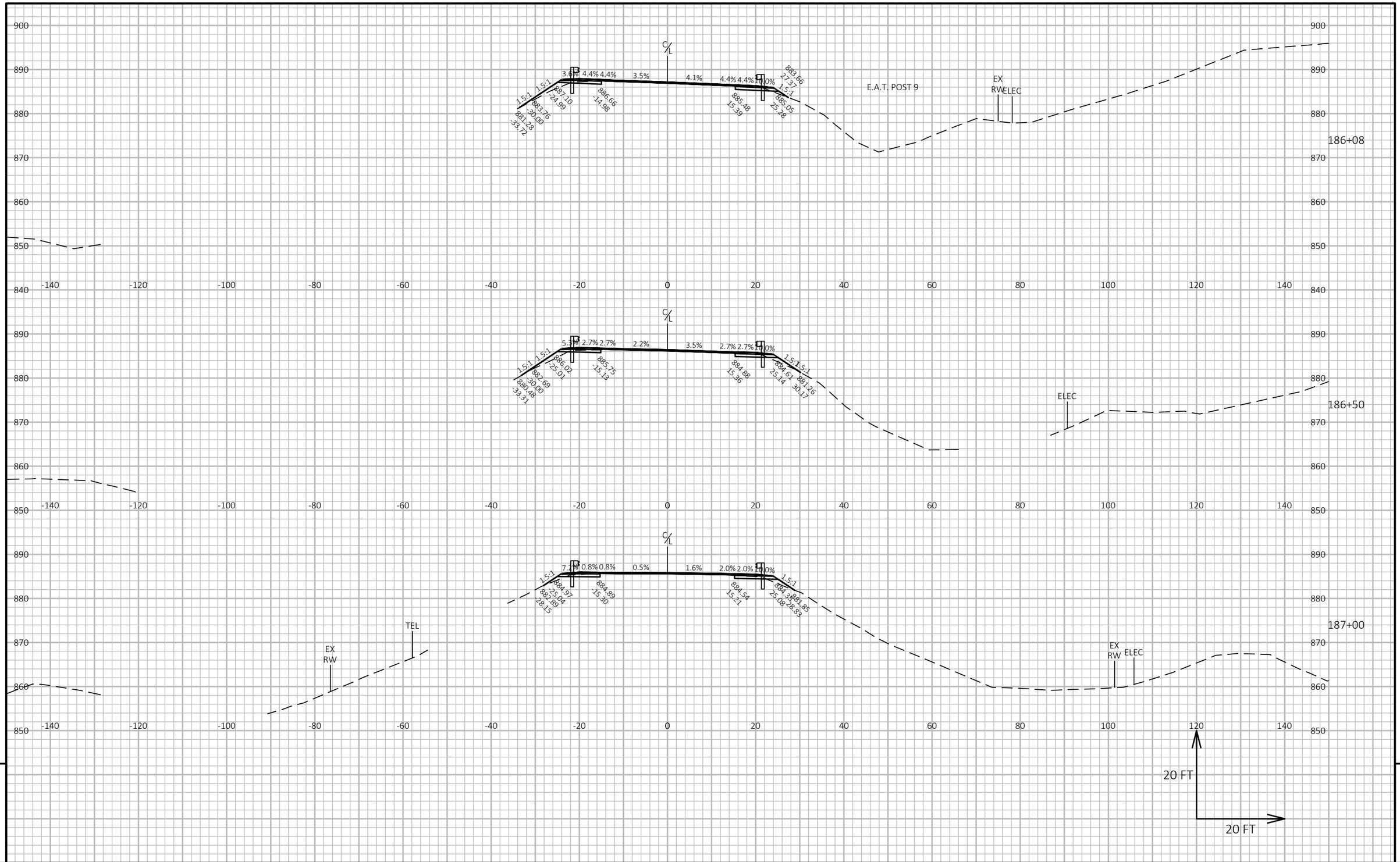
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PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 298	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_A.DWG
LAYOUT NAME - 18

PLOT DATE : 7/19/2023 10:21 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



9

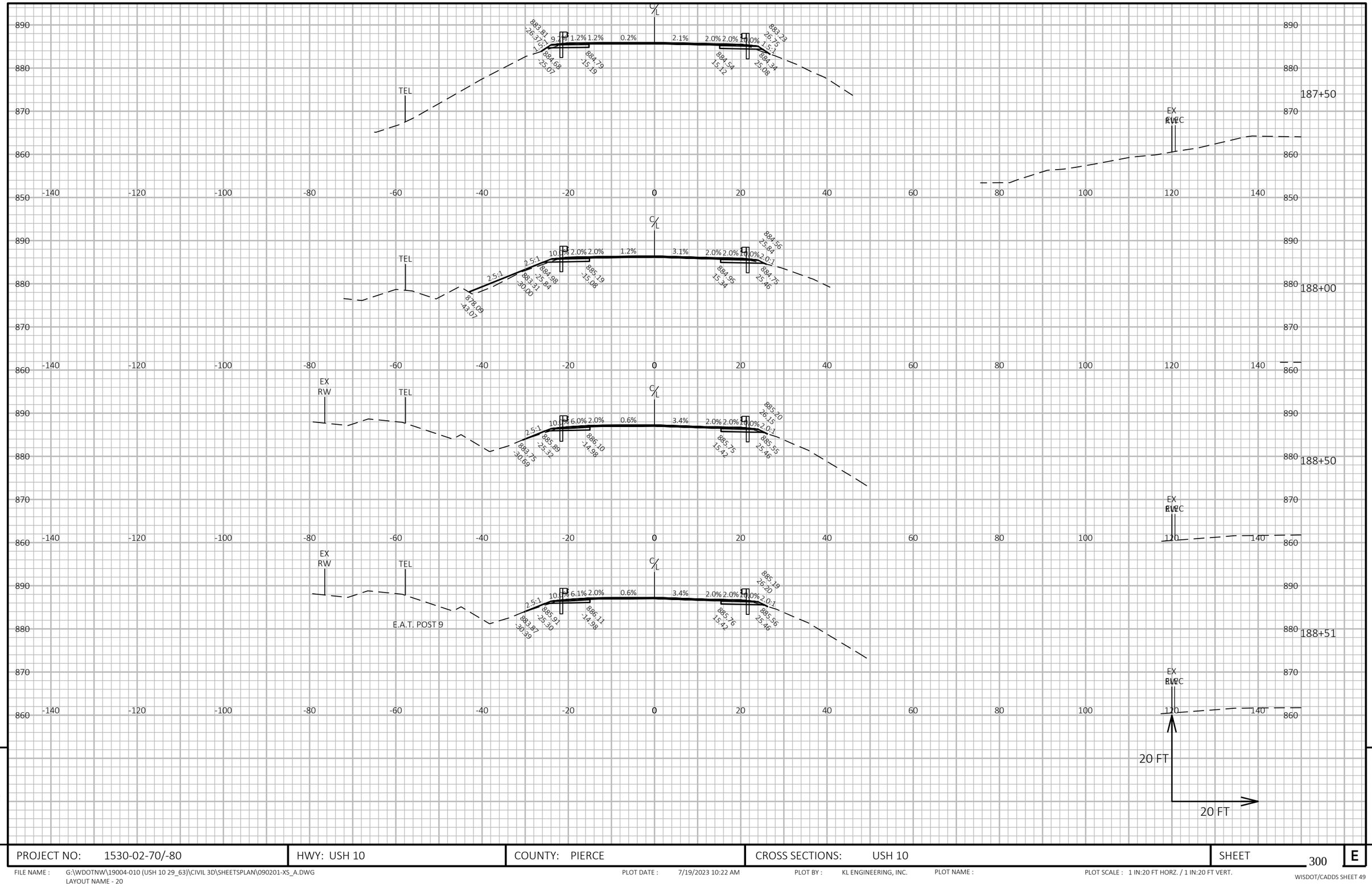
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PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 299	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_A.DWG
LAYOUT NAME - 19

PLOT DATE : 7/19/2023 10:22 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

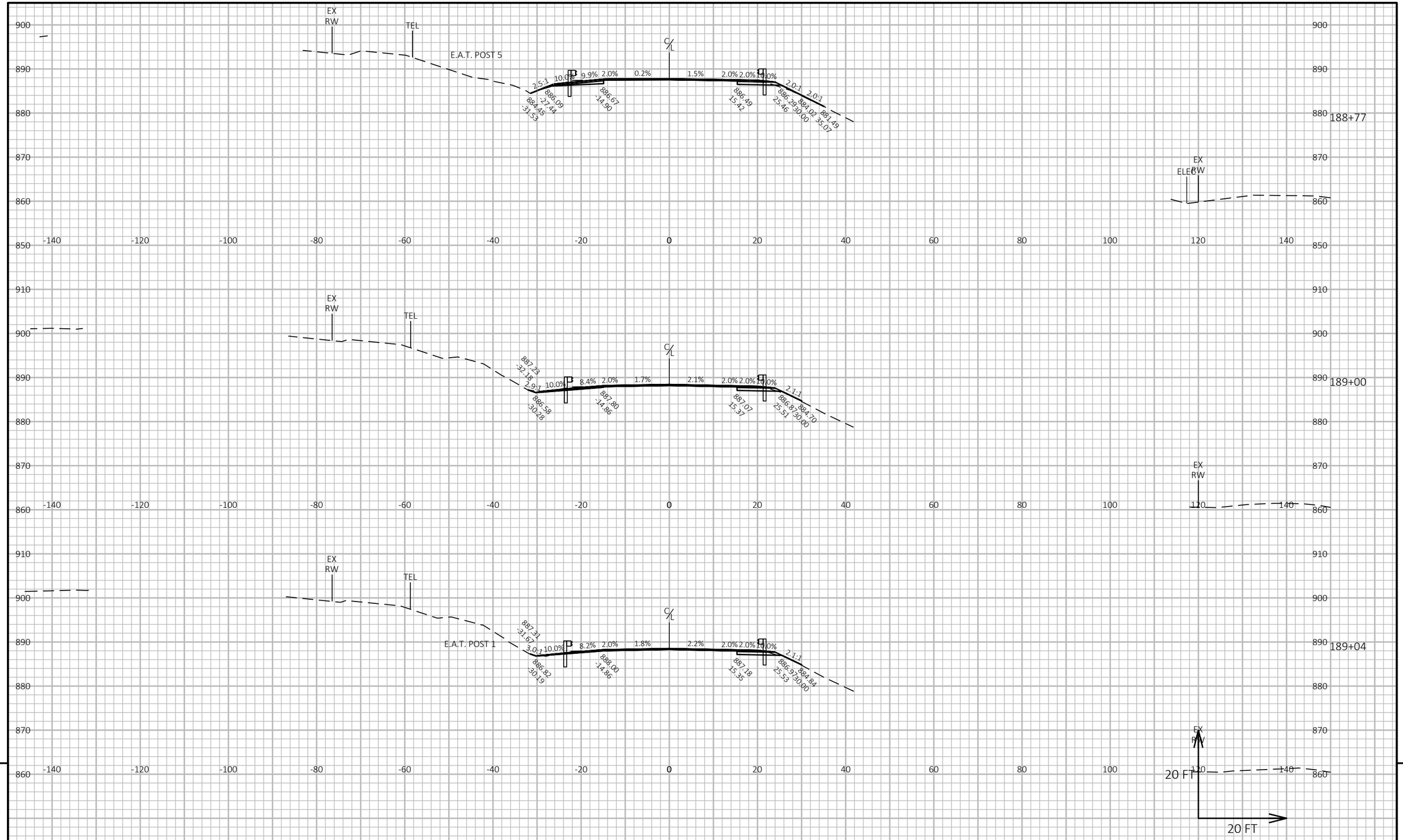


PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 300	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_A.DWG
LAYOUT NAME - 20

PLOT DATE : 7/19/2023 10:22 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

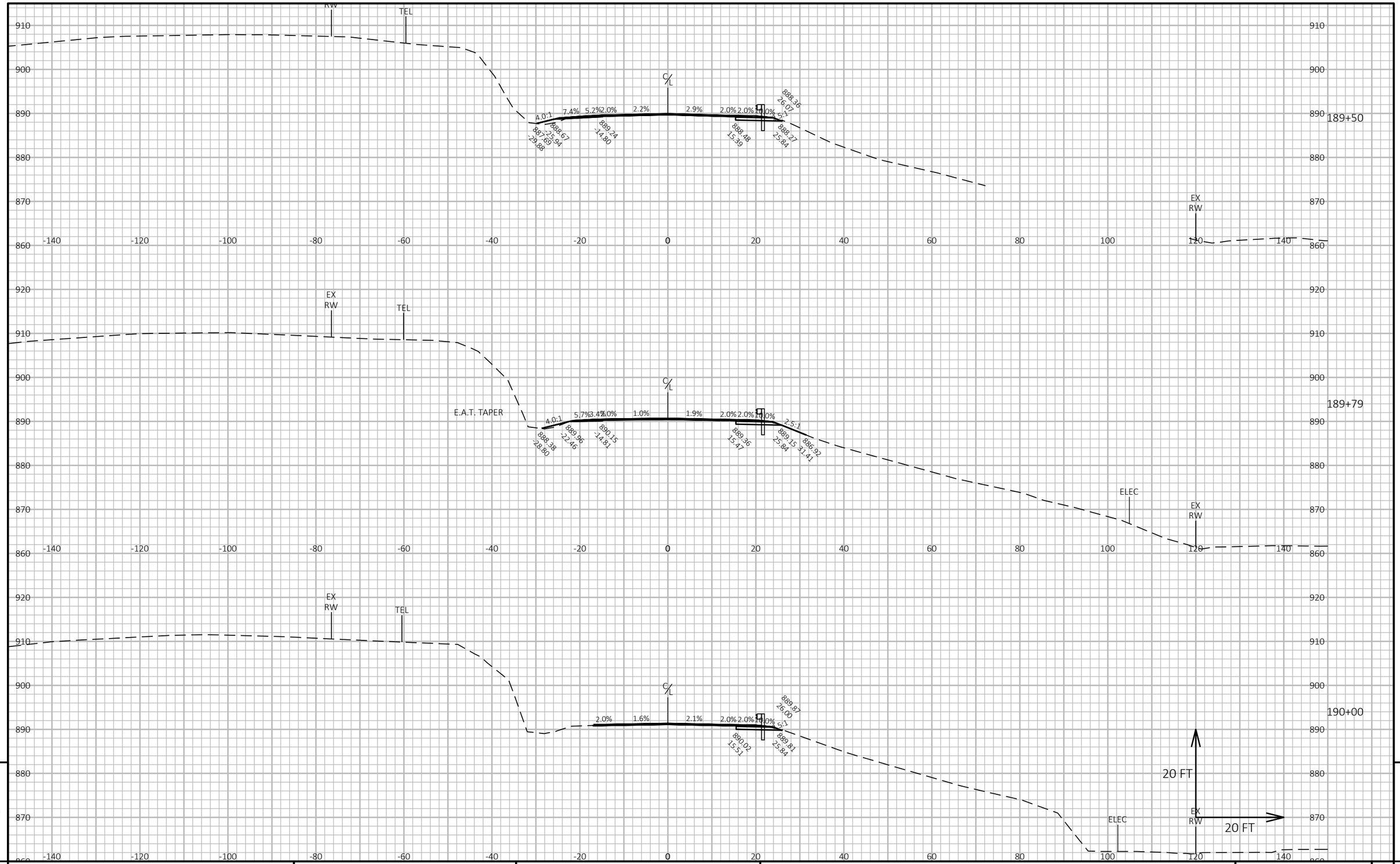


PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 301	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_A.DWG
LAYOUT NAME - 21

PLOT DATE : 7/19/2023 10:22 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

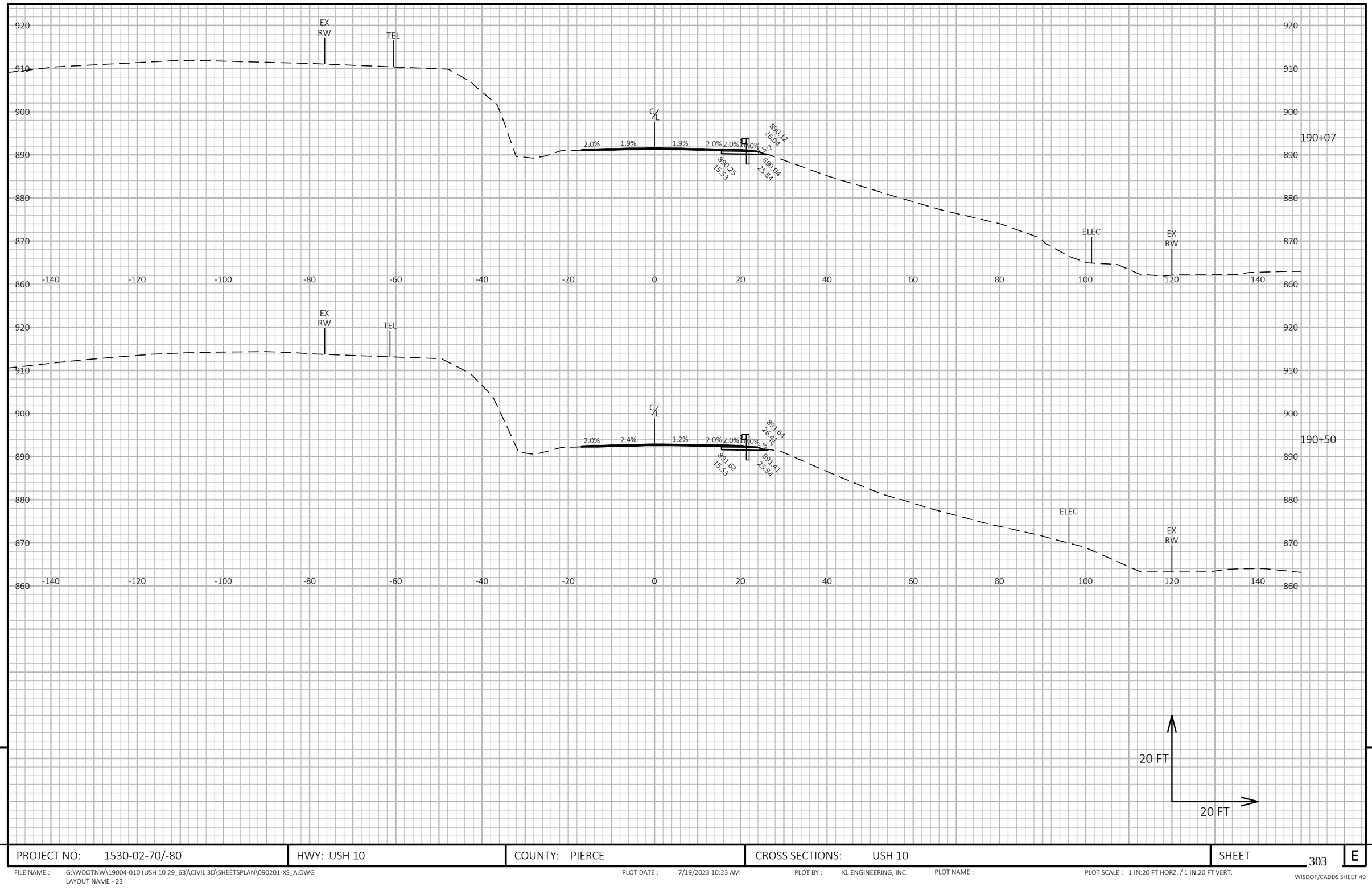
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PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 302	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_A.DWG
LAYOUT NAME - 22

PLOT DATE : 7/19/2023 10:23 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

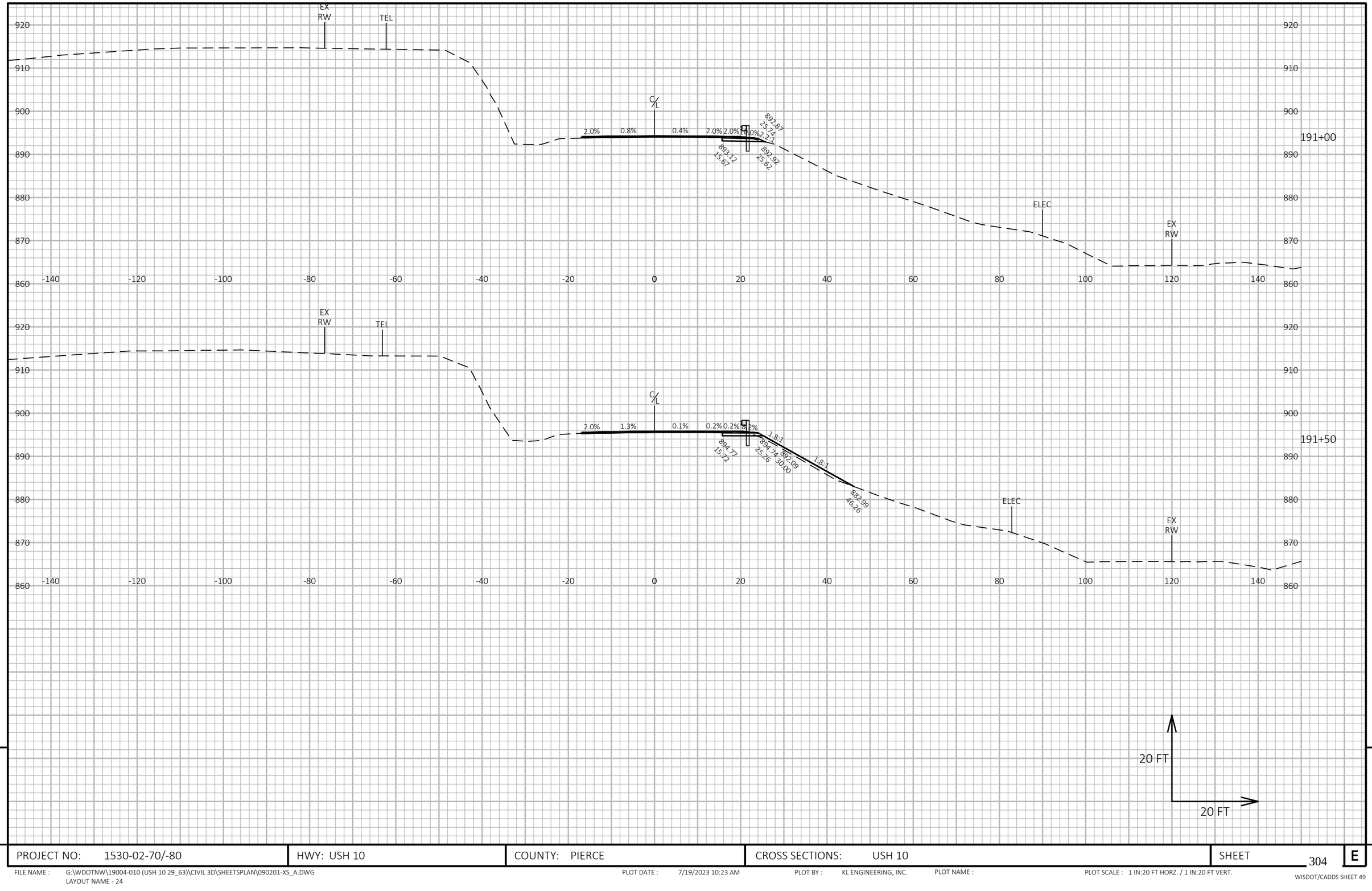
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PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 303	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_A.DWG
LAYOUT NAME - 23

PLOT DATE : 7/19/2023 10:23 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



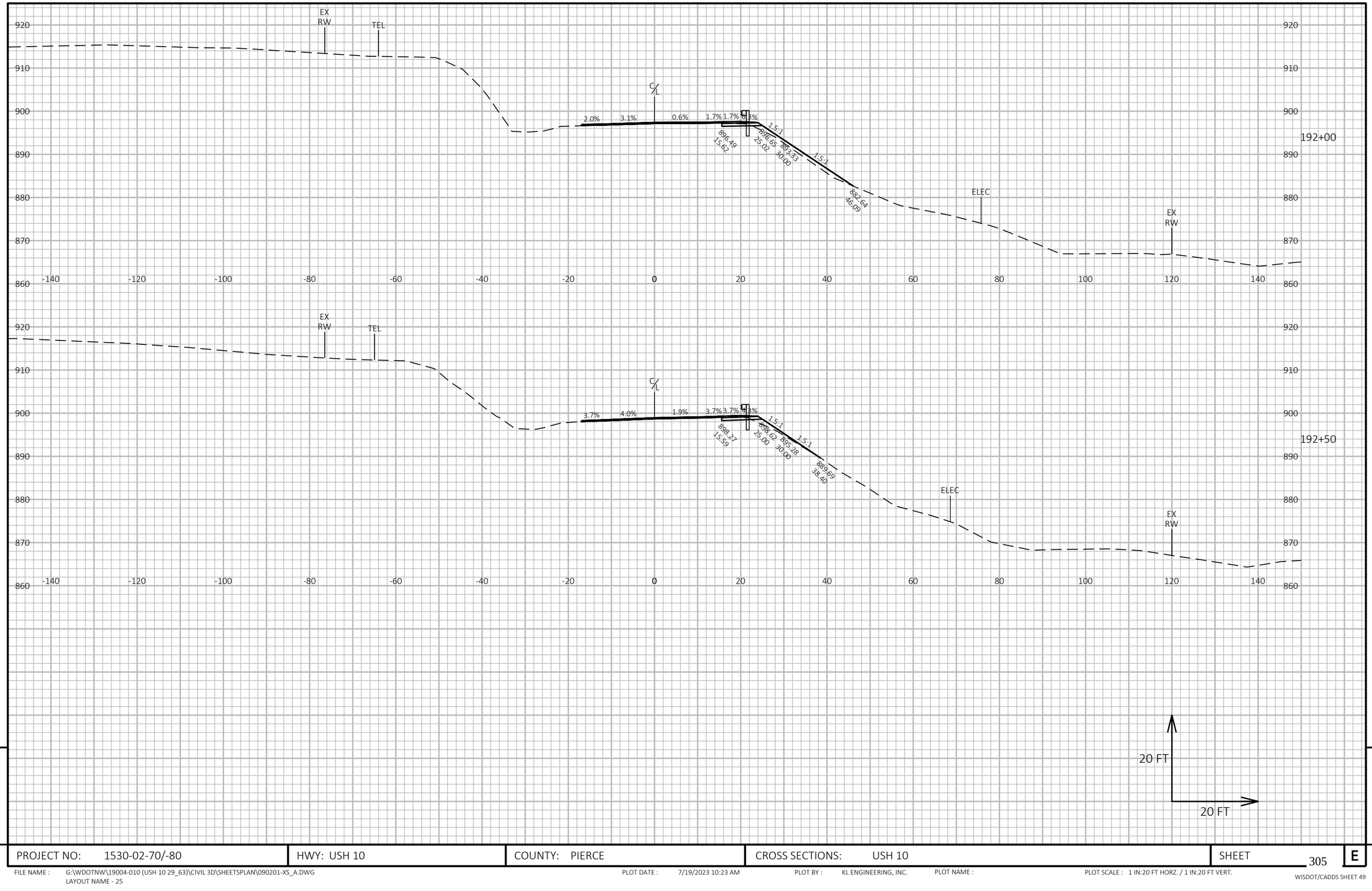
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PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 304	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_A.DWG
LAYOUT NAME - 24

PLOT DATE : 7/19/2023 10:23 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



9

9

PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 305	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_A.DWG
LAYOUT NAME - 25

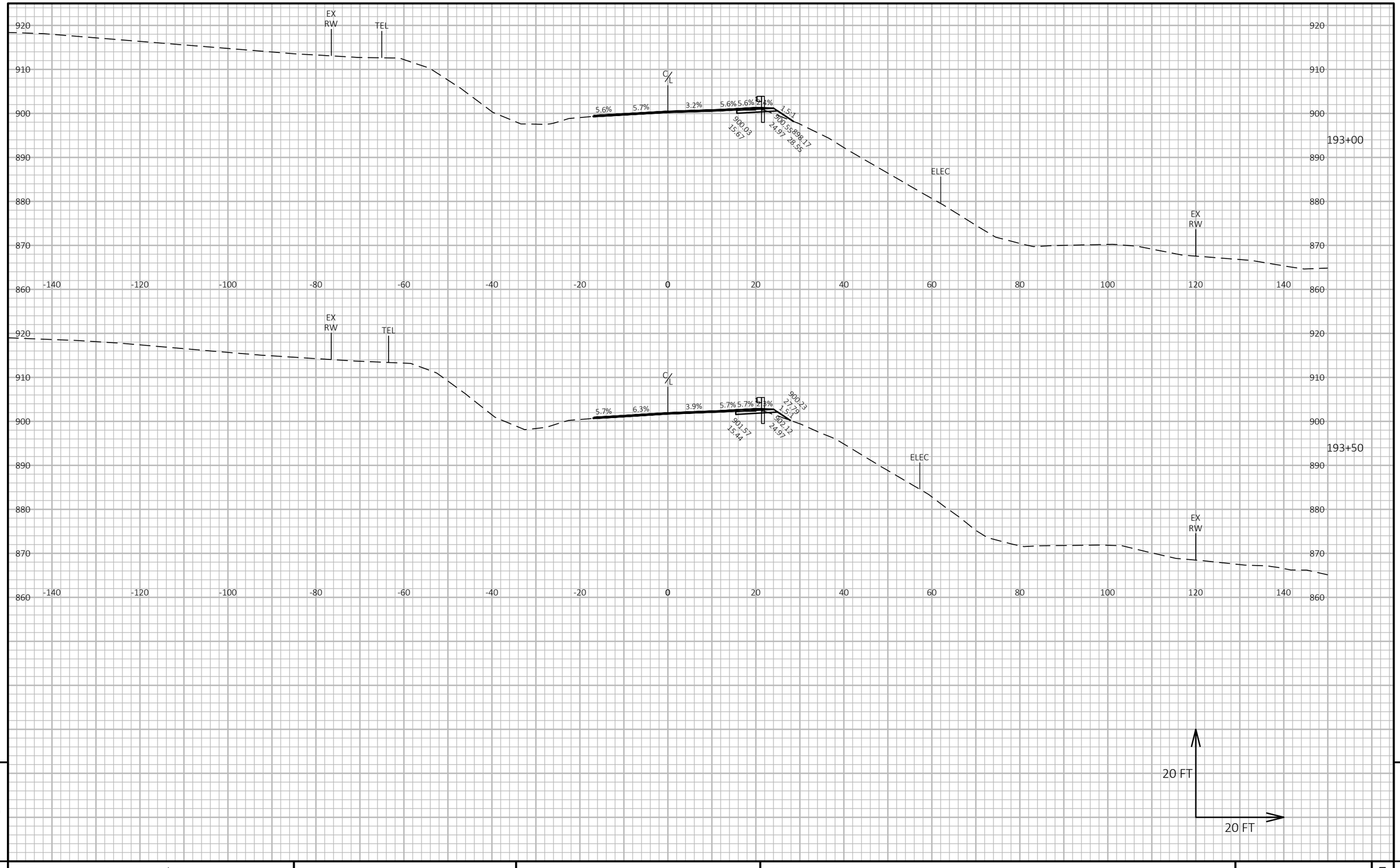
PLOT DATE : 7/19/2023 10:23 AM

PLOT BY : KL ENGINEERING, INC.

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

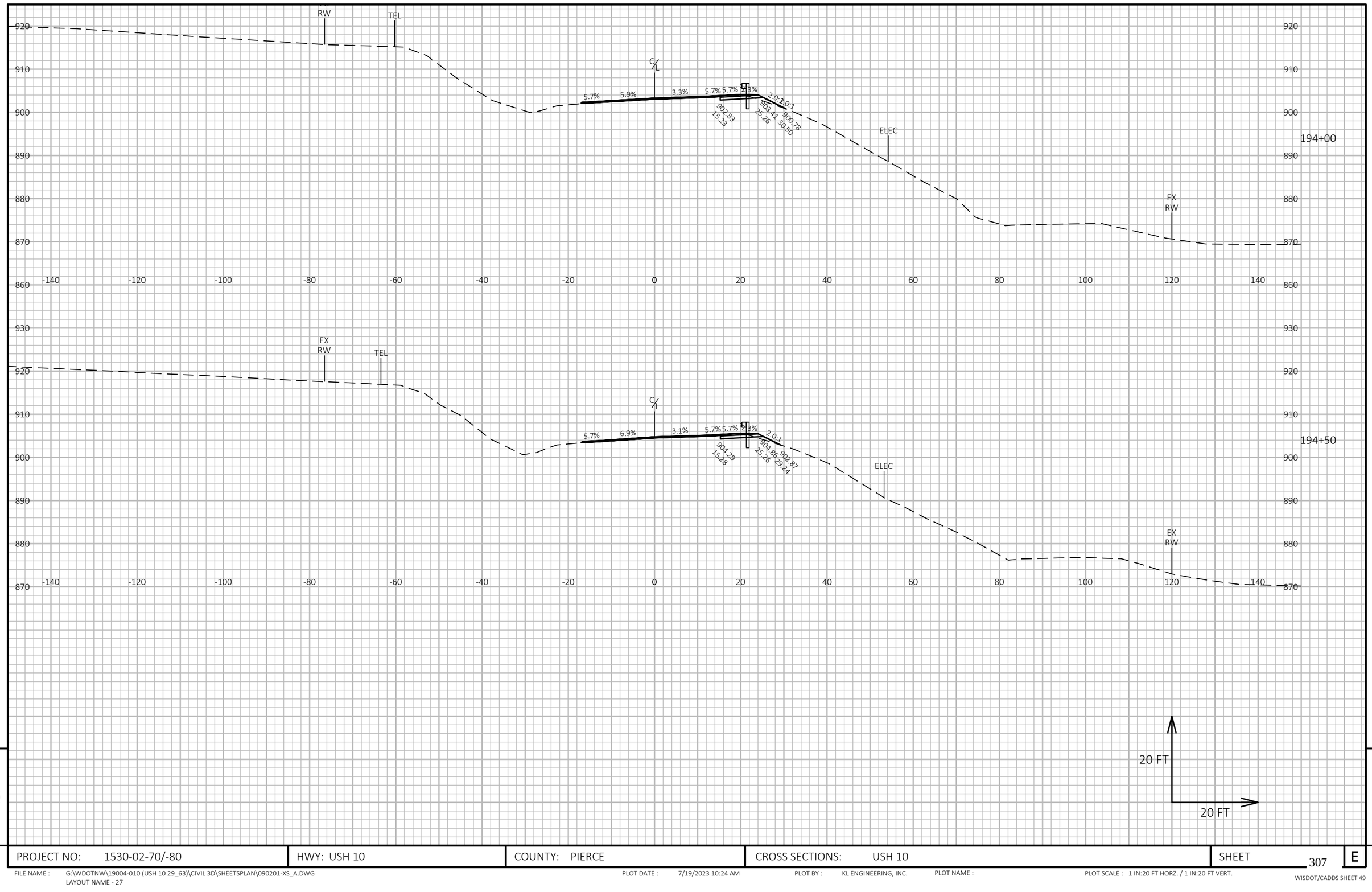


PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 306	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_A.DWG
LAYOUT NAME - 26

PLOT DATE : 7/19/2023 10:24 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



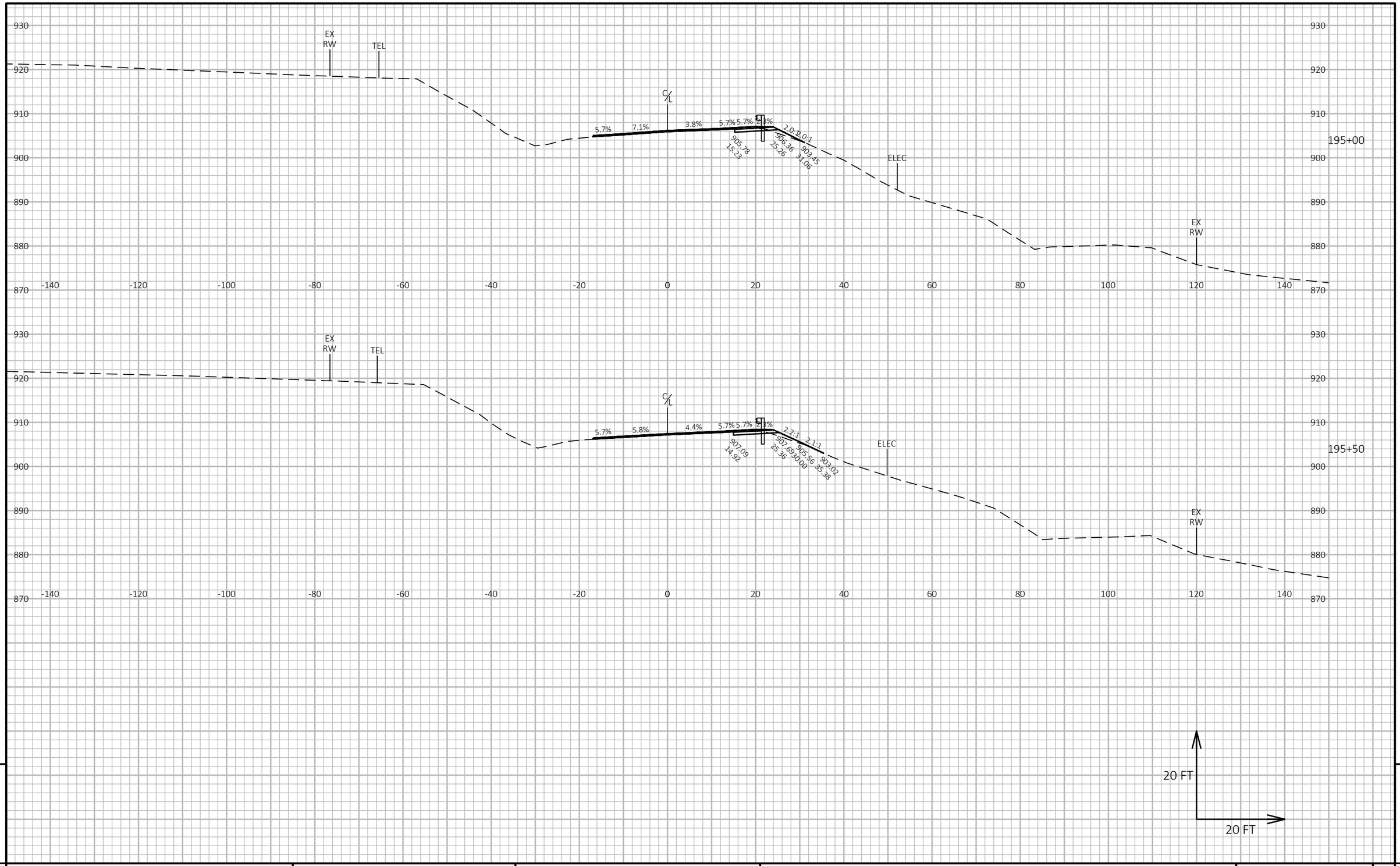
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PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 307	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_A.DWG
LAYOUT NAME - 27

PLOT DATE : 7/19/2023 10:24 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



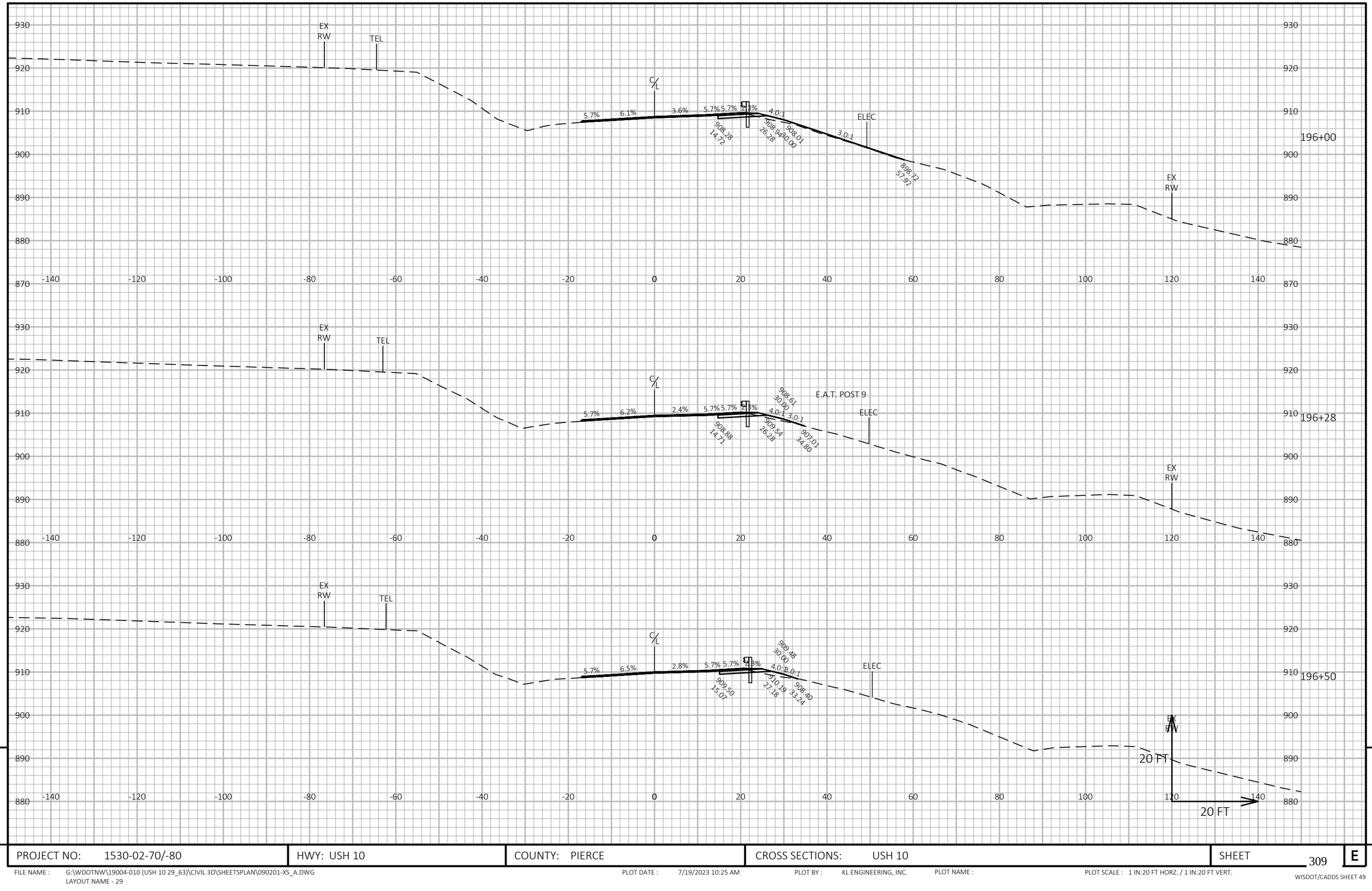
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PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 308	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_A.DWG
LAYOUT NAME - 28

PLOT DATE : 7/19/2023 10:24 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



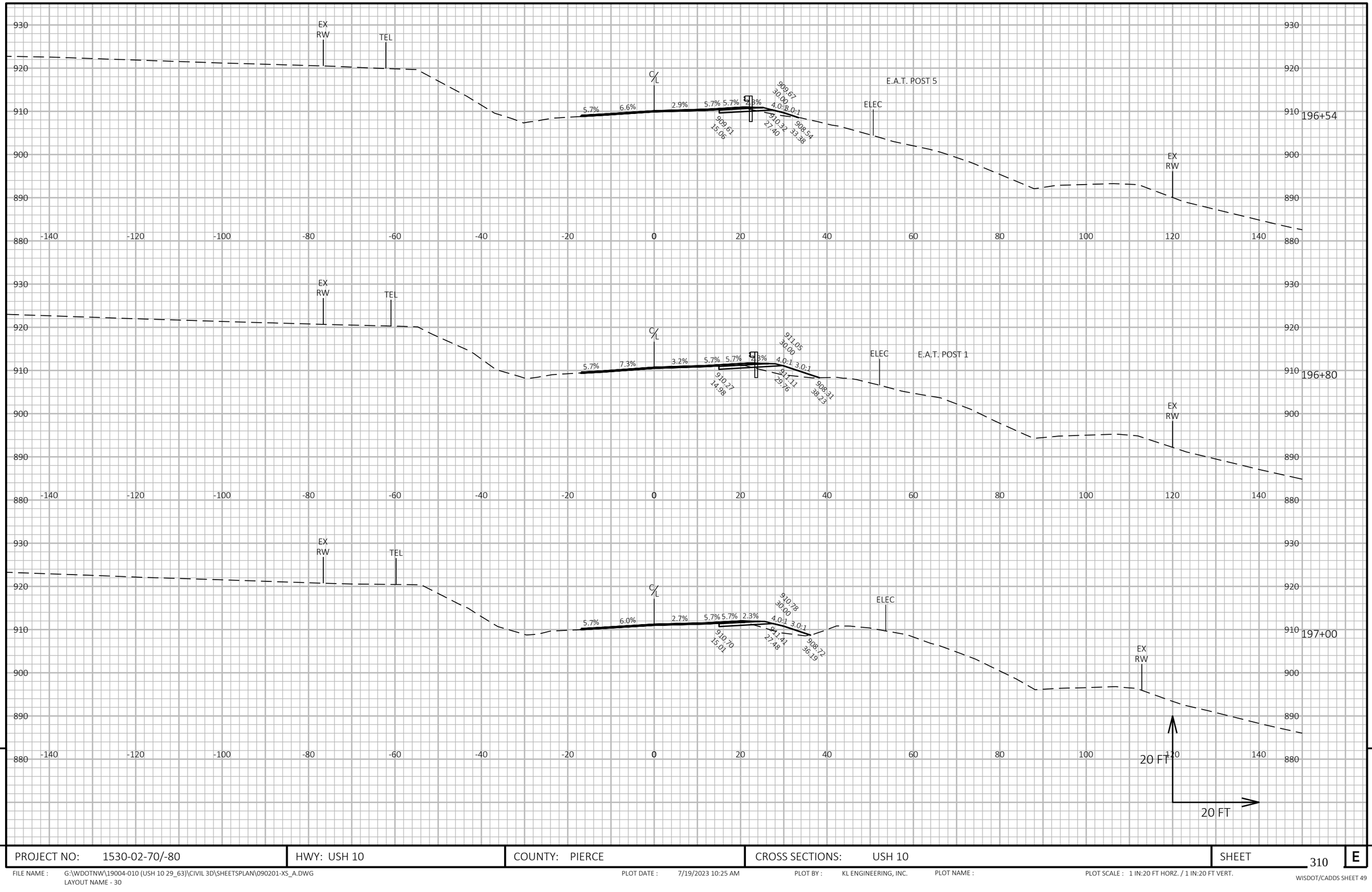
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9

PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 309	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_A.DWG
LAYOUT NAME - 29

PLOT DATE : 7/19/2023 10:25 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 310	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_A.DWG
LAYOUT NAME - 30

PLOT DATE : 7/19/2023 10:25 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



20 FT

20 FT

9

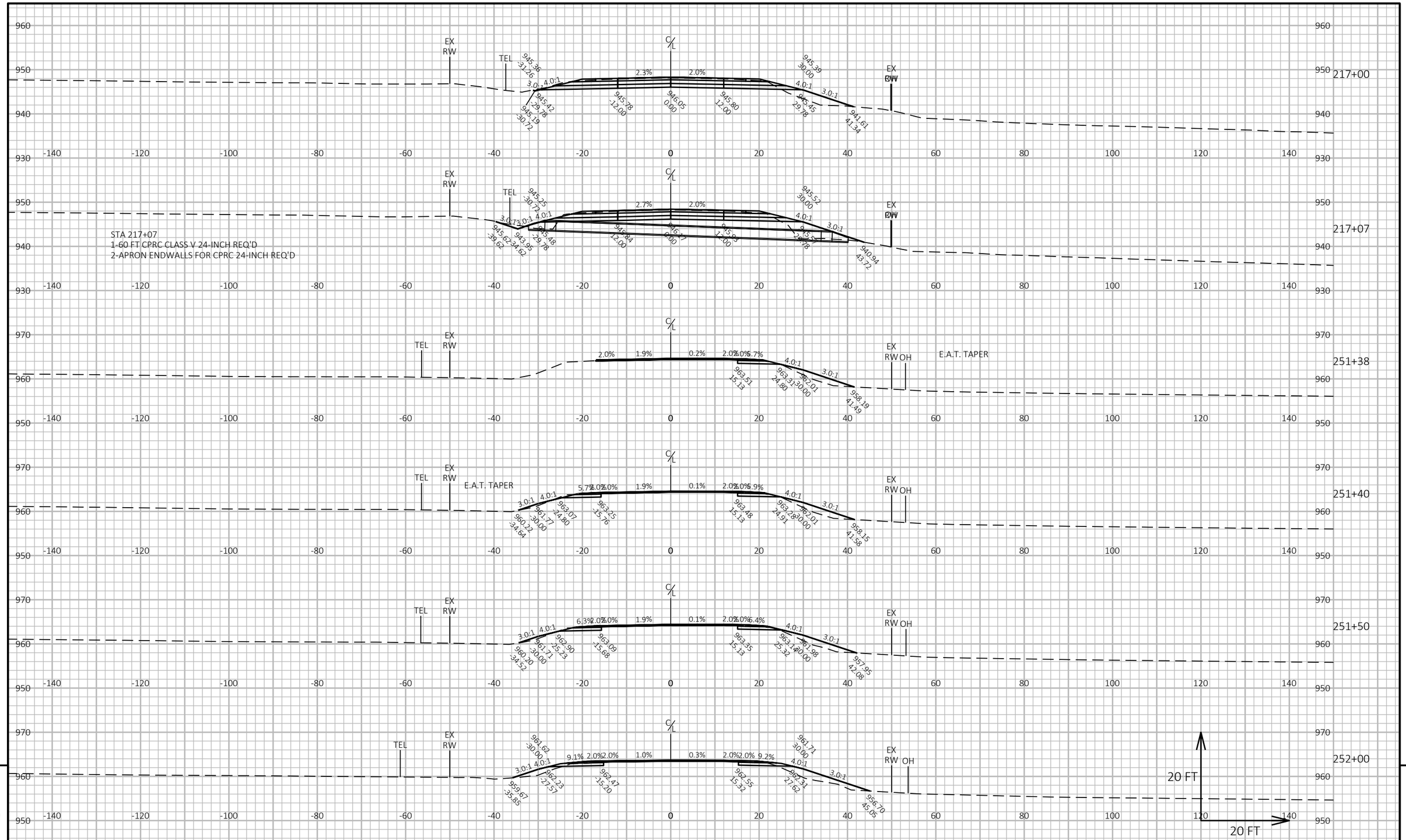
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PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 311	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_A.DWG
LAYOUT NAME - 31

PLOT DATE : 7/19/2023 10:25 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

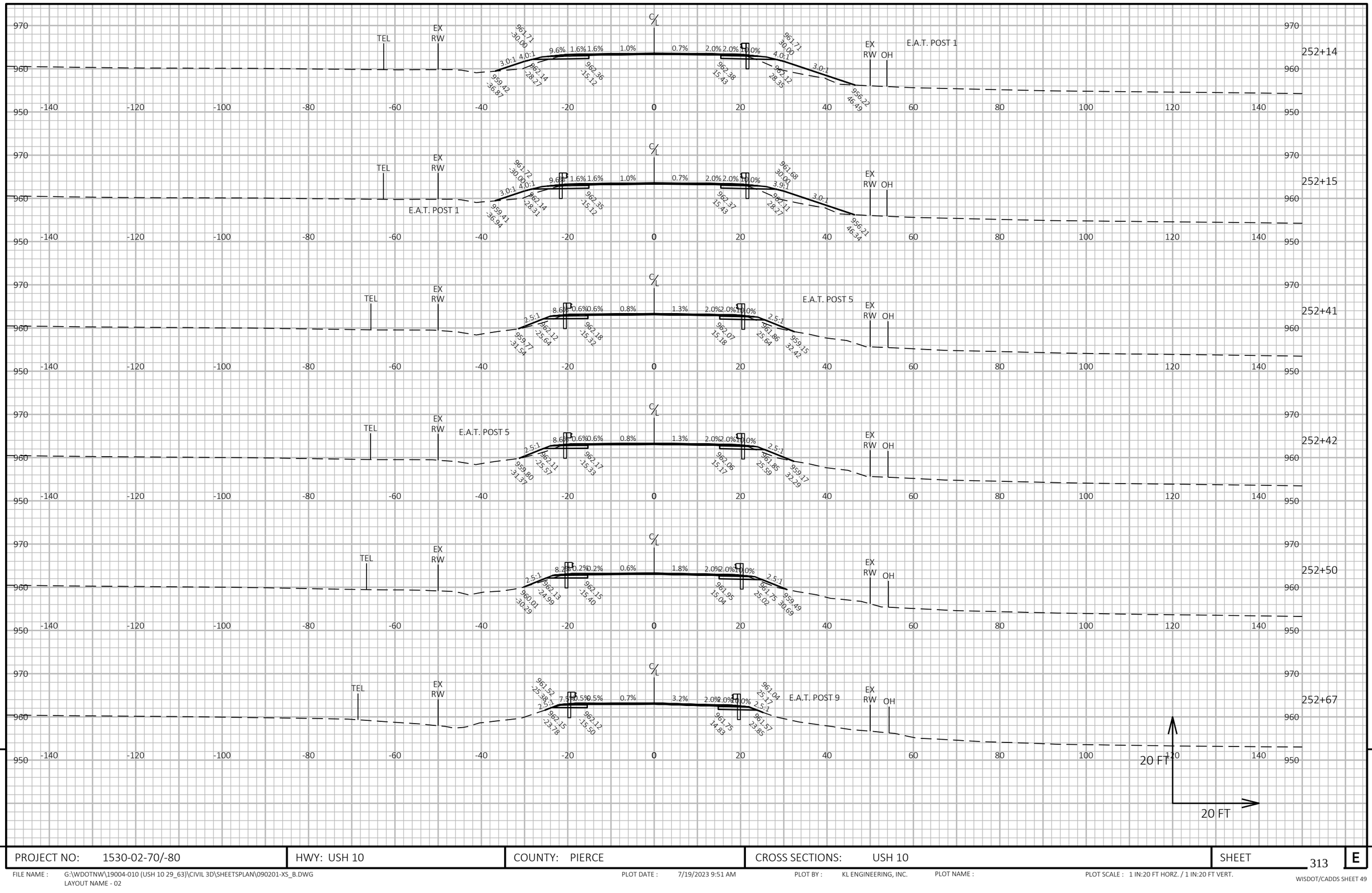


PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 312 E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_B.DWG
LAYOUT NAME - 01

PLOT DATE : 7/19/2023 9:50 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 313	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_B.DWG
LAYOUT NAME - 02
PLOT DATE : 7/19/2023 9:51 AM
PLOT BY : KL ENGINEERING, INC.
PLOT NAME :
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.
WISDOT/CADDS SHEET 49

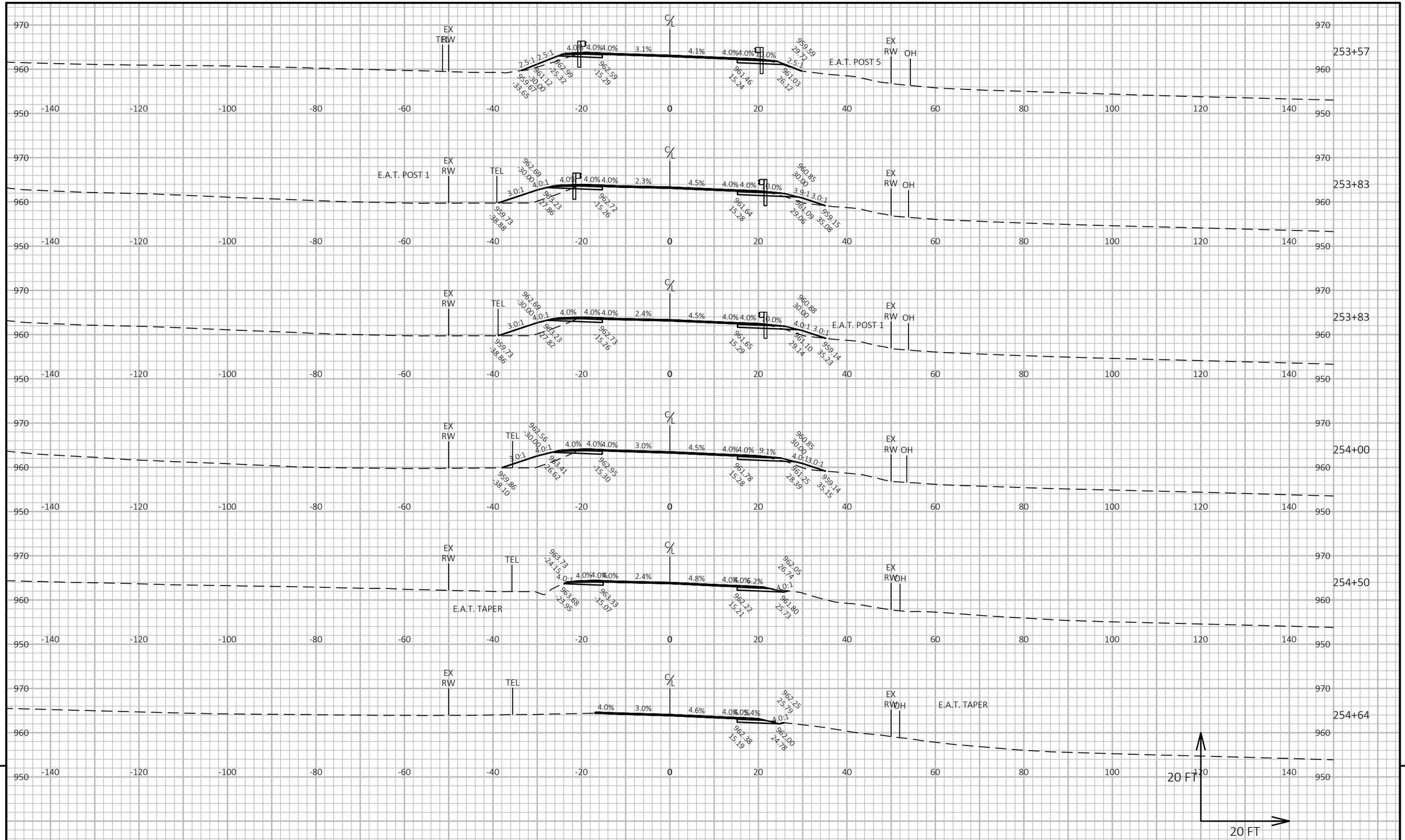


PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 314	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_B.DWG
LAYOUT NAME - 03

PLOT DATE : 7/19/2023 9:51 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

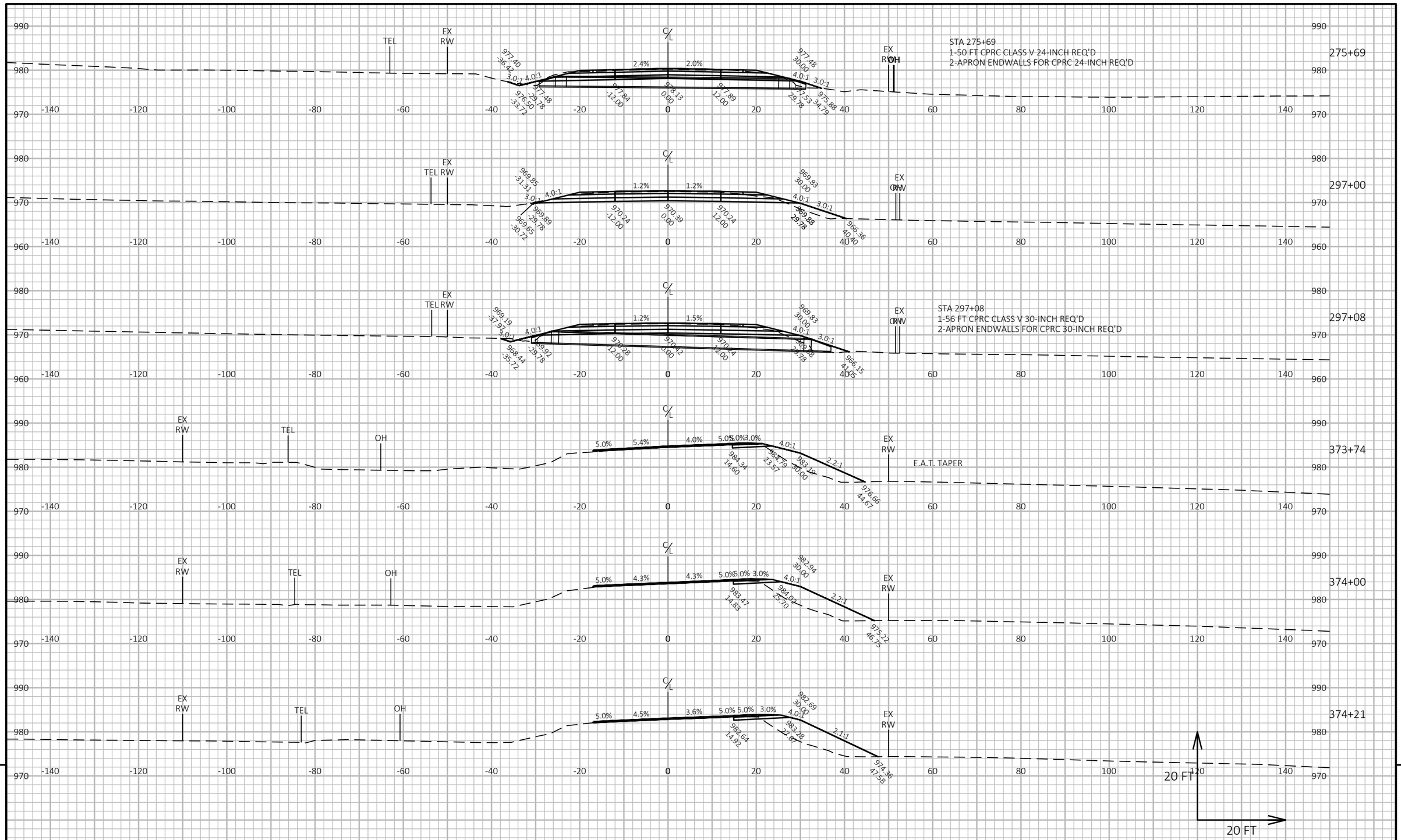
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PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 315	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_B.DWG
LAYOUT NAME - 04

PLOT DATE : 7/19/2023 9:51 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

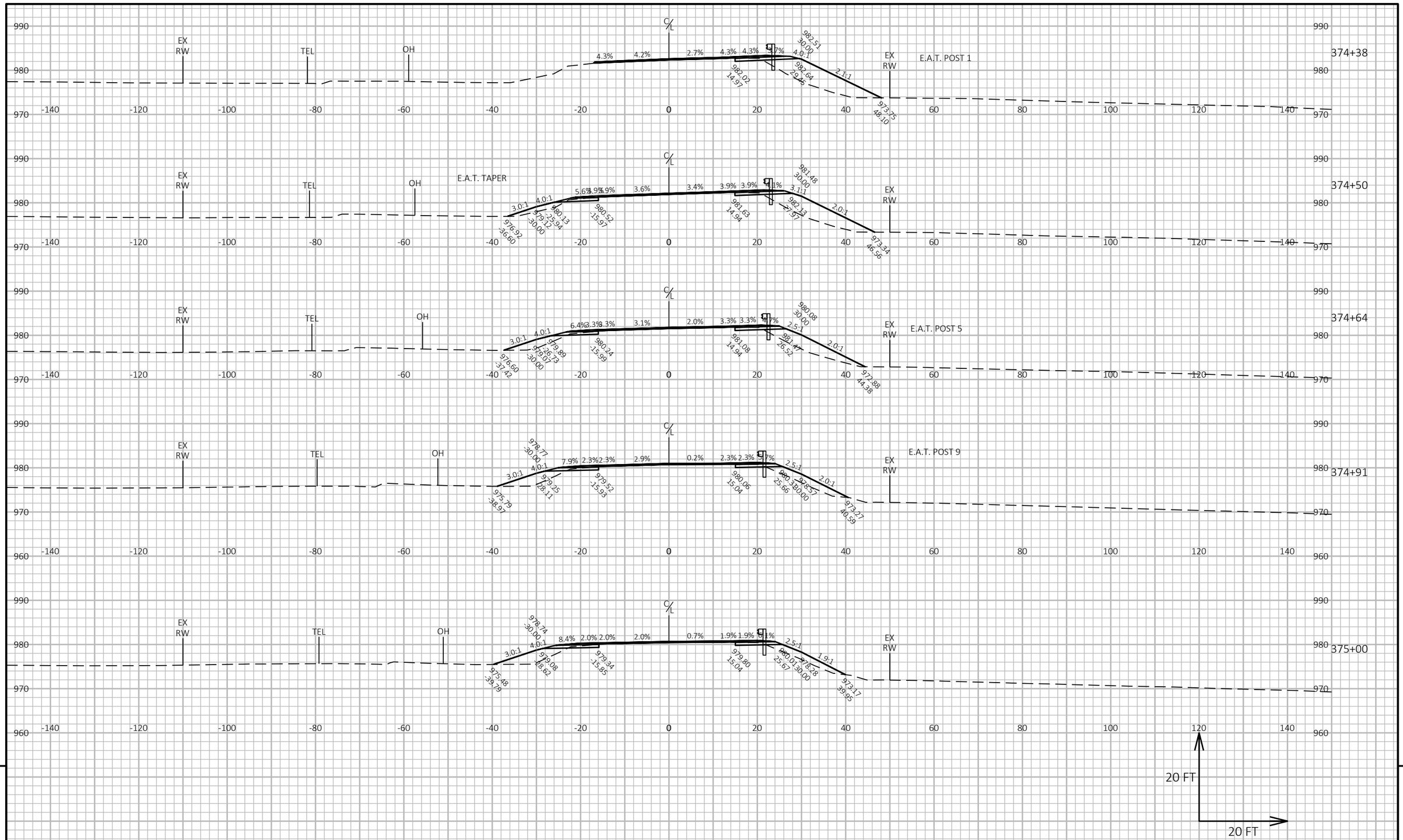


PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 316	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_B.DWG
LAYOUT NAME - 05

PLOT DATE : 7/19/2023 9:52 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49


374+38
E.A.T. POST 1
EX RW
TEL
OH
C/L
4.3%
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4.3%
4.3%
4.7%
982.51
30.00
4.0:1
982.64
29.96
2.1:1
982.02
14.97
973.75
48.10
374+50
E.A.T. TAPER
3.0:1
4.0:1
5.6%
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3.9%
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3.1:1
982.13
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2.0:1
976.92
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979.22
30.00
980.13
25.94
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15.97
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14.94
973.34
46.56
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E.A.T. POST 5
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981.47
26.52
2.0:1
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979.89
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981.08
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E.A.T. POST 9
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980.57
25.86
2.0:1
978.77
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4.0:1
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28.71
979.52
15.93
980.06
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4.1%
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28.62
979.34
15.85
979.80
15.04
975.48
39.79
978.01
30.00
2.5:1
978.28
25.67
1.9:1
973.17
39.95
E
EX RW
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OH
C/L
-140
-120
-100
-80
-60
-40
-20
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20
40
60
80
100
120
140
990
980
970
960
20 FT
20 FT
9
9
PROJECT NO: 1530-02-70/-80
HWY: USH 10
COUNTY: PIERCE
CROSS SECTIONS: USH 10
SHEET 317
FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_B.DWG
LAYOUT NAME - 06
PLOT DATE : 7/19/2023 9:52 AM
PLOT BY : KL ENGINEERING, INC.
PLOT NAME :
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.
WISDOT/CADDS SHEET 49

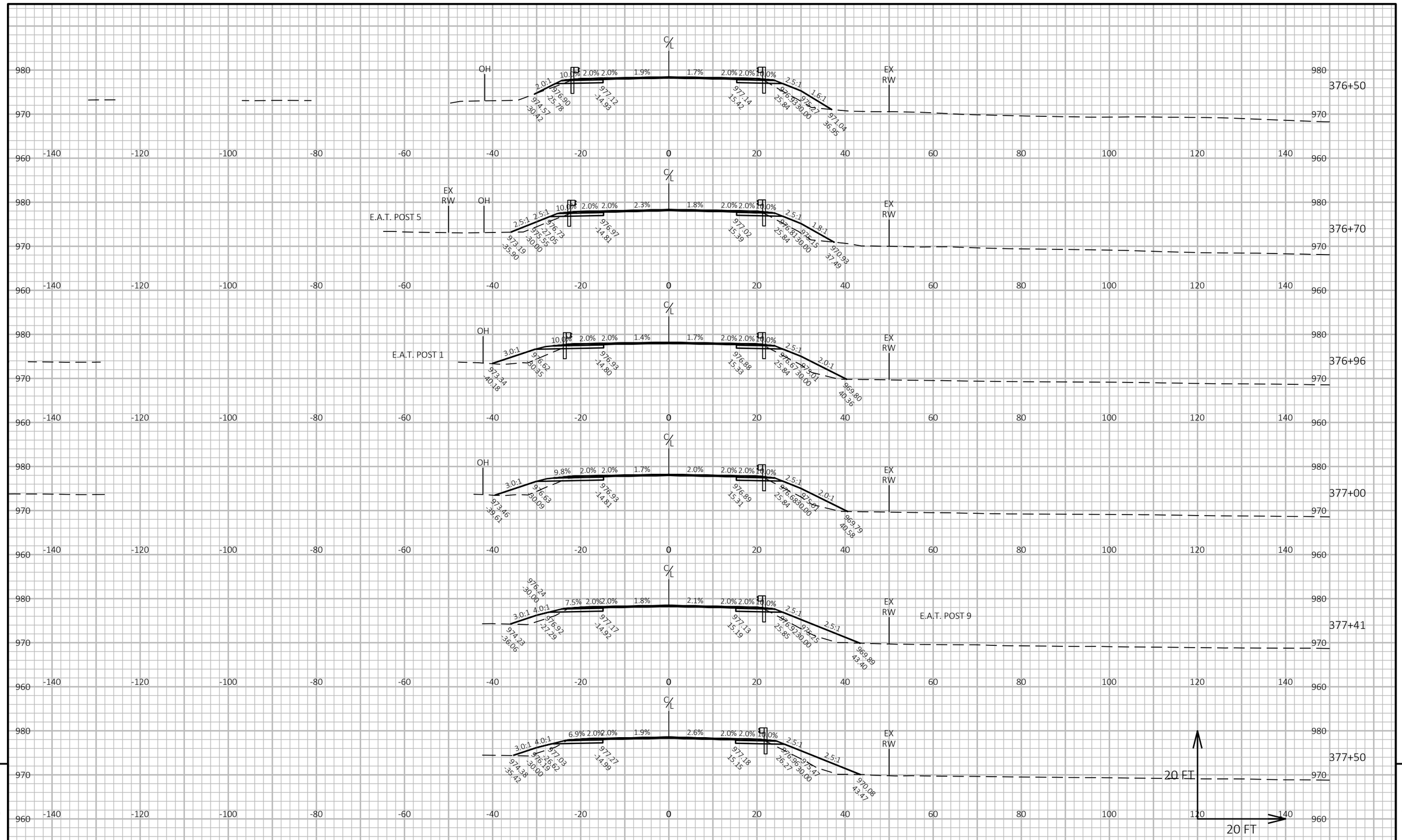


PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 318	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_B.DWG
LAYOUT NAME - 07

PLOT DATE : 7/19/2023 9:53 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

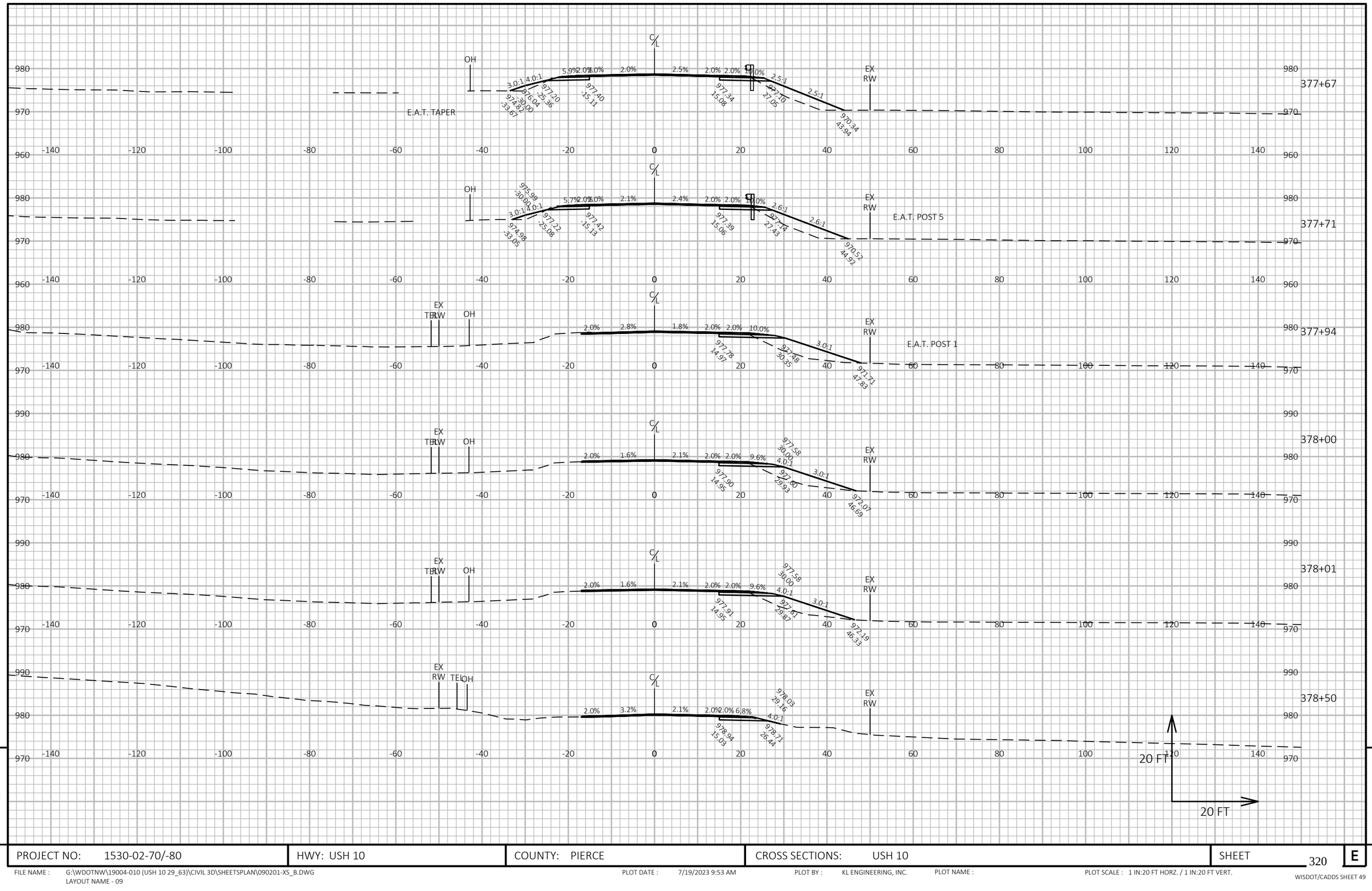


PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 319	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_B.DWG
LAYOUT NAME - 08

PLOT DATE : 7/19/2023 9:53 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

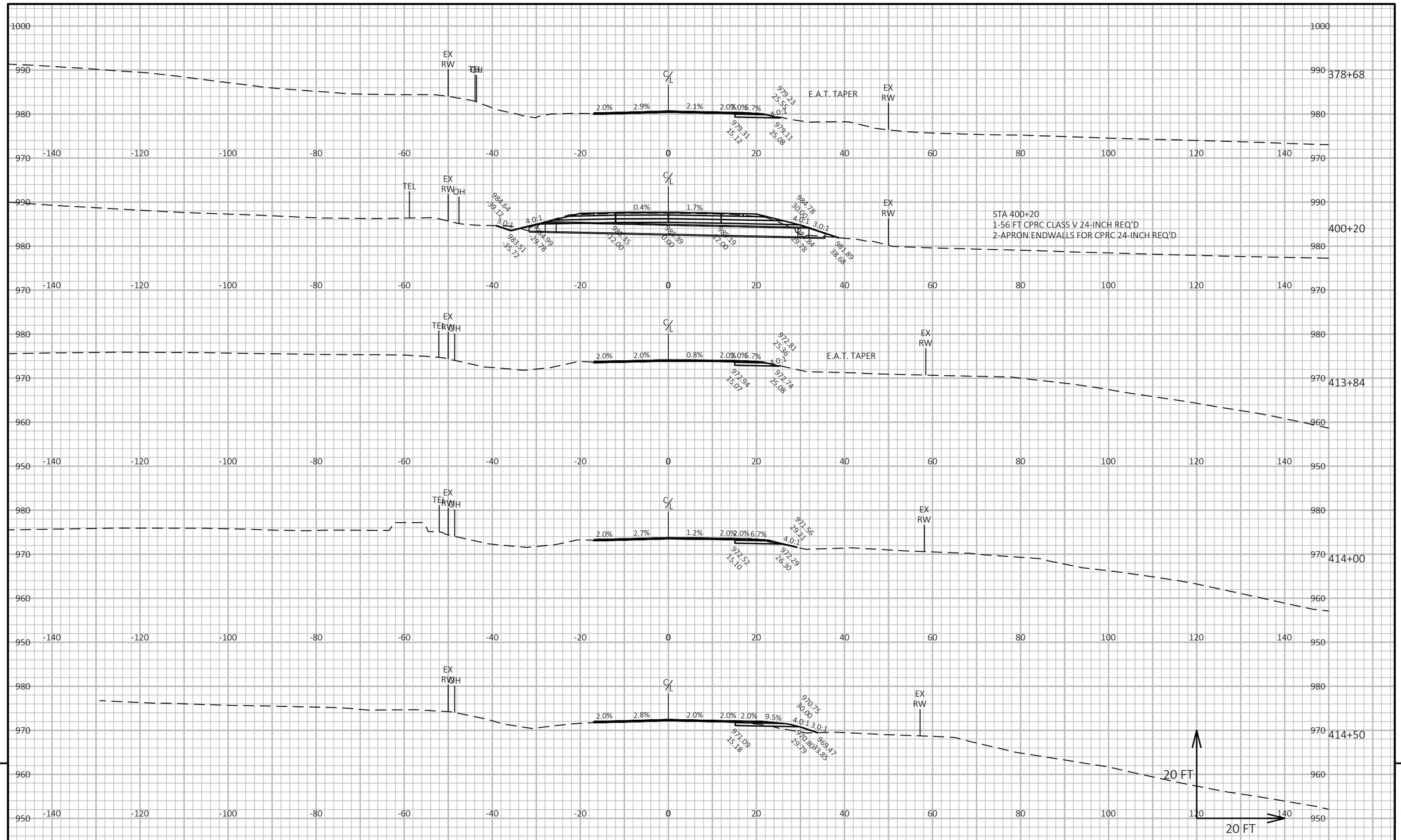
9

PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 320	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_B.DWG
LAYOUT NAME - 09

PLOT DATE : 7/19/2023 9:53 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

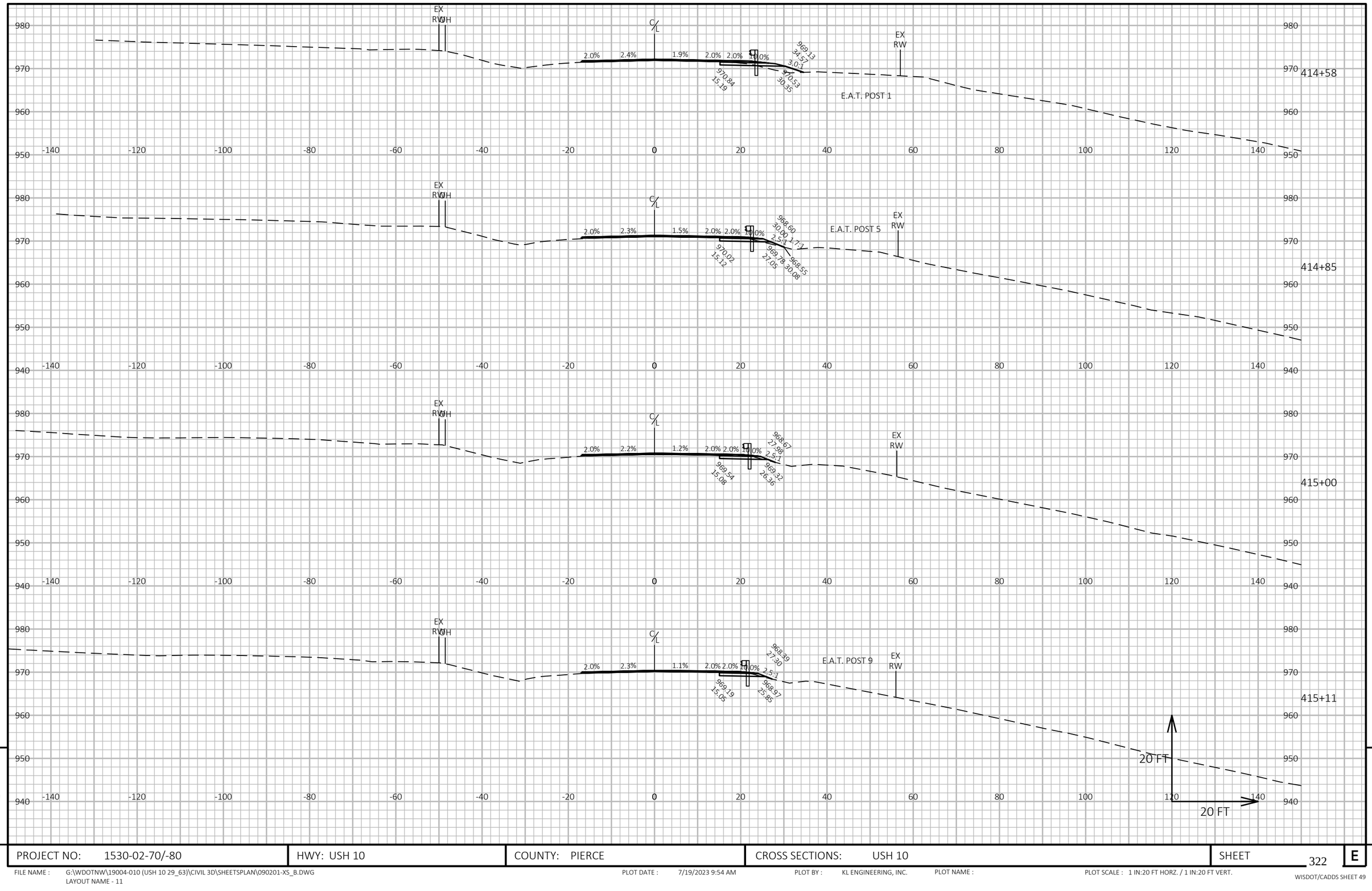


PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 321	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_B.DWG
LAYOUT NAME - 10

PLOT DATE : 7/19/2023 9:54 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

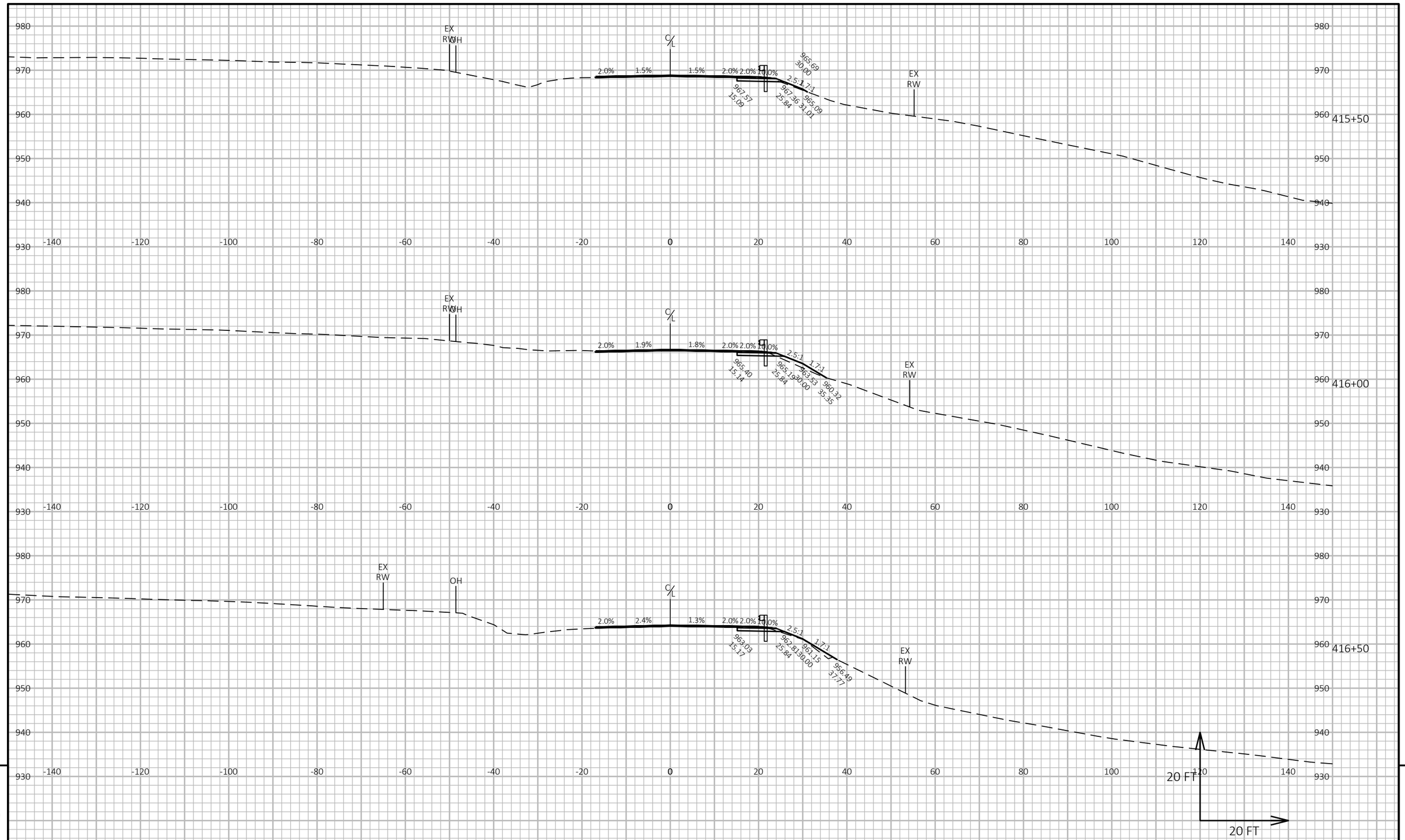
9

PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 322	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_B.DWG
LAYOUT NAME - 11

PLOT DATE : 7/19/2023 9:54 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

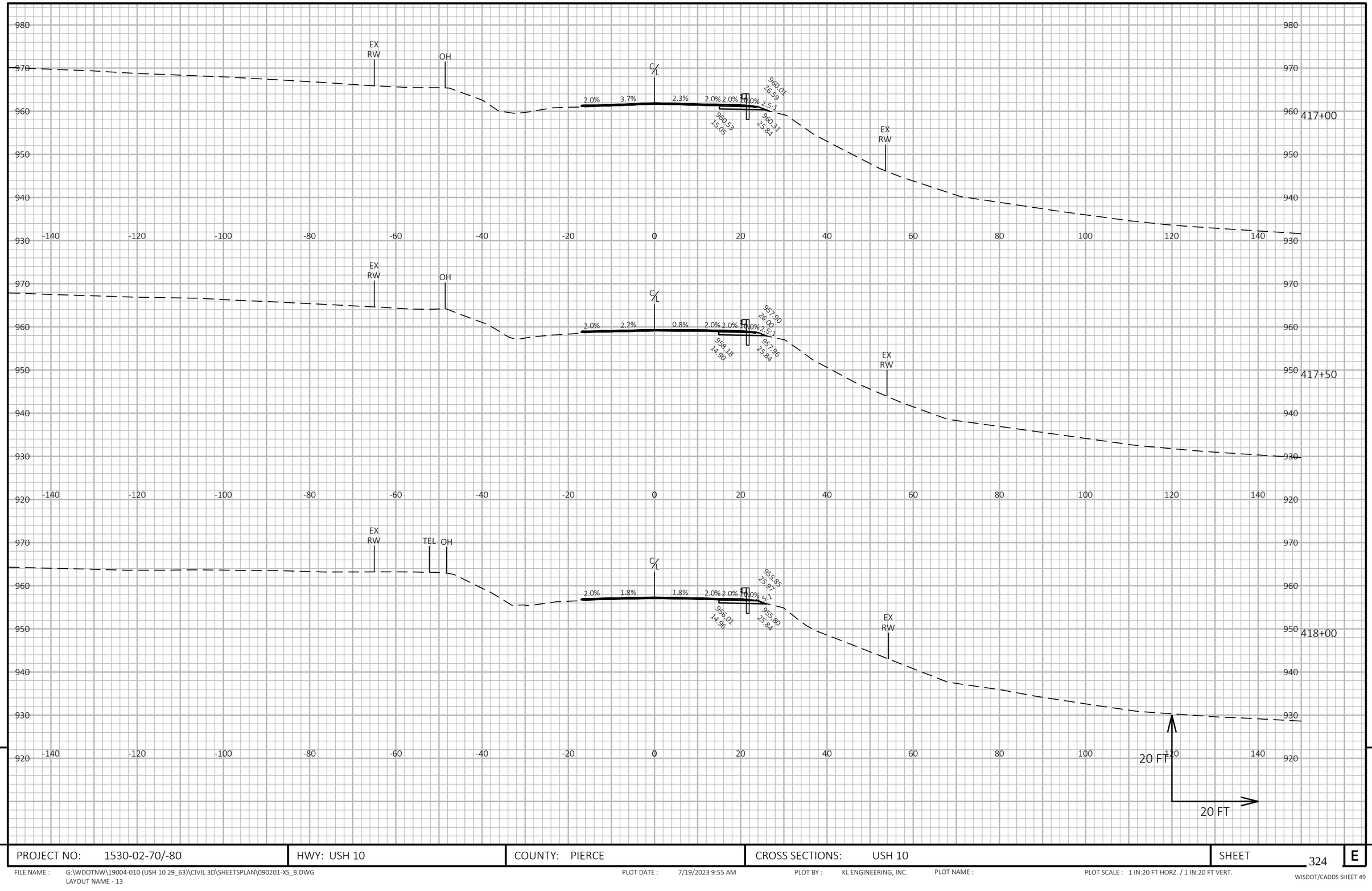


PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 323	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_B.DWG
LAYOUT NAME - 12

PLOT DATE : 7/19/2023 9:55 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

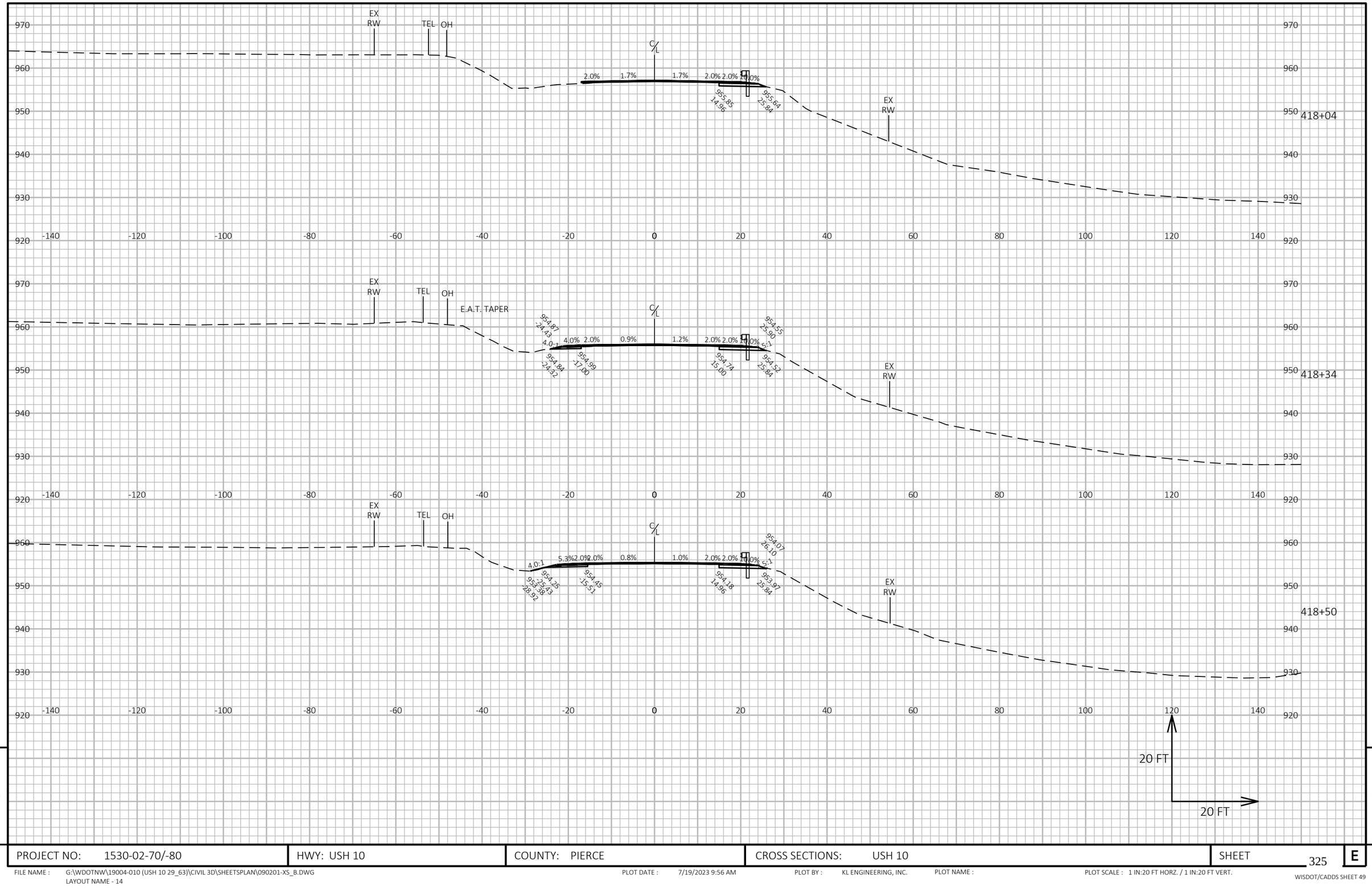


PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 324 E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_B.DWG
LAYOUT NAME - 13

PLOT DATE : 7/19/2023 9:55 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 325	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_B.DWG
LAYOUT NAME - 14

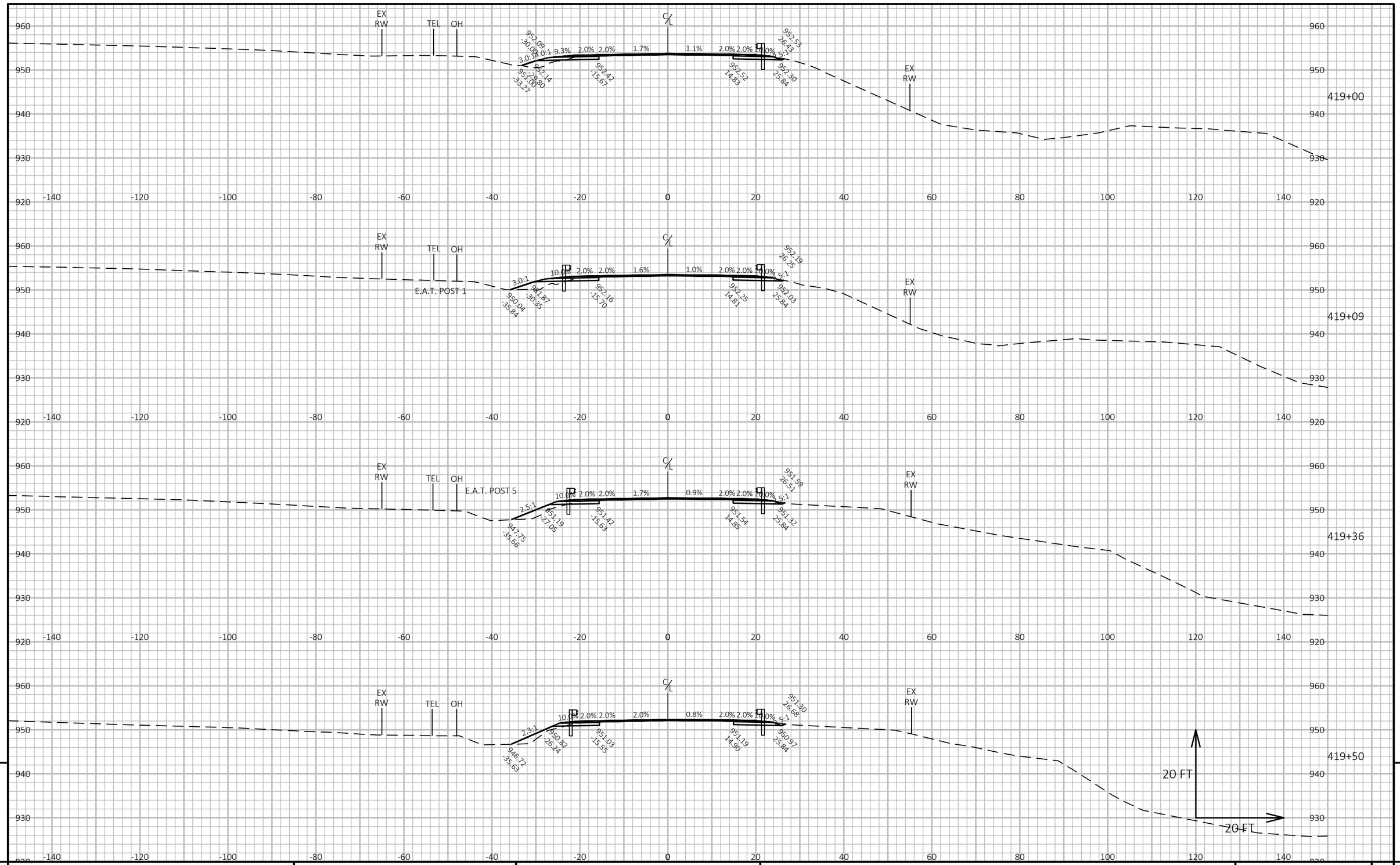
PLOT DATE : 7/19/2023 9:56 AM

PLOT BY : KL ENGINEERING, INC.

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

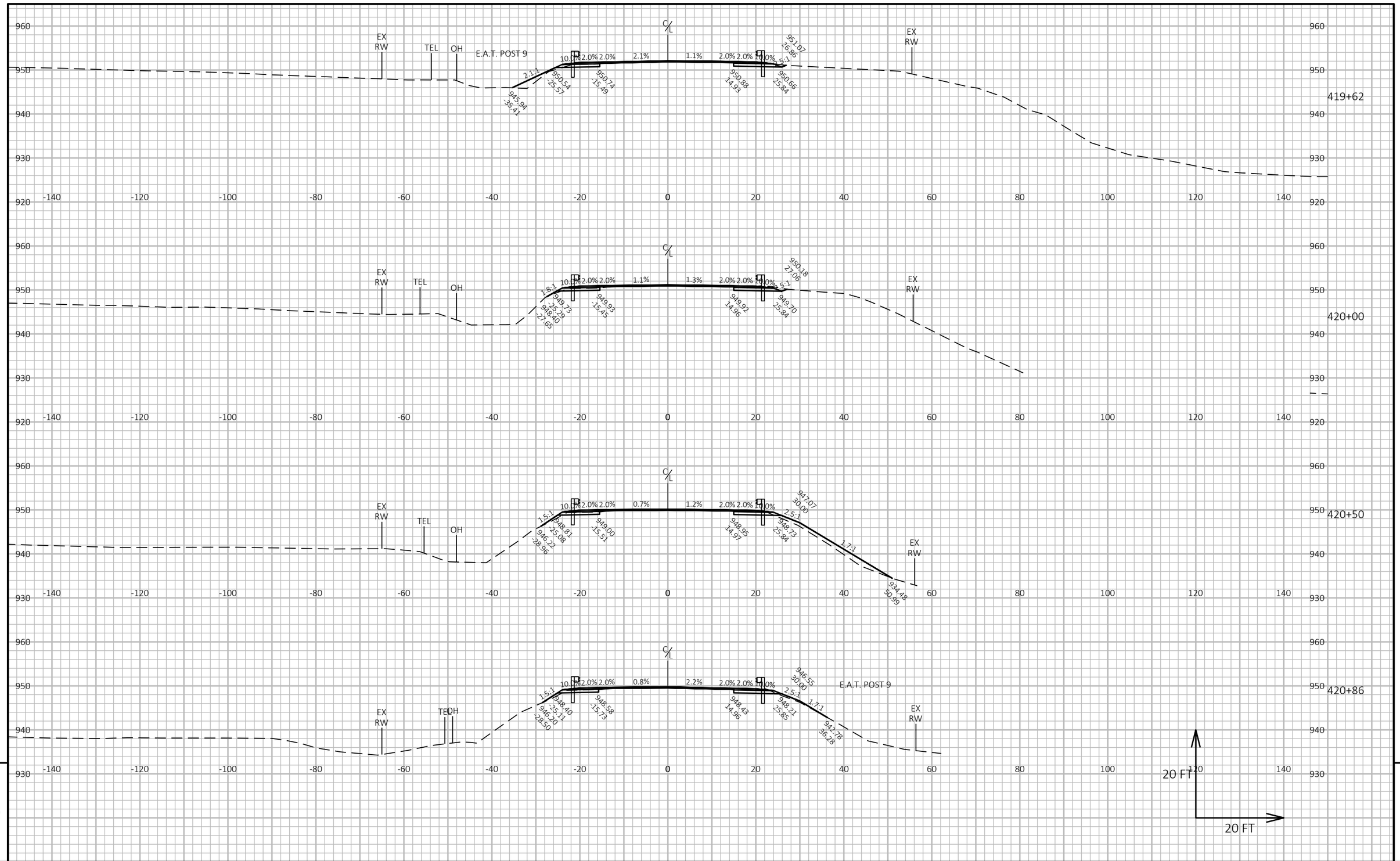
9

PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 326	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_B.DWG
LAYOUT NAME - 15

PLOT DATE : 7/19/2023 9:56 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 327	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_B.DWG
LAYOUT NAME - 16

PLOT DATE : 7/19/2023 9:57 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

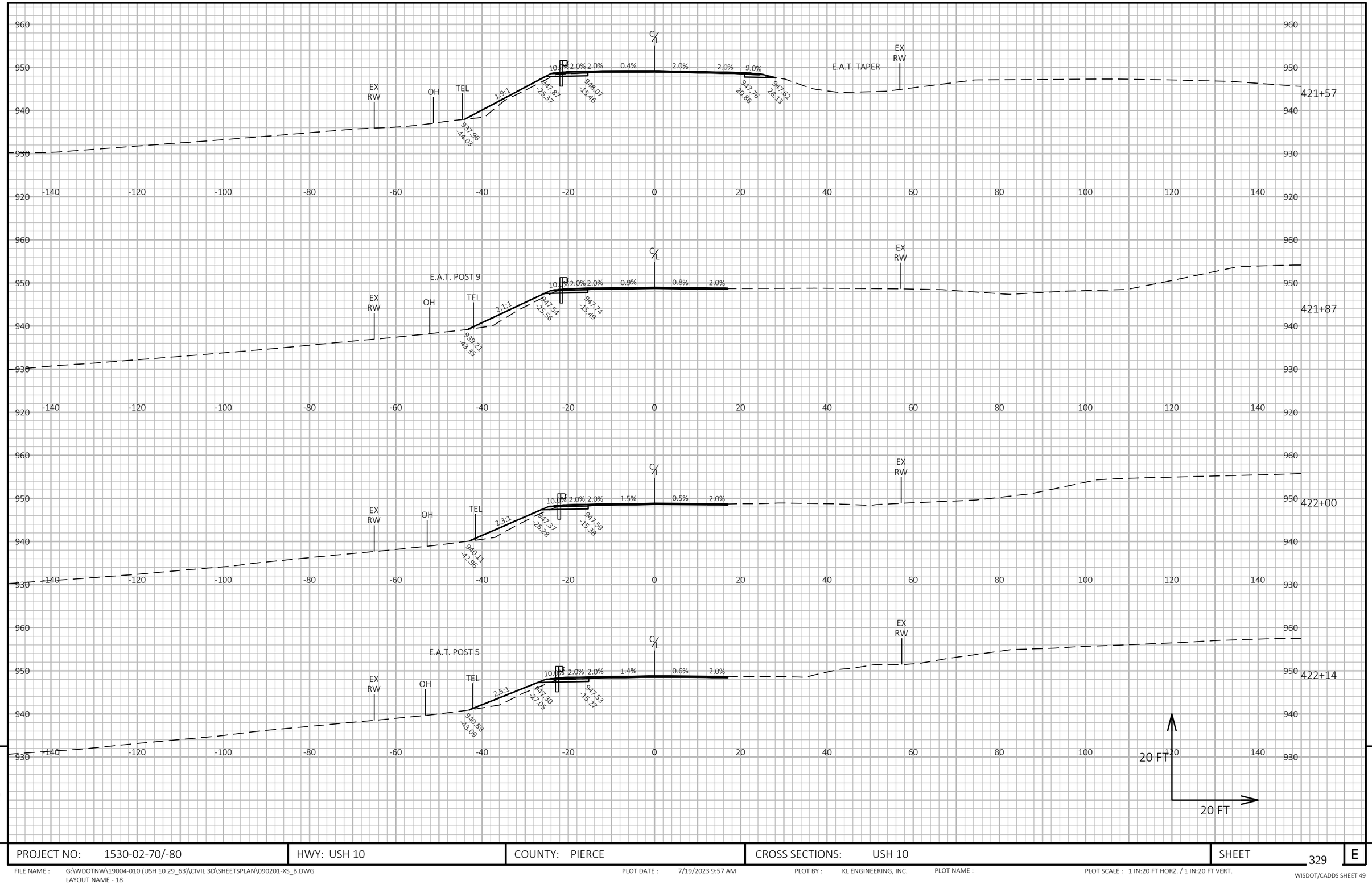


PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 328	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_B.DWG
LAYOUT NAME - 17

PLOT DATE : 7/19/2023 9:57 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

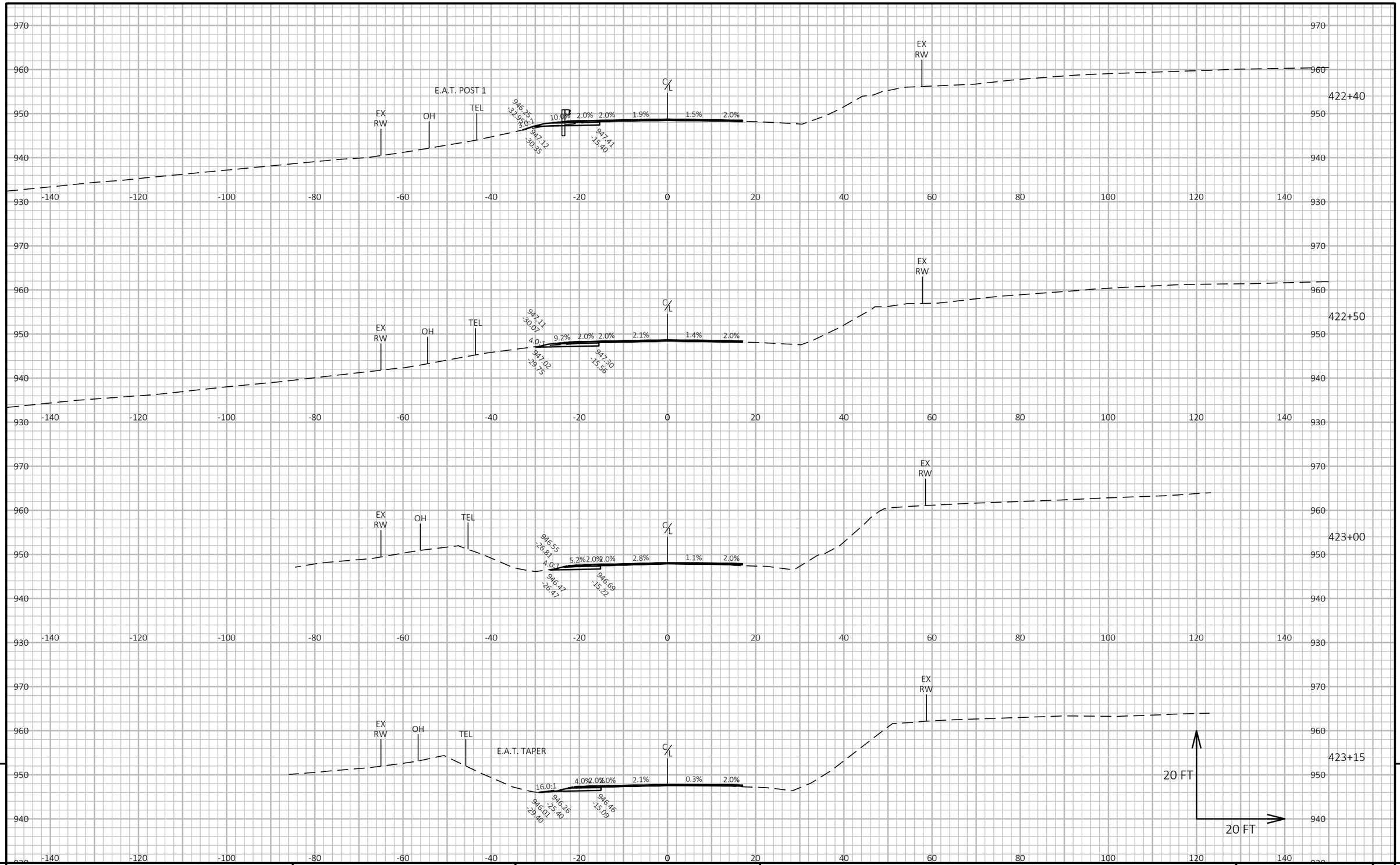
9

PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 329	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_B.DWG
LAYOUT NAME - 18

PLOT DATE : 7/19/2023 9:57 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 330	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_B.DWG
LAYOUT NAME - 19

PLOT DATE : 7/19/2023 9:58 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

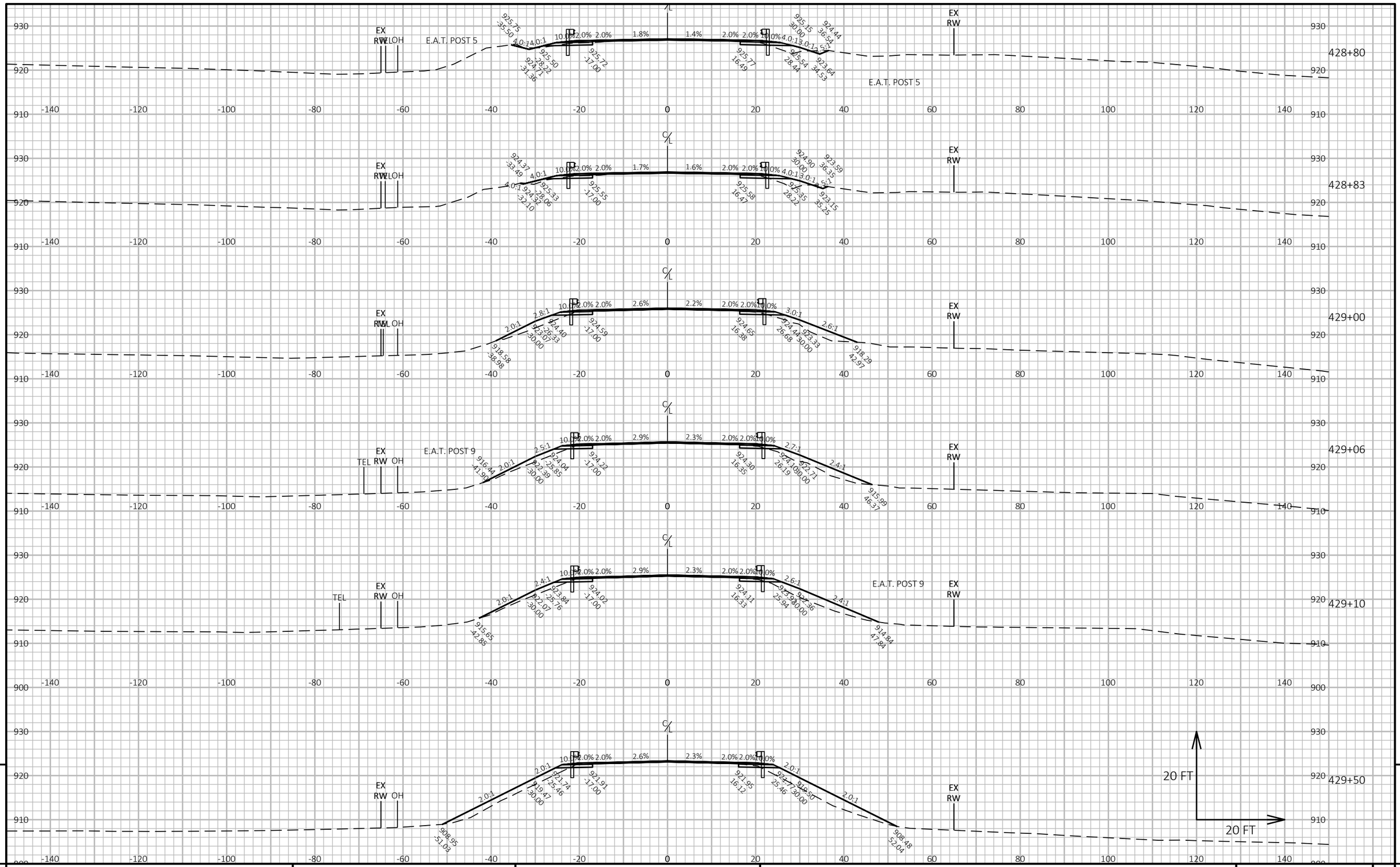


PROJECT NO: 1530-02-70	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 331	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_B.DWG
LAYOUT NAME - B1

PLOT DATE : 7/19/2023 9:58 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

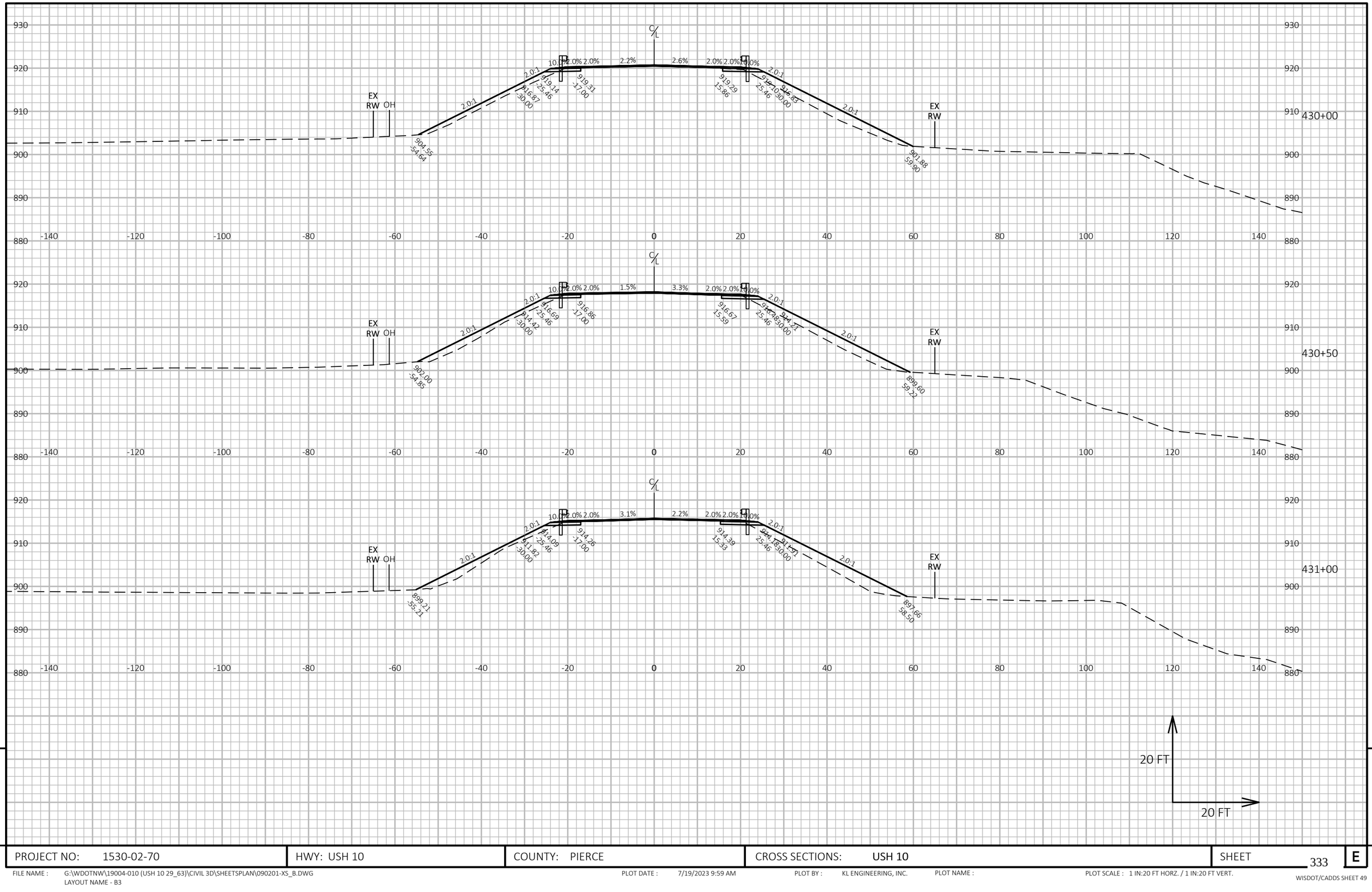


PROJECT NO: 1530-02-70	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 332	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_B.DWG
LAYOUT NAME - B2

PLOT DATE : 7/19/2023 9:59 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1530-02-70	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 333	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_B.DWG
LAYOUT NAME - B3

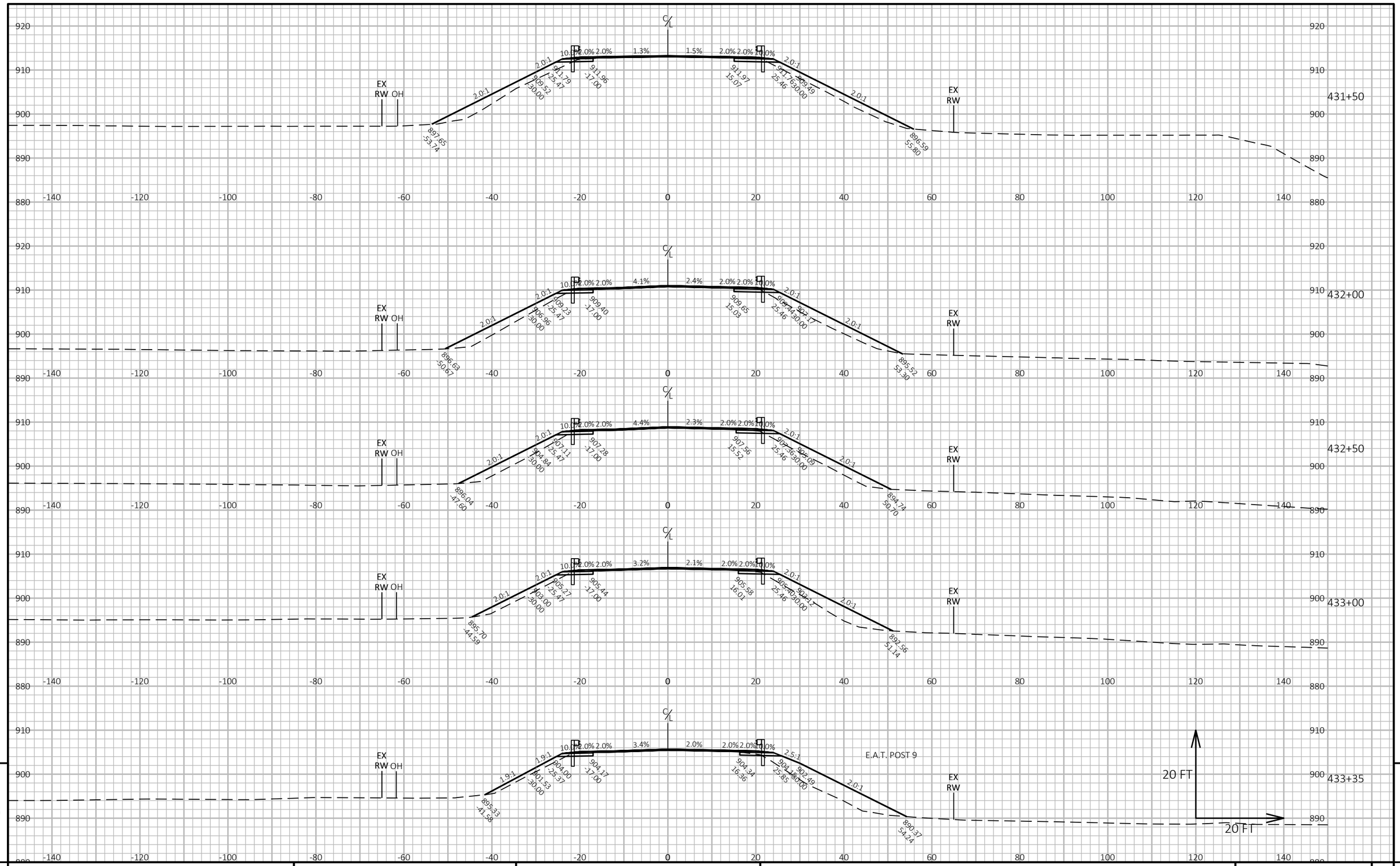
PLOT DATE : 7/19/2023 9:59 AM

PLOT BY : KL ENGINEERING, INC.

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

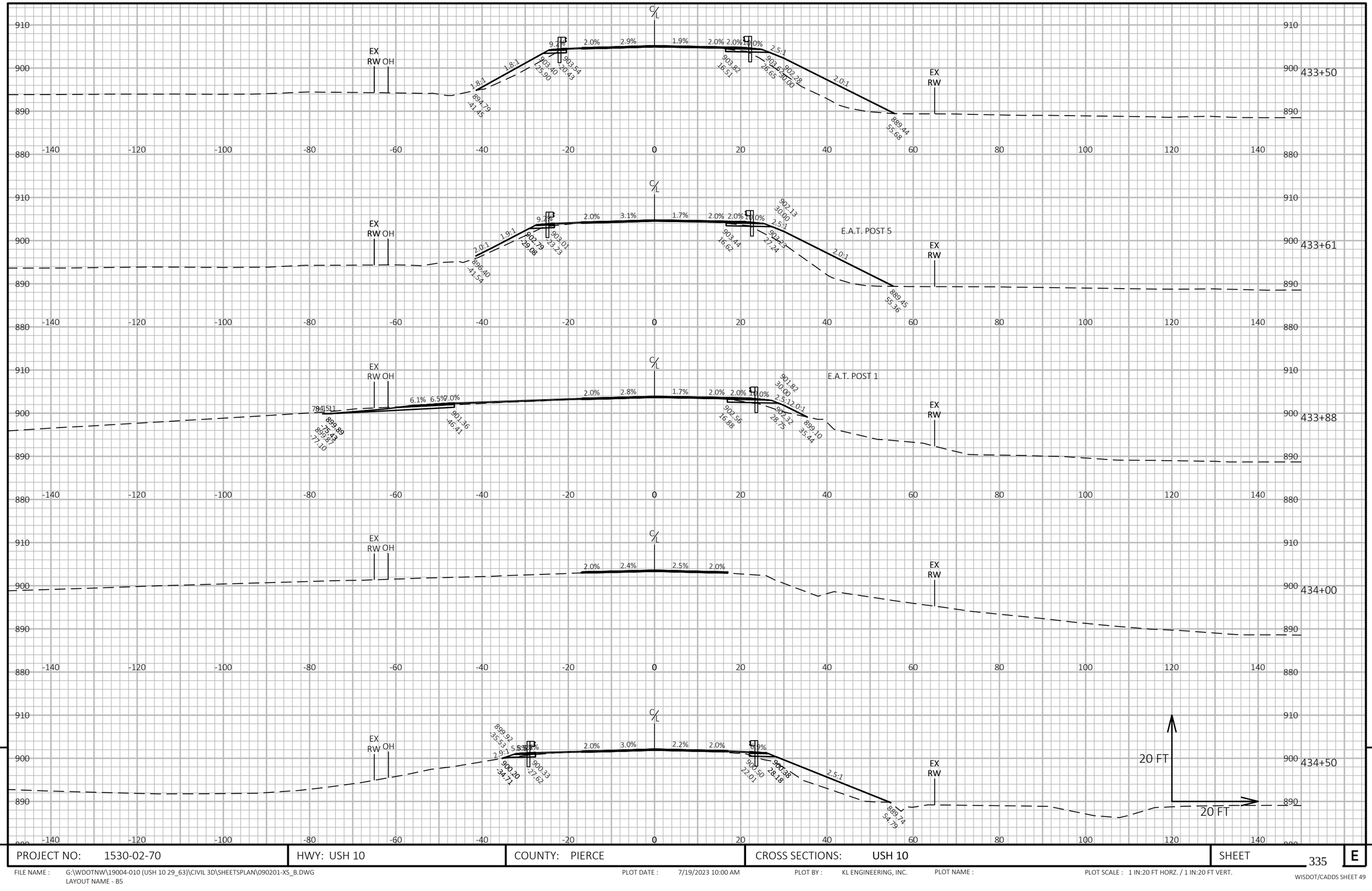
9

PROJECT NO: 1530-02-70	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 334	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_B.DWG
LAYOUT NAME - B4

PLOT DATE : 7/19/2023 10:00 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

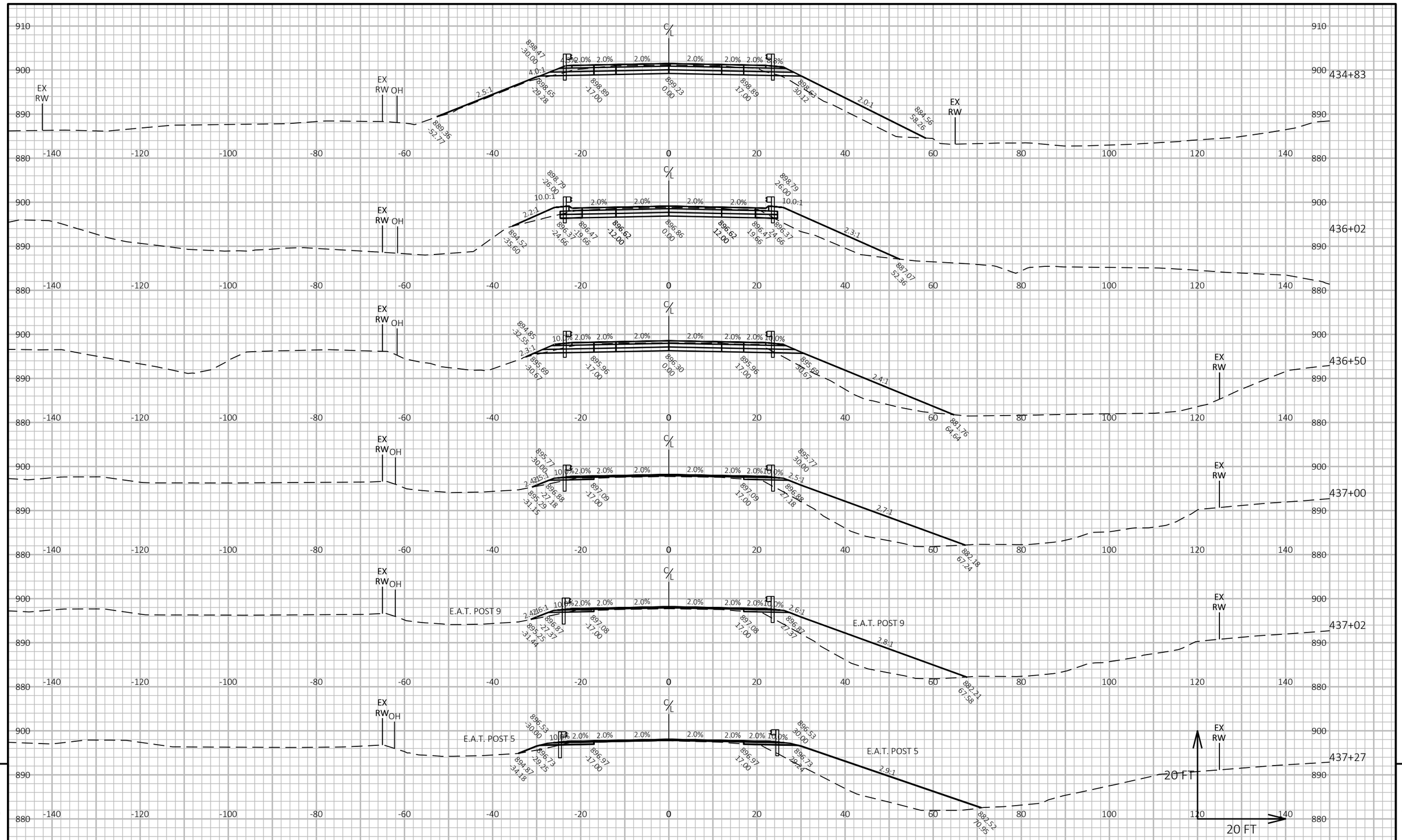
9

PROJECT NO: 1530-02-70	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 335	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_B.DWG
LAYOUT NAME - B5

PLOT DATE : 7/19/2023 10:00 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

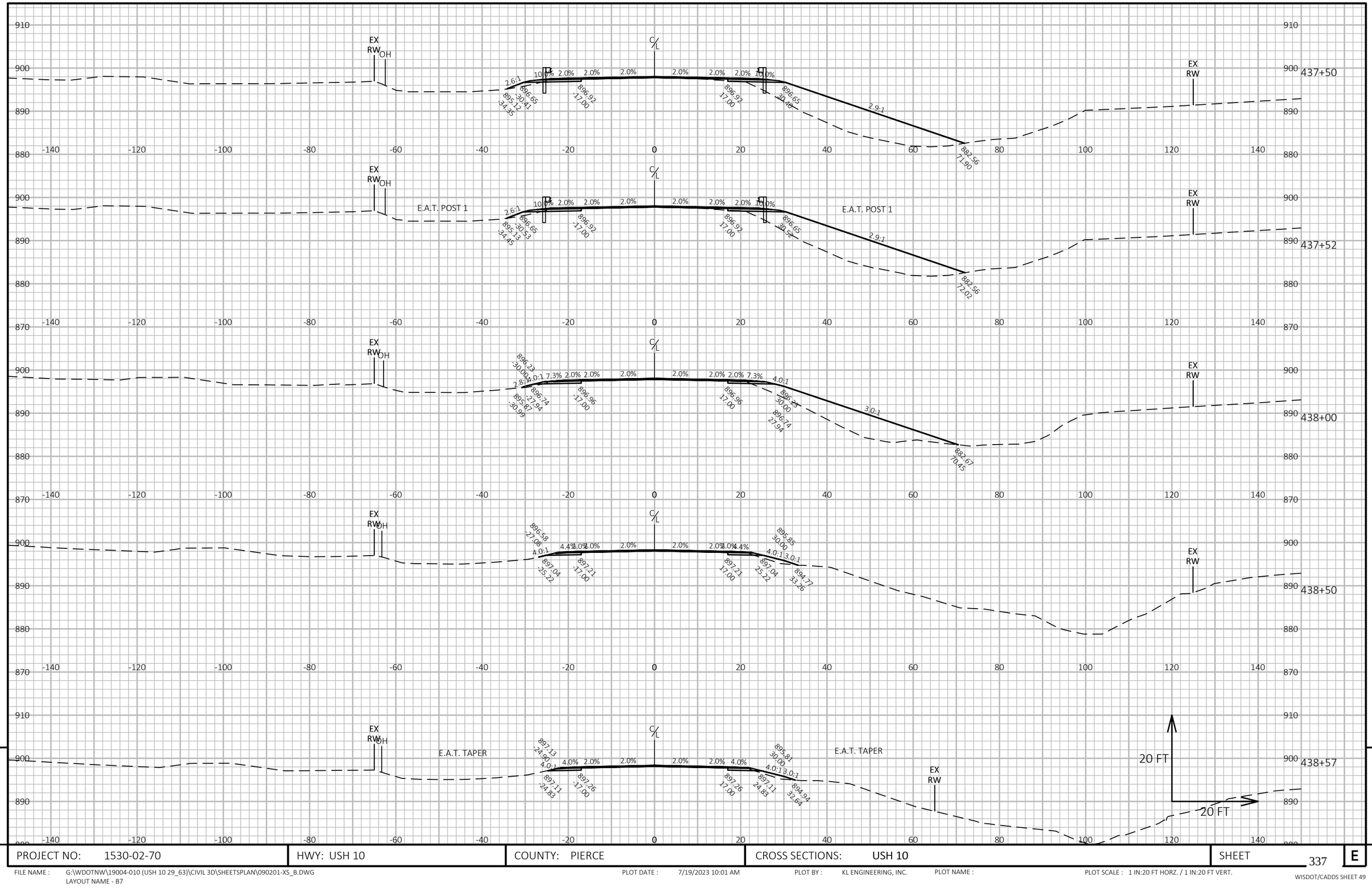


PROJECT NO: 1530-02-70	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 336	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_B.DWG
LAYOUT NAME - B6

PLOT DATE : 7/19/2023 10:01 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

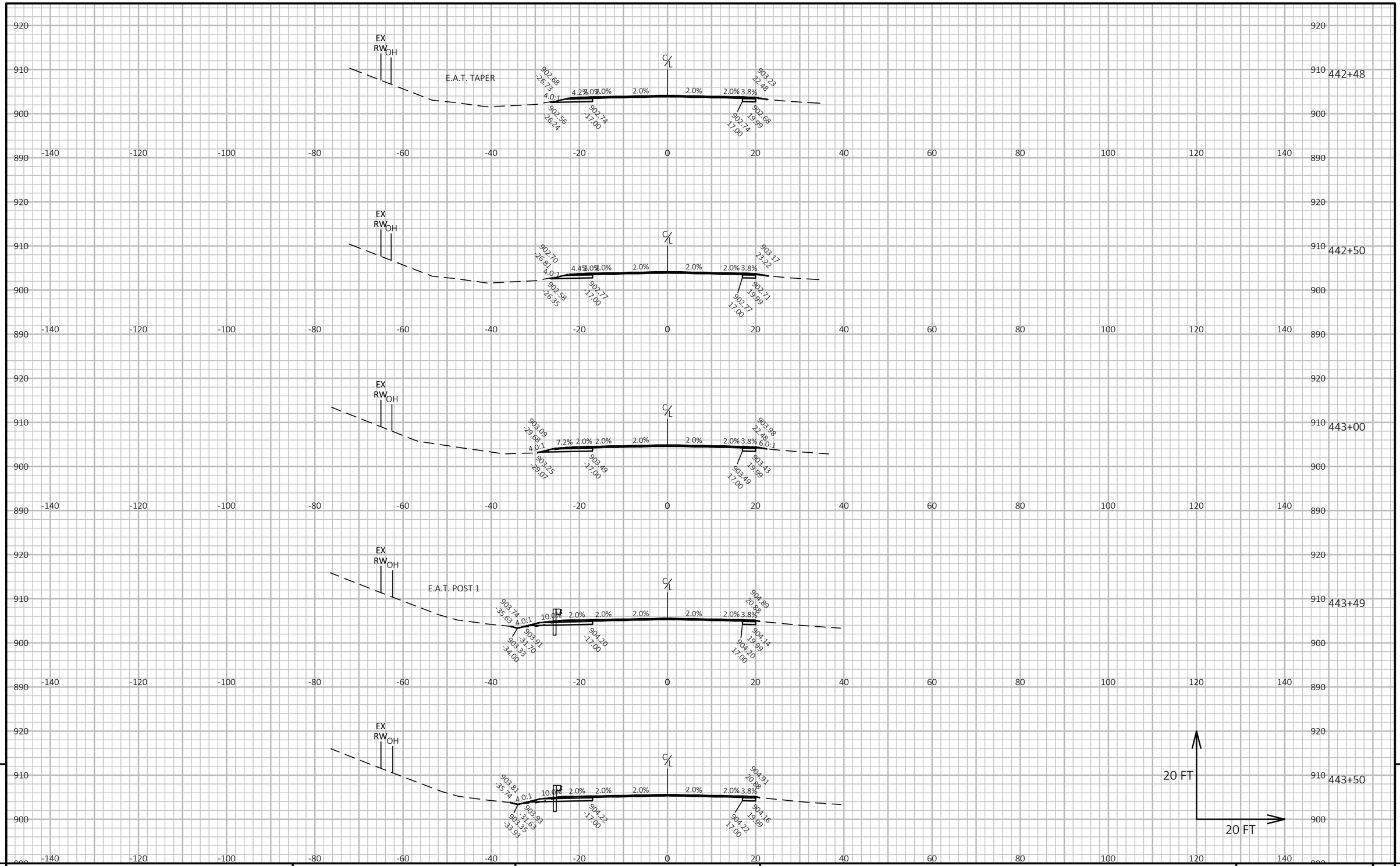
9

PROJECT NO: 1530-02-70	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 337	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_B.DWG
LAYOUT NAME - B7

PLOT DATE : 7/19/2023 10:01 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1530-02-70	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 338	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_B.DWG
LAYOUT NAME - B8

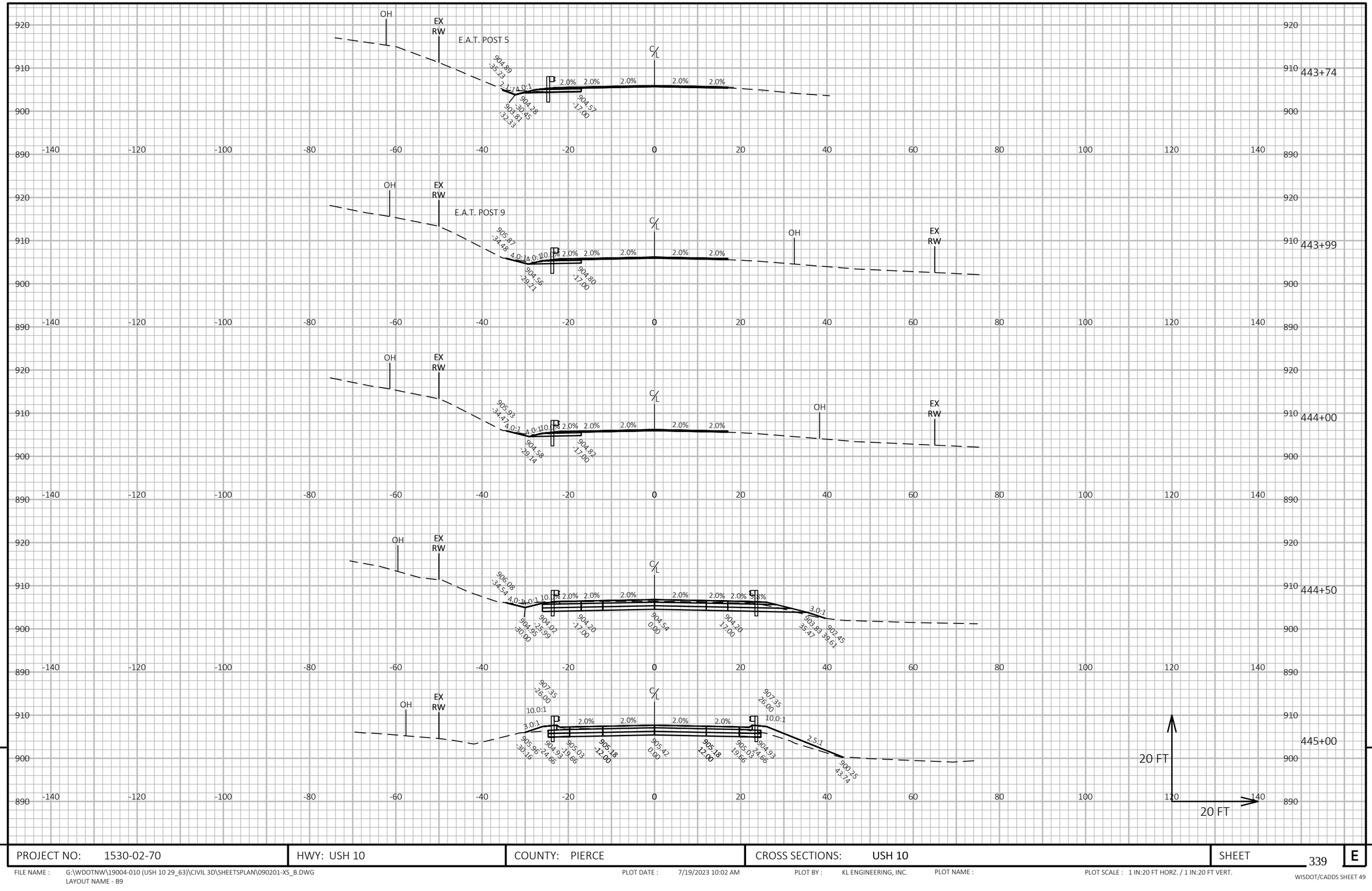
PLOT DATE : 7/19/2023 10:01 AM

PLOT BY : KL ENGINEERING, INC.

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

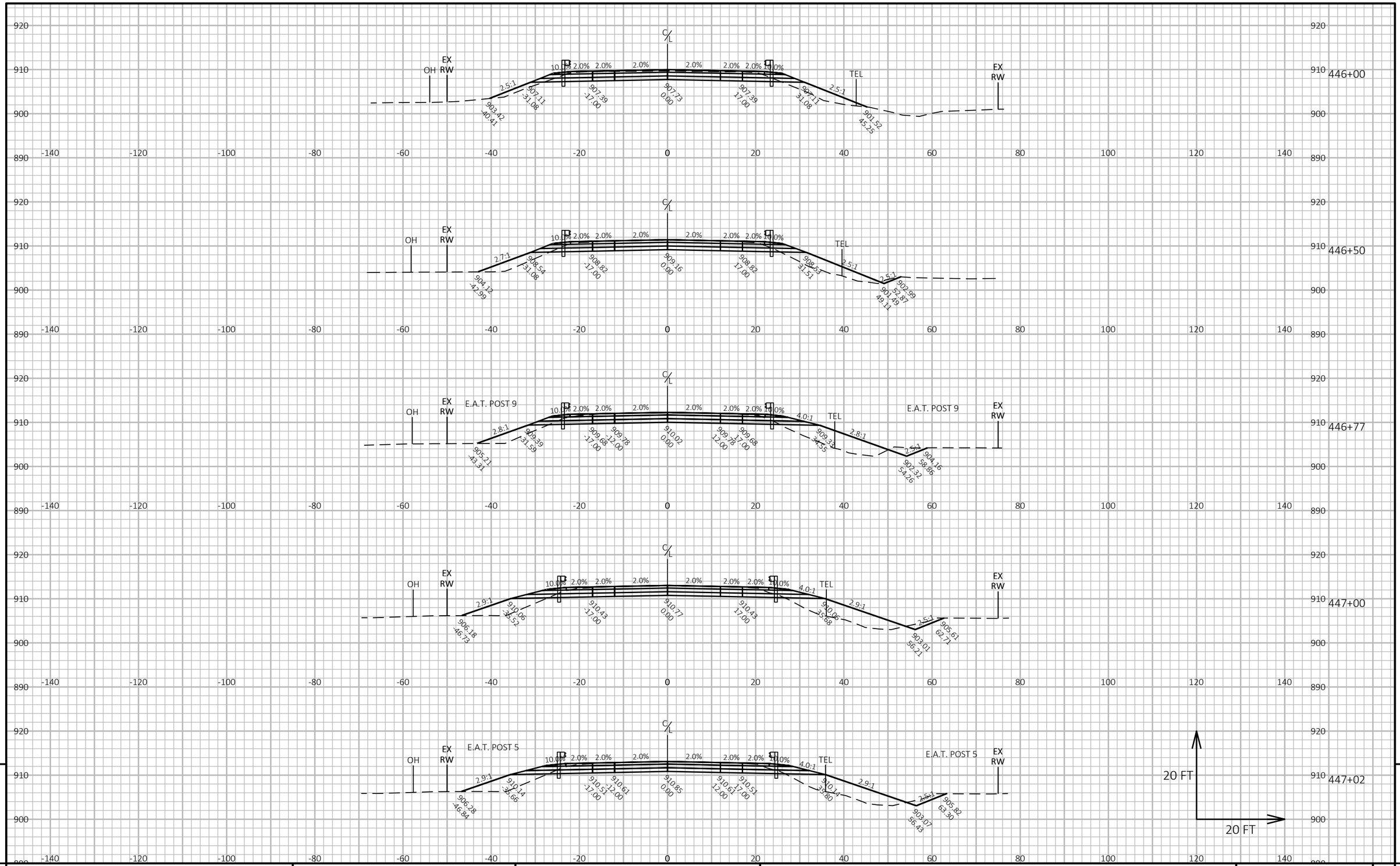


PROJECT NO: 1530-02-70	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 339	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_B.DWG
LAYOUT NAME - B9

PLOT DATE : 7/19/2023 10:02 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

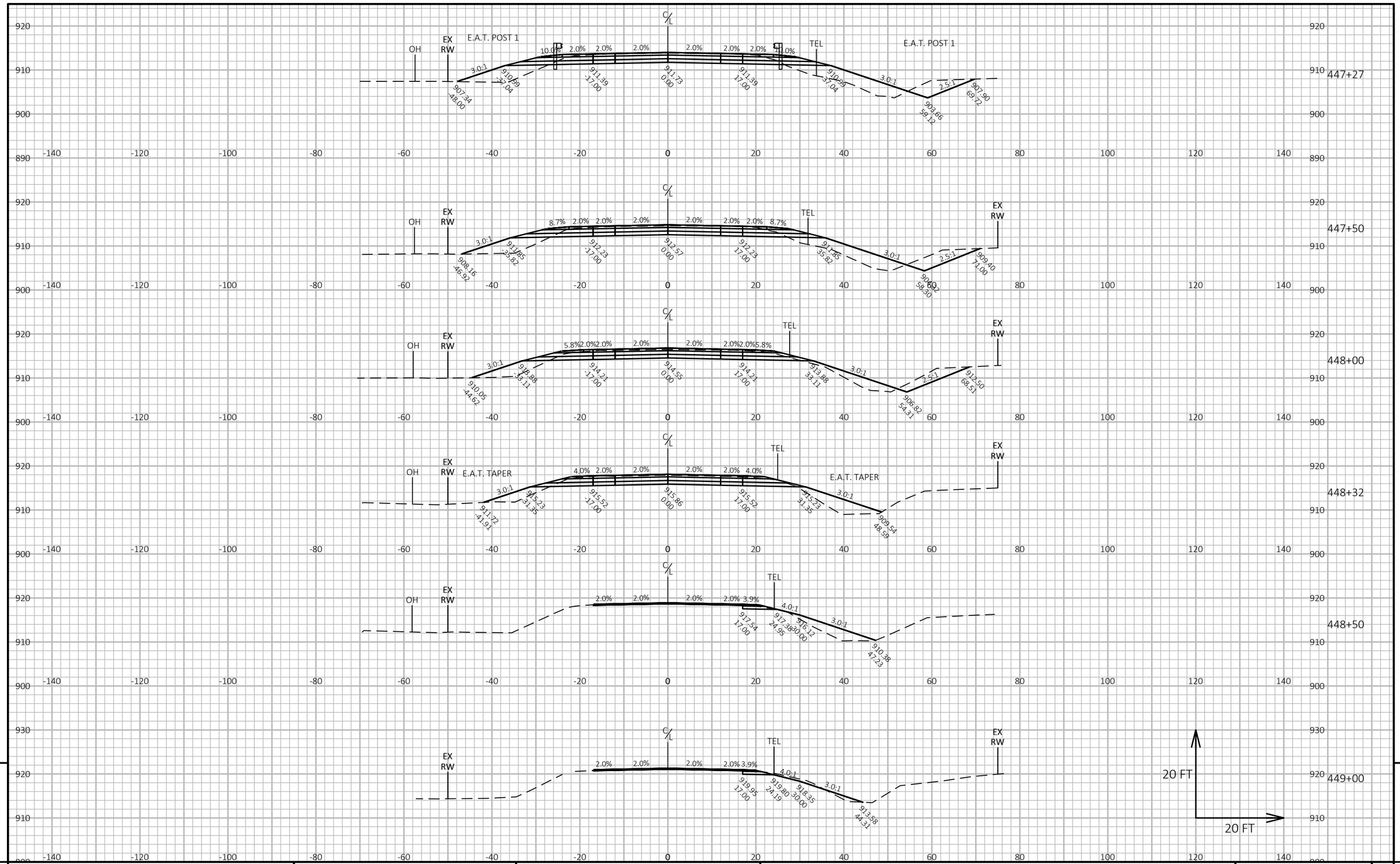
9

PROJECT NO: 1530-02-70	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 340	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_B.DWG
LAYOUT NAME - B10

PLOT DATE : 7/19/2023 10:02 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

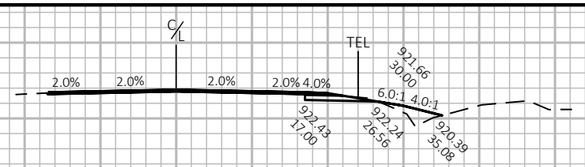
9

PROJECT NO: 1530-02-70	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 341	E

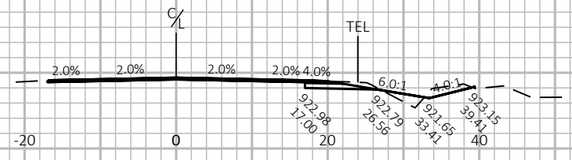
FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_B.DWG
LAYOUT NAME - B11

PLOT DATE : 7/19/2023 10:03 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

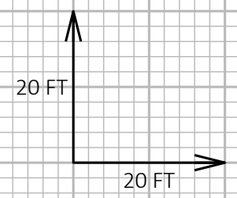
WISDOT/CADDS SHEET 49



449+50



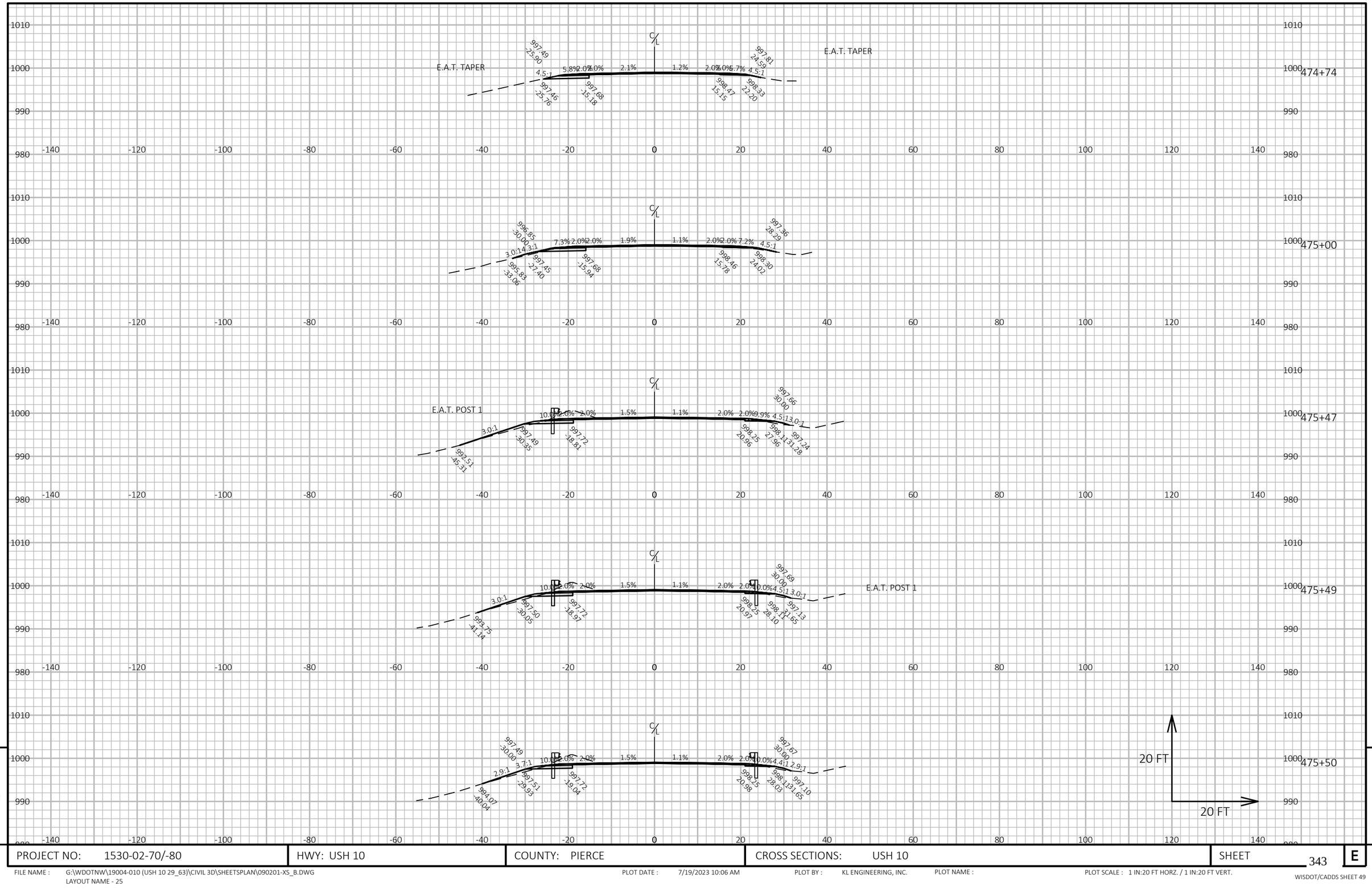
449+61



PROJECT NO: 1530-02-70	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 342	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_B.DWG
LAYOUT NAME - B11 (2)

PLOT DATE : 7/19/2023 10:03 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

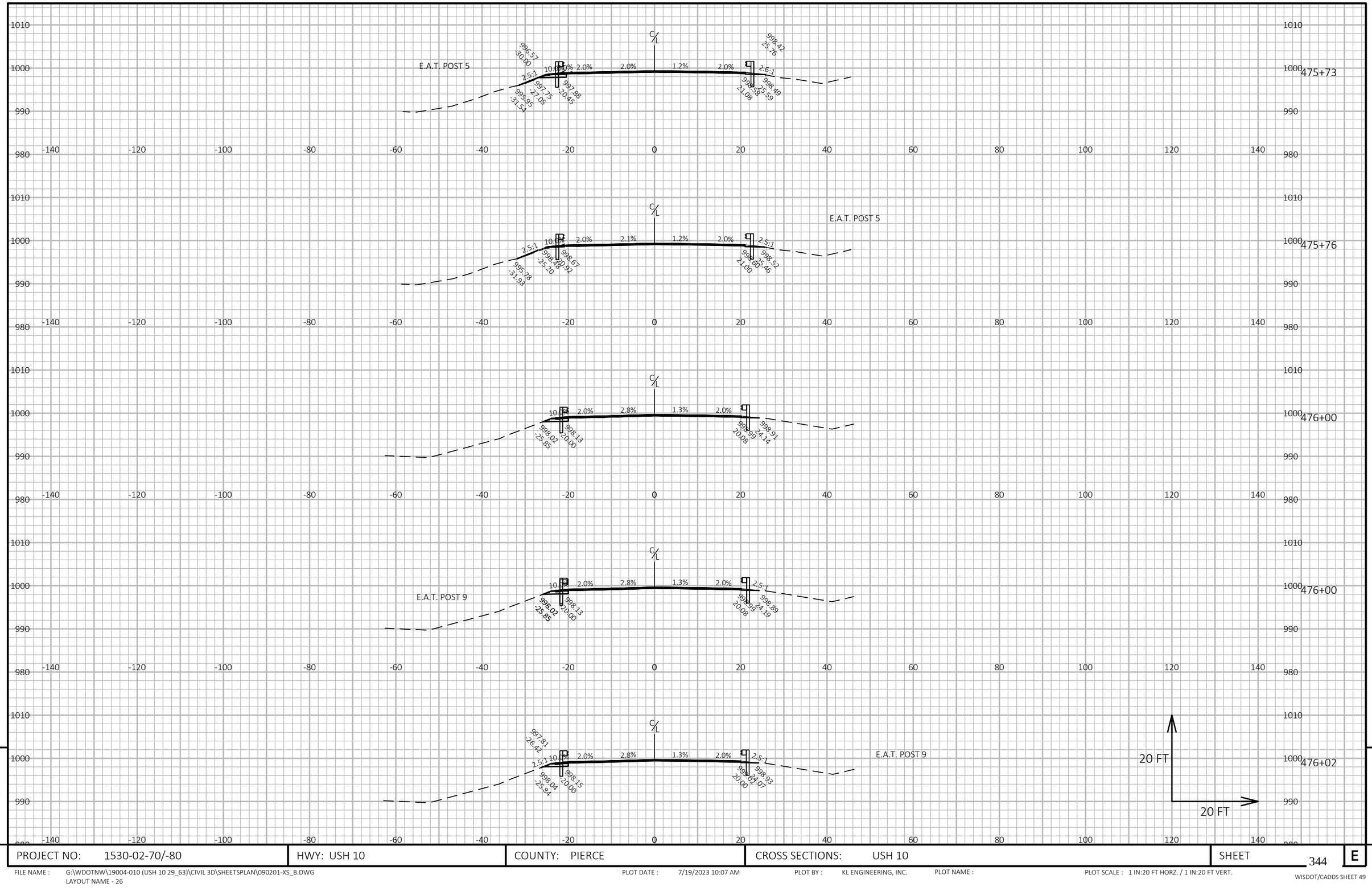


PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 343 E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_B.DWG
LAYOUT NAME - 25

PLOT DATE : 7/19/2023 10:06 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

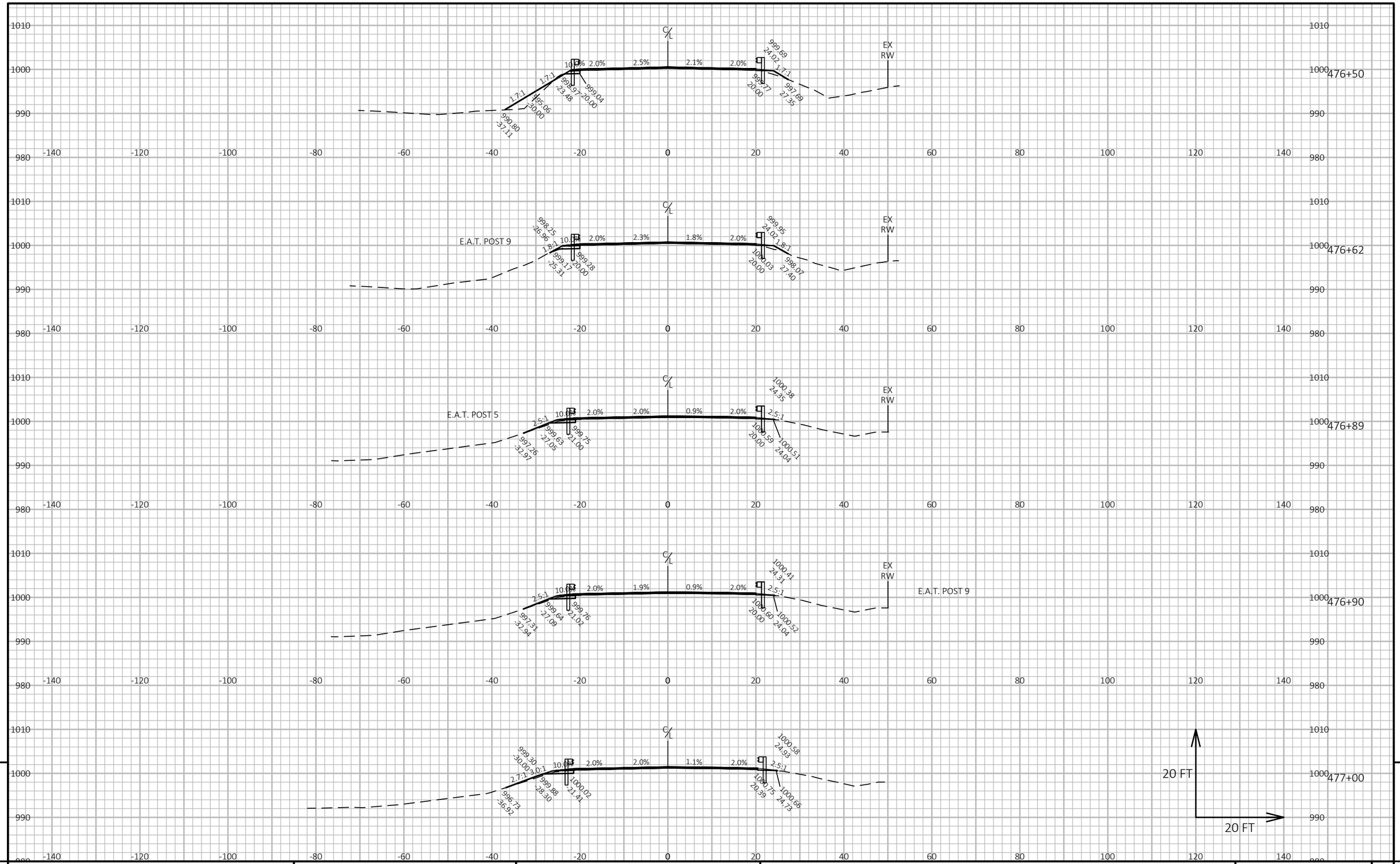


PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 344	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_B.DWG
LAYOUT NAME - 26

PLOT DATE : 7/19/2023 10:07 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

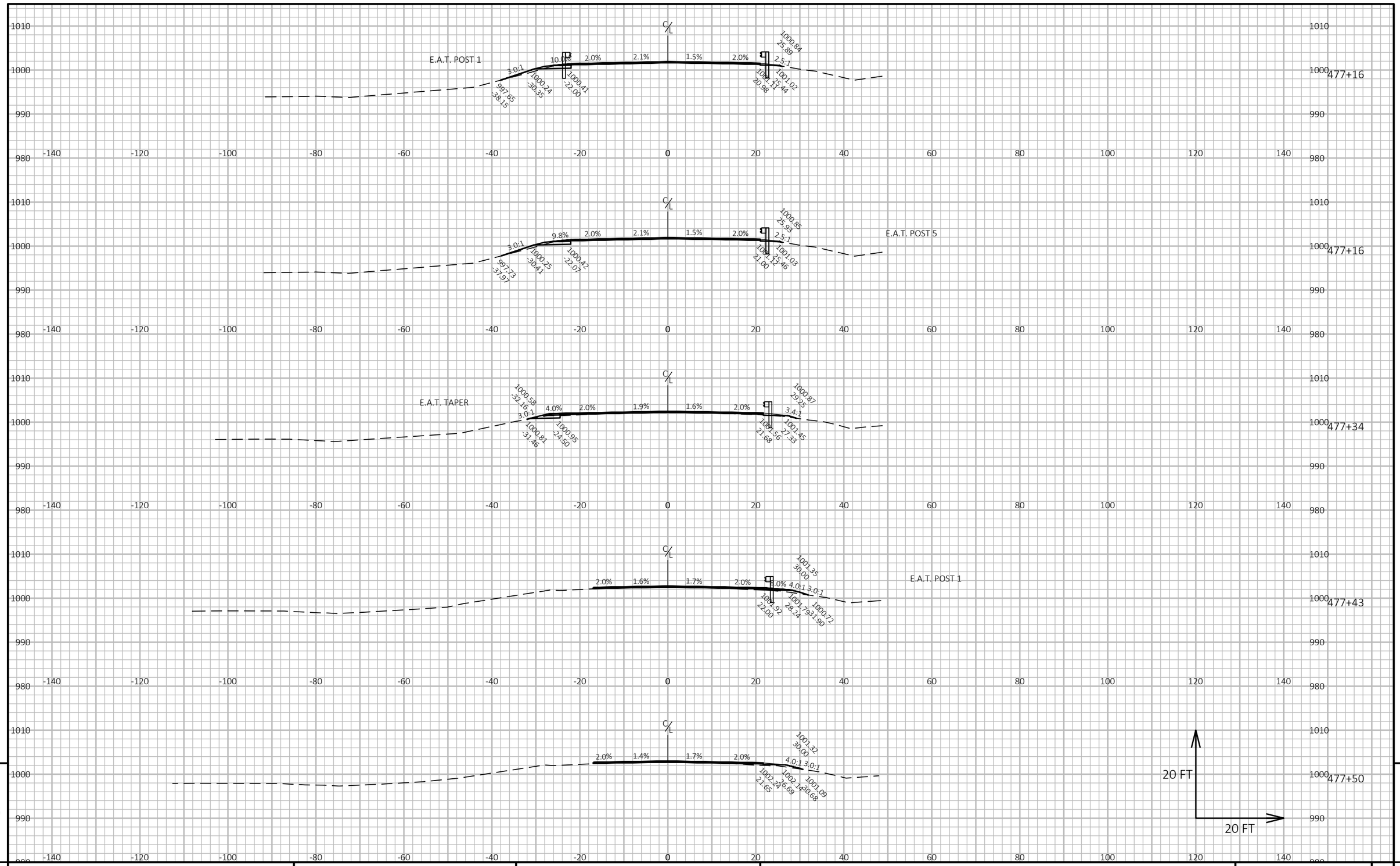


PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 345	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_B.DWG
LAYOUT NAME - 27

PLOT DATE : 7/19/2023 10:07 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

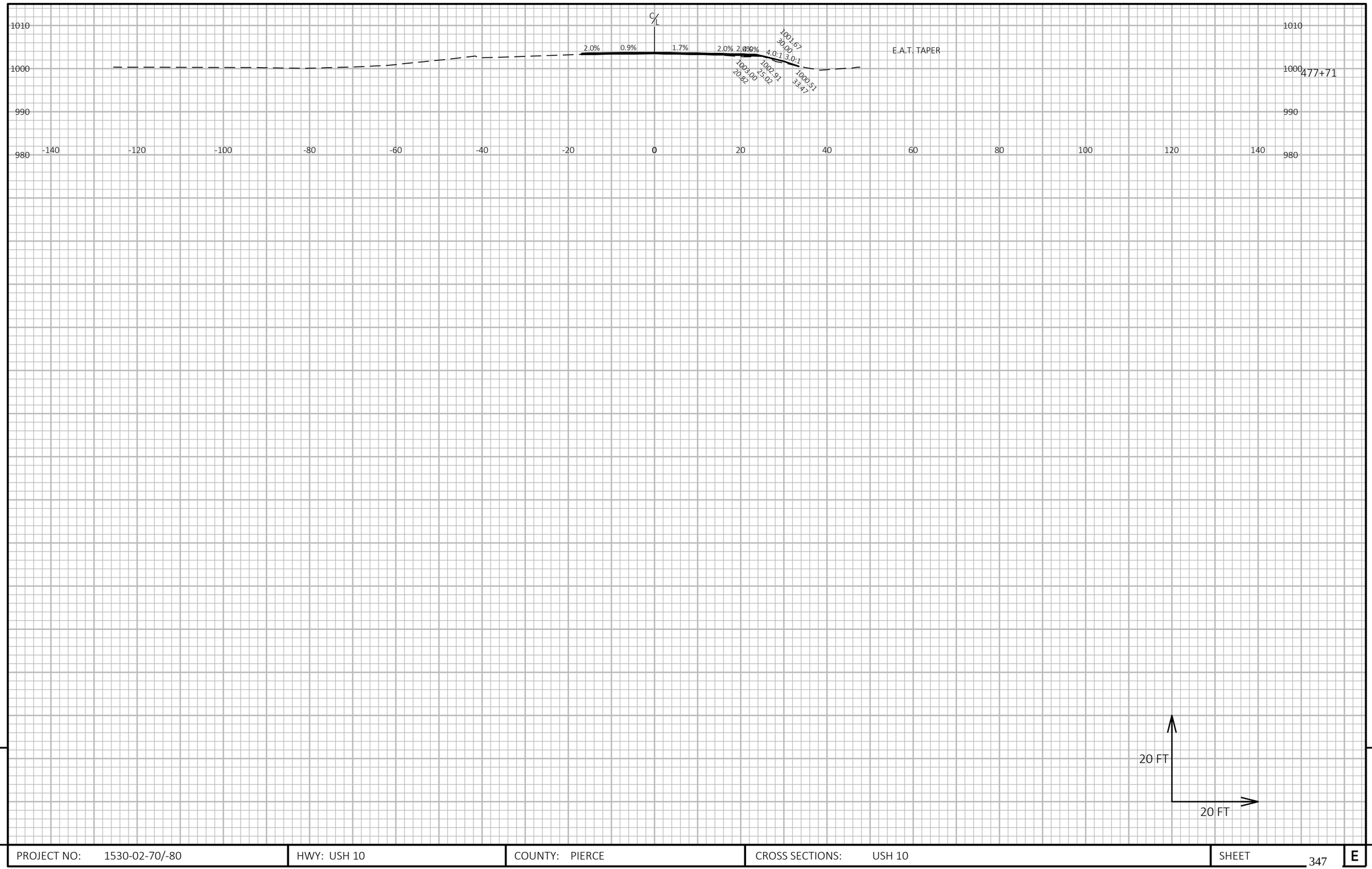
9

PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 346	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_B.DWG
LAYOUT NAME - 28

PLOT DATE : 7/19/2023 10:08 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

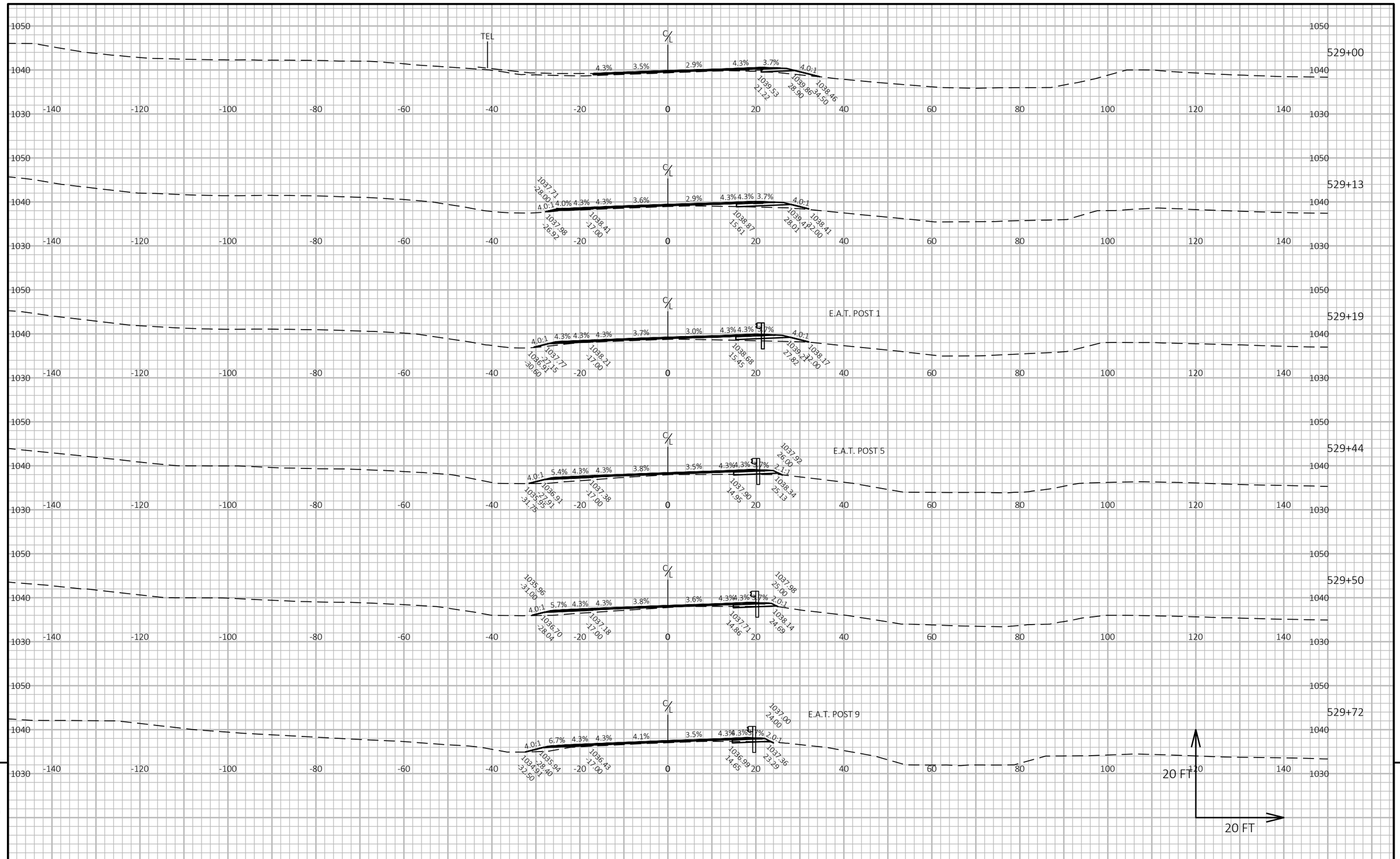
9

PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 347	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_B.DWG
LAYOUT NAME - 29

PLOT DATE : 7/19/2023 10:08 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 348	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_C.DWG
LAYOUT NAME - 01

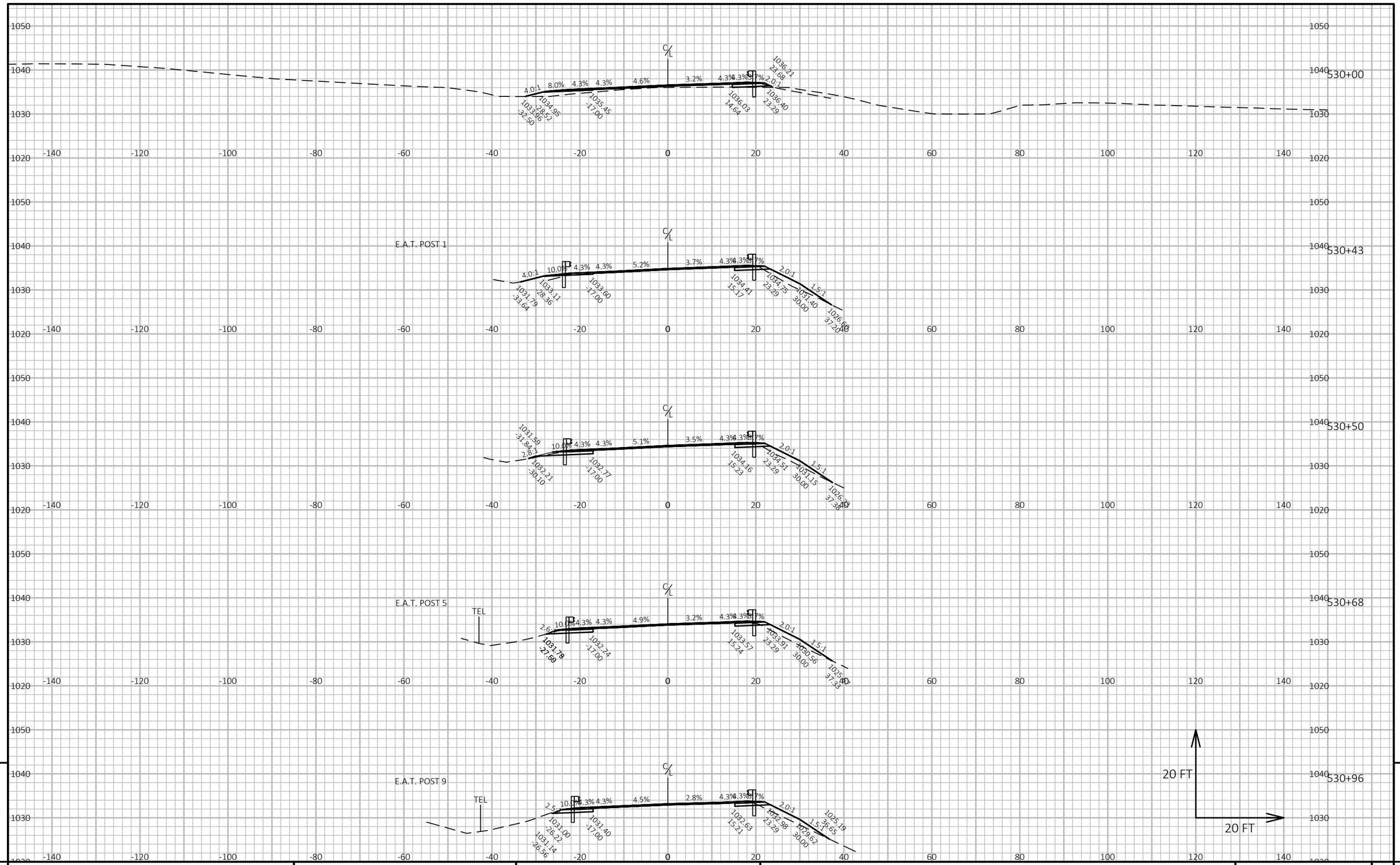
PLOT DATE : 7/19/2023 9:32 AM

PLOT BY : KL ENGINEERING, INC.

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

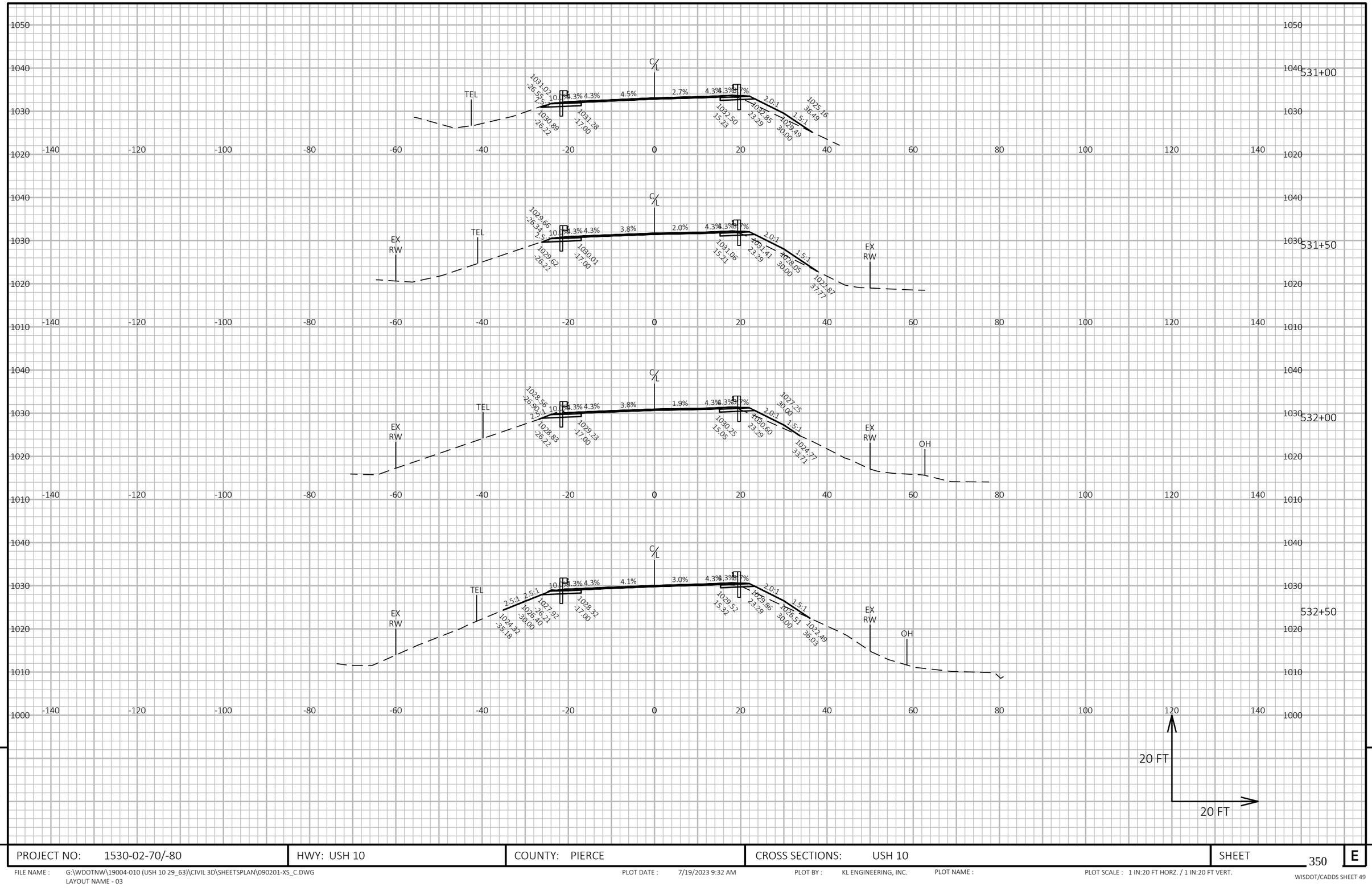
WISDOT/CADDS SHEET 49



PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 349	E

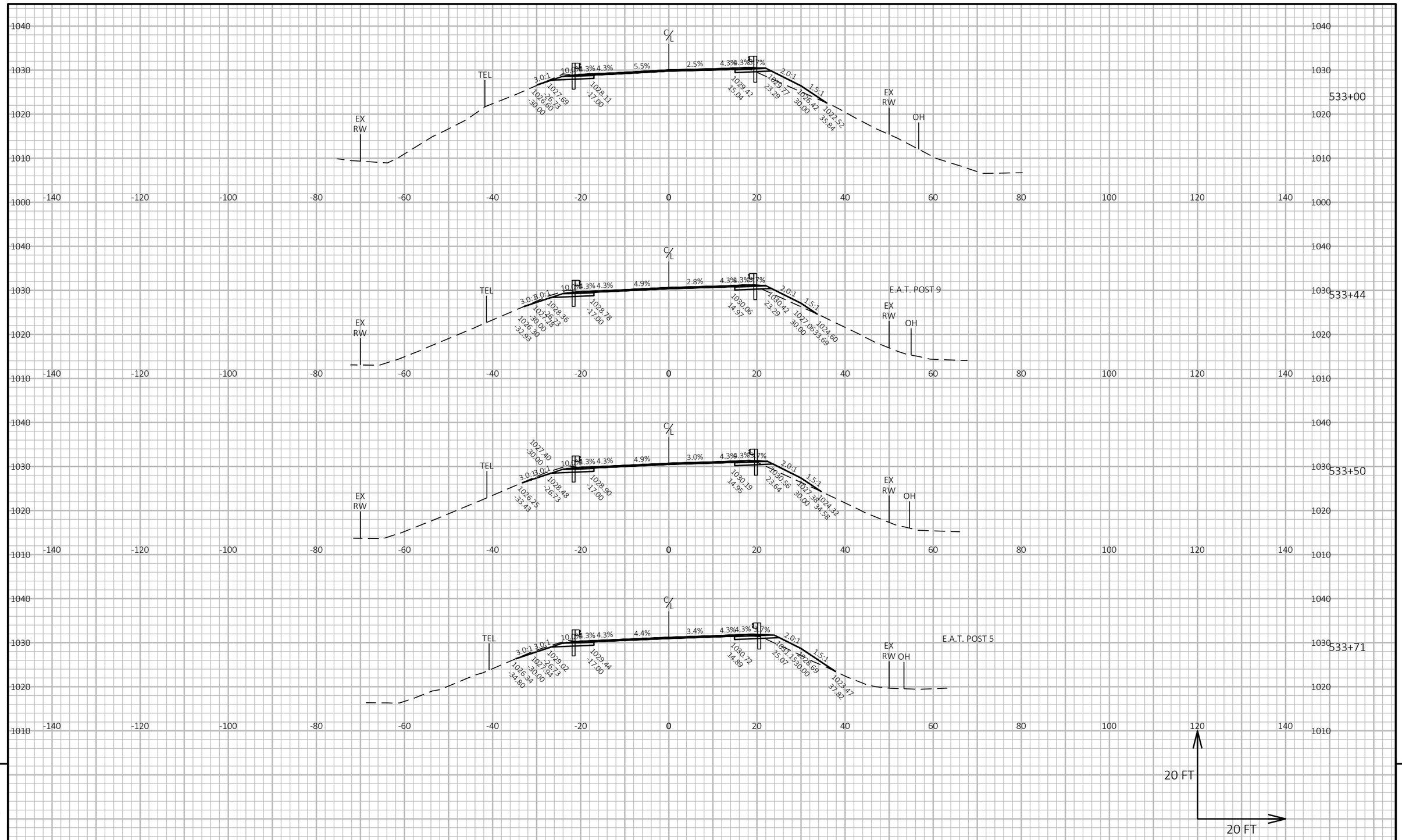
FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_C.DWG
LAYOUT NAME - 02

PLOT DATE : 7/19/2023 9:32 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 350	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_C.DWG
LAYOUT NAME - 03
PLOT DATE : 7/19/2023 9:32 AM
PLOT BY : KL ENGINEERING, INC.
PLOT NAME :
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.
WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 351	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_C.DWG
LAYOUT NAME - 04

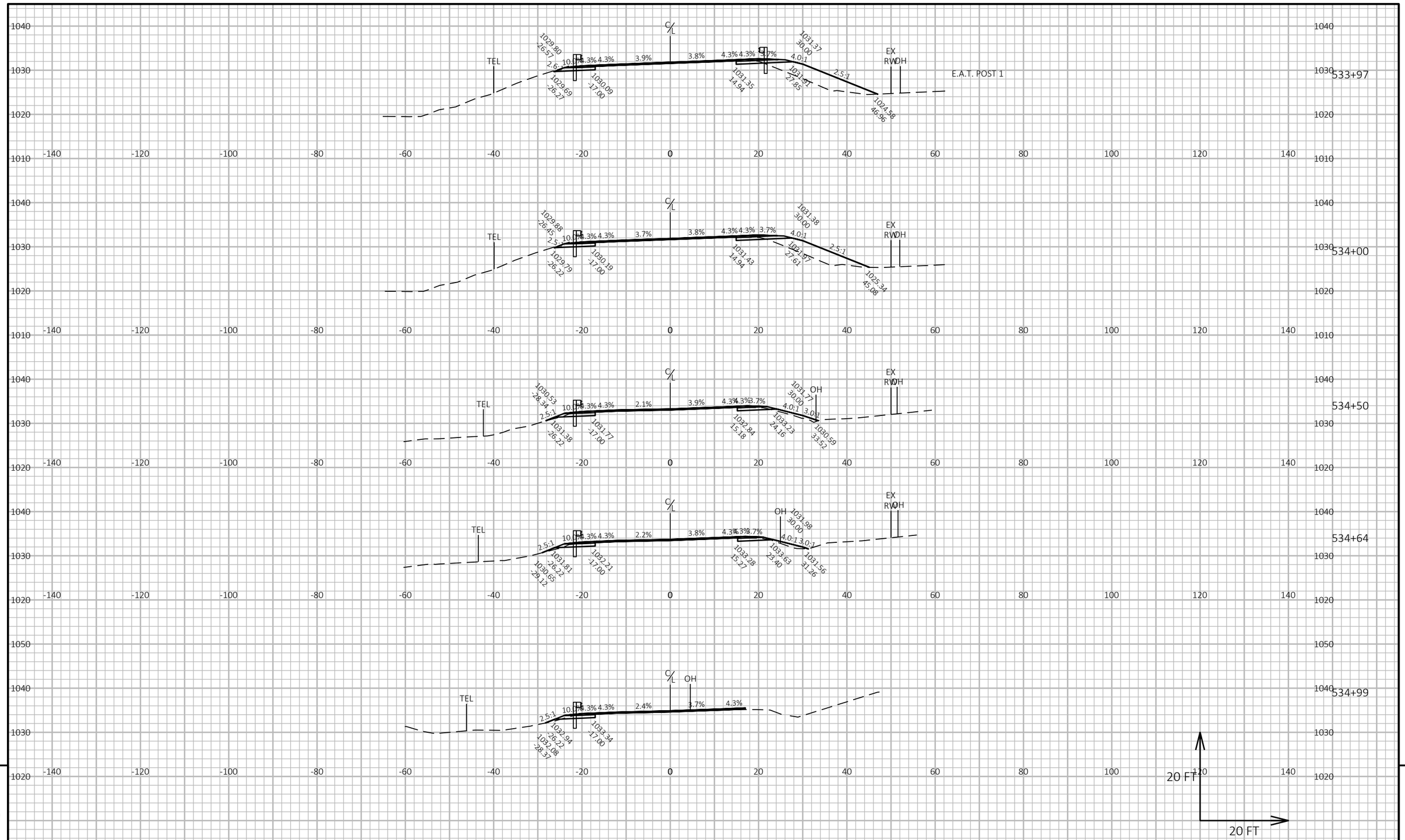
PLOT DATE : 7/19/2023 9:33 AM

PLOT BY : KL ENGINEERING, INC.

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

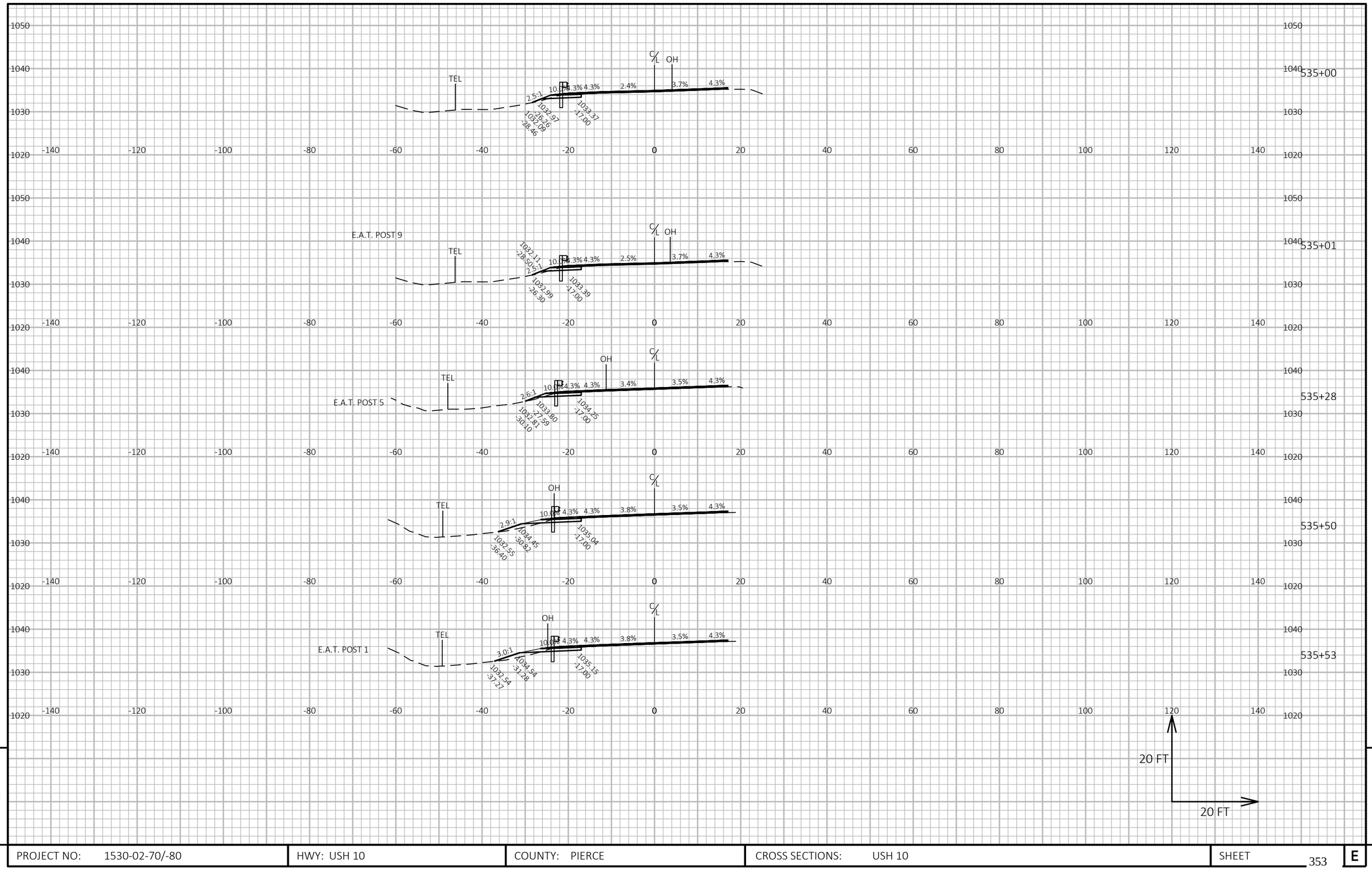


PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 352	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_C.DWG
LAYOUT NAME - 05

PLOT DATE : 7/19/2023 9:33 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



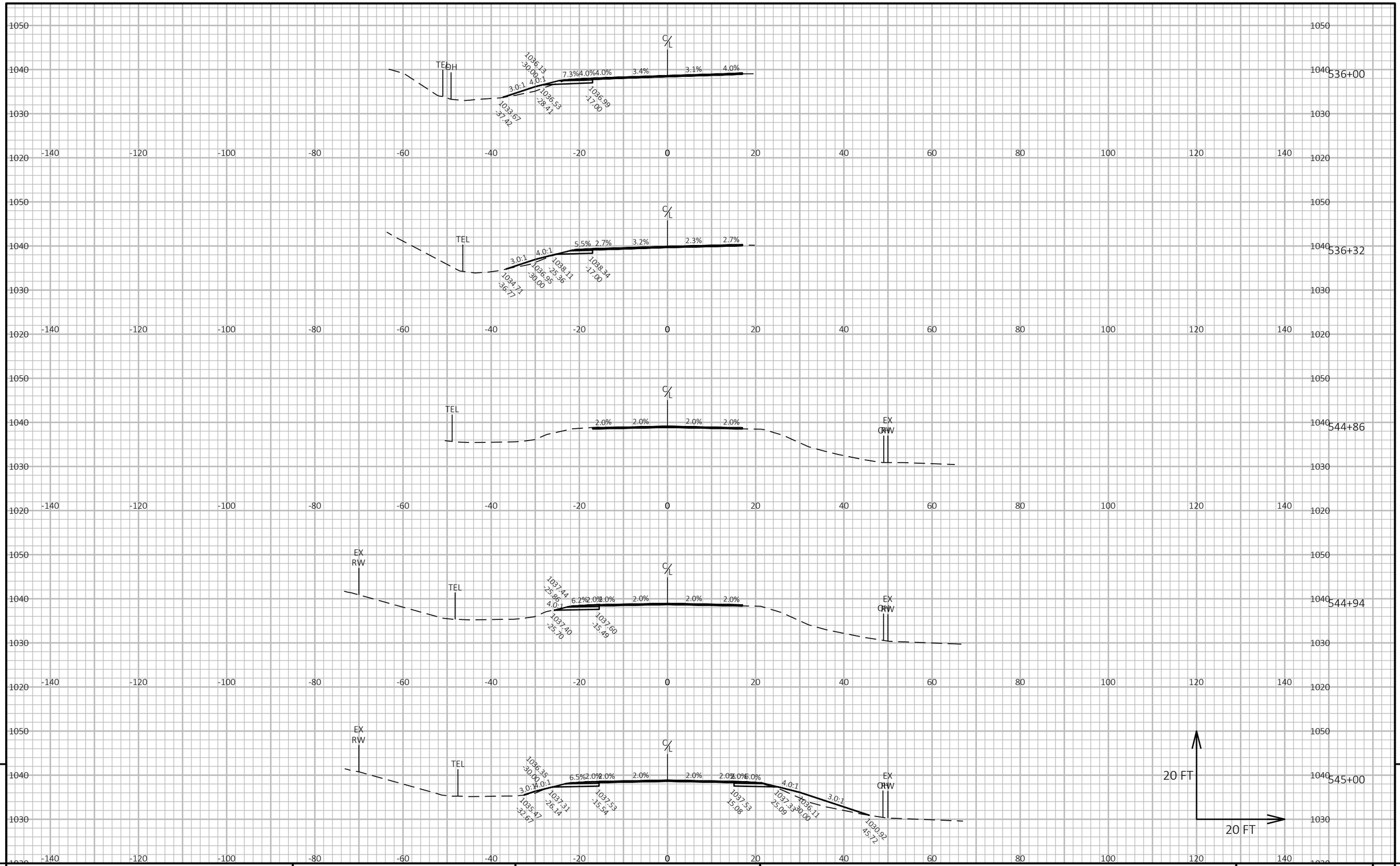
9

9

PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 353	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_C.DWG
LAYOUT NAME - 06

PLOT DATE : 7/19/2023 9:33 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

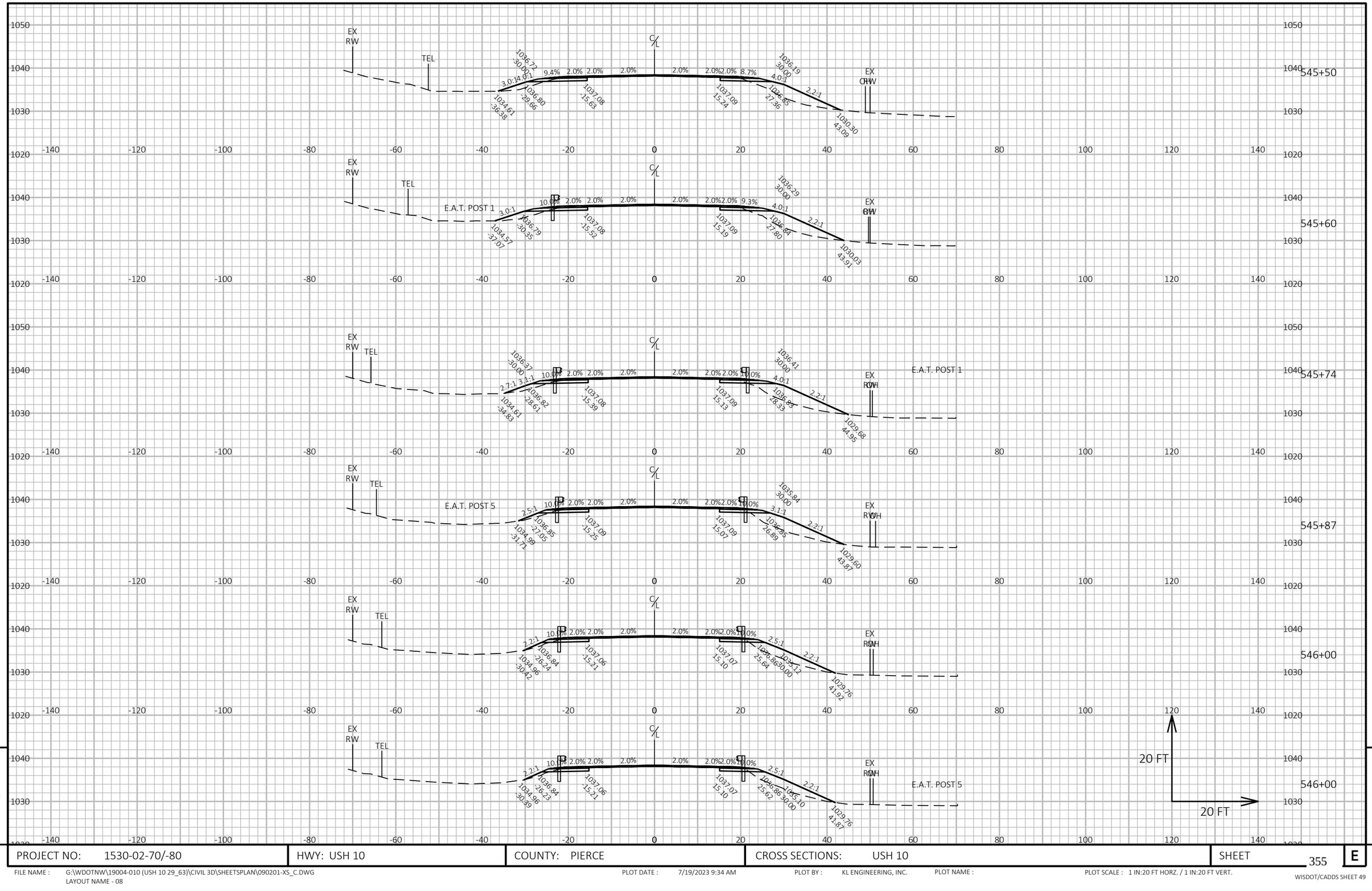


PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 354	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_C.DWG
LAYOUT NAME - 07

PLOT DATE : 7/19/2023 9:34 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

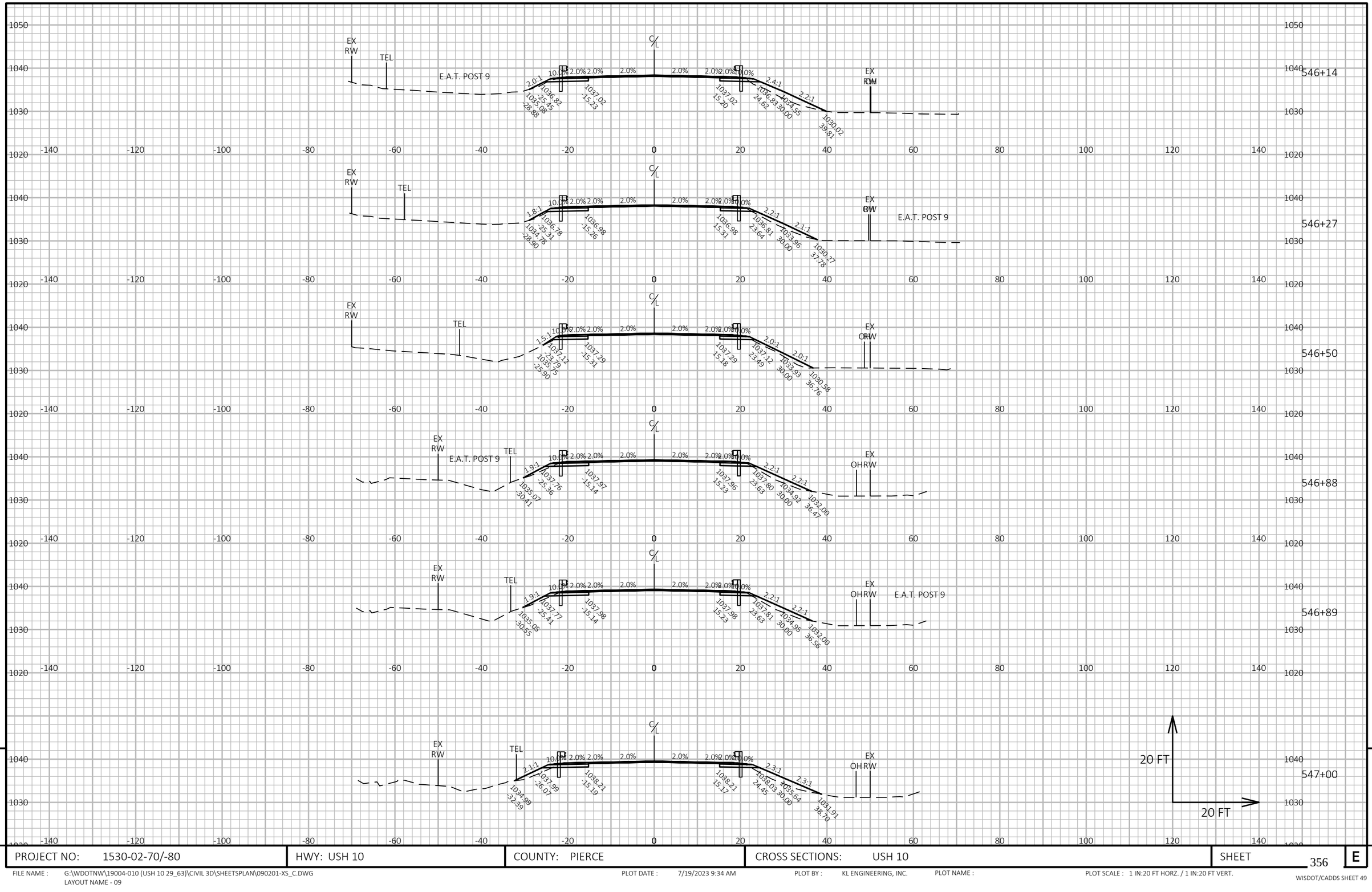
9

PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 355	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_C.DWG
LAYOUT NAME - 08

PLOT DATE : 7/19/2023 9:34 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

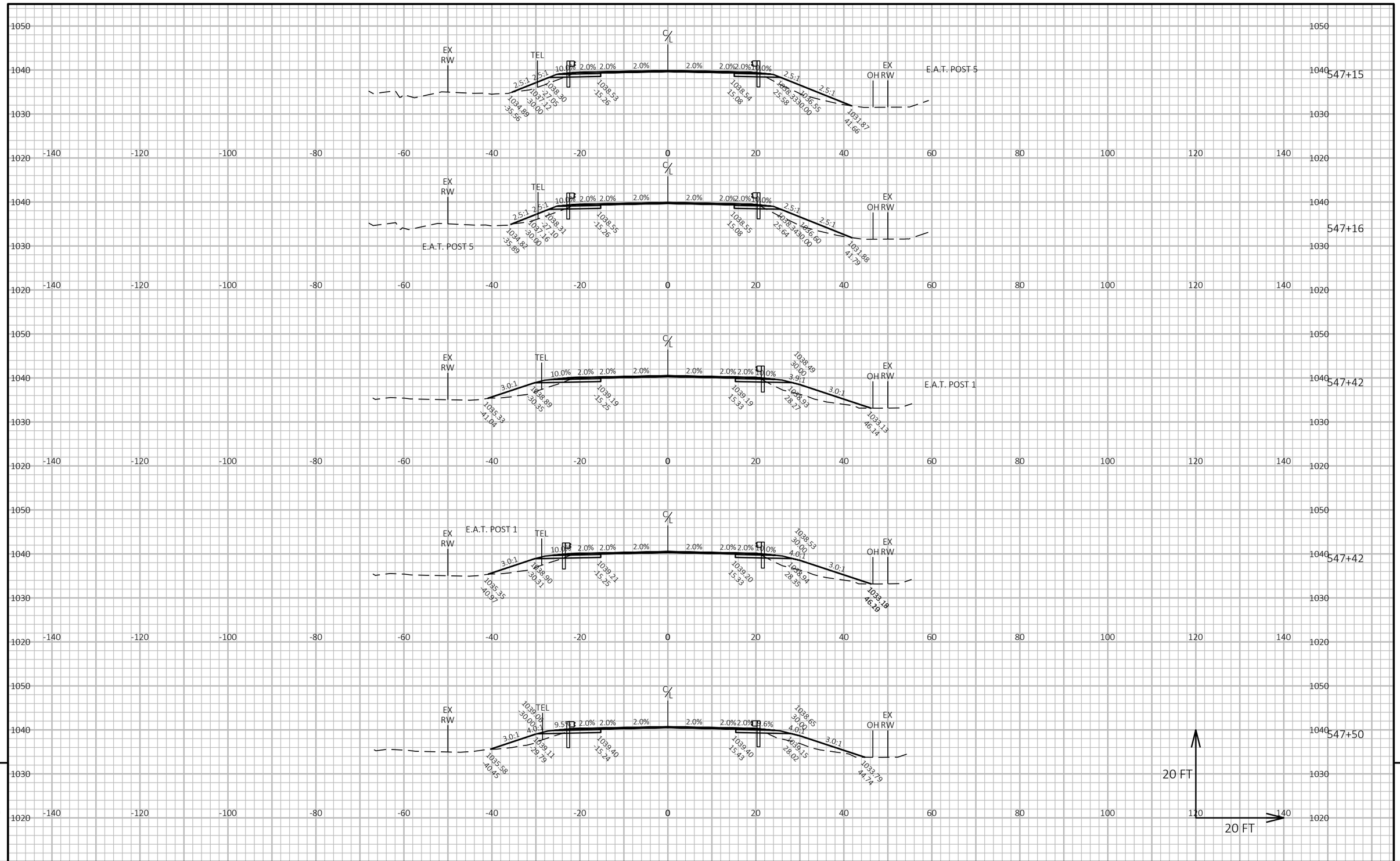


PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 356	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_C.DWG
LAYOUT NAME - 09

PLOT DATE : 7/19/2023 9:34 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

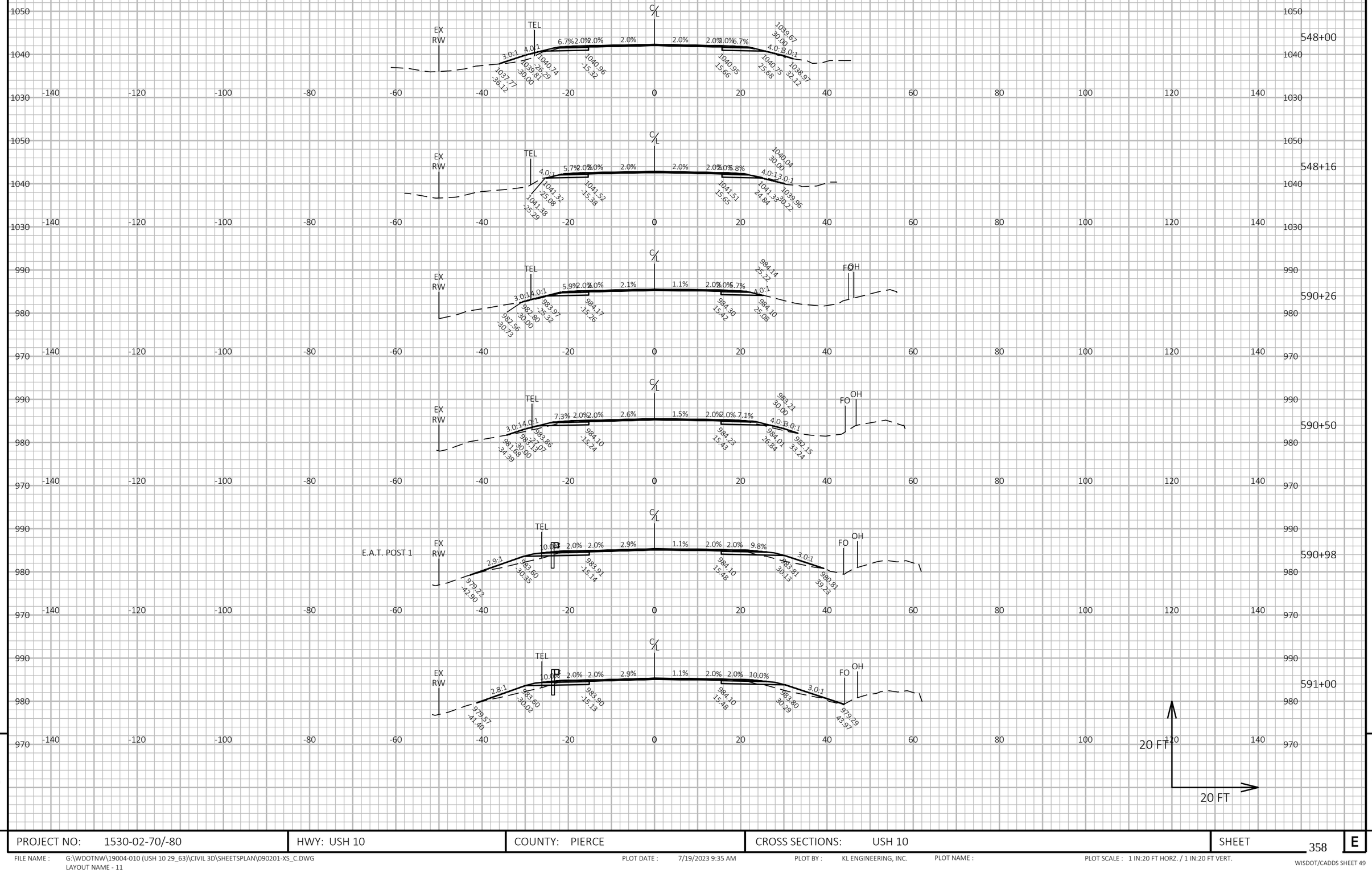
9

PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 357	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_C.DWG
LAYOUT NAME - 10

PLOT DATE : 7/19/2023 9:35 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

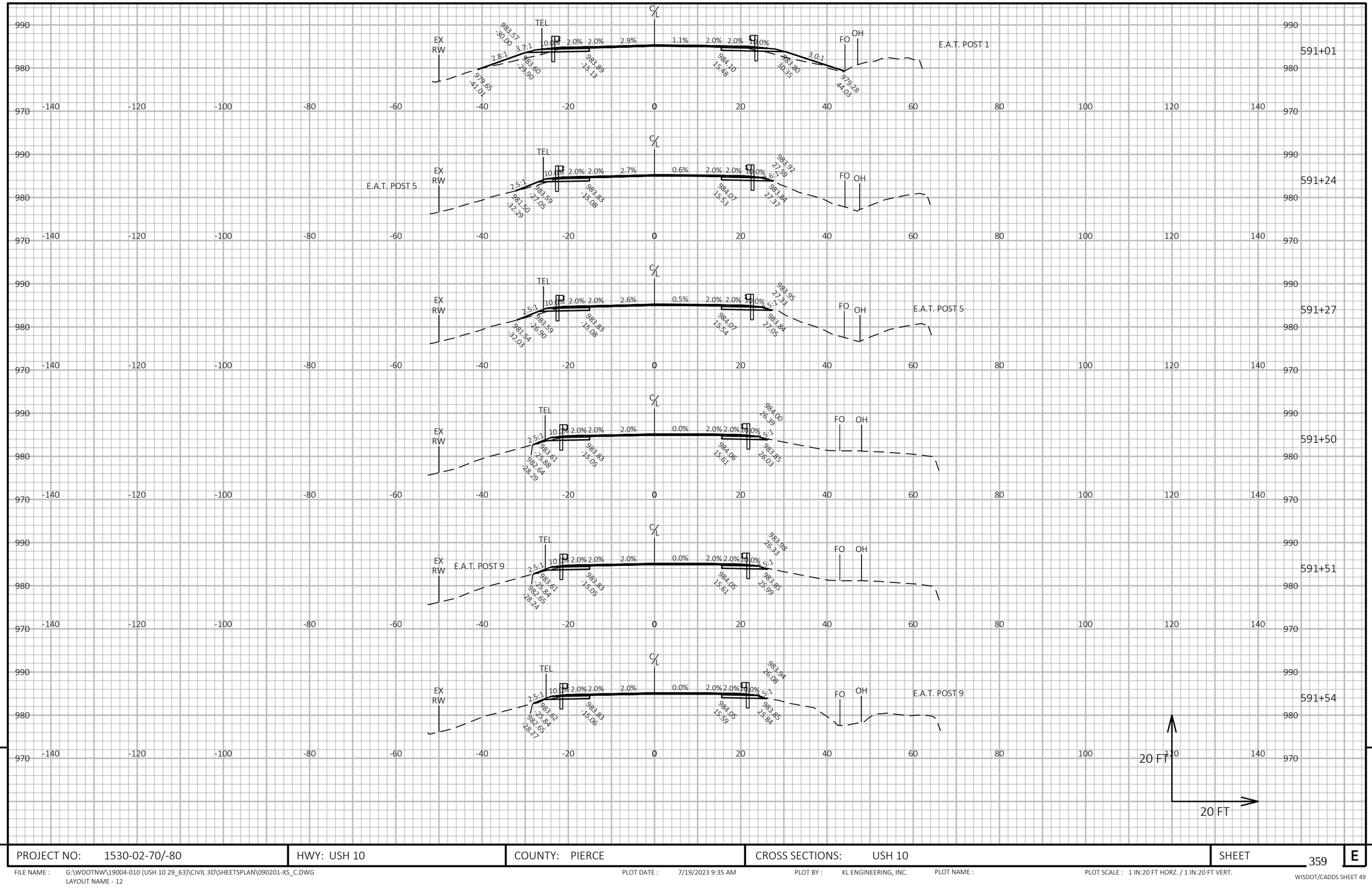


PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 358	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_C.DWG
LAYOUT NAME - 11

PLOT DATE : 7/19/2023 9:35 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

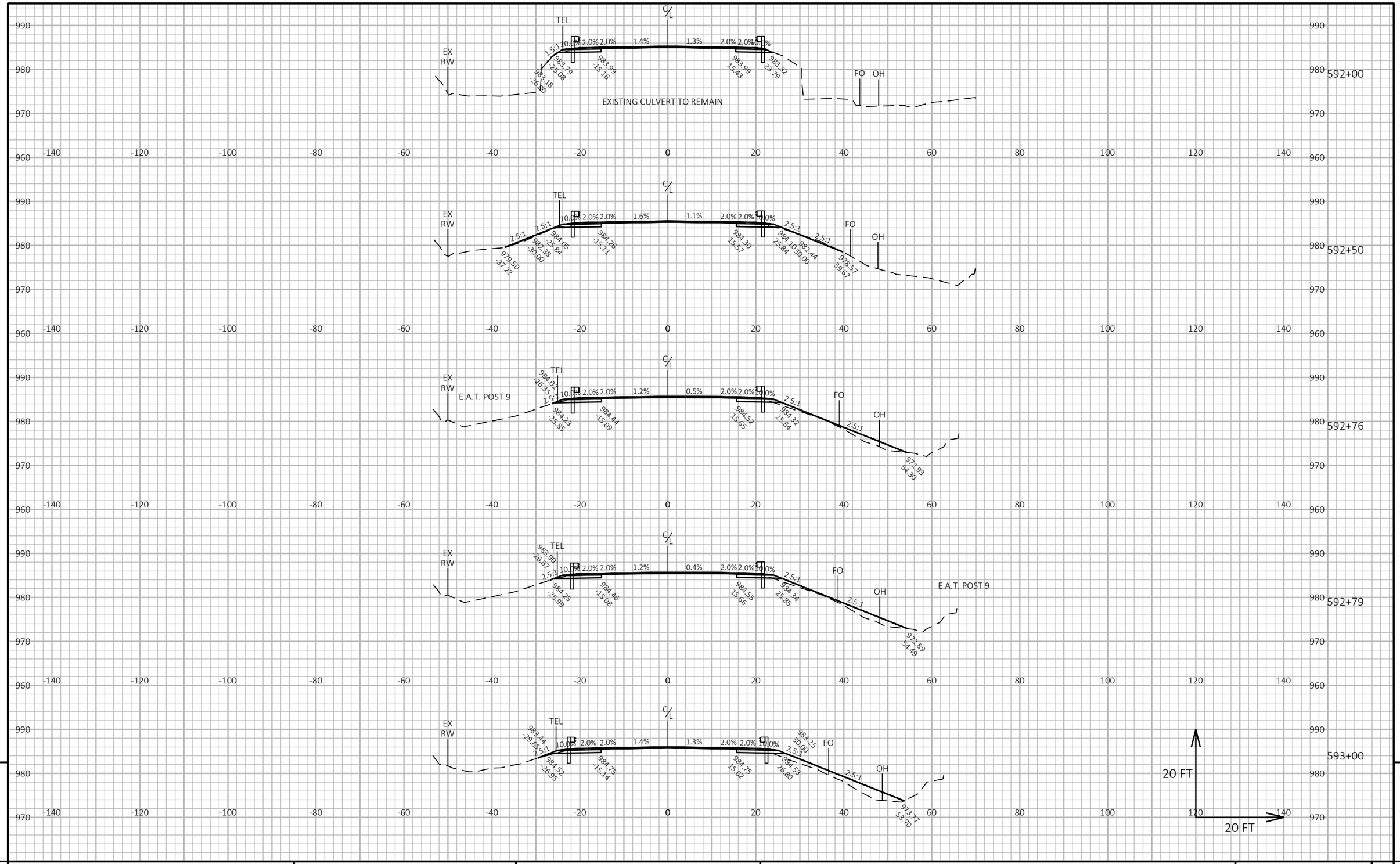


PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 359 E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_C.DWG
LAYOUT NAME - 12

PLOT DATE : 7/19/2023 9:35 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

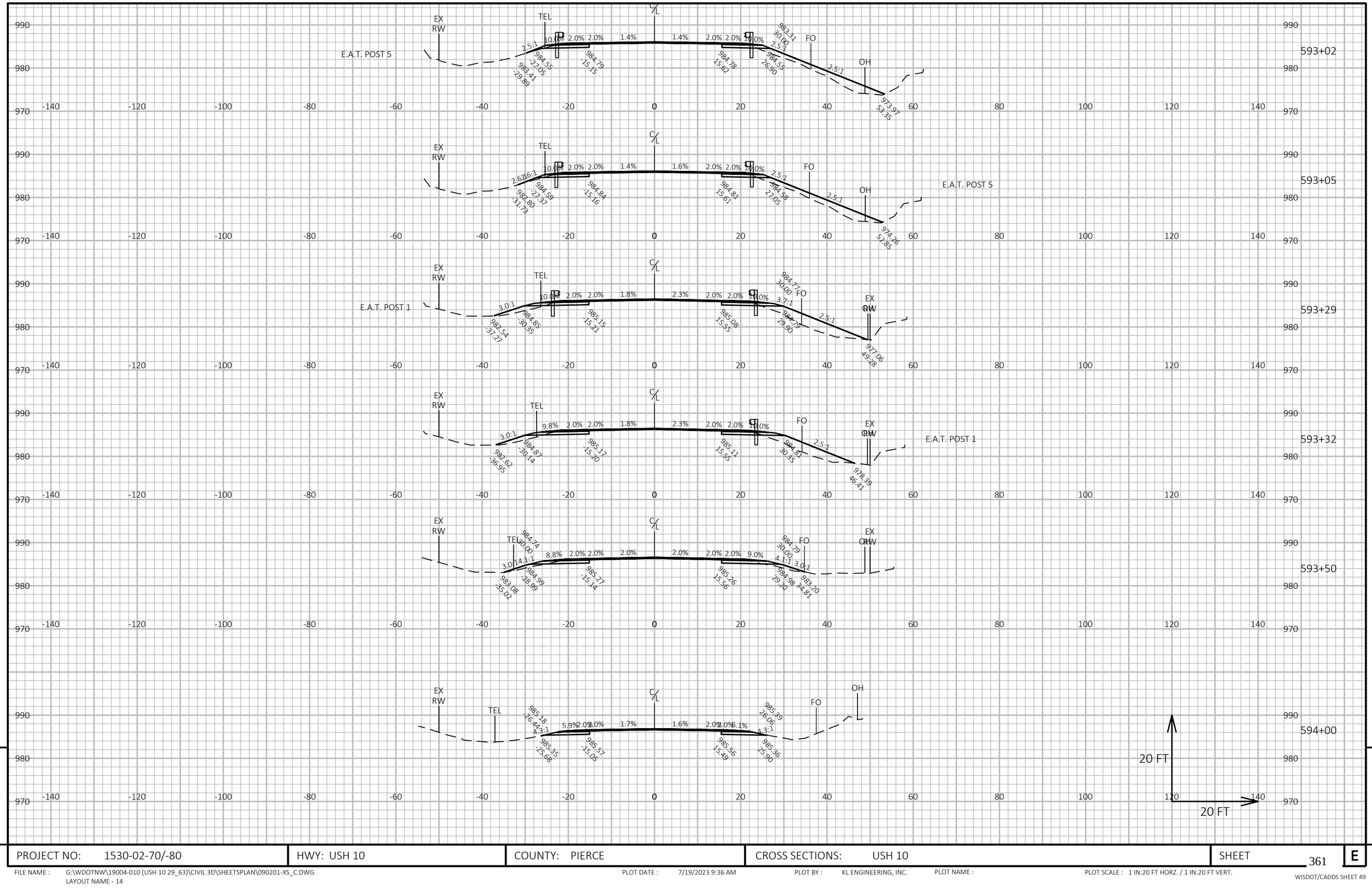


PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 360	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_C.DWG
LAYOUT NAME - 13

PLOT DATE : 7/19/2023 9:36 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

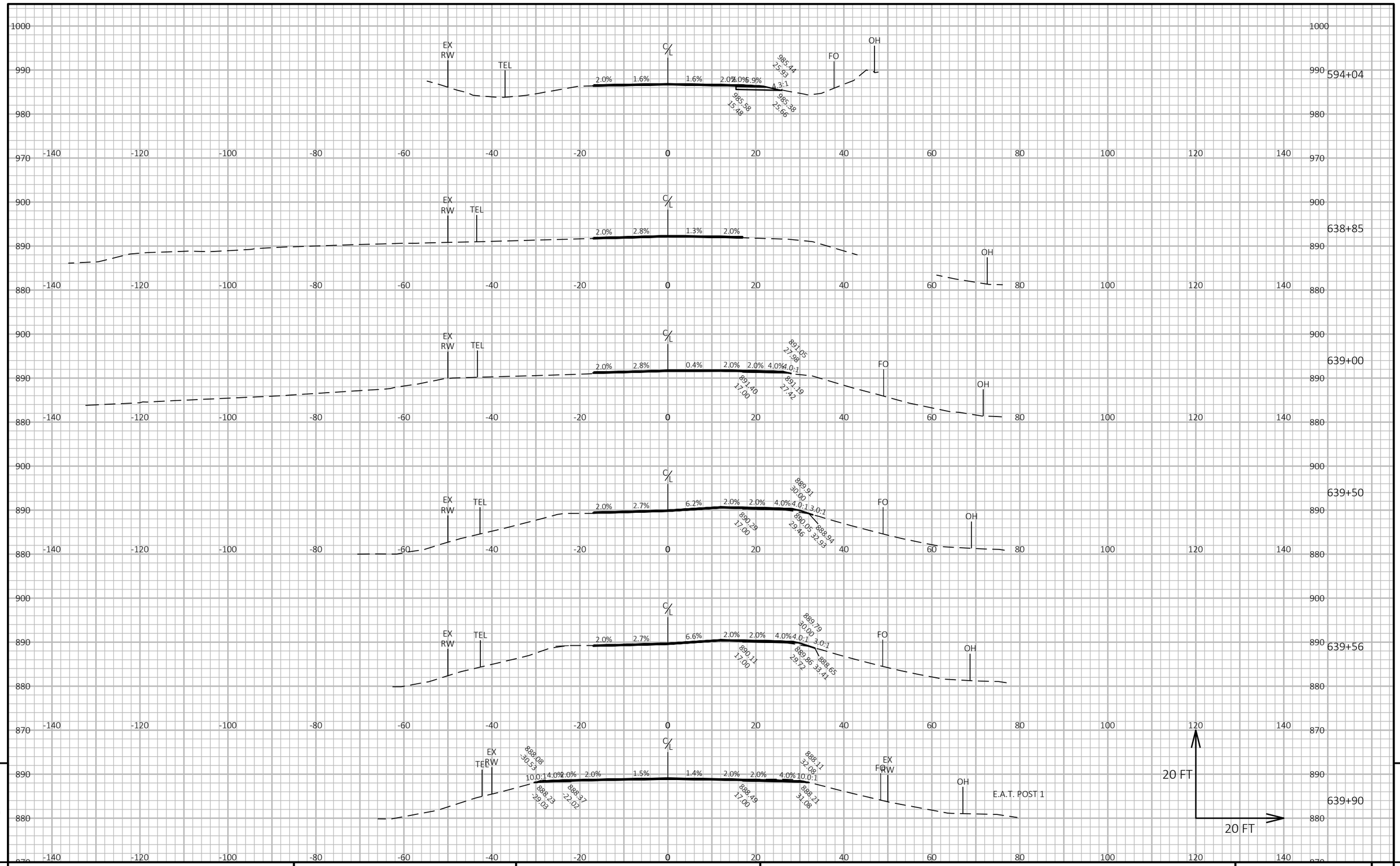


PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 361	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_C.DWG
LAYOUT NAME - 14

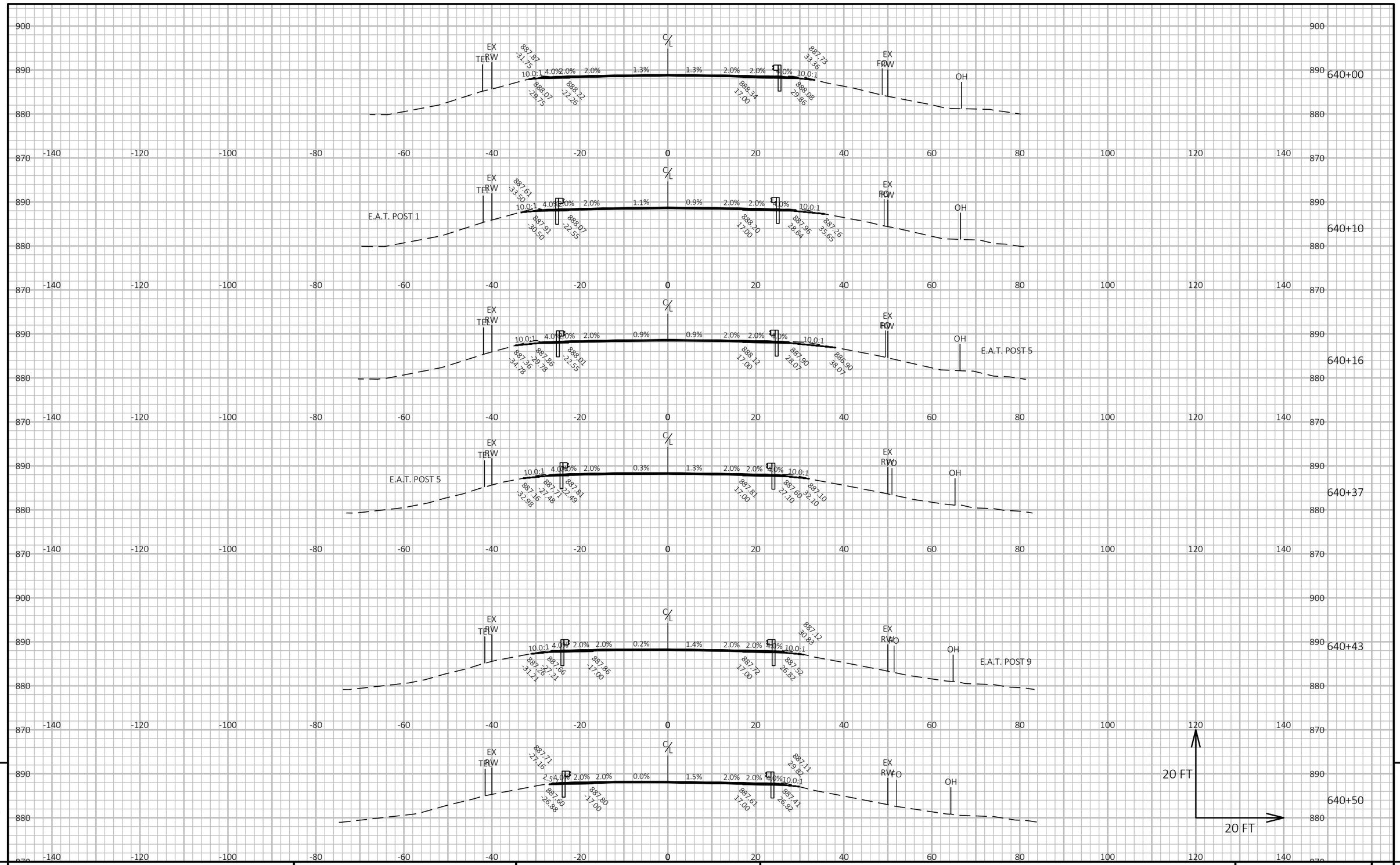
PLOT DATE : 7/19/2023 9:36 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 362	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_C.DWG
LAYOUT NAME - 15
PLOT DATE : 7/19/2023 9:37 AM
PLOT BY : KL ENGINEERING, INC.
PLOT NAME :
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.
WISDOT/CADDS SHEET 49

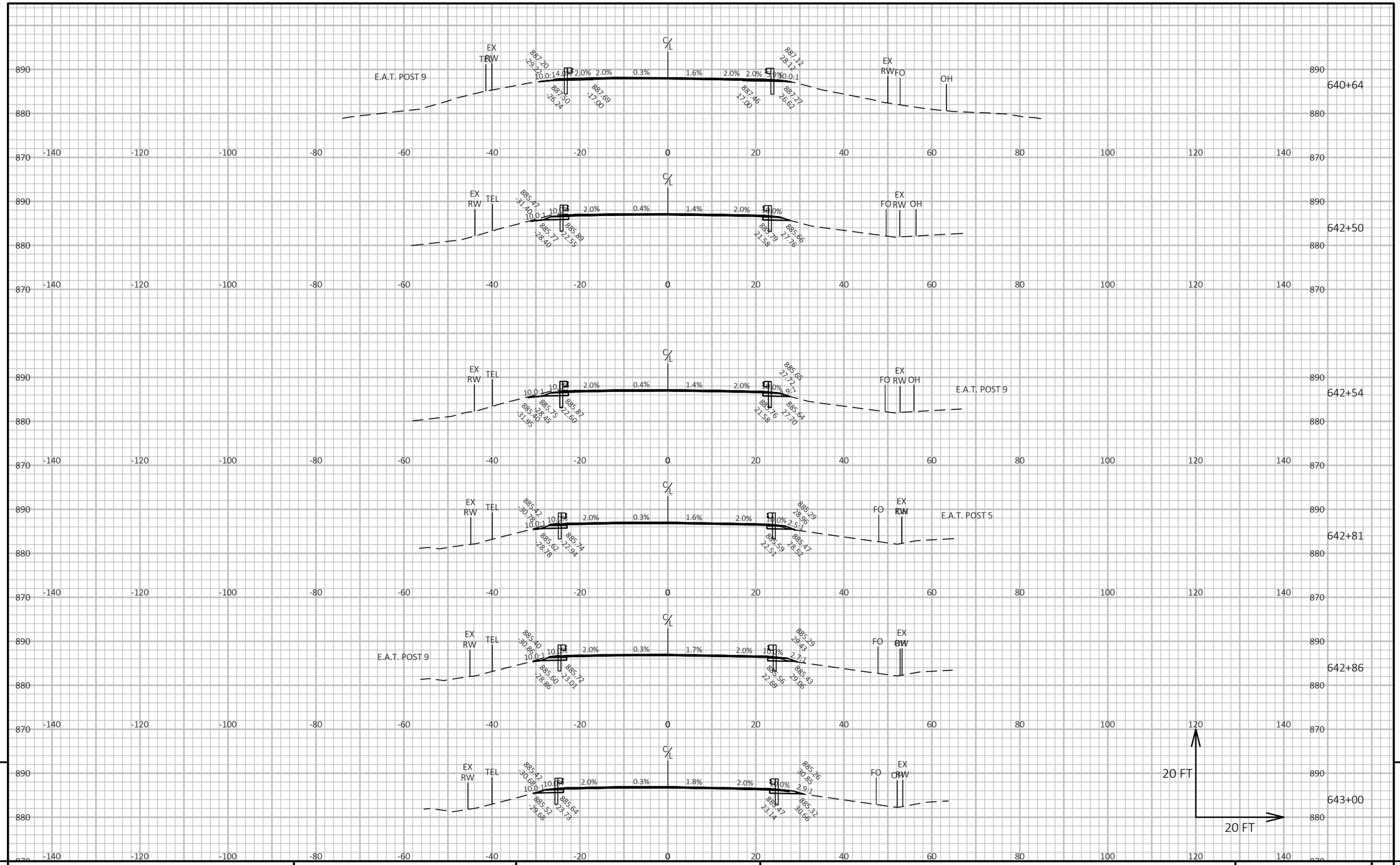


PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 363	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_C.DWG
LAYOUT NAME - 16

PLOT DATE : 7/19/2023 9:37 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

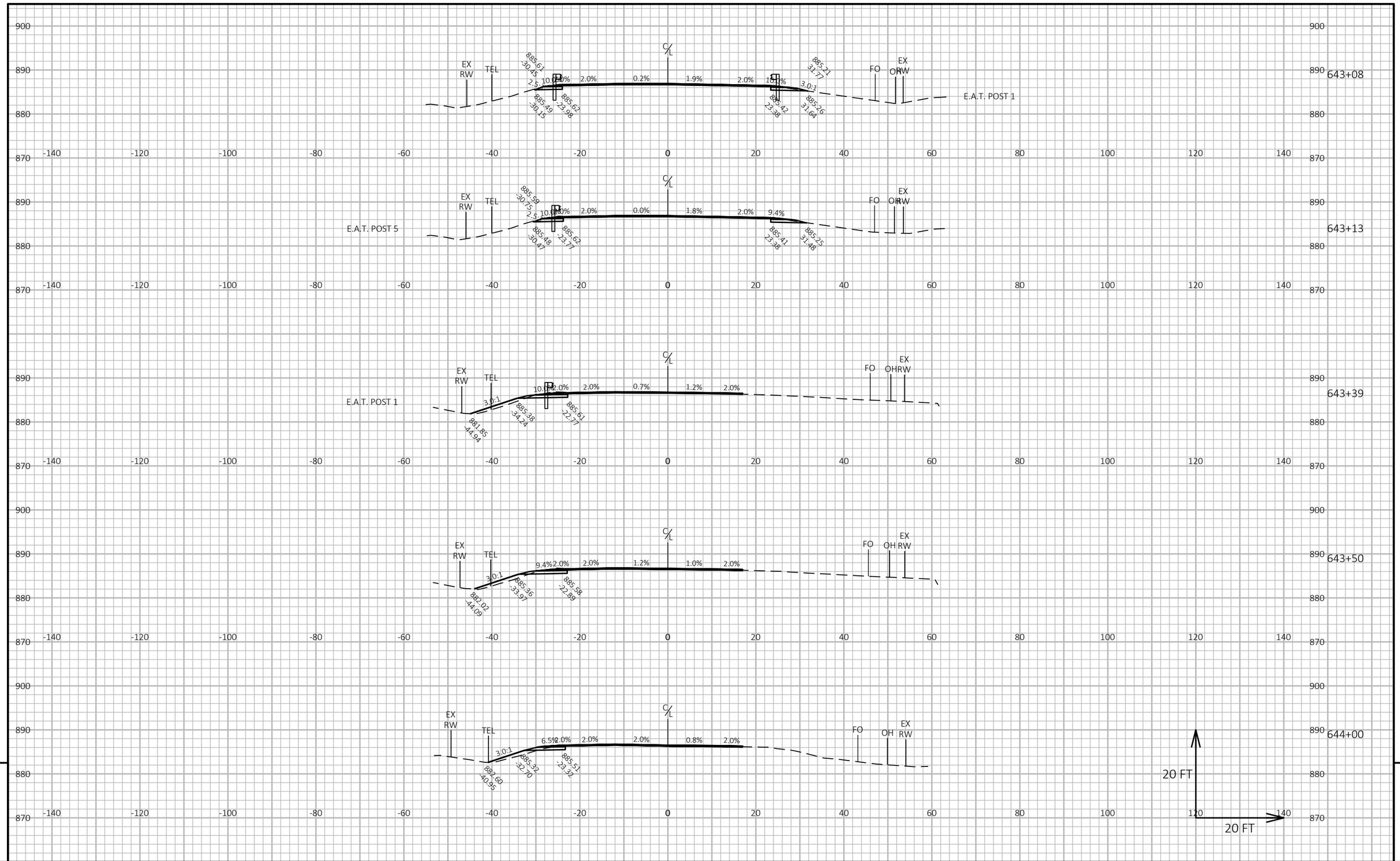
9

PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 364	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_C.DWG
LAYOUT NAME - 17

PLOT DATE : 7/19/2023 9:37 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

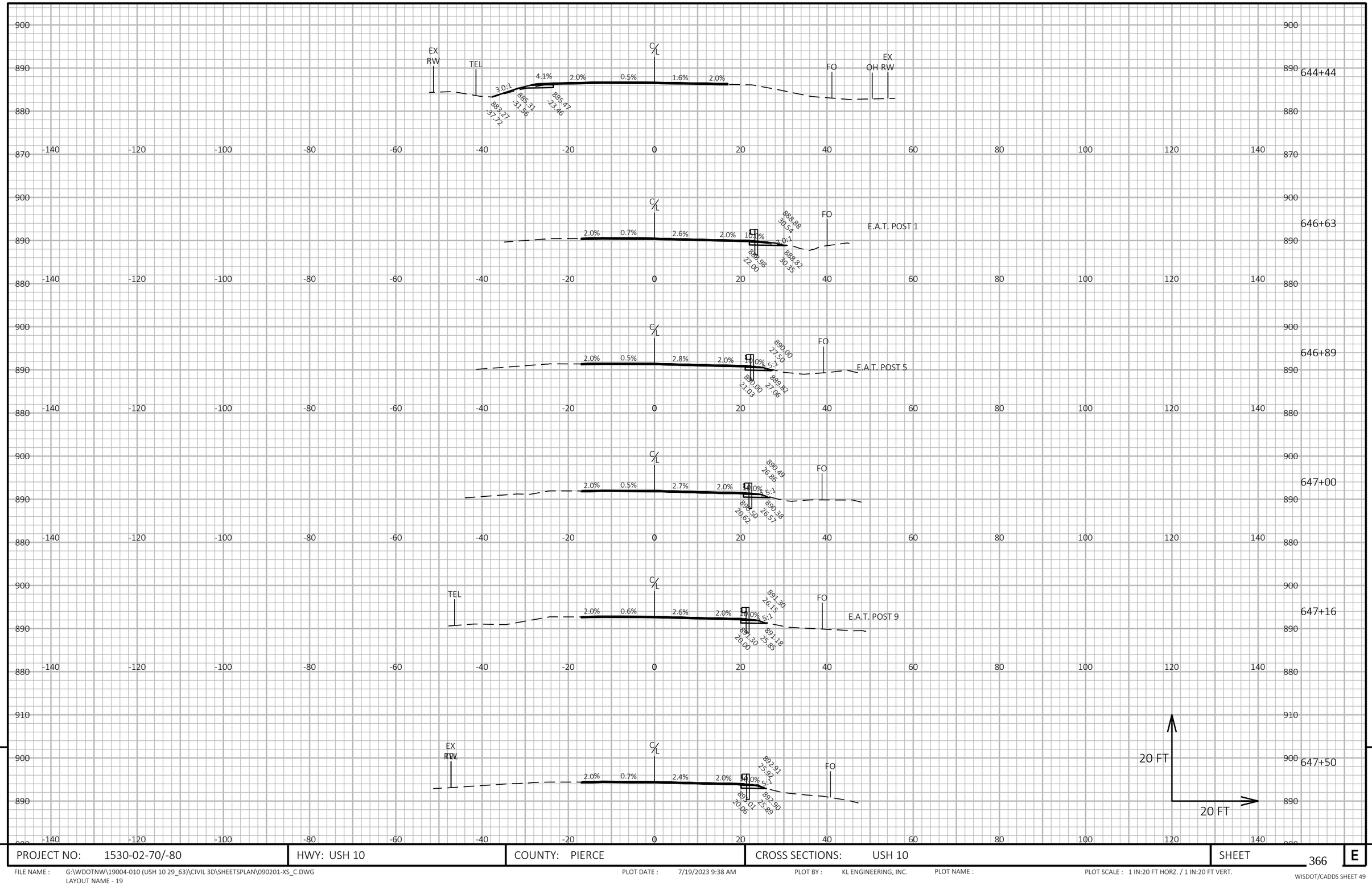


PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 365	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_C.DWG
LAYOUT NAME - 18

PLOT DATE : 7/19/2023 9:38 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

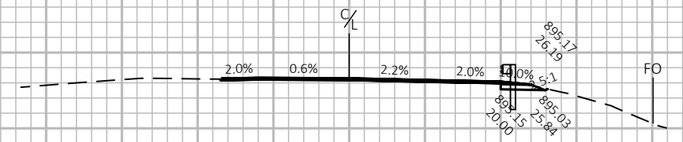
9

PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 366	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_C.DWG
LAYOUT NAME - 19

PLOT DATE : 7/19/2023 9:38 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



910
900
890
880
-140 -120 -100 -80 -60 -40 -20 0 20 40 60 80 100 120 140

20 FT
20 FT

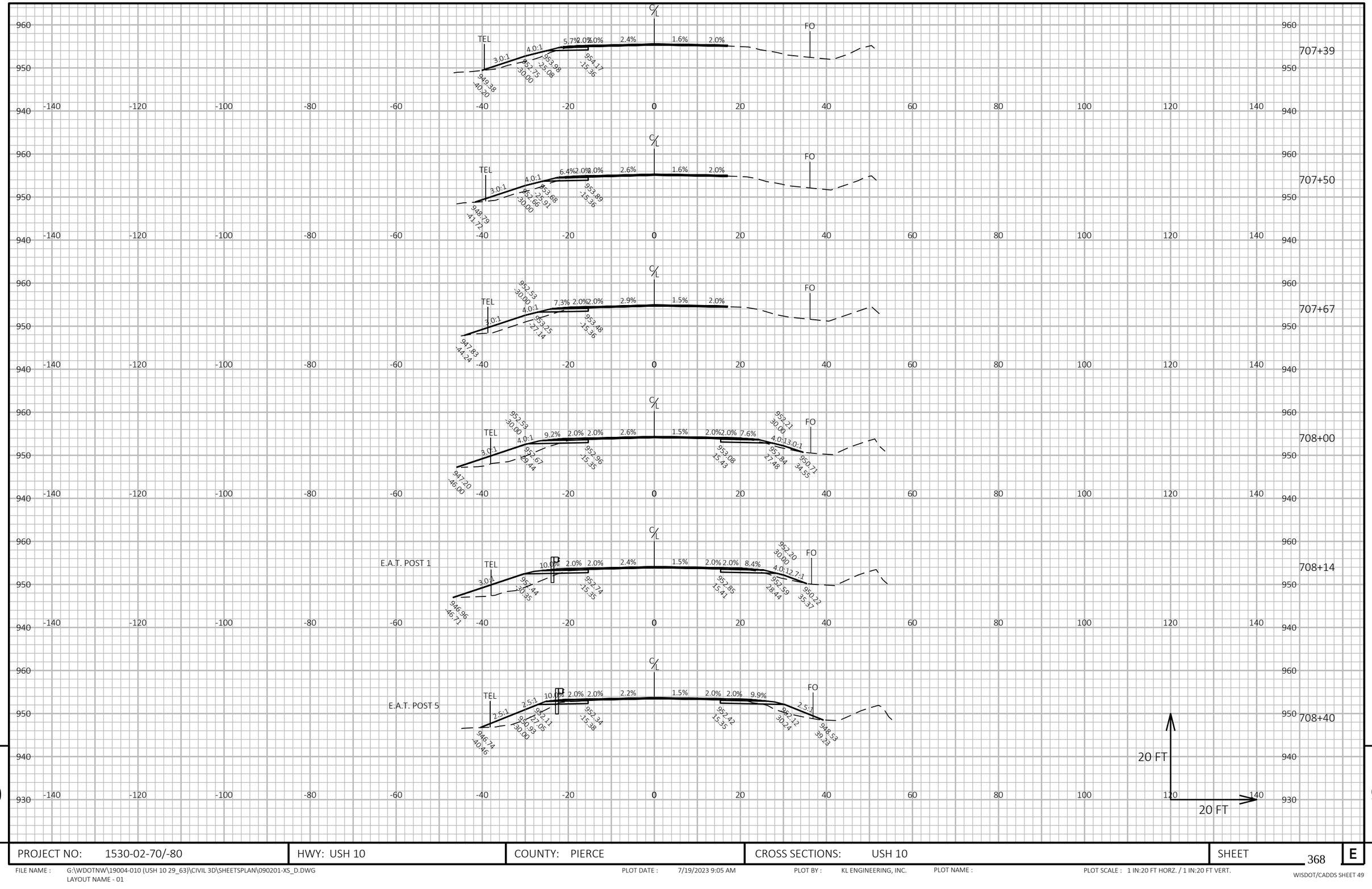
9

PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 367	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_C.DWG
LAYOUT NAME - 20

PLOT DATE : 7/19/2023 9:38 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

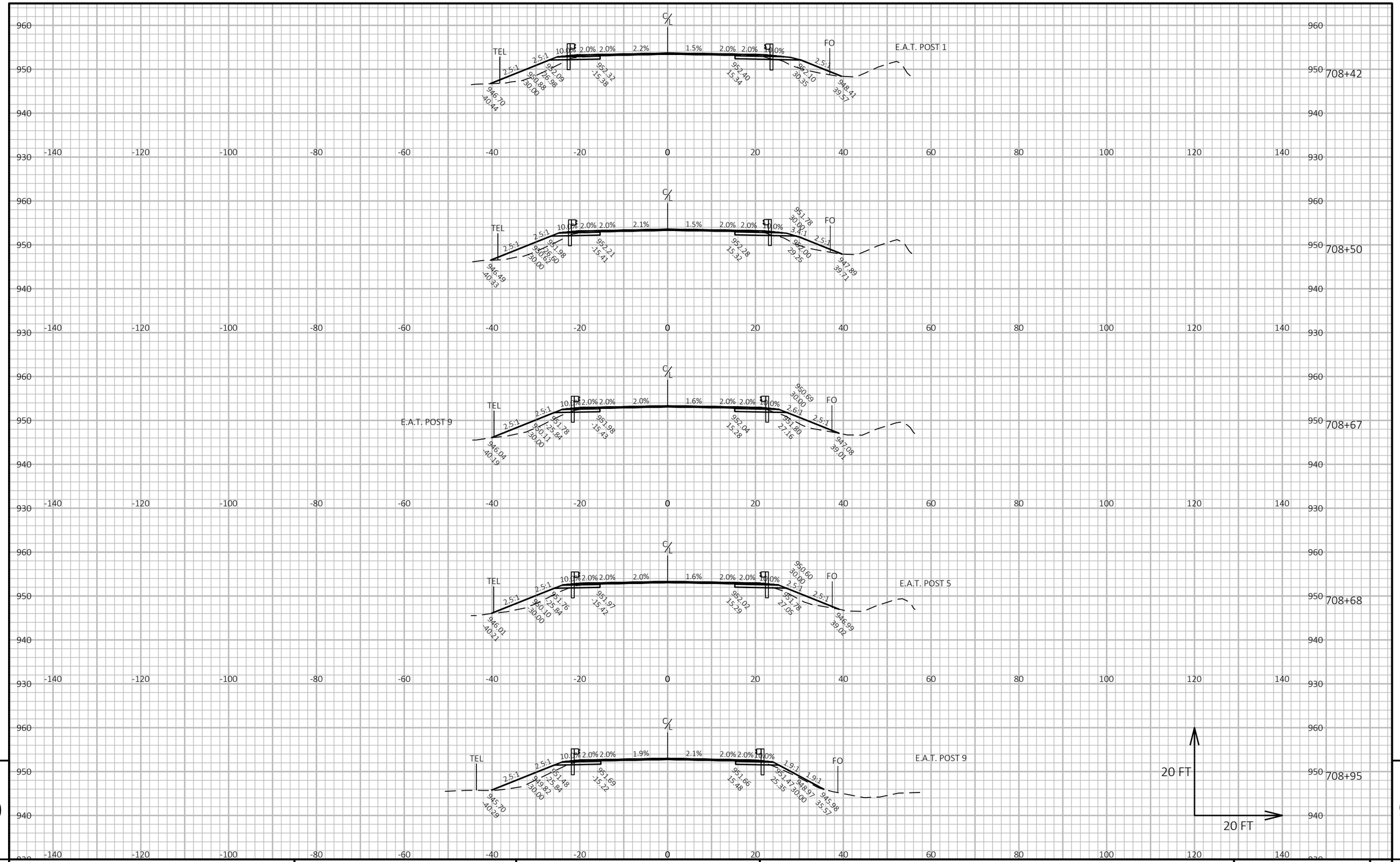


PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 368	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_D.DWG
LAYOUT NAME - 01

PLOT DATE : 7/19/2023 9:05 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

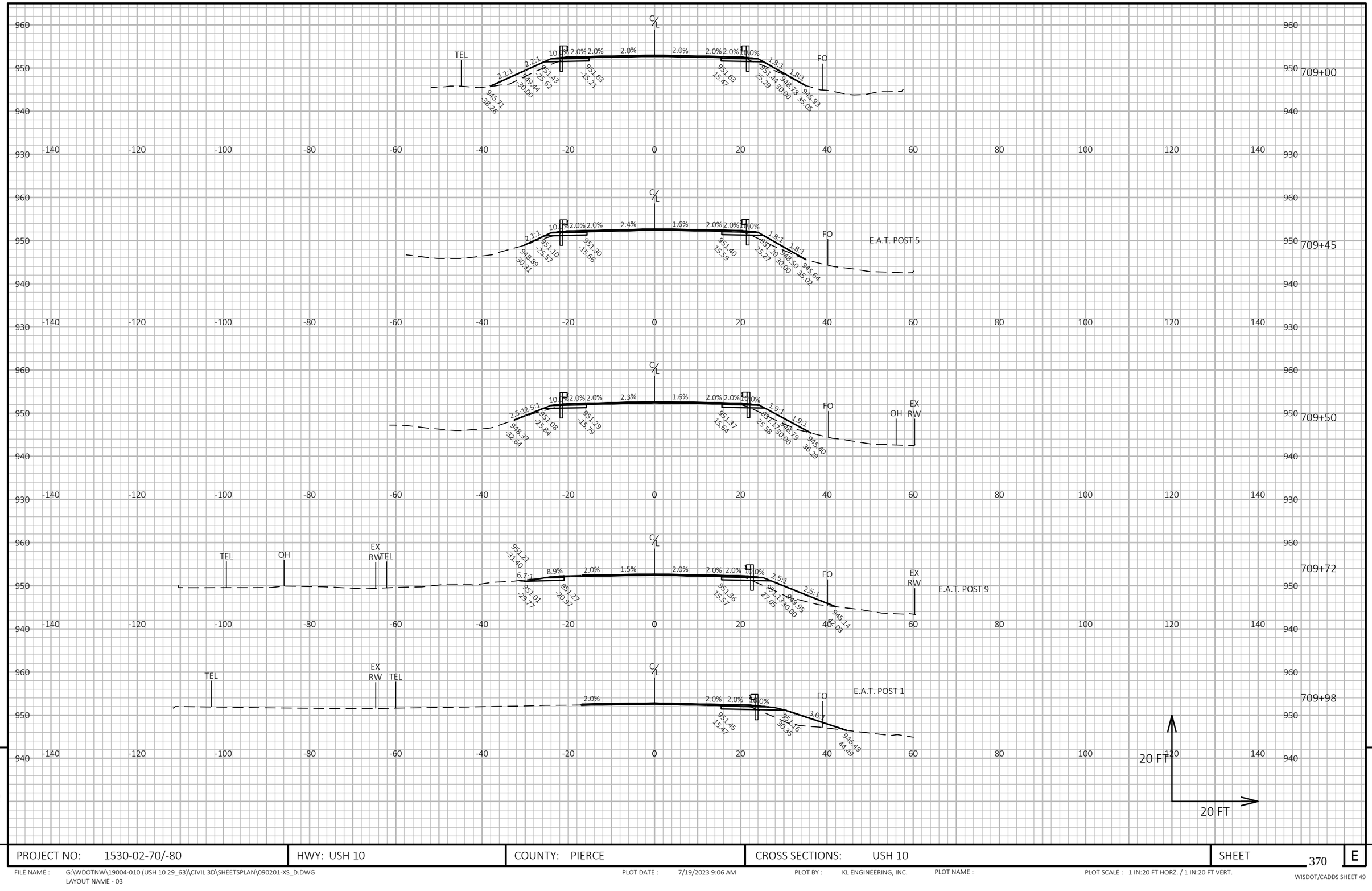


PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 369	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_D.DWG
LAYOUT NAME - 02

PLOT DATE : 7/19/2023 9:06 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

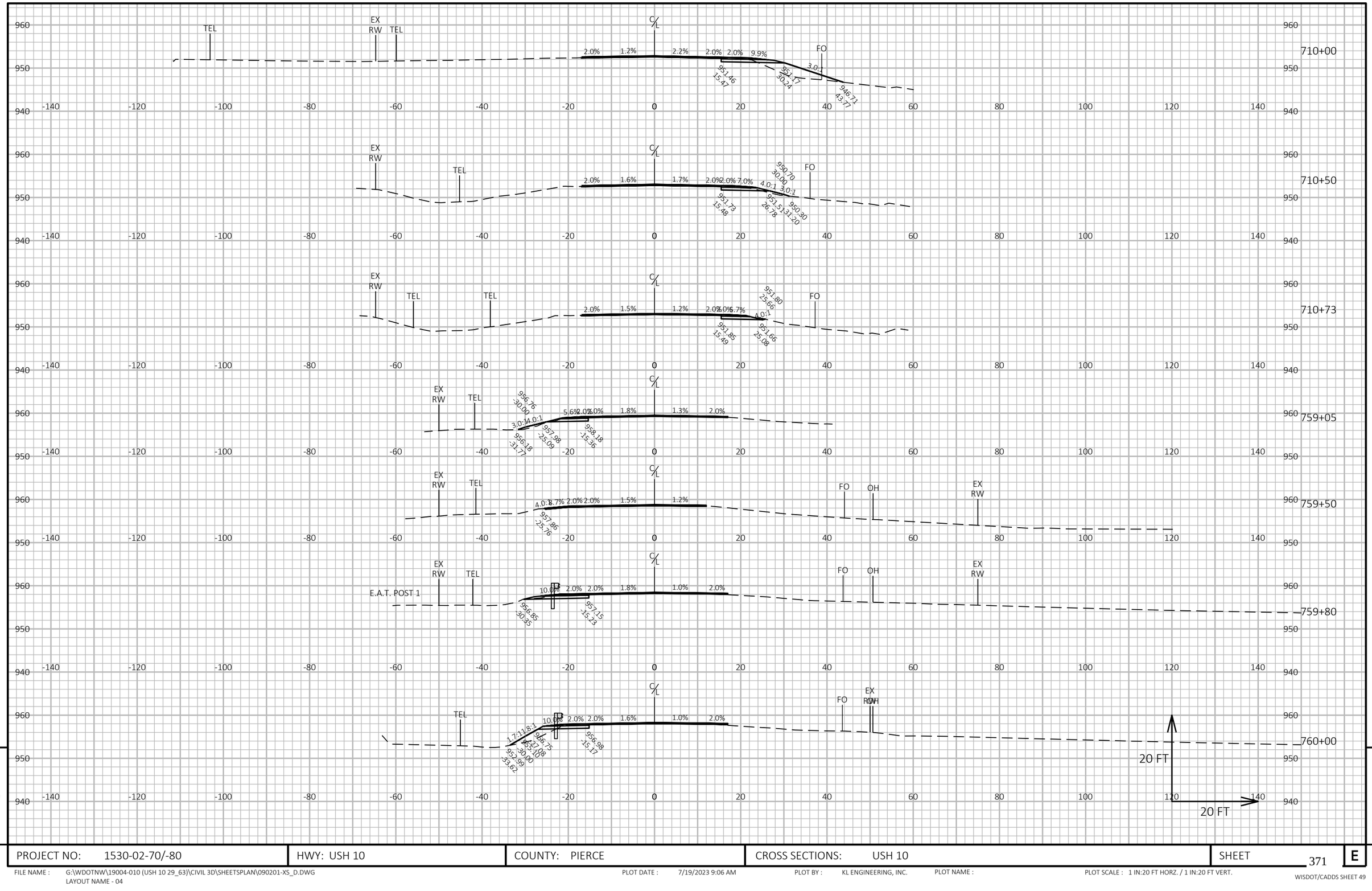


PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 370 E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_D.DWG
LAYOUT NAME - 03

PLOT DATE : 7/19/2023 9:06 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 371	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_D.DWG
LAYOUT NAME - 04

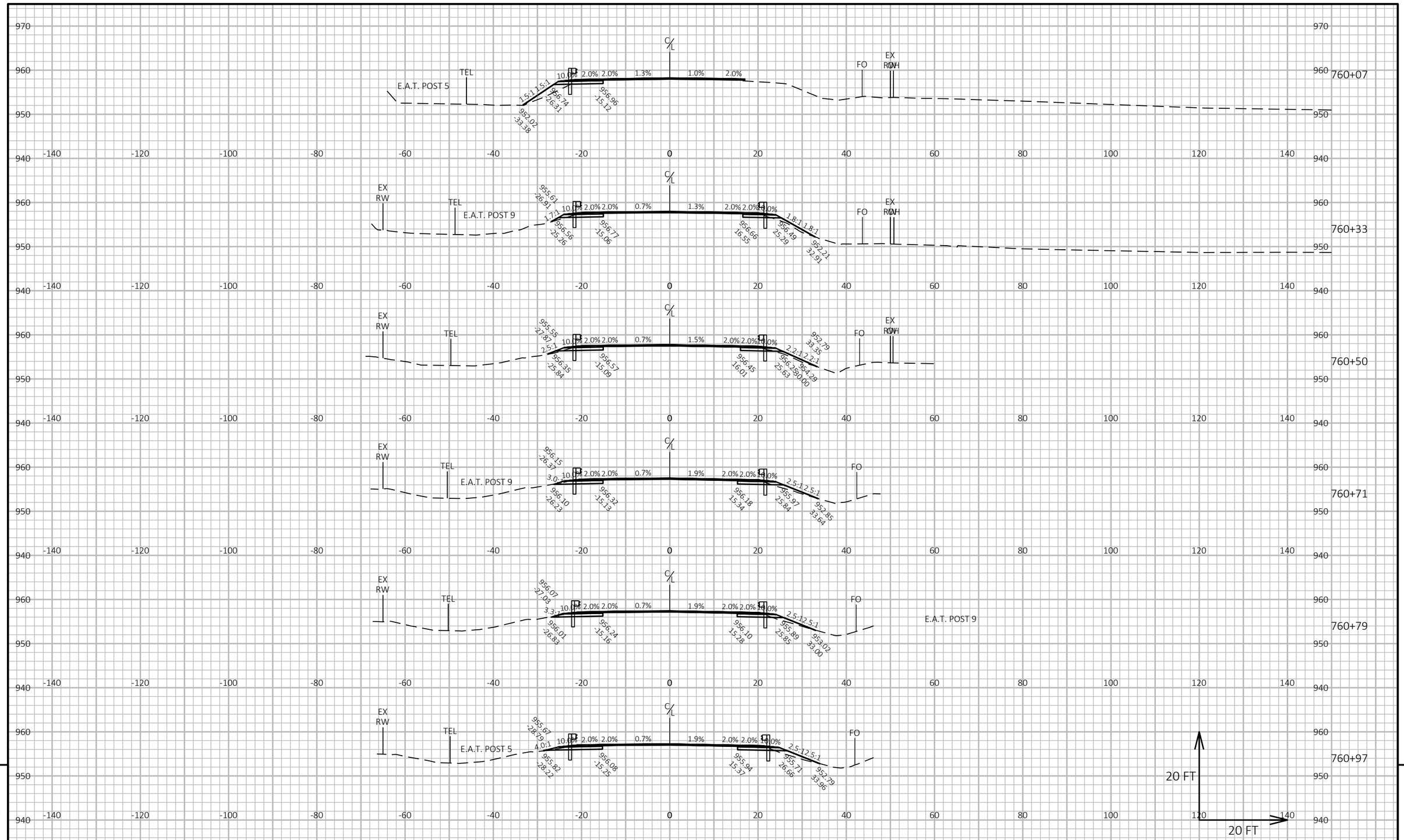
PLOT DATE : 7/19/2023 9:06 AM

PLOT BY : KL ENGINEERING, INC.

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

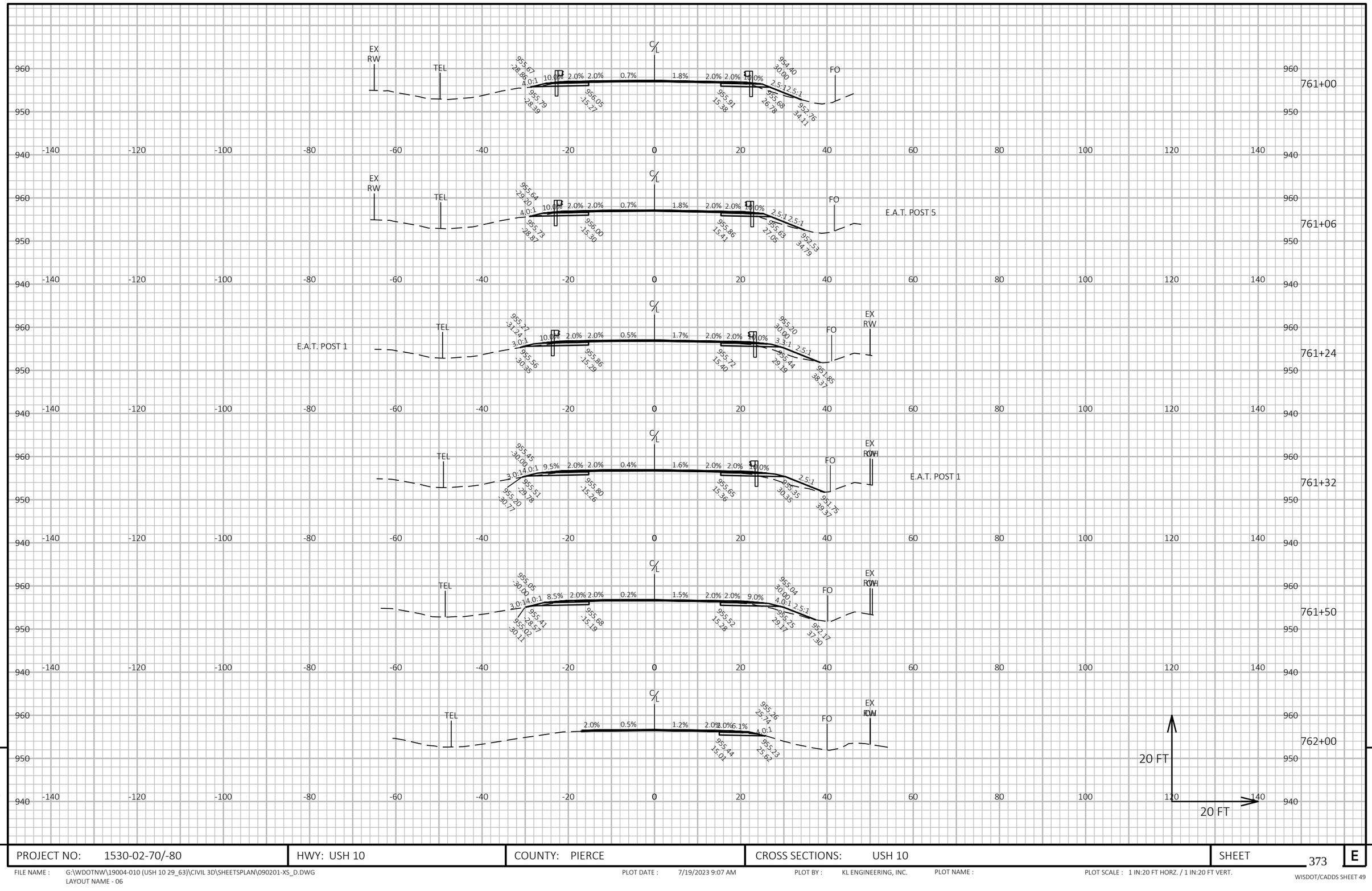
9

PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 372	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_D.DWG
LAYOUT NAME - 05

PLOT DATE : 7/19/2023 9:07 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

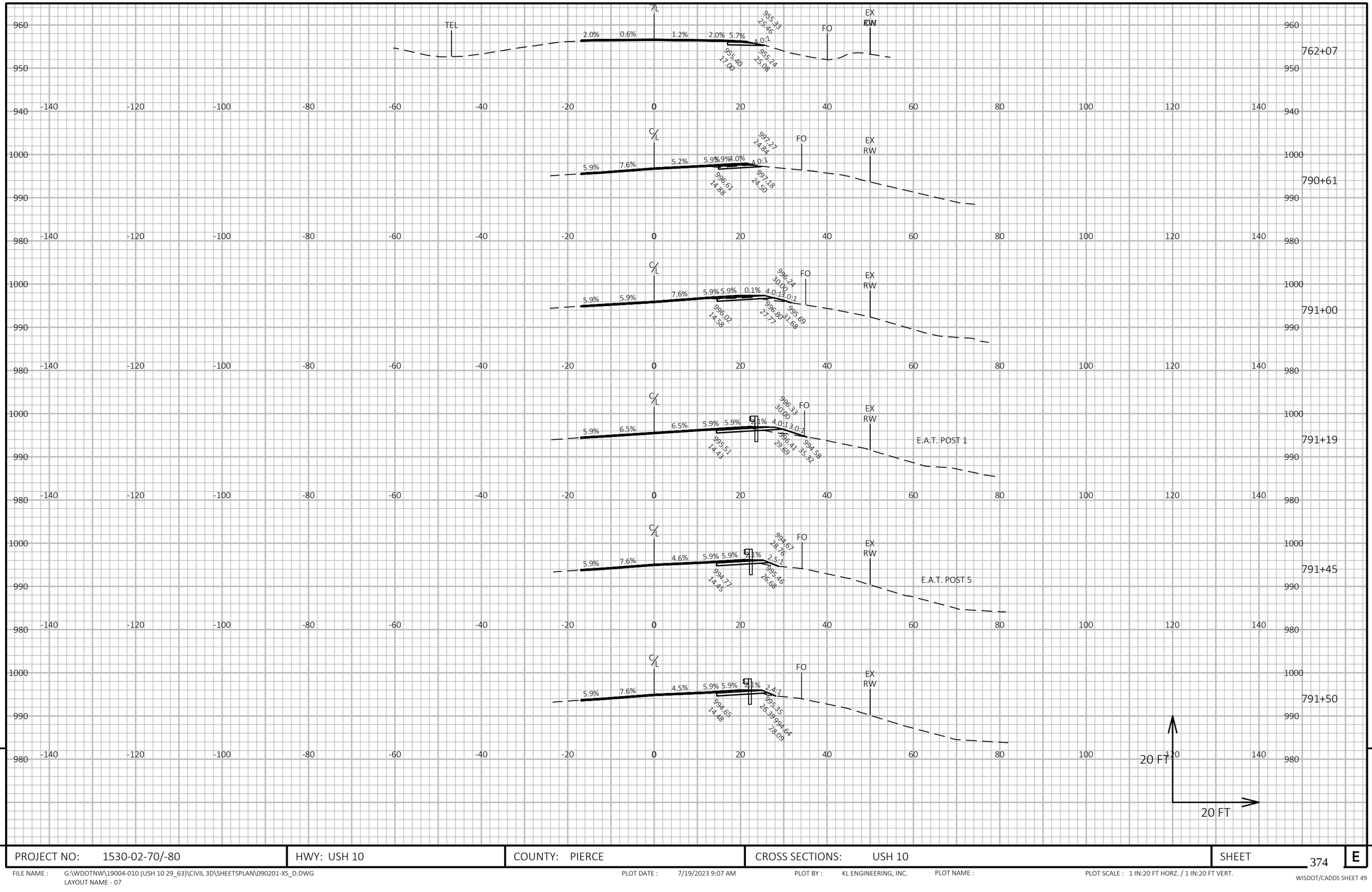


PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 373	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_D.DWG
LAYOUT NAME - 06

PLOT DATE : 7/19/2023 9:07 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

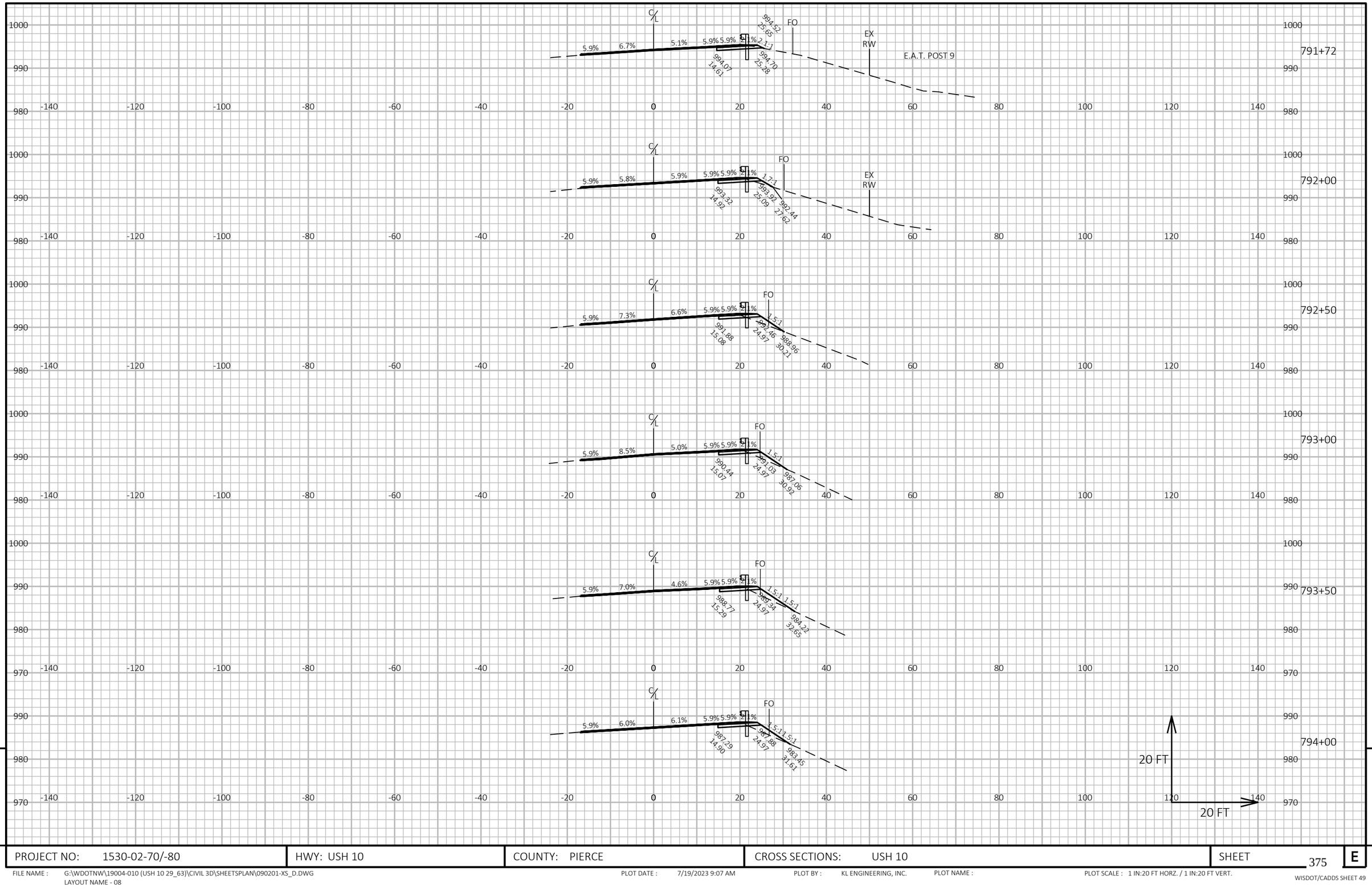


PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 374	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_D.DWG
LAYOUT NAME - 07

PLOT DATE : 7/19/2023 9:07 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

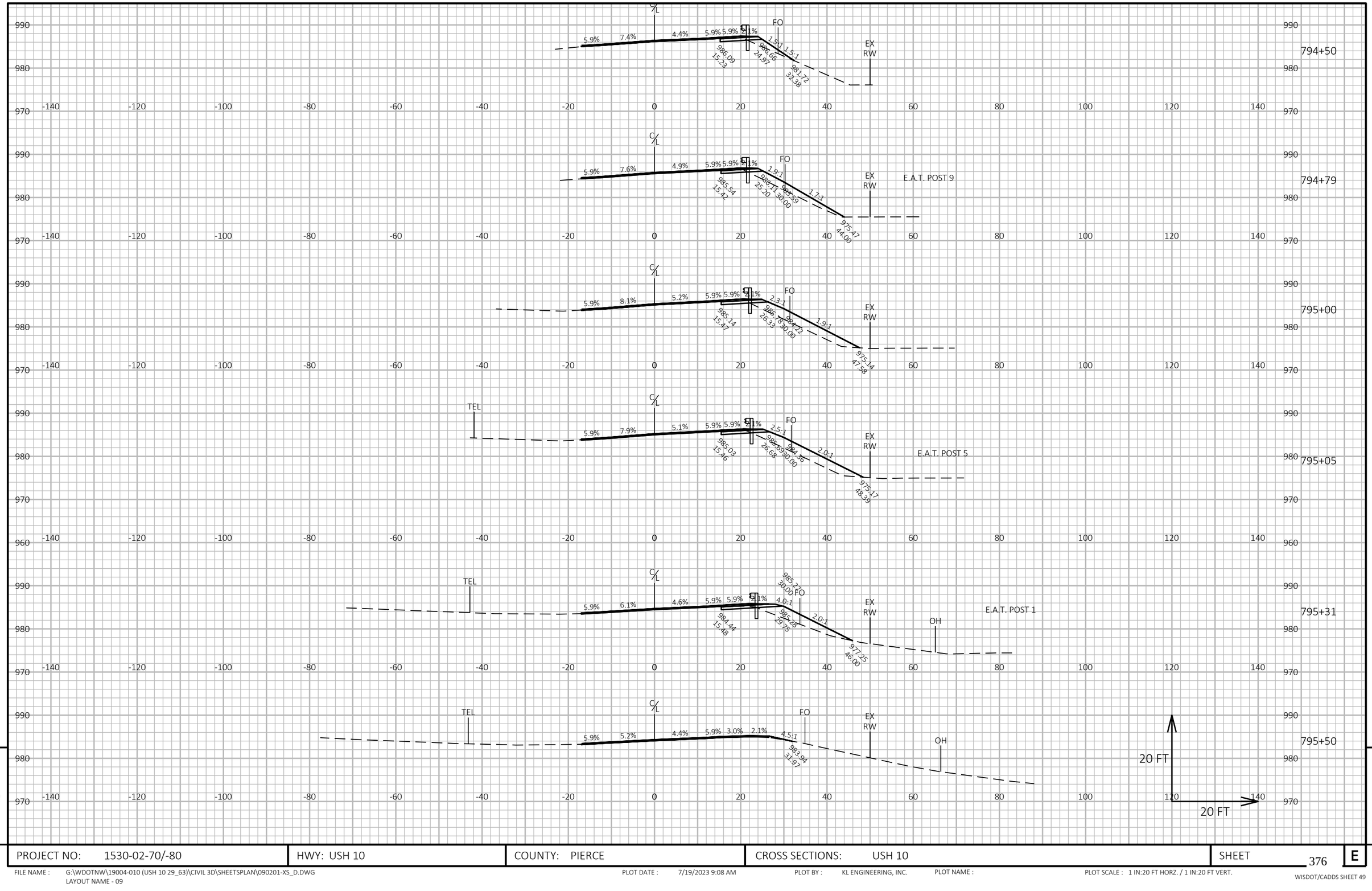


PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 375	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_D.DWG
LAYOUT NAME - 08

PLOT DATE : 7/19/2023 9:07 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

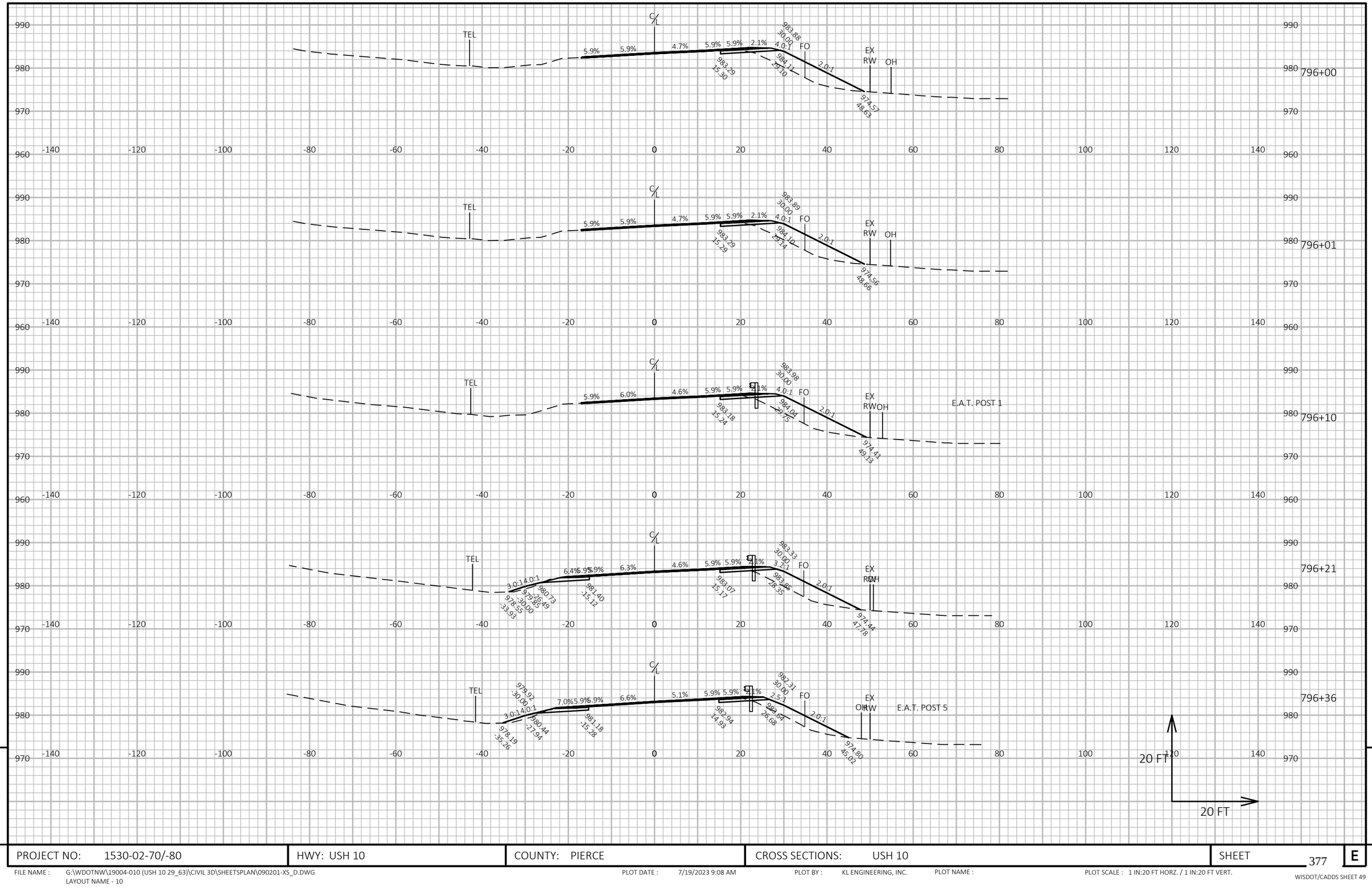


PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 376	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_D.DWG
LAYOUT NAME - 09

PLOT DATE : 7/19/2023 9:08 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

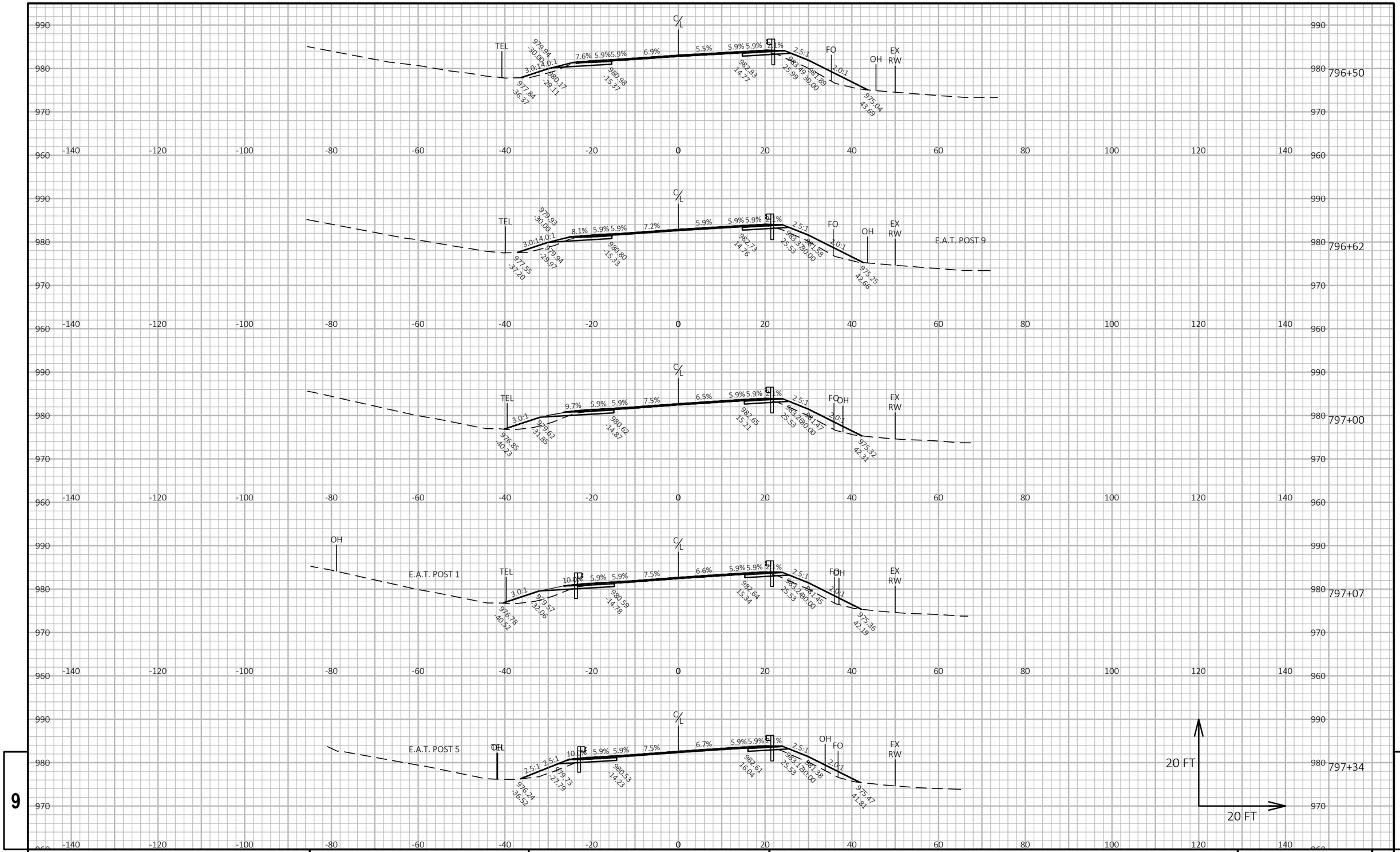


PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 377	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_D.DWG
LAYOUT NAME - 10

PLOT DATE : 7/19/2023 9:08 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

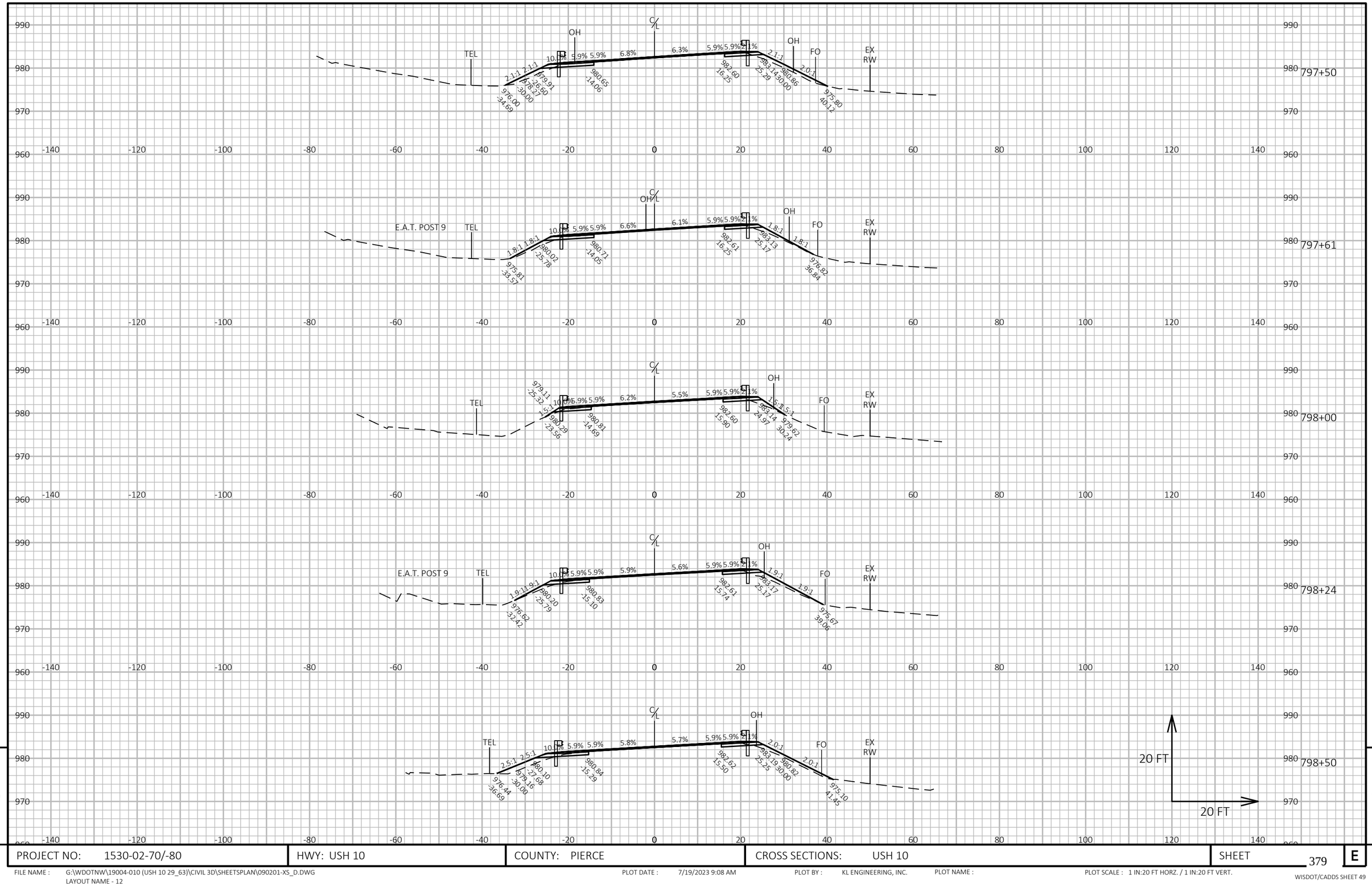


PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 378	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_D.DWG
LAYOUT NAME - 11

PLOT DATE : 7/19/2023 9:08 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

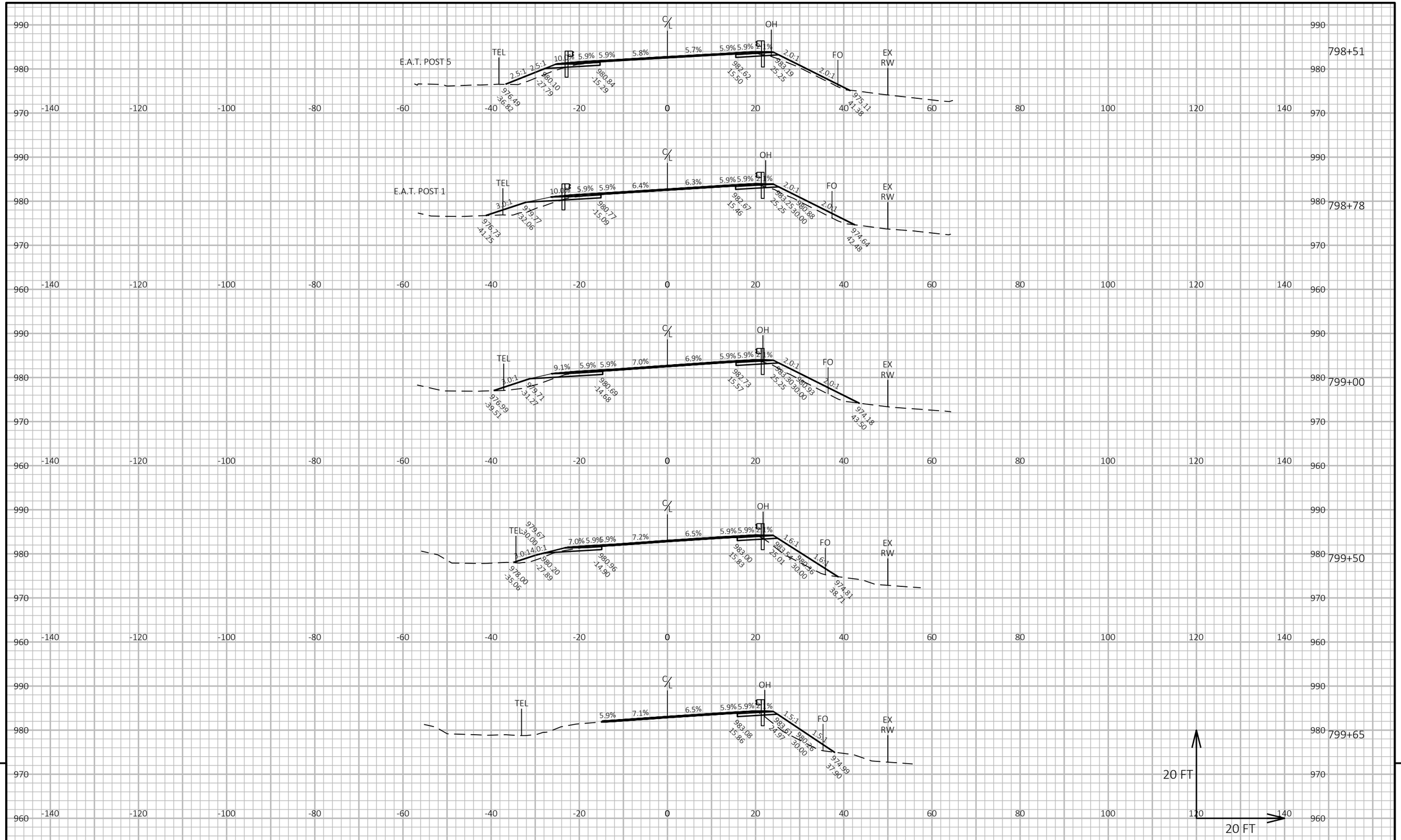


PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 379	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_D.DWG
LAYOUT NAME - 12

PLOT DATE : 7/19/2023 9:08 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

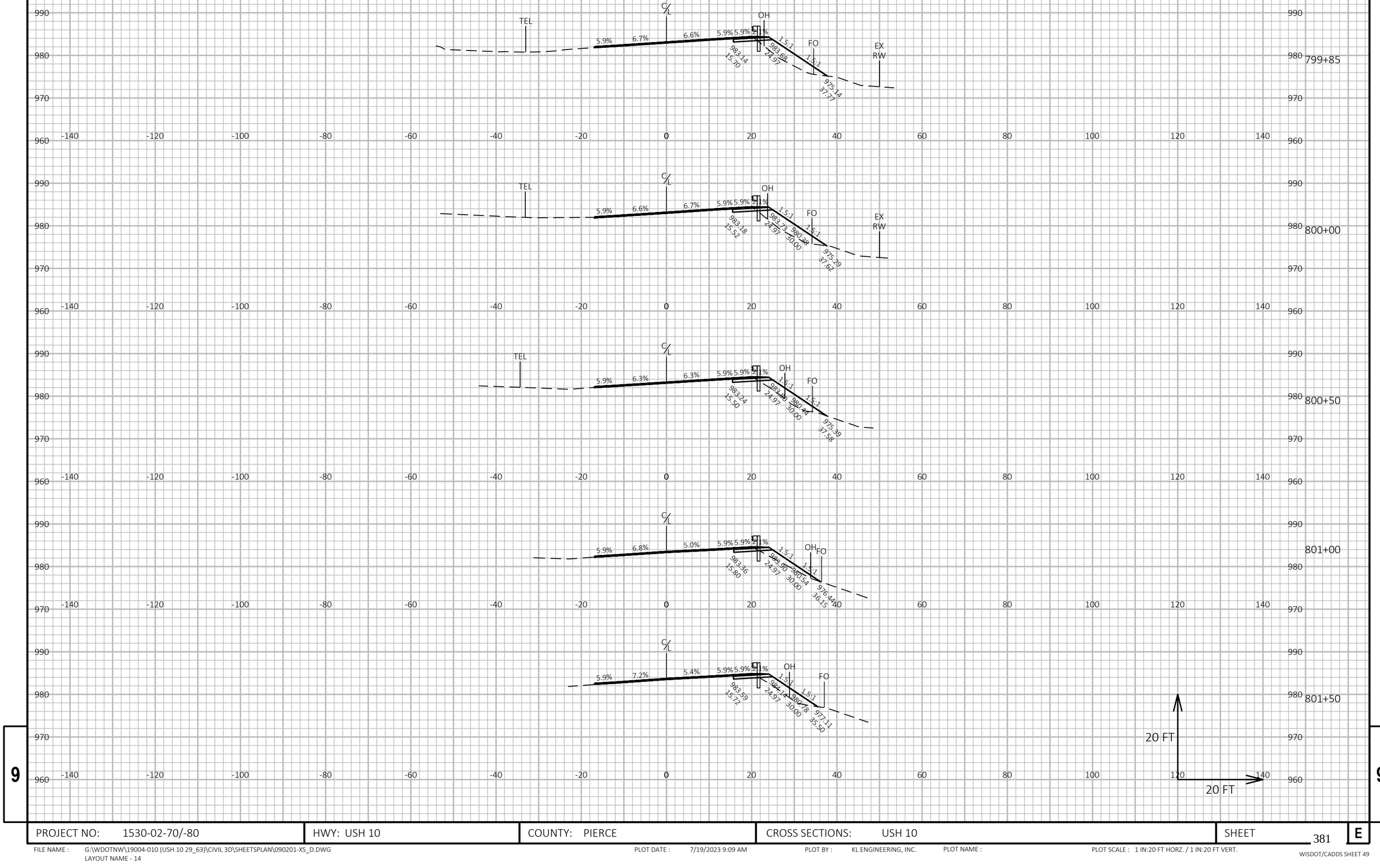


PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 380	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_D.DWG
LAYOUT NAME - 13

PLOT DATE : 7/19/2023 9:09 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

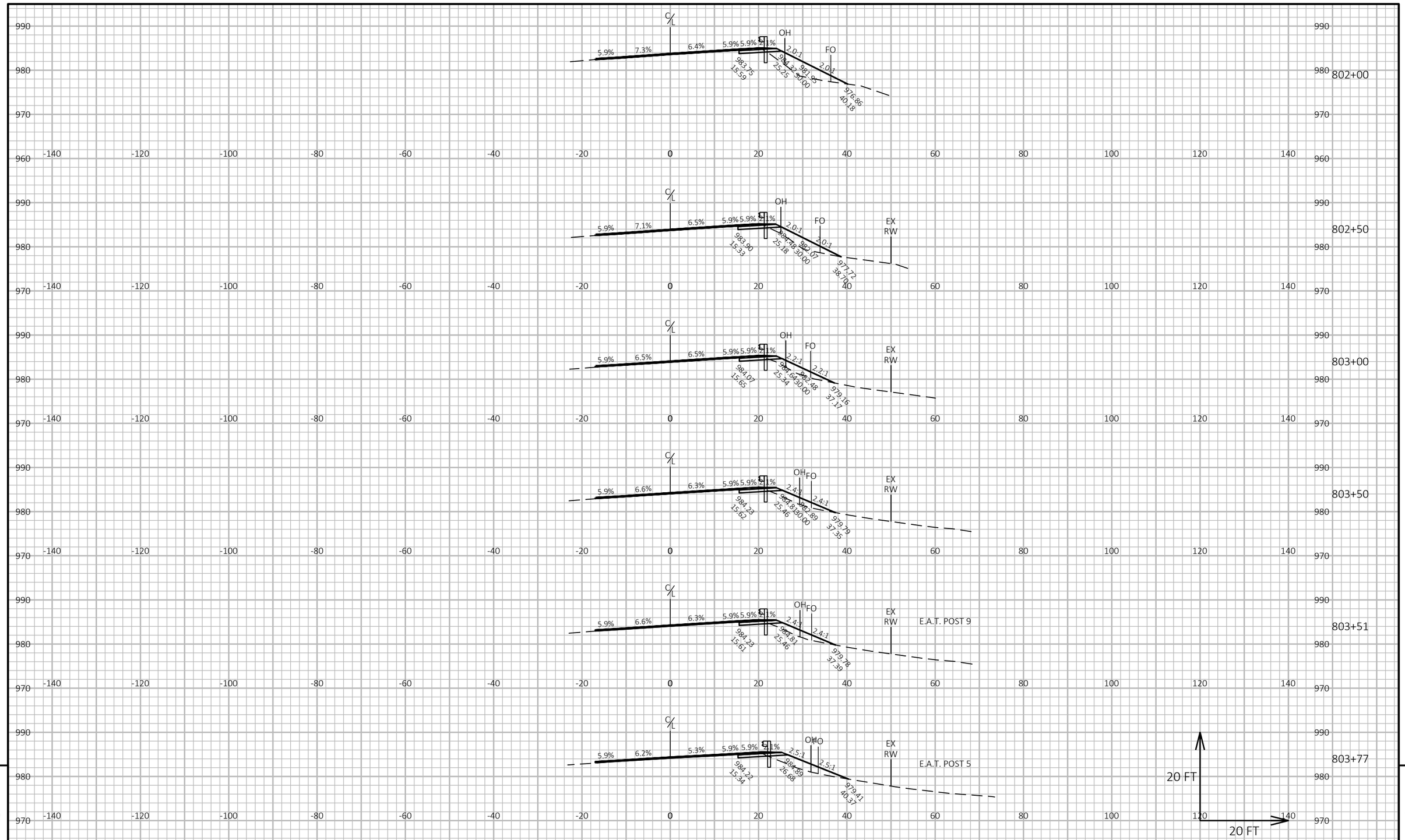


PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 381	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_D.DWG
LAYOUT NAME - 14

PLOT DATE : 7/19/2023 9:09 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

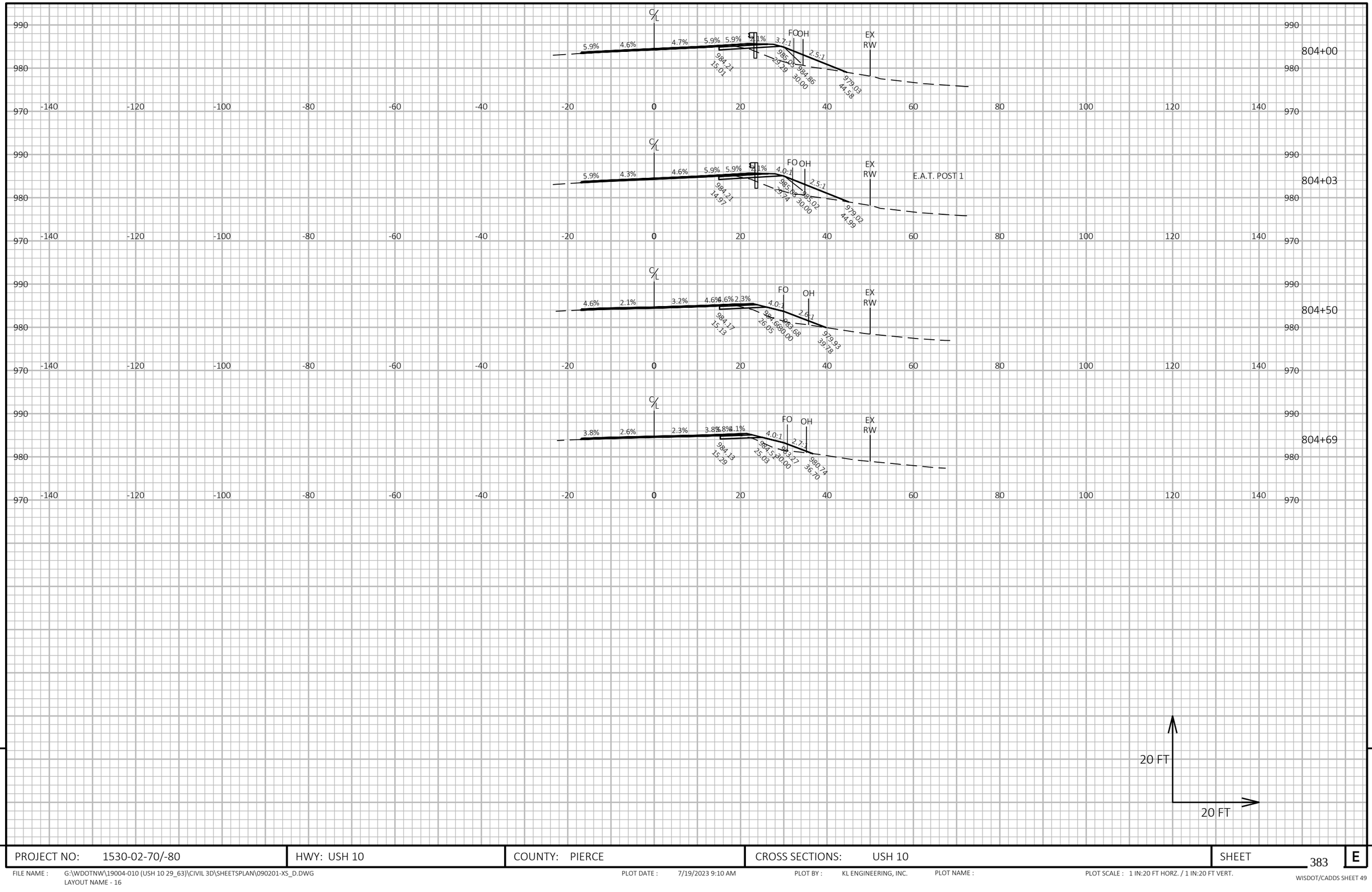


PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 382	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_D.DWG
LAYOUT NAME - 15

PLOT DATE : 7/19/2023 9:09 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

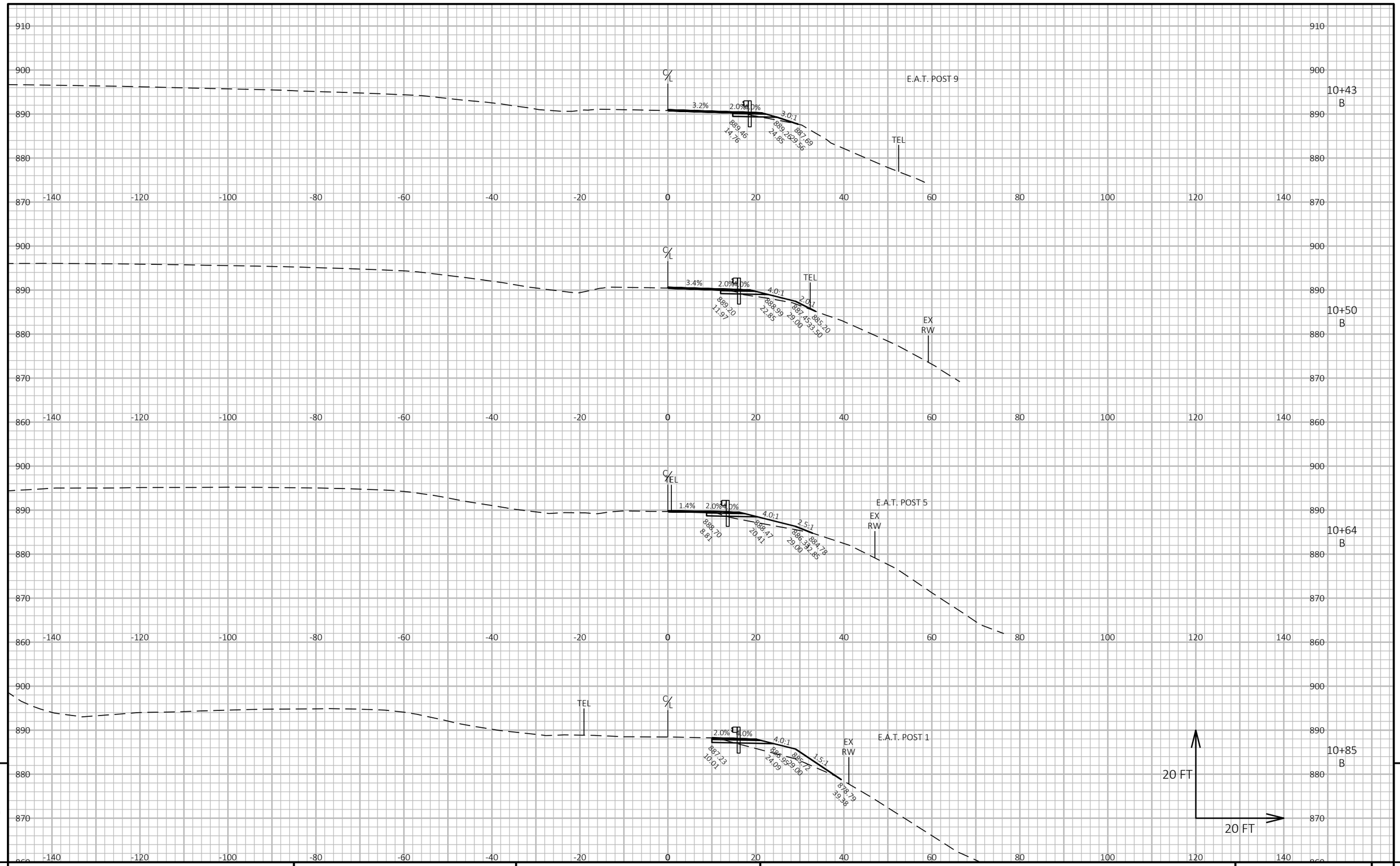


PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: USH 10	SHEET 383	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_D.DWG
LAYOUT NAME - 16

PLOT DATE : 7/19/2023 9:10 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

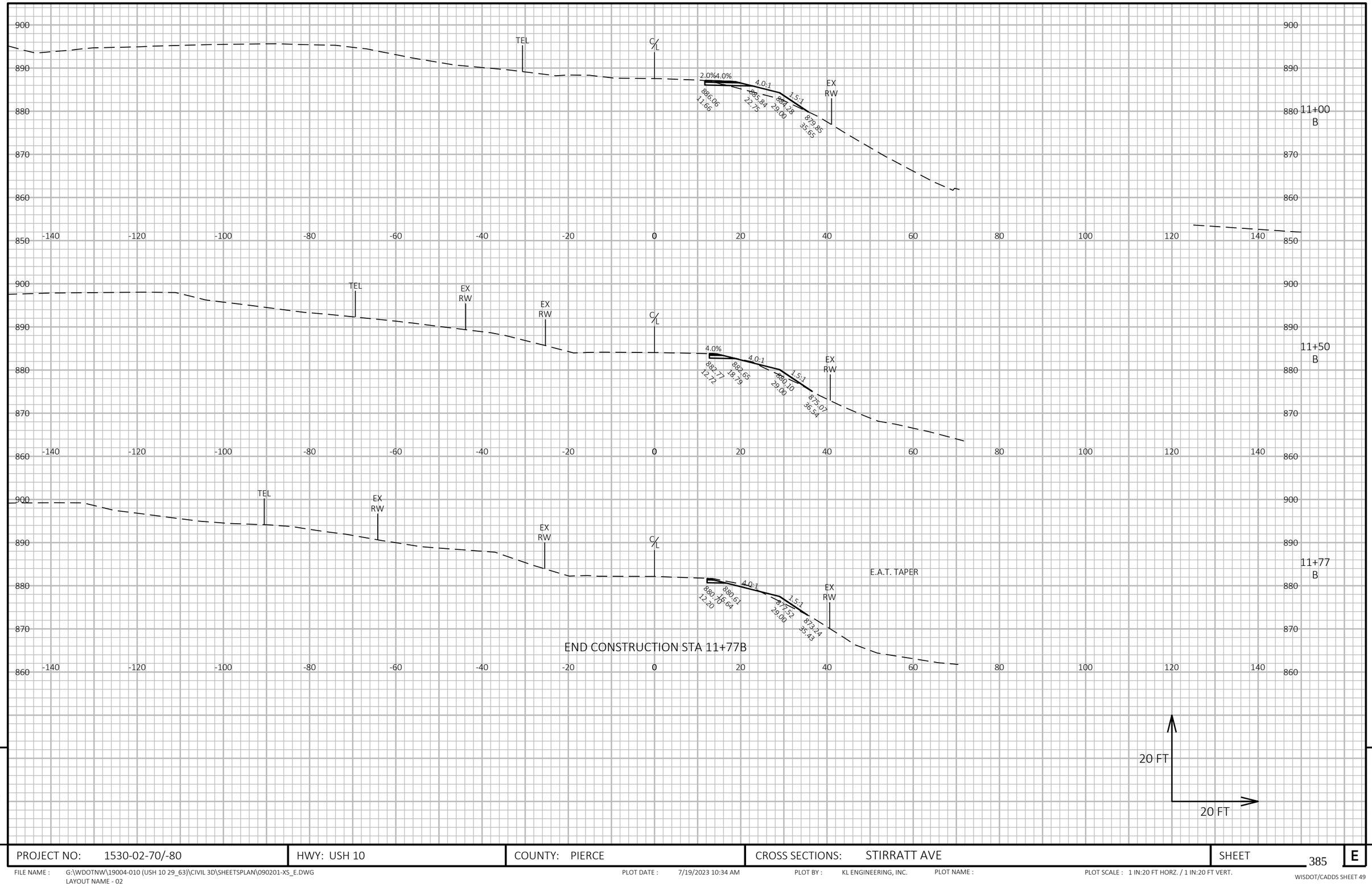
9

PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: STIRRATT AVE	SHEET 384	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_E.DWG
LAYOUT NAME - 01

PLOT DATE : 7/19/2023 10:34 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

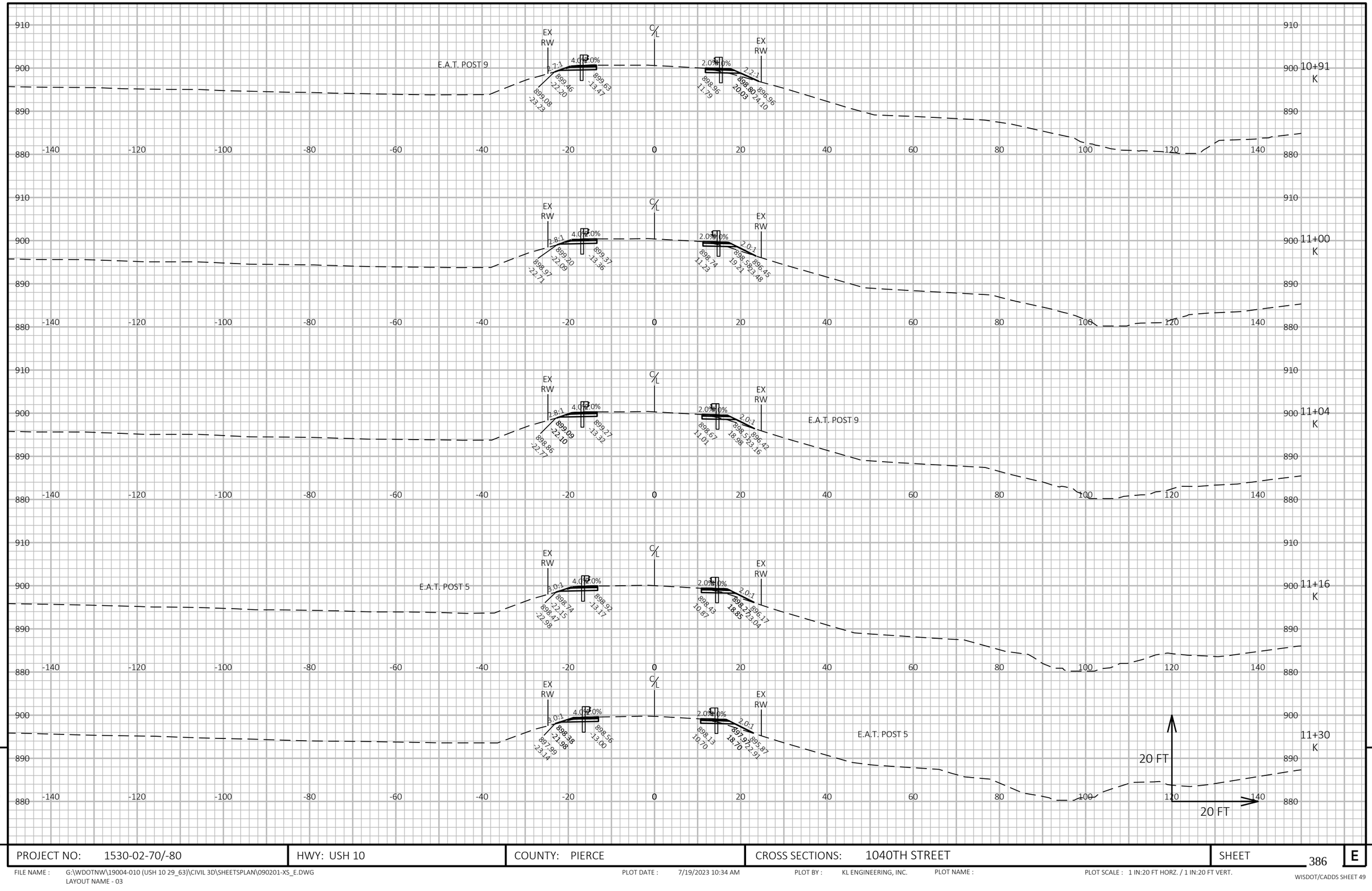
9

PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: STIRRATT AVE	SHEET 385	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_E.DWG
LAYOUT NAME - 02

PLOT DATE : 7/19/2023 10:34 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

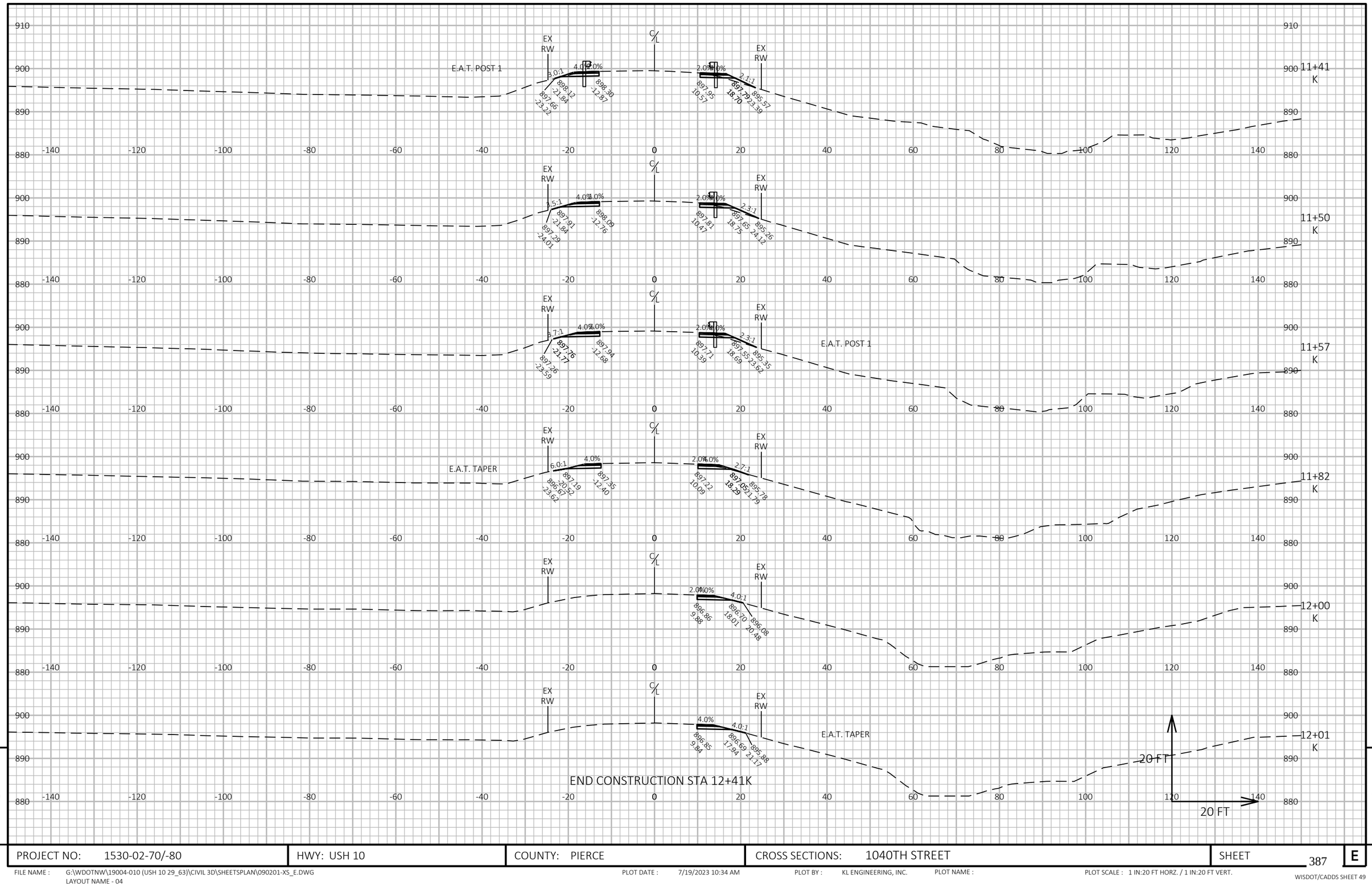


PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: 1040TH STREET	SHEET 386	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_E.DWG
LAYOUT NAME - 03

PLOT DATE : 7/19/2023 10:34 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

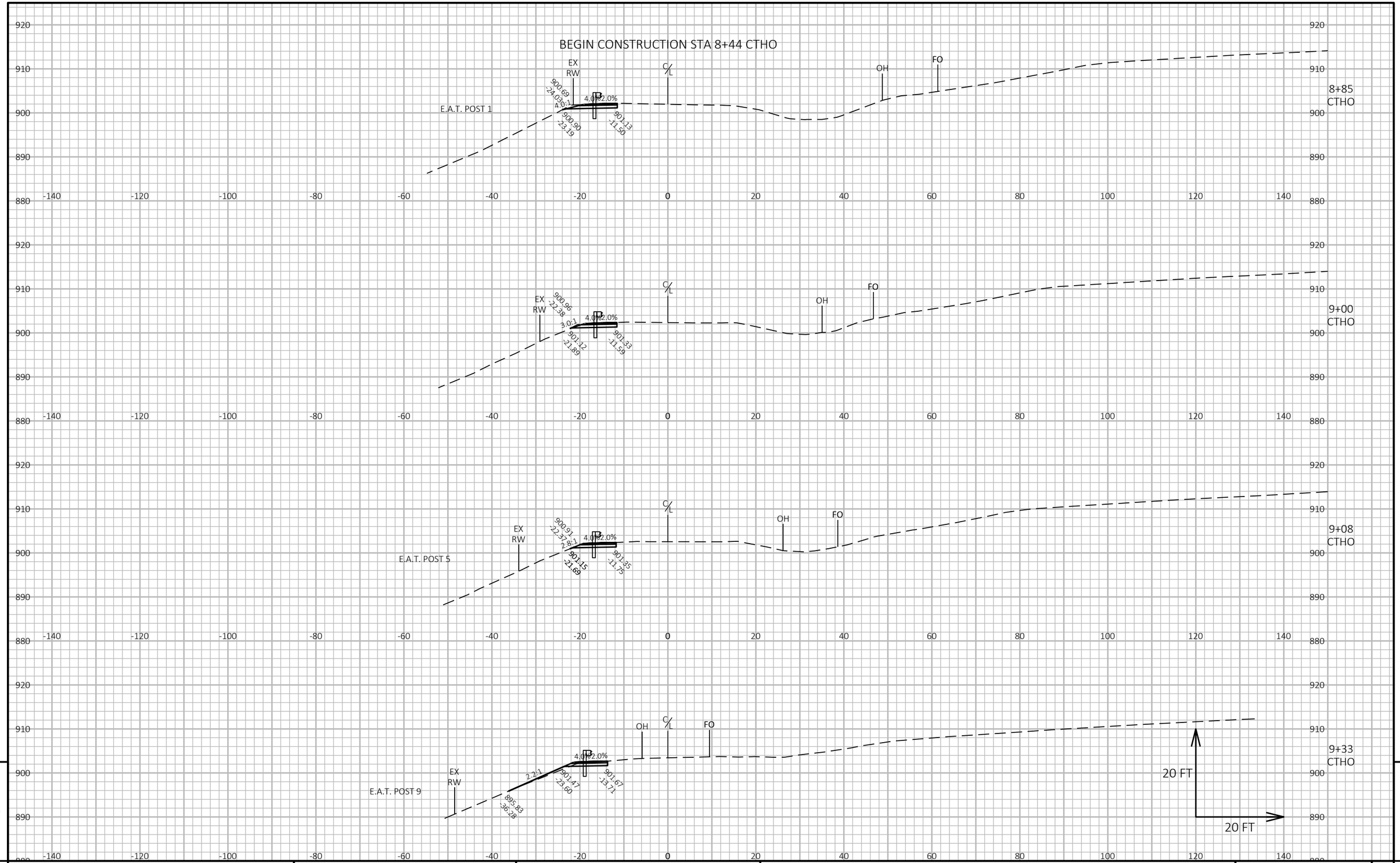


PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: 1040TH STREET	SHEET 387	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_E.DWG
LAYOUT NAME - 04

PLOT DATE : 7/19/2023 10:34 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



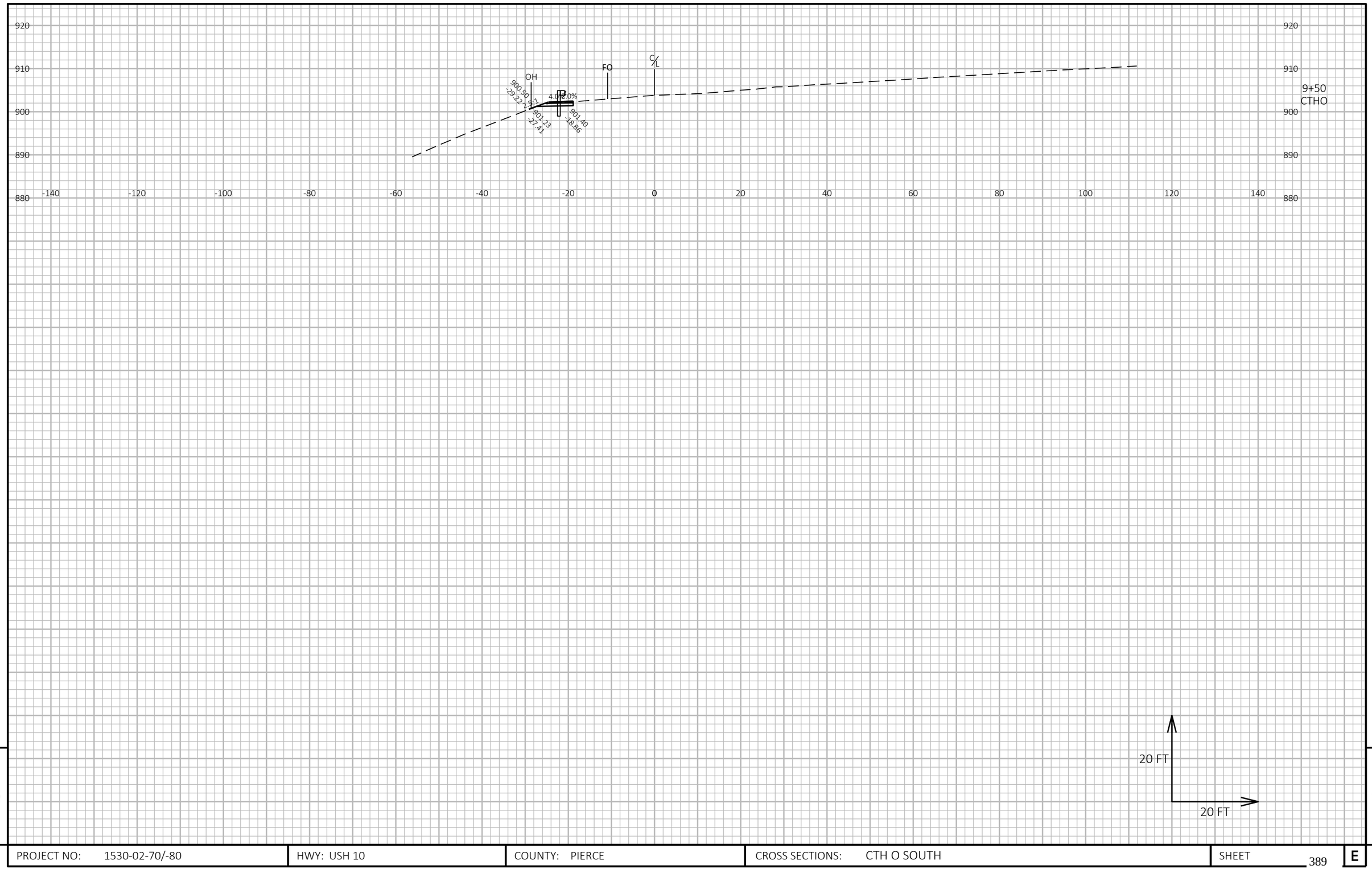
9

9

PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: CTH O SOUTH	SHEET 388	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_E.DWG
LAYOUT NAME - 05

PLOT DATE : 7/19/2023 10:34 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



9

9

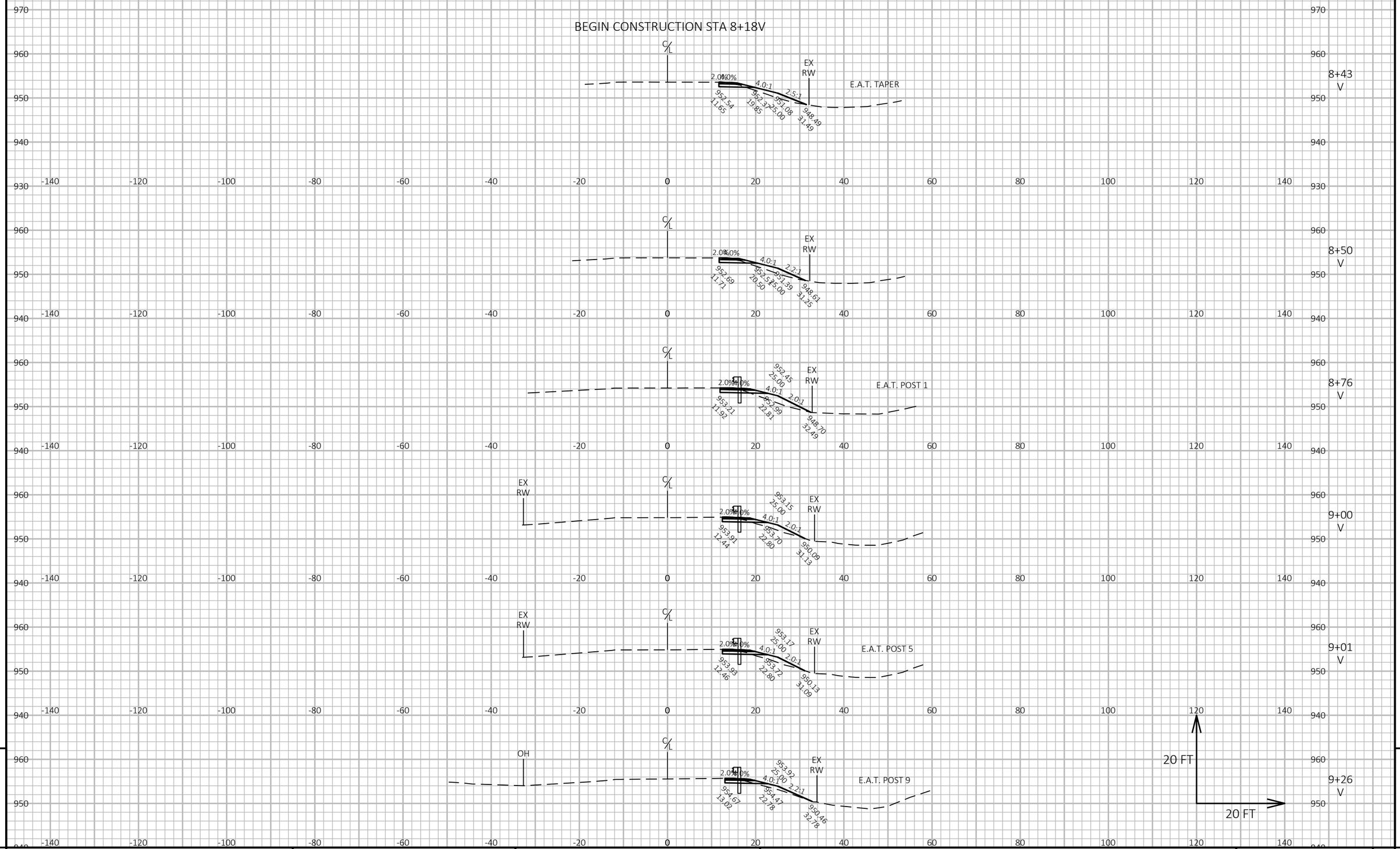
PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: CTH O SOUTH	SHEET 389	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_E.DWG
LAYOUT NAME - 06

PLOT DATE : 7/19/2023 10:34 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

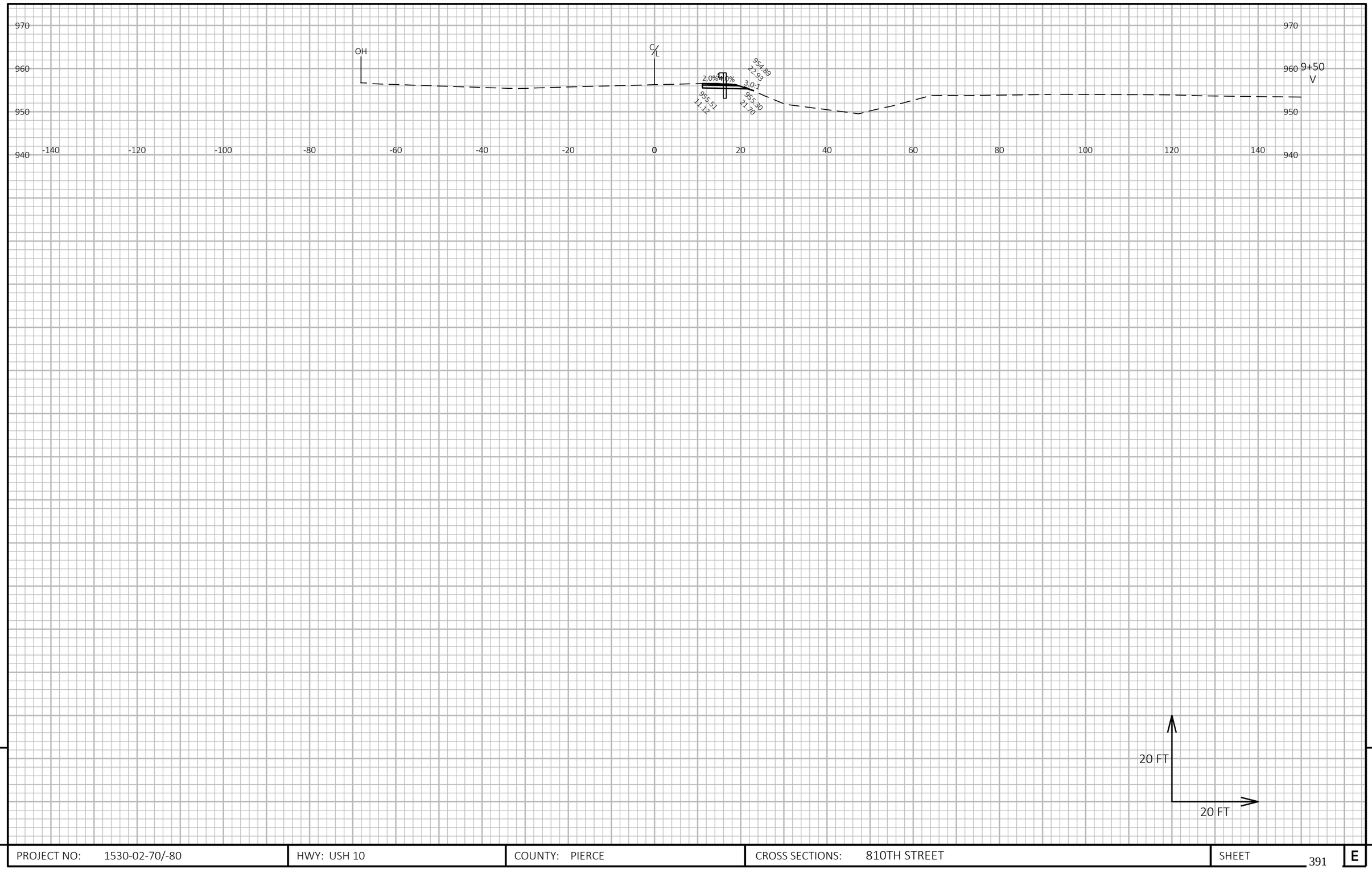
WISDOT/CADDS SHEET 49

BEGIN CONSTRUCTION STA 8+18V



PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: 810TH STREET	SHEET 390	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_E.DWG
LAYOUT NAME - 07
PLOT DATE : 7/19/2023 10:34 AM
PLOT BY : KL ENGINEERING, INC.
PLOT NAME :
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.
WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1530-02-70/-80	HWY: USH 10	COUNTY: PIERCE	CROSS SECTIONS: 810TH STREET	SHEET 391	E

FILE NAME : G:\WDOTNW\19004-010 (USH 10 29_63)\CIVIL 3D\SHEETSPLAN\090201-XS_E.DWG
LAYOUT NAME - 08

PLOT DATE : 7/19/2023 10:34 AM PLOT BY : KL ENGINEERING, INC. PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

Wisconsin Department of Transportation

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through innovation and exceptional service.

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