NWL JUNE 2017

PROJECT ID: 7894-03-71
WITH: N/A

COUNTY: PIERCE

ORDER OF SHEETS

TOTAL SHEETS = 168

18

N

DESIGN DESIGNATION

A.A.D.T. 2017	=	180
A.A.D.T. 2037	=	300
D.H.V.	=	N/A
D.D.	=	N/A
T.	=	N/A
DESIGN SPEED	=	45 MPH
ESALS	=	N/A

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
- 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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

TRIMBELLE - STH 35

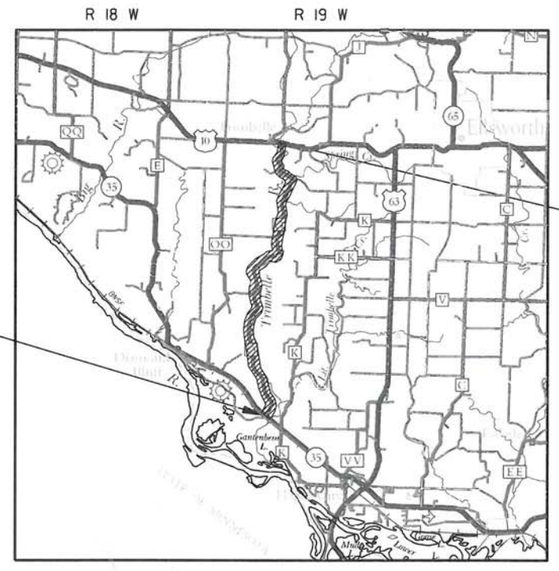
STH 35 TO USH 10

CTH O

PIERCE COUNTY

STATE PROJECT NUMBER
7894-03-71

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
7894-03-71	WISC 2017176	1



BEGIN PROJECT
7894-03-71
STA 100+29.58
Y = 457632.3318
X = 279267.9389

END PROJECT
STA 546+31.41

LAYOUT
SCALE 0 2 MI.

TOTAL NET LENGTH OF CENTERLINE = 8.447 MI.

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), PIERCE COUNTY.

ACCEPTED FOR
COUNTY of PIERCE
10/20/16
DATE:

ORIGINAL PLANS PREPARED BY:
CBS SQUARED INC.

WISCONSIN
JOHN W. BECKFIELD
34273
EAU CLAIRE, WI
PROFESSIONAL ENGINEER
10/20/2016

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	CBS SQUARED INC
Designer	CBS SQUARED INC
Management Consultant	Knight E/A

APPROVED FOR THE DEPARTMENT
DATE: 10/27/16 Ryan B McKane (Signature)

E

FILE NAME : P:\PIERC\15002 - CTH O\cad\TTCTH001.dgn
PLOT DATE : 10/20/2016
PLOT BY : $$...plotuser...$$ PLOT NAME :
PLOT SCALE : $$.....plotscale.....$$
WISDOT/CADDS SHEET 10

STANDARD ABBREVIATIONS

CE	COMMERCIAL ENTRANCE
CL OR C/L OR ℄	CENTER LINE
	CENTRAL ANGLE OR DELTA
DWY	DRIVEWAY
EOR	END POINT OF RADIUS
ENT	ENTRANCE
FE	FIELD ENTRANCE
FO	FIBER OPTIC
CWT	HUNDREDWEIGHT
IP	IRON PIPE OR PIN
L	LENGTH OF CURVE
SY	SQUARE YARD
CY	CUBIC YARD
NC	NORMAL CROWN
PAVT	PAVEMENT
PE	PRIVATE ENTRANCE
R	RADIUS
R/W	RIGHT-OF-WAY
RDWY	ROADWAY
R/L OR ℞	REFERENCE LINE
TYP	TYPICAL
VAR	VARIABLE
VC	VERTICAL CURVE
TV	CABLE TV
OH	OVERHEAD LINE
T	TELEPHONE
E	ELECTRICAL

GENERAL NOTES

THERE ARE UTILITY FACILITIES WITHIN THE PROJECT AREA THAT ARE NOT SHOWN ON THE PLANS. THE CONTRACTOR SHALL COORDINATE THEIR CONSTRUCTION ACTIVITIES WITH A CALL TO DIGGER'S HOTLINE AND/OR A DIRECT CALL TO THE UTILITIES THAT HAVE FACILITIES IN THE AREA.

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

BEARINGS SHOWN ON THE PLANS ARE GRID BEARINGS TO THE NEAREST SECOND.

THE LOCATION OF ALL DRIVEWAYS WILL BE DETERMINED BY THE ENGINEER.

ALIGNMENT WAS BASED ON CENTERLINE SHOTS, IF ADJUSTMENTS TO THE ALIGNMENT ARE NEEDED IN THE FIELD, THE ADJUSTMENTS WILL BE APPROVED BY THE ENGINEER. ADJUSTMENTS SHALL BE INCIDENTAL TO THE PROJECT.

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

VERTICAL REFERENCE DATUM IS GEOID12a - NAV88 (2011) ADJUSTMENT.

EXISTING RIGHT OF WAY IS BASED OFF OF CLARK COUNTY GIS. CONTRACTOR SHALL FIELD VERIFY EXACT LIMITS PRIOR TO CONSTRUCTION AND NOTIFY ENGINEER OF ANY CONFLICTS.

NOT ALL UTILITIES ARE MEMBERS OF DIGGERS HOTLINE.

UTILITY CONTACTS

PIERCE PEPIN COOPERATIVE SERVICES
W7725 USH 10
ELLSWORTH, WI 54011
TELEPHONE: 715.273.2473
ATTENTION: BRAD RISTOW
EMAIL: BRISTOW@PIERCEPEPIN.COM

BEVCOMM
W8108 165TH AVE
PO BOX 125
HAGER CITY, WI 54014
TELEPHONE: 715.792.2103
ATTENTION: CHAD WHITCOMB
EMAIL: CWHITCOMB@BEVCOMM.COM

XCEL ENERGY
1201 LIVINGSTONE RD
HUDSON, WI 54016
TELEPHONE: 715.377.1810
ATTENTION: BRIAN MELLO
EMAIL: BRIAN.M.MELLO@XCELENERGY.COM

KOCH PIPELINE COMPANY LP
6483 85TH ST SOUTH
COTTAGE GROVE, MN 55016
TELEPHONE: 612.655.2554
ATTENTION: TIM SNYDER
EMAIL: TIMOTHY.SNYDER@KOCHPIPELINE.COM

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

CONTROL POINT TABLE

NAME	Y	X	Z	DESC
DN7021	304198.352	465257.0079	1045.4109	HARN
DL4232	273644.6462	464786.9779	718.8062	HARN
CP1	280810.9611	458615.4371	724.6519	3/4 IN REBAR
CP2	281210.5024	458539.9755	721.7388	3/4 IN REBAR
CP3	282794.9266	457459.719	747.0947	3/4 IN REBAR
CP4	283724.776	457336.4575	730.0095	3/4 IN REBAR
CP5	284626.3685	457071.3758	719.708	3/4 IN REBAR
CP6	285786.6358	455973.0738	727.9779	3/4 IN REBAR
CP7	286826.6456	455819.8338	730.7729	3/4 IN REBAR
CP8	288720.7241	455552.2339	730.3078	3/4 IN REBAR
CP9	279545.4981	457858.492	725.085	3/4 IN REBAR
CP10	289961.3844	455245.0429	738.8221	3/4 IN REBAR
CP11	290382.216	455055.9176	747.7601	3/4 IN REBAR
CP12	291707.8871	455022.7039	752.7265	3/4 IN REBAR
CP13	292651.7372	455172.7473	759.8995	3/4 IN REBAR
CP14	293554.9929	455807.7382	751.0164	3/4 IN REBAR
CP15	297459.7039	455943.0001	780.526	3/4 IN REBAR
CP16	292651.7372	455172.7473	759.8995	3/4 IN REBAR
CP17	296532.1528	455644.3973	774.3032	3/4 IN REBAR
CP18	296391.1493	455645.3567	772.6774	3/4 IN REBAR
CP19	296391.1493	455645.3567	772.6774	3/4 IN REBAR
CP20	297459.7039	455943.0001	780.526	3/4 IN REBAR
CP21	300291.6952	456239.7144	789.3619	3/4 IN REBAR
CP22	300660.9028	456793.7281	789.5561	3/4 IN REBAR
CP23	302484.8661	458817.9731	813.851	3/4 IN REBAR
CP24	303495.0877	458720.3129	843.6413	3/4 IN REBAR
CP25	300291.6952	456239.7144	789.3619	3/4 IN REBAR
CP26	300660.9028	456793.7281	789.5561	3/4 IN REBAR
CP27	302484.8661	458817.9731	813.851	3/4 IN REBAR
CP28	303495.0877	458720.3129	843.6413	3/4 IN REBAR
CP29	304014.9296	458684.9674	819.7483	3/4 IN REBAR
CP30	304806.9732	458859.5276	823.3098	3/4 IN REBAR
CP31	307079.8863	459377.6346	837.5386	3/4 IN REBAR
CP32	307434.2785	459524.3271	838.9689	3/4 IN REBAR
CP33	308883.7246	459028.3847	848.6578	3/4 IN REBAR
CP34	310212.8789	459607.342	852.1328	3/4 IN REBAR
CP35	302857.0525	458741.0212	819.8225	3/4 IN REBAR
CP36	302857.0525	458741.0212	819.798	3/4 IN REBAR

CONTROL POINT TABLE (CONT)

NAME	Y	X	Z	DESC
CP37	310429.0079	459814.247	852.3141	3/4 IN REBAR
CP38	310429.0079	459814.247	852.3141	3/4 IN REBAR
CP39	310212.8789	459607.342	852.1083	3/4 IN REBAR
CP40	312472.8271	460751.5451	869.9194	3/4 IN REBAR
CP41	312567.1456	460159.4538	867.2922	3/4 IN REBAR
CP42	316260.1074	458910.4511	888.1525	3/4 IN REBAR
CP43	317079.6817	458844.8963	887.2969	3/4 IN REBAR
CP44	317282.6277	458526.806	901.2224	3/4 IN REBAR

	HYDROLIC 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 = 71.7 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 2.8 ACRES

WISCONSIN DNR LIASON

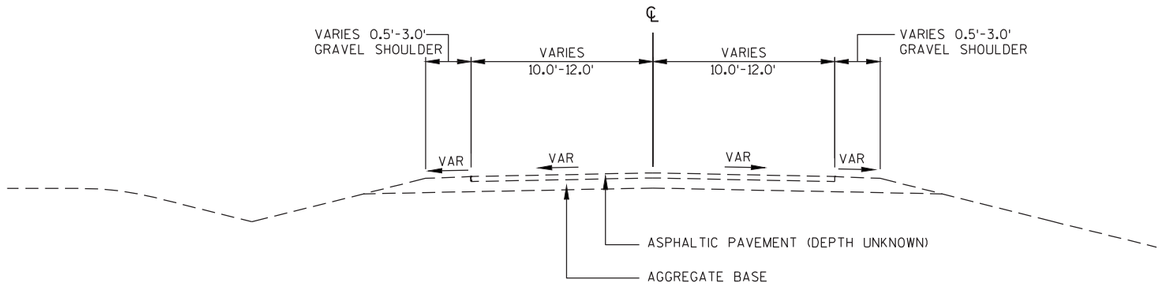
CHRIS WILLGER
DEPARTMENT OF NATURAL RESOURCES
WEST CENTRAL REGION
1300 W CLAIREMONT AVE
EAU CLAIRE, WI 54702
715.839.1609
CHRISTOPHERJ.WILLGER@WISCONSIN.GOV

DESIGN CONTACTS

CBS SQUARED INC.
770 TECHNOLOGY WAY
CHIPPEWA FALLS, WI 54729
TELEPHONE: 715.861.5226
ATTENTION: JOHN BECKFIELD, PE

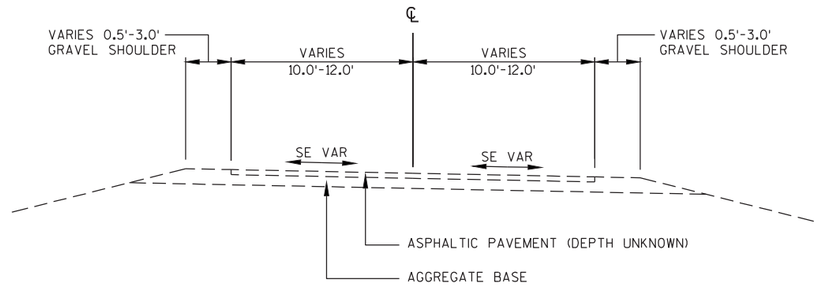
CHAD JOHNSON, PE
PIERCE COUNTY HIGHWAY DEPARTMENT
612 CAIRNS ST
ELLSWORTH, WI 54486
715.273.5096
CHAD.JOHNSON@CO.PIERCE.WI.US

2



TYPICAL EXISTING SECTION - CTH O

STA 100+00.00 TO STA 546+31.41



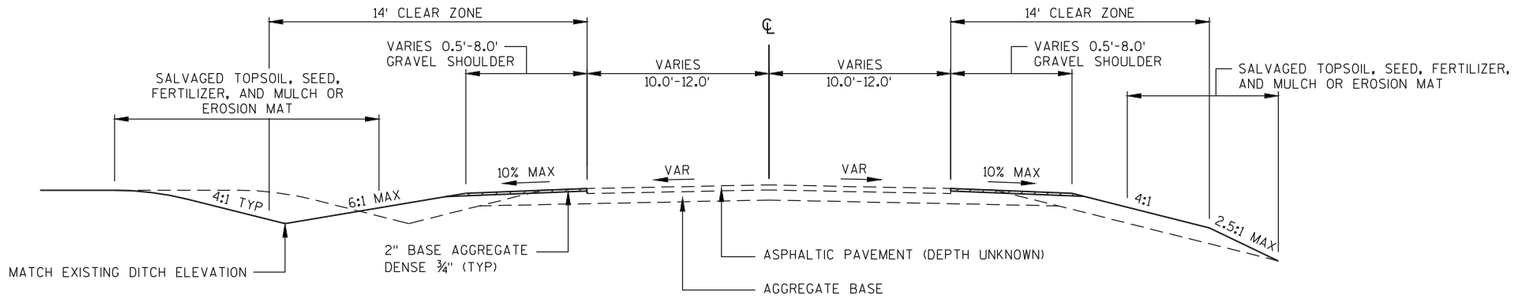
TYPICAL SUPERELEVATED EXISTING SECTION - CTH O

PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	TYPICAL SECTIONS	SHEET 3	E

FILE NAME : P:\PIERC\15002 - CTH O\C3D\SHEETSPLAN\020301TS.DWG

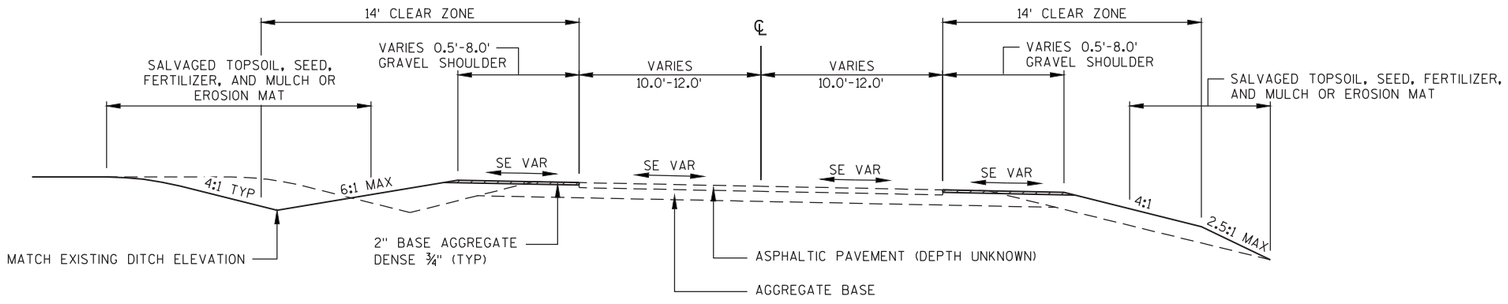
SHEET NAME: TYCTHO01

2



TYPICAL FINISHED SECTION - CTH O

STA 100+00.00 TO STA 546+31.41



TYPICAL SUPERELEVATED FINISHED SECTION - CTH O

NOTES:

SEE THE FOLLOWING SDD'S FOR OTHER DETAILS NOT SHOWN:

14B27 "STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL"
14B42 "MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL"
14B44 "MIDWEST GUARDRAIL SYSTEM (MGS) TERMINAL"
14B45 "MIDWEST GUARDRAIL SYSTEM (MGS) THRIE BEAM TRANSITION"

N

PC 8+00.93
Y=296368.8520
X=455481.8030

STRUCTURE P-47-086
STA 290+19.51 CTH O
(TO REMAIN)

PI 8+72.85

+89.71
14.5' LT

STEEL PLATE BEAM GUARD EAT

STEEL PLATE BEAM GUARD
SHORT RADIUS TERMINAL

STEEL PLATE BEAM
GUARD, CLASS A

STEEL PLATE
BEAM GUARD
SHORT RADIUS

370TH AVE

PT 9+44.31
Y=296409.0570
X=455619.1961

BEVCOMM

STA 289+47.65 CTH O =
STA 10+00.00 370TH AVE

PT 288+82.54
Y=296361.7882
X=455704.2421

PC 289+93.32
Y=296459.8201
X=455652.6439

+10.47
16.8' LT

+40.14
15.5' LT

PI 289+89.43

+54.02
9.9' RT

PI 29+46.09

PC 29+28.69
Y=296542.1527
X=455556.3520

DRIVEWAY

PT 29+62.57
Y=296531.3785
X=455587.9953

STA 290+71.57 CTH O =
STA 30+00.00 DRIVEWAY

PI 291+46.41

CURVE 26
PI STA. 291+46.41
Y=296595.291
X=455581.340
DELTA= 52°01'34.48" RT.
T=153.09'
L=284.85'
R=313.70'

① PC 29+81.79
Y=296530.4968
X=455607.1979

② PT 29+96.95
Y=296532.0914
X=455622.2194

PI 287+26.71

CURVE 25
PI STA. 287+26.71
Y=296215.723
X=455781.122
DELTA= 33°05'55.40" LT.
T=165.06'
L=320.89'
R=555.48'

CTH O

N 27°45'35" W

EXISTING GUARDRAIL TO REMAIN

+35.53
16.0' RT

+88.80
15.5' RT

MGS GUARDRAIL
TERMINAL EAT

STA 290+44.33 CTH O =
STA 20+00.00 372ND AVE

+47.61
9.0' RT

ANCHORAGES FOR
STEEL PLATE BEAM
GUARD TYPE 2

+72.60
9.7' RT

SLOPE INTERCEPTS (TYP)

372ND AVE

N 89°32'33" E

POE 21+76.13
Y=296512.3810
X=455807.5680

PI 21+13.48
Y=296517.1530
X=455745.1090

PI 21+40.88
Y=296515.7080
X=455772.4770

PC 20+20.78
Y=296512.0456
X=455652.7303

PI 20+32.60

PT 20+44.31
Y=296516.3937
X=455675.9675

PT 292+78.17
Y=296734.8539
X=455644.2575

N 24°16'00" E

LEGEND

SILT FENCE

RIPRAP HEAVY WITH
GEOTEXTILE FABRIC TYPE HR

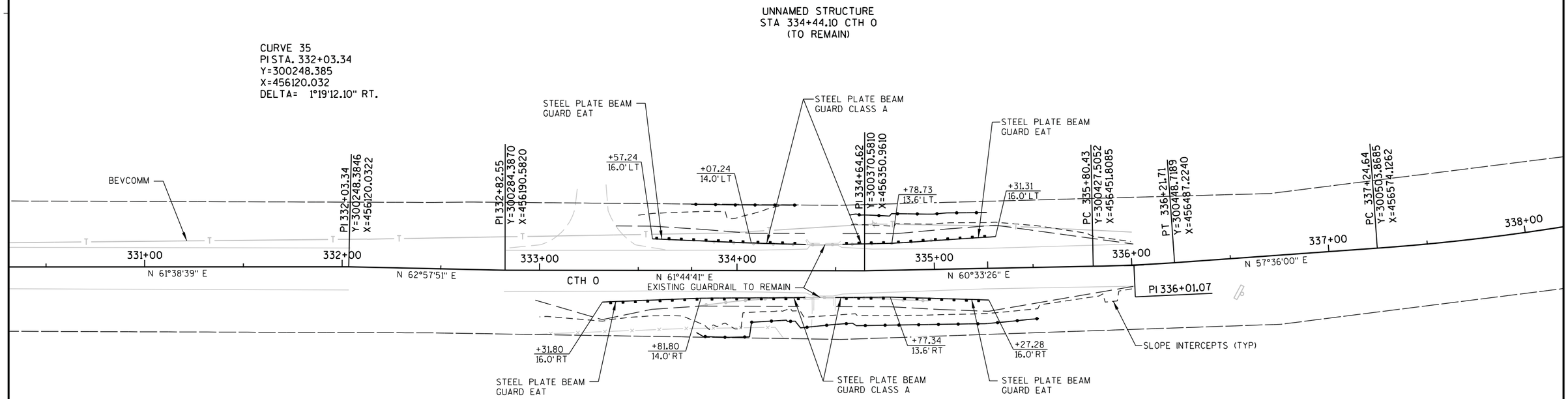
PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	CONSTRUCTION DETAILS - BEAM GUARD LAYOUTS	SHEET 5	E

2

NOTES:

SEE THE FOLLOWING SDD'S FOR OTHER DETAILS NOT SHOWN:

14B27 "STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL"
14B42 "MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL"
14B44 "MIDWEST GUARDRAIL SYSTEM (MGS) TERMINAL"
14B45 "MIDWEST GUARDRAIL SYSTEM (MGS) THRIE BEAM TRANSITION"



CURVE 36
PI STA. 332+82.55
Y=300284.387
X=456190.582
DELTA= 1°13'10.48" LT.

CURVE 37
PI STA. 334+64.62
Y=300370.581
X=456350.961
DELTA= 1°11'15.26" LT.

CURVE 38
PI STA. 336+01.07
Y=300437.655
X=456469.790
DELTA= 2°57'25.20" LT.
T=20.65'
L=41.29'
R=800.00'

N

LEGEND

SILT FENCE

PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	CONSTRUCTION DETAILS - BEAM GUARD LAYOUTS	SHEET 6	E

2

NOTES:

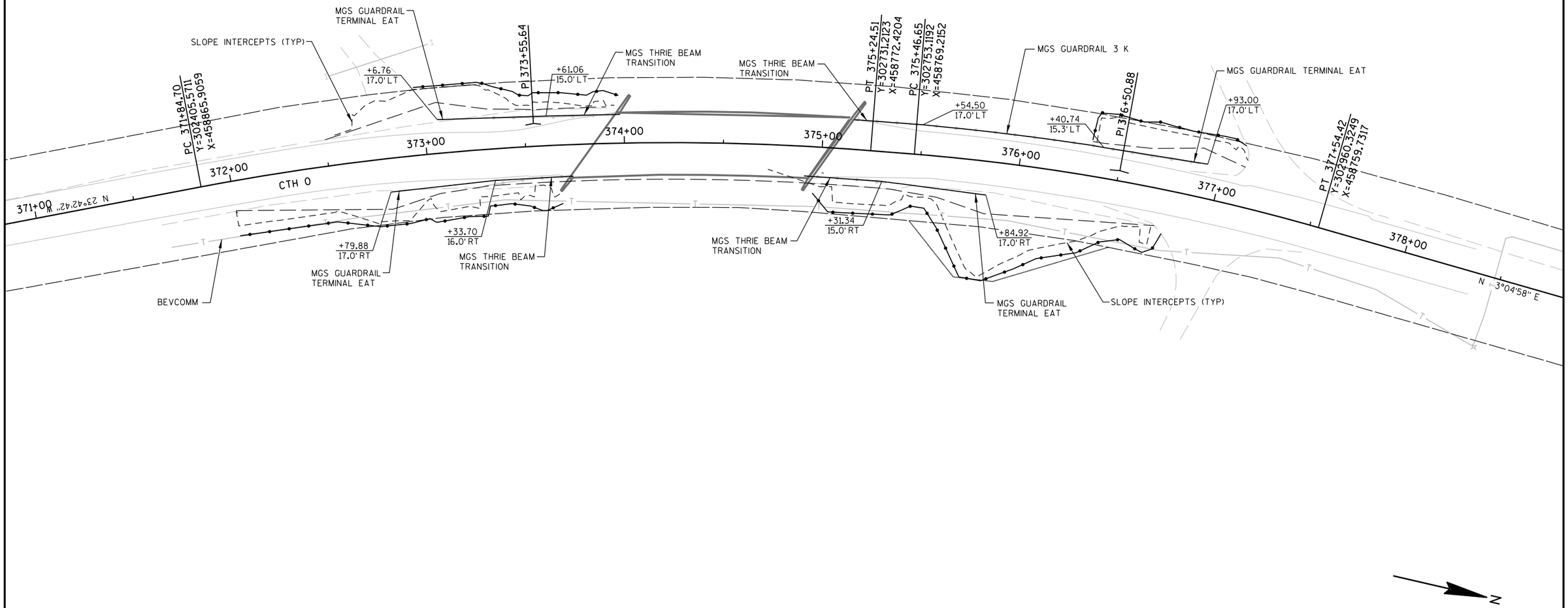
SEE THE FOLLOWING SDD'S FOR OTHER DETAILS NOT SHOWN:

14B27 "STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL"
14B42 "MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL"
14B44 "MIDWEST GUARDRAIL SYSTEM (MGS) TERMINAL"
14B45 "MIDWEST GUARDRAIL SYSTEM (MGS) THRIE BEAM TRANSITION"

CURVE 47
PI STA. 373+55.64
Y=302562.077
X=458797.167
DELTA= 15°23'16.01" RT.
T=170.94'
L=339.81'
R=1265.29'

STRUCTURE B-47-048
STA 374+44.25 CTH 0
(TO REMAIN)

CURVE 48
PI STA. 376+50.88
Y=302856.248
X=458754.126
DELTA= 11°24'24.22" RT.
T=104.23'
L=207.77'
R=1043.60'



LEGEND

SILT FENCE

PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	CONSTRUCTION DETAILS - BEAM GUARD LAYOUTS	SHEET 7	E

2

NOTES:

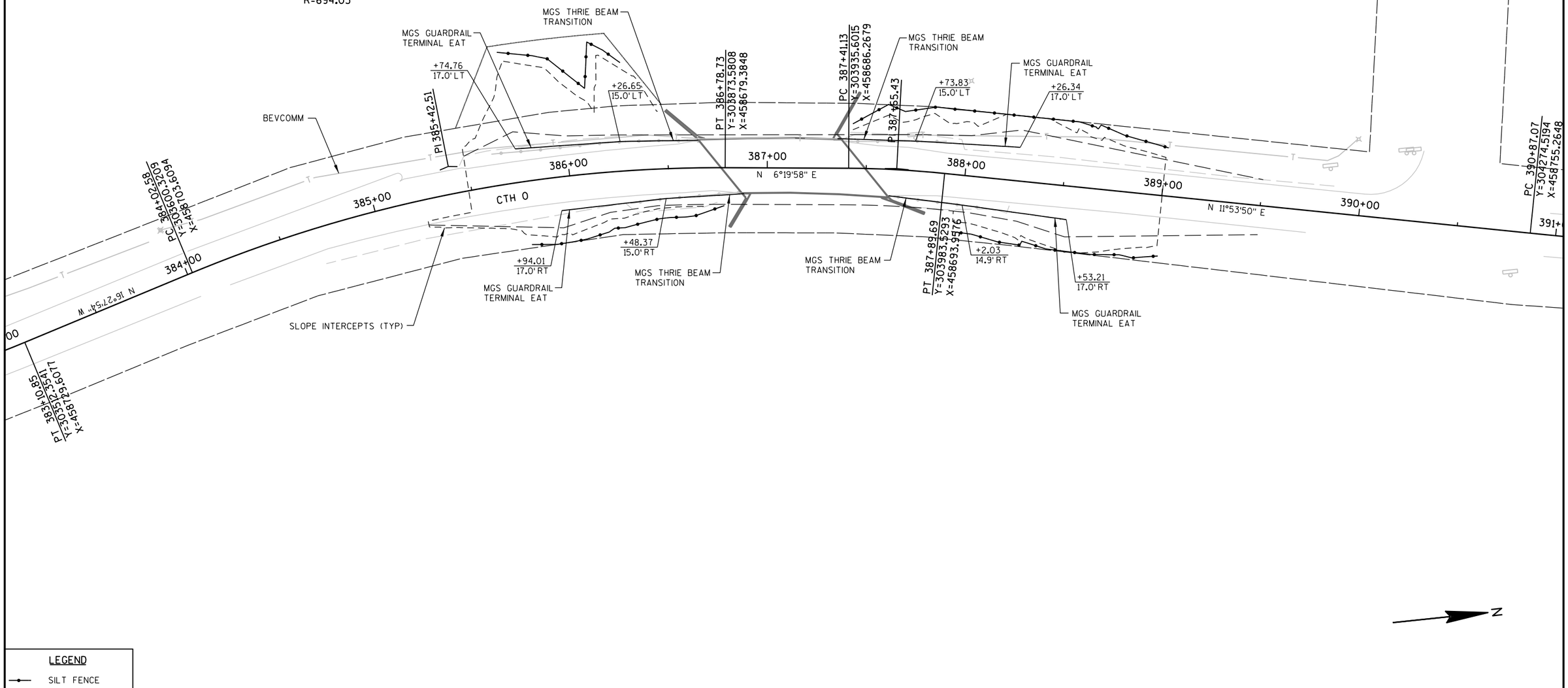
SEE THE FOLLOWING SDD'S FOR OTHER DETAILS NOT SHOWN:

14B27 "STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL"
14B42 "MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL"
14B44 "MIDWEST GUARDRAIL SYSTEM (MGS) TERMINAL"
14B45 "MIDWEST GUARDRAIL SYSTEM (MGS) THRIE BEAM TRANSITION"

CURVE 50
PI STA. 385+42.51
Y=303734.509
X=458663.951
DELTA= 22°47'51.71" RT.
T=139.93'
L=276.15'
R=694.03'

STRUCTURE B-47-068
STA 387+12.84 CTH 0
(TO REMAIN)

CURVE 51
PI STA. 387+65.43
Y=303959.752
X=458688.948
DELTA= 5°33'52.39" RT.
T=24.30'
L=48.56'
R=500.00'



LEGEND

SILT FENCE

PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	CONSTRUCTION DETAILS - BEAM GUARD LAYOUTS	SHEET 8	E

2

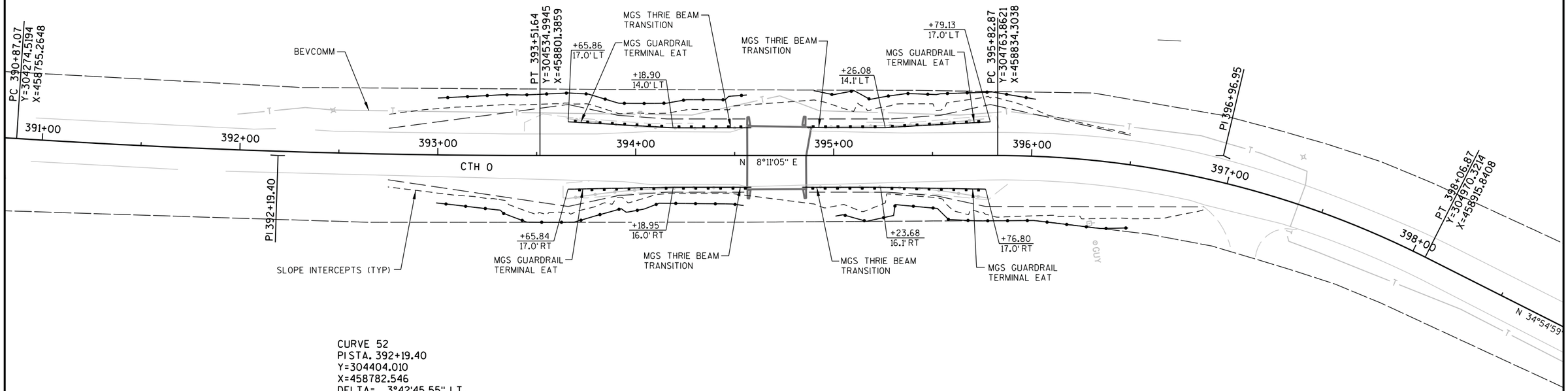
NOTES:

SEE THE FOLLOWING SDD'S FOR OTHER DETAILS NOT SHOWN:

14B27 "STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL"
14B42 "MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL"
14B44 "MIDWEST GUARDRAIL SYSTEM (MGS) TERMINAL"
14B45 "MIDWEST GUARDRAIL SYSTEM (MGS) THRIE BEAM TRANSITION"

CURVE 53
PI STA. 396+96.95
Y=304876.778
X=458850.545
DELTA= 26°43'54.10" RT.
T=114.08'
L=224.00'
R=480.12'

STRUCTURE B-47-142
STA 394+71.05 CTH 0
(TO REMAIN)



CURVE 52
PI STA. 392+19.40
Y=304404.010
X=458782.546
DELTA= 3°42'45.55" LT.
T=132.33'
L=264.57'
R=4083.04'

LEGEND
SILT FENCE

PROJECT NO: 7894-03-71	HWY: CTH 0	COUNTY: PIERCE	CONSTRUCTION DETAILS - BEAM GUARD LAYOUTS	SHEET 9	E

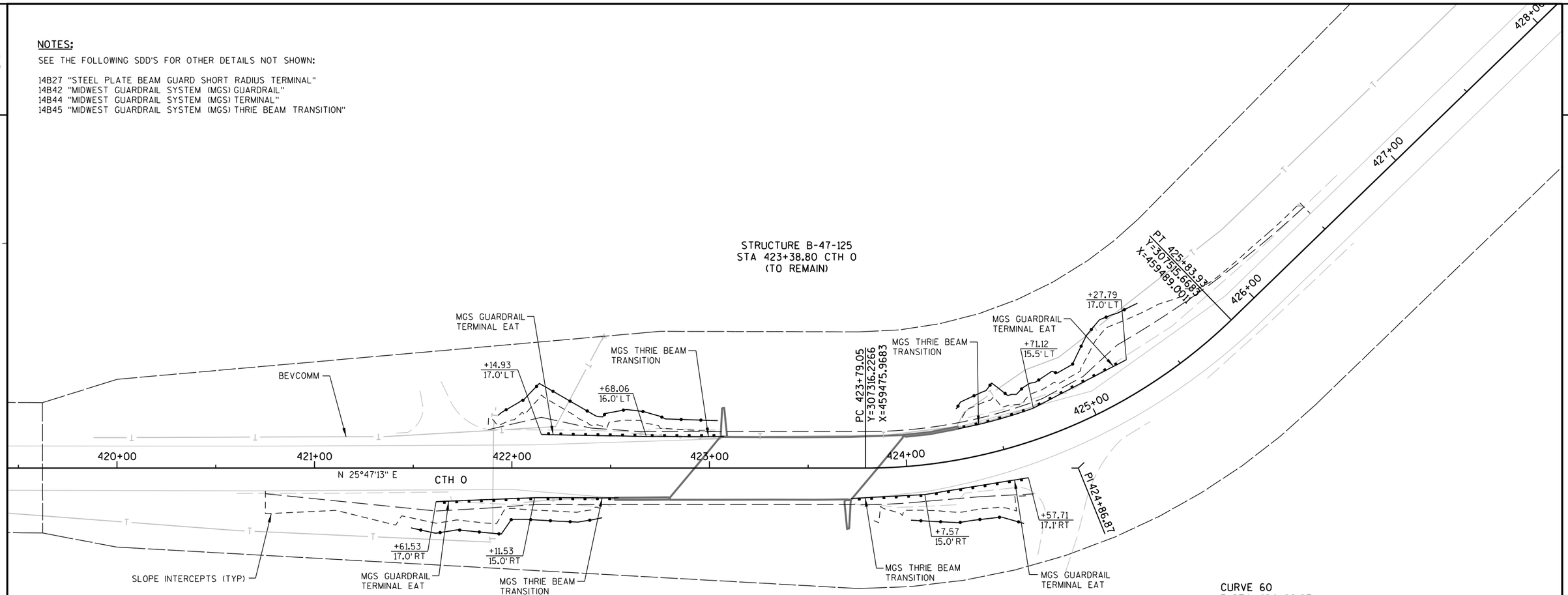
FILE NAME : P:\PIERC\15002 - CTH 0\cad\PP05_P-47-142.dgn PLOT DATE : 1/30/2017 PLOT BY : $$...plotuser...$$ PLOT NAME : PLOT SCALE : $$.....plotscale.....$$

WISDOT/CADDS SHEET 42

NOTES:

SEE THE FOLLOWING SDD'S FOR OTHER DETAILS NOT SHOWN:

14B27 "STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL"
14B42 "MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL"
14B44 "MIDWEST GUARDRAIL SYSTEM (MGS) TERMINAL"
14B45 "MIDWEST GUARDRAIL SYSTEM (MGS) THRIE BEAM TRANSITION"



CURVE 60
PI STA. 424+86.87
Y=307413.308
X=459522.872
DELTA= 44°05'46.96" LT.
T=107.82'
L=204.89'
R=266.22'

N

LEGEND
SILT FENCE

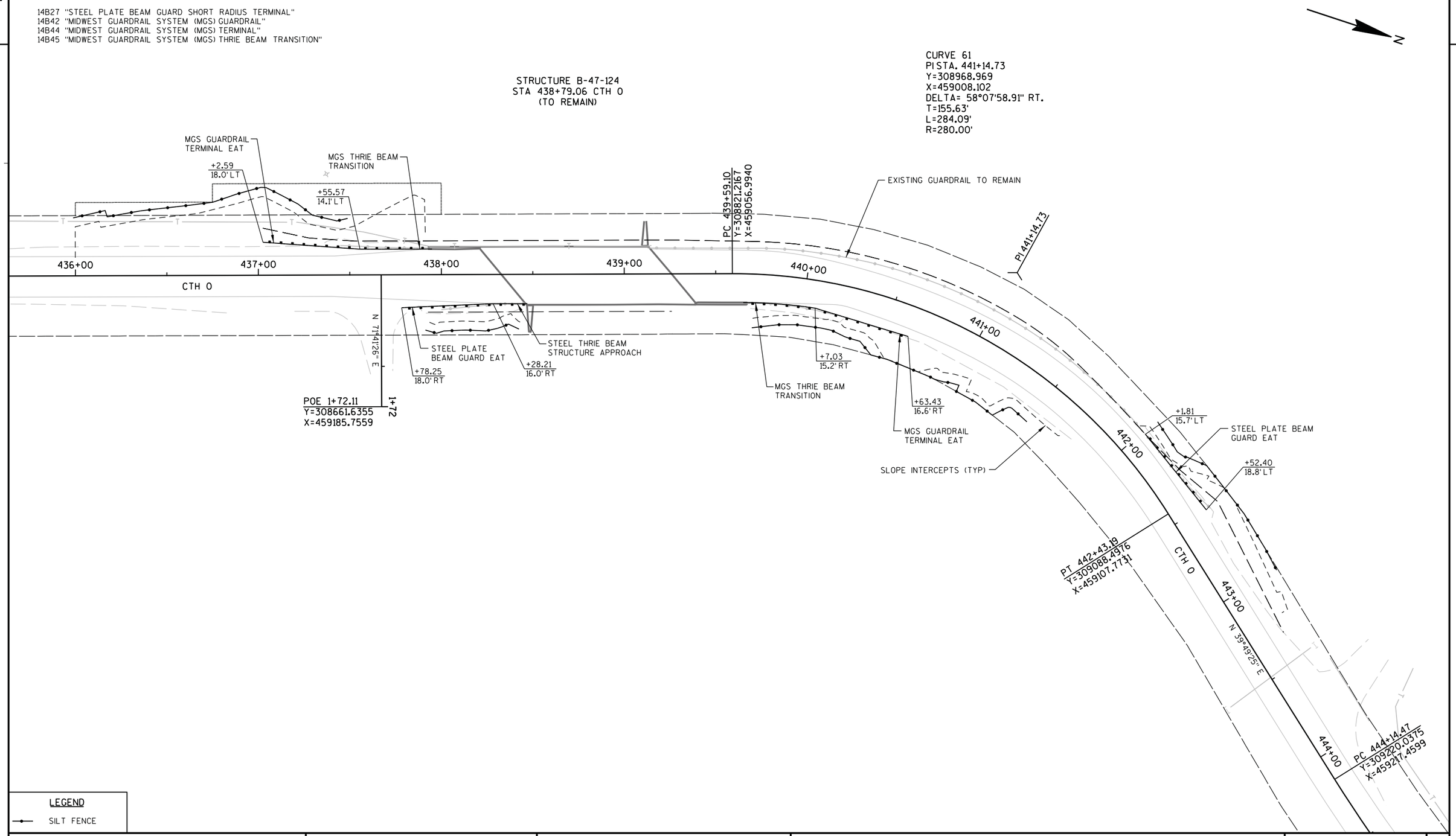
PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	CONSTRUCTION DETAILS - BEAM GUARD LAYOUTS	SHEET 10	E

2

NOTES:

SEE THE FOLLOWING SDD'S FOR OTHER DETAILS NOT SHOWN:

14B27 "STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL"
14B42 "MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL"
14B44 "MIDWEST GUARDRAIL SYSTEM (MGS) TERMINAL"
14B45 "MIDWEST GUARDRAIL SYSTEM (MGS) THRIE BEAM TRANSITION"



LEGEND

SILT FENCE

PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	CONSTRUCTION DETAILS - BEAM GUARD LAYOUTS	SHEET 11	E

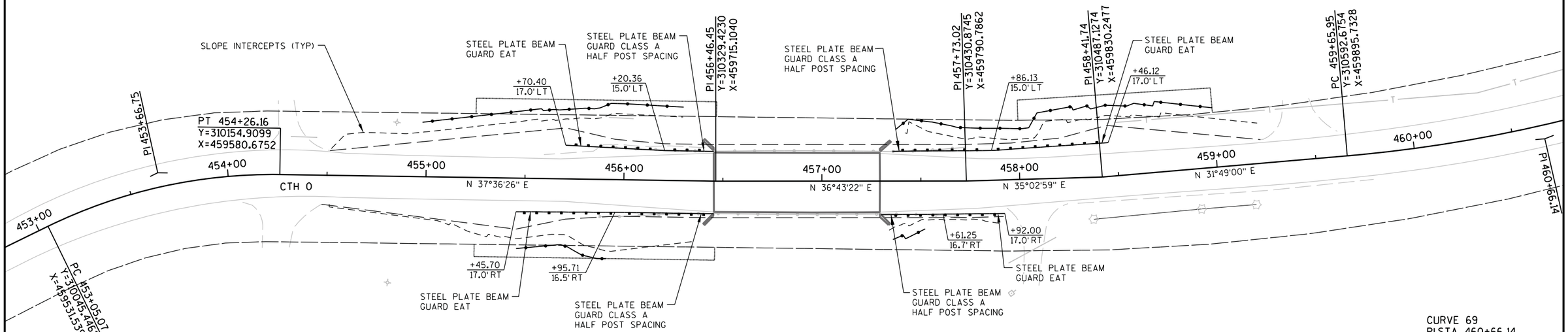
NOTES:

SEE THE FOLLOWING SDD'S FOR OTHER DETAILS NOT SHOWN:

14B27 "STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL"
14B42 "MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL"
14B44 "MIDWEST GUARDRAIL SYSTEM (MGS) TERMINAL"
14B45 "MIDWEST GUARDRAIL SYSTEM (MGS) THRIE BEAM TRANSITION"

CURVE 65
PI STA. 453+66.75
Y=310106.046
X=459543.035
DELTA= 26°51'56.94" RT.
T=61.68'
L=121.09'
R=258.25'

STRUCTURE P-47-080
STA 456+86.97 CTH 0
(TO REMAIN)



CURVE 66
PI STA. 456+46.45
Y=310329.423
X=459715.104
DELTA= 0°53'04.63" LT.

CURVE 67
PI STA. 457+73.02
Y=310430.875
X=459790.786
DELTA= 1°40'22.77" LT.

CURVE 68
PI STA. 458+41.74
Y=310487.127
X=459830.248
DELTA= 3°13'58.92" LT.

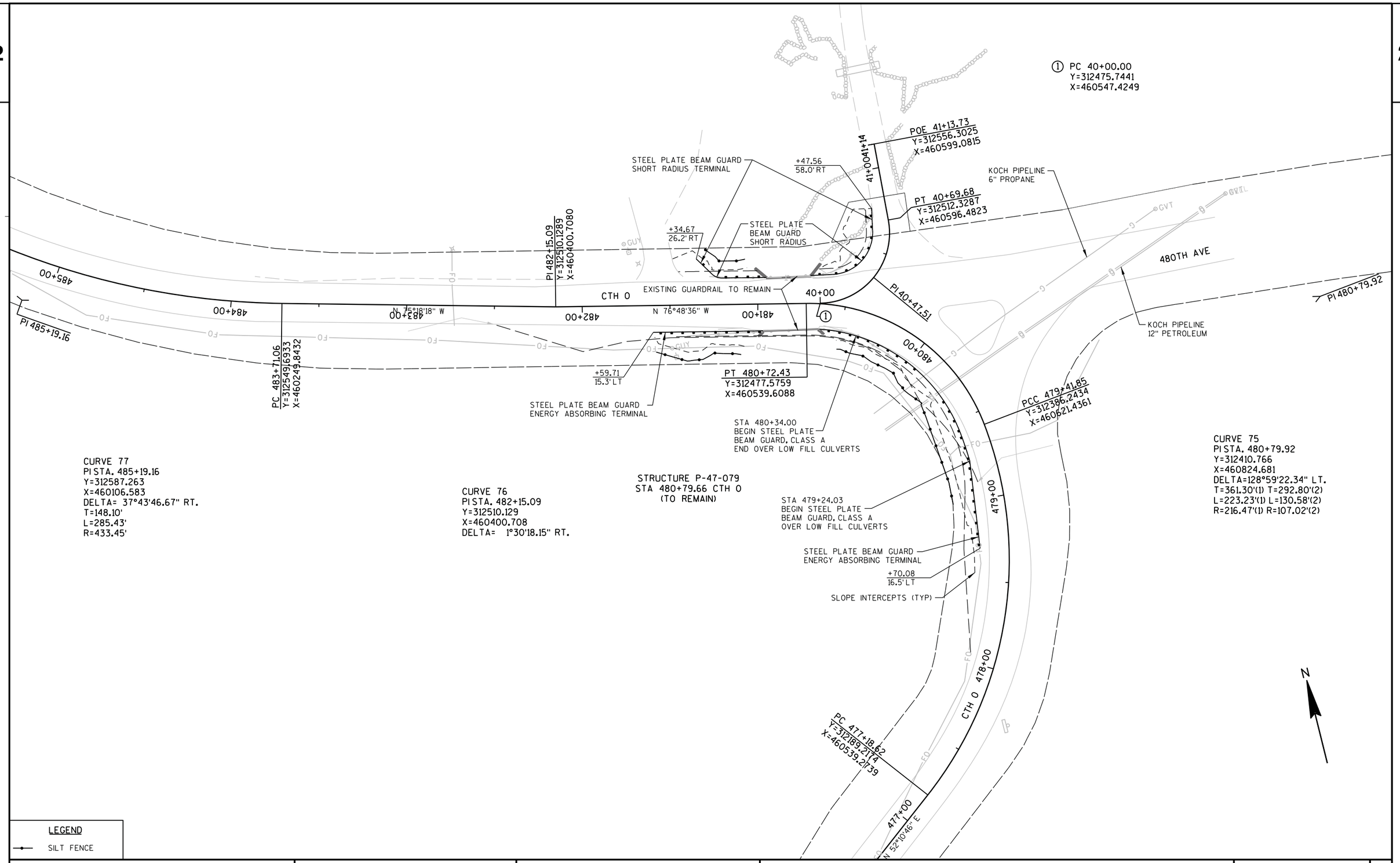
CURVE 69
PI STA. 460+66.14
Y=310677.811
X=459948.553
DELTA= 15°51'37.03" LT.
T=100.19'
L=199.10'
R=719.25'

N

LEGEND
SILT FENCE

PROJECT NO: 7894-03-71	HWY: CTH 0	COUNTY: PIERCE	CONSTRUCTION DETAILS - BEAM GUARD LAYOUTS	SHEET 12	E

2



LEGEND

SILT FENCE

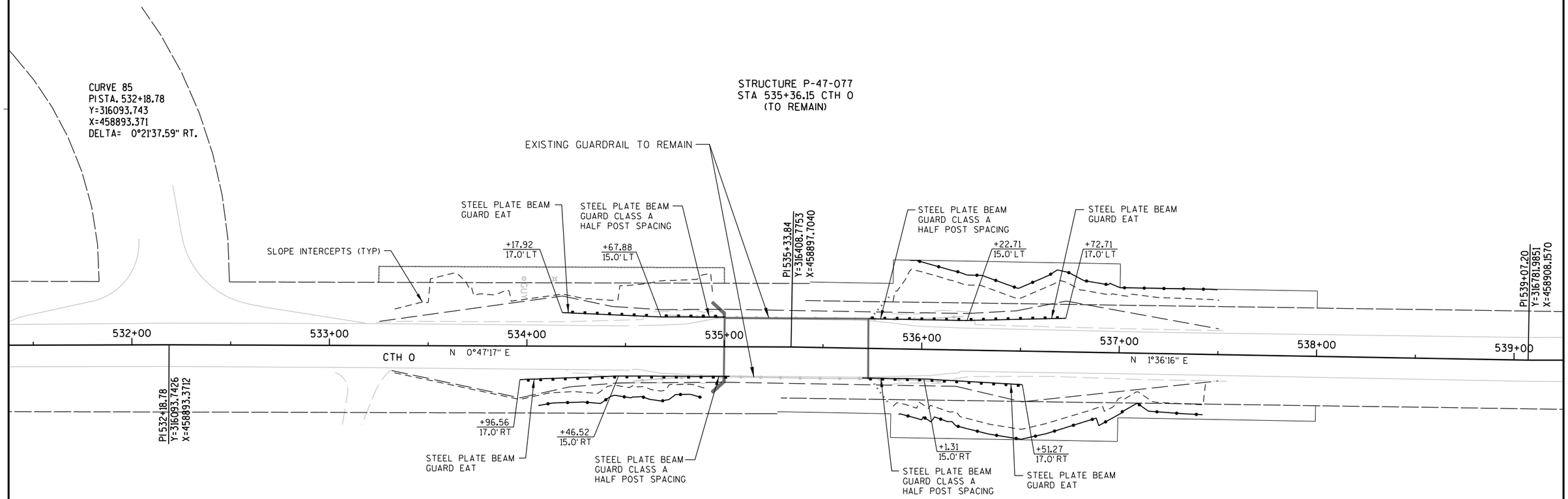
PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	CONSTRUCTION DETAILS - BEAM GUARD LAYOUTS	SHEET 13	E

2

NOTES:

SEE THE FOLLOWING SDD'S FOR OTHER DETAILS NOT SHOWN:

14B27 "STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL"
14B42 "MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL"
14B44 "MIDWEST GUARDRAIL SYSTEM (MGS) TERMINAL"
14B45 "MIDWEST GUARDRAIL SYSTEM (MGS) THRIE BEAM TRANSITION"



LEGEND

SILT FENCE

PROJECT NO: 7894-03-71	HWY: CTH 0	COUNTY: PIERCE	CONSTRUCTION DETAILS - BEAM GUARD LAYOUTS	SHEET 14	E

2

SIGNING GENERAL NOTES

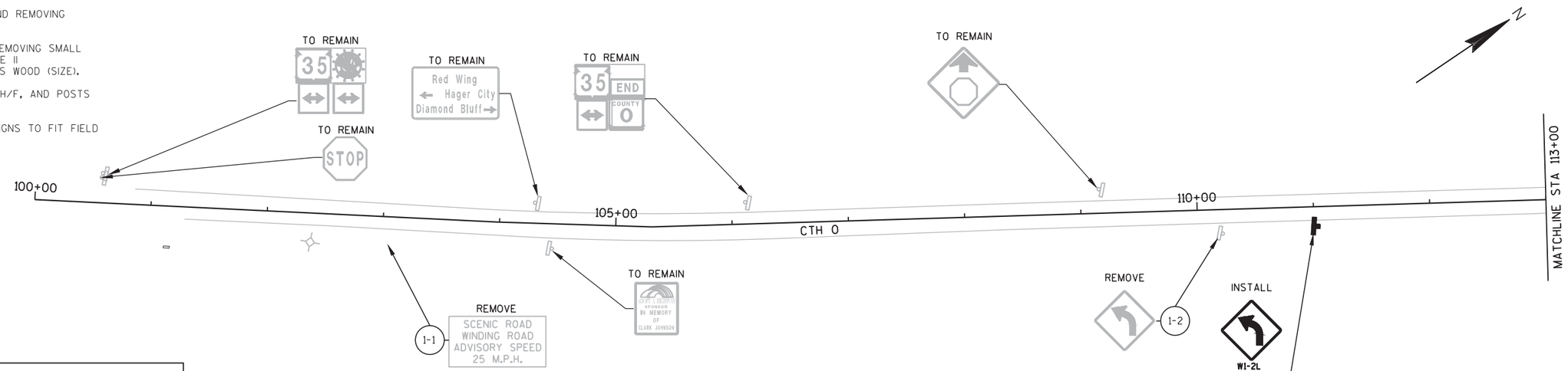
ALL SIGNS THAT ARE MOUNTED TO LIGHT POLES AND OVERHANG THE SIDEWALK SHALL HAVE A MOUNTING HEIGHT OF 7'-3" MIN.

REMOVE = REMOVING SIGNS TYPE II AND REMOVING SMALL SIGN SUPPORTS.

REPLACE = REMOVING SIGNS TYPE II, REMOVING SMALL SIGN SUPPORTS, SIGNS TYPE II REFLECTIVE H/F AND POSTS WOOD (SIZE).

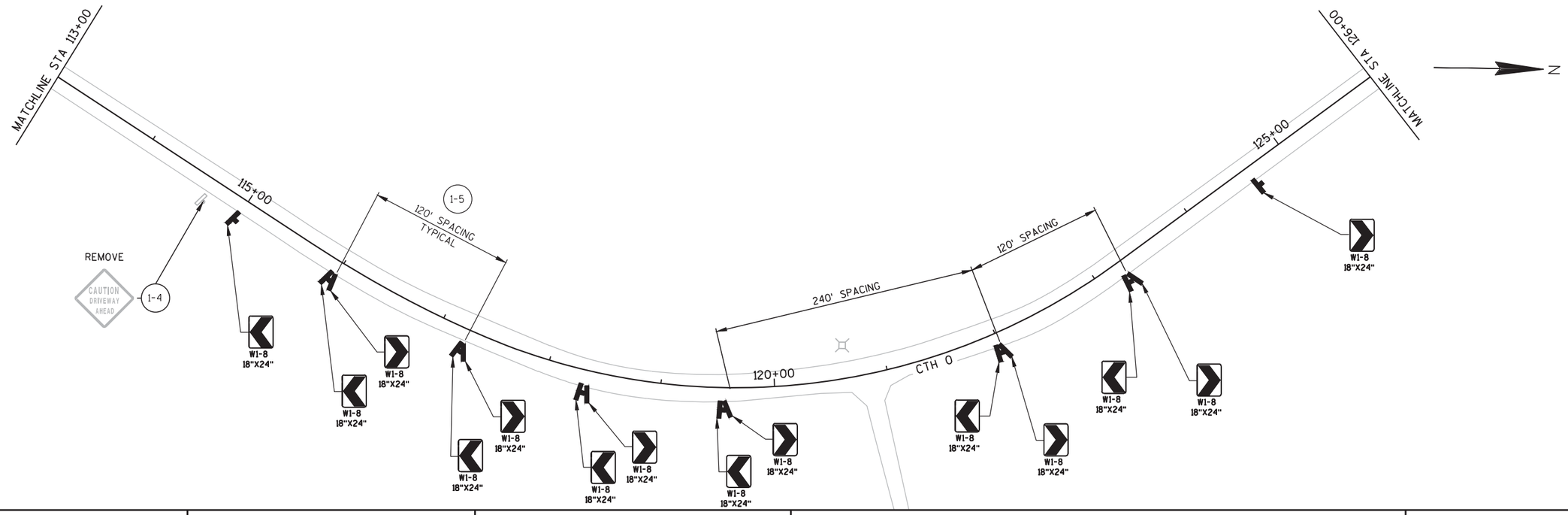
INSTALL = SIGNS TYPE II REFLECTIVE H/F, AND POSTS WOOD (SIZE).

ENGINEER WILL MODIFY LOCATION OF SIGNS TO FIT FIELD CONDITIONS.



SIGN LEGEND

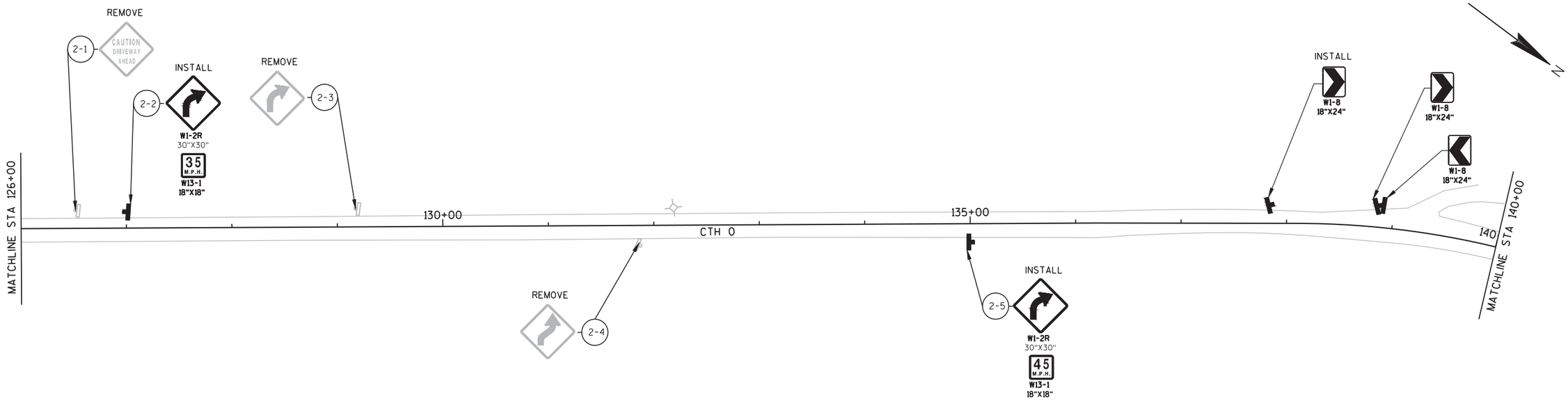
- X-X — SIGN GROUP NUMBER
- SIGNS TYPE II REFLECTIVE H/F ON POSTS WOOD
- EXISTING SIGNS TYPE II REFLECTIVE H/F ON POSTS WOOD

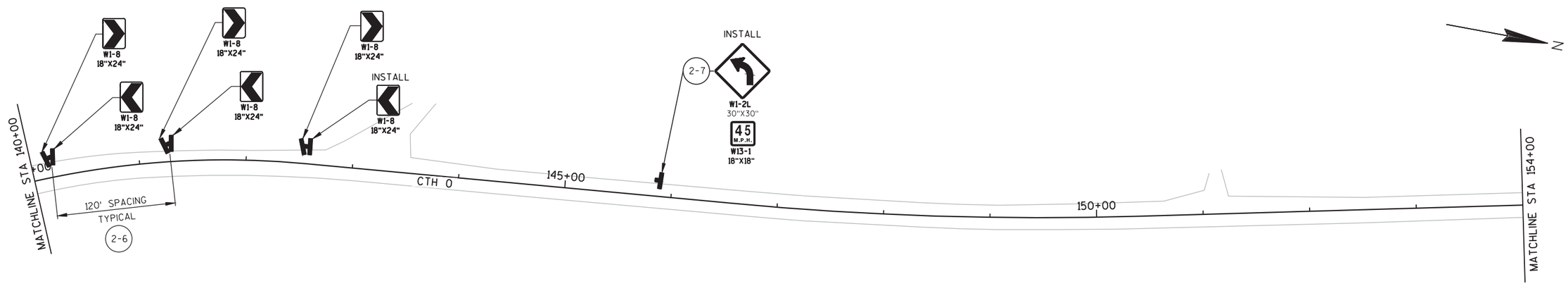


PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	PERMANENT SIGNING	SHEET	E

FILE NAME : P:\PIERC\15002 - CTH O\C3D\SHEETSPLAN\SNCTH001.DWG

SHEET NAME: SNCTH001





SIGN LEGEND

X-X — SIGN GROUP NUMBER

SIGNS TYPE II REFLECTIVE H/F ON POSTS WOOD

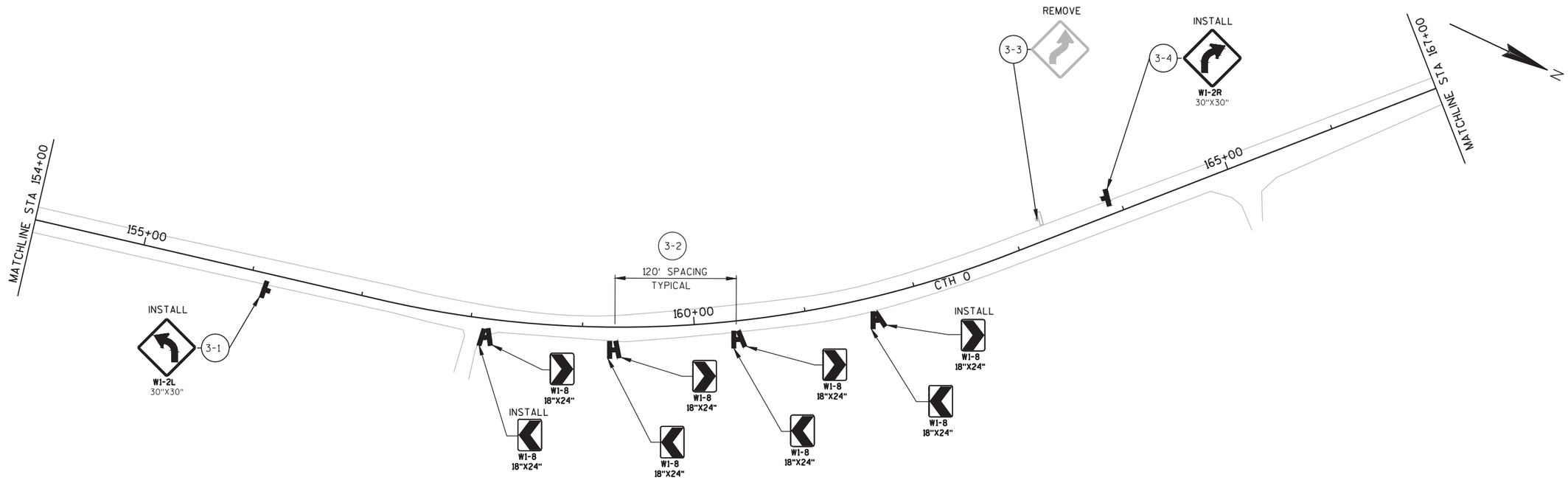
EXISTING SIGNS TYPE II REFLECTIVE H/F ON POSTS WOOD

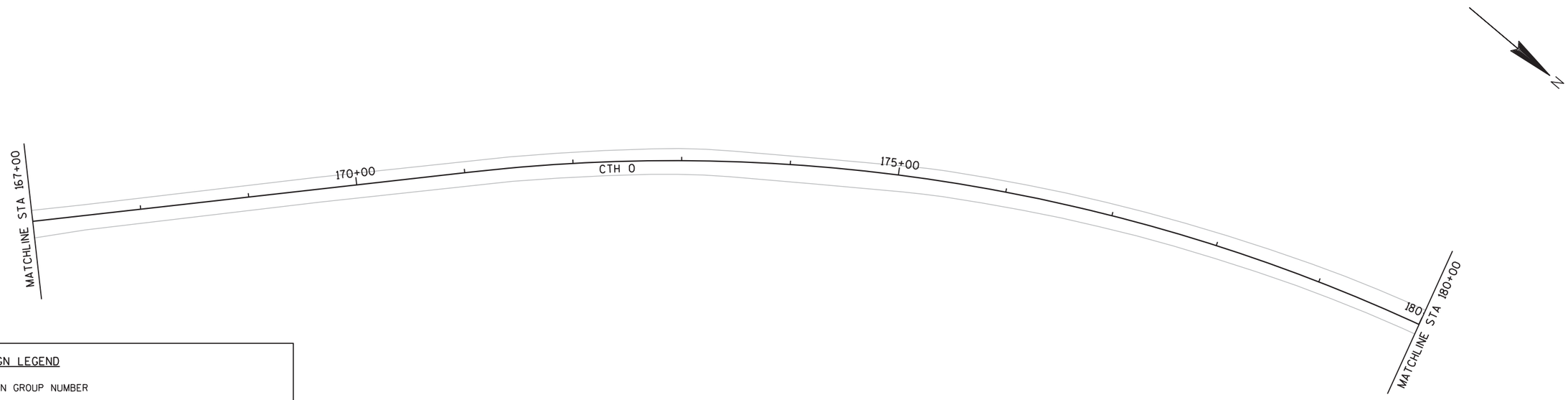
PROJECT NO: 7894-03-71	HWY: CTH 0	COUNTY: PIERCE	PERMANENT SIGNING	SHEET	E

FILE NAME : P:\PIERC\15002 - CTH 0\C3D\SHEETSPLAN\SNCTH001.DWG

SHEET NAME: SNCTH002

2





SIGN LEGEND

X-X SIGN GROUP NUMBER

SIGNS TYPE II REFLECTIVE H/F ON POSTS WOOD

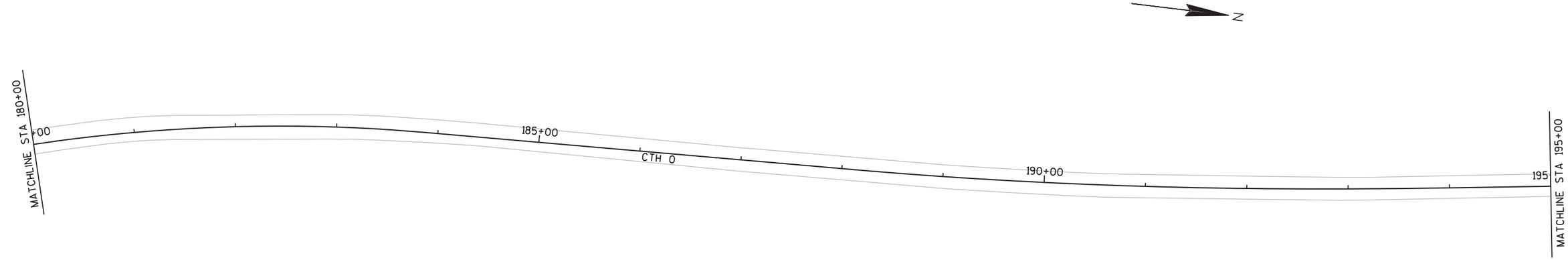
EXISTING SIGNS TYPE II REFLECTIVE H/F ON POSTS WOOD

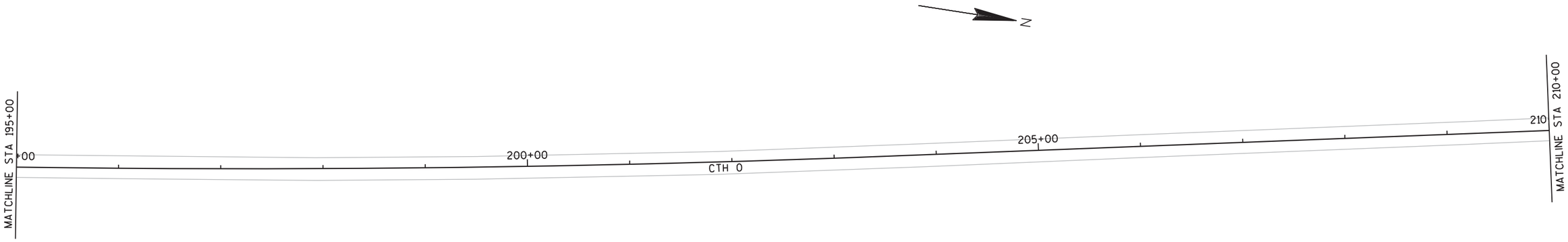
PROJECT NO: 7894-03-71	HWY: CTH 0	COUNTY: PIERCE	PERMANENT SIGNING	SHEET	E

FILE NAME : P:\PIERC\15002 - CTH 0\C3D\SHEETSPLAN\SNCTH001.DWG

SHEET NAME: SNCTH003

2





SIGN LEGEND

X-X SIGN GROUP NUMBER

SIGNS TYPE II REFLECTIVE H/F ON POSTS WOOD

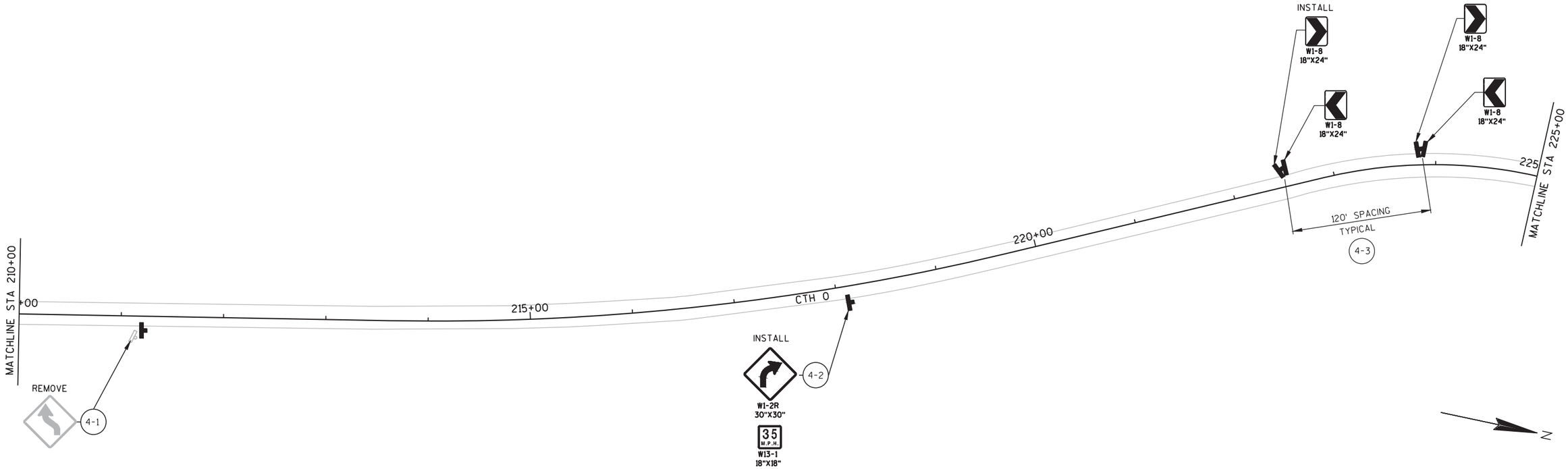
EXISTING SIGNS TYPE II REFLECTIVE H/F ON POSTS WOOD

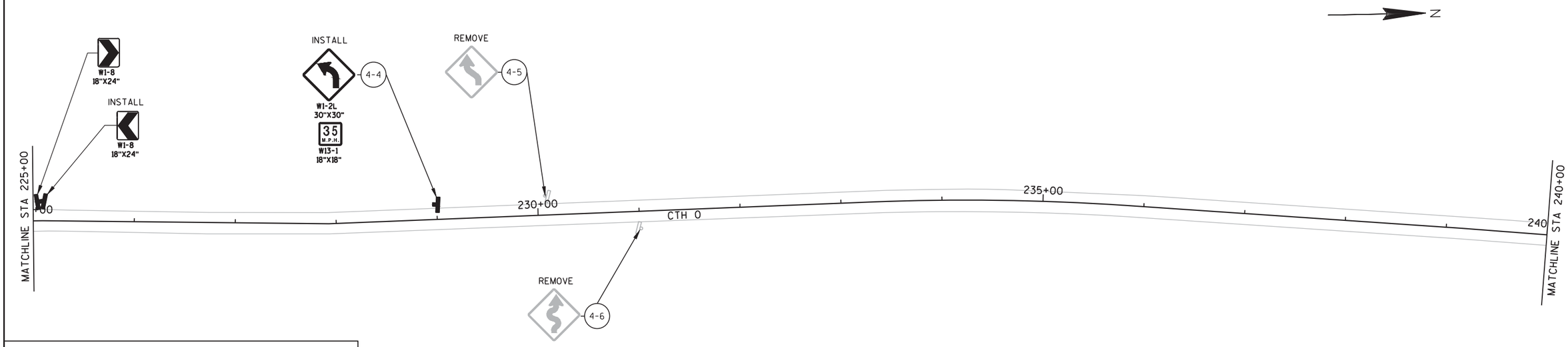
PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	PERMANENT SIGNING	SHEET	E

FILE NAME : P:\PIERC\15002 - CTH O\C3D\SHEETSPLAN\SNCTH001.DWG

SHEET NAME: SNCTH004

2





SIGN LEGEND

X-X — SIGN GROUP NUMBER

SIGNS TYPE II REFLECTIVE H/F ON POSTS WOOD

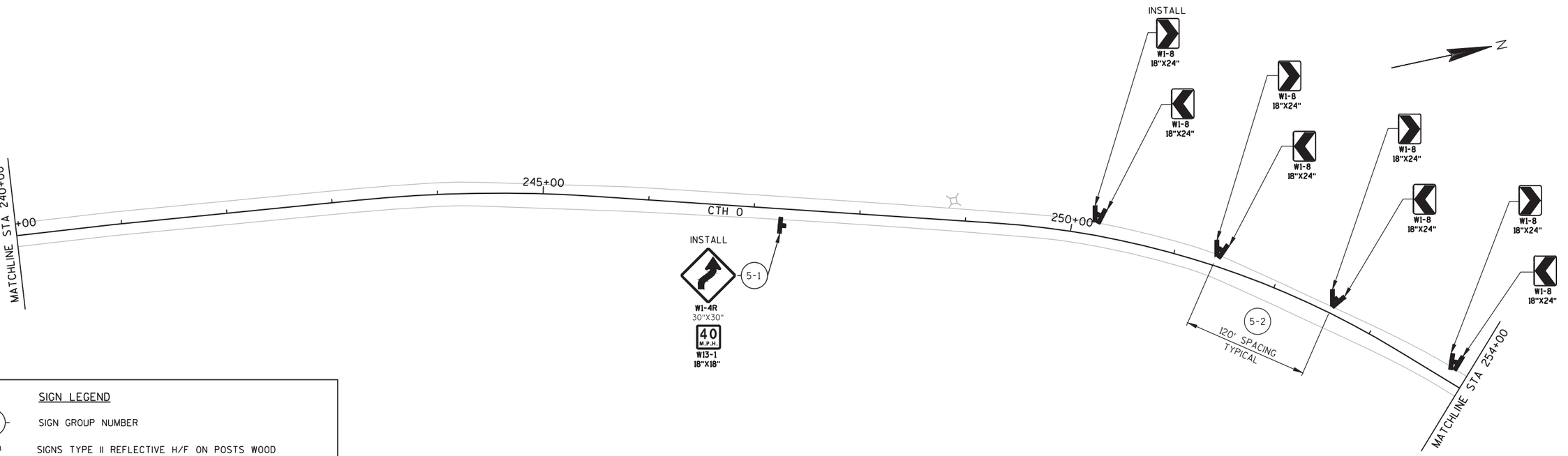
EXISTING SIGNS TYPE II REFLECTIVE H/F ON POSTS WOOD

PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	PERMANENT SIGNING	SHEET	E

FILE NAME : P:\PIERC\15002 - CTH O\C3D\SHEETSPLAN\SNCTH001.DWG

SHEET NAME: SNCTH005

2

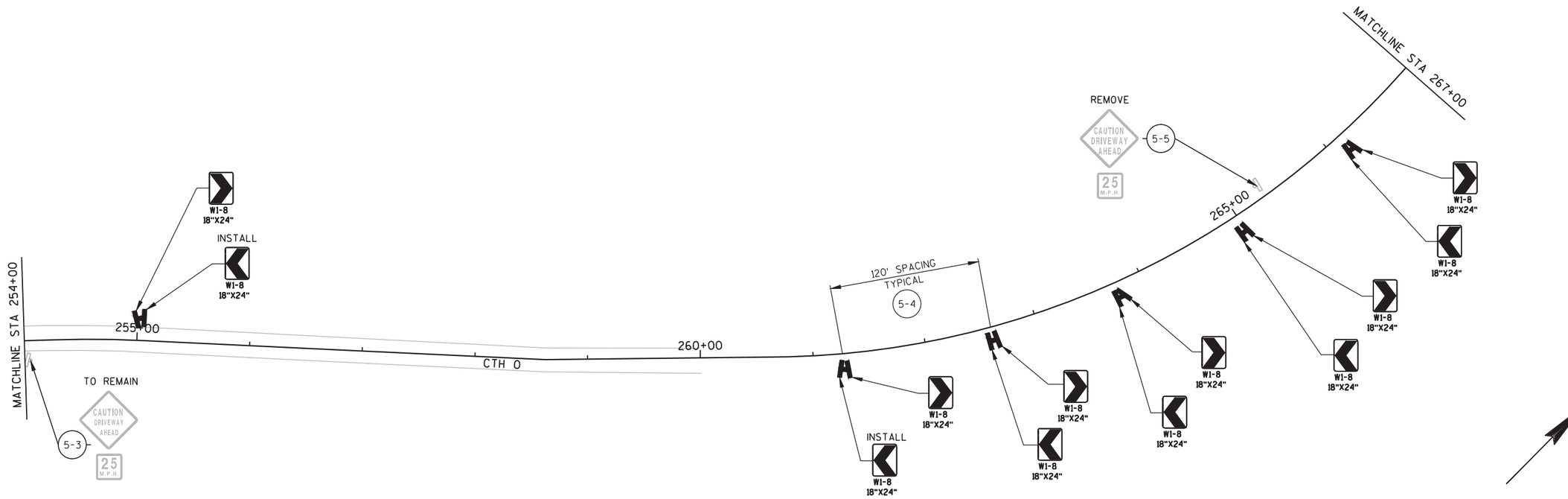


SIGN LEGEND

X-X SIGN GROUP NUMBER

SIGNS TYPE II REFLECTIVE H/F ON POSTS WOOD

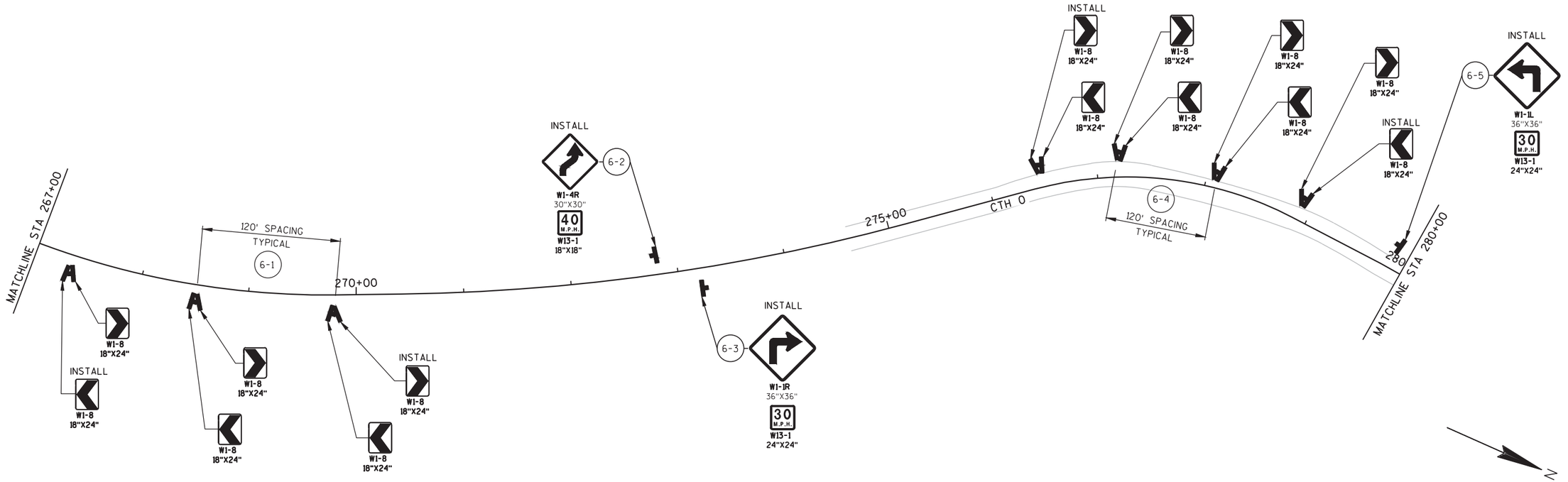
EXISTING SIGNS TYPE II REFLECTIVE H/F ON POSTS WOOD

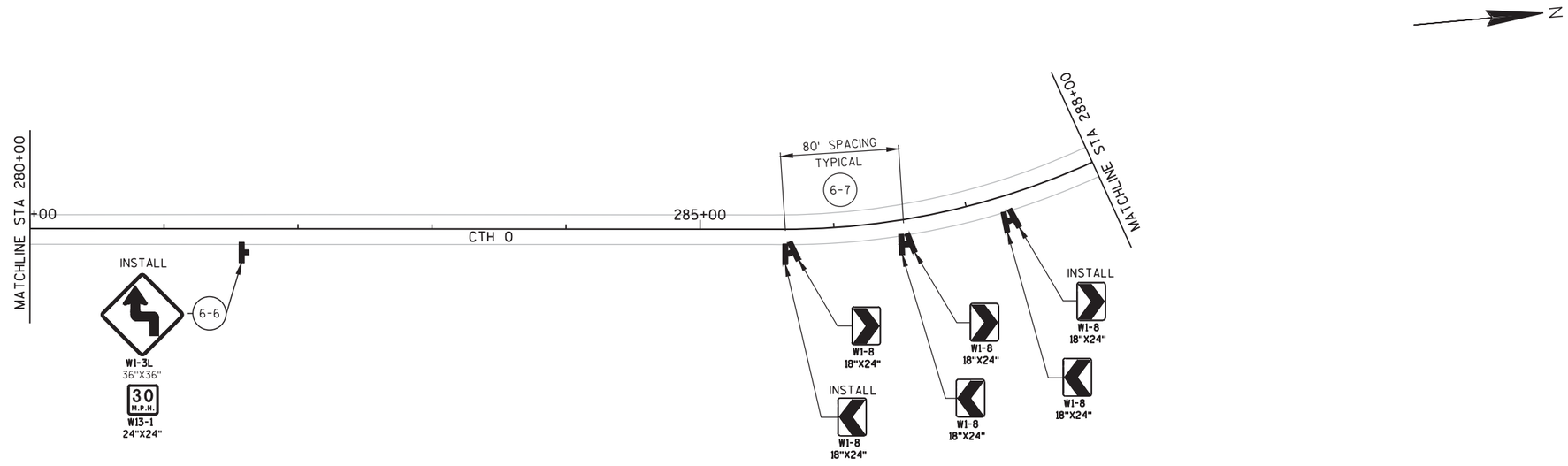


PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	PERMANENT SIGNING	SHEET	E

FILE NAME : P:\PIERC\15002 - CTH O\C3D\SHEETSPLAN\SNCTH001.DWG

SHEET NAME: SNCTH006





SIGN LEGEND

X-X SIGN GROUP NUMBER

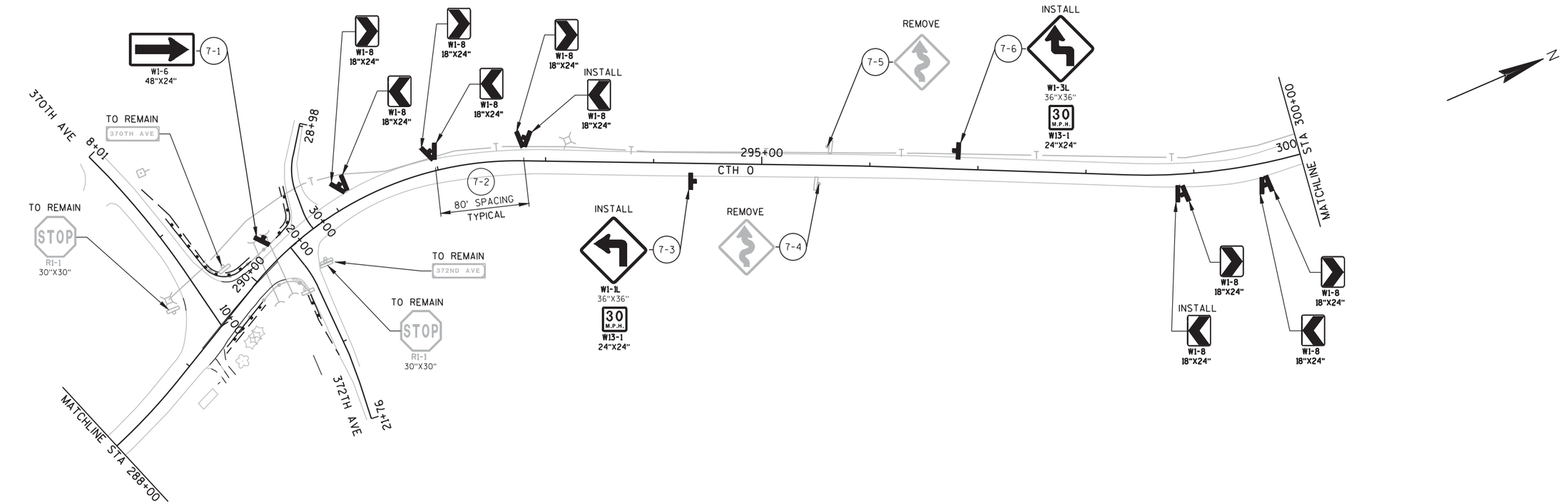
SIGNS TYPE II REFLECTIVE H/F ON POSTS WOOD

EXISTING SIGNS TYPE II REFLECTIVE H/F ON POSTS WOOD

PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	PERMANENT SIGNING	SHEET	E

FILE NAME : P:\PIERC\15002 - CTH O\C3D\SHEETSPLAN\SNCTH001.DWG

SHEET NAME: SNCTH007

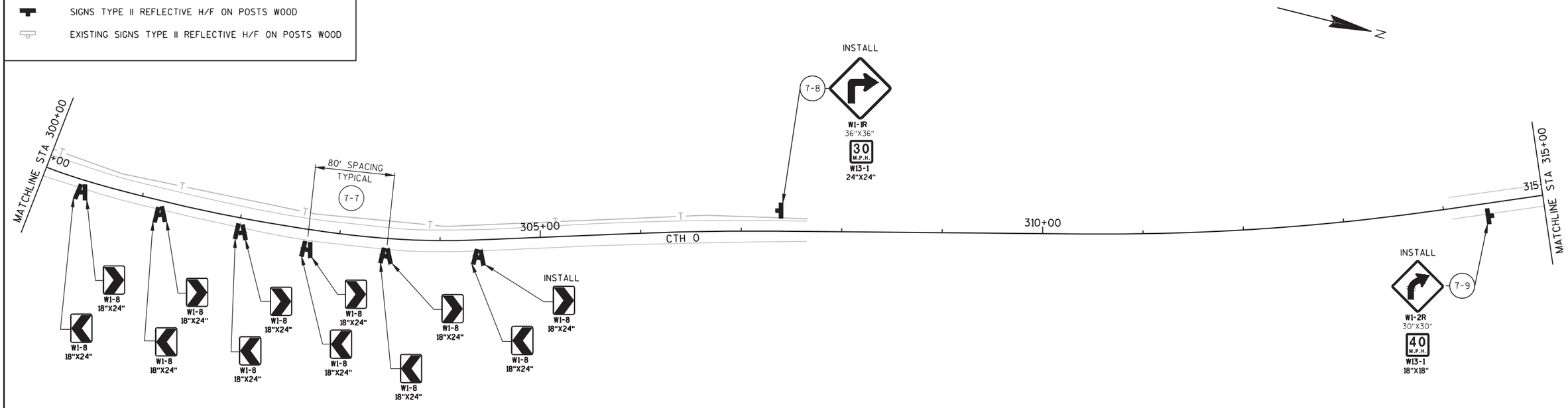


SIGN LEGEND

X-X SIGN GROUP NUMBER

SIGNS TYPE II REFLECTIVE H/F ON POSTS WOOD

EXISTING SIGNS TYPE II REFLECTIVE H/F ON POSTS WOOD

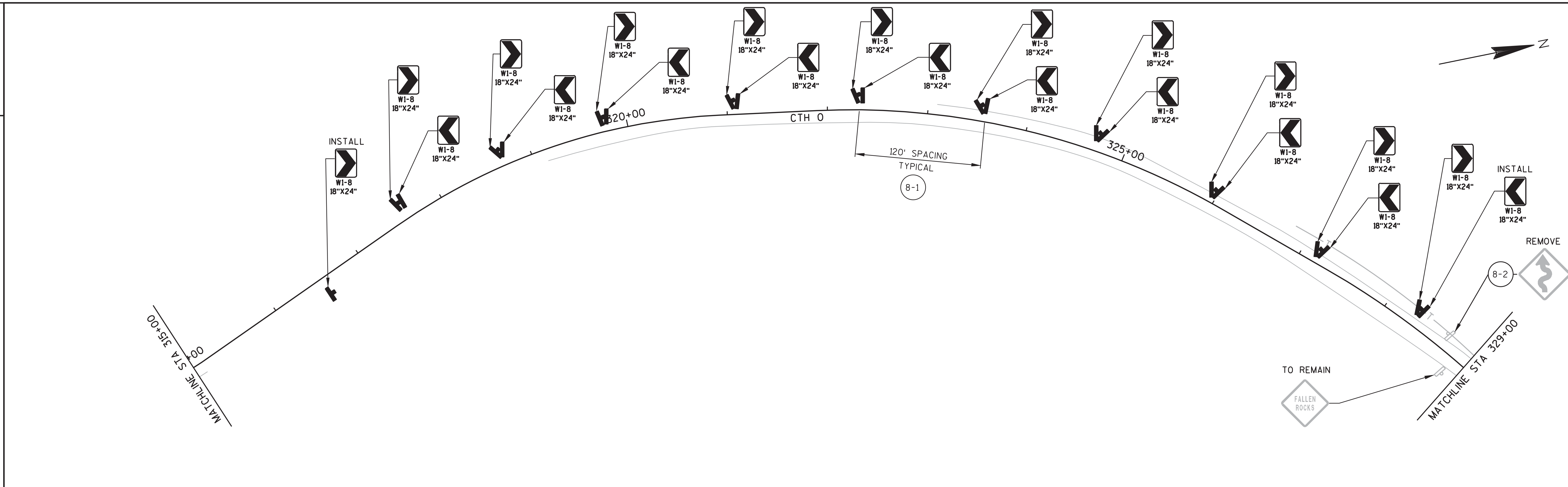


PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	PERMANENT SIGNING	SHEET	E

FILE NAME : P:\PIERC\15002 - CTH O\C3D\SHEETSPLAN\SNCTH001.DWG

SHEET NAME: SNCTH008

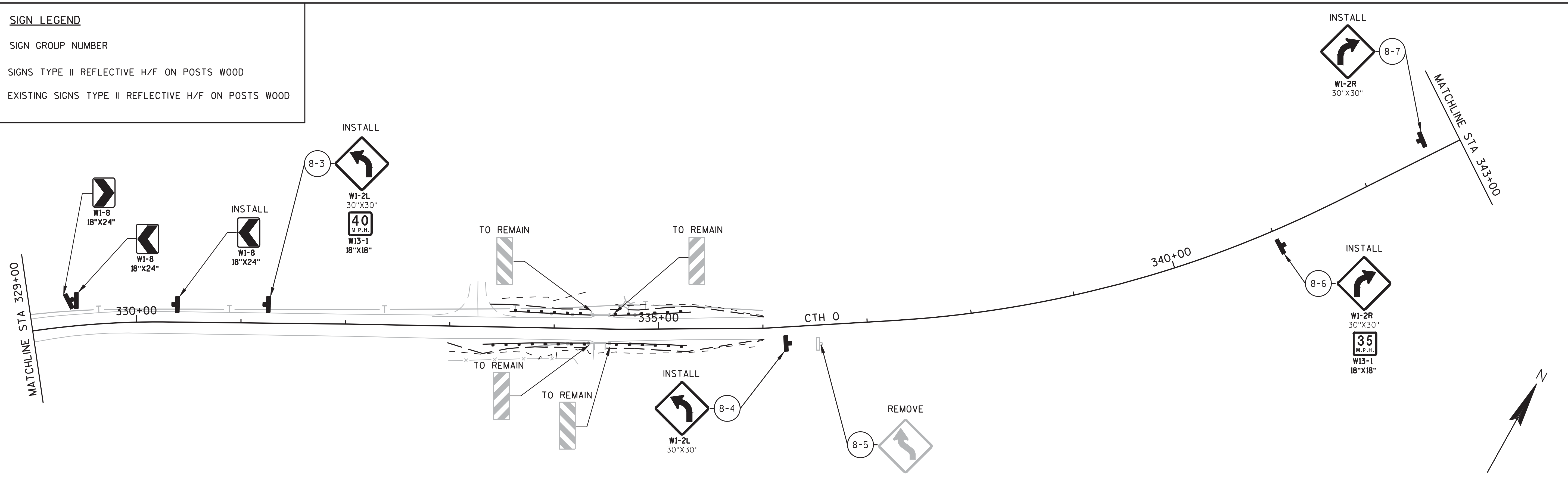
2



2

SIGN LEGEND

(X-X)	SIGN GROUP NUMBER
▬	SIGNS TYPE II REFLECTIVE H/F ON POSTS WOOD
▭	EXISTING SIGNS TYPE II REFLECTIVE H/F ON POSTS WOOD

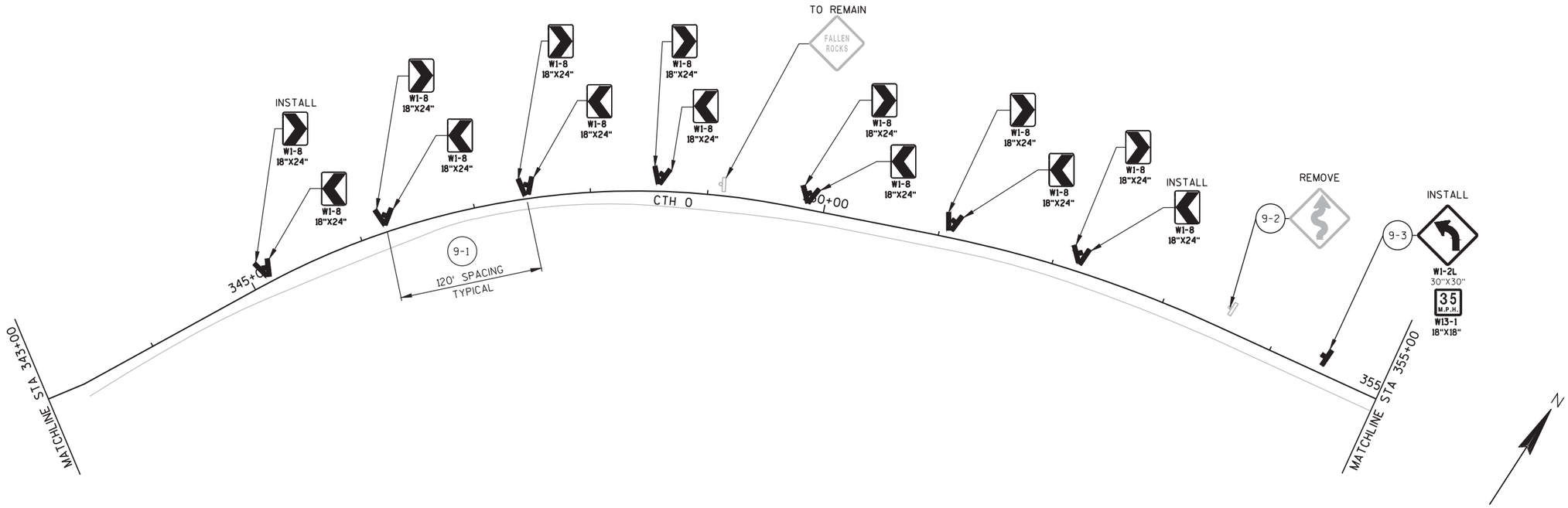


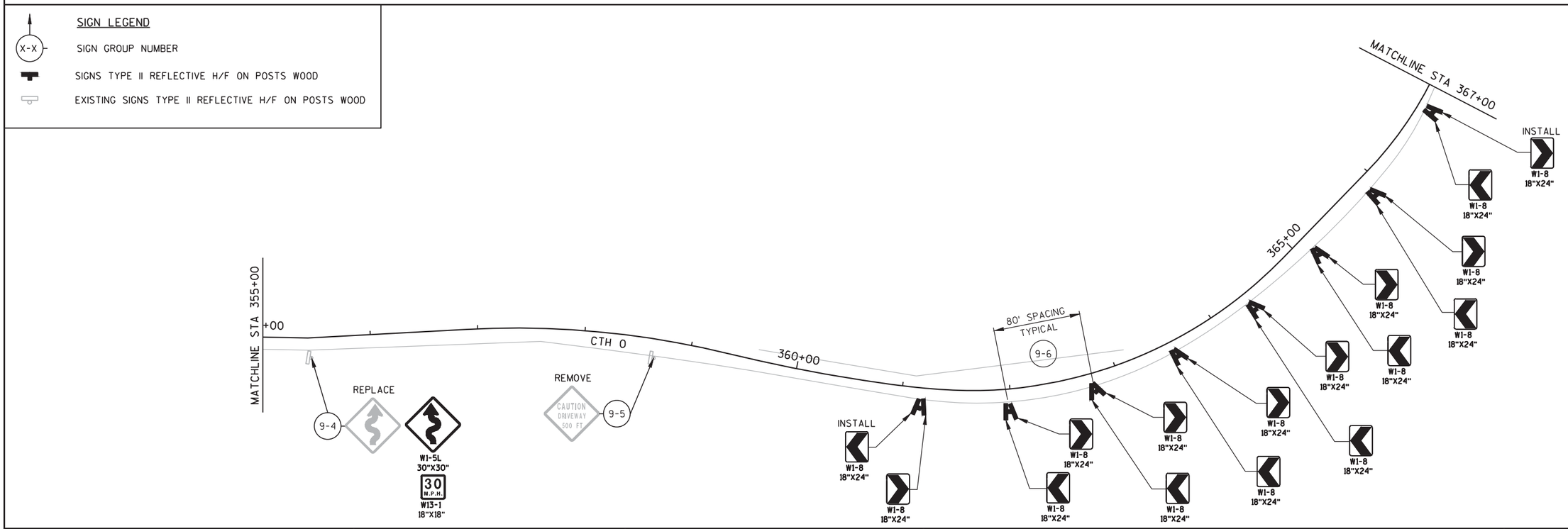
PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	PERMANENT SIGNING	SHEET	E

FILE NAME : P:\PIERC\15002 - CTH O\C3D\SHEETSPLAN\SNCTH001.DWG

SHEET NAME: SNCTH009

2



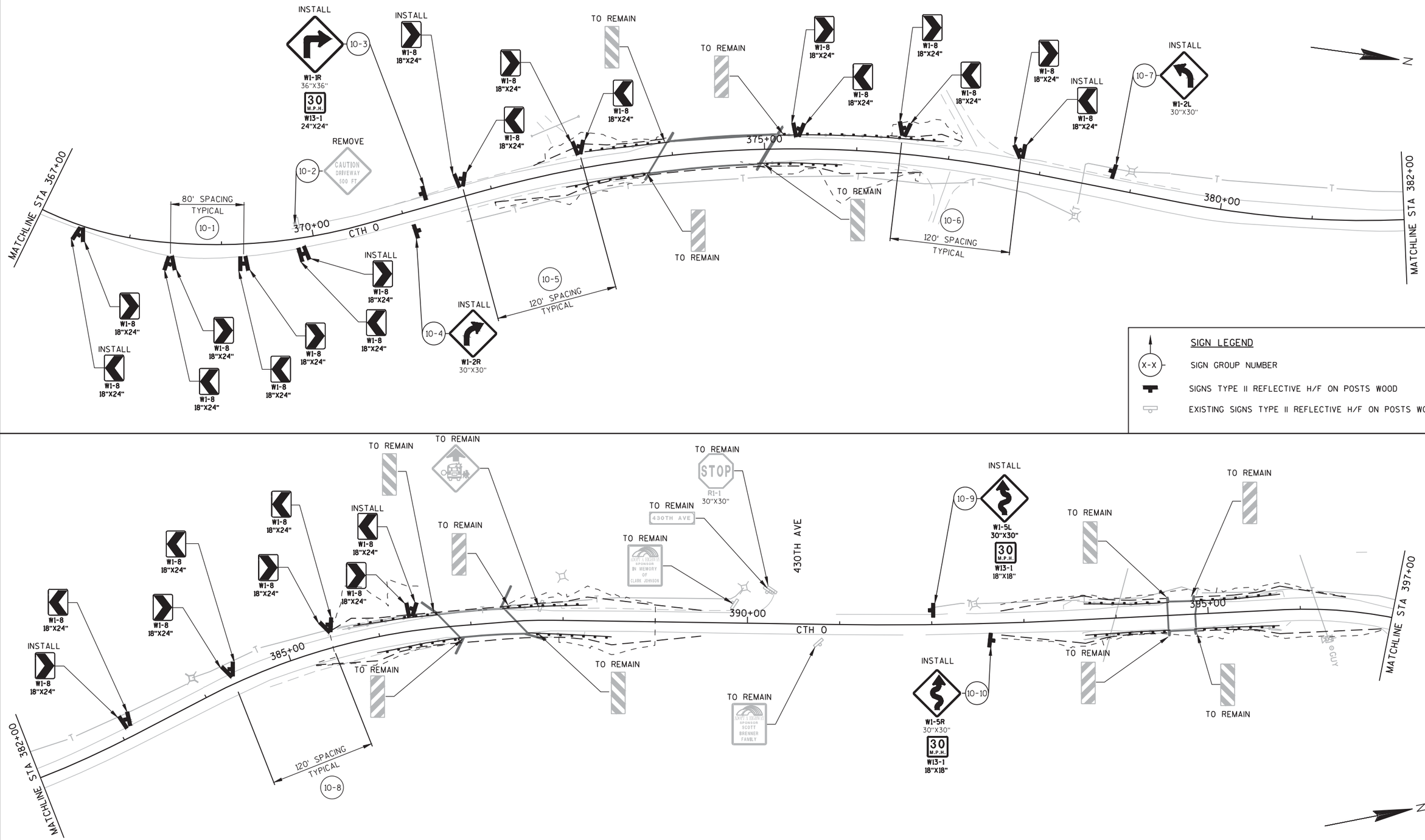


PROJECT NO: 7894-03-71	HWY: CTH 0	COUNTY: PIERCE	PERMANENT SIGNING	SHEET	E

FILE NAME : P:\PIERC\15002 - CTH 0\C3D\SHEETSPLAN\SNCTH001.DWG

SHEET NAME: SNCTH010

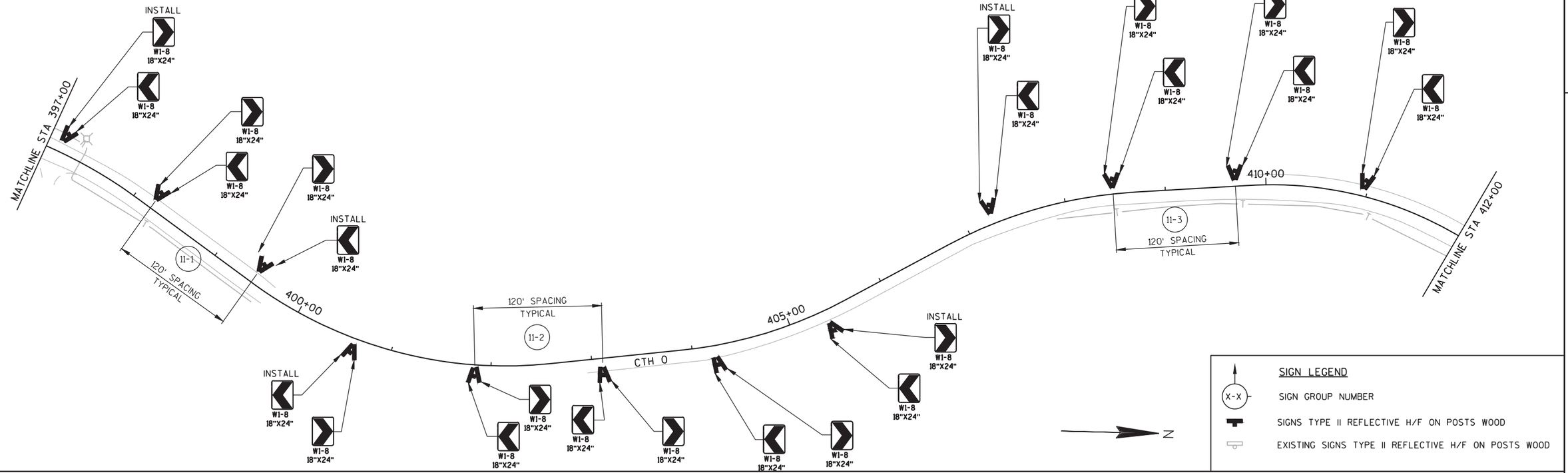
2

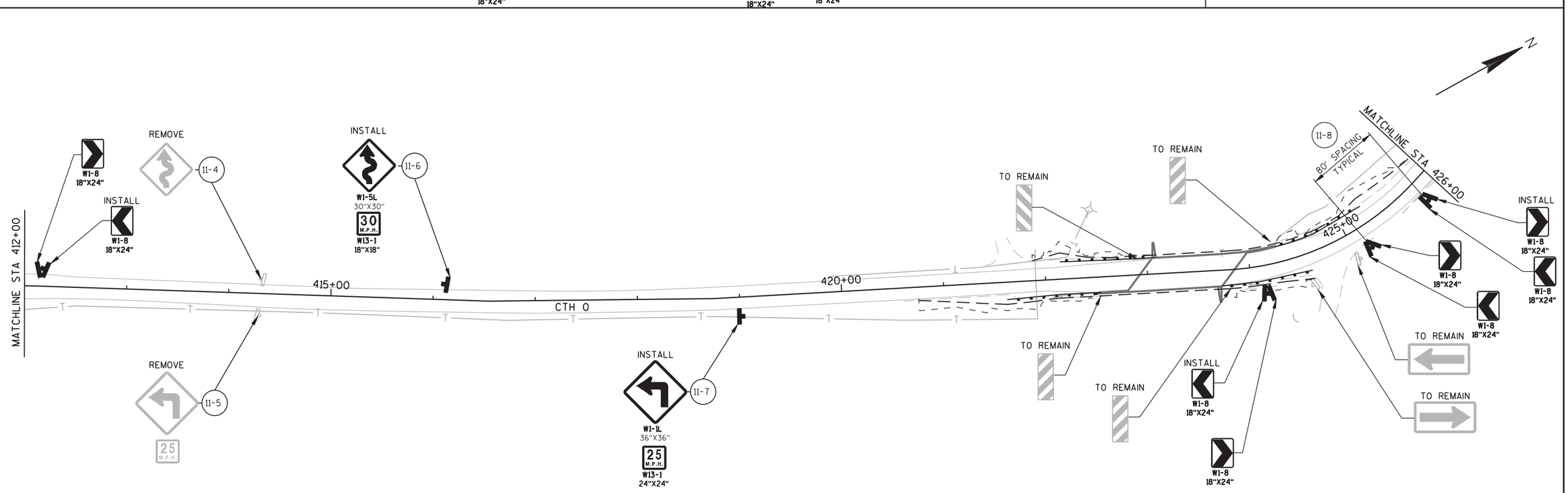


PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	PERMANENT SIGNING	SHEET	E

FILE NAME : P:\PIERC\15002 - CTH O\C3D\SHEETSPLAN\SNCTHO01.DWG

SHEET NAME: SNCTHO11



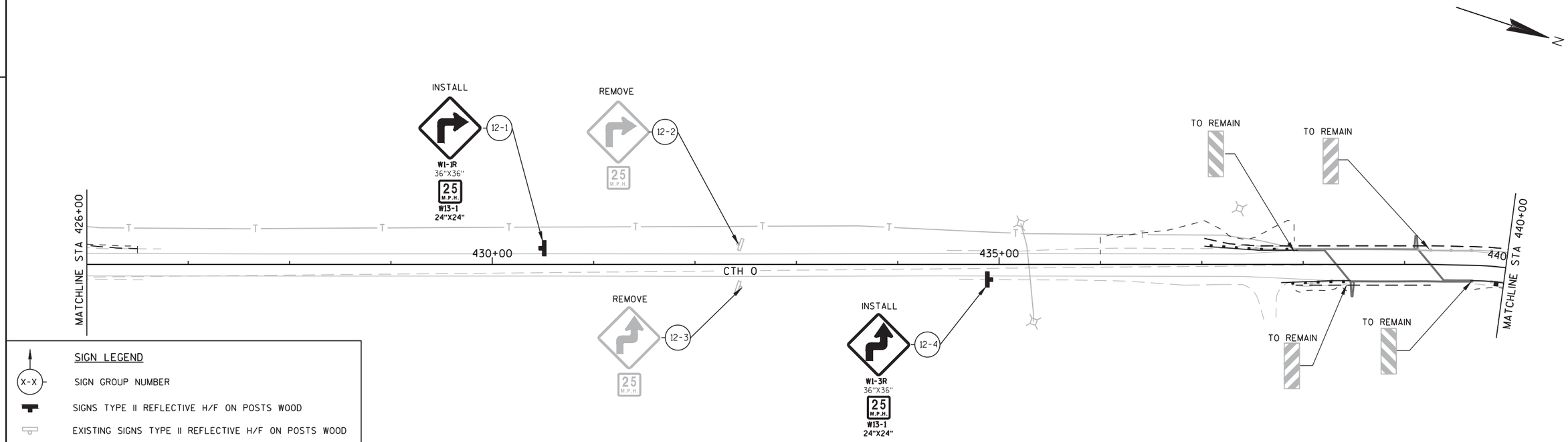


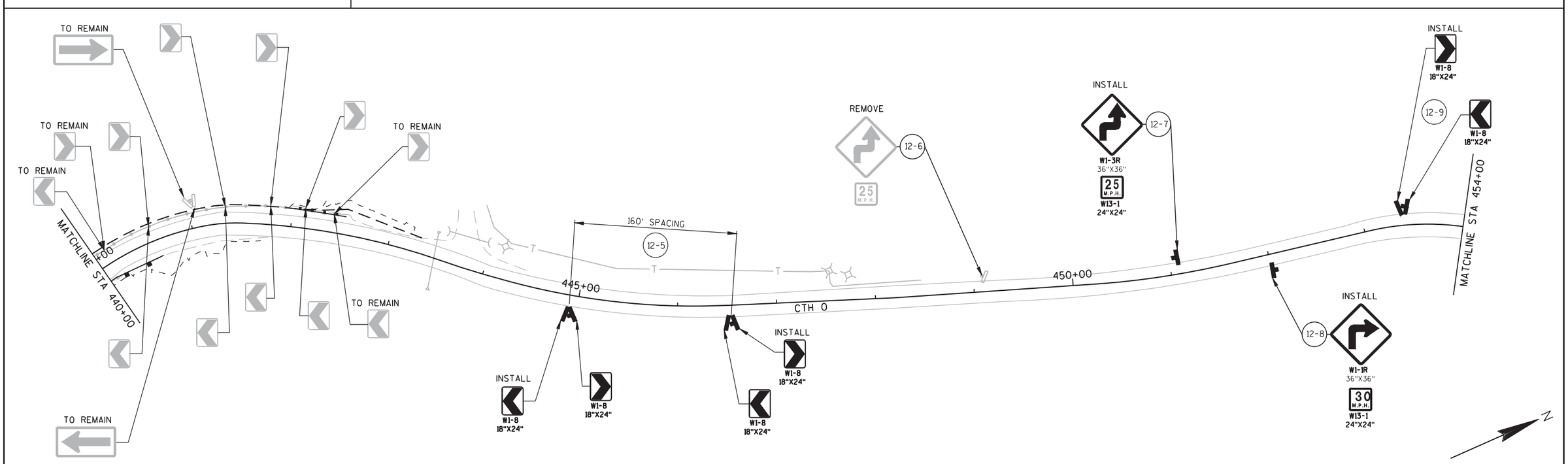
PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	PERMANENT SIGNING	SHEET	E

FILE NAME : P:\PIERC\15002 - CTH O\C3D\SHEETSPLAN\SNCTHO01.DWG

SHEET NAME: SNCTHO12

2



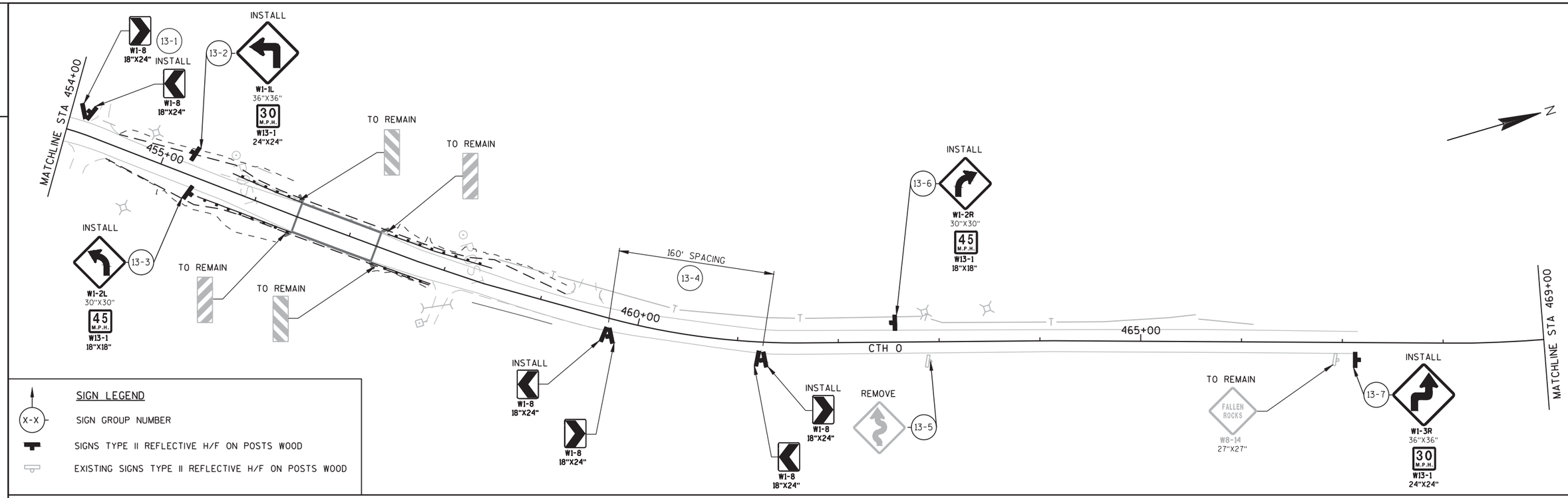


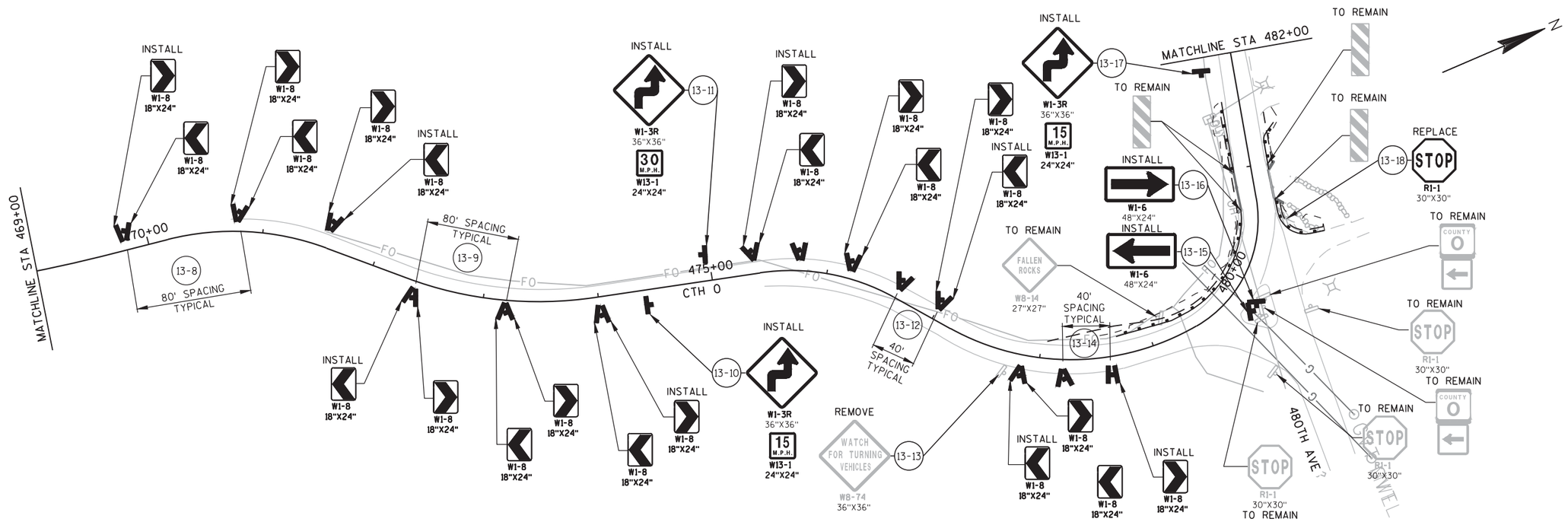
PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	PERMANENT SIGNING	SHEET	E

FILE NAME : P:\PIERC\15002 - CTH O\C3D\SHEETSPLAN\SNCTH001.DWG

SHEET NAME: SNCTH013

2



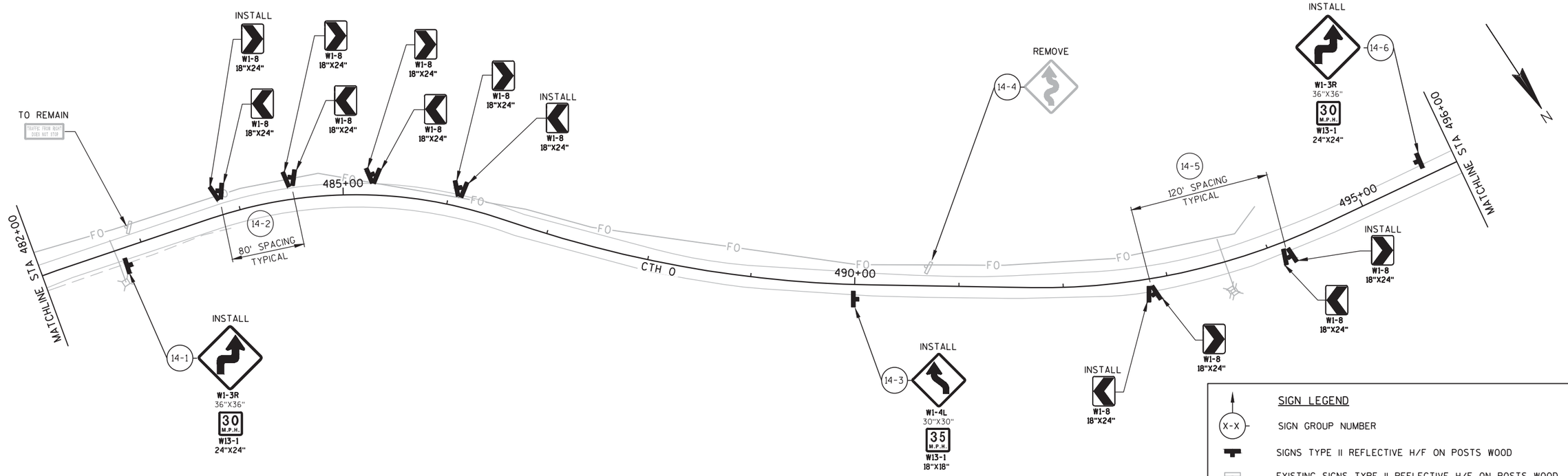


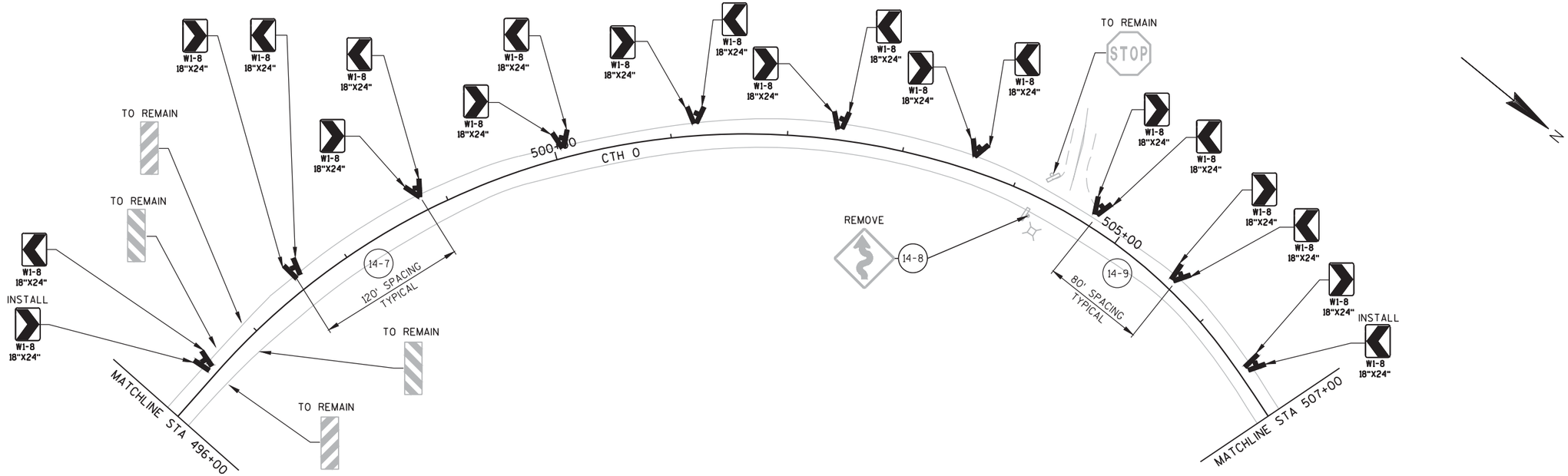
PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	PERMANENT SIGNING	SHEET	E

FILE NAME : P:\PIERC\15002 - CTH O\C3D\SHEETSPLAN\SNCTH001.DWG

SHEET NAME: SNCTH014

2



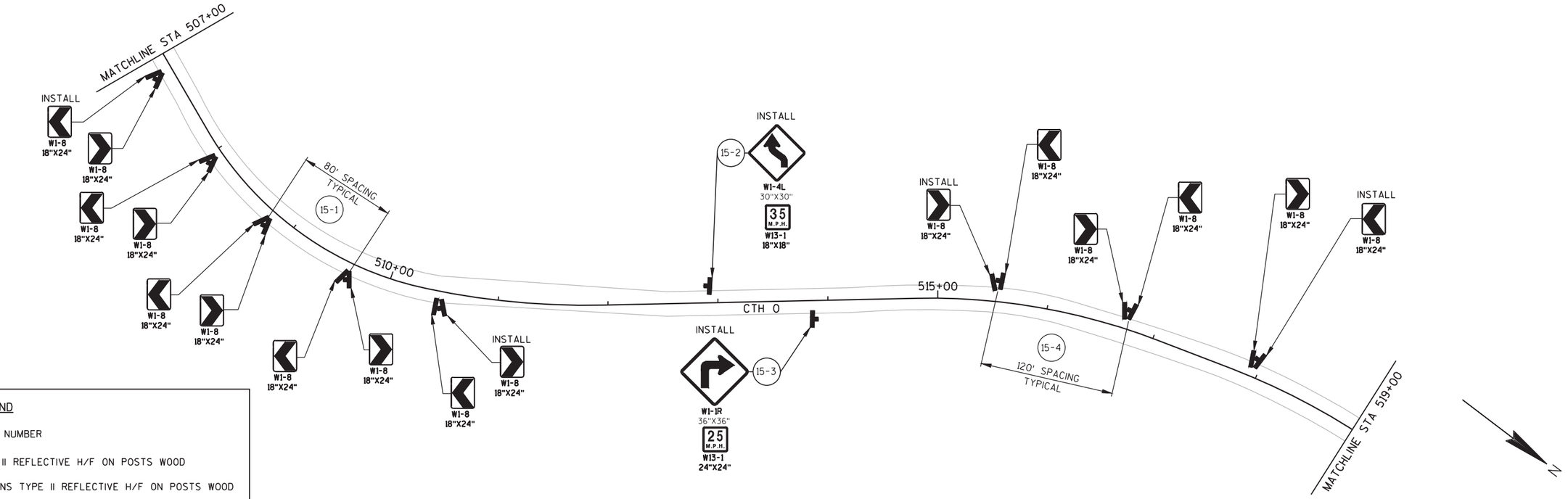


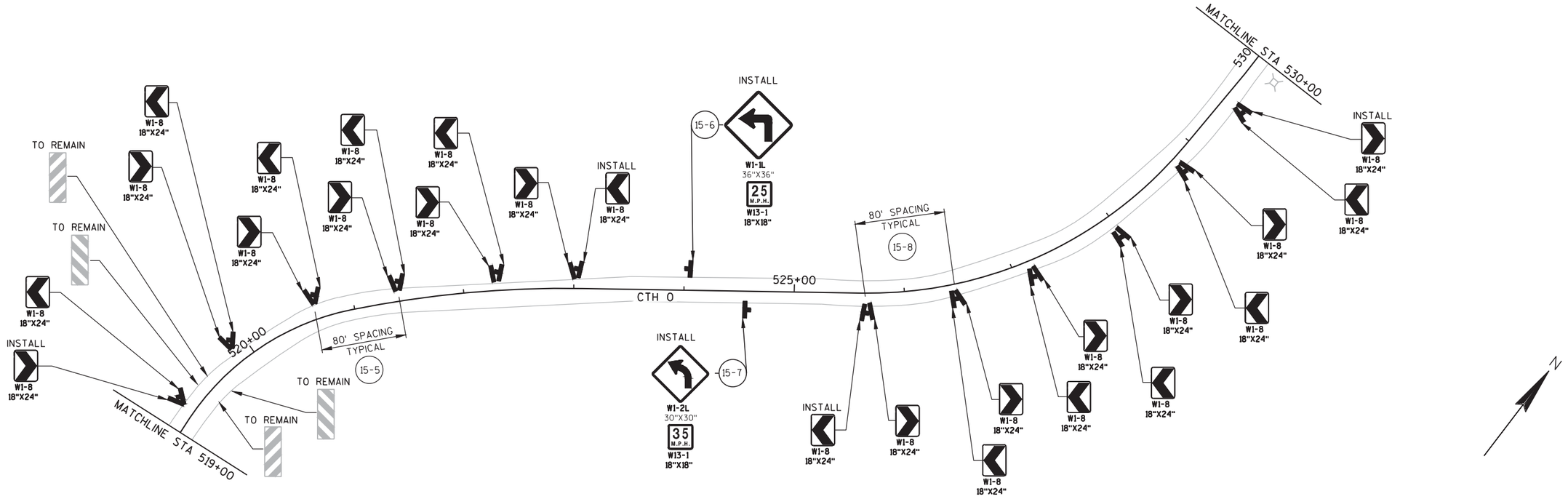
PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	PERMANENT SIGNING	SHEET	E

FILE NAME : P:\PIERC\15002 - CTH O\C3D\SHEETSPLAN\SNCTHO01.DWG

SHEET NAME: SNCTHO15

2



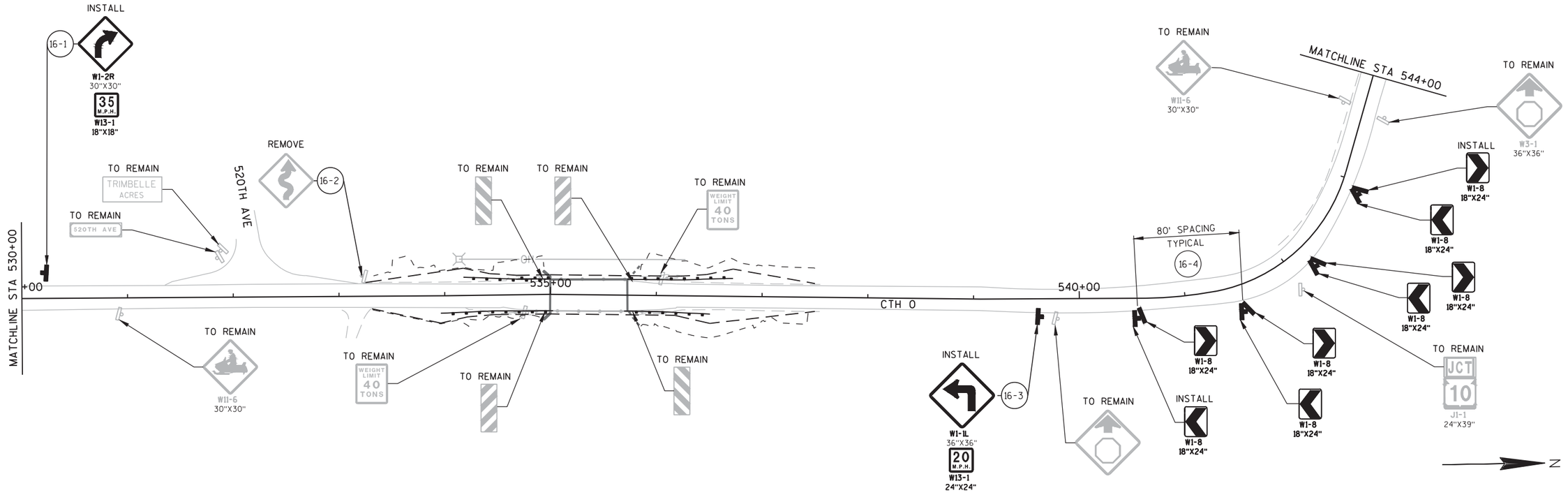


PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	PERMANENT SIGNING	SHEET	E

FILE NAME : P:\PIERC\15002 - CTH O\C3D\SHEETSPLAN\SNCTHO01.DWG

SHEET NAME: SNCTHO16

2

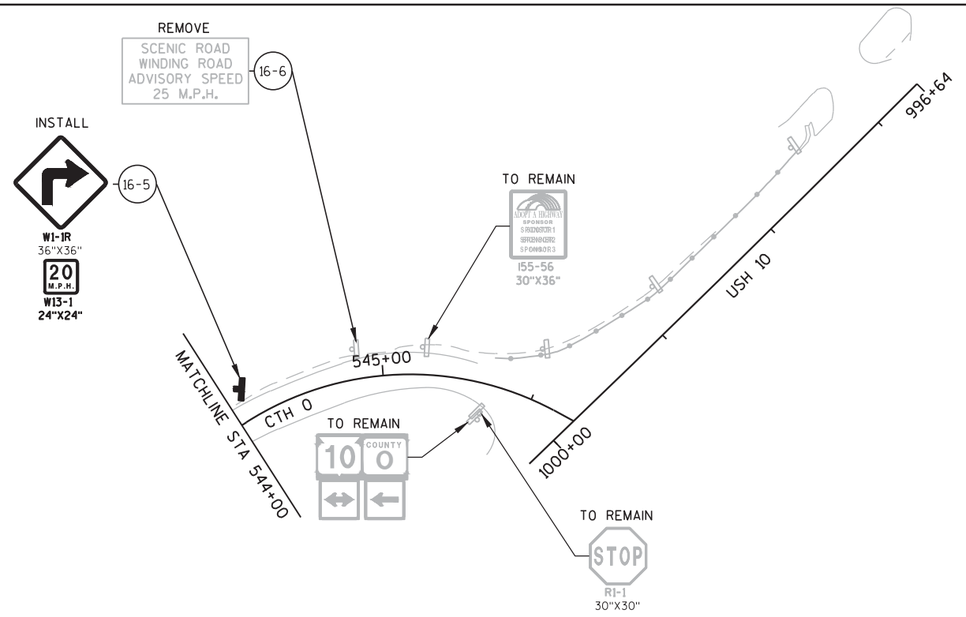


SIGN LEGEND

X-X — SIGN GROUP NUMBER

SIGNS TYPE II REFLECTIVE H/F ON POSTS WOOD

EXISTING SIGNS TYPE II REFLECTIVE H/F ON POSTS WOOD



PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	PERMANENT SIGNING	SHEET	E

FILE NAME : P:\PIERC\15002 - CTH O\C3D\SHEETSPLAN\SNCTH001.DWG

SHEET NAME: SNCTH017

7894-03-71

Line	Item	Item Description	Unit	Total	Qty
0010	201.0205	Grubbing	STA	7.000	7.000
0020	204.0165	Removing Guardrail	LF	2,005.000	2,005.000
0030	213.0100	Finishing Roadway (project) 01. 7894-03-71	EACH	1.000	1.000
0040	305.0110	Base Aggregate Dense 3/4-Inch	TON	627.000	627.000
0050	606.0300	Riprap Heavy	CY	9.000	9.000
0060	614.0010	Barrier System Grading Shaping Finishing	EACH	40.000	40.000
0070	614.0115	Anchorages for Steel Plate Beam Guard Type 2	EACH	1.000	1.000
0080	614.0200	Steel Thrie Beam Structure Approach	LF	20.600	20.600
0090	614.0305	Steel Plate Beam Guard Class A	LF	643.900	643.900
0100	614.0340	Steel Plate Beam Guard Over Low-Fill Culverts Class A	LF	100.000	100.000
0110	614.0345	Steel Plate Beam Guard Short Radius	LF	125.000	125.000
0120	614.0370	Steel Plate Beam Guard Energy Absorbing Terminal	EACH	18.000	18.000
0130	614.0390	Steel Plate Beam Guard Short Radius Terminal	EACH	3.000	3.000
0140	614.2330	MGS Guardrail 3 K	LF	87.500	87.500
0150	614.2500	MGS Thrie Beam Transition	LF	709.200	709.200
0160	614.2610	MGS Guardrail Terminal EAT	EACH	18.000	18.000
0170	619.1000	Mobilization	EACH	1.000	1.000
0180	628.1504	Silt Fence	LF	4,005.000	4,005.000
0190	628.1520	Silt Fence Maintenance	LF	4,005.000	4,005.000
0200	628.1905	Mobilizations Erosion Control	EACH	10.000	10.000
0210	628.1910	Mobilizations Emergency Erosion Control	EACH	10.000	10.000
0220	628.2008	Erosion Mat Urban Class I Type B	SY	3,982.000	3,982.000
0230	634.0614	Posts Wood 4x6-Inch X 14-FT	EACH	168.000	168.000
0240	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	54.000	54.000
0250	637.2210	Signs Type II Reflective H	SF	5.180	5.180
0260	637.2230	Signs Type II Reflective F	SF	1,540.250	1,540.250
0270	638.2602	Removing Signs Type II	EACH	35.000	35.000
0280	638.3000	Removing Small Sign Supports	EACH	30.000	30.000
0290	642.5001	Field Office Type B	EACH	1.000	1.000
0300	643.0100	Traffic Control (project) 01. 7894-03-71	EACH	1.000	1.000
0310	645.0120	Geotextile Type HR	SY	13.000	13.000
0320	646.0106	Pavement Marking Epoxy 4-Inch	LF	165,500.000	165,500.000
0330	648.0100	Locating No-Passing Zones	MI	8.500	8.500
0340	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	1,200.000	1,200.000
0350	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	300.000	300.000

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BARRIER SYSTEM GRADING SHAPING FINISHING

STATION - STATION	LOCATION	614.0010 EACH	FOR INFORMATIONAL PURPOSES ONLY: EXCAVATION COMMON CY	BORROW CY	SALVAGED TOPSOIL SY	MULCHING SY	FERTILIZER TYPE B CWT	SEEDING #20 LB	SLOPE STAKES LF	CONSTRUCTION STAKING BASE LF
P-47-086										
9+44 - 9+61		1								
289+88 - 289+59		1								
20+54		1								
290+38 - 290+58		1								
UNNAMED			53	47	226	226	0.1	6.1	70	70
333+82 - 334+35		1								
333+82 - 334+34		1								
334+53 - 335+04		1								
334+53 - 334+97		1								
B-47-048			24	146	678	678	0.4	18.3	200	200
373+31 - 373+97		1								
373+27 - 373+74		1								
376+36 - 376+89		1								
374+93 - 375+33		1								
B-47-068			36	357	595	595	0.4	16.1	206	206
385+62 - 386+66		1								
386+30 - 386+86		1								
387+39 - 387+89		1								
387+62 - 388+17		1								
B-47-142			31	93	343	343	0.2	9.3	204	204
394+75 - 393+65		1								
393+65 - 394+59		1								
394+87 - 395+76		1								
394+85 - 395+78		1								
B-47-125			130	54	1413	1413	0.9	38.2	386	386
423+05 - 422+59		1								
422+52 - 422+06		1								
424+29 - 424+78		1								
423+71 - 424+21		1								
B-47-124			46	202	603	603	0.4	16.3	191	191
437+44 - 437+94		1								
438+00 - 438+46		1								
440+18 - 439+67		1								
441+99 - 442+53		1								
P-47-080			63	270	353	353	0.2	9.5	203	203
455+90 - 456+45		1								
455+83 - 456+45		1								
457+30 - 457+74		1								
457+29 - 457+72		1								
P-47-079			7	15	151	151	0.1	4.1	146	146
480+09 - 480+64		1								
480+51 - 480+67		1								
480+97 - 481+40		1								
480+95 - 481+27		1								
P-47-077			59	366	711	711	0.4	19.2	174	174
534+17 - 534+96		1								
534+54 - 534+99		1								
535+73 - 536+21		1								
535+75 - 536+11		1								
ITEM TOTAL		40	449	1550	5073	5073	3	137	1780	1780

BASE AGGREGATE DENSE, 3/4 - INCH 305.0110

STATION - STATION	LOCATION	TON
UNNAMED		65
B47048		63
B47068		88
B47124		72
B47125		67
B47142		84
P47077		72
P47079		23
P47086		20
P47080		73
ITEM TOTAL		627

REMOVING GUARDRAIL

STATION - STATION	LOCATION	204.0165 LF
P-47-086		
9+44 - 9+61	370TH LT	19
289+88 - 289+59	RT	30
20+54	372ND AVE RT	7
290+38 - 290+58	LT, DRIVEWAY	25
UNNAMED		
333+82 - 334+35	LT	53
333+82 - 334+34	RT	45
334+53 - 335+04	LT	50
334+53 - 334+97	RT	44
B-47-048		
373+31 - 373+97	LT	68
373+27 - 373+74	RT	45
376+36 - 376+89	LT	53
374+93 - 375+33	RT	41
B-47-068		
385+62 - 386+66	LT	105
386+30 - 386+86	RT	56
387+39 - 387+89	LT	52
387+62 - 388+17	RT	55
B-47-142		
394+75 - 393+65	LT	94
393+65 - 394+59	RT	94
394+87 - 395+76	LT	93
394+85 - 395+78	RT	95
B-47-125		
423+05 - 422+59	LT	46
422+52 - 422+06	RT	46
424+29 - 424+78	LT	46
423+71 - 424+21	RT	48
B-47-124		
437+44 - 437+94	LT	48
438+00 - 438+46	RT	47
440+18 - 439+67	LT	53
441+99 - 442+53	RT	48
P-47-080		
455+90 - 456+45	LT	54
455+83 - 456+45	RT	58
457+30 - 457+74	LT	43
457+29 - 457+72	RT	43
P-47-079		
480+09 - 480+64	LT	45
480+51 - 480+67	RT	27
480+97 - 481+40	LT	41
480+95 - 481+27	RT	31
P-47-077		
534+17 - 534+96	LT	26
534+54 - 534+99	RT	46
535+73 - 536+21	LT	48
535+75 - 536+11	RT	37
ITEM TOTAL		2005

GRUBBING

STATION - STATION	LOCATION	201.0205 STA
334+00 - 336+00	SOUTHEAST APPROACH QUADRANT	2
385+00 - 387+00	SOUTHWEST APPROACH QUADRANT	2
395+00 - 396+00	NORTHWEST APPROACH QUADRANT	1
455+00 - 457+00	SOUTHEAST APPROACH QUADRANT	2
ITEM TOTAL		7

NOTE:
ALL ITEMS ARE CATEGORY 10
UNLESS OTHEWISE NOTED.

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ANCHORAGES FOR STEEL PLATE BEAM GUARD TYPE 2

STATION - STATION	LOCATION	614.0115 EACH
P-47-086		
20+72	372ND AVE RT	1
ITEM TOTAL		1

STEEL THRIE BEAM STRUCTURE APPROACH

STATION - STATION	LOCATION	614.0200 LF
438+28 - 438+47	RT	20.6
ITEM TOTAL		20.6

MGS GUARDRAIL 3 K

STATION - STATION	LOCATION	614.2330 LF
375+54	LT	87.5
ITEM TOTAL		87.5

STEEL PLATE BEAM GUARD SHORT RADIUS

STATION - STATION	LOCATION	614.0345 LF	NOTES
P-47-086			
9+45 - 289+99	LT	37.5	24' Radius
290+52 - 290+68	17' LT - 37' LT	37.5	16' Radius w/45° Bend
P-47-079			
480+45 - 480+60	17' RT - 46' RT	37.5	24' Radius
481+20 - 481+30	RT	12.5	8 Radius w/45° Bend
ITEM TOTAL		125	

STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL

STATION	LOCATION	614.0390 EACH
P-47-086		
290+72.5	49' LT	1
P-47-079		
480+48	58' RT	1
481+35	26' RT	1
ITEM TOTAL		3

STEEL PLATE BEAM GUARD OVER LOW FILL CULVERTS CLASS A

STATION - STATION	LOCATION	614.0340 LF
P-47-086		
479+24 - 480+34	LT	100
ITEM TOTAL		100

STEEL PLATE BEAM GUARD, CLASS A

STATION - STATION	LOCATION	614.0305 LF
P-47-086		
289+99 - 290+10	LT	12.5
290+40 - 290+52	LT	12.5
20+47 - 20+72	372ND RT	25.0
UNNAMED		
334+09.8 - 334+34.8	LT	25.0
333+31.8 - 333+81.8	RT	50.0
334+78.7 - 335+31.3	LT	25.0
334+50 - 334+75	RT	50.0
P-47-080		
457+36 - 457+86	LT	50.0
457+30 - 457+43	RT	12.5
455+96 - 456+46	RT	50.0
456+20 - 456+45	LT	25.0
P-47-079		
480+95 - 481+20	RT	25.0
480+59 - 480+71	RT	12.5
479+62 - 480+64	LT	87.5
480+97 - 481+10	LT	12.5
P-47-077		
534+69 - 534+99	LT	31.3
534+47 - 535+03	RT	56.3
535+73 - 536+23	LT	50.0
535+70 - 536+01	RT	31.3
ITEM TOTAL		643.9

MGS THRIE BEAM TRANSITION

STATION - STATION	LOCATION	614.2500 LF
B-47-048		
373+61 - 373+98	LT	39.4
373+33 - 373+70	RT	39.4
374+92 - 375+31	RT	39.4
375+15 - 375+54	LT	39.4
B-47-068		
386+27 - 386+66	LT	39.4
386+48 - 386+86	RT	39.4
387+61 - 388+00	RT	39.4
387+35 - 387+78	LT	39.4
B-47-142		
394+19 - 394+57	LT	39.4
394+19 - 394+57	RT	39.4
394+85 - 395+24	RT	39.4
394+87 - 395+26	LT	39.4
B-47-125		
422+12 - 422+52	RT	39.4
422+68 - 423+05	LT	39.4
423+71 - 424+09	RT	39.4
424+29 - 424+71	LT	39.4
B-47-124		
437+55 - 437+95	LT	39.4
439+65 - 440+07	RT	39.4
ITEM TOTAL		709.2

STEEL PLATE BEAM GUARD, ENERGY ABSORBING TERMINAL

STATION - STATION	LOCATION	614.0370 EACH
P-47-086		
8+89.7 - 9+45.3	LT	1
289+35 - 289+89	RT	1
UNNAMED		
333+31.9	RT	1
333+57.2	LT	1
335+27.1	RT	1
335+31.3	LT	1
B-47-124		
437+78	RT	1
442+53	LT	1
P-47-080		
458+46	LT	1
457+92	RT	1
455+70	LT	1
455+46	RT	1
P-47-079		
479+07	LT	1
481+60	LT	1
P-47-077		
533+97	RT	1
534+18	LT	1
536+51	RT	1
536+72	LT	1
ITEM TOTAL		18

MGS GUARDRAIL TERMINAL EAT

STATION - STATION	LOCATION	614.2610 EACH
B-47-048		
372+80	LT	1
373+07	RT	1
375+85	LT	1
376+89	RT	1
B-47-068		
385+76	LT	1
385+94	RT	1
388+26	LT	1
388+53	RT	1
B-47-142		
393+66	LT	1
393+66	RT	1
395+77	LT	1
395+79	RT	1
B-47-125		
421+61	RT	1
422+15	LT	1
424+58	RT	1
425+28	LT	1
B-47-124		
437+02	LT	1
440+63	RT	1
ITEM TOTAL		18

EROSION CONTROL ITEMS

STATION - STATION	LOCATION	606.0300 RIPRAP HEAVY CY	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH	628.2008 EROSION MAT URBAN CLASS I TYPE B SY	645.0120 GEOTEXTILE FABRIC TYPE HR SY
288+00 - 291+00	P-47-086	9	100	100	1	1	238	13
331+70 - 336+00	UNNAMED		365	365	1	1	237	
372+00 - 377+11	B-47-048		465	465	1	1	534	
385+25 - 389+50	B-47-068		603	603	1	1	545	
392+75 - 396+90	B-47-142		493	493	1	1	310	
420+75 - 426+50	B-47-125		343	343	1	1	297	
436+00 - 443+22	B-47-124		558	558	1	1	616	
452+52 - 459+22	P-47-080		439	439	1	1	428	
478+50 - 481+60	P-47-079		100	100	1	1	203	
533+25 - 537+50	P-47-077		539	539	1	1	574	
ITEM TOTAL		9	4005	4005	10	10	3982	13

TRAFFIC CONTROL (PROJECT)

STATION - STATION	LOCATION	643.0100 EACH
	LT & RT	1
ITEM TOTAL		1

LOCATING NO-PASSING ZONES

STATION - STATION	LOCATION	648.0100 MI
100+50 - 546+00	CTH O	8.5
ITEM TOTAL		8.5

PAVEMENT MARKING

STATION - STATION	LOCATION	646.0106 EPOXY 4-INCH (YELLOW) LF	646.0106 EPOXY 4-INCH (WHITE) LF
100+29 - 546+31	CTH O CENTERLINE	77250	
	CTH O EDGELINE		88250
ITEM TOTAL		165,500	

NOTE:
ALL ITEMS ARE CATEGORY 10 UNLESS OTHEWISE NOTED.

PERMANENT SIGNING ITEMS

SIGN GROUP NUMBER	SIGN CODE	SIGN MESSAGE	SIZE	637.2210 SIGNS TYPE II REFLECTIVE H SF	637.2230 SIGNS TYPE II REFLECTIVE F SF	634.0614 POSTS WOOD 4X6-INCH 14-FT EACH	634.0616 POSTS WOOD 4X6-INCH 16-FT EACH	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH
1-1	-	SCENIC ROAD/WINDING ROAD						1	1
1-2	W1-2L	LEFT CURVE						1	1
1-3	W1-2L	LEFT CURVE	30 X 30		6.25		1		
	W13-1	ADVISORY SPEED PLATE (YELLOW) 35 MPH	18 X 18		2.25				
1-4	-	CAUTION DRIVEWAY AHEAD						1	1
1-5	W1-8	CHEVRONS (14)	18 X 24		42.00	8			
2-1	-	CAUTION DRIVEWAY AHEAD							
2-2	W1-2R	RIGHT CURVE	30 X 30		6.25		1		
	W13-1	ADVISORY SPEED PLATE (YELLOW) 35 MPH	18 X 18		2.25				
2-3	W1-2R	RIGHT CURVE						1	1
2-4	W1-4R	REVERSE CURVE RIGHT						1	1
2-5	W1-2R	RIGHT CURVE	30 X 30		6.25		1		
	W13-1	ADVISORY SPEED PLATE (YELLOW) 45 MPH	18 X 18		2.25				
2-6	W1-8	CHEVRONS (9)	18 X 24		27.00	5			
2-7	W1-2L	LEFT CURVE	30 X 30		6.25		1		
	W13-1	ADVISORY SPEED PLATE (YELLOW) 45 MPH	18 X 18		2.25				
3-1	W1-2L	LEFT CURVE	30 X 30		6.25		1		
3-2	W1-8	CHEVRONS (8)	18 X 24		24.00	4			
3-3	W1-4R	REVERSE CURVE RIGHT						1	1
3-4	W1-2R	RIGHT CURVE	30 X 30		6.25		1		
4-1	W1-4L	REVERSE CURVE LEFT						1	1
4-2	W1-2R	RIGHT CURVE	30 X 30		6.25		1		
	W13-1	ADVISORY SPEED PLATE (YELLOW) 35 MPH	18 X 18		2.25				
4-3	W1-8	CHEVRONS (6)	18 X 24		18.00	3			
4-4	W1-2L	LEFT CURVE	30 X 30		6.25		1		
	W13-1	ADVISORY SPEED PLATE (YELLOW) 35 MPH	18 X 18		2.25				
4-5	W1-4L	REVERSE CURVE LEFT						1	1
4-6	W1-5R	WINDING ROAD RIGHT						1	1
5-1	W1-4R	REVERSE CURVE RIGHT	30 X 30		6.25		1		
	W13-1	ADVISORY SPEED PLATE (YELLOW) 40 MPH	18 X 18		2.25				
5-2	W1-8	CHEVRONS (10)	18 X 24		30.00	5			
5-3	-	CAUTION DRIVEWAY AHEAD						1	1
	W13-1	ADVISORY SPEED PLATE (YELLOW) 25 MPH						1	
5-4	W1-8	CHEVRONS (10)	18 X 24		30.00	5			
5-5	-	CAUTION DRIVEWAY AHEAD							
	W13-1	ADVISORY SPEED PLATE (YELLOW) 25 MPH						1	
6-1	W1-8	CHEVRONS (6)	18 x 24		18.00	3			
6-2	W1-4R	REVERSE CURVE RIGHT	30 X 30		6.25		1		
	W13-1	ADVISORY SPEED PLATE (YELLOW) 40 MPH	18 X 18		2.25				
6-3	W1-1R	ROAD TURNS RIGHT	36 X 36		9.00		1		
	W13-1	ADVISORY SPEED PLATE (YELLOW) 30 MPH	24 X 24		4.00				
6-4	W1-8	CHEVRONS (8)	18 x 24		24.00	4			
6-5	W1-1L	ROAD TURNS LEFT	36 X 36		9.00		1		
	W13-1	ADVISORY SPEED PLATE (YELLOW) 30 MPH	24 X 24		4.00				
6-6	W1-3L	ROAD CURVES AHEAD LEFT	36 x 36		9.00				
	W13-1	ADVISORY SPEED PLATE (YELLOW) 30 MPH	24 X 24		4.00				
6-7	W1-8	CHEVRONS (6)	18 x 24		18.00	3			
7-1	W1-6	NIGHT ARROW (SINGLE)	48 X 24		8.00		1		
7-2	W1-8	CHEVRONS (6)	18 x 24		18.00	3			
7-3	W1-1L	ROAD TURNS LEFT	36 X 36		9.00		1		
	W13-1	ADVISORY SPEED PLATE (YELLOW) 30 MPH	24 X 24		4.00				
7-4	W1-5L	LEFT WINDING ROAD						1	1
7-5	W1-5L	LEFT WINDING ROAD						1	1
7-6	W1-3L	ROAD CURVES AHEAD LEFT	36 x 36		9.00		1		
	W13-1	ADVISORY SPEED PLATE (YELLOW) 30 MPH	24 X 24		4.00				
7-7	W1-8	CHEVRONS (16)	18 x 24		48.00	8			
7-8	W1-1R	ROAD TURNS RIGHT	36 X 36		9.00		1		
	W13-1	ADVISORY SPEED PLATE (YELLOW) 30 MPH	24 X 24		4.00				
7-9	W1-2R	RIGHT CURVE	30 X 30		6.25		1		
	W13-1	ADVISORY SPEED PLATE (YELLOW) 40 MPH	18 X 18		2.25				
8-1	W1-8	CHEVRONS (24)	18 x 24		72.00	13			
8-2	W1-5L	LEFT WINDING ROAD						1	1
8-3	W1-2L	LEFT CURVE	30 X 30		6.25		1		
	W13-1	ADVISORY SPEED PLATE (YELLOW) 40 MPH	18 X 18		2.25				
8-4	W1-2L	LEFT CURVE	30 X 30		6.25		1		
8-5	W1-4R	REVERSE CURVE RIGHT						1	1
8-6	W1-2R	RIGHT CURVE	30 X 30		6.25		1		
	W13-1	ADVISORY SPEED PLATE (YELLOW) 35 MPH	18 X 18		2.25				
8-7	W1-2R	RIGHT CURVE	30 X 30		6.25		1		

NOTE:
ALL ITEMS ARE CATEGORY 10
UNLESS OTHEWISE NOTED.

PERMANENT SIGNING ITEMS (CONTINUED)

SIGN GROUP NUMBER	SIGN CODE	SIGN MESSAGE	SIZE	637.2210 SIGNS TYPE II REFLECTIVE H SF	637.2230 SIGNS TYPE II REFLECTIVE F SF	634.0614 POSTS WOOD 4X6-INCH 14-FT EACH	634.0616 POSTS WOOD 4X6-INCH 16-FT EACH	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH
9-1	W1-8	CHEVRONS (14)	18 x 24		42.00	7			
9-2	W1-4R	REVERSE CURVE RIGHT						1	1
9-3	W1-2L	LEFT CURVE	30 X 30		6.25		1		
	W13-1	ADVISORY SPEED PLATE (YELLOW) 35 MPH	18 X 18		2.25				
9-4	W1-5L	WINDING ROAD LEFT (REPLACE)	30 X 30		6.25		1	1	1
	W13-1	ADVISORY SPEED PLATE (YELLOW) 30 MPH	24 X 24		4.00				
9-5	-	CAUTION DRIVEWAY AHEAD						1	1
9-6	W1-8	CHEVRONS (16)	18 x 24		48.00	8			
10-1	W1-8	CHEVRONS (8)	18 x 24		24.00	4			
10-2	-	CAUTION DRIVEWAY AHEAD						1	1
10-3	W1-1R	ROAD TURNS RIGHT	36 X 36		9.00		1		
	W13-1	ADVISORY SPEED PLATE (YELLOW) 30 MPH	24 X 24		4.00				
10-4	W1-2R	RIGHT CURVE	30 X 30		6.25		1		
10-5	W1-8	CHEVRONS (4)	18 x 24		12.00	2			
10-6	W1-8	CHEVRONS (6)	18 x 24		18.00	3			
10-7	W1-2L	LEFT CURVE	30 X 30		6.25		1		
10-8	W1-8	CHEVRONS (8)	18 x 24		24.00	4			
10-9	W1-5L	WINDING ROAD LEFT	30 X 30		6.25		1		
	W13-1	ADVISORY SPEED PLATE (YELLOW) 30 MPH	18 X 18		2.25				
10-10	W1-5R	WINDING ROAD RIGHT	30 X 30		6.25		1		
	W13-1	ADVISORY SPEED PLATE (YELLOW) 30 MPH	18 X 18		2.25				
11-1	W1-8	CHEVRONS (6)	18 x 24		18.00	3			
11-2	W1-8	CHEVRONS (10)	18 X 24		30.00	5			
11-3	W1-8	CHEVRONS (8)	18 x 24		24.00	5			
11-4	W1-5R	WINDING ROAD RIGHT						1	1
11-5	W1-1R	ROAD TURNS RIGHT						1	1
11-6	W1-5L	WINDING ROAD LEFT	30 X 30		6.25		1		
	W13-1	ADVISORY SPEED PLATE (YELLOW) 30 MPH	18 X 18		2.25				
11-7	W1-1L	ROAD TURNS LEFT	36 X 36		9.00		1		
	W13-1	ADVISORY SPEED PLATE (YELLOW) 25 MPH	24 X 24		4.00				
11-8	W1-8	CHEVRONS (6)	18 x 24		18.00	3			
12-1	W1-1R	ROAD TURNS RIGHT	36 X 36		9.00		1		
	W13-1	ADVISORY SPEED PLATE (YELLOW) 25 MPH	24 X 24		4.00				
12-2	W1-1R	ROAD TURNS RIGHT						1	1
	W13-1	ADVISORY SPEED PLATE (YELLOW) 25 MPH						1	
12-3	W1-3R	ROAD CURVES AHEAD RIGHT						1	1
	W13-1	ADVISORY SPEED PLATE (YELLOW) 25 MPH						1	
12-4	W1-3R	ROAD CURVES AHEAD RIGHT	36 X 36		9.00		1		
	W13-1	ADVISORY SPEED PLATE (YELLOW) 25 MPH	24 X 24		4.00				
12-5	W1-8	CHEVRONS (4)	18 x 24		12.00	2			
12-6	W1-3R	ROAD CURVES AHEAD RIGHT						1	1
	W13-1	ADVISORY SPEED PLATE (YELLOW) 25 MPH						1	
12-7	W1-3R	ROAD CURVES AHEAD RIGHT	36 X 36		9.00		1		
	W13-1	ADVISORY SPEED PLATE (YELLOW) 25 MPH	24 X 24		4.00				
12-8	W1-1R	ROAD TURNS RIGHT	36 X 36		9.00		1		
	W13-1	ADVISORY SPEED PLATE (YELLOW) 25 MPH	24 X 24		4.00				
12-9	W1-8	CHEVRONS (2)	18 x 24		6.00	1			
13-1	W1-8	CHEVRONS (2)	18 x 24		6.00	1			
13-2	W1-1L	ROAD TURNS LEFT	36 X 36		9.00		1		
	W13-1	ADVISORY SPEED PLATE (YELLOW) 25 MPH	24 X 24		4.00				
13-3	W1-2L	LEFT CURVE	30 X 30		6.25		1		
	W13-1	ADVISORY SPEED PLATE (YELLOW) 45 MPH	18 X 18		2.25				
13-4	W1-8	CHEVRONS (4)	18 x 24		12.00	2			
13-5	W1-5L	WINDING ROAD LEFT						1	1
13-6	W1-2R	RIGHT CURVE	30 X 30		6.25		1		
	W13-1	ADVISORY SPEED PLATE (YELLOW) 45 MPH	18 X 18		2.25				
13-7	W1-3R	ROAD CURVES AHEAD RIGHT	36 X 36		9.00		1		
	W13-1	ADVISORY SPEED PLATE (YELLOW) 30 MPH	24 X 24		4.00				
13-8	W1-8	CHEVRONS (6)	18 x 24		18.00	3			
13-9	W1-8	CHEVRONS (6)	18 x 24		18.00	3			
13-10	W1-3R	ROAD CURVES AHEAD RIGHT	36 X 36		9.00		1		
	W13-1	ADVISORY SPEED PLATE (YELLOW) 15 MPH	24 X 24		4.00				
13-11	W1-3R	ROAD CURVES AHEAD RIGHT	36 X 36		9.00		1		
	W13-1	ADVISORY SPEED PLATE (YELLOW) 30 MPH	24 X 24		4.00				
13-12	W1-8	CHEVRONS (10)	18 x 24		30.00	5			
13-13		WATCH FOR TURNING VEHICLES						1	1
13-14	W1-8	CHEVRONS (6)	18 x 24		18.00	3			
13-15	W1-6	NIGHT ARROW (SINGLE)	48 X 24		8.00		1		
13-16	W1-6	NIGHT ARROW (SINGLE)	48 X 24		8.00		1		
13-17	W1-3R	ROAD CURVES AHEAD RIGHT	36 X 36		9.00		1		
	W13-1	ADVISORY SPEED PLATE (YELLOW) 15 MPH	24 X 24		4.00				
13-18	R1-1	STOP	30 X 30	5.18			1	1	1
	W13-1	ADVISORY SPEED PLATE (YELLOW) 15 MPH	18 X 18		2.25				

NOTE:
ALL ITEMS ARE CATEGORY 10
UNLESS OTHEWISE NOTED.

3

PERMANENT SIGNING ITEMS (CONTINUED)

SIGN GROUP NUMBER	SIGN CODE	SIGN MESSAGE	SIZE	637.2210 SIGNS TYPE II REFLECTIVE H SF	637.2230 SIGNS TYPE II REFLECTIVE F SF	634.0614 POSTS WOOD 4X6-INCH 14-FT EACH	634.0616 POSTS WOOD 4X6-INCH 16-FT EACH	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH
14-1	W1-3R	ROAD CURVES AHEAD RIGHT	36 X 36		9.00		1		
	W13-1	ADVISORY SPEED PLATE (YELLOW) 30 MPH	24 X 24		4.00				
14-2	W1-8	CHEVRONS (8)	18 x 24		24.00	4			
14-3	W1-4L	REVERSE CURVE LEFT	30 X 30		6.25		1		
	W13-1	ADVISORY SPEED PLATE (YELLOW) 35 MPH	18 X 18		2.25				
14-4	W1-5L	WINDING ROAD LEFT						1	1
14-5	W1-8	CHEVRONS (4)	18 x 24		12.00	2			
14-6	W1-3R	ROAD CURVES AHEAD RIGHT	36 X 36		9.00		1		
	W13-1	ADVISORY SPEED PLATE (YELLOW) 30 MPH	24 X 24		4.00				
14-7	W1-8	CHEVRONS (14)	18 x 24		42.00	7			
14-8	W1-5L	WINDING ROAD LEFT						1	1
14-9	W1-8	CHEVRONS (6)	18 x 24		18.00	3			
15-1	W1-8	CHEVRONS (10)	18 x 24		30.00	5			
15-2	W1-4L	REVERSE CURVE LEFT	30 X 30		6.25		1		
	W13-1	ADVISORY SPEED PLATE (YELLOW) 35 MPH	18 X 18		2.25				
15-3	W1-1R	ROAD TURNS RIGHT	36 X 36		9.00		1		
	W13-1	ADVISORY SPEED PLATE (YELLOW) 25 MPH	24 X 24		4.00				
15-4	W1-8	CHEVRONS (6)	18 x 24		18.00	3			
15-5	W1-8	CHEVRONS (12)	18 x 24		36.00	6			
15-6	W1-1L	ROAD TURNS LEFT	36 X 36		9.00		1		
	W13-1	ADVISORY SPEED PLATE (YELLOW) 25 MPH	24 X 24		4.00				
15-7	W1-2L	LEFT CURVE	30 X 30		6.25		1		
	W13-1	ADVISORY SPEED PLATE (YELLOW) 35 MPH	18 X 18		2.25				
15-8	W1-8	CHEVRONS (12)	18 x 24		36.00	6			
16-1	W1-2R	RIGHT CURVE	30 X 30		6.25		1		
	W13-1	ADVISORY SPEED PLATE (YELLOW) 35 MPH	24 X 24		4.00				
16-2	W1-5R	WINDING ROAD RIGHT						1	1
16-3	W1-1L	ROAD TURNS LEFT	36 X 36		9.00		1		
	W13-1	ADVISORY SPEED PLATE (YELLOW) 20 MPH	24 X 24		4.00				
16-4	W1-8	CHEVRONS (8)	18 x 24		24.00	4			
16-5	W1-1R	ROAD TURNS RIGHT	36 X 36		9.00		1		
	W13-1	ADVISORY SPEED PLATE (YELLOW) 20 MPH	24 X 24		4.00				
16-6	-	SCENIC ROAD/WINDING ROAD						1	1
ITEM TOTAL				5.18	1540.25	168	54	35	30

NOTE:
ALL ITEMS ARE CATEGORY 10
UNLESS OTHEWISE NOTED.

R/W PROJECT NUMBER	SHEET NUMBER	TOTAL SHEETS
7894-03-01		
FEDERAL PROJECT NUMBER	4.1	9

PLAT OF RIGHT-OF-WAY REQUIRED FOR

TRIMBELLE – STH 35

STH 35 – USH 10

C.T.H. O — PIERCE CO.

CONSTRUCTION PROJECT NUMBER

CONVENTIONAL ABBREVIATIONS

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

CURVE DATA

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

CONVENTIONAL UTILITY SYMBOLS

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

CONVENTIONAL SYMBOLS

- SECTION LINE
- QUARTER LINE
- SIXTEENTH LINE
- NEW REFERENCE LINE
- NEW R/W LINE
- EXISTING R/W LINE
- PROPERTY LINE
- LOT, TIE & OTHER MINOR LINES
- CORPORATE LIMITS
- UNDERGROUND FACILITY (COMMUNICATIONS, ELECTRIC, ETC) —W— (TYPE)
- FEE ACQUISITION AREA (HATCHING VARIES BY OWNER)
- TEMPORARY LIMITED EASEMENT AREA
- EASEMENT AREA (HIGHWAY, PERMANENT LIMITED, OR RESTRICTED DEVELOPMENT)
- TRANSMISSION STRUCTURES
- BUILDING
- NATIONAL GEODETIC SURVEY MONUMENT
- SIXTEENTH CORNER MONUMENT

- SECTION CORNER (18 17 / 19 20 / 30 29 / 31 32)
- NOTATION FOR COMBUSTABLE FLUIDS — CAUTION
- NOTATION FOR HIGH VOLTAGE TRANSMISSION LINES — CAUTION
- R/W MONUMENT
- NON-MONUMENTED R/W POINT
- FOUND IRON PIN IP
- VALVE (GAS, WATER, ETC.) (TYPE)
- SIGN SIGN
- OFF-PREMISE SIGN (EX. 25) SIGN

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

- ACCESS CONTROLLED BY ACQUISITION
- NO ACCESS (BY STATUTORY AUTHORITY)
- ACCESS RESTRICTED (BY PREVIOUS PROJECT OR CONTROL)
- BRIDGE
- PARCEL NUMBER (25)
- UTILITY NUMBER (40)

R 19 W | R 18 W

T 26 N

T 25 N

BEGIN RELOCATION ORDER
STA. 285+00.00
Y=295,989.995
X=455,760.027
412.10 FEET WEST AND 105.54 FEET SOUTH OF THE SOUTH 1/4 CORNER OF SECTION 5, T25N, R18W.

END RELOCATION ORDER
STA. 540+00.00
Y=316,874.779
X=458,909.380
492.23 FEET SOUTH AND 4.50 FEET EAST OF THE NORTHWEST CORNER OF SECTION 21, T26N, R18W.

LAYOUT
SCALE 0 1 MI.

TOTAL NET LENGTH OF CENTERLINE = 4.830 MI.

N

NOTES:

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COUNTY COORDINATES, PIERCE COUNTY, NAD83(2011), IN U.S. SURVEY FEET. VALUES 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 REBARS), UNLESS OTHERWISE NOTED, AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

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.

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 THE 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 PIERCE COUNTY HIGHWAY OFFICE IN ELLSWORTH.

ORIGINAL PLANS PREPARED BY

cbs²

770 TECHNOLOGY WAY
CHIPPEWA FALLS, WI 54729

WISCONSIN
NEIL C. BOWE
S-2827
CHIPPEWA FALLS WI
LAND SURVEYOR

DATE: 10-15-16 Neil C. Bowe (Signature)

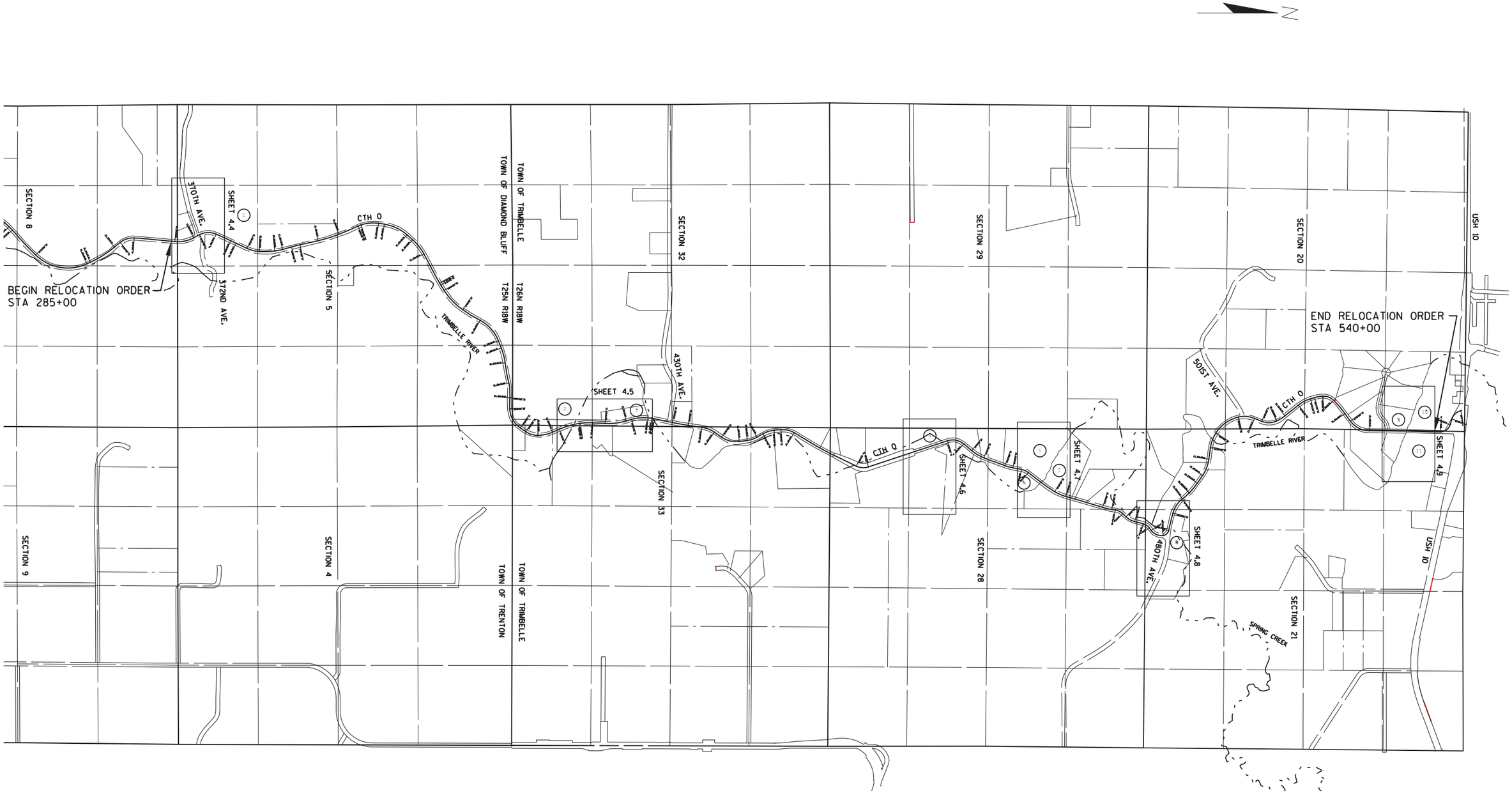
REVISION DATE

PIERCE COUNTY

APPROVED FOR PIERCE COUNTY

DATE: 1-26-17 (Signature)

E



REVISION DATE	DATE 10/1/2016	SCALE. FEET N.T.S.	HWY: C.T.H O	R/W PROJECT NUMBER PIERC15002	PLAT SHEET 4.2	
	GRID FACTOR N/A		COUNTY: PIERCE	CONSTRUCTION PROJECT NUMBER	PS&E SHEET	E

FILE NAME : P:\PIERC\15002 - CTH O\C3D\RW\RLCTH000.DWG PLOT DATE : 5/23/2016 4:20 PM PLOT BY : NBOWE PLOT NAME :

SCHEDULE OF LANDS & INTERESTS REQUIRED

OWNER NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO THE DEPARTMENT

PARCEL NUMBER	SHEET NUMBER	OWNER(S)	INTEREST REQUIRED	TOTAL ACRES	R/W ACRES REQUIRED			TOTAL ACRES REMAINING	TLE ACRES
					NEW	EXISTING	TOTAL		
1	4.4	DAVID L. KINNEMAN	FEE,TLE	24.00	0.02	0.08	0.10	23.90	0.01
2	4.5	MARK KEARNS	TLE	-	-	-	-	-	0.02
3	4.5	GEORGE SMITH	TLE	-	-	-	-	-	0.07
4	4.6	MICHAEL T. BERG	TLE	-	-	-	-	-	0.06
5	4.7	JEFFREY & CYNTHIA KLEIN	TLE	-	-	-	-	-	0.02
6	4.7	JAMES & CYNTHIA OGDEN	TLE	-	-	-	-	-	0.02
7	4.7	THOMAS COGAN	TLE	-	-	-	-	-	0.03
8	4.8	MICHAEL & SUZANNE HOLST	FEE	5.05	0.02	-	0.02	5.03	-
9	4.9	PAULA SUSLA	TLE	-	-	-	-	-	0.03
10	4.9	GAS LIGHT LLC.	FEE	16.73	0.09	0.08	0.15	16.58	-
11	4.9	CHARLES & DEBRA FOY	FEE	28.50	0.08	0.23	0.31	28.19	-
50	4.4	BEVCOMM	RELEASE OF RIGHTS						

4

4

REVISION DATE	DATE 10-1-16	SCALE, FEET	HWY: C.T.H. O	R/W PROJECT NUMBER 7894-03-01	PLAT SHEET 4.3	
	GRID FACTOR N/A	N/A	COUNTY: PIERCE	PROJECT NUMBER	PS&E SHEET	E

COURSE TABLE			
FROM	TO	DIRECTION	DISTANCE
309	310	N27°45'35"W	109.99'
310	116	S62°14'26"W	33.00'
112	113	N77°16'07"W	24.78'
114	115	S85°07'00"E	22.73'
115	307	N79°53'52"E	33.00'

STATION – OUT TABLE		
POINT	STATION	OUT
113	290+70	55.00' LT
114	290+95	55.00' LT

ROAD NAME	BASIS OF EXISTING R/W	YEAR
CTH O	WI STATUTE 82.31 (2)	
370TH AVE.		
372ND AVE.		

PI STA 291+46.41
Y = 296595.291
X = 455581.340
Delta = 52°01'34" RT
R = 313.70'
D = 18°15'53"
T = 153.09'
L = 284.85'

CURVE 307-310
L= 97.47'
LC= 97.08'
LCB= S19°00'10"E
R= 313.70'

CURVE 308-309
L= 277.50'
LC= 274.62'
LCB= N13°26'54"W
R= 555.48'

CURVE 113-114
L= 29.38'
LC= 29.38'
LCB= N11°28'20"W
R= 368.70'

CURVE 116-112
L= 74.48'
LC= 74.34'
LCB= N21°44'10"W
R= 346.70'

PI STA 287+26.71
Y = 296215.723
X = 455781.122
Delta = 33°05'55" LT
R = 555.48'
D = 10°18'53"
T = 165.06'
L = 320.89'

TOWN OF DIAMOND BLUFF

TOWN OF DIAMOND BLUFF

SE-SW
SEC 5-25-18W

DAVID L. KINNEMAN (1)

BEVCOMM (50)

372ND AVE.

370TH AVE.

C.T.H. O

1/16TH LINE

1/4 LINE

SECTION LINE

S89°52'53"W 2668.17'

S89°52'53"W 2264.15'

S89°52'53"W 404.02'

HARRISON MONUMENT (52)
Y= 296,090.009
X= 453,503.961

53 3" ALUM. CAP
Y= 296,095.534
X= 456,172.130

REVISION DATE	DATE 10/1/2016	SCALE, FEET 0 50 100	HWY: C.T.H. O	R/W PROJECT NUMBER 7894-03-01	PLAT SHEET 4.4
	GRID FACTOR N/A		COUNTY: PIERCE	CONSTRUCTION PROJECT NUMBER	PS&E SHEET 41 E

FILE NAME : P:\PIERC\15002 - CTH O\C3D\RW\RDCTH001.DWG PLOT DATE : PLOT BY : NBOWE PLOT NAME :

WISDOT/CADDS SHEET 75

PI STA 373+55.64
Y = 302562.077
X = 458797.167
Delta = 15°23'16" RT
R = 1265.29'
D = 04°31'42"
T = 170.94'
L = 339.82'

PI STA 376+50.88
Y = 302856.248
X = 458754.126
Delta = 11°24'24" RT
R = 1043.60'
D = 05°29'25"
T = 104.23'
L = 207.77'

PI STA 385+42.51
Y = 303734.509
X = 458663.951
Delta = 22°47'52" RT
R = 694.03'
D = 08°15'20"
T = 139.93'
L = 276.15'

TOWN OF DIAMOND BLUFF

SE-SE
SEC 32-26-18W

NE-SE
SEC 32-26-18W

1/16TH LINE

P.L.

N

(3)
GEORGE SMITH

TLE FOR SLOPES

206 385+47.69 32.1
207 385+70.00 70.0'
208 386+23.00 70.0'
209 386+47.81 32.5'

PI 385+42.51
PI 387+65.43
66'

PT 383+10.85
R = N 16°27'54" W
385+00
R = N 06°19'58" E
PC 384+02.58
PT 386+78.73
PC 387+41.13
PT 387+89.69

PI 376+50.88
PC 379+57.06
66'
380+00
PI 373+55.64
R = N 08°19'26" W
R = N 03°04'58" E
C.T.H. O

PT 375+24.51
PC 375+46.65
40.9'
202
375+53.62
60.0'
203
375+72.78
60.0'
204
375+94
48.4'
205
376+21.13
TLE FOR SLOPES

PT 377+54.42

PI 381+35.55

PIERCE CO.
HIGHWAY DEPARTMENT

SECTION LINE

(2)
MARK KEARNS

SW-SW
SEC 33-26-18W

NW-SW
SEC 33-26-18W

PI STA 381+35.55
Y = 303341.049
X = 458780.237
Delta = 19°32'52" LT
R = 1036.98'
D = 05°31'31"
T = 178.63'
L = 353.79'

ROAD NAME	BASIS OF EXISTING R/W	YEAR
CTH O	WI STATUTE 82.31 (2)	

REVISION DATE	DATE 10/1/2016	SCALE, FEET 0 50 100	HWY: C.T.H. O	R/W PROJECT NUMBER 7894-03-01	PLAT SHEET 4.5	
	GRID FACTOR N/A		COUNTY: PIERCE	CONSTRUCTION PROJECT NUMBER	PS&E SHEET 42	E

FILE NAME : P:\PIERC\15002 - CTH O\C3D\RW\RDCTH002.DWG PLOT DATE : PLOT BY : NBOWE PLOT NAME :

WISDOT/CADDS SHEET 75

ROAD NAME	BASIS OF EXISTING R/W	YEAR
CTH O	WI STATUTE 82.31 (2)	

PI STA 441+14.73
Y = 308968.969
X = 459008.102
Delta = 58°07'59" RT
R = 280.00'
D = 20°27'46"
T = 155.63'
L = 284.09'

PI 441+14.73

PC 439+59.10

66'

440+00

C.T.H. O

214 215 438+00 50.0'-32.9'

TLE FOR SLOPES

213 212 436+75 50.0'-40.0'

211 210 436+00 40.0'-32.9'

R = N 18°18'34" W

66'

435+00

4

MICHAEL T. BERG

P.L.

TOWN OF TRIMBELLE

NW-SW
SEC 28-26-18W

P.L.

SECTION LINE

1/16TH LINE

1/16TH LINE

N

4

4

REVISION DATE	DATE 10/1/2016	SCALE. FEET 0 50 100	HWY: C.T.H. O	R/W PROJECT NUMBER 7894-03-01	PLAT SHEET 4.6	
	GRID FACTOR N/A		COUNTY: PIERCE	CONSTRUCTION PROJECT NUMBER	PS&E SHEET 43	E

FILE NAME : P:\PIERC\15002 - CTH O\C3D\RW\RDCTH003.DWG PLOT DATE : PLOT BY : NBOWE PLOT NAME :

WISDOT/CADDS SHEET 75

4

4

1/16TH LINE

SECTION LINE

N

P.L.

TRIMBELLE RIVER

SW-NW
SEC 28-26-18W

7
THOMAS COGAN

5
JEFFREY & CYNTHIA KLEIN

TOWN OF TRIMBELLE

6
JAMES & CYNTHIA OGDEN

PT 461+65.05

.99

PI 460+66.14

PC 459+65.95

460+00

R= N 31°49'00" E

TLE FOR SLOPES

226|227 459+00 40.0'-21.6'

PI 458+41.74

225|224 458+00 40.0'-29.80'

PI 457+73.02
N= 310430.874
E= 459790.786

R= N35°02'59"E

C.T.H. O

222|223 PI 456+46.45 40.0'-32.5'
N= 310328.423
E= 459735.005

R= N 36°43'22" E

TLE FOR SLOPES

221|220 455+25 40.0'-32.2'

455+00 R= N 37°36'26" E

456+46.45 33.5'-40.0' 219|218

TLE FOR SLOPES

455+25 33.8'-40.0' 216|217

PI 453+66.75

PT 454+26.16

PC 453+05.07

.99

TRIMBELLE RIVER

P.L.

P.L.

1/16TH LINE

PI STA 453+66.75
Y = 310106.046
X = 459543.035
Delta = 26°51'57" RT
R = 258.25'
D = 22°11'10"
T = 61.68'
L = 121.09'

PI STA 453+66.75
Y = 310106.046
X = 459543.035
Delta = 26°51'57" RT
R = 258.25'
D = 22°11'10"
T = 61.68'
L = 121.09'

ROAD NAME	BASIS OF EXISTING R/W	YEAR
CTH O	WI STATUTE 82.31 (2)	

T 26 N
R 29 28 W
18

UNRECOVERED

REVISION DATE	DATE 10/1/2016	SCALE. FEET 0 50 100	HWY: C.T.H. O	R/W PROJECT NUMBER 7894-03-01	PLAT SHEET 4.7
	GRID FACTOR N/A		COUNTY: PIERCE	CONSTRUCTION PROJECT NUMBER	PS&E SHEET 44 E

FILE NAME : P:\PIERC\15002 - CTH O\C3D\RW\RDCTH004.DWG PLOT DATE : PLOT BY : NBOWE PLOT NAME :

ROAD NAME	BASIS OF EXISTING R/W	YEAR
CTH O	WI STATUTE 82.31 (2)	
480TH AVE.	WI STATUTE 82.31 (2)	

N

P.L.

NW-SW
SEC 21-26-18W

TOWN OF TRIMBELLE

MICHAEL & SUZANNE HOLST

CSM V.2 PG.183
LOT 1

(8)

SHED

(66) 3" ALUM. CAP
Y= 317339.397
X= 461545.985

T 26 N
R 18 W
16
21

S00°14'30"E 415.14'

313

N89°45'30"W 918.55'

PI STA 480+16.66
Y = 312460.507
X = 460612.441
Delta = 69°54'15" LT
R = 107.03'
D = 53°32'07"
T = 74.81'
L = 130.58'

PI 485+19.16

485+00

PC 483+71.06

PI 482+15.09
N= 312510.129
E= 460400.708

R= N 75°18'18" W

C.T.H. O

R= N 76°48'36" W

66'

101'

(118) 480+61.12 35.28'

(119) 480+56.25 55.03'

(120) 480+37.59 71.41'

(121) 480+31.11 51.88'

PI 480+16.66

480TH AVE.

66'

PT 480+72.43

480+00

PCC 479+41.85

1/16TH LINE

1/4 LINE

PI STA 485+19.16
Y = 312587.263
X = 460106.583
Delta = 37°43'47" RT
R = 433.45'
D = 13°13'07"
T = 148.10'
L = 285.43'

66'

PC 477+18.62

PI 478+41.30

PI STA 478+41.30
Y = 312264.447
X = 460636.188
Delta = 59°05'07" LT
R = 216.47'
D = 26°28'05"
T = 122.69'
L = 223.23'

PI STA 476+04.49
Y = 312116.509
X = 460445.609
Delta = 37°25'37" RT
R = 183.35'
D = 31°14'55"
T = 62.11'
L = 119.77'

PI 476+04.49

R= N 52°10'46" E

C.T.H. O

PI 476+62.16

475+00

14°45'09" E

PC 475+42.38

COURSE TABLE			
FROM	TO	DIRECTION	DISTANCE
121	118	N84°03'27"W	45.20'
118	119	N37°00'41"E	24.76'
119	120	S85°31'21"E	32.43'
120	121	S05°56'33"W	22.04'

SECTION LINE

T 26 N
R 18 W
20
21
29
28

UNRECOVERED

T 26 N
R 18 W
21
28

(67) 3" ALUM. CAP
Y= 312084.042
X= 461523.831

4

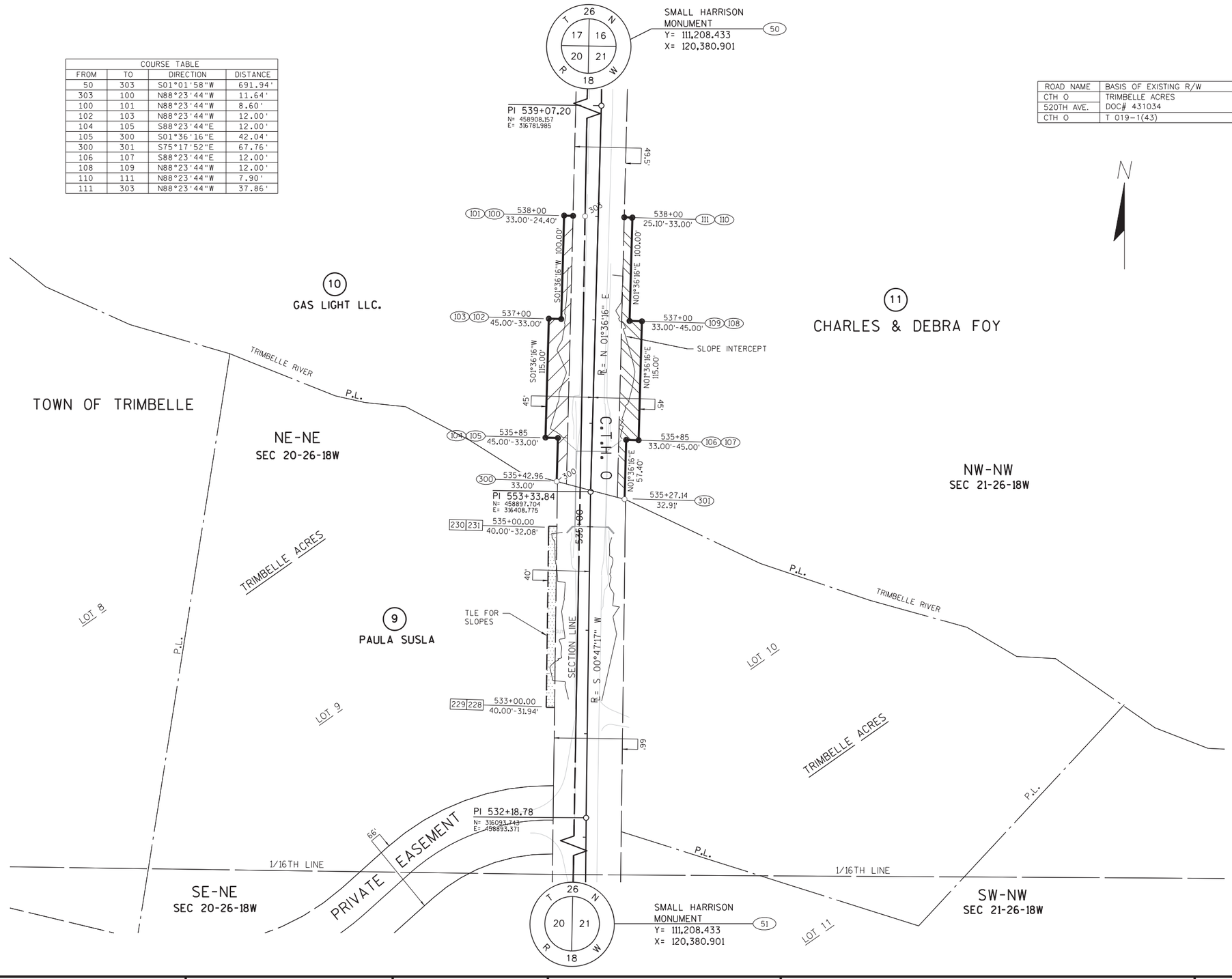
4

REVISION DATE	DATE 10/1/2016	SCALE. FEET 0 50 100	HWY: C.T.H. O	R/W PROJECT NUMBER 7894-03-01	PLAT SHEET 4.8
	GRID FACTOR N/A		COUNTY: PIERCE	CONSTRUCTION PROJECT NUMBER	PS&E SHEET 45 E

FILE NAME : P:\PIERC\15002 - CTH O\C3D\RW\RDCTH005.DWG PLOT DATE : PLOT BY : NBOWE PLOT NAME :

COURSE TABLE			
FROM	TO	DIRECTION	DISTANCE
50	303	S01°01'58"W	691.94'
303	100	N88°23'44"W	11.64'
100	101	N88°23'44"W	8.60'
102	103	N88°23'44"W	12.00'
104	105	S88°23'44"E	12.00'
105	300	S01°36'16"E	42.04'
300	301	S75°17'52"E	67.76'
106	107	S88°23'44"E	12.00'
108	109	N88°23'44"W	12.00'
110	111	N88°23'44"W	7.90'
111	303	N88°23'44"W	37.86'

ROAD NAME	BASIS OF EXISTING R/W	YEAR
CTH O	TRIMBELLE ACRES	2002
520TH AVE.	DOC# 431034	
CTH O	T 019-1(43)	1972



REVISION DATE	DATE 10/1/2016	SCALE, FEET 0 50 100	HWY: C.T.H. O	R/W PROJECT NUMBER 7894-03-01	PLAT SHEET 4.9
	GRID FACTOR N/A		COUNTY: PIERCE	CONSTRUCTION PROJECT NUMBER	PS&E SHEET 46 E

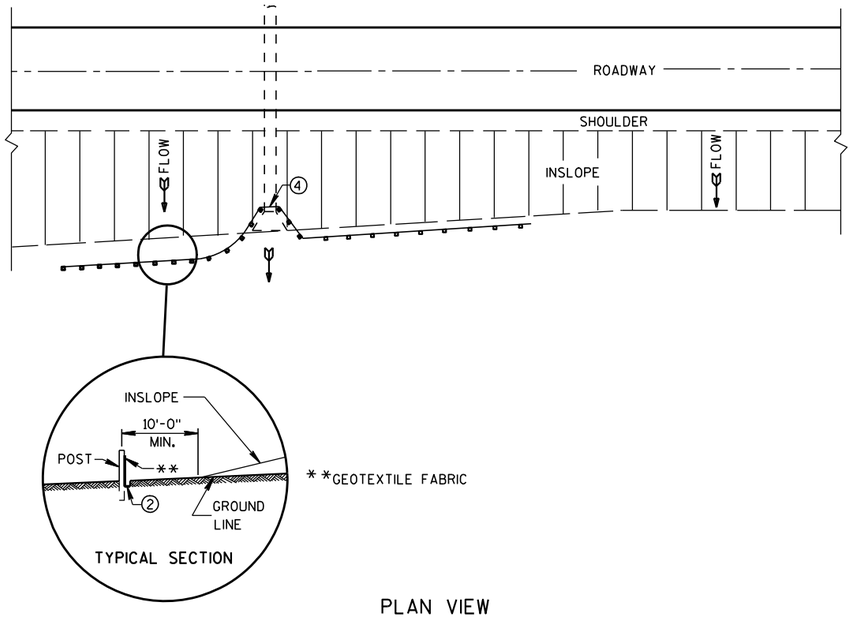
FILE NAME : P:\PIERC\15002 - CTH O\C3D\RW\RDCTH006.DWG PLOT DATE : PLOT BY : NBOWE PLOT NAME :

WISDOT/CADDS SHEET 75

Standard Detail Drawing List

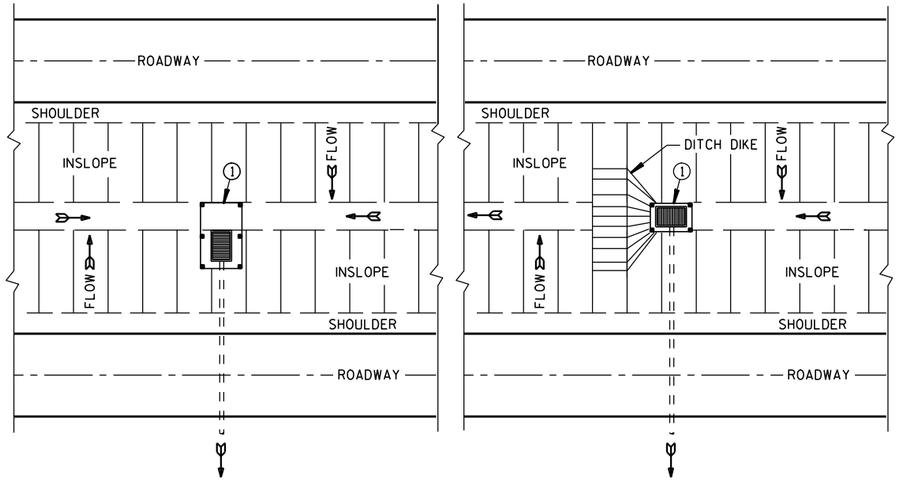
08E09-06	SILT FENCE
14B15-09A	STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS
14B15-09B	STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS
14B15-09C	STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS
14B16-04A	ANCHORAGE FOR STEEL PLATE BEAM GUARD TYPE 2
14B16-04B	ANCHORAGE FOR STEEL PLATE BEAM GUARD TYPE 2
14B18-06A	STEEL PLATE BEAM GUARD, CLASS "A" (AT BRIDGES, OBSTACLES AND SIDEROADS/DRIVEWAYS)
14B20-11A	STEEL THRIE BEAM STRUCTURE APPROACH
14B20-11E	STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO BRIDGE RAILING TYPES "F" AND "W"
14B20-11G	STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTOR PLATE DETAIL
14B24-08A	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
14B24-08B	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
14B24-08C	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
14B25-01	STEEL PLATE BEAM GUARD, CLASS "A", OVER LOW FILL CULVERTS
14B27-01A	STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL
14B27-01B	STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL
14B27-01C	STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL
14B42-04A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-04B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-04C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-02A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-02B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-02C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B45-04A	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04B	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04C	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04G	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
15C04-03	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C08-17A	LONGITUDINAL MARKING (MAINLINE)
15C12-04	TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)
15C19-04A	MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY
15D27-03	TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH

6



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.

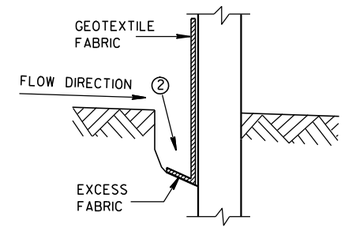
① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

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.

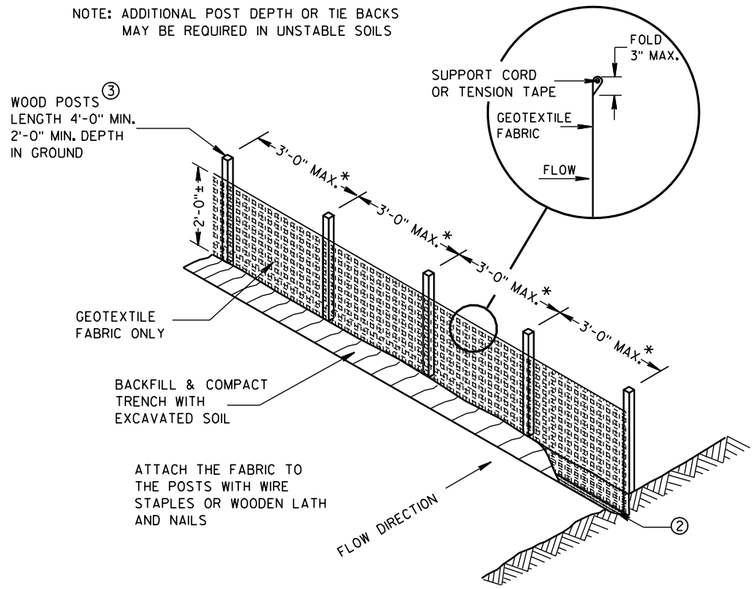
③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

④ SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.

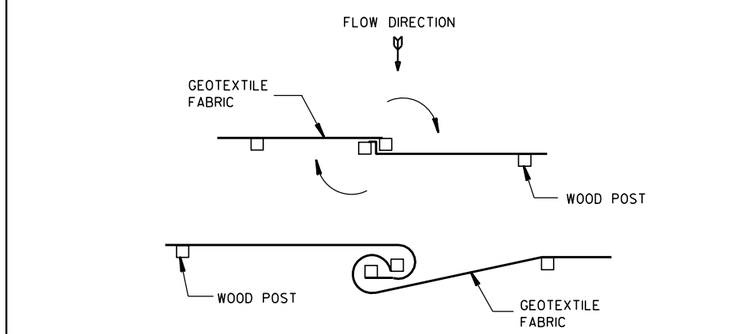
⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



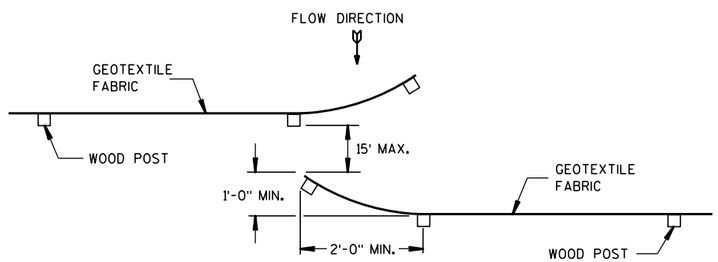
TRENCH DETAIL



SILT FENCE

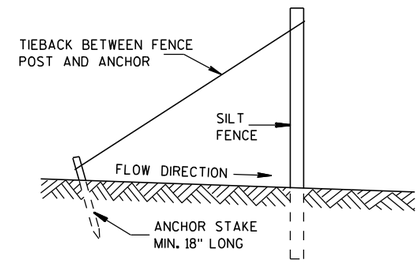


TWIST METHOD



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

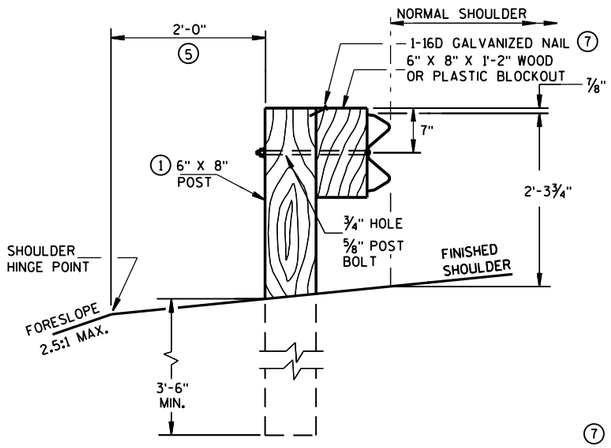
6

S.D.D. 8 E 9-6

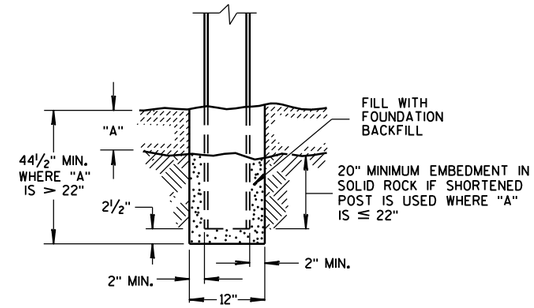
GENERAL NOTES

1. W6 X 9 OR W6 X 8.5 STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS ARE ACCEPTABLE ALTERNATIVES FOR 6" X 8" WOOD POSTS WITH WOOD OR PLASTIC BLOCKOUTS. USE APPROVED NOTCHED PLASTIC BLOCKOUTS WITH STEEL POSTS. APPROVED PLASTIC BLOCKOUT DESIGNS MAY VARY FROM THIS TYPICAL DETAIL WHEN USED IN CONJUNCTION WITH STEEL POSTS.
   DO NOT MIX STEEL POSTS AND WOOD POSTS IN A SINGLE INSTALLATION.
2. USE STRUCTURAL STEEL POSTS CONFORMING TO ASTM A 36. GALVANIZED POSTS ACCORDING TO AASHTO M 111. EITHER SET THE POSTS IN DRILLED HOLES OR DRIVE TO GRADE. REMOVE MUSHROOMING CAUSED BY DRIVING AND REPAIR DAMAGED SPELTER COATING ON GALVANIZED POSTS.
3. INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.
4. USE EITHER WOOD OR APPROVED PLASTIC BLOCKOUTS ON WOOD POSTS.
5. IF THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING, W BEAM (LHW).
6. IF ROCK IS ENCOUNTERED DURING EXCAVATION, THE ENGINEER MAY APPROVE USING A 12 INCH DIAMETER POST HOLE EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE APPROXIMATELY 2½ INCHES DEEP. CUT THE POSTS TO LENGTH AND PLACE IN YHE HOLE. BACKFILL WITH MATERIAL EXCAVATED FROM THE HOLE AND COMPACT ADEQUATEY.
7. 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.

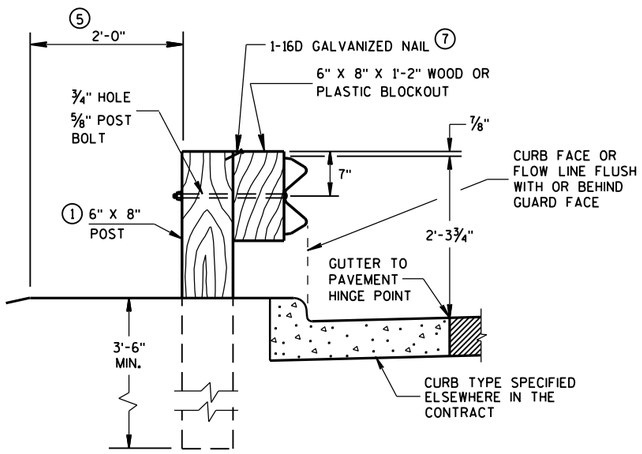
INSTALL BEAM GUARD SECTIONS AND ALL NECESSARY HARDWARE ACCORDING TO THE APPLICABLE PLAN AND CURRENT STANDARD AND SUPPLEMENTAL SPECIFICATIONS.
ALL DIMENSIONS ARE SUBJECT TO MANUFACTURER'S TOLERANCES EXCEPT WHERE ALLOWABLE TOLERANCES ARE SHOWN.



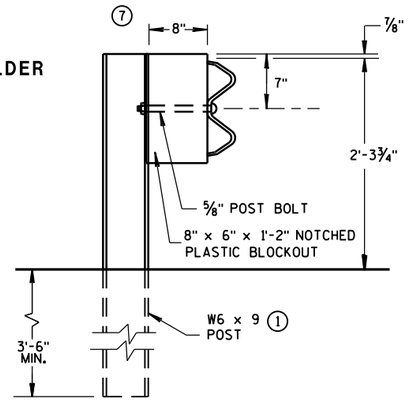
END VIEW
LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION



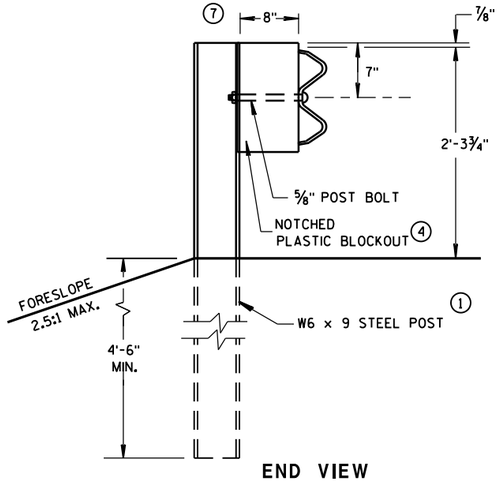
END VIEW
SETTING STEEL OR WOOD POST IN ROCK ⑥



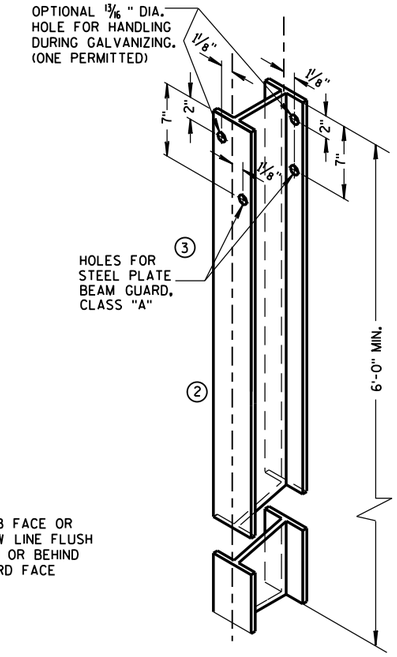
END VIEW
LOCATED ALONG A CURBED ROADWAY



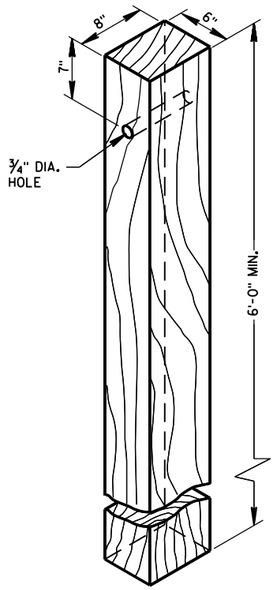
END VIEW
STEEL POST & NOTCHED
PLASTIC BLOCKOUT ALTERNATIVE
STANDARD INSTALLATION



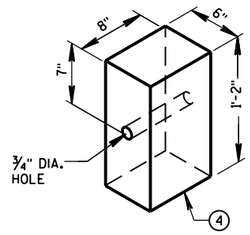
END VIEW
LONGER POST AT HALF
POST SPACING W BEAM
(LHW)



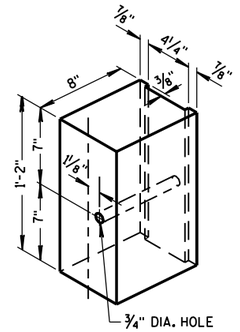
STEEL POST &
HOLE PUNCHING DETAIL
(W6 X 9) ①
ALL HOLES 13/16" DIAMETER EXCEPT AS NOTED



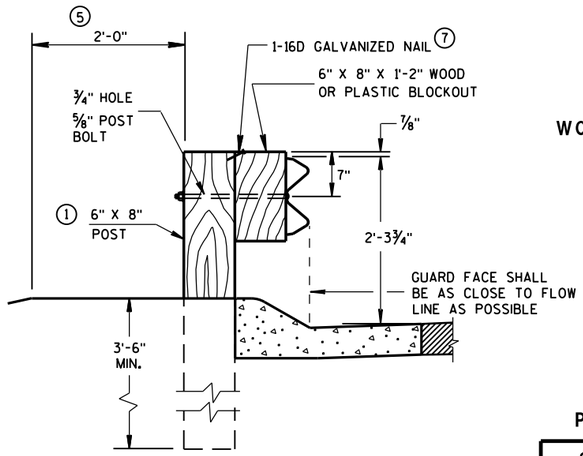
WOOD POST
(6"X8") NOMINAL



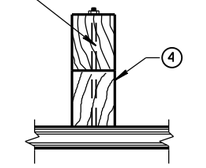
WOOD OR PLASTIC
BLOCKOUT FOR
WOOD POSTS



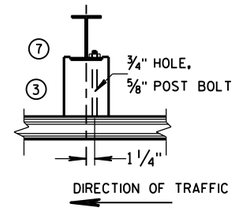
TYPICAL NOTCHED ①
PLASTIC BLOCKOUT
FOR STEEL POSTS



END VIEW
LOCATED ALONG A
MOUNTABLE CURBED ROADWAY



PLAN VIEW
WOOD POST, BLOCKOUT & BEAM



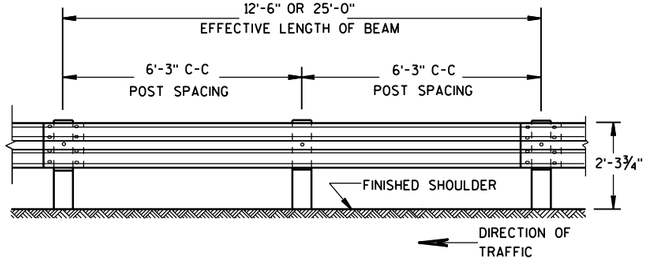
PLAN VIEW
STEEL POST, NOTCHED
PLASTIC BLOCKOUT & BEAM

STEEL PLATE BEAM GUARD,
CLASS "A"
INSTALLATION & ELEMENTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

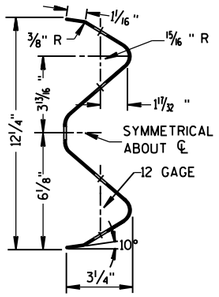
TYPICAL INSTALLATION OF STEEL PLATE BEAM GUARD

6
S.D.D. 14 B 15-9a

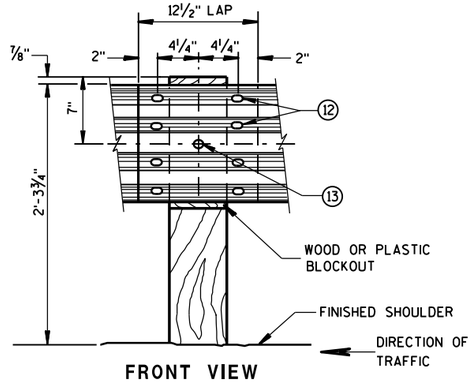


FRONT VIEW

POST SPACING STANDARD INSTALLATION



SECTION THRU W BEAM



FRONT VIEW

BEAM SPLICE AT WOOD POST AND POST MOUNTING DETAIL

GENERAL NOTES

(8) PROVIDE SILVER REFLECTIVE SHEETING ON ALL REFLECTORS EXCEPT THOSE LOCATED ALONG THE LEFT EDGE OF ONE-WAY ROADWAYS, WHICH SHALL BE PROVIDED WITH YELLOW REFLECTIVE SHEETING. SHEETING IS TYPE H. SEE STANDARD SPECIFICATION 637.

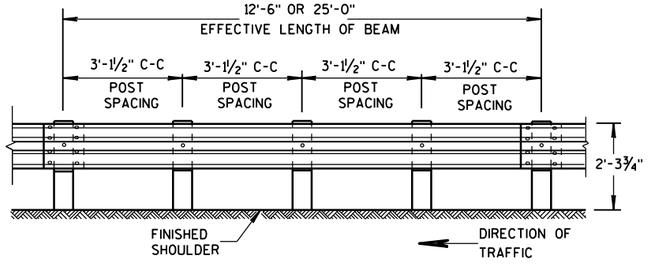
(9) DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

(10) REVERSE EVERY OTHER REFLECTOR FOR 2-WAY VISIBILITY. THE CONTRACTOR MAY FURNISH TWO-SIDED REFLECTORS IN LIEU OF ONE-SIDED REFLECTORS.

(11) PROVIDE AN ANGLE OF BEND OF 90° ± 1° FOR TWO-SIDED REFLECTORS.

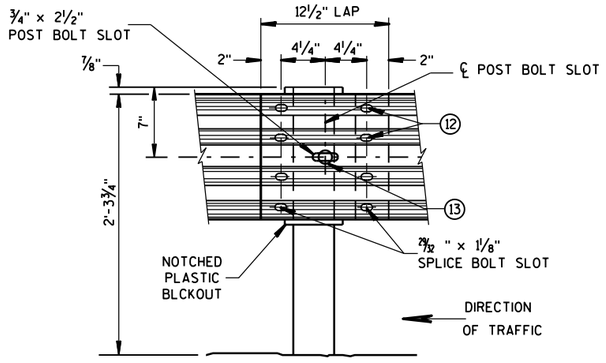
(12) 8 -⅝" ϕ X 2" BUTTON HEAD BOLTS WITH OVAL SHOULDERS & RECESS NUTS.

(13) ⅝" DIA. BUTTON HEAD BOLT AND RECESS NUT WITH ⅝" DIA. F844 FLAT WASHER UNDER NUT.



FRONT VIEW

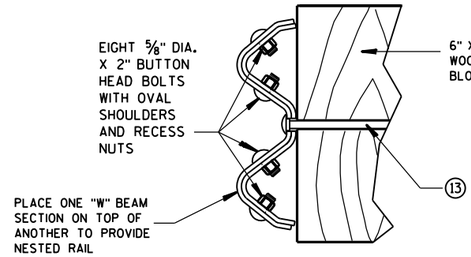
POST SPACING FOR LONGER POST AT HALF POST SPACING W BEAM (LHW)



FRONT VIEW

BEAM SPLICE AT STEEL POST

TYPICAL SPLICING DETAILS OF STEEL PLATE BEAM GUARD

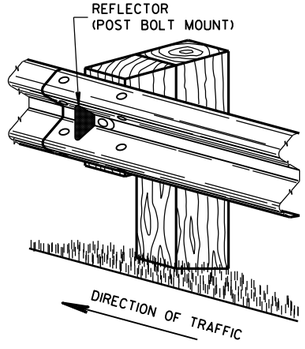


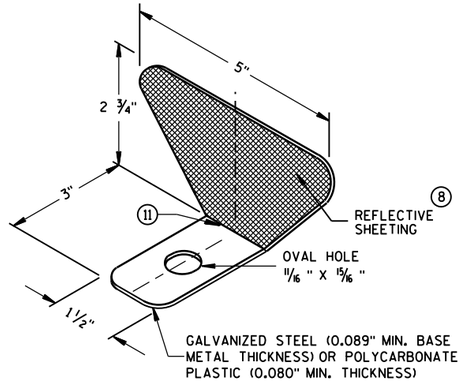
NESTED W BEAM (NW)

USE ALL OTHER STANDARD BEAM GUARD DETAILS FOR CONSTRUCTING NESTED W BEAM (NW)

REFLECTOR SPACING (9)

	BEAM GUARD LENGTH	REFLECTOR SPACING	NO. SURFACES REFLECTORIZED	MIN. NO. REFLECTORS
ONE WAY TRAFFIC	< 200'	50' C-C	1	3
	> 200'	100' C-C	1	
TWO WAY TRAFFIC	< 200'	25' C-C	1 (10)	6
	> 200'	50' C-C	1	
TWO WAY TRAFFIC	< 200'	50' C-C	2 (11)	3
	> 200'	100' C-C	2	



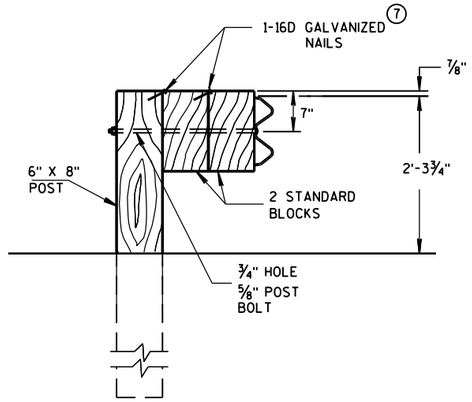


ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION (8)

STEEL PLATE BEAM GUARD,
CLASS "A",
INSTALLATION & ELEMENTS

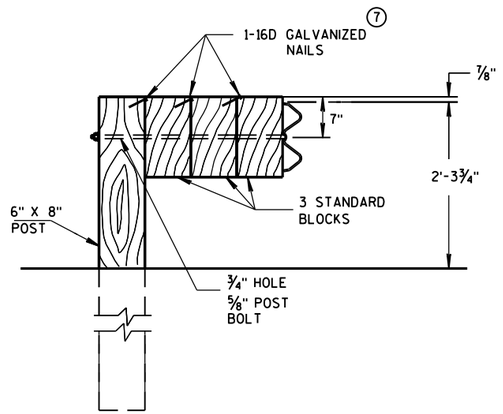
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6
S.D.D. 14 B 15-9b



DETAIL FOR DOUBLE BLOCKS

THE NUMBER OF DOUBLE BLOCK POSTS WITHIN A BARRIER RUN IS UNLIMITED

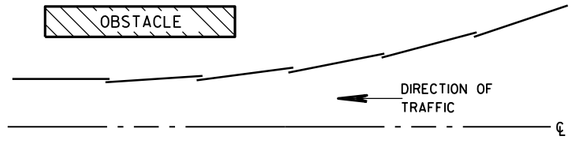


DETAIL FOR TRIPLE BLOCKS

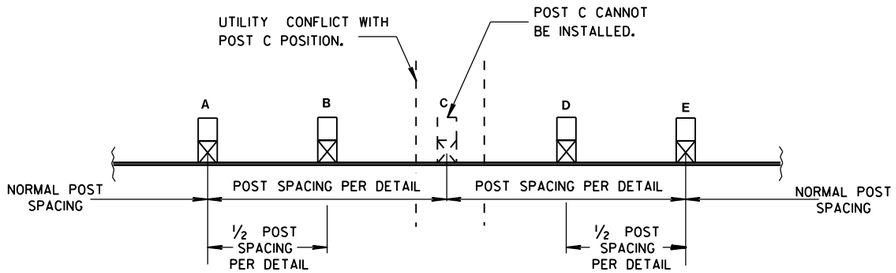
TRIPLE BLOCK DETAIL IS LIMITED TO ONE LOCATION WITHIN A BEAM GUARD RUN.

NOTES: USE DOUBLE OR TRIPLE BLOCKS WHEN UNDERGROUND OBSTACLES PREVENT THE POST FROM BEING INSTALLED.

DO NOT USE EXTRA 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.



PLAN VIEW
BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION

STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2016 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

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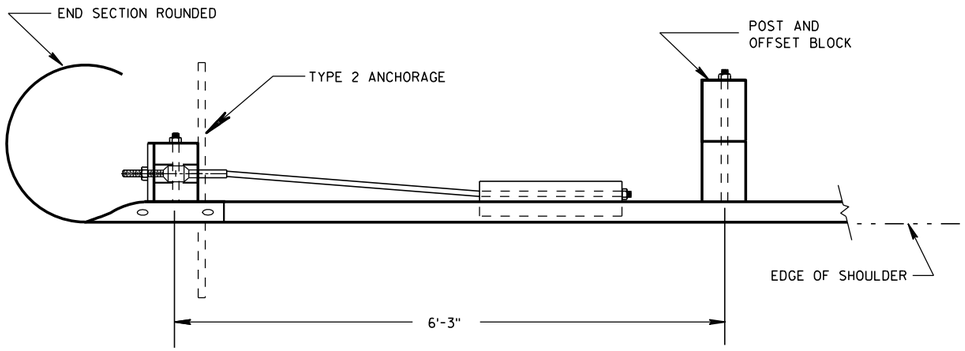
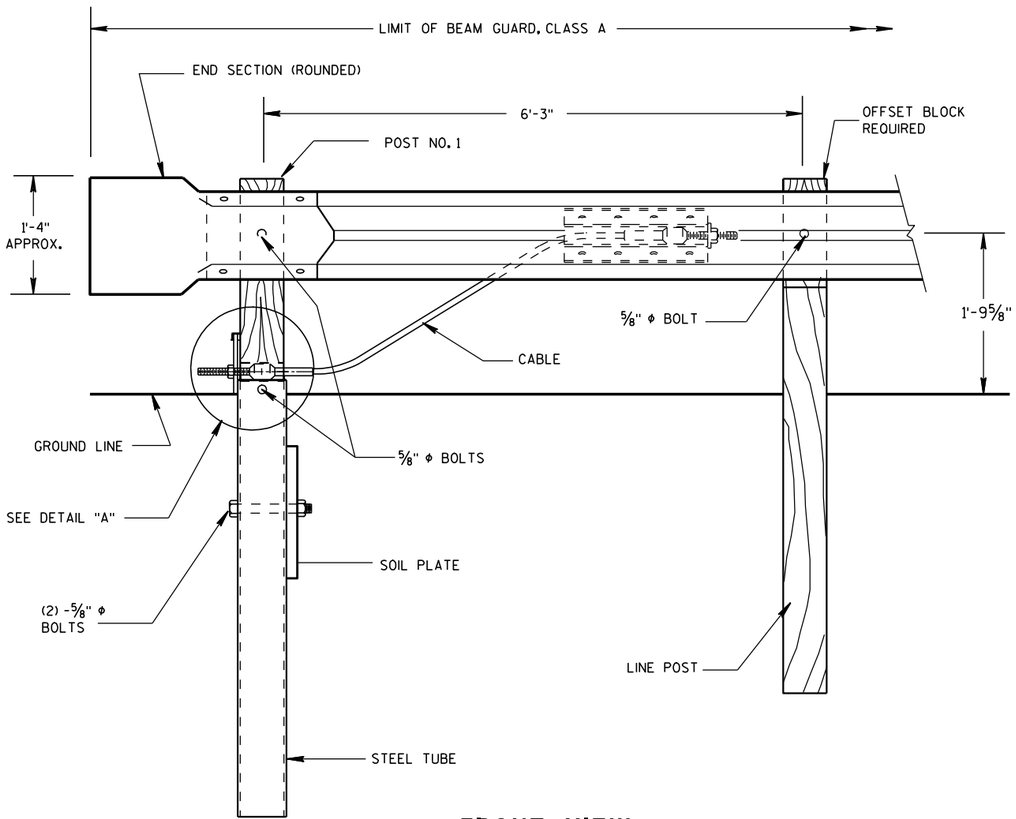
S.D.D. 14 B 15-9c



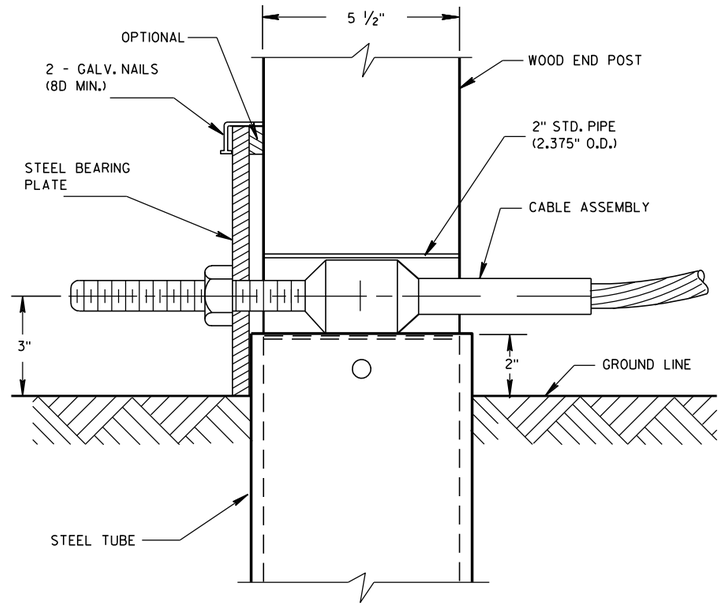
PLAN VIEW



FRONT VIEW

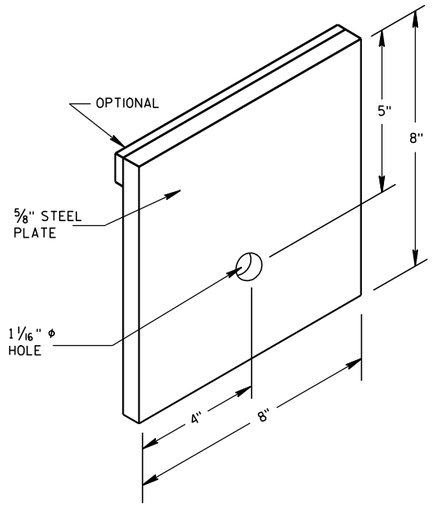
END TREATMENT WITH TYPE 2 ANCHORAGE

(USE ON ONE-WAY ROADWAYS ONLY - DEPARTING END)



DETAIL "A"

POST NO. 1



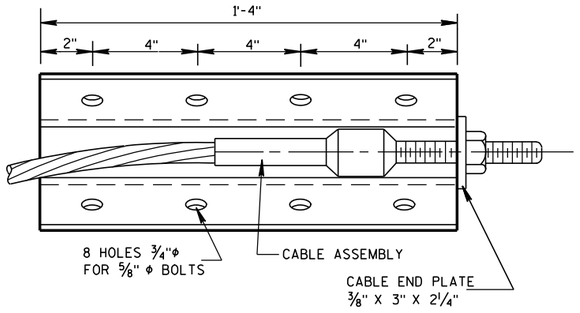
STEEL BEARING PLATE

ANCHORAGE FOR STEEL
PLATE BEAM GUARD
TYPE 2

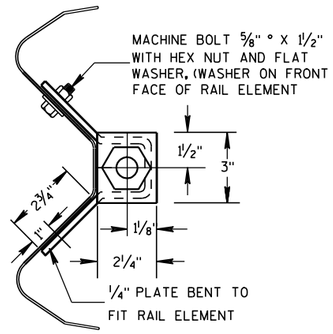
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

S.D.D. 14 B 16-4a

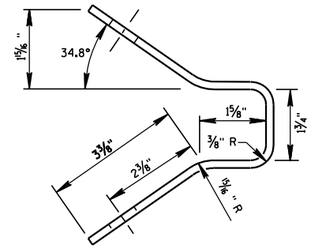


FRONT VIEW

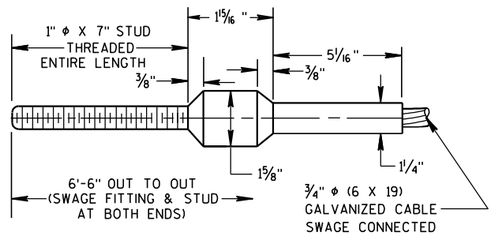


END VIEW

ANCHOR PLATE DETAIL



END VIEW OF BRACKET



CABLE ASSEMBLY

CABLE, SWAGE FITTING, STUD AND NUT SHALL DEVELOP
A MINIMUM BREAKING STRENGTH OF 40,000 LB
(TIGHTEN UNTIL TAUT)

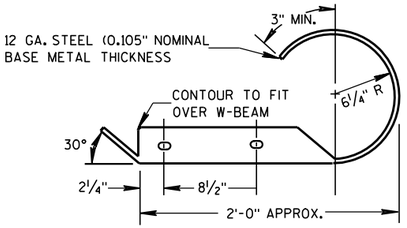
GENERAL NOTES

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

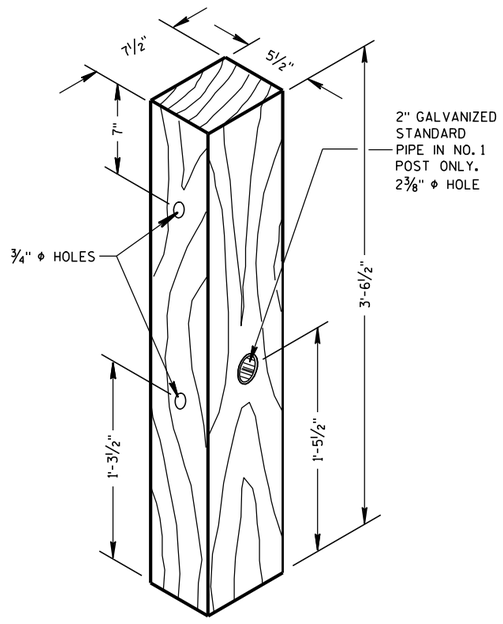
STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A-500 GRADE B OR ASTM A-501.

POST NO. 1 SHALL BE WOOD BREAKAWAY POST INSERTED AND BOLTED INTO STEEL TUBE.

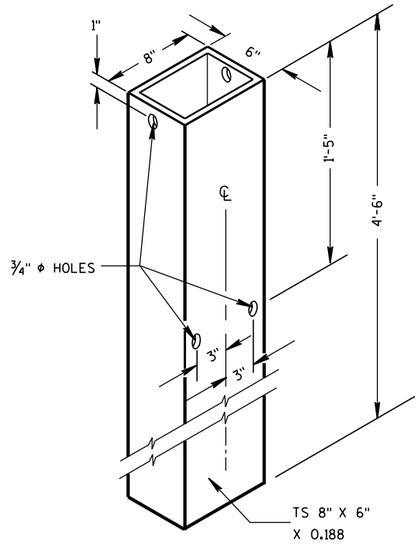
TYPE 2 ANCHORAGE SHALL CONSIST OF A STEEL TUBE, SOIL PLATE WOOD BREAKAWAY POST, BEARING PLATE, ANCHOR PLATE, CABLE ASSEMBLY AND ALL ASSOCIATED HARDWARE, ALL STEEL PARTS SHALL BE GALVANIZED.



PLAN VIEW

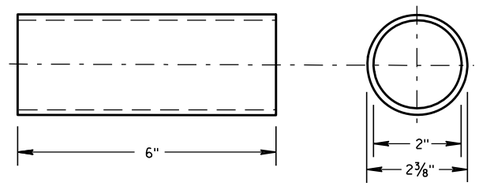


WOOD BREAKAWAY POST



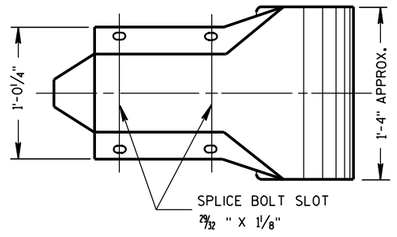
STEEL TUBE

STEEL TUBE SHALL CONFORM TO
REQUIREMENTS OF ASTM A500

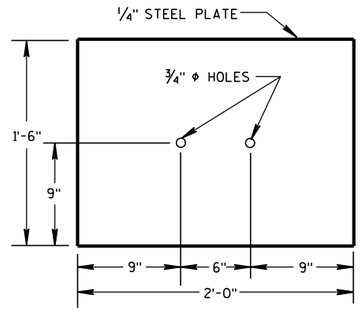


BREAKAWAY TERMINAL POST SLEEVE

GALVANIZED STANDARD STRENGTH STEEL PIPE, ASTM 53 GRADE "B"



FRONT VIEW
W BEAM END SECTION ROUNDED



SOIL PLATE

ANCHORAGE FOR STEEL
PLATE BEAM GUARD
TYPE 2

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/21/2007
DATE
/S/ Jerry H. [illegible]
ROADWAY STANDARDS ENGINEER
53
ENT
FHWA

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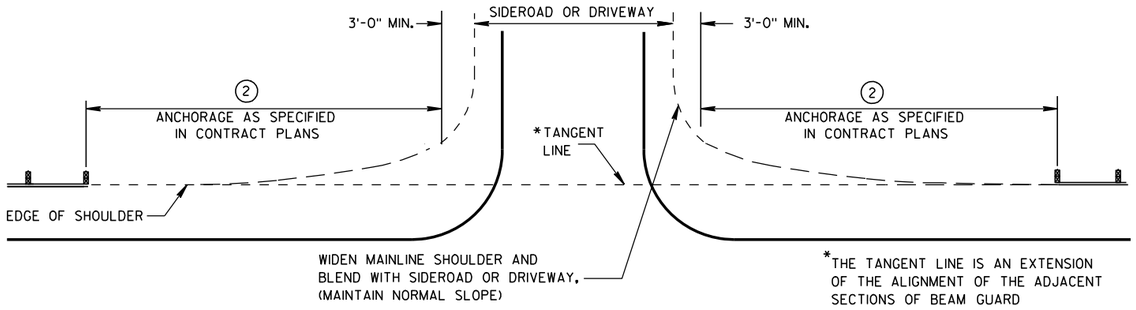
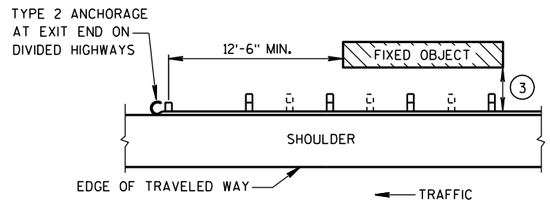
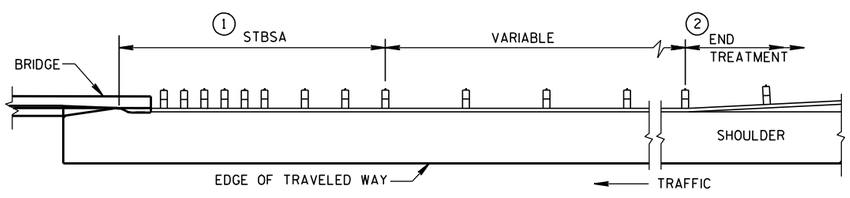
S.D.D. 14 B 16-4b



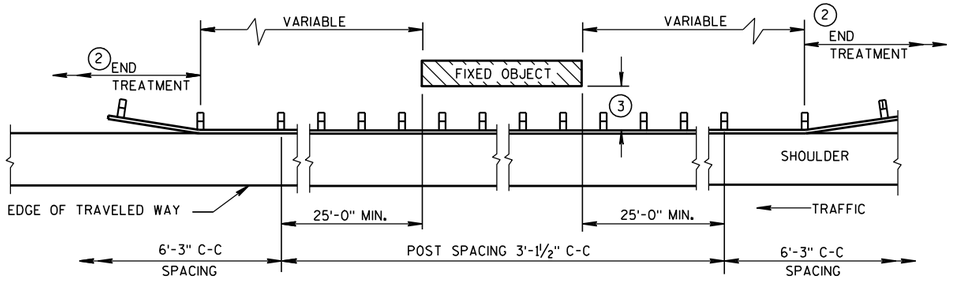
BEAM GUARD AT SIDEROADS OR DRIVEWAYS



BEAM GUARD AT OBSTACLES EXIT END - ONE WAY TRAFFIC

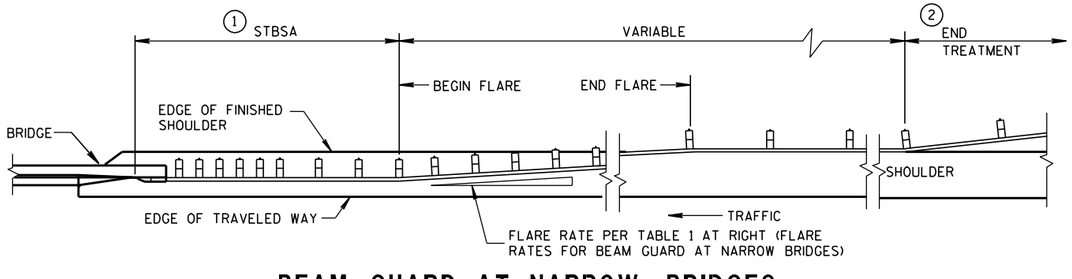


BEAM GUARD AT FULL WIDTH BRIDGES



BEAM GUARD AT OBSTACLES - TWO WAY TRAFFIC

(RAIL TO OBSTACLE CLEARANCE 3'-6" TO 4'-6")



BEAM GUARD AT NARROW BRIDGES

(FLARED TO SHOULDER EDGE, THEN PARALLEL TO ROADWAY)

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE PERTINENT STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

W6 X 9 OR W6 X 8.5 STEEL POSTS WITH NOTCHED PLASTIC BLOCKOUTS ARE ACCEPTABLE ALTERNATIVES FOR 6" X 8" WOOD POSTS WITH WOOD OR PLASTIC BLOCKOUTS. USE APPROVED NOTCHED PLASTIC BLOCKOUTS WITH STEEL POSTS.

THE LOCATIONS AND LENGTHS OF BEAM GUARD ARE SHOWN ELSEWHERE IN THE PLAN.

(1) STEEL THRIE BEAM STRUCTURAL APPROACH (STBSA) - SEE CURRENT SDD 14B20.

(2) USE AN APPROVED END TREATMENT FOR THE TRAFFIC APPROACH SIDE OF BRIDGE/OBSTACLES. USE TYPE 2 ANCHORAGE ONLY AT THE DOWNSTREAM ENDS OF BEAM GUARD LOCATED ALONG ROADWAYS WITH ONE WAY TRAFFIC.

(3)

MINIMUM LATERAL DISTANCE FROM FACE OF BEAM GUARD TO FIXED OBJECT	POST SPACING
3'-6"	3' - 1½"
4'-6"	6' - 3"

TABLE 1
FLARE RATES FOR BEAM GUARD AT NARROW BRIDGES

POSTED SPEED (MPH)	FLARE RATE
25	13:1
30	15:1
35	16:1
40	18:1
45	21:1
50	24:1
55	26:1
65	30:1

STEEL PLATE BEAM GUARD CLASS "A" AT BRIDGES, OBSTACLES AND SIDEROADS/DRIVEWAYS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8-21-07
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

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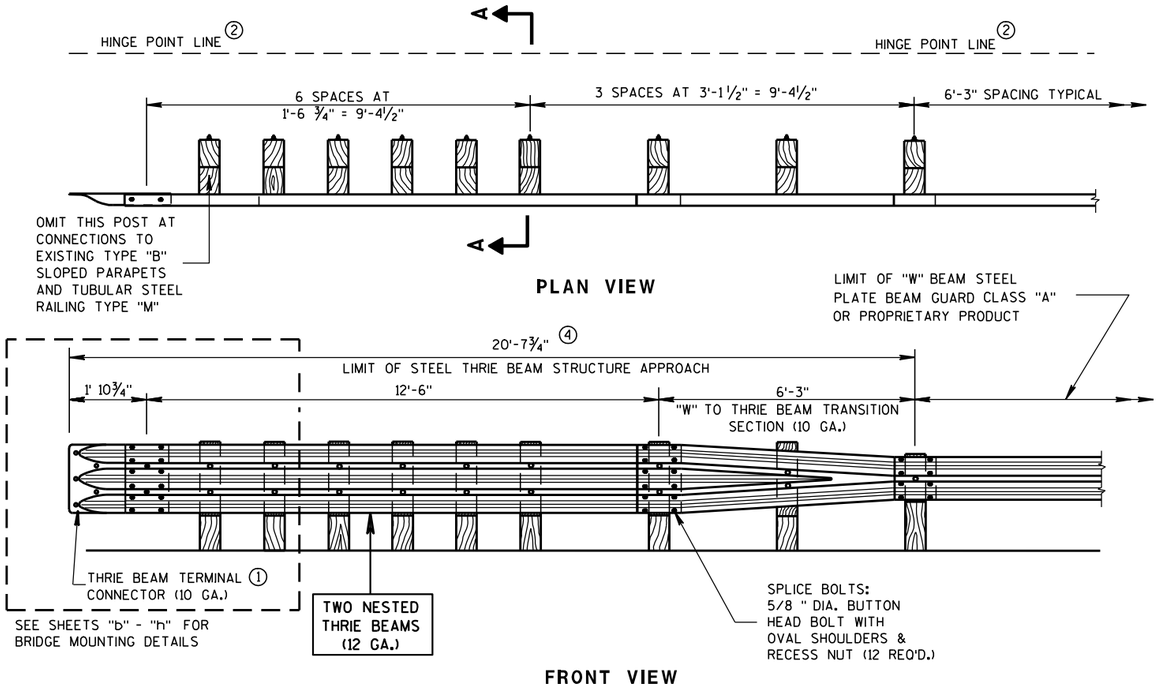


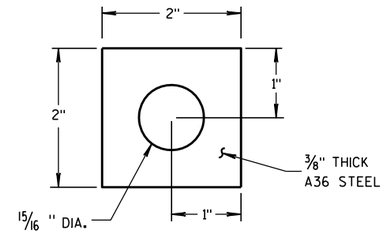


PLATE WASHER DETAIL

GENERAL NOTES

BOLT THE THRIE BEAM TO ALL POSTS AND BLOCKOUTS. DRILL OR PUNCH BOLT HOLES IN THE BEAM IF THE POST SPACING IS LESS THAN 6'-3".

DO NOT USE STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS IN THE STEEL THRIE BEAM STRUCTURAL APPROACH AND THE TRANSITION SECTION OF STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATIONS.

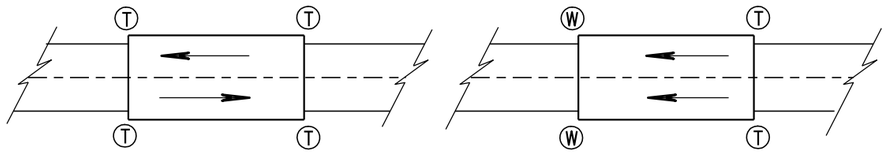
IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2 1/2" , AND 12" DIAMETER AROUND POST. SEE 14B15 FOR MORE DETAILS.

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

② MINIMUM EMBEDMENT SHALL BE 4'-0". WHERE EXISTING CONDITIONS DO NOT PERMIT THE APPROPRIATE EARTHWORK SHOWN ON THE PLAN TYPICAL SECTIONS OR DETAILS, THE ENGINEER MAY ALLOW THE REDUCTION OR ELIMINATION OF THE 2 FOOT DISTANCE TO THE HINGE POINT. OTHERWISE BUILD AS THE PLAN SHOWS OR AS THE ENGINEER DIRECTS. IF THE 2 FOOT DISTANCE TO THE HINGE POINT IS REDUCED OR ELIMINATED, INCREASE THE POST EMBEDMENT DEPTH TO 4'-6" OR MORE.

③ POST BOLTS ARE 5/8" DIAMETER ASTM A307 BUTTON HEAD BOLT. A POST BOLT REQUIRES A 5/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX AND A 5/8" DIAMETER F844 FLAT WASHER. LENGTH OF POST BOLT MAY VARY.

④ ALL WOOD POSTS MUST BE 6" X 8" AND AT LEAST 7'-0" LONG.



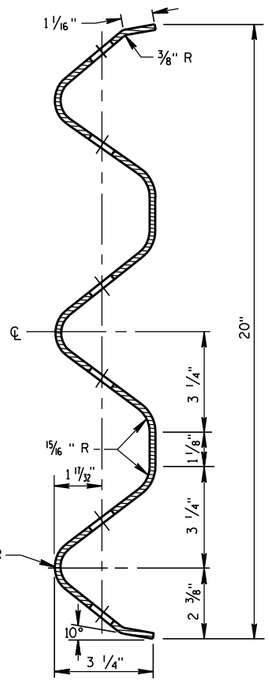
TWO WAY TRAFFIC

ONE WAY TRAFFIC

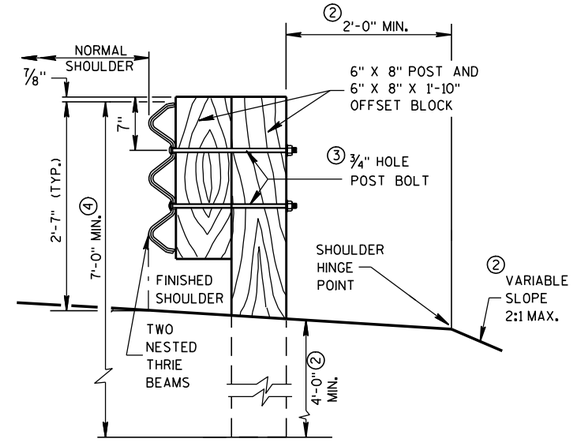
(T) THRIE BEAM CONNECTION

(W) W-BEAM CONNECTION WHEN REQUIRED

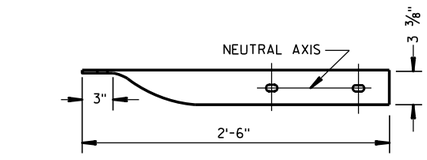
TYPICAL LOCATIONS OF THRIE BEAM AND W-BEAM CONNECTIONS TO BRIDGE

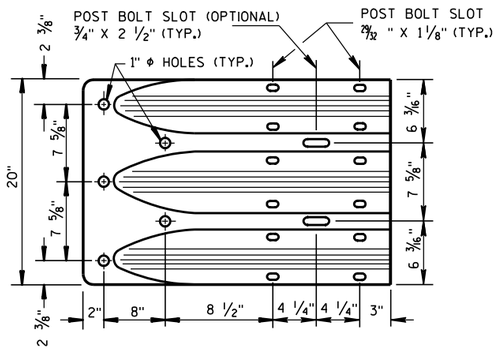


SECTION THRU THRIE BEAM RAIL ELEMENT

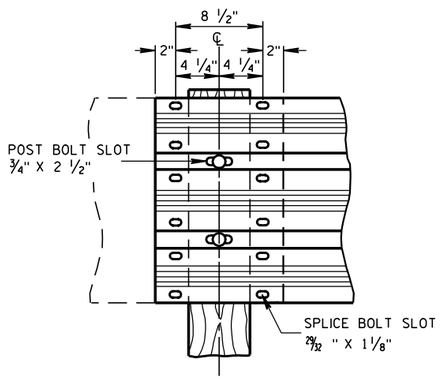


SECTION A-A





THRIE BEAM TERMINAL CONNECTOR



THRIE BEAM SPLICE

STEEL THRIE BEAM STRUCTURE APPROACH

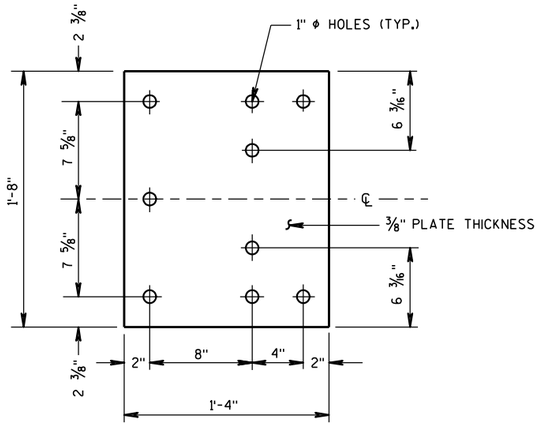
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

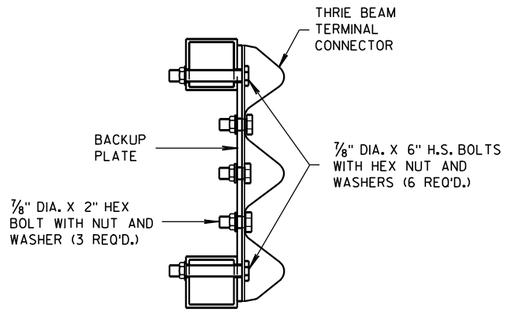
8/31/2012 — DATE

/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER

FHWA



BACK-UP PLATE DETAIL



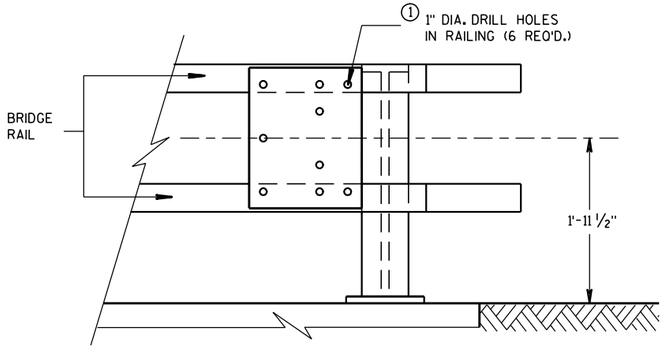
SECTION G-G

GENERAL NOTES

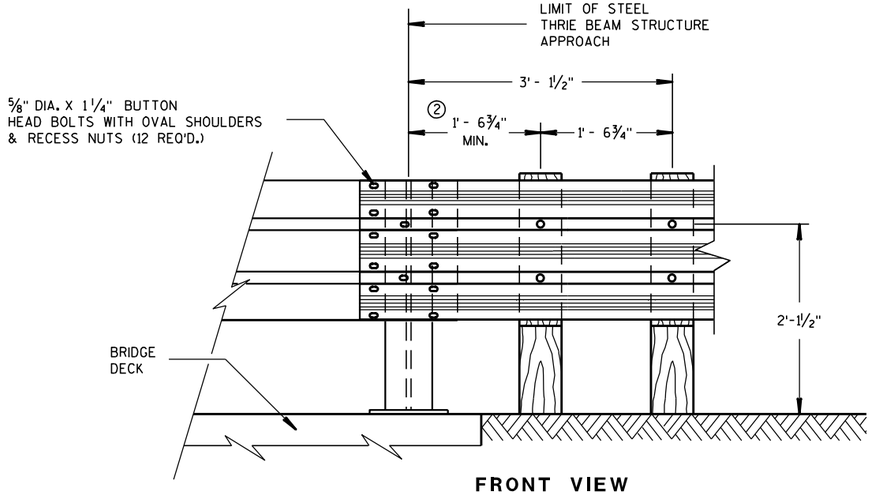
BOLTS, PLATES, NUTS AND WASHERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM SPECIFICATION A 325 AND BE GALVANIZED IN ACCORDANCE WITH ASTM A 153.

① DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

② VARY THIS DIMENSION DEPENDING ON ABUTMENT TYPE, WINGWALL DETAILS, AND ANGLE OF SKEW. PLACE THE FIRST WOOD POST OFF THE BRIDGE SHALL AS CLOSE AS FEASIBLE TO THE STEEL END POST.

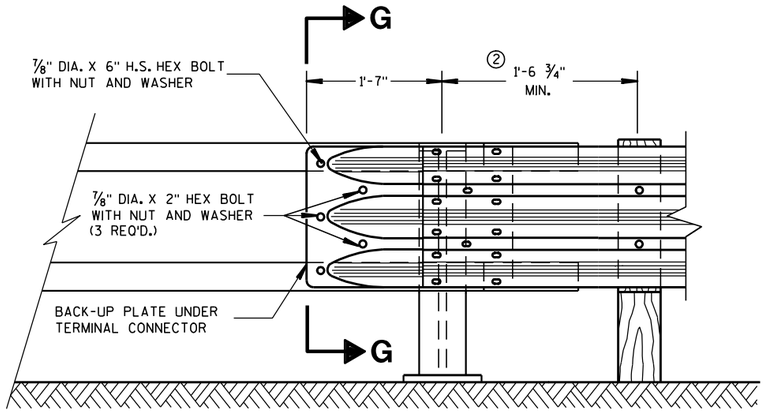


BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING

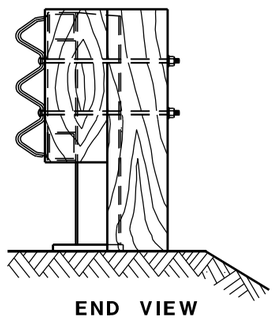


FRONT VIEW

THRIE BEAM CONNECTION TO STEEL RAILING TYPE "W"



FRONT VIEW



END VIEW

THRIE BEAM CONNECTION TO TUBULAR RAILING TYPE "F"

STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO BRIDGE RAILING TYPES "F" AND "W"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/31/2012
DATE

/S/ Jerry H ...
ROADWAY STANDARDS ENGINEER

ENT

FHWA

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S.D.D. 14 B 20-11e

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.

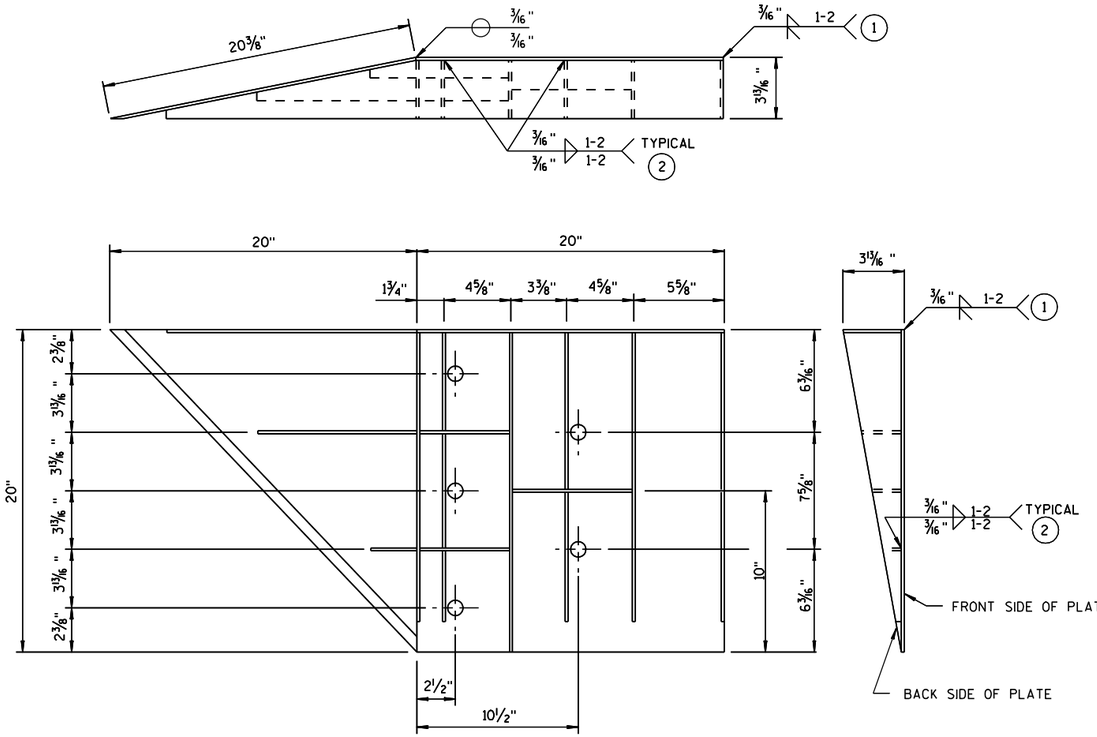
FOR GALVANIZED REQUIREMENTS, SEE SECTION 614 OF THE STANDARD SPECIFICATIONS.

ALL HOLE DIAMETERS SHALL BE 1".

FOR OPPOSITE SIDE INSTALLATION MIRROR DRAWINGS.

(1) 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.

(2) 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)

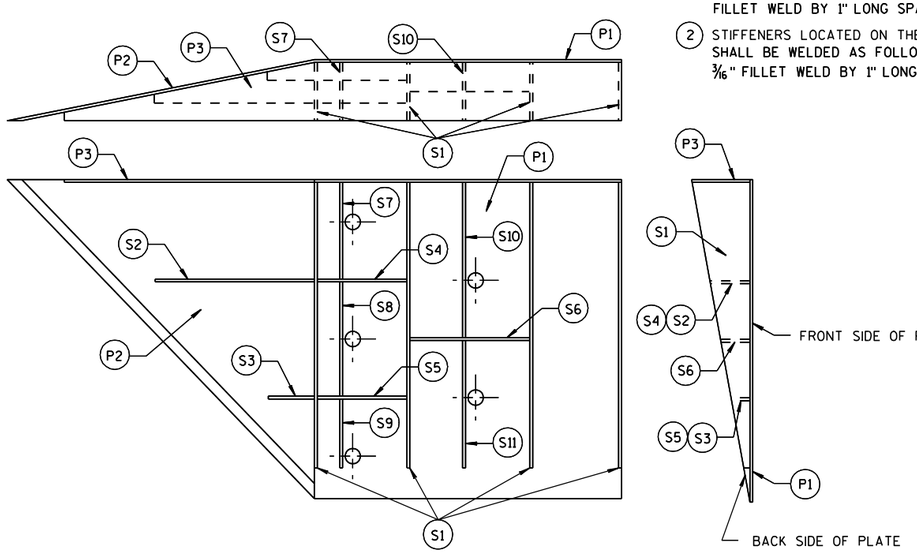


PLATE AND STIFFENER IDENTIFICATION

(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"

STEEL THRIE BEAM STRUCTURE APPROACH

STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTOR PLATE DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/31/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

6

S.D.D. 14 B 20-11g

BILL OF MATERIALS

NOTE NO.	QTY.	DESCRIPTION
(1)	4	WOOD BREAKAWAY TERMINAL POST: 5½" X 7½" X 3'-9"
(2)	**	STEEL TUBE: OPTION 1 - QUANITY OF 4 TS 8" X 6" X 0.188", 4'-6" LONG OR OPTION 2 - QUANITY OF 2 TS 8" X 6" X 0.188", 6'-0" AND 2 TS 8" X 6" X 0.188", 4'-6" LONG
(3)	2	SOIL PLATE: 2'-0" X 1'-6" X ¼" **
(4)	4	WOOD BREAKAWAY CRT POST: 6" X 8" X 6'-0"
(5)	6	WOOD OFFSET BLOCKS: 6' X 8" X 1'-2"
(6)	1	PIPE SLEEVE: 2" X 5 ½" STANDARD PIPE
(7)	1	BEARING PLATE
(8)	1	BCT CABLE ASSEMBLY
(9)	1	CABLE ANCHOR BOX
(10)	1	STRUT & YOKE
(11)	1	STEEL PLATE BEAM, END PANEL 12 GA. 13'-6½" LONG FOR SKT-350, ET-2000 AND ET-2000 PLUS
(12)	3	STEEL PLATE BEAM: 12 GA. 13'-6½"
(13)	1	ET-2000/ET-2000 PLUS GUARDRAIL EXTRUDER OR SKT-350 IMPACT HEAD: AS FURNISHED BY MANUFACTURER
(14)	1	0.040" ALUMINUM SHEET WITH REFLECTIVE SHEETING TYPE F PER SECTION 637 OF THE STANDARD SPECIFICATIONS
(15)	1	E.A.T. MARKER POST

GENERAL NOTES

FOLLOW MANUFACTURE'S BOLTING RECOMMENDATIONS. IF NONE ARE AVAILABLE, INSTALL ⅝" ø X 1'-6" BUTTON HEAD BOLTS AT ALL POSTS EXCEPT FOR POST 1.

(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) THE 13 SLOT FIRST RAIL PANEL MAY BE USED IN LIEU OF THE 3 SLOT RAIL PANEL ON SKT-350 ONLY.

(D) THE TOP OF THE STEEL TUBE ON POSTS 1 THROUGH 4 SHALL NOT BE MORE THAN 3" ABOVE THE FINISH GROUND ELEVATION.

(E) THE CENTER OF THE UPPER 3½" DIAMETER HOLE ON POST 5 THROUGH 8 SHALL BE ¾" ABOVE THE FINISHED GROUND LINE.

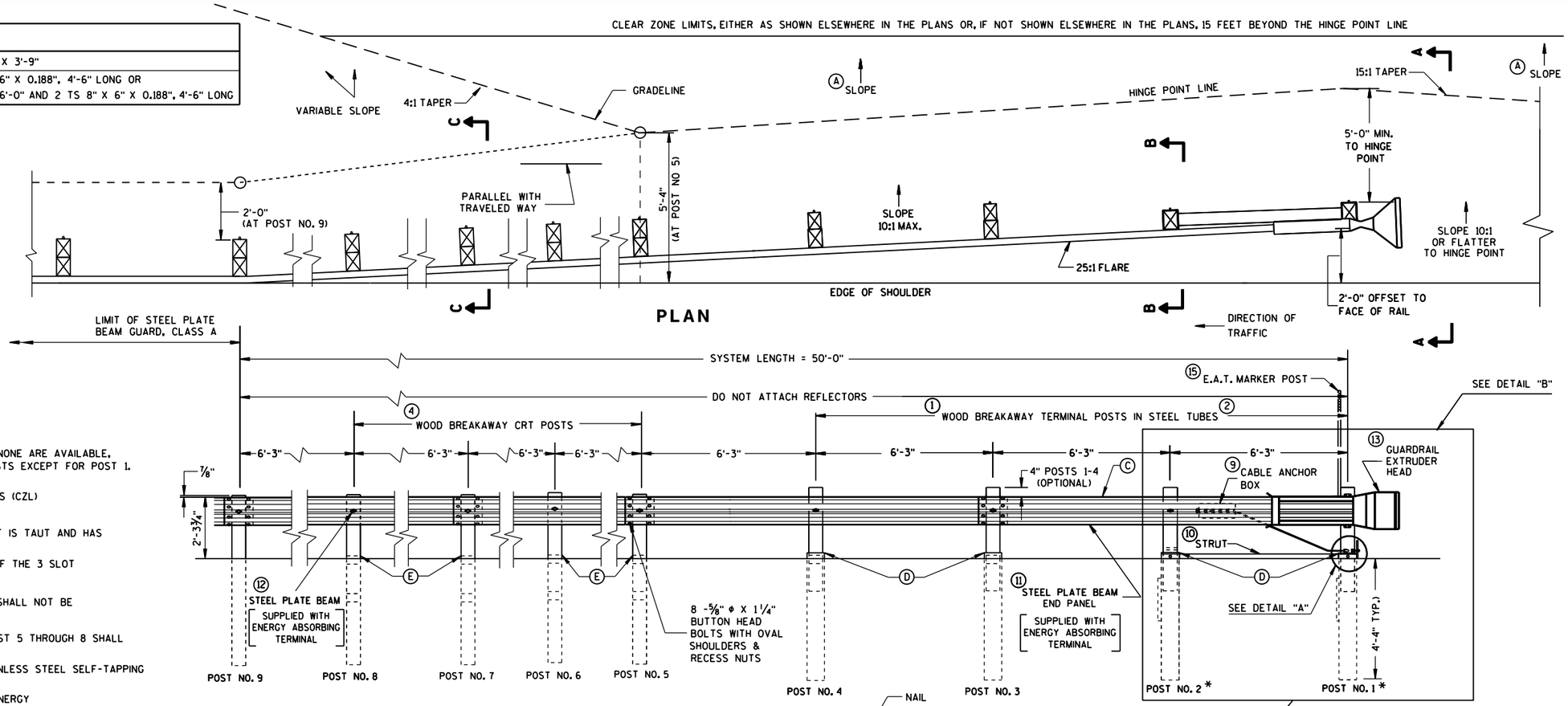
(F) ATTACH ALUMINUM SHEET TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF-TAPPING SCREWS. ONE SCREW PER CORNER.

STEEL POSTS SHALL NOT BE ALLOWED FOR USE WITH ENERGY ABSORBING TERMINALS.

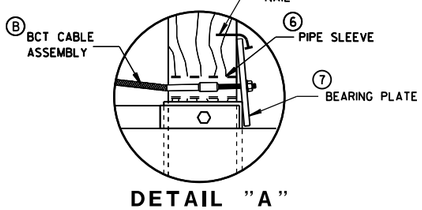
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

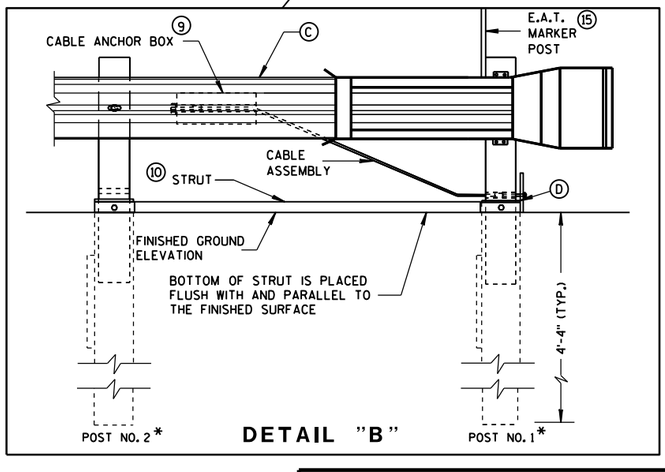
** SDD SHOWS 4 - 54 INCH STEEL TUBES WITH SOIL PLATES INSTALLED ON POST 1 AND POST 2. POST 3 AND 4 DO NOT NEED SOIL PLATES. AN ALTERNATIVE INSTALLATION WOULD CONSIST OF 2 - 72 INCH STEEL TUBES ON POST 1 AND POST 2 AND 54 INCH SOIL TUBES ON POSTS 3 AND 4. THE ALTERNATIVE INSTALLATION DOES NOT REQUIRE SOIL PLATES.



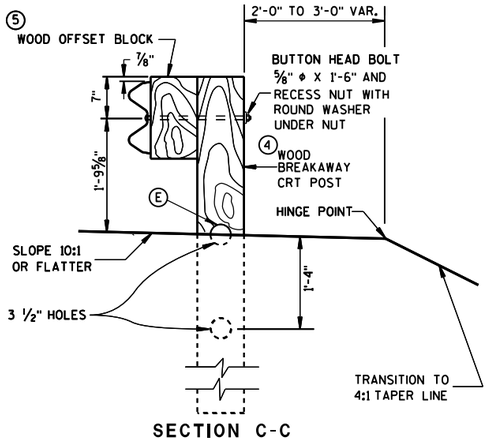
ELEVATION



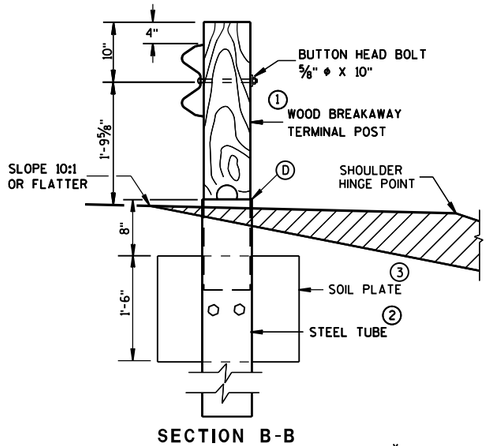
DETAIL "A"



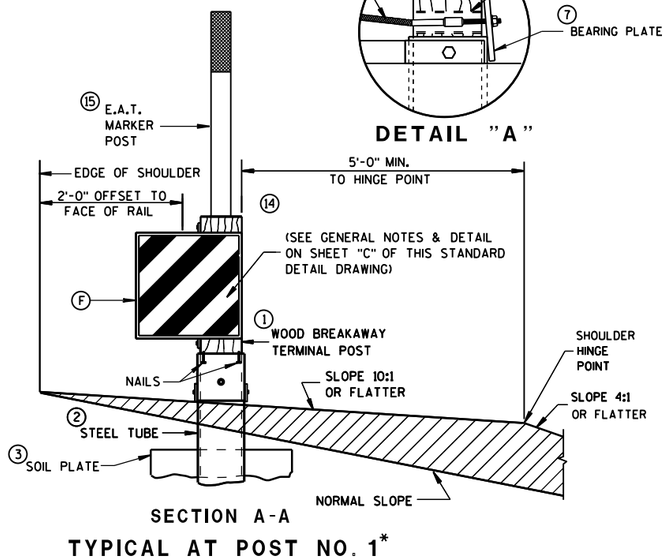
DETAIL "B"



SECTION C-C
TYPICAL AT POST NOS. 6, 8



SECTION B-B
TYPICAL AT POST NO. 2*



SECTION A-A
TYPICAL AT POST NO. 1*

STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL

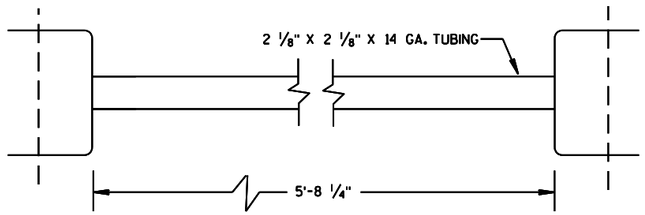
STATE OF WISCONSIN
DEPARTMENT OF TRANSPO 58

6

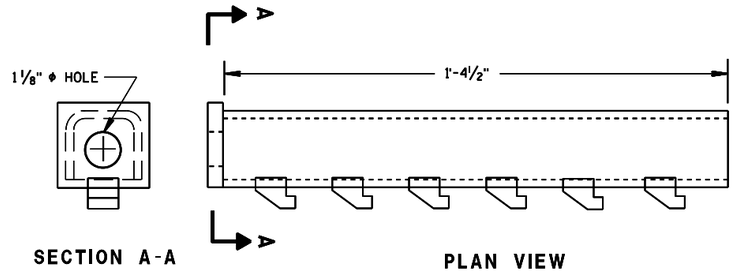
S.D.D. 14 B 24-8a

6

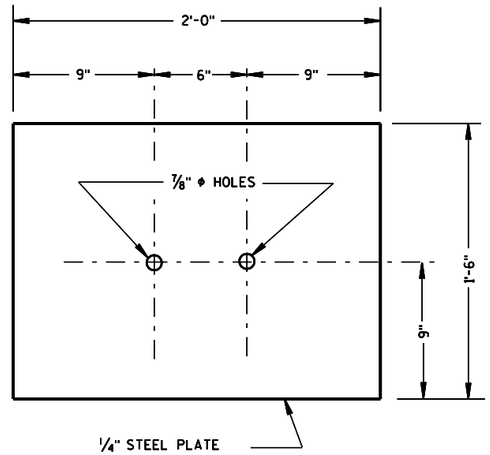
S.D.D. 14 B 24-8a



⑩ STRUT DETAIL (SKT-350)

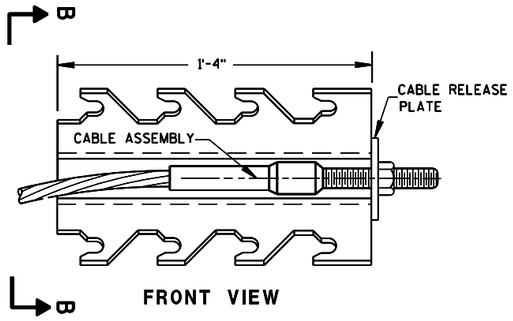


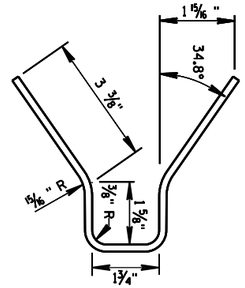
⑨ CABLE ANCHOR BOX (ET-2000/ET-2000 PLUS)



③ SOIL PLATE

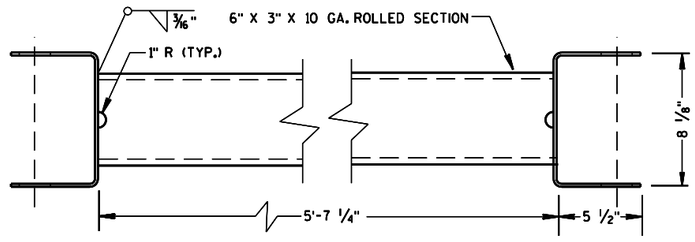
(SKT-350, ET-2000/ET-2000 PLUS)





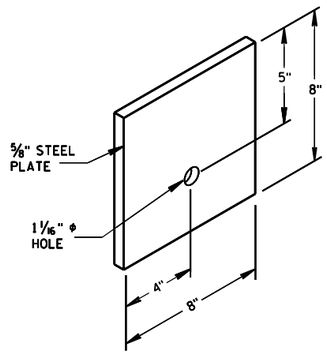
⑨ CABLE ANCHOR BOX (SKT-350)

(SKT-350)



⑩ STRUT DETAIL (ET-2000/ET-2000 PLUS)

(ET-2000/ET-2000 PLUS)



⑦ STEEL BEARING PLATE

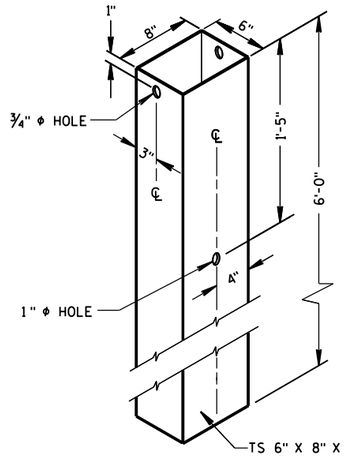
(SKT-350, ET-2000/ET-2000 PLUS)

STEEL PLATE BEAM GUARD
ENERGY ABSORBING TERMINAL

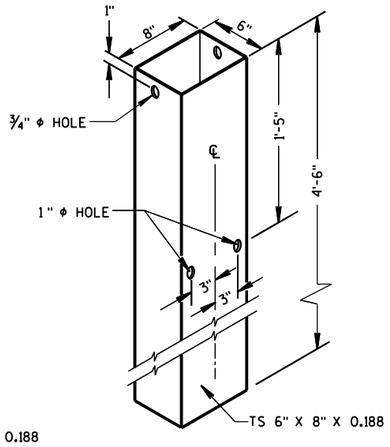
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

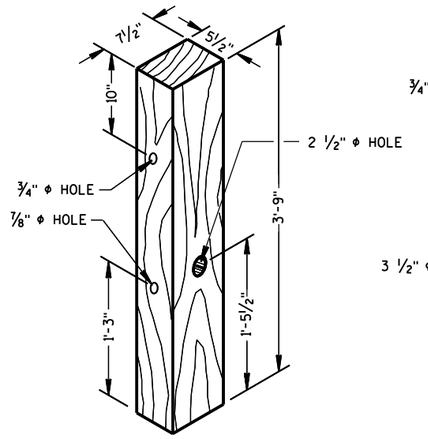
S.D.D. 14 B 24-8b



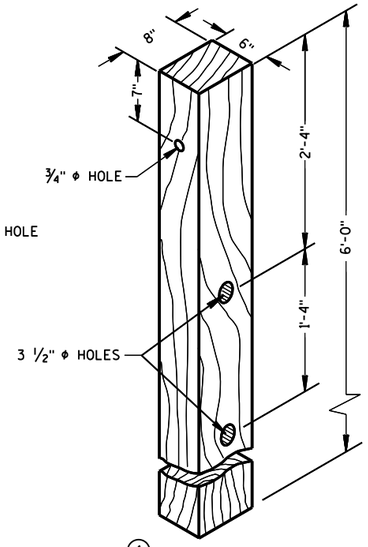
② 72" STEEL TUBE
(POSTS NO. 1-4



② 54" STEEL TUBE
(POSTS NO. 1-4



① TERMINAL POST
(POSTS NO. 1-4



④ CRT POST
(POSTS NO'S 5-8

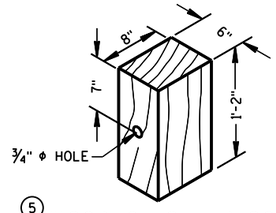
WOOD BREAKAWAY POSTS

GENERAL NOTES

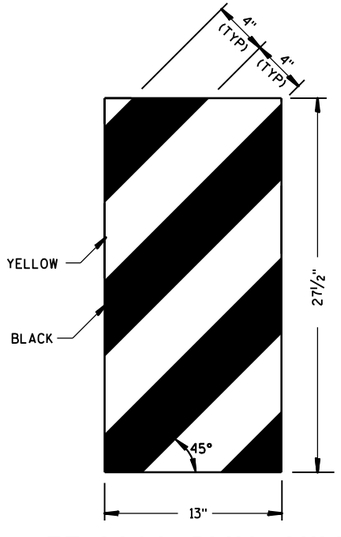
WHEN ROCK IS ENCOUNTERED DURING EXCAVATION, A 12 INCH DIA. POST HOLE EXTENDING 20 INCHES DEEP INTO THE ROCK MAY BE USED IF APPROVED BY THE ENGINEER. GRANULAR MATERIAL SHALL BE PLACED IN THE BOTTOM OF THE HOLE APPROXIMATELY 2 ½" INCHES DEEP TO PROVIDE DRAINAGE. THE SOIL TUBES SHALL BE FIELD CUT TO LENGTH, PLACED IN THE HOLE AND BACKFILLED WITH ADEQUATELY COMPACTED MATERIAL EXCAVATED FROM THE HOLE.

SEE APPROVED PRODUCTS LIST FOR ACCEPTABLE E. A. T. MARKER POST.

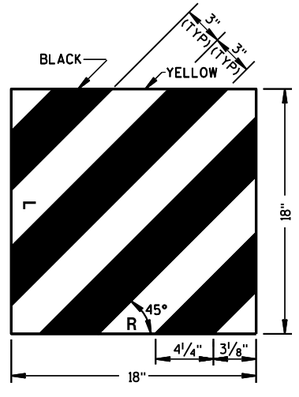
(G) ½" DIA. X 3" LAG BOLT WITH WASHER.



⑤ WOOD OFFSET BLOCK
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2

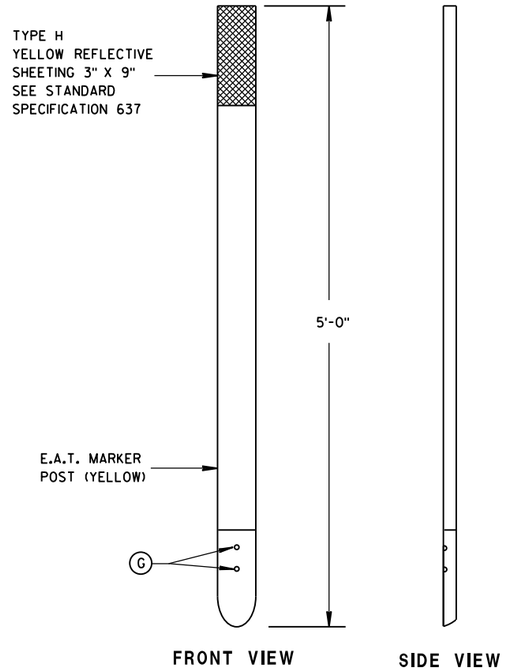


ET-2000 PLUS ONLY



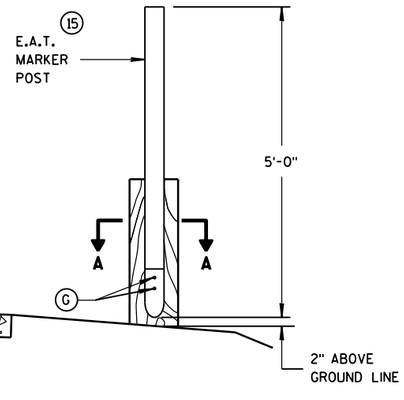
ET-2000 AND SKT-350

⑭ REFLECTIVE SHEETING DETAILS

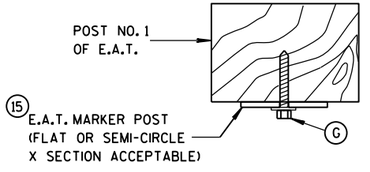


FRONT VIEW SIDE VIEW

⑮ E.A.T. MARKER POST



TYPICAL INSTALLATION OF E.A.T.
MARKER POST BACKSIDE OF POST NO. 1
(E.A.T. AND RAIL REMOVED FOR CLARITY)



SECTION A-A

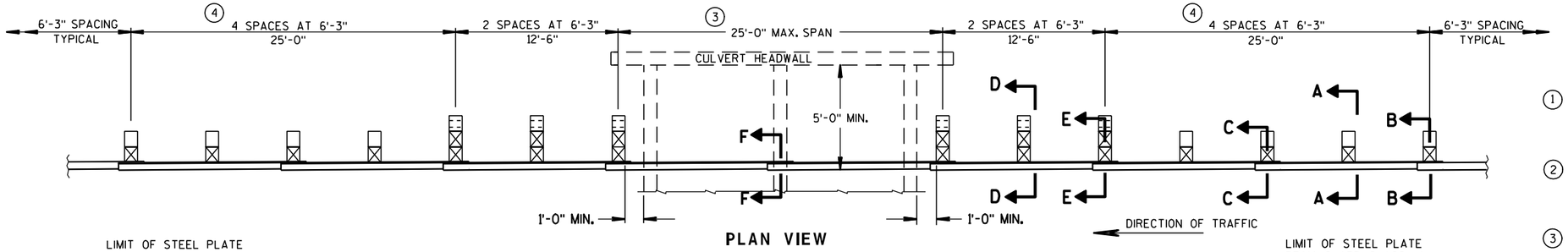
STEEL PLATE BEAM GUARD
ENERGY ABSORBING TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

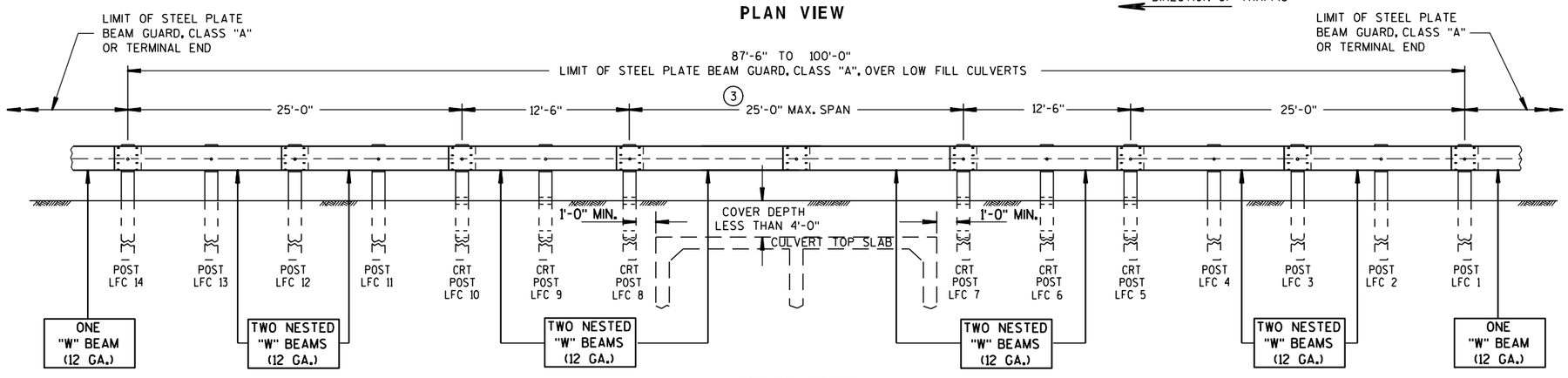
APPROVED
June 2014
DATE
/S/ Jerry H. Zoda
ROADWAY STANDARDS ENGINEER
FHWA

6

S.D.D. 14 B 24-8c



PLAN VIEW



FRONT VIEW

TYPICAL INSTALLATION OF STEEL PLATE BEAM GUARD OVER LOW FILL CULVERTS

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.

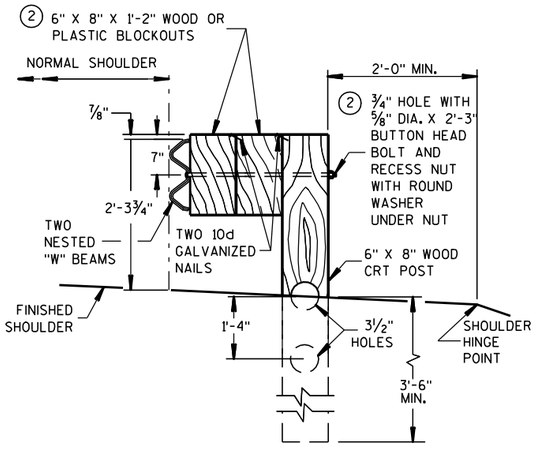
(1) MAINTAIN THE NESTING OF EACH NESTED PAIR OF "W" BEAM SECTIONS THROUGH SPLICES. ORIENTATE NESTED "W" BEAM SPLICES IN THE DIRECTION OF TRAFFIC AS THE PLAN VIEW SHOWS. SEE S.D.D. 14 B 15 FOR SPLICE INSTALLATION.

(2) THE CONTRACTOR MAY USE APPROVED PLASTIC BLOCKOUTS IN LIEU OF WOOD BLOCKOUTS. SEE S.D.D. 14 B 15 FOR TYPICAL BLOCKOUT, SPLICE AND REFLECTOR INSTALLATIONS. USE BOLT SIZES AND LENGTHS AS SHOWN ON THIS DETAIL.

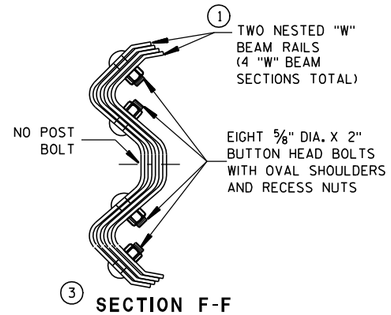
(3) PROVIDE 12'-6", 18'-9" AND 25'-0" SPANS ONLY. USE A MAXIMUM OF ONE SPLICE LOCATED ANYWHERE WITHIN THE SPAN SECTION. LOCATE ALL OTHER SPLICES AT BEAM GUARD POSTS.

(4) IN THE FIRST AND LAST 25 FOOT SECTIONS (POSTS LFC 1-4 & LFC 11-14), THE CONTRACTOR MAY USE W6 X 9 OR W6 X 8.5 STEEL POSTS WITH NOTCHED PLASTIC BLOCKOUTS OR 6" X 8" WOOD POSTS WITH EITHER WOOD OR PLASTIC BLOCKOUTS. DO NOT MIX STEEL POSTS WITH NOTCHED PLASTIC BLOCKOUTS AND WOOD POSTS WITH EITHER WOOD OR PLASTIC BLOCKOUTS IN THE SAME INSTALLATION.

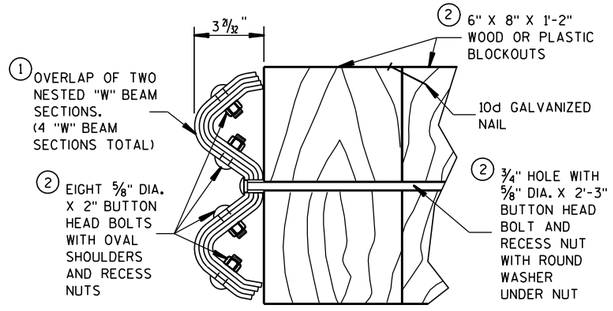
(5) WHERE EXISTING CONDITIONS DO NOT PERMIT THE APPROPRIATE EARTHWORK, THE PLAN TYPICAL SECTIONS OR DETAILS MAY SHOW, OR THE ENGINEER MAY ALLOW, THE REDUCTION OR ELIMINATION OF THE 2 FOOT DISTANCE TO THE HINGE POINT. BUILD AS THE PLAN SHOWS OR ENGINEER DIRECTS. IF THE 2 FOOT DISTANCE TO THE HINGE POINT IS REDUCED OR ELIMINATED, INCREASE THE POST SOIL DEPTH TO 4'-6" OR MORE.



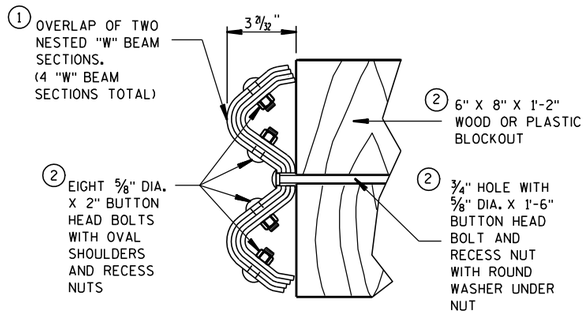
SECTION D-D
TYPICAL CRT POST LFC 6 AND 9



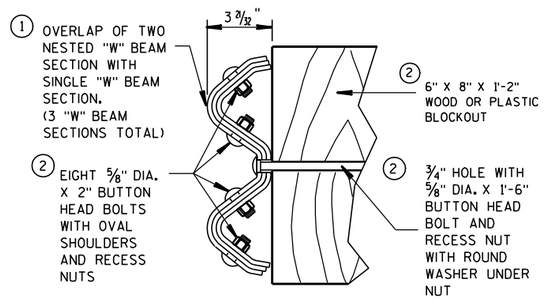
(3) SECTION F-F
BEAM SPLICE IN SPAN OVER CULVERT



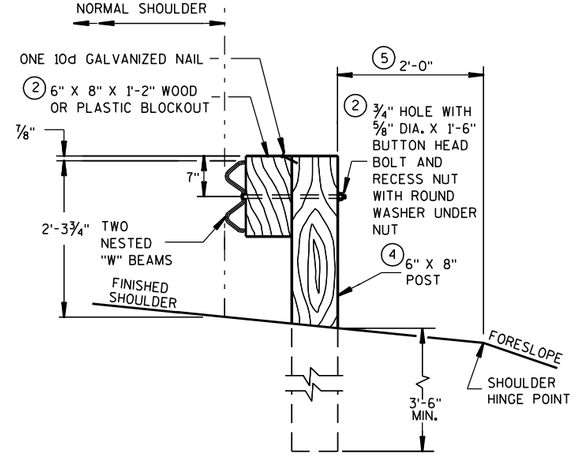
SECTION E-E
TYPICAL CRT POST LFC 5, 7, 8 AND 10



SECTION C-C
TYPICAL AT POSTS LFC 3 AND 12



SECTION B-B
TYPICAL AT POSTS LFC 1 AND 14



SECTION A-A
TYPICAL AT POST LFC 2,4,11,13

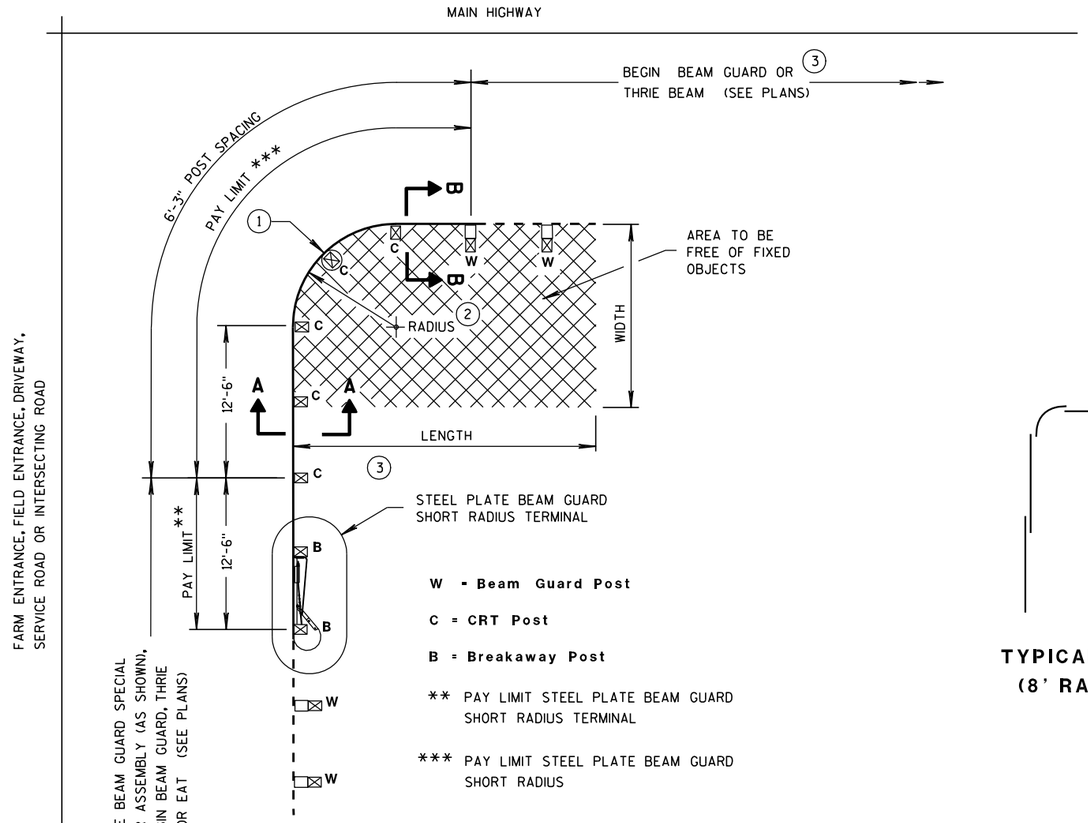
STEEL PLATE BEAM GUARD, CLASS "A", OVER LOW FILL CULVERTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

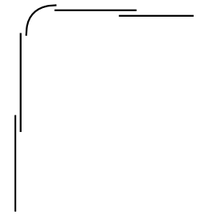
APPROVED
12/8/00 DATE
/S/ John Have... CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 14 B 25-1



TYPICAL LAYOUT
(8' RADIUS SHOWN)



TYPICAL LAP SPLICES
(8' RADIUS SHOWN)

GENERAL NOTES

ALL ANGLES, CHANNELS, AND PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A36 AND THE STRUCTURAL TUBING SHALL CONFORM TO ASTM A 500. WELDING SHALL MEET THE CURRENT REQUIREMENTS OF THE AMERICAN WELDING SOCIETY STRUCTURAL WELDING CODE ANSI/AWS D1.1. ALL STRUCTURAL STEEL SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A 123. PUNCHING, DRILLING, CUTTING, OR WELDING WILL NOT BE PERMITTED AFTER GALVANIZING. FURNISH AND INSTALL HARDWARE PER STANDARD SPECIFICATION 614.2. UNLESS NOTED OTHERWISE.

SHOP BEND CURVED RAIL SECTIONS.

SEE STANDARD DETAIL DRAWING 14 B 15 FOR OTHER DETAIL.

(1) ON THE 8 FOOT RADIUS INSTALLATION, DO NOT INSTALL BUTTON HEAD BOLT AT CENTER CRT POST.

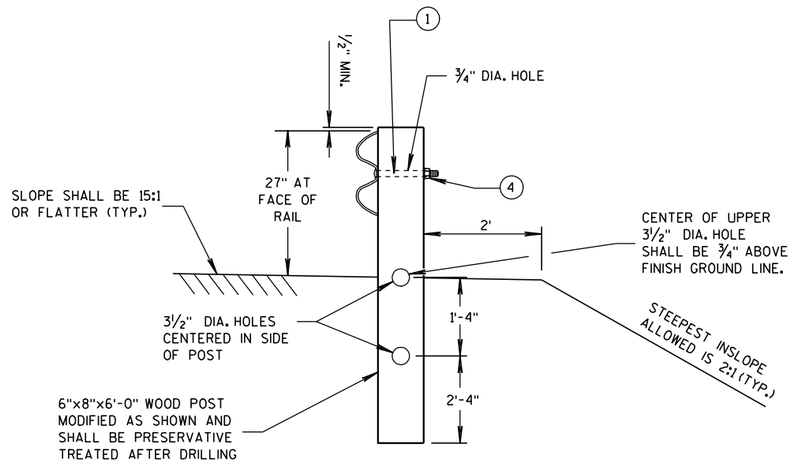
(2) RADIUS FROM 8' - 36'. SEE PLAN.

(3) HEIGHT TRANSITION MAY BE REQUIRED. SEE PLAN OR PROJECT ENGINEER.

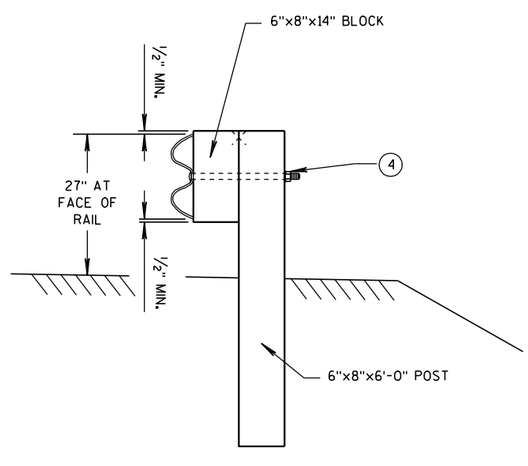
(4) 5/8" ø X 1'-6" BUTTON HEAD BOLT AND RECESS NUT WITH ROUND WASHER UNDER NUT.

RADIUS	NUMBER OF CRT POSTS	*NUMBER AND LENGTH OF CURVED RAILS	REQUIRED AREA FREE OF FIXED OBJECTS (LENGTH x WIDTH)
8'	5	1 at 12.5'	25' x 15'
16'	7	1 at 25'	30' x 15'
24'	9	1 at 25' and 1 at 12.5'	40' x 20'
32'	11	2 at 25'	50' x 20'

* THE NUMBER OF RAILS IS BASED ON A 90° INTERSECTION. SEE PLAN FOR NON 90° INSTALLATIONS.



SECTION A-A
(CRT POST)



SECTION B-B
(BEAM GUARD POST)

STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL

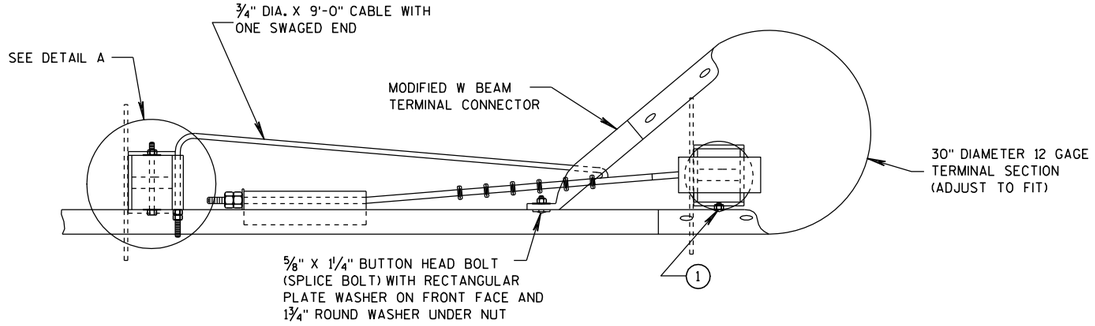
STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	62

6

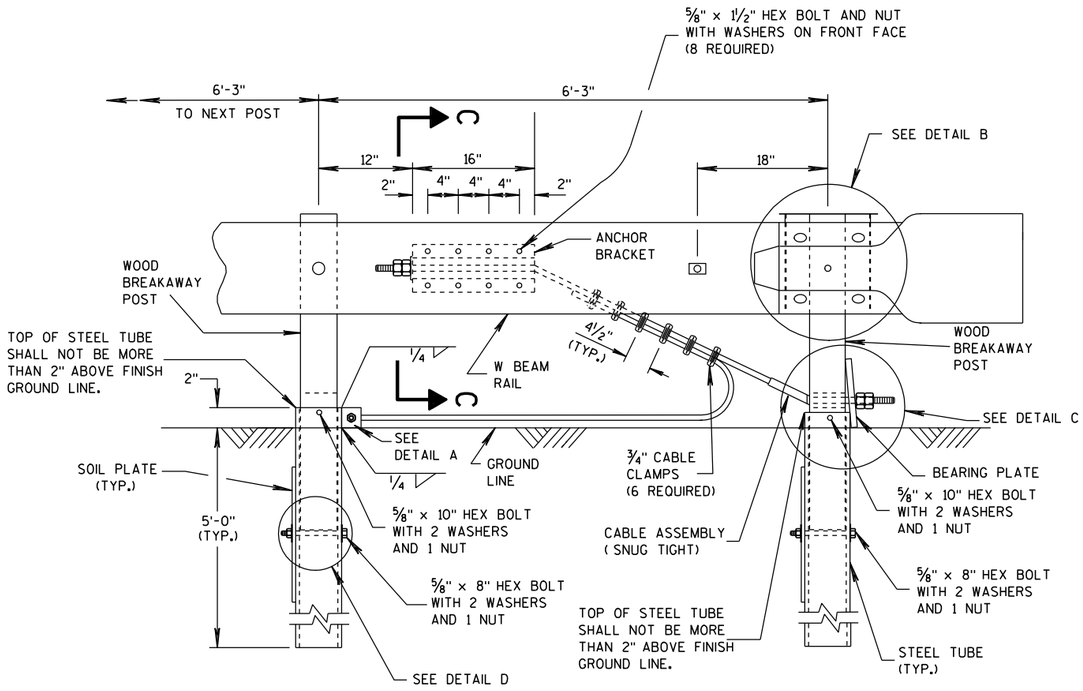
S.D.D. 14 B 27-1a

6

S.D.D. 14 B 27-1a



PLAN VIEW



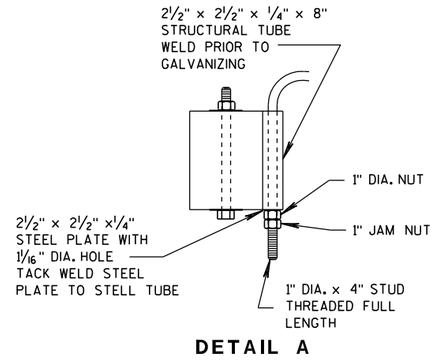
ELEVATION VIEW

STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL

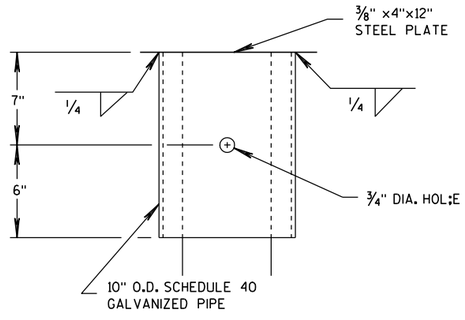
GENERAL NOTES

(1) ATTACH W BEAM RAIL TO THE STEEL PIPE WITH A ⅝" X 2" BUTTON HEAD BOLT WITH NO WASHER. CONNECTION TO THE POST IS NOT REQUIRED.

INSTALL GALVANIZED ¾" (6X19) PREFORMED WIRE OR INDEPENDENT WIRE ROPE CORE CONFORMING TO AASHTO M 30. MANUFACTURE WIRE ROPE OUT OF IMPROVED PLOW STEEL WITH A MINIMUM BREAKING STRENGTH OF 42,800 PSI.



DETAIL A



DETAIL B

(BEAM GUARD AND TERMINAL SECTION NOT SHOWN)

STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL

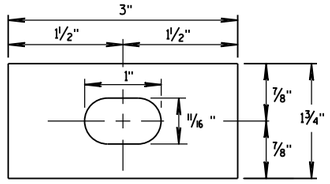
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

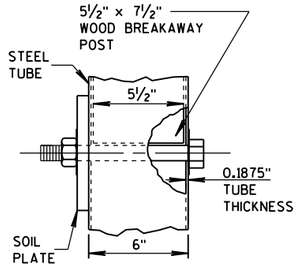
S.D.D. 14 B 27-1b

6

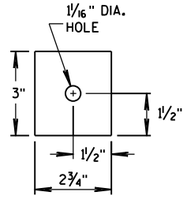
S.D.D. 14 B 27-1b



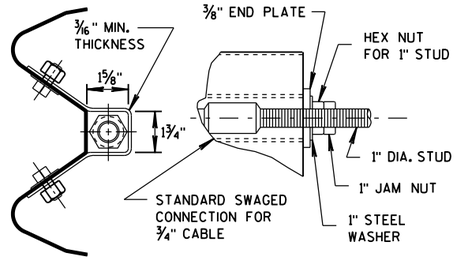
RECTANGULAR PLATE WASHER



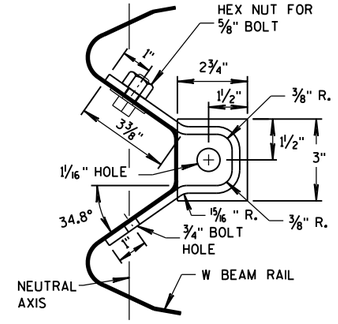
DETAIL D



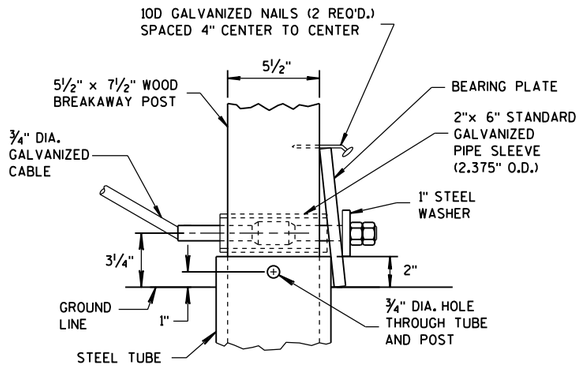
END PLATE



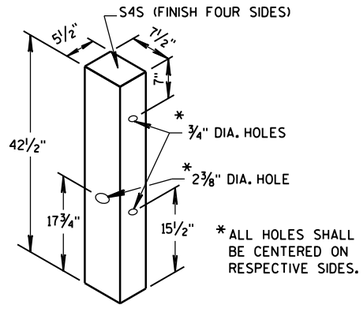
SECTION C-C
(END PLATE REMOVED)



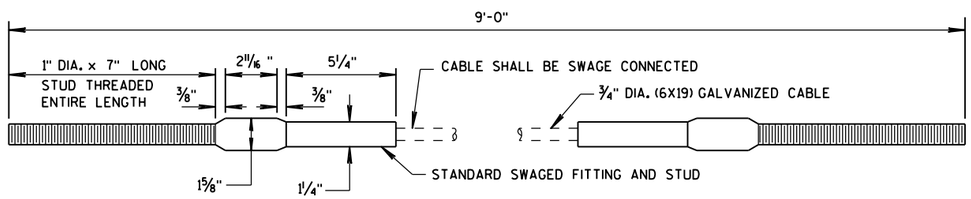
ANCHOR BRACKET



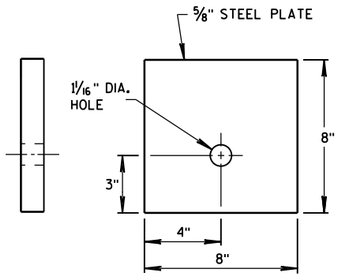
DETAIL C



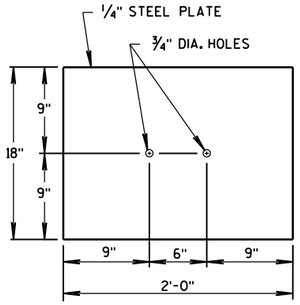
WOOD BREAKAWAY POST



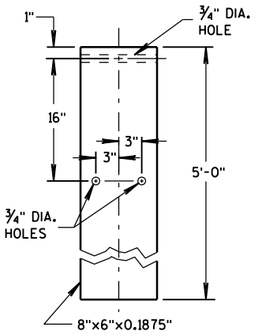
CABLE ASSEMBLY



BEARING PLATE



SOIL PLATE



STEEL TUBE

STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
12/18/08 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 14 B 27-1c

6

S.D.D. 14 B 27-1c

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.

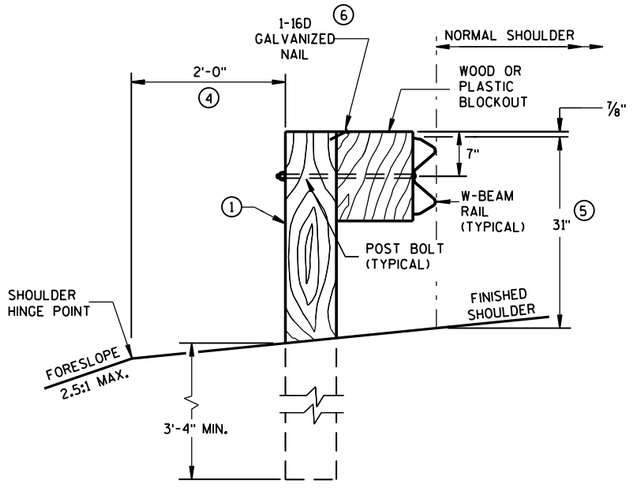
② USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL. DIMENSIONS OF APPROVED PLASTIC BLOCKOUTS MAY VARY.

③ IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2½ 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).

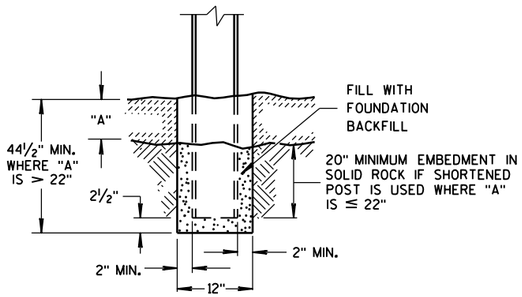
⑤ FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ± 1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27¾" TO 32".

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.



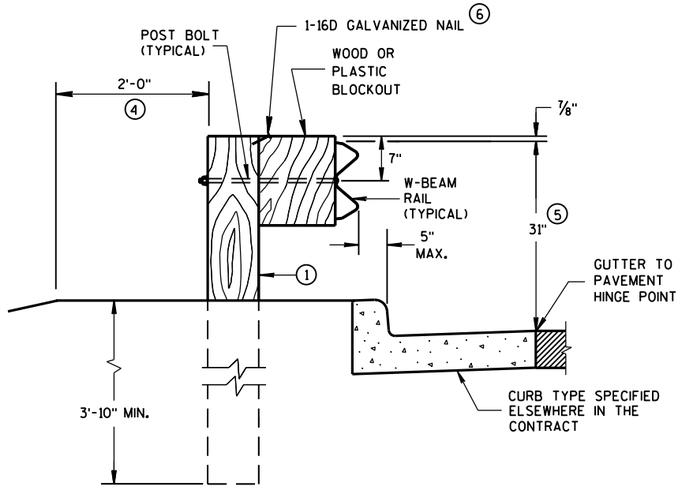
END VIEW

LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION



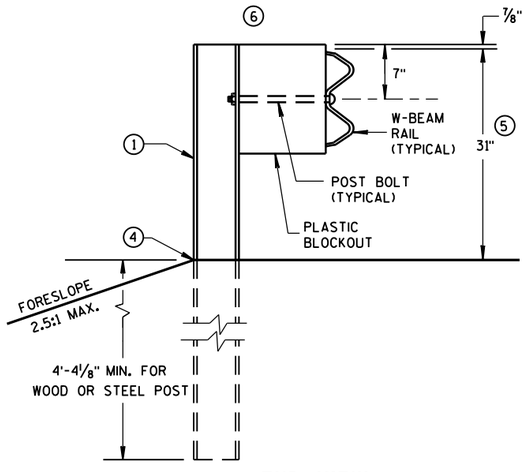
END VIEW

SETTING STEEL OR WOOD POST IN ROCK ③



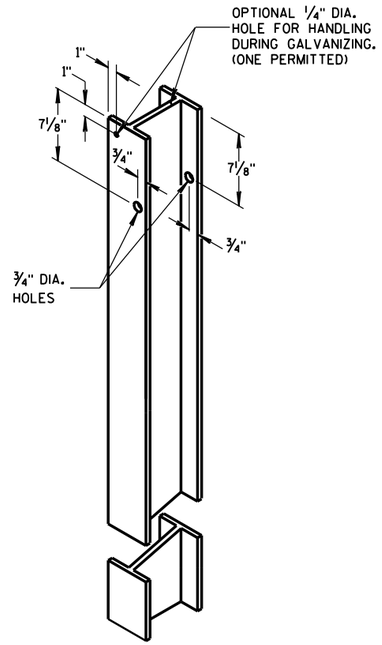
END VIEW

LOCATED ALONG A CURBED ROADWAY

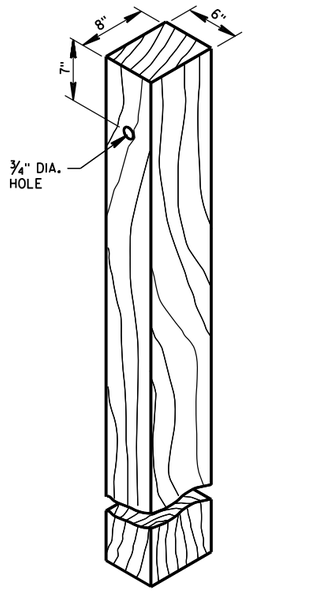


END VIEW

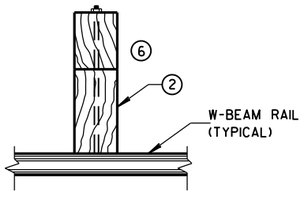
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



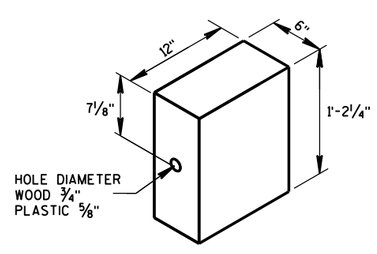
STEEL POST &
HOLE PUNCHING DETAIL
(w6X9) ①



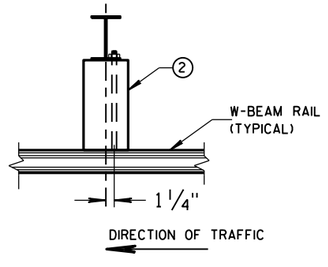
WOOD POST
(6" X 8") NOMINAL ①



PLAN VIEW
WOOD POST,
BLOCKOUT & BEAM



WOOD OR
PLASTIC BLOCKOUT ②



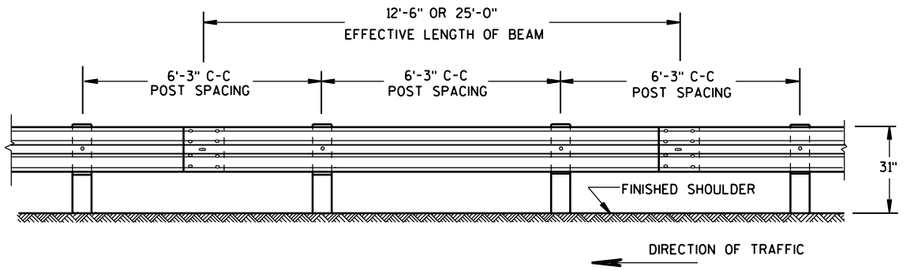
PLAN VIEW
STEEL POST,
PLASTIC BLOCKOUT & BEAM

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

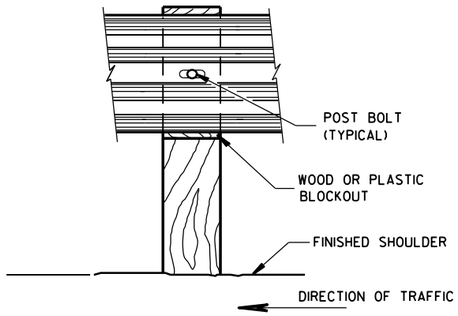
6

S.D.D. 14 B 42-4a



FRONT VIEW

POST SPACING STANDARD INSTALLATION



FRONT VIEW AT WOOD POST

7. PROVIDE SILVER REFLECTIVE SHEETING ON ALL REFLECTORS EXCEPT THOSE LOCATED ALONG THE LEFT EDGE OF ONE-WAY ROADWAYS, WHICH SHALL BE PROVIDED WITH YELLOW REFLECTIVE SHEETING. SHEETING IS TYPE H. SEE STANDARD SPECIFICATION 637.

8. DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL. RAIL SPLICE LOCATIONS ARE THE ONLY ACCEPTABLE LOCATIONS FOR REFLECTORS.

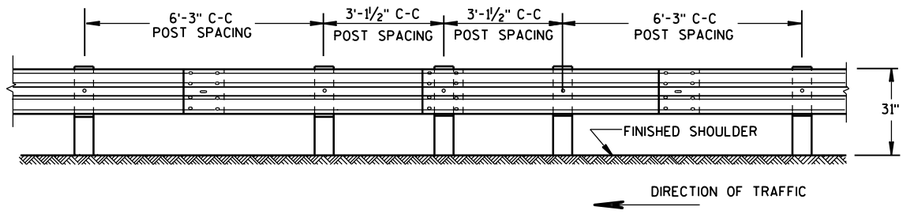
9. REVERSE EVERY OTHER REFLECTOR FOR 2-WAY VISIBILITY. THE CONTRACTOR MAY FURNISH TWO-SIDED REFLECTORS IN LIEU OF ONE-SIDED REFLECTORS.

10. PROVIDE AN ANGLE OF BEND OF 90° ± 1° FOR TWO-SIDED REFLECTORS.

11. 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

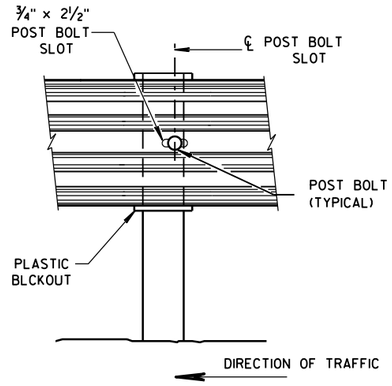
POST BOLTS ARE A 5/8" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES 5/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND 5/8" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

GUARD RAIL SPLICE BOLTS ARE A 5/8" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES 5/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.

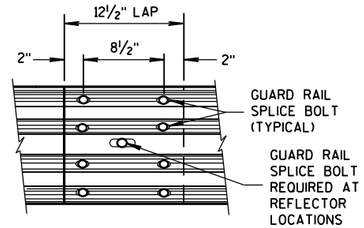


FRONT VIEW

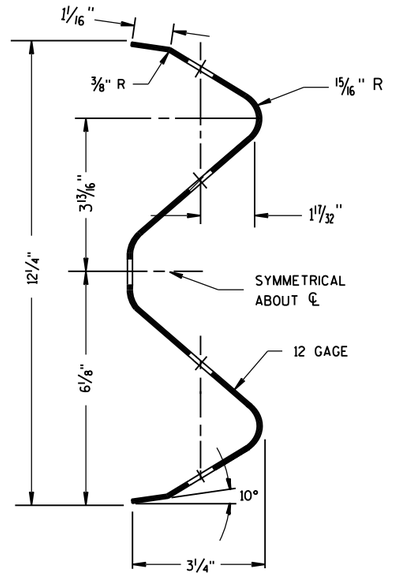
HALF POST SPACING (HS) AND HALF POST SPACING WITH LONGER POSTS (K)



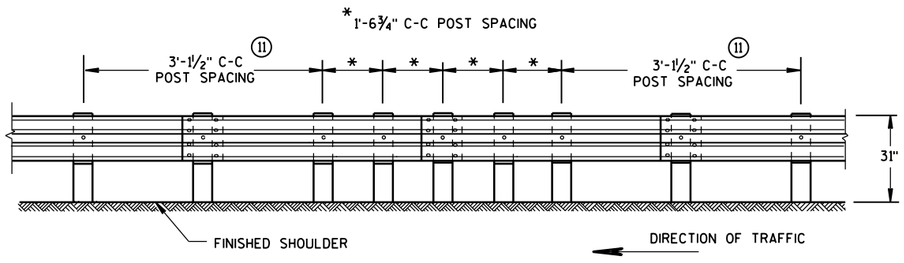
FRONT VIEW AT STEEL POST



FRONT VIEW
MID-SPAN BEAM SPLICE

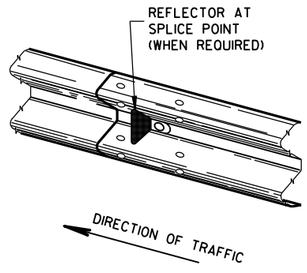


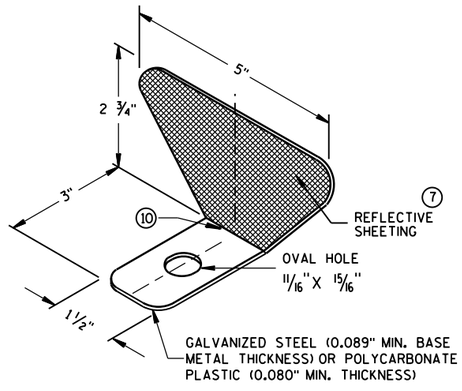
SECTION THRU W-BEAM RAIL



FRONT VIEW

QUARTER POST SPACING (QS)





ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION 7

REFLECTOR SPACING 8

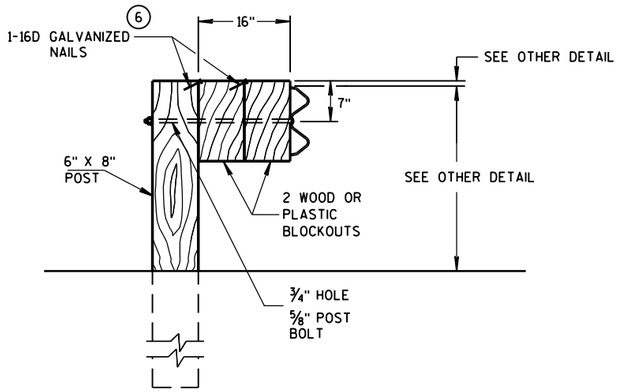
	BEAM GUARD LENGTH	REFLECTOR SPACING	NO. SURFACES REFLECTORIZED	MIN. NO. REFLECTORS
ONE WAY TRAFFIC	< 200'	50' C-C	1	3
	> 200'	100' C-C	1	
TWO WAY TRAFFIC	< 200'	25' C-C	1 9	6
	> 200'	50' C-C	1	
TWO WAY TRAFFIC	< 200'	50' C-C	2	3
	> 200'	100' C-C	2 10	

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

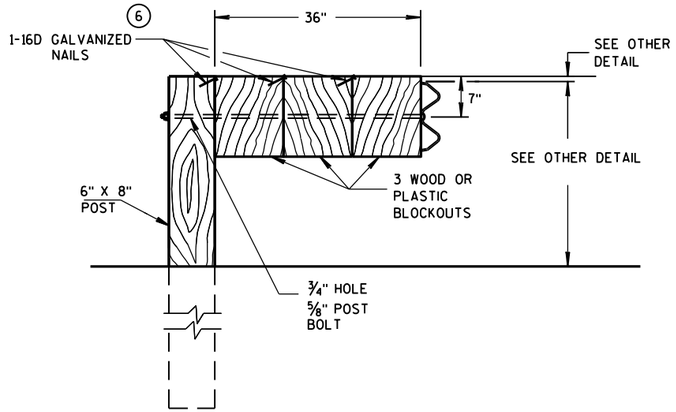
6

S.D.D. 14 B 42-4b



DETAIL FOR 16" BLOCKOUT DEPTH

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

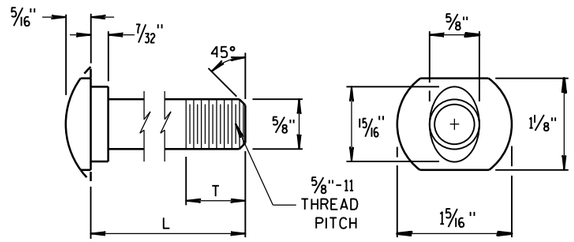


DETAIL FOR 36" BLOCKOUT DEPTH

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

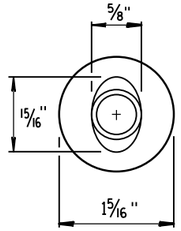
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

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

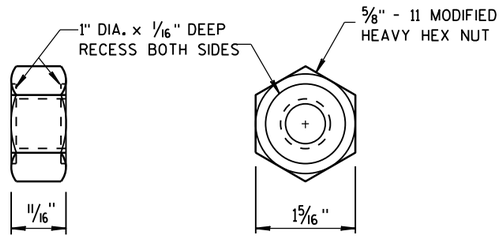


POST BOLT TABLE

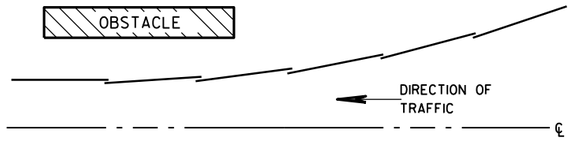
L	T (MIN.)
1¼"	1⅛"
2"	1¾"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"



ALTERNATE BOLT HEAD

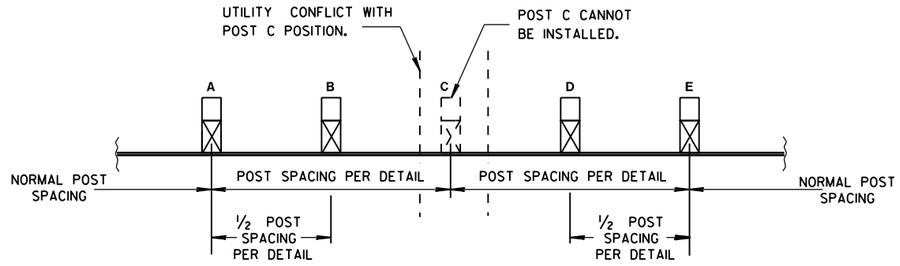


POST BOLT, SPLICE BOLT AND RECESS NUT

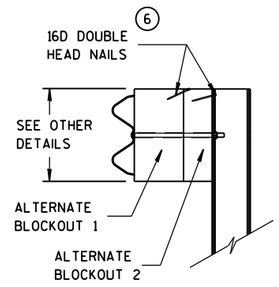


PLAN VIEW

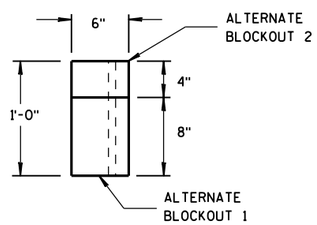
BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



SIDE VIEW



TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2016 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

6
S.D.D. 14 B 42-4c

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 MANUFACTURES REQUIRE DIFFERENT PERFORATED W-BEAM RAIL END PANELS. SEE MANUFACTURES INFORMATION.

(D) THE TOP OF THE STEEL TUBE ON POST 1 AND POST 2 SHALL NOT BE MORE THAN 3" ABOVE THE FINISH GROUND ELEVATION.

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

(G) ½" DIAMETER X 3" LONG LAG BOLT AND WASHER.

(H) HARDWARE VARIES BETWEEN DIFFERENT MANUFACTURES. SEE MANUFACTURE'S DRAWING FOR INFORMATION.

(I) DIMENSIONS MAY VARY. SEE MANUFACTURE'S INFORMATION.

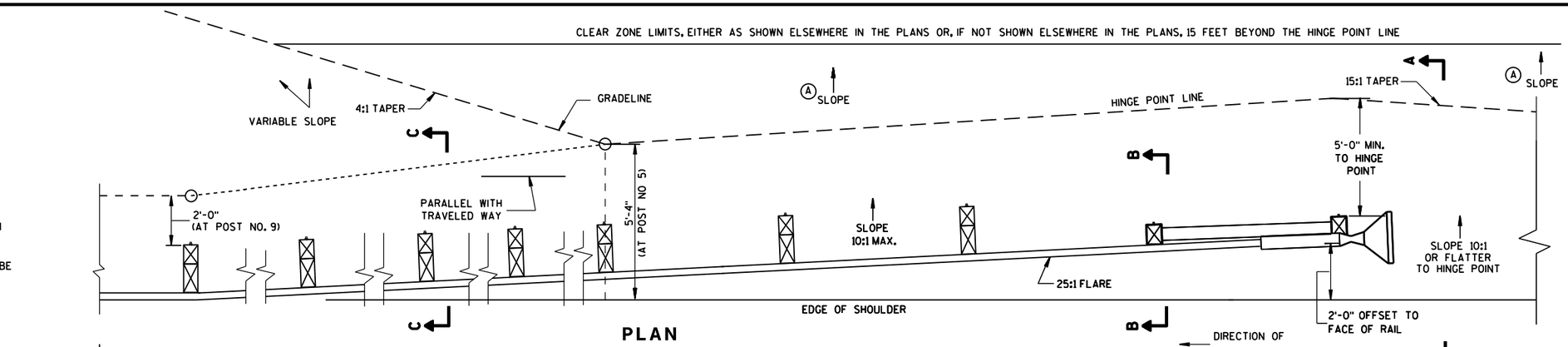
SEE SDD 14B42 FOR MORE INFORMATION.

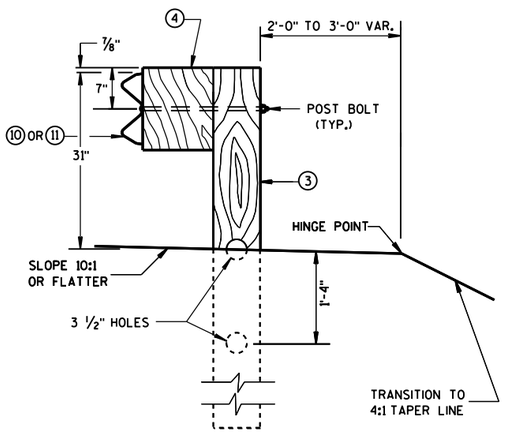
* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

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

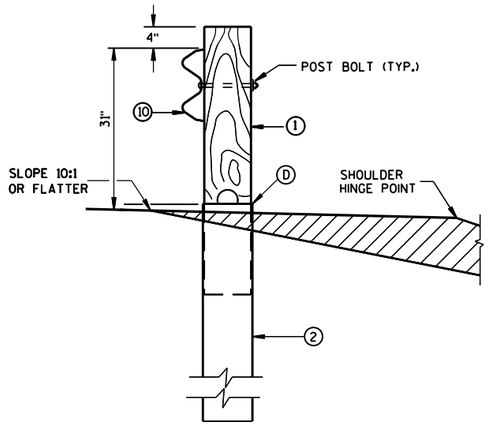
W-BEAM RAIL SPLICES ARE LOCATED AT POST NUMBER 3, AND BETWEEN POST 5 AND 6, BETWEEN POSTS 7 AND 8, AND MIDDLE OF THE SPAN AFTER POST 9.

THE CENTER OF THE UPPER 3½" 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.

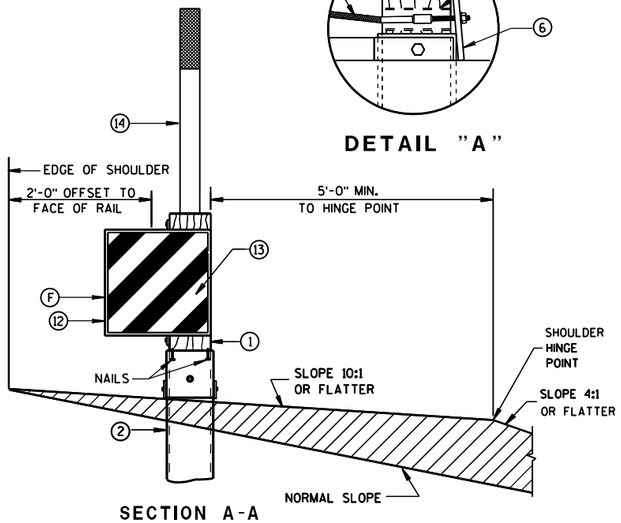




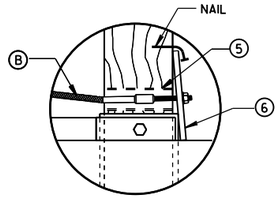
SECTION C-C
TYPICAL AT POST NOS. 3-9



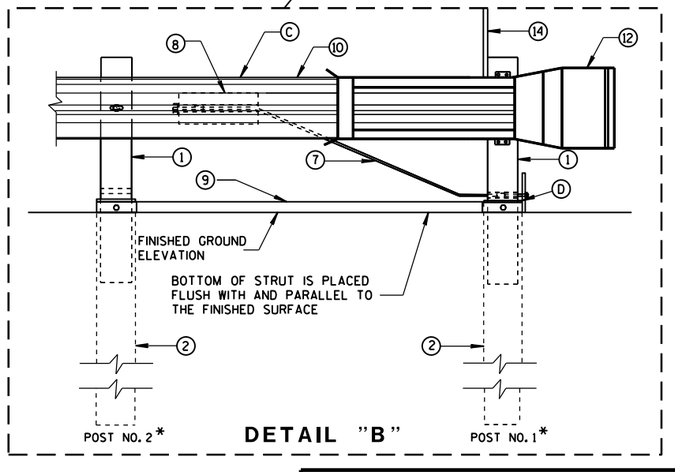
SECTION B-B
TYPICAL AT POST NO. 2*



SECTION A-A
TYPICAL AT POST NO. 1*



DETAIL "A"



DETAIL "B"

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO 68

S.D.D. 14 B 44-2a

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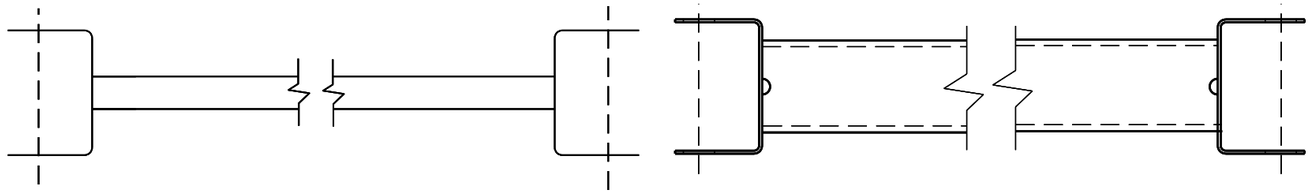
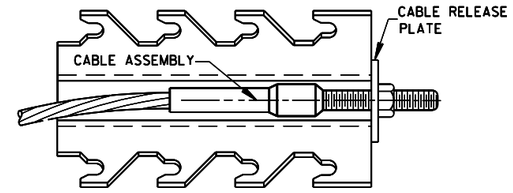


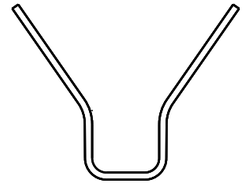
GENERIC GROUND STRUT (9) (H)

BILL OF MATERIALS

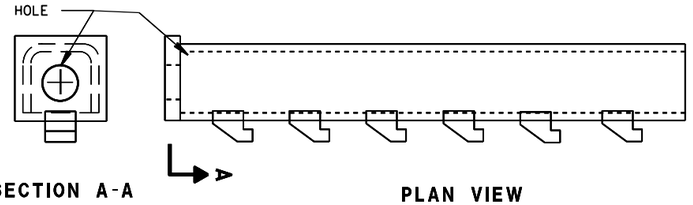
PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.
(1)	WOOD BREAKAWAY POST
(2)	6" X 8" X 0.188", 6'-0" LONG FOUNDATION TUBE AT POSTS 1 AND 2
(3)	WOOD CRT
(4)	WOOD BLOCKOUT
(5)	PIPE SLEEVE
(6)	BEARING PLATE
(7)	BCT CABLE ASSEMBLY
(8)	ANCHOR 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)	END SECTION EAT
(13)	0.040" ALUMINUM SHEET WITH REFLECTIVE SHEETING TYPE F PER SECTION 637 OF THE STANDARD SPECIFICATIONS
(14)	EAT MARKER POST - YELLOW (SEE APPROVED PRODUCTS LIST)



FRONT VIEW



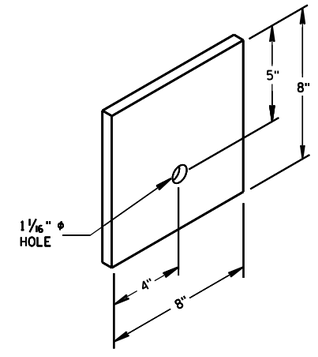
SECTION B-B



SECTION A-A

PLAN VIEW

GENERIC ANCHOR CABLE BOX (8) (H)

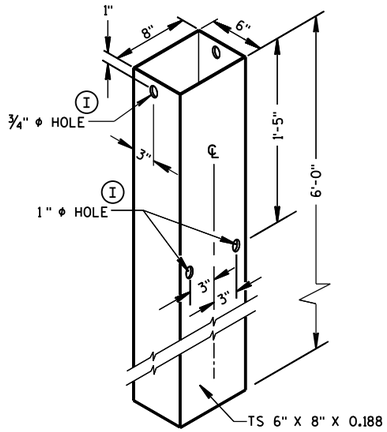


BEARING PLATE (6)

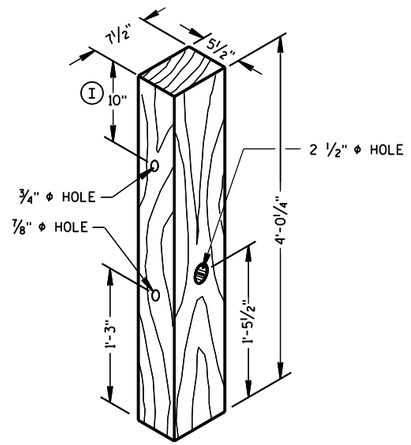
MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6
S.D.D. 14 B 44-2b

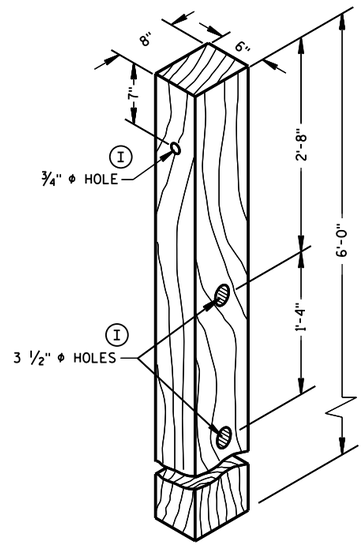


FOUNDATION TUBE (2)



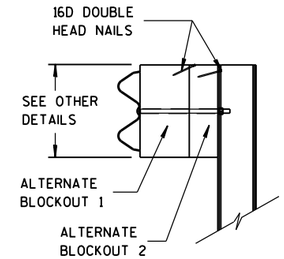
POSTS NUMBER 1 AND 2

WOOD BREAKAWAY POST (1)

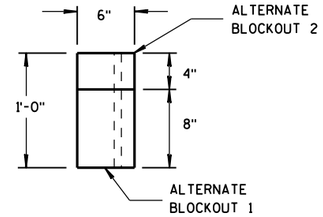


POSTS NUMBER 3-9

WOOD CRT POST (3)

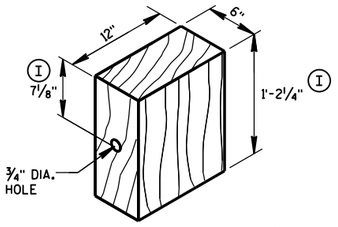


SIDE VIEW



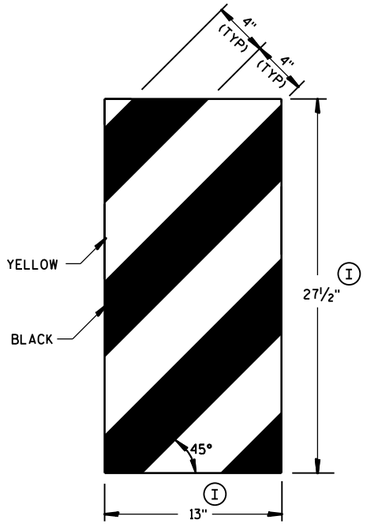
TOP VIEW

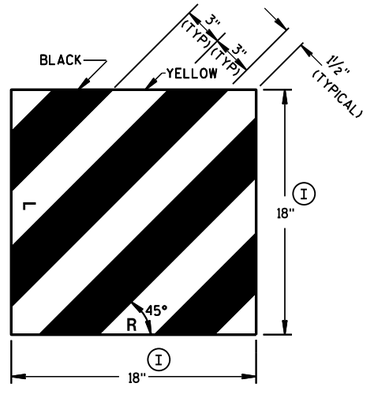
ALTERNATE WOOD BLOCKOUT DETAIL



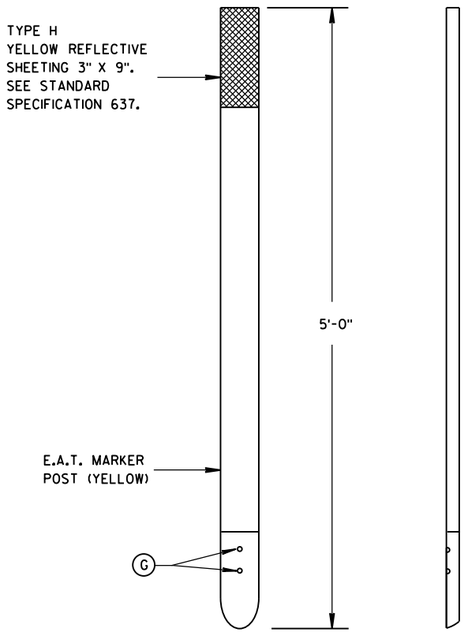
WOOD BLOCKOUT (4)

REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2





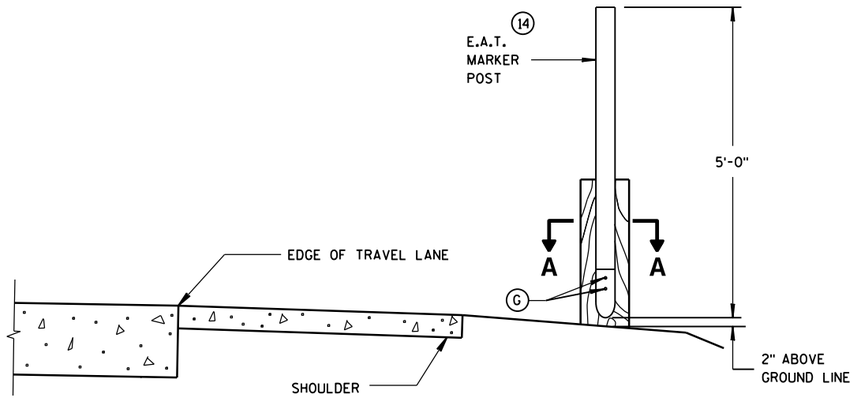
GENERIC REFLECTIVE SHEETING (13) (H)



FRONT VIEW

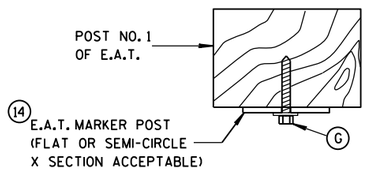
SIDE VIEW

E.A.T. MARKER POST (14)



TYPICAL INSTALLATION OF E.A.T. MARKER POST BACKSIDE OF POST NO. 1

(E.A.T. AND RAIL REMOVED FOR CLARITY)



SECTION A-A

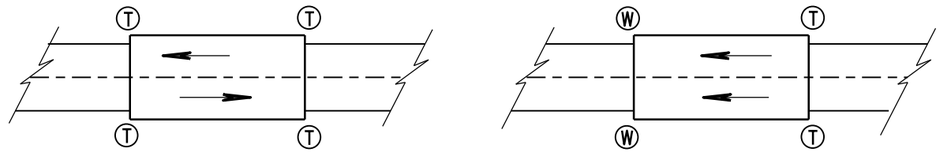
MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2014 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

6

S.D.D. 14 B 44-2c



TWO WAY TRAFFIC **ONE WAY TRAFFIC**

Ⓣ THRIE BEAM CONNECTION

Ⓦ W-BEAM CONNECTION WHEN REQUIRED

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

GENERAL NOTES

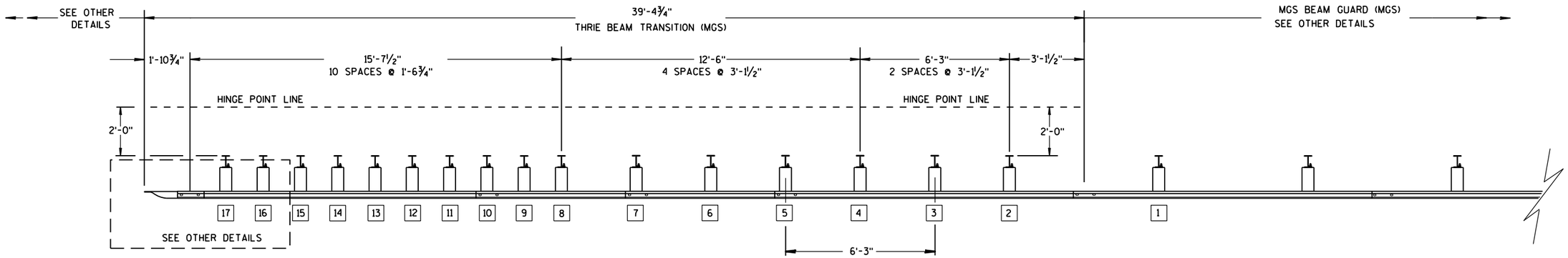
IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2½", AND 12" DIAMETER AROUND POST. SEE 14B42 FOR MORE DETAILS.

TRANSITION USES STEEL POSTS ONLY.

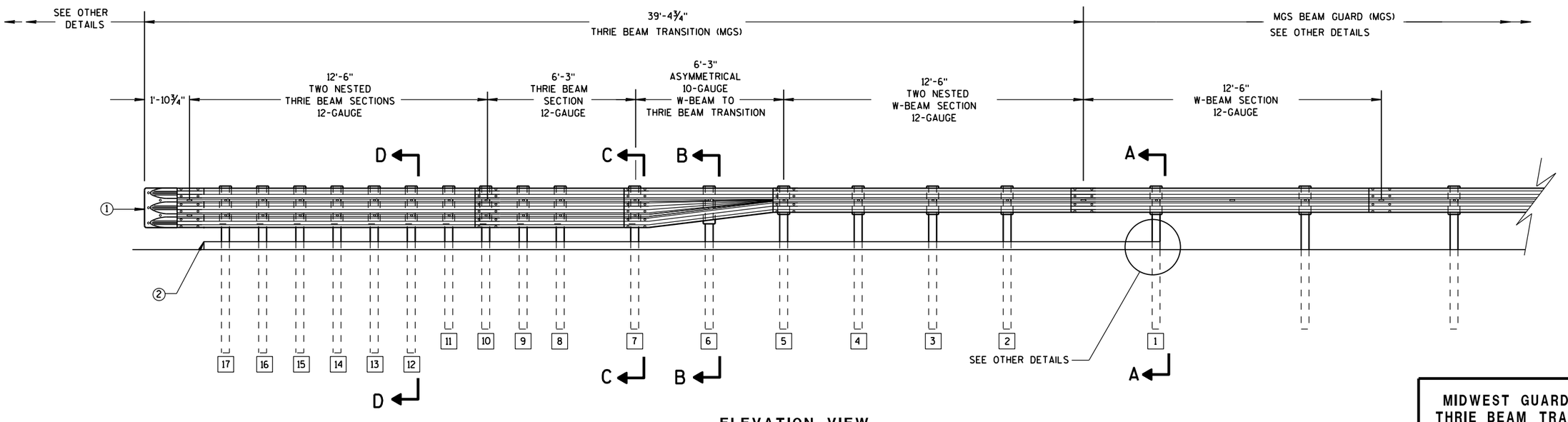
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

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

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



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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S.D.D. 14 B 45-4a

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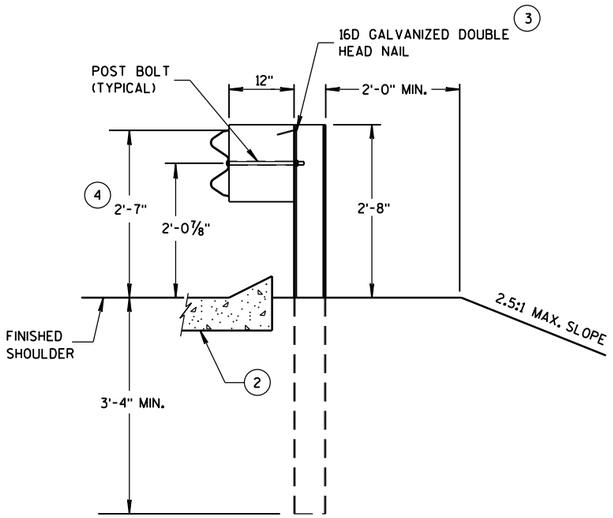
S.D.D. 14 B 45-4a

GENERAL NOTES

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

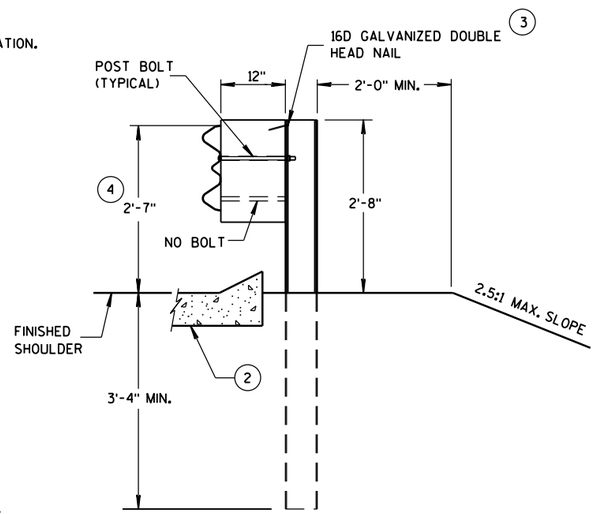
(3) WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 10D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

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



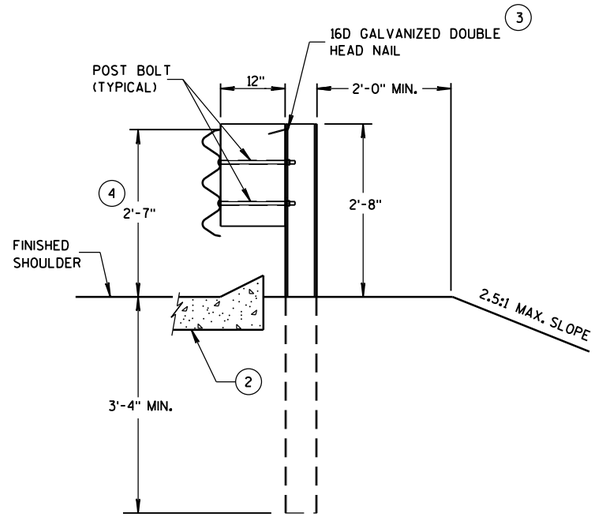
SECTION A-A

POSTS 1-5



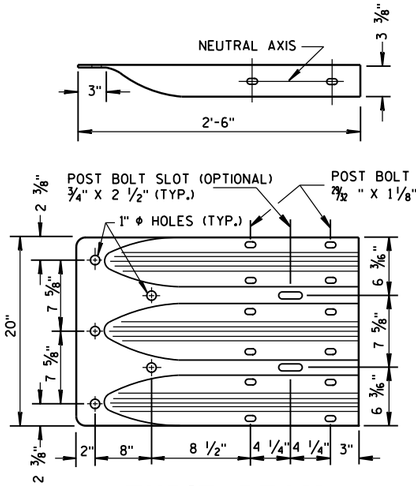
SECTION B-B

POST 6



SECTION C-C

POSTS 7-11



THRIE BEAM TERMINAL CONNECTOR

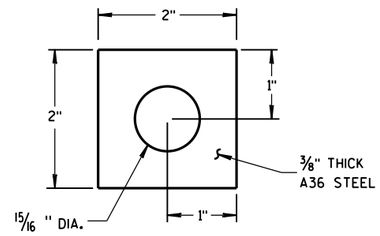
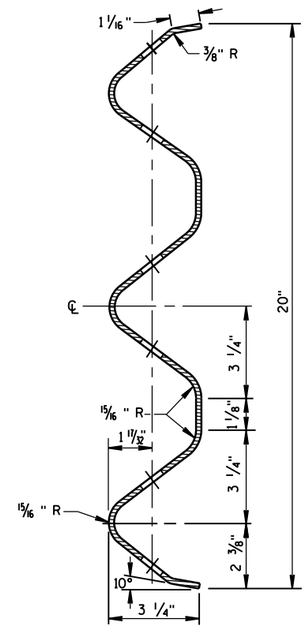
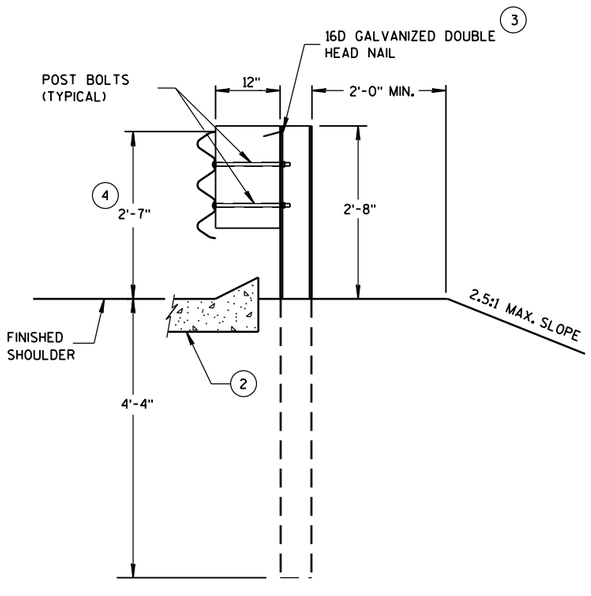


PLATE WASHER DETAIL

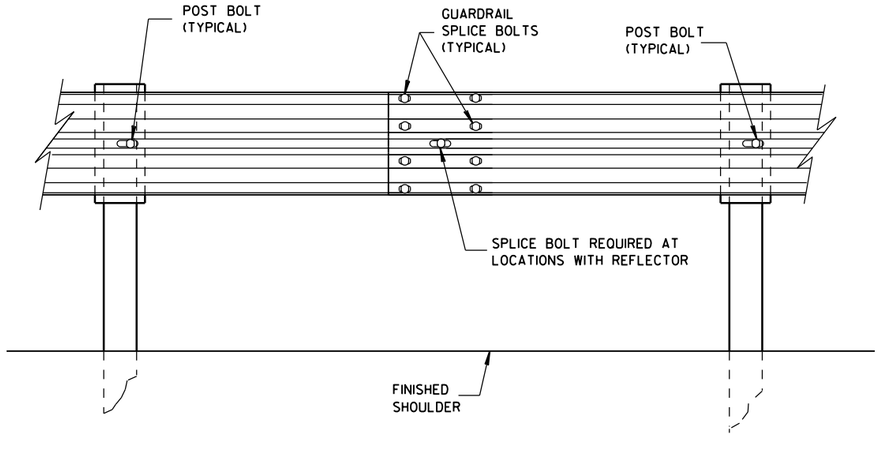


SECTION THRU THRIE BEAM RAIL ELEMENT



SECTION D-D

POSTS 12-17



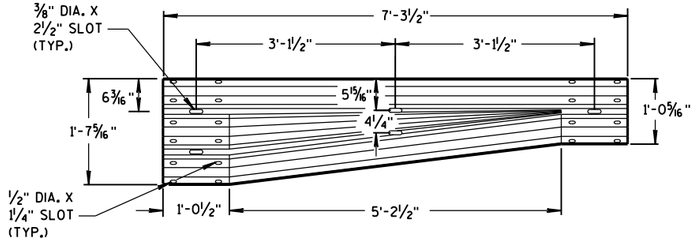
SPLICE DETAIL

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

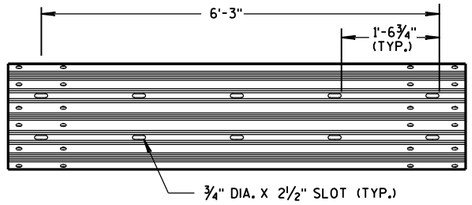
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

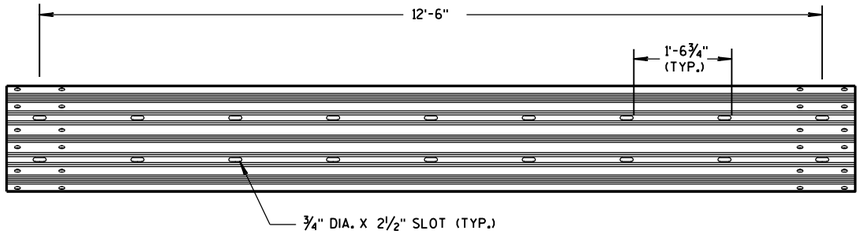
S.D.D. 14 B 45-4b



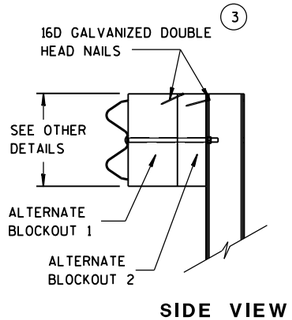
W-BEAM TO THRIE BEAM TRANSITION SECTION



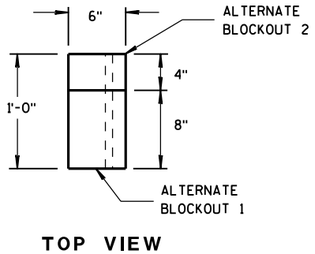
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

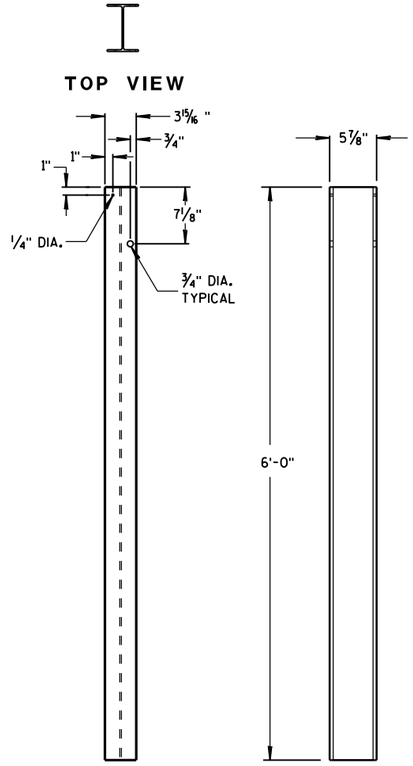


SIDE VIEW

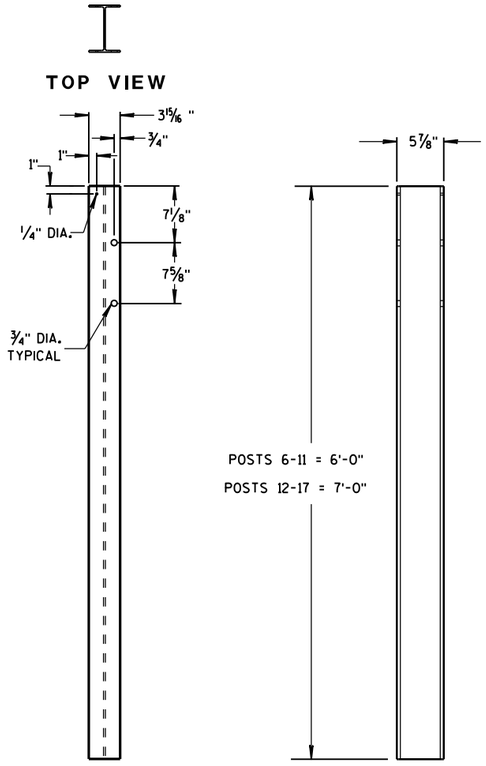


TOP VIEW

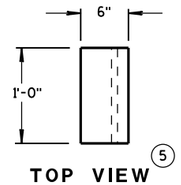
ALTERNATE WOOD BLOCKOUT DETAIL



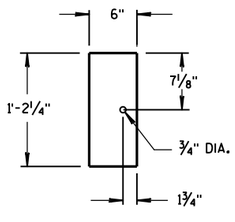
STEEL POSTS 1-5



STEEL POSTS 6-17

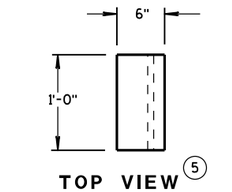


TOP VIEW

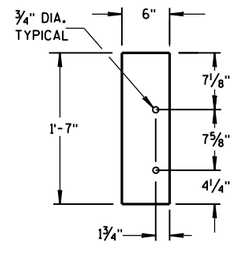


FRONT VIEW

BLOCKOUT POSTS 1-5



TOP VIEW



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.

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

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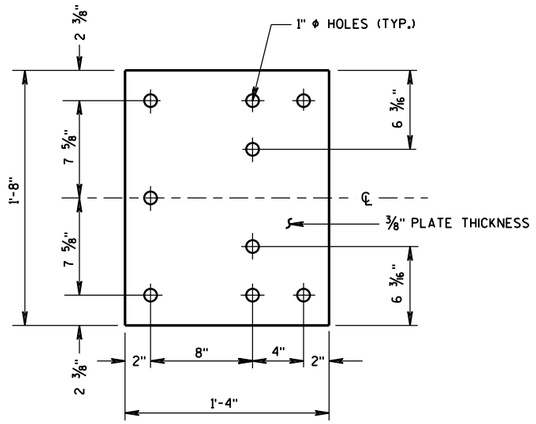
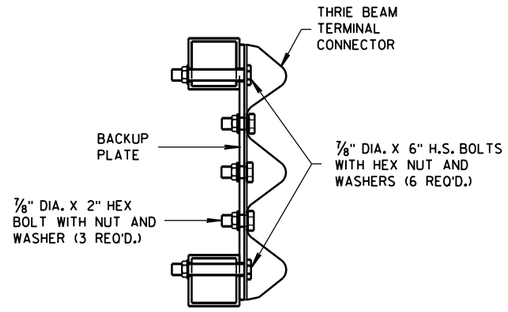
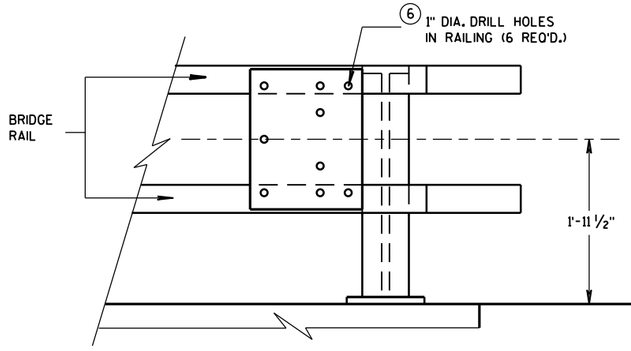
S.D.D. 14 B 45-4c



BACK-UP PLATE DETAIL



SECTION J-J

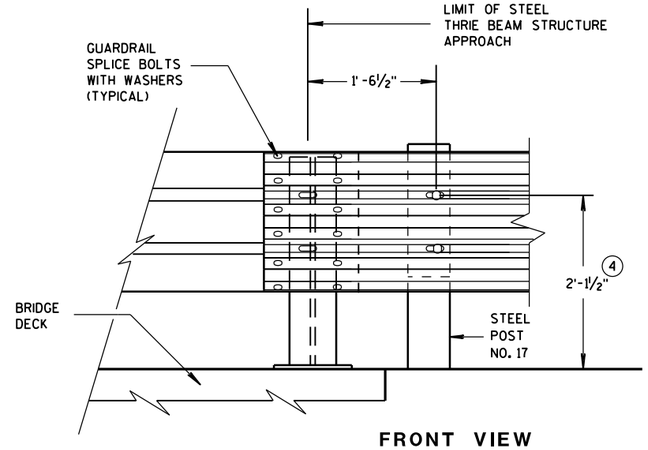


BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING

GENERAL NOTES

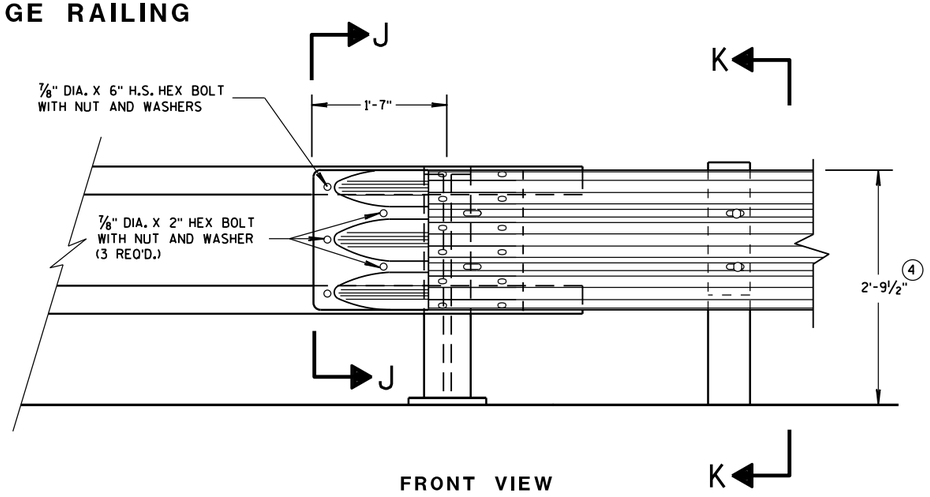
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

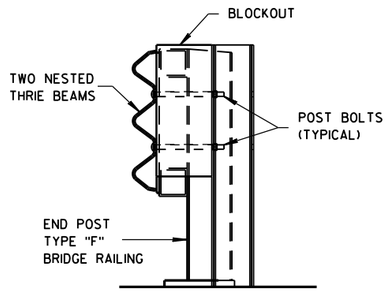


FRONT VIEW

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

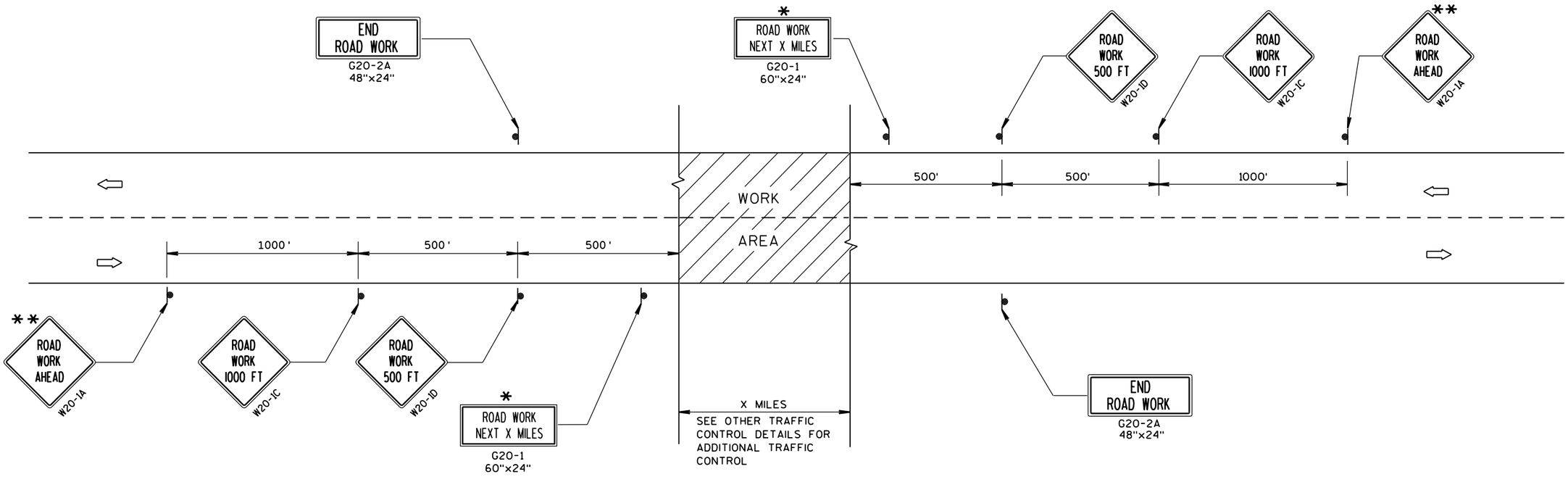
APPROVED
June, 2015 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
74
FHWA
NT

6

S.D.D. 14 B 45-4g

6

S.D.D. 14 B 45-4g



TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL

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.

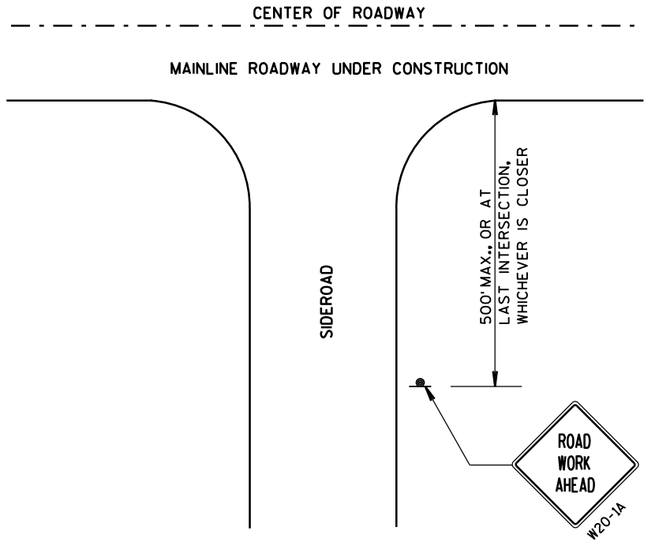
ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 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 RE-ESTABLISHED.

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

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



LEGEND

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

TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

Sept. 2015 — DATE

/S/ Peter Amakobe Atepe — STATEWIDE WORK ZONE SAFETY ENGINEER

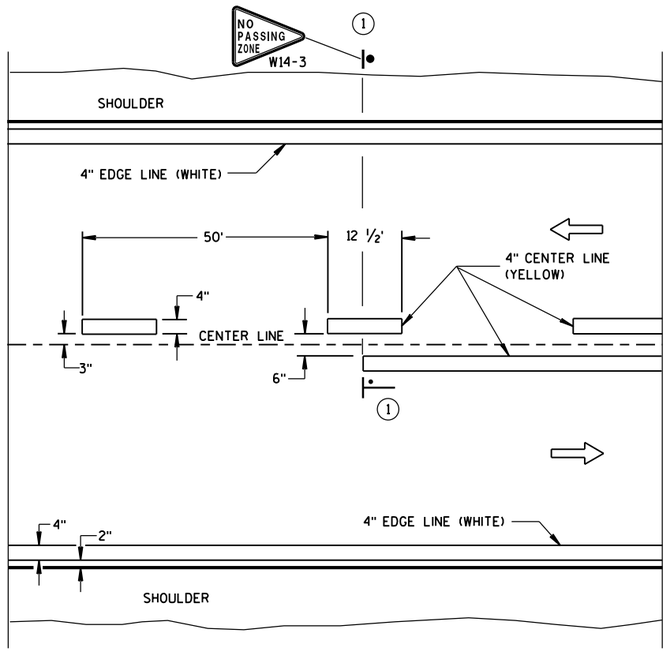
FHWA

6

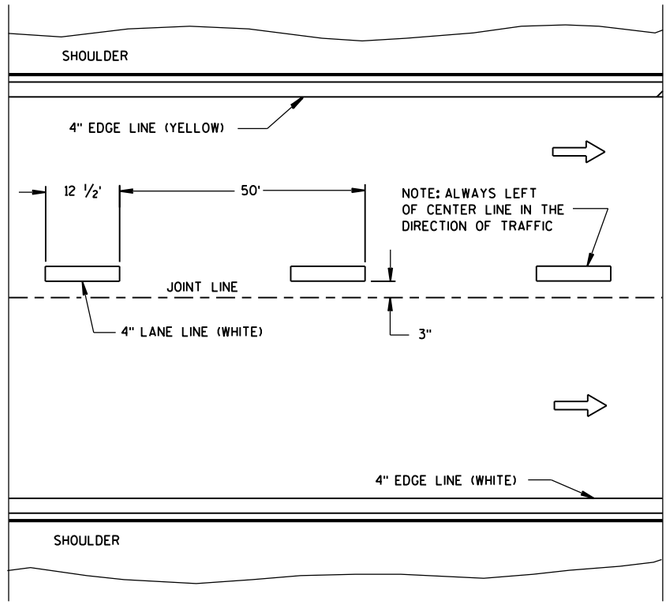
S.D.D. 15 C 4-3

6

S.D.D. 15 C 4-3



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

GENERAL NOTES

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

(1) NO PASSING ZONE W14-3 SIGN SHALL BE LOCATED WITHIN 50 FEET OF THE "T" MARKING.

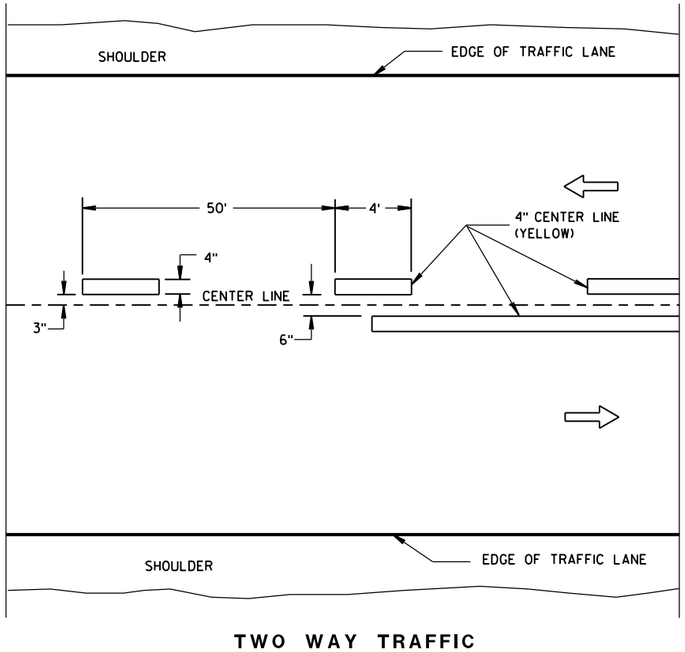
NOTE

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

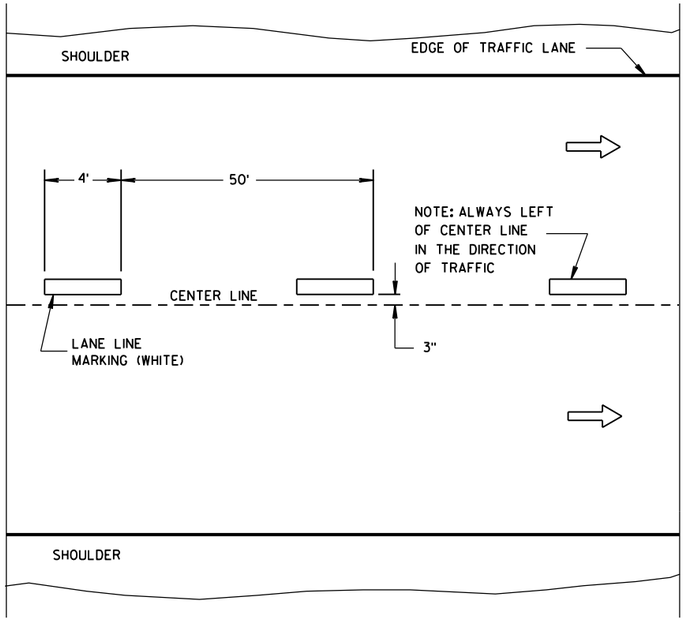
LEGEND

"T" MARKING

POST MOUNTED SIGN



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

LONGITUDINAL MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept., 2016 — DATE
/S/ Matthew R. Rauch — STATE SIGNING AND MARKING ENGINEER
FHWA

S.D.D. 15 C 8-17a

S.D.D. 15 C 8-17a

LEGEND

SIGN ON PORTABLE OR PERMANENT SUPPORT

DIRECTION OF TRAFFIC

WORK AREA

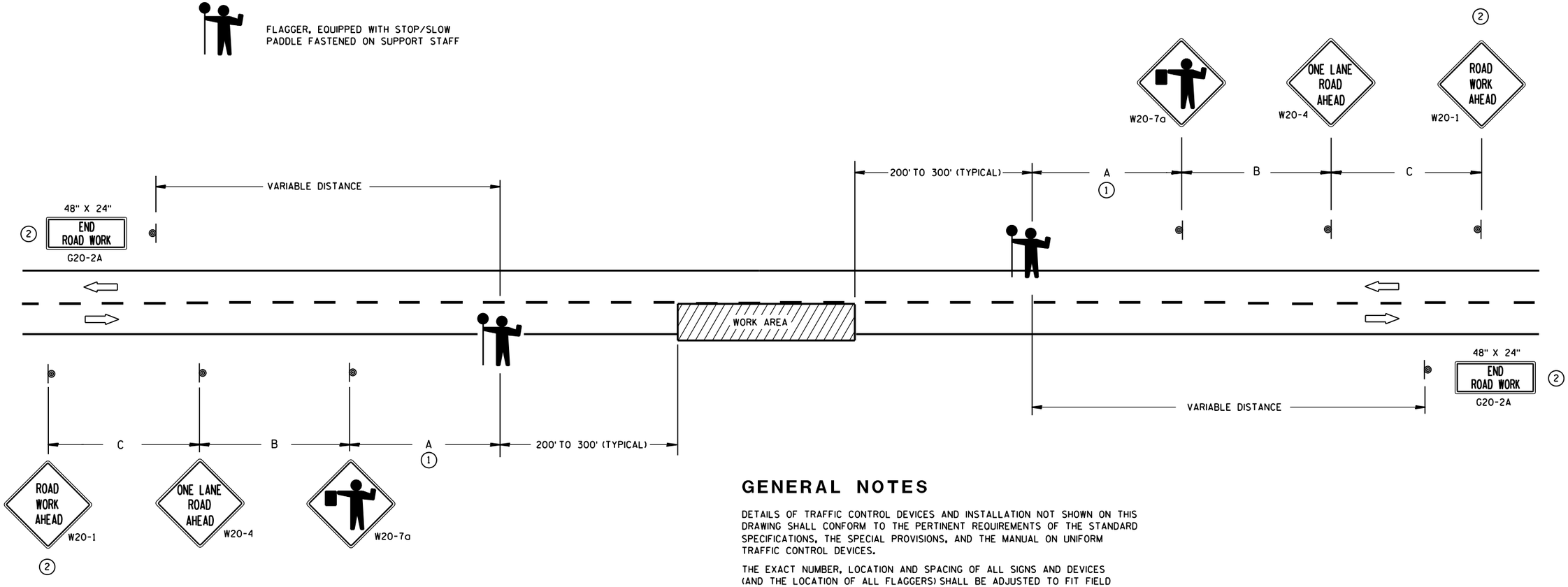
FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

SIGN SPACING TABLE

SPEED LIMIT	SIGN SPACING A,B,C
25-35 MPH	200'
35-40 MPH	350'
45-55 MPH	500'

W3-4

USE OF THE "BE PREPARED TO STOP" SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7a AND W20-4 SIGNS. A 500' TYPICAL SPACING SHALL BE PROVIDED BETWEEN THE SIGNS.



(1) FOR A MOVING WORK OPERATION,
SIGNING FOR BOTH DIRECTIONS SHALL BE REESTABLISHED (AS SIMULTANEOUSLY AS PRACTICAL) AT APPROXIMATELY 3500 FOOT 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.

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.

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS AND DEVICES (AND THE 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.

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, COVER OR REMOVE ALL TEMPORARY TRAFFIC CONTROL SIGNS.

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

TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

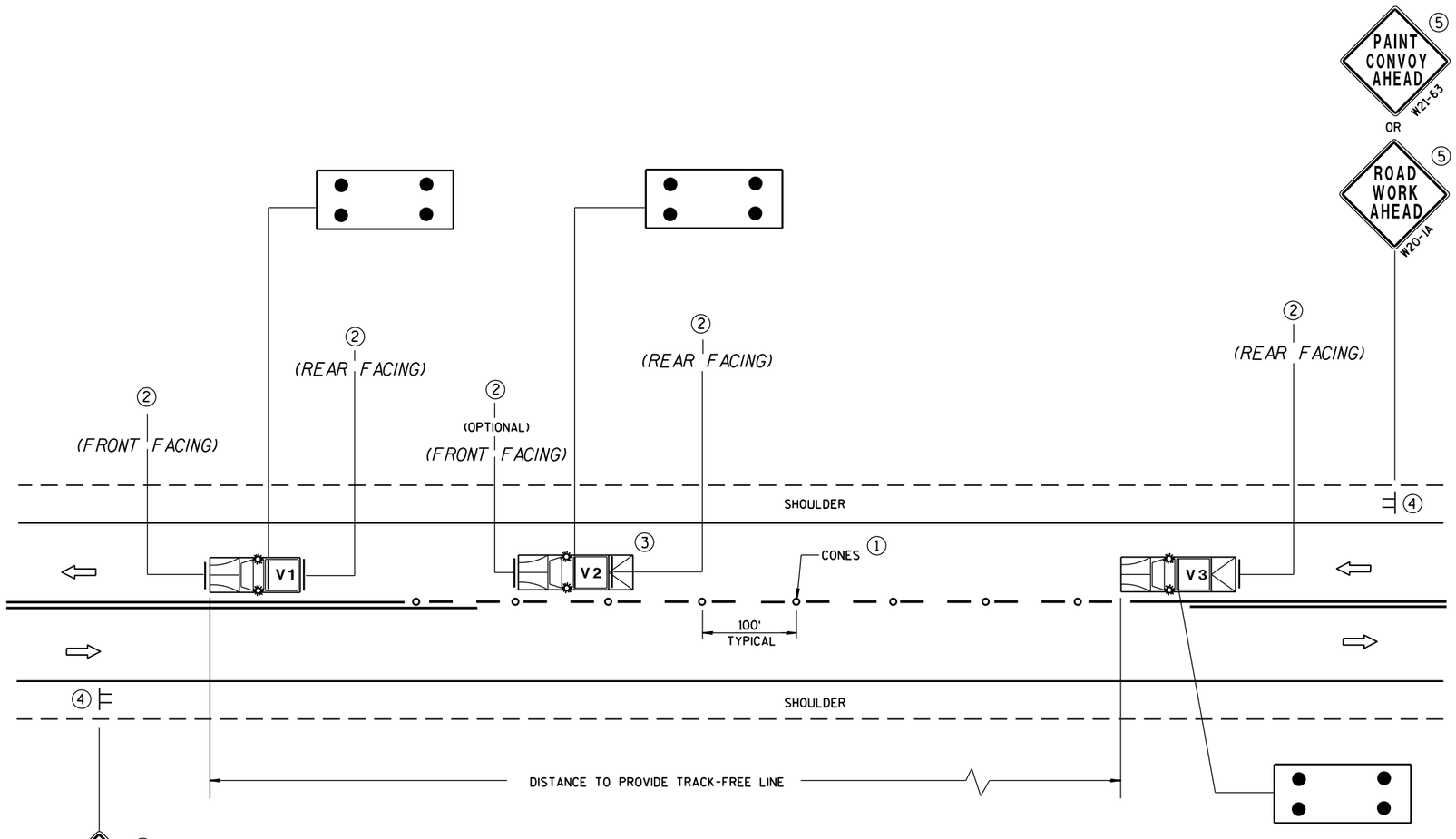
APPROVED
8/2013 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

6

S.D.D. 15 C 12-4

6

S.D.D. 15 C 12-4



MOVING PAVEMENT MARKING OPERATIONS
TWO-LANE TWO-WAY ROADWAY

GENERAL NOTES

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

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

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

IF SPEED LIMIT IS 40 MPH OR LESS STATIONARY SIGNS MAY BE OMITTED IF CONES ARE USED.

ALTERNATE SIGN MESSAGES, SUCH AS "PAINT CREW AHEAD" OR "ROAD PAINTING AHEAD" MAY BE USED.

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

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

THIS DRAWING SHALL BE USED FOR CENTERLINE OR EDGELINE MARKING.

WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR TURN THE STATIONARY WARNING SIGNS AWAY FROM TRAFFIC.

(1) CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.

(2) USE STANDARD SIGN W21-64 WITH APPROPRIATE ARROW.

WET PAINT W21-64 OR WET PAINT W21-64

(3) OPTIONAL TRUCK-MOUNTED ATTENUATOR.

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

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

LEGEND

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

MOVING PAVEMENT MARKING OPERATION
TWO-LANE TWO-WAY ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2016 — DATE
/S/ Peter Amakobe Atepe — STATEWIDE WORK ZON SAFETY ENGINE
FHWA

6

S.D.D. 15 C 19-4a

6

S.D.D. 15 C 19-4a

LEGEND

- TRAFFIC CONTROL DRUM
- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC
- FLASHING ARROW BOARD
- WORK AREA

GENERAL NOTES

THIS DETAIL IS TYPICAL FOR CLOSING THE RIGHT SHOULDER. FOR CLOSING THE LEFT SHOULDER, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR DIVIDED ROADWAYS WITH ANY NUMBER OF TRAVEL LANES.

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

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

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

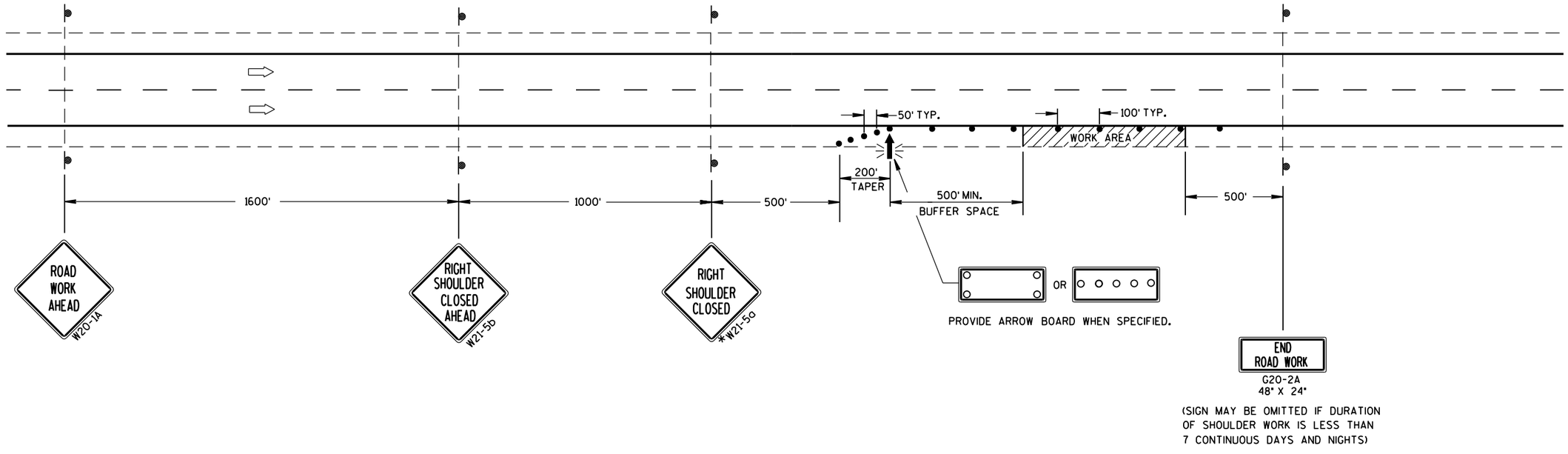
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

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

WHEN A 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.

*FOR SHORT DURATION SHOULDER WORK OF LESS THAN ONE HOUR, THE W21-5a SIGN MAY BE OMITTED.



TRAFFIC CONTROL SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June 2016 — DATE

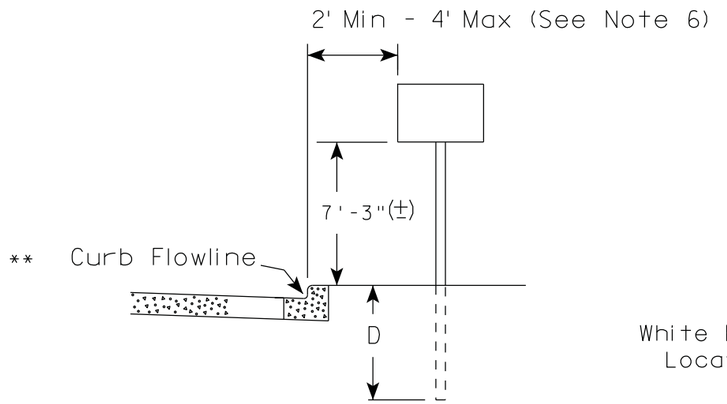
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZO[illegible] SAFETY ENGI[illegible]

FHWA

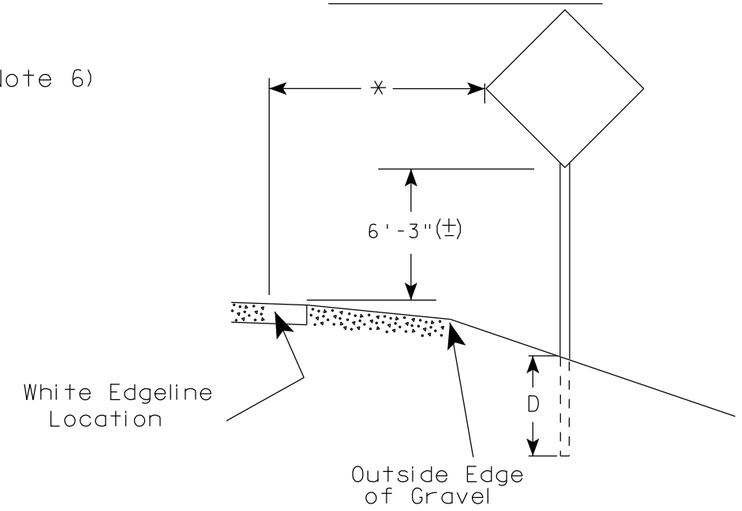
6

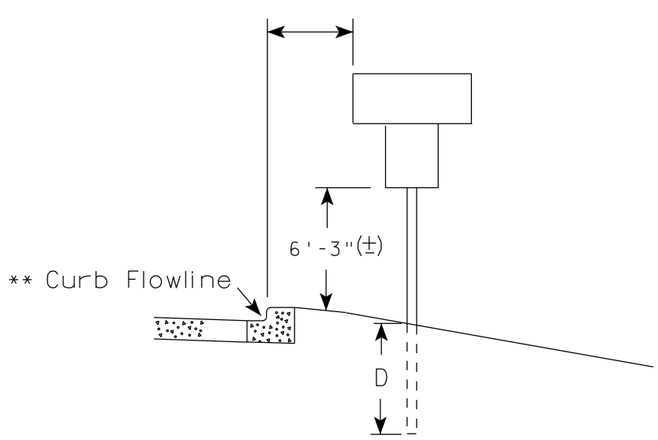
S.D.D. 15 D 27-3

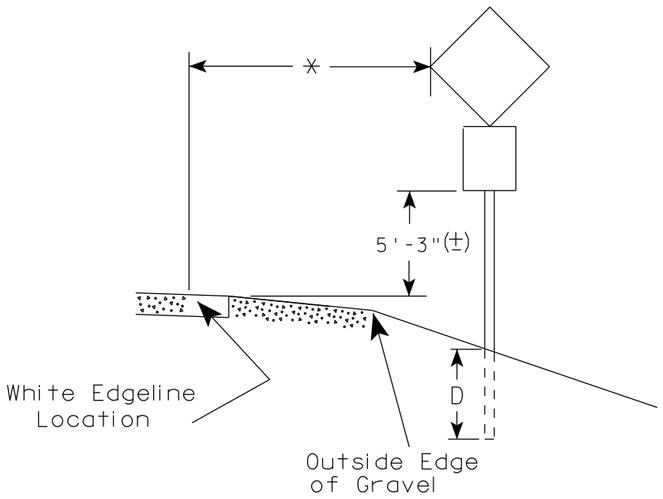
URBAN AREA



RURAL AREA (See Note 2)







GENERAL NOTES

1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on barrier wall, see A4-10 sign plate.
3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. Minimum mounting height for J assemblies (A2-1S) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
5. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. The (±) tolerance for mounting height is 3 inches.
8. Folding signs shall be mounted at a height of 5'-3" (±) or as directd by the Engineer.
9. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±).

POST EMBEDMENT DEPTH

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

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

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

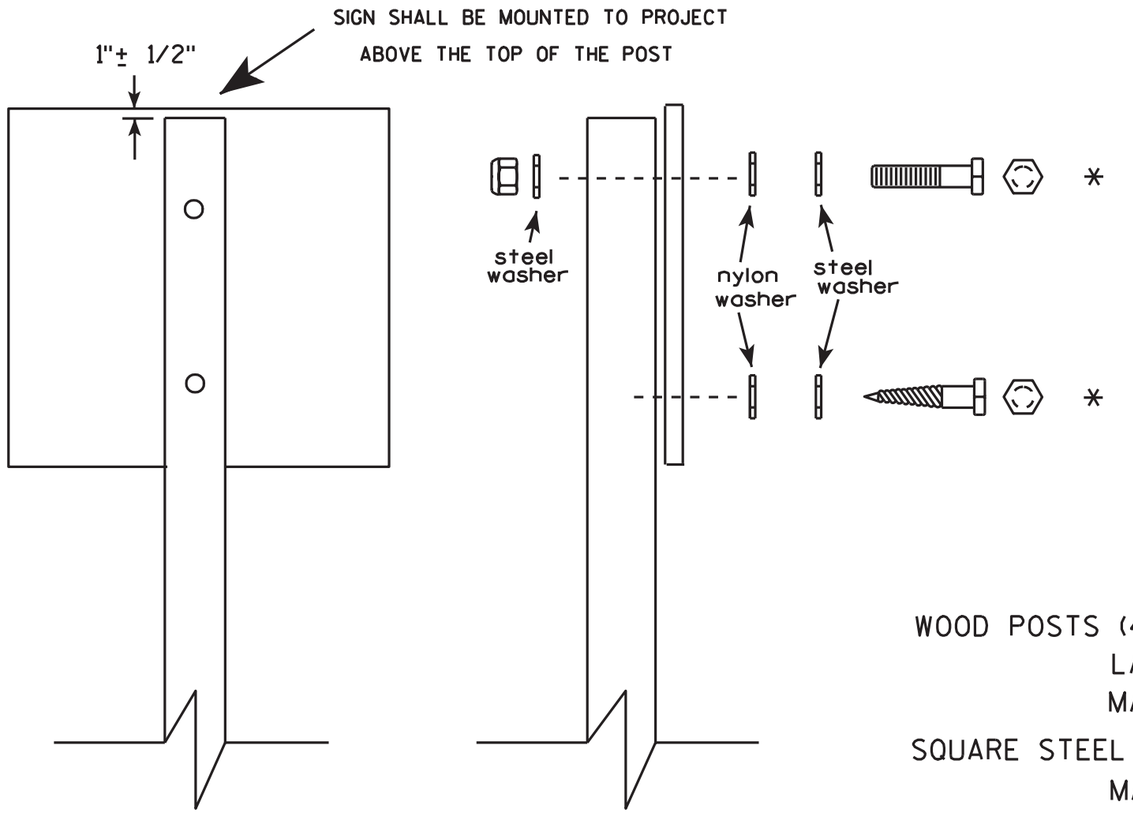
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/23/15 PLATE NO. A4-3.20

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



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

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

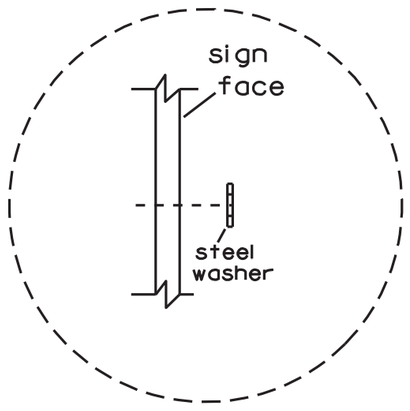
b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

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

WOOD POSTS (4" x 4" or 4" x 6")
LAG SCREWS - 3/8" X 3"
MACHINE BOLTS - 5/16" X 6-1/2" or 7" Length w/ nuts

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

WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON for all Type H signs.



Washer Placement when Sign Has Other Than Type H or Type F Face

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

ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

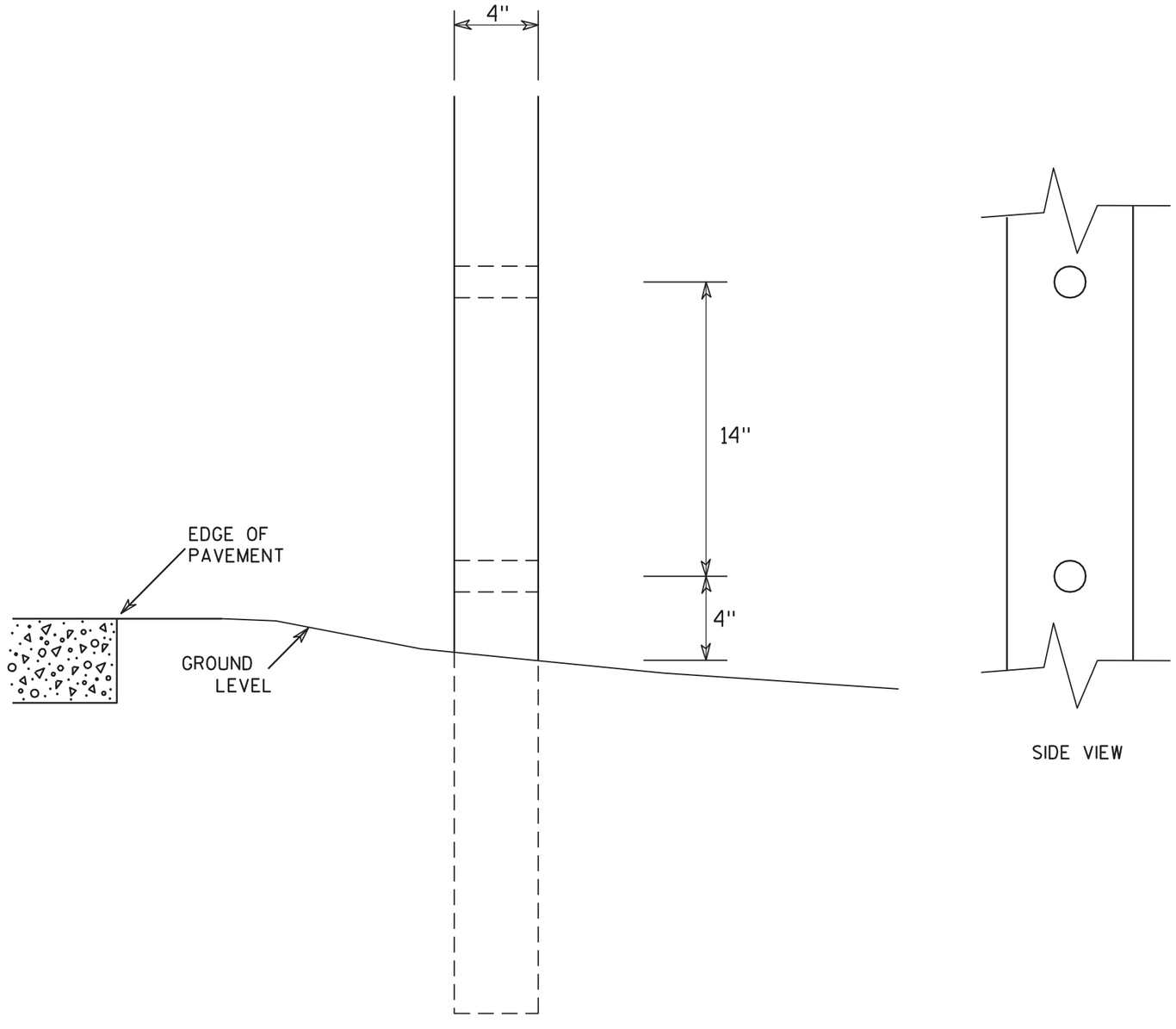
DATE 3/23/10 PLATE NO. A4-8.7

7

7

PROJECT NO:

SHEET NO: 81 E



SIDE VIEW

GENERAL NOTES

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

7

7

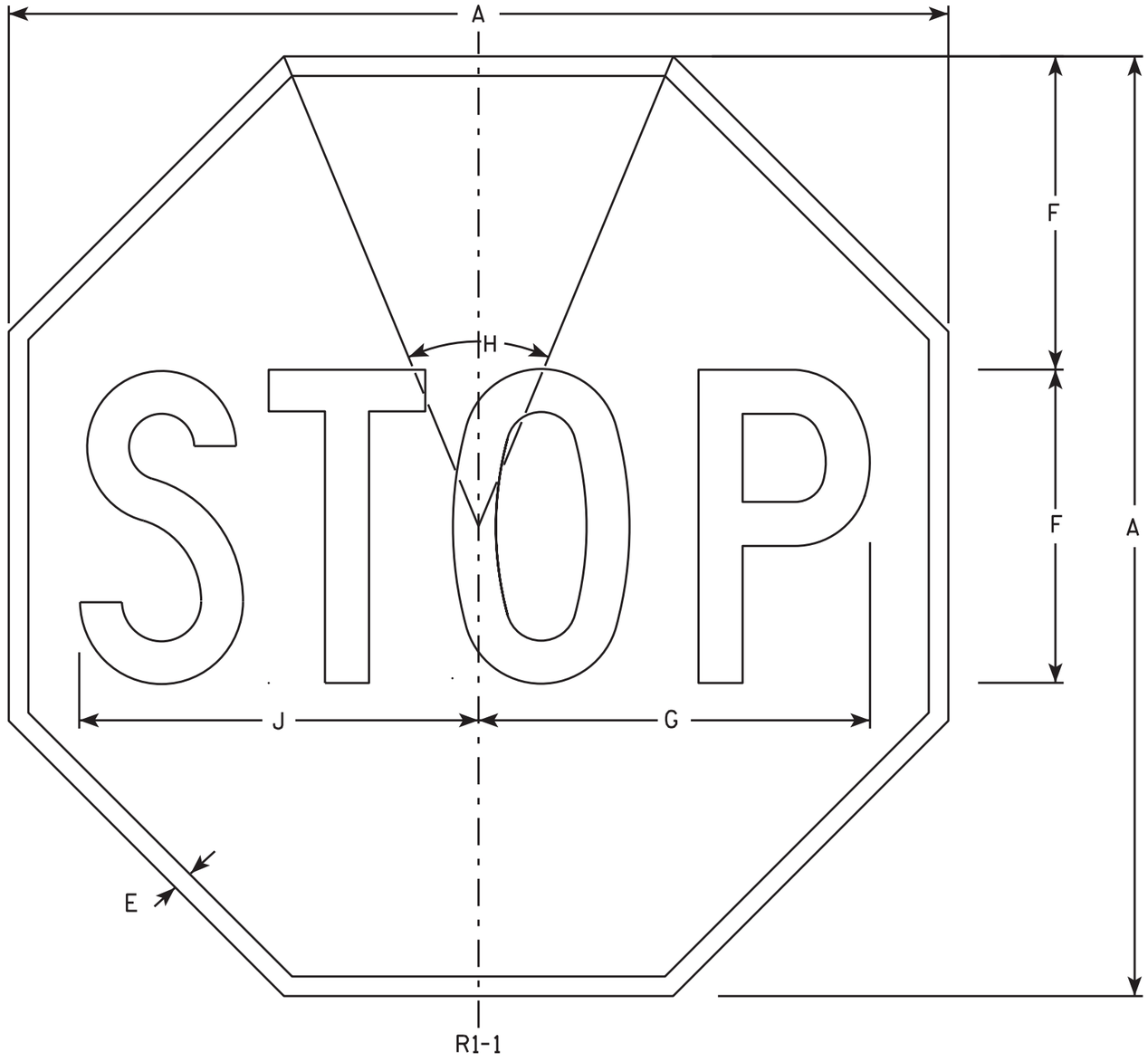
4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 82	E



NOTES

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

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

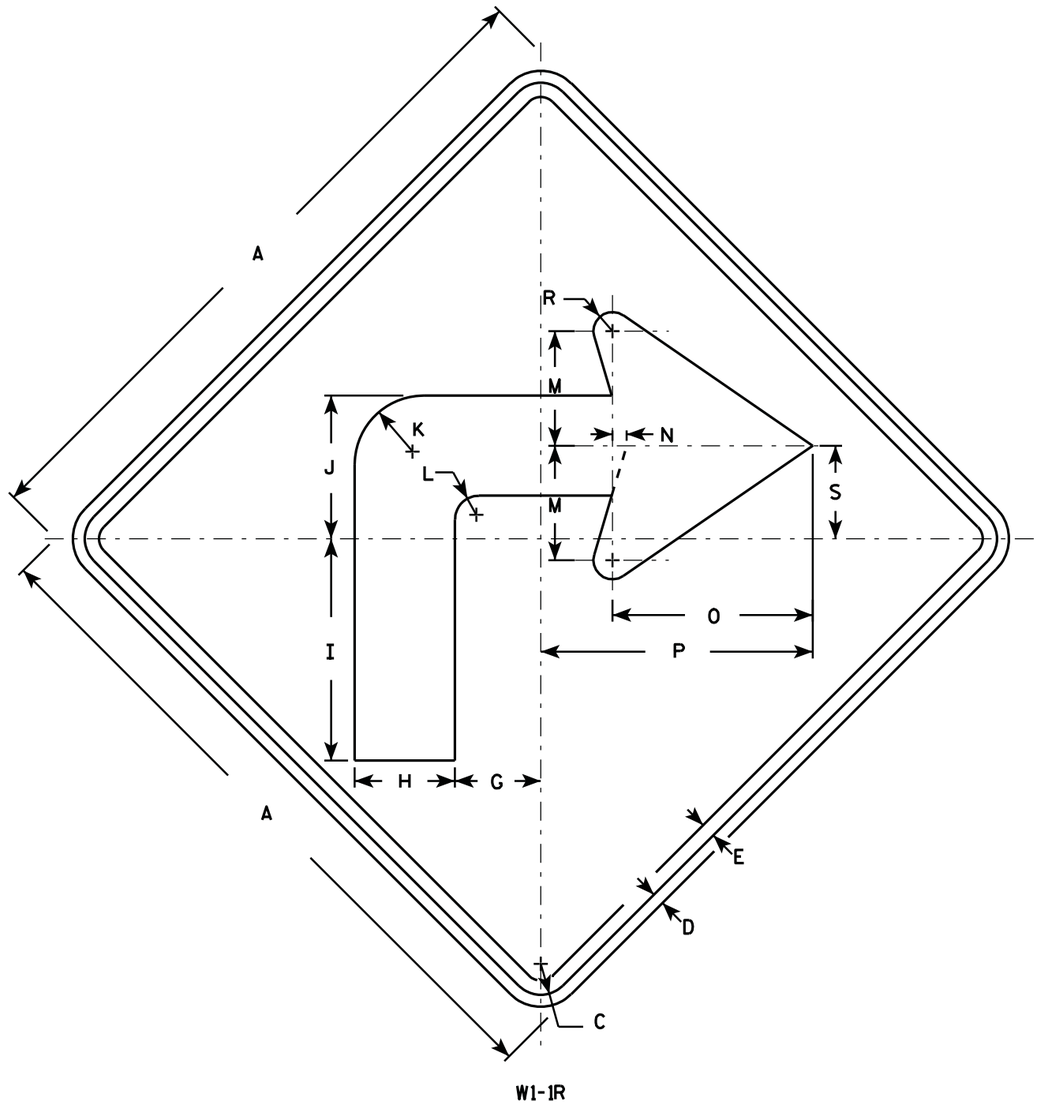
STANDARD SIGN
R1-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/12/15 PLATE NO. R1-1.12

PROJECT NO:	HWY:	COUNTY:		SHEET NO. 83	E



W1-1R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W1-1L is the same as W1-1R except the arrow is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2		3	3 1/2	7 3/4	5	2 1/2	7/8	4	1/2	7	9 1/2		5/8	3 1/4								4.0
2S	36		1 5/8	5/8	3/4		4 1/2	5 1/4	11 5/8	7 1/2	3 5/8	1 1/4	6	3/4	10 1/2	14 1/4		1	4 7/8								9.0
2M	36		1 5/8	5/8	3/4		4 1/2	5 1/4	11 5/8	7 1/2	3 5/8	1 1/4	6	3/4	10 1/2	14 1/4		1	4 7/8								9.0
3	36		1 5/8	5/8	3/4		4 1/2	5 1/4	11 5/8	7 1/2	3 5/8	1 1/4	6	3/4	10 1/2	14 1/4		1	4 7/8								9.0
4	48		2 1/4	3/4	1		6	7	15 1/2	10	4 7/8	1 5/8	8	1	14	19		1 1/4	6 1/2								16.0
5	48		2 1/4	3/4	1		6	7	15 1/2	10	4 7/8	1 5/8	8	1	14	19		1 1/4	6 1/2								16.0

STANDARD SIGN
W1-1

WISCONSIN DEPT OF TRANSPORTATION

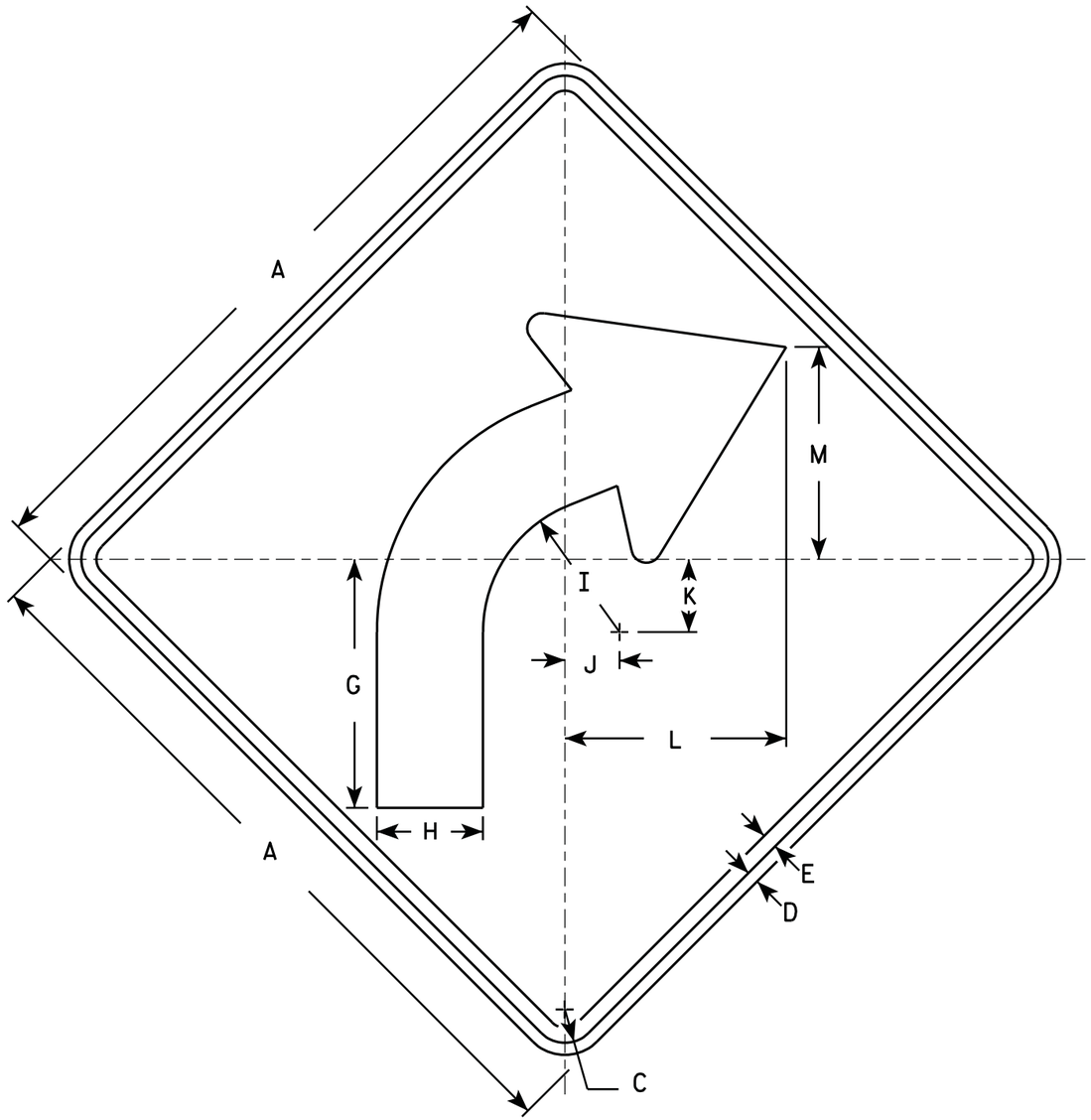
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/15/12 PLATE NO. W1-1.11

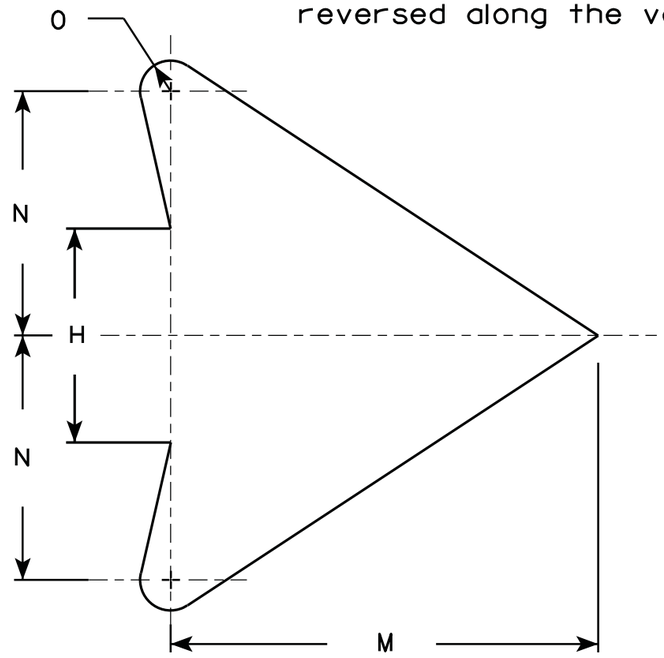
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 84 | E

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W1-2L is the same as W1-2R except the arrow is reversed along the vertical centerline.



W1-2R



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2		8 1/4	3 1/2	4 1/2	1 3/4	2 3/8	7 1/4	7	4	1/2												4.0
2S	30		1 3/8	1/2	5/8		10 1/4	4 3/8	5 5/8	2 1/4	3	9 1/8	8 3/4	5	5/8												6.25
2M	36		1 5/8	5/8	3/4		12 3/8	5 1/4	6 3/4	2 5/8	3 1/2	10 7/8	10 1/2	6	3/4												9.0
3	36		1 5/8	5/8	3/4		12 3/8	5 1/4	6 3/4	2 5/8	3 1/2	10 7/8	10 1/2	6	3/4												9.0
4	36		1 5/8	5/8	3/4		12 3/8	5 1/4	6 3/4	2 5/8	3 1/2	10 7/8	10 1/2	6	3/4												9.0
5	48		2 1/4	3/4	1		16 1/2	7	9	3 1/2	4 5/8	14 1/2	14	8	1												16.0

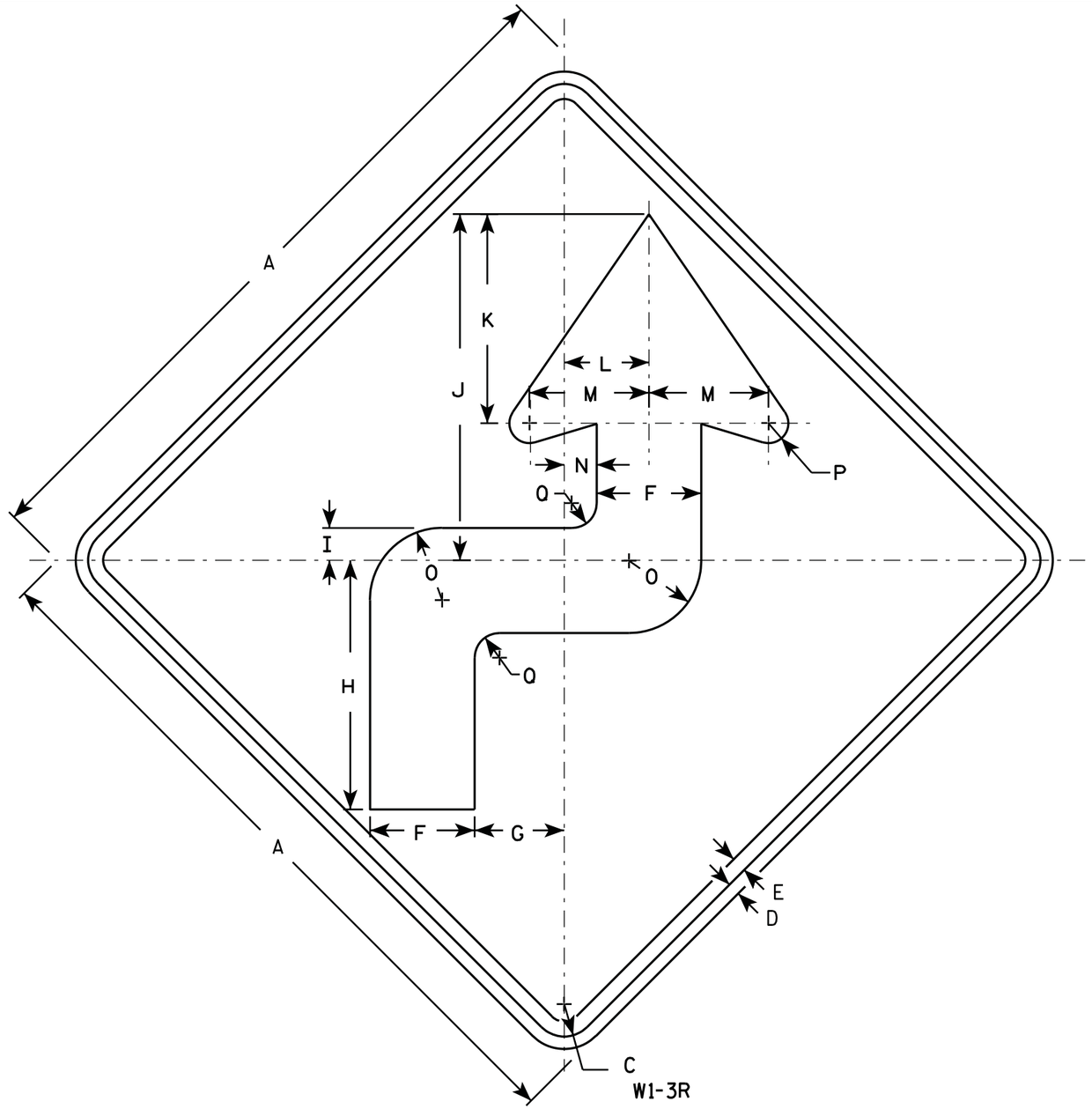
STANDARD SIGN
W1-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 5/15/12 PLATE NO. W1-2.10

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 85	E



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W1-3L is the same as W1-3R except the arrow is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	3 1/2	3	8 3/8	1 1/8	11 5/8	7	2 3/4	4	1 1/8	2 1/2	5/8	7/8										4.0
2S	36		1 5/8	5/8	3/4	5 1/4	4 1/2	12 1/2	1 5/8	17 3/8	10 1/2	4 1/4	6	1 5/8	3 5/8	1	1 1/4										9.0
2M	36		1 5/8	5/8	3/4	5 1/4	4 1/2	12 1/2	1 5/8	17 3/8	10 1/2	4 1/4	6	1 5/8	3 5/8	1	1 1/4										9.0
3	36		1 5/8	5/8	3/4	5 1/4	4 1/2	12 1/2	1 5/8	17 3/8	10 1/2	4 1/4	6	1 5/8	3 5/8	1	1 1/4										9.0
4	36		1 5/8	5/8	3/4	5 1/4	6	12 1/2	1 5/8	17 3/8	10 1/2	4 1/4	6	1 5/8	3 5/8	1	1 1/4										9.0
5	48		2 1/4	3/4	1	7	6	16 5/8	2 1/4	23 1/4	14	5 5/8	8	2 1/8	4 7/8	1 1/4	1 5/8										16.0

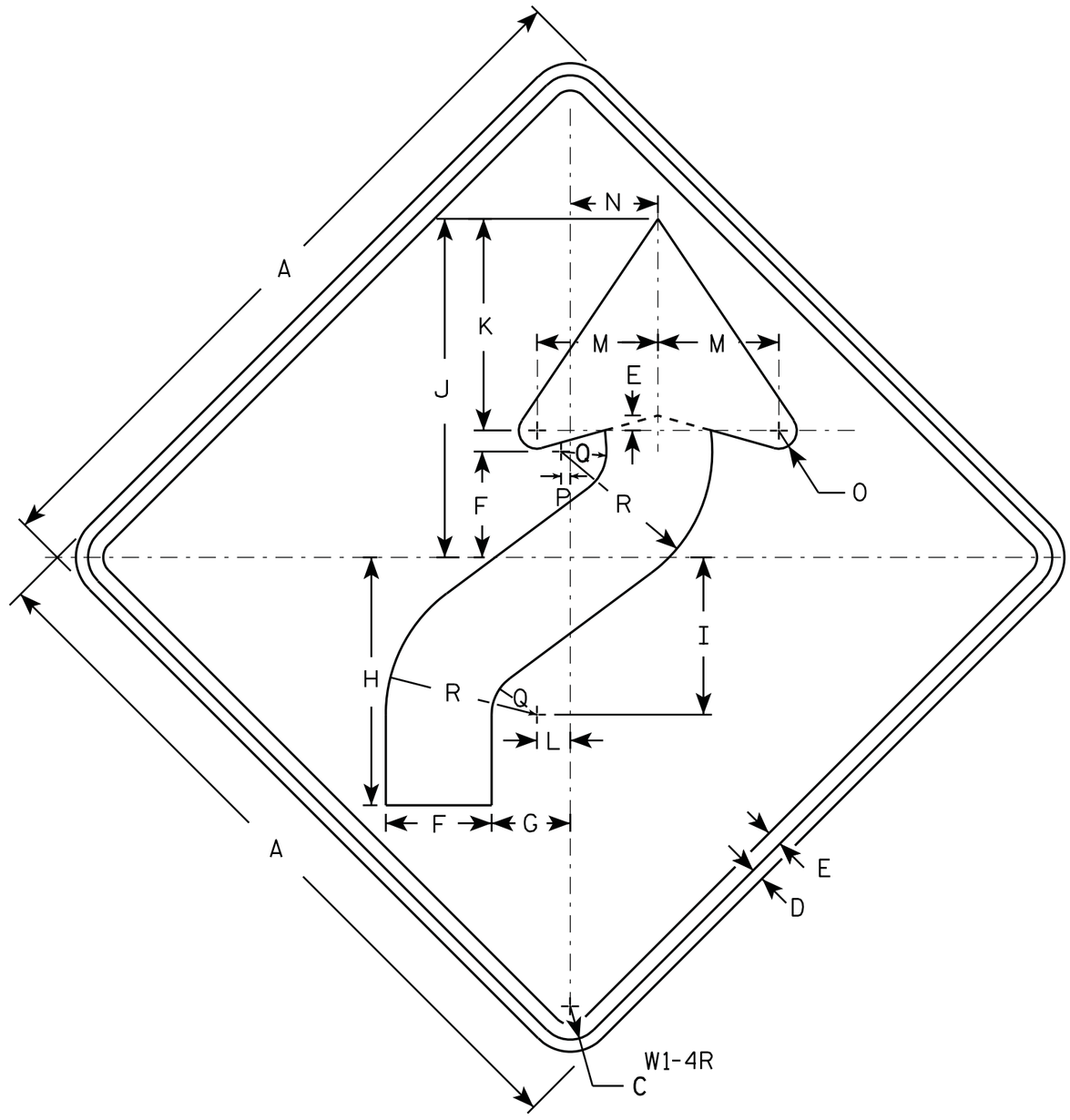
STANDARD SIGN
W1-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/17/12 PLATE NO. W1-3.8

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 86 | E



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W1-4L is the same as W1-4R except the arrow is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	3 1/2	2 5/8	8 1/4	5 1/4	11 1/4	7	1 1/8	4	3	5/8	1/4	1 1/2	5									4.0
2S	30		1 3/8	1/2	5/8	4 3/8	3 1/4	10 1/4	6 1/2	14	8 3/4	1 3/8	5	3 5/8	3/4	3/8	1 7/8	6 1/4									6.25
2M	36		1 5/8	5/8	3/4	5 1/4	4	12 3/8	7 7/8	16 7/8	10 1/2	1 5/8	6	4 1/2	1	1/2	2 1/4	7 1/2									9.0
3	36		1 5/8	5/8	3/4	5 1/4	4	12 3/8	7 7/8	16 7/8	10 1/2	1 5/8	6	4 1/2	1	1/2	2 1/4	7 1/2									9.0
4	36		1 5/8	5/8	3/4	5 1/4	4	12 3/8	7 7/8	16 7/8	10 1/2	1 5/8	6	4 1/2	1	1/2	2 1/4	7 1/2									9.0
5	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0

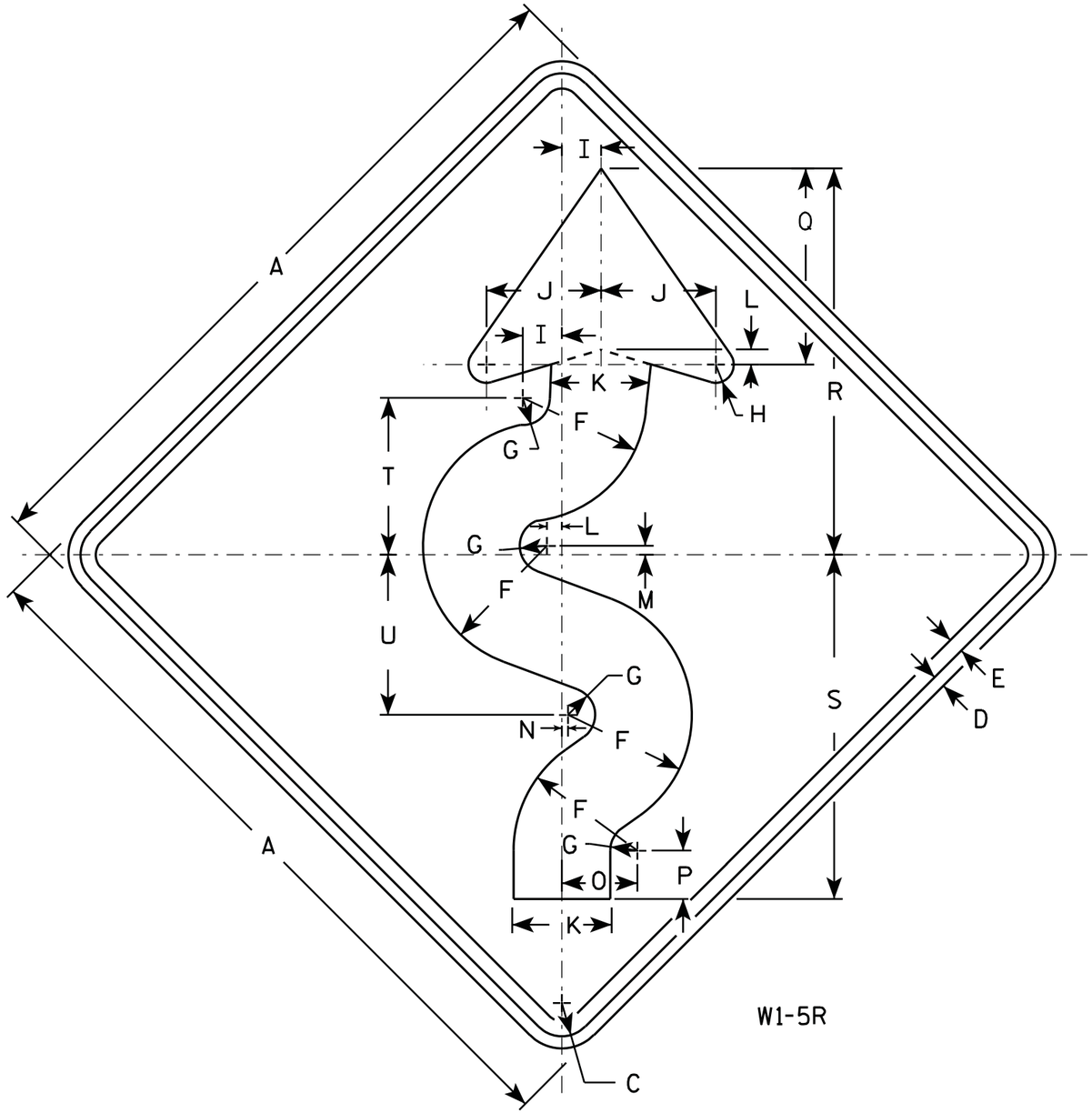
STANDARD SIGN
W1-4

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/17/12 PLATE NO. W1-4.11

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 87 | E



W1-5R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W1-5L is the same as W1-5R except the arrow is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	4 1/8	7/8	5/8	1 1/4	3 3/4	3 1/4	1/2	1/4	1/8	2 1/2	1 5/8	6 1/2	12 3/4	11 3/8	5 1/4	5 1/4						4.0
2S	30		1 3/8	1/2	5/8	5 1/8	1 1/8	3/4	1 5/8	4 3/4	4 1/8	5/8	3/8	1/4	3 1/8	2	8 1/8	16	14 1/4	6 1/2	6 5/8						6.25
2M	36		1 5/8	5/8	3/4	6 1/4	1 3/8	1	1 7/8	5 5/8	4 7/8	3/4	3/8	1/4	3 3/4	2 7/8	9 3/4	19 1/8	17 1/8	7 3/4	7 7/8						9.0
3	36		1 5/8	5/8	3/4	6 1/4	1 3/8	1	1 7/8	5 5/8	4 7/8	3/4	3/8	1/4	3 3/4	2 7/8	9 3/4	19 1/8	17 1/8	7 3/4	7 7/8						9.0
4	36		1 5/8	5/8	3/4	6 1/4	1 3/8	1	1 7/8	5 5/8	4 7/8	3/4	3/8	1/4	3 3/4	2 7/8	9 3/4	19 1/8	17 1/8	7 3/4	7 7/8						9.0
5	48		2 1/4	3/4	1	8 1/4	1 3/4	1 1/4	2 1/2	7 1/2	6 1/2	1	1/2	3/8	5	3 1/4	13	25 1/2	22 3/4	10 3/8	10 1/2						16.0

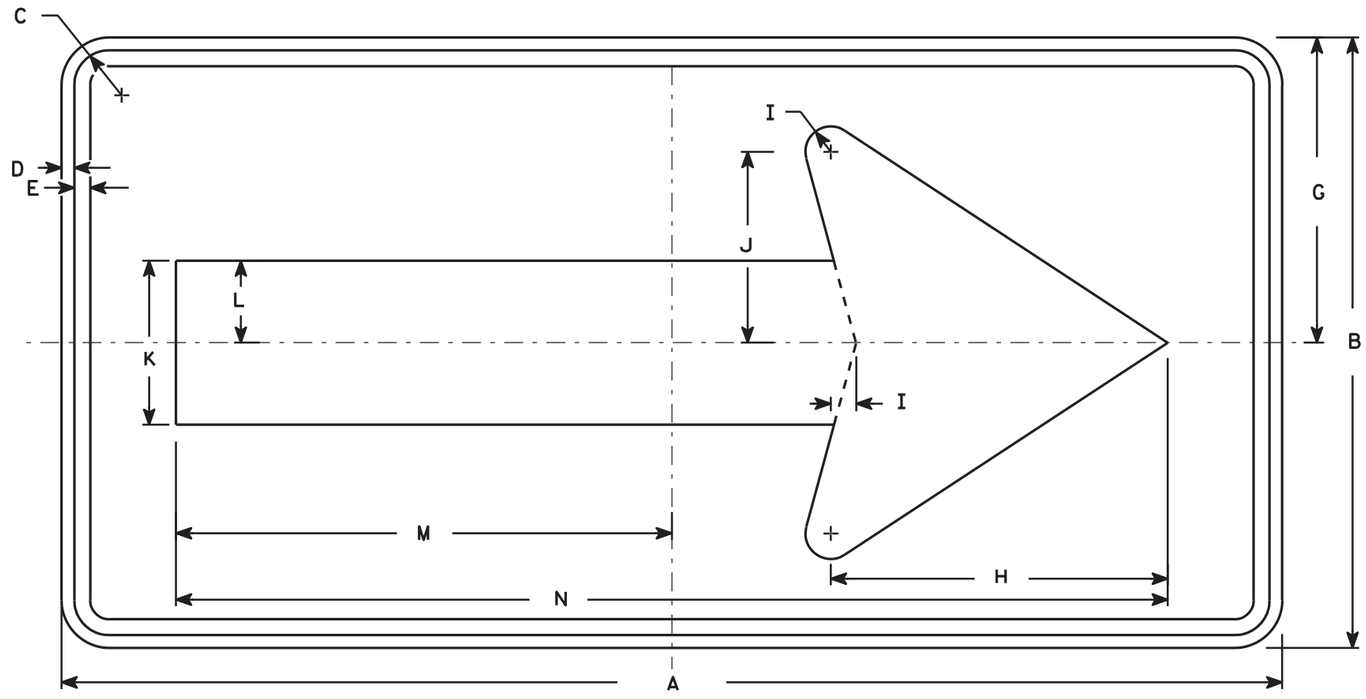
STANDARD SIGN
W1-5

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 5/18/12 PLATE NO. W1-5.8

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 88 | E



W1-6

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	18	1 1/8	3/8	3/8		9	10	3/4	5 5/8	4 3/4	2 3/8	14 5/8	29 1/4													4.5
2S	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
2M	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
3	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
4	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
5	96	48	2 1/4	3/4	1		24	26 1/2	2	15	13	6 1/2	39	78													32.0

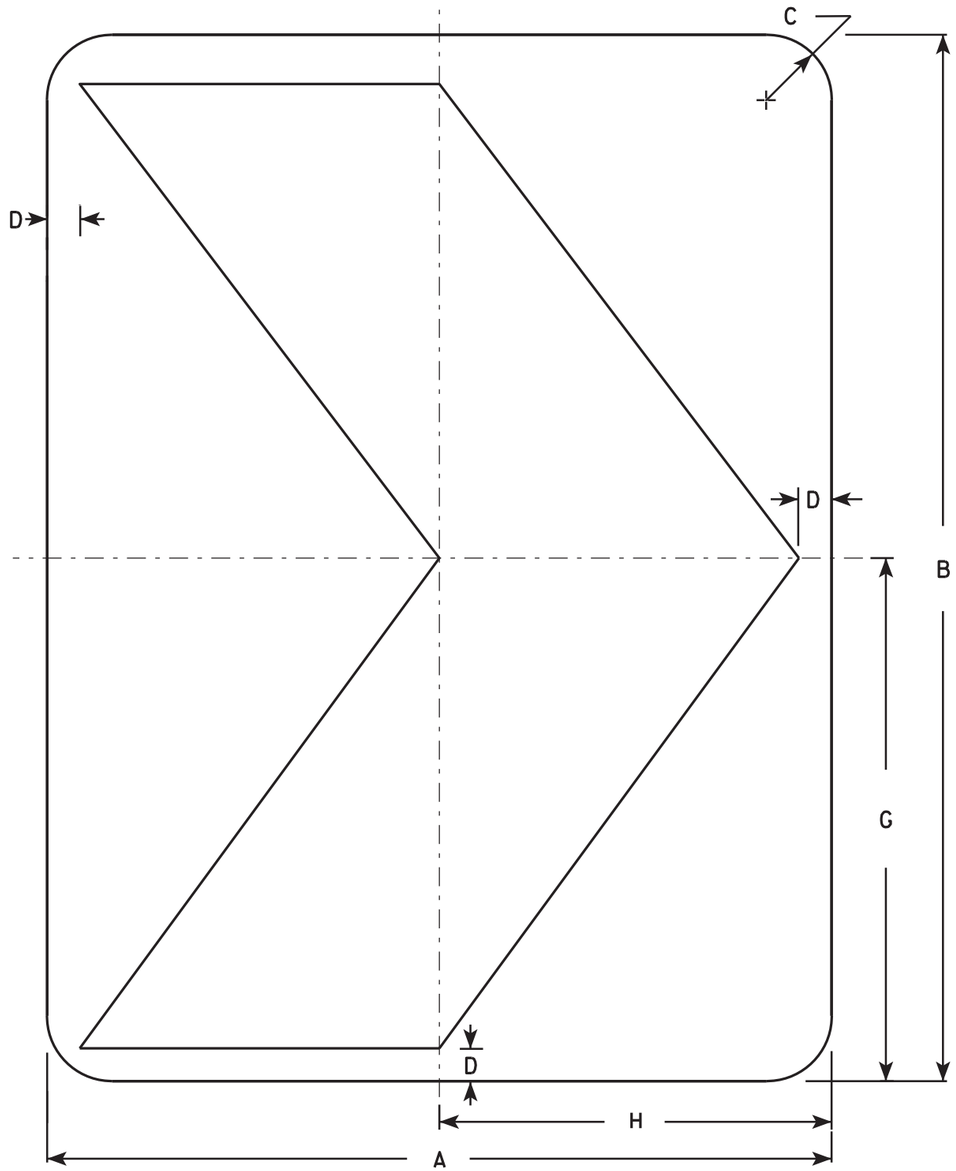
STANDARD SIGN
W1-6

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W1-6.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 89



W1-8

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	12	18	1 ½	½			9	6																			1.5
2S	18	24	1 ½	¾			12	9																			3.0
2M	18	24	1 ½	¾			12	9																			3.0
3	24	30	1 ½	1			15	12																			5.0
4	30	36	1 ⅞	1 ¼			18	15																			7.5
5	36	48	2 ¼	1 ½			24	18																			12.0

STANDARD SIGN
W1-8

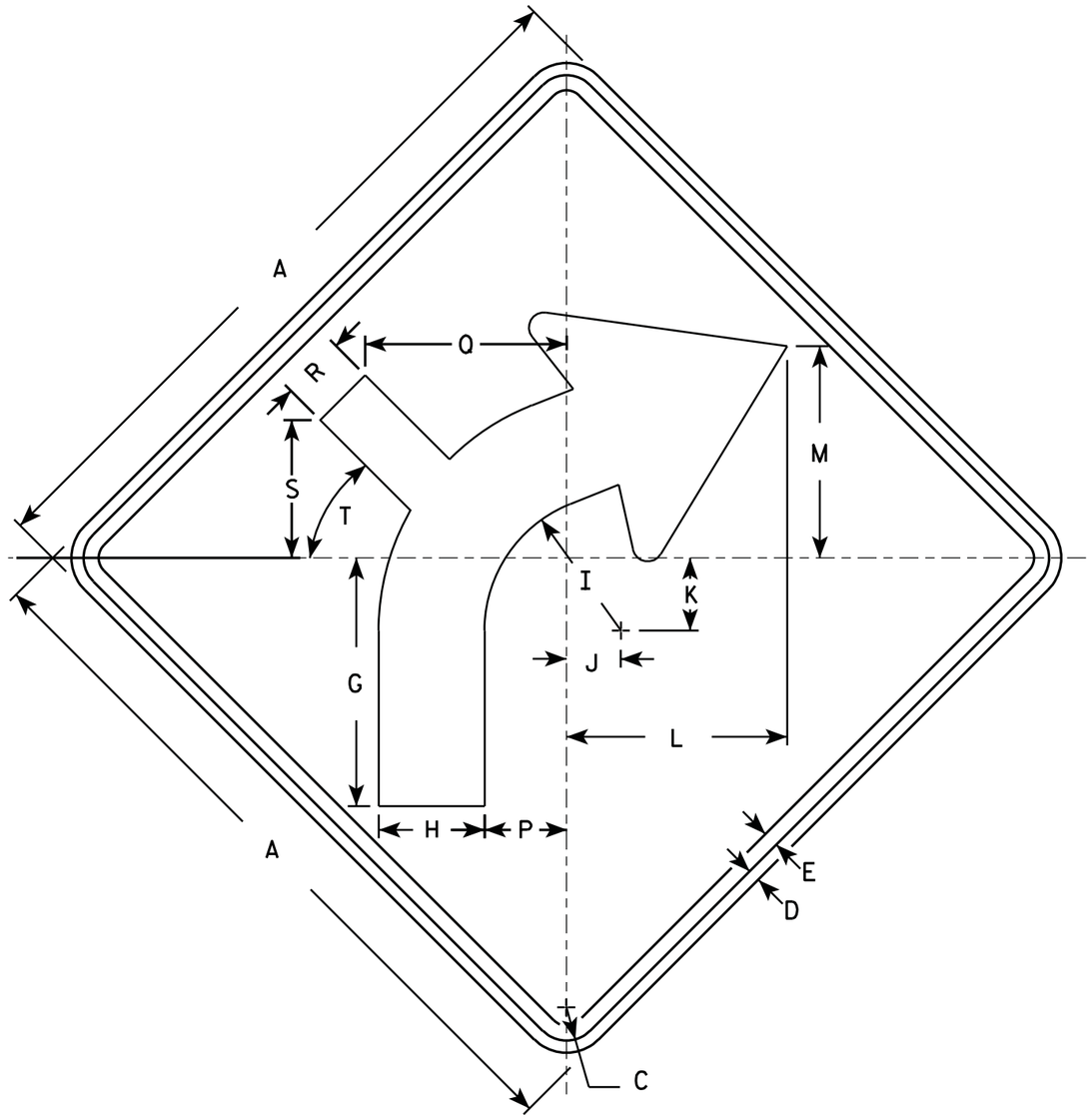
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W1-8.6

PROJECT NO:

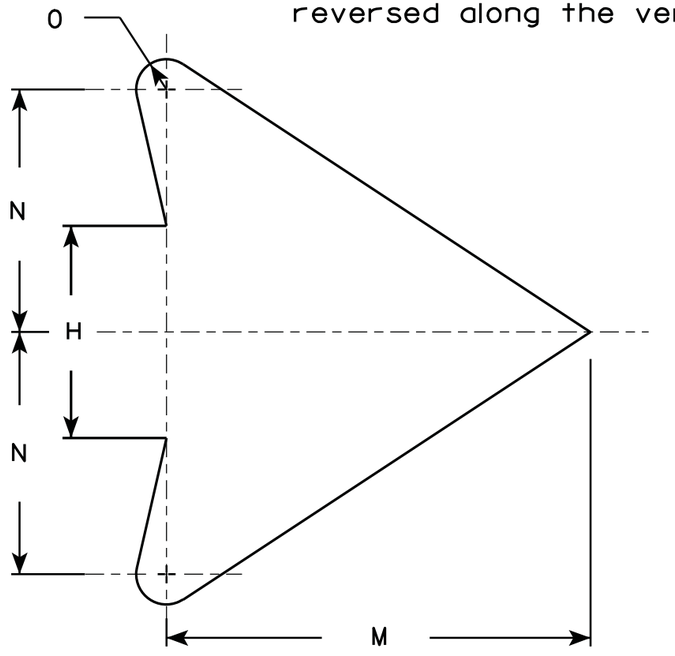
SHEET NO: 90 E



W1-10R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W1-10L is the same as W1-10R except the arrow is reversed along the vertical centerline.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2		8 1/4	3 1/2	4 1/2	1 3/4	2 3/8	7 1/4	7	4	1/2	2 5/8	6 5/8	2 1/8	4 1/2	45°							4.0
2S	30		1 3/8	1/2	5/8		10 1/4	4 3/8	5 5/8	2 1/4	3	9 1/8	8 3/4	5	5/8	3 3/8	8 3/8	2 5/8	5 3/4	45°							6.25
2M	36		1 5/8	5/8	3/4		12 3/8	5 1/4	6 3/4	2 5/8	3 1/2	10 7/8	10 1/2	6	3/4	4	10	3 1/4	6 7/8	45°							9.0
3	36		1 5/8	5/8	3/4		12 3/8	5 1/4	6 3/4	2 5/8	3 1/2	10 7/8	10 1/2	6	3/4	4	10	3 1/4	6 7/8	45°							9.0
4	36		1 5/8	5/8	3/4		12 3/8	5 1/4	6 3/4	2 5/8	3 1/2	10 7/8	10 1/2	6	3/4	4	10	3 1/4	6 7/8	45°							9.0
5	48		2 1/4	3/4	1		16 1/2	7	9	3 1/2	4 5/8	14 1/2	14	8	1	5 3/8	13 1/4	4 1/4	9 1/8	45°							16.0

STANDARD SIGN
W1-10

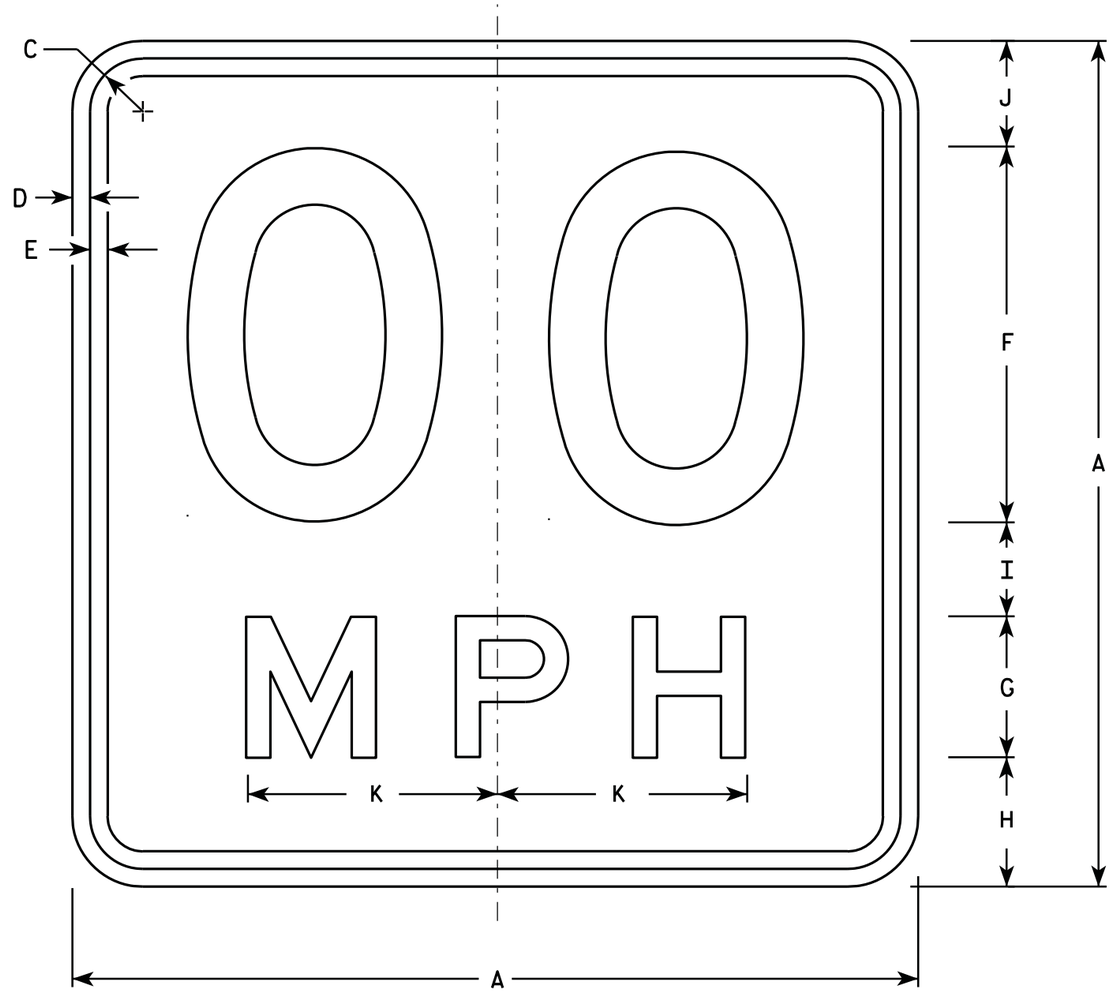
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/17/12 PLATE NO. W1-10.3

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 91 | E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W110.DGN PLOT DATE : 17-MAY-2012 10:14 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 6.251989:1.000000
WISDOT/CADDS SHEET 42



W13-1

* For 30" x 30" Warning Signs, use 18" x 18" W13-1 signs.
For 36" x 36" Warning Signs, use 24" x 24" W13-1 signs.

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Message Series - See Note 6
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically space about centerline to achieve proper balance.
6. Line 1 is Series D
   Line 2 is Series E

	SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
	1	18		1 1/8	3/8	3/8	8	3	2 3/4	2	2 1/4	5 3/8																2.25
*	2S	18		1 1/8	3/8	3/8	8	3	2 3/4	2	2 1/4	5 3/8																2.25
*	2M	18		1 1/8	3/8	3/8	8	3	2 3/4	2	2 1/4	5 3/8																2.25
	3	24		1 1/8	3/8	1/2	10	4	4	2 3/4	3 1/4	6 5/8																4.00
	4	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
	5	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00

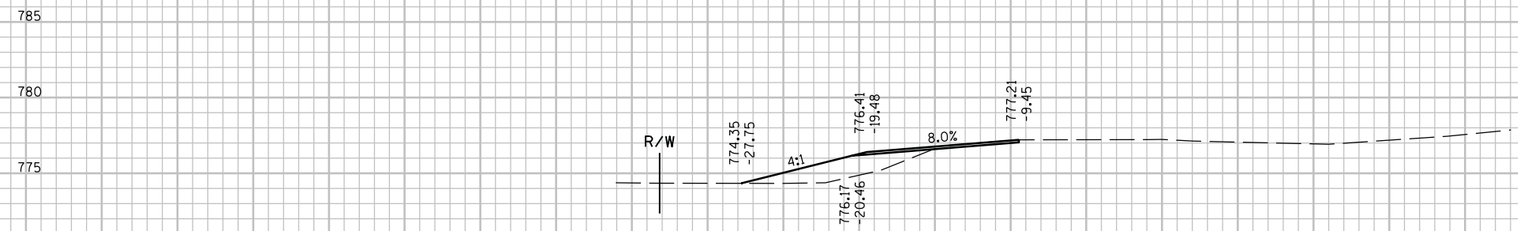
STANDARD SIGN
W13-1

WISCONSIN DEPT OF TRANSPORTATION

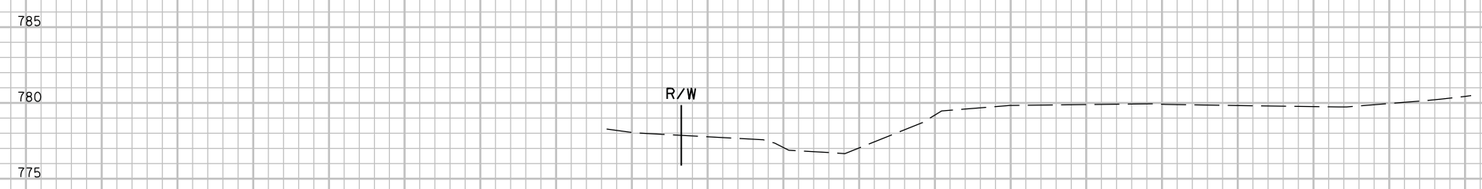
APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 5/31/12 PLATE NO. W13-1.16

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 92 | E



8+90



8+50

8+01

5 FT

5 FT

9

9

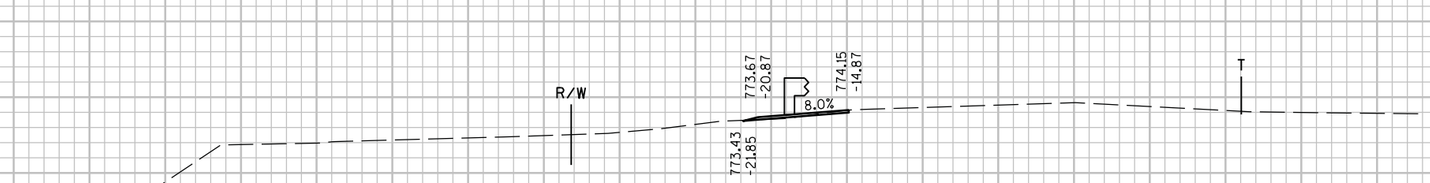
PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	CROSS SECTIONS: 370TH AVE	SHEET 93	E

FILE NAME : P:\PIERC\15002 - CTH O\cad\XS_01.dgn

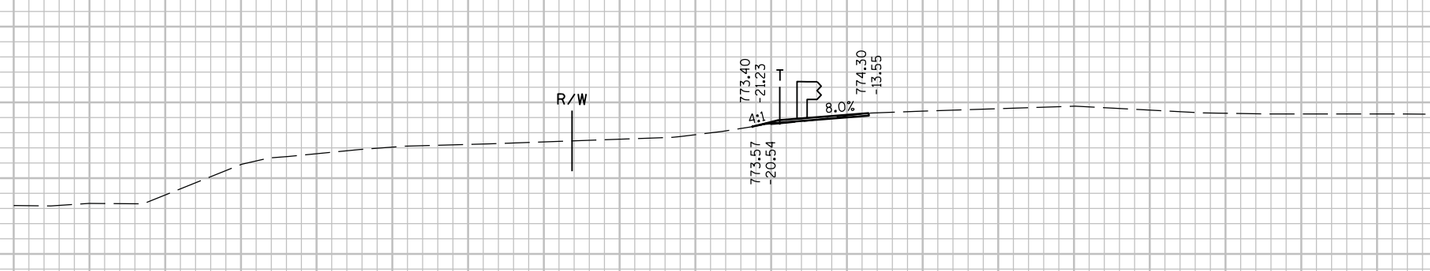
PLOT DATE : 10/26/2016

PLOT BY : $$...plotuser...$$

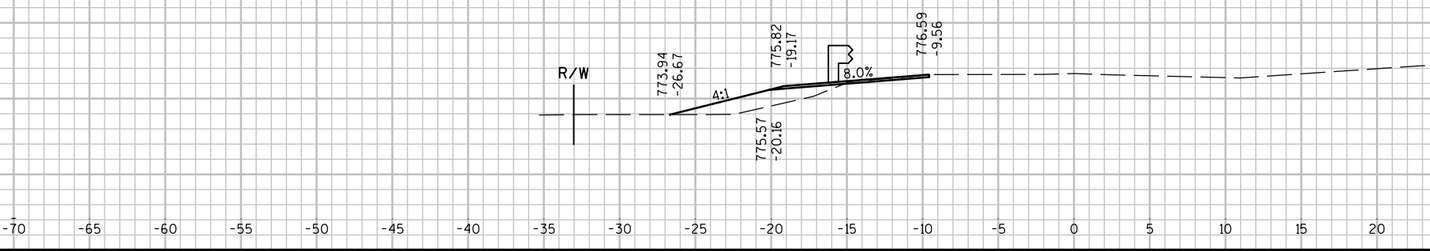
WISDOT/CADDS SHEET 21

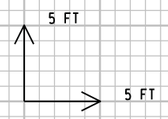


9+50



9+45





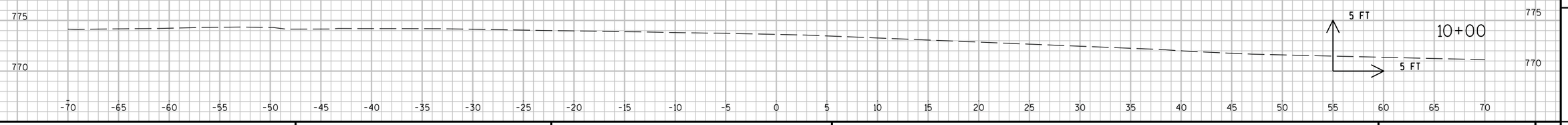
9+00

9 9

PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	CROSS SECTIONS: 370TH AVE	SHEET 94	E

FILE NAME : P:\PIERC\15002 - CTH O\cad\XS_01.dgn PLOT DATE : 10/26/2016 PLOT BY : $$...plotuser...$$

WISDOT/CADDS SHEET 21



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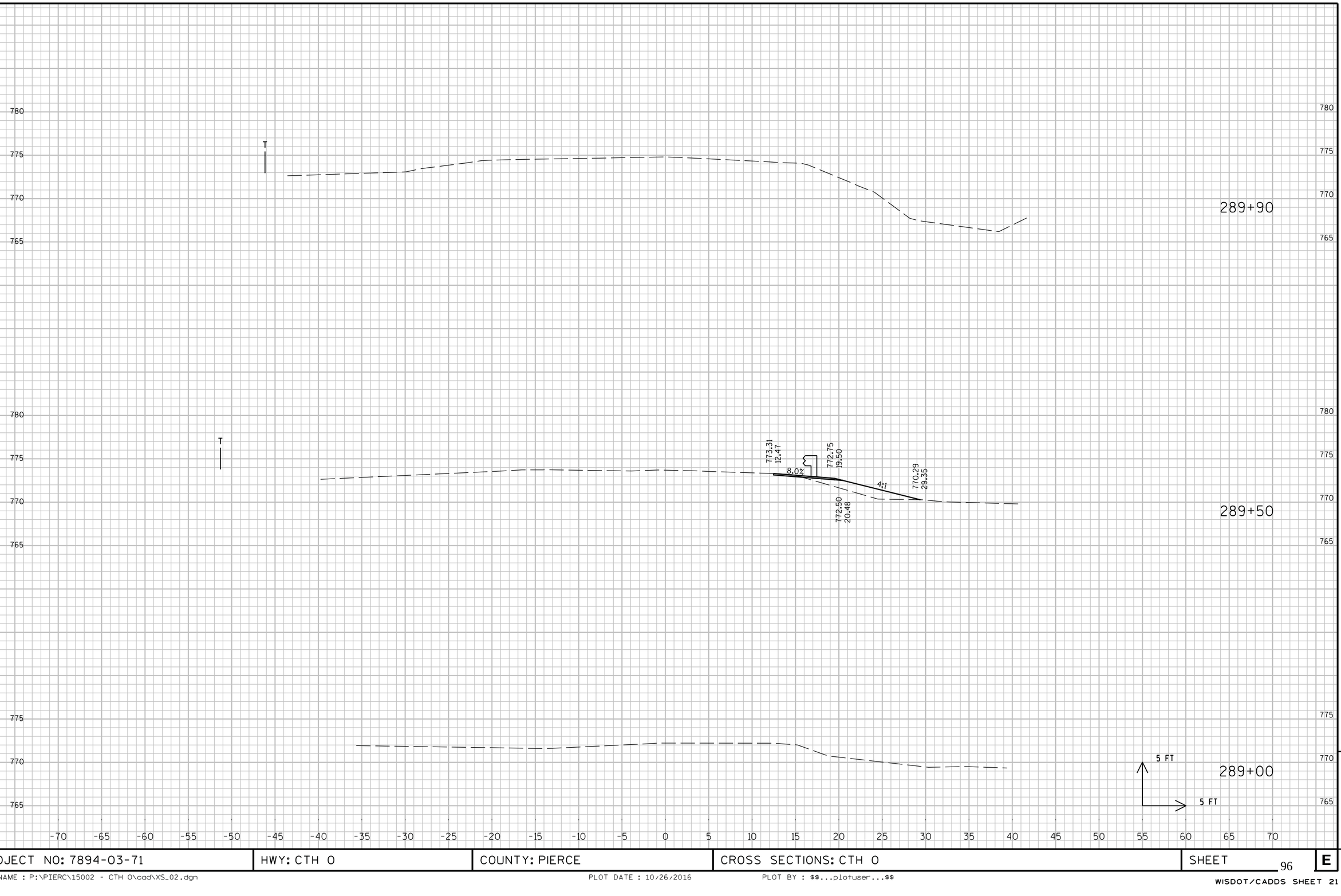
PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	CROSS SECTIONS: 370TH AVE	SHEET 95	E



9

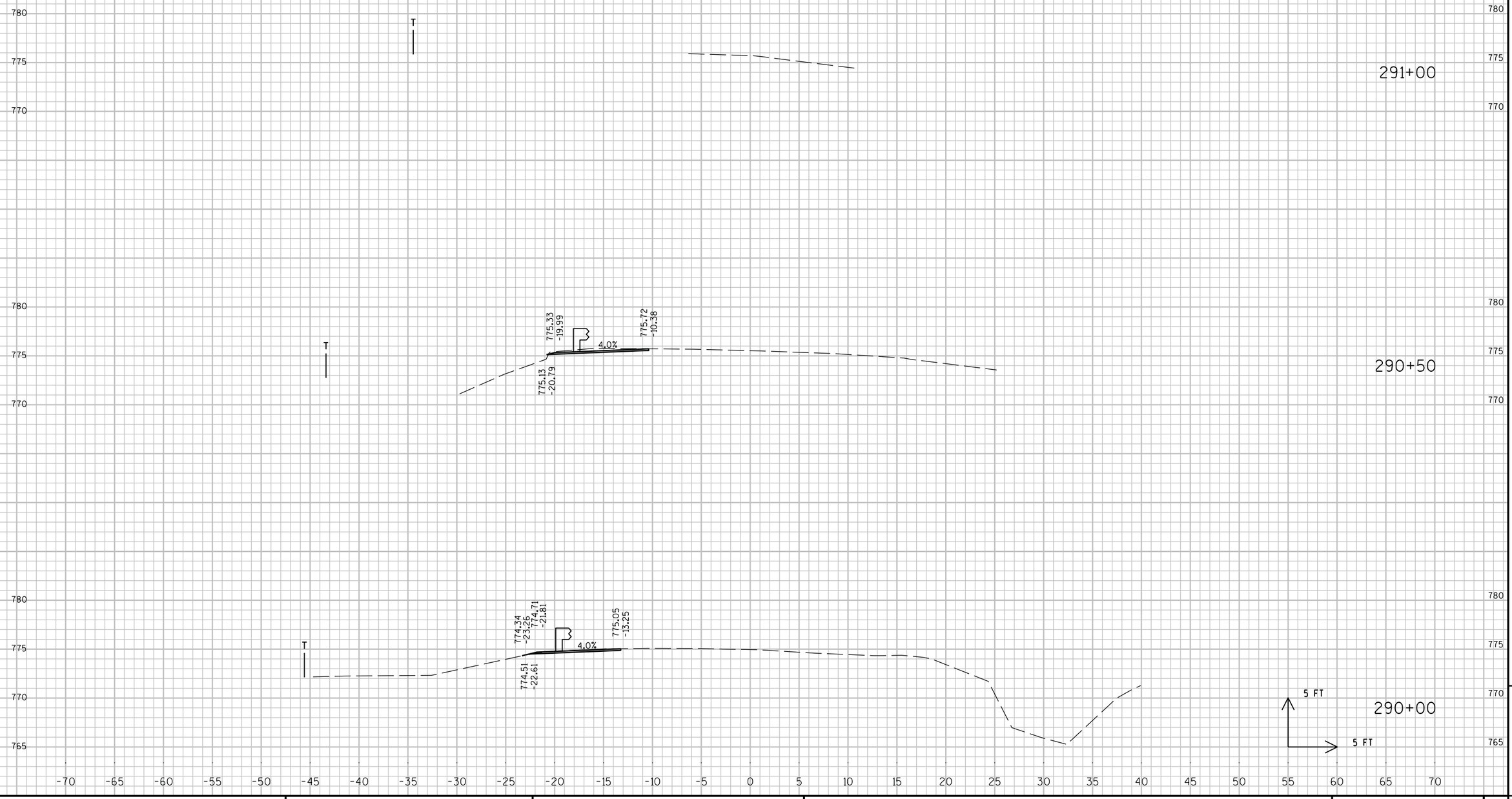
PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	CROSS SECTIONS: CTH O	SHEET 96	E

FILE NAME : P:\PIERC\15002 - CTH O\cad\XS_02.dgn

PLOT DATE : 10/26/2016

PLOT BY : $$...plotuser...$$

WISDOT/CADDS SHEET 21



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9

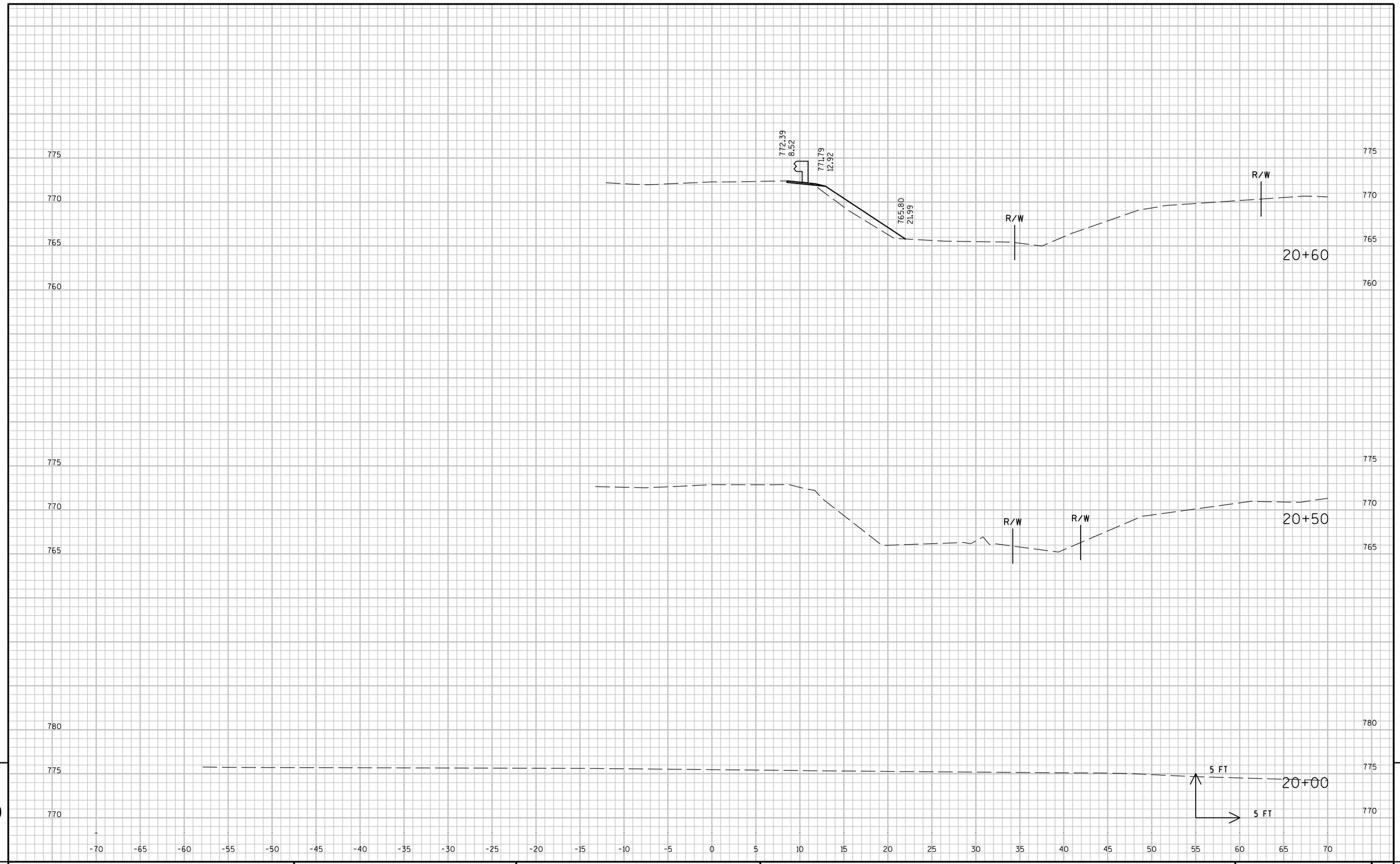
PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	CROSS SECTIONS: CTH O	SHEET 97	E

FILE NAME : P:\PIERC\15002 - CTH O\cad\XS_02.dgn

PLOT DATE : 10/26/2016

PLOT BY : $$...plotuser...$$

WISDOT/CADDS SHEET 21



9

PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	CROSS SECTIONS: 372ND AVE	SHEET 98	E

9

FILE NAME : P:\PIERC\15002 - CTH O\cad\XS_03.dgn PLOT DATE : 10/26/2016 PLOT BY : $$...plotuser...$$

WISDOT/CADDS SHEET 21

9

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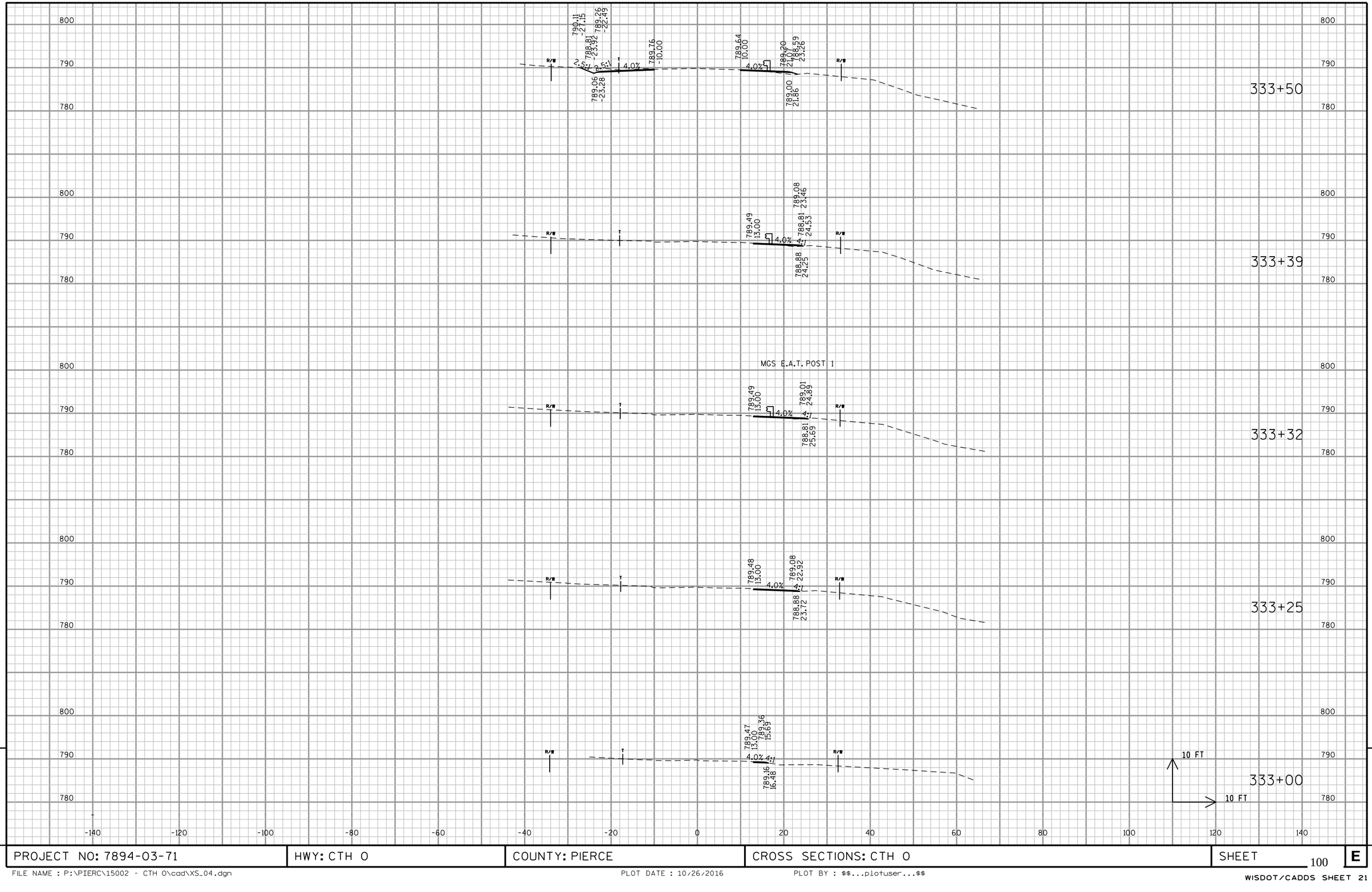
PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	CROSS SECTIONS: 372ND AVE	SHEET 99	E

FILE NAME : P:\PIERC\15002 - CTH O\cad\XS_03.dgn

PLOT DATE : 10/26/2016

PLOT BY : $$...plotuser...$$

WISDOT/CADDS SHEET 21



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PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	CROSS SECTIONS: CTH O	SHEET 100	E

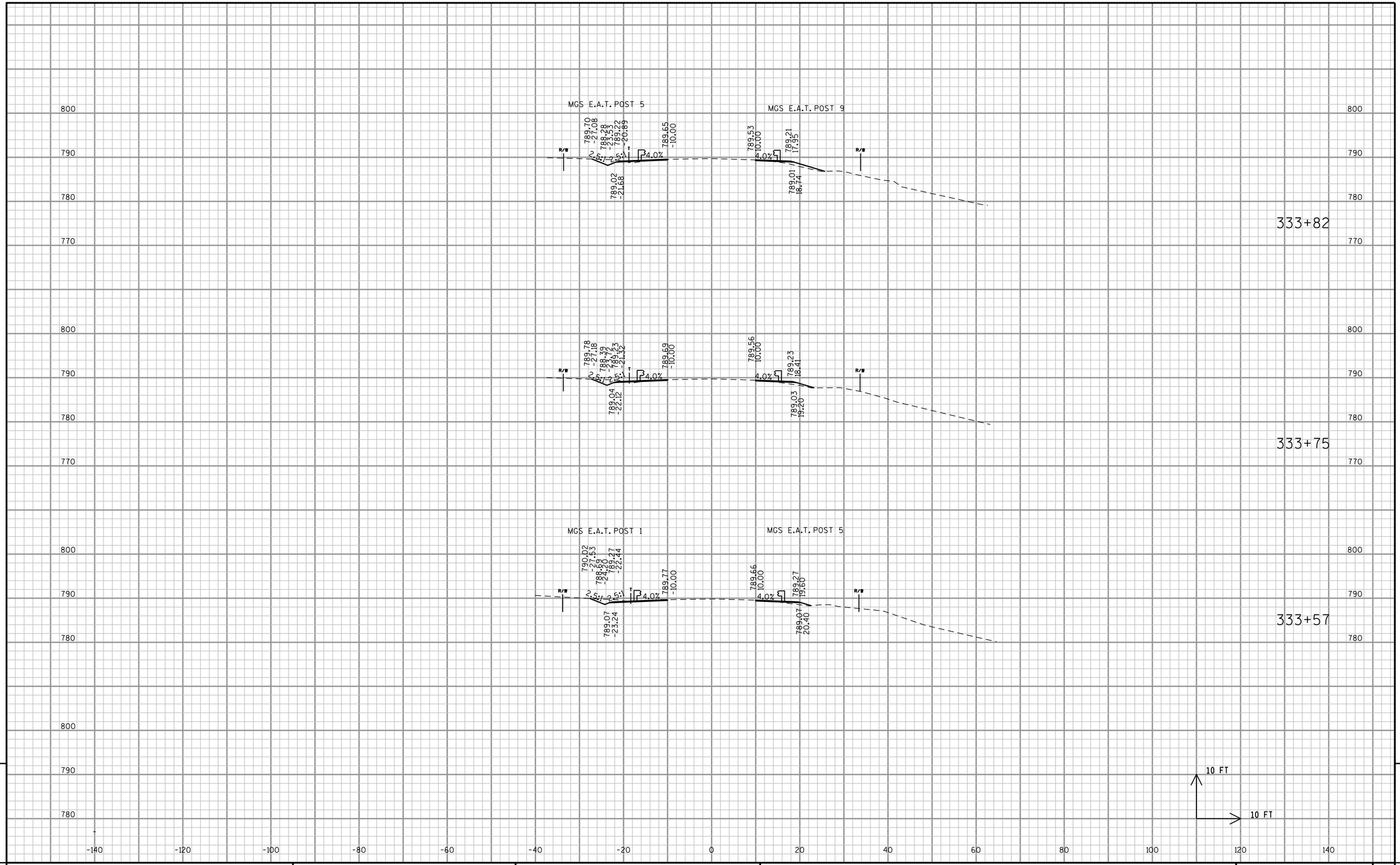
9

FILE NAME : P:\PIERC\15002 - CTH O\cad\XS_04.dgn

PLOT DATE : 10/26/2016

PLOT BY : $$...plotuser...$$

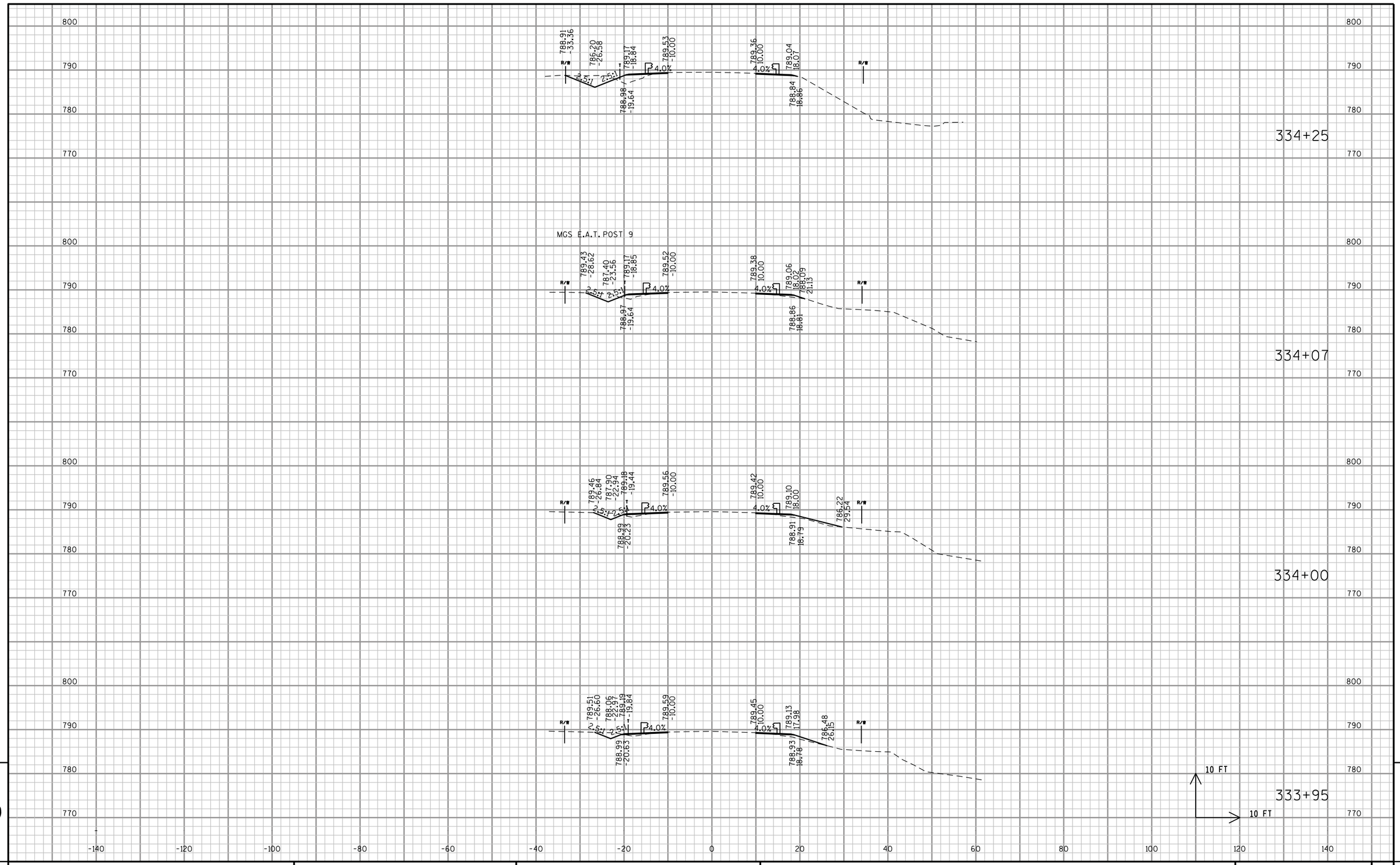
WISDOT/CADDS SHEET 21



PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	CROSS SECTIONS: CTH O	SHEET 101	E

FILE NAME : P:\PIERC\15002 - CTH O\cad\XS_04.dgn PLOT DATE : 10/26/2016 PLOT BY : $$...plotuser...$$

WISDOT/CADDS SHEET 21



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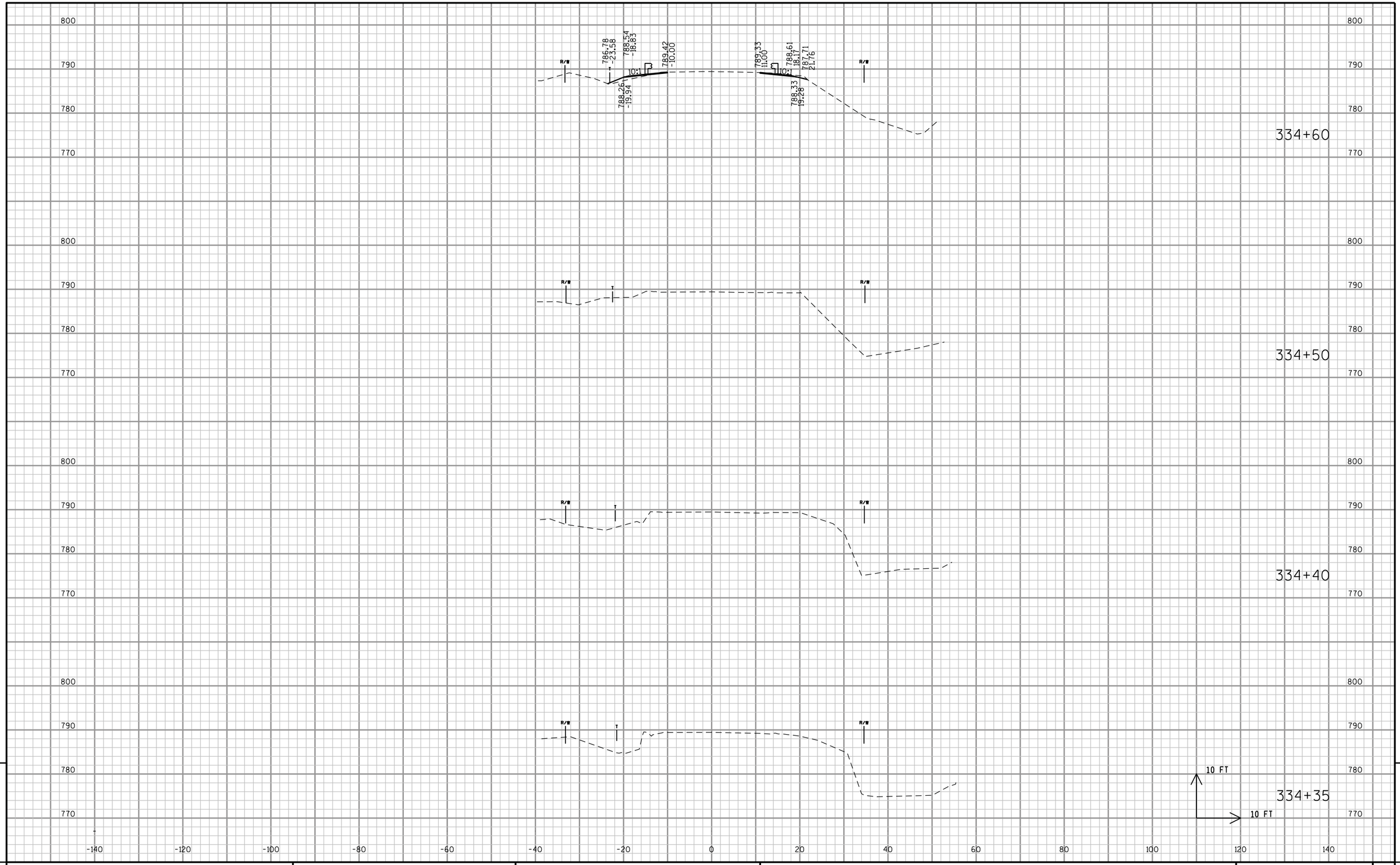
PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	CROSS SECTIONS: CTH O	SHEET 102	E



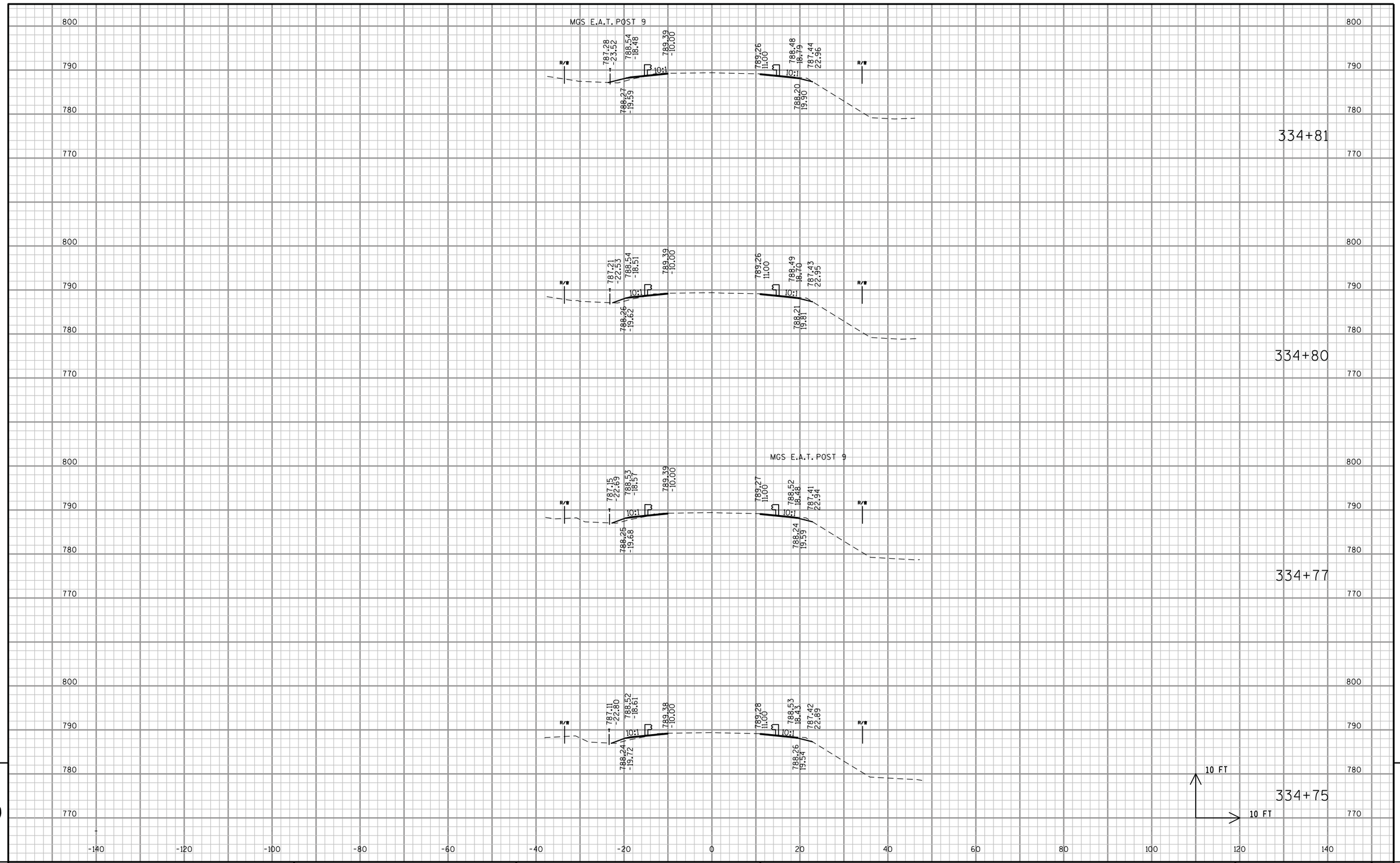
9

9

PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	CROSS SECTIONS: CTH O	SHEET 103	E

FILE NAME : P:\PIERC\15002 - CTH O\cad\XS_04.dgn PLOT DATE : 10/26/2016 PLOT BY : $$...plotuser...$$

WISDOT/CADDS SHEET 21



9

9

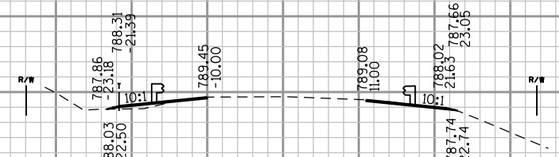
PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	CROSS SECTIONS: CTH O	SHEET 104	E

FILE NAME : P:\PIERC\15002 - CTH O\cad\XS_04.dgn PLOT DATE : 10/26/2016 PLOT BY : $$...plotuser...$$

WISDOT/CADDS SHEET 21

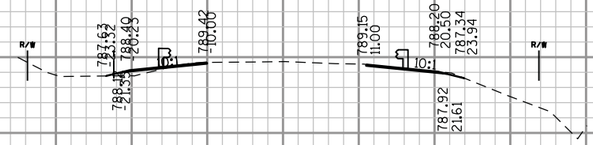
MGS E.A.T. POST 1

335+27



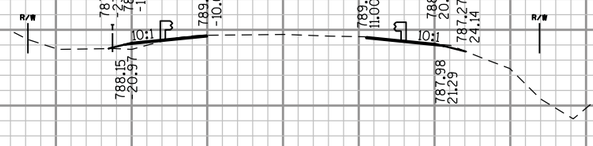
335+25

MGS E.A.T. POST 5

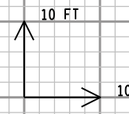


335+05

MGS E.A.T. POST 5



335+00



9

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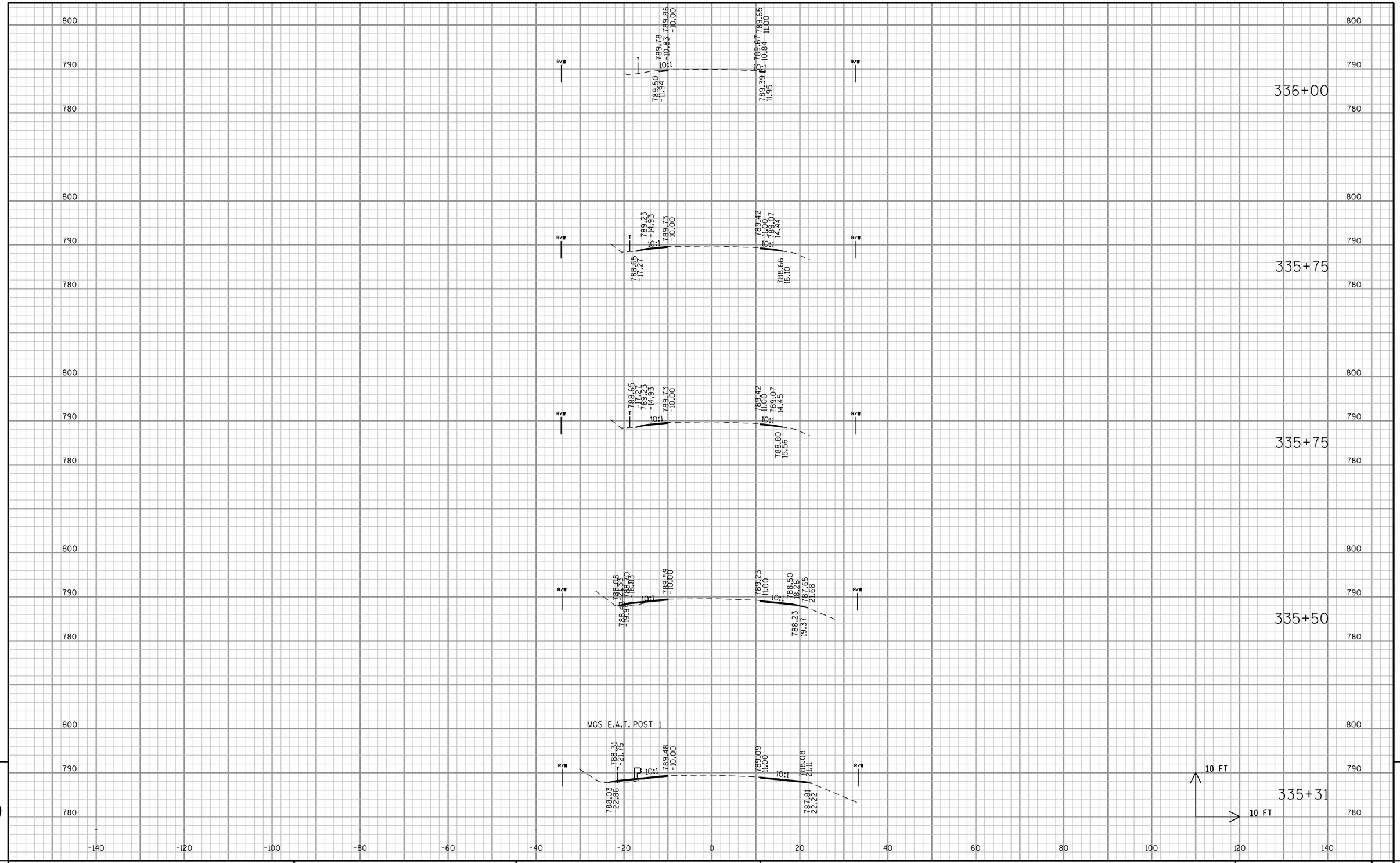
PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	CROSS SECTIONS: CTH O	SHEET 105	E

FILE NAME : P:\PIERC\15002 - CTH O\cad\XS_04.dgn PLOT DATE : 10/26/2016 PLOT BY : $$...plotuser...$$

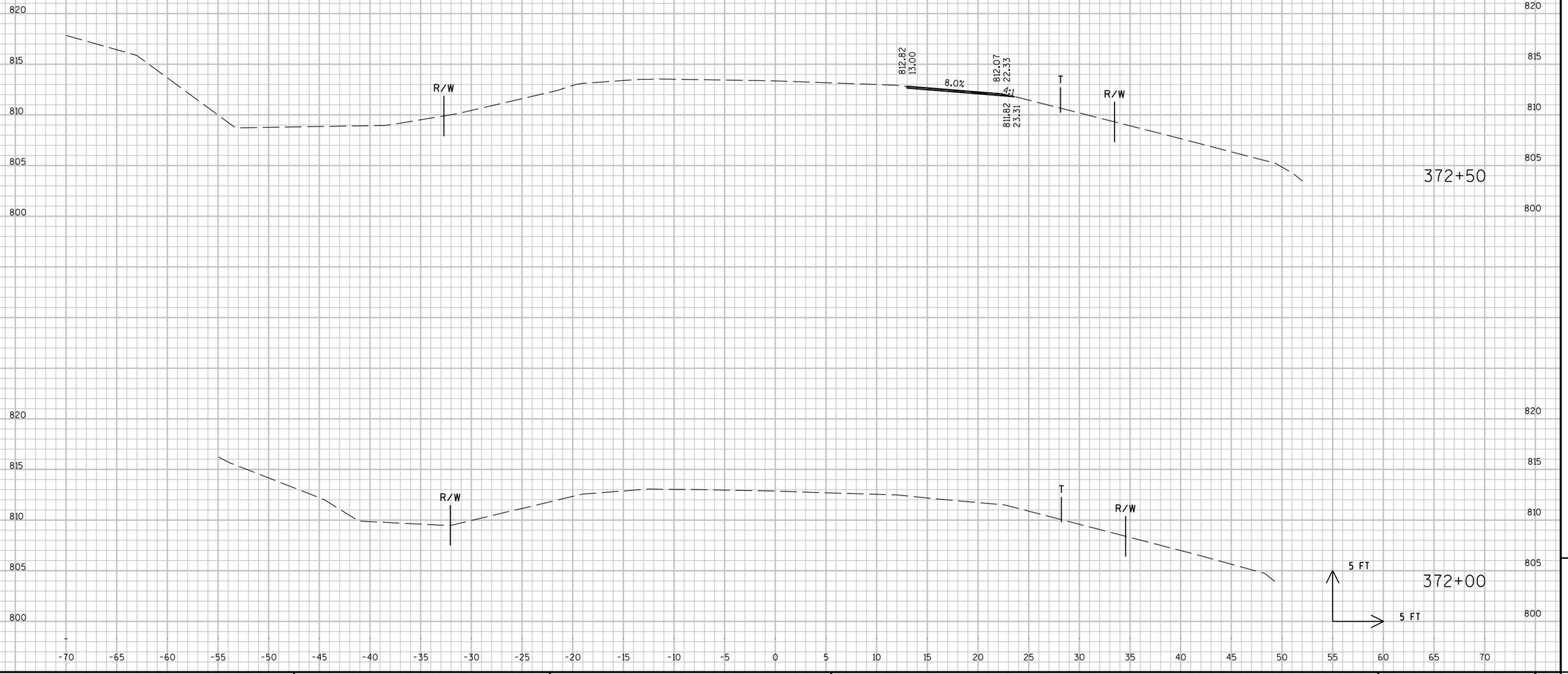
WISDOT/CADDS SHEET 21



PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	CROSS SECTIONS: CTH O	SHEET 106	E

FILE NAME : P:\PIERC\15002 - CTH O\cad\XS_04.dgn PLOT DATE : 10/26/2016 PLOT BY : $$...plotuser...$$

WISDOT/CADDS SHEET 21



9

9

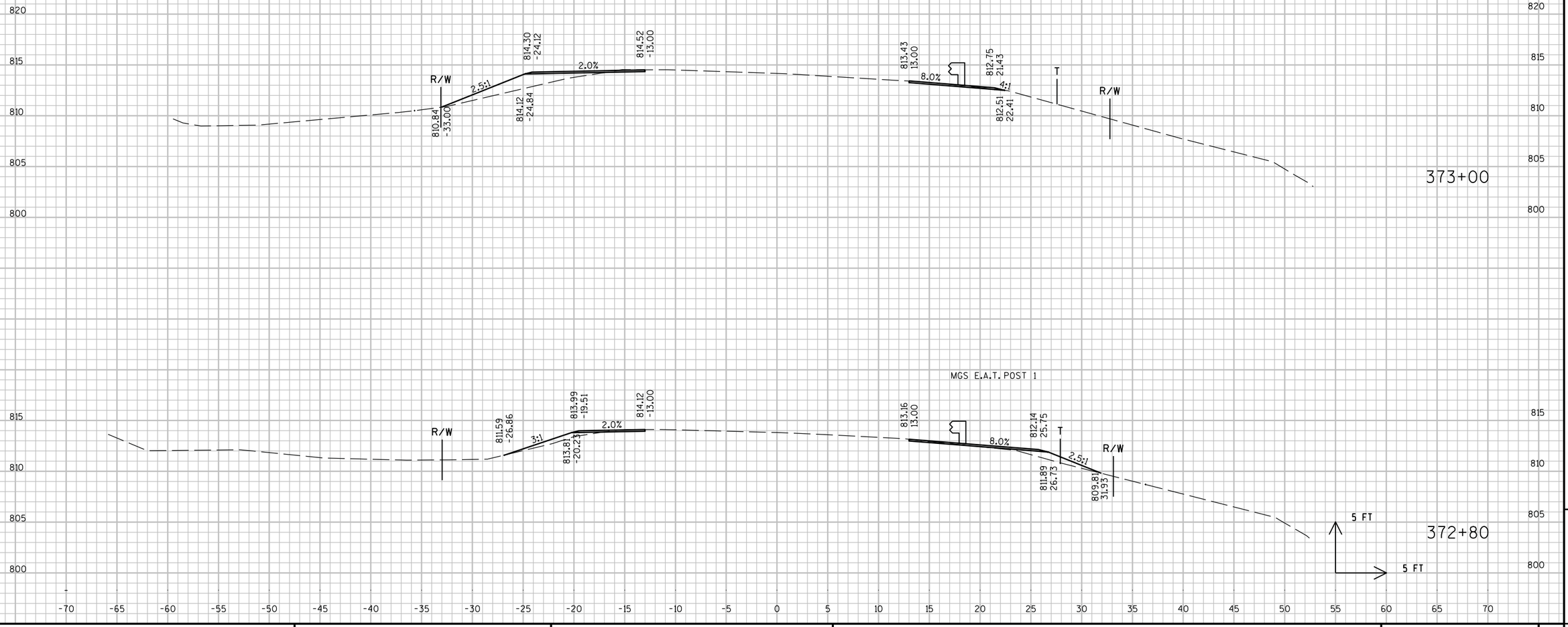
PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	CROSS SECTIONS: CTH O	SHEET 107	E

FILE NAME : P:\PIERC\15002 - CTH O\cad\XS_05.dgn

PLOT DATE : 1/30/2017

PLOT BY : $$...plotuser...$$

WISDOT/CADDS SHEET 21



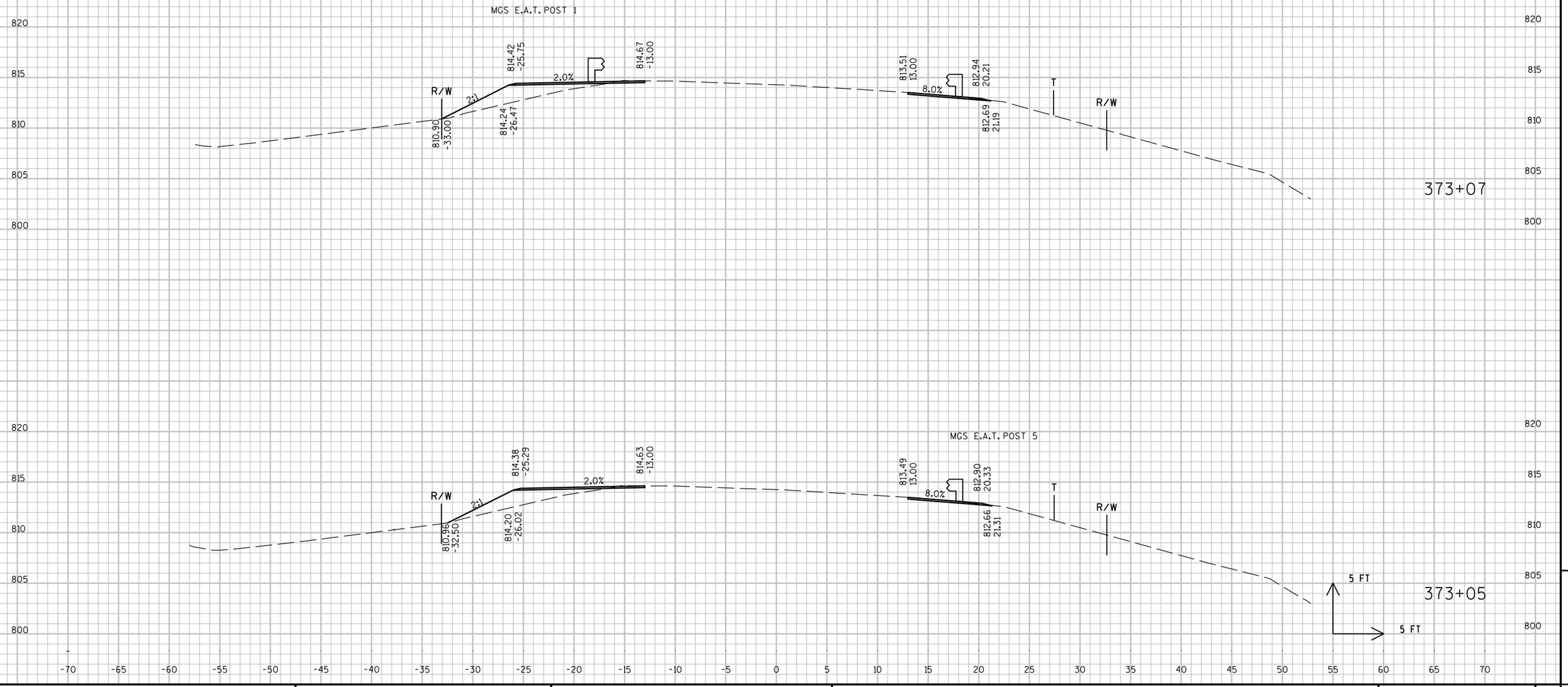
9

9

PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	CROSS SECTIONS: CTH O	SHEET 108	E

FILE NAME : P:\PIERC\15002 - CTH O\cad\XS_05.dgn PLOT DATE : 1/30/2017 PLOT BY : $$...plotuser...$$

WISDOT/CADDS SHEET 21



9

9

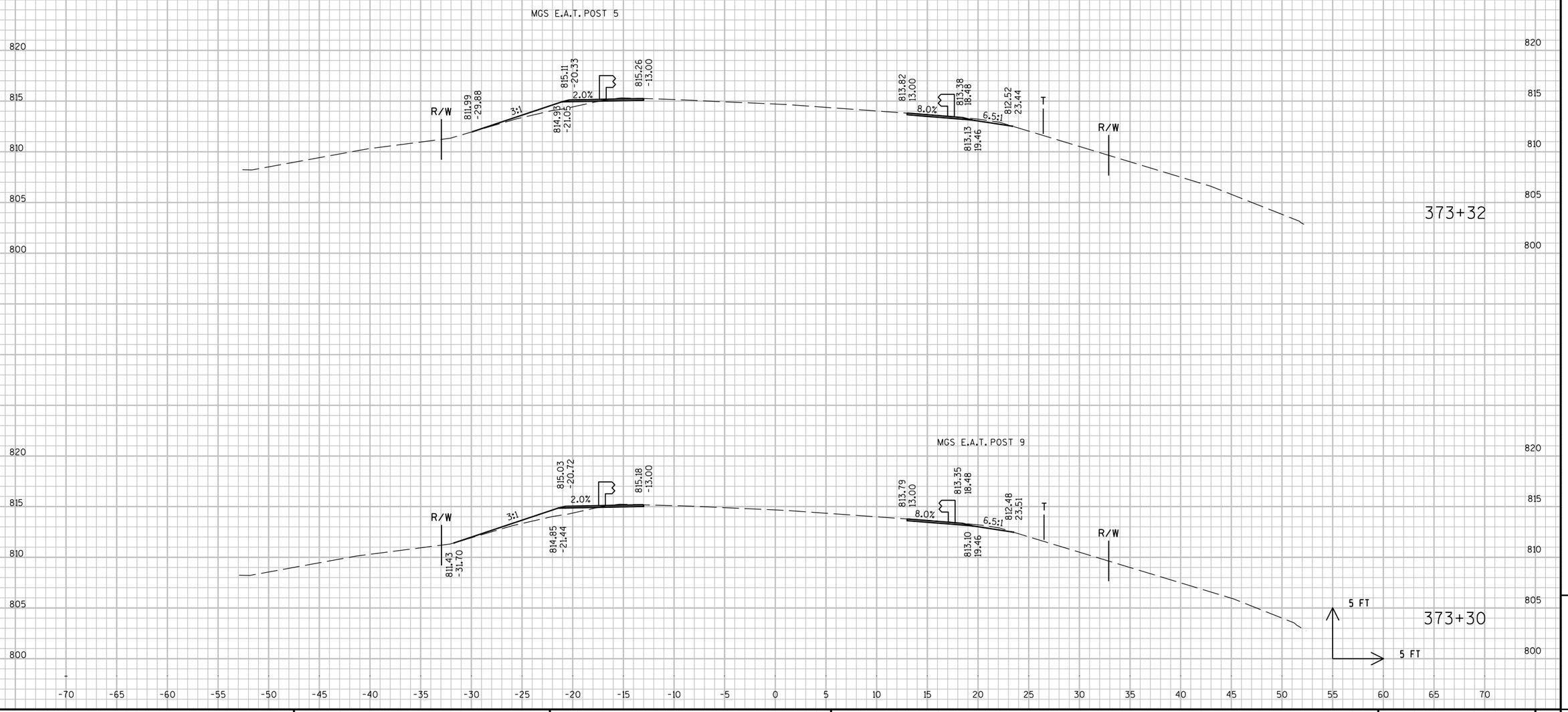
PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	CROSS SECTIONS: CTH O	SHEET 109	E

FILE NAME : P:\PIERC\15002 - CTH O\cad\XS_05.dgn

PLOT DATE : 1/30/2017

PLOT BY : $$...plotuser...$$

WISDOT/CADDS SHEET 21



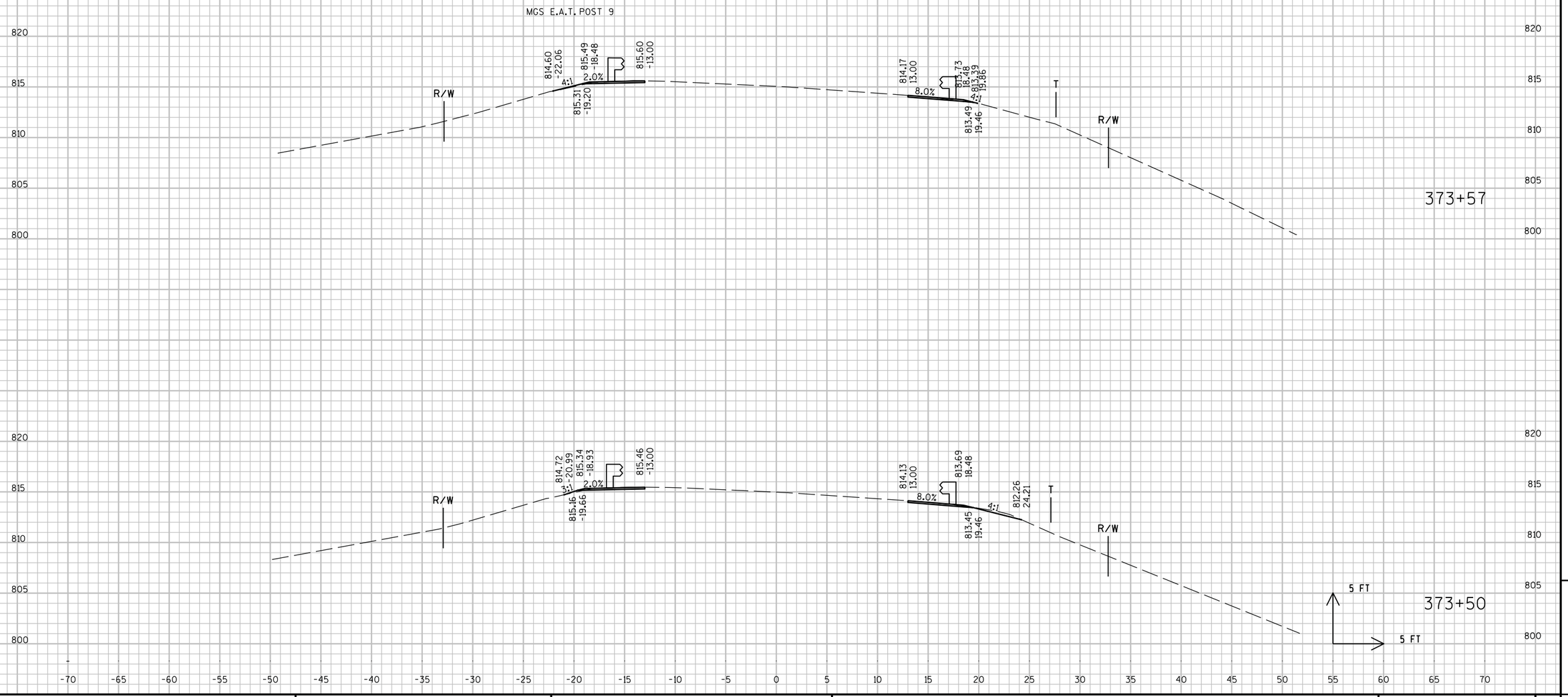
9 9

PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	CROSS SECTIONS: CTH O	SHEET 110	E

FILE NAME : P:\PIERC\15002 - CTH O\cad\XS_05.dgn PLOT DATE : 1/30/2017 PLOT BY : $$...plotuser...$$

WISDOT/CADDS SHEET 21

MGS E.A.T. POST 9

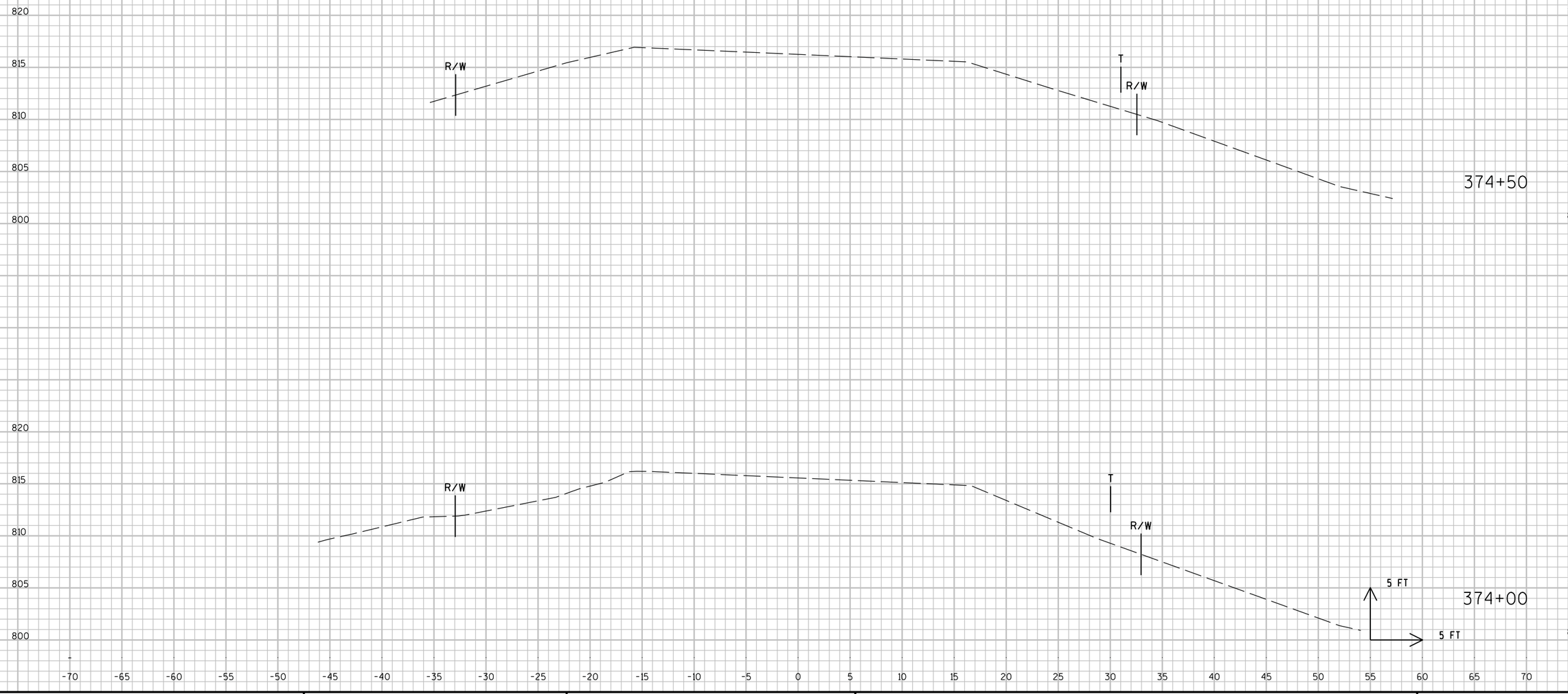


9 9

PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	CROSS SECTIONS: CTH O	SHEET 111	E

FILE NAME : P:\PIERC\15002 - CTH O\cad\XS_05.dgn PLOT DATE : 1/30/2017 PLOT BY : $$...plotuser...$$

WISDOT/CADDS SHEET 21



9

9

PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	CROSS SECTIONS: CTH O	SHEET 112	E

FILE NAME : P:\PIERC\15002 - CTH O\cad\XS_05.dgn PLOT DATE : 1/30/2017 PLOT BY : $$...plotuser...$$

WISDOT/CADDS SHEET 21

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9

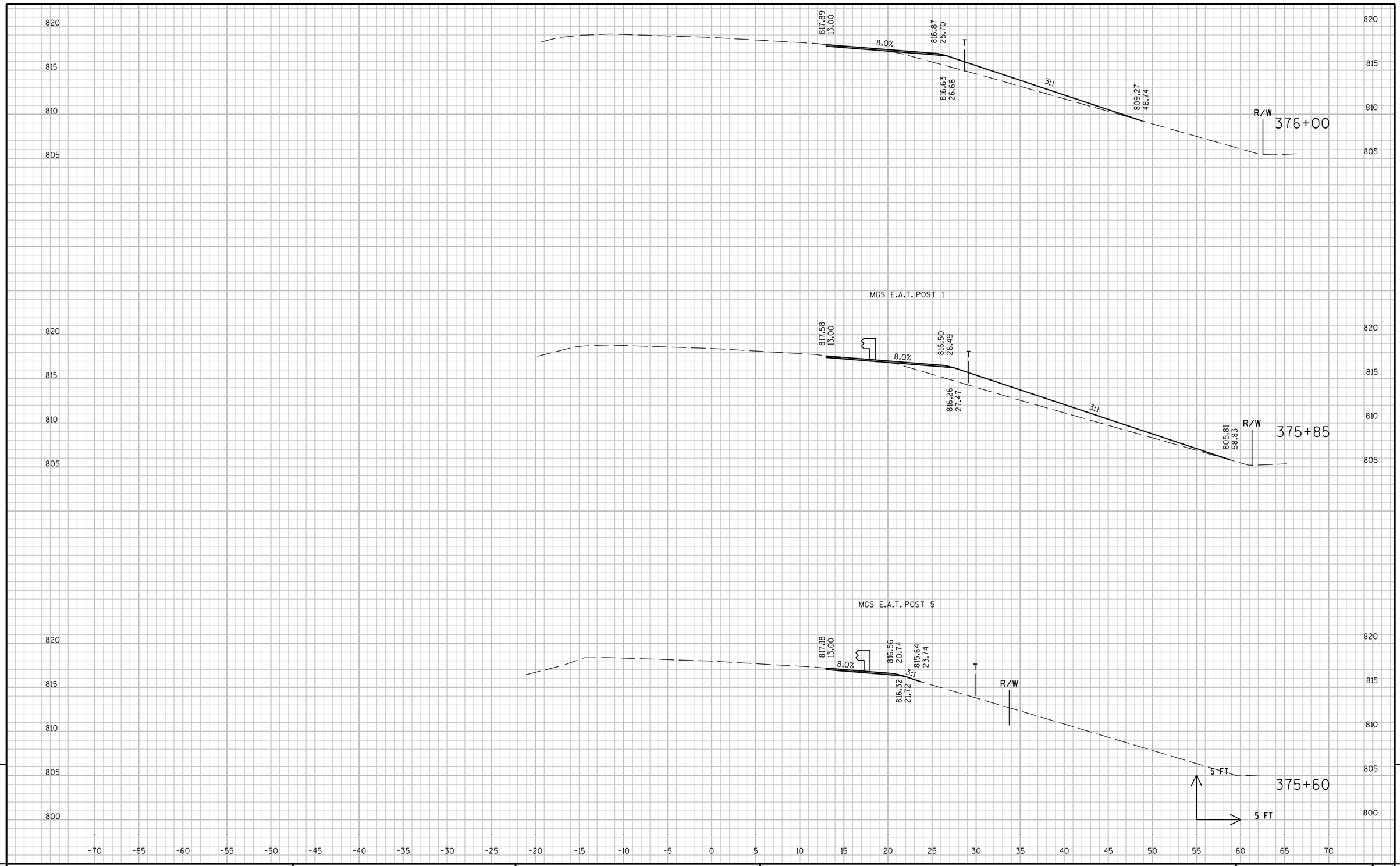
PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	CROSS SECTIONS: CTH O	SHEET 113	E

FILE NAME : P:\PIERC\15002 - CTH O\cad\XS_05.dgn

PLOT DATE : 1/30/2017

PLOT BY : $$...plotuser...$$

WISDOT/CADDS SHEET 21



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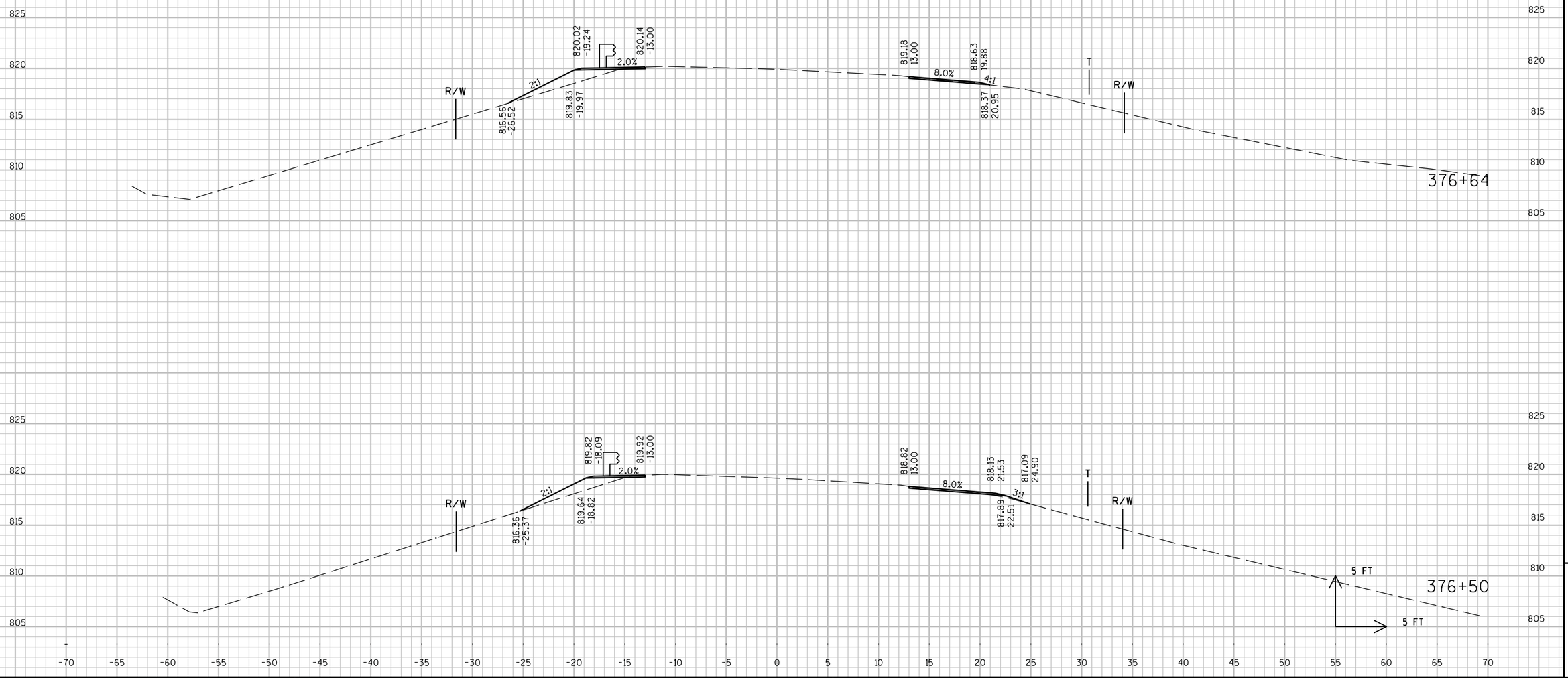
PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	CROSS SECTIONS: CTH O	SHEET 114	E

FILE NAME : P:\PIERC\15002 - CTH O\cad\XS_05.dgn PLOT DATE : 1/30/2017 PLOT BY : $$...plotuser...$$

WISDOT/CADDS SHEET 21



9

9

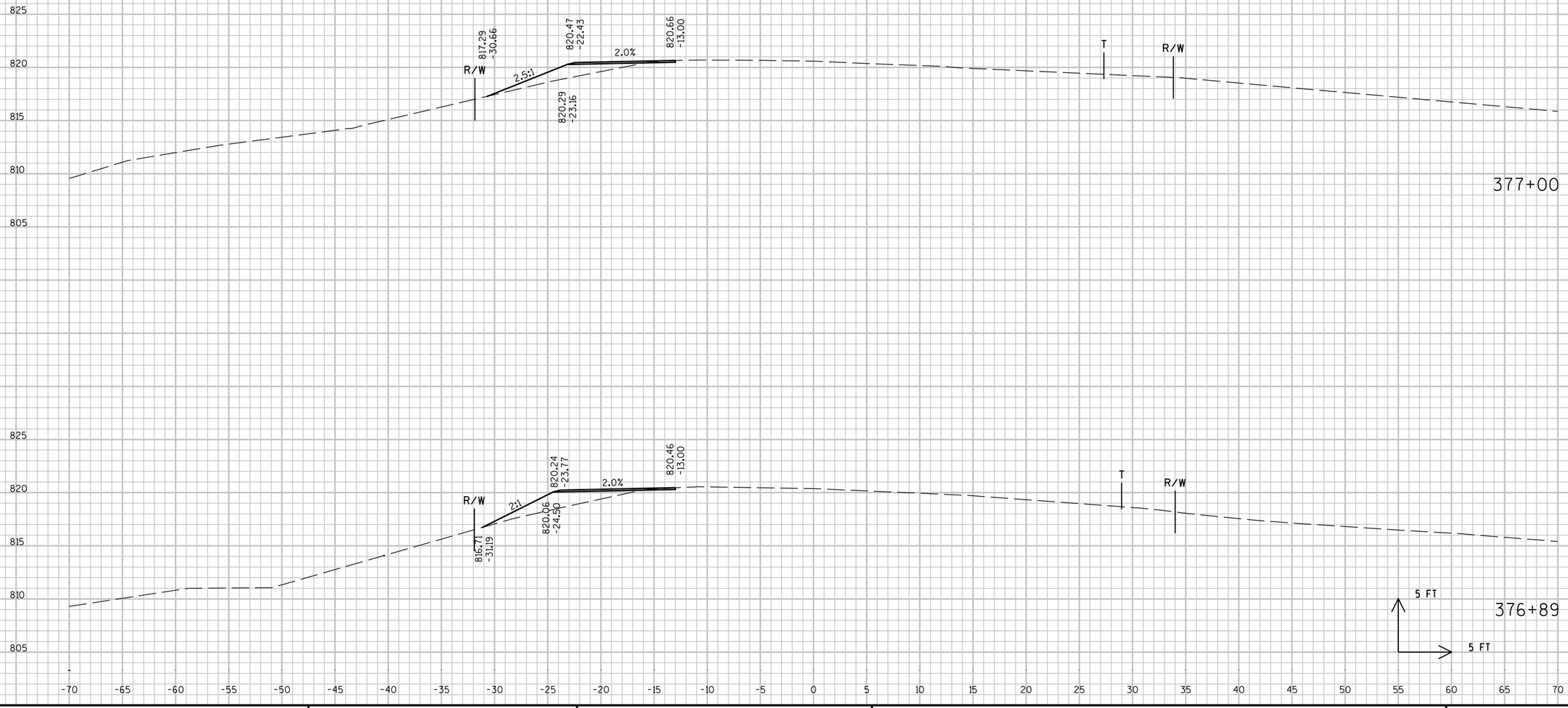
PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	CROSS SECTIONS: CTH O	SHEET 115	E

FILE NAME : P:\PIERC\15002 - CTH O\cad\XS_05.dgn

PLOT DATE : 1/30/2017

PLOT BY : $$...plotuser...$$

WISDOT/CADDS SHEET 21

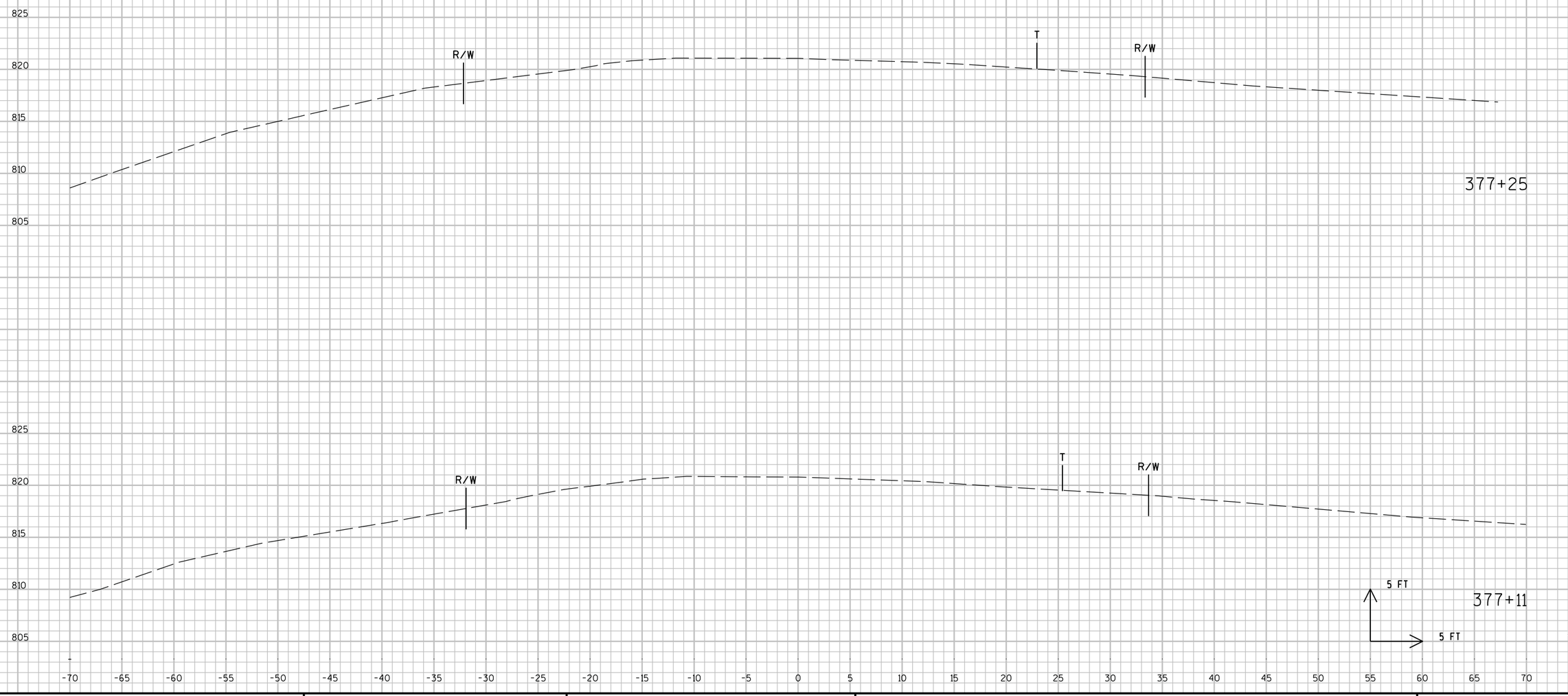


9 9

PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	CROSS SECTIONS: CTH O	SHEET 116	E

FILE NAME : P:\PIERC\15002 - CTH O\cad\XS_05.dgn PLOT DATE : 1/30/2017 PLOT BY : $$...plotuser...$$

WISDOT/CADDS SHEET 21



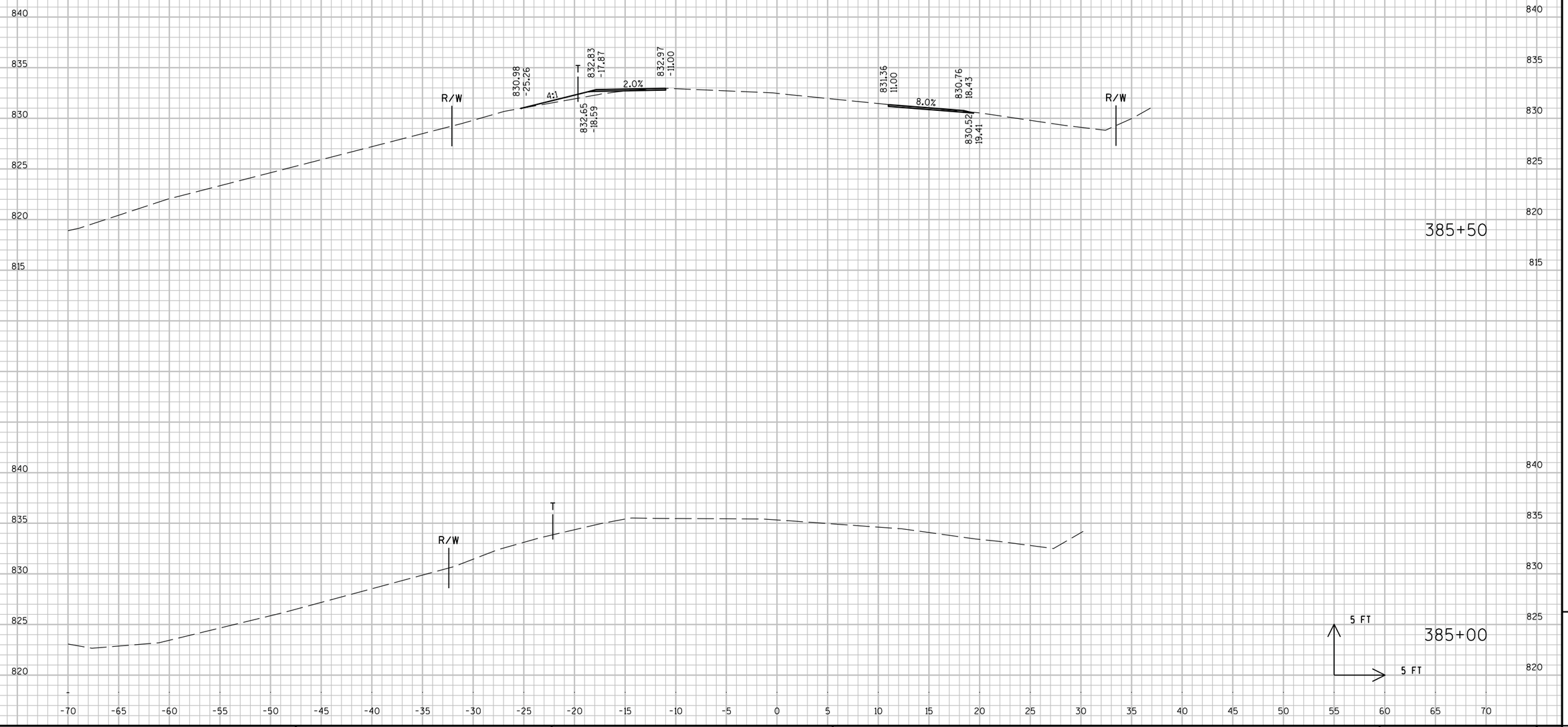
9

9

PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	CROSS SECTIONS: CTH O	SHEET 117	E

FILE NAME : P:\PIERC\15002 - CTH O\cad\XS_05.dgn PLOT DATE : 1/30/2017 PLOT BY : $$...plotuser...$$

WISDOT/CADDS SHEET 21



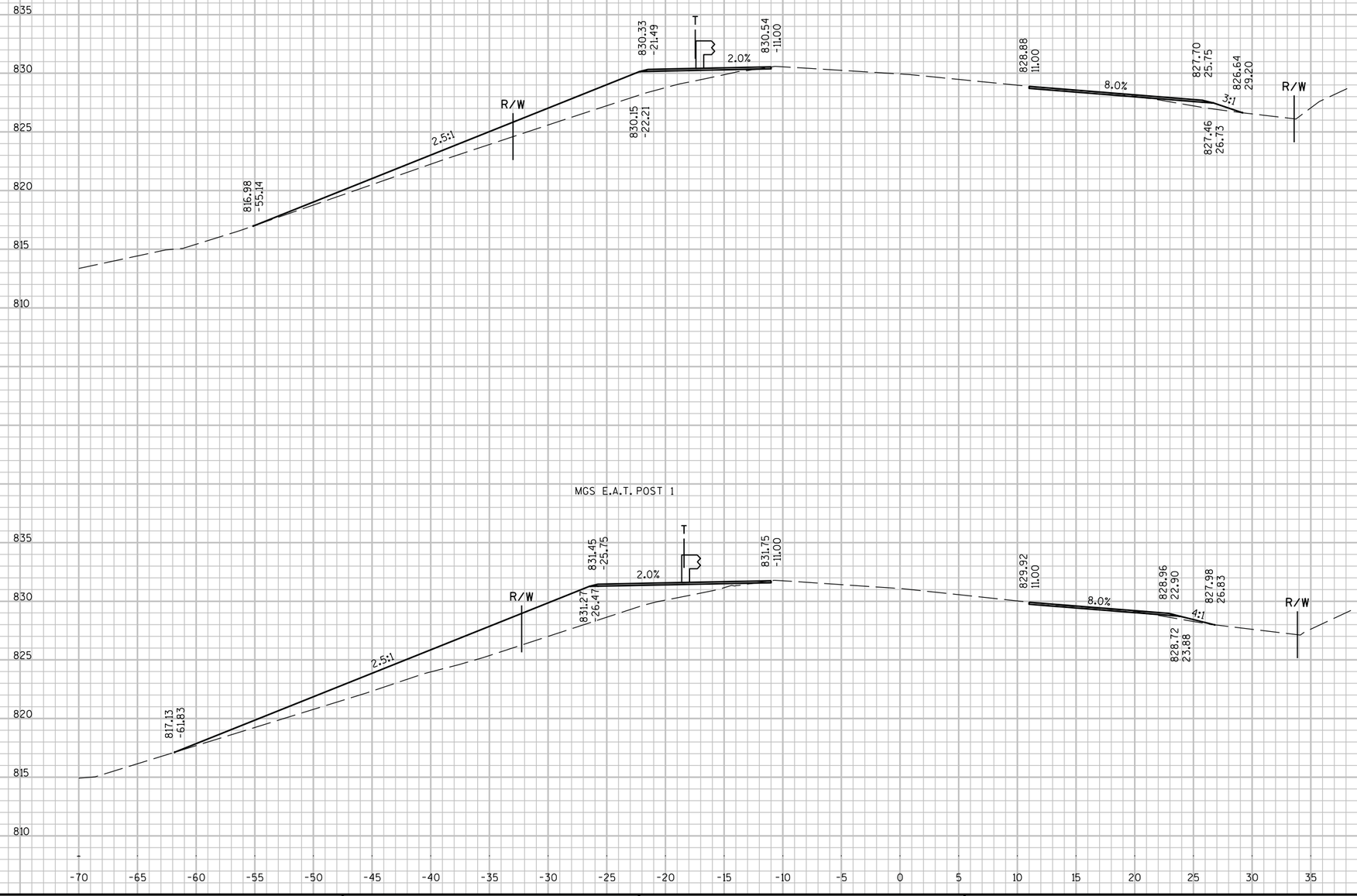
9

9

PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	CROSS SECTIONS: CTH O	SHEET 118	E

FILE NAME : P:\PIERC\15002 - CTH O\cad\XS_06.dgn PLOT DATE : 10/26/2016 PLOT BY : $$...plotuser...$$

WISDOT/CADDS SHEET 21



9

9

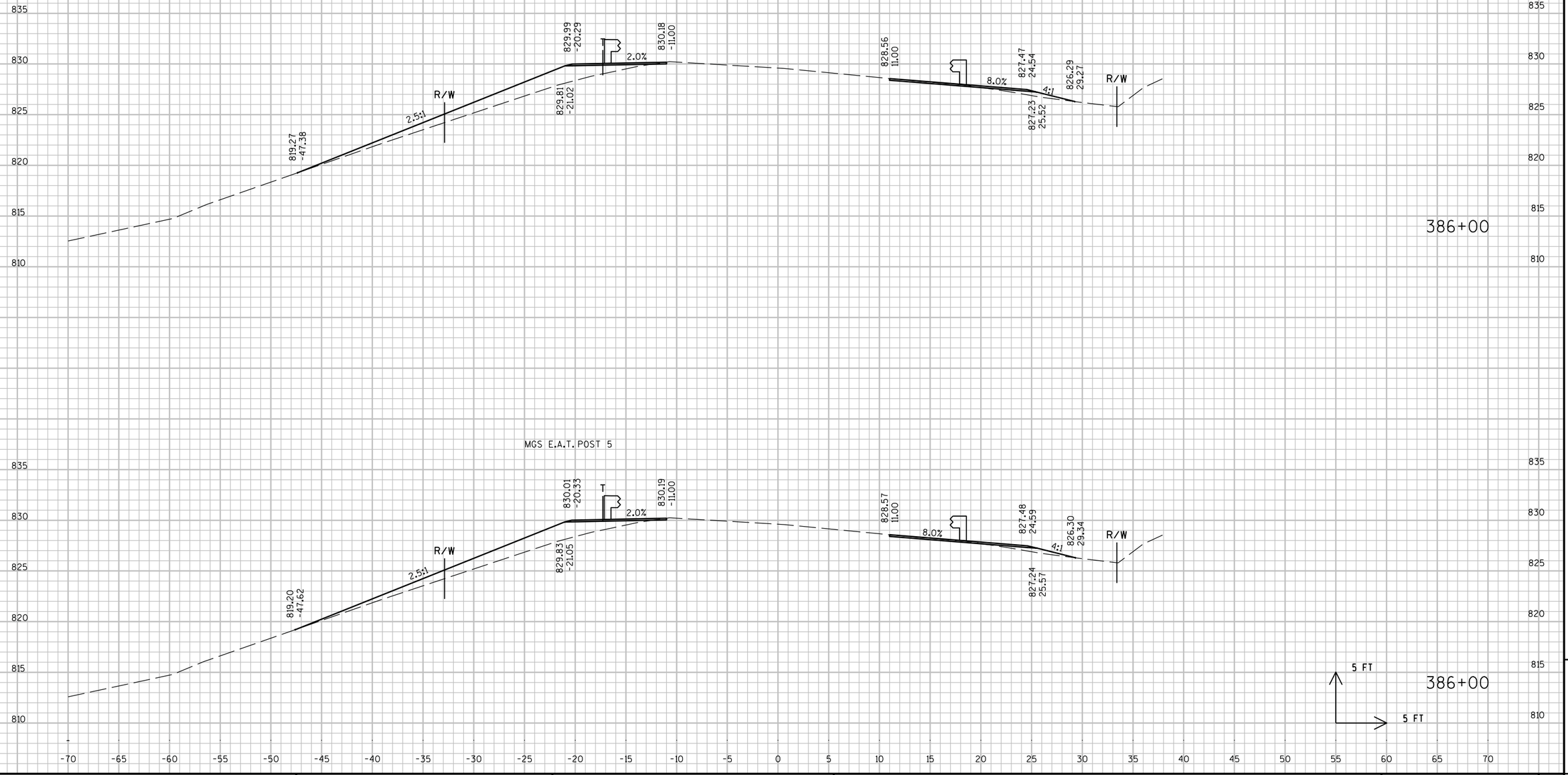
PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	CROSS SECTIONS: CTH O	SHEET 119	E

FILE NAME : P:\PIERC\15002 - CTH O\cad\XS_06.dgn

PLOT DATE : 10/26/2016

PLOT BY : $$...plotuser...$$

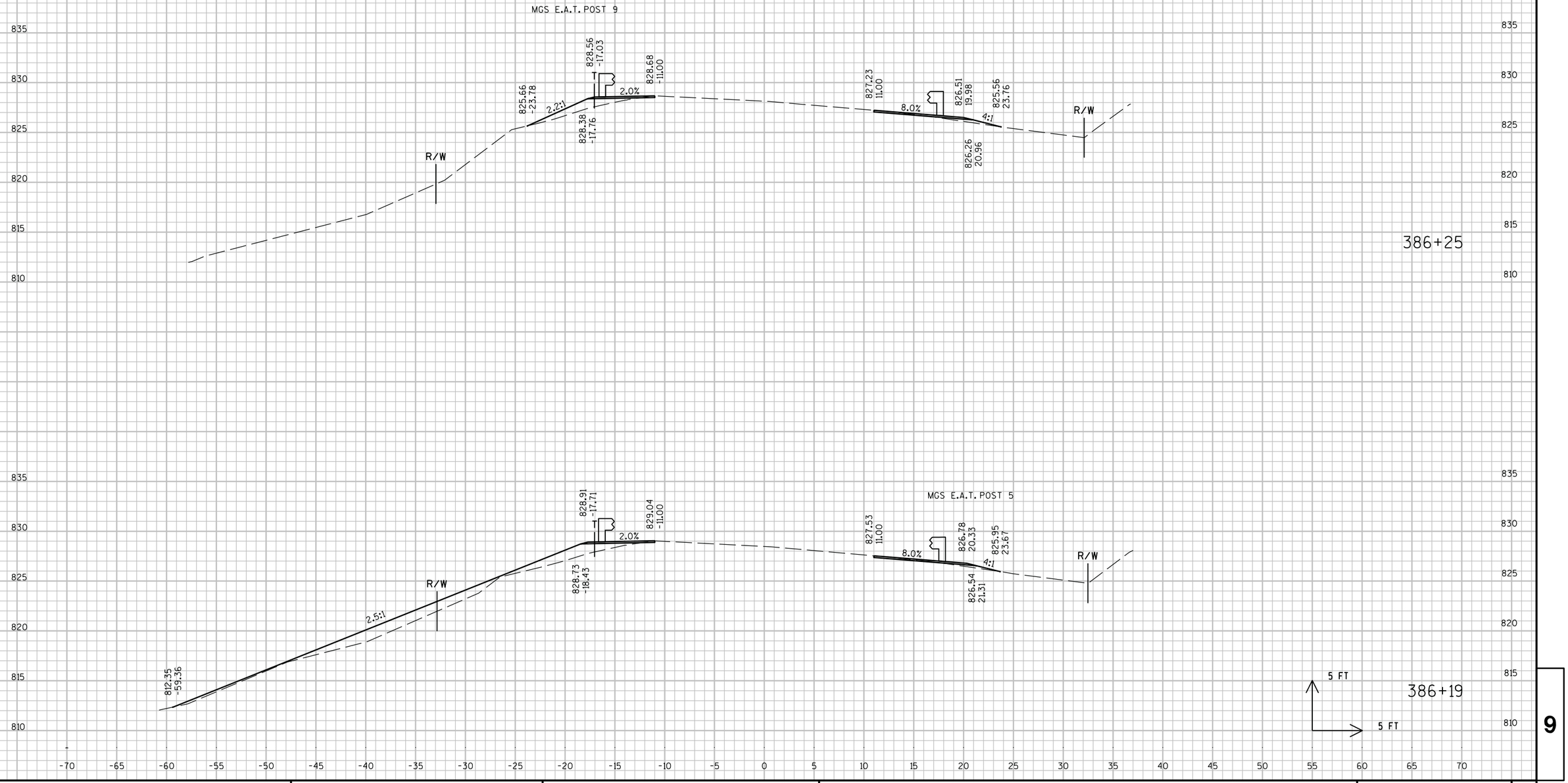
WISDOT/CADDS SHEET 21



PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	CROSS SECTIONS: CTH O	SHEET 120	E

FILE NAME : P:\PIERC\15002 - CTH O\cad\XS_06.dgn PLOT DATE : 10/26/2016 PLOT BY : $$...plotuser...$$

WISDOT/CADDS SHEET 21



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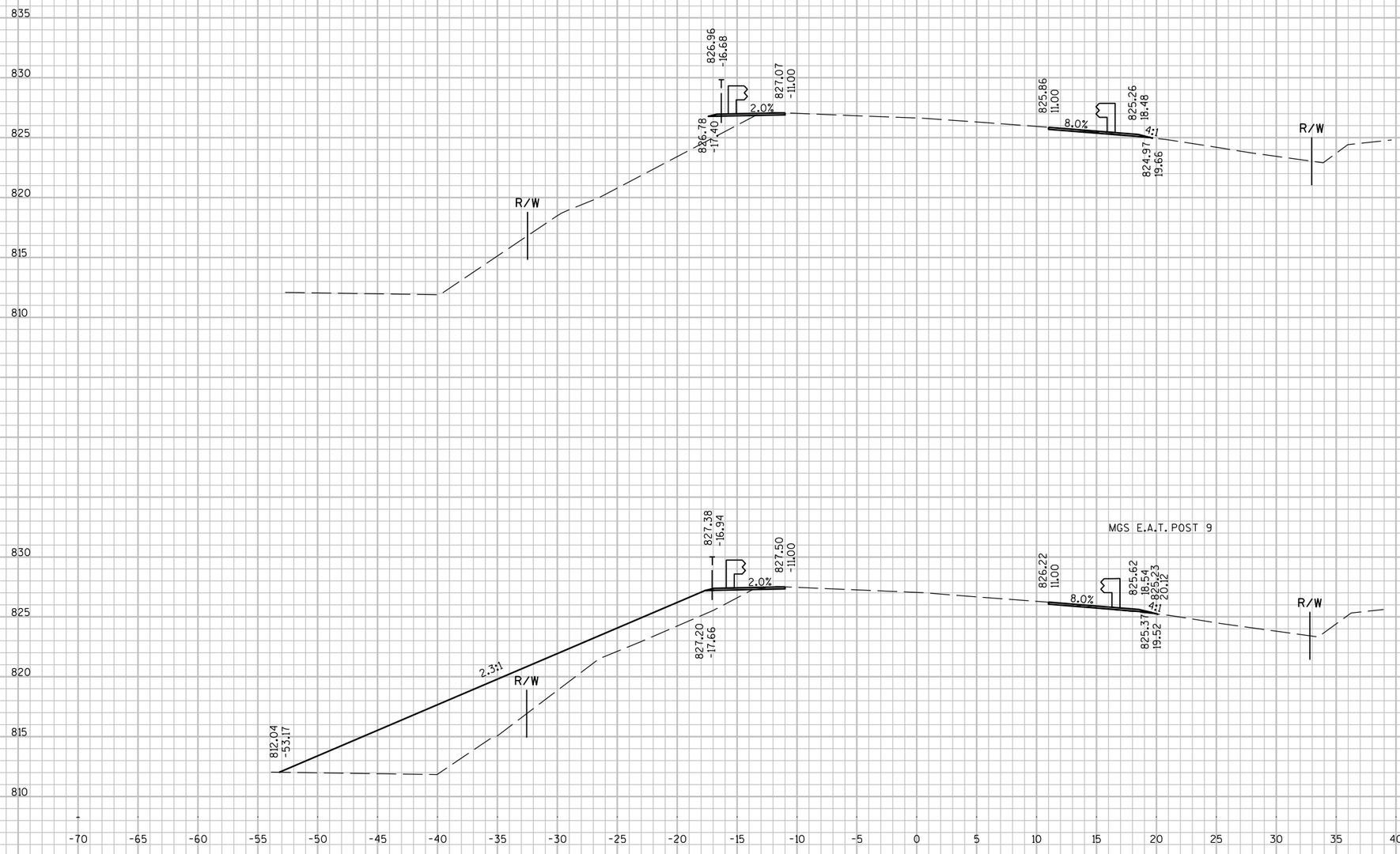
9

PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	CROSS SECTIONS: CTH O	SHEET 121	E

FILE NAME : P:\PIERC\15002 - CTH O\cad\XS_06.dgn PLOT DATE : 10/26/2016 PLOT BY : $$...plotuser...$$

WISDOT/CADDS SHEET 21



9

9

PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	CROSS SECTIONS: CTH O	SHEET 122	E

FILE NAME : P:\PIERC\15002 - CTH O\cad\XS_06.dgn

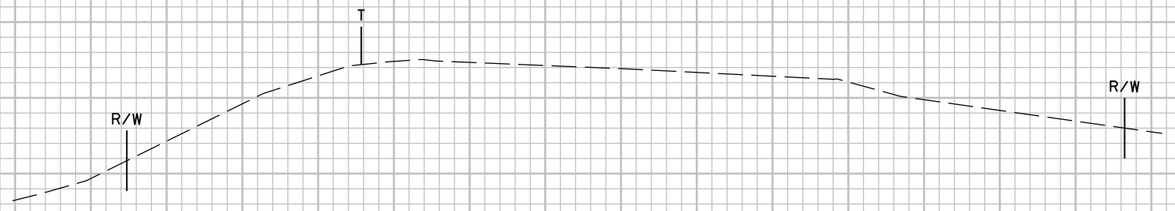
PLOT DATE : 10/26/2016

PLOT BY : $$...plotuser...$$

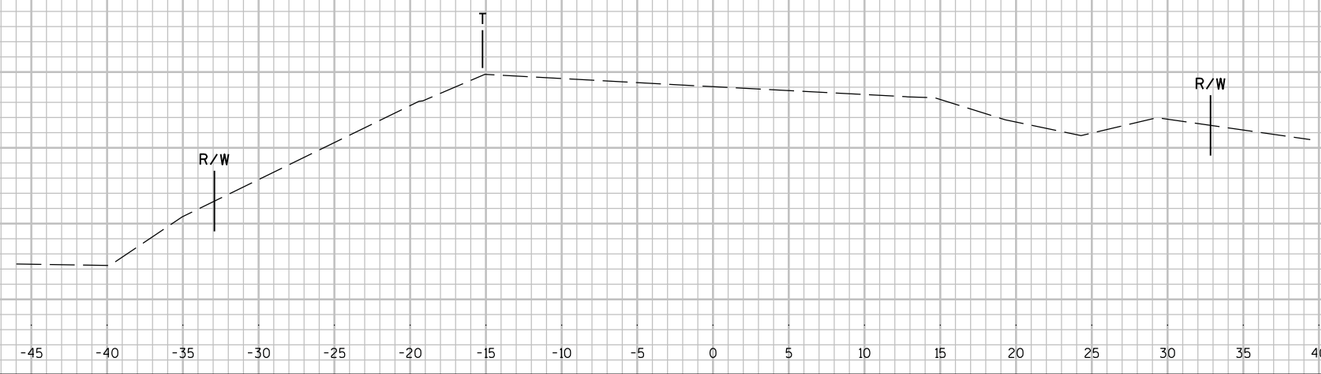
WISDOT/CADDS SHEET 21

MGS E.A.T. POST 9

387+76



387+50



387+00

5 FT
5 FT

9

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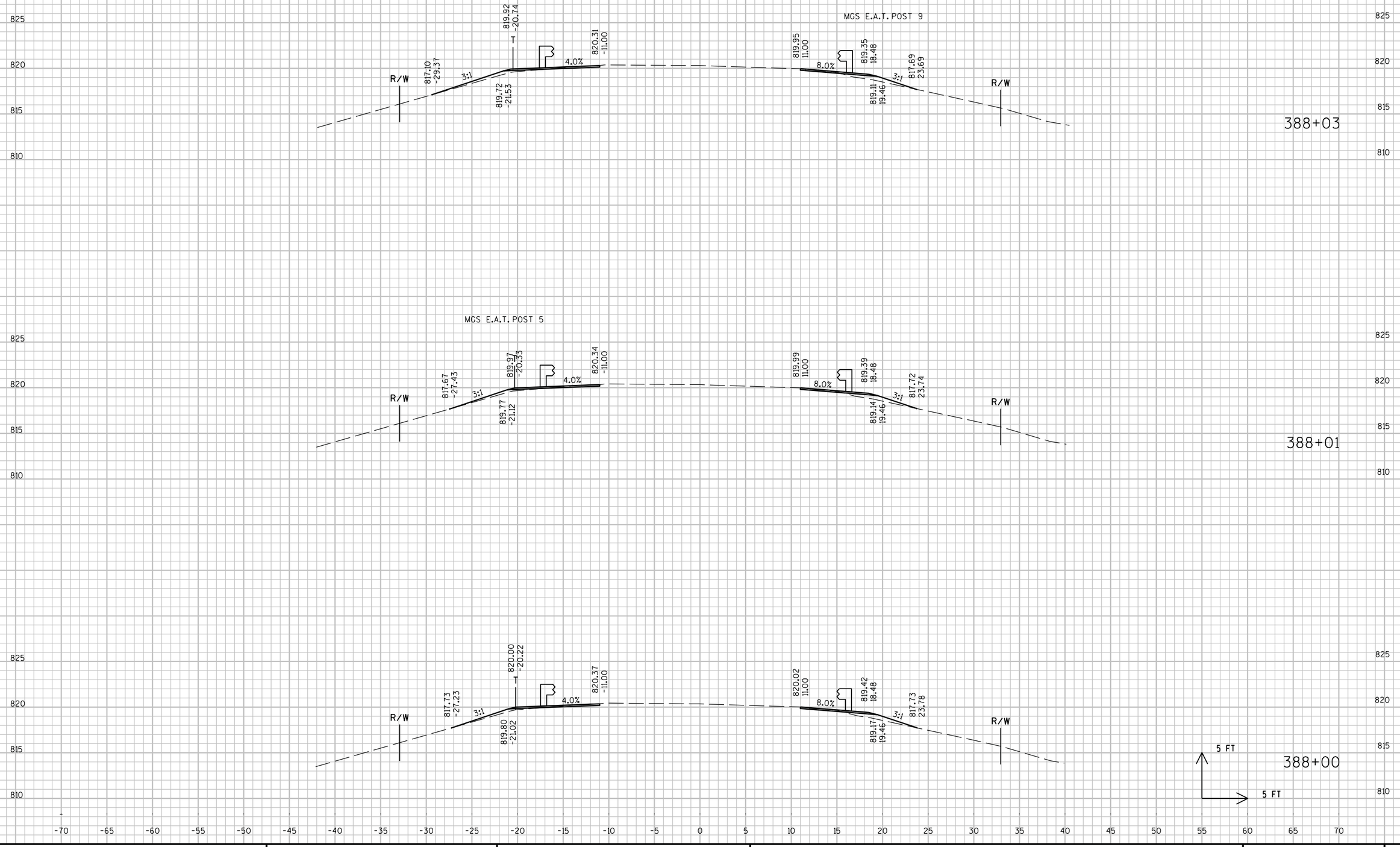
PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	CROSS SECTIONS: CTH O	SHEET 123	E

FILE NAME : P:\PIERC\15002 - CTH O\cad\XS_06.dgn

PLOT DATE : 10/26/2016

PLOT BY : $$...plotuser...$$

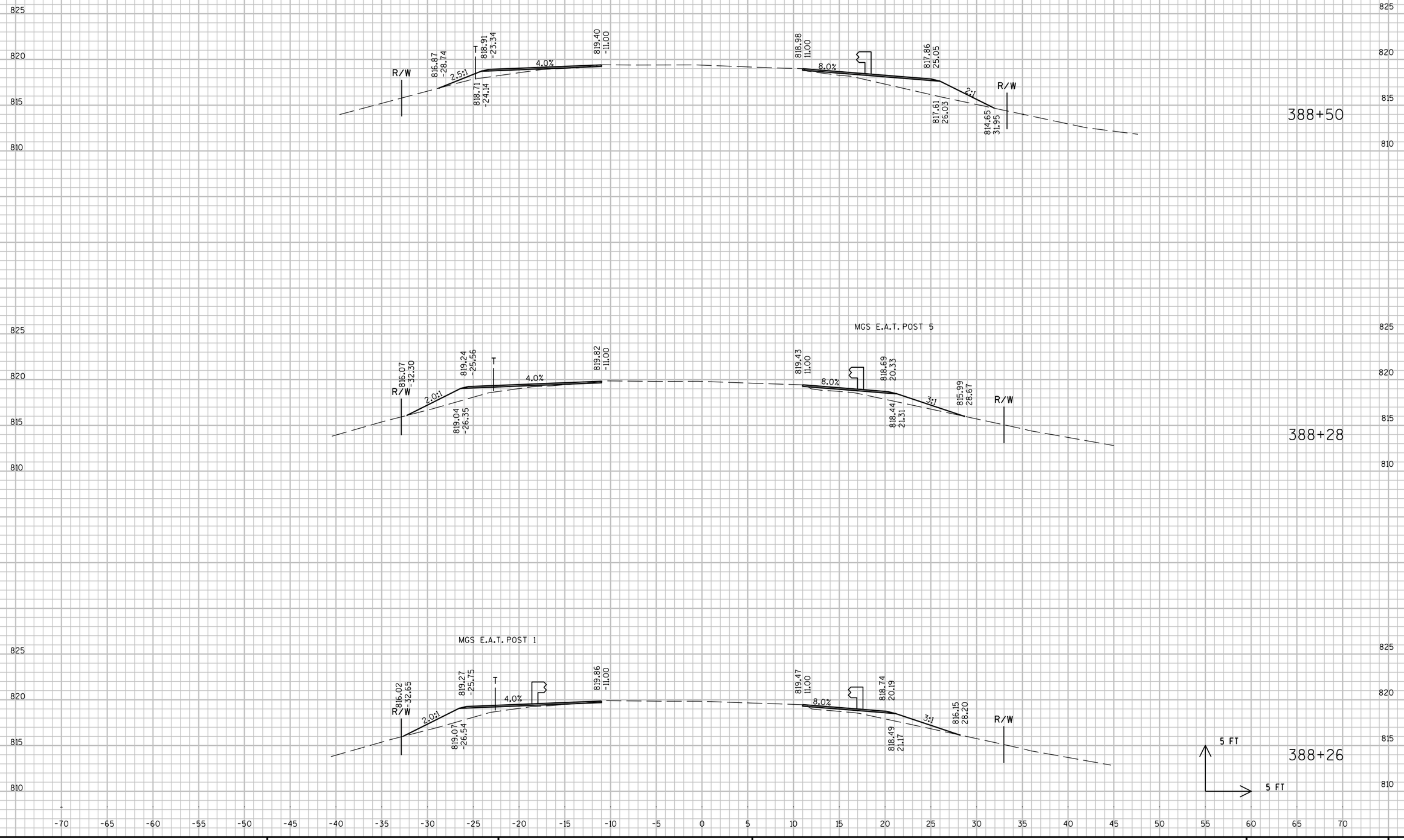
WISDOT/CADDS SHEET 21



9

9

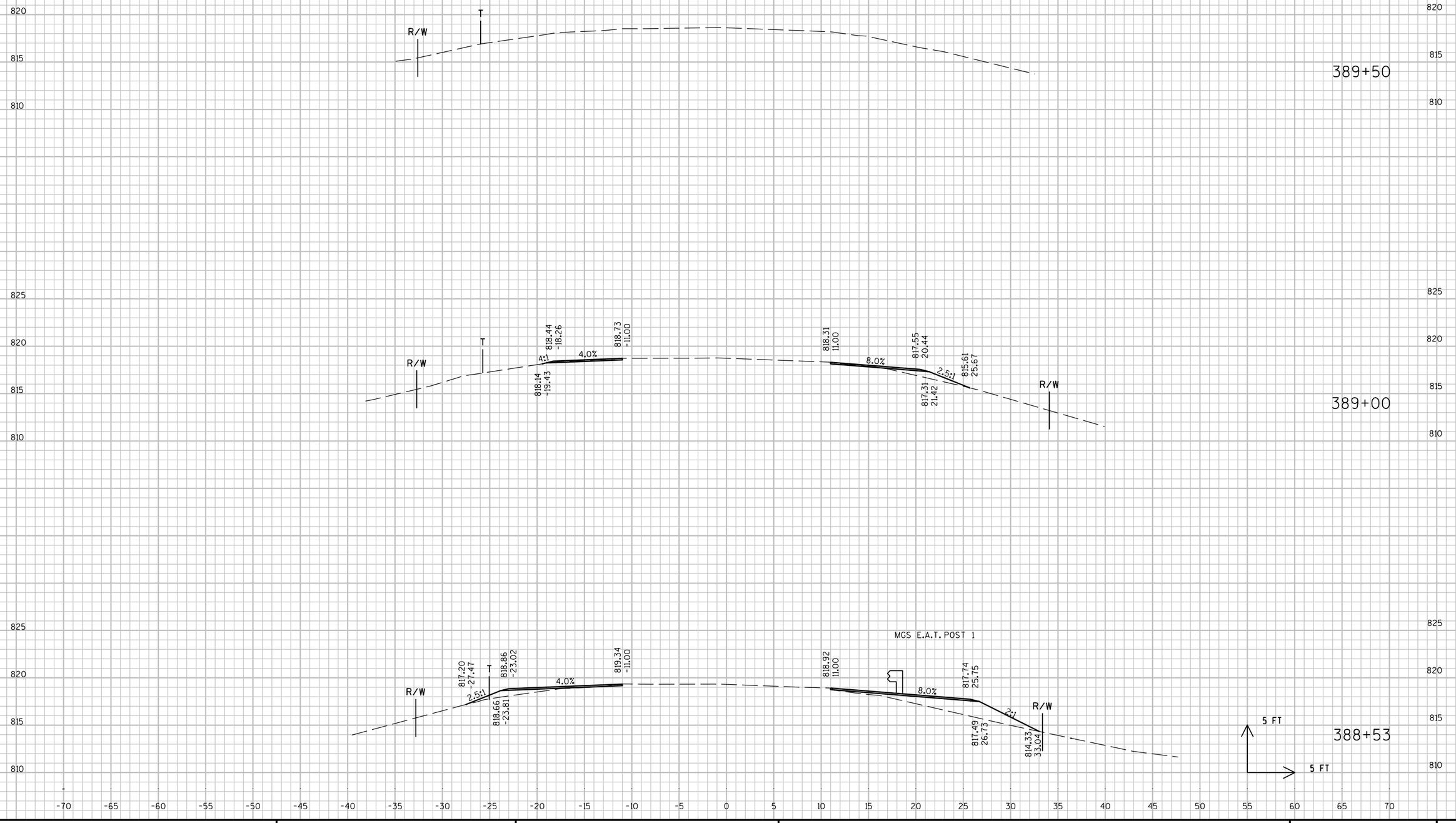
PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	CROSS SECTIONS: CTH O	SHEET 124	E



9

9

PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	CROSS SECTIONS: CTH O	SHEET 125	E



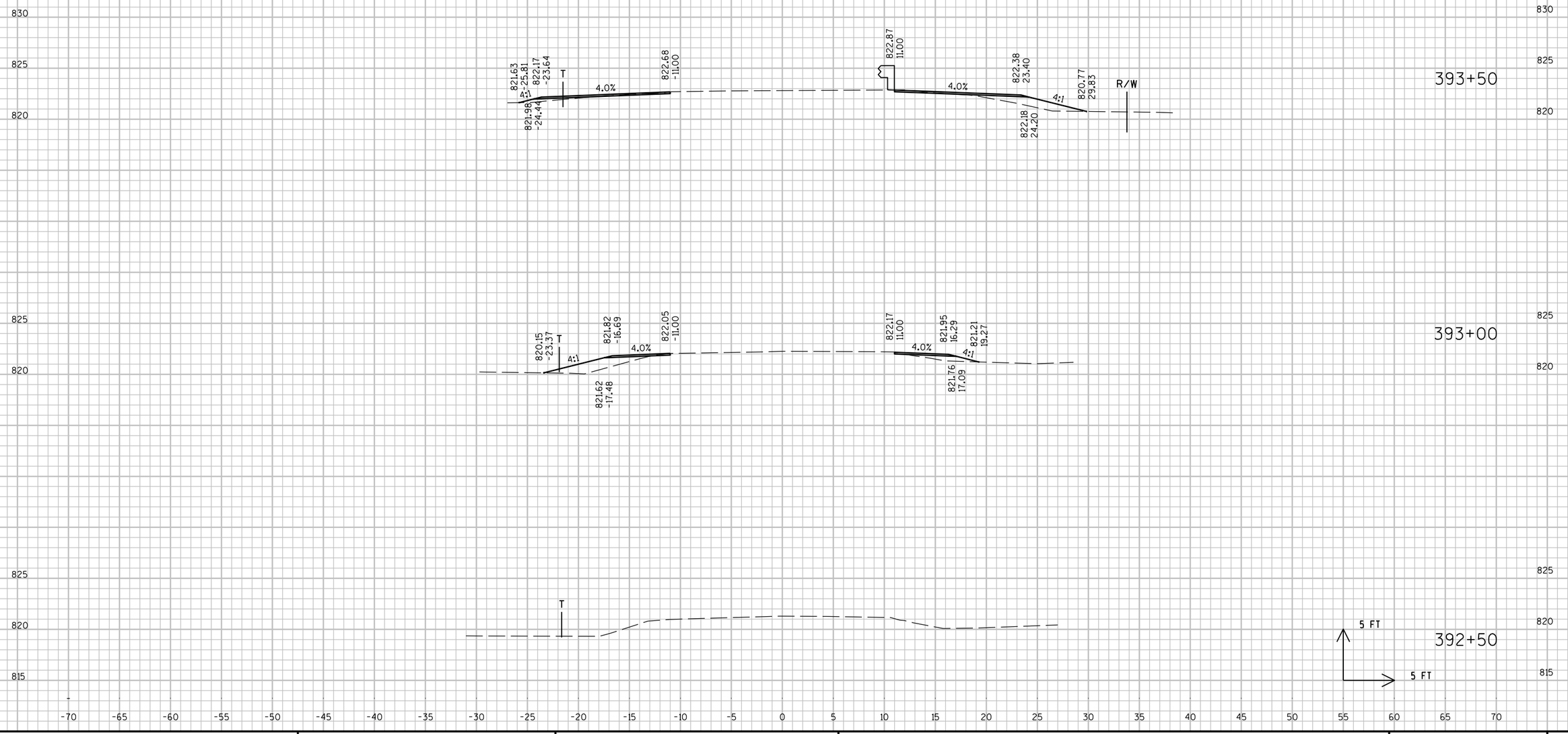
9

9

PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	CROSS SECTIONS: CTH O	SHEET 126	E

FILE NAME : P:\PIERC\15002 - CTH O\cad\XS_06.dgn PLOT DATE : 1/30/2017 PLOT BY : $$...plotuser...$$

WISDOT/CADDS SHEET 21



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9

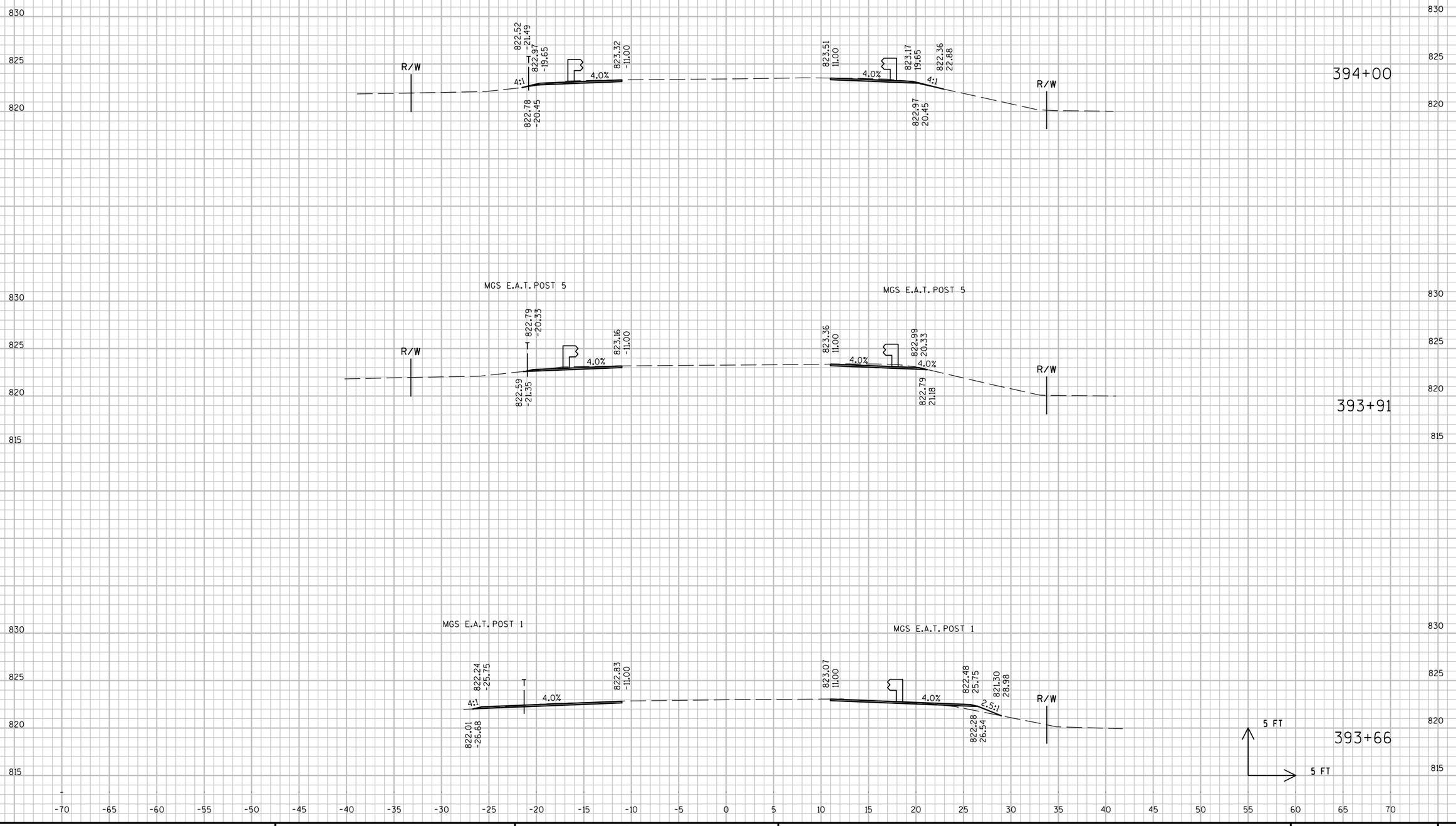
PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	CROSS SECTIONS: CTH O	SHEET 127	E

FILE NAME : P:\PIERC\15002 - CTH O\cad\XS_07.dgn

PLOT DATE : 10/26/2016

PLOT BY : $$...plotuser...$$

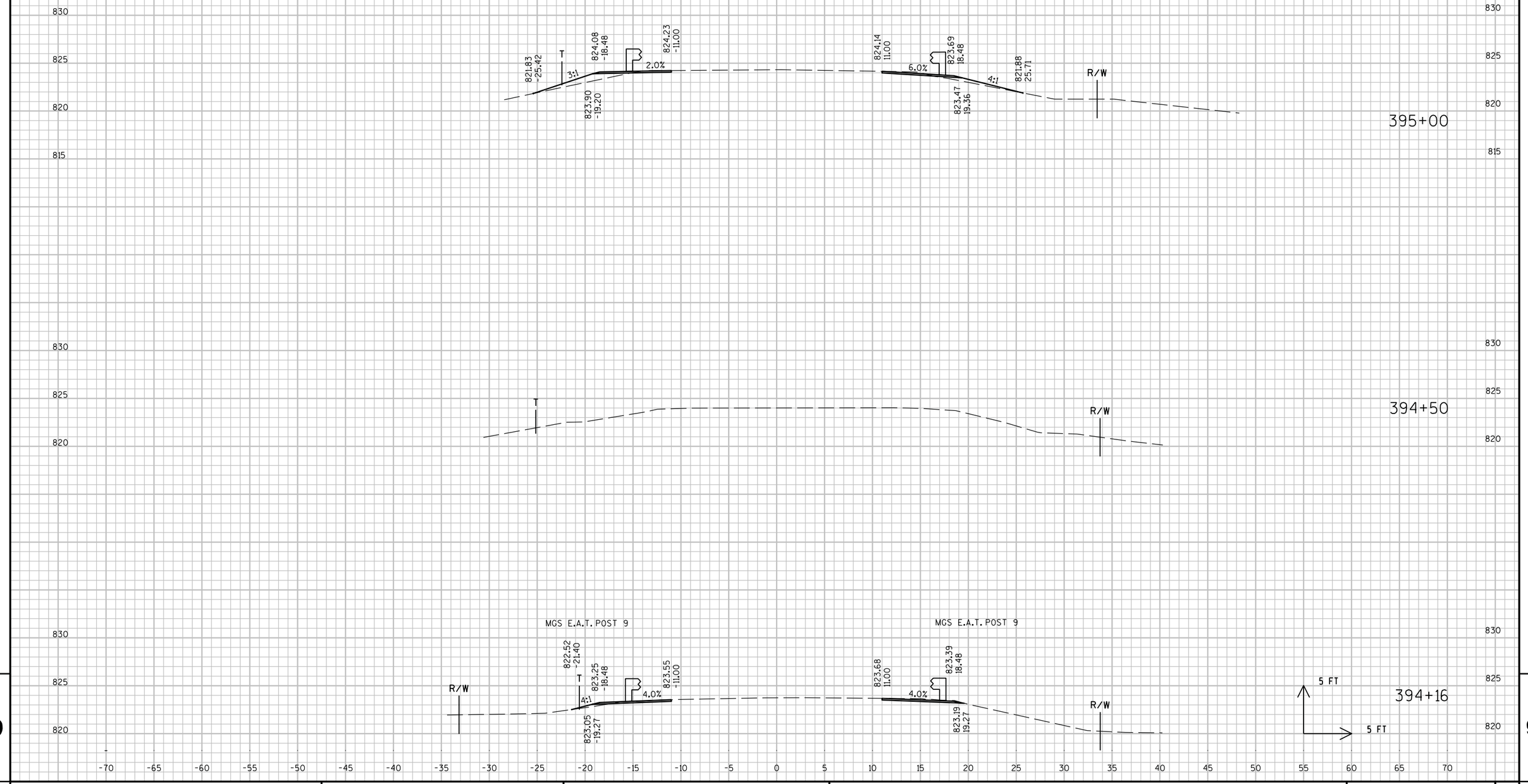
WISDOT/CADDS SHEET 21



9

9

PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	CROSS SECTIONS: CTH O	SHEET 128	E

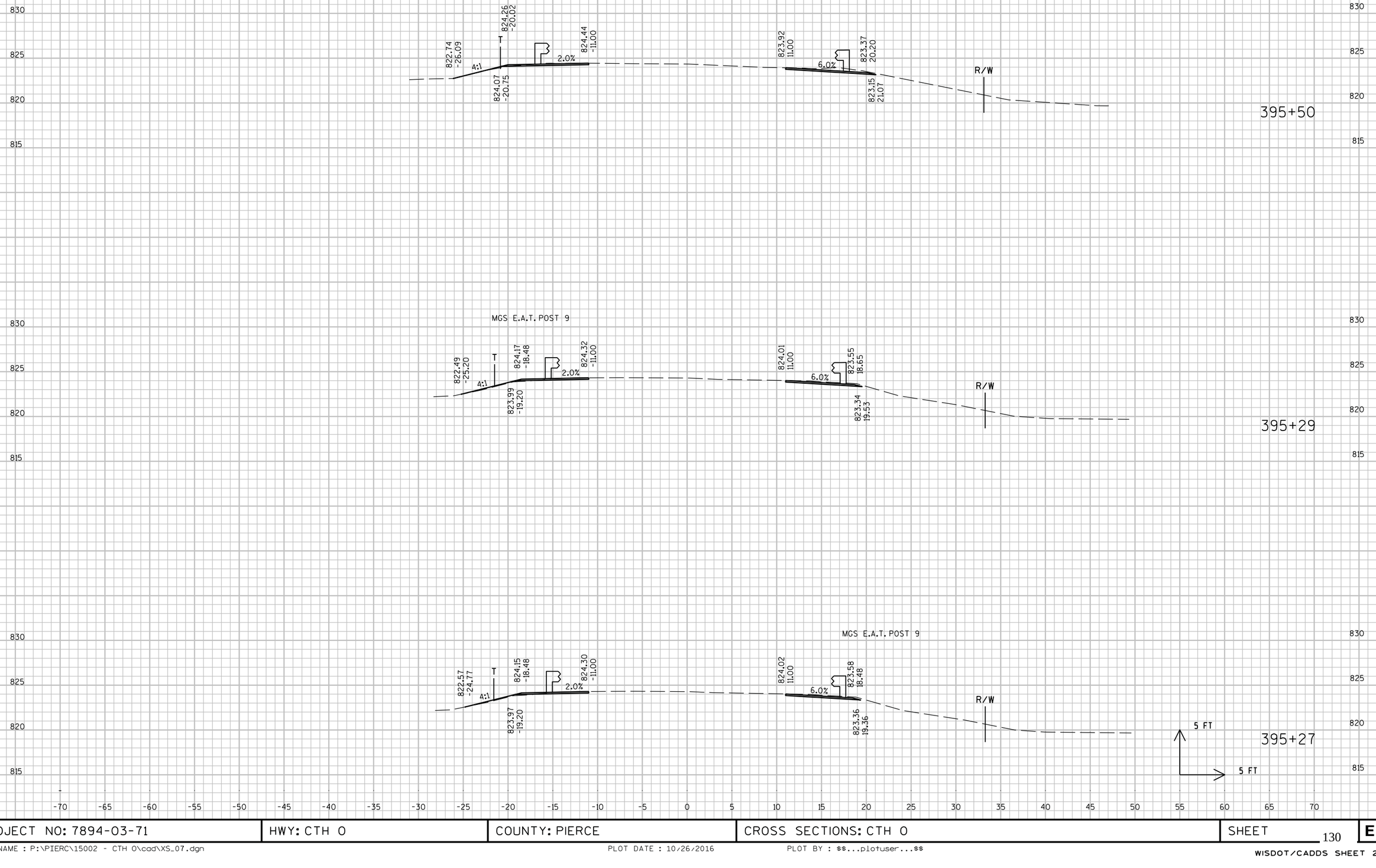


9

PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	CROSS SECTIONS: CTH O	SHEET 129	E

FILE NAME : P:\PIERC\15002 - CTH O\cad\XS_07.dgn PLOT DATE : 10/26/2016 PLOT BY : $$...plotuser...$$

WISDOT/CADDS SHEET 21



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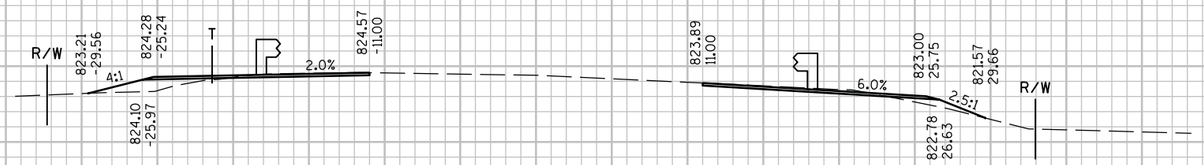
PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	CROSS SECTIONS: CTH O	SHEET 130	E

FILE NAME : P:\PIERC\15002 - CTH O\cad\XS_07.dgn PLOT DATE : 10/26/2016 PLOT BY : $$...plotuser...$$

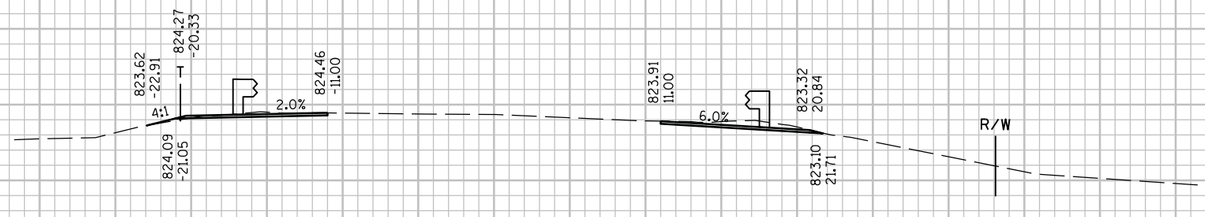
WISDOT/CADDS SHEET 21

MGS E.A.T. POST 1



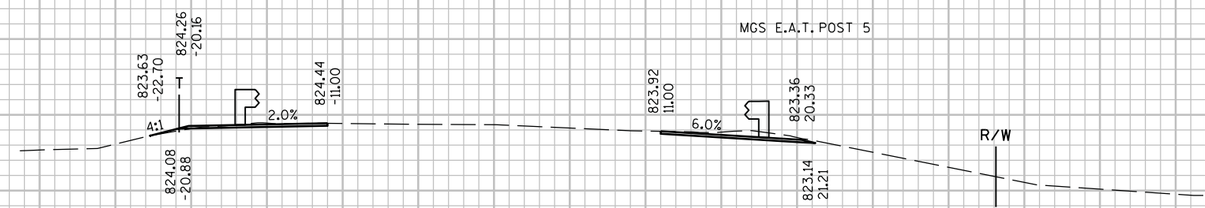
395+77

MGS E.A.T. POST 5

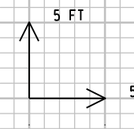


395+54

MGS E.A.T. POST 5



395+52



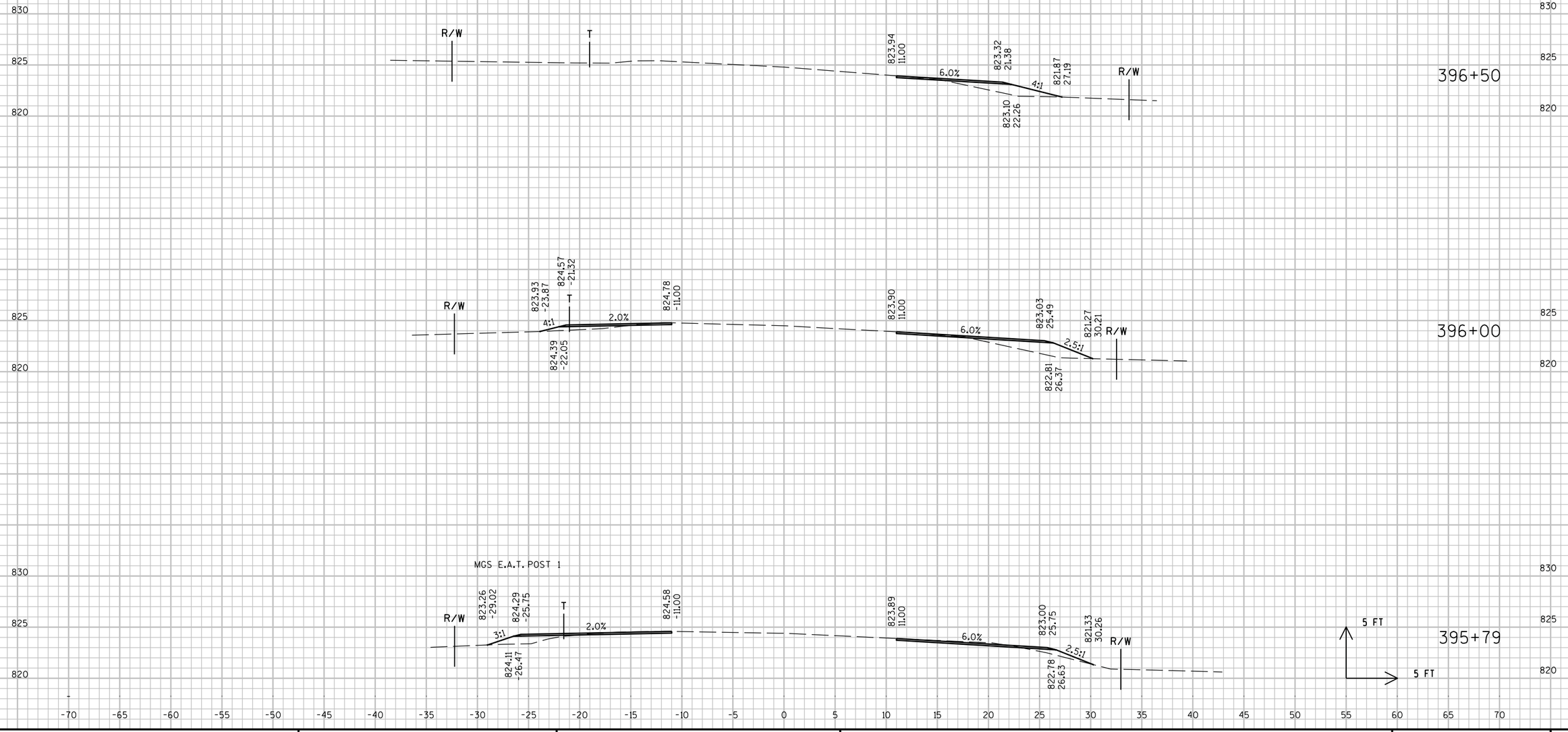
9

9

PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	CROSS SECTIONS: CTH O	SHEET 131	E

FILE NAME : P:\PIERC\15002 - CTH O\cad\XS_07.dgn PLOT DATE : 10/26/2016 PLOT BY : $$...plotuser...$$

WISDOT/CADDS SHEET 21



9

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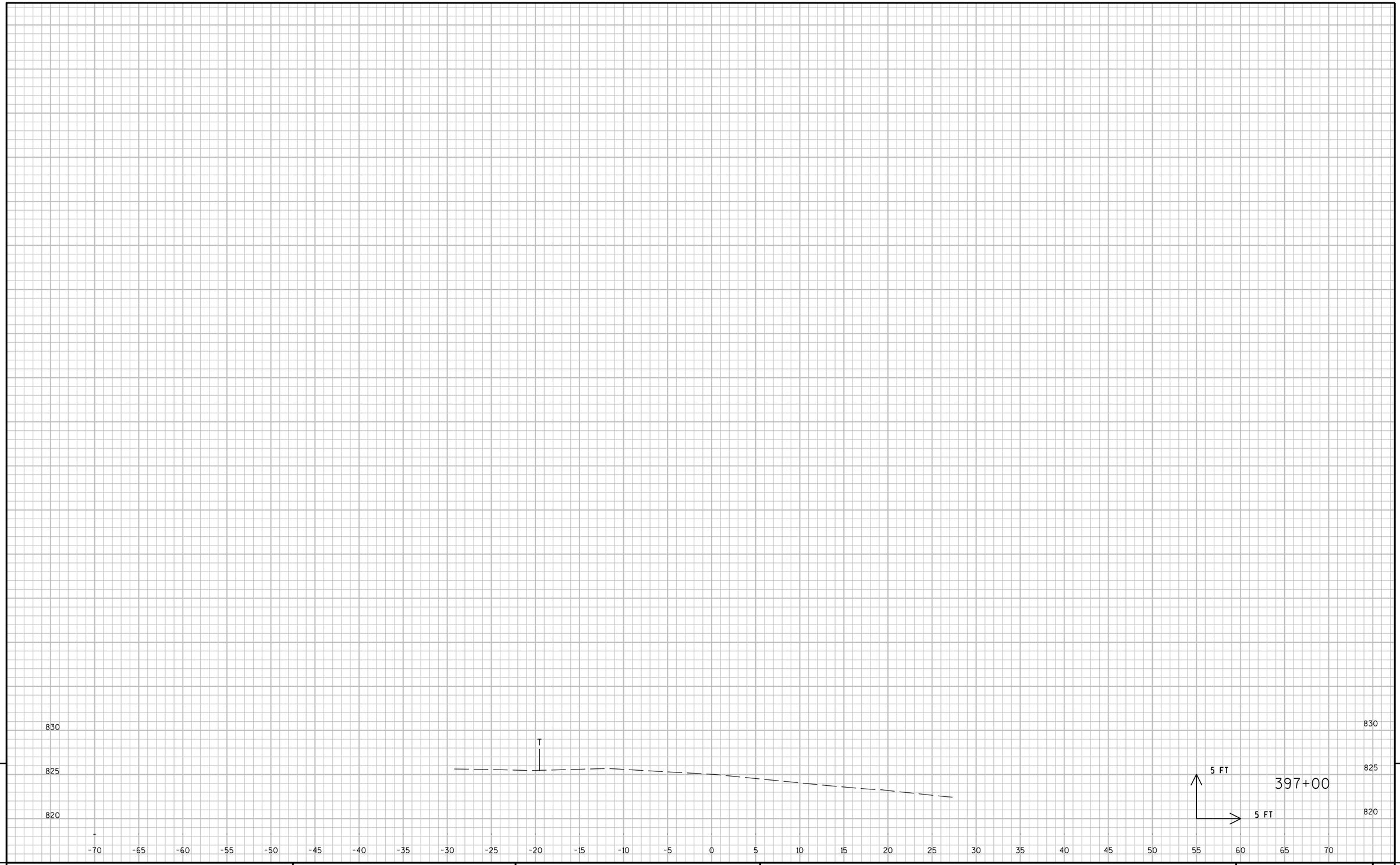
PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	CROSS SECTIONS: CTH O	SHEET 132	E



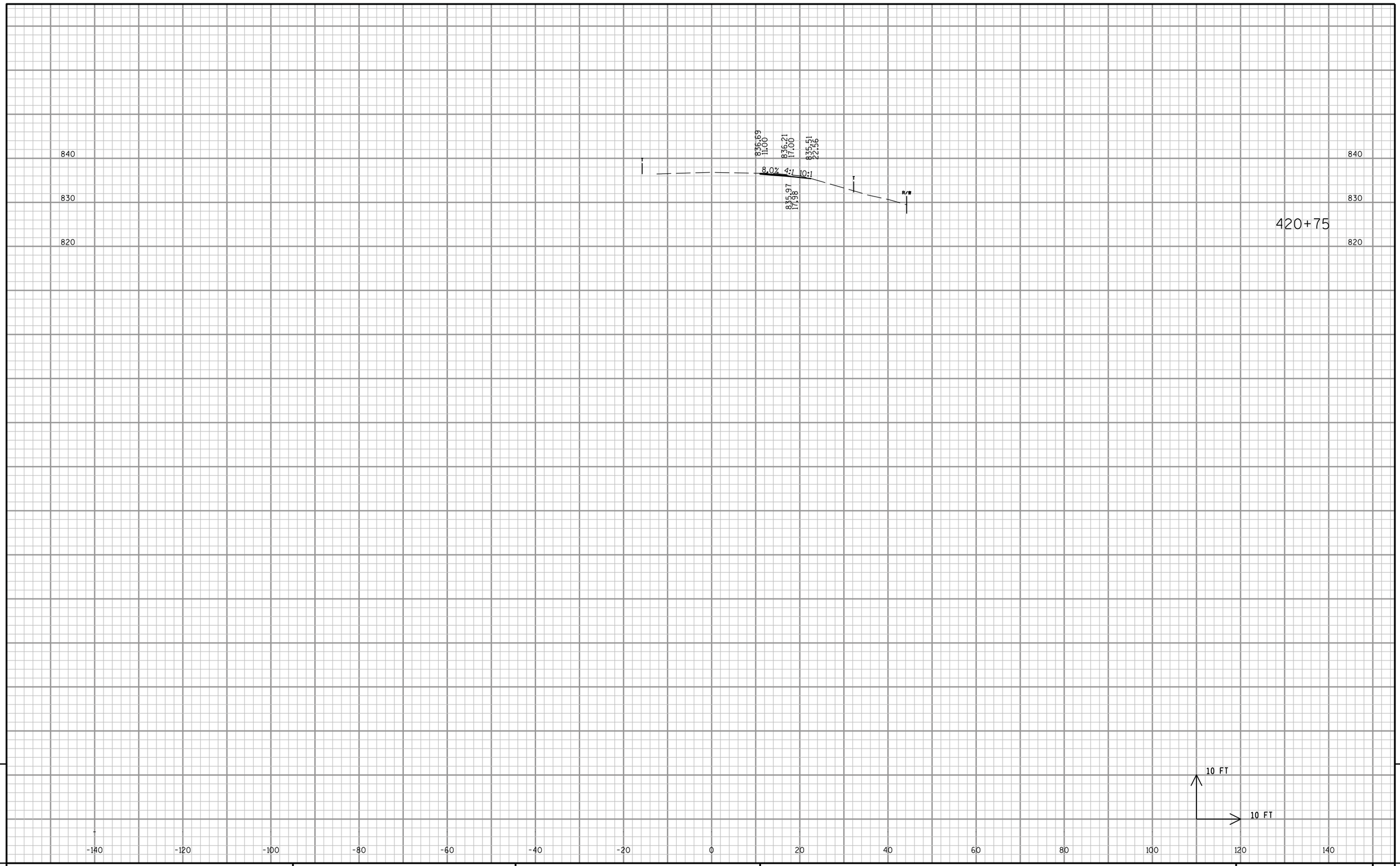
9

9

PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	CROSS SECTIONS: CTH O	SHEET 133	E

FILE NAME : P:\PIERC\15002 - CTH O\cad\XS_07.dgn PLOT DATE : 10/26/2016 PLOT BY : $$...plotuser...$$

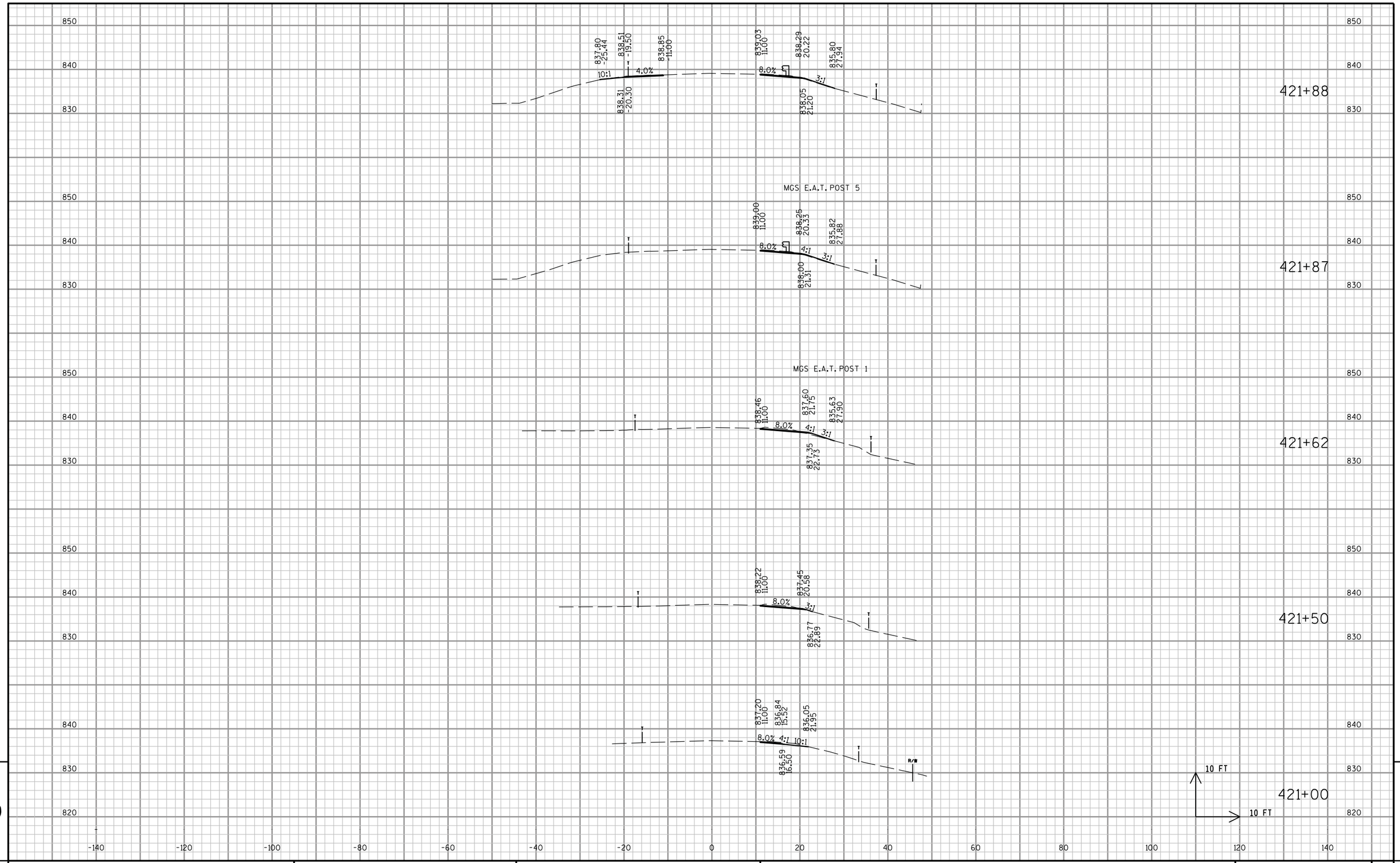
WISDOT/CADDS SHEET 21



PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	CROSS SECTIONS: CTH O	SHEET 134	E

FILE NAME : P:\PIERC\15002 - CTH O\cad\XS_08.dgn PLOT DATE : 10/26/2016 PLOT BY : $$...plotuser...$$

WISDOT/CADDS SHEET 21



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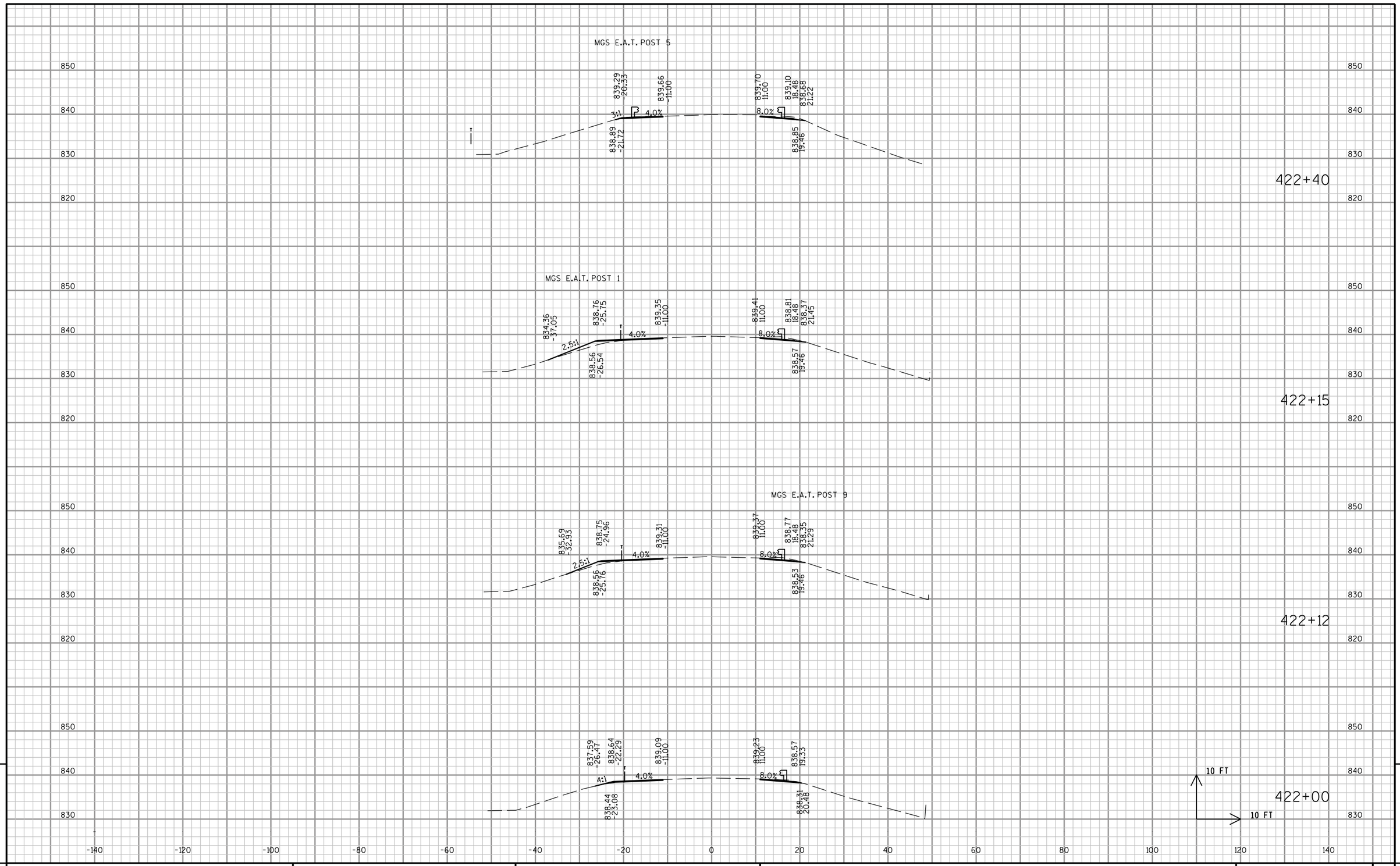
PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	CROSS SECTIONS: CTH O	SHEET 135	E

FILE NAME : P:\PIERC\15002 - CTH O\cad\XS_08.dgn PLOT DATE : 10/26/2016 PLOT BY : $$...plotuser...$$

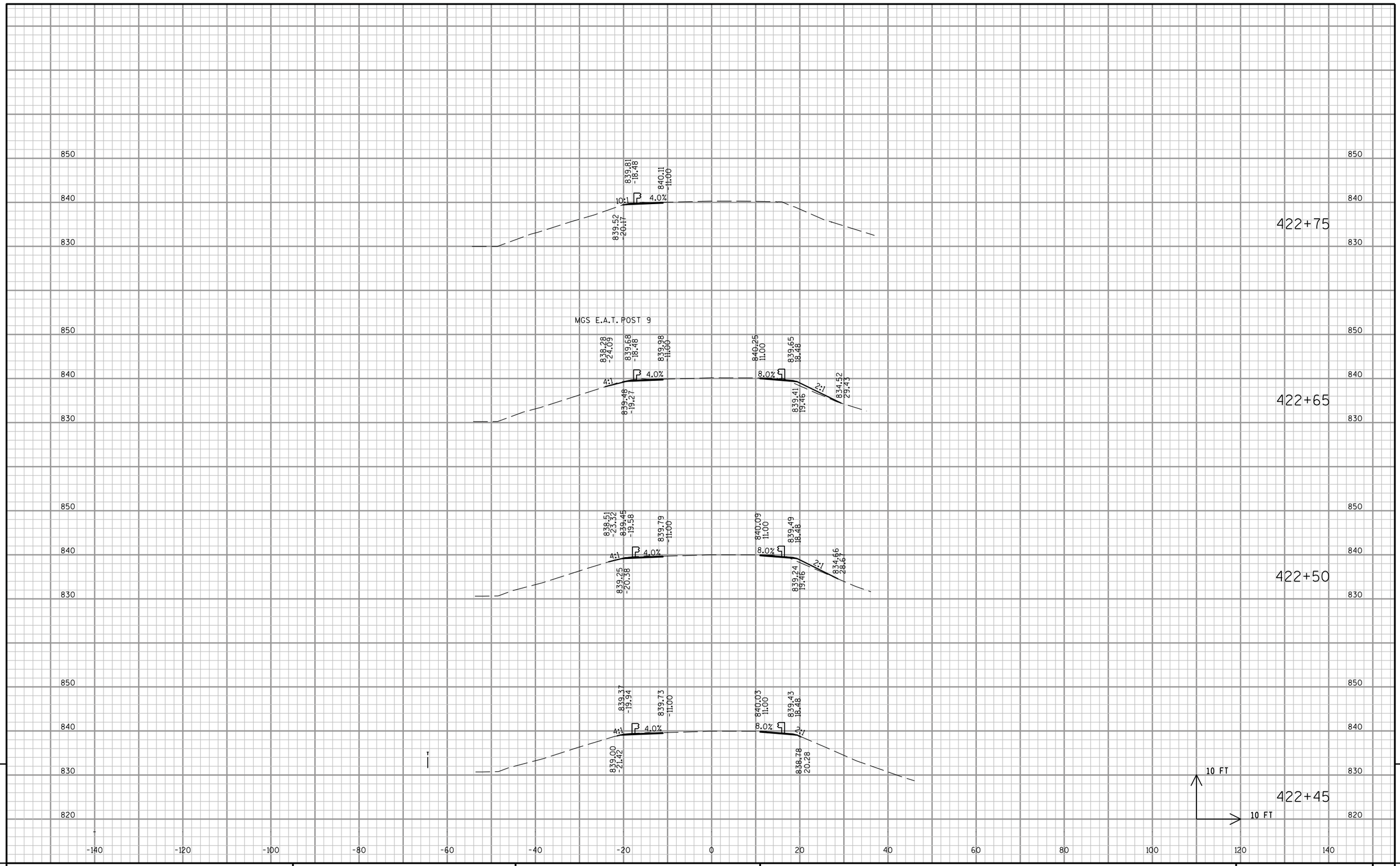
WISDOT/CADDS SHEET 21



PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	CROSS SECTIONS: CTH O	SHEET 136	E

FILE NAME : P:\PIERC\15002 - CTH O\cad\XS_08.dgn PLOT DATE : 10/26/2016 PLOT BY : $$...plotuser...$$

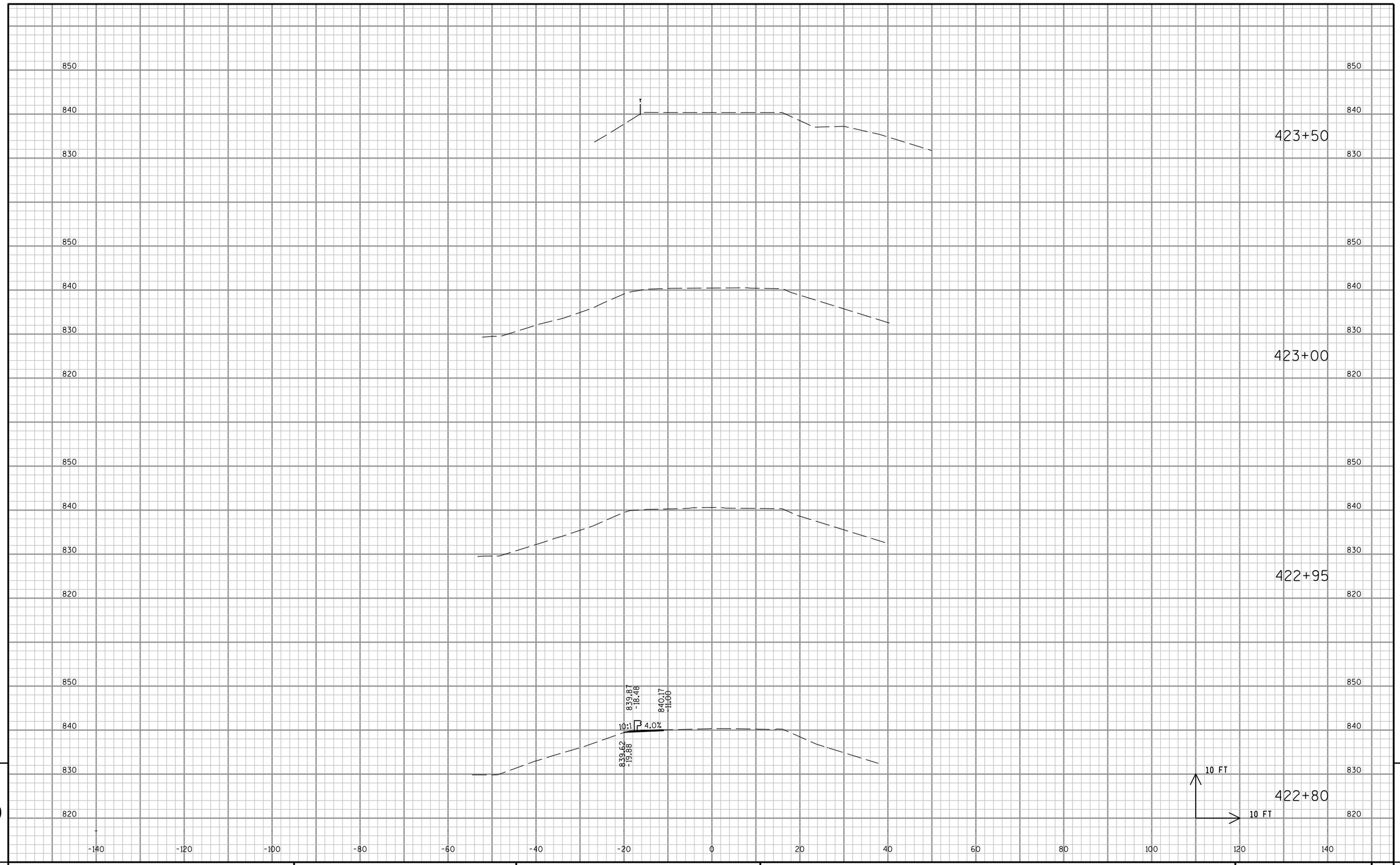
WISDOT/CADDS SHEET 21



PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	CROSS SECTIONS: CTH O	SHEET 137	E

FILE NAME : P:\PIERC\15002 - CTH O\cad\XS_08.dgn PLOT DATE : 10/26/2016 PLOT BY : $$...plotuser...$$

WISDOT/CADDS SHEET 21



9

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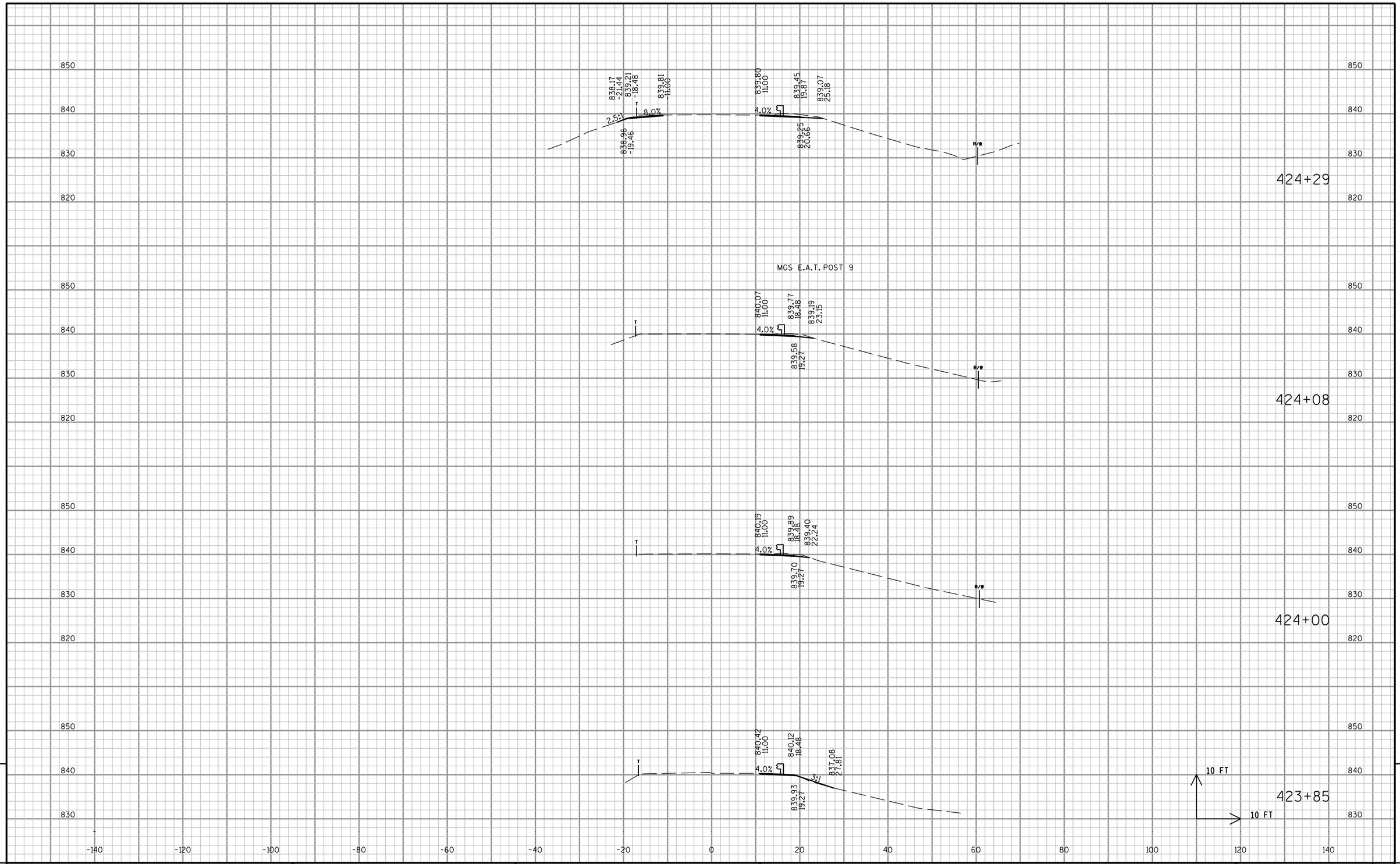
PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	CROSS SECTIONS: CTH O	SHEET 138	E

FILE NAME : P:\PIERC\15002 - CTH O\cad\XS_08.dgn

PLOT DATE : 10/26/2016

PLOT BY : $$...plotuser...$$

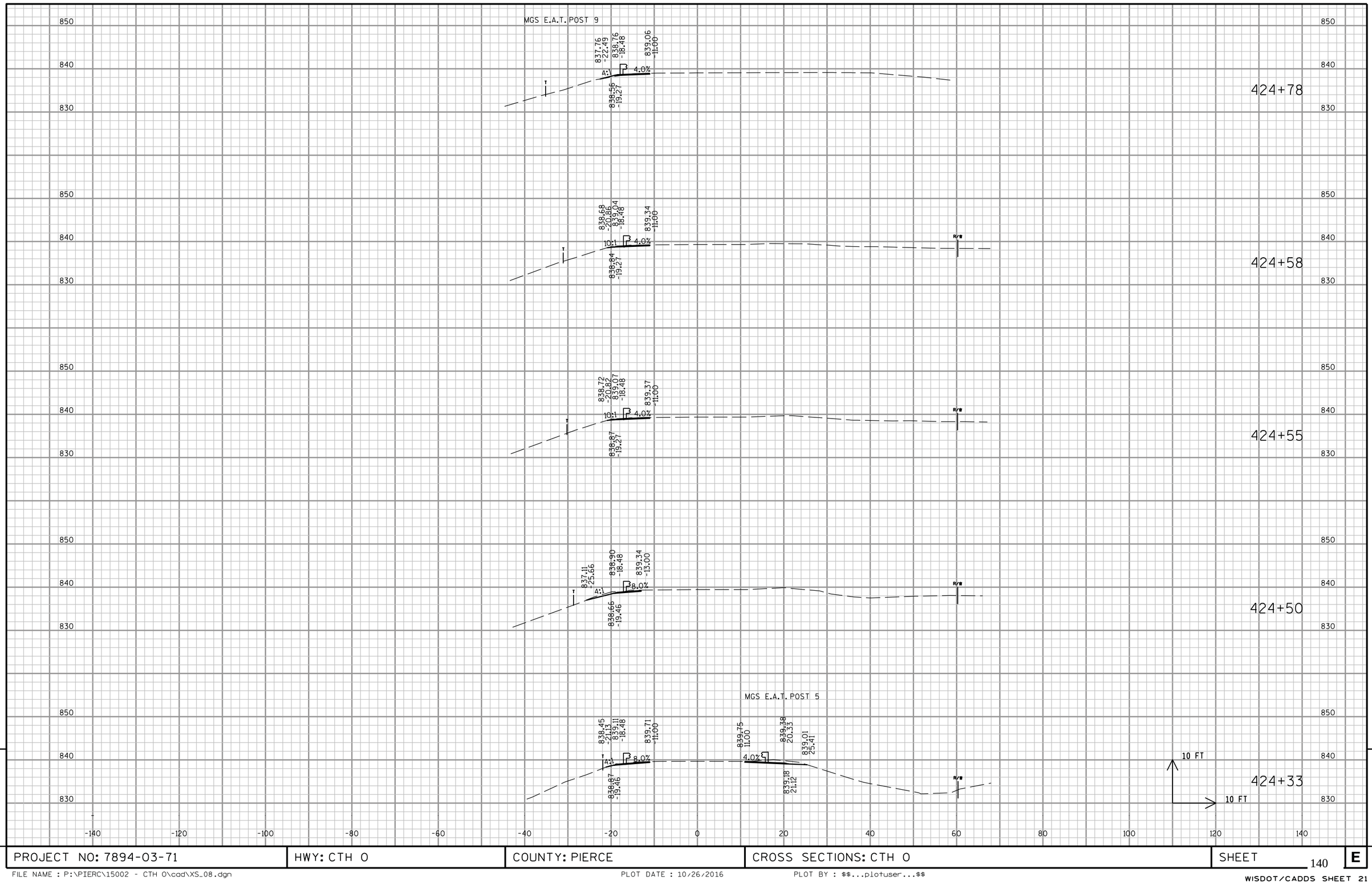
WISDOT/CADDS SHEET 21



PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	CROSS SECTIONS: CTH O	SHEET 139	E

FILE NAME : P:\PIERC\15002 - CTH O\cad\XS_08.dgn PLOT DATE : 10/26/2016 PLOT BY : $$...plotuser...$$

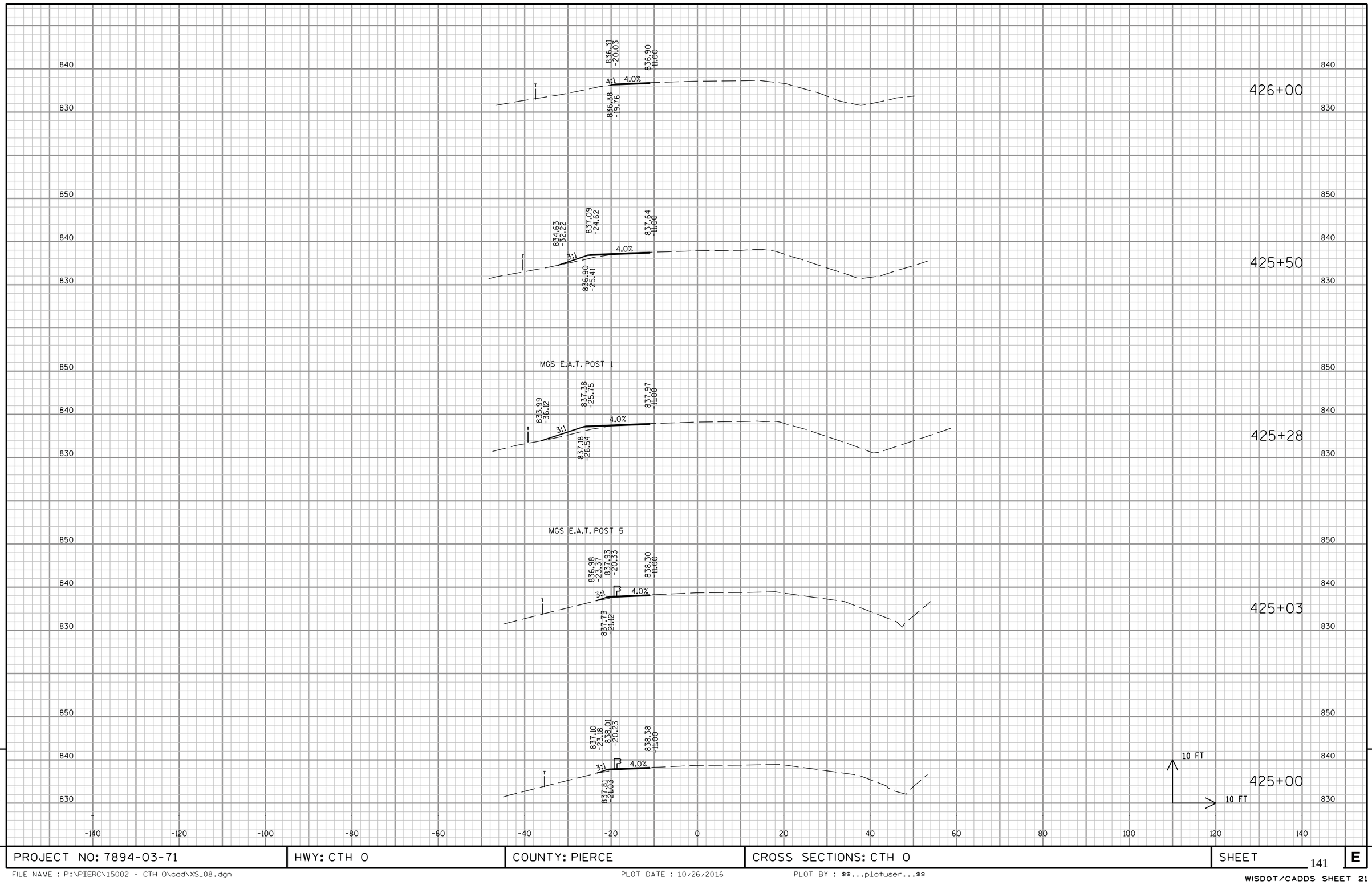
WISDOT/CADDS SHEET 21



PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	CROSS SECTIONS: CTH O	SHEET 140	E

FILE NAME : P:\PIERC\15002 - CTH O\cad\XS_08.dgn PLOT DATE : 10/26/2016 PLOT BY : $$...plotuser...$$

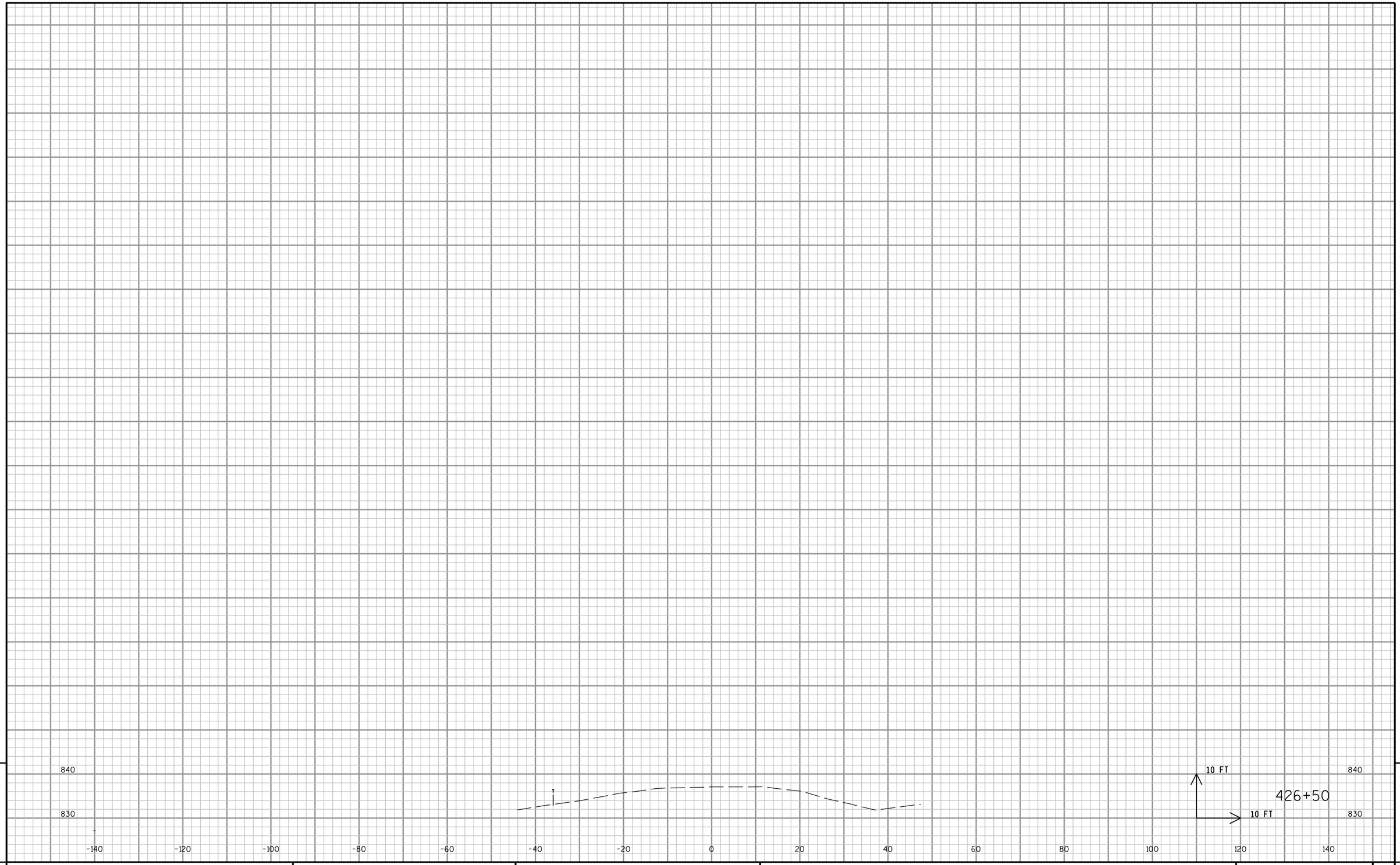
WISDOT/CADDS SHEET 21



PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	CROSS SECTIONS: CTH O	SHEET 141	E

FILE NAME : P:\PIERC\15002 - CTH O\cad\XS_08.dgn PLOT DATE : 10/26/2016 PLOT BY : $$...plotuser...$$

WISDOT/CADDS SHEET 21



9

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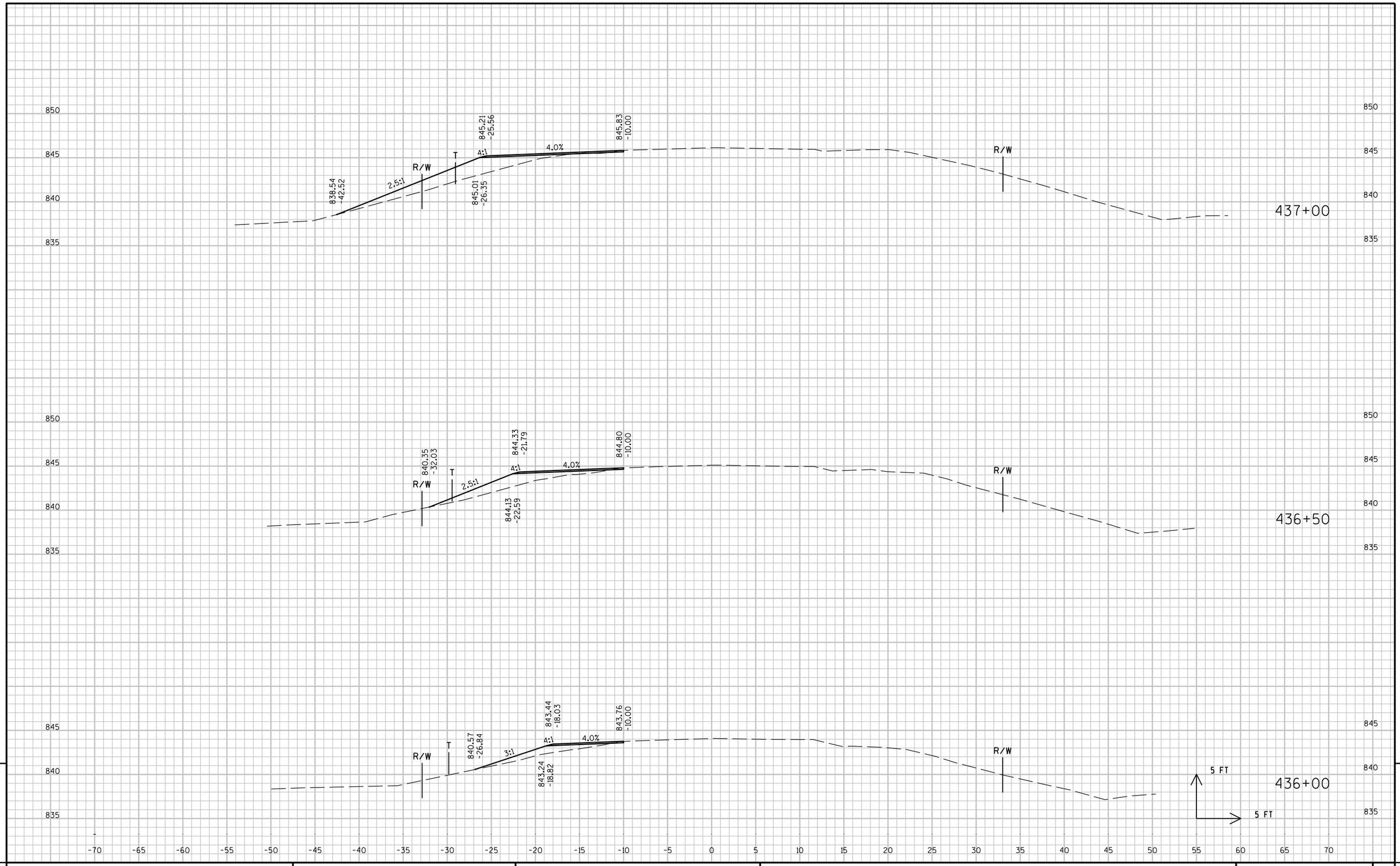
PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	CROSS SECTIONS: CTH O	SHEET 142	E

FILE NAME : P:\PIERC\15002 - CTH O\cad\XS_08.dgn

PLOT DATE : 10/26/2016

PLOT BY : $$...plotuser...$$

WISDOT/CADDS SHEET 21



9

9

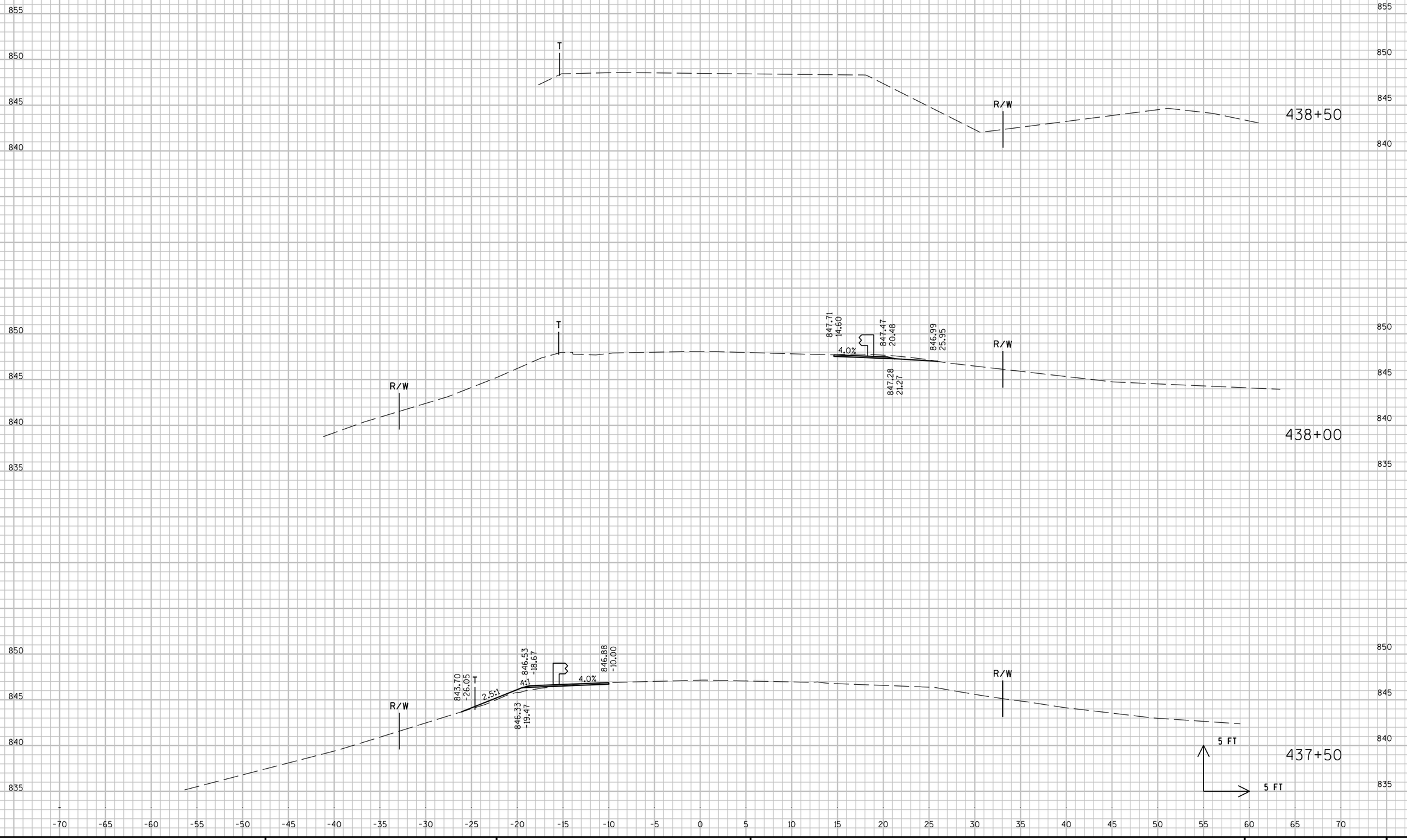
PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	CROSS SECTIONS: CTH O	SHEET 143	E

FILE NAME : P:\PIERC\15002 - CTH O\cad\XS_09.dgn

PLOT DATE : 10/26/2016

PLOT BY : $$...plotuser...$$

WISDOT/CADDS SHEET 21



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9

PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	CROSS SECTIONS: CTH O	SHEET 144	E

FILE NAME : P:\PIERC\15002 - CTH O\cad\XS_09.dgn PLOT DATE : 10/26/2016 PLOT BY : $$...plotuser...$$

WISDOT/CADDS SHEET 21

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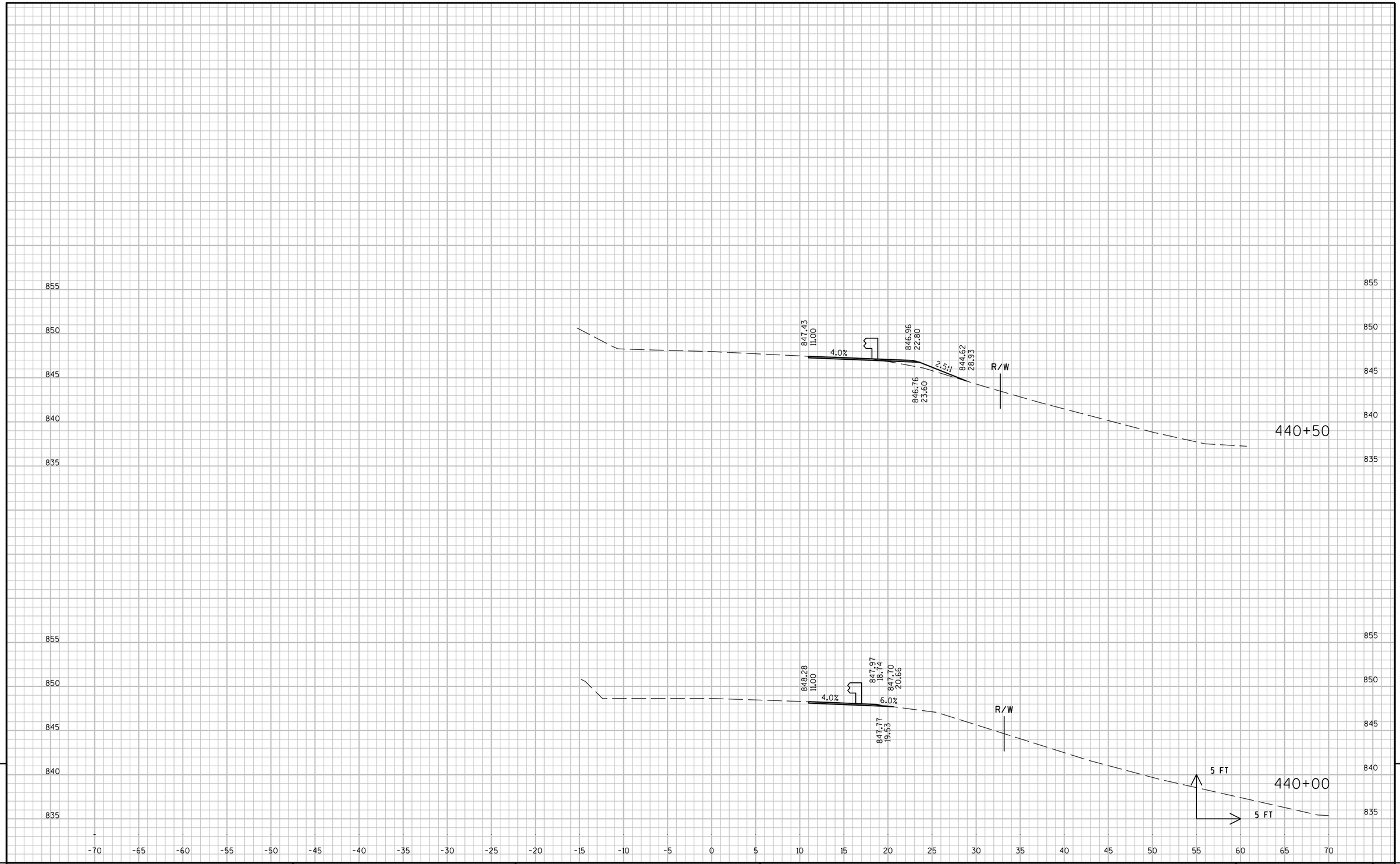
PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	CROSS SECTIONS: CTH O	SHEET 145	E

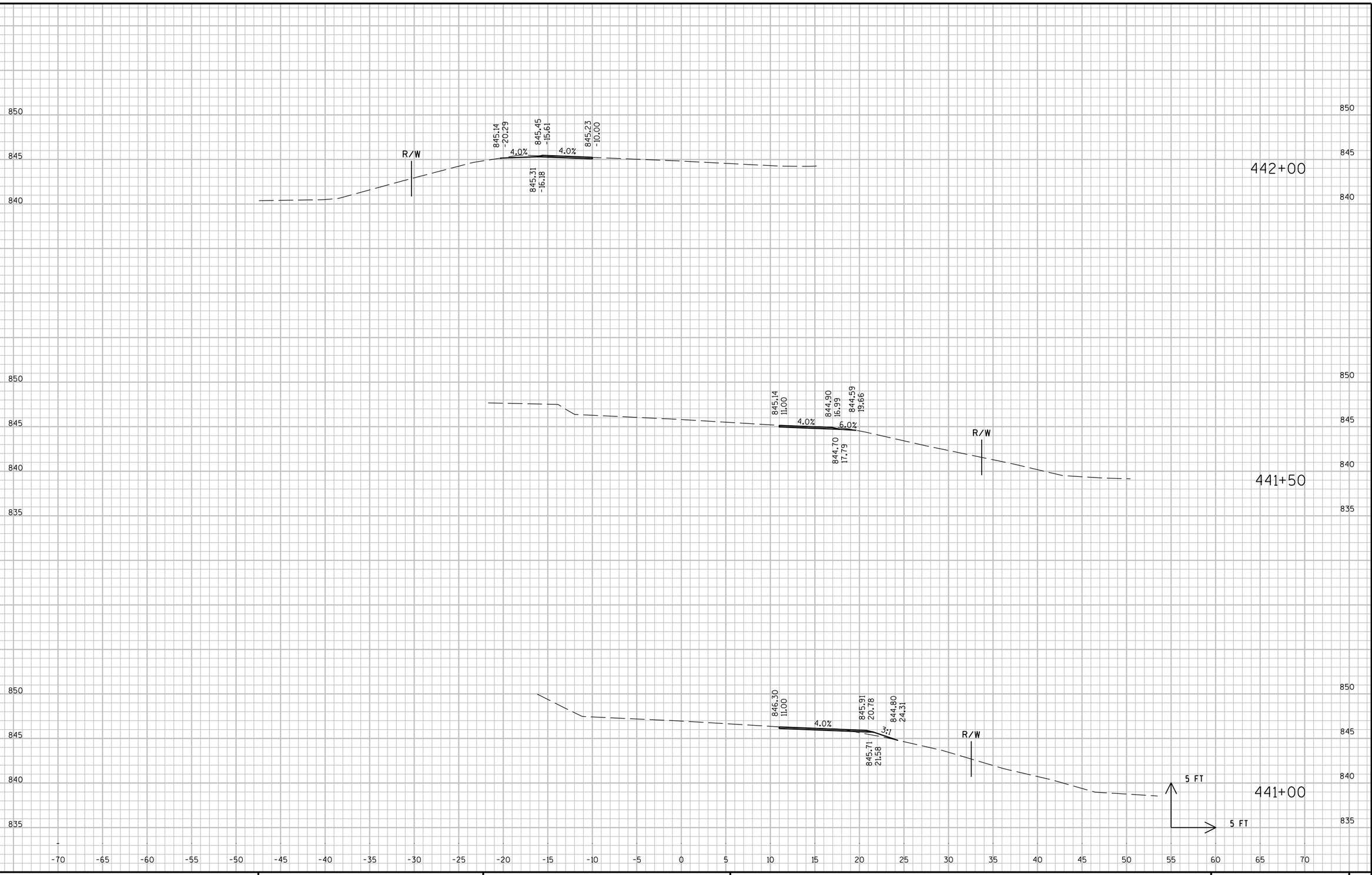
FILE NAME : P:\PIERC\15002 - CTH O\cad\XS_09.dgn PLOT DATE : 10/26/2016 PLOT BY : $$...plotuser...$$

WISDOT/CADDS SHEET 21



9 9

PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	CROSS SECTIONS: CTH O	SHEET 146	E



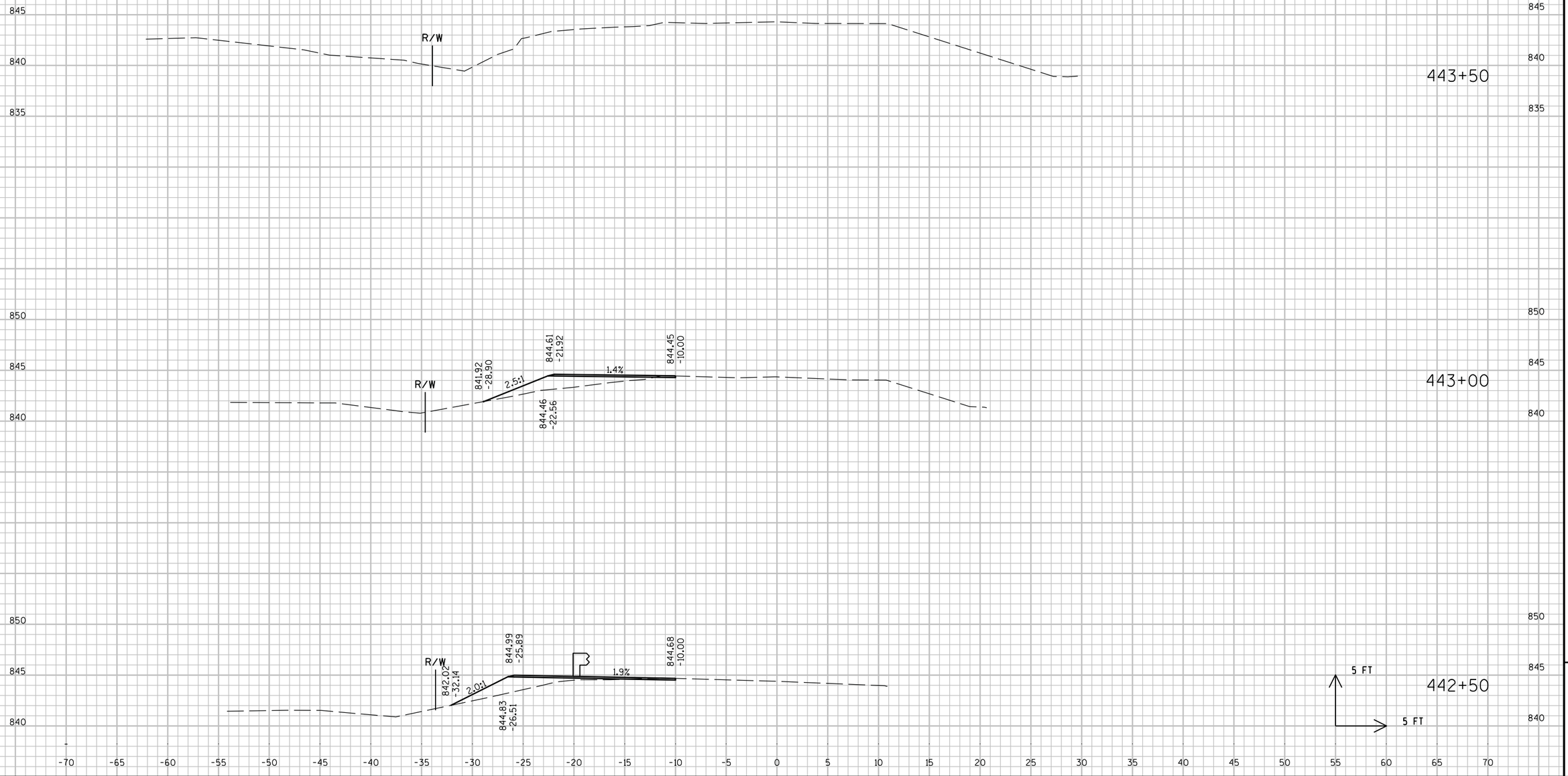
9

PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	CROSS SECTIONS: CTH O	SHEET 147	E

9

FILE NAME : P:\PIERC\15002 - CTH O\cad\XS_09.dgn PLOT DATE : 10/26/2016 PLOT BY : $$...plotuser...$$

WISDOT/CADDS SHEET 21



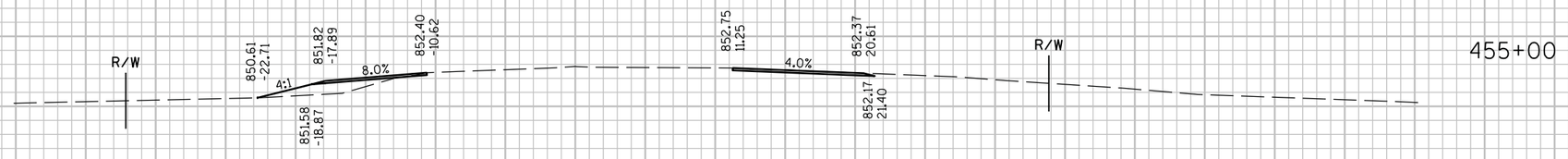
9

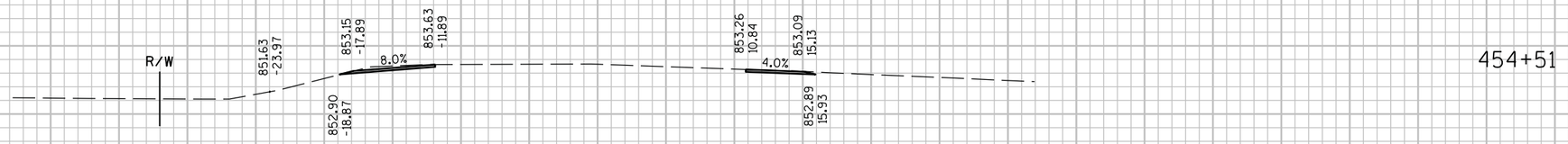
9

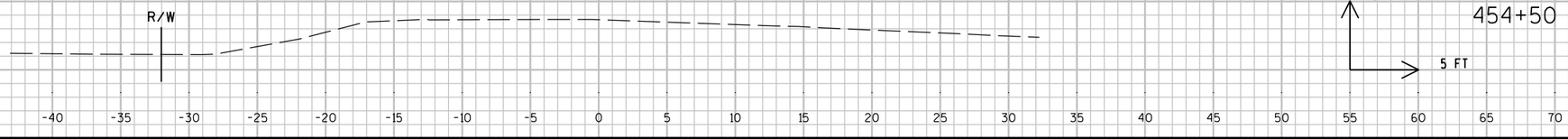
PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	CROSS SECTIONS: CTH O	SHEET 148	E

FILE NAME : P:\PIERC\15002 - CTH O\cad\XS_09.dgn PLOT DATE : 1/30/2017 PLOT BY : $$...plotuser...$$

WISDOT/CADDS SHEET 21







9

9

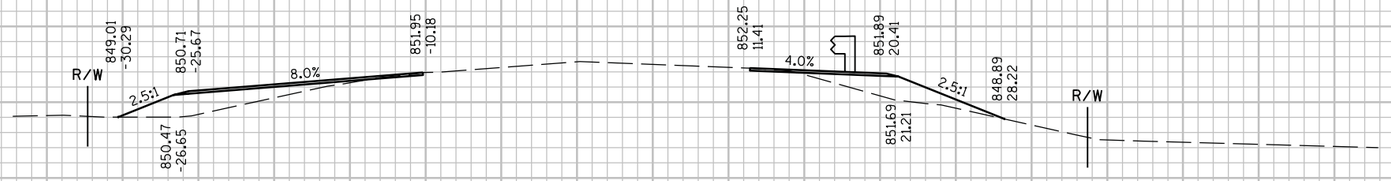
PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	CROSS SECTIONS: CTH O	SHEET 149	E

FILE NAME : P:\PIERC\15002 - CTH O\cad\XS_10.dgn

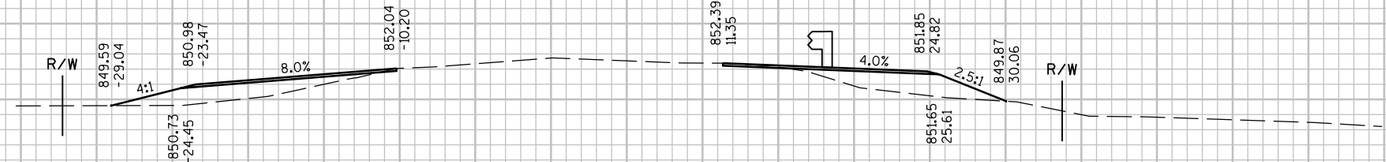
PLOT DATE : 10/26/2016

PLOT BY : $$...plotuser...$$

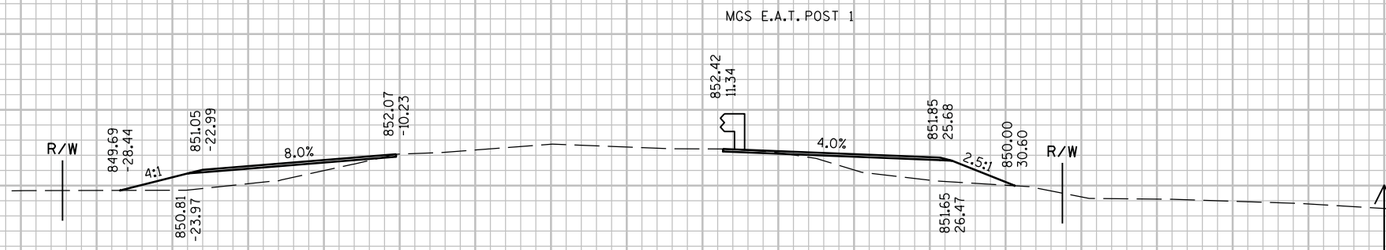
WISDOT/CADDS SHEET 21



455+70



455+50

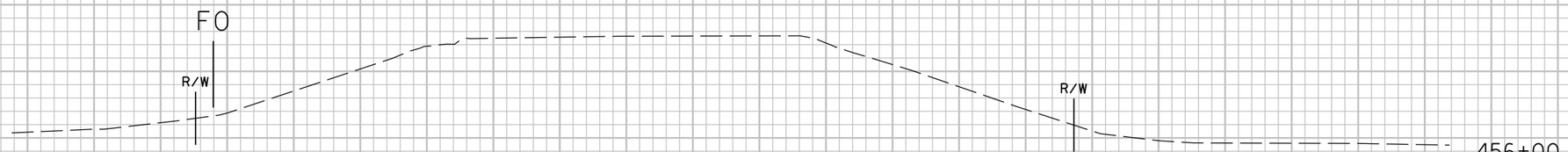


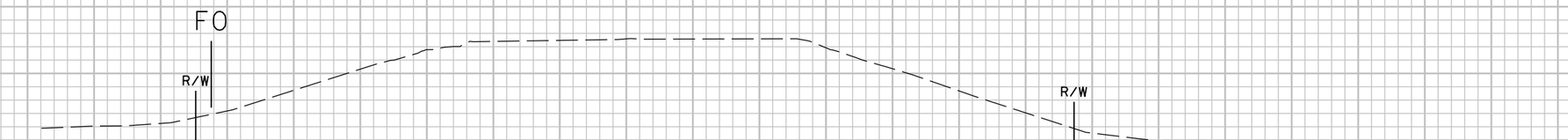
455+46

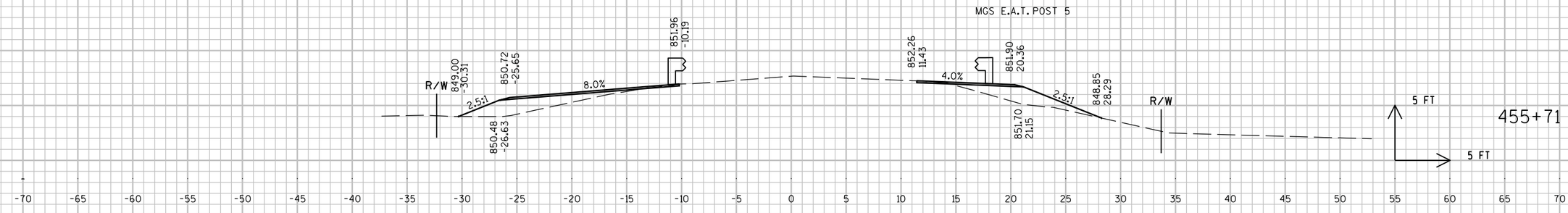
-70 -65 -60 -55 -50 -45 -40 -35 -30 -25 -20 -15 -10 -5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70

9 9

PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	CROSS SECTIONS: CTH O	SHEET 150	E







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PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	CROSS SECTIONS: CTH O	SHEET 151	E

FILE NAME : P:\PIERC\15002 - CTH O\cad\XS_10.dgn

PLOT DATE : 10/26/2016

PLOT BY : $$...plotuser...$$

WISDOT/CADDS SHEET 21

9

9

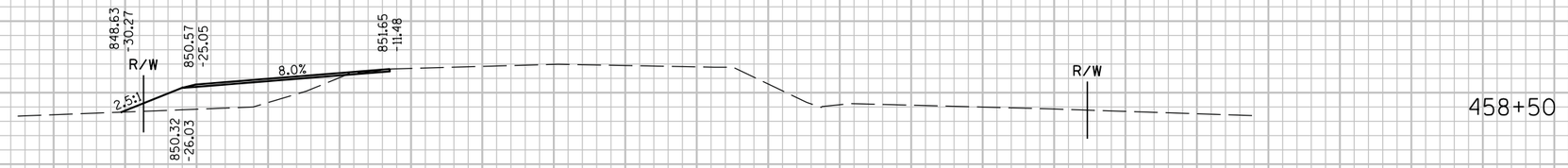
PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	CROSS SECTIONS: CTH O	SHEET 152	E

FILE NAME : P:\PIERC\15002 - CTH O\cad\XS_10.dgn

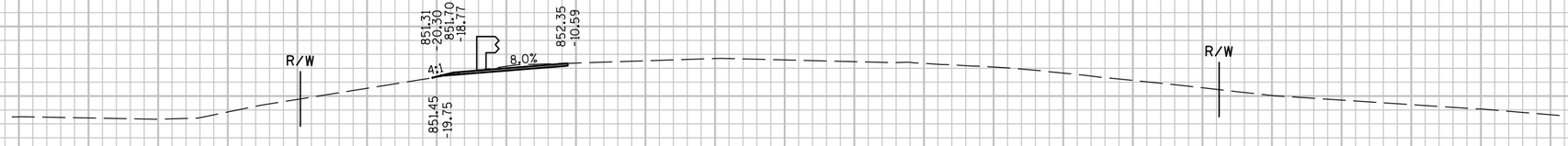
PLOT DATE : 10/26/2016

PLOT BY : $$...plotuser...$$

WISDOT/CADDS SHEET 21



458+50



458+00

457+50

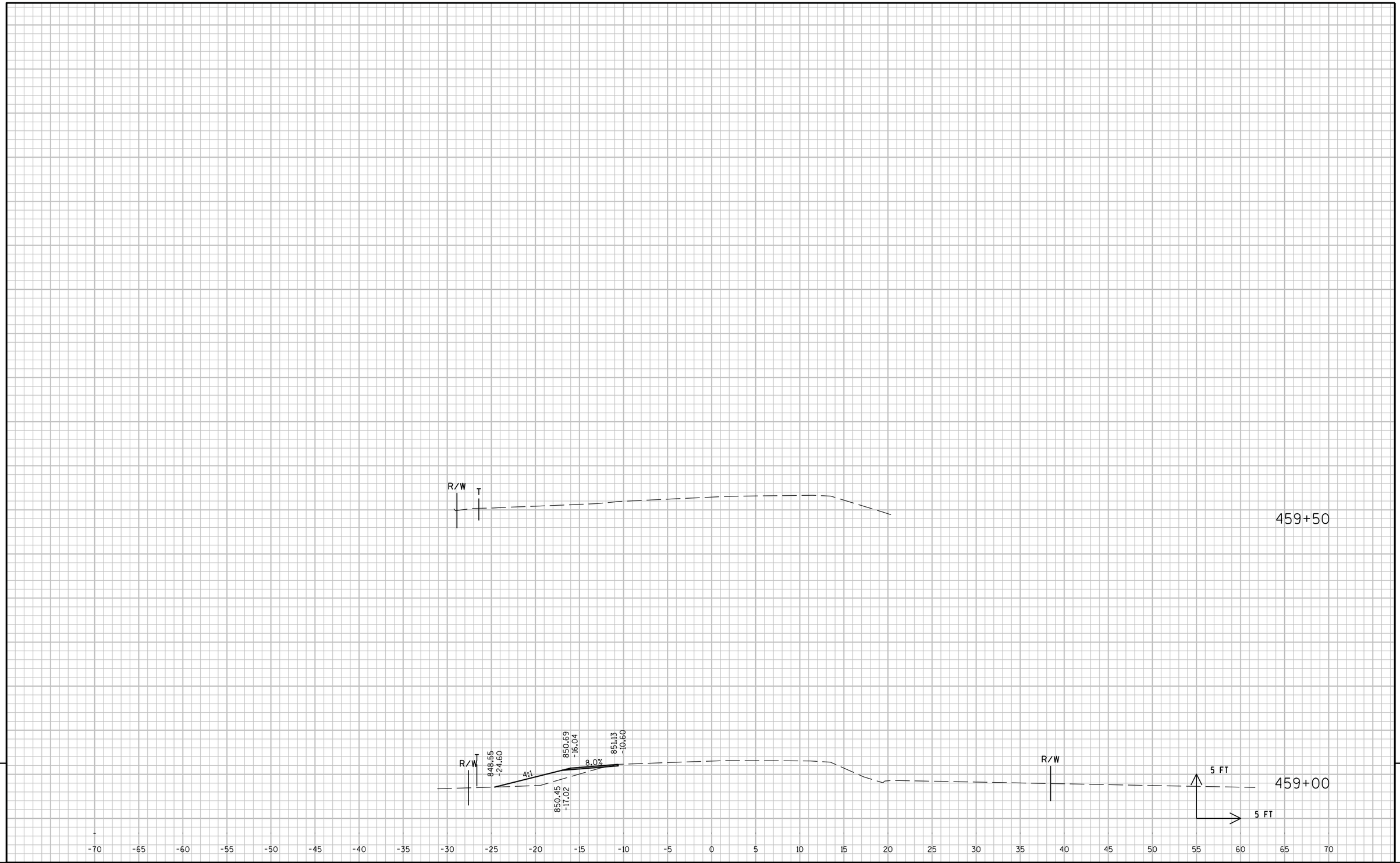
-70 -65 -60 -55 -50 -45 -40 -35 -30 -25 -20 -15 -10 -5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70

9 9

PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	CROSS SECTIONS: CTH O	SHEET 153	E

FILE NAME : P:\PIERC\15002 - CTH O\cad\XS_10.dgn PLOT DATE : 10/26/2016 PLOT BY : $$...plotuser...$$

WISDOT/CADDS SHEET 21



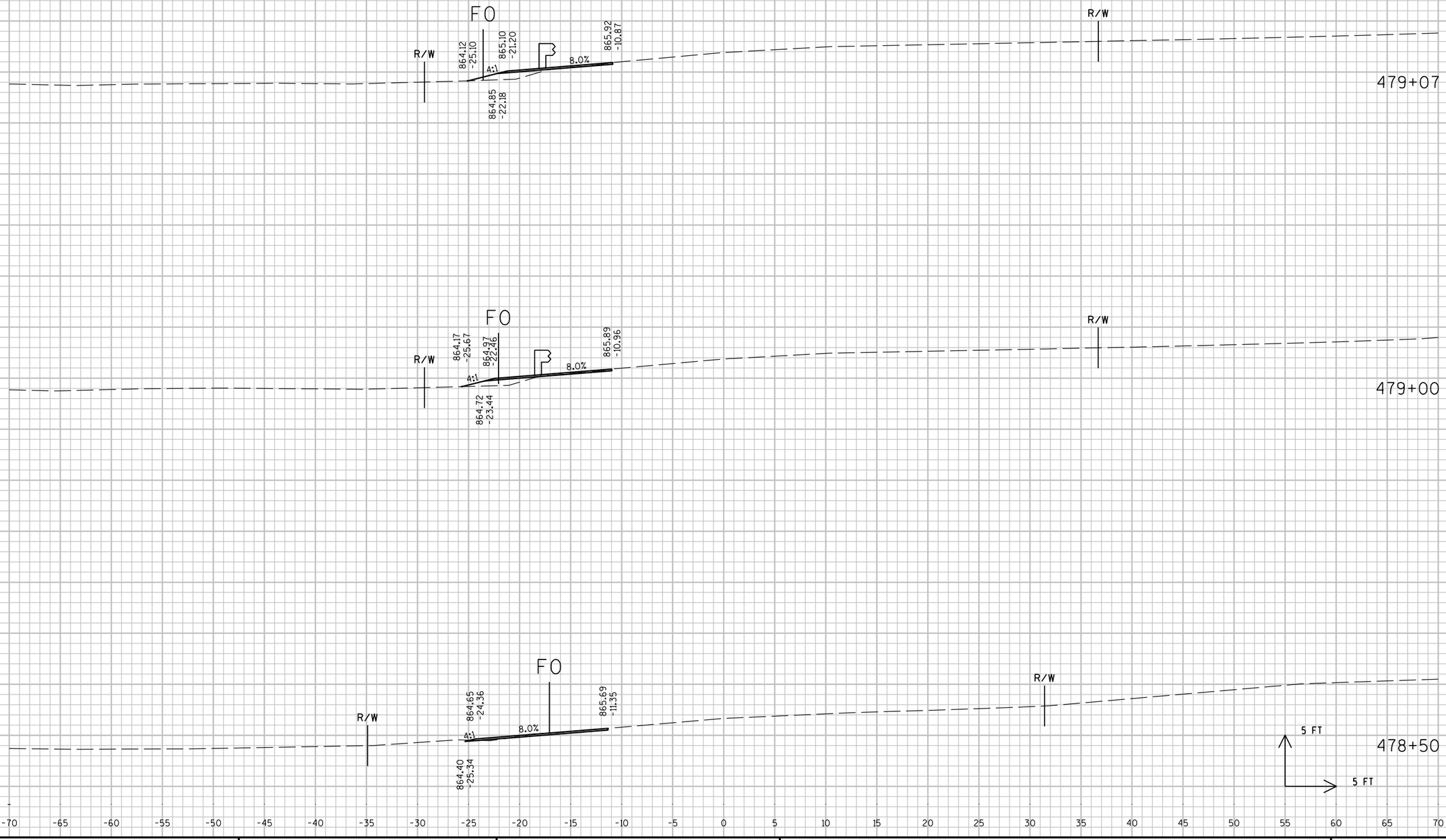
9

9

PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	CROSS SECTIONS: CTH O	SHEET 154	E

FILE NAME : P:\PIERC\15002 - CTH O\cad\XS_10.dgn PLOT DATE : 10/26/2016 PLOT BY : $$...plotuser...$$

WISDOT/CADDS SHEET 21



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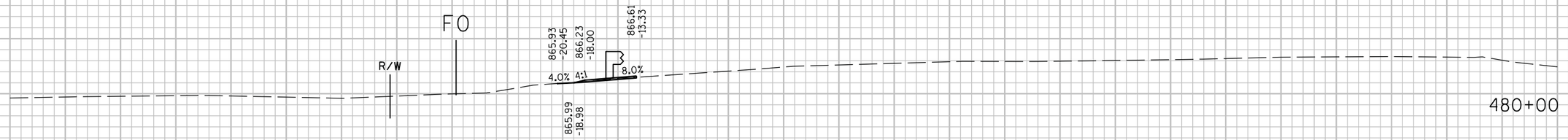
9

PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	CROSS SECTIONS: CTH O	SHEET 155	E

FILE NAME : P:\PIERC\15002 - CTH O\cad\XS_11.dgn PLOT DATE : 10/26/2016 PLOT BY : $$...plotuser...$$

WISDOT/CADDS SHEET 21



9

9

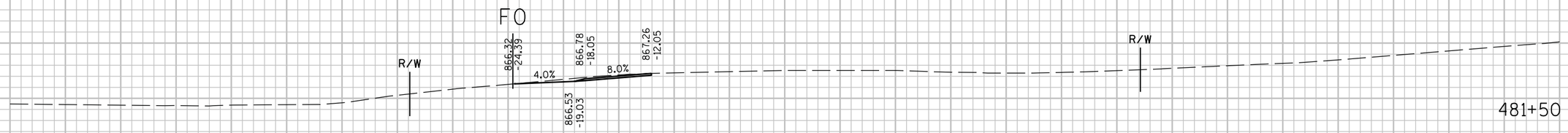
PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	CROSS SECTIONS: CTH O	SHEET 156	E

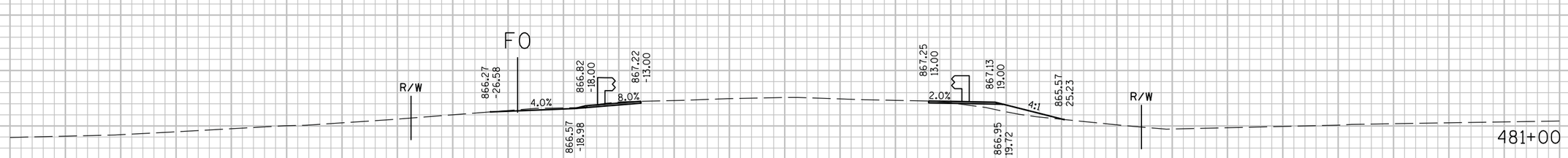
FILE NAME : P:\PIERC\15002 - CTH O\cad\XS_11.dgn

PLOT DATE : 10/26/2016

PLOT BY : $$...plotuser...$$

WISDOT/CADDS SHEET 21





9

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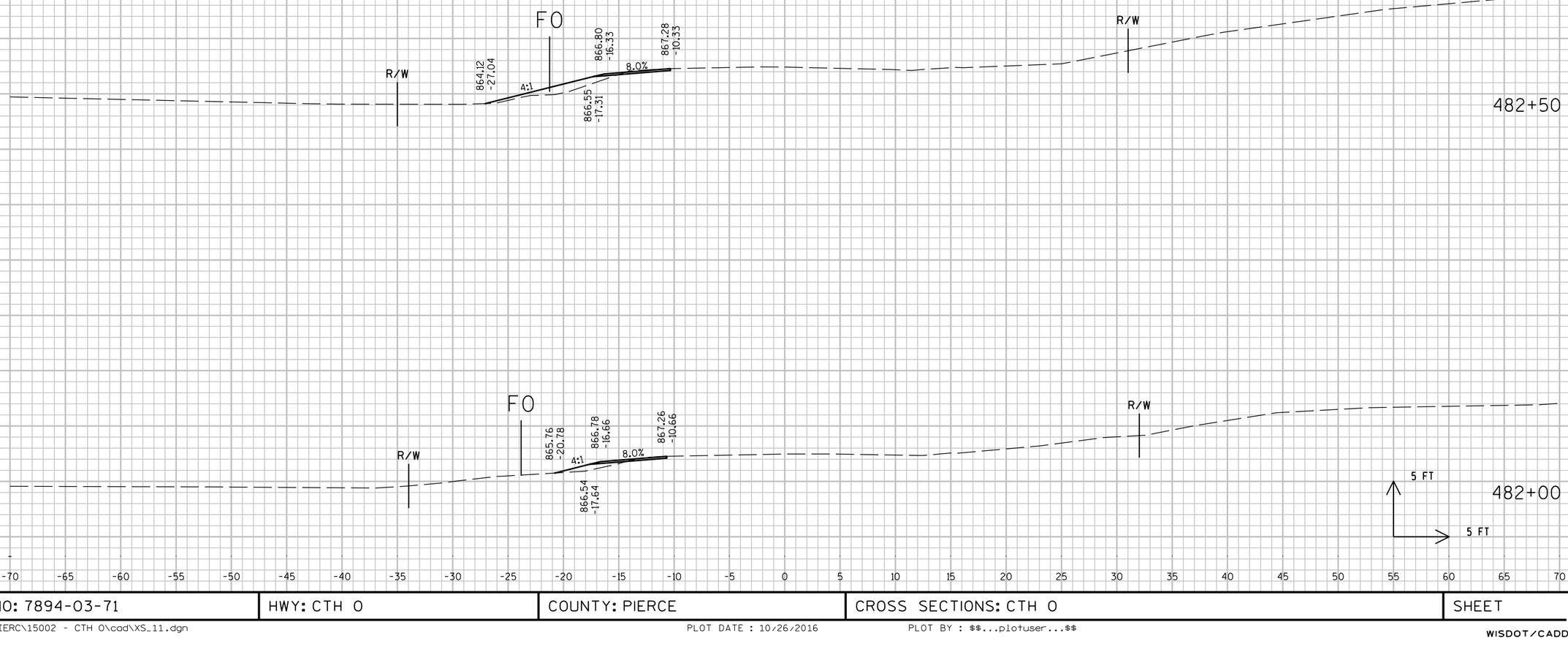
PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	CROSS SECTIONS: CTH O	SHEET 157	E



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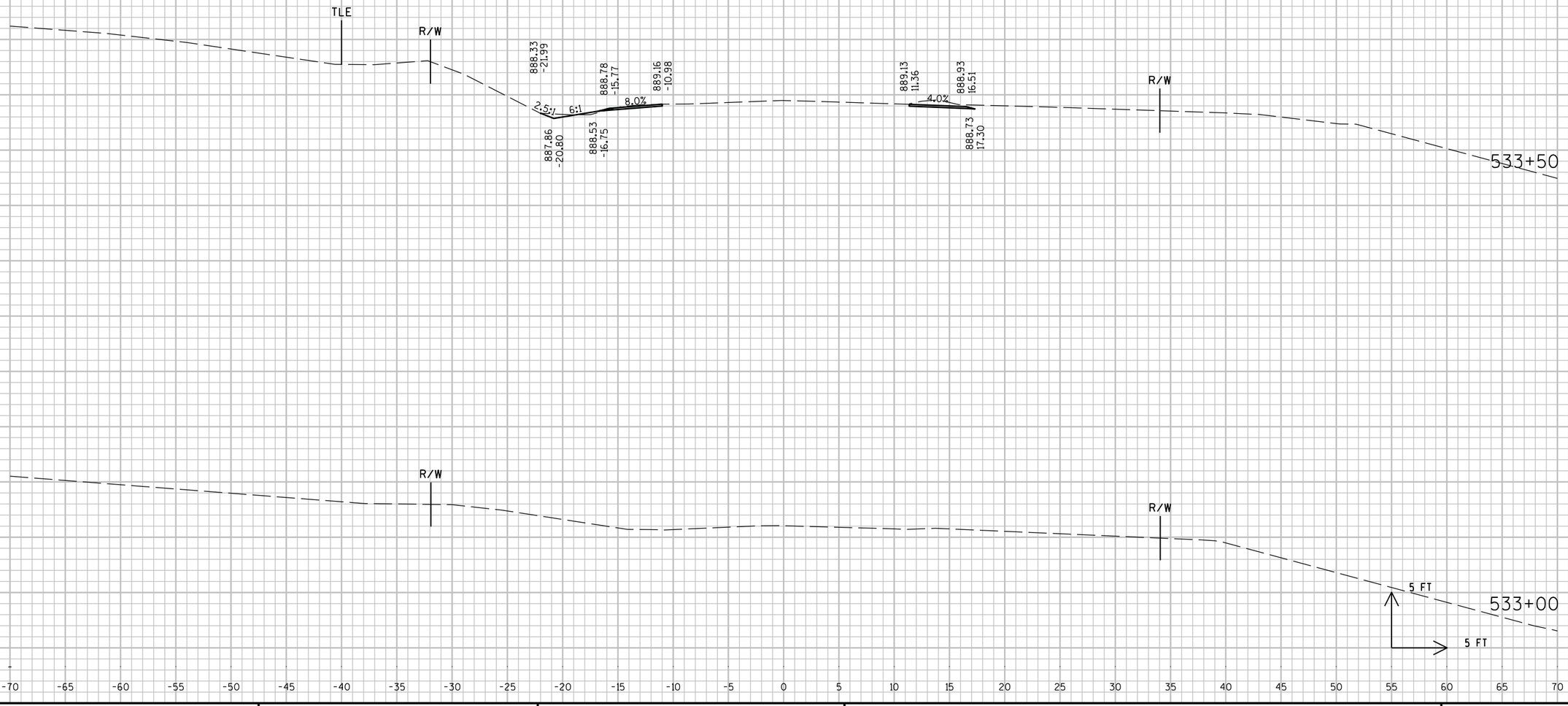
PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	CROSS SECTIONS: CTH O	SHEET 158	E

FILE NAME : P:\PIERC\15002 - CTH O\cad\XS_11.dgn

PLOT DATE : 10/26/2016

PLOT BY : $$...plotuser...$$

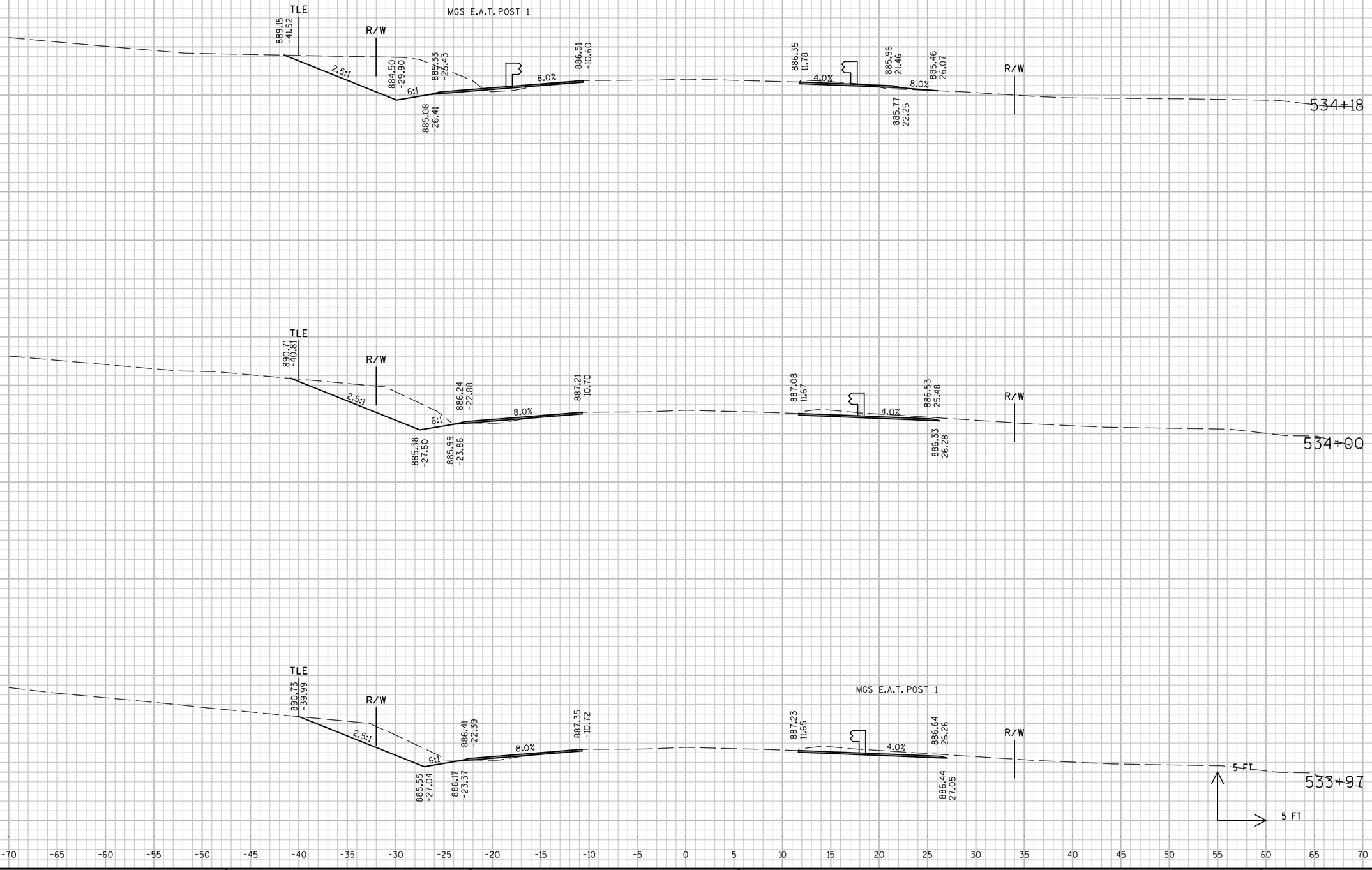
WISDOT/CADDS SHEET 21



PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	CROSS SECTIONS: CTH O	SHEET 159	E

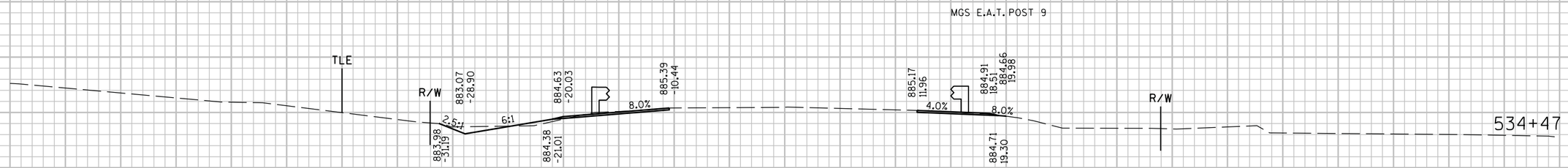
FILE NAME : P:\PIERC\15002 - CTH O\cad\XS_12.dgn PLOT DATE : 10/26/2016 PLOT BY : $$...plotuser...$$

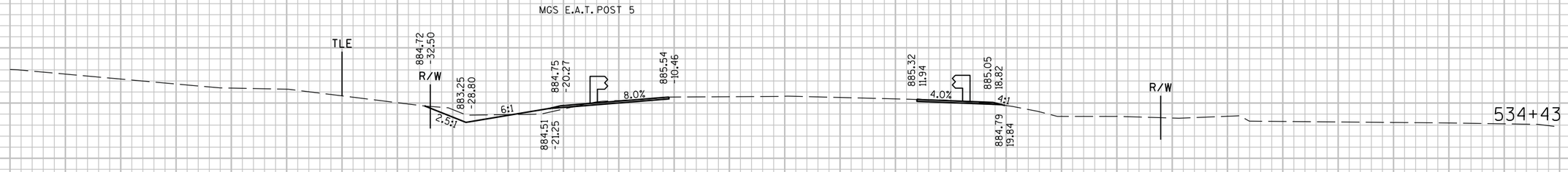
WISDOT/CADDS SHEET 21

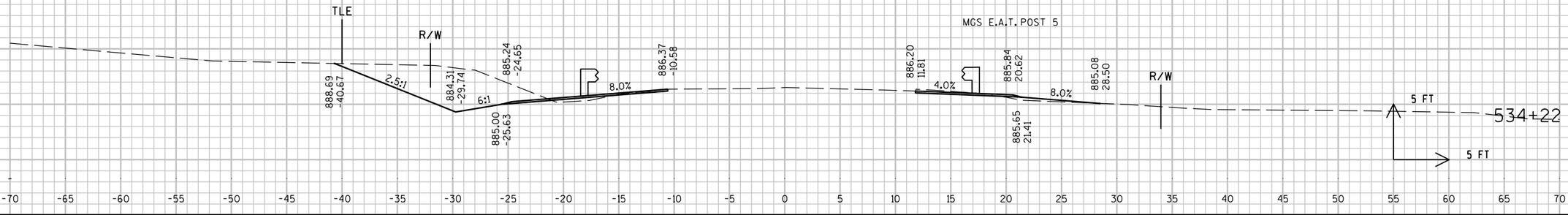


9 9

PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	CROSS SECTIONS: CTH O	SHEET 160	E







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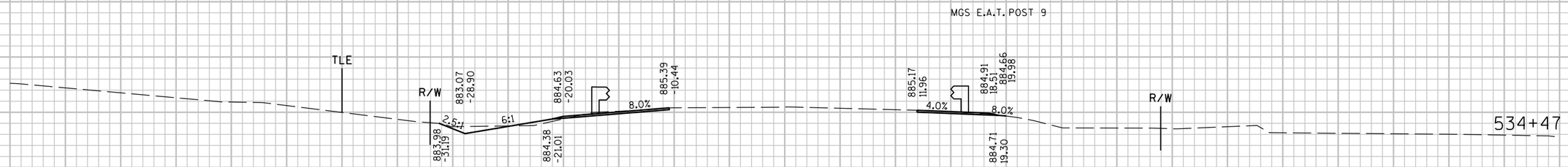
PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	CROSS SECTIONS: CTH O	SHEET 161	E

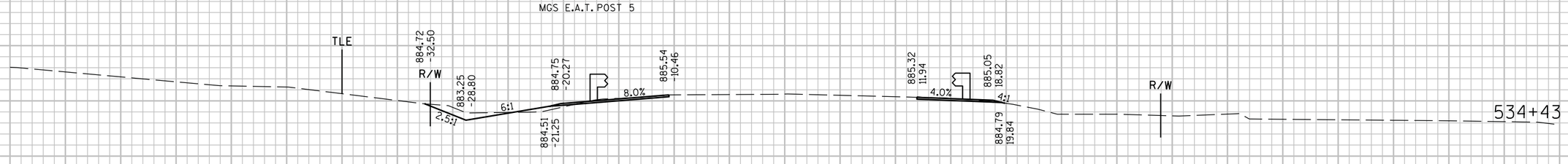
FILE NAME : P:\PIERC\15002 - CTH O\cad\XS_12.dgn

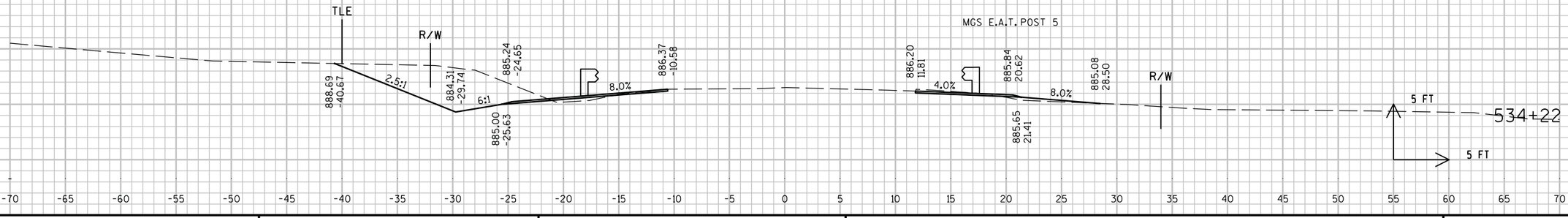
PLOT DATE : 10/26/2016

PLOT BY : $$...plotuser...$$

WISDOT/CADDS SHEET 21







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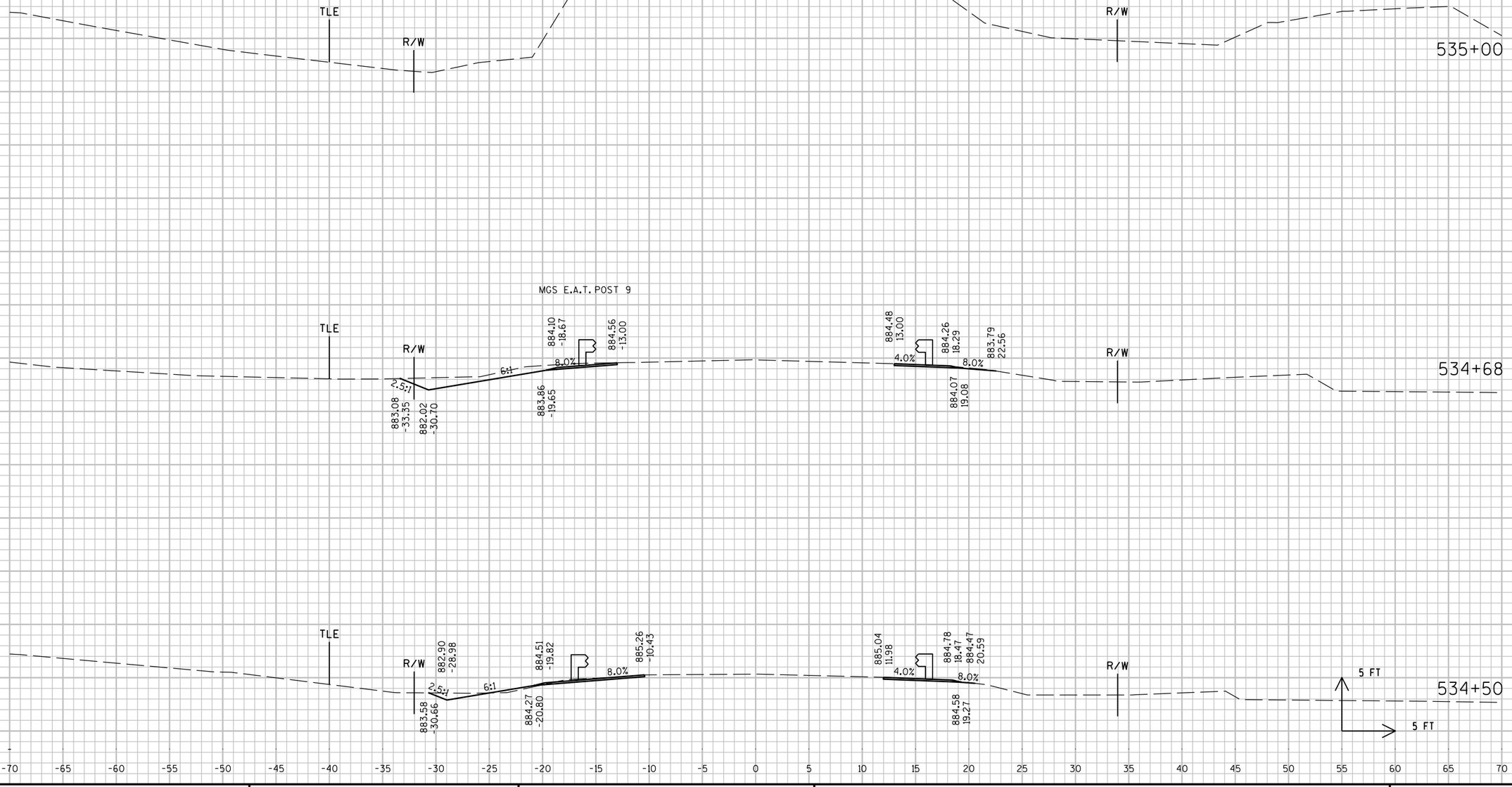
PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	CROSS SECTIONS: CTH O	SHEET 162	E

FILE NAME : P:\PIERC\15002 - CTH O\cad\XS_12.dgn

PLOT DATE : 10/26/2016

PLOT BY : $$...plotuser...$$

WISDOT/CADDS SHEET 21



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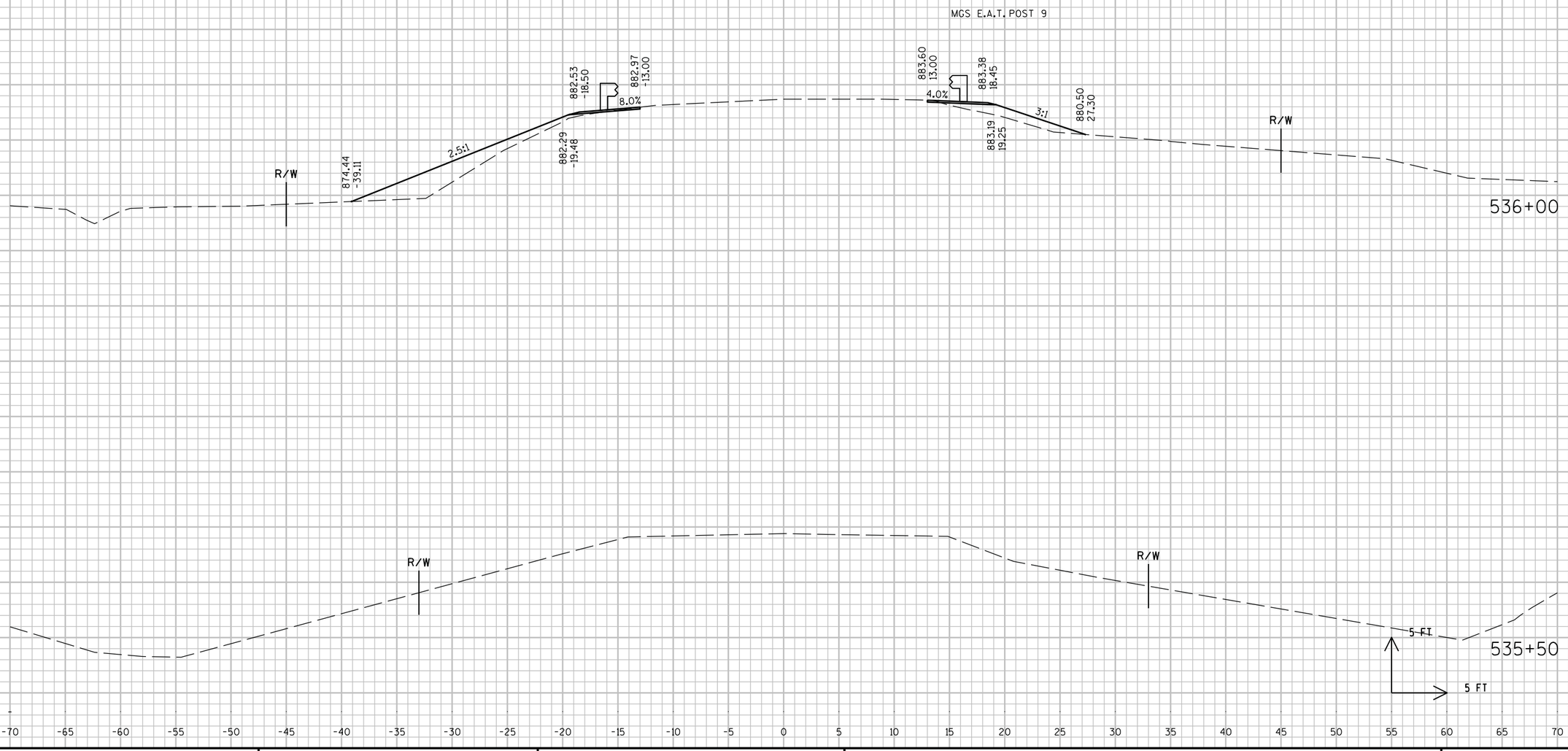
PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	CROSS SECTIONS: CTH O	SHEET 163	E

FILE NAME : P:\PIERC\15002 - CTH O\cad\XS_12.dgn

PLOT DATE : 10/26/2016

PLOT BY : $$...plotuser...$$

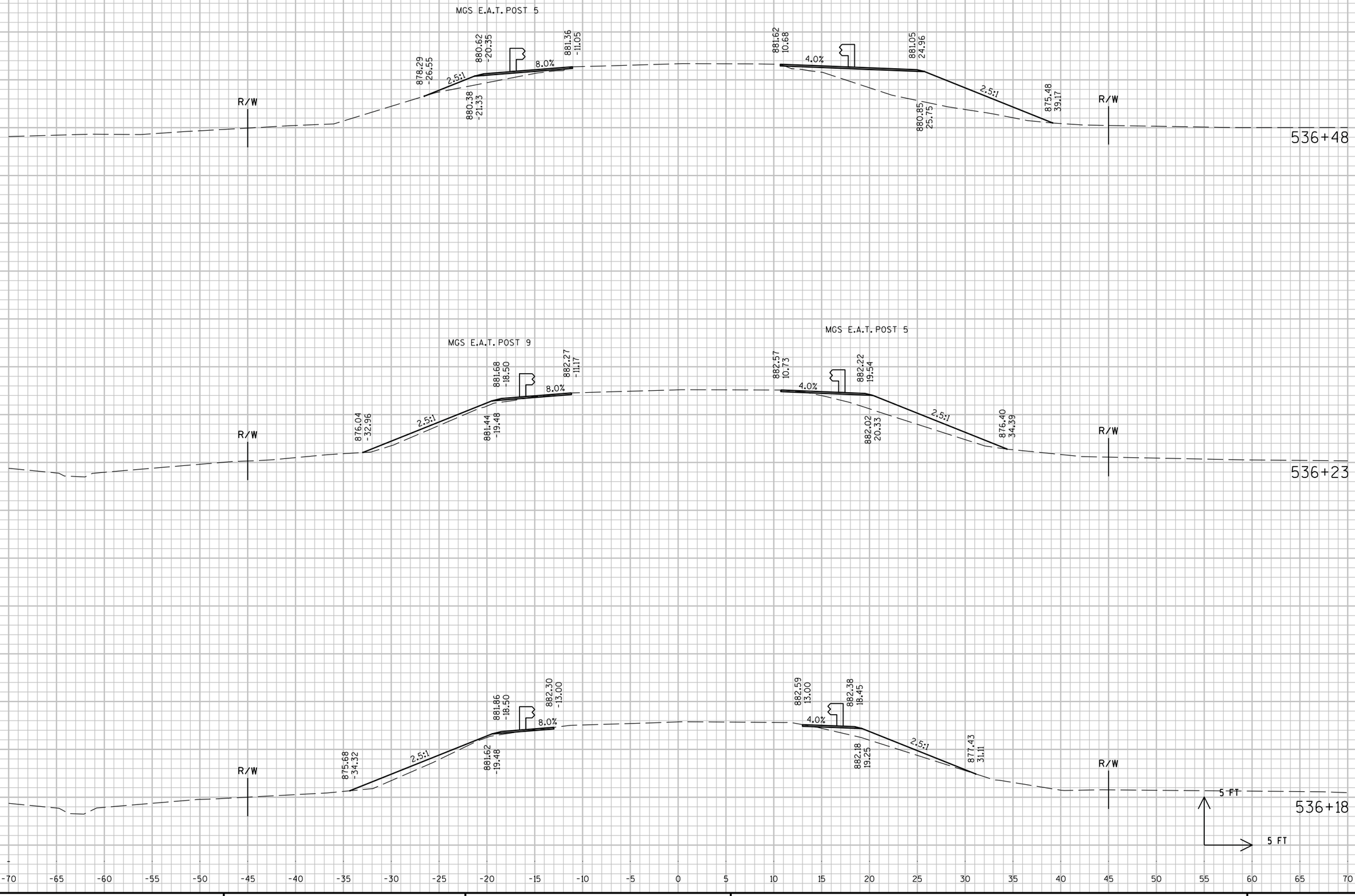
WISDOT/CADDS SHEET 21



PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	CROSS SECTIONS: CTH O	SHEET 164	E

FILE NAME : P:\PIERC\15002 - CTH O\cad\XS_12.dgn PLOT DATE : 10/26/2016 PLOT BY : $$...plotuser...$$

WISDOT/CADDS SHEET 21



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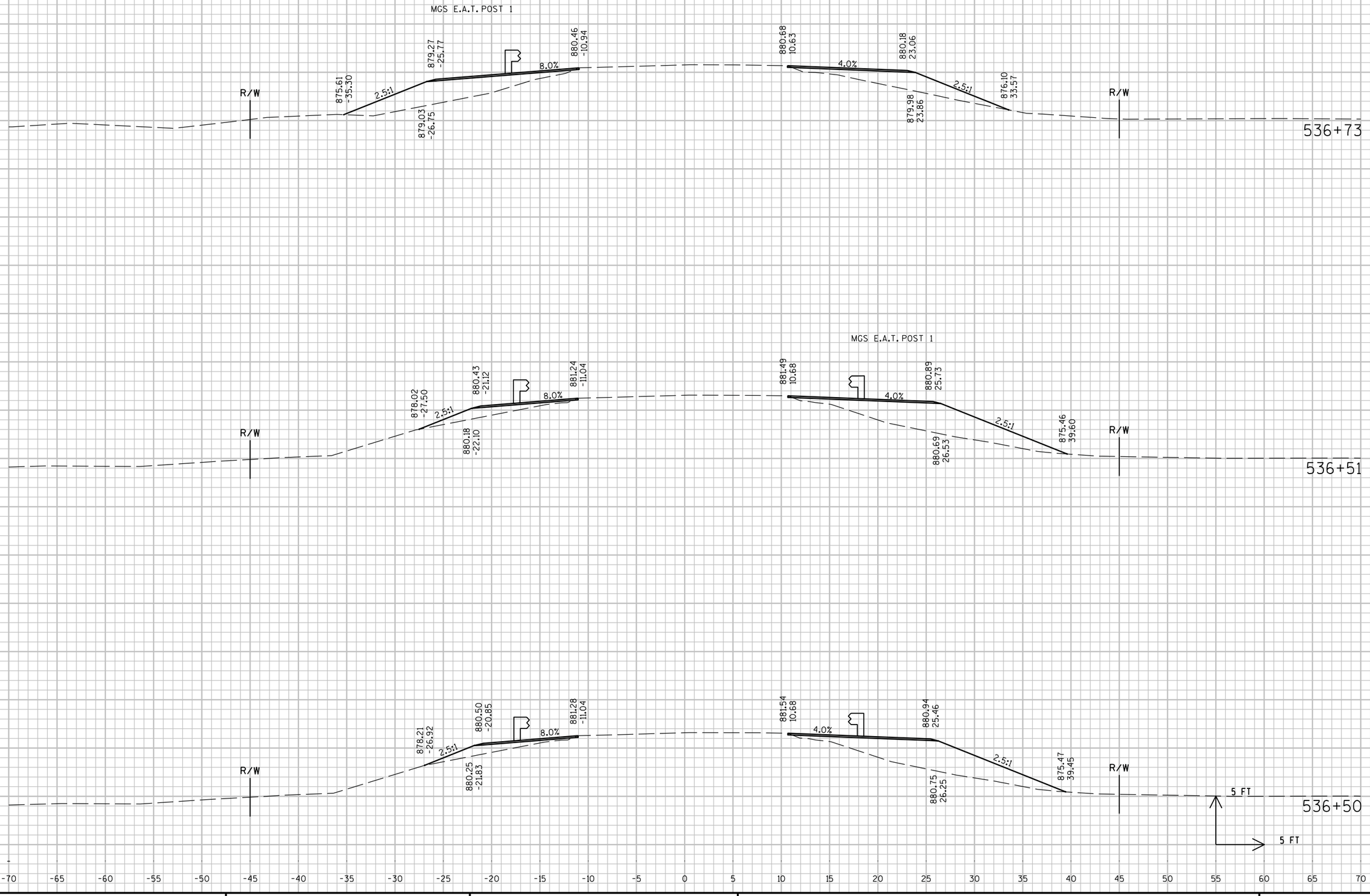
PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	CROSS SECTIONS: CTH O	SHEET 165	E



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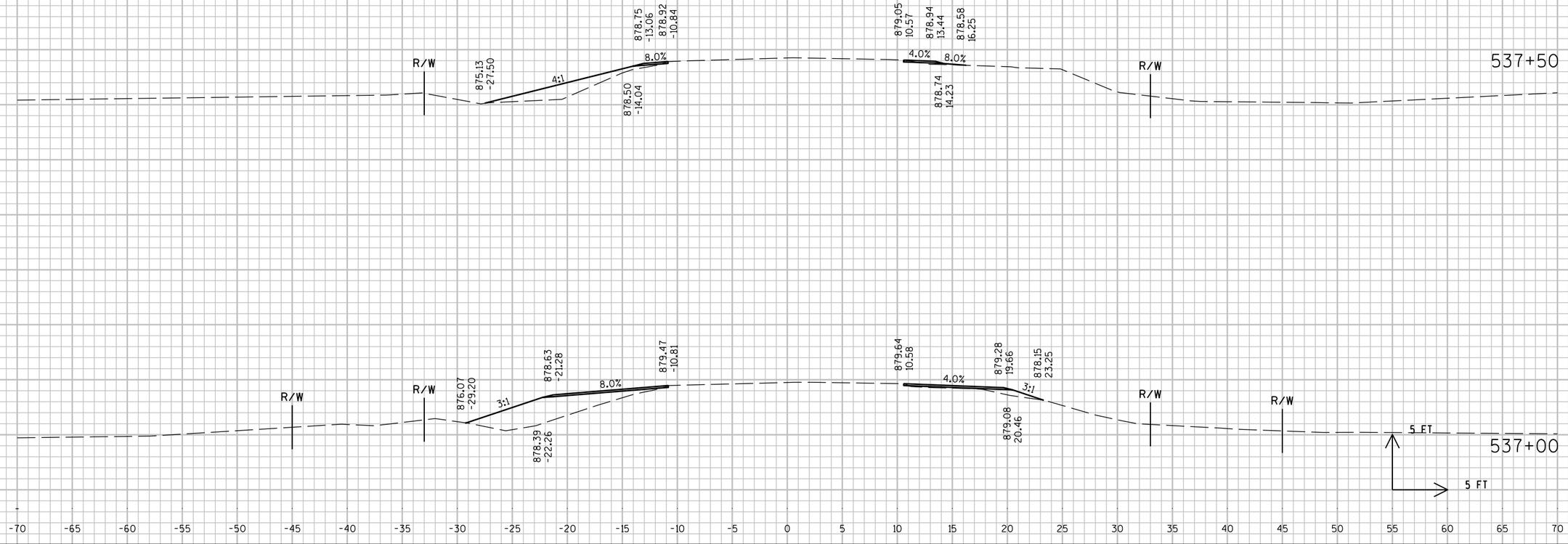
PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	CROSS SECTIONS: CTH O	SHEET	E

FILE NAME : P:\PIERC\15002 - CTH O\cad\XS_12.dgn PLOT DATE : 10/26/2016 PLOT BY : $$...plotuser...$$



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PROJECT NO: 7894-03-71	HWY: CTH O	COUNTY: PIERCE	CROSS SECTIONS: CTH O	SHEET 167	E

Wisconsin Department of Transportation

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