RHI JAN 2015

PROJECT ID: 9090-01-71
WITH: N/A

COUNTY: FOREST

ORDER OF SHEETS

TOTAL SHEETS = 166

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

EAGLE RIVER - TIPLER

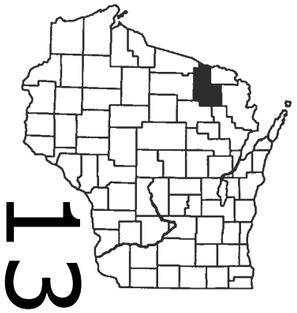
STH 55 - STH 139

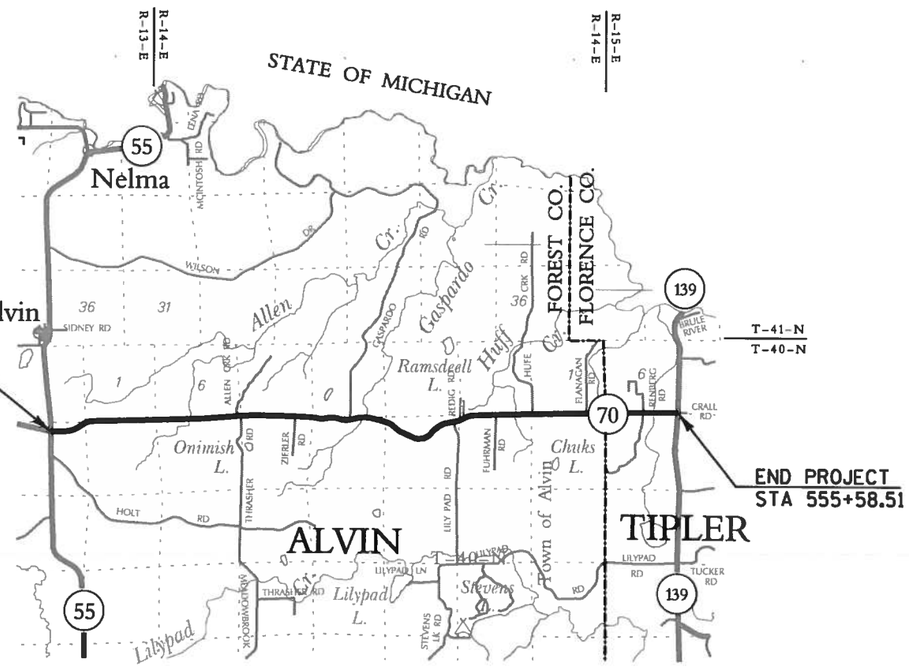
STH 70

FOREST COUNTY

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
9090-01-71	WISC 2015010	1

STATE PROJECT NUMBER
9090-01-71





DESIGN DESIGNATION

A.A.D.T. (2013)	=	700
A.A.D.T. (2033)	=	950
D.H.V.	=	UNKNOWN
D.D.	=	61/39
T.	=	22.3%
DESIGN SPEED	=	55 MPH
ESALS	=	343,100

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

LAYOUT
SCALE 0 — 1 MI.

TOTAL NET LENGTH OF CENTERLINE = 8.623 MI.

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), FOREST COUNTY, HORIZONTAL DATUM NAD 83, (2007). ALL DISTANCES ARE GROUND. ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO NAVD 1988.

ORIGINAL PLANS PREPARED BY

EMCS
630 South 36th Avenue
Wausau, WI 54401
715.845.1081 FAX 715.845.1099

WISCONSIN
STEPHANIE G. CHRISTENSEN
E35508
WAUSAU, WI
PROFESSIONAL ENGINEER

1-25-13 (Date) Stephanie G. Christensen (Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	EMCS, INC.
Designer	EMCS, INC.
Project Manager	JIM VOLKMANN
Regional Examiner	CHERYL SIMON
Regional Supervisor	ANNA WISNER
C.O. Examiner	

APPROVED FOR THE DEPARTMENT
DATE: 1/25/13 Anna Wisner (Signature)

E

FILE NAME : P:\47xx\4726.DP.12.STH70.FOR\CADDS\Plan\010101_ti.dgn

PLOT DATE : 1/25/2013 PLOT BY : emo PLOT NAME : PLOT SCALE : 1:200

WISDOT/CADDS SHEET 10

GENERAL NOTES

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

THE LOCATIONS OF EXISTING UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN. EXISTING UTILITIES WERE ONLY SURVEYED IN AREAS OF POTENTIAL EXCAVATION.

THE CONTRACTOR SHALL NOTIFY DIGGERS HOTLINE AND AFFECTED UTILITIES PRIOR TO THE START OF WORK. ANY UTILITY WHICH IS NOT A MEMBER OF THE DIGGERS HOTLINE MUST BE CONTACTED SEPARATELY. IN GENERAL, EXISTING UNDERGROUND UTILITY FACILITIES WERE NOT FIELD SURVEYED AND ARE NOT SHOWN ON PLANS.

EXISTING RIGHT-OF-WAY IS APPROXIMATE AND IS BASED ON AVAILABLE RIGHT-OF-WAY PLATS.

THE SIGNS AND PAVEMENT MARKING ARE TO BE ADJUSTED BASED ON THE RESULTS OF "LOCATING NO PASSING ZONES".

AS-BUILTS USED FOR PLAN DEVELOPMENT

PROJECT NO: 9090-01-70, CONSTRUCTION YEAR: 1995-1996
PROJECT NO: 9110-00-74, CONSTRUCTION YEAR: 1986-1987

OTHER CONTACTS

DNR LIAISON
JON SIMONSEN
107 SUTLIFF AVE
RHINELANDER, WI 54501
(715) 365-8916
JONATHAN.SIMONSEN@WISCONSIN.GOV

U.S. FOREST SERVICE
FOREST SUPERVISOR
1170 FOURTH AVENUE SOUTH
PARK FALLS, WI 54552
(715)-762-1907

UTILITIES

CENTURY LINK
(COMMUNICATIONS)
RICK KLUSSENDORF
PO BOX 260
WAUSAUKEE, WI 54177
(717) 845-0051
RICK.KLUSSENDORF@CENTURYLINK.COM

WISCONSIN DOT RWIS PROGRAM UTILITY
(WEATHER TOWER AND SENSORS)
MICHAEL J. ADAMS
P.O. BOX 7986
MADISON, WI 53707-7986
(608) 266-5004
MICHAEL.ADAMS@DOT.WI.GOV

WE ENERGIES
(ELECTRICITY)

SEND ALL WE ENERGIES CORRESPONDENCE TO:
LATROY BRUMFIELD
ROOM A299
333 WEST EVERETT STREET
MILWAUKEE, WI 53203
(414) 221-5617
LATROY.BRUMFIELD@WE-ENERGIES.COM

WE ENERGIES PROJECT CONSTRUCTION FIELD CONTACT:
BILL HOWARD
4222 COUNTY ROAD B
LAND O'LAKES, WI 54540
(906) 779-2472
WILLIAM.HOWARD@WE-ENERGIES.COM

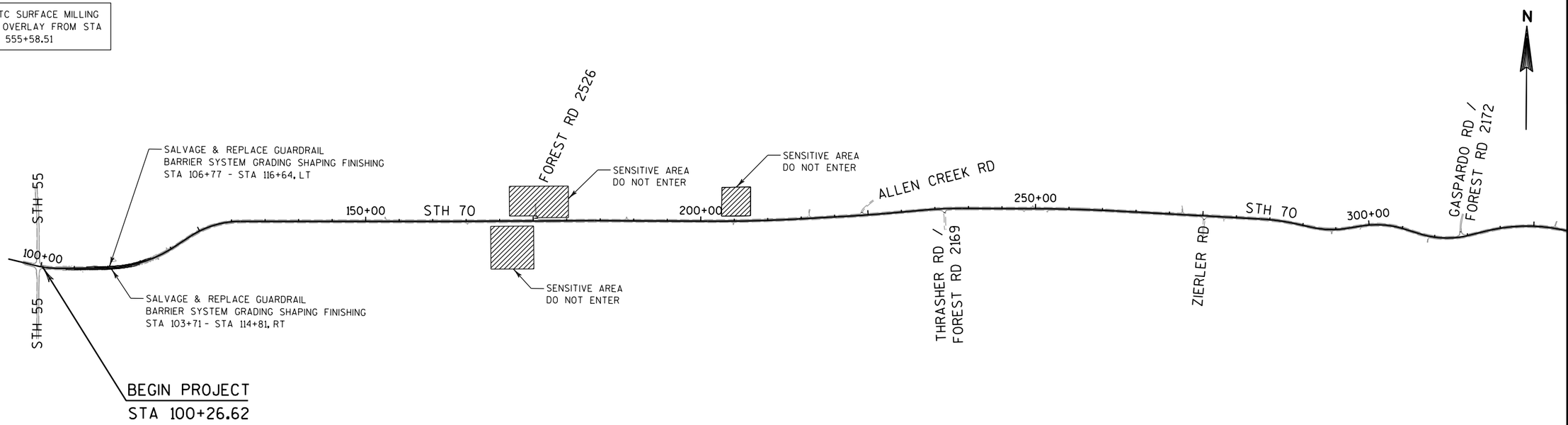
DIGGERS HOTLINE
Dial 811 or (800) 242-8511
www.DiggersHotline.com

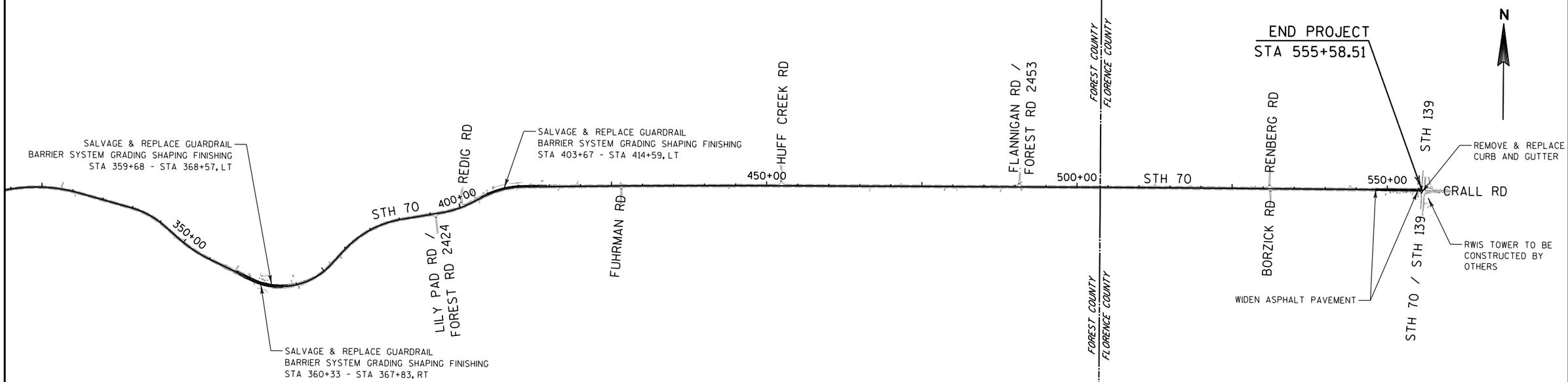
TO OBTAIN LOCATION OF PARTICIPANTS UNDERGROUND FACILITIES BEFORE YOU DIG IN WISCONSIN

WISCONSIN STATUTE 182.0175 (1974) REQUIRES MINIMUM OF 3 WORK DAYS NOTICE BEFORE YOU EXCAVATE.

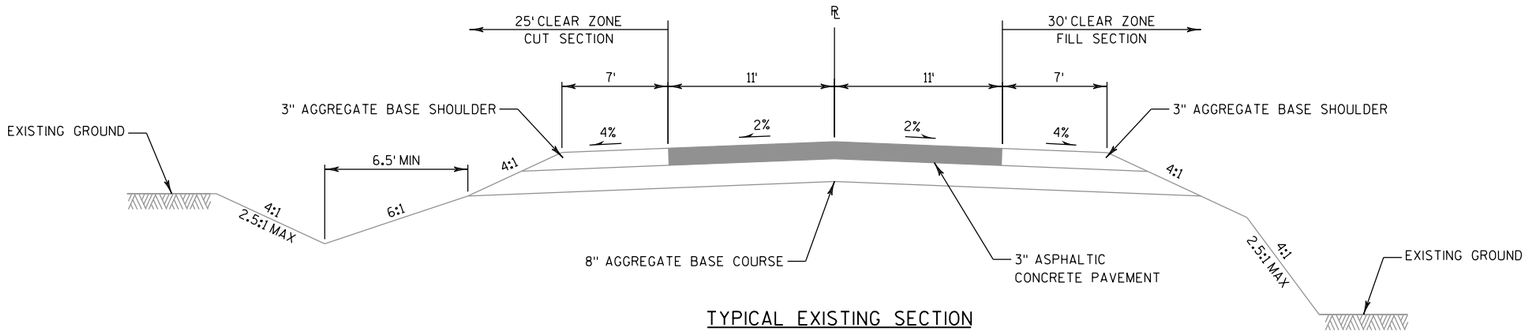
ORDER OF SECTION 2 SHEETS

REMOVING ASPHALITC SURFACE MILLING
& HMA PAVEMENT OVERLAY FROM STA
100+26.62 TO STA 555+58.51

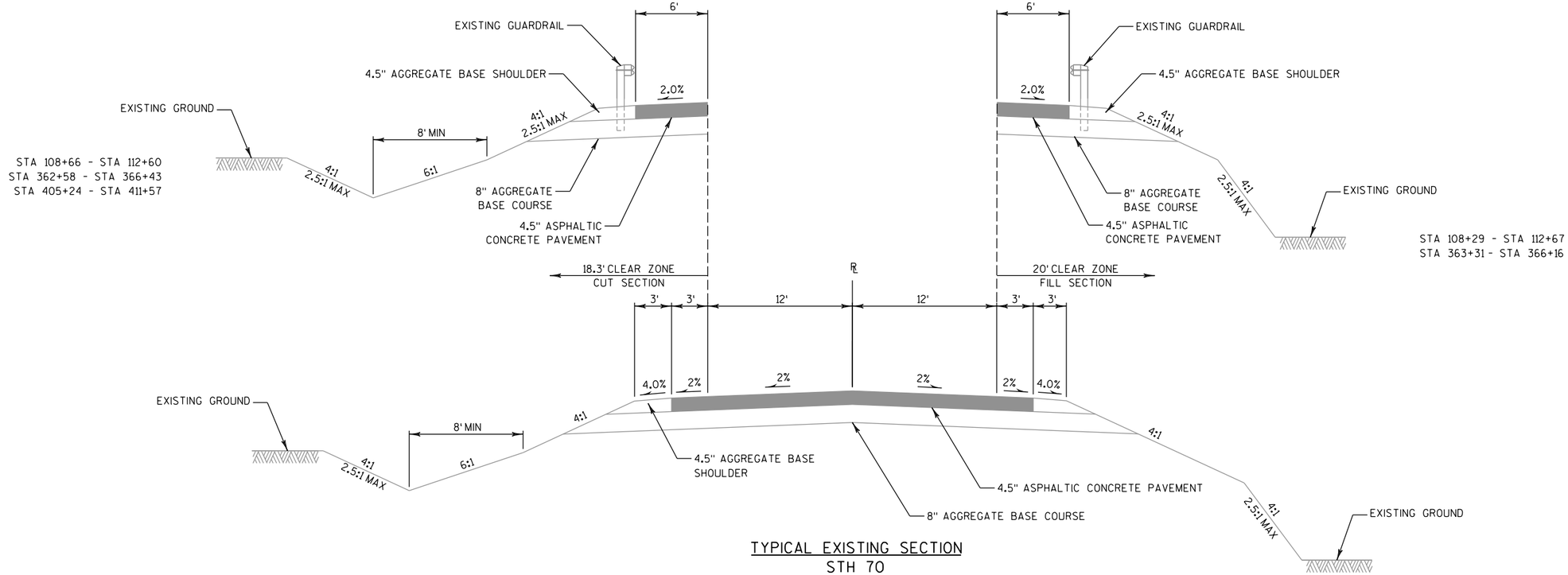




PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	PROJECT OVERVIEW	SHEET 3	E



TYPICAL EXISTING SECTION
STH 70
STA 548+58 - STA 555+58.51

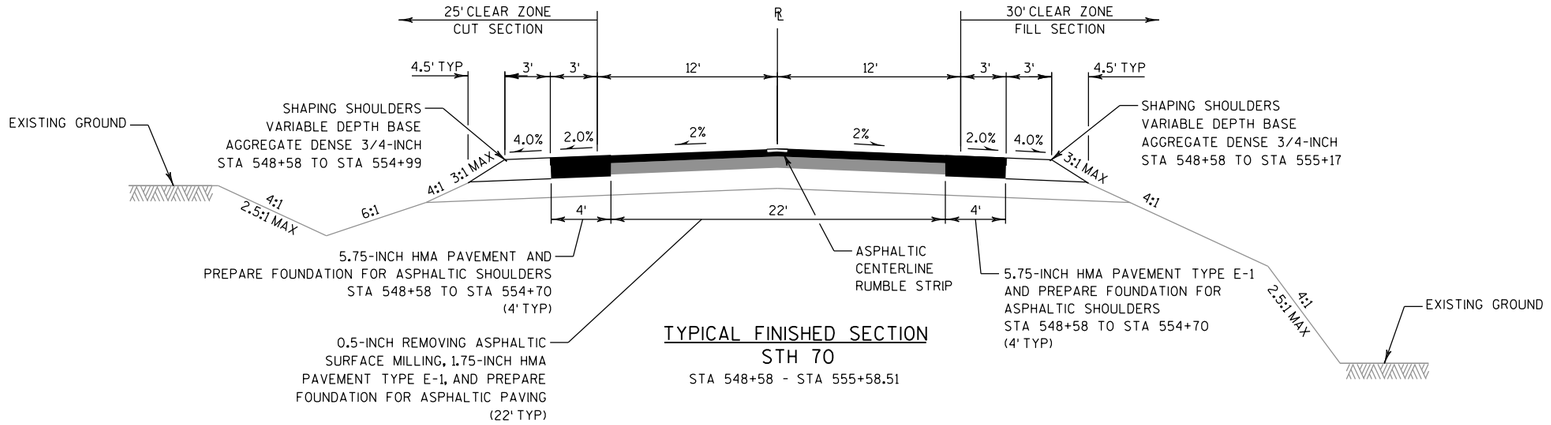


TYPICAL EXISTING SECTION
STH 70
STA 100+26.62 - STA 548+58

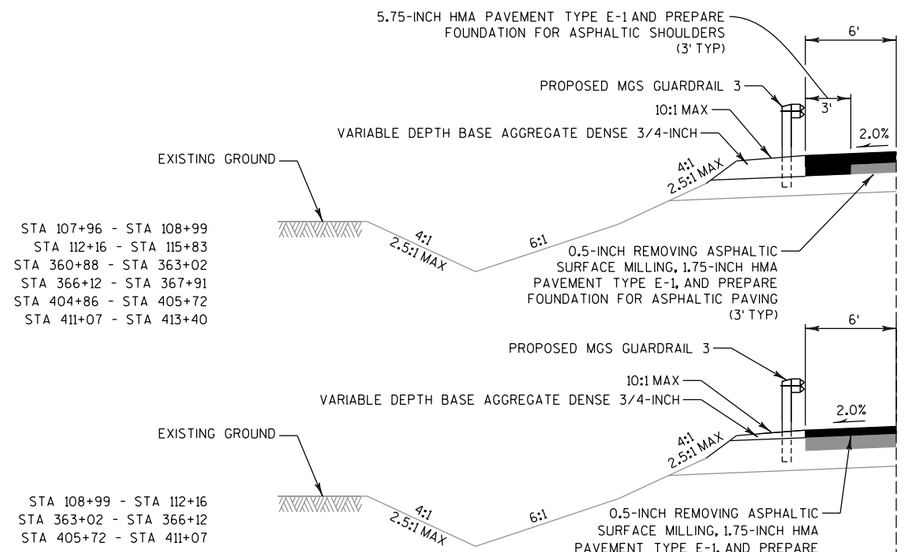
NOTE:

PAVEMENT CROSS SLOPES VARY DUE TO SUPERELEVATION.
SEE SECTION 5 PLAN SHEETS FOR SUPERELEVATION DATA.

PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	TYPICAL SECTIONS	SHEET 4	E

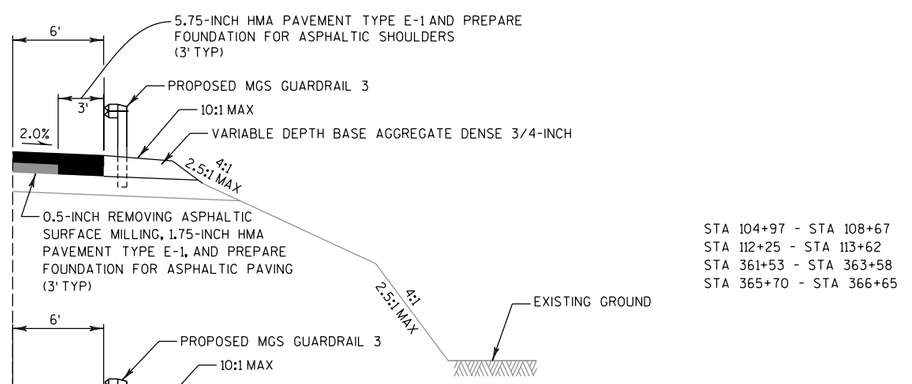


TYPICAL FINISHED SECTION
STH 70
STA 548+58 - STA 555+58.51



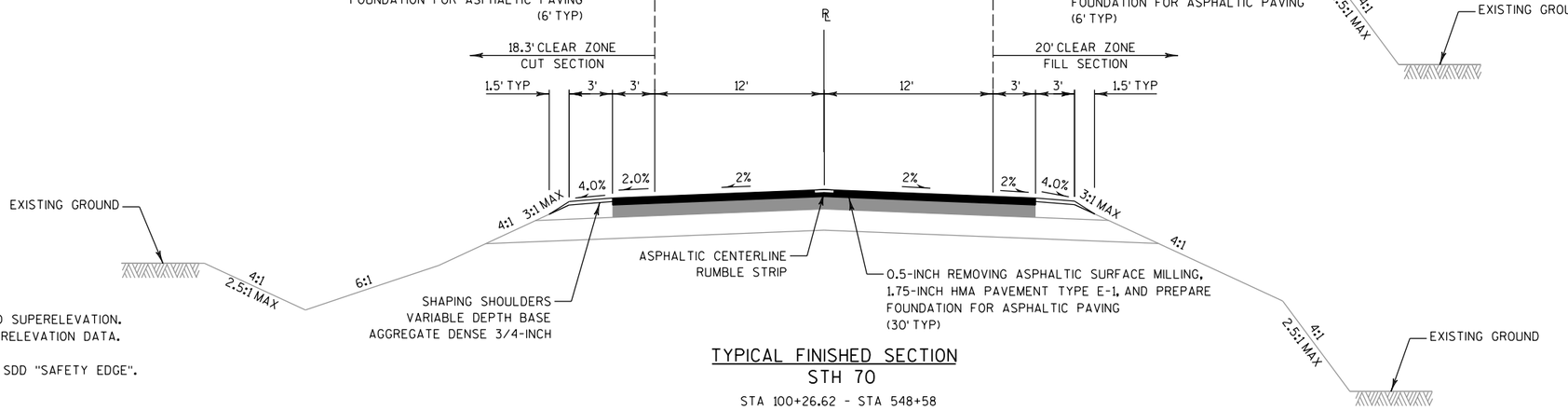
STA 107+96 - STA 108+99
STA 112+16 - STA 115+83
STA 360+88 - STA 363+02
STA 366+12 - STA 367+91
STA 404+86 - STA 405+72
STA 411+07 - STA 413+40

STA 108+99 - STA 112+16
STA 363+02 - STA 366+12
STA 405+72 - STA 411+07



STA 104+97 - STA 108+67
STA 112+25 - STA 113+62
STA 361+53 - STA 363+58
STA 365+70 - STA 366+65

STA 108+67 - STA 112+25
STA 363+58 - STA 365+70



TYPICAL FINISHED SECTION
STH 70
STA 100+26.62 - STA 548+58

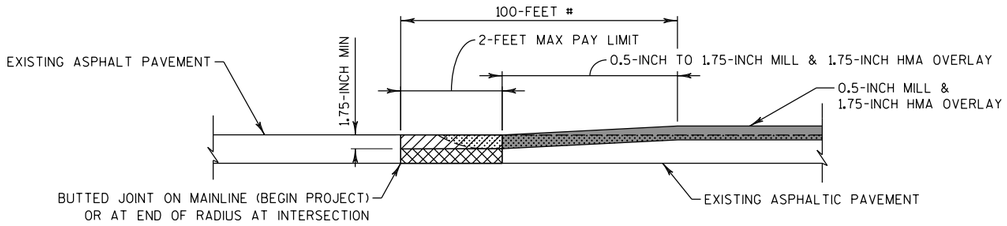
NOTES:

PAVEMENT CROSS SLOPES VARY DUE TO SUPERELEVATION.
SEE SECTION 5 PLAN SHEETS FOR SUPERELEVATION DATA.

PAVEMENT SAFETY EDGE REQUIRED. SEE SDD "SAFETY EDGE".

PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	TYPICAL SECTIONS	SHEET 5	E

FILE NAME : P:\47xx\4726.DP.12.STH70.FOR\CADDS\Plan\020301_ts.dgn PLOT DATE : 5/28/2014 PLOT BY : emo PLOT NAME : PLOT SCALE : 1:20



ASPHALTIC WEDGING
(FULL DEPTH REMOVAL OPTIONAL)

REMOVING ASPHALTIC SURFACE BUTT JOINTS
DO NOT REMOVE MATERIAL UNDER THIS ITEM UNTIL 24 HOURS BEFORE PAVING

REMOVING ASPHALTIC SURFACE MILLING

1.75-INCH HMA PAVEMENT TYPE E-1

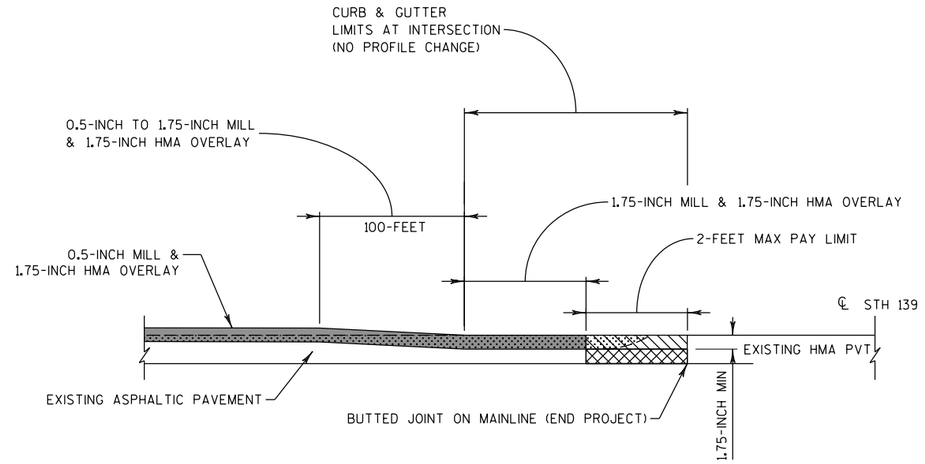
NOTES:

FOR MAINLINE AND SIDE ROADS USE 1.75-INCH HMA PAVEMENT TYPE E-1

DISTANCE VARIES FOR SIDE ROADS, SEE INTERSECTION MATCH LIMITS ON PLANS

ASPHALTIC SURFACE BUTT JOINT DETAIL

BEGIN PROJECT (STA 100+26.62)
GASPARDO RD / FOREST RD 2172
LILY PAD RD / FOREST RD 2424
FUHRMAN RD
REMBERG RD



ASPHALTIC WEDGING
(FULL DEPTH REMOVAL OPTIONAL)

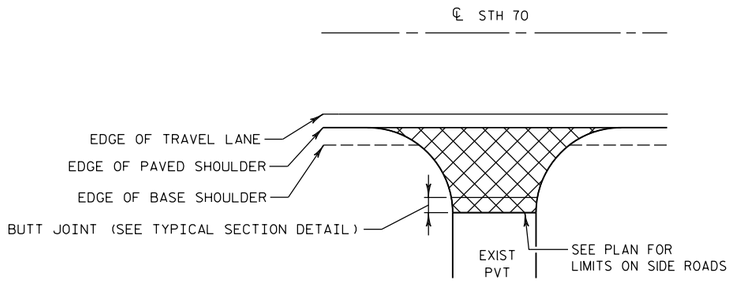
REMOVING ASPHALTIC MATERIAL, BUTT JOINTS
DO NOT REMOVE MATERIAL UNDER THIS ITEM UNTIL 24 HOURS BEFORE PAVING

REMOVING ASPHALTIC SURFACE MILLING

1.75-INCH HMA PAVEMENT TYPE E-1

DETAIL OF BUTT JOINT ON MAINLINE AT STH 139

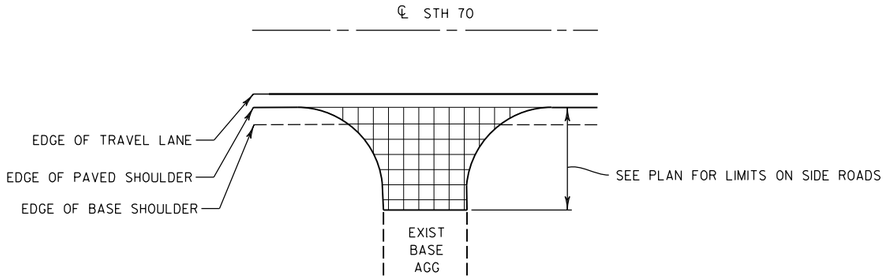
END PROJECT (STA 555+58.51)



0.5-INCH TO 1.75-INCH MILL & 1.75-INCH HMA PAVEMENT TYPE E-1 OVERLAY

PLAN VIEW OF MILL & OVERLAY AT ASPHALT INTERSECTIONS DETAIL

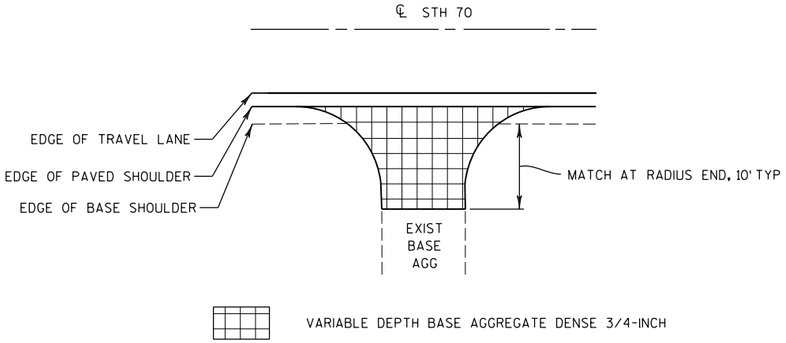
GASPARDO RD / FOREST RD 2172
LILY PAD RD / FOREST RD 2424
FUHRMAN RD
REMBERG RD



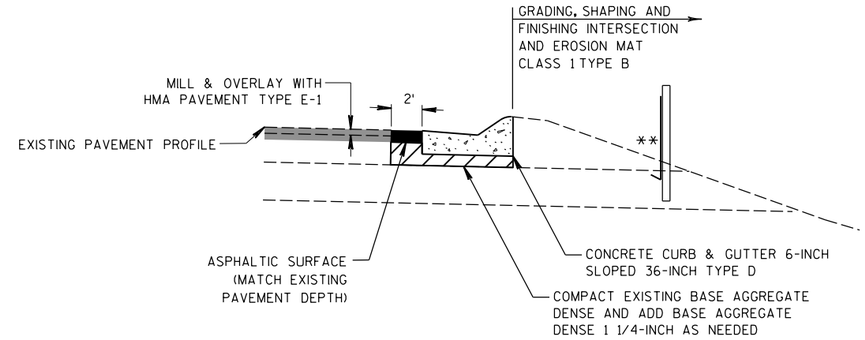
VARIABLE DEPTH MILL 0.5-INCH TO 1.75-INCH AND OVERLAY
WITH 1.75-INCH HMA PAVEMENT TYPE E-1

MATCH LIMITS AT UNPAVED INTERSECTIONS DETAIL

FOREST RD 2526
ALLEN CREEK RD
THRASHER RD / FOREST RD 2169
ZIERLER RD
REDIG RD
HUFF CREEK RD
FLANNAGAN RD / FOREST RD 2453
BURZICK RD



MATCH LIMITS AT UNPAVED DRIVEWAYS DETAIL



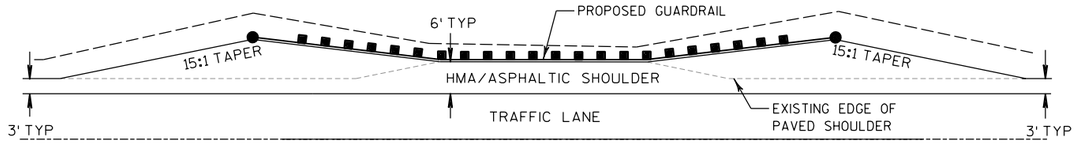
DETAIL OF ASPHALTIC SURFACE AND EROSION CONTROL AT CURB & GUTTER INSTALLATION AREAS

AT INTERSECTION RADII
STH 70 / STH 139

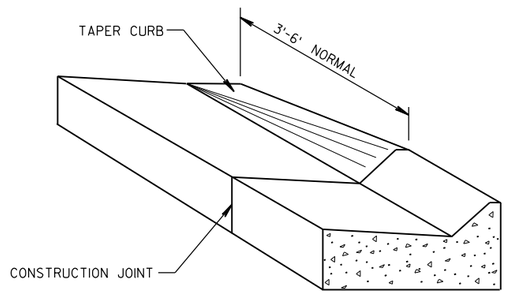
NOTES:

PLACE NEW CURB & GUTTER AND ASPHALTIC SURFACE PRIOR TO MILL & OVERLAY

** INSTALL SILT FENCE (AROUND CURB & GUTTER RADIUS) AND SILT FENCE RELIEF (ROCK BAGS)



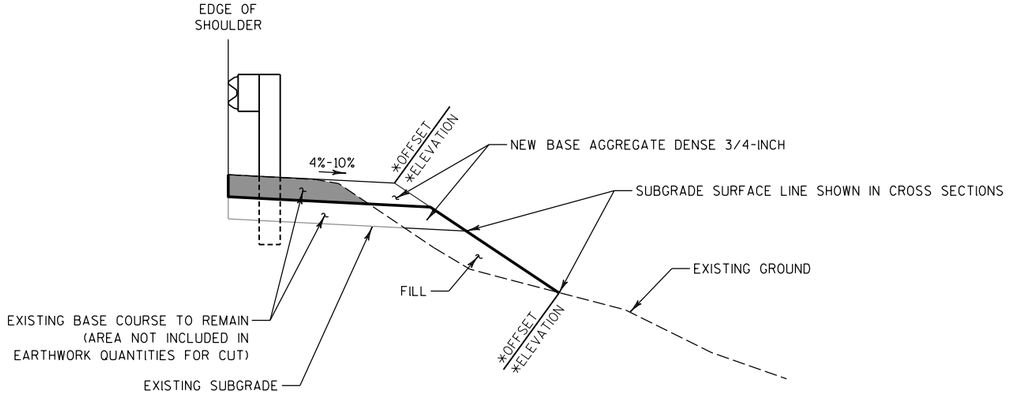
DETAIL FOR HMA SHOULDER AT GUARDRAIL



DETAIL OF CURB & GUTTER TERMINI

AT INTERSECTION RADII
STH 70 / STH 139

PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	CONSTRUCTION DETAILS	SHEET 7	E



SHOULDER WIDENING EARTHWORK & BASE AGGREGATE FOR GUARDRAIL DETAIL

NOTES:

ANY CUT AND FILL REQUIRED IS INCIDENTAL TO THE BARRIER SYSTEM GRADING SHAPING FINISHING ITEM.

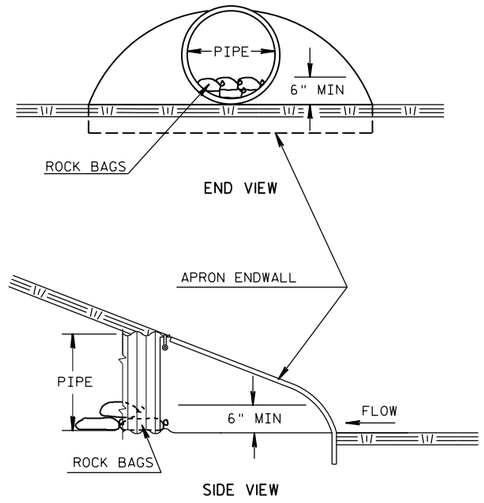
* OFFSET AND ELEVATION PROVIDED TO THESE POINTS ON THE CROSS SECTIONS

RUNOFF COEFFICIENT TABLE

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

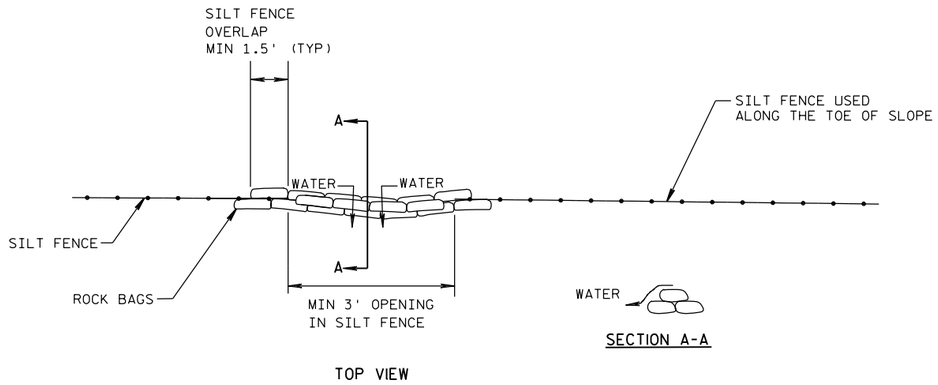
TOTAL PROJECT AREA = 157 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 42 ACRES

2



CULVERT PIPE CHECKS

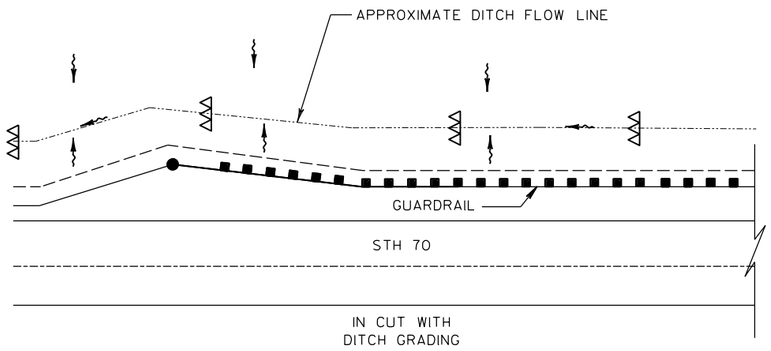
INSTALL ON INLET END
EACH ROCK BAG PAID AS CULVERT PIPE CHECKS

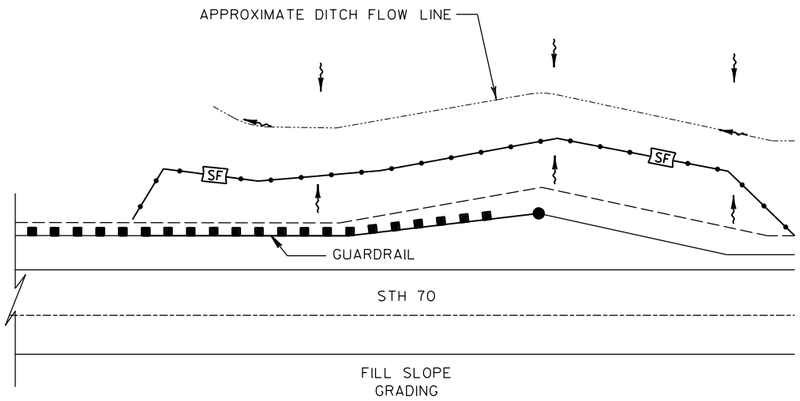


ROCK BAGS SILT FENCE RELIEF DETAIL

PAID AS ROCK BAGS

2





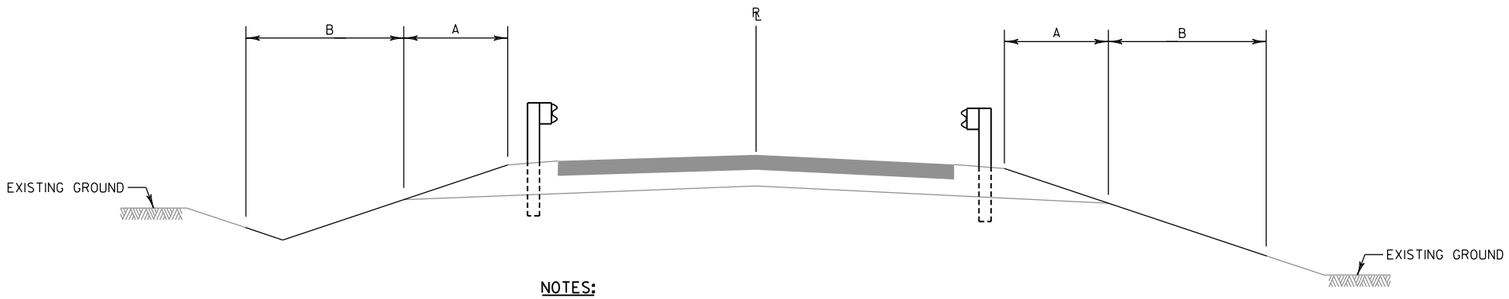
LEGEND

SILT FENCE

TEMPORARY DITCH CHECKS

SF SILT FENCE RELIEF (ROCK BAGS)
(SEE CONSTRUCTION DETAILS)

DETAIL FOR EROSION CONTROL FOR GUARDRAIL REPLACEMENT



NOTES:

A= FERTILIZER TYPE B & SEEDING MIXTURE NO. 30

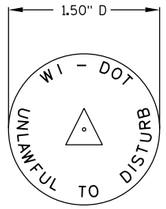
B= TOPSOIL, FERTILIZER TYPE B, SEEDING MIXTURE NO. 20, SEEDING MIXTURE NO. 30 AND EROSION MAT CLASS I TYPE B

TOPSOIL, FERTILIZER TYPE B, SEEDING MIXTURE NO. 20, AND SEEDING MIXTURE NO. 30 ARE INCIDENTAL TO BARRIER SYSTEM GRADING SHAPING FINISHING ITEM

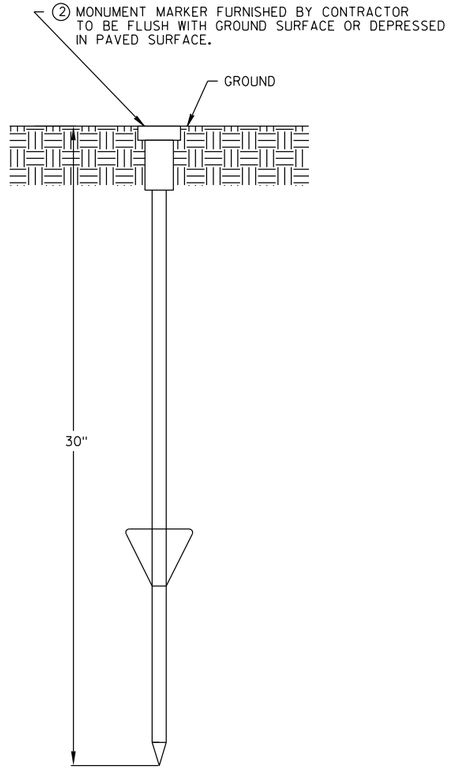
PLACE SEEDING MIXTURE NO. 20 AND SEEDING MIXTURE NO. 30 PER STANDARD SPECIFICATIONS

FINISHING ITEMS AT GUARDRAIL INSTALLATIONS

STH 70

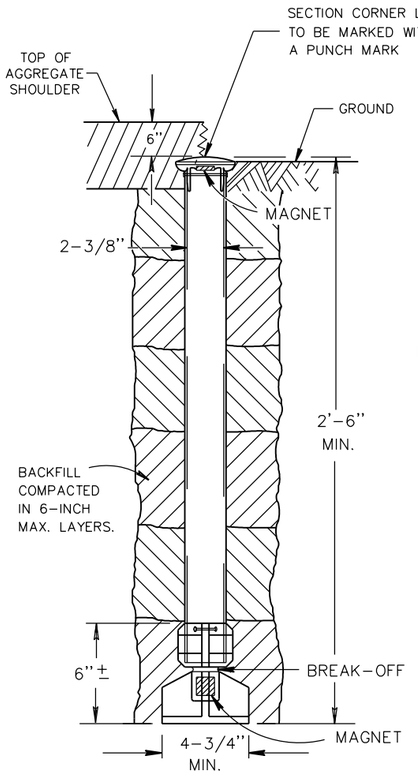


② WIS DOT MONUMENT CAP MARKER LOGO (SSDR130)
CONTRACTOR TO ORDER LANDMARK REFERENCE MONUMENTS WITH THE ABOVE STAMPING



(FRONT VIEW)
BERNSTEN DRIVABLE MONUMENT SSDR130

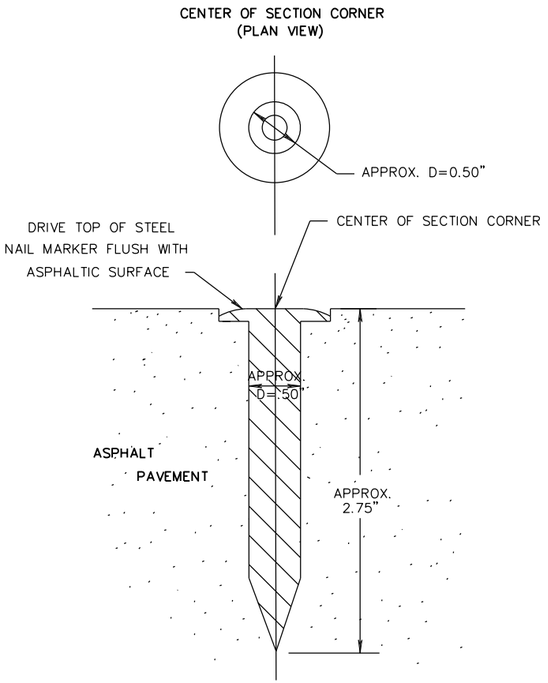
LANDMARK REFERENCE MONUMENTS (TIES ONLY)



(SIDE VIEW)

OUTSIDE OF PAVEMENT

① BERNTSEN A1BR30 ALUMINUM BREAK-OFF MONUMENT



(SIDE VIEW)

IN ASPHALTIC PAVEMENT

① BERNTSEN SNM1 STEEL NAIL MARKER

SECTION CORNER MONUMENTS

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.

LOCATE LANDMARK REFERENCE MONUMENTS OUTSIDE THE CONSTRUCTION LIMITS AND WITHIN WISDOT RIGHT OF WAY. LOCATION TO BE APPROVED BY THE ENGINEER.

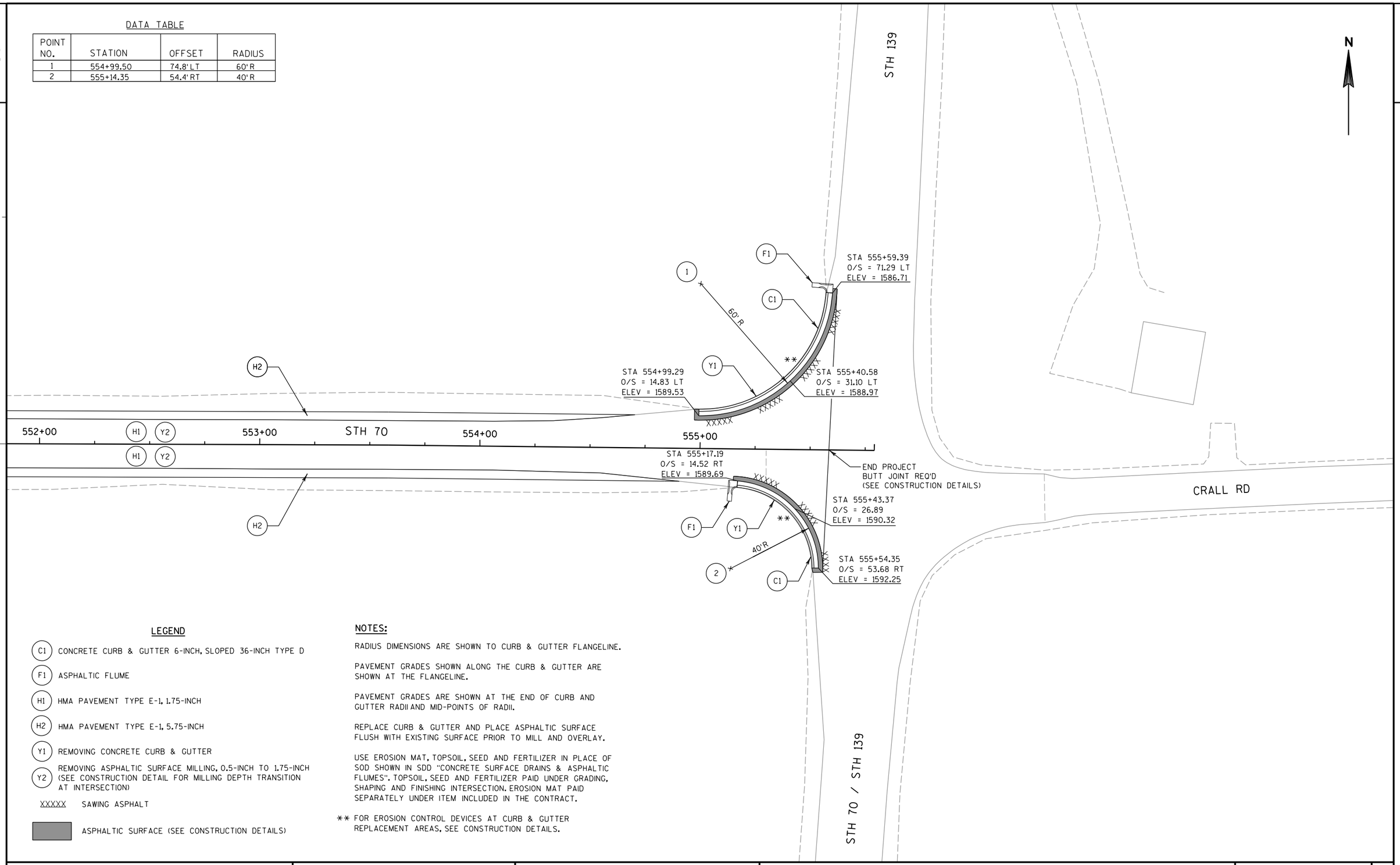
① THE REGIONAL SURVEY COORDINATOR WILL SUPPLY.

② CONTRACTOR WILL SUPPLY.

SECTION CORNER MONUMENT AND LANDMARK REFERENCE MONUMENT DETAIL

DATA TABLE

POINT NO.	STATION	OFFSET	RADIUS
1	554+99.50	74.8' LT	60' R
2	555+14.35	54.4' RT	40' R



LEGEND

- (C1) CONCRETE CURB & GUTTER 6-INCH, SLOPED 36-INCH TYPE D
- (F1) ASPHALTIC FLUME
- (H1) HMA PAVEMENT TYPE E-1, 1.75-INCH
- (H2) HMA PAVEMENT TYPE E-1, 5.75-INCH
- (Y1) REMOVING CONCRETE CURB & GUTTER
- (Y2) REMOVING ASPHALTIC SURFACE MILLING, 0.5-INCH TO 1.75-INCH (SEE CONSTRUCTION DETAIL FOR MILLING DEPTH TRANSITION AT INTERSECTION)
- XXXXX SAWING ASPHALT
- ASPHALTIC SURFACE (SEE CONSTRUCTION DETAILS)

NOTES:

RADIUS DIMENSIONS ARE SHOWN TO CURB & GUTTER FLANGELINE.

PAVEMENT GRADES SHOWN ALONG THE CURB & GUTTER ARE SHOWN AT THE FLANGELINE.

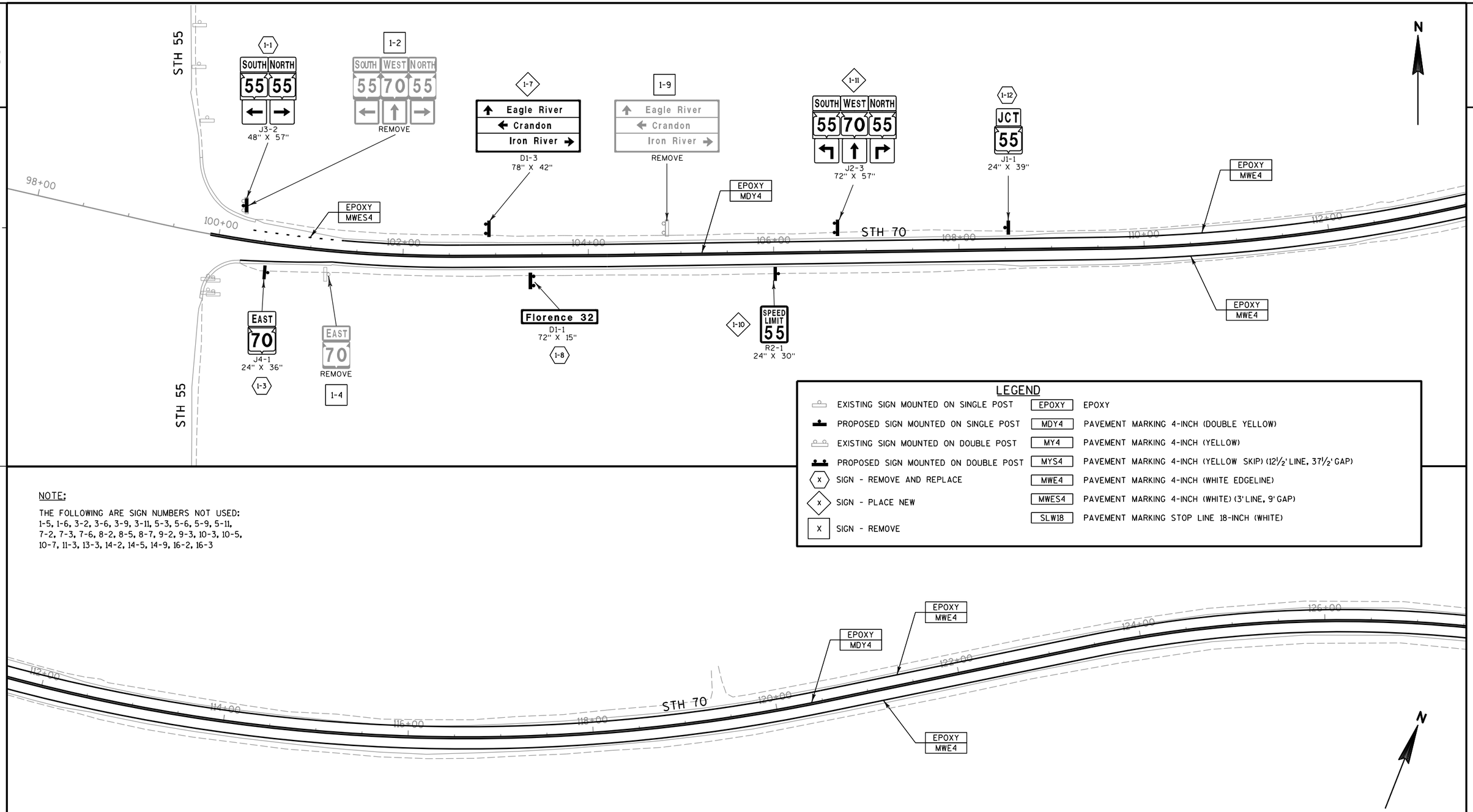
PAVEMENT GRADES ARE SHOWN AT THE END OF CURB AND GUTTER RADII AND MID-POINTS OF RADII.

REPLACE CURB & GUTTER AND PLACE ASPHALTIC SURFACE FLUSH WITH EXISTING SURFACE PRIOR TO MILL AND OVERLAY.

USE EROSION MAT, TOPSOIL, SEED AND FERTILIZER IN PLACE OF SOD SHOWN IN SDD "CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES". TOPSOIL, SEED AND FERTILIZER PAID UNDER GRADING, SHAPING AND FINISHING INTERSECTION. EROSION MAT PAID SEPARATELY UNDER ITEM INCLUDED IN THE CONTRACT.

** FOR EROSION CONTROL DEVICES AT CURB & GUTTER REPLACEMENT AREAS, SEE CONSTRUCTION DETAILS.

PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	INTERSECTION DETAILS - STH 139	SHEET 11	E



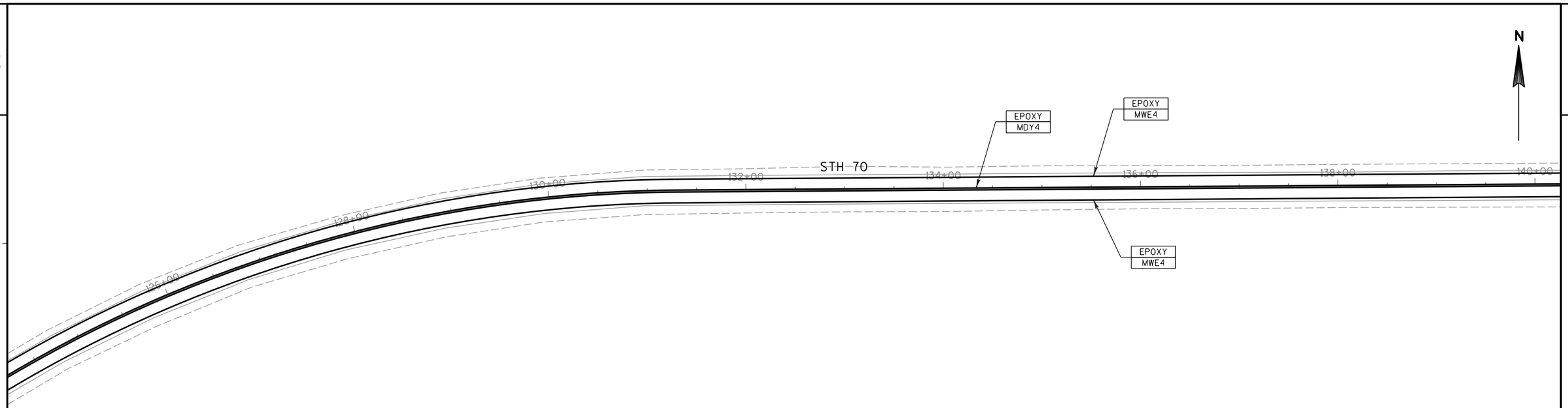
LEGEND

EXISTING SIGN MOUNTED ON SINGLE POST	EPOXY	EPOXY
PROPOSED SIGN MOUNTED ON SINGLE POST	MDY4	PAVEMENT MARKING 4-INCH (DOUBLE YELLOW)
EXISTING SIGN MOUNTED ON DOUBLE POST	MY4	PAVEMENT MARKING 4-INCH (YELLOW)
PROPOSED SIGN MOUNTED ON DOUBLE POST	MYS4	PAVEMENT MARKING 4-INCH (YELLOW SKIP) (12½'LINE, 37½'GAP)
(X) SIGN - REMOVE AND REPLACE	MWE4	PAVEMENT MARKING 4-INCH (WHITE EDGELINE)
◇X SIGN - PLACE NEW	MWES4	PAVEMENT MARKING 4-INCH (WHITE) (3'LINE, 9'GAP)
X SIGN - REMOVE	SLW18	PAVEMENT MARKING STOP LINE 18-INCH (WHITE)

NOTE:

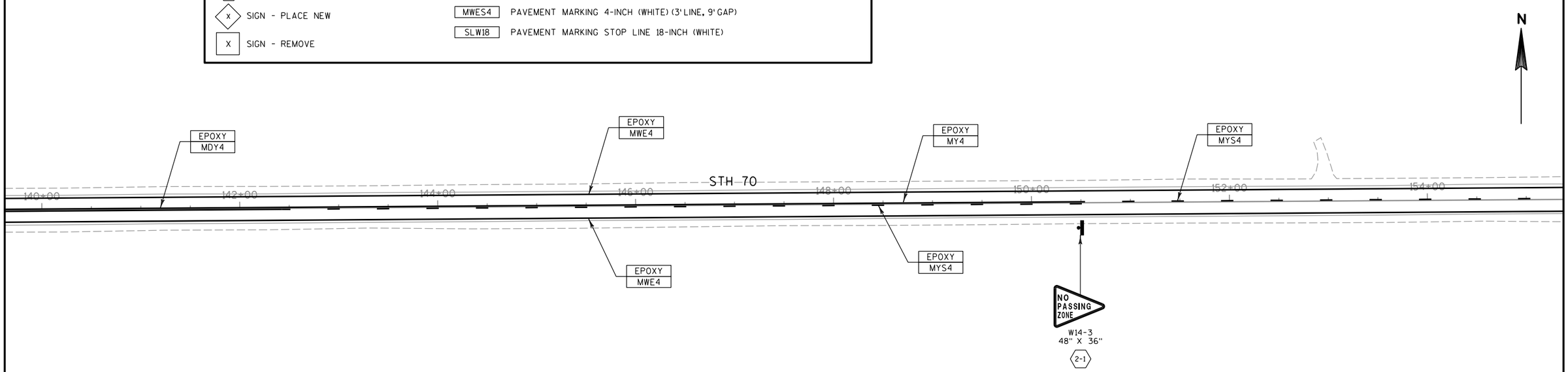
THE FOLLOWING ARE SIGN NUMBERS NOT USED:
1-5, 1-6, 3-2, 3-6, 3-9, 3-11, 5-3, 5-6, 5-9, 5-11,
7-2, 7-3, 7-6, 8-2, 8-5, 8-7, 9-2, 9-3, 10-3, 10-5,
10-7, 11-3, 13-3, 14-2, 14-5, 14-9, 16-2, 16-3

PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	PERMANENT SIGNING & PAVEMENT MARKING	SHEET 12 E



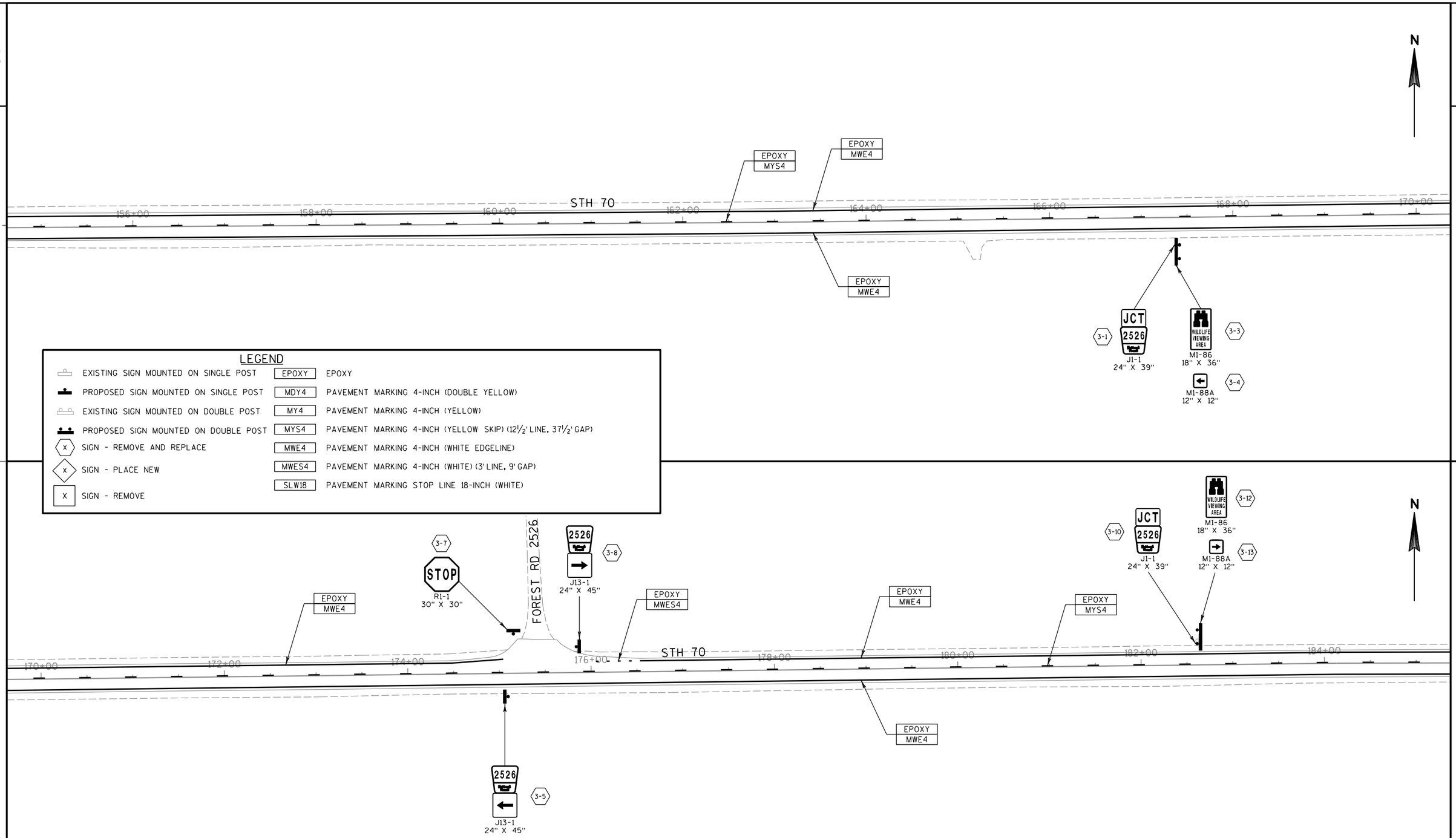
LEGEND

EXISTING SIGN MOUNTED ON SINGLE POST	EPOXY	EPOXY
PROPOSED SIGN MOUNTED ON SINGLE POST	MDY4	PAVEMENT MARKING 4-INCH (DOUBLE YELLOW)
EXISTING SIGN MOUNTED ON DOUBLE POST	MY4	PAVEMENT MARKING 4-INCH (YELLOW)
PROPOSED SIGN MOUNTED ON DOUBLE POST	MYS4	PAVEMENT MARKING 4-INCH (YELLOW SKIP) (12½' LINE, 37½' GAP)
(X) SIGN - REMOVE AND REPLACE	MWE4	PAVEMENT MARKING 4-INCH (WHITE EDGELINE)
(X) SIGN - PLACE NEW	MWES4	PAVEMENT MARKING 4-INCH (WHITE) (3' LINE, 9' GAP)
X SIGN - REMOVE	SLW18	PAVEMENT MARKING STOP LINE 18-INCH (WHITE)

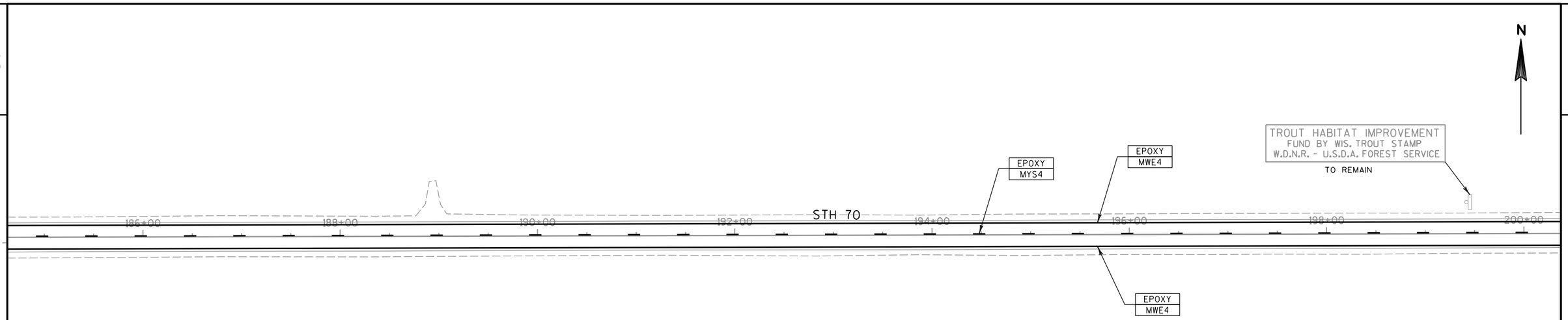


PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	PERMANENT SIGNING & PAVEMENT MARKING	SHEET 13	E

2

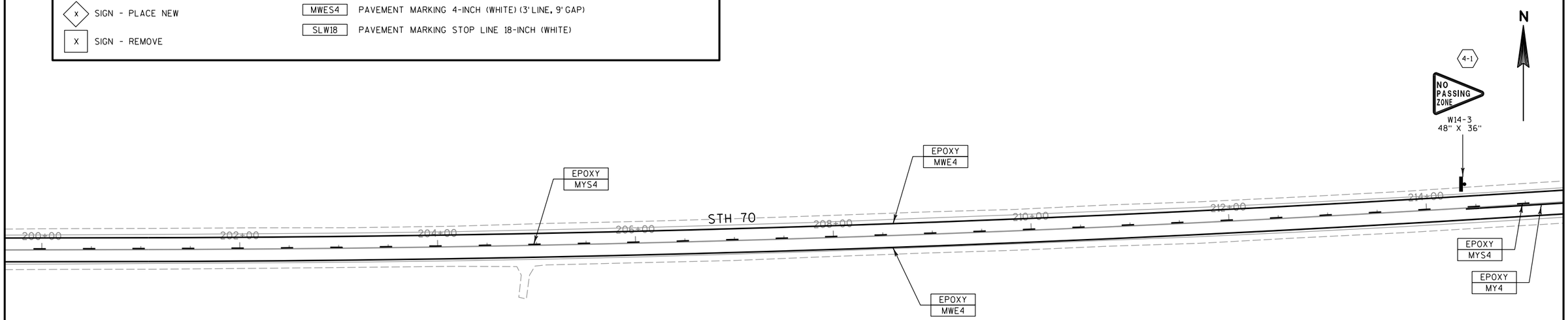


PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	PERMANENT SIGNING & PAVEMENT MARKING	SHEET 14	E

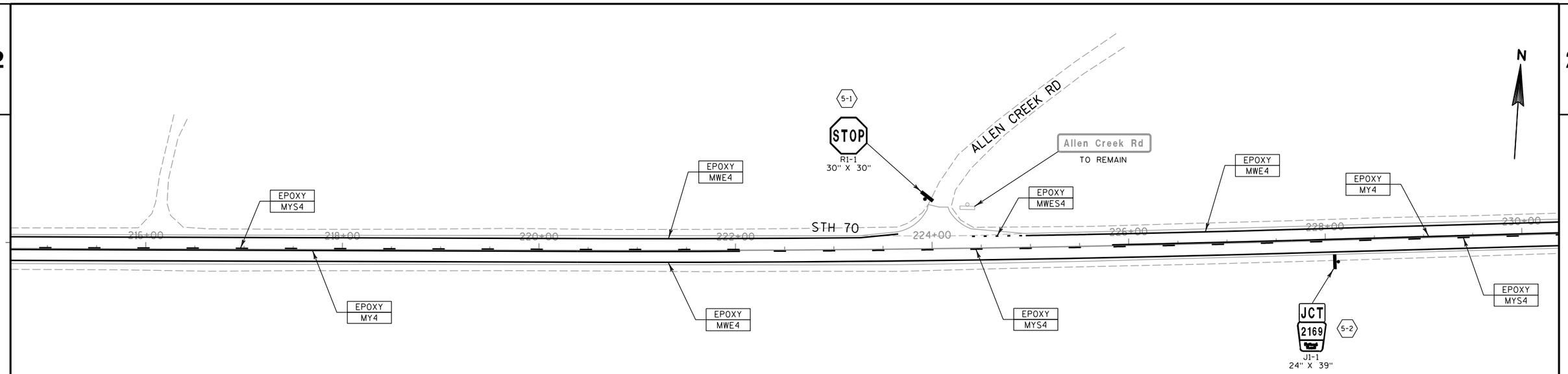


LEGEND

EXISTING SIGN MOUNTED ON SINGLE POST	EPOXY	EPOXY
PROPOSED SIGN MOUNTED ON SINGLE POST	MDY4	PAVEMENT MARKING 4-INCH (DOUBLE YELLOW)
EXISTING SIGN MOUNTED ON DOUBLE POST	MY4	PAVEMENT MARKING 4-INCH (YELLOW)
PROPOSED SIGN MOUNTED ON DOUBLE POST	MYS4	PAVEMENT MARKING 4-INCH (YELLOW SKIP) (12½' LINE, 37½' GAP)
(X) SIGN - REMOVE AND REPLACE	MWE4	PAVEMENT MARKING 4-INCH (WHITE EDGELINE)
(X) SIGN - PLACE NEW	MWES4	PAVEMENT MARKING 4-INCH (WHITE) (3' LINE, 9' GAP)
X SIGN - REMOVE	SLW18	PAVEMENT MARKING STOP LINE 18-INCH (WHITE)



PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	PERMANENT SIGNING & PAVEMENT MARKING	SHEET 15	E



LEGEND

EXISTING SIGN MOUNTED ON SINGLE POST	EPOXY	EPOXY
PROPOSED SIGN MOUNTED ON SINGLE POST	MDY4	PAVEMENT MARKING 4-INCH (DOUBLE YELLOW)
EXISTING SIGN MOUNTED ON DOUBLE POST	MY4	PAVEMENT MARKING 4-INCH (YELLOW)
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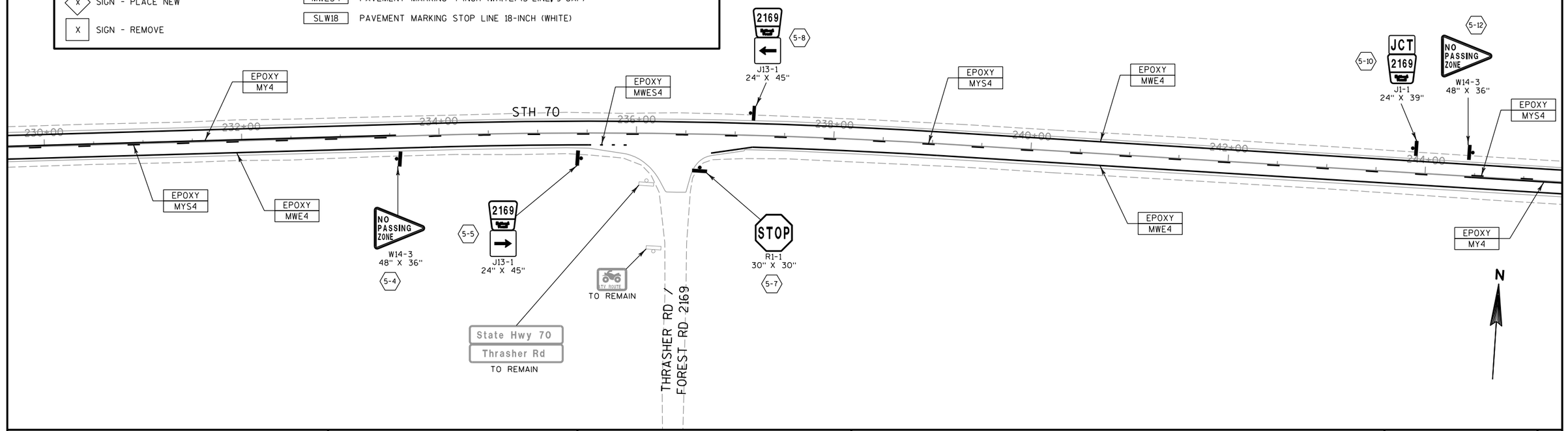
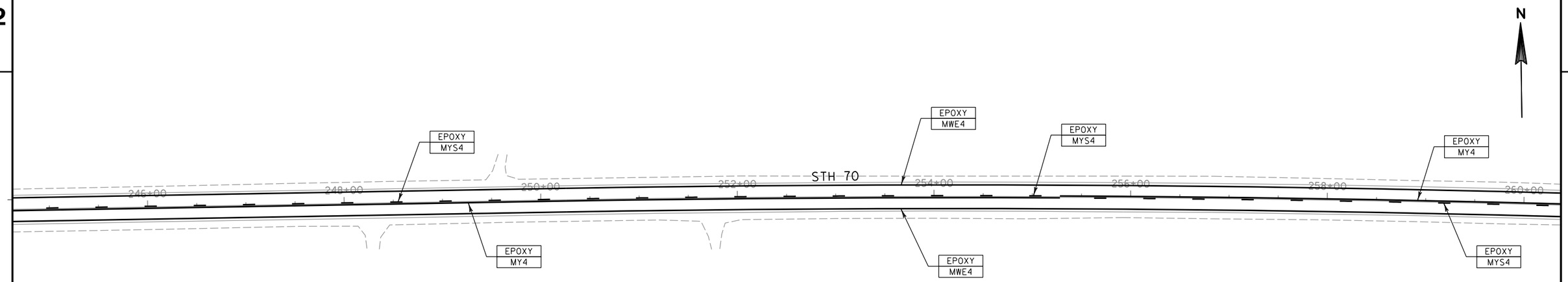
(X) SIGN - REMOVE AND REPLACE	MWE4	PAVEMENT MARKING 4-INCH (WHITE EDGELINE)
◇X SIGN - PLACE NEW	MWES4	PAVEMENT MARKING 4-INCH (WHITE) (3' LINE, 9' GAP)
X SIGN - REMOVE	SLW18	PAVEMENT MARKING STOP LINE 18-INCH (WHITE)



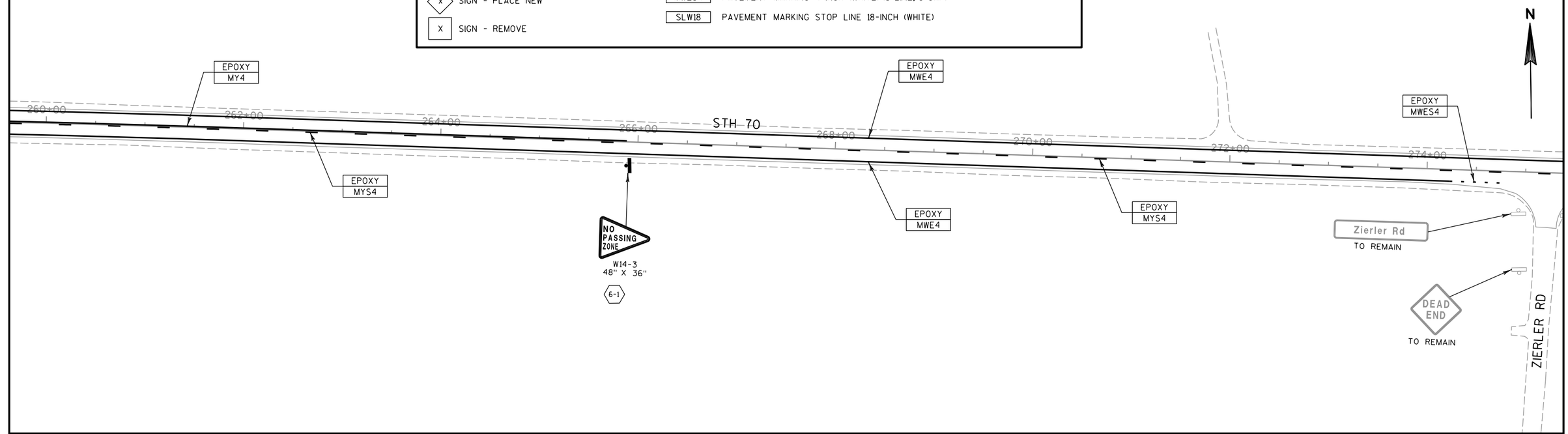
PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	PERMANENT SIGNING & PAVEMENT MARKING	SHEET	E

FILE NAME : P:\47xx\4726.DP.12.STH70.FOR\CADDS\Plan\023205_ps.dgn PLOT DATE : 5/28/2014 PLOT BY : emo PLOT NAME : PLOT SCALE : 1:100

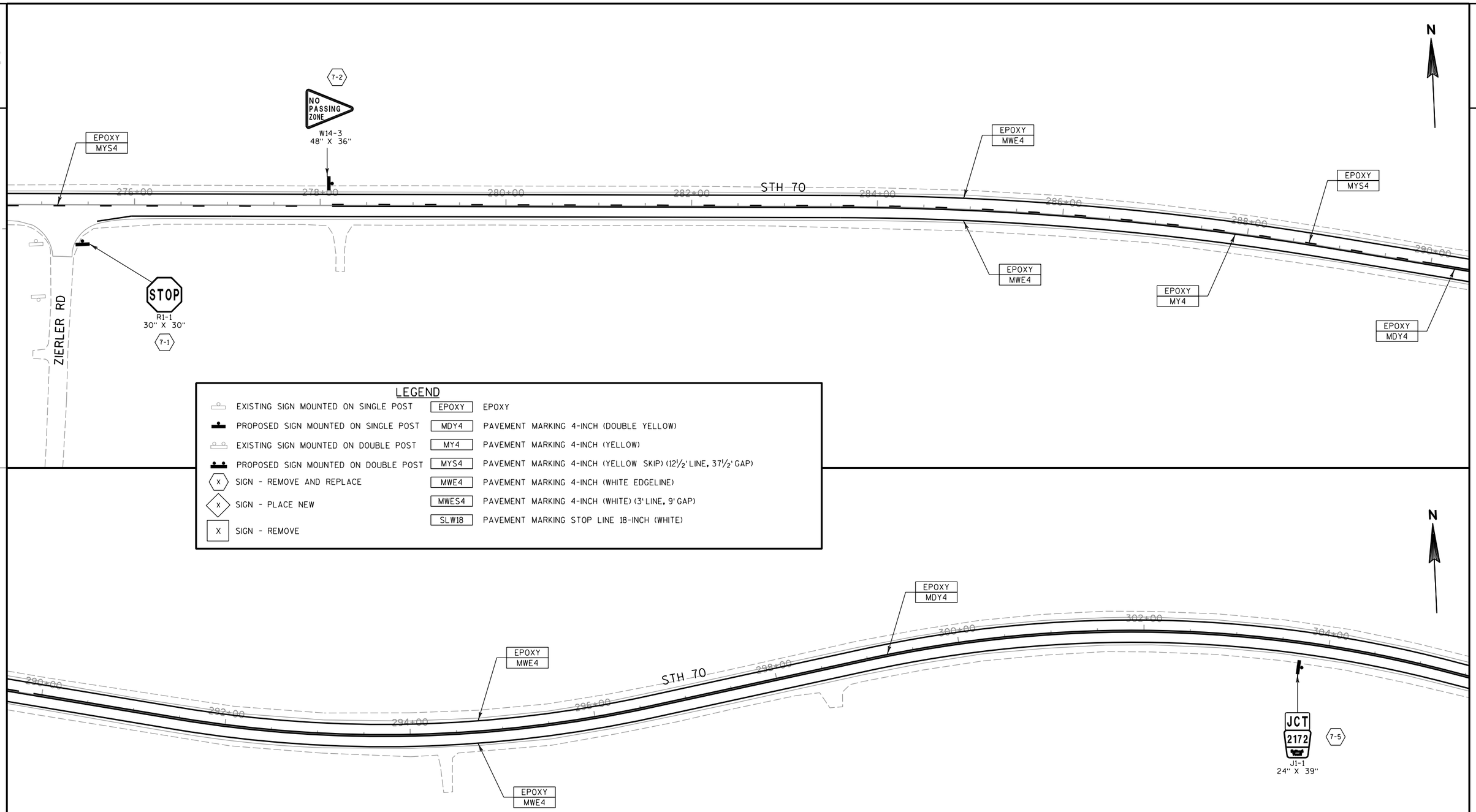


LEGEND

EXISTING SIGN MOUNTED ON SINGLE POST	EPOXY	EPOXY
PROPOSED SIGN MOUNTED ON SINGLE POST	MDY4	PAVEMENT MARKING 4-INCH (DOUBLE YELLOW)
EXISTING SIGN MOUNTED ON DOUBLE POST	MY4	PAVEMENT MARKING 4-INCH (YELLOW)
PROPOSED SIGN MOUNTED ON DOUBLE POST	MYS4	PAVEMENT MARKING 4-INCH (YELLOW SKIP) (12½' LINE, 37½' GAP)
(X) SIGN - REMOVE AND REPLACE	MWE4	PAVEMENT MARKING 4-INCH (WHITE EDGELINE)
◇X SIGN - PLACE NEW	MWES4	PAVEMENT MARKING 4-INCH (WHITE) (3' LINE, 9' GAP)
X SIGN - REMOVE	SLW18	PAVEMENT MARKING STOP LINE 18-INCH (WHITE)

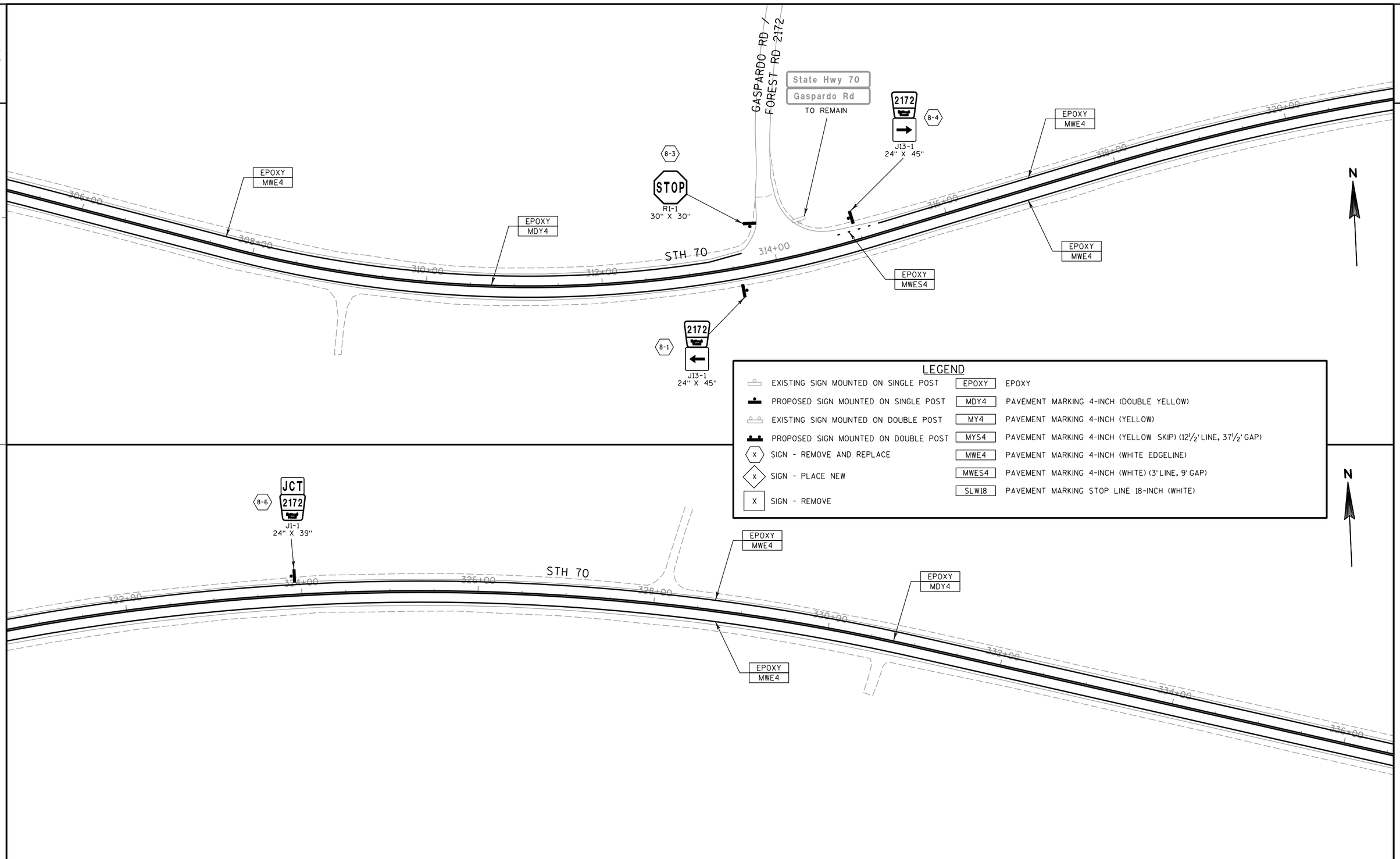


PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	PERMANENT SIGNING & PAVEMENT MARKING	SHEET 17	E



PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	PERMANENT SIGNING & PAVEMENT MARKING	SHEET 18	E

FILE NAME : P:\47xx\4726.DP.12.STH70.FOR\CADDS\Plan\023207_ps.dgn PLOT DATE : 5/28/2014 PLOT BY : emo PLOT NAME : PLOT SCALE : 1:100

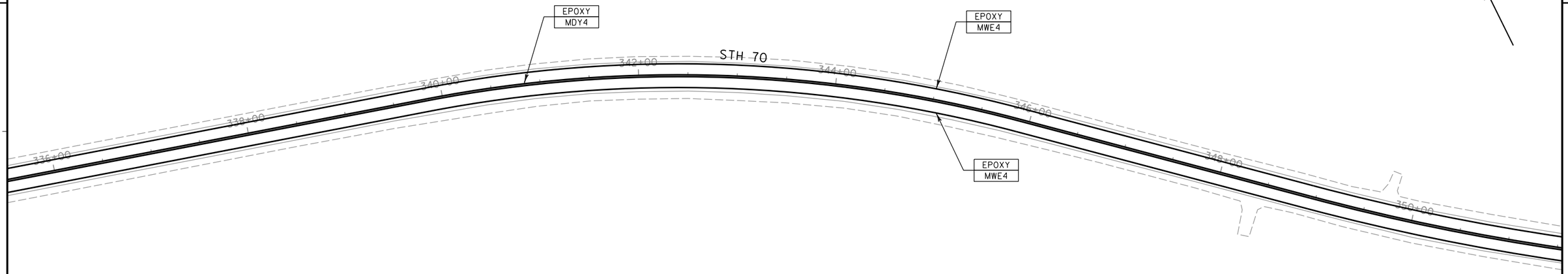


LEGEND

EXISTING SIGN MOUNTED ON SINGLE POST	EPOXY	EPOXY
PROPOSED SIGN MOUNTED ON SINGLE POST	MDY4	PAVEMENT MARKING 4-INCH (DOUBLE YELLOW)
EXISTING SIGN MOUNTED ON DOUBLE POST	MY4	PAVEMENT MARKING 4-INCH (YELLOW)
PROPOSED SIGN MOUNTED ON DOUBLE POST	MYS4	PAVEMENT MARKING 4-INCH (YELLOW SKIP) (12½' LINE, 37½' GAP)
X SIGN - REMOVE AND REPLACE	MWE4	PAVEMENT MARKING 4-INCH (WHITE EDGELINE)
X SIGN - PLACE NEW	MWES4	PAVEMENT MARKING 4-INCH (WHITE) (3' LINE, 9' GAP)
X SIGN - REMOVE	SLW18	PAVEMENT MARKING STOP LINE 18-INCH (WHITE)

PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	PERMANENT SIGNING & PAVEMENT MARKING	SHEET 19	E

2



2

LEGEND

	EXISTING SIGN MOUNTED ON SINGLE POST	EPOXY	EPOXY
	PROPOSED SIGN MOUNTED ON SINGLE POST	MDY4	PAVEMENT MARKING 4-INCH (DOUBLE YELLOW)
	EXISTING SIGN MOUNTED ON DOUBLE POST	MY4	PAVEMENT MARKING 4-INCH (YELLOW)
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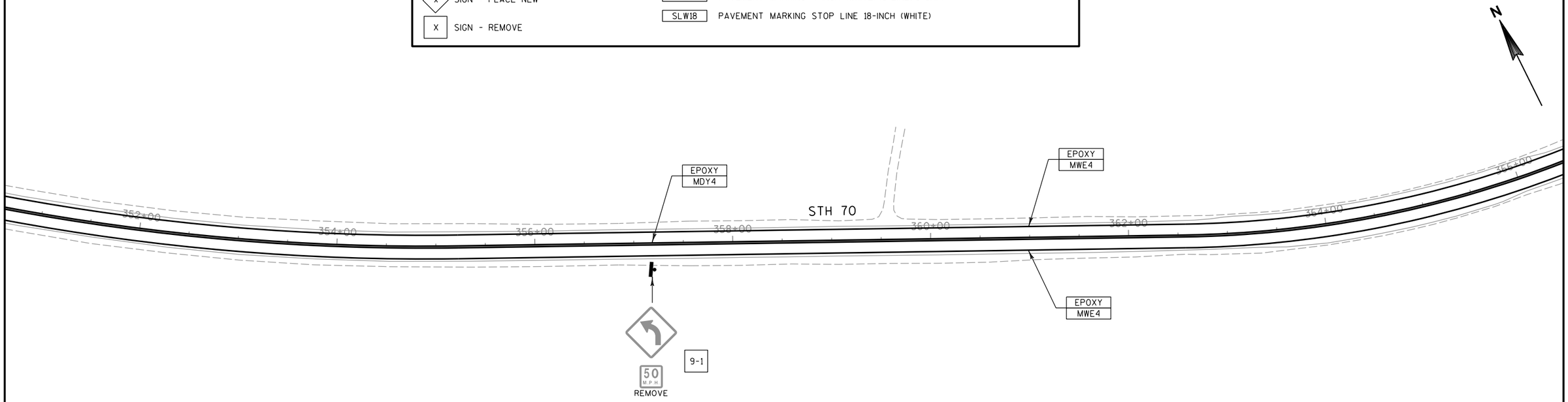
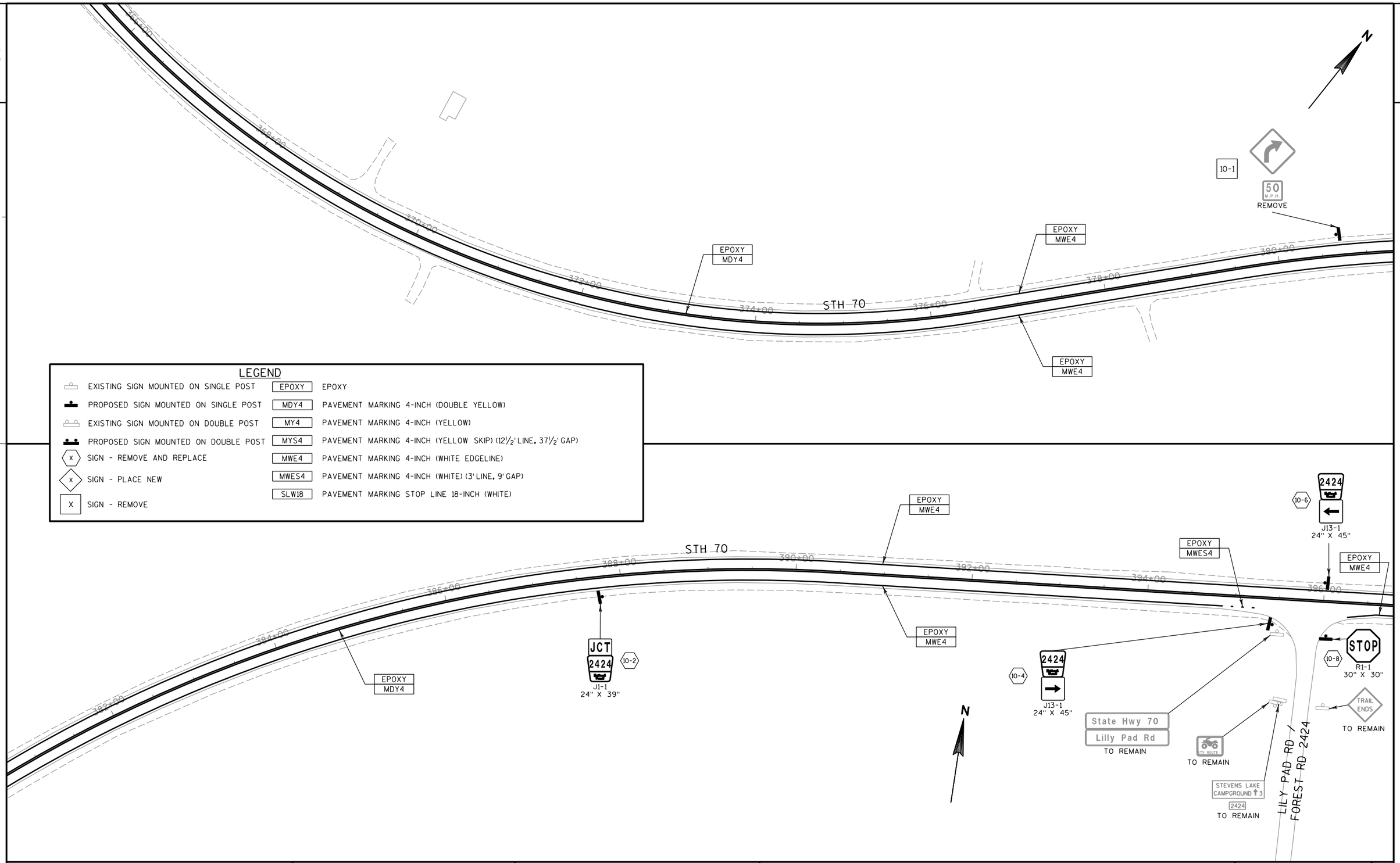
X	SIGN - PLACE NEW	MWES4	PAVEMENT MARKING 4-INCH (WHITE) (3' LINE, 9' GAP)
X	SIGN - REMOVE	SLW18	PAVEMENT MARKING STOP LINE 18-INCH (WHITE)



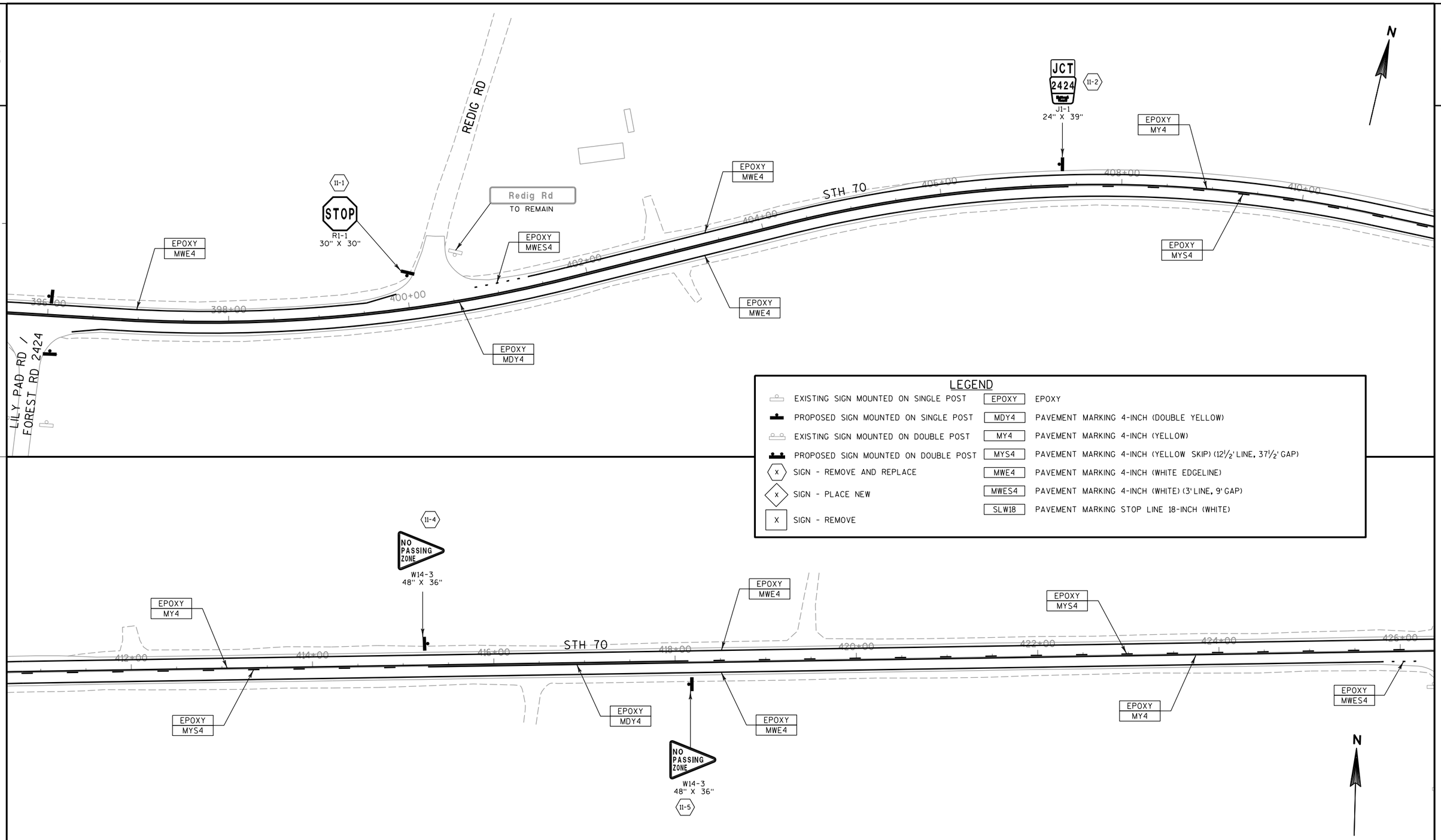
PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	PERMANENT SIGNING & PAVEMENT MARKING	SHEET 20 E



LEGEND

EXISTING SIGN MOUNTED ON SINGLE POST	EPOXY	EPOXY
PROPOSED SIGN MOUNTED ON SINGLE POST	MDY4	PAVEMENT MARKING 4-INCH (DOUBLE YELLOW)
EXISTING SIGN MOUNTED ON DOUBLE POST	MY4	PAVEMENT MARKING 4-INCH (YELLOW)
PROPOSED SIGN MOUNTED ON DOUBLE POST	MYS4	PAVEMENT MARKING 4-INCH (YELLOW SKIP) (12½' LINE, 37½' GAP)
(X) SIGN - REMOVE AND REPLACE	MWE4	PAVEMENT MARKING 4-INCH (WHITE EDGELINE)
(X) SIGN - PLACE NEW	MWES4	PAVEMENT MARKING 4-INCH (WHITE) (3' LINE, 9' GAP)
[X] SIGN - REMOVE	SLW18	PAVEMENT MARKING STOP LINE 18-INCH (WHITE)

PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	PERMANENT SIGNING & PAVEMENT MARKING	SHEET 21	E



LEGEND

	EXISTING SIGN MOUNTED ON SINGLE POST	EPOXY	EPOXY
	PROPOSED SIGN MOUNTED ON SINGLE POST	MDY4	PAVEMENT MARKING 4-INCH (DOUBLE YELLOW)
	EXISTING SIGN MOUNTED ON DOUBLE POST	MY4	PAVEMENT MARKING 4-INCH (YELLOW)
	PROPOSED SIGN MOUNTED ON DOUBLE POST	MYS4	PAVEMENT MARKING 4-INCH (YELLOW SKIP) (12½' LINE, 37½' GAP)
X	SIGN - REMOVE AND REPLACE	MWE4	PAVEMENT MARKING 4-INCH (WHITE EDGELINE)
X	SIGN - PLACE NEW	MWES4	PAVEMENT MARKING 4-INCH (WHITE) (3' LINE, 9' GAP)
X	SIGN - REMOVE	SLW18	PAVEMENT MARKING STOP LINE 18-INCH (WHITE)

PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	PERMANENT SIGNING & PAVEMENT MARKING	SHEET 22	E

2

N

Fuhrman Rd
TO REMAIN

EPOXY MDY4

EPOXY MY4

EPOXY MWE4

EPOXY MDY4

EPOXY MYS4

12-2

NO PASSING ZONE
W14-3
48" X 36"

STH 70

426+00 428+00 430+00 432+00 434+00 436+00 438+00 440+00

EPOXY MWES4

EPOXY MWE4

STOP
R1-1
30" X 30"

12-1

EPOXY MYS4

EPOXY MWE4

EPOXY MY4

NO PASSING ZONE
W14-3
48" X 36"

12-3

FUHRMAN RD

DEAD END
TO REMAIN

LEGEND

EXISTING SIGN MOUNTED ON SINGLE POST	EPOXY	EPOXY
PROPOSED SIGN MOUNTED ON SINGLE POST	MDY4	PAVEMENT MARKING 4-INCH (DOUBLE YELLOW)
EXISTING SIGN MOUNTED ON DOUBLE POST	MY4	PAVEMENT MARKING 4-INCH (YELLOW)
PROPOSED SIGN MOUNTED ON DOUBLE POST	MYS4	PAVEMENT MARKING 4-INCH (YELLOW SKIP) (12½' LINE, 37½' GAP)
(X) SIGN - REMOVE AND REPLACE	MWE4	PAVEMENT MARKING 4-INCH (WHITE EDGELINE)
(X) SIGN - PLACE NEW	MWES4	PAVEMENT MARKING 4-INCH (WHITE) (3' LINE, 9' GAP)
X SIGN - REMOVE	SLW18	PAVEMENT MARKING STOP LINE 18-INCH (WHITE)

HUFF CREEK RD

DEAD END
TO REMAIN

12-5

NO PASSING ZONE
W14-3
48" X 36"

12-4

STOP
R1-1
30" X 30"

Huff Creek Rd
TO REMAIN

EPOXY MWE4

EPOXY MWES4

EPOXY MY4

EPOXY MYS4

EPOXY MWE4

EPOXY MDY4

EPOXY MYS4

442+00 444+00 446+00 448+00 450+00 452+00 454+00 456+00

STH 70

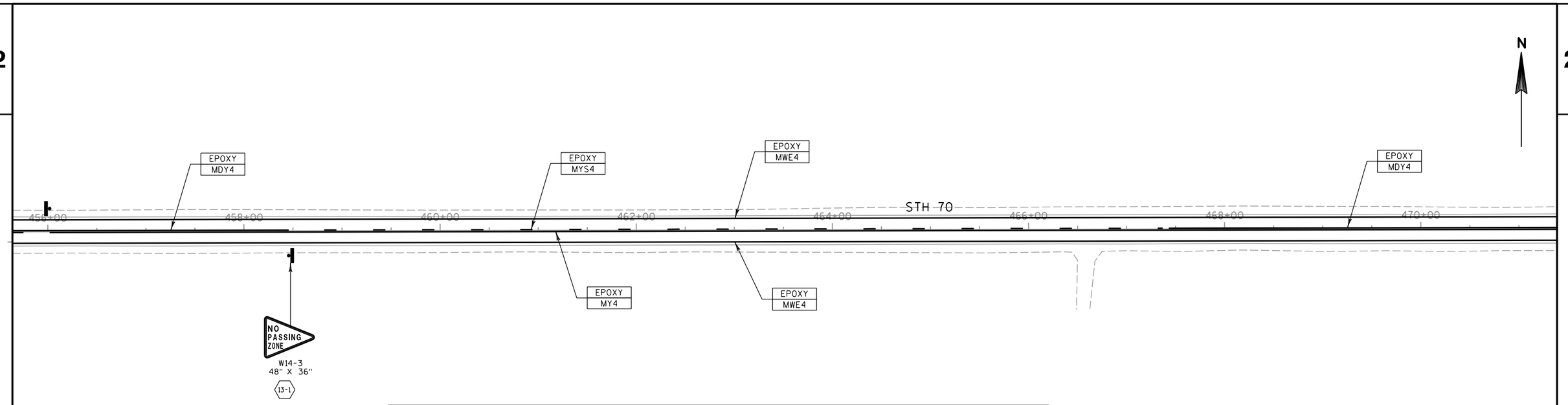
EPOXY MY4

EPOXY MWE4

COXS CABIN
TO REMAIN

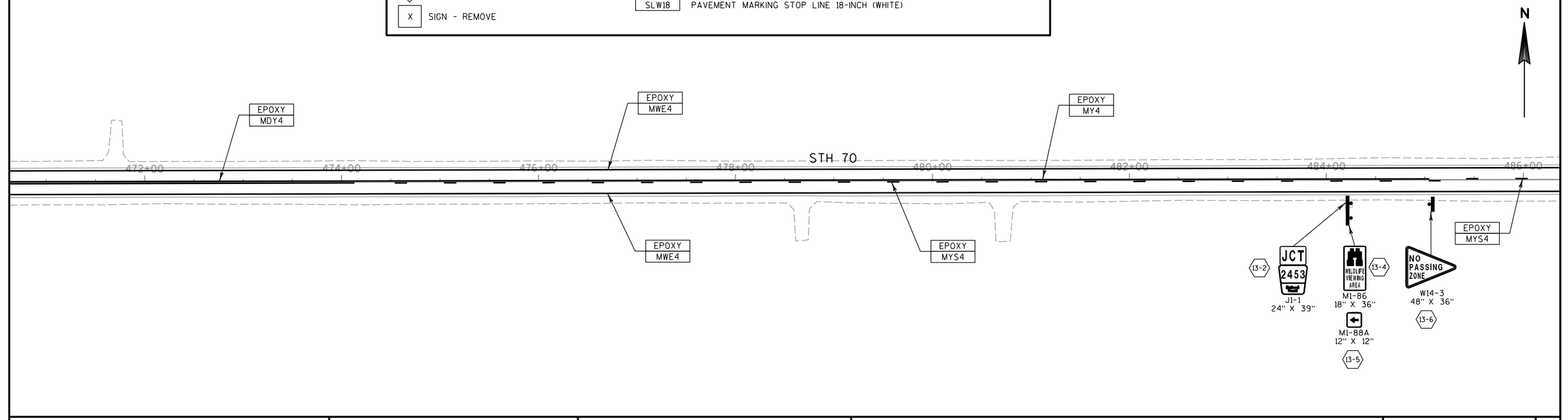
N

PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	PERMANENT SIGNING & PAVEMENT MARKING	SHEET 23	E

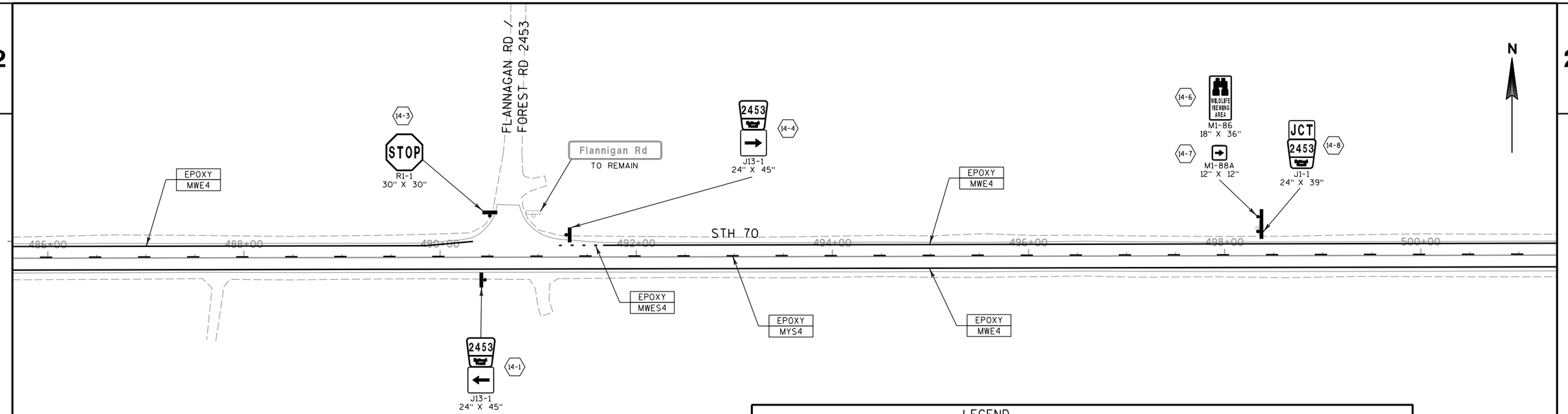


LEGEND

EXISTING SIGN MOUNTED ON SINGLE POST	EPOXY	EPOXY
PROPOSED SIGN MOUNTED ON SINGLE POST	MDY4	PAVEMENT MARKING 4-INCH (DOUBLE YELLOW)
EXISTING SIGN MOUNTED ON DOUBLE POST	MY4	PAVEMENT MARKING 4-INCH (YELLOW)
PROPOSED SIGN MOUNTED ON DOUBLE POST	MYS4	PAVEMENT MARKING 4-INCH (YELLOW SKIP) (12½' LINE, 37½' GAP)
(X) SIGN - REMOVE AND REPLACE	MWE4	PAVEMENT MARKING 4-INCH (WHITE EDGELINE)
(X) SIGN - PLACE NEW	MWES4	PAVEMENT MARKING 4-INCH (WHITE) (3' LINE, 9' GAP)
X SIGN - REMOVE	SLW18	PAVEMENT MARKING STOP LINE 18-INCH (WHITE)



PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	PERMANENT SIGNING & PAVEMENT MARKING	SHEET 24	E



LEGEND

EXISTING SIGN MOUNTED ON SINGLE POST	EPOXY	EPOXY
PROPOSED SIGN MOUNTED ON SINGLE POST	MDY4	PAVEMENT MARKING 4-INCH (DOUBLE YELLOW)
EXISTING SIGN MOUNTED ON DOUBLE POST	MY4	PAVEMENT MARKING 4-INCH (YELLOW)
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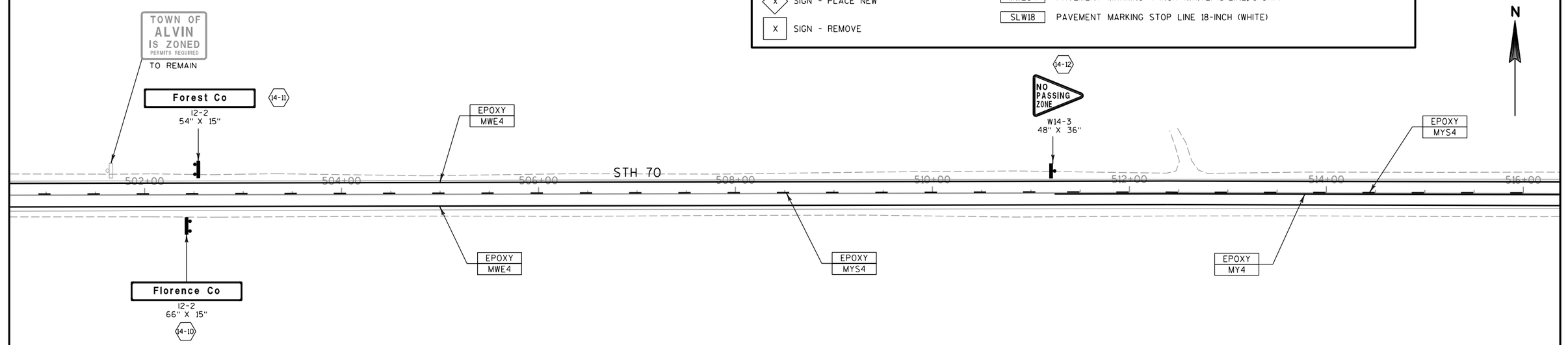
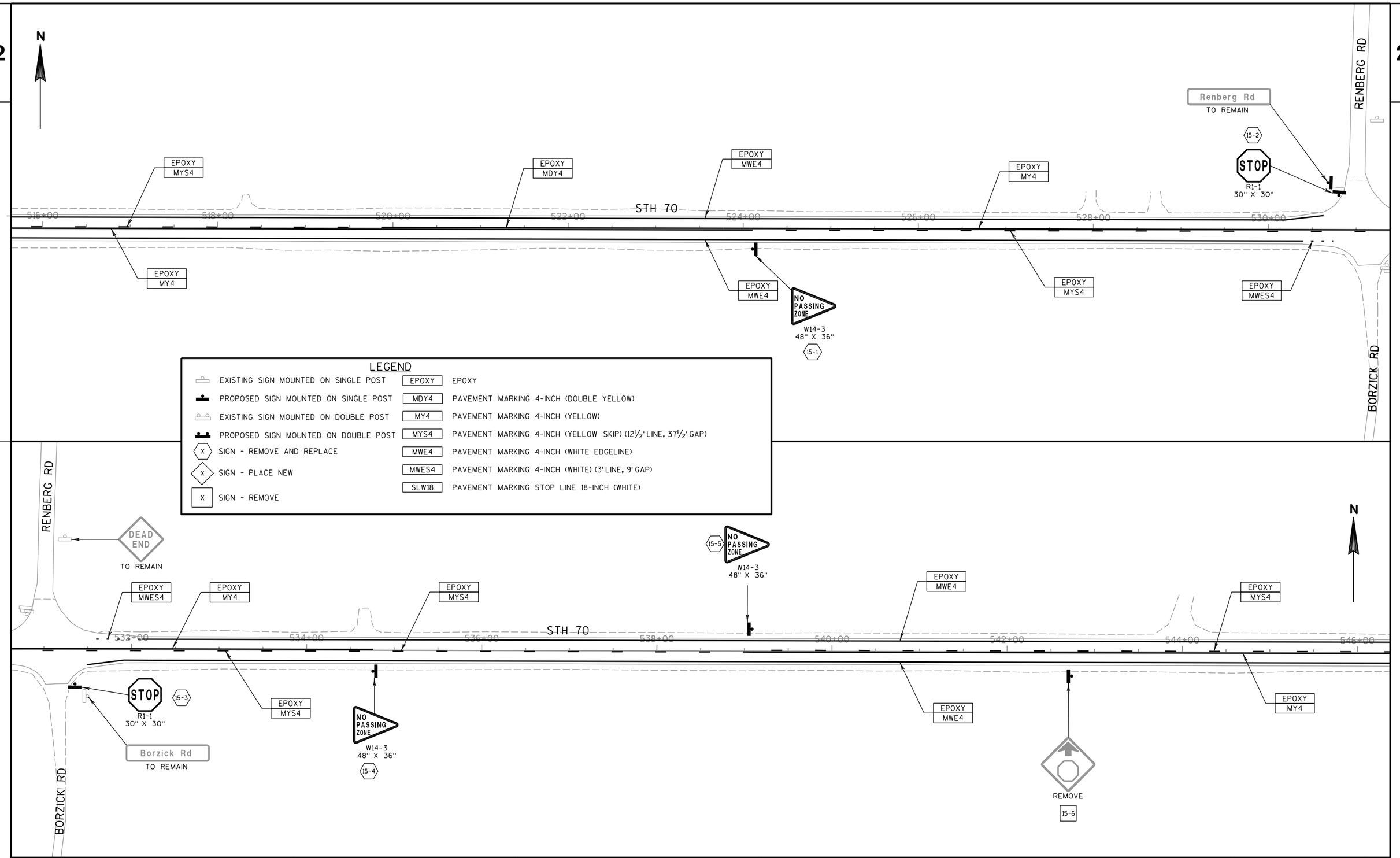
(X) SIGN - REMOVE AND REPLACE	MWE4	PAVEMENT MARKING 4-INCH (WHITE EDGELINE)
◇X SIGN - PLACE NEW	MWES4	PAVEMENT MARKING 4-INCH (WHITE) (3' LINE, 9' GAP)
[X] SIGN - REMOVE	SLW18	PAVEMENT MARKING STOP LINE 18-INCH (WHITE)

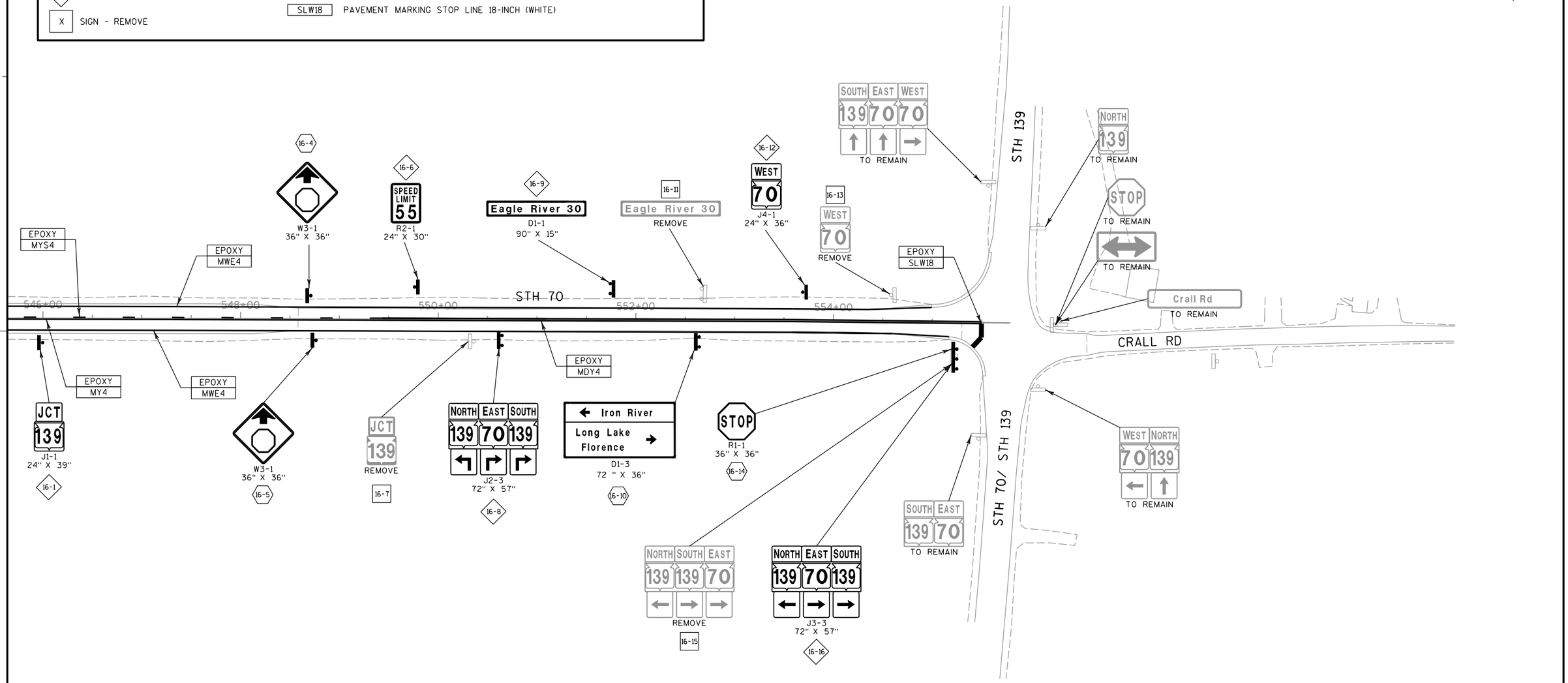




PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	PERMANENT SIGNING & PAVEMENT MARKING	SHEET 26	E

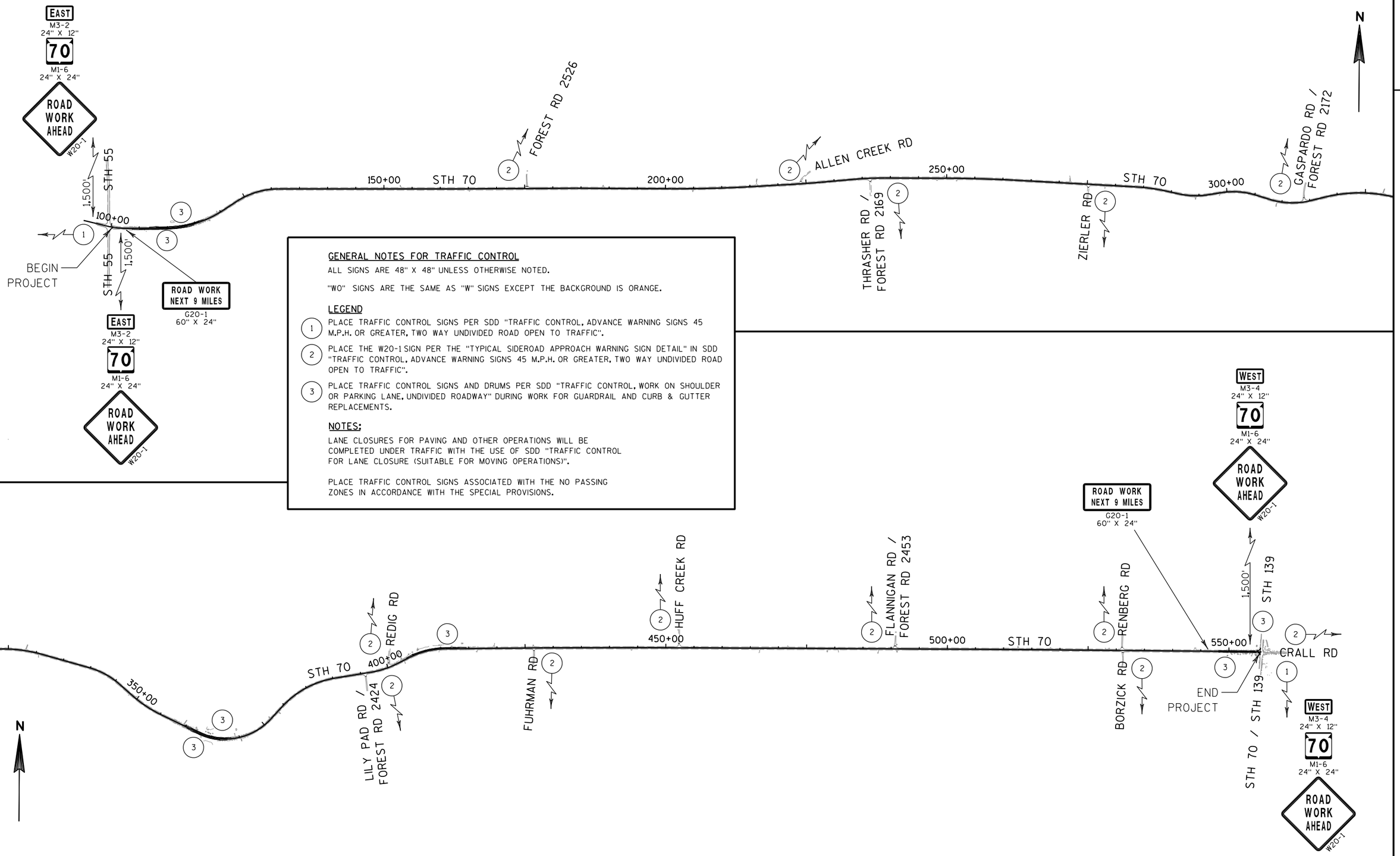
LEGEND

EXISTING SIGN MOUNTED ON SINGLE POST	EPOXY	EPOXY
PROPOSED SIGN MOUNTED ON SINGLE POST	MDY4	PAVEMENT MARKING 4-INCH (DOUBLE YELLOW)
EXISTING SIGN MOUNTED ON DOUBLE POST	MY4	PAVEMENT MARKING 4-INCH (YELLOW)
PROPOSED SIGN MOUNTED ON DOUBLE POST	MYS4	PAVEMENT MARKING 4-INCH (YELLOW SKIP) (12½' LINE, 37½' GAP)
X SIGN - REMOVE AND REPLACE	MWE4	PAVEMENT MARKING 4-INCH (WHITE EDGELINE)
X SIGN - PLACE NEW	MWES4	PAVEMENT MARKING 4-INCH (WHITE) (3' LINE, 9' GAP)
X SIGN - REMOVE	SLW18	PAVEMENT MARKING STOP LINE 18-INCH (WHITE)



PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	PERMANENT SIGNING & PAVEMENT MARKING	SHEET 27	E

FILE NAME : P:\47xx\4726.DP.12.STH70.FOR\CADDS\Plan\023216_ps.dgn PLOT DATE : 5/28/2014 PLOT BY : emo PLOT NAME : PLOT SCALE : 1:100



GENERAL NOTES FOR TRAFFIC CONTROL

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

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

LEGEND

(1) PLACE TRAFFIC CONTROL SIGNS PER SDD "TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER, TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC".

(2) PLACE THE W20-1 SIGN PER THE "TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL" IN SDD "TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER, TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC".

(3) PLACE TRAFFIC CONTROL SIGNS AND DRUMS PER SDD "TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY" DURING WORK FOR GUARDRAIL AND CURB & GUTTER REPLACEMENTS.

NOTES:

LANE CLOSURES FOR PAVING AND OTHER OPERATIONS WILL BE COMPLETED UNDER TRAFFIC WITH THE USE OF SDD "TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)".

PLACE TRAFFIC CONTROL SIGNS ASSOCIATED WITH THE NO PASSING ZONES IN ACCORDANCE WITH THE SPECIAL PROVISIONS.

PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	TRAFFIC CONTROL	SHEET 28	E

DATE 20NOV14 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	9090-01-71 QUANTITY
0010	204.0115	REMOVING ASPHALTIC SURFACE BUTT JOINTS **P**	SY	60.000	60.000
0020	204.0120	REMOVING ASPHALTIC SURFACE MILLING **P**	SY	153,800.000	153,800.000
0030	204.0150	REMOVING CURB & GUTTER	LF	145.000	145.000
0040	205.9015.S	GRADING SHAPING & FINISHING INTERSECTION (LOCATION) 01. STH 70/STH 139	LS	1.000	1.000
0050	211.0100	PREPARE FOUNDATION FOR ASPHALTIC PAVING (PROJECT) 01. 9090-01-71	LS	1.000	1.000
0060	211.0400	PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS **P**	STA	39.000	39.000
0070	213.0100	FINISHING ROADWAY (PROJECT) 01. 9090-01-71	EACH	1.000	1.000
0080	305.0110	BASE AGGREGATE DENSE 3/4-INCH	TON	3,600.000	3,600.000
0090	305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	20.000	20.000
0100	305.0500	SHAPING SHOULDERS	STA	868.000	868.000
0110	440.4410.S	INCENTIVE IRI RIDE	DOL	34,490.000	34,490.000
0120	455.0110	ASPHALTIC MATERIAL PG58-34	TON	930.000	930.000
0130	455.0605	TACK COAT **P**	GAL	10,950.000	10,950.000
0140	460.1101	HMA PAVEMENT TYPE E-1	TON	16,670.000	16,670.000
0150	460.2000	INCENTIVE DENSITY HMA PAVEMENT	DOL	10,670.000	10,670.000
0160	465.0105	ASPHALTIC SURFACE	TON	10.000	10.000
0170	465.0110	ASPHALTIC SURFACE PATCHING	TON	150.000	150.000
0180	465.0315	ASPHALTIC FLUMES	SY	10.000	10.000
0190	465.0475	ASPHALT CENTER LINE RUMBLE STRIPS 2-LANE RURAL	LF	40,774.000	40,774.000
0200	601.0557	CONCRETE CURB AND GUTTER 6-INCH SLOPED 36-INCH TYPE D	LF	145.000	145.000
0210	614.0010	BARRIER SYSTEM GRADING SHAPING FINISHING	EACH	6.000	6.000
0220	614.0920	SALVAGED RAIL **P**	LF	1,650.000	1,650.000
0230	614.0925	SALVAGED GUARDRAIL END TREATMENTS	EACH	10.000	10.000
0240	614.2300	MGS GUARDRAIL 3	LF	3,050.000	3,050.000
0250	614.2610	MGS GUARDRAIL TERMINAL EAT	EACH	12.000	12.000
0260	616.0700.S	FENCE SAFETY	LF	2,000.000	2,000.000
0270	618.0100	MAINTENANCE AND REPAIR OF HAUL ROADS (PROJECT) 01. 9090-01-71	EACH	1.000	1.000
0280	619.1000	MOBILIZATION	EACH	1.000	1.000
0290	621.0100	LANDMARK REFERENCE MONUMENTS	EACH	36.000	36.000
0300	624.0100	WATER	MGAL	6.000	6.000
0310	628.1504	SILT FENCE	LF	4,800.000	4,800.000
0320	628.1520	SILT FENCE MAINTENANCE	LF	4,800.000	4,800.000
0330	628.1905	MOBILIZATIONS EROSION CONTROL	EACH	4.000	4.000
0340	628.1910	MOBILIZATIONS EMERGENCY EROSION CONTROL	EACH	2.000	2.000
0350	628.2004	EROSION MAT CLASS I TYPE B	SY	2,360.000	2,360.000
0360	628.7504	TEMPORARY DITCH CHECKS	LF	265.000	265.000
0370	628.7555	CULVERT PIPE CHECKS	EACH	10.000	10.000
0380	628.7570	ROCK BAGS	EACH	390.000	390.000
0390	634.0614	POSTS WOOD 4X6-INCH X 14-FT	EACH	4.000	4.000
0400	634.0616	POSTS WOOD 4X6-INCH X 16-FT	EACH	65.000	65.000
0410	634.0618	POSTS WOOD 4X6-INCH X 18-FT	EACH	6.000	6.000
0420	634.0620	POSTS WOOD 4X6-INCH X 20-FT	EACH	6.000	6.000
0430	637.2210	SIGNS TYPE II REFLECTIVE H	SF	441.260	441.260
0440	637.2230	SIGNS TYPE II REFLECTIVE F	SF	120.000	120.000
0450	638.2602	REMOVING SIGNS TYPE II	EACH	75.000	75.000
0460	638.3000	REMOVING SMALL SIGN SUPPORTS	EACH	77.000	77.000

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DATE 20NOV14 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	9090-01-71 QUANTITY
0470	642.5001	FIELD OFFICE TYPE B	EACH	1.000	1.000
0480	643.0100	TRAFFIC CONTROL (PROJECT) 01. 9090-01-71	EACH	1.000	1.000
0490	643.0300	TRAFFIC CONTROL DRUMS	DAY	1,390.000	1,390.000
0500	643.0900	TRAFFIC CONTROL SIGNS	DAY	3,240.000	3,240.000
0510	646.0106	PAVEMENT MARKING EPOXY 4-INCH	LF	148,400.000	148,400.000
0520	647.0566	PAVEMENT MARKING STOP LINE EPOXY 18-INCH	LF	28.000	28.000
0530	648.0100	LOCATING NO-PASSING ZONES	MI	8.630	8.630
0540	649.0100	TEMPORARY PAVEMENT MARKING 4-INCH **P**	LF	118,000.000	118,000.000
0550	650.5500	CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER	LF	145.000	145.000
0560	650.8000	CONSTRUCTION STAKING RESURFACING REFERENCE **P**	LF	45,531.000	45,531.000
0570	650.9910	CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) 01. 9090-01-71	LS	1.000	1.000
0580	690.0150	SAWING ASPHALT **P**	LF	190.000	190.000
0590	ASP.1T0A	ON-THE-JOB TRAINING APPRENTICE AT $5. 00/HR	HRS	1,200.000	1,200.000
0600	ASP.1T0G	ON-THE-JOB TRAINING GRADUATE AT $5.00/HR	HRS	600.000	600.000
0610	SPV.0060	SPECIAL 01. REESTABLISH SECTION CORNER MONUMENTS	EACH	9.000	9.000
0620	SPV.0060	SPECIAL 02. TEMPORARY PAVEMENT MARKING REFLECTIVE TABS	EACH	920.000	920.000
0630	SPV.0090	SPECIAL 01. FOG SEAL RUMBLE STRIPS	LF	40,774.000	40,774.000

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REMOVING ASPHALTIC SURFACE ITEMS

STATION - STATION	LOCATION	204.0115 BUTT JOINTS SY	204.0120 MILLING SY	COMMENTS
CAT 0010				
100+26 - 175+00	LT&RT	11	25,000	
175+00 - 224+00	LT&RT	--	16,090	
175+41	LT	--	200	FOREST RD 2526
224+00 - 275+00	LT&RT	--	16,760	
224+06	LT	--	170	ALLEN CREEK RD
236+41	RT	--	260	THRASHER RD / FOREST RD 2169
275+00 - 314+00	LT&RT	--	12,920	
275+22	RT	--	210	ZIERLER RD
314+00 - 396+00	LT&RT	--	27,400	
314+03	LT	5	280	GASPARDO RD / FOREST RD 2172
395+83	RT	5	250	LILLY PAD RD / FOREST RD 2424
396+00 - 427+00	LT&RT	--	10,510	
400+39	LT	--	280	REDIG RD
426+58	RT	5	140	FUHRMAN RD
427+00 - 452+00	LT&RT	--	8,330	
452+00 - 491+00	LT&RT	--	12,890	
452+33	LT	--	310	HUFF CREEK RD
490+70	LT	--	230	FLANNAGAN RD / FOREST RD 2453
491+00 - 531+00	LT&RT	--	13,320	
531+00 - 555+59	LT&RT	28	7,820	
531+00	LT	6	280	RENBERG RD
531+15	RT	--	150	BORZICK RD
TOTALS		60	153,800	

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REMOVING CURB & GUTTER

STATION - STATION	LOCATION	204.0150 LF
CAT 0010		
554+99 - 555+59	LT	88
555+17 - 555+54	RT	57
TOTAL		145

GRADING, SHAPING, AND FINISHING INTERSECTION (STH 70/STH 139)

LOCATION	205.9015.S.01 EACH	**COMMON EXC. CY	**FILL CY	**BORROW EXC. CY	**TOPSOIL SY	**FERTILIZER TYPE B CWT	**SEEDING #30 LB
CAT 0010							
STH 70/STH 139 INTERSECTION	1	20	13	--	125	0.1	3
TOTALS	1	20	13	0	125	0.1	3

**NON-BID ITEM, ITEMS AND QUANTITIES LISTED FOR BID INFORMATION ONLY. ITEMS INCIDENTAL TO GRADING, SHAPING, AND FINISHING INTERSECTION

PREPARE FOUNDATION FOR ASPHALTIC PAVING

STATION - STATION	LOCATION	211.0100 (9090-01-71) LS
CAT 0010		
PROJECT	LT & RT	1
TOTAL		1

PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS

STATION - STATION	LOCATION	211.0400 STA
CAT 0010		
104+97 - 108+67	RT	4
107+96 - 108+99	LT	2
112+16 - 115+83	LT	4
112+25 - 113+62	RT	2
360+88 - 363+02	LT	3
361+53 - 363+58	RT	3
365+70 - 366+65	RT	1
366+12 - 367+91	LT	2
404+86 - 405+72	LT	1
411+07 - 413+40	LT	3
548+58 - 554+70	LT & RT	14
TOTAL		39

SHAPING SHOULDERS

STATION - STATION	LOCATION	305.0500 STA
CAT 0010		
100+26 - 106+77	LT	7
100+26 - 103+71	RT	4
116+64 - 175+00	LT	59
114+81 - 175+00	RT	61
175+00 - 224+00	LT&RT	98
224+00 - 275+00	LT&RT	102
275+00 - 314+00	LT&RT	78
314+00 - 359+68	LT	46
314+00 - 360+33	RT	47
368+57 - 396+00	LT	28
367+83 - 396+00	RT	29
396+00 - 403+67	LT	8
396+00 - 427+00	RT	31
414+59 - 427+00	LT	13
427+00 - 452+00	LT&RT	50
452+00 - 491+00	LT&RT	78
491+00 - 531+00	LT&RT	80
531+00 - 555+17	LT&RT	49
TOTAL		868

BASE AGGREGATE DENSE ITEMS

STATION - STATION	LOCATION	305.0110 3/4-INCH TON	305.0120 1 1/4-INCH TON	COMMENTS
CAT 0010				
100+26 - 175+00	LT & RT	660	--	SHOULDERS
175+00 - 224+00	LT & RT	275	--	SHOULDERS
224+00 - 275+00	LT & RT	290	--	SHOULDERS
275+00 -314+00	LT & RT	220	--	SHOULDERS
314+00 - 396+00	LT & RT	660	--	SHOULDERS
396+00 - 427+00	LT & RT	235	--	SHOULDERS
427+00 - 452+00	LT & RT	140	--	SHOULDERS
452+00 - 491+00	LT & RT	220	--	SHOULDERS
491+00 - 531+00	LT & RT	225	--	SHOULDERS
531+00 - 555+17	LT & RT	140	--	SHOULDERS
554+97 - 555+59	LT & RT	--	20	CURB & GUTTER
PROJECT	LT & RT	140	--	DRIVEWAYS
UNDISTRIBUTED	--	395	--	
TOTALS		3,600	20	

HMA AND ASPHALTIC PAVEMENT ITEMS

STATION - STATION	LOCATION	455.0110 ASPHALTIC MATERIAL PG58-34 TON	455.0605 TACK COAT GAL	460.1101 HMA PAVEMENT TYPE E-1 TON	465.0105 ASPHALTIC SURFACE TON	465.0110 ASPHALTIC SURFACE PATCHING TON	465.0315 ASPHALTIC FLUMES SY	COMMENTS
CAT 0010								
100+26 - 175+00	LT&RT	152	1,780	2,740	--	--	--	
175+00 - 224+00	LT&RT	95	1,145	1,720	--	--	--	
175+41	LT	2	15	20	--	--	--	FOREST RD 2526
224+00 - 275+00	LT&RT	99	1,190	1,785	--	--	--	
224+06	LT	2	12	20	--	--	--	ALLEN CREEK RD
236+41	RT	2	18	30	--	--	--	THRASHER RD / FOREST RD 2169
275+00 - 314+00	LT&RT	76	910	1,365	--	--	--	
275+22	RT	2	15	20	--	--	--	ZIERLER RD
314+00 - 396+00	LT&RT	164	1,940	2,965	--	--	--	
314+03	LT	2	20	30	--	--	--	GASPARDO RD / FOREST RD 2172
395+83	RT	2	18	25	--	--	--	LILLY PAD RD / FOREST RD 2424
396+00 - 427+00	LT&RT	62	748	1,140	--	--	--	
400+39	LT	2	19	30	--	--	--	REDIG RD
426+58	RT	1	10	15	--	--	--	FUHRMAN RD
427+00 - 452+00	LT&RT	49	585	875	--	--	--	
452+00 - 491+00	LT&RT	76	910	1,365	--	--	--	
452+33	LT	2	22	35	--	--	--	HUFF CREEK RD
490+70	LT	2	16	25	--	--	--	FLANNAGAN RD / FOREST RD 2453
491+00 - 531+00	LT&RT	78	935	1,400	--	--	--	
531+00 - 555+59	LT&RT	57	611	1,020	10	--	10	
531+00	LT	2	20	30	--	--	--	RENBERG RD
531+15	RT	1	11	15	--	--	--	BORZICK RD
UNDISTRIBUTED	--	--	--	--	--	150	--	
TOTALS		930	10,950	16,670	10	150	10	

NOTE: THE ADDITIONAL HMA AND ASPHALTIC MATERIAL FOR THE PAVEMENT SAFETY EDGE WAS CALCULATED WITH H=5-INCHES TYP

RUMBLE STRIP ITEMS

STATION - STATION	LOCATION	465.0475 ASPHALT CENTER LINE RUMBLE STRIP 2-LANE RURAL LF	SPV.0090.01 FOG SEAL RUMBLE STRIPS LF
CAT 0010			
101+58 - 173+41	LT & RT	7,183	7,183
177+41 - 222+07	LT & RT	4,466	4,466
226+07 - 234+41	LT & RT	834	834
238+41 - 273+22	LT & RT	3,481	3,481
277+22 - 312+02	LT & RT	3,480	3,480
316+02 - 393+83	LT & RT	7,781	7,781
402+30 - 424+58	LT & RT	2,228	2,228
428+58 - 450+33	LT & RT	2,175	2,175
454+33 - 488+70	LT & RT	3,437	3,437
492+70 - 528+27	LT & RT	3,557	3,557
532+27 - 553+79	LT & RT	2,152	2,152
TOTALS		40,774	40,774

CONCRETE CURB & GUTTER ITEMS

STATION - STATION	LOCATION	601.0557 CONCRETE CURB & GUTTER 6-INCH SLOPED 36-INCH TYPE D LF	650.5500 CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER LF
CAT 0010			
554+99 - 555+59	LT	88	88
555+17 - 555+54	RT	57	57
TOTALS		145	145

BARRIER SYSTEM GRADING SHAPING FINISHING

STATION - STATION	LOCATION	614.0010 EACH	**COMMON EXC. CY	**FILL CY	**BORROW EXC. CY	**TOPSOIL SY	**FERTILIZER TYPE B CWT	**SEEDING #20 LB	**SEEDING #30 LB
CAT 0010									
103+71 - 114+81	RT	1	2	1	--	160	0.2	--	3
106+77 - 116+64	LT	1	1	67	66	590	0.4	6	8
359+68 - 368+57	LT	1	--	63	63	765	0.5	5	12
360+33 - 367+83	RT	1	--	6	6	155	0.1	--	3
403+67 - 412+03	LT	1	7	--	--	50	0.1	--	1
412+03 - 414+59	LT	1	--	1	1	57	0.1	--	2
TOTALS		6	10	138	136	1,777	1.4	11	29

**NON-BID ITEM. ITEMS AND QUANTITIES LISTED FOR BID INFORMATION ONLY. ITEMS INCIDENTAL TO BARRIER SYSTEM GRADING SHAPING FINISHING.

SALVAGED RAIL AND GUARDRAIL ITEMS

STATION - STATION	LOCATION	614.0920 RAIL LF	614.0925 GUARDRAIL END TREATMENTS EACH
CAT 0010			
108+29 - 112+67	RT	343	2
108+66 - 112+60	LT	293	2
362+58 - 366+43	LT	280	2
363+31 - 366+16	RT	192	2
405+24 - 411+57	LT	542	2
TOTALS		1,650	10

GUARDRAIL ITEMS

STATION - STATION	LOCATION	614.2300 MGS GUARDRAIL 3 LF	614.2610 MGS GUARDRAIL TERMINAL EAT EACH
CAT 0010			
104+97 - 113+62	RT	762.5	2
107+96 - 115+83	LT	675.0	2
360+88 - 367+91	LT	587.5	2
361+53 - 366+65	RT	412.5	2
404+86 - 411+85	LT	600.0	2
412+21 - 413+40	LT	12.5	2
TOTALS		3,050.0	12

FENCE SAFETY

STATION - STATION	LOCATION	616.0700.S LF
CAT 0010		
168+50 - 175+20	RT	670
171+30 - 175+25	LT	395
175+55 - 180+40	LT	485
203+00 - 207+50	LT	450
TOTAL		2,000

WATER

LOCATION	624.0100 MGAL
CAT 0010	
PROJECT	6
TOTAL	6

WATER PROVIDED FOR COMPACTION OF BASE AGGREGATE

MONUMENT ITEMS

LOCATION	621.0100 LANDMARK REFERENCE MONUMENTS EACH	SPV.0060.01 REESTABLISH SECTION CORNER MONUMENTS EACH
CAT 0010		
NORTH 1/4 OF SEC 12, T40N, R13E	4	1
NORTHEAST OF SEC 12, T40N, R13E	4	1
NORTHEAST OF SEC 7, T40N, R14E	4	1
NORTH 1/4 OF SEC 6, T40N, R14E	4	1
NORTH 1/4 OF SEC 11, T40N, R14E	4	1
NORTHEAST OF SEC 11, T40N, R14E	4	1
NORTH 1/4 OF SEC 12, T40N, R14E	4	1
NORTHEAST OF SEC 12, T40N, R14E	4	1
NORTH 1/4 OF SEC 7, T40N, R15E	4	1
TOTALS	36	9

MOBILIZATIONS EROSION CONTROL

LOCATION	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH
CAT 0010		
PROJECT	4	2
TOTALS	4	2

TYPE II SIGNS AND SUPPORTS

SIGN NO.	SIGN CODE	W	X	H	634.0614 POSTS WOOD 4x6-INCH X 14-FT EACH	634.0616 POSTS WOOD 4x6-INCH X 16-FT EACH	634.0618 POSTS WOOD 4x6-INCH X 18-FT EACH	634.0620 POSTS WOOD 4x6-INCH X 20-FT EACH	637.2210 SIGNS TYPE II REFLECTIVE H SF	637.2230 SIGNS TYPE II REFLECTIVE F SF	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	COMMENTS
CAT 0010													
1-1	J3-2	48	X	57	--	--	1	--	19.00	--	--	--	
1-2	--	--	X	--	--	--	--	--	--	--	1	2	
1-3	J4-1	24	X	36	--	1	--	--	6.00	--	--	--	
1-4	--	--	X	--	--	--	--	--	--	--	1	1	
1-5	--	--		--	--	--	--	--	--	--	--	--	SIGN NUMBER NOT USED
1-6	--	--		--	--	--	--	--	--	--	--	--	SIGN NUMBER NOT USED
1-7	D1-3	78	X	42	--	--	2	--	22.75	--	--	--	
1-8	D1-1	72	X	15	1	1	--	--	7.50	--	1	2	
1-9	--	--	X	--	--	--	--	--	--	--	1	2	
1-10	R2-1	24	X	30	--	1	--	--	5.00	--	--	--	
1-11	J2-3	72	X	57	--	--	--	2	28.50	--	--	--	
1-12	J1-1	24	X	39	--	1	--	--	6.50	--	1	1	
2-1	W14-3	48	X	36	--	1	--	--	--	6.00	1	1	
3-1	J1-1	24	X	39	--	1	--	--	6.50	--	1	1	
3-2	--	--		--	--	--	--	--	--	--	--	--	SIGN NUMBER NOT USED
3-3	M1-86	18	X	36	--	1	--	--	4.50	--	1	1	MOUNT ON SAME POST AS 3-4
3-4	M1-88A	12	X	12	--	--	--	--	1.00	--	1	--	MOUNT ON SAME POST AS 3-3
3-5	J13-1	24	X	45	--	1	--	--	7.50	--	1	1	
3-6	--	--		--	--	--	--	--	--	--	--	--	SIGN NUMBER NOT USED
3-7	R1-1	30	X	30	--	1	--	--	5.18	--	1	1	
3-8	J13-1	24	X	45	--	1	--	--	7.50	--	1	1	
3-9	--	--		--	--	--	--	--	--	--	--	--	SIGN NUMBER NOT USED
3-10	J1-1	24	X	39	--	1	--	--	6.50	--	1	1	
3-11	--	--		--	--	--	--	--	--	--	--	--	SIGN NUMBER NOT USED
3-12	M1-86	18	X	36	--	1	--	--	4.50	--	1	1	MOUNT ON SAME POST AS 3-13
3-13	M1-88A	12	X	12	--	--	--	--	1.00	--	1	--	MOUNT ON SAME POST AS 3-12
4-1	W14-3	48	X	36	--	1	--	--	--	6.00	1	1	
5-1	R1-1	30	X	30	--	1	--	--	5.18	--	1	1	
5-2	J1-1	24	X	39	--	1	--	--	6.50	--	1	1	
5-3	--	--		--	--	--	--	--	--	--	--	--	SIGN NUMBER NOT USED
5-4	W14-3	48	X	36	--	1	--	--	--	6.00	1	1	
5-5	J13-1	24	X	45	--	1	--	--	7.50	--	1	1	
5-6	--	--		--	--	--	--	--	--	--	--	--	SIGN NUMBER NOT USED
5-7	R1-1	30	X	30	--	1	--	--	5.18	--	1	1	
5-8	J13-1	24	X	45	--	1	--	--	7.50	--	1	1	
5-9	--	--		--	--	--	--	--	--	--	--	--	SIGN NUMBER NOT USED
5-10	J1-1	24	X	39	--	1	--	--	6.50	--	1	1	
5-11	--	--		--	--	--	--	--	--	--	--	--	SIGN NUMBER NOT USED
5-12	W14-3	48	X	36	--	1	--	--	--	6.00	1	1	
6-1	W14-3	48	X	36	--	1	--	--	--	6.00	1	1	
7-1	R1-1	30	X	30	--	1	--	--	5.18	--	1	1	
7-2	W14-3	48	X	36	--	1	--	--	--	6.00	1	1	
7-3	--	--		--	--	--	--	--	--	--	--	--	SIGN NUMBER NOT USED
7-4	--	--		--	--	--	--	--	--	--	--	--	SIGN NUMBER NOT USED
7-5	J1-1	24	X	39	--	1	--	--	6.50	--	1	1	
SUBTOTALS					1	25	3	2	189.47	36.00	28	29	

TYPE II SIGNS AND SUPPORTS (CONTINUED)

SIGN NO.	SIGN CODE	W	X	H	634.0614 POSTS WOOD 4x6-INCH X 14-FT EACH	634.0616 POSTS WOOD 4x6-INCH X 16-FT EACH	634.0618 POSTS WOOD 4x6-INCH X 18-FT EACH	634.0620 POSTS WOOD 4x6-INCH X 20-FT EACH	637.2210 SIGNS TYPE II REFLECTIVE H SF	637.2230 SIGNS TYPE II REFLECTIVE F SF	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	COMMENTS
CAT 0010													
7-6	--	--		--	--	--	--	--	--	--	--	--	SIGN NUMBER NOT USED
8-1	J13-1	24	X	45	--	1	--	--	7.50	--	1	1	
8-2	--	--		--	--	--	--	--	--	--	--	--	SIGN NUMBER NOT USED
8-3	R1-1	30	X	30	--	1	--	--	5.18	--	1	1	
8-4	J13-1	24	X	45	--	1	--	--	7.50	--	1	1	
8-5	--	--		--	--	--	--	--	--	--	--	--	SIGN NUMBER NOT USED
8-6	J1-1	24	X	39	--	1	--	--	6.50	--	1	1	
8-7	--	--		--	--	--	--	--	--	--	--	--	SIGN NUMBER NOT USED
9-1	--	--	X	--	--	--	--	--	--	--	1	1	
9-2	--	--		--	--	--	--	--	--	--	--	--	SIGN NUMBER NOT USED
9-3	--	--		--	--	--	--	--	--	--	--	--	SIGN NUMBER NOT USED
10-1	--	--	X	--	--	--	--	--	--	--	1	1	
10-2	J1-1	24	X	39	--	1	--	--	6.50	--	1	1	
10-3	--	--		--	--	--	--	--	--	--	--	--	SIGN NUMBER NOT USED
10-4	J13-1	24	X	45	--	1	--	--	7.50	--	1	1	
10-5	--	--		--	--	--	--	--	--	--	--	--	SIGN NUMBER NOT USED
10-6	J13-1	24	X	45	--	1	--	--	7.50	--	1	1	
10-7	--	--		--	--	--	--	--	--	--	--	--	SIGN NUMBER NOT USED
10-8	R1-1	30	X	30	--	1	--	--	5.18	--	1	1	
11-1	R1-1	30	X	30	--	1	--	--	5.18	--	1	1	
11-2	J1-1	24	X	39	--	1	--	--	6.50	--	1	1	
11-3	--	--		--	--	--	--	--	--	--	--	--	SIGN NUMBER NOT USED
11-4	W14-3	48	X	36	--	1	--	--	--	6.00	1	1	
11-5	W14-3	48	X	36	--	1	--	--	--	6.00	1	1	
12-1	R1-1	30	X	30	--	1	--	--	5.18	--	1	1	
12-2	W14-3	48	X	36	--	1	--	--	--	6.00	1	1	
12-3	W14-3	48	X	36	--	1	--	--	--	6.00	1	1	
12-4	R1-1	30	X	30	--	1	--	--	5.18	--	1	1	
12-5	W14-3	48	X	36	--	1	--	--	--	6.00	1	1	
13-1	W14-3	48	X	36	--	1	--	--	--	6.00	1	1	
13-2	J1-1	24	X	39	--	1	--	--	6.50	--	1	1	
13-3	--	--		--	--	--	--	--	--	--	--	--	SIGN NUMBER NOT USED
13-4	M1-86	18	X	36	--	1	--	--	4.50	--	1	1	MOUNT ON SAME POST AS 13-5
13-5	M1-88A	12	X	12	--	--	--	--	1.00	--	1	--	MOUNT ON SAME POST AS 13-4
13-6	W14-3	48	X	36	--	1	--	--	--	6.00	1	1	
14-1	J13-1	24	X	45	--	1	--	--	7.50	--	1	1	
14-2	--	--		--	--	--	--	--	--	--	--	--	SIGN NUMBER NOT USED
14-3	R1-1	30	X	30	--	1	--	--	5.18	--	1	1	
14-4	J13-1	24	X	45	--	1	--	--	7.50	--	1	1	
14-5	--	--		--	--	--	--	--	--	--	--	--	SIGN NUMBER NOT USED
14-6	M1-86	18	X	36	--	1	--	--	4.50	--	1	1	MOUNT ON SAME POST AS 14-7
14-7	M1-88A	12	X	12	--	--	--	--	1.00	--	1	--	MOUNT ON SAME POST AS 14-6
14-8	J1-1	24	X	39	--	1	--	--	6.50	--	1	1	
14-9	--	--		--	--	--	--	--	--	--	--	--	SIGN NUMBER NOT USED
14-10	I2-2	66	X	15	1	1	--	--	6.88	--	1	1	
SUBTOTALS					1	27	0	0	126.46	42.00	31	29	

3

TYPE II SIGNS AND SUPPORTS (CONTINUED)

SIGN NO.	SIGN CODE	W	X	H	634.0614 POSTS WOOD 4x6-INCH X 14-FT EACH	634.0616 POSTS WOOD 4x6-INCH X 16-FT EACH	634.0618 POSTS WOOD 4x6-INCH X 18-FT EACH	634.0620 POSTS WOOD 4x6-INCH X 20-FT EACH	637.2210 SIGNS TYPE II REFLECTIVE H SF	637.2230 SIGNS TYPE II REFLECTIVE F SF	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	COMMENTS
CAT 0010													
14-11	I2-2	54	X	15	1	1	--	--	5.63	--	1	1	
14-12	W14-3	48	X	36	--	1	--	--	--	6.00	1	1	
15-1	W14-3	48	X	36	--	1	--	--	--	6.00	1	1	
15-2	R1-1	30	X	30	--	1	--	--	5.18	--	1	1	
15-3	R1-1	30	X	30	--	1	--	--	5.18	--	1	1	
15-4	W14-3	48	X	36	--	1	--	--	--	6.00	1	1	
15-5	W14-3	48	X	36	--	1	--	--	--	6.00	1	1	
15-6	--	--	X	--	--	--	--	--	--	--	1	1	
16-1	J1-1	24	X	39	--	1	--	--	6.50	--	--	--	
16-2	--	--		--	--	--	--	--	--	--	--	--	SIGN NUMBER NOT USED
16-3	--	--		--	--	--	--	--	--	--	--	--	SIGN NUMBER NOT USED
16-4	W3-1	36	X	36	--	--	1	--	--	9.00	1	1	
16-5	W3-1	36	X	36	--	--	1	--	--	9.00	1	1	
16-6	R2-1	24	X	30	--	1	--	--	5.00	--	--	--	
16-7	--	--	X	--	--	--	--	--	--	--	1	1	
16-8	J2-3	72	X	57	--	--	--	2	28.50	--	--	--	
16-9	D1-1	90	X	15	1	1	--	--	9.38	--	--	--	
16-10	D1-3	72	X	36	--	1	1	--	18.00	--	1	2	
16-11	--	--	X	--	--	--	--	--	--	--	1	2	
16-12	J4-1	24	X	36	--	1	--	--	6.00	--	--	--	
16-13	--	--	X	--	--	--	--	--	--	--	1	1	
16-14	R1-1	36	X	36	--	1	--	--	7.46	--	1	1	
16-15	--	--	X	--	--	--	--	--	--	--	1	2	
16-16	J3-3	72	X	57	--	--	--	2	28.50	--	--	--	
SUBTOTALS					2	13	3	4	125.33	42.00	16	19	
TOTALS					4	65	6	6	441.26	120.00	75	77	

EROSION CONTROL ITEMS

STATION - STATION	LOCATION	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.2004 EROSION MAT CLASS 1 TYPE B SY	628.7504 TEMPORARY DITCH CHECKS LF	628.7555 CULVERT PIPE CHECKS EACH	628.7570 ROCK BAGS EACH
CAT 0010							
103+71 - 114+81	RT	790	790	590	75	--	60
106+77 - 116+64	LT	830	830	160	30	--	75
359+68 - 368+57	LT	720	720	765	30	--	60
360+33 - 367+83	RT	550	550	155	45	--	45
403+67 - 412+03	LT	820	820	50	15	--	45
412+03 - 414+59	LT	--	--	57	15	5	--
554+99 - 555+59	LT & RT	160	160	130	--	--	30
UNDISTRIBUTED	--	930	930	453	55	5	75
TOTALS		4,800	4,800	2,360	265	10	390

NOTE: ROCK BAGS ARE FOR SILT FENCE RELIEF

TRAFFIC CONTROL ITEMS

LOCATION	DAYS	643.0300 DRUMS NO.	643.0300 DRUMS DAYS	643.0900 SIGNS NO.	643.0900 SIGNS DAYS
CAT 0010					
PROJECT (ADVANCED WARNING STH 70 AND SIDE ROADS)	65	--	--	35	2,275
PROJECT (SHOULDER CLOSURES FOR GUARDRAIL)	35	32	1,120	2	70
PROJECT (SHOULDER CLOSURES FOR CURB AND GUTTER)	5	54	270	3	15
PROJECT (TEMPORARY PASSING ZONES)	20	--	--	44	880
TOTALS			1,390		3,240

NOTES: THE ADDITIONAL SIGNS FOR THE SHOULDER CLOSURES ARE W21-5 "SHOULDER WORK" SIGNS AND W20-1 "ROAD WORK AHEAD" SIGNS WHEN NEEDED PER SDD "TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY".

3

PAVEMENT MARKING ITEMS

STATION - STATION	LOCATION	646.0106 EPOXY 4-INCH (SOLID WHITE) LF	646.0106 EPOXY 4-INCH (WHITE SKIPS) LF	646.0106 EPOXY 4-INCH (SOLID YELLOW) LF	646.0106 EPOXY 4-INCH (YELLOW SKIPS) LF	647.0566 STOP LINE EPOXY 18-INCH (WHITE) LF	648.0100 LOCATING NO-PASSING ZONES MI
CAT 0010							
99+91 - 175+00	LT & RT	14,845	27	9,315	825	--	1.42
175+00 - 224+00	LT & RT	9,615	15	765	1,225	--	0.93
224+00 - 275+00	LT & RT	9,905	39	2,920	1,275	--	0.97
275+00 - 314+00	LT & RT	7,705	--	6,000	375	--	0.74
314+00 - 396+00	LT & RT	16,160	27	16,400	--	--	1.55
396+00 - 427+00	LT & RT	5,917	27	4,550	413	--	0.59
427+00 - 452+00	LT & RT	4,995	--	3,105	475	--	0.47
452+00 - 491+00	LT & RT	7,585	15	4,220	750	--	0.74
491+00 - 531+00	LT & RT	7,835	21	2,395	900	--	0.76
531+00 - 555+50	LT & RT	4,656	15	2,625	463	28	0.46
TOTALS		89,218	186	52,295	6,701	28	8.63
		148,400					

TEMPORARY PAVEMENT MARKING ITEMS

STATION - STATION	LOCATION	649.0100 4-INCH (YELLOW) LF	SPV.0060.02 REFLECTIVE TABS (YELLOW) EACH
CAT 0010			
100+26 - 175+00	LT & RT	20,280	150
175+00 - 224+00	LT & RT	3,980	99
224+00 - 275+00	LT & RT	8,390	103
275+00 - 314+00	LT & RT	12,750	79
314+00 - 396+00	LT & RT	32,800	165
396+00 - 427+00	LT & RT	9,930	63
427+00 - 452+00	LT & RT	7,160	51
452+00 - 491+00	LT & RT	9,940	79
491+00 - 531+00	LT & RT	6,590	81
531+00 - 555+59	LT & RT	6,180	50
TOTALS		118,000	920

NOTES: THE TEMPORARY PAVEMENT MARKING 4-INCH IS TO BE PLACED ON THE MILLED SURFACE AND FINISHED SURFACE PRIOR TO INSTALLING THE RUMBLE STRIPS THE REFLECTIVE TABS YELLOW ARE TO BE PLACED AT 50-FOOT INTERVALS ON THE FINISHED HMA SURFACE AFTER MILLING THE RUMBLE STRIPS

CONSTRUCTION STAKING ITEMS

LOCATION	650.8000 RESURFACING REFERENCE LF	650.9910 SUPPLEMENTAL CONTROL (9090-01-71) LS
CAT 0010		
PROJECT	45,531	1
TOTALS	45,531	1

SAWING ASPHALT

STATION - STATION	LOCATION	690.0150 LF
CAT 0010		
554+97 - 555+61	LT	110
555+13 - 555+56	RT	80
TOTAL		190

PROPOSED WORK
STA 100+26.62 - STA 112+00
MILL AND OVERLAY
REMOVE AND REPLACE GUARDRAIL

BENCH MARK

NO.	STATION	DESCRIPTION	ELEV.
1	103+49, 61' LT	RR SPK IN 20" MAPLE	1701.00

STH 70
CURVE 1 DATA
PI = 100+94.49
Y = 714767.90
X = 855285.23
PC = 99+25.69
Y = 714805.95
X = 855120.78
PT = 102+61.77
Y = 714768.79
X = 855454.03
T = 168.80
L = 336.07
R = 1444.51
DELTA = 13°19'49" LT
D = 03°57'59"
SE = 6.0%
SE TRANSITION (T) = 213
RO (RUNOFF) = 160

STH 70
CURVE 2 DATA
PI = 115+18.44
Y = 714785.45
X = 856710.58
PC = 109+55.62
Y = 714777.34
X = 856147.82
PT = 120+50.27
Y = 715097.43
X = 857179.01
T = 562.82
L = 1094.65
R = 1909.86
DELTA = 32°50'22" LT
D = 03°00'00"
SE = 5.5%
SE TRANSITION (T) = 200
RO (RUNOFF) = 147

NOTE:
FOR EROSION CONTROL DEVICES AT GUARDRAIL REPLACEMENT AREAS SEE CONSTRUCTION DETAILS

N

SALVAGED RAIL AND GUARDRAIL END TREATMENTS
STA 108+66 - STA 112+60, LT

MGS GUARDRAIL 3 & TERMINAL EATS
STA 107+96 - STA 115+83, LT

DELINEATED WETLAND BOUNDARY

SLOPE INTERCEPT

BEGIN PROJECT
STA 100+26.62
BUTT JOINT REQ'D
(SEE CONSTRUCTION DETAILS)

PC STA99+25.69

BM 1

R/W

98+00
S 76°58'18" E
100+00
CURVE 1
102+00
PT STA102+61.77
PI STA104+20.28
104+00
STH 70
106+00
108+00
+77
BEGIN BARRIER SYSTEM
GRADING, SHAPING, FINISHING
+49
PC STA109+55.62
110+00
112+00
CURVE 2
N 89°41'53" E
N 89°10'28" E
+50
+71
BEGIN BARRIER SYSTEM
GRADING, SHAPING, FINISHING
SLOPE INTERCEPT
R/W

STH 55

CONTROL POINT 1
Y=714717.58
X=855208.37
0.75" IRON ROD SET
W/ BLUE EMCS CAP

SALVAGED RAIL AND GUARDRAIL END TREATMENTS
STA 108+29 - STA 112+67, RT

MGS GUARDRAIL 3 & TERMINAL EATS
STA 104+97 - STA 113+62, RT

5

5

PROPOSED WORK
STA 112+00 - STA 126+00
MILL AND OVERLAY
REMOVE & REPLACE GUARDRAIL

NOTE:
FOR EROSION CONTROL DEVICES AT GUARDRAIL REPLACEMENT AREAS SEE CONSTRUCTION DETAILS

BENCH MARK

NO.	STATION	DESCRIPTION	ELEV.
2	117+16, 63' RT	RR SPK IN 20" HEMLOCK	1697.27

N

SALVAGED RAIL AND GUARDRAIL END TREATMENTS
STA 108+66 - STA 112+60, LT

MGS GUARDRAIL 3 & TERMINAL EATS
STA 107+96 - STA 115+83, LT

CONTROL POINT 2
Y=715076.66
X=857045.50
0.75" IRON ROD SET
W/ BLUE EMCS CAP

PC STA123+45.42

SLOPE INTERCEPT

R/W

112+00
114+00
+29
+64
END BARRIER SYSTEM
GRADING, SHAPING, FINISHING
116+00
118+00
STH 70
120+00
PT STA120+50.27
122+00
124+00
126+00
CURVE 3
N 56°20'07" E
CURVE 2
+09
+81
END BARRIER SYSTEM
GRADING, SHAPING, FINISHING
SLOPE INTERCEPT
BASE
AGG FE
R/W
BM 2

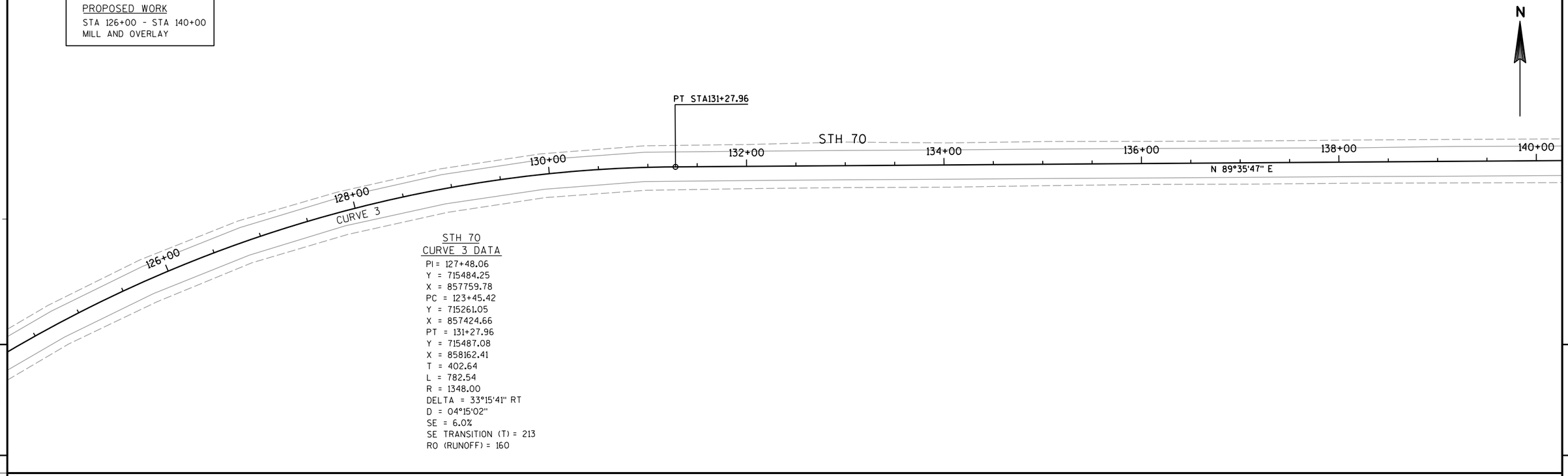
SALVAGED RAIL AND GUARDRAIL END TREATMENTS
STA 108+29 - STA 112+67, RT

MGS GUARDRAIL 3 & TERMINAL EATS
STA 104+97 - STA 113+62, RT

STH 70
CURVE 3 DATA
PI = 127+48.06
Y = 715484.25
X = 857759.78
PC = 123+45.42
Y = 715261.05
X = 857424.66
PT = 131+27.96
Y = 715487.08
X = 858162.41
T = 402.64
L = 782.54
R = 1348.00
DELTA = 33°15'41" RT
D = 04°15'02"
SE = 6.0%
SE TRANSITION (T) = 213
RO (RUNOFF) = 160

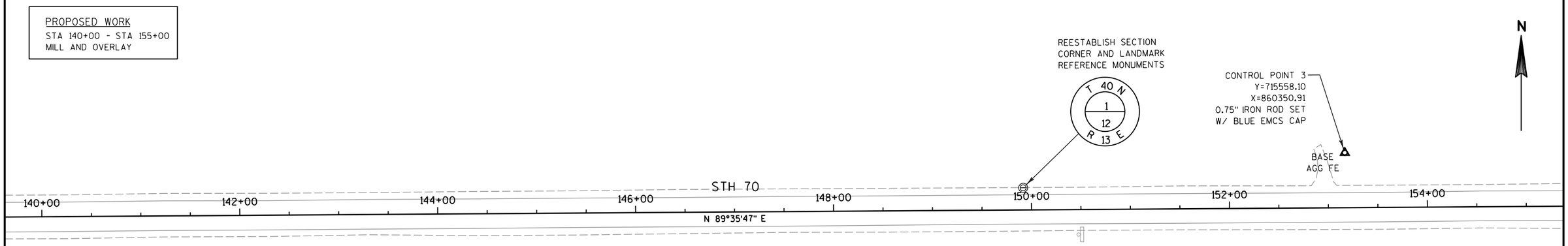
PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	PLAN	SHEET 41	E

PROPOSED WORK
STA 126+00 - STA 140+00
MILL AND OVERLAY



STH 70
CURVE 3 DATA
PI = 127+48.06
Y = 715484.25
X = 857759.78
PC = 123+45.42
Y = 715261.05
X = 857424.66
PT = 131+27.96
Y = 715487.08
X = 858162.41
T = 402.64
L = 782.54
R = 1348.00
DELTA = 33°15'41" RT
D = 04°15'02"
SE = 6.0%
SE TRANSITION (T) = 213
RO (RUNOFF) = 160

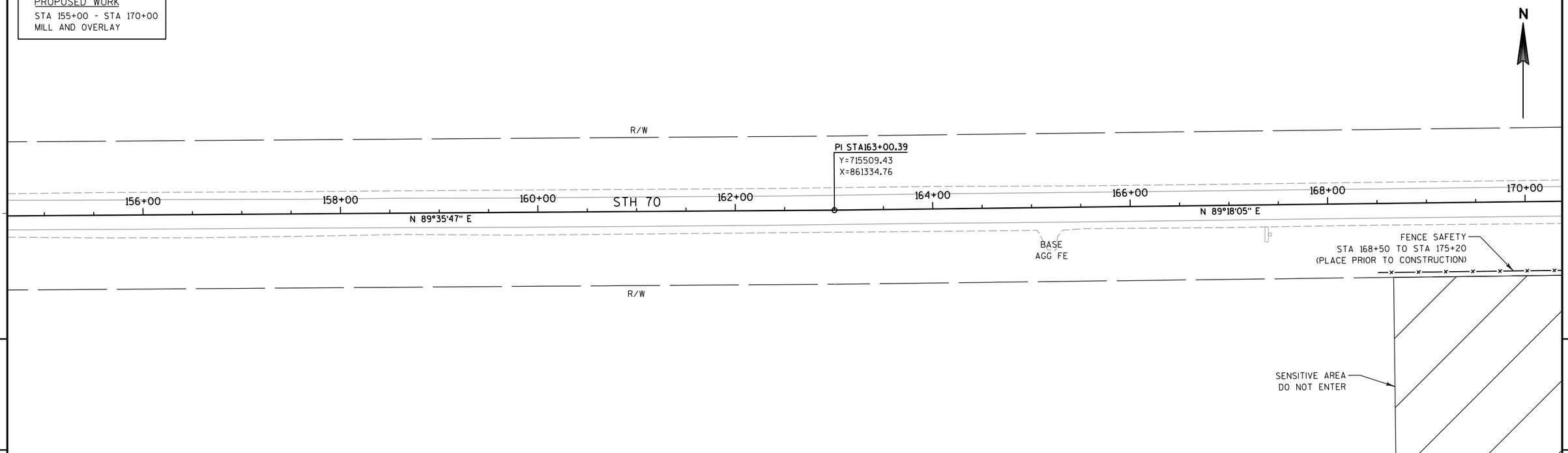
PROPOSED WORK
STA 140+00 - STA 155+00
MILL AND OVERLAY



PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	PLAN	SHEET 42	E

FILE NAME : P:\47xx\4726.DP.12.STH70.FOR\CADDS\Plan\050202_pn.dgn PLOT DATE : 5/28/2014 PLOT BY : emo PLOT NAME : PLOT SCALE : 1:100

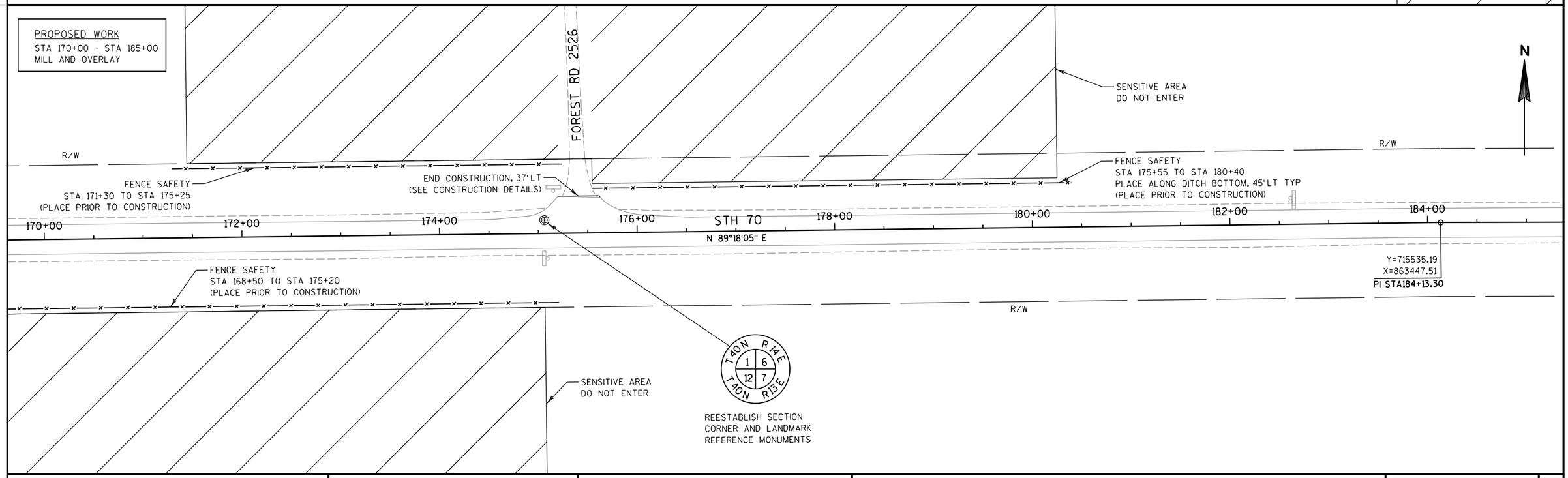
PROPOSED WORK
STA 155+00 - STA 170+00
MILL AND OVERLAY



5

5

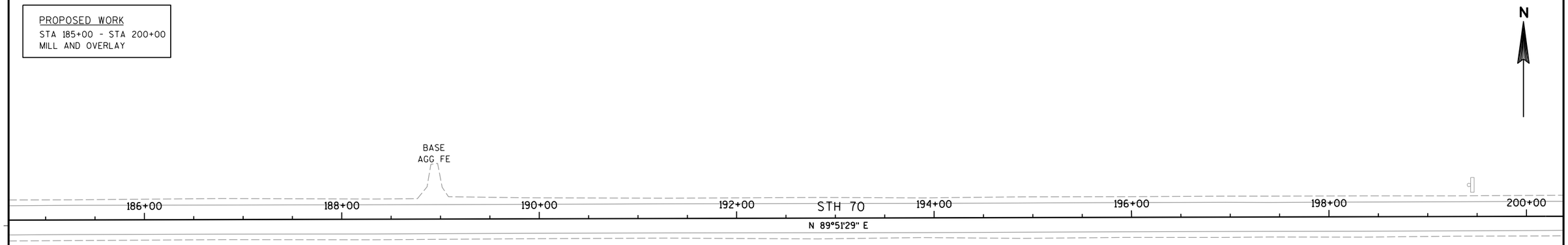
PROPOSED WORK
STA 170+00 - STA 185+00
MILL AND OVERLAY



PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	PLAN	SHEET 43	E

FILE NAME : P:\47xx\4726.DP.12.STH70.FOR\CADDS\Plan\050203_pn.dgn PLOT DATE : 5/28/2014 PLOT BY : emo PLOT NAME : PLOT SCALE : 1:100

PROPOSED WORK
STA 185+00 - STA 200+00
MILL AND OVERLAY

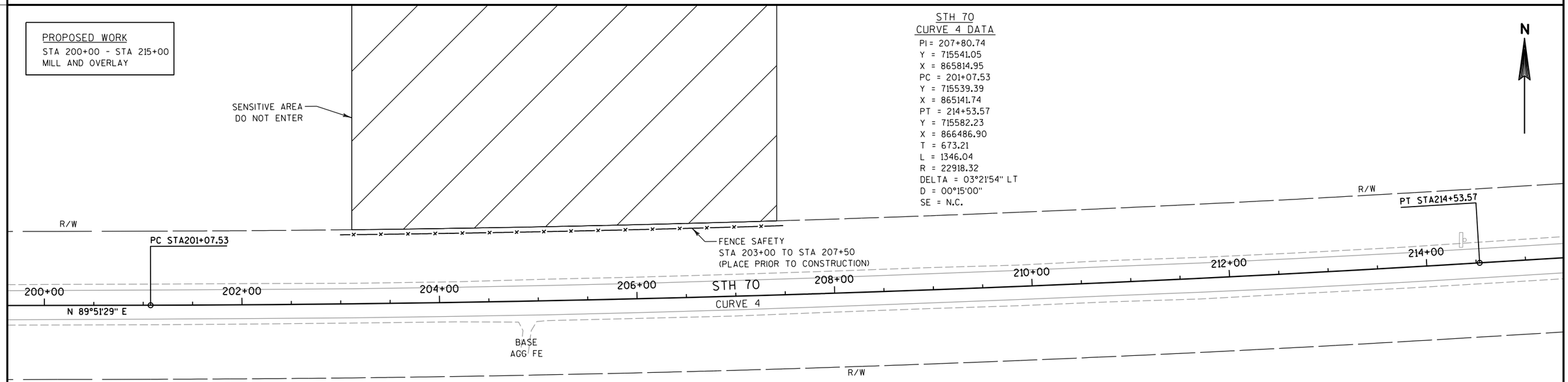


5

5

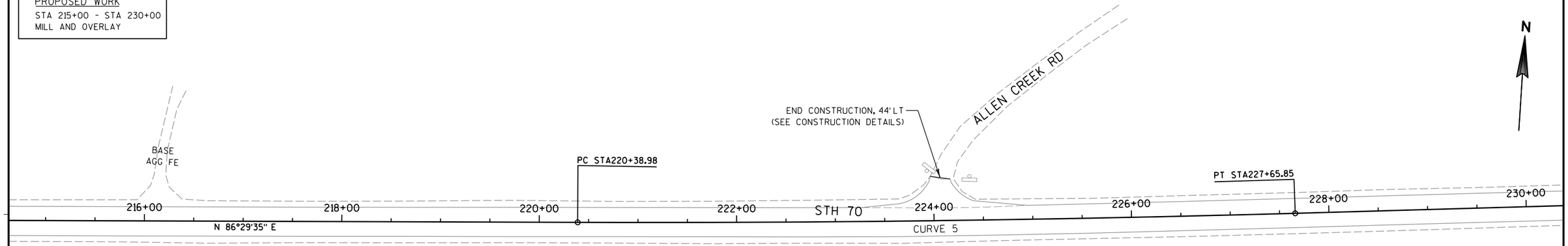
PROPOSED WORK
STA 200+00 - STA 215+00
MILL AND OVERLAY

STH 70
CURVE 4 DATA
PI = 207+80.74
Y = 715541.05
X = 865814.95
PC = 201+07.53
Y = 715539.39
X = 865141.74
PT = 214+53.57
Y = 715582.23
X = 866486.90
T = 673.21
L = 1346.04
R = 22918.32
DELTA = 03°21'54" LT
D = 00°15'00"
SE = N.C.



PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	PLAN	SHEET 44	E

PROPOSED WORK
STA 215+00 - STA 230+00
MILL AND OVERLAY

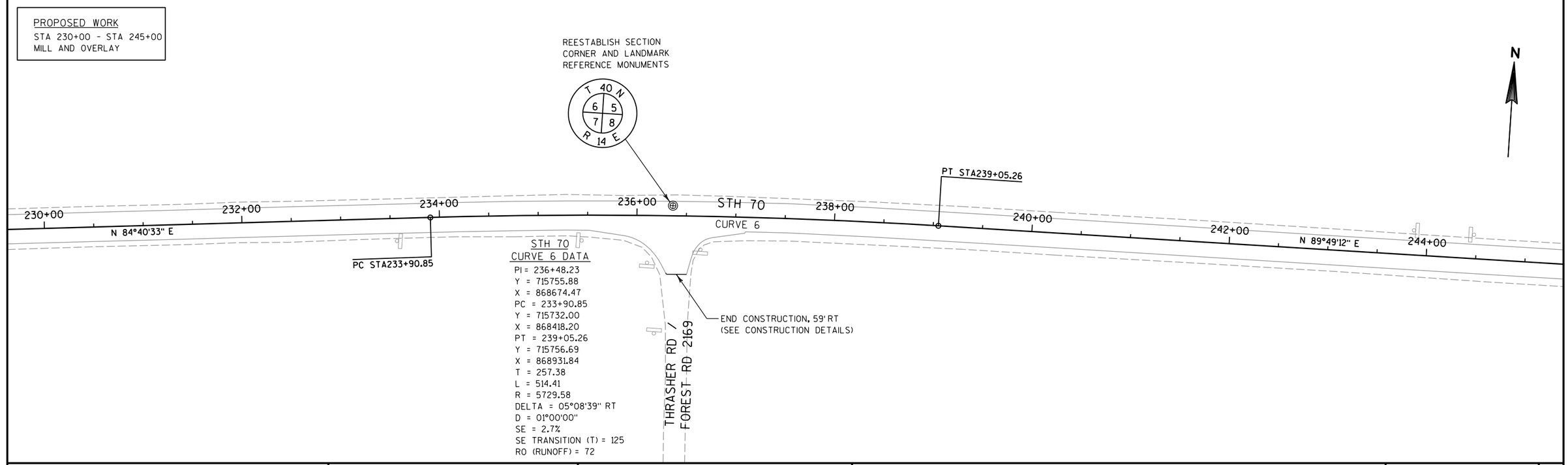


STH 70
CURVE 5 DATA
PI = 224+02.45
Y = 715640.28
X = 867434.00
PC = 220+38.98
Y = 715618.04
X = 867071.21
PT = 227+65.85
Y = 715674.00
X = 867795.90
T = 363.47
L = 726.88
R = 22918.32
DELTA = 01°49'02" LT
D = 00°15'00"
SE = N.C.

5

5

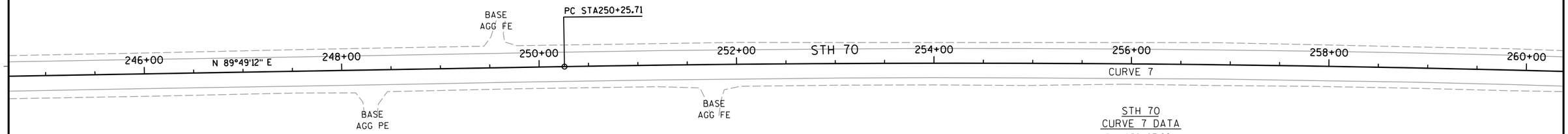
PROPOSED WORK
STA 230+00 - STA 245+00
MILL AND OVERLAY



STH 70
CURVE 6 DATA
PI = 236+48.23
Y = 715755.88
X = 868674.47
PC = 233+90.85
Y = 715732.00
X = 868418.20
PT = 239+05.26
Y = 715756.69
X = 868931.84
T = 257.38
L = 514.41
R = 5729.58
DELTA = 05°08'39" RT
D = 01°00'00"
SE = 2.7%
SE TRANSITION (T) = 125
RO (RUNOFF) = 72

PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	PLAN	SHEET 45	E

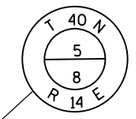
PROPOSED WORK
STA 245+00 - STA 260+00
MILL AND OVERLAY

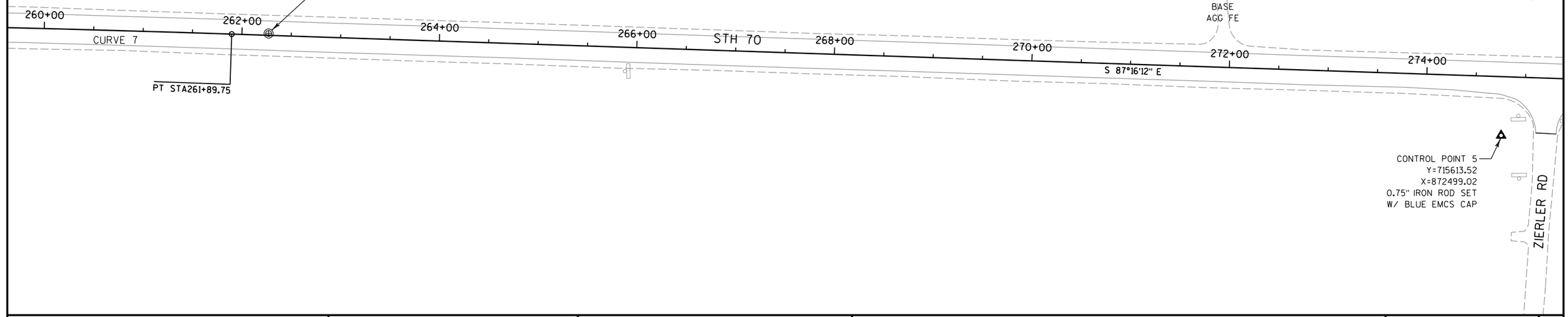


STH 70
CURVE 7 DATA
PI = 256+07.86
Y = 715762.04
X = 870634.43
PC = 250+25.71
Y = 715760.21
X = 870052.29
PT = 261+89.75
Y = 715734.31
X = 871215.92
T = 582.15
L = 1164.04
R = 22918.32
DELTA = 02°54'36" RT
D = 00°15'00"
SE = N.C.

PROPOSED WORK
STA 260+00 - STA 275+00
MILL AND OVERLAY

REESTABLISH SECTION
CORNER AND LANDMARK
REFERENCE MONUMENTS



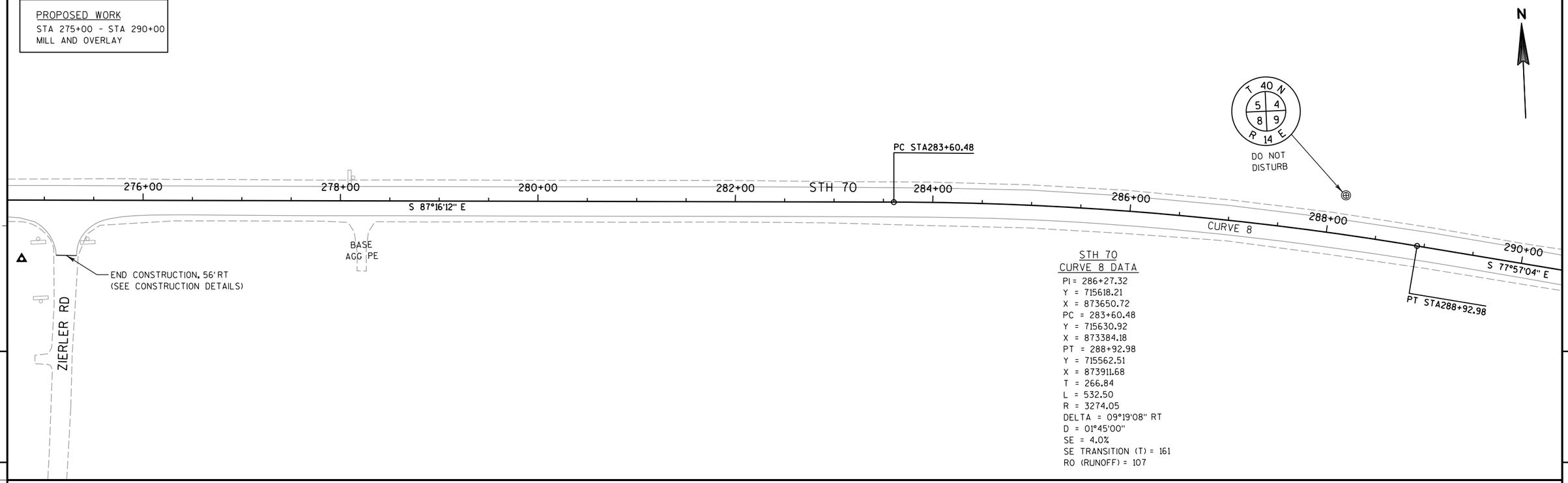


PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	PLAN	SHEET 46	E

FILE NAME : P:\47xx\4726.DP.12.STH70.FOR\CADDS\Plan\050206_pn.dgn PLOT DATE : 5/28/2014 PLOT BY : emo PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 44

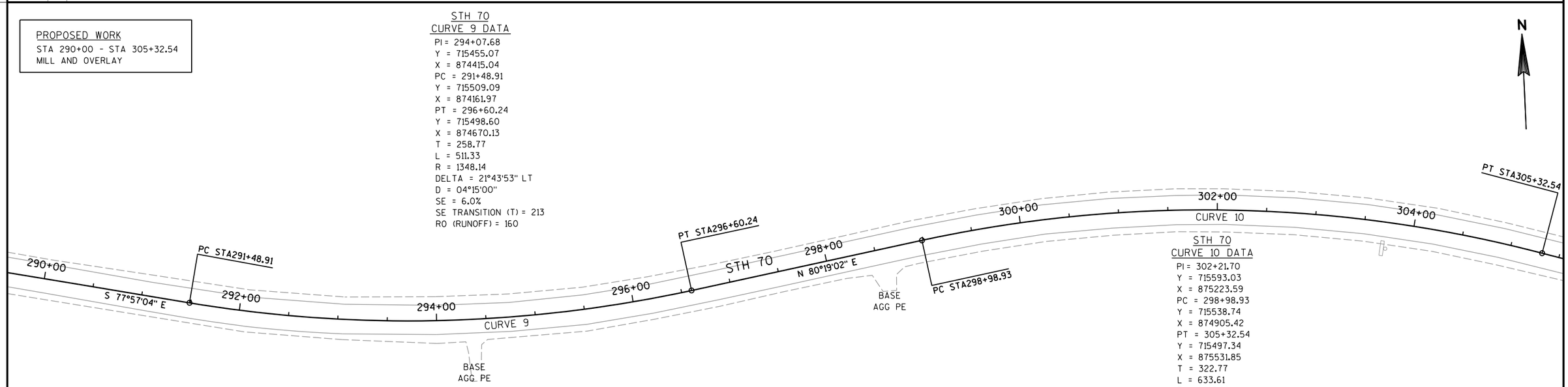
PROPOSED WORK
STA 275+00 - STA 290+00
MILL AND OVERLAY



STH 70
CURVE 8 DATA
PI = 286+27.32
Y = 715618.21
X = 873650.72
PC = 283+60.48
Y = 715630.92
X = 873384.18
PT = 288+92.98
Y = 715562.51
X = 873911.68
T = 266.84
L = 532.50
R = 3274.05
DELTA = 09°19'08" RT
D = 01°45'00"
SE = 4.0%
SE TRANSITION (T) = 161
RO (RUNOFF) = 107

PROPOSED WORK
STA 290+00 - STA 305+32.54
MILL AND OVERLAY

STH 70
CURVE 9 DATA
PI = 294+07.68
Y = 715455.07
X = 874415.04
PC = 291+48.91
Y = 715509.09
X = 874161.97
PT = 296+60.24
Y = 715498.60
X = 874670.13
T = 258.77
L = 511.33
R = 1348.14
DELTA = 21°43'53" LT
D = 04°15'00"
SE = 6.0%
SE TRANSITION (T) = 213
RO (RUNOFF) = 160



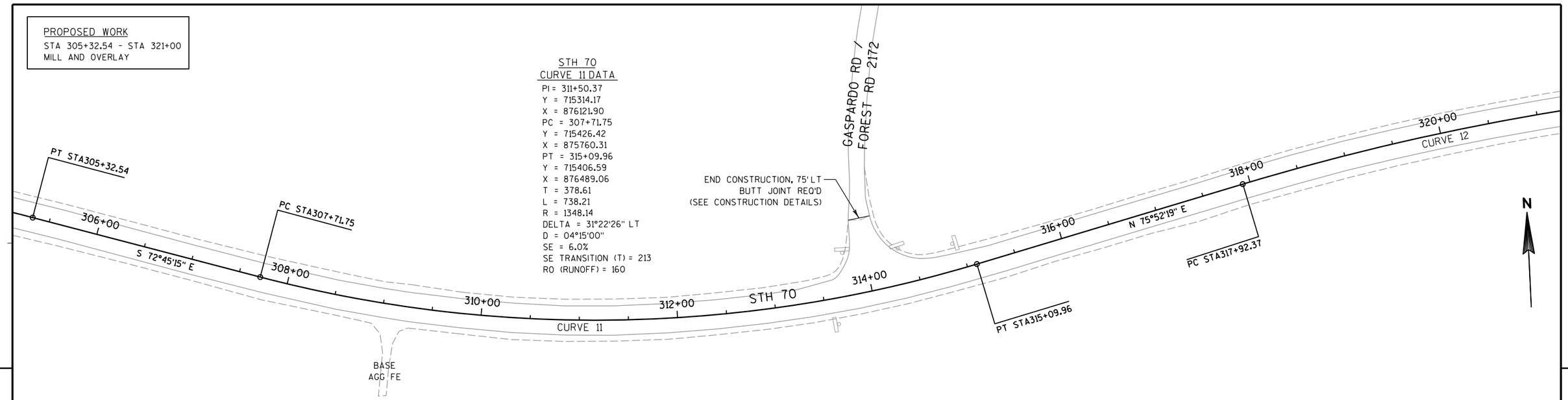
STH 70
CURVE 10 DATA
PI = 302+21.70
Y = 715593.03
X = 875223.59
PC = 298+98.93
Y = 715538.74
X = 874905.42
PT = 305+32.54
Y = 715497.34
X = 875531.85
T = 322.77
L = 633.61
R = 1348.14
DELTA = 26°55'43" RT
D = 04°15'00"
EXISTING SE = 5.7%
PROPOSED SE = 5.8%
SE TRANSITION (T) = 199
RO (RUNOFF) = 148

PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	PLAN	SHEET 47	E

FILE NAME : P:\47xx\4726.DP.12.STH70.FOR\CADDS\Plan\050207_pn.dgn PLOT DATE : 5/28/2014 PLOT BY : emo PLOT NAME : PLOT SCALE : 1:100

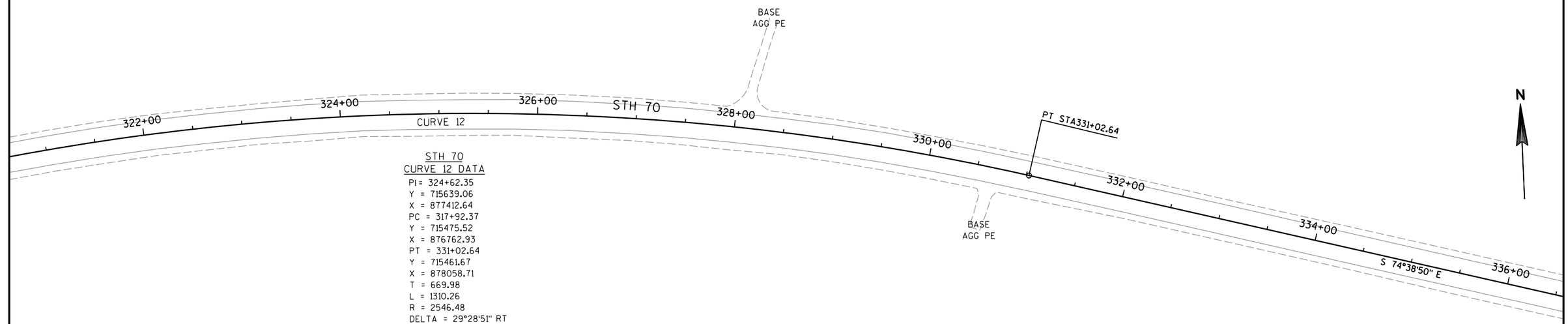
PROPOSED WORK
STA 305+32.54 - STA 321+00
MILL AND OVERLAY

STH 70
CURVE 11 DATA
PI = 311+50.37
Y = 715314.17
X = 876121.90
PC = 307+71.75
Y = 715426.42
X = 875760.31
PT = 315+09.96
Y = 715406.59
X = 876489.06
T = 378.61
L = 738.21
R = 1348.14
DELTA = 31°22'26" LT
D = 04°15'00"
SE = 6.0%
SE TRANSITION (T) = 213
RO (RUNOFF) = 160



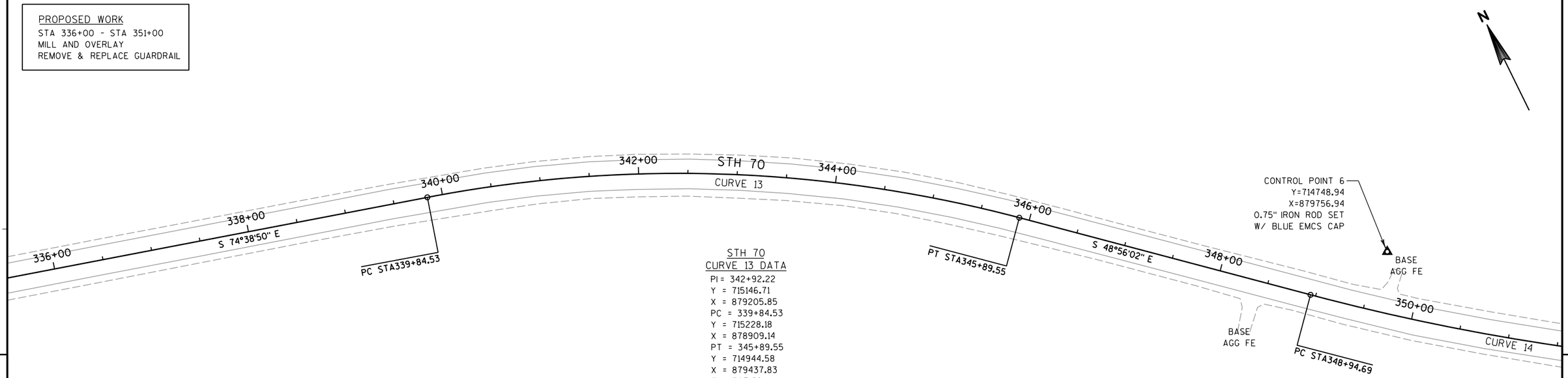
PROPOSED WORK
STA 321+00 - STA 336+00
MILL AND OVERLAY

STH 70
CURVE 12 DATA
PI = 324+62.35
Y = 715639.06
X = 877412.64
PC = 317+92.37
Y = 715475.52
X = 876762.93
PT = 331+02.64
Y = 715461.67
X = 878058.71
T = 669.98
L = 1310.26
R = 2546.48
DELTA = 29°28'51" RT
D = 02°15'00"
SE = 4.8%
SE TRANSITION (T) = 181
RO (RUNOFF) = 128



PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	PLAN	SHEET 48	E

PROPOSED WORK
STA 336+00 - STA 351+00
MILL AND OVERLAY
REMOVE & REPLACE GUARDRAIL



STH 70
CURVE 13 DATA
PI = 342+92.22
Y = 715146.71
X = 879205.85
PC = 339+84.53
Y = 715228.18
X = 878909.14
PT = 345+89.55
Y = 714944.58
X = 879437.83
T = 307.69
L = 605.02
R = 1348.14
DELTA = 25°42'48" RT
D = 04°15'00"
SE = 6.0%
SE TRANSITION (T) = 213
RO (RUNOFF) = 160

5

5

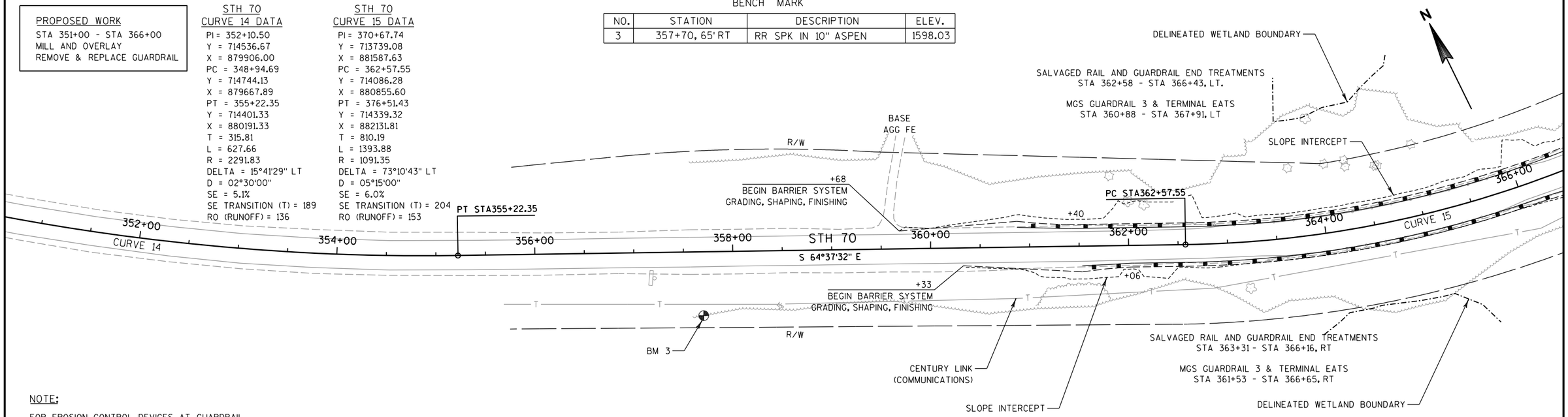
PROPOSED WORK
STA 351+00 - STA 366+00
MILL AND OVERLAY
REMOVE & REPLACE GUARDRAIL

STH 70
CURVE 14 DATA
PI = 352+10.50
Y = 714536.67
X = 879906.00
PC = 348+94.69
Y = 714744.13
X = 879667.89
PT = 355+22.35
Y = 714401.33
X = 880191.33
T = 315.81
L = 627.66
R = 2291.83
DELTA = 15°41'29" LT
D = 02°30'00"
SE = 5.1%
SE TRANSITION (T) = 189
RO (RUNOFF) = 136

STH 70
CURVE 15 DATA
PI = 370+67.74
Y = 713739.08
X = 881587.63
PC = 362+57.55
Y = 714086.28
X = 880855.60
PT = 376+51.43
Y = 714339.32
X = 882131.81
T = 810.19
L = 1393.88
R = 1091.35
DELTA = 73°10'43" LT
D = 05°15'00"
SE = 6.0%
SE TRANSITION (T) = 204
RO (RUNOFF) = 153

BENCH MARK

NO.	STATION	DESCRIPTION	ELEV.
3	357+70, 65' RT	RR SPK IN 10" ASPEN	1598.03

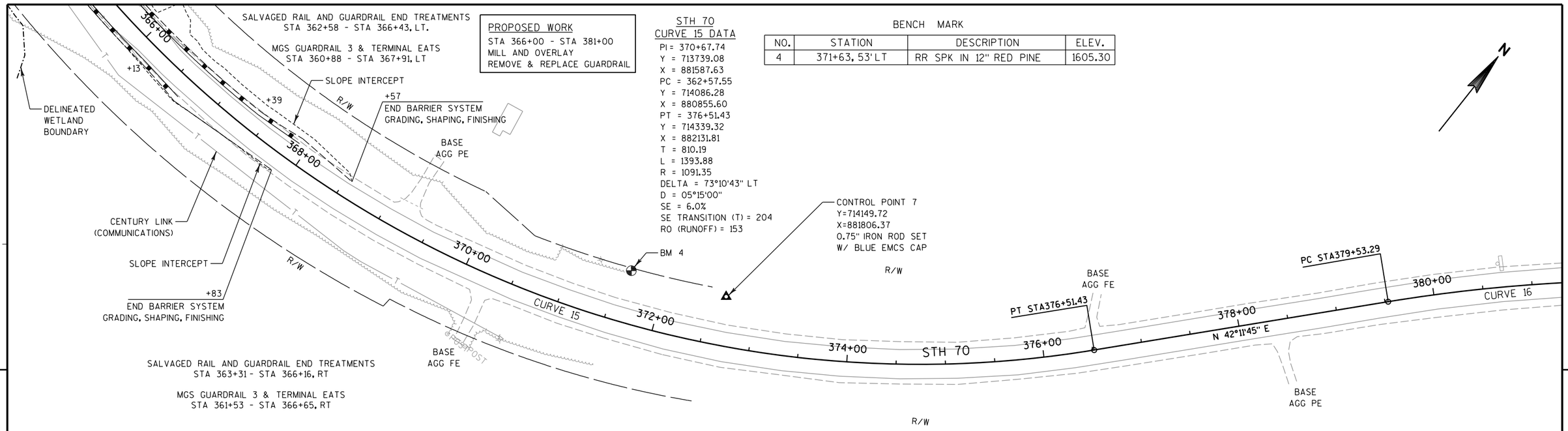


NOTE:

FOR EROSION CONTROL DEVICES AT GUARDRAIL
REPLACEMENT AREAS SEE CONSTRUCTION DETAILS

PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	PLAN	SHEET 49	E

FILE NAME : P:\47xx\4726.DP.12.STH70.FOR\CADDS\Plan\050209_pn.dgn PLOT DATE : 5/28/2014 PLOT BY : emo PLOT NAME : PLOT SCALE : 1:100



5

5

NOTE:

FOR EROSION CONTROL DEVICES AT GUARDRAIL REPLACEMENT AREAS SEE CONSTRUCTION DETAILS

PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	PLAN	SHEET 50	E

FILE NAME : P:\47xx\4726.DP.12.STH70.FOR\CADDS\Plan\050210_pn.dgn PLOT DATE : 5/28/2014 PLOT BY : emo PLOT NAME : PLOT SCALE : 1:100

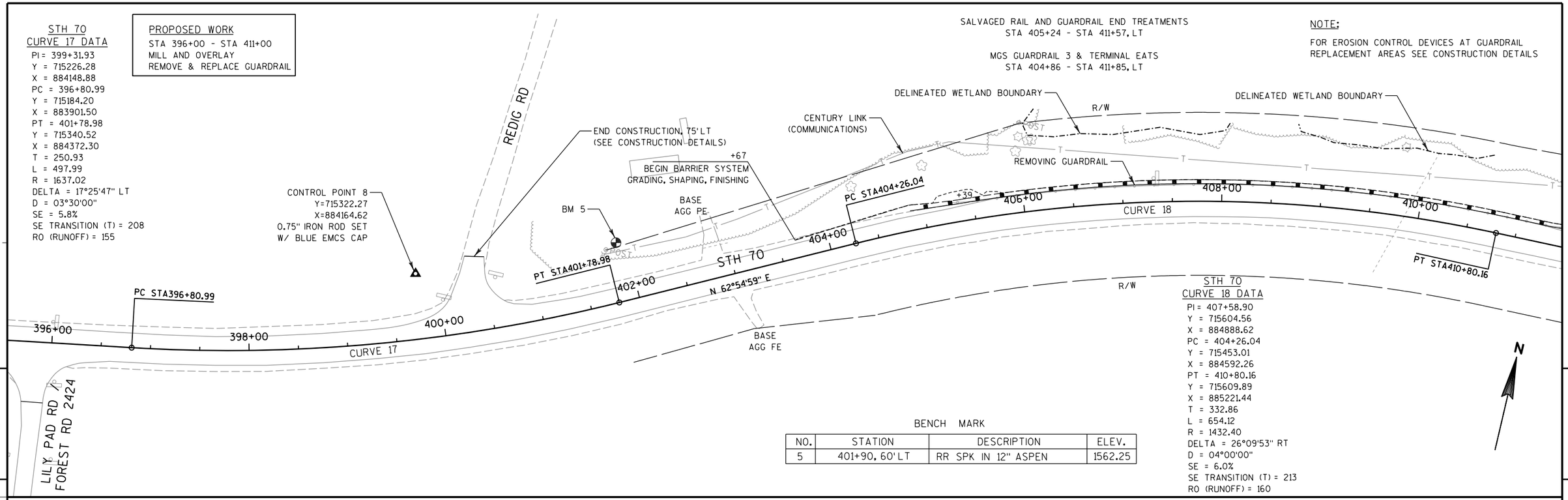
STH 70
CURVE 17 DATA
PI = 399+31.93
Y = 715226.28
X = 884148.88
PC = 396+80.99
Y = 715184.20
X = 883901.50
PT = 401+78.98
Y = 715340.52
X = 884372.30
T = 250.93
L = 497.99
R = 1637.02
DELTA = 17°25'47" LT
D = 03°30'00"
SE = 5.8%
SE TRANSITION (T) = 208
RO (RUNOFF) = 155

PROPOSED WORK
STA 396+00 - STA 411+00
MILL AND OVERLAY
REMOVE & REPLACE GUARDRAIL

SALVAGED RAIL AND GUARDRAIL END TREATMENTS
STA 405+24 - STA 411+57, LT

MGS GUARDRAIL 3 & TERMINAL EATS
STA 404+86 - STA 411+85, LT

NOTE:
FOR EROSION CONTROL DEVICES AT GUARDRAIL REPLACEMENT AREAS SEE CONSTRUCTION DETAILS



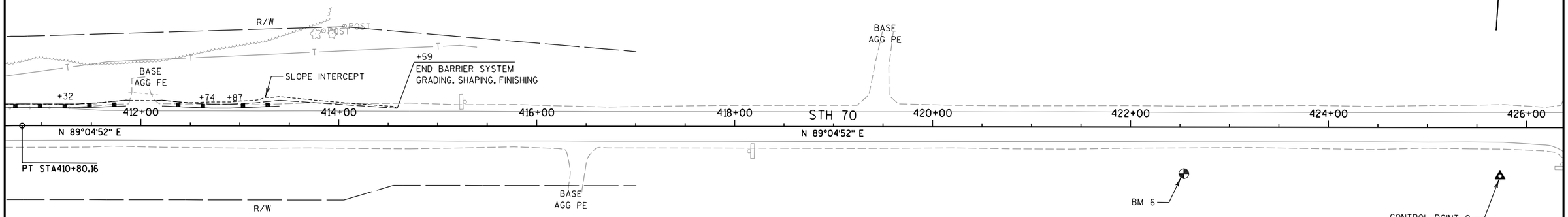
STH 70
CURVE 18 DATA
PI = 407+58.90
Y = 715604.56
X = 884888.62
PC = 404+26.04
Y = 715453.01
X = 884592.26
PT = 410+80.16
Y = 715609.89
X = 885221.44
T = 332.86
L = 654.12
R = 1432.40
DELTA = 26°09'53" RT
D = 04°00'00"
SE = 6.0%
SE TRANSITION (T) = 213
RO (RUNOFF) = 160

BENCH MARK

NO.	STATION	DESCRIPTION	ELEV.
5	401+90, 60'LT	RR SPK IN 12" ASPEN	1562.25

PROPOSED WORK
STA 411+00 - STA 426+00
MILL AND OVERLAY
REMOVE & REPLACE GUARDRAIL

MGS GUARDRAIL 3 & TERMINAL EATS
STA 412+21 - STA 413+40, LT



NOTE:
FOR EROSION CONTROL DEVICES AT GUARDRAIL REPLACEMENT AREAS SEE CONSTRUCTION DETAILS

BENCH MARK

NO.	STATION	DESCRIPTION	ELEV.
6	422+54, 47'RT	RR SPK IN 12" ASPEN	1575.00

PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	PLAN	SHEET	E

FILE NAME : P:\47xx\4726.DP.12.STH70.FOR\CADDS\Plan\050211_pn.dgn PLOT DATE : 5/28/2014 PLOT BY : emo PLOT NAME : PLOT SCALE : 1:100

PROPOSED WORK
STA 426+00 - STA 441+00
MILL AND OVERLAY

REESTABLISH SECTION
CORNER AND LANDMARK
REFERENCE MONUMENT

T 40 N
2
11
R 14 E

BASE
AGG PE

426+00 428+00 430+00 432+00 434+00 STH 70 436+00 438+00 440+00

N 89°25'49" E

Y=715637.80
X=886961.23
PI STA428+20.17

END CONSTRUCTION, 47' RT
BUTT JOINT REQ'D
(SEE CONSTRUCTION DETAILS)

FUHRMAN RD

N

5

5

PROPOSED WORK
STA 441+00 - STA 456+00
MILL AND OVERLAY

HUFF CREEK RD

END CONSTRUCTION, 73' LT
(SEE CONSTRUCTION DETAILS)

N

PI STA446+69.84
Y=715656.20
X=888810.82

442+00 444+00 446+00 448+00 STH 70 450+00 452+00 454+00 456+00

N 89°25'49" E

N 89°52'47" E

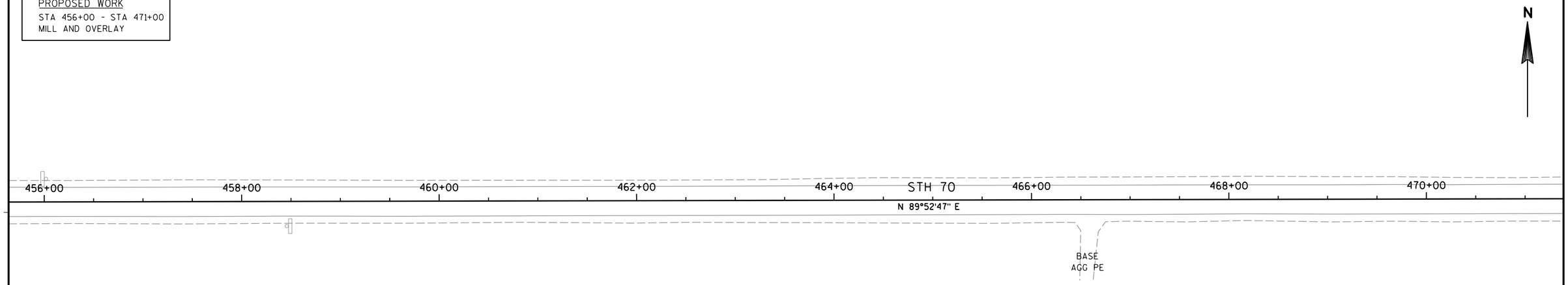
BASE
AGG PE

T 40 N
2 1
11 12
R 14 E

REESTABLISH SECTION
CORNER AND LANDMARK
REFERENCE MONUMENTS

PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	PLAN	SHEET 52	E

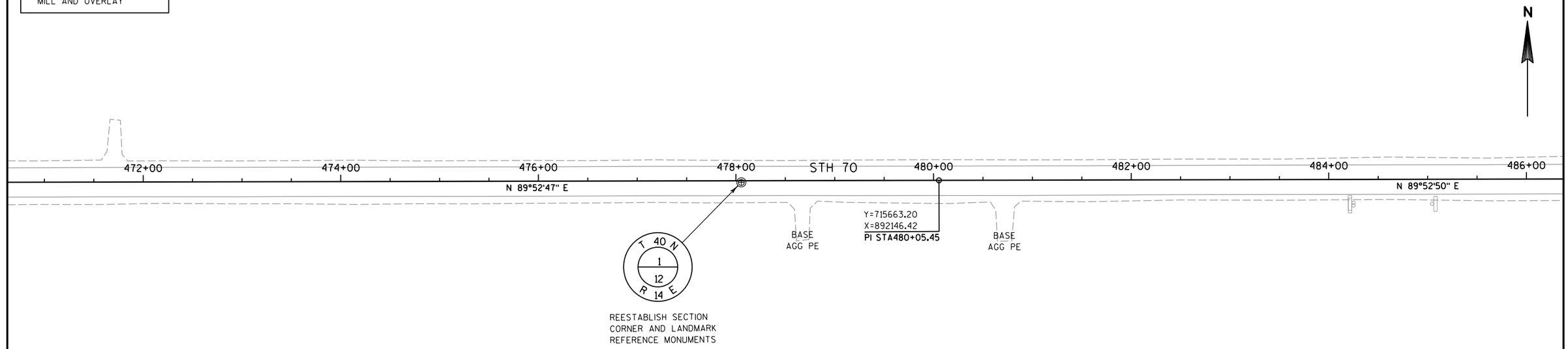
PROPOSED WORK
STA 456+00 - STA 471+00
MILL AND OVERLAY



5

5

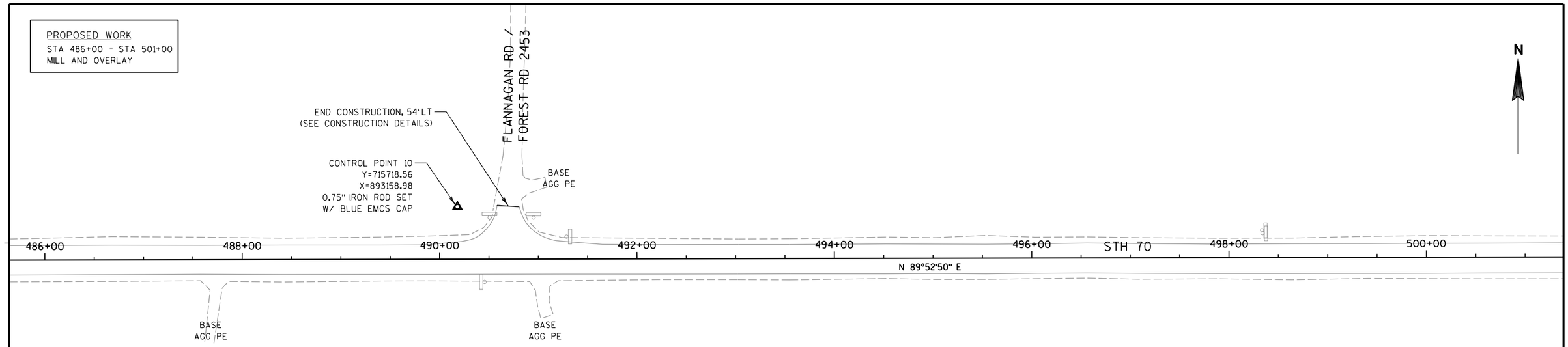
PROPOSED WORK
STA 471+00 - STA 486+00
MILL AND OVERLAY



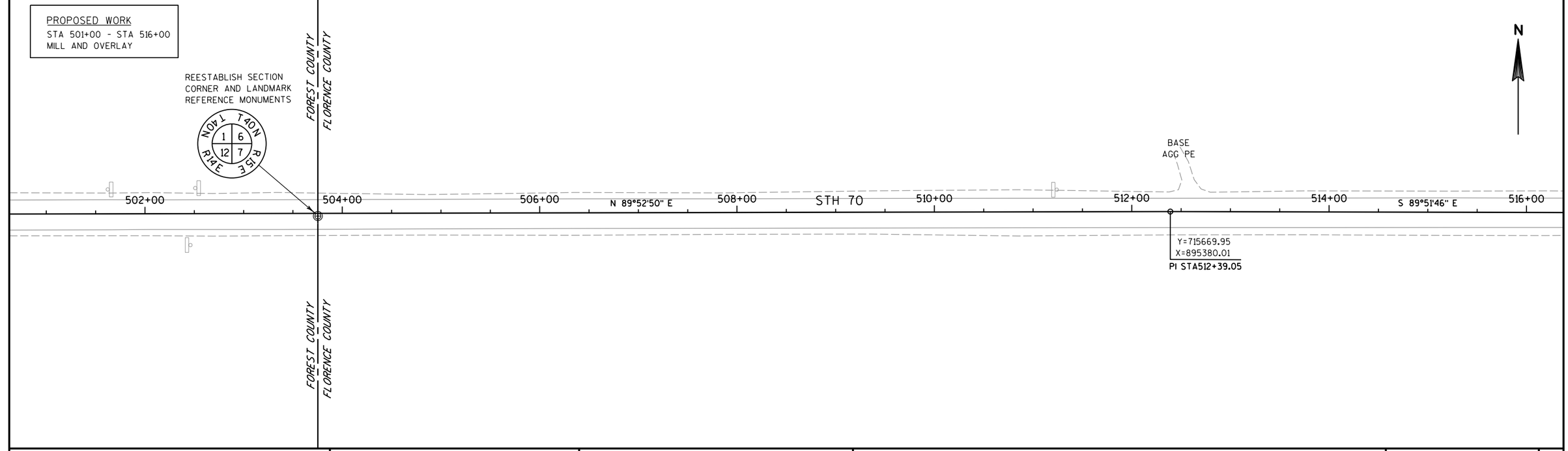
REESTABLISH SECTION
CORNER AND LANDMARK
REFERENCE MONUMENTS

PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	PLAN	SHEET 53	E

PROPOSED WORK
STA 486+00 - STA 501+00
MILL AND OVERLAY



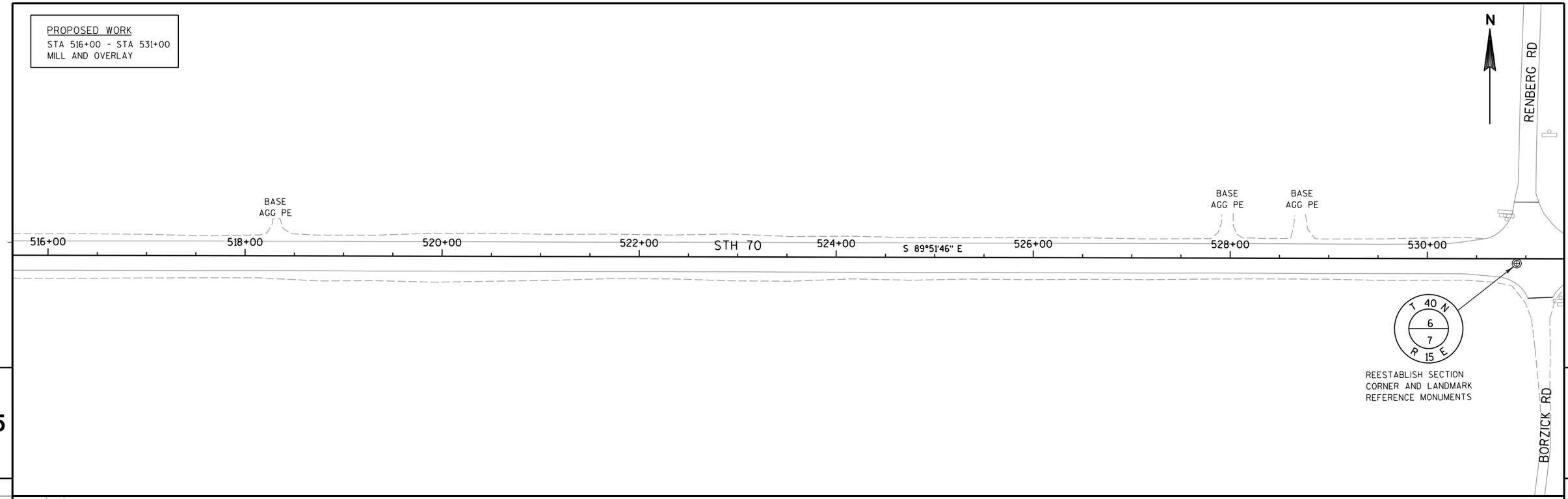
PROPOSED WORK
STA 501+00 - STA 516+00
MILL AND OVERLAY



PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	PLAN	SHEET 54	E

FILE NAME : P:\47xx\4726.DP.12.STH70.FOR\CADDS\Plan\050214_pn.dgn PLOT DATE : 5/28/2014 PLOT BY : emo PLOT NAME : PLOT SCALE : 1:100

PROPOSED WORK
STA 516+00 - STA 531+00
MILL AND OVERLAY

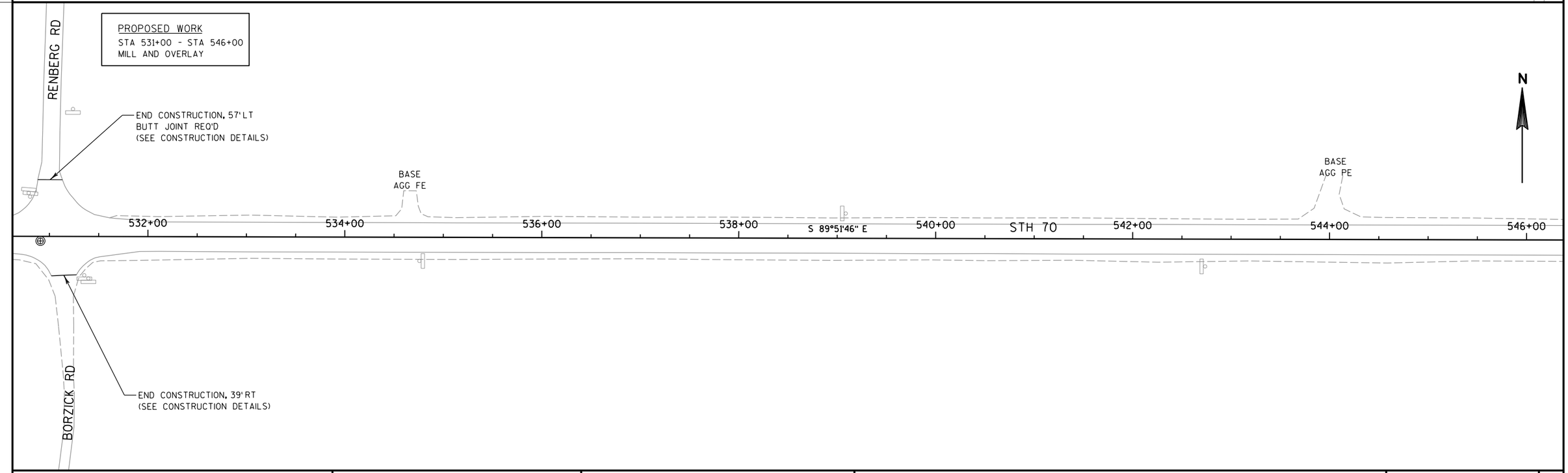


REESTABLISH SECTION CORNER AND LANDMARK REFERENCE MONUMENTS

5

5

PROPOSED WORK
STA 531+00 - STA 546+00
MILL AND OVERLAY



PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	PLAN	SHEET 55	E

FILE NAME : P:\47xx\4726.DP.12.STH70.FOR\CADDS\Plan\050215_pn.dgn PLOT DATE : 5/28/2014 PLOT BY : emo PLOT NAME : PLOT SCALE : 1:100

PROPOSED WORK
STA 546+00 - STA 555+58.51
MILL AND OVERLAY

NOTES:

FOR EROSION CONTROL DEVICES AT CURB & GUTTER REPLACEMENT AREAS SEE CONSTRUCTION DETAILS

5.75-INCH HMA PAVEMENT TYPE E-1 AND PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS (SEE TYPICAL SECTIONS FOR ADDITIONAL INFORMATION)

N

5

5

PI STA547+30.18
Y=715661.59
X=898871.13

546+00 STH 70 548+00 550+00 552+00 554+00

S 89°48'30" E

PI STA553+58.46
Y=715659.49
X=899499.40

S 89°21'50" E

WE ENERGIES (ELECTRICITY)

CONTROL POINT 11
Y=715734.17
X=899626.63
0.75" IRON ROD SET
W/ BLUE EMCS CAP

CENTURY LINK (COMMUNICATIONS)

STH 139

END PROJECT
STA 555+58.51
BUTT JOINT REQ'D
(SEE CONSTRUCTION DETAILS)

T 40 N
6 5
7 8
R 15 E
DO NOT DISTURB

CRALL RD

Y=715657.04
X=899720.08
POE STA555+79.15

GUY POLE

CENTURY LINK (COMMUNICATIONS)

REMOVE AND REPLACE CURB AND GUTTER SEE INTERSECTION DETAILS FOR ADDITIONAL INFORMATION

STH 70 / STH 139

WITNESS MONUMENT
DO NOT DISTURB

WE ENERGIES (ELECTRICITY)

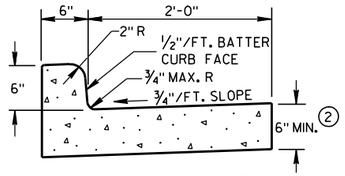
PROPOSED LOCATION OF RWIS TOWER
36"X36"X45" CONCRETE BASE WITH TOWER AND SENSORS TO BE PLACED IN PAVEMENT
(ALL WORK BY OTHERS)

PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	PLAN	SHEET	E

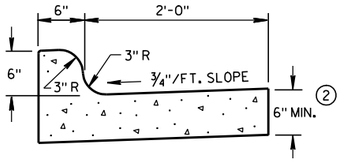
FILE NAME : P:\47xx\4726.DP.12.STH70.FOR\CADDS\Plan\050216_pn.dgn PLOT DATE : 5/28/2014 PLOT BY : emo PLOT NAME : PLOT SCALE : 1:100
WISDOT/CADDS SHEET 44

Standard Detail Drawing List

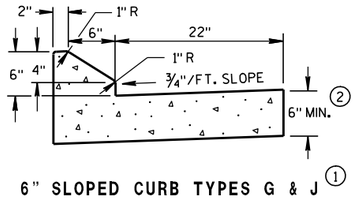
08D01-17	CONCRETE CURB, CONCRETE CURB AND GUTTER AND TIES
08D04-05	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
13A11-02A	2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING
13A11-02B	2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING
14B29-01	SAFETY EDGE
14B42-03A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-03B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-03C	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)
15C04-02	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C08-16A	PAVEMENT MARKING (MAINLINE)
15C08-16B	PAVEMENT MARKING (INTERSECTIONS)
15C12-04	TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)
15C33-01	STOP LINE AND CROSSWALK PAVEMENT MARKING
15D28-02	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY



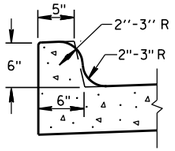
TYPES A & D (1)



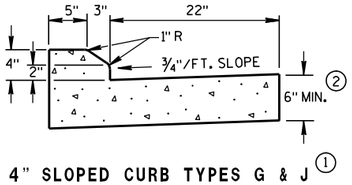
TYPES K & L (1)



6" SLOPED CURB TYPES G & J (1)

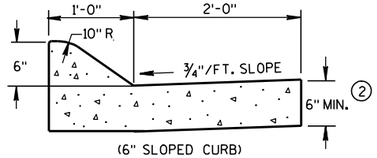


OPTIONAL CURB SHAPE FOR TYPES K & L (1)

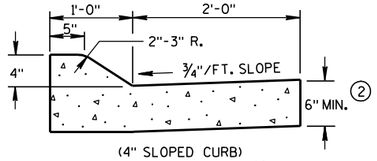


4" SLOPED CURB TYPES G & J (1)

CONCRETE CURB & GUTTER 30"

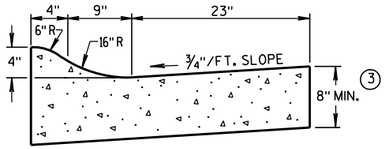


(6" SLOPED CURB)



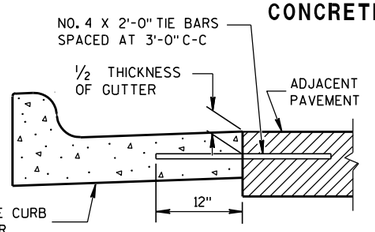
(4" SLOPED CURB)

TYPES A & D (1)

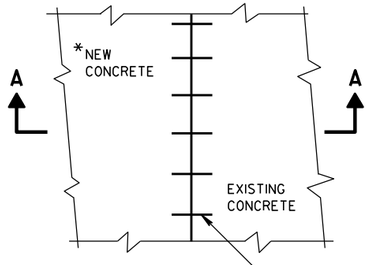


4" SLOPED CURB TYPES R & T (1) (4)

CONCRETE CURB & GUTTER 36"

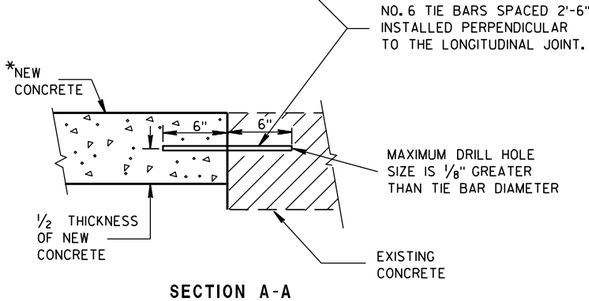


TYPICAL TIE BAR LOCATION (1)



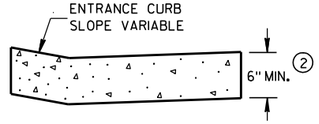
*NEW CURB & GUTTER, SURFACE DRAINS, CONCRETE PAVEMENT OR OTHER NEW CONCRETE.

PLAN VIEW

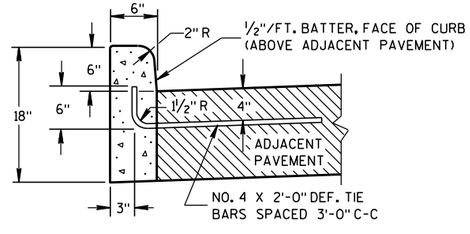


SECTION A-A

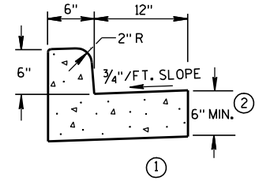
TIE BARS DRILLED INTO EXISTING PAVEMENT



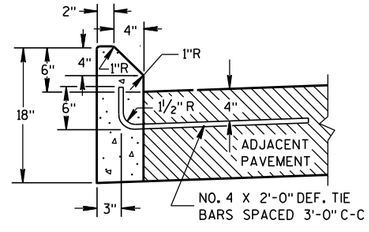
DRIVEWAY ENTRANCE CURB
(WHEN DIRECTED BY THE ENGINEER)



(1)
TYPES A & D

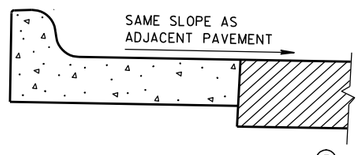


(1)
TYPES A & D
CONCRETE CURB & GUTTER 18"

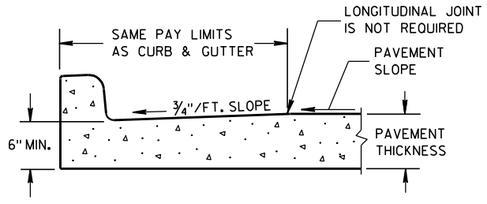


(1)
TYPES G & J

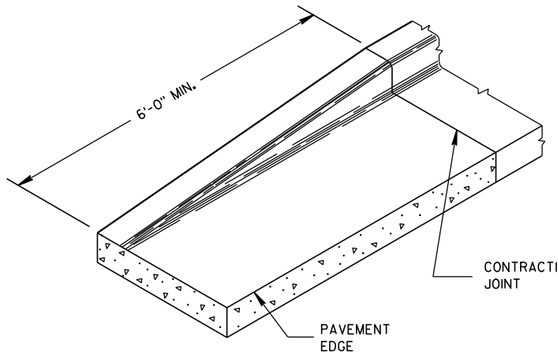
CONCRETE CURB



REVERSE SLOPE GUTTER (5)
(TYPICAL FOR ALL CURB & GUTTER TYPES)



PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB & GUTTER



END SECTION CURB & GUTTER

GENERAL NOTES

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

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

INTEGRAL CURB & GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB & GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE. A LONGITUDINAL CONSTRUCTION JOINT IS NOT REQUIRED WITH INTEGRAL CURB AND GUTTER.

WHERE THE TRANSVERSE JOINTS IN THE PAVEMENT ARE REQUIRED TO BE SEALED, THE JOINTS IN THE INTEGRAL CURB AND GUTTER SHALL BE SEALED TO THE FACE OF CURB WITH THE SAME TYPE OF SEALANT. THE COST OF FURNISHING AND INSTALLING THIS SEALANT SHALL BE INCIDENTAL TO THE ITEM CONCRETE CURB AND GUTTER.

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

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

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

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

(4) THE FACE OF CURB IS 6" FROM THE BACK OF CURB.

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

CONCRETE CURB, CONCRETE CURB & GUTTER AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
9/4/08 — DATE
/S/ Jerry H. [illegible] — ROADWAY STANDARDS ENGINEER
FHWA

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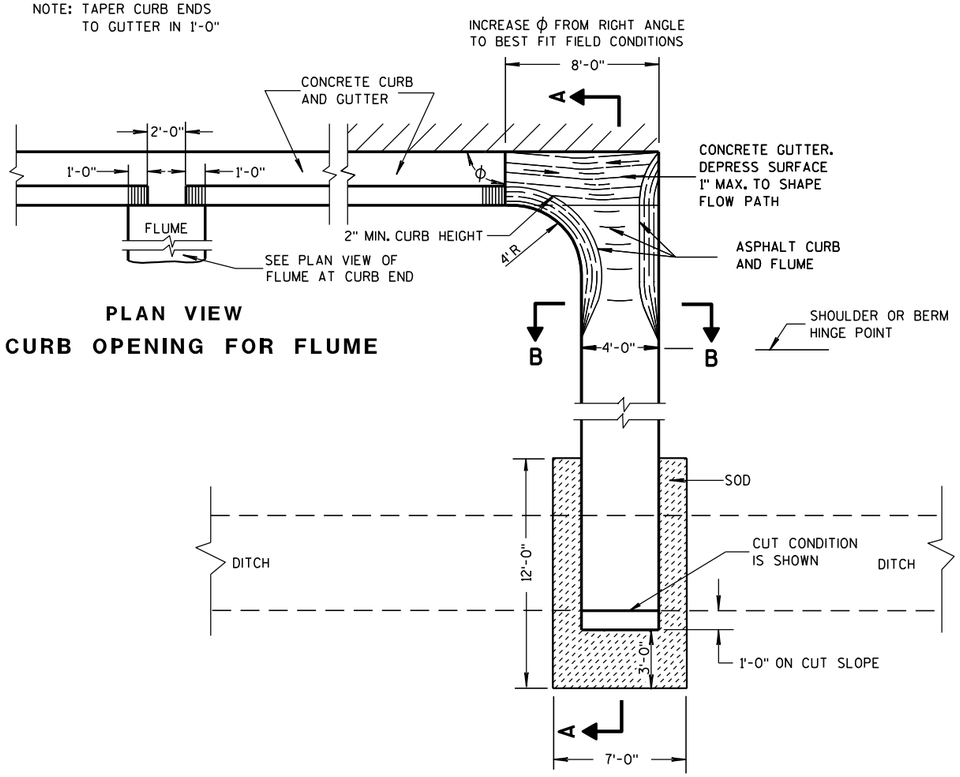
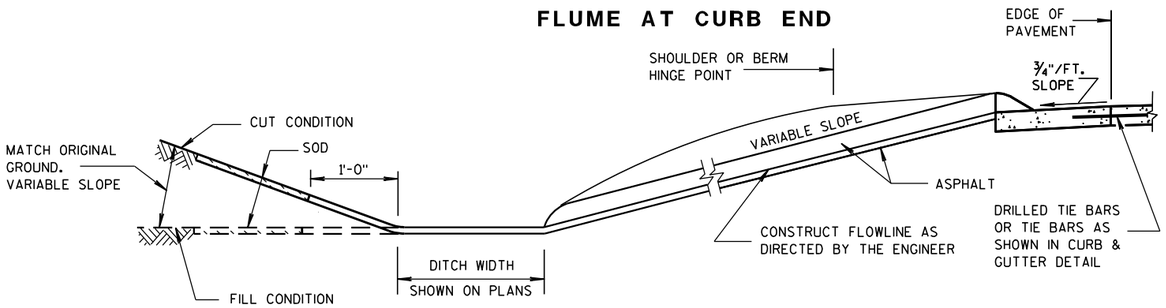
S.D.D. 8 D 1-17

ASPHALTIC FLUME

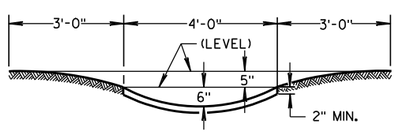


PLAN VIEW
CURB OPENING FOR FLUME

PLAN VIEW
FLUME AT CURB END



SECTION A-A



SECTION B-B

GENERAL NOTES

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

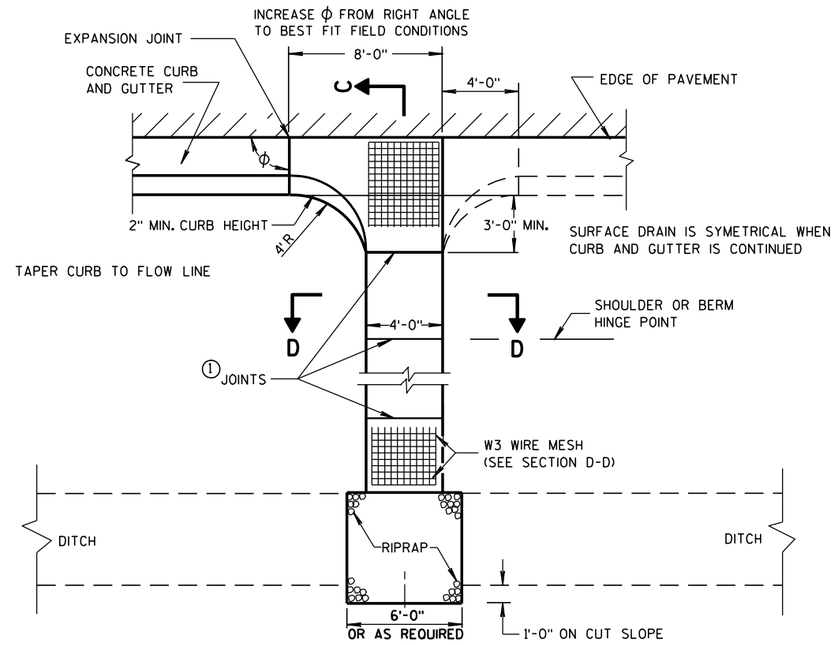
WELDED STEEL WIRE FABRIC SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

① JOINTS SHALL BE $\frac{1}{8}$ TO $\frac{1}{4}$ INCH WIDE BY $1\frac{1}{2}$ INCHES DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.

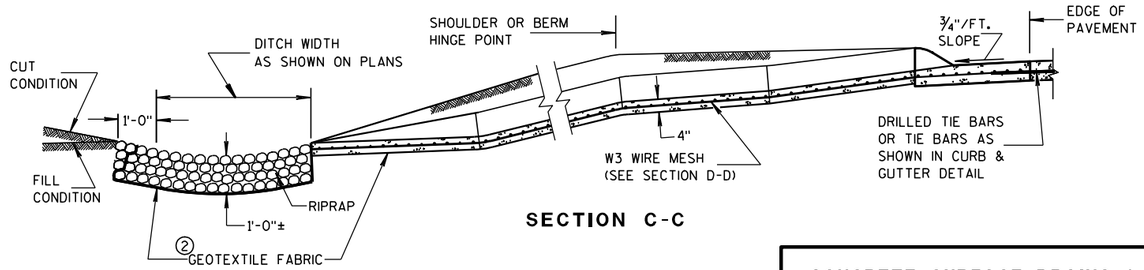
② GEOTEXTILE FABRIC TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.

③ CONCRETE SURFACE DRAIN WITHOUT CURB AND GUTTER MAY BE USED ON BACKSLOPES WHEN SPECIFIED

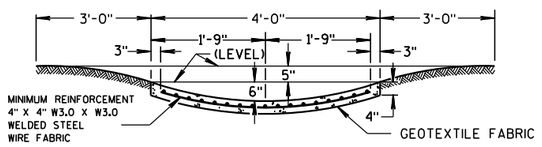
③ CONCRETE SURFACE DRAIN



PLAN VIEW



SECTION C-C



SECTION D-D

CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
9-4-08 DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER
59
MENT
FHWA

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S.D.D. 8 D 4-5

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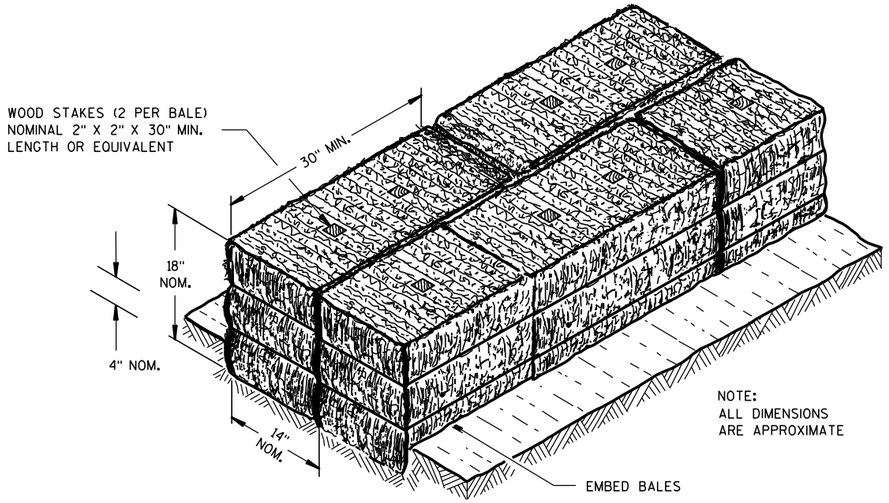
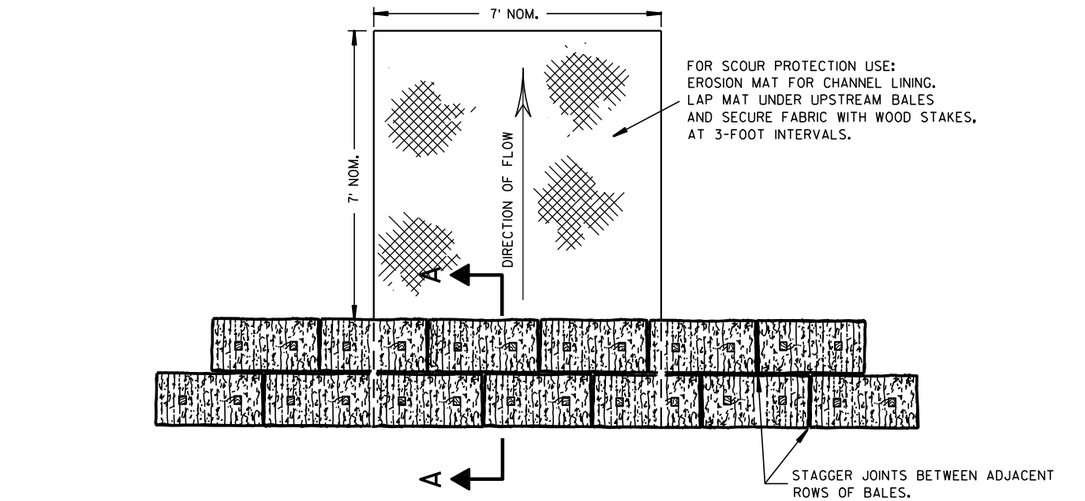
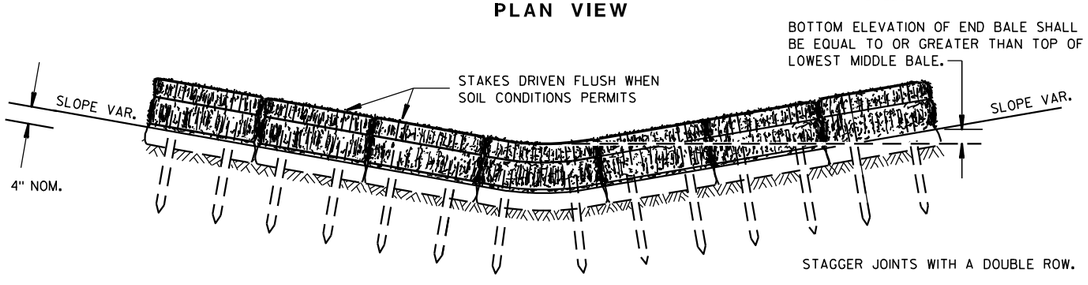


SECTION A-A



PLAN VIEW



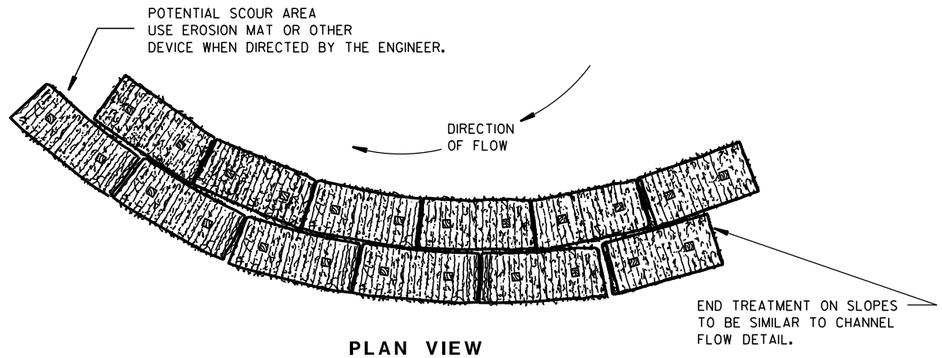
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES (1)

GENERAL NOTES

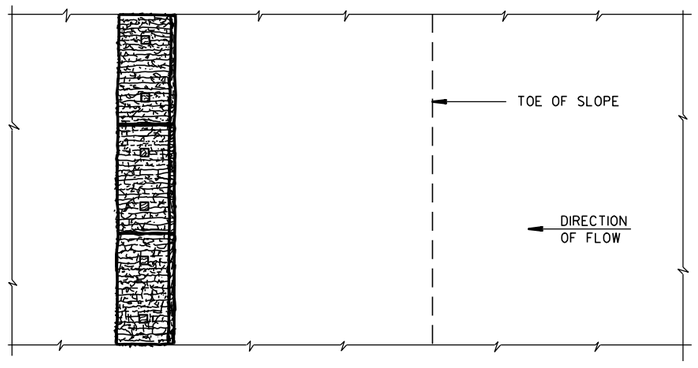
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

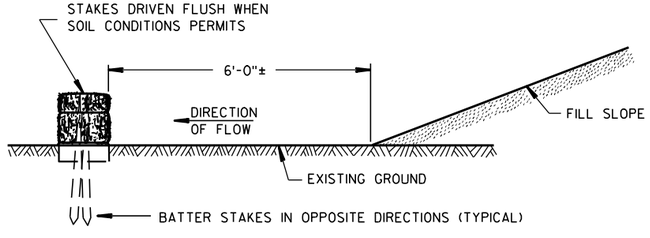


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/04/02 — DATE

/S/ Beth Cannestra — CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

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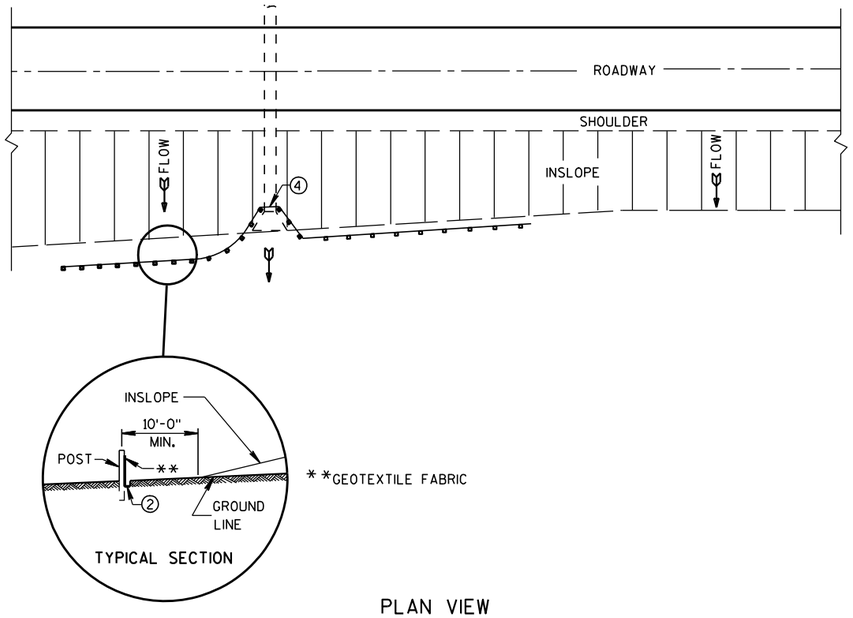
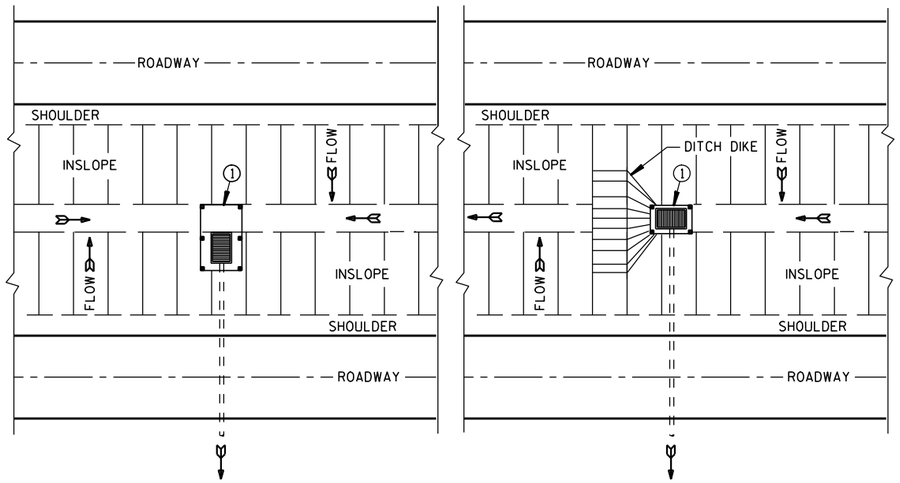


PLAN VIEW

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.

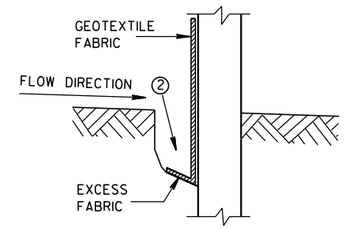
① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

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.

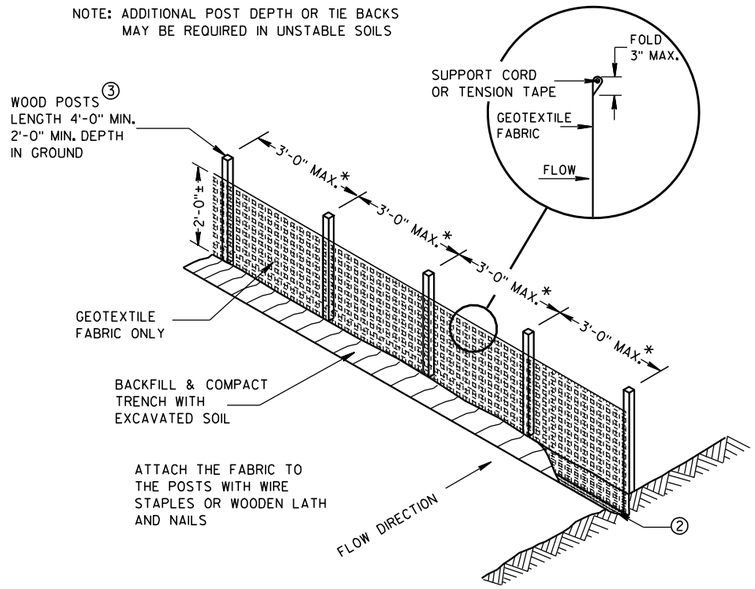
③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

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.

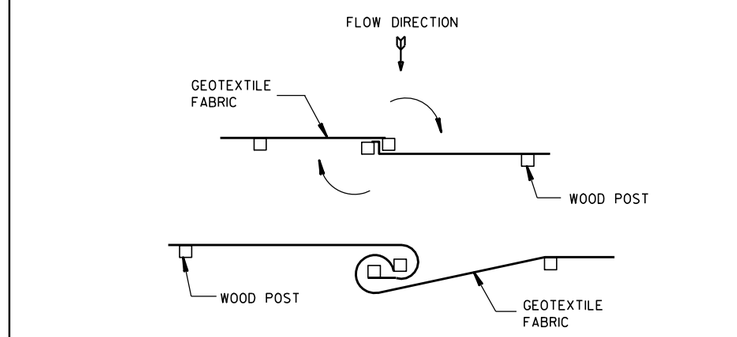


TRENCH DETAIL

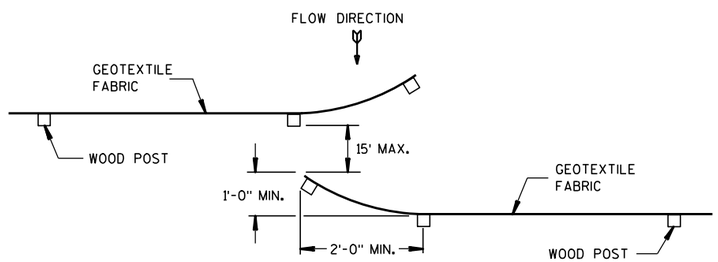


*NOTE: 8'-0" POST SPACING ALLOWED IF A WOVEN GEOTEXTILE FABRIC IS USED.

SILT FENCE

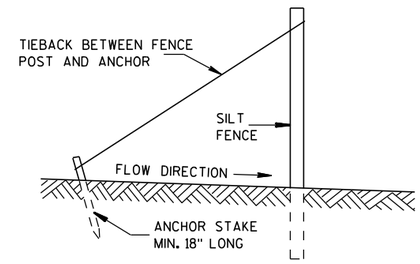


TWIST METHOD



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

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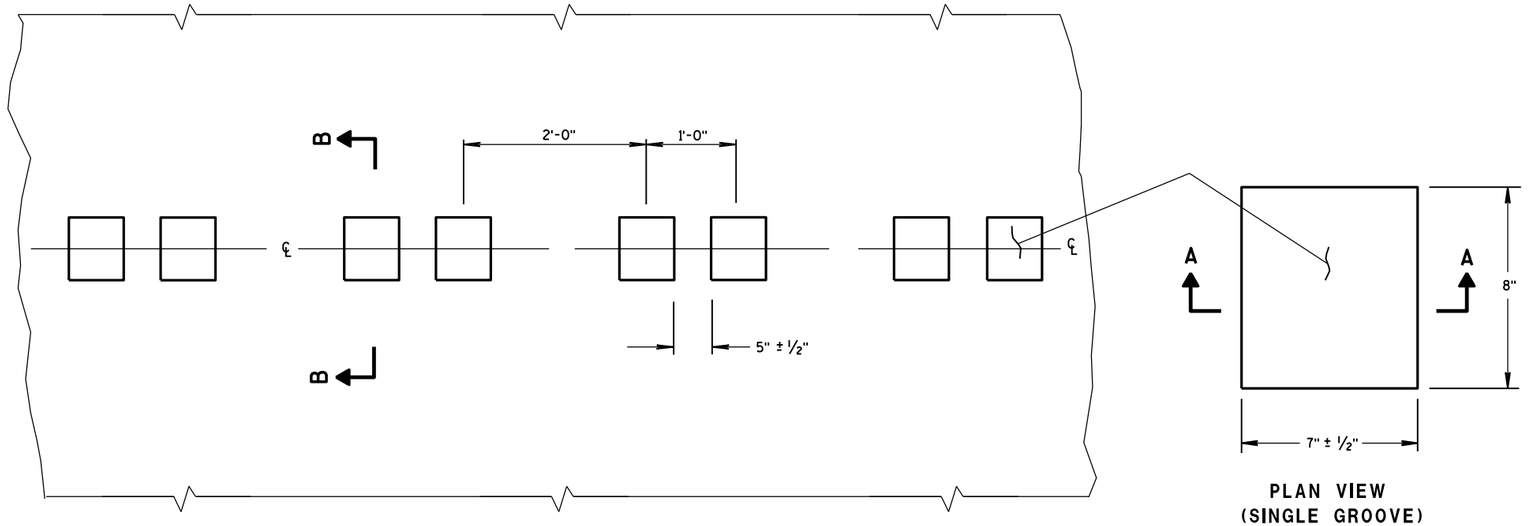
S.D.D. 8 E 9-6



PLAN VIEW
CENTER LINE WITH GROOVES

PLAN VIEW
(SINGLE GROOVE)

PLACEMENT DETAIL FOR MILLED RUMBLE STRIP

GENERAL NOTES

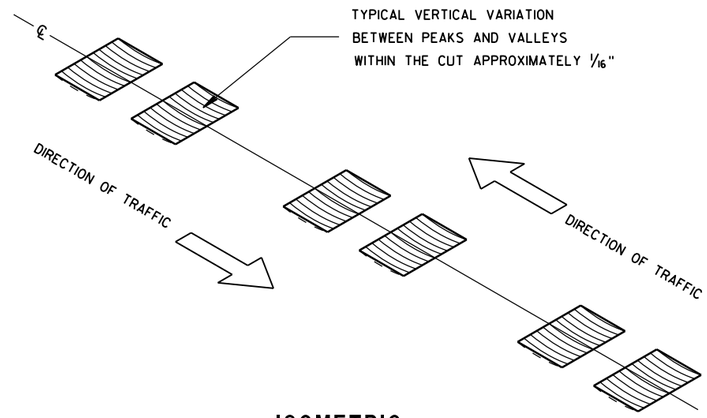
DETAILS OF CONSTRUCTION SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

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

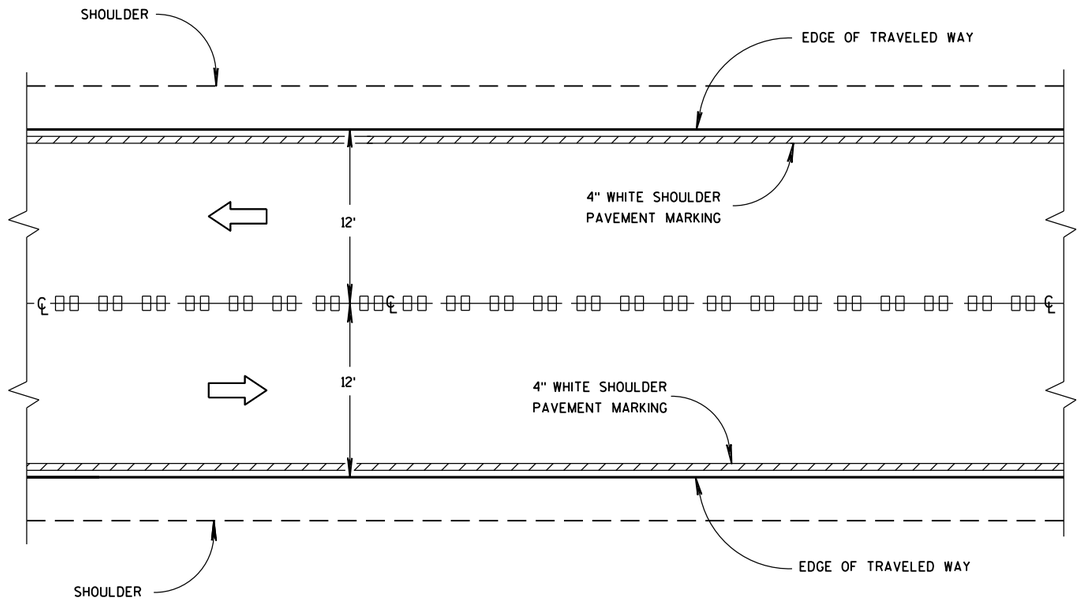
INSTALL PAVEMENT MARKING AFTER THE GROOVES ARE INSTALLED.

SEE SIGNING PLAN FOR SIGN REQUIREMENTS THAT MAY BE NEEDED.

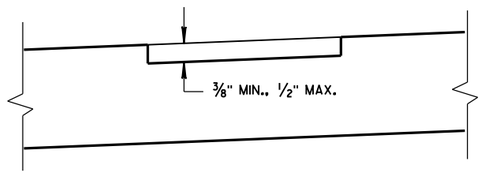
(1) CENTERLINE GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS, WHEN DIRECTED BY THE ENGINEER.



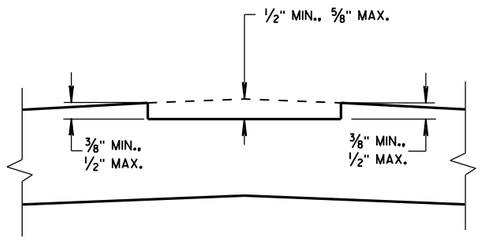
ISOMETRIC



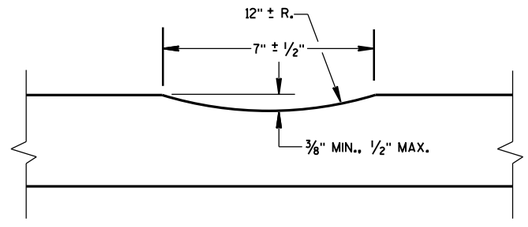
CENTER LINE GROOVES ON TWO-WAY ROADWAYS



SECTION B-B
SUPERELEVATED ROADWAY



SECTION B-B
CROWNED ROADWAY



SECTION A-A

2-LANE RURAL
CENTER LINE RUMBLE STRIP, MILLING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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S.D.D. 13 A 11-2a

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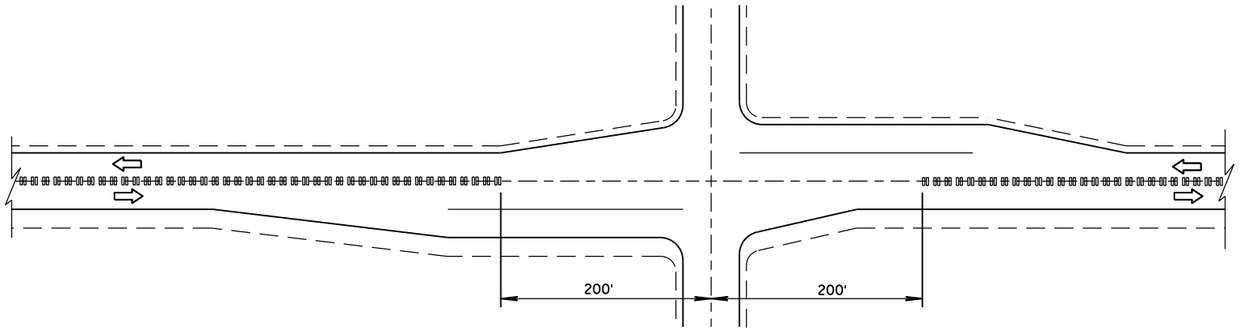
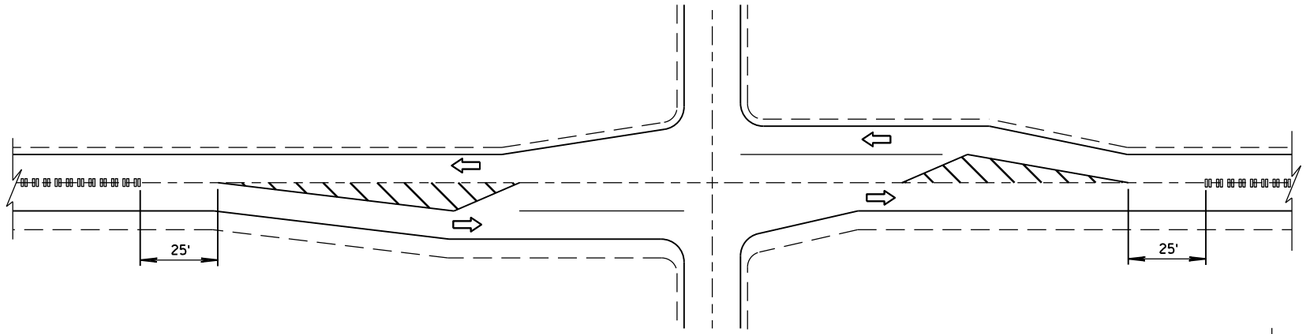
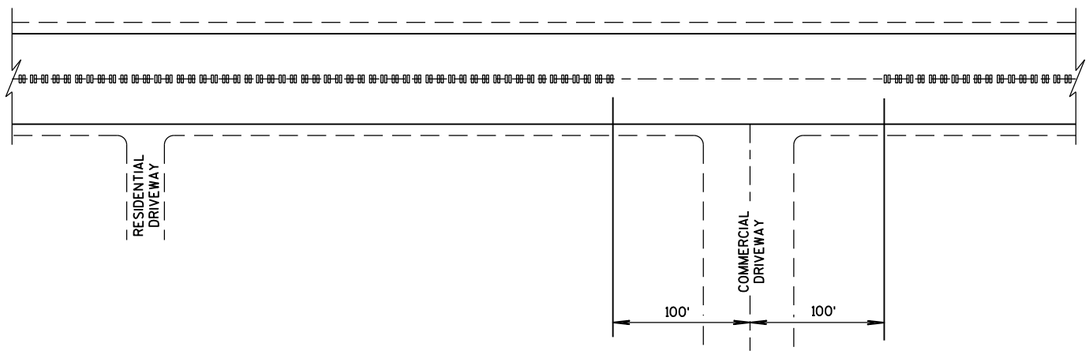
S.D.D. 13 A 11-2a



CENTER LINE GROOVES AT INTERSECTIONS

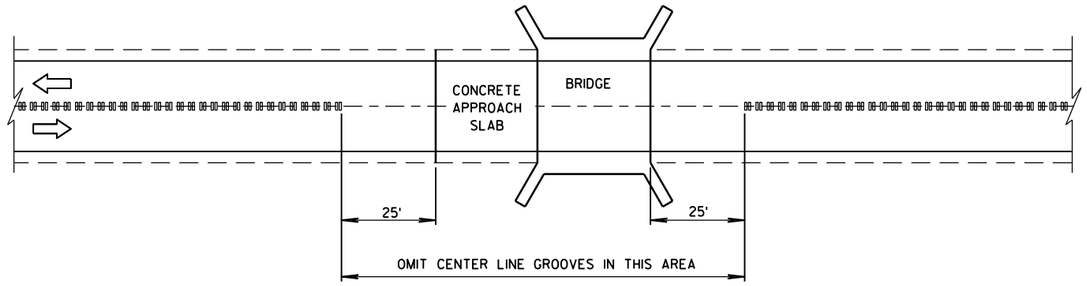


CENTER LINE GROOVES AT INTERSECTIONS
(WITH LEFT TURN LANES)

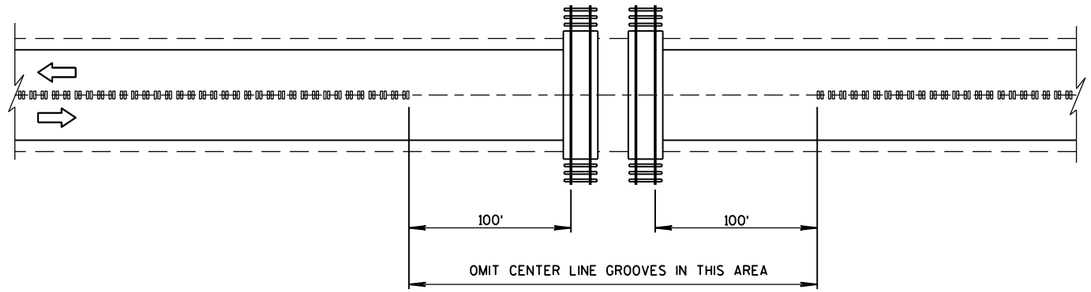


CENTER LINE GROOVES AT DRIVEWAYS (1)

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



CENTER LINE GROOVES AT BRIDGES



CENTER LINE GROOVES AT RAILROADS

6

S.D.D. 13 A 11-2b

2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5/15/2013
DATE

/S/ Jerry H. Zoda
ROADWAY STANDARDS DEVELOPMENT ENGINEER

NT

FHWA

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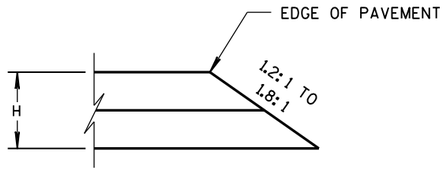
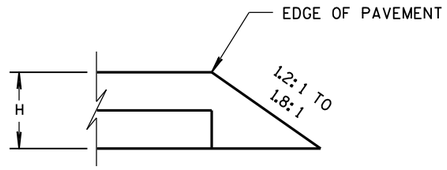
S.D.D. 13 A 11-2b



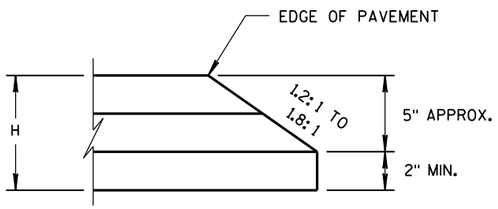
CONSTRUCTED WITH FINAL TWO LAYERS

FOR H 5" OR LESS



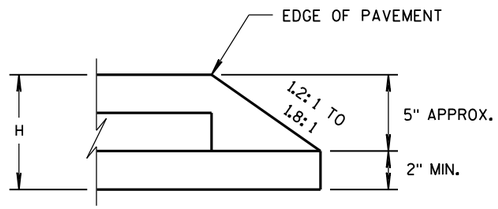
CONSTRUCTED WITH FINAL LAYER

FOR H 5" OR LESS



CONSTRUCTED WITH FINAL TWO LAYERS

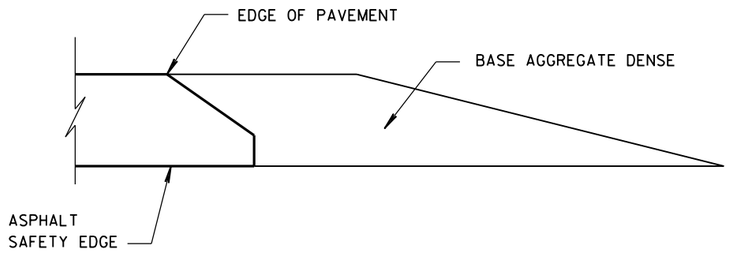
FOR H GREATER THAN 5"



CONSTRUCTED WITH FINAL LAYER

FOR H GREATER THAN 5"

HMA PAVEMENT AND HMA OVERLAYS



FINISHED SHOULDER AGGREGATE PLACEMENT

6

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S.D.D. 14 B 29-1

S.D.D. 14 B 29-1

SAFETY EDGE SM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

11/30/2012
DATE

/S/ Jerry H. Zoda
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

GENERAL NOTES

(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.

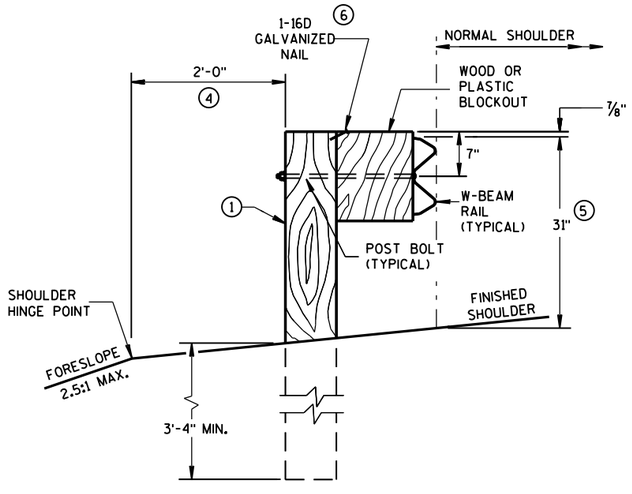
(2) USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL. DIMENSIONS OF APPROVED PLASTIC BLOCKOUTS MAY VARY.

(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).

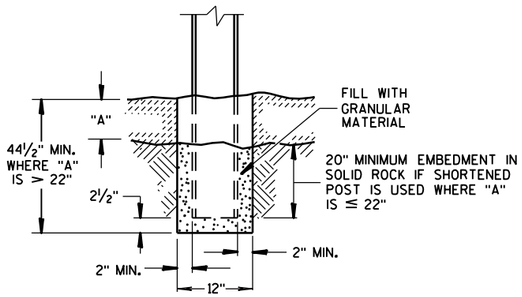
(5) FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ± 1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27¾" TO 32".

(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.



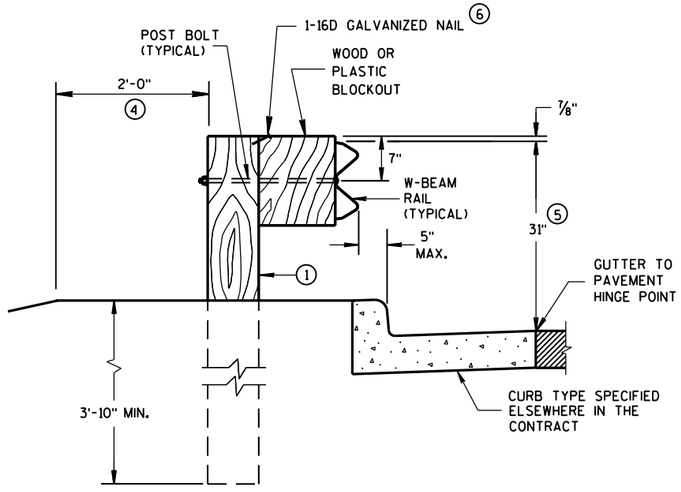
END VIEW

LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION



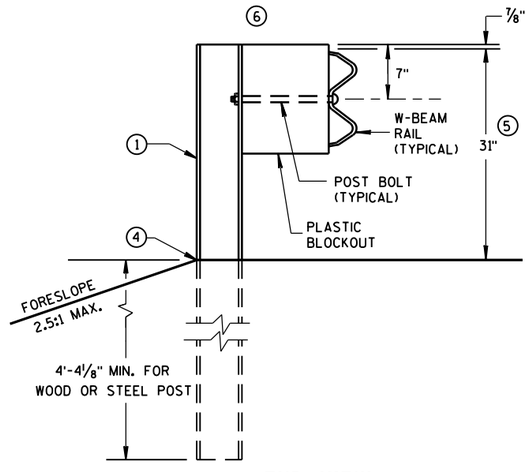
END VIEW

SETTING STEEL OR WOOD POST IN ROCK (3)



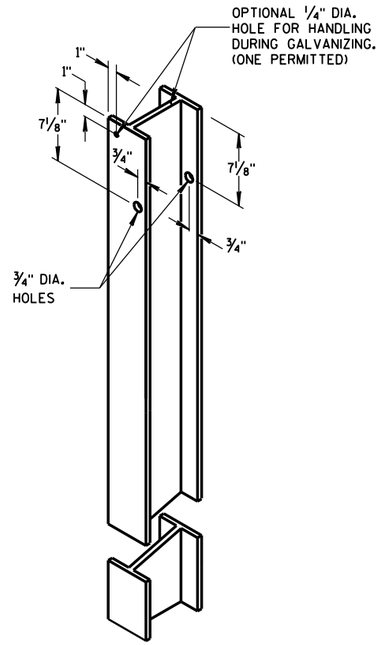
END VIEW

LOCATED ALONG A CURBED ROADWAY

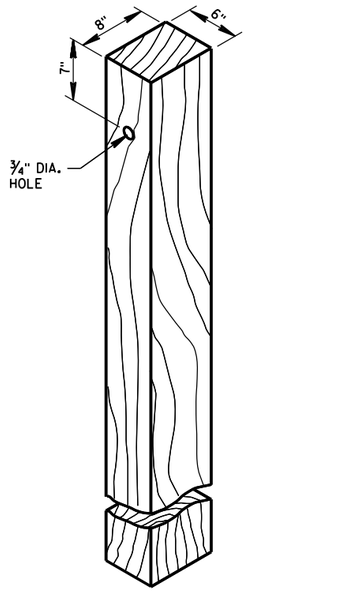


END VIEW

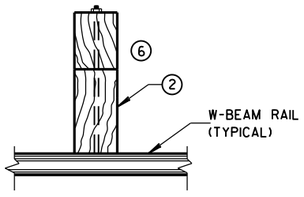
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



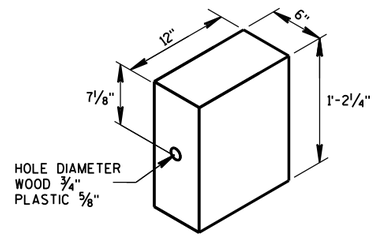
STEEL POST &
HOLE PUNCHING DETAIL
(w6X9) (1)



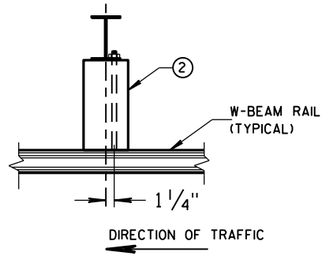
WOOD POST
(6" X 8") NOMINAL (1)



PLAN VIEW
WOOD POST,
BLOCKOUT & BEAM



WOOD OR
PLASTIC BLOCKOUT (2)

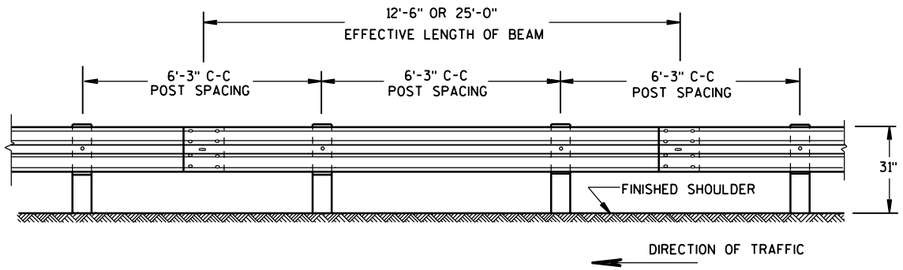


PLAN VIEW
STEEL POST,
PLASTIC BLOCKOUT & BEAM

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

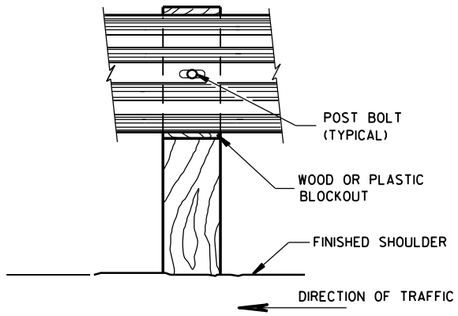
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6
S.D.D. 14 B 42-3a



FRONT VIEW

POST SPACING STANDARD INSTALLATION



FRONT VIEW AT WOOD POST

GENERAL NOTES

(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.

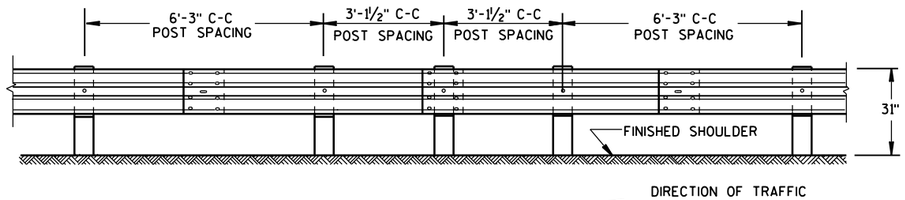
(9) REVERSE EVERY OTHER REFLECTOR FOR 2-WAY VISIBILITY. THE CONTRACTOR MAY FURNISH TWO-SIDED REFLECTORS IN LIEU OF ONE-SIDED REFLECTORS.

(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.

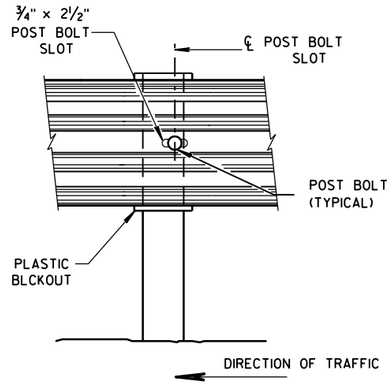
POST BOLTS ARE A 5/8" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES 5/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND 5/8" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

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.

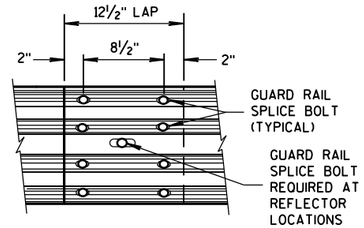


FRONT VIEW

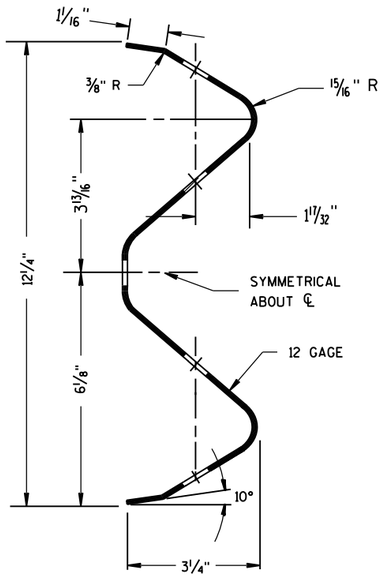
HALF POST SPACING (HS) AND HALF POST SPACING WITH LONGER POSTS (K)



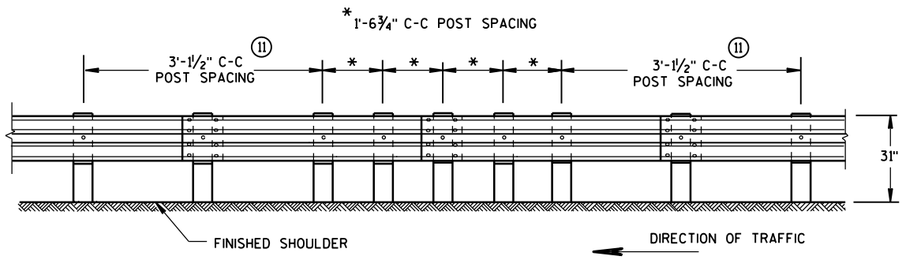
FRONT VIEW AT STEEL POST



FRONT VIEW
MID-SPAN BEAM SPLICE

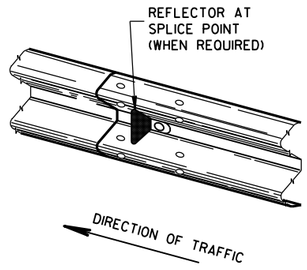


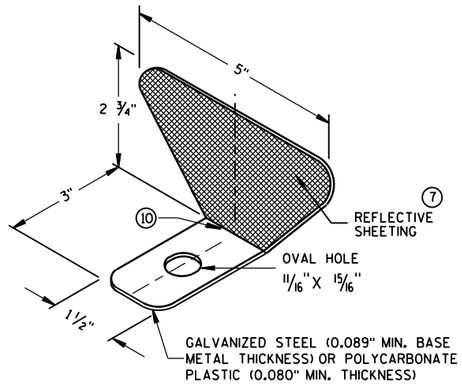
SECTION THRU W-BEAM RAIL



FRONT VIEW

QUARTER POST SPACING (QS)





REFLECTOR SPACING (8)

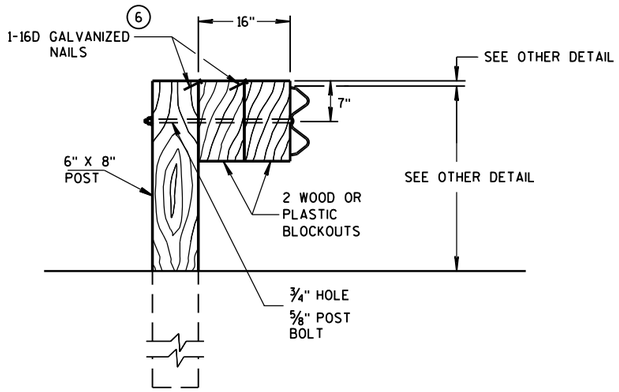
	BEAM GUARD LENGTH	REFLECTOR SPACING	NO. SURFACES REFLECTORIZED	MIN. NO. REFLECTORS
ONE WAY TRAFFIC	< 200'	50' C-C	1	3
	> 200'	100' C-C	1	
TWO WAY TRAFFIC	< 200'	25' C-C	1 (9)	6
	> 200'	50' C-C	1	
TWO WAY TRAFFIC	< 200'	50' C-C	2	3
	> 200'	100' C-C	2 (10)	

ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION (7)

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

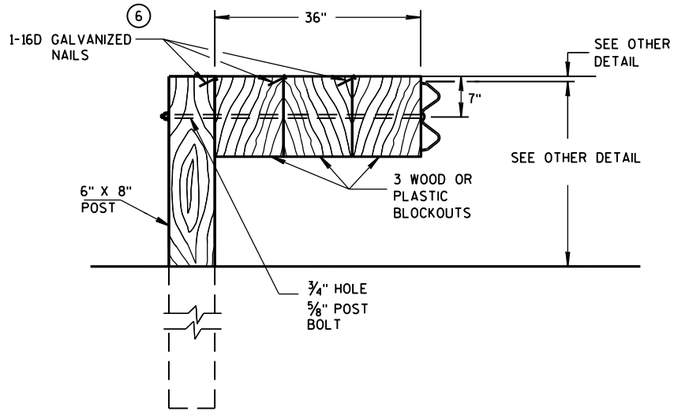
STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

6
S.D.D. 14 B 42-3b



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.

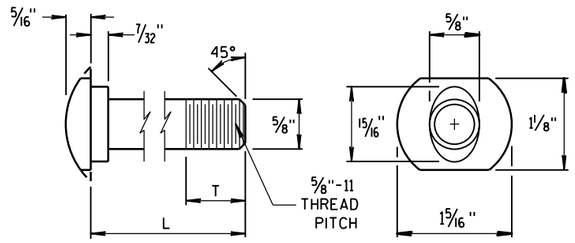


DETAIL FOR 36" BLOCKOUT DEPTH

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.

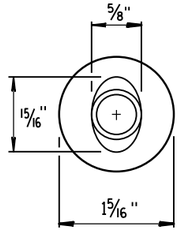
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

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.

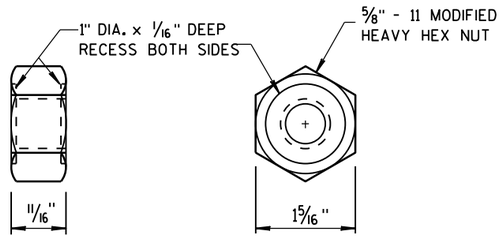


POST BOLT TABLE

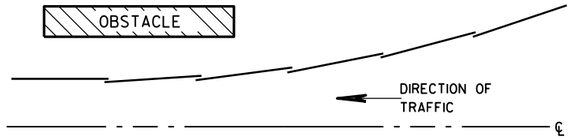
L	T (MIN.)
1¼"	1⅛"
2"	1¾"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"



ALTERNATE BOLT HEAD

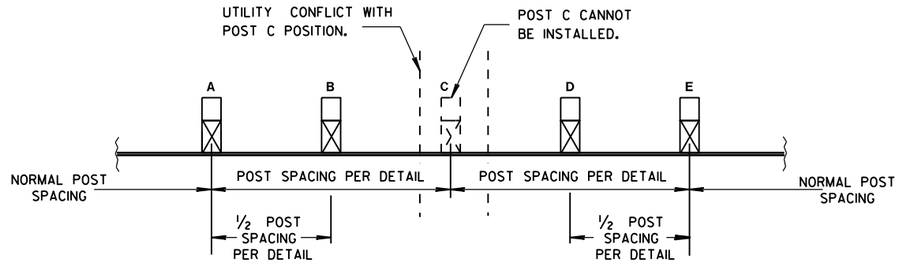


POST BOLT AND RECESS NUT

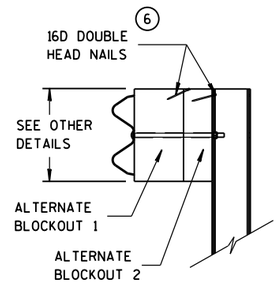


PLAN VIEW

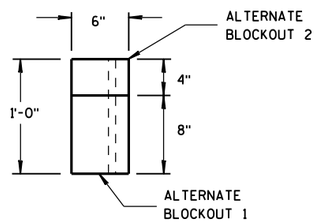
BEAM LAPPING DETAIL



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

6
S.D.D. 14 B 42-3c

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.

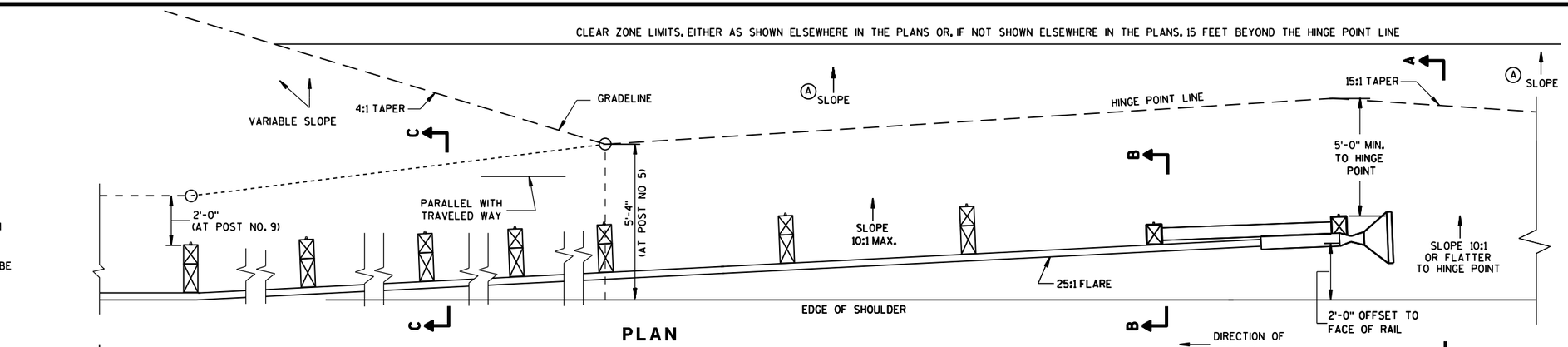
SEE SDD 14B42 FOR MORE INFORMATION.

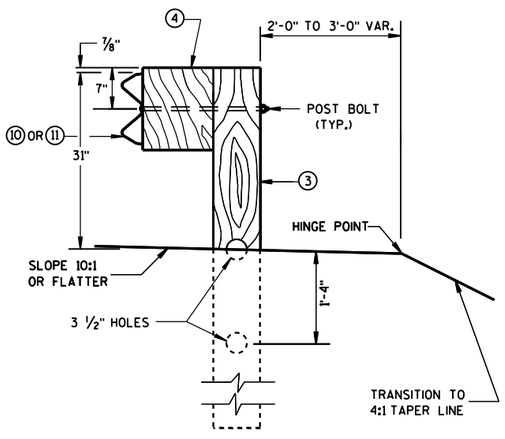
* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

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

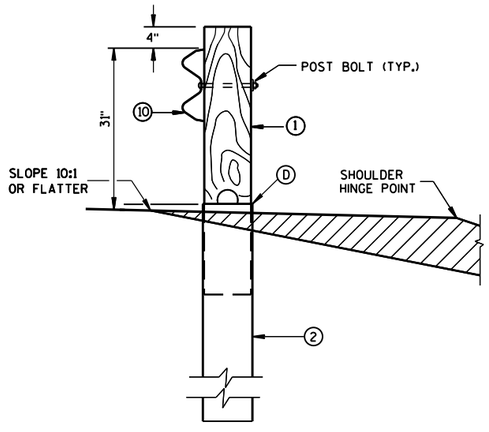
W-BEAM RAIL SPLICES ARE LOCATED AT POST NUMBER 3, AND BETWEEN POST 5 AND 6, BETWEEN POSTS 7 AND 8, AND MIDDLE OF THE SPAN AFTER POST 9.

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.

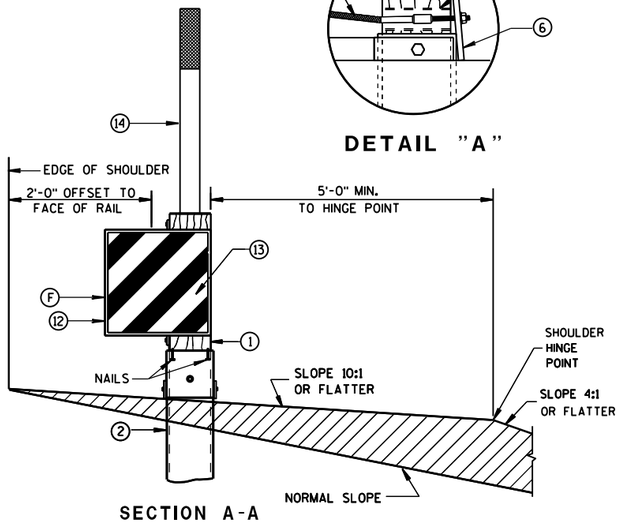




SECTION C-C
TYPICAL AT POST NOS. 3-9

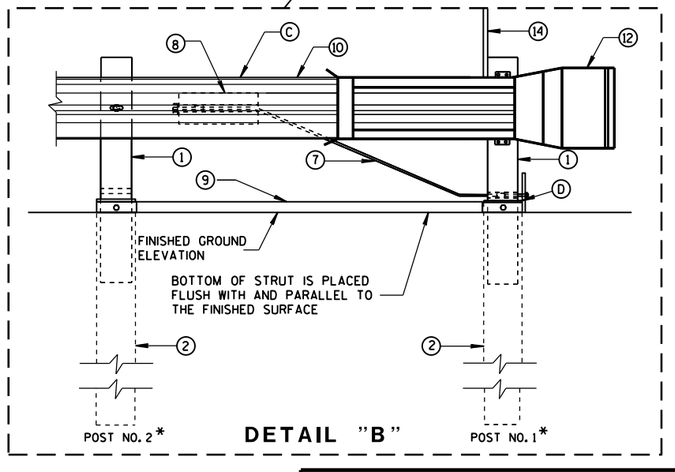


SECTION B-B
TYPICAL AT POST NO. 2*



SECTION A-A
TYPICAL AT POST NO. 1*

DETAIL "A"



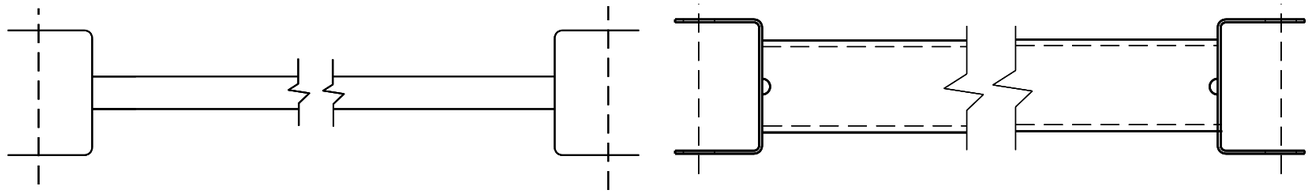
DETAIL "B"

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO 68

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

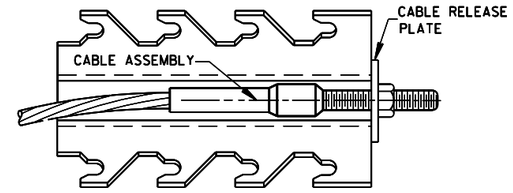
S.D.D. 14 B 44-2a



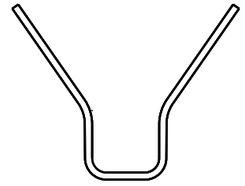
GENERIC GROUND STRUT (9) (H)

BILL OF MATERIALS

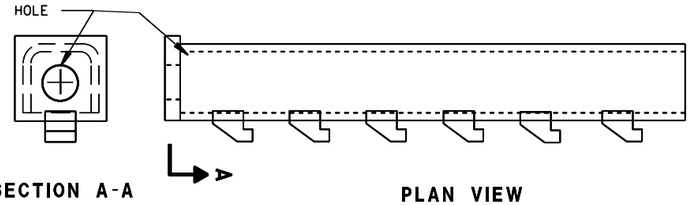
PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.
(1)	WOOD BREAKAWAY POST
(2)	6" X 8" X 0.188", 6'-0" LONG FOUNDATION TUBE AT POSTS 1 AND 2
(3)	WOOD CRT
(4)	WOOD BLOCKOUT
(5)	PIPE SLEEVE
(6)	BEARING PLATE
(7)	BCT CABLE ASSEMBLY
(8)	ANCHOR 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



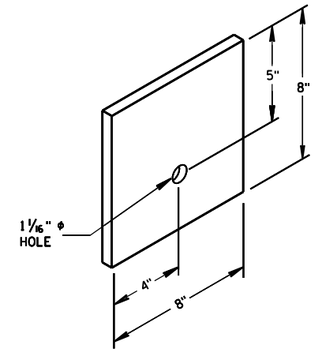
SECTION B-B



SECTION A-A

PLAN VIEW

GENERIC ANCHOR CABLE BOX (8) (H)

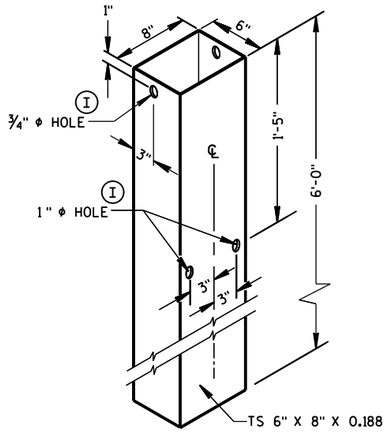


BEARING PLATE (6)

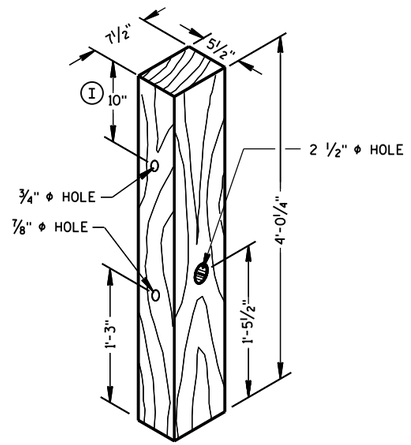
MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

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

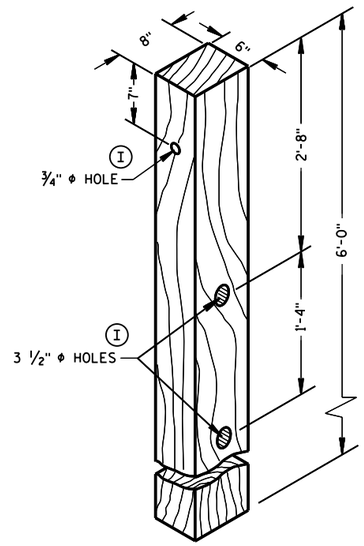


FOUNDATION TUBE (2)



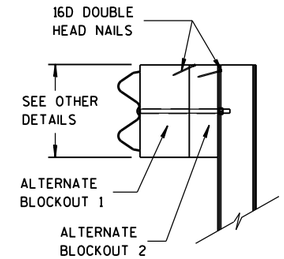
POSTS NUMBER 1 AND 2

WOOD BREAKAWAY POST (1)

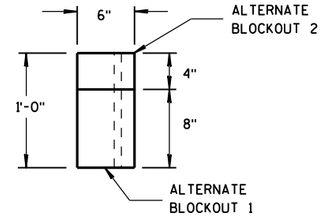


POSTS NUMBER 3-9

WOOD CRT POST (3)

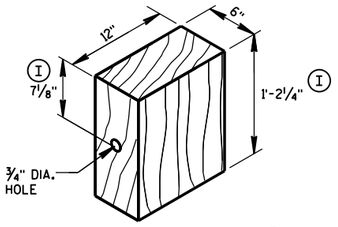


SIDE VIEW



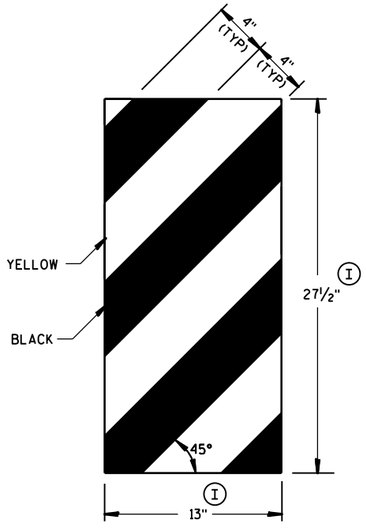
TOP VIEW

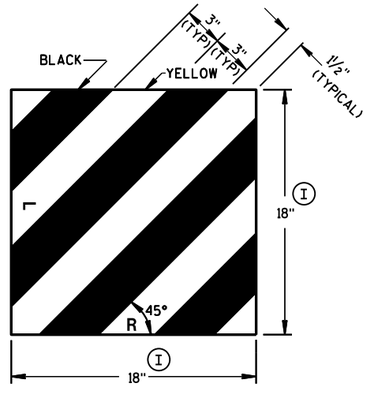
ALTERNATE WOOD BLOCKOUT DETAIL



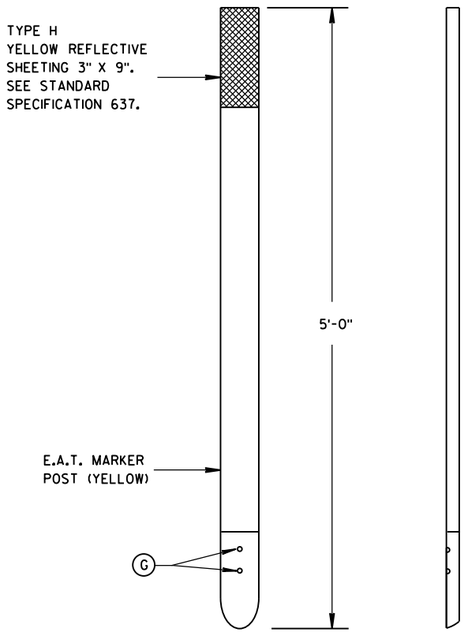
WOOD BLOCKOUT (4)

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





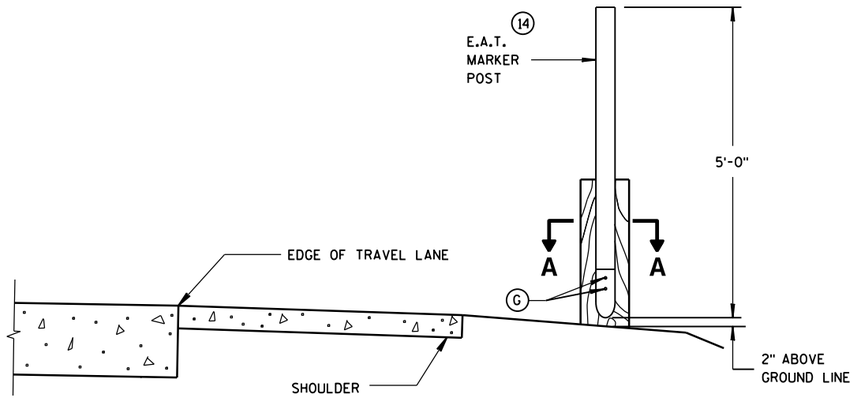
GENERIC REFLECTIVE SHEETING (13) (H)



FRONT VIEW

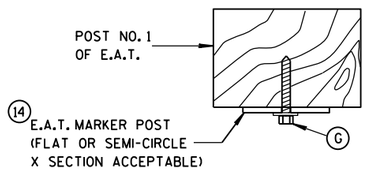
SIDE VIEW

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

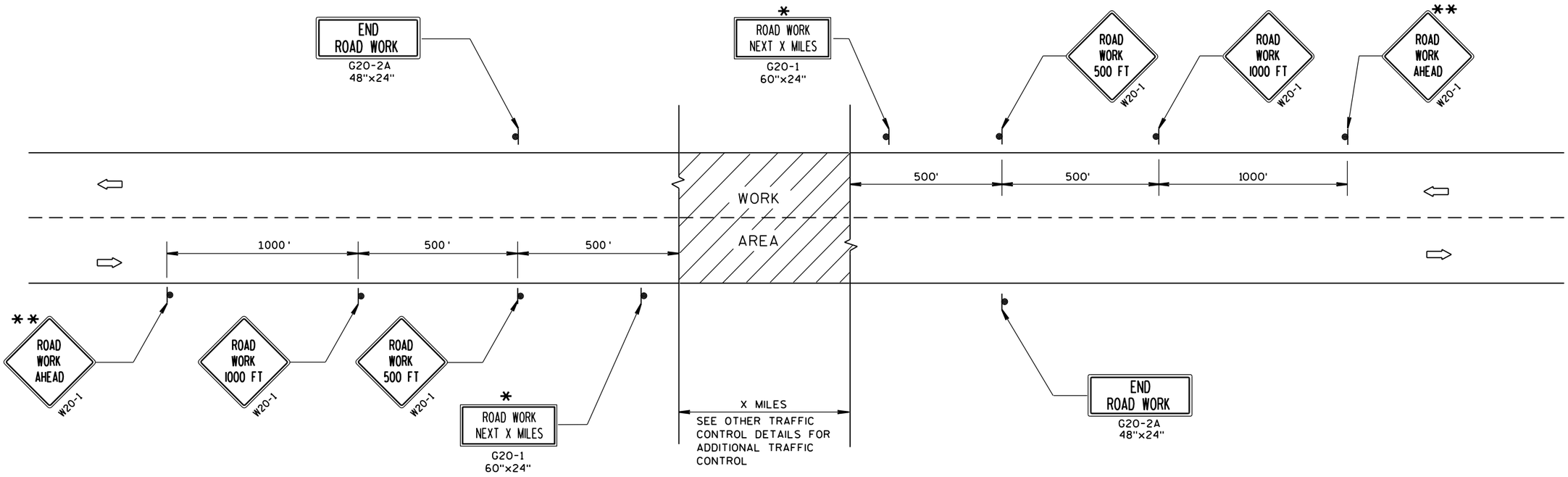
MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

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



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.

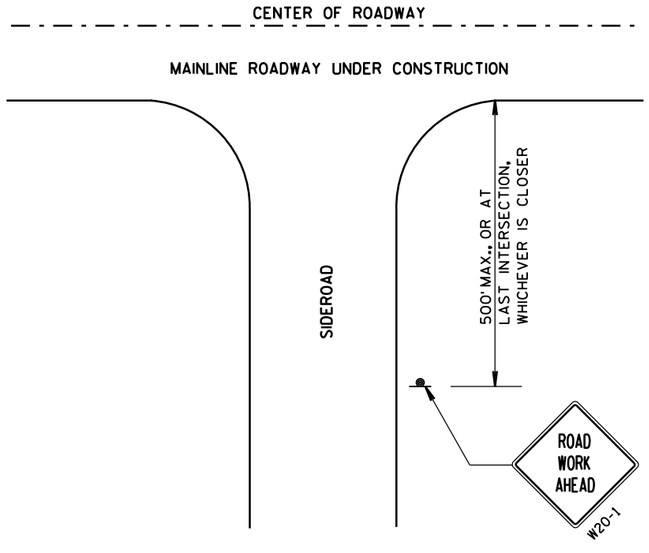
ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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 W20-1 "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

8/2013 — DATE

/S/ Travis Feltes — STATE TRAFFIC ENGINEER

SIGN

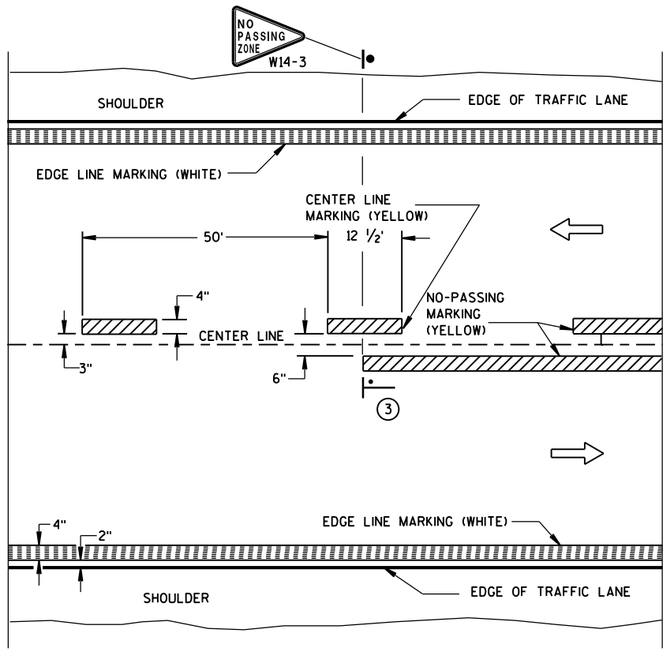
FHWA

6

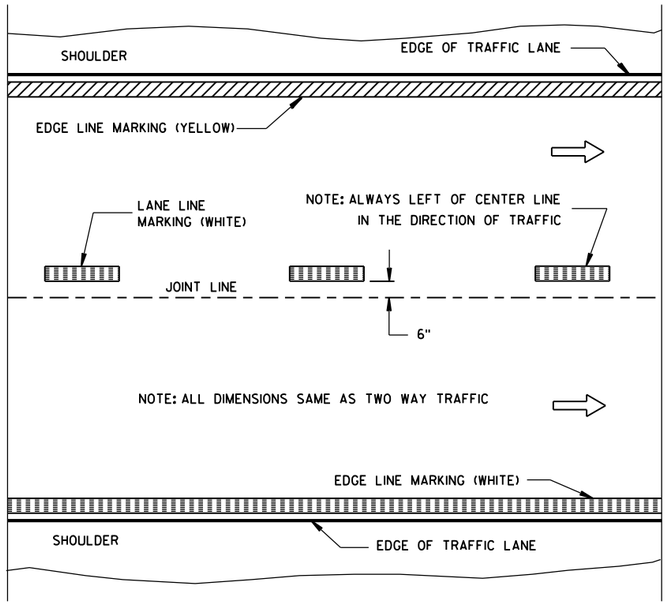
S.D.D. 15 C 4-2

6

S.D.D. 15 C 4-2

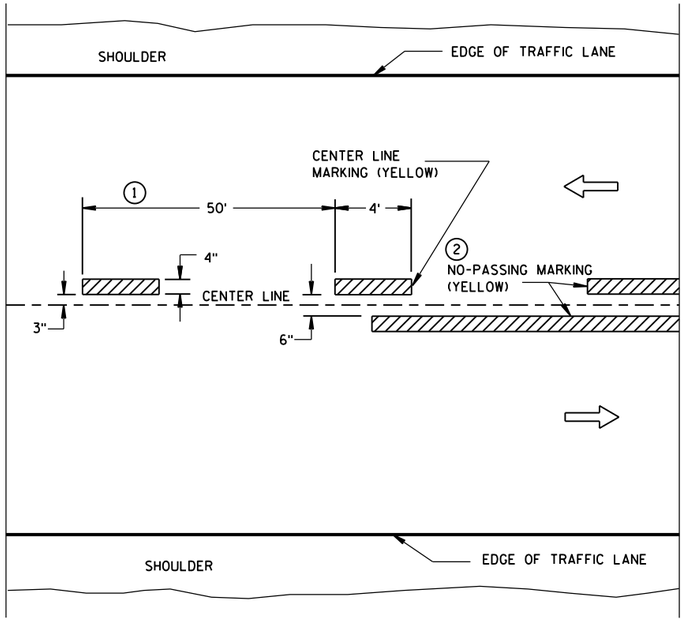


TWO WAY TRAFFIC

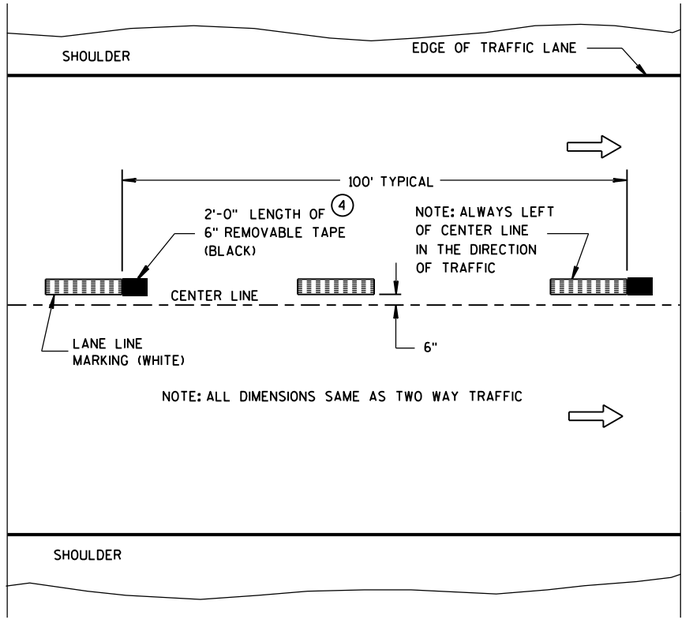


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY (INTERMEDIATE) PAVEMENT MARKING

(SHOWS CYCLE FOR TEMPORARY CENTER LINE OR TEMPORARY LANE LINE MARKING)

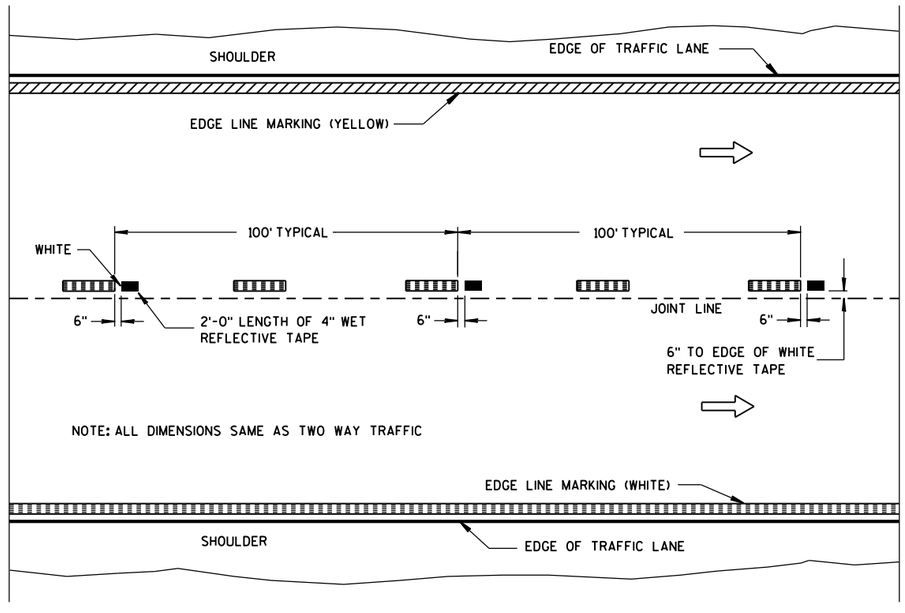
GENERAL NOTES

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

1. HALF CYCLE LENGTHS (25'±) WITH 2' MINIMUM STRIPE LENGTHS SHALL BE PROVIDED ON ROADWAYS (INCLUDING TEMPORARY TRAVELED WAYS) WITH REVERSE CURVATURE, CURVATURE OF OVER 5 DEGREES OR WHEN DIRECTED BY THE ENGINEER TO MARK UNUSUAL ALIGNMENT OF THE TRAVELED WAY.
2. NO PASSING ZONE TEMPORARY PAVEMENT MARKING IS REQUIRED TO BE PLACED, WHERE APPROPRIATE, ALONG WITH CENTERLINE TEMPORARY PAVEMENT MARKING WHEN A SAME DAY PERMANENT PAVEMENT MARKING ITEM IS INCLUDED IN THE CONTRACT.
3. NO PASSING ZONE MARKINGS ARE PLACED ACCORDING TO "T" MARKINGS. IF EXISTING NO PASSING ZONE W14-3 SIGNS ARE BEYOND 50 FEET IN EITHER DIRECTION, THE SIGNS SHALL BE MOVED TO THE "T" MARKINGS.
4. CONCRETE ONLY.

NOTE

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL



WET REFLECTIVE TAPE SUPPLEMENT TO
SPRAYED OR NON WET REFLECTIVE TAPE LANE LINE

LEGEND

"T" MARKING

POST MOUNTED SIGN

PAVEMENT MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

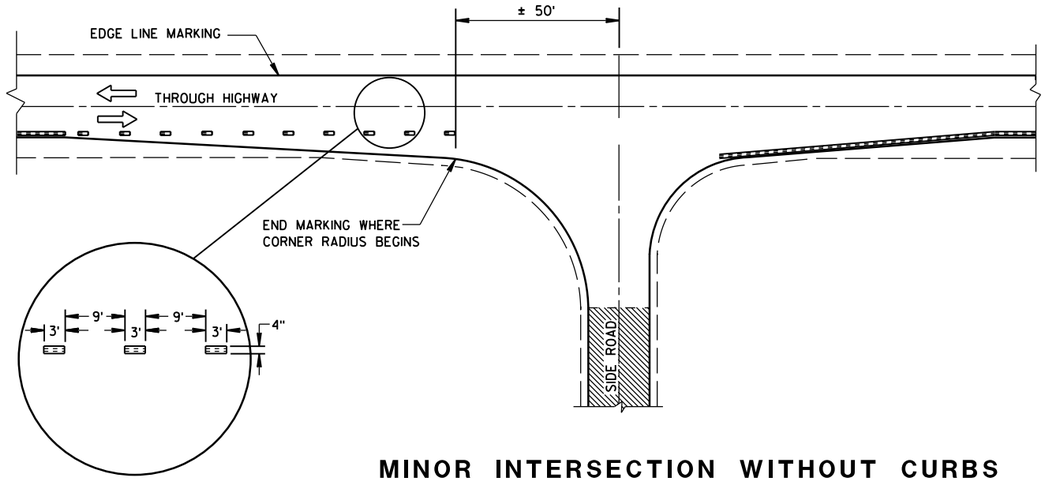
APPROVED
5-13-2013 DATE
/S/ Travis Feltes STATE TRAFFIC E
FHWA

6

S.D.D. 15 C 8-16a

6

S.D.D. 15 C 8-16a



MINOR INTERSECTION WITHOUT CURBS

GENERAL NOTES

EDGE LINES SHALL BE OMITTED THROUGH INTERSECTIONS. EDGE LINES SHALL BE CONTINUED THROUGH DRIVEWAYS.

(1) WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.

(2) WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.

(3) ALTERNATIVE MARKING SHALL BE PROVIDED WHEN SPECIFIED IN THE CONTRACT. TYPICAL SITUATIONS WHERE THIS MARKING MAY BE REQUIRED ARE WHERE THE INTERSECTION IS ON A SHARP HORIZONTAL CURVE OR CREST VERTICAL CURVE IN AN UNLIGHTED AREA SUCH THAT THE EDGE LINE MAY BE MISLEADING TO THE MOTORIST OR DISAPPEAR FROM SIGHT.

(4) THE EDGE LINE IN THE TAPER AREAS OF THE BYPASS LANE AND THE BYPASS LANE SHALL BE LOCATED 1-FOOT FROM EDGE OF PAVEMENT TO THE OUTSIDE EDGE OF EDGE LINE.

(5) BARRIER LINE ENDS AT SIDE ROAD PAVEMENT/SURFACE EDGE EXTENSION.

(6) BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.

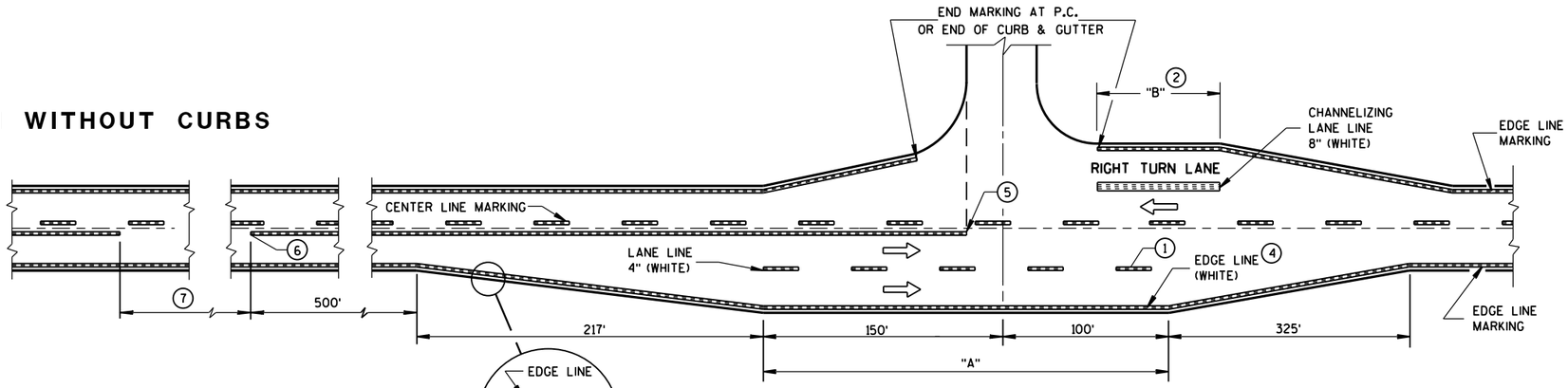
(7) IF THE DISTANCE BETWEEN 2 SUCCESSIVE NO-PASSING ZONES IS LESS THAN THE MINIMUM DISTANCE BETWEEN ZONES, CONNECT THE 2 ZONES.

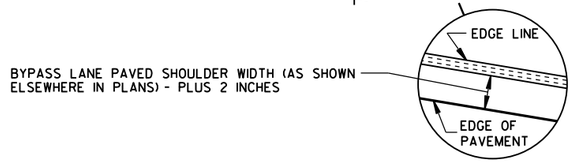
(8) 3' LINE 9' GAP, EXCEPT RETRACE THE EXISTING LINE - GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

(7)

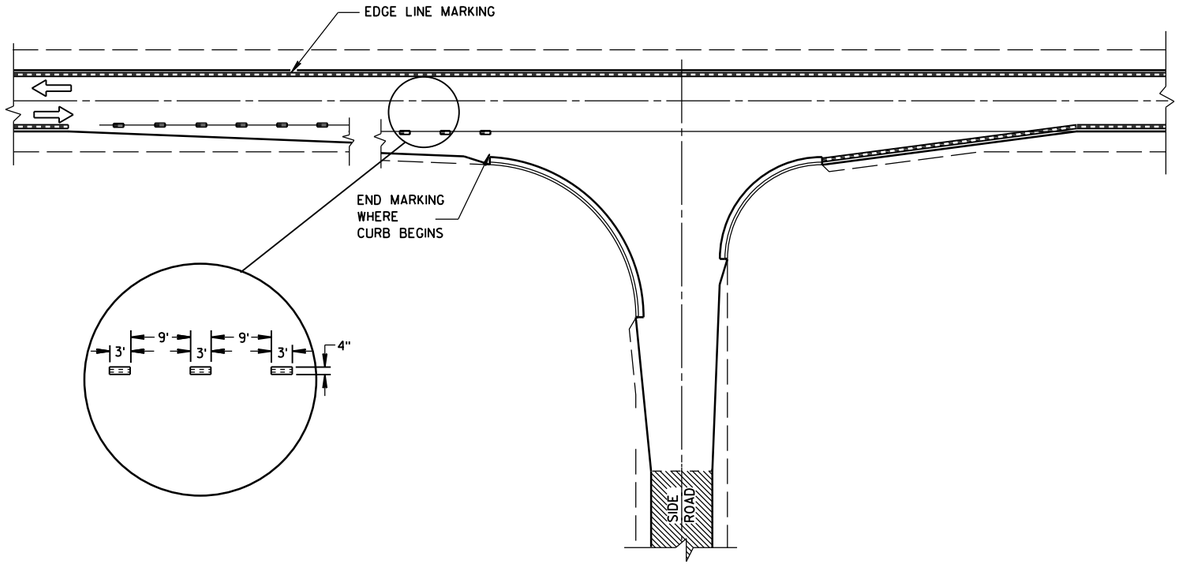
POSTED SPEED (MPH)	MINIMUM DISTANCE BETWEEN ZONES (FEET)
25 - 30	528
35 - 40	528
45 - 50	686
55	792





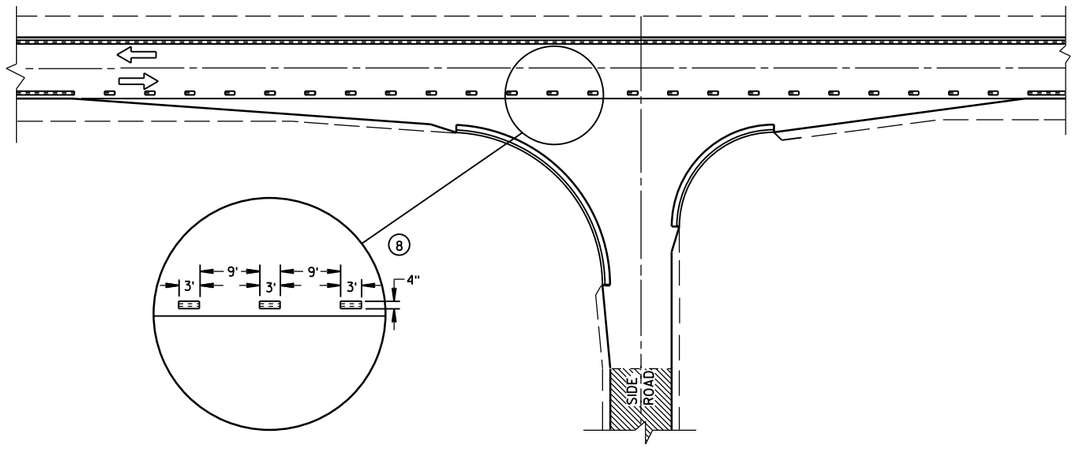
MAJOR INTERSECTIONS

(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANES)



MINOR INTERSECTION WITH CURBS

(TYPICAL MARKING)



MINOR INTERSECTION WITH CURBS

(3) (FOR SPECIAL CONDITIONS AS SPECIFIED)

PAVEMENT MARKING
(INTERSECTIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 15 C 8-16b

6

S.D.D. 15 C 8-16b

LEGEND

SIGN ON PORTABLE OR PERMANENT SUPPORT

DIRECTION OF TRAFFIC

WORK AREA

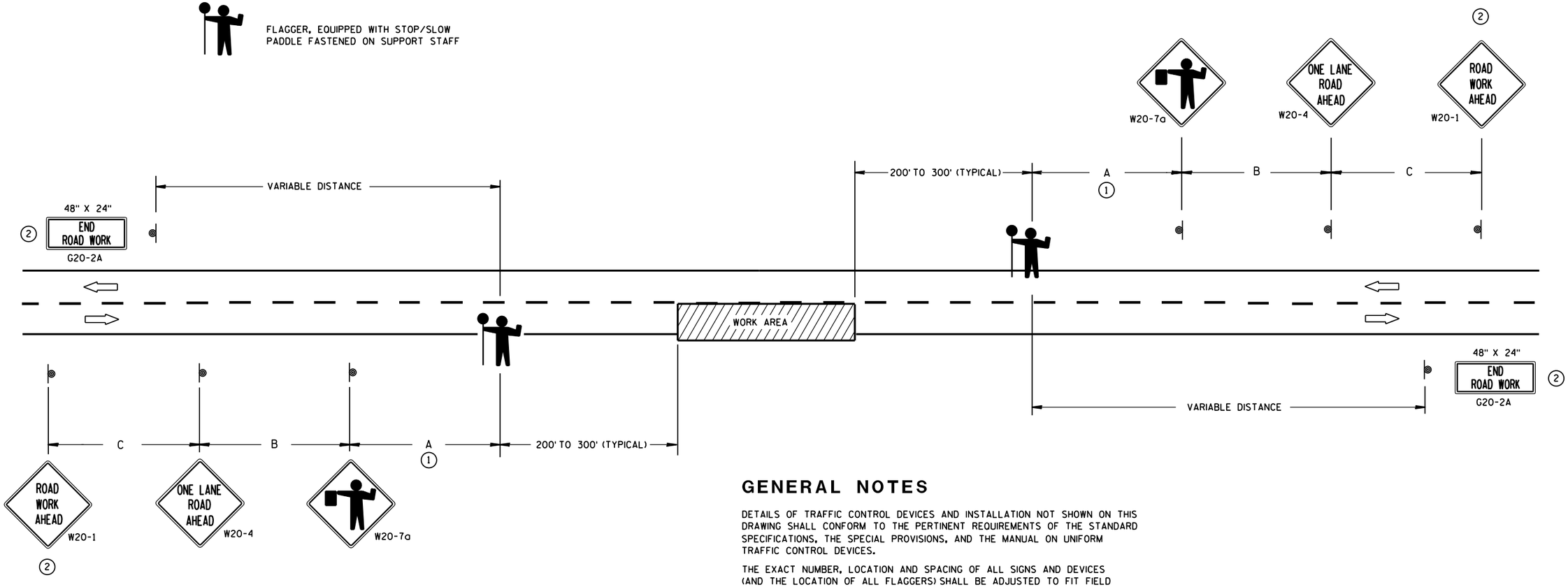
FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

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

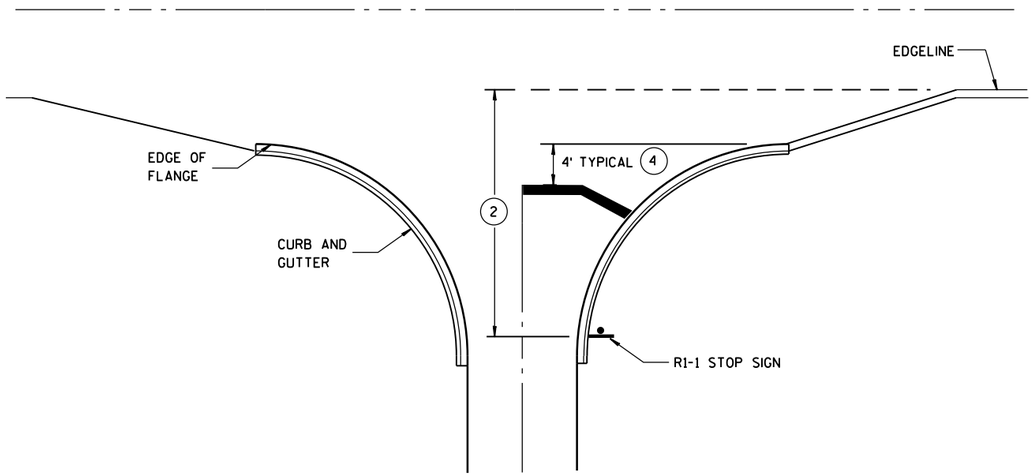
APPROVED
8/2013 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
DESIGN
FHWA

6

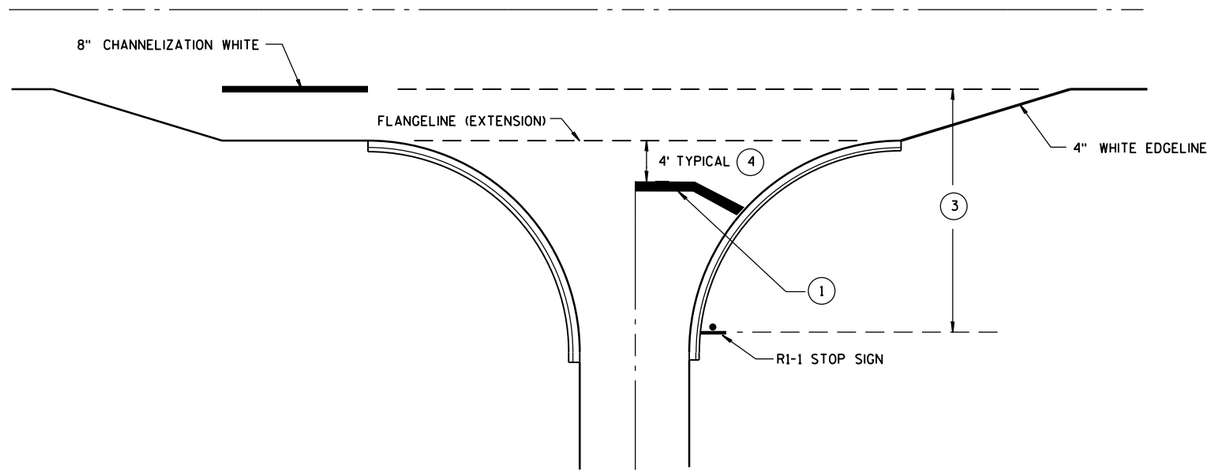
S.D.D. 15 C 12-4

6

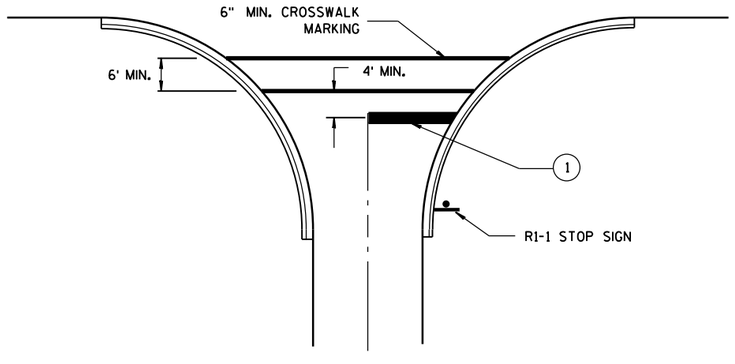
S.D.D. 15 C 12-4



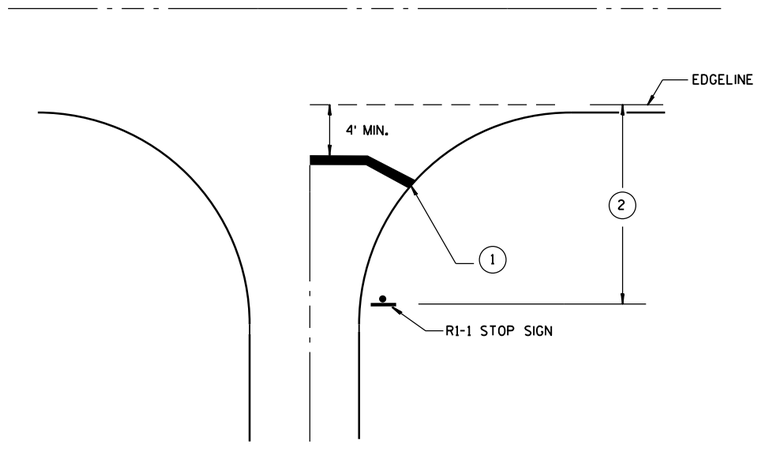
TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER



TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH RIGHT TURN LANE



TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH CROSSWALK MARKING



TYPICAL STOP LINE PAVEMENT MARKING WITHOUT CURB AND GUTTER

GENERAL NOTES

1. 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE PROJECT ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
2. IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE THAN NO STOP LINE IS REQUIRED.
3. IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE EXTENSION THAN NO STOP LINE IS REQUIRED.
4. MOVE CLOSER TO EDGE OF TRAVEL LANE AS NEEDED FOR VISIBILITY AND SIGHT LINES.

STOP LINE AND CROSSWALK PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

4/30/2013
DATE

/S/ Travis Feltes
STATE TRAFFIC E

FHWA

6

S.D.D. 15 C 33-1

GENERAL NOTES

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

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

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

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.

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

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

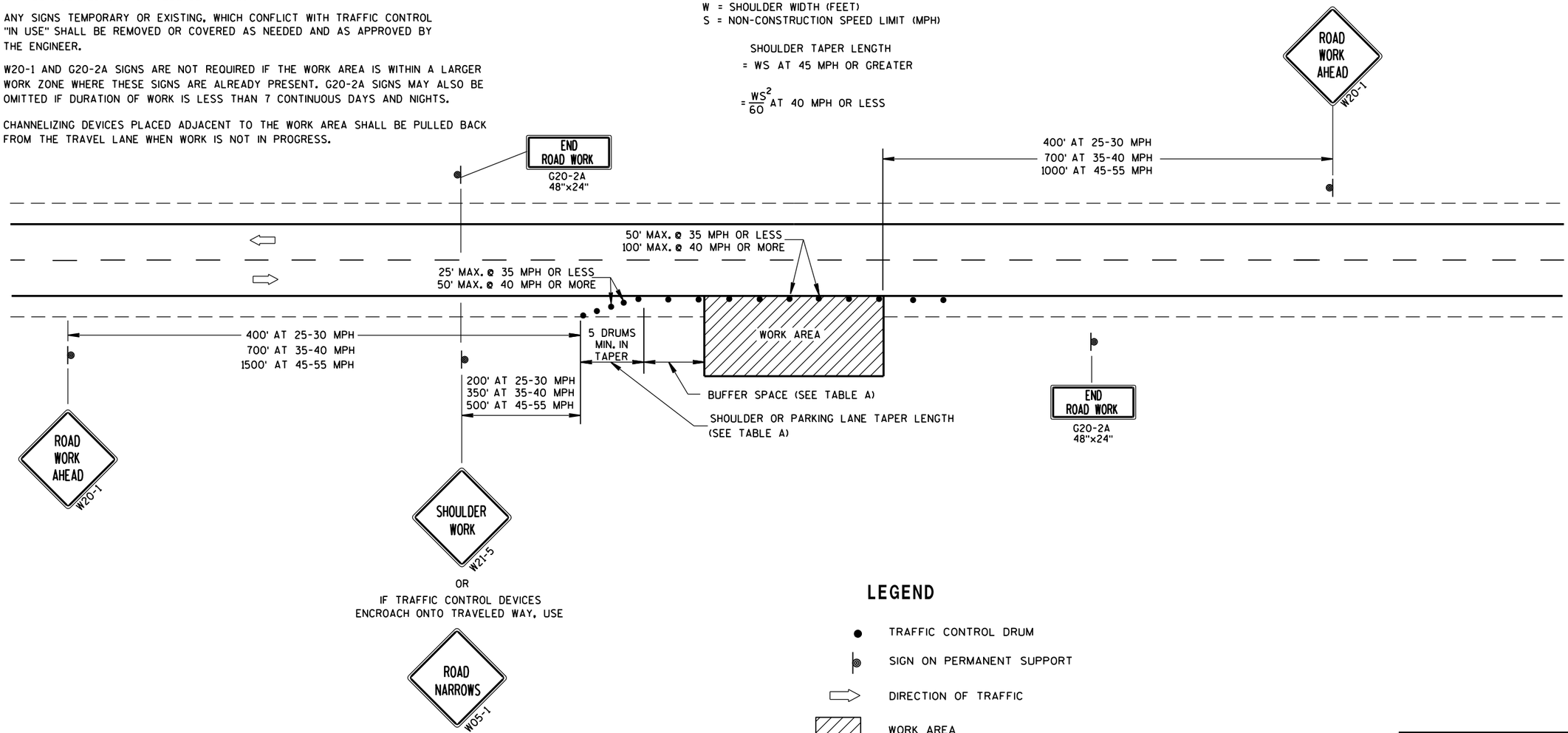
TABLE A

S \ W	SHOULDER TAPER LENGTH (FEET) 4	6	8	10	BUFFER SPACE (FEET)
30	20	30	40	50	85
35	30	45	55	70	120
40	40	55	75	90	170
45	60	90	120	150	220
50	70	100	135	170	280
55	75	110	150	185	335

W = SHOULDER WIDTH (FEET)
S = NON-CONSTRUCTION SPEED LIMIT (MPH)

SHOULDER TAPER LENGTH
= WS AT 45 MPH OR GREATER

$= \frac{WS^2}{60}$ AT 40 MPH OR LESS



LEGEND

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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

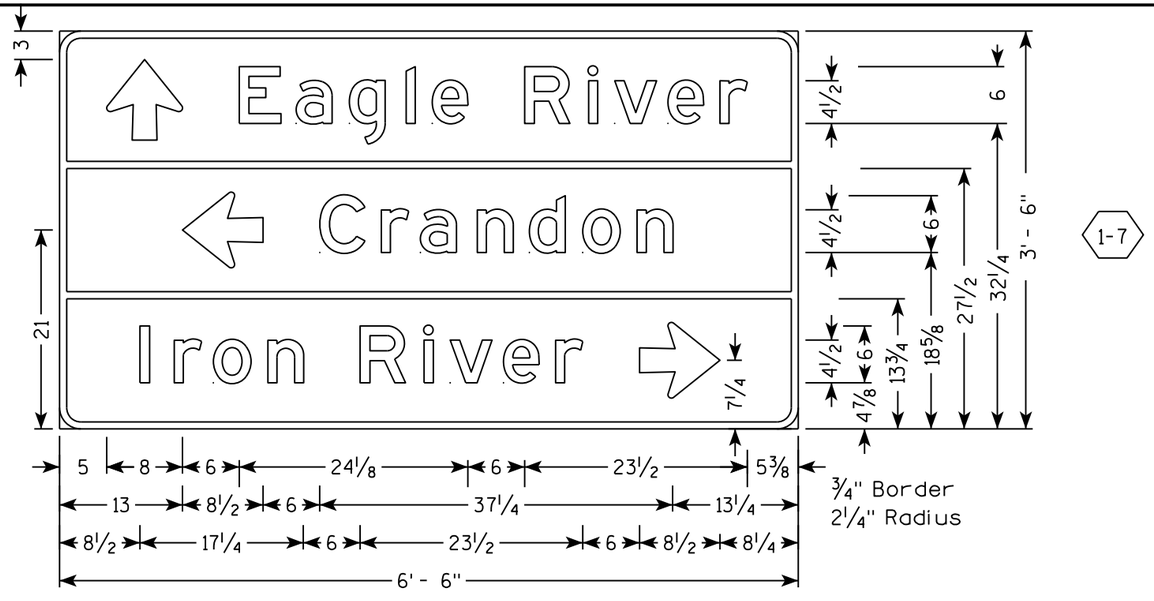
8/2013 DATE

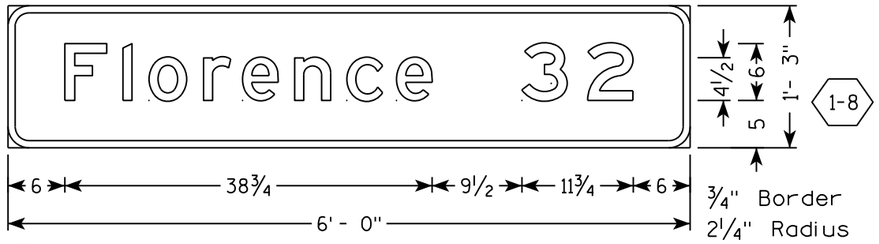
/S/ Travis Feltes
STATE TRAFFIC ENGINEER

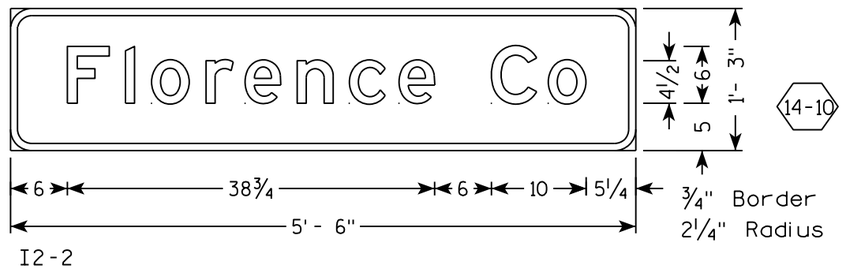
FHWA

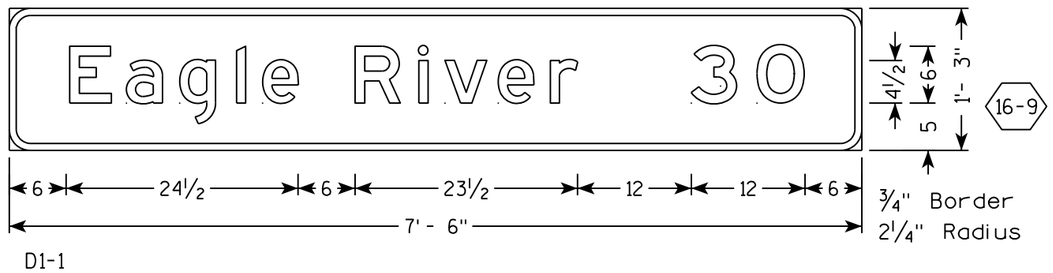
6

S.D.D. 15 D 28-2



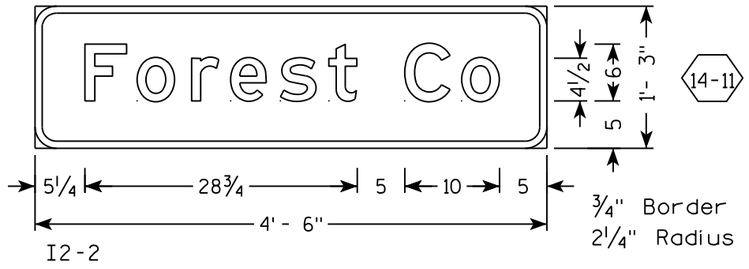


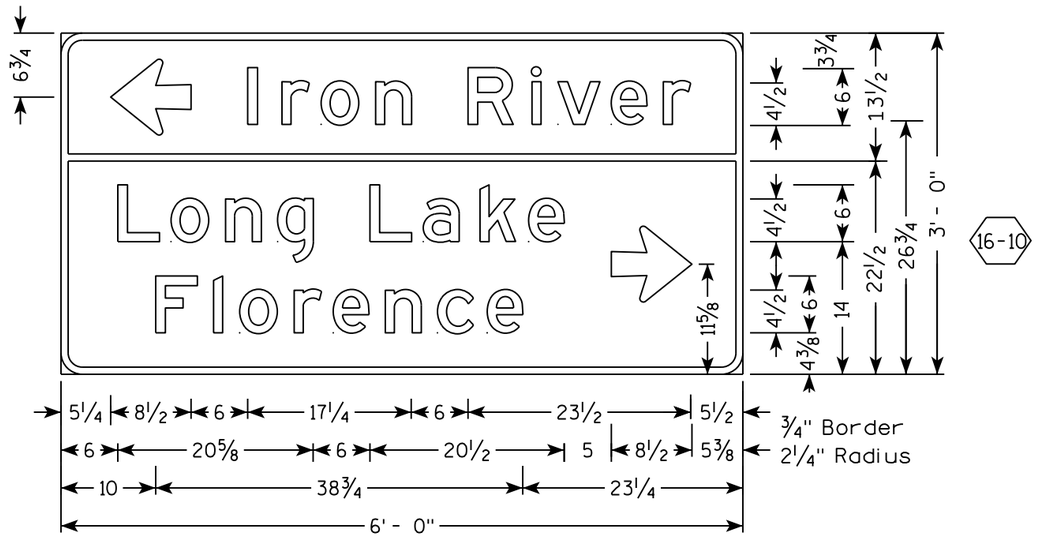




NOTES

1. All Signs Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - GREEN
   Message - WHITE
3. Message Series - E





7

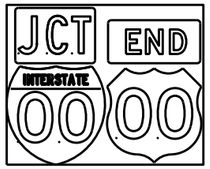
7

PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	SIGNING DETAIL	SHEET NO: 77	E

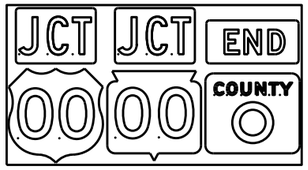
FILE NAME : P:\47xx\4726.DP.12.STH70.FOR\CADDS\Plan\070101_sd.dgn PLOT DATE : 5/28/2014 PLOT BY : emo PLOT NAME : PLOT SCALE : 1:15.99
WISDOT/CADDS SHEET 42

TYPICAL ASSEMBLIES

J1-1

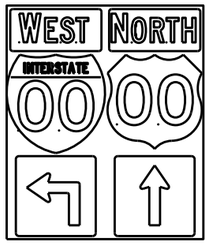


J1-2

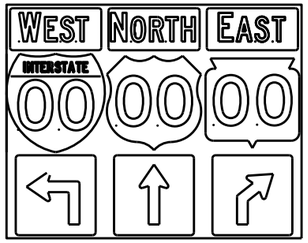


J1-3

J2-1



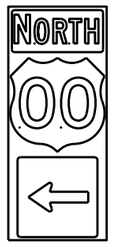
J2-2



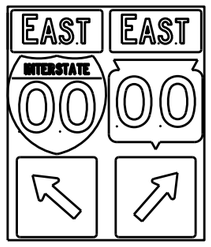
J2-3

JV

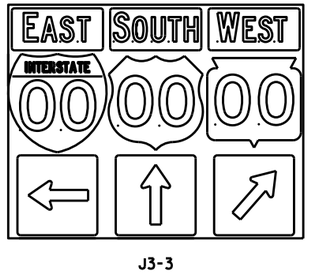
(Typical Vertical J-Assembly
See Note 10 and 11)



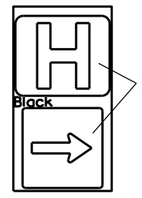
J3-1



J3-2

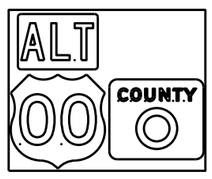


J3-3

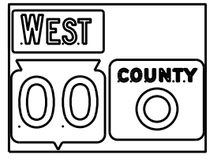


JH-1

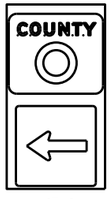
J4-1



J4-2



J4-2



J13-1

J12-1

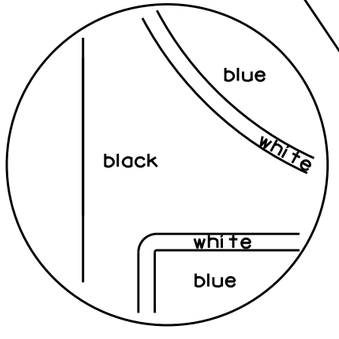
J32-1

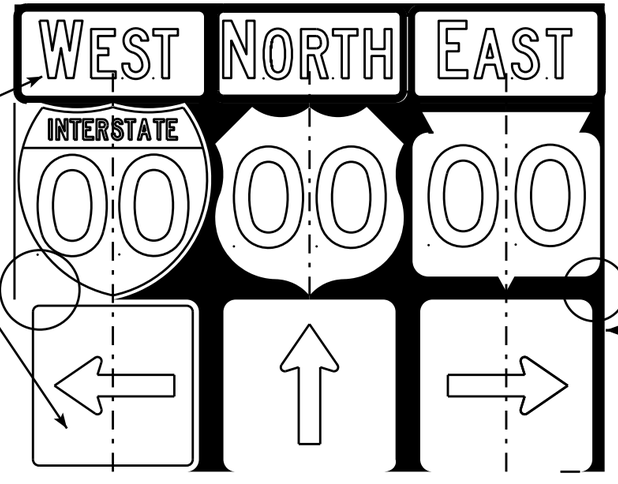
J33-1

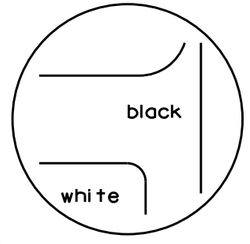
J23-1

J22-1

[blue background with interstate]







[black background]

NOTES

1. Signs are Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Black Non-reflective
   Message - see Note 5
3. Message Series - See Note 5
4. Corners shall be square or rounded if base material is plywood. If base material is metal the corners shall be rounded.
5. The colors and message spacing on each marker shall be according to the applicable route marker panel specifications.
6. Certain marker heads require the component pieces to be the same color. As an example, all the components used with an M1-1 Interstate marker shall be blue.
7. Single panel j-assemblies shall only be used with route marker shields that are same size. If the route marker shields are different size use multiple piece component.
8. Route assemblies that have 24 inch route shields and have dimensions greater than 48 inches (both vertical and horizontal) shall have one horizontal splice between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 inches or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
9. Route assemblies that have 36 inch shields and have dimensions greater than 48 inchs (both vertical and horizontal) shall have two horizontal splices. One horizontal splice shall be between the cardinal direction and route shields and the other horizontal splice shall be between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
10. All Vertical J Assemblies are given a Sign Code of JV
11. For JV Assemblies that have a mixture of Interstate and non Interstate shields, arrows and cardinals shall be white on blue.

ROUTE MARKERS & COMPONENTS
IN TYPICAL ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

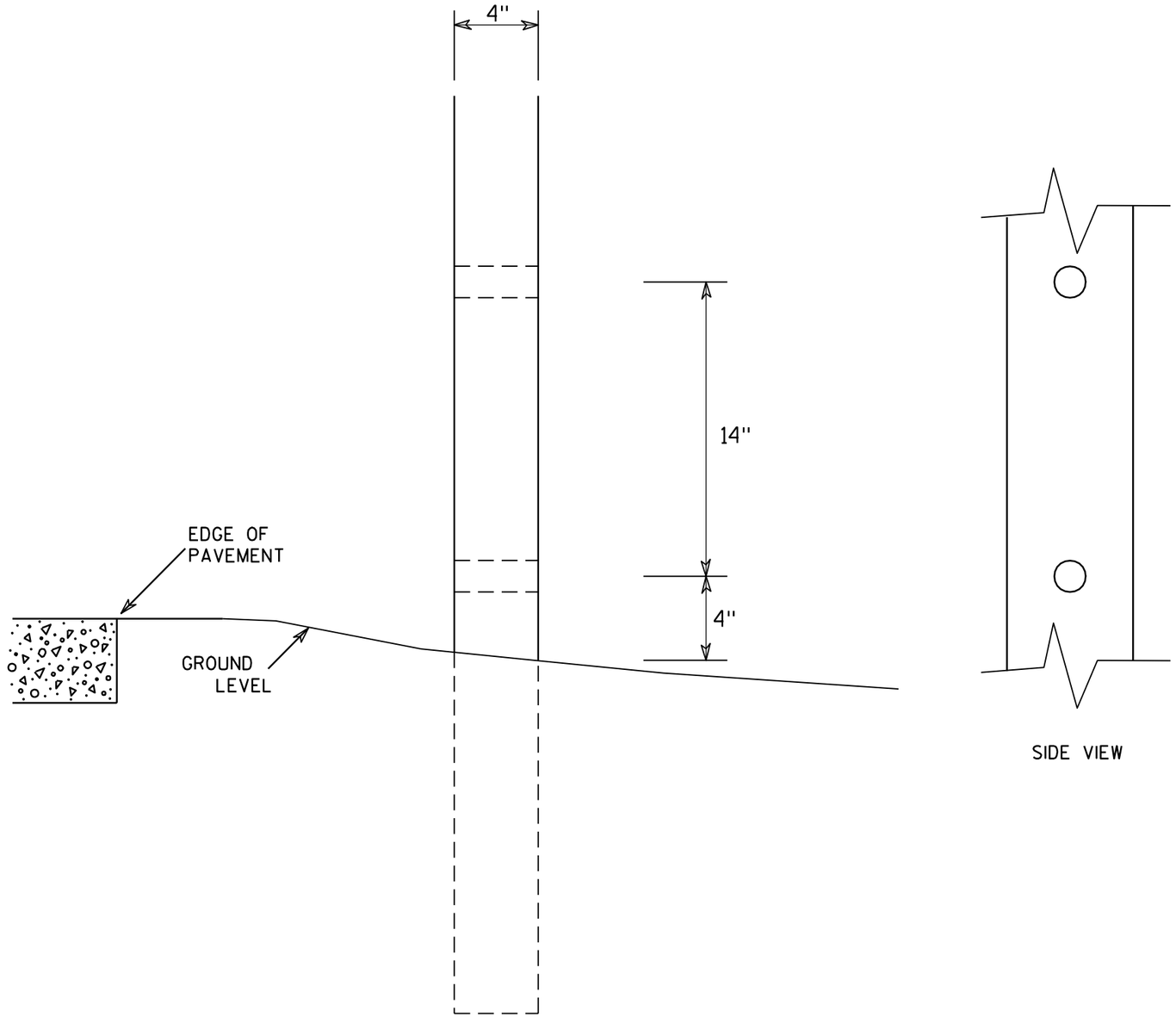
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/06/14 PL... A2-1S.8

PROJECT NO: | SHEET NO: E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A21S.DGN PLOT DATE : 06-FEB-2014 14:10 PLOT BY : mscsja PLOT NAME :

WISDOT/CADDS SHEET 42



SIDE VIEW

GENERAL NOTES

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

7

7

4 X 6 WOOD POST MODIFICATIONS

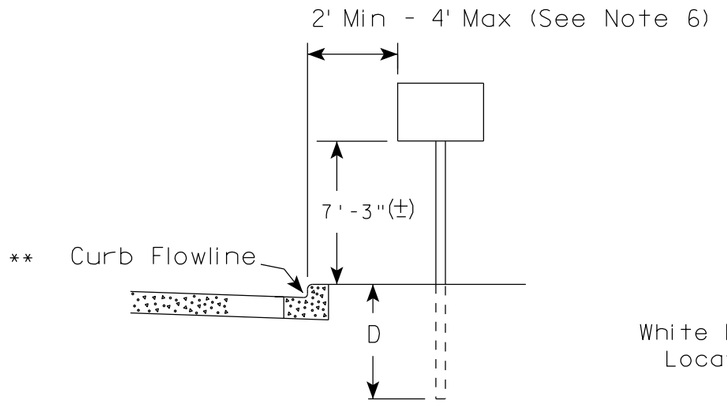
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang
for State Traffic Engineer

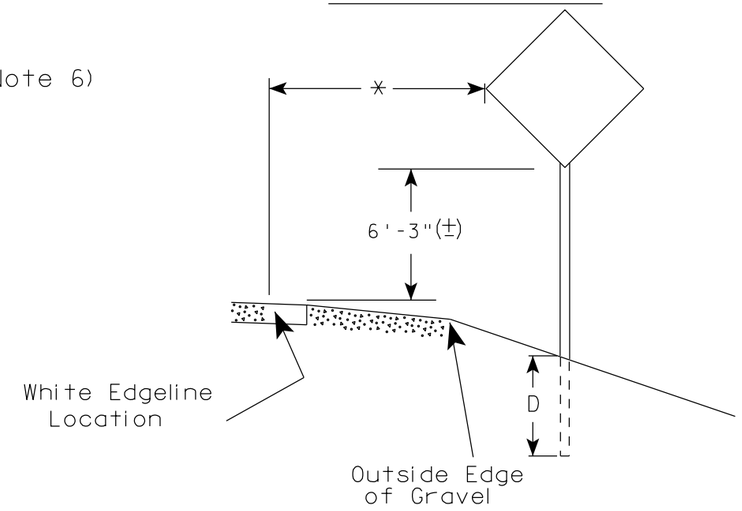
DATE 3/27/97 PLATE NO. A4-11.2

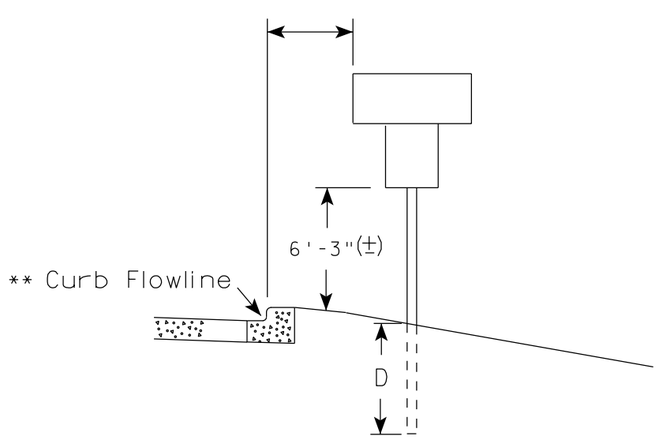
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 79	E

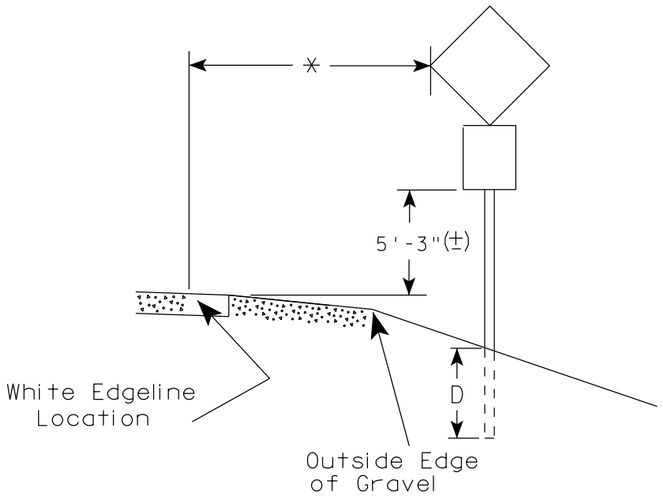
URBAN AREA



RURAL AREA (See Note 2)







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

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

POST EMBEDMENT DEPTH

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

GENERAL NOTES

1. Signs wider than 4 feet, 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 stop signs (R1-1F) shall be mounted at a height of 5'-3" (±) or as directed 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" (±).

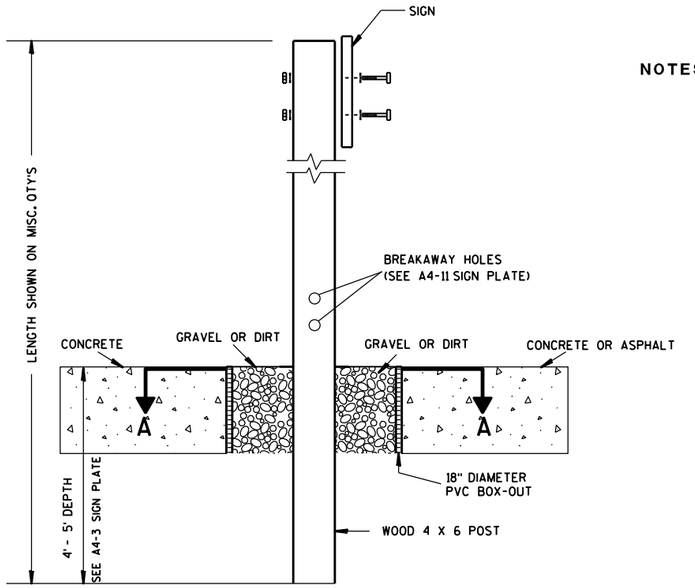
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 10/13/14 PLATE NO. A4-3.19

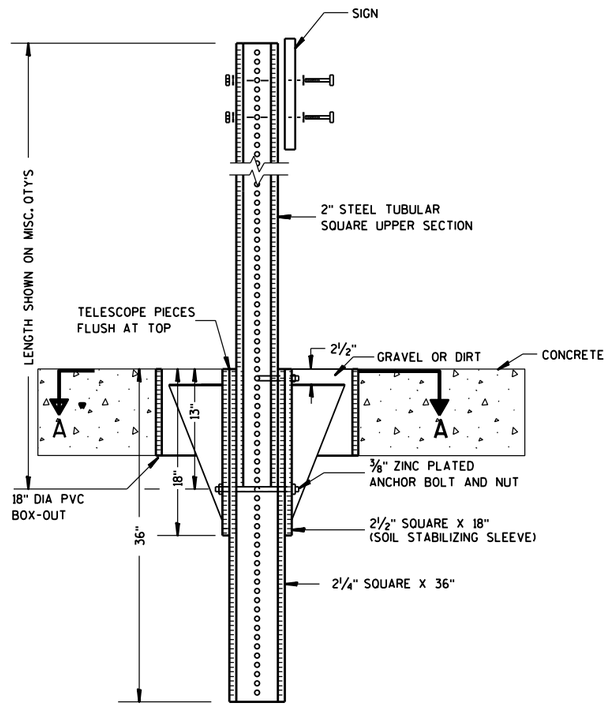
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



ELEVATION VIEW

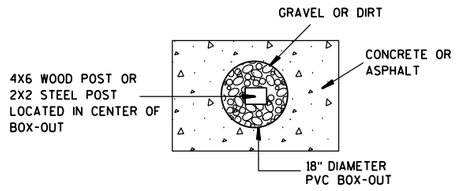
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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



ELEVATION VIEW

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



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B

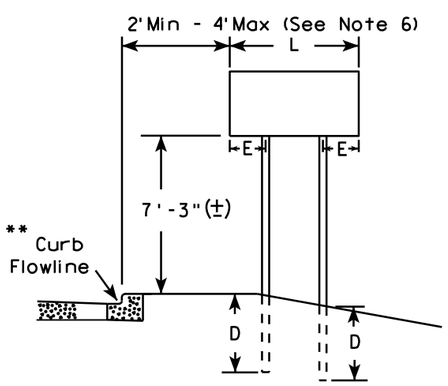
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

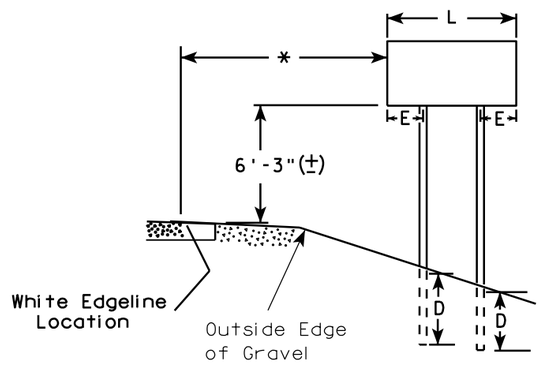
DATE 1/27/14 PLATE NO. A4-3B.1

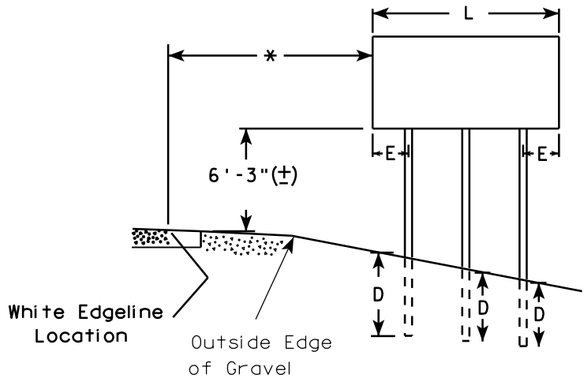
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

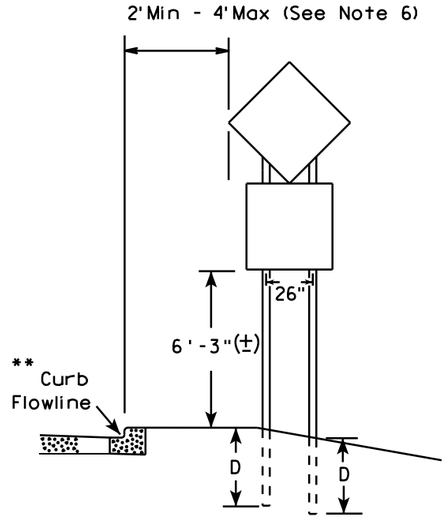
URBAN AREA



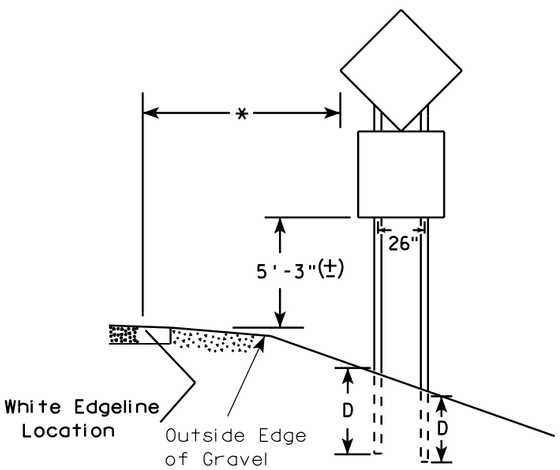
RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

GENERAL NOTES

1. For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
2. See tables below for required number of posts.
3. For expressways and freeways, mounting height is 7'-3" (±) or 6'-3" (±) depending upon existence of sub-sign.
4. The (±) tolerance for mounting height is 3 inches.
5. Minimum mounting height for J assemblies (A2-1S) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. Folding stop signs (R1-1F) shall be mounted at a height of 5'-3" (±) or as directed by the engineer.
8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4"-3" (±).

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

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

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

SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED)	
L	E
Greater than 48" Less than 60"	12"
60" to 120"	L/5

***

SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 120" less than 168"	12"

SIGN SHAPE OTHER THAN DIAMOND (FOUR POSTS REQUIRED)	
L	E
168" and greater	12"

POST EMBEDMENT DEPTH

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

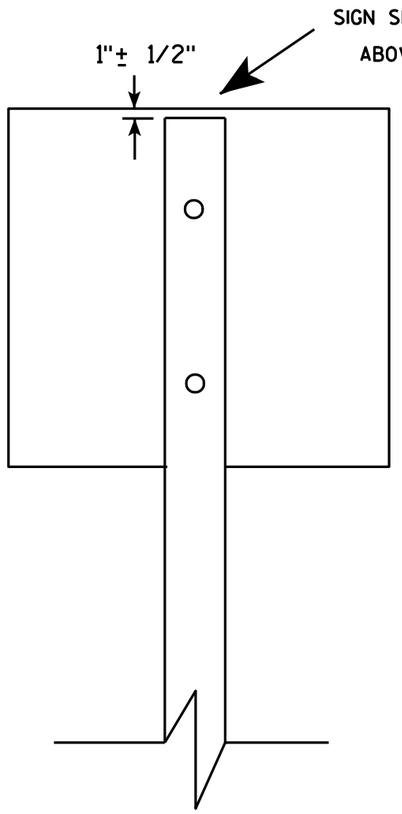
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

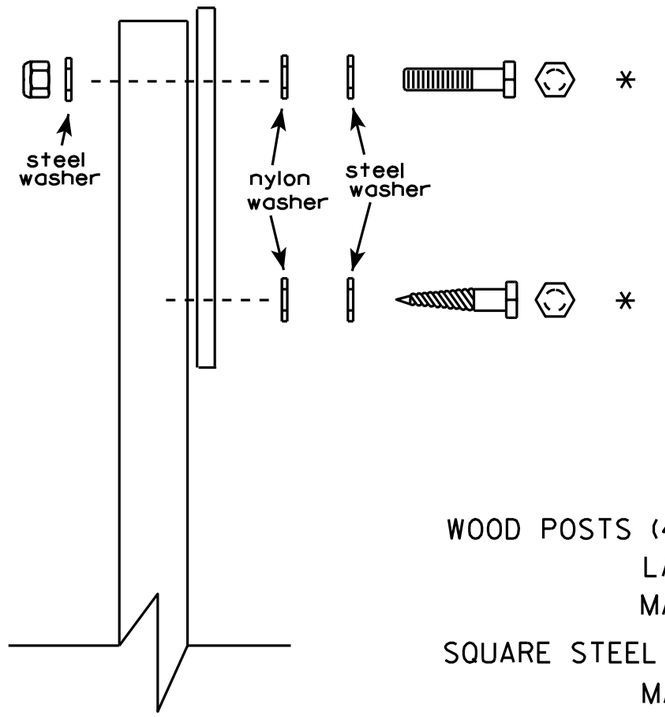
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/13/14 PLATE NO. A4-4 82 13

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E





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

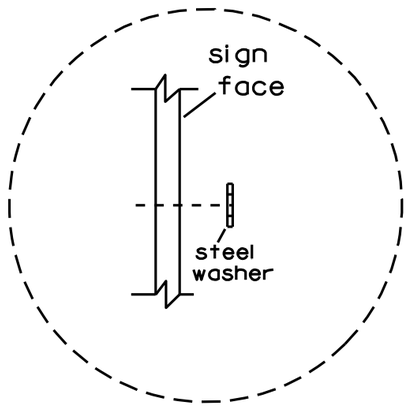
a. Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3
b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

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

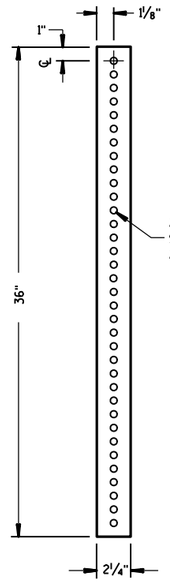
7

PROJECT NO:

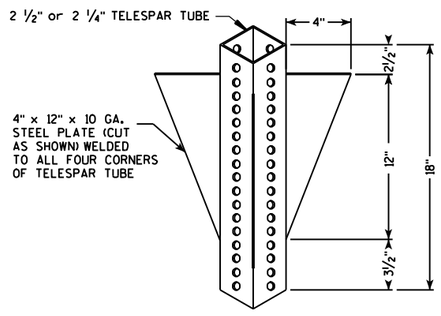
SHEET NO: 83 E

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

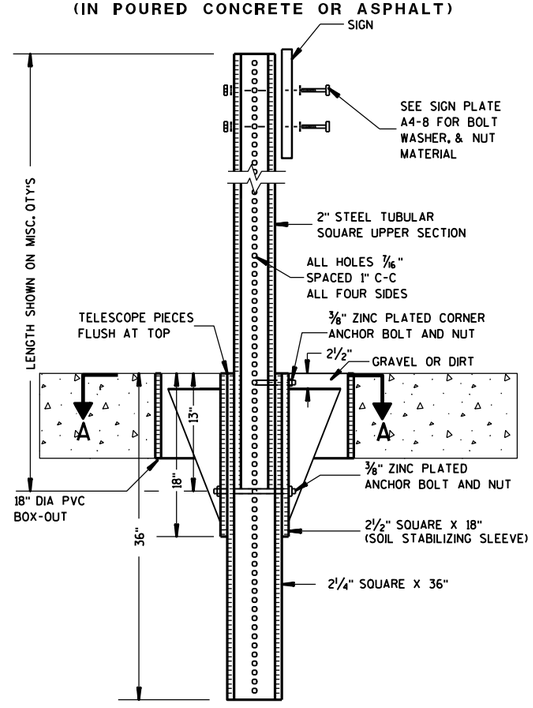
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



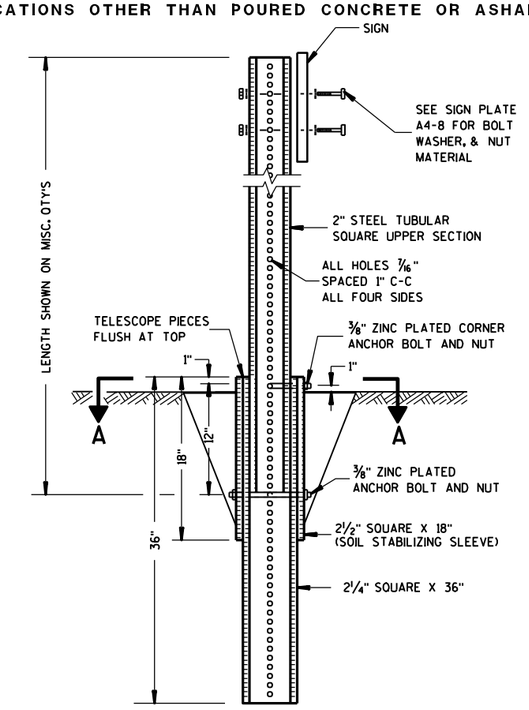
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

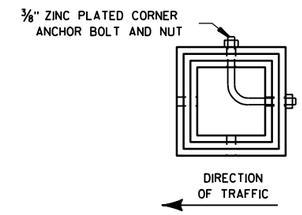


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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





SECTION A-A

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

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

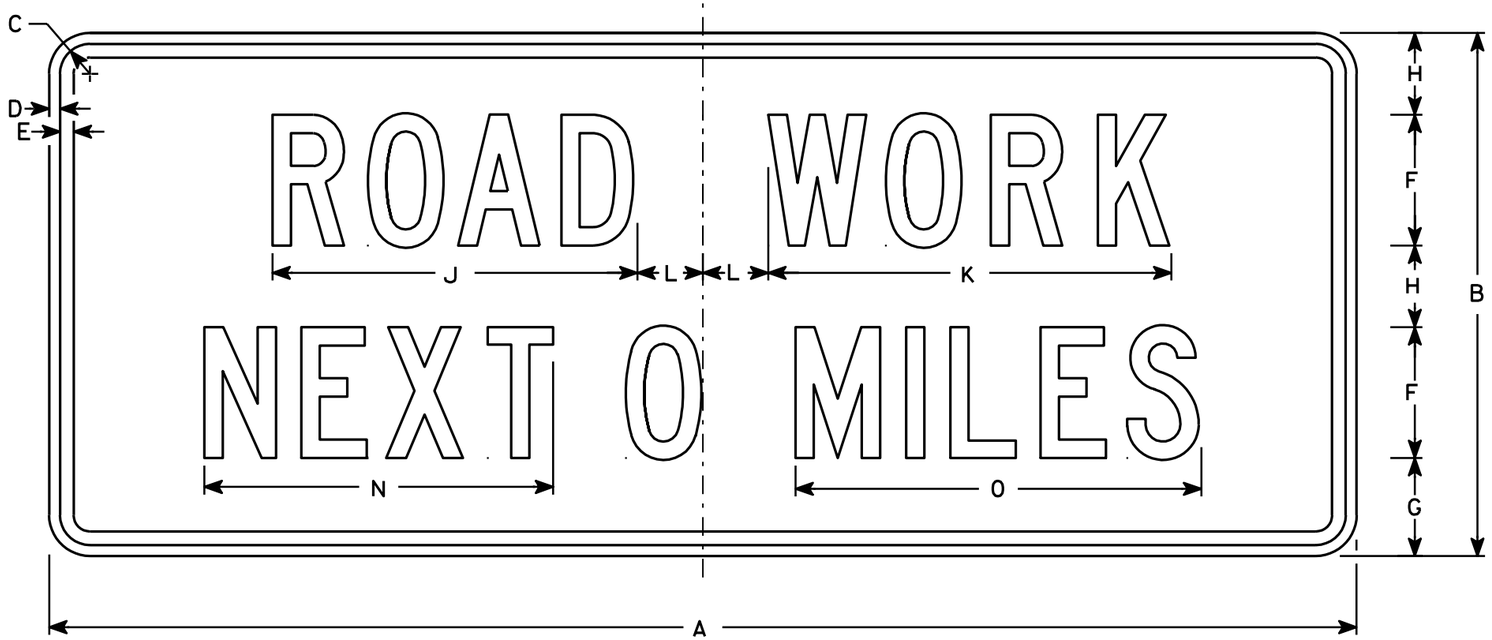
TUBULAR STEEL SIGN POST A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/30/12 PLATE NO. A4-9.7

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



G20-1

NOTES

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

Metric equivalent for this sign is:

SIZE	
1	
2	1500 mm X 600 mm
3	
4	1500 mm X 600 mm
5	

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.	Area m2
1																												
2	60	24	1 3/8	1/2	5/8	6	4 1/2	3 3/4		16 3/4	18 1/2	3		16	18 5/8												10	.90
3																												
4	60	24	1 3/8	1/2	5/8	6	4 1/2	3 3/4		16 3/4	18 1/2	3		16	18 5/8												10	.90
5																												

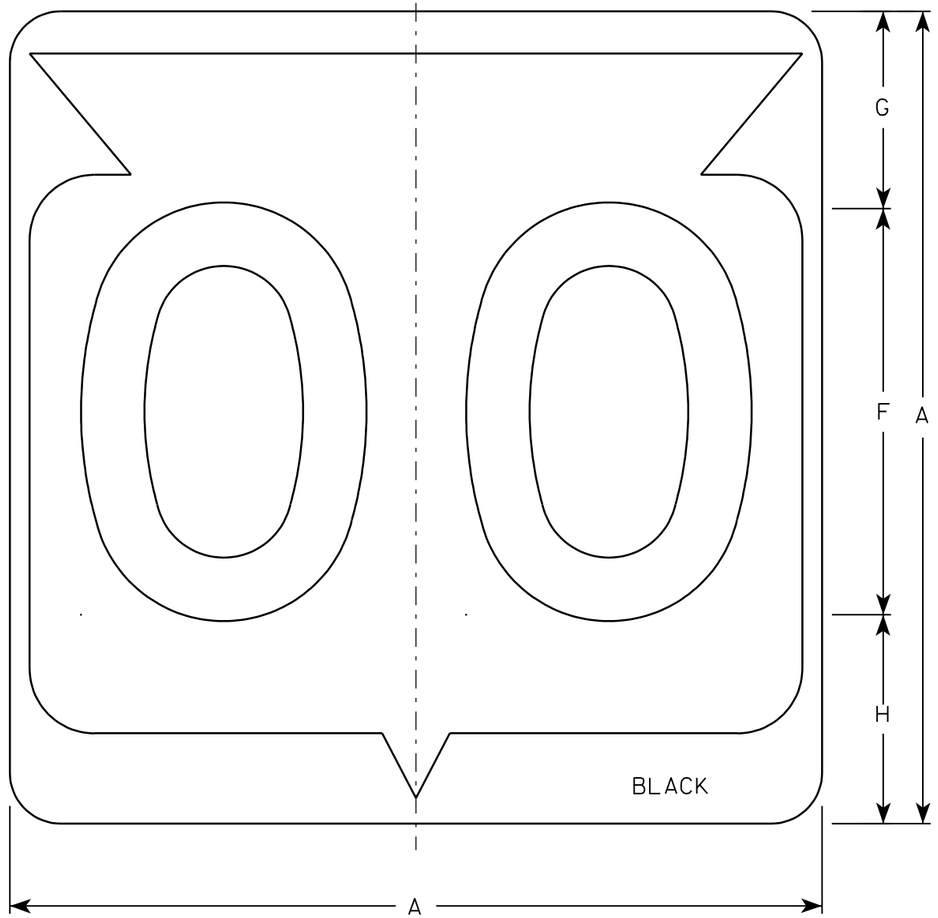
STANDARD SIGN
G20-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spray for State Traffic Engineer

DATE 4/8/97 PLATE NO. G20-1.7

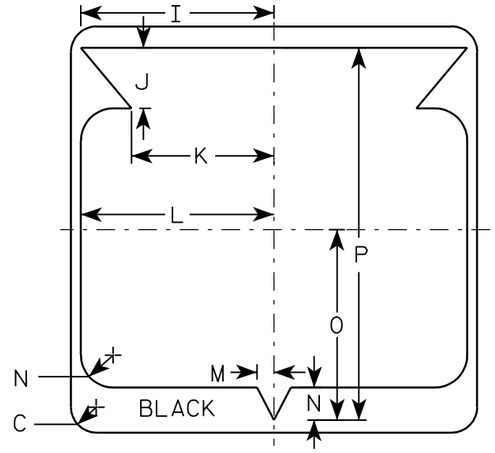
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 85	E



M1-6

NOTES

1. Sign is Type II - See Note 6 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White & Black - See Note 6
   Message - Black
3. Message Series - See note 5
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 Series numerals and adjust spacing as per plate A10-1.
6. Permanent Signs
   Background - Type H Reflective
   Detour or temporary Signs
   Background - Reflective



Metric equivalent for this sign is:

SIZE	
1	
2	600 mm X 600 mm
3	900 mm X 900 mm
4	900 mm X 900 mm
5	900 mm X 900 mm

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.	Area m2
1																												
2	24		1 1/2			12	5 1/2	6 1/2	10 1/4	2 1/2	8 7/8	11 1/2	1	1 7/8	11 1/4	21 7/8											4.0	.36
3	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0	.81
4	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0	.81
5	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0	.81

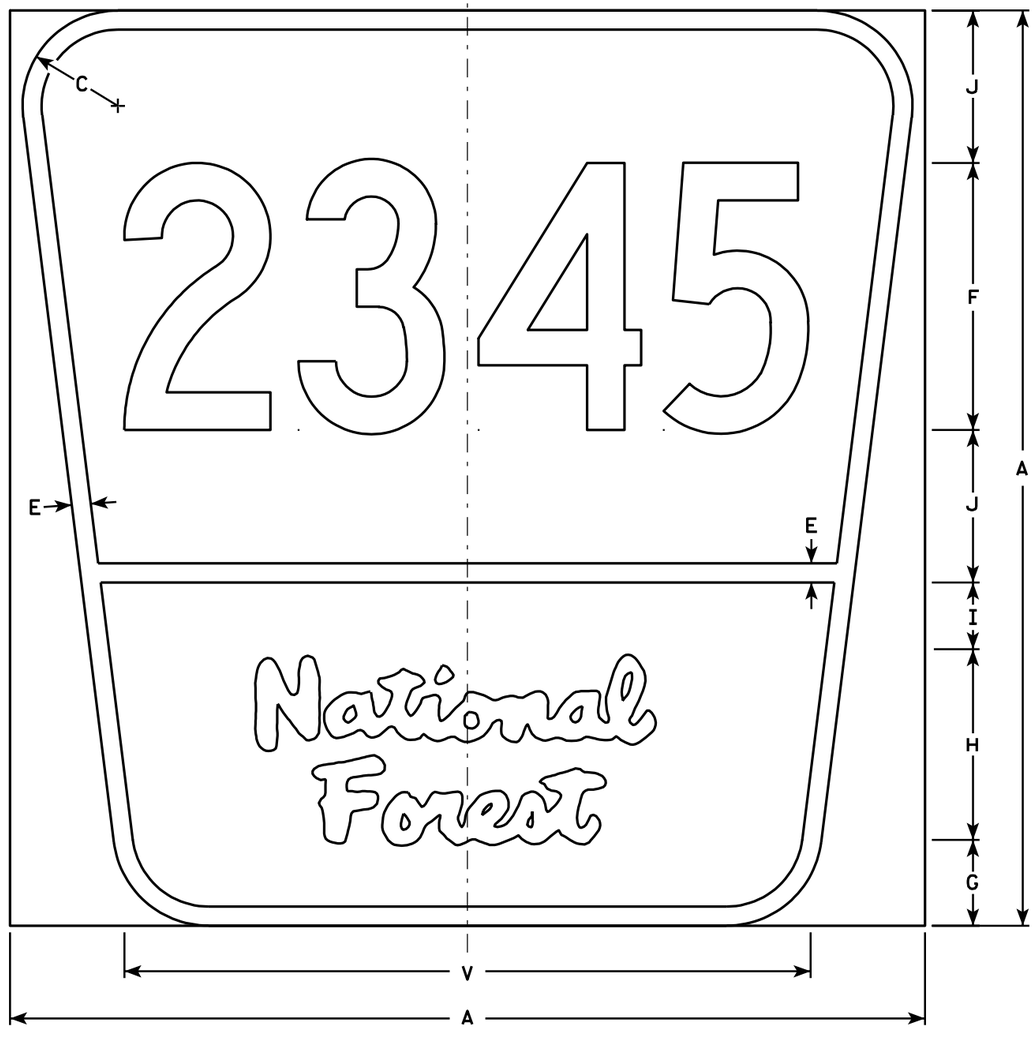
STATE ROUTE MARKER M1-6 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang for State Traffic Engineer

DATE 3/20/02 PLATE NO. M1-6.9

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



M1-7

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Brown
   Message - White - Type H Reflective
3. Message Series - see note 5
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. 4 digit numerals series C
   3 digit numerals series D
6. See National Forest Handbook for layout of "National Forest".

Metric equivalent for this sign is:

SIZE	
1	
2	600 mm X 600 mm
3	
4	
5	

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.	Area sq. m.
1																												
2	24		2 ½		½	7	2 ¼	5	1 ¾	4												18					4.0	.37
3																												
4																												
5																												

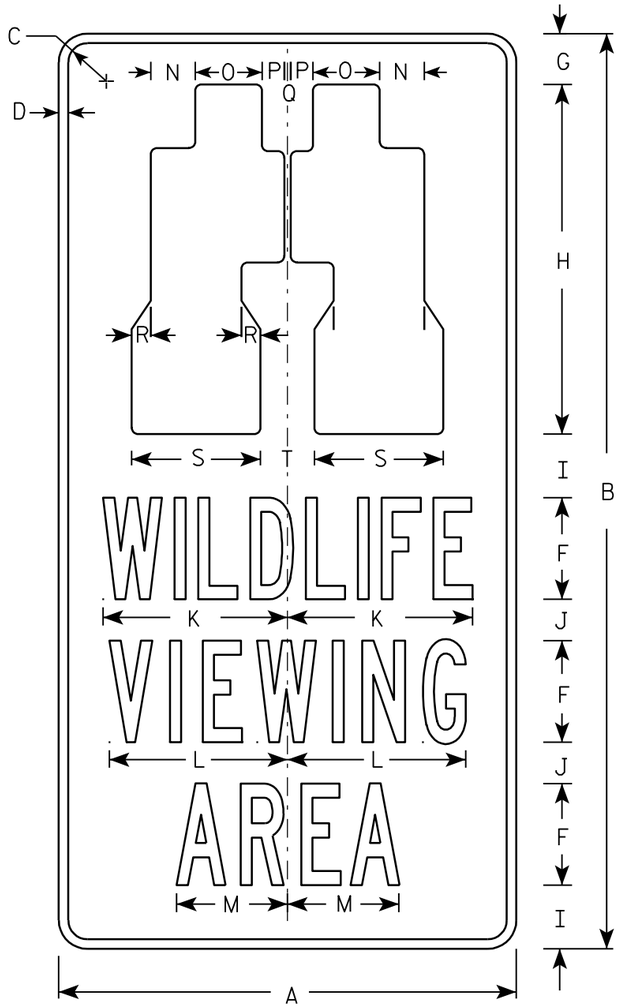
STANDARD SIGN
M1-7

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spagg for State Traffic Engineer

DATE 1/30/02 PLATE NO. M1-7.5

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



M1-86

NOTES

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

Metric equivalent for this sign is:

SIZE	
1	
2	450 mm X 900 mm
3	
4	
5	

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.	Area m2
1																												
2	18	36	1 1/8	3/8		4	2	13 3/4	2 1/2	1 5/8	7 1/4	7	4 3/8	1 3/4	2 5/8	7/8	1/4	3/4	5 1/8	2 1/8							4.5	.41
3																												
4																												
5																												

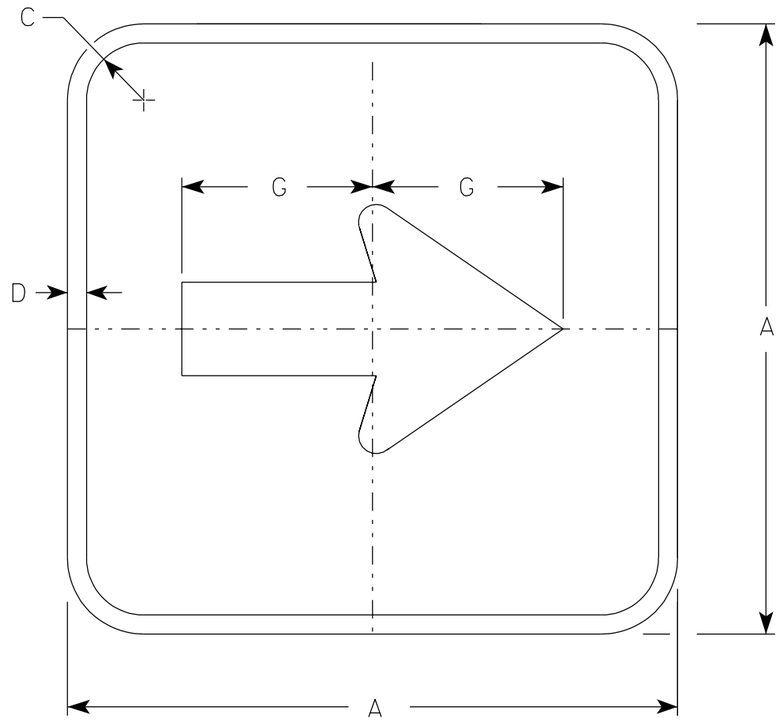
STANDARD SIGN
M1-86

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang for State Traffic Engineer

DATE 1/30/02 PLATE NO. M1-86.3

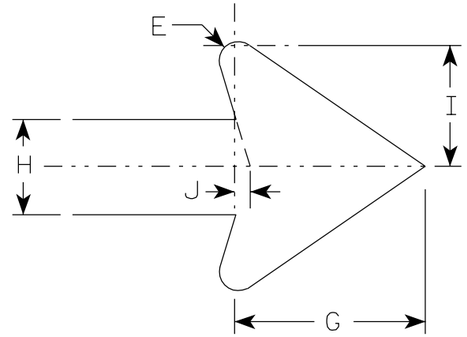
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 88 | E



M1-88A

NOTES

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



7

7

Metric equivalent for this sign is:

SIZE	
1	
2	300 mm X 300 mm
3	
4	
5	

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.	Area m2
1																												
2	12		1 1/8				3 3/4	1 7/8	2 3/8	5/16																	1.0	.09
3																												
4																												
5																												

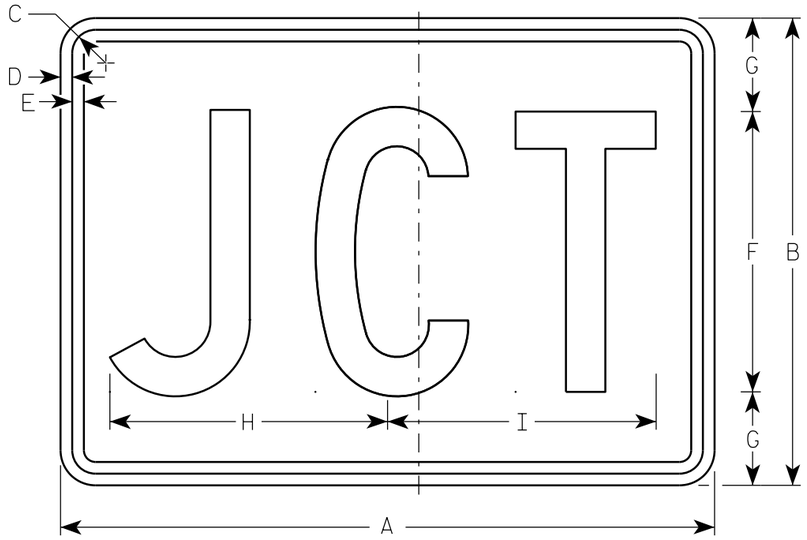
STANDARD SIGN
M1-88A

WISCONSIN DEPT OF TRANSPORTATION

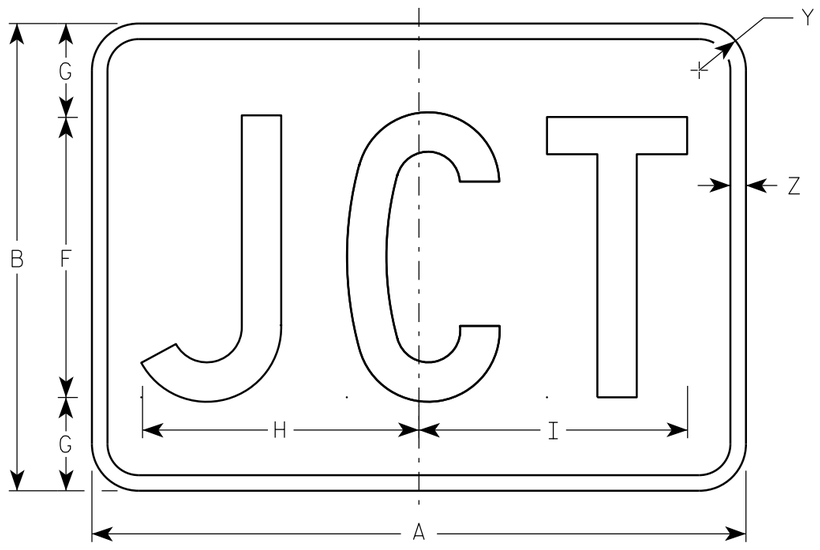
APPROVED Chester J Spang for State Traffic Engineer

DATE 1/30/02 PLATE NO. M1-88A.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 89	E



M2-1
MK2-1
MM2-1
MN2-1
MR2-1



MB2-1

NOTES

1. Sign is Type II - Type H
2. Color:
   Background - See note 5
   Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M2-1 Background - White
   Message - Black
   MB2-1 Background - Blue
   Message - White
   MK2-1 Background - Green
   Message - White
   MM2-1 Background - White
   Message - Green
   MN2-1 Background - Brown
   Message - White
   MR2-1 Background - Brown
   Message - Yellow

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21	15	1 1/8	3/8	3/8	9	3	8 7/8	8 5/8																1 1/2	1/2	2.20
3	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40
4	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40
5	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40

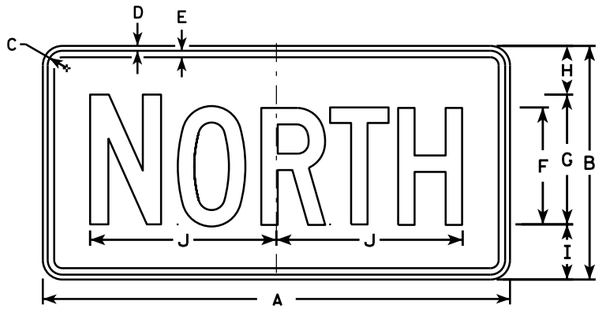
STANDARD SIGN
M2-1

WISCONSIN DEPT OF TRANSPORTATION

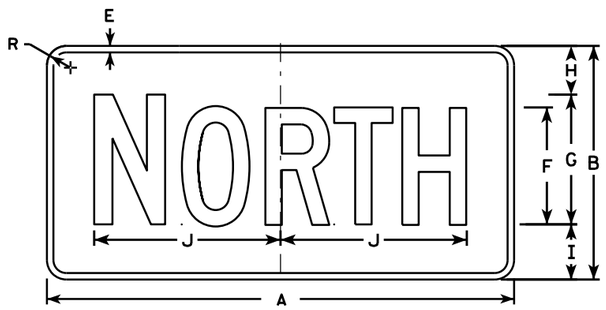
APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 6/30/14 PLATE 90 12-1.11

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



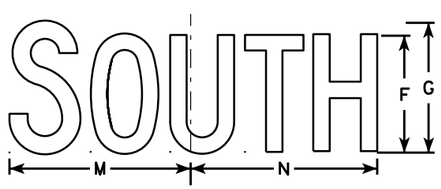
M3-1
MK3-1
MM3-1
MN3-1



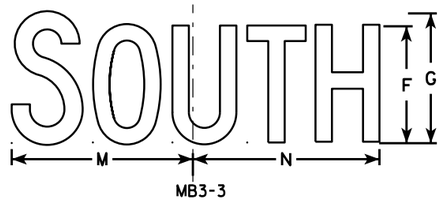
MB3-1

M3-2
MK3-2
MM3-2
MN3-2

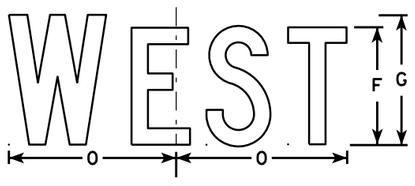
MB3-2



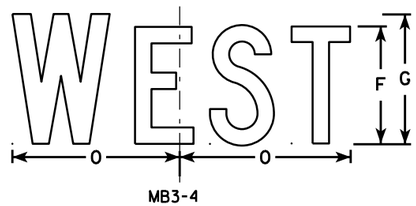
M3-3
MK3-3
MM3-3
MN3-3



MB3-3



M3-4
MK3-4
MM3-4
MN3-4



MB3-4

NOTES

1. All Signs Type II - Type H
2. Color:
   Background - See note 5
   Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M3-1 thru M3-4 Background - White
   Message - Black
   MB3-1 thru MB3-4 Background - Blue
   Message - White
   MK3-1 thru MK3-4 Background - Green
   Message - White
   MM3-1 thru MM3-4 Background - White
   Message - Green
   MN3-1 thru MN3-4 Background - Brown
   Message - White
6. Note the first letter of each direction is larger than the remainder of the message.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	7	2 1/4	2 3/4	10 1/4	7 7/8	8 3/8	10 1/4	9 3/4	8 3/4			1 1/2									2.00
3	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
4	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
5	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5

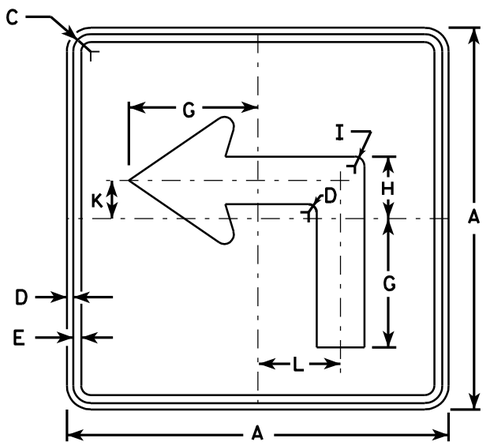
STANDARD SIGNS
M3-1 thur M3-4
SERIES

WISCONSIN DEPT OF TRANSPORTATION

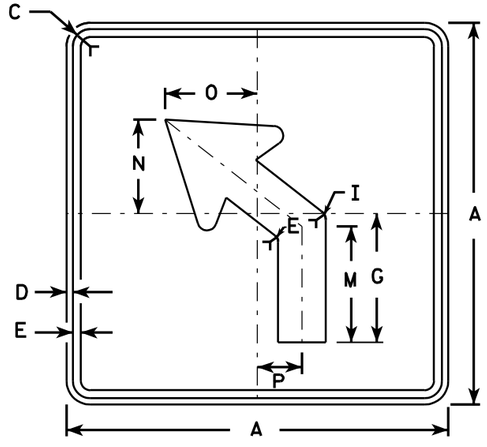
APPROVED Matthew R Rauch for State Traffic Engineer

DATE 6/30/14 PLATE NO M3-1.13

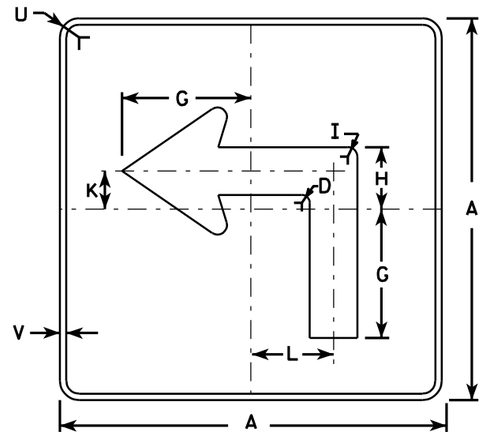
PROJECT NO: | HWY: | COUNTY: | | SHEET NO: E



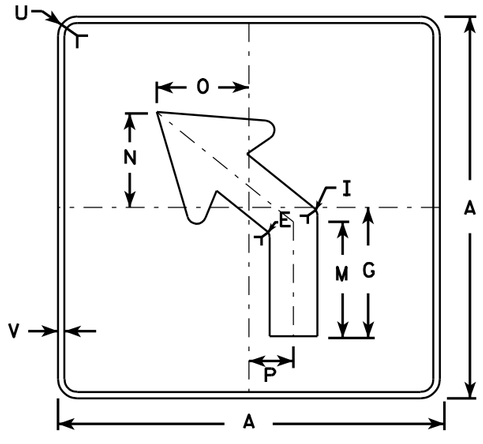
M5-1L
MK5-1L
MM5-1L
MO5-1L
MP5-1L
MR5-1L



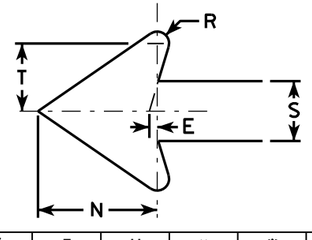
M5-2L
MK5-2L
MM5-2L
MO5-2L
MP5-2L
MR5-2L



MB5-1L
MG5-1L
MN5-1L



MB5-2L
MG5-2L
MN5-2L



NOTES

1. Signs are Type II - See Note 4 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M5-1 and M5-2 Background - White - Type H Reflective
   Message - Black
   MB5-1 and MB5-2 Background - Blue
   Message - White - Type H Reflective
   MG5-1 and MG5-2 Background - Green
   Message - White - Type H Reflective
   MK5-1 and MK5-2 Background - Green
   Message - White Type H Reflective
   MM5-1 and MM5-2 Background - White - Type H Reflective
   Message - Green
   MN5-1 and MN5-2 Background - Brown
   Message - White - Type H Reflective
   MO5-1 and MO5-2 Background - Orange - Type F Reflective
   Message - Black
   MP5-1 and MP5-2 Background - White - Type H Reflective
   Message - Blue
   MR5-1 and MR5-2 Background - Brown
   Message - Yellow - Type H Reflective
5. M5-1R same as M5-1L except arrow points right.
6. M5-2R same as M5-2L except arrow tilts right.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7	3 3/8	5/8		2 1/8	4 1/2	6 3/8	5 1/4	5	2 1/2		1/2	2 5/8	3	1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 1/8	4 1/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25
4	30		1 3/8	1/2	5/8		10 1/8	4 1/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25
5	30		1 3/8	1/2	5/8		10 1/8	4 1/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25

STANDARD SIGN
M5-1 & M5-2

WISCONSIN DEPT OF TRANSPORTATION

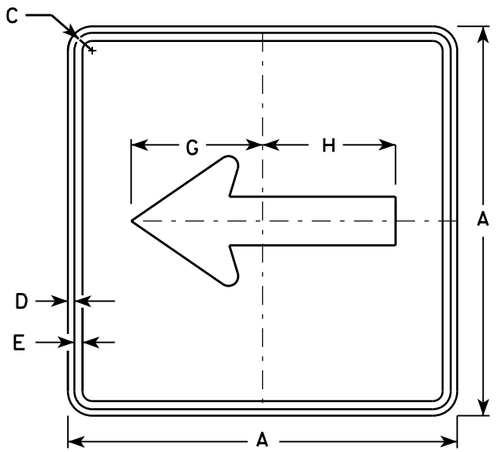
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/29/13 PLATE NO. M5-1.12

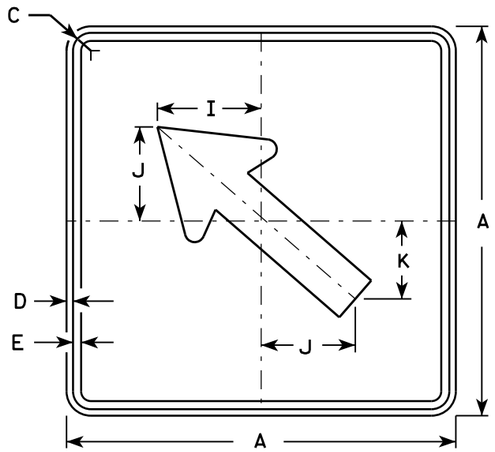
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 92 | E

7

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\M51.DGN PLOT DATE : 29-JUL-2013 13:34 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 11.908552:1.000000
WISDOT/CADDS SHEET 42



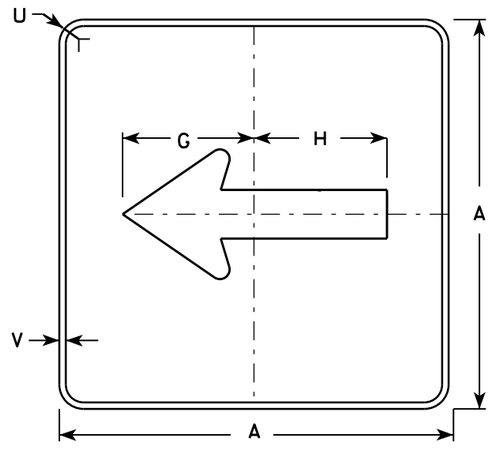
M6-1
MK6-1
MM6-1
MN6-1
MO6-1
MP6-1
MR6-1



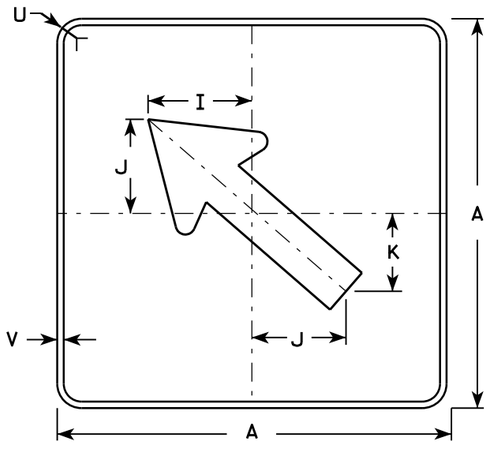
M6-2
MK6-2
MM6-2
MN6-2
MO6-2
MP6-2
MR6-2

NOTES

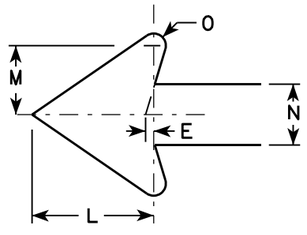
1. Signs are Type II - Type H except as Shown
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-1 and M6-2 Background - White
   Message - Black
   MB6-1 and MB6-2 Background - Blue
   Message - White
   MG6-1 and MG6-2 Background - Green
   Message - White
   MK6-1 and MK6-2 Background - Green
   Message - White
   MM6-1 and MM6-2 Background - White
   Message - Green
   MN6-1 and MN6-2 Background - Brown
   Message - White
   MO6-1 and MO6-2 Background - Orange - Type F Reflective
   Message - Black
   MP6-1 and MP6-2 Background - White
   Message - Blue
   MR6-1 and MR6-2 Background - Brown
   Message - Yellow



MB6-1



MB6-2



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7 1/2	7 1/8	5 5/8	5	4 1/4	5 1/4	3	2 5/8	1/2						1 1/2	1/2						3.06
3	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2						6.25
4	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2						6.25
5	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2						6.25

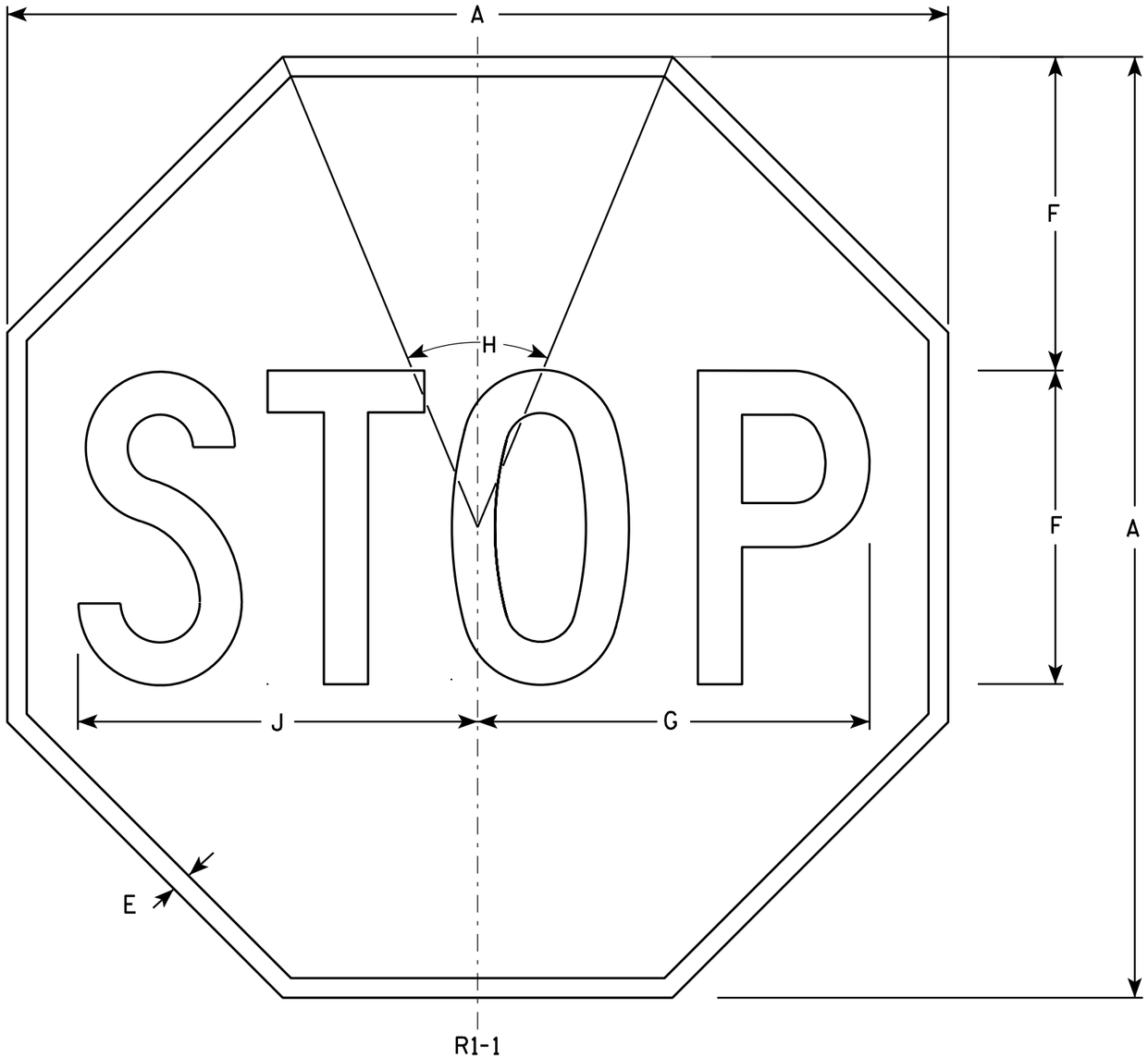
STANDARD SIGN M6-1 & M6-2 SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/03/14 PLATE 93 M6-1.14

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 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	24				3/8	8	10	45°		10 1/4																	3.31
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

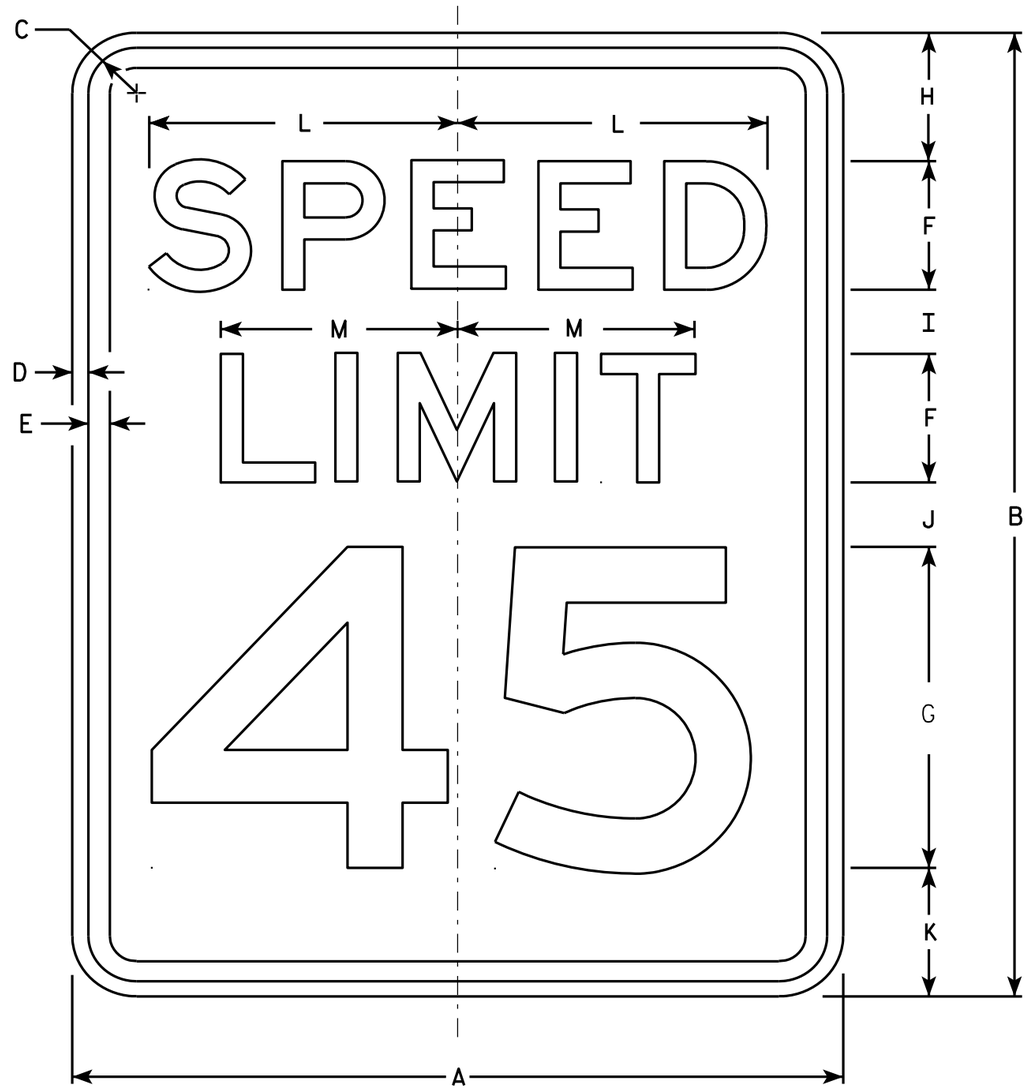
STANDARD SIGN
R1-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/03/10 PLATE NO. R1-1.12

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



R2-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - E
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 adjust spacing to achieve proper balance.

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	24	1 1/8	3/8	1/2	3	8	3	2	2	3	7 1/4	5 1/2														3.0
2S	24	30	1 1/8	3/8	1/2	4	10	3	2 1/4	3 3/8	3 3/8	9 5/8	7 3/8														5.0
2M	30	36	1 3/8	1/2	5/8	5	12	5	2 1/2	2 1/2	4	12	9 1/4														7.5
3	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
4	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
5	48	60	2 1/4	3/4	1	8	20	6	4 1/2	6 3/4	6 3/4	19 1/4	14 5/8														20.0

STANDARD SIGN
R2-1

WISCONSIN DEPT OF TRANSPORTATION

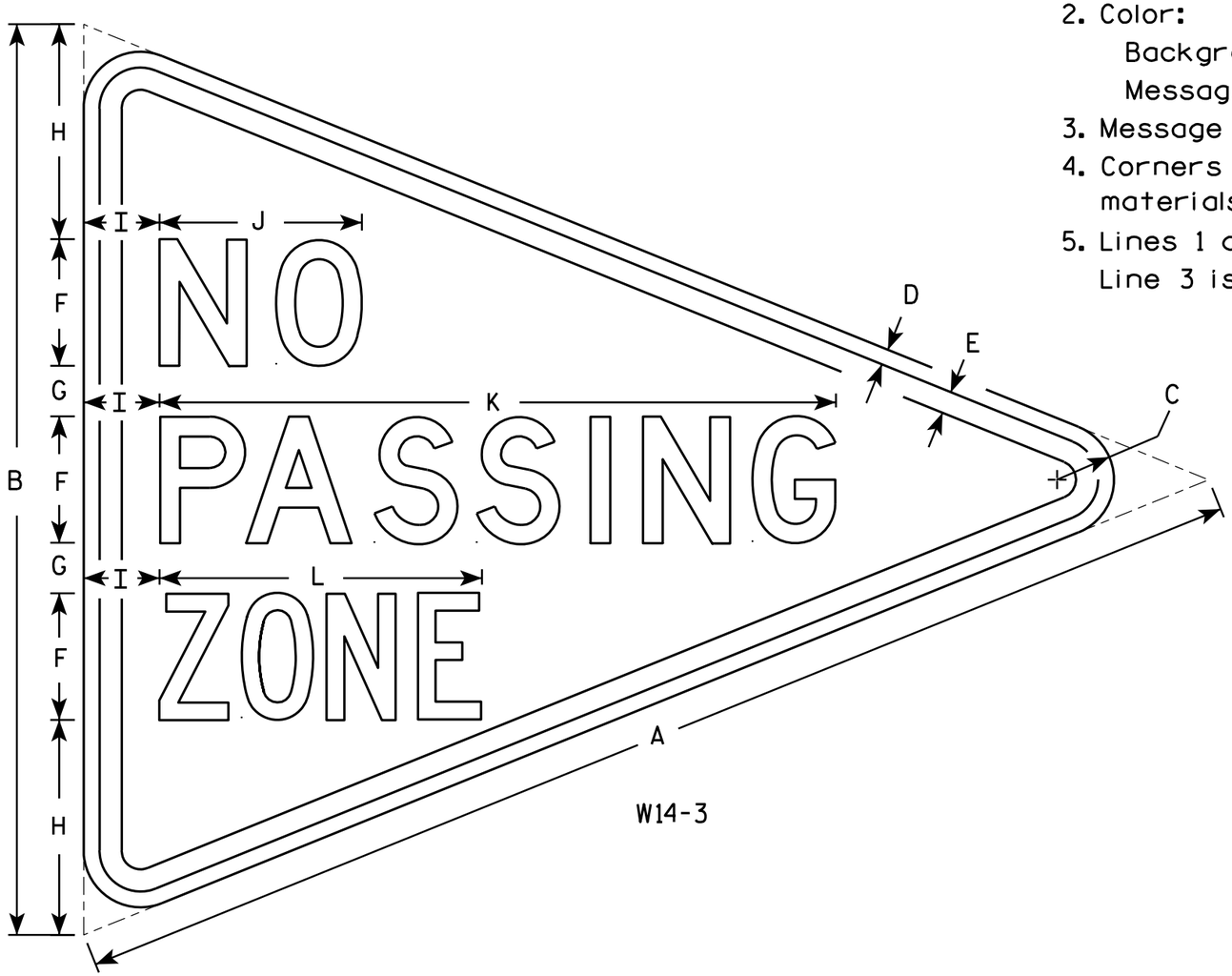
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/26/10 PLATE NO. R2-1.13

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 95 | 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. Message Series - See note 5
4. Corners and borders shall be rounded on all base materials for this sign.
5. Lines 1 and 2 are Series D.
   Line 3 is series C.



W14-3

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	36	2 1/4	5/8	7/8	5	2	8 1/2	3	8	26 3/4	12 3/4															6.0
2M	48	36	2 1/4	5/8	7/8	5	2	8 1/2	3	8	26 3/4	12 3/4															6.0
3	64	48	3	3/4	1 1/4	6	3	12	4	10 3/4	33 5/8	16 1/2															10.7
4																											
5																											

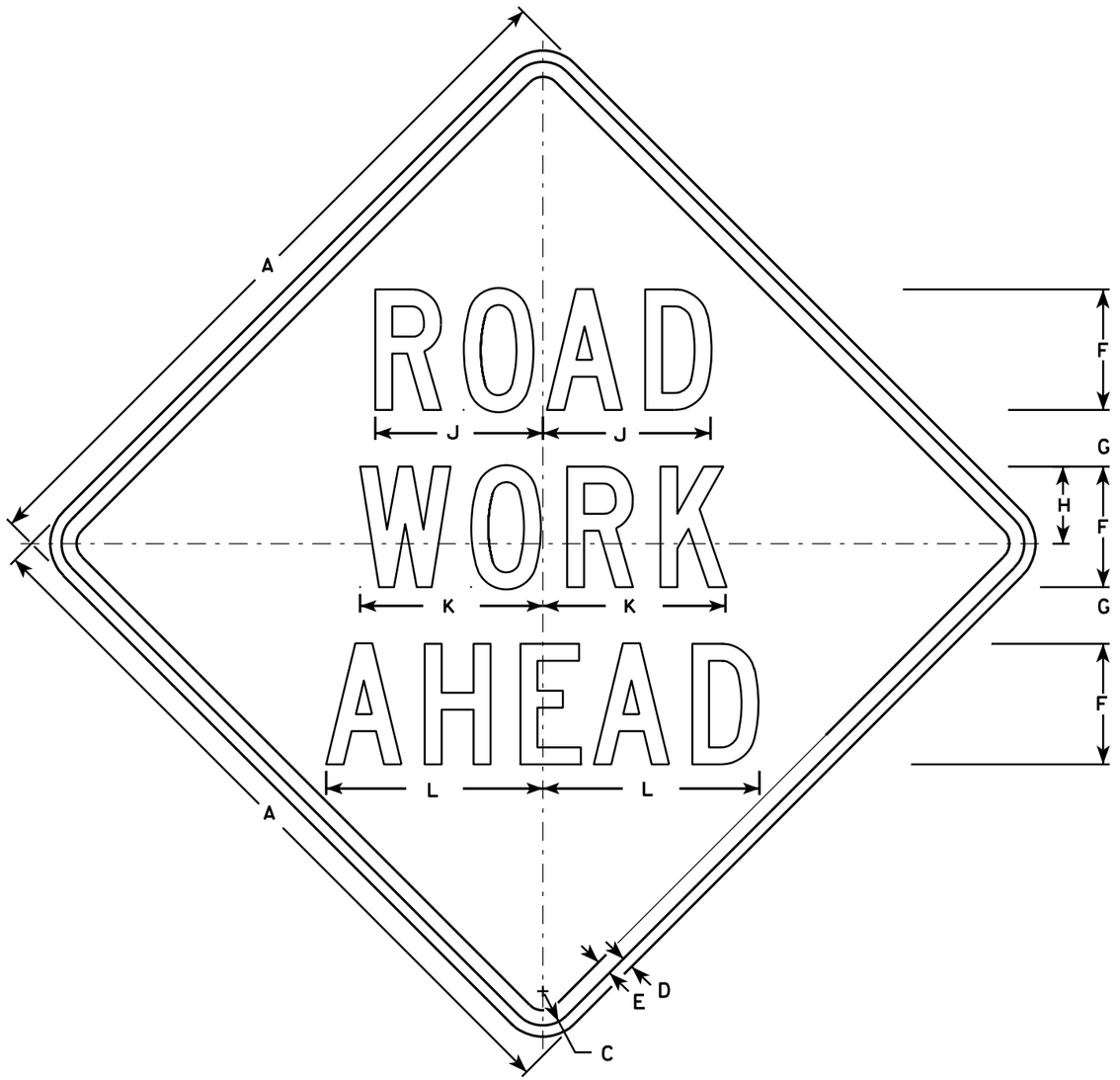
STANDARD SIGN
W14-3

WISCONSIN DEPT OF TRANSPORTATION

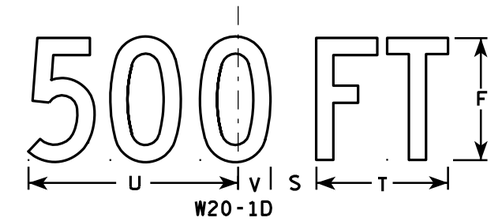
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W14-3.9

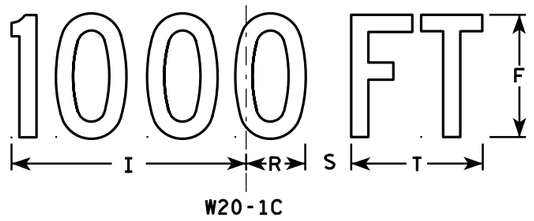
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 96	E



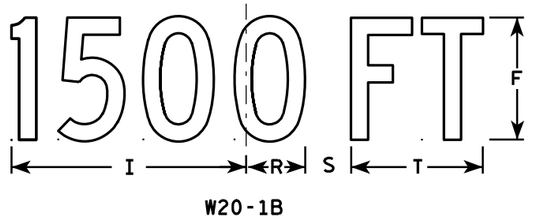
W20-1A



W20-1D

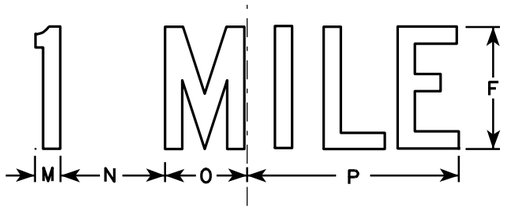


W20-1C



W20-1B

W20-1G



W20-1F

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 3/8	1/2	5/8	5	2 5/8	3 1/4	10 1/8	7	7 5/8	8 7/8	1 1/8	4 1/2	3 1/2	9		2 1/2	1 7/8	5 5/8	9	1 3/8	8	1 3/4	10 3/4	6	9.0
2S	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8		3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
2M	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8		3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
3	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8		3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
4	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8		3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
5	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8		3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0

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

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-1.9

PROJECT NO:

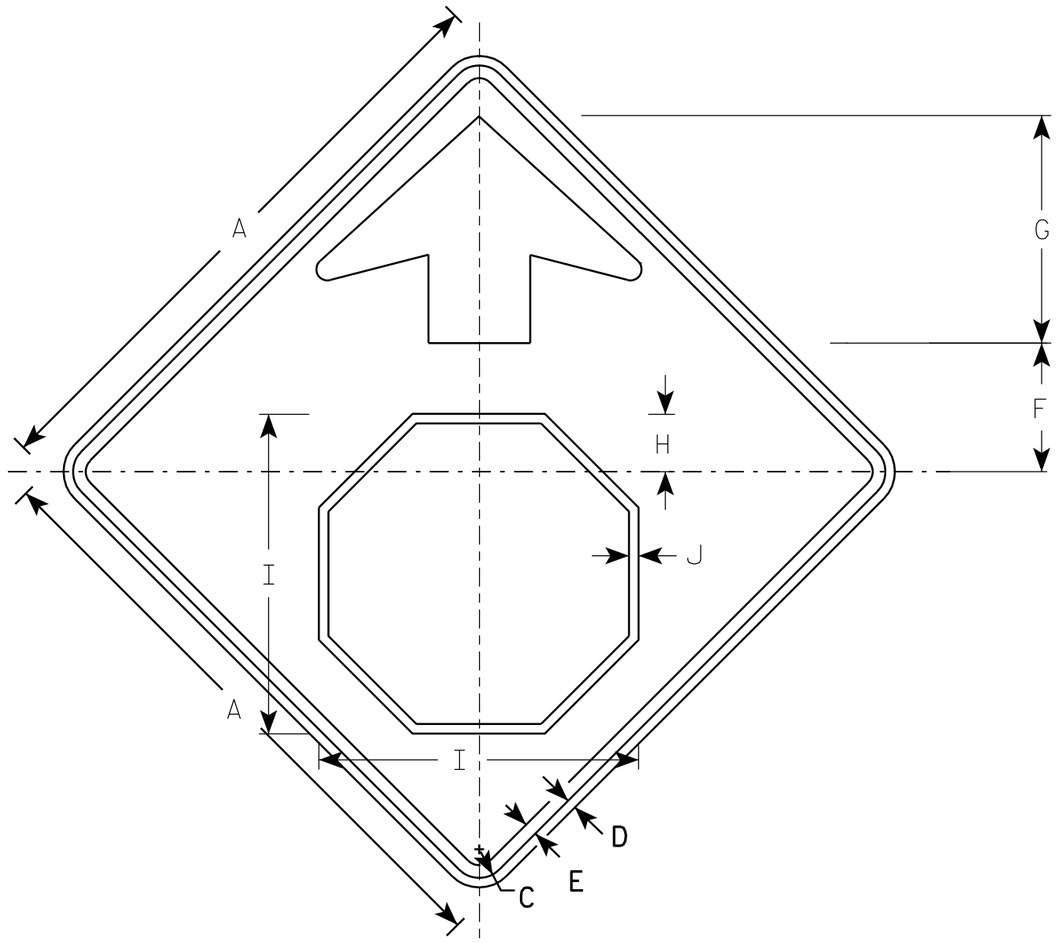
SHEET NO: 97 E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W201.DGN PLOT DATE : 18-MAR-2011 09:56 PLOT BY : mscj9h

WISDOT/CADDS SHEET 42

7

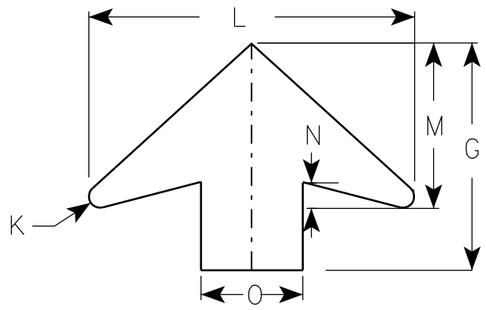
7



W3-1

NOTES

1. All Signs Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - YELLOW
   Arrow & Border - BLACK
   Stop Symbol - WHITE BORDER ON RED BACKGROUND



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	30		1 3/8	1/2	5/8	6 1/4	11 1/4	2 7/8	15 3/4	1/2	1/2	16	8	1 1/4	5												6.25
2S	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 1/2	19	5/8	5/8	19 1/4	9 3/4	1 5/8	6												9.0
2M	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 1/2	19	5/8	5/8	19 1/4	9 3/4	1 5/8	6												9.0
3	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 1/2	19	5/8	5/8	19 1/4	9 3/4	1 5/8	6												9.0
4	48		2 1/4	3/4	1	10	17 7/8	4 1/2	25 1/8	3/4	7/8	25 5/8	13	2	8												16.0
5	48		2 1/4	3/4	1	10	17 7/8	4 1/2	25 1/8	3/4	7/8	25 5/8	13	2	8												16.0

STANDARD SIGN
W3-1

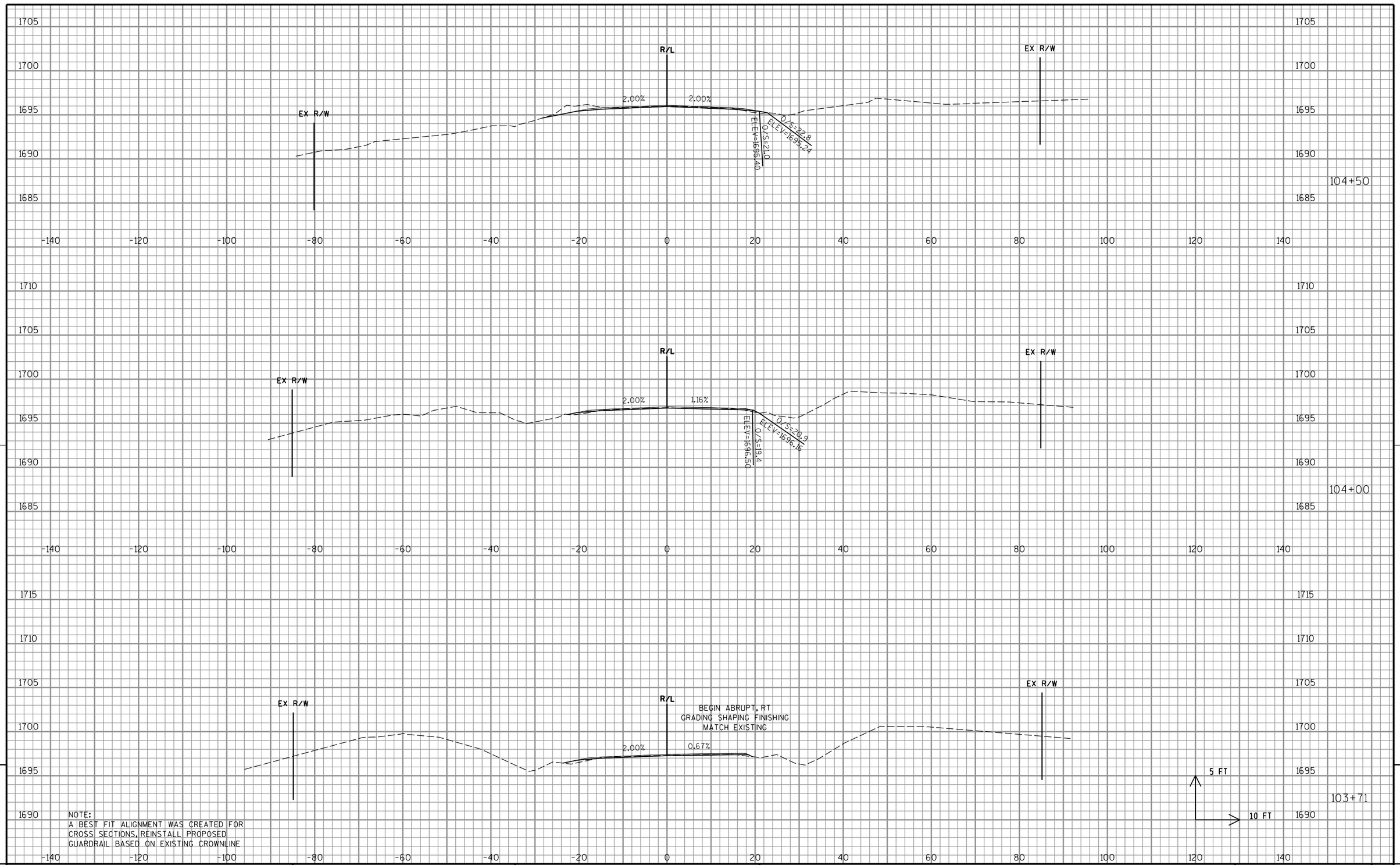
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W3-1.12

PROJECT NO:

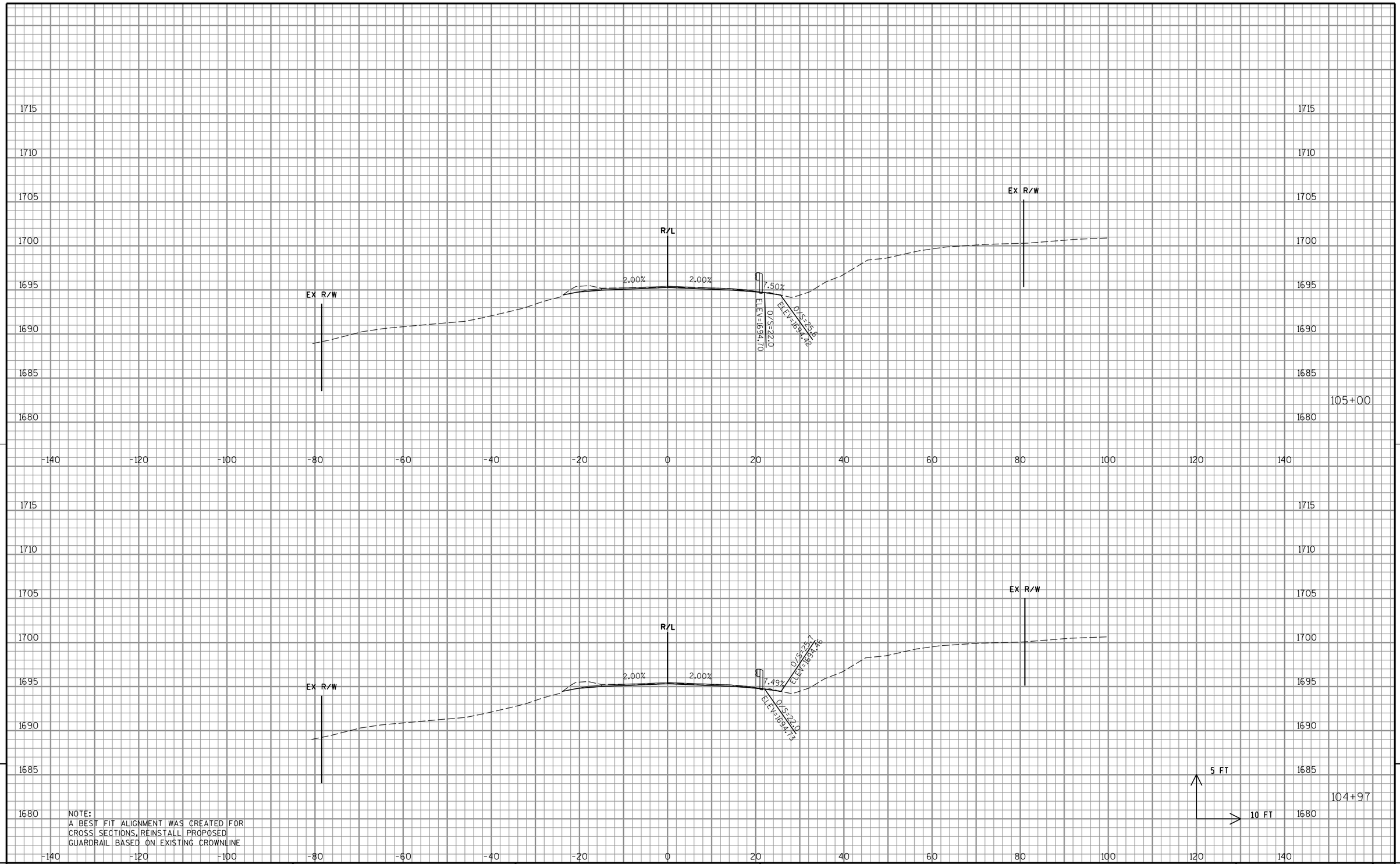
SHEET NO: 98 E



PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	CROSS SECTIONS: GUARDRAIL	SHEET 99	E

FILE NAME : P:\47xx\4726.DP.12.STH70.FOR\CADDS\Plan\090201_xs.dgn PLOT DATE : 7/18/2014 PLOT BY : emo PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



9

NOTE:
A BEST FIT ALIGNMENT WAS CREATED FOR CROSS SECTIONS, REINSTALL PROPOSED GUARDRAIL BASED ON EXISTING CROWNLINE

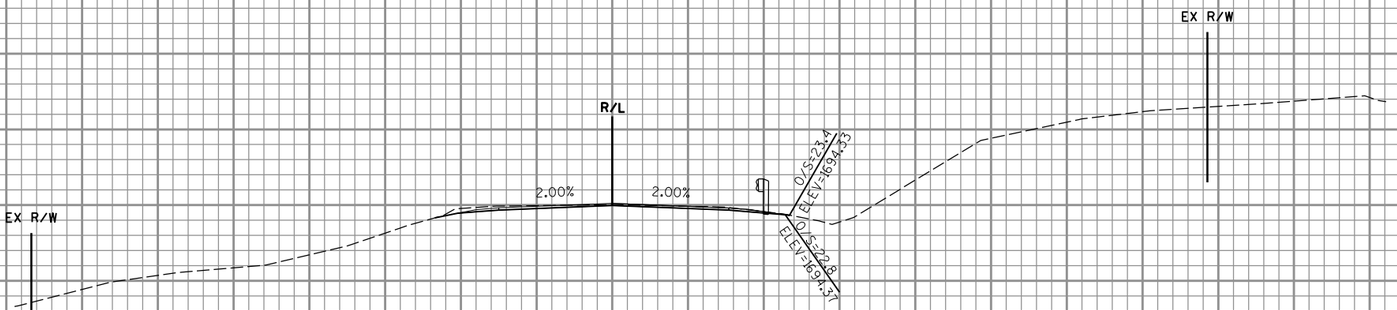
9

PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	CROSS SECTIONS: GUARDRAIL	SHEET 100	E

FILE NAME : P:\47xx\4726.DP.12.STH70.FOR\CADDS\Plan\090201_xs.dgn PLOT DATE : 7/18/2014 PLOT BY : emo PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

105+47



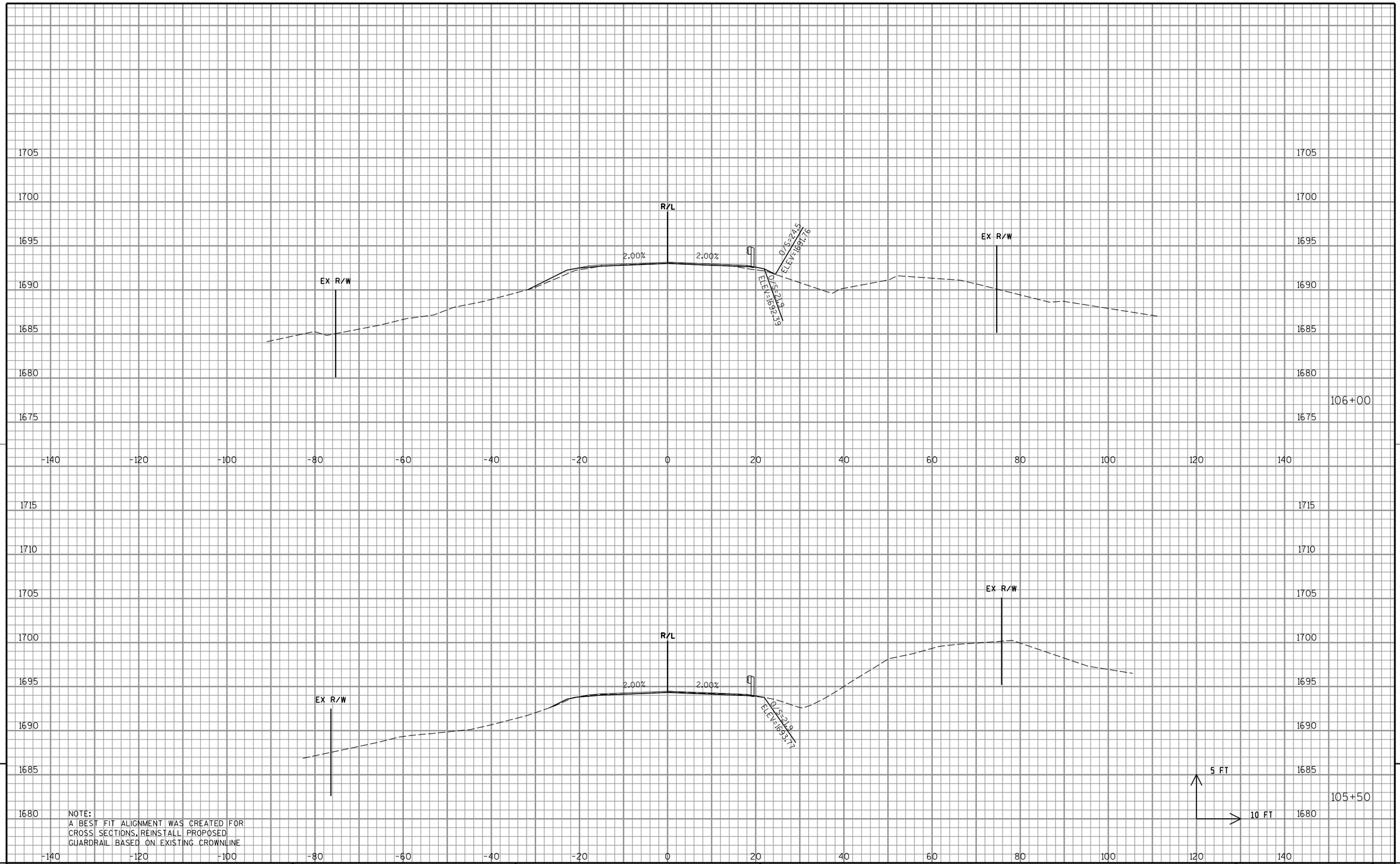
105+22

NOTE:
A BEST FIT ALIGNMENT WAS CREATED FOR CROSS SECTIONS, REINSTALL PROPOSED GUARDRAIL BASED ON EXISTING CROWNLINE

PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	CROSS SECTIONS: GUARDRAIL	SHEET 101	E

FILE NAME : P:\47xx\4726.DP.12.STH70.FOR\CADDS\Plan\090201_xs.dgn PLOT DATE : 7/18/2014 PLOT BY : emo PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

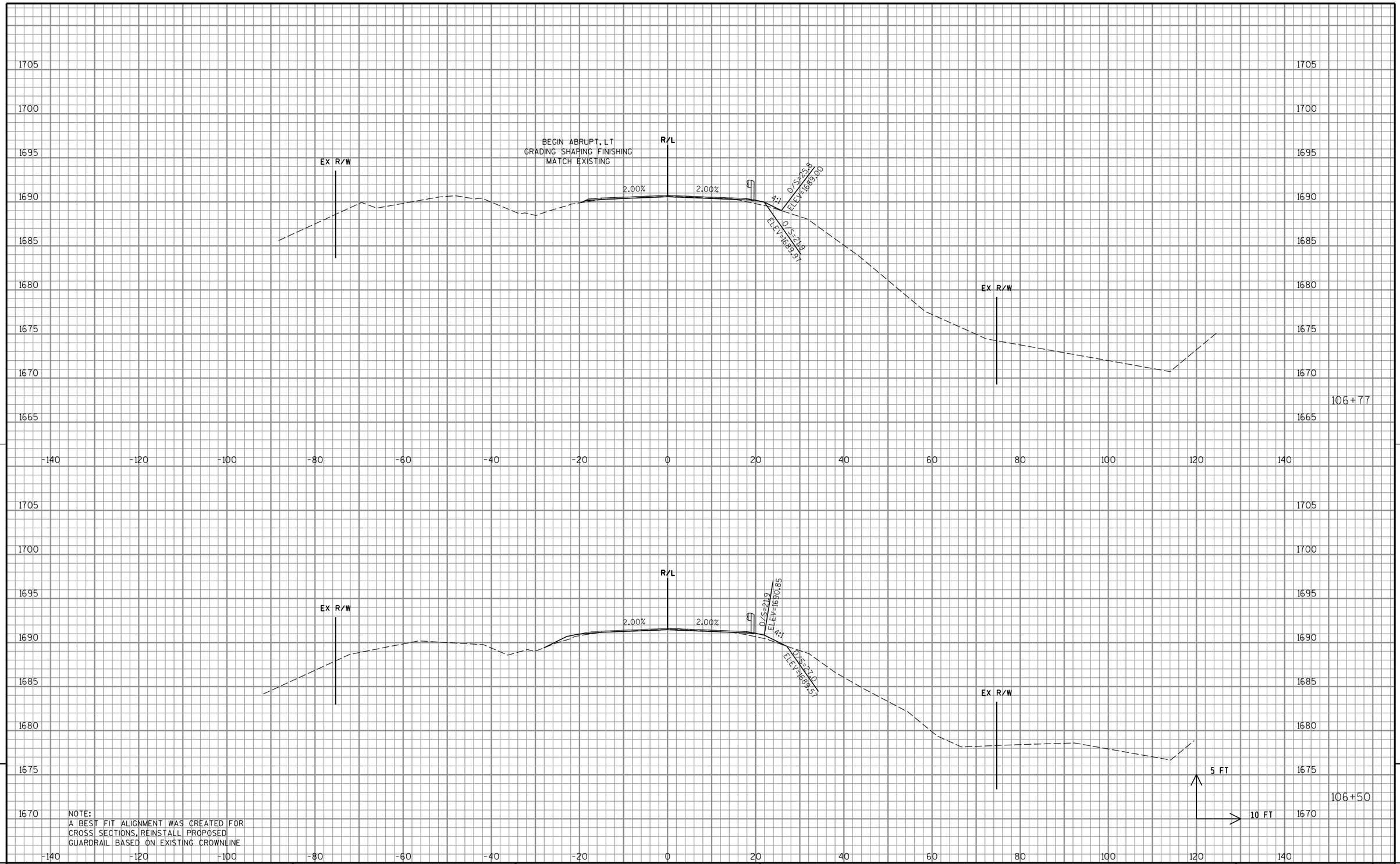


NOTE:
A BEST FIT ALIGNMENT WAS CREATED FOR CROSS SECTIONS, REINSTALL PROPOSED GUARDRAIL BASED ON EXISTING CROWNLINE

PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	CROSS SECTIONS: GUARDRAIL	SHEET 102	E

FILE NAME : P:\47xx\4726.DP.12.STH70.FOR\CADDS\Plan\090201_xs.dgn PLOT DATE : 7/18/2014 PLOT BY : emo PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

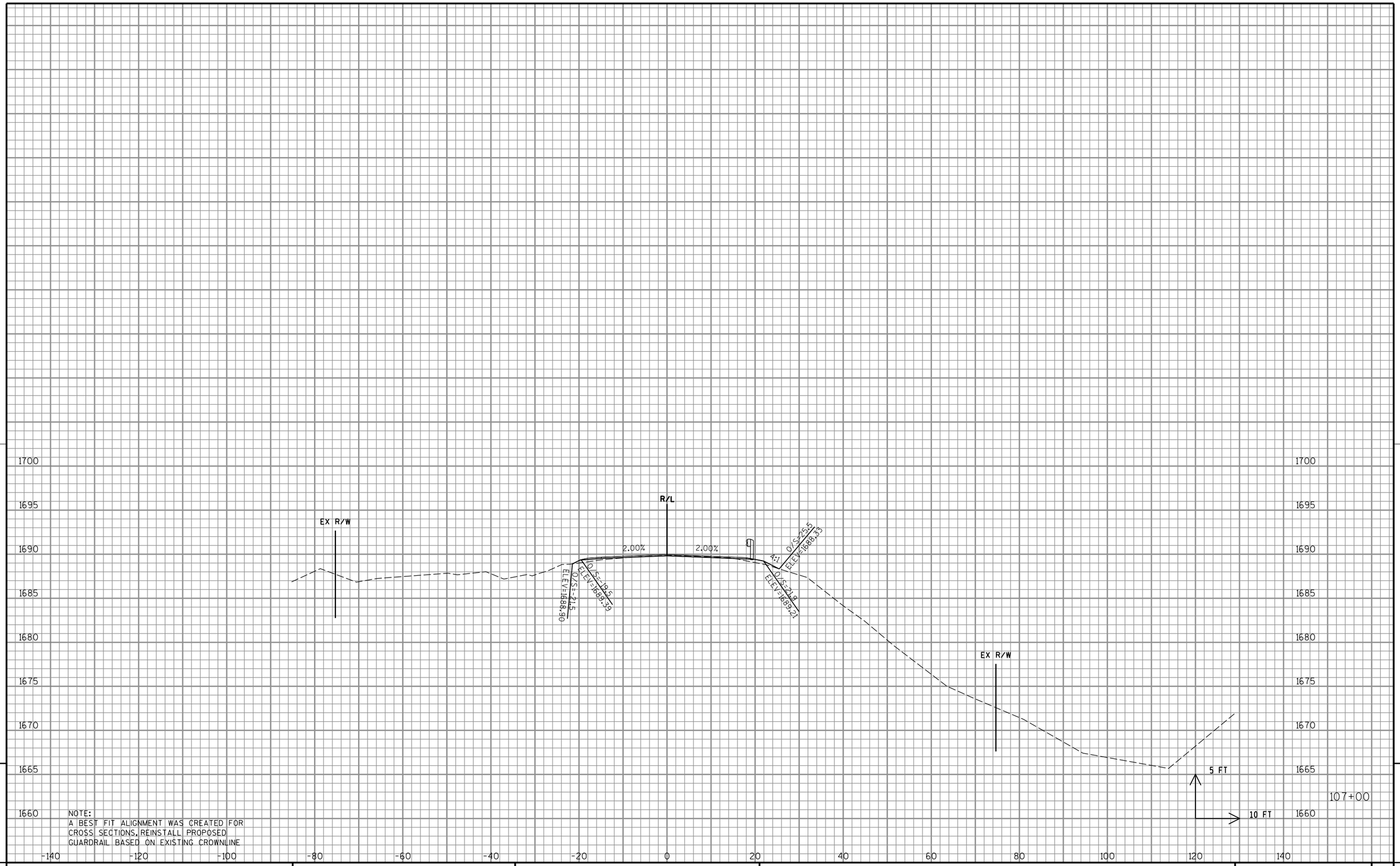


NOTE:
A BEST FIT ALIGNMENT WAS CREATED FOR CROSS SECTIONS, REINSTALL PROPOSED GUARDRAIL BASED ON EXISTING CROWNLINE

PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	CROSS SECTIONS: GUARDRAIL	SHEET 103	E

FILE NAME : P:\47xx\4726.DP.12.STH70.FOR\CADDS\Plan\090201_xs.dgn PLOT DATE : 7/18/2014 PLOT BY : emo PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

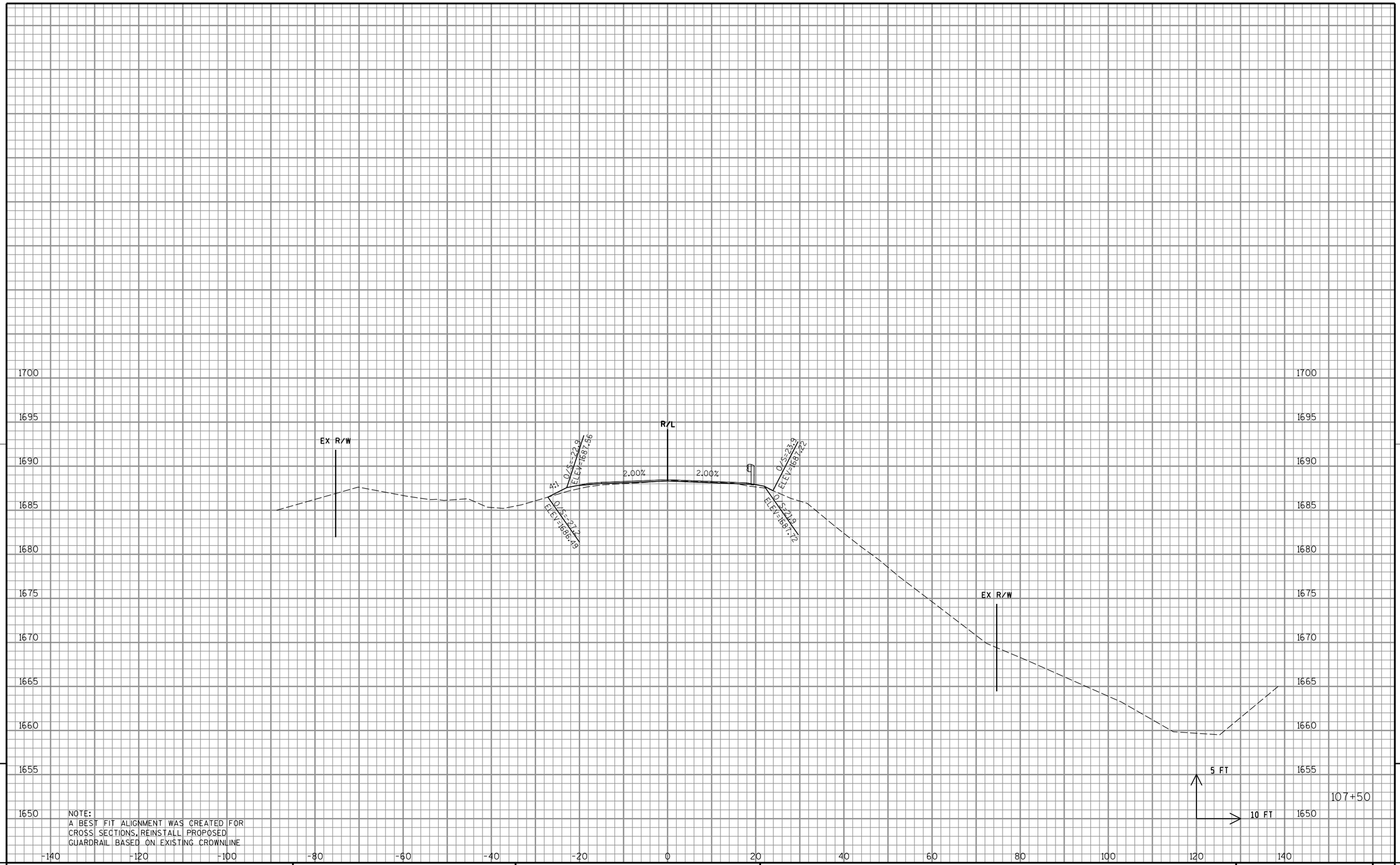


NOTE:
A BEST FIT ALIGNMENT WAS CREATED FOR CROSS SECTIONS. REINSTALL PROPOSED GUARDRAIL BASED ON EXISTING CROWNLINE

PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	CROSS SECTIONS: GUARDRAIL	SHEET 104	E

FILE NAME : P:\47xx\4726.DP.12.STH70.FOR\CADDS\Plan\090201_xs.dgn PLOT DATE : 7/18/2014 PLOT BY : emo PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

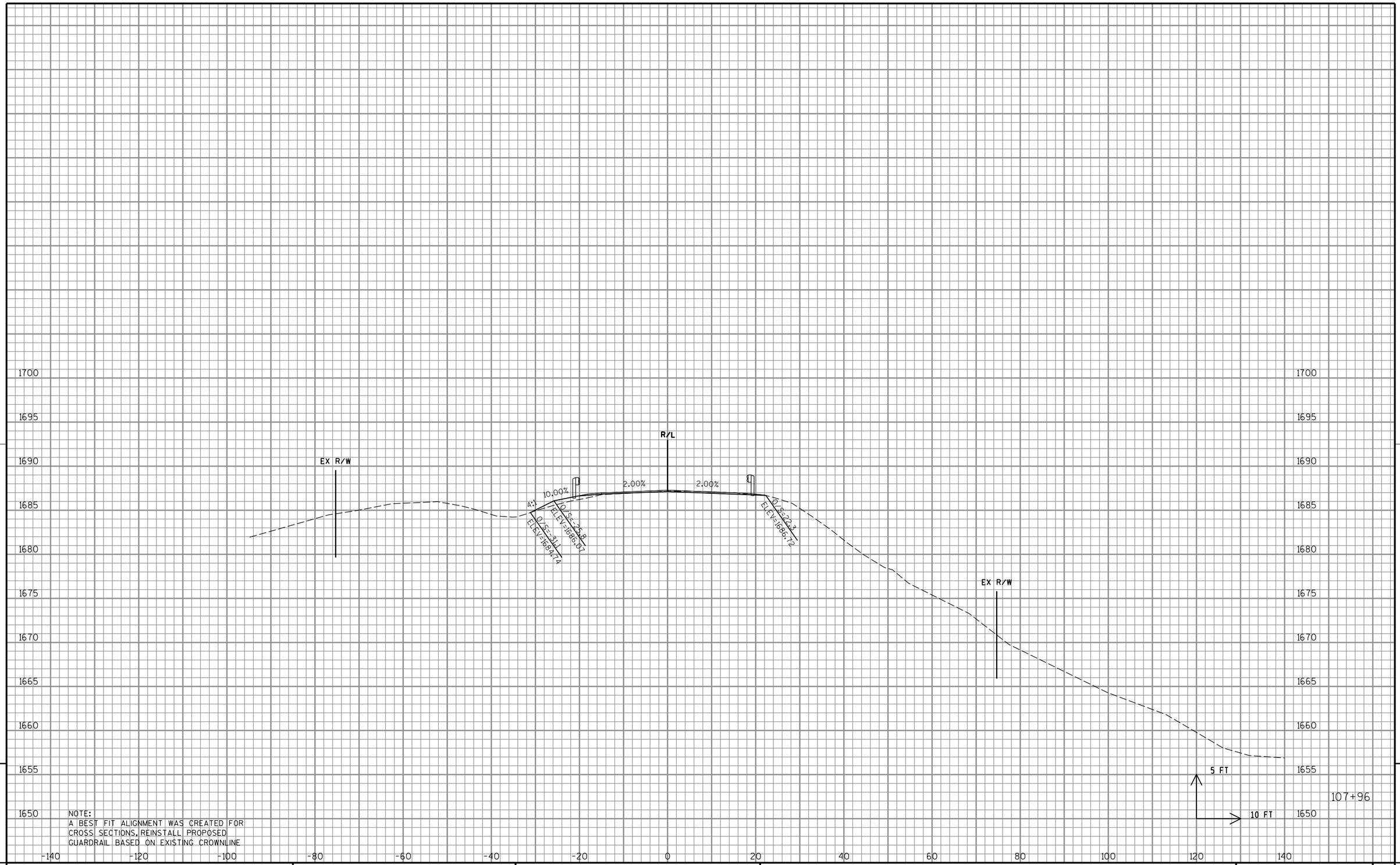


NOTE:
A BEST FIT ALIGNMENT WAS CREATED FOR CROSS SECTIONS. REINSTALL PROPOSED GUARDRAIL BASED ON EXISTING CROWNLINE

PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	CROSS SECTIONS: GUARDRAIL	SHEET 105	E

FILE NAME : P:\47xx\4726.DP.12.STH70.FOR\CADDS\Plan\090201_xs.dgn PLOT DATE : 7/18/2014 PLOT BY : emo PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

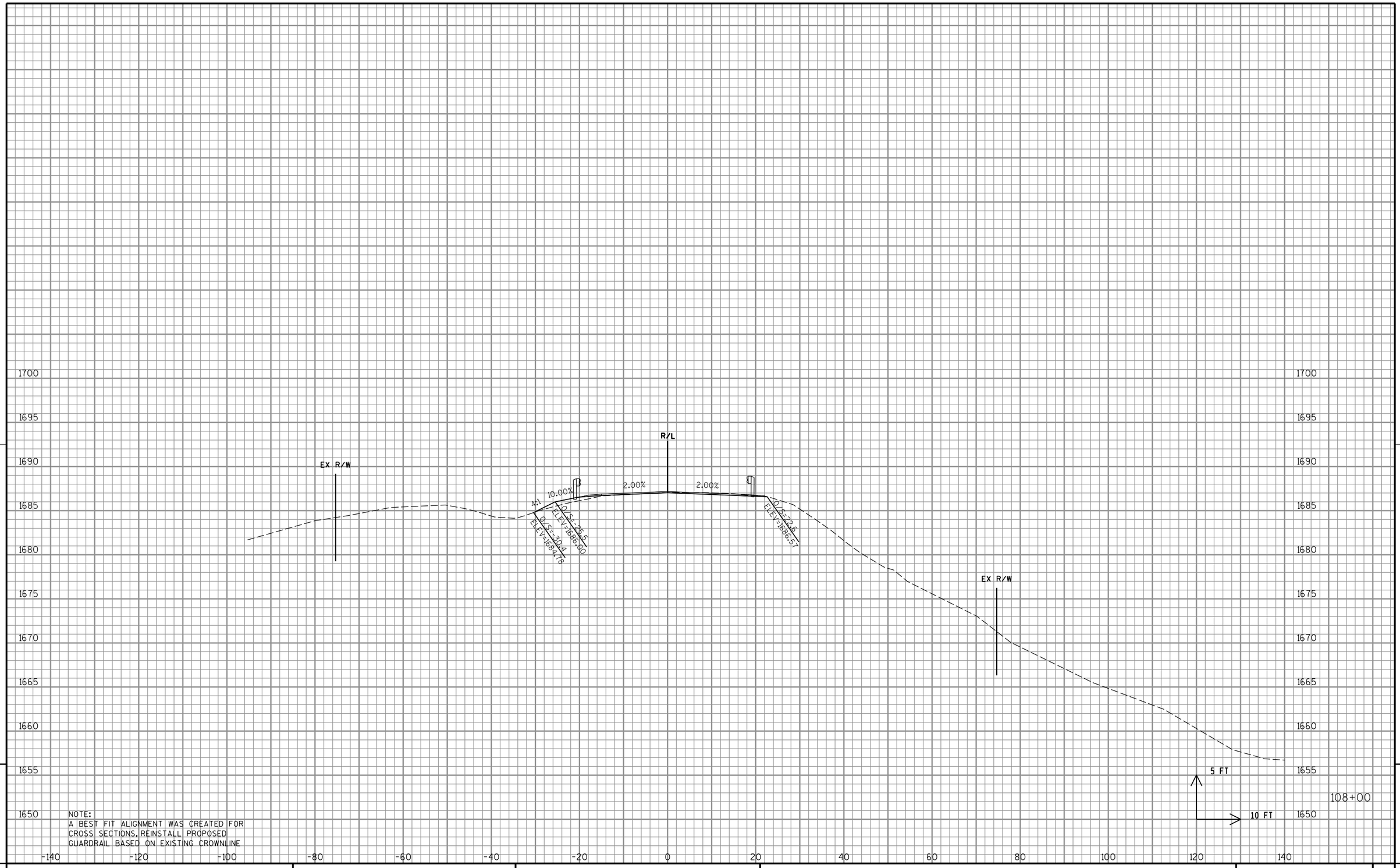


NOTE:
A BEST FIT ALIGNMENT WAS CREATED FOR CROSS SECTIONS. REINSTALL PROPOSED GUARDRAIL BASED ON EXISTING CROWNLINE

PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	CROSS SECTIONS: GUARDRAIL	SHEET 106	E

FILE NAME : P:\47xx\4726.DP.12.STH70.FOR\CADDS\Plan\090201_xs.dgn PLOT DATE : 7/18/2014 PLOT BY : emo PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



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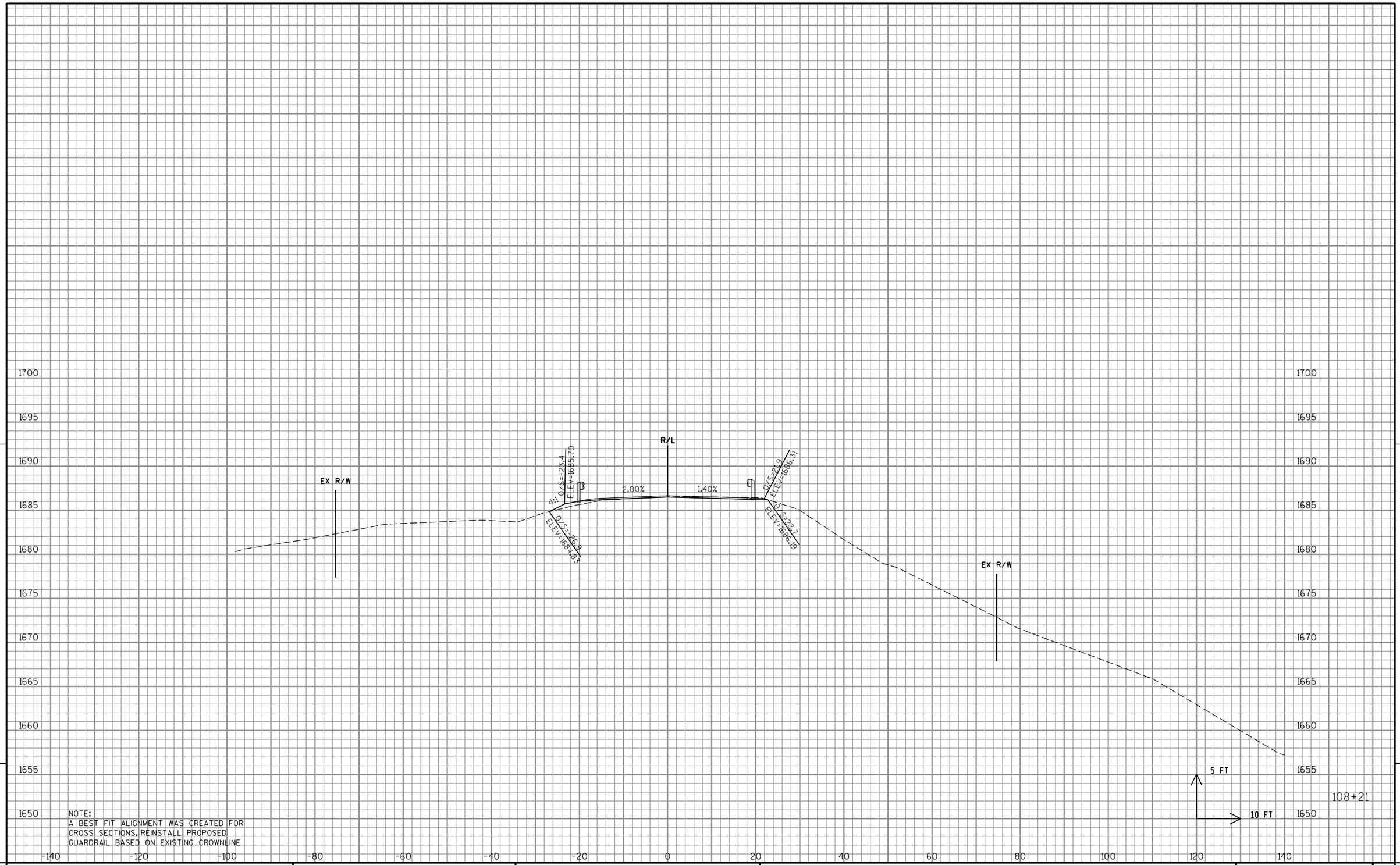
NOTE:
A BEST FIT ALIGNMENT WAS CREATED FOR CROSS SECTIONS, REINSTALL PROPOSED GUARDRAIL BASED ON EXISTING CROWNLINE

9

PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	CROSS SECTIONS: GUARDRAIL	SHEET 107	E

FILE NAME : P:\47xx\4726.DP.12.STH70.FOR\CADDS\Plan\090201_xs.dgn PLOT DATE : 7/18/2014 PLOT BY : emo PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



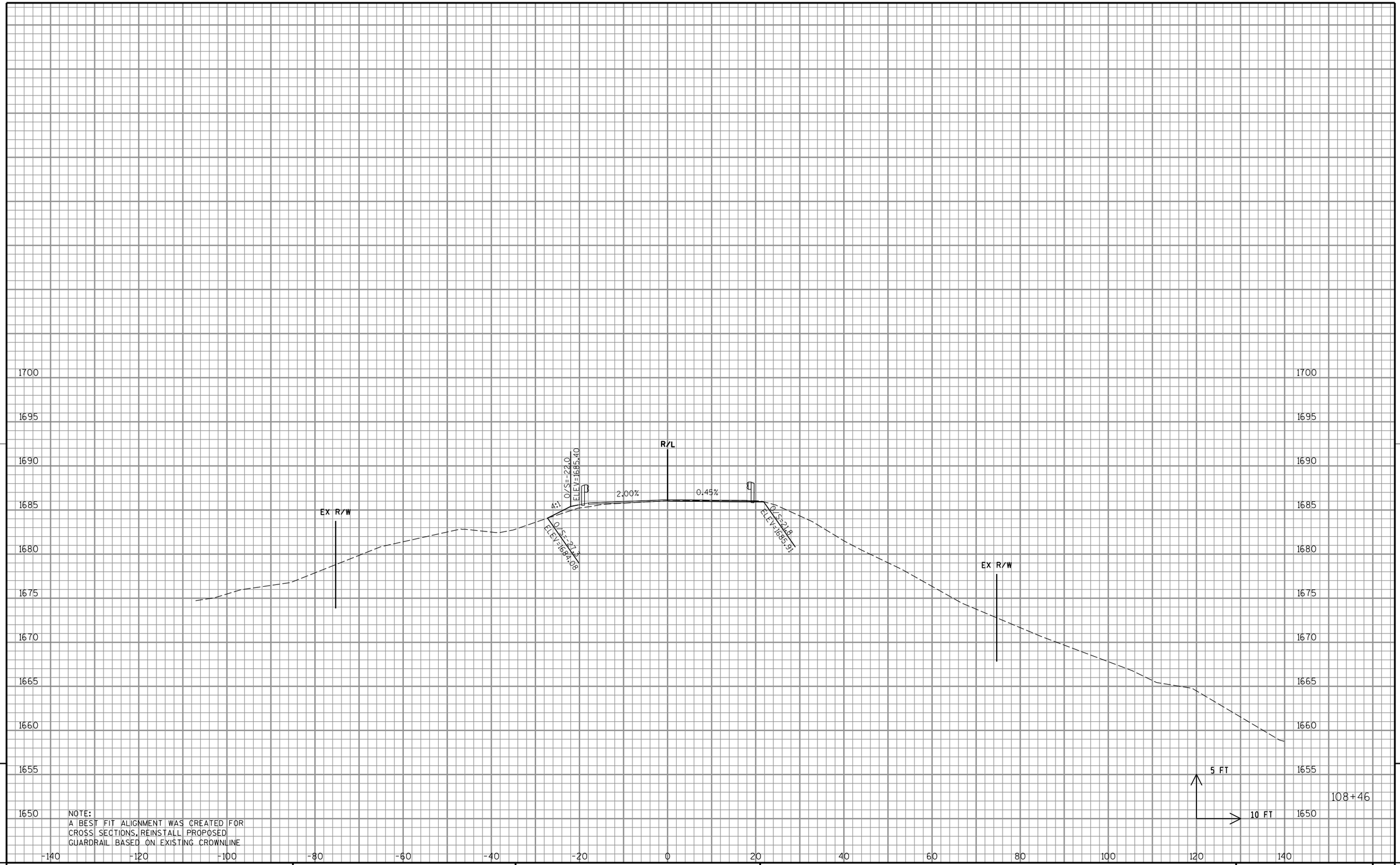
NOTE:
A BEST FIT ALIGNMENT WAS CREATED FOR CROSS SECTIONS. REINSTALL PROPOSED GUARDRAIL BASED ON EXISTING CROWNLINE

108+21

9

9

PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	CROSS SECTIONS: GUARDRAIL	SHEET 108	E

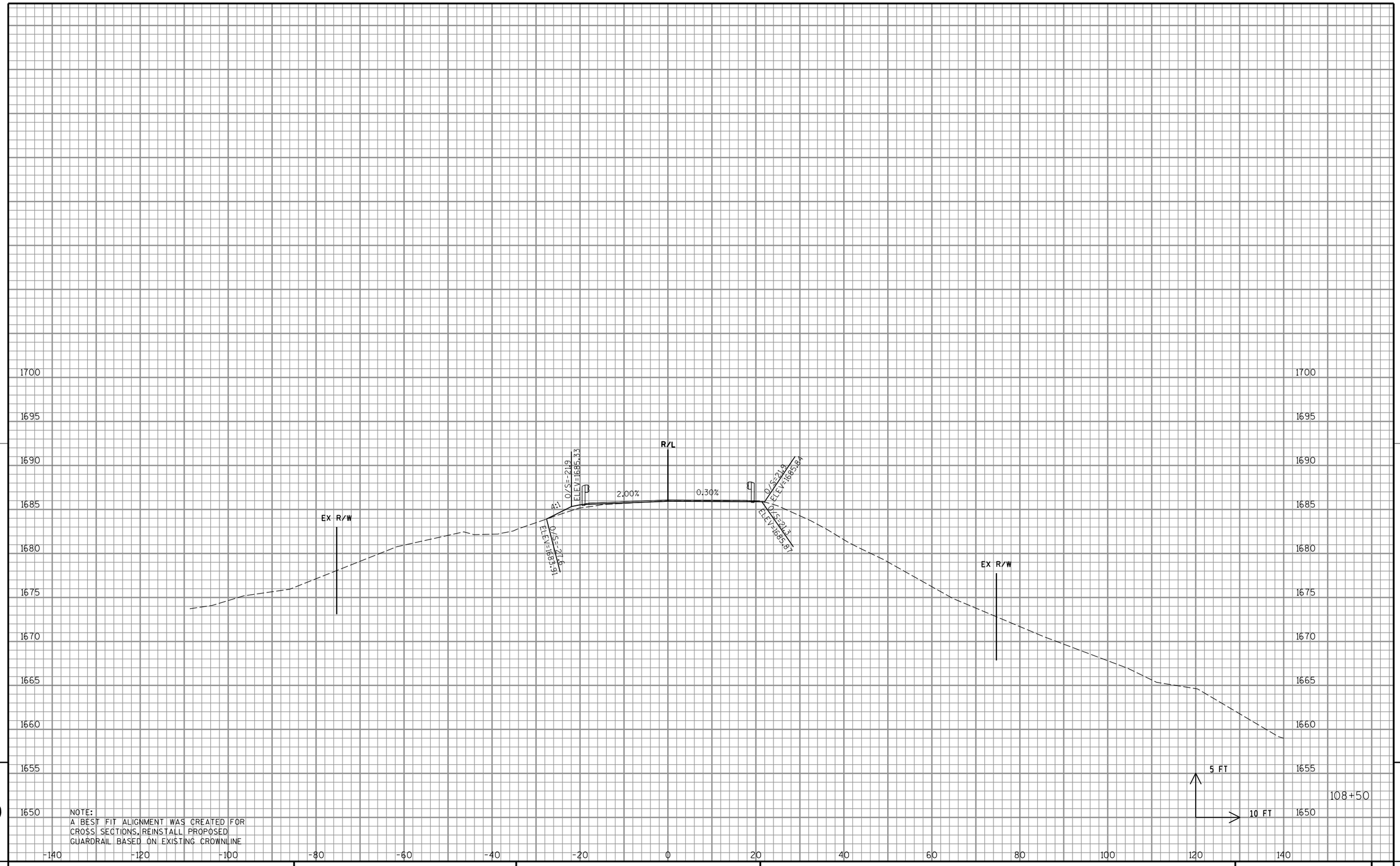


NOTE:
A BEST FIT ALIGNMENT WAS CREATED FOR CROSS SECTIONS, REINSTALL PROPOSED GUARDRAIL BASED ON EXISTING CROWNLINE

PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	CROSS SECTIONS: GUARDRAIL	SHEET 109	E

FILE NAME : P:\47xx\4726.DP.12.STH70.FOR\CADDS\Plan\090201_xs.dgn PLOT DATE : 7/18/2014 PLOT BY : emo PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

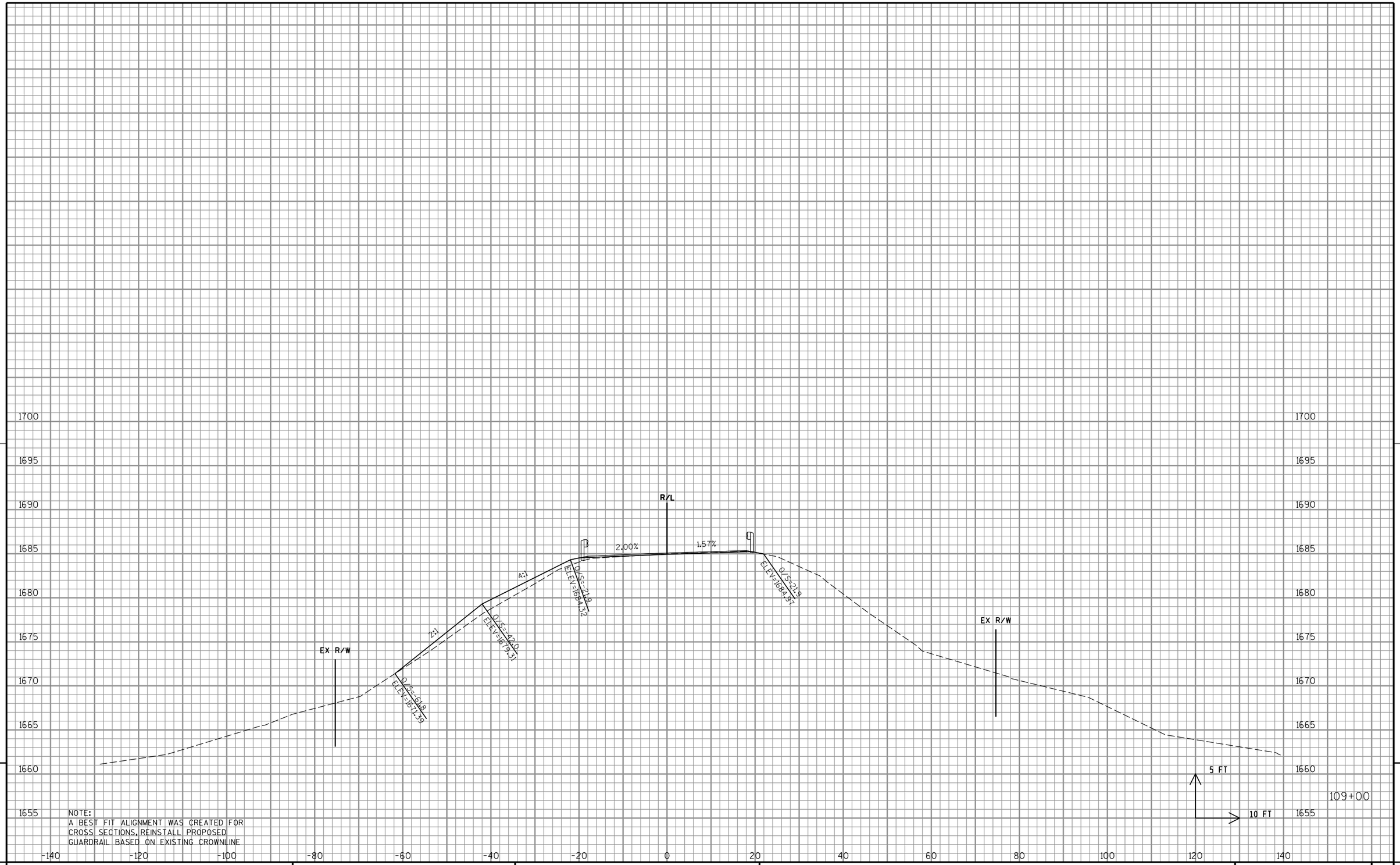


NOTE:
A BEST FIT ALIGNMENT WAS CREATED FOR CROSS SECTIONS, REINSTALL PROPOSED GUARDRAIL BASED ON EXISTING CROWNLINE

PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	CROSS SECTIONS: GUARDRAIL	SHEET 110	E

FILE NAME : P:\47xx\4726.DP.12.STH70.FOR\CADDS\Plan\090201_xs.dgn PLOT DATE : 7/18/2014 PLOT BY : emo PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

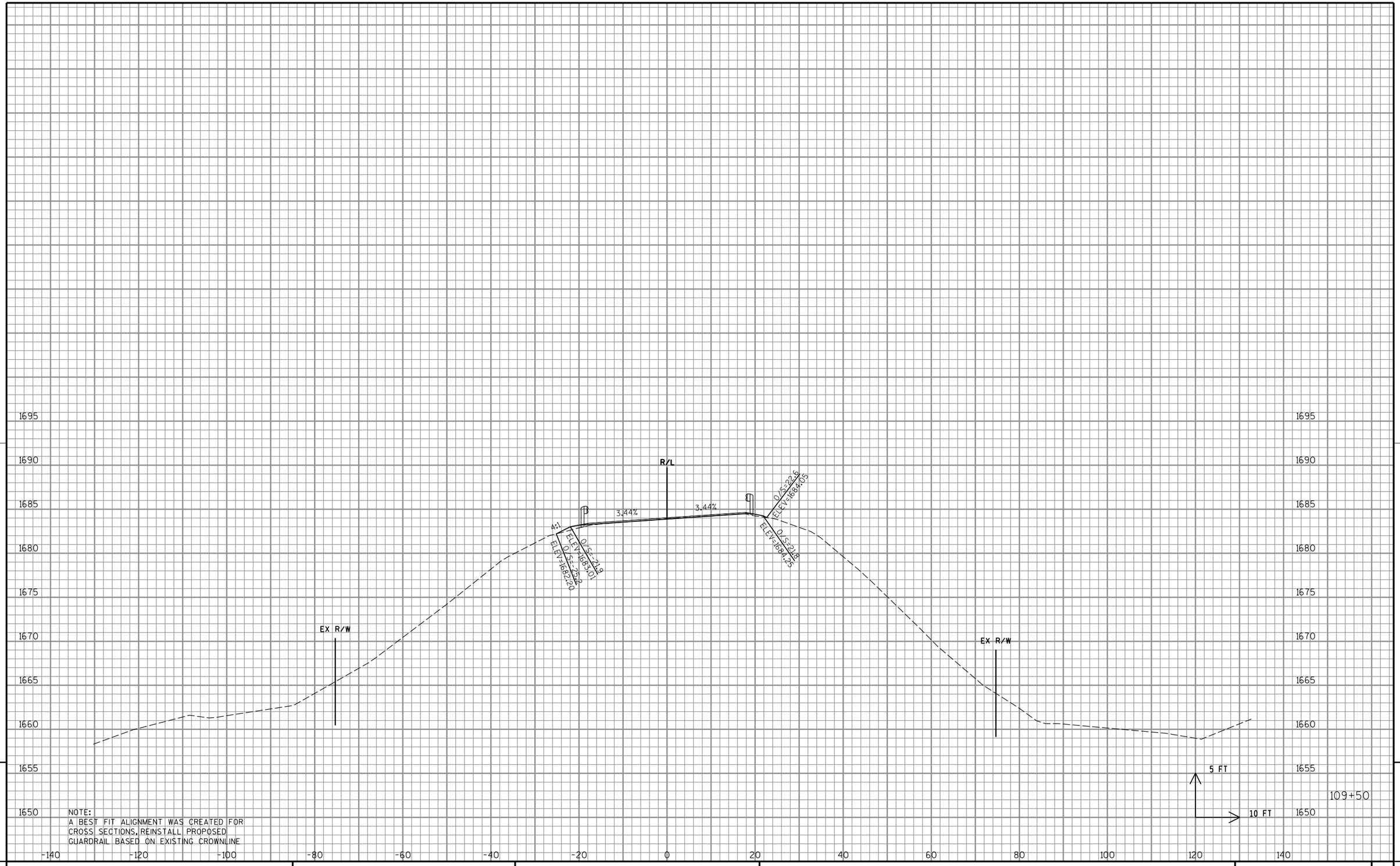


NOTE:
A BEST FIT ALIGNMENT WAS CREATED FOR CROSS SECTIONS, REINSTALL PROPOSED GUARDRAIL BASED ON EXISTING CROWNLINE

PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	CROSS SECTIONS: GUARDRAIL	SHEET 111	E

FILE NAME : P:\47xx\4726.DP.12.STH70.FOR\CADDS\Plan\090201_xs.dgn PLOT DATE : 7/18/2014 PLOT BY : emo PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

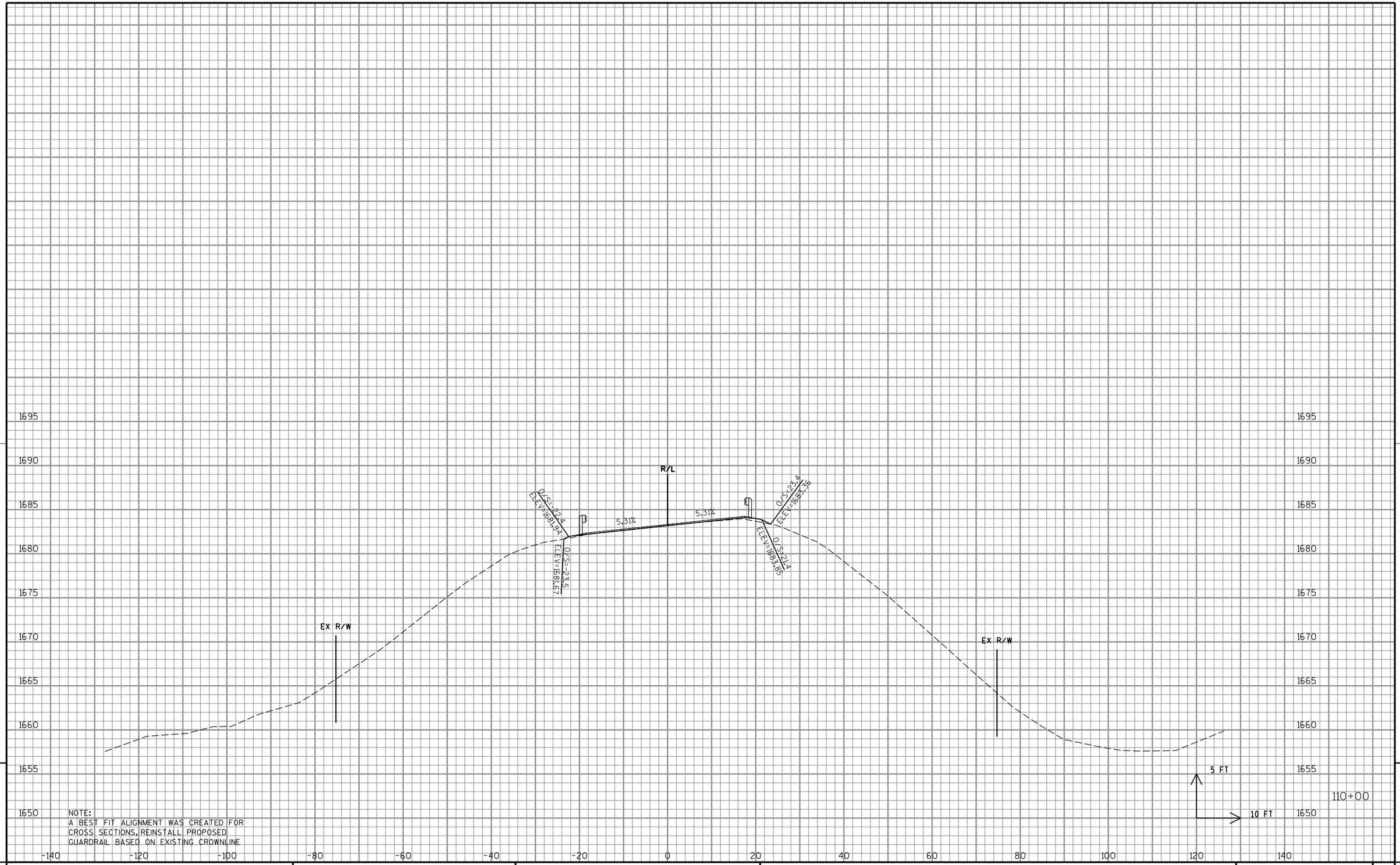


NOTE:
A BEST FIT ALIGNMENT WAS CREATED FOR CROSS SECTIONS, REINSTALL PROPOSED GUARDRAIL BASED ON EXISTING CROWNLINE

PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	CROSS SECTIONS: GUARDRAIL	SHEET 112	E

FILE NAME : P:\47xx\4726.DP.12.STH70.FOR\CADDS\Plan\090201_xs.dgn PLOT DATE : 7/18/2014 PLOT BY : emo PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

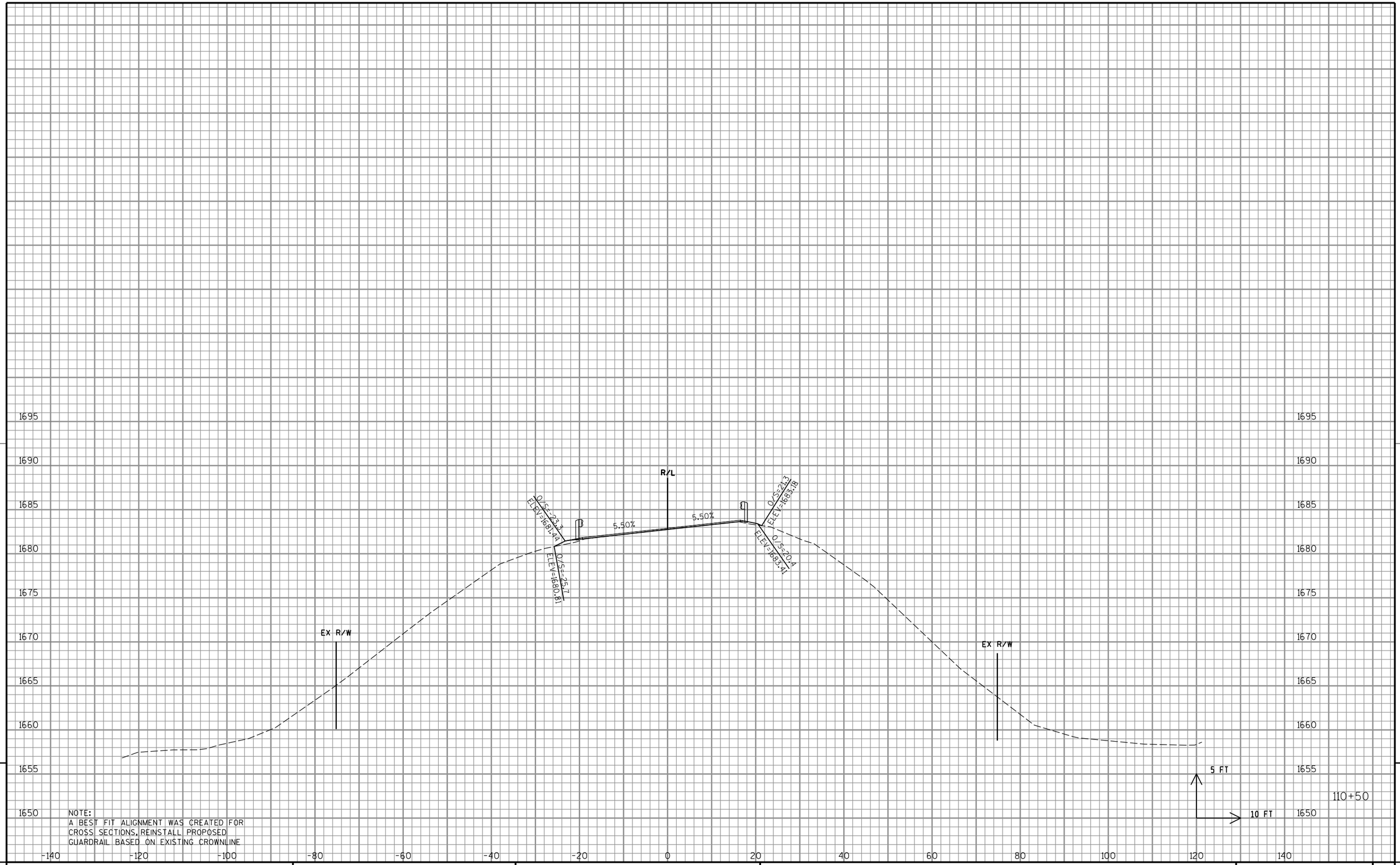


NOTE:
A BEST FIT ALIGNMENT WAS CREATED FOR CROSS SECTIONS, REINSTALL PROPOSED GUARDRAIL BASED ON EXISTING CROWNLINE

PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	CROSS SECTIONS: GUARDRAIL	SHEET 113	E

FILE NAME : P:\47xx\4726.DP.12.STH70.FOR\CADDS\Plan\090201_xs.dgn PLOT DATE : 7/18/2014 PLOT BY : emo PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

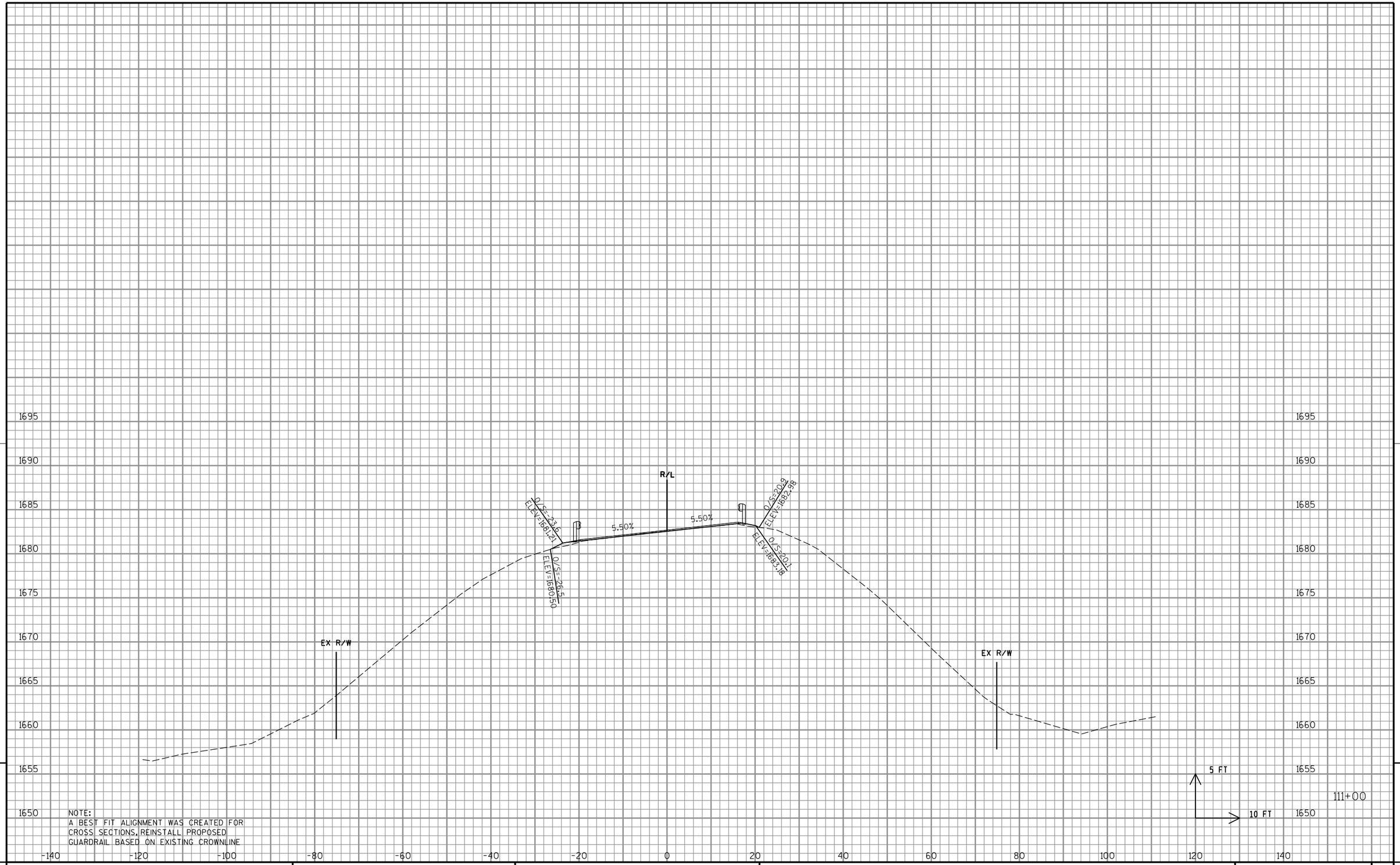


NOTE:
A BEST FIT ALIGNMENT WAS CREATED FOR CROSS SECTIONS, REINSTALL PROPOSED GUARDRAIL BASED ON EXISTING CROWNLINE

PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	CROSS SECTIONS: GUARDRAIL	SHEET 114	E

FILE NAME : P:\47xx\4726.DP.12.STH70.FOR\CADDS\Plan\090201_xs.dgn PLOT DATE : 7/18/2014 PLOT BY : emo PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

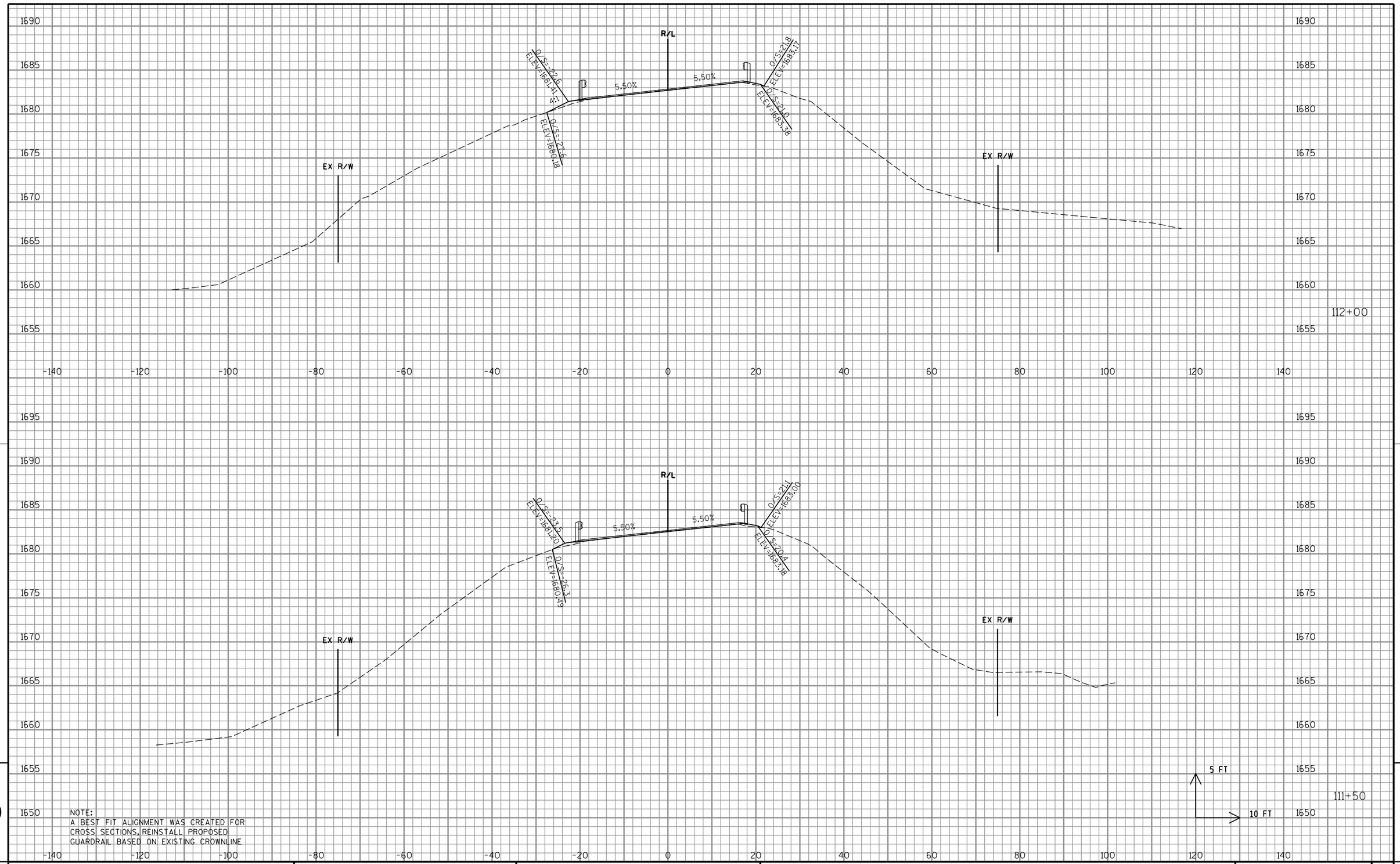


NOTE:
A BEST FIT ALIGNMENT WAS CREATED FOR CROSS SECTIONS, REINSTALL PROPOSED GUARDRAIL BASED ON EXISTING CROWNLINE

PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	CROSS SECTIONS: GUARDRAIL	SHEET 115	E

FILE NAME : P:\47xx\4726.DP.12.STH70.FOR\CADDS\Plan\090201_xs.dgn PLOT DATE : 7/18/2014 PLOT BY : emo PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

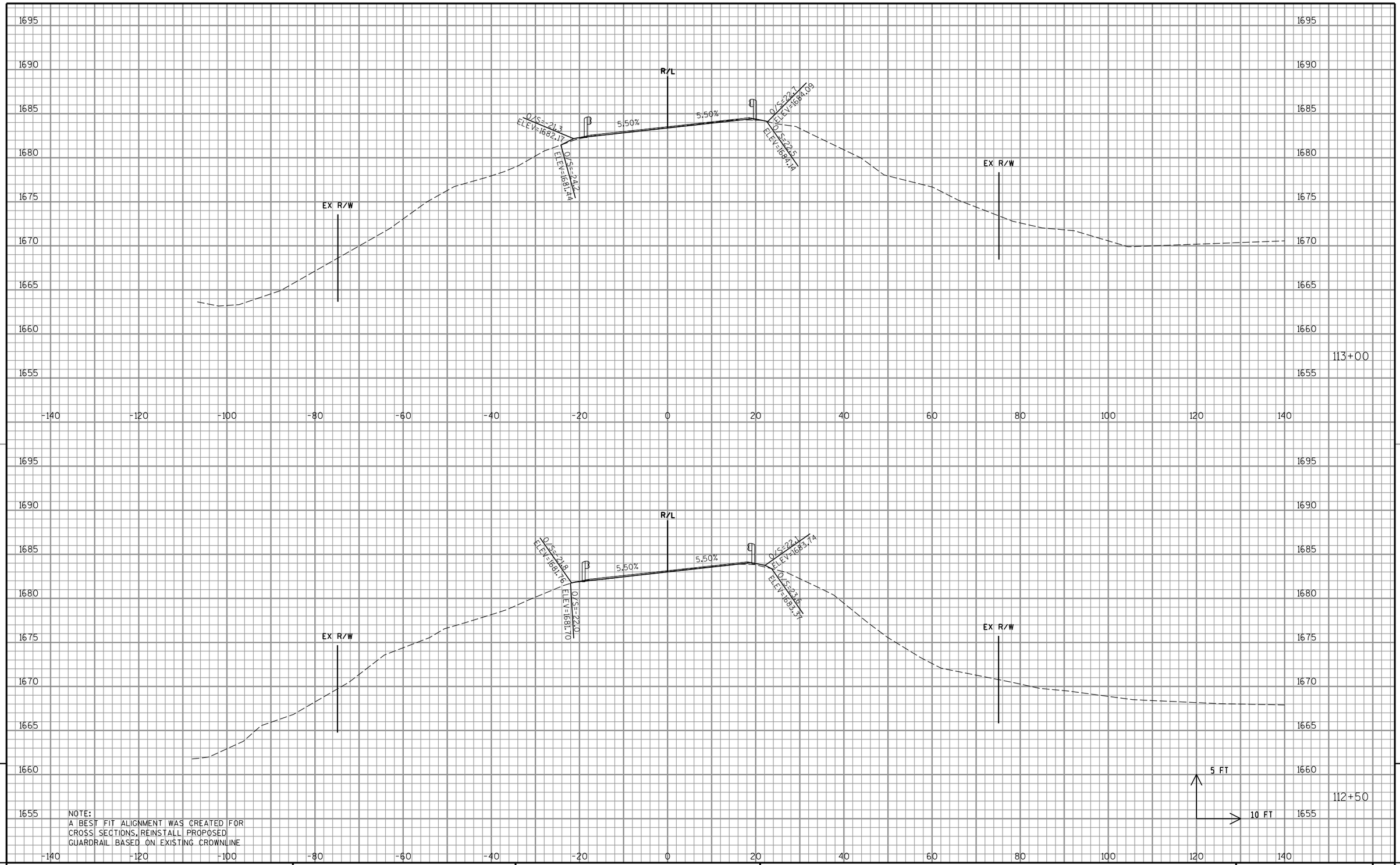


NOTE:
A BEST FIT ALIGNMENT WAS CREATED FOR CROSS SECTIONS, REINSTALL PROPOSED GUARDRAIL BASED ON EXISTING CROWNLINE

PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	CROSS SECTIONS: GUARDRAIL	SHEET 116	E

FILE NAME : P:\47xx\4726.DP.12.STH70.FOR\CADDS\Plan\090201_xs.dgn PLOT DATE : 7/18/2014 PLOT BY : emo PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

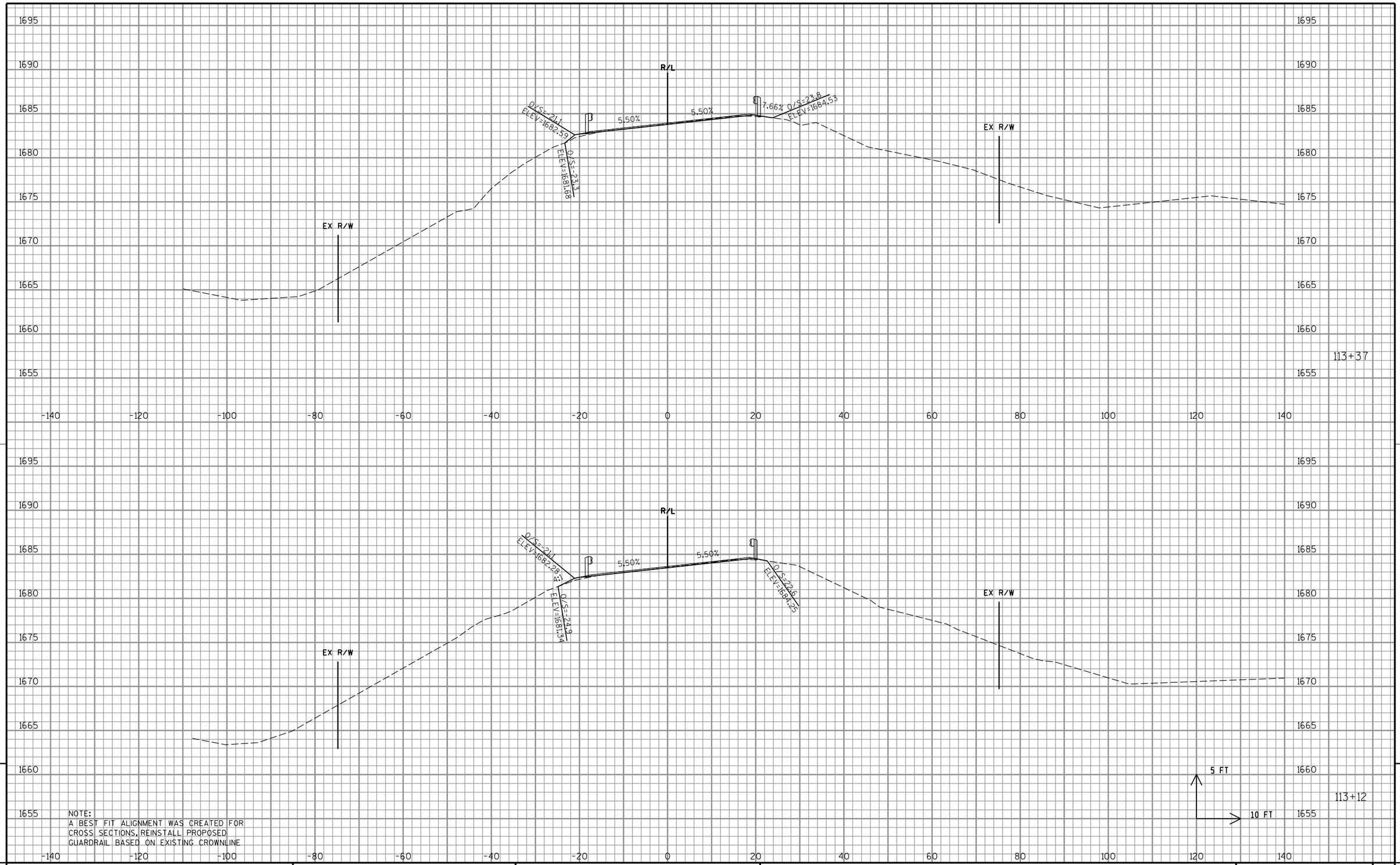


NOTE:
A BEST FIT ALIGNMENT WAS CREATED FOR CROSS SECTIONS. REINSTALL PROPOSED GUARDRAIL BASED ON EXISTING CROWNLINE

PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	CROSS SECTIONS: GUARDRAIL	SHEET 117	E

FILE NAME : P:\47xx\4726.DP.12.STH70.FOR\CADDS\Plan\090201_xs.dgn PLOT DATE : 7/18/2014 PLOT BY : emo PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



NOTE:
A BEST FIT ALIGNMENT WAS CREATED FOR CROSS SECTIONS. REINSTALL PROPOSED GUARDRAIL BASED ON EXISTING CROWNLINE

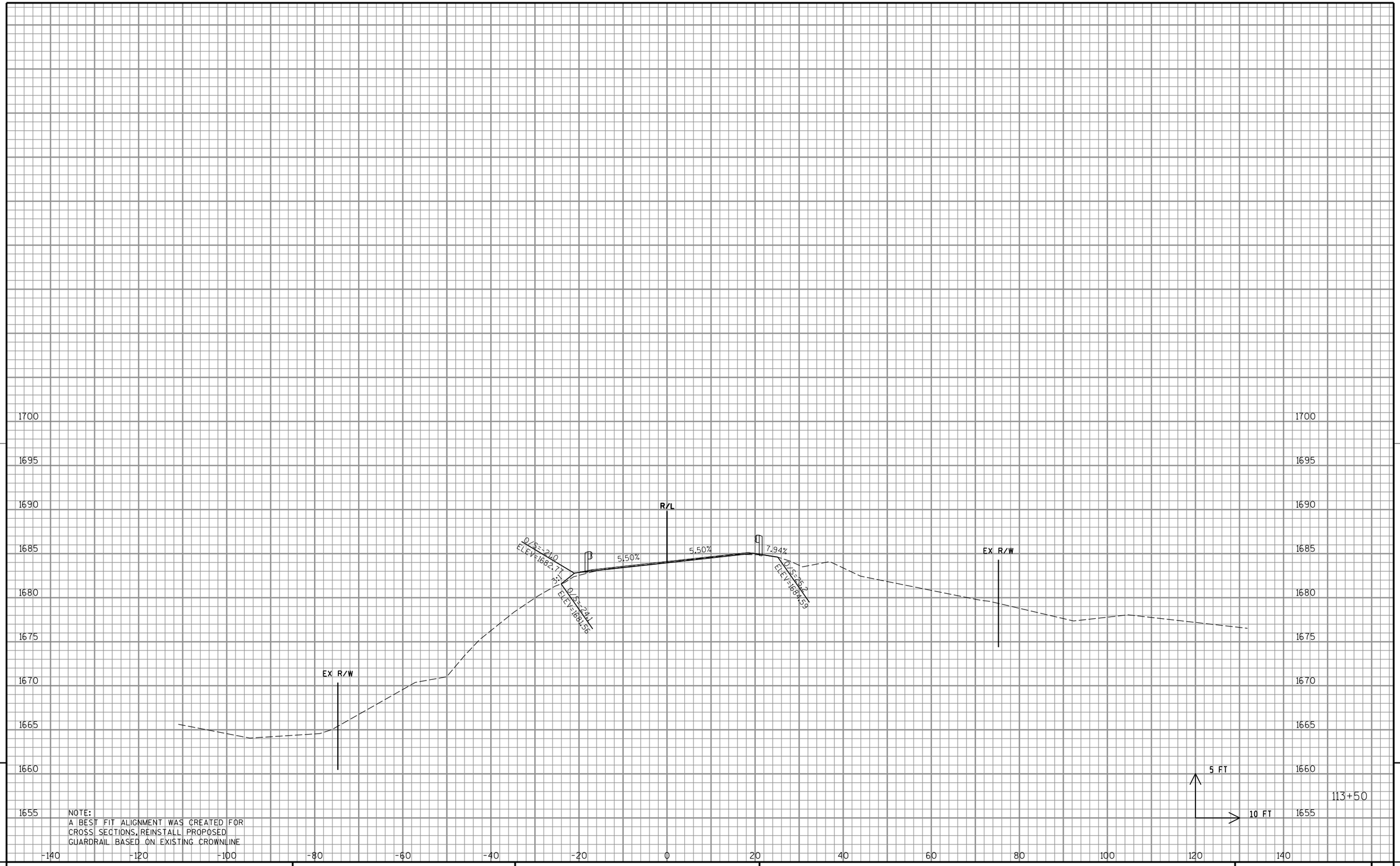
9

9

PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	CROSS SECTIONS: GUARDRAIL	SHEET 118	E

FILE NAME : P:\47xx\4726.DP.12.STH70.FOR\CADDS\Plan\090201_xs.dgn PLOT DATE : 7/18/2014 PLOT BY : emo PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

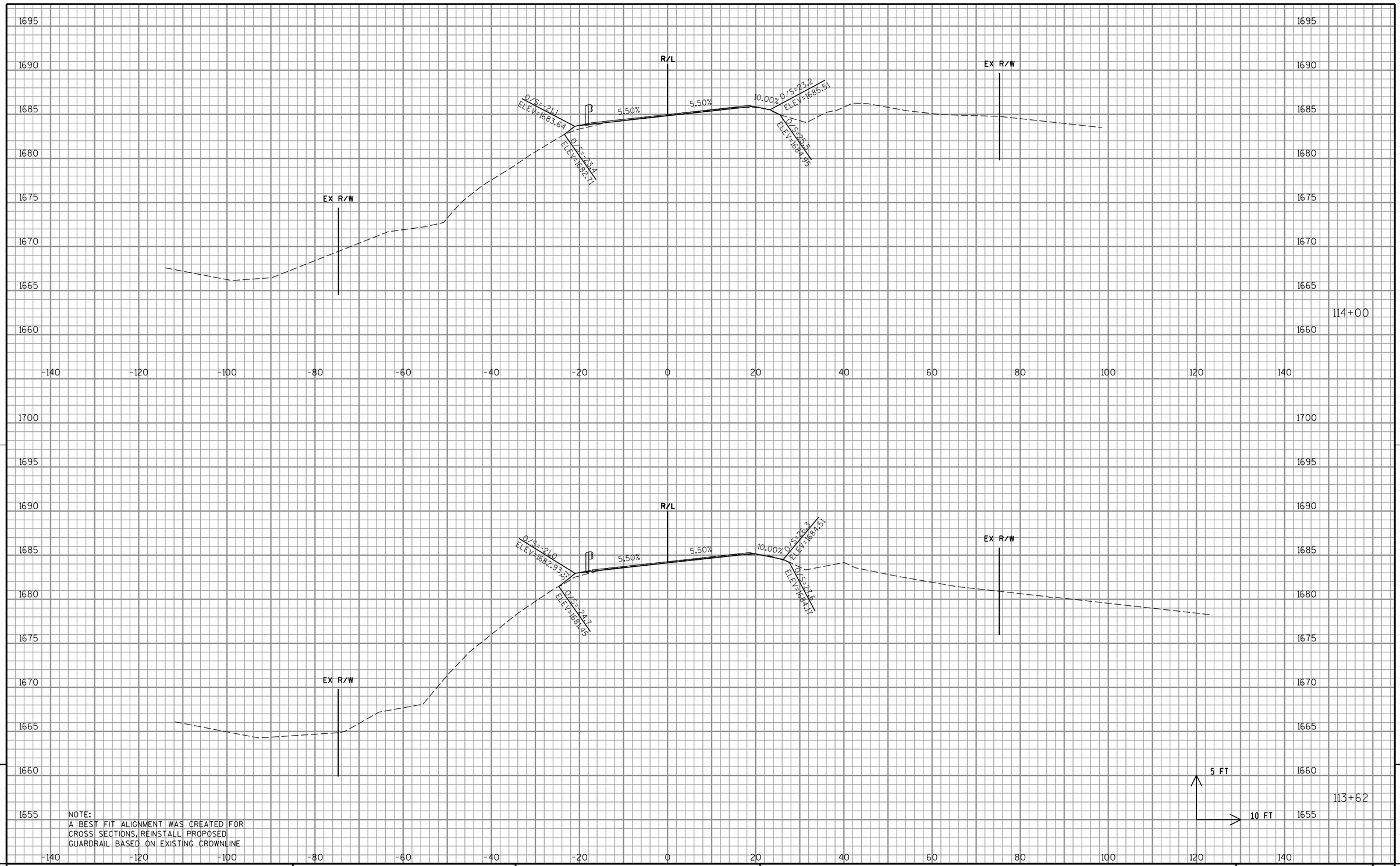


NOTE:
A BEST FIT ALIGNMENT WAS CREATED FOR CROSS SECTIONS, REINSTALL PROPOSED GUARDRAIL BASED ON EXISTING CROWNLINE

PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	CROSS SECTIONS: GUARDRAIL	SHEET 119	E

FILE NAME : P:\47xx\4726.DP.12.STH70.FOR\CADDS\Plan\090201_xs.dgn PLOT DATE : 7/18/2014 PLOT BY : emo PLOT NAME : PLOT SCALE : 1:20

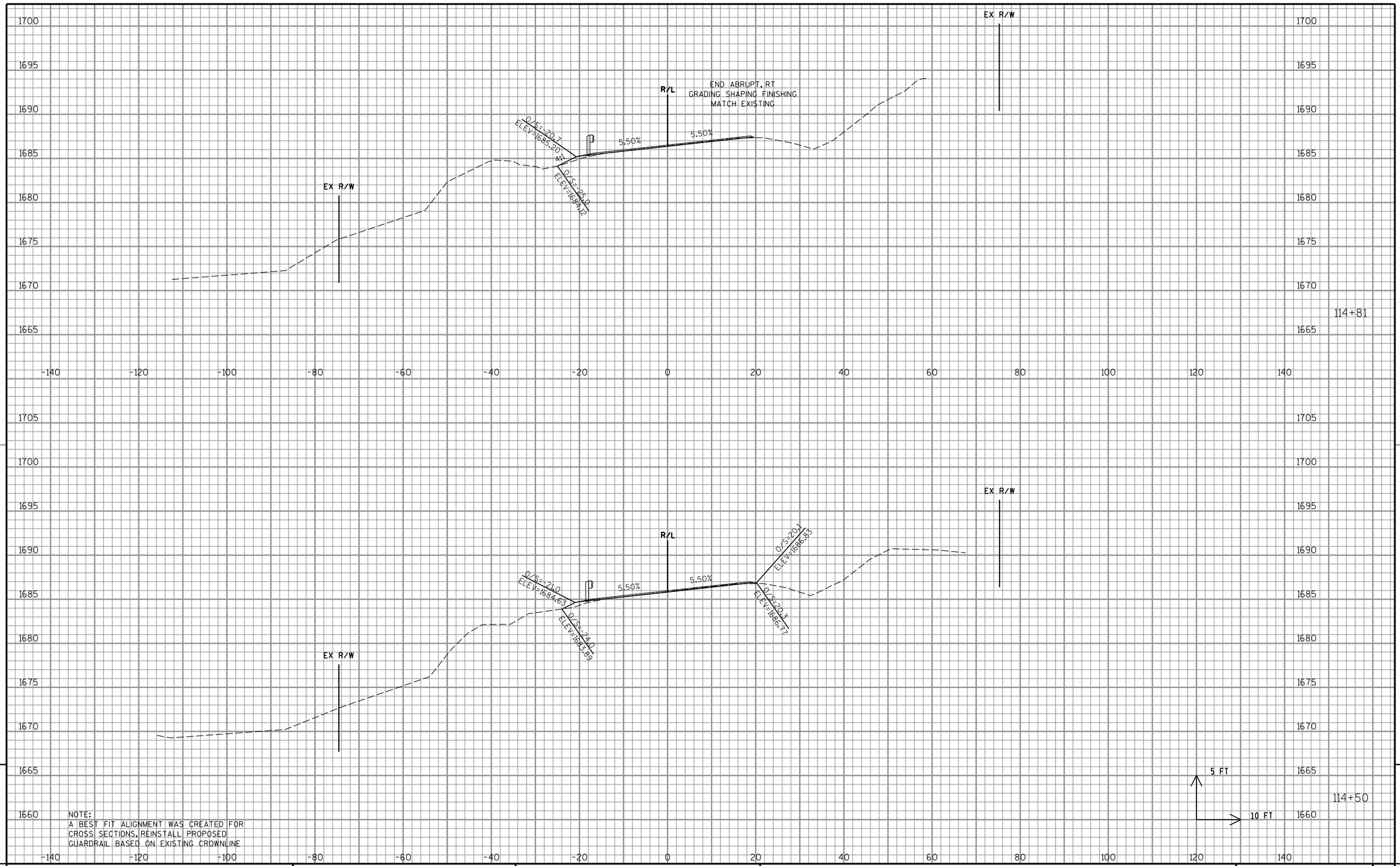
WISDOT/CADDS SHEET 21



PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	CROSS SECTIONS: GUARDRAIL	SHEET 120	E

FILE NAME : P:\47xx\4726.DP.12.STH70.FOR\CADDS\Plan\090201_xs.dgn PLOT DATE : 7/18/2014 PLOT BY : emo PLOT NAME : PLOT SCALE : 1:20

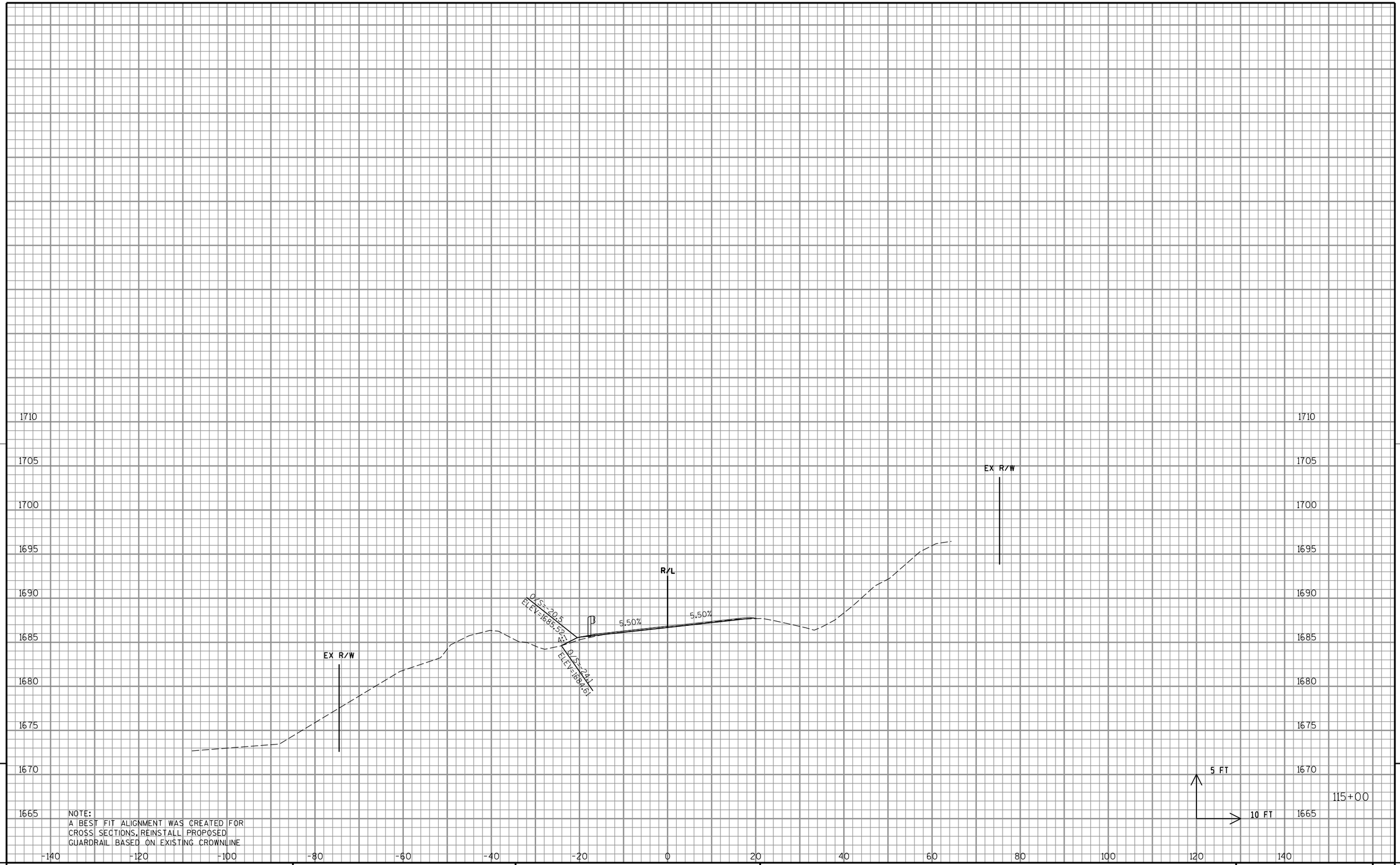
WISDOT/CADDS SHEET 21



PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	CROSS SECTIONS: GUARDRAIL	SHEET 121	E

FILE NAME : P:\47xx\4726.DP.12.STH70.FOR\CADDS\Plan\090201_xs.dgn PLOT DATE : 7/18/2014 PLOT BY : emo PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

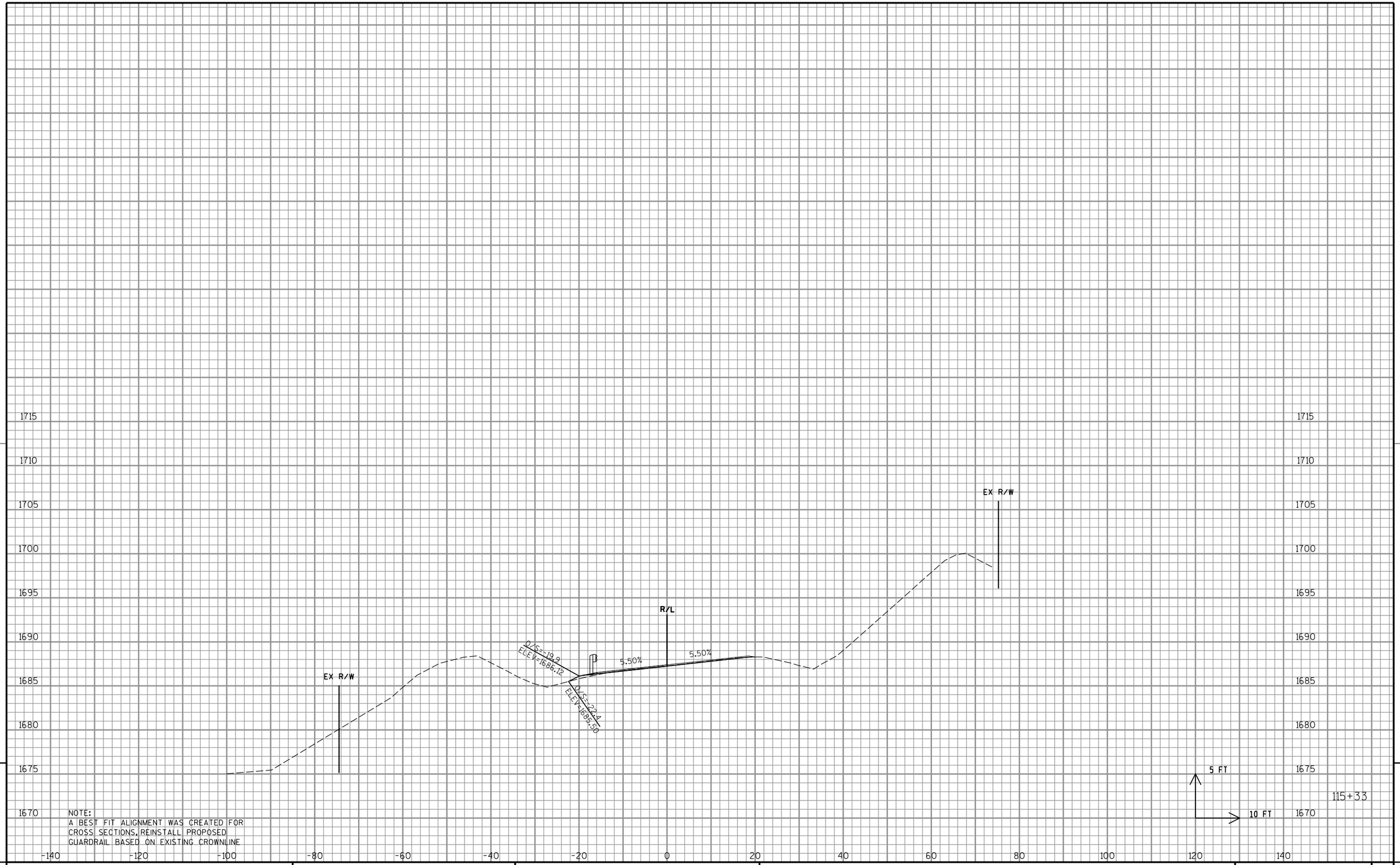


NOTE:
A BEST FIT ALIGNMENT WAS CREATED FOR CROSS SECTIONS, REINSTALL PROPOSED GUARDRAIL BASED ON EXISTING CROWNLINE

PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	CROSS SECTIONS: GUARDRAIL	SHEET 122	E

FILE NAME : P:\47xx\4726.DP.12.STH70.FOR\CADDS\Plan\090201_xs.dgn PLOT DATE : 7/18/2014 PLOT BY : emo PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



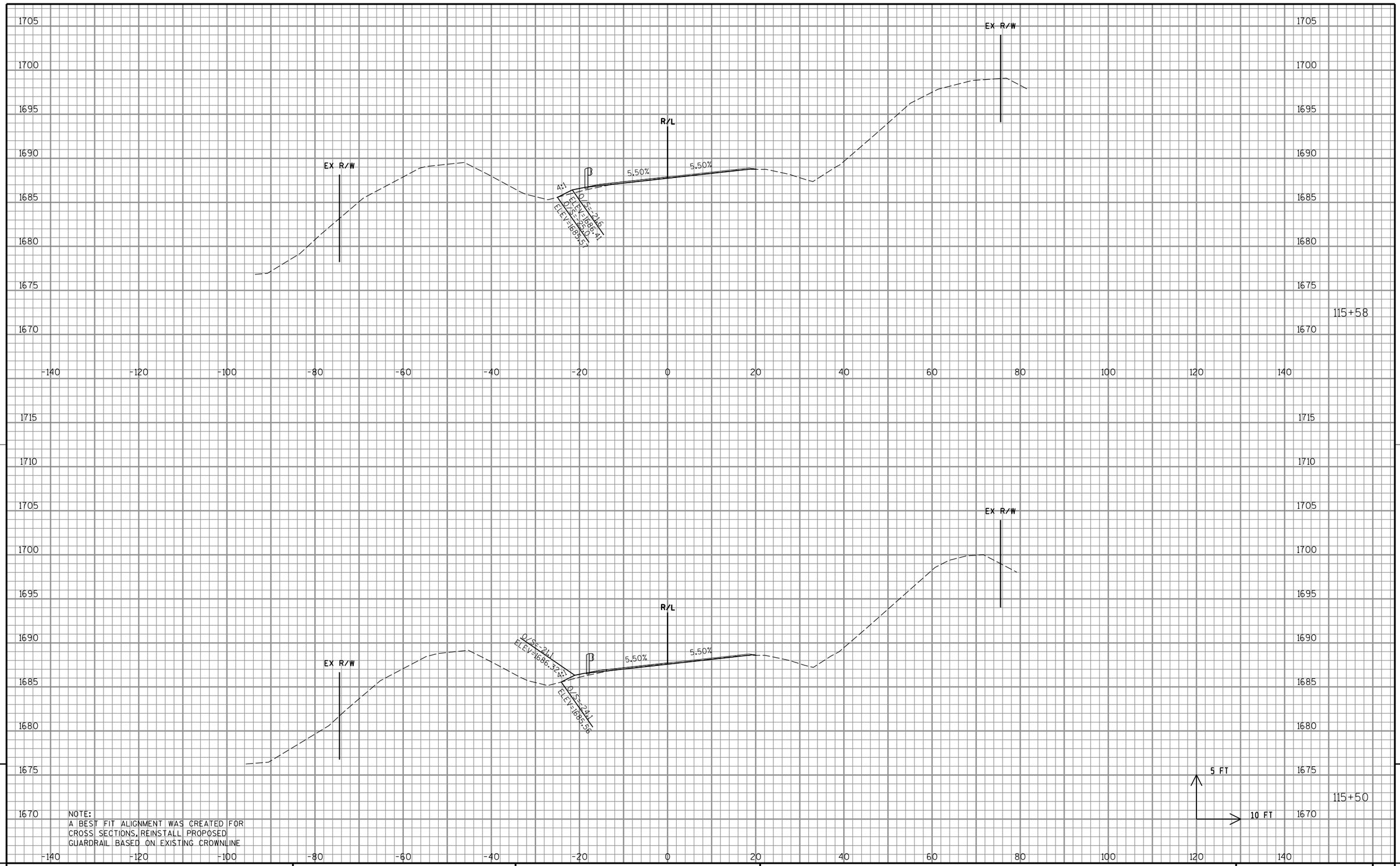
9

9

PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	CROSS SECTIONS: GUARDRAIL	SHEET 123	E

FILE NAME : P:\47xx\4726.DP.12.STH70.FOR\CADDS\Plan\090201_xs.dgn PLOT DATE : 7/18/2014 PLOT BY : emo PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



NOTE:
A BEST FIT ALIGNMENT WAS CREATED FOR CROSS SECTIONS, REINSTALL PROPOSED GUARDRAIL BASED ON EXISTING CROWNLINE

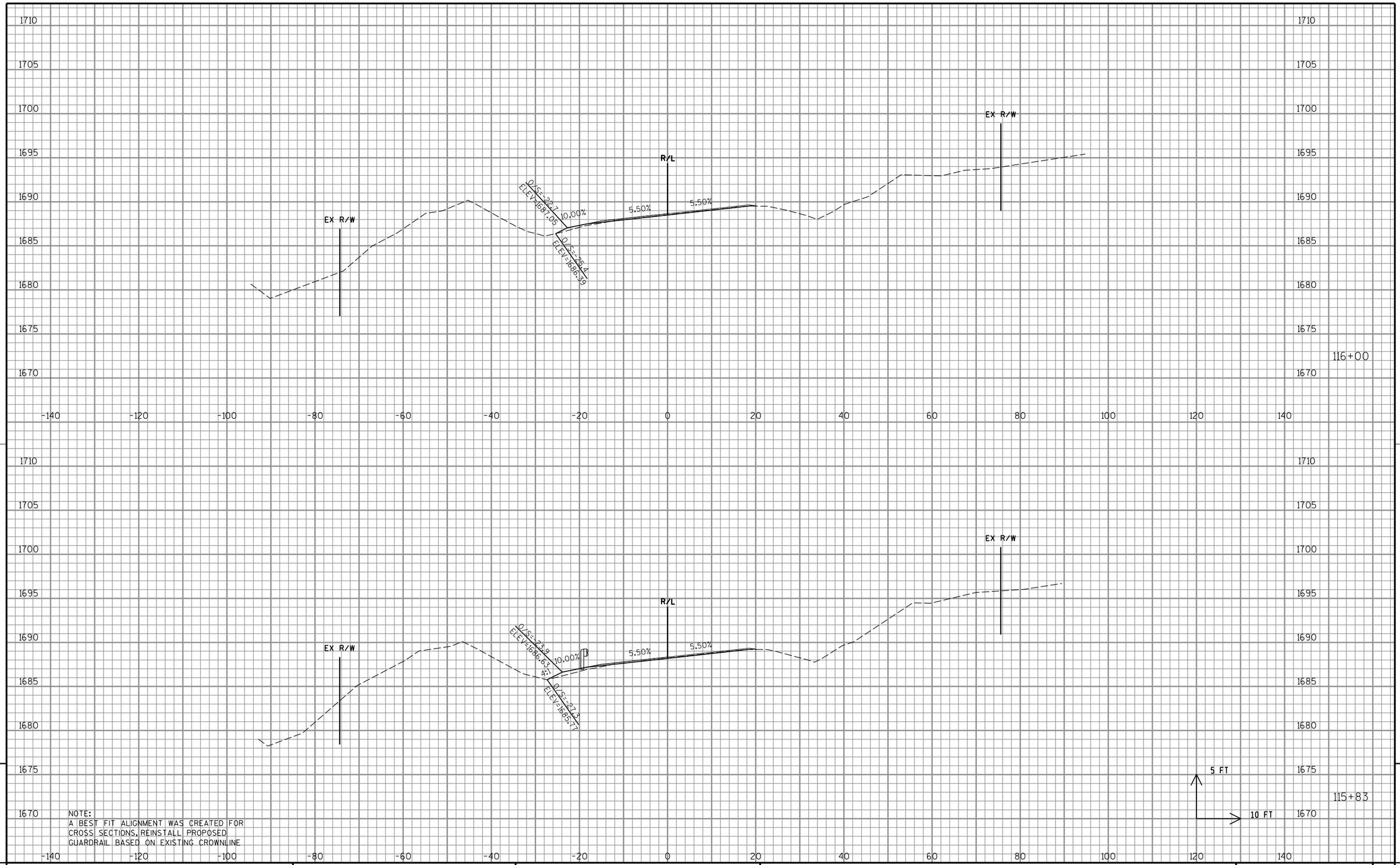
9

9

PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	CROSS SECTIONS: GUARDRAIL	SHEET 124	E

FILE NAME : P:\47xx\4726.DP.12.STH70.FOR\CADDS\Plan\090201_xs.dgn PLOT DATE : 7/18/2014 PLOT BY : emo PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

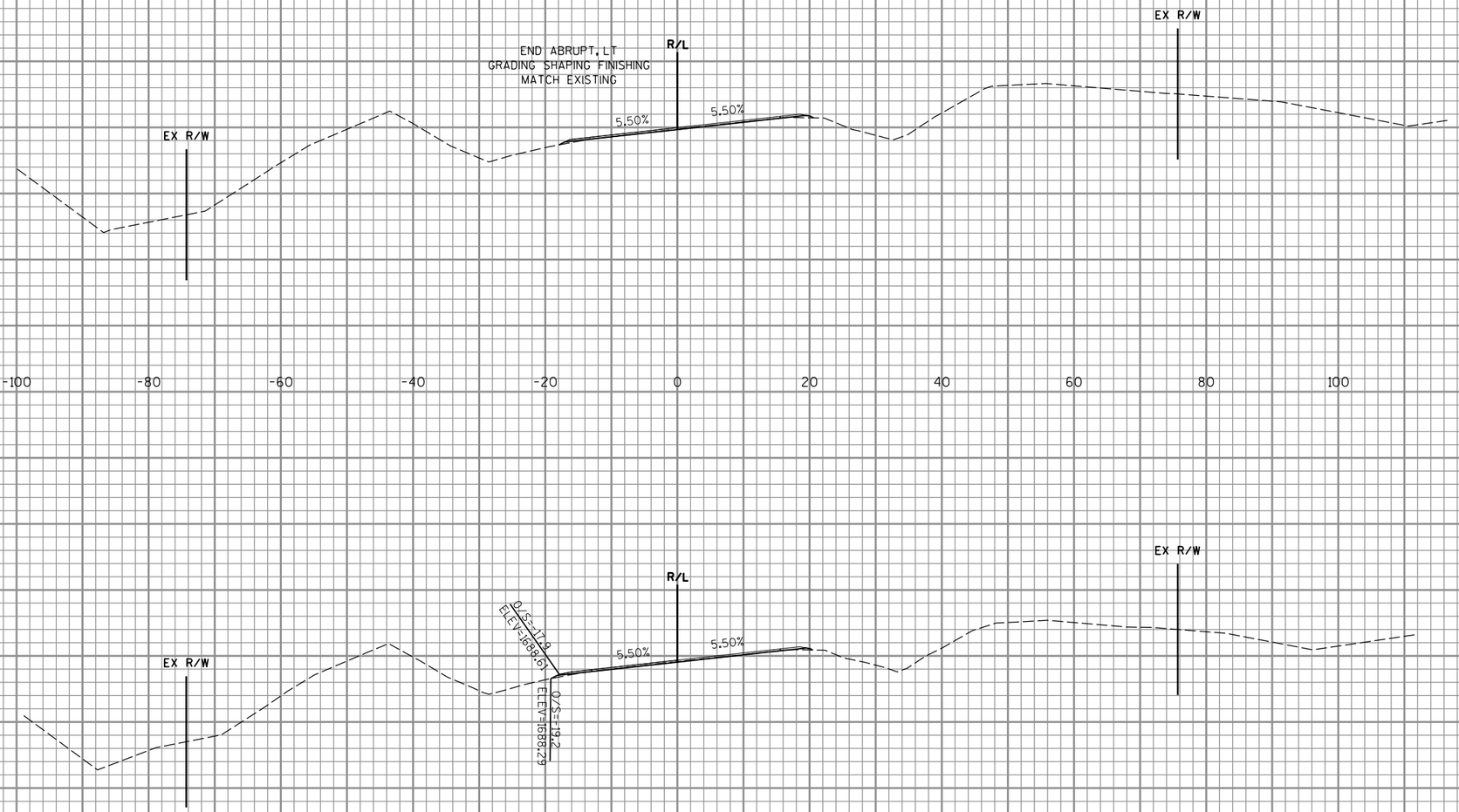


NOTE:
A BEST FIT ALIGNMENT WAS CREATED FOR CROSS SECTIONS. REINSTALL PROPOSED GUARDRAIL BASED ON EXISTING CROWNLINE

PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	CROSS SECTIONS: GUARDRAIL	SHEET 125	E

FILE NAME : P:\47xx\4726.DP.12.STH70.FOR\CADDS\Plan\090201_xs.dgn PLOT DATE : 7/18/2014 PLOT BY : emo PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



116+64

116+50

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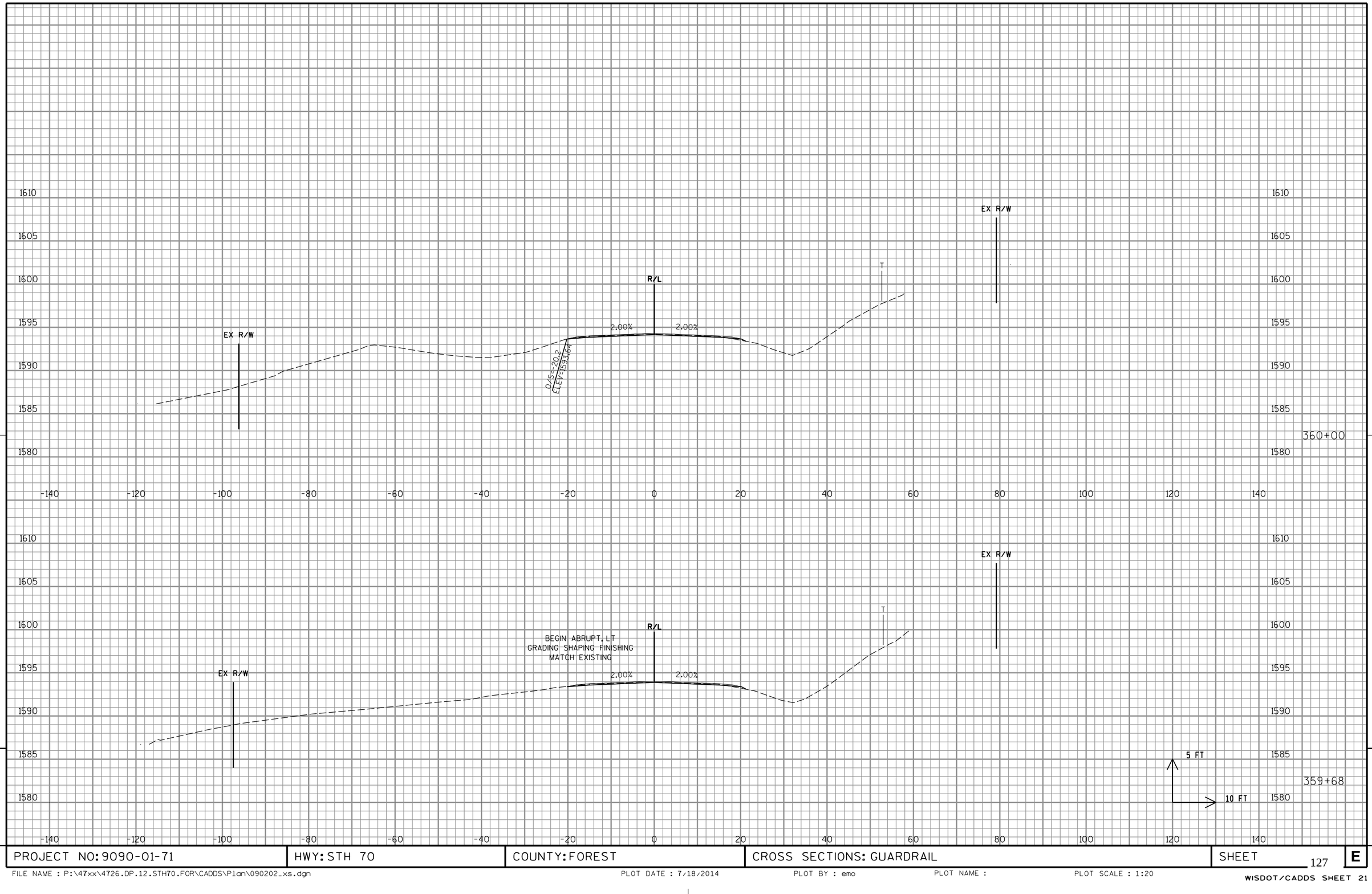
PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	CROSS SECTIONS: GUARDRAIL	SHEET 126	E

FILE NAME : P:\47xx\4726.DP.12.STH70.FOR\CADDS\Plan\090201_xs.dgn PLOT DATE : 7/18/2014 PLOT BY : emo PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



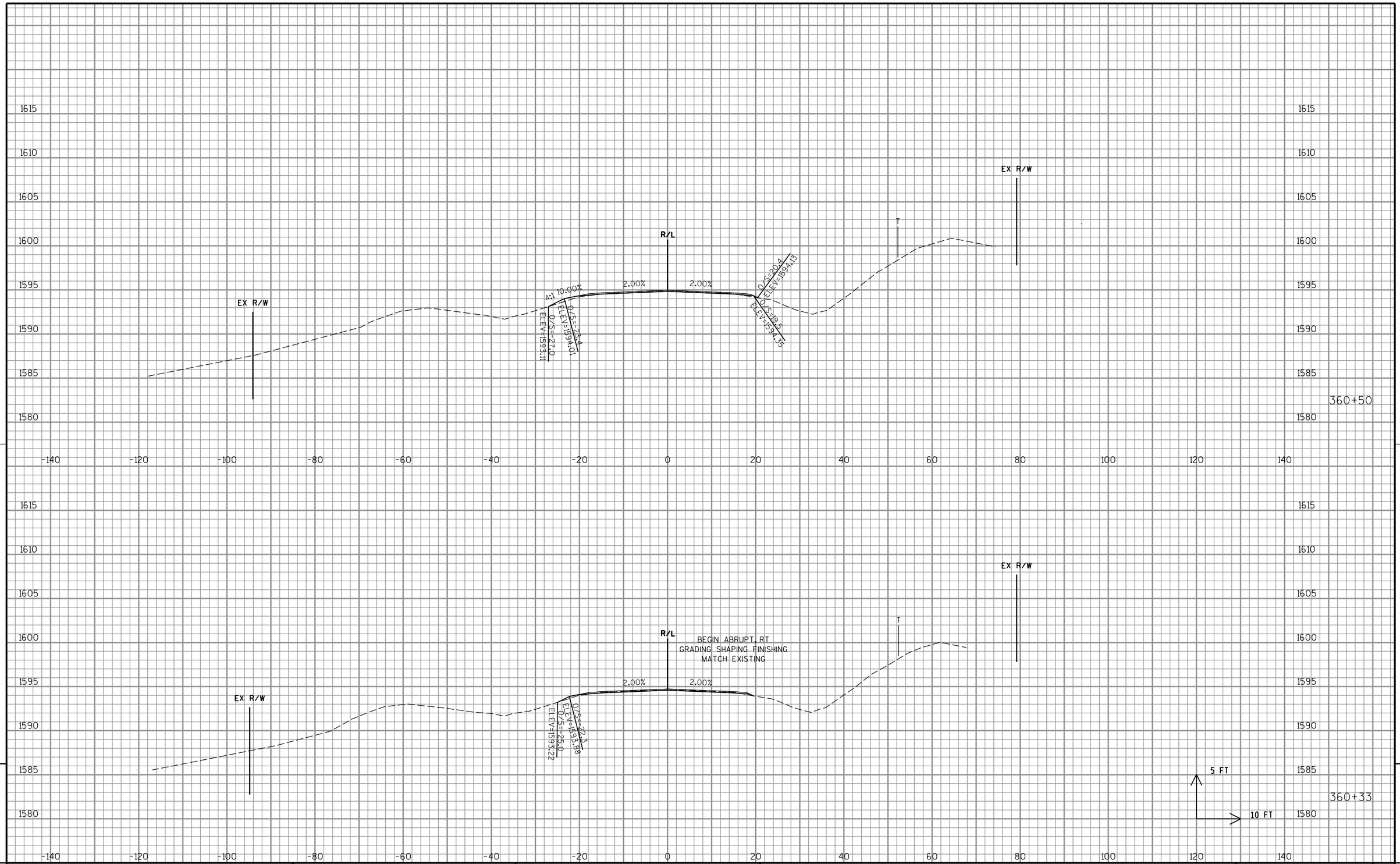
9

9

PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	CROSS SECTIONS: GUARDRAIL	SHEET 127	E

FILE NAME : P:\47xx\4726.DP.12.STH70.FOR\CADDS\Plan\090202_xs.dgn PLOT DATE : 7/18/2014 PLOT BY : emo PLOT NAME : PLOT SCALE : 1:20

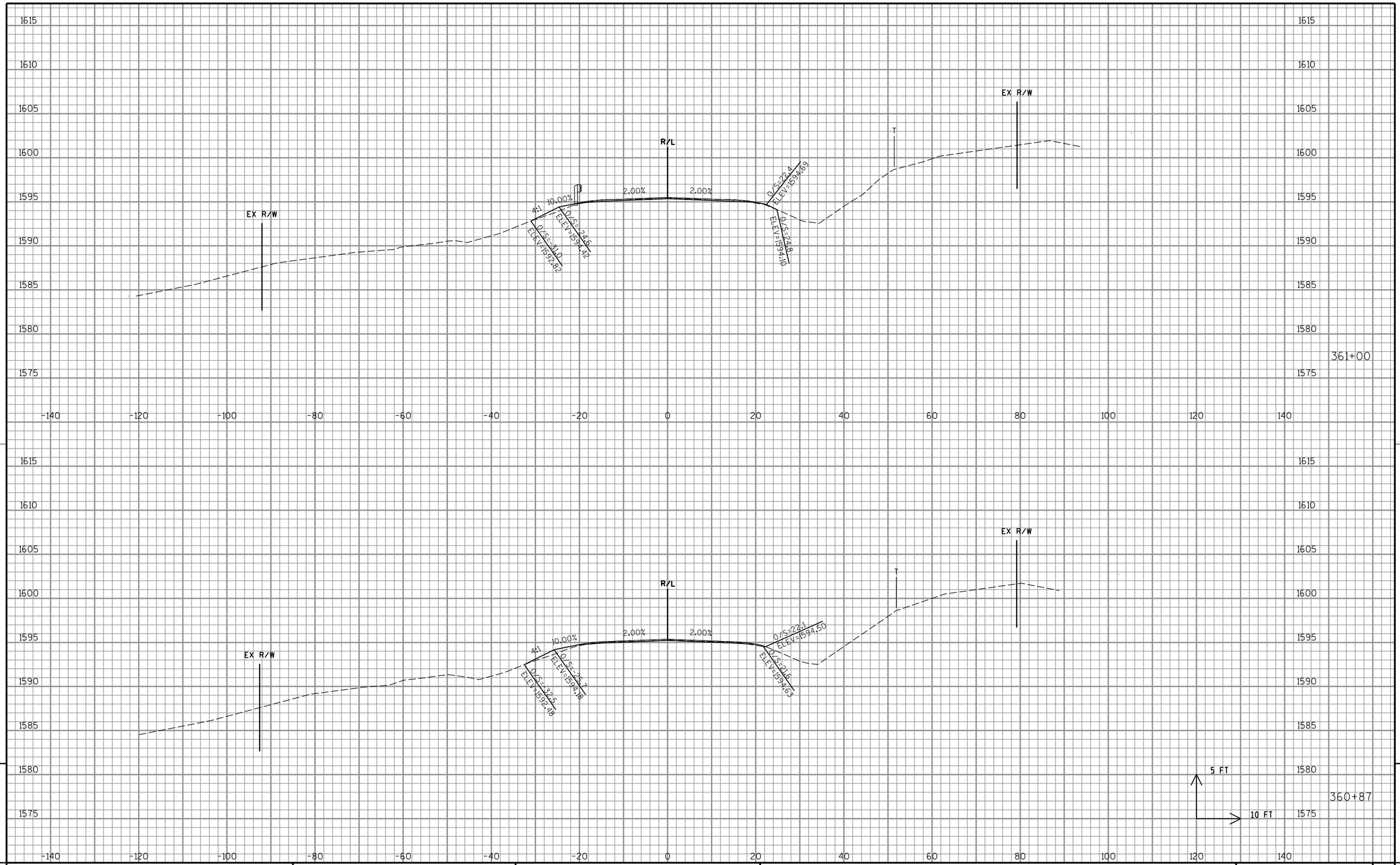
WISDOT/CADDS SHEET 21



9

PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	CROSS SECTIONS: GUARDRAIL	SHEET 128	E

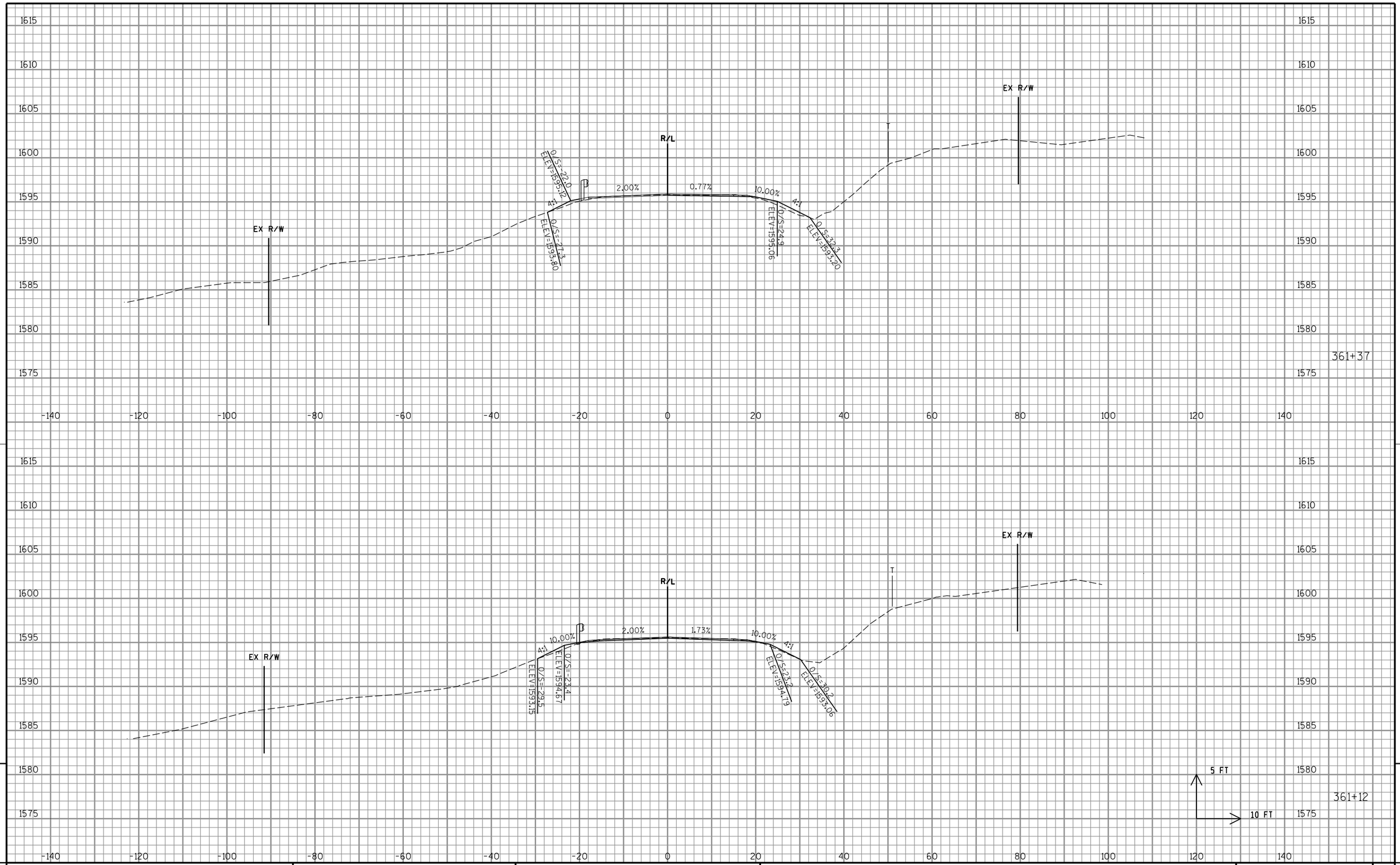
9



PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	CROSS SECTIONS: GUARDRAIL	SHEET 129	E

FILE NAME : P:\47xx\4726.DP.12.STH70.FOR\CADDS\Plan\090202_xs.dgn PLOT DATE : 7/18/2014 PLOT BY : emo PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



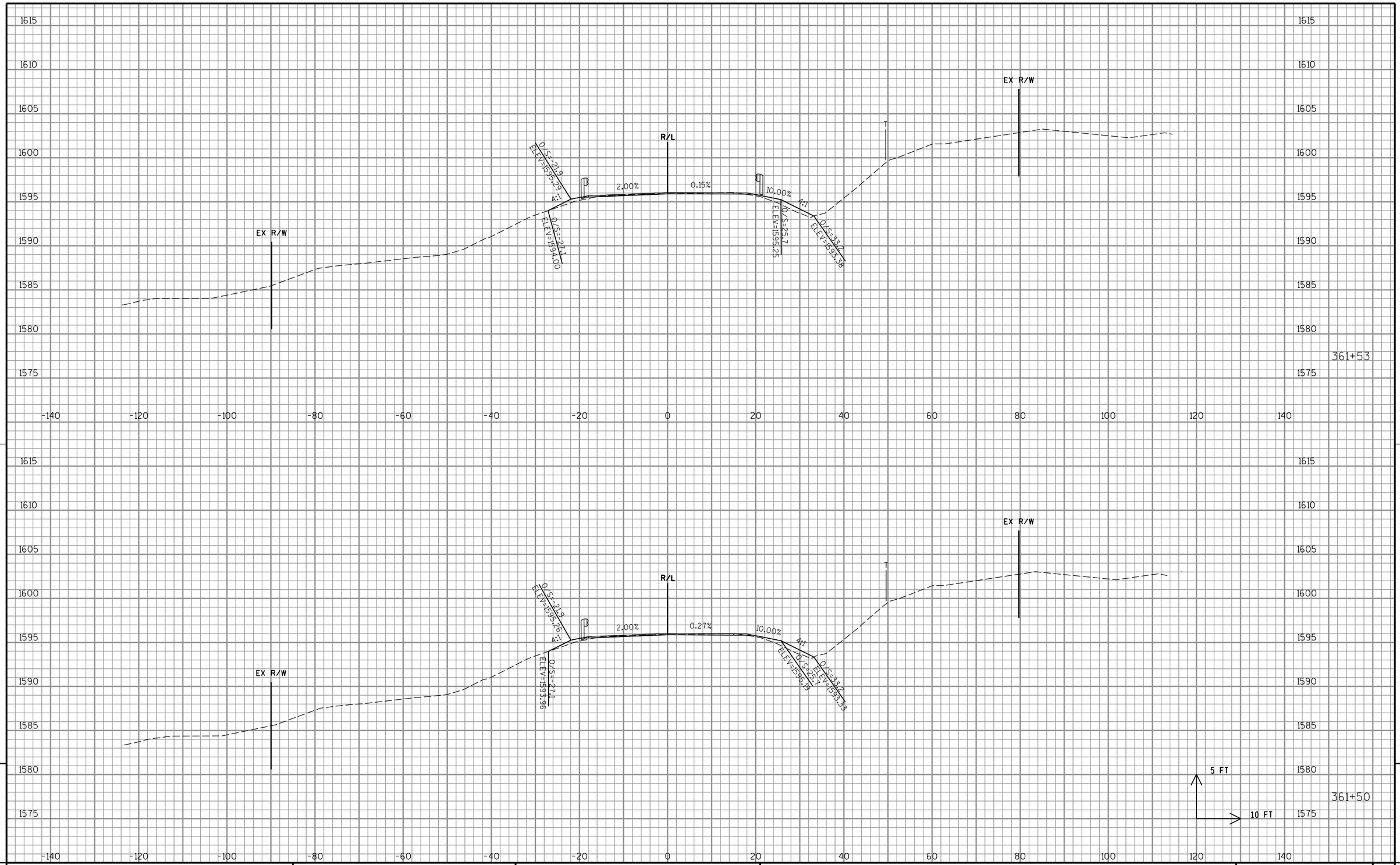
9

PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	CROSS SECTIONS: GUARDRAIL	SHEET 130	E

FILE NAME : P:\47xx\4726.DP.12.STH70.FOR\CADDS\Plan\090202_xs.dgn PLOT DATE : 7/18/2014 PLOT BY : emo PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

9



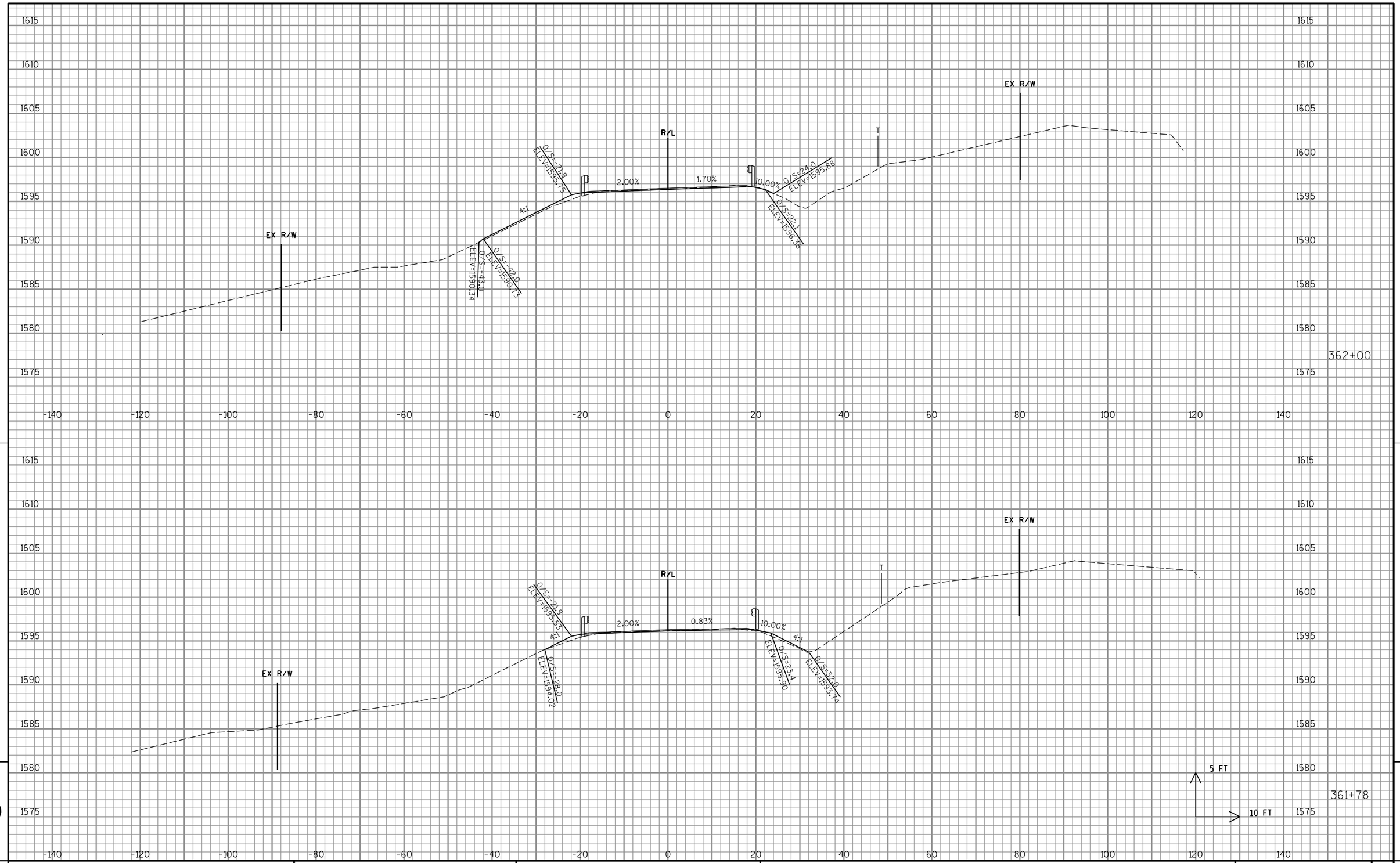
9

9

PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	CROSS SECTIONS: GUARDRAIL	SHEET 131	E

FILE NAME : P:\47xx\4726.DP.12.STH70.FOR\CADDS\Plan\090202_xs.dgn PLOT DATE : 7/18/2014 PLOT BY : emo PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

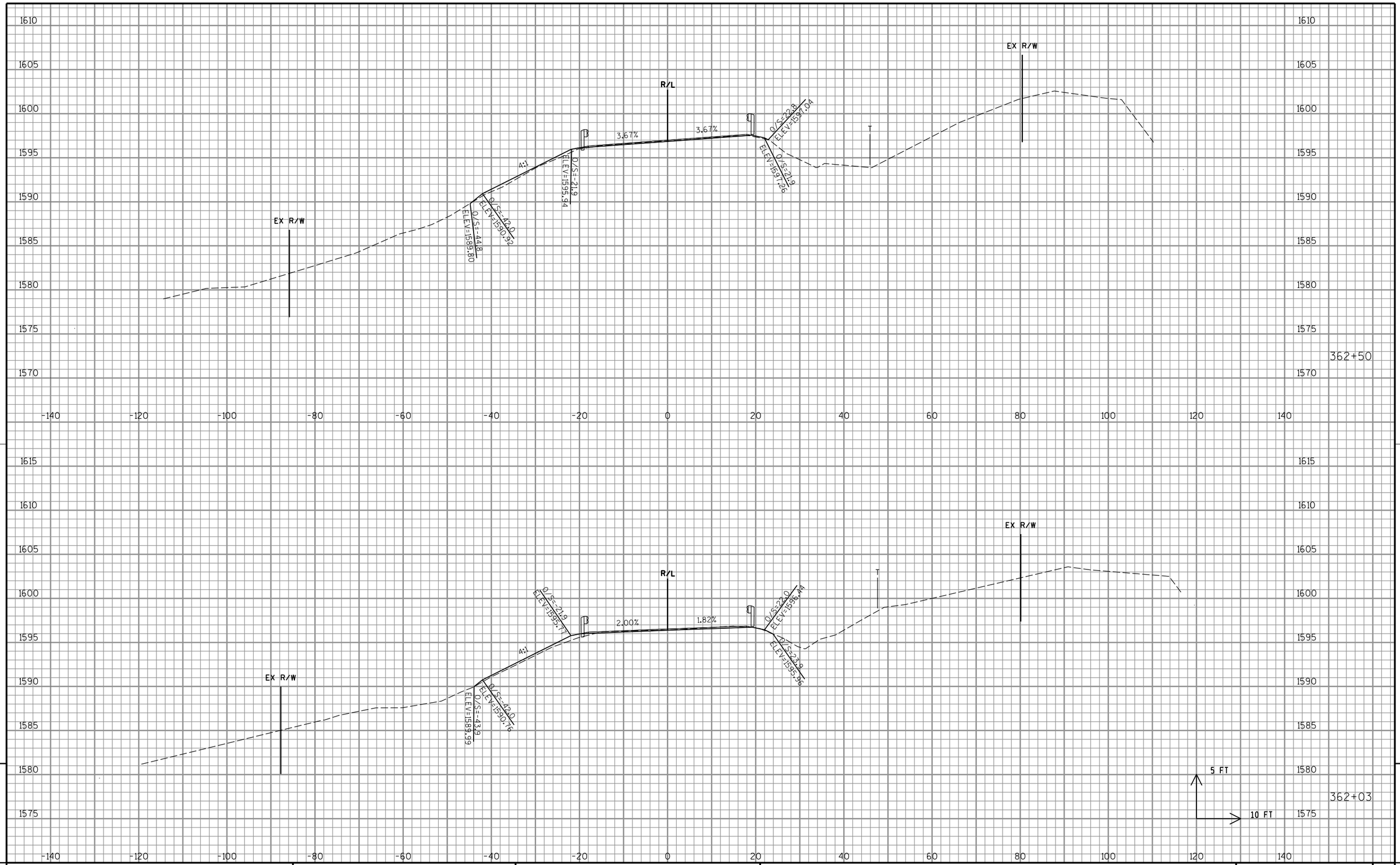


9

PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	CROSS SECTIONS: GUARDRAIL	SHEET 132	E

FILE NAME : P:\47xx\4726.DP.12.STH70.FOR\CADDS\Plan\090202_xs.dgn PLOT DATE : 7/18/2014 PLOT BY : emo PLOT NAME : PLOT SCALE : 1:20

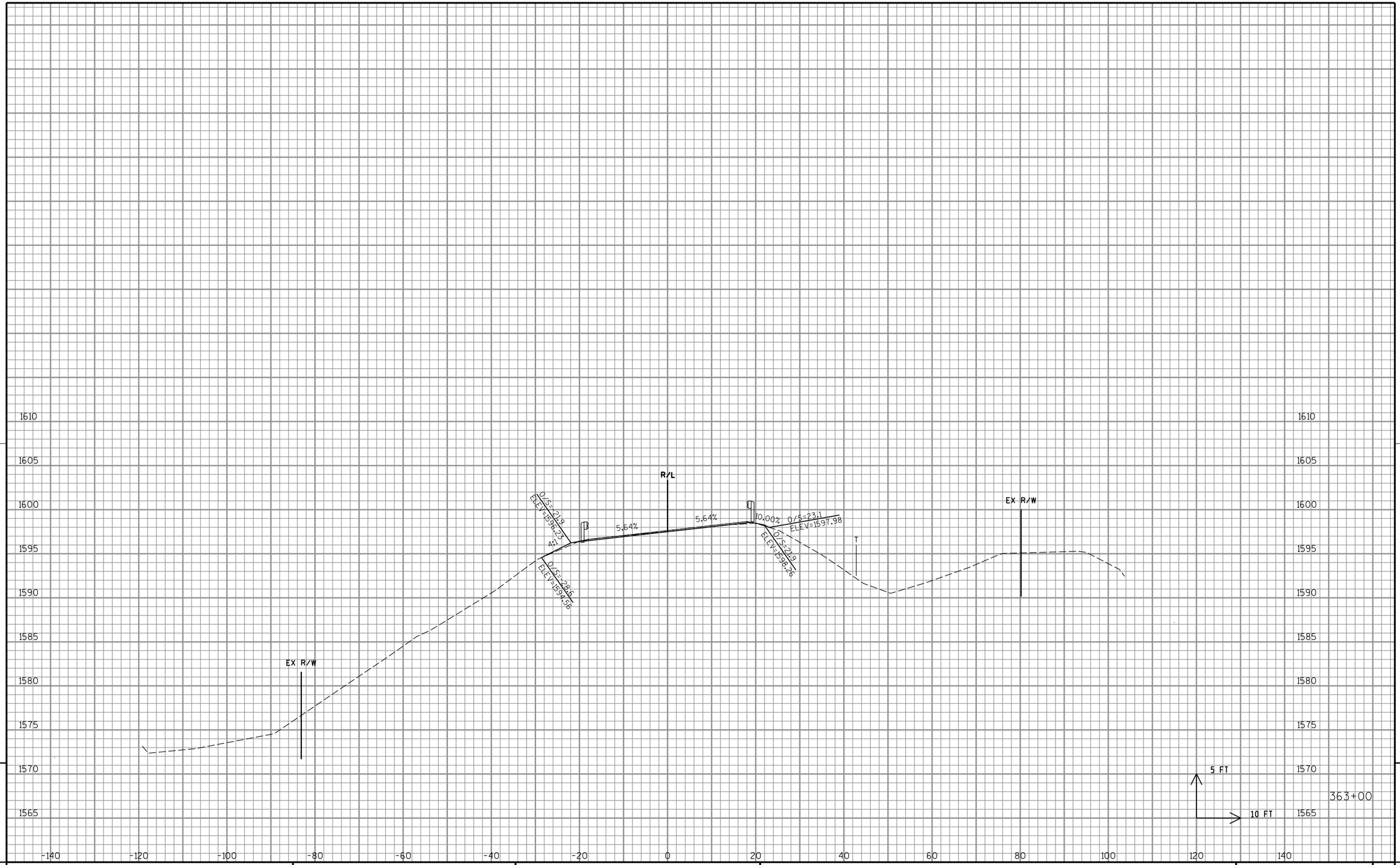
WISDOT/CADDS SHEET 21



PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	CROSS SECTIONS: GUARDRAIL	SHEET 133	E

FILE NAME : P:\47xx\4726.DP.12.STH70.FOR\CADDS\Plan\090202_xs.dgn PLOT DATE : 7/18/2014 PLOT BY : emo PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



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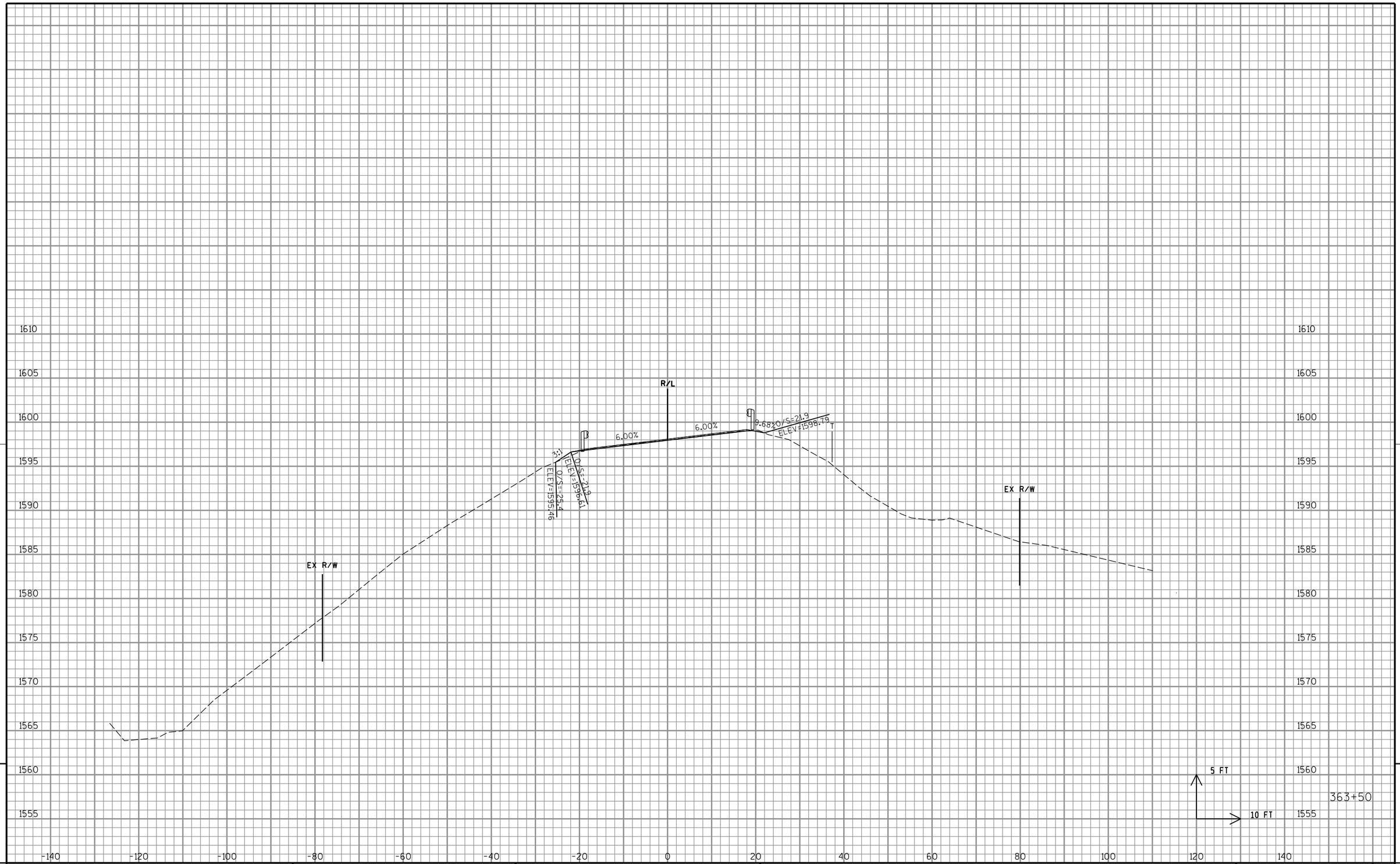
PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	CROSS SECTIONS: GUARDRAIL	SHEET 134	E

FILE NAME : P:\47xx\4726.DP.12.STH70.FOR\CADDS\Plan\090202_xs.dgn PLOT DATE : 7/18/2014 PLOT BY : emo PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



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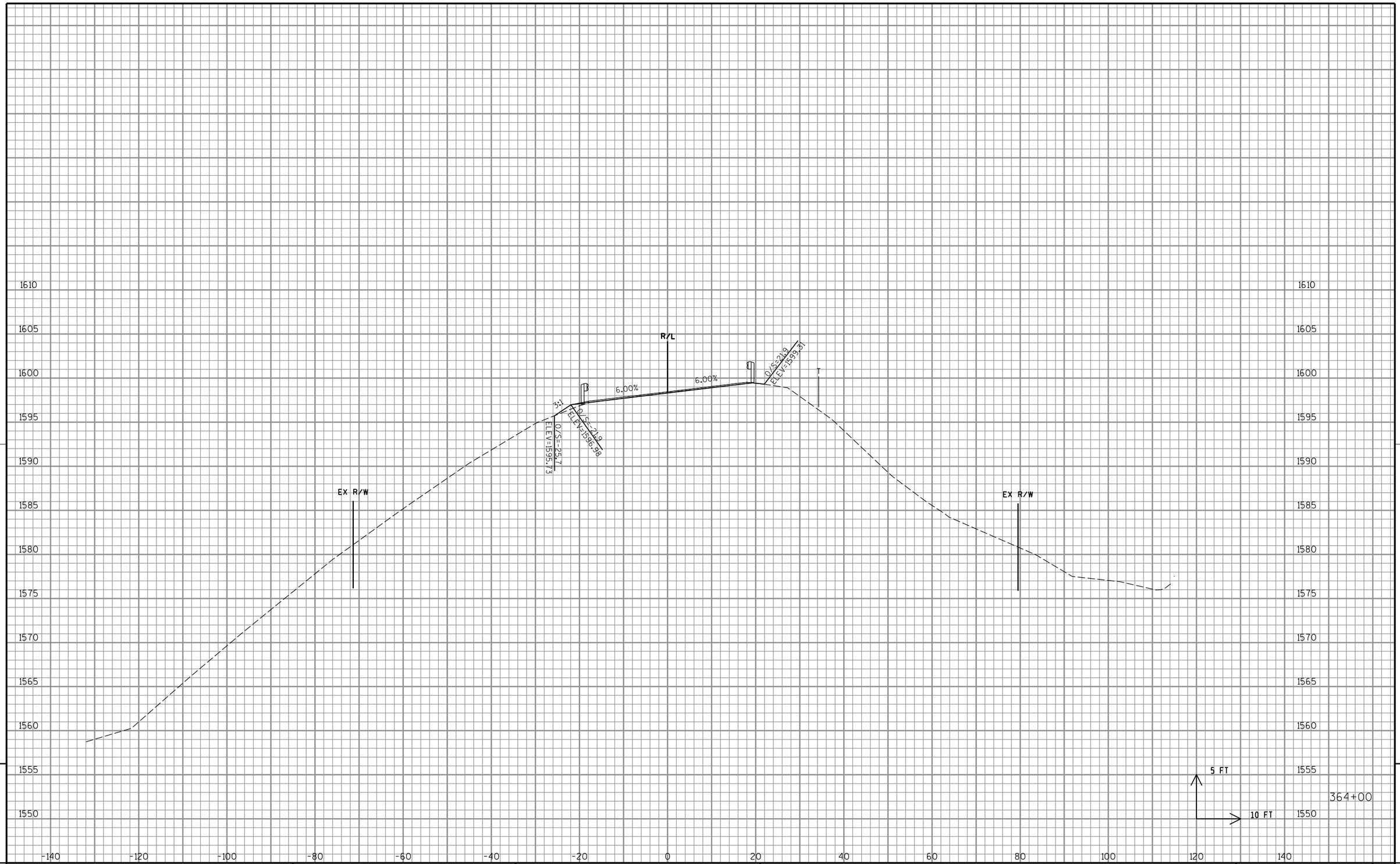
PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	CROSS SECTIONS: GUARDRAIL	SHEET 135	E

FILE NAME : P:\47xx\4726.DP.12.STH70.FOR\CADDS\Plan\090202_xs.dgn PLOT DATE : 7/18/2014 PLOT BY : emo PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



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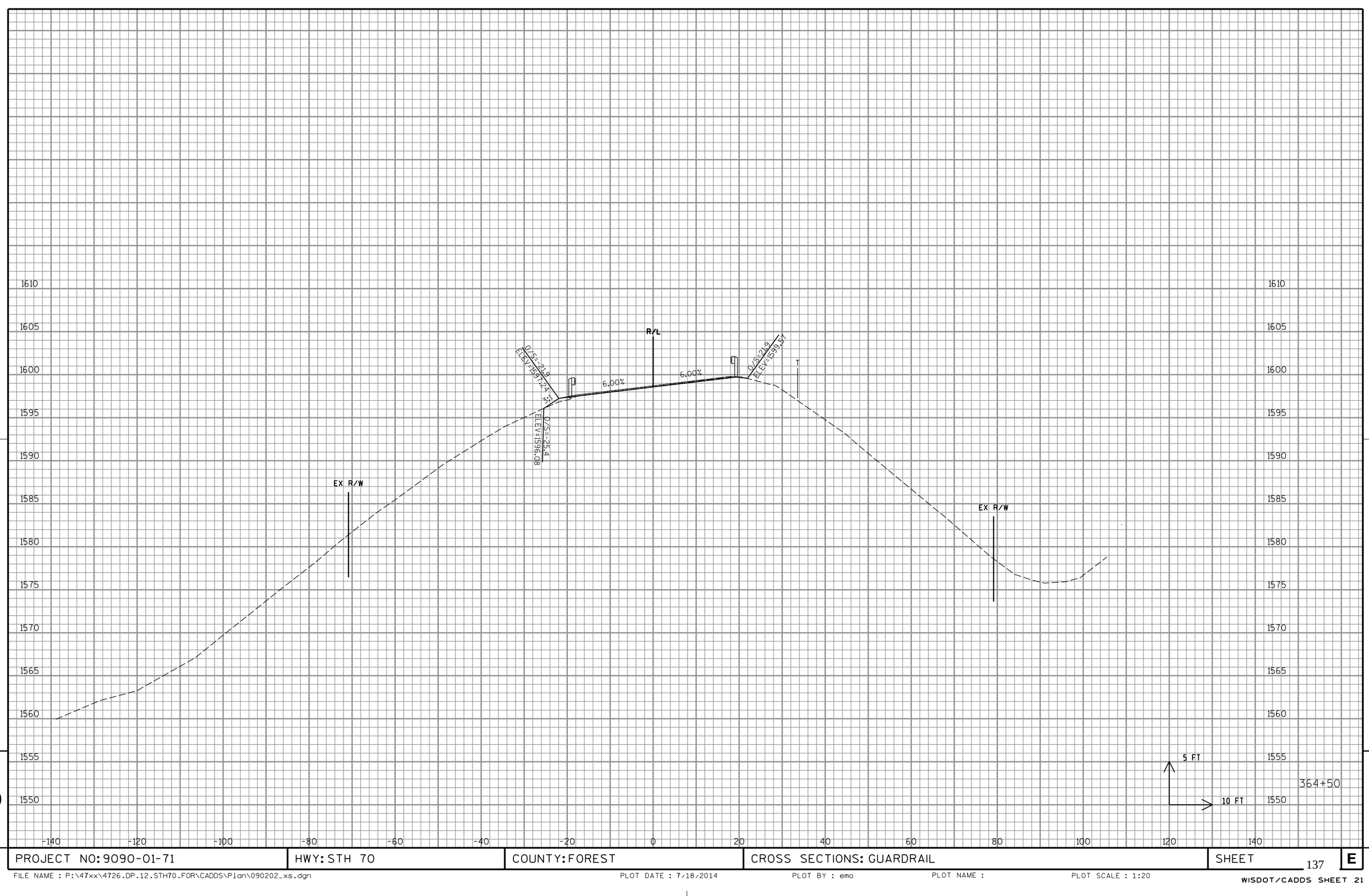
PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	CROSS SECTIONS: GUARDRAIL	SHEET 136	E

9

FILE NAME : P:\47xx\4726.DP.12.STH70.FOR\CADDS\Plan\090202_xs.dgn PLOT DATE : 7/18/2014 PLOT BY : emo PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



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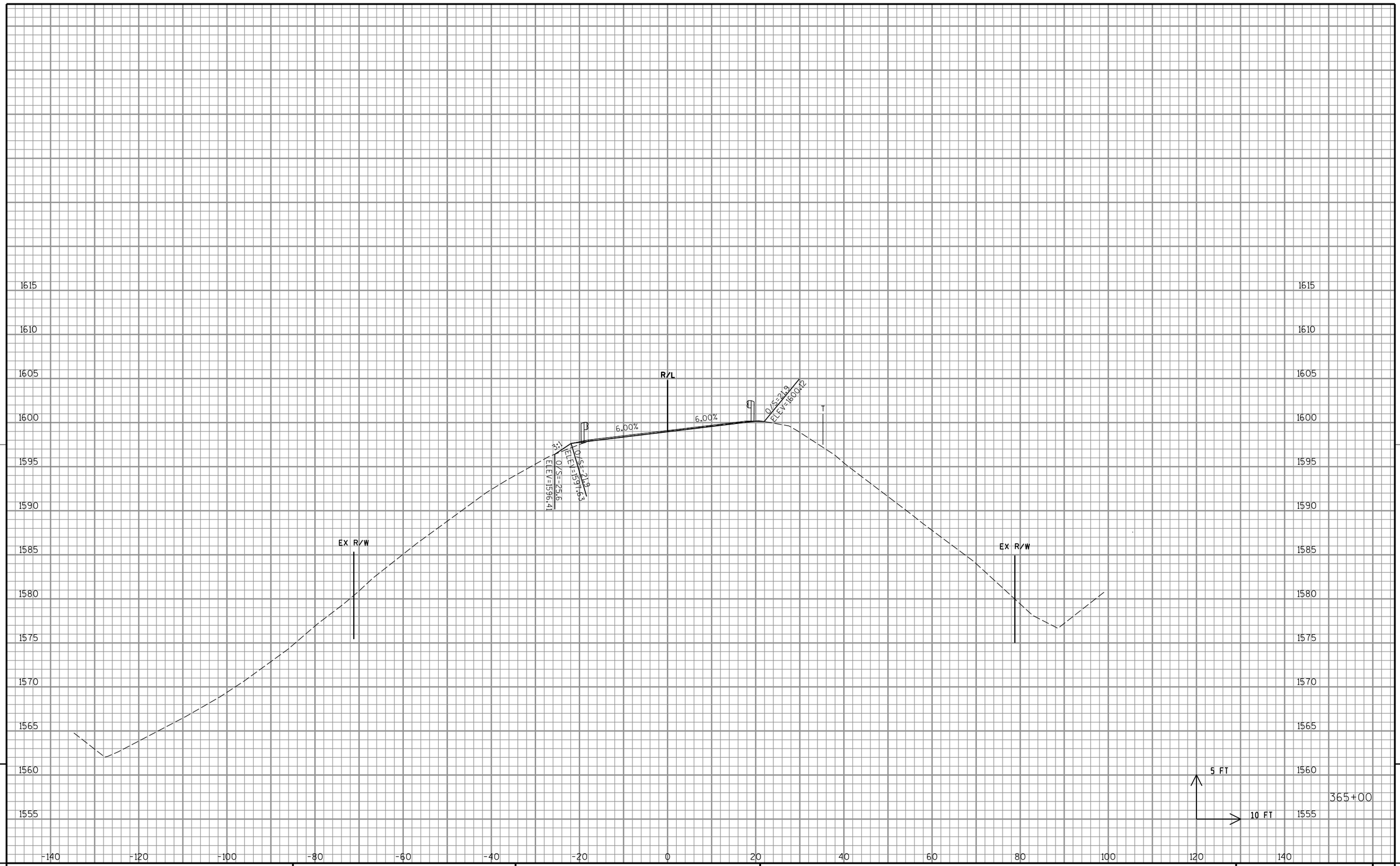
PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	CROSS SECTIONS: GUARDRAIL	SHEET 137	E

FILE NAME : P:\47xx\4726.DP.12.STH70.FOR\CADDS\Plan\090202_xs.dgn PLOT DATE : 7/18/2014 PLOT BY : emo PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



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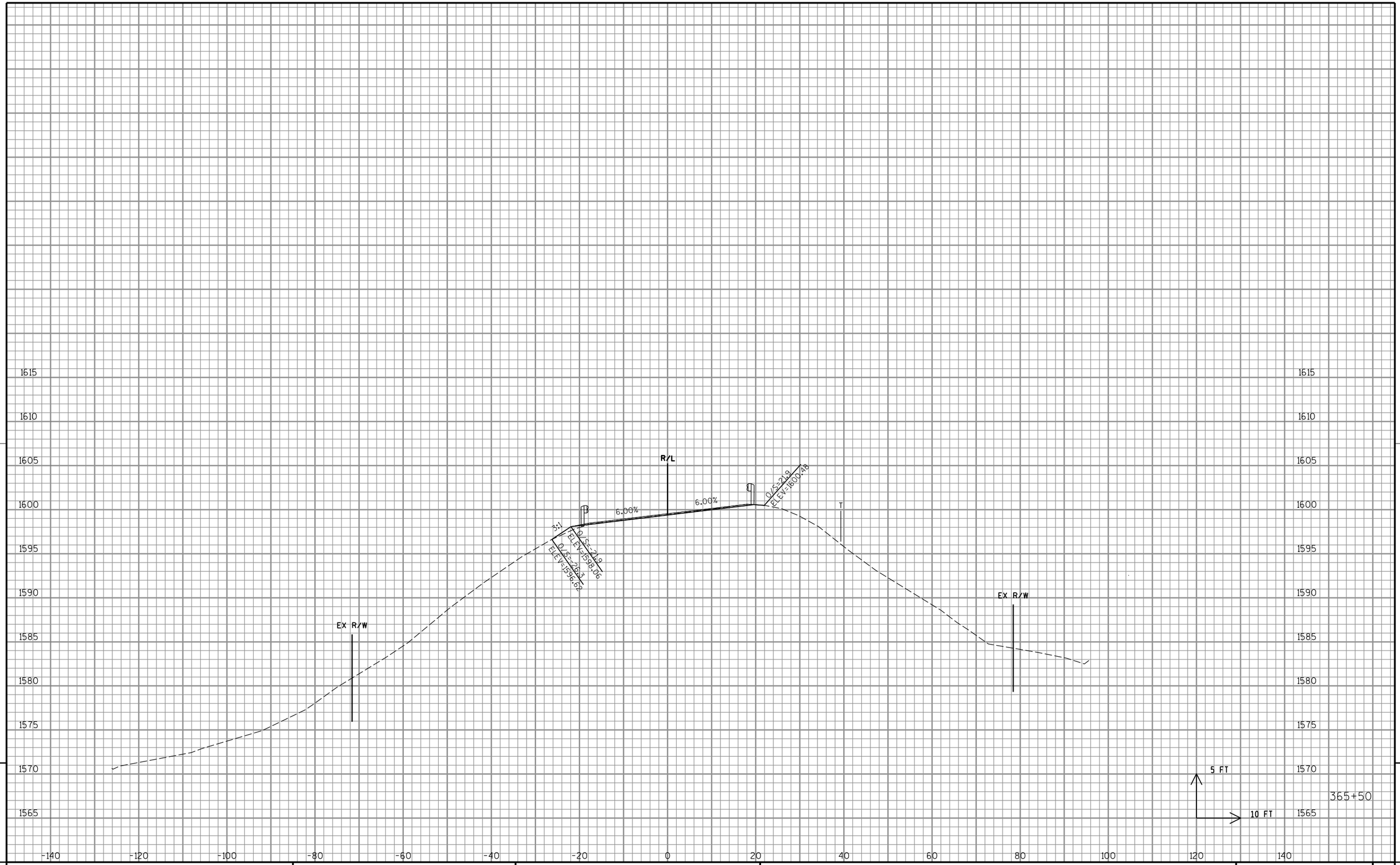
PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	CROSS SECTIONS: GUARDRAIL	SHEET 138	E

FILE NAME : P:\47xx\4726.DP.12.STH70.FOR\CADDS\Plan\090202_xs.dgn PLOT DATE : 7/18/2014 PLOT BY : emo PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



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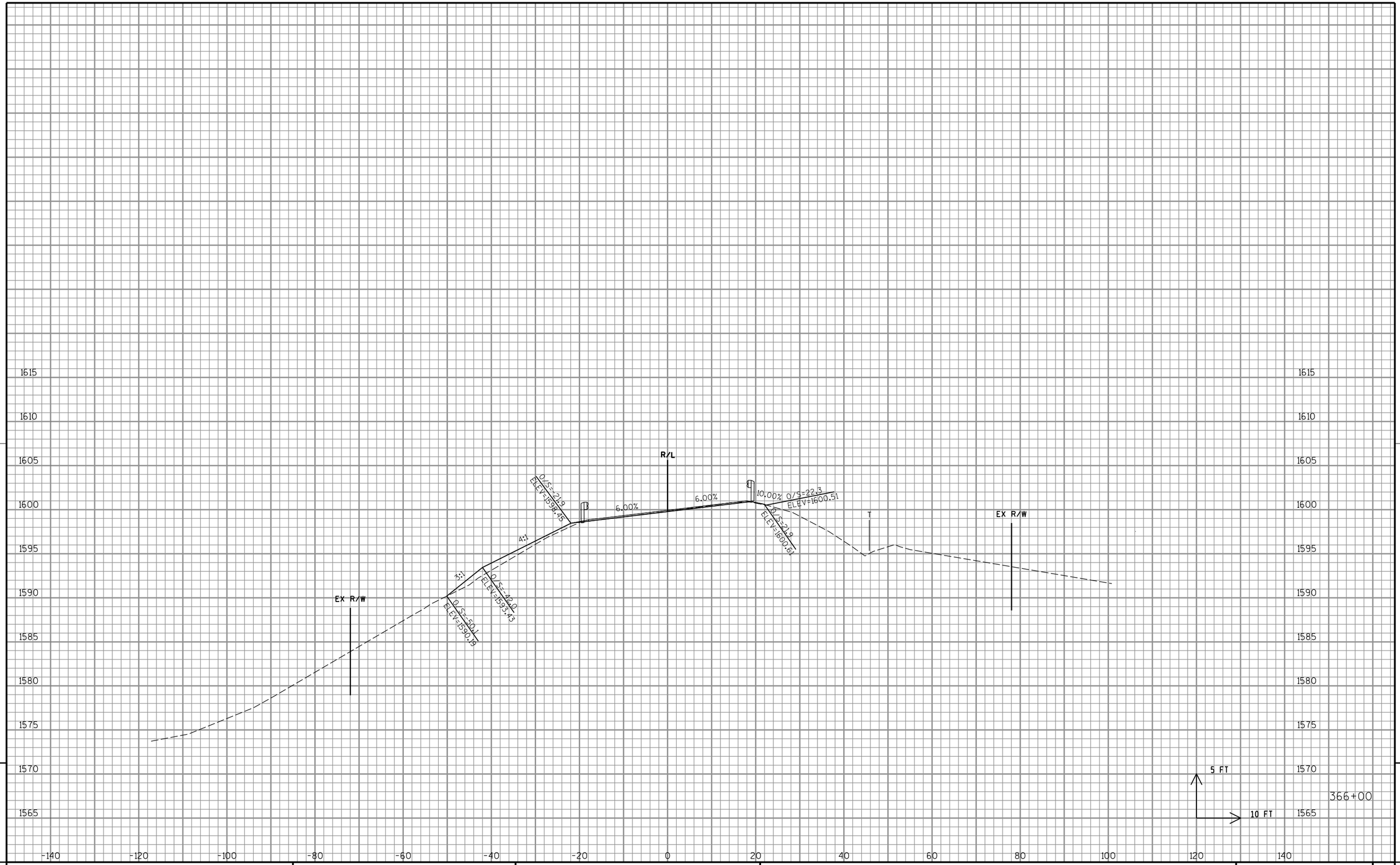
PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	CROSS SECTIONS: GUARDRAIL	SHEET 139	E

FILE NAME : P:\47xx\4726.DP.12.STH70.FOR\CADDS\Plan\090202_xs.dgn PLOT DATE : 7/18/2014 PLOT BY : emo PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



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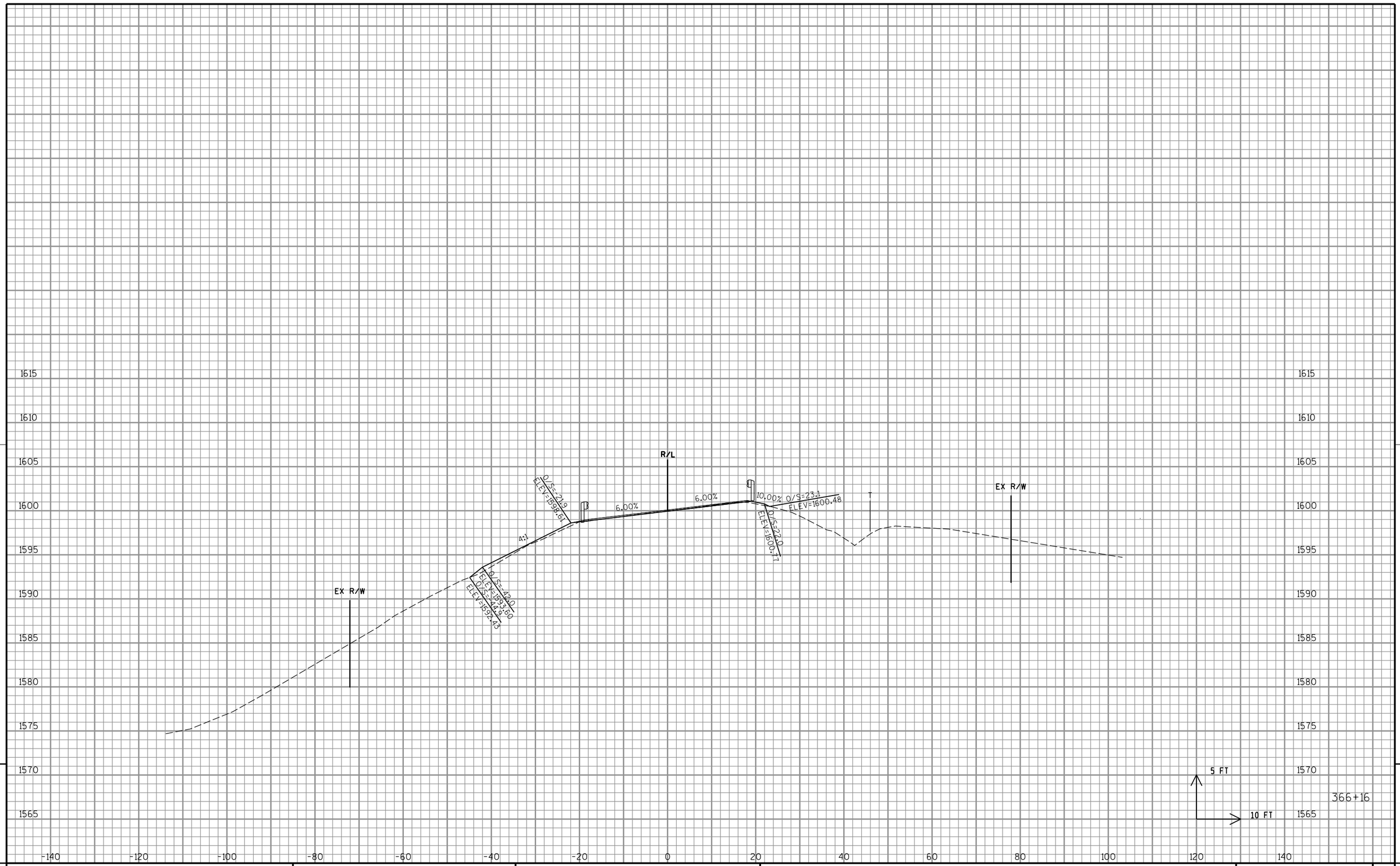
PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	CROSS SECTIONS: GUARDRAIL	SHEET 140	E

FILE NAME : P:\47xx\4726.DP.12.STH70.FOR\CADDS\Plan\090202_xs.dgn PLOT DATE : 7/18/2014 PLOT BY : emo PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



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PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	CROSS SECTIONS: GUARDRAIL	SHEET 141	E

FILE NAME : P:\47xx\4726.DP.12.STH70.FOR\CADDS\Plan\090202_xs.dgn PLOT DATE : 7/18/2014 PLOT BY : emo PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

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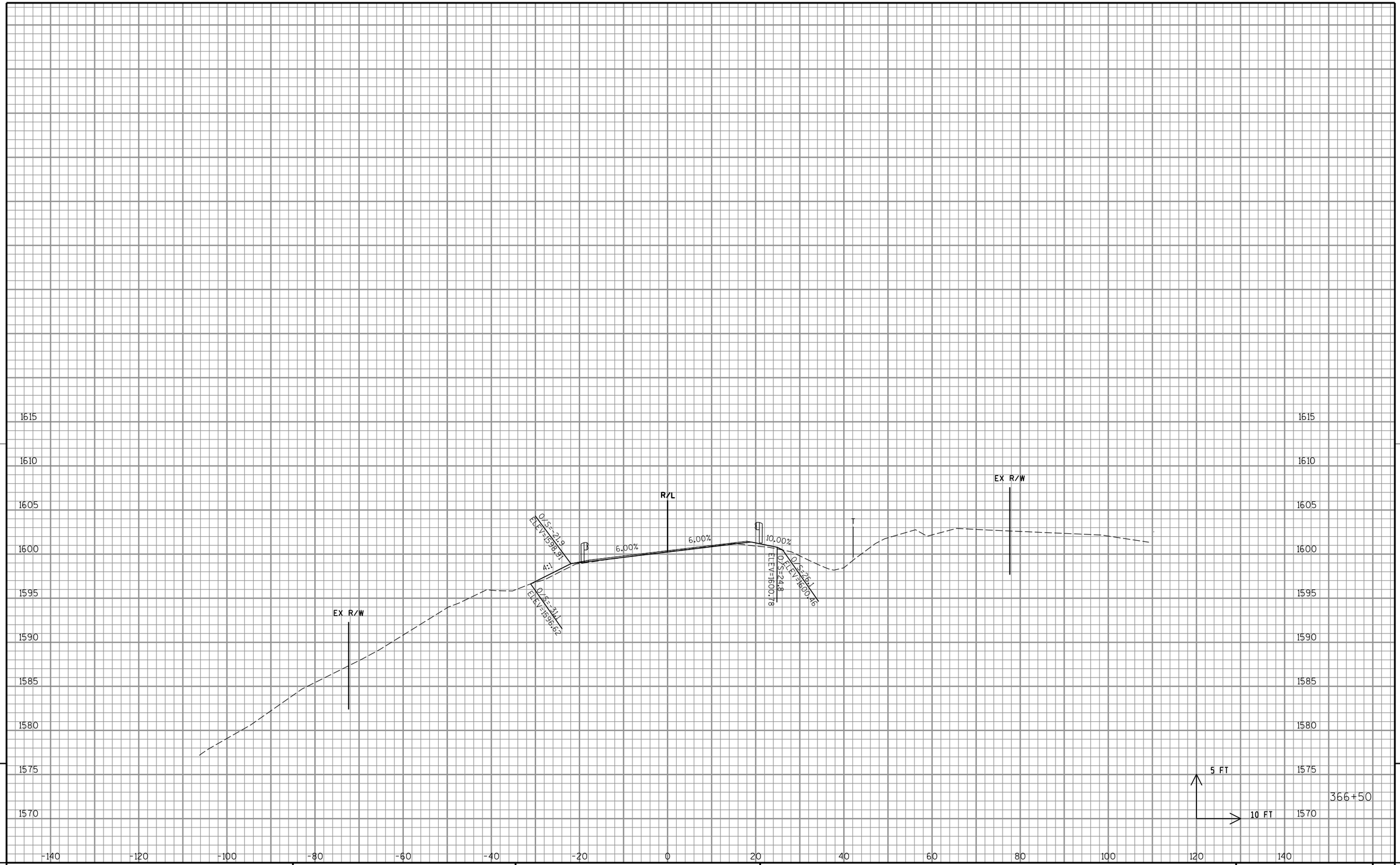
PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	CROSS SECTIONS: GUARDRAIL	SHEET 142	E

FILE NAME : P:\47xx\4726.DP.12.STH70.FOR\CADDS\Plan\090202_xs.dgn PLOT DATE : 7/18/2014 PLOT BY : emo PLOT NAME : PLOT SCALE : 1:20

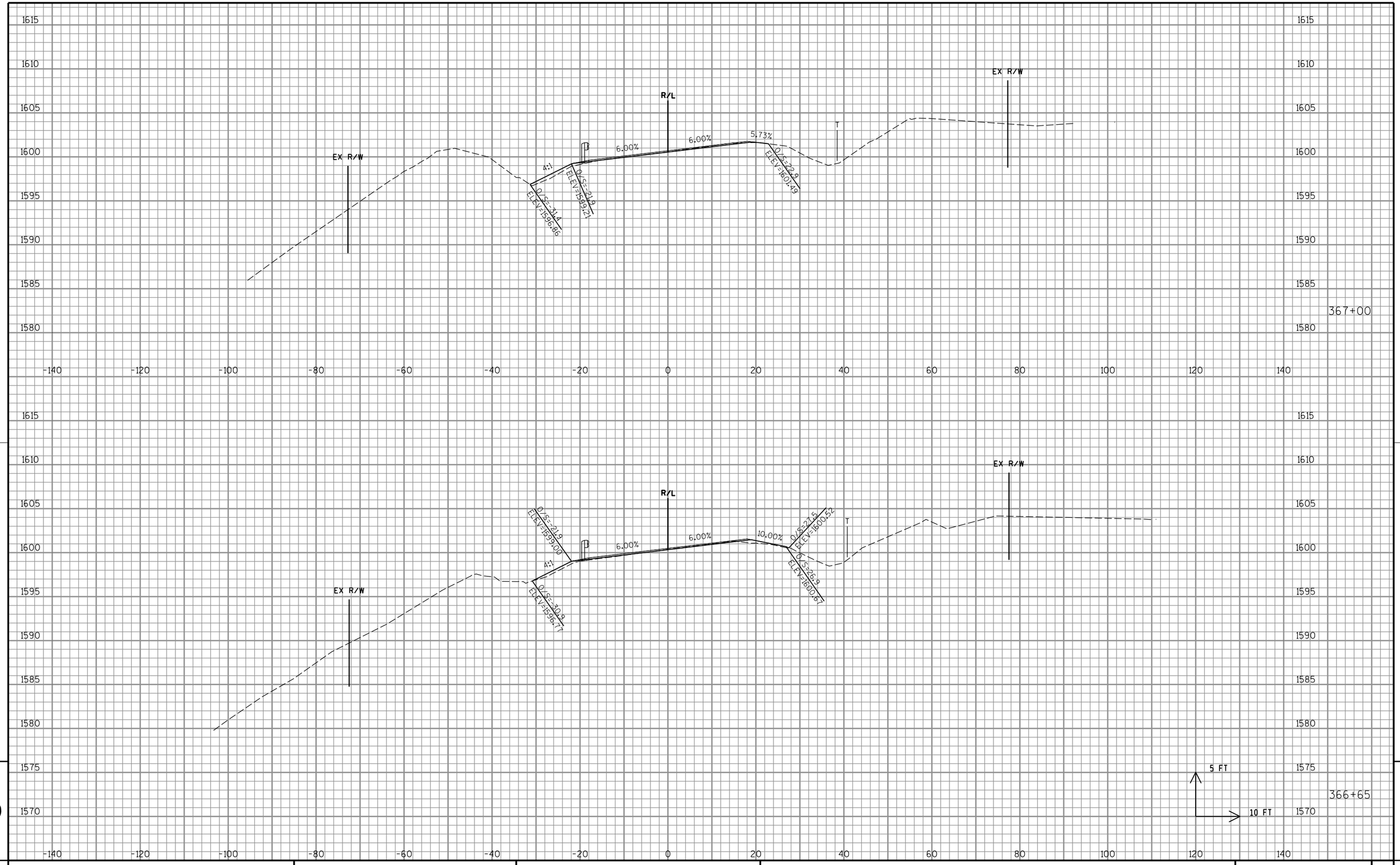
WISDOT/CADDS SHEET 21



PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	CROSS SECTIONS: GUARDRAIL	SHEET 143	E

FILE NAME : P:\47xx\4726.DP.12.STH70.FOR\CADDS\Plan\090202_xs.dgn PLOT DATE : 7/18/2014 PLOT BY : emo PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



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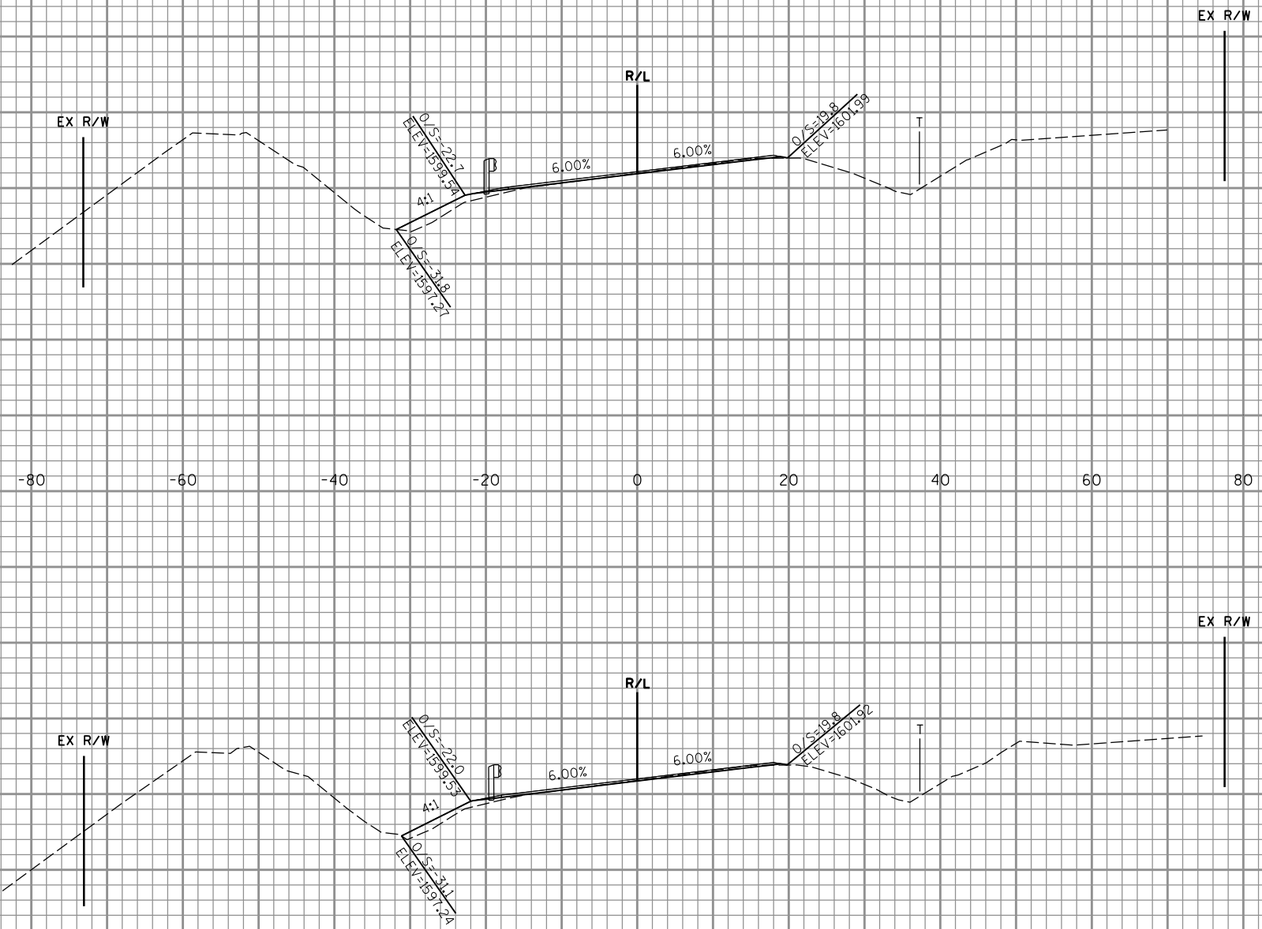
PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	CROSS SECTIONS: GUARDRAIL	SHEET 144	E

FILE NAME : P:\47xx\4726.DP.12.STH70.FOR\CADDS\Plan\090202_xs.dgn PLOT DATE : 7/18/2014 PLOT BY : emo PLOT NAME : PLOT SCALE : 1:20

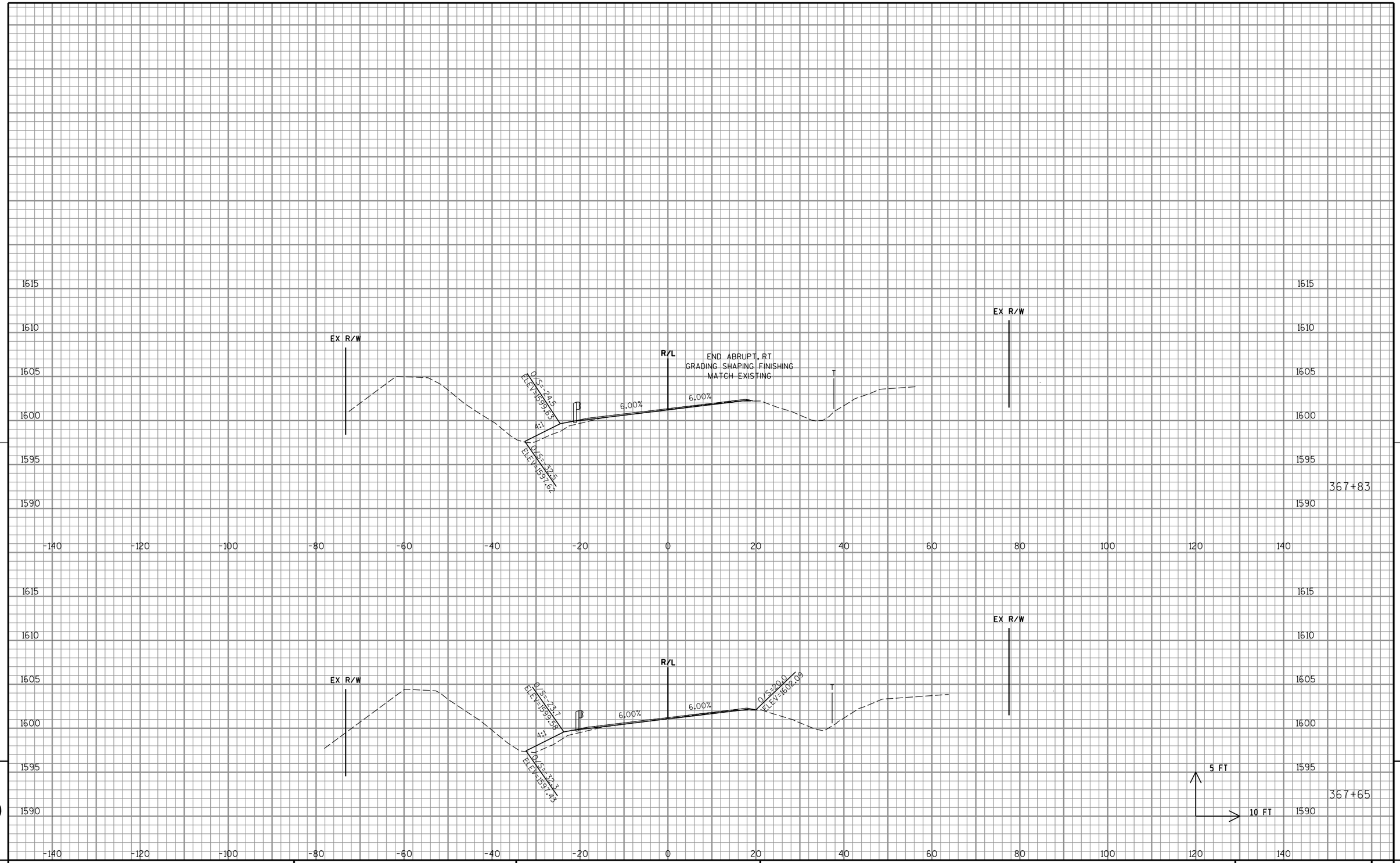
WISDOT/CADDS SHEET 21



PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	CROSS SECTIONS: GUARDRAIL	SHEET 145	E

FILE NAME : P:\47xx\4726.DP.12.STH70.FOR\CADDS\Plan\090202_xs.dgn PLOT DATE : 7/18/2014 PLOT BY : emo PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



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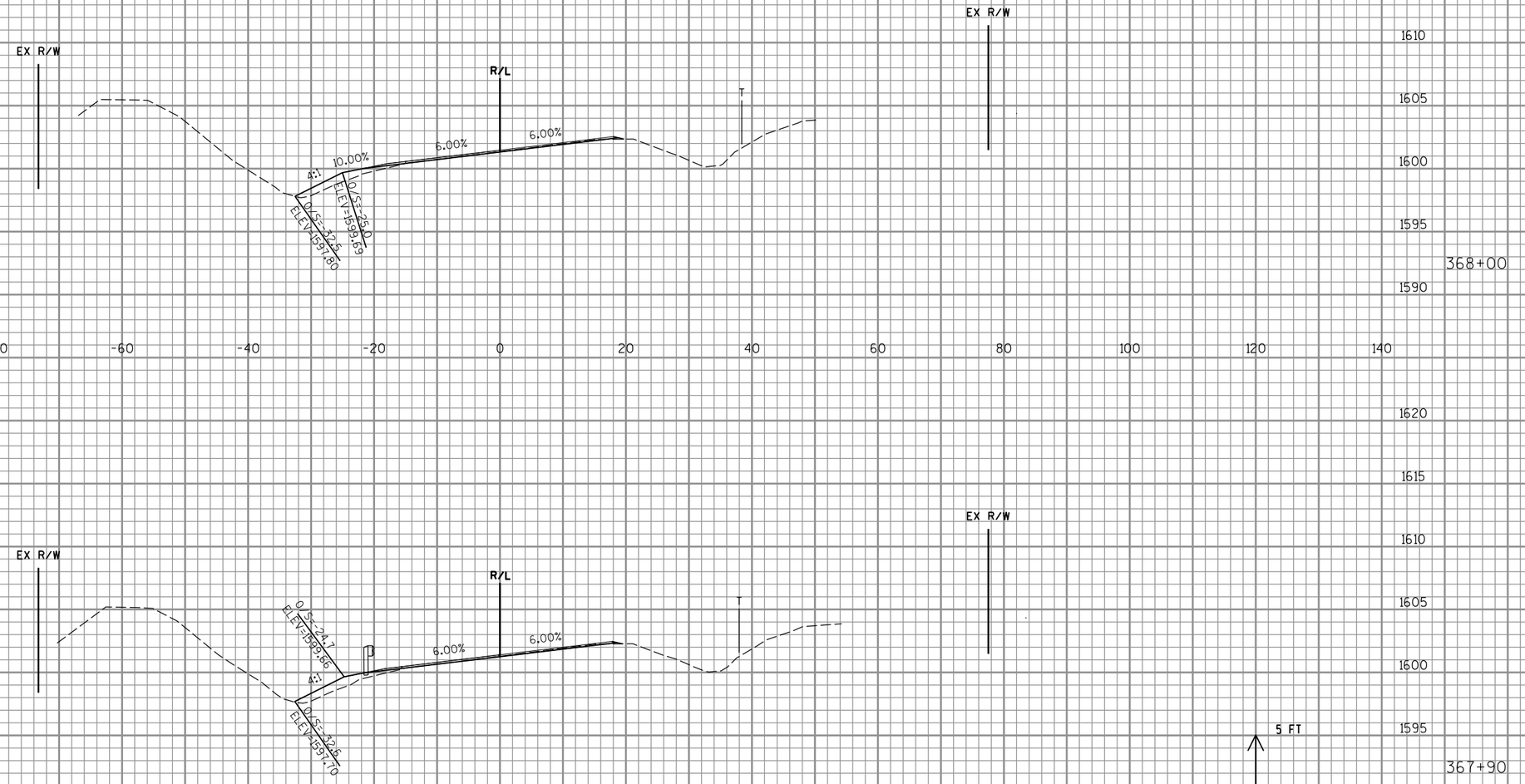
PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	CROSS SECTIONS: GUARDRAIL	SHEET 146	E

FILE NAME : P:\47xx\4726.DP.12.STH70.FOR\CADDS\Plan\090202_xs.dgn PLOT DATE : 7/18/2014 PLOT BY : emo PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



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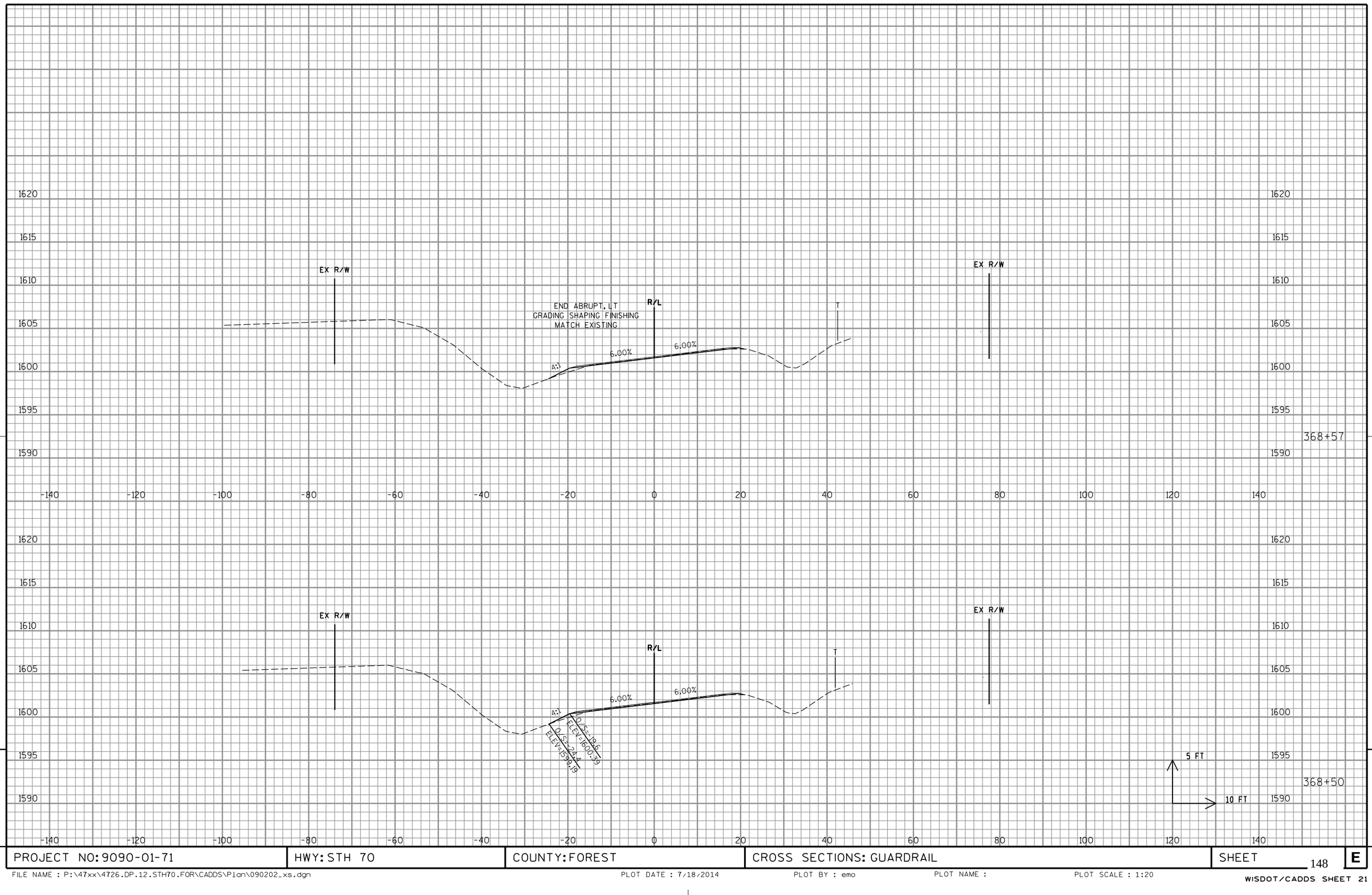
PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	CROSS SECTIONS: GUARDRAIL	SHEET 147	E

FILE NAME : P:\47xx\4726.DP.12.STH70.FOR\CADDS\Plan\090202_xs.dgn PLOT DATE : 7/18/2014 PLOT BY : emo PLOT NAME : PLOT SCALE : 1:20
WISDOT/CADDS SHEET 21



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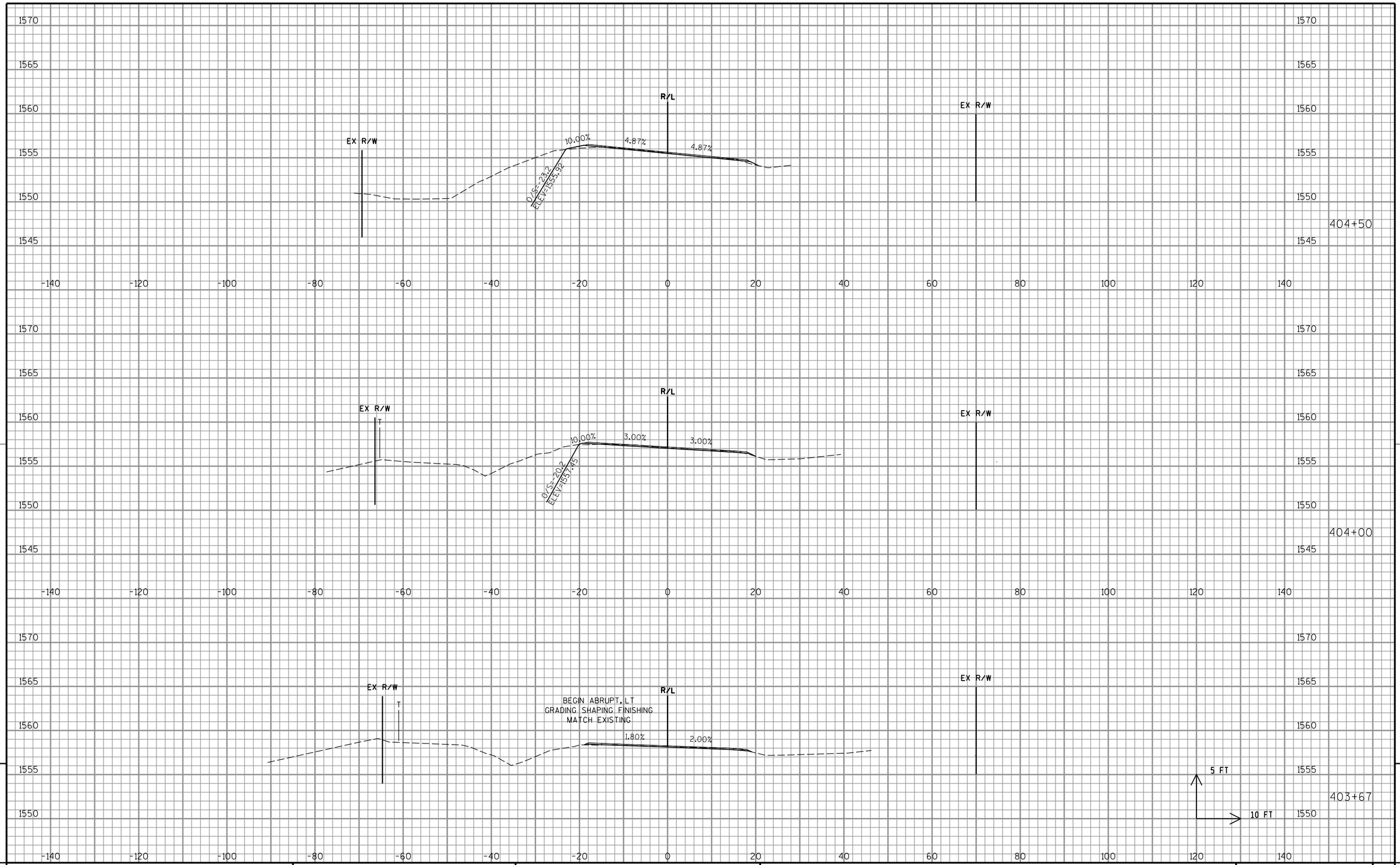
PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	CROSS SECTIONS: GUARDRAIL	SHEET 148	E

FILE NAME : P:\47xx\4726.DP.12.STH70.FOR\CADDS\Plan\090202_xs.dgn PLOT DATE : 7/18/2014 PLOT BY : emo PLOT NAME : PLOT SCALE : 1:20

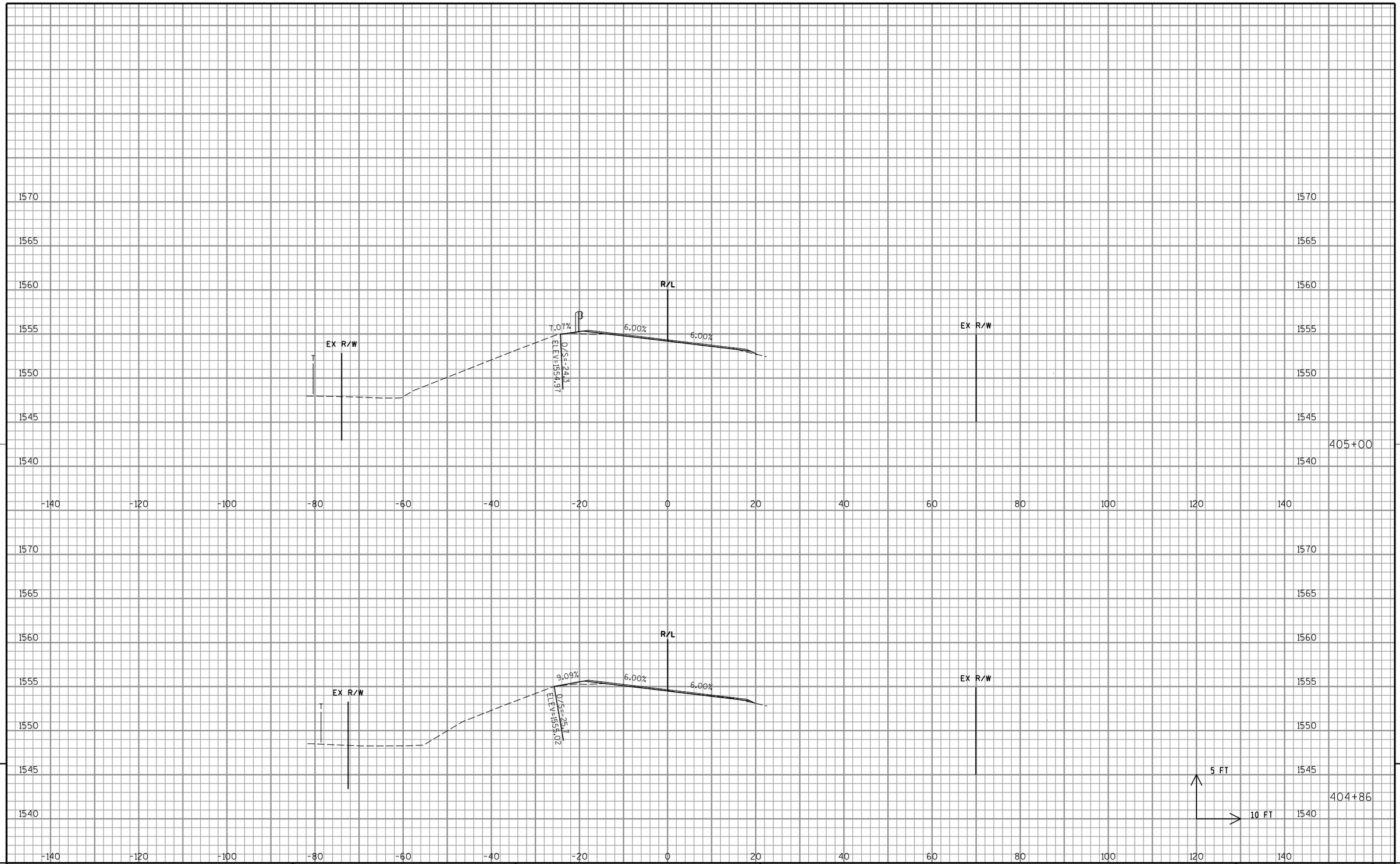
WISDOT/CADDS SHEET 21



PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	CROSS SECTIONS: GUARDRAIL	SHEET 149	E

FILE NAME : P:\47xx\4726.DP.12.STH70.FOR\CADDS\Plan\090203_xs.dgn PLOT DATE : 7/18/2014 PLOT BY : emo PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



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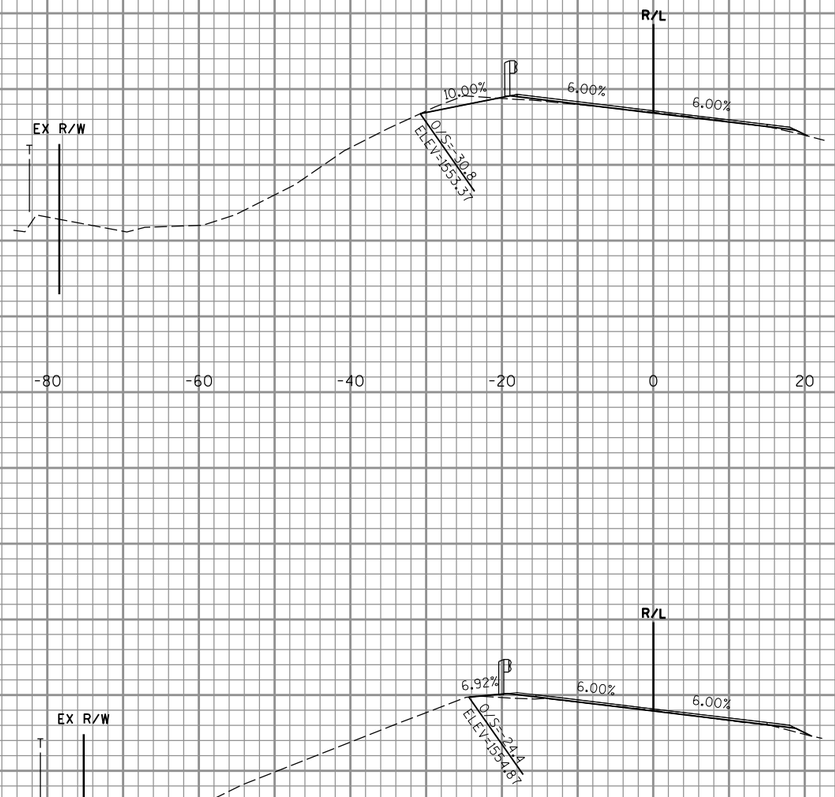
PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	CROSS SECTIONS: GUARDRAIL	SHEET 150	E

FILE NAME : P:\47xx\4726.DP.12.STH70.FOR\CADDS\Plan\090203_xs.dgn PLOT DATE : 7/18/2014 PLOT BY : emo PLOT NAME : PLOT SCALE : 1:20

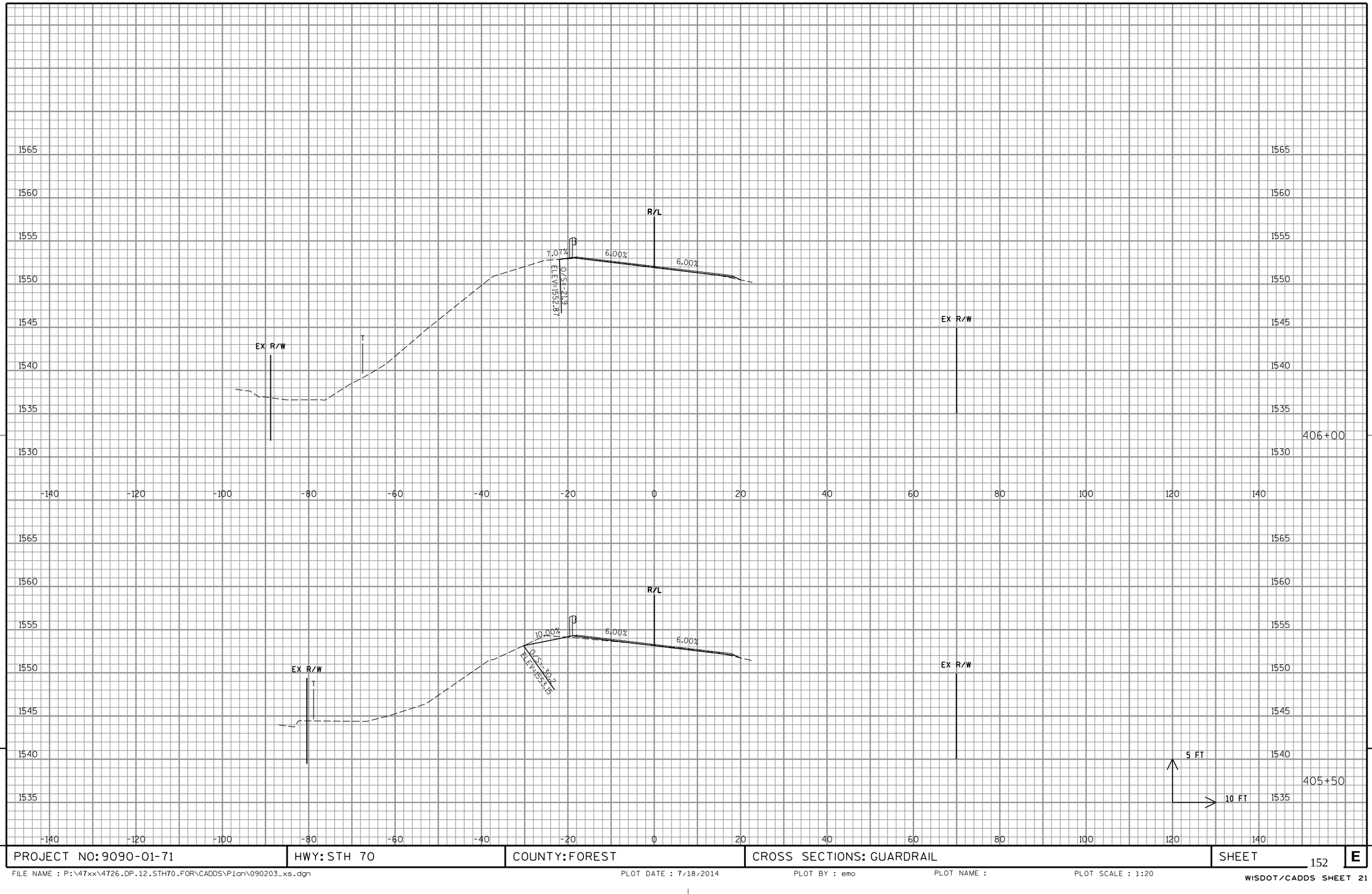
WISDOT/CADDS SHEET 21



PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	CROSS SECTIONS: GUARDRAIL	SHEET 151	E

FILE NAME : P:\47xx\4726.DP.12.STH70.FOR\CADDS\Plan\090203_xs.dgn PLOT DATE : 7/18/2014 PLOT BY : emo PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



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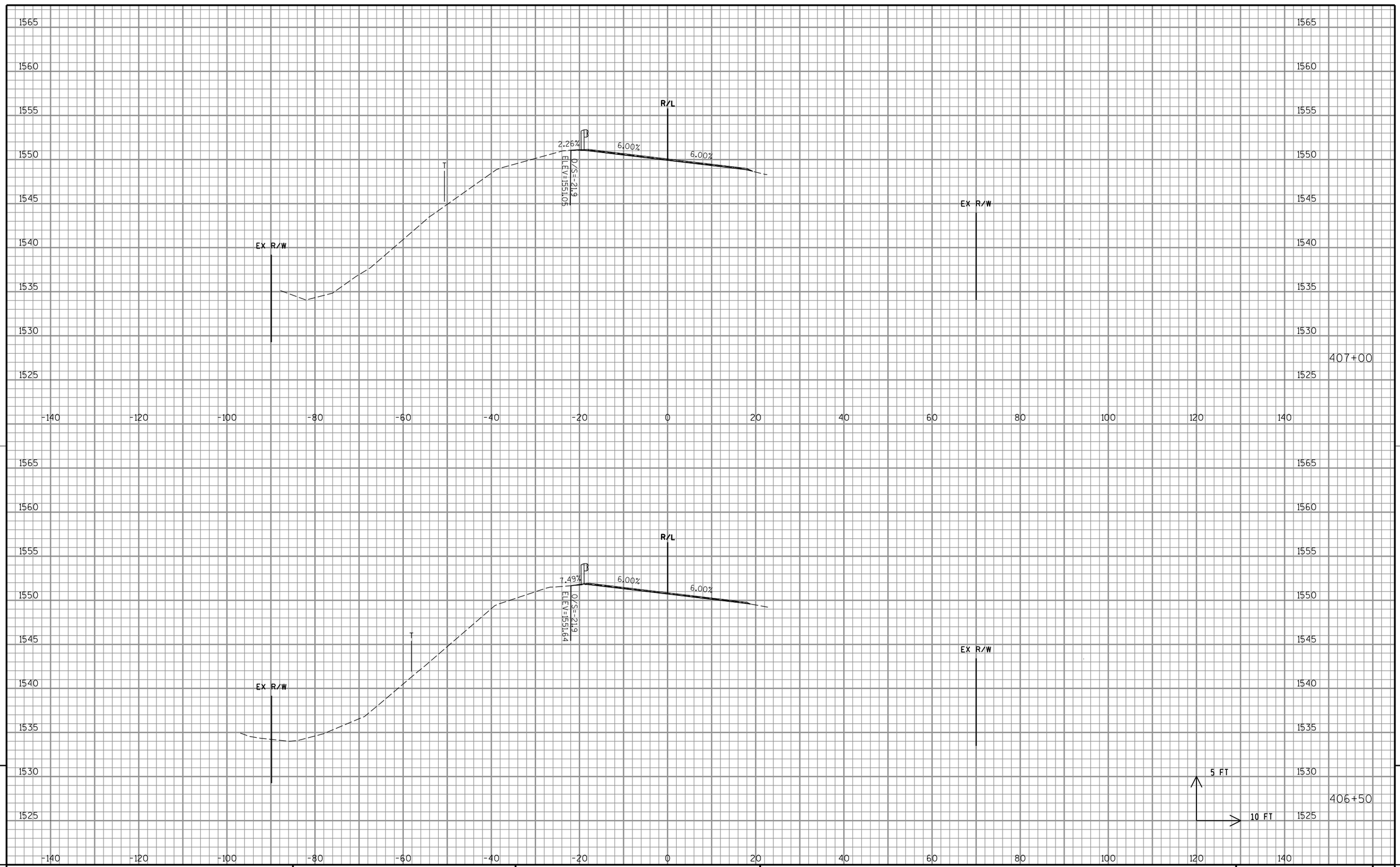
PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	CROSS SECTIONS: GUARDRAIL	SHEET 152	E

FILE NAME : P:\47xx\4726.DP.12.STH70.FOR\CADDS\Plan\090203_xs.dgn PLOT DATE : 7/18/2014 PLOT BY : emo PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



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PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	CROSS SECTIONS: GUARDRAIL	SHEET 153	E

FILE NAME : P:\47xx\4726.DP.12.STH70.FOR\CADDS\Plan\090203_xs.dgn PLOT DATE : 7/18/2014 PLOT BY : emo PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

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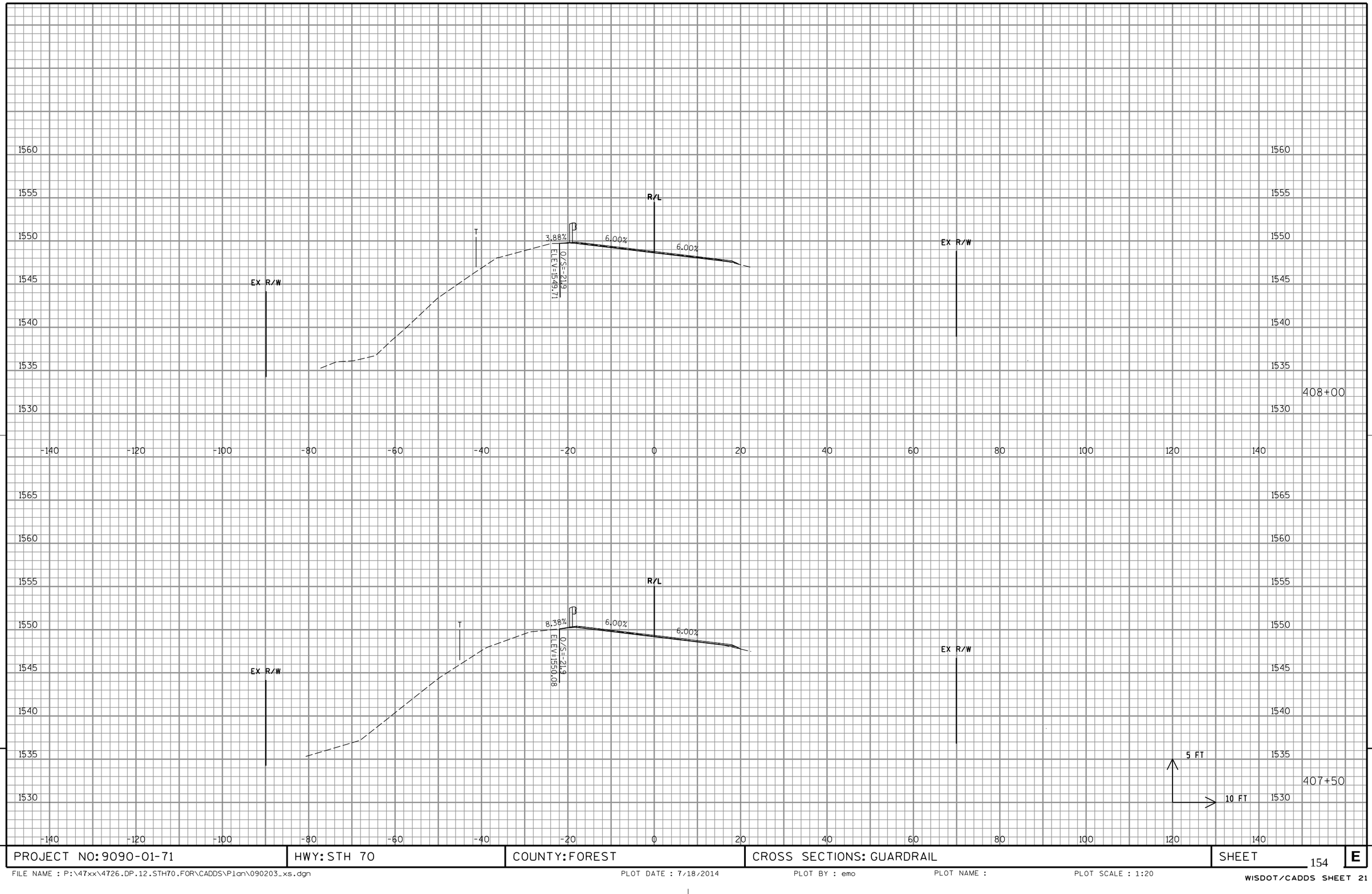

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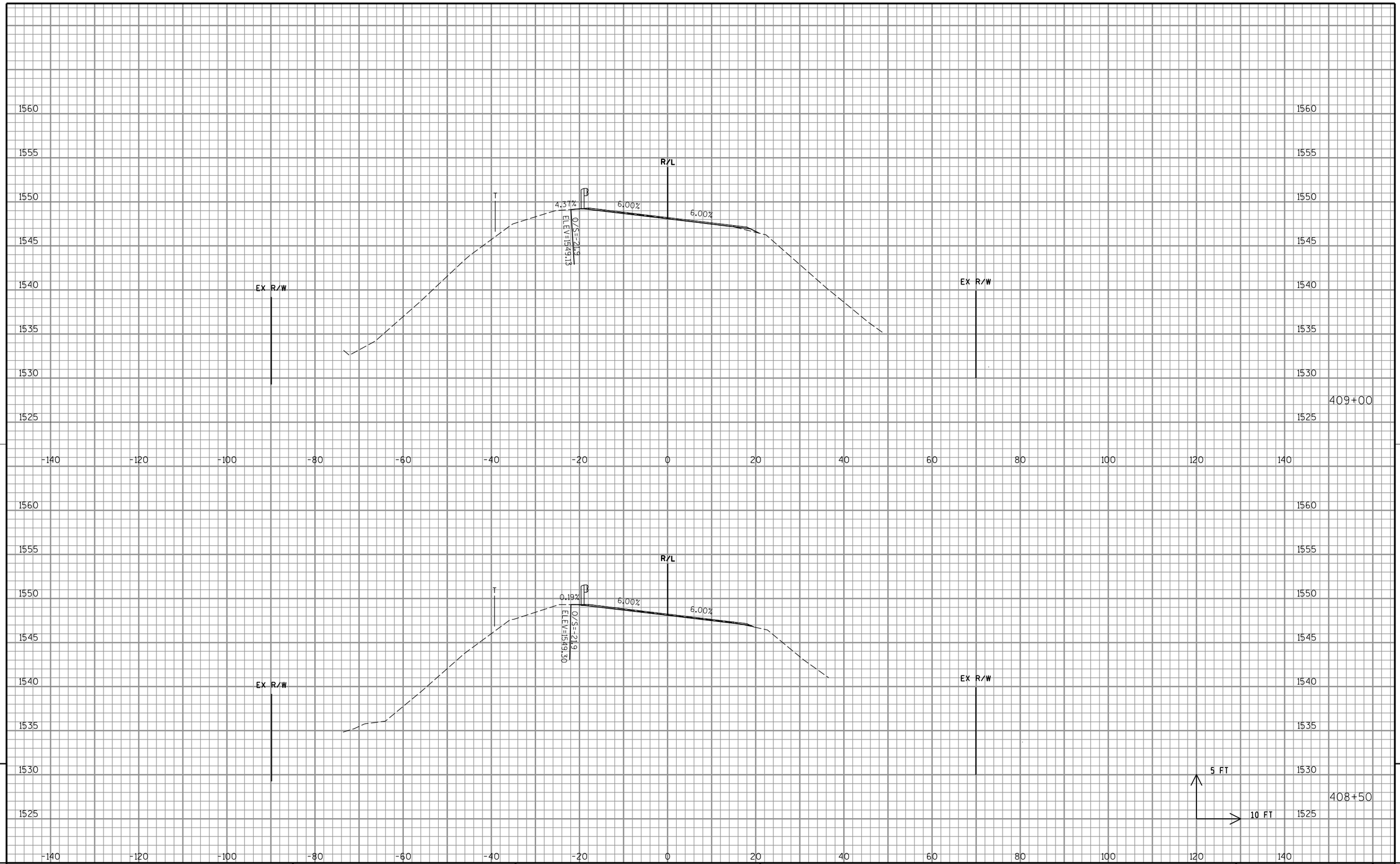
PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	CROSS SECTIONS: GUARDRAIL	SHEET 154	E

FILE NAME : P:\47xx\4726.DP.12.STH70.FOR\CADDS\Plan\090203_xs.dgn PLOT DATE : 7/18/2014 PLOT BY : emo PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



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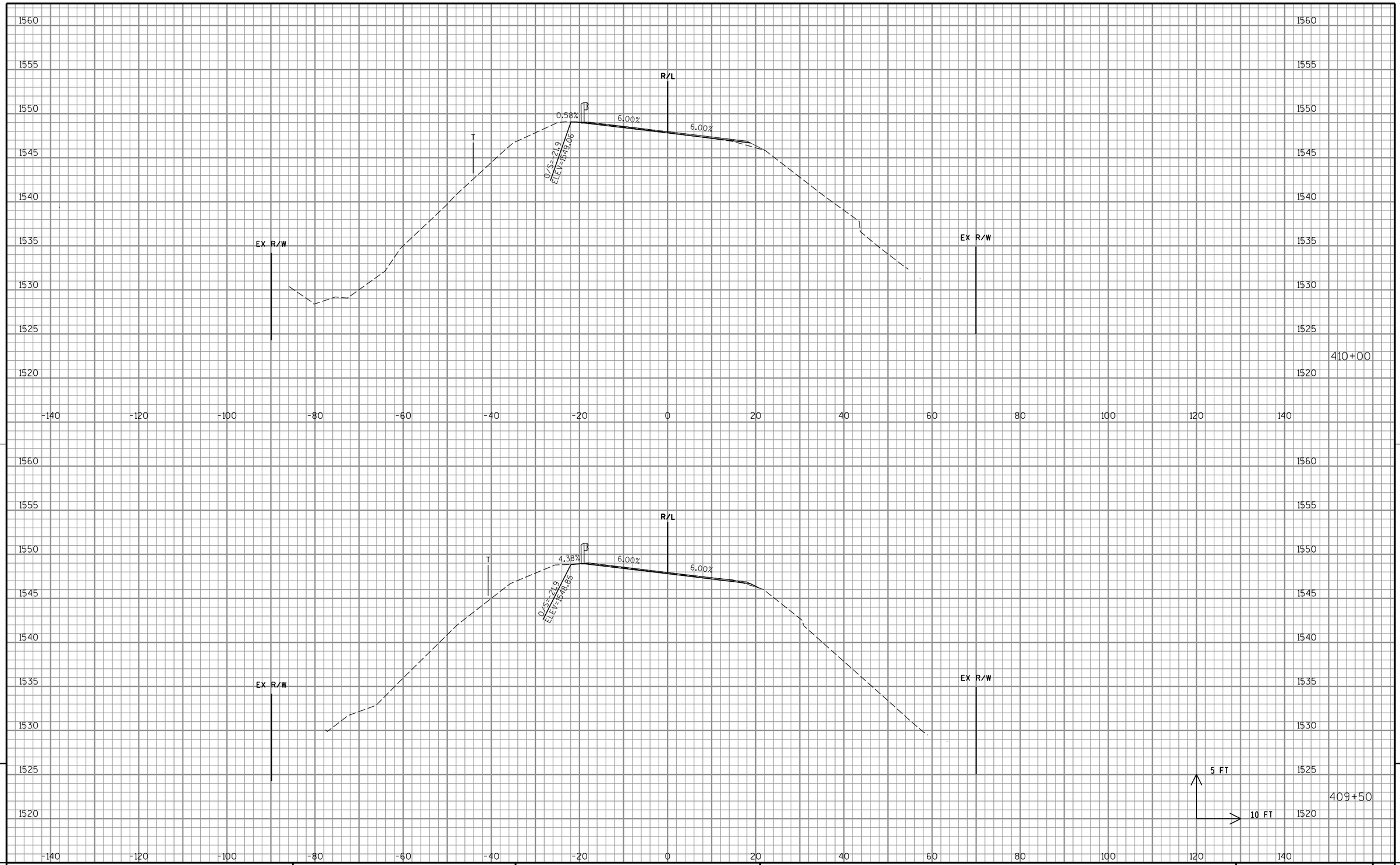
PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	CROSS SECTIONS: GUARDRAIL	SHEET 155	E

FILE NAME : P:\47xx\4726.DP.12.STH70.FOR\CADDS\Plan\090203_xs.dgn PLOT DATE : 7/18/2014 PLOT BY : emo PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



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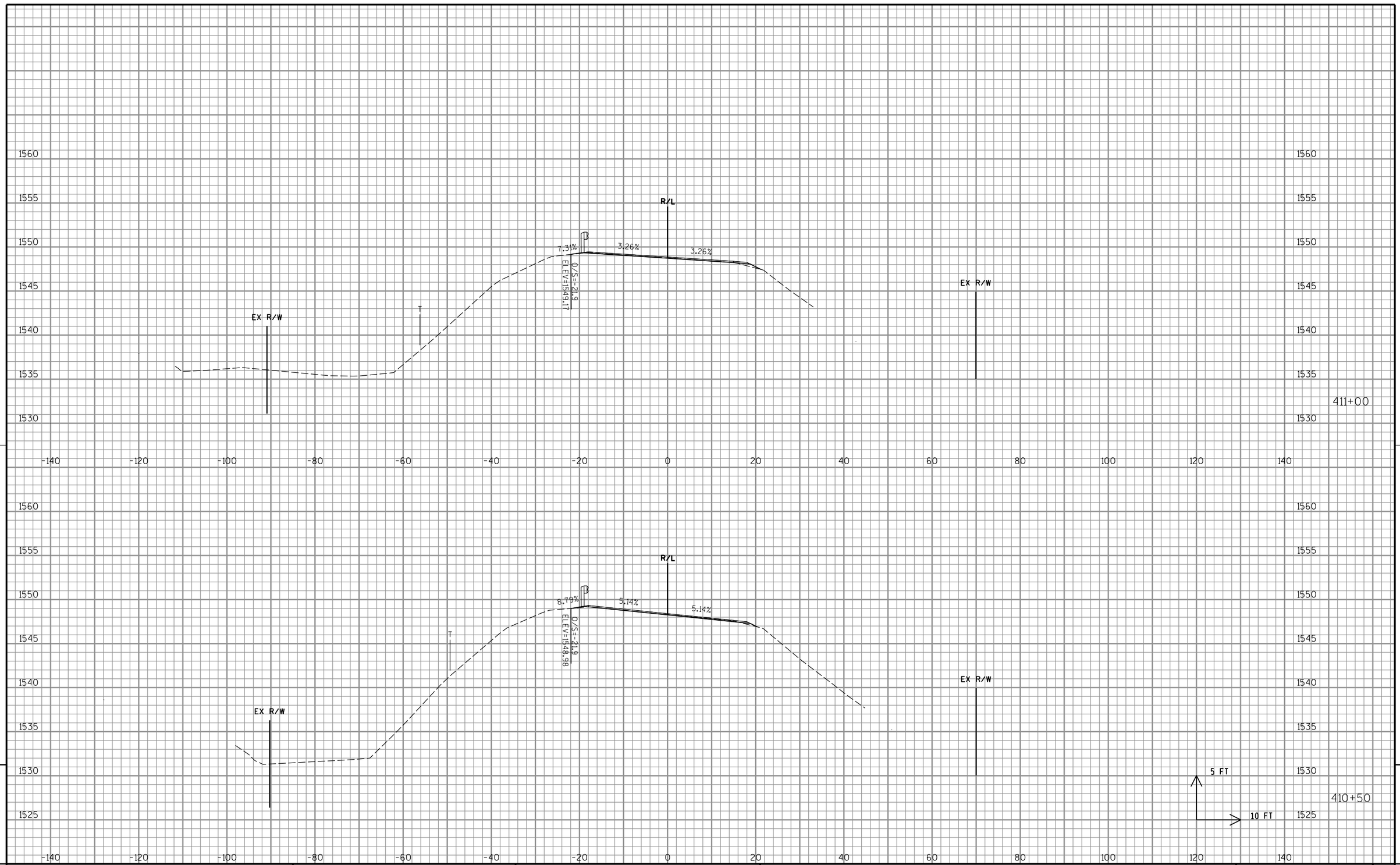
PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	CROSS SECTIONS: GUARDRAIL	SHEET 156	E

FILE NAME : P:\47xx\4726.DP.12.STH70.FOR\CADDS\Plan\090203_xs.dgn PLOT DATE : 7/18/2014 PLOT BY : emo PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



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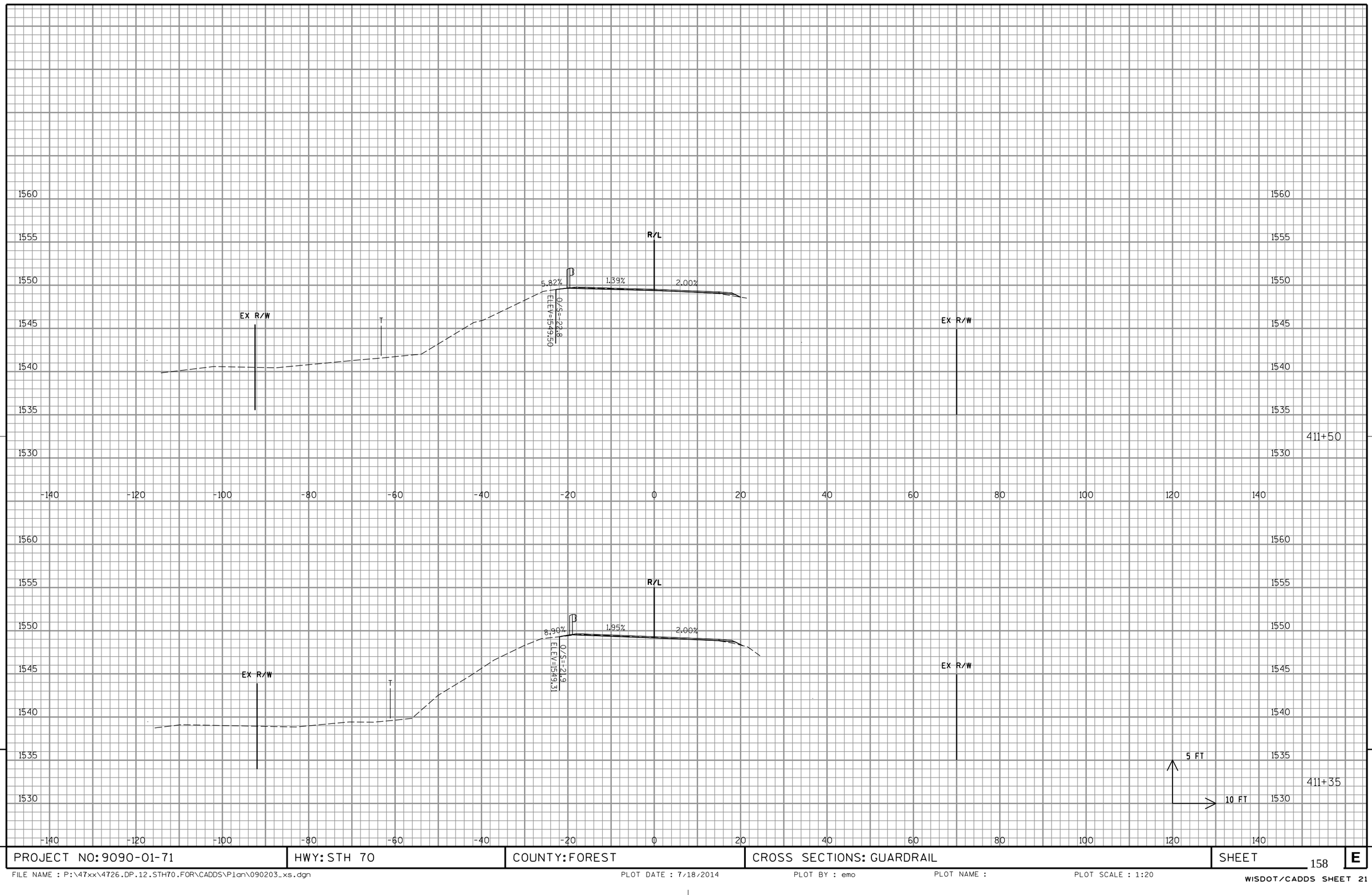
PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	CROSS SECTIONS: GUARDRAIL	SHEET 157	E

FILE NAME : P:\47xx\4726.DP.12.STH70.FOR\CADDS\Plan\090203_xs.dgn PLOT DATE : 7/18/2014 PLOT BY : emo PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



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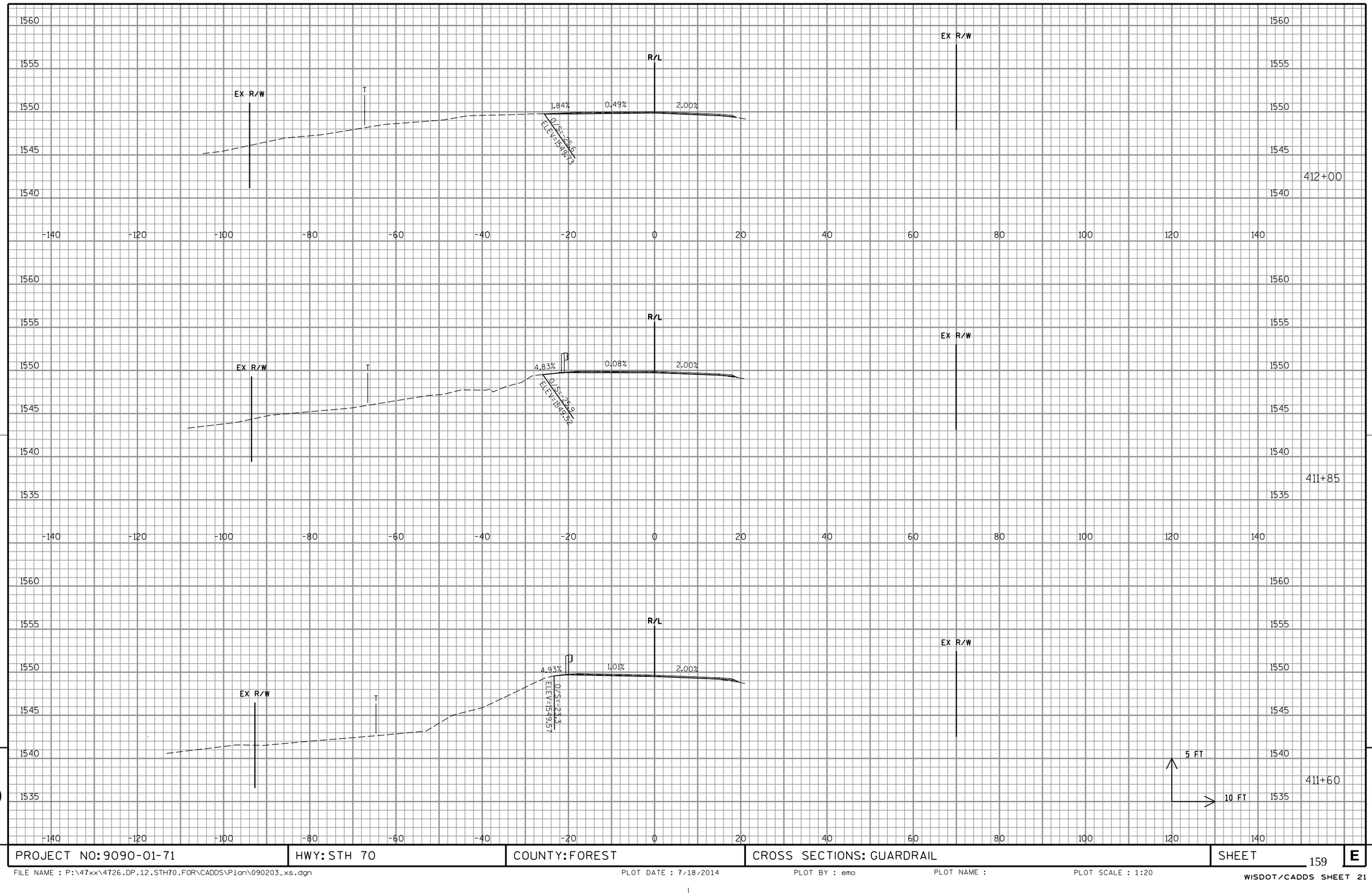
PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	CROSS SECTIONS: GUARDRAIL	SHEET 158	E

FILE NAME : P:\47xx\4726.DP.12.STH70.FOR\CADDS\Plan\090203_xs.dgn PLOT DATE : 7/18/2014 PLOT BY : emo PLOT NAME : PLOT SCALE : 1:20

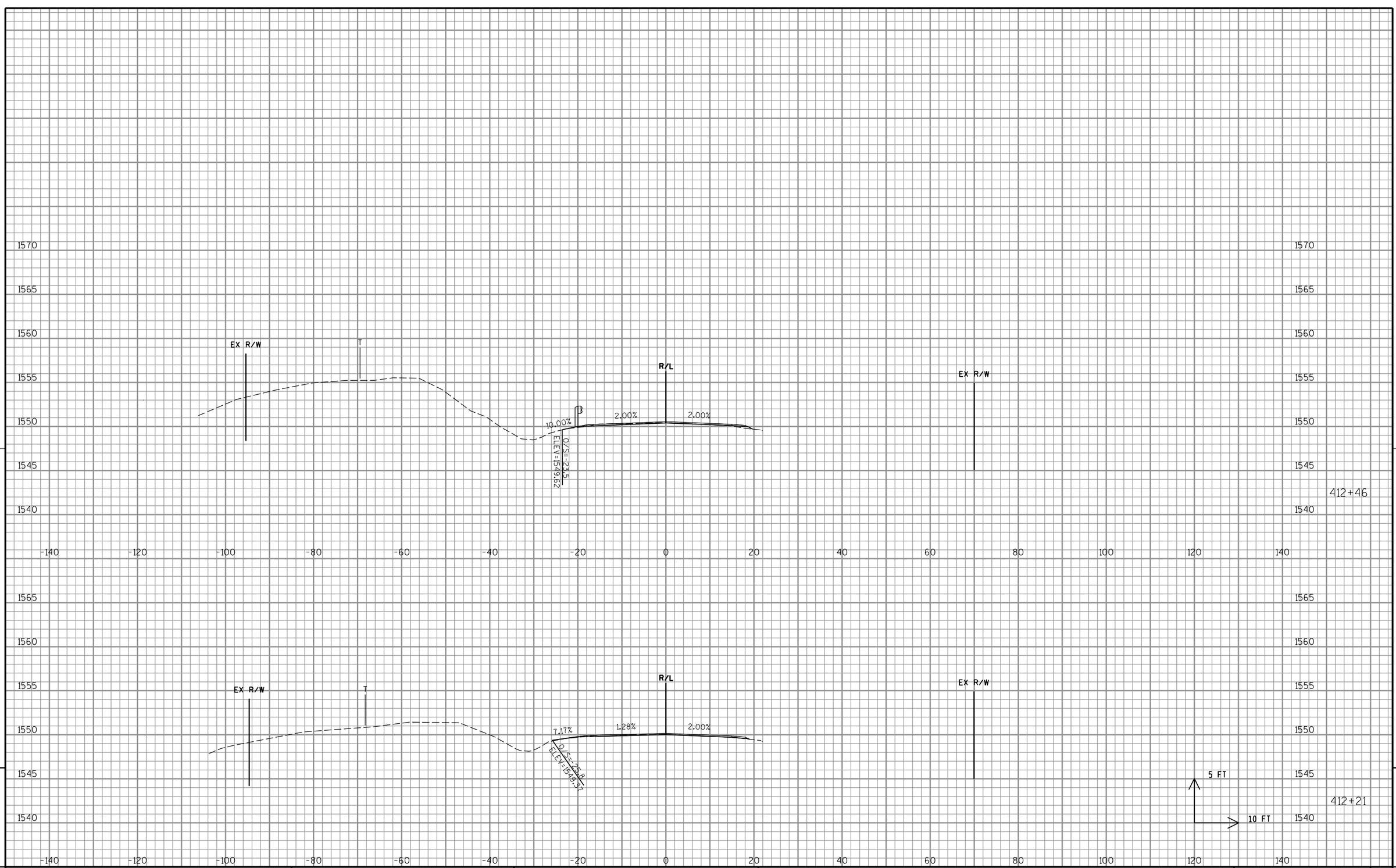
WISDOT/CADDS SHEET 21



PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	CROSS SECTIONS: GUARDRAIL	SHEET 159	E

FILE NAME : P:\47xx\4726.DP.12.STH70.FOR\CADDS\Plan\090203_xs.dgn PLOT DATE : 7/18/2014 PLOT BY : emo PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



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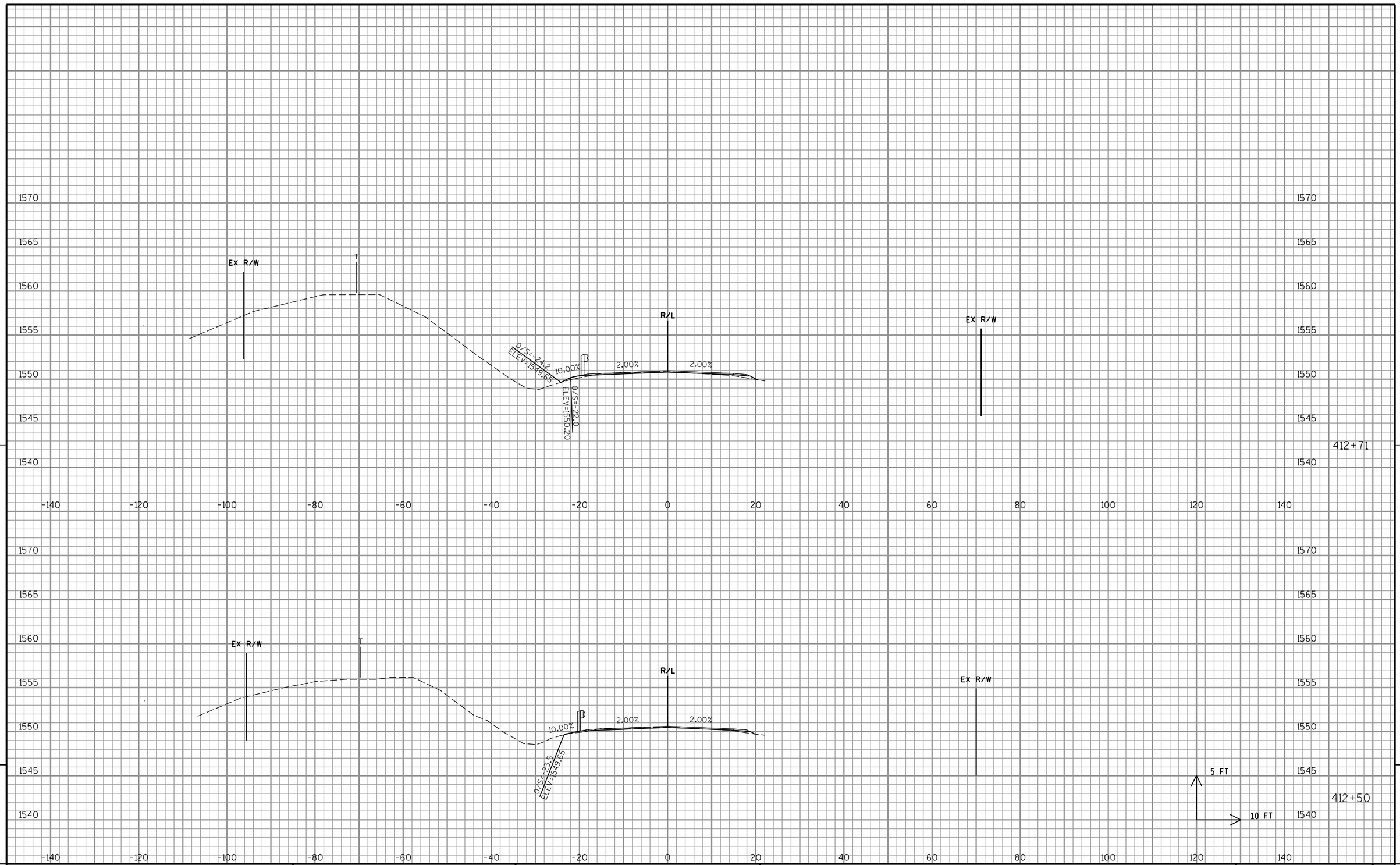
PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	CROSS SECTIONS: GUARDRAIL	SHEET 160	E

FILE NAME : P:\47xx\4726.DP.12.STH70.FOR\CADDS\Plan\090203_xs.dgn PLOT DATE : 7/18/2014 PLOT BY : emo PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



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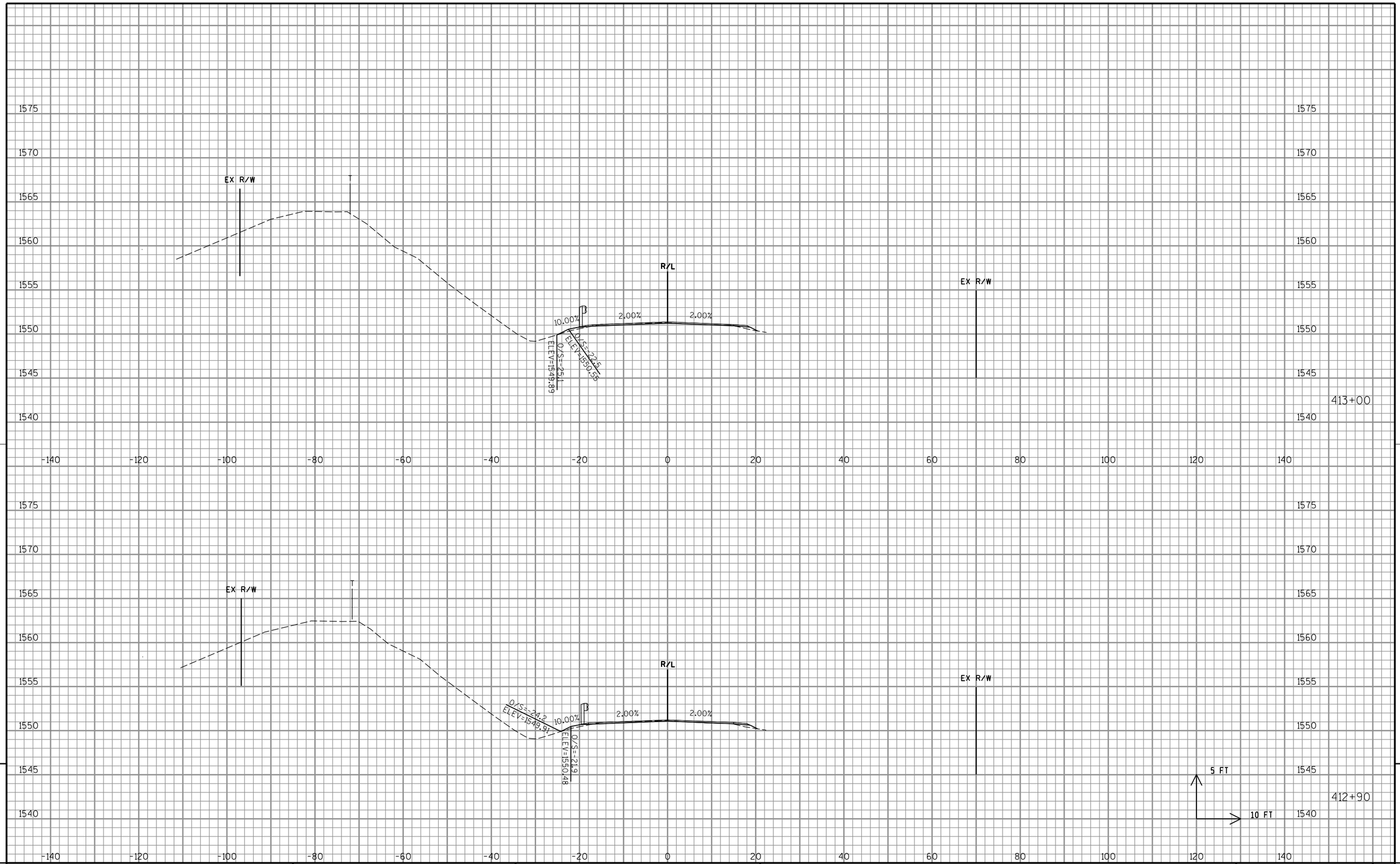
PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	CROSS SECTIONS: GUARDRAIL	SHEET 161	E



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PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	CROSS SECTIONS: GUARDRAIL	SHEET 162	E

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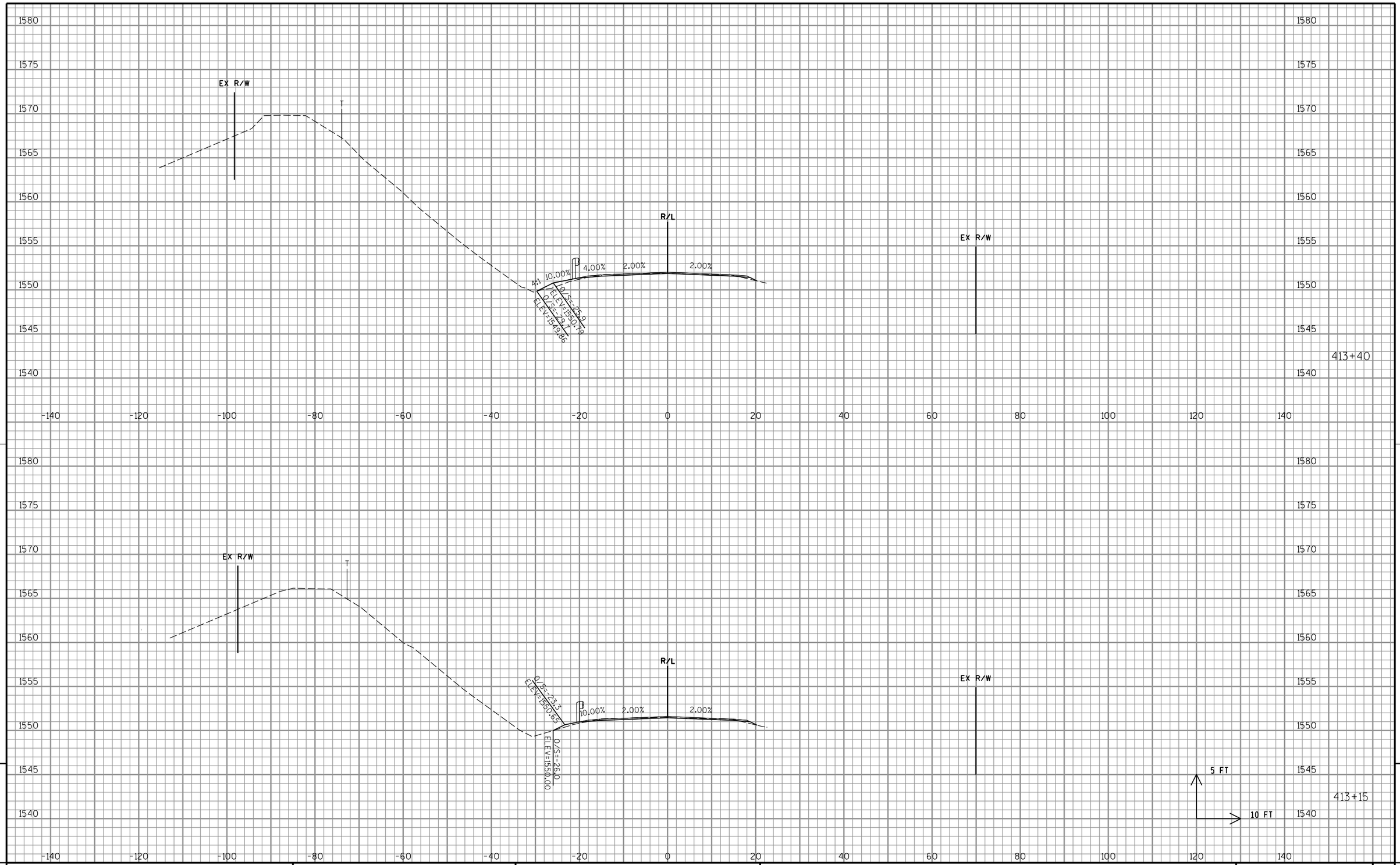
FILE NAME : P:\47xx\4726.DP.12.STH70.FOR\CADDS\Plan\090203_xs.dgn PLOT DATE : 7/18/2014 PLOT BY : emo PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



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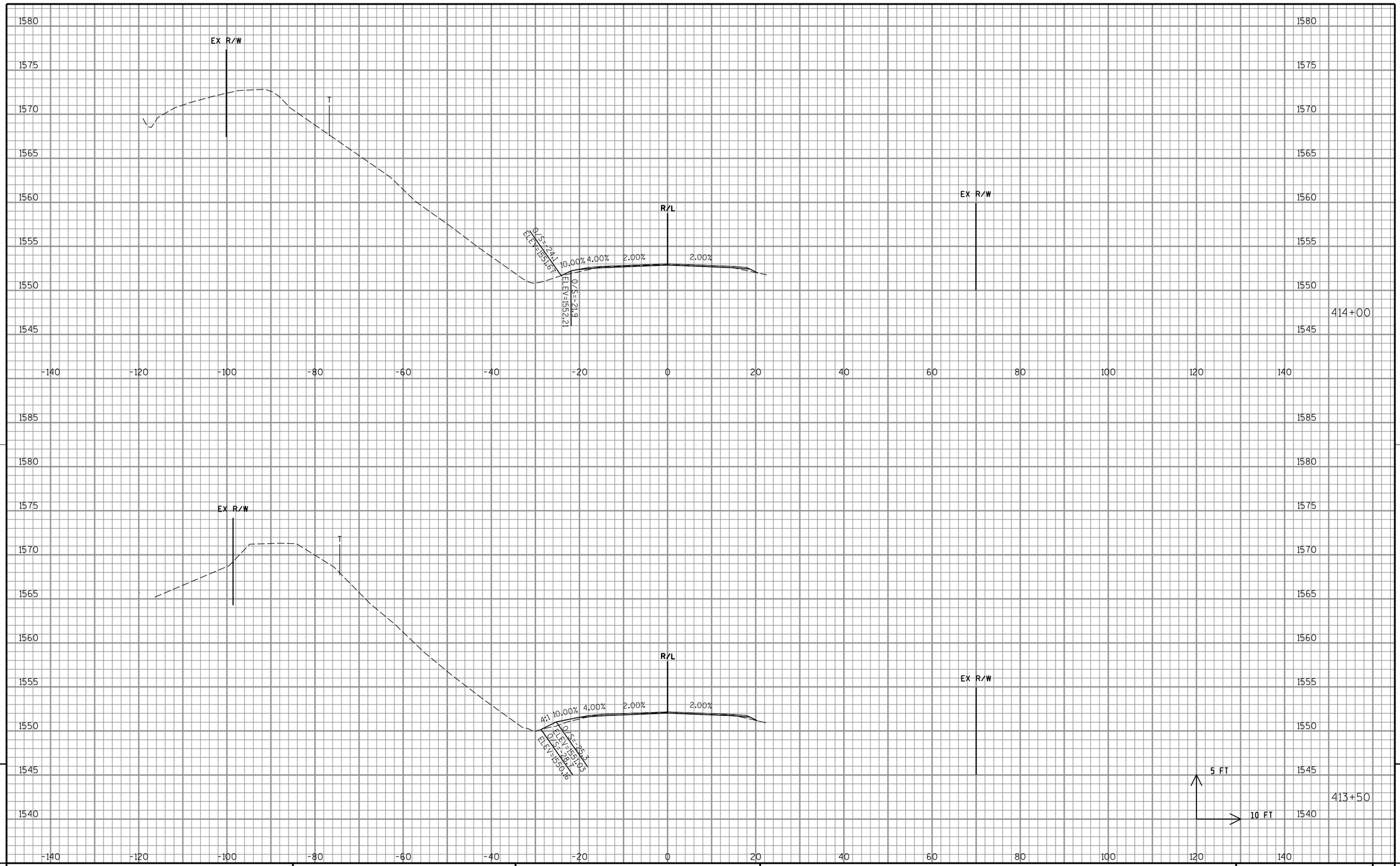
PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	CROSS SECTIONS: GUARDRAIL	SHEET 163	E

FILE NAME : P:\47xx\4726.DP.12.STH70.FOR\CADDS\Plan\090203_xs.dgn PLOT DATE : 7/18/2014 PLOT BY : emo PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



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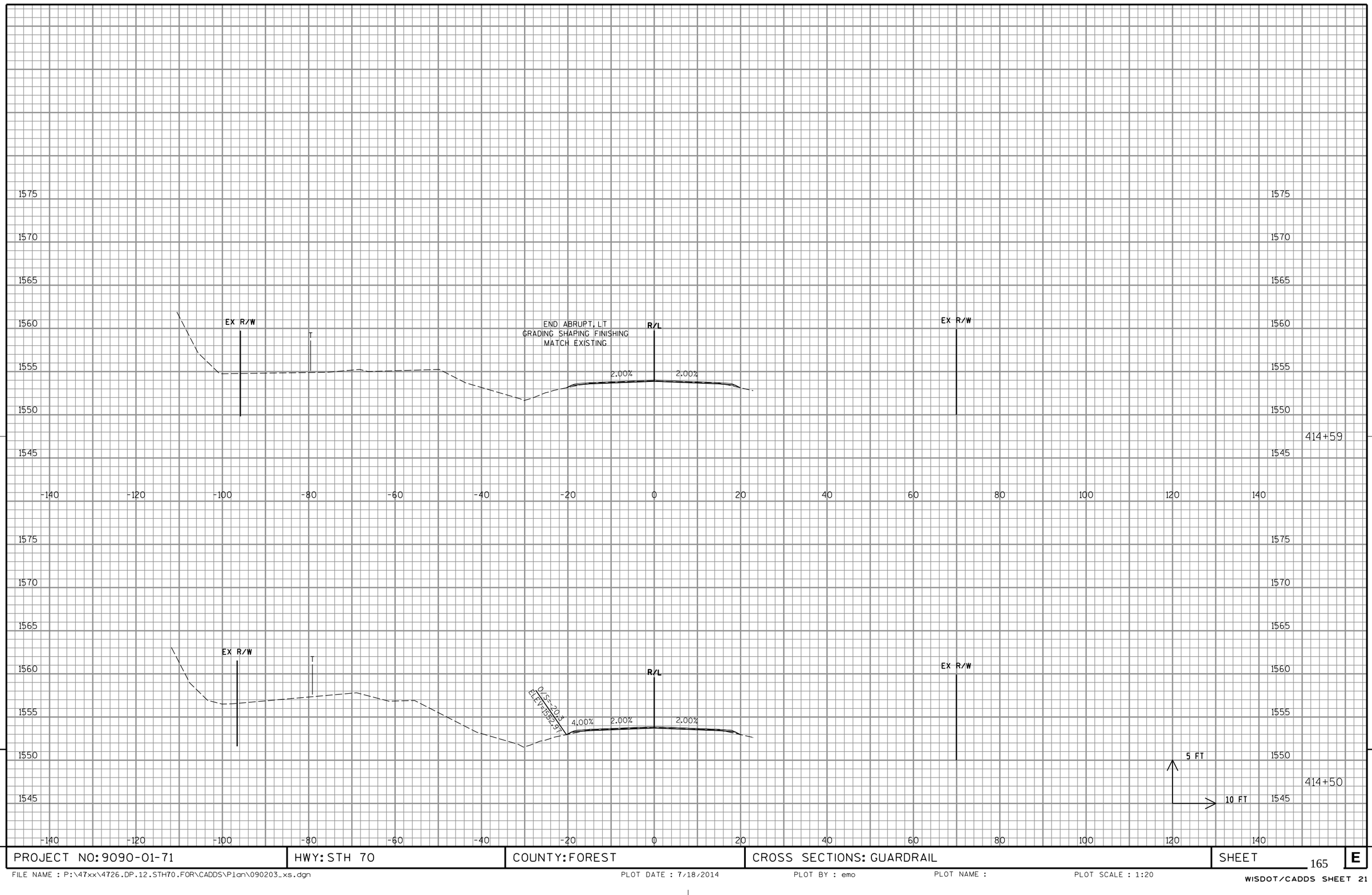
PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	CROSS SECTIONS: GUARDRAIL	SHEET 164	E

FILE NAME : P:\47xx\4726.DP.12.STH70.FOR\CADDS\Plan\090203_xs.dgn PLOT DATE : 7/18/2014 PLOT BY : emo PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



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PROJECT NO: 9090-01-71	HWY: STH 70	COUNTY: FOREST	CROSS SECTIONS: GUARDRAIL	SHEET 165	E

FILE NAME : P:\47xx\4726.DP.12.STH70.FOR\CADDS\Plan\090203_xs.dgn PLOT DATE : 7/18/2014 PLOT BY : emo PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

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