EAU NOV 2016

PROJECT ID: 1050-01-61
WITH: 1052-01-62

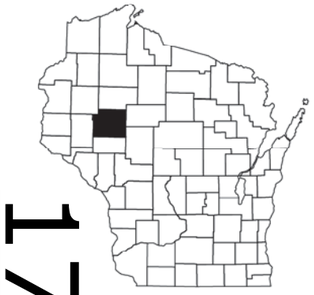
COUNTY: CHIPPEWA

17

ORDER OF SHEETS

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

TOTAL SHEETS = 528



N

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

CHIPPEWA FALLS - CADOTT

STILLSON CREEK TO 320TH STREET (WB)

STH 29

CHIPPEWA COUNTY

STATE PROJECT NUMBER
1050-01-61

STILLSON CREEK TO 320TH STREET (EB)

STH 29

CHIPPEWA COUNTY

STATE PROJECT NUMBER
1052-01-62

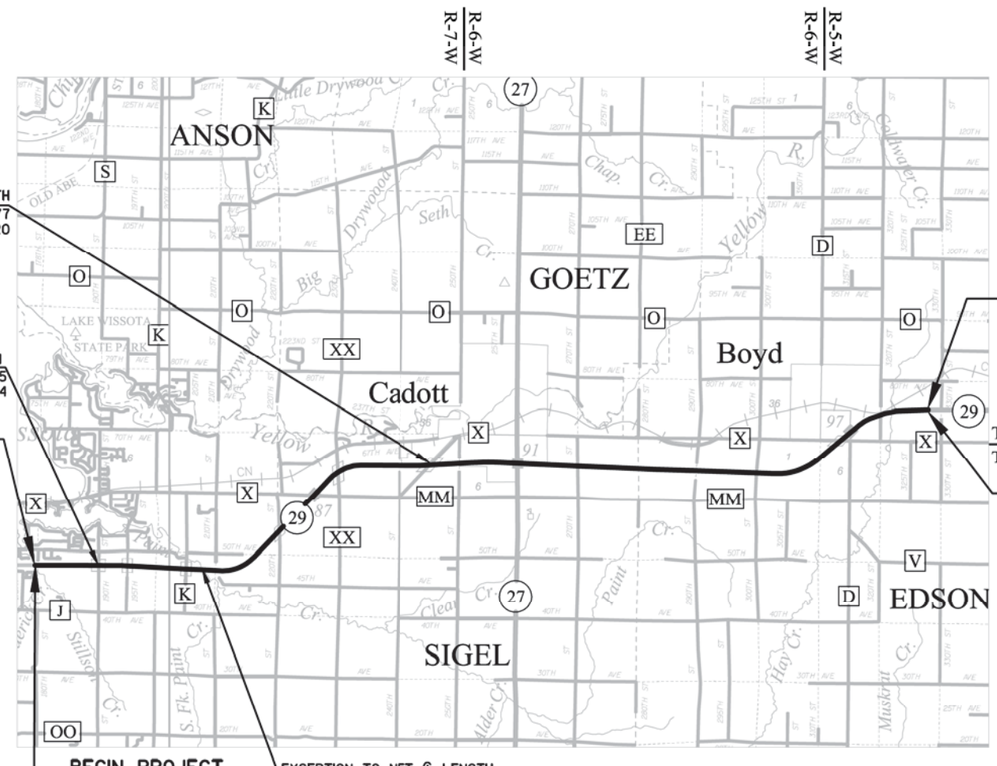
STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1050-01-61	WISC 2016416	1
1052-01-62	WISC 2016417	1

DESIGN DESIGNATION			STH 29: CTH J-CTH X	STH 29: CTH X-STH 27	STH 29: STH 27-CTH D
A.A.D.T.	2017	=	17,950	16,650	14,800
A.A.D.T.	2037	=	21,000	20,870	18,970
D.H.V.	2037	=	2,170	2,150	1,955
D.D.		=	60/40	60/40	60/40
T.		=	8.1 %	8.1 %	8.1 %
DESIGN SPEED		=	70 MPH	70 MPH	70 MPH
ESALS		=	3,500,000	3,500,000	3,500,000

EXCEPTION TO NET ℄ LENGTH
STA 534'WB'+28 - STA 535'WB'+94, B-9-177
STA 533'EB'+67 - STA 535'EB'+33, B-9-20

EXCEPTION TO NET ℄ LENGTH
STA 209'WB'+86 - STA 210'WB'+82, B-9-35
STA 209'EB'+86 - STA 210'EB'+82, B-9-174

BEGIN PROJECT
1050-01-61
STA 155'WB'+60.95
Y=120,570.25
X=193,528.20



END PROJECT
1050-01-61
STA 990'WB'+00.00

T-29-N
T-28-N

END PROJECT
1052-01-62
STA 990'EB'+00.00

BEGIN PROJECT
1052-01-62
STA 156'EB'+14.02
Y=120,510.47
X=193,582.00

EXCEPTION TO NET ℄ LENGTH
STA 298'WB'+73 - STA 299'WB'+69, B-9-38
STA 298'EB'+71 - STA 299'EB'+69, B-9-75

LAYOUT
SCALE 0 2.5 MILE

PROJECT 1050-01-61 TOTAL NET LENGTH OF CENTERLINE = 15.745 MI
PROJECT 1052-01-62 TOTAL NET LENGTH OF CENTERLINE = 15.725 MI

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

COORDINATES FROM BEGIN PROJECT TO STA 601'EB'+00 ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), CHIPPEWA COUNTY (NAD 83), 2007 ADJUSTMENT.

ALL ELEVATIONS FROM BEGIN PROJECT TO STA 601'EB'+00 ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).

COORDINATES FROM STA 601'EB'+00 TO END PROJECT ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), CHIPPEWA COUNTY (NAD 83), 1991 ADJUSTMENT.

ALL ELEVATIONS FROM STA 601'EB'+00 TO END PROJECT ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1929 (NAVD29).

ORIGINAL PLANS PREPARED BY

emcs inc
500 North 17th Avenue
Wausau, WI 54401
715.845.1081 Fax 715.845.1099

WISCONSIN
STEPHANIE G. CHRISTENSEN
E35808
WAUSAU, WI
PROFESSIONAL ENGINEER

7-5-2016 (Date) (Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	EMCS, INC.
Designer	EMCS, INC.
Project Manager	TARA WEISS
Regional Examiner	CHRISTINE KOSKI
Regional Supervisor	TIMOTHY MASON

APPROVED FOR THE DEPARTMENT
DATE: 7/5/16 (Signature)

E

2

GENERAL NOTES

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

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

EXISTING RIGHT-OF-WAY IS APPROXIMATE AND IS BASED ON AVAILABLE RIGHT-OF-WAY PLATS AND CHIPPEWA COUNTY GIS PARCEL MAPPING.

HMA PAVEMENT TYPES REFERENCED THROUGHOUT THE PLANS REFER TO SPV ITEMS AS SPECIFIED BELOW:

HMA PAVEMENT 4 LT 58-28 S = HMA PAVEMENT 4 LT 58-28 S 3.0% VA REGRESSION SPECIAL
HMA PAVEMENT 4 LT 58-34 S = HMA PAVEMENT 4 LT 58-34 S 3.0% VA REGRESSION SPECIAL
HMA PAVEMENT 4 MT 58-28 S = HMA PAVEMENT 4 MT 58-28 S 3.0% VA REGRESSION SPECIAL
HMA PAVEMENT 4 MT 58-34 S = HMA PAVEMENT 4 MT 58-34 S 3.0% VA REGRESSION SPECIAL
HMA PAVEMENT 4 SMA 58-34 H = HMA PAVEMENT 4 SMA 58-34 H 3.0% VA REGRESSION SPECIAL

AS-BUILTS USED FOR PLAN DEVELOPMENT

PROJECT NO: F020-1(48), CONSTRUCTION YEAR: 1964
PROJECT NO: 1052-07-72, CONSTRUCTION YEAR: 1992
PROJECT NO: 1052-07-74, CONSTRUCTION YEAR: 1992
PROJECT NO: 1052-07-80, CONSTRUCTION YEAR: 1993
PROJECT NO: 1052-07-84, CONSTRUCTION YEAR: 1993
PROJECT NO: 1052-07-79, CONSTRUCTION YEAR: 1993
PROJECT NO: 1052-07-78, CONSTRUCTION YEAR: 1993
PROJECT NO: 1052-07-87, CONSTRUCTION YEAR: 1995
PROJECT NO: 1052-01-61, CONSTRUCTION YEAR: 2009
PROJECT NO: 1050-01-62, CONSTRUCTION YEAR: 2011
PROJECT NO: 1050-01-64, CONSTRUCTION YEAR: 2011
PROJECT NO: 1050-01-63, CONSTRUCTION YEAR: 2011
PROJECT NO: 1050-00-64, CONSTRUCTION YEAR: 2012

ALIGNMENT DESIGNATOR SUMMARY

STH 29 EASTBOUND = 'EB'
STH 29 WESTBOUND = 'WB'
CTH X = 'X'
CTH X RAMPS = 'XA', 'XB', 'XC', 'XD'
STH 27 = 'S'
STH 27 RAMPS = 'SA', 'SB', 'SC', 'SD'
CTH D = 'D'
CTH D RAMPS = 'DA', 'DB', 'DC', 'DD'

ORDER OF SECTION 2 SHEETS

PROJECT OVERVIEW
TYPICAL SECTIONS
CONSTRUCTION DETAILS
INTERSECTION DETAILS
PAVING DETAILS
EROSION CONTROL
PERMANENT SIGNING & PAVEMENT MARKING
TRAFFIC CONTROL
ALIGNMENT DATA

UTILITIES

COMMUNICATIONS

AT&T WISCONSIN
RICK PODOLAK
304 S DEWEY ST
EAU CLAIRE, WI 54701
(715) 839-5565
RP4514@ATT.COM

CENTURYLINK
JIM ARQUETTE
PO BOX 13
SHELDON, WI 54766
(715) 452-5168
JIM.ARQUETTE@CENTURYLINK.COM

24-HOUR EMERGENCY REPAIR:
(800) 824-2877

CENTURYLINK COMMUNICATIONS (F/K/A QWEST)
ROBERT SAMPSON
1310 E MARY ST
OTTUMWA, IA 52501
(636) 887-5367
ROBERT.SAMPSON@CENTURYLINK.COM

CHARTER COMMUNICATIONS
SHANE YODER
1201 MCCANN DR
ALTOONA, WI 54720
(715) 831-8940 (EXT 51113)
SHANE.YODER@CHARTER.COM

ELECTRICITY

VILLAGE OF CADOTT
NEIL AUBART
110 CENTRAL ST
CADOTT, WI 54729
(715) 313-3353
CADOTTELECTRIC@CENTURYTEL.NET

DAIRYLAND POWER COOPERATIVE
KURT D. CHILDS
3200 EAST AVE
PO BOX 817
LA CROSSE, WI 54602-0817
(608) 787-1367
KDC@DAIRYNET.COM

EAU CLAIRE ENERGY COOPERATIVE
RANDY BAIER
8214 HIGHWAY 12
PO BOX 368
FALL CREEK, WI 54742
(715) 836-6473
RBAIER@ECEC.COM

XCEL ENERGY (DISTRIBUTION)
JOE COOK
PO BOX 8
EAU CLAIRE, WI 54703
(715) 737-1072
JOE.J.COOK@XCELENERGY.COM

XCEL ENERGY (TRANSMISSION)
BRUCE M ZEMKE
414 NICOLLET MALL, MP-8
MINNEALPOLIS, MN 54401
(651) 214-2620
BRUCE.M.ZEMKE@XCELENERGY.COM

COPY ALL XCEL ENERGY CORRESPONDENCE TO:
DAWN SCHULTZ
1414 W HAMILTON AVE
PO BOX 8
EAU CLAIRE,WI 54702-0008
(715) 737-2482
DAWN.SHULTZ@XCELENERGY.COM

GAS/PETROLEUM

MAGELLAN PIPELINE
CLAIR MADSEN
2728 PATTON RD
ST PAUL, MN 55113
(612) 750-1806
CLAIR.MADSEN@MAGELLANLP.COM

24-HOUR EMERGENCY CONTACT:
(800) 720-2417

WE ENERGIES
RYAN MIENTKE
1921 8TH ST S
WISCONSIN RAPIDS, WI 54494
(715) 421-9293
RYAN.MIENTKE@WE-ENERGIES.COM

24-HOUR EMERGENCY CONTACT:
(800) 261-5325

WATER AND SEWER

VILLAGE OF BOYD
THOMAS GRUNEWALD
PO BOX 8
BOYD WI, 54726
(715) 667-3282
GRUNEWALDTHOMAS@YAHOO.COM

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

OTHER CONTACTS

U.S. ARMY CORPS OF ENGINEERS

DAN MUNSON
U.S. ARMY CORPS OF ENGINEERS
ST. PAUL DISTRICT-REGULATORY
180 5TH STREET EAST, SUITE 700
ST. PAUL, MN 55101
(651) 290-5191
DANIEL.J.MUNSON@USACE.ARMY.MIL

DNR LIAISON

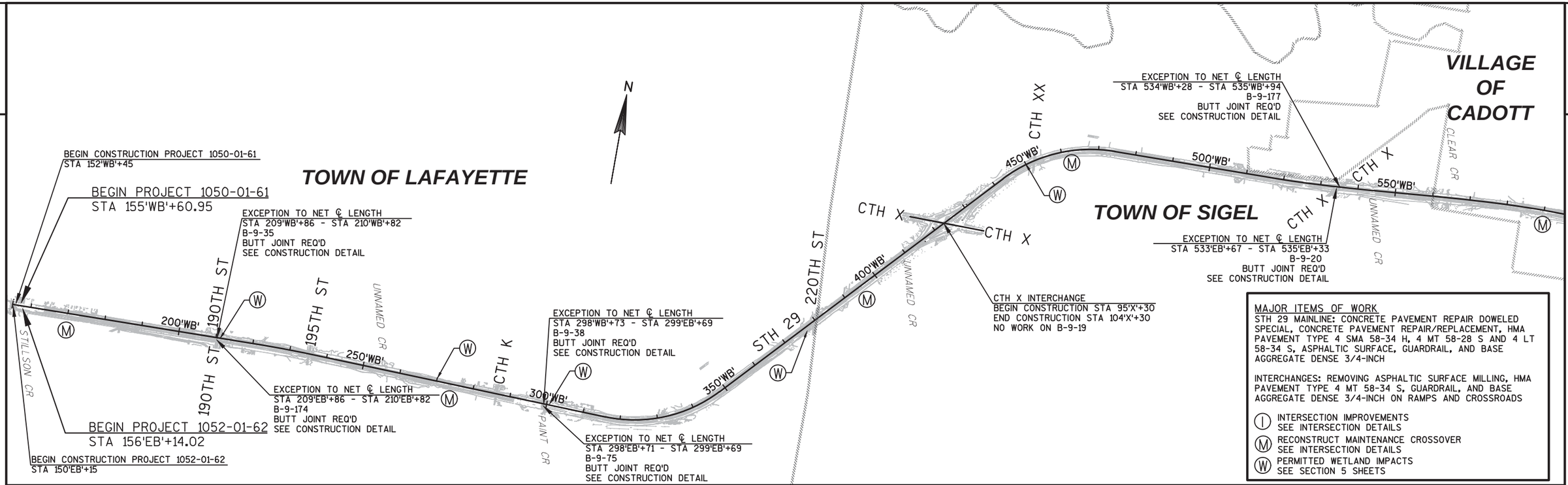
CHRIS WILLGER
1300 W CLAIRMONT ST
EAU CLAIRE, WI 54702
(715) 839-1609
CHRISTOPHERJ.WILLGER@WISCONSIN.GOV

WISCONSIN CENTRAL LTD (CN)

WISCONSIN CENTRAL LTD (CN)
1625 DEPOT STREET
STEVENS POINT, WI 54481
ATTN: JACQUELINE MACEWICZ
PHONE 715-345-2503
JACKIE.MACEQICZ@CN.CA

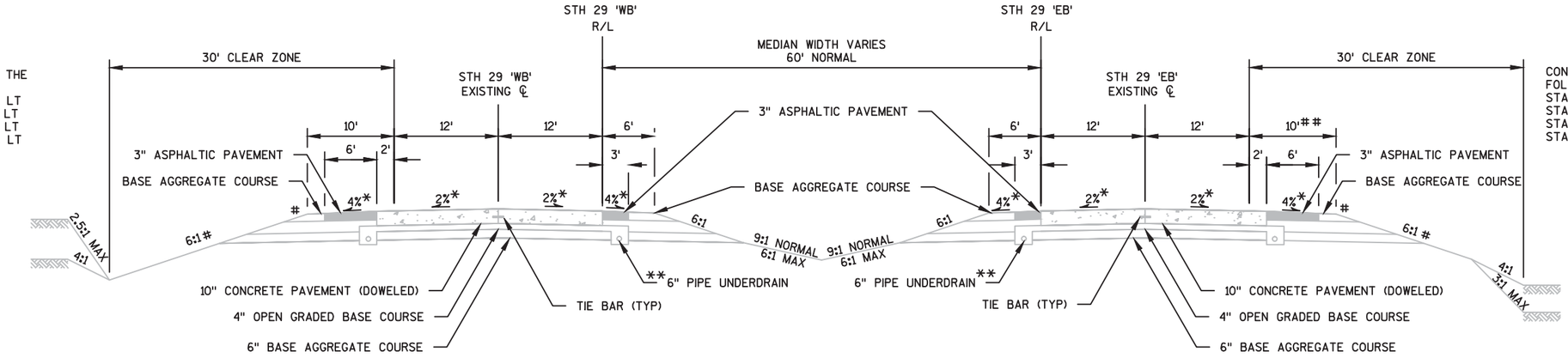
CALL BEFORE YOU DIG
CN IS NOT PART OF DIGGER HOTLINE
CONTACT MARY ELLEN CARMODY
PHONE 734-783-4533

2



PROJECT NO: 1050-01-61/1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	PROJECT OVERVIEW	SHEET 3	E

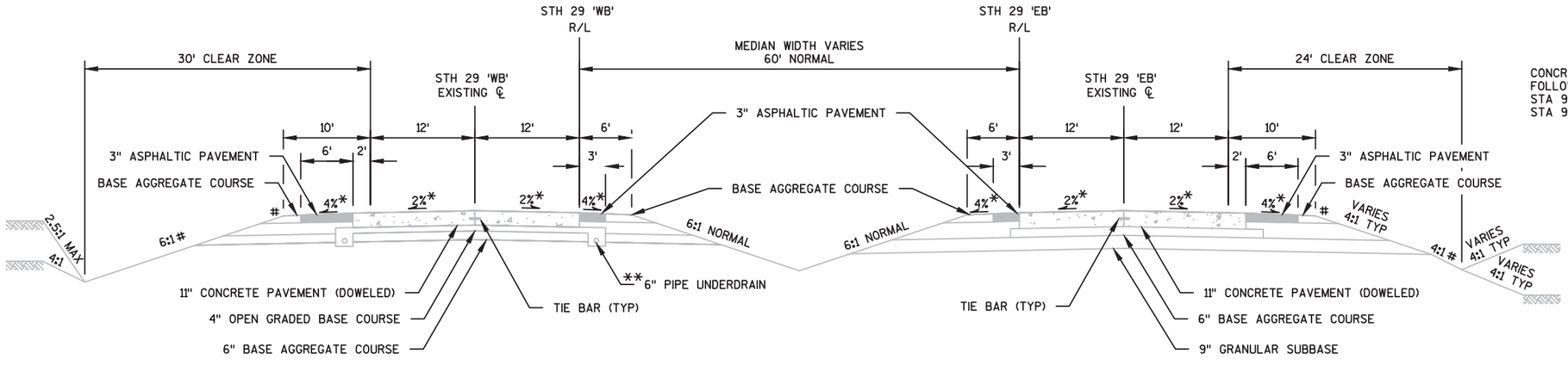
CONCRETE BARRIER IS PRESENT AT THE FOLLOWING LOCATIONS:
STA 234'WB'+78 - STA 235'WB'+48, LT
STA 286'WB'+05 - STA 286'WB'+61, LT
STA 380'WB'+31 - STA 380'WB'+94, LT
STA 422'WB'+38 - STA 423'WB'+05, LT



TYPICAL EXISTING SECTION
STH 29
STA 155'WB'+60.95 - STA 654'WB'+00
STA 156'EB'+14.02 - STA 644'EB'+00

CONCRETE BARRIER IS PRESENT AT THE FOLLOWING LOCATIONS:
STA 234'EB'+90 - STA 235'EB'+43, RT
STA 286'EB'+05 - STA 286'EB'+60, RT
STA 379'EB'+50 - STA 380'EB'+13, RT
STA 423'EB'+92 - STA 425'EB'+21, RT

CONCRETE BARRIER IS PRESENT AT THE FOLLOWING LOCATIONS:
STA 911'WB'+11 - STA 911'WB'+71, RT
STA 911'WB'+47 - STA 912'WB'+17, LT



TYPICAL EXISTING SECTION
STH 29
STA 654'WB'+00 - STA 974'WB'+85
STA 644'EB'+00 - STA 974'EB'+85

NOTES

* CROSS SLOPE VARIES DUE TO SUPERELEVATION. SHOULDER CROSS SLOPE VARIES AT LOCATIONS WITH EXISTING CONCRETE BARRIER (2%-4%).

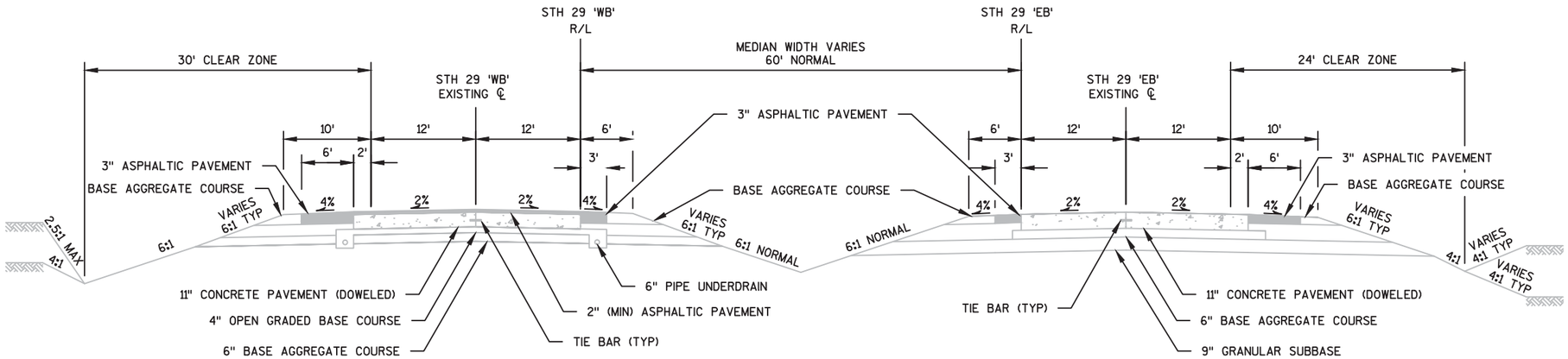
** PIPE UNDERDRAIN IS ONLY LOCATED ON THE LOW SIDE OF STH 29 IN SUPERELEVATED SECTIONS.

\# SLOPES VARY IN GUARDRAIL SECTIONS. SEE PLAN SHEETS FOR GUARDRAIL LOCATIONS.

TOTAL SHOULDER WIDTH AT STA 607+95 - STA 611+99 IS 8' DUE TO EXISTING GUARDRAIL LOCATION.

PROJECT NO: 1050-01-61/1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	TYPICAL SECTIONS	SHEET 4	E

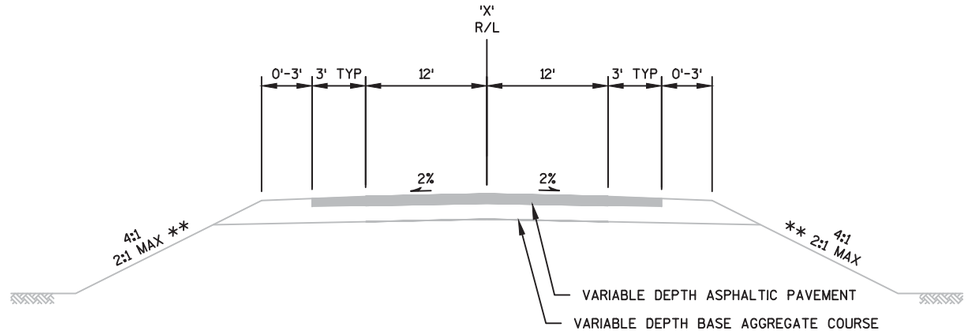
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TYPICAL EXISTING SECTION
STH 29

STA 974'WB'+85 - STA 990'WB'+00
STA 974'EB'+85 - STA 990'EB'+00

2



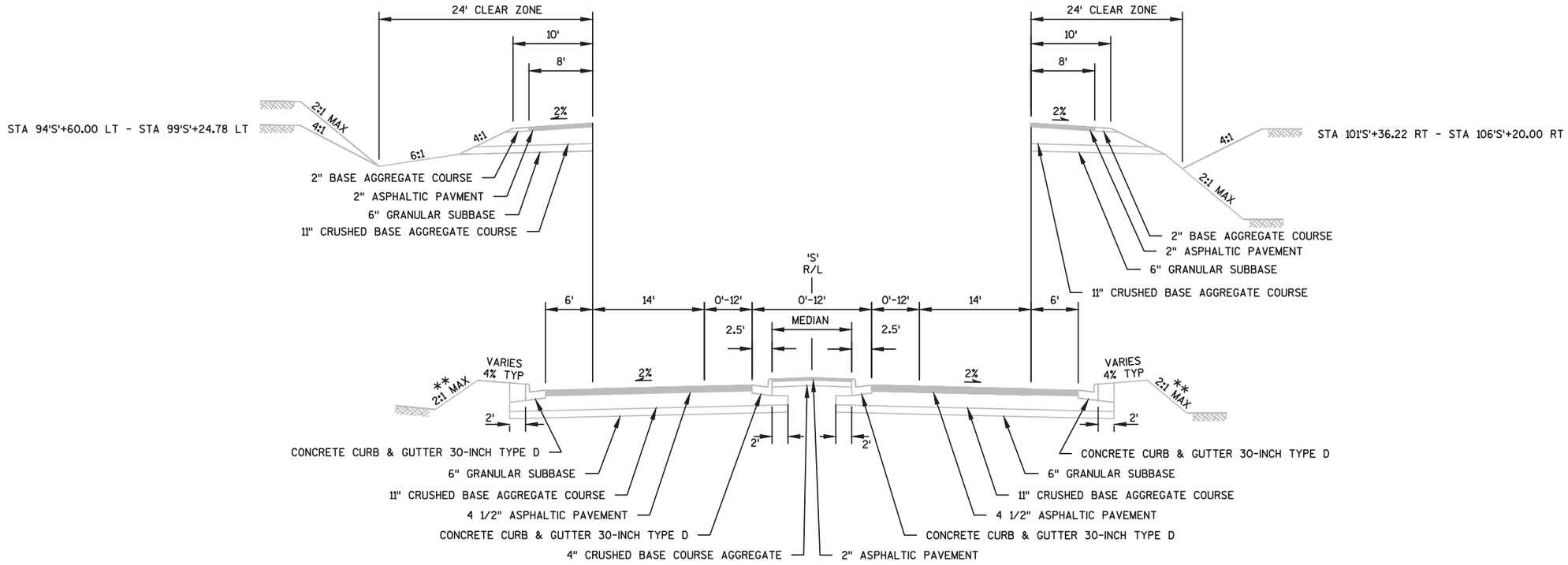
TYPICAL EXISTING SECTION
CTH X
STA 95'X'+30 - STA 98'X'+26 (B-9-19)
STA 100'X'+95 (B-9-19) - STA 104'X'+30

NOTES

SEE PLAN SHEETS FOR ADDITIONAL TURN LANE AND VARIABLE WIDTH PAVEMENT LOCATIONS.

** 2:1 MAX SLOPE ONLY OCCURS IN SECTIONS WITH GUARDRAIL. SLOPES STEEPER THAN 3:1 ARE PROTECTED WITH GUARDRAIL.

2



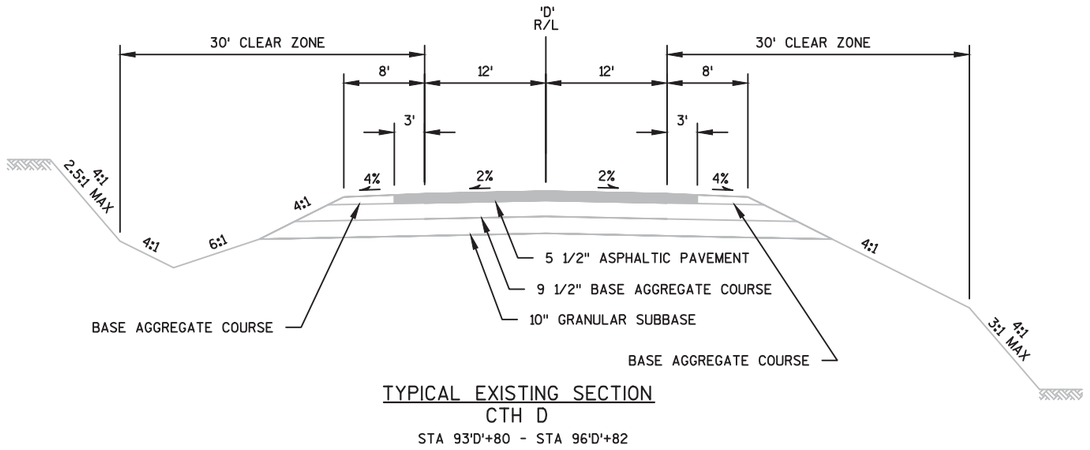
TYPICAL EXISTING SECTION
STH 27

STA 94'S'+60 - STA 99'S'+25 (B-9-179)
STA 101'S'+36 (B-9-179) - STA 106'S'+20

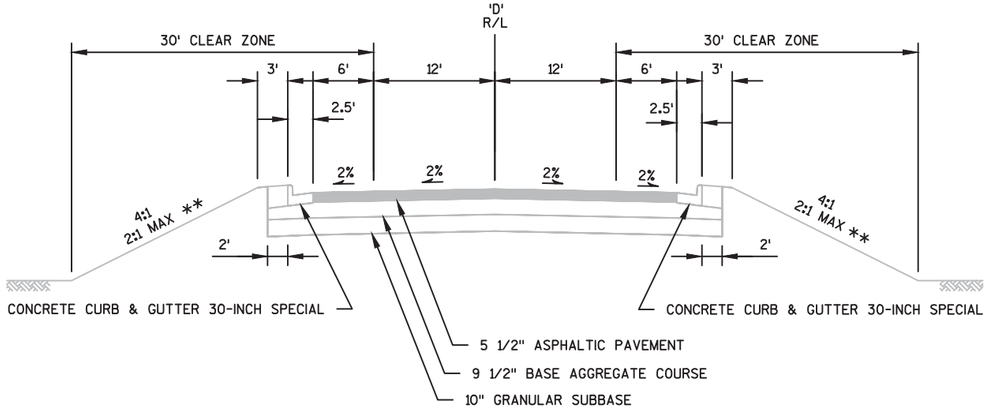
NOTES

SEE PLAN SHEETS FOR ADDITIONAL TURN LANE AND VARIABLE WIDTH PAVEMENT LOCATIONS.

** 2:1 MAX SLOPE ONLY OCCURS IN SECTIONS WITH GUARDRAIL.



TYPICAL EXISTING SECTION
CTH D
STA 93'D'+80 - STA 96'D'+82



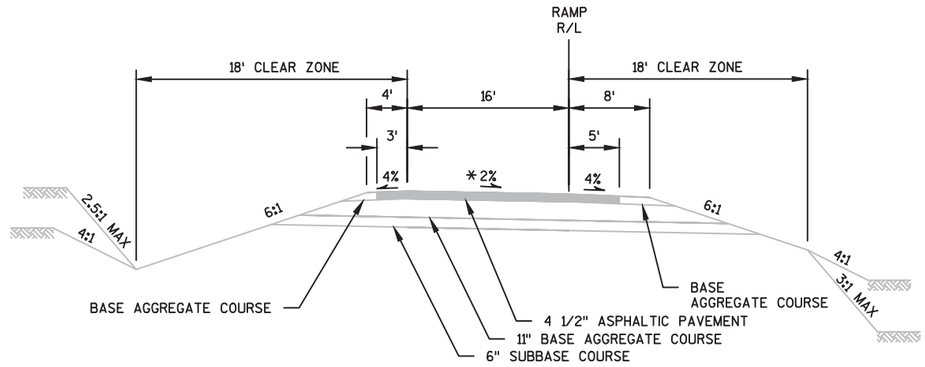
TYPICAL EXISTING SECTION
CTH D
STA 96'D'+82 - STA 98'D'+96 (B-9-189)
STA 101'D'+73 (B-9-189) - STA 105'D'+00

NOTES

SEE PLAN SHEETS FOR ADDITIONAL TURN LANE AND VARIABLE WIDTH PAVEMENT LOCATIONS.

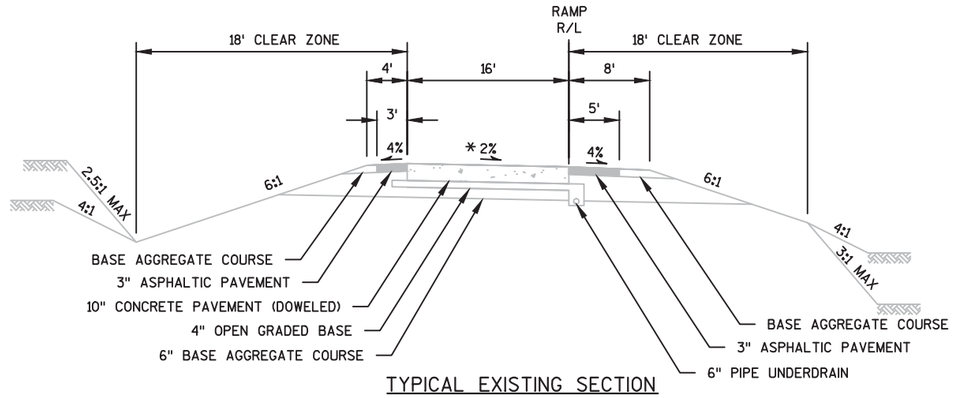
** 2:1 MAX SLOPE ONLY OCCURS IN SECTIONS WITH GUARDRAIL.

PROJECT NO: 1050-01-61/1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	TYPICAL SECTIONS	SHEET 8	E



TYPICAL EXISTING SECTION
STH 29 EXIT AND ENTRANCE RAMPS

CTH X	STH 27
STA 416'XA'+35 - STA 422'XA'+17	STA 604'SA'+15 - STA 610'SA'+74
STA 422'XB'+17 - STA 430'XB'+76	STA 610'SB'+74 - STA 619'SB'+33
##STA 426'XC'+41 - STA 427'XC'+50	##STA 611'SC'+23 - STA 618'SC'+27
##STA 417'XD'+91 - STA 426'XD'+41	##STA 602'SD'+96 - STA 611'SD'+23



TYPICAL EXISTING SECTION
STH 29 EXIT AND ENTRANCE RAMPS

CTH X	STH 27
STA 403'XA'+96 - STA 416'XA'+35	STA 590'SA'+29 - STA 604'SA'+15
STA 430'XB'+76 - STA 436'XB'+39	STA 619'SB'+33 - STA 625'SB'+02
##STA 427'XC'+50 - STA 444'XC'+91	##STA 618'SC'+27 - STA 631'SC'+09
##STA 412'XD'+33 - STA 417'XD'+91	##STA 597'SD'+10 - STA 602'SD'+96

NOTES

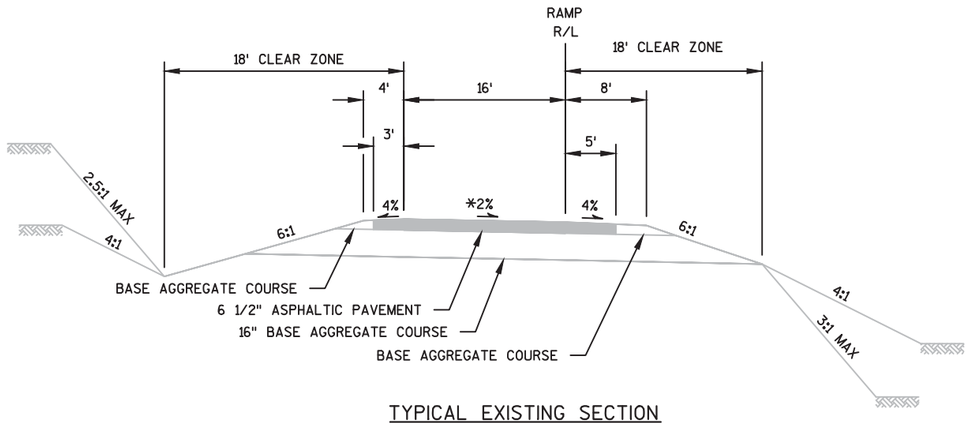
* CROSS SLOPE VARIES DUE TO SUPERELEVATION.

PAVEMENT WIDTH VARIES AT TURN LANES AND RAMP TERMINALS.

DETAIL SHOWN IS FOR ALIGNMENT 'XC' AND 'XD', MIRROR TYPICAL FOR 'XA' AND 'XB' ALIGNMENTS.

PROJECT NO: 1050-01-61/1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	TYPICAL SECTIONS	SHEET 9	E

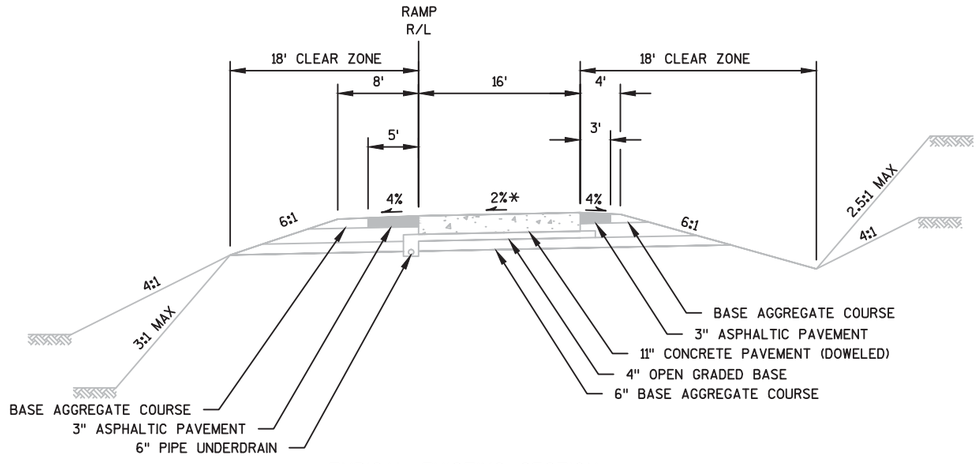
2



TYPICAL EXISTING SECTION
STH 29 EXIT AND ENTRANCE RAMPS

CTH D

STA 906'DA'+42 - STA 913'DA'+87
STA 913'DB'+87 - STA 922'DB'+10
##STA 909'DC'+50 - STA 916'DC'+69
##STA 905'DD'+40 - STA 909'DD'+50



TYPICAL EXISTING SECTION
STH 29 EXIT AND ENTRANCE RAMPS

CTH D

STA 894'DA'+55 - STA 906'DA'+42
STA 922'DB'+10 - STA 927'DB'+85

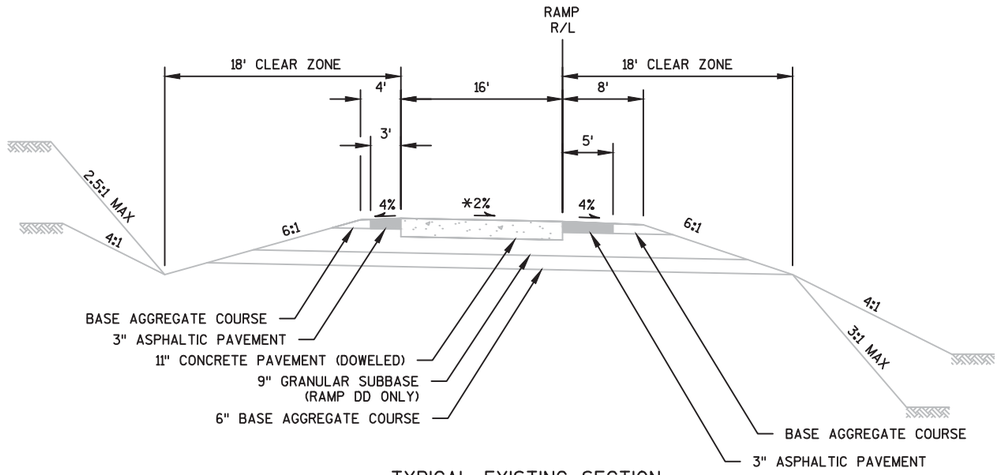
NOTES

* CROSS SLOPE VARIES DUE TO SUPERELEVATION.

PAVEMENT WIDTH VARIES AT TURN LANES AND RAMP TERMINALS.

DETAILS SHOWN IS FOR ALIGNMENT 'DC' AND 'DD', MIRROR TYPICAL FOR 'DA' AND 'DB' ALIGNMENT.

PROJECT NO: 1050-01-61/1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	TYPICAL SECTIONS	SHEET 10	E



TYPICAL EXISTING SECTION
STH 29 EXIT AND ENTRANCE RAMPS

CTH D

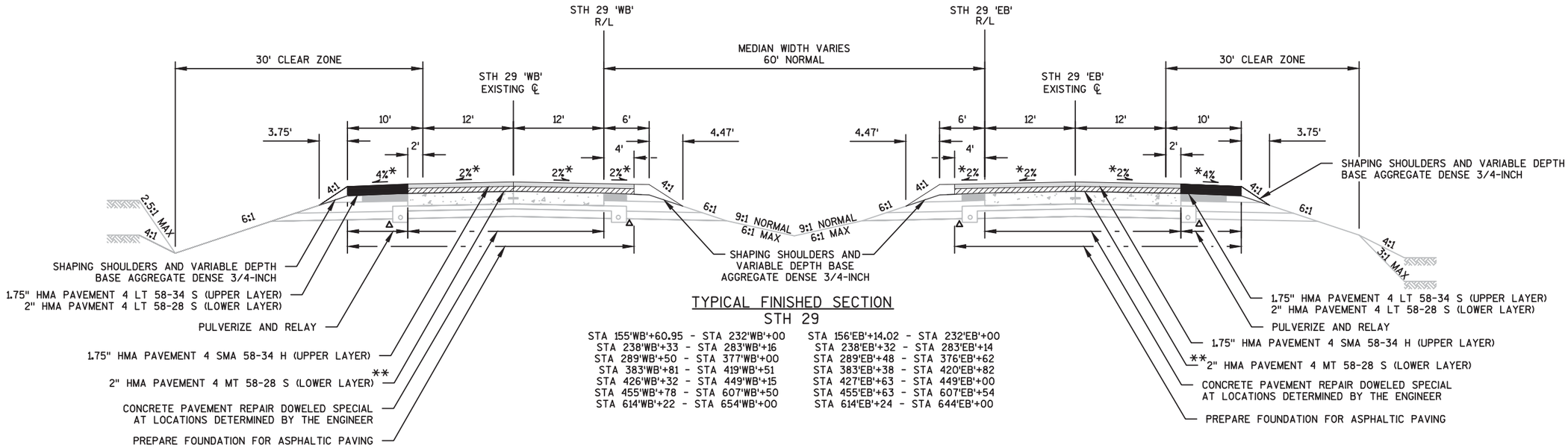
STA 916'DC'+69 - STA 928'DC'+65
STA 896'DD'+12 - STA 905'DD'+40

NOTES

* CROSS SLOPE VARIES DUE TO SUPERELEVATION.

PAVEMENT WIDTH VARIES AT TURN LANES AND RAMP TERMINALS.

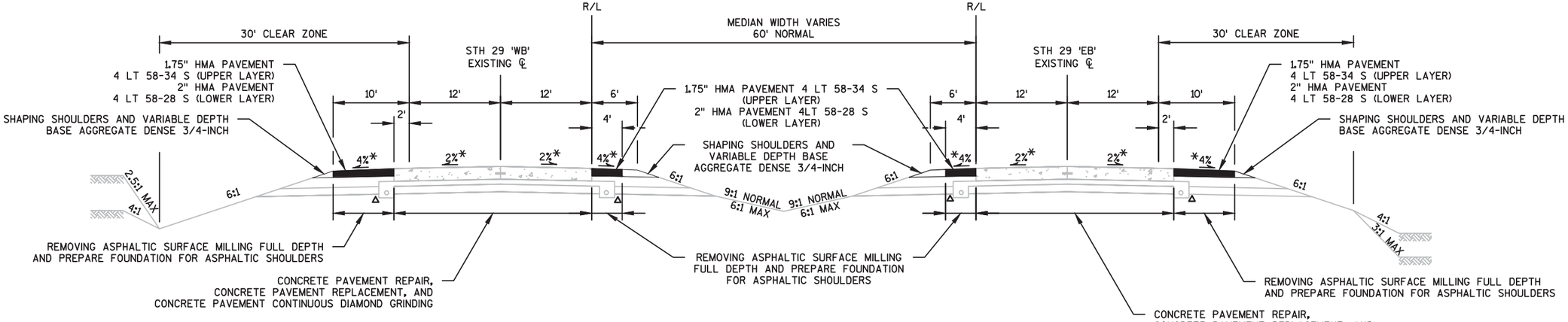
PROJECT NO: 1050-01-61/1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	TYPICAL SECTIONS	SHEET 11	E



TYPICAL FINISHED SECTION
STH 29

STA 155'WB'+60.95 - STA 232'WB'+00
STA 238'WB'+33 - STA 283'WB'+16
STA 289'WB'+50 - STA 377'WB'+00
STA 383'WB'+81 - STA 419'WB'+51
STA 426'WB'+32 - STA 449'WB'+15
STA 455'WB'+78 - STA 607'WB'+50
STA 614'WB'+22 - STA 654'WB'+00

STA 156'EB'+14.02 - STA 232'EB'+00
STA 238'EB'+32 - STA 283'EB'+14
STA 289'EB'+48 - STA 376'EB'+62
STA 383'EB'+38 - STA 420'EB'+82
STA 427'EB'+63 - STA 449'EB'+00
STA 455'EB'+63 - STA 607'EB'+54
STA 614'EB'+24 - STA 644'EB'+00



TYPICAL FINISHED SECTION
STH 29
(AT OVERPASS STRUCTURES)

STA 232'WB'+00 - STA 238'WB'+33
STA 283'WB'+16 - STA 289'WB'+50
STA 377'WB'+00 - STA 383'WB'+81
STA 419'WB'+51 - STA 426'WB'+32
STA 449'WB'+15 - STA 455'WB'+78
STA 607'WB'+50 - STA 614'WB'+22

STA 232'EB'+00 - STA 238'EB'+32
STA 283'EB'+14 - STA 289'EB'+48
STA 376'EB'+62 - STA 383'EB'+38
STA 420'EB'+82 - STA 427'EB'+63
STA 449'EB'+00 - STA 455'EB'+63
STA 607'EB'+54 - STA 614'EB'+24

NOTES

* CROSS SLOPE VARIES DUE TO SUPERELEVATION. SEE TABLE IN TYPICAL FINISHED SECTION SHEETS FOR EXISTING AND PROPOSED SUPERELEVATIONS. SHOULDER CROSS SLOPE VARIES AT LOCATIONS WITH EXISTING CONCRETE BARRIER.

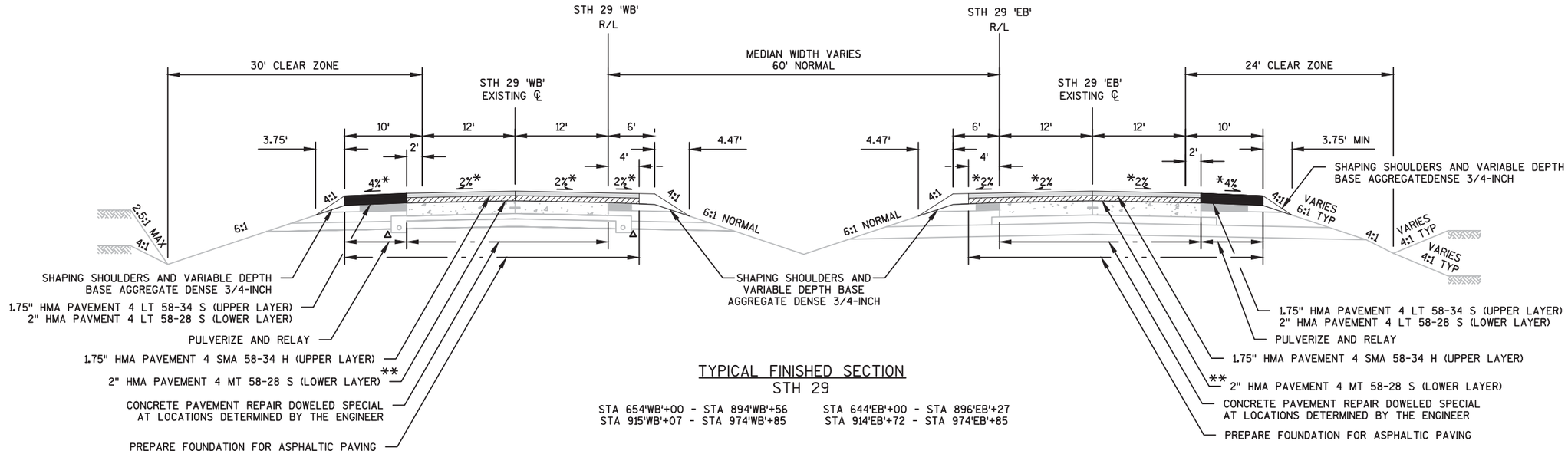
** HMA PAVEMENT 4 MT 58-28 S THICKNESS VARIES FROM 2" TO 3" ON THE INSIDE SHOULDER.

PLACE ADDITIONAL BASE AGGREGATE DENSE 3/4-INCH AS NEED ON SHOULDERS IN TANGENT AND SUPERELEVATED SECTIONS.

FOR AREAS OF GUARDRAIL AND CROSSOVER GRADING SEE CONSTRUCTION DETAILS, SECTION 5 PLAN SHEETS, MISCELLANEOUS QUANTITIES, AND CROSS SECTIONS.

COMPLETE PASSING LANE AND PASSING LANE SHOULDER PAVING DURING THE SAME OPERATION FOR EACH LAYER.

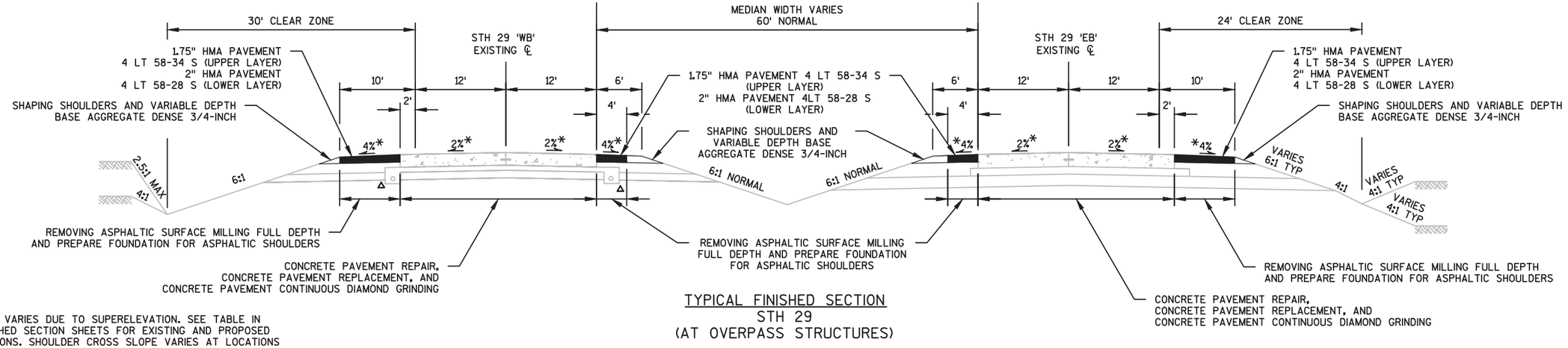
△ CLEAN APRON ENDWALLS FOR UNDERDRAIN OUTFALLS.



TYPICAL FINISHED SECTION
STH 29

STA 654'WB'+00 - STA 894'WB'+56
STA 915'WB'+07 - STA 974'WB'+85

STA 644'EB'+00 - STA 896'EB'+27
STA 914'EB'+72 - STA 974'EB'+85



TYPICAL FINISHED SECTION
STH 29
(AT OVERPASS STRUCTURES)

STA 894'WB'+56 - STA 915'WB'+07

STA 896'EB'+27 - STA 914'EB'+72

NOTES

* CROSS SLOPE VARIES DUE TO SUPERELEVATION. SEE TABLE IN TYPICAL FINISHED SECTION SHEETS FOR EXISTING AND PROPOSED SUPERELEVATIONS. SHOULDER CROSS SLOPE VARIES AT LOCATIONS WITH EXISTING CONCRETE BARRIER.

** HMA PAVEMENT 4 MT 58-28 S THICKNESS VARIES FROM 2" TO 3" ON THE INSIDE SHOULDER.

PLACE ADDITIONAL BASE AGGREGATE DENSE 3/4-INCH AS NEED ON SHOULDERS IN TANGENT AND SUPERELEVATED SECTIONS.

FOR AREAS OF GUARDRAIL AND CROSSOVER GRADING SEE CONSTRUCTION DETAILS, SECTION 5 PLAN SHEETS, MISCELLANEOUS QUANTITIES, AND CROSS SECTIONS.

COMPLETE PASSING LANE AND PASSING LANE SHOULDER PAVING DURING THE SAME OPERATION FOR EACH LAYER.

△ CLEAN APRON ENDWALLS FOR UNDERDRAIN OUTFALLS.

PROJECT NO: 1050-01-61/1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	TYPICAL SECTIONS	SHEET 13	E

NOTES

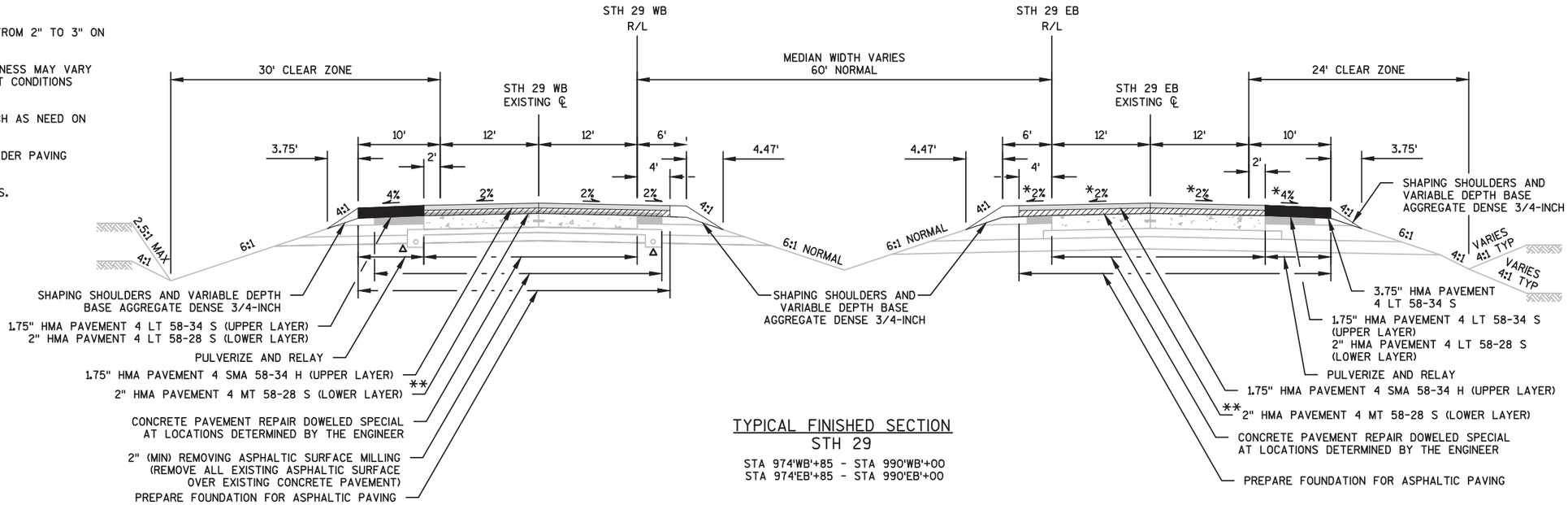
** HMA PAVEMENT 4 MT 58-28 S THICKNESS VARIES FROM 2" TO 3" ON THE INSIDE SHOULDER.

TRAVEL LANE HMA PAVEMENT 4 MT 58-28 S THICKNESS MAY VARY TO GREATER THAN 2" PENDING CONCRETE PAVEMENT CONDITIONS UNDER EXISTING ASPHALTIC OVERLAY.

PLACE ADDITIONAL BASE AGGREGATE DENSE 3/4-INCH AS NEED ON SHOULDERS.

COMPLETE PASSING LANE AND PASSING LANE SHOULDER PAVING DURING THE SAME OPERATION FOR EACH LAYER.

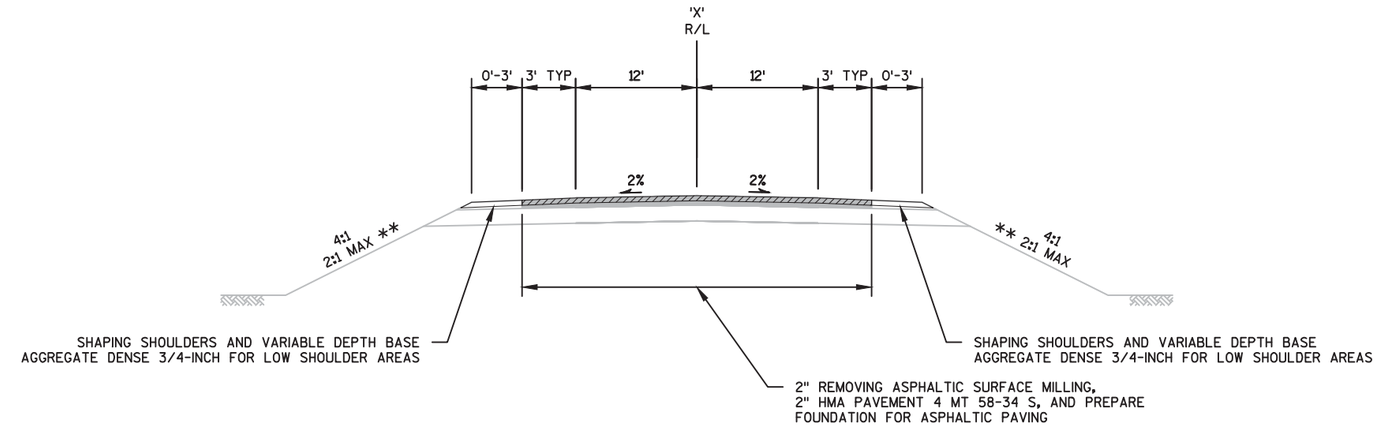
△ CLEAN APRON ENDWALLS FOR UNDERDRAIN OUTFALLS.



TYPICAL FINISHED SECTION
STH 29
STA 974'WB'+85 - STA 990'WB'+00
STA 974'EB'+85 - STA 990'EB'+00

PI STATION	CURVE	RADIUS (FT)	EXISTING SUPERELEVATION	PROPOSED SUPERELEVATION	NOTES	PRELIMINARY DESIGN NOTES: (THESE WILL BE REMOVED FROM FINAL PLANS)
228'WB'+15.56	CURVE WB-1	22,918.31	NC	NC	TO REMAIN	
333'WB'+14.32	CURVE WB-2	3,759.72	4.6%	4.7%	ADJUST SUPERELEVATION AROUND OUTSIDE EDGE LINE	
459'WB'+52.31	CURVE WB-3	3,890.36	4.5%	4.5%	TO REMAIN	
525'WB'+36.19	CURVE WB-4	17,128.73	RC	RC	TO REMAIN	70+ MPH DESIGN SPEED, REVERSE CROWN WILL NOT BE CORRECTED TO NC PER CURRENT STANDARDS
584'WB'+32.80	CURVE WB-5	22,978.31	NC	NC	TO REMAIN	
856'WB'+51.23	CURVE WB-6	5,656.87	3.2%	3.4%	ADJUST SUPERELEVATION AROUND OUTSIDE EDGE LINE	
929'WB'+47.35	CURVE WB-7	4,643.75	3.9%	4.0%	ADJUST SUPERELEVATION AROUND INSIDE EDGE LINE	
955'WB'+90.80	CURVE WB-8	10,530.35	2.1%	2.1%	TO REMAIN	70+ MPH DESIGN SPEED, 2.1% CROSS SLOPE WILL NOT BE CORRECTED TO RC PER CURRENT STANDARDS
228'EB'+22.51	CURVE EB-1	22,858.31	NC	NC	TO REMAIN	
333'EB'+39.43	CURVE EB-2	3,819.72	4.3%	4.6%	ADJUST SUPERELEVATION AROUND INSIDE EDGE LINE	
459'EB'+76.10	CURVE EB-3	3,830.36	4.6%	4.6%	TO REMAIN	
525'EB'+35.00	CURVE EB-4	17,188.73	RC	RC	TO REMAIN	70+ MPH DESIGN SPEED, REVERSE CROWN WILL NOT BE CORRECTED TO NC PER CURRENT STANDARDS
584'EB'+40.51	CURVE EB-5	22,918.31	NC	NC	TO REMAIN	
856'EB'+72.57	CURVE EB-6	5,716.87	3.2%	3.4%	ADJUST SUPERELEVATION AROUND INSIDE EDGE LINE	
929'EB'+79.50	CURVE EB-7	4,583.75	3.9%	4.0%	ADJUST SUPERELEVATION AROUND OUTSIDE EDGE LINE	
956'EB'+01.34	CURVE EB-8	10,470.35	RC	RC	TO REMAIN	
NOTES: ADDITIONAL CURVE DATA IS SHOWN ON SECTION 5 PLAN SHEETS. ADJUST SUPERELEVATIONS WITH VARIABLE DEPTH LEVELING LAYER OF HMA PAVEMENT 4 MT 58-28 S LOWER LAYER.						

2



TYPICAL FINISHED SECTION
CTH X

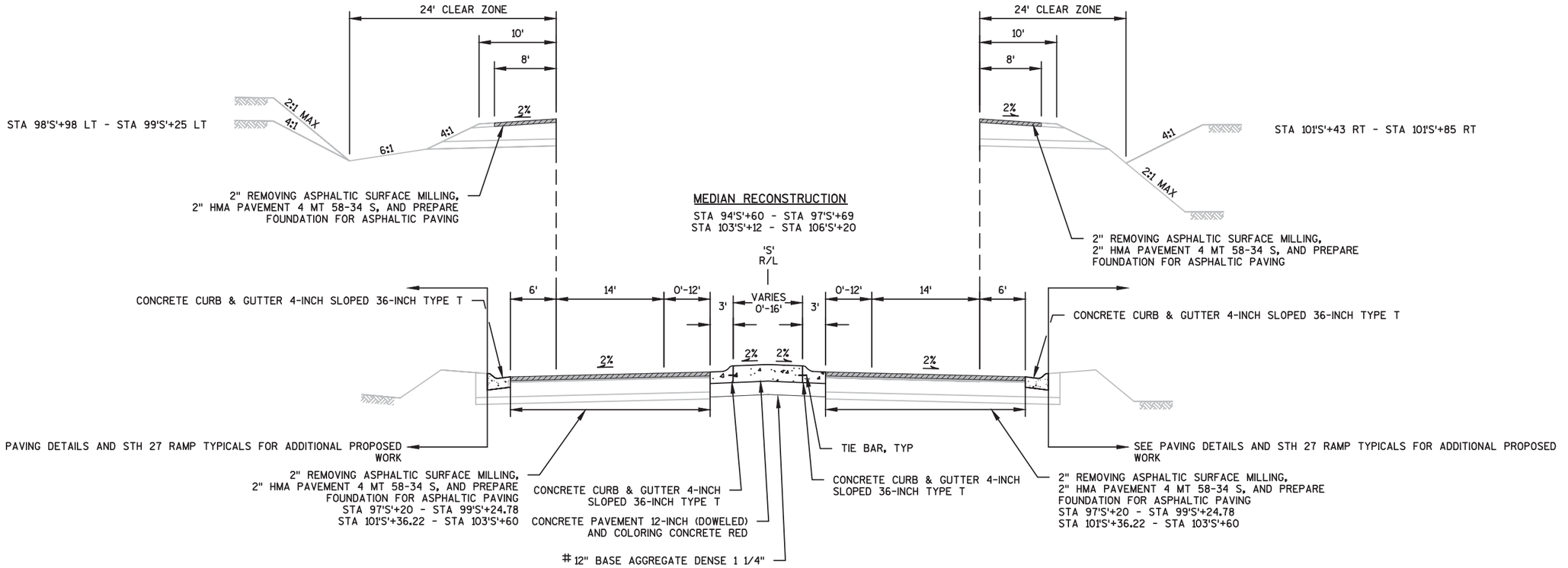
STA 95'X'+30 - STA 98'X'+26 (B-9-19)
STA 100'X'+95 (B-9-19) - STA 104'X'+30

NOTES

SEE PLAN SHEETS FOR ADDITIONAL TURN LANE AND VARIABLE WIDTH PAVEMENT LOCATIONS.

** 2:1 MAX SLOPE ONLY OCCURS IN SECTIONS WITH GUARDRAIL. SLOPES STEEPER THAN 3:1 ARE PROTECTED WITH EXISTING GUARDRAIL.

2



TYPICAL FINISHED SECTION
STH 27

STA 94'S'+60 - STA 99'S'+25 (B-9-179)
STA 101'S'+36 (B-9-179) - STA 106'S'+20

NOTES

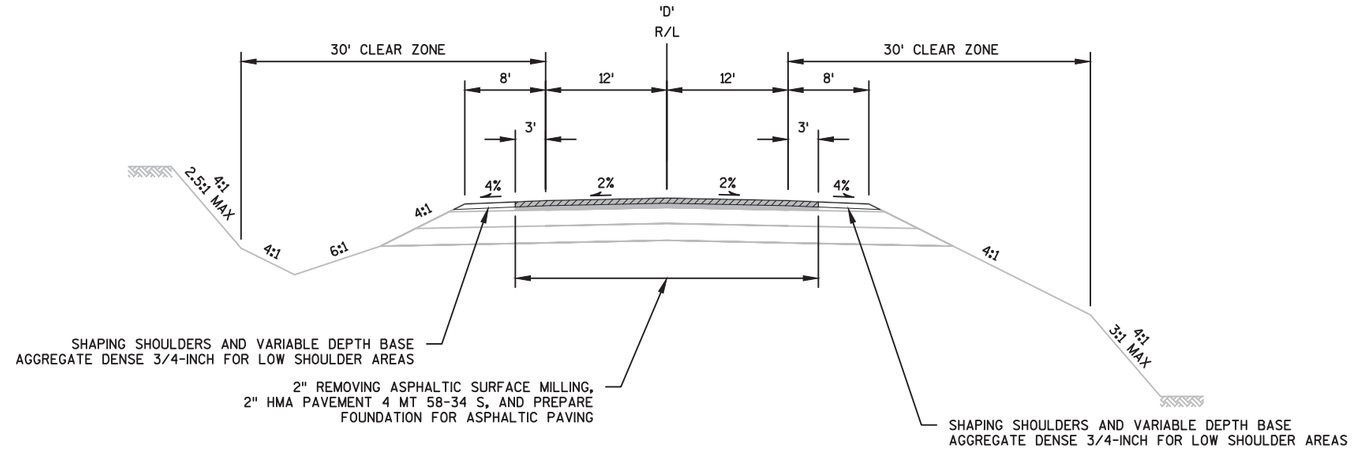
SEE PLAN SHEETS FOR ADDITIONAL TURN LANE AND VARIABLE WIDTH PAVEMENT LOCATIONS.

TIE BARS INCIDENTAL TO CONCRETE PAVEMENT.

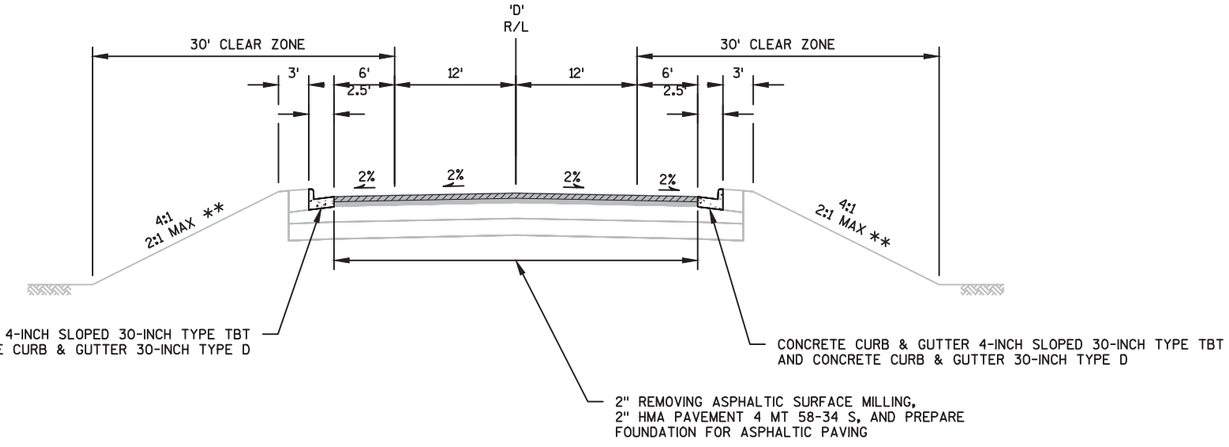
SEE SECTION 5 PLAN SHEETS FOR PROPOSED CURB & GUTTER LOCATIONS AND TYPES.

PROPOSED SUBGRADE SHOULD MATCH OR BE CONSTRUCTED BELOW EXISTING SUBGRADE.

SEE CONSTRUCTION DETAILS FOR REQUIREMENTS IN CURB & GUTTER REMOVAL/REPLACEMENT AREAS.



TYPICAL FINISHED SECTION
CTH D
STA 93'D'+80 - STA 96'D'+82



TYPICAL FINISHED SECTION
CTH D
STA 96'D'+82 - STA 98'D'+96 (B-9-189) STA
101'D'+73 (B-9-189) - STA 105'D'+00

NOTES

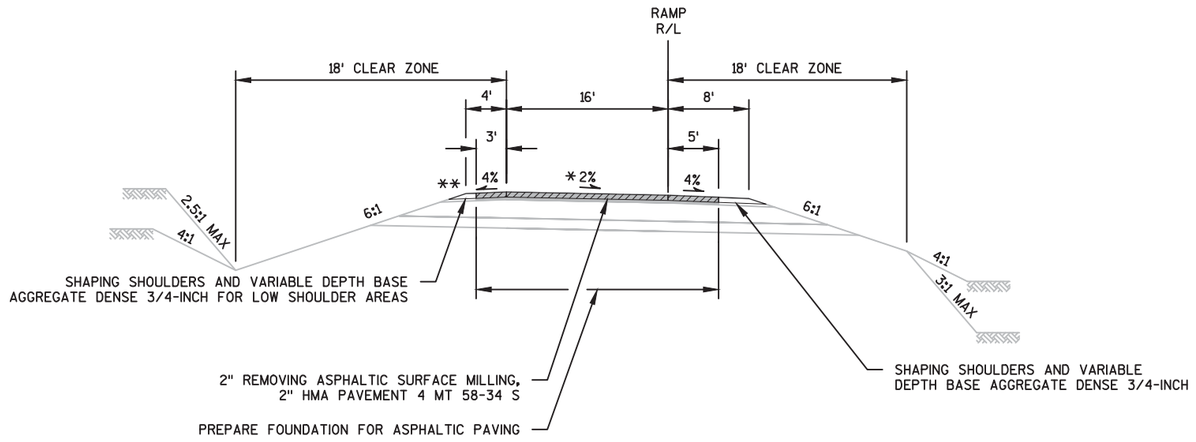
SEE PLAN SHEETS FOR ADDITIONAL TURN LANE AND VARIABLE WIDTH PAVEMENT LOCATIONS.

** 2:1 MAX SLOPE ONLY OCCURS IN SECTIONS WITH GUARDRAIL.

SEE SECTION 5 PLAN SHEETS FOR PROPOSED CURB & GUTTER LOCATIONS AND TYPES.

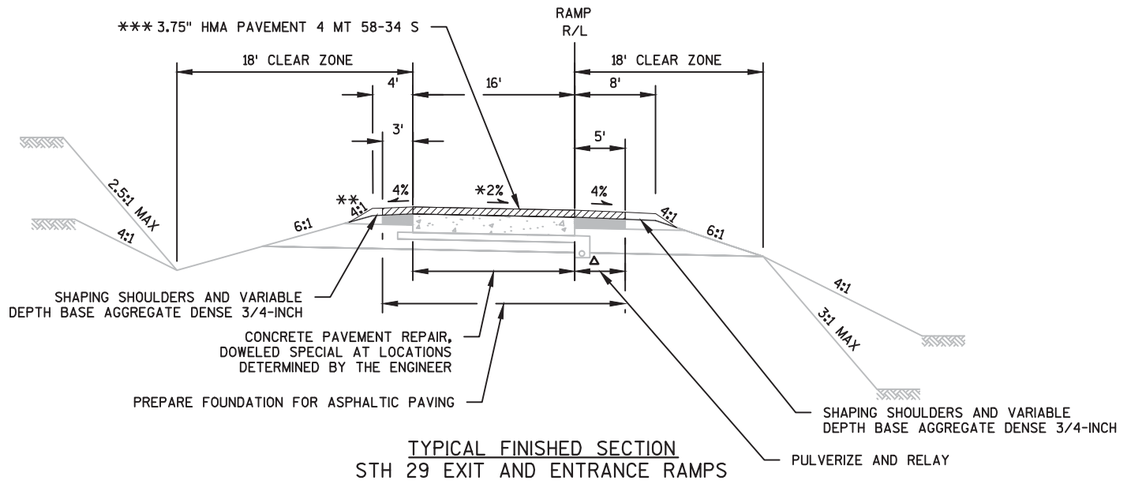
SEE CONSTRUCTION DETAILS FOR REQUIREMENTS IN CURB & GUTTER REMOVAL/REPLACEMENT AREAS.

PROJECT NO: 1050-01-61/1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	TYPICAL SECTIONS	SHEET 17	E



TYPICAL FINISHED SECTION
STH 29 EXIT AND ENTRANCE RAMPS
CTH X

STA 416'XA'+35 - STA 422'XA'+17
STA 422'XB'+17 - STA 430'XB'+76
##STA 426'XC'+41 - STA 432'XC'+85
##STA 417'XD'+91 - STA 426'XD'+41



TYPICAL FINISHED SECTION
STH 29 EXIT AND ENTRANCE RAMPS

CTH X

STA 403'XA'+96 - STA 416'XA'+35
STA 430'XB'+76 - STA 436'XB'+39
##STA 432'XC'+85 - STA 444'XC'+91
STA 412'XD'+33 - STA 417'XD'+91

STH 27

STA 590'SA'+29 - STA 604'SA'+15
STA 619'SB'+33 - STA 625'SB'+02
##STA 618'SC'+27 - STA 631'SC'+09
##STA 597'SD'+10 - STA 602'SD'+96

NOTES

* PAVEMENT CROSS SLOPE VARIES DUE TO SUPER ELEVATION SEE ALIGNMENT DATA SHEETS FOR SUPER ELEVATION DATA.

PAVEMENT WIDTH VARIES AT TURN LANES AND RAMP TERMINALS.

*** HMA THICKNESS VARIES, SEE CONSTRUCTION DETAILS.

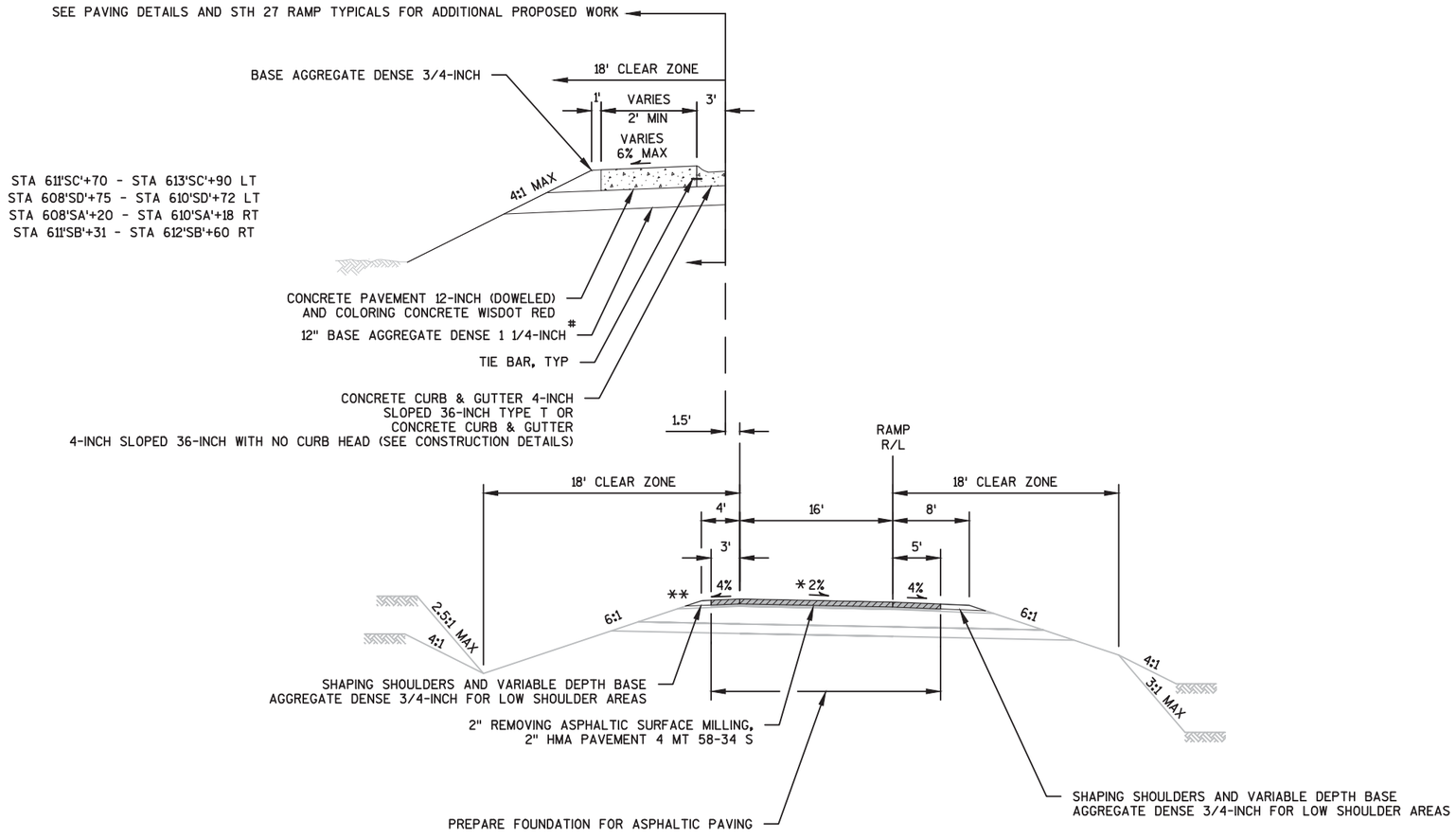
** PAVEMENT SAFETY EDGE REQUIRED, SEE SDD "SAFETY EDGE".

DETAIL SHOW IS FOR ALIGNMENTS 'XC' AND 'XD', MIRROR TYPICAL FOR 'XA' AND 'XB' ALIGNMENTS.

Δ CLEAN APRON ENDWALLS FOR UNDERDRAIN OUTFALLS.

PROJECT NO: 1050-01-61/1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	TYPICAL SECTIONS	SHEET 18	E

2



TYPICAL FINISHED SECTION
STH 29 EXIT AND ENTRANCE RAMPS
STH 27

STA 604'SA'+15 - STA 610'SA'+74
STA 610'SB'+74 - STA 619'SB'+33
STA 611'SC'+23 - STA 618'SC'+27
STA 602'SD'+96 - STA 611'SD'+23

NOTES

SEE SECTION 5 PLAN SHEETS FOR RAMP SHOULDER MILL AND OVERLAY LIMITS.

PROPOSED SUBGRADE SHOULD MATCH OR BE CONSTRUCTED BELOW EXISTING SUBGRADE.

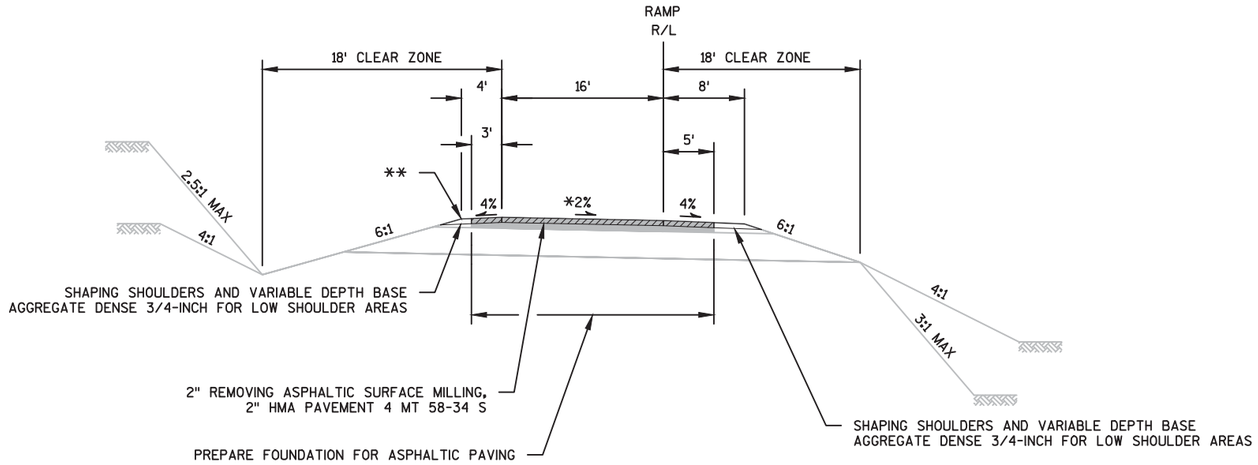
** PAVEMENT SAFETY EDGE REQUIRED, SEE SDD "SAFETY EDGE".

* PAVEMENT CROSS SLOPE VARIES DUE TO SUPER ELEVATION
SEE ALIGNMENT DATA SHEETS FOR SUPER ELEVATION DATA.

DETAIL SHOWN IS ALIGNMENT 'SC' AND 'SD', MIRROR TYPICAL FOR 'SA' AND 'SB' ALIGNMENTS.

TIE BARS INCIDENTAL TO CONCRETE PAVEMENT.

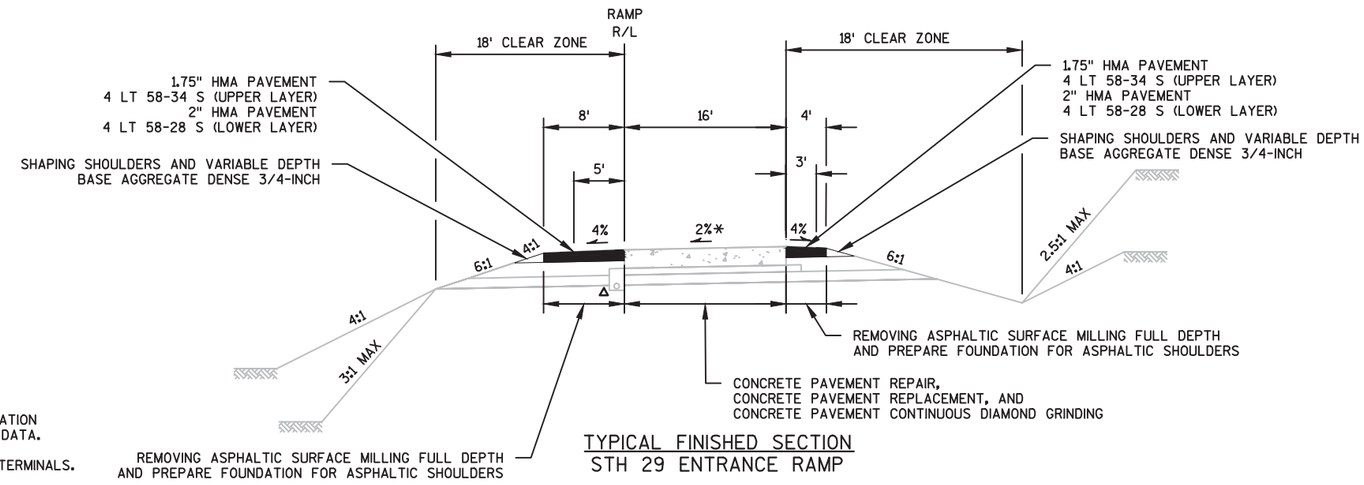
SEE CONSTRUCTION DETAILS FOR REQUIREMENTS IN CURB & GUTTER REMOVAL/REPLACEMENT AREAS.



TYPICAL FINISHED SECTION
STH 29 EXIT AND ENTRANCE RAMPS

CTH D

STA 906'DA'+42 - STA 913'DA'+87
STA 913'DB'+87 - STA 922'DB'+10
##STA 909'DC'+50 - STA 916'DC'+69
##STA 905'DD'+40 - STA 909'DD'+50



TYPICAL FINISHED SECTION
STH 29 ENTRANCE RAMP

CTH D

STA 894'DA'+55 - STA 906'DA'+42

NOTES

* PAVEMENT CROSS SLOPE VARIES DUE TO SUPER ELEVATION SEE ALIGNMENT DATA SHEETS FOR SUPER ELEVATION DATA.

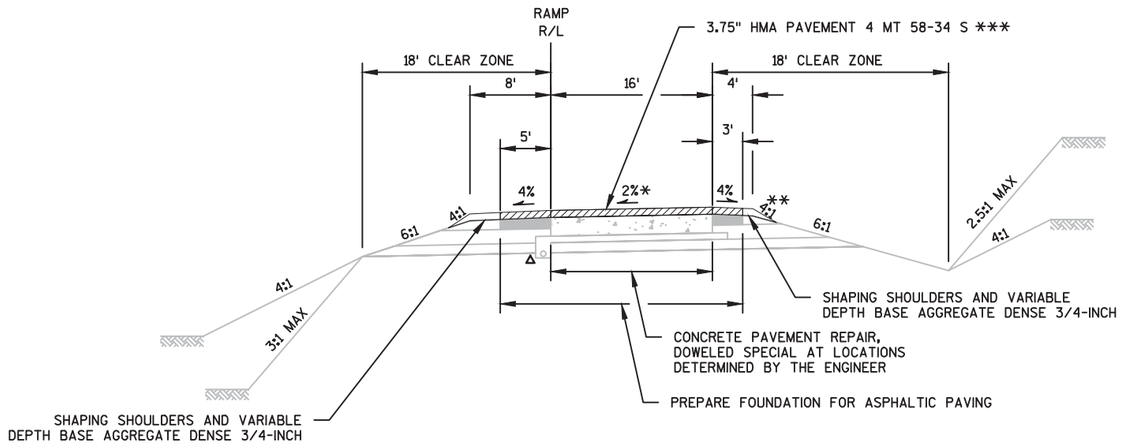
PAVEMENT WIDTH VARIES AT TURN LANES AND RAMP TERMINALS.

*** HMA THICKNESS VARIES, SEE CONSTRUCTION DETAILS.

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

DETAIL SHOWN IS ALIGNMENT 'DC' AND 'DD', MIRROR TYPICAL FOR 'DA' AND DB ALIGNMENTS.

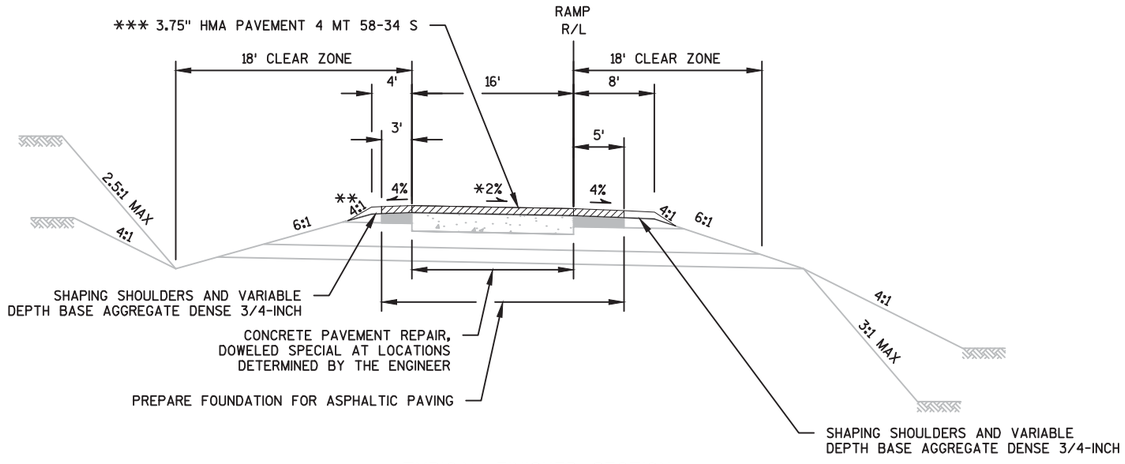
Δ CLEAN APRON ENDWALLS FOR UNDERDRAIN OUTFALLS.



TYPICAL FINISHED SECTION
STH 29 EXIT RAMP

CTH D

STA 922'DB'+10 - STA 927'DB'+85



TYPICAL FINISHED SECTION
STH 29 ENTRANCE RAMP

CTH D

STA 916'DC'+69 - STA 928'DC'+65

NOTES

* PAVEMENT CROSS SLOPE VARIES DUE TO SUPER ELEVATION
SEE ALIGNMENT DATA SHEETS FOR SUPER ELEVATION DATA.

PAVEMENT WIDTH VARIES AT TURN LANES AND RAMP TERMINALS.

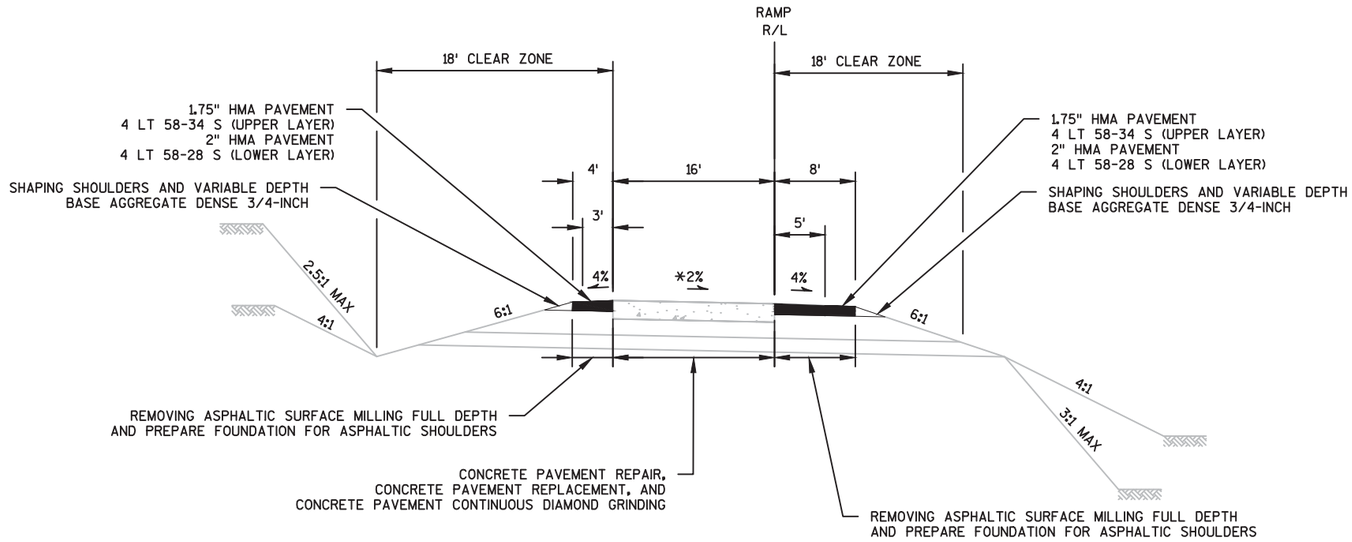
*** HMA THICKNESS VARIES, SEE CONSTRUCTION DETAILS.

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

△ CLEAN APRON ENDWALLS FOR UNDERDRAIN OUTFALLS.

PROJECT NO: 1050-01-61/1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	TYPICAL SECTIONS	SHEET 21	E

2



TYPICAL FINISHED SECTION
STH 29 EXIT RAMP

CTH D

STA 896'DD'+12 - STA 905'DD'+40

NOTES

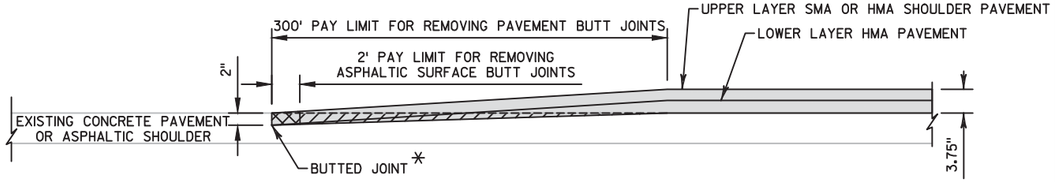
* PAVEMENT CROSS SLOPE VARIES DUE TO SUPER ELEVATION
SEE ALIGNMENT DATA SHEETS FOR SUPER ELEVATION DATA.

PAVEMENT WIDTH VARIES AT TURN LANES AND RAMP TERMINALS.

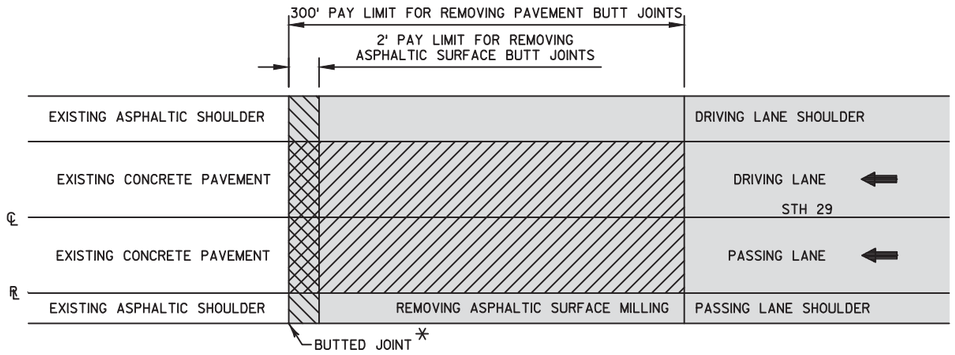
*** HMA THICKNESS VARIES, SEE CONSTRUCTION DETAILS.

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

PROJECT NO: 1050-01-61/1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	TYPICAL SECTIONS	SHEET 22	E



PROFILE



PLAN

REMOVING PAVEMENT BUTT JOINTS

REMOVING ASPHALTIC SURFACE BUTT JOINTS

PROPOSED SMA OR HMA SHOULDER PAVEMENT OVERLAY

STH 29 MAINLINE BUTT JOINT & TRANSITION DETAIL

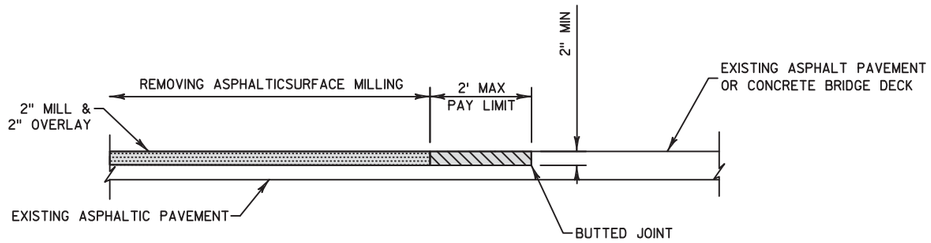
REQUIRED AT BEGIN/END EB PROJECT, BEGIN WB PROJECT, BEGIN/END CONCRETE PAVEMENT REPAIR AREAS, AND BRIDGE DECKS
(SEE PLAN SHEETS FOR LOCATIONS)

NOTES

GRADE PULVERIZED SHOULDERS TO MATCH 300' TRANSITIONS TO EXISTING CONCRETE PAVEMENT.

HMA SHOULDERS FULL DEPTH REPLACEMENTS SHALL OCCUR DURING STAGE 2 & 3 CONSTRUCTION TO PROVIDE ADEQUATE WIDTH FOR STAGED TRAFFIC. NO BUTT JOINT REQUIRED FOR STAGE 2 & 3. BUTT JOINT REQUIRED FOR STAGE 4 & 5 AT CONCRETE REPAIR AREAS.

* PAVE LOWER LAYER HMA PAVEMENT FLUSH W/EXISTING CONCRETE PAVEMENT OR ASPHALTIC SHOULDER FOR STAGE 3 & 4 TRAFFIC. REMOVING ASPHALTIC SURFACE MILLING & BUTT JOINT REQUIRED DURING STAGE 4 & 5 TO PROVIDE CONSISTENT 1.75" UPPER LAYER THICKNESS OF SMA OR HMA PAVEMENT.



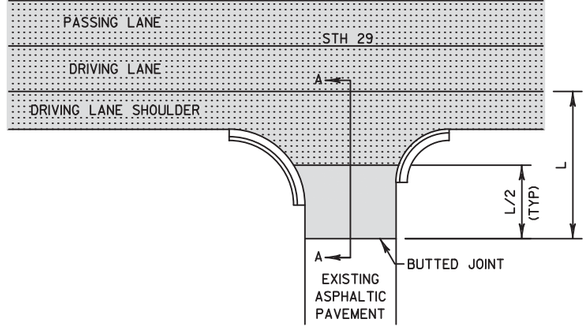
REMOVING ASPHALTIC SURFACE BUTT JOINTS
DO NOT REMOVE MATERIAL UNDER THIS ITEM UNTIL 24 HOURS BEFORE PAVING

REMOVING ASPHALTIC SURFACE MILLING

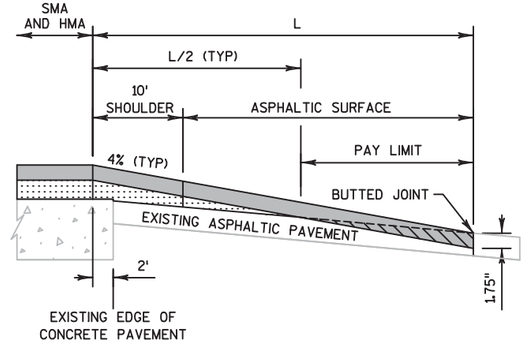
PROPOSED HMA PAVEMENT OVERLAY

CTH X, STH 27, & CTH D MAINLINE BUTT JOINT DETAIL

REQUIRED AT BEGIN CONSTRUCTION, END CONSTRUCTION, AND BRIDGE DECKS
(SEE PLAN SHEETS FOR LOCATIONS)



PLAN



PROFILE
SECTION A-A
(ALONG SIDE ROAD)

NOTE

OFFSET TO "L" SHOWN ON SECTION 5 PLAN SHEETS

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

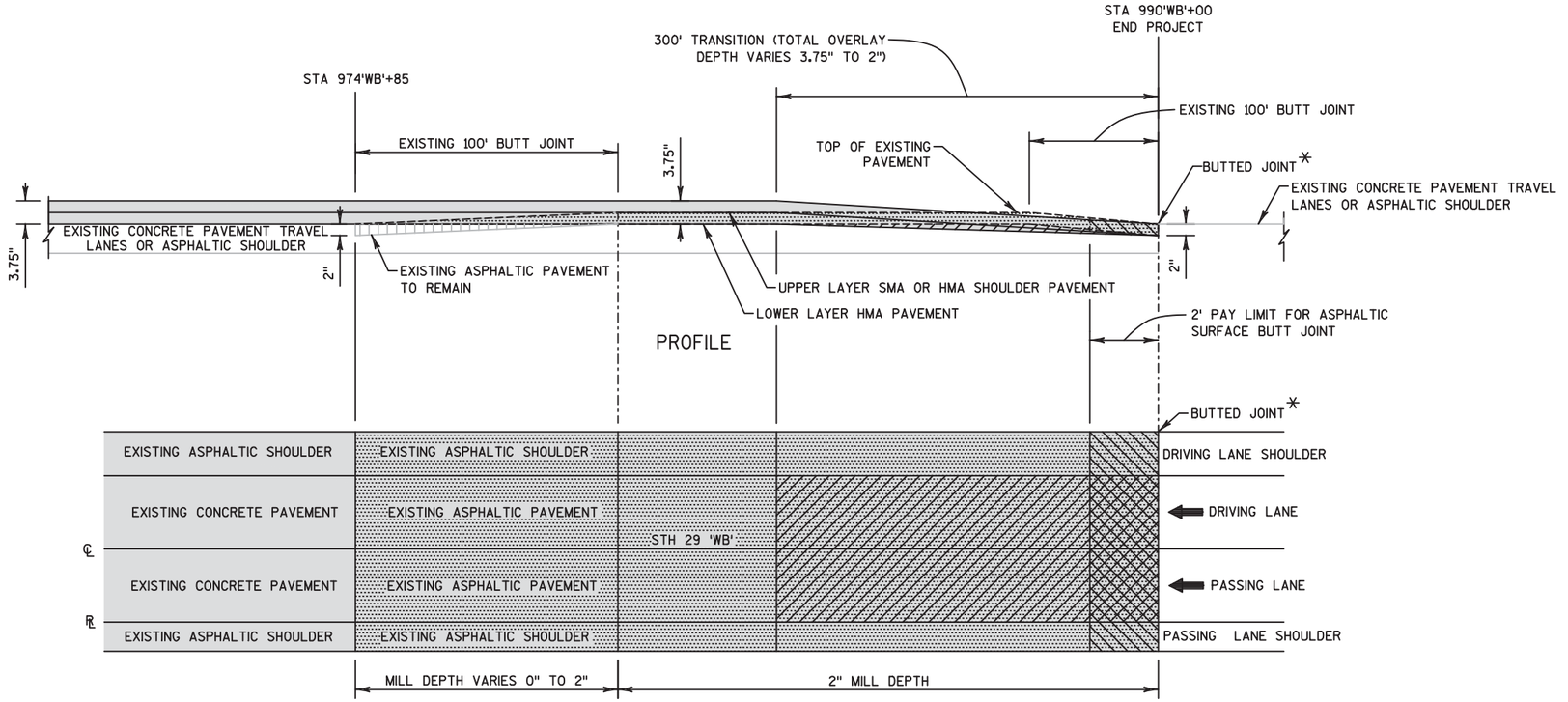
PROPOSED LOWER LAYER HMA PAVEMENT OVERLAY

PROPOSED UPPER LAYER HMA, SMA, OR ASPHALTIC SURFACE OVERLAY

AT-GRADE INTERSECTION BUTT JOINT DETAIL

270TH STREET, 300TH STREET, AND 320TH STREET

2

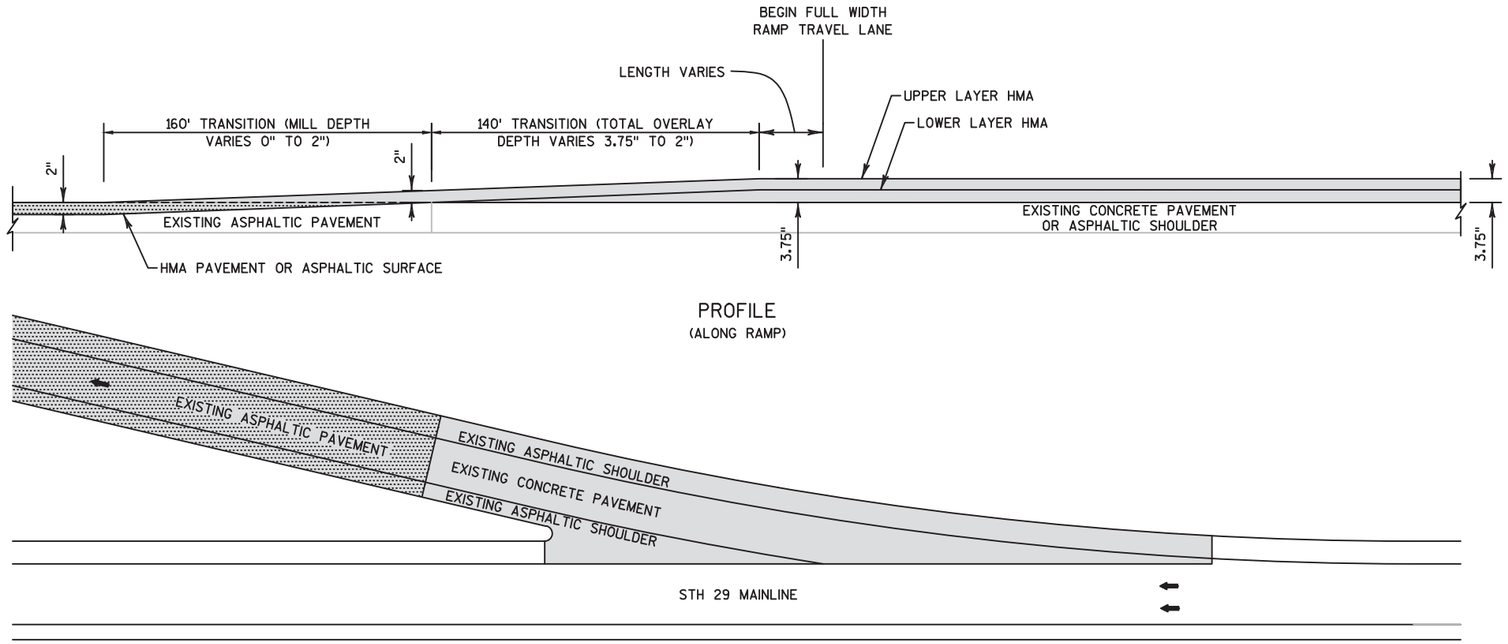


STH 29 WB END PROJECT BUTT JOINT DETAIL

STH 29 WB END PROJECT LIMIT

NOTES

* PAVE LOWER LAYER HMA PAVEMENT FLUSH W/EXISTING CONCRETE PAVEMENT OR ASPHALTIC SHOULDER FOR STAGE 3 & 4 TRAFFIC. REMOVING ASPHALTIC SURFACE MILLING & BUTT JOINT REQUIRED DURING STAGE 4 & 5 TO PROVIDE CONSISTENT 1.75" UPPER LAYER THICKNESS OF SMA OR HMA PAVEMENT.



PROFILE
(ALONG RAMP)

PLAN

PROPOSED HMA PAVEMENT OVERLAY

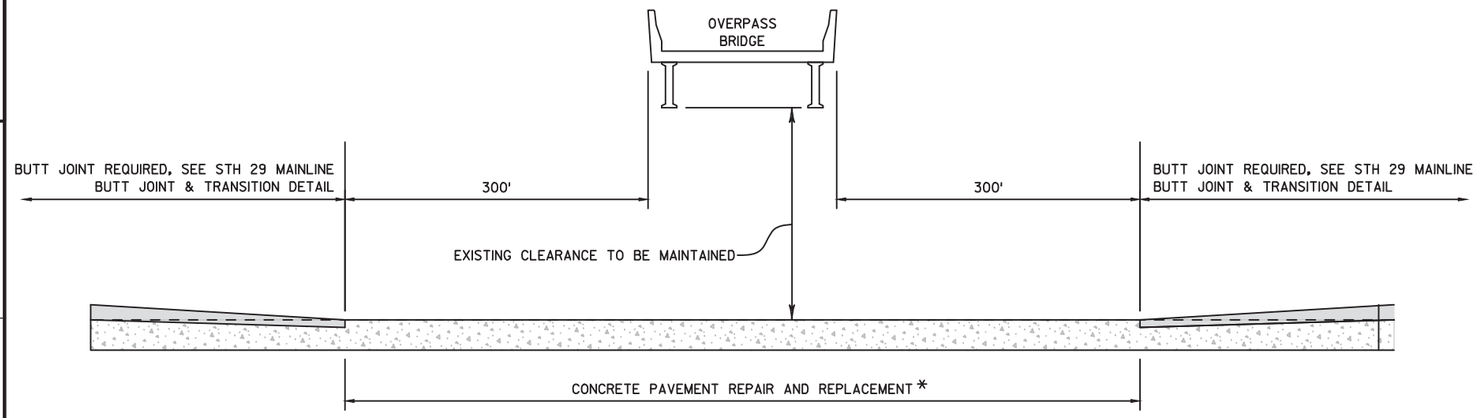
REMOVING ASPHALTIC SURFACE MILLING

PAVING TRANSITION AT RAMPS DETAIL

CTH X, STH 27, AND CTH D (DB AND DC) INTERCHANGE RAMPS

PROJECT NO: 1050-01-61/1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CONSTRUCTION DETAILS	SHEET 25	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\021001-CD.DWG
LAYOUT NAME - ****
PLOT DATE : 7/27/2016 12:47 PM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 42



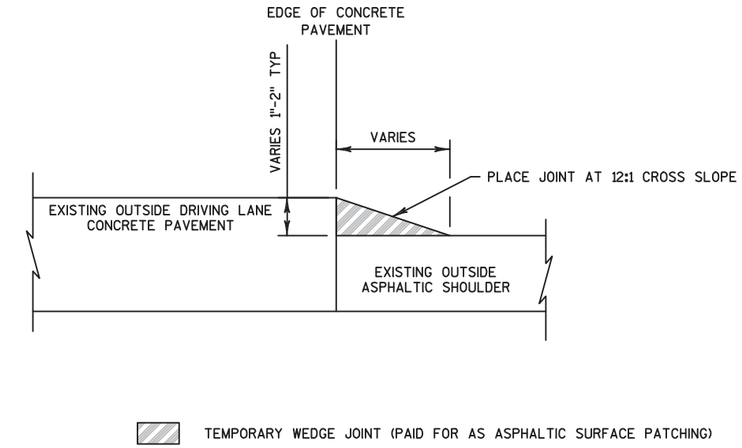
PROFILE

CONCRETE PAVEMENT REPAIR & REPLACEMENT DETAIL AT OVERPASS STRUCTURES

SEE SECTION 5 PLAN SHEETS FOR LOCATIONS

NOTE

* SEE TYPICAL SECTIONS FOR ADDITIONAL PROPOSED WORK INFORMATION ON THE TRAVEL LANES AND SHOULDERS.

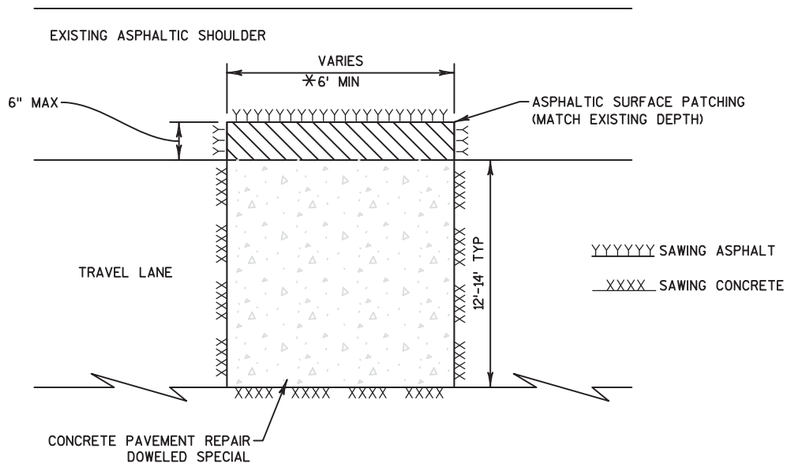


TEMPORARY WEDGE JOINT ON EXISTING OUTSIDE DRIVING LANE SHOULDER DETAIL

REQUIRED AT UNEVEN LONGITUDINAL JOINT PRIOR TO SHIFTING TRAFFIC ONTO THE EXISTING OUTSIDE SHOULDER DUE TO SETTLEMENT OF EXISTING SHOULDER. PLACE AT LOCATIONS DESIGNATED BY ENGINEER.

NOTE

TEMPORARY WEDGE JOINT TO BE PULVERIZED AND RELAYED WITH EXISTING ASPHALTIC SHOULDER.



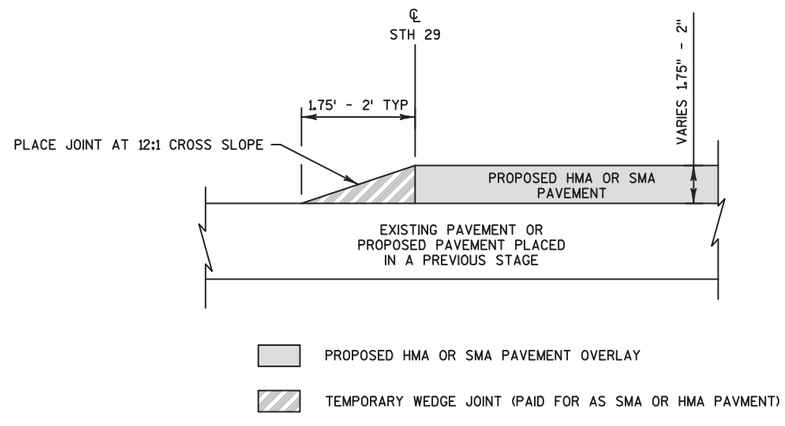
HMA SHOULDER DETAIL ADJACENT TO CONCRETE PAVEMENT REPAIR DOWELED SPECIAL

NOTES

DAMAGE TO EITHER EXISTING PAVEMENTS OR EXISTING SHOULDERS OUTSIDE OF THE LIMITS TO BE REMOVED DUE TO CONTRACTOR OPERATIONS SHALL BE REPAIRED AS DIRECTED BY THE ENGINEER AND NO ADDITIONAL PAYMENT WILL BE MADE.

PLACE ASPHALTIC PATCH BEFORE OPENING ADJACENT LANE TO TRAFFIC IN ALL AREAS.

* CONCRETE PAVEMENT REPAIR AREAS AT EXISTING PATCHES MAY NEED TO EXTEND 1' BEYOND JOINTS OR AS DIRECTED BY THE ENGINEER.



TEMPORARY WEDGE JOINT ADJACENT TO PROPOSED HMA OR SMA PAVEMENT DETAIL

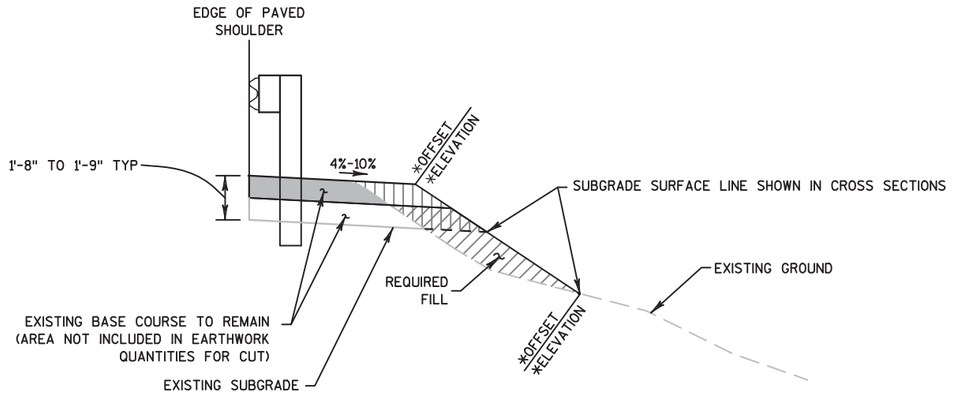
REQUIRED AT UNEVEN LONGITUDINAL JOINT PRIOR TO OPENING TO TRAFFIC

NOTES

REMOVE TEMPORARY WEDGE JOINT PRIOR TO PLACING ADJACENT HMA OR SMA LAYERS ON TRAVEL LANES AND SHOULDERS.

TEMPORARY WEDGE JOINT REMOVAL TO BE PAID AS "MILLING AND REMOVING TEMPORARY JOINT".

2



SHOULDER WIDENING EARTHWORK & BASE AGGREGATE FOR GUARDRAIL DETAIL

NOTES

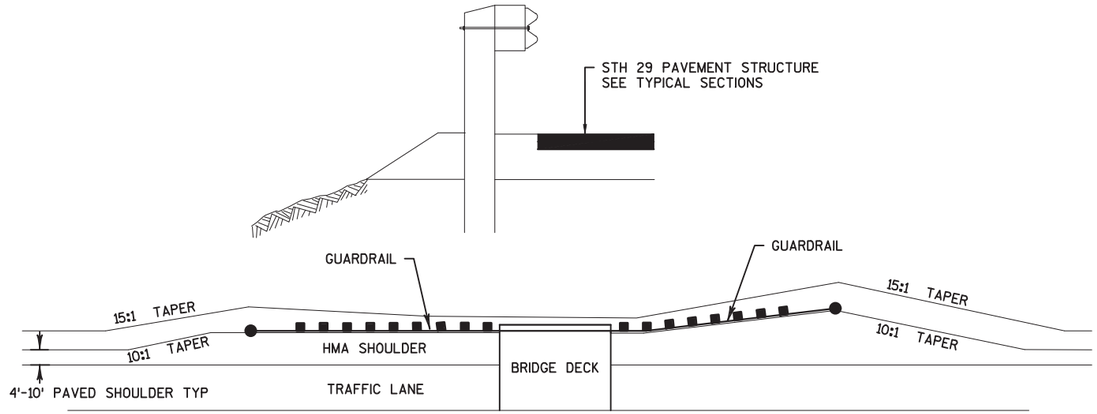
ANY CUT AND FILL REQUIRED IS INCIDENTAL TO THE BARRIER SYSTEM GRADING SHAPING FINISHING ITEM.

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

LEGEND

NEW BASE AGGREGATE DENSE 3/4-INCH

CUT AND FILL SHOWN IN MISCELLANEOUS QUANTITIES



DETAIL FOR HMA SHOULDER AT GUARDRAIL

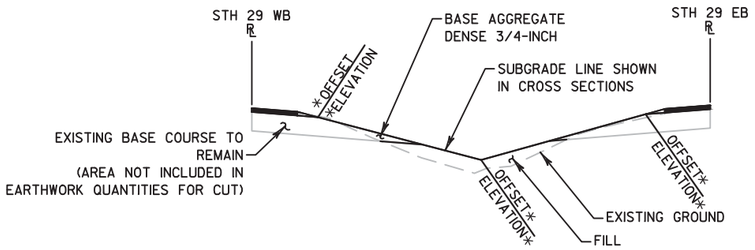
SEE SECTION 5 PLAN SHEETS FOR GUARDRAIL LOCATIONS

NOTES

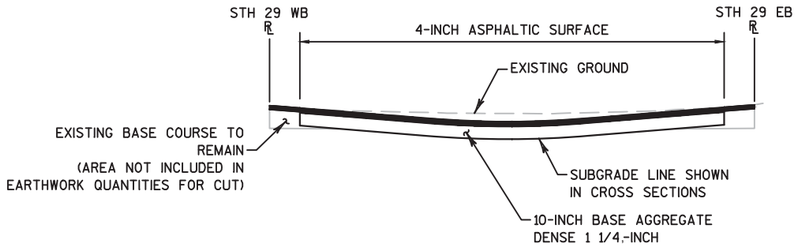
SEE SDDS FOR GUARDRAIL FOR ADDITIONAL DETAILS.

DETAIL FOR GUARDRAIL ATTACHED TO BRIDGE SHOWN, HMA SHOULDER TAPER IS THE SAME FOR FREE STANDING GUARDRAIL SECTIONS.

2



DITCH GRADING SECTION



PAVED CROSSOVER SECTION

EARTHWORK & BASE AGGREGATE FOR MAINTENANCE CROSSOVER GRADING DETAIL

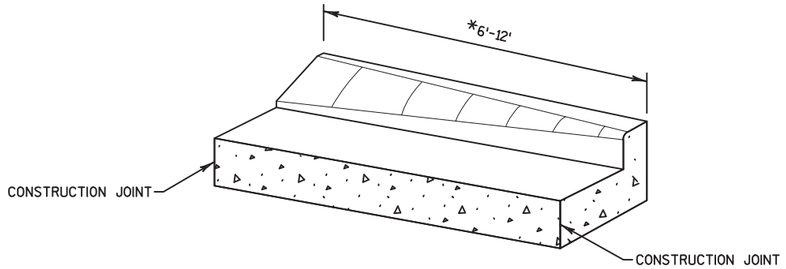
NOTES

ANY CUT AND FILL REQUIRED IS INCIDENTAL TO THE GRADING, SHAPING AND FINISHING CROSSOVERS ITEM. CUT AND FILL SHOWN ON MISCELLANEOUS QUANTITIES.

* OFFSET AND ELEVATION PROVIDED ON CROSS SECTIONS.

SEE INTERSECTION DETAILS - MAINTENANCE CROSSOVER RECONSTRUCTION FOR ADDITIONAL INFORMATION.

2

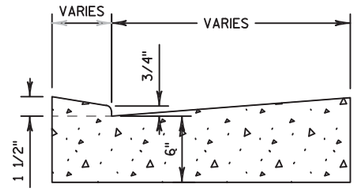


CURB & GUTTER TRANSITION DETAIL

CONCRETE CURB & GUTTER TRANSITION TO A DIFFERENT TYPE OF CURB & GUTTER, SEE PAVING DETAILS FOR CURB & GUTTER TYPES

NOTE

* CONSTRUCT 12' TRANSITIONS WHEN CONCRETE PAVEMENT IS PROPOSED ADJACENT TO THE BACK OF CURB. CONSTRUCT 6' TRANSITIONS IN ALL OTHER LOCATIONS.



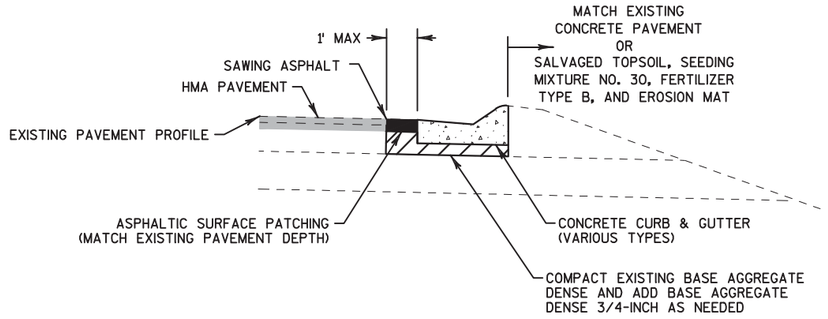
CONCRETE CURB & GUTTER DETAIL WITH NO CURB HEAD / DRIVEWAY CURB HEAD

SEE PAVING DETAILS FOR LOCATIONS

CONCRETE CURB & GUTTER WITH NO CURB HEAD TO BE PAID FOR AS STANDARD CONCRETE CURB & GUTTER ITEM

NOTE

SEE SDD "CONCRETE CURB, CONCRETE CURB & GUTTER AND TIES" FOR INFORMATION NOT SHOWN.



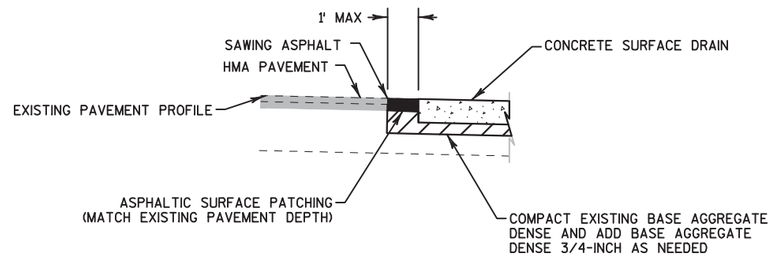
SECTION VIEW

DETAIL OF CURB & GUTTER AREAS

SEE PAVING DETAILS AND INTERSECTION DETAILS FOR LOCATIONS

NOTE

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



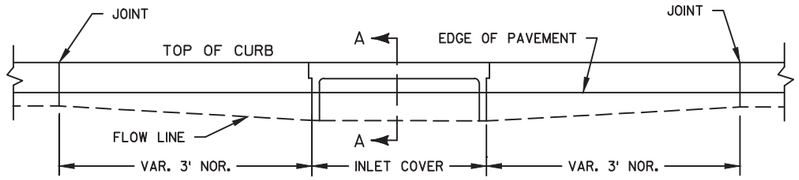
SECTION VIEW

DETAIL OF ASPHALTIC SURFACE PATCH AT CONCRETE SURFACE DRAINS

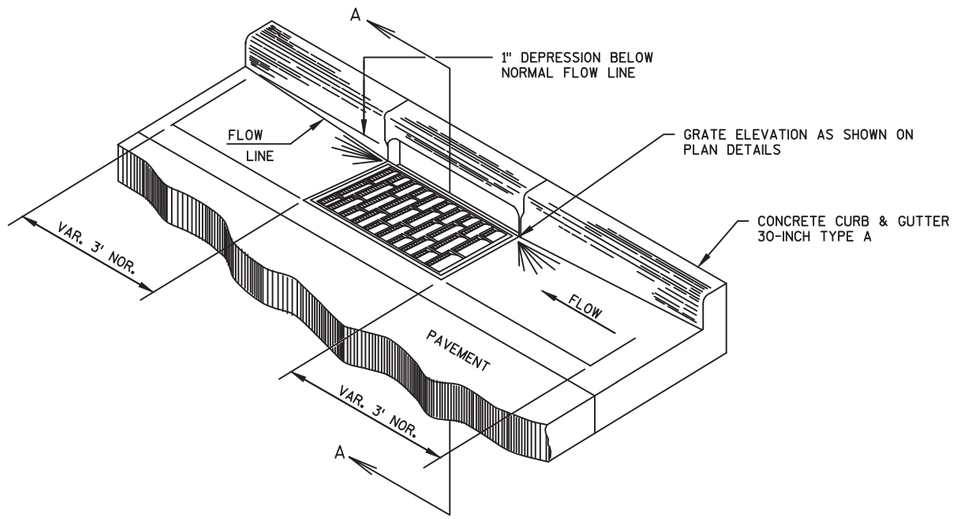
SEE SECTION 5 PLAN SHEETS FOR LOCATIONS

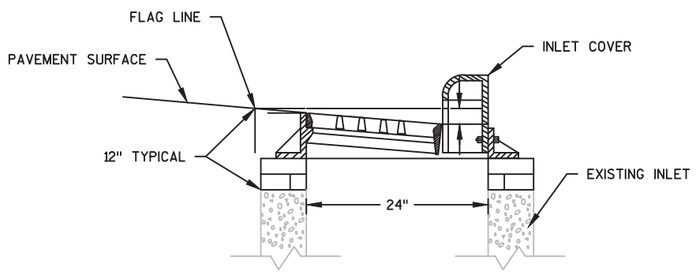
NOTE

PLACE NEW CONCRETE SURFACE DRAIN AND ASPHALTIC SURFACE PATCHING PRIOR TO MILL AND OVERLAY



ELEVATION



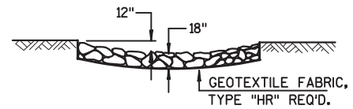


SECTION A-A

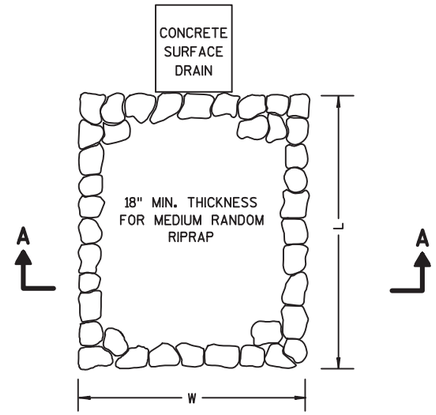
CURB & GUTTER AT INLETS DETAIL

(TYPE 3-H INLET SHOWN)
NEW AND ADJUSTING INLET COVER LOCATIONS
(SEE PAVING DETAILS FOR LOCATIONS)

NOTE
INLET COVER TYPES AND DIMENSIONS VARY
DEPENDING ON TYPE OF CURB & GUTTER

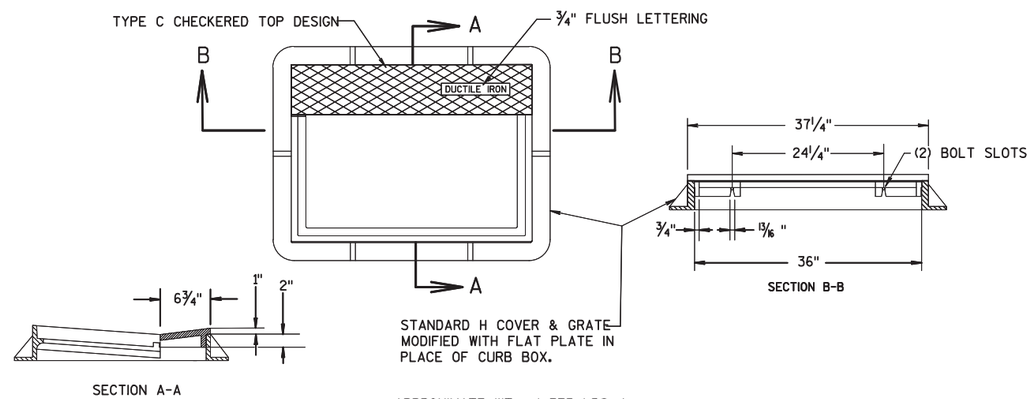


SECTION A-A



MEDIUM RIPRAP TREATMENT DETAIL AT CONCRETE SURFACE DRAINS

FOR LOCATIONS OF RIPRAP SEE PLAN SHEETS ON STH 29 AND
STH 27 (DIMENSIONS ARE SHOWN ON MISCELLANEOUS QUANTITIES



INLET COVERS TEMPORARY DETAIL

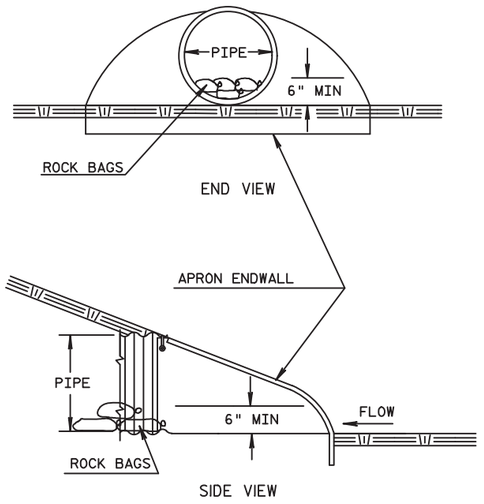
(INLET COVER TYPE H-D
WITH MOUNTABLE CURB PLATE)
FOR PLACEMENT IN TEMPORARY
ASPHALTIC SURFACE AREAS IN STAGE S1 (STH 27)
STA 97+60, LT

NOTE
FOR DETAILS NOT SHOW, SEE SDD FOR
INLET COVERS TYPE A, H, A-S, & H-S.

RUNOFF COEFFICIENT TABLE

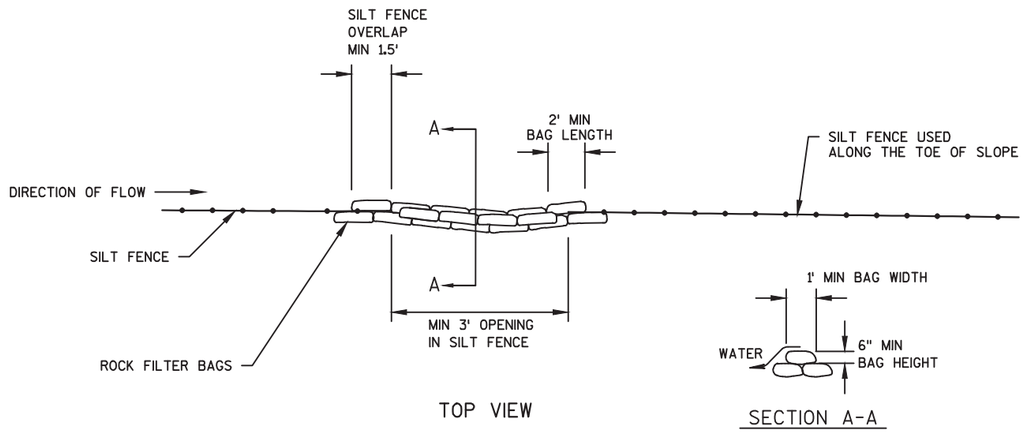
	HYDROLOGIC SOIL GROUP											
	A			B			C			D		
	SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)		
LAND USE:	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER
ROW CROPS	.08 .22	.16 .30	.22 .38	.12 .26	.20 .34	.27 .44	.15 .30	.24 .37	.33 .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 = 520 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 160 ACRES



CULVERT PIPE CHECKS DETAIL

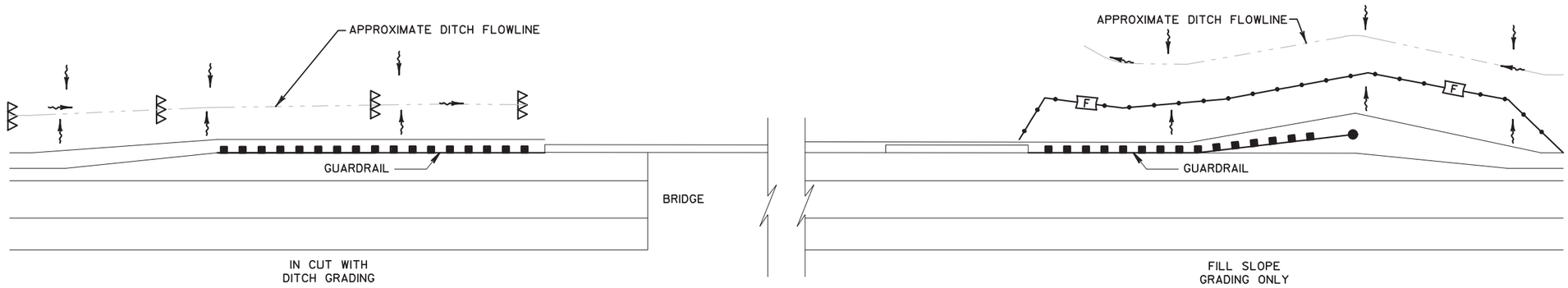
INSTALL ON INLET END
EACH ROCK BAG PAID AS CULVERT PIPE CHECKS



DETAIL OF ROCK BAGS USED FOR SILT FENCE RELIEF

PAID AS ROCK BAGS

NOTE
SEE EROSION CONTROL PLANS, INTERSECTION DETAILS,
AND CONSTRUCTION DETAILS FOR LOCATIONS.



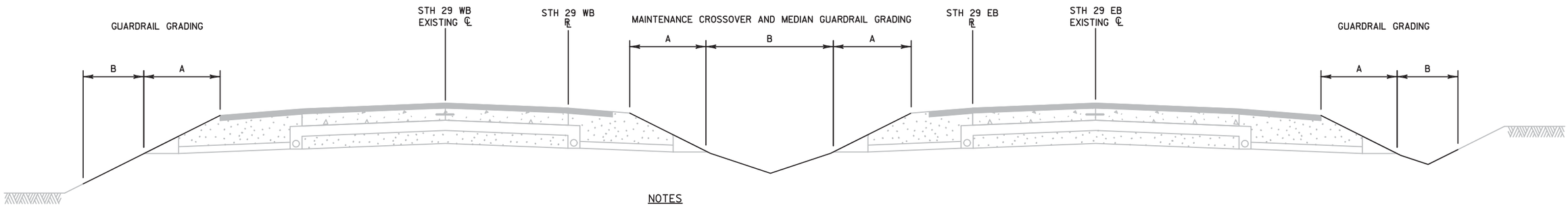
DETAIL FOR EROSION CONTROL FOR GUARDRAIL REPLACEMENT

LEGEND

- SILT FENCE
- TEMPORARY DITCH CHECK
- F — SILT FENCE RELIEF (ROCK BAGS) SEE CONSTRUCTION DETAILS
- SURFACE WATER FLOW

NOTE

DETAIL SHOWN IS FOR GUARDRAIL ATTACHED TO A BRIDGE, EROSION CONTROL IS THE SAME FOR FREE STANDING GUARDRAIL SECTIONS.



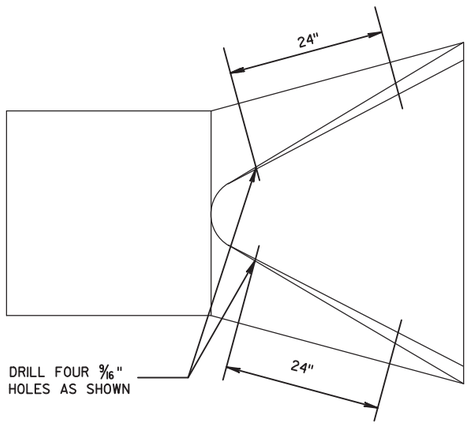
NOTES

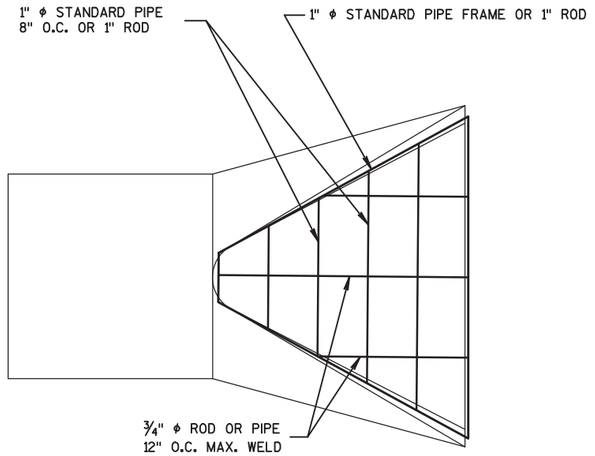
A= FERTILIZER TYPE B & SEEDING MIXTURE NO. 30

B= SALVAGED TOPSOIL, FERTILIZER TYPE B, SEEDING MIXTURE NO. 30 & EROSION MAT CLASS I TYPE A (SLOPES) OR EROSION MAT CLASS I TYPE B (CHANNELS)

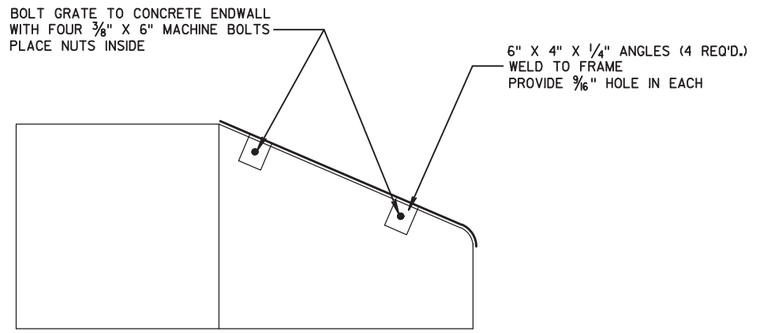
SALVAGED TOPSOIL, FERTILIZER TYPE B, AND SEEDING MIXTURE NO. 30 ARE INCIDENTAL TO THE BARRIER SYSTEM GRADING SHAPING FINISHING AND GRADING, SHAPING AND FINISHING MAINTENANCE CROSSOVER ITEMS (SEE SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION). EROSION MAT WILL BE PAID FOR UNDER THE ITEMS PROVIDED IN THE CONTRACT.

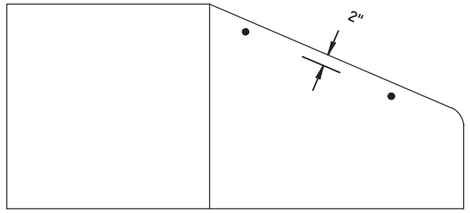
DETAIL FOR FINISHING ITEMS MAINTENANCE CROSSOVER & GUARDRAIL GRADING AREAS

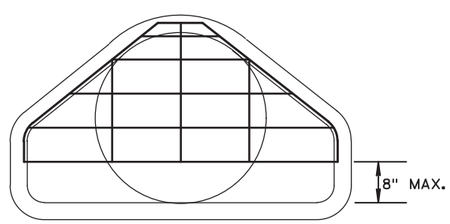




AT EACH PIPE







PIPE GRATE DETAIL
STA 272+71 RT

PROJECT NO: 1050-01-61/1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CONSTRUCTION DETAILS	SHEET 32	E

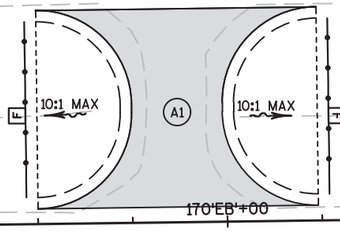
2

SEPTIC

N

STH 29 WB

167'WB'+00 168'WB'+00 169'WB'+00 170'WB'+00 171'WB'+00 172'WB'+00 173'WB'+00



167'EB'+00 168'EB'+00 169'EB'+00 170'EB'+00 171'EB'+00 172'EB'+00 173'EB'+00

STH 29 EB

LEGEND

A1	ASPHALTIC SURFACE, 4"
A2	ASPHALTIC SURFACE, 3.75"
C1	CONCRETE CURB & GUTTER 6-INCH, SLOPED 36-INCH TYPE D
F1	ASPHALTIC FLUME (NO SOD REQUIRED)
Y1	REMOVING CONCRETE CURB & GUTTER
Y2	REMOVING ASPHALTIC SURFACE MILLING AND ASPHALTIC SURFACE (SEE CONSTRUCTION DETAILS)
	SILT FENCE
	INLET PROTECTION TYPE A
	TEMPORARY DITCH CHECKS
	CULVERT PIPE CHECKS
	SURFACE WATER FLOW
F	SILT FENCE RELIEF (ROCK BAGS)
	SLOPE INTERCEPT FOR GRADING, SHAPING, AND FINISHING CROSSOVER LIMITS AND

NOTES

FOR ADDITIONAL PAVEMENT SLOPE INFORMATION, SEE CROSS SECTIONS.

FOR TYPE II SIGNING ITEMS, SEE THE PERMANENT SIGNING AND PAVEMENT MARKING SHEETS.

SEE SDD "MAINTENANCE CROSSOVER FOR FREEWAYS" FOR INFORMATION NOT SHOWN.

AREAS WITHIN THE RIGHT-OF-WAY DISTURBED FOR CROSSOVER GRADING ARE TO BE RESTORED TO THE ORIGINAL CONDITION WITH SALVAGED TOPSOIL, FERTILIZER TYPE B, SEED NO. 30, AND EROSION MAT CLASS I TYPE B. ALL OF THESE ITEMS EXCEPT EROSION MAT WILL BE PAID FOR AS GRADING, SHAPING, AND FINISHING CROSSOVERS. EROSION MAT WILL BE PAID FOR UNDER THE ITEMS PROVIDED IN THE CONTRACT.

SEE TYPICAL SECTIONS FOR ADDITIONAL PROPOSED WORK ON STH 29.

PROJECT NO: 1050-01-61/1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	INTERSECTION DETAILS - MAINTENANCE CROSSOVER RECONSTRUCTION	SHEET 33	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\021101-ID.DWG
LAYOUT NAME - ****

PLOT DATE : 7/27/2016 1:04 PM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

N

SEE PROFILE DETAIL FOR PROPOSED STORM SEWER INFORMATION

271'WB'+00 272'WB'+00 273'WB'+00 274'WB'+00 275'WB'+00 276'WB'+00 277'WB'+00

STH 29 WB

10:1 MAX

A1

10:1 MAX

F

271'EB'+00 272'EB'+00 273'EB'+00 274'EB'+00 275'EB'+00 276'EB'+00 277'EB'+00

STH 29 EB

LEGEND

- (A1) ASPHALTIC SURFACE, 4"
- (A2) ASPHALTIC SURFACE, 3.75"
- (C1) CONCRETE CURB & GUTTER 6-INCH, SLOPED 36-INCH TYPE D
- (F1) ASPHALTIC FLUME (NO SOD REQUIRED)
- (Y1) REMOVING CONCRETE CURB & GUTTER
- (Y2) REMOVING ASPHALTIC SURFACE MILLING AND ASPHALTIC SURFACE (SEE CONSTRUCTION DETAILS)
- SILT FENCE
- INLET PROTECTION TYPE A
- TEMPORARY DITCH CHECKS
- CULVERT PIPE CHECKS
- SURFACE WATER FLOW
- [F] SILT FENCE RELIEF (ROCK BAGS)
- SLOPE INTERCEPT FOR GRADING, SHAPING, AND FINISHING CROSSOVER LIMITS AND

NOTES

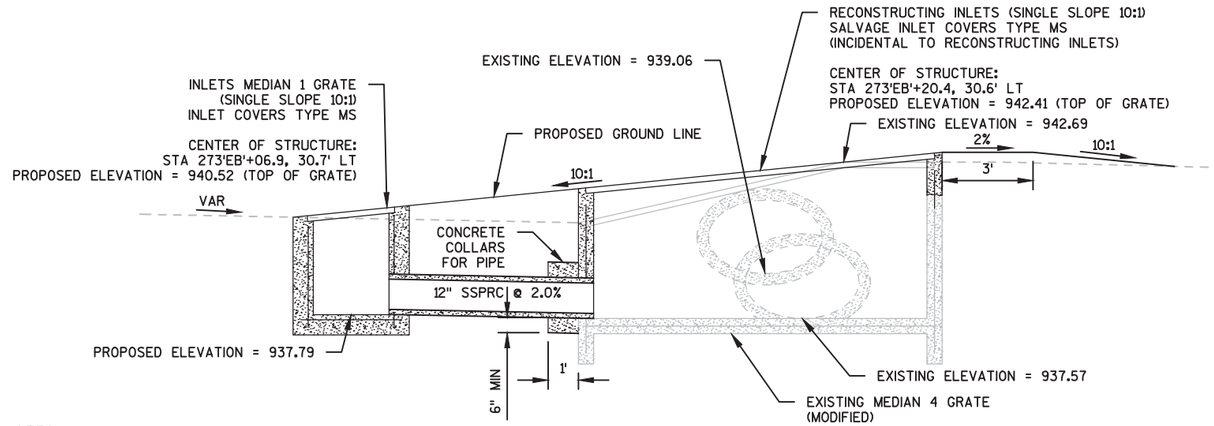
FOR ADDITIONAL PAVEMENT SLOPE INFORMATION, SEE CROSS SECTIONS.

FOR TYPE II SIGNING ITEMS, SEE THE PERMANENT SIGNING AND PAVEMENT MARKING SHEETS.

SEE SDD "MAINTENANCE CROSSOVER FOR FREEWAYS" FOR INFORMATION NOT SHOWN.

AREAS WITHIN THE RIGHT-OF-WAY DISTURBED FOR CROSSOVER GRADING ARE TO BE RESTORED TO THE ORIGINAL CONDITION WITH SALVAGED TOPSOIL, FERTILIZER TYPE B, SEED NO. 30, AND EROSION MAT CLASS 1 TYPE B. ALL OF THESE ITEMS EXCEPT EROSION MAT WILL BE PAID FOR AS GRADING, SHAPING, AND FINISHING CROSSOVERS. EROSION MAT WILL BE PAID FOR UNDER THE ITEMS PROVIDED IN THE CONTRACT.

SEE TYPICAL SECTIONS FOR ADDITIONAL PROPOSED WORK ON STH 29.



PROPOSED STORM SEWER PROFILE

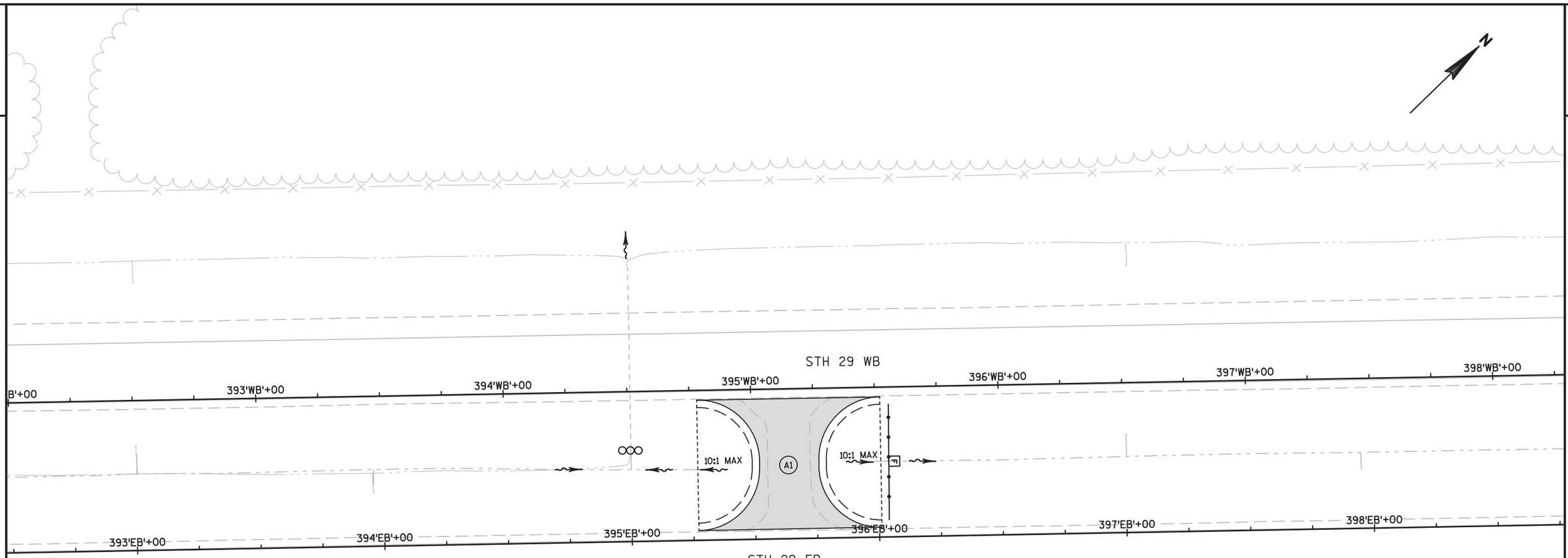
NOTES

FOR INFORMATION NOT SHOWN, SEE SDD "INLETS MEDIAN 1 & 2 GRATE" AND SDD "INLETS MEDIAN 3 & 4 GRATE".

FIELD VERIFY ALL ELEVATIONS PRIOR TO RECONSTRUCTION OF INLETS AND CROSSOVER.

PROJECT NO: 1050-01-61/1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	INTERSECTION DETAILS - MAINTENANCE CROSSOVER RECONSTRUCTION	SHEET 34	E

2



LEGEND

- (A1) ASPHALTIC SURFACE, 4"
- (A2) ASPHALTIC SURFACE, 3.75"
- (C1) CONCRETE CURB & GUTTER 6-INCH, SLOPED 36-INCH TYPE D
- (F1) ASPHALTIC FLUME (NO SOD REQUIRED)
- (Y1) REMOVING CONCRETE CURB & GUTTER
- (Y2) REMOVING ASPHALTIC SURFACE MILLING AND ASPHALTIC SURFACE (SEE CONSTRUCTION DETAILS)
- SILT FENCE
- INLET PROTECTION TYPE A
- TEMPORARY DITCH CHECKS
- CULVERT PIPE CHECKS
- SURFACE WATER FLOW
- (F) SILT FENCE RELIEF (ROCK BAGS)
- SLOPE INTERCEPT FOR GRADING, SHAPING, AND FINISHING CROSSOVER LIMITS AND

NOTES

FOR ADDITIONAL PAVEMENT SLOPE INFORMATION, SEE CROSS SECTIONS.

FOR TYPE II SIGNING ITEMS, SEE THE PERMANENT SIGNING AND PAVEMENT MARKING SHEETS.

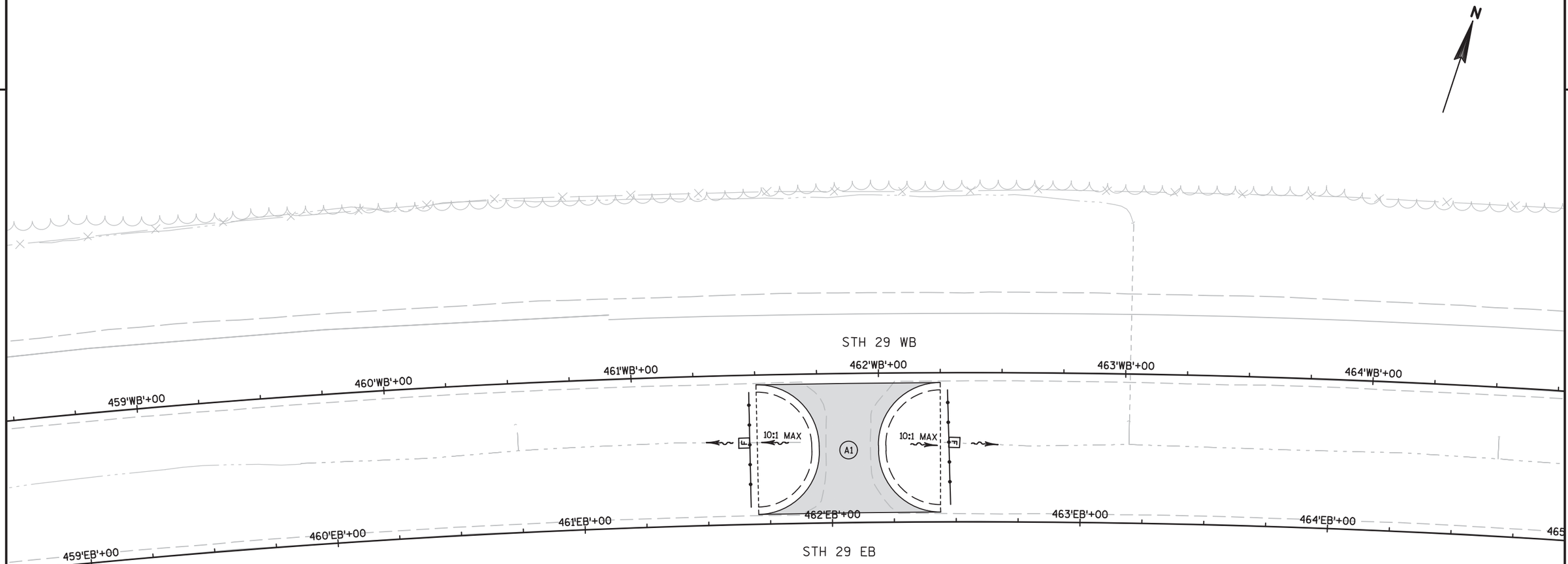
SEE SDD "MAINTENANCE CROSSOVER FOR FREEWAYS" FOR INFORMATION NOT SHOWN.

AREAS WITHIN THE RIGHT-OF-WAY DISTURBED FOR CROSSOVER GRADING ARE TO BE RESTORED TO THE ORIGINAL CONDITION WITH SALVAGED TOPSOIL, FERTILIZER TYPE B, SEED NO. 30, AND EROSION MAT CLASS 1 TYPE B. ALL OF THESE ITEMS EXCEPT EROSION MAT WILL BE PAID FOR AS GRADING, SHAPING, AND FINISHING CROSSOVERS. EROSION MAT WILL BE PAID FOR UNDER THE ITEMS PROVIDED IN THE CONTRACT.

SEE TYPICAL SECTIONS FOR ADDITIONAL PROPOSED WORK ON STH 29.

PROJECT NO:1050-01-61/1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	INTERSECTION DETAILS - MAINTENANCE CROSSOVER RECONSTRUCTION	SHEET 35	E

2



LEGEND

- (A1) ASPHALTIC SURFACE, 4"
- (A2) ASPHALTIC SURFACE, 3.75"
- (C1) CONCRETE CURB & GUTTER 6-INCH, SLOPED 36-INCH TYPE D
- (F1) ASPHALTIC FLUME (NO SOD REQUIRED)
- (Y1) REMOVING CONCRETE CURB & GUTTER
- (Y2) REMOVING ASPHALTIC SURFACE MILLING AND ASPHALTIC SURFACE (SEE CONSTRUCTION DETAILS)
- SILT FENCE
- INLET PROTECTION TYPE A
- TEMPORARY DITCH CHECKS
- CULVERT PIPE CHECKS
- SURFACE WATER FLOW
- [F] SILT FENCE RELIEF (ROCK BAGS)
- SLOPE INTERCEPT FOR GRADING, SHAPING, AND FINISHING CROSSOVER LIMITS AND

NOTES

FOR ADDITIONAL PAVEMENT SLOPE INFORMATION, SEE CROSS SECTIONS.

FOR TYPE II SIGNING ITEMS, SEE THE PERMANENT SIGNING AND PAVEMENT MARKING SHEETS.

SEE SDD "MAINTENANCE CROSSOVER FOR FREEWAYS" FOR INFORMATION NOT SHOWN.

AREAS WITHIN THE RIGHT-OF-WAY DISTURBED FOR CROSSOVER GRADING ARE TO BE RESTORED TO THE ORIGINAL CONDITION WITH SALVAGED TOPSOIL, FERTILIZER TYPE B, SEED NO. 30, AND EROSION MAT CLASS 1 TYPE B. ALL OF THESE ITEMS EXCEPT EROSION MAT WILL BE PAID FOR AS GRADING, SHAPING, AND FINISHING CROSSOVERS. EROSION MAT WILL BE PAID FOR UNDER THE ITEMS PROVIDED IN THE CONTRACT.

SEE TYPICAL SECTIONS FOR ADDITIONAL PROPOSED WORK ON STH 29.

PROJECT NO: 1050-01-61/1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	INTERSECTION DETAILS - MAINTENANCE CROSSOVER RECONSTRUCTION	SHEET 36	E

2

2

N

STH 29 WB

587'WB'+00 588'WB'+00 589'WB'+00 590'WB'+00 591'WB'+00 592'WB'+00

MATCH EXISTING ENDWALL

10:1 MAX

A1

10:1 MAX

587'EB'+00 588'EB'+00 589'EB'+00 590'EB'+00 591'EB'+00 592'EB'+00

STH 29 EB

LEGEND

- A1 ASPHALTIC SURFACE, 4"
- A2 ASPHALTIC SURFACE, 3.75"
- C1 CONCRETE CURB & GUTTER 6-INCH, SLOPED 36-INCH TYPE D
- F1 ASPHALTIC FLUME (NO SOD REQUIRED)
- Y1 REMOVING CONCRETE CURB & GUTTER
- Y2 REMOVING ASPHALTIC SURFACE MILLING AND ASPHALTIC SURFACE (SEE CONSTRUCTION DETAILS)
- SILT FENCE
- INLET PROTECTION TYPE A
- TEMPORARY DITCH CHECKS
- CULVERT PIPE CHECKS
- SURFACE WATER FLOW
- F SILT FENCE RELIEF (ROCK BAGS)
- SLOPE INTERCEPT FOR GRADING, SHAPING, AND FINISHING CROSSOVER LIMITS AND

NOTES

FOR ADDITIONAL PAVEMENT SLOPE INFORMATION, SEE CROSS SECTIONS.

FOR TYPE II SIGNING ITEMS, SEE THE PERMANENT SIGNING AND PAVEMENT MARKING SHEETS.

SEE SDD "MAINTENANCE CROSSOVER FOR FREEWAYS" FOR INFORMATION NOT SHOWN.

AREAS WITHIN THE RIGHT-OF-WAY DISTURBED FOR CROSSOVER GRADING ARE TO BE RESTORED TO THE ORIGINAL CONDITION WITH SALVAGED TOPSOIL, FERTILIZER TYPE B, SEED NO. 30, AND EROSION MAT CLASS 1 TYPE B. ALL OF THESE ITEMS EXCEPT EROSION MAT WILL BE PAID FOR AS GRADING, SHAPING, AND FINISHING CROSSOVERS. EROSION MAT WILL BE PAID FOR UNDER THE ITEMS PROVIDED IN THE CONTRACT.

SEE TYPICAL SECTIONS FOR ADDITIONAL PROPOSED WORK ON STH 29.

PROJECT NO: 1050-01-61/1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	INTERSECTION DETAILS - MAINTENANCE CROSSOVER RECONSTRUCTION	SHEET 37	E

2

N

STH 29 WB

636'WB'+00 637'WB'+00 638'WB'+00 639'WB'+00 640'WB'+00 641'WB'+00

MATCH EXISTING ENDWALL

A1

10:1 MAX

F

636'EB'+00 637'EB'+00 638'EB'+00 639'EB'+00 640'EB'+00 641'EB'+00

STH 29 EB

LEGEND

- (A1) ASPHALTIC SURFACE, 4"
- (A2) ASPHALTIC SURFACE, 3.75"
- (C1) CONCRETE CURB & GUTTER 6-INCH, SLOPED 36-INCH TYPE D
- (F1) ASPHALTIC FLUME (NO SOD REQUIRED)
- (Y1) REMOVING CONCRETE CURB & GUTTER
- (Y2) REMOVING ASPHALTIC SURFACE MILLING AND ASPHALTIC SURFACE (SEE CONSTRUCTION DETAILS)
- SILT FENCE
- INLET PROTECTION TYPE A
- TEMPORARY DITCH CHECKS
- CULVERT PIPE CHECKS
- SURFACE WATER FLOW
- (F) SILT FENCE RELIEF (ROCK BAGS)
- SLOPE INTERCEPT FOR GRADING, SHAPING, AND FINISHING CROSSOVER LIMITS AND

NOTES

FOR ADDITIONAL PAVEMENT SLOPE INFORMATION, SEE CROSS SECTIONS.

FOR TYPE II SIGNING ITEMS, SEE THE PERMANENT SIGNING AND PAVEMENT MARKING SHEETS.

SEE SDD "MAINTENANCE CROSSOVER FOR FREEWAYS" FOR INFORMATION NOT SHOWN.

AREAS WITHIN THE RIGHT-OF-WAY DISTURBED FOR CROSSOVER GRADING ARE TO BE RESTORED TO THE ORIGINAL CONDITION WITH SALVAGED TOPSOIL, FERTILIZER TYPE B, SEED NO. 30, AND EROSION MAT CLASS 1 TYPE B. ALL OF THESE ITEMS EXCEPT EROSION MAT WILL BE PAID FOR AS GRADING, SHAPING, AND FINISHING CROSSOVERS. EROSION MAT WILL BE PAID FOR UNDER THE ITEMS PROVIDED IN THE CONTRACT.

SEE TYPICAL SECTIONS FOR ADDITIONAL PROPOSED WORK ON STH 29.

2

LEGEND

- (A1) ASPHALTIC SURFACE, 4"
- (A2) ASPHALTIC SURFACE, 3.75"
- (C1) CONCRETE CURB & GUTTER 6-INCH, SLOPED 36-INCH TYPE D
- (F1) ASPHALTIC FLUME (NO SOD REQUIRED)
- (Y1) REMOVING CONCRETE CURB & GUTTER
- (Y2) REMOVING ASPHALTIC SURFACE MILLING AND ASPHALTIC SURFACE (SEE CONSTRUCTION DETAIL).
- SILT FENCE
- INLET PROTECTION TYPE A
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECKS
- SURFACE WATER FLOW
- (F) SILT FENCE RELIEF (ROCK BAGS)
- SLOPE INTERCEPT

NOTES

RADIUS DIMENSIONS ARE SHOWN TO CURB & GUTTER FLANGELINE.

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

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

REPLACE CURB & GUTTER PRIOR TO OVERLAY, MATCH EXISTING RADIUS.

FOR ADDITIONAL SAWCUTS AND ASPHALTIC SURFACE PATCHING ALONG CURB & GUTTER REPLACEMENT AREAS, SEE CONSTRUCTION DETAILS.

AREAS WITHIN THE RIGHT-OF-WAY DISTURBED FOR INTERSECTION GRADING ARE TO BE RESTORED TO THE ORIGINAL CONDITION WITH SALVAGED TOPSOIL, FERTILIZER TYPE B, SEED NO. 30, AND EROSION MAT CLASS 1 TYPE B. ALL OF THESE ITEMS EXCEPT EROSION MAT WILL BE PAID FOR AS GRADING, SHAPING, AND FINISHING INTERSECTIONS. EROSION MAT WILL BE PAID FOR UNDER THE ITEMS PROVIDED IN THE CONTRACT.

SEE TYPICAL SECTIONS FOR ADDITIONAL PROPOSED WORK ON STH 29.

REMOVE EXISTING FLUMES UNDER REMOVING ASPHALTIC SURFACE ITEM.

270TH ST

THE NORTH LEG AND MEDIAN AT THE 270TH ST INTERSECTION ARE SCHEDULED TO BE ELIMINATED UNDER ANOTHER PROJECT ANTICIPATED TO BE COMPLETED IN 2016.

N

STH 29 WB

660'WB'+00 661'WB'+00 662'WB'+00 663'WB'+00 664'WB'+00 665'WB'+00

660'EB'+00 661'EB'+00 662'EB'+00 663'EB'+00 664'EB'+00 665'EB'+00

STH 29 EB

1028.80
662+67

1028.95
663+11

1031.63
663+97

1030.50
663+70

1029.36
663+59

1029.10
663+30

F1 Y1 C1 Y2 F1 Y1 C1 F1

R60' 1

R40' 2

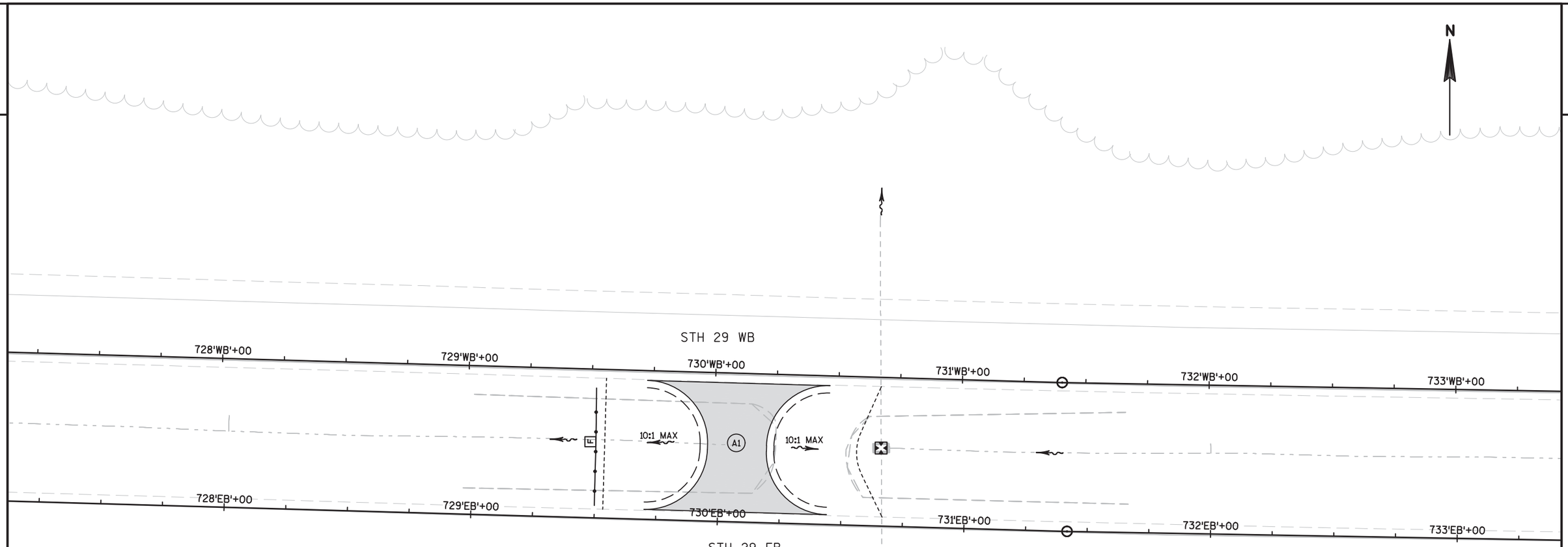
270TH ST

END CONSTRUCTION, 95' RT
BUTT JOINT REQ'D
(SEE CONSTRUCTION DETAILS)

POINT NO.	STATION	OFFSET	RADIUS
1	662'EB'+69.76	95.94'RT	60'R
2	663'EB'+98.72	75.97'RT	40'R

PROJECT NO: 1050-01-61/1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	INTERSECTION DETAILS - 270TH ST	SHEET 39	E

2



LEGEND

- (A1) ASPHALTIC SURFACE, 4"
- (A2) ASPHALTIC SURFACE, 3.75"
- (C1) CONCRETE CURB & GUTTER 6-INCH, SLOPED 36-INCH TYPE D
- (F1) ASPHALTIC FLUME (NO SOD REQUIRED)
- (Y1) REMOVING CONCRETE CURB & GUTTER
- (Y2) REMOVING ASPHALTIC SURFACE MILLING AND ASPHALTIC SURFACE (SEE CONSTRUCTION DETAILS)
- SILT FENCE
- INLET PROTECTION TYPE A
- TEMPORARY DITCH CHECKS
- CULVERT PIPE CHECKS
- SURFACE WATER FLOW
- (F) SILT FENCE RELIEF (ROCK BAGS)
- SLOPE INTERCEPT FOR GRADING, SHAPING, AND FINISHING CROSSOVER LIMITS AND

NOTES

FOR ADDITIONAL PAVEMENT SLOPE INFORMATION, SEE CROSS SECTIONS.

FOR TYPE II SIGNING ITEMS, SEE THE PERMANENT SIGNING AND PAVEMENT MARKING SHEETS.

SEE SDD "MAINTENANCE CROSSOVER FOR FREEWAYS" FOR INFORMATION NOT SHOWN.

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SEE TYPICAL SECTIONS FOR ADDITIONAL PROPOSED WORK ON STH 29.

PROJECT NO: 1050-01-61/1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	INTERSECTION DETAILS - MAINTENANCE CROSSOVER RECONSTRUCTION	SHEET 40	E

2

LEGEND

- (A1) ASPHALTIC SURFACE, 4"
- (A2) ASPHALTIC SURFACE, 3.75"
- (C1) CONCRETE CURB & GUTTER 6-INCH, SLOPED 36-INCH TYPE D
- (F1) ASPHALTIC FLUME (NO SOD REQUIRED)
- (Y1) REMOVING CONCRETE CURB & GUTTER
- (Y2) REMOVING ASPHALTIC SURFACE MILLING AND ASPHALTIC SURFACE (SEE CONSTRUCTION DETAIL).
- SILT FENCE
- INLET PROTECTION TYPE A
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECKS
- SURFACE WATER FLOW
- [F] SILT FENCE RELIEF (ROCK BAGS)
- SLOPE INTERCEPT

NOTES

RADIUS DIMENSIONS ARE SHOWN TO CURB & GUTTER FLANGELINE.

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

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

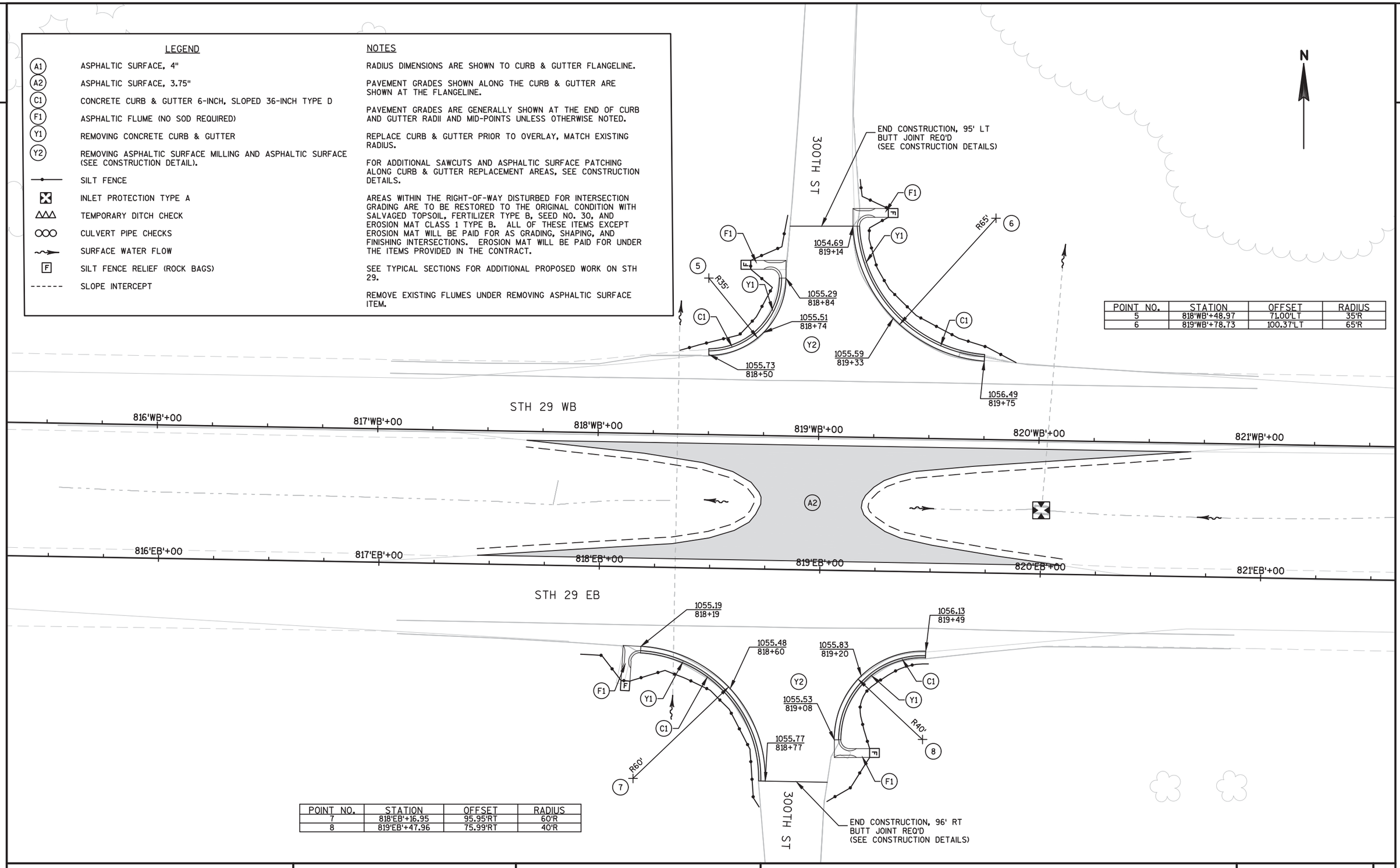
REPLACE CURB & GUTTER PRIOR TO OVERLAY, MATCH EXISTING RADIUS.

FOR ADDITIONAL SAWCUTS AND ASPHALTIC SURFACE PATCHING ALONG CURB & GUTTER REPLACEMENT AREAS, SEE CONSTRUCTION DETAILS.

AREAS WITHIN THE RIGHT-OF-WAY DISTURBED FOR INTERSECTION GRADING ARE TO BE RESTORED TO THE ORIGINAL CONDITION WITH SALVAGED TOPSOIL, FERTILIZER TYPE B, SEED NO. 30, AND EROSION MAT CLASS 1 TYPE B. ALL OF THESE ITEMS EXCEPT EROSION MAT WILL BE PAID FOR AS GRADING, SHAPING, AND FINISHING INTERSECTIONS. EROSION MAT WILL BE PAID FOR UNDER THE ITEMS PROVIDED IN THE CONTRACT.

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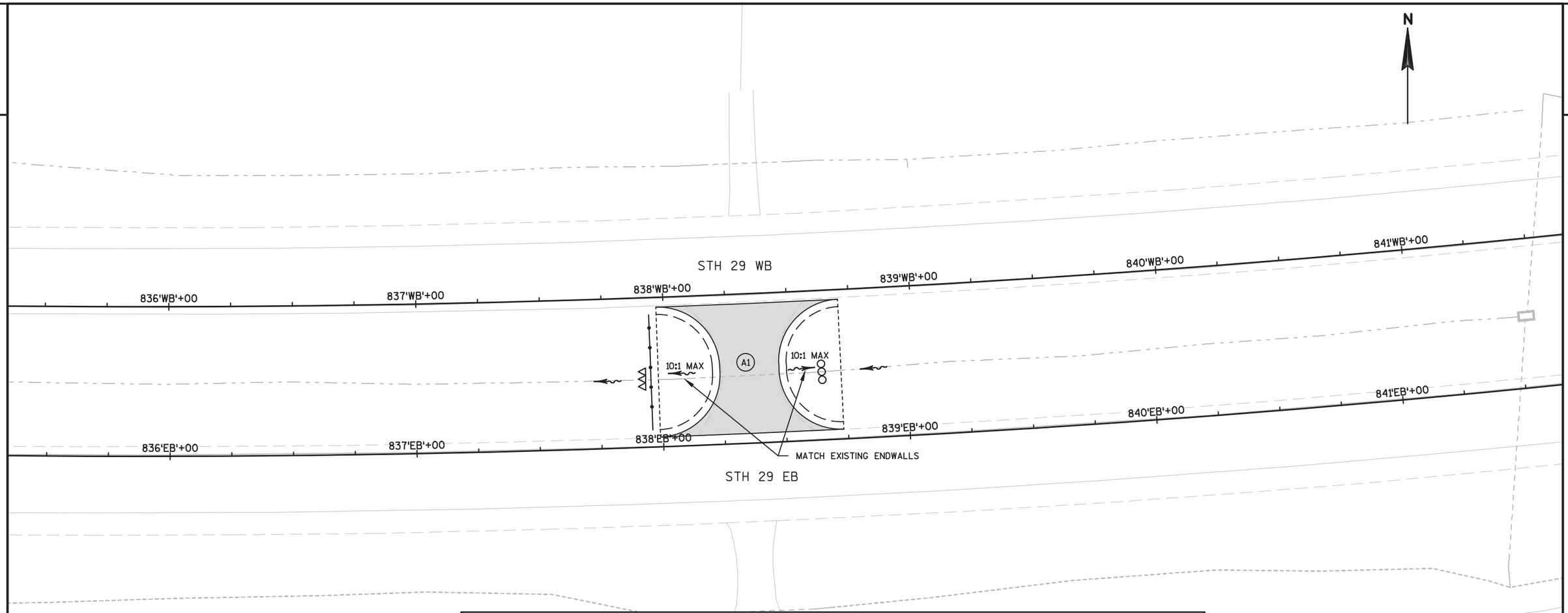
REMOVE EXISTING FLUMES UNDER REMOVING ASPHALTIC SURFACE ITEM.



POINT NO.	STATION	OFFSET	RADIUS
5	818'WB'+48.97	71.00'LT	35'R
6	819'WB'+78.73	100.37'LT	65'R

POINT NO.	STATION	OFFSET	RADIUS
7	818'EB'+16.95	95.95'RT	60'R
8	819'EB'+47.96	75.99'RT	40'R

PROJECT NO: 1050-01-61/1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	INTERSECTION DETAILS - 300TH ST	SHEET 41	E



LEGEND

- (A1) ASPHALTIC SURFACE, 4"
- (A2) ASPHALTIC SURFACE, 3.75"
- (C1) CONCRETE CURB & GUTTER 6-INCH, SLOPED 36-INCH TYPE D
- (F1) ASPHALTIC FLUME (NO SOD REQUIRED)
- (Y1) REMOVING CONCRETE CURB & GUTTER
- (Y2) REMOVING ASPHALTIC SURFACE MILLING AND ASPHALTIC SURFACE (SEE CONSTRUCTION DETAILS)
- SILT FENCE
- INLET PROTECTION TYPE A
- TEMPORARY DITCH CHECKS
- CULVERT PIPE CHECKS
- SURFACE WATER FLOW
- (F) SILT FENCE RELIEF (ROCK BAGS)
- SLOPE INTERCEPT FOR GRADING, SHAPING, AND FINISHING CROSSOVER LIMITS AND

NOTES

FOR ADDITIONAL PAVEMENT SLOPE INFORMATION, SEE CROSS SECTIONS.

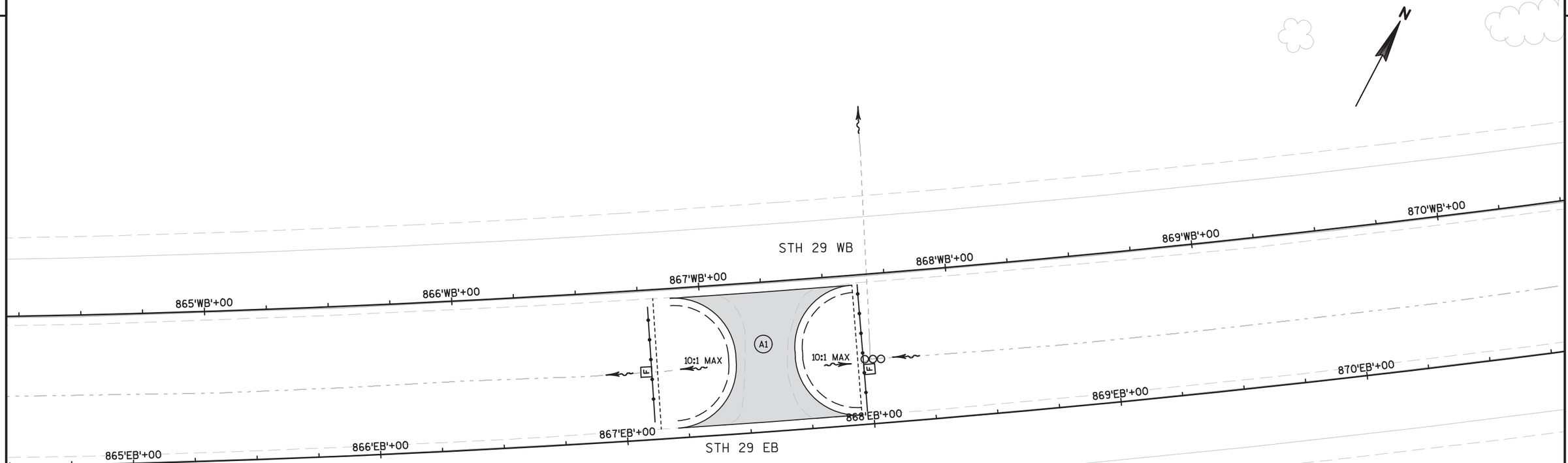
FOR TYPE II SIGNING ITEMS, SEE THE PERMANENT SIGNING AND PAVEMENT MARKING SHEETS.

SEE SDD "MAINTENANCE CROSSOVER FOR FREEWAYS" FOR INFORMATION NOT SHOWN.

AREAS WITHIN THE RIGHT-OF-WAY DISTURBED FOR CROSSOVER GRADING ARE TO BE RESTORED TO THE ORIGINAL CONDITION WITH SALVAGED TOPSOIL, FERTILIZER TYPE B, SEED NO. 30, AND EROSION MAT CLASS 1 TYPE B. ALL OF THESE ITEMS EXCEPT EROSION MAT WILL BE PAID FOR AS GRADING, SHAPING, AND FINISHING CROSSOVERS. EROSION MAT WILL BE PAID FOR UNDER THE ITEMS PROVIDED IN THE CONTRACT.

SEE TYPICAL SECTIONS FOR ADDITIONAL PROPOSED WORK ON STH 29.

2



LEGEND

A1	ASPHALTIC SURFACE, 4"
A2	ASPHALTIC SURFACE, 3.75"
C1	CONCRETE CURB & GUTTER 6-INCH, SLOPED 36-INCH TYPE D
F1	ASPHALTIC FLUME (NO SOD REQUIRED)
Y1	REMOVING CONCRETE CURB & GUTTER
Y2	REMOVING ASPHALTIC SURFACE MILLING AND ASPHALTIC SURFACE (SEE CONSTRUCTION DETAILS)
	SILT FENCE
	INLET PROTECTION TYPE A
	TEMPORARY DITCH CHECKS
	CULVERT PIPE CHECKS
	SURFACE WATER FLOW
F	SILT FENCE RELIEF (ROCK BAGS)
	SLOPE INTERCEPT FOR GRADING, SHAPING, AND FINISHING CROSSOVER LIMITS AND

NOTES

FOR ADDITIONAL PAVEMENT SLOPE INFORMATION, SEE CROSS SECTIONS.

FOR TYPE II SIGNING ITEMS, SEE THE PERMANENT SIGNING AND PAVEMENT MARKING SHEETS.

SEE SDD "MAINTENANCE CROSSOVER FOR FREEWAYS" FOR INFORMATION NOT SHOWN.

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SEE TYPICAL SECTIONS FOR ADDITIONAL PROPOSED WORK ON STH 29.

2

2

LEGEND

- (A1) ASPHALTIC SURFACE, 4"
- (A2) ASPHALTIC SURFACE, 3.75"
- (C1) CONCRETE CURB & GUTTER 6-INCH, SLOPED 36-INCH TYPE D
- (F1) ASPHALTIC FLUME (NO SOD REQUIRED)
- (Y1) REMOVING CONCRETE CURB & GUTTER
- (Y2) REMOVING ASPHALTIC SURFACE MILLING AND ASPHALTIC SURFACE (SEE CONSTRUCTION DETAIL).
- SILT FENCE
- INLET PROTECTION TYPE A
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECKS
- SURFACE WATER FLOW
- (F) SILT FENCE RELIEF (ROCK BAGS)
- SLOPE INTERCEPT

NOTES

RADIUS DIMENSIONS ARE SHOWN TO CURB & GUTTER FLANGELINE.

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

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

REPLACE CURB & GUTTER PRIOR TO OVERLAY, MATCH EXISTING RADIUS.

FOR ADDITIONAL SAWCUTS AND ASPHALTIC SURFACE PATCHING ALONG CURB & GUTTER REPLACEMENT AREAS, SEE CONSTRUCTION DETAILS.

AREAS WITHIN THE RIGHT-OF-WAY DISTURBED FOR INTERSECTION GRADING ARE TO BE RESTORED TO THE ORIGINAL CONDITION WITH SALVAGED TOPSOIL, FERTILIZER TYPE B, SEED NO. 30, AND EROSION MAT CLASS 1 TYPE B. ALL OF THESE ITEMS EXCEPT EROSION MAT WILL BE PAID FOR AS GRADING, SHAPING, AND FINISHING INTERSECTIONS. EROSION MAT WILL BE PAID FOR UNDER THE ITEMS PROVIDED IN THE CONTRACT.

SEE TYPICAL SECTIONS FOR ADDITIONAL PROPOSED WORK ON STH 29.

REMOVE EXISTING FLUMES UNDER REMOVING ASPHALTIC SURFACE ITEM.

N

STH 29 WB

940'WB'+00 941'WB'+00 942'WB'+00 943'WB'+00 944'WB'+00 945'WB'+00

A2

940'EB'+00 941'EB'+00 942'EB'+00 943'EB'+00 944'EB'+00 945'EB'+00

STH 29 EB

1081.09
941+78

1080.40
942+21

1079.71
942+27

1080.11
943+19

1080.19
942+92

1080.28
942+75

Y1 C1 Y2 F1 R60' 9 R40' 10

320TH ST

END CONSTRUCTION, 119' RT
BUTT JOINT REQ'D
(SEE CONSTRUCTION DETAILS)

POINT NO.	STATION	OFFSET	RADIUS
9	941'EB'+69.86	95.51'RT	60'R
10	943'EB'+13.89	75.68'RT	40'R

PROJECT NO: 1050-01-61/1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	INTERSECTION DETAILS - 320TH ST	SHEET 44	E

2

LEGEND

- (B1) BASE AGGREGATE DENSE 3/4-INCH, VARIABLE DEPTH
- (C1) CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE T
- (C2) CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH WITH NO CURB HEAD (SEE CONSTRUCTION DETAILS)
- (F1) ASPHALTIC FLUME
- (N1) CONCRETE MEDIAN SLOPED NOSE (TYPE 1 UNLESS OTHERWISE NOTED)
- (P1) CONCRETE PAVEMENT 12-INCH
- (P2) CONCRETE SURFACE DRAIN, WITHOUT PIPE
- REMOVING ASPHALTIC SURFACE MILLING AND HMA PAVEMENT 4 MT 58-34 S, 2.00"
- COLORING CONCRETE WISDOT RED
- INLET COVER TYPE T
- ** CURB TRANSITION (SEE CONSTRUCTION DETAILS)
- PULLBOXES STEEL (SEE SECTION 5 SHEETS AND MISCELLEANOUS QUANTITIES)

NOTES

RADIUS AND DIMENSIONS ARE SHOWN TO CURB & GUTTER FLANGELINE.

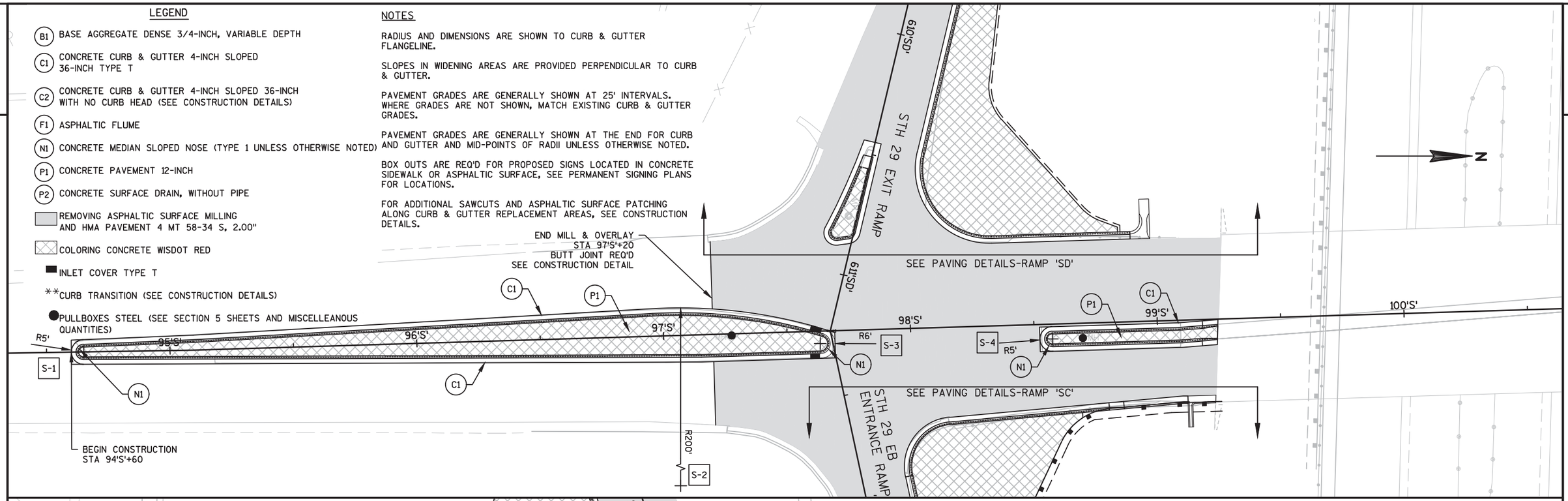
SLOPES IN WIDENING AREAS ARE PROVIDED PERPENDICULAR TO CURB & GUTTER.

PAVEMENT GRADES ARE GENERALLY SHOWN AT 25' INTERVALS. WHERE GRADES ARE NOT SHOWN, MATCH EXISTING CURB & GUTTER GRADES.

PAVEMENT GRADES ARE GENERALLY SHOWN AT THE END FOR CURB AND GUTTER AND MID-POINTS OF RADII UNLESS OTHERWISE NOTED.

BOX OUTS ARE REQ'D FOR PROPOSED SIGNS LOCATED IN CONCRETE SIDEWALK OR ASPHALTIC SURFACE, SEE PERMANENT SIGNING PLANS FOR LOCATIONS.

FOR ADDITIONAL SAWCUTS AND ASPHALTIC SURFACE PATCHING ALONG CURB & GUTTER REPLACEMENT AREAS, SEE CONSTRUCTION DETAILS.



POINT NO.	STATION	OFFSET	RADIUS
S-1	94'S'+65.03	0.00'	5'R
S-2	97'S'+01.18	188.77'RT	200'R
S-3	97'S'+63.34	5.00'RT	6'R
S-4	98'S'+57.29	6.00'RT	5'R
S-5	102'S'+21.68	6.00'LT	5'R
S-6	103'S'+16.81	6.00'LT	5'R
S-7	103'S'+69.21	114.00'LT	125'R
S-8	106'S'+15.62	0.00'	5'R

PROJECT NO: 1050-01-61/1051-01-62	HWY: STH 29	COUNTY: CHIPPEWA	PAVING DETAILS - STH 27 INTERCHANGE	SHEET 45	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\021201-PD.DWG
LAYOUT NAME - ****
PLOT DATE : 7/27/2016 2:00 PM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:40 FT

LEGEND

- (B1) BASE AGGREGATE DENSE 3/4-INCH, VARIABLE DEPTH
- (C1) CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE T
- (C2) CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH WITH NO CURB HEAD (SEE CONSTRUCTION DETAILS)
- (F1) ASPHALTIC FLUME
- (N1) CONCRETE MEDIAN SLOPED NOSE (TYPE 1 UNLESS OTHERWISE NOTED)
- (P1) CONCRETE PAVEMENT 12-INCH
- (P2) CONCRETE SURFACE DRAIN, WITHOUT PIPE
- REMOVING ASPHALTIC SURFACE MILLING AND HMA PAVEMENT 4 MT 58-34 S, 2.00"
- COLORING CONCRETE WISDOT RED
- INLET COVER TYPE T
- ** CURB TRANSITION (SEE CONSTRUCTION DETAILS)
- PULLBOXES STEEL (SEE SECTION 5 SHEETS AND MISCELLEANOUS QUANTITIES)

NOTES

RADIUS AND DIMENSIONS ARE SHOWN TO CURB & GUTTER FLANGELINE.

SLOPES IN WIDENING AREAS ARE PROVIDED PERPENDICULAR TO CURB & GUTTER.

PAVEMENT GRADES ARE GENERALLY SHOWN AT 25' INTERVALS. WHERE GRADES ARE NOT SHOWN, MATCH EXISTING CURB & GUTTER GRADES.

PAVEMENT GRADES ARE GENERALLY SHOWN AT THE END FOR CURB AND GUTTER AND MID-POINTS OF RADII UNLESS OTHERWISE NOTED.

BOX OUTS ARE REQ'D FOR PROPOSED SIGNS LOCATED IN CONCRETE SIDEWALK OR ASPHALTIC SURFACE, SEE PERMANENT SIGNING PLANS FOR LOCATIONS.

FOR ADDITIONAL SAWCUTS AND ASPHALTIC SURFACE PATCHING ALONG CURB & GUTTER REPLACEMENT AREAS, SEE CONSTRUCTION DETAILS.

N

610'SA'

609'SA'

608'SA'

STH 29 WB ENTRANCE RAMP

STH 27

103'S'

607'A'+85.00, 17.50'
1072.05'

608'A'+20.00, 22.50'
1073.17'

17.50'
1073.10'

17.50'
1073.65'

17.50'
1074.13'

17.50'
1074.44'

17.50'
1074.63'

17.50'
1074.83'

17.50'
1075.06'

609'A'+85.78, 17.50'
1075.16'

610'A'+08.41, 25.80'
1075.98'

SEE PAVING DETAILS FOR STH 27 INTERCHANGE

22.92'
1073.28'

25.00'
1073.82'

31.33'
1074.23'

38.54'
1074.31'

45.74'
1074.68'

52.95'
1075.62'

66.87'
1074.75'

102'S'+47.50,-36.48'
1077.55'

-35.12'
1078.33'

-33.61'
1079.14'

610'A'+04.62, 95.51'
1076.26'

-32.10'
1079.92'

101'S'+49.48,-30.67'
1080.72'

+88

102'S'

1077.4

1079

-2.01%

-1.32%

-0.41%

-2.71%

1"

3"

R40'

R35'

R24'

R40'

C1

C2

B1

P1

P2

F1

A-1

A-2

A-3

A-4

**

SEE PAVING DETAIL LAYOUT SHEETS FOR ADDITIONAL LAYOUT AND PAVEMENT GRADE INFORMATION

STA 101'S'+36 TO STA 102'S'+25, LT
STEEL THRIE BEAM STRUCTURE APPROACH, STEEL PLATE BEAM GUARD CLASS A, STEEL PLATE BEAM GUARD SHORT RADIUS AND STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL

VERIFY PROPOSED GUARDRAIL POST SPACING PRIOR TO CONSTRUCTING FLUME

POINT NO.	STATION	OFFSET	RADIUS
A-1	608'SA'+47.01	64.89'RT	40'R
A-2	609'SA'+44.11	92.88'RT	40'R
A-3	609'SA'+83.41	106.74'RT	24'R
A-4	609'SA'+85.78	52.50'RT	35'R

PROJECT NO: 1050-01-61/1051-01-62	HWY: STH 29	COUNTY: CHIPPEWA	PAVING DETAILS - RAMP 'SA'	SHEET 46	E

2

LEGEND

- (B1) BASE AGGREGATE DENSE 3/4-INCH, VARIABLE DEPTH
- (C1) CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE T
- (C2) CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH WITH NO CURB HEAD (SEE CONSTRUCTION DETAILS)
- (F1) ASPHALTIC FLUME
- (N1) CONCRETE MEDIAN SLOPED NOSE (TYPE 1 UNLESS OTHERWISE NOTED)
- (P1) CONCRETE PAVEMENT 12-INCH
- (P2) CONCRETE SURFACE DRAIN, WITHOUT PIPE
- REMOVING ASPHALTIC SURFACE MILLING AND HMA PAVEMENT 4 MT 58-34 S, 2.00"
- COLORING CONCRETE WISDOT RED
- INLET COVER TYPE T
- ** CURB TRANSITION (SEE CONSTRUCTION DETAILS)
- PULLBOXES STEEL (SEE SECTION 5 SHEETS AND MISCELLEANOUS QUANTITIES)

NOTES

RADIUS AND DIMENSIONS ARE SHOWN TO CURB & GUTTER FLANGELINE.

SLOPES IN WIDENING AREAS ARE PROVIDED PERPENDICULAR TO CURB & GUTTER.

PAVEMENT GRADES ARE GENERALLY SHOWN AT 25' INTERVALS. WHERE GRADES ARE NOT SHOWN, MATCH EXISTING CURB & GUTTER GRADES.

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FOR ADDITIONAL SAWCUTS AND ASPHALTIC SURFACE PATCHING ALONG CURB & GUTTER REPLACEMENT AREAS, SEE CONSTRUCTION DETAILS.

N

SEE PAVING DETAILS FOR STH 27 INTERCHANGE

SEE PAVING DETAILS FOR STH 27 INTERCHANGE

STH 27

STH 29 WB EXIT RAMP

611'SB'

612'SB'

613'SB'

103'S'

102'S'

B-1 B-2 B-3 B-4 B-5 B-6

N1 TYPE 2

N1 TYPE 2

R5'

R5'

R40'

R25'

R20'

R40'

611'B'+50.00,19.62'
1075.21'

611'B'+31.09,31.56'
1076.44'

19.50'
1074.40'

19.50'
1073.75'

19.50'
1073.19'

19.50'
1072.64'

612'B'+60.00,24.50'
1072.61'

612'B'+95.00,19.47'
1071.81'

102'S'+50.40,33.50'
1077.42'

-4.51%

-3.38%

-1.94%

31.99'
1074.16'

28.28'
1073.27'

25.58'
1072.80'

57.42'
1076.37'

65.23'
1076.98'

33.50'
1078.40'

-5.58%

33.50'
1079.25'

101'S'+85.00,33.50'
1079.76'

95.85'
1078.98'

611'B'+54.40,108.10'
1079.79'

REMOVE 8' OF EXISTING STORM SEWER PIPE
STORM SEWER PIPE REINFORCED CONCRTE CLASS III 12-INCH
APRON ENDWALL FOR CULVERT PIPE REINFORCED CONCRETE 12-INCH

PROPOSED INVERT = 1070.01
STA 102'S'+12, 93' RT

EXISTING INVERT = 1070.28

POINT NO.	STATION	OFFSET	RADIUS
B-1	611'SB'+52.49	44.50'RT	25'R
B-2	612'SB'+06.01	82.68'RT	40'R
B-3	612'SB'+08.26	50.20'RT	20'R
B-4	611'SB'+16.35	1.00'LT	5'R
B-5	611'SB'+14.77	4.22'LT	5'R
B-6	611'SB'+57.19	142.87'LT	140'R

PROJECT NO: 1050-01-61/1051-01-62	HWY: STH 29	COUNTY: CHIPPEWA	PAVING DETAILS - RAMP 'SB'	SHEET 47	E

LEGEND

- (B1) BASE AGGREGATE DENSE 3/4-INCH, VARIABLE DEPTH
- (C1) CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE T
- (C2) CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH WITH NO CURB HEAD (SEE CONSTRUCTION DETAILS)
- (F1) ASPHALTIC FLUME
- (N1) CONCRETE MEDIAN SLOPED NOSE (TYPE 1 UNLESS OTHERWISE NOTED)
- (P1) CONCRETE PAVEMENT 12-INCH
- (P2) CONCRETE SURFACE DRAIN, WITHOUT PIPE
- REMOVING ASPHALTIC SURFACE MILLING AND HMA PAVEMENT 4 MT 58-34 S, 2.00"
- COLORING CONCRETE WISDOT RED
- INLET COVER TYPE T
- ** CURB TRANSITION (SEE CONSTRUCTION DETAILS)
- PULLBOXES STEEL (SEE SECTION 5 SHEETS AND MISCELLEANOUS QUANTITIES)

NOTES

RADIUS AND DIMENSIONS ARE SHOWN TO CURB & GUTTER FLANGELINE.

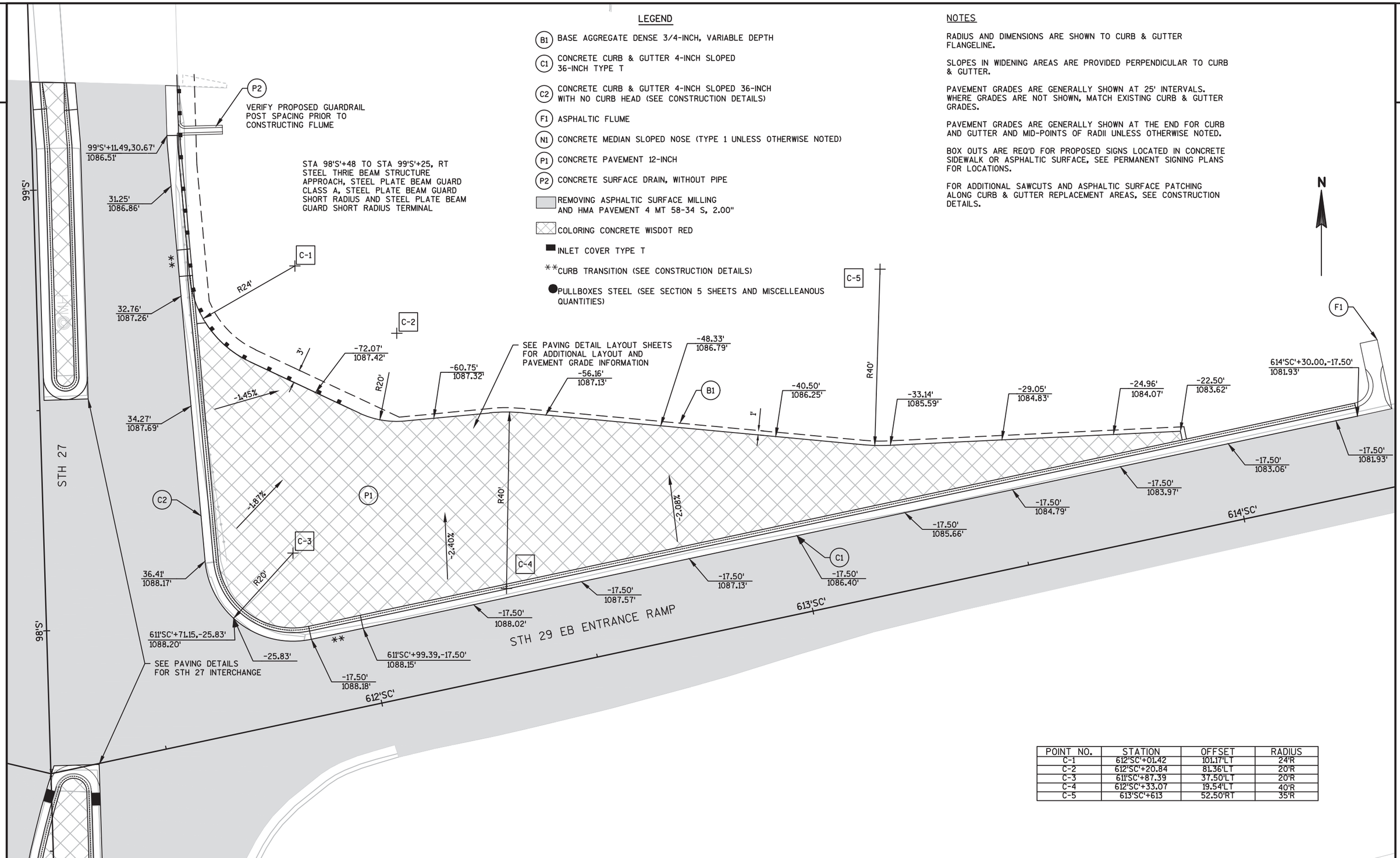
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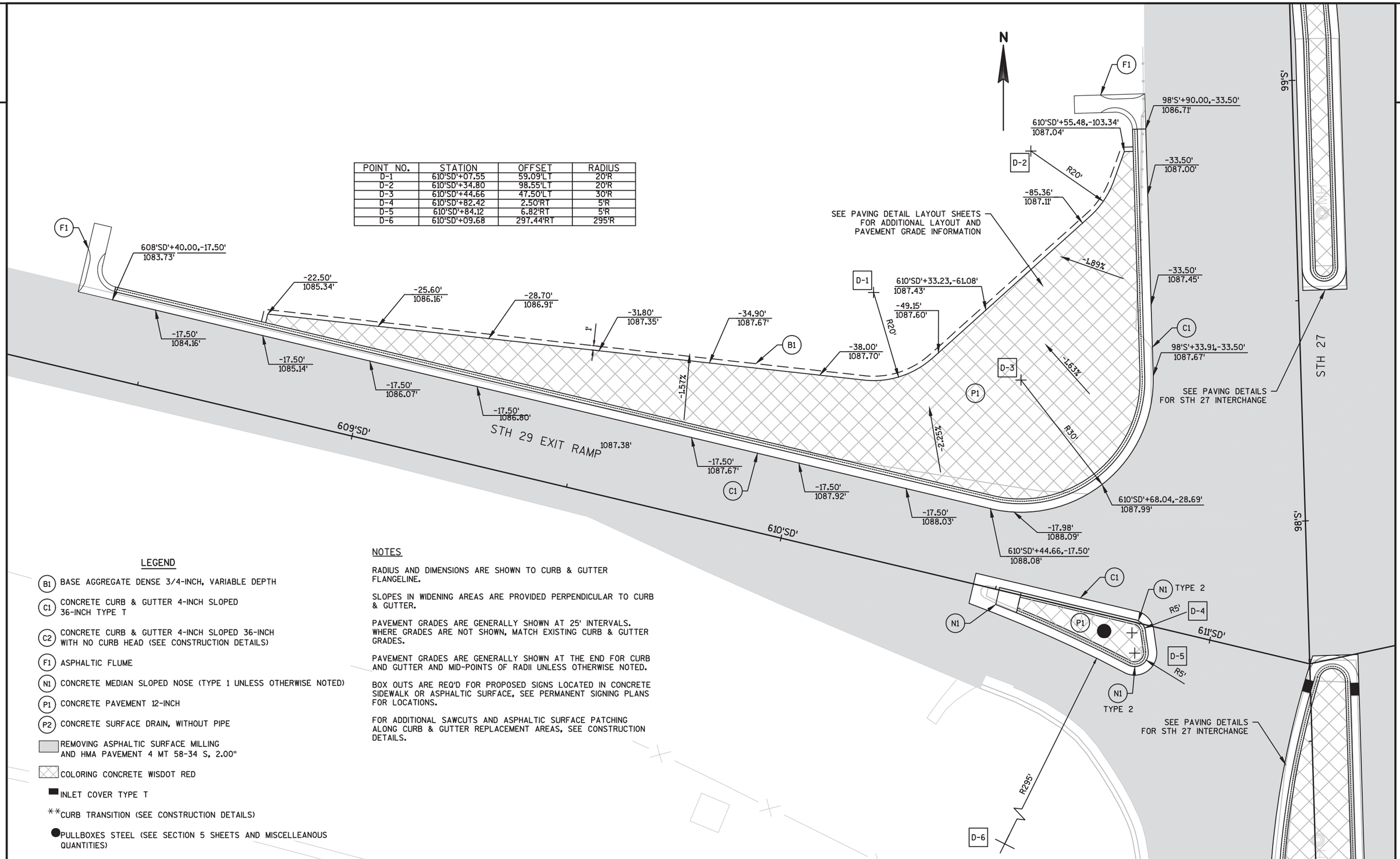
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FOR ADDITIONAL SAWCUTS AND ASPHALTIC SURFACE PATCHING ALONG CURB & GUTTER REPLACEMENT AREAS, SEE CONSTRUCTION DETAILS.



POINT NO.	STATION	OFFSET	RADIUS
C-1	612'SC'+01.42	101.17'LT	24'R
C-2	612'SC'+20.84	81.36'LT	20'R
C-3	611'SC'+87.39	37.50'LT	20'R
C-4	612'SC'+33.07	19.54'LT	40'R
C-5	613'SC'+613	52.50'RT	35'R

POINT NO.	STATION	OFFSET	RADIUS
D-1	610'SD'+07.55	59.09'LT	20'R
D-2	610'SD'+34.80	98.55'LT	20'R
D-3	610'SD'+44.66	47.50'LT	30'R
D-4	610'SD'+82.42	2.50'RT	5'R
D-5	610'SD'+84.12	6.82'RT	5'R
D-6	610'SD'+09.68	297.44'RT	295'R



LEGEND

- (B1) BASE AGGREGATE DENSE 3/4-INCH, VARIABLE DEPTH
- (C1) CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE T
- (C2) CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH WITH NO CURB HEAD (SEE CONSTRUCTION DETAILS)
- (F1) ASPHALTIC FLUME
- (N1) CONCRETE MEDIAN SLOPED NOSE (TYPE 1 UNLESS OTHERWISE NOTED)
- (P1) CONCRETE PAVEMENT 12-INCH
- (P2) CONCRETE SURFACE DRAIN, WITHOUT PIPE
- REMOVING ASPHALTIC SURFACE MILLING AND HMA PAVEMENT 4 MT 58-34 S, 2.00"
- COLORING CONCRETE WISDOT RED
- INLET COVER TYPE T
- **CURB TRANSITION (SEE CONSTRUCTION DETAILS)
- PULLBOXES STEEL (SEE SECTION 5 SHEETS AND MISCELLEANOUS QUANTITIES)

NOTES

RADIUS AND DIMENSIONS ARE SHOWN TO CURB & GUTTER FLANGELINE.

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FOR ADDITIONAL SAWCUTS AND ASPHALTIC SURFACE PATCHING ALONG CURB & GUTTER REPLACEMENT AREAS, SEE CONSTRUCTION DETAILS.

PROJECT NO: 1050-01-61/1051-01-62	HWY: STH 29	COUNTY: CHIPPEWA	PAVING DETAILS - RAMP 'SD'	SHEET 49	E

2

2

LEGEND

- EROSION MAT CLASS I, TYPE B
- SILT FENCE
- RIPRAP MEDIUM
- SLOPE INTERCEPT
- INLET PROTECTION
- TEMPORARY DITCH CHECKS
- SURFACE WATER FLOW
- CULVERT PIPE CHECKS
- SILT FENCE RELIEF (ROCK BAGS)

NOTE
DISTURBED AREAS WITHIN THE RIGHT-OF-WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS, SHALL BE COVERED WITH FERTILIZER, SEED, SALVAGED TOPSOILED AND EROSION MAT.

N

104'S+00
103'S+00
102'S+00
101'S+00
STH 27

608'SA'+00
609'SA'+00
610'SA'+00
STH 29 WB ENTRANCE RAMP

611'SB'+00
612'SB'+00
613'SB'+00
STH 29 WB EXIT RAMP

SS

RIPRAP MEDIUM AND GEOTEXTILE FABRIC TYPE HR 6'X12'X1.5'

SEE CONSTRUCTION DETAIL FOR GUARDRAIL EROSION CONTROL

608'WB'+00
609'WB'+00
610'WB'+00
611'WB'+00
612'WB'+00
613'WB'+00
STH 29 WB

PROJECT NO: 1050-01-61/1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	EROSION CONTROL - STH 27	SHEET 50	E

2

STH 29 EB

609'EB'+00

610'EB'+00

611'EB'+00

612'EB'+00

613'EB'+00

614'EB'+00

100'S+00

99'S+00

98'S+00

97'S+00

STH 27

609'SD'+00

610'SD'+00

611'SD'+00

612+00

613+00

614+00

STH 29 EXIT RAMP

STH 29 EB ENTRANCE RAMP

SEE CONSTRUCTION DETAIL
FOR GUARDRAIL EROSION CONTROL

RIPRAP MEDIUM AND GEOTEXTILE
FABRIC TYPE HR 6'X12'X1.5'

F

MH

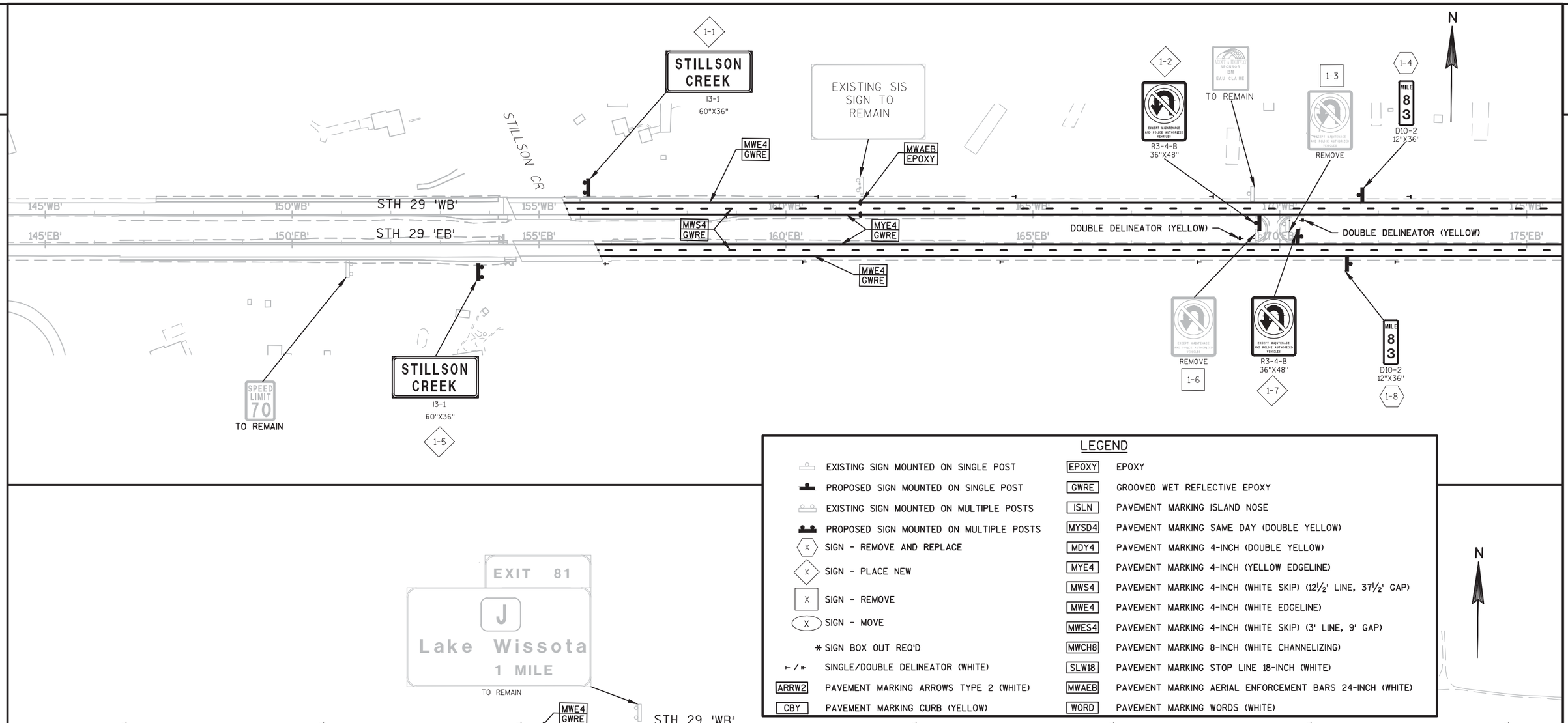
N

LEGEND

######	EROSION MAT CLASS I, TYPE B
	SILT FENCE
	RIPRAP MEDIUM
	SLOPE INTERCEPT
	INLET PROTECTION
	TEMPORARY DITCH CHECKS
	SURFACE WATER FLOW
	CULVERT PIPE CHECKS
F	SILT FENCE RELIEF (ROCK BAGS)

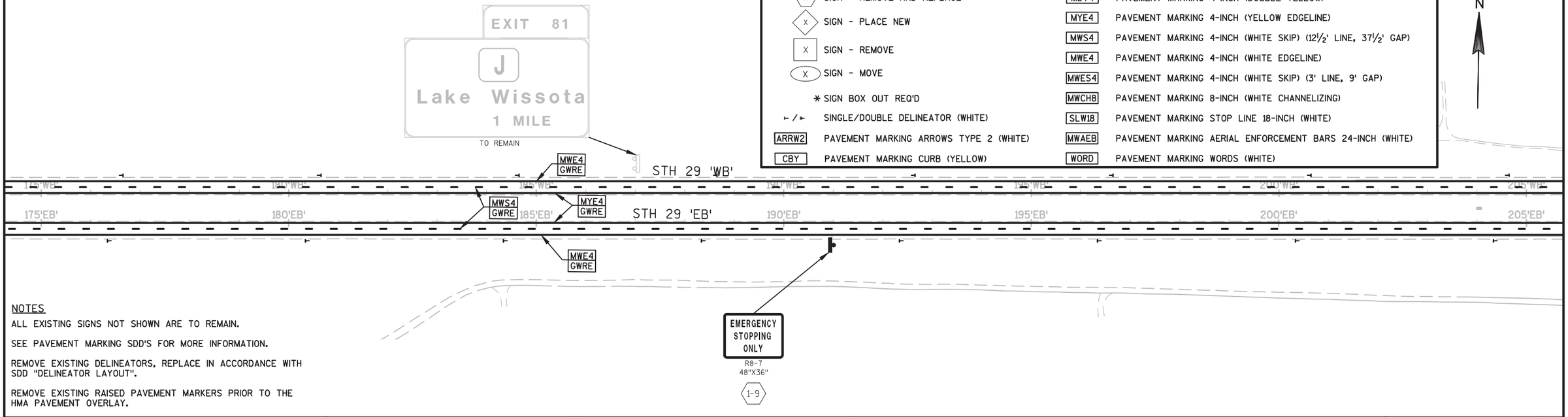
NOTE
DISTURBED AREAS WITHIN THE RIGHT-OF-WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS, SHALL BE COVERED WITH FERTILIZER, SEED, SALVAGED TOPSOILED AND EROSION MAT.

PROJECT NO: 1050-01-61/1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	EROSION CONTROL - STH 27	SHEET 51	E



LEGEND

EXISTING SIGN MOUNTED ON SINGLE POST		EPOXY	EPOXY
PROPOSED SIGN MOUNTED ON SINGLE POST		GWRE	GROOVED WET REFLECTIVE EPOXY
EXISTING SIGN MOUNTED ON MULTIPLE POSTS		ISLN	PAVEMENT MARKING ISLAND NOSE
PROPOSED SIGN MOUNTED ON MULTIPLE POSTS		MYSD4	PAVEMENT MARKING SAME DAY (DOUBLE YELLOW)
X	SIGN - REMOVE AND REPLACE	MDY4	PAVEMENT MARKING 4-INCH (DOUBLE YELLOW)
X	SIGN - PLACE NEW	MYE4	PAVEMENT MARKING 4-INCH (YELLOW EDGELINE)
X	SIGN - REMOVE	MWS4	PAVEMENT MARKING 4-INCH (WHITE SKIP) (12½' LINE, 37½' GAP)
X	SIGN - MOVE	MWE4	PAVEMENT MARKING 4-INCH (WHITE EDGELINE)
		MWES4	PAVEMENT MARKING 4-INCH (WHITE SKIP) (3' LINE, 9' GAP)
*	SIGN BOX OUT REQ'D	MWCH8	PAVEMENT MARKING 8-INCH (WHITE CHANNELIZING)
⊢/⊢	SINGLE/DOUBLE DELINEATOR (WHITE)	SLW18	PAVEMENT MARKING STOP LINE 18-INCH (WHITE)
ARRW2	PAVEMENT MARKING ARROWS TYPE 2 (WHITE)	MWAEB	PAVEMENT MARKING AERIAL ENFORCEMENT BARS 24-INCH (WHITE)
CBY	PAVEMENT MARKING CURB (YELLOW)	WORD	PAVEMENT MARKING WORDS (WHITE)



NOTES

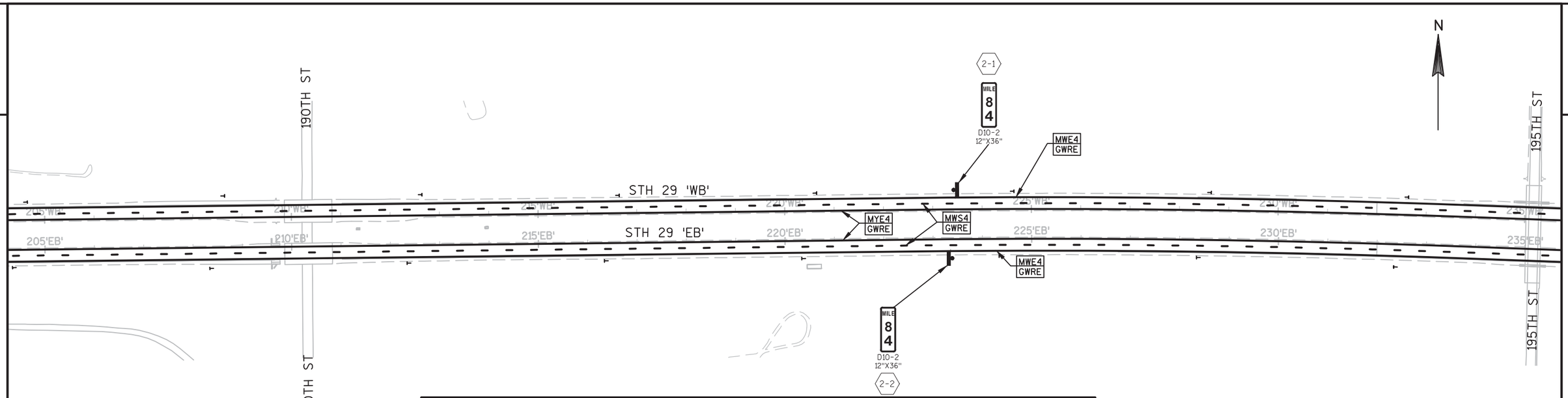
ALL EXISTING SIGNS NOT SHOWN ARE TO REMAIN.

SEE PAVEMENT MARKING SDD'S FOR MORE INFORMATION.

REMOVE EXISTING DELINEATORS, REPLACE IN ACCORDANCE WITH SDD "DELINEATOR LAYOUT".

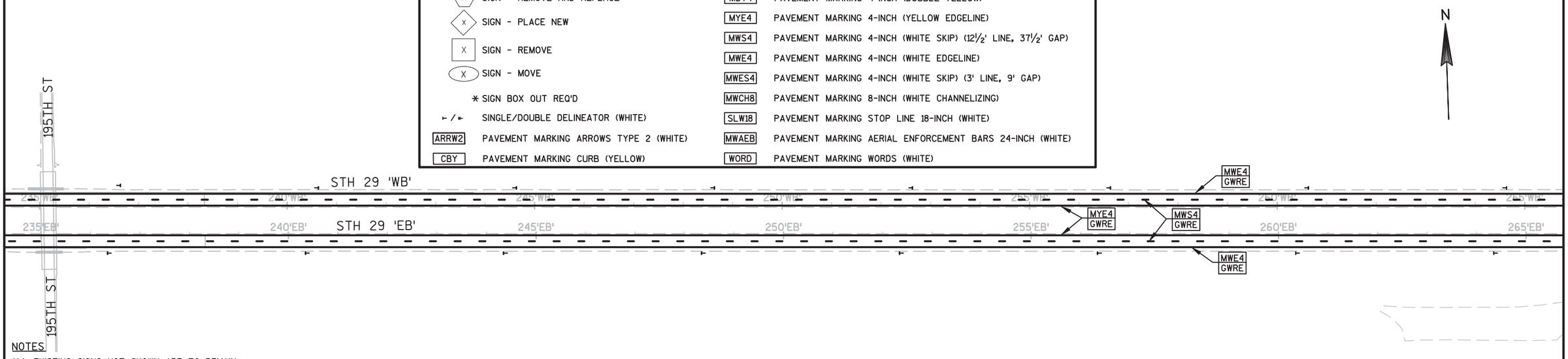
REMOVE EXISTING RAISED PAVEMENT MARKERS PRIOR TO THE HMA PAVEMENT OVERLAY.

PROJECT NO: 1050-01-61/1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	PERMANENT SIGNING AND PAVEMENT MARKING	SHEET 52	E



LEGEND

	EXISTING SIGN MOUNTED ON SINGLE POST	EPOXY	EPOXY
	PROPOSED SIGN MOUNTED ON SINGLE POST	GWRE	GROOVED WET REFLECTIVE EPOXY
	EXISTING SIGN MOUNTED ON MULTIPLE POSTS	ISLN	PAVEMENT MARKING ISLAND NOSE
	PROPOSED SIGN MOUNTED ON MULTIPLE POSTS	MYSD4	PAVEMENT MARKING SAME DAY (DOUBLE YELLOW)
X	SIGN - REMOVE AND REPLACE	MDY4	PAVEMENT MARKING 4-INCH (DOUBLE YELLOW)
X	SIGN - PLACE NEW	MYE4	PAVEMENT MARKING 4-INCH (YELLOW EDGELINE)
X	SIGN - REMOVE	MWS4	PAVEMENT MARKING 4-INCH (WHITE SKIP) (12½' LINE, 37½' GAP)
X	SIGN - MOVE	MWE4	PAVEMENT MARKING 4-INCH (WHITE EDGELINE)
	* SIGN BOX OUT REQ'D	MWES4	PAVEMENT MARKING 4-INCH (WHITE SKIP) (3' LINE, 9' GAP)
	SINGLE/DOUBLE DELINEATOR (WHITE)	MWCH8	PAVEMENT MARKING 8-INCH (WHITE CHANNELIZING)
ARRW2	PAVEMENT MARKING ARROWS TYPE 2 (WHITE)	SLW18	PAVEMENT MARKING STOP LINE 18-INCH (WHITE)
CBY	PAVEMENT MARKING CURB (YELLOW)	MWAEB	PAVEMENT MARKING AERIAL ENFORCEMENT BARS 24-INCH (WHITE)
		WORD	PAVEMENT MARKING WORDS (WHITE)



NOTES

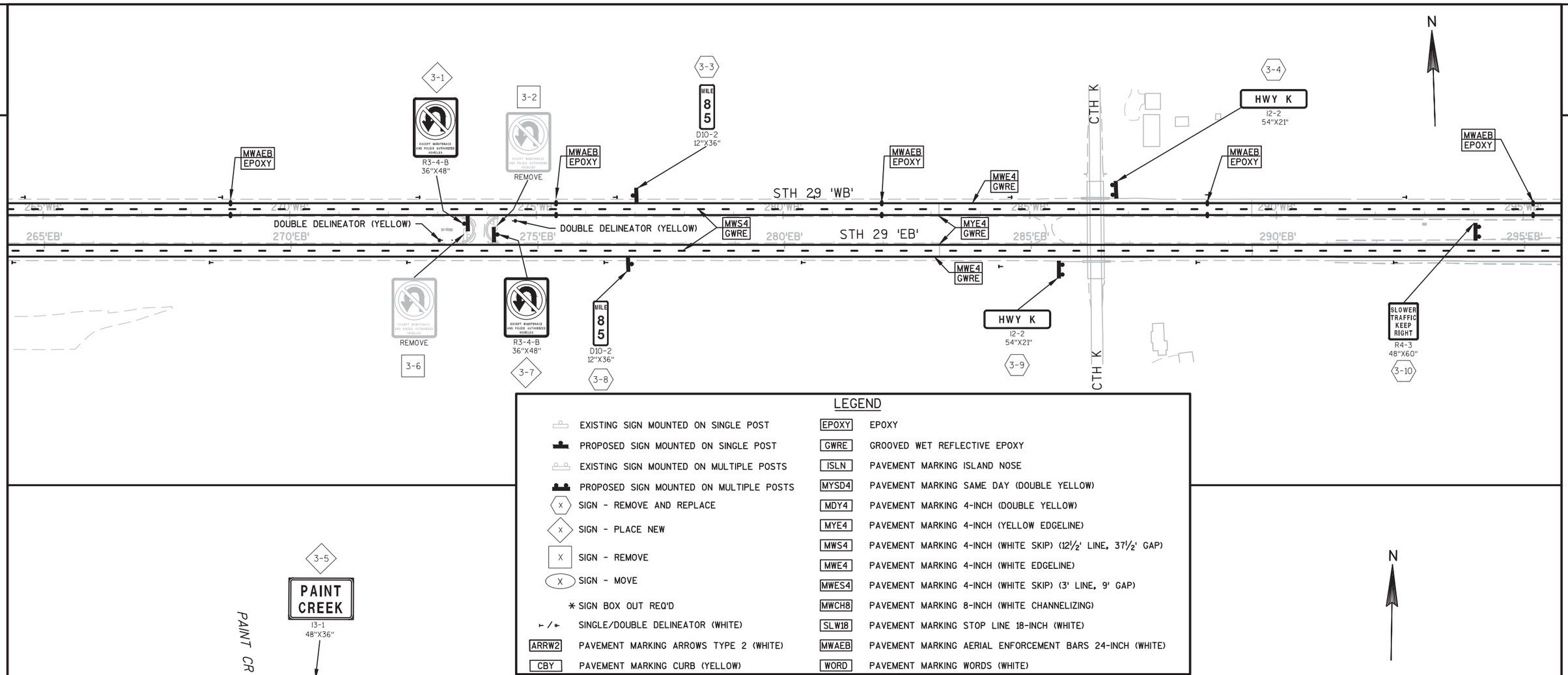
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SEE PAVEMENT MARKING SDD'S FOR MORE INFORMATION.

REMOVE EXISTING DELINEATORS, REPLACE IN ACCORDANCE WITH SDD "DELINEATOR LAYOUT".

REMOVE EXISTING RAISED PAVEMENT MARKERS PRIOR TO THE HMA PAVEMENT OVERLAY.

PROJECT NO: 1050-01-61/1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	PERMANENT SIGNING AND PAVEMENT MARKING	SHEET 53	E



LEGEND

	EXISTING SIGN MOUNTED ON SINGLE POST	EPOXY	EPOXY
	PROPOSED SIGN MOUNTED ON SINGLE POST	GWRE	GROOVED WET REFLECTIVE EPOXY
	EXISTING SIGN MOUNTED ON MULTIPLE POSTS	ISLN	PAVEMENT MARKING ISLAND NOSE
	PROPOSED SIGN MOUNTED ON MULTIPLE POSTS	MYSD4	PAVEMENT MARKING SAME DAY (DOUBLE YELLOW)
X	SIGN - REMOVE AND REPLACE	MDY4	PAVEMENT MARKING 4-INCH (DOUBLE YELLOW)
X	SIGN - PLACE NEW	MYE4	PAVEMENT MARKING 4-INCH (YELLOW EDGELINE)
X	SIGN - REMOVE	MWS4	PAVEMENT MARKING 4-INCH (WHITE SKIP) (12½' LINE, 37½' GAP)
X	SIGN - MOVE	MWE4	PAVEMENT MARKING 4-INCH (WHITE EDGELINE)
*	SIGN BOX OUT REQ'D	MWES4	PAVEMENT MARKING 4-INCH (WHITE SKIP) (3' LINE, 9' GAP)
	SINGLE/DOUBLE DELINEATOR (WHITE)	MWCH8	PAVEMENT MARKING 8-INCH (WHITE CHANNELIZING)
ARRW2	PAVEMENT MARKING ARROWS TYPE 2 (WHITE)	SLW18	PAVEMENT MARKING STOP LINE 18-INCH (WHITE)
CBY	PAVEMENT MARKING CURB (YELLOW)	MWAEB	PAVEMENT MARKING AERIAL ENFORCEMENT BARS 24-INCH (WHITE)
		WORD	PAVEMENT MARKING WORDS (WHITE)

NOTES

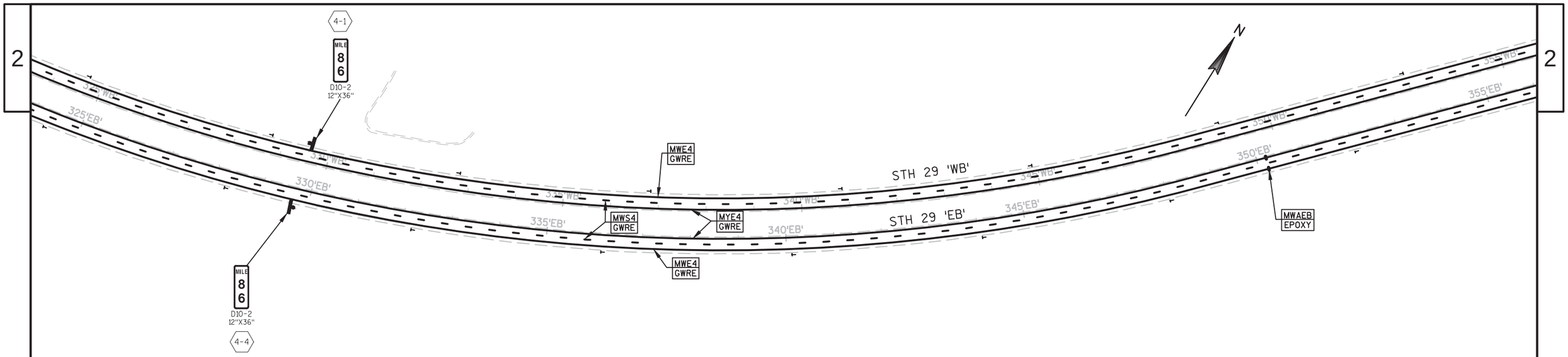
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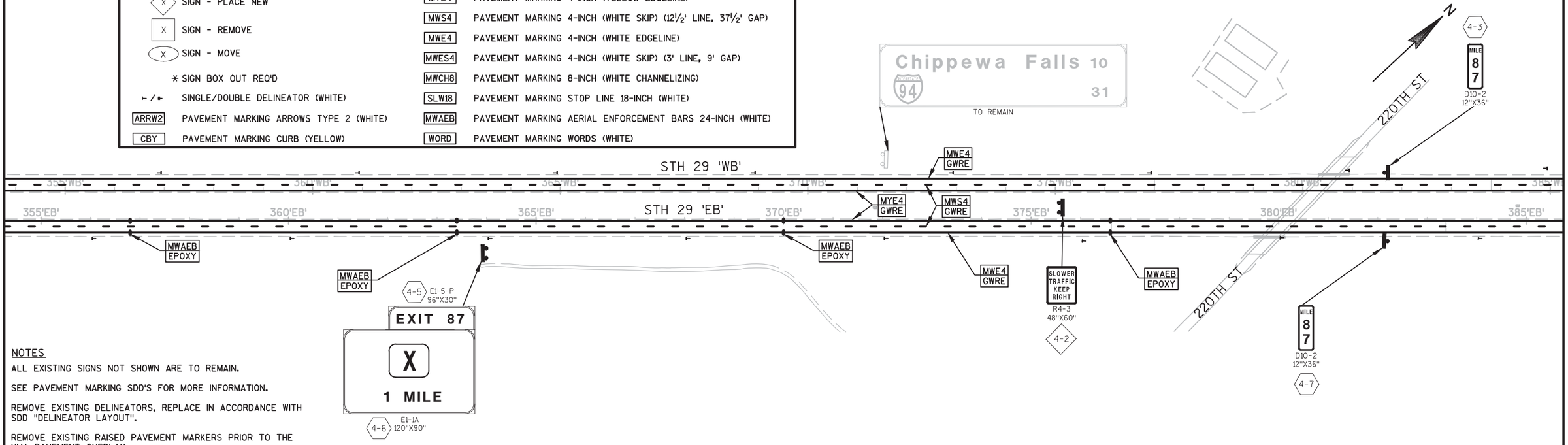
REMOVE EXISTING RAISED PAVEMENT MARKERS PRIOR TO THE HMA PAVEMENT OVERLAY.

PROJECT NO: 1050-01-61/1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	PERMANENT SIGNING AND PAVEMENT MARKING	SHEET 54	E



LEGEND

	EXISTING SIGN MOUNTED ON SINGLE POST	EPOXY	EPOXY
	PROPOSED SIGN MOUNTED ON SINGLE POST	GWRE	GROOVED WET REFLECTIVE EPOXY
	EXISTING SIGN MOUNTED ON MULTIPLE POSTS	ISLN	PAVEMENT MARKING ISLAND NOSE
	PROPOSED SIGN MOUNTED ON MULTIPLE POSTS	MYSD4	PAVEMENT MARKING SAME DAY (DOUBLE YELLOW)
X	SIGN - REMOVE AND REPLACE	MDY4	PAVEMENT MARKING 4-INCH (DOUBLE YELLOW)
X	SIGN - PLACE NEW	MYE4	PAVEMENT MARKING 4-INCH (YELLOW EDGELINE)
X	SIGN - REMOVE	MWS4	PAVEMENT MARKING 4-INCH (WHITE SKIP) (12½' LINE, 37½' GAP)
X	SIGN - MOVE	MWE4	PAVEMENT MARKING 4-INCH (WHITE EDGELINE)
	* SIGN BOX OUT REQ'D	MWES4	PAVEMENT MARKING 4-INCH (WHITE SKIP) (3' LINE, 9' GAP)
⊢ / ⊢	SINGLE/DOUBLE DELINEATOR (WHITE)	MWCH8	PAVEMENT MARKING 8-INCH (WHITE CHANNELIZING)
ARRW2	PAVEMENT MARKING ARROWS TYPE 2 (WHITE)	SLW18	PAVEMENT MARKING STOP LINE 18-INCH (WHITE)
CBY	PAVEMENT MARKING CURB (YELLOW)	MWAEB	PAVEMENT MARKING AERIAL ENFORCEMENT BARS 24-INCH (WHITE)
		WORD	PAVEMENT MARKING WORDS (WHITE)



NOTES

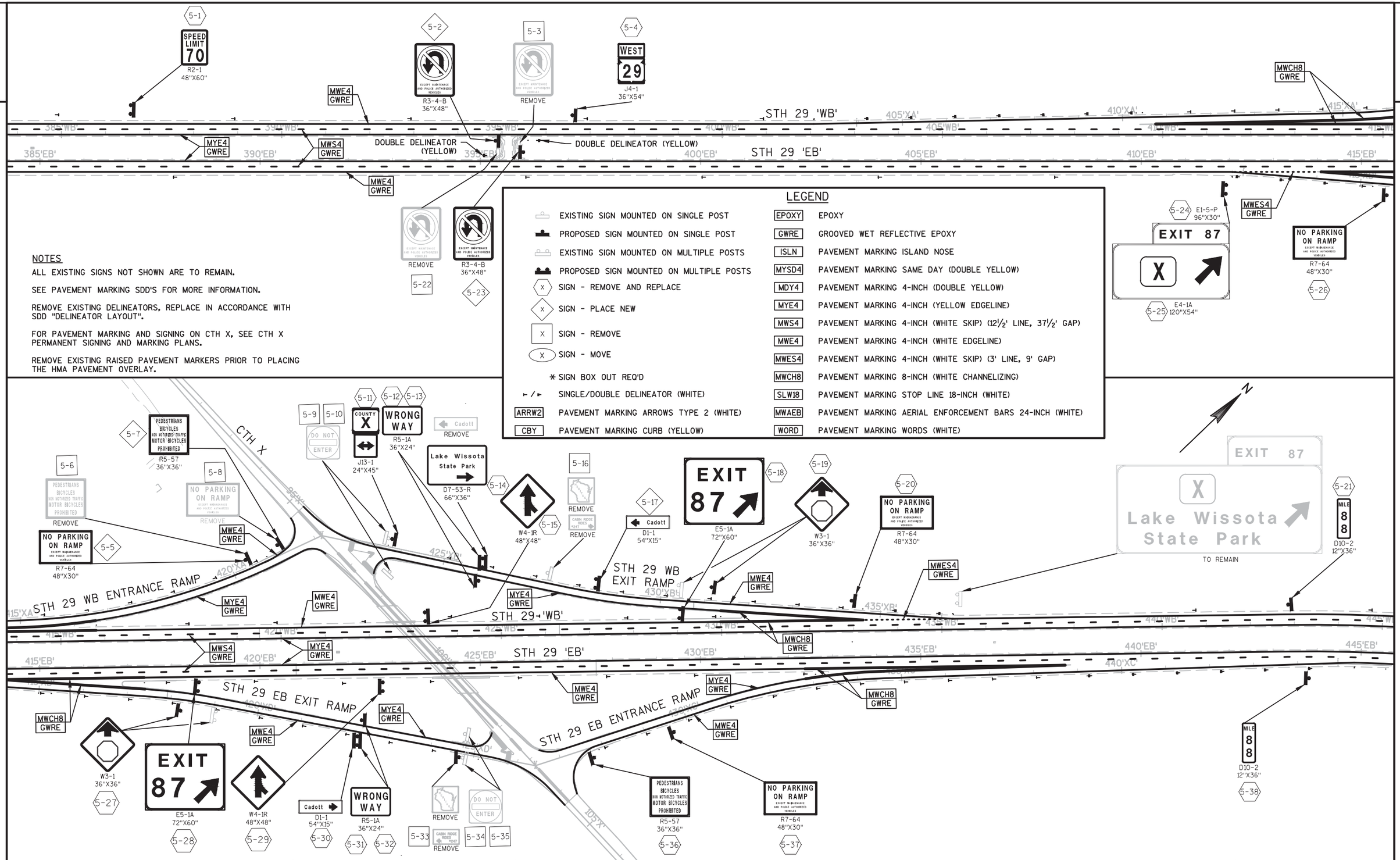
ALL EXISTING SIGNS NOT SHOWN ARE TO REMAIN.

SEE PAVEMENT MARKING SDD'S FOR MORE INFORMATION.

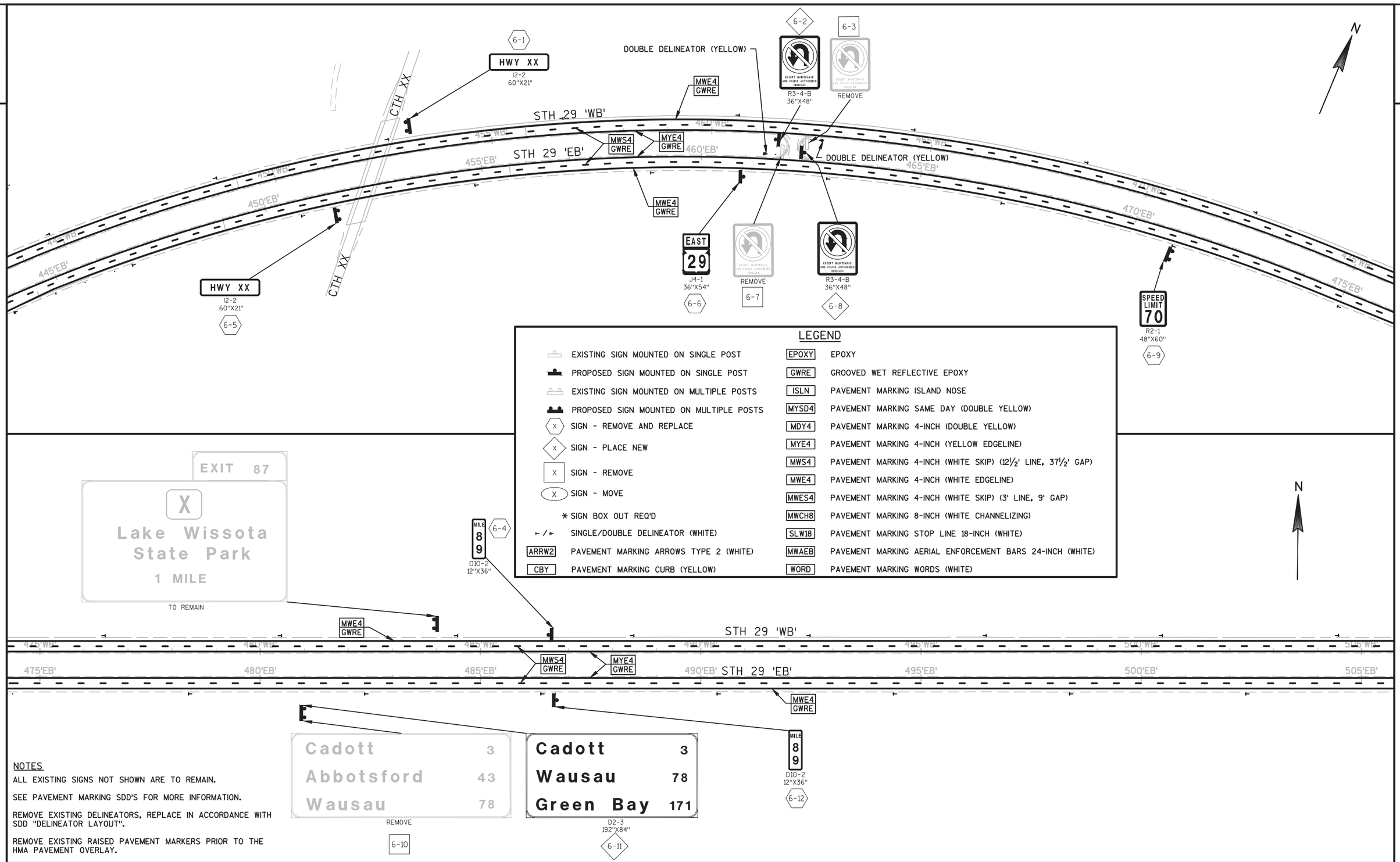
REMOVE EXISTING DELINEATORS, REPLACE IN ACCORDANCE WITH SDD "DELINEATOR LAYOUT".

REMOVE EXISTING RAISED PAVEMENT MARKERS PRIOR TO THE HMA PAVEMENT OVERLAY.

PROJECT NO: 1050-01-61/1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	PERMANENT SIGNING AND PAVEMENT MARKING	SHEET 55	E



PROJECT NO: 1050-01-61/1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	PERMANENT SIGNING AND PAVEMENT MARKING	SHEET 56	E



NOTES

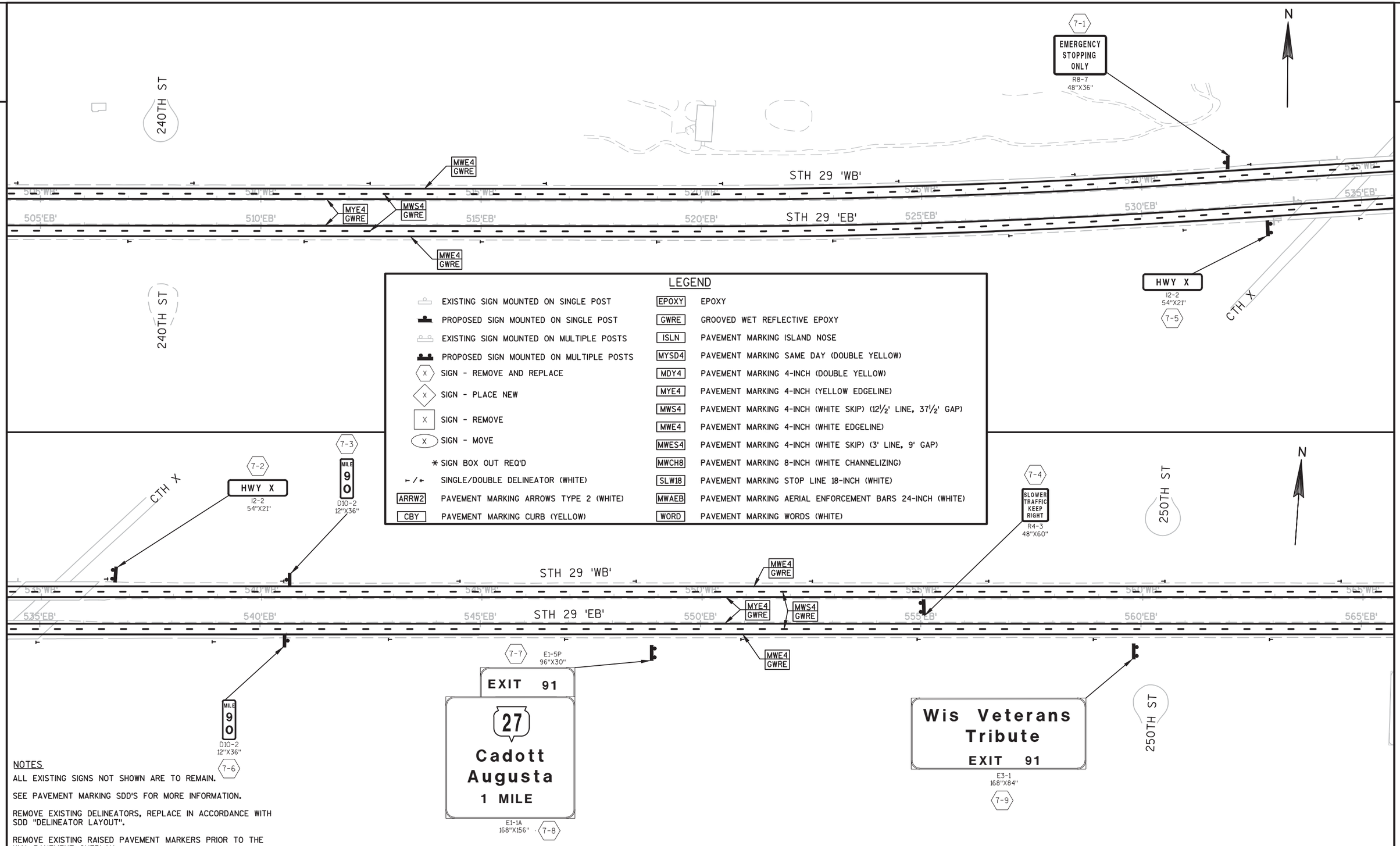
ALL EXISTING SIGNS NOT SHOWN ARE TO REMAIN.

SEE PAVEMENT MARKING SDD'S FOR MORE INFORMATION.

REMOVE EXISTING DELINEATORS, REPLACE IN ACCORDANCE WITH SDD "DELINEATOR LAYOUT".

REMOVE EXISTING RAISED PAVEMENT MARKERS PRIOR TO THE HMA PAVEMENT OVERLAY.

PROJECT NO: 1050-01-61/1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	PERMANENT SIGNING AND PAVEMENT MARKING	SHEET 57	E



NOTES

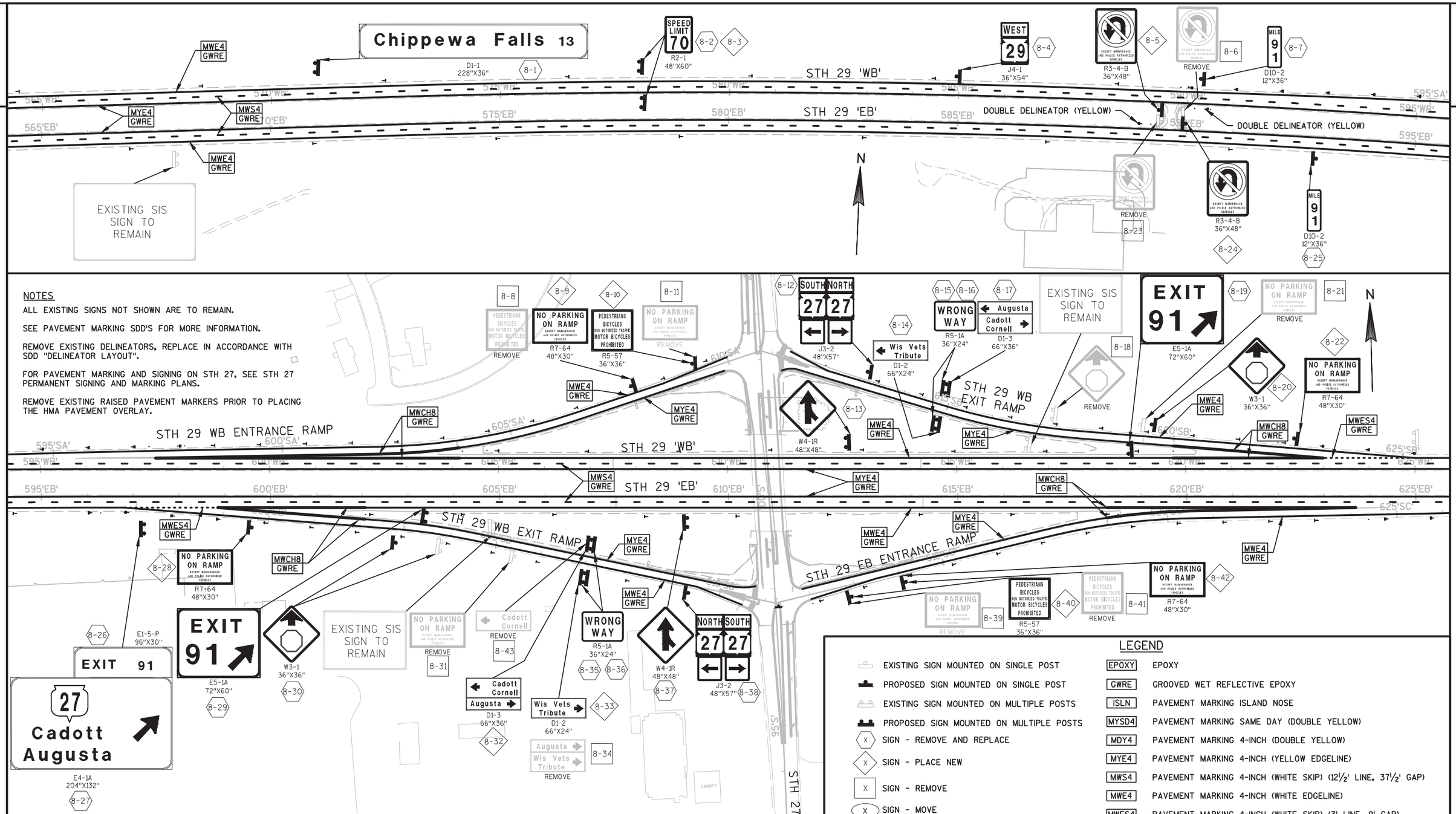
ALL EXISTING SIGNS NOT SHOWN ARE TO REMAIN.

SEE PAVEMENT MARKING SDD'S FOR MORE INFORMATION.

REMOVE EXISTING DELINEATORS, REPLACE IN ACCORDANCE WITH SDD "DELINEATOR LAYOUT".

REMOVE EXISTING RAISED PAVEMENT MARKERS PRIOR TO THE HMA PAVEMENT OVERLAY.

PROJECT NO: 1050-01-61/1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	PERMANENT SIGNING AND PAVEMENT MARKING	SHEET 58	E



LEGEND

	EXISTING SIGN MOUNTED ON SINGLE POST	EPOXY	EPOXY
	PROPOSED SIGN MOUNTED ON SINGLE POST	GWRE	GROOVED WET REFLECTIVE EPOXY
	EXISTING SIGN MOUNTED ON MULTIPLE POSTS	ISLN	PAVEMENT MARKING ISLAND NOSE
	PROPOSED SIGN MOUNTED ON MULTIPLE POSTS	MYSD4	PAVEMENT MARKING SAME DAY (DOUBLE YELLOW)
X	SIGN - REMOVE AND REPLACE	MDY4	PAVEMENT MARKING 4-INCH (DOUBLE YELLOW)
X	SIGN - PLACE NEW	MYE4	PAVEMENT MARKING 4-INCH (YELLOW EDGELINE)
X	SIGN - REMOVE	MWS4	PAVEMENT MARKING 4-INCH (WHITE SKIP) (12½' LINE, 37½' GAP)
X	SIGN - MOVE	MWE4	PAVEMENT MARKING 4-INCH (WHITE EDGELINE)
*	SIGN BOX OUT REQ'D	MWES4	PAVEMENT MARKING 4-INCH (WHITE SKIP) (3' LINE, 9' GAP)
⊢ / ⊢	SINGLE/DOUBLE DELINEATOR (WHITE)	MWCH8	PAVEMENT MARKING 8-INCH (WHITE CHANNELIZING)
ARRW2	PAVEMENT MARKING ARROWS TYPE 2 (WHITE)	SLW18	PAVEMENT MARKING STOP LINE 18-INCH (WHITE)
CBY	PAVEMENT MARKING CURB (YELLOW)	MWAEB	PAVEMENT MARKING AERIAL ENFORCEMENT BARS 24-INCH (WHITE)
		WORD	PAVEMENT MARKING WORDS (WHITE)

PROJECT NO: 1050-01-61/1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	PERMANENT SIGNING AND PAVEMENT MARKING	SHEET 59	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\023201-PS.DWG PLOT DATE : 7/29/2016 9:35 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : ********** WISDOT/CADDS SHEET 42

EXIT 91
27
Cadott
Augusta
TO REMAIN

9-1
R3-4-B
36"X48"

9-2
REMOVE

EXISTING SIS SIGN TO REMAIN

9-3
MILE 9 2
D10-2
12"X36"

Wisconsin Veterans Tribute
EXIT 91
TO REMAIN

N

STH 29 'WB'

625'SB' 625'WB' 630'WB' 635'WB' 640'WB' 645'WB' 650'WB' 655'WB'

DOUBLE DELINEATOR (YELLOW)

DOUBLE DELINEATOR (YELLOW)

MWE4 GWRE

MYE4 GWRE

MWS4 GWRE

STH 29 'EB'

625'EB' 630'EB' 635'EB' 640'EB' 645'EB' 650'EB' 655'EB'

625'SC' 630'SC'

SPEED LIMIT 65
W3-5
48"X48"
9-8 9-9

REMOVE
9-10

EAST 29
J4-1
36"X54"
9-11

R3-4-B
36"X48"
9-12

SPEED LIMIT 65
R2-1
48"X60"
9-13 9-14

MWE4 GWRE

SPEED LIMIT 65
REMOVE
9-15
9-16

MILE 9 2
D10-2
12"X36"
9-17

Boyd	6
Thorp	18
Wausau	75

REMOVE
9-32

Boyd	6
Wausau	75
Green Bay	168

D2-3
192"X84"
9-33

LEGEND

	EXISTING SIGN MOUNTED ON SINGLE POST	EPOXY	EPOXY
	PROPOSED SIGN MOUNTED ON SINGLE POST	GWRE	GROOVED WET REFLECTIVE EPOXY
	EXISTING SIGN MOUNTED ON MULTIPLE POSTS	ISLN	PAVEMENT MARKING ISLAND NOSE
	PROPOSED SIGN MOUNTED ON MULTIPLE POSTS	MYSD4	PAVEMENT MARKING SAME DAY (DOUBLE YELLOW)
X	SIGN - REMOVE AND REPLACE	MDY4	PAVEMENT MARKING 4-INCH (DOUBLE YELLOW)
X	SIGN - PLACE NEW	MYE4	PAVEMENT MARKING 4-INCH (YELLOW EDGELINE)
X	SIGN - REMOVE	MWS4	PAVEMENT MARKING 4-INCH (WHITE SKIP) (12½' LINE, 37½' GAP)
X	SIGN - MOVE	MWE4	PAVEMENT MARKING 4-INCH (WHITE EDGELINE)
*	SIGN BOX OUT REQ'D	MWES4	PAVEMENT MARKING 4-INCH (WHITE SKIP) (3' LINE, 9' GAP)
⊢ / ⊢	SINGLE/DOUBLE DELINEATOR (WHITE)	MWCH8	PAVEMENT MARKING 8-INCH (WHITE CHANNELIZING)
		SLW18	PAVEMENT MARKING STOP LINE 18-INCH (WHITE)
ARRW2	PAVEMENT MARKING ARROWS TYPE 2 (WHITE)	MWAEB	PAVEMENT MARKING AERIAL ENFORCEMENT BARS 24-INCH (WHITE)
CBY	PAVEMENT MARKING CURB (YELLOW)	WORD	PAVEMENT MARKING WORDS (WHITE)

9-4
PEDESTRIANS BICYCLES NON MOTORIZED TRAFFIC MOTOR BICYCLES PROHIBITED
REMOVE

9-5
BEYOND NEXT EXIT
REMOVE

9-6 E1-5-P
96"X30"
EXIT 91
27
Cadott
Augusta
1 MILE
E1-1A
168"X156"
9-7

MWE4 GWRE

MYE4 GWRE

MWS4 GWRE

STH 29 'WB'

655'WB' 660'WB' 665'WB' 670'WB' 675'WB' 680'WB' 685'WB'

STH 29 'EB'

655'EB' 660'EB' 665'EB' 670'EB' 675'EB' 680'EB' 685'EB'

MWE4 GWRE

270th ST
REMOVE
9-21

MWES4 GWRE

CROSS TRAFFIC NEXT 40 MILES
W6-53
144"X48"
9-18 9-19

270th St
D1-1
90"X21"
9-20

WRONG WAY
REMOVE
9-22

WRONG WAY
R5-1A
42"X30"
9-23

DO NOT ENTER
R5-1
48"X48"
9-24

ONE WAY
REMOVE
9-25

DO NOT ENTER
REMOVE
9-26

9-27
ONE WAY
R6-1-R
54"X18"

STOP
R1-1
36"X36"
9-28

DIVIDED HIGHWAY
REMOVE
9-29

R3-2
24"X24"
9-30

ONE WAY
R6-2-R
36"X48"
9-31

270TH ST

N

NOTES

ALL EXISTING SIGNS NOT SHOWN ARE TO REMAIN.

SEE PAVEMENT MARKING SDD'S FOR MORE INFORMATION.

REMOVE EXISTING DELINEATORS, REPLACE IN ACCORDANCE WITH SDD "DELINEATOR LAYOUT".

REMOVE EXISTING RAISED PAVEMENT MARKERS PRIOR TO THE HMA PAVEMENT OVERLAY.

PROJECT NO: 1050-01-61/1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	PERMANENT SIGNING AND PAVEMENT MARKING	SHEET 60	E

2

2

N

10-1

MILE 93
D10-2
12"X36"

MWE4 GWRE

STH 29 'WB'

685'WB' 690'WB' 695'WB' 700'WB' 705'WB' 710'WB' 715'WB'

MWS4 GWRE

MYE4 GWRE

685'EB' 690'EB' 695'EB' STH 29 'EB' 700'EB' 705'EB' 710'EB' 715'EB'

MWE4 GWRE

MILE 93
D10-2
12"X36"
10-5

EMERGENCY STOPPING ONLY
R8-7
48"X36"
10-6

LEGEND

	EXISTING SIGN MOUNTED ON SINGLE POST	EPOXY	EPOXY
	PROPOSED SIGN MOUNTED ON SINGLE POST	GWRE	GROOVED WET REFLECTIVE EPOXY
	EXISTING SIGN MOUNTED ON MULTIPLE POSTS	ISLN	PAVEMENT MARKING ISLAND NOSE
	PROPOSED SIGN MOUNTED ON MULTIPLE POSTS	MYSD4	PAVEMENT MARKING SAME DAY (DOUBLE YELLOW)
X	SIGN - REMOVE AND REPLACE	MDY4	PAVEMENT MARKING 4-INCH (DOUBLE YELLOW)
X	SIGN - PLACE NEW	MYE4	PAVEMENT MARKING 4-INCH (YELLOW EDGELINE)
X	SIGN - REMOVE	MWS4	PAVEMENT MARKING 4-INCH (WHITE SKIP) (12½' LINE, 37½' GAP)
X	SIGN - MOVE	MWE4	PAVEMENT MARKING 4-INCH (WHITE EDGELINE)
*	SIGN BOX OUT REQ'D	MWES4	PAVEMENT MARKING 4-INCH (WHITE SKIP) (3' LINE, 9' GAP)
⊢ / ⊢	SINGLE/DOUBLE DELINEATOR (WHITE)	MWCH8	PAVEMENT MARKING 8-INCH (WHITE CHANNELIZING)
ARRW2	PAVEMENT MARKING ARROWS TYPE 2 (WHITE)	SLW18	PAVEMENT MARKING STOP LINE 18-INCH (WHITE)
CBY	PAVEMENT MARKING CURB (YELLOW)	MWAEB	PAVEMENT MARKING AERIAL ENFORCEMENT BARS 24-INCH (WHITE)
		WORD	PAVEMENT MARKING WORDS (WHITE)

N

10-2

EXCEPT MAINTENANCE AND POLICE AUTHORIZED VEHICLES
R3-4-B
36"X48"

10-3

EXCEPT MAINTENANCE AND POLICE AUTHORIZED VEHICLES
REMOVE

10-4

EMERGENCY STOPPING ONLY
R8-7
48"X36"

MWE4 GWRE

STH 29 'WB'

715'WB' 720'WB' 725'WB' 730'WB' 735'WB' 740'WB' 745'WB'

MYE4 GWRE

MWS4 GWRE

715'EB' 720'EB' 725'EB' STH 29 'EB'

DOUBLE DELINEATOR (YELLOW)

730'EB'

DOUBLE DELINEATOR (YELLOW)

735'EB' 740'EB' 745'EB'

MWE4 GWRE

SLOWER TRAFFIC KEEP RIGHT
R4-3
48"X60"
10-7

EXCEPT MAINTENANCE AND POLICE AUTHORIZED VEHICLES
R3-4-B
36"X48"
10-8

NOTES

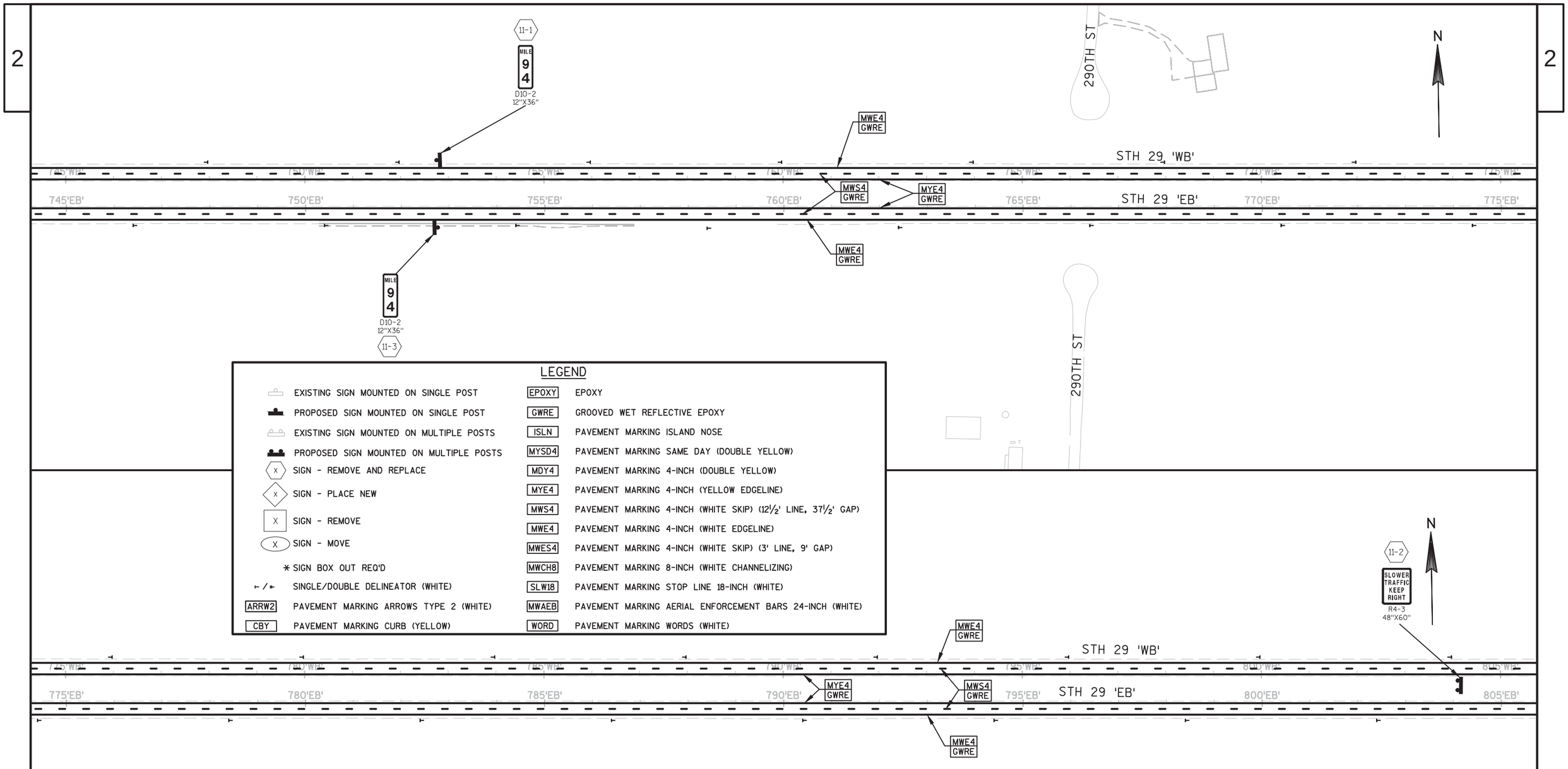
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REMOVE EXISTING DELINEATORS, REPLACE IN ACCORDANCE WITH SDD "DELINEATOR LAYOUT".

REMOVE EXISTING RAISED PAVEMENT MARKERS PRIOR TO THE HMA PAVEMENT OVERLAY.

PROJECT NO: 1050-01-61/1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	PERMANENT SIGNING AND PAVEMENT MARKING	SHEET 61	E



LEGEND

	EXISTING SIGN MOUNTED ON SINGLE POST	EPOXY	EPOXY
	PROPOSED SIGN MOUNTED ON SINGLE POST	GWRE	GROOVED WET REFLECTIVE EPOXY
	EXISTING SIGN MOUNTED ON MULTIPLE POSTS	ISLN	PAVEMENT MARKING ISLAND NOSE
	PROPOSED SIGN MOUNTED ON MULTIPLE POSTS	MYSD4	PAVEMENT MARKING SAME DAY (DOUBLE YELLOW)
X	SIGN - REMOVE AND REPLACE	MDY4	PAVEMENT MARKING 4-INCH (DOUBLE YELLOW)
X	SIGN - PLACE NEW	MYE4	PAVEMENT MARKING 4-INCH (YELLOW EDGELINE)
X	SIGN - REMOVE	MWS4	PAVEMENT MARKING 4-INCH (WHITE SKIP) (12½' LINE, 37½' GAP)
X	SIGN - MOVE	MWE4	PAVEMENT MARKING 4-INCH (WHITE EDGELINE)
*	SIGN BOX OUT REQ'D	MWES4	PAVEMENT MARKING 4-INCH (WHITE SKIP) (3' LINE, 9' GAP)
⊢ / ⊩	SINGLE/DOUBLE DELINEATOR (WHITE)	MWCH8	PAVEMENT MARKING 8-INCH (WHITE CHANNELIZING)
ARRW2	PAVEMENT MARKING ARROWS TYPE 2 (WHITE)	SLW18	PAVEMENT MARKING STOP LINE 18-INCH (WHITE)
CBY	PAVEMENT MARKING CURB (YELLOW)	MWAEB	PAVEMENT MARKING AERIAL ENFORCEMENT BARS 24-INCH (WHITE)
		WORD	PAVEMENT MARKING WORDS (WHITE)

NOTES

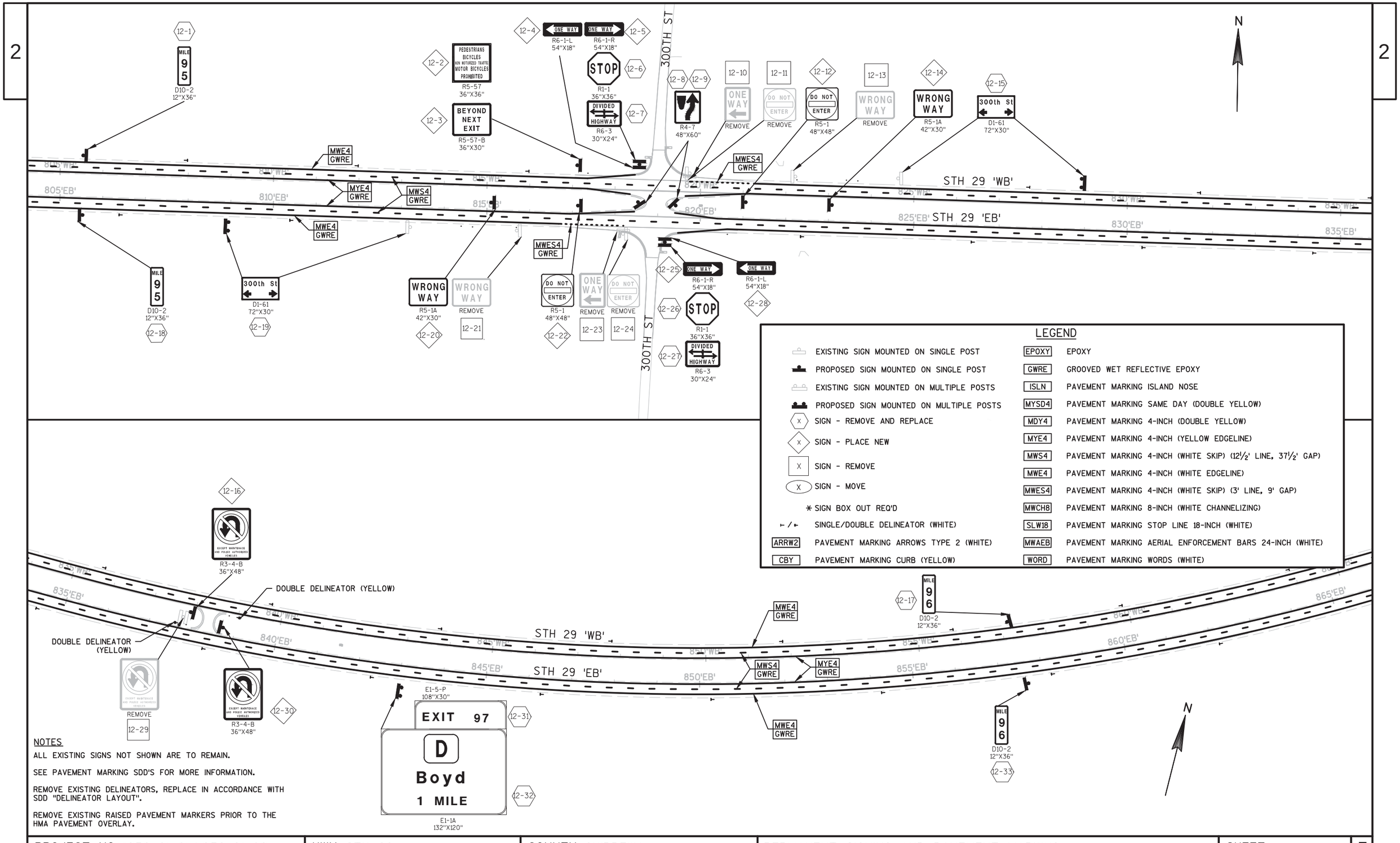
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SEE PAVEMENT MARKING SDD'S FOR MORE INFORMATION.

REMOVE EXISTING DELINEATORS, REPLACE IN ACCORDANCE WITH SDD "DELINEATOR LAYOUT".

REMOVE EXISTING RAISED PAVEMENT MARKERS PRIOR TO THE HMA PAVEMENT OVERLAY.

PROJECT NO: 1050-01-61/1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	PERMANENT SIGNING AND PAVEMENT MARKING	SHEET 62	E



NOTES

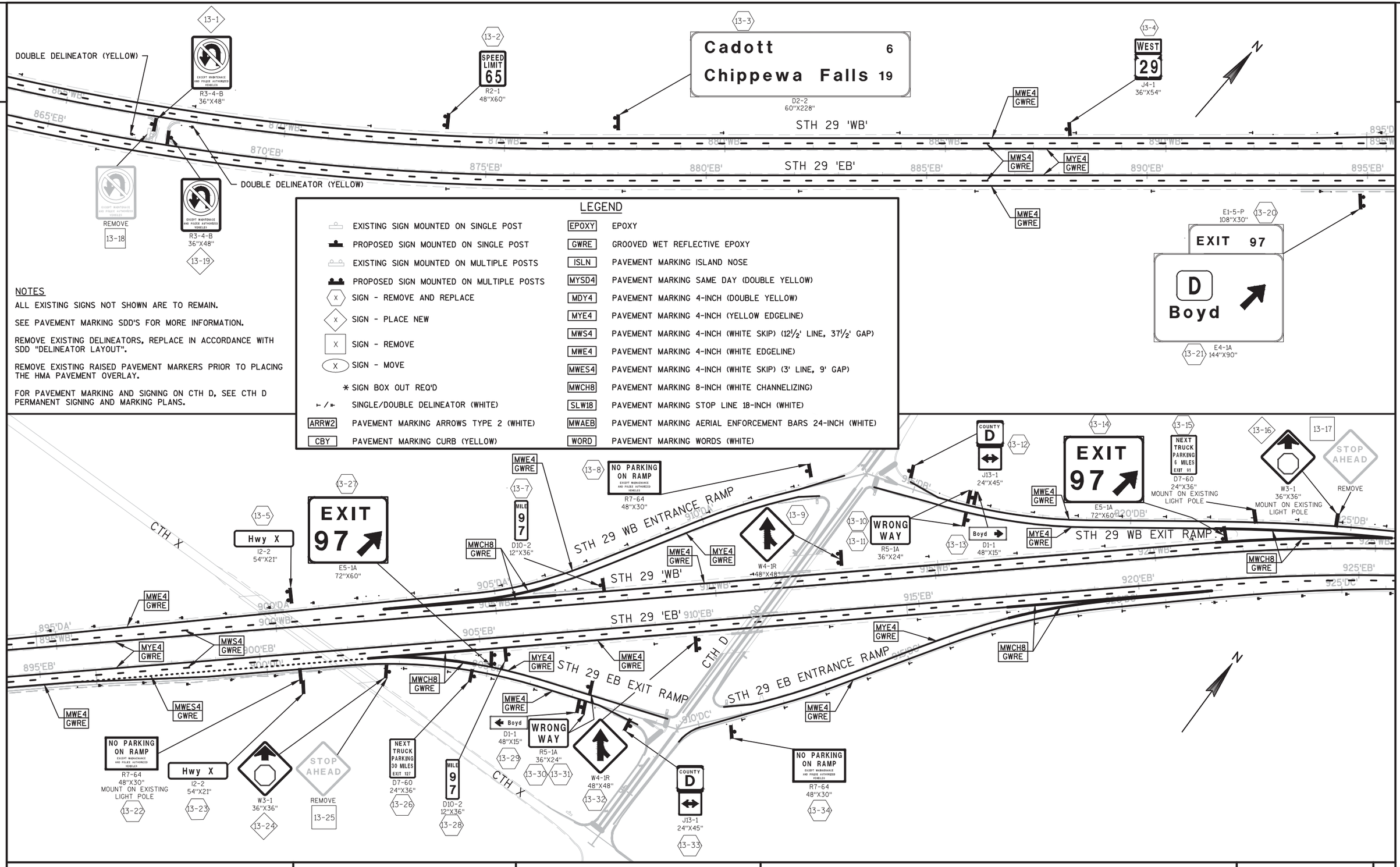
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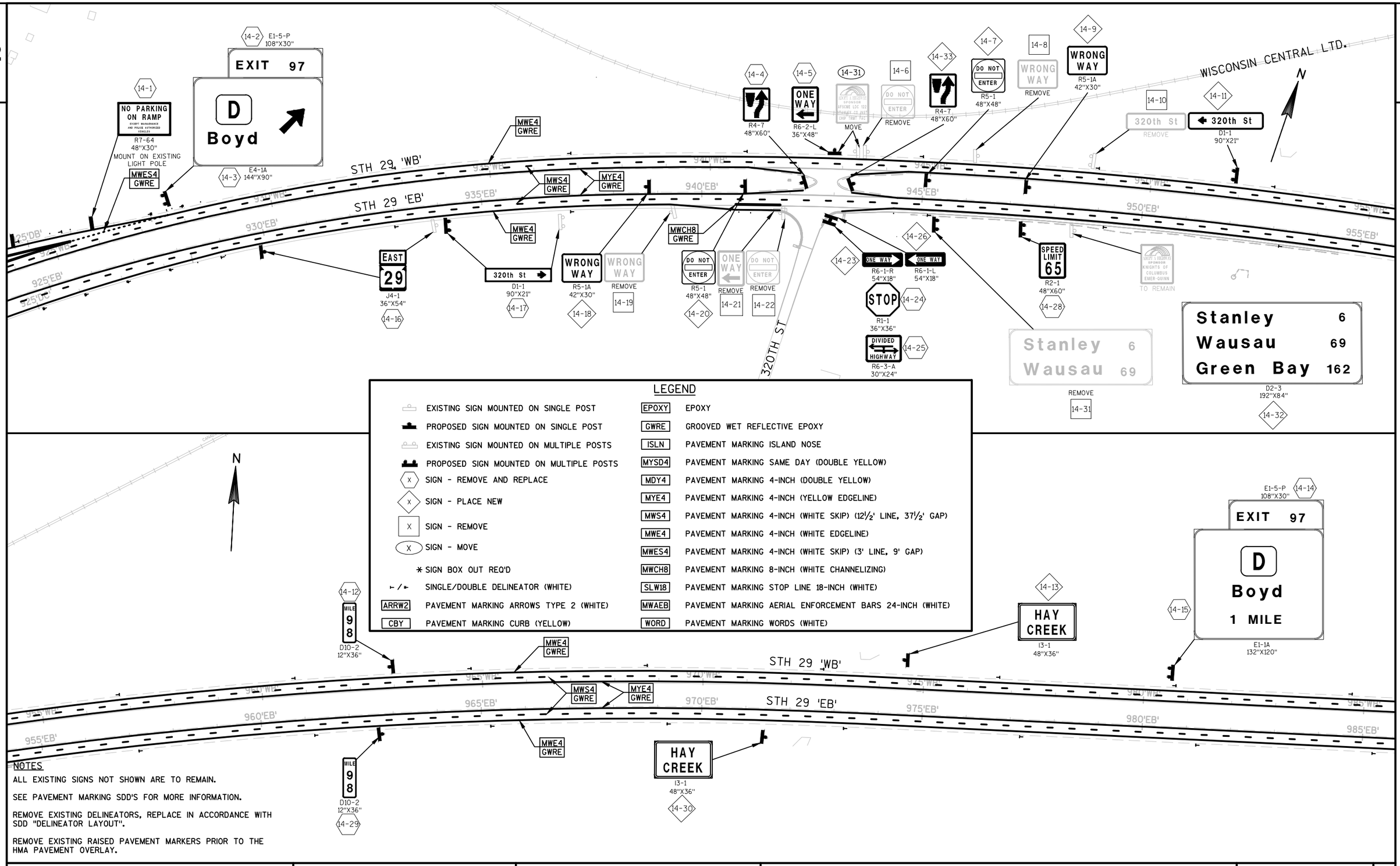
REMOVE EXISTING DELINEATORS, REPLACE IN ACCORDANCE WITH SDD "DELINEATOR LAYOUT".

REMOVE EXISTING RAISED PAVEMENT MARKERS PRIOR TO THE HMA PAVEMENT OVERLAY.

PROJECT NO: 1050-01-61/1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	PERMANENT SIGNING AND PAVEMENT MARKING	SHEET 63	E



PROJECT NO: 1050-01-61/1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	PERMANENT SIGNING AND PAVEMENT MARKING	SHEET 64	E



NOTES

ALL EXISTING SIGNS NOT SHOWN ARE TO REMAIN.

SEE PAVEMENT MARKING SDD'S FOR MORE INFORMATION.

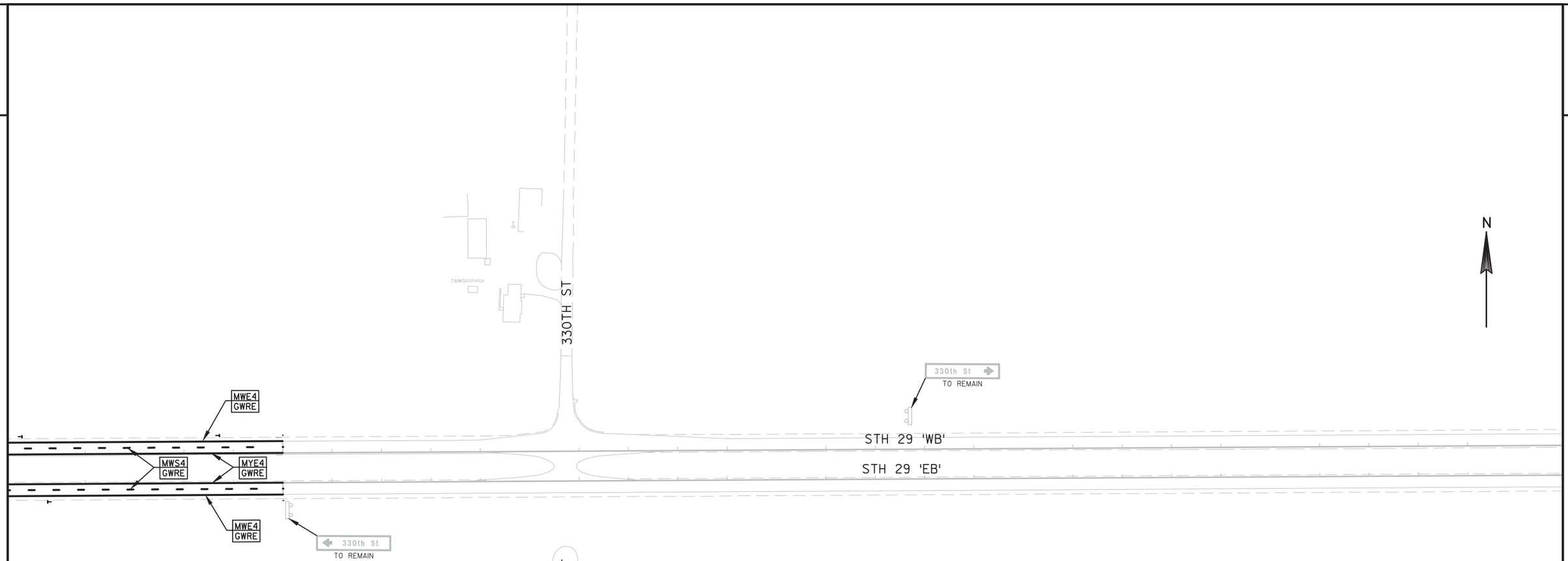
REMOVE EXISTING DELINEATORS, REPLACE IN ACCORDANCE WITH SDD "DELINEATOR LAYOUT".

REMOVE EXISTING RAISED PAVEMENT MARKERS PRIOR TO THE HMA PAVEMENT OVERLAY.

PROJECT NO: 1050-01-61/1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	PERMANENT SIGNING AND PAVEMENT MARKING	SHEET 65	E

2

2



LEGEND

	EXISTING SIGN MOUNTED ON SINGLE POST	EPOXY	EPOXY
	PROPOSED SIGN MOUNTED ON SINGLE POST	GWRE	GROOVED WET REFLECTIVE EPOXY
	EXISTING SIGN MOUNTED ON MULTIPLE POSTS	ISLN	PAVEMENT MARKING ISLAND NOSE
	PROPOSED SIGN MOUNTED ON MULTIPLE POSTS	MYSD4	PAVEMENT MARKING SAME DAY (DOUBLE YELLOW)
X	SIGN - REMOVE AND REPLACE	MDY4	PAVEMENT MARKING 4-INCH (DOUBLE YELLOW)
X	SIGN - PLACE NEW	MYE4	PAVEMENT MARKING 4-INCH (YELLOW EDGELINE)
		MWS4	PAVEMENT MARKING 4-INCH (WHITE SKIP) (12½' LINE, 37½' GAP)
X	SIGN - REMOVE	MWE4	PAVEMENT MARKING 4-INCH (WHITE EDGELINE)
X	SIGN - MOVE	MWES4	PAVEMENT MARKING 4-INCH (WHITE SKIP) (3' LINE, 9' GAP)
*	SIGN BOX OUT REQ'D	MWCH8	PAVEMENT MARKING 8-INCH (WHITE CHANNELIZING)
⊢ / ⊢	SINGLE/DOUBLE DELINEATOR (WHITE)	SLW18	PAVEMENT MARKING STOP LINE 18-INCH (WHITE)
ARRW2	PAVEMENT MARKING ARROWS TYPE 2 (WHITE)	MWAEB	PAVEMENT MARKING AERIAL ENFORCEMENT BARS 24-INCH (WHITE)
CBY	PAVEMENT MARKING CURB (YELLOW)	WORD	PAVEMENT MARKING WORDS (WHITE)

NOTES

ALL EXISTING SIGNS NOT SHOWN ARE TO REMAIN.

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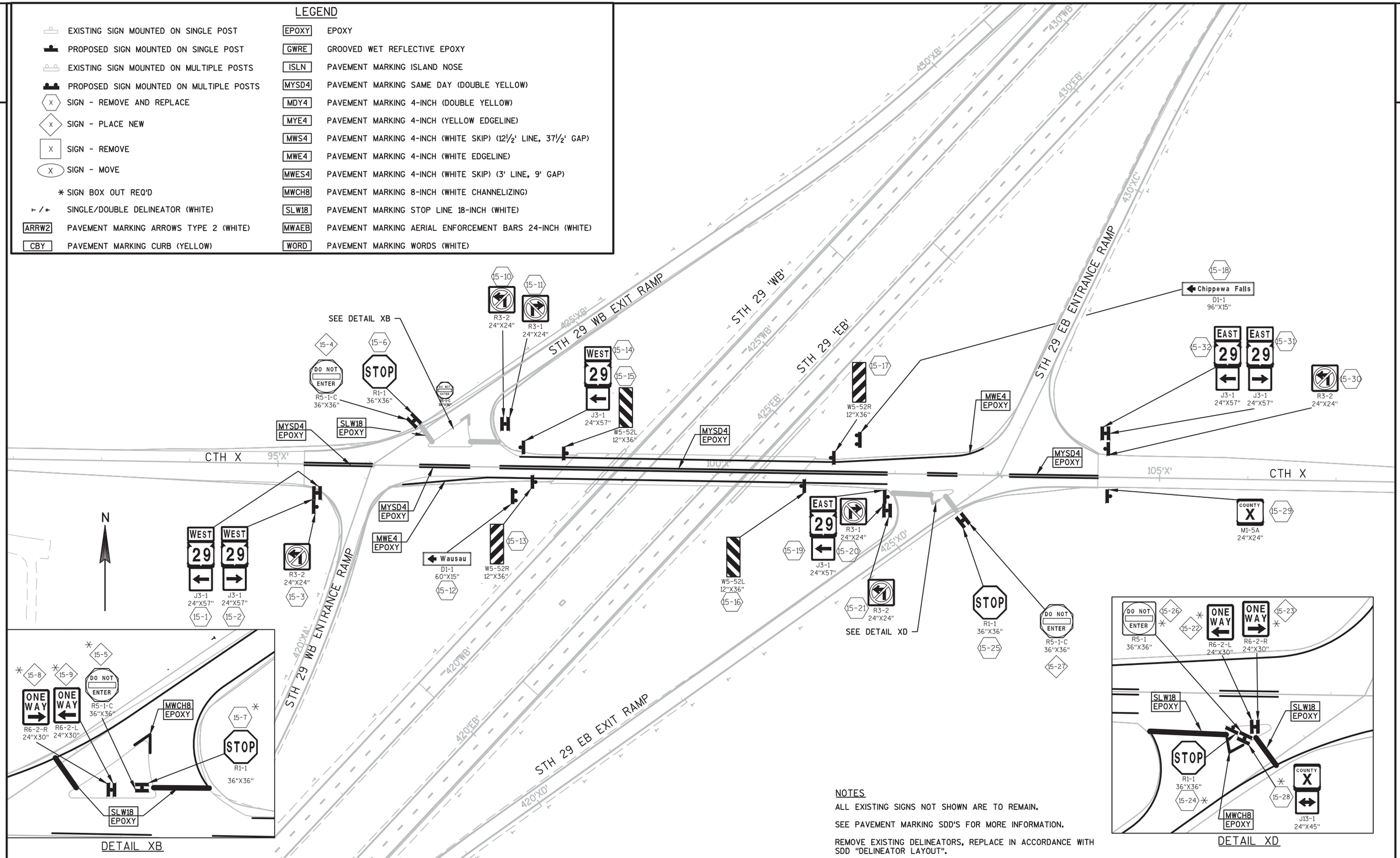
REMOVE EXISTING DELINEATORS, REPLACE IN ACCORDANCE WITH SDD "DELINEATOR LAYOUT".

REMOVE EXISTING RAISED PAVEMENT MARKERS PRIOR TO THE HMA PAVEMENT OVERLAY.

PROJECT NO: 1050-01-61/1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	PERMANENT SIGNING AND PAVEMENT MARKING	SHEET 66	E

LEGEND

	EXISTING SIGN MOUNTED ON SINGLE POST	EPOXY	EPOXY
	PROPOSED SIGN MOUNTED ON SINGLE POST	GWRE	GROOVED WET REFLECTIVE EPOXY
	EXISTING SIGN MOUNTED ON MULTIPLE POSTS	ISLN	PAVEMENT MARKING ISLAND NOSE
	PROPOSED SIGN MOUNTED ON MULTIPLE POSTS	MYSD4	PAVEMENT MARKING SAME DAY (DOUBLE YELLOW)
X	SIGN - REMOVE AND REPLACE	MDY4	PAVEMENT MARKING 4-INCH (DOUBLE YELLOW)
X	SIGN - PLACE NEW	MYE4	PAVEMENT MARKING 4-INCH (YELLOW EDGELINE)
X	SIGN - REMOVE	MWS4	PAVEMENT MARKING 4-INCH (WHITE SKIP) (12½' LINE, 37½' GAP)
		MWE4	PAVEMENT MARKING 4-INCH (WHITE EDGELINE)
X	SIGN - MOVE	MWES4	PAVEMENT MARKING 4-INCH (WHITE SKIP) (3' LINE, 9' GAP)
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⊢ / ⊢	SINGLE/DOUBLE DELINEATOR (WHITE)	SLW18	PAVEMENT MARKING STOP LINE 18-INCH (WHITE)
ARRW2	PAVEMENT MARKING ARROWS TYPE 2 (WHITE)	MWAEB	PAVEMENT MARKING AERIAL ENFORCEMENT BARS 24-INCH (WHITE)
CBY	PAVEMENT MARKING CURB (YELLOW)	WORD	PAVEMENT MARKING WORDS (WHITE)



DETAIL XB

DETAIL XD

NOTES

ALL EXISTING SIGNS NOT SHOWN ARE TO REMAIN.

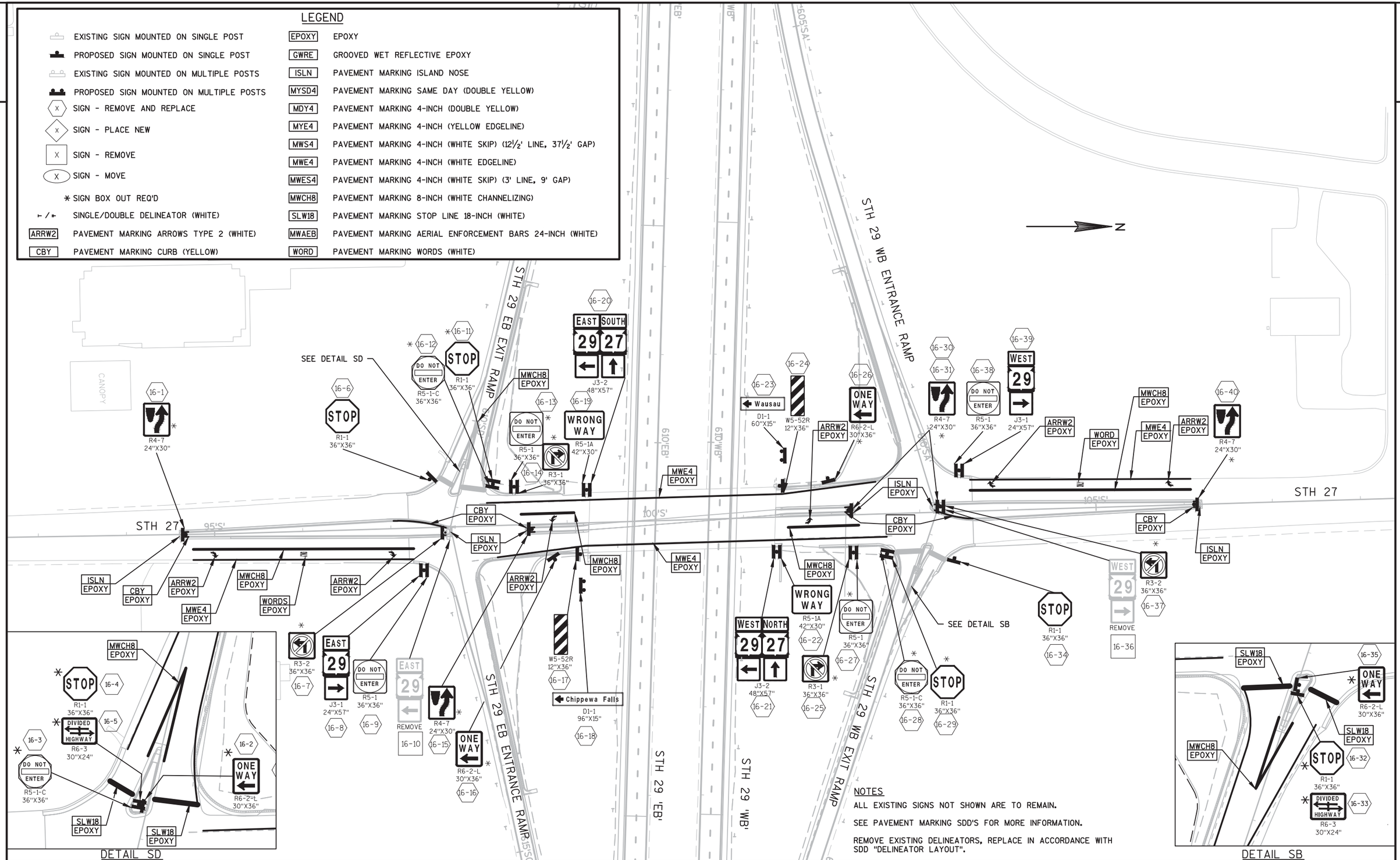
SEE PAVEMENT MARKING SDD'S FOR MORE INFORMATION.

REMOVE EXISTING DELINEATORS, REPLACE IN ACCORDANCE WITH SDD "DELINEATOR LAYOUT".

PROJECT NO: 1050-01-61/1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	PERMANENT SIGNING AND PAVEMENT MARKING - CTH X	SHEET 67	E

LEGEND

	EXISTING SIGN MOUNTED ON SINGLE POST	EPOXY	EPOXY
	PROPOSED SIGN MOUNTED ON SINGLE POST	GWRE	GROOVED WET REFLECTIVE EPOXY
	EXISTING SIGN MOUNTED ON MULTIPLE POSTS	ISLN	PAVEMENT MARKING ISLAND NOSE
	PROPOSED SIGN MOUNTED ON MULTIPLE POSTS	MYSD4	PAVEMENT MARKING SAME DAY (DOUBLE YELLOW)
X	SIGN - REMOVE AND REPLACE	MDY4	PAVEMENT MARKING 4-INCH (DOUBLE YELLOW)
X	SIGN - PLACE NEW	MYE4	PAVEMENT MARKING 4-INCH (YELLOW EDGELINE)
X	SIGN - REMOVE	MWS4	PAVEMENT MARKING 4-INCH (WHITE SKIP) (12½' LINE, 37½' GAP)
X	SIGN - MOVE	MWE4	PAVEMENT MARKING 4-INCH (WHITE EDGELINE)
*	SIGN BOX OUT REQ'D	MWES4	PAVEMENT MARKING 4-INCH (WHITE SKIP) (3' LINE, 9' GAP)
⊢ / ⊢	SINGLE/DOUBLE DELINEATOR (WHITE)	MWCH8	PAVEMENT MARKING 8-INCH (WHITE CHANNELIZING)
ARRW2	PAVEMENT MARKING ARROWS TYPE 2 (WHITE)	SLW18	PAVEMENT MARKING STOP LINE 18-INCH (WHITE)
CBY	PAVEMENT MARKING CURB (YELLOW)	MWAEB	PAVEMENT MARKING AERIAL ENFORCEMENT BARS 24-INCH (WHITE)
		WORD	PAVEMENT MARKING WORDS (WHITE)



DETAIL SD

DETAIL SB

NOTES

ALL EXISTING SIGNS NOT SHOWN ARE TO REMAIN.

SEE PAVEMENT MARKING SDD'S FOR MORE INFORMATION.

REMOVE EXISTING DELINEATORS, REPLACE IN ACCORDANCE WITH SDD "DELINEATOR LAYOUT".

PROJECT NO: 1050-01-61/1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	PERMANENT SIGNING AND PAVEMENT MARKING - STH 27	SHEET 68	E

2

LEGEND

	EXISTING SIGN MOUNTED ON SINGLE POST	EPOXY	EPOXY
	PROPOSED SIGN MOUNTED ON SINGLE POST	GWRE	GROOVED WET REFLECTIVE EPOXY
	EXISTING SIGN MOUNTED ON MULTIPLE POSTS	ISLN	PAVEMENT MARKING ISLAND NOSE
	PROPOSED SIGN MOUNTED ON MULTIPLE POSTS	MYSD4	PAVEMENT MARKING SAME DAY (DOUBLE YELLOW)
X	SIGN - REMOVE AND REPLACE	MDY4	PAVEMENT MARKING 4-INCH (DOUBLE YELLOW)
X	SIGN - PLACE NEW	MYE4	PAVEMENT MARKING 4-INCH (YELLOW EDGELINE)
X	SIGN - REMOVE	MWS4	PAVEMENT MARKING 4-INCH (WHITE SKIP) (12½' LINE, 37½' GAP)
X	SIGN - MOVE	MWE4	PAVEMENT MARKING 4-INCH (WHITE EDGELINE)
*	SIGN BOX OUT REQ'D	MWES4	PAVEMENT MARKING 4-INCH (WHITE SKIP) (3' LINE, 9' GAP)
⊢ / ⊢	SINGLE/DOUBLE DELINEATOR (WHITE)	MWCH8	PAVEMENT MARKING 8-INCH (WHITE CHANNELIZING)
ARRW2	PAVEMENT MARKING ARROWS TYPE 2 (WHITE)	SLW18	PAVEMENT MARKING STOP LINE 18-INCH (WHITE)
CBY	PAVEMENT MARKING CURB (YELLOW)	MWAEB	PAVEMENT MARKING AERIAL ENFORCEMENT BARS 24-INCH (WHITE)
		WORD	PAVEMENT MARKING WORDS (WHITE)

N

CTH X

STH 29 'EB' EXIT RAMP

905'EB'

905'WB'

905'DD'

STH 29 'WB' ENTRANCE RAMP

STH 29 'WB'

STH 29 'EB'

910'EB'

910'WB'

910'DC'

CTH D

County Hwy X
TO REMAIN

County Hwy D
TO REMAIN

17-1 J3-3 72"X45" — COUNTY X / COUNTY D / COUNTY V

17-2 R1-1 30"X30" — STOP — SLW18 EPOXY

ARRW2 EPOXY

WORDS EPOXY

MWE4 EPOXY

17-6 R3-8 36"X30" — ONLY

17-7 R5-1-C 36"X36" — DO NOT ENTER

17-8 17-9 R1-1 36"X36" — STOP

17-14 R5-1-C 36"X36" — DO NOT ENTER

17-15 R3-2 24"X24"

17-16 R3-1 24"X24"

17-17 J3-1 24"X57" — EAST 29

17-19 D1-1 60"X15" — Wausau

SEE DETAIL DB

SEE DETAIL DD

MWCH8 EPOXY

MYSD4 EPOXY

17-3 J1-1 24"X39" — JCT 29

17-4 M1-5A 24"X24" — COUNTY D

17-5 D1-2 96"X30" — Chippewa Falls / Wausau

17-11 J3-2 48"X57" — WEST 29 / EAST 29

Chippewa Falls

17-18 D1-1 96"X15"

17-32 J3-2 48"X57" — EAST 29 / WEST 29

JCT 29
TO REMAIN

17-22 J3-1 24"X57" — WEST 29

17-23 R3-1 24"X24"

17-24 R3-2 24"X24"

17-25 R5-1-C 36"X36" — DO NOT ENTER

17-26 17-27 R1-1 36"X36" — STOP

17-31 R5-1-C 36"X36" — DO NOT ENTER

STH 29 'WB' EXIT RAMP

STH 29 'EB' ENTRANCE RAMP

915'EB'

915'WB'

915'DC'

17-12 R6-2-R 24"X30" — ONE WAY

17-10 R1-1 36"X36" — STOP

17-13 R6-2-L 24"X30" — ONE WAY

SL W18 EPOXY

DETAIL DD

17-29 R6-2-L 24"X30" — ONE WAY

17-30 R6-2-R 24"X30" — ONE WAY

17-28 R1-1 36"X36" — STOP

SL W18 EPOXY

MWCH8 EPOXY

DETAIL DB

NOTES

ALL EXISTING SIGNS NOT SHOWN ARE TO REMAIN.

SEE PAVEMENT MARKING SDD'S FOR MORE INFORMATION.

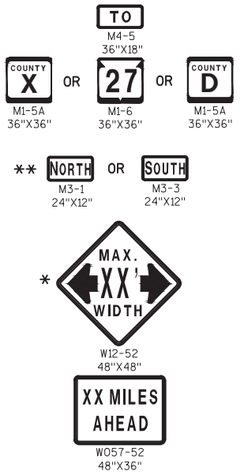
REMOVE EXISTING DELINEATORS, REPLACE IN ACCORDANCE WITH SDD "DELINEATOR LAYOUT".

PROJECT NO: 1050-01-61/1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	PERMANENT SIGNING AND PAVEMENT MARKING - CTH D	SHEET 69	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\023202-PS.DWG PLOT DATE : 7/29/2016 9:58 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:100 FT

ADVANCED WARNING FOR LANE WIDTH RESTRICTIONS

PLACE THE FOLLOWING ADVANCED WARNING SIGNS AT THE FOLLOWING LOCATIONS DURING WIDTH RESTRICTIONS ON THE ENTRANCE AND EXIT RAMPS WITHIN THE PROJECT LIMITS



1. STH 29/USH 53 - CTH X, 11 ½ MILES - STH 27, 15 ¼ MILES - CTH D, 21 MILES
2. STH 29/USH 53 - CTH X, 11 ½ MILES - STH 27, 15 ¼ MILES - CTH D, 21 MILES
3. STH 29/USH 53 - CTH X, 11 ½ MILES - STH 27, 15 ¼ MILES - CTH D, 21 MILES
4. STH 29/STH 178 - CTH X, 8 MILES - STH 27, 11 ½ MILES - CTH D, 17 ¼ MILES
5. STH 29/STH 178 - CTH X, 8 MILES - STH 27, 11 ½ MILES - CTH D, 17 ¼ MILES
29. STH 29 - CTH X, ½ MILES
30. STH 29 - CTH X, ½ MILES
31. STH 29 - STH 27, ½ MILES
32. STH 29 - STH 27, ½ MILES
33. STH 29 - CTH D, ½ MILES
34. STH 29 - CTH D, ½ MILES
35. STH 29/STH 73 - CTH X, 14 ¼ MILES - STH 27, 10 ½ MILES - CTH D, 5 MILES



6. CTH X/CTH K - 2 MILES
7. CTH X/CTH K - 2 MILES
8. STH 29 ENTRANCE RAMP - DO NOT PLACE W057-52 SIGN
9. STH 29 ENTRANCE RAMP - DO NOT PLACE W057-52 SIGN
10. CTH X/CTH XX - ¼ MILES
11. CTH X/CTH XX - ¼ MILES
12. CTH X/CTH XX - ¼ MILES
13. STH 27/STH 64 - 16 MILES
14. STH 27/STH 64 - 16 MILES
15. STH 27/CTH S - 10 MILES
16. STH 27/CTH S - 10 MILES
17. STH 29 ENTRANCE RAMP - DO NOT PLACE W057-52 SIGN
18. STH 29 ENTRANCE RAMP - DO NOT PLACE W057-52 SIGN
19. USH 12/STH 27 - 20 ½ MILES
20. USH 12/STH 27 - 20 ½ MILES
21. CTH D/CTH O - 2 ¼ MILES
22. CTH D/CTH O - 2 ¼ MILES
23. CTH D/CTH O - 2 ¼ MILES
24. STH 29 ENTRANCE RAMP - DO NOT PLACE W057-52 SIGN
25. STH 29 ENTRANCE RAMP - DO NOT PLACE W057-52 SIGN
26. CTH X/CTH D - ¼ MILES
27. CTH X/CTH D - ¼ MILES
28. CTH X/CTH D - ¼ MILES

TRAFFIC CONTROL GENERAL NOTES

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

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

3) FOR NIGHTTIME OPERATION ALL DRUMS IN TAPERS SHALL HAVE A TYPE C WARNING LIGHT.

4) ALL TYPE III BARRICADES SHALL BE 8' WIDE, UNLESS OTHERWISE NOTED. EQUIP WITH TYPE "A" (LOW INTENSITY FLASHING) LIGHTS PER SDDS.

5) FOR STH 29 LANE CLOSURES SEE SDD "TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION". REDUCE SPEED LIMIT TO 55 MPH DURING WORKING HOURS OR LANE CLOSURES. RETURN SPEED LIMIT TO THE EXISTING POSTED REGULATORY SPEED LIMIT AND COVER SIGN DURING NON-WORKING HOURS.

6) FOR STH 29 NEAR EXIT AND ENTRANCE RAMPS SEE SDD "TRAFFIC CONTROL, EXIT AND ENTRANCE RAMP WITHIN LANE CLOSURE".

7) FOR STH 29 SHOULDER CLOSURES SEE SDD "TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAT 40 M.P.H.".

8) FOR STH 27, CTH X, & CTH D ADVANCED WARNING SEE SDD "TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO WAY UNDIVIDED OPEN TO TRAFFIC" OR SDD "TRAFFFIC CONTROL, ADVANCED WARNING SIGNS 40 M.P.H. OR LESS, TWO WAY UNDIVIDED OPEN TO TRAFFIC".

9) FOR STH 27, CTH X, & CTH D MOVING LANE CLOSURES AND FLAGGING SEE SDD "TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)".

10) FOR STH 27, CTH X, & CTH D PAVEMENT MARKING OPERATIONS SEE THE SDD'S FOR "MOVING PAVEMENT MARKING OPERATIONS".

11) FOR STH 27 LANE CLOSURES SEE SDD "TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY".

12) FOR STH 27 LANE CLOSURES THROUGH INTERSECTIONS SEE SDD "TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE".

13) FOR STH 27, CTH X, AND CTH D SHOULDER CLOSURES SEE SDD "TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 M.P.H." OR SDD "TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY".

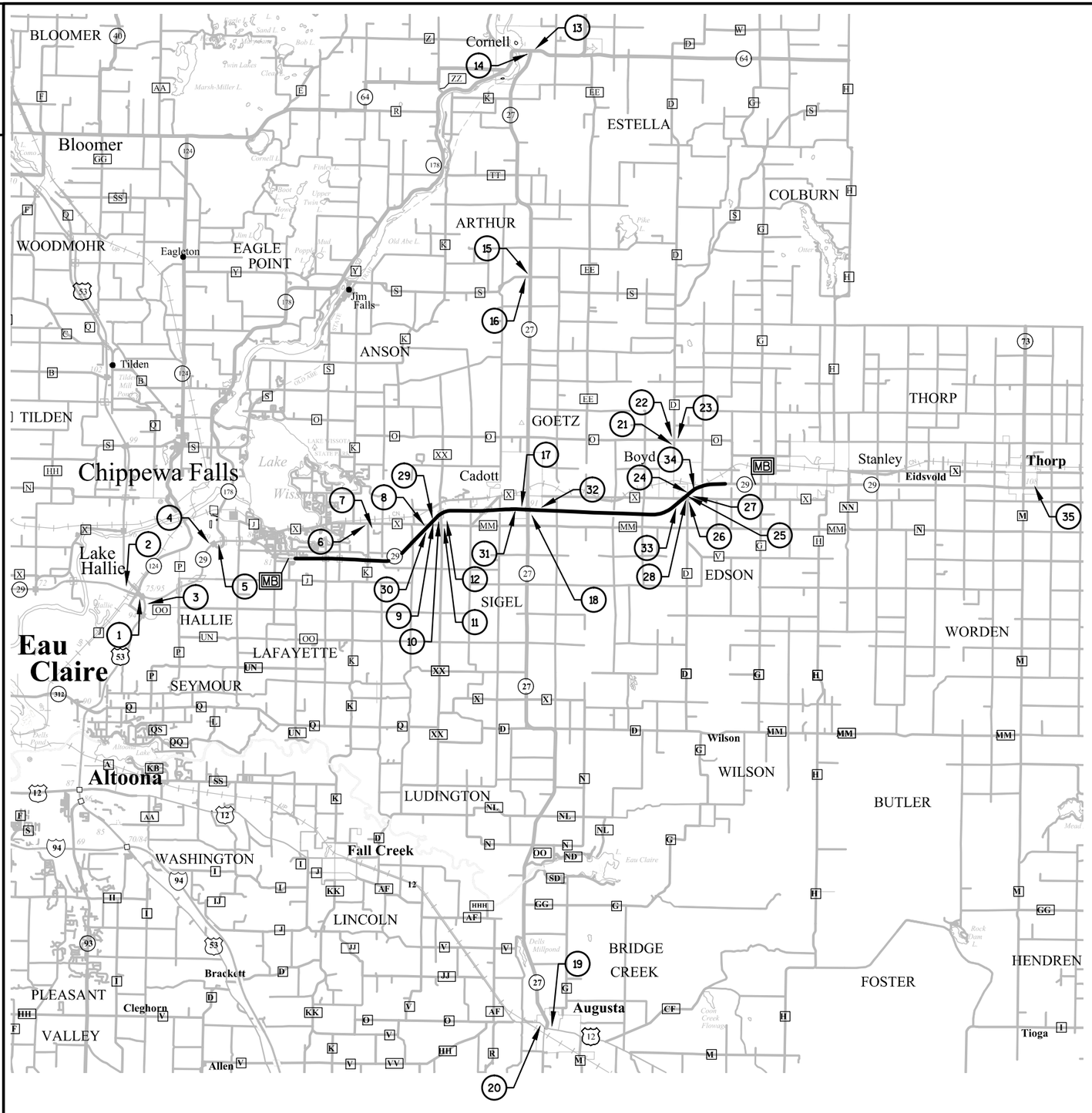
12) FOR WORK ON 270 STREET, 300TH STREET, AND 320TH STREET SEE SDD "TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)".

15) TRAFFIC CONTROL PLANS FOR STH 29 PROVIDE SUGGESTED STAGING WITH TRAFFIC CONTROL DEVICE LOCATIONS. STAGING MAY BE ALTERED WITH APPROVAL OF THE ENGINEER BASED ON OPERATIONS PROPOSED BY THE CONTRACTOR.

16) THE MAX WIDTH DIMENSIONS FOR WORK ON THE STH 27 ENTRANCE AND EXIT RAMPS ARE AS FOLLOWS:

* STAGE R1 MAX WIDTH = 12'
* STAGE R2 MAX WIDTH = 14'
* STAGE S2 MAX WIDTH FOR STH 29 EB EXIT RAMP = 12'
* STAGE S2 MAX WIDTH FOR STH 29 WB EXIT RAMP = 14'
* STAGE S3 MAX WIDTH = 12'

** INSTALL M3-1 AND M3-3 FOR STAGE S3 ONLY



LEGEND

PROJECT LOCATION

MB — TRAFFIC CONTROL SIGNS PCMS REMOTE COMMUNICATIONS

N

TRAFFIC CONTROL PCMS NOTES

ADJUST TRAFFIC CONTROL PCMS MESSAGE AS NEEDED BASED WORK ZONE AREAS AND CONSTRUCTION SCHEDULE.

CONSIDER GEOMETRICS WHEN LOCATING MESSAGE BOARDS SO THE DRIVER HAS A CLEAR VIEW OF THE BOARD FOR A MINIMUM OF 1,000 FEET IN FRONT OF THE MESSAGE BOARD.

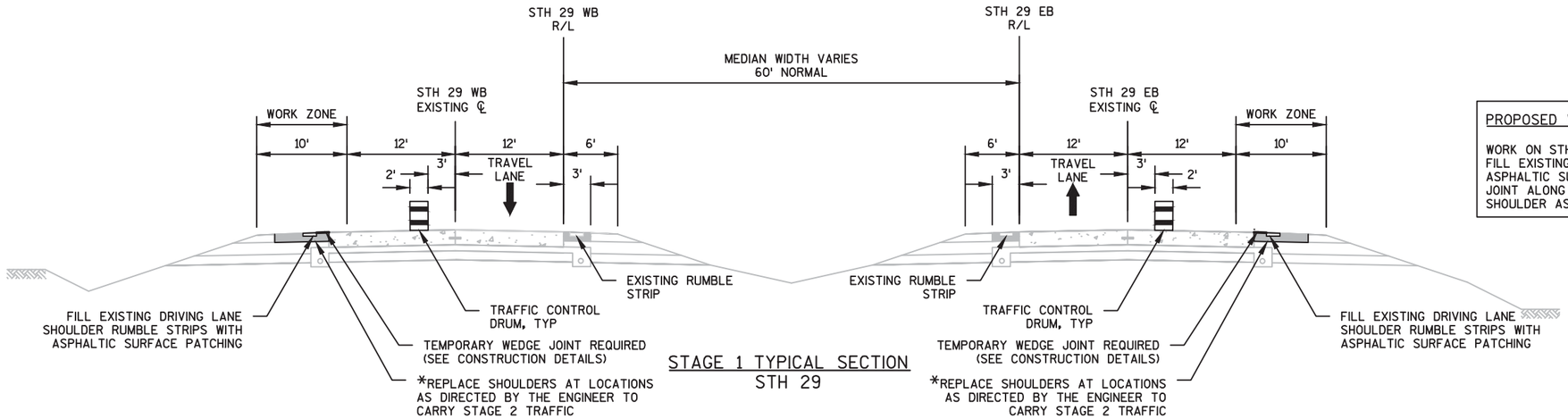
PLACE MESSAGE BOARDS AS FAR AWAY FROM LIVE TRAFFIC LANES AS POSSIBLE WITHOUT HAMPERING VISIBILITY. IN ADVANCE OF FREEWAY CONSTRUCTION PROJECTS THE SIGNS SHOULD BE PLACED ON THE BACKSLOPE BEYOND THE DITCH. THE LOCATION SELECTED SHOULD BE AT OR SLIGHTLY ABOVE THE ELEVATION OF THE ROADWAY. FOR INTERMITTENT WORK SUCH AS FREEWAY LANE CLOSURE, OR WHERE SITE CONDITIONS DO NOT ALLOW OTHERWISE, THE SIGNS MAY BE PLACED ON THE SHOULDER. THE SITE SHOULD BE VISITED TO ASSURE VISIBILITY, SAFETY AND MAINTENANCE CONSIDERATIONS. A TAPER OF REFLECTORIZED DRUMS OR BARRICADES SHOULD BE PLACED AHEAD OF PCMS.

PLACE TRAFFIC CONTROL SIGNS PCMS AND DISPLAY THE PRIOR TO CONSTRUCTION MESSAGE 10 DAYS PRIOR TO THE EXPECTED START OF THE PROPOSED WORK THAT WILL REQUIRE LANE CLOSURES. ADJUST THE MESSAGE DATE ACCORDINGLY.

TRAFFIC CONTROL SIGNS PCMS ARE ALSO FOR WORK ZONE INCIDENT MANAGEMENT.

TRAFFIC CONTROL SIGNS PCMS MESSAGES - STH 29 ADVANCED WARNING						
	PRIOR TO CONSTRUCTION		SINGLE LANE CLOSURE		EMERGENCY MESSAGE	
PCMS SIGN LOCATION	PHASE 1 (2 SEC)	PHASE 2 (2 SEC)	PHASE 1 (2 SEC)	PHASE 2 (2 SEC)	PHASE 1 (2 SEC)	PHASE 2 (2 SEC)
STH 29 EB WEST OF THE BEGIN PROJECT LIMITS	ROAD WORK BEGINS	STARTING DATE	LEFT/RIGHT LANE	CLOSED AHEAD	TRAFFIC STOPPED AHEAD	WATCH FOR FLAGGER
STH 29 WB EAST OF THE END PROJECT LIMITS	ROAD WORK BEGINS	STARTING DATE	LEFT/RIGHT LANE	CLOSED AHEAD	TRAFFIC STOPPED AHEAD	WATCH FOR FLAGGER

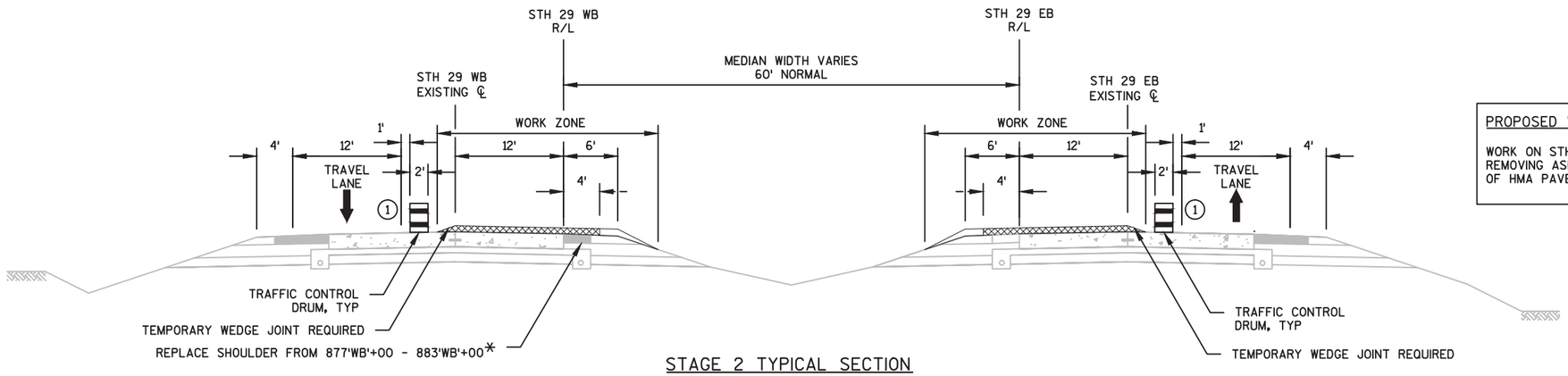
PROJECT NO: 1050-01-61/1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	TRAFFIC CONTROL - WIDTH RESTRICTION AND PCMS OVERVIEW	SHEET 71	E



STAGE 1 TYPICAL SECTION
STH 29

PROPOSED WORK STAGE 1

WORK ON STH 29 DRIVING LANE SHOULDERS: FILL EXISTING SHOULDER RUMBLE STRIPS WITH ASPHALTIC SURFACE PATCHING, CONSTRUCT WEDGE JOINT ALONG DRIVE LANE SHOULDER, AND REPLACE SHOULDER AS NEEDED BY ENGINEER.



STAGE 2 TYPICAL SECTION
STH 29

PROPOSED WORK STAGE 2

WORK ON STH 29 PASSING LANES AND SHOULDERS: REMOVING ASPHALTIC SURFACE MILLING, LOWER LAYER OF HMA PAVEMENT, CONCRETE PAVEMENT REPAIR.

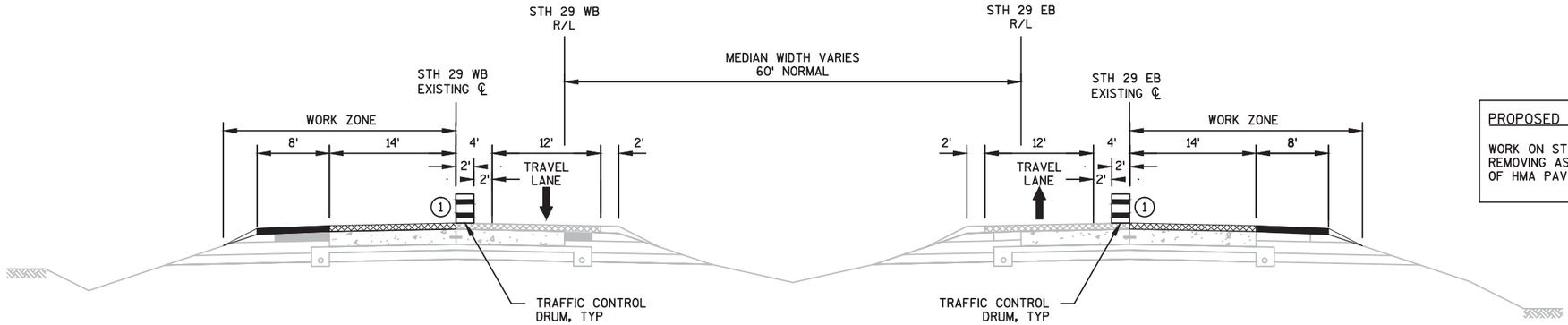
NOTES
CONCRETE PAVEMENT REPAIR AREAS (SEE TYPICAL SECTIONS AND SECTION 5 PLAN SHEETS FOR LOCATIONS) AND ASPHALTIC MILLING (STA 974'WB'+85 TO STA 990'WB'+00) NOT SHOWN IN TRAFFIC CONTROL TYPICAL SECTIONS. TRAVEL LANE, WORK ZONE, AND DRUM LOCATION IS THE SAME AS THE ASPHALT OVERLAY TYPICALS SHOWN.

PLACE TEMPORARY PAVEMENT MARKING AT THE EDGE LINES AND CENTER LINES FOR EACH OVERLAY LAYER.

* REMOVING ASPHALTIC SURFACE MILLING (FULL DEPTH), PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS, REMOVING ASPHALTIC SURFACE BUTT JOINTS, SHAPING SHOULDERS, AND ASPHALTIC SURFACE

(1) DRUM LOCATION SHOWN FOR AREAS IMMEDIATELY ADJACENT TO CONSTRUCTION ACTIVITIES, SHIFT DRUMS PAST LANE LINE IN AREAS WITH NO CONSTRUCTION ACTIVITIES

PROJECT NO: 1050-01-61/1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	TRAFFIC CONTROL	SHEET 72	E

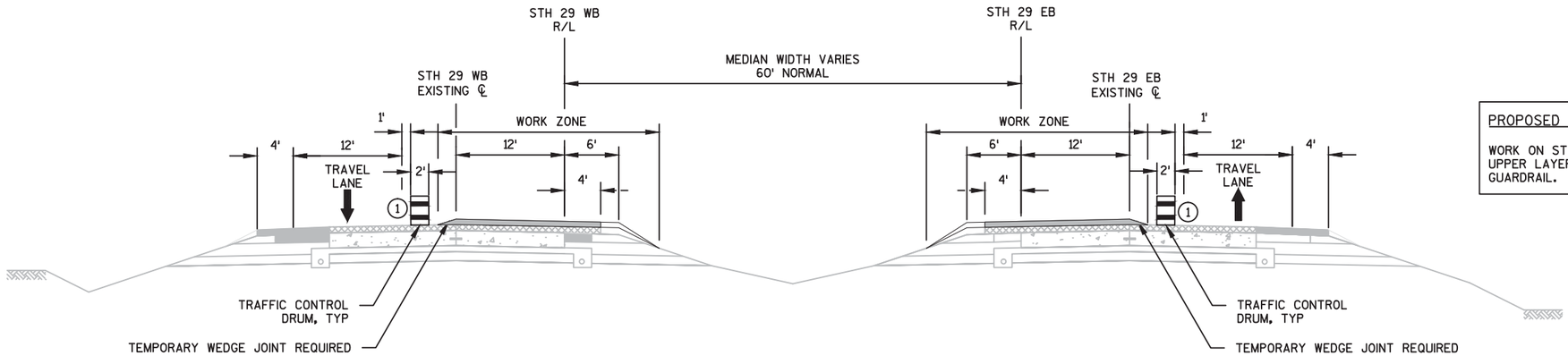


PROPOSED WORK STAGE 3

WORK ON STH 29 DRIVING LANES AND SHOULDERS: REMOVING ASPHALTIC SURFACE MILLING, LOWER LAYER OF HMA PAVEMENT, CONCRETE PAVEMENT REPAIR.

STAGE 3 TYPICAL SECTION
STH 29

(1) DRUM LOCATION SHOWN FOR AREAS IMMEDIATELY ADJACENT TO CONSTRUCTION ACTIVITIES, SHIFT DRUMS PAST LANE LINE IN AREAS WITH NO CONSTRUCTION ACTIVITIES



PROPOSED WORK STAGE 4

WORK ON STH 29 PASSING LANES AND SHOULDERS: UPPER LAYER OF SMA PAVEMENT AND INSTALL GUARDRAIL.

STAGE 4 TYPICAL SECTION
STH 29

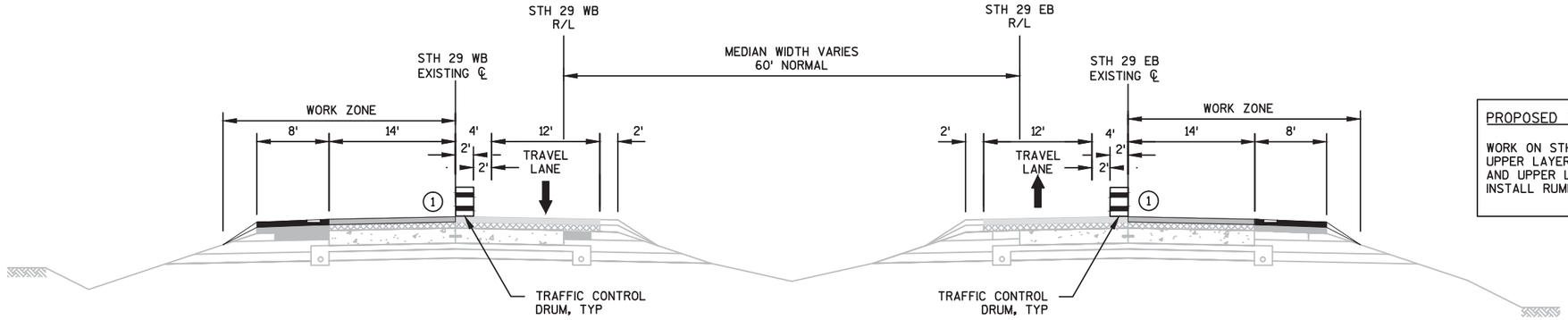
(1) DRUM LOCATION SHOWN FOR AREAS IMMEDIATELY ADJACENT TO CONSTRUCTION ACTIVITIES, SHIFT DRUMS PAST LANE LINE IN AREAS WITH NO CONSTRUCTION ACTIVITIES

NOTES

CONCRETE PAVEMENT REPAIR AREAS (SEE TYPICAL SECTIONS AND SECTION 5 PLAN SHEETS FOR LOCATIONS) AND ASPHALTIC MILLING (STA 974'WB'+85 TO STA 990'WB'+00) NOT SHOWN IN TRAFFIC CONTROL TYPICAL SECTIONS. TRAVEL LANE, WORK ZONE, AND DRUM LOCATION IS THE SAME AS THE ASPHALT OVERLAY TYPICALS SHOWN.

CONSTRUCTION OF CROSSOVERS SHOWN IN STAGE 6 CAN BE COMPLETED IN STAGE 4.

2

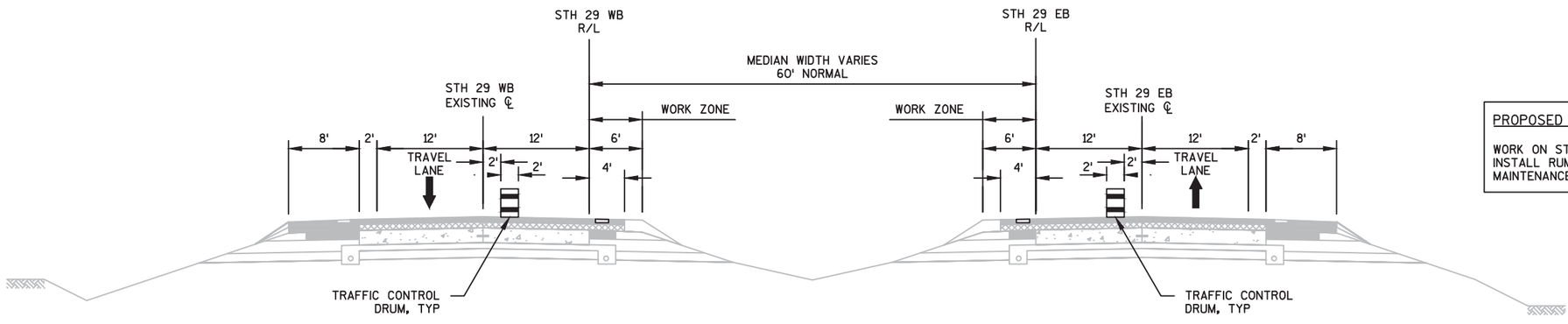


PROPOSED WORK STAGE 5

WORK ON STH 29 DRIVING LANES AND SHOULDERS: UPPER LAYER OF SMA PAVEMENT ON DRIVING LANES AND UPPER LAYER OF HMA PAVEMENT ON SHOULDERS, INSTALL RUMBLE STRIP, INSTALL GUARDRAIL.

STAGE 5 TYPICAL SECTION
STH 29

(1) DRUM LOCATION SHOWN FOR AREAS IMMEDIATELY ADJACENT TO CONSTRUCTION ACTIVITIES, SHIFT DRUMS PAST LANE LINE IN AREAS WITH NO CONSTRUCTION ACTIVITIES



PROPOSED WORK STAGE 6

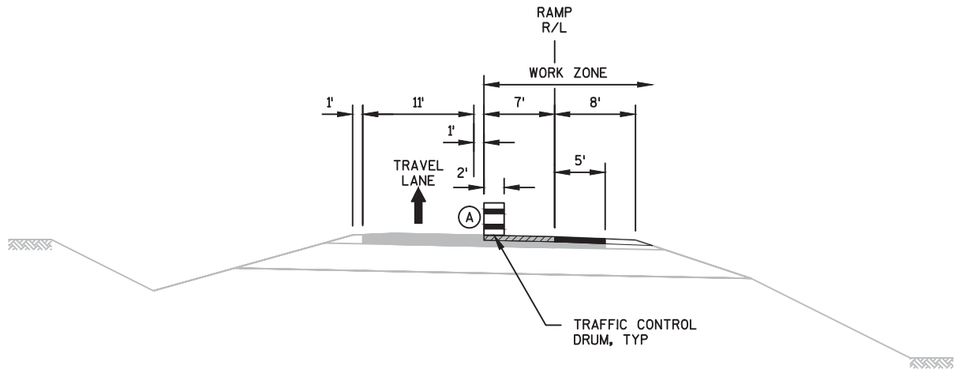
WORK ON STH 29 PASSING LANES AND SHOULDERS: INSTALL RUMBLE STRIPS AND RECONSTRUCT MAINTENANCE CROSSOVERS.

STAGE 6 TYPICAL SECTION
STH 29

NOTES

CONCRETE PAVEMENT REPAIR AREAS NOT SHOWN IN TRAFFIC CONTROL TYPICAL SECTIONS. TRAVEL LANE, WORK ZONE, AND DRUM LOCATION IS THE SAME AS THE ASPHALT OVERLAY TYPICALS SHOWN.

CONSTRUCTION OF CROSSOVERS SHOWN IN STAGE 6 CAN BE COMPLETED IN STAGE 4.



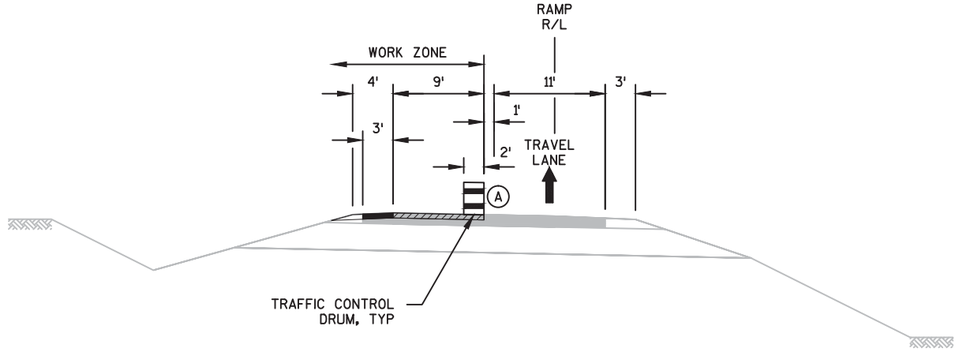
PROPOSED WORK STAGE R1

WORK ON STH 29 RAMP OUTSIDE HALF OF LANE AND SHOULDERS:
MILL AND OVERLAY

RAMP TYPICAL SECTION STAGE R1
STH 29 EXIT AND ENTRANCE RAMPS

STH 29 EB RAMPS SHOWN,
REVERSE FOR STH 29 WB RAMPS

(A) DRUM LOCATION SHOWN FOR AREAS NOT IMMEDIATELY ADJACENT TO CONSTRUCTION ACTIVITIES, GAP DRUMS AROUND CONSTRUCTION ACTIVITIES



PROPOSED WORK STAGE R2

WORK ON STH 29 RAMP INSIDE HALF OF LANE AND SHOULDERS:
MILL AND OVERLAY

RAMP TYPICAL SECTION STAGE R2
STH 29 EXIT AND ENTRANCE RAMPS

STH 29 EB RAMPS SHOWN,
REVERSE FOR STH 29 WB RAMPS

(A) DRUM LOCATION SHOWN FOR AREAS NOT IMMEDIATELY ADJACENT TO CONSTRUCTION ACTIVITIES, GAP DRUMS AROUND CONSTRUCTION ACTIVITIES

2

N

STH 29 EB EXIT RAMP 600+00.809

STH 29 EB 608EB+00

STH 29 WB 608WB+00

STH 29 WB ENTRANCE RAMP 608SA+00

STH 27 610EB+00 610WB+00 610'SA'+00

612EB+00 612WB+00 612'SB'+00

614EB+00 614WB+00 614'SB'+00

616EB+00 616WB+00 616'SB'+00

STH 29 EB ENTRANCE RAMP 614'SC'+00 616'SC'+00

612'SC'+00 600+00.619

SEE "DETAIL A" OF SDD "TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE" FOR ADDITIONAL TRAFFIC CONTROL DEVICES AND DETAILS. MAINTAIN ACCESS TO LAVORATA RD AND ALL COMMERCIAL DRIVEWAY ENTRANCES

SEE SDD "TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER, TWO WAY UNDIVIDED ROADWAY OPEN TO TRAFFIC" FOR ADVANCE WARNING SIGNS AND ADDITIONAL TRAFFIC CONTROL DEVICES. UTILIZE DRUMS AND TYPE 3 BARRICADES WITH ATTACHED W01-6 SIGN TO CLOSE THE INSIDE TRAVEL LANE PRIOR TO THE ADD LANE TAPER

END ROAD WORK G20-2A 48"X24"

RIGHT LANE ENDS

**COVER

EAST 29

* MOVE TO TEMPORARY SIGN SUPPORT (MOUNT TO BACK OF STH 29 "J" ASSEMBLY)

* MOVE TO TEMPORARY SIGN SUPPORT

WEST 29

* MOVE TO TEMPORARY SIGN SUPPORT

* MOVE TO TEMPORARY SIGN SUPPORT (MOUNT TO BACK OF STH 29 "J" ASSEMBLY)

LANE CLOSED R11-2-L 48"X30"

25' TYP

±38'

16' MIN

STH 27

94'S'+00 96'S'+00 98'S'+00 100'S'+00 102'S'+00 104'S'+00 106'S'+00 108'S'+00

REMOVING PAVEMENT MARKINGS ARROWS

INLET COVERS TEMPORARY (TYPE HD OR SIMILAR, SEE CONSTRUCTION DETAILS)

NO WORK ON B-9-179

SEE SDD "TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER, TWO WAY UNDIVIDED ROADWAY OPEN TO TRAFFIC" FOR ADVANCE WARNING SIGNS AND ADDITIONAL TRAFFIC CONTROL DEVICES. UTILIZE DRUMS AND TYPE 3 BARRICADES WITH ATTACHED W01-6 SIGN TO CLOSE THE INSIDE TRAVEL LANE PRIOR TO THE ADD LANE TAPER

SEE "DETAIL A" OF SDD "TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE" FOR ADDITIONAL TRAFFIC CONTROL DEVICES AND DETAILS. MAINTAIN ACCESS TO SOUTHRIDGE AVE AND ALL COMMERCIAL DRIVEWAY ENTRANCES

CONSTRUCTION

REMOVE NOSE OF MEDIAN ISLANDS AND PAVE FLUSH WITH ASPHALTIC SURFACE TEMPORARY.

TRAFFIC

MAINTAIN ALL TRAFFIC MOVEMENTS AT THE STH 27 INTERCHANGE.

TRAFFIC CONTROL DEVICES SHOWN FOR WORKING HOURS, RE-OPEN ALL LANES AND TURN LANES DURING NON-WORKING HOURS.

MAINTAIN A MINIMUM OF 16' CLEAR WIDTH ON STH 27 AND STH 27 RAMPS AT ALL TIMES DURING STAGE S1.

A MINIMUM OF 16' CLEAR ZONE WIDTH IS AVAILABLE IN ALL LOCATIONS NOT DIMENSIONED.

NOTES

* PAID FOR AS TRAFFIC CONTROL SIGNS (EACH LOCATION)

** PAID FOR AS TRAFFIC CONTROL COVERING SIGNS TYPE II

MAINTAIN ACCESS TO SIDE ROADS, RESIDENTIAL DRIVEWAYS AND COMMERCIAL DRIVEWAYS

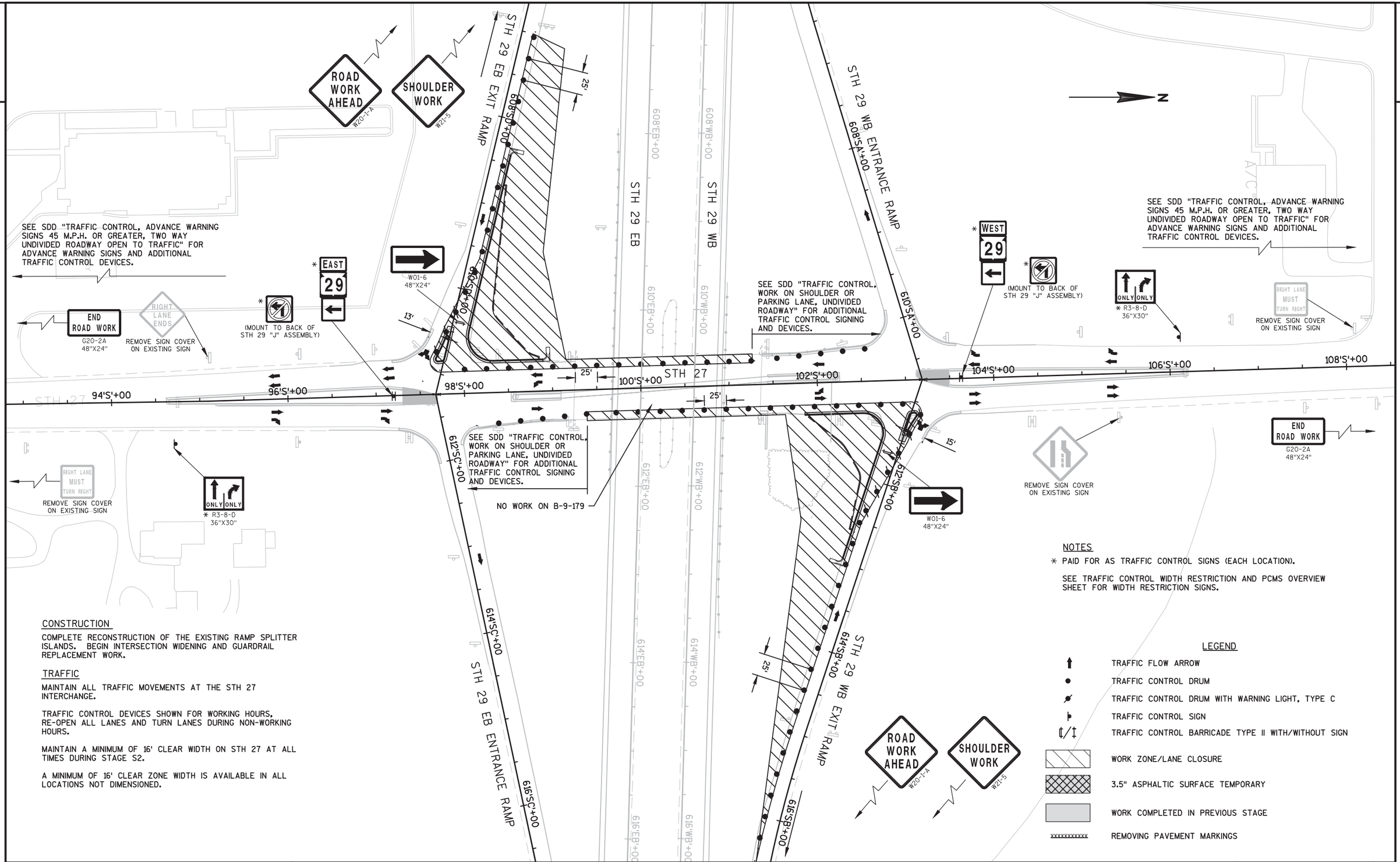
LEGEND

- TRAFFIC FLOW ARROW
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH WARNING LIGHT, TYPE C
- TRAFFIC CONTROL SIGN
- TRAFFIC CONTROL BARRICADE TYPE III WITH/WITHOUT SIGN
- WORK ZONE/LANE CLOSURE
- 3.5" ASPHALTIC SURFACE TEMPORARY
- WORK COMPLETED IN PREVIOUS STAGE
- xxxxxxxxxx REMOVING PAVEMENT MARKINGS (8-INCH CHANNELIZING)

PROJECT NO: 1050-01-61/1050-01-62	HWY: STH 29	COUNTY: CHIPPEWA	TRAFFIC CONTROL - WIDENING AND MEDIAN WORK-STH 27-STAGE S1	SHEET 76	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\025002-TC.DWG PLOT DATE : 7/26/2016 8:48 AM PLOT BY : ERIK OLESON PLOT NAME : PLOT SCALE : 1 IN:100 FT

2



NOTES

* PAID FOR AS TRAFFIC CONTROL SIGNS (EACH LOCATION).

SEE TRAFFIC CONTROL WIDTH RESTRICTION AND PCMS OVERVIEW SHEET FOR WIDTH RESTRICTION SIGNS.

CONSTRUCTION

COMPLETE RECONSTRUCTION OF THE EXISTING RAMP SPLITTER ISLANDS. BEGIN INTERSECTION WIDENING AND GUARDRAIL REPLACEMENT WORK.

TRAFFIC

MAINTAIN ALL TRAFFIC MOVEMENTS AT THE STH 27 INTERCHANGE.

TRAFFIC CONTROL DEVICES SHOWN FOR WORKING HOURS, RE-OPEN ALL LANES AND TURN LANES DURING NON-WORKING HOURS.

MAINTAIN A MINIMUM OF 16' CLEAR WIDTH ON STH 27 AT ALL TIMES DURING STAGE S2.

A MINIMUM OF 16' CLEAR ZONE WIDTH IS AVAILABLE IN ALL LOCATIONS NOT DIMENSIONED.

LEGEND

- TRAFFIC FLOW ARROW
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH WARNING LIGHT, TYPE C
- TRAFFIC CONTROL SIGN
- TRAFFIC CONTROL BARRICADE TYPE II WITH/WITHOUT SIGN
- WORK ZONE/LANE CLOSURE
- 3.5" ASPHALTIC SURFACE TEMPORARY
- WORK COMPLETED IN PREVIOUS STAGE
- xxxxxxxxxx REMOVING PAVEMENT MARKINGS

PROJECT NO: 1050-01-61/1050-01-62	HWY: STH 29	COUNTY: CHIPPEWA	TRAFFIC CONTROL - WIDENING AND MEDIAN WORK-STH 27-STAGE S2	SHEET 77	E

2

2

ROAD WORK AHEAD W20-1-A

SHOULDER WORK W21-5

STH 29 EB EXIT RAMP

608SC+00

608EB+00

608WB+00

STH 29 EB

STH 29 WB

STH 29 WB ENTRANCE RAMP

608SA+00

610SC+00

610EB+00

610WB+00

610SA+00

25'

16' MIN

13'

+20

+40

16'

N

CANOPY

* EAST 29

(MOUNT TO BACK OF STH 29 "J" ASSEMBLY)

END ROAD WORK
G20-2A
48"X24"

SEE SDD "TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY" FOR ADDITIONAL TRAFFIC CONTROL SIGNS AND DEVICES.

SEE SDD "TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER, TWO WAY UNDIVIDED ROADWAY OPEN TO TRAFFIC" FOR ADVANCE WARNING SIGNS AND ADDITIONAL TRAFFIC CONTROL DEVICES.

* WEST 29

(MOUNT TO BACK OF STH 29 "J" ASSEMBLY)

ONLY ONLY
* R3-8-D
36"X30"

94'S'+00

96'S'+00

98'S'+00

100'S'+00

STH 27

102'S'+00

104'S'+00

106'S'+00

108'S'+00

612SC+00

612EB+00

612WB+00

612SB+00

NO WORK ON B-9-179

614SC+00

614EB+00

614WB+00

614SB+00

STH 29 EB ENTRANCE RAMP

STH 29 WB EXIT RAMP

619SC+00

619EB+00

619WB+00

616SB+00

SEE SDD "TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER, TWO WAY UNDIVIDED ROADWAY OPEN TO TRAFFIC" FOR ADVANCE WARNING SIGNS AND ADDITIONAL TRAFFIC CONTROL DEVICES.

SEE SDD "TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY" FOR ADDITIONAL TRAFFIC CONTROL SIGNS AND DEVICES.

ONLY ONLY
*R3-8-D
36"X30"

CONSTRUCTION

COMPLETE THE INTERSECTION WIDENING AND GUARDRAIL REPLACEMENT FOR ALL RAMPS.

TRAFFIC

MAINTAIN ALL TRAFFIC MOVEMENTS AT THE STH 27 INTERCHANGE.

TRAFFIC CONTROL DEVICES SHOWN FOR WORKING HOURS, RE-OPEN ALL LANES AND TURN LANES DURING NON-WORKING HOURS.

MAINTAIN A MINIMUM OF 16' CLEAR WIDTH ON STH 27 AT ALL TIMES DURING STAGE S3.

A MINIMUM OF 16' CLEAR ZONE WIDTH IS AVAILABLE IN ALL LOCATIONS NOT DIMENSIONED.

NOTES

* PAID FOR AS TRAFFIC CONTROL SIGNS (EACH LOCATION).

SEE TRAFFIC CONTROL WIDTH RESTRICTIONS AND PCMS OVERVIEW SHEET FOR WIDTH RESTRICTION SIGNS.

LEGEND

- TRAFFIC FLOW ARROW
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH WARNING LIGHT, TYPE C
- TRAFFIC CONTROL SIGN
- TRAFFIC CONTROL BARRICADE TYPE II WITH/WITHOUT SIGN
- CONCRETE BARRIER TEMPORARY PRECAST
- CRASH CUSHION TEMPORARY
- WORK ZONE/LANE CLOSURE
- 3.5" ASPHALTIC SURFACE TEMPORARY
- WORK COMPLETED IN PREVIOUS STAGE
- xxxxxxxxxx REMOVING PAVEMENT MARKINGS

ROAD WORK AHEAD W20-1-A

SHOULDER WORK W21-5

PROJECT NO: 1050-01-61/1050-01-62	HWY: STH 29	COUNTY: CHIPPEWA	TRAFFIC CONTROL - WIDENING AND MEDIAN WORK-STH 27-STAGE S3	SHEET 78	E

2

N

STH 29 EB EXIT RAMP

STH 29 EB

STH 29 WB

STH 29 WB ENTRANCE RAMP

STH 27

608'SD'+00

610'SD'+00

608'EB'+00

608'WB'+00

610'EB'+00

610'WB'+00

608'SA'+00

610'SA'+00

612'EB'+00

612'WB'+00

614'EB'+00

614'WB'+00

616'EB'+00

616'WB'+00

612'SC'+00

614'SC'+00

616'SC'+00

612'SB'+00

614'SB'+00

616'SB'+00

94'S'+00

96'S'+00

98'S'+00

100'S'+00

102'S'+00

104'S'+00

106'S'+00

108'S'+00

100'S'+00

25' TYP

25' TYP

25' TYP

SEE "DETAIL A" OF SDD "TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE" FOR ADDITIONAL TRAFFIC CONTROL DEVICES AND DETAILS. MAINTAIN ACCESS TO LAVORATA RD AND ALL COMMERCIAL DRIVEWAY ENTRANCES

* EAST 29

(MOUNT TO BACK OF STH 29 "J" ASSEMBLY)

END ROAD WORK
G20-2A
48"X24"

RIGHT LANE ENDS

**COVER

LANE CLOSED
R11-2-L
48"X30"

NO WORK ON B-9-179

LANE CLOSED
R11-2-L
48"X30"

SEE SDD "TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER, TWO WAY UNDIVIDED ROADWAY OPEN TO TRAFFIC" FOR ADVANCE WARNING SIGNS AND ADDITIONAL TRAFFIC CONTROL DEVICES. UTILIZE DRUMS AND TYPE 3 BARRICADES WITH ATTACHED W01-6 SIGN TO CLOSE THE INSIDE TRAVEL LANE PRIOR TO THE ADD LANE TAPER

* WEST 29

(MOUNT TO BACK OF STH 29 "J" ASSEMBLY)

LANE CLOSED
R11-2-L
48"X30"

LEFT LANE ENDS

**COVER

END ROAD WORK
G20-2A
48"X24"

**COVER

SEE SDD "TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER, TWO WAY UNDIVIDED ROADWAY OPEN TO TRAFFIC" FOR ADVANCE WARNING SIGNS AND ADDITIONAL TRAFFIC CONTROL DEVICES. UTILIZE DRUMS AND TYPE 3 BARRICADES WITH ATTACHED W01-6 SIGN TO CLOSE THE INSIDE TRAVEL LANE PRIOR TO THE ADD LANE TAPER

SEE "DETAIL A" OF SDD "TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE" FOR ADDITIONAL TRAFFIC CONTROL DEVICES AND DETAILS. MAINTAIN ACCESS TO SOUTHRIDGE AVE AND ALL COMMERCIAL DRIVEWAY ENTRANCES

STH 29 EB ENTRANCE RAMP

STH 29 WB EXIT RAMP

CONSTRUCTION

COMPLETE THE MEDIAN ISLAND RECONSTRUCTION.

TRAFFIC

MAINTAIN ALL TRAFFIC MOVEMENTS AT THE STH 27 INTERCHANGE.

TRAFFIC CONTROL DEVICES SHOWN FOR WORKING HOURS, RE-OPEN ALL LANES AND TURN LANES DURING NON-WORKING HOURS.

MAINTAIN A MINIMUM OF 16' CLEAR WIDTH ON STH 27 AND STH 27 RAMPS AT ALL TIMES DURING STAGE S4.

NOTES

* PAID FOR AS TRAFFIC CONTROL SIGNS (EACH LOCATION)

** PAID FOR AS TRAFFIC CONTROL COVERING SIGNS TYPE II

MAINTAIN ACCESS TO SIDE ROADS, RESIDENTIAL DRIVEWAYS AND COMMERCIAL DRIVEWAYS

LEGEND

- TRAFFIC FLOW ARROW
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH WARNING LIGHT, TYPE C
- TRAFFIC CONTROL SIGN
- TRAFFIC CONTROL BARRICADE TYPE II WITH/WITHOUT SIGN
- WORK ZONE/LANE CLOSURE
- 3.5" ASPHALTIC SURFACE TEMPORARY
- WORK COMPLETED IN PREVIOUS STAGE
- xxxxxxxxxx REMOVING PAVEMENT MARKINGS

PROJECT NO: 1050-01-61/1050-01-62	HWY: STH 29	COUNTY: CHIPPEWA	TRAFFIC CONTROL - WIDENING AND MEDIAN WORK-STH 27-STAGE S4	SHEET 79	E

STH 29 WB ALIGNMENT DATA

CURVE WB-1
PI STA = 228'WB'+15.56
Y = 120664.40
X = 200782.20
PC STA = 222+61.62
Y = 120657.21
X = 200228.31
PT STA = 233+69.29
Y = 120644.8163
X = 201335.80
DELTA = 2°46'09"
D = 0°15'00"
T = 553.94'
L = 1107.67'
R = 22918.31'
EX SE = N/C
SE TRANSITION (T)= 0
RO (RUNOFF) = 0
PR SE = N/C

CURVE WB-2
PI STA = 333'WB'+14.32
Y = 120293.31
X = 211274.62
PC STA = 316+03.69
Y = 120353.77
X = 209565.06
PT STA = 348+14.45
Y = 121542.4320
X = 212443.35
DELTA = 48°55'48"
D = 1°31'26"
T = 1710.63'
L = 3210.76'
R = 3759.72'
EX SE = 4.6%
SE TRANSITION (T) = 302
RO (RUNOFF) = 212
PR SE = 4.7%

CURVE WB-3
PI STA = 459'WB'+52.31
Y = 129675.46
X = 220052.93
PC STA = 442+83.94
Y = 128457.19
X = 218913.07
PT STA = 474+36.11
Y = 129689.4526
X = 221721.25
DELTA = 46°25'26"
D = 1°28'22"
T = 1668.38'
L = 3152.17'
R = 3890.36'
EX SE = 4.5%
SE TRANSITION (T) = 293
RO (RUNOFF) = 203
PR SE = 4.5%

CURVE WB-4
PI STA = 525'WB'+36.19
Y = 129732.21
X = 226821.15
PC STA = 519+92.58
Y = 129727.66
X = 226277.56
PT STA = 530+79.44
Y = 129771.2322
X = 227363.36
DELTA = 3°38'08"
D = 0°20'04"
T = 543.61'
L = 1086.86'
R = 17128.73'
EX SE = R/C
SE TRANSITION (T) = 180
RO (RUNOFF) = 90
PR SE = R/C

CURVE WB-5
PI STA = 584'WB'+32.80
Y = 130155.47
X = 232702.91
PC STA = 572+75.57
Y = 130072.41
X = 231548.67
PT STA = 595+88.07
Y = 130122.1456
X = 233859.66
DELTA = 5°45'58"
D = 0°14'58"
T = 1157.23'
L = 2312.51'
R = 22978.31'
EX SE = N/C
SE TRANSITION (T) = 0
RO (RUNOFF) = 0
PR SE = N/C

CURVE WB-6
PI STA = 856'WB'+51.23
Y = 129510.86
X = 259915.24
PC STA = 834+89.78
Y = 129549.00
X = 257754.14
PT STA = 876+19.00
Y = 130923.5174
X = 261551.15
DELTA = 41°49'22"
D = 1°00'46"
T = 2161.44'
L = 4129.21'
R = 5656.87'
EX SE = 3.2%
SE TRANSITION (T) = 243
RO (RUNOFF) = 153
PR SE = 3.4%

CURVE WB-7
PI STA = 929'WB'+47.35
Y = 134405.99
X = 265583.98
PC STA = 920+82.86
Y = 133840.98
X = 264929.68
PT STA = 937+92.26
Y = 134697.6965
X = 266397.76
DELTA = 21°05'28"
D = 1°14'02"
T = 864.49'
L = 1709.40'
R = 4643.75'
EX SE = 3.9%
SE TRANSITION (T) = 270
RO (RUNOFF) = 180
PR SE = 4.0%

CURVE WB-8
PI STA = 955'WB'+90.80
Y = 135304.58
X = 268090.81
PC STA = 937+92.26
Y = 134697.70
X = 266397.76
PT STA = 973+54.96
Y = 135315.1953
X = 269889.31
DELTA = 19°22'57"
D = 0°32'39"
T = 1798.53'
L = 3562.69'
R = 10531.55'
EX SE = 2.1%
SE TRANSITION (T) = 184
RO (RUNOFF) = 94
PR SE = 2.1%

STH 29 EB ALIGNMENT DATA

CURVE EB-1
PI STA = 228'EB'+22.51
Y = 120604.06
X = 200789.88
PC STA = 222+69.87
Y = 120596.90
X = 200237.29
PT STA = 233+74.94
Y = 120584.5075
X = 201342.18
DELTA = 2°46'12"
D = 0°15'02"
T = 552.65'
L = 1105.07'
R = 22858.31'
SE = N/C
SE TRANSITION (T) = 0
RO (RUNOFF) = 0
PR SE = N/C

CURVE EB-2
PI STA = 333'EB'+39.43
Y = 120232.00
X = 211300.44
PC STA = 316+01.40
Y = 120293.48
X = 209563.49
PT STA = 348+63.57
Y = 121501.1541
X = 212487.87
DELTA = 48°55'58"
D = 1°30'00"
T = 1738.04'
L = 3262.18'
R = 3819.72'
EX SE = 4.3%
SE TRANSITION (T) = 297
RO (RUNOFF) = 207
PR SE = 4.6%

CURVE EB-3
PI STA = 459'EB'+76.10
Y = 129615.80
X = 220080.02
PC STA = 443+33.19
Y = 128416.11
X = 218957.57
PT STA = 474+37.20
Y = 129629.4085
X = 221722.88
DELTA = 46°25'51"
D = 1°29'45"
T = 1642.92'
L = 3104.01'
R = 3830.36'
EX SE = 4.6%
SE TRANSITION (T) = 297
RO (RUNOFF) = 207
PR SE = 4.6%

CURVE EB-4
PI STA = 525'EB'+35.00
Y = 129671.62
X = 226820.51
PC STA = 519+88.90
Y = 129667.10
X = 226274.42
PT STA = 530+80.74
Y = 129710.7987
X = 227365.21
DELTA = 3°38'22"
D = 0°20'00"
T = 546.11'
L = 1091.84'
R = 17188.73'
EX SE = R/C
SE TRANSITION (T) = 180
RO (RUNOFF) = 90
PR SE = R/C

CURVE EB-5
PI STA = 584'EB'+40.51
Y = 130095.31
X = 232711.16
PC STA = 572+85.53
Y = 130012.45
X = 231559.16
PT STA = 595+93.53
Y = 130061.9290
X = 233865.66
DELTA = 5°46'12"
D = 0°15'00"
T = 1154.98'
L = 2308.00'
R = 22918.31'
EX SE = N/C
SE TRANSITION (T) = 0
RO (RUNOFF) = 0
PR SE = N/C

CURVE EB-6
PI STA = 856'EB'+72.57
Y = 129449.86
X = 259937.11
PC STA = 834+88.21
Y = 129488.46
X = 257753.09
PT STA = 876+61.21
Y = 130877.4577
X = 261590.40
DELTA = 41°49'22"
D = 1°00'08"
T = 2184.36'
L = 4173.00'
R = 5716.87'
EX SE = 3.2%
SE TRANSITION (T) = 243
RO (RUNOFF) = 153
PR SE = 3.4%

CURVE EB-7
PI STA = 929'EB'+79.50
Y = 134353.26
X = 265615.70
PC STA = 921+26.07
Y = 133795.49
X = 264969.76
PT STA = 938+13.61
Y = 134641.1752
X = 266419.10
DELTA = 21°05'38"
D = 1°15'00"
T = 853.43'
L = 1687.55'
R = 4583.75'
EX SE = 3.9%
SE TRANSITION (T) = 270
RO (RUNOFF) = 180
PR SE = 4.0%

CURVE EB-8
PI STA = 956'EB'+01.34
Y = 135244.29
X = 268102.03
PC STA = 938+13.62
Y = 134641.18
X = 266419.11
PT STA = 973+54.92
Y = 135254.8244
X = 269889.72
DELTA = 19°22'43"
D = 0°32'50"
T = 1787.72'
L = 3541.30'
R = 10470.35'
EX SE = R/C
SE TRANSITION (T) = 180
RO (RUNOFF) = 90
PR SE = R/C

CTH X RAMP ALIGNMENT DATA

CURVE XA-1
PI STA = 417'XA'+92.57
Y = 126608.61
X = 217108.41
PC STA = 415+01.32
Y = 126391.87
X = 216913.85
PT STA = 420+75.99
Y = 126884.1119
X = 217202.88
DELTA = 22°59'13"
D = 4°00'00"
T = 291.25'
L = 574.67'
R = 1432.39'
SE = 4.8%
SE TRANSITION (T)= 152
RO (RUNOFF) = 107

CURVE XB-1
PI STA = 428'XB'+88.39
Y = 127395.67
X = 217803.39
PC STA = 427+86.82
Y = 127338.45
X = 217719.47
PT STA = 429+89.63
Y = 127464.1560
X = 217878.41
DELTA = 8°06'44"
D = 4°00'00"
T = 101.57'
L = 202.81'
R = 1432.39'
SE = 3.6%
SE TRANSITION (T)= 109
RO (RUNOFF) = 70

CURVE XC-1
PI STA = 432'XC'+60.96
Y = 127563.23
X = 218231.09
PC STA = 430+58.56
Y = 127381.12
X = 218142.78
PT STA = 434+60.70
Y = 127713.7472
X = 218366.41
DELTA = 16°05'08"
D = 4°00'00"
T = 202.40'
L = 402.14'
R = 1432.39'
SE = 5.0%
SE TRANSITION (T)= 155
RO (RUNOFF) = 111

CURVE XD-1
PI STA = 418'XD'+27.33
Y = 126534.13
X = 217296.98
PC STA = 417+40.17
Y = 126475.41
X = 217232.57
PT STA = 419+14.27
Y = 126584.6084
X = 217368.03
DELTA = 6°57'50"
D = 4°00'00"
T = 87.16'
L = 174.10'
R = 1432.39'
SE = 4.1%
SE TRANSITION (T)= 126
RO (RUNOFF) = 85

STH 27 RAMP ALIGNMENT DATA

CURVE SA-1
PI STA = 604'SA'+31.01
Y = 130149.69
X = 234731.83
PC STA = 602+10.36
Y = 130152.12
X = 234511.20
PT STA = 606+48.21
Y = 130213.7761
X = 234942.97
DELTA = 17°30'50"
D = 4°00'00"
T = 220.64'
L = 437.85'
R = 1432.39'
SE = 4.4%
SE TRANSITION (T)= 132
RO (RUNOFF) = 91

CURVE SB-1
PI STA = 616'SB'+42.93
Y = 130158.69
X = 235890.53
PC STA = 614+91.63
Y = 130206.23
X = 235746.88
PT STA = 617+93.12
Y = 130142.2201
X = 236040.94
DELTA = 12°03'35"
D = 4°00'00"
T = 151.31'
L = 301.50'
R = 1432.39'
SE = 3.6%
SE TRANSITION (T)= 109
RO (RUNOFF) = 70

CURVE SC-1
PI STA = 618'SC'+90.63
Y = 129946.35
X = 236117.52
PC STA = 617+33.01
Y = 129913.44
X = 235963.38
PT STA = 620+46.98
Y = 129944.9534
X = 236275.13
DELTA = 12°33'32"
D = 4°00'00"
T = 157.62'
L = 313.97'
R = 1432.39'
SE = 5.2%
SE TRANSITION (T)= 173
RO (RUNOFF) = 125

CURVE SD-1
PI STA = 603'SD'+58.61
Y = 129963.16
X = 234622.94
PC STA = 602+68.11
Y = 129972.85
X = 234532.96
PT STA = 604+48.87
Y = 129942.2115
X = 234710.99
DELTA = 7°13'51"
D = 4°00'00"
T = 90.50'
L = 180.77'
R = 1432.39'
SE = 4.2%
SE TRANSITION (T)= 128
RO (RUNOFF) = 87

CTH D RAMP ALIGNMENT DATA

CURVE DA-1
PI STA = 905'DA'+39.55
Y = 132866.50
X = 263732.06
PC STA = 904+62.88
Y = 132815.37
X = 263674.92
PT STA = 906+15.76
Y = 132927.5564
X = 263778.45
DELTA = 10°56'59"
D = 7°09'43"
T = 76.68'
L = 152.89'
R = 800.00'
SE = 5.7%
SE TRANSITION (T)= 159
RO (RUNOFF) = 118

CURVE DA-2
PI STA = 906'DA'+72.70
Y = 132972.89
X = 263812.89
PC STA = 906+32.39
Y = 132940.80
X = 263788.51
PT STA = 907+12.95
Y = 133007.0779
X = 263834.24
DELTA = 5°14'10"
D = 6°30'00"
T = 40.31'
L = 80.56'
R = 881.47'
SE = 5.7%
SE TRANSITION (T)= 172
RO (RUNOFF) = 127

CURVE DA-3
PI STA = 910'DA'+99.23
Y = 133334.71
X = 264038.87
PC STA = 909+94.24
Y = 133245.66
X = 263983.25
PT STA = 912+03.85
Y = 133414.6954
X = 264106.89
DELTA = 8°23'04"
D = 4°00'00"
T = 104.99'
L = 209.61'
R = 1432.39'
SE = 2.6%
SE TRANSITION (T)= 80
RO (RUNOFF) = 45

CURVE DB-1
PI STA = 917'DB'+09.75
Y = 133650.42
X = 264533.67
PC STA = 915+08.28
Y = 133590.26
X = 264341.40
PT STA = 919+07.78
Y = 133767.9435
X = 264697.30
DELTA = 18°18'41"
D = 4°35'01"
T = 201.46'
L = 399.49'
R = 1250.00'
SE = 5.0%
SE TRANSITION (T)= 155
RO (RUNOFF) = 111

CURVE DB-2
PI STA = 924'DB'+33.83
Y = 134074.81
X = 265124.58
PC STA = 921+84.99
Y = 133929.66
X = 264922.46
PT STA = 926+82.20
Y = 134197.7212
X = 265340.94
DELTA = 6°05'15"
D = 1°13'28"
T = 248.84'
L = 497.21'
R = 4679.80'
SE = 2.2%
SE TRANSITION (T)= 94
RO (RUNOFF) = 49

CURVE DC-1
PI STA = 912'DC'+27.01
Y = 133043.36
X = 264401.45
PC STA = 911+38.43
Y = 132975.92
X = 264344.01
PT STA = 913+15.37
Y = 133117.3585
X = 264450.15
DELTA = 7°04'40"
D = 4°00'00"
T = 88.58'
L = 176.94'
R = 1432.39'
SE = 2.7
SE TRANSITION (T)= 80
RO (RUNOFF) = 46

CURVE DC-2
PI STA = 917'DC'+79.02
Y = 133504.67
X = 264705.02
PC STA = 915+91.52
Y = 133348.04
X = 264601.95
PT STA = 919+64.41
Y = 133629.4990
X = 264844.94
DELTA = 14°54'57"
D = 4°00'00"
T = 187.51'
L = 372.90'
R = 1432.39'
SE = 5.0%
SE TRANSITION (T)= 155
RO (RUNOFF) = 111

CURVE DC-3
PI STA = 925'DC'+21.22
Y = 134000.17
X = 265260.43
PC STA = 922+03.70
Y = 133788.80
X = 265023.50
PT STA = 928+37.60
Y = 134174.7639
X = 265525.64
DELTA = 8°22'43"
D = 1°19'18"
T = 317.51'
L = 633.89'
R = 4334.73'
SE = 3.9%
SE TRANSITION (T)= 165
RO (RUNOFF) = 109

CURVE DD-1
PI STA = 904'DD'+03.84
Y = 132652.12
X = 263700.71
PC STA = 901+84.01
Y = 132508.45
X = 263534.33
PT STA = 906+18.39
Y = 132724.0219
X = 263908.45
DELTA = 21°43'09"
D = 5°00'00"
T = 219.83'
L = 434.38'
R = 1145.91'
SE = 4.9%
SE TRANSITION (T)= 142
RO (RUNOFF) = 101

DATE 17AUG16 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	1050-01-61 QUANTITY	1052-01-62 QUANTITY
0010	201.0105	Clearing	STA	4.000	3.000	1.000
0020	201.0205	Grubbing	STA	4.000	3.000	1.000
0030	204.0105	Removing Pavement Butt Joints	SY	38,100.000	19,050.000	19,050.000
0040	204.0110	Removing Asphaltic Surface	SY	3,935.000	1,730.000	2,205.000
0050	204.0115	Removing Asphaltic Surface Butt Joints	SY	1,120.000	410.000	710.000
0060	204.0120	Removing Asphaltic Surface Milling	SY	117,560.000	61,430.000	56,130.000
0070	204.0130	Removing Curb	LF	161.000	75.000	86.000
0080	204.0150	Removing Curb & Gutter	LF	3,185.000	1,460.000	1,725.000
0090	204.0180	Removing Delineators and Markers	EACH	634.000	316.000	318.000
0100	204.0190	Removing Surface Drains	EACH	14.000	3.000	11.000
0110	204.0245	Removing Storm Sewer (size) 01. 12-Inch	LF	8.000	8.000	
0120	205.0100	Excavation Common	CY	2,899.000	1,481.000	1,418.000
0130	205.9015.S	Grading Shaping and Finishing Intersection (location) 01. 300th Street (WB)	LS	1.000	1.000	
0140	205.9015.S	Grading Shaping and Finishing Intersection (location) 02. 270th Street	LS	1.000		1.000
0150	205.9015.S	Grading Shaping and Finishing Intersection (location) 03. 300th Street (EB)	LS	1.000		1.000
0160	205.9015.S	Grading Shaping and Finishing Intersection (location) 04. 320th Street	LS	1.000		1.000
0170	211.0100	Prepare Foundation for Asphaltic Paving (project) 01. 1050-01-61	LS	1.000	1.000	
0180	211.0100	Prepare Foundation for Asphaltic Paving (project) 02. 1052-01-62	LS	1.000		1.000
0190	211.0400	Prepare Foundation for Asphaltic Shoulders	STA	227.000	120.000	107.000
0200	213.0100	Finishing Roadway (project) 01. 1050-01-61	EACH	1.000	1.000	
0210	213.0100	Finishing Roadway (project) 02. 1052-01-62	EACH	1.000		1.000
0220	305.0110	Base Aggregate Dense 3/4-Inch	TON	31,105.000	15,560.000	15,545.000
0230	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	10,210.000	5,285.000	4,925.000
0240	305.0500	Shaping Shoulders	STA	3,575.000	1,780.000	1,795.000
0250	325.0100	Pulverize and Relay	SY	132,916.000	66,885.000	66,031.000
0260	405.0100	Coloring Concrete WisDOT Red	CY	962.000	452.000	510.000
0270	415.0120	Concrete Pavement 12-Inch	SY	2,880.000	1,355.000	1,525.000
0280	416.0610	Drilled Tie Bars	EACH	13,534.000	6,650.000	6,884.000
0290	416.0620	Drilled Dowel Bars	EACH	63,512.000	22,720.000	40,792.000
0300	416.1010	Concrete Surface Drains	CY	23.000	3.000	20.000
0310	416.1110	Concrete Shoulder Rumble Strips	LF	9,880.000	5,035.000	4,845.000
0320	416.1710	Concrete Pavement Repair	SY	1,350.000	230.000	1,120.000
0330	416.1720	Concrete Pavement Replacement	SY	5,050.000	2,150.000	2,900.000
0340	420.1000	Continuous Diamond Grinding Concrete Pavement	SY	37,910.000	19,490.000	18,420.000
0350	440.4410	Incentive IRI Ride	DOL	126,000.000	63,000.000	63,000.000
0360	450.4000	HMA Cold Weather Paving	TON	30,000.000	15,000.000	15,000.000
0370	455.0605	Tack Coat	GAL	79,230.000	39,660.000	39,570.000
0380	460.2000	Incentive Density HMA Pavement	DOL	96,300.000	48,000.000	48,300.000
0390	460.4110.S	Reheating HMA Pavement Longitudinal Joints	LF	154,295.000	77,070.000	77,225.000
0400	465.0105	Asphaltic Surface	TON	2,025.000	1,335.000	690.000
0410	465.0110	Asphaltic Surface Patching	TON	1,890.000	910.000	980.000
0420	465.0125	Asphaltic Surface Temporary	TON	20.000	10.000	10.000
0430	465.0315	Asphaltic Flumes	SY	205.000	75.000	130.000

3

DATE 17AUG16 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	1050-01-61 QUANTITY	1052-01-62 QUANTITY
0440	465.0400	Asphaltic Shoulder Rumble Strips	LF	311,180.000	156,460.000	154,720.000
0450	520.8000	Concrete Collars for Pipe	EACH	1.000		1.000
0460	520.8700	Cleaning Culvert Pipes	EACH	3.000	2.000	1.000
0470	522.1012	Apron Endwalls for Culvert Pipe Reinforced Concrete 12-Inch	EACH	1.000	1.000	
0480	523.0529	Apron Endwalls for Culvert Pipe Reinforced Concrete Horizontal Elliptical 29x45-Inch	EACH	1.000		1.000
0490	601.0411	Concrete Curb & Gutter 30-Inch Type D	LF	530.000	275.000	255.000
0500	601.0557	Concrete Curb & Gutter 6-Inch Sloped 36-Inch Type D	LF	595.000	140.000	455.000
0510	601.0582	Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type T	LF	2,885.000	1,415.000	1,470.000
0520	603.8000	Concrete Barrier Temporary Precast Delivered	LF	240.000	120.000	120.000
0530	603.8125	Concrete Barrier Temporary Precast Installed	LF	240.000	120.000	120.000
0540	606.0200	Riprap Medium	CY	72.000	28.000	44.000
0550	608.0312	Storm Sewer Pipe Reinforced Concrete Class III 12-Inch	LF	53.000	34.000	19.000
0560	611.0430	Reconstructing Inlets	EACH	1.000		1.000
0570	611.0642	Inlet Covers Type MS	EACH	1.000		1.000
0580	611.0652	Inlet Covers Type T	EACH	6.000	4.000	2.000
0590	611.3901	Inlets Median 1 Grate	EACH	1.000		1.000
0600	611.8115	Adjusting Inlet Covers	EACH	6.000	4.000	2.000
0610	611.9800.S	Pipe Grates	EACH	1.000		1.000
0620	614.0010	Barrier System Grading Shaping Finishing	EACH	49.000	23.000	26.000
0630	614.0200	Steel Thrie Beam Structure Approach	LF	82.800	41.400	41.400
0640	614.0305	Steel Plate Beam Guard Class A	LF	150.100	81.300	68.800
0650	614.0345	Steel Plate Beam Guard Short Radius	LF	87.600	43.800	43.800
0660	614.0370	Steel Plate Beam Guard Energy Absorbing Terminal	EACH	2.000	1.000	1.000
0670	614.0390	Steel Plate Beam Guard Short Radius Terminal	EACH	2.000	1.000	1.000
0680	614.0905	Crash Cushions Temporary	EACH	2.000	1.000	1.000
0690	614.0920	Salvaged Rail	LF	10,185.000	4,600.000	5,585.000
0700	614.0925	Salvaged Guardrail End Treatments	EACH	44.000	21.000	23.000
0710	614.2300	MGS Guardrail 3	LF	10,012.500	4,437.500	5,575.000
0720	614.2310	MGS Guardrail 3 HS	LF	562.500	175.000	387.500
0730	614.2500	MGS Thrie Beam Transition	LF	1,334.600	663.200	671.400
0740	614.2610	MGS Guardrail Terminal EAT	EACH	38.000	18.000	20.000
0750	614.2620	MGS Guardrail Terminal Type 2	EACH	15.000	6.000	9.000
0760	618.0100	Maintenance And Repair of Haul Roads (project) 01. 1050-01-61	EACH	1.000	1.000	
0770	618.0100	Maintenance And Repair of Haul Roads (project) 02. 1052-01-62	EACH	1.000		1.000
0780	619.1000	Mobilization	EACH	1.000	0.500	0.500
0790	620.0300	Concrete Median Sloped Nose	SF	620.000	305.000	315.000
0800	624.0100	Water	MGAL	425.000	217.000	208.000
0810	625.0500	Salvaged Topsoil	SY	4,020.000	2,205.000	1,815.000
0820	628.1504	Silt Fence	LF	26,690.000	12,550.000	14,140.000
0830	628.1520	Silt Fence Maintenance	LF	26,690.000	12,550.000	14,140.000
0840	628.1905	Mobilizations Erosion Control	EACH	20.000	11.000	9.000
0850	628.1910	Mobilizations Emergency Erosion Control	EACH	14.000	7.000	7.000
0860	628.2002	Erosion Mat Class I Type A	SY	18,055.000	6,169.000	11,886.000

3

DATE 17AUG16 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	1050-01-61 QUANTITY	1052-01-62 QUANTITY
0870	628.2004	Erosion Mat Class I Type B	SY	6,475.000	4,229.000	2,246.000
0880	628.7005	Inlet Protection Type A	EACH	8.000	4.000	4.000
0890	628.7015	Inlet Protection Type C	EACH	8.000	5.000	3.000
0900	628.7504	Temporary Ditch Checks	LF	380.000	175.000	205.000
0910	628.7555	Culvert Pipe Checks	EACH	44.000	38.000	6.000
0920	628.7570	Rock Bags	EACH	3,415.000	1,690.000	1,725.000
0930	629.0210	Fertilizer Type B	CWT	2.500	1.400	1.100
0940	630.0120	Seeding Mixture No. 20	LB	45.000	30.000	15.000
0950	630.0130	Seeding Mixture No. 30	LB	43.000	20.000	23.000
0960	633.0100	Delineator Posts Steel	EACH	641.000	319.000	322.000
0970	633.0500	Delineator Reflectors	EACH	771.000	384.000	387.000
0980	633.5200	Markers Culvert End	EACH	3.000	1.000	2.000
0990	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	134.000	66.000	68.000
1000	634.0618	Posts Wood 4x6-Inch X 18-FT	EACH	117.000	53.000	64.000
1010	634.0620	Posts Wood 4x6-Inch X 20-FT	EACH	37.000	17.000	20.000
1020	634.0814	Posts Tubular Steel 2x2-Inch X 14-FT	EACH	15.000	8.000	7.000
1030	635.0200	Sign Supports Structural Steel HS	LB	11,970.000	3,843.000	8,127.000
1040	636.0100	Sign Supports Concrete Masonry	CY	22.000	7.200	14.800
1050	636.0500	Sign Supports Steel Reinforcement	LB	1,320.000	430.000	890.000
1060	637.1220	Signs Type I Reflective SH	SF	1,847.000	599.000	1,248.000
1070	637.2210	Signs Type II Reflective H	SF	2,571.890	1,269.730	1,302.160
1080	637.2230	Signs Type II Reflective F	SF	296.000	84.000	212.000
1090	638.2102	Moving Signs Type II	EACH	1.000	1.000	
1100	638.2601	Removing Signs Type I	EACH	14.000	5.000	9.000
1110	638.2602	Removing Signs Type II	EACH	231.000	110.000	121.000
1120	638.3000	Removing Small Sign Supports	EACH	280.000	129.000	151.000
1130	638.3100	Removing Structural Steel Sign Supports	EACH	28.000	10.000	18.000
1140	642.5201	Field Office Type C	EACH	1.000	0.500	0.500
1150	643.0100	Traffic Control (project) 01. 1050-01-61	EACH	1.000	1.000	
1160	643.0100	Traffic Control (project) 02. 1050-01-62	EACH	1.000		1.000
1170	643.0300	Traffic Control Drums	DAY	119,200.000	59,600.000	59,600.000
1180	643.0420	Traffic Control Barricades Type III	DAY	7,960.000	3,980.000	3,980.000
1190	643.0705	Traffic Control Warning Lights Type A	DAY	15,920.000	7,960.000	7,960.000
1200	643.0715	Traffic Control Warning Lights Type C	DAY	13,200.000	6,600.000	6,600.000
1210	643.0800	Traffic Control Arrow Boards	DAY	720.000	360.000	360.000
1220	643.0900	Traffic Control Signs	DAY	25,280.000	12,640.000	12,640.000
1230	643.0920	Traffic Control Covering Signs Type II	EACH	112.000	56.000	56.000
1240	643.1050	Traffic Control Signs PCMS	DAY	380.000	190.000	190.000
1250	645.0120	Geotextile Type HR	SY	256.000	91.000	165.000
1260	646.0106	Pavement Marking Epoxy 4-Inch	LF	4,112.000	1,681.000	2,431.000
1270	646.0126	Pavement Marking Epoxy 8-Inch	LF	1,336.000	614.000	722.000
1280	646.0406	Pavement Marking Same Day Epoxy 4-Inch	LF	3,420.000	1,516.000	1,904.000
1290	646.0600	Removing Pavement Markings	LF	1,660.000	830.000	830.000
1300	646.0805.S	Pavement Marking Outfall	EACH	650.000	400.000	250.000
1310	646.2304.S	Pavement Marking Grooved Wet Reflective Epoxy 4-Inch	LF	391,420.000	196,024.000	195,396.000
1320	646.2308.S	Pavement Marking Grooved Wet Reflective Epoxy 8-Inch	LF	10,443.000	5,404.000	5,039.000
1330	647.0166	Pavement Marking Arrows Epoxy Type 2	EACH	9.000	4.000	5.000
1340	647.0356	Pavement Marking Words Epoxy	EACH	4.000	2.000	2.000
1350	647.0456	Pavement Marking Curb Epoxy	LF	160.000	90.000	70.000
1360	647.0566	Pavement Marking Stop Line Epoxy 18-Inch	LF	340.000	154.000	186.000
1370	647.0606	Pavement Marking Island Nose Epoxy	EACH	6.000	3.000	3.000

3

DATE 17AUG16 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	1050-01-61 QUANTITY	1052-01-62 QUANTITY
1380	647.0803	Pavement Marking Aerial Enforcement Bars Epoxy 24-Inch	LF	132.000	72.000	60.000
1390	647.0955	Removing Pavement Markings Arrows	EACH	4.000	2.000	2.000
1400	649.0400	Temporary Pavement Marking Removable Tape 4-Inch	LF	33,040.000	16,520.000	16,520.000
1410	649.0402	Temporary Pavement Marking Paint 4-Inch	LF	728,100.000	364,514.000	363,586.000
1420	649.0506	Temporary Pavement Marking Removable Mask-Out Tape 6-Inch	LF	8,250.000	4,125.000	4,125.000
1430	649.0801	Temporary Pavement Marking Removable Tape 8-Inch	LF	2,400.000	1,200.000	1,200.000
1440	649.0802	Temporary Pavement Marking Paint 8-Inch	LF	20,900.000	10,820.000	10,080.000
1450	650.4000	Construction Staking Storm Sewer	EACH	3.000	1.000	2.000
1460	650.4500	Construction Staking Subgrade	LF	1,735.000	835.000	900.000
1470	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	4,150.000	1,900.000	2,250.000
1480	650.7000	Construction Staking Concrete Pavement	LF	1,735.000	835.000	900.000
1490	650.8000	Construction Staking Resurfacing Reference	LF	189,215.000	94,595.000	94,620.000
1500	650.8500	Construction Staking Electrical Installations (project) 01. 1050-01-61	LS	1.000	1.000	
1510	650.8500	Construction Staking Electrical Installations (project) 02. 1052-01-62	LS	1.000		1.000
1520	650.9910	Construction Staking Supplemental Control (project) 01. 1050-01-61	LS	1.000	1.000	
1530	650.9910	Construction Staking Supplemental Control (project) 02. 1052-01-62	LS	1.000		1.000
1540	650.9920	Construction Staking Slope Stakes	LF	1,735.000	835.000	900.000
1550	652.0235	Conduit Rigid Nonmetallic Schedule 40 3-Inch	LF	525.000	245.000	280.000
1560	653.0140	Pull Boxes Steel 24x42-Inch	EACH	6.000	3.000	3.000
1570	653.0905	Removing Pull Boxes	EACH	6.000	3.000	3.000
1580	655.0510	Electrical Wire Traffic Signals 12 AWG	LF	1,860.000	920.000	940.000
1590	690.0150	Sawing Asphalt	LF	55,805.000	24,050.000	31,755.000
1600	690.0250	Sawing Concrete	LF	158,910.000	59,955.000	98,955.000
1610	715.0415	Incentive Strength Concrete Pavement	DOL	1,000.000	500.000	500.000
1620	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	2,100.000	2,100.000	
1630	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	2,400.000	2,400.000	
1640	SPV.0045	Special 01. Traffic Control Signs PCMS Remote Communications	DAY	380.000	190.000	190.000
1650	SPV.0060	Special 01. Removing Raised Pavement Markers and Filling Voids	EACH	1,200.000	600.000	600.000
1660	SPV.0060	Special 02. Cleaning Pipe Underdrain Outfalls	EACH	650.000	400.000	250.000
1670	SPV.0060	Special 03. Grading, Shaping and Finishing Maintenance Crossovers	EACH	9.000	9.000	
1680	SPV.0060	Special 04. Inlet Covers Temporary	EACH	2.000		2.000
1690	SPV.0090	Special 01. Concrete Curb & Gutter Cure and Seal Treatment	LF	4,285.000	1,965.000	2,320.000
1700	SPV.0090	Special 02. Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type TBT	LF	150.000	75.000	75.000
1710	SPV.0105	Special 01. Milling and Removing Temporary Joint Project 1050-01-61	LS	1.000	1.000	
1720	SPV.0105	Special 02. Milling and Removing Temporary Joint Project 1052-01-62	LS	1.000		1.000
1730	SPV.0105	Special 03. Material Transfer Vehicle Project 1050-01-61	LS	1.000	1.000	

3

DATE 17AUG16 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	1050-01-61 QUANTITY	1052-01-62 QUANTITY
1740	SPV.0105	Special 04. Material Transfer Vehicle Project 1052-01-62	LS	1.000		1.000
1750	SPV.0180	Special 01. Concrete Pavement Repair Doweled Special	SY	16,510.000	3,975.000	12,535.000
1760	SPV.0180	Special 02. Concrete Pavement Replacement Doweled Special	SY	48,085.000	23,800.000	24,285.000
1770	SPV.0195	Special 01. HMA Pavement 4 LT 58-28 S 3. 0% Va Regression Special	TON	15,990.000	8,025.000	7,965.000
1780	SPV.0195	Special 02. HMA Pavement 4 LT 58-34 S 3. 0% Va Regression Special	TON	13,990.000	7,020.000	6,970.000
1790	SPV.0195	Special 03. HMA Pavement 4 MT 58-28 S 3. 0% Va Regression Special	TON	61,875.000	30,860.000	31,015.000
1800	SPV.0195	Special 04. HMA Pavement 4 MT 58-34 S 3. 0% Va Regression Special	TON	7,890.000	3,895.000	3,995.000
1810	SPV.0195	Special 05. HMA Pavement 4 SMA 58-34 H 3.0% Va Regression Special	TON	50,990.000	25,470.000	25,520.000
1820	SPV.0195	Special 06. SMA Pavement Compaction Acceptance	TON	50,990.000	25,470.000	25,520.000

3

CLEARING AND GRUBBING

PROJECT	STATION	TO	STATION	OFFSET	ALIGNMENT	201.0105 CLEARING STA	201.0205 GRUBBING STA	REMARKS
1050-01-61								
	609+00	-	610+00	RT	'SA'	1	1	STH 29 WB ENTRANCE RAMP
	611+00	-	613+00	RT	'SB'	2	2	STH 29 WB EXIT RAMP
PROJECT 1050-01-61 TOTALS						3	3	
1052-01-62								
	952+00		953+00	RT	'EB'	1	1	--
PROJECT 1052-01-62 TOTALS						1	1	
TOTALS						4	4	

REMOVAL ITEMS

PROJECT	STATION	TO	STATION	OFFSET	ALIGNMENT	204.0105 REMOVING PAVEMENT BUTT JOINTS SY	204.0110* REMOVING ASPHALTIC SURFACE SY	204.0115 REMOVING ASPHALTIC SURFACE BUTT JOINTS SY	204.0120 REMOVING ASPHALTIC SURFACE MILLING SY	204.0130 REMOVING CURB LF	204.0150 REMOVING CURB & GUTTER LF	204.0180 REMOVING DELINEATORS AND MARKERS EACH	204.0190 REMOVING SURFACE DRAINS EACH	SPV.0060.01 REMOVING RAISED PAVEMENT MARKER AND FILLING VOID EACH	REMARKS
1050-01-61															
	155+61	-	209+86	LT/RT	'WB'	800	–	8	1,270	–	–	1	–	–	PASSING LANE AND SHOULDER
	155+61	-	209+86	LT	'WB'	930	–	6	930	–	–	–	–	–	DRIVING LANE
	155+61	-	209+86	LT	'WB'	–	–	4	530	–	–	13	–	–	DRIVING LANE SHOULDER
	210+82	-	232+00	LT/RT	'WB'	800	–	8	1,270	–	–	–	–	–	PASSING LANE AND SHOULDER
	210+82	-	232+00	LT	'WB'	930	–	6	930	–	–	–	–	–	DRIVING LANE
	210+82	-	232+00	LT	'WB'	–	–	4	530	–	–	5	–	–	DRIVING LANE SHOULDER
	232+00	-	238+33	LT/RT	'WB'	–	–	–	210	–	–	–	–	–	PASSING LANE AND SHOULDER
	232+00	-	238+33	LT	'WB'	–	–	–	–	–	–	–	–	–	DRIVING LANE
	232+00	-	238+33	LT	'WB'	–	–	–	420	–	–	2	–	–	DRIVING LANE SHOULDER
	238+33	-	283+16	LT/RT	'WB'	800	–	7	1,270	–	–	1	–	–	PASSING LANE AND SHOULDER
	238+33	-	283+16	LT	'WB'	930	–	6	930	–	–	–	–	–	DRIVING LANE
	238+33	-	283+16	LT	'WB'	–	–	4	530	–	–	11	–	–	DRIVING LANE SHOULDER
	283+16	-	289+50	LT/RT	'WB'	–	–	–	210	–	–	–	–	–	PASSING LANE AND SHOULDER
	283+16	-	289+50	LT	'WB'	–	–	–	–	–	–	–	–	–	DRIVING LANE
	283+16	-	289+50	LT	'WB'	–	–	–	420	–	–	2	–	–	DRIVING LANE SHOULDER
	289+50	-	298+73	LT/RT	'WB'	800	–	8	1,270	–	–	–	–	–	PASSING LANE AND SHOULDER
	289+50	-	298+73	LT	'WB'	930	–	6	930	–	–	–	–	–	DRIVING LANE
	289+50	-	298+73	LT	'WB'	–	–	3	530	–	–	2	–	–	DRIVING LANE SHOULDER
	299+69	-	377+00	LT/RT	'WB'	800	–	8	1,270	–	–	–	–	–	PASSING LANE AND SHOULDER
	299+69	-	377+00	LT	'WB'	930	–	6	930	–	–	–	–	–	DRIVING LANE
	299+69	-	377+00	LT	'WB'	–	–	3	530	–	–	20	–	–	DRIVING LANE SHOULDER
	377+00	-	383+81	LT/RT	'WB'	–	–	–	230	–	–	–	–	–	PASSING LANE AND SHOULDER
	377+00	-	383+81	LT	'WB'	–	–	–	–	–	–	–	–	–	DRIVING LANE
	377+00	-	383+81	LT	'WB'	–	–	–	450	–	–	1	–	–	DRIVING LANE SHOULDER
	383+81	-	419+51	LT/RT	'WB'	800	–	7	1,270	–	–	1	–	–	PASSING LANE AND SHOULDER
SUBTOTALS						9,450	–	94	16,860	–	–	59	–	–	

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

REMOVAL ITEMS (CONT.)

PROJECT	STATION	TO	STATION	OFFSET	ALIGNMENT	204.0105 REMOVING PAVEMENT BUTT JOINTS SY	204.0110* REMOVING ASPHALTIC SURFACE SY	204.0115 REMOVING ASPHALTIC SURFACE BUTT JOINTS SY	204.0120 REMOVING ASPHALTIC SURFACE MILLING SY	204.0130 REMOVING CURB LF	204.0150 REMOVING CURB & GUTTER LF	204.0180 REMOVING DELINEATORS AND MARKERS EACH	204.0190 REMOVING SURFACE DRAINS EACH	SPV.0060.01 REMOVING RAISED PAVEMENT MARKER AND FILLING VOID EACH	REMARKS
1050-01-61															
	383+81	-	419+51	LT	'WB'	930	--	6	930	--	--	--	--	--	DRIVING LANE
	383+81	-	419+51	LT	'WB'	--	--	4	530	--	--	8	--	--	DRIVING LANE SHOULDER
	419+51	-	426+32	LT/RT	'WB'	--	--	--	230	--	--	--	--	--	PASSING LANE AND SHOULDER
	419+51	-	426+32	LT	'WB'	--	--	--	--	--	--	--	--	--	DRIVING LANE
	419+51	-	426+32	LT	'WB'	--	--	--	450	--	--	3	--	--	DRIVING LANE SHOULDER
	426+32	-	449+15	LT/RT	'WB'	800	--	7	1,270	--	--	--	--	--	PASSING LANE AND SHOULDER
	426+32	-	449+15	LT	'WB'	930	--	6	930	--	--	--	--	--	DRIVING LANE
	426+32	-	449+15	LT	'WB'	--	--	4	530	--	--	5	--	--	DRIVING LANE SHOULDER
	449+15	-	455+78	LT/RT	'WB'	--	--	--	220	--	--	--	--	--	PASSING LANE AND SHOULDER
	449+15	-	455+78	LT	'WB'	--	--	--	--	--	--	--	--	--	DRIVING LANE
	449+15	-	455+78	LT	'WB'	--	--	--	440	--	--	2	--	--	DRIVING LANE SHOULDER
	455+78	-	534+28	LT/RT	'WB'	800	--	8	1,270	--	--	1	--	--	PASSING LANE AND SHOULDER
	455+78	-	534+28	LT	'WB'	930	--	6	930	--	--	--	--	--	DRIVING LANE
	455+78	-	534+28	LT	'WB'	--	--	4	530	--	--	20	--	--	DRIVING LANE SHOULDER
	535+94	-	607+50	LT/RT	'WB'	800	--	8	1,270	--	--	1	--	--	PASSING LANE AND SHOULDER
	535+94	-	607+50	LT	'WB'	930	--	6	930	--	--	--	--	--	DRIVING LANE
	535+94	-	607+50	LT	'WB'	--	--	4	530	--	--	15	--	--	DRIVING LANE SHOULDER
	607+50	-	614+22	LT/RT	'WB'	--	--	--	220	--	--	--	--	--	PASSING LANE AND SHOULDER
	607+50	-	614+22	LT	'WB'	--	--	--	--	--	--	--	--	--	DRIVING LANE
	607+50	-	614+22	LT	'WB'	--	--	--	450	--	--	3	--	--	DRIVING LANE SHOULDER
	614+22	-	661+00	LT/RT	'WB'	400	--	4	630	--	--	1	--	--	PASSING LANE AND SHOULDER
	614+22	-	661+00	LT	'WB'	470	--	3	470	--	--	--	--	--	DRIVING LANE
	614+22	-	661+00	LT	'WB'	--	--	2	270	--	--	12	--	--	DRIVING LANE SHOULDER
	661+00	-	729+00	LT/RT	'WB'	--	--	--	--	--	--	--	--	--	PASSING LANE AND SHOULDER
	661+00	-	729+00	LT	'WB'	--	--	--	--	--	--	--	--	--	DRIVING LANE
	661+00	-	729+00	LT	'WB'	--	--	--	--	--	--	17	--	--	DRIVING LANE SHOULDER
	729+00	-	817+00	LT/RT	'WB'	--	--	--	--	--	--	1	--	--	PASSING LANE AND SHOULDER
	729+00	-	817+00	LT	'WB'	--	--	--	--	--	--	--	--	--	DRIVING LANE
	729+00	-	817+00	LT	'WB'	--	--	--	--	--	--	22	--	--	DRIVING LANE SHOULDER
	817+00	-	894+56	LT/RT	'WB'	400	--	4	630	--	--	3	--	--	PASSING LANE AND SHOULDER
	817+00	-	894+56	LT	'WB'	470	--	3	470	--	--	--	--	--	DRIVING LANE
	817+00	-	894+56	LT	'WB'	--	--	2	270	--	--	19	--	--	DRIVING LANE SHOULDER
		818+97		LT	'WB'	--	16	133	--	--	140	--	--	--	300TH STREET INTERSECTION
	877+00	-	883+00	RT	'WB'	--	--	2	400	--	--	--	--	--	PASSING LANE SHOULDER REPLACEMENT
	894+56	-	915+07	LT/RT	'WB'	--	--	--	680	--	--	--	--	--	PASSING LANE AND SHOULDER
	894+56	-	915+07	LT	'WB'	--	--	--	--	--	--	--	--	--	DRIVING LANE
	894+56	-	915+07	LT	'WB'	--	--	--	600	--	--	5	--	--	DRIVING LANE SHOULDER
	915+07	-	941+00	LT/RT	'WB'	400	--	4	630	--	--	--	--	--	PASSING LANE AND SHOULDER
	915+07	-	941+00	LT	'WB'	470	--	3	470	--	--	--	--	--	DRIVING LANE
	915+07	-	941+00	LT	'WB'	--	--	2	270	--	--	6	--	--	DRIVING LANE SHOULDER
	941+00	-	990+00	LT/RT	'WB'	400	--	4	2,530	--	--	1	--	--	PASSING LANE AND SHOULDER
	941+00	-	990+00	LT	'WB'	470	--	3	2,360	--	--	--	--	--	DRIVING LANE
	941+00	-	990+00	LT	'WB'	--	--	2	1,010	--	--	13	--	--	DRIVING LANE SHOULDER
	95+30	-	98+26	LT/RT	'X'	--	--	19	1,360	--	--	--	--	--	--
	403+96	-	422+17	LT/RT	'XA'	--	--	--	1,630	--	--	18	--	--	--
	422+17	-	436+39	LT/RT	'XB'	--	--	--	2,420	--	--	14	--	--	--
	101+36	-	106+20	LT/RT	'S'	--	514	25	1,550	--	960	--	1	--	--
	590+29	-	610+74	LT/RT	'SA'	--	40	--	1,910	--	--	20	--	--	--
	610+74	-	625+02	LT/RT	'SB'	--	50	--	2,450	75	--	14	--	--	--
	101+73	-	105+00	LT/RT	'D'	--	40	20	1,490	--	360	--	2	--	--
	894+55	-	913+87	LT/RT	'DA'	--	--	--	2,120	--	--	19	--	--	--
	913+87	-	927+85	LT/RT	'DB'	--	--	--	2,480	--	--	14	--	--	--
	UNDISTRIBUTED			LT/RT	0	--	--	18	3,810	--	--	--	--	--	SHOULDER REPAIR PRIOR TO TRAFFIC SHIFT
	UNDISTRIBUTED			LT	0	--	--	--	--	--	--	--	--	600	--
SUBTOTALS						9,600	660	316	44,570	75	1,460	257	3	600	
PROJECT 1050-01-61 TOTALS						19,050	660	410	61,430	75	1,460	316	3	600	

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

REMOVAL ITEMS (CONT.)

PROJECT	STATION	TO	STATION	OFFSET	ALIGNMENT	204.0105 REMOVING PAVEMENT BUTT JOINTS SY	204.0110* REMOVING ASPHALTIC SURFACE SY	204.0115 REMOVING ASPHALTIC SURFACE BUTT JOINTS SY	204.0120 REMOVING ASPHALTIC SURFACE MILLING SY	204.0130 REMOVING CURB LF	204.0150 REMOVING CURB & GUTTER LF	204.0180 REMOVING DELINEATORS AND MARKERS EACH	204.0190 REMOVING SURFACE DRAINS EACH	SPV.0060.01 REMOVING RAISED PAVEMENT MARKER AND FILLING VOID EACH	REMARKS
1052-01-62															
	154+19	-	159+37	LT/RT	'EB'	–	7	--	–	–	--	–	2	--	–
	156+14	-	209+86	LT/RT	'EB'	800	3	8	1,270	–	--	1	1	--	PASSING LANE AND SHOULDER
	156+14	-	209+86	RT	'EB'	930	--	6	930	–	--	–	–	--	DRIVING LANE
	156+14	-	209+86	RT	'EB'	–	3	4	530	–	--	13	1	--	DRIVING LANE SHOULDER
	210+82	-	232+00	LT/RT	'EB'	800	--	8	1,270	–	--	–	–	--	PASSING LANE AND SHOULDER
	210+82	-	232+00	RT	'EB'	930	--	6	930	–	--	–	–	--	DRIVING LANE
	210+82	-	232+00	RT	'EB'	–	--	4	530	–	--	5	–	--	DRIVING LANE SHOULDER
	232+00	-	238+33	LT/RT	'EB'	–	--	--	210	–	--	–	–	--	PASSING LANE AND SHOULDER
	232+00	-	238+33	RT	'EB'	–	--	--	–	–	--	–	–	--	DRIVING LANE
	232+00	-	238+33	RT	'EB'	–	--	--	420	–	--	2	–	--	DRIVING LANE SHOULDER
	238+33	-	283+14	LT/RT	'EB'	800	--	7	1,270	–	--	1	–	--	PASSING LANE AND SHOULDER
	238+33	-	283+14	RT	'EB'	930	--	6	930	–	--	–	–	--	DRIVING LANE
	238+33	-	283+14	RT	'EB'	–	--	4	530	–	--	11	–	--	DRIVING LANE SHOULDER
	283+14	-	289+48	LT/RT	'EB'	–	--	--	210	–	--	–	–	--	PASSING LANE AND SHOULDER
	283+14	-	289+48	RT	'EB'	–	--	--	–	–	--	–	–	--	DRIVING LANE
	283+14	-	289+48	RT	'EB'	–	--	--	420	–	--	2	–	--	DRIVING LANE SHOULDER
	289+48	-	298+71	LT/RT	'EB'	800	3	8	1,270	–	--	–	1	--	PASSING LANE AND SHOULDER
	289+48	-	298+71	RT	'EB'	930	--	6	930	–	--	–	–	--	DRIVING LANE
	289+48	-	298+71	RT	'EB'	–	3	3	530	–	--	2	1	--	DRIVING LANE SHOULDER
	299+69	-	376+62	LT/RT	'EB'	800	--	8	1,270	–	--	–	–	--	PASSING LANE AND SHOULDER
	299+69	-	376+62	RT	'EB'	930	--	6	930	–	--	–	–	--	DRIVING LANE
	299+69	-	376+62	RT	'EB'	–	--	3	530	–	--	20	–	--	DRIVING LANE SHOULDER
	376+62	-	383+38	LT/RT	'EB'	–	--	--	230	–	--	–	–	--	PASSING LANE AND SHOULDER
	376+62	-	383+38	RT	'EB'	–	--	--	–	–	--	–	–	--	DRIVING LANE
	376+62	-	383+38	RT	'EB'	–	--	--	450	–	--	1	–	--	DRIVING LANE SHOULDER
	383+38	-	420+82	LT/RT	'EB'	800	--	7	1,270	–	--	1	–	--	PASSING LANE AND SHOULDER
	383+38	-	420+82	RT	'EB'	930	--	6	930	–	--	–	–	--	DRIVING LANE
	383+38	-	420+82	RT	'EB'	–	--	4	530	–	--	10	–	--	DRIVING LANE SHOULDER
	420+82	-	427+63	LT/RT	'EB'	–	--	--	230	–	--	–	–	--	PASSING LANE AND SHOULDER
	420+82	-	427+63	RT	'EB'	–	--	--	–	–	--	–	–	--	DRIVING LANE
	420+82	-	427+63	RT	'EB'	–	--	--	450	–	--	3	–	--	DRIVING LANE SHOULDER
	427+63	-	449+00	LT/RT	'EB'	800	--	7	1,270	–	--	–	–	--	PASSING LANE AND SHOULDER
	427+63	-	449+00	RT	'EB'	930	--	6	930	–	--	–	–	--	DRIVING LANE
	427+63	-	449+00	RT	'EB'	–	--	4	530	–	--	5	–	--	DRIVING LANE SHOULDER
	449+00	-	455+63	LT/RT	'EB'	–	--	--	220	–	--	–	–	--	PASSING LANE AND SHOULDER
	449+00	-	455+63	RT	'EB'	–	--	--	–	–	--	–	–	--	DRIVING LANE
	449+00	-	455+63	RT	'EB'	–	--	--	440	–	--	2	–	--	DRIVING LANE SHOULDER
	455+63	-	533+67	LT/RT	'EB'	800	3	8	1,270	–	--	1	1	--	PASSING LANE AND SHOULDER
	455+63	-	533+67	RT	'EB'	930	--	6	930	–	--	–	–	--	DRIVING LANE
	455+63	-	533+67	RT	'EB'	–	3	4	530	–	--	19	1	--	DRIVING LANE SHOULDER
	535+33	-	607+54	LT/RT	'EB'	800	--	8	1,270	–	--	1	–	--	PASSING LANE AND SHOULDER
	535+33	-	607+54	RT	'EB'	930	--	6	930	–	--	–	–	--	DRIVING LANE
	535+33	-	607+54	RT	'EB'	–	--	4	530	–	--	19	–	--	DRIVING LANE SHOULDER
	607+54	-	614+24	LT/RT	'EB'	–	--	--	220	–	--	–	–	--	PASSING LANE AND SHOULDER
	607+54	-	614+24	RT	'EB'	–	--	--	–	–	--	–	–	--	DRIVING LANE
	607+54	-	614+24	RT	'EB'	–	--	--	450	–	--	3	–	--	DRIVING LANE SHOULDER
	614+24	-	661+00	LT/RT	'EB'	400	--	4	630	–	--	1	–	--	PASSING LANE AND SHOULDER
	614+24	-	661+00	RT	'EB'	470	--	3	470	–	--	–	–	--	DRIVING LANE
	614+24	-	661+00	RT	'EB'	–	--	2	270	–	--	10	–	--	DRIVING LANE SHOULDER
	661+00	-	729+00	LT/RT	'EB'	–	--	--	–	–	--	–	–	--	PASSING LANE AND SHOULDER
	661+00	-	729+00	RT	'EB'	–	--	--	–	–	--	–	–	--	DRIVING LANE
	661+00	-	729+00	RT	'EB'	–	--	--	–	–	--	17	–	--	DRIVING LANE SHOULDER
	663+40			RT	'EB'	–	30	129	–	–	150	–	–	--	270TH STREET INTERSECTION
	729+00	-	817+00	LT/RT	'EB'	–	--	--	–	–	--	1	–	--	PASSING LANE AND SHOULDER
	729+00	-	817+00	RT	'EB'	–	--	--	–	–	--	–	–	--	DRIVING LANE
	729+00	-	817+00	RT	'EB'	–	--	--	–	–	--	22	–	--	DRIVING LANE SHOULDER
	817+00	-	896+27	LT/RT	'EB'	400	--	4	630	–	--	3	–	--	PASSING LANE AND SHOULDER
	817+00	-	896+27	RT	'EB'	470	--	3	470	–	--	–	–	--	DRIVING LANE
	817+00	-	896+27	RT	'EB'	–	--	2	270	–	--	19	–	--	DRIVING LANE SHOULDER
	818+94			RT	'EB'	–	28	133	–	–	150	–	–	--	300TH STREET INTERSECTION
	896+27	-	914+72	LT/RT	'EB'	–	--	--	620	–	--	–	–	--	PASSING LANE AND SHOULDER
	896+27	-	914+72	RT	'EB'	–	--	--	–	–	--	–	–	--	DRIVING LANE
	896+27	-	914+72	RT	'EB'	–	--	--	690	–	--	5	–	--	DRIVING LANE SHOULDER
	914+72	-	941+00	LT/RT	'EB'	400	--	4	630	–	--	–	–	--	PASSING LANE AND SHOULDER
	914+72	-	941+00	RT	'EB'	470	--	3	470	–	--	–	–	--	DRIVING LANE
SUBTOTALS						18,180	83	444	33,670	–	300	200	8	--	

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

REMOVAL ITEMS (CONT.)

PROJECT	STATION	TO	STATION	OFFSET	ALIGNMENT	204.0105 REMOVING PAVEMENT BUTT JOINTS SY	204.0110* REMOVING ASPHALTIC SURFACE SY	204.0115 REMOVING ASPHALTIC SURFACE BUTT JOINTS SY	204.0120 REMOVING ASPHALTIC SURFACE MILLING SY	204.0130 REMOVING CURB LF	204.0150 REMOVING CURB & GUTTER LF	204.0180 REMOVING DELINEATORS AND MARKERS EACH	204.0190 REMOVING SURFACE DRAINS EACH	SPV.0060.01 REMOVING RAISED PAVEMENT MARKER AND FILLING VOID EACH	REMARKS
1052-01-62															
	914+72	-	941+00	RT	'EB'	–	--	2	270	–	--	5	–	–	DRIVING LANE SHOULDER
	941+00	-	990+00	LT/RT	'EB'	400	--	4	630	–	--	1	–	–	PASSING LANE AND SHOULDER
	941+00	-	990+00	RT	'EB'	470	--	3	470	–	--	–	–	–	DRIVING LANE
	941+00	-	990+00	RT	'EB'	–	--	2	270	–	--	13	–	–	DRIVING LANE SHOULDER
		942+50		RT	'EB'	–	20	164	–	–	160	–	–	–	320TH STREET INTERSECTION
	100+95	-	104+30	LT/RT	'X'	–	--	17	1,410	–	--	–	–	–	–
	412+33	-	426+41	LT/RT	'XD'	–	--	--	2,340	–	--	14	–	–	–
	426+41	-	444+91	LT/RT	'XC'	–	--	--	1,960	–	--	18	–	–	–
	94+60	-	99+25	LT/RT	'S'	–	491	25	1,400	–	906	–	1	–	–
	597+10	-	611+23	LT/RT	'SD'	–	66	--	2,220	86	--	20	–	–	–
	611+23	-	631+09	LT/RT	'SC'	–	40	--	2,000	–	--	14	–	–	–
	93+80	-	98+96	LT/RT	'D'	–	40	31	2,380	–	359	–	2	–	–
	896+08	-	909+50	LT/RT	'DD'	–	--	--	1,310	–	--	20	–	–	–
	909+50	-	928+65	LT/RT	'DC'	–	--	--	1,990	–	--	13	–	–	–
	UNDISTRIBUTED			LT/RT	0	–	--	18	3,810	–	--	–	–	–	SHOULDER REPAIR PRIOR TO TRAFFIC SHIFT
	UNDISTRIBUTED			' RT	0	–	--	--	–	–	--	–	–	600	–
SUBTOTALS						870	657	266	22,460	86	1,425	118	3	600	
PROJECT 1052-01-62 TOTALS						19,050	740	710	56,130	86	1,725	318	11	600	
TOTALS						38,100	1,400	1,120	117,560	161	3,185	634	14	1,200	

NOTE: REPAIR ASPHALT SHOULDERS PRIOR TO TRAFFIC SHIFT AT LOCATIONS DESIGNATED BY THE ENGINEER

EARTHWORK SUMMARY

DIVISION	LOCATION	EXCAVATION COMMON (NOTE 1) (ITEM #205.0100)	SALVAGED / UNUSEABLE PAVEMENT MATERIAL (NOTE 2)	AVAILABLE MATERIAL (NOTE 3)	UNEXPANDED FILL	EXPANDED FILL (NOTE 4)	MASS ORDINATE +/- (NOTE 5)
						FACTOR 1.25	
ID 1050-01-61							
1	STH 27 INTERCHANGE - NW WIDENING	271	10	261	2	3	258
1	STH 27 INTERCHANGE - RAMP SA WIDENING	564	9	555	9	12	543
1	STH 27 INTERCHANGE - NE WIDENING	63	3	60	127	159	-99
1	STH 27 INTERCHANGE - RAMP SB WIDENING	113	3	110	173	217	-107
1	STH 27 INTERCHANGE - MEDIAN/ISLAND RECONSTRUCTION *	470	117	352	0	0	352
1050-01-61 TOTALS		1,481	142	1,339	311	391	948
ID 1052-01-62							
2	STH 27 INTERCHANGE - SE WIDENING	143	10	133	6	8	125
2	STH 27 INTERCHANGE - RAMP SC WIDENING	341	4	337	44	55	282
2	STH 27 INTERCHANGE - SW WIDENING	70	2	68	8	10	58
2	STH 27 INTERCHANGE - RAMP SD WIDENING	404	9	395	4	5	390
2	STH 27 INTERCHANGE - MEDIAN/ISLAND RECONSTRUCTION *	460	115	345	0	0	345
1052-01-62 TOTALS		1,418	141	1,277	62	78	1,199
TOTALS		2,899	283	2,616	373	469	2,147

1) SALVAGED/UNSUABLE PAVEMENT MATERIAL IS INCLUDED IN CUT
2) SALVAGED/UNUSABLE PAVEMENT MATERIAL = (AREA OF PROJECT PAVEMENT REMOVAL) * (TYPICAL EXISTING PAVEMENT DEPTH)
3) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSUABLE PAVEMENT MATERIAL
4) EXPANDED FILL FACTOR = (UNEXPANDED FILL) * (FILL FACTOR)
5) MASS ORDINATE = CUT - (EXPANDED FILL); PLUS INDICATES AN EXCESS OF MATERIAL

OTHER NOTES:
* CUT VOLUME BASED ON TYPICAL SECTION WITH 24-INCHES OF CUT ACROSS MEDIAN WIDTH ; NO CROSS SECTIONS PROVIDED, LOCATIONS SHOWN ONPAVING DETAILS

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

3

GRADING, SHAPING AND FINISHING INTERSECTIONS

PROJECT	STATION	OFFSET	ALIGNMENT	LOCATION	205.9015.S EACH	**EXCAVATION COMMON CY	**FILL CY	**BORROW CY	**TOPSOIL SY	**FERTILIZER TYPE B CWT	**SEEDING MIXTURE NO. 30 LB
1050-01-61											
	818+97	LT/RT	'WB'	300TH STREET (WB)	1	26	3	–	62	0.1	1.1
PROJECT 1050-01-61 TOTALS					1	26	3	–	62	0.1	1.1
1052-01-62											
	663+40	RT	'EB'	270TH STREET	1	28	3	–	67	0.1	1.2
	818+94	RT	'EB'	300TH STREET (EB)	1	28	3	–	67	0.1	1.2
	942+50	LT/RT	'EB'	320TH STREET	1	29	3	–	69	0.1	1.2
PROJECT 1052-01-62 TOTALS					3	85	9	–	203	0.3	3.7
TOTALS					4	111	12	–	265	0.4	4.8

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

MISCELLANEOUS ASPHALTIC ITEMS

PROJECT	LOCATION	211.0100 PREPARE FOUNDATION FOR ASPHALTIC PAVING (1050-01-61) LS	211.0100 PREPARE FOUNDATION FOR ASPHALTIC PAVING (1052-01-62) LS	SPV.0105.01 MILLING AND REMOVING TEMPORARY JOINT PROJECT 1050-01-61 LS	SPV.0105.02 MILLING AND REMOVING TEMPORARY JOINT PROJECT 1052-01-62 LS	SPV.0105.03 MATERIAL TRANSFER VEHICLE PROJECT 1050-01-61 LS	SPV.0105.04 MATERIAL TRANSFER VEHICLE PROJECT 1052-01-62 LS
1050-01-61							
	PROJECT	1	–	1	–	1	–
PROJECT 1050-01-61 TOTALS		1	–	1	–	1	–
1052-01-62							
	PROJECT	--	1	–	1	–	1
PROJECT 1052-01-62 TOTALS		1	1	1	1	1	1

NOTE: SEE TYPICAL SECTIONS FOR LOCATIONS OF PREPARE FOUNDATION FOR ASPHALTIC PAVING AND MILLING AND REMOVING TEMPORARY JOINT

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

BASE AGGREGATE ITEMS

PROJECT	STATION	TO	STATION	OFFSET	ALIGNMENT	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	305.0120* BASE AGGREGATE DENSE 1 1/4-INCH TON	305.0500 SHAPING SHOULDERS STA	REMARKS
1050-01-61									
	151+70	-	154+29	LT	'WB'	21	–	–	GUARDRAIL GRADING
	155+54	-	159+64	LT	'WB'	81	–	–	GUARDRAIL GRADING
	155+61	-	209+86	RT	'WB'	483	–	54	PASSING LANE SHOULDER
	155+61	-	209+86	LT	'WB'	201	–	54	DRIVING LANE SHOULDER
	155+72	-	159+82	RT	'WB'	82	–	–	GUARDRAIL GRADING
		169+87		RT	'WB'	12	144	–	CROSSOVER GRADING
	206+02	-	209+86	LT	'WB'	196	–	–	GUARDRAIL GRADING
	210+82	-	232+00	RT	'WB'	170	–	21	PASSING LANE SHOULDER
	210+82	-	232+00	LT	'WB'	69	–	21	DRIVING LANE SHOULDER
	210+91	-	214+64	RT	'WB'	237	–	–	GUARDRAIL GRADING
	210+91	-	216+14	LT	'WB'	289	–	–	GUARDRAIL GRADING
	232+00	-	238+33	RT	'WB'	47	–	6	PASSING LANE SHOULDER
	232+00	-	238+33	LT	'WB'	10	–	3	DRIVING LANE SHOULDER
	235+46	-	239+19	LT	'WB'	216	–	–	GUARDRAIL GRADING
	273+86			RT	'WB'	12	144	–	CROSSOVER GRADING
	238+33	-	283+16	RT	'WB'	432	–	45	PASSING LANE SHOULDER
	238+33	-	283+16	LT	'WB'	191	–	45	DRIVING LANE SHOULDER
	283+16	-	289+50	RT	'WB'	47	–	6	PASSING LANE SHOULDER
	283+16	-	289+50	LT	'WB'	10	–	3	DRIVING LANE SHOULDER
	286+58	-	290+44	LT	'WB'	221	–	–	GUARDRAIL GRADING
	289+50	-	298+73	RT	'WB'	90	–	9	PASSING LANE SHOULDER
	289+50	-	298+73	LT	'WB'	31	–	9	DRIVING LANE SHOULDER
	297+65	-	298+61	LT	'WB'	65	–	–	GUARDRAIL GRADING
	299+69	-	377+00	RT	'WB'	718	–	77	PASSING LANE SHOULDER
	299+69	-	377+00	LT	'WB'	308	–	77	DRIVING LANE SHOULDER
	299+72	-	305+95	LT	'WB'	58	–	–	GUARDRAIL GRADING
	299+75	-	303+76	RT	'WB'	64	–	–	GUARDRAIL GRADING
	377+00	-	383+81	RT	'WB'	50	–	7	PASSING LANE SHOULDER
	377+00	-	383+81	LT	'WB'	11	–	4	DRIVING LANE SHOULDER
	380+91	-	385+90	LT	'WB'	283	–	–	GUARDRAIL GRADING
	383+81	-	419+51	RT	'WB'	343	–	36	PASSING LANE SHOULDER
	383+81	-	419+51	LT	'WB'	93	–	36	DRIVING LANE SHOULDER
		395+15		RT	'WB'	12	144	–	CROSSOVER GRADING
	419+51	-	426+32	RT	'WB'	50	–	7	PASSING LANE SHOULDER
	419+51	-	426+32	LT	'WB'	10	–	4	DRIVING LANE SHOULDER
	423+02	-	426+76	LT	'WB'	187	–	–	GUARDRAIL GRADING
	426+32	-	449+15	RT	'WB'	224	–	23	PASSING LANE SHOULDER
	426+32	-	449+15	LT	'WB'	78	–	23	DRIVING LANE SHOULDER
	449+15	-	455+78	RT	'WB'	49	–	7	PASSING LANE SHOULDER
	449+15	-	455+78	LT	'WB'	8	–	3	DRIVING LANE SHOULDER
	452+02	-	456+96	LT	'WB'	287	–	–	GUARDRAIL GRADING
	455+78	-	534+28	RT	'WB'	762	–	79	PASSING LANE SHOULDER
	455+78	-	534+28	LT	'WB'	334	–	79	DRIVING LANE SHOULDER
		461+88		RT	'WB'	12	144	–	CROSSOVER GRADING
	533+97	-	534+55	LT	'WB'	25	–	–	GUARDRAIL GRADING
	535+94	-	607+50	RT	'WB'	652	–	72	PASSING LANE SHOULDER
	535+94	-	607+50	LT	'WB'	235	–	72	DRIVING LANE SHOULDER
	535+97	-	540+20	RT	'WB'	245	–	–	GUARDRAIL GRADING
	536+45	-	540+31	LT	'WB'	213	–	–	GUARDRAIL GRADING
		589+65		RT	'WB'	12	144	–	CROSSOVER GRADING
	607+50	-	614+22	RT	'WB'	50	–	7	PASSING LANE SHOULDER
	607+50	-	614+22	LT	'WB'	8	–	3	DRIVING LANE SHOULDER
	610+17	-	615+02	LT	'WB'	67	–	–	GUARDRAIL GRADING
	614+22	-	661+00	RT	'WB'	451	–	47	PASSING LANE SHOULDER
	614+22	-	661+00	LT	'WB'	180	–	47	DRIVING LANE SHOULDER
		638+36		RT	'WB'	12	144	–	CROSSOVER GRADING
	661+00	-	729+00	RT	'WB'	667	–	68	PASSING LANE SHOULDER
	661+00	-	729+00	LT	'WB'	295	–	68	DRIVING LANE SHOULDER
	729+00	-	817+00	RT	'WB'	855	–	88	PASSING LANE SHOULDER
	729+00	-	817+00	LT	'WB'	382	–	88	DRIVING LANE SHOULDER
		730+09		RT	'WB'	12	144	–	CROSSOVER GRADING
	817+00	-	894+56	RT	'WB'	716	–	78	PASSING LANE SHOULDER
	817+00	-	894+56	LT	'WB'	331	–	78	DRIVING LANE SHOULDER
		818+97		RT	'WB'	39	–	–	300TH STREET INTERSECTION
		838+34		RT	'WB'	12	144	–	CROSSOVER GRADING
SUBTOTALS						12,613	1,152	1,454	

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

BASE AGGREGATE ITEMS (CONT.)

PROJECT	STATION	TO	STATION	OFFSET	ALIGNMENT	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	305.0120* BASE AGGREGATE DENSE 1 1/4-INCH TON	305.0500 SHAPING SHOULDERS STA	REMARKS
1050-01-61									
		867+25		RT	'WB'	12	144	–	CROSSOVER GRADING
	877+00	-	883+00	RT	'WB'	--	–	6	PASSING LANE SHOULDER REPLACEMENT
	894+56	-	915+07	RT	'WB'	168	–	17	PASSING LANE SHOULDER
	894+56	-	915+07	LT	'WB'	27	–	6	DRIVING LANE SHOULDER
	900+17	-	904+65	LT	'WB'	228	–	–	GUARDRAIL GRADING
	911+69	-	915+05	RT	'WB'	204	–	–	GUARDRAIL GRADING
	912+15	-	915+88	LT	'WB'	220	–	–	GUARDRAIL GRADING
	915+07	-	941+00	RT	'WB'	254	–	26	PASSING LANE SHOULDER
	915+07	-	941+00	LT	'WB'	34	–	26	DRIVING LANE SHOULDER
	941+00	-	990+00	RT	'WB'	452	–	49	PASSING LANE SHOULDER
	941+00	-	990+00	LT	'WB'	213	–	49	DRIVING LANE SHOULDER
		942+64		RT	'WB'	46	–	–	320TH STREET INTERSECTION
	95+30	-	98+26	LT/RT	'X'	18	–	3	LOW SHOULDERS
	403+96	-	422+17	LT/RT	'XA'	193	–	11	SHOULDERS
	422+17	-	436+39	LT/RT	'XB'	122	–	16	SHOULDERS
	101+36	-	106+20	LT/RT	'S'	--	437	–	MEDIAN ISLANDS
	590+29	-	610+74	LT/RT	'SA'	203	–	10	SHOULDERS
	RAMP 'SA' WIDENING			RT	–	36	579	–	OSOW WIDENING
	RAMP 'SB' WIDENING			LT/RT	–	17	408	–	OSOW WIDENING AND ISLAND
	610+74	-	625+02	LT/RT	'SB'	120	–	15	SHOULDERS
	101+58	-	102+99	LT	'D'	140	–	–	GUARDRAIL GRADING
	101+73	-	105+00	LT/RT	'D'	6	–	1	LOW SHOULDERS
	101+88	-	103+87	RT	'D'	98	–	–	GUARDRAIL GRADING
	894+55	-	913+87	LT/RT	'DA'	69	–	22	SHOULDERS
	913+87	-	927+85	LT/RT	'DB'	67	–	16	SHOULDERS
	UNDISTRIBUTED			–	–	--	–	53	SHOULDER REPAIR PRIOR TO TRAFFIC SHIFT
SUBTOTALS						2,947	1,568	326	
PROJECT 1050-01-61 TOTALS						15,560	2,720	1,780	
1052-01-62									
	150+15	-	154+38	LT	'EB'	9	–	–	GUARDRAIL GRADING
	150+82	-	154+56	RT	'EB'	25	–	–	GUARDRAIL GRADING
	156+14	-	209+86	LT	'EB'	477	–	54	PASSING LANE SHOULDER
	156+14	-	209+86	RT	'EB'	210	–	54	DRIVING LANE SHOULDER
	156+39	-	158+22	RT	'EB'	98	–	–	GUARDRAIL GRADING
	205+55	-	209+79	LT	'EB'	253	–	–	GUARDRAIL GRADING
	206+65	-	209+79	RT	'EB'	197	–	–	GUARDRAIL GRADING
	210+82	-	232+00	LT	'EB'	208	–	21	PASSING LANE SHOULDER
	210+82	-	232+00	RT	'EB'	84	–	21	DRIVING LANE SHOULDER
	210+90	-	211+60	RT	'EB'	26	–	–	GUARDRAIL GRADING
	230+98	-	234+93	RT	'EB'	216	–	–	GUARDRAIL GRADING
	232+00	-	238+33	LT	'EB'	47	–	6	PASSING LANE SHOULDER
	232+00	-	238+33	RT	'EB'	10	–	3	DRIVING LANE SHOULDER
	238+33	-	283+14	LT	'EB'	432	–	45	PASSING LANE SHOULDER
	238+33	-	283+14	RT	'EB'	191	–	45	DRIVING LANE SHOULDER
	282+34	-	286+07	RT	'EB'	216	–	–	GUARDRAIL GRADING
	283+14	-	289+48	LT	'EB'	47	–	6	PASSING LANE SHOULDER
	283+14	-	289+48	RT	'EB'	10	–	3	DRIVING LANE SHOULDER
	289+48	-	298+71	LT	'EB'	48	–	9	PASSING LANE SHOULDER
	289+48	-	298+71	RT	'EB'	24	–	9	DRIVING LANE SHOULDER
	299+69	-	376+62	LT	'EB'	743	–	77	PASSING LANE SHOULDER
	299+69	-	376+62	RT	'EB'	308	–	77	DRIVING LANE SHOULDER
	299+91	-	305+74	RT	'EB'	298	–	–	GUARDRAIL GRADING
	376+62	-	383+38	LT	'EB'	50	–	7	PASSING LANE SHOULDER
	376+62	-	383+38	RT	'EB'	11	–	4	DRIVING LANE SHOULDER
	376+98	-	379+53	RT	'EB'	238	–	–	GUARDRAIL GRADING
	383+38	-	420+82	LT	'EB'	360	–	37	PASSING LANE SHOULDER
	383+38	-	420+82	RT	'EB'	140	–	37	DRIVING LANE SHOULDER
	420+21	-	423+94	RT	'EB'	218	–	–	GUARDRAIL GRADING
	420+82	-	427+63	LT	'EB'	50	–	7	PASSING LANE SHOULDER
SUBTOTALS						5,244	–	522	

BASE AGGREGATE ITEMS (CONT.)

PROJECT	STATION	TO	STATION	OFFSET	ALIGNMENT	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	305.0120* BASE AGGREGATE DENSE 1 1/4-INCH TON	305.0500 SHAPING SHOULDERS STA	REMARKS
1052-01-62									
	420+82	-	427+63	RT	'EB'	11	–	7	DRIVING LANE SHOULDER
	427+63	-	449+00	LT	'EB'	209	–	21	PASSING LANE SHOULDER
	427+63	-	449+00	RT	'EB'	34	–	21	DRIVING LANE SHOULDER
	447+03	-	452+80	RT	'EB'	370	–	6	GUARDRAIL GRADING
	449+00	-	455+63	LT	'EB'	49	–	7	PASSING LANE SHOULDER
	449+00	-	455+63	RT	'EB'	8	–	7	DRIVING LANE SHOULDER
	455+63	-	533+67	LT	'EB'	716	–	78	PASSING LANE SHOULDER
	455+63	-	533+67	RT	'EB'	320	–	78	DRIVING LANE SHOULDER
	529+42	-	533+66	LT	'EB'	253	–	–	GUARDRAIL GRADING
	529+45	-	533+18	RT	'EB'	223	–	–	GUARDRAIL GRADING
	535+07	-	539+90	RT	'EB'	239	–	–	GUARDRAIL GRADING
	535+33	-	607+54	LT	'EB'	708	–	72	PASSING LANE SHOULDER
	535+33	-	607+54	RT	'EB'	270	–	72	DRIVING LANE SHOULDER
	606+68	-	611+52	RT	'EB'	64	–	–	GUARDRAIL GRADING
	607+54	-	614+24	LT	'EB'	50	–	7	PASSING LANE SHOULDER
	607+54	-	614+24	RT	'EB'	8	–	7	DRIVING LANE SHOULDER
	614+24	-	661+00	LT	'EB'	451	–	47	PASSING LANE SHOULDER
	614+24	-	661+00	RT	'EB'	150	–	47	DRIVING LANE SHOULDER
	661+00	-	729+00	LT	'EB'	667	–	68	PASSING LANE SHOULDER
	661+00	-	729+00	RT	'EB'	289	–	68	DRIVING LANE SHOULDER
	729+00	-	817+00	LT	'EB'	863	–	88	PASSING LANE SHOULDER
	729+00	-	817+00	RT	'EB'	341	–	88	DRIVING LANE SHOULDER
	754+04	-	763+39	RT	'EB'	234	–	–	GUARDRAIL GRADING
	817+00	-	896+27	LT	'EB'	737	–	79	PASSING LANE SHOULDER
	817+00	-	896+27	RT	'EB'	338	–	79	DRIVING LANE SHOULDER
	896+27	-	914+72	LT	'EB'	112	–	15	PASSING LANE SHOULDER
	896+27	-	914+72	RT	'EB'	19	–	7	DRIVING LANE SHOULDER
	897+22	-	901+71	RT	'EB'	32	–	–	GUARDRAIL GRADING
	907+00	-	910+74	RT	'EB'	216	–	–	GUARDRAIL GRADING
	907+81	-	911+17	LT	'EB'	197	–	–	GUARDRAIL GRADING
	914+72	-	941+00	LT	'EB'	258	–	26	PASSING LANE SHOULDER
	914+72	-	941+00	RT	'EB'	67	–	26	DRIVING LANE SHOULDER
	941+00	-	990+00	LT	'EB'	453	–	49	PASSING LANE SHOULDER
	941+00	-	990+00	RT	'EB'	181	–	49	DRIVING LANE SHOULDER
	948+65	-	954+52	RT	'EB'	86	–	–	GUARDRAIL GRADING
	100+95	-	104+30	LT/RT	'X'	22	–	4	LOW SHOULDERS
	412+33	-	426+41	LT/RT	'XD'	123	–	17	SHOULDERS
	426+41	-	444+91	LT/RT	'XC'	186	–	13	SHOULDERS
	94+60	-	99+25	LT/RT	'S'	--	435	–	MEDIAN ISLANDS
	597+10	-	611+23	LT/RT	'SD'	119	–	14	SHOULDERS
	RAMP 'SD' WIDENING			LT/RT	–	25	526	–	OSOW WIDENING AND ISLAND
	RAMP 'SC' WIDENING			LT	–	37	489	–	OSOW WIDENING
	611+23	-	631+09	LT/RT	'SC'	193	–	24	SHOULDERS
	93+80	-	98+62	LT/RT	'D'	29	–	4	LOW SHOULDERS
	96+92	-	98+82	LT	'D'	109	–	–	GUARDRAIL GRADING
	97+97	-	99+13	RT	'D'	123	–	–	GUARDRAIL GRADING
	896+08	-	909+50	LT/RT	'DD'	39	–	13	SHOULDERS
	909+50	-	928+65	LT/RT	'DC'	73	–	11	SHOULDERS
	UNDISTRIBUTED			--	–	--	–	54	SHOULDER REPAIR PRIOR TO TRAFFIC SHIFT
SUBTOTALS						10,301	1,450	1,273	
PROJECT 1052-01-62 TOTALS						15,545	1,450	1,795	
TOTALS						31,105	4,170	3,575	

NOTE: REPAIR ASPHALT SHOULDERS PRIOR TO TRAFFIC SHIFT AT LOCATIONS DESIGNATED BY THE ENGINEER.

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

CONCRETE PAVEMENT REPAIR AND REPLACEMENT ITEMS

PROJECT	STATION	TO	STATION	OFFSET	ALIGNMENT	204.0110* REMOVING ASPHALTIC SURFACE SY	305.0120* BASE AGGREGATE DENSE 1 1/4-INCH TON	416.0610 DRILLED TIE BARS EACH	416.0620 DRILLED DOWEL BARS EACH	416.1110 CONCRETE SHOULDER RUMBLE STRIPS LF	416.1710 CONCRETE PAVEMENT REPAIR SY	416.1720 CONCRETE PAVEMENT REPLACEMENT SY	420.1000 CONTINUOUS DIAMOND GRINDING CONCRETE PAVEMENT SY	465.0110* ASPHALTIC SURFACE PATCHING TON	690.0150 SAWING ASPHALT SY	690.0250 SAWING CONCRETE SY	SPV.0180.01 CONCRETE PAVEMENT REPAIR DOWELED SPECIAL SY	SPV.0180.01 CONCRETE PAVEMENT REPLACEMENT DOWELED SPECIAL SY	REMARKS
1050-01-61																			
	155+61	-	209+86	LT/RT	'WB'	122	243	805	2032	--	--	–	–	20	2499	5420	96	2760	PASSING LANE
	155+61	-	209+86	LT	'WB'	95	227	602	1824	--	--	–	–	16	2002	5080	261	2408	DRIVING LANE
	210+82	-	232+00	LT/RT	'WB'	35	71	245	560	--	--	–	–	6	735	1540	--	840	PASSING LANE
	210+82	-	232+00	LT	'WB'	50	120	350	816	--	--	–	–	8	1057	2434	9	1400	DRIVING LANE
	232+00	-	238+33	LT/RT	'WB'	–	14	42	96	--	--	160	844	--	–	264	--	–	PASSING LANE
	232+00	-	238+33	LT	'WB'	–	17	42	112	633	9	187	985	--	–	322	--	–	DRIVING LANE
	238+33	-	283+16	LT/RT	'WB'	91	186	630	1488	--	--	–	–	15	1911	4050	24	2160	PASSING LANE
	238+33	-	283+16	LT	'WB'	8	19	49	160	--	--	–	–	1	168	438	28	196	DRIVING LANE
	283+16	-	289+50	LT/RT	'WB'	–	22	56	192	--	32	224	845	--	–	480	--	–	PASSING LANE
	283+16	-	289+50	LT	'WB'	–	24	42	240	634	84	196	986	--	–	600	--	–	DRIVING LANE
	289+50	-	298+73	LT/RT	'WB'	7	13	35	144	--	--	–	–	1	138	345	32	127	PASSING LANE
	289+50	-	298+73	LT	'WB'	8	20	49	160	--	--	–	–	1	175	445	28	207	DRIVING LANE
	299+69	-	377+00	LT/RT	'WB'	36	74	238	624	--	--	–	–	6	756	1653	40	825	PASSING LANE
	299+69	-	377+00	LT	'WB'	48	114	301	896	--	--	–	–	8	1003	2515	121	1217	DRIVING LANE
	377+00	-	383+81	LT/RT	'WB'	–	7	21	48	--	--	86	908	--	–	136	--	–	PASSING LANE
	377+00	-	383+81	LT	'WB'	–	26	63	160	681	9	300	1,059	--	–	479	--	–	DRIVING LANE
	383+81	-	419+51	LT/RT	'WB'	9	18	56	128	--	--	–	–	1	179	363	--	207	PASSING LANE
	383+81	-	419+51	LT	'WB'	37	89	217	688	--	--	–	–	6	778	1939	112	936	DRIVING LANE
	419+51	-	426+32	LT/RT	'WB'	–	5	14	32	--	--	55	908	--	–	89	--	–	PASSING LANE
	419+51	-	426+32	LT	'WB'	–	5	14	32	681	--	64	1,059	--	–	97	--	–	DRIVING LANE
	426+32	-	449+15	LT/RT	'WB'	1	2	7	16	--	--	–	–	0	22	45	--	25	PASSING LANE
	426+32	-	449+15	LT	'WB'	8	19	35	208	--	--	–	–	1	164	515	75	144	DRIVING LANE
	449+15	-	455+78	LT/RT	'WB'	–	--	–	--	--	--	–	884	--	–	–	--	–	PASSING LANE
	449+15	-	455+78	LT	'WB'	–	25	63	144	663	--	298	1,031	--	–	444	--	–	DRIVING LANE
	455+78	-	534+28	LT/RT	'WB'	11	23	70	176	--	--	–	–	2	230	483	8	257	PASSING LANE
	455+78	-	534+28	LT	'WB'	86	205	490	1648	--	--	–	–	14	1792	4573	308	2102	DRIVING LANE
	535+94	-	607+50	LT/RT	'WB'	12	25	70	224	--	--	–	–	2	253	575	32	260	PASSING LANE
	535+94	-	607+50	LT	'WB'	83	197	497	1408	--	--	–	–	14	1717	4093	159	2154	DRIVING LANE
	607+50	-	614+22	LT/RT	'WB'	–	2	7	16	--	--	28	896	--	–	45	--	–	PASSING LANE
	607+50	-	614+22	LT	'WB'	–	6	14	32	672	--	65	1,045	--	–	98	--	–	DRIVING LANE
	614+22	-	661+00	LT/RT	'WB'	8	16	49	144	--	--	–	–	1	168	375	16	177	PASSING LANE
	614+22	-	661+00	LT	'WB'	31	73	189	544	--	--	–	–	5	643	1561	65	798	DRIVING LANE
	661+00	-	729+00	LT/RT	'WB'	6	12	28	160	--	--	–	–	1	128	358	48	99	PASSING LANE
	661+00	-	729+00	LT	'WB'	15	35	56	448	--	--	–	–	2	312	1068	187	230	DRIVING LANE
	729+00	-	817+00	LT/RT	'WB'	11	22	56	256	--	--	–	–	2	224	592	64	192	PASSING LANE
	729+00	-	817+00	LT	'WB'	14	33	70	352	--	--	–	–	2	294	888	112	280	DRIVING LANE
	817+00	-	894+56	LT/RT	'WB'	10	20	35	304	--	--	–	–	2	206	643	112	123	PASSING LANE
	817+00	-	894+56	LT	'WB'	24	57	112	608	--	--	–	–	4	498	1524	205	460	DRIVING LANE
	894+56	-	915+07	LT/RT	'WB'	–	15	49	112	--	--	182	2,735	--	–	305	--	–	PASSING LANE
	894+56	-	915+07	LT	'WB'	–	27	70	176	1071	9	305	3,193	--	–	509	--	–	DRIVING LANE
	915+07	-	941+00	LT/RT	'WB'	15	30	84	304	--	--	–	–	2	307	744	56	296	PASSING LANE
	915+07	-	941+00	LT	'WB'	29	70	154	672	--	--	–	–	5	613	1747	187	633	DRIVING LANE
	941+00	-	990+00	LT/RT	'WB'	43	88	105	1584	--	--	–	–	7	905	3182	674	362	PASSING LANE
	941+00	-	990+00	LT	'WB'	87	207	399	2336	--	--	–	–	14	1826	5771	831	1605	DRIVING LANE
	403+96	-	416+35	LT/RT	'XA'	2	3	7	16	--	--	–	–	0	21	52	--	32	–
	430+76	-	436+39	LT/RT	'XB'	4	5	14	32	--	--	–	–	1	42	104	--	64	–
	590+29	-	604+15	LT/RT	'SA'	10	14	28	112	--	--	–	–	2	105	322	32	128	–
	619+33	-	625+02	LT/RT	'SB'	6	8	21	48	--	--	–	–	1	63	156	--	96	–
	894+55	-	906+42	LT/RT	'DA'	5	7	–	128	--	87	–	2,110	1	56	304	--	–	–
	922+10	-	927+85	LT/RT	'DB'	3	5	–	80	--	--	–	–	1	35	190	53	–	–
PROJECT 1050-01-61 TOTALS						1,070	2,565	6,650	22,720	5,035	230	2,150	19,490	175	22,025	59,955	3,975	23,800	

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

CONCRETE PAVEMENT REPAIR AND REPLACEMENT ITEMS

PROJECT	STATION	TO	STATION	OFFSET	ALIGNMENT	204.0110* REMOVING ASPHALTIC SURFACE SY	305.0120* BASE AGGREGATE DENSE 1 1/4-INCH TON	416.0610 DRILLED TIE BARS EACH	416.0620 DRILLED DOWEL BARS EACH	416.1110 CONCRETE SHOULDER RUMBLE STRIPS LF	416.1710 CONCRETE PAVEMENT REPAIR SY	416.1720 CONCRETE PAVEMENT REPLACEMENT SY	420.1000 CONTINUOUS DIAMOND GRINDING CONCRETE PAVEMENT SY	465.0110* ASPHALTIC SURFACE PATCHING TON	690.0150* SAWING ASPHALT SY	690.0250 SAWING CONCRETE SY	SPV.0180.01 CONCRETE PAVEMENT REPAIR DOWELED SPECIAL SY	SPV.0180.01 CONCRETE PAVEMENT REPLACEMENT DOWELED SPECIAL SY	REMARKS
1052-01-62																			
	156+14	-	209+86	LT/RT	'EB'	8	17	49	144	–	–	--	--	1	170	377	16	180	PASSING LANE
	156+14	-	209+86	RT	'EB'	31	73	168	624	–	–	--	--	5	640	1693	140	721	DRIVING LANE
	210+82	-	232+00	LT/RT	'EB'	3	6	14	80	–	–	--	--	0	63	178	24	48	PASSING LANE
	210+82	-	232+00	RT	'EB'	12	28	70	240	–	–	--	--	2	245	650	47	280	DRIVING LANE
	232+00	-	238+33	LT/RT	'EB'	–	–	–	–	–	–	--	844	–	–	–	–	--	PASSING LANE
	232+00	-	238+33	RT	'EB'	–	31	77	208	633	19	342	985	–	–	596	–	--	DRIVING LANE
	238+33	-	283+14	LT/RT	'EB'	7	14	42	112	–	–	--	--	1	139	300	8	152	PASSING LANE
	238+33	-	283+14	RT	'EB'	34	80	189	672	–	–	--	--	6	699	1833	140	798	DRIVING LANE
	283+14	-	289+48	LT/RT	'EB'	–	7	21	48	–	–	81	845	–	–	133	–	--	PASSING LANE
	283+14	-	289+48	RT	'EB'	–	25	63	160	634	9	284	986	–	–	469	–	--	DRIVING LANE
	289+48	-	298+71	LT/RT	'EB'	3	6	21	48	–	–	--	--	0	63	132	–	72	PASSING LANE
	289+48	-	298+71	RT	'EB'	5	12	28	112		–	--	--	1	105	294	28	112	DRIVING LANE
	299+69	-	376+62	LT/RT	'EB'	32	65	168	720	–	–	--	--	5	670	1705	168	602	PASSING LANE
	299+69	-	376+62	RT	'EB'	76	181	469	1360	–	–	--	--	13	1587	3882	168	1959	DRIVING LANE
	376+62	-	383+38	LT/RT	'EB'	–	14	42	112	–	8	158	901	–	–	293	–	--	PASSING LANE
	376+62	-	383+38	RT	'EB'	–	29	70	208	676	28	308	1,052	–	–	580	–	--	DRIVING LANE
	383+38	-	420+82	LT/RT	'EB'	11	22	77	176	–	–	--	--	2	231	484	–	264	PASSING LANE
	383+38	-	420+82	RT	'EB'	62	148	406	1120	–	–	--	--	10	1302	5192	112	1624	DRIVING LANE
	420+82	-	427+63	LT/RT	'EB'	–	7	21	48	–	–	79	908	–	–	131	–	--	PASSING LANE
	420+82	-	427+63	RT	'EB'	–	24	63	160	681	9	277	1,059	–	–	464	–	--	DRIVING LANE
	427+63	-	449+00	LT/RT	'EB'	37	75	259	624	–	–	--	--	6	773	1670	16	863	PASSING LANE
	427+63	-	449+00	RT	'EB'	35	83	252	576	–	–	--	--	6	738	1710	–	980	DRIVING LANE
	449+00	-	455+63	LT/RT	'EB'	–	23	70	160	–	–	267	884	–	–	440	–	--	PASSING LANE
	449+00	-	455+63	RT	'EB'	–	29	77	176	663	–	342	1,031	–	–	528	–	--	DRIVING LANE
	455+63	-	533+67	LT/RT	'EB'	65	133	441	1104	–	–	--	--	11	1365	2952	48	1512	PASSING LANE
	455+63	-	533+67	RT	'EB'	121	289	819	2048	–	–	--	--	23	2535	5993	103	3276	DRIVING LANE
	535+33	-	607+54	LT/RT	'EB'	85	174	581	1440	–	–	--	--	14	1792	3862	56	1992	PASSING LANE
	535+33	-	607+54	RT	'EB'	116	267	749	1968	–	–	--	--	19	2359	5680	149	2996	DRIVING LANE
	607+54	-	614+24	LT/RT	'EB'	–	16	49	112	–	–	187	893	–	–	308	–	--	PASSING LANE
	607+54	-	614+24	RT	'EB'	–	16	42	96	670	–	187	1,042	–	–	288	–	--	DRIVING LANE
	614+24	-	661+00	LT/RT	'EB'	16	33	35	608	–	–	--	--	3	336	1210	264	120	PASSING LANE
	614+24	-	661+00	RT	'EB'	38	90	189	960	–	–	--	--	6	798	2418	308	756	DRIVING LANE
	661+00	-	729+00	LT/RT	'EB'	46	94	–	2208	–	–	--	--	8	966	4140	1104	--	PASSING LANE
	661+00	-	729+00	RT	'EB'	70	166	161	2608	–	–	--	--	11	1463	5864	1307	644	DRIVING LANE
	729+00	-	817+00	LT/RT	'EB'	86	176	–	4144	–	–	--	--	14	1813	7770	2075	--	PASSING LANE
	729+00	-	817+00	RT	'EB'	109	260	371	3552	–	–	--	--	18	2296	8290	1577	1486	DRIVING LANE
	817+00	-	896+27	LT/RT	'EB'	64	131	6	3056	–	–	--	--	11	1350	5743	1520	23	PASSING LANE
	817+00	-	896+27	RT	'EB'	83	198	210	2960	–	–	--	--	14	1750	6745	1400	926	DRIVING LANE
	896+27	-	914+72	LT/RT	'EB'	–	26	–	608	–	304	--	2,460	–	–	1140	–	--	PASSING LANE
	896+27	-	914+72	RT	'EB'	–	65	63	960	888	476	292	2,872	–	–	2172	–	--	DRIVING LANE
	914+72	-	941+00	LT/RT	'EB'	22	44	–	1040	–	–	--	--	4	455	1950	520	--	PASSING LANE
	914+72	-	941+00	RT	'EB'	32	76	91	1120	–	–	--	--	5	673	2563	532	366	DRIVING LANE
	941+00	-	990+00	LT/RT	'EB'	1	3	–	64	–	–	--	--	0	28	120	32	--	PASSING LANE
	941+00	-	990+00	RT	'EB'	7	18	35	192	–	–	--	--	1	155	479	65	141	DRIVING LANE
	412+33	-	417+91	LT/RT	'XD'	8	11	28	64	–	–	--	--	1	84	208	–	128	--
	427+50	-	444+91	LT/RT	'XC'	26	35	88	216	–	–	--	--	4	270	688	11	400	--
	597+10	-	602+96	LT/RT	'SD'	27	37	91	240	–	–	--	--	5	287	752	21	416	--
	618+27	-	631+09	LT/RT	'SC'	28	38	98	224	–	–	--	--	5	294	728	–	448	--
	896+08	-	905+40	LT/RT	'DD'	23	31	21	448	–	267	96	1,657	4	238	1106	–	--	--
	916+69	-	928+65	LT/RT	'DC'	36	49	–	864	–	–	--	--	6	378	2052	576	--	--
PROJECT 1052-01-62 TOTALS						1,465	3,475	6,884	40,792	4,845	1,120	2,900	18,420	245	29,110	98,955	12,535	24,285	
TOTALS						2,535	6,040	13,534	63,512	9,880	1,350	5,050	37,910	420	51,135	158,910	16,510	48,085	

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS

211.0400

PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS

PROJECT	STATION	TO	STATION	OFFSET	ALIGNMENT	STA	REMARKS
1050-01-61							
	232+00	-	238+33	LT	'WB'	6	DRIVING LANE SHOULDER
	232+00	-	238+33	RT	'WB'	6	PASSING LANE SHOULDER
	283+16	-	289+50	LT	'WB'	6	DRIVING LANE SHOULDER
	283+16	-	289+50	RT	'WB'	6	PASSING LANE SHOULDER
	377+00	-	383+81	LT	'WB'	7	DRIVING LANE SHOULDER
	377+00	-	383+81	RT	'WB'	7	PASSING LANE SHOULDER
	419+51	-	426+32	LT	'WB'	7	DRIVING LANE SHOULDER
	449+15	-	455+78	RT	'WB'	7	PASSING LANE SHOULDER
	607+50	-	614+22	LT	'WB'	7	DRIVING LANE SHOULDER
	607+50	-	614+22	RT	'WB'	7	PASSING LANE SHOULDER
	894+56	-	915+07	LT	'WB'	21	DRIVING LANE SHOULDER **
	894+56	-	915+07	RT	'WB'	21	PASSING LANE SHOULDER
	894+55	-	906+42	LT/RT	'DA'	12	DRIVING LANE SHOULDER
PROJECT 1050-01-61 TOTALS						120	
1052-01-62							
	232+00	-	238+32	LT	'EB'	6	PASSING LANE SHOULDER
	232+00	-	238+32	RT	'EB'	6	DRIVING LANE SHOULDER
	283+14	-	289+48	LT	'EB'	6	PASSING LANE SHOULDER
	283+14	-	289+48	RT	'EB'	6	DRIVING LANE SHOULDER
	376+62	-	383+38	LT	'EB'	7	PASSING LANE SHOULDER
	376+62	-	383+38	RT	'EB'	7	DRIVING LANE SHOULDER
	420+82	-	427+63	LT	'EB'	7	PASSING LANE SHOULDER
	420+82	-	427+63	RT	'EB'	7	DRIVING LANE SHOULDER
	449+00	-	455+63	LT	'EB'	7	PASSING LANE SHOULDER
	449+00	-	455+63	RT	'EB'	7	DRIVING LANE SHOULDER
	607+54	-	614+24	LT	'EB'	7	PASSING LANE SHOULDER
	607+54	-	614+24	RT	'EB'	7	DRIVING LANE SHOULDER
	896+27	-	914+72	LT	'EB'	18	PASSING LANE SHOULDER
	896+12	-	905+40	RT	'EB'	9	DRIVING LANE SHOULDER **
PROJECT 1052-01-62 TOTALS						107	
TOTALS						227	

NOTE: ** INCLUDES PART OF RAMP SHOULDER AND GORE

CONCRETE SURFACE DRAIN ITEMS

PROJECT	STATION	OFFSET	ALIGNMENT	416.1010 CONCRETE SURFACE DRAINS CY	606.0200 RIPRAP MEDIUM CY	645.0120 GEOTEXTILE FABRIC TYPE HR SY	REMARKS
1050-01-61							
	101+48	RT	'S'	1	4	15	RIPRAP AREA = 6' X 12'
	101+65	LT	'D'	1	11	35	RIPRAP AREA = 6' X 32'
	102+07	RT	'D'	1	13	41	RIPRAP AREA = 6' X 38'
PROJECT 1050-01-61 TOTALS				3	28	91	
1052-01-62							
	154+19	LT	'EB'	2	4	15	RIPRAP AREA = 6' X 12'
	154+37	RT	'EB'	2	4	15	RIPRAP AREA = 6' X 12'
	209+60	LT	'EB'	2	4	15	RIPRAP AREA = 6' X 12'
	209+60	RT	'EB'	2	4	15	RIPRAP AREA = 6' X 12'
	298+41	LT	'EB'	2	4	15	RIPRAP AREA = 6' X 12'
	298+46	RT	'EB'	2	4	15	RIPRAP AREA = 6' X 12'
	532+99	RT	'EB'	2	4	15	RIPRAP AREA = 6' X 12'
	533+77	LT	'EB'	2	4	15	RIPRAP AREA = 6' X 12'
	99+13	RT	'S'	1	4	15	RIPRAP AREA = 6' X 12'
	98+61	LT	'D'	2	4	15	RIPRAP AREA = 6' X 12'
	99+04	RT	'D'	1	4	15	RIPRAP AREA = 6' X 12'
PROJECT 1052-01-62 TOTALS				20	44	165	
TOTALS				23	72	256	

CONCRETE PAVEMENT AND CONCRETE CURB & GUTTER ITEMS

PROJECT	STATION	TO	STATION	OFFSET	ALIGNMENT	405.0100 COLORING CONCRETE RED CY	415.0120 CONCRETE PAVEMENT 12-INCH SY	601.0411 CONCRETE CURB & GUTTER 30-INCH TYPE D LF	601.0557 CONCRETE CURB & GUTTER 6-INCH SLOPED 36-INCH TYPE D LF	601.0582 CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE T LF	620.0300 CONCRETE MEDIAN SLOPED NOSE SF	SPV.0090.01 CONCRETE CURB & GUTTER CURE AND SEAL TREATMENT LF	SPV.0090.02 CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBT LF	REMARKS
1050-01-61														
	818+97			LT	'WB'	–	--	–	140	--	–	140	--	300TH STREET INTERSECTION
	101+36	-	106+20	LT/RT	'S'	129	388	–	–	769	145	799	--	MEDIANS
	RAMP 'SA' WIDENING			RT		–	195	586	–	–	356	–	356	--	OSOW WIDENING
	RAMP 'SB' WIDENING			LT/RT		–	127	381	–	–	290	160	320	--	OSOW WIDENING AND ISLAND
	101+73	-	105+00	LT/RT	'D'	–	--	275	–	--	--	350	75	--
PROJECT 1050-01-61 TOTALS						452	1,355	275	140	1,415	305	1,965	75	
1052-01-62														
	663+40			RT	'EB'	–	--	–	150	--	–	150	--	270TH STREET INTERSECTION
	818+94			RT	'EB'	–	--	–	150	--	–	150	--	300TH STREET INTERSECTION
	942+50			RT	'EB'	–	--	–	155	--	–	155	--	320TH STREET INTERSECTION
	94+60	-	99+25	LT/RT	'S'	128	384	–	–	735	166	770	--	MEDIANS
	RAMP 'SD' WIDENING			LT/RT		–	158	473	–	–	366	149	396	--	OSOW WIDENING AND ISLAND
	RAMP 'SC' WIDENING			LT		–	225	668	–	–	369	–	369	--	OSOW WIDENING
	96+82	-	98+96	LT/RT	'D'	–	--	255	–	--	--	330	75	--
PROJECT 1052-01-62 TOTALS						510	1,525	255	455	1,470	315	2,320	75	
TOTALS						962	2,880	530	595	2,885	620	4,285	150	

NOTE: CONCRETE CURB & GUTTER CURE AND SEAL TREATMENT INCLUDES THE LENGTH OF THE CONCRETE MEDIAN SLOPED NOSES MEASURED ALONG THE LOW LINE OF THE GUTTER.

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ASPHALTIC ITEMS

PROJECT	STATION	TO	STATION	OFFSET	ALIGNMENT	325.0100 PULVERIZE AND RELAY SY	450.4000 HMA COLD WEATHER PAVING TON	455.0605 TACK COAT GAL	460.4110.S REHEATING HMA PAVEMENT LONGITUDINAL JOINTS LF	SPV.0195.01 HMA PAVEMENT 4 LT 58-28 S 3% VA REGRESSION SPECIAL TON	SPV.0195.02 HMA PAVEMENT 4 LT 58-34 S 3% VA REGRESSION SPECIAL TON	SPV.0195.03 HMA PAVEMENT 4 MT 58-28 S 3% VA REGRESSION SPECIAL TON	SPV.0195.04 HMA PAVEMENT 4 MT 58-34 S 3% VA REGRESSION SPECIAL TON	SPV.0195.05 HMA PAVEMENT 4 SMA 58-34 H 3% VA REGRESSION SPECIAL TON	465.0105 ASPHALTIC SURFACE TON	465.0110* ASPHALTIC SURFACE PATCHING TON	465.0125 ASPHALTIC SURFACE TEMPORARY TON	465.0315 ASPHALTIC FLUMES SY	465.0400 ASPHALTIC SHOULDER RUMBLE STRIPS LF	SPV.0195.06 SMA PAVEMENT COMPACTION ACCEPTANCE TON	REMARKS
1050-01-61																					
	155+61	-	209+86	LT/RT	'WB'	–	–	1,269	--	–	--	1,194	--	981	--	–	–	–	5,425	981	PASSING LANE AND SHOULDER
	155+61	-	209+86	LT	'WB'	–	–	1,013	5,425	–	--	928	--	812	--	–	–	–	–	812	DRIVING LANE
	155+61	-	209+86	LT	'WB'	4,822	–	241	--	530	464	–	--	–	--	11	–	–	5,425	–	DRIVING LANE SHOULDER
		169+87		RT	'WB'	–	–	10	--	–	--	–	--	–	44	–	–	–	–	–	MAINTENANCE CROSSOVER
	210+82	-	232+00	LT/RT	'WB'	–	–	495	--	–	--	466	--	383	--	–	–	–	2,118	383	PASSING LANE AND SHOULDER
	210+82	-	232+00	LT	'WB'	–	–	395	2,118	–	--	362	--	317	--	–	–	–	–	317	DRIVING LANE
	210+82	-	232+00	LT	'WB'	1,883	–	94	--	207	181	–	--	–	--	4	–	–	2,118	–	DRIVING LANE SHOULDER
	232+00	-	238+33	LT/RT	'WB'	–	–	14	--	31	27	–	--	–	--	–	–	–	633	–	PASSING LANE SHOULDER
		232+00		LT	'WB'	–	–	28	--	62	54	–	--	–	--	1	–	–	–	–	DRIVING LANE SHOULDER
	238+33	-	283+16	LT/RT	'WB'	–	–	1,049	--	–	--	986	--	810	--	–	–	–	4,483	810	PASSING LANE AND SHOULDER
	238+33	-	283+16	LT	'WB'	–	–	837	4,483	–	--	767	--	671	--	–	–	–	–	671	DRIVING LANE
	238+33	-	283+16	LT	'WB'	3,985	–	199	--	438	384	–	--	–	--	9	–	–	4,483	–	DRIVING LANE SHOULDER
		273+86		RT	'WB'	–	–	10	--	–	--	–	--	–	44	–	–	–	–	–	MAINTENANCE CROSSOVER
		283+16		LT/RT	'WB'	–	–	14	--	31	27	–	--	–	--	–	–	–	634	–	PASSING LANE SHOULDER
	283+16	-	289+50	LT	'WB'	–	–	28	--	62	54	–	--	–	--	1	–	–	–	–	DRIVING LANE SHOULDER
	289+50	-	298+73	LT/RT	'WB'	–	–	216	--	–	--	203	--	167	--	–	–	–	923	167	PASSING LANE AND SHOULDER
	289+50	-	298+73	LT	'WB'	–	–	172	923	–	--	158	--	138	--	–	–	–	–	138	DRIVING LANE
	289+50	-	298+73	LT	'WB'	820	–	41	--	90	79	–	--	–	--	2	–	–	923	–	DRIVING LANE SHOULDER
		299+69		LT/RT	'WB'	–	–	1,808	--	–	--	1,701	--	1,397	--	–	–	–	7,731	1,397	PASSING LANE AND SHOULDER
	299+69	-	377+00	LT	'WB'	–	–	1,443	7,731	–	--	1,323	--	1,158	--	–	–	–	–	1,158	DRIVING LANE
	299+69	-	377+00	LT	'WB'	6,872	–	344	--	756	661	–	--	–	--	16	–	–	7,731	–	DRIVING LANE SHOULDER
	377+00	-	383+81	LT/RT	'WB'	–	–	15	--	33	29	–	--	–	--	–	–	–	681	–	PASSING LANE SHOULDER
	377+00	-	383+81	LT	'WB'	–	–	30	--	67	58	–	--	–	--	1	–	–	–	–	DRIVING LANE SHOULDER
		383+81		LT/RT	'WB'	–	–	835	--	–	--	785	--	645	--	–	–	–	3,570	645	PASSING LANE AND SHOULDER
	383+81	-	419+51	LT	'WB'	–	–	666	3,570	–	--	611	--	535	--	–	–	–	–	535	DRIVING LANE
	383+81	-	419+51	LT	'WB'	2,084	–	104	--	229	201	–	--	–	--	6	–	–	3,023	–	DRIVING LANE SHOULDER
		395+15		RT	'WB'	–	–	10	--	–	--	–	--	–	44	–	–	–	–	–	MAINTENANCE CROSSOVER
	419+51	-	426+32	LT/RT	'WB'	–	–	15	--	33	29	–	--	–	--	–	–	–	681	–	PASSING LANE SHOULDER
		419+51		LT	'WB'	–	–	30	--	67	58	–	--	–	--	1	–	–	–	–	DRIVING LANE SHOULDER
	426+32	-	449+15	LT/RT	'WB'	–	–	534	--	–	--	502	--	413	--	–	–	–	2,283	413	PASSING LANE AND SHOULDER
	426+32	-	449+15	LT	'WB'	–	–	426	2,283	–	--	391	--	342	--	–	–	–	–	342	DRIVING LANE
	426+32	-	449+15	LT	'WB'	1,632	–	82	--	180	157	–	--	–	--	4	–	–	1,736	–	DRIVING LANE SHOULDER
	449+15	-	455+78	LT/RT	'WB'	–	–	15	--	32	28	–	--	–	--	–	–	–	663	–	PASSING LANE SHOULDER
		449+15		LT	'WB'	–	–	29	--	65	57	–	--	–	--	1	–	–	–	–	DRIVING LANE SHOULDER
	455+78	-	534+28	LT/RT	'WB'	–	–	1,836	--	–	--	1,727	--	1,419	--	–	–	–	7,850	1,419	PASSING LANE AND SHOULDER
	455+78	-	534+28	LT	'WB'	–	–	1,465	7,850	–	--	1,343	--	1,175	--	–	–	–	–	1,175	DRIVING LANE
	455+78	-	534+28	LT	'WB'	6,978	–	349	--	768	672	–	--	–	--	16	–	–	7,850	–	DRIVING LANE SHOULDER
		461+88		RT	'WB'	–	–	10	--	–	--	–	--	–	44	–	–	–	–	–	MAINTENANCE CROSSOVER
		535+94		LT/RT	'WB'	–	–	1,674	--	–	--	1,574	--	1,293	--	–	–	–	7,156	1,293	PASSING LANE AND SHOULDER
	535+94	-	607+50	LT	'WB'	–	–	1,336	7,156	–	--	1,225	--	1,071	--	–	–	–	–	1,071	DRIVING LANE
	535+94	-	607+50	LT	'WB'	5,195	–	260	--	571	500	–	--	–	--	13	–	–	6,364	–	DRIVING LANE SHOULDER
		589+65		RT	'WB'	–	–	10	--	–	--	–	--	–	44	–	–	–	–	–	MAINTENANCE CROSSOVER
	607+50	-	614+22	LT/RT	'WB'	–	–	15	--	33	29	–	--	–	--	–	–	–	672	–	PASSING LANE SHOULDER
		607+50		LT	'WB'	–	–	30	--	66	58	–	--	–	--	1	–	–	–	–	DRIVING LANE SHOULDER
	614+22	-	661+00	LT/RT	'WB'	–	–	1,094	--	–	--	1,029	--	846	--	–	–	–	4,678	846	PASSING LANE AND SHOULDER
	614+22	-	661+00	LT	'WB'	–	–	873	4,678	–	--	801	--	700	--	–	–	–	–	700	DRIVING LANE
	614+22	-	661+00	LT	'WB'	3,756	–	188	--	413	362	–	--	–	--	8	–	–	4,125	–	DRIVING LANE SHOULDER
		638+36		RT	'WB'	–	–	10	--	–	--	–	--	–	44	–	–	–	–	–	MAINTENANCE CROSSOVER
		661+00		LT/RT	'WB'	–	–	1,590	--	–	--	1,496	--	1,229	--	–	–	–	6,800	1,229	PASSING LANE AND SHOULDER
	661+00	-	729+00	LT	'WB'	–	–	1,269	6,800	–	--	1,164	--	1,018	--	–	–	–	–	1,018	DRIVING LANE
	661+00	-	729+00	LT	'WB'	6,044	–	302	--	665	582	–	--	–	--	14	–	–	6,800	–	DRIVING LANE SHOULDER
	729+00	-	817+00	LT/RT	'WB'	–	–	2,058	--	–	--	1,937	--	1,594	--	–	–	–	8,768	1,594	PASSING LANE AND SHOULDER
	729+00	-	817+00	LT	'WB'	–	–	1,643	8,804	–	--	1,506	--	1,318	--	–	–	–	–	1,318	DRIVING LANE
		729+00		LT	'WB'	7,809	–	391	--	864	755	–	--	–	--	18	–	–	8,788	–	DRIVING LANE SHOULDER
		730+09		RT	'WB'	–	–	10	--	–	--	–	--	–	44	–	–	–	–	–	MAINTENANCE CROSSOVER
SUBTOTALS						51,880	–	28,924	61,821	6,293	5,505	24,179	--	20,431	307	130	–	–	125,115	20,431	

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ASPHALTIC ITEMS (CONT.)

PROJECT	STATION	TO	STATION	OFFSET	ALIGNMENT	325.0100 PULVERIZE AND RELAY SY	450.4000 HMA COLD WEATHER PAVING TON	455.0605 TACK COAT GAL	460.4110.S REHEATING HMA PAVEMENT LONGITUDINAL JOINTS LF	SPV.0195.01 HMA PAVEMENT 4 LT 58-28 S TON	SPV.0195.02 HMA PAVEMENT 4 LT 58-34 S TON	SPV.0195.03 HMA PAVEMENT 4 MT 58-28 S TON	SPV.0195.04 HMA PAVEMENT 4 MT 58-34 S TON	SPV.0195.05 HMA PAVEMENT 4 SMA 58-34 H TON	465.0105 ASPHALTIC SURFACE TON	465.0110* ASPHALTIC SURFACE PATCHING TON	465.0125 ASPHALTIC SURFACE TEMPORARY TON	465.0315 ASPHALTIC FLUMES SY	465.0400 ASPHALTIC SHOULDER RUMBLE STRIPS LF	SPV.0195.06 SMA PAVEMENT COMPACTION ACCEPTANCE TON	REMARKS
										3% VA REGRESSION SPECIAL											
1050-01-61																					
	817+00	-	894+56	LT/RT	'WB'	–	--	1,814	–	–	–	1,706	–	1,402	–	–	–	–	7,348	1,402	PASSING LANE AND SHOULDER
	817+00	-	894+56	LT	'WB'	–	--	1,448	7,756	–	–	1,327	–	1,161	–	–	–	–	–	1,161	DRIVING LANE
	817+00	-	894+56	LT	'WB'	6,416	--	339	–	745	652	–	–	--	–	15	–	–	7,218	--	DRIVING LANE SHOULDER
		818+97		LT	'WB'	–	--	22	–	–	–	–	–	--	31	–	–	21	–	--	300TH STREET INTERSECTION
		818+97		RT	'WB'	–	--	74	–	–	–	–	–	--	128	–	–	–	–	--	300TH STREET INTERSECTION
		838+34		RT	'WB'	–	--	10	–	–	–	–	–	--	44	–	–	–	–	--	MAINTENANCE CROSSOVER
		867+25		RT	'WB'	–	--	10	–	–	–	–	–	--	44	–	–	–	–	--	MAINTENANCE CROSSOVER
	877+00	-	883+00	RT	'WB'		--		–	–	–	–	–	--	66	–	–	–	–		PASSING LANE SHOULDER REPLACEMENT
		894+56		LT/RT	'WB'	–	--	46	–	100	88	–	–	--	–	–	–	–	2,051	--	PASSING LANE SHOULDER
	894+56	-	915+07	LT	'WB'	–	--	41	–	90	79	–	–	--	–	2	–	–	790	--	DRIVING LANE SHOULDER
	915+07	-	941+00	LT/RT	'WB'	–	--	606	–	–	–	571	–	469	–	–	–	–	2,560	469	PASSING LANE AND SHOULDER
	915+07	-	941+00	LT	'WB'	–	--	484	2,593	–	–	444	–	388	–	–	–	–	–	388	DRIVING LANE
	915+07	-	941+00	LT	'WB'	1,827	--	91	–	201	176	–	–	--	–	4	–	–	1,955	--	DRIVING LANE SHOULDER
		941+00		LT/RT	'WB'	–	--	1,149	–	–	–	1,078	–	886	–	–	–	–	4,523	886	PASSING LANE AND SHOULDER
	941+00	-	990+00	LT	'WB'	–	--	915	4,900	–	–	838	–	734	–	–	–	–	–	734	DRIVING LANE
	941+00	-	990+00	LT	'WB'	4,356	--	218	–	479	419	–	–	--	–	10	–	–	4,900	--	DRIVING LANE SHOULDER
		942+64		RT	'WB'	–	--	79	–	–	–	–	–	--	135	–	–	–	–	--	320TH STREET INTERSECTION
	155+61	-	990+00	LT	'WB'		--	969	–	–	–	–	–	--	–	575	–	–	–	--	WEDGE AT DRIVING LANE SHOULDER DROP OFF
		95+30		LT/RT	'X'	–	--	95	–	–	–	–	150	--	–	–	–	–	–	--	–
	403+96	-	416+35	LT/RT	'XA'	688	--	296	–	–	–	–	511	--	–	–	–	–	–	--	–
	416+35	-	422+17	LT/RT	'XA'	–	--	114	–	–	–	–	180	--	–	–	–	9	–	--	–
	422+17	-	430+76	LT/RT	'XB'	–	--	169	–	–	–	–	266	--	–	–	–	9	–	--	–
	430+76	-	436+39	LT/RT	'XB'	313	--	166	–	–	–	–	285	--	–	–	–	–	–	--	–
		101+36		LT/RT	'S'	–	--	109	–	–	–	–	171	--	–	–	10	–	–	--	STH 27 STAGE S1
	590+29	-	604+15	LT/RT	'SA'	770	--	335	–	–	–	–	576	--	–	–	–	–	–	--	–
	604+15	-	610+74	LT/RT	'SA'	–	--	134	–	–	–	–	211	--	–	–	–	9	–	--	–
	610+74	-	619+33	LT/RT	'SB'	–	--	171	–	–	–	–	269	--	–	–	–	9	–	--	–
	619+33	-	625+02	LT/RT	'SB'	316	--	168	–	–	–	–	289	--	–	–	–	–	–	--	–
		101+73		LT/RT	'D'	–	--	104	–	–	–	–	164	--	–	–	–	–	–	--	–
	894+55	-	906+42	LT/RT	'DA'	–	--	53	–	116	102	–	–	--	–	–	–	–	–	--	–
	906+42	-	913+87	LT/RT	'DA'	–	--	148	–	–	–	–	233	--	–	–	–	9	–	--	–
	913+87	-	922+10	LT/RT	'DB'	–	--	174	–	–	–	–	273	--	–	–	–	9	–	--	–
	922+10	-	927+85	LT/RT	'DB'	319	--	185	–	–	–	–	318	--	–	–	–	–	–	--	–
UNDISTRIBUTED				–	–	–	--	–	–	–	–	–	–	--	581	–	–	–	–	--	SHOULDER REPAIR PRIOR TO TRAFFIC SHIFT
UNDISTRIBUTED				–	–	–	--	–	–	–	–	717	–	--	–	–	–	–	–	--	LEVELING LAYER FOR SUPERELEVATION
UNDISTRIBUTED				–	–	–	15,000	–	–	–	–	–	–	--	–	–	–	–	–	--	COLD WEATHER PAVING
SUBTOTALS						15,005	15,000	10,736	15,249	1,731	1,515	6,681	3,895	5,039	1,028	605	10	75	31,345	5,039	
PROJECT 1050-01-61 TOTALS						66,885	15,000	39,660	77,070	8,025	7,020	30,860	3,895	25,470	1,335	735	10	75	156,460	25,470	

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ASPHALTIC ITEMS (CONT.)

PROJECT	STATION	TO	STATION	OFFSET	ALIGNMENT	325.0100 PULVERIZE AND RELAY SY	450.4000 HMA COLD WEATHER PAVING TON	455.0605 TACK COAT GAL	460.4110.S REHEATING HMA PAVEMENT LONGITUDINAL JOINTS LF	SPV.0195.01 HMA PAVEMENT 4 LT 58-28 S TON	SPV.0195.02 HMA PAVEMENT 4 LT 58-34 S TON	SPV.0195.03 HMA PAVEMENT 4 MT 58-28 S TON	SPV.0195.04 HMA PAVEMENT 4 MT 58-34 S TON	SPV.0195.05 HMA PAVEMENT 4 SMA 58-34 H TON	465.0105 ASPHALTIC SURFACE TON	465.0110* ASPHALTIC SURFACE PATCHING TON	465.0125 ASPHALTIC SURFACE TEMPORARY TON	465.0315 ASPHALTIC FLUMES SY	465.0400 ASPHALTIC SHOULDER RUMBLE STRIPS LF	SPV.0195.06 SMA PAVEMENT COMPACTION ACCEPTANCE TON	REMARKS
										3% VA REGRESSION SPECIAL											
1052-01-62																					
	156+14	-	209+86	LT/RT	'EB'	--	–	1,256	–	–	–	1,182	--	971	–	--	--	--	5,372	971	PASSING LANE AND SHOULDER
	156+14	-	209+86	RT	'EB'	--	–	1,003	5,372	–	–	919	--	804	–	--	--	--	–	804	DRIVING LANE
	156+14	-	209+86	RT	'EB'	4,775	–	239	–	525	460	--	--	–	–	11	--	--	5,372	–	DRIVING LANE SHOULDER
		210+82		LT/RT	'EB'	--	–	495	–	–	–	466	--	383	–	--	--	--	2,118	383	PASSING LANE AND SHOULDER
	210+82	-	232+00	RT	'EB'	--	–	395	2,118	–	–	362	--	317	–	--	--	--	–	317	DRIVING LANE
	210+82	-	232+00	RT	'EB'	1,883	–	94	–	207	181	--	--	–	–	4	--	--	2,118	–	DRIVING LANE SHOULDER
	232+00	-	238+33	LT/RT	'EB'	--	–	14	–	31	27	--	--	–	–	--	--	--	633	–	PASSING LANE SHOULDER
	232+00	-	238+33	RT	'EB'	--	–	28	–	62	54	--	--	–	–	1	--	--	–	–	DRIVING LANE SHOULDER
		238+33		LT/RT	'EB'	--	–	1,048	–	–	–	986	--	810	–	--	--	--	4,481	810	PASSING LANE AND SHOULDER
	238+33	-	283+14	RT	'EB'	--	–	836	4,481	–	–	767	--	671	–	--	--	--	–	671	DRIVING LANE
	238+33	-	283+14	RT	'EB'	3,983	–	199	–	438	383	--	--	–	–	9	--	--	4,481	–	DRIVING LANE SHOULDER
	283+14	-	289+48	LT/RT	'EB'	--	–	14	–	31	27	--	--	–	–	--	--	--	634	–	PASSING LANE SHOULDER
	283+14	-	289+48	RT	'EB'	--	–	28	–	62	54	--	--	–	–	1	--	--	–	–	DRIVING LANE SHOULDER
		289+48		LT/RT	'EB'	--	–	216	–	–	–	203	--	167	–	--	--	--	923	167	PASSING LANE AND SHOULDER
	289+48	-	298+71	RT	'EB'	--	–	172	923	–	–	158	--	138	–	--	--	--	–	138	DRIVING LANE
	289+48	-	298+71	RT	'EB'	820	–	41	–	90	79	--	--	–	–	2	--	--	923	–	DRIVING LANE SHOULDER
	299+69	-	376+62	LT/RT	'EB'	--	–	1,799	–	–	–	1,693	--	1,390	–	--	--	--	7,693	1,390	PASSING LANE AND SHOULDER
	299+69	-	376+62	RT	'EB'	--	–	1,436	7,693	–	–	1,316	--	1,152	–	--	--	--	–	1,152	DRIVING LANE
		299+69		RT	'EB'	6,838	–	342	–	752	658	--	--	–	–	16	--	--	7,693	–	DRIVING LANE SHOULDER
	376+62	-	383+38	LT/RT	'EB'	--	–	15	–	33	29	--	--	–	–	--	--	--	676	–	PASSING LANE SHOULDER
	376+62	-	383+38	RT	'EB'	--	–	30	–	66	58	--	--	–	–	1	--	--	–	–	DRIVING LANE SHOULDER
	383+38	-	420+82	LT/RT	'EB'	--	–	876	–	–	–	824	--	677	–	--	--	--	3,744	677	PASSING LANE AND SHOULDER
	383+38	-	420+82	RT	'EB'	--	–	699	3,744	–	–	641	--	561	–	--	--	--	–	561	DRIVING LANE
		383+38		RT	'EB'	2,924	–	146	–	322	281	--	--	–	–	7	--	--	3,189	–	DRIVING LANE SHOULDER
	420+82	-	427+63	LT/RT	'EB'	--	–	15	–	33	29	--	--	–	–	--	--	--	681	–	PASSING LANE SHOULDER
	420+82	-	427+63	RT	'EB'	--	–	30	–	67	58	--	--	–	–	1	--	--	–	–	DRIVING LANE SHOULDER
	427+63	-	449+00	LT/RT	'EB'	--	–	500	–	–	–	470	--	386	–	--	--	--	2,137	386	PASSING LANE AND SHOULDER
	427+63	-	449+00	RT	'EB'	--	–	399	2,137	–	–	366	--	320	–	--	--	--	–	320	DRIVING LANE
		427+63		RT	'EB'	870	–	44	–	96	84	--	--	–	–	3	--	--	1,599	–	DRIVING LANE SHOULDER
	449+00	-	455+63	LT/RT	'EB'	--	–	15	–	32	28	--	--	–	–	--	--	--	663	–	PASSING LANE SHOULDER
	449+00	-	455+63	RT	'EB'	--	–	29	–	65	57	--	--	–	–	1	--	--	–	–	DRIVING LANE SHOULDER
	455+63	-	533+67	LT/RT	'EB'	--	–	1,825	–	–	–	1,717	--	1,411	–	--	--	--	7,804	1,411	PASSING LANE AND SHOULDER
	455+63	-	533+67	RT	'EB'	--	–	1,457	7,804	–	–	1,335	--	1,168	–	--	--	--	–	1,168	DRIVING LANE
		455+63		RT	'EB'	6,937	–	347	–	763	668	--	--	–	–	16	--	--	7,804	–	DRIVING LANE SHOULDER
	535+33	-	607+54	LT/RT	'EB'	--	–	1,689	–	–	–	1,589	--	1,305	–	--	--	--	7,221	1,305	PASSING LANE AND SHOULDER
	535+33	-	607+54	RT	'EB'	--	–	1,348	7,221	–	–	1,236	--	1,081	–	--	--	--	–	1,081	DRIVING LANE
	535+33	-	607+54	RT	'EB'	6,020	–	301	–	662	579	--	--	–	–	14	--	--	6,672	–	DRIVING LANE SHOULDER
	607+54	-	614+24	LT/RT	'EB'	--	–	15	–	33	29	--	--	–	–	--	--	--	670	–	PASSING LANE SHOULDER
		607+54		RT	'EB'	--	–	30	–	66	57	--	--	–	–	1	--	--	–	–	DRIVING LANE SHOULDER
	614+24	-	661+00	LT/RT	'EB'	--	–	1,094	–	–	–	1,029	--	845	–	--	--	--	4,676	845	PASSING LANE AND SHOULDER
	614+24	-	661+00	RT	'EB'	--	–	873	4,676	–	–	800	--	700	–	--	--	--	–	700	DRIVING LANE
	614+24	-	661+00	RT	'EB'	2,952	–	154	–	339	297	--	--	–	–	8	--	--	3,952	–	DRIVING LANE SHOULDER
	661+00	-	729+00	LT/RT	'EB'	--	–	1,590	–	–	–	1,496	--	1,229	–	--	--	--	6,803	1,229	PASSING LANE AND SHOULDER
		661+00		RT	'EB'	--	–	1,269	6,800	–	–	1,164	--	1,018	–	--	--	--	–	1,018	DRIVING LANE
	661+00	-	729+00	RT	'EB'	5,680	–	296	–	652	570	--	--	–	–	13	--	--	6,340	–	DRIVING LANE SHOULDER
	663+40			RT	'EB'	--	–	22	–	–	–	--	--	–	31	--	--	18	–	–	270TH STREET INTERSECTION
	729+00	-	817+00	LT/RT	'EB'	--	–	2,060	–	–	–	1,937	--	1,592	–	--	--	--	8,793	1,592	PASSING LANE AND SHOULDER
	729+00	-	817+00	RT	'EB'	--	–	1,643	8,801	–	–	1,506	--	1,318	–	--	--	--	–	1,318	DRIVING LANE
		729+00		RT	'EB'	7,655	–	391	–	864	757	--	--	–	–	18	--	--	8,612	–	DRIVING LANE SHOULDER
	817+00	-	896+27	LT/RT	'EB'	--	–	1,854	–	–	–	1,744	--	1,433	–	--	--	--	7,537	1,433	PASSING LANE SHOULDER
	817+00	-	896+27	RT	'EB'	--	–	1,480	7,927	–	–	1,356	--	1,187	–	--	--	--	–	1,187	DRIVING LANE
	817+00	-	896+27	RT	'EB'	6,734	–	346	–	762	666	--	--	–	–	15	--	--	7,511	–	DRIVING LANE SHOULDER
		818+94		RT	'EB'	--	–	23	–	–	–	--	--	–	32	--	--	18	–	–	300TH STREET INTERSECTION
		896+27		LT/RT	'EB'	--	–	41	–	90	79	--	--	–	–	--	--	--	1,845	–	PASSING LANE SHOULDER
	896+27	-	914+72	RT	'EB'	--	–	46	–	101	88	--	--	–	–	4	--	--	–	–	DRIVING LANE SHOULDER
SUBTOTALS						58,071	–	32,647	69,697	7,243	6,339	27,260	--	23,033	62	148	--	36	141,370	23,033	

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ASPHALTIC ITEMS (CONT.)

PROJECT	STATION	TO	STATION	OFFSET	ALIGNMENT	325.0100 PULVERIZE AND RELAY SY	450.4000 HMA COLD WEATHER PAVING TON	455.0605 TACK COAT GAL	460.4110.S REHEATING HMA PAVEMENT LONGITUDINAL JOINTS LF	SPV.0195.01 HMA PAVEMENT 4 LT 58-28 S TON	SPV.0195.02 HMA PAVEMENT 4 LT 58-34 S TON	SPV.0195.03 HMA PAVEMENT 4 MT 58-28 S TON	SPV.0195.04 HMA PAVEMENT 4 MT 58-34 S TON	SPV.0195.05 HMA PAVEMENT 4 SMA 58-34 H TON	465.0105 ASPHALTIC SURFACE TON	465.0110* ASPHALTIC SURFACE PATCHING TON	465.0125 ASPHALTIC SURFACE TEMPORARY TON	465.0315 ASPHALTIC FLUMES SY	465.0400 ASPHALTIC SHOULDER RUMBLE STRIPS LF	SPV.0195.06 SMA PAVEMENT COMPACTION ACCEPTANCE TON	REMARKS
										3% VA REGRESSION SPECIAL											
1052-01-62																					
	914+72	-	941+00	LT/RT	'EB'	--	–	615	–	–	–	578	--	475	–	--	--	--	2,595	475	PASSING LANE AND SHOULDER
	914+72	-	941+00	RT	'EB'	--	–	491	2,628	–	–	450	--	394	–	--	--	--	–	394	DRIVING LANE
	914+72	-	941+00	RT	'EB'	1,222	–	69	–	151	132	--	--	–	–	4	--	--	1,738	–	DRIVING LANE SHOULDER
		941+00		LT/RT	'EB'	--	–	1,146	–	–	–	1,078	--	886	–	--	--	--	4,504	886	PASSING LANE AND SHOULDER
	941+00	-	990+00	RT	'EB'	--	–	915	4,900	–	–	838	--	734	–	--	--	--	–	734	DRIVING LANE
	941+00	-	990+00	RT	'EB'	4,056	–	218	–	479	419	--	--	–	–	9	--	--	4,513	–	DRIVING LANE SHOULDER
		942+50		RT	'EB'	--	–	33	–	–	–	--	--	–	46	--	--	22	–	–	320TH STREET INTERSECTION
	156+14	-	990+00	RT	'EB'		–	969	–	–	–	--	--	–	–	574	--	--	–	–	WEDGE AT DRIVING LANE SHOULDER DROP OFF
		100+95		LT/RT	'X'	--	–	99	–	–	–	--	155	–	–	--	--	9	–	–	–
	412+33	-	417+91	LT/RT	'XD'	310	–	161	–	–	–	--	276	–	–	--	--	--	–	–	–
	417+91	-	426+41	LT/RT	'XD'	--	–	164	–	–	–	--	257	–	–	--	--	9	–	–	–
	426+41	-	432+85	LT/RT	'XC'	--	–	138	–	–	–	--	216	–	–	--	--	9	–	–	–
	432+85	-	444+91	LT/RT	'XC'	670	–	308	–	–	–	--	530	–	–	--	--	--	–	–	–
		94+60		LT/RT	'S'	--	–	98	–	–	–	--	154	–	–	--	10	9	–	–	STH 27 STAGE S1
	597+10	-	602+96	LT/RT	'SD'	326	–	166	–	–	–	--	286	–	–	--	--	--	–	–	–
	602+96	-	611+23	LT/RT	'SD'	--	–	155	–	–	–	--	244	–	–	--	--	9	–	–	–
	611+23	-	618+27	LT/RT	'SC'	--	–	140	–	–	–	--	220	–	–	--	--	9	–	–	–
	618+27	-	631+09	LT/RT	'SC'	712	–	319	–	–	–	--	549	–	–	--	--	--	–	–	–
		93+80		LT/RT	'D'	--	–	166	–	–	–	--	262	–	–	--	--	--	–	–	–
	896+08	-	905+40	LT/RT	'DD'	--	–	41	–	91	80	--	--	–	–	--	--	--	–	–	–
	905+40	-	909+50	LT/RT	'DD'	--	–	92	–	–	–	--	144	–	–	--	--	9	–	–	–
	909+50	-	916+69	LT/RT	'DC'	--	–	139	–	–	–	--	219	–	–	--	--	9	–	–	–
	916+69	-	928+65	LT/RT	'DC'	664	–	281	–	–	–	--	483	–	–	--	--	--	–	–	–
	UNDISTRIBUTED			–	–	--	–	–	–	–	–	--	--	–	581	--	--	--	–	–	SHOULDER REPAIR PRIOR TO TRAFFIC SHIFT
	UNDISTRIBUTED			–	–	--	–	–	–	–	–	811	--	–	–	--	--	--	–	–	LEVELING LAYER FOR SUPERELEVATION
	UNDISTRIBUTED			–	–	--	15,000	–	–	–	–	--	--	–	–	--	--	--	–	–	COLD WEATHER PAVING
SUBTOTALS						7,960	15,000	6,923	7,528	722	631	3,755	3,995	2,488	627	587	10	94	13,350	2,488	
PROJECT 1052-01-62 TOTALS						66,031	15,000	39,570	77,225	7,965	6,970	31,015	3,995	25,520	690	735	10	130	154,720	25,520	
TOTALS						132,916	30,000	79,230	154,295	15,990	13,990	61,875	7,890	50,990	2,025	1,470	20	205	311,180	50,990	

NOTES: REHEATING HMA PAVEMENT LONGITUDINAL JOINTS IS FOR THE CENTERLINE JOINT OF THE UPPER LAYER OF STH 29 ONLY.
ASPHALTIC SURFACE PATCHING IS FOR FILLING IN EXISTING RUMBLE STRIPS PRIOR TO SHIFTING TRAFFIC ONTO THE SHOULDERS, TEMPORARY WEDG JOINT AT DRIVING LANE SHOULDER, AND ADJACENT TO CONCRETE CURB AND GUTTER/SURFACE DRAINS.
REPAIR ASPHALT SHOULDERS PRIOR TO TRAFFIC SHIFT AT LOCATIONS DESIGNATED BY THE ENGINEER.

STORM SEWER ITEMS

PROJECT	STATION	OFFSET	ALIGNMENT	INLET ELEVATION	DISCHARGE ELEVATION	SLOPE (%)	204.0245.01 REMOVING STORM SEWER (12-INCH) LF	520.8000 CONCRETE COLLARS FOR PIPE EACH	522.1012 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 12-INCH EACH	608.0312 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 12-INCH LF	611.0430 RECONSTRUCTING INLETS EACH	611.0642 INLET COVERS TYPE MS EACH	611.0652 INLET COVERS TYPE T EACH	611.3901 INLETS MEDIAN 1 GRATE EACH	611.8115 ADJUSTING INLET COVERS EACH	633.5200* MARKERS CULVERT END EACH
1050-01-61																
	102+12	RT	'S'	1070.28	1070.01	1.60%	8	–	1	34	--	--	–	--	--	1
	102+18	LT&RT	'S'	–	–	--	–	–	–	--	--	--	2	--	2	--
	106+13	LT&RT	'S'	–	–	--	–	–	–	--	--	--	2	--	2	--
PROJECT 1050-01-61 TOTALS							8	–	1	34	--	--	4	--	4	1
1052-01-62																
	273+20	LT	'EB'	937.79	937.57	2.00%	–	1	–	19	1	1	–	1	--	1
	97+61	LT&RT	'S'	–	–	--	–	–	–	--	--	--	2	--	2	--
PROJECT 1052-01-62 TOTALS							–	1	–	19	1	1	2	1	2	1
TOTALS							8	1	1	53	1	1	6	1	6	2

NOTES: STATION OFFSETS SHOWN ARE TO THE CENTER OF INLET STRUCTURES OR END OF PIPE AT APRON ENDWALLS (NOT INCLUDING LENGTH OF ENDWALL).
STORM SEWER PIPE REINFORCED CONCRETE CLASS III 12-INCH LENGTH SHOWN FOR STATION 273+20 IS FROM CENTER TO CENTER OF INLETS

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

3

CULVERT PIPE ITEMS

PROJECT	STATION	OFFSET	ALIGNMENT	520.8700 CLEANING CULVERT PIPES EACH	523.0529 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL 29X45-INCH EACH	611.9800.S PIPE GRATES EACH	633.5200* MARKERS CULVERT END EACH
1050-01-61							
	284+04	LT	'WB'	1	--	–	–
	335+00	LT	'WB'	1	--	–	–
PROJECT 1050-01-61 TOTALS				2	--	–	–
1052-01-62							
	272+71	RT	'EB'	1	1	1	1
PROJECT 1052-01-62 TOTALS				1	1	1	1
TOTALS				3	1	1	1

PIPE UNDERDRAIN ITEMS

PROJECT	LOCATION	646.0805.S PAVEMENT MARKING OUTFALL EACH	SPV.0060.02 CLEANING PIPE UNDERDRAIN OUTFALLS EACH
1050-01-61			
	PROJECT	400	400
PROJECT 1050-01-61 TOTALS		400	400
1052-01-62			
	PROJECT	250	250
PROJECT 1052-01-62 TOTALS		250	250
TOTALS		650	650

INLET COVERS TEMPORARY

PROJECT	STATION	OFFSET	ALIGNMENT	SPV.0060.04 EACH
1052-01-62				
	97+60	LT	S'	2
TOTAL				2

NOTE: INSTALL IN STAGE S1

3

CONCRETE BARRIER TEMPORARY PRECAST ITEMS

PROJECT	STATION	TO	STATION	OFFSET	ALIGNMENT	STAGE	603.8000 CONCRETE BARRIER TEMPORARY PRECAST DELIVERED LF	603.8125 CONCRETE BARRIER TEMPORARY PRECAST INSTALLED LF	614.0905 CRASH CUSHIONS TEMPORARY EACH	REMARKS
1050-01-61										
	101+20	-	102+40	LT	S'	3	120	120	1	STH 27 INTERCHANGE
PROJECT 1050-01-61 TOTALS							120	120	1	
1052-01-62										
	98+20	-	99+40	RT	S'	3	120	120	1	STH 27 INTERCHANGE
PROJECT 1052-01-62 TOTALS							120	120	1	
TOTALS							240	240	2	

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

BARRIER SYSTEM GRADING SHAPING FINISHING

PROJECT	STATION	TO	STATION	OFFSET	ALIGNMENT	614.0010 EACH	**EXCAVATION COMMON CY	**FILL CY	**BORROW CY	**TOPSOIL SY	**FERTILIZER TYPE B CWT	**SEEDING MIXTURE NO. 20 LB	**SEEDING MIXTURE NO. 30 LB
1050-01-61													
	151+70	-	154+29	LT	'WB'	1	–	35	35	205	0.1	–	3.7
	155+54	-	159+64	LT	'WB'	1	–	60	60	213	0.1	–	3.8
	155+72	-	159+82	RT	'WB'	1	–	45	45	230	0.1	–	4.1
	206+02	-	209+86	LT	'WB'	1	–	145	145	274	0.2	–	4.9
	210+91	-	214+64	RT	'WB'	1	5	10	5	167	0.1	–	3.0
	210+91	-	216+14	LT	'WB'	1	20	65	45	337	0.2	–	6.1
	235+46	-	239+19	LT	'WB'	1	20	20	--	140	0.1	–	2.5
	286+58	-	290+44	LT	'WB'	1	10	25	15	256	0.2	–	4.6
	297+65	-	298+61	LT	'WB'	1	–	30	30	97	0.1	–	1.8
	299+72	-	305+95	LT	'WB'	1	5	110	105	377	0.2	–	6.8
	299+77	-	303+76	RT	'WB'	1	–	65	65	181	0.1	–	3.3
	380+91	-	385+90	LT	'WB'	1	25	70	45	329	0.2	–	5.9
	423+02	-	426+76	LT	'WB'	1	15	25	10	263	0.2	–	4.7
	452+02	-	456+96	LT	'WB'	1	5	25	20	196	0.1	–	3.5
	533+97	-	534+55	LT	'WB'	1	15	60	45	16	0.0	–	0.3
	535+97	-	540+20	RT	'WB'	1	10	35	25	256	0.2	–	4.6
	536+45	-	540+31	LT	'WB'	1	10	45	35	201	0.1	–	3.6
	610+17	-	615+02	LT	'WB'	1	25	15	--	169	0.1	–	3.0
	900+17	-	904+65	LT	'WB'	1	55	5	--	248	0.2	–	4.5
	911+69	-	915+05	RT	'WB'	1	20	5	--	147	0.1	–	2.6
	912+15	-	915+88	LT	'WB'	1	25	5	--	121	0.1	–	2.2
	101+58	-	102+99	LT	'D'	1	50	25	--	265	0.2	2.2	4.8
	101+88	-	103+87	RT	'D'	1	45	300	255	49	0.0	–	0.9
PROJECT 1050-01-61 TOTALS						23	360	1,225	985	4,735	3.0	2.2	85.2
1052-01-62													
	150+15	-	154+38	LT	'EB'	1	15	10	--	116	0.1	–	2.1
	150+82	-	154+56	RT	'EB'	1	15	40	25	452	0.3	–	8.1
	156+39	-	158+22	RT	'EB'	1	10	30	20	264	0.2	–	4.8
	205+55	-	209+79	LT	'EB'	1	10	35	25	218	0.1	–	3.9
	206+05	-	209+79	RT	'EB'	1	15	40	25	181	0.1	–	3.3
	210+90	-	211+60	RT	'EB'	1	5	15	10	23	0.0	–	0.4
	230+98	-	234+93	RT	'EB'	1	20	15	--	184	0.1	–	3.3
	282+34	-	286+07	RT	'EB'	1	10	10	--	141	0.1	–	2.5
	294+37	-	298+60	LT	'EB'	1	–	35	35	203	0.1	–	3.7
	294+92	-	298+65	RT	'EB'	1	15	45	30	213	0.1	–	3.8
	299+87	-	300+83	LT	'EB'	1	–	50	50	42	0.0	–	0.7
	299+91	-	305+74	RT	'EB'	1	5	35	30	254	0.2	–	4.6
	376+98	-	379+53	RT	'EB'	1	15	10	--	122	0.1	–	2.2
	420+21	-	423+94	RT	'EB'	1	10	20	10	163	0.1	–	2.9
	447+03	-	452+80	RT	'EB'	1	10	45	35	325	0.2	–	5.9
	529+42	-	533+66	LT	'EB'	1	15	30	15	208	0.1	–	3.7
	529+45	-	533+18	RT	'EB'	1	15	10	--	128	0.1	–	2.3
	535+07	-	539+90	RT	'EB'	1	–	30	30	263	0.2	–	4.7
	606+68	-	611+52	RT	'EB'	1	25	10	--	126	0.1	–	2.3
	754+04	-	763+39	RT	'EB'	1	20	795	775	2,635	1.7	30.2	27.2
	897+22	-	901+71	RT	'EB'	1	290	20	--	823	0.5	11.9	6.9
	907+00	-	910+74	RT	'EB'	1	20	15	--	152	0.1	–	2.7
	907+81	-	911+17	LT	'EB'	1	15	5	--	81	0.1	–	1.5
	948+65	-	954+52	RT	'EB'	1	–	585	585	1,887	1.2	24.3	17.8
	96+92	-	98+82	LT	'D'	1	60	10	--	187	0.1	–	3.4
	97+97	-	99+13	RT	'D'	1	30	15	--	260	0.2	2.8	2.8
PROJECT 1052-01-62 TOTALS						26	645	1,960	1,700	9,650	6.1	69.2	127.5
TOTALS						49	1,005	3,185	2,685	14,385	9.1	71.3	212.7

NOTES: **NON-BID ITEM, ITEMS AND QUANTITIES LISTED FOR BID INFORMATION ONLY. ITEMS INCIDENTAL TO BARRIER SYSTEM GRADING SHAPING FINISHING. ITEMS ASSOCIATED WITH STH 27 BARRIER SYSTEM LOCATIONS ARE PAID FOR USING STANDARD BID ITEMS SHOWN ELSEWHERE.

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

GUARDRAIL ITEMS

PROJECT	STATION	TO	STATION	OFFSET	ALIGNMENT	614.0920* SALVAGED RAIL LF	614.0925* SALVAGED GUARDRAIL END TREATMENTS EACH	614.2300 MGS GUARDRAIL 3 LF	614.2310 MGS GUARDRAIL 3 HS LF	614.2500 MGS THRIE BEAM TRANSITION LF	614.2610 MGS GUARDRAIL TERMINAL EAT EACH	614.2620 MGS GUARDRAIL TERMINAL TYPE 2 EACH
1050-01-61												
	151+70	-	154+29	LT	'WB'	185	–	212.5	37.5	8.2	–	1
	155+54	-	158+46	LT	'WB'	235	1	200.0	–	39.4	1	--
	155+72	-	158+64	RT	'WB'	235	1	200.0	–	39.4	1	--
	206+02	-	209+86	LT	'WB'	290	–	375.0	–	8.2	–	1
	210+91	-	213+46	RT	'WB'	175	1	162.5	–	39.4	1	--
	210+91	-	214+96	LT	'WB'	345	1	312.5	–	39.4	1	--
	235+46	-	238+00	LT	'WB'	210	1	162.5	–	39.4	1	--
	286+58	-	289+26	LT	'WB'	210	1	175.0	–	39.4	1	--
	297+65	-	298+61	LT	'WB'	95	–	87.5	–	8.2	–	1
	299+72	-	304+77	LT	'WB'	450	1	412.5	–	39.4	1	--
	299+77	-	302+57	RT	'WB'	225	1	187.5	–	39.4	1	--
	380+91	-	384+71	LT	'WB'	250	1	287.5	–	39.4	1	--
	423+02	-	425+57	LT	'WB'	35	1	162.5	–	39.4	1	--
	452+02	-	455+79	LT	'WB'	330	1	350.0	–	–	1	1
	533+97	-	534+55	LT	'WB'	45	–	50.0	–	8.2	–	1
	535+97	-	539+02	RT	'WB'	145	1	212.5	–	39.4	1	--
	536+45	-	539+12	LT	'WB'	210	1	175.0	–	39.4	1	--
	610+17	-	613+83	LT	'WB'	355	1	175.0	137.5	–	1	1
	900+17	-	903+47	LT	'WB'	185	1	237.5	–	39.4	1	--
	911+69	-	913+86	RT	'WB'	145	1	162.5	–	39.4	1	--
	912+15	-	914+70	LT	'WB'	85	1	125.0	–	39.4	1	--
	101+88	-	102+93	RT	'D'	25	1	12.5	–	39.4	1	--
PROJECT 1050-01-61 TOTALS						4,465	18	4,437.5	175.0	663.2	18	6
1052-01-62												
	151+33	-	154+38	LT	'EB'	185	1	212.5	–	39.4	1	--
	152+01	-	154+56	RT	'EB'	250	1	162.5	–	39.4	1	--
	156+39	-	158+22	RT	'EB'	170	–	175.0	–	8.2	–	1
	206+74	-	209+79	LT	'EB'	185	1	212.5	–	39.4	1	--
	207+24	-	209+79	RT	'EB'	135	1	162.5	–	39.4	1	--
	210+90	-	211+60	RT	'EB'	80	–	62.5	–	8.2	–	1
	232+38	-	234+93	RT	'EB'	200	1	162.5	–	39.4	1	--
	283+52	-	286+07	RT	'EB'	200	1	162.5	–	39.4	1	--
	295+55	-	298+60	LT	'EB'	185	1	212.5	–	39.4	1	--
	296+10	-	298+65	RT	'EB'	135	1	162.5	–	39.4	1	--
	299+87	-	300+83	LT	'EB'	70	–	87.5	–	8.2	–	1
	299+91	-	305+74	RT	'EB'	560	–	575.0	–	8.2	–	1
	376+98	-	379+53	RT	'EB'	225	1	162.5	–	39.4	1	--
	421+39	-	423+94	RT	'EB'	20	1	162.5	–	39.4	1	--
	448+22	-	452+80	RT	'EB'	300	1	412.5	–	–	1	1
	530+61	-	533+66	LT	'EB'	45	1	212.5	–	39.4	1	--
	530+63	-	533+18	RT	'EB'	220	1	162.5	–	39.4	1	--
	535+07	-	539+90	RT	'EB'	480	–	475.0	–	8.2	–	1
	606+68	-	611+52	RT	'EB'	355	1	162.5	150.0	–	1	1
	755+23	-	763+39	RT	'EB'	565	1	762.5	–	–	1	1
	898+41	-	901+71	RT	'EB'	275	1	–	237.5	39.4	1	--
	908+19	-	910+74	RT	'EB'	85	1	162.5	–	39.4	1	--
	909+00	-	911+17	LT	'EB'	145	1	125.0	–	39.4	1	--
	949+84	-	954+52	RT	'EB'	350	1	412.5	–	–	1	1
	97+77	-	98+82	LT	'D'	25	1	12.5	–	39.4	1	--
PROJECT 1052-01-62 TOTALS						5,445	20	5,575.0	387.5	671.4	20	9
TOTALS						9,910	38	10,012.5	562.5	1,334.6	38	15

3

STEEL BEAM GUARD ITEMS

PROJECT	STATION	TO	STATION	OFFSET	ALIGNMENT	614.0200 STEEL THRIE BEAM STRUCTURE APPROACH LF	614.0305 STEEL PLATE BEAM GUARD CLASS A LF	614.0345 STEEL PLATE BEAM GUARD SHORT RADIUS LF	614.0370 STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL EACH	614.0390 STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL EACH	614.0920* SALVAGED RAIL LF	614.0925* SALVAGED GUARDRAIL END TREATMENTS EACH
1050-01-61												
	101+36	-	102+34	LT/RT	'S'	20.7	31.3	43.8	–	1	90	2
	101+58	-	102+73	LT	'D'	20.7	50.0	--	1	–	45	1
PROJECT 1050-01-61 TOTALS						41.4	81.3	43.8	1	1	135	3
1052-01-62												
	98+15	-	99+25	LT/RT	'S'	20.7	18.8	43.8	–	1	95	2
	98+02	-	99+13	RT	'D'	20.7	50.0	--	1	–	45	1
PROJECT 1052-01-62 TOTALS						41.4	68.8	43.8	1	1	140	3
TOTALS						82.8	150.1	87.6	2	2	275	6

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

WATER

PROJECT	LOCATION	624.0100 MGAL
1050-01-61		
	PROJECT-BASE COMPACTION	184
	PROJECT-EXCAVATION COMMON	7
	PROJECT-BORROW	4
	PROJECT-PULVERIZE AND RELAY	22
PROJECT 1050-01-61 TOTAL		217
1052-01-62		
	PROJECT-BASE COMPACTION	171
	PROJECT-EXCAVATION COMMON	8
	PROJECT-BORROW	7
	PROJECT-PULVERIZE AND RELAY	22
PROJECT 1052-01-62 TOTAL		208
TOTAL		425

FIELD OFFICE

PROJECT	LOCATION	642.5201 FIELD OFFICE TYPE C EACH
1050-01-61		
	PROJECT	0.5
PROJECT 1050-01-61 TOTAL		0.5
1052-01-62		
	PROJECT	0.5
PROJECT 1052-01-62 TOTAL		0.5
TOTAL		1

RESTORATION ITEMS

PROJECT	STATION	TO	STATION	OFFSET	ALIGNMENT	625.0500 SALVAGED TOPSOIL SY	628.2002 EROSION MAT CLASS I TYPE A SY	628.2004 EROSION MAT CLASS I TYPE B SY	629.0210 FERTILIZER TYPE B CWT	630.0120 SEEDING MIXTURE NO. 20 LB	630.0130 SEEDING MIXTURE NO. 30 LB	REMARKS
1050-01-61												
	151+70	-	154+29	LT	'WB'	–	205	–	--	–	–	BARRIER SYSTEM
	155+54	-	159+64	LT	'WB'	–	213	–	--	–	–	BARRIER SYSTEM
	155+72	-	159+82	RT	'WB'	–	230	–	--	–	–	BARRIER SYSTEM
		169+87		RT	'WB'	–	–	164	--	–	–	MEDIAN CROSSOVER
	206+02	-	209+86	LT	'WB'	–	274	–	--	–	–	BARRIER SYSTEM
	210+91	-	214+64	RT	'WB'	–	167	–	--	–	–	BARRIER SYSTEM
	210+91	-	216+14	LT	'WB'	–	337	–	--	–	–	BARRIER SYSTEM
	235+46	-	239+19	LT	'WB'	–	140	–	--	–	–	BARRIER SYSTEM
		273+86		RT	'WB'	–	–	224	--	–	–	MEDIAN CROSSOVER
	286+58	-	290+44	LT	'WB'	–	210	46	--	–	–	BARRIER SYSTEM
	297+65	-	298+61	LT	'WB'	–	97	–	--	–	–	BARRIER SYSTEM
	299+72	-	305+95	LT	'WB'	–	377	–	--	–	–	BARRIER SYSTEM
	299+77	-	303+76	RT	'WB'	–	181	–	--	–	–	BARRIER SYSTEM
	380+91	-	385+90	LT	'WB'	–	329	–	--	–	–	BARRIER SYSTEM
		395+15		RT	'WB'	–	–	163	--	–	–	MEDIAN CROSSOVER
	423+02	-	426+76	LT	'WB'	–	213	50	--	–	–	BARRIER SYSTEM
	452+02	-	456+96	LT	'WB'	–	196	–	--	–	–	BARRIER SYSTEM
		461+88		RT	'WB'	–	–	162	--	–	–	MEDIAN CROSSOVER
	533+97	-	534+55	LT	'WB'	–	16	–	--	–	–	BARRIER SYSTEM
	535+97	-	540+20	RT	'WB'	–	256	–	--	–	–	BARRIER SYSTEM
	536+45	-	540+31	LT	'WB'	–	201	–	--	–	–	BARRIER SYSTEM
		589+65		RT	'WB'	–	–	161	--	–	–	MEDIAN CROSSOVER
	610+17	-	615+02	LT	'WB'	–	169	–	--	–	–	BARRIER SYSTEM
		638+36		RT	'WB'	–	–	163	--	–	–	MEDIAN CROSSOVER
		730+09		RT	'WB'	–	–	161	--	–	–	MEDIAN CROSSOVER
		818+97		LT	'WB'	–	62	–	--	–	–	300TH ST INTERSECTION
		818+97		RT	'WB'	–	–	–	--	–	–	300TH ST INTERSECTION
		838+34		RT	'WB'	–	–	163	--	–	–	MEDIAN CROSSOVER
		867+25		RT	'WB'	–	163	163	--	–	–	MEDIAN CROSSOVER
	900+17	-	904+65	LT	'WB'	–	248	–	--	–	–	BARRIER SYSTEM
	911+69	-	915+05	RT	'WB'	–	147	–	--	–	–	BARRIER SYSTEM
	912+15	-	915+88	LT	'WB'	–	121	–	--	–	–	BARRIER SYSTEM
	942+64			RT	'WB'	–	69	–	--	–	–	320TH ST INTERSECTION
	RAMP 'SA' WIDENING			RT	'S'	1,089	–	1,088	0.7	15	10	INTERSECTION WIDENING
	RAMP 'SB' WIDENING			RT	'S'	675	–	675	0.4	9	6	INTERSECTION WIDENING
	101+58	-	102+99	LT	'D'	–	265	–	--	–	–	BARRIER SYSTEM
	101+88	-	103+87	RT	'D'	–	49	–	--	–	–	BARRIER SYSTEM
	UNDISTRIBUTED			–	–	441	1,234	846	0.3	6	4	–
PROJECT 1050-01-61 TOTALS						2,205	6,169	4,229	1.4	30	20	

RESTORATION ITEMS (CONT.)

PROJECT	STATION	TO	STATION	OFFSET	ALIGNMENT	625.0500 SALVAGED TOPSOIL SY	628.2002 EROSION MAT CLASS I TYPE A SY	628.2004 EROSION MAT CLASS I TYPE B SY	629.0210 FERTILIZER TYPE B CWT	630.0120 SEEDING MIXTURE NO. 20 LB	630.0130 SEEDING MIXTURE NO. 30 LB	REMARKS
1052-01-62												
	150+15	-	154+38	LT	'EB'	--	116	--	–	--	--	BARRIER SYSTEM
	150+82	-	154+56	RT	'EB'	--	328	124	–	--	--	BARRIER SYSTEM
	156+39	-	158+22	RT	'EB'	--	264	--	–	--	--	BARRIER SYSTEM
	205+55	-	209+79	LT	'EB'	--	218	--	–	--	--	BARRIER SYSTEM
	206+05	-	209+79	RT	'EB'	--	181	--	–	--	--	BARRIER SYSTEM
	210+90	-	211+60	RT	'EB'	--	23	--	–	--	--	BARRIER SYSTEM
	230+98	-	234+93	RT	'EB'	--	184	--	–	--	--	BARRIER SYSTEM
	282+34	-	286+07	RT	'EB'	--	141	--	–	--	--	BARRIER SYSTEM
	294+37	-	298+60	LT	'EB'	--	203	--	–	--	--	BARRIER SYSTEM
	294+92	-	298+65	RT	'EB'	--	213	--	–	--	--	BARRIER SYSTEM
	299+87	-	300+83	LT	'EB'	--	42	--	–	--	--	BARRIER SYSTEM
	299+91	-	305+74	RT	'EB'	--	254	--	–	--	--	BARRIER SYSTEM
	376+98	-	379+53	RT	'EB'	--	122	--	–	--	--	BARRIER SYSTEM
	420+21	-	423+94	RT	'EB'	--	163	--	–	--	--	BARRIER SYSTEM
	447+03	-	452+80	RT	'EB'	--	262	63	–	--	--	BARRIER SYSTEM
	529+42	-	533+66	LT	'EB'	--	208	--	–	--	--	BARRIER SYSTEM
	529+45	-	533+18	RT	'EB'	--	128	--	–	--	--	BARRIER SYSTEM
	535+07	-	539+90	RT	'EB'	--	263	--	–	--	--	BARRIER SYSTEM
	606+68	-	611+52	RT	'EB'	--	126	--	–	--	--	BARRIER SYSTEM
		663+40		RT	'EB'	--	67	--	–	--	--	270TH ST INTERSECTION
	754+04	-	763+39	RT	'EB'	--	2,633	--	–	--	--	BARRIER SYSTEM
	818+94			RT	'EB'	--	67	--	–	--	--	300TH ST INTERSECTION
	897+22	-	901+71	RT	'EB'	--	667	156	–	--	--	BARRIER SYSTEM
	907+00	-	910+74	RT	'EB'	--	152	--	–	--	--	BARRIER SYSTEM
	907+81	-	911+17	LT	'EB'	--	81	--	–	--	--	BARRIER SYSTEM
	942+50			RT	'EB'	--	69	--	–	--	--	320TH ST INTERSECTION
	948+65	-	954+52	RT	'EB'	--	1,887	--	–	--	--	BARRIER SYSTEM
	RAMP 'SD' WIDENING			LT	'S'	835	–	837	0.5	10	8	INTERSECTION WIDENING
	RAMP 'SC' WIDENING			LT	'S'	617	–	617	0.4	2	10	INTERSECTION WIDENING
	96+92	-	98+82	LT	'D'	--	187	--	–	--	--	BARRIER SYSTEM
	97+97	-	99+13	RT	'D'	--	260	--	–	--	--	BARRIER SYSTEM
	UNDISTRIBUTED			--	--	363	2,377	449	0.2	3	5	–
PROJECT 1052-01-62 TOTALS						1,815	11,886	2,246	1.1	15	23	
TOTALS						4,020	18,055	6,475	2.5	45	43	

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

EROSION CONTROL ITEMS

PROJECT	STATION	TO	STATION	OFFSET	ALIGNMENT	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.7504 TEMPORARY DITCH CHECKS LF	628.7555 CULVERT PIPE CHECKS EACH	628.7570 ROCK BAGS EACH	REMARKS
1050-01-61											
	151+70	-	154+29	LT	'WB'	270	270	–	--	30	BARRIER SYSTEM
	155+54	-	159+64	LT	'WB'	420	420	–	--	45	BARRIER SYSTEM
	155+72	-	159+82	RT	'WB'	430	430	–	--	45	BARRIER SYSTEM
		169+87		RT	'WB'	100	100	–	--	30	MEDIAN CROSSOVER
	206+02	-	209+86	LT	'WB'	410	410	–	--	45	BARRIER SYSTEM
	210+91	-	214+64	RT	'WB'	400	400	–	--	45	BARRIER SYSTEM
	210+91	-	216+14	LT	'WB'	560	560	–	--	75	BARRIER SYSTEM
	235+46	-	239+19	LT	'WB'	420	420	–	--	45	BARRIER SYSTEM
		273+86		RT	'WB'	50	50	13	--	15	MEDIAN CROSSOVER
	286+58	-	290+44	LT	'WB'	360	360	25	--	30	BARRIER SYSTEM
	297+65	-	298+61	LT	'WB'	130	130	–	--	15	BARRIER SYSTEM
	299+72	-	305+95	LT	'WB'	660	660	–	--	90	BARRIER SYSTEM
	299+77	-	303+76	RT	'WB'	420	420	–	--	45	BARRIER SYSTEM
	380+91	-	385+90	LT	'WB'	430	430	–	--	45	BARRIER SYSTEM
		395+15		RT	'WB'	50	50	–	5	15	MEDIAN CROSSOVER
	423+02	-	426+76	LT	'WB'	340	340	25	--	45	BARRIER SYSTEM
	452+02	-	456+96	LT	'WB'	560	560	–	--	75	BARRIER SYSTEM
		461+88		RT	'WB'	100	100	–	--	30	MEDIAN CROSSOVER
	533+97	-	534+55	LT	'WB'	100	100	–	--	15	BARRIER SYSTEM
	535+97	-	540+20	RT	'WB'	450	450	–	--	45	BARRIER SYSTEM
	536+45	-	540+31	LT	'WB'	440	440	–	--	45	BARRIER SYSTEM
		589+65		RT	'WB'	50	50	–	5	15	MEDIAN CROSSOVER
	610+17	-	615+02	LT	'WB'	510	510	–	--	60	BARRIER SYSTEM
		638+36		RT	'WB'	50	50	–	5	15	MEDIAN CROSSOVER
		730+09		RT	'WB'	50	50	–	--	15	MEDIAN CROSSOVER
		818+97		LT	'WB'	200	200	–	--	30	300TH ST INTERSECTION
		818+97		RT	'WB	–	–	–	--	15	300TH ST INTERSECTION
		838+34		RT	'WB'	50	50	–	5	15	MEDIAN CROSSOVER
		867+25		RT	'WB'	100	100	–	5	30	MEDIAN CROSSOVER
	900+17	-	904+65	LT	'WB'	470	470	–	--	45	BARRIER SYSTEM
	911+69	-	915+05	RT	'WB'	370	370	–	--	45	BARRIER SYSTEM
	912+15	-	915+88	LT	'WB'	380	380	–	--	45	BARRIER SYSTEM
	942+64			RT	'WB'	–	–	–	--	15	320TH ST INTERSECTION
	RAMP 'SA' WIDENING			RT	'S'	100	100	75	--	30	OSOW WIDENING
	RAMP 'SB' WIDENING			RT	'S'	250	250	–	5	45	OSOW WIDENING
	101+58	-	102+99	LT	'D'	160	160	–	--	30	BARRIER SYSTEM
	101+88	-	103+87	RT	'D'	200	200	–	--	30	BARRIER SYSTEM
	UNDISTRIBUTED			–	–	2,510	2,510	37	8	340	--
PROJECT 1050-01-61 TOTALS						12,550	12,550	175	38	1,690	

EROSION CONTROL MOBILIZATION

PROJECT	LOCATION	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH
1050-01-61			
	UNDISTRIBUTED	11	7
PROJECT 1050-01-61 TOTALS		11	7
1052-01-62			
	UNDISTRIBUTED	9	7
PROJECT 1052-01-62 TOTALS		9	7
TOTALS		20	14

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

EROSION CONTROL ITEMS (CONT.)

PROJECT	STATION	TO	STATION	OFFSET	ALIGNMENT	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.7504 TEMPORARY DITCH CHECKS LF	628.7555 CULVERT PIPE CHECKS EACH	628.7570 ROCK BAGS EACH	REMARKS
1052-01-62											
	150+15	-	154+38	LT	'EB'	440	440	–	–	45	BARRIER SYSTEM
	150+82	-	154+56	RT	'EB'	230	230	25	–	30	BARRIER SYSTEM
	156+39	-	158+22	RT	'EB'	220	220	–	–	45	BARRIER SYSTEM
		205+55		LT	'EB'	450	450	–	–	60	BARRIER SYSTEM
	206+05	-	209+79	RT	'EB'	390	390	–	–	45	BARRIER SYSTEM
	210+90	-	211+60	RT	'EB'	80	80	–	–	15	BARRIER SYSTEM
	230+98	-	234+93	RT	'EB'	420	420	–	–	45	BARRIER SYSTEM
	282+34	-	286+07	RT	'EB'	330	330	–	–	30	BARRIER SYSTEM
		294+37		LT	'EB'	440	440	–	–	45	BARRIER SYSTEM
	294+92	-	298+65	RT	'EB'	400	400	–	–	45	BARRIER SYSTEM
	299+87	-	300+83	LT	'EB'	110	110	–	–	15	BARRIER SYSTEM
	299+91	-	305+74	RT	'EB'	610	610	–	–	75	BARRIER SYSTEM
	376+98	-	379+53	RT	'EB'	390	390	–	–	45	BARRIER SYSTEM
		420+21		RT	'EB'	400	400	–	–	45	BARRIER SYSTEM
	447+03	-	452+80	RT	'EB'	550	550	13	–	75	BARRIER SYSTEM
	529+42	-	533+66	LT	'EB'	480	480	–	–	60	BARRIER SYSTEM
	529+45	-	533+18	RT	'EB'	410	410	–	–	45	BARRIER SYSTEM
	535+07	-	539+90	RT	'EB'	520	520	–	–	60	BARRIER SYSTEM
		606+68		RT	'EB'	510	510	–	–	60	BARRIER SYSTEM
	663+40			RT	'EB'	200	200	–	–	30	270TH STREET INTERSECTION
	754+04	-	763+39	RT	'EB'	1,030	1,030	–	–	105	BARRIER SYSTEM
	818+94			RT	'EB'	200	200	–	–	30	300TH STREET INTERSECTION
	897+22	-	901+71	RT	'EB'	280	280	25	–	30	BARRIER SYSTEM
		907+00		RT	'EB'	390	390	–	–	45	BARRIER SYSTEM
	907+81	-	911+17	LT	'EB'	370	370	–	–	45	BARRIER SYSTEM
	942+50			RT	'EB'	250	250	–	–	30	320TH STREET INTERSECTION
	948+65	-	954+52	RT	'EB'	640	640	–	–	90	BARRIER SYSTEM
	RAMP 'SD' WIDENING			LT	'S'	100	100	63	–	15	OSOW WIDENING
	RAMP 'SC' WIDENING			LT	'S'	150	150	38	5	30	OSOW WIDENING
	96+92	-	98+82	LT	'D'	200	200	–	–	30	BARRIER SYSTEM
	97+97	-	99+13	RT	'D'	120	120	–	–	15	BARRIER SYSTEM
	UNDISTRIBUTED			--	--	2,830	2,830	41	1	345	–
PROJECT 1052-01-62 TOTALS						14,140	14,140	205	6	1,725	
TOTALS						26,690	26,690	380	44	3,415	

NOTE: ROCK BAGS ARE FOR SILT FENCE RELIEF

INLET PROTECTION

PROJECT	STATION	OFFSET	ALIGNMENT	628.7005 INLET PROTECTION TYPE A EACH	628.7015 INLET PROTECTION TYPE C EACH
1050-01-61					
	213+98	RT	'WB'	1	–
	300+00	RT	'WB'	1	–
	730+70	RT	'WB'	1	–
	820+05	RT	'WB'	1	–
	841+80	RT	'WB'	1	–
	102+18	LT&RT	'S'	--	2
	106+13	LT&RT	'S'	--	2
	UNDISTRIBUTED	–	–	1	1
PROJECT 1050-01-61 TOTALS				4	5
1052-01-62					
	273+20	LT	'EB'	2	–
	942+00	LT	'EB'	1	–
	97+61	LT&RT	'S'	--	2
	UNDISTRIBUTED	–	–	1	1
PROJECT 1052-01-62 TOTALS				4	3
TOTALS				8	8

DELINEATOR REFLECTOR ITEMS

PROJECT	STATION	TO	STATION	OFFSET	ALIGNMENT	633.0100 DELINEATOR POSTS STEEL EACH	633.0500 DELINEATOR REFLECTORS WHITE EACH	633.0500 DELINEATOR REFLECTORS YELLOW EACH	REMARKS
1050-01-61									
	155+61	-	209+86	LT	'WB'	13	13	--	–
	169+87			RT	'WB'	1	–	2	MEDIAN CROSSOVER
	210+82	-	232+00	LT	'WB'	5	5	--	–
	232+00	-	238+33	LT	'WB'	2	2	--	–
	238+33	-	283+16	LT	'WB'	11	11	--	–
	273+86			RT	'WB'	1	–	2	MEDIAN CROSSOVER
	283+16	-	289+50	LT	'WB'	2	2	--	–
	289+50	-	298+73	LT	'WB'	2	2	--	–
	299+69	-	377+00	LT	'WB'	20	20	--	–
	377+00	-	383+81	LT	'WB'	1	1	--	–
	383+81	-	419+51	LT	'WB'	8	8	--	–
	395+15			RT	'WB'	1	–	2	MEDIAN CROSSOVER
	419+51	-	426+32	LT	'WB'	3	3	--	–
	426+32	-	449+15	LT	'WB'	5	5	--	–
	449+15	-	455+78	LT	'WB'	2	2	--	–
	455+78	-	534+28	LT	'WB'	20	20	--	–
	461+88			RT	'WB'	1	–	2	MEDIAN CROSSOVER
	535+94	-	607+50	LT	'WB'	18	18	--	–
	589+65			RT	'WB'	1	–	2	MEDIAN CROSSOVER
	607+50	-	614+22	LT	'WB'	3	3	--	–
	614+22	-	661+00	LT	'WB'	12	12	--	–
	638+36			RT	'WB'	1	–	2	MEDIAN CROSSOVER
	661+00	-	729+00	LT	'WB'	17	17	--	–
	729+00	-	817+00	LT	'WB'	22	22	--	–
	730+09			RT	'WB'	1	–	2	MEDIAN CROSSOVER
	817+00	-	894+56	LT	'WB'	19	19	--	–
	818+97			RT	'WB'	1	–	2	300TH STREET INTERSECTION
	838+34			RT	'WB'	1	–	2	MEDIAN CROSSOVER
	867+25			RT	'WB'	1	–	2	MEDIAN CROSSOVER
	894+56	-	915+07	LT	'WB'	5	5	--	–
	915+07	-	941+00	LT	'WB'	6	6	--	–
	941+00	-	990+00	LT	'WB'	13	13	--	–
	942+64			RT	'WB'	1	–	2	320TH STREET INTERSECTION
	403+96	-	422+17	LT/RT	'XA'	18	30	--	–
	422+17	-	436+39	LT/RT	'XB'	14	19	--	–
	590+29	-	610+74	LT/RT	'SA'	20	33	--	–
	610+74	-	625+02	LT/RT	'SB'	14	20	--	–
	894+55	-	913+87	LT/RT	'DA'	19	31	--	–
	913+87	-	927+85	LT/RT	'DB'	14	20	--	–
PROJECT 1050-01-61 TOTALS						319	362	22	
							384		

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

DELINEATOR REFLECTOR ITEMS (CONT.)

PROJECT	STATION	TO	STATION	OFFSET	ALIGNMENT	633.0100 DELINEATOR POSTS STEEL EACH	633.0500 DELINEATOR REFLECTORS WHITE EACH	633.0500 DELINEATOR REFLECTORS YELLOW EACH	REMARKS
1052-01-62									
	156+14	-	209+86	RT	'EB'	13	13	–	–
	169+87			LT	'EB'	1	–	2	MEDIAN CROSSOVER
	210+82	-	232+00	RT	'EB'	5	5	–	–
	232+00	-	238+33	RT	'EB'	2	2	–	–
	238+33	-	283+14	RT	'EB'	11	11	–	–
	273+86			LT	'EB'	1	–	2	MEDIAN CROSSOVER
	283+14	-	289+48	RT	'EB'	2	2	–	–
	289+48	-	298+71	RT	'EB'	2	2	–	–
	299+69	-	376+62	RT	'EB'	20	20	–	–
	376+62	-	383+38	RT	'EB'	1	1	–	–
	383+38	-	420+82	RT	'EB'	10	10	–	–
	395+15			LT	'EB'	1	–	2	MEDIAN CROSSOVER
	420+82	-	427+63	RT	'EB'	3	3	–	–
	427+63	-	449+00	RT	'EB'	5	5	–	–
	449+00	-	455+63	RT	'EB'	2	2	–	–
	455+63	-	533+67	RT	'EB'	19	19	–	–
	461+88			LT	'EB'	1	–	2	MEDIAN CROSSOVER
	535+33	-	607+54	RT	'EB'	19	19	–	–
	589+65			LT	'EB'	1	–	2	MEDIAN CROSSOVER
	607+54	-	614+24	RT	'EB'	3	3	–	–
	614+24	-	661+00	RT	'EB'	12	12	–	–
	638+36			LT	'EB'	1	–	2	MEDIAN CROSSOVER
	661+00	-	729+00	RT	'EB'	17	17	–	–
	729+00	-	817+00	RT	'EB'	22	22	–	–
	730+09			LT	'EB'	1	–	2	MEDIAN CROSSOVER
	817+00	-	896+27	RT	'EB'	19	19	–	–
	818+97			LT	'EB'	1	–	2	300TH STREET INTERSECTION
	838+34			LT	'EB'	1	–	2	MEDIAN CROSSOVER
	867+25			LT	'EB'	1	–	2	MEDIAN CROSSOVER
	896+27	-	914+72	RT	'EB'	5	5	–	–
	914+72	-	941+00	RT	'EB'	7	7	–	–
	941+00	-	990+00	RT	'EB'	13	13	–	–
	942+64			LT	'EB'	1	–	2	320TH STREET INTERSECTION
	412+33	-	426+41	LT/RT	'XD'	14	20	–	–
	426+41	-	444+91	LT/RT	'XC'	18	28	–	–
	597+10	-	611+23	LT/RT	'SD'	14	20	–	–
	611+23	-	631+09	LT/RT	'SC'	20	32	–	–
	896+08	-	909+50	LT/RT	'DD'	13	22	–	–
	909+50	-	928+65	LT/RT	'DC'	20	31	–	–
PROJECT 1052-01-62 TOTALS						322	365	22	
							387		
TOTALS						641	771		

TYPE II SIGNS AND SUPPORTS

PROJECT	SIGN NUMBER	SIGN CODE	SIGN DIMENSION W X H IN		IN	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	634.0814 POSTS TUBULAR STEEL 2X2-INCH X 14-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	638.2102 MOVING SIGNS TYPE II EACH	REMARKS
1050-01-61															
	1-1	I3-1	60	X	36	1	1	--	--	15.00	–	–	–	--	–
	1-2	R3-4B	36	X	48	–	1	--	--	12.00	–	–	–	--	–
	1-3	–	–	X	–	–	–	--	--	–	–	1	1	--	–
	1-4	D10-2	12	X	36	1	–	--	--	3.00	–	1	1	--	–
	2-1	D10-2	12	X	36	1	–	--	--	3.00	–	1	1	--	–
	3-1	R3-4B	36	X	48	–	1	--	--	12.00	–	–	–	--	–
	3-2	–	–	X	–	–	–	--	--	–	–	1	1	--	–
	3-3	D10-2	12	X	36	1	–	--	--	3.00	–	1	1	--	–
	3-4	I2-2	54	X	21	2	–	--	--	7.88	–	1	2	--	–
	3-5	I3-1	48	X	36	–	1	--	--	12.00	–	–	–	--	–
	4-1	D10-2	12	X	36	1	–	--	--	3.00	–	1	1	--	–
	4-2	R4-3	48	X	60	–	1	1	--	20.00	–	–	–	--	–
	4-3	D10-2	12	X	36	1	–	--	--	3.00	–	1	1	--	–
	5-1	R2-1	48	X	60	–	1	1	--	20.00	–	1	2	--	SPEED LIMIT 70
	5-2	R3-4B	36	X	48	–	1	--	--	12.00	–	–	–	--	–
	5-3	–	–	X	–	–	–	--	--	–	–	1	1	--	–
	5-4	J4-1	36	X	54	–	1	--	--	13.50	–	1	1	--	–
	5-5	R7-64	48	X	30	1	–	--	--	10.00	–	–	–	--	–
	5-6	–	–	X	–	–	–	--	--	–	–	1	1	--	–
	5-7	R5-57	36	X	36	–	1	--	--	9.00	–	–	–	--	–
	5-8	–	–	X	–	–	–	--	--	–	–	1	2	--	–
	5-9	–	–	X	–	–	–	--	--	–	–	1	1	--	–
	5-10	–	–	X	–	–	–	--	--	–	–	1	1	--	–
	5-11	J13-1	24	X	45	–	1	--	--	7.50	–	1	–	--	–
	5-12	R5-1A	36	X	24	1	–	--	--	6.00	–	1	1	--	–
	5-13	R5-1A	36	X	24	–	–	--	--	6.00	–	1	2	--	MOUNT ON SAME POST AS 5-14
	5-14	D7-53R	66	X	36	–	2	--	--	16.50	–	–	–	--	MOUNT ON SAME POST AS 5-13
	5-15	W4-1R	48	X	48	–	2	--	--	–	16.00	1	2	--	–
	5-16	–	–	X	–	–	–	--	--	–	–	1	1	--	–
	5-17	D1-1	54	X	15	2	–	--	--	5.63	–	–	–	--	–
	5-18	E5-1A	72	X	60	–	–	2	--	30.00	–	1	2	--	–
	5-19	W3-1	36	X	36	–	1	--	--		9.00	1	2	--	–
	5-20	R7-64	48	X	30	1	–	--	--	10.00	–	1	2	--	–
	5-21	D10-2	12	X	36	1	–	--	--	3.00	–	1	1	--	–
	6-1	I2-2	60	X	21	2	–	--	--	8.75	–	1	2	--	–
	6-2	R3-4B	36	X	48	–	1	--	--	12.00	–	–	–	--	–
	6-3	–	–	X	–	–	–	--	--	–	–	1	1	--	–
	6-4	D10-2	12	X	36	1	–	--	--	3.00	–	1	1	--	–
	7-1	R8-7	48	X	36	–	1	--	--	12.00	–	1	1	--	–
	7-2	I2-2	54	X	21	2	–	--	--	7.88	–	1	–	--	–
	7-3	D10-2	12	X	36	1	–	--	--	3.00	–	1	1	--	–
	7-4	R4-3	48	X	60	–	1	1	--	20.00	–	1	2	--	–
	8-2	R2-1	48	X	60	–	1	1	--	20.00	–	1	2	--	SPEED LIMIT 70
	8-3	R2-1	48	X	60	–	1	1	--	20.00	–	–	–	--	SPEED LIMIT 70
	8-4	J4-1	36	X	54	–	1	--	--	13.50	–	1	1	--	–
	8-5	R3-4B	36	X	48	–	1	--	--	12.00	–	–	–	--	–
	8-6	–	–	X	–	–	–	--	--	–	–	1	1	--	–
	8-7	D10-2	12	X	36	1	–	--	--	3.00	–	1	1	--	–
	8-8	–	–	X	–	–	–	--	--	–	–	1	1	--	–
	8-9	R7-64	48	X	30	1	–	--	--	10.00	–	–	–	--	–
	8-10	R5-57	36	X	36	–	1	--	--	9.00	–	–	–	--	–
	8-11	–	–	X	–	–	–	--	--	–	–	1	1	--	–
	8-12	J3-2	48	X	57	–	1	--	--	19.00	–	1	1	--	–
	8-13	W4-1R	48	X	48	–	2	--	--	–	16.00	1	2	--	–
	8-14	D1-2	66	X	24	–	–	--	--	11.00	–	–	–	--	MOUNT ON SAME POST AS 8-15
	8-15	R5-1A	36	X	24	2	–	--	--	6.00	–	1	2	--	MOUNT ON SAME POST AS 8-14
	8-16	R5-1A	36	X	24	2	–	--	--	6.00	–	1	2	--	MOUNT ON SAME POST AS 8-17
	8-17	D1-3	66	X	36	–	–	--	--	16.50	–	–	–	--	MOUNT ON SAME POST AS 8-16
	8-18	–	–	X	–	–	–	--	--	–	–	1	2	--	–
	8-19	E5-1A	72	X	60	–	–	2	--	30.00	–	1	2	--	–
SUBTOTALS						26	26	9	--	485.63	41.00	43	57	--	

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TYPE II SIGNS AND SUPPORTS (CONT.)

PROJECT	SIGN NUMBER	SIGN CODE	SIGN DIMENSION W X H IN	X	IN	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	634.0814 POSTS TUBULAR STEEL 2X2-INCH X 14-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	638.2102 MOVING SIGNS TYPE II EACH	REMARKS
1050-01-61															
	8-20	W3-1	36	X	36	–	1	–	–	–	9.00	–	–	--	–
	8-21	--	–	X	--	–	--	–	–	–	–	1	1	--	–
	8-22	R7-64	48	X	30	1	--	–	–	10.00	–	–	–	--	–
	9-1	R3-4B	36	X	48	–	1	–	–	12.00	–	–	–	--	–
	9-2	--	–	X	--	–	--	–	–	–	–	1	1	--	–
	9-3	D10-2	12	X	36	1	--	–	–	3.00	–	1	1	--	–
	9-4	--	–	X	--	–	--	–	–	–	–	1	1	--	–
	9-5	--	–	X	--	–	--	–	–	–	–	–	–	--	–
	10-1	D10-2	12	X	36	1	--	–	–	3.00	–	1	1	--	–
	10-2	R3-4B	36	X	48	–	1	–	–	12.00	–	–	–	--	–
	10-3	--	–	X	--	–	--	–	–	–	–	1	1	--	–
	10-4	R8-7	48	X	36	–	1	–	–	12.00	–	1	1	--	–
	11-1	D10-2	12	X	36	1	--	–	–	3.00	–	1	1	--	–
	11-2	R4-3	48	X	60	–	1	1	–	20.00	–	1	2	--	–
	12-1	D10-2	12	X	36	1	--	–	–	3.00	–	1	1	--	–
	12-2	R5-57	36	X	36	–	1	–	–	9.00	–	1	1	--	MOUNT ON SAME POST AS 12-3
	12-3	R5-57B	36	X	30	–	--	–	–	7.50	–	–	–	--	MOUNT ON SAME POST AS 12-2
	12-4	R6-1L	54	X	18	–	--	–	–	6.75	–	–	–	--	MOUNT ON SAME POST AS 12-5, 12-6, 12-7
	12-5	R6-1R	54	X	18	–	--	–	–	6.75	–	–	–	--	MOUNT ON SAME POST AS 12-4, 12-6, 12-7
	12-6	R1-1	36	X	36	–	1	–	–	7.46	–	1	1	--	MOUNT ON SAME POST AS 12-4, 12-5, 12-7
	12-7	R6-3	30	X	24	–	--	–	–	5.00	–	–	–	--	MOUNT ON SAME POST AS 12-4, 12-5, 12-6
	12-8	R4-7	48	X	60	–	--	1	–	20.00	–	1	1	--	–
	12-9	R4-7	48	X	60	–	--	1	–	20.00	–	1	1	--	–
	12-10	--	–	X	--	–	--	–	–	–	–	1	1	--	–
	12-11	--	–	X	--	–	--	–	–	–	–	–	–	--	–
	12-12	R5-1	48	X	48	–	1	–	–	16.00	–	–	–	--	–
	12-13	--	–	X	--	–	--	–	–	–	–	1	1	--	–
	12-14	R5-1A	42	X	30	1	--	–	–	8.75	–	–	–	--	–
	12-15	D1-61	72	X	30	1	1	–	–	15.00	–	1	1	--	–
	12-16	R3-4B	36	X	48	–	1	–	–	12.00	–	–	–	--	–
	12-17	D10-2	12	X	36	1	--	–	–	3.00	–	1	1	--	–
	13-1	R3-4B	36	X	48	–	1	–	–	12.00	–	–	–	--	–
	13-2	R2-1	48	X	60	–	1	1	–	20.00	–	1	2	--	SPEED LIMIT 65
	13-4	J4-1	36	X	54	–	1	–	–	13.50	–	1	1	--	–
	13-5	I2-2	54	X	21	2	--	–	–	7.88	–	1	1	--	–
	13-6	--	–	X	--	–	--	–	–	–	–	–	–	--	SIGN NUMBER NOT USED
	13-7	D10-2	12	X	36	1	--	–	–	3.00	–	1	1	--	–
	13-8	R7-64	48	X	30	1	--	–	–	10.00	–	1	2	--	–
	13-9	W4-1R	48	X	48	–	2	–	–	–	16.00	1	2	--	–
	13-10	R5-1A	36	X	24	1	--	–	–	6.00	–	1	1	--	–
	13-11	R5-1A	36	X	24	1	--	–	–	6.00	–	1	1	--	MOUNT ON SAME POST AS 13-13
	13-12	J13-1	24	X	45	–	1	–	–	7.50	–	1	1	--	–
	13-13	D1-1	48	X	15	–	--	–	–	5.00	–	–	–	--	MOUNT ON SAME POST AS 13-11
	13-14	E5-1A	72	X	60	–	--	2	–	30.00	–	1	2	--	–
	13-15	D7-60	24	X	36	–	--	–	–	6.00	–	1	–	--	MOUNT ON EXISTING LIGHT POLE
	13-16	W3-1	36	X	36	–	--	–	–	–	9.00	–	–	--	MOUNT ON EXISTING LIGHT POLE
	13-17	--	–	X	--	–	--	–	–	–	–	1	–	--	–
	14-1	R7-64	48	X	30	–	--	–	–	10.00	–	1	–	--	MOUNT ON EXISTING LIGHT POLE
	14-4	R4-7	48	X	60	–	--	1	–	20.00	–	1	1	--	–
	14-5	R6-2L	36	X	48	–	1	–	–	12.00	–	1	1	--	MOUNT ON SAME POST AS 14-31
	14-6	--	–	X	--	–	--	–	–	–	–	1	1	--	–
	14-7	R5-1	48	X	48	–	1	–	–	16.00	–	–	–	--	–
	14-8	--	–	X	--	–	--	–	–	–	–	1	1	--	–
	14-9	R5-1A	42	X	30	1	--	–	–	8.75	–	–	–	--	–
	14-10	--	–	X	--	–	--	–	–	–	–	1	2	--	–
	14-11	D1-1	90	X	21	2	--	–	–	13.13	–	–	–	--	–
	14-12	D10-2	12	X	36	1	--	–	–	3.00	–	1	1	--	–
	14-13	I3-1	48	X	36	–	1	–	–	12.00	–	–	–	--	–
	14-31	--	–	X	--	–	--	–	–	–	–	–	–	1	MOUNT ON SAME POST AS 14-5
	14-33	R4-7	48	X	60	–	--	1	–	20.00	–	–	–	--	–
SUBTOTALS						18	19	8	–	456.96	34.00	37	40	1	

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TYPE II SIGNS AND SUPPORTS (CONT.)

PROJECT	SIGN NUMBER	SIGN CODE	SIGN DIMENSION W X H IN	X	IN	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	634.0814 POSTS TUBULAR STEEL 2X2-INCH X 14-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	638.2102 MOVING SIGNS TYPE II EACH	REMARKS
1050-01-61															
	15-1	J3-1	24	X	57	--	1	--	–	9.50	–	1	1	–	MOUNT ON SAME POST AS 15-2
	15-2	J3-1	24	X	57	--	--	--	–	9.50	–	–	–	–	MOUNT ON SAME POST AS 15-1
	15-3	R3-2	24	X	24	1	--	--	–	4.00	–	1	1	–	–
	15-4	R5-1C	36	X	36	--	--	--	–	9.00	–	–	–	–	MOUNT ON SAME POST AS 15-6
	15-5	R5-1C	36	X	36	--	--	--	–	9.00	–	–	–	–	MOUNT ON SAME POST AS 15-7
	15-6	R1-1	36	X	36	1	--	--	–	7.46	–	1	1	–	MOUNT ON SAME POST AS 15-4
	15-7	R1-1	36	X	36	1	--	--	–	7.46	–	1	1	–	MOUNT ON SAME POST AS 15-4
	15-8	R6-2R	24	X	30	1	--	--	–	5.00	–	–	–	–	MOUNT ON SAME POST AS 15-9
	15-9	R6-2L	24	X	30	--	--	--	–	5.00	–	–	–	–	MOUNT ON SAME POST AS 15-8
	15-10	R3-2	24	X	24	1	--	--	–	4.00	–	1	1	–	MOUNT ON SAME POST AS 15-11
	15-11	R3-1	24	X	24	--	--	--	–	4.00	–	–	–	–	MOUNT ON SAME POST AS 15-10
	15-12	D1-1	60	X	15	2	--	--	–	6.25	–	1	2	–	–
	15-13	W5-52R	12	X	36	1	--	--	–	–	3.00	1	1	–	–
	15-14	J3-1	24	X	57	--	1	--	–	9.50	–	1	1	–	–
	15-15	W5-52L	12	X	36	1	--	--	–	–	3.00	1	1	–	–
	16-21	J3-2	48	X	57	--	1	--	–	19.00	–	1	1	–	MOUNT ON SAME POST AS 16-22
	16-22	R5-1A	42	X	30	--	--	--	–	8.75	–	–	–	–	MOUNT ON SAME POST AS 16-21
	16-23	D1-1	60	X	15	2	--	--	–	6.25	–	1	2	–	–
	16-24	W5-52R	12	X	36	1	--	--	–	–	3.00	1	1	–	–
	16-25	R3-1	36	X	36	--	--	--	1	9.00	–	1	1	–	MOUNT ON SAME POST AS 16-27
	16-26	R6-2L	30	X	36	--	--	--	1	7.50	–	1	1	–	–
	16-27	R5-1	36	X	36	--	--	--	–	9.00	–	–	–	–	MOUNT ON SAME POST AS 16-25
	16-28	R5-1C	36	X	36	--	--	--	1	7.46	–	1	1	–	MOUNT ON SAME POST AS 16-29
	16-29	R1-1	36	X	36	--	--	--	–	7.46	–	–	–	–	MOUNT ON SAME POST AS 16-28
	16-30	R4-7	24	X	30	1	--	--	1	5.00	–	1	1	–	–
	16-31	R4-7	24	X	30	1	--	--	1	5.00	–	1	1	–	MOUNT ON SAME POST AS 16-37
	16-32	R1-1	36	X	36	--	1	--	1	7.46	–	1	1	–	MOUNT ON SAME POST AS 16-33
	16-33	R6-3	30	X	24	--	--	--	–	5.00	–	–	–	–	MOUNT ON SAME POST AS 16-32
	16-34	R1-1	36	X	36	1	--	--	–	7.46	–	1	1	–	–
	16-35	R6-2L	30	X	36	--	--	--	1	7.50	–	–	–	–	–
	16-36	–	–	X	–	--	--	--	–	–	–	–	–	–	SEE SIGN 16-31 FOR REMOVAL
	16-37	R3-2	36	X	36	--	--	--	–	9.00	–	–	–	–	MOUNT ON SAME POST AS 16-31
	16-38	R5-1	36	X	36	--	--	--	–	9.00	–	1	1	–	MOUNT ON SAME POST AS 16-39
	16-39	J3-1	24	X	57	--	1	--	–	9.50	–	–	–	–	MOUNT ON SAME POST AS 16-38
	16-40	R4-7	24	X	30	1	--	--	1	5.00	–	1	1	–	–
	17-19	D1-1	60	X	15	2	--	--	–	6.25	–	1	1	–	–
	17-20	–	–	X	–	--	--	--	–	–	–	–	–	–	SIGN NUMBER NOT USED
	17-21	–	–	X	–	--	--	--	–	–	–	–	–	–	SIGN NUMBER NOT USED
	17-22	J3-1	24	X	57	--	1	--	–	9.50	–	1	1	–	–
	17-23	R3-1	24	X	24	1	--	--	–	4.00	–	1	1	–	MOUNT ON SAME POST AS 17-24
	17-24	R3-2	24	X	24	--	--	--	–	4.00	–	–	–	–	MOUNT ON SAME POST AS 17-23
	17-25	R5-1C	36	X	36	--	--	--	–	9.00	–	1	1	–	MOUNT ON SAME POST AS 26
	17-26	R1-1	36	X	36	1	--	--	–	7.46	–	1	1	–	MOUNT ON SAME POST AS 25
	17-27	R1-1	36	X	36	--	1	--	–	7.46	–	1	1	–	MOUNT ON SAME POST AS 31
	17-28	R1-1	36	X	36	1	--	--	–	7.46	–	1	1	–	–
	17-29	R6-2L	24	X	30	1	--	--	–	5.00	–	–	–	–	MOUNT ON SAME POST AS 17-30
	17-30	R6-2R	24	X	30	--	--	--	–	5.00	–	–	–	–	MOUNT ON SAME POST AS 17-29
	17-31	R5-1C	36	X	36	--	--	--	–	9.00	–	1	1	–	MOUNT ON SAME POST AS 27
	17-32	J3-2	48	X	57	--	1	--	–	19.00	–	1	1	–	–
SUBTOTALS						22	8	--	8	327.14	9.00	30	32	–	
PROJECT 1050-01-61 TOTALS						66	53	17	8	1,269.73	84.00	110	129	1	

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TYPE II SIGNS AND SUPPORTS (CONT.)

PROJECT	SIGN NUMBER	SIGN CODE	SIGN DIMENSION W		H	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	634.0814 POSTS TUBULAR STEEL 2X2-INCH X 14-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	638.2102 MOVING SIGNS TYPE II EACH	REMARKS
			IN	X	IN										
1052-01-62															
	1-5	I3-1	60	X	36	1	1	--	–	15.00	–	–	–	--	–
	1-6	--	–	X	--	–	–	--	–	–	–	1	1	--	–
	1-7	R3-4B	36	X	48	–	1	--	–	12.00	–	–	–	--	–
	1-8	D10-2	12	X	36	1	–	--	–	3.00	–	1	1	--	–
	1-9	R8-7	48	X	36	–	1	--	–	12.00	–	1	1	--	–
	2-2	D10-2	12	X	36	1	–	--	–	3.00	–	1	1	--	–
	3-6	--	–	X	--	–	–	--	–	–	–	1	1	--	–
	3-7	R3-4B	36	X	48	–	1	--	–	12.00	–	–	–	--	–
	3-8	D10-2	12	X	36	1	–	--	–	3.00	–	1	1	--	–
	3-9	I2-2	54	X	21	2	–	--	–	7.88	–	1	2	--	–
	3-10	R4-3	48	X	60	–	1	1	–	20.00	–	1	2	--	–
	3-11	I3-1	48	X	36	–	1	--	–	12.00	–	–	–	--	–
	4-4	D10-2	12	X	36	1	–	--	–	3.00	–	1	1	--	–
	4-7	D10-2	12	X	36	1	–	--	–	3.00	–	1	1	--	–
	5-22	--	–	X	--	–	–	--	–	–	–	1	1	--	–
	5-23	R3-4B	36	X	48	–	1	--	–	12.00	–	–	–	--	–
	5-26	R7-64	48	X	30	1	–	--	–	10.00	–	1	1	--	–
	5-27	W3-1	36	X	36	–	1	--	–	–	9.00	1	2	--	–
	5-28	E5-1A	72	X	60	–	–	2	–	30.00	–	1	2	--	–
	5-29	W4-1R	48	X	48	–	2	--	–	–	16.00	1	2	--	–
	5-30	D1-1	54	X	15	–	–	--	–	5.63	–	–	–	--	MOUNT ON SAME POST AS 5-31
	5-31	R5-1A	36	X	24	2	–	--	–	6.00	–	1	2	--	MOUNT ON SAME POST AS 5-30
	5-32	R5-1A	36	X	24	1	–	--	–	6.00	–	1	1	--	–
	5-33	--	–	X	--	–	–	--	–	–	–	1	1	--	–
	5-34	--	–	X	--	–	–	--	–	–	–	–	–	--	MOUNTED ON SAME POST AS 5-33
	5-35	--	–	X	--	–	–	--	–	–	–	1	1	--	–
	5-36	R5-57	36	X	36	–	1	--	–	9.00	–	1	1	--	–
	5-37	R7-64	48	X	30	1	–	--	–	10.00	–	1	1	--	–
	5-38	D10-2	12	X	36	1	–	--	–	3.00	–	1	1	--	–
	6-5	I2-2	60	X	21	2	–	--	–	8.75	–	1	2	--	–
	6-6	J4-1	36	X	54	–	1	--	–	13.50	–	1	1	--	–
	6-7	--	–	X	--	–	–	--	–	–	–	1	1	--	–
	6-8	R3-4B	36	X	48	–	1	--	–	12.00	–	–	–	--	–
	6-9	R2-1	48	X	60	–	1	1	–	20.00	–	1	2	--	SPEED LIMIT 70
	6-12	D10-2	12	X	36	1	–	--	–	3.00	–	1	1	--	–
	7-5	I2-2	54	X	21	2	–	--	–	7.88	–	1	2	--	–
	7-6	D10-2	12	X	36	1	–	--	–	3.00	–	1	1	--	–
	8-23	--	–	X	--	–	–	--	–	–	–	1	1	--	–
	8-24	R3-4B	36	X	48	–	1	--	–	12.00	–	–	–	--	–
	8-25	D10-2	12	X	36	1	–	--	–	3.00	–	1	1	--	–
	8-28	R7-64	48	X	30	1	–	--	–	10.00	–	–	–	--	–
	8-29	E5-1A	72	X	60	–	–	2	–	30.00	–	1	2	--	–
	8-30	W3-1	36	X	36	–	1	--	–	–	9.00	1	2	--	–
	8-31	--	–	X	--	–	–	--	–	–	–	1	1	--	–
	8-32	D1-3	66	X	36	–	2	--	–	16.50	–	–	–	--	MOUNT ON SAME POST AS 8-36
	8-33	D1-2	66	X	24	–	2	--	–	11.00	–	–	–	--	MOUNT ON SAME POST AS 8-35
	8-34	--	–	X	--	–	–	--	–	–	–	1	2	--	–
	8-35	R5-1A	36	X	24	–	–	--	–	6.00	–	–	–	--	MOUNT ON SAME POST AS 8-33
	8-36	R5-1A	36	X	24	–	–	--	–	6.00	–	1	2	--	REMOVED WITH SIGN 8-32
	8-37	W4-1R	48	X	48	–	2	--	–	–	16.00	1	2	--	–
	8-38	J3-2	48	X	57	–	1	--	–	19.00	–	1	1	--	–
	8-39	--	–	X	--	–	–	--	–	–	–	1	1	--	–
	8-40	R5-57	36	X	36	–	1	--	–	9.00	–	–	–	--	–
	8-41	--	–	X	--	–	–	--	–	–	–	1	1	--	–
	8-42	R7-64	48	X	30	1	–	--	–	10.00	–	–	–	--	–
	8-43	--	–	X	--	–	–	--	–	–	–	1	2	--	REMOVED WITH SIGN 8-36
	9-8	W3-5	48	X	48	–	2	--	–	–	16.00	1	2	--	–
	9-9	W3-5	48	X	48	–	2	--	–	–	16.00	1	2	--	–
	9-10	--	–	X	--	–	–	--	–	–	–	1	1	--	–
	9-11	J4-1	36	X	54	–	1	--	–	13.50	–	1	1	--	–
	9-12	R3-4B	36	X	48	–	1	--	–	12.00	–	–	–	--	–
	9-13	R2-1	48	X	60	–	1	1	–	20.00	–	–	–	--	SPEED LIMIT 65
	9-14	R2-1	48	X	60	–	1	1	–	20.00	–	–	–	--	SPEED LIMIT 65
	9-15	--	–	X	--	–	–	--	–	–	–	1	2	--	–
	9-16	--	–	X	--	–	–	--	–	–	–	1	2	--	–
	9-17	D10-2	12	X	36	1	–	--	–	3.00	–	1	1	--	–
SUBTOTALS						24	32	8	–	466.63	82.00	48	67	--	

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TYPE II SIGNS AND SUPPORTS (CONT.)

PROJECT	SIGN NUMBER	SIGN CODE	SIGN DIMENSION W X H IN	X	IN	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	634.0814 POSTS TUBULAR STEEL 2X2-INCH X 14-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	638.2102 MOVING SIGNS TYPE II EACH	REMARKS
1052-01-62															
	9-18	W6-53	144	X	48	--	1	2	–	–	48.00	1	3	–	–
	9-19	W6-53	144	X	48	--	1	2	–	–	48.00	1	3	–	–
	9-20	D1-61	90	X	21	2	–	–	–	13.13	–	--	–	–	–
	9-21	–	–	X	–	--	–	–	–	–	–	1	1	–	–
	9-22	–	–	X	–	--	–	–	–	–	–	--	–	–	–
	9-23	R5-1A	42	X	30	1	–	–	–	8.75	–	--	–	–	–
	9-24	R5-1	48	X	48	--	1	–	–	16.00	–	--	–	–	–
	9-25	–	–	X	–	--	–	–	–	–	–	1	1	–	–
	9-26	–	–	X	–	--	–	–	–	–	–	--	–	–	–
	9-27	R6-1R	54	X	18	--	–	–	–	6.75	–	1	1	–	MOUNT ON SAME POST AS 9-28
	9-28	R1-1	36	X	36	--	–	1	–	7.46	–	1	1	–	MOUNT ON SAME POST AS 9-27
	9-29	–	–	X	–	--	–	–	–	–	–	--	–	–	–
	9-30	R3-2	24	X	24	--	1	–	–	4.00	–	--	–	–	–
	9-31	R6-2R	36	X	48	--	1	–	–	12.00	–	--	–	–	–
	10-5	D10-2	12	X	36	1	–	–	–	3.00	–	1	1	–	–
	10-6	R8-7	48	X	36	--	1	–	–	12.00	–	1	1	–	–
	10-7	R4-3	48	X	60	--	1	1	–	20.00	–	1	2	–	–
	10-8	R3-4B	36	X	48	--	1	–	–	12.00	–	--	–	–	–
	11-3	D10-2	12	X	36	1	–	–	–	3.00	–	--	–	–	–
	12-18	D10-2	12	X	36	1	–	–	–	3.00	–	--	–	–	–
	12-19	D1-61	72	X	30	1	1	–	–	15.00	–	1	1	–	–
	12-20	R5-1A	42	X	30	1	–	–	–	8.75	–	--	–	–	–
	12-21	–	–	X	–	--	–	–	–	–	–	1	1	–	–
	12-22	R5-1	48	X	48	--	1	–	–	16.00	–	--	–	–	–
	12-23	–	–	X	–	--	–	–	–	–	–	1	1	–	–
	12-24	–	–	X	–	--	–	–	–	–	–	--	–	–	–
	12-25	R6-1R	54	X	18	--	–	–	–	6.75	–	--	–	–	MOUNT ON SAME POST AS 12-26, 12-27, 12-28
	12-26	R1-1	36	X	36	--	–	1	–	7.46	–	1	1	–	MOUNT ON SAME POST AS 12-25, 12-27, 12-28
	12-27	R6-3	30	X	24	--	–	–	–	5.00	–	--	–	–	MOUNT ON SAME POST AS 12-25, 12-26, 12-28
	12-28	R6-1L	54	X	18	--	–	–	–	6.75	–	--	–	–	MOUNT ON SAME POST AS 12-25, 12-26, 12-27
	12-29	–	–	X	–	--	–	–	–	–	–	1	1	–	–
	12-30	R3-4B	36	X	48	--	1	–	–	12.00	–	--	–	–	–
	12-33	D10-2	12	X	36	1	–	–	–	3.00	–	1	1	–	–
	13-18	–	–	X	–	--	–	–	–	–	–	1	1	–	–
	13-19	R3-4B	36	X	48	--	1	–	–	12.00	–	--	–	–	–
	13-22	R7-64	48	X	30	--	–	–	–	10.00	–	1	–	–	MOUNT ON EXISTING LIGHT POLE
	13-23	I2-2	54	X	21	1	–	–	–	7.88	–	1	1	–	–
	13-24	W3-1	36	X	36	--	1	–	–	–	9.00	--	–	–	–
	13-25	–	–	X	–	--	–	–	–	–	–	1	1	–	–
	13-26	D7-60	24	X	36	1	–	–	–	6.00	–	1	–	–	–
	13-27	E5-1A	72	X	60	--	–	2	–	30.00	–	1	2	–	–
	13-28	D10-2	12	X	36	1	–	–	–	3.00	–	1	1	–	–
	13-29	D1-1	48	X	15	--	–	–	–	5.00	–	--	–	–	MOUNT ON SAME POST AS 13-30
	13-30	R5-1A	36	X	24	1	–	–	–	6.00	–	1	1	–	MOUNT ON SAME POST AS 13-29
	13-31	R5-1A	36	X	24	1	–	–	–	6.00	–	1	1	–	–
	13-32	W4-1R	48	X	48	--	2	–	–	–	16.00	1	2	–	–
	13-33	J13-1	24	X	45	--	1	–	–	7.50	–	1	1	–	–
	13-34	R7-64	48	X	30	1	–	–	–	10.00	–	1	2	–	–
	14-16	J4-1	36	X	54	--	1	–	–	13.50	–	1	1	–	–
	14-17	D1-1	90	X	21	2	–	–	–	13.13	–	1	2	–	–
	14-18	R5-1A	42	X	30	1	–	–	–	8.75	–	--	–	–	–
	14-19	–	–	X	–	--	–	–	–	–	–	1	1	–	–
	14-20	R5-1	48	X	48	--	1	–	–	16.00	–	--	–	–	–
	14-21	–	–	X	–	--	–	–	–	–	–	1	1	–	–
	14-22	–	–	X	–	--	–	–	–	–	–	--	–	–	–
	14-23	R6-1R	54	X	18	--	–	–	–	6.75	–	--	–	–	MOUNT ON SAME POST AS 14-24, 14-25, 14-26
	14-24	R1-1	36	X	36	--	–	1	–	7.46	–	1	1	–	MOUNT ON SAME POST AS 14-23, 14-25, 14-26
	14-25	R6-3A	30	X	24	--	–	–	–	5.00	–	--	–	–	MOUNT ON SAME POST AS 14-23, 14-24, 14-26
	14-26	R6-1L	54	X	18	--	–	–	–	6.75	–	--	–	–	MOUNT ON SAME POST AS 14-23, 14-24, 14-25
	14-28	R2-1	48	X	60	--	1	1	–	20.00	–	1	2	–	SPEED LIMIT 65
	14-29	D10-2	12	X	36	1	–	–	–	3.00	–	1	1	–	–
	14-30	I3-1	48	X	36	--	1	–	–	12.00	–	--	–	–	–
	15-16	W5-52L	12	X	36	1	–	–	–	–	3.00	1	1	–	–
	15-17	W5-52R	12	X	36	1	–	–	–	–	3.00	1	1	–	–
	15-18	D1-1	96	X	15	2	–	–	–	10.00	–	1	2	–	–
SUBTOTALS						23	20	11	–	427.51	127.00	37	46	–	

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TYPE II SIGNS AND SUPPORTS (CONT.)

PROJECT	SIGN NUMBER	SIGN CODE	SIGN DIMENSION W X H IN		IN	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	634.0814 POSTS TUBULAR STEEL 2X2-INCH X 14-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	638.2102 MOVING SIGNS TYPE II EACH	REMARKS
1052-01-62															
	15-19	J3-1	24	X	57	–	1	–	--	9.50	--	1	1	--	–
	15-20	R3-1	24	X	24	1	–	–	--	4.00	--	1	1	--	MOUNT ON SAME POST AS 15-21
	15-21	R3-2	24	X	24	–	–	–	--	4.00	--	–	–	--	MOUNT ON SAME POST AS 15-20
	15-22	R6-2L	24	X	30	1	–	–	--	5.00	--	–	–	--	MOUNT ON SAME POST AS 15-23
	15-23	R6-2R	24	X	30	–	–	–	--	5.00	--	–	–	--	MOUNT ON SAME POST AS 15-22
	15-24	R1-1	36	X	36	1	–	–	--	7.46	--	1	1	--	–
	15-25	R1-1	36	X	36	1	–	–	--	7.46	--	1	1	--	MOUNT ON SAME POST AS 15-27
	15-26	R5-1	36	X	36	–	–	–	--	9.00	--	–	–	--	MOUNT ON SAME POST AS 15-28
	15-27	R5-1C	36	X	36	–	–	–	--	9.00	--	1	–	--	MOUNT ON SAME POST AS 15-25
	15-28	J13-1	24	X	45	1	–	–	--	7.50	--	1	1	--	MOUNT ON SAME POST AS 15-26
	15-29	M1-5A	24	X	24	1	–	–	--	4.00	--	1	1	--	–
	15-30	R3-2	24	X	24	1	–	–	--	4.00	--	1	1	--	–
	15-31	J3-1	24	X	57	–	–	–	--	9.50	--	–	–	--	MOUNT ON SAME POST AS 15-32
	15-32	J3-1	24	X	57	–	1	–	--	9.50	--	1	1	--	MOUNT ON SAME POST AS 15-31
	16-1	R4-7	24	X	30	–	–	–	1	5.00	--	1	1	--	–
	16-2	R6-2L	30	X	36	–	–	–	1	7.50	--	1	–	--	MOUNT ON SAME POST AS 16-3, 16-4, 16-5
	16-3	R5-1C	36	X	36	–	–	–	--	7.46	--	–	–	--	MOUNT ON SAME POST AT 16-2, 16-4, 16-5
	16-4	R1-1	36	X	36	–	–	–	--	7.46	--	1	1	--	MOUNT ON SAME POST AS 16-2, 16.3, 16-5
	16-5	R6-3	30	X	24	–	–	–	--	5.00	--	–	–	--	MOUNT ON SAME POST AT 16-2, 16-3, 16-4
	16-6	R1-1	36	X	36	–	1	–	--	7.46	--	–	1	--	–
	16-7	R3-2	36	X	36	–	–	–	1	9.00	--	1	1	--	–
	16-8	J3-1	24	X	57	–	1	–	--	9.50	--	–	–	--	MOUNT ON SAME POST AS 16-9
	16-9	R5-1	36	X	36	1	–	–	--	9.00	--	–	–	--	MOUNT ON SAME POST AS 16-8
	16-10	–	–	X	–	–	–	–	--	--	--	1	1	--	–
	16-11	R1-1	36	X	36	–	1	–	1	7.46	--	1	1	--	MOUNT ON SAME POST AS 16-12
	16-12	R5-1C	36	X	36	–	–	–	--	7.46	--	–	–	--	MOUNT ON SAME POST AS 16-11
	16-13	R5-1	36	X	36	–	–	–	1	9.00	--	1	1	--	MOUNT ON SAME POST AS 16-14
	16-14	R3-1	36	X	36	–	–	–	--	9.00	--	–	–	--	MOUNT ON SAME POST AS 16-13
	16-15	R4-7	24	X	30	–	–	–	1	5.00	--	1	1	--	–
	16-16	R6-2L	30	X	36	–	–	–	1	7.50	--	1	1	--	–
	16-17	W5-52R	12	X	36	1	–	–	--	--	3.00	1	1	--	–
	16-18	D1-1	96	X	15	2	–	–	--	10.00	--	1	2	--	–
	16-19	R5-1A	42	X	30	–	–	–	--	8.75	--	–	–	--	MOUNT ON SAME POST AS 16-20
	16-20	J3-2	48	X	57	–	1	–	--	19.00	--	1	1	--	MOUNT ON SAME POST AS 16-19
	17-1	J3-3	72	X	45	–	1	1	--	22.50	--	1	1	--	–
	17-2	R1-1	30	X	30	1	–	–	--	5.18	--	1	1	--	–
	17-3	J1-1	24	X	39	–	1	–	--	6.50	--	1	1	--	–
	17-4	M1-5A	24	X	24	1	–	–	--	4.00	--	1	1	--	–
	17-5	D1-2	96	X	30	1	1	–	--	20.00	--	1	2	--	–
	17-6	R3-8	36	X	30	1	–	–	--	7.50	--	–	–	--	–
	17-7	R5-1C	36	X	36	–	–	–	--	9.00	--	1	1	--	MOUNT ON SAME POST AS 17-8
	17-8	R1-1	36	X	36	1	–	–	--	7.46	--	1	1	--	MOUNT ON SAME POST AS 17-7
	17-9	R1-1	36	X	36	–	1	–	--	7.46	--	1	1	--	MOUNT ON SAME POST AS 17-14
	17-10	R1-1	36	X	36	1	–	–	--	7.46	--	1	1	--	–
	17-11	J3-2	48	X	57	–	1	–	--	19.00	--	1	1	--	–
	17-12	R6-2R	24	X	30	1	–	–	--	5.00	--	1	1	--	MOUNT ON SAME POST AS 17-13
	17-13	R6-2L	24	X	30	–	–	–	--	5.00	--	–	–	--	MOUNT ON SAME POST AS 17-12
	17-14	R5-1C	36	X	36	–	–	–	--	9.00	--	1	1	--	MOUNT ON SAME POST AS 17-9
	17-15	R3-2	24	X	24	1	–	–	--	4.00	--	1	1	--	MOUNT ON SAME POST AS 17-16
	17-16	R3-1	24	X	24	–	–	–	--	4.00	--	–	–	--	MOUNT ON SAME POST AS 17-15
	17-17	J3-1	24	X	57	–	1	–	--	9.50	--	1	1	--	–
	17-18	D1-1	96	X	15	2	–	–	--	10.00	--	1	2	--	–
SUBTOTALS						21	12	1	7	408.03	3.00	36	38	--	–
PROJECT 1052-01-62 TOTALS						68	64	20	7	1,302.16	212.00	121	151	--	
TOTALS						134	117	37	15	2,571.88	296.00	231	280	1	

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TYPE I SIGNS AND SUPPORTS

PROJECT	SIGN NUMBER	SIGN CODE	SIGN DIMENSION W X H IN		IN	I - BEAM TYPE	635.0200 SIGN SUPPORTS STRUCTURAL STEEL HS LB	636.0100 SIGN SUPPORTS CONCRETE MASONRY CY	636.0500 SIGN SUPPORTS STEEL REINFORCEMENT LB	637.1220 SIGNS TYPE I REFLECTIVE SH SF	638.2601 REMOVING SIGNS TYPE I EACH	638.3100 REMOVING STRUCTURAL STEEL SIGN SUPPORTS EACH	REMARKS
1050-01-61													
	8-1	D1-1	228	X	36	A	506	1.2	68	57.00	1	2	–
	9-6	E1-5P	96	X	30	–	--	--	–	20.00	–	--	MOUNT WITH 9-7
	9-7	E1-1A	168	X	156	B	1,133	1.6	98	182.00	1	2	MOUNT WITH 9-6
	13-3	D2-2	228	X	60	A	482	1.2	68	95.00	1	2	–
	14-2	E1-5P	108	X	30	–	--	--	–	22.50	–	--	MOUNT WITH 14-3
	14-3	E4-1A	144	X	90	B	773	1.6	98	90.00	1	2	MOUNT WITH 14-2
	14-14	E1-5P	108	X	30	–	--	--	–	22.50	–	--	MOUNT WITH 14-15
	14-15	E1-1A	132	X	120	B	949	1.6	98	110.00	1	2	MOUNT WITH 14-14
PROJECT 1050-01-61 TOTALS							3,843	7.2	430	599.00	5	10	
1052-01-62													
	4-5	E1-5P	96	X	30	–	--	--	–	20.00	–	--	MOUNT WITH 4-6
	4-6	E1-1A	120	X	90	A	596	1.2	68	75.00	1	2	MOUNT WITH 4-5
	5-24	E1-5P	96	X	30	–	--	--	–	20.00	–	--	MOUNT WITH 5-25
	5-25	E4-1A	120	X	54	A	518	1.2	68	45.00	–	--	MOUNT WITH 5-24
	6-10	--	–	X	–	–	--	--	–	--	1	2	–
	6-11	D2-3	192	X	84	B	797	1.6	98	112.00	–	--	–
	7-7	E1-5P	96	X	30	–	--	--	–	20.00	–	--	MOUNT WITH 7-8
	7-8	E1-1A	168	X	156	–	933	1.6	98	182.00	1	2	MOUNT WITH 7-7
	7-9	E3-1	168	X	84	A	560	1.2	68	98.00	1	2	–
	8-26	E1-5P	96	X	30	–	--	--	–	20.00	–	--	MOUNT WITH 8-27
	8-27	E4-1A	204	X	132	B	981	1.6	98	187.00	1	2	MOUNT WITH 8-26
	9-32	--	–	X	–	–	--	--	–	--	1	2	–
	9-33	D2-3	192	X	84	B	1,015	1.6	98	112.00	–	--	–
	12-31	E1-5P	108	X	30	–	--	--	–	22.50	–	--	MOUNT WITH 12-32
	12-32	E1-1A	132	X	120	B	1,021	1.6	98	110.00	1	2	MOUNT WITH 12-31
	13-20	E1-5P	108	X	30	–	--	--	–	22.50	–	--	MOUNT WITH 13-21
	13-21	E4-1A	144	X	90	B	749	1.6	98	90.00	1	2	MOUNT WITH 13-20
	14-31	--	–	X	–	–	--	--	–	--	1	2	–
	14-32	D2-3	192	X	84	B	957	1.6	98	112.00	–	--	–
PROJECT 1052-01-62 TOTALS							8,127	14.8	890	1,248.00	9	18	
TOTALS							11,970	22.0	1,320	1,847.00	14	28	

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TRAFFIC CONTROL (PROJECT)

PROJECT	LOCATION	643.0100 TRAFFIC CONTROL (PROJECT) EACH
1050-01-61		
	PROJECT	1
PROJECT 1050-01-61 TOTAL		1
1052-01-62		
	PROJECT	1
PROJECT 1052-01-62 TOTAL		1

TRAFFIC CONTROL COVERING SIGNS

643.0920

PROJECT	STAGE	NUMBER OF CYCLES	TRAFFIC CONTROL COVERING SIGNS TYPE II NO.	TRAFFIC CONTROL COVERING SIGNS TYPE II EACH	REMARKS
1050-01-61					
	1, 3, & 5	26	1	26	EXIT SIGNS (CTH X, STH 27, CTH D)
	S1	5	1	5	RIGHT LANE MUST TURN
	S1	5	1	5	RIGH LANE ENDS
	S4	10	1	10	RIGHT LANE MUST TURN
	S4	10	1	10	RIGH LANE ENDS
PROJECT 1050-01-61 TOTAL				56	
1052-01-62					
	1, 3, & 5	26	1	26	EXIT SIGNS (CTH X, STH 27, CTH D)
	S1	5	1	5	RIGHT LANE MUST TURN
	S1	5	1	5	RIGH LANE ENDS
	S4	10	1	10	RIGHT LANE MUST TURN
	S4	10	1	10	RIGH LANE ENDS
PROJECT 1052-01-62 TOTAL				56	
TOTAL				112	

TRAFFIC CONTROL ITEMS

			643.0300		643.0420		643.0705		643.0715		643.0800		643.0900		643.1050		SPV.0045.01		
		STAGE DURATION	TRAFFIC CONTROL DRUMS		TRAFFIC CONTROL BARRICADES TYPE III		TRAFFIC CONTROL WARNING LIGHTS TYPE A		TRAFFIC CONTROL WARNING LIGHTS TYPE C		TRAFFIC CONTROL ARROW BOARDS		TRAFFIC CONTROL SIGNS		TRAFFIC CONTROL SIGNS PCMS		TRAFFIC CONTROL SIGNS PCMS REMOTE COMMUNICATIONS		
PROJECT	STAGE(S)	DAYS	NO.	DAY	NO.	DAY	NO.	DAY	NO.	DAY	NO.	DAY	NO.	DAY	NO.	DAY	NO.	DAY	REMARKS
1050-01-61																			
	1-6	180	310	55,800	21	3,780	42	7,560	36	6,480	2	360	52	9,360	1	180	1	180	STH 29
	R1-R2	30	30	900	3	90	6	180	--	–	--	–	3	90	--	--	–	--	RAMPS (CTH X, STH 27, & CTH D)
	S1	5	100	500	6	30	12	60	--	–	--	–	22	110	--	--	–	--	STH 27 INTERCHANGE
	S2	10	60	600	2	20	4	40	12	120	--	–	24	240	--	--	–	--	STH 27 INTERCHANGE
	S3	10	80	800	–	--	–	–	--	–	--	–	22	220	--	--	–	--	STH 27 INTERCHANGE
	S4	10	100	1,000	6	60	12	120	--	–	--	–	22	220	--	--	–	--	STH 27 INTERCHANGE
	–	30	–	–	–	--	–	–	--	–	--	–	80	2,400	--	--	–	--	RAMP WIDTH RESTRICTION SIGNS
	–	10	–	–	–	--	–	–	--	–	--	–	--	–	1	10	1	10	PRIOR TO CONSTRUCTION ON STH 29
PROJECT 1050-01-61 TOTALS				59,600		3,980		7,960		6,600		360		12,640		190		190	
1052-01-62																			
	1-6	180	310	55,800	21	3,780	42	7,560	36	6,480	2	360	52	9,360	1	180	1	180	STH 29
	R1-R2	30	30	900	3	90	6	180	--	–	--	–	3	90	--	--	–	--	RAMPS (CTH X, STH 27, & CTH D)
	S1	5	100	500	6	30	12	60	--	–	--	–	22	110	--	--	–	--	STH 27 INTERCHANGE
	S2	10	60	600	2	20	4	40	12	120	--	–	24	240	--	--	–	--	STH 27 INTERCHANGE
	S3	10	80	800	–	--	–	–	--	–	--	–	22	220	--	--	–	--	STH 27 INTERCHANGE
	S4	10	100	1,000	6	60	12	120	--	–	--	–	22	220	--	--	–	--	STH 27 INTERCHANGE
	–	30	–	–	–	--	–	–	--	–	--	–	80	2,400	--	--	–	--	RAMP WIDTH RESTRICTION SIGNS
	–	10	–	–	–	--	–	–	--	–	--	–	--	–	1	10	1	10	PRIOR TO CONSTRUCTION ON STH 29
PROJECT 1052-01-62 TOTALS				59,600		3,980		7,960		6,600		360		12,640		190		190	
TOTALS				119,200		7,960		15,920		13,200		720		25,280		380		380	

NOTES: STH 29 TRAFFIC CONTROL DEVICES FOR STAGES 1-6 ARE BASED ON A 4 MILE LANE CLOSURE IN EACH DIRECTION WITH ONE INTERCHANGE WITHIN EACH CLOSURE FOR THE DURATION OF THE PROJECT.

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

3

TEMPORARY PAVEMENT MARKING ITEMS

PROJECT	STAGE	646.0600 REMOVING PAVEMENT MARKINGS LF	647.0955 REMOVING PAVEMENT MARKINGS ARROWS EACH	649.0400 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW) LF	649.0400 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE) LF	649.0402 TEMPORARY PAVEMENT MARKING PAINT 4-INCH (YELLOW) LF	649.0402 TEMPORARY PAVEMENT MARKING PAINT 4-INCH (WHITE) LF	649.0506 TEMPORARY PAVEMENT MARKING REMOVABLE MASK-OUT TAPE 6-INCH (BLACK) LF	649.0801 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE) LF	649.0802 TEMPORARY PAVEMENT MARKING PAINT 8-INCH (WHITE) LF	REMARKS
1050-01-61											
	1-6	–	–	7,260	7,260	--	–	4,125	–	–	LANE CLOSURE TAPER
	2	–	–	–	–	83,198	20,862	–	–	–	PASSING LANE EDGLINE AND CENTERLINE SKIPS
	3	–	–	–	–	--	77,439	–	–	5,410	DRIVING LANE EDGELINE AND GORES
	3	290	–	–	1,000	--	–	–	600	–	CTH D GORE IN WITHIN LANE CLOSURE
	4	–	–	–	–	83,198	20,862	–	–	–	PASSING LANE EDGLINE AND CENTERLINE SKIPS
	5	–	–	–	–	--	77,439	–	–	5,410	DRIVING LANE EDGELINE AND GORES
	5	290	–	–	1,000	--	–	–	600	–	CTH D GORE IN WITHIN LANE CLOSURE
	S1	250	2	–	–	--	–	–	–	–	STH 27
	–	–	–	–	–	962	–	–	–	–	CTH X CENTERLINE
	–	–	–	–	–	554	–	–	–	–	CTH D CENTERLINE
PROJECT 1050-01-61 TOTALS		830	2	7,260	9,260	167,912	196,602	4,125	1,200	10,820	
				16,520		364,514					
1052-01-62											
	1-6	–	–	7,260	7,260	--	–	4,125	–	–	LANE CLOSURE TAPER
	2	–	–	–	–	82,989	20,846	–	–	–	PASSING LANE EDGLINE AND CENTERLINE SKIPS
	3	–	–	–	–	--	77,006	–	–	5,040	DRIVING LANE EDGELINE AND GORES
	3	290	–	–	1,000	--	–	–	600	–	CTH D GORE IN WITHIN LANE CLOSURE
	4	–	–	–	–	82,989	20,846	–	–	–	PASSING LANE EDGLINE AND CENTERLINE SKIPS
	5	–	–	–	–	--	77,006	–	–	5,040	DRIVING LANE EDGELINE AND GORES
	5	290	–	–	1,000	--	–	–	600	–	CTH D GORE IN WITHIN LANE CLOSURE
	S1	250	2	–	–	--	–	–	–	–	STH 27
	–	–	–	–	–	448	–	–	–	–	CTH X CENTERLINE
	–	–	–	–	–	1,456	–	–	–	–	CTH D CENTERLINE
PROJECT 1052-01-62 TOTALS		830	2	7,260	9,260	167,882	195,704	4,125	1,200	10,080	
				16,520		363,586					
TOTALS		1,660	4	33,040		728,100		8,250	2,400	20,900	

NOTES: STH 29 TEMPORARY PAVEMENT MARKING IS FOR ON APPLICATION ON EACH OF THE PROPOSED HMA/SMA LAYERS.
TEMPORARY PAVEMENT MARKING ON CTH X AND CTH D IS FOR THE MILLED SURFACE.
LANE CLOSURE TAPERS ARE FOR ONE INSTALLATION EACH WEEK OF THE PROECT.

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

PAVEMENT MARKING ITEMS

PROJECT	STATION	TO	STATION	ALIGNMENT	646.0106 PAVEMENT MARKING EPOXY 4-INCH (WHITE) LF	646.0406 PAVEMENT MARKING SAME DAY EPOXY 4-INCH (YELLOW) LF	646.0126 PAVEMENT MARKING EPOXY 8-INCH (WHITE) LF	646.2304.S PAVEMENT MARKING GROOVED WET REFLECTIVE EPOXY 4-INCH (YELLOW) LF	(WHITE) LF	12.5' LINE 37.5' SKIP (WHITE) LF	3' LINE 9' SKIP (WHITE) LF	646.2308.S PAVEMENT MARKING GROOVED WET REFLECTIVE EPOXY 8-INCH (WHITE) LF	647.0166 PAVEMENT MARKING ARROWS EPOXY TYPE 2 (WHITE) EACH	647.0356 PAVEMENT MARKING WORDS EPOXY (ONLY) EACH	647.0456 PAVEMENT MARKING CURB EPOXY (YELLOW) LF	647.0566 PAVEMENT MARKING STOP LINE EPOXY 18-INCH (WHITE) LF	647.0606 PAVEMENT MARKING ISLAND NOSE EPOXY (WHITE) EACH	647.0803 PAVEMENT MARKING AERIAL ENFORCEMENT BARS EPOXY 24-INCH (WHITE) LF
1050-01-61																		
	155+61	-	210+82	'WB'	--	--	--	5,521	5,531	1,382	–	--	–	--	--	–	–	12
	210+82	-	232+00	'WB'	--	--	--	2,118	2,119	530	–	--	–	--	--	–	–	–
	232+00	-	238+33	'WB'	--	--	--	633	633	158	–	--	–	--	--	–	–	–
	238+33	-	283+16	'WB'	--	--	--	4,483	4,483	1,121	–	--	–	--	--	–	–	36
	283+16	-	289+50	'WB'	--	--	--	634	634	159	–	--	–	--	--	–	–	12
	289+50	-	299+69	'WB'	--	--	--	1,019	1,019	255	–	--	–	--	--	–	–	12
	299+69	-	377+00	'WB'	--	--	--	7,731	7,711	1,930	–	--	–	--	--	–	–	–
	377+00	-	383+81	'WB'	--	--	--	681	681	170	–	--	–	--	--	–	–	–
	383+81	-	419+51	'WB'	--	--	--	3,570	2,197	893	–	--	–	--	--	–	–	–
	419+51	-	426+32	'WB'	--	--	--	681	681	170	–	--	–	--	--	–	–	–
	426+32	-	449+15	'WB'	--	--	--	2,283	1,760	571	–	--	–	--	--	–	–	–
	449+15	-	455+78	'WB'	--	--	--	663	667	166	–	--	–	--	--	–	–	–
	455+78	-	535+94	'WB'	--	--	--	8,016	8,026	2,005	–	--	–	--	--	–	–	–
	535+94	-	607+50	'WB'	--	--	--	7,156	5,663	1,789	–	--	–	--	--	–	–	–
	607+50	-	614+22	'WB'	--	--	--	672	672	168	–	--	–	--	--	–	–	–
	614+22	-	661+00	'WB'	--	--	--	4,678	4,151	1,170	–	--	–	--	--	–	–	–
	661+00	-	729+00	'WB'	--	--	--	6,800	6,800	1,700	–	--	–	--	--	–	–	–
	729+00	-	817+00	'WB'	--	--	--	8,800	8,800	2,200	–	--	–	--	--	–	–	–
	817+00	-	894+56	'WB'	--	--	--	7,627	7,476	1,939	38	--	–	--	--	–	–	–
	894+56	-	915+07	'WB'	--	--	--	2,051	870	513	–	--	–	--	--	–	–	–
	915+07	-	941+00	'WB'	--	--	--	2,593	1,965	648	–	--	–	--	--	–	–	–
	941+00	-	990+00	'WB'	--	--	--	4,786	4,900	1,225	–	--	–	--	--	–	–	–
	95+30	-	101+00	'X'	784	962	21	–	–	--	–	--	–	--	--	52	–	–
	403+96	-	422+16	'XA'	--	--	--	542	1,910	--	–	1,194	–	--	--	–	–	–
	422+16	-	436+39	'XB'	--	--	--	816	1,290	--	51	647	–	--	--	–	–	–
	101+36	-	110+09	'S'	491	--	445	–	–	--	–	--	3	1	90	43	3	–
	590+29	-	610+73	'SA'	--	--	--	604	2,109	--	–	1,327	–	--	--	–	–	–
	610+73	-	625+02	'SB'	--	--	--	876	1,392	--	50	656	–	--	--	–	–	–
	101+73	-	110+00	'D'	406	554	148	–	–	--	–	--	1	1	--	59	–	–
	894+55	-	913+86	'DA'	--	--	--	638	1,995	--	–	780	–	--	--	–	–	–
	913+86	-	927+85	'DB'	--	--	--	784	1,337	--	95	800	–	--	--	–	–	–
PROJECT 1050-01-61 TOTALS					1,681	1,516	614	87,456	87,472	20,862	234	5,404	4	2	90	154	3	72
										196,024								

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

3

3

PAVEMENT MARKING ITEMS (CONT.)

PROJECT	STATION	TO	STATION	ALIGNMENT	646.0106 PAVEMENT MARKING EPOXY 4-INCH (WHITE) LF	646.0406 PAVEMENT MARKING SAME DAY EPOXY 4-INCH (YELLOW) LF	646.0126 PAVEMENT MARKING EPOXY 8-INCH (WHITE) LF	646.2304.S PAVEMENT MARKING GROOVED WET REFLECTIVE EPOXY 4-INCH (YELLOW) LF	(WHITE) LF	12.5' LINE 37.5' SKIP (WHITE) LF	3' LINE 9' SKIP (WHITE) LF	646.2308.S PAVEMENT MARKING GROOVED WET REFLECTIVE EPOXY 8-INCH (WHITE) LF	647.0166 PAVEMENT MARKING ARROWS EPOXY TYPE 2 (WHITE) EACH	647.0356 PAVEMENT MARKING WORDS EPOXY (ONLY) EACH	647.0356 PAVEMENT MARKING CURB EPOXY (ONLY) LF	647.0566 PAVEMENT MARKING STOP LINE EPOXY 18-INCH (WHITE) LF	647.0606 PAVEMENT MARKING ISLAND NOSE EPOXY (WHITE) EACH	647.0803 PAVEMENT MARKING AERIAL ENFORCEMENT BARS EPOXY 24-INCH (WHITE) LF
1052-01-62																		
	156+14	-	210+82	'EB'	--	--	--	5,468	5,457	1,366	–	--	–	--	--	–	–	–
	210+82	-	232+00	'EB'	--	--	--	2,118	2,117	529	–	--	–	--	--	–	–	–
	232+00	-	238+32	'EB'	--	--	--	632	632	158	–	--	–	--	--	–	–	–
	238+33	-	283+14	'EB'	--	--	--	4,483	4,483	1,121	–	--	–	--	--	–	–	–
	283+14	-	289+48	'EB'	--	--	--	634	634	159	–	--	–	--	--	–	–	–
	289+48	-	299+69	'EB'	--	--	--	1,021	1,021	255	–	--	–	--	--	–	–	–
	299+69	-	376+62	'EB'	--	--	--	7,693	7,713	1,926	–	--	–	--	--	–	–	60
	376+62	-	383+38	'EB'	--	--	--	676	676	169	–	--	–	--	--	–	–	–
	383+38	-	420+82	'EB'	--	--	--	3,744	3,214	936	–	--	–	--	--	–	–	–
	420+82	-	427+63	'EB'	--	--	--	681	681	170	–	--	–	--	--	–	–	–
	427+63	-	449+00	'EB'	--	--	--	2,137	887	534	–	--	–	--	--	–	–	–
	449+00	-	455+63	'EB'	--	--	--	663	659	165	–	--	–	--	--	–	–	–
	455+63	-	535+33	'EB'	--	--	--	7,970	7,960	1,991	–	--	–	--	--	–	–	–
	535+33	-	607+54	'EB'	--	--	--	7,221	6,693	1,805	–	--	–	--	--	–	–	–
	607+54	-	614+24	'EB'	--	--	--	670	670	168	–	--	–	--	--	–	–	–
	614+24	-	661+00	'EB'	--	--	--	4,676	3,434	1,169	–	--	–	--	--	–	–	–
	661+00	-	729+00	'EB'	--	--	--	6,800	6,525	1,700	38	--	–	--	--	–	–	–
	729+00	-	817+00	'EB'	--	--	--	8,800	8,800	2,200	–	--	–	--	--	–	–	–
	817+00	-	896+27	'EB'	--	--	--	7,832	7,677	1,982	38	--	–	--	--	–	–	–
	896+27	-	914+72	'EB'	--	--	--	1,652	983	461	–	--	–	--	--	–	–	–
	914+72	-	941+00	'EB'	--	--	--	2,628	1,410	657	–	--	–	--	--	–	–	–
	941+00	-	990+00	'EB'	--	--	--	4,790	4,680	1,225	–	100	–	--	--	–	–	–
	101+00	-	104+30	'X'	292	448	17	–	–	--	–	--	–	--	--	63	–	–
	412+33	-	426+41	'XD'	--	--	--	813	1,535	--	51	660	–	--	--	–	–	–
	426+41	-	444+91	'XC'	--	--	--	629	1,874	--	–	1,181	–	--	--	–	–	–
	94+60	-	101+36	'S'	893	--	459	–	–	--	–	--	3	1	70	39	3	–
	597+10	-	611+23	'SD'	--	--	--	867	1,370	--	51	643	–	--	--	–	–	–
	611+23	-	631+09	'SC'	--	--	--	684	2,008	--	–	1,086	–	--	--	–	–	–
	93+80	-	101+73	'D'	1,246	1,456	246	–	–	--	–	--	2	1	--	84	–	–
	896+08	-	909+50	'DD'	--	--	--	454	1,299	--	167	439	–	--	--	–	–	–
	909+50	-	928+65	'DC'	0	--	--	679	1,998	--	–	930	–	--	--	–	–	–
PROJECT 1052-01-62 TOTALS					2,431	1,904	722	87,115	87,090	20,846	345	5,039	5	2	70	186	3	60
										195,396								
TOTALS					4,112	3,420	1,336			391,420		10,443	9	4	160	340	6	132

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

3

CONSTRUCTION STAKING STORM SEWER

PROJECT	STATION	OFFSET	ALIGNMENT	650.4000 CONSTRUCTION STAKING STORM SEWER EACH	REMARKS
1050-01-61					
	102+12	RT	'S'	1	AEW FOR CPRC 12-INCH
PROJECT 1050-01-61 TOTAL				1	
1052-01-62					
	272+71	RT	'EB'	1	AEW FOR CPRCHE 29X45-INCH
	273+20	LT	'EB'	1	INLET MEDIAN 1 GRATE
PROJECT 1052-01-62 TOTAL				2	
TOTAL				3	

CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER

PROJECT	STATION	TO	STATION	OFFSET	ALIGNMENT	650.5500 CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER LF	REMARKS
1050-01-61							
	818+97			LT	'WB'	140	300TH STREET INTERSECTION
	101+36	-	106+20	LT/RT	'S'	769	MEDIAN
	RAMP 'SA' WIDENING			RT	--	356	INTERSECTION WIDENING
	RAMP 'SB' WIDENING			LT/RT	--	290	INTERSECTION WIDENING AND ISLAND
	101+73	-	105+00	LT/RT	'D'	345	--
PROJECT 1050-01-61 TOTAL						1,900	
1052-01-62							
	663+40			RT	'EB'	150	270TH STREET INTERSECTION
	818+94			RT	'EB'	150	300TH STREET INTERSECTION
	942+50			RT	'EB'	155	320TH STREET INTERSECTION
	94+60	-	99+25	LT/RT	'S'	734	MEDIAN
	RAMP 'SD' WIDENING			LT/RT	--	366	INTERSECTION WIDENING AND ISLAND
	RAMP 'SC' WIDENING			LT	--	369	INTERSECTION WIDENING
	96+82	-	98+96	LT/RT	'D'	326	--
PROJECT 1052-01-62 TOTAL						2,250	
TOTAL						4,150	

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

CONSTRUCTION STAKING SUBGRADE, CONCRETE PAVEMENT, AND SLOPE STAKES

PROJECT	STATION	TO	STATION	OFFSET	ALIGNMENT	650.4500 CONSTRUCTION STAKING SUBGRADE LF	650.7000 CONSTRUCTION STAKING CONCRETE PAVEMENT LF	650.9920 CONSTRUCTION STAKING SLOPE STAKES LF
1050-01-61								
	101+35	-	106+20	LT/RT	'S'	485	485	485
	608+20	-	610+20	RT	'SA'	200	200	200
	611+10	-	612+60	LT/RT	'SB'	150	150	150
PROJECT 1050-01-61 TOTALS						835	835	835
1052-01-62								
	94+60	-	99+25	LT/RT	'S'	465	465	465
	608+75	-	610+90	LT/RT	'SD'	215	215	215
	611+70	-	613+90	LT	'SC'	220	220	220
PROJECT 1052-01-62 TOTALS						900	900	900
TOTALS						1,735	1,735	1,735

CONSTRUCTION STAKING RESURFACING REFERENCE

PROJECT	STATION	TO	STATION	OFFSET	ALIGNMENT	650.8000 CONSTRUCTION STAKING RESURFACING REFERENCE LF
1050-01-61						
	155+61	-	990+00	LT/RT	'WB'	83,442
	95+30	-	98+26	LT/RT	'X'	296
	403+96	-	422+17	LT/RT	'XA'	1,821
	422+17	-	436+39	LT/RT	'XB'	1,422
	101+36	-	106+20	LT/RT	'S'	484
	590+29	-	610+74	LT/RT	'SA'	2,045
	610+74	-	625+02	LT/RT	'SB'	1,428
	101+73	-	105+00	LT/RT	'D'	327
	894+55	-	913+87	LT/RT	'DA'	1,932
	913+87	-	927+85	LT/RT	'DB'	1,398
PROJECT 1050-01-61 TOTAL						94,595
1052-01-62						
	156+14	-	990+00	LT/RT	'EB'	83,390
	100+95	-	104+30	LT/RT	'X'	335
	412+33	-	426+41	LT/RT	'XD'	1,408
	426+41	-	444+91	LT/RT	'XC'	1,850
	94+60	-	99+25	LT/RT	'S'	465
	597+10	-	611+23	LT/RT	'SD'	1,413
	611+23	-	631+09	LT/RT	'SC'	1,986
	93+80	-	98+96	LT/RT	'D'	516
	896+08	-	909+50	LT/RT	'DD'	1,342
	909+50	-	928+65	LT/RT	'DC'	1,915
PROJECT 1052-01-62 TOTAL						94,620
TOTAL						189,215

3

CONSTRUCTION STAKING ELECTRICAL INSTALLATIONS

		650.8500
		CONSTRUCTION STAKING ELECTRICAL INSTALLATIONS (PROJECT)
PROJECT	LOCATION	LS
1050-01-61		
	PROJECT	1
PROJECT 1050-01-61 TOTAL		1
1052-01-62		
	PROJECT	1
PROJECT 1052-01-62 TOTAL		1

CONSTRUCTION STAKING SUPPLEMENTAL CONTROL

		650.9910
		CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT)
PROJECT	LOCATION	LS
1050-01-61		
	PROJECT	1
PROJECT 1050-01-61 TOTAL		1
1052-01-62		
	PROJECT	1
PROJECT 1052-01-62 TOTAL		1

3

ELECTRICAL ITEMS

				652.0235	653.0140	653.0905	655.0510
				CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH	PULL BOXES STEEL 24X42-INCH	REMOVING PULL BOXES	ELECTRICAL WIRE TRAFFIC SIGNALS 12 AWG
PROJECT	STATION	OFFSET	ALIGNMENT	LF	EACH	EACH	LF
1050-01-61							
	102+09	LT/RT	'S'	52	1	1	250
	103+53	LT/RT	'S'	--	1	1	202
	610+02	LT/RT	'SA'	107	--	--	200
	611+28	LT/RT	'SB'	86	1	1	268
PROJECT 1050-01-61 TOTALS				245	3	3	920
1052-01-62							
	97+28	LT/RT	'S'	--	1	1	226
	98+70	LT/RT	'S'	30	1	1	216
	610+76	LT/RT	'SD'	120	1	1	268
	611+80	LT/RT	'SC'	130	--	--	230
PROJECT 1052-01-62 TOTALS				280	3	3	940
TOTALS				525	6	6	1,860

NOTES: INSTALL ELECTRICAL WIRE TRAFFIC SIGNALS 12 AWG AS TRACER WIRE IN THE EXISTING AND PROPOSED CONDUIT BEING EXTENDED.
EXTEND CONDUIT A MINIMUM OF 5-FT BEYOND THE PROPOSED EDGE OF PAVEMENT.
INSTALL LOCKING COVERS AT ALL LOCATIONS.

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

SAWING ASPHALT

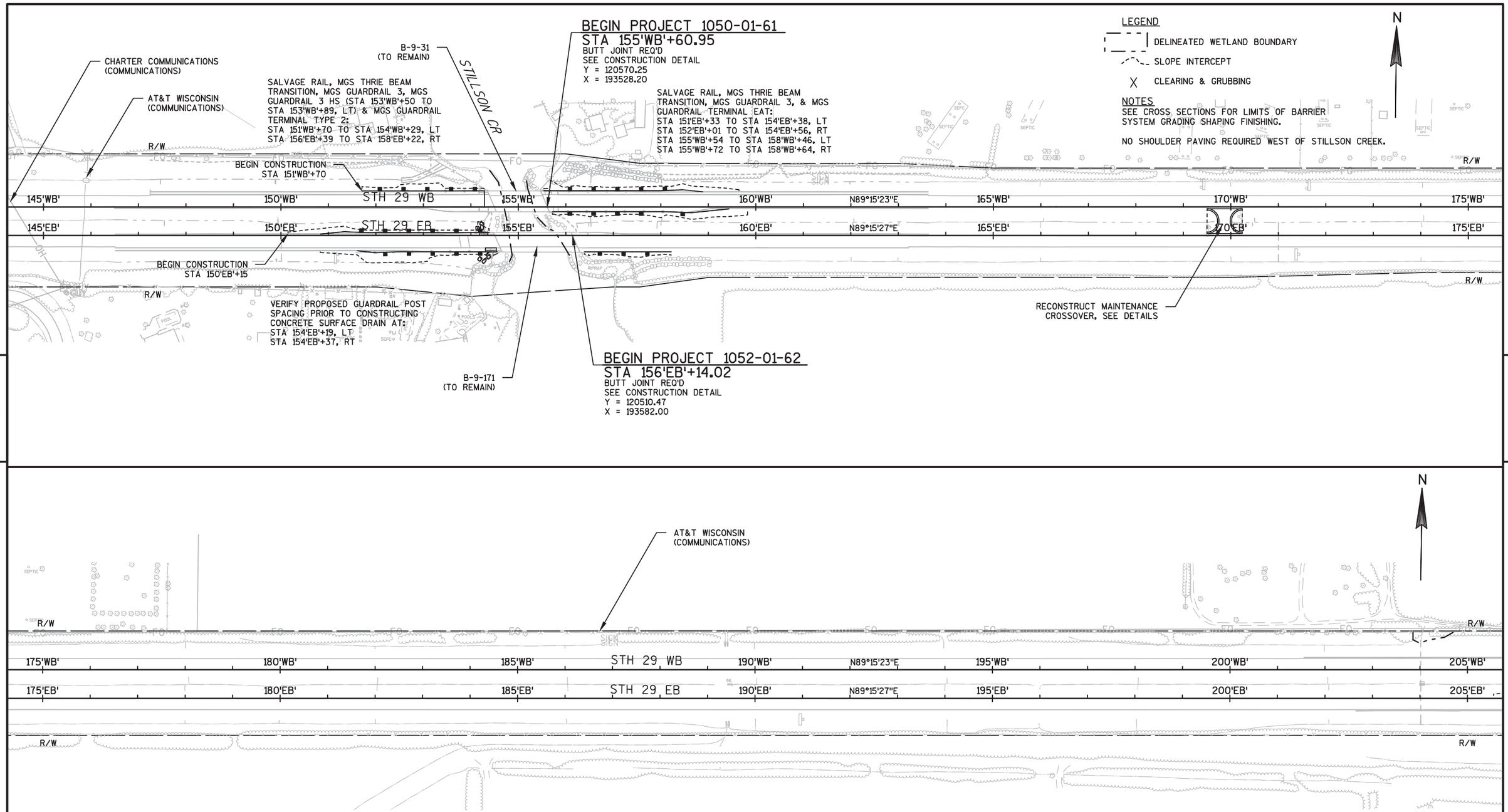
PROJECT	STATION	TO	STATION	OFFSET	ALIGNMENT	690.0150* SAWING ASPHALT LF	REMARKS
1050-01-61							
	818+50	-	819+75	LT	'WB'	140	300TH STREET INTERSECTION
	101+36	-	106+20	LT/RT	'S'	825	MEDIAN
	101+48			RT	'S'	20	CONCRETE SURFACE DRAIN
	RAMP 'SA' WIDENING			RT	--	360	INTERSECTION WIDENING
	RAMP 'SB' WIDENING			LT/RT	--	290	INTERSECTION WIDENING AND ISLAND
	101+65			LT	'D'	10	CONCRETE SURFACE DRAIN
	101+73	-	105+00	LT/RT	'D'	360	CURB & GUTTER REPLACEMENT
	102+07			RT	'D'	20	CONCRETE SURFACE DRAIN
PROJECT 1050-01-61 TOTAL						2,025	
1052-01-62							
	154+19			LT	'EB'	30	CONCRETE SURFACE DRAIN
	154+37			RT	'EB'	35	CONCRETE SURFACE DRAIN
	209+60			LT	'EB'	30	CONCRETE SURFACE DRAIN
	209+60			RT	'EB'	30	CONCRETE SURFACE DRAIN
	298+41			LT	'EB'	30	CONCRETE SURFACE DRAIN
	298+46			RT	'EB'	30	CONCRETE SURFACE DRAIN
	532+99			RT	'EB'	30	CONCRETE SURFACE DRAIN
	533+77			LT	'EB'	30	CONCRETE SURFACE DRAIN
	663+40			RT	'EB'	150	270TH STREET INTERSECTION
	818+94			RT	'EB'	150	300TH STREET INTERSECTION
	942+50			RT	'EB'	155	320TH STREET INTERSECTION
	94+60	-	99+25	LT/RT	'S'	795	MEDIAN
	99+13			LT	'S'	20	CONCRETE SURFACE DRAIN
	RAMP 'SD' WIDENING			LT/RT	--	370	INTERSECTION WIDENING AND ISLAND
	RAMP 'SC' WIDENING			LT	--	370	INTERSECTION WIDENING
	96+82	-	98+96	LT/RT	'D'	360	CURB & GUTTER REPLACEMENT
	98+61			LT	'D'	20	CONCRETE SURFACE DRAIN
	99+04			RT	'D'	10	CONCRETE SURFACE DRAIN
PROJECT 1052-01-62 TOTAL						2,645	
TOTAL						4,670	

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

GRADING, SHAPING AND FINISHING MAINTENANCE CROSSOVERS

PROJECT	STATION	OFFSET	ALIGNMENT	SPV.0060.03 EACH	**EXCAVATION COMMON CY	**FILL CY	**BORROW CY	**TOPSOIL SY	**FERTILIZER TYPE B CWT	**SEEDING MIXTURE NO. 30 LB
1050-01-61										
	169+87	RT	'WB'	1	70	–	–	164	0.1	3.0
	273+86	RT	'WB'	1	90	50	–	228	0.1	4.1
	395+15	RT	'WB'	1	90	–	–	163	0.1	2.9
	461+88	RT	'WB'	1	90	30	–	161	0.1	2.9
	589+65	RT	'WB'	1	70	50	–	161	0.1	2.9
	638+36	RT	'WB'	1	70	20	–	162	0.1	2.9
	730+09	RT	'WB'	1	30	170	140	160	0.1	2.9
	838+34	RT	'WB'	1	90	–	–	163	0.1	2.9
	867+25	RT	'WB'	1	100	50	–	163	0.1	2.9
TOTALS				9	700	370	140	1,525	1.0	27.4

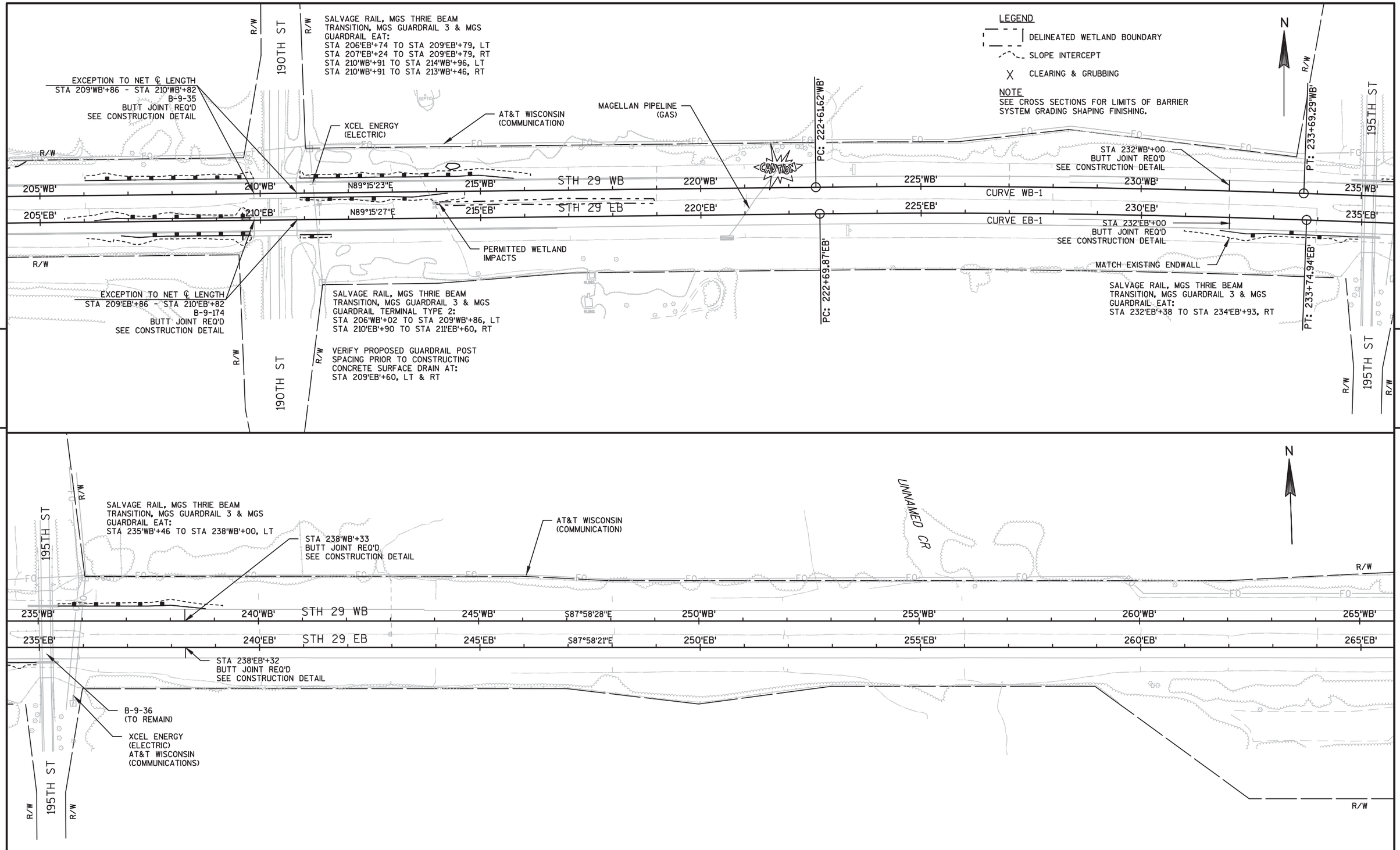
NOTES: **NON-BID ITEM, ITEMS AND QUANTITIES LISTED FOR BID INFORMATION ONLY. ITEMS INCIDENTAL TO GRADING, SHAPING AND FINISHING MAINTENANCECROSSOVERS. REMOVING ASPHALTIC SURFACE IS INCIDENTAL TO GRADING, SHAPING AND FINISHING MAINTENANCE CROSSOVERS.



PROJECT NO: 1050-01-61/1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	PLAN	SHEET 121	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\050401-PN.DWG
LAYOUT NAME - 050201

PLOT DATE : 7/29/2016 10:01 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:200 FT



PROJECT NO: 1050-01-61/1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	PLAN	SHEET 122	E

LEGEND

DELINEATED WETLAND BOUNDARY

SLOPE INTERCEPT

X CLEARING & GRUBBING

NOTE
SEE CROSS SECTIONS FOR LIMITS OF BARRIER SYSTEM GRADING SHAPING FINISHING.

PERMITTED WETLAND IMPACTS

AT&T WISCONSIN (COMMUNICATION)

CLEANING CULVERT PIPES

STA 283'WB'+16
BUTT JOINT REQ'D
SEE CONSTRUCTION DETAIL

XCEL ENERGY (ELECTRIC)

STA 289'WB'+50
BUTT JOINT REQ'D
SEE CONSTRUCTION DETAIL

RECONSTRUCT MAINTENANCE CROSSOVER, SEE DETAILS

ADD PIPE GRATE & CLEANING CULVERT PIPES

STA 283'EB'+14
BUTT JOINT REQ'D
SEE CONSTRUCTION DETAIL

CONTROL POINT 520
Y = 120315.87
X = 206390.74
ELEV=932.32
FENO 1000 MONUMENT
W/ALUMININUM CAP

B-9-37
(TO REMAIN)

STA 289'EB'+48
BUTT JOINT REQ'D
SEE CONSTRUCTION DETAIL

SALVAGE RAIL, MGS THRIE BEAM TRANSITION, MGS GUARDRAIL 3 & MGS GUARDRAIL EAT:
STA 283'EB'+52 TO STA 286'EB'+07, RT
STA 286'WB'+58 TO STA 289'WB'+26, LT

SALVAGE RAIL, MGS THRIE BEAM TRANSITION, MGS GUARDRAIL 3 & MGS GUARDRAIL TERMINAL TYPE 2:
STA 297'WB'+65 TO STA 298'WB'+61, LT
STA 299'EB'+87 TO STA 300'EB'+83, LT
STA 299'EB'+91 TO STA 305'EB'+74, RT

EXCEPTION TO NET ℄ LENGTH
STA 298'WB'+73 - STA 299'WB'+69
B-9-38
BUTT JOINT REQ'D
SEE CONSTRUCTION DETAIL

PERMITTED WETLAND IMPACTS

AT&T WISCONSIN (COMMUNICATION)

EAU CLAIRE ELECTRICAL COOPERATIVE (ELECTRIC)

MATCH EXISTING ENDWALL

SALVAGE RAIL, MGS THRIE BEAM TRANSITION, MGS GUARDRAIL 3 & MGS GUARDRAIL EAT:
STA 295'EB'+55 TO STA 298'EB'+60, LT
STA 296'EB'+10 TO STA 298'EB'+65, RT
STA 299'WB'+72 TO STA 304'WB'+77, LT
STA 299'WB'+77 TO STA 302'WB'+57, RT

VERIFY PROPOSED GUARDRAIL POST SPACING PRIOR TO CONSTRUCTING CONCRETE SURFACE DRAIN AT:
STA 298'EB'+41, LT
STA 298'EB'+46, RT

EXCEPTION TO NET ℄ LENGTH
STA 298'EB'+71 - STA 299'EB'+69
B-9-75
BUTT JOINT REQ'D
SEE CONSTRUCTION DETAIL

AT&T WISCONSIN (COMMUNICATION)

PROJECT NO: 1050-01-61/1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	PLAN	SHEET 123	E

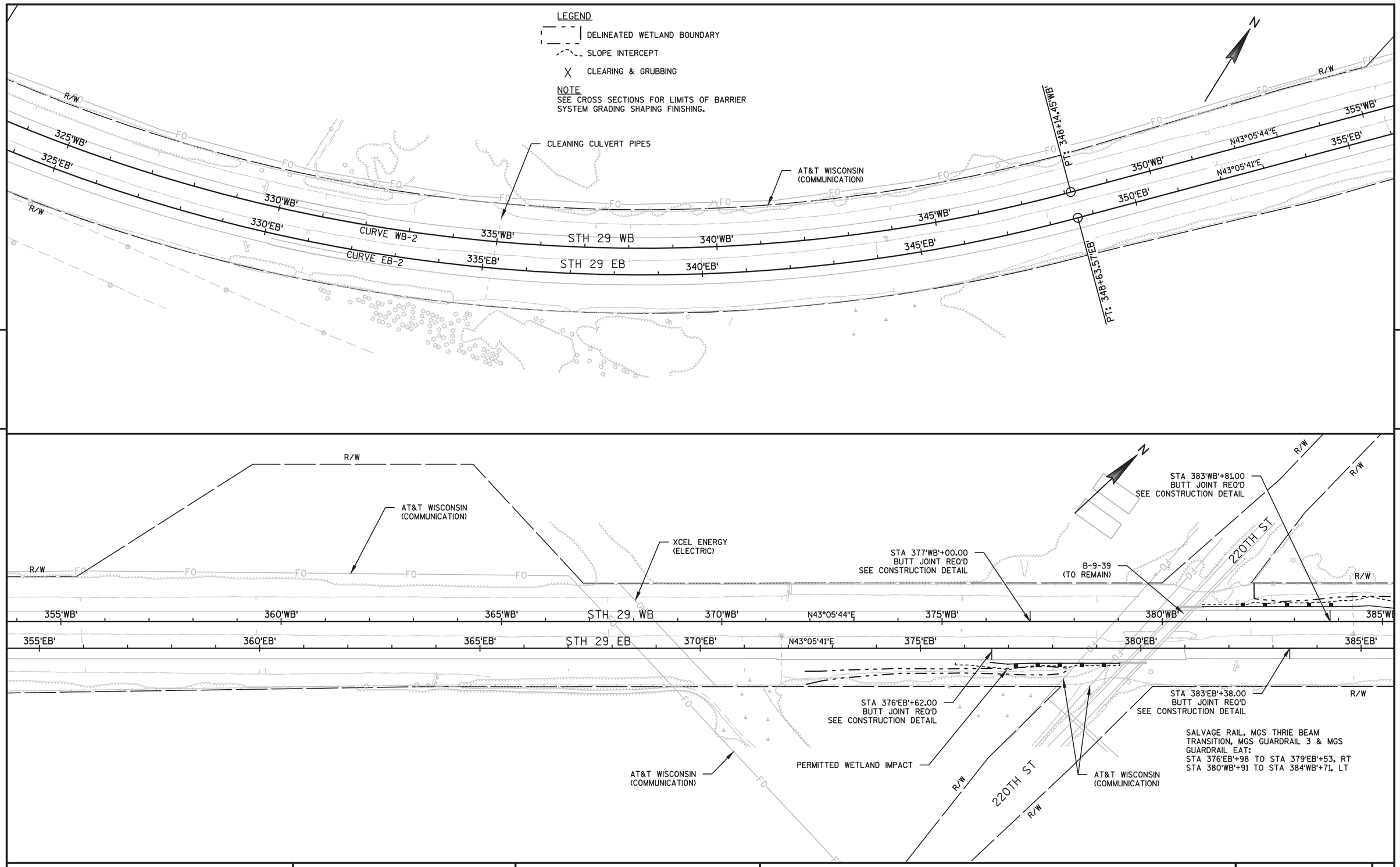
LEGEND

DELINEATED WETLAND BOUNDARY

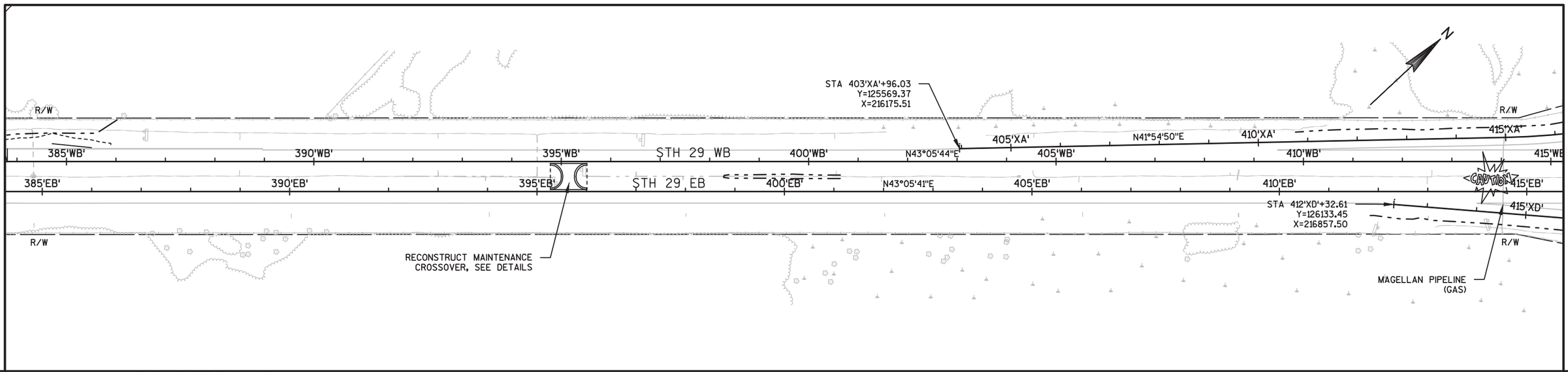
SLOPE INTERCEPT

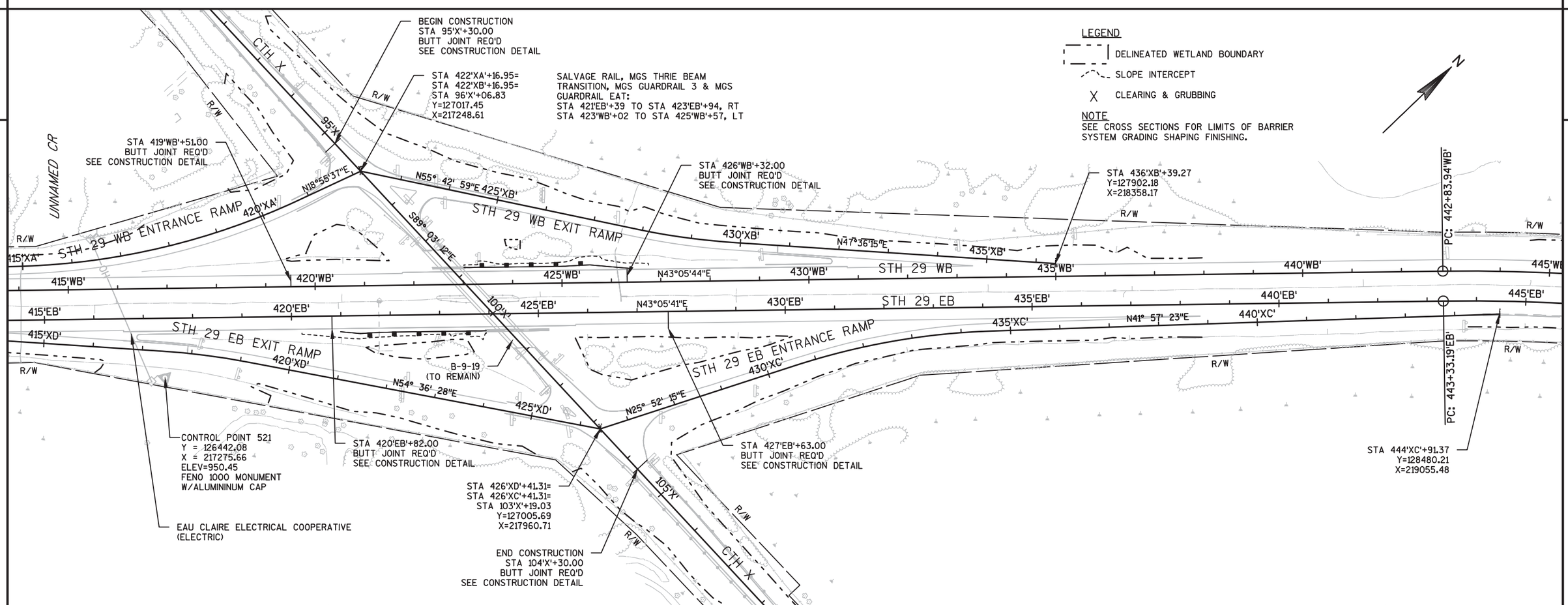
CLEARING & GRUBBING

NOTE
SEE CROSS SECTIONS FOR LIMITS OF BARRIER SYSTEM GRADING SHAPING FINISHING.



PROJECT NO: 1050-01-61/1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	PLAN	SHEET 124	E





LEGEND

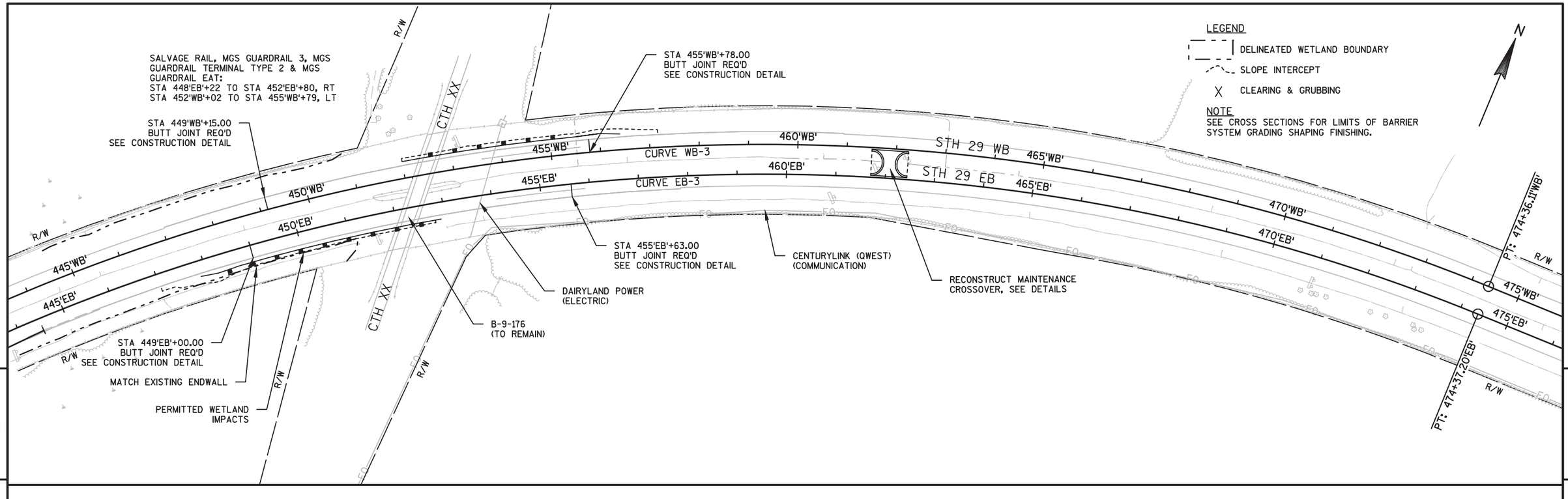
DELINEATED WETLAND BOUNDARY

SLOPE INTERCEPT

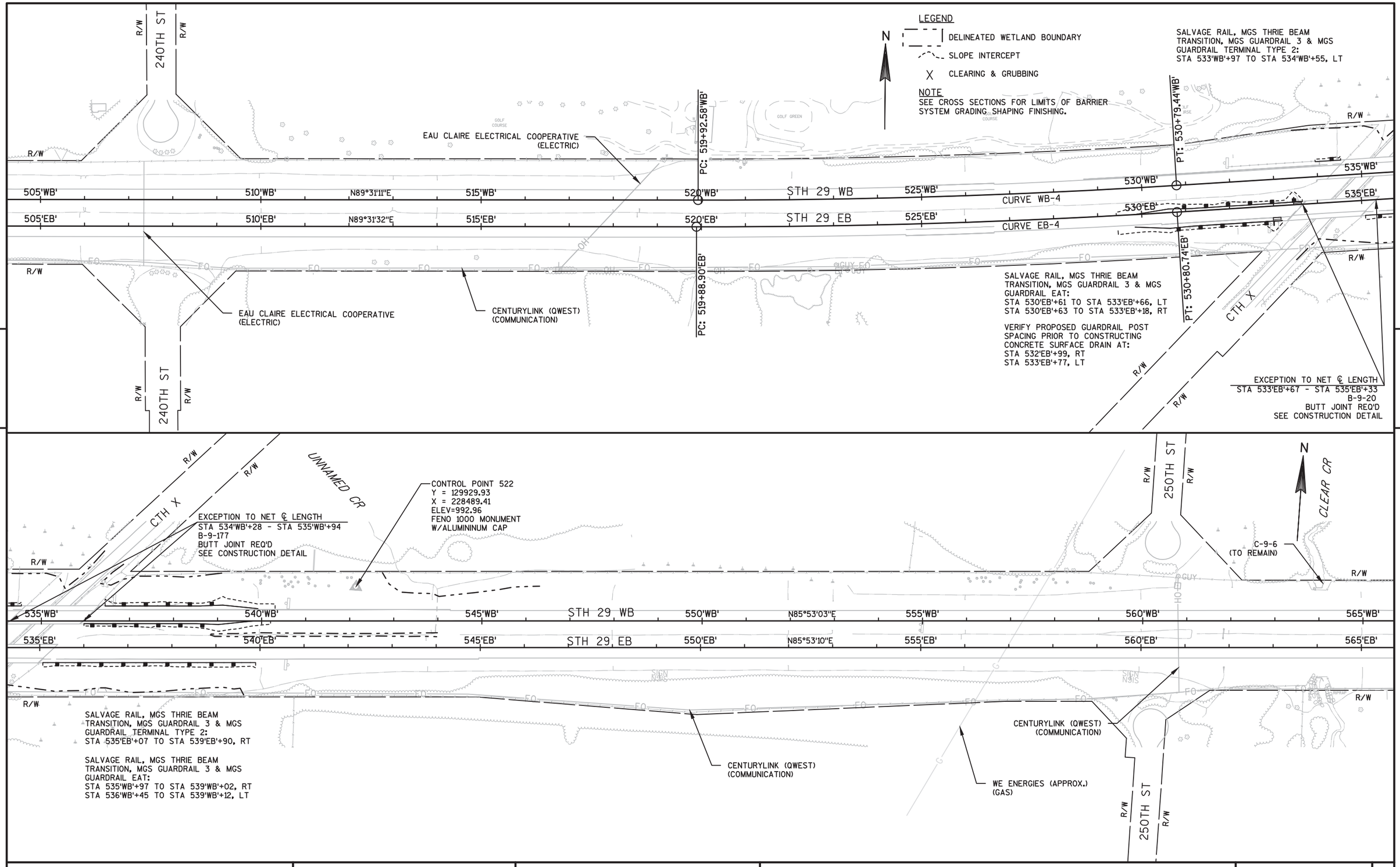
X CLEARING & GRUBBING

NOTE
SEE CROSS SECTIONS FOR LIMITS OF BARRIER SYSTEM GRADING SHAPING FINISHING.

PROJECT NO: 1050-01-61/1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	PLAN	SHEET 125	E



PROJECT NO: 1050-01-61/1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	PLAN	SHEET 126	E



PROJECT NO: 1050-01-61/1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	PLAN	SHEET 127	E

LEGEND

DELINEATED WETLAND BOUNDARY

SLOPE INTERCEPT

X CLEARING & GRUBBING

NOTE
SEE CROSS SECTIONS FOR LIMITS OF BARRIER SYSTEM GRADING SHAPING FINISHING.

5

R/W
PC: 572+75.57'WB'
PC: 572+85.53'EB'
565'WB' N85°53'03"E 570'WB' 575'WB' STH 29 WB 580'WB' 585'WB' CURVE WB-5 590'WB' 595'SA' 595'WB'
565'EB' N85°53'10"E 570'EB' 575'EB' STH 29 EB 580'EB' 585'EB' CURVE EB-5 590'EB' 595'EB'
FO
SIGN
CENTURYLINK (QWEST)
(COMMUNICATION)
STA 590'SA'+29.04
Y=130157.30
X=233329.92
RECONSTRUCT MAINTENANCE CROSSOVER, SEE DETAILS
RUINS

N

VILLAGE OF CADOTT
(ELECTRICITY)
CHARTER COMMUNICATIONS
(COMMUNICATIONS)
STA 610'SA'+73.98=
STA 610'SB'+73.98=
STA 103'S'+19.12
Y=130337.44
X=235350.38
STA 607'WB'+50.00
BUTT JOINT REQ'D
SEE CONSTRUCTION DETAIL
CONTROL POINT 514
Y = 130370.22
X = 235438.59
ELEV=1075.00
FENO 1000 MONUMENT
W/ALUMININUM CAP
SALVAGE RAIL, MGS GUARDRAIL 3, MGS GUARDRAIL 3 HS (STA 610'WB'+17 TO STA 611'WB'+50, LT & 610'EB'+00 TO 611'EB'+52, RT), MGS GUARDRAIL TERMINAL TYPE 2 & MGS GUARDRAIL EAT:
STA 606'EB'+68 TO STA 611'EB'+52, RT
STA 610'WB'+17 TO STA 613'WB'+83, LT
STH 27 105'S'
UNNAMED CR
PT: 595+88.07'WB'
PT: 595+93.53'EB'
R/W
610'SA' N73° 06' 57"E STH 29 WB ENTRANCE RAMP 605'SA' 600'SA' CURVE SA-1
595'SA' 595'WB' 600'WB' STH 29 WB 605'WB' 610'WB' S88°20'59"E 615'WB' 620'WB' 625'WB'
595'EB' 600'EB' STH 29 EB 605'EB' 610'EB' S88°20'38"E 615'EB' 620'EB' 625'EB'
S71° 41' 23"E 615'SB' STH 29 WB EXIT RAMP CURVE SB-1 620'SB' S83° 44' 59"E 625'SB'
STA 614'WB'+22.00
BUTT JOINT REQ'D
SEE CONSTRUCTION DETAIL
STA 625'SB'+02.36
Y=130065.00
X=236745.96
WE ENERGIES (APPROX.)
(DISCONTINUED GAS)
B-9-179
(TO REMAIN)
N11° 44' 03"W
100'S'
S83° 50' 56"E 600'SD' STH 29 EB EXIT RAMP CURVE SD-1 605'SD' S76° 37' 06"E 610'SD'
CAUTION
CENTURYLINK (COMMUNICATIONS)
WE ENERGIES (GAS)
STA 597'SD'+09.84
Y=130032.67
X=233977.91
CENTURYLINK (QWEST)
(COMMUNICATIONS)
STA 607'EB'+54.00
BUTT JOINT REQ'D
SEE CONSTRUCTION DETAIL
CENTURYLINK (QWEST)
(COMMUNICATIONS)
R/W
CONTROL POINT 512
Y = 129945.38
X = 235327.01
ELEV=1086.05
NGS BRASS CAP MONUMENT
IN CONCRETE STAMPED 5D49
(DO NOT IMPACT)
CENTURYLINK (QWEST)
(COMMUNICATIONS)
CONTROL POINT 515
Y = 129699.00
X = 235293.08
ELEV=1090.31
FENO 1000 MONUMENT
W/ALUMININUM CAP
95'S'
STH 27
CURVE SC-1 620'SC' S89° 29' 34"E 625'SC'
615'SC' N77° 56' 54"E STH 29 EB ENTRANCE RAMP
STA 614'EB'+24.00
BUTT JOINT REQ'D
SEE CONSTRUCTION DETAIL
STA 611'SD'+23.27=
STA 611'SC'+23.27=
STA 97'S'+67.56
Y=129786.13
X=235367.08
CENTURYLINK (QWEST)
(COMMUNICATIONS)
NOTE
SEE SECTION 5 STH 27 PLAN SHEET AND PAVING DETAIL SHEETS FOR ADDITIONAL INFORMATION AT THE STH 27 INTERCHANGE.

PROJECT NO: 1050-01-61/1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	PLAN	SHEET 128	E

LEGEND

DELINEATED WETLAND BOUNDARY

SLOPE INTERCEPT

X CLEARING & GRUBBING

NOTE
SEE CROSS SECTIONS FOR LIMITS OF BARRIER SYSTEM GRADING SHAPING FINISHING.

N

UNNAMED CR

R/W

625'SB'
625'WB' 630'WB' STH 29 WB 635'WB' 640'WB' S88°20'59"E 645'WB' 650'WB' 655'WB'
625'EB' 630'EB' STH 29 EB 635'EB' 640'EB' S88°20'38"E 645'EB' 650'EB' 655'EB'
625'SC' 630'SC'

FO

SIGN

STA 631'SC'+09.11
Y = 129935.55
X = 237337.22

RECONSTRUCT MAINTENANCE CROSSOVER, SEE DETAILS

CENTURYLINK (QWEST) (COMMUNICATION)

5

SLAUGHTERHOUSE CR

270TH ST

MH

GUY

THE NORTH LEG AND MEDIAN AT THE 270TH ST INTERSECTION ARE SCHEDULED TO BE ELIMINATED UNDER ANOTHER PROJECT ANTICIPATED TO BE COMPLETED IN 2016.

PI: 658+00.42'WB'

DO NOT DISTURB

NGS

655'WB' 660'WB' STH 29 WB 665'WB' 670'WB' S88°20'53"E 675'WB' 680'WB' 685'WB'
655'EB' 660'EB' STH 29 EB 665'EB' 670'EB' S88°21'03"E 675'EB' 680'EB' 685'EB'

CENTURYLINK (COMMUNICATIONS)

PI: 658+00.74'EB'

XCEL ENERGY (ELECTRIC)

REPLACE CURB & GUTTER AND OVERLAY MEDIAN
SEE INTERSECTION DETAILS FOR SIDE ROAD WORK LIMITS

CENTURYLINK (QWEST) (COMMUNICATION)

PROJECT NO: 1050-01-61/1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	PLAN	SHEET 129	E

LEGEND

DELINEATED WETLAND BOUNDARY

SLOPE INTERCEPT

X CLEARING & GRUBBING

NOTE
SEE CROSS SECTIONS FOR LIMITS OF BARRIER SYSTEM GRADING SHAPING FINISHING.

N

R/W

685'WB' 690'WB' 695'WB' S88°20'53"E 700'WB' STH 29 WB 705'WB' 710'WB' 715'WB'

685'EB' 690'EB' 695'EB' S88°21'03"E 700'EB' STH 29 EB 705'EB' 710'EB' 715'EB'

FO

R/W

CENTURYLINK (QWEST)
(COMMUNICATION)

5

5

N

PI: 731+40.46'WB'

R/W

715'WB' 720'WB' S88°20'53"E 725'WB' STH 29 WB 730'WB' 735'WB' S88°59'20"E 740'WB' 745'WB'

715'EB' 720'EB' S88°21'03"E 725'EB' STH 29 EB 730'EB' 735'EB' S88°59'15"E 740'EB' 745'EB'

FO

R/W

RECONSTRUCT MAINTENANCE
CROSSOVER, SEE DETAILS

PI: 731+41.87'EB'

CENTURYLINK (QWEST)
(COMMUNICATION)

PROJECT NO: 1050-01-61/1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	PLAN	SHEET 130	E

DO NOT DISTURB

290TH ST

R/W

R/W

R/W

745'WB' 750'WB' 755'WB' STH 29 WB 760'WB' S88°59'20"E 765'WB' 770'WB' 775'WB'

745'EB' 750'EB' 755'EB' STH 29 EB 760'EB' S88°59'15"E 765'EB' 770'EB' 775'EB'

FO

R/W

R/W

CENTURYLINK (QWEST)
(COMMUNICATION)

XCEL ENERGY
(ELECTRIC)

SALVAGE RAIL, MGS GUARDRAIL 3, MGS GUARDRAIL TERMINAL TYPE 2 & MGS GUARDRAIL EAT:
STA 755'EB'+23 TO STA 763'EB'+39, RT

290TH ST

R/W

R/W

LEGEND

DELINEATED WETLAND BOUNDARY

SLOPE INTERCEPT

X CLEARING & GRUBBING

NOTE
SEE CROSS SECTIONS FOR LIMITS OF BARRIER SYSTEM GRADING SHAPING FINISHING.

5

5

TURNER CR

R/W

R/W

775'WB' 780'WB' 785'WB' STH 29 WB 790'WB' S88°59'20"E 795'WB' 800'WB' 805'WB'

775'EB' 780'EB' 785'EB' STH 29 EB 790'EB' S88°59'15"E 795'EB' 800'EB' 805'EB'

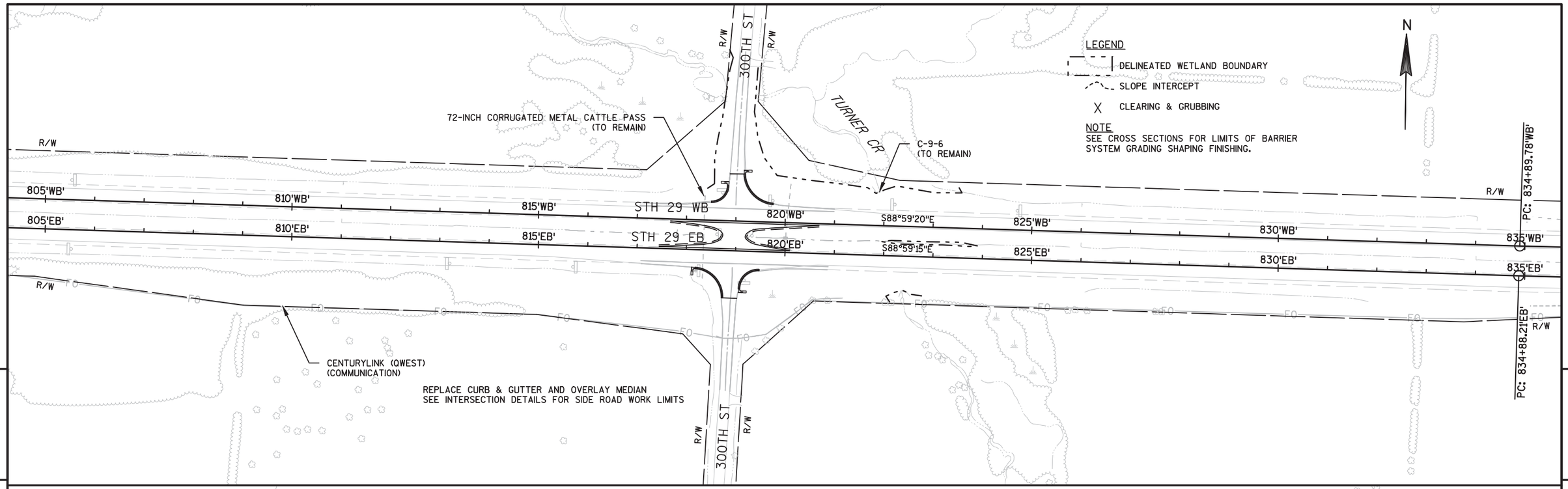
FO

R/W

R/W

CENTURYLINK (QWEST)
(COMMUNICATION)

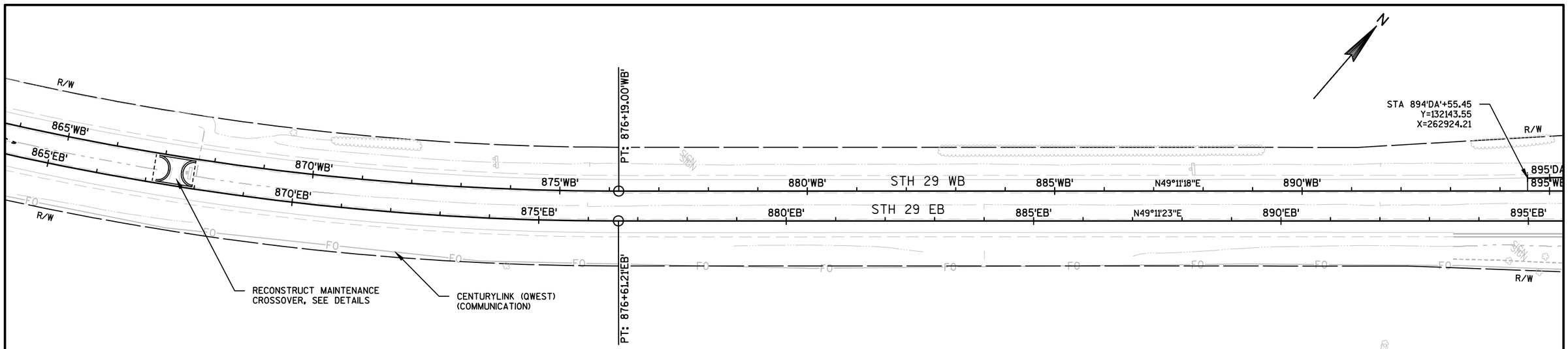
PROJECT NO: 1050-01-61/1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	PLAN	SHEET 131	E



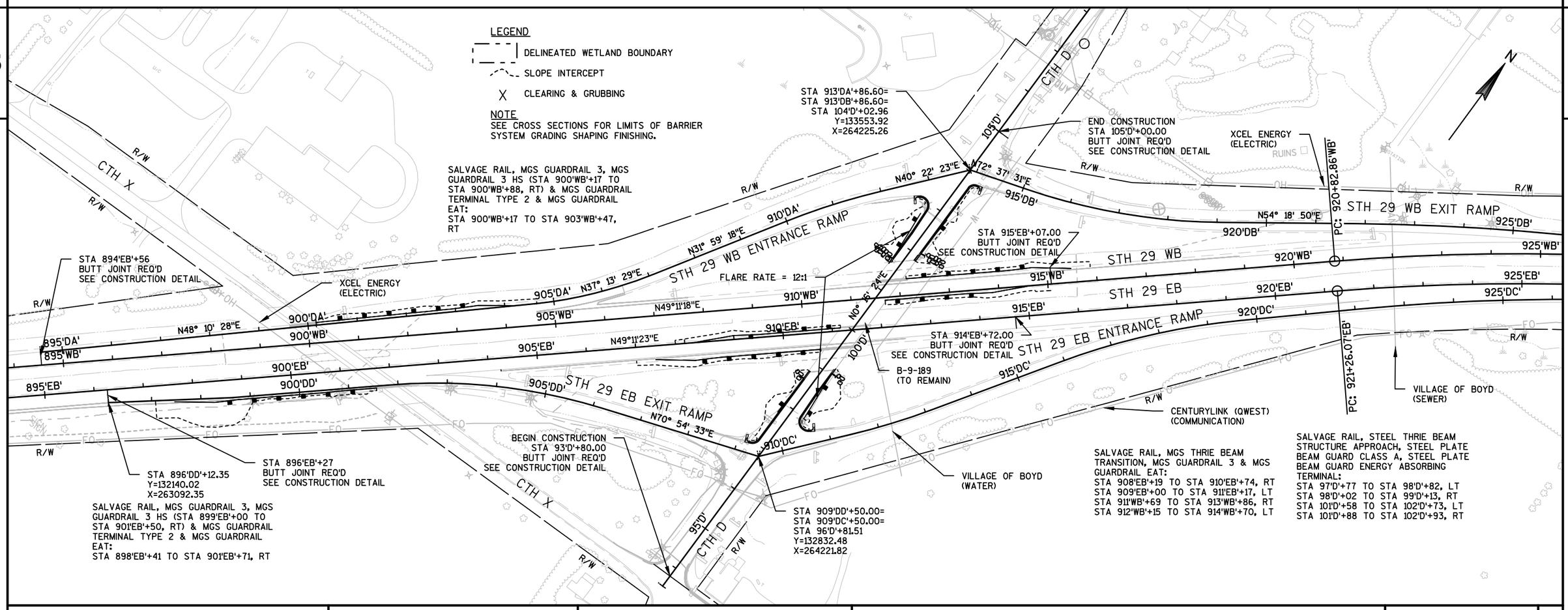
PROJECT NO: 1050-01-61/1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	PLAN	SHEET 132	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\050401-PN.DWG PLOT DATE : 7/26/2016 12:10 PM PLOT BY : ERIK OLESON PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 44


R/W
865'WB'
865'EB'
870'WB'
870'EB'
875'WB'
875'EB'
880'WB'
880'EB'
885'WB'
885'EB'
890'WB'
890'EB'
895'EB'
PT: 876+19.00'WB'
PT: 876+61.21'EB'
STH 29 WB
STH 29 EB
N49°11'18"E
N49°11'23"E
FO
SWEN
RECONSTRUCT MAINTENANCE CROSSOVER, SEE DETAILS
CENTURYLINK (QWEST) (COMMUNICATION)
STA 894'DA'+55.45
Y=132143.55
X=262924.21

5


LEGEND
DELINEATED WETLAND BOUNDARY
SLOPE INTERCEPT
CLEARING & GRUBBING
NOTE
SEE CROSS SECTIONS FOR LIMITS OF BARRIER SYSTEM GRADING SHAPING FINISHING.
SALVAGE RAIL, MGS GUARDRAIL 3, MGS GUARDRAIL 3 HS (STA 900'WB'+17 TO STA 900'WB'+88, RT) & MGS GUARDRAIL TERMINAL TYPE 2 & MGS GUARDRAIL EAT:
STA 900'WB'+17 TO STA 903'WB'+47, RT
STA 913'DA'+86.60=
STA 913'DB'+86.60=
STA 104'D'+02.96
Y=133553.92
X=264225.26
CTH D
CTH X
R/W
STA 894'EB'+56
BUTT JOINT REQ'D
SEE CONSTRUCTION DETAIL
XCEL ENERGY (ELECTRIC)
STA 896'DD'+12.35
Y=132140.02
X=263092.35
STA 896'EB'+27
BUTT JOINT REQ'D
SEE CONSTRUCTION DETAIL
SALVAGE RAIL, MGS GUARDRAIL 3, MGS GUARDRAIL 3 HS (STA 899'EB'+00 TO STA 901'EB'+50, RT) & MGS GUARDRAIL TERMINAL TYPE 2 & MGS GUARDRAIL EAT:
STA 898'EB'+41 TO STA 901'EB'+71, RT
BEGIN CONSTRUCTION
STA 93'D'+80.00
BUTT JOINT REQ'D
SEE CONSTRUCTION DETAIL
STA 909'DD'+50.00=
STA 909'DC'+50.00=
STA 96'D'+81.51
Y=132832.48
X=264221.82
N31° 59' 18"E
N37° 13' 29"E
N48° 10' 28"E
N70° 54' 33"E
N40° 22' 23"E
N72° 37' 31"E
N00° 16' 24"E
N54° 18' 50"E
STH 29 WB ENTRANCE RAMP
STH 29 EB EXIT RAMP
STH 29 EB ENTRANCE RAMP
STH 29 WB EXIT RAMP
STH 29 WB
STH 29 EB
905'DA'
905'WB'
905'EB'
905'DD'
910'DA'
910'WB'
910'EB'
910'DC'
915'DB'
915'WB'
915'EB'
915'DC'
920'DB'
920'WB'
920'EB'
920'DC'
925'DB'
925'WB'
925'EB'
925'DC'
900'DA'
900'WB'
900'EB'
900'DD'
895'DA'
895'WB'
895'EB'
105'D'
100'D'
95'D'
FLARE RATE = 12:1
STA 915'EB'+07.00
BUTT JOINT REQ'D
SEE CONSTRUCTION DETAIL
STA 914'EB'+72.00
BUTT JOINT REQ'D
SEE CONSTRUCTION DETAIL
B-9-189
(TO REMAIN)
END CONSTRUCTION
STA 105'D'+00.00
BUTT JOINT REQ'D
SEE CONSTRUCTION DETAIL
XCEL ENERGY (ELECTRIC)
PC: 920+82.86'WB'
PC: 921+26.07'EB'
VILLAGE OF BOYD (SEWER)
CENTURYLINK (QWEST) (COMMUNICATION)
VILLAGE OF BOYD (WATER)
SALVAGE RAIL, MGS THRIE BEAM TRANSITION, MGS GUARDRAIL 3 & MGS GUARDRAIL EAT:
STA 908'EB'+19 TO STA 910'EB'+74, RT
STA 909'EB'+00 TO STA 911'EB'+17, LT
STA 911'WB'+69 TO STA 913'WB'+86, RT
STA 912'WB'+15 TO STA 914'WB'+70, LT
SALVAGE RAIL, STEEL THRIE BEAM STRUCTURE APPROACH, STEEL PLATE BEAM GUARD CLASS A, STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL:
STA 97'D'+77 TO STA 98'D'+82, LT
STA 98'D'+02 TO STA 99'D'+13, RT
STA 101'D'+58 TO STA 102'D'+73, LT
STA 101'D'+88 TO STA 102'D'+93, RT
RUINS
FO
SWEN
OHU

LEGEND

DELINEATED WETLAND BOUNDARY

SLOPE INTERCEPT

X CLEARING & GRUBBING

NOTE
SEE CROSS SECTIONS FOR LIMITS OF BARRIER SYSTEM GRADING SHAPING FINISHING.

STA 927'DB'+85.30
Y=134248.64
X=265430.59

XCEL ENERGY (ELECTRIC)

DAIRYLAND POWER (ELECTRIC)

WISCONSIN CENTRAL LTD.

PCC: 937+92.26'WB'

N70°16'46"E

N70°17'01"E

PCC: 938+13.61'EB'

STH 29 WB

STH 29 EB

320TH ST

UNNAMED CR

CURVE WB-7

CURVE EB-7

CURVE WB-8

CURVE EB-8

925'DB'
925'WB'
925'EB'
925'DC'
930'WB'
930'EB'
935'WB'
935'EB'
940'WB'
940'EB'
945'WB'
945'EB'
950'WB'
950'EB'
955'WB'
955'EB'

R/W

STA 928'DC'+65.29
Y=134189.99
X=265548.77

CENTURYLINK (QWEST) (COMMUNICATION)

CLEANING CULVERT PIPES

REPLACE CURB & GUTTER AND OVERLAY MEDIAN
SEE INTERSECTION DETAILS FOR SIDE ROAD WORK LIMITS

SALVAGE RAIL, MGS GUARDRAIL 3, MGS GUARDRAIL TERMINAL TYPE 2 & MGS GUARDRAIL EAT:
STA 949'EB'+84 TO STA 954'EB'+52, RT

CONTROL POINT 513
Y = 135010.74
X = 268060.80
ELEV=1079.16
FENO 1000 MONUMENT
W/ALUMININUM CAP

N

PT: 973+54.96'WB'

PT: 973+54.92'EB'

HAY CR

B-9-29
(TO REMAIN)

CENTURYLINK (QWEST) (COMMUNICATION)

965'WB'
970'WB'
975'WB'
980'WB'
985'WB'
960'WB'
955'WB'
965'EB'
970'EB'
975'EB'
980'EB'
985'EB'
960'EB'
955'EB'

N89°39'43"E
N89°39'44"E

PROJECT NO: 1050-01-61/1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	PLAN	SHEET 134	E

LEGEND

DELINEATED WETLAND BOUNDARY

SLOPE INTERCEPT

X CLEARING & GRUBBING

NOTE
SEE CROSS SECTIONS FOR LIMITS OF BARRIER SYSTEM GRADING SHAPING FINISHING.

N

R/W

330TH ST

END PROJECT 1050-01-61
STA 990'WB'+00.00
BUTT JOINT REQ'D
SEE CONSTRUCTION DETAIL

5

N89° 39' 43"E 990'WB' 995'WB' 1000'WB' STH 29 WB 1005'WB' 1010'WB' 1015'WB'

N89° 39' 44"E 990'EB' 995'EB' 1000'EB' STH 29 EB 1005'EB' 1010'EB' 1015'EB'

FO

CENTURYLINK (QWEST)
(COMMUNICATION)

END PROJECT 1052-01-62
STA 990'EB'+00.00
BUTT JOINT REQ'D
SEE CONSTRUCTION DETAIL

SEPTIC

U/C

PROJECT NO: 1050-01-61/1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	PLAN	SHEET 135	E

N

CENTURYLINK (QWEST)
(COMMUNICATIONS)

R/W

STH 29 EB EXIT RAMP

S76° 37' 06"E

CANOPY

CANOPY

FILLER
CAPS

CENTURYLINK (QWEST)
(COMMUNICATIONS)

CONTROL POINT 515
Y = 129699.00
X = 235293.08
ELEV=1090.31
FENO 1000 MONUMENT
W/ALUMININUM CAP

SALVAGE
EXISTING
GUARDRAIL

CONTROL POINT 512
Y = 129945.38
X = 235327.01
ELEV=1086.05
NGS BRASS CAP MONUMENT
IN CONCRETE STAMPED 5D49

STH 29 WB ENTRANCE RAMP

N13° 08' 57"E

R/W

610'SD'

610'EB'

610'WB'

610'SA'

STA 92'S'+00
Y = 129218.73
X = 235379.78

R/W

PI: 95+09.45'S'
Y=129528.14
X=235374.89

WISDOT
(SIGNALS)

END MILL & OVERLAY
STA 97'S'+20
BUTT JOINT REQ'D
SEE CONSTRUCTION DETAIL

P

N0° 54' 19"W

STH 27

95'S'

100'S'

N1° 44' 03"W

105'S'

STH 27

END MILL & OVERLAY
STA 104'S'+10
BUTT JOINT REQ'D
SEE CONSTRUCTION DETAIL

END CONSTRUCTION
STA 106'S'+20

VILLAGE OF CADOTT
(ELECTRICITY)
CHARTER COMMUNICATIONS
(COMMUNICATIONS)

R/W

HO

EX GUY

BEGIN CONSTRUCTION
STA 94'S'+60

R/W

HO

HO

EX GUY

CENTURYLINK (QWEST)
(COMMUNICATIONS)

STA 611'SD'+23.27=
STA 611'SC'+23.27=
STA 97'S'+67.56
Y=129786.13
X=235367.08

B-19-179
(TO REMAIN)

STH 29 EB

STH 29 WB

SALVAGE
EXISTING
GUARDRAIL

STORM SEWER EXTENSION
(SEE PAVING DETAILS)

WE ENERGIES (APPROX.)
(DISCONTINUED GAS)

STA 610'SA'+73.98=
STA 610'SB'+73.98=
STA 103'S'+19.12
Y=130337.44
X=235350.38

WISDOT
(SIGNALS)

R/W

CONTROL POINT 514
Y = 130370.22
X = 235438.59
ELEV=1075.00
FENO 1000 MONUMENT
W/ALUMININUM CAP

S71° 41' 23"E

FO

FO

S88°20'38"E

S88°20'59"E

615'SC'

615'EB'

615'WB'

615'SB'

STH 29 EB ENTRANCE RAMP

STH 29 WB EXIT RAMP

R/W

R/W

CENTURYLINK (QWEST)
(COMMUNICATIONS)

SALVAGE RAIL, STEEL THRIE BEAM STRUCTURE APPROACH, STEEL PLATE BEAM GUARD CLASS A, STEEL PLATE BEAM GUARD SHORT RADIUS AND STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL:
STA 98'S'+48 TO STA 99'S'+25, RT
STA 101'S'+36 TO STA 102'S'+25, LT

VERIFY PROPOSED GUARDRAIL POST SPACING PRIOR TO CONSTRUCTING CONCRETE SURFACE DRAIN AT:
STA 99'S'+13, RT
STA 101'S'+48, LT

LEGEND

- DELINEATED WETLAND BOUNDARY
- SLOPE INTERCEPT
- X CLEARING & GRUBBING
- (P) REMOVING PULL BOXES AND PULL BOXES STEEL 24X42-INCH (WITH LOCKINIG COVERS)
- == CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH

NOTES

FOR ADDITIONAL REMOVAL AND PROPOSED WORK INFORMATION, SEE PAVING DETAILS.

SEE SECTION 5 PLAN SHEETS FOR ADDITIONAL INFORMATION FOR WORK ON STH 29.

INSTALL ELECTRICAL WIRE TRAFFIC SIGNALS 12 AWG AS TRACER WIRE IN THE EXISTING AND PROPOSED CONDUIT BEING EXTENDED.

EXTEND CONDUIT A MINIMUM OF 5' BEYOND THE PROPOSED EDGE OF PAVEMENT.

SEE MISCELLANEOUS QUANTITIES FOR PULL BOX LOCATIONS.

5

5

PROJECT NO: 1050-01-61/1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	PLAN - STH 27	SHEET 136	E

Standard Detail Drawing List

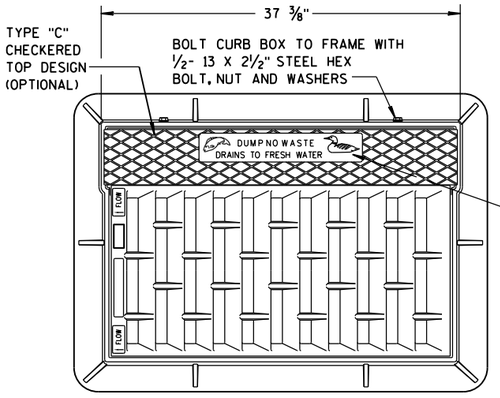
08A05-19A	INLET COVERS TYPE A, H, A-S, H-S & Z
08A05-19B	INLET COVERS TYPE B, B-A, C, MS, MS-A, & WM
08A05-19C	INLET COVERS TYPE F, HM, HM-S, S, T, V, HM-GJ, & HM-GJ-S
08C08-01	INLETS MEDIAN 1 AND 2 GRATE
08C09-01	INLETS MEDIAN 3 AND 4 GRATE
08D01-19	CONCRETE CURB, CONCRETE CURB AND GUTTER AND TIES
08D02-06	CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES
08D04-05	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08D15-05A	EDGEDRAIN OUTLET AND OUTFALL MARKERS
08D15-05B	EDGEDRAIN AND BASE AGGREGATE OPEN GRADED
08D15-05C	EDGEDRAIN AND BASE AGGREGATE OPEN GRADED
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F02-01	APRON ENDWALLS FOR PIPE ARCH AND ELLIPTICAL PIPE
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
09B02-09	CONDUIT
09B04-11	PULL BOX
11A01-05	MAINTENANCE CROSSOVER FOR FREEWAYS
11B02-02	CONCRETE MEDIAN NOSE
13A05-05A	SHOULDER RUMBLE STRIP, MILLING
13A05-05B	SHOULDER RUMBLE STRIP, MILLING
13C01-18	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
13C09-13A	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C09-13B	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C09-13C	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C11-11A	RURAL DOWELED CONCRETE PAVEMENT
13C11-11B	RURAL DOWELED CONCRETE PAVEMENT
14B07-14A	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14B	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14C	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14D	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14E	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14F	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14G	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14H	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B08-02A	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02B	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02C	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02D	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02E	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B15-09A	STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS
14B15-09B	STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS
14B15-09C	STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS
14B16-04A	ANCHORAGE FOR STEEL PLATE BEAM GUARD TYPE 2
14B16-04B	ANCHORAGE FOR STEEL PLATE BEAM GUARD TYPE 2
14B18-06A	STEEL PLATE BEAM GUARD, CLASS "A" (AT BRIDGES, OBSTACLES AND SIDEROADS/DRIVEWAYS)
14B18-06B	STEEL PLATE BEAM GUARD, CLASS "A" AT MEDIAN APPROACH TO BRIDGES
14B20-11A	STEEL THRIE BEAM STRUCTURE APPROACH
14B20-11B	STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO SQUARE END PARAPETS
14B20-11C	STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO VERTICAL FACED PARAPETS
14B20-11D	STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO SLOPED END PARAPETS
14B20-11E	STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO BRIDGE RAILING TYPES "F" AND "W"
14B20-11F	STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO BRIDGE RAILING TYPE "M"
14B20-11G	STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTOR PLATE DETAIL
14B20-11H	STEEL THRIE BEAM STRUCTURE APPROACH, SINGLE SLOPE ATTACHMENT
14B24-08A	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
14B24-08B	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
14B24-08C	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
14B27-01A	STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL
14B27-01B	STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL
14B27-01C	STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL
14B29-01	SAFETY EDGE
14B42-04A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-04B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-04C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

6

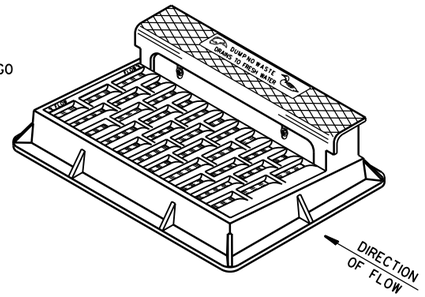
Standard Detail Drawing List

14B44-02A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-02B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-02C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B45-04A	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04B	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04C	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04D	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04E	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04F	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04G	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04H	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04I	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04J	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04K	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04L	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B47-02A	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-02B	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-02C	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
15A02-09	DELINEATOR POST, DELINEATOR REFLECTOR AND DELINEATOR BRACKET WITH REFLECTIVE SHEETING
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15A06-02	DELINEATOR LAYOUT
15C04-03	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C05-03	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS
15C07-13B	PAVEMENT MARKING WORDS
15C07-13C	PAVEMENT MARKING ARROWS
15C08-16A	PAVEMENT MARKING (MAINLINE)
15C08-16B	PAVEMENT MARKING (INTERSECTIONS)
15C08-16E	PAVEMENT MARKING (LEFT TURN LANE)
15C08-16F	PAVEMENT MARKING (ISLANDS)
15C12-04	TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)
15C14-02	AERIAL ENFORCEMENT BARS PAVEMENT MARKING DETAILS
15C19-04A	MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY
15C19-04B	MOVING PAVEMENT MARKING OPERATION MULTI-LANE UNDIVIDED ROADWAY
15C19-04C	MOVING PAVEMENT MARKING OPERATION MULTI-LANE DIVIDED ROADWAY
15C33-02	STOP LINE AND CROSSWALK PAVEMENT MARKING
15D12-06A	TRAFFIC CONTROL, LANE CLOSURE
15D12-06B	TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION
15D15-02	TRAFFIC CONTROL, EXIT AND ENTRANCE RAMP WITHIN LANE CLOSURE
15D21-04	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
15D27-03	TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH
15D28-03	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY

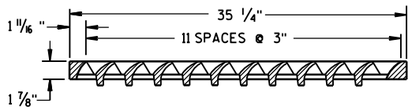
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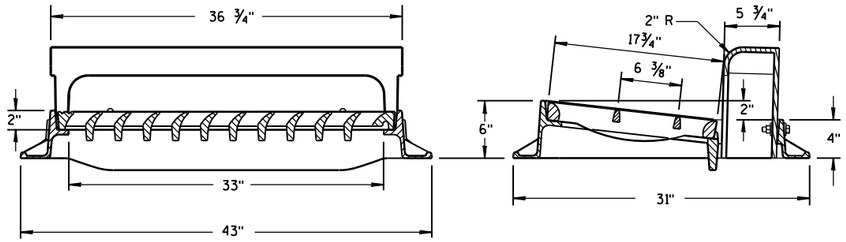


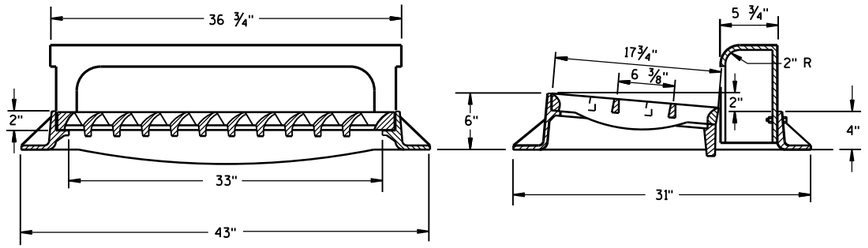
NOTE:
GRATE IS REVERSIBLE.



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

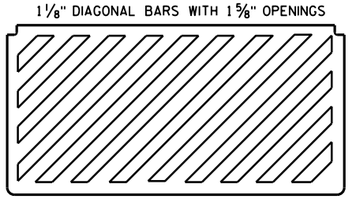






TYPE "H"

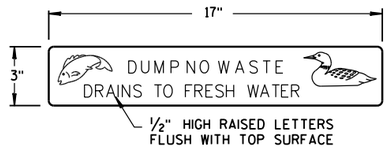
NOTE: EITHER CASTING IS ACCEPTABLE



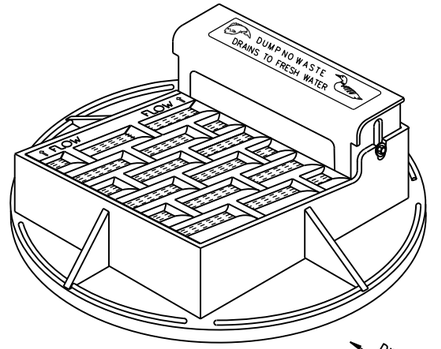
SPECIAL GRATE FOR TYPE "H" COVER

(MEASURES 35 1/4" X 17 3/4" X 2")

(NOTED AS TYPE H-S ON DRAINAGE TABLE)



LOGO DETAIL



NOTE: CURB BOX ADJUSTABLE 4" TO 9"

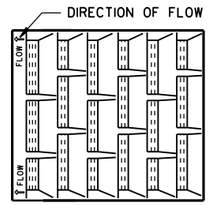
NOTE:
GRATE IS REVERSIBLE.

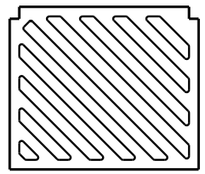
GENERAL NOTES

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.

DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.

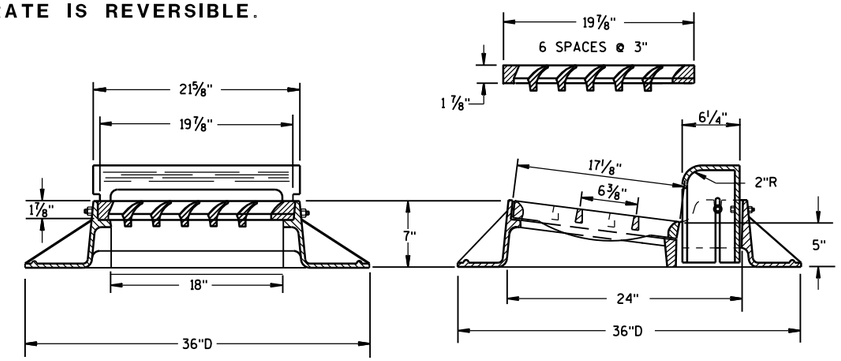




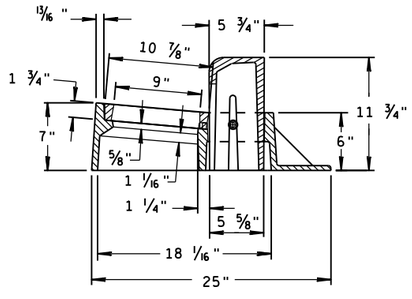
SPECIAL GRATE FOR TYPE "A" COVER

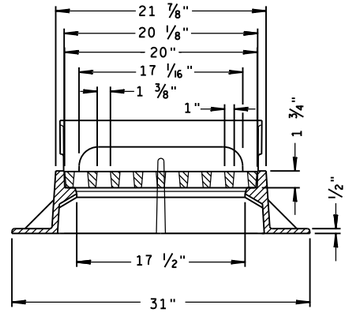
(MEASURES 19 3/4" X 17" X 1 7/8")

(NOTED AS TYPE A-S ON DRAINAGE TABLE)

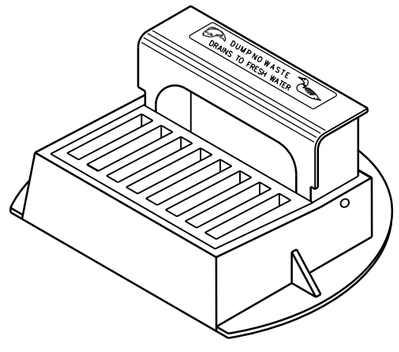


TYPE "A"





TYPE "Z"

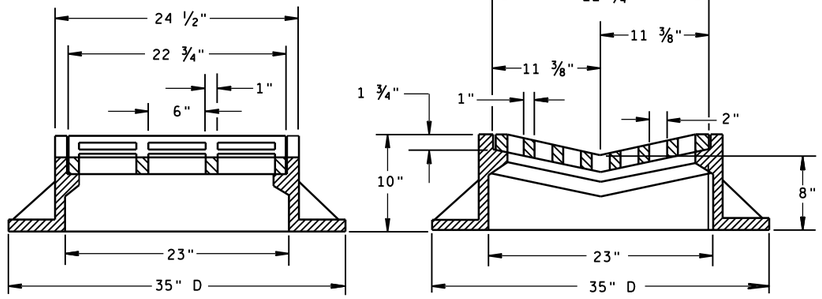


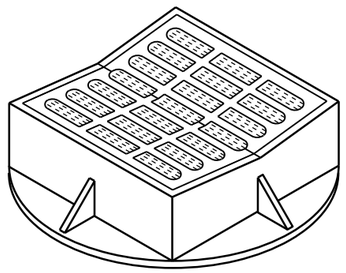
INLET COVERS
TYPE A, H, A-S, H-S & Z

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

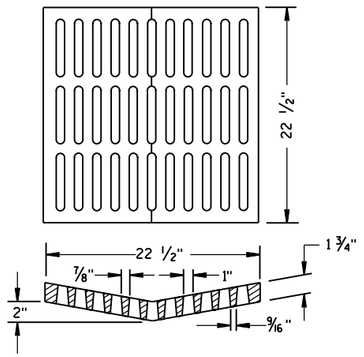
APPROVED
11-27-13 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

S.D.D. 8 A 5-19a



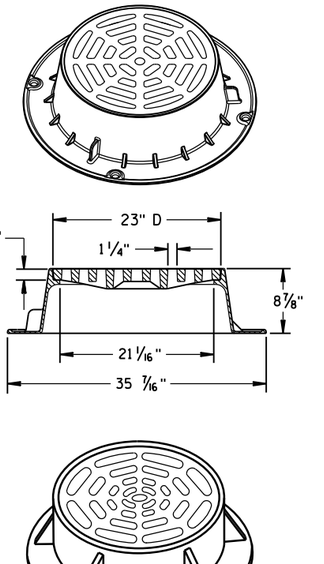


TYPE "B"



ALTERNATIVE GRATE FOR TYPE "B" COVER

USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS POSSIBLE.
NOTED AS TYPE B-A ON THE DRAINAGE TABLE



TYPE "C"

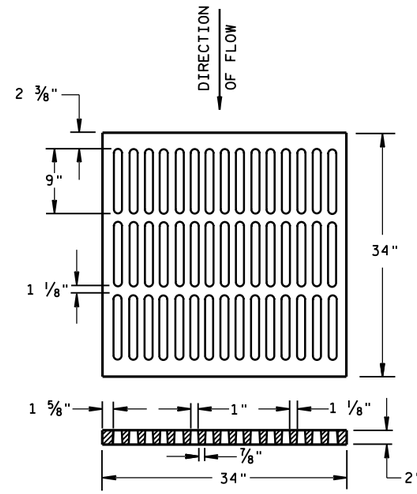
NOTE: EITHER CASTING IS ACCEPTABLE

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.

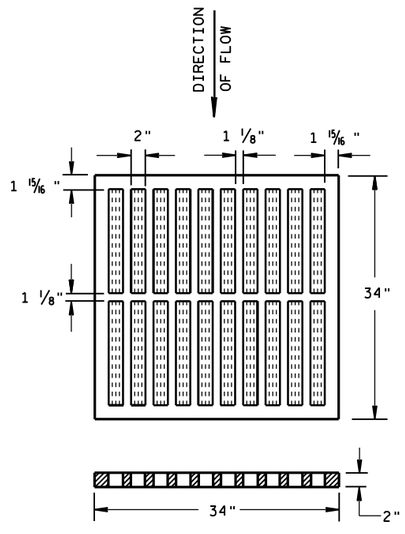
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.



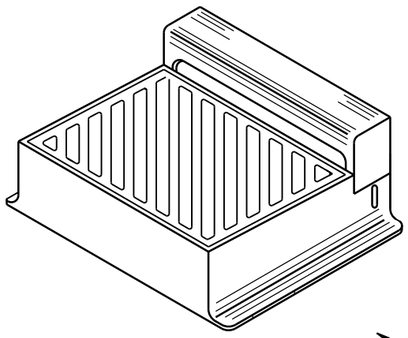
ALTERNATIVE TYPE "MS"

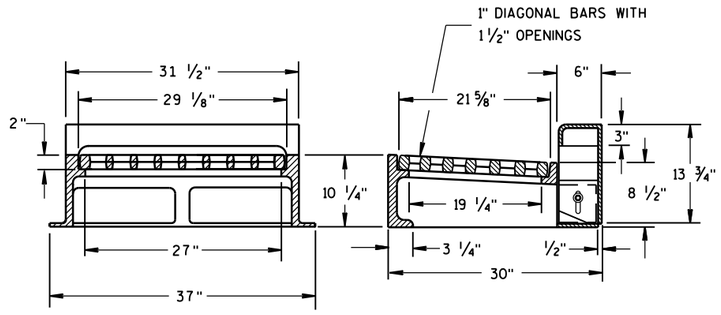
USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS PERMITTED
NOTED AS TYPE MS-A ON THE DRAINAGE TABLE



TYPE "MS"

USE ON FREEWAYS AND EXPRESSWAYS
NOTED AS TYPE MS ON DRAINAGE TABLE





NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

TYPE "WM"



DIAGONAL SLOTS, SHALL BE ORIENTED TO THE DIRECTION OF FLOW AS ILLUSTRATED. GRATES ARE MANUFACTURED TO BE REVERSIBLE.

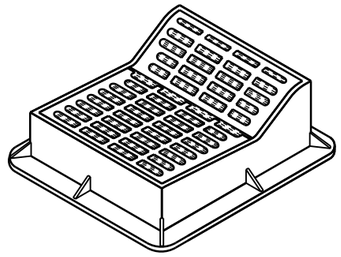
INLET COVERS
TYPE B, B-A, C, MS, MS-A, & WM

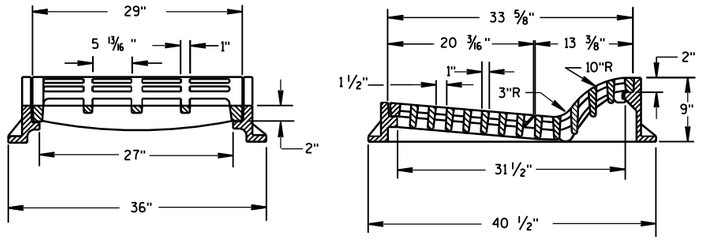
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/27/2013 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

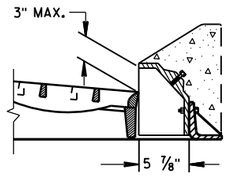
S.D.D. 8 A 5-19b





TYPE "F"

USE WITH TYPES A & D CONCRETE CURB & GUTTER, 36 INCH.



ALTERNATIVE CURB BOX FOR TYPE "HM" COVER

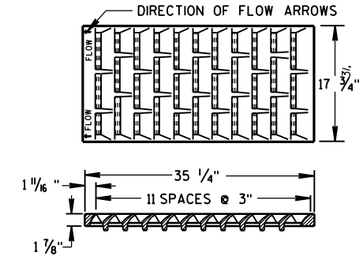
USE WITH TYPES G & J CONCRETE CURB & GUTTER, 30 INCH
NOTED AS TYPE HM-GJ ON DRAINAGE TABLE

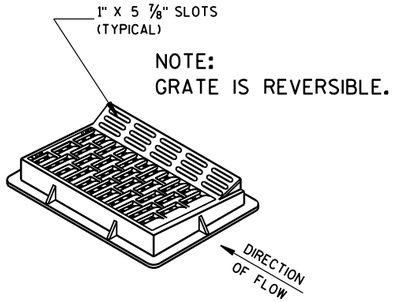
NOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM-GJ" COVER
NOTED AS TYPE HM-GJ-S ON DRAINAGE TABLE

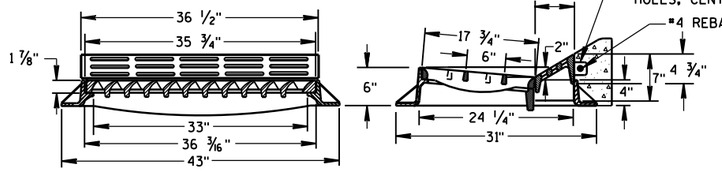
GENERAL NOTES

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.

DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.



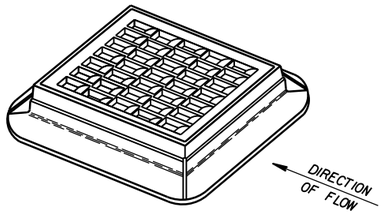


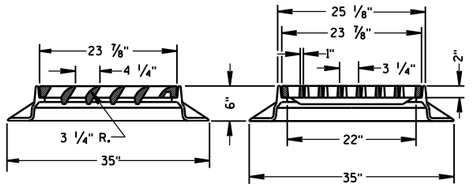


TYPE "HM"

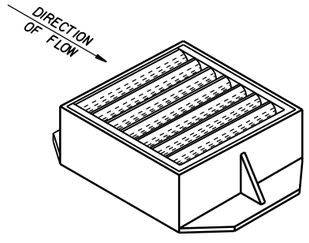
USE WITH TYPES A & D CONCRETE CURB & GUTTER, 36 INCH.

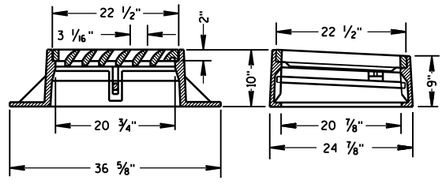
NOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM" COVER
NOTED AS TYPE HM-S ON DRAINAGE TABLE



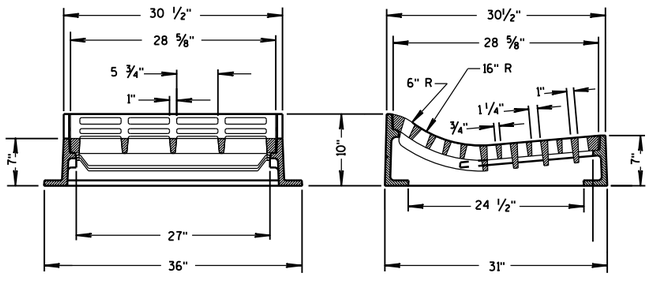


TYPE "S"



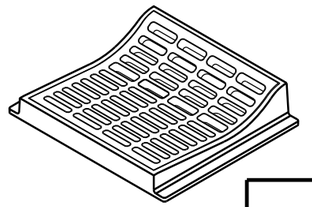


TYPE "V"



TYPE "T"

USE WITH TYPES R & T CONCRETE CURB & GUTTER, 36 INCH.



INLET COVERS
TYPE F, HM, HM-S, S, T, V, HM-GJ, & HM-GJ-S

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

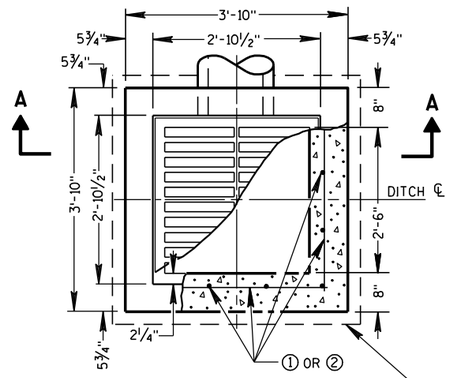
APPROVED
11/27/2013
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

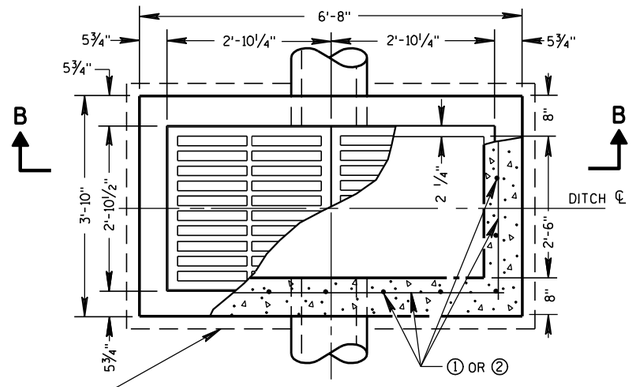
FHWA

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S.D.D. 8 A 5-19c

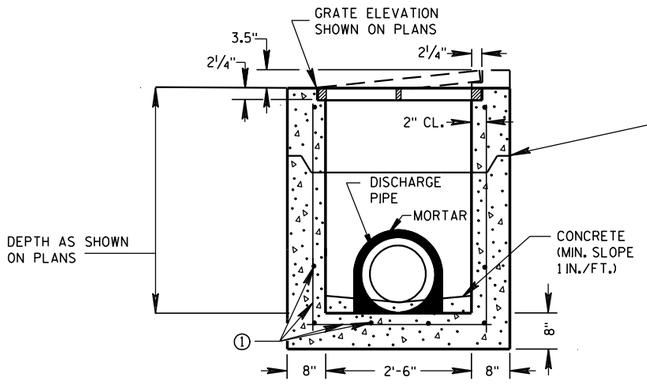


PLAN VIEW

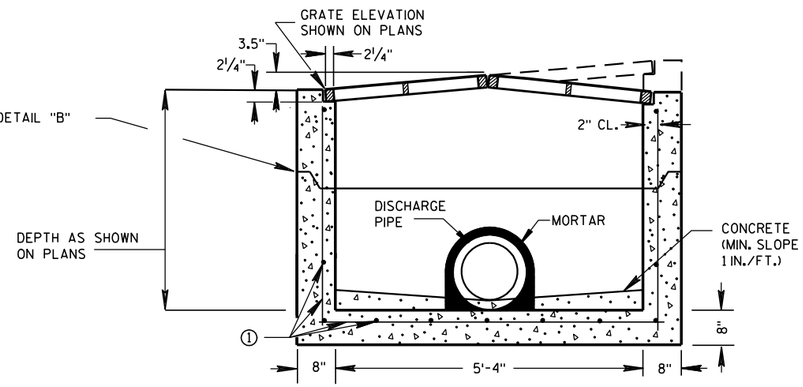


PLAN VIEW

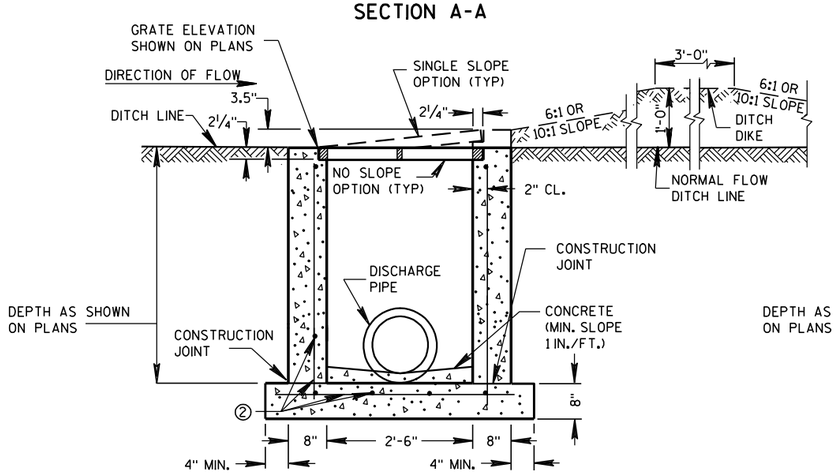
4" OVERHANGING BASE ON REINFORCED CAST-IN-PLACE CONCRETE INLETS



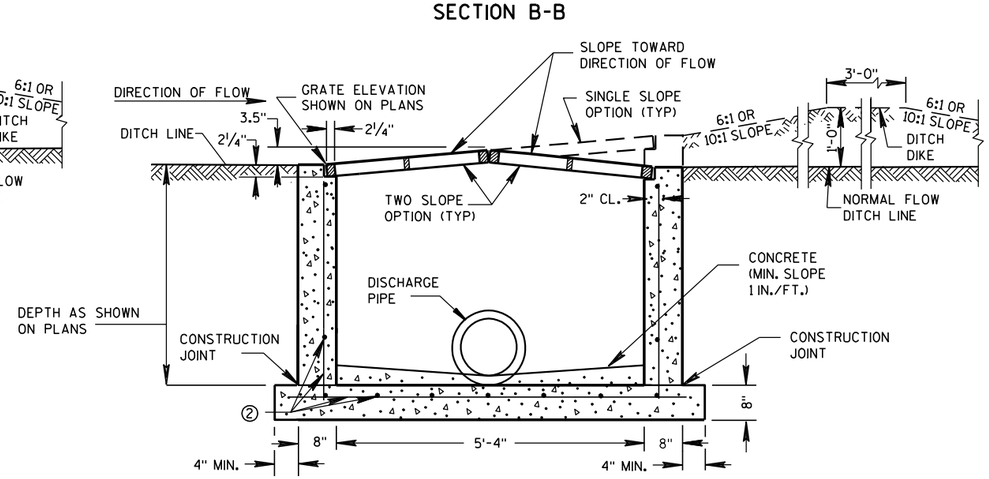
PRECAST REINFORCED CONCRETE SECTION A-A



PRECAST REINFORCED CONCRETE SECTION B-B



REINFORCED CAST-IN-PLACE CONCRETE SECTION A-A



REINFORCED CAST-IN-PLACE CONCRETE SECTION B-B

INLETS MEDIAN 1 GRATE

INLETS MEDIAN 2 GRATE

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.

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST INLET UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR INLETS WHICH MAY INCLUDE PRECAST REINFORCED CONCRETE INLETS, SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL MEDIAN INLETS ARE DESIGNATED ON THE PLANS AS "INLETS, 1G-MS", ETC. THE FIRST NUMBER AND LETTER DESIGNATE THE TYPE OF STRUCTURE, AND THE FOLLOWING LETTERS DESIGNATE THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

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

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF ASTM C 913.

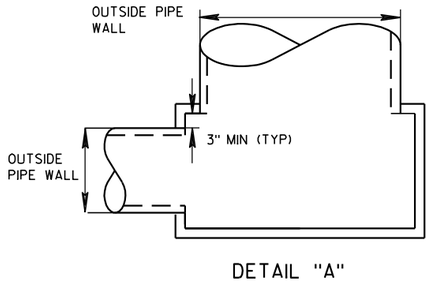
MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3" CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

① FOR PRECAST INLETS PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.

② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

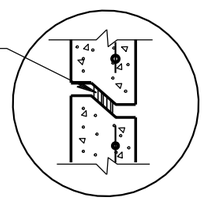
PIPE MATRIX

	MAXIMUM INSIDE PIPE DIAMETER	
INLET SIZE	WIDTH (IN)	LENGTH (IN)
1 GRATE	18	18
2 GRATE	18	42



DETAIL "A"

JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 (TYP)



DETAIL "B"

INLETS MEDIAN 1 AND 2 GRATE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

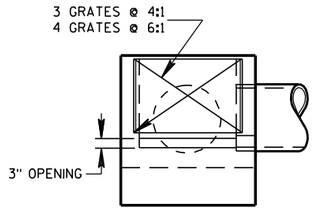
APPROVED
6/5/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

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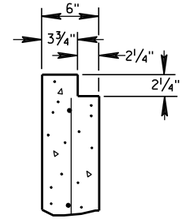
S.D.D. 8 C 8-1

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S.D.D. 8 C 8-1



SECTION B-B



SECTION C-C

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.

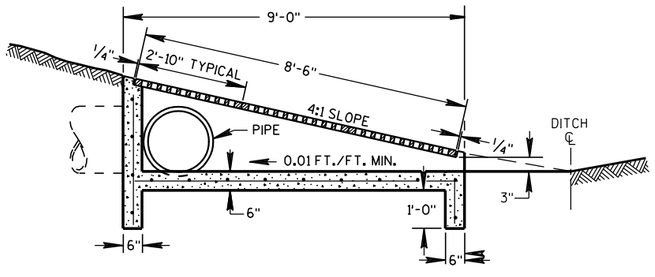
UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST INLET UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR INLETS WHICH MAY INCLUDE PRECAST REINFORCED CONCRETE INLETS, SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

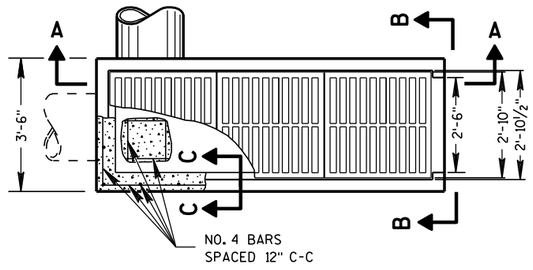
ALL MEDIAN INLETS ARE DESIGNATED ON THE PLANS AS "INLETS, 3G-MS", ETC. THE FIRST NUMBER AND LETTER DESIGNATE THE TYPE OF STRUCTURE, AND THE FOLLOWING LETTERS DESIGNATE THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

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

ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF ASTM C 913.

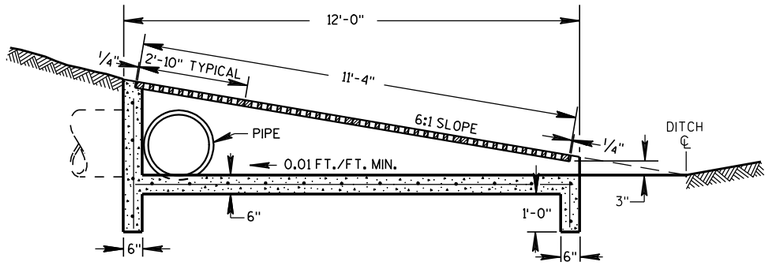


SECTION A-A

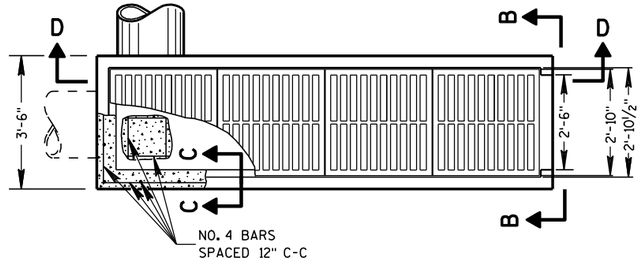


PLAN VIEW

INLETS MEDIAN 3 GRATE



SECTION D-D



PLAN VIEW

INLETS MEDIAN 4 GRATE

INLETS MEDIAN 3 AND 4 GRATE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/5/2012 — DATE

/S/ Jerry H. Zogg — ROADWAY STANDARDS DEV ENGINEER

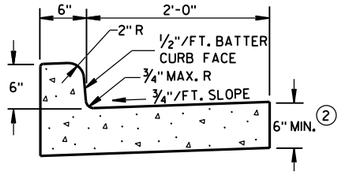
FHWA

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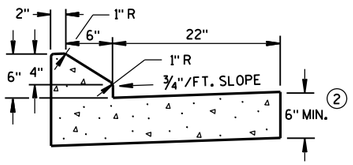
S.D.D. 8 C 9-1

6

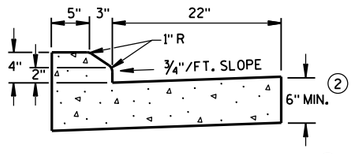
S.D.D. 8 C 9-1



TYPES A & D ①

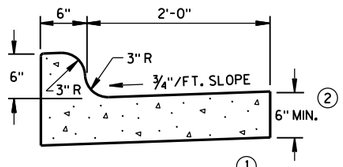


6" SLOPED CURB TYPES G & J ①

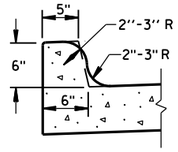


4" SLOPED CURB TYPES G & J ①

CONCRETE CURB & GUTTER 30"

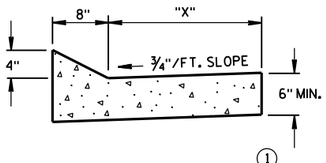


TYPES K & L ①



OPTIONAL CURB SHAPE FOR TYPES K & L ①

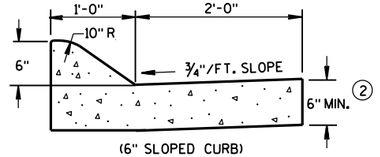
CONCRETE CURB & GUTTER 30"



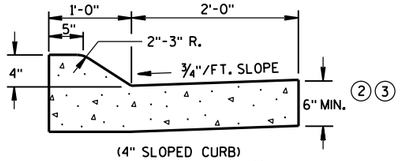
TYPES TBT & TBTT ①

CONCRETE CURB & GUTTER

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

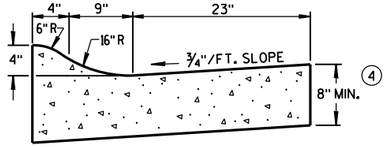


(6" SLOPED CURB)



(4" SLOPED CURB)

TYPES A & D ①



4" SLOPED CURB TYPES R & T ①⑤

CONCRETE CURB & GUTTER 36"

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, R AND TBTT.

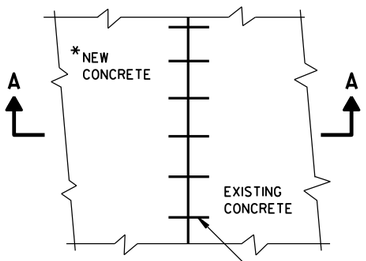
② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

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

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

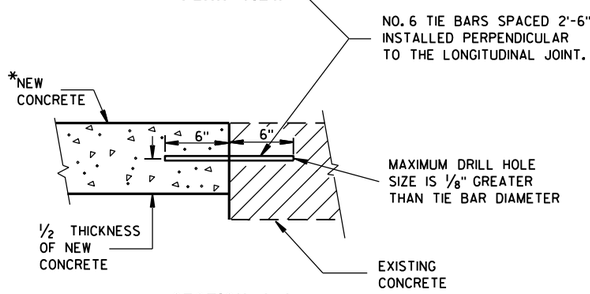
⑤ THE FACE OF CURB IS 6" FROM THE BACK OF CURB.

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



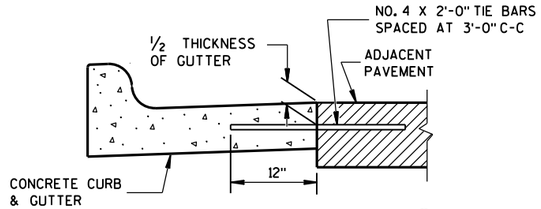
PLAN VIEW

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

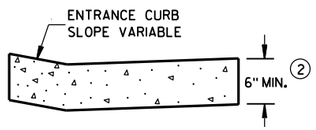


SECTION A-A

TIE BARS DRILLED INTO EXISTING PAVEMENT

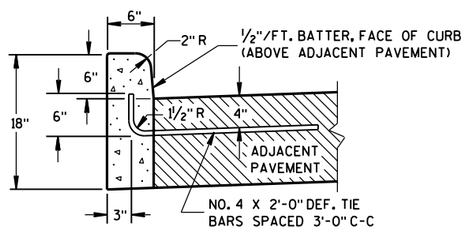


TYPICAL TIE BAR LOCATION ①

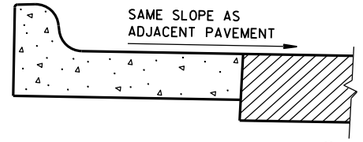


DRIVEWAY ENTRANCE CURB

(WHEN DIRECTED BY THE ENGINEER)

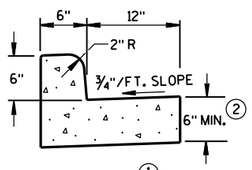


① TYPES A & D



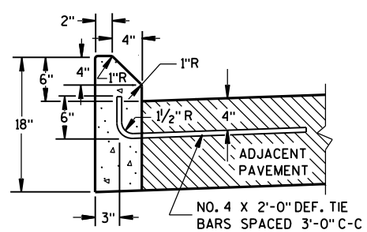
⑥ REVERSE SLOPE GUTTER

(TYPICAL FOR ALL CURB & GUTTER TYPES)



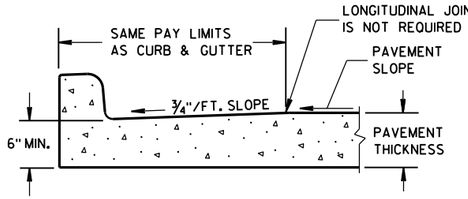
① TYPES A & D

CONCRETE CURB & GUTTER 18"

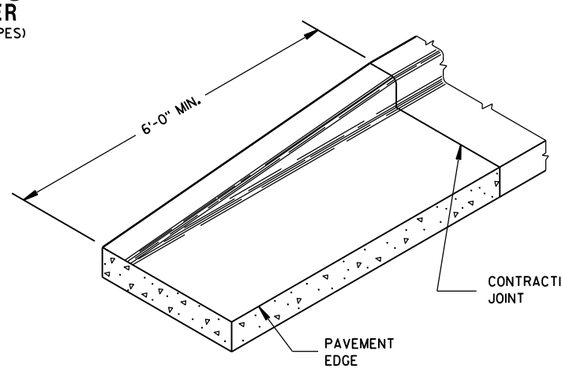


① TYPES G & J

CONCRETE CURB



PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB & GUTTER



END SECTION CURB & GUTTER

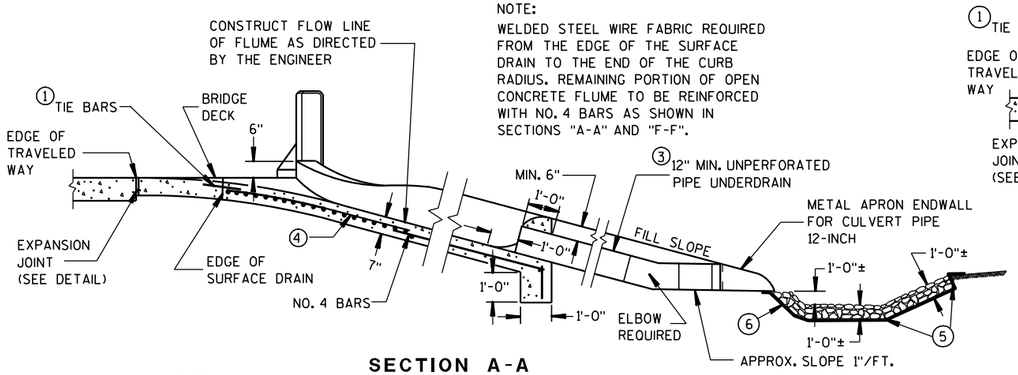
CONCRETE CURB, CONCRETE CURB & GUTTER AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

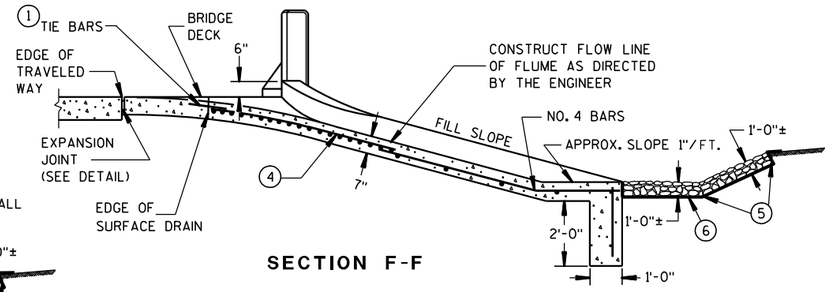
APPROVED
June, 2016 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

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S.D.D. 8 D 1-19



SECTION A-A



SECTION F-F

GENERAL NOTES

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

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

(1) NO. 4 X 2'-0" TIE BARS SPACED AT 3'-0" CENTERS TO BE USED ONLY WHEN ADJACENT TO P.C. CONCRETE.

(2) NO. 4 X 2'-0" TIE BARS SPACED AT 12" CENTERS TO BE PLACED BY BRIDGE CONTRACTOR, OR DRILLED TIE BARS PLACED AS DIRECTED BY THE ENGINEER.

(3) PIPE UNDERDRAIN MAY BE ANY OF THE MATERIALS LISTED IN SECTION 612.2 OF THE STANDARD SPECIFICATIONS EXCEPT DRAIN TILE.

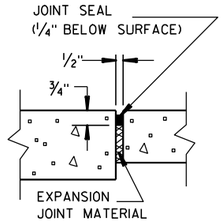
(4) MINIMUM REINFORCEMENT SHALL BE 6" X 6" - W4.0 X W4.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C-C.

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

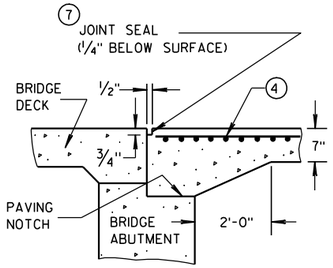
(6) GEOTEXTILE FABRIC, TYPE 'R"

(7) HOT POURED SEALANT UNLESS OTHERWISE SPECIFIED.

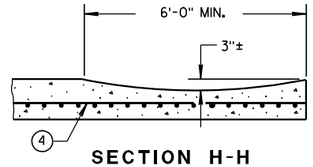
(8) THIS DIMENSION MAY VARY DEPENDING ON THE SPACING OF POSTS FOR THE STEEL PLATE BEAM GUARD. THE TYPICAL LOCATION FOR THE SURFACE DRAIN IS WHERE THE POST SPACING WIDENS TO 3'-1½".



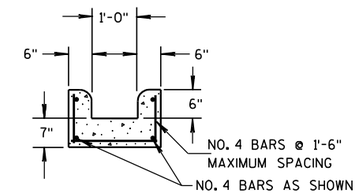
EXPANSION JOINT DETAIL



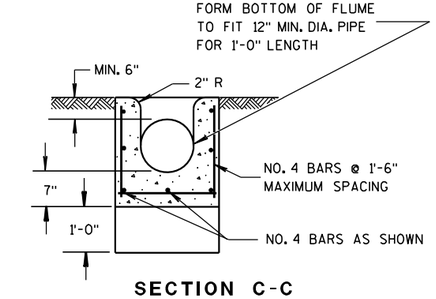
SECTION D-D



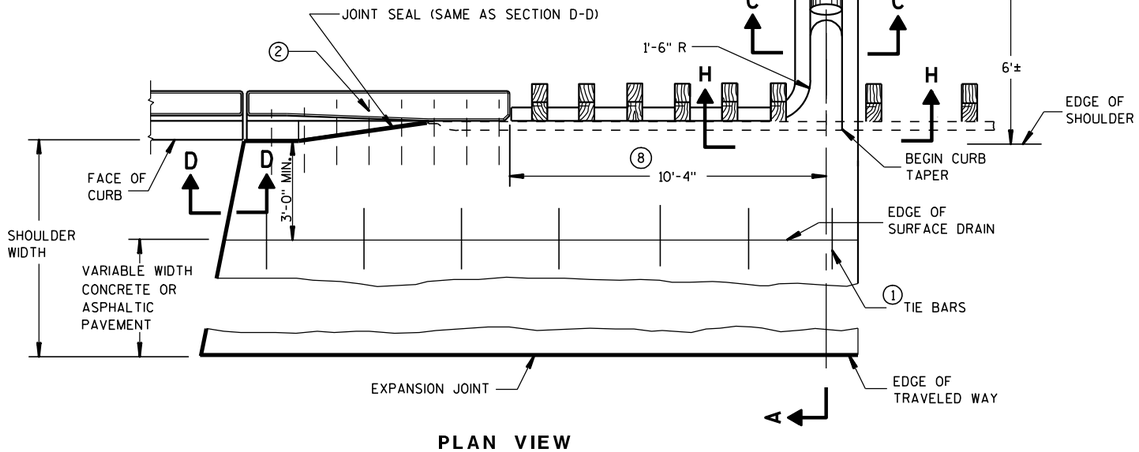
SECTION H-H



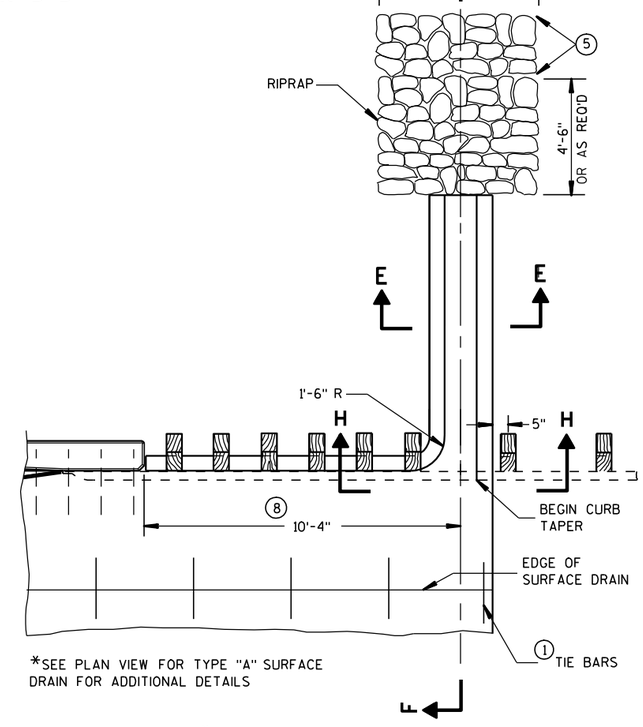
SECTION E-E



SECTION C-C

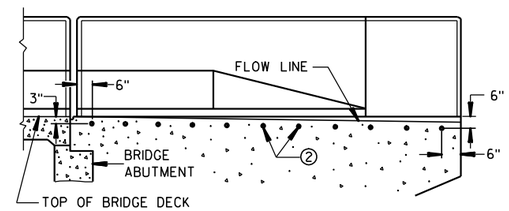


PLAN VIEW
SURFACE DRAIN WITH PIPE
TYPE "A"



*SEE PLAN VIEW FOR TYPE "A" SURFACE DRAIN FOR ADDITIONAL DETAILS

***PARTIAL PLAN VIEW**
SURFACE DRAIN WITHOUT PIPE
TYPE "B"



LOCATION OF TIE BARS IN WINGWALL

CONCRETE SURFACE DRAINS
FLUME TYPE
AT STRUCTURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
9/4/08 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

145

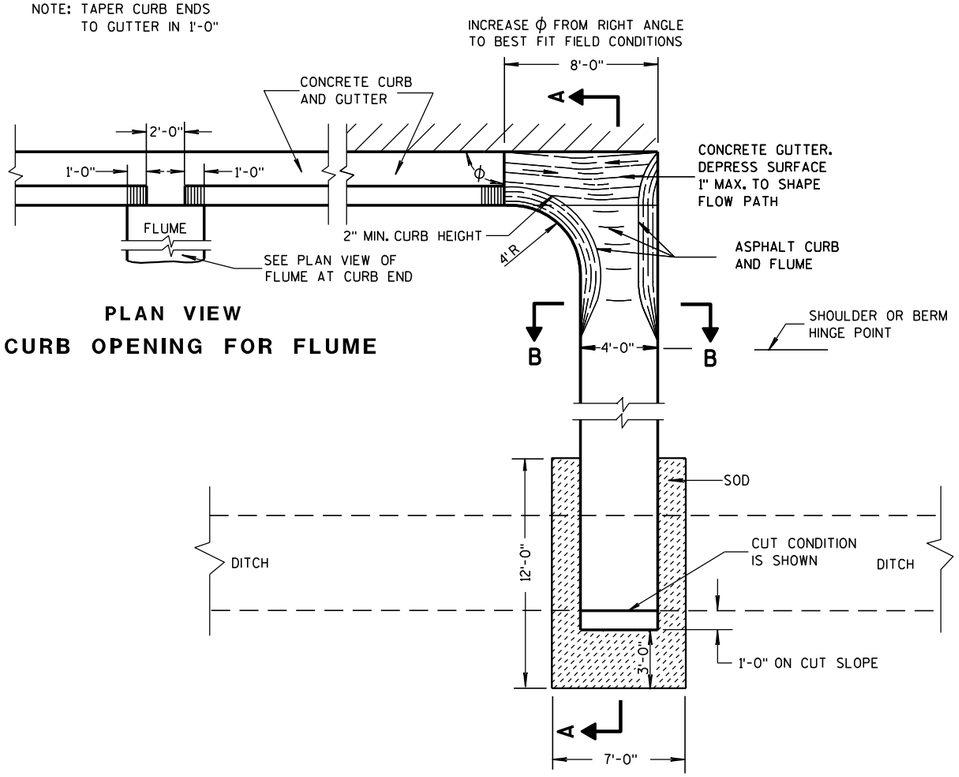
6

S.D.D. 8 D 2-6

6

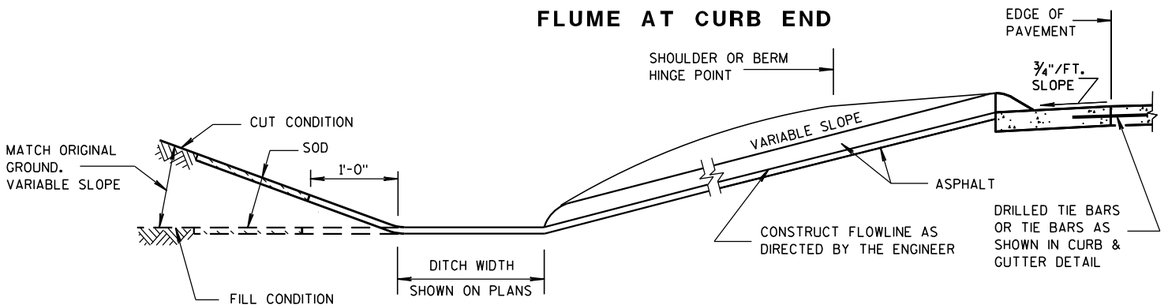
S.D.D. 8 D 2-6

ASPHALTIC FLUME

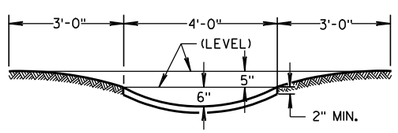


PLAN VIEW
CURB OPENING FOR FLUME

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.

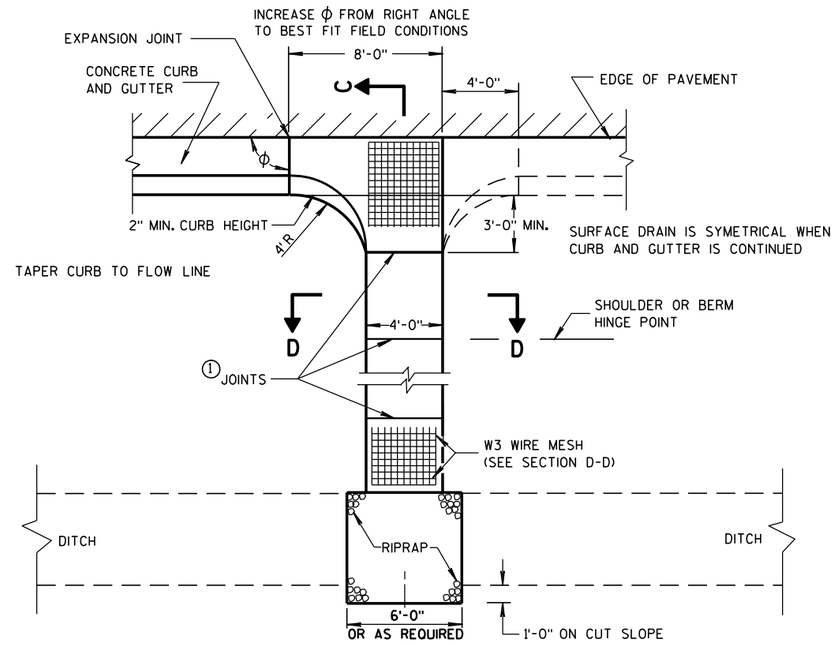
WELDED STEEL WIRE FABRIC SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

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.

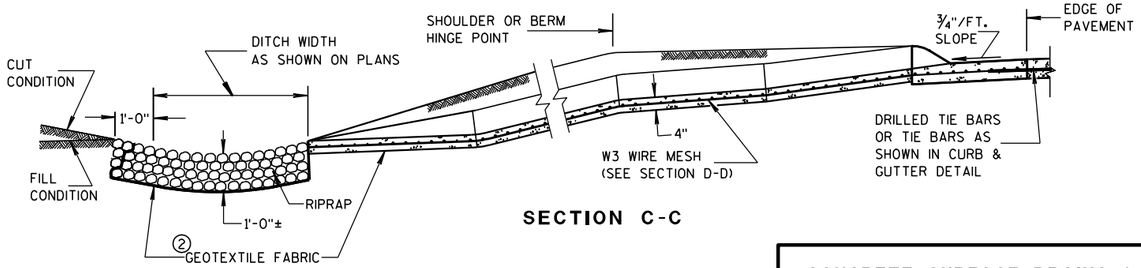
② GEOTEXTILE FABRIC TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.

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

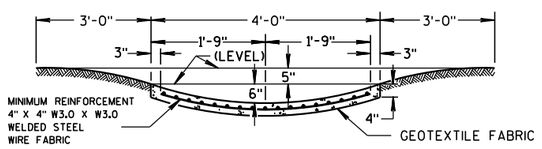
③ CONCRETE SURFACE DRAIN



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. [illegible]
ROADWAY STANDARDS ENGINEER
FHWA

6

S.D.D. 8 D 4-5

6

S.D.D. 8 D 4-5

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) UNPERFORATED PIPE UNDERDRAIN AND FITTINGS FURNISHED FOR OUTFALL PIPE SHALL MEET THE REQUIREMENTS OF ONE OF THE FOLLOWING SPECIFICATIONS:

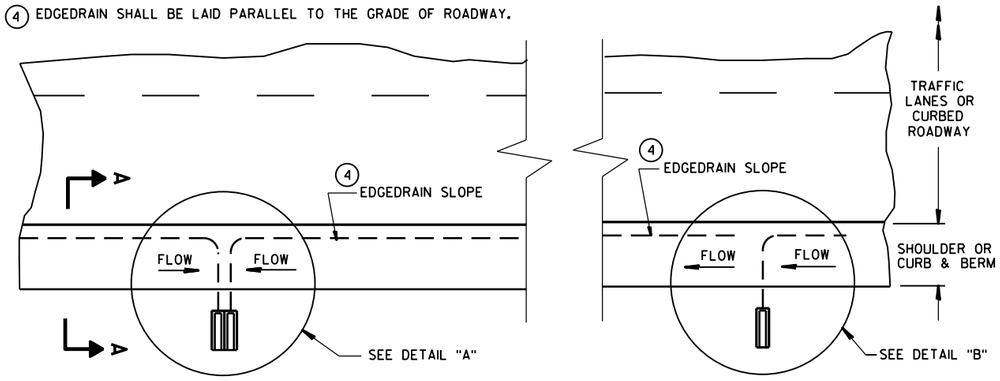
POLYVINYL CHLORIDE (PVC) PLASTIC DRAIN, WASTE, AND VENT PIPE AND FITTINGS, ASTM D 2665, SCHEDULE 40 PVC.

TYPE PSM POLYVINYL CHLORIDE (PVC) SEWER PIPE AND FITTINGS, ASTM D 3034, SDR 23.5 PVC SEWER PIPE.

(2) MAXIMUM SPACING OF EDGEDRAIN OUTLETS SHALL BE 250 FEET UNLESS OTHERWISE SPECIFIED IN THE CONTRACT OR DIRECTED BY THE ENGINEER.

(3) EDGEDRAIN SHALL BE CONNECTED TO INLETS REGARDLESS OF FLOW DIRECTION FOR DRAINAGE AND MAINTENANCE ACCESS.

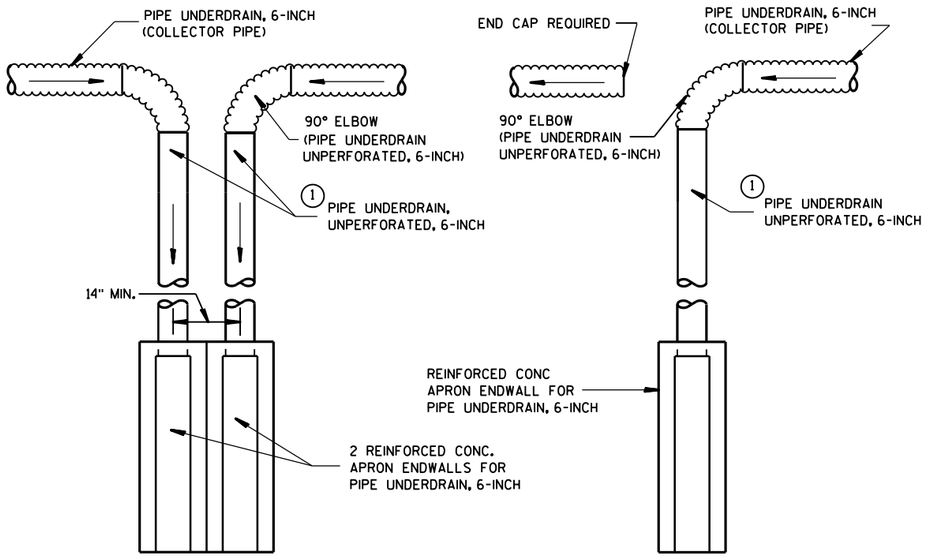
(4) EDGEDRAIN SHALL BE LAID PARALLEL TO THE GRADE OF ROADWAY.



PLAN VIEW

ROADWAY WITH SHOULDERS OR CURBS

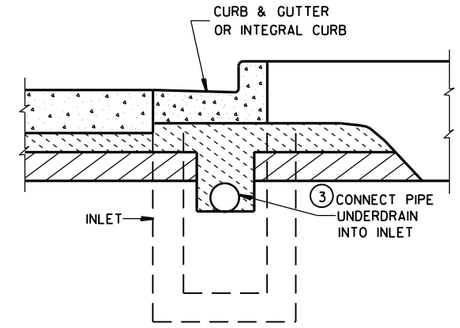
(EDGEDRAIN OUTLETS TO ROADSIDE) (2)



DETAIL "A"
TO BE USED AT LOW POINT LOCATIONS

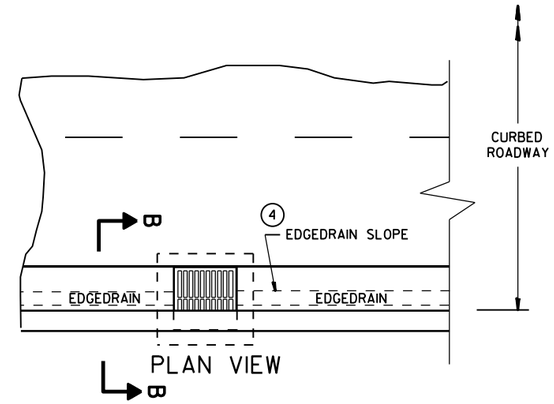
DETAIL "B"
TO BE USED AT INTERMEDIATE LOCATIONS

TYPICAL DRAIN OUT DETAILS



SECTION B-B

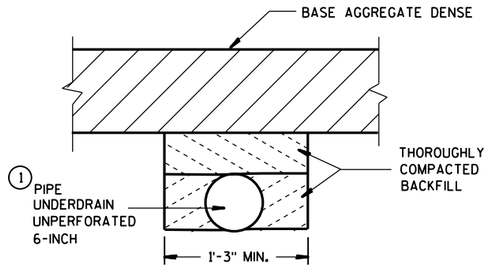
URBAN CROSS SECTION



PLAN VIEW

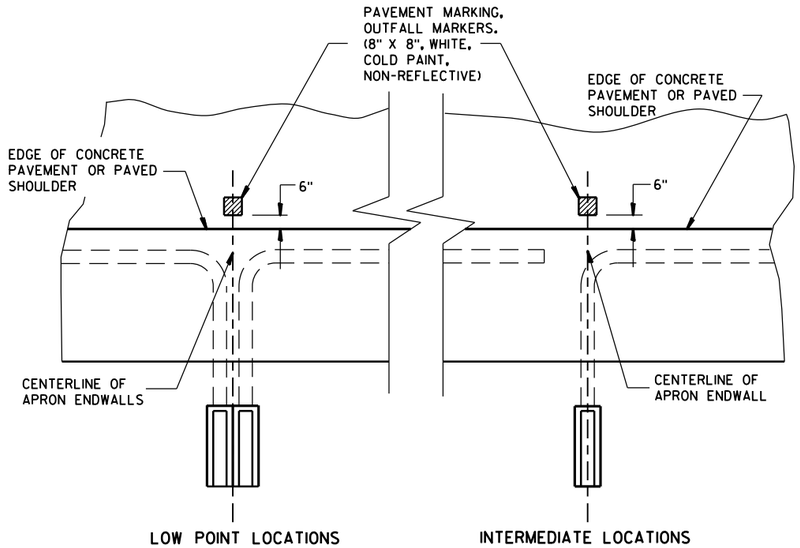
ROADWAY WITH CURBS

(EDGEDRAIN CONNECTS INTO INLET STRUCTURE)



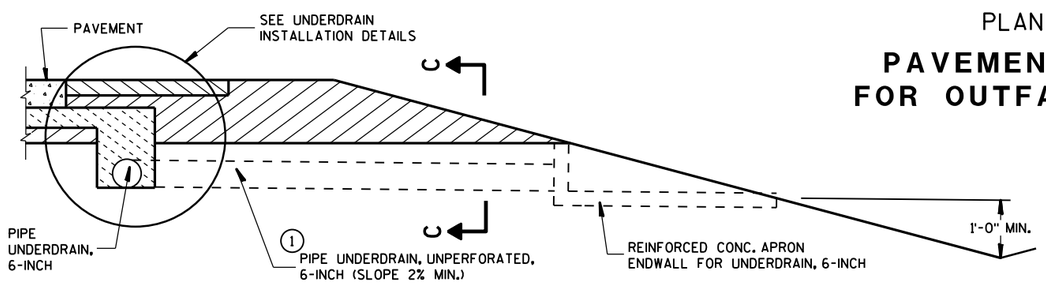
SECTION C-C

(TRENCH FOR OUTFALL PIPE)



PLAN VIEW

PAVEMENT MARKING FOR OUTFALL MARKERS



SECTION A-A

RURAL CROSS SECTION

EDGEDRAIN OUTLET AND OUTFALL MARKERS

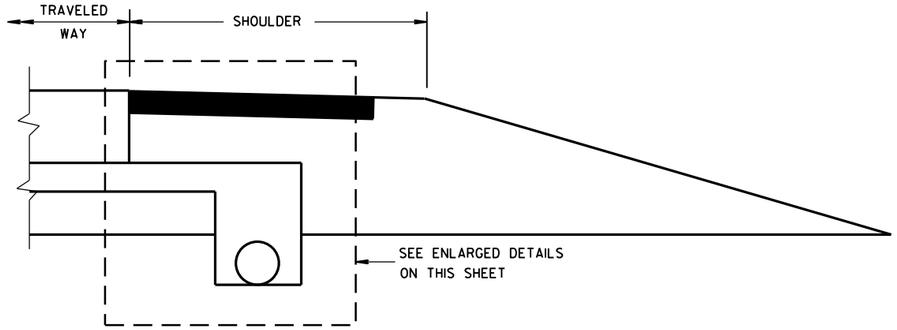
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 8 D 15-5a

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S.D.D. 8 D 15-5a



RURAL CROSS SECTION

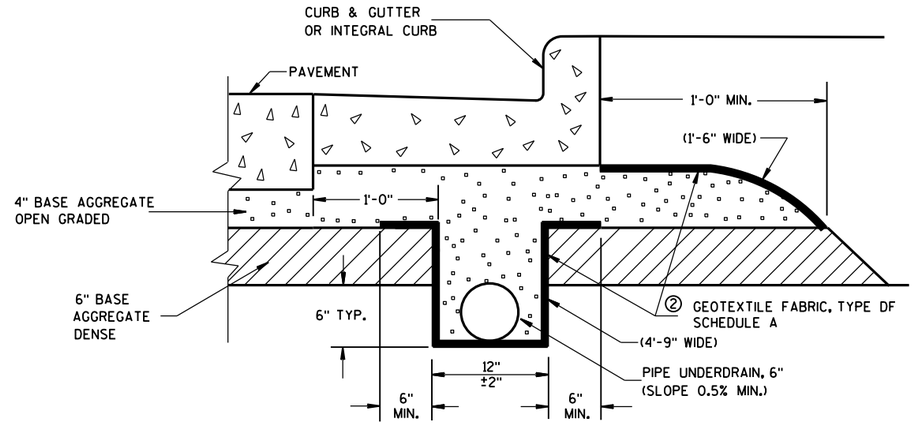
GENERAL NOTES

THE DIMENSIONS SHOWN ON THE TYPICAL CROSS SECTIONS WILL GOVERN IN THE EVENT THERE IS A CONFLICT WITH THE DETAILS SHOWN ON THIS DRAWING.

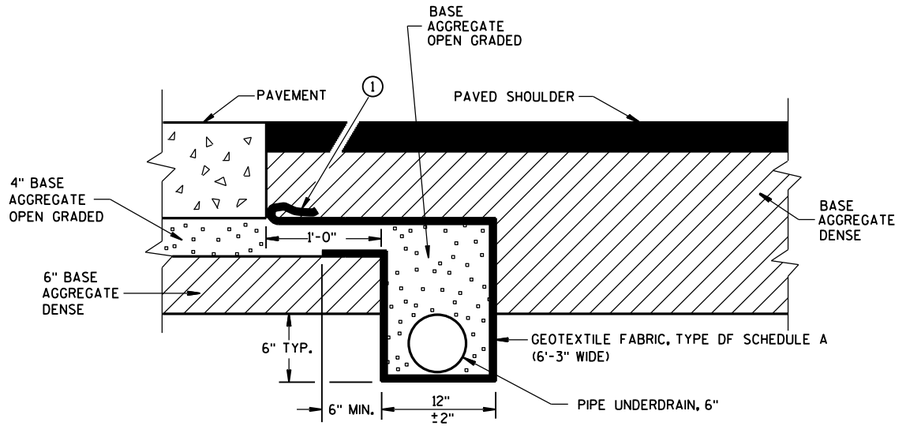
PIPE UNDERDRAIN SHALL BE LAID PARALLEL TO THE GRADE OF THE ROADWAY.

① FOLD OVER EXCESS GEOTEXTILE FABRIC AT THIS LOCATION.

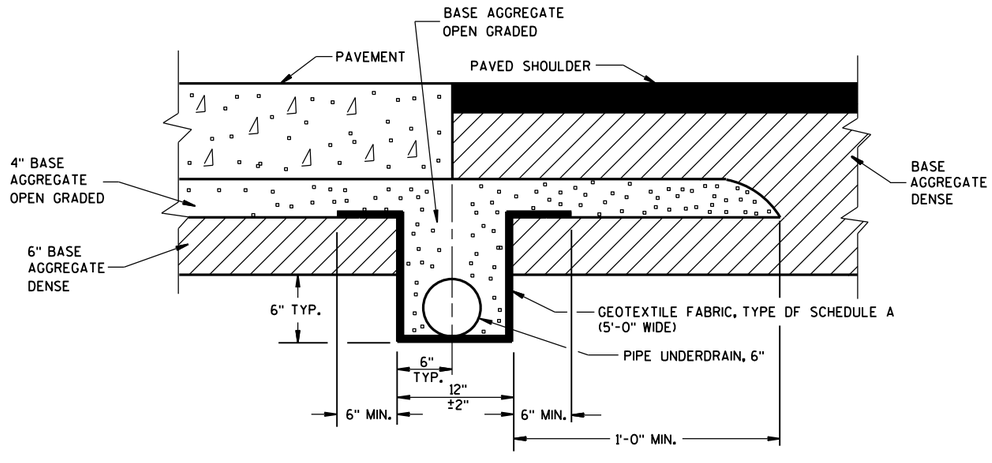
② TOTAL FABRIC WIDTH IS 6'-3" FOR PAYMENT.



EDGEDRAIN IN URBAN ROADWAY



POST PAVING INSTALLATION
(QUANTITIES ARE BASED ON THIS DETAIL)



PRE-PAVING INSTALLATION ALTERNATE

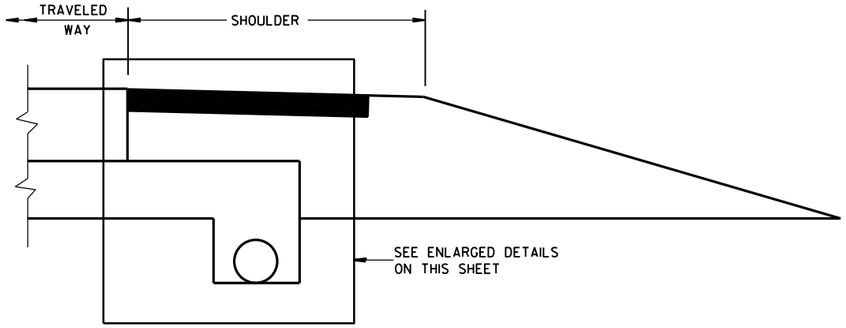
EDGEDRAIN IN RURAL ROADWAY

EDGEDRAIN AND BASE AGGREGATE OPEN GRADED

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2015 — DATE
/S/ Peter Kemp, P.E. — PAVEMENT SUPE
FHWA

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S.D.D. 8 D 15-5b

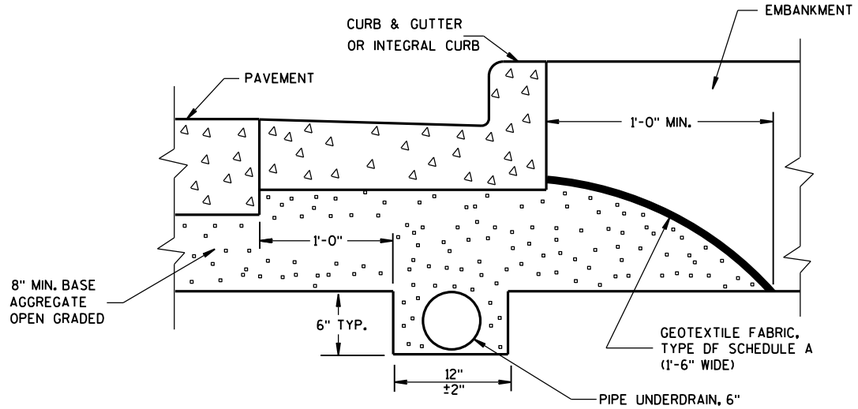


RURAL CROSS SECTION

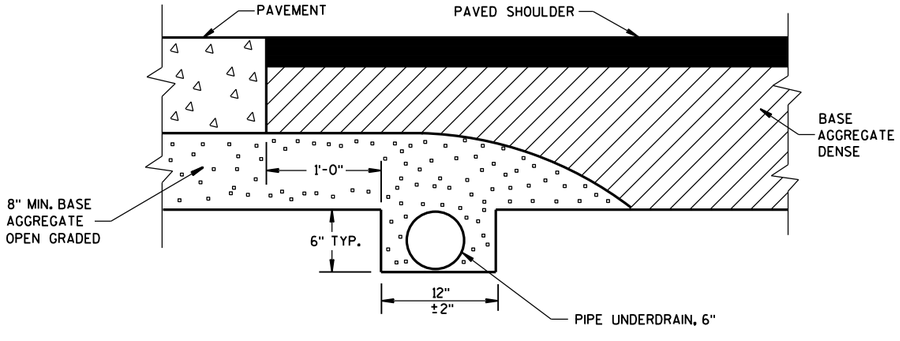
GENERAL NOTES

THE DIMENSIONS SHOWN ON THE TYPICAL CROSS SECTIONS WILL GOVERN IN THE EVENT THERE IS A CONFLICT WITH THE DETAILS SHOWN ON THIS DRAWING.

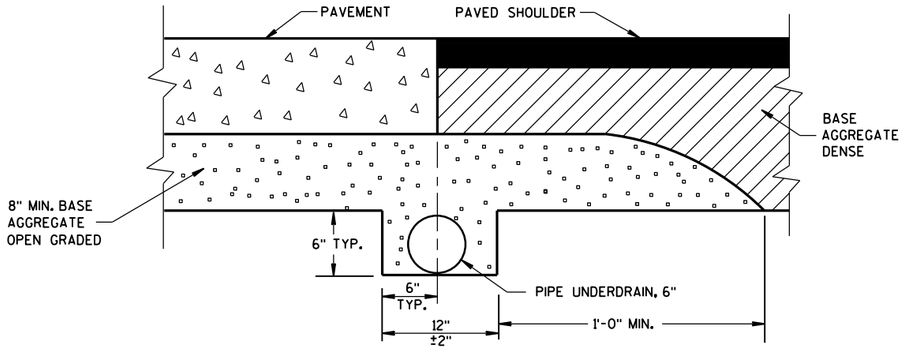
PIPE UNDERDRAIN SHALL BE LAID PARALLEL TO THE GRADE OF THE ROADWAY.



EDGEDRAIN IN URBAN ROADWAY



POST PAVING INSTALLATION
(QUANTITIES ARE BASED ON THIS DETAIL)



PRE-PAVING INSTALLATION ALTERNATIVE

EDGEDRAIN IN RURAL ROADWAY

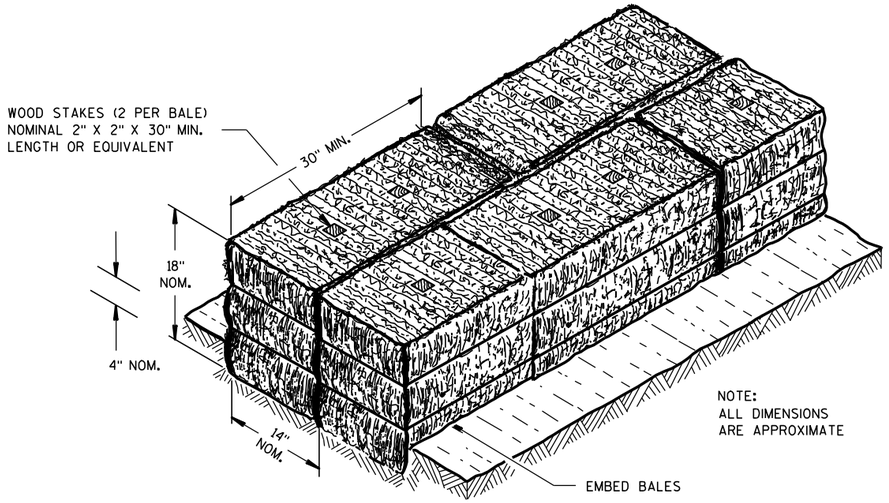
EDGEDRAIN AND BASE AGGREGATE OPEN GRADED

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

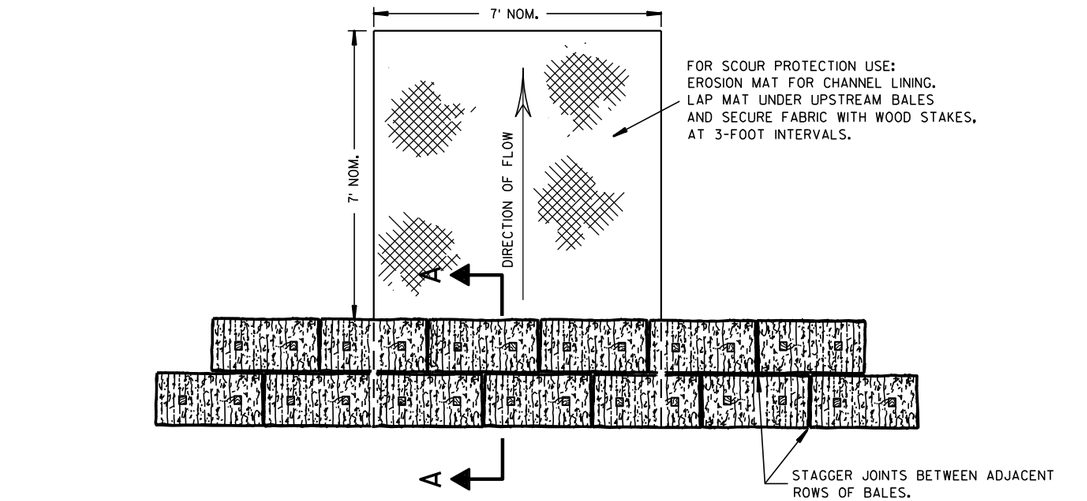
APPROVED
Sept. 2015 — DATE
/S/ Peter Kemp, P.E. — PAVEMENT SUPE
FHWA

6

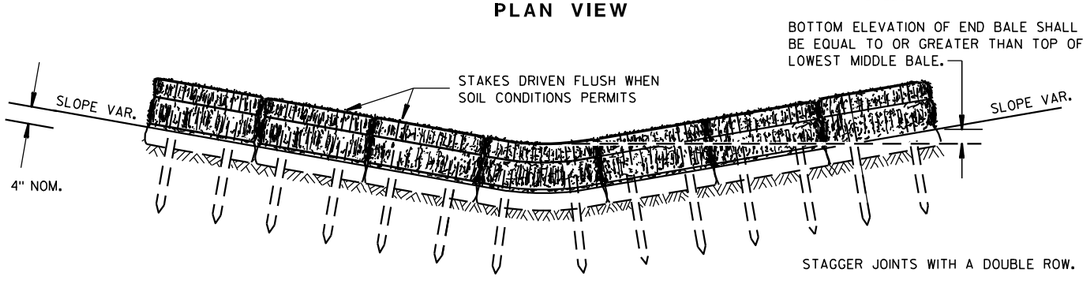
S.D.D. 8 D 15-5c



SECTION A-A



PLAN VIEW



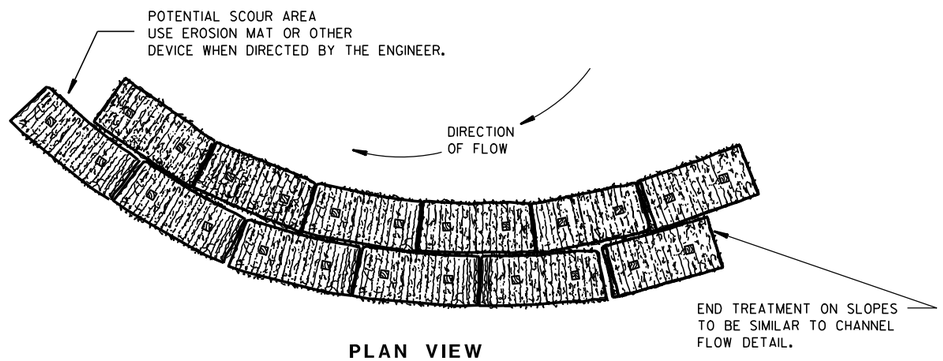
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

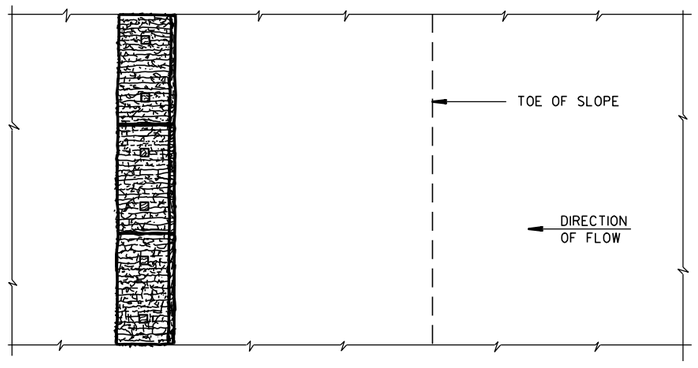
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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.

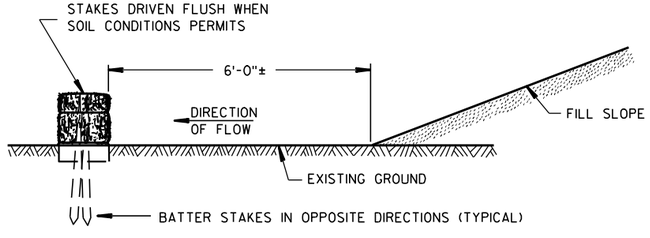


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

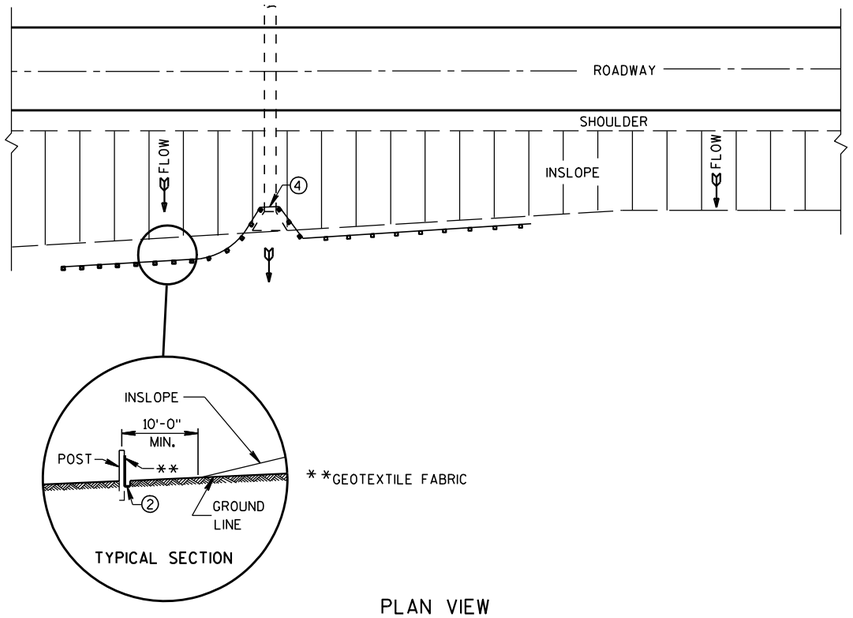
EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

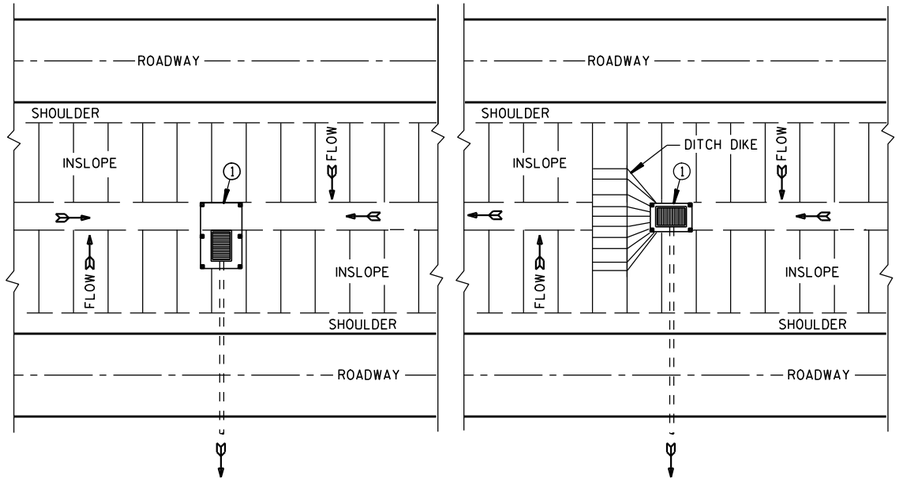
APPROVED
6/04/02 — DATE
/S/ Beth Cannestra — CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

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S.D.D. 8 E 8-3



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

GENERAL NOTES

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

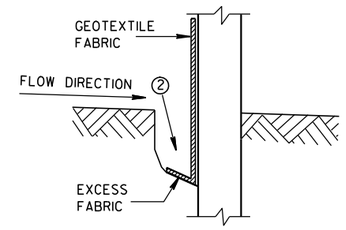
① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

② FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.

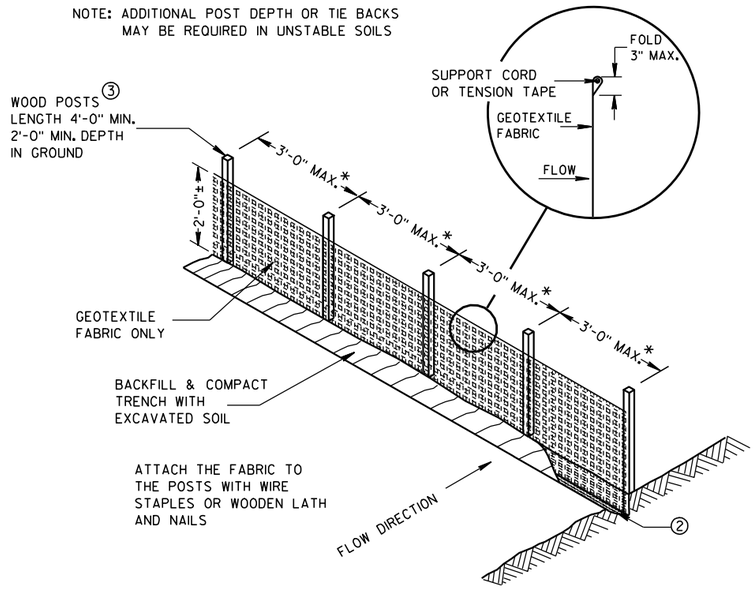
③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

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

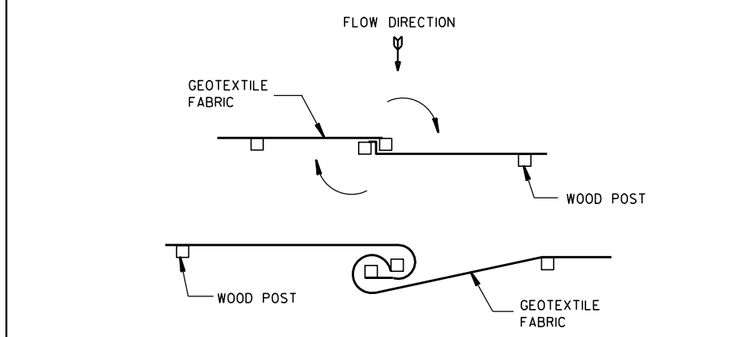
⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



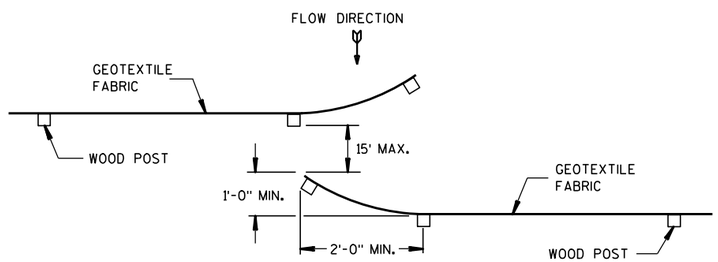
TRENCH DETAIL



SILT FENCE

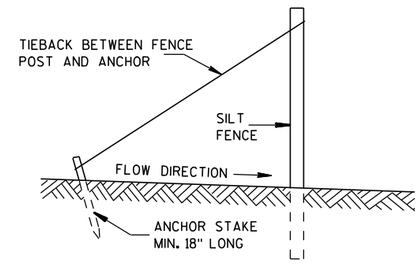


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE ⑤



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

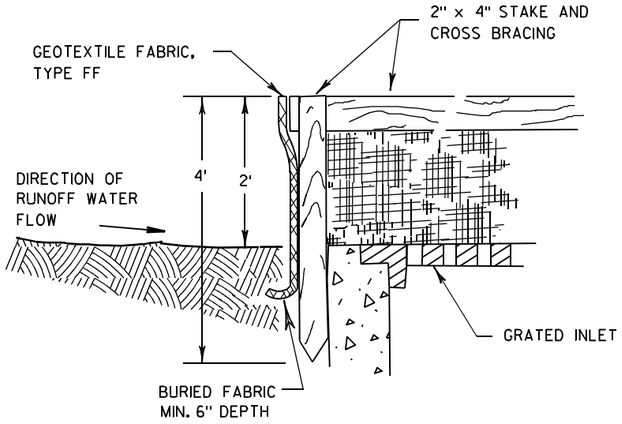
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

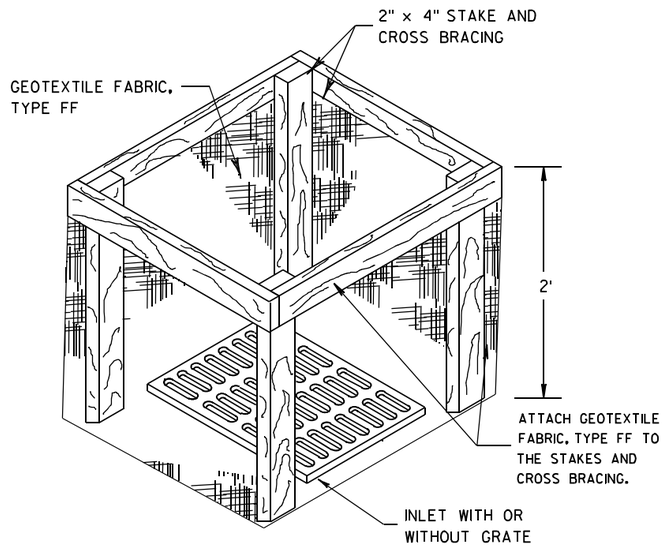
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S.D.D. 8 E 9-6

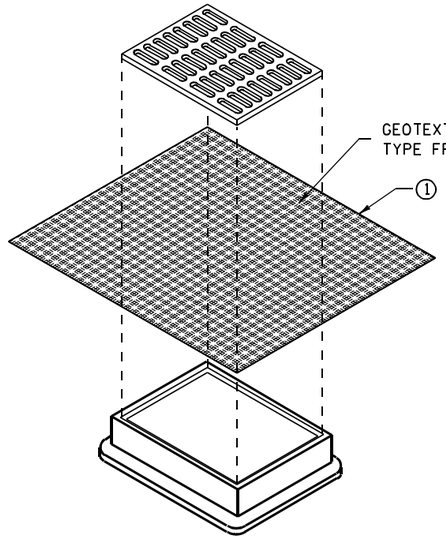
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S.D.D. 8 E 9-6



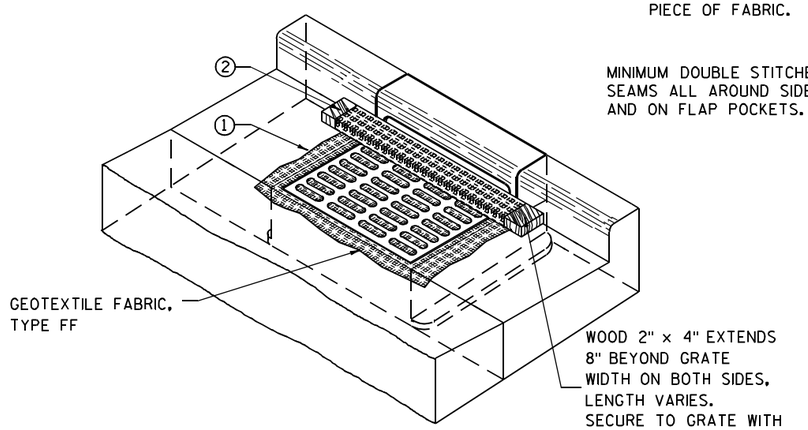


INLET PROTECTION, TYPE A

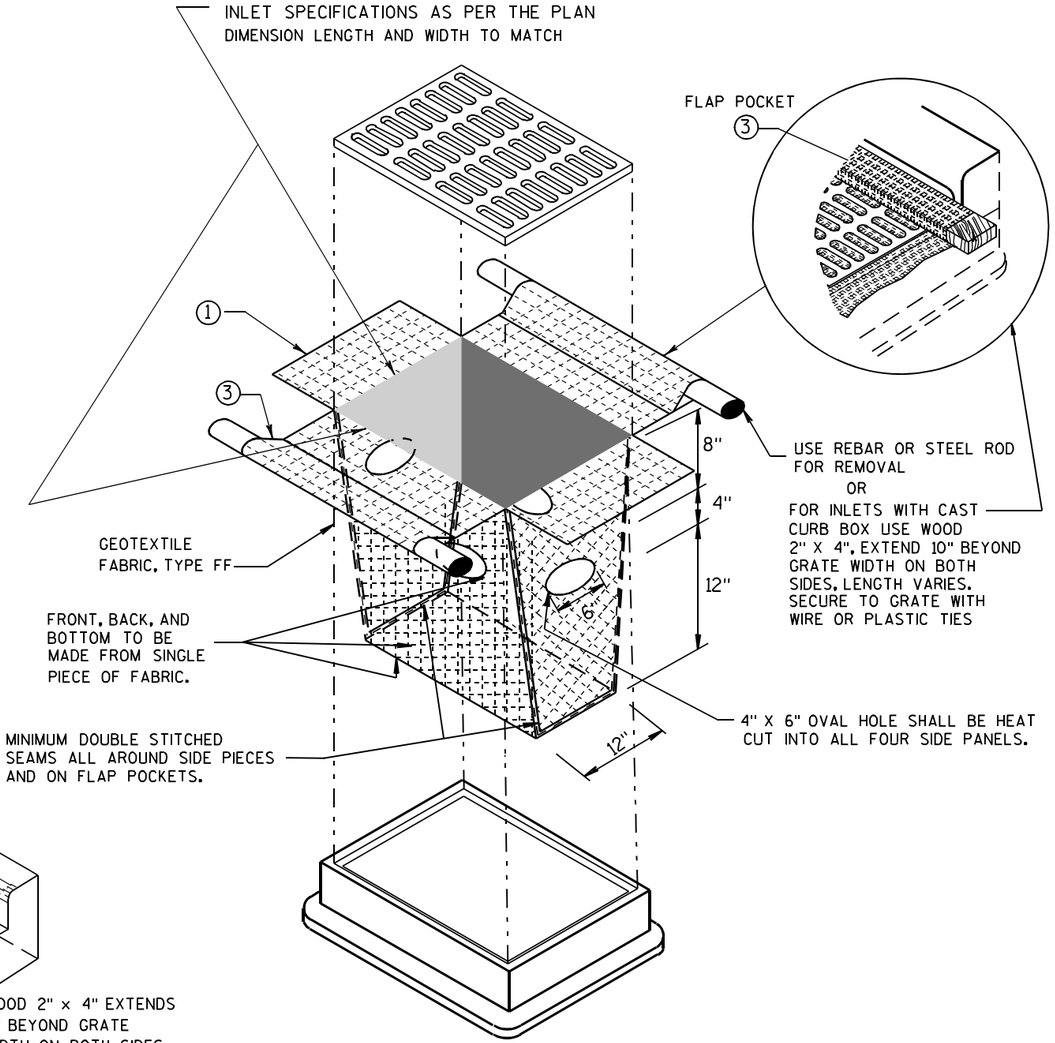


INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

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



INLET PROTECTION, TYPE C (WITH CURB BOX)



INLET PROTECTION, TYPE D

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

GENERAL NOTES

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

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

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

① FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.

② FOR INLET PROTECTION, TYPE C (WITH CURB BOX), AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX OPENING.

③ FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2X4.

INSTALLATION NOTES

TYPE B & C

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

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

TYPE D

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

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

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

INLET PROTECTION
TYPE A, B, C, AND D

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

10/16/02
DATE

/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

6

S.D.D. 8 E 10-2

METAL APRON ENDWALLS

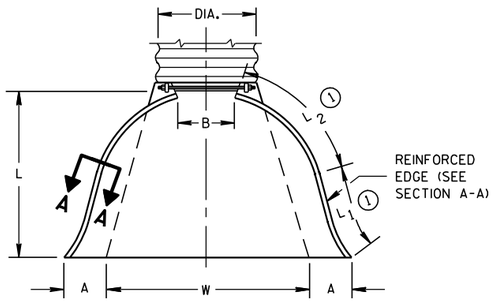
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4	36	2 1/2 to 1	1 Pc.
21	.064	.060	9	12	6	36	18	29 5/8	42	2 1/2 to 1	1 Pc.
24	.064	.075	10	13	6	41	18	37 1/4	48	2 1/2 to 1	1 Pc.
30	.079	.075	12	16	8	51	18	52 1/4	60	2 1/2 to 1	1 Pc.
36	.079	.105	14	19	9	60	24	59 3/4	72	2 1/2 to 1	2 Pc.
42	.109	.105	16	22	11	69	24	75 5/8	84	2 1/2 to 1	2 Pc.
48	.109	.105	18	27	12	78	24	81	90	2 1/4 to 1	3 Pc.
54	.109	.105	18	30	12	84	30	85 1/2	102	2 1/4 to 1	3 Pc.
60	.109×	.105×	18	33	12	87	—	—	114	2 to 1	3 Pc.
66	.109×	.105×	18	36	12	87	—	—	120	2 to 1	3 Pc.
72	.109×	.105×	18	39	12	87	—	—	126	2 to 1	3 Pc.
78	.109×	.105×	18	42	12	87	—	—	132	1 1/2 to 1	3 Pc.
84	.109×	.105×	18	45	12	87	—	—	138	1 1/2 to 1	3 Pc.
90	.109×	.105×	18	37	12	87	—	—	144	1 1/2 to 1	3 Pc.
96	.109×	.105×	18	35	12	87	—	—	150	1 1/2 to 1	3 Pc.

× EXCEPT CENTER PANEL SEE GENERAL NOTES

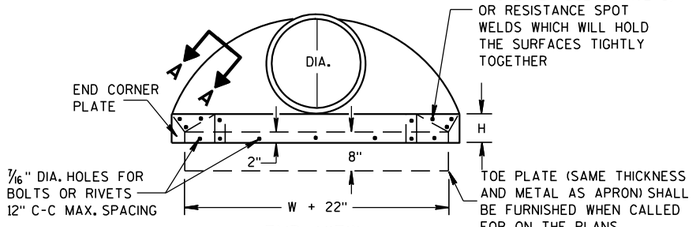
REINFORCED CONCRETE APRON ENDWALLS

PIPE DIA. (IN.)	DIMENSIONS (Inches) T	A	B	C	D	E	G	APPROX. SLOPE
12	2	4	24	48 7/8	72 1/8	24	2	3 to 1
15	2 1/4	6	27	46	73	30	2 1/4	3 to 1
18	2 1/2	9	27	46	73	36	2 1/2	3 to 1
21	2 3/4	9	36	37 1/2	73 1/2	42	2 3/4	3 to 1
24	3	9 1/2	43 1/2	30	73 1/2	48	3	3 to 1
27	3 1/4	10 1/2	49 1/2	24	73 1/2	54	3 1/4	3 to 1
30	3 1/2	12	54	19 3/4	73 1/2	60	3 1/2	3 to 1
36	4	15	63	34 3/4	97 3/4	72	4	3 to 1
42	4 1/2	21	63	35	98	78	4 1/2	3 to 1
48	5	24	72	26	98	84	5	3 to 1
54	5 1/2	27	65	* 33 1/4 - ** 35	* 98 1/4 - ** 100	90	5 1/2	2 2/5 to 1
60	6	* 30 - ** 35	60	39	99	96	5	2 to 1
66	6 1/2	* 24 - ** 30	* 72 - ** 78	* 21 - ** 27	99	102	5 1/2	2 to 1
72	7	* 24 - ** 36	78	21	99	108	6	2 to 1
78	7 1/2	* 24 - ** 36	78	21	99	114	6 1/2	2 to 1
84	8	36	90 1/2	21	111 1/2	120	6 1/2	1 1/2 to 1
90	8 1/2	41	87 1/2	24	111 1/2	132	6 1/2	1 1/2 to 1

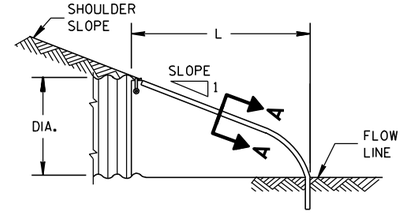
*MINIMUM
**MAXIMUM



PLAN VIEW

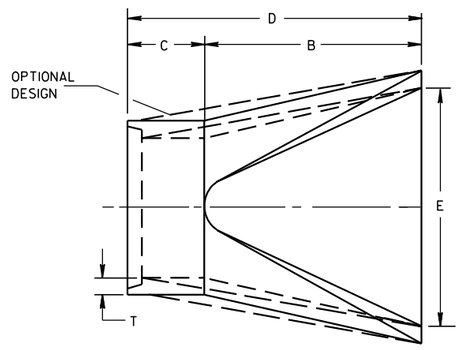


END VIEW

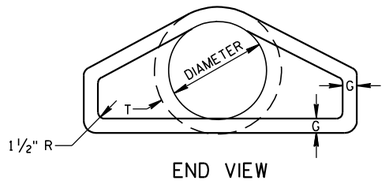


SIDE ELEVATION

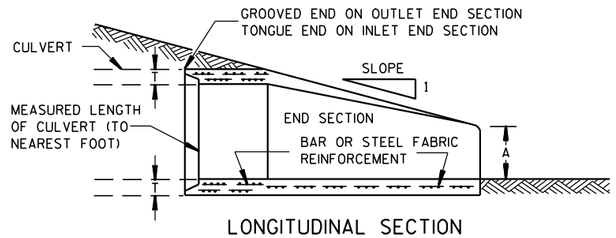
METAL ENDWALLS



PLAN

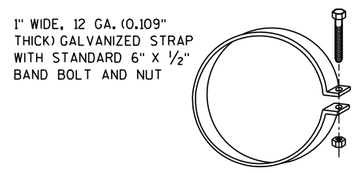


END VIEW



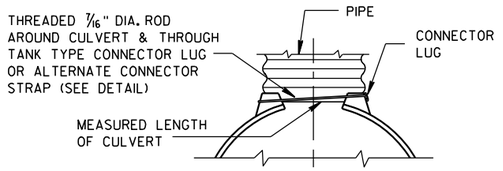
LONGITUDINAL SECTION

CONCRETE ENDWALLS

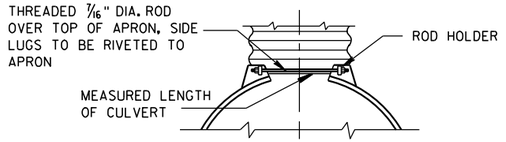


ALTERNATE FOR TYPE 1 CONNECTION

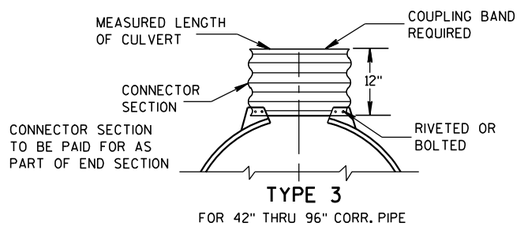
END SECTION CONNECTOR STRAP



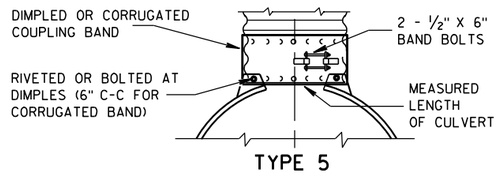
TYPE 1
FOR 12" THRU 24" CORR. PIPE



TYPE 2
FOR 30" THRU 96" CORR. PIPE



TYPE 3
FOR 42" THRU 96" CORR. PIPE



TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

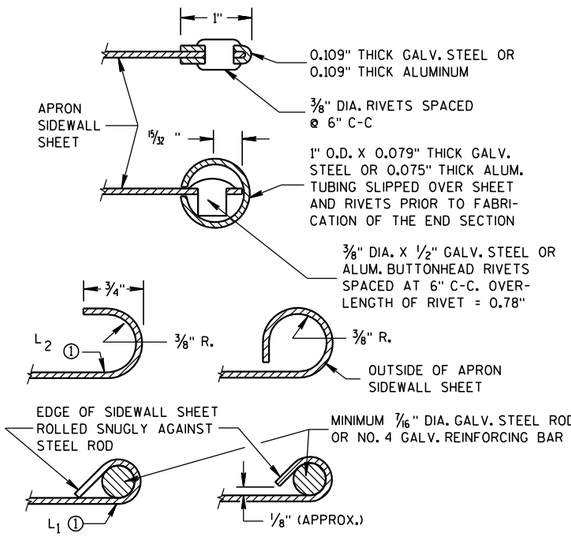
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

FOR CIRCUMFERENTIALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2, 3 OR 5 AS APPLICABLE.

FOR HELICALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2 OR 5.

FOR HELICALLY CORRUGATED PIPES WITH TWO CIRCUMFERENTIAL CORRUGATIONS AT EACH END USE ENDWALL CONNECTION DETAILS 1, 2 OR 3.

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

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

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

ALL THREE PIECE STEEL APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT OF THE PIPE PERIMETER.

LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS. FOR THE 60" THROUGH 96" DIAMETER APRON ENDWALL SIZES, THE REINFORCED EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES. THE ANGLES SHALL BE ATTACHED BY GALVANIZED NUTS AND BOLTS FOR STEEL UNITS AND ALUMINUM NUTS AND BOLTS FOR ALUMINUM UNITS.

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

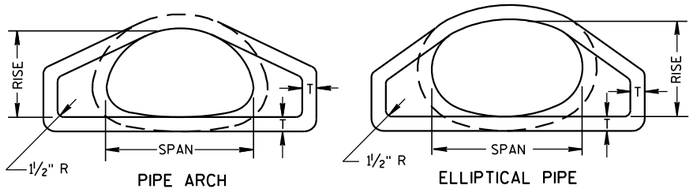
① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR CULVERT PIPE

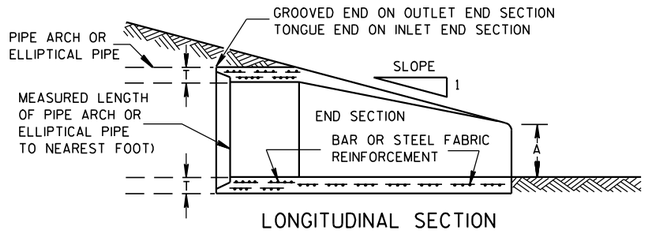
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

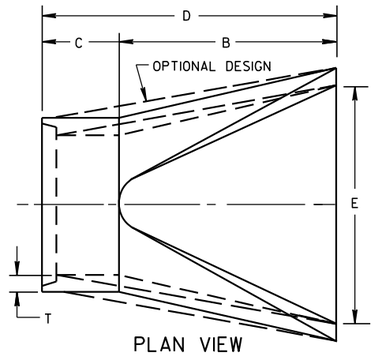
6
S.D.D. 8 F 1-11



END VIEW

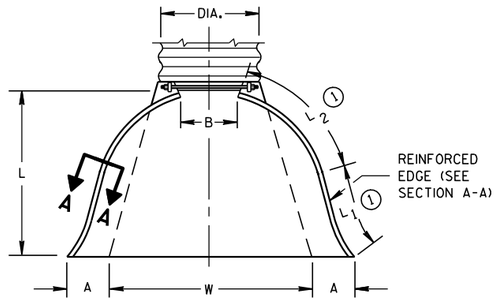


LONGITUDINAL SECTION

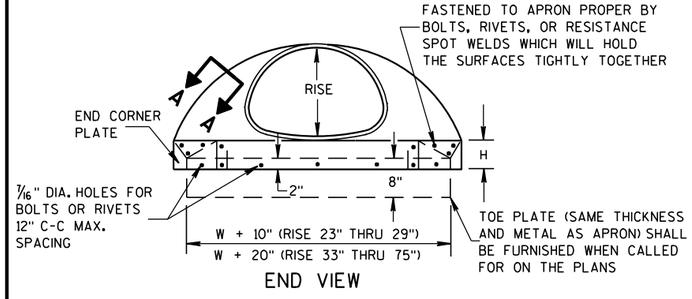


PLAN VIEW

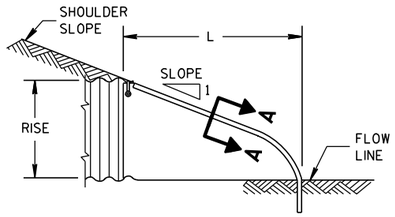
CONCRETE ENDWALLS



PLAN VIEW

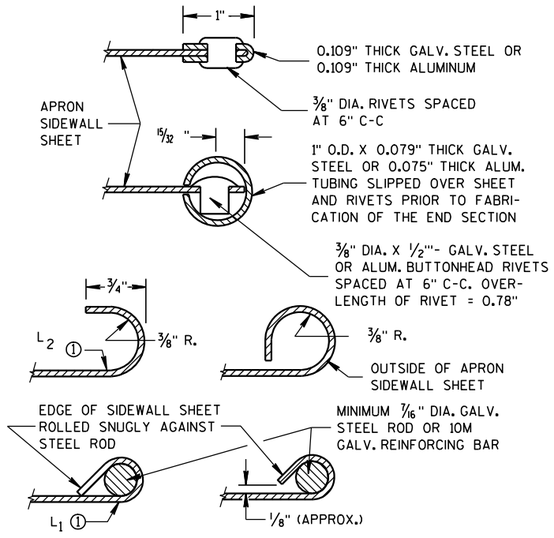


END VIEW



SIDE ELEVATION

METAL ENDWALLS



SECTION A-A

2- 2/3" X 1/2" CORRUGATIONS

EQUIV. DIA. (Inches)	(Inches) SPAN	(Inches) RISE	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
15	17	13	.064	.060	7	9	6	19	14	16	30	2½ to 1	1 Pc.
18	21	15	.064	.060	7	10	6	23	14	19⅜	36	2½ to 1	1 Pc.
21	24	18	.064	.060	8	12	6	28	18	21¾	42	2½ to 1	1 Pc.
24	28	20	.064	.060	9	14	6	32	18	27½	48	2½ to 1	1 Pc.
30	35	24	.079	.075	10	16	6	39	18	37⅝	60	2½ to 1	1 Pc.
36	42	29	.079	.075	12	18	8	46	24	45⅜	75	2½ to 1	1 Pc.
42	49	33	.109	.105	13	21	9	53	24	54¾	85	2½ to 1	2 Pc.
48	57	38	.109	.105	18	26	12	63	24	68	90	2½ to 1	3 Pc.
54	64	43	.109	.105	18	30	12	70	24	72¾	102	2¼ to 1	3 Pc.
60	71	47	.109*	.105*	18	33	12	77	30	82¼	114	2¼ to 1	3 Pc.
66	77	52	.109*	.105*	18	36	12	77	—	—	126	2 to 1	3 Pc.
72	83	57	.109*	.105*	18	39	12	77	—	—	138	2 to 1	3 Pc.

3" X 1" CORRUGATIONS

EQUIV. DIA. (Inches)	(Inches) SPAN	(Inches) RISE	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
48	53	41	.109	.105	18	26	12	63	24	72¾	90	2½ to 1	2 Pc.
54	60	46	.109	.105	18	30	12	70	30	82¼	102	2 to 1	2 Pc.
60	66	51	.109*	.105*	18	33	12	77	—	—	114	1½ to 1	3 Pc.
66	73	55	.109*	.105*	18	36	12	77	—	—	126	1½ to 1	3 Pc.
72	81	59	.109*	.105*	18	39	12	77	—	—	138	2 to 1	3 Pc.
78	87	63	.109*	.105*	22	38	12	77	—	—	148	1½ to 1	3 Pc.
84	95	67	.109*	.105*	22	34	12	77	—	—	162	1½ to 1	3 Pc.
90	103	71	.109*	.105*	22	38	12	77	—	—	174	1½ to 1	3 Pc.
96	112	75	.109*	.105*	24	40	12	77	—	—	174	1½ to 1	3 Pc.

NOTE: ALL SPLICES TO BE LAP RIVETED OR BOLTED.

* EXCEPT CENTER PANEL SEE GENERAL NOTES

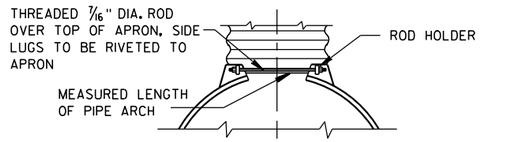
REINFORCED CONCRETE PIPE ARCH

EQUIV. DIA. (Inches)	DIMENSIONS (Inches) ** SPAN	** RISE	T	A	B	C	D	E	APPROX. SLOPE
24	29	18	3	8½	39	33	72	48	3 to 1
30	36	22	3½	9½	50	46	96	60	3 to 1
36	44	27	4	11⅛	60	36	96	72	3 to 1
42	51	31	4½	15 13/16	60	36	96	78	3 to 1
48	58	36	5	21	60	36	96	84	3 to 1
54	65	40	5½	25½	60	36	96	90	3 to 1
60	73	45	6	31	60	36	96	96	3 to 1
72	88	54	7	31	60	39	99	120	2 to 1
84	102	62	8	28½	83	19	102	144	2 to 1

REINFORCED CONCRETE ELLIPTICAL PIPE

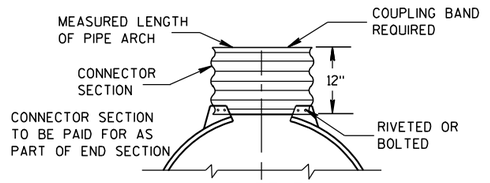
EQUIV. DIA. (Inches)	DIMENSIONS (Inches) ** SPAN	** RISE	T	A	B	C	D	E	APPROX. SLOPE
24	30	19	3¼	8½	39	33	72	48	3 to 1
30	38	24	3¾	9½	54	18	72	60	3 to 1
36	45	29	4½	11⅛	60	24	84	72	2½ to 1
42	53	34	5	15¾	60	36	96	78	2½ to 1
48	60	38	5½	21	60	36	96	84	2½ to 1
54	68	43	6	25½	60	36	96	90	2½ to 1
60	76	48	6½	30	60	36	96	96	2½ to 1

**NOMINAL SIZE



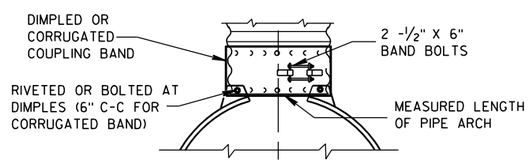
TYPE 2

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



TYPE 3

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



TYPE 5

ALTERNATE FOR:

ALL SIZES CORRUGATED PIPE ARCHES

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

CONNECTION DETAILS

GENERAL NOTES

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

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

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

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

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

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

APRON ENDWALLS FOR PIPE ARCH AND ELLIPTICAL PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

11/30/94 — DATE

/S/ Rory L. Rhinesmith — CHIEF ROADWAY DEVELOPMENT ENGINEER

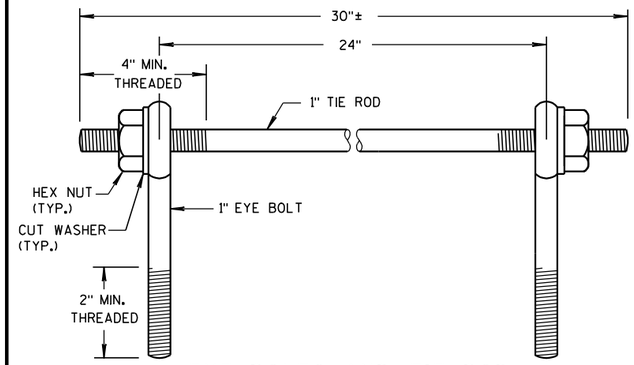
FHWA

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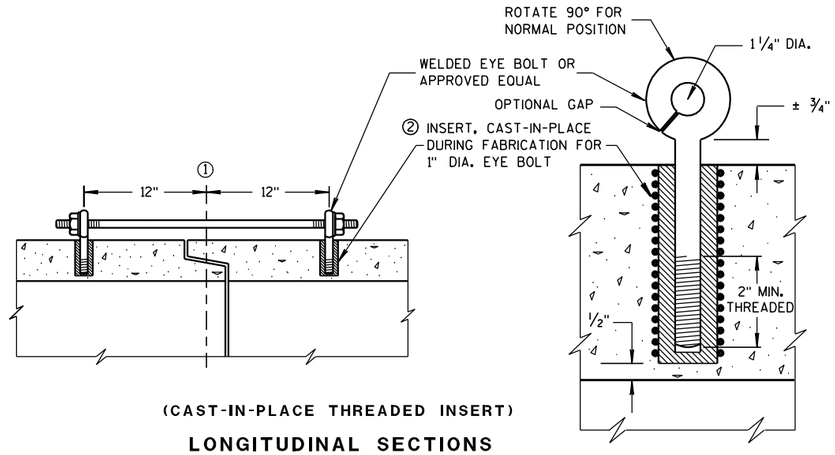
S.D.D. 8 F 2-1

6

S.D.D. 8 F 2-1



EYE BOLTS AND TIE ROD



(CAST-IN-PLACE THREADED INSERT)

LONGITUDINAL SECTIONS

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

GENERAL NOTES

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

CONCRETE CULVERT AND STORM SEWER PIPE SHALL BE TIED TOGETHER IN THE MANNER ILLUSTRATED BY THIS DETAIL AT LOCATIONS DESIGNATED IN THE STANDARD SPECIFICATIONS AND THE PLAN. THE CONTRACTOR MAY USE EITHER ALTERNATE 1, 2 OR 3 FOR DRAINAGE STRUCTURES. ONLY ALTERNATE 1 AND 3 MAY BE USED FOR CATTLE PASSES, UNLESS OTHERWISE STATED IN THE CONTRACT. THE MATERIALS, FABRICATION AND WORK NECESSARY TO TIE THE PIPE BY THIS DETAIL WILL BE CONSIDERED INCIDENTAL TO THE PIPE AND APRON ENDWALLS IF REQUIRED.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR JOINT TIES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

JOINT TIES TO BE HOT-DIP GALVANIZED PER ASTM A 153.

① ℄ OF TONGUE AND GROOVE OR BELL AND SPIGOT JOINTS.

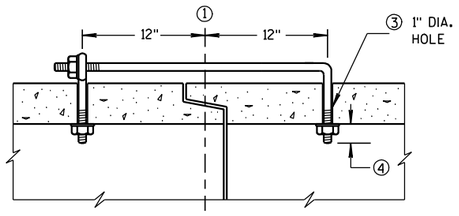
② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.

③ HOLES SHALL BE CAST-IN-PLACE OR DRILLED 12 INCHES FROM ℄ OF TONGUE AND GROOVE.

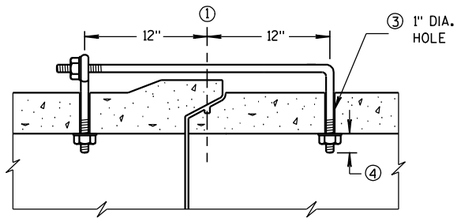
④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.

⑤ OPENING TO BE ROD DIAMETER PLUS 1 INCH.

⑥ LENGTH ADEQUATE TO EXTEND TO WITHIN 1/2 INCH OF THE INNER SURFACE OF THE PIPE.



(TONGUE & GROOVE PIPE)

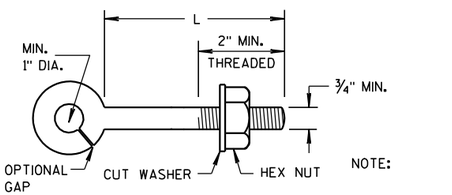


(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

EYE BOLT DIMENSION TABLE

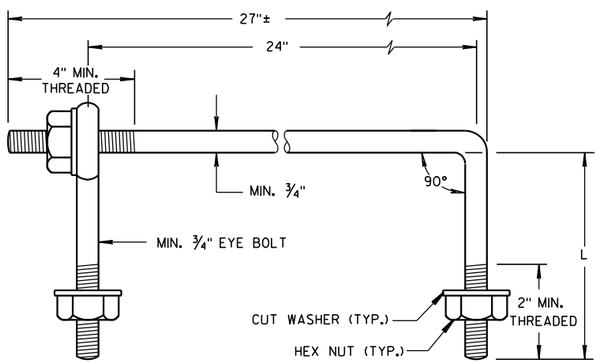
PIPE SIZE	L = LENGTH	
	TONGUE & GROOVE PIPE	MODIFIED BELL PIPE
18" TO 24"	4 1/2"	6 1/4"
30"	5"	7"
36"	5 1/2"	7"
42"	6"	
48"	6 1/2"	
60"	7 1/2"	
66"	8"	



NOTE:

EYE BOLT

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



EYE BOLT AND TIE ROD

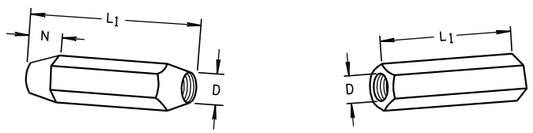
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

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

ADJUSTABLE TIE ROD TABLE

PIPE DIAMETER	TIE ROD DIAMETER	D	L_1	N
12-60	5/8	5/8	5	1/2
66-84	3/4	3/4	5	1/2
90-108	1	1	7	1 1/16

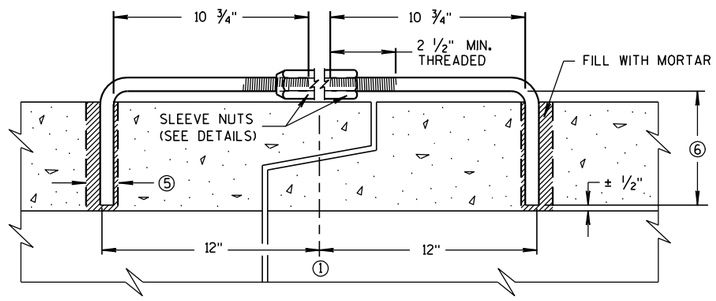
DIMENSIONS SHOWN ARE IN INCHES



TAPERED PLAIN

RIGHT AND LEFT THREADS

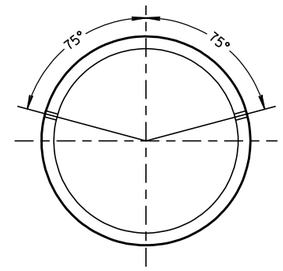
SLEEVE NUTS



LONGITUDINAL SECTION

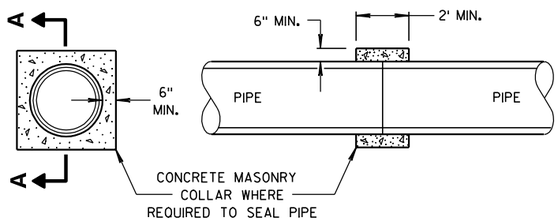
(JOINT TIES FOR 12" TO 108" DIA. CONCRETE PIPE)

ADJUSTABLE TIE ROD (ALTERNATE NO. 3)



PLACEMENT OF (2) CAST-IN-PLACE INSERTS OR HOLES DURING FABRICATION FOR PIPE SECTIONS REQUIRING TIE RODS

TRANSVERSE SECTION



SECTION A-A

CONCRETE COLLAR DETAIL

JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

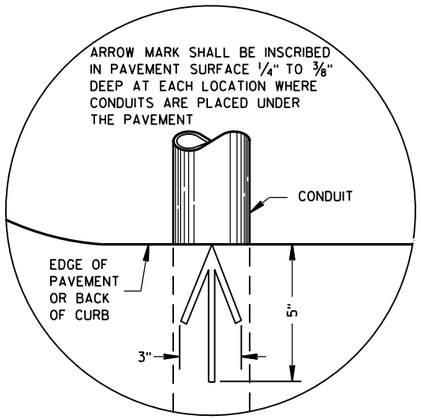
APPROVED
6/5/2012 DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER
155
FHWA

6

S.D.D. 8 F 4-7

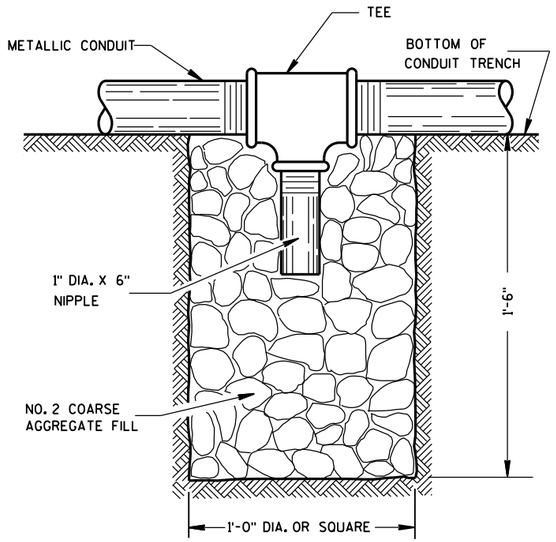
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S.D.D. 8 F 4-7



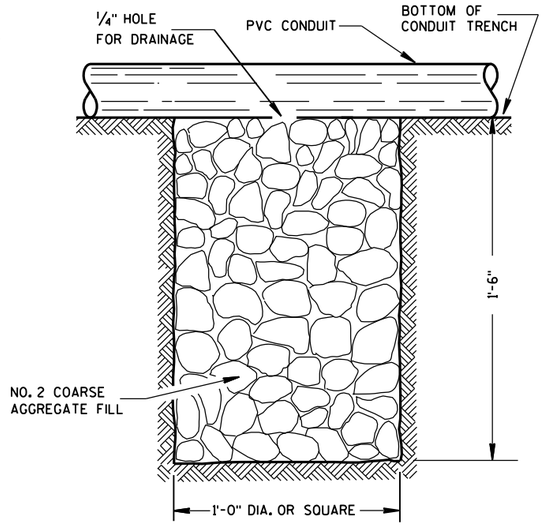
PLAN VIEW

ARROW MARK



NOTE: INSTALL AT LOCATIONS WHERE METALLIC CONDUITS CANNOT BE PITCHED TO DRAIN INTO A PULL BOX.

DRAIN SUMP FOR METALLIC CONDUIT



NOTE: INSTALL AT LOCATIONS WHERE PVC CONDUITS CANNOT BE PITCHED TO DRAIN INTO A PULL BOX.

DRAIN SUMP FOR PVC CONDUIT

GENERAL NOTES

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

METALLIC (STANDARD SPECIFICATION 652.2.2) OR NONMETALLIC (STANDARD SPECIFICATION 652.2.3) CONDUIT SHALL BE FURNISHED AND PLACED AS SHOWN.

DEPTH OF CONDUIT INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES MINIMUM AND 36 INCHES MAXIMUM.

DEPTH OF CONDUIT INSTALLED THAT IS NOT BELOW THE TRAVELED WAY SHALL BE 18 INCHES MINIMUM AND 36 INCHES MAXIMUM.

ANY EXCEPTION TO THE MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE ENGINEER.

THE TRENCH SHALL NOT BE BACKFILLED PRIOR TO INSPECTION OF THE CONDUIT.

ALL METALLIC CONDUIT RACEWAY ENDS SHALL BE REAMED AND THREADED.

ALL METALLIC CONDUIT IN WHICH WIRE OR CABLE IS TO BE INSTALLED SHALL BE BUSHED WITH APPROVED THREADED BUSHINGS BEFORE INSTALLATION OF THE WIRE OR CABLE.

ALL METALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT TO BE INSTALLED SHALL BE CAPPED WITH THREADED PROTECTIVE CAPS, AS APPROVED BY THE ENGINEER.

ALL NONMETALLIC CONDUIT SHALL BE CAPPED OR PLUGGED IMMEDIATELY AFTER INSTALLATION AND SHALL REMAIN CAPPED OR PLUGGED UNTIL WIRE/CABLES ARE INSTALLED.

NONMETALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

BENDING OF PVC ELECTRICAL CONDUIT SHALL BE ACCOMPLISHED BY USING A BLANKET OR EMERSION TYPE TANK DESIGNED FOR THE PURPOSE OF BENDING PVC ELECTRICAL CONDUIT.

ALL CUT ENDS SHALL BE TRIMMED INSIDE AND OUTSIDE TO REMOVE ALL ROUGH EDGES ON NONMETALLIC CONDUIT. (SEE NEC 347.5)

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY U.L. LISTED ADAPTER FITTINGS SHALL BE USED.

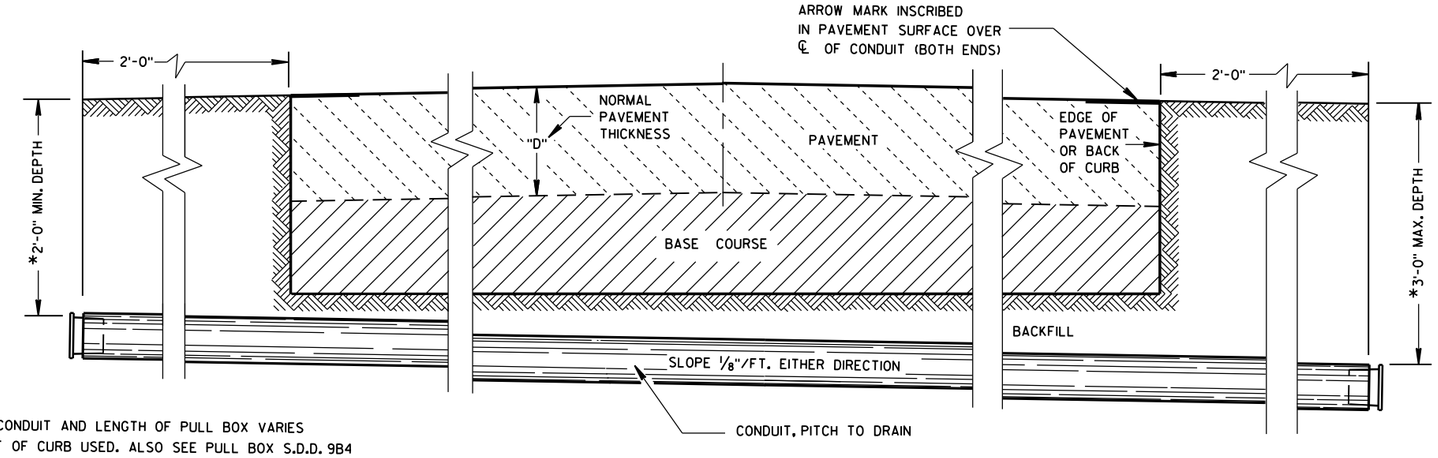
PRIOR TO CONDUIT ACCEPTANCE, CONDUIT CAPS OR PLUGS SHALL BE REMOVED, AND THE CAPS, PLUGS AND CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND THEN THE CAPS OR PLUGS REINSTALLED TO ENSURE THAT THE CAPS OR PLUGS CAN BE EASILY REMOVED IN THE FUTURE.

ALL CONDUIT BEING FURNISHED AND INSTALLED SHALL HAVE THE U.L. LABEL FIRMLY ATTACHED.

CONDUIT RUNS SHALL BE THE SAME SIZE OF CONDUIT FROM ONE END TO THE OTHER (FROM PULL BOX TO PULL BOX-OR-JUNCTION BOX TO JUNCTION BOX-OR-BASE TO BASE, ETC.).

TRACER WIRE SHALL BE INSTALLED AS STATED IN THE STANDARD SPECIFICATION, ITEM 652.3.1.1.

ALL CONDUIT RUNS SHALL BE STRAIGHT (WITHOUT BENDS) FROM PULL BOX TO PULL BOX, PULL BOX TO BASE AND BASE TO BASE AS SHOWN ON THE PLANS.



*DEPTH OF CONDUIT AND LENGTH OF PULL BOX VARIES WITH HEIGHT OF CURB USED. ALSO SEE PULL BOX S.D.D. 9B4

SIDE ELEVATION

DETAIL FOR CONDUIT UNDER PAVED HIGHWAYS

CONDUIT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

6

S.D.D. 9 B 2-9

6

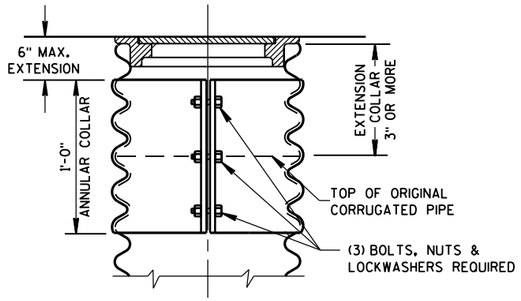
S.D.D. 9 B 2-9

TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

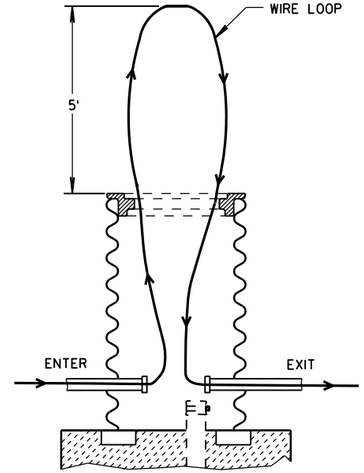
DIMENSION IN INCHES		CORRUGATED STEEL PIPE								
PIPE DIAMETER (INSIDE)	A	12	12	12	18	18	18	24	24	24
PIPE LENGTH **	B	24	30	36	24	30	36	36	42	48
WALL THICKNESS	C	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064
COVER	D	10 1/4	10 1/4	10 1/4	16 1/4	16 1/4	16 1/4	22 1/4	22 1/4	22 1/4
FRAME	E	14 1/2	14 1/2	14 1/2	20 1/2	20 1/2	20 1/2	26 1/2	26 1/2	26 1/2
FRAME	F	8 1/2	8 1/2	8 1/2	14 1/2	14 1/2	14 1/2	20 1/2	20 1/2	20 1/2
FRAME	G	11 1/2	11 1/2	11 1/2	17 1/2	17 1/2	17 1/2	23 1/2	23 1/2	23 1/2
WEIGHT IN POUNDS *										
FRAME AND COVER		60	60	60	110	110	110	155	155	155

* THE ACTUAL WEIGHT OF THE MANHOLE FRAME AND COVER MAY VARY WITHIN 5 PERCENT PLUS OR MINUS OF THE WEIGHTS SHOWN.

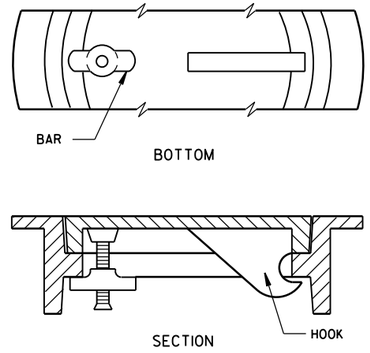
** NORMALLY USED LENGTHS. THE PROJECT ENGINEER SHALL DETERMINE IF PIPE LENGTHS, OTHER THAN THOSE SPECIFIED, SHALL BE USED, TO A MAXIMUM OF 48" (CONTINUOUS LENGTH, NON-SPLICED). THE ADDITIONAL LENGTH SHALL BE INCIDENTAL TO THE PULL BOX BID PRICE.



CORRUGATED PIPE EXTENDER

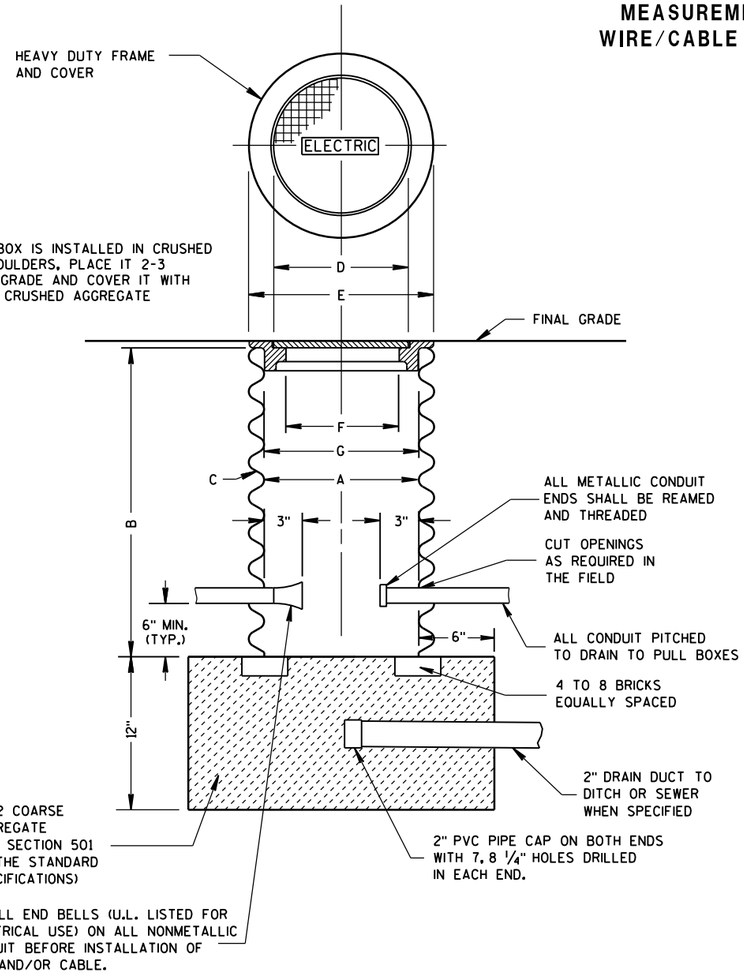


MEASUREMENT DETAIL FOR WIRE/CABLE IN THE PULL BOX



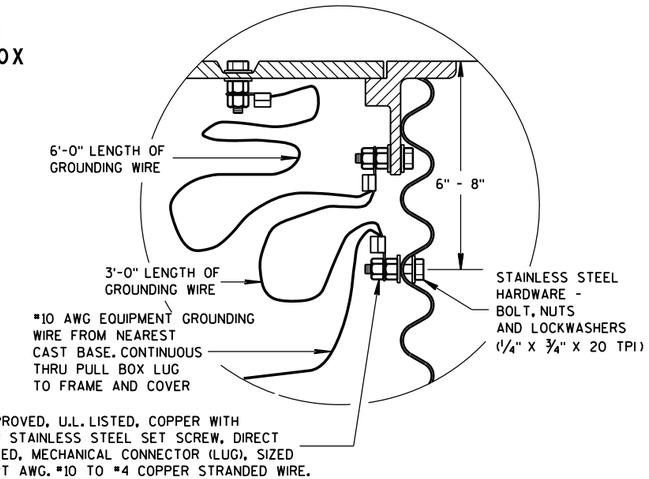
ALTERNATE COVER (LOCKING)

TIGHTENING BAR TYPE

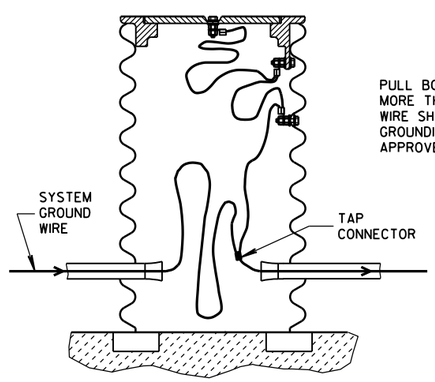


WHEN A PULL BOX IS INSTALLED IN CRUSHED AGGREGATE SHOULDERS, PLACE IT 2-3 INCHES BELOW GRADE AND COVER IT WITH 2-3 INCHES OF CRUSHED AGGREGATE

PULL BOX



EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES



PULL BOX TO NEAREST BASE DISTANCE MORE THAN 20 FEET. PULL BOX GROUND WIRE SHALL CONNECT AT SYSTEM GROUNDING WIRE. USE DEPARTMENT APPROVED TAP CONNECTOR.

EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES

GENERAL NOTES

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

ALL FRAMES AND COVERS SHALL BE HEAVY DUTY TYPE, SUITABLE FOR VEHICULAR TRAFFIC LOADS.

PULL BOXES LOCATED IN THE ROADWAYS SHALL HAVE LOCKING COVERS.

ENTRANCE HOLES INTO PULL BOXES SHALL BE CUT WITH A CIRCULAR HOLE SAW OR HYDRAULIC CONDUIT PUNCH. HOLE SIZE SHALL BE THE OUTSIDE DIAMETER OF THE CONDUIT THAT IS TO FIT IN THE OPENING PLUS NO MORE THAN 1/4".

THE CONTRACTOR SHALL NOT INSTALL WIRE IN ANY PULL BOX UNTIL ITS INSTALLATION HAS BEEN INSPECTED AND ACCEPTED BY THE ENGINEER.

GROUNDING LUGS (MECHANICAL CONNECTORS) SHALL BE U.L. LISTED AND APPROVED FOR USE WITH COPPER WIRE.

ALL METALLIC CONDUIT IN WHICH WIRE AND/OR CABLE IS TO BE INSTALLED, SHALL BE BUSHED BEFORE INSTALLATION OF THE WIRE AND/OR CABLE.

WHEN PULL BOXES ARE INSTALLED FOR FUTURE USE, DO NOT INSTALL THE EQUIPMENT GROUNDING LUG. THE EQUIPMENT GROUNDING LUG, THE EQUIPMENT GROUNDING ELECTRODE AND THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE REQUIRED AND INSTALLED UNDER A FUTURE WIRING CONTRACT.

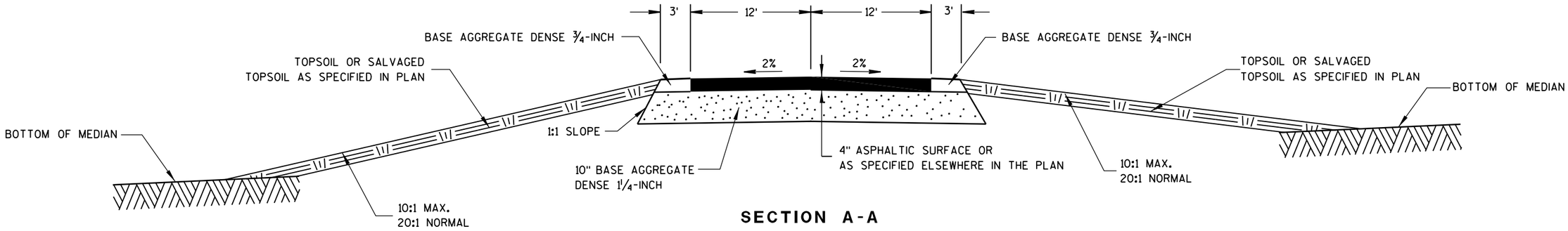
PULL BOX

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

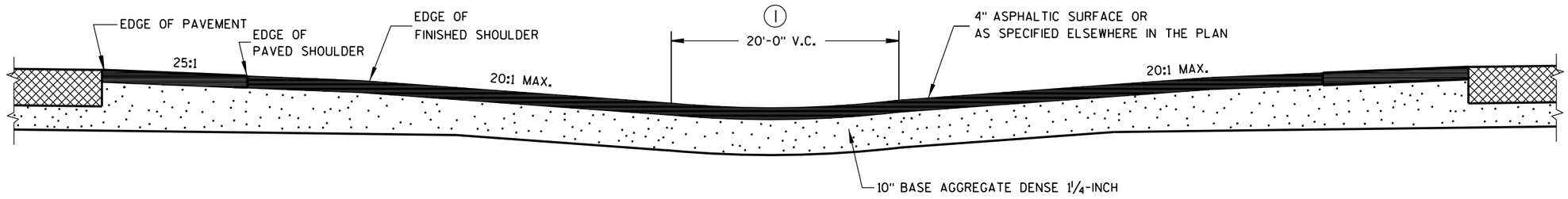
APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

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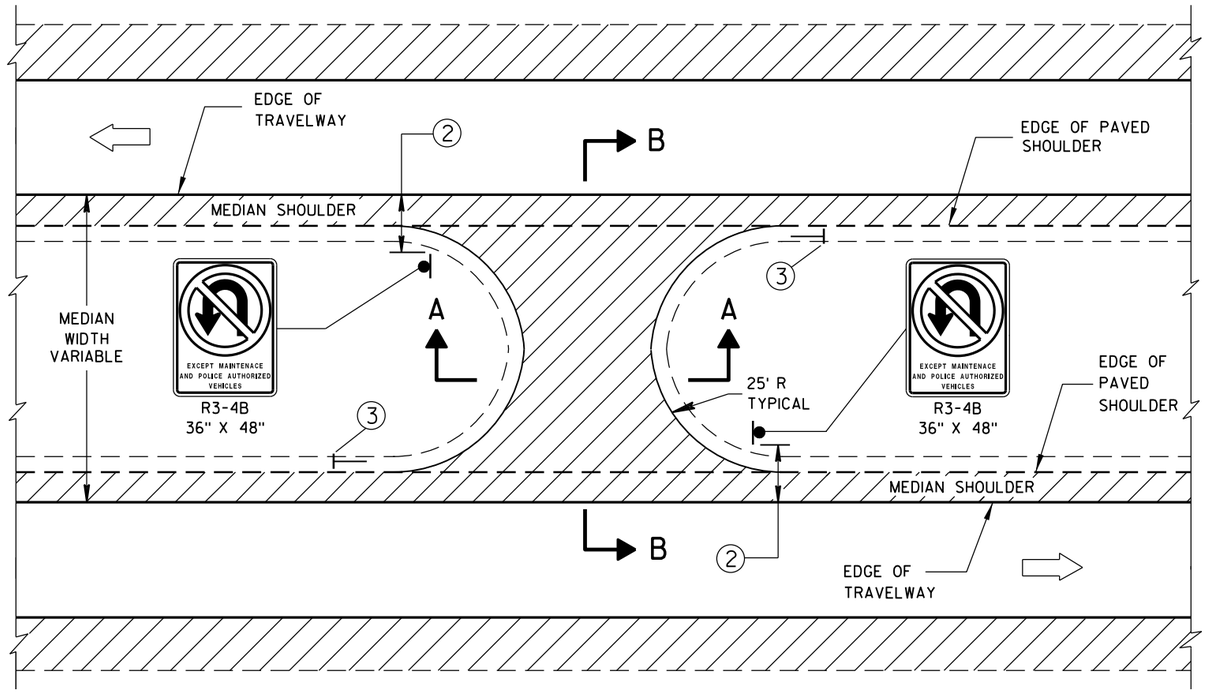
S.D.D. 9 B 4-11



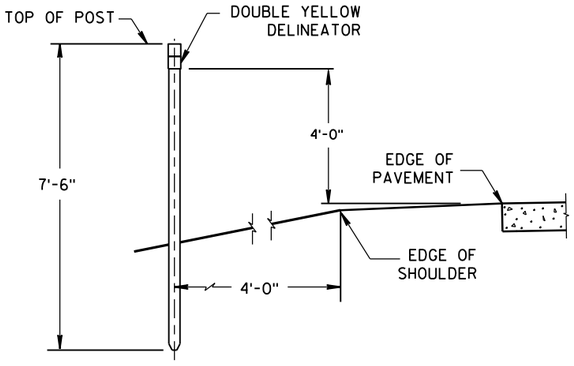
SECTION A-A



SECTION B-B



PLAN VIEW



DOUBLE YELLOW DELINEATOR INSTALLATION

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) ADJUST VERTICAL CURVE LOCATION LATERALLY TO MAINTAIN 20:1 MAX.

(2) SIGNING DETAILS AND SPECIFICATIONS ARE PROVIDED ELSEWHERE IN THE CONTRACT.

(3) INSTALL DOUBLE YELLOW DELINEATOR. SEE STANDARD DETAIL DRAWING 15A2.

MAINTENANCE CROSSOVER FOR FREEWAYS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/2013 — DATE

/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER

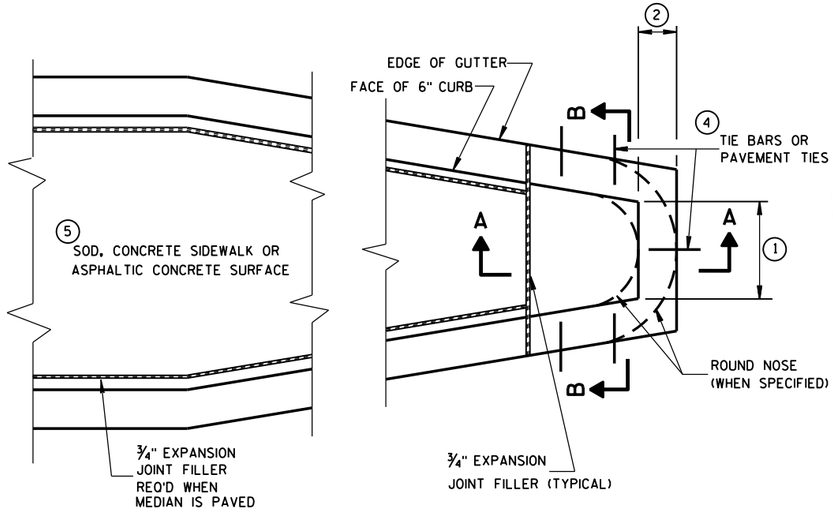
FHWA

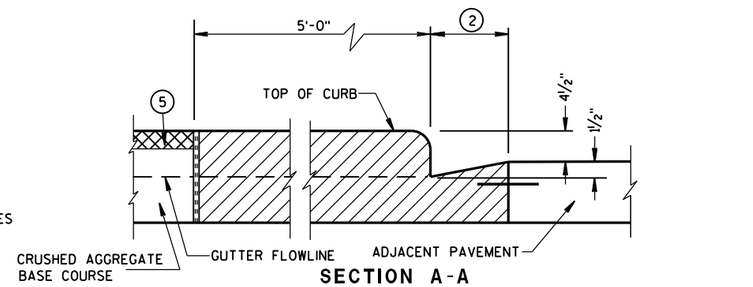
6

S.D.D. 11 A 1-5

6

S.D.D. 11 A 1-5





CONCRETE MEDIAN BLUNT NOSE DETAIL

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) SEE PLAN FOR MEDIAN NOSE WIDTH AND RADIUS (FOR ROUND NOSE ALTERNATE).

(2) WIDTH OF GUTTER TO MATCH EXISTING ADJACENT GUTTER OR AS SPECIFIED ELSEWHERE IN THE PLAN.

(3) DEPTH EQUAL TO ADJACENT PAVEMENT. ADJACENT PAVEMENT STRUCTURE DETAILS ARE SHOWN ON THE PLAN. TYPICAL OPTIONS ARE:

(1) NEW OR EXISTING CONCRETE PAVEMENT.

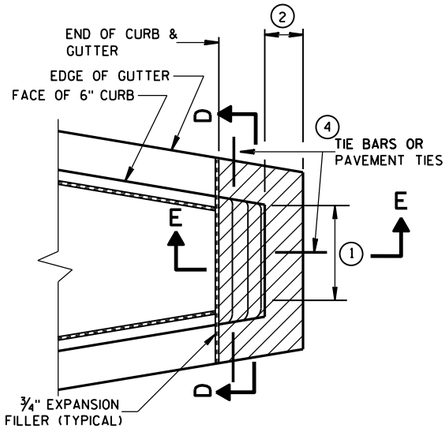
(2) ASPHALTIC CONCRETE PAVEMENT OVER NEW OR EXISTING CONCRETE BASE COURSE.

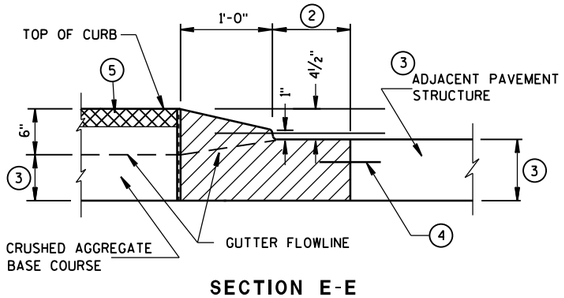
(3) ASPHALTIC CONCRETE PAVEMENT OVER CRUSHED AGGREGATE BASE COURSE.

(4) TIE BARS OR PAVEMENT TIES REQUIRED IN NEW CONCRETE PAVEMENT OR CONCRETE BASE COURSE. TIE BARS SHALL BE NO. 4 X 2'-0" SPACED AT 2'-0" C-C.

PAVEMENT TIES REQUIRED IN EXISTING CONCRETE BASE COURSE. PAVEMENT TIES SHALL BE NO. 6 X 1'-0" SPACED AT 3'-0" C-C INSTALLED ON A HORIZONTAL SKEW OF 6:1. THE DIRECTION OF SKEW SHALL ALTERNATE AFTER EVERY ONE OR TWO BARS.

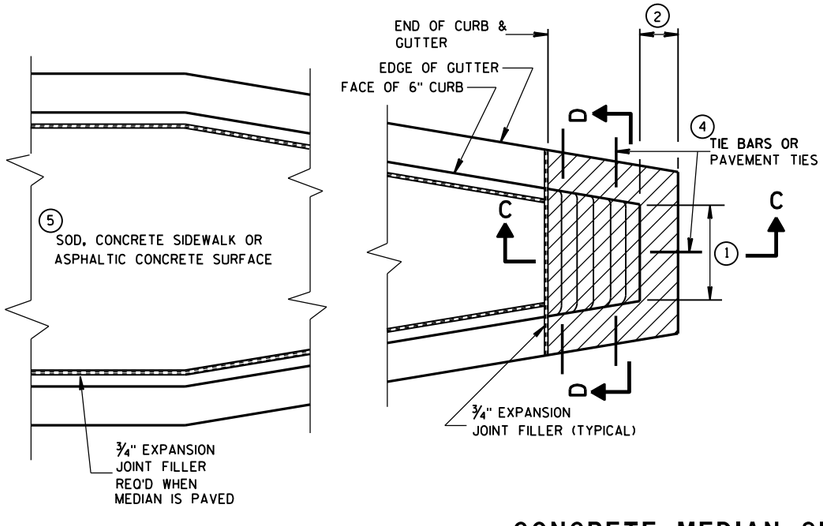
(5) SURFACE TYPE AND DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.

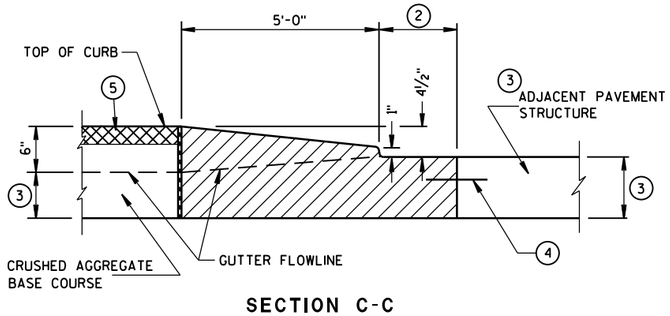




SECTION E-E

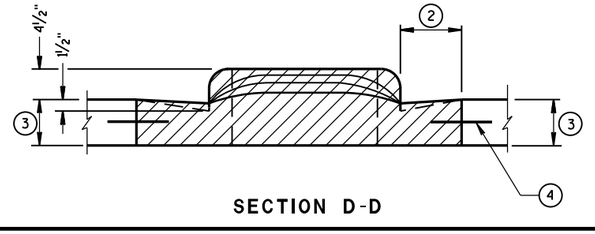
CONCRETE MEDIAN SLOPED NOSE TYPE 2





SECTION C-C

CONCRETE MEDIAN SLOPED NOSE TYPE 1



SECTION D-D

CONCRETE MEDIAN NOSE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

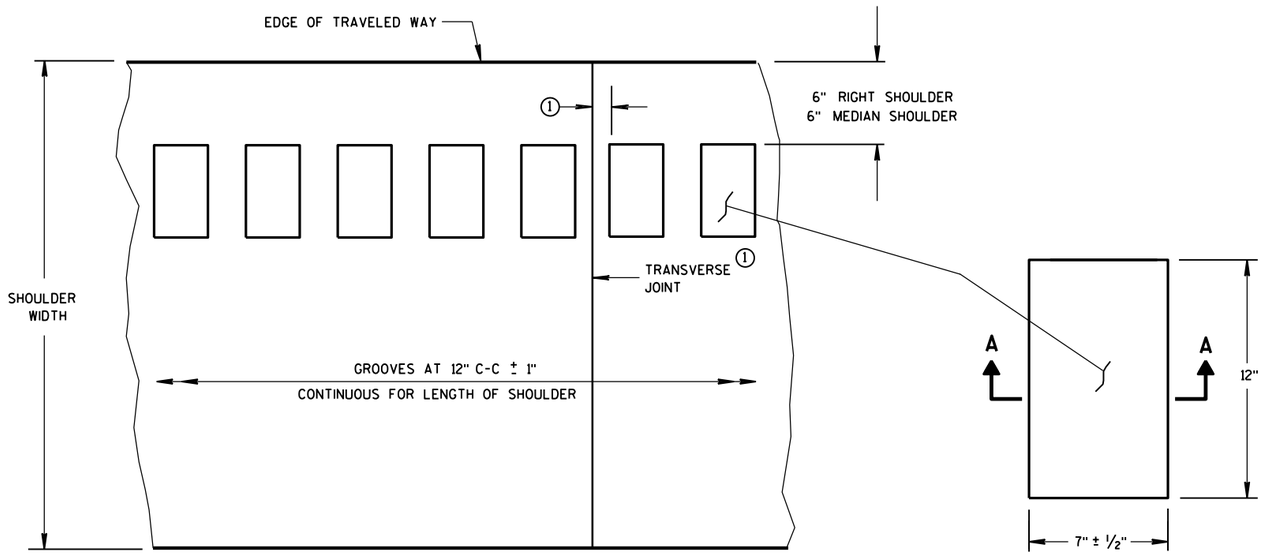
APPROVED
6/8/2006
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS D ENGINEER
FHWA

6

S.D.D. 11 B 2-2

6

S.D.D. 11 B 2-2



PLAN VIEW
SHOULDER WITH GROOVES

PLAN VIEW
(SINGLE GROOVE)

PLACEMENT DETAIL FOR MILLED RUMBLE STRIP

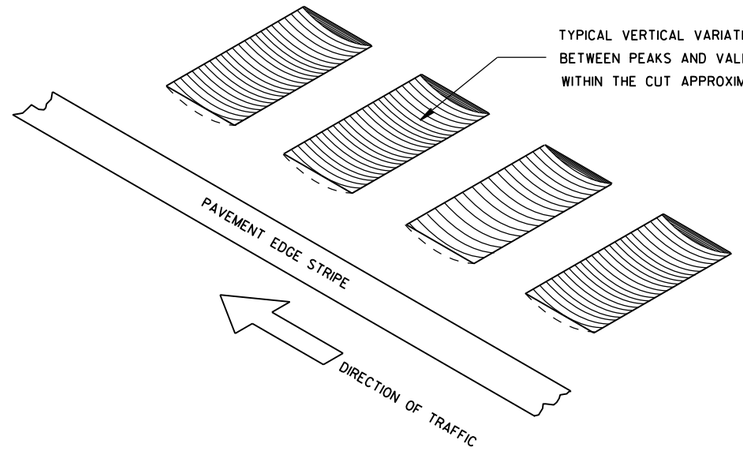
GENERAL NOTES

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

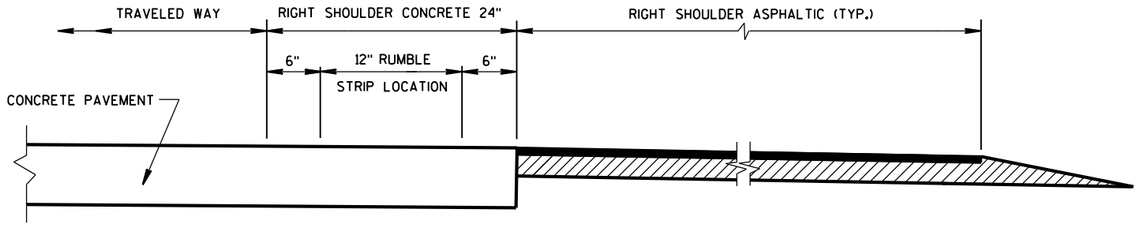
RUMBLE STRIPS ON EXPRESSWAYS

DO NOT INSTALL RUMBLE STRIPS ACROSS SIDE ROAD INTERSECTIONS, COMMERCIAL DRIVEWAYS, PRIVATE DRIVEWAYS OR ADJACENT TO RIGHT TURN LANES, LEFT TURN LANES, TURN LANE TAPERS, BRIDGE DECKS, BRIDGE APPROACHES, OR 100 FEET IN ADVANCE OF RAILROAD CROSSING. THE ATTACHED STANDARD DETAIL DRAWING SHOWS THE LOCATION OF THE RUMBLE STRIPS AT INTERCHANGE AREAS.

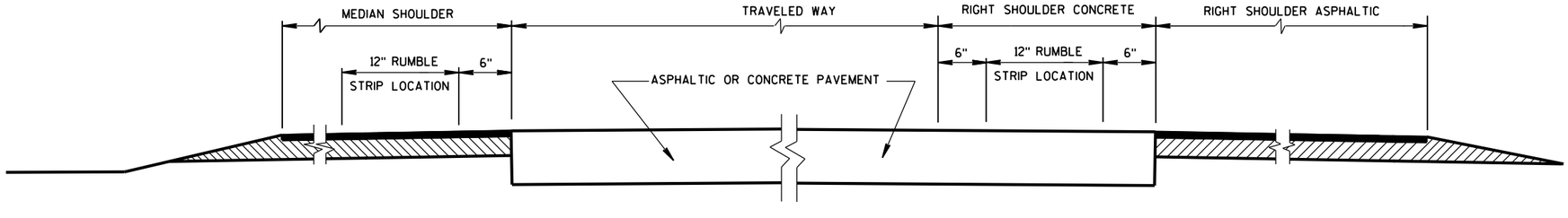
(1) CONCRETE PAVEMENT - RUMBLE STRIPS SHALL BE A MINIMUM OF 6" AWAY FROM TRANSVERSE JOINTS.



ISOMETRIC



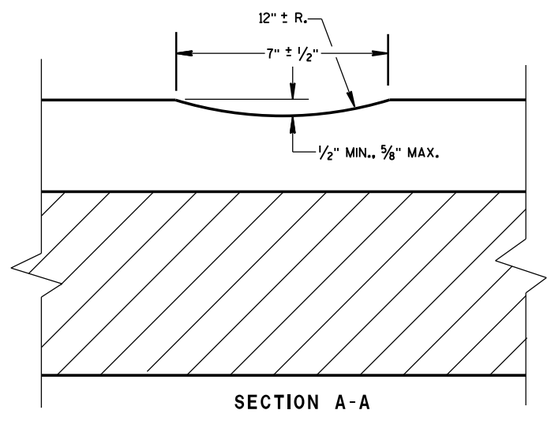
SECTION VIEW
CONCRETE PAVEMENT EXTENDS INTO RIGHT SHOULDER)



SECTION VIEW

TYPICAL LOCATIONS OF SHOULDER RUMBLE STRIPS IN RURAL DIVIDED HIGHWAYS

(ONE ROADWAY IS SHOWN)



SECTION A-A

SHOULDER RUMBLE STRIP, MILLING

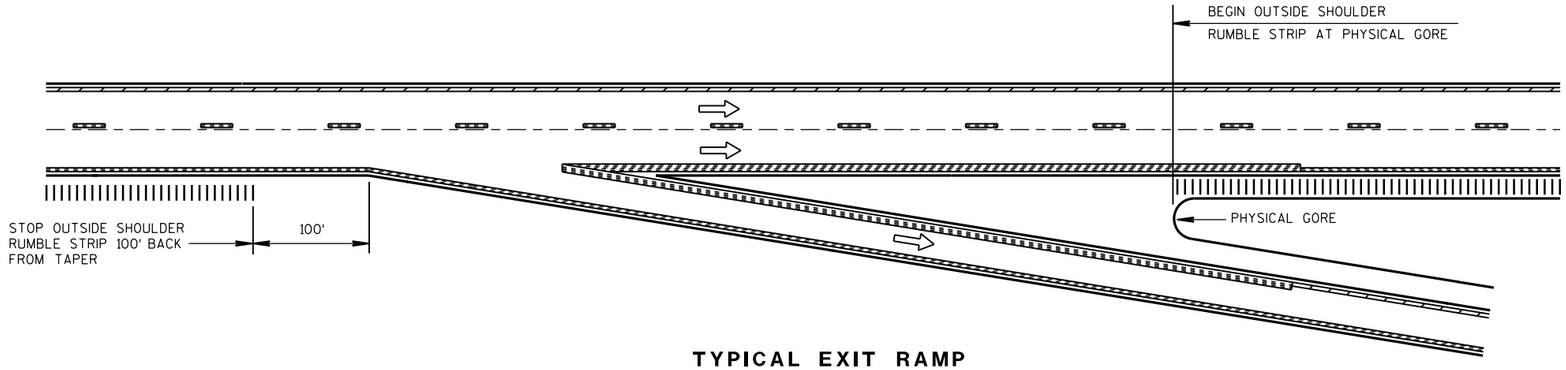
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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S.D.D. 13 A 5-5a

6

S.D.D. 13 A 5-5a



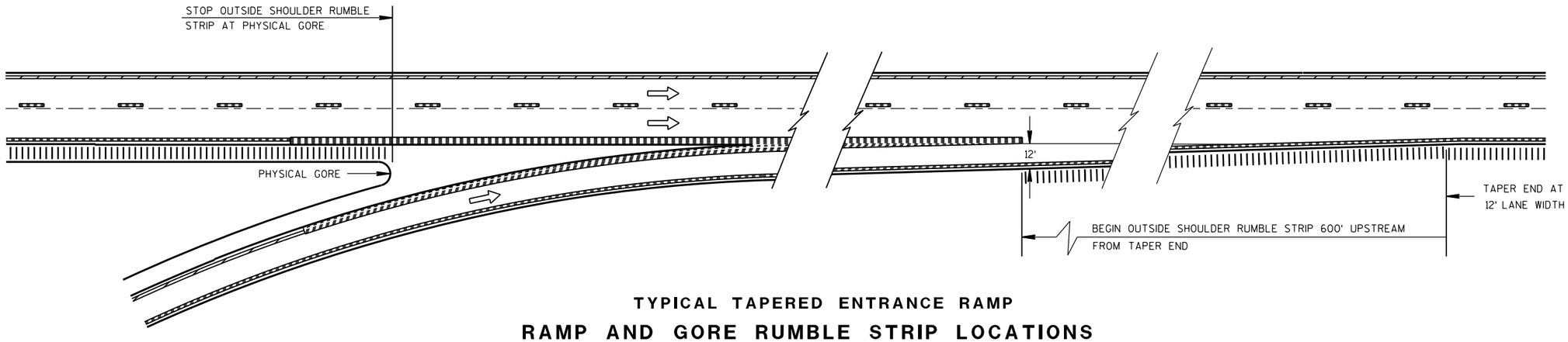
TYPICAL EXIT RAMP

NOTES:

NO RUMBLE STRIP ON EXIT, DIRECTIONAL, OR ENTRANCE RAMPS, EXCEPT NEAR THE ENTRANCE TAPER END AND ALONG THE PARALLEL RAMP AREA AS SHOWN.

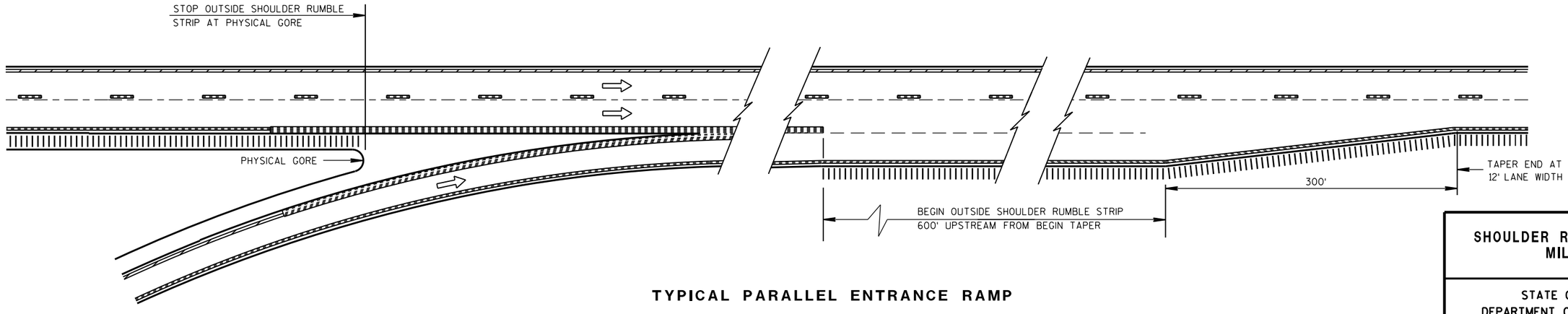
PAVEMENT MARKING DETAILS AND SPECIFICATIONS ARE PROVIDED ELSEWHERE IN THE CONTRACT.

NOTE:
ARROW SYMBOL (⇨)
SHOWS DIRECTION OF TRAVEL



TYPICAL TAPERED ENTRANCE RAMP

RAMP AND GORE RUMBLE STRIP LOCATIONS



TYPICAL PARALLEL ENTRANCE RAMP

RAMP AND GORE RUMBLE STRIP LOCATIONS

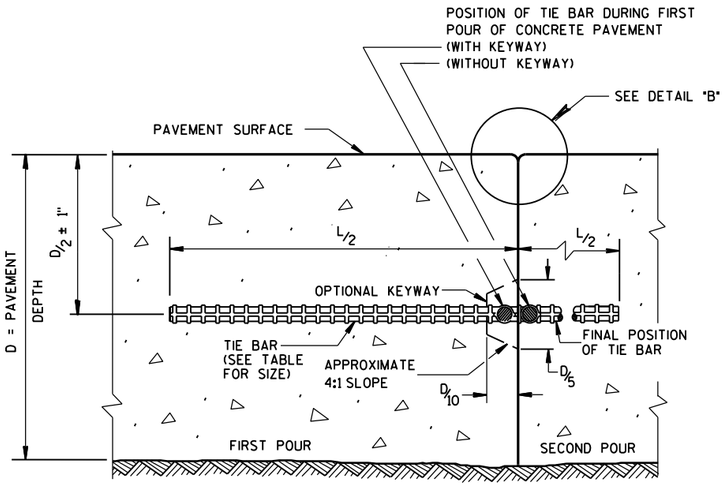
SHOULDER RUMBLE STRIP, MILLING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

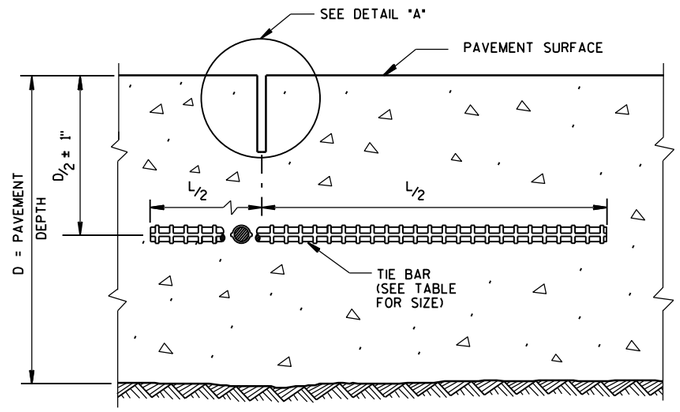
APPROVED
12/17/2012 — DATE
/S/ Jerry H. Zoga — ROADWAY STANDARDS ENGINEER
FHWA

6

S.D.D. 13 A 5-5b



CONSTRUCTION JOINT



SAWED JOINT

GENERAL NOTES

DO NOT SEAL OR FILL LONGITUDINAL JOINTS.

CREATE A LONGITUDINAL JOINT FOR PAVEMENT WIDTHS GREATER THAN 15 FEET.

CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

(1) ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

(2) PAVEMENT THAT WAS IN PLACE PRIOR TO THE CONTRACT.

PLAN VIEW

SECTION A-A

LONGITUDINAL CONSTRUCTION JOINT TIE BARS ANCHORED INTO EXISTING PAVEMENT

DETAIL "A"

DETAIL "B"

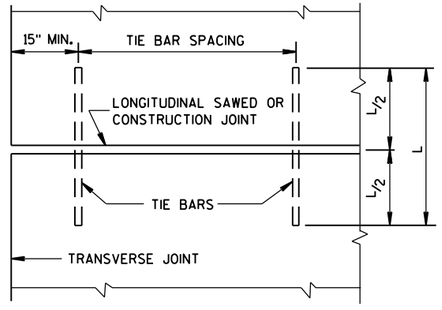
DETAIL "C"

TIE BAR TABLE

PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 1/2"	NO. 4	30"	36"
≥ 10 1/2"	NO. 5	36"	36"
	NO. 4 *	30"	24"**

* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

** CONFORM TO 15" MINUMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.



PLAN VIEW
SHOWING LOCATION OF TIE BARS

CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015 — DATE
/S/ Peter Kemp, P.E. — PAVEMENT SUPER
FHWA

6

S.D.D. 13 C 1-18

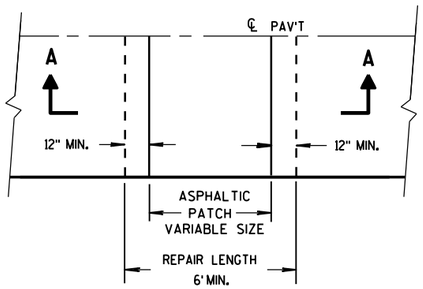
GENERAL NOTES

SAW CUT, DRILL, AND LIFT OUT EXISTING CONCRETE PAVEMENT WITHIN THE BOUNDARIES OF CONCRETE REPAIR AREAS. THE CONTRACTOR MAY MAKE ADDITIONAL SAW CUTS INSIDE THE REPAIR LIMITS TO REDUCE WEIGHT AND SIZE OF CONCRETE PIECES.

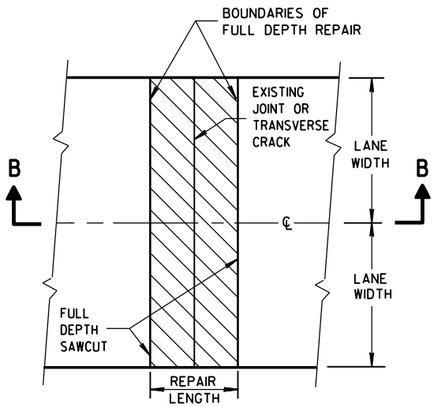
PROVIDE A 6-FOOT MINIMUM DISTANCE FROM BOUNDARIES OF CONCRETE REPAIR AREAS TO ADJACENT TRANSVERSE JOINT OR CRACK IN THE SAME LANE.

THE LENGTH OF THE REPAIRS MAY VARY FROM THE DIMENSIONS SHOWN IF THE EXISTING CONCRETE PAVEMENT IS NONDOWELED AND THE PAVEMENT IS TO BE OVERLAID AFTER REPAIRING.

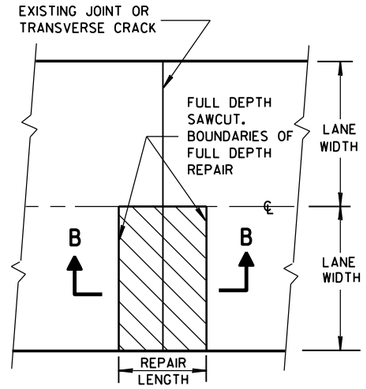
(1) DOWEL BARS MIGHT NOT EXIST.



PLAN VIEW

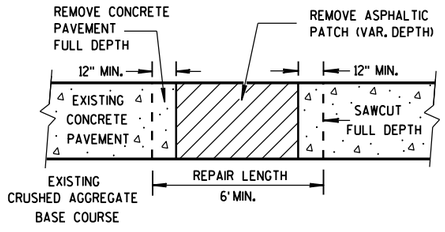


PLAN VIEW
(DOUBLE LANE REPAIR)



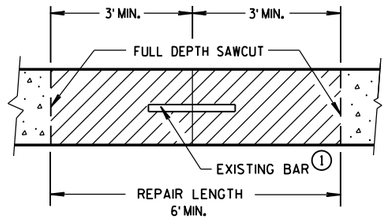
PLAN VIEW
(SINGLE LANE REPAIR)

FULL DEPTH CONCRETE PAVEMENT REMOVAL



SECTION A-A

HMA PATCH REMOVAL



SECTION B-B

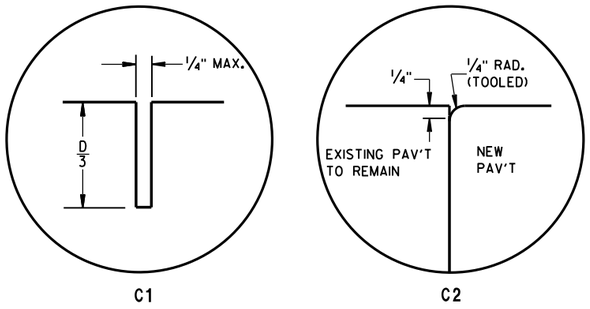
CONCRETE REMOVAL

CONCRETE PAVEMENT REPAIR AND REPLACEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 13 C 9-13a



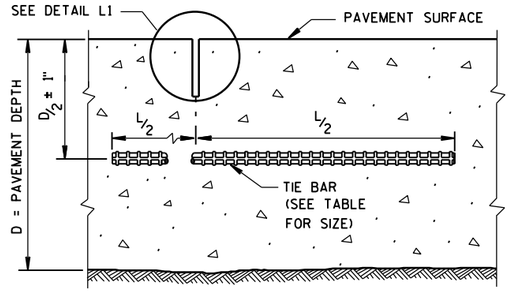
TRANSVERSE JOINTS

TIE BAR TABLE

PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 ½"	NO. 4	30"	36"
≥ 10 ½"	NO. 5	36"	36"
	NO. 4 *	30"	24"**

* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

** CONFORM TO 15" MINUMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.



SECTION C-C

SAWED LONGITUDINAL JOINT

GENERAL NOTES

INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

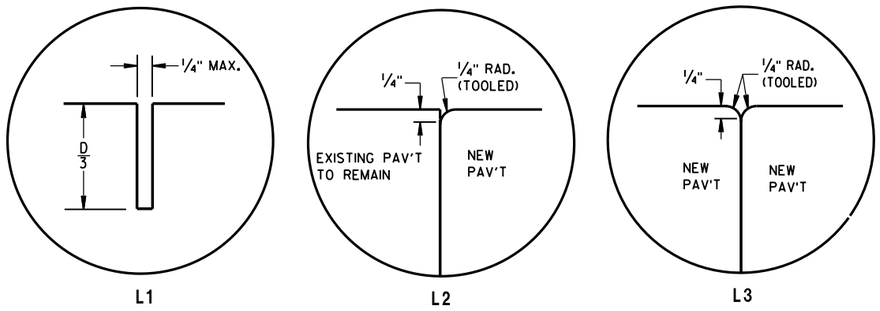
CONCRETE PAVEMENT REPAIRS OF EXISTING NONDOWELED CONCRETE PAVEMENTS DO NOT NEED TO BE DOWELED.

DO NOT SEAL OR FILL JOINTS.

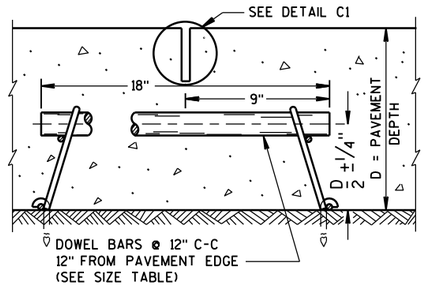
ANCHOR DOWEL BARS AND TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

FOR MULTI-LANE CONCRETE PAVEMENT REPLACEMENTS, PROVIDE A MINIMUM DISTANCE OF 15 INCHES FROM ALL TRANSVERSE JOINTS OR EDGES OF REPLACEMENT TO THE CENTER OF THE TIE BAR NEAREST THAT JOINT OR EDGE.

(1) APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.

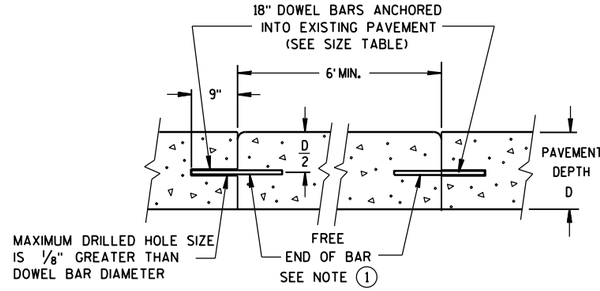


LONGITUDINAL JOINTS

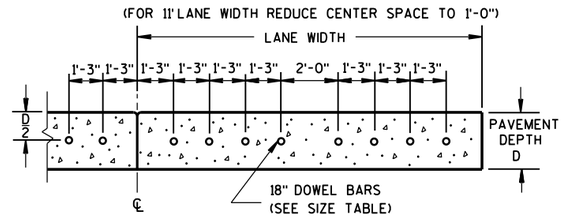


SECTION F-F

CONTRACTION JOINT



SECTION D-D

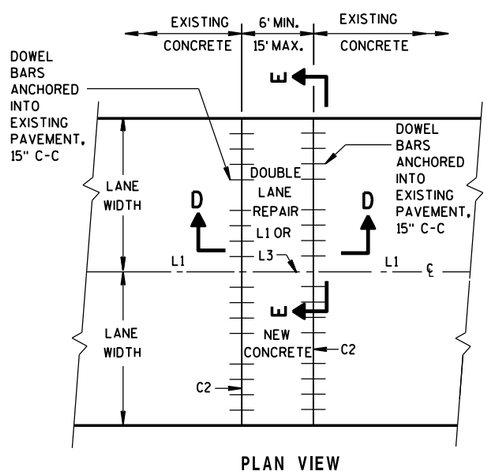


SECTION E-E

DRILLED DOWEL BAR CONSTRUCTION JOINT

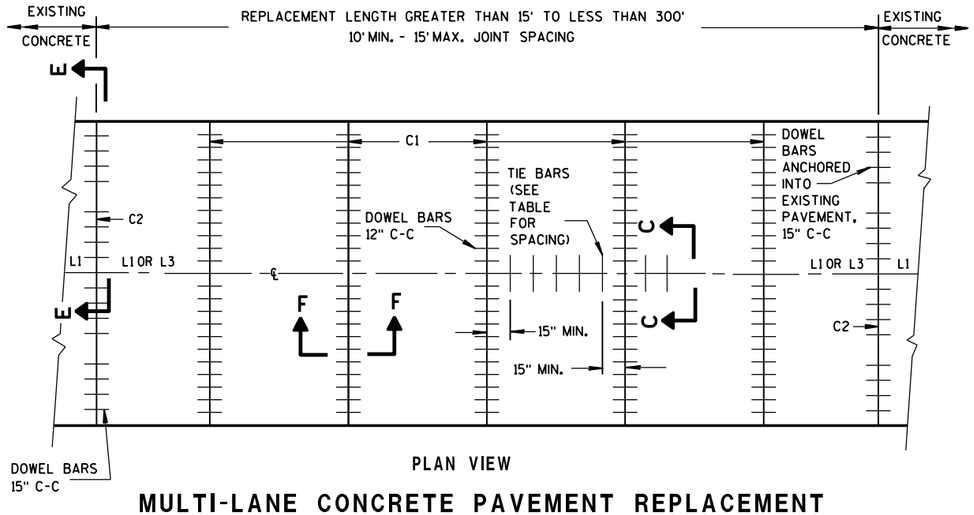
PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
5 ½", 6",6 ½"	NONE	12'
7",7 ½"	1"	14'
8",8 ½"	1 ¼"	15'
9",9 ½"	1 ¼"	15'
10" & ABOVE	1 ½"	15'



PLAN VIEW

MULTI-LANE CONCRETE PAVEMENT REPAIR



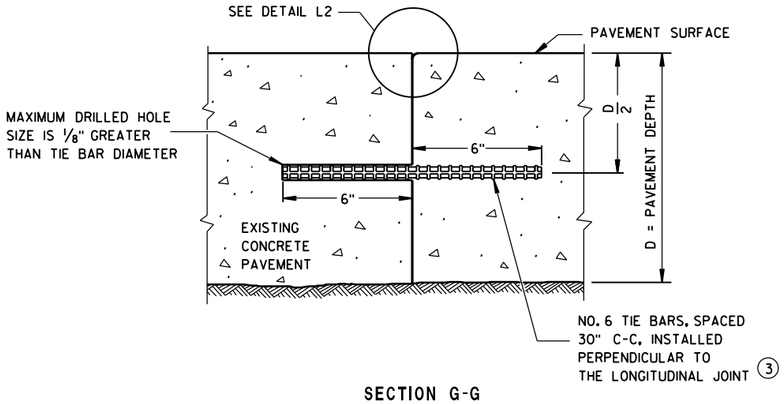
PLAN VIEW

MULTI-LANE CONCRETE PAVEMENT REPLACEMENT

CONCRETE PAVEMENT REPAIR AND REPLACEMENT
STATE OF WISCONSIN DEPARTMENT OF TRANSPOR

6

S.D.D. 13 C 9-13b



SECTION G-G

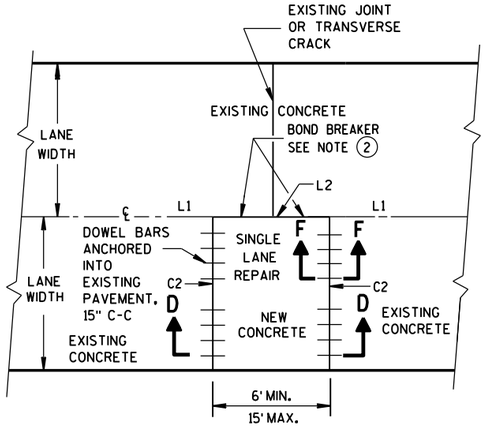
TIE BARS ANCHORED INTO EXISTING PAVEMENT

GENERAL NOTES

(1) WITH THE APPROVAL OF THE ENGINEER, FOR SINGLE LANE PAVEMENT REPLACEMENTS LESS THAN 30 FEET IN LENGTH, THE CONTRACTOR MAY INSTALL DRILLED TIE BARS ON 6:1 SKEW HORIZONTALLY, DIRECTION OF SKEW ALTERNATING WITH EACH SUCCESSIVE BAR. DRIVE SKEWED TIE BARS TO A DEPTH OF 6 INCHES IN A HOLE OF SUCH A DIAMETER AS TO PROVIDE A TIGHT DRIVEN FIT.

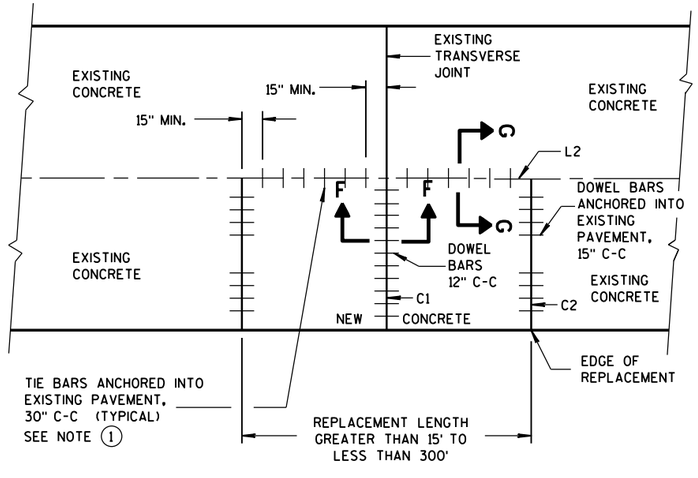
(2) USE AN ENGINEER-APPROVED BOND BREAKER (E.G. RELEASE AGENT, CURING COMPOUND) FOR SINGLE LANE REPAIRS UP TO 15 FEET IN LENGTH.

(3) ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.



PLAN VIEW

SINGLE LANE CONCRETE PAVEMENT REPAIR



PLAN VIEW

SINGLE LANE CONCRETE PAVEMENT REPLACEMENT

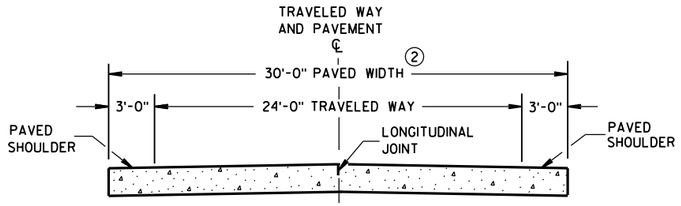
CONCRETE PAVEMENT REPAIR AND REPLACEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept., 2015 — DATE
/S/ Peter Kemp, P.E. — PAVEMENT SUPER
FHWA

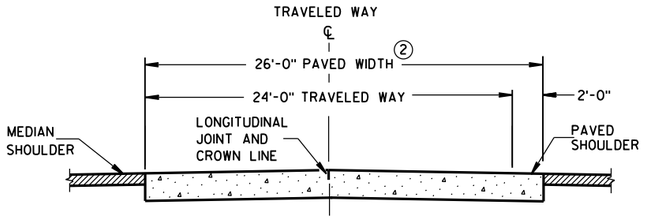
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S.D.D. 13 C 9-13c

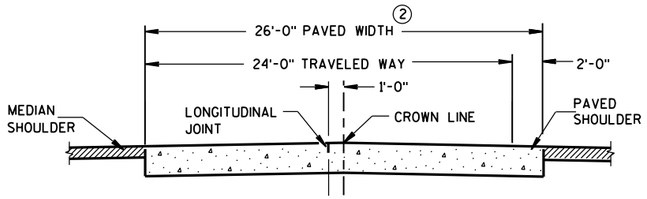


SECTION A-A ①

TWO-LANE TWO-WAY HIGHWAY



SECTION B-B



ALTERNATIVE SECTION B-B ①

DIVIDED HIGHWAY

GENERAL NOTES

CONTRACTION JOINTS

CONSTRUCT TRANSVERSE CONTRACTION JOINTS NORMAL TO THE CENTERLINE. SHOW THE LOCATION OF CONTRACTION JOINTS THROUGH INTERSECTIONS ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

DO NOT SEAL OR FILL CONTRACTION JOINTS.

INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

FOR PAVEMENT SLABS OF VARYING WIDTHS, LOCATE THE OUTER MOST DOWEL BAR SO THAT THE CENTER OF THE BAR IS A MINIMUM OF 6 INCHES AND A MAXIMUM OF 18 INCHES FROM THE FREE EDGE OF PAVEMENT.

CONSTRUCTION JOINTS

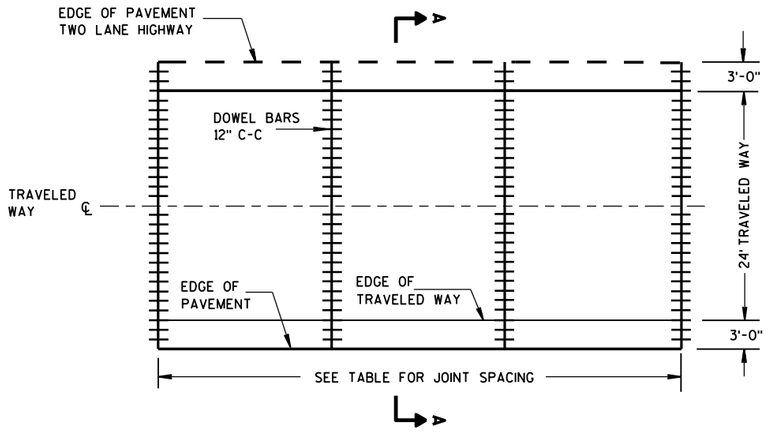
LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO CONTRACTION JOINTS.

① REFER TO TYPICAL CROSS SECTIONS FOR ADDITIONAL DETAILS.

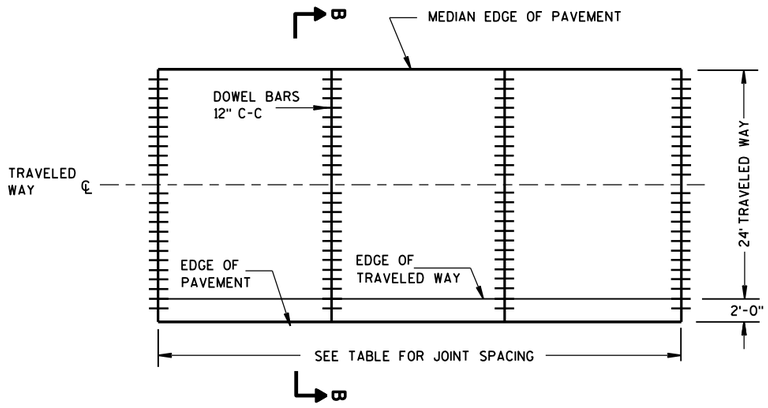
② MEASURE THE ENTIRE PAVED WIDTH INCLUDING THE PORTION(S) LABELED PAVED SHOULDER AS CONCRETE PAVEMENT.

PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
5 ½", 6", 6 ½"	NONE	12'
7", 7 ½"	1"	14'
8", 8 ½"	1 ¼"	15'
9", 9 ½"	1 ¼"	15'
10" & ABOVE	1 ½"	15'



CONTRACTION JOINT LAYOUT
FOR TWO-LANE TWO-WAY HIGHWAY



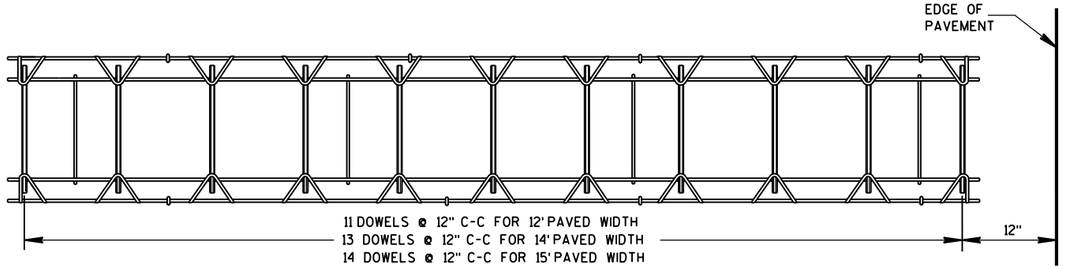
CONTRACTION JOINT LAYOUT
FOR DIVIDED HIGHWAY

RURAL DOWELED
CONCRETE PAVEMENT

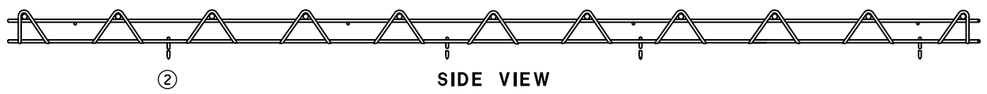
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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S.D.D. 13 C 11-11a



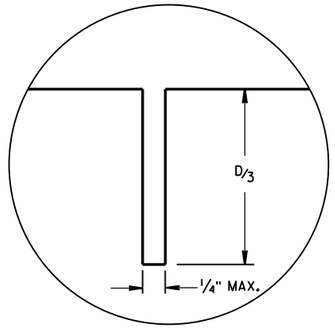
PLAN VIEW



SIDE VIEW

(NORMAL TO CENTERLINE)

CONTRACTION JOINT DOWEL ASSEMBLY ①



JOINT DETAIL

GENERAL NOTES

① OBTAIN THE ENGINEER'S APPROVAL FOR THE USE OF ALTERNATIVE DESIGNS OF THE DOWEL ASSEMBLY. USE MECHANICAL DOWEL BAR INSERTERS OR DOWEL ASSEMBLIES WHEN CONSTRUCTING CONTRACTION JOINTS.

② SECURE BASKETS WITH ANCHORS TO HOLD DOWEL BARS IN THE CORRECT POSITION AND ALIGNMENT. TYPE, LOCATION, NUMBER AND LENGTH OF ANCHORS ARE DEPENDENT UPON FIELD CONDITIONS.

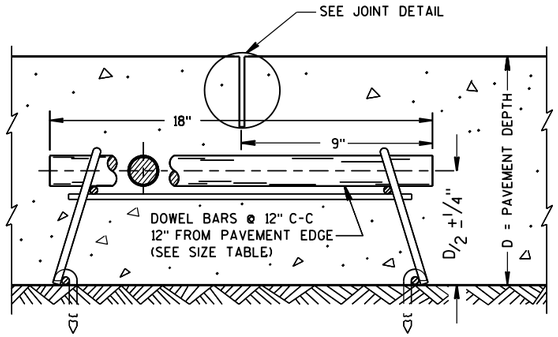
③ FORM OR SAW CONSTRUCTION JOINTS. PROVIDE A 1/4-INCH RADIUS AT FORMED JOINTS.

④ PROVIDE A SMOOTH VERTICAL FACE FOR THE ENTIRE DEPTH OF THE PAVEMENT WHEN FORMING CONSTRUCTION JOINTS.

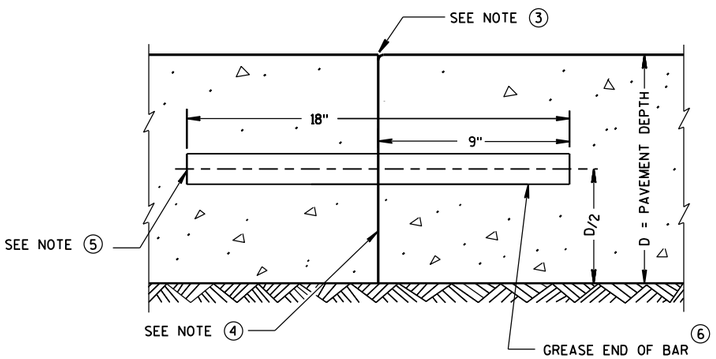
⑤ INSTALL DOWEL BARS AT CONSTRUCTION JOINTS BY FORMING OR DRILLING. INSTALL FORMED DOWEL BARS 12 INCHES C-C AND 12 INCHES FROM PAVEMENT EDGE. REMOVE EXCESS CONCRETE FROM THE FREE END OF THE DOWEL BAR IF DOWEL BARS ARE FORMED THROUGH A HEADER BOARD. INSTALL DRILLED DOWEL BARS ACCORDING TO *DRILLED DOWEL BAR CONSTRUCTION JOINT* DETAIL.

⑥ APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.

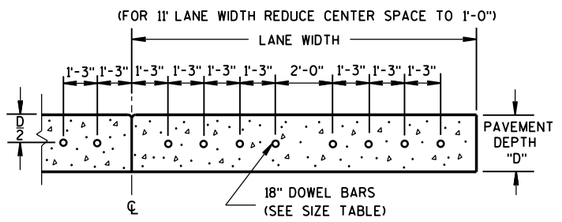
⑦ ANCHOR DOWEL BARS INTO DRILLED HOLES WITH AN EPOXY. MAXIMUM DRILLED HOLE SIZE IS 1/8-INCH GREATER THAN DOWEL BAR DIAMETER, 9 INCHES IN LENGTH.



DOWELED CONTRACTION JOINT



TRANSVERSE CONSTRUCTION JOINT



DRILLED DOWEL BAR CONSTRUCTION JOINT ⑦

RURAL DOWELED CONCRETE PAVEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

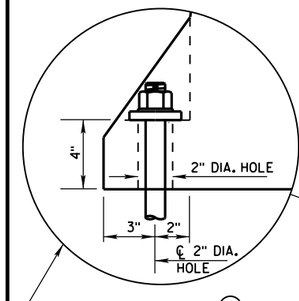
APPROVED
5/3/2013 DATE
/S/ Deb Bischoff PAVEMENT POLICY & DE
FHWA

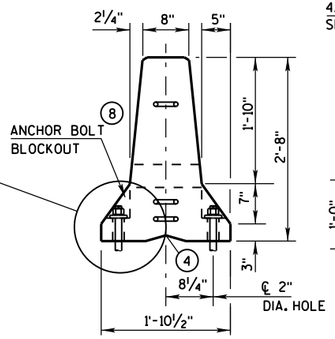
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S.D.D. 13 C 11-11b

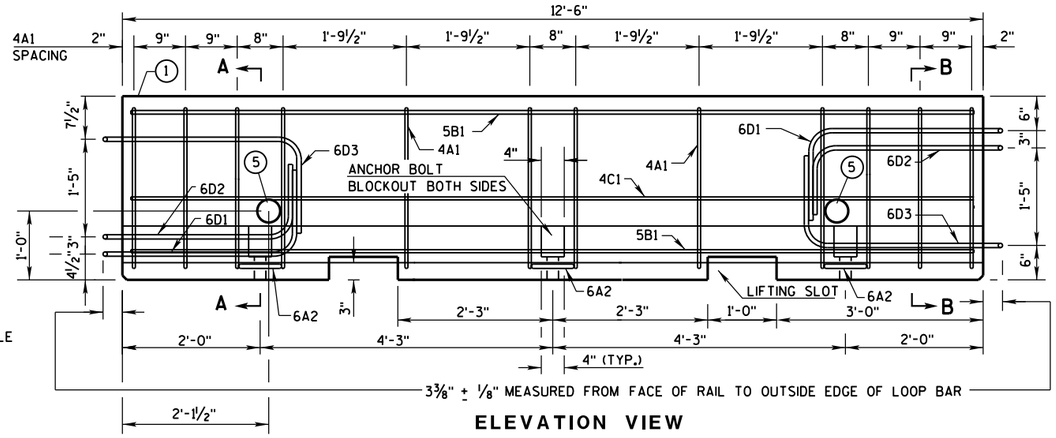
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S.D.D. 13 C 11-11b

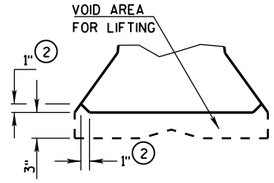




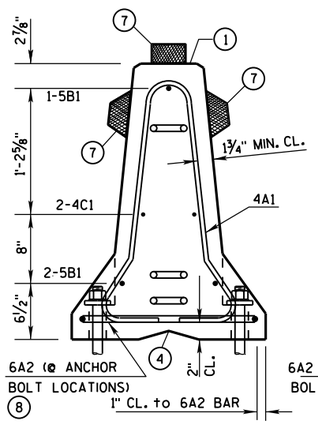
END VIEW



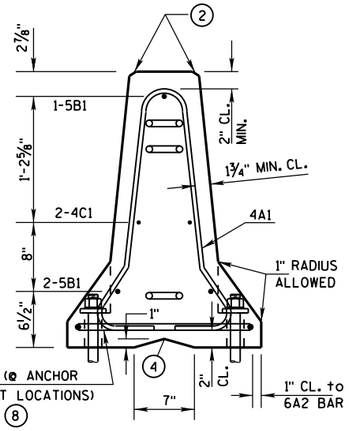
ELEVATION VIEW



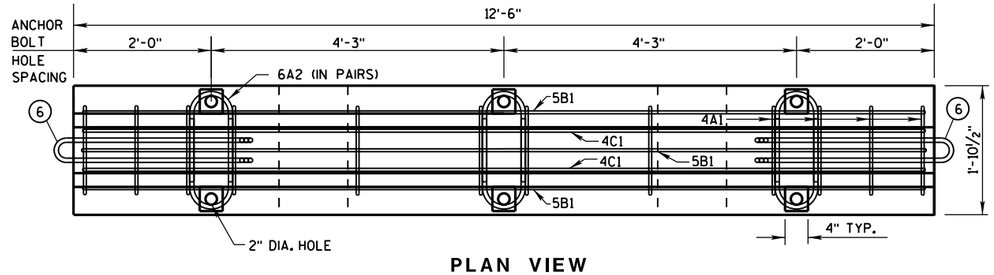
DETAIL "B"
LIFTING SLOT DETAIL



SECTION A-A
(STIRRUP PLACEMENT)

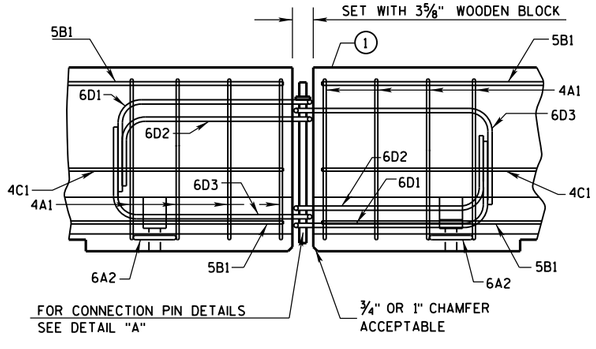


SECTION B-B
(STIRRUP PLACEMENT)

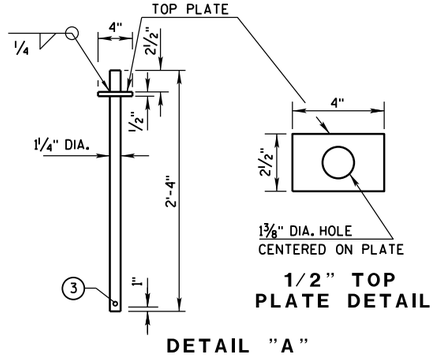


PLAN VIEW

DETAILS OF BARRIER SECTION

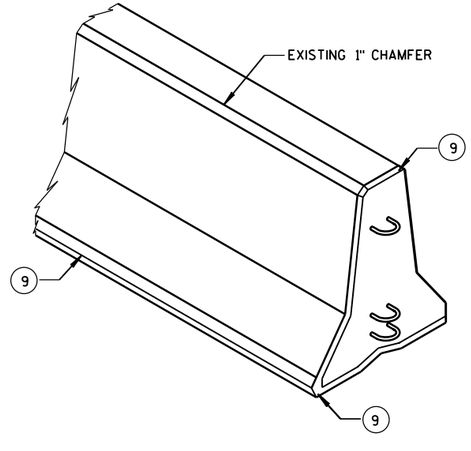


DETAILS OF BARRIER CONNECTION



1/2" TOP
PLATE DETAIL

DETAIL "A"
CONNECTION PIN
(A36 STEEL (10.9 LB EACH))



GENERAL NOTES

THESE GENERAL NOTES APPLY TO SHEETS 14B7-14(a) THRU 14B7-14(h).

DO NOT INTERMIX CONCRETE BARRIER TEMPORARY PRCAST, 12'-6" (CBTP12.5) WITH OTHER TEMPORARY CONCRETE BARRIERS.

USE ASTM A-615, GRADE 60, DEFORMED STEEL BARS FOR BARS 4A1, 6A2, 5B1 AND 4C1 IN THE BARRIER SECTION AND FOR 4V1, 4V2, 4V3, 4V4, 4V5, 4V6, 4F1, 4F2 AND 5F3 IN THE BARRIER TAPER SECTION.

LOOP BARS 6D1, 6D2 AND 6D3 SHALL BE ¾" SMOOTH STEEL BARS WITH A MINIMUM YIELD STRENGTH OF 60 KSI, A TENSILE STRENGTH OF NOT LESS THAN 1.25 TIMES THE YIELD STRENGTH BUT A MINIMUM OF 80 KSI, A MINIMUM 14% ELONGATION IN 8 INCHES AND PASSING A 180 DEGREE BEND TEST USING A 3-½" PIN BEND DIAMETER FOR BEND TESTS. THE LOOPS SHALL BE INSTALLED WITHIN ⅛" OF THE PLAN DIMENSION.

CONSTRUCT LIFTING SLOTS AS SPECIFIED ON THE PLANS TO FACILITATE THE DRAINAGE OF WATER AFTER INSTALLATION.

PLACE BARRIER ON A PAVED SURFACE. REMOVE ALL LOOSE DIRT AND SAND FROM THE ROADWAY SURFACE PRIOR TO PLACEMENT OF THE BARRIER.

INSTALL MECHANICAL OR ADHESIVE ANCHORS PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE MANUFACTURER'S INFORMATION TO PROJECT ENGINEER.

(1) MARK ONE END OF EACH BARRIER PERMANENTLY BY FORMING INTO THE BARRIER THE FOLLOWING INFORMATION:
- a. TYPE: WI CBTP
- b. MANUFACTURER
- c. DATE MANUFACTURED (MONTH AND YEAR)

(2) 1" CHAMFER TO PREVENT SPALLING.

(3) A ⅜" HOLE IN THE CONNECTION PIN, AT THE LOCATION SHOWN, IS ACCEPTABLE, BUT NOT REQUIRED..

(4) "V" NOTCH IS OPTIONAL.

(5) THE 4" DIAMETER, 11 GAUGE STEEL, ROUND MECHANICAL TUBING SLEEVE FOR LIFTING (OPTIONAL).

(6) NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.

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

(8) SEE SHEET D FOR ANCHORING CRITERIA.

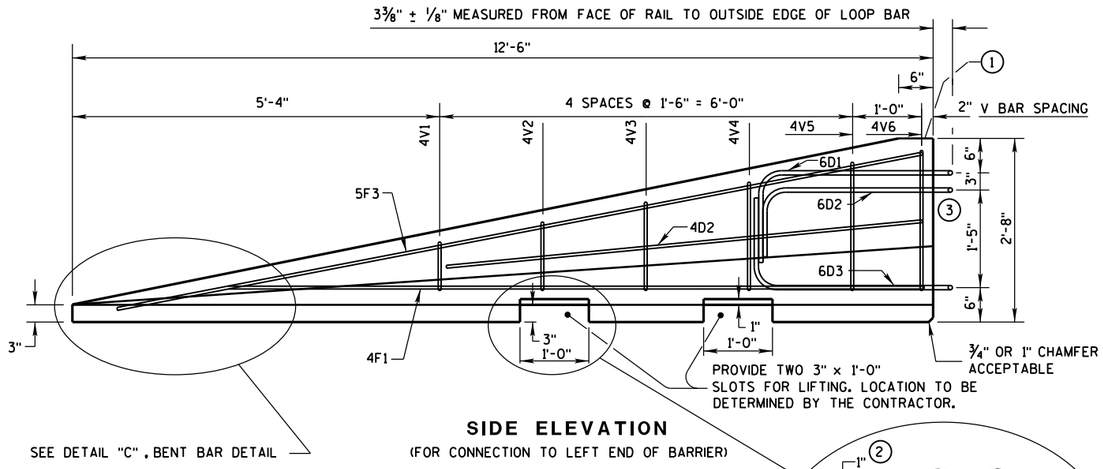
(9) 1" CHAMFER OPTIONAL.

CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"

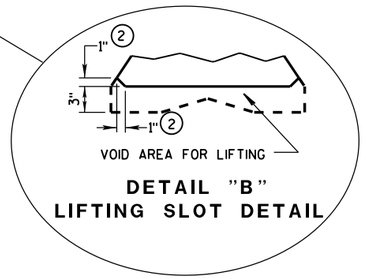
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

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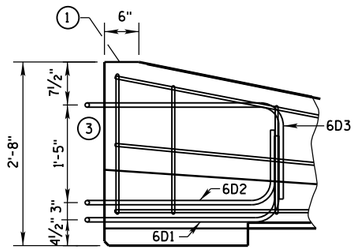
S.D.D. 14 B 7-14a



SIDE ELEVATION
(FOR CONNECTION TO LEFT END OF BARRIER)



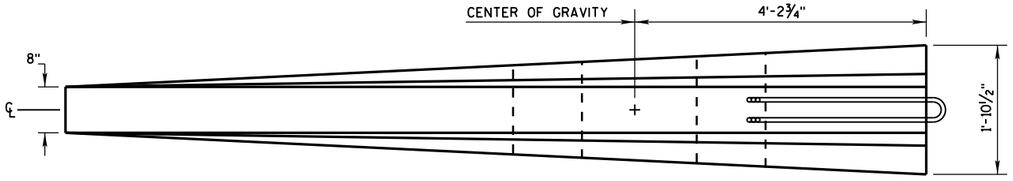
DETAIL "B"
LIFTING SLOT DETAIL



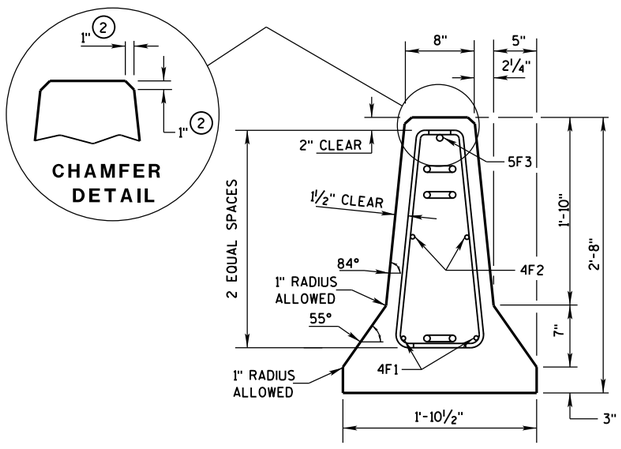
SIDE ELEVATION
LOOP BAR ASSEMBLY INVERTED
FOR OPPOSITE END.
(FOR CONNECTION TO RIGHT END OF BARRIER)

GENERAL NOTES

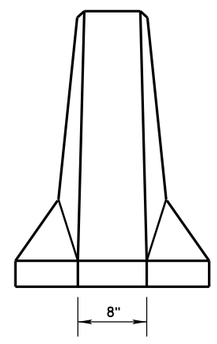
1. MARK ONE END OF EACH BARRIER PERMANENTLY BY FORMING INTO THE BARRIER THE FOLLOWING INFORMATION:
   a. TYPE WICBTP
   b. MANUFACTURER
   c. DATE MANUFACTURED (MONTH AND YEAR)
2. 1" CHAMFER TO PREVENT SPALLING.
3. NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.



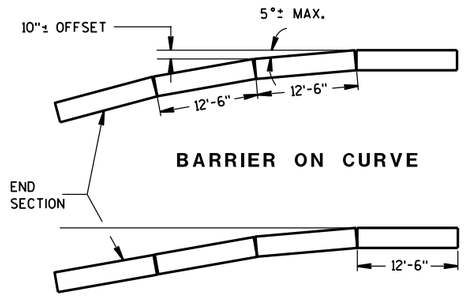
PLAN VIEW



END SECTION



FRONT ELEVATION



BARRIER ON CURVE

FLARE AT BARRIER END

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

DETAILS OF BARRIER TAPER SECTION

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

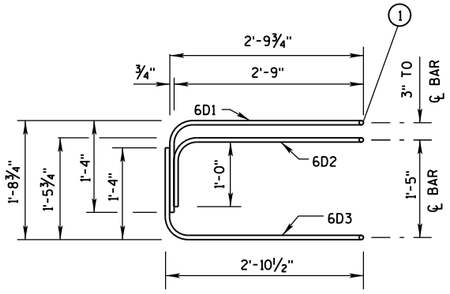
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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S.D.D. 14 B 7-14b

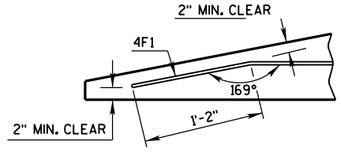
BARRIER TAPER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER TAPER SECTION)

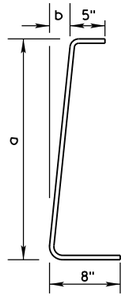
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4V1	4	2	1'-11"
4V2	4	2	2'-2"
4V3	4	2	2'-6"
4V4	4	2	2'-9"
4V5	4	2	3'-2"
4V6	4	2	3'-4"
4F1	4	2	12'-0"
4F2	4	2	7'-6"
5F3	5	1	11'-9"
LOOP ASSEMBLY			
6D1	6	1	8'-5"
6D2	6	1	7'-7"
6D3	6	1	8'-6"



ELEVATION
LOOP BAR ASSEMBLY



DETAIL "C"
BENT BAR DETAIL



BAR	a	b
V1	10"	1"
V2	1'-1"	1¼"
V3	1'-5"	1⅝"
V4	1'-8"	1⅞"
V5	2'-0½"	2⅜"
V6	2'-3"	2¾"

4V BARS
2 AT EACH SIZE REQUIRED
FOR STIRRUP ASSEMBLY

TAPER BARRIER SECTION

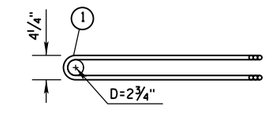
GENERAL NOTES

(1) NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.

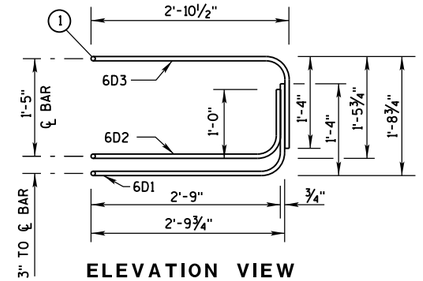
BARRIER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER SECTION)

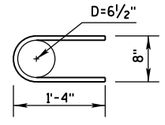
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4A1	4	12	6'-0"
6A2	6	6	2'-11"
5B1	5	3	12'-2"
4C1	4	2	12'-2"
LOOP ASSEMBLY			
6D1	6	2	8'-5"
6D2	6	2	7'-7"
6D3	6	2	8'-6"



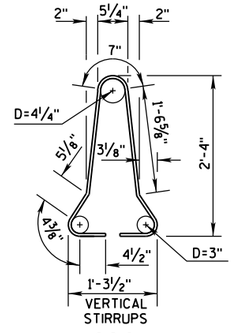
PLAN VIEW
LOOP BAR ASSEMBLY
(MARKED END SHOWN, INVERT FOR OTHER END)



ELEVATION VIEW



6A2



4A1

BARRIER SECTION

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

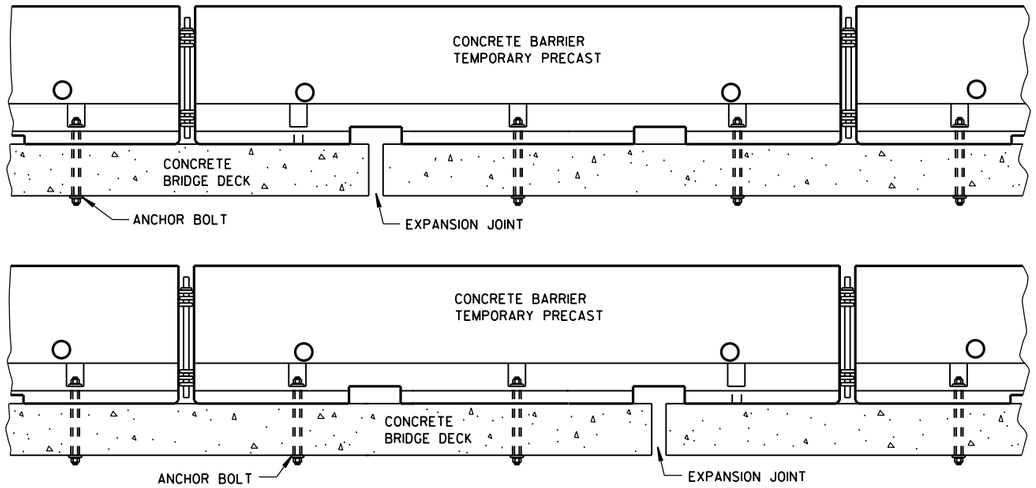
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR 170

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S.D.D. 14 B 7-14c

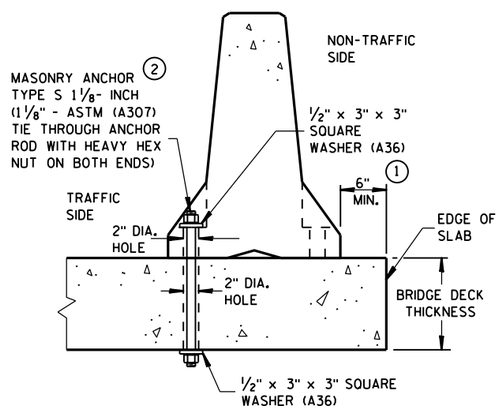
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S.D.D. 14 B 7-14c



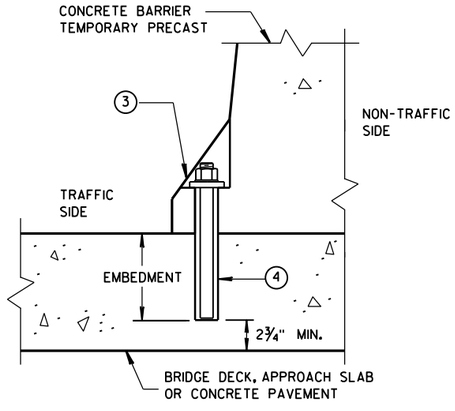
TREATMENT AT BRIDGE DECK EXPANSION JOINTS

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



THROUGH BOLTED ANCHOR INSTALLATION ON BRIDGE DECK

(DO NOTUSE ON CONCRETE BRIDGE DECK WITH ASPHALT OVERLAY)



REMOVABLE ADHESIVE BONDED ANCHOR ② INSTALLATION ON CONCRETE BRIDGE DECK, CONCRETE APPROACH SLAB, OR CONCRETE PAVEMENT

(DO NOT USE ON CONCRETE WITH AN ASPHALTIC OVERLAY)

GENERAL NOTES

① CONCRETE BARRIER TEMPORARY PRECAST, 12'-6" SHALL BE ANCHORED IF:
THE DISTANCE TO A 2 FOOT OR GREATER DROPOFF THAT IS STEEPER THAN 3H : 1V, FOR EXAMPLE THE EDGE OF A BRIDGE DECK OR A DROPOFF AT THE EDGE OF PAVEMENT, IS LESS THAN 4 FEET FROM THE SIDE OF THE BARRIER CLOSEST TO THE DROPOFF AND THE POSTED SPEED IS 45 MPH OR GREATER, OR

THE DISTANCE TO A 2 FOOT OR GREATER DROPOFF THAT IS STEEPER THAN 3H : 1V, FOR EXAMPLE THE EDGE OF A BRIDGE DECK OR A DROPOFF AT THE EDGE OF PAVEMENT, IS LESS THAN 2 FEET FROM THE SIDE OF THE BARRIER CLOSEST TO THE DROPOFF AND THE POSTED SPEED IS 40 MPH OR LESS.

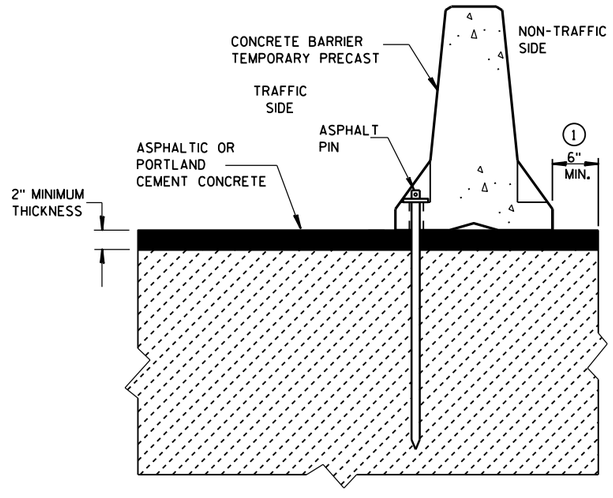
② ANCHORING IS INCIDENTAL TO CONCRETE BARRIER TEMPORARY PRECAST.

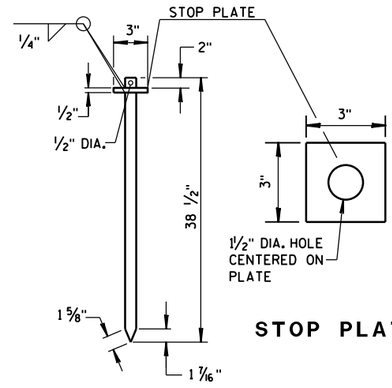
WITH THE APPROVAL OF THE ENGINEER, REMOVABLE ADHESIVE BONDED ANCHOR BOLT INSTALLATION MAY BE USED IN LIEU OF THROUGH BOLTED ANCHOR INSTALLATION. THE ADHESIVE BONDED ANCHOR BOLT MUST BE REMOVABLE. USE ASTM (A307) MASONRY ANCHORS TYPE S 1⅛-INCH, EMBEDDED TO A DEPTH SUFFICIENT TO DEVELOP THE ULTIMATE CAPACITY OF THE ANCHOR BOLT AND PROVIDE DOCUMENTATION TO CONFIRM THIS.

UPON REMOVAL OR RELOCATION OF THE BARRIER UNITS, REMOVE ALL ANCHOR BOLTS AND COMPLETELY FILL IN THE REMAINING HOLES IN CONCRETE BRIDGE DECKS, CONCRETE APPROACH SLABS AND CONCRETE PAVEMENTS THAT ARE TO REMAIN, WITH A NON-SHRINK COMMERICAL GROUT OR MATERIAL IDENTIFIED ON THE CURRENT WISDOT APPROVED PRODUCTS LIST.

③ 1⅛" DIAMENTER A307 THREADED ROD, ½" X 3" X 3" SQUARE PLATE WASHER WITH ASTM A36 STEEL, ASTM A563A HEAVY HEX NUT.

④ ADHESIVE ANCHORS WITH A MINIMUM BOND STRENGTH OF 1,800 PSI AND 5¼" EMBEDMENT. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.



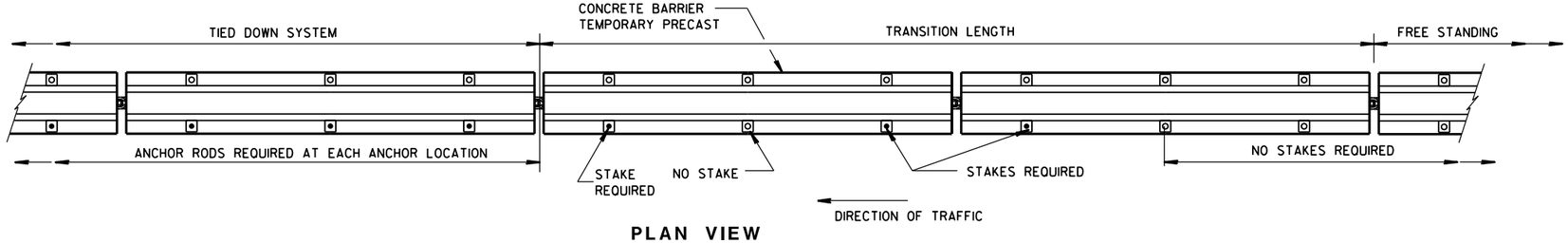


STOP PLATE

ASPHALT PIN
(ASTM A36 STEEL)

STAKE DOWN INSTALLATION FOR ASPHALTIC OR PORTLAND CEMENT CONCRETE SURFACE

(STAKING IS INCIDENTAL TO CONCRETE BARRIER TEMPORARY PRECAST)



PLAN VIEW

FREE STANDING TRANSITION TO TIED-DOWN SYSTEM

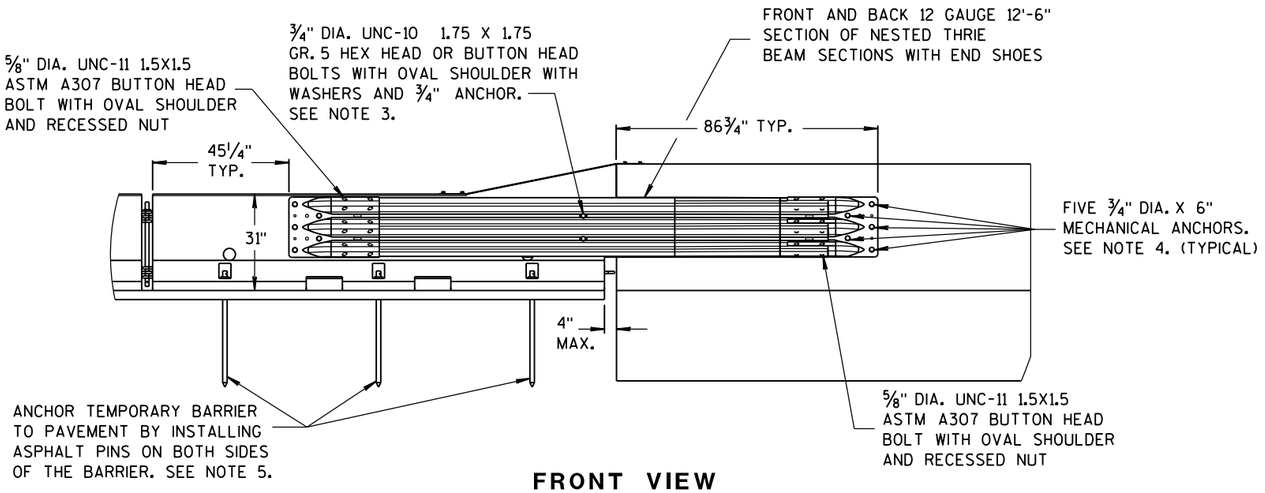
(PLACE TRANSITION IN A TANGENT SECTION OF BARRIER PARALLEL TO THE ROADWAY. IF TRANSITION OCCURS ON STRUCTURAL SLAB, ANCHOR AS SHOWN.)

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

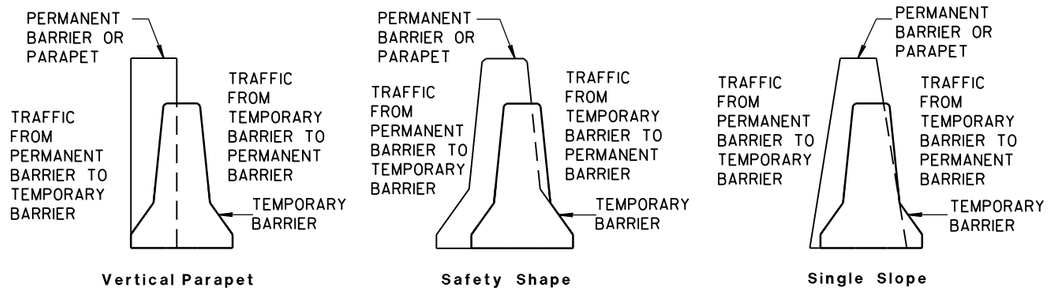
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 14 B 7-14d



FRONT VIEW



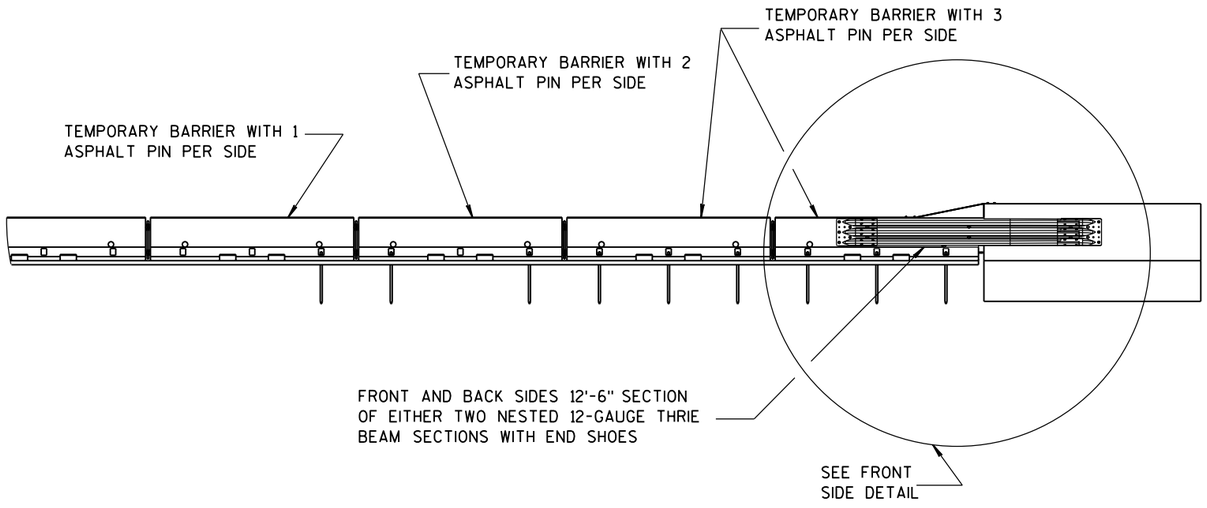
TEMPORARY BARRIER PLACEMENT FOR BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM

NOTES

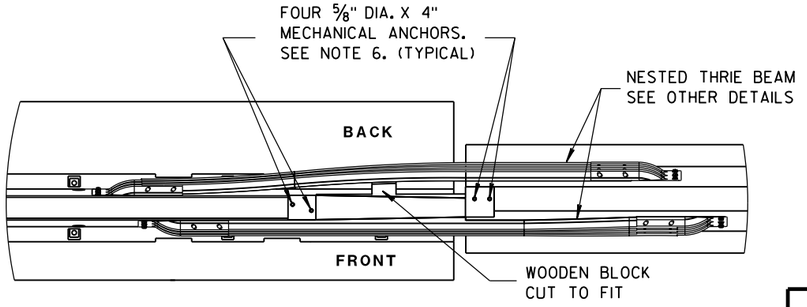
NESTED THRIE BEAM IS REQUIRED ON BOTH SIDES OF THE TEMPORARY BARRIER FOR ALL INSTALLATIONS.

1. CAP END PLATE PLACED FLUSH WITH UPSTREAM END OF PERMANENT BARRIER OR PARAPET.
2. THRIE BEAM PIECES ARE OFFSET 15 1/4" TO PREVENT INTERFERENCE FROM THE ANCHORS ON OPPOSING SIDES.
3. MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 9.48 KIPS AND ULTIMATE SHEAR LOAD 10.48 KIPS.
4. MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 17.9 KIPS AND ULTIMATE SHEAR LOAD 21.96 KIPS.
5. MAY BE USED ON CONCRETE OR ASPHALT PAVEMENTS. ASPHALT OPTION SHOWN. FOR CONCRETE OPTION SEE OTHER DETAILS.
6. MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 12.14 KIPS AND ULTIMATE SHEAR LOAD 17.5 KIPS.

BACK VIEW



FRONT VIEW



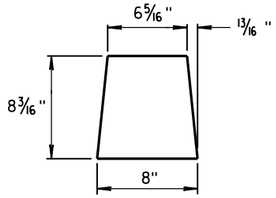
PLAN VIEW

BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM

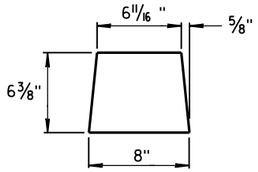
CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

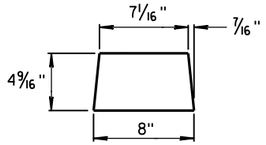
6
S.D.D. 14 B 7-14e



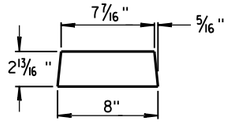
GUSSET 1



GUSSET 2

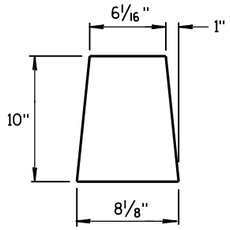


GUSSET 3

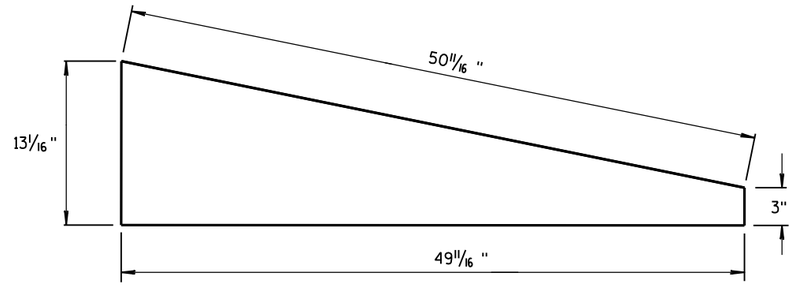


GUSSET 4

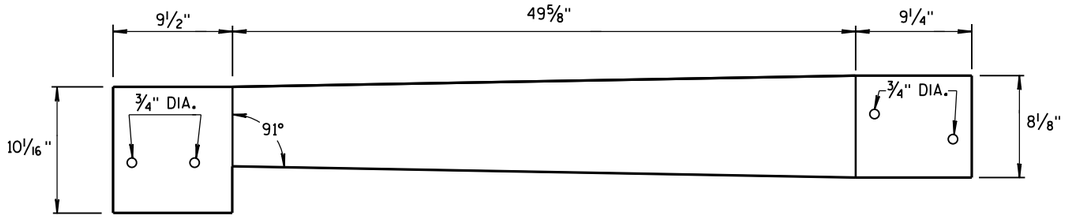
GUSSETS

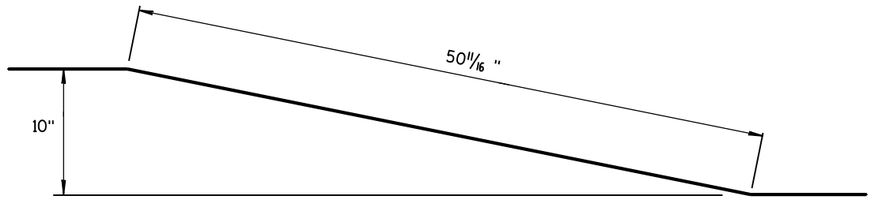


END PLATE



SIDE PLATE

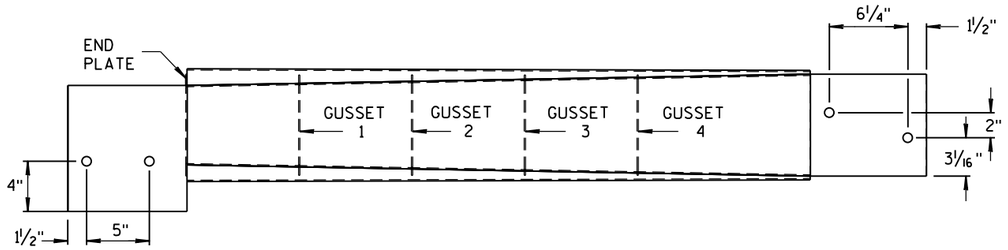


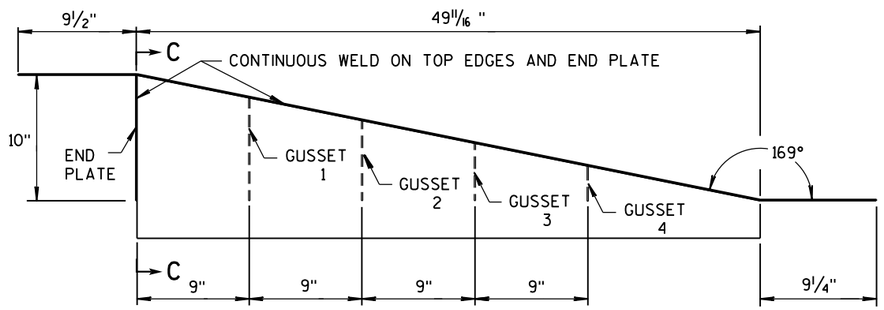


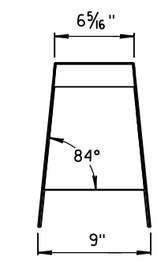
TOP PLATE

SIDE, TOP AND END PLATES FOR CAP FROM TEMPORARY CONCRETE BARRIER TO 42" PERMANENT CONCRETE BARRIER

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







SECTION C-C

NOTES

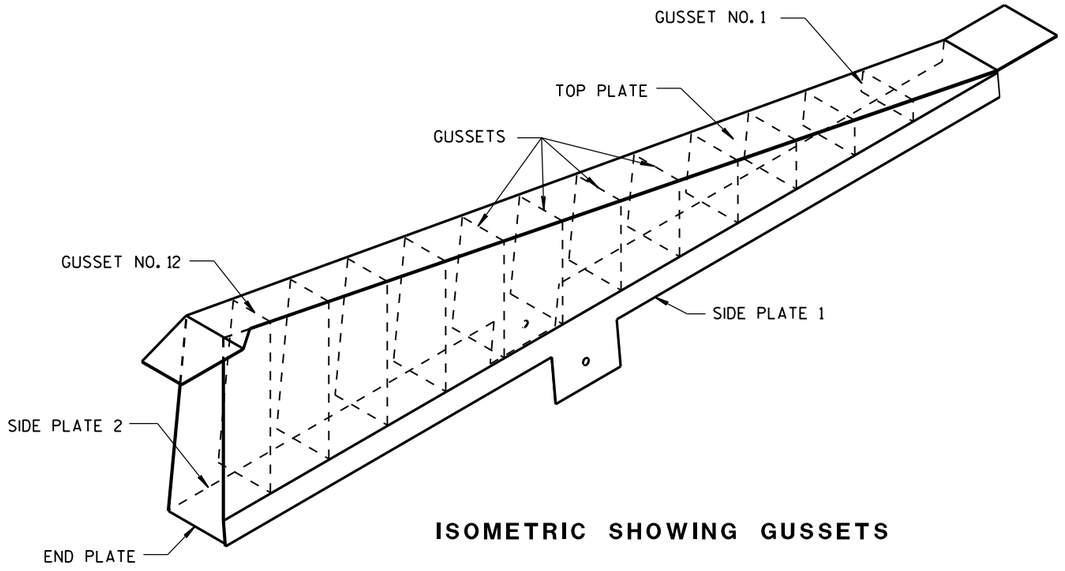
1. FOUR GUSSETS AND END PLATE ARE STITCH WELDED ON THREE SIDES.
2. TWO TRIANGULAR SIDE PLATES ARE STITCH WELDED TO TOP PLATE, END PLATE, AND GUSSETS.

CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 42" PERMANENT CONCRETE BARRIER

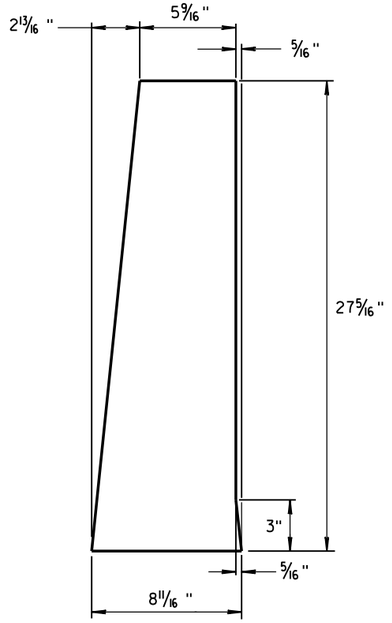
CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6
S.D.D. 14 B 7-14f

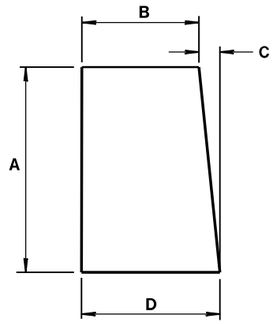


ISOMETRIC SHOWING GUSSETS



END PLATE

1/8" STEEL PLATE



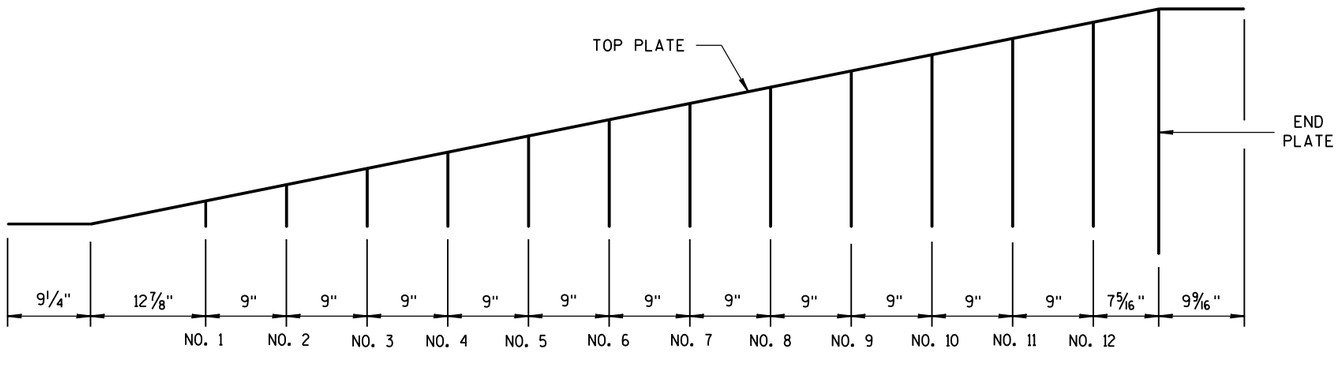
GUSSETS 1 - 12

ALL GUSSETS 1/8" STEEL PLATE

GUSSET DIMENSIONS				
GUSSET NO.	A	B	C	D
1	2 7/8"	7 3/4"	1/4"	8
2	4 11/16 "	7 9/16 "	1/2"	8
3	6 1/2"	7 3/8"	11/16 "	8 1/16 "
4	8 5/16 "	7 3/16 "	7/8"	8 1/16 "
5	10 1/8"	7"	1 1/16 "	8 1/16 "
6	11 15/16 "	6 13/16 "	1 1/4"	8 1/16 "
7	13 3/4"	6 5/8"	1 7/16 "	8 1/16 "
8	15 9/16 "	6 7/16 "	1 9/16 "	8 1/16 "
9	17 3/8"	6 1/4"	1 13/16 "	8 1/16 "
10	19 3/16 "	6 1/16 "	1 15/16 "	8 1/16 "
11	21"	5 7/8"	2 3/16 "	8 1/16 "
12	22 13/16 "	5 11/16 "	2 5/16 "	8 1/16 "

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

GUSSETS AND END PLATE ARE STITCH WELDED ON 3 SIDES. TWO TRIANGULAR SIDE PLATES ARE STITCH WELDED TO TOP PLATE, END PLATE AND GUSSETS.



GUSSET LOCATION

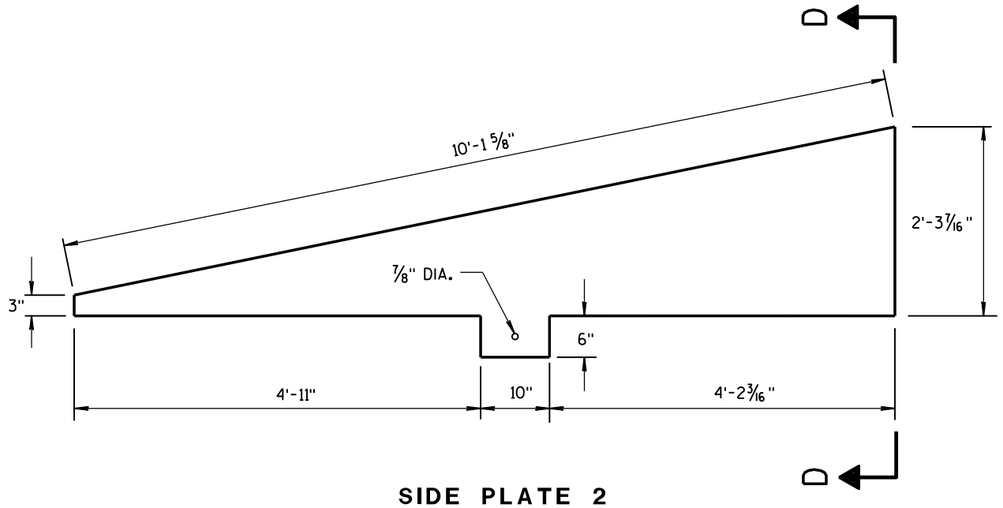
CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 56" PERMANENT CONCRETE BARRIER

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

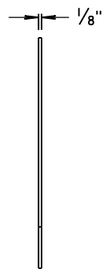
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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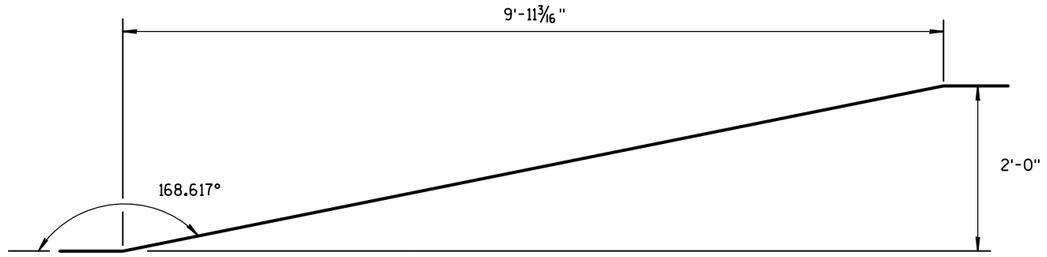
S.D.D. 14 B 7-14g



SIDE PLATE 2

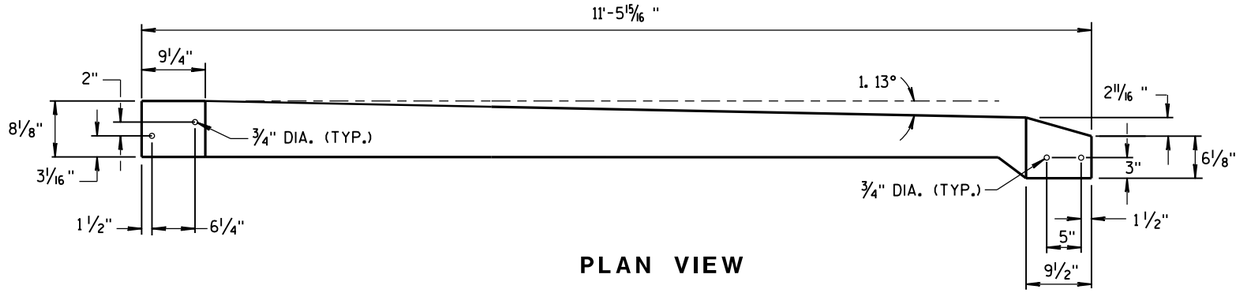


END VIEW



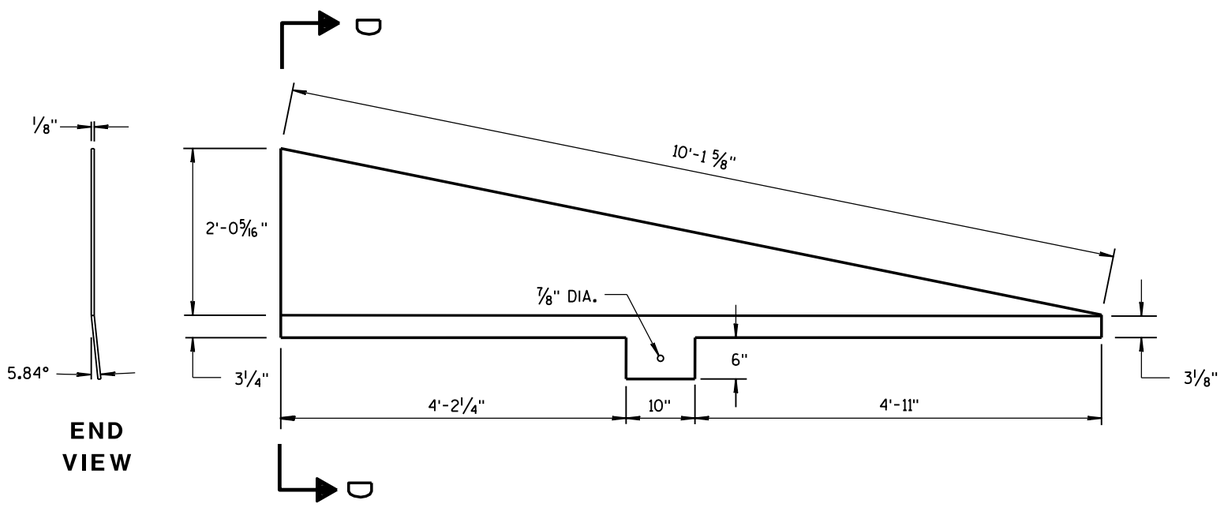
SIDE VIEW

TOP PLATE



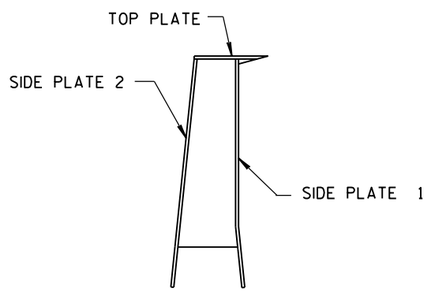
PLAN VIEW

TOP PLATE



END VIEW

SIDE PLATE 1



SECTION D-D

CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 56" PERMANENT CONCRETE BARRIER

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

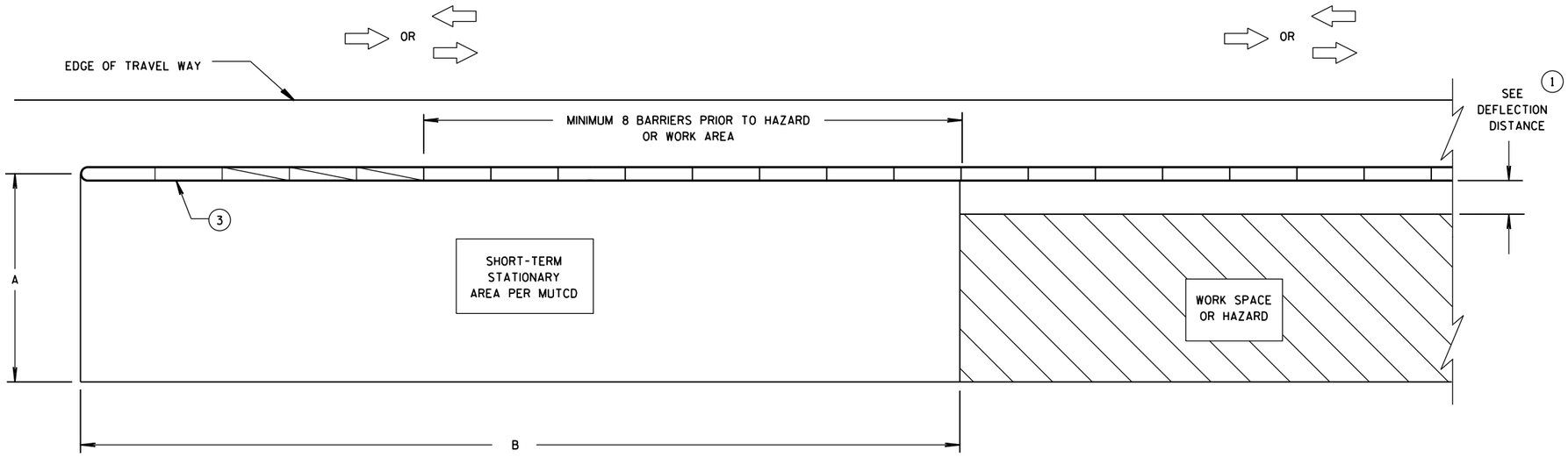
APPROVED
June 2014 — DATE
/S/ Jerry H. Zoaa — ROADWAY STANDARD DEVELOPMENT ENGINEER
FHWA

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S.D.D. 14 B 7-14h

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S.D.D. 14 B 7-14h



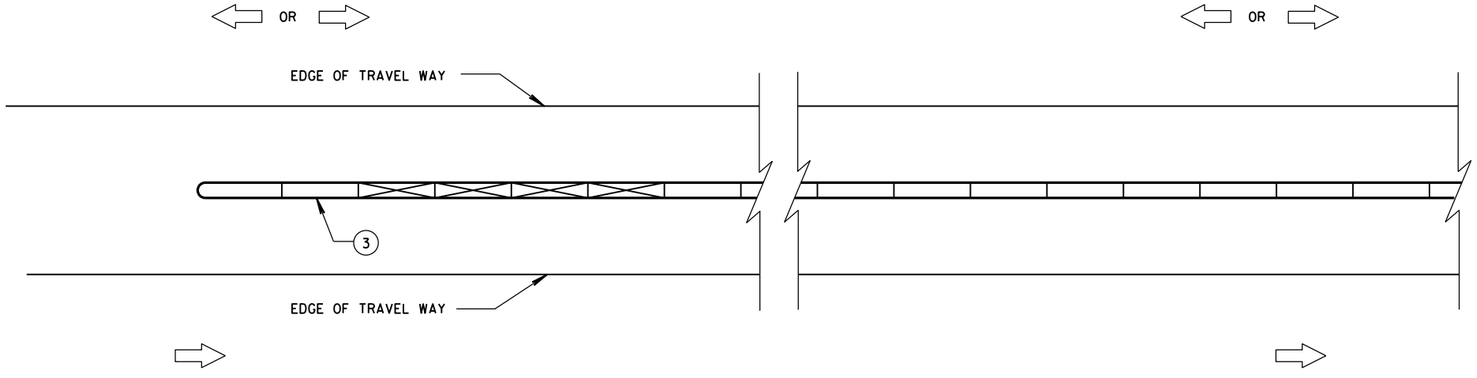
CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER INSTALLATION FOR TRAFFIC ON ONE SIDE OF BARRIER

DIMENSION A TABLE (2)

FACILITY	POSTED SPEED MPH	DIMENSION A	
		MIN. FT	MAX. FT
FREEWAY/EXPRESSWAY	ALL	15	20
NON-FREEWAY/EXPRESSWAY	GREATER THAN OR EQUAL TO 45	10	15
NON-FREEWAY/EXPRESSWAY	LESS THAN 45	8	10
AADT LESS THAN 1,500	ALL	8	10

DIMENSION B TABLE (2)

POSTED SPEEDS MPH	DIMENSION B FT
20	115
25	155
30	200
35	250
40	305
45	360
50	425
55	495
60	570
65	645



CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER INSTALLATION FOR TRAFFIC ON BOTH SIDES OF BARRIER

LEGEND

- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER

GENERAL NOTES

SEE STANDARD DETAIL DRAWING 14B7 FOR MORE INFORMATION.

DETAILS PROVIDE A GENERAL LAYOUT OF TEMPORARY CONCRETE BARRIER, CRASH CUSHIONS, SAND BARREL ARRAYS AND TIE DOWN TRANSITIONS. DETAILS PROVIDED MAY NOT FIT ALL POSSIBLE SITUATIONS OR SITE CONDITIONS. SEE OTHER SECTIONS OF THE CONTRACT OR PROJECT ENGINEER FOR MORE DETAILS.

ADDITIONAL TEMPORARY BARRIER MAY BE REQUIRED TO PROTECT TRAVELING PUBLIC FROM HAZARDS, CONTRACTOR'S OPERATIONS OR TO CONTROL TRAFFIC.

TEMPORARY BARRIER MAY BE REQUIRED TO BE ANCHORED TO PAVEMENT OR BRIDGE DECK.

FOR DETAILS ON CRASH CUSHION OR SAND BARREL ARRAYS SEE OTHER SECTIONS OF THE PLAN AND MANUFACTURE'S DETAILS.

SLOPES LEADING TO TEMPORARY BARRIER, CRASH CUSHION OR SAND BARREL ARRAY ARE 10:1 OR LESS.

(1) FOR DEFLECTION INFORMATION SEE STANDARD DETAIL DRAWING 14B7.

(2) VALUES PROVIDED MAY NOT FIT ALL POSSIBLE SITUATIONS OR SITE CONDITIONS. SEE OTHER SECTIONS OF THE CONTRACT OR PROJECT ENGINEER FOR MORE DETAILS.

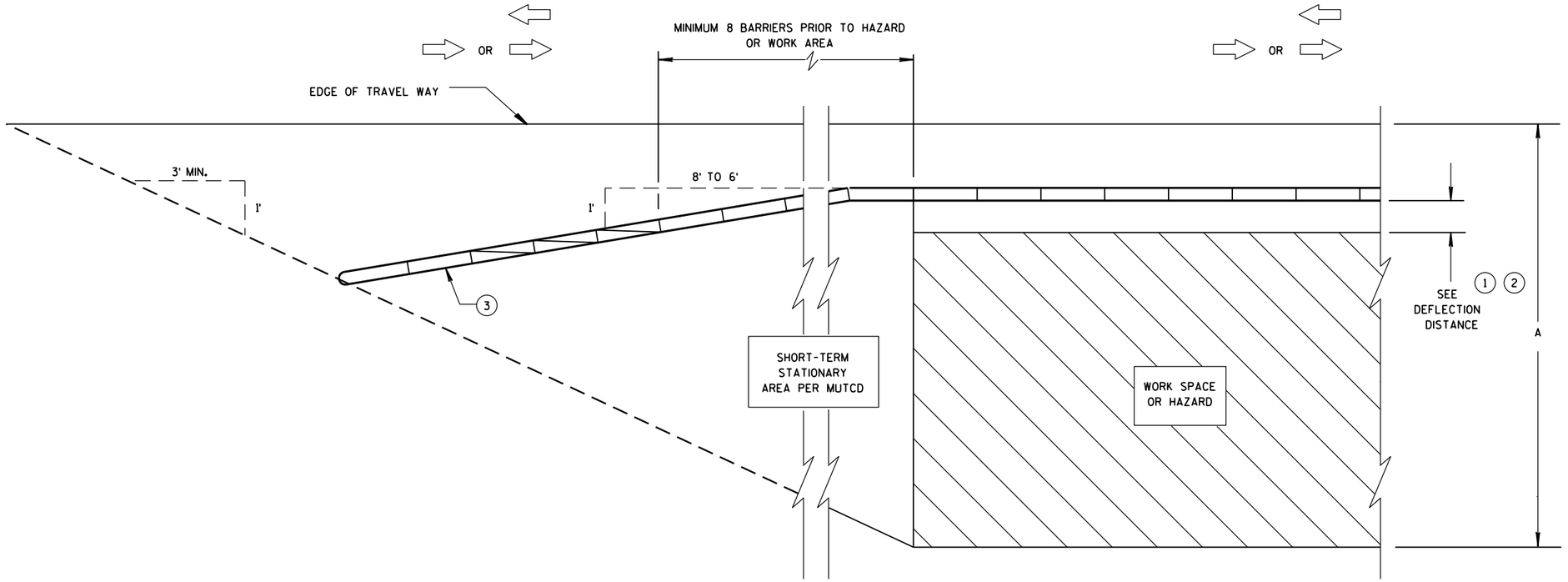
(3) ANCHOR TEMPORARY BARRIER ACCORDING TO CRASH CUSHION OR SAND BARREL MANUFACTURER'S RECOMMENDATIONS. IF MANUFACTURER'S RECOMMENDATIONS ARE NOT PROVIDED, ANCHOR 3 PINS ON TRAFFIC SIDE.

CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

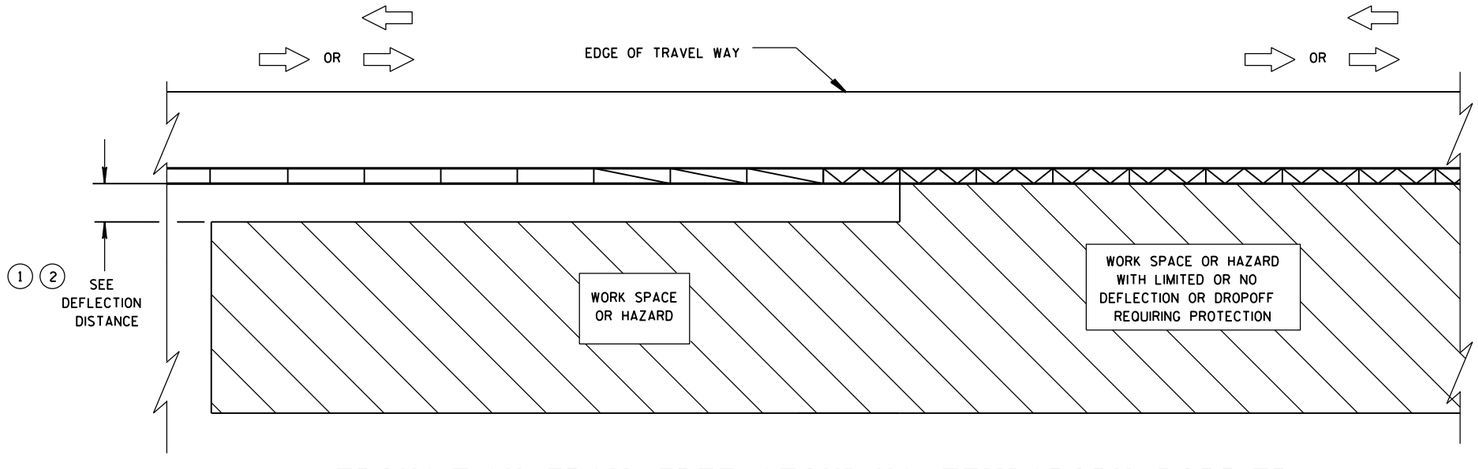
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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S.D.D. 14 B 8-2a



CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER INSTALLATION FOR TRAFFIC ON ONE SIDE - FLARED INSTALLATION



TRANSITION FROM FREE STANDING TEMPORARY BARRIER TO ANCHORED BARRIER

LEGEND

- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER

CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

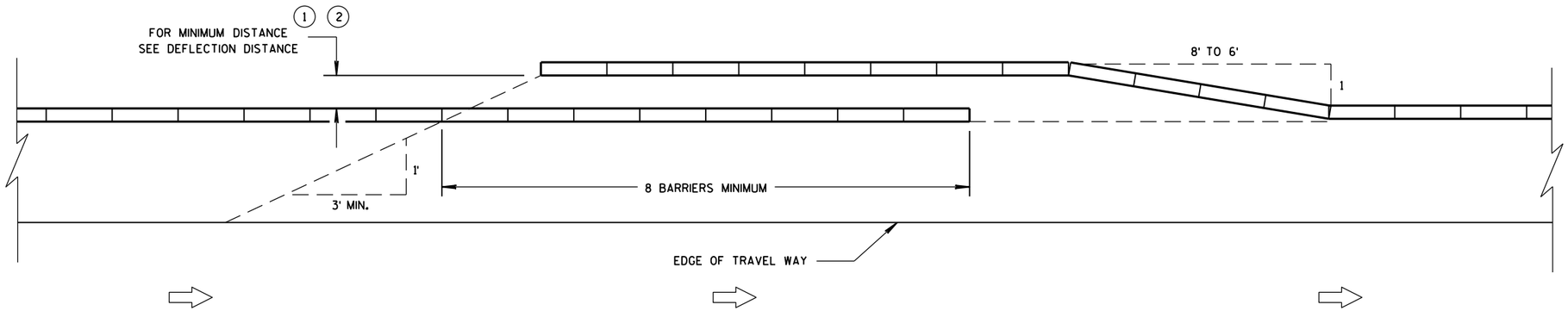
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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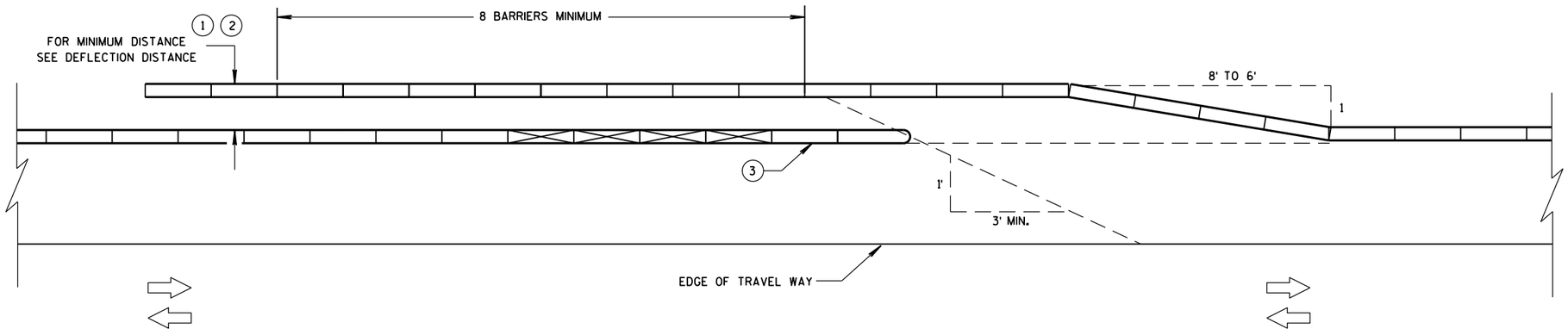
S.D.D. 14 B 8-2b

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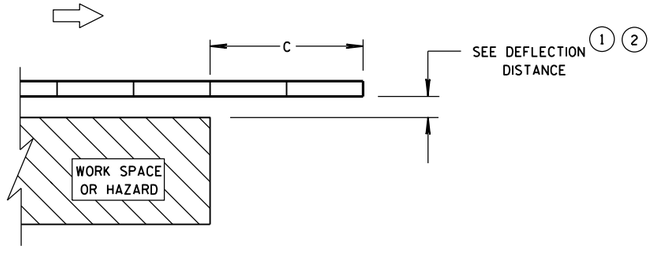
S.D.D. 14 B 8-2b



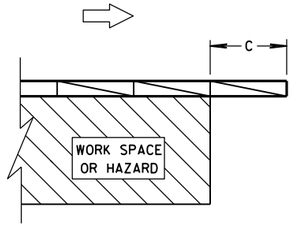
TEMPORARY BARRIER OVERLAP - ONE-WAY TRAFFIC



TEMPORARY BARRIER OVERLAP - TWO-WAY TRAFFIC



ENDING TEMPORARY BARRIER DOWNSTREAM - UNANCHORED



ENDING TEMPORARY BARRIER DOWNSTREAM - ANCHORED

LEGEND

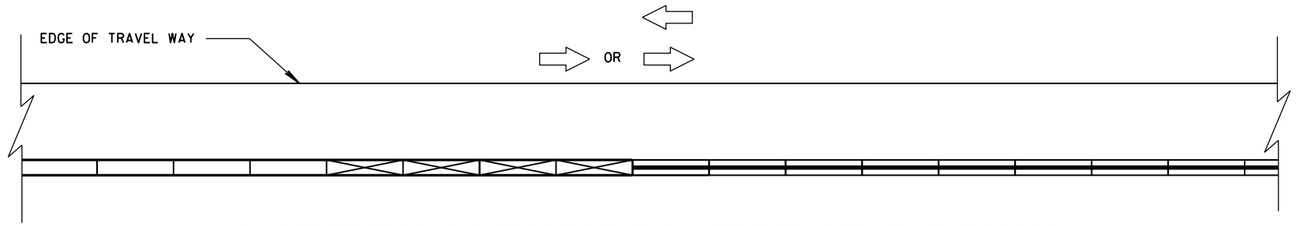
- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER

CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

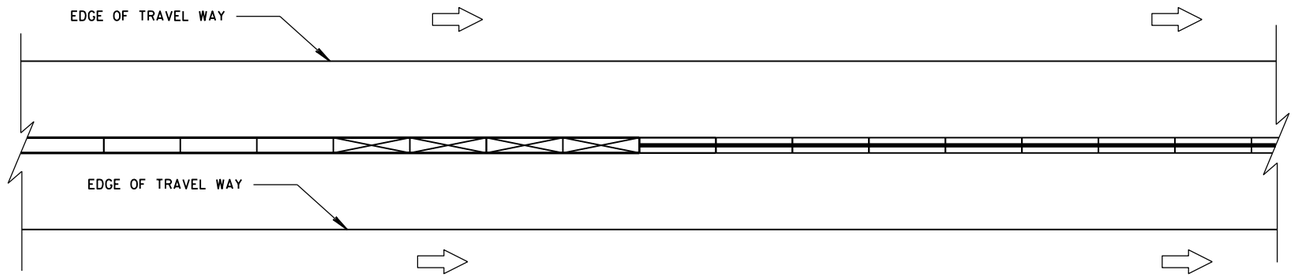
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 14 B 8-2c



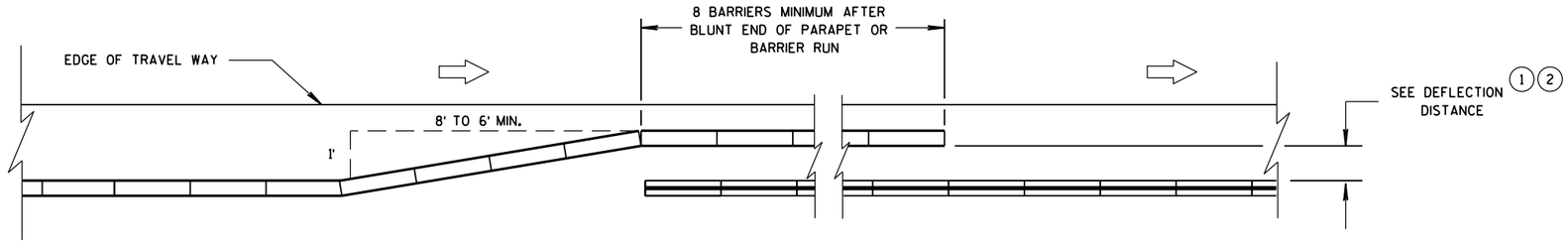
CONNECTING TEMPORARY BARRIER TO PERMANENT
CONCRETE BARRIER-TRAFFIC ON ONE SIDE



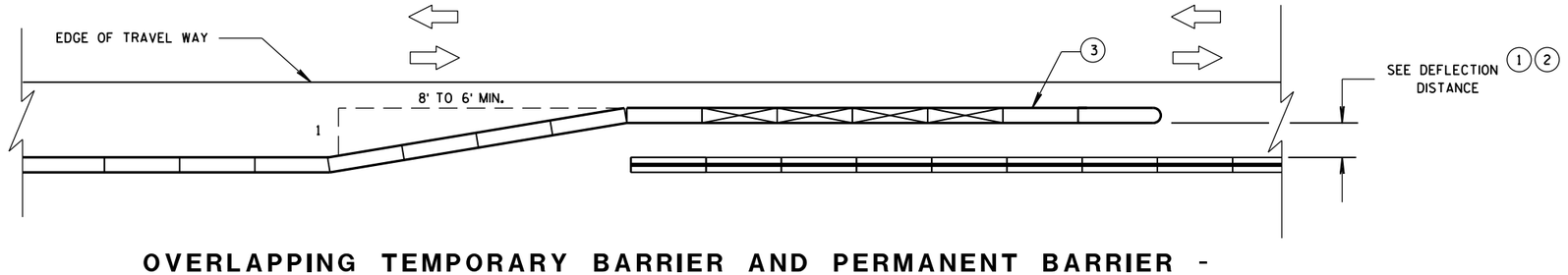
CONNECTING TEMPORARY BARRIER TO PERMANENT
CONCRETE BARRIER-TRAFFIC ON BOTH SIDES

LEGEND

- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER



OVERLAPPING TEMPORARY BARRIER AND PERMANENT BARRIER -
ONE WAY TRAFFIC



OVERLAPPING TEMPORARY BARRIER AND PERMANENT BARRIER -
TWO WAY TRAFFIC

CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 14 B 8-2d

LEGEND

DIRECTION OF TRAVEL

CRASH CUSHION OR SAND BARREL ARRAY

SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS

SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS

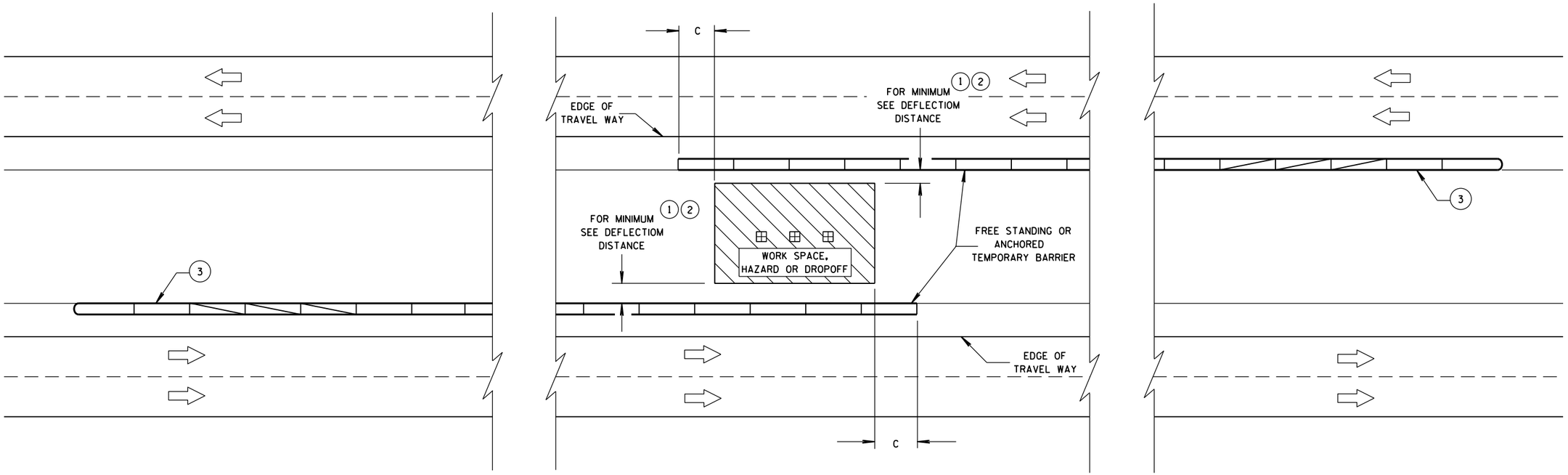
3 PINS PLACED ON TRAFFIC SIDE OF BARRIER

PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET

FREE STANDING TEMPORARY BARRIER

DIMENSION C TABLE (2)

AVAILABLE DEFLECTION DISTANCE	MINIMUM LENGTH OF BARRIER BEYOND HAZARD FT
GREATER THAN 8'	12.5
LESS THAN OR EQUAL TO 8' BUT GREATER THAN 4'	50
LESS THAN OR EQUAL TO 4'	100



CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINNER
FHWA

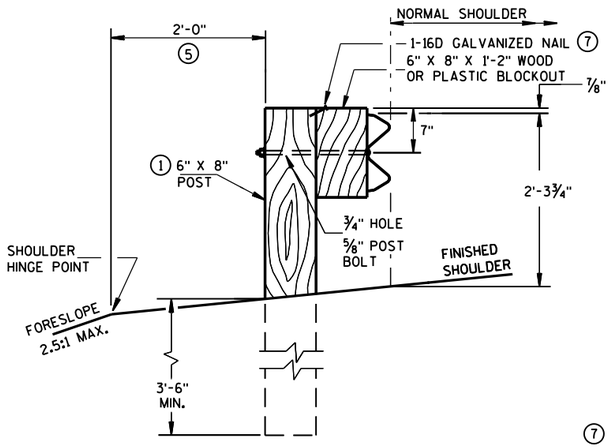
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S.D.D. 14 B 8-2e

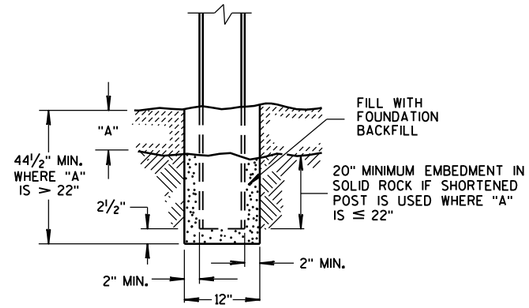
GENERAL NOTES

1. W6 X 9 OR W6 X 8.5 STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS ARE ACCEPTABLE ALTERNATIVES FOR 6" X 8" WOOD POSTS WITH WOOD OR PLASTIC BLOCKOUTS. USE APPROVED NOTCHED PLASTIC BLOCKOUTS WITH STEEL POSTS. APPROVED PLASTIC BLOCKOUT DESIGNS MAY VARY FROM THIS TYPICAL DETAIL WHEN USED IN CONJUNCTION WITH STEEL POSTS.
   DO NOT MIX STEEL POSTS AND WOOD POSTS IN A SINGLE INSTALLATION.
2. USE STRUCTURAL STEEL POSTS CONFORMING TO ASTM A 36. GALVANIZED POSTS ACCORDING TO AASHTO M 111. EITHER SET THE POSTS IN DRILLED HOLES OR DRIVE TO GRADE. REMOVE MUSHROOMING CAUSED BY DRIVING AND REPAIR DAMAGED SPELTER COATING ON GALVANIZED POSTS.
3. INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.
4. USE EITHER WOOD OR APPROVED PLASTIC BLOCKOUTS ON WOOD POSTS.
5. IF THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING, W BEAM (LHW).
6. IF ROCK IS ENCOUNTERED DURING EXCAVATION, THE ENGINEER MAY APPROVE USING A 12 INCH DIAMETER POST HOLE EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE APPROXIMATELY 2½ INCHES DEEP. CUT THE POSTS TO LENGTH AND PLACE IN YHE HOLE. BACKFILL WITH MATERIAL EXCAVATED FROM THE HOLE AND COMPACT ADEQUATEY.
7. WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

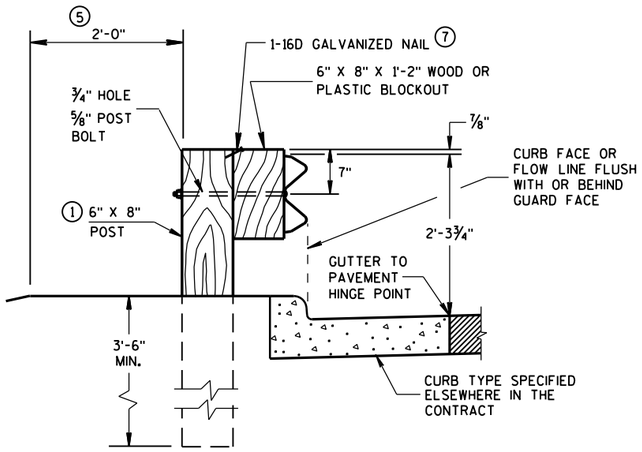
INSTALL BEAM GUARD SECTIONS AND ALL NECESSARY HARDWARE ACCORDING TO THE APPLICABLE PLAN AND CURRENT STANDARD AND SUPPLEMENTAL SPECIFICATIONS.
ALL DIMENSIONS ARE SUBJECT TO MANUFACTURER'S TOLERANCES EXCEPT WHERE ALLOWABLE TOLERANCES ARE SHOWN.



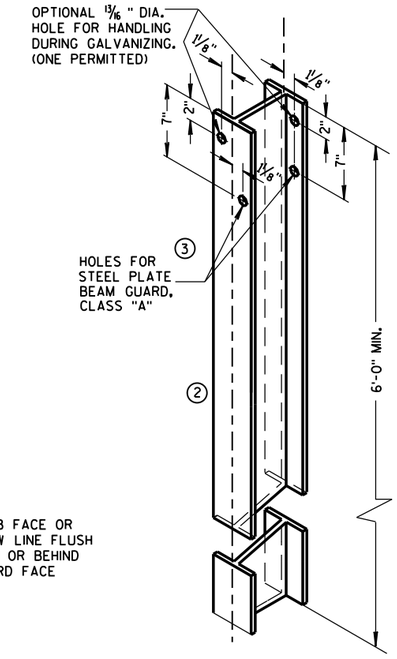
END VIEW
LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION



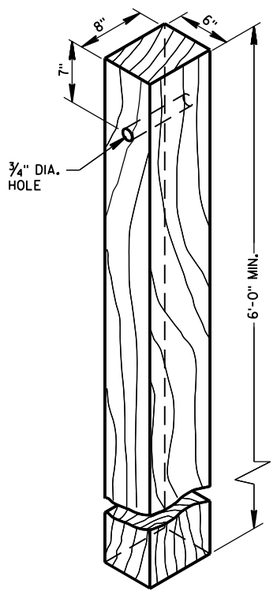
END VIEW
SETTING STEEL OR WOOD POST IN ROCK ⑥



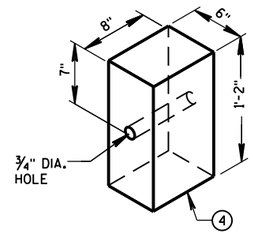
END VIEW
LOCATED ALONG A CURBED ROADWAY



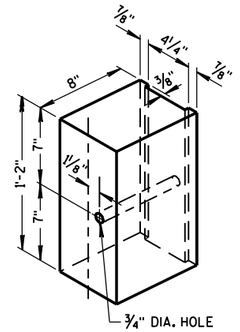
STEEL POST &
HOLE PUNCHING DETAIL
(W6 X 9) ①
ALL HOLES 13/16" DIAMETER EXCEPT AS NOTED



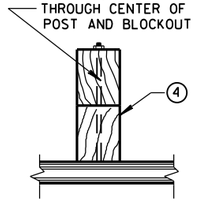
WOOD POST
(6"X8") NOMINAL



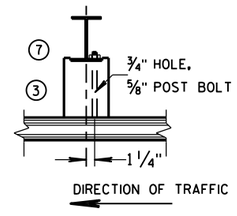
WOOD OR PLASTIC
BLOCKOUT FOR
WOOD POSTS



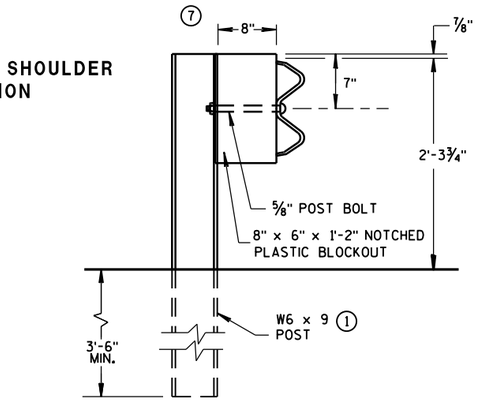
TYPICAL NOTCHED ①
PLASTIC BLOCKOUT
FOR STEEL POSTS



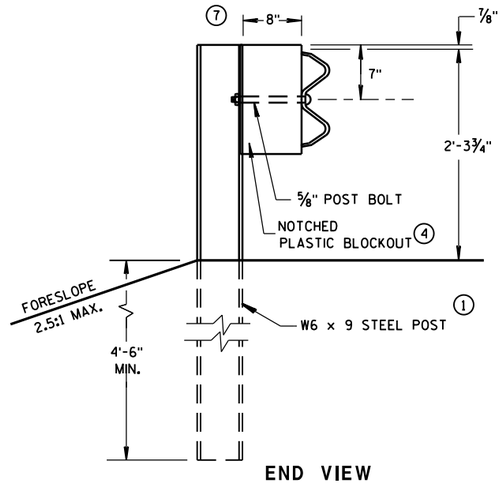
PLAN VIEW
WOOD POST, BLOCKOUT & BEAM



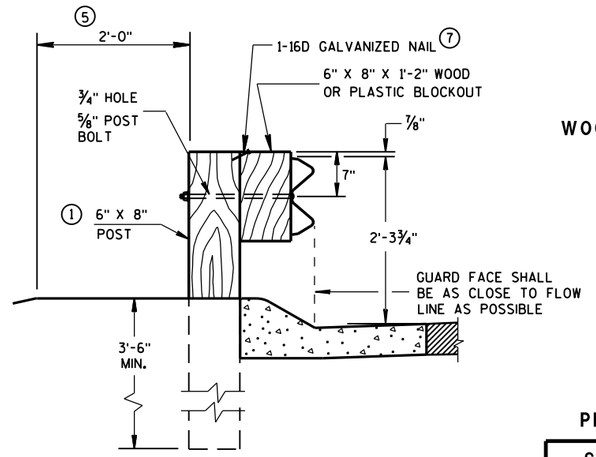
PLAN VIEW
STEEL POST, NOTCHED
PLASTIC BLOCKOUT & BEAM



END VIEW
STEEL POST & NOTCHED
PLASTIC BLOCKOUT ALTERNATIVE
STANDARD INSTALLATION



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



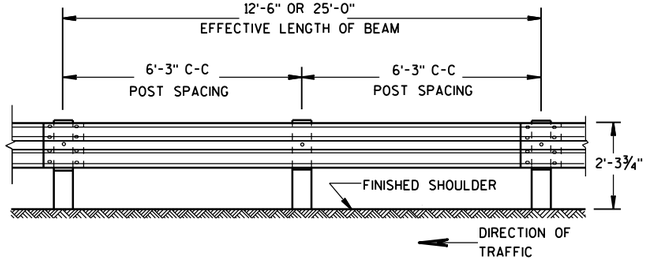
END VIEW
LOCATED ALONG A
MOUNTABLE CURBED ROADWAY

TYPICAL INSTALLATION OF STEEL PLATE BEAM GUARD

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

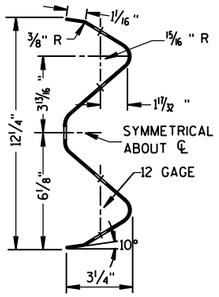
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

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

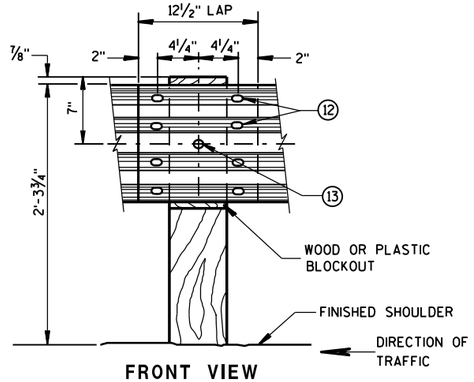


FRONT VIEW

POST SPACING STANDARD INSTALLATION



SECTION THRU W BEAM



FRONT VIEW

BEAM SPLICE AT WOOD POST AND POST MOUNTING DETAIL

GENERAL NOTES

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

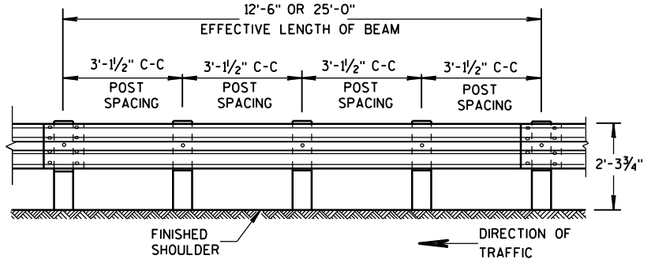
(9) DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

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

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

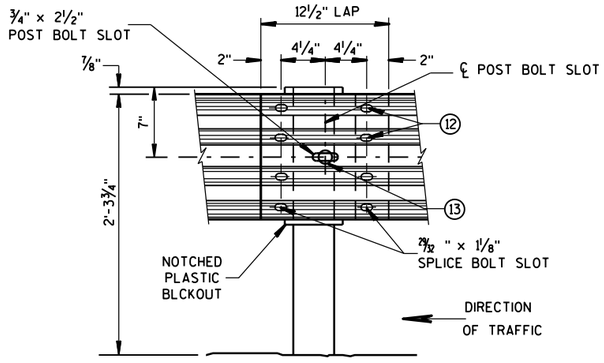
(12) 8 -⅝" ϕ X 2" BUTTON HEAD BOLTS WITH OVAL SHOULDERS & RECESS NUTS.

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



FRONT VIEW

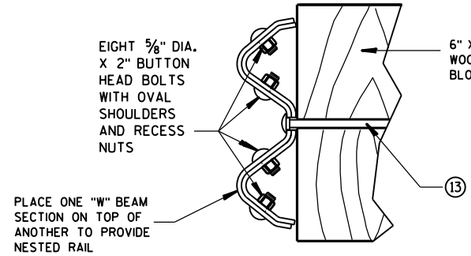
POST SPACING FOR LONGER POST AT HALF POST SPACING W BEAM (LHW)



FRONT VIEW

BEAM SPLICE AT STEEL POST

TYPICAL SPLICING DETAILS OF STEEL PLATE BEAM GUARD

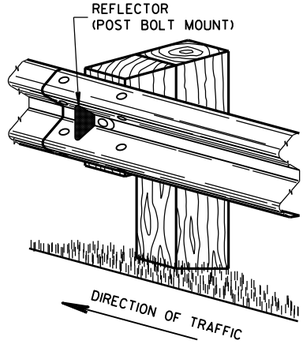


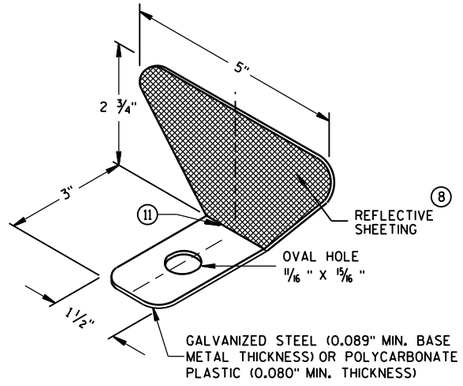
NESTED W BEAM (NW)

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

REFLECTOR SPACING (9)

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



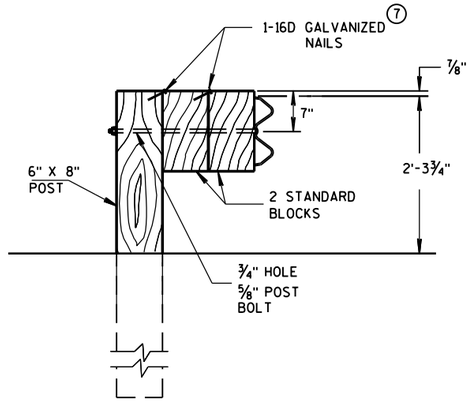


ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION (8)

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

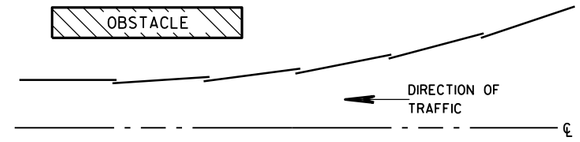
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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

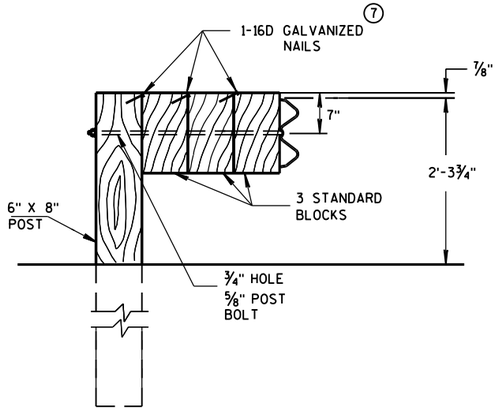


DETAIL FOR DOUBLE BLOCKS

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

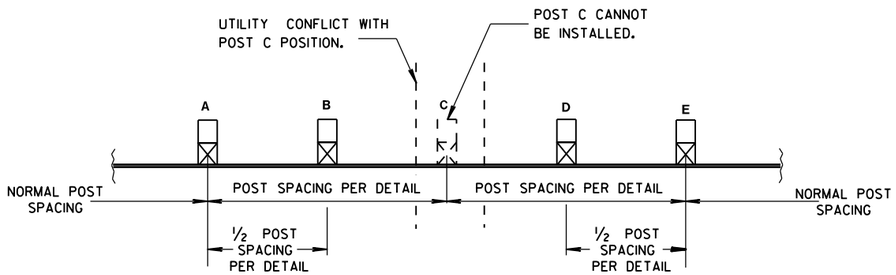


PLAN VIEW
BEAM LAPPING DETAIL



DETAIL FOR TRIPLE BLOCKS

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



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION

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

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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

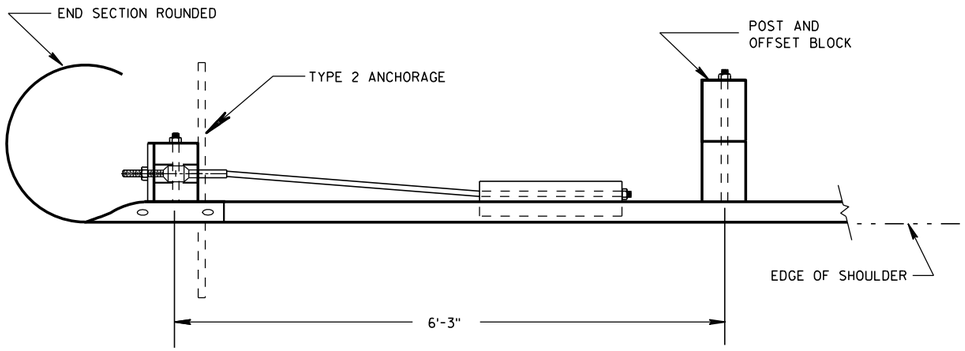
June 2016 — DATE

/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER

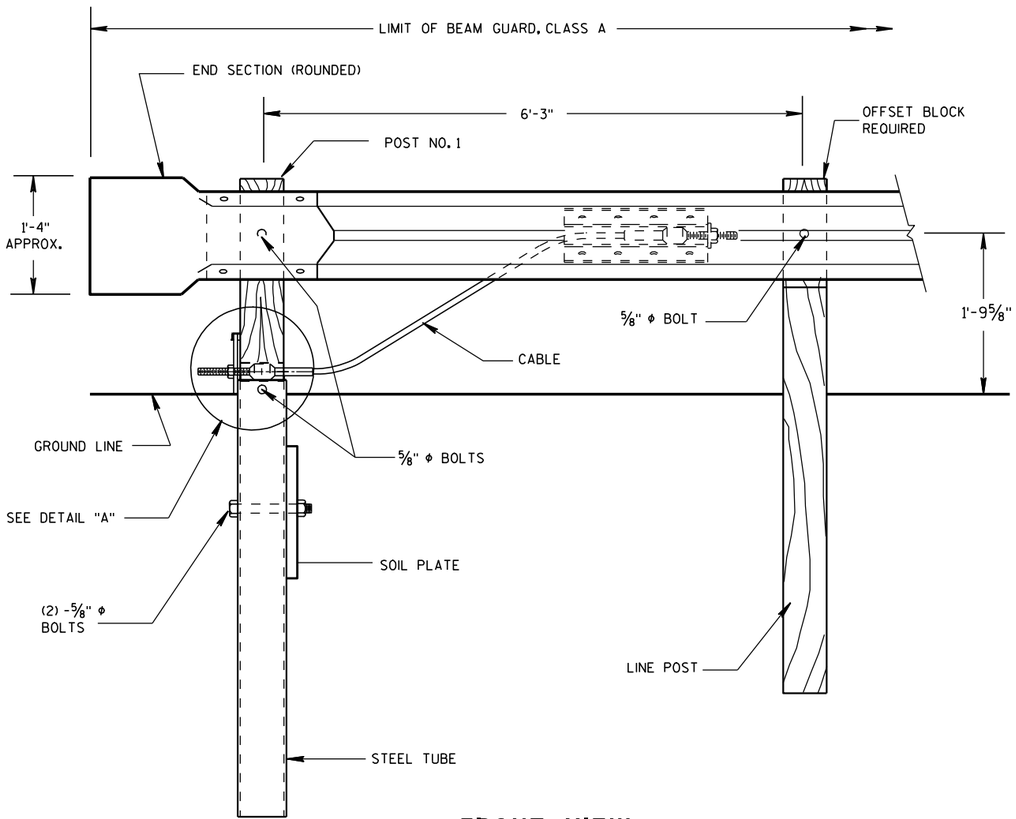
FHWA

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



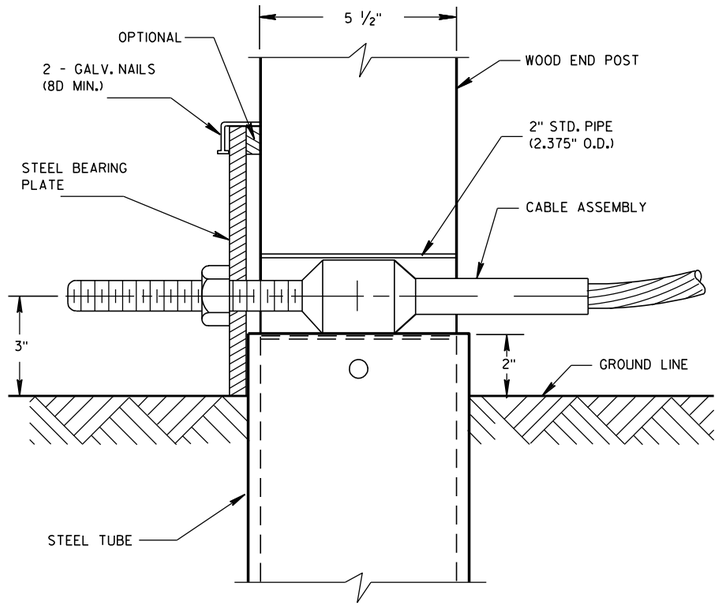
PLAN VIEW



FRONT VIEW

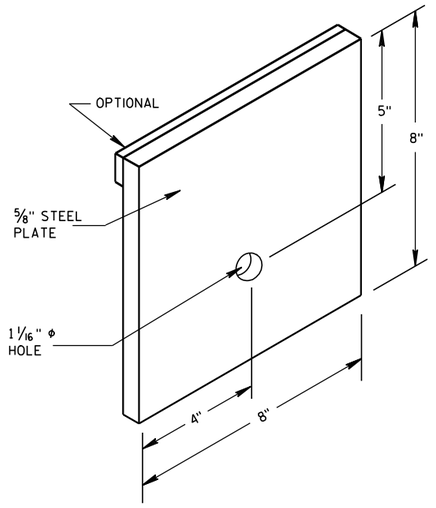
END TREATMENT WITH TYPE 2 ANCHORAGE

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



DETAIL "A"

POST NO. 1



STEEL BEARING PLATE

ANCHORAGE FOR STEEL PLATE BEAM GUARD TYPE 2

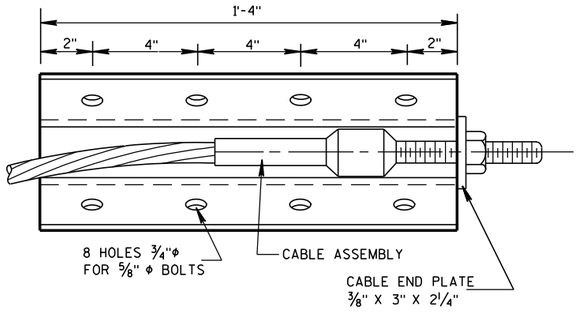
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

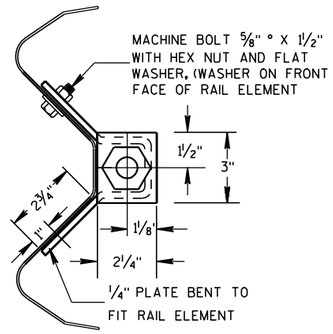
S.D.D. 14 B 16-4a

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

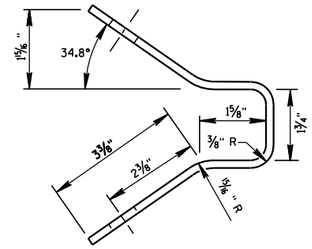


FRONT VIEW

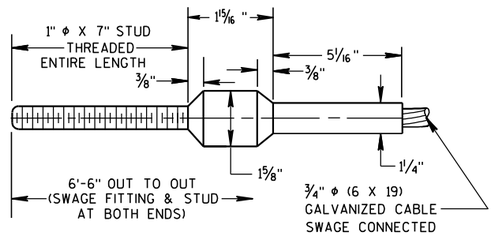


END VIEW

ANCHOR PLATE DETAIL



END VIEW OF BRACKET



CABLE ASSEMBLY

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

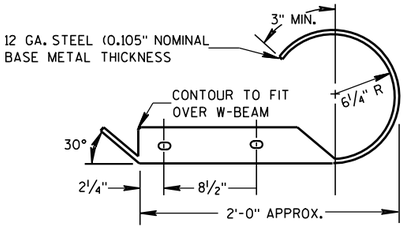
GENERAL NOTES

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

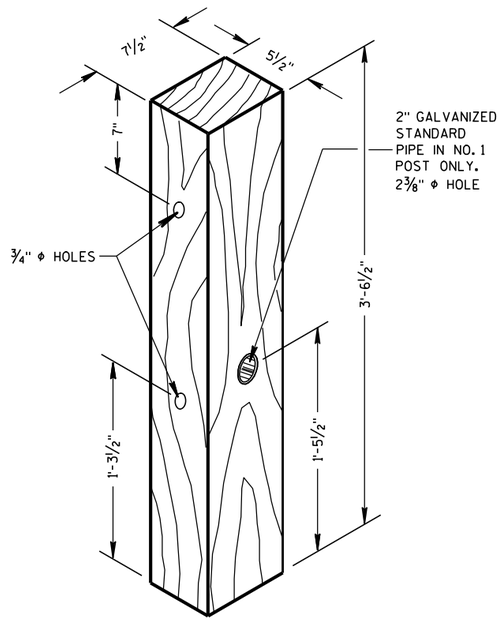
STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A-500 GRADE B OR ASTM A-501.

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

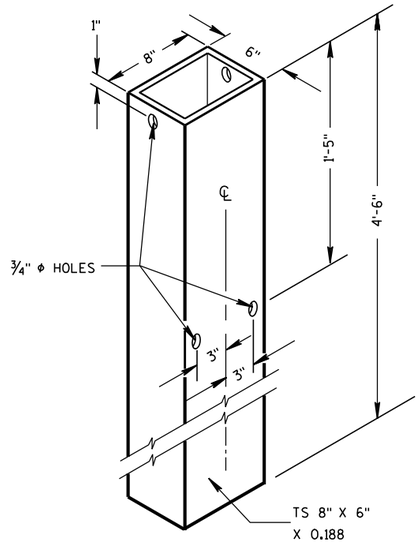
TYPE 2 ANCHORAGE SHALL CONSIST OF A STEEL TUBE, SOIL PLATE WOOD BREAKAWAY POST, BEARING PLATE, ANCHOR PLATE, CABLE ASSEMBLY AND ALL ASSOCIATED HARDWARE, ALL STEEL PARTS SHALL BE GALVANIZED.



PLAN VIEW

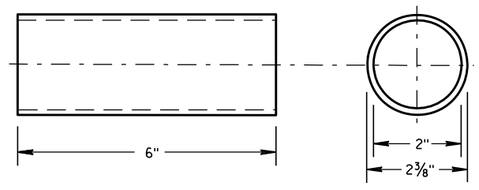


WOOD BREAKAWAY POST



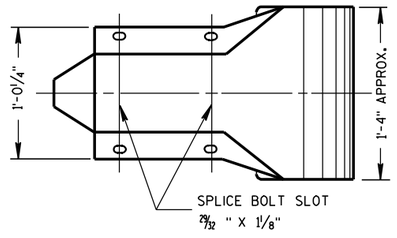
STEEL TUBE

STEEL TUBE SHALL CONFORM TO
REQUIREMENTS OF ASTM A500

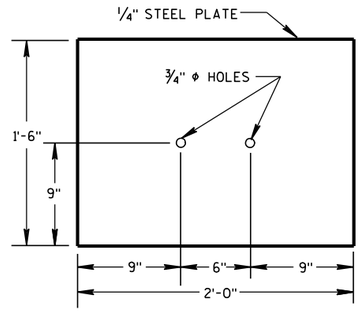


BREAKAWAY TERMINAL POST SLEEVE

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



FRONT VIEW
W BEAM END SECTION ROUNDED



SOIL PLATE

ANCHORAGE FOR STEEL
PLATE BEAM GUARD
TYPE 2

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

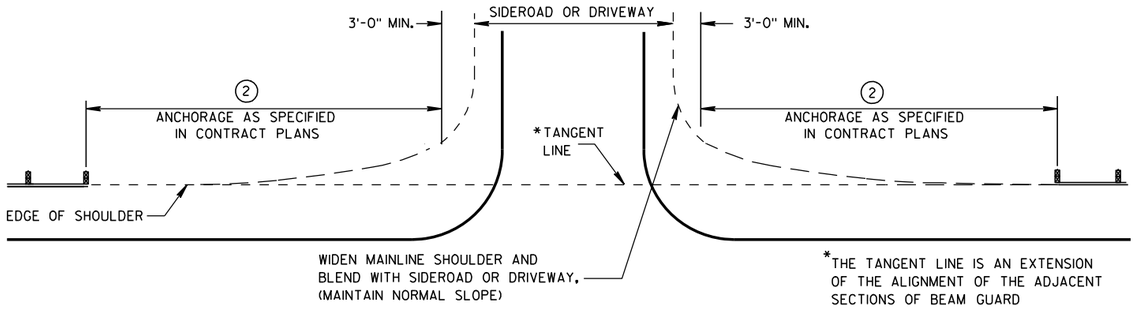
APPROVED
8/21/2007
DATE
/S/ Jerry H. [illegible]
ROADWAY STANDARDS ENGINEER
185
FHWA

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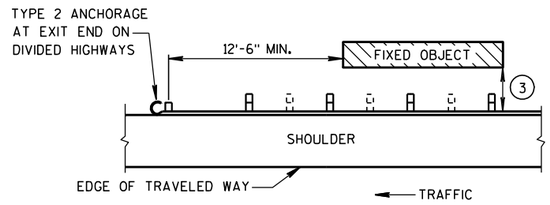
S.D.D. 14 B 16-4b

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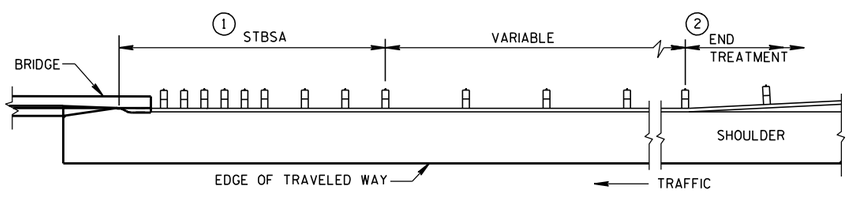
S.D.D. 14 B 16-4b



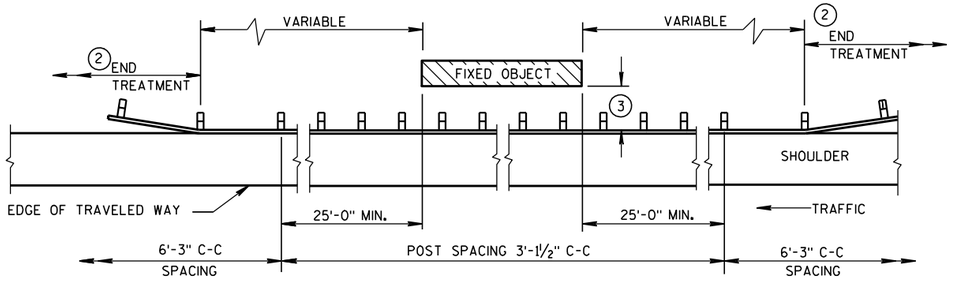
BEAM GUARD AT SIDEROADS OR DRIVEWAYS



BEAM GUARD AT OBSTACLES EXIT END - ONE WAY TRAFFIC

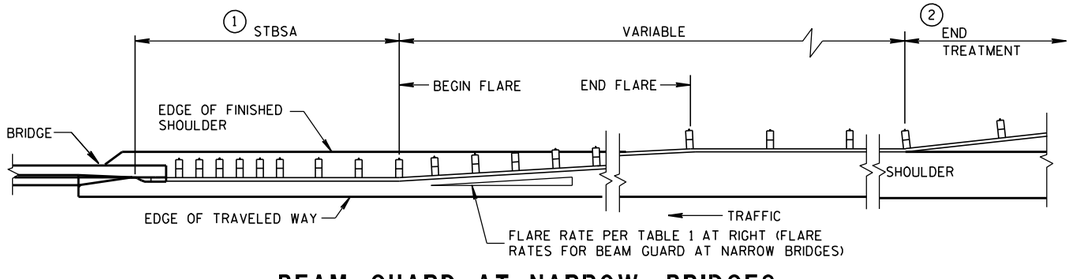


BEAM GUARD AT FULL WIDTH BRIDGES



BEAM GUARD AT OBSTACLES - TWO WAY TRAFFIC

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



BEAM GUARD AT NARROW BRIDGES

(FLARED TO SHOULDER EDGE, THEN PARALLEL TO ROADWAY)

TABLE 1
FLARE RATES FOR BEAM GUARD AT NARROW BRIDGES

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

GENERAL NOTES

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

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

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

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

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

(3)

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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8-21-07
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER

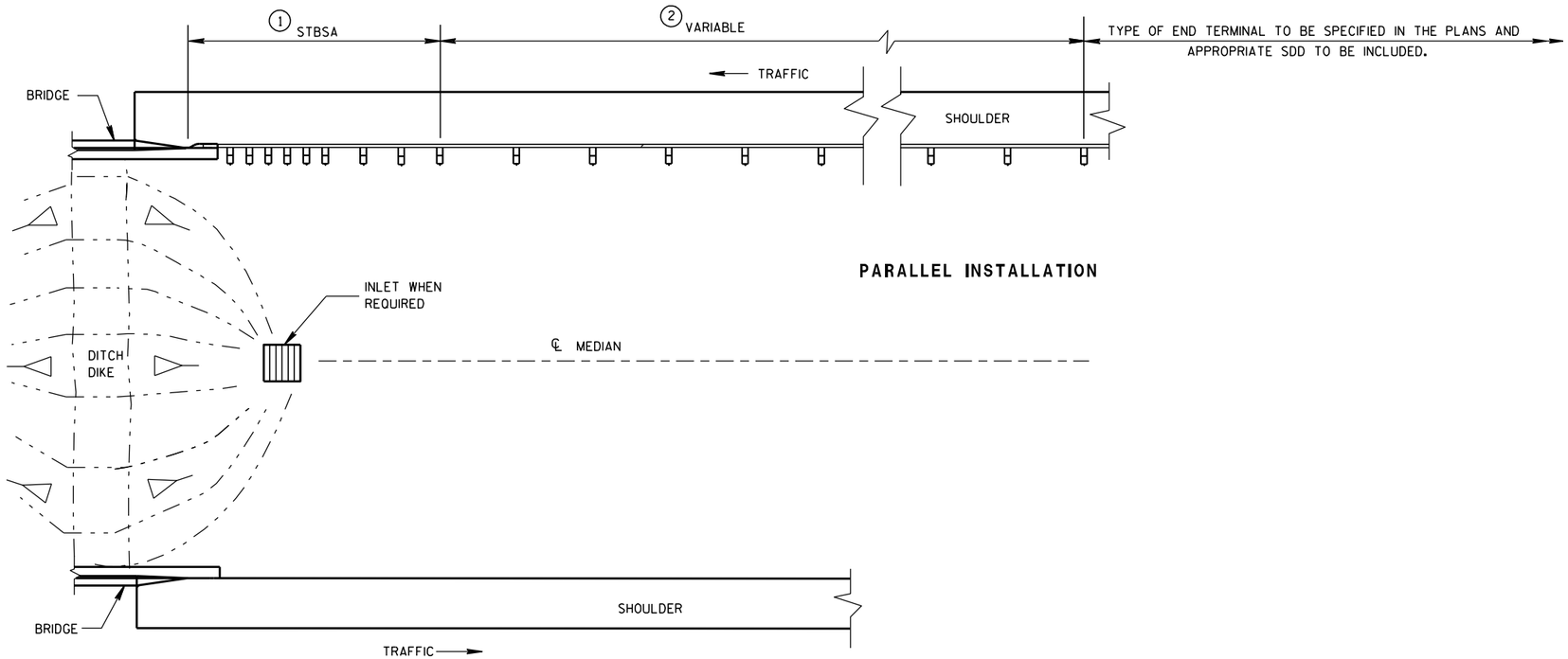
FHWA

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S.D.D. 14 B 18-6a

GENERAL NOTES

1. STEEL THRIE BEAM STRUCTURAL APPROACH (STBSA) - SEE CURRENT SDD 14B20.
2. LOCATIONS AND LENGTHS OF BEAM GUARD ARE SHOWN ELSEWHERE IN THE PLAN.



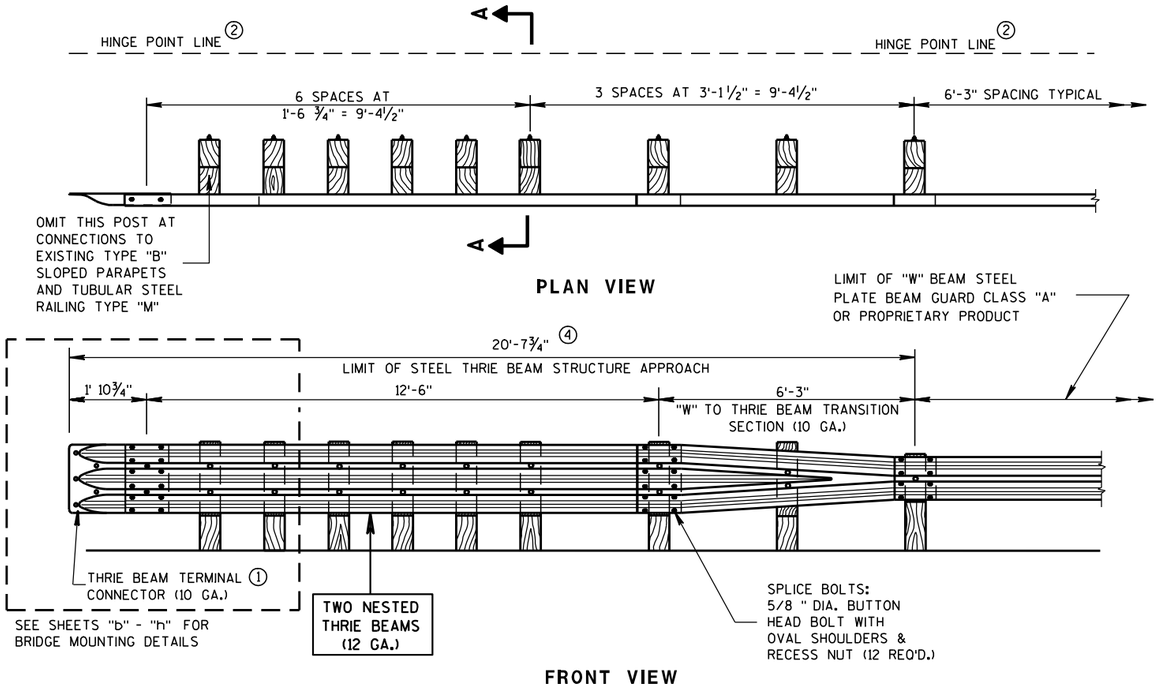
PARALLEL INSTALLATION

BEAM GUARD AT MEDIAN APPROACH TO BRIDGES

STEEL PLATE BEAM GUARD CLASS "A" AT MEDIAN APPROACH TO BRIDGES	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
8-21-07 DATE	/S/ Jerry H. Zogg ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA	

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S.D.D. 14 B 18-6b



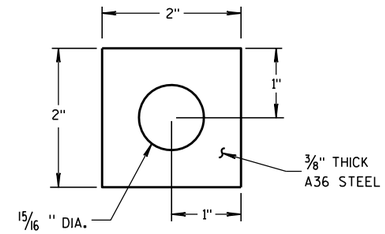


PLATE WASHER DETAIL

GENERAL NOTES

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

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

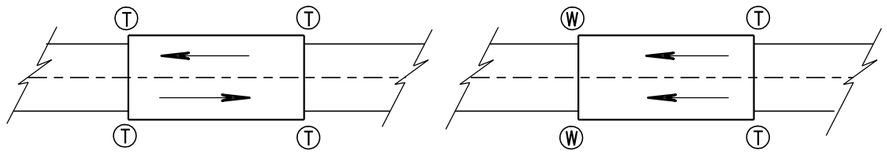
IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2 1/2" , AND 12" DIAMETER AROUND POST. SEE 14B15 FOR MORE DETAILS.

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

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

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

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



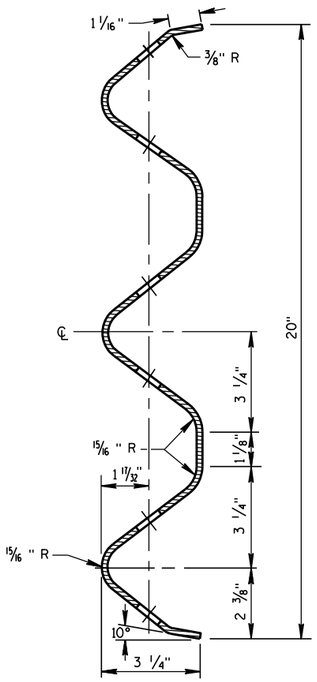
TWO WAY TRAFFIC

ONE WAY TRAFFIC

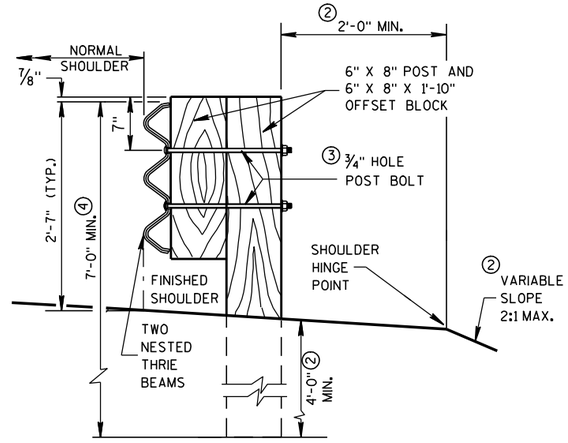
T THRIE BEAM CONNECTION

W W-BEAM CONNECTION WHEN REQUIRED

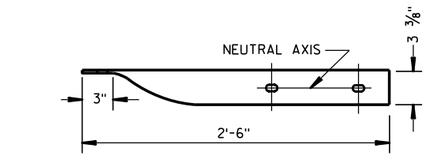
TYPICAL LOCATIONS OF THRIE BEAM AND W-BEAM CONNECTIONS TO BRIDGE

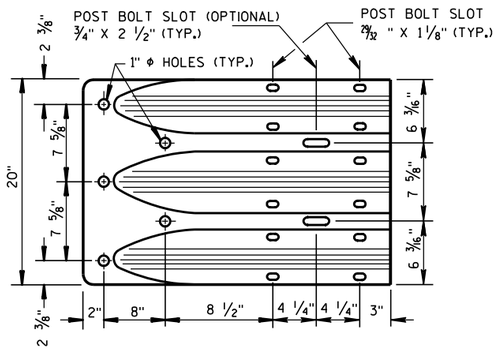


SECTION THRU THRIE BEAM RAIL ELEMENT

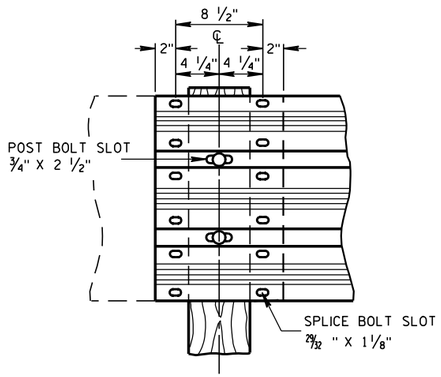


SECTION A-A





THRIE BEAM TERMINAL CONNECTOR



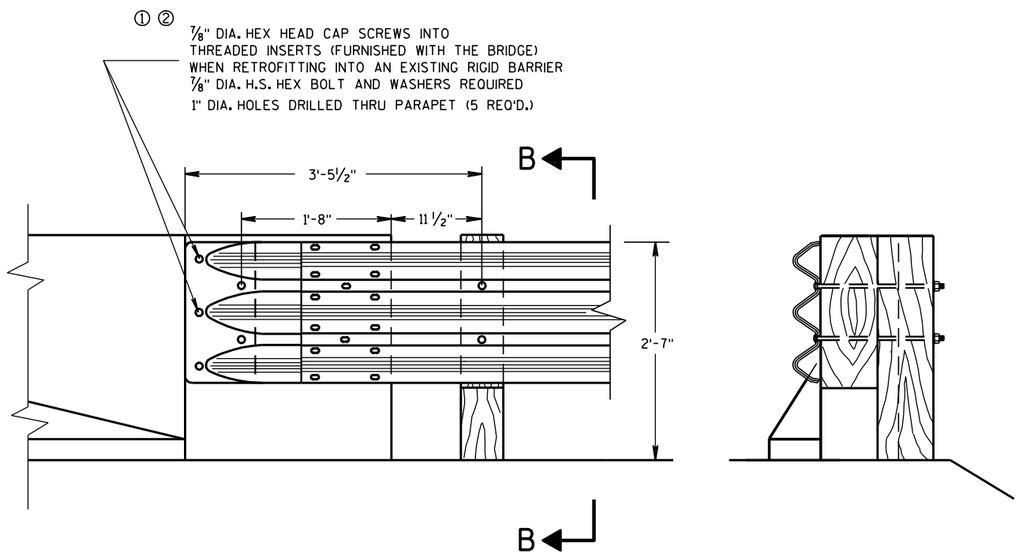
THRIE BEAM SPLICE

STEEL THRIE BEAM STRUCTURE APPROACH

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

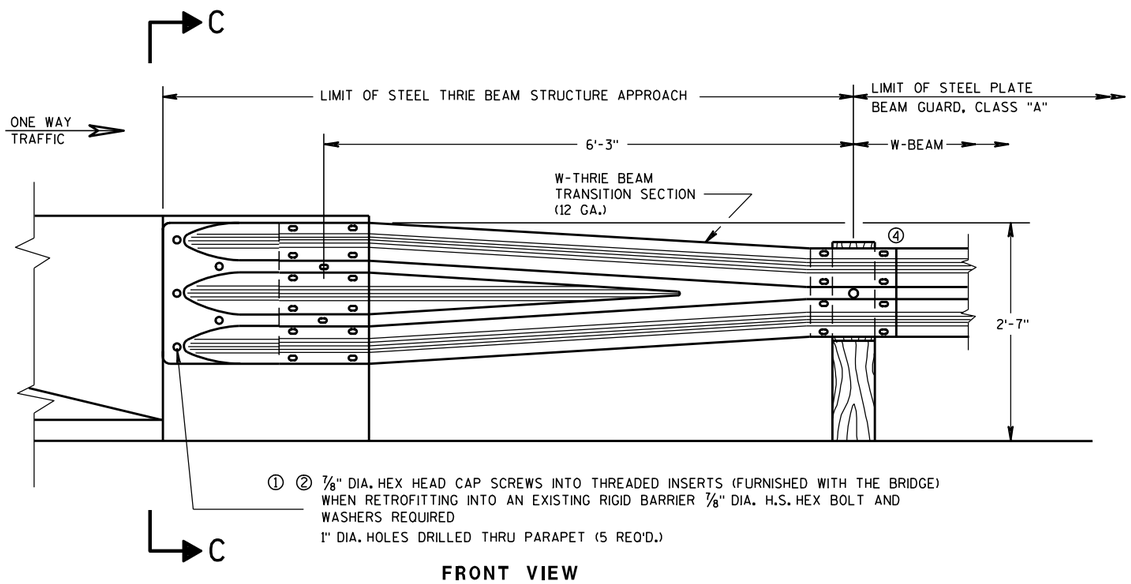
FHWA



FRONT VIEW

SECTION B-B

THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS



① ② ⅞" DIA. HEX HEAD CAP SCREWS INTO THREADED INSERTS (FURNISHED WITH THE BRIDGE) WHEN RETROFITTING INTO AN EXISTING RIGID BARRIER ⅞" DIA. H.S. HEX BOLT AND WASHERS REQUIRED
1" DIA. HOLES DRILLED THRU PARAPET (5 REQ'D.)

FRONT VIEW

W BEAM TRANSITION AND CONNECTION TO BRIDGE PARAPETS WITH SQUARE ENDS

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

GENERAL NOTES

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

BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A325, A449 AND GALVANIZED PER STANDARD SPECIFICATIONS 614.

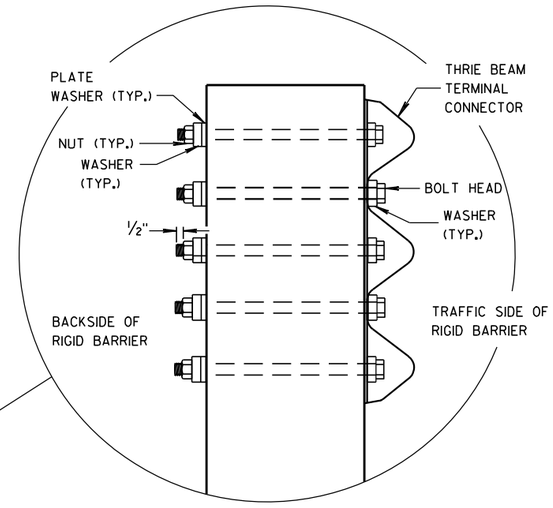
① DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

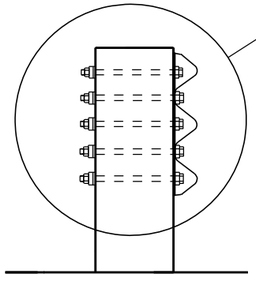
② BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM TERMINAL CONNECTOR. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X ⅝" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

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

④ W6 X 9 OR W6 X 8.5 STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS ARE ACCEPTABLE ALTERNATIVES FOR 6" X 8" WOOD POST WITH WOOD OR PLASTIC BLOCKOUTS. USE APPROVED NOTCHED PLASTIC BLOCKOUTS WITH STEEL POSTS.

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





SECTION C-C

STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO SQUARE END PARAPETS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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

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

GENERAL NOTES

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

BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A325, A449 AND GALVANIZED PER STANDARD SPECIFICATIONS 614.

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

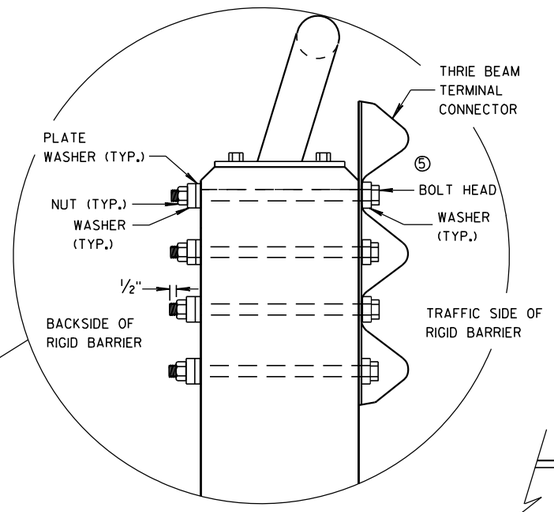
② BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM TERMINAL CONNECTOR. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X ⅝" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

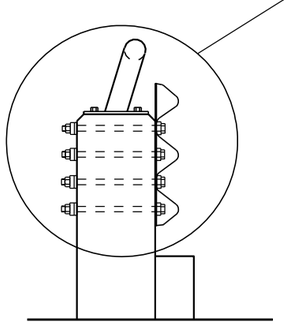
③ THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 ½".

④ W6 X 9 OR W6 X 8.5 STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS ARE ACCEPTABLE ALTERNATIVES FOR 6" X 8" WOOD POST WITH WOOD OR PLASTIC BLOCKOUTS. USE APPROVED NOTCHED PLASTIC BLOCKOUTS WITH STEEL POSTS.

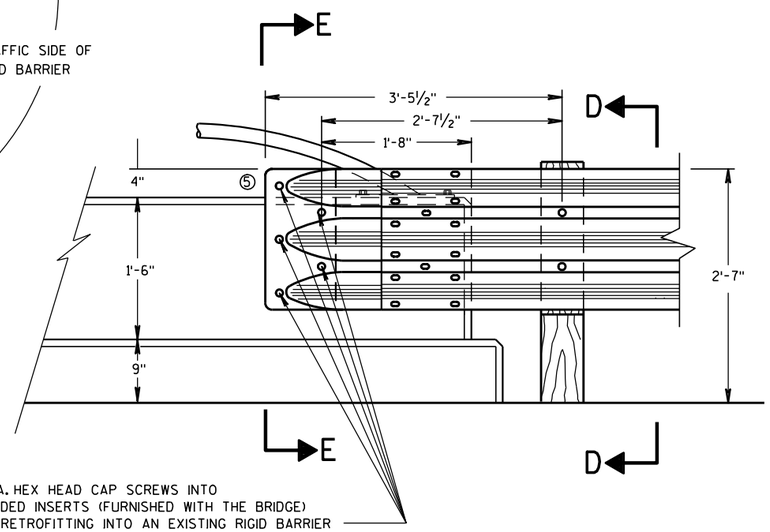
⑤ BOLT, NUT AND WASHERS NOT REQUIRED FOR THIS LOCATION WHEN RETROFITTING AN EXISTING PAPAPET AND THE HOLE IS EITHER ABOVE PARAPET OR WITHIN 4 INCHES OF THE EDGE OF PARAPET.

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



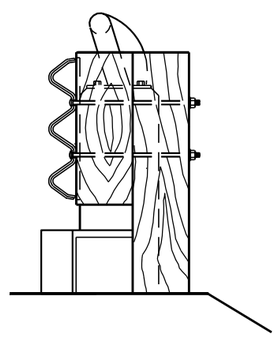


SECTION E-E



① ② ⅞" DIA. HEX HEAD CAP SCREWS INTO THREADED INSERTS (FURNISHED WITH THE BRIDGE) WHEN RETROFITTING INTO AN EXISTING RIGID BARRIER
⅞" DIA. H.S. HEX BOLT AND WASHERS REQUIRED
1" DIA. HOLES DRILLED THRU PARAPET (4 REQ'D.)

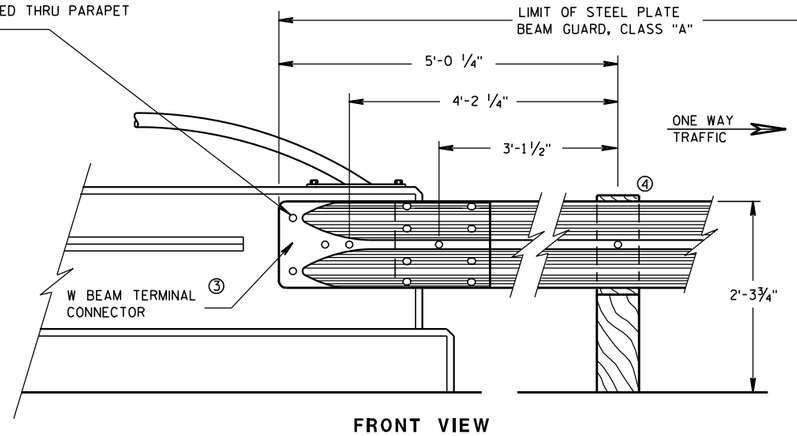
FRONT VIEW



SECTION D-D

THRIE BEAM CONNECTION TO VERTICAL FACED PARAPETS

① ② ⅞" DIA. HEX HEAD CAP SCREWS INTO THREADED INSERTS (FURNISHED WITH THE BRIDGE) WHEN RETROFITTING INTO AN EXISTING RIGID BARRIER
⅞" DIA. H.S. HEX BOLT AND WASHERS REQUIRED
1" DIA. HOLES DRILLED THRU PARAPET (4 REQ'D.)



FRONT VIEW

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

STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO VERTICAL FACED PARAPETS

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DEPARTMENT OF TRANSPORTATION

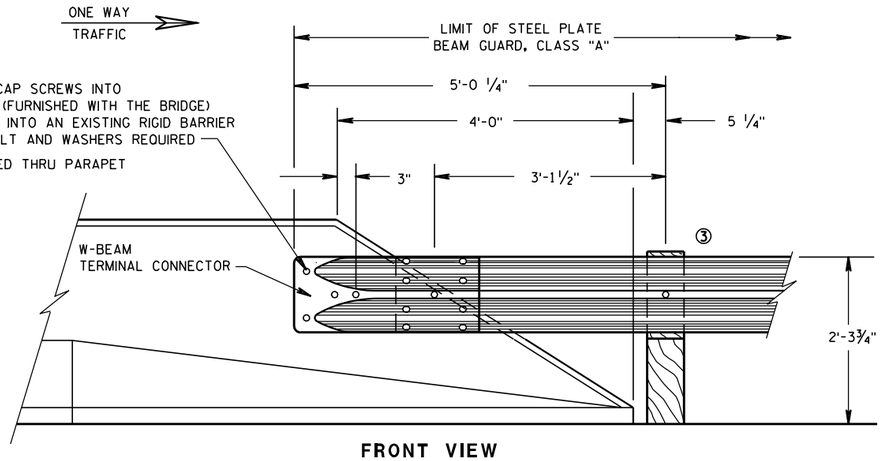
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FRONT VIEW

W BEAM CONNECTION TO PARAPETS WITH SLOPED ENDS

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

GENERAL NOTES

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

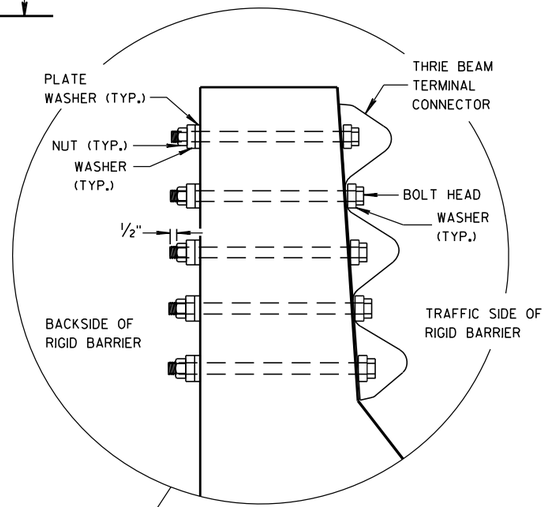
BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A325, A449 AND GALVANIZED PER STANDARD SPECIFICATIONS 614.

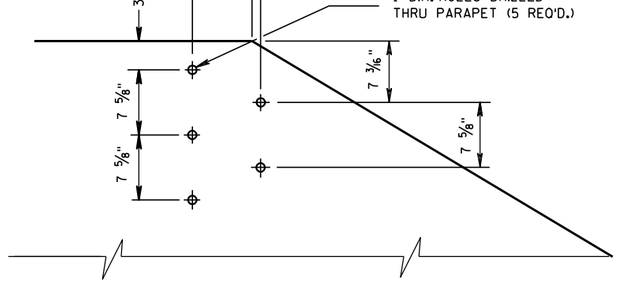
① DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

② BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM TERMINAL CONNECTOR. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

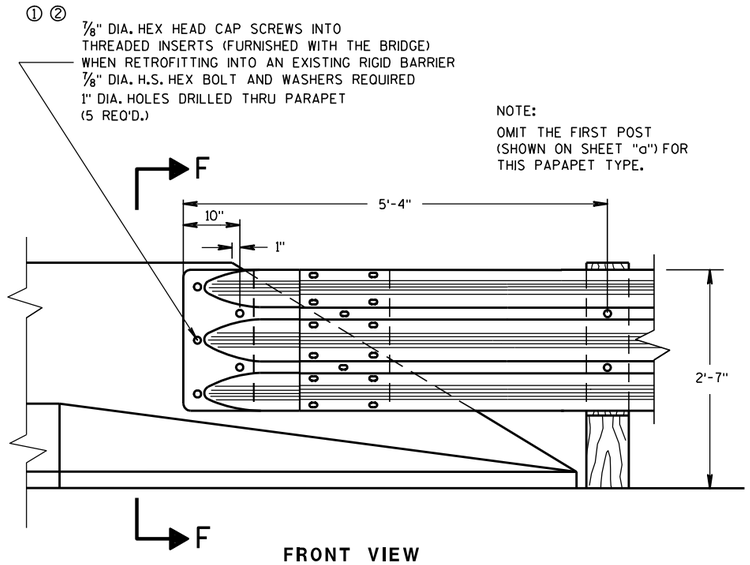
③ W6 X 9 OR W6 X 8.5 STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS ARE ACCEPTABLE ALTERNATIVES FOR 6" X 8" WOOD POST WITH WOOD OR PLASTIC BLOCKOUTS. USE APPROVED NOTCHED PLASTIC BLOCKOUTS WITH STEEL POSTS.

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

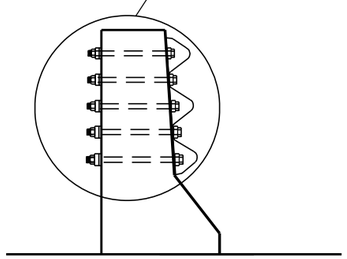




DRILL HOLE LOCATION AND PATTERN FOR THRIE BEAM CONNECTION



FRONT VIEW



SECTION F-F

THRIE BEAM CONNECTION TO BRIDGE PARAPETS WITH SLOPED ENDS

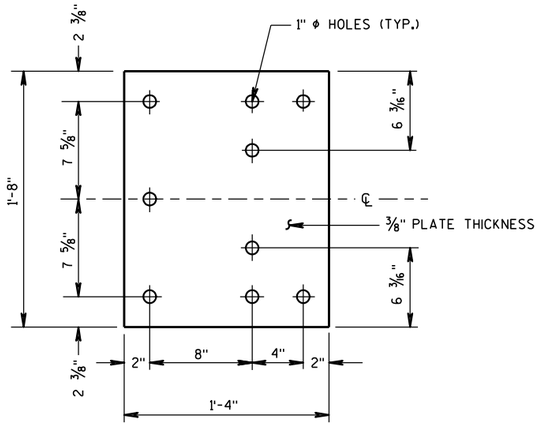
STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO SLOPED END PARAPETS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

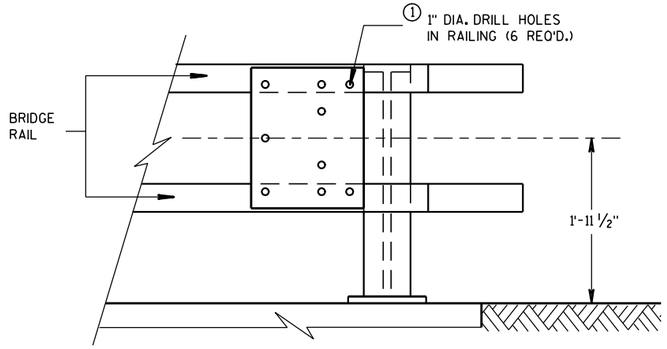
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8/31/2012 — DATE
/S/ Jerry H. [illegible] — ROADWAY STANDARDS [illegible] ENGINEER
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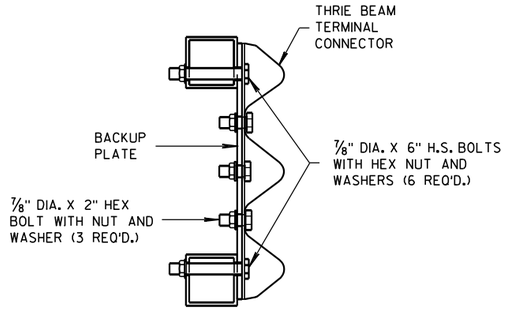
S.D.D. 14 B 20-11d



BACK-UP PLATE DETAIL



BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING



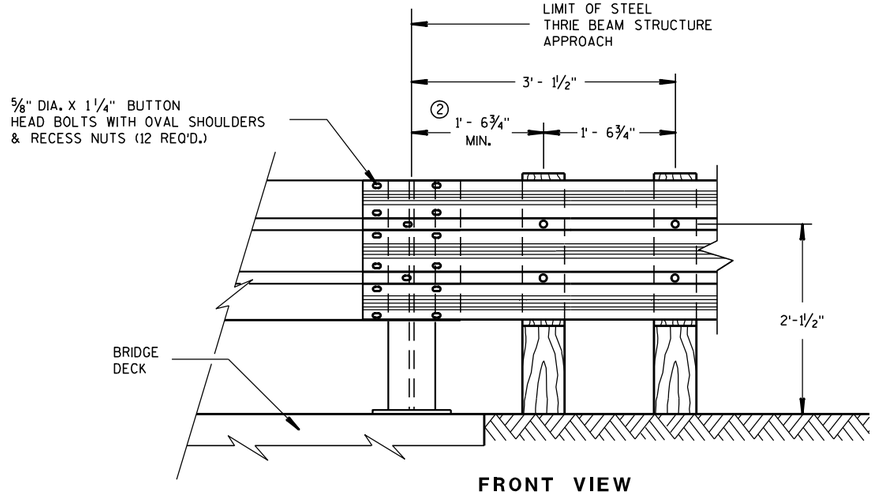
SECTION G-G

GENERAL NOTES

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

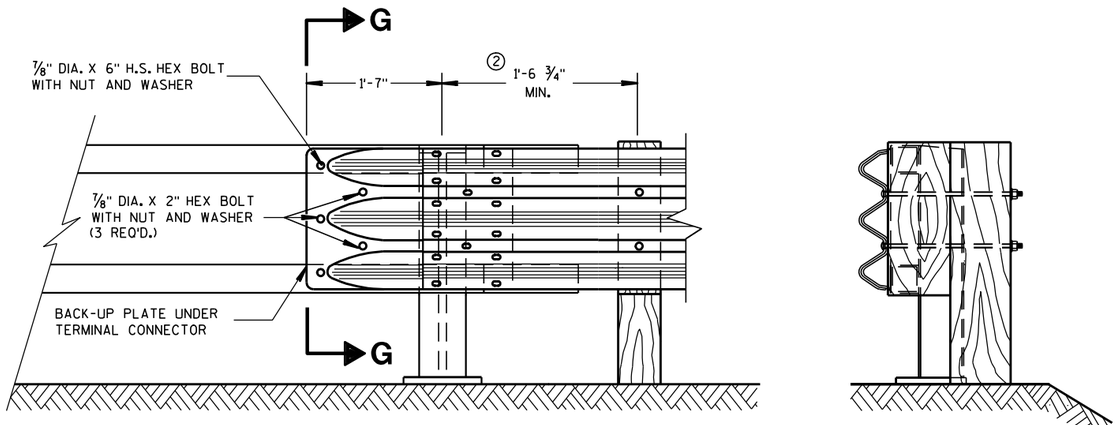
① DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

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



FRONT VIEW

THRIE BEAM CONNECTION TO STEEL RAILING TYPE "W"



FRONT VIEW

END VIEW

THRIE BEAM CONNECTION TO TUBULAR RAILING TYPE "F"

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

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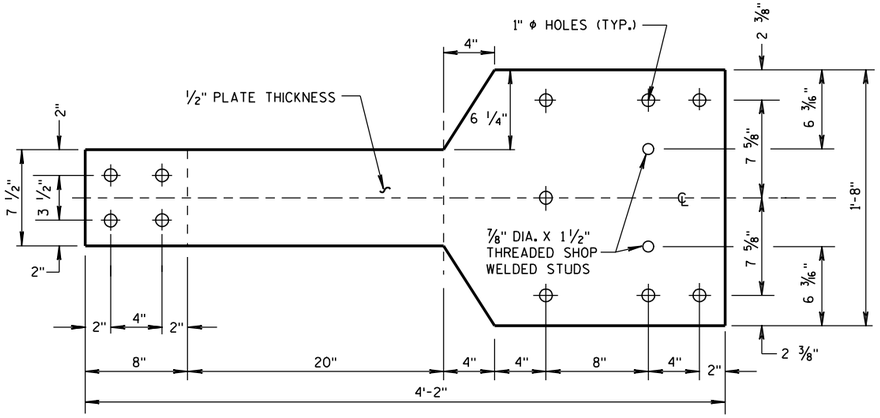
S.D.D. 14 B 20-11e

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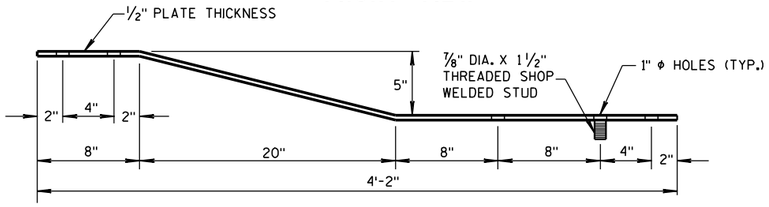
S.D.D. 14 B 20-11e

GENERAL NOTES

① VARY THIS DIMENSION DEPENDING ON ABUTMENT TYPE, WINGWALL DETAILS, AND ANGLE OF SKEW. PLACE THE FIRST WOOD POST OFF THE BRIDGE SHALL BE AS CLOSE AS FEASIBLE TO THE STEEL END POST.

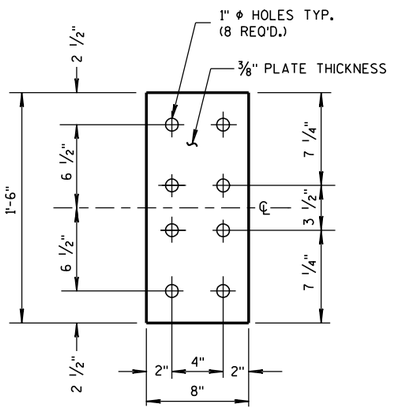


FRONT VIEW



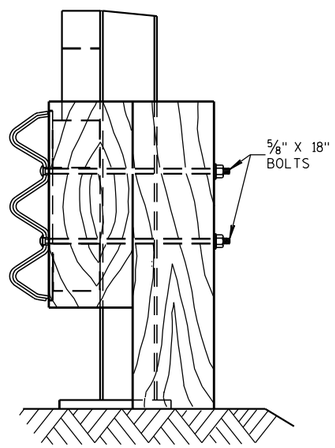
PLAN VIEW

BACK-UP PLATE DETAIL, TYPE "M"

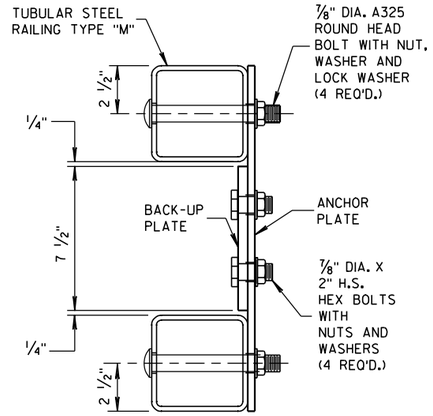


FRONT VIEW

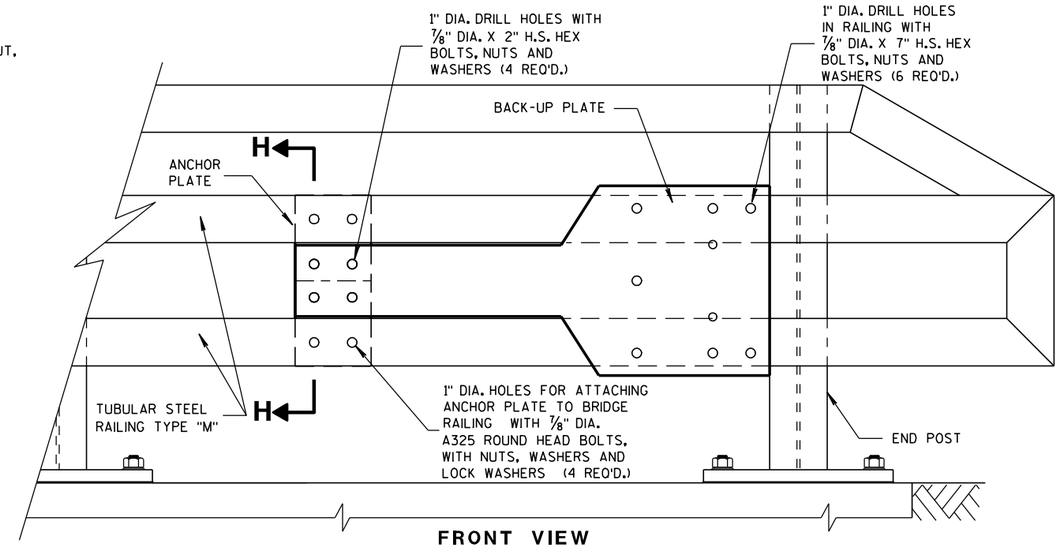
ANCHOR PLATE DETAIL, TYPE "M"



SECTION I-I

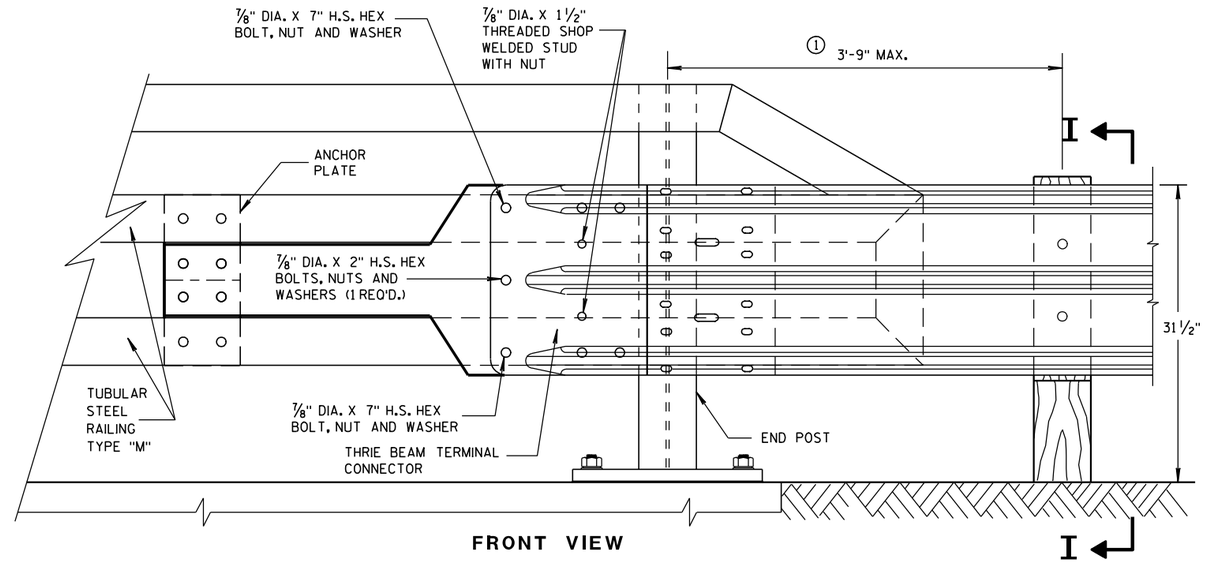


SECTION H-H

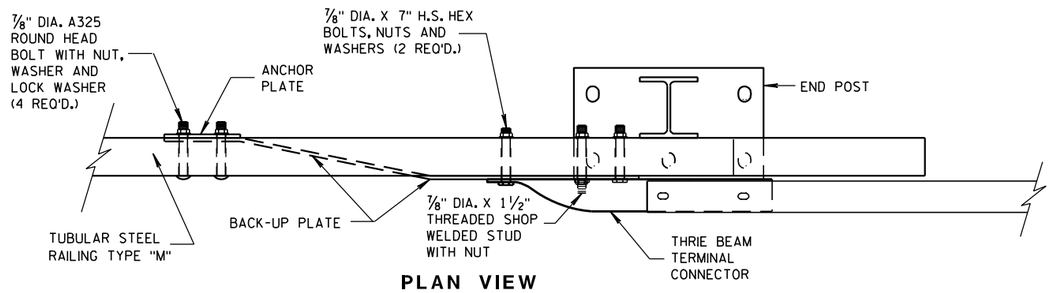


FRONT VIEW

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



FRONT VIEW



PLAN VIEW

THRIE BEAM CONNECTION TO TUBULAR RAILING, TYPE "M"

STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO BRIDGE RAILING TYPE "M"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/31/2012 — DATE

/S/ Jerry H. [illegible] — ROADWAY STANDARDS ENGINEER

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GENERAL NOTES

COVER PLATE PANELS ARE 3/16" THICK.

ALL STIFFENERS ARE 1/4" THICK.

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

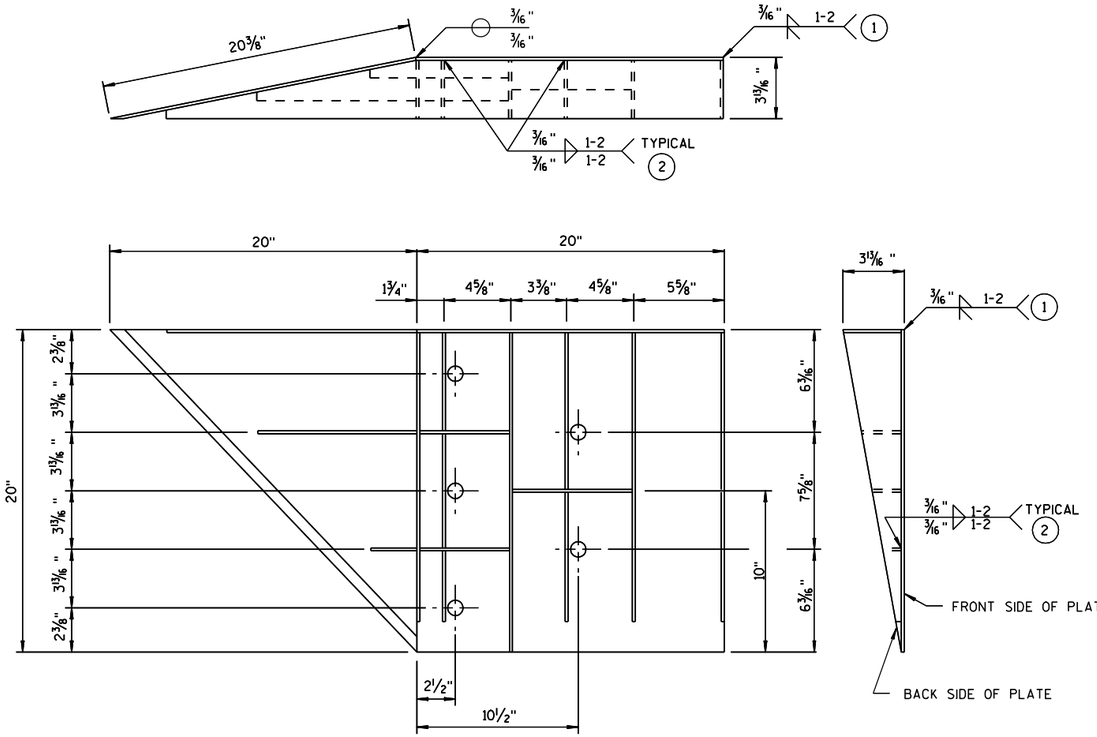
FOR GALVANIZED REQUIREMENTS, SEE SECTION 614 OF THE STANDARD SPECIFICATIONS.

ALL HOLE DIAMETERS SHALL BE 1".

FOR OPPOSITE SIDE INSTALLATION MIRROR DRAWINGS.

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

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



WELDING INSTRUCTION

(VIEWED FROM BACK SIDE OF PLATE)

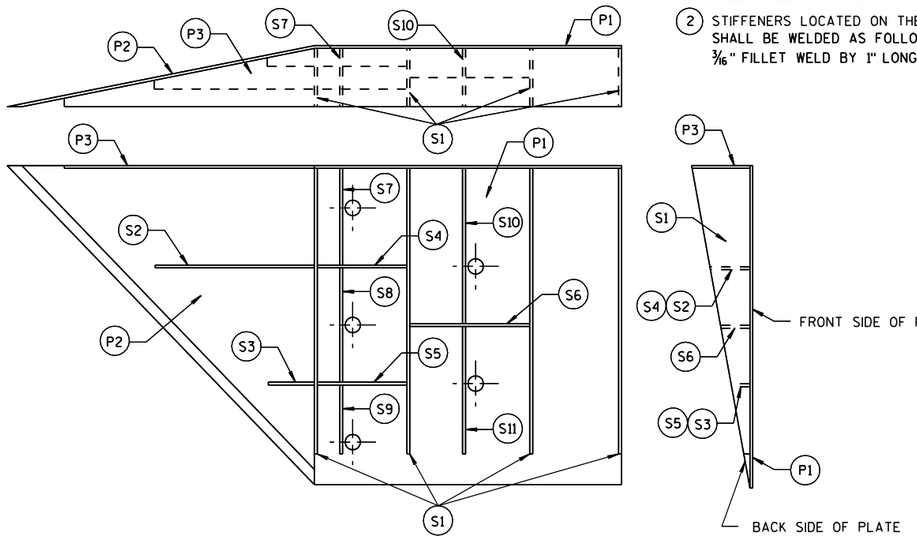


PLATE AND STIFFENER IDENTIFICATION

(VIEWED FROM BACK SIDE OF PLATE)

CONNECTOR PLATE DIMENSION (PER ASSEMBLY)

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

STEEL THRIE BEAM STRUCTURE APPROACH

STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTOR PLATE DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

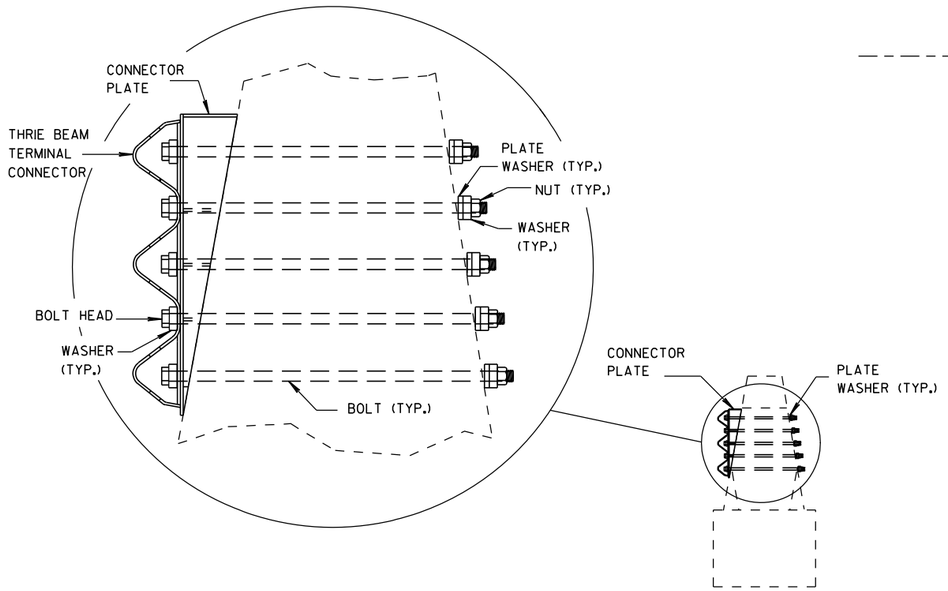
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/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER
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FHWA

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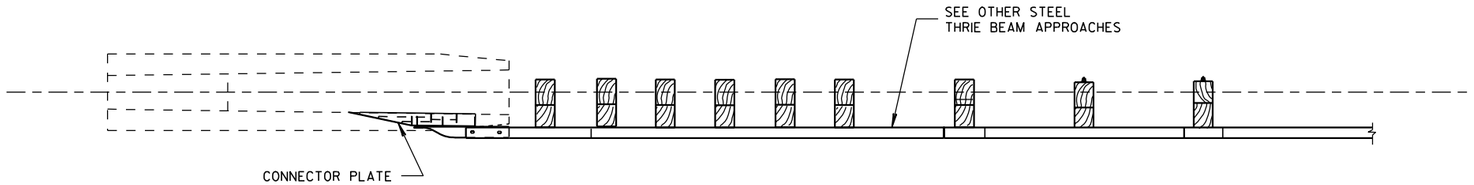
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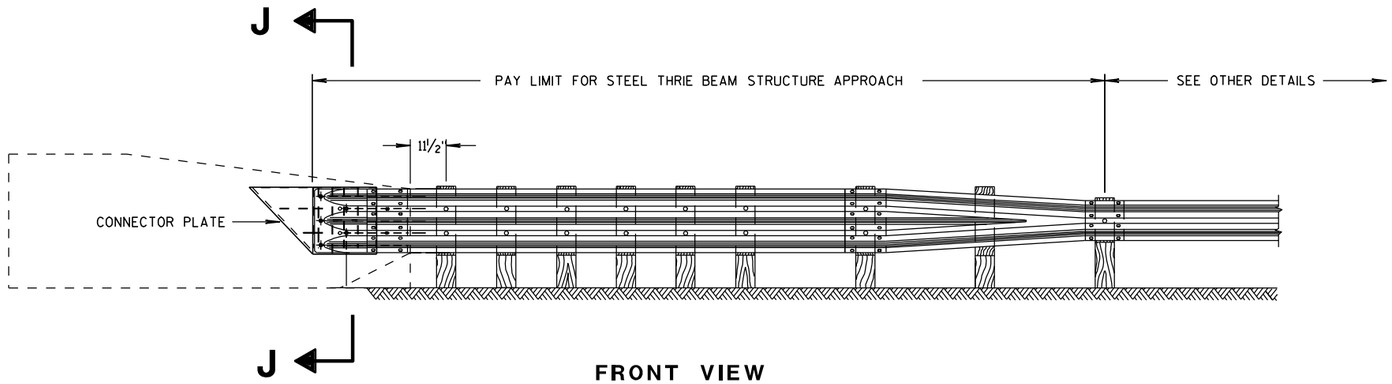
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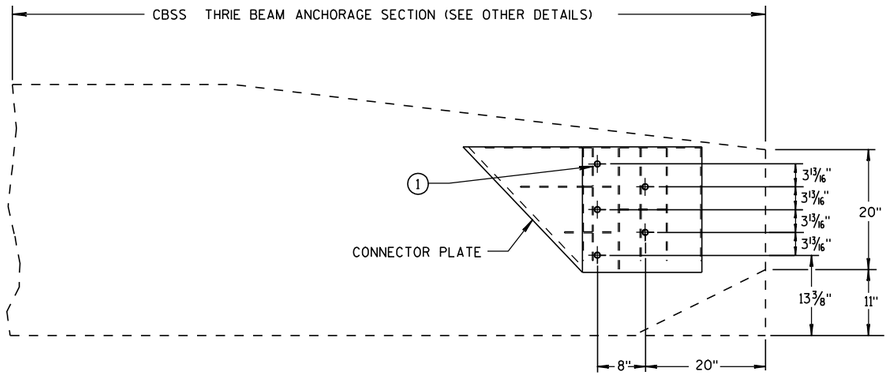
SECTION J-J



PLAN VIEW



FRONT VIEW



CONNECTOR PLATE LOCATION

GENERAL NOTES

CONSTRUCT PER STANDARD SPECIFICATION 614.

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

(1) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM TERMINAL CONNECTOR. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

STEEL THRIE BEAM STRUCTURE APPROACH

STEEL THRIE BEAM STRUCTURE APPROACH, SINGLE SLOPE ATTACHMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/31/2012
DATE

/S/ Jerry H. Zogg
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BILL OF MATERIALS

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

GENERAL NOTES

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

(A) THE SLOPE IN THE AREA BOUNDED BY THE GRADELINE, THE HINGE POINT LINE (HPL), AND THE CLEAR ZONE LIMITS (CZL) SHALL BE 4:1 OR FLATTER.

(B) AFTER FINAL ASSEMBLY, RECHECK CABLE TO BE SURE IT IS TAUT AND HAS NOT RELAXED.

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

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

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

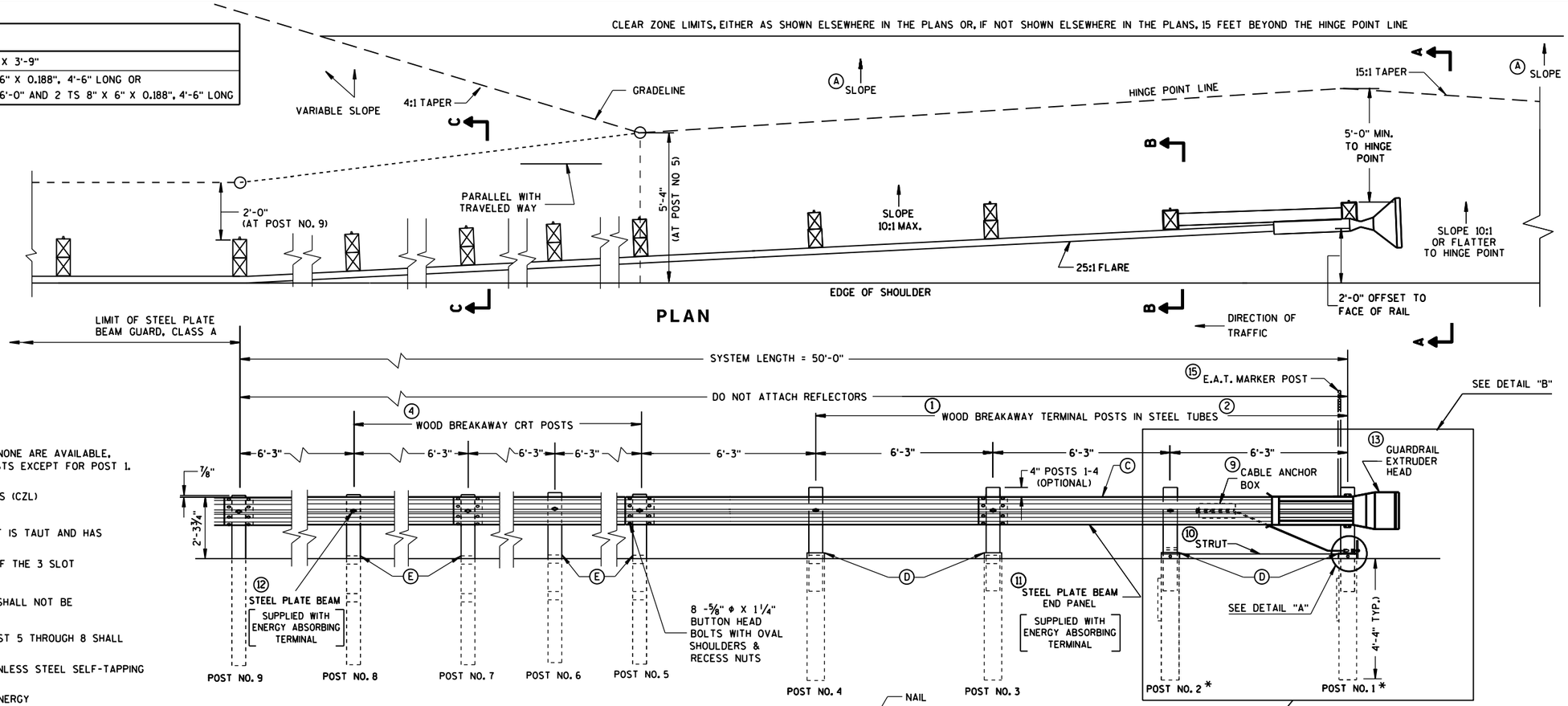
(F) ATTACH ALUMINUM SHEET TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF-TAPPING SCREWS. ONE SCREW PER CORNER.

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

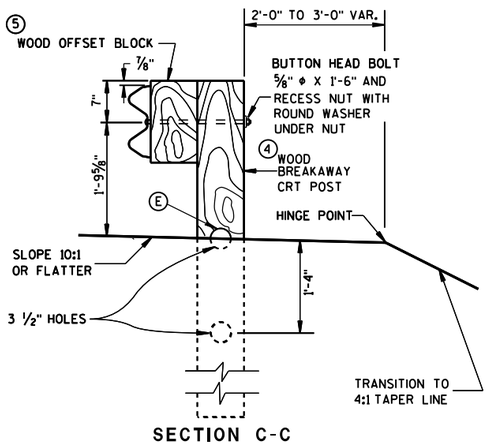
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

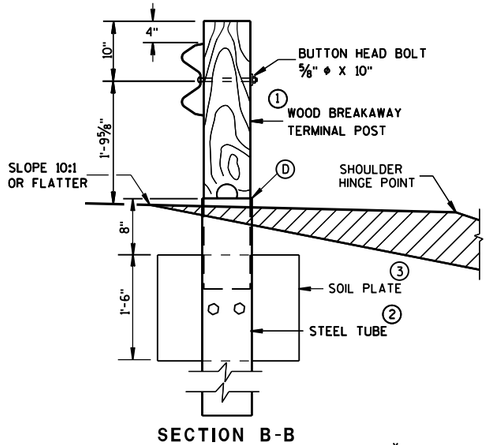
** SDD SHOWS 4 - 54 INCH STEEL TUBES WITH SOIL PLATES INSTALLED ON POST 1 AND POST 2. POST 3 AND 4 DO NOT NEED SOIL PLATES. AN ALTERNATIVE INSTALLATION WOULD CONSIST OF 2 - 72 INCH STEEL TUBES ON POST 1 AND POST 2 AND 54 INCH SOIL TUBES ON POSTS 3 AND 4. THE ALTERNATIVE INSTALLATION DOES NOT REQUIRE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



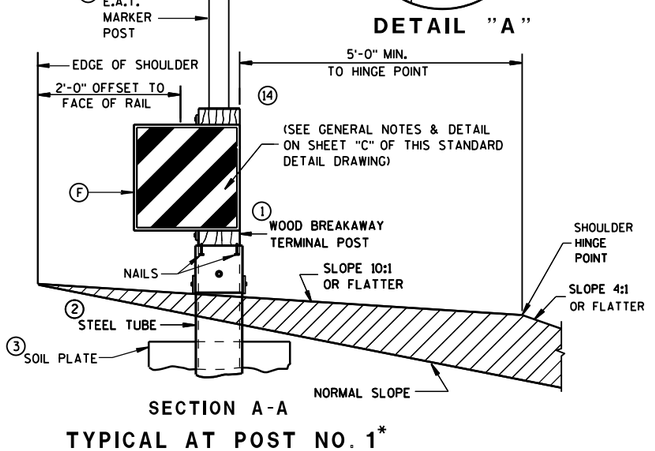
ELEVATION



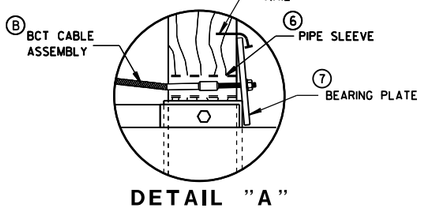
SECTION C-C
TYPICAL AT POST NOS. 6, 8



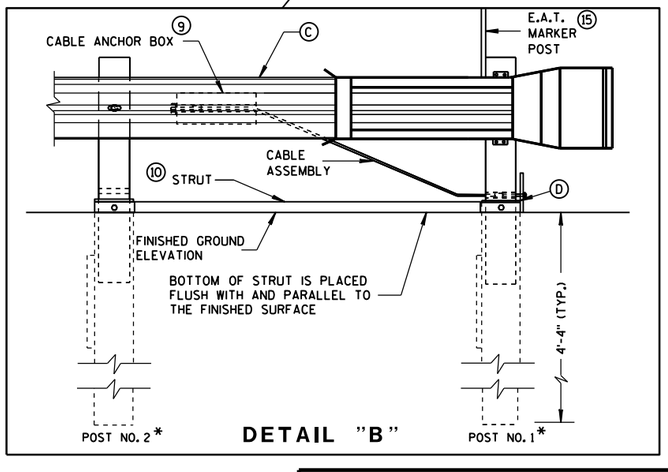
SECTION B-B
TYPICAL AT POST NO. 2*



SECTION A-A
TYPICAL AT POST NO. 1*



DETAIL "A"

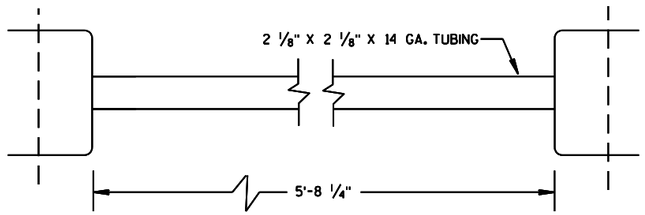


DETAIL "B"

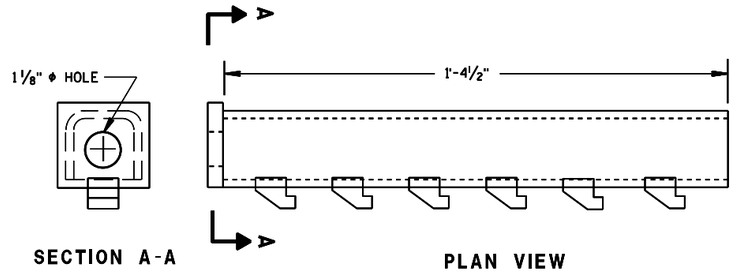
STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

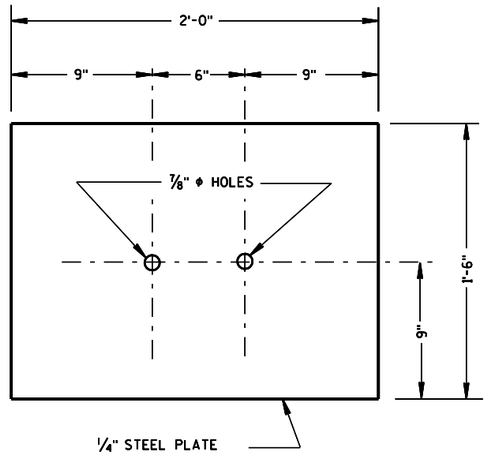
6
S.D.D. 14 B 24-8a



⑩ STRUT DETAIL (SKT-350)

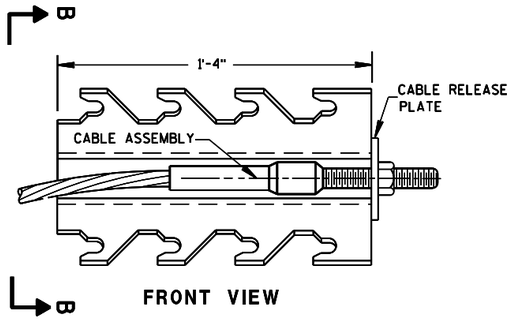


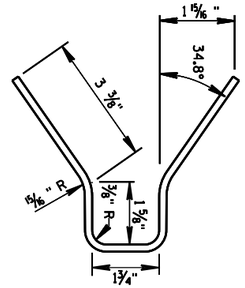
⑨ CABLE ANCHOR BOX (ET-2000/ET-2000 PLUS)



③ SOIL PLATE

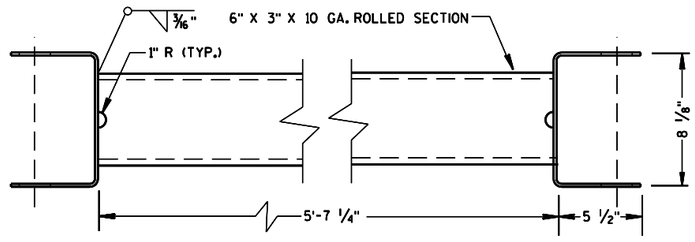
(SKT-350, ET-2000/ET-2000 PLUS)





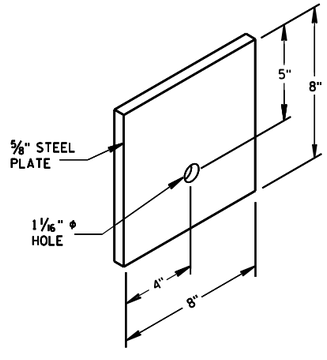
⑨ CABLE ANCHOR BOX (SKT-350)

(SKT-350)



⑩ STRUT DETAIL (ET-2000/ET-2000 PLUS)

(ET-2000/ET-2000 PLUS)



⑦ STEEL BEARING PLATE

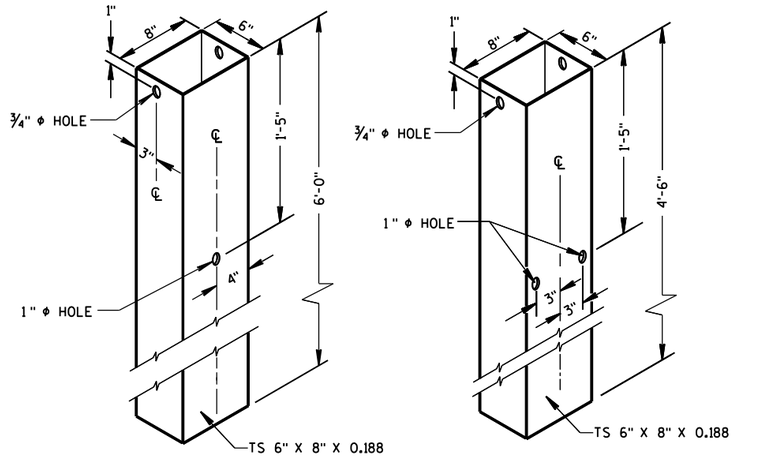
(SKT-350, ET-2000/ET-2000 PLUS)

STEEL PLATE BEAM GUARD
ENERGY ABSORBING TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

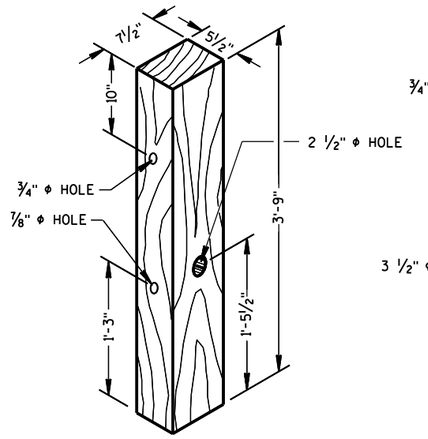
6

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

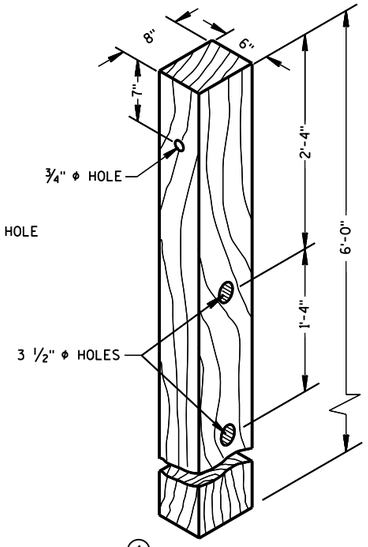


② 72" STEEL TUBE
(POSTS NO. 1-4

② 54" STEEL TUBE
(POSTS NO. 1-4



① TERMINAL POST
(POSTS NO. 1-4



④ CRT POST
(POSTS NO'S 5-8

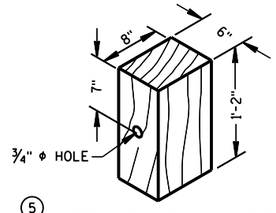
WOOD BREAKAWAY POSTS

GENERAL NOTES

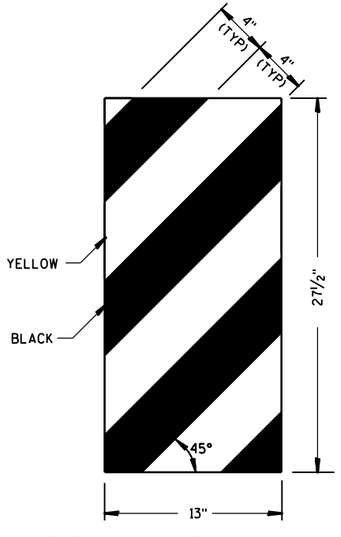
WHEN ROCK IS ENCOUNTERED DURING EXCAVATION, A 12 INCH DIA. POST HOLE EXTENDING 20 INCHES DEEP INTO THE ROCK MAY BE USED IF APPROVED BY THE ENGINEER. GRANULAR MATERIAL SHALL BE PLACED IN THE BOTTOM OF THE HOLE APPROXIMATELY 2 ½" INCHES DEEP TO PROVIDE DRAINAGE. THE SOIL TUBES SHALL BE FIELD CUT TO LENGTH,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

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

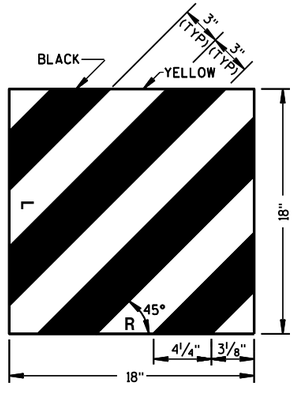
(G) ½" DIA. X 3" LAG BOLT WITH WASHER.



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

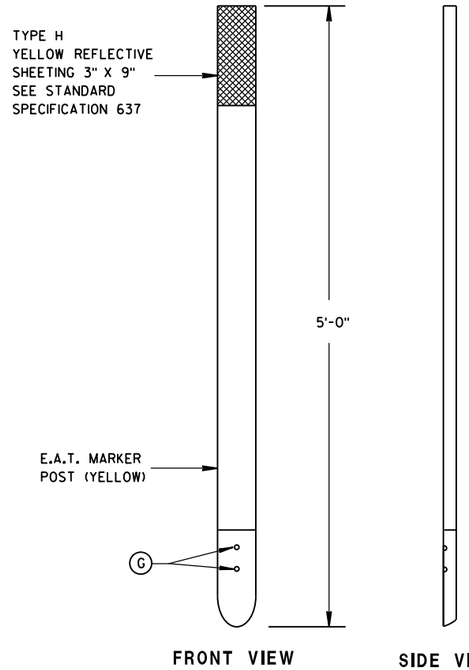


ET-2000 PLUS ONLY



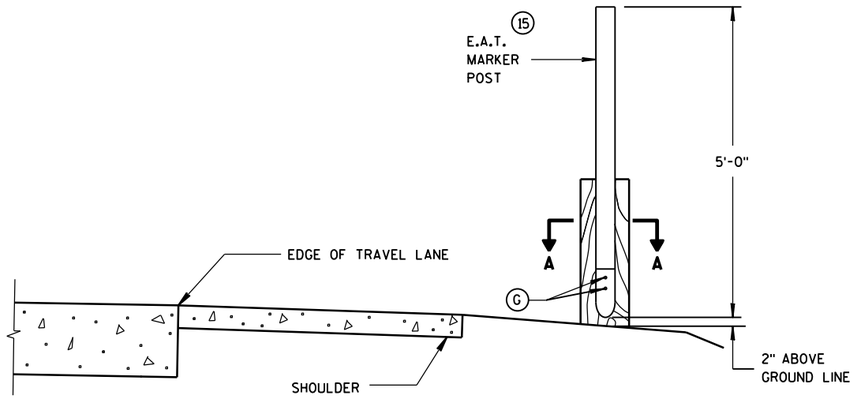
ET-2000 AND SKT-350

⑭ REFLECTIVE SHEETING DETAILS

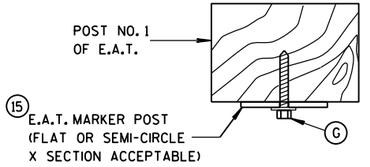


FRONT VIEW SIDE VIEW

⑮ E.A.T. MARKER POST



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



SECTION A-A

STEEL PLATE BEAM GUARD
ENERGY ABSORBING TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

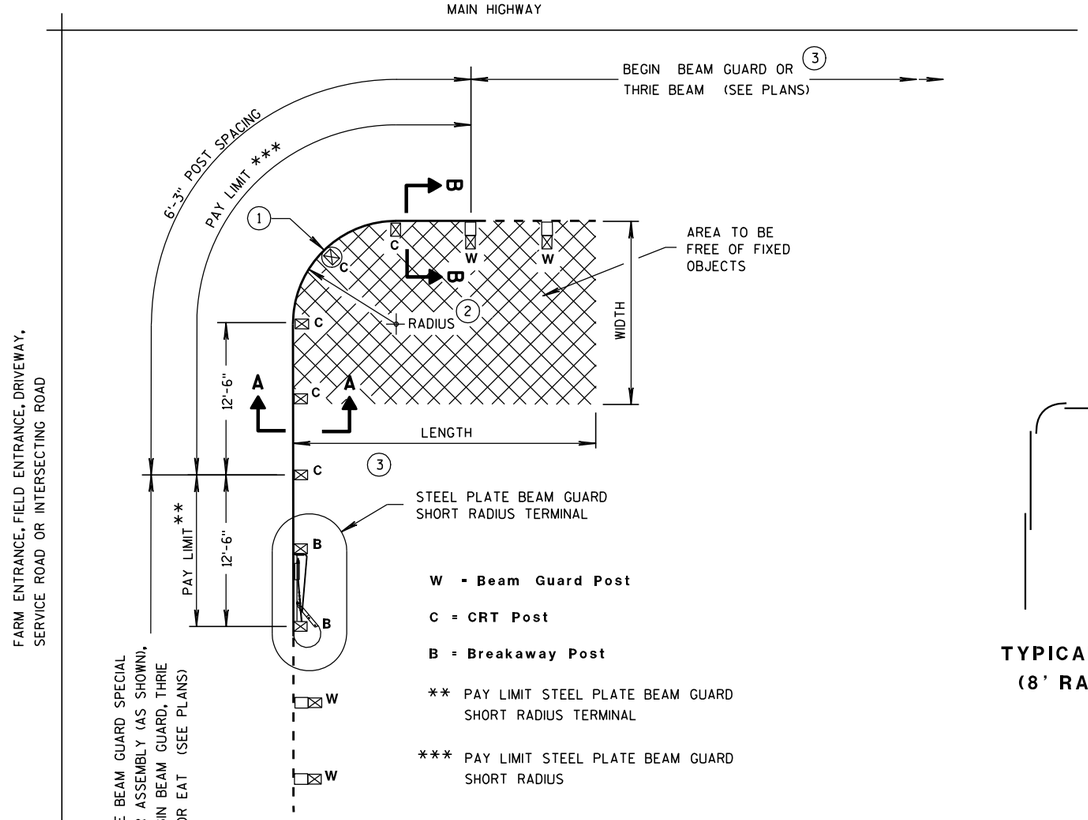
APPROVED
June 2014 — DATE
/S/ Jerry H. Zoda — ROADWAY STANDARDS ENGINEER
FHWA

6

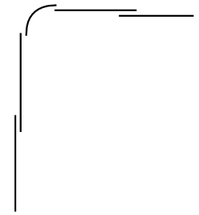
S.D.D. 14 B 24-8c

6

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



TYPICAL LAYOUT
(8' RADIUS SHOWN)



TYPICAL LAP SPLICES
(8' RADIUS SHOWN)

GENERAL NOTES

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

SHOP BEND CURVED RAIL SECTIONS.

SEE STANDARD DETAIL DRAWING 14 B 15 FOR OTHER DETAIL.

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

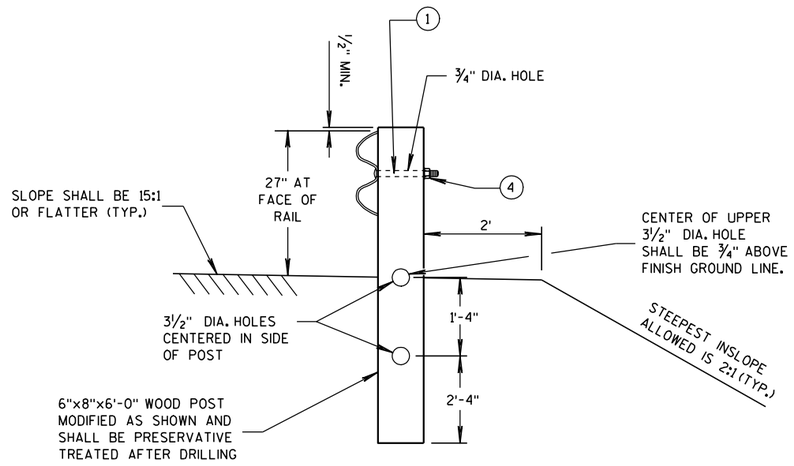
(2) RADIUS FROM 8' - 36'. SEE PLAN.

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

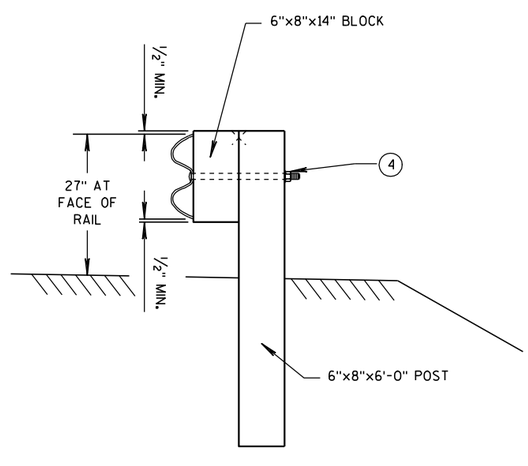
(4) 5/8" ø X 1'-6" BUTTON HEAD BOLT AND RECESS NUT WITH ROUND WASHER UNDER NUT.

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

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



SECTION A-A
(CRT POST)

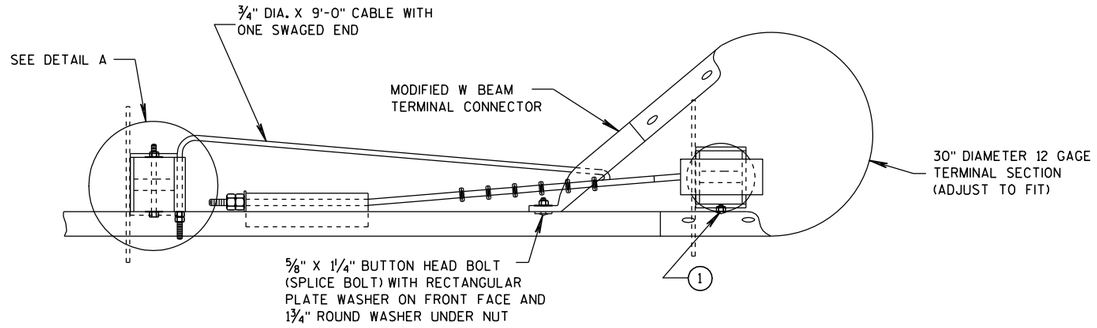


SECTION B-B
(BEAM GUARD POST)

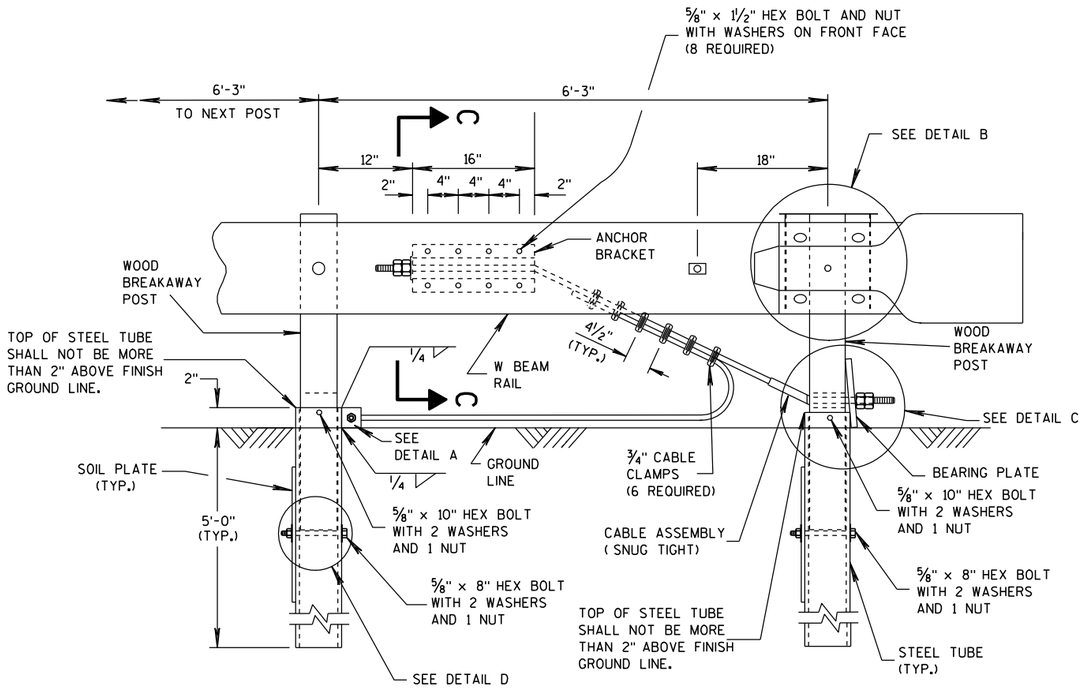
STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL

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

6
S.D.D. 14 B 27-1a



PLAN VIEW



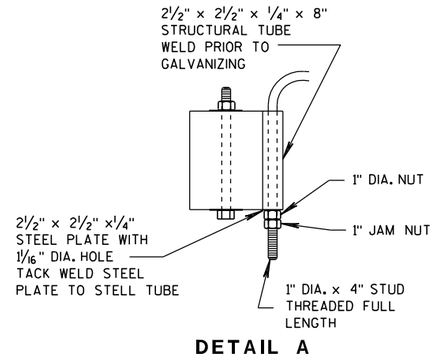
ELEVATION VIEW

STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL

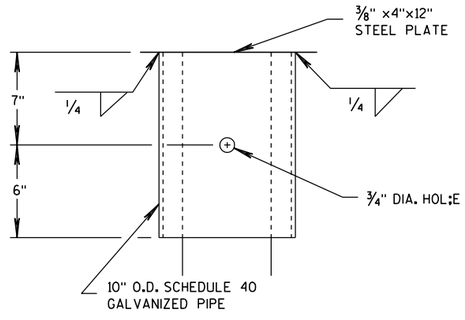
GENERAL NOTES

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

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



DETAIL A



DETAIL B

(BEAM GUARD AND TERMINAL SECTION NOT SHOWN)

STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL

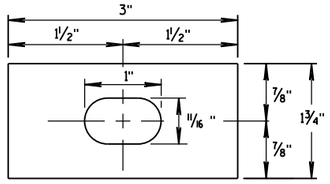
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

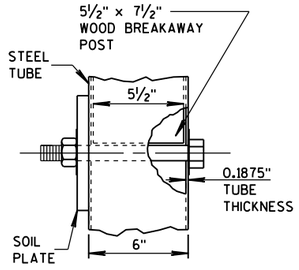
S.D.D. 14 B 27-1b

6

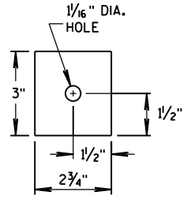
S.D.D. 14 B 27-1b



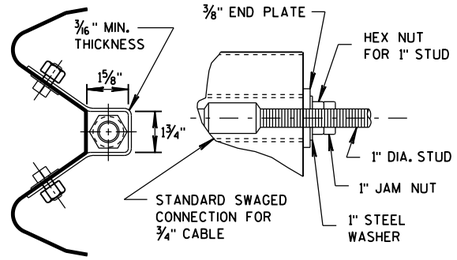
RECTANGULAR PLATE WASHER



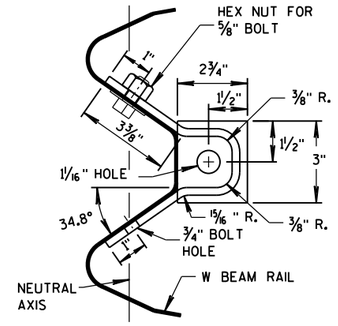
DETAIL D



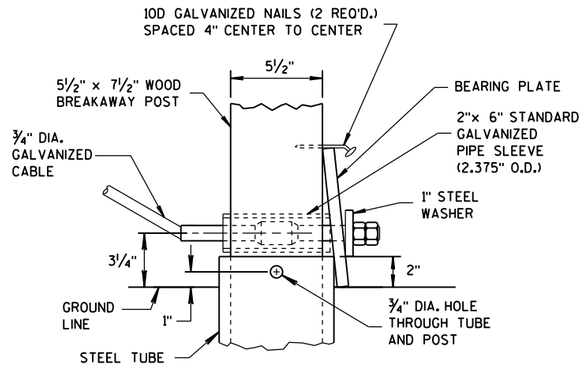
END PLATE



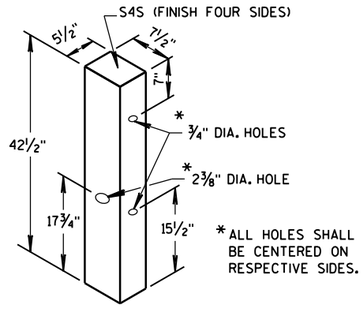
SECTION C-C
(END PLATE REMOVED)



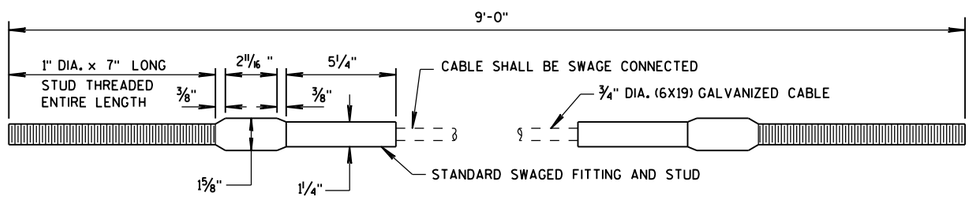
ANCHOR BRACKET



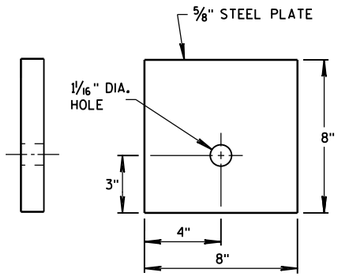
DETAIL C



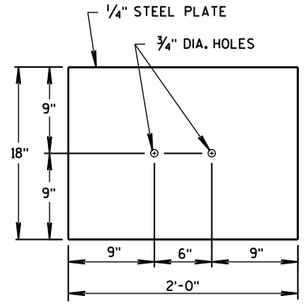
WOOD BREAKAWAY POST



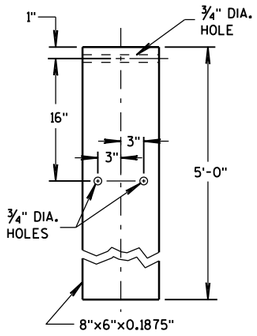
CABLE ASSEMBLY



BEARING PLATE



SOIL PLATE



STEEL TUBE

STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

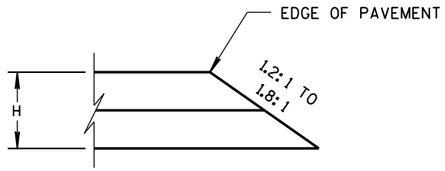
APPROVED
12/18/08 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

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

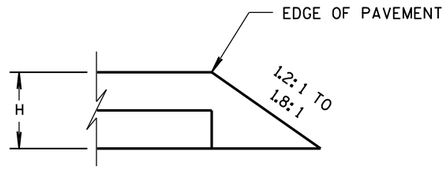
6

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



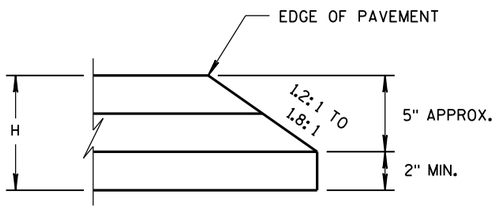
CONSTRUCTED WITH FINAL TWO LAYERS

FOR H 5" OR LESS



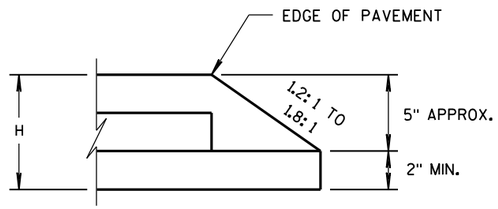
CONSTRUCTED WITH FINAL LAYER

FOR H 5" OR LESS



CONSTRUCTED WITH FINAL TWO LAYERS

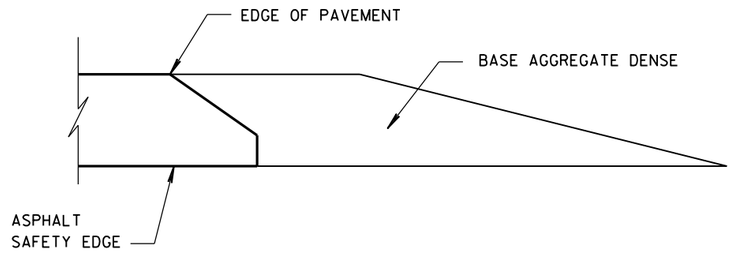
FOR H GREATER THAN 5"



CONSTRUCTED WITH FINAL LAYER

FOR H GREATER THAN 5"

HMA PAVEMENT AND HMA OVERLAYS



FINISHED SHOULDER AGGREGATE PLACEMENT

6

6

S.D.D. 14 B 29-1

S.D.D. 14 B 29-1

SAFETY EDGE SM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

11/30/2012
DATE

/S/ Jerry H. Zoda
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

① WOOD OR STEEL POSTS (w6X9 OR w6X8.5) MAY BE USED. DO NOT INTERMIX WOOD AND STEEL POSTS. INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.

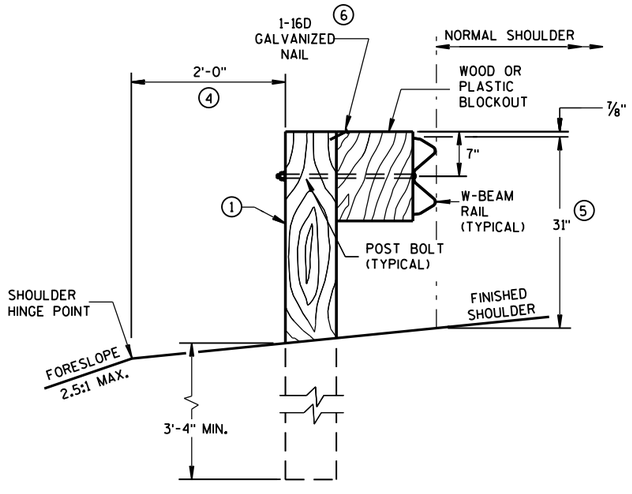
② USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL. DIMENSIONS OF APPROVED PLASTIC BLOCKOUTS MAY VARY.

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

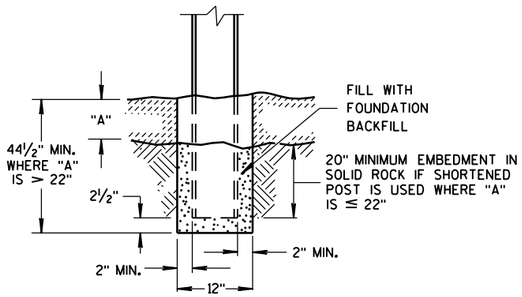
⑤ FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ± 1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27¾" TO 32".

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.



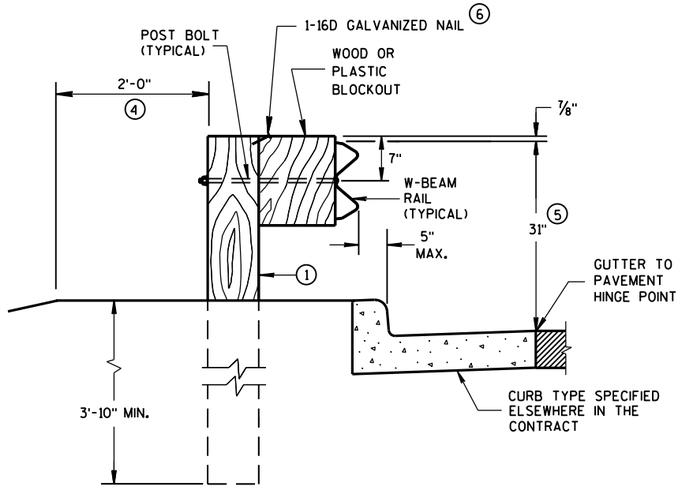
END VIEW

LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION



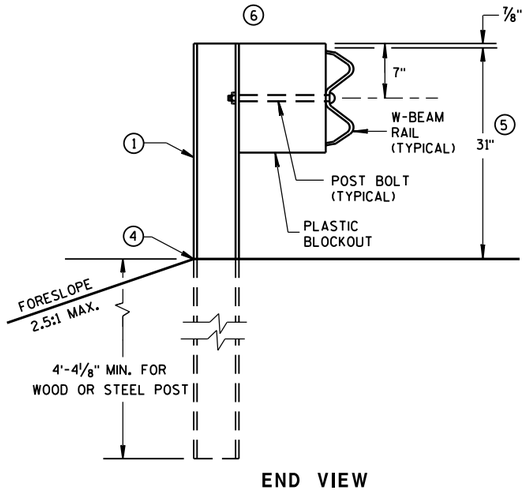
END VIEW

SETTING STEEL OR WOOD POST IN ROCK ③



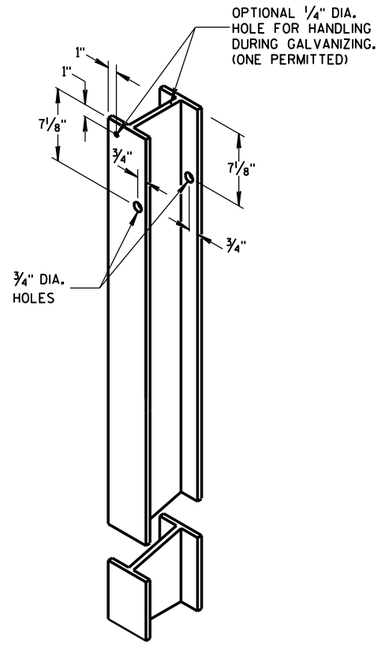
END VIEW

LOCATED ALONG A CURBED ROADWAY

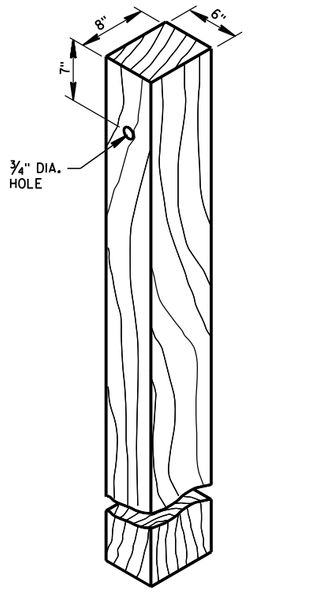


END VIEW

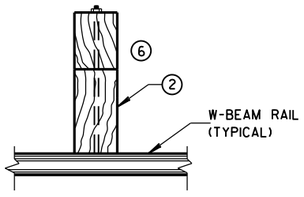
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



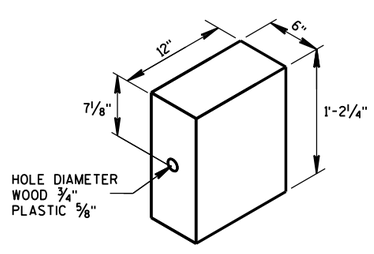
STEEL POST &
HOLE PUNCHING DETAIL
(w6X9) ①



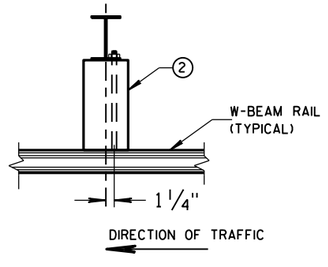
WOOD POST
(6" X 8") NOMINAL ①



PLAN VIEW
WOOD POST,
BLOCKOUT & BEAM



WOOD OR
PLASTIC BLOCKOUT ②



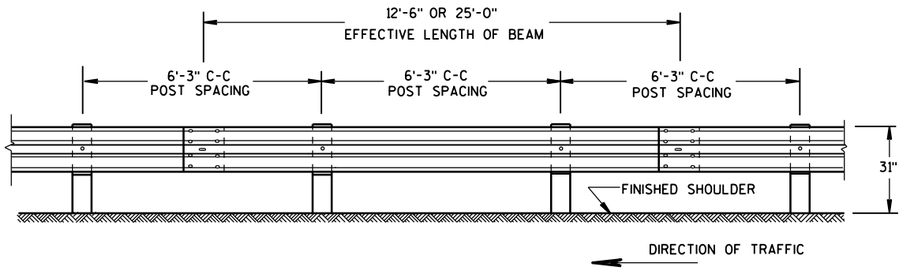
PLAN VIEW
STEEL POST,
PLASTIC BLOCKOUT & BEAM

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

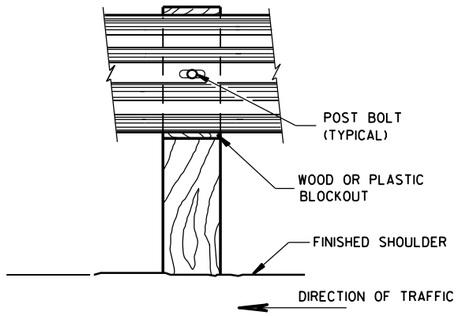
6

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



FRONT VIEW

POST SPACING STANDARD INSTALLATION



FRONT VIEW AT WOOD POST

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

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

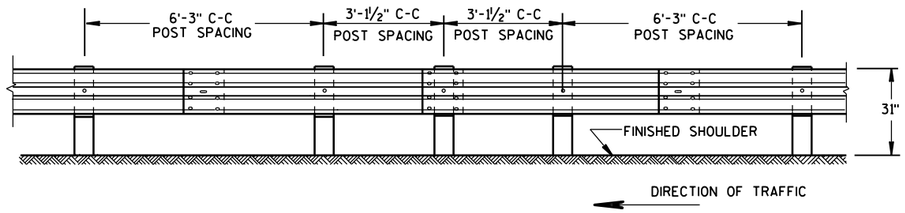
9. REVERSE EVERY OTHER REFLECTOR FOR 2-WAY VISIBILITY. THE CONTRACTOR MAY FURNISH TWO-SIDED REFLECTORS IN LIEU OF ONE-SIDED REFLECTORS.

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

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

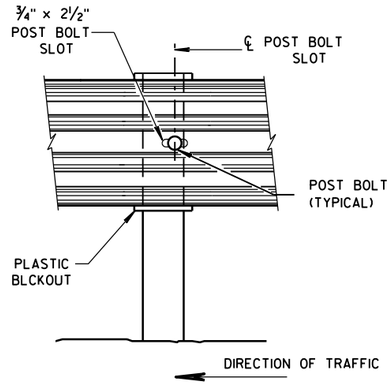
POST BOLTS ARE A 5/8" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES 5/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND 5/8" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

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

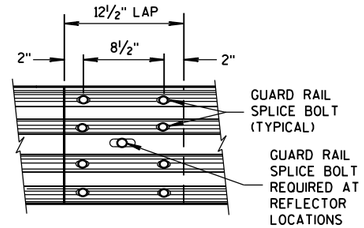


FRONT VIEW

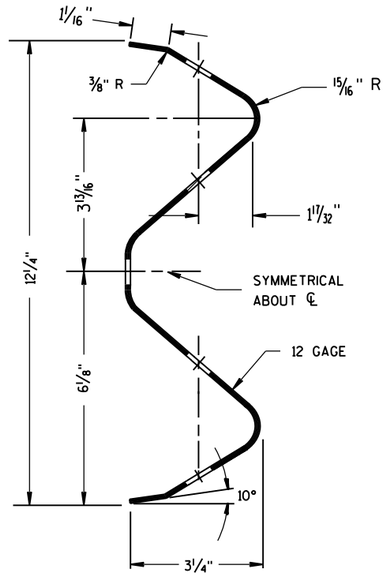
HALF POST SPACING (HS) AND HALF POST SPACING WITH LONGER POSTS (K)



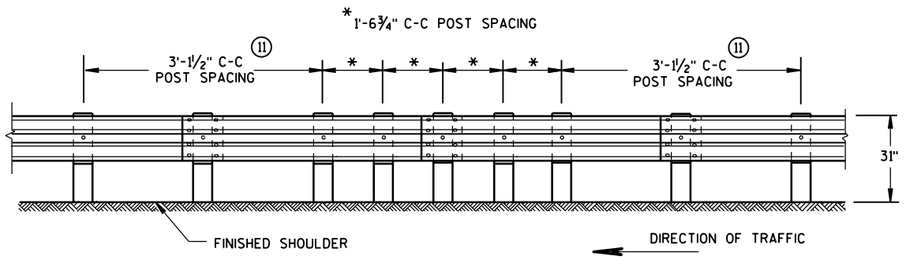
FRONT VIEW AT STEEL POST



FRONT VIEW
MID-SPAN BEAM SPLICE

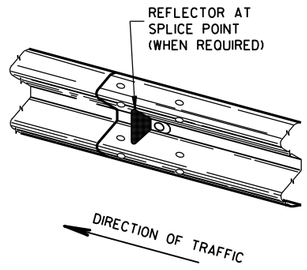


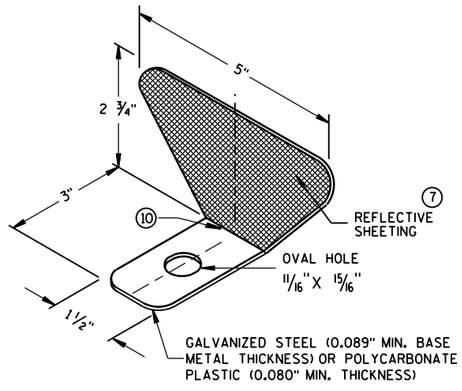
SECTION THRU W-BEAM RAIL



FRONT VIEW

QUARTER POST SPACING (QS)





REFLECTOR SPACING 8

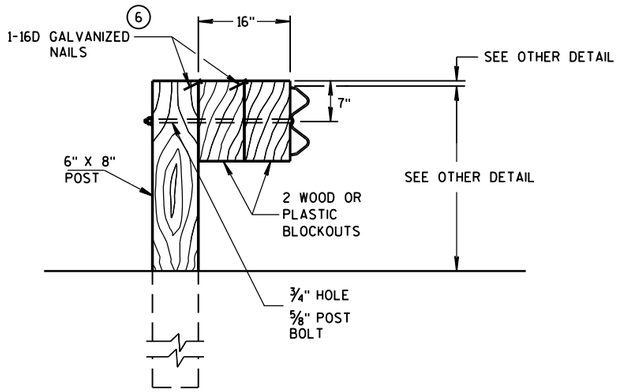
	BEAM GUARD LENGTH	REFLECTOR SPACING	NO. SURFACES REFLECTORIZED	MIN. NO. REFLECTORS
ONE WAY TRAFFIC	< 200'	50' C-C	1	3
	> 200'	100' C-C	1	
TWO WAY TRAFFIC	< 200'	25' C-C	1 9	6
	> 200'	50' C-C	1	
TWO WAY TRAFFIC	< 200'	50' C-C	2	3
	> 200'	100' C-C	2 10	

ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION 7

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

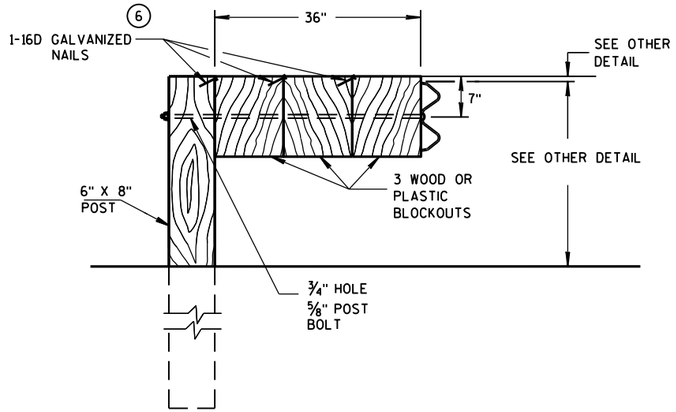
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

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



DETAIL FOR 16" BLOCKOUT DEPTH

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

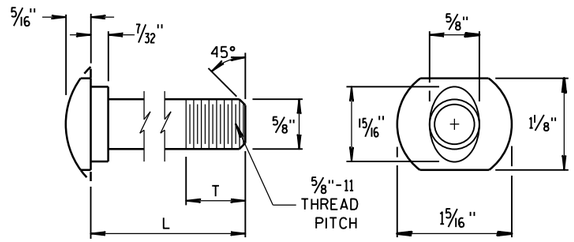


DETAIL FOR 36" BLOCKOUT DEPTH

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

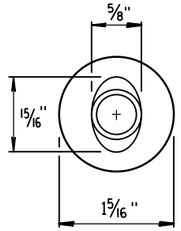
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

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

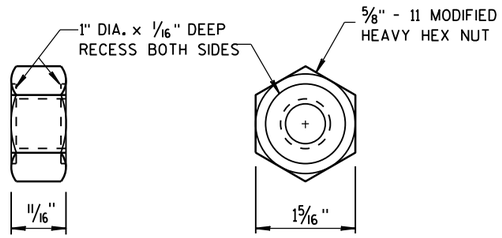


POST BOLT TABLE

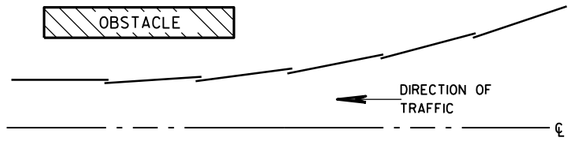
L	T (MIN.)
1¼"	1⅛"
2"	1¾"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"



ALTERNATE BOLT HEAD

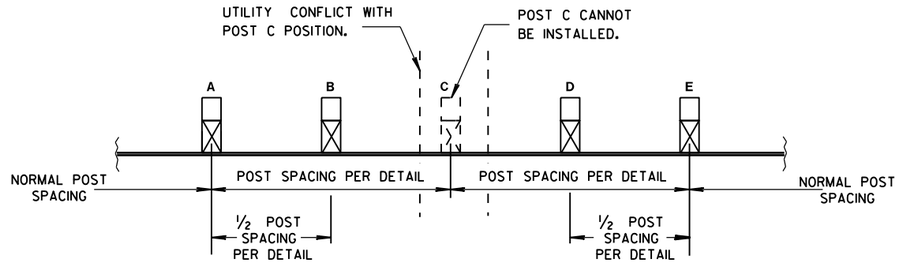


POST BOLT, SPLICE BOLT AND RECESS NUT

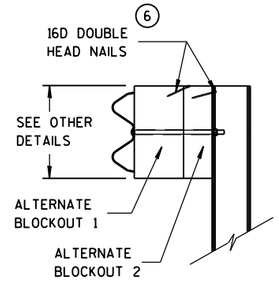


PLAN VIEW

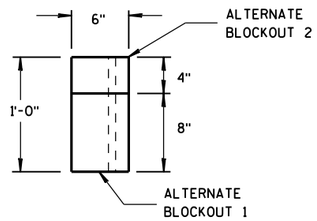
BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



SIDE VIEW



TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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

GENERAL NOTES

(A) THE SLOPE IN THE AREA BOUNDED BY THE GRADELINE, THE HINGE POINT LINE (HPL), AND THE CLEAR ZONE LIMITS (CZL) SHALL BE 4:1 OR FLATTER.

(B) AFTER FINAL ASSEMBLY, RECHECK CABLE TO BE SURE IT IS TAUT AND HAS NOT RELAXED.

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

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

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

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

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

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

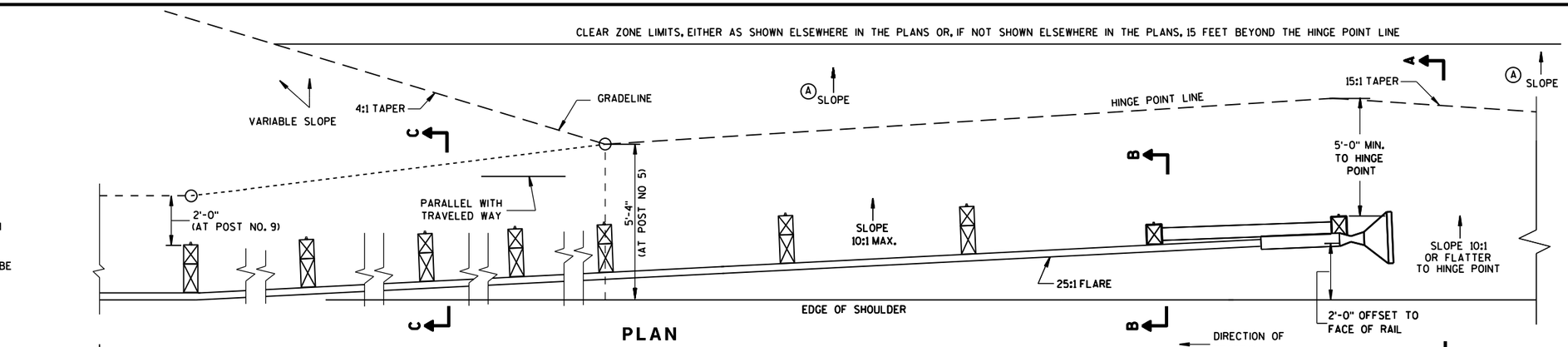
SEE SDD 14B42 FOR MORE INFORMATION.

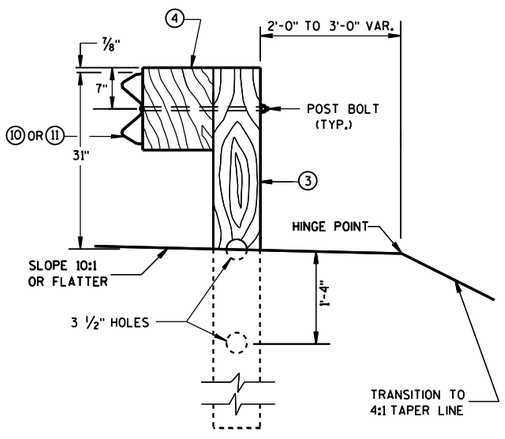
* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

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

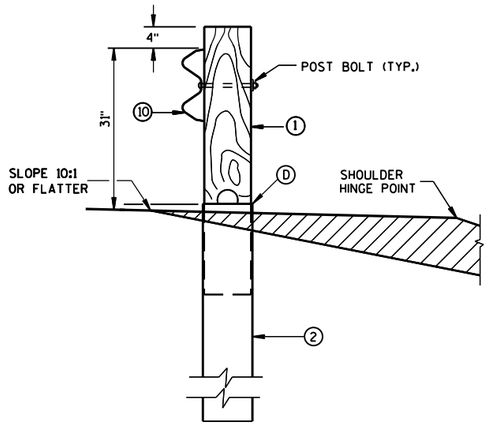
W-BEAM RAIL SPLICES ARE LOCATED AT POST NUMBER 3, AND BETWEEN POST 5 AND 6, BETWEEN POSTS 7 AND 8, AND MIDDLE OF THE SPAN AFTER POST 9.

THE CENTER OF THE UPPER 3½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE.

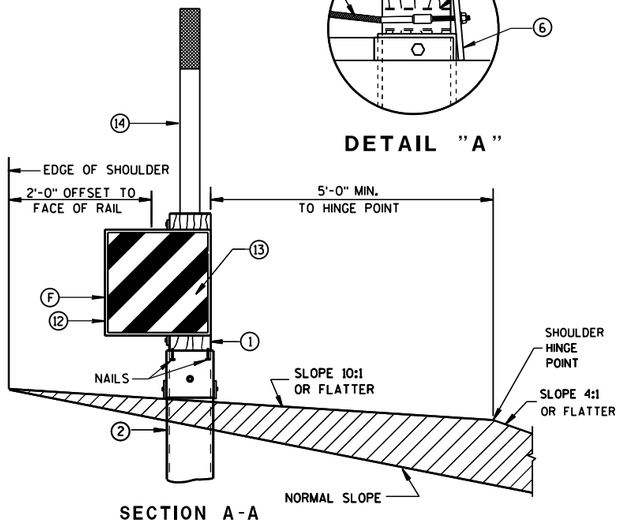




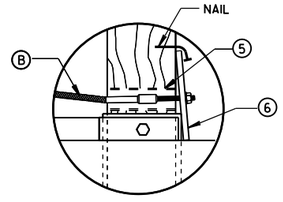
SECTION C-C
TYPICAL AT POST NOS. 3-9



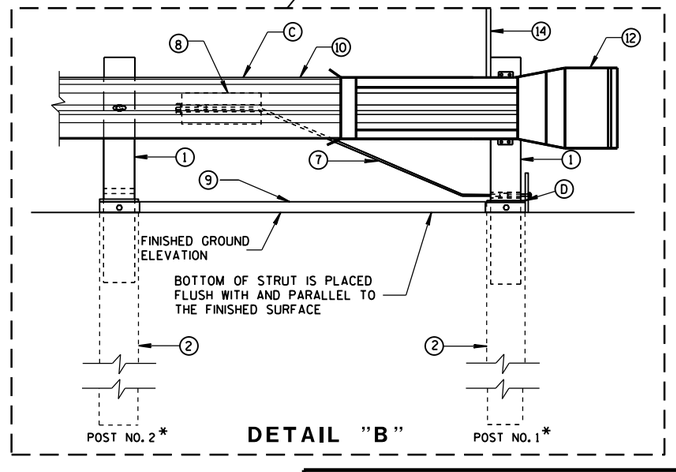
SECTION B-B
TYPICAL AT POST NO. 2*



SECTION A-A
TYPICAL AT POST NO. 1*



DETAIL "A"



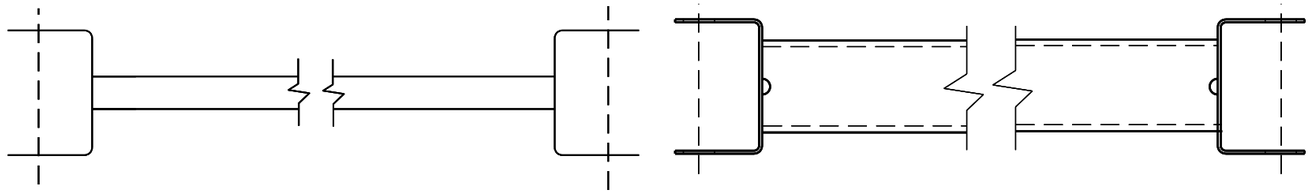
DETAIL "B"

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

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

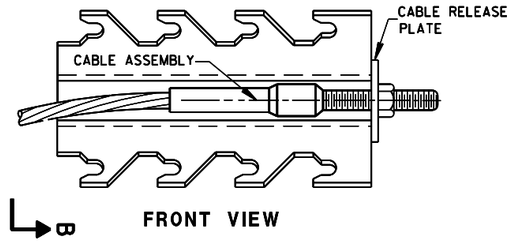
S.D.D. 14 B 44-2a



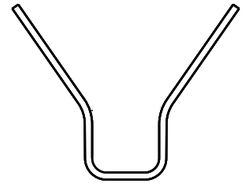
GENERIC GROUND STRUT (9) (H)

BILL OF MATERIALS

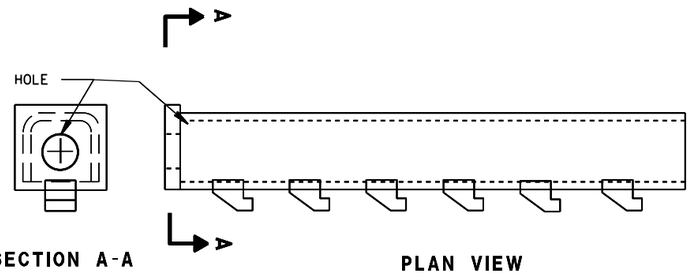
PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.
(1)	WOOD BREAKAWAY POST
(2)	6" X 8" X 0.188", 6'-0" LONG FOUNDATION TUBE AT POSTS 1 AND 2
(3)	WOOD CRT
(4)	WOOD BLOCKOUT
(5)	PIPE SLEEVE
(6)	BEARING PLATE
(7)	BCT CABLE ASSEMBLY
(8)	ANCHOR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



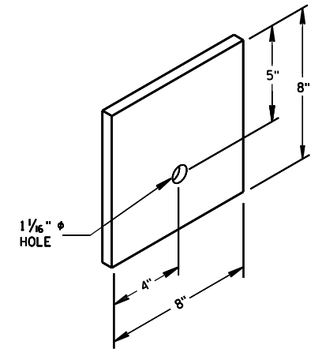
SECTION B-B



SECTION A-A

PLAN VIEW

GENERIC ANCHOR CABLE BOX (8) (H)



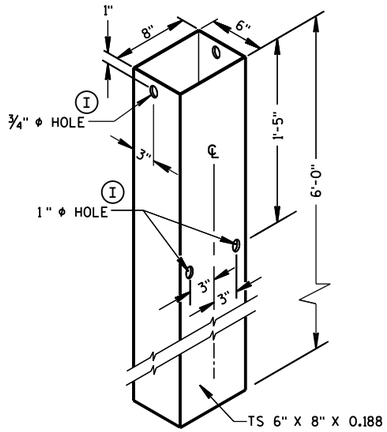
BEARING PLATE (6)

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

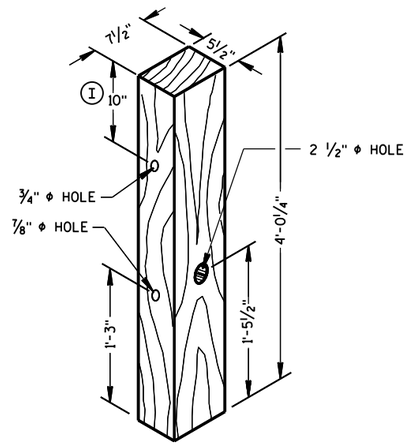
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

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

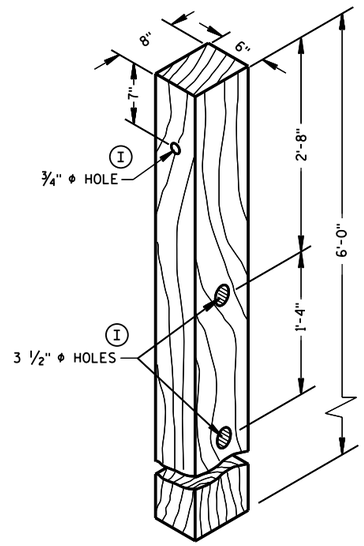


FOUNDATION TUBE (2)



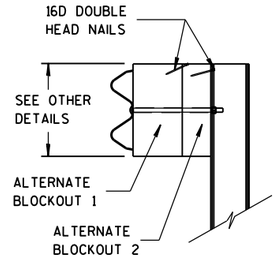
POSTS NUMBER 1 AND 2

WOOD BREAKAWAY POST (1)

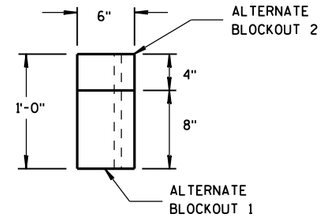


POSTS NUMBER 3-9

WOOD CRT POST (3)

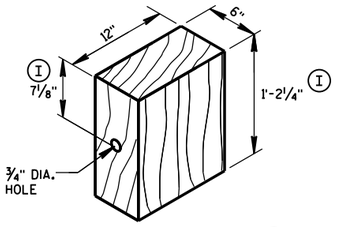


SIDE VIEW



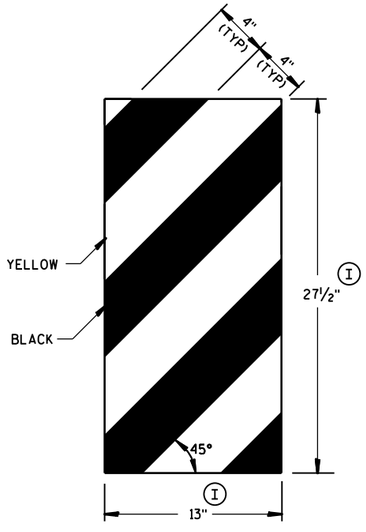
TOP VIEW

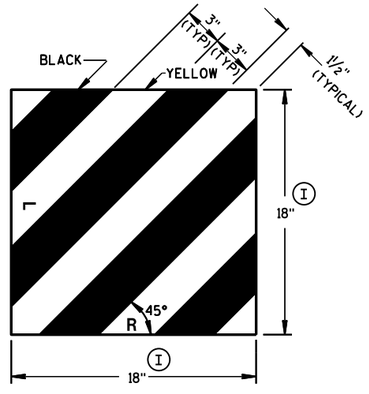
ALTERNATE WOOD BLOCKOUT DETAIL



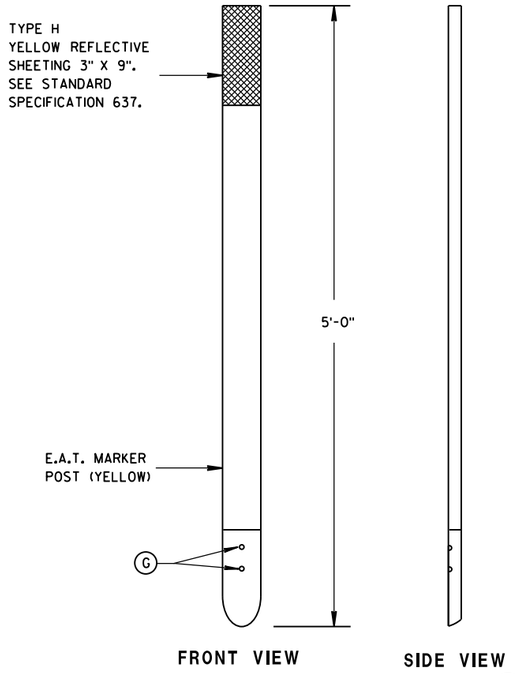
WOOD BLOCKOUT (4)

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





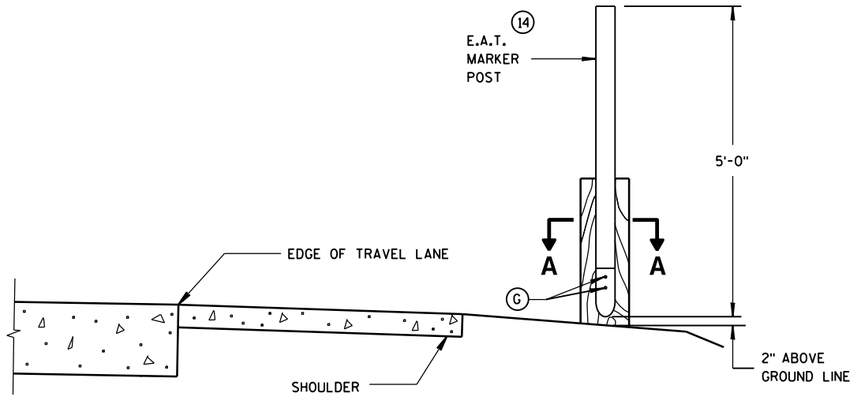
GENERIC REFLECTIVE SHEETING (13) (H)



FRONT VIEW

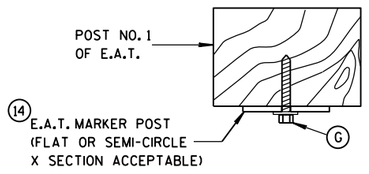
SIDE VIEW

E.A.T. MARKER POST (14)



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

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



SECTION A-A

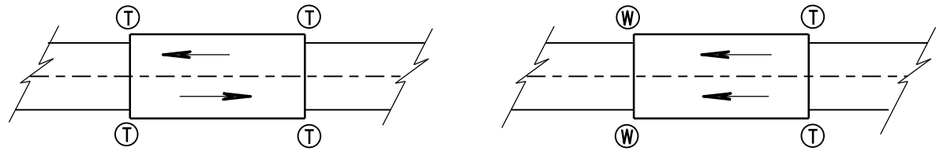
MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

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



TWO WAY TRAFFIC

ONE WAY TRAFFIC

Ⓣ THRIE BEAM CONNECTION

Ⓦ W-BEAM CONNECTION WHEN REQUIRED

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

GENERAL NOTES

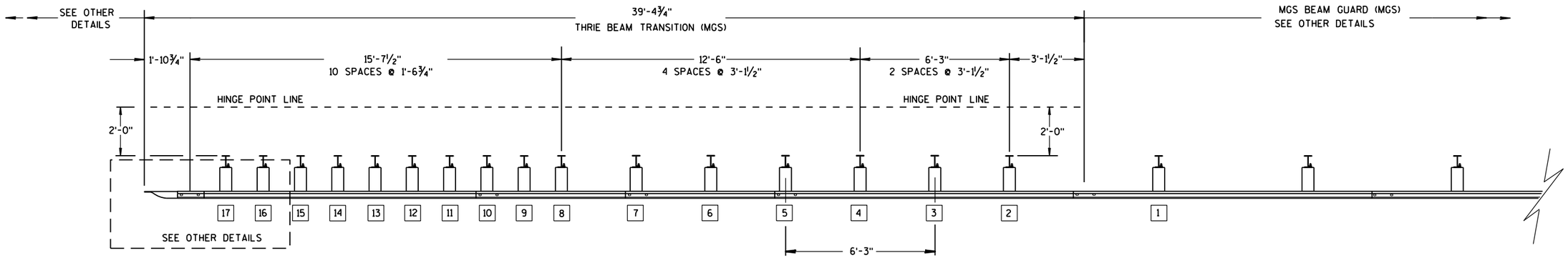
IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2½", AND 12" DIAMETER AROUND POST. SEE 14B42 FOR MORE DETAILS.

TRANSITION USES STEEL POSTS ONLY.

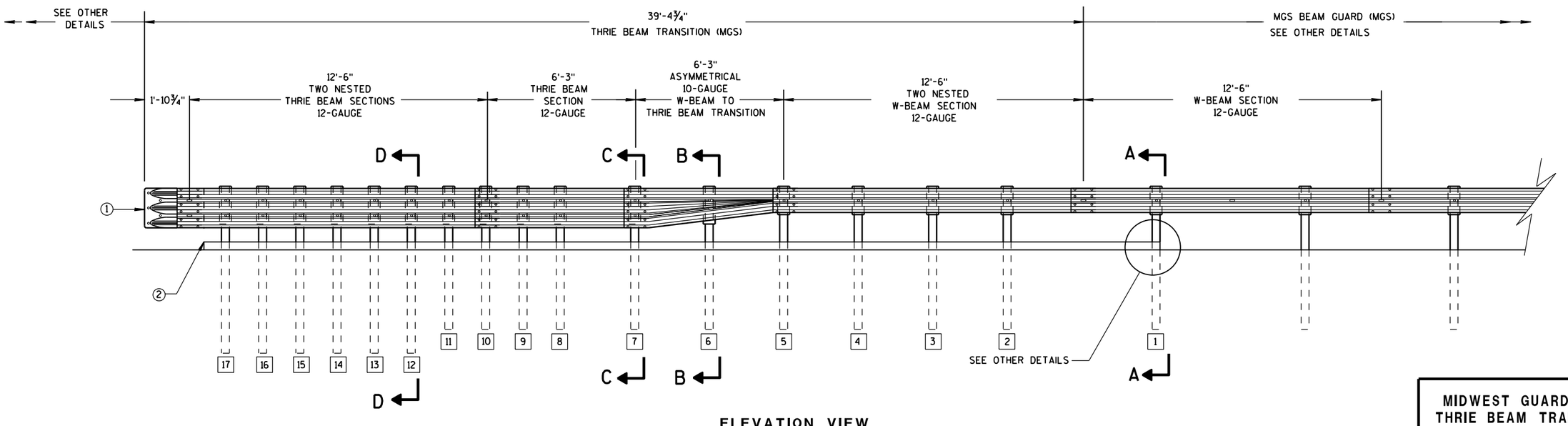
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

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

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



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

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

6

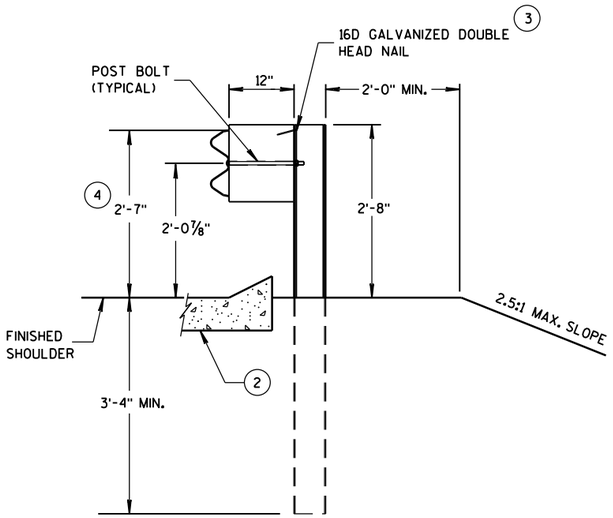
S.D.D. 14 B 45-4a

GENERAL NOTES

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

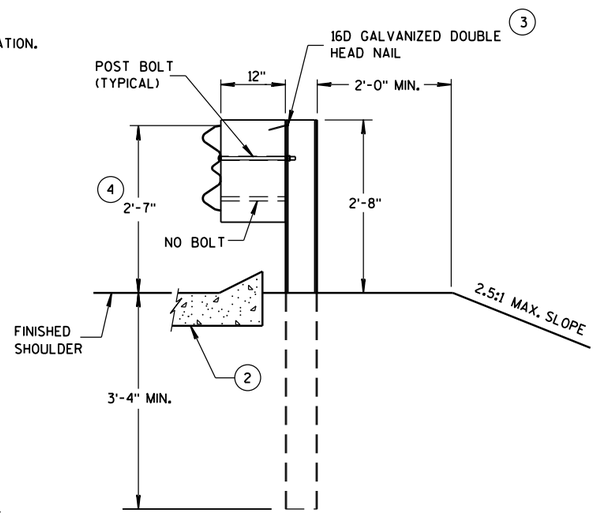
(3) WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 10D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

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



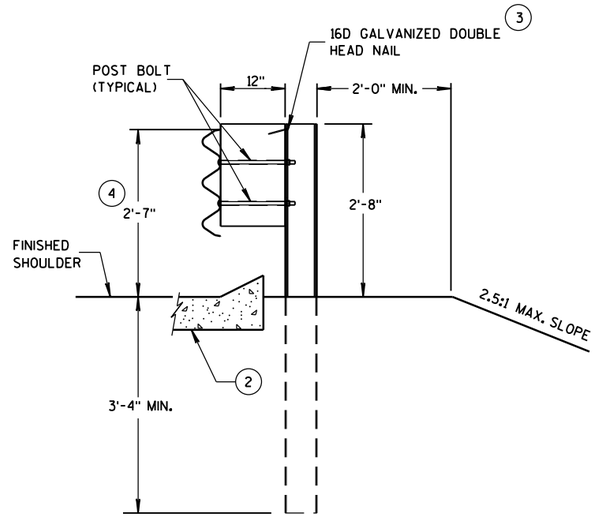
SECTION A-A

POSTS 1-5



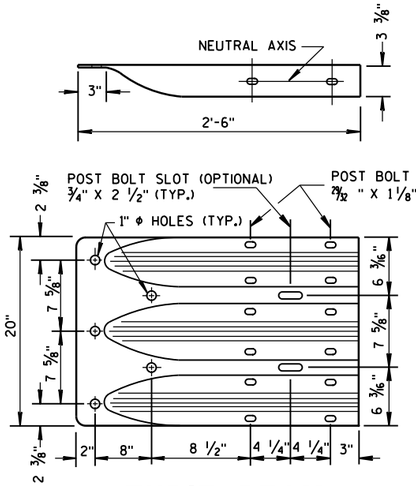
SECTION B-B

POST 6



SECTION C-C

POSTS 7-11



THRIE BEAM TERMINAL CONNECTOR

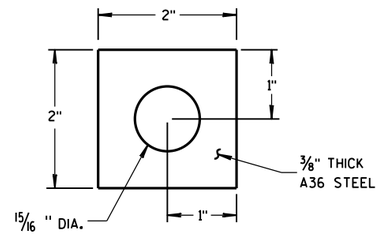
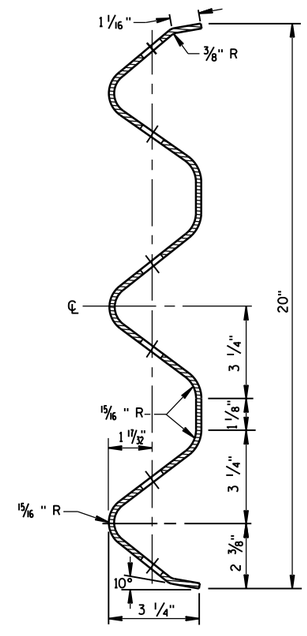
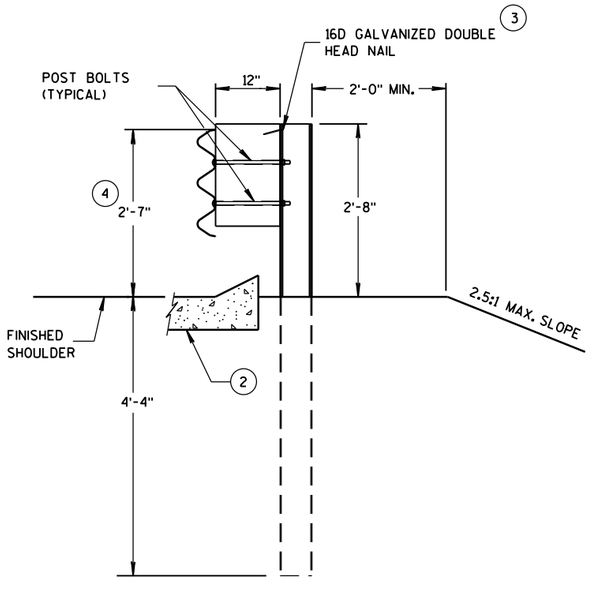


PLATE WASHER DETAIL

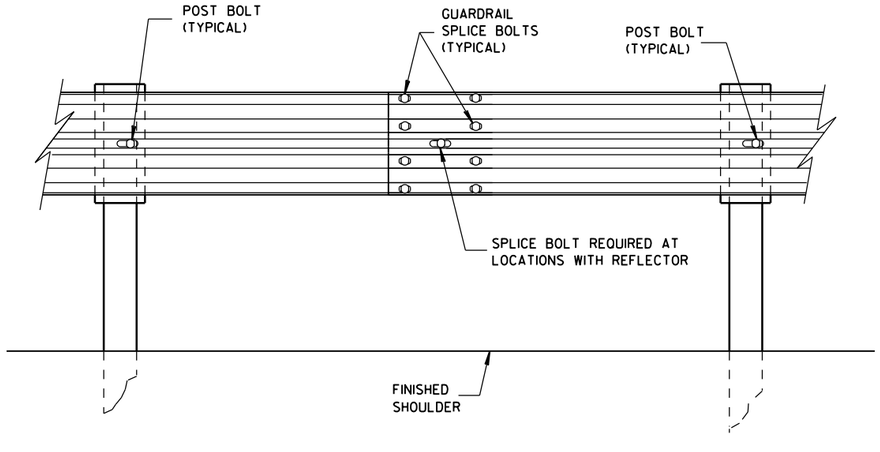


SECTION THRU THRIE BEAM RAIL ELEMENT



SECTION D-D

POSTS 12-17



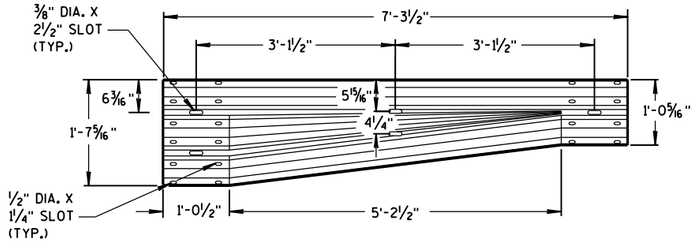
SPLICE DETAIL

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

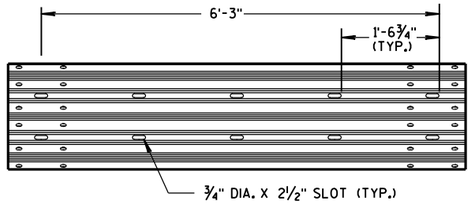
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

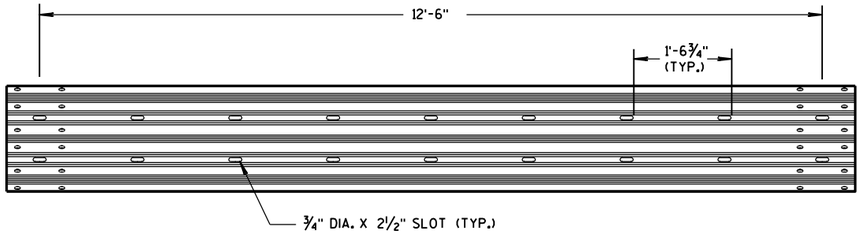
S.D.D. 14 B 45-4b



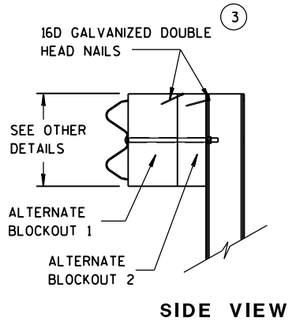
W-BEAM TO THRIE BEAM TRANSITION SECTION



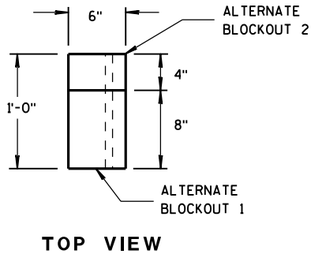
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

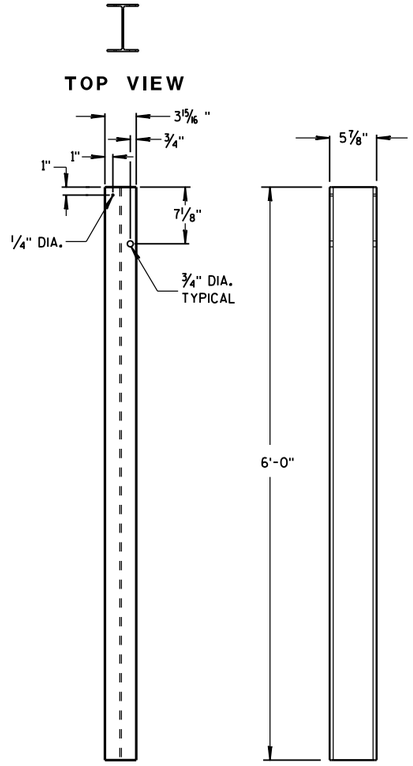


SIDE VIEW

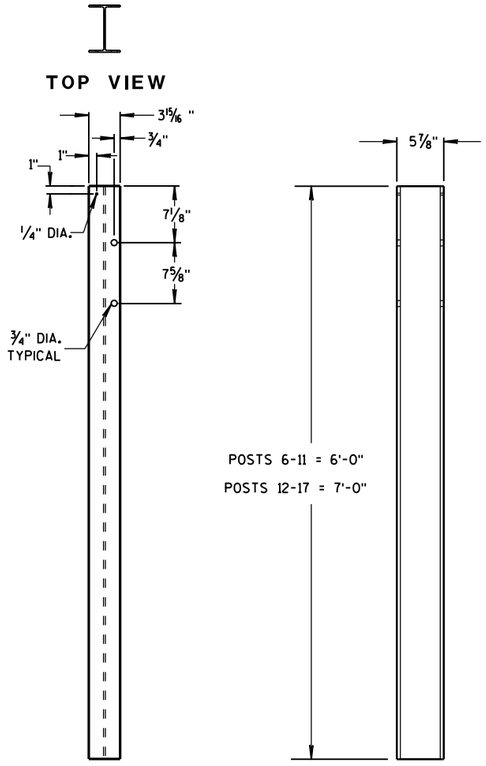


TOP VIEW

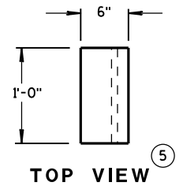
ALTERNATE WOOD BLOCKOUT DETAIL



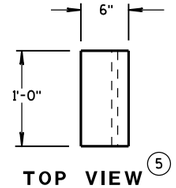
STEEL POSTS 1-5



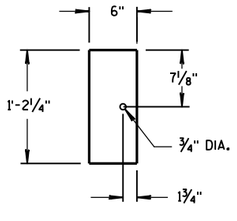
STEEL POSTS 6-17



TOP VIEW

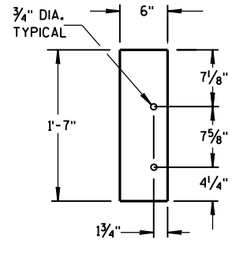


TOP VIEW



FRONT VIEW

BLOCKOUT POSTS 1-5



FRONT VIEW

BLOCKOUT POSTS 6-17

GENERAL NOTES

STEEL POSTS ARE W6X9 OR W6X8.5.

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

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

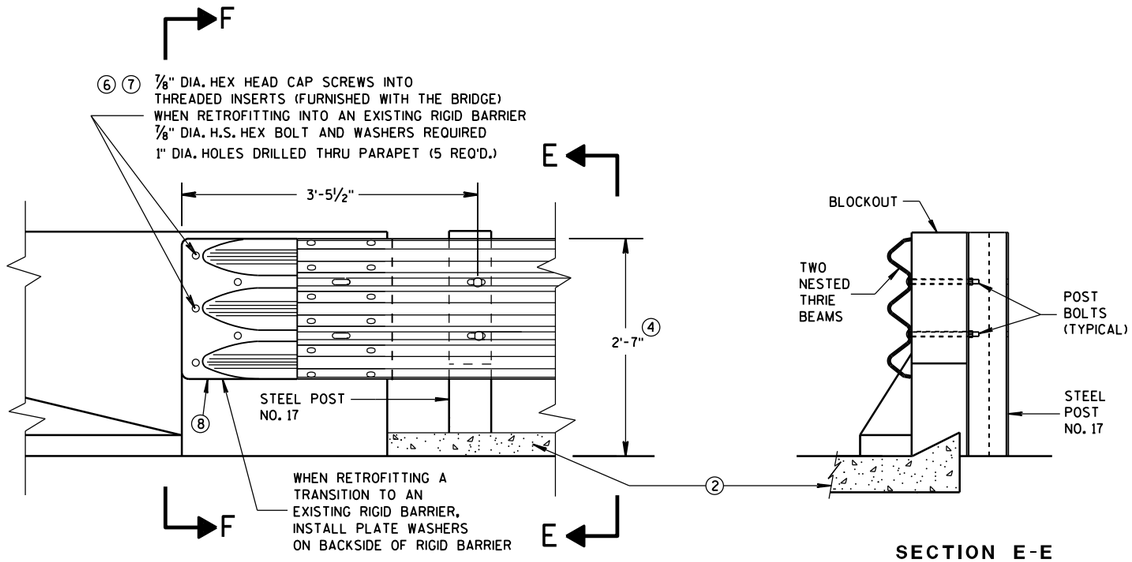
(5) WOOD BLOCKS MAY BE CONSTRUCTED OUT OF 2 WOOD BLOCKS. SEE ALTERNATE WOOD BLOCK DETAIL.

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

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



FRONT VIEW

SECTION E-E

THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS

GENERAL NOTES

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

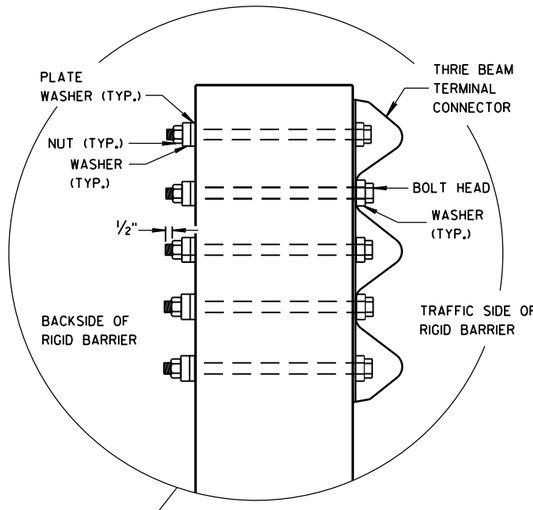
② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

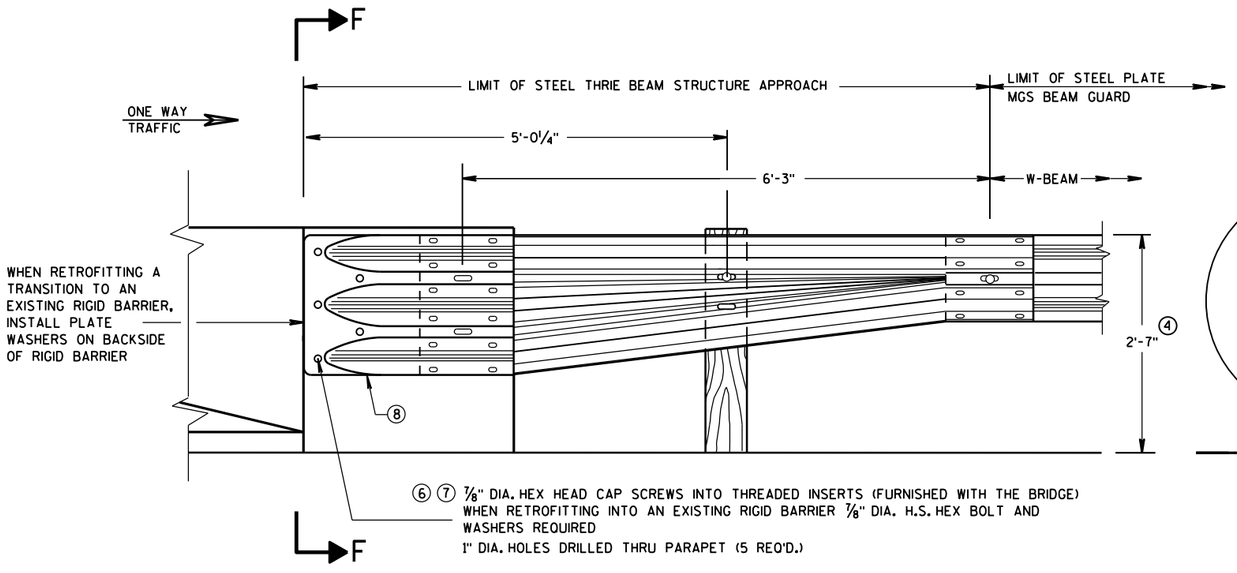
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

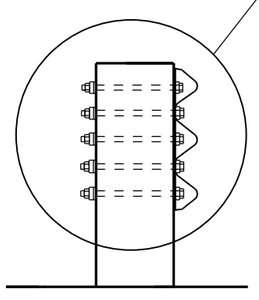
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

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

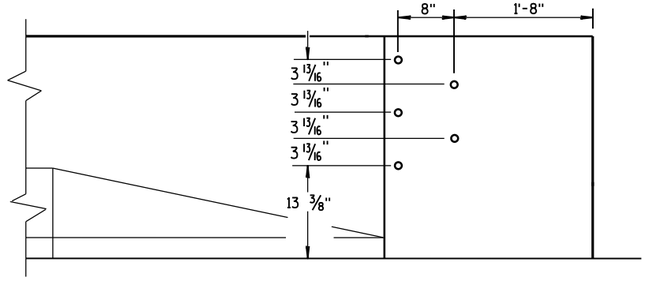




FRONT VIEW



SECTION F-F



DRILL HOLE LOCATION

W BEAM TRANSITION AND CONNECTION TO BRIDGE PARAPETS WITH SQUARE ENDS

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

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

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

6

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

GENERAL NOTES

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

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

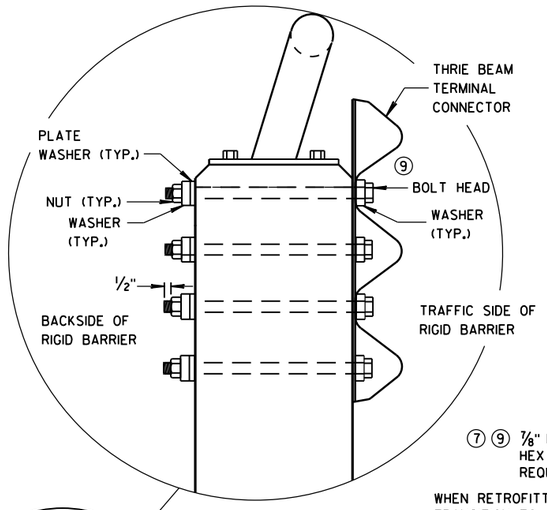
(4) TOLERANCE FOR TOP OF BEAM IS ± 1".

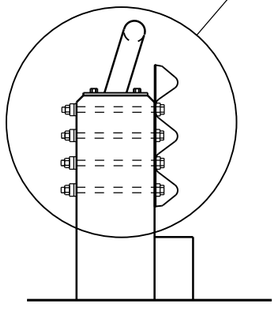
(6) DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

(7) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

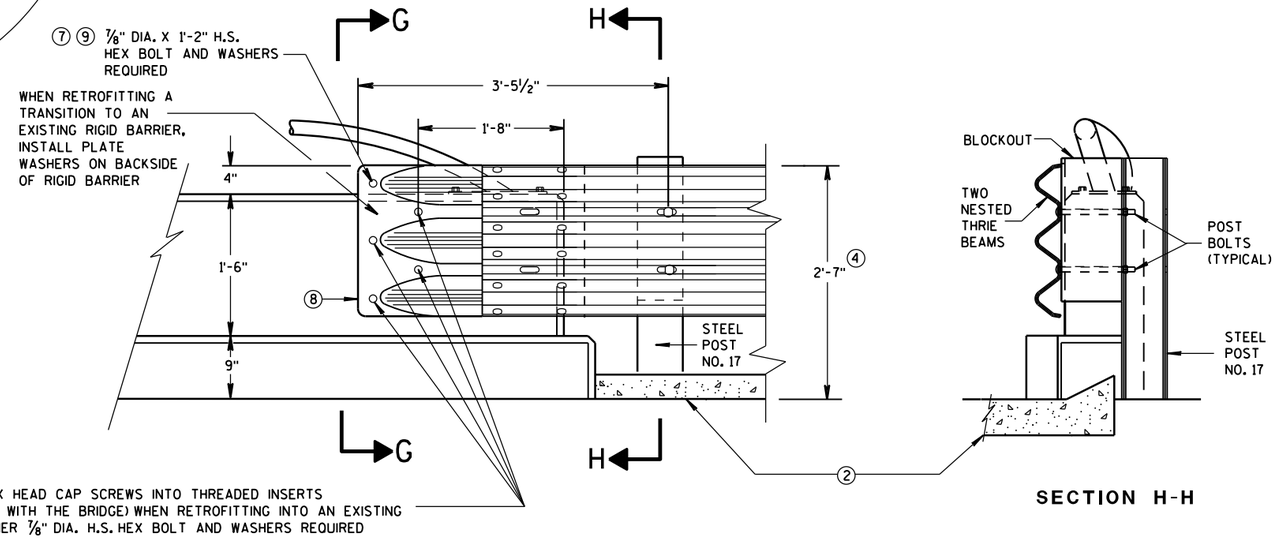
(8) THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2".

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





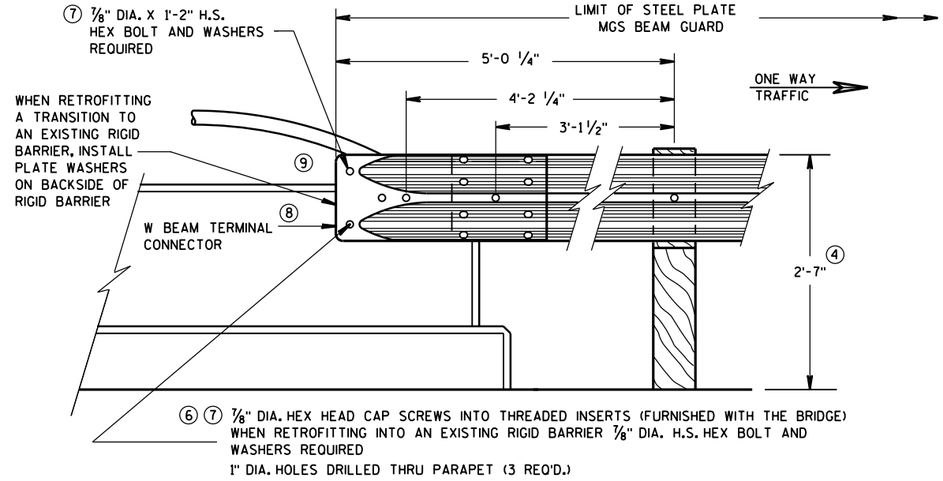
SECTION G-G



FRONT VIEW

SECTION H-H

THRIE BEAM CONNECTION TO VERTICAL FACED PARAPETS



FRONT VIEW

W BEAM CONNECTION TO VERTICAL FACE PARAPET

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

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

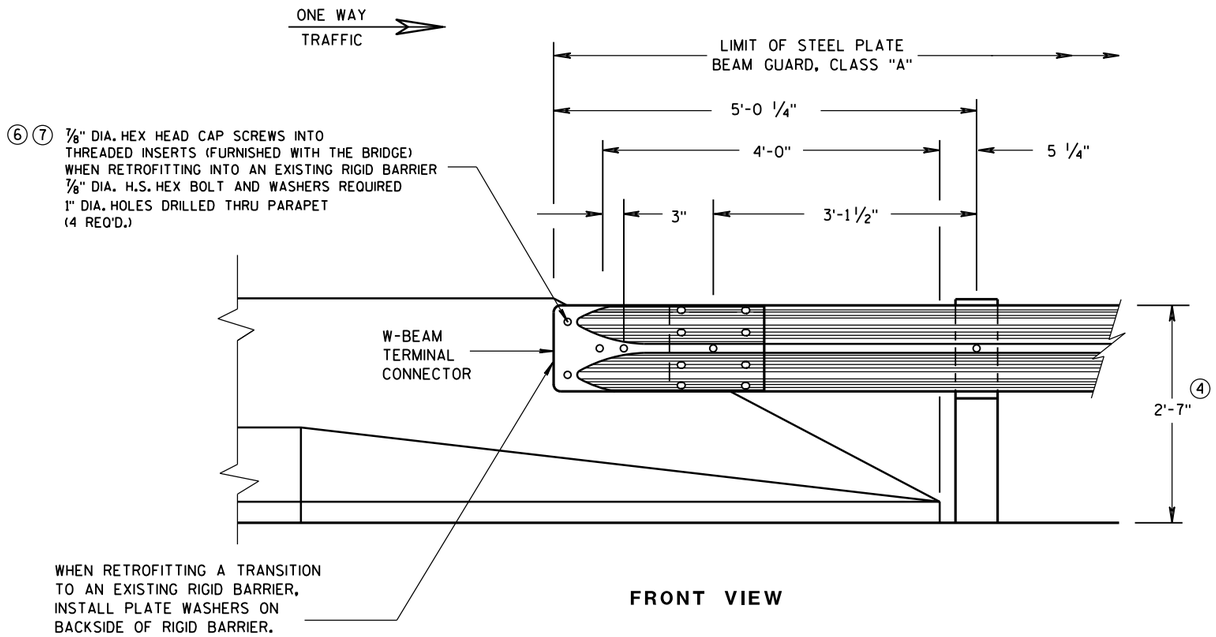
APPROVED
June, 2015 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

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

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



FRONT VIEW

W BEAM CONNECTION TO PARAPETS WITH SLOPED ENDS

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

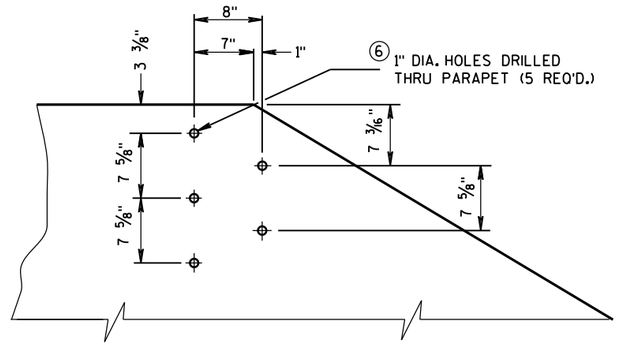
GENERAL NOTES

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

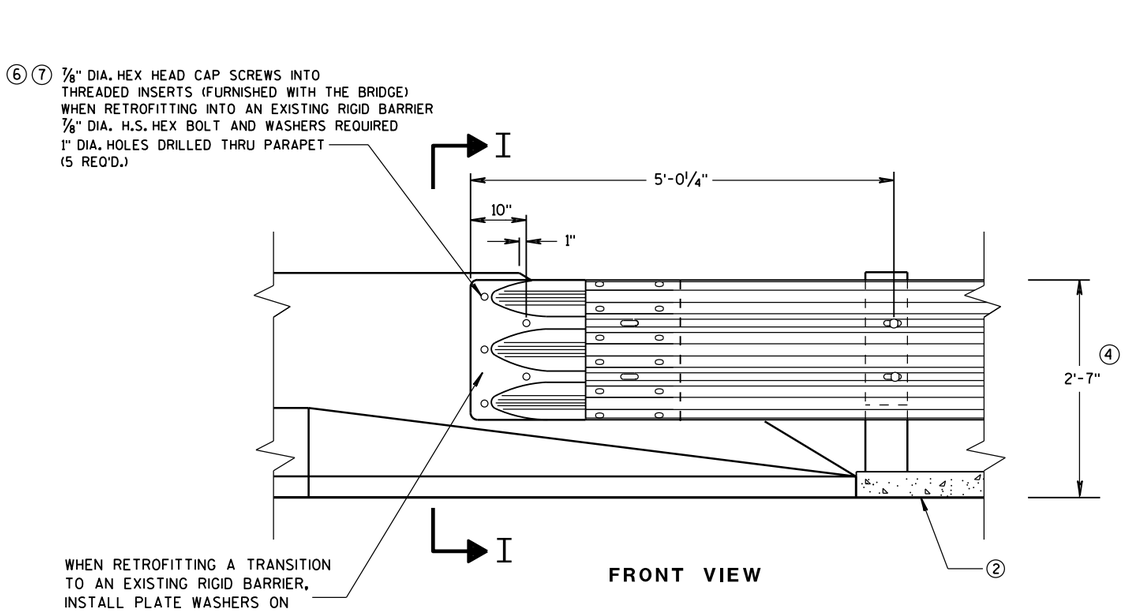
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

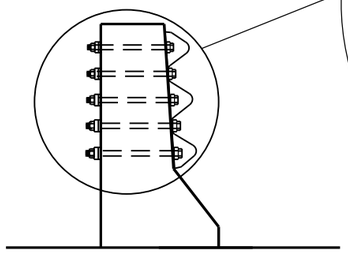
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.



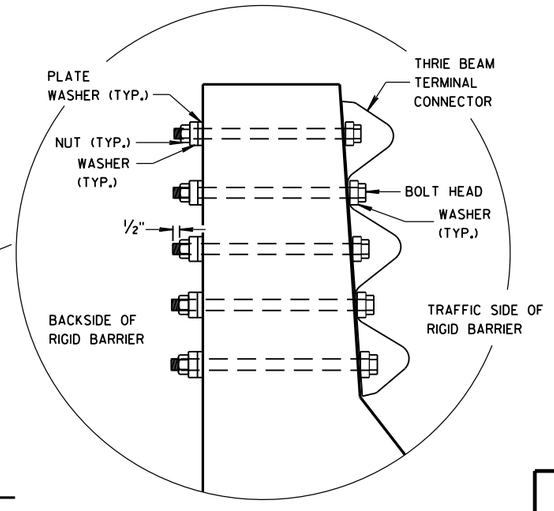
DRILL HOLE LOCATION AND PATTERN
FOR THRIE BEAM CONNECTION



FRONT VIEW



SECTION I-I



THRIE BEAM CONNECTION TO BRIDGE PARAPETS WITH SLOPED ENDS

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

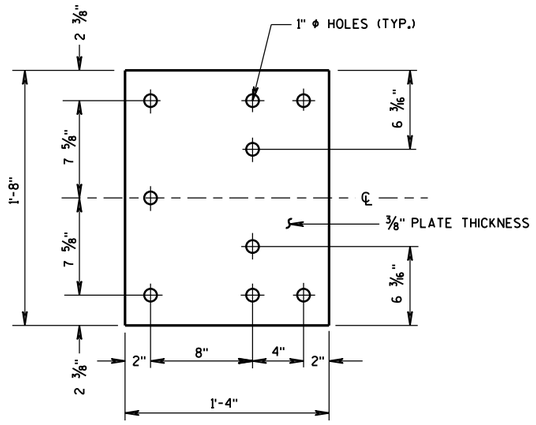
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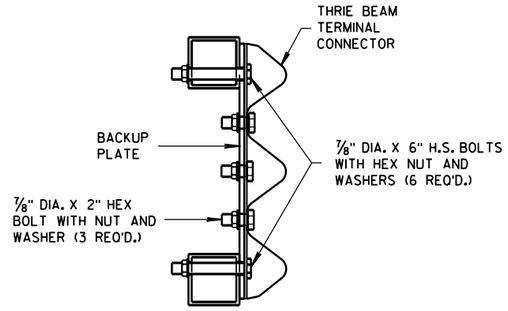
S.D.D. 14 B 45-4f

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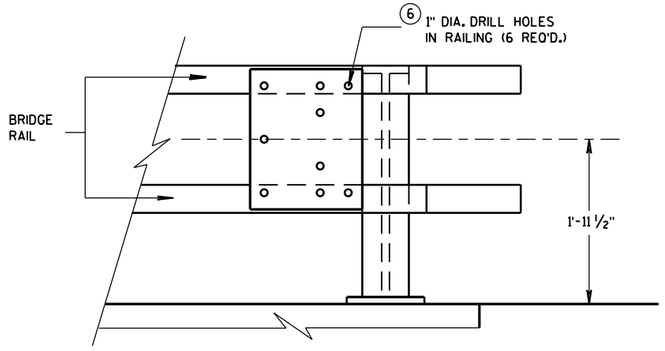
S.D.D. 14 B 45-4f



BACK-UP PLATE DETAIL



SECTION J-J

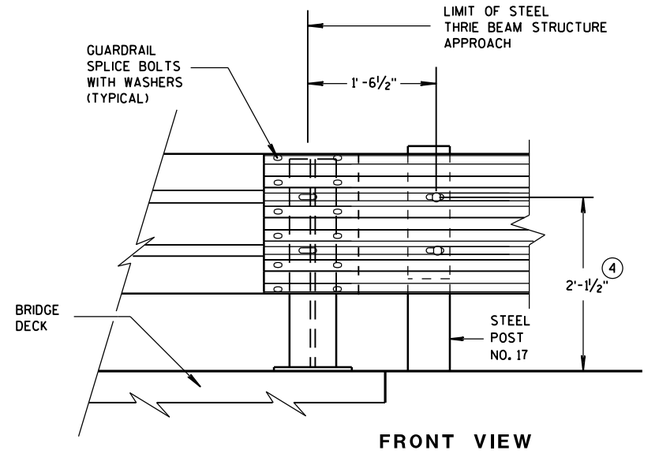


BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING

GENERAL NOTES

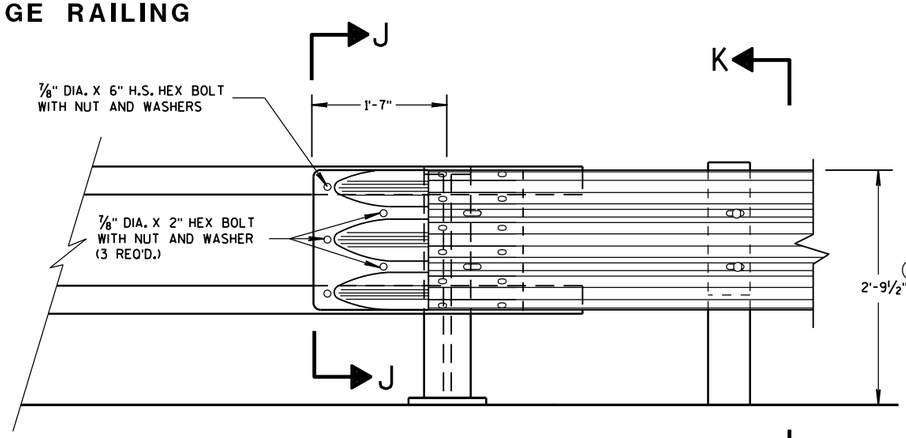
(4) TOLERANCE FOR TOP OF BEAM IS ± 1".

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

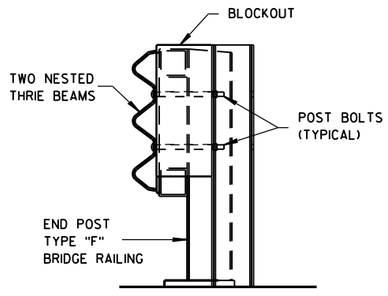


FRONT VIEW

THRIE BEAM CONNECTION TO STEEL RAILING TYPE "W"



FRONT VIEW



SECTION K-K

THRIE BEAM CONNECTION TO TUBULAR RAILING TYPE "F"

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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June, 2015 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
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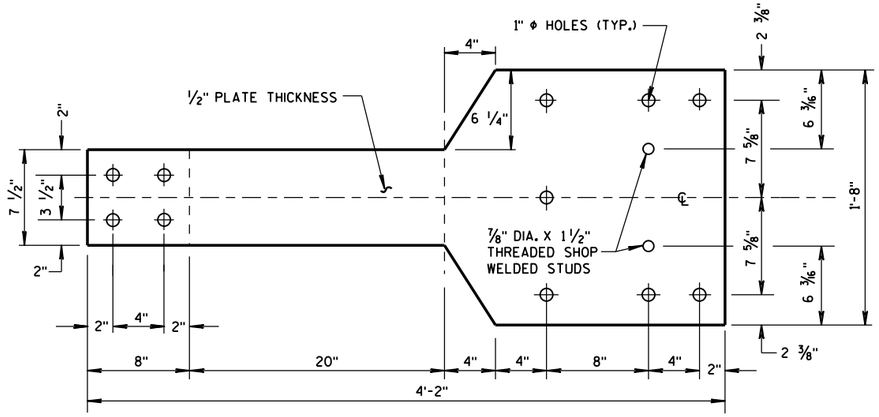
S.D.D. 14 B 45-4g

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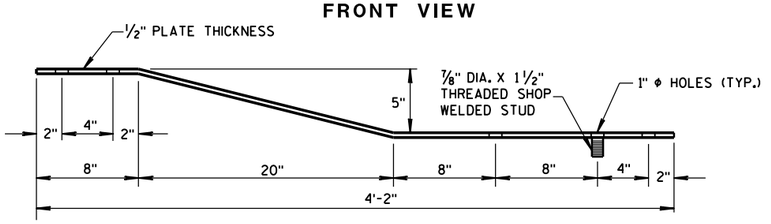
S.D.D. 14 B 45-4g

GENERAL NOTES

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

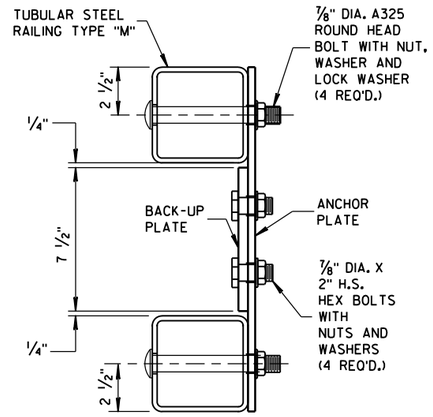


FRONT VIEW

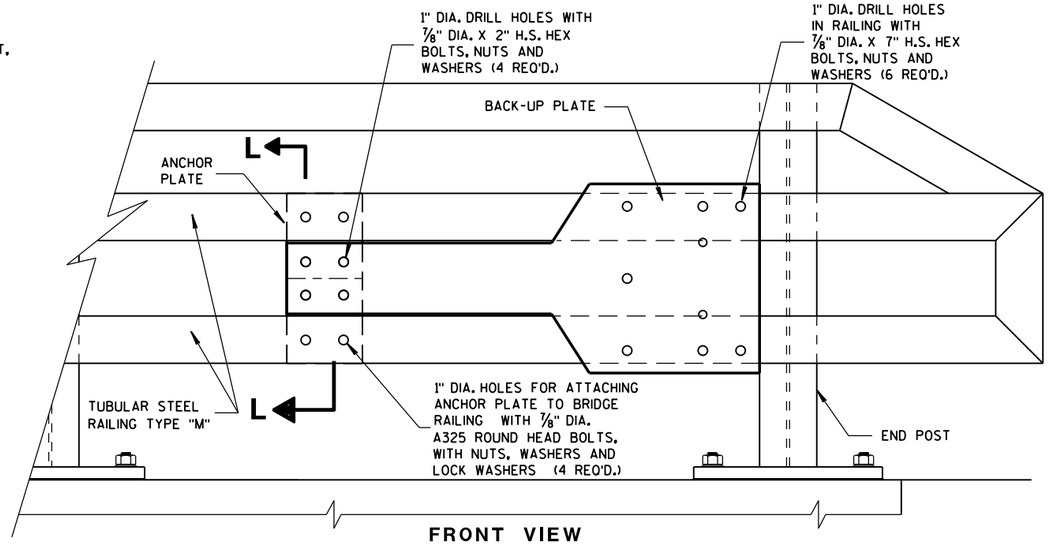


PLAN VIEW

BACK-UP PLATE DETAIL, TYPE "M"

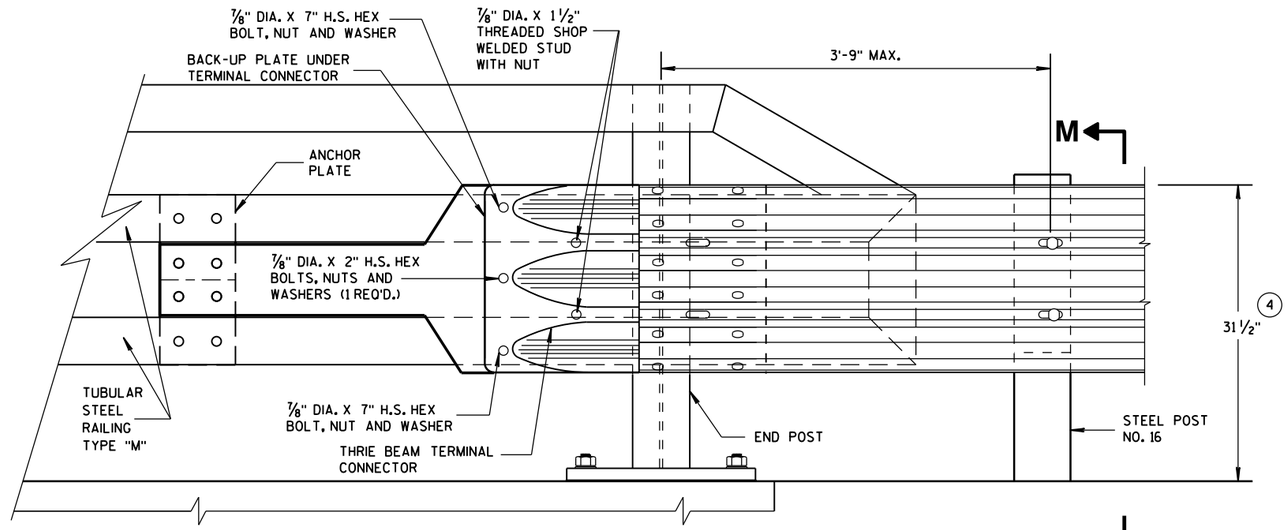


SECTION L-L

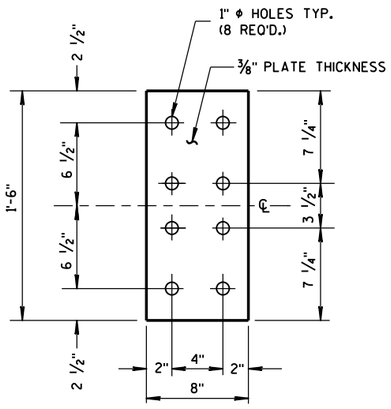


FRONT VIEW

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

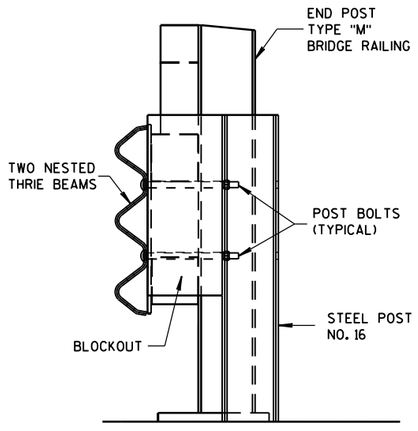


FRONT VIEW

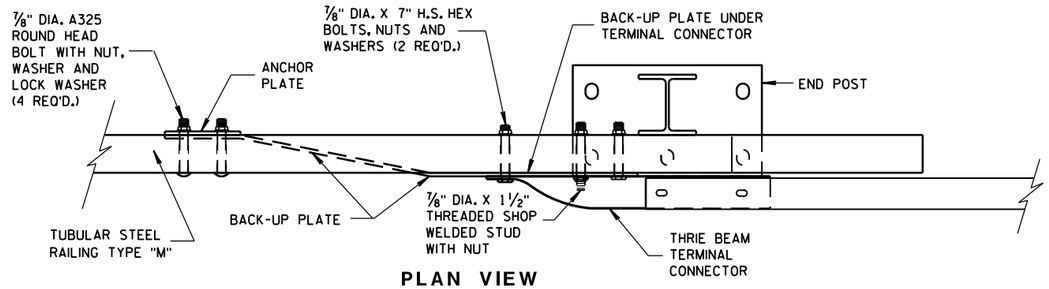


FRONT VIEW

ANCHOR PLATE DETAIL, TYPE "M"



SECTION M-M



PLAN VIEW

THRIE BEAM CONNECTION TO TUBULAR RAILING, TYPE "M"

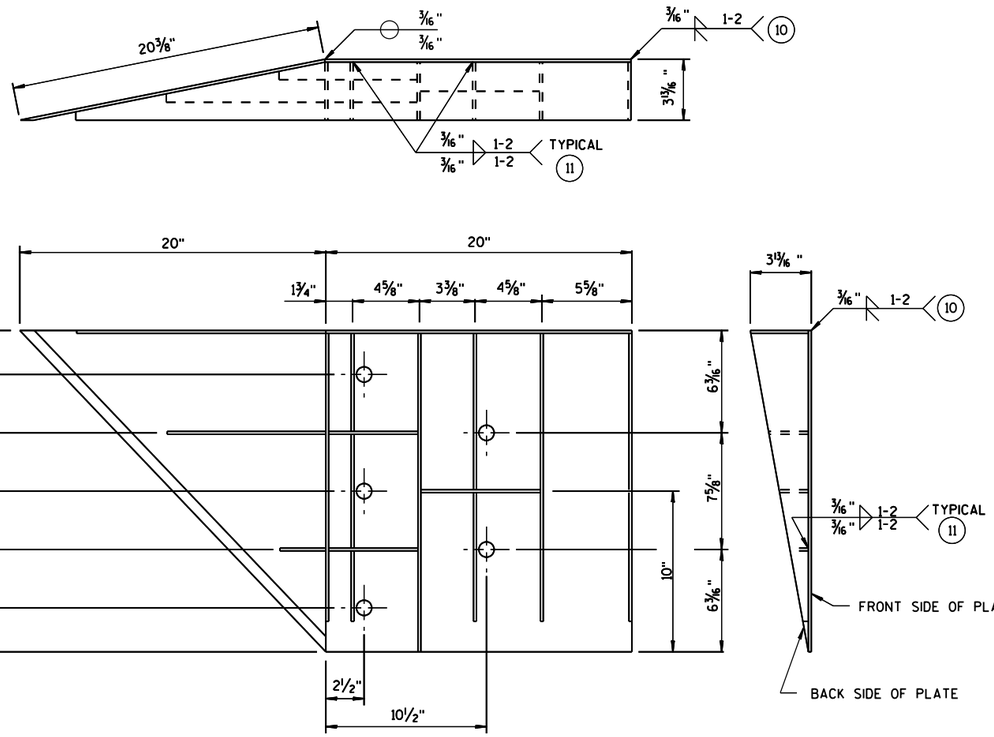
MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June, 2015 DATE FHWA	/S/ Jerry H. Zogg ROADWAY STANDARDS DEVELOPMENT ENGINEER

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WELDING INSTRUCTION

(VIEWED FROM BACK SIDE OF PLATE)

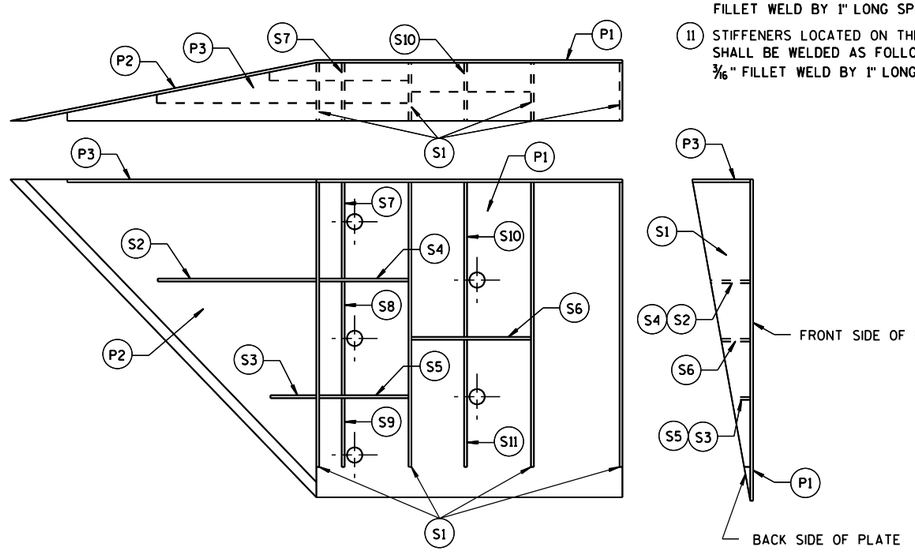


PLATE AND STIFFENER IDENTIFICATION

(VIEWED FROM BACK SIDE OF PLATE)

GENERAL NOTES

COVER PLATE PANELS ARE 3/16" THICK.

ALL STIFFENERS ARE 1/4" THICK.

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

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

ALL HOLE DIAMETERS SHALL BE 1".

FOR OPPOSITE SIDE INSTALLATION MIRROR DRAWINGS.

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

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

CONNECTOR PLATE DIMENSION (PER ASSEMBLY)

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

SINGLE SLOPE CONNECTION PLATE

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

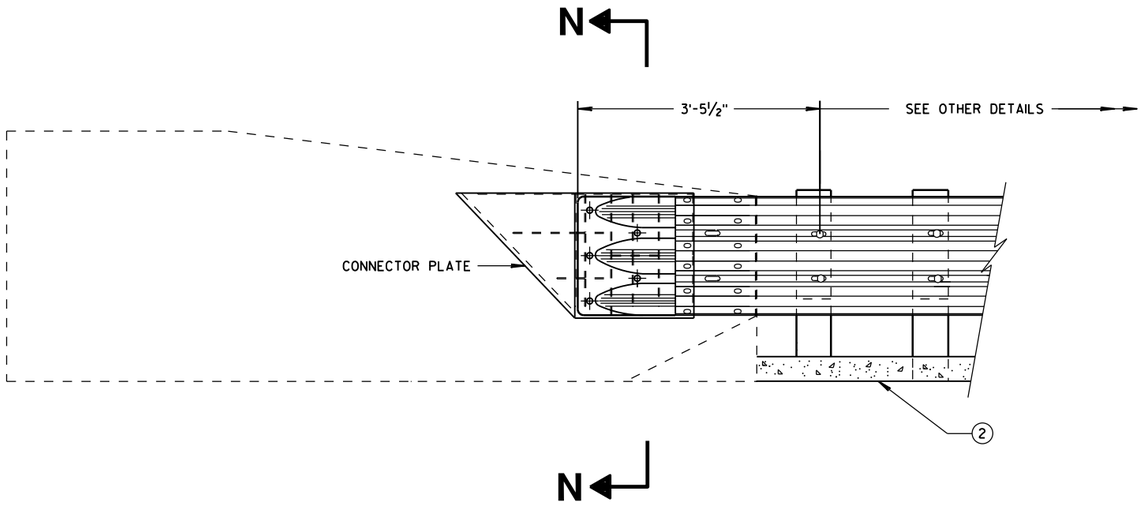
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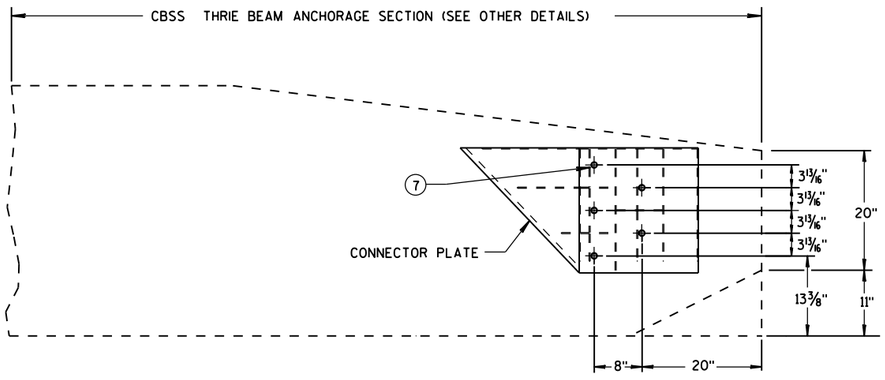
S.D.D. 14 B 45-4i

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



THRIE BEAM CONNECTION TO SINGLE SLOPE BARRIER



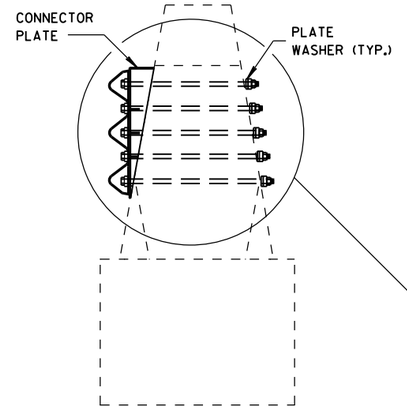
SINGLE SLOPE CONNECTION PLATE PLACEMENT

GENERAL NOTES

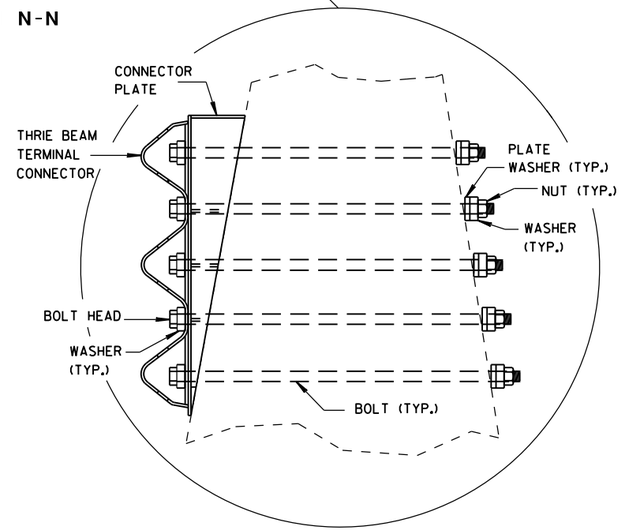
CONNECTOR PLATE, DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

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

(7) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.



SECTION N-N



MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

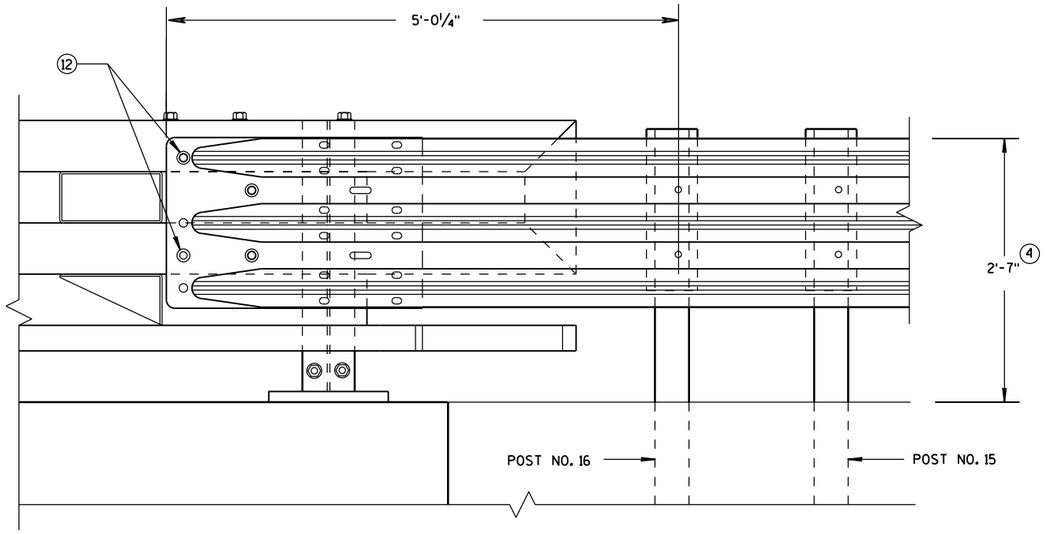
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S.D.D. 14 B 45-4j

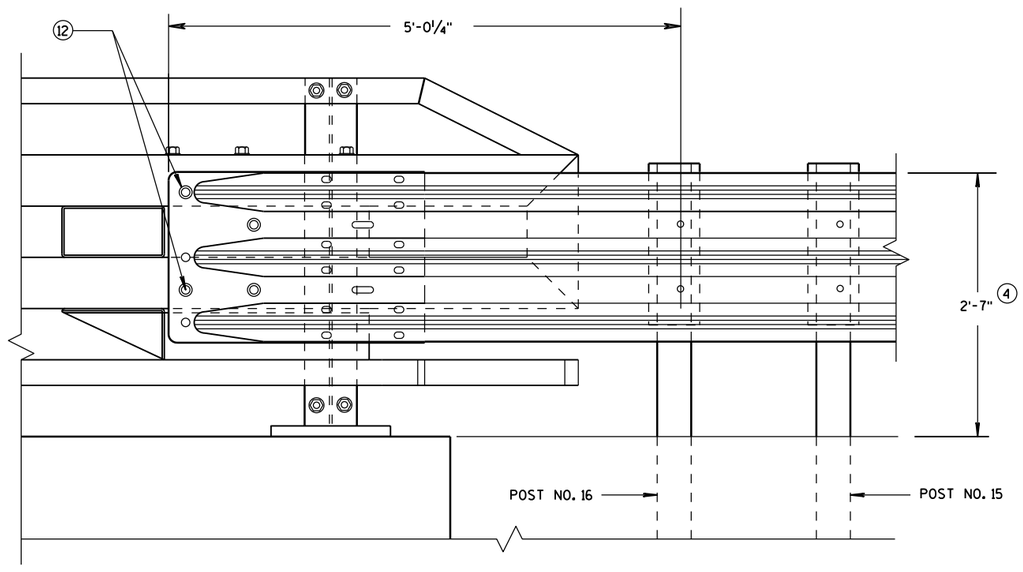
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S.D.D. 14 B 45-4j



ELEVATION OF DETAIL AT NY3 END POST

THRIE BEAM RAIL ATTACHMENT



ELEVATION OF DETAIL AT NY4 END POST

THRIE BEAM RAIL ATTACHMENT

GENERAL NOTES

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

(12) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. ON BACKSIDE OF PARAPET ONE ROUND WASHER, AND NUT REQUIRED. BOLT THREAD IS TO EXTEND ½-INCH BEYOND NUT.

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS D 219 NT
ENGINEER

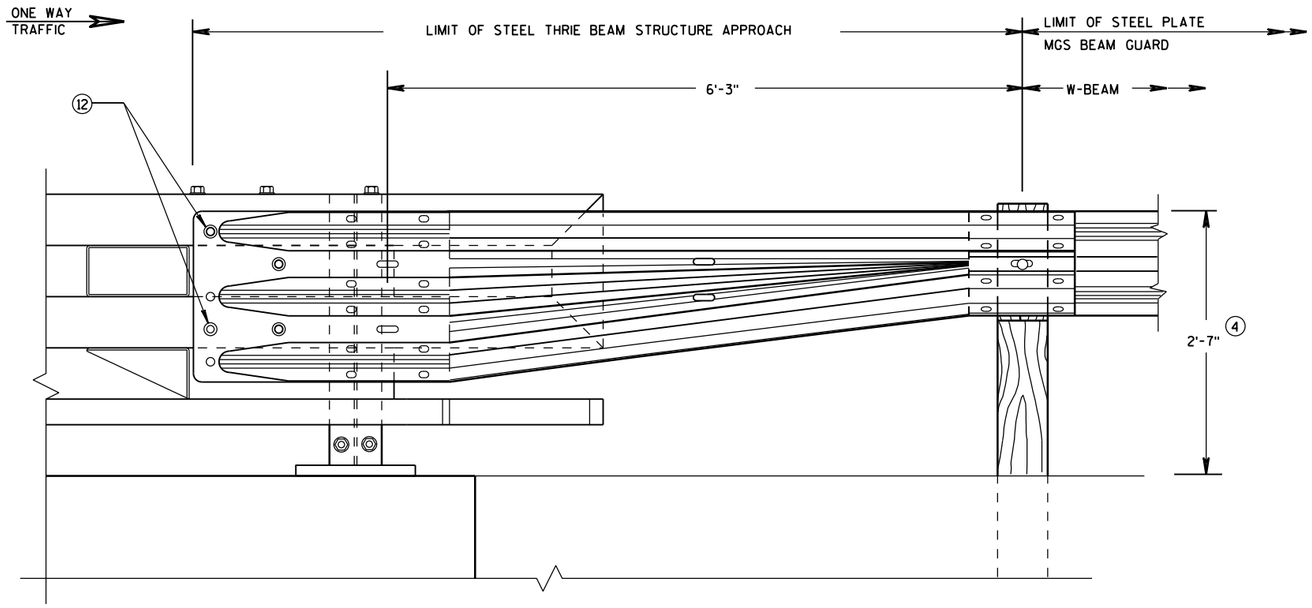
FHWA

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

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



FRONT VIEW

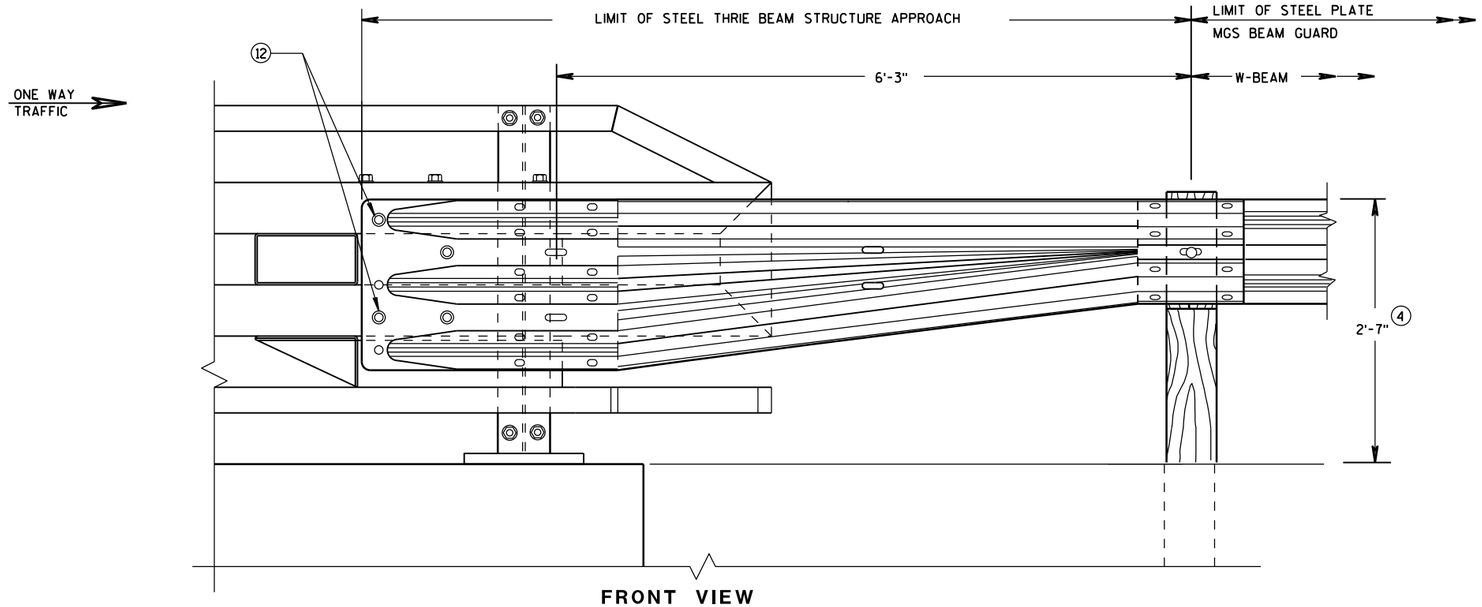
W BEAM TRANSITION AND CONNECTION TO BRIDGE RAILING TYPE "NY3"

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

GENERAL NOTES

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

(12) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. ON BACKSIDE OF PARAPET ONE ROUND WASHER, AND NUT REQUIRED. BOLT THREAD IS TO EXTEND ½-INCH BEYOND NUT.



FRONT VIEW

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

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

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

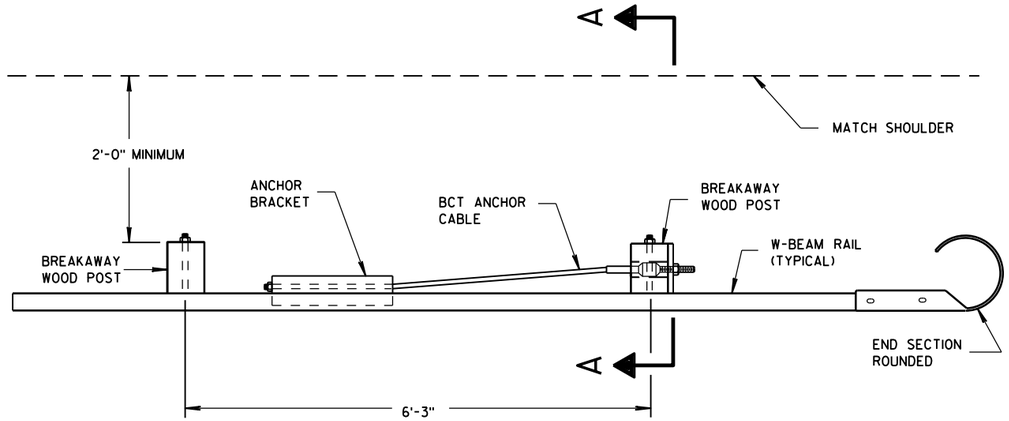
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FHWA

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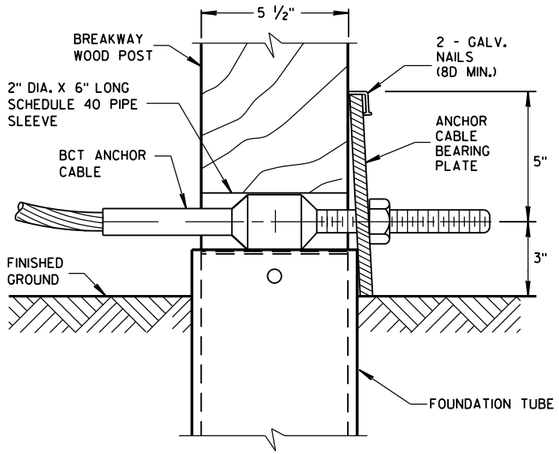
S.D.D. 14 B 45-4L

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



PLAN VIEW



DETAIL A

POST NO. 1
GROUNG STRUT NOT SHOWN FOR CLARITY.

GENERAL NOTES

SEE SDD 14 B 42 FOR MORE INFORMATION.

END SECTION BOLTS AND NUTS HAVE THE SAME MATERIAL REQUIREMENTS AS SPLICE BOLTS.

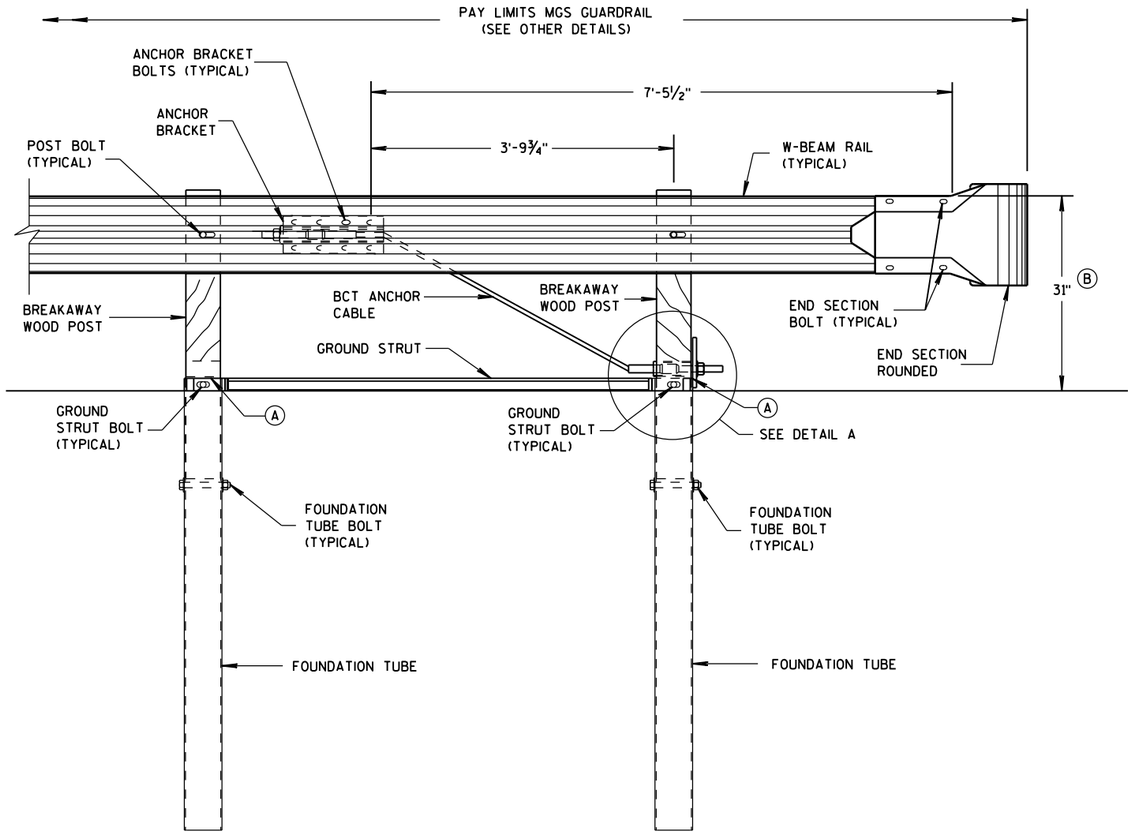
FOUNDATION TUBE BOLTS ARE ⅞" DIAMETER ASTM A307 HEX HEAD BOLT. FOUNDATION TUBE BOLTS REQUIRE ASTM A563 A NUT AND TWO ASTM F844 ⅞" DIAMETER FLAT WASHERS. INSTALL ONE WASHER UNDER BOLT HEAD AND ONE WASHER UNDER NUT.

ANCHOR BRACKET AND GROUND STRUT BOLTS ARE A ⅝" DIAMETER ASTM A307 HEX HEAD BOLT. ANCHOR BRACKET BOLTS REQUIRE ASTM A563 A NUT AND TWO ASTM F844 ⅝" DIAMETER FLAT WASHERS. INSTALL ONE WASHER UNDER BOLT HEAD AND ONE WASHER UNDER NUT.

W-BEAM END SECTION ROUNDED HAS THE SAME MATERIAL PROPERTIES AS STANDARD STEEL RAIL.

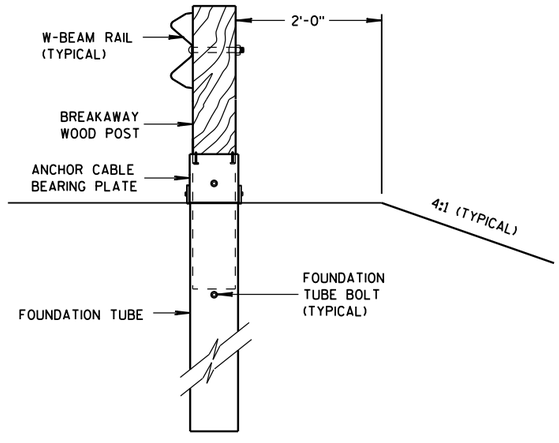
(A) TOP OF FOUNDATION TUBE SHALL BE NO MORE THAN 3" ABOVE FINISHED GROUND.

(B) FOR NEW CONSTRUCTION TOP OF RAIL IS 31" ± 1".
FOR EXISTING INSTALLATIONS TOP OF RAIL IS BETWEEN 27¾" TO 32" ± 1".

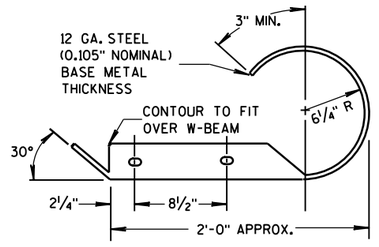


FRONT VIEW

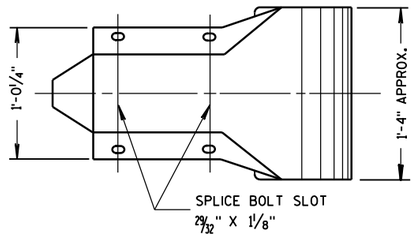
END RAIL DETAIL



SECTION A-A



PLAN VIEW



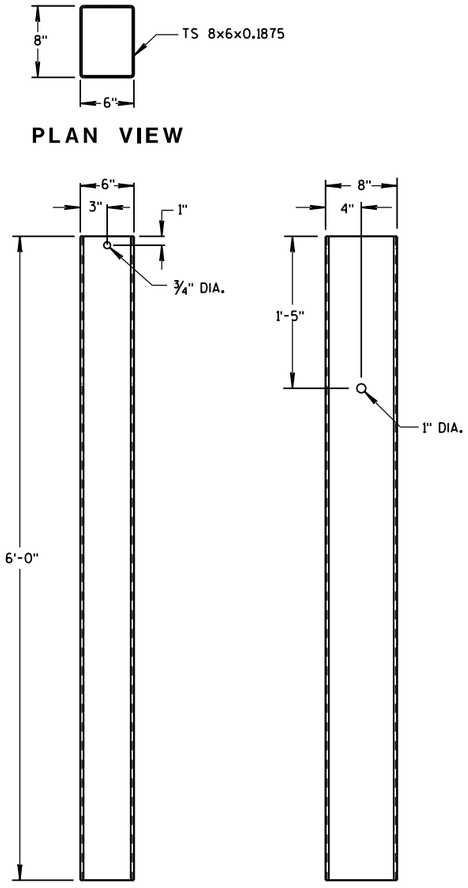
FRONT VIEW

W BEAM END SECTION ROUNDED

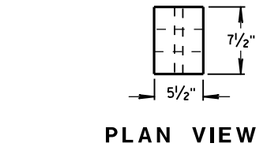
MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

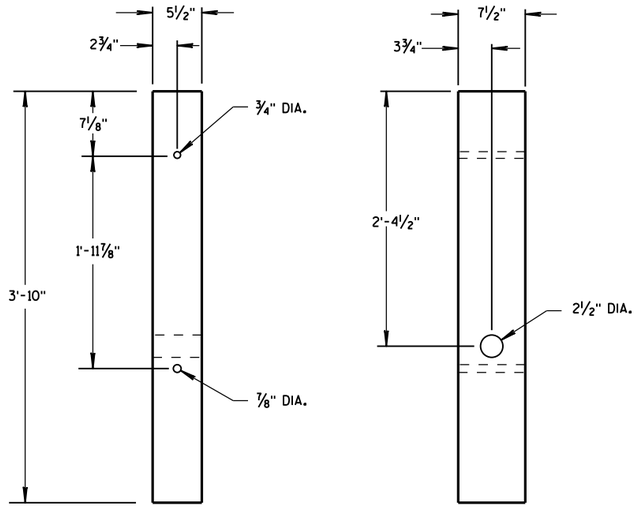
STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

6
S.D.D. 14 B 47-2a



FOUNDATION TUBE



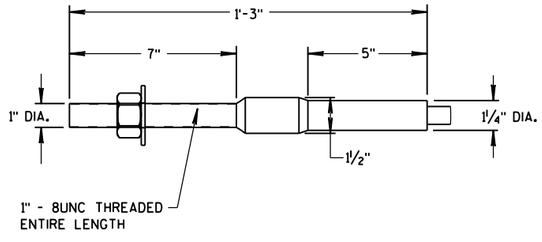


BREAKAWAY WOOD POST

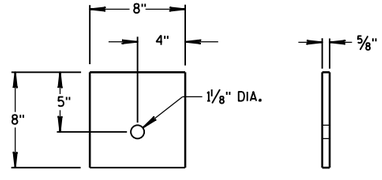
GENERAL NOTES

BCT ANCHOR CABLE IS A ¾" DIAMETER 6X19 IWRC IPS GALVANIZED WIRE ROPE. THE SWAGED FITTINGS AND STUD ARE REQUIRED. END FITTING SHALL BE MACHINED FROM HOT-ROLLED CARBON STEEL CONFORMING TO ASTM A576 GRADE 1035 AND GALVANIZED ACCORDING TO ASTM A123. TREADED STUD SHALL CONFORM TO ASTM A325 OR SAE GRADE 5. MINIMUM BREAKING STRENGTH OF WIRE ROPE IS 43,000 LB. WIRE ROPE IS TO BE TAUT.

BCT ANCHOR CABLE



DETAIL B



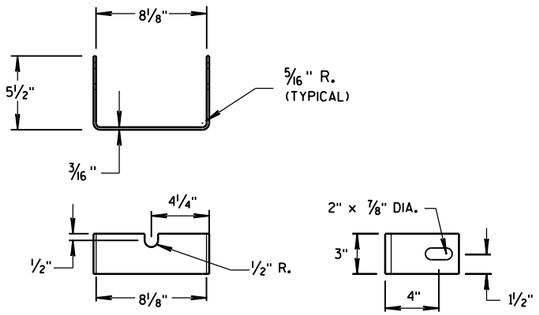
ANCHOR CABLE
BEARING PLATE

MIDWEST GUARDRAIL
SYSTEM (MGS) TYPE 2 TERMINAL

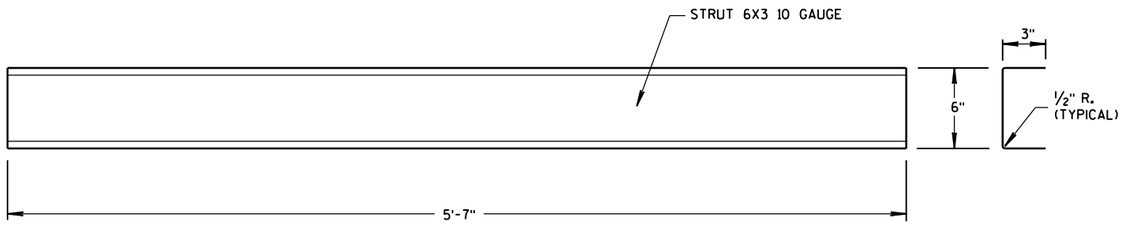
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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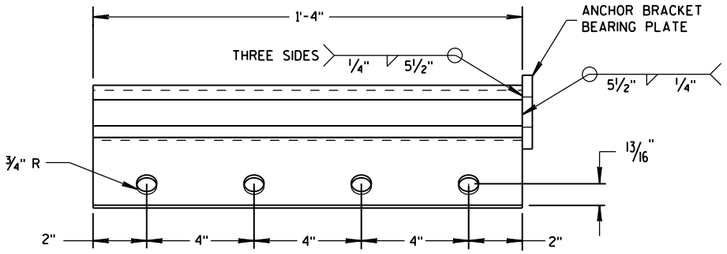
S.D.D. 14 B 47-2b

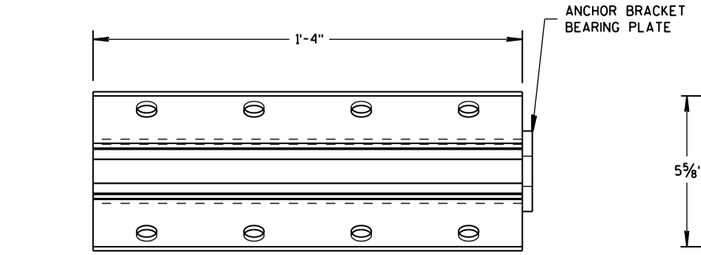


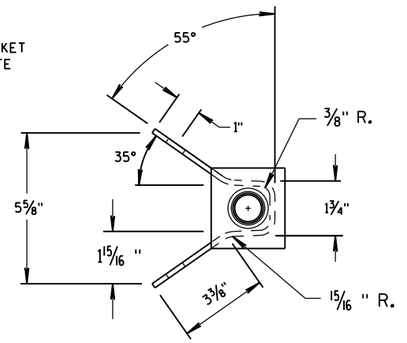
YOKE DETAIL



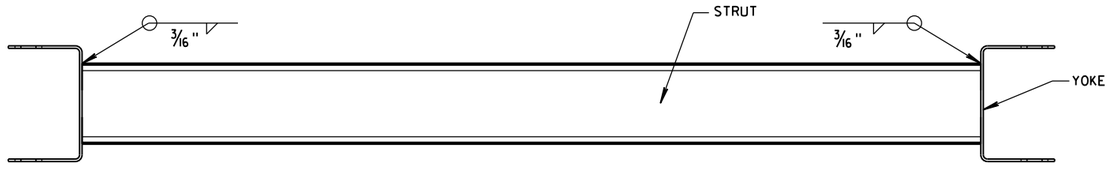
STRUT DETAIL



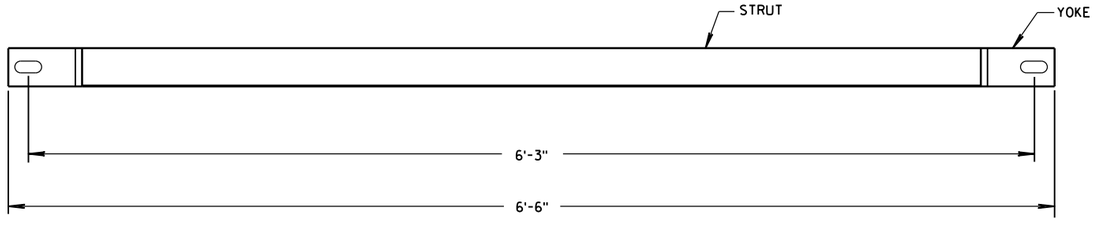




ANCHOR BRACKET

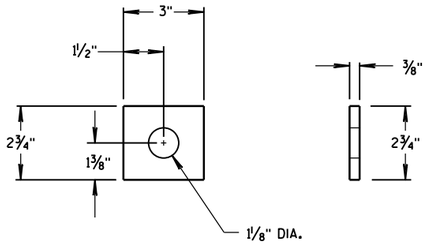


PLAN VIEW



FRONT VIEW

GROUND STRUT DETAIL



ANCHOR BRACKET BEARING PLATE

MIDWEST GUARDRAIL
SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

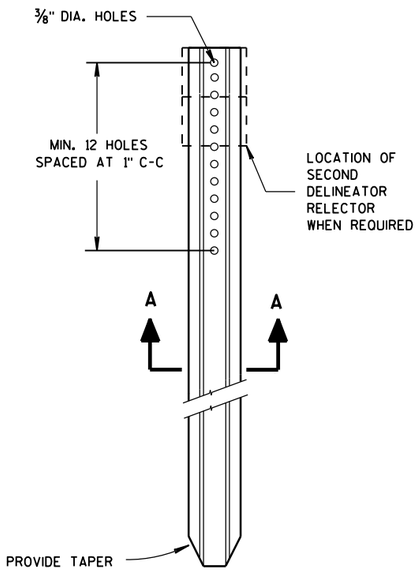
APPROVED
June 2014
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

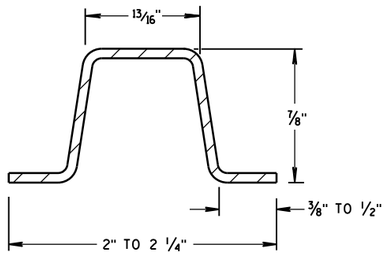
FHWA

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S.D.D. 14 B 47-2c

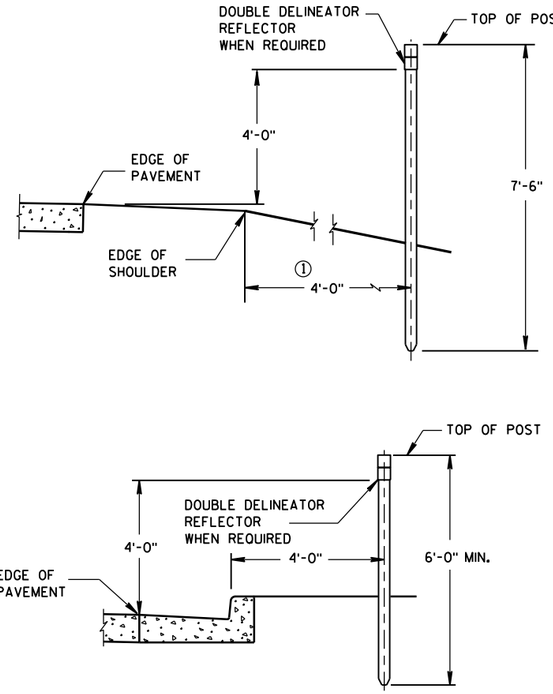


DELINEATOR POST



SECTION A-A

WEIGHT 1.12 LBS PER FT. ± 0.1 LB.

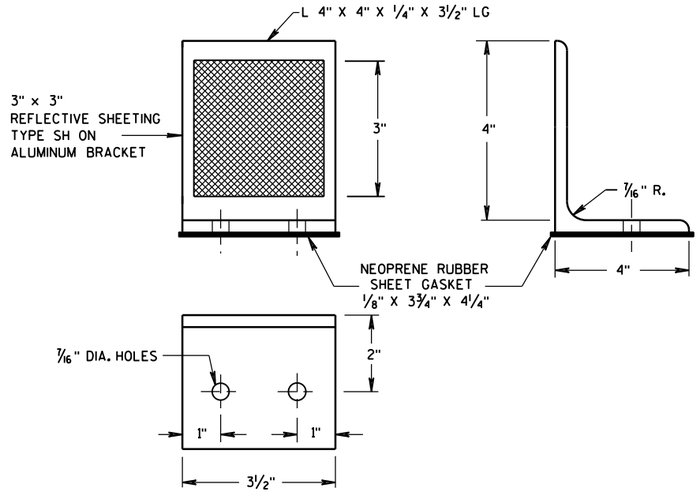


TYPICAL INSTALLATIONS OF DELINEATOR POSTS

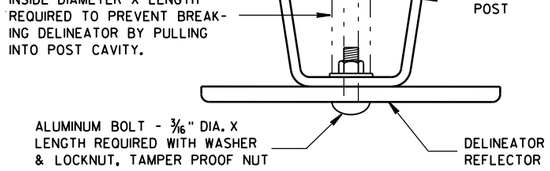
GENERAL NOTES

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

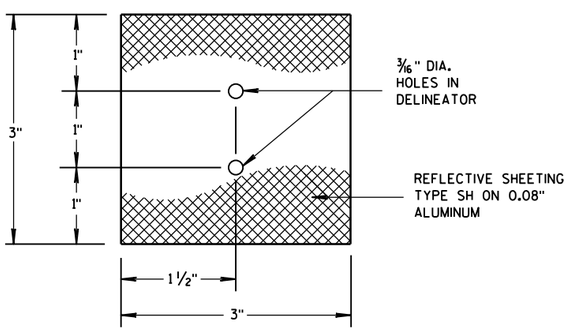
① DELINEATORS SHALL BE PLACED AT A CONSTANT DISTANCE FROM THE EDGE OF THE SHOULDER FOR THE LENGTH OF THE INSTALLATION.



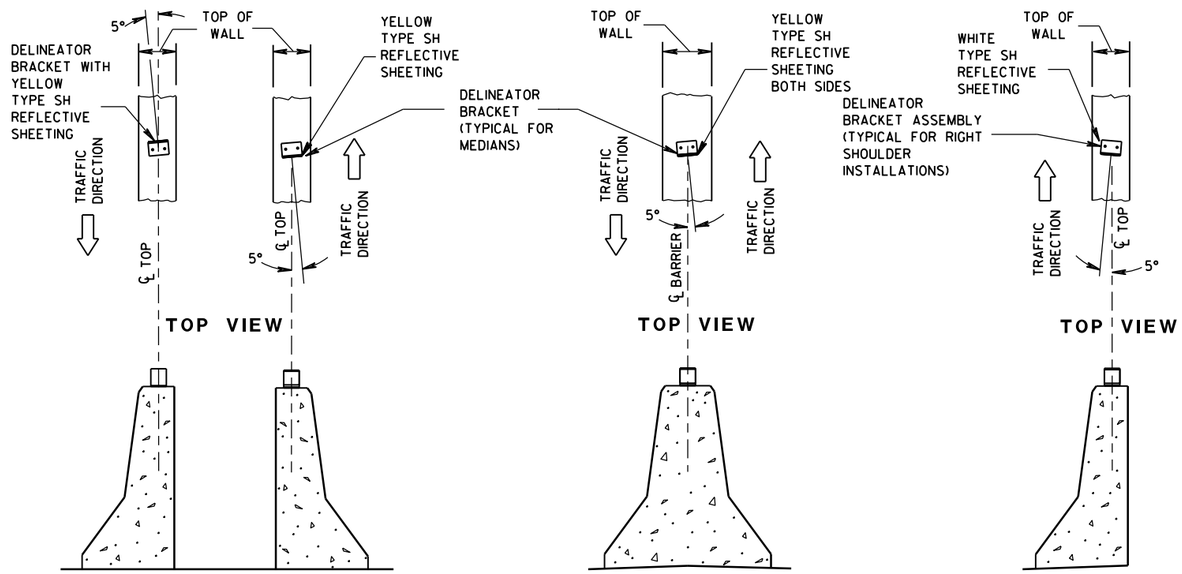
DELINEATOR BRACKET



MOUNTING DETAIL FOR DELINEATOR REFLECTOR

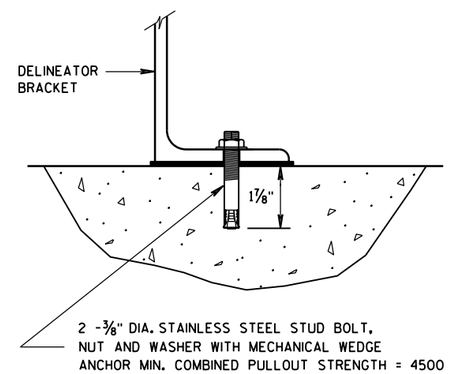


3"x 3" DELINEATOR REFLECTOR



DOUBLE BARRIERS IN MEDIAN | **MEDIAN BARRIER** | **BARRIER LOCATED TO RT. OF TRAFFIC FLOW**

LOCATION AND AIMING DETAILS FOR DELINEATOR BRACKETS MOUNTED ON CONCRETE BARRIERS



DELINEATOR BRACKET MOUNTING DETAIL

DELINEATOR POST, DELINEATOR REFLECTOR AND DELINEATOR BRACKET WITH REFLECTIVE SHEETING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

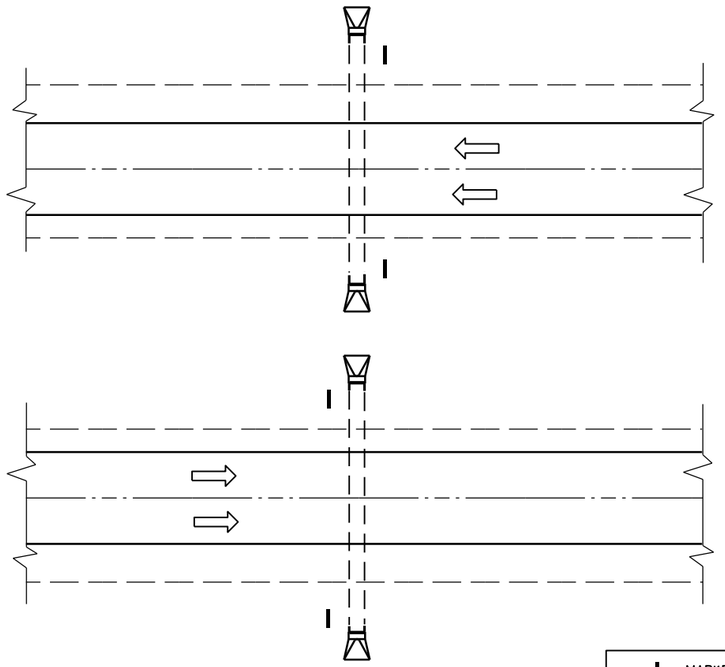
APPROVED
4-18-16 DATE
/S/ Matthew R. Rauch
STATE SIGNING AND MAR[illegible]INEER
FHWA

6

S.D.D. 15 A 2-9

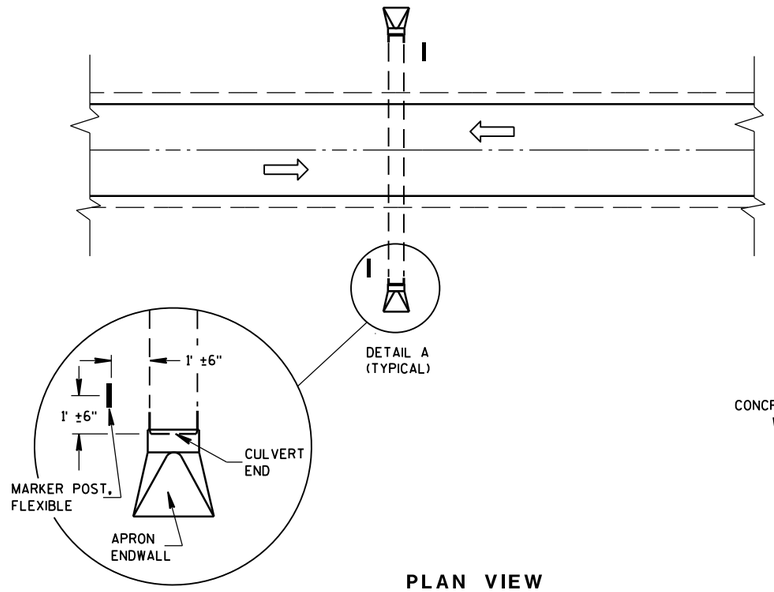
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S.D.D. 15 A 2-9



PLAN VIEW

DIVIDED HIGHWAY



DETAIL A
(TYPICAL)

PLAN VIEW

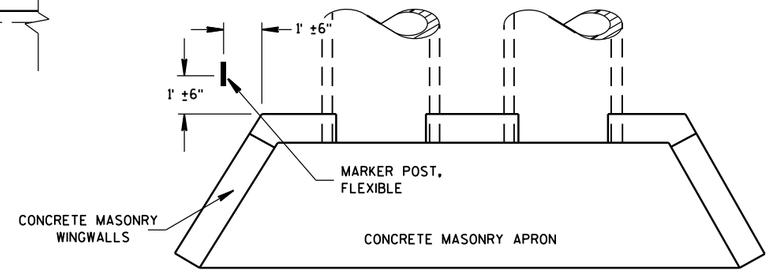
UNDIVIDED HIGHWAY

MARKER POST, FLEXIBLE

DIRECTION OF TRAFFIC FLOW

GENERAL NOTES

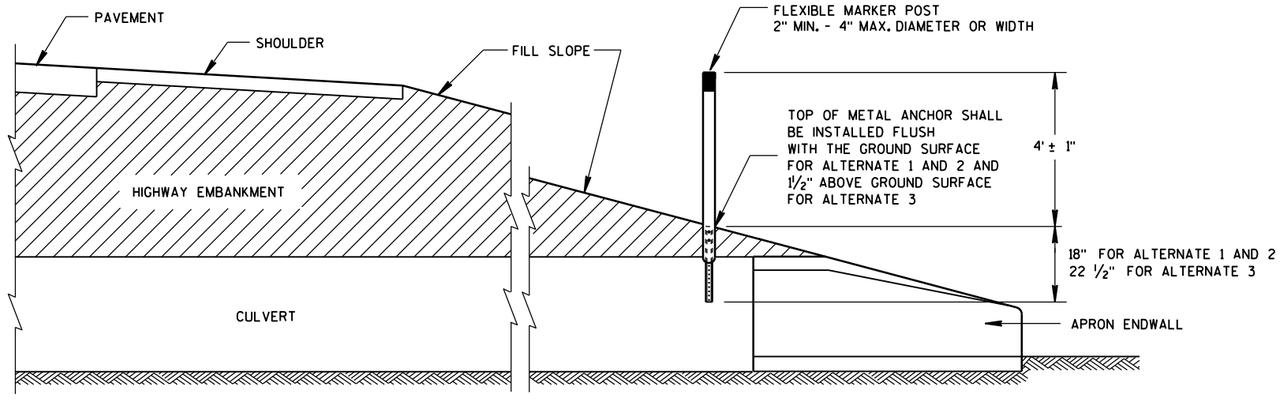
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



PLAN VIEW

CONCRETE MASONRY ENDWALLS FOR CULVERT PIPE AND PIPE ARCH

FLEXIBLE MARKER POST LOCATION



CROSS SECTION

FLEXIBLE MARKER POST

FLEXIBLE MARKER POST FOR CULVERT END

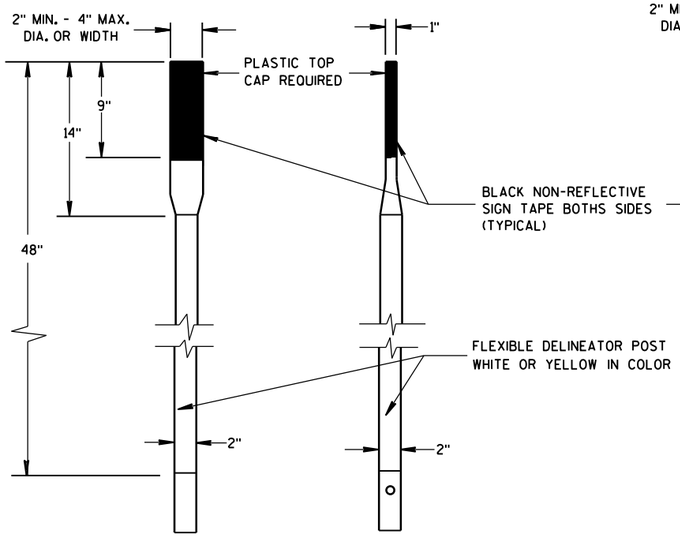
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

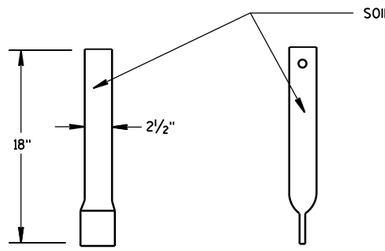
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S.D.D. 15 A 3-2a

6

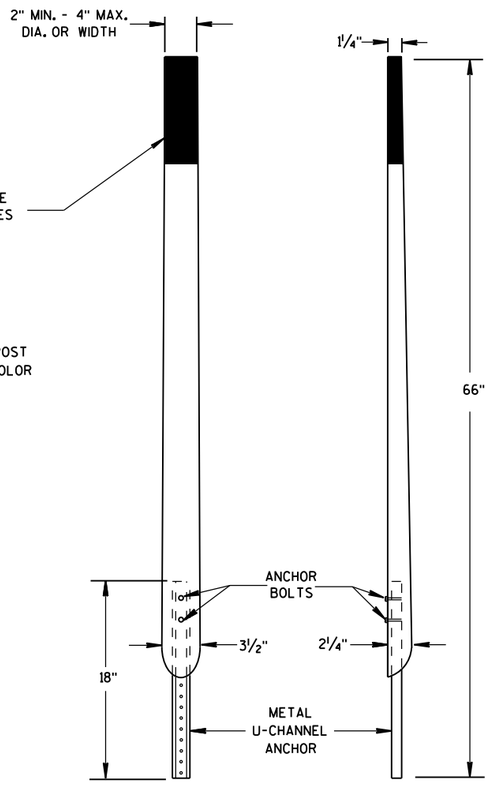
S.D.D. 15 A 3-2a





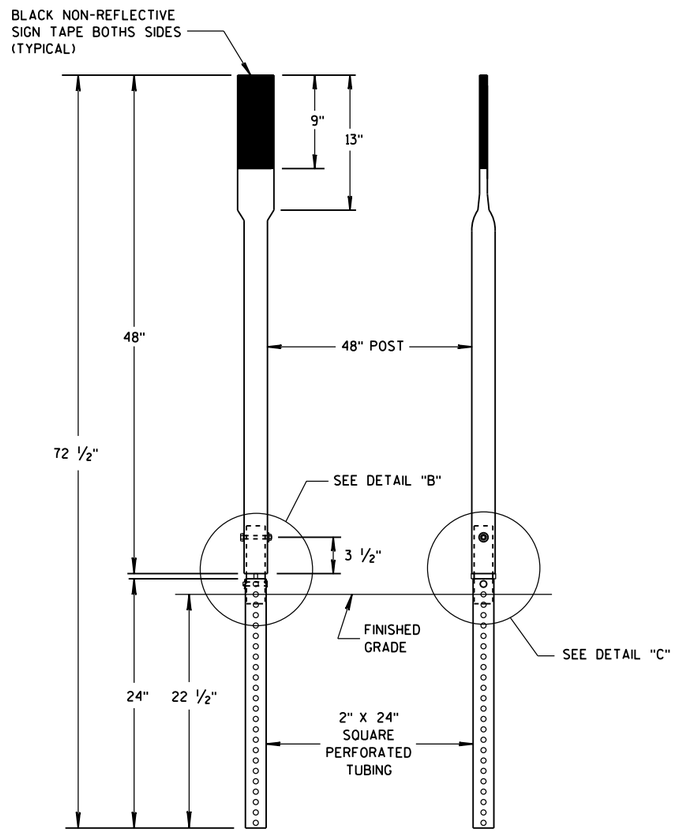
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

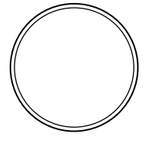
ALTERNATE 2



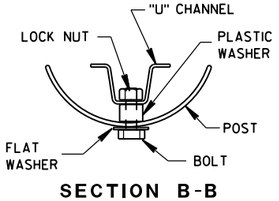
FRONT VIEW SIDE VIEW

ALTERNATE 3

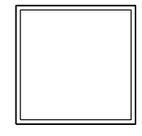
FLEXIBLE MARKER POSTS



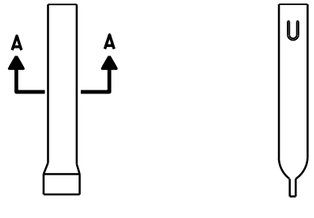
SECTION A-A



SECTION B-B

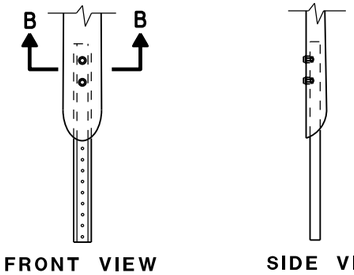


SECTION C-C



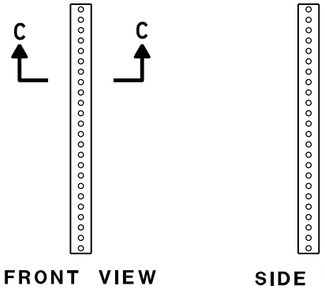
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

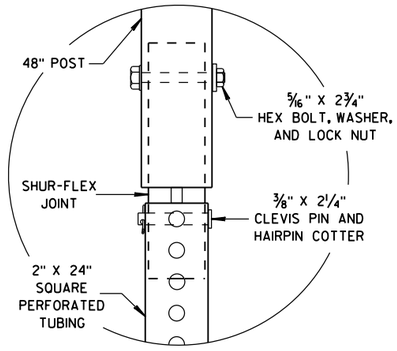
ALTERNATE 2



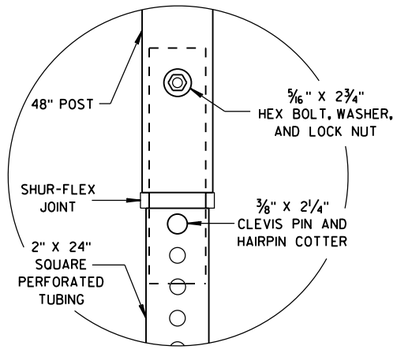
FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POST ANCHORS



DETAIL B



DETAIL C

FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

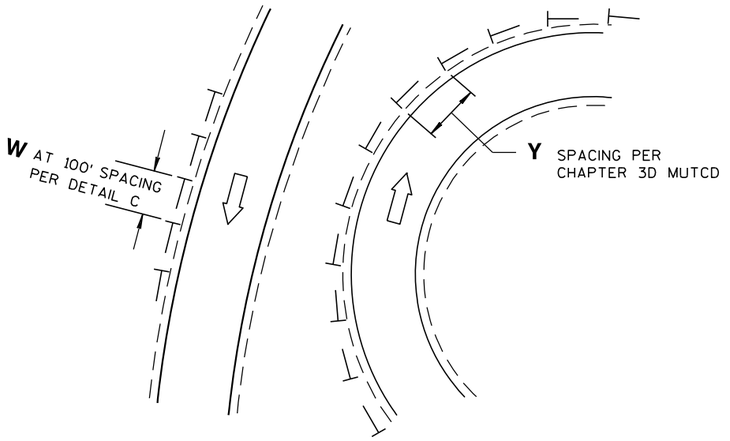
S.D.D. 15 A 3-2b

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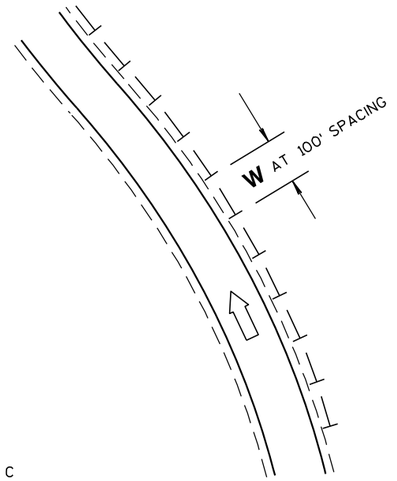
S.D.D. 15 A 3-2b

GENERAL NOTES

* USE DOUBLE DELINEATOR ALONG ACCELERATION-DECELERATION LANES AND TAPERS. USE SINGLE DELINEATOR WHEN RAMP PAVEMENT IS FULL WIDTH.



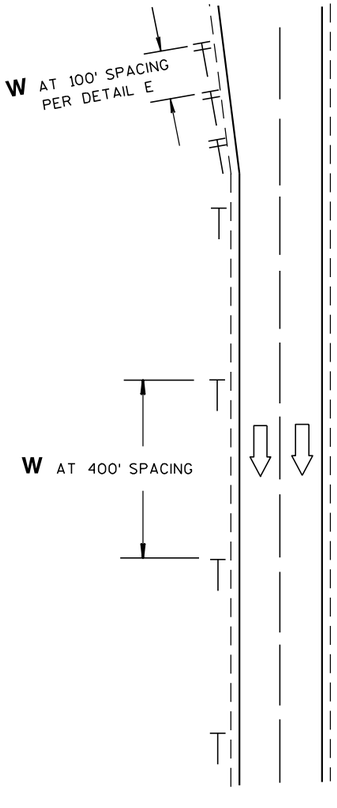
DETAIL A
DELINEATOR LAYOUT AT CURVED RAMP



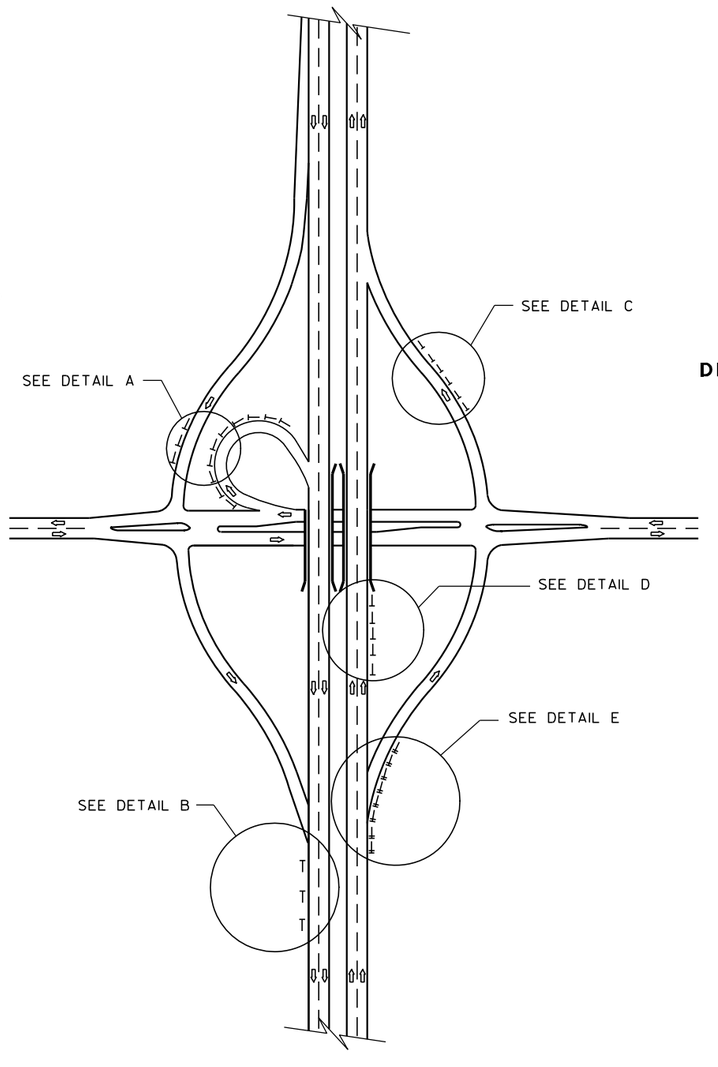
DETAIL C
DELINEATOR LAYOUT ALONG RAMP

LEGEND

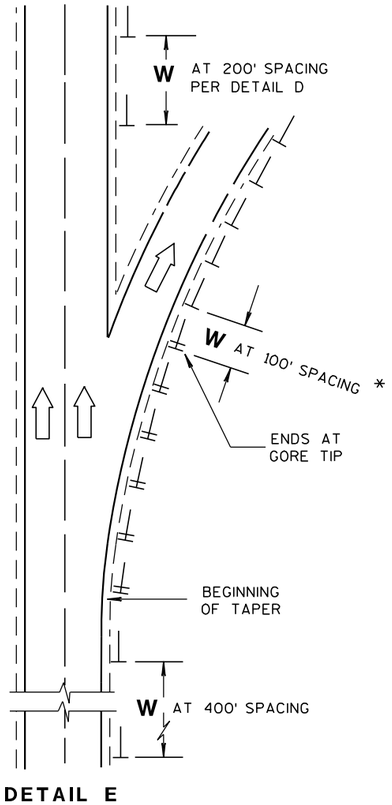
- DIRECTION OF TRAFFIC FLOW
- SINGLE DELINEATOR
- DOUBLE DELINEATOR
- W — WHITE
- Y — YELLOW



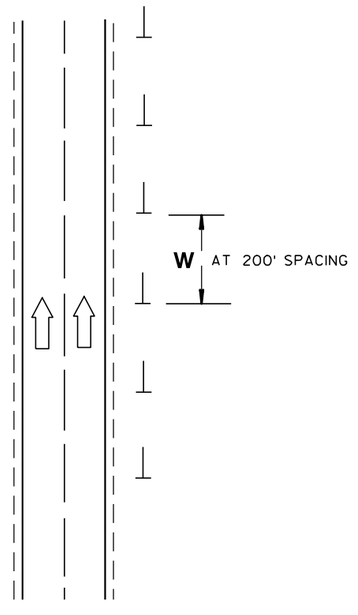
DETAIL B
DELINEATOR LAYOUT ALONG MAINLINE



DELINEATOR LAYOUT



DETAIL E
DELINEATOR LAYOUT FOR ACCELERATION - DECELERATION LANES AND TAPERS AT RAMPS



DETAIL D
DELINEATOR LAYOUT BETWEEN INTERCHANGE RAMPS

DELINEATOR LAYOUT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

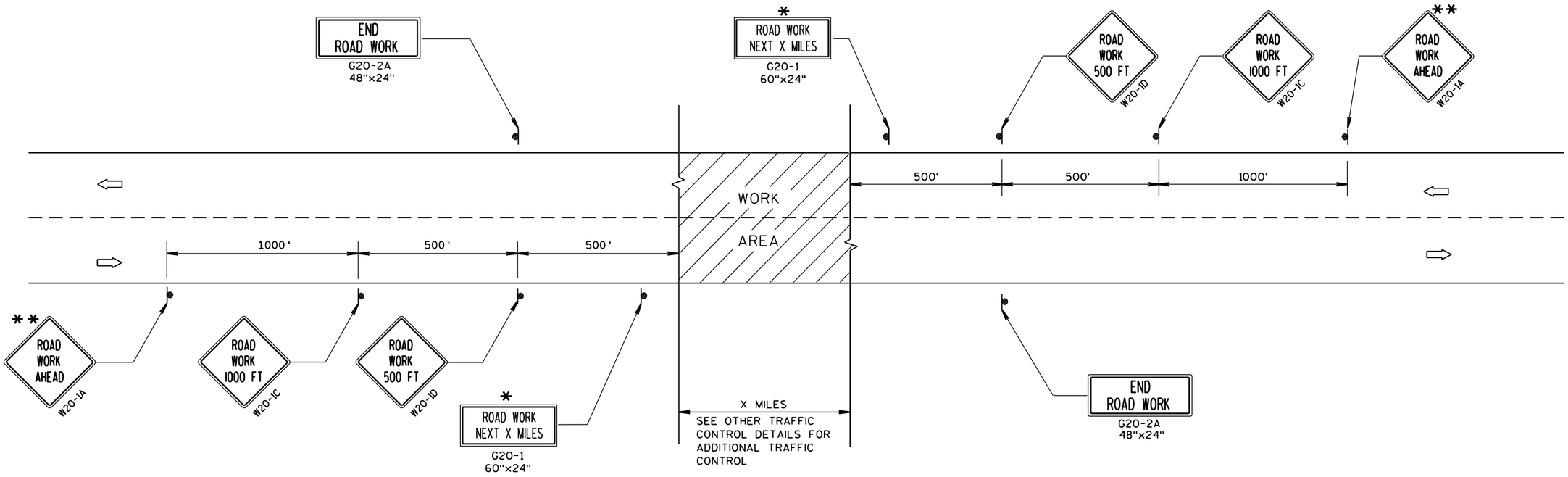
APPROVED
2/5/09 DATE
/S/ Thomas N. Nothdurft STATE TRAFFIC ENGINEER
FHWA

6

S.D.D. 15 A 6-2

6

S.D.D. 15 A 6-2



TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL

GENERAL NOTES

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

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

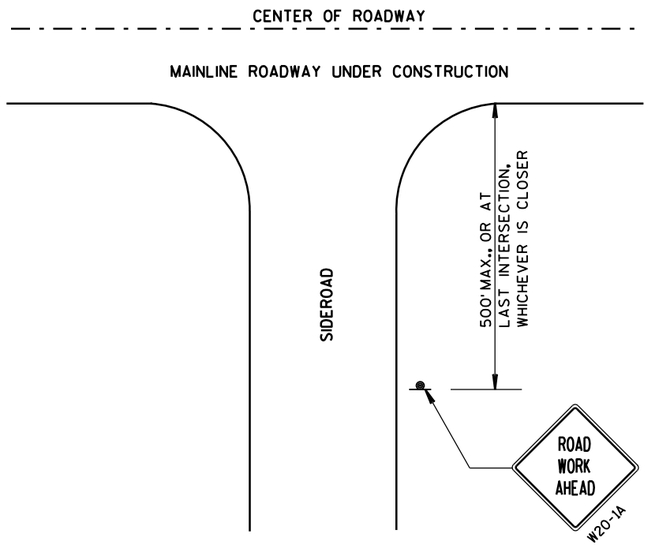
ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

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

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

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



LEGEND

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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

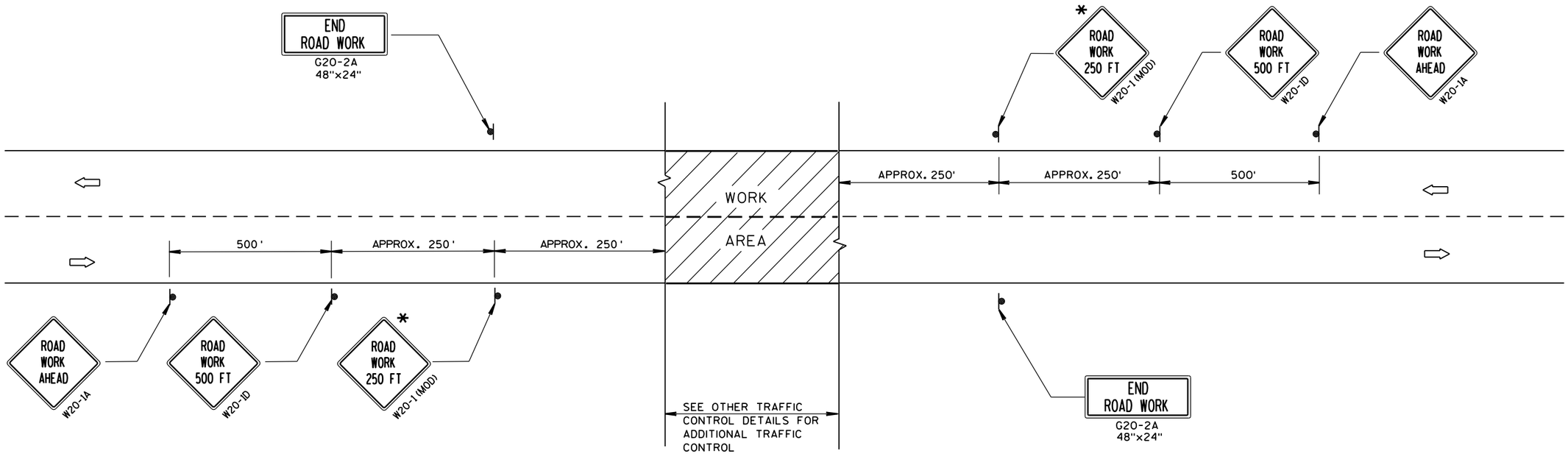
APPROVED
Sept. 2015 — DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZONE SAFETY ENGINEER
FHWA

6

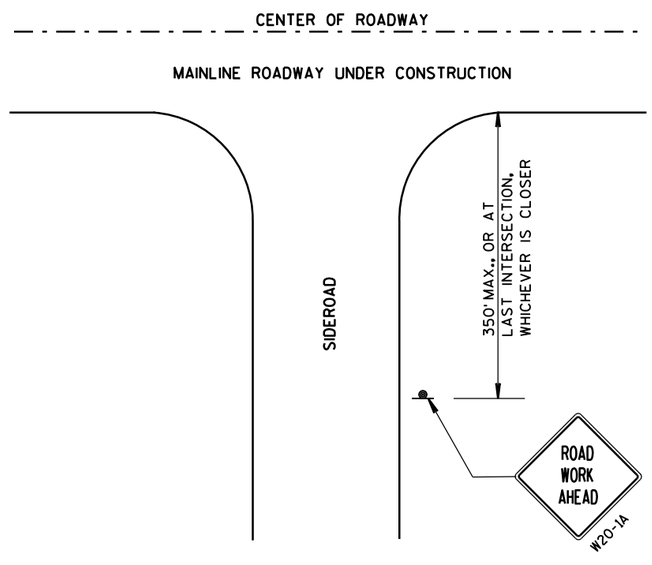
S.D.D. 15 C 4-3

6

S.D.D. 15 C 4-3



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 DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS, 36"x36" SIGNS MAY BE USED INSTEAD OF 48"x48" SIGNS.

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.

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

LEGEND

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

TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2015 — DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZONE SAFETY ENGINEER
FHWA

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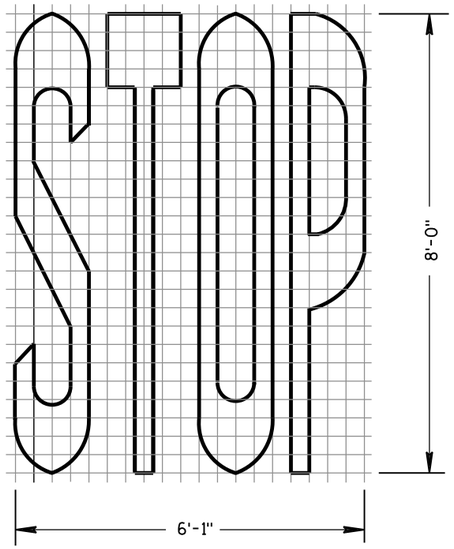
S.D.D. 15 C 5-3

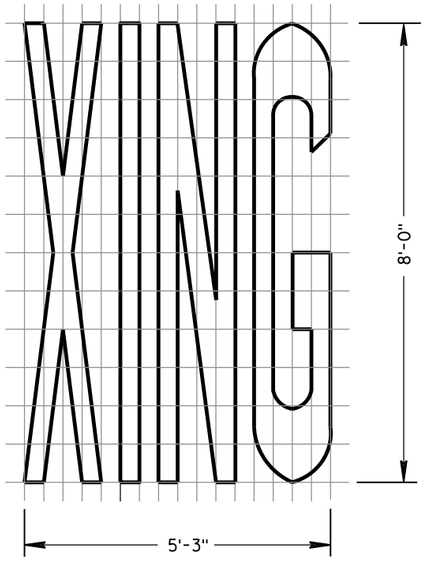
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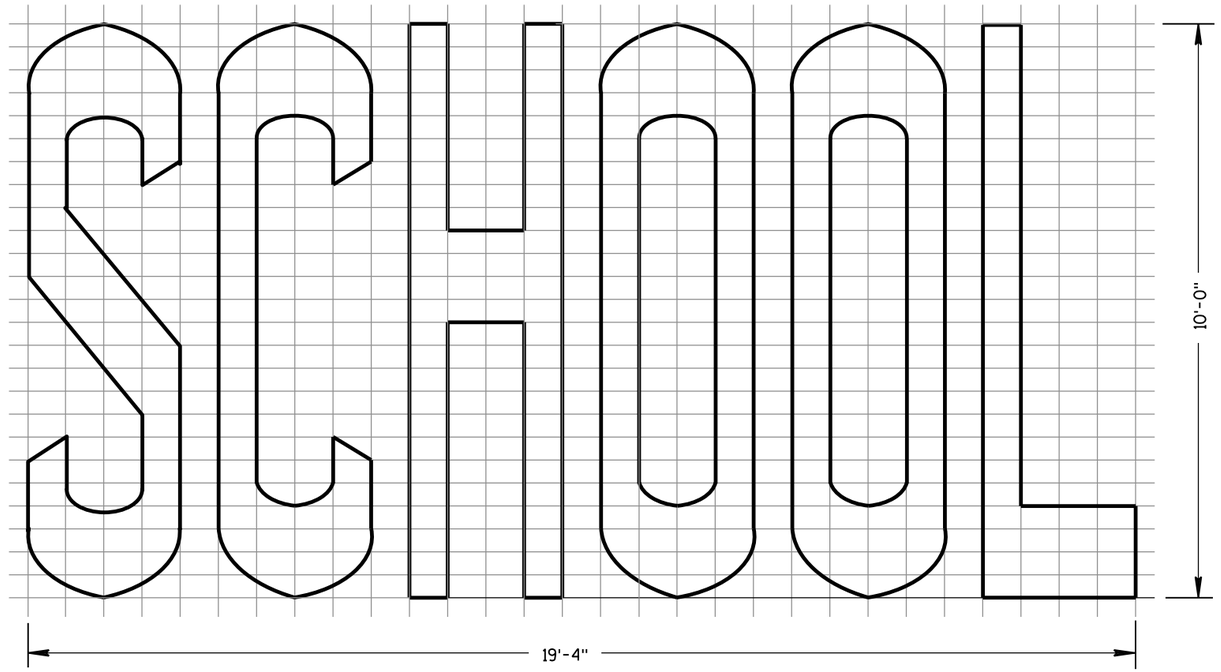
S.D.D. 15 C 5-3

GENERAL NOTES

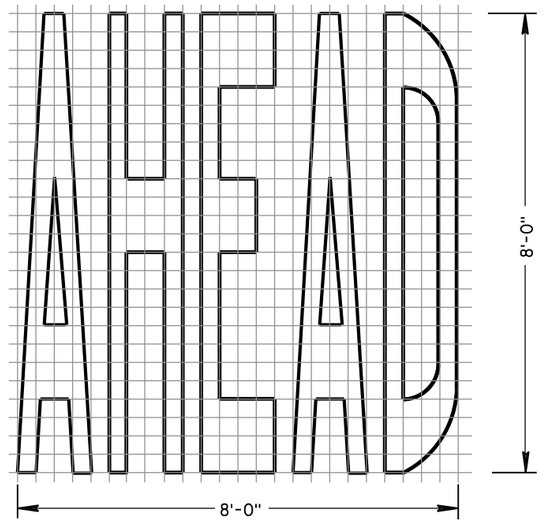
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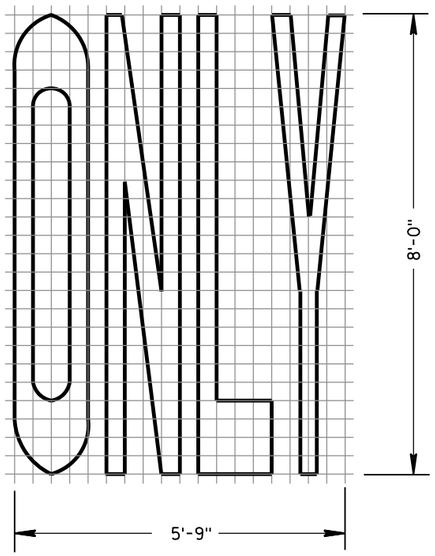


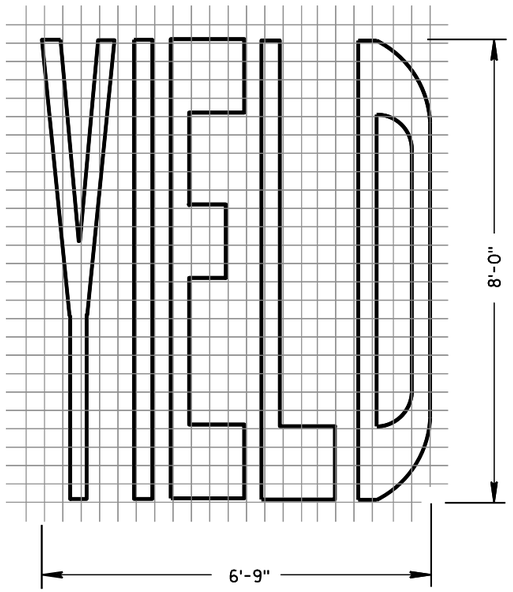


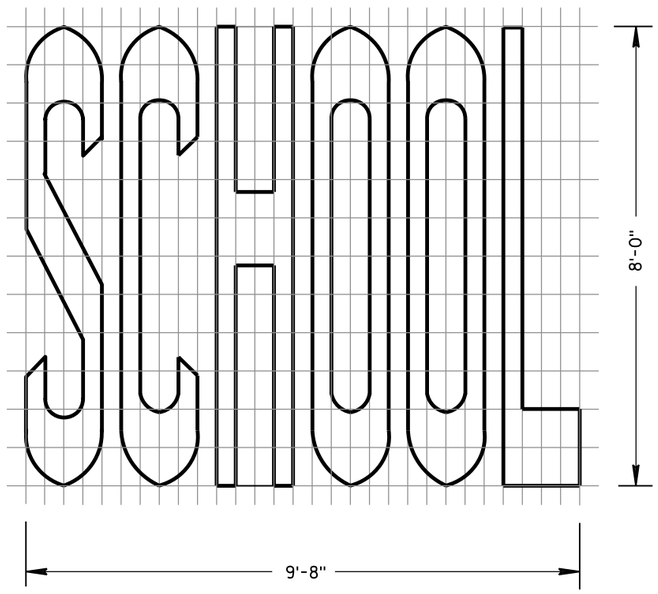


TWO-LANE









SINGLE-LANE

PAVEMENT MARKING WORDS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

4-18-16	/S/ Matthew R. Rauch	
DATE	STATE SIGNING AND MARK	EER

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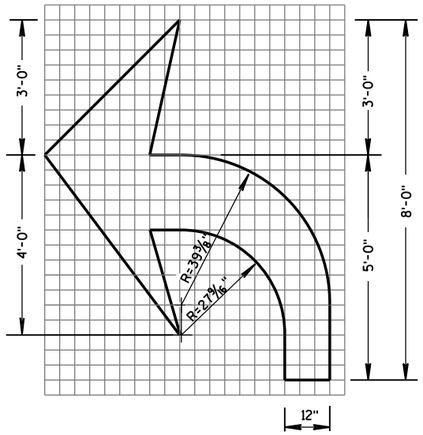
S.D.D. 15 C 7-13b

6

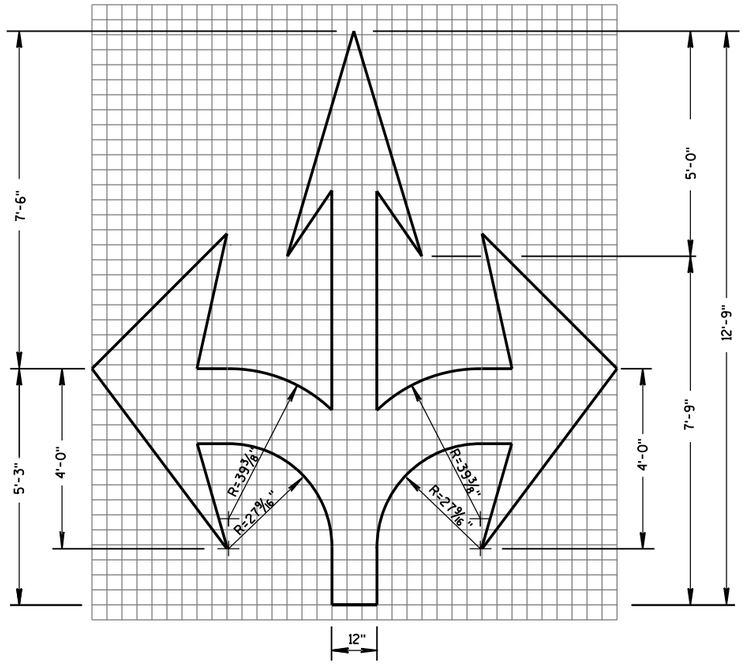
S.D.D. 15 C 7-13b

GENERAL NOTES

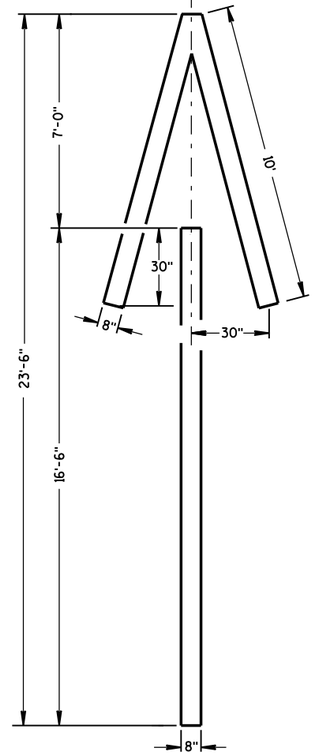
DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.



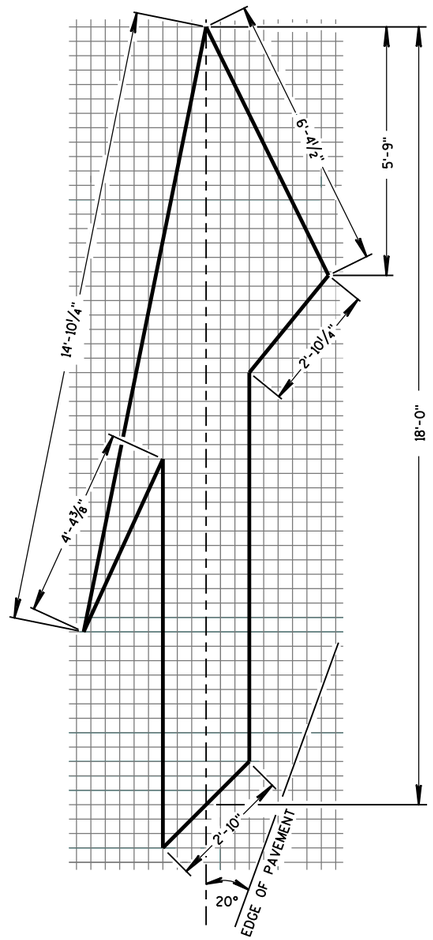
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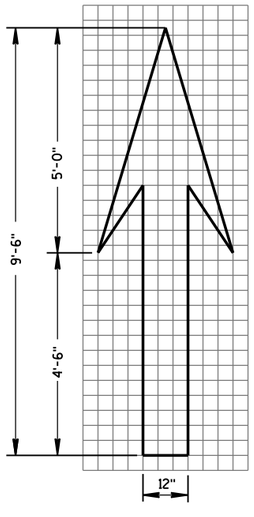
TYPE 6



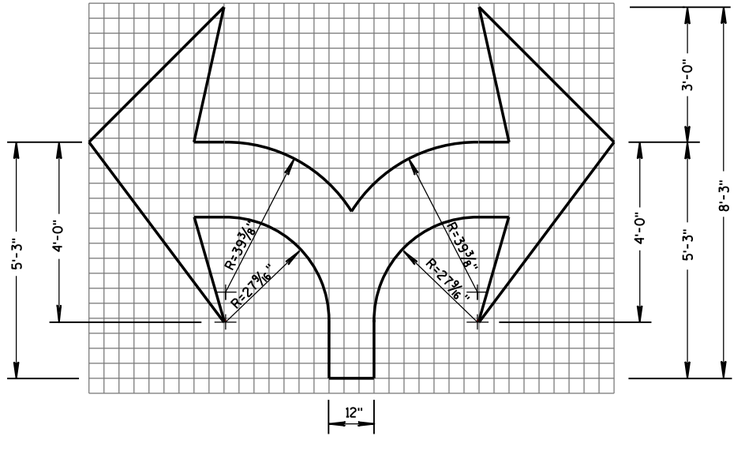
TYPE 4



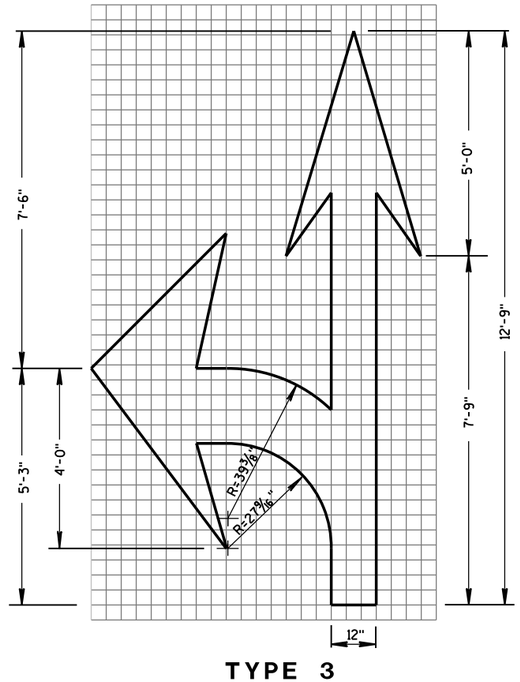
TYPE 5 LANE DROP ARROW



TYPE 1



TYPE 7



TYPE 3

PAVEMENT MARKING ARROWS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

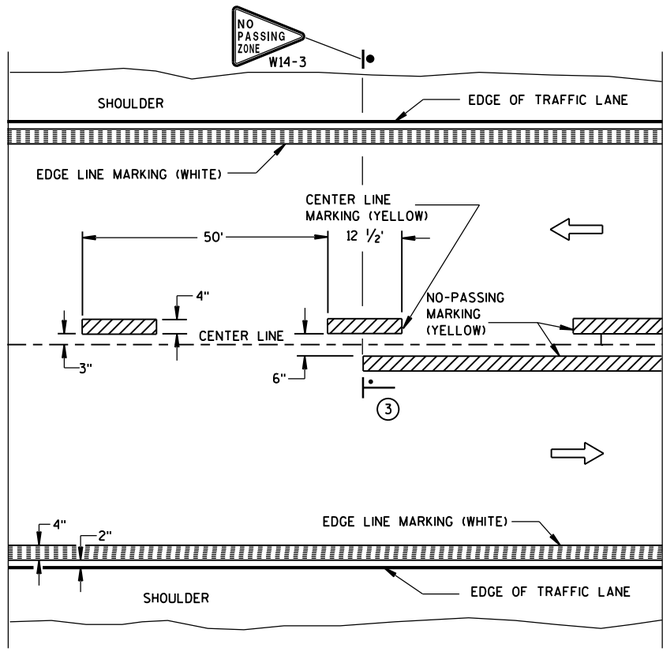
APPROVED
4-18-16
DATE
/S/ Matthew R. Rauch
STATE SIGNING AND MAR
NEER
FHWA

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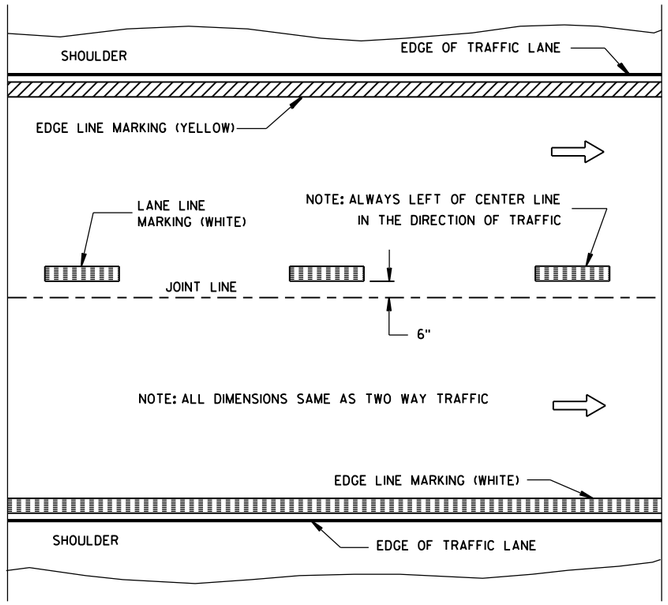
S.D.D. 15 C 7-13c

6

S.D.D. 15 C 7-13c

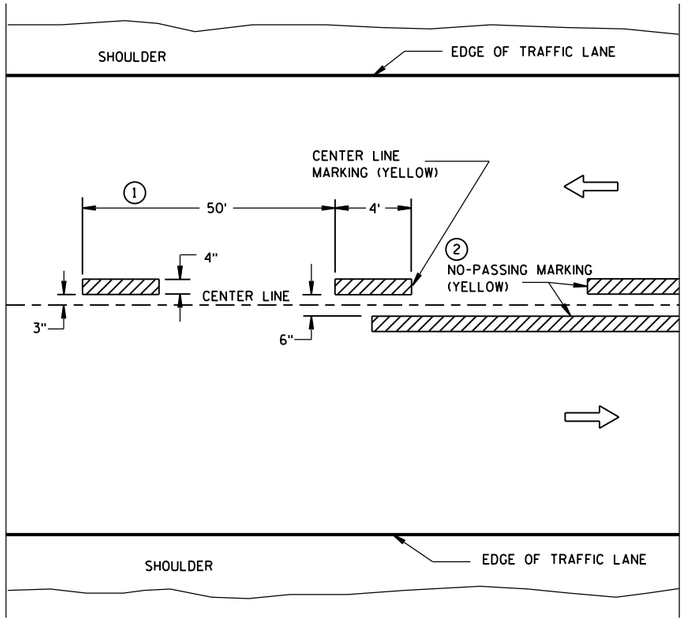


TWO WAY TRAFFIC

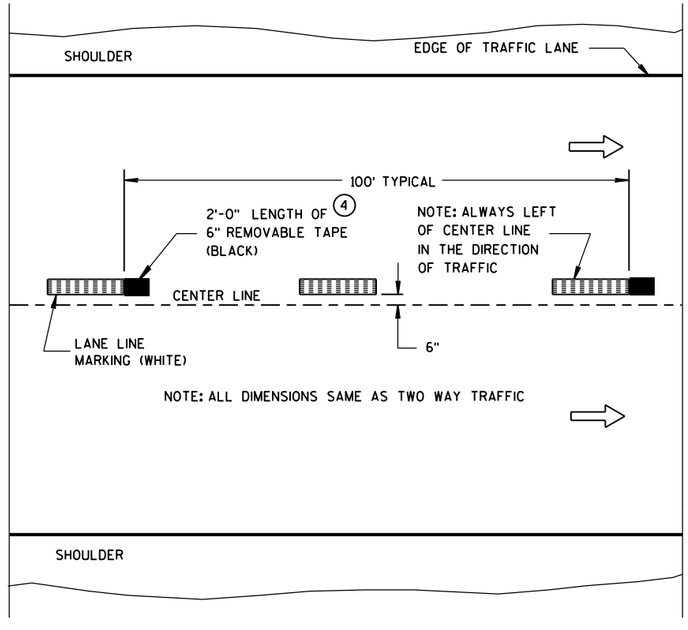


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY (INTERMEDIATE) PAVEMENT MARKING

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

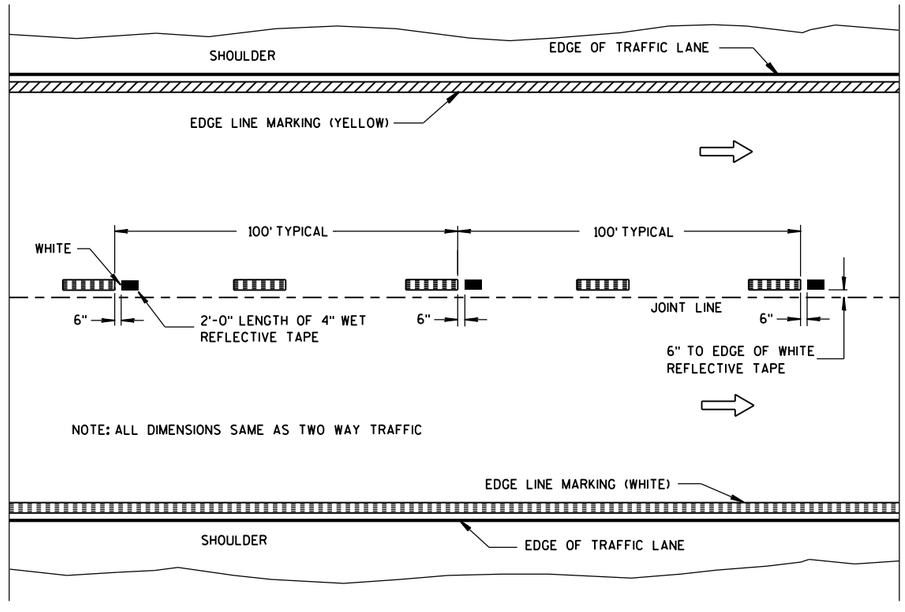
GENERAL NOTES

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

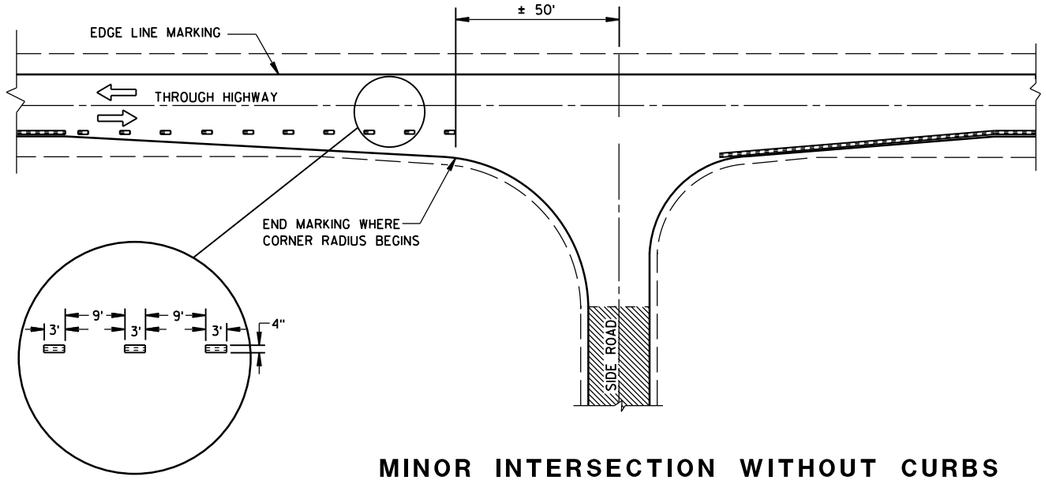
APPROVED
5-13-2013 DATE
/S/ Travis Feltes STATE TRAFFIC E
FHWA

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.

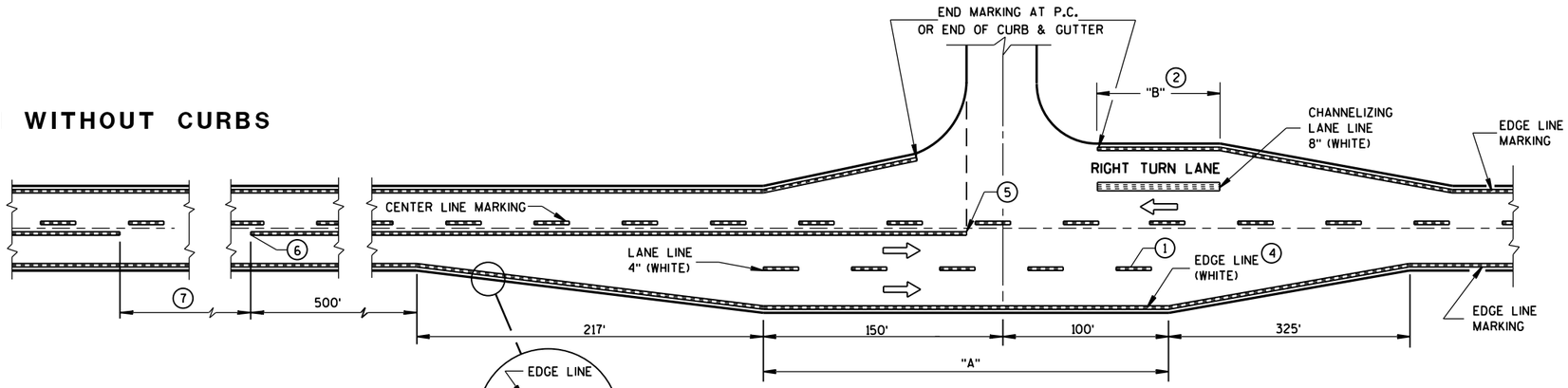
(7) IF THE DISTANCE BETWEEN 2 SUCCESSIVE NO-PASSING ZONES IS LESS THAN THE MINIMUM DISTANCE BETWEEN ZONES, CONNECT THE 2 ZONES.

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

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

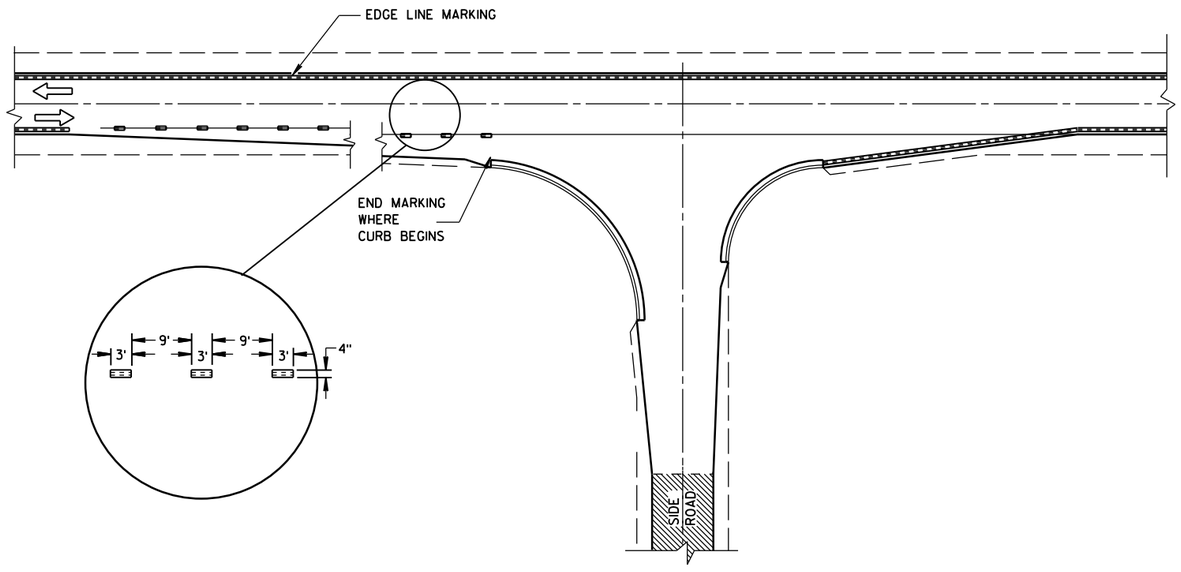
(7)

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



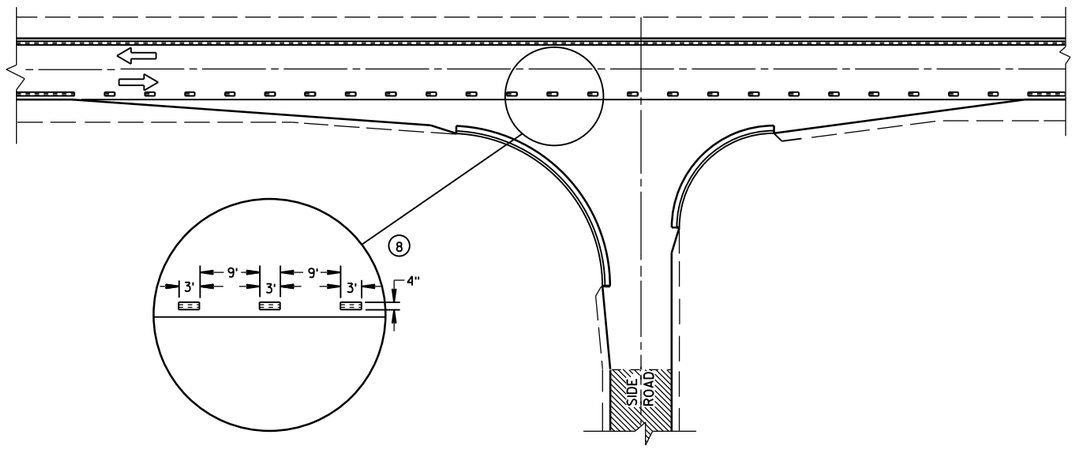
MAJOR INTERSECTIONS

(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)

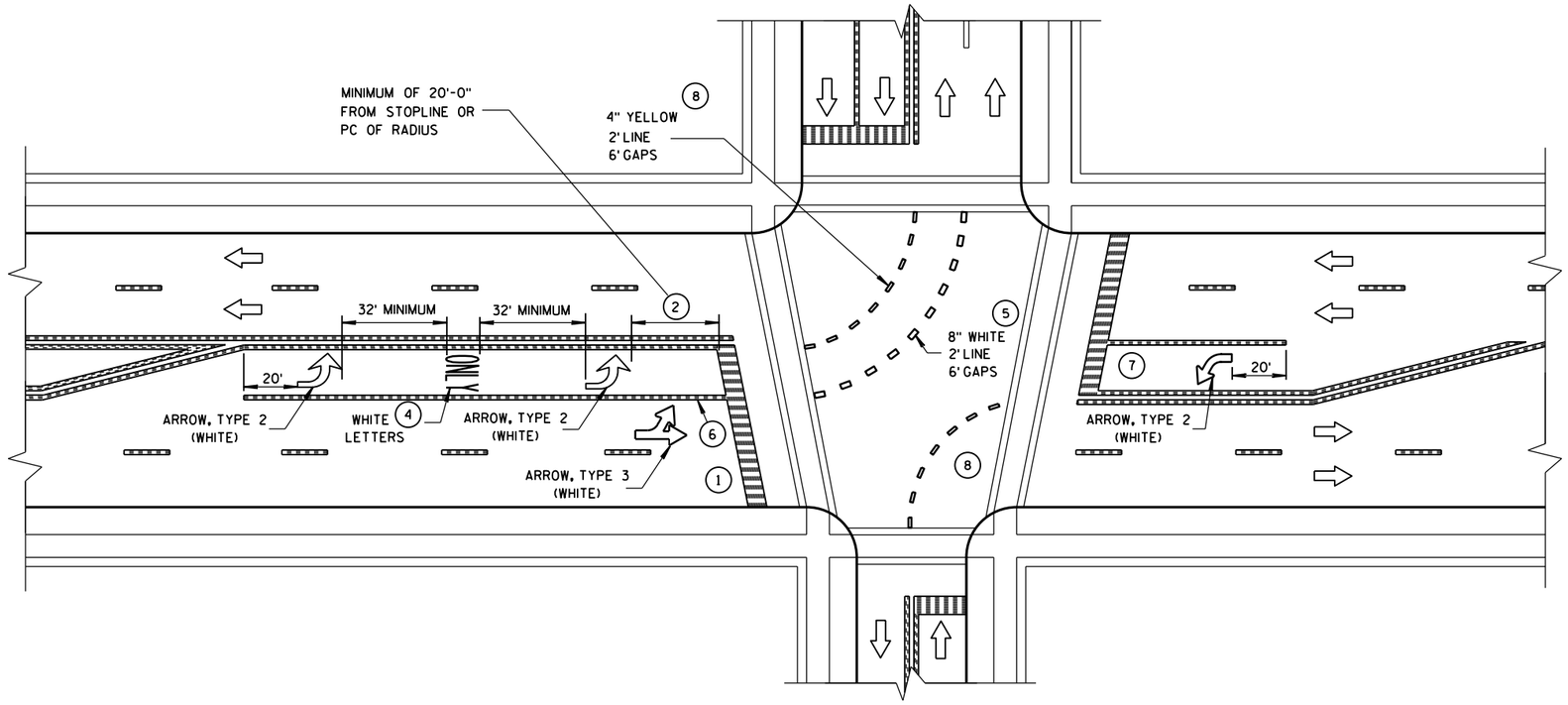
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

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

6

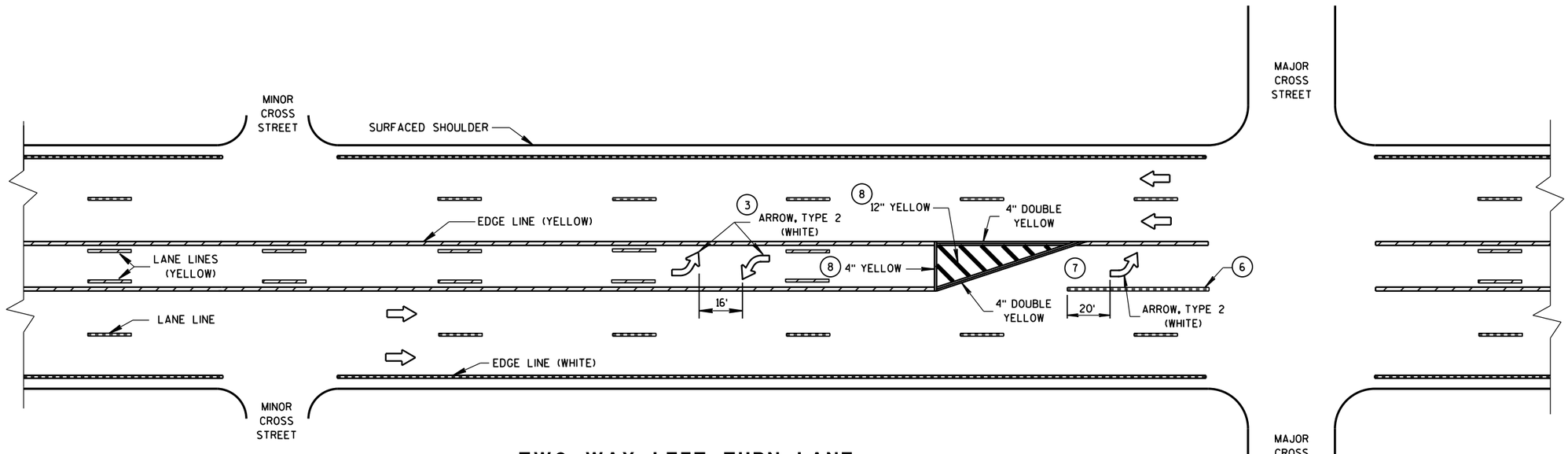
S.D.D. 15 C 8-16b



GENERAL NOTES

1. STOP BAR IS REQUIRED ONLY WHEN SPECIFIED IN THE CONTRACT.
2. DISTANCE MAY BE ADJUSTED TO ACCOMODATE SHORT LEFT TURN LANES. AS APPROVED BY THE ENGINEER.
3. A SET OF ARROWS IS REQUIRED EVERY 400 FEET OR NEAR INTERSECTIONS OR DRIVEWAYS WITH TURNING TRAFFIC.
4. ADD EXTRA SETS OF ONE ARROW AND ONE ONLY PER 160 FEET OR WHEN ON A CURVE.
5. 8" WHITE WITH 2' LINE 6' GAPS FOR DUAL TURN LANE.
6. 8" WHITE
7. ADD SECOND ARROW WHEN TURN BAY IS GREATER THAN OR EQUAL TO 108 FEET.
8. REQUIRED ONLY WHEN SPECIFIED IN THE CONTRACT.

NOTE:
ARROW SYMBOL (⇨)
SHOWS DIRECTION OF TRAVEL



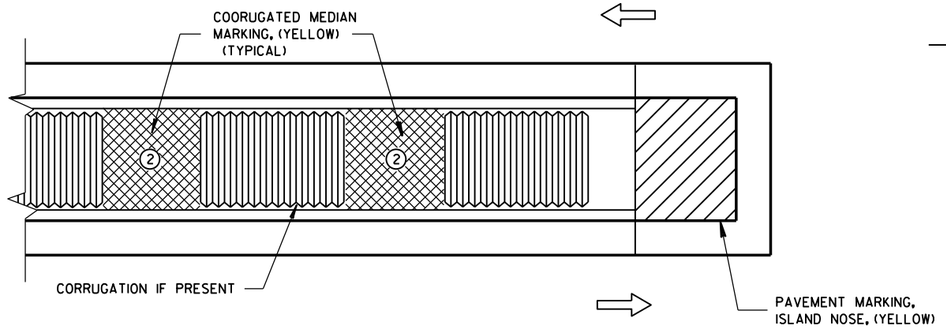
TWO WAY LEFT TURN LANE

PAVEMENT MARKING (LEFT TURN LANE)

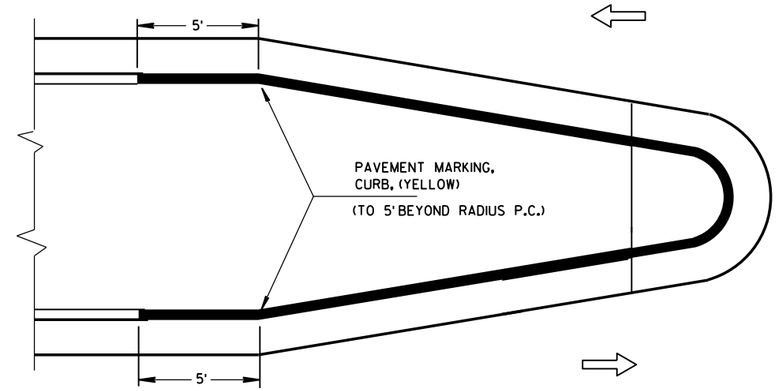
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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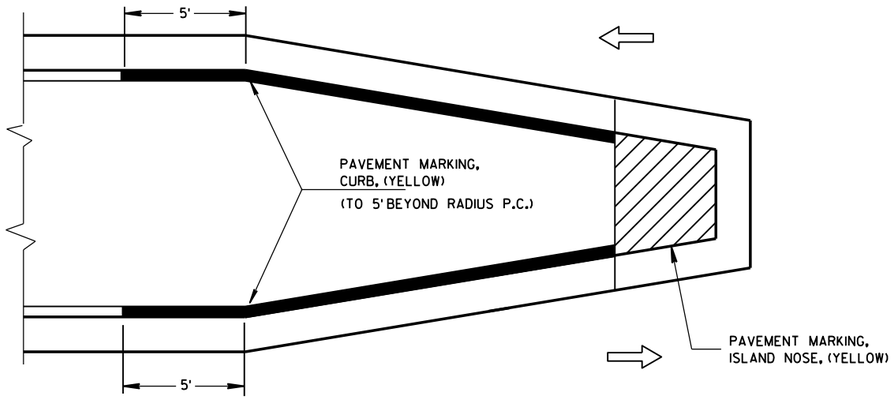
S.D.D. 15 C 8-16e
S.D.D. 15 C 8-16e



MEDIAN ISLAND WITH SQUARE BLUNT NOSE

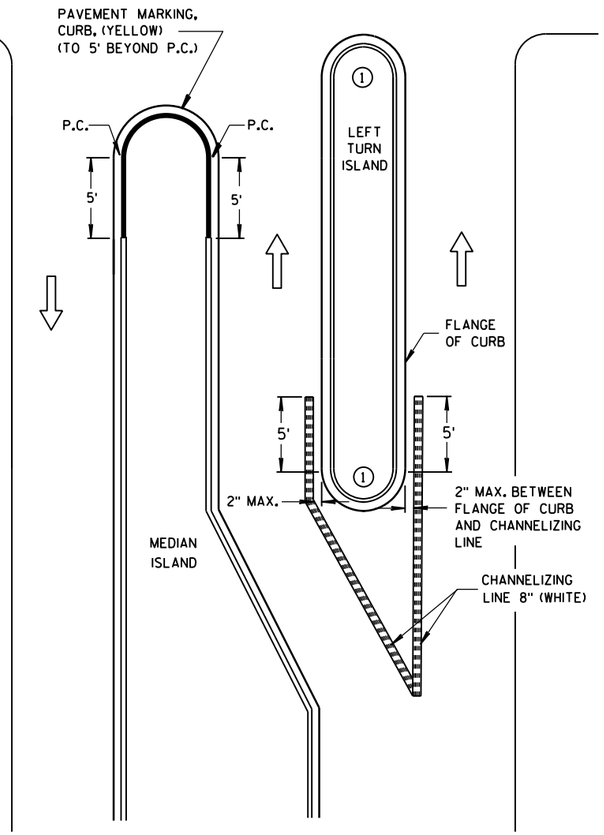


MEDIAN ISLAND WITH ROUND BLUNT NOSE



MEDIAN ISLAND WITH SLOPED NOSE

TYPICAL PLACEMENT OF PAVEMENT MARKING ON MEDIAN ISLANDS

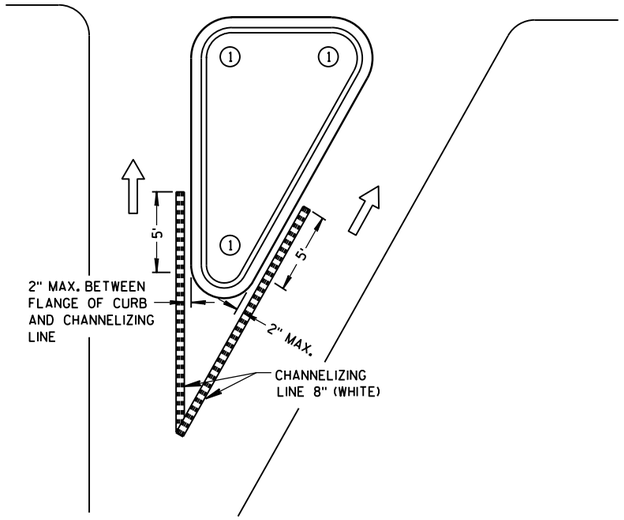


LEFT TURN & MEDIAN ISLAND

GENERAL NOTES

1. DO NOT MARK CURB NOSES THAT SEPARATE LANES OF TRAFFIC TRAVELING IN THE SAME DIRECTION.

2. WHEN CONCRETE CORRUGATED MEDIAN IS CONSTRUCTED TO SEPARATE TRAFFIC OPERATING IN THE OPPOSING DIRECTION YELLOW PAVEMENT MARKING SHALL BE APPLIED TO THE FLAT PORTION OF THE CONCRETE CORRUGATED MEDIAN. THE ITEM OF PAVEMENT MARKING, CONCRETE CORRUGATED MEDIAN, WILL BE MEASURED IN PLACE AND AND ACCEPTED IN ACCORDANCE WITH THE CONTRACT AND PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE FOOT.



RIGHT TURN ISLAND

LEGEND

- ISLAND NOSE MARKING
- CURB MARKING
- CORRUGATED MEDIAN MARKING
- DIRECTION OF TRAVEL

PAVEMENT MARKING
(ISLANDS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

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

6

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

LEGEND

SIGN ON PORTABLE OR PERMANENT SUPPORT

DIRECTION OF TRAFFIC

WORK AREA

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

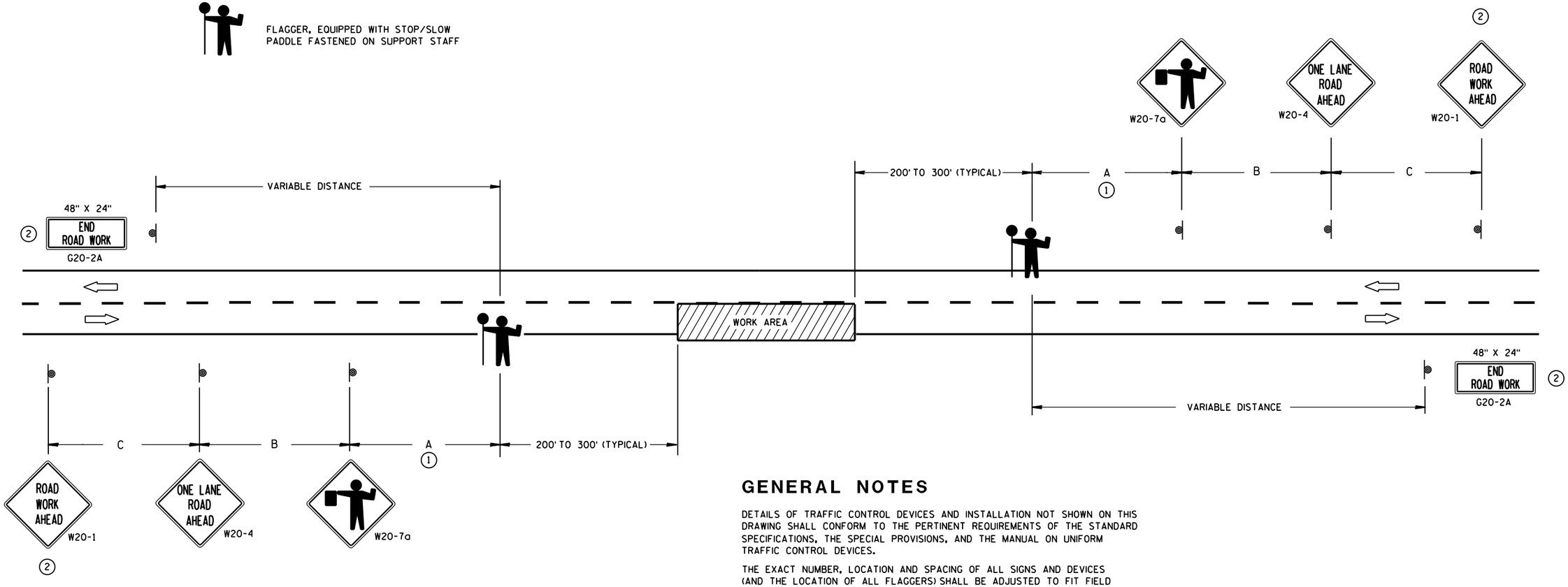
SIGN SPACING TABLE

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



W3-4

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



(1) FOR A MOVING WORK OPERATION,
SIGNING FOR BOTH DIRECTIONS SHALL BE REESTABLISHED (AS SIMULTANEOUSLY AS PRACTICAL) AT APPROXIMATELY 3500 FOOT INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.

(2) SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

GENERAL NOTES

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

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

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

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

FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT, COVER OR REMOVE ALL TEMPORARY TRAFFIC CONTROL SIGNS.

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

TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

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S.D.D. 15 C 12-4

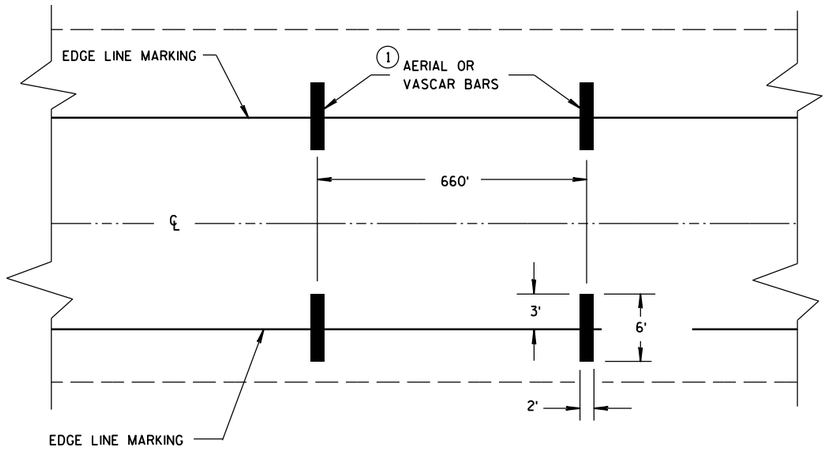
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S.D.D. 15 C 12-4

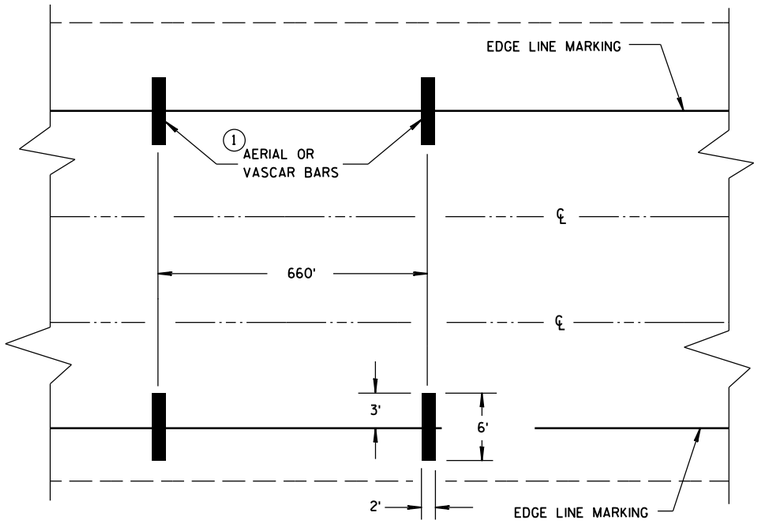
GENERAL NOTES

(1) NUMBER OF VASCAR OR AERIAL BARS SHALL BE A MINIMUM OF 2 OR A MAXIMUM OF 5 AT 660' SPACING.

A CAR CAN BE PROVIDED BY THE WISCONSIN STATE PATROL FOR TRAFFIC CONTROL.



TYPICAL FOR TWO WAY OR ONE WAY TRAFFIC



TYPICAL FOR MULTILANE TRAFFIC

SPEED ENFORCEMENT ZONE WITH AERIAL OR VASCAR BARS

6

S.D.D. 15 C 14-2

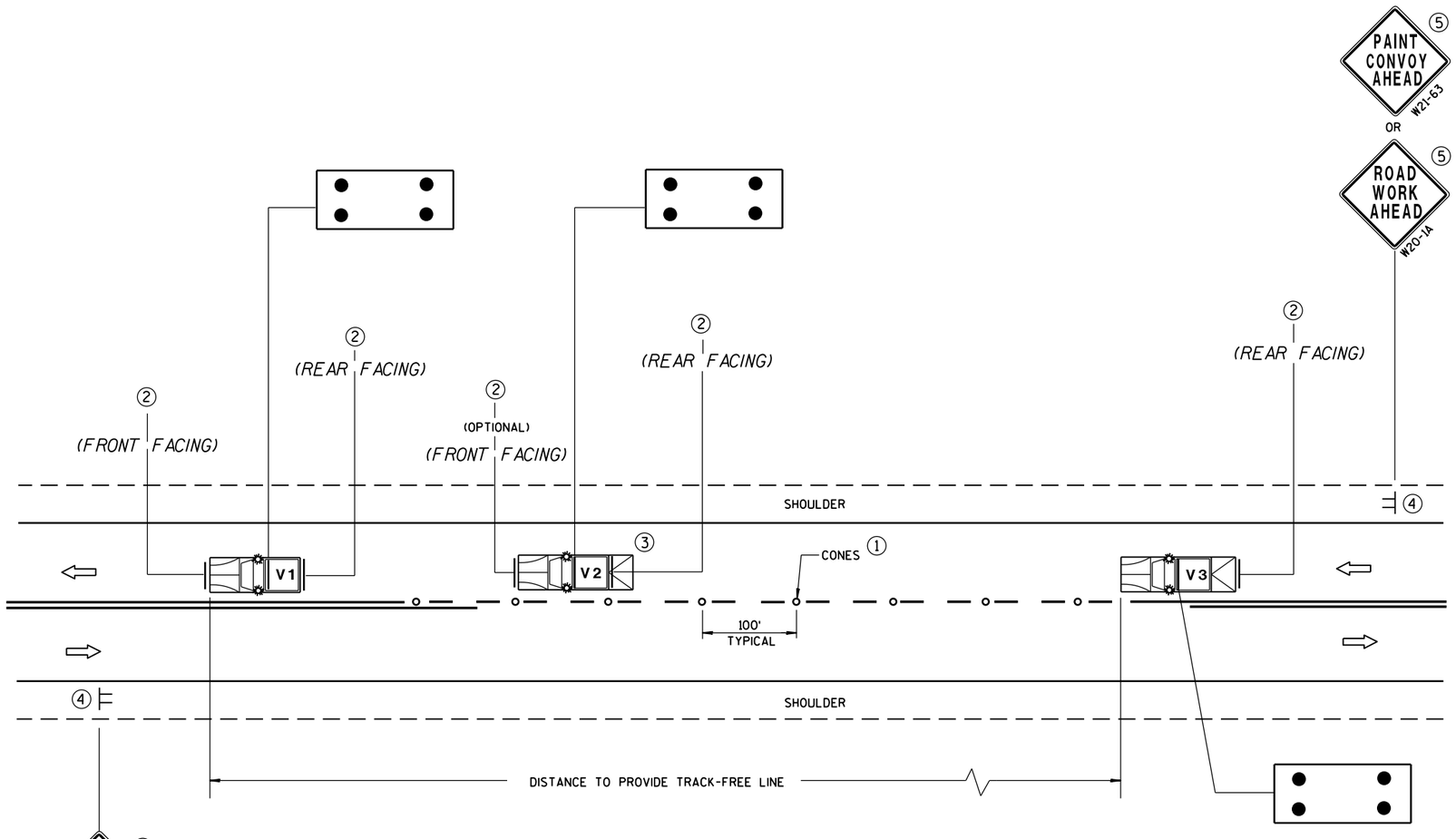
AERIAL ENFORCEMENT BARS
PAVEMENT MARKING DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4/18/2016 /S/ Matthew R. Rauch
DATE STATE SIGNING AND MAR[illegible]GINEER
FHWA

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S.D.D. 15 C 14-2



MOVING PAVEMENT MARKING OPERATIONS
TWO-LANE TWO-WAY ROADWAY

GENERAL NOTES

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

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

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

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

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

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

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

THIS DRAWING SHALL BE USED FOR CENTERLINE OR EDGELINE MARKING.

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

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

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

WET PAINT W21-64 OR WET PAINT W21-64

(3) OPTIONAL TRUCK-MOUNTED ATTENUATOR.

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

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

LEGEND

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

MOVING PAVEMENT MARKING OPERATION
TWO-LANE TWO-WAY ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

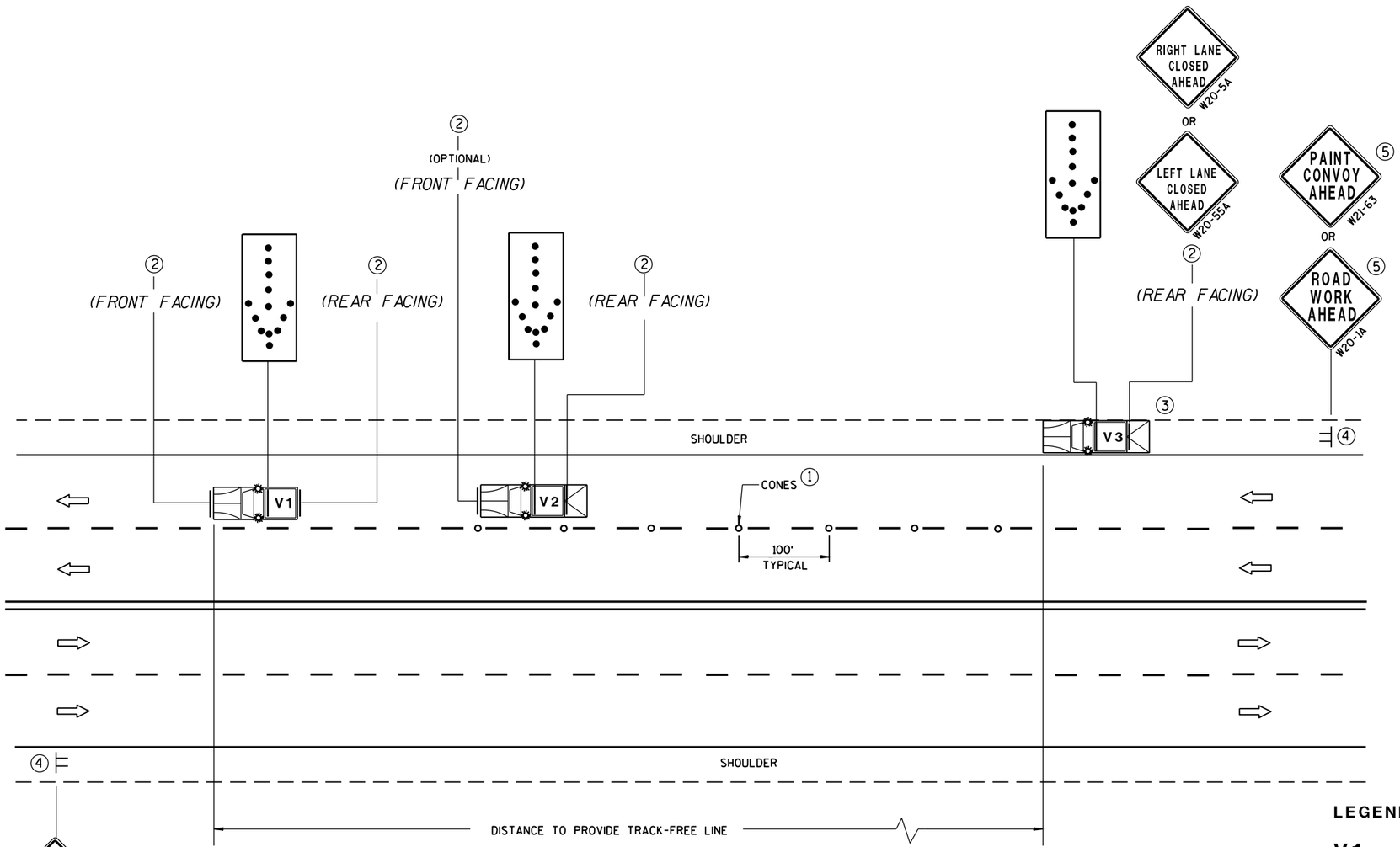
APPROVED
June 2016 — DATE
/S/ Peter Amakobe Atepe — STATEWIDE WORK ZON SAFETY ENGINE
FHWA

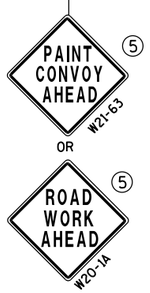
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S.D.D. 15 C 19-4a

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





MOVING PAVEMENT MARKING OPERATIONS
MULTI-LANE UNDIVIDED ROADWAY

GENERAL NOTES

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

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

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

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

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

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

WHEN WORK ACTIVITY BLOCKS THE LEFT LANE, REVERSE TRAFFIC CONTROL.

WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, PROVIDE ADDITIONAL TRAFFIC CONTROLS AS SPECIFIED IN THE CONTRACT OR AS APPROVED BY THE ENGINEER.

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

FOR EDGELINE MARKING OR IF CONES ARE NOT USED, POSITION THE REARMOST SHADOW VEHICLE ON THE SHOULDER AS SHOWN IN THE MUTCD IF THE SHOULDER HAS ADEQUATE WIDTH.

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

THIS DRAWING SHALL BE USED FOR CENTERLINE OR EDGELINE OR LANELINE MARKING FOR MULTILANE UNDIVIDED ROADWAYS.

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

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

WET PAINT W21-64 OR WET PAINT W21-64

(3) OPTIONAL TRUCK-MOUNTED ATTENUATOR.

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

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

LEGEND

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

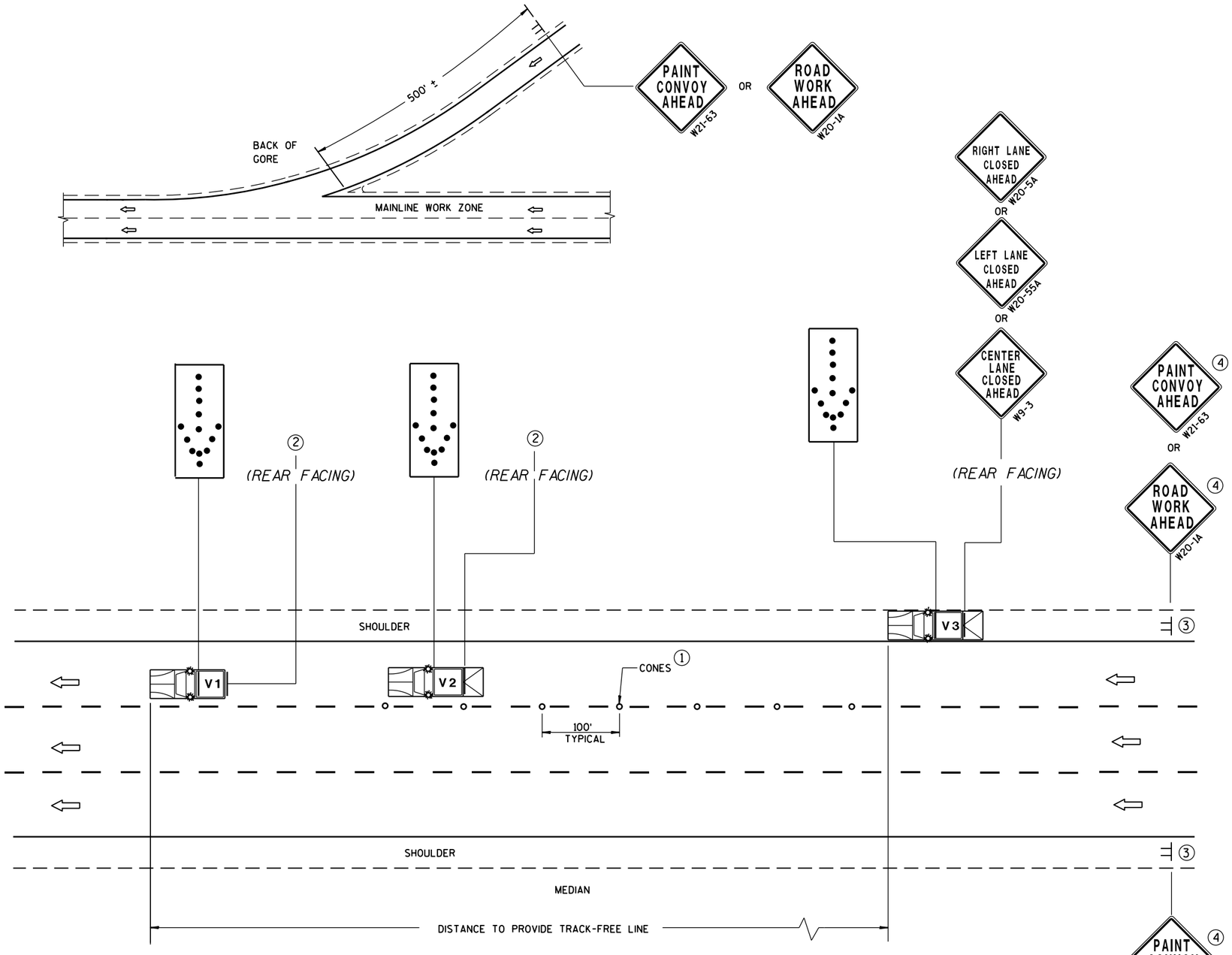
MOVING PAVEMENT MARKING OPERATION
MULTI-LANE UNDIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

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



MOVING PAVEMENT MARKING OPERATIONS
MULTI-LANE DIVIDED ROADWAY

GENERAL NOTES

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

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

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

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

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

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

WHEN WORK ACTIVITY BLOCKS THE LEFT LANE, REVERSE TRAFFIC CONTROL.

WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, PROVIDE ADDITIONAL TRAFFIC CONTROLS AS SPECIFIED IN THE CONTRACT OR AS APPROVED BY THE ENGINEER.

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

FOR EDGELINE MARKING OR IF CONES ARE NOT USED, POSITION THE REARMOST SHADOW VEHICLE ON THE SHOULDER AS SHOWN IN THE MUTCD IF THE SHOULDER HAS ADEQUATE WIDTH. USE DOUBLE ARROWS WHEN CONVOY IS IN CENTER LANE ONLY.

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

THIS DRAWING SHALL BE USED FOR EDGELINE OR LANELINE MARKING FOR MULTILANE DIVIDED ROADWAYS.

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

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

WET PAINT W21-64 OR WET PAINT W21-64

(3) SIGNS SHALL BE REPEATED AFTER EVERY ON RAMP OR EVERY THREE MILES.

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

LEGEND

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

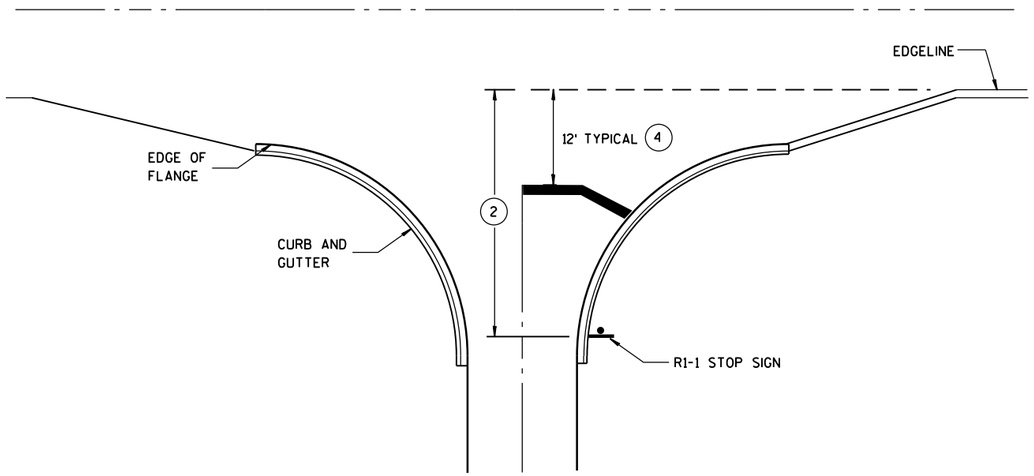
MOVING PAVEMENT MARKING OPERATION MULTI-LANE DIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

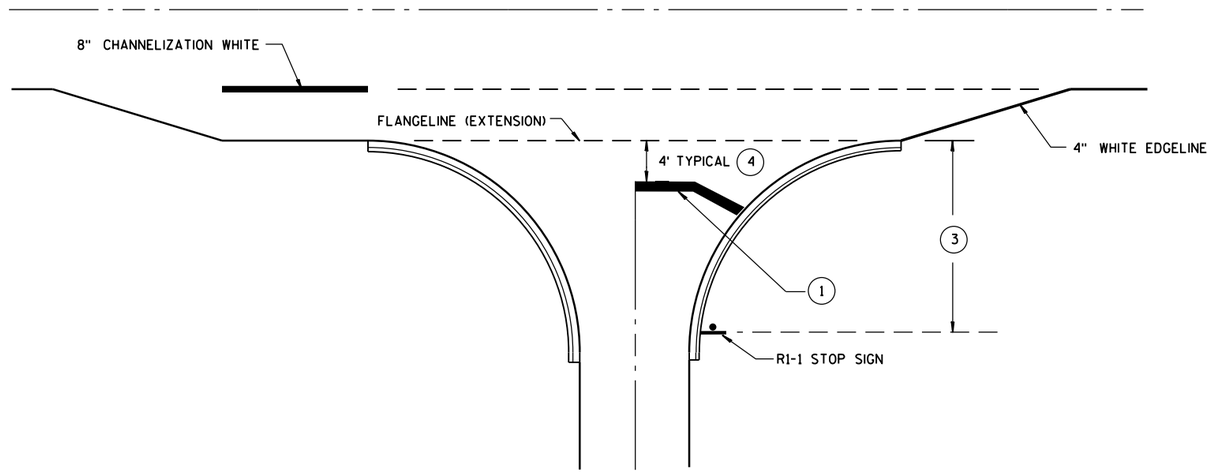
APPROVED
June 2016 — DATE
/S/ Peter Amakobe Atepe — STATEWIDE WORK ZON SAFETY ENGINI
FHWA

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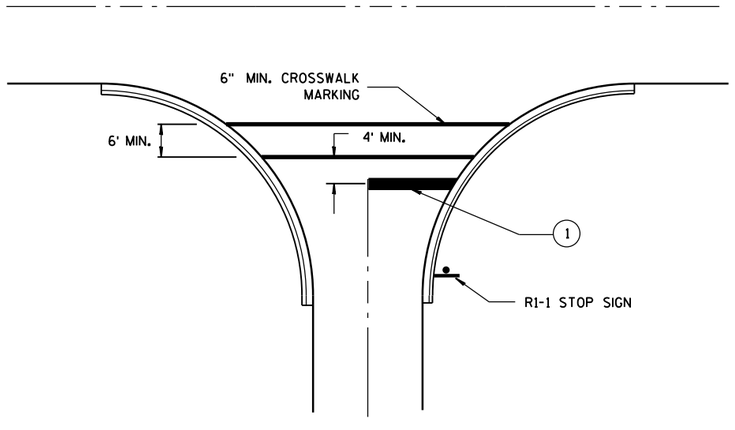
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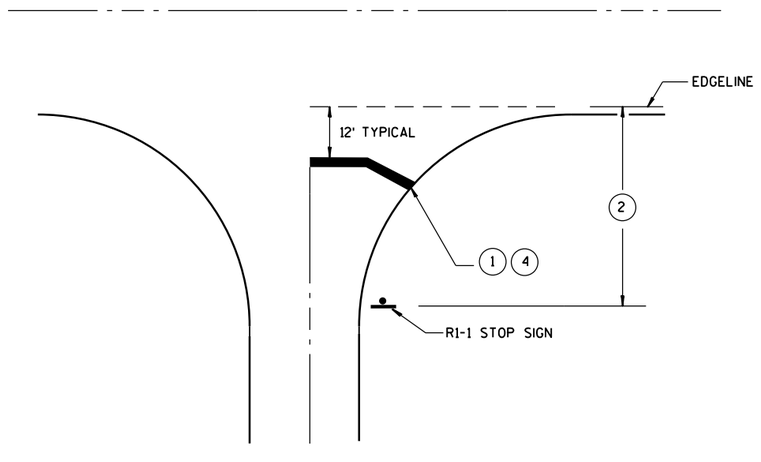
TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER



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. (NO CLOSER THAN 4 FEET).

STOP LINE AND CROSSWALK PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

4-18-2016
DATE

/S/ Matthew R. Rauch
STATE SIGNING AND MAR 241 NEER

FHWA

6

S.D.D. 15 C 33-2

LEGEND

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

GENERAL NOTES

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

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

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

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON "COVERED" OR "DOWNED" SIGNS.

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

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

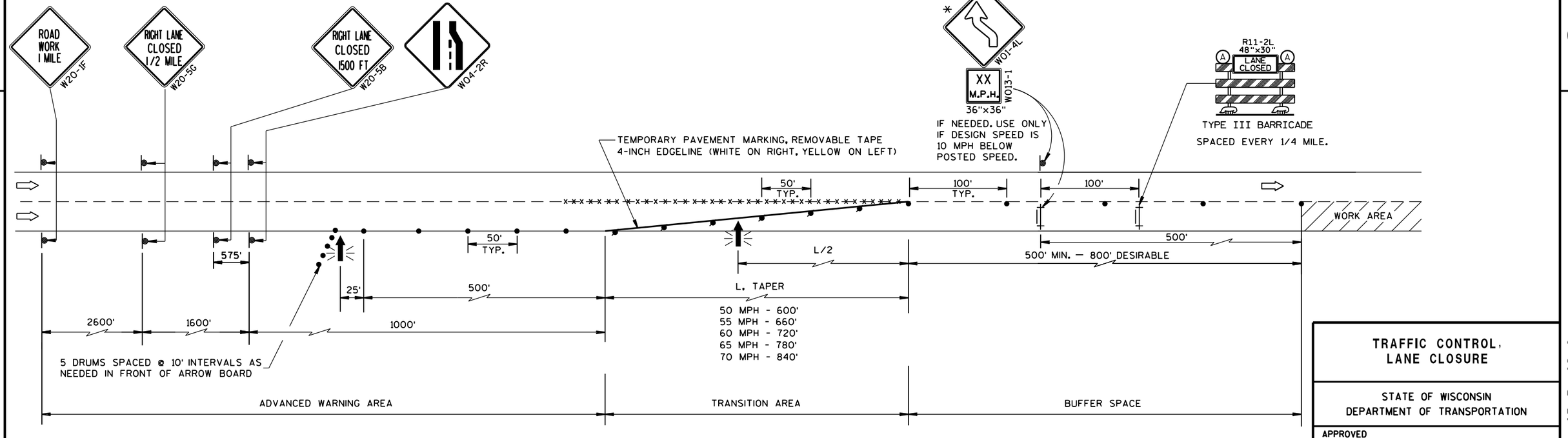
REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE FOR LONGER THAN 4 OR MORE DAYS AND NIGHTS.

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

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

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

* THE LEFT REVERSE CURVE SIGN (WO1-4L) IS ONLY REQUIRED WHEN THIS DETAIL IS USED IN COMBINATION WITH "SINGLE LANE CROSSOVER" DETAIL.



TRAFFIC CONTROL, LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2016 — DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER
FHWA

S.D.D. 15 D 12-6a

S.D.D. 15 D 12-6a

LEGEND

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

GENERAL NOTES

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

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

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

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

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON "COVERED" OR "DOWNED" SIGNS.

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

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

REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE FOR LONGER THAN 4 OR MORE DAYS AND NIGHTS.

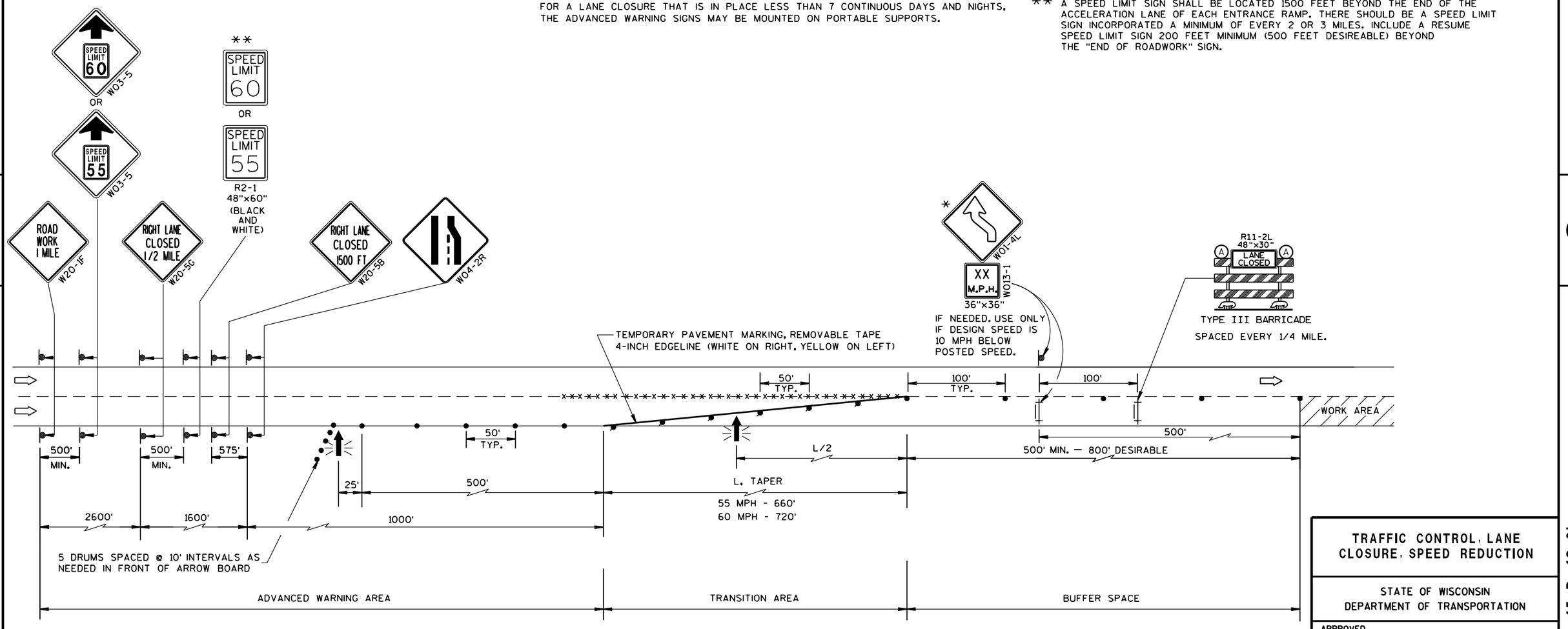
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

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

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

* THE LEFT REVERSE CURVE SIGN (W01-4L) IS ONLY REQUIRED WHEN THIS DETAIL IS USED IN COMBINATION WITH "SINGLE LANE CROSSOVER" DETAIL.

** A SPEED LIMIT SIGN SHALL BE LOCATED 1500 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP. THERE SHOULD BE A SPEED LIMIT SIGN INCORPORATED A MINIMUM OF EVERY 2 OR 3 MILES. INCLUDE A RESUME SPEED LIMIT SIGN 200 FEET MINIMUM (500 FEET DESIREABLE) BEYOND THE "END OF ROADWORK" SIGN.



TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

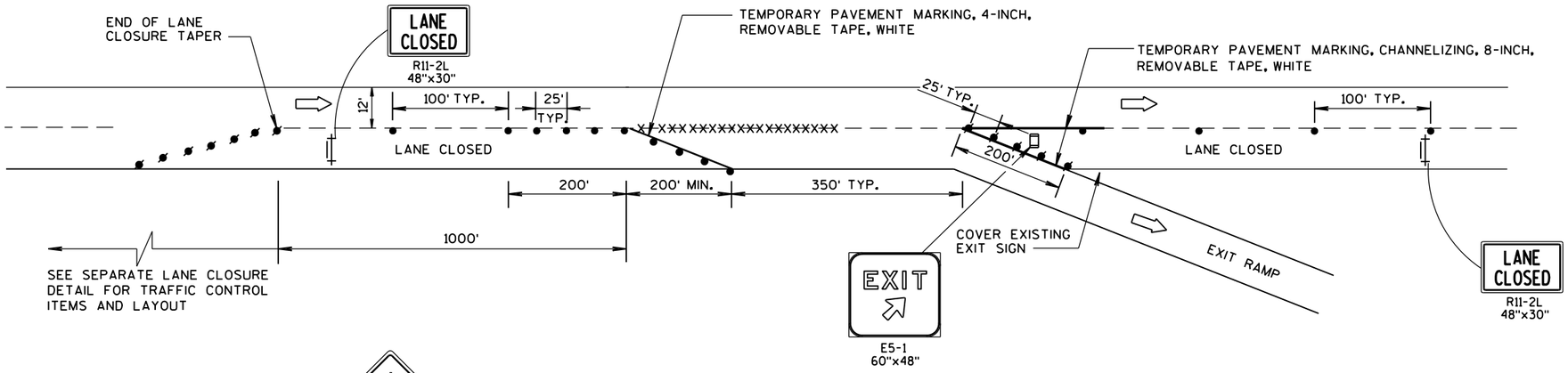
APPROVED
March 2016 — DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZONE SAFETY ENGINEER
FHWA

6

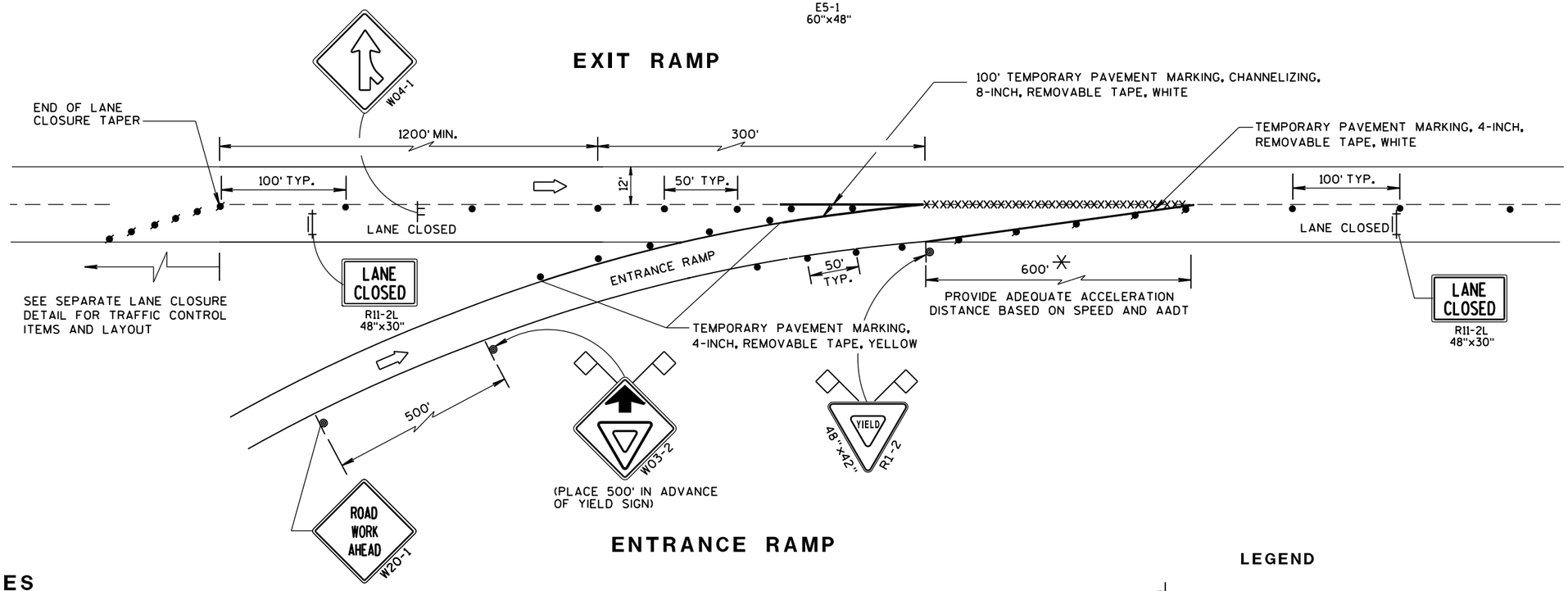
S.D.D. 15 D 12-6b

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S.D.D. 15 D 12-6b



EXIT RAMP



ENTRANCE RAMP

GENERAL NOTES

THE INSTALLATIONS SHOWN ON THIS SHEET ARE TYPICAL EXAMPLES AND ARE NOT INTENDED TO REPRESENT ANY PARTICULAR RAMP. AT SPECIFIC FIELD LOCATIONS, SIMILAR INSTALLATIONS SHALL BE USED AND ADJUSTED TO THE GEOMETRICS OF THE RAMP AS COORDINATED WITH THE ENGINEER.

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

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.

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

SEE SEPARATE LANE CLOSURE DETAIL FOR TYPICAL SPACING OF TYPE III BARRICADES AND R11-2L "LANE CLOSED" SIGNS.

YIELD SIGN AND WARNING SIGNS ON ENTRANCE RAMP ARE ALSO APPROPRIATE FOR CLOSURE OF THE MAINLINE LEFT LANE. OMIT THE YIELD SIGN IF MORE THAN ONE LANE REMAINS OPEN ON THE MAINLINE AND THE RAMP TAPER IS AT LEAST AS LONG AS THE NORMAL ENTRANCE RAMP TAPER AT THE SITE.

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

IF INDICATED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE FLEXIBLE TUBULAR MARKERS FOR DRUMS IN THE GORE BETWEEN THE ENTRANCE RAMP AND MAINLINE TRAFFIC.

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.

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE IF LANE CLOSURE IS TO BE IN PLACE FOR 7 OR MORE CONTINUOUS DAYS AND NIGHTS.

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

* LENGTH OF OPENING MAY BE REDUCED TO 150 FEET DURING STAGING OF WORK IN IMMEDIATE AREA OF RAMP TAPER.

LEGEND

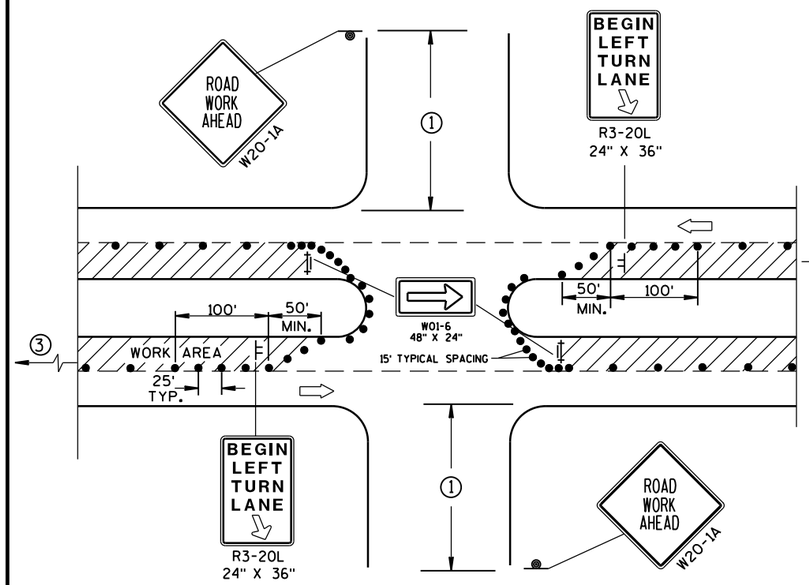
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)
- TYPE III BARRICADE WITH ATTACHED SIGN
- FLAGS, 16" x 16" MIN., (ORANGE)
- DIRECTION OF TRAFFIC

TRAFFIC CONTROL, EXIT AND ENTRANCE RAMP WITHIN LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2015 — DATE
/S/ Peter Amakobe Atepe — STATEWIDE WORK ZONE SAFETY ENGINEER
FHWA

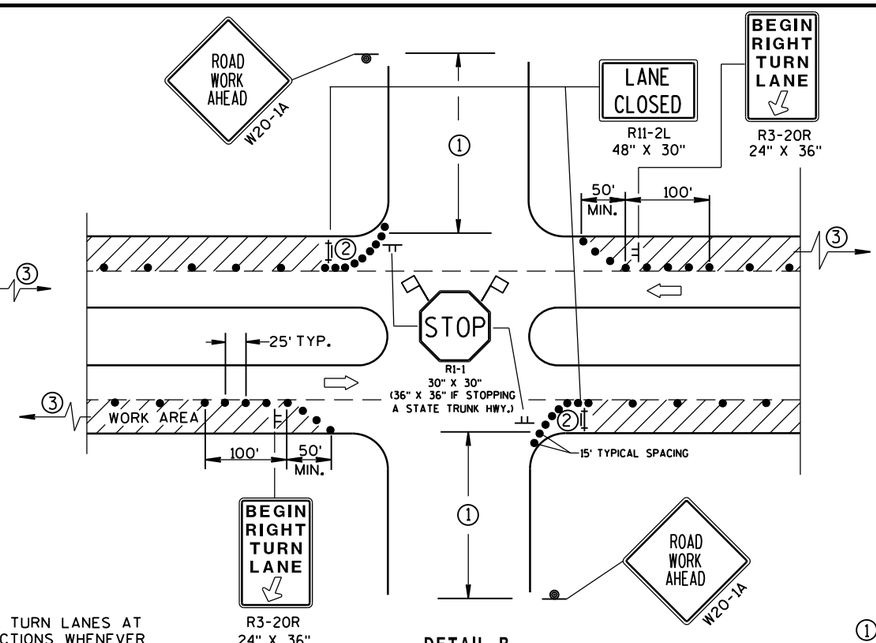
6
S.D.D. 15 D 15-2



DETAIL A

FOR LEFT LANE CLOSURE AT INTERSECTION OR MEDIAN OPENING

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



DETAIL B

FOR RIGHT LANE CLOSURE AT INTERSECTION

GENERAL NOTES

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

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

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

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

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

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

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

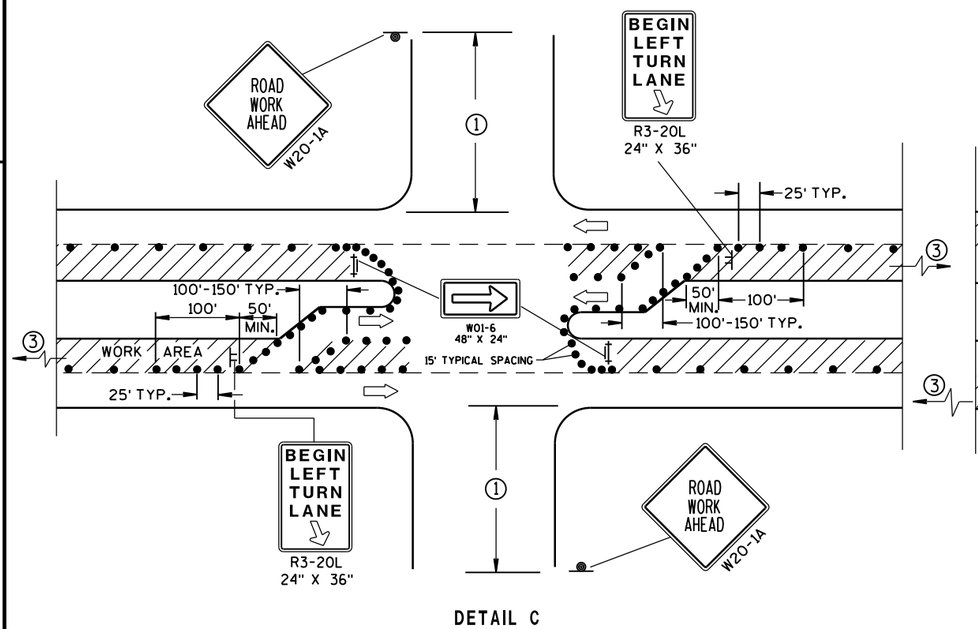
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

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

① 500' TYPICAL OR AT LAST INTERSECTION, WHICHEVER IS CLOSER.
350' IF 35-40 MPH.
200' IF 25-30 MPH.

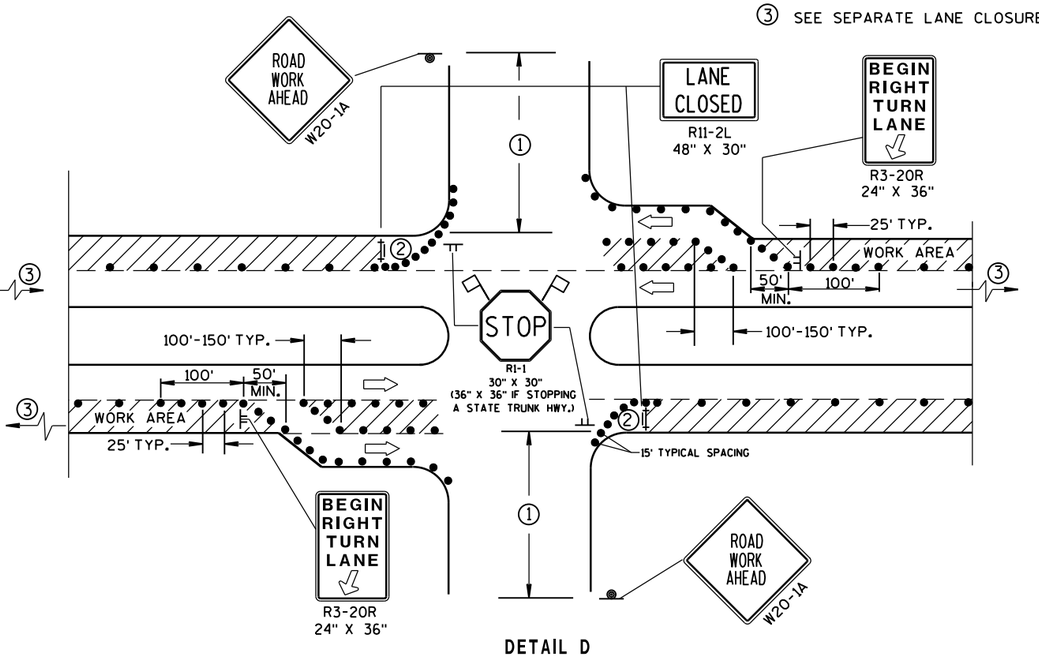
② ALSO USE BARRICADE AND 15-FOOT TYPICAL DRUM SPACING AT COMMERCIAL DRIVEWAYS.

③ SEE SEPARATE LANE CLOSURE DETAIL FOR ADDITIONAL TRAFFIC CONTROL.



DETAIL C

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



DETAIL D

FOR RIGHT LANE CLOSURE AT INTERSECTION (WITH RIGHT TURN BAY OPEN)

LEGEND

- TRAFFIC CONTROL DRUM
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT (5' MIN. MOUNTING HEIGHT)
- TYPE III BARRICADE WITH ATTACHED SIGN AND TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC
- FLAGS, 16" X 16" MIN., (ORANGE)
- WORK AREA

TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2016 — DATE
/S/ Peter Anakobe Atepe
STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER
FHWA

6

S.D.D. 15 D 21-4

LEGEND

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

GENERAL NOTES

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

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

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

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

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

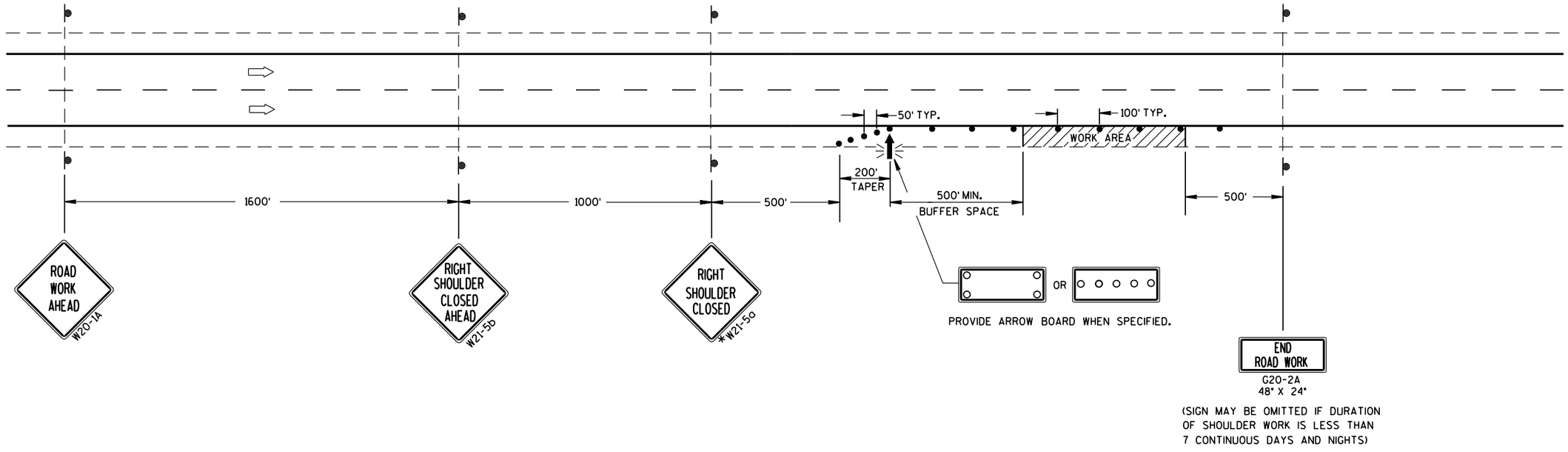
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

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

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

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



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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June 2016 — DATE

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

FHWA

6

S.D.D. 15 D 27-3

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.

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

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	200
35	30	45	55	70	250
40	40	55	75	90	305
45	60	90	120	150	360
50	70	100	135	170	425
55	75	110	150	185	495

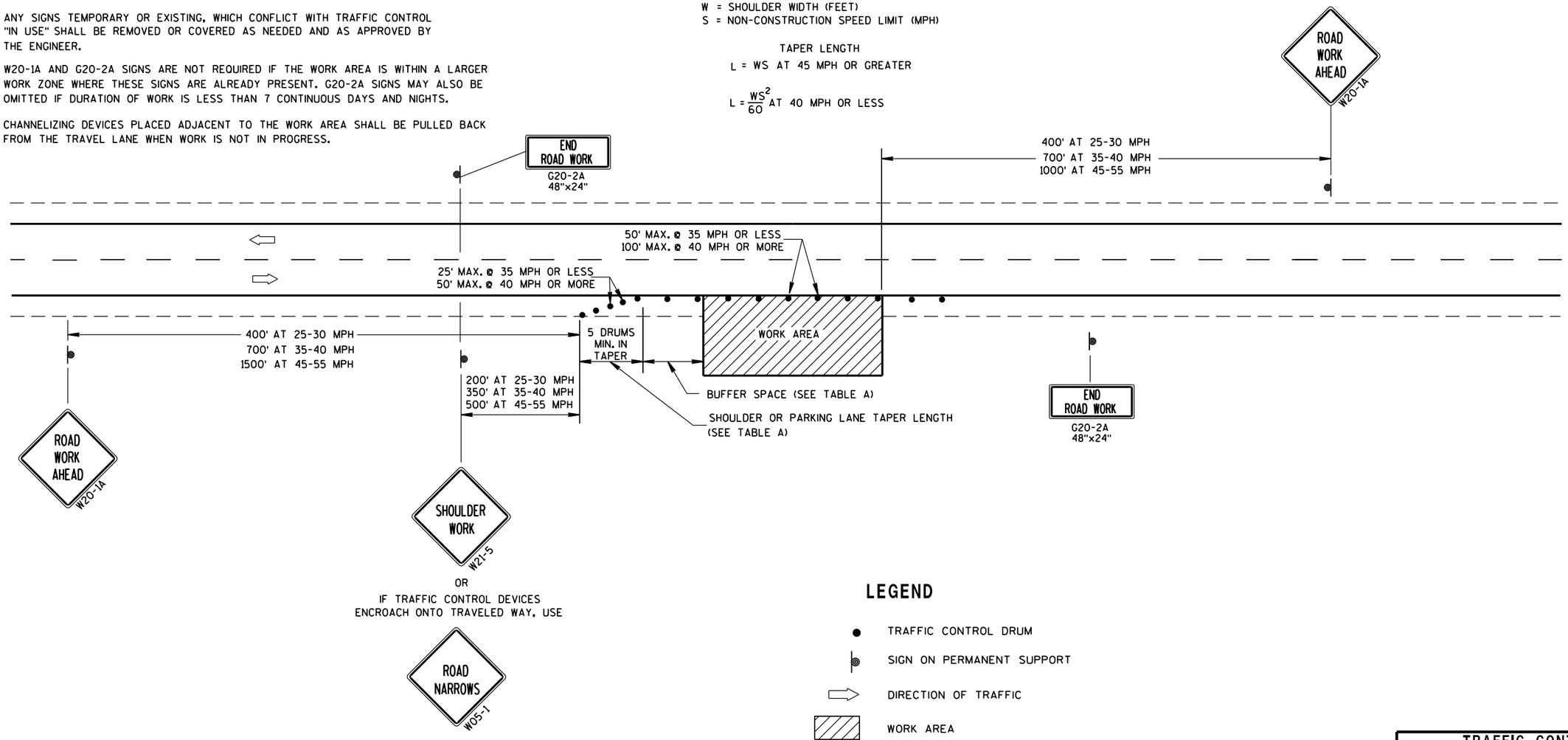
W = SHOULDER WIDTH (FEET)
S = NON-CONSTRUCTION SPEED LIMIT (MPH)

TAPER LENGTH

L = WS AT 45 MPH OR GREATER

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

SHOULDER TAPER LENGTH = $\frac{1}{3}L$



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

July 14, 2015 — DATE

/S/ Peter Amakobe Atepe — STATEWIDE WORK ZO... SAFETY ENGI... FIC

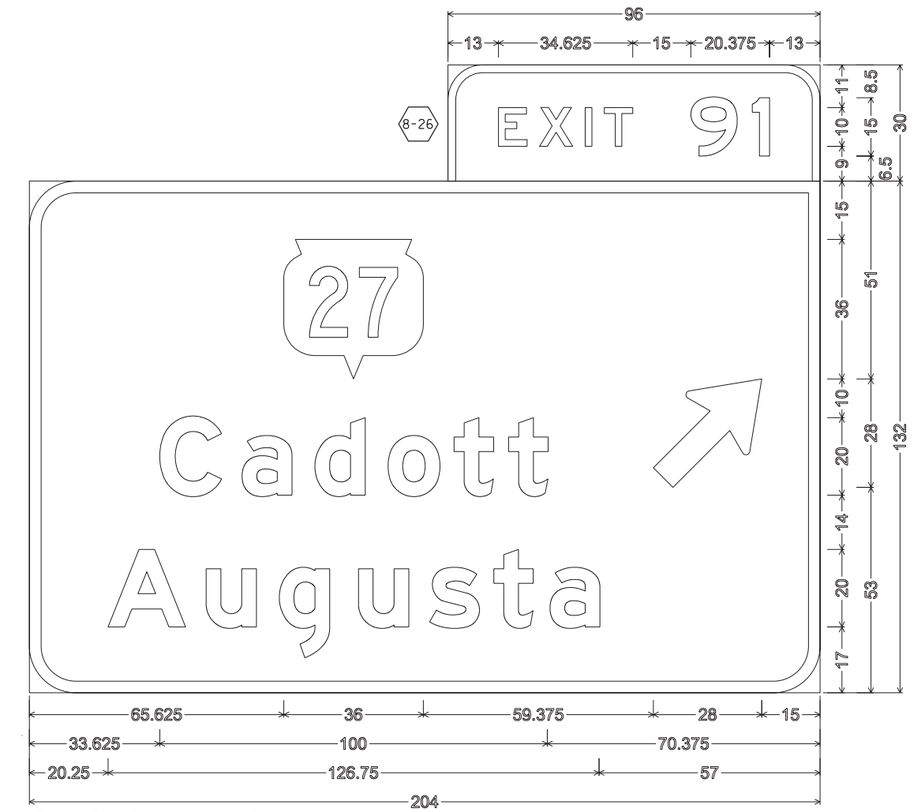
FHWA

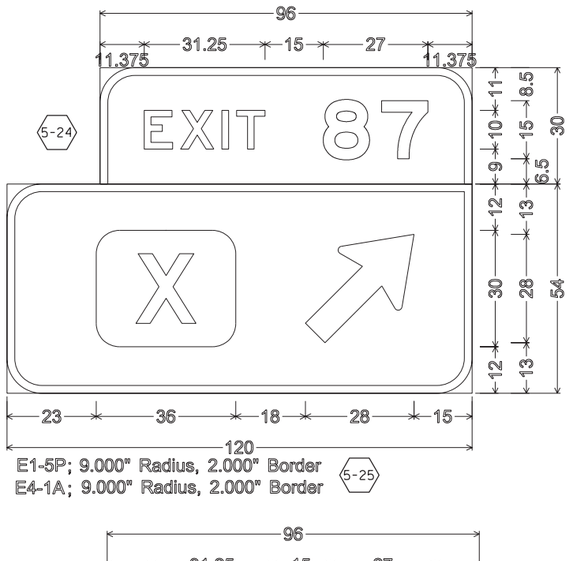
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S.D.D. 15 D 28-3

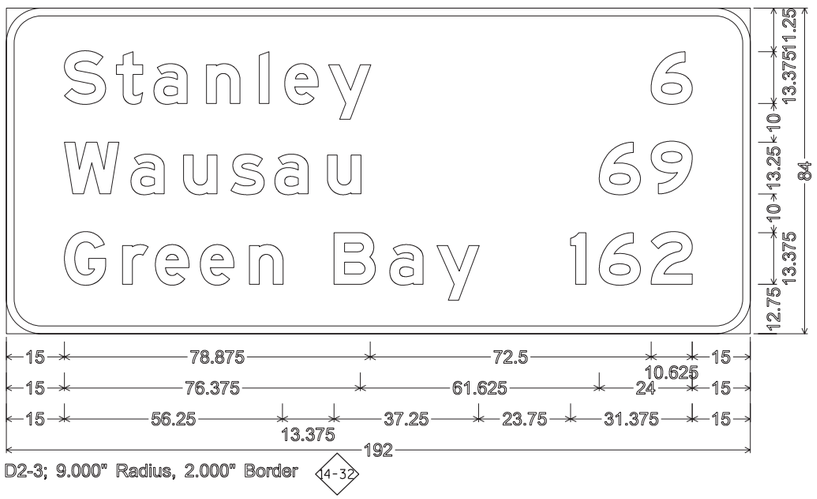
NOTES

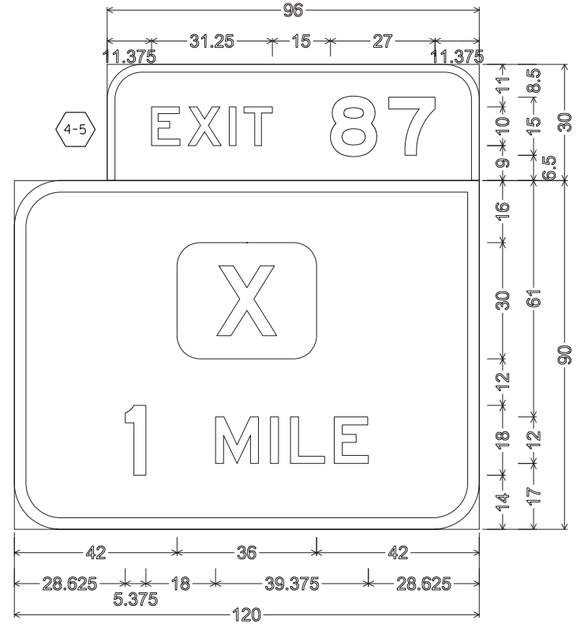
1. All Signs are Type I - Type SH Reflective
2. Color:
   Background - Green
   Message - White
3. Message Series - E Modified except all cap Words are Series E
3. Exit Only panels are Yellow Type F Sheeting Background with Black Message



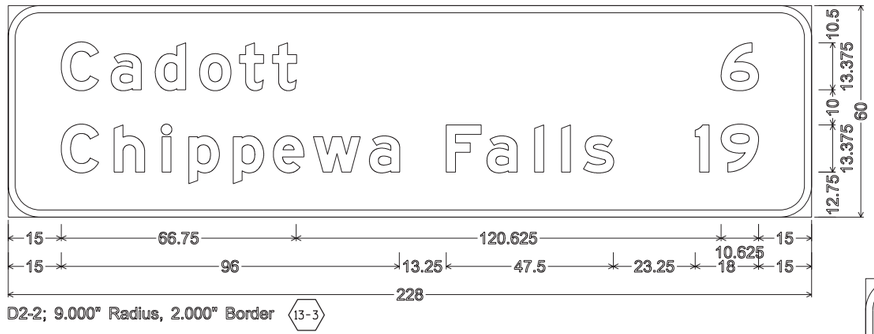








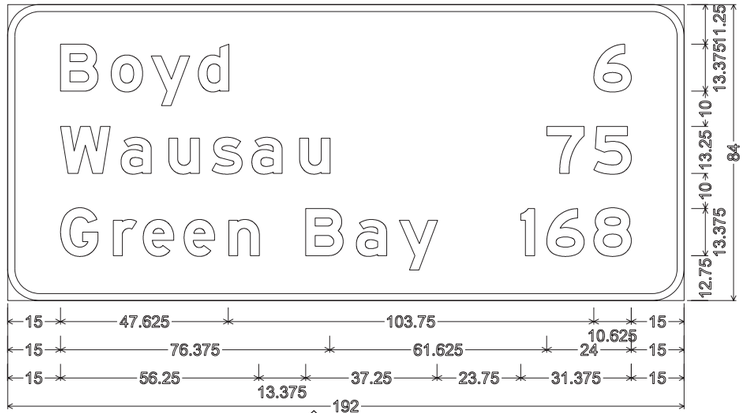
PROJECT NO: 1050-01-61/1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	SIGN DETAIL		SHEET 248	E



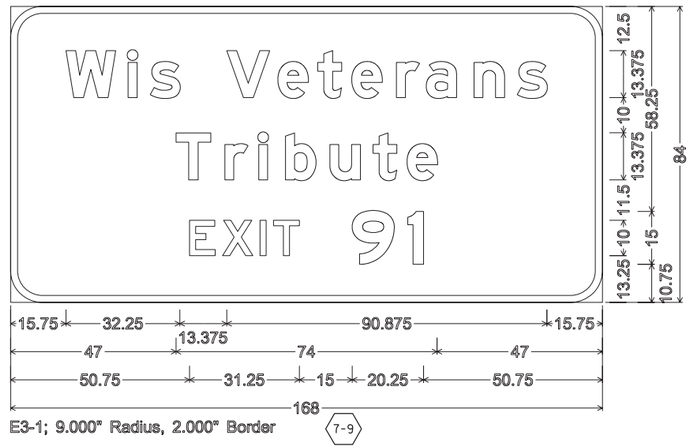
D2-2; 9.000" Radius, 2.000" Border (13-3)

NOTES

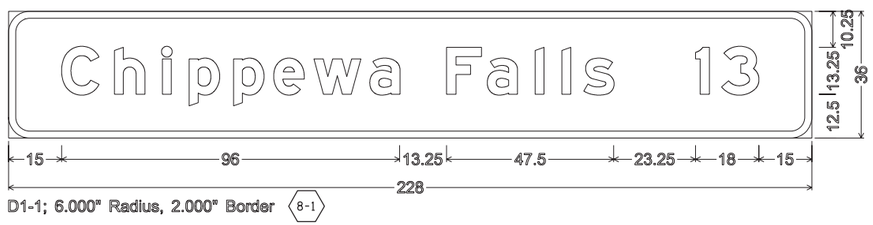
1. All Signs are Type I - Type SH Reflective
2. Color:
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   Message - White
3. Message Series - E Modified except all cap Words are Series E
3. Exit Only panels are Yellow Type F Sheeting Background with Black Message



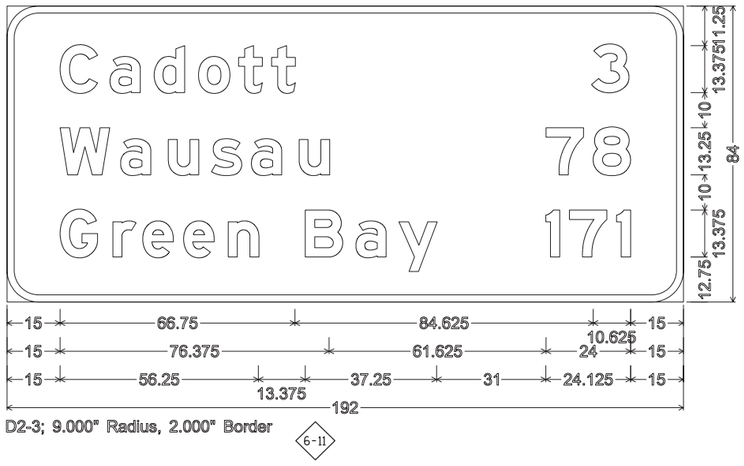
D2-3; 9.000" Radius, 2.000" Border (9-33)



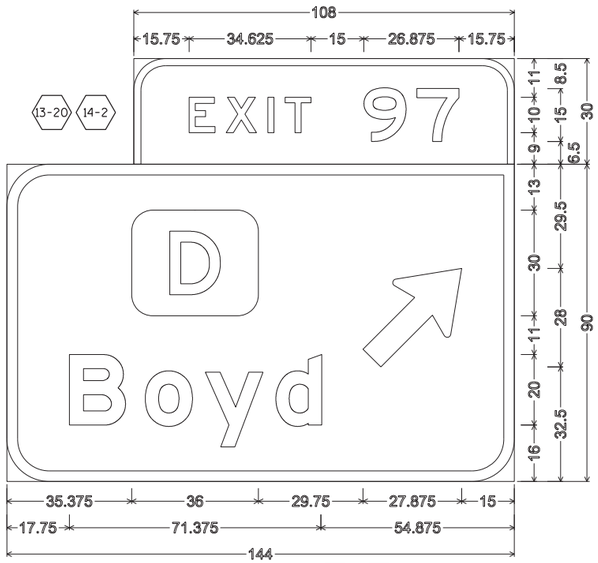
E3-1; 9.000" Radius, 2.000" Border (7-9)



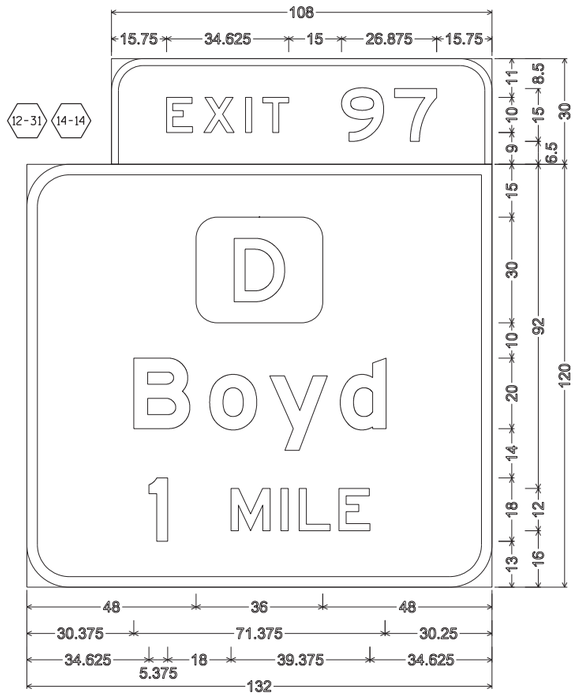
D1-1; 6.000" Radius, 2.000" Border (8-1)



D2-3; 9.000" Radius, 2.000" Border (6-11)

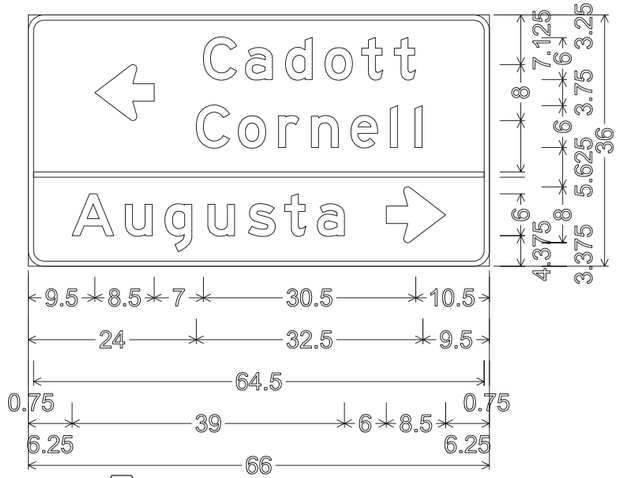


E1-5P; 9.000" Radius, 2.000" Border
E4-1A; 12.000" Radius, 3.000" Border (13-21) (14-3)

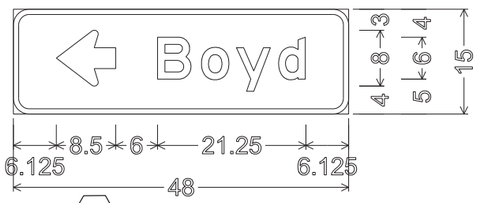


E1-5P; 9.000" Radius, 2.000" Border
E1-1A; 12.000" Radius, 3.000" Border (12-32) (14-15)

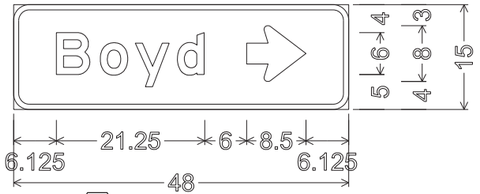
(12-31) (14-14)



D1-3; 8-32
2.250" Radius, 0.750" Border



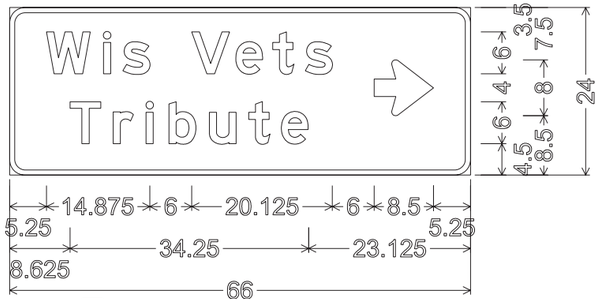
D1-1; 13-29
2.250" Radius, 0.750" Border



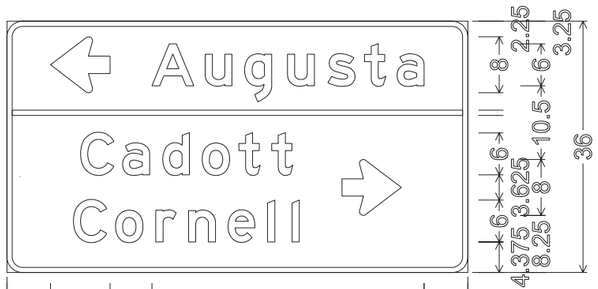
D1-1; 13-13
2.250" Radius, 0.750" Border

NOTES

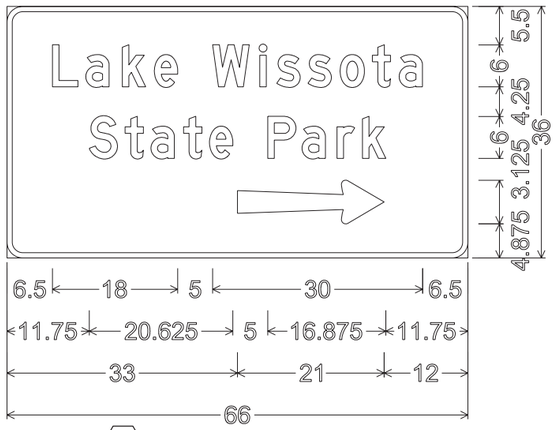
1. All Signs are Type II Type H Reflective
2. Color:
   Background - Green except as noted
   Message - White except as noted
3. Message Series - E except as noted



D1-2; 8-33
2.250" Radius, 0.750" Border



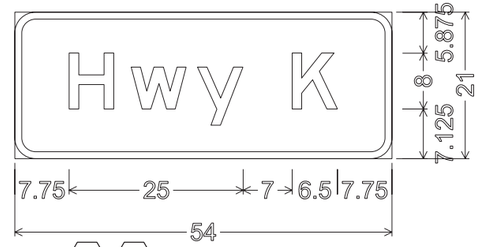
D1-3; 8-17
2.250" Radius, 0.750" Border



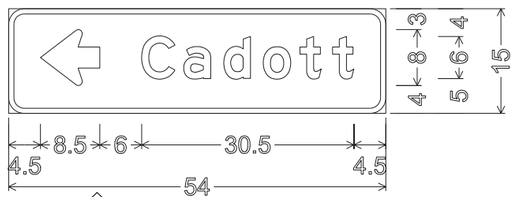
D7-53R; 5-14
2.250" Radius, 0.750" Border, White on Brown;
"Lake" D; "Wissota" D; "State" D; "Park" D



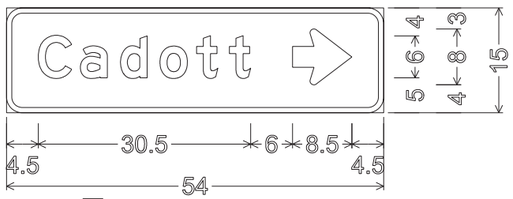
D1-2; 8-14
2.250" Radius, 0.750" Border



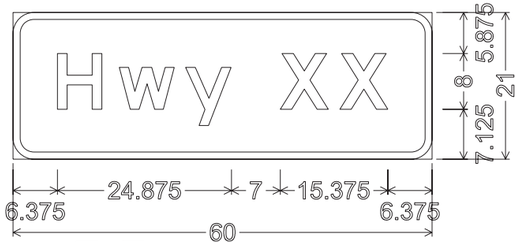
I2-2; 3-4 3-9
3.000" Radius, 1.000" Border



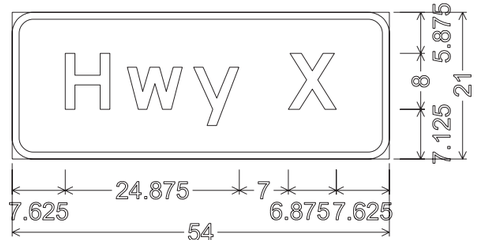
D1-1; 5-17
2.250" Radius, 0.750" Border



D1-1; 5-30
2.250" Radius, 0.750" Border



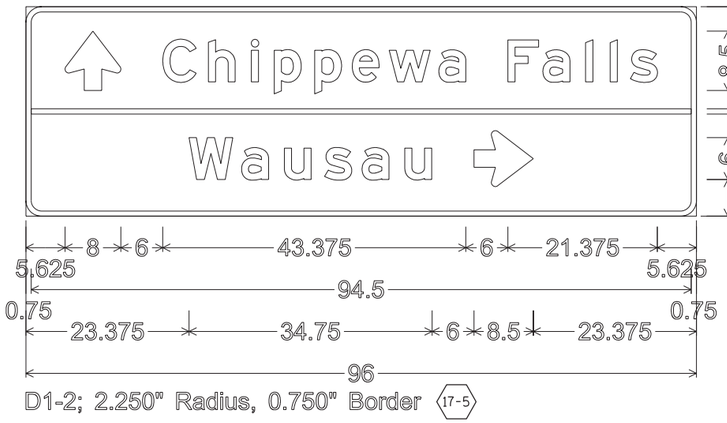
I2-2; 6-1 6-5
3.000" Radius, 1.000" Border



I2-2; 7-2 7-5 13-5 13-23
3.000" Radius, 1.000" Border

7

7



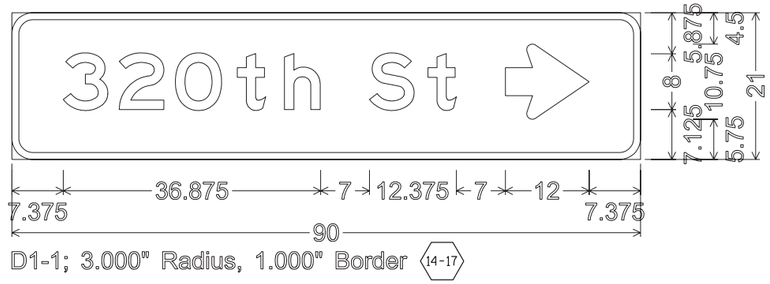
D1-2; 2.250" Radius, 0.750" Border (17-5)



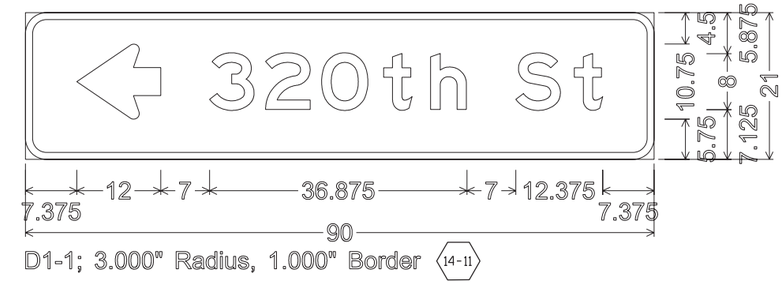
D1-1; 2.250" Radius, 0.750" Border (15-18) (16-18) (17-18)

NOTES

1. All Signs are Type II Type H Reflective
2. Color:
   Background - Green except as noted
   Message - White except as noted
3. Message Series - E except as noted



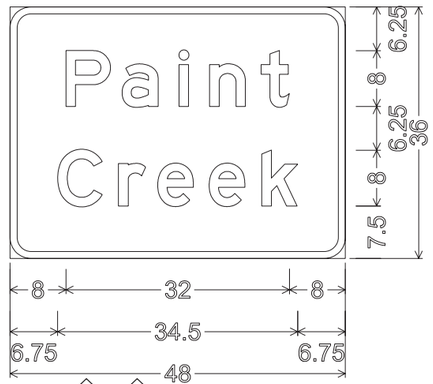
D1-1; 3.000" Radius, 1.000" Border (14-17)



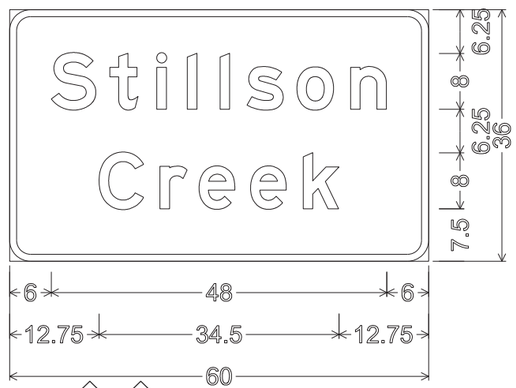
D1-1; 3.000" Radius, 1.000" Border (14-11)



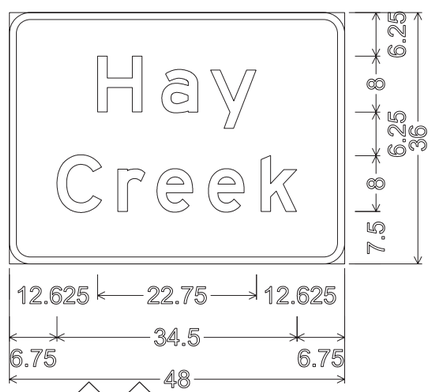
D1-1; (15-12) (16-23) (17-19)
2.250" Radius, 0.750" Border



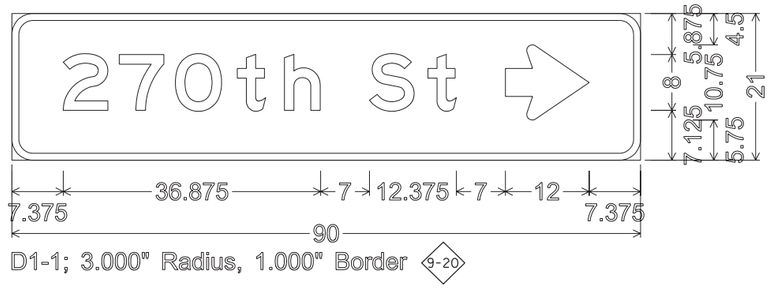
I3-1; (3-5) (3-11)
3.000" Radius, 1.000" Border



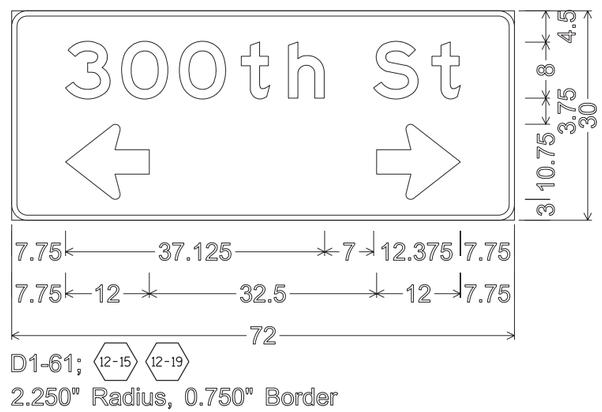
I3-1; (1-1) (1-5)
3.000" Radius, 1.000" Border



I3-1; (14-13) (14-30)
3.000" Radius, 1.000" Border



D1-1; 3.000" Radius, 1.000" Border (9-20)



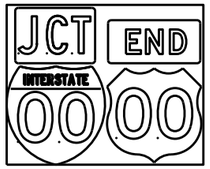
D1-61; (12-15) (12-19)
2.250" Radius, 0.750" Border

PROJECT NO: 1050-01-61/1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	SIGN DETAIL		SHEET 251	E

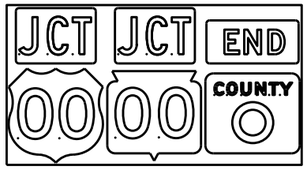
TYPICAL ASSEMBLIES



J1-1



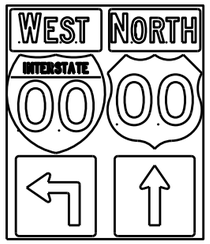
J1-2



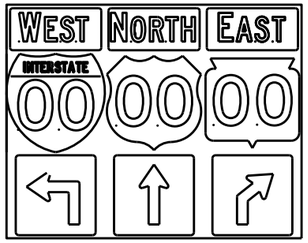
J1-3



J2-1



J2-2

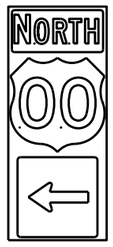


J2-3

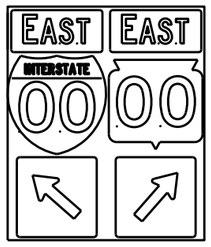


JV

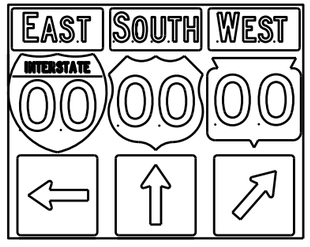
(Typical Vertical J-Assembly
See Note 10 and 11)



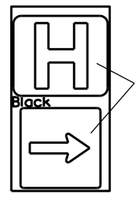
J3-1



J3-2



J3-3

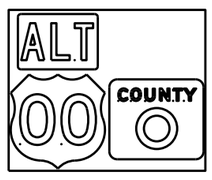


Blue Background

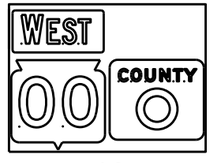
JH-1



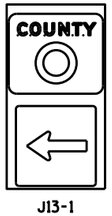
J4-1



J4-2



J4-2



J13-1



J12-1



J32-1



J33-1

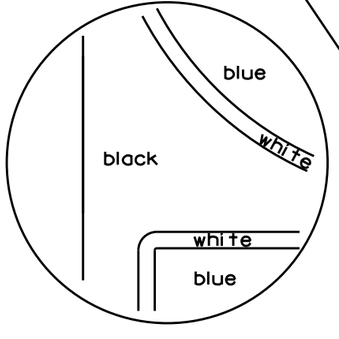


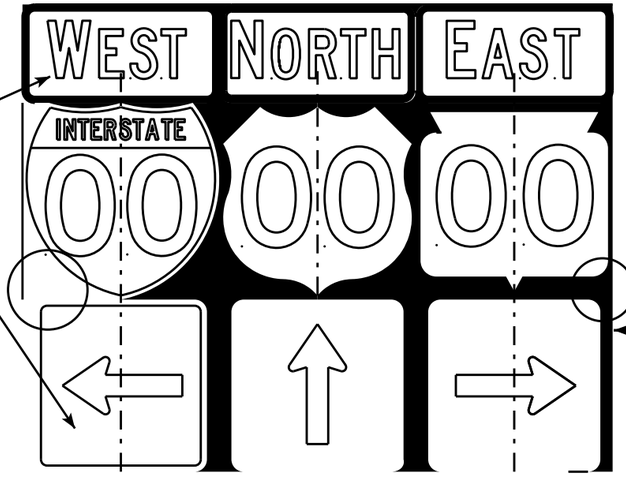
J23-1

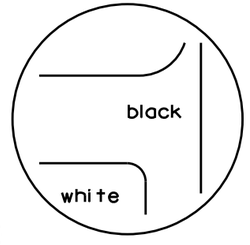


J22-1

[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

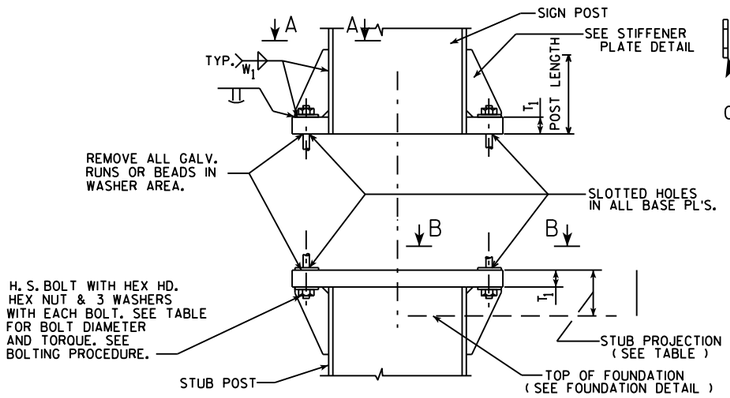
APPROVED Matthew R Rauch
for State Traffic Engineer

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

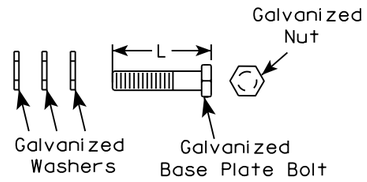
PROJECT NO: SHEET NO: E

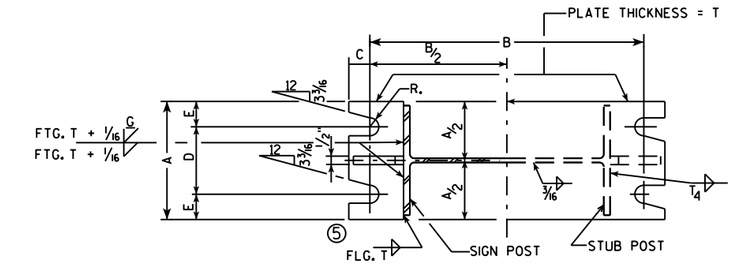
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A21S.DGN PLOT DATE : 06-FEB-2014 14:10 PLOT BY : mscsja PLOT NAME :

WISDOT/CADDS SHEET 42

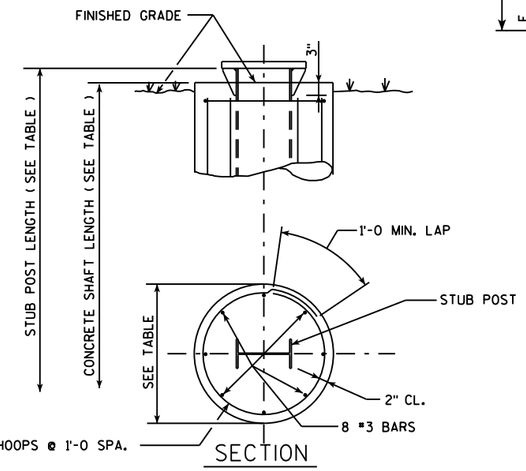


SIGN POST AND STUB POST ELEVATION

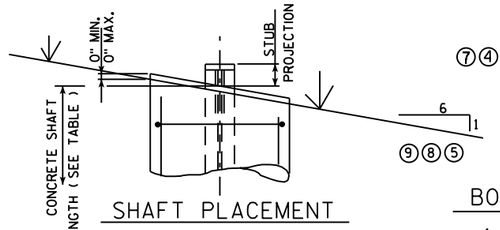




SECTION A-A SECTION B-B



SECTION



SHAFT PLACEMENT

DESIGN DATA

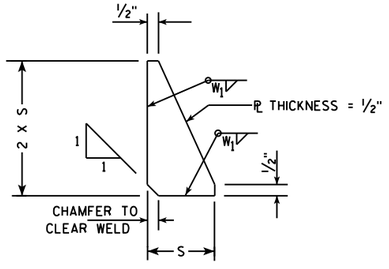
WIND PRESSURE = 75 M.P.H.
WIND COMPONENTS - NORMAL = 1.0 TRANSVERSE = 0.0
ICE LOAD = 3 P.S.F.

GROUP LOADS	PERCENT OF ALLOWABLE STRESS
1. DEAD	100
2. DEAD & WIND	140
3. DEAD, ICE & 1/2 WIND[4]	140 [4]25 P.S.F. MIN.

ALLOWABLE SOIL PRESSURE = 1 1/2 T / SQ. FT.
WIND LOAD WAS APPLIED TO THE AREA OF THE SIGN AND TO THE SUPPORTING MEMBERS.
ICE LOAD WAS APPLIED TO ONE FACE OF THE SIGN AND AROUND THE SURFACE OF THE SUPPORTING MEMBERS.

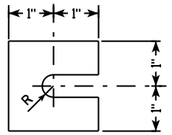
GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.
DESIGN CONFORMS WITH A.A.S.H.T.O. SPECIFICATIONS 1985.
ALL POSTS, POST STUBS & ATTACHMENTS SHALL BE A.S.T.M. A709 GRADE 50, GALVANIZED IN ACCORDANCE WITH ASTM A123. (9)
THE POST, BASE PLATES, UPPER SIX INCHES OF STUB POST FLANGE SPLICE PLATE AND FUSE PLATE SHALL BE GALVANIZED AFTER FABRICATION.
FURNISH STEEL BOLTS, NUTS, AND WASHERS IN ACCORDANCE WITH SECTION 635 OF THE STANDARD SPECIFICATIONS.



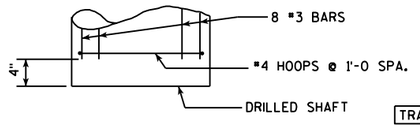
STIFFENER PLATE DETAIL

(SEE TABLE FOR DIMENSIONS)



FURNISH 2 @ .012" ± THICK AND 2 @ .032" ± THICK SHIMS PER POST. SHIMS SHALL BE FABRICATED FROM BRASS SHIM STOCK OR STRIP CONFORMING TO A.S.T.M.- B36.

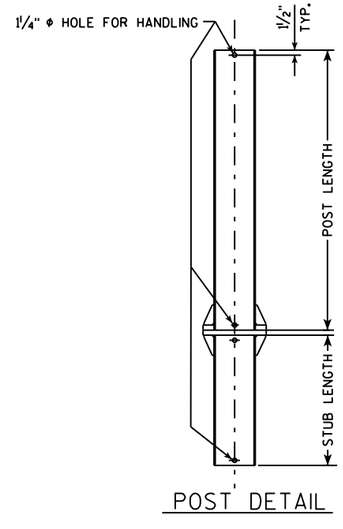
SHIM DETAIL



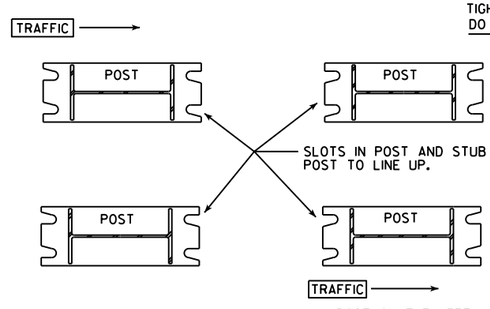
FOUNDATION DETAIL

QUANTITIES FOR 1 FOOTING		
	CONC. MASONRY C.Y.	REINF. STEEL LBS.
A	0.6	34
B	0.8	49
C	0.9	50
D	0.9	56
(7) E	1.0	62

(7) REINF. TYPE	#3	#4
A	8 @ 4'-5	5 @ 6'-3
B	8 @ 6'-5	7 @ 6'-3
C	8 @ 6'-11	7 @ 6'-3
D	8 @ 7'-5	8 @ 6'-3
E	8 @ 7'-11	9 @ 6'-3



POST DETAIL



POST SLOT ORIENTATION (7)

BOLTING PROCEDURE - BASE CONNECTION

1. ASSEMBLE SIGN POST TO STUB POST WITH BOLTS AND ONE OF THE FLAT WASHERS ON EACH BOLT BETW. PLATES.
2. SHIM AS REQ'D. TO PLUMB POST.
3. PRIOR TO BOLT TIGHTENING LUBRICATE BASE CONNECTION BOLTS WITH BEESWAX OR OTHER HIGH-WAX LUBRICANT.
4. TIGHTEN ALL BOLTS THE MAXIMUM POSSIBLE WITH 12" OR 15" WRENCH TO BED WASHERS & SHIMS AND TO CLEAN BOLT THREADS, THEN LOOSEN EACH BOLT IN TURN AND RETIGHTEN IN A SYSTEMATIC ORDER TO THE PRESCRIBED TORQUE. (SEE TABLE)
5. BURR THREADS AT JUNCTION WITH NUT USING A CENTER PUNCH TO PREVENT NUT LOOSENING.

NOTE:
TIGHTEN THE HIGH STRENGTH BOLTS TO THE TORQUE SHOWN. DO NOT OVERTIGHTEN.

BASE CONNECTION DATA TABLE														FOUNDATION DATA				(2)
L	X	TYPE	DIMENSION / POST SIZE	BOLT SIZE & TORQUE	A	B	C	D	E	T_1	T_4	W_1	R	S	STUB LENGTH	STUB PROJECTION	SHAFT DIAMETER	SHAFT LENGTH	K	
3 3/4	(4)	A	W10"X12.0 #/FT.	3/4" Φ @ 75#-FT.	5 1/4"	1'-0 3/8"	7/8"	3 1/2"	7/8"	1"	3/16"	5/16"	13/32"	2 1/8"	3'-6	3"	2'-0 Φ	5'-0	76.0#	(4)
4 3/4	(4)	B	W12"X16.0 #/FT.	7/8" Φ @ 85#-FT.	5 1/2"	1'-4 1/4"	1"	3 1/2"	1"	1 1/4"	1/4"	5/16"	13/32"	3"	5'-6	3"	2'-0 Φ	7'-0	146.5#	(4)
5		C	W12"X19.0 #/FT.	7/8" Φ @ 85#-FT.	5 1/2"	1'-4 1/4"	1"	3 1/2"	1"	1 1/2"	5/16"	5/16"	13/32"	3"	6'-0	3"	2'-0 Φ	7'-6	182.1#	
5		D	W12"X22.0 #/FT.	7/8" Φ @ 85#-FT.	5 1/2"	1'-4 1/4"	1"	3 1/2"	1"	1 1/2"	3/8"	5/16"	13/32"	3"	6'-6	3"	2'-0 Φ	8'-0	210.5#	
5	(3)	E	W12"X26.0 #/FT.	1" Φ @ 90#-FT.	7"	1'-4 1/4"	1 1/4"	4"	1 1/2"	1 1/2"	3/8"	5/16"	17/32"	3"	7'-0	3"	2'-0 Φ	8'-6	293.0#	(3)
											①	⑥	①							

STRUCTURAL CARBON STEEL PAY WTS. (1 POST) = K+ (POST LENGTH X POST WT.)
" K " INCLUDES STUB, BASE PLATES, STIFFS., BOLTS, AND WASHERS.

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 11/12/15 PLATE NO. A3-1.16

NO.	DATE	REVISION
(10)	1-21-14	LUBRICATION OF BASE BOLTS
(9)	4-26-11	REMOVE NON-GALVANIZED
(8)	10-30-96	NOT GALVANIZED/GALVANIZED
(7)	10-30-92	QUANT., A588 EXCEPT., ADD SLOT VIEW
(6)	8-24-87	BASE CONN. WELD
(5)	10-13-81	BASE CONN. WELD & FUSE PL WASHERS
(4)	10-19-79	POST A & B, A572 GR. 50, & K
(2)	11-28-78	"K" (3) 4-23-79 TYPE "E"
(1)	5-4-78	T_1 , T_2 & W_1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

TYPE A, B, C, D, & E

CONST. SPEC.	DRAWN BY	PLANS CK'D.
2011	JPH	

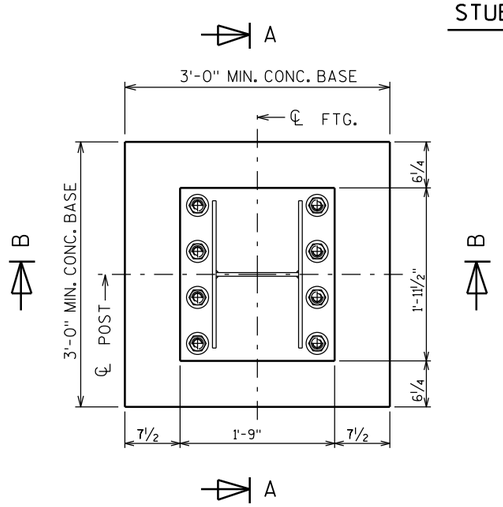
FTG. & SIGN SUPPORT DETAILS GROUND MOUNT BREAK-AWAY SIGNS

SHEET 253

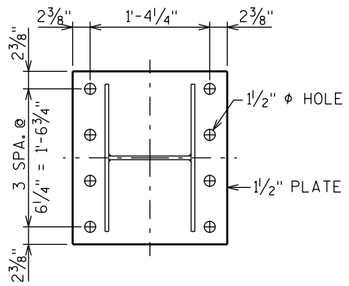
PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A31.DGN PLOT DATE : 01-DEC-2015 18:20 PLOT BY : $$ platuser $$ PLOT NAME : PLOT SCALE : 5.351066:1.000000

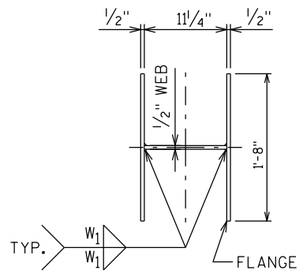
STUB AND MASONRY ANCHOR DETAILS



STUB SECTION



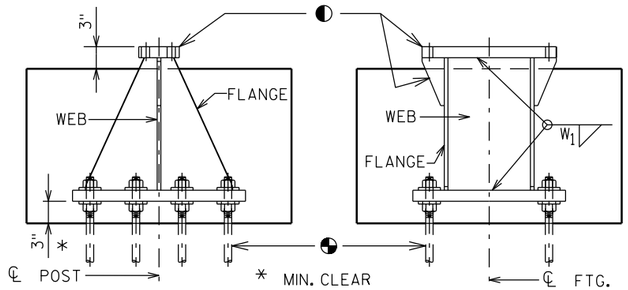
BASE PLATE



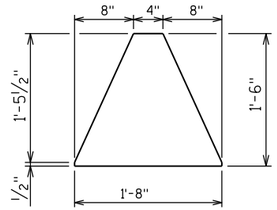
STUB

◐ SEE PLATE NO. A3-1 FOR DETAILS

◒ MASONRY ANCHORS TYPE S 1¼-INCHES (ADHESIVE). ALLOWABLE PULL OUT CAPACITY 14,995 KIPS. EMBED 1'-3" IN ROCK.



SECTION A SECTION B



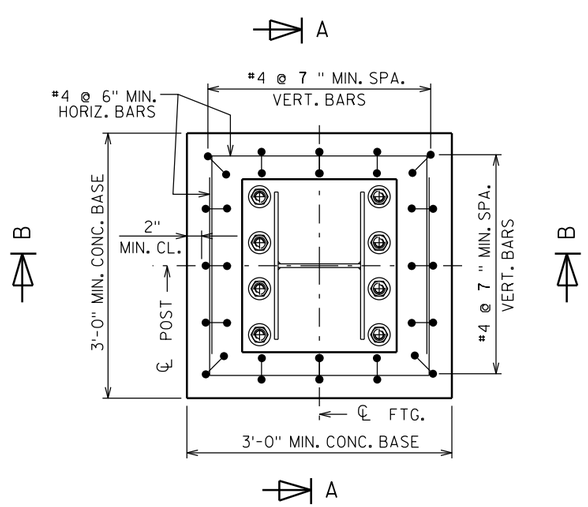
FLANGE

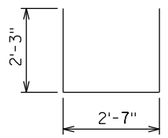
GENERAL NOTES

1. Quantities per Base:
   - REINFORCING BAR STEEL = 62 LBS
   - CONCRETE = 0.6 C.Y.
   - STEEL WEIGHT = 335 LBS
2. All materials, except anchor rod, nuts and washers, are to be A.S.T.M. A709 grade 50. All materials to be galvanized after fabrication.
3. If the contractor encounters rock before reaching the footing depth, per the A3-1 Sign Detail, determine the pull-out capacity of a test adhesive anchor installed in the rock. If the test result equals or exceeds the pull-out capacity of 14,995 KIPS, the contractor may install the breakaway stub for rock, according to this detail.

CONCRETE BASE AND REINFORCING STEEL DETAILS

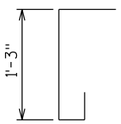
CONCRETE BASE SECTION





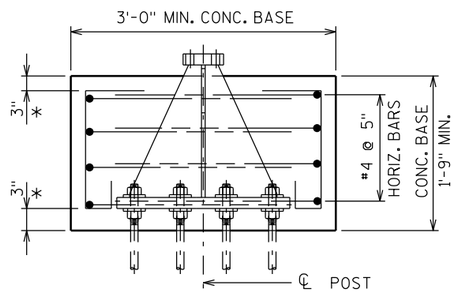
HORIZONTAL BAR

8 BARS @ 6'-11" LENGTH



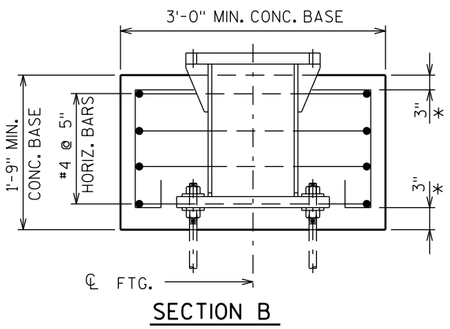
VERTICAL BARS

16 BARS @ 2'-4" LENGTH
MAY BE PLACED IN SKEW
FOR CLEARANCE NEED



SECTION A

* MIN. CLEAR



SECTION B

ALTERNATE BREAK-AWAY BASE ON ROCK
A3-1M

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 2/06/2014 PLATE A3-1M.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A31M.DGN PLOT DATE : 10-MAR-2014 15:16 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 1.556674:1.000000 WISDOT/CADDS SHEET 42

VERITCAL DIMENSION ⇨

HORIZONTAL DIMENSION ⇩

⇩ \ ⇨	2.5 ft.	3 ft.	3.5 ft.	4 ft.	4.5 ft.	5 ft.	5.5 ft.	6 ft.	6.5 ft.	7 ft.	7.5 ft.	8 ft.	8.5 ft.	9 ft.	9.5 ft.	10 ft.	10.5 ft.	11 ft.	11.5 ft.	12 ft.	12.5 ft.	13 ft.	13.5 ft.	14 ft.	14.5 ft.	15 ft.	15.5 ft.	16 ft.
10 ft.	25 Sq. Ft	30 Sq. Ft	35 Sq. Ft	40 Sq. Ft	45 Sq. Ft	50 Sq. Ft	55 Sq. Ft	60 Sq. Ft	65 Sq. Ft	70 Sq. Ft	75 Sq. Ft	80 Sq. Ft	85 Sq. Ft	90 Sq. Ft	95 Sq. Ft	100 Sq. Ft	105 Sq. Ft	110 Sq. Ft	115 Sq. Ft	120 Sq. Ft	125 Sq. Ft	130 Sq. Ft	135 Sq. Ft	140 Sq. Ft	145 Sq. Ft	150 Sq. Ft	155 Sq. Ft	160 Sq. Ft
11 ft.	27.5 Sq. Ft	33 Sq. Ft	38.5 Sq. Ft	44 Sq. Ft	49.5 Sq. Ft	55 Sq. Ft	60.5 Sq. Ft	66 Sq. Ft	71.5 Sq. Ft	77 Sq. Ft	82.5 Sq. Ft	88 Sq. Ft	93.5 Sq. Ft	99 Sq. Ft	104.5 Sq. Ft	110 Sq. Ft	115.5 Sq. Ft	121 Sq. Ft	126.5 Sq. Ft	132 Sq. Ft	137.5 Sq. Ft	143 Sq. Ft	148.5 Sq. Ft	154 Sq. Ft	159.5 Sq. Ft	165 Sq. Ft	170.5 Sq. Ft	176 Sq. Ft
12 ft.	30 Sq. Ft	36 Sq. Ft	42 Sq. Ft	48 Sq. Ft	54 Sq. Ft	60 Sq. Ft	66 Sq. Ft	72 Sq. Ft	78 Sq. Ft	84 Sq. Ft	90 Sq. Ft	96 Sq. Ft	102 Sq. Ft	108 Sq. Ft	114 Sq. Ft	120 Sq. Ft	126 Sq. Ft	132 Sq. Ft	138 Sq. Ft	144 Sq. Ft	150 Sq. Ft	156 Sq. Ft	162 Sq. Ft	168 Sq. Ft	174 Sq. Ft	180 Sq. Ft	186 Sq. Ft	192 Sq. Ft
13 ft.	32.5 Sq. Ft	39 Sq. Ft	45.5 Sq. Ft	52 Sq. Ft	58.5 Sq. Ft	65 Sq. Ft	71.5 Sq. Ft	78 Sq. Ft	84.5 Sq. Ft	91 Sq. Ft	97.5 Sq. Ft	104 Sq. Ft	110.5 Sq. Ft	117 Sq. Ft	123.5 Sq. Ft	130 Sq. Ft	136.5 Sq. Ft	143 Sq. Ft	149.5 Sq. Ft	156 Sq. Ft	162.5 Sq. Ft	169 Sq. Ft	175.5 Sq. Ft	182 Sq. Ft	188.5 Sq. Ft	195 Sq. Ft	201.5 Sq. Ft	208 Sq. Ft
14 ft.	35 Sq. Ft	42 Sq. Ft	49 Sq. Ft	56 Sq. Ft	63 Sq. Ft	70 Sq. Ft	77 Sq. Ft	84 Sq. Ft	91 Sq. Ft	98 Sq. Ft	105 Sq. Ft	112 Sq. Ft	119 Sq. Ft	126 Sq. Ft	133 Sq. Ft	140 Sq. Ft	147 Sq. Ft	154 Sq. Ft	161 Sq. Ft	168 Sq. Ft	175 Sq. Ft	182 Sq. Ft	189 Sq. Ft	196 Sq. Ft	203 Sq. Ft	210 Sq. Ft	217 Sq. Ft	224 Sq. Ft
15 ft.	37.5 Sq. Ft	45 Sq. Ft	52.5 Sq. Ft	60 Sq. Ft	67.5 Sq. Ft	75 Sq. Ft	82.5 Sq. Ft	90 Sq. Ft	97.5 Sq. Ft	105 Sq. Ft	112.5 Sq. Ft	120 Sq. Ft	127.5 Sq. Ft	135 Sq. Ft	142.5 Sq. Ft	150 Sq. Ft	157.5 Sq. Ft	165 Sq. Ft	172.5 Sq. Ft	180 Sq. Ft	187.5 Sq. Ft	195 Sq. Ft	202.5 Sq. Ft	210 Sq. Ft	217.5 Sq. Ft	225 Sq. Ft	232.5 Sq. Ft	240 Sq. Ft
16 ft.	40 Sq. Ft	48 Sq. Ft	56 Sq. Ft	64 Sq. Ft	72 Sq. Ft	80 Sq. Ft	88 Sq. Ft	96 Sq. Ft	104 Sq. Ft	112 Sq. Ft	120 Sq. Ft	128 Sq. Ft	136 Sq. Ft	144 Sq. Ft	152 Sq. Ft	160 Sq. Ft	168 Sq. Ft	176 Sq. Ft	184 Sq. Ft	192 Sq. Ft	200 Sq. Ft	208 Sq. Ft	216 Sq. Ft	224 Sq. Ft	232 Sq. Ft	240 Sq. Ft	248 Sq. Ft	256 Sq. Ft
17 ft.	42.5 Sq. Ft	51 Sq. Ft	59.5 Sq. Ft	68 Sq. Ft	76.5 Sq. Ft	85 Sq. Ft	93.5 Sq. Ft	102 Sq. Ft	110.5 Sq. Ft	119 Sq. Ft	127.5 Sq. Ft	136 Sq. Ft	144.5 Sq. Ft	153 Sq. Ft	161.5 Sq. Ft	170 Sq. Ft	178.5 Sq. Ft	187 Sq. Ft	195.5 Sq. Ft	204 Sq. Ft	212.5 Sq. Ft	221 Sq. Ft	229.5 Sq. Ft	238 Sq. Ft	246.5 Sq. Ft	255 Sq. Ft	263.5 Sq. Ft	272 Sq. Ft
18 ft.	45 Sq. Ft	54 Sq. Ft	63 Sq. Ft	72 Sq. Ft	81 Sq. Ft	90 Sq. Ft	99 Sq. Ft	108 Sq. Ft	117 Sq. Ft	126 Sq. Ft	135 Sq. Ft	144 Sq. Ft	153 Sq. Ft	162 Sq. Ft	171 Sq. Ft	180 Sq. Ft	189 Sq. Ft	198 Sq. Ft	207 Sq. Ft	216 Sq. Ft	225 Sq. Ft	234 Sq. Ft	243 Sq. Ft	252 Sq. Ft	261 Sq. Ft	270 Sq. Ft	279 Sq. Ft	288 Sq. Ft
19 ft.	47.5 Sq. Ft	57 Sq. Ft	66.5 Sq. Ft	76 Sq. Ft	85.5 Sq. Ft	95 Sq. Ft	104.5 Sq. Ft	114 Sq. Ft	123.5 Sq. Ft	133 Sq. Ft	142.5 Sq. Ft	152 Sq. Ft	161.5 Sq. Ft	171 Sq. Ft	180.5 Sq. Ft	190 Sq. Ft	199.5 Sq. Ft	209 Sq. Ft	218.5 Sq. Ft	228 Sq. Ft	237.5 Sq. Ft	247 Sq. Ft	256.5 Sq. Ft	266 Sq. Ft	275.5 Sq. Ft	285 Sq. Ft	294.5 Sq. Ft	304 Sq. Ft
20 ft.	50 Sq. Ft	60 Sq. Ft	70 Sq. Ft	80 Sq. Ft	90 Sq. Ft	100 Sq. Ft	110 Sq. Ft	120 Sq. Ft	130 Sq. Ft	140 Sq. Ft	150 Sq. Ft	160 Sq. Ft	170 Sq. Ft	180 Sq. Ft	190 Sq. Ft	200 Sq. Ft	210 Sq. Ft	220 Sq. Ft	230 Sq. Ft	240 Sq. Ft	250 Sq. Ft	260 Sq. Ft	270 Sq. Ft	280 Sq. Ft	290 Sq. Ft	300 Sq. Ft	310 Sq. Ft	320 Sq. Ft
21 ft.	52.5 Sq. Ft	63 Sq. Ft	73.5 Sq. Ft	84 Sq. Ft	94.5 Sq. Ft	105 Sq. Ft	115.5 Sq. Ft	126 Sq. Ft	136.5 Sq. Ft	147 Sq. Ft	157.5 Sq. Ft	168 Sq. Ft	178.5 Sq. Ft	189 Sq. Ft	199.5 Sq. Ft	210 Sq. Ft	220.5 Sq. Ft	231 Sq. Ft	241.5 Sq. Ft	252 Sq. Ft	262.5 Sq. Ft	273 Sq. Ft	283.5 Sq. Ft	294 Sq. Ft	304.5 Sq. Ft	315 Sq. Ft	325.5 Sq. Ft	336 Sq. Ft

Type "A" (2 Posts)
1.2 CY Conc.
68 LBs Bar Steel

Type "B" (2 Posts)
1.6 CY Conc.
98 LBs Bar Steel

Type "C" (2 Posts)
1.8 CY Conc.
100 LBs Bar Steel

Type "D" (2 Posts)
1.8 CY Conc.
112 LBs Bar Steel

Type "C" (3 Posts)
2.7 CY Conc.
150 LBs Bar Steel

STEEL POST SIZE

"A" - W10" x 12"
"B" - W12" x 16"
"C" - W12" x 19"
"D" - W12 x 22"

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DETERMINATION OF HIGH STRENGTH STRUCTURAL STEEL SIGN SUPPORT TYPE

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/03/10 PLATE NO. A3-2.2

PROJECT NO: | SHEET NO: E

FILE NAME : C:\users\PROJECTS\tr_stdplate\A32.DGN PLOT DATE : 05-MAR-2010 10:10 PLOT BY : ditjph

VERTICAL DIMENSION ⇨

HORIZONTAL DIMENSION ⇩

Type "A" (2 Posts) 1.2 CY Conc. 68 LBs Bar Steel

⇩ \ ⇨	2.5 ft.	3 ft.	3.5 ft.	4 ft.	4.5 ft.	5 ft.	5.5 ft.	6 ft.	6.5 ft.	7 ft.	7.5 ft.	8 ft.	8.5 ft.	9 ft.	9.5 ft.	10 ft.	10.5 ft.	11 ft.	11.5 ft.	12 ft.	12.5 ft.	13 ft.	13.5 ft.	14 ft.	14.5 ft.	15 ft.	15.5 ft.	16 ft.
22 ft.	55 Sq. Ft	66 Sq. Ft	77 Sq. Ft	88 Sq. Ft	99 Sq. Ft	110 Sq. Ft	121 Sq. Ft	132 Sq. Ft	143 Sq. Ft	154 Sq. Ft	165 Sq. Ft	176 Sq. Ft	187 Sq. Ft	198 Sq. Ft	209 Sq. Ft	220 Sq. Ft	231 Sq. Ft	242 Sq. Ft	253 Sq. Ft	264 Sq. Ft	275 Sq. Ft	286 Sq. Ft	297 Sq. Ft	308 Sq. Ft	319 Sq. Ft	330 Sq. Ft	341 Sq. Ft	352 Sq. Ft
23 ft.	57.5 Sq. Ft	69 Sq. Ft	80.5 Sq. Ft	92 Sq. Ft	103.5 Sq. Ft	115 Sq. Ft	126.5 Sq. Ft	138 Sq. Ft	149.5 Sq. Ft	161 Sq. Ft	172.5 Sq. Ft	184 Sq. Ft	195.5 Sq. Ft	207 Sq. Ft	218.5 Sq. Ft	230 Sq. Ft	241.5 Sq. Ft	253 Sq. Ft	264.5 Sq. Ft	276 Sq. Ft	287.5 Sq. Ft	299 Sq. Ft	310.5 Sq. Ft	322 Sq. Ft	333.5 Sq. Ft	345 Sq. Ft	356.5 Sq. Ft	368 Sq. Ft
24 ft.	60 Sq. Ft	72 Sq. Ft	84 Sq. Ft	96 Sq. Ft	108 Sq. Ft	120 Sq. Ft	132 Sq. Ft	144 Sq. Ft	156 Sq. Ft	168 Sq. Ft	180 Sq. Ft	192 Sq. Ft	204 Sq. Ft	216 Sq. Ft	228 Sq. Ft	240 Sq. Ft	252 Sq. Ft	264 Sq. Ft	276 Sq. Ft	288 Sq. Ft	300 Sq. Ft	312 Sq. Ft	324 Sq. Ft	336 Sq. Ft	348 Sq. Ft	360 Sq. Ft	372 Sq. Ft	384 Sq. Ft
25 ft.	62.5 Sq. Ft	75 Sq. Ft	87.5 Sq. Ft	100 Sq. Ft	112.5 Sq. Ft	125 Sq. Ft	137.5 Sq. Ft	150 Sq. Ft	162.5 Sq. Ft	175 Sq. Ft	187.5 Sq. Ft	200 Sq. Ft	212.5 Sq. Ft	225 Sq. Ft	237.5 Sq. Ft	250 Sq. Ft	262.5 Sq. Ft	275 Sq. Ft	287.5 Sq. Ft	300 Sq. Ft	312.5 Sq. Ft	325 Sq. Ft	337.5 Sq. Ft	350 Sq. Ft	362.5 Sq. Ft	375 Sq. Ft	387.5 Sq. Ft	400 Sq. Ft
26 ft.	65 Sq. Ft	78 Sq. Ft	91 Sq. Ft	104 Sq. Ft	117 Sq. Ft	130 Sq. Ft	143 Sq. Ft	156 Sq. Ft	169 Sq. Ft	182 Sq. Ft	195 Sq. Ft	208 Sq. Ft	221 Sq. Ft	234 Sq. Ft	247 Sq. Ft	260 Sq. Ft	273 Sq. Ft	286 Sq. Ft	299 Sq. Ft	312 Sq. Ft	325 Sq. Ft	338 Sq. Ft	351 Sq. Ft	364 Sq. Ft	377 Sq. Ft	390 Sq. Ft	403 Sq. Ft	416 Sq. Ft
27 ft.	67.5 Sq. Ft	81 Sq. Ft	94.5 Sq. Ft	108 Sq. Ft	121.5 Sq. Ft	135 Sq. Ft	148.5 Sq. Ft	162 Sq. Ft	175.5 Sq. Ft	189 Sq. Ft	202.5 Sq. Ft	216 Sq. Ft	229.5 Sq. Ft	243 Sq. Ft	256.5 Sq. Ft	270 Sq. Ft	283.5 Sq. Ft	297 Sq. Ft	310.5 Sq. Ft	324 Sq. Ft	337.5 Sq. Ft	351 Sq. Ft	364.5 Sq. Ft	378 Sq. Ft	391.5 Sq. Ft	405 Sq. Ft	418.5 Sq. Ft	432 Sq. Ft
28 ft.	70 Sq. Ft	84 Sq. Ft	98 Sq. Ft	112 Sq. Ft	126 Sq. Ft	140 Sq. Ft	154 Sq. Ft	168 Sq. Ft	182 Sq. Ft	196 Sq. Ft	210 Sq. Ft	224 Sq. Ft	238 Sq. Ft	252 Sq. Ft	266 Sq. Ft	280 Sq. Ft	294 Sq. Ft	308 Sq. Ft	322 Sq. Ft	336 Sq. Ft	350 Sq. Ft	364 Sq. Ft	378 Sq. Ft	392 Sq. Ft	406 Sq. Ft	420 Sq. Ft	434 Sq. Ft	448 Sq. Ft
29 ft.	72.5 Sq. Ft	87 Sq. Ft	101.5 Sq. Ft	116 Sq. Ft	130.5 Sq. Ft	145 Sq. Ft	159.5 Sq. Ft	174 Sq. Ft	188.5 Sq. Ft	203 Sq. Ft	217.5 Sq. Ft	232 Sq. Ft	246.5 Sq. Ft	261 Sq. Ft	275.5 Sq. Ft	290 Sq. Ft	304.5 Sq. Ft	319 Sq. Ft	333.5 Sq. Ft	348 Sq. Ft	362.5 Sq. Ft	377 Sq. Ft	391.5 Sq. Ft	406 Sq. Ft	420.5 Sq. Ft	435 Sq. Ft	449.5 Sq. Ft	464 Sq. Ft
30 ft.	75 Sq. Ft	90 Sq. Ft	105 Sq. Ft	120 Sq. Ft	135 Sq. Ft	150 Sq. Ft	165 Sq. Ft	180 Sq. Ft	195 Sq. Ft	210 Sq. Ft	225 Sq. Ft	240 Sq. Ft	255 Sq. Ft	270 Sq. Ft	285 Sq. Ft	300 Sq. Ft	315 Sq. Ft	330 Sq. Ft	345 Sq. Ft	360 Sq. Ft	375 Sq. Ft	390 Sq. Ft	405 Sq. Ft	420 Sq. Ft	435 Sq. Ft	450 Sq. Ft	465 Sq. Ft	480 Sq. Ft
31 ft.	77.5 Sq. Ft	93 Sq. Ft	108.5 Sq. Ft	124 Sq. Ft	139.5 Sq. Ft	155 Sq. Ft	170.5 Sq. Ft	186 Sq. Ft	201.5 Sq. Ft	217 Sq. Ft	232.5 Sq. Ft	248 Sq. Ft	263.5 Sq. Ft	279 Sq. Ft	294.5 Sq. Ft	310 Sq. Ft	325.5 Sq. Ft	341 Sq. Ft	356.5 Sq. Ft	372 Sq. Ft	387.5 Sq. Ft	403 Sq. Ft	418.5 Sq. Ft	434 Sq. Ft	449.5 Sq. Ft	465 Sq. Ft	480.5 Sq. Ft	496 Sq. Ft
32 ft.	80 Sq. Ft	96 Sq. Ft	112 Sq. Ft	128 Sq. Ft	144 Sq. Ft	160 Sq. Ft	176 Sq. Ft	192 Sq. Ft	208 Sq. Ft	224 Sq. Ft	240 Sq. Ft	256 Sq. Ft	272 Sq. Ft	288 Sq. Ft	304 Sq. Ft	320 Sq. Ft	336 Sq. Ft	352 Sq. Ft	368 Sq. Ft	384 Sq. Ft	400 Sq. Ft	416 Sq. Ft	432 Sq. Ft	448 Sq. Ft	464 Sq. Ft	480 Sq. Ft	496 Sq. Ft	512 Sq. Ft
33 ft.	82.5 Sq. Ft	99 Sq. Ft	115.5 Sq. Ft	132 Sq. Ft	148.5 Sq. Ft	165 Sq. Ft	181.5 Sq. Ft	198 Sq. Ft	214.5 Sq. Ft	231 Sq. Ft	247.5 Sq. Ft	264 Sq. Ft	280.5 Sq. Ft	297 Sq. Ft	313.5 Sq. Ft	330 Sq. Ft	346.5 Sq. Ft	363 Sq. Ft	379.5 Sq. Ft	396 Sq. Ft	412.5 Sq. Ft	429 Sq. Ft	445.5 Sq. Ft	462 Sq. Ft	478.5 Sq. Ft	495 Sq. Ft	511.5 Sq. Ft	528 Sq. Ft
34 ft.	85 Sq. Ft	102 Sq. Ft	119 Sq. Ft	136 Sq. Ft	153 Sq. Ft	170 Sq. Ft	187 Sq. Ft	204 Sq. Ft	221 Sq. Ft	238 Sq. Ft	255 Sq. Ft	272 Sq. Ft	289 Sq. Ft	306 Sq. Ft	323 Sq. Ft	340 Sq. Ft	357 Sq. Ft	374 Sq. Ft	391 Sq. Ft	408 Sq. Ft	425 Sq. Ft	442 Sq. Ft	459 Sq. Ft	476 Sq. Ft	493 Sq. Ft	510 Sq. Ft	527 Sq. Ft	544 Sq. Ft
35 ft.	87.5 Sq. Ft	105 Sq. Ft	122.5 Sq. Ft	140 Sq. Ft	157.5 Sq. Ft	175 Sq. Ft	192.5 Sq. Ft	210 Sq. Ft	227.5 Sq. Ft	245 Sq. Ft	262.5 Sq. Ft	280 Sq. Ft	297.5 Sq. Ft	315 Sq. Ft	332.5 Sq. Ft	350 Sq. Ft	367.5 Sq. Ft	385 Sq. Ft	402.5 Sq. Ft	420 Sq. Ft	437.5 Sq. Ft	455 Sq. Ft	472.5 Sq. Ft	490 Sq. Ft	507.5 Sq. Ft	525 Sq. Ft	542.5 Sq. Ft	560 Sq. Ft
36 ft.	90 Sq. Ft	108 Sq. Ft	126 Sq. Ft	144 Sq. Ft	162 Sq. Ft	180 Sq. Ft	198 Sq. Ft	216 Sq. Ft	234 Sq. Ft	252 Sq. Ft	270 Sq. Ft	288 Sq. Ft	306 Sq. Ft	324 Sq. Ft	342 Sq. Ft	360 Sq. Ft	378 Sq. Ft	396 Sq. Ft	414 Sq. Ft	432 Sq. Ft	450 Sq. Ft	468 Sq. Ft	486 Sq. Ft	504 Sq. Ft	522 Sq. Ft	540 Sq. Ft	558 Sq. Ft	576 Sq. Ft

Type "B" (2 Posts)
1.6 CY Conc.
98 LBs Bar Steel

Type "C" (2 Posts)
1.8 CY Conc.
100 LBs Bar Steel

Type "D" (2 Posts)
1.8 CY Conc.
112 LBs Bar Steel

Type "C" (3 Posts)
2.7 CY Conc.
150 LBs Bar Steel

Type "D" (3 Posts)
2.7 CY Conc.
168 LBs Bar Steel

STEEL POST SIZE

"A" - W10" x 12"
"B" - W12" x 16"
"C" - W12" x 19"
"D" - W12 x 22"

DETERMINATION OF HIGH STRENGTH STRUCTURAL STEEL SIGN SUPPORT TYPE

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

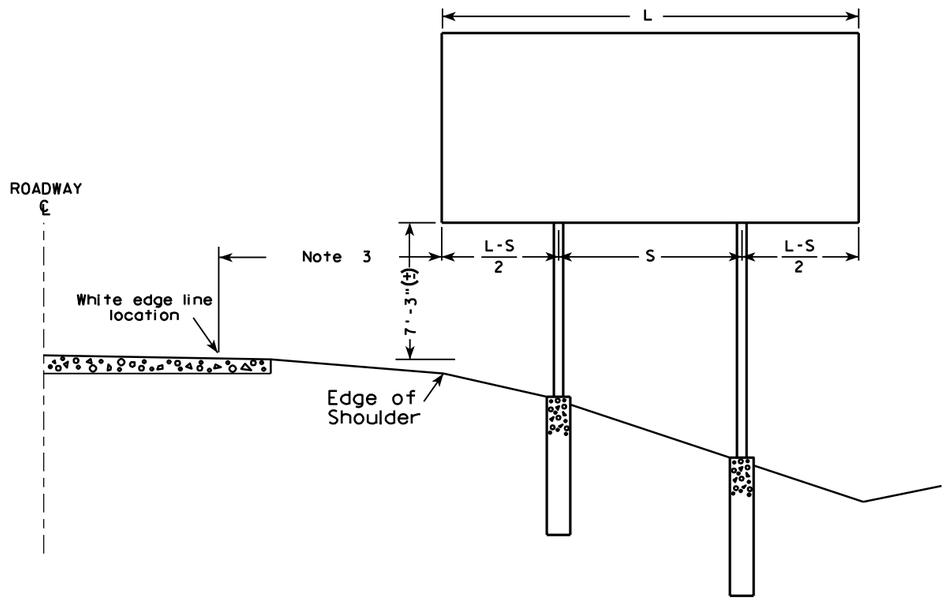
DATE 3/5/10 PLATE NO. A3-3.2

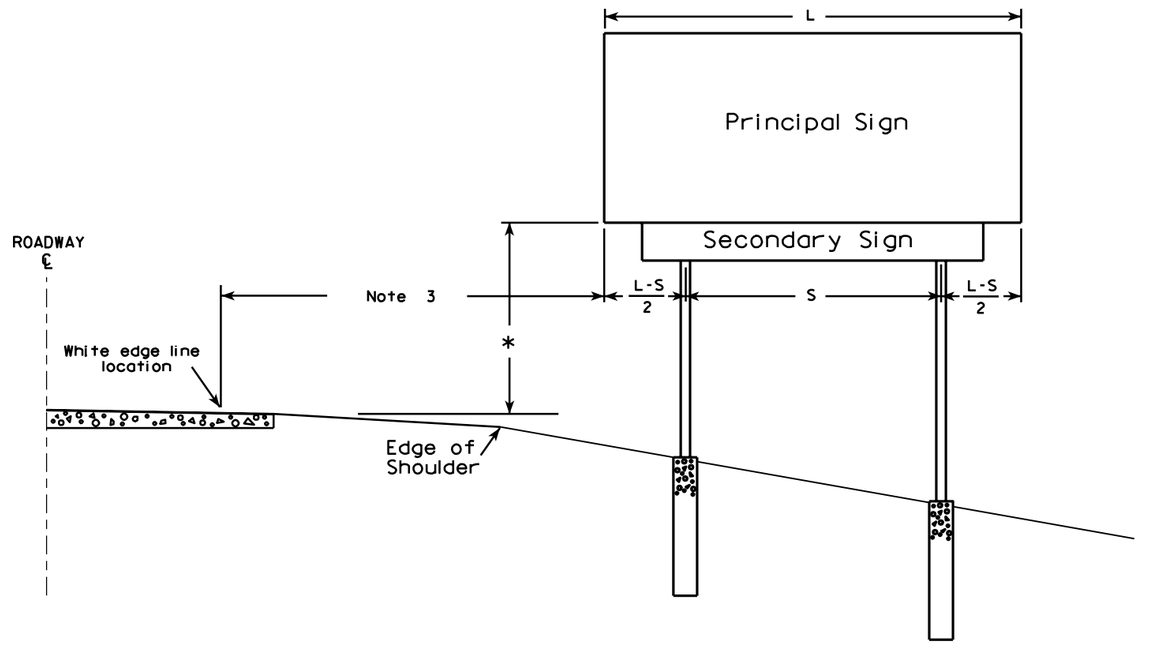
PROJECT NO: | SHEET NO: E

FILE NAME : C:\users\PROJECTS\tr_stdplate\A33.DGN PLOT DATE : 05-MAR-2010 10:07 PLOT BY : ditjph

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GENERAL NOTES

1. For a 2 post installation, S equals 3L/5, but shall not be less than 9 ft.
2. For a 3 post installation, S equals 5L/7, but shall not be less than 18 ft., and the space between any two posts shall not be less than 9 ft.
3. Unless noted in the plan, the sign offset distance shall be a minimum of 17'-6", desirable 30'-0".
4. The (±) tolerance shown on this sheet is 3 in.
5. The vertical sign height clearance detailed is measured from the bottom of the sign to the near edge of pavement.
6. Post lengths shown in the miscellaneous quantities are estimated lengths. The contractor shall verify post lengths at the time of final grading.
7. Refer to the Traffic Guidelines Manual for further guidance on minimum vertical clearance requirements.

* Clearance is 8'-3"(±) when the secondary sign is 3 ft. or less in height. For secondary signs larger than 3 ft., the clearance to the bottom of the secondary sign shall be 5'-3"(±).

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TYPICAL INSTALLATION
OF TYPE I SIGNS

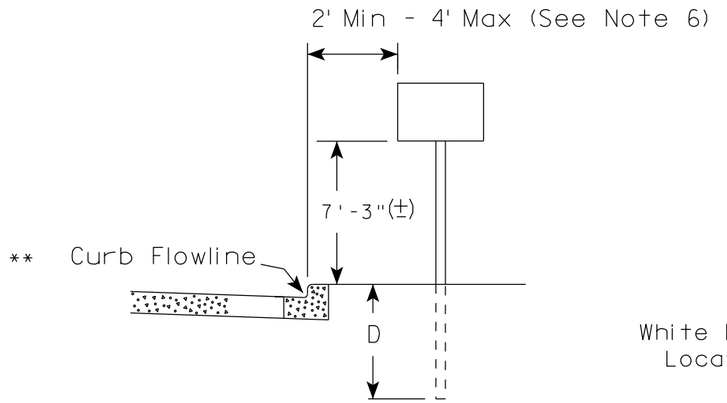
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

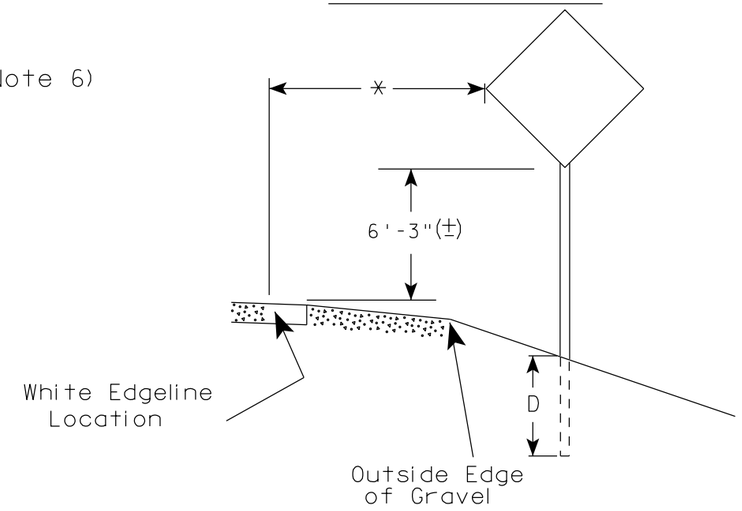
DATE 4/02/08 PLATE NO. A4-1.9

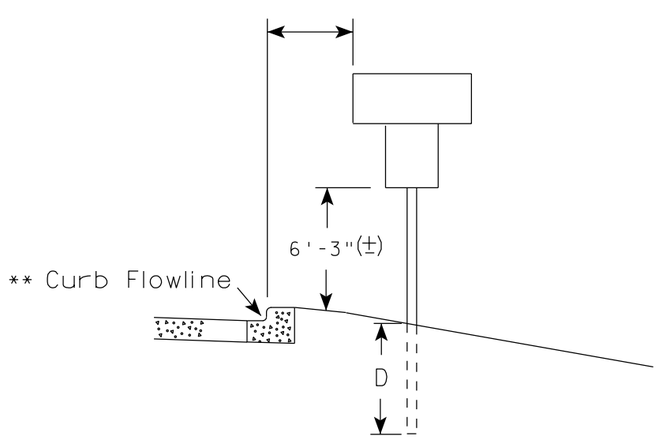
PROJECT NO:				SHEET NO: 257	E

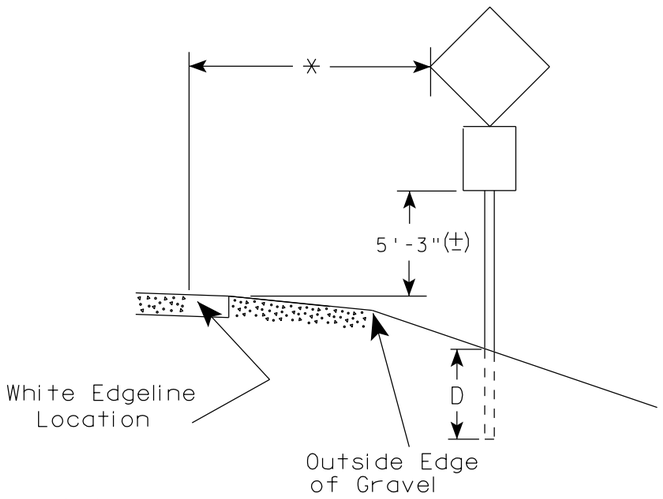
URBAN AREA



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

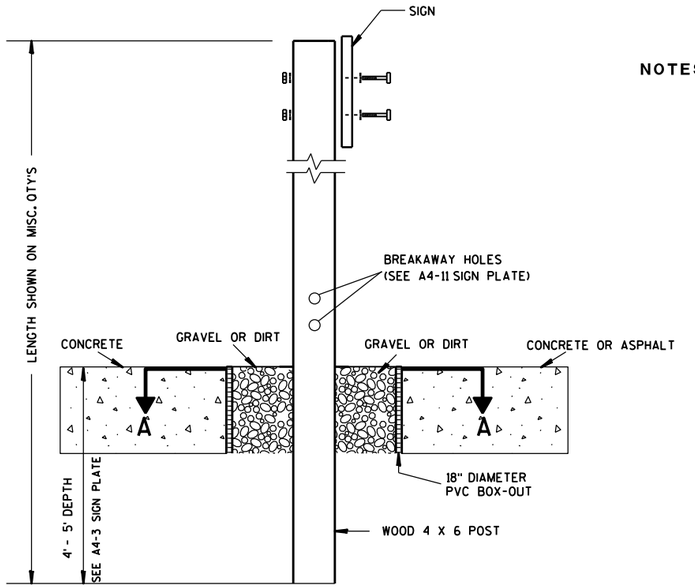
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

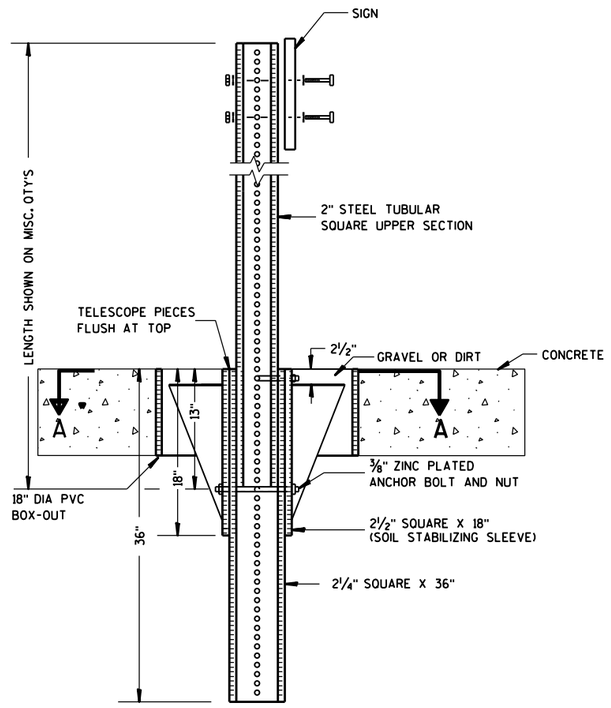
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



ELEVATION VIEW

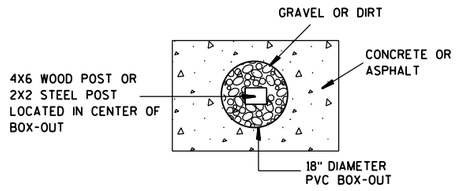
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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

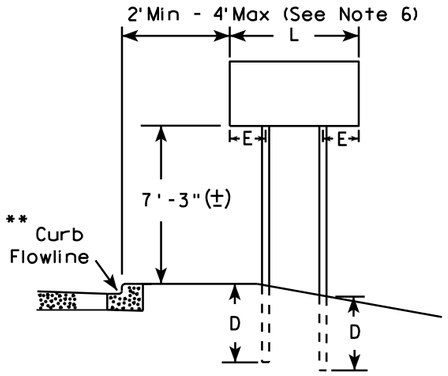
APPROVED Matthew R Rauch
for State Traffic Engineer

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

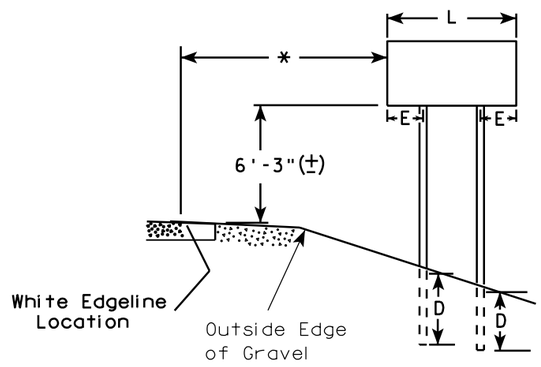
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

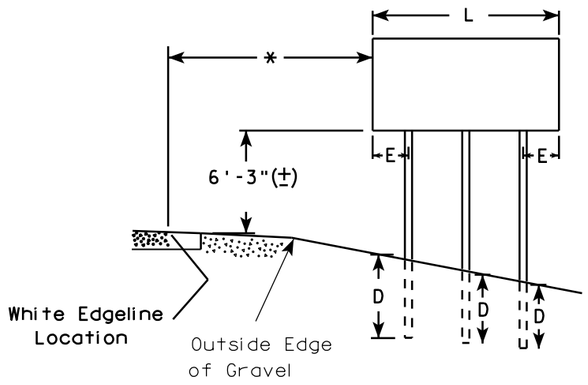
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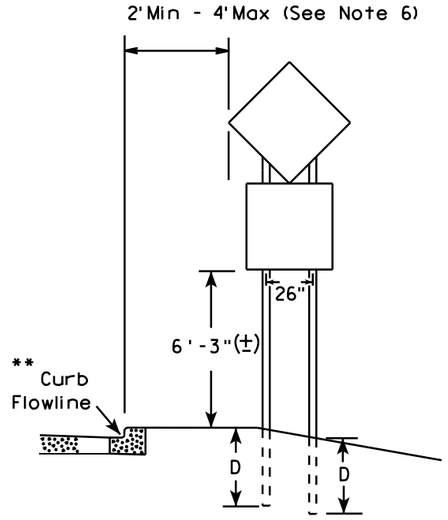
URBAN AREA



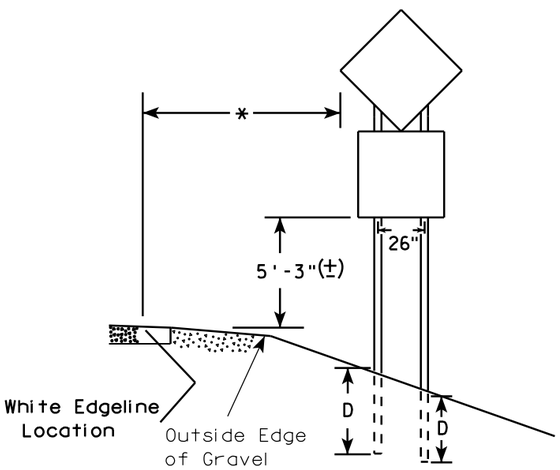
RURAL AREA (See Note 3)







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 signs 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 and 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

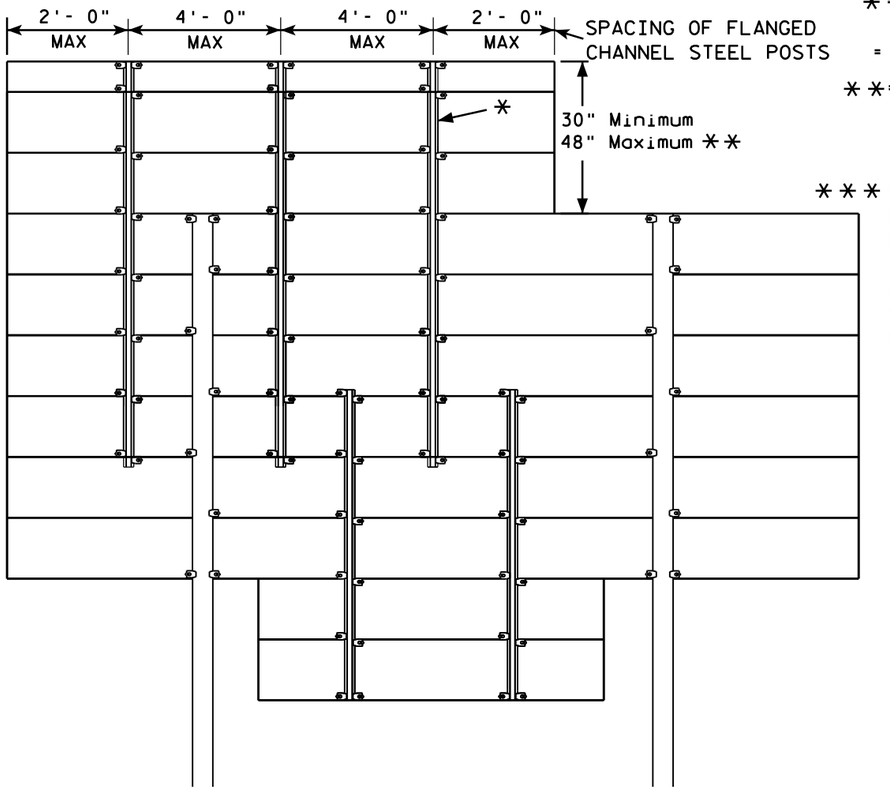
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/23/15 PLATE NO. A4-4 260 14

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

GROUND MOUNTED SIGN

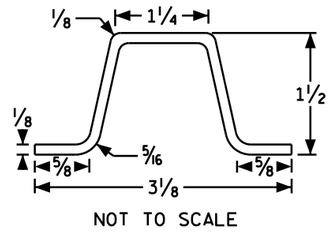


* =2.00 lb/ft FLANGED CHANNEL, MIN. YIELD STRENGTH = 60,000 PSI (GRADE 60) GALVANIZED

** =FOR 48" HEIGHT PANELS ON OVERHEAD STRUCTURES, ENTIRE SIGN SHALL BE CENTERED VERTICALLY ABOUT THE DEPTH OF THE TRUSS.

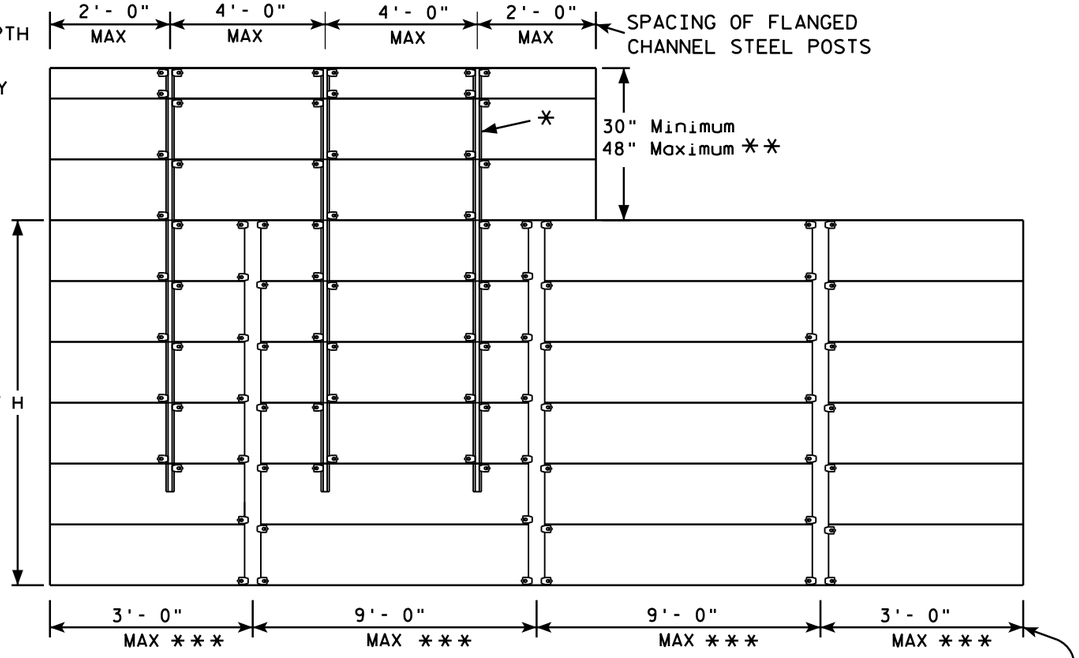
*** THESE SPACING DISTANCES SHALL ONLY BE USED WHEN THE MAIN SIGN HAS A MAXIMUM HEIGHT (DIMENSION H) OF 16 FT OR LESS. FOR SIGNS WITH A HEIGHT OF GREATER THAN 16 FT, STRUCTURAL CALCULATIONS SHALL BE PERFORMED.

FLANGE CHANNEL DETAIL



NOT TO SCALE

SIGN BRIDGE MOUNTED SIGN



GENERAL NOTES

1. Flanged channel steel posts shall conform to size and material above, and shall be considered as incidental to other items in the contract.
2. Number of Flanged channel steel supports varies with length of panel and shall be spaced as shown:

   PANEL LENGTH 8'-0" OR LESS = 2 CHANNELS
   PANEL LENGTH 9'- 0" - 12'- 0" = 3 CHANNELS
   PANEL LENGTH 13'- 0" OR MORE = 4 CHANNELS

   If the flanged channel steel posts can not be horizontally spaced as shown, they can be moved so as to securely hold the sign.
3. The EXIT NUMBER PANEL shall normally be positioned above the guide sign aligned with the right edge of the guide sign. If the guide sign indicates a left exit, the EXIT NUMBER PANEL shall be aligned with the left edge of the guide sign.
4. If the bolt holes in the top panel (EXIT NUMBER), or sub panel (NEXT EXIT) line up with holes in main sign panel, stitch bolts shall be used in addition to the channels.
5. Provide post clips for each sign as shown. (Please note the differences between a ground mounted versus Sign bridge mounted sign as far as number of clips required on the main supports or beams)
6. Structural steel sign supports shall extend to the top of the main signs, as shown on the above details.

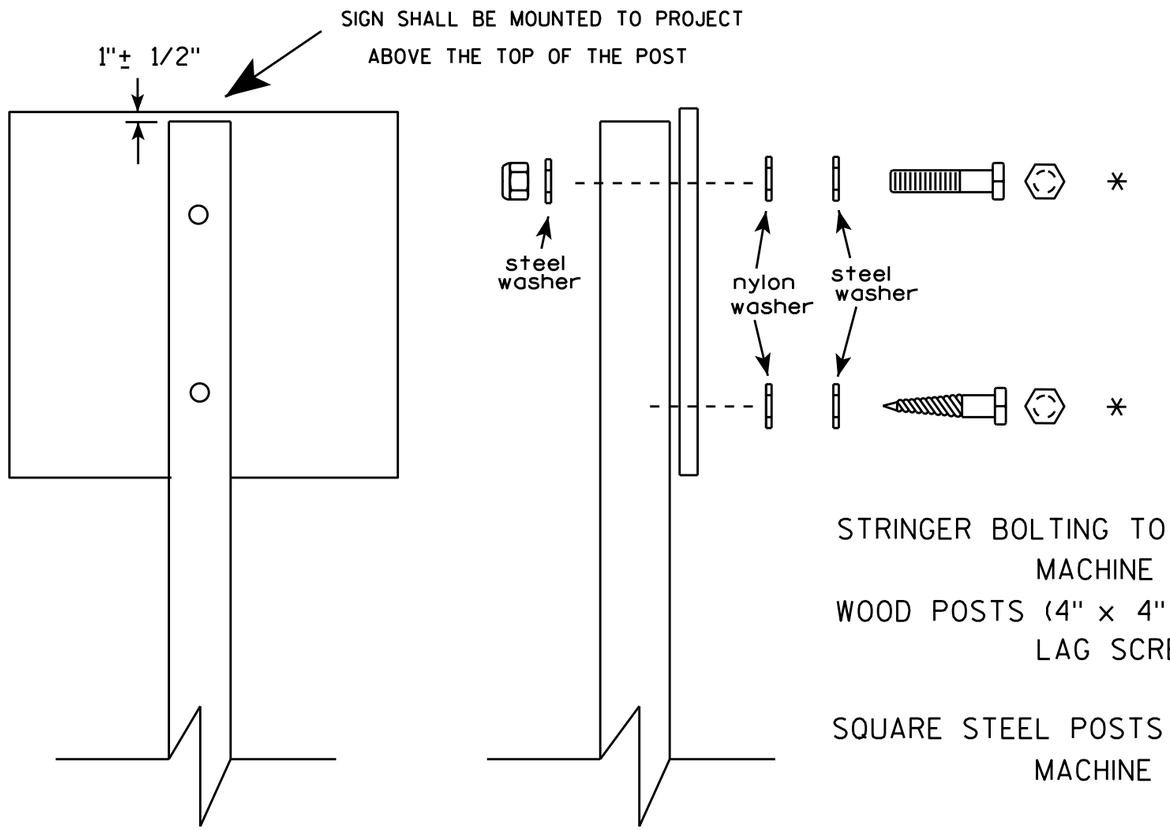
ATTACHMENT OF GUIDE SIGNS TO SUPPORTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/05/13 PLAT 261 A4-6.12

PROJECT NO: | 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.

STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)
MACHINE BOLTS - 5/16" X 1-3/4" Length w/ nuts
WOOD POSTS (4" x 4" or 4" x 6")
LAG SCREWS - 3/8" X 3" (NO STRINGERS ON BACK OF SIGN)
3/8" X 4" (STRINGERS ON BACK OF SIGN)
SQUARE STEEL POSTS (2" x 2")
MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)
3/8" X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)
RIVETS - 9/32 " (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL
O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH
WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON

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

ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

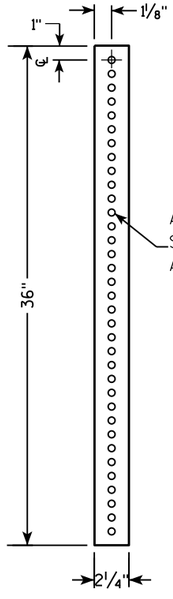
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/27/16 PLATE NO. A4-8.8

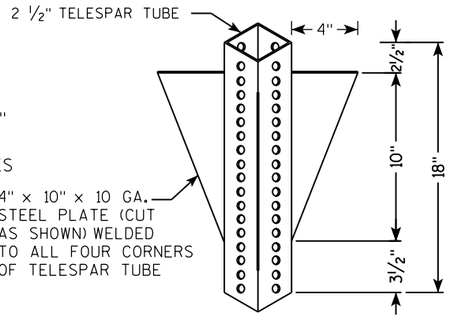
PROJECT NO: SHEET NO: E

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

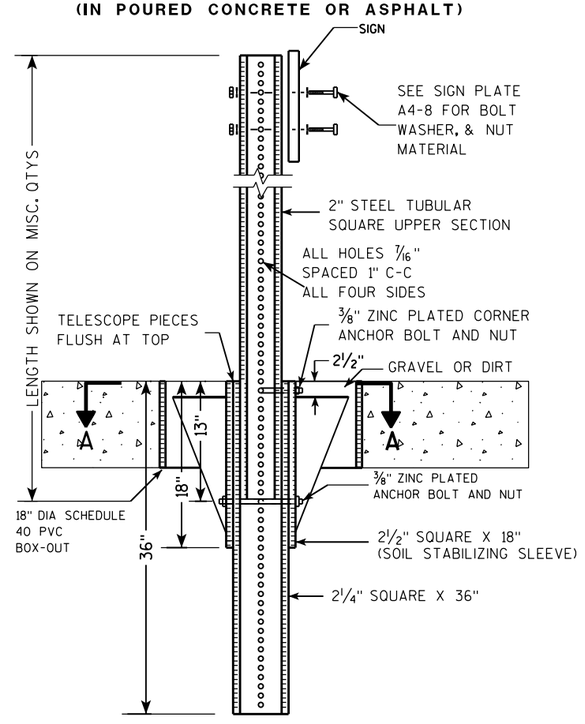
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



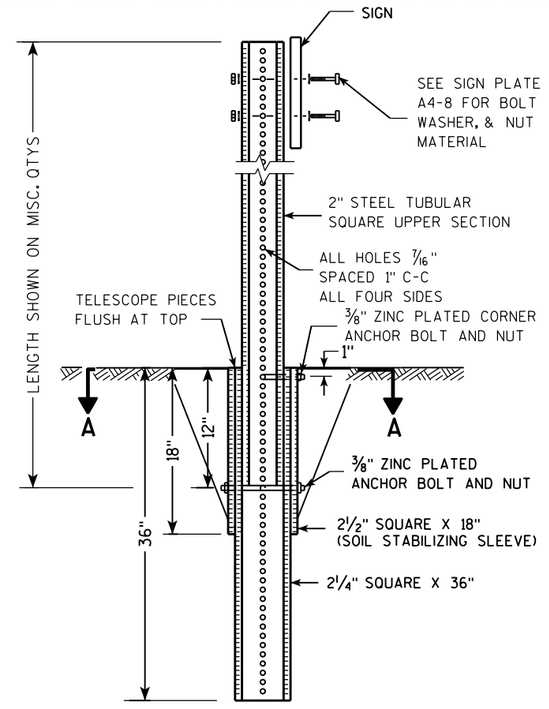
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

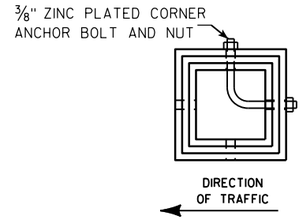


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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





SECTION A-A

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

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

TUBULAR STEEL
SIGN POST
A4-9

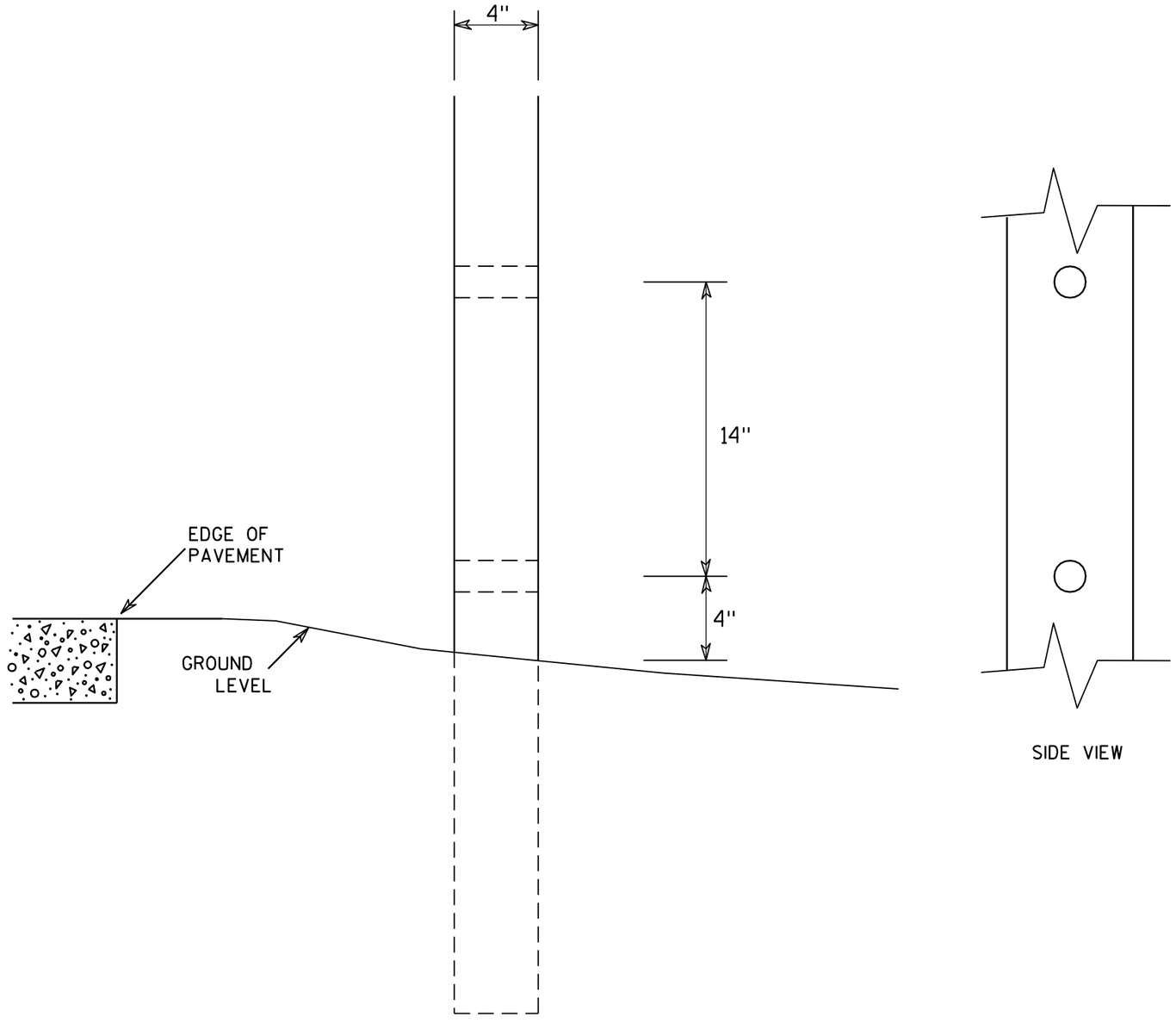
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE A4-9.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

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



SIDE VIEW

GENERAL NOTES

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

4 X 6 WOOD POST MODIFICATIONS

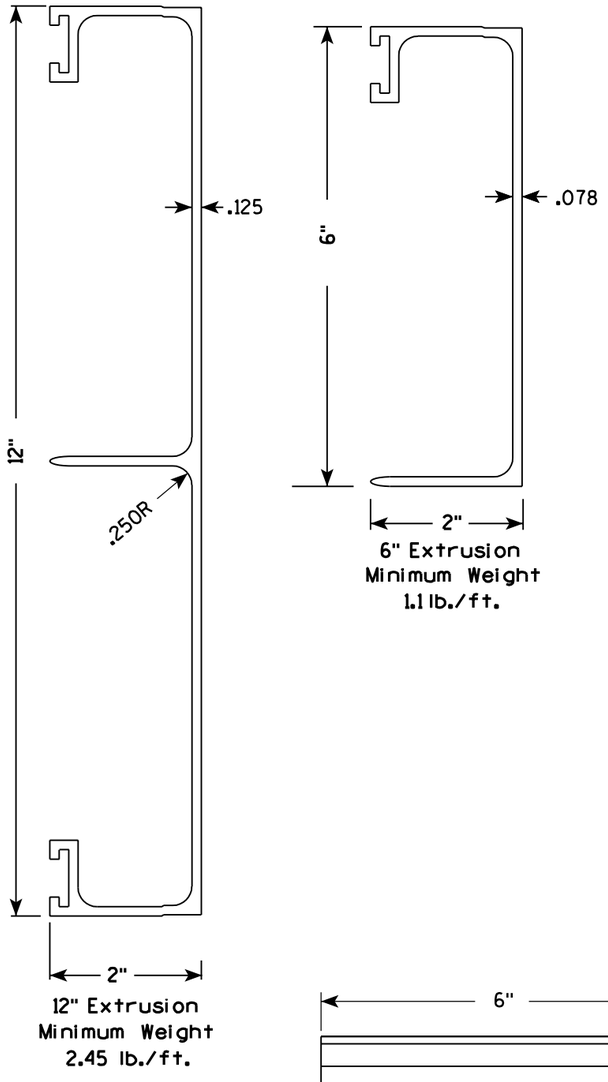
WISCONSIN DEPT OF TRANSPORTATION

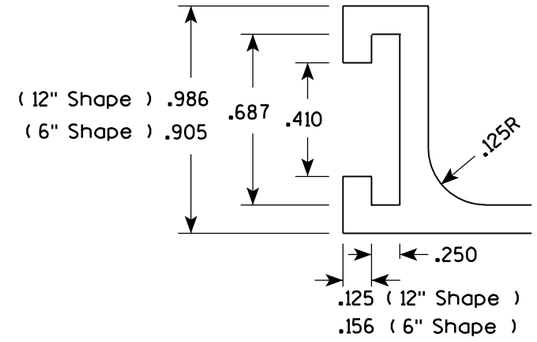
APPROVED Chester J Spang for State Traffic Engineer

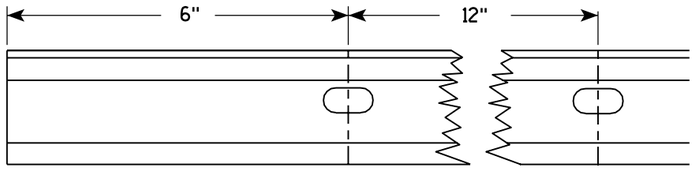
DATE 3/27/97 PLATE NO. A4-11.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 264	E

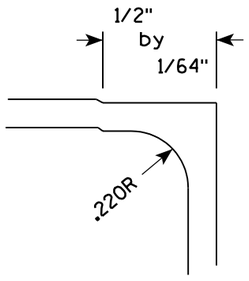
Extruded Shape







Punch 7/16" x 7/8" oval holes beginning 6" in from end of extrusion 12" CC on both edges of 6" and 12" panels.

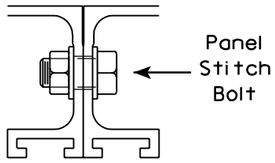


Hardware

STITCH BOLT, WASHER & NUT

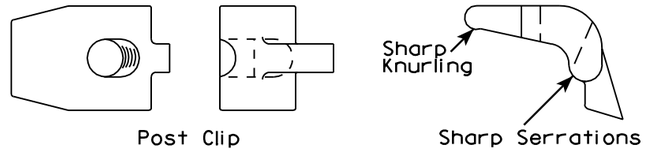
The hardware includes:

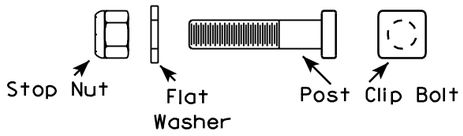
3/8 " - 16 X 3/4 " Economy Bolt 2024-T4 alloy
3/8 " - Stainless steel stop nut
3/8" X .064 Flat Washers, Alclad 2024-T4 alloy



POST CLIP, POST CLIP BOLT, WASHER & NUT

Post Clip shall be Alum. Alloy 356-T6
Post Clip Bolt shall be Stainless Steel.
Flat washer shall be 3/8" X .091, Stainless Steel.
Stop nut shall be stainless steel.





NOTES

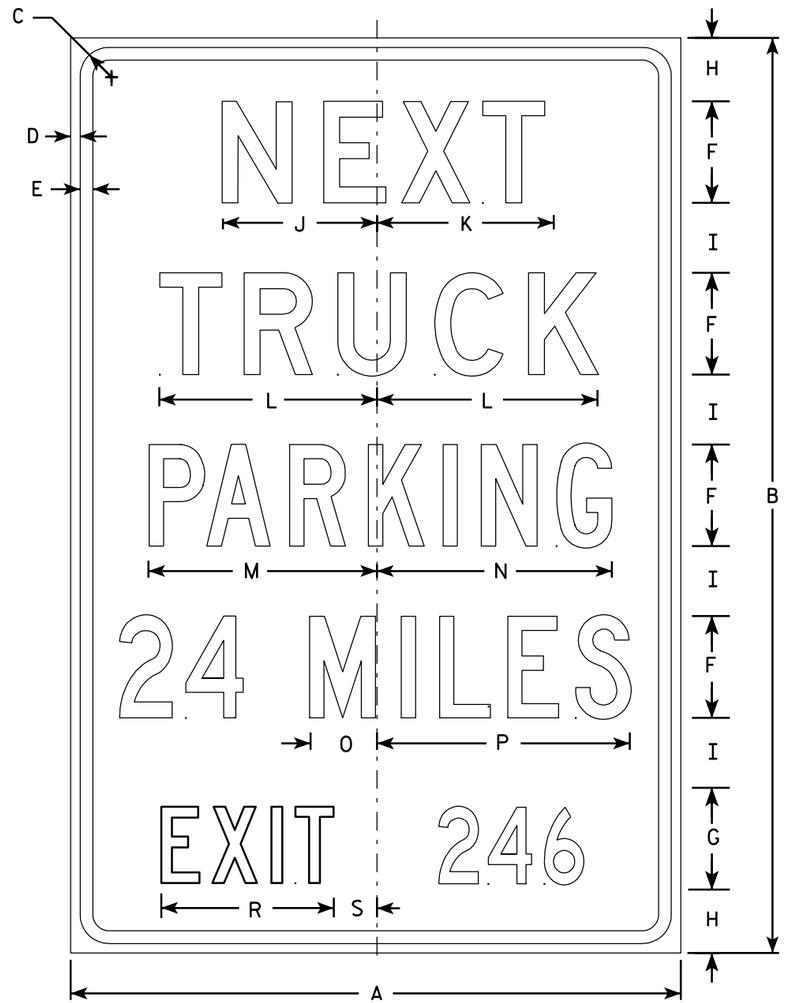
1. The contractor may select any brand of extrusion that conforms to the illustrations or meets with the approval of the engineer, but all extrusions used on this contract shall be of the same brand.
2. Panel Stitch Bolts shall be used to assemble adjacent panels. Maximum stitch bolt spacing shall be 24" C-C, and a minimum of 4 bolts shall be used to connect any two extrusions.
3. Post Clips shall be used to attach the sign panel to the sign support.

ALUMINUM EXTRUSIONS FOR TYPE I SIGNS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang
for State Traffic Engineer

DATE 11/18/99 PLATE NO. A5-2.9



D7-60

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Blue
   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. Lines 1 & 2 Series D, lines 3, 4, & 5 Series C
6. Line 4 - Apply proper Mileage Number(s) and optically adjust spacing to achieve proper balance
7. Line 5 - Apply proper Exit Numbers and Letters, optically adjust spacing to achieve proper balance

Metric equivalent for this sign is:

SIZE	
1	
2	600 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	24	36	1 1/8	3/8	1/2	4	3	2 1/2	2 3/4	6	6 1/2	8 1/2	9	9 1/4	2 5/8	10		6 3/4	1 3/4								6.0	.06
3																												
4																												
5																												

STANDARD SIGN
D7-60

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/8/07 PLATE NO. D7-60.3

PROJECT NO:

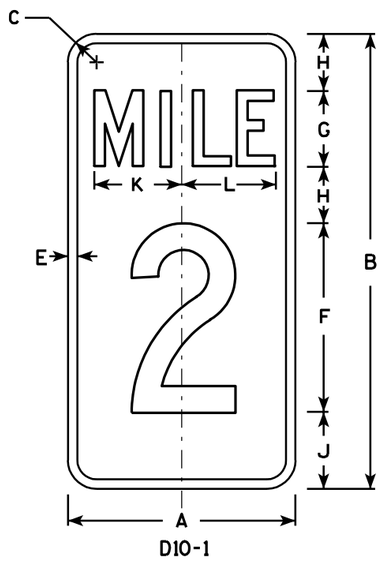
SHEET NO: 266 E

FILE NAME : C:\Users\Projects\tr_stdplate\D760.DGN PLOT DATE : 10-JAN-2007 13:58 PLOT BY : DOTSJA

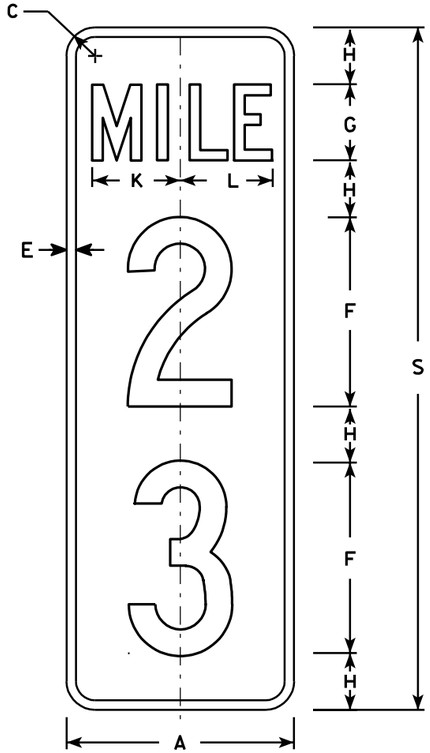
WISDOT/CADDS SHEET 42

7

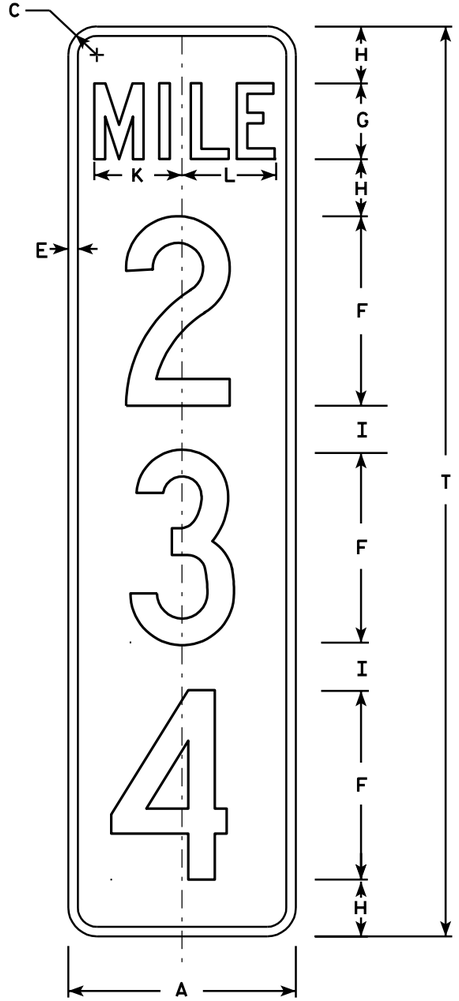
7



D10-1



D10-2



D10-3

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Green
   Message - White - Type H Reflective
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. Optically adjust numerals about the centerline of the sign to achieve proper balance.

Metric equivalent for this sign is:

PHY. SIZE	
12 X 24	300 mm X 600 mm
12 X 36	300 mm X 900 mm
12 X 48	300 mm X 1200 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
1																										
2																										
3																										
4	12	24	1 ½		½	10	4	3	2 ½	4	4 ⅝	4 ⅞							36	48						
5	12	24	1 ½		½	10	4	3	2 ½	4	4 ⅝	4 ⅞							36	48						

D10-1	D10-2	D10-3
Area sq. ft.	Area sq. ft.	Area sq. ft.
2.0	3.0	4.0
Area m2	Area m2	Area m2
.19	.28	.38

STANDARD SIGN
D10-1 , D10-2 & D10-3

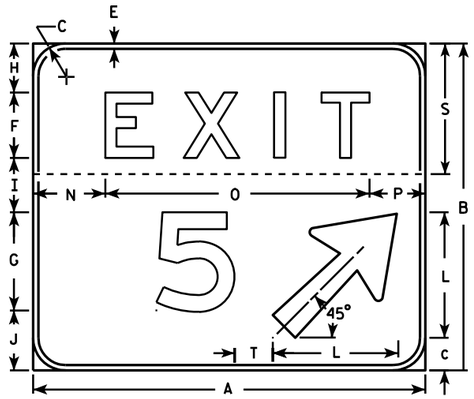
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang for Director, Office of Traffic

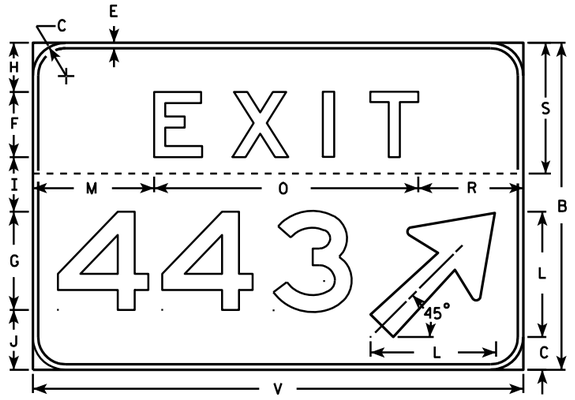
DATE 1/16/02 PLATE NO. D10-3.2

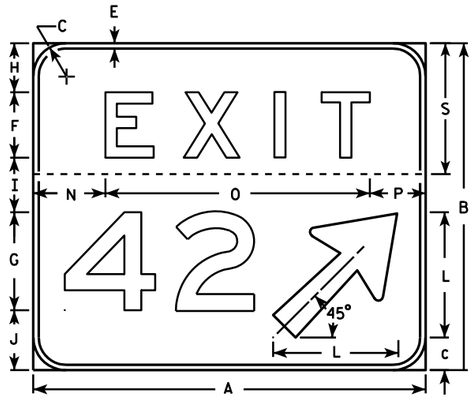
PROJECT NO:

SHEET NO: 267 E



NOTE: T diminision shall be measured from the back of the number to the front of the arrow





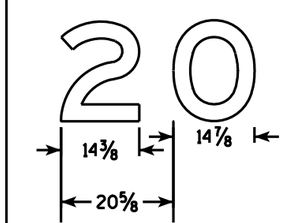
NOTES

1. Sign is Type II - Type H reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Green
   Message - White (Type H reflective)
3. Message Series - E
4. Corners may be square or rounded but the border shall be rounded as shown.
5. Base material for this sign shall be plywood and shall be split into two seperate pieces as shown on each detail by the dashed line (----------).
6. Arrow is Type "A" from sign plate A1-1.
7. Substitute appropriate message, space per the table and adjust placement on sign to achieve proper balance.
8. As per the Standard Spec's, these signs shall not have a vertical joint.

SPACING CHART FOR 18" NUMERALS

NUMBERS	WIDTH	0	1	2	3	4	5	6	7	8	9	A	B	C
0	14 7/8	21 5/8	21 5/8	21 1/4	20 3/8	21 1/4	21 1/4	21 5/8	19 7/8	22 1/8	21 5/8			
1	5 7/8	14	14	14	13 1/8	12 1/8	14	14	12 1/4	14	14			
2	14 3/8	20 5/8	21 1/8	20 5/8	19 3/4	20 1/4	20 5/8	20 5/8	18 7/8	21 1/8	20 5/8			
3	14 3/8	20 3/4	21 1/8	20 3/4	20 1/4	19 3/4	20 3/4	20 3/4	19 3/8	21 1/8	20 3/4			
4	16 5/8	22 7/8	22	22 1/2	21 5/8	21 5/8	22 7/8	22 7/8	20 5/8	23 3/8	22 7/8			
5	14 1/4	20 5/8	20 5/8	20 1/8	18 3/4	18 3/4	20 5/8	20 5/8	18 3/8	20 5/8	20 5/8			
6	14 1/2	21 1/4	20 3/4	20 3/4	19 7/8	19 1/2	20 3/8	20 3/4	19	20 3/4	20 3/8			
7	14 3/8	19 3/4	19 3/4	20 1/4	19 3/4	17	19 3/4	20 5/8	18 7/8	20 5/8	19 3/4			
8	14 1/4	21 1/2	21 1/2	20 5/8	19 1/4	19 3/4	20 5/8	21 1/2	19 5/8	21 1/2	20 5/8			
9	14 1/2	21 1/4	21 1/4	20 7/8	20	20 7/8	20 7/8	21 1/4	19 1/2	21 3/4	21 1/4			
A	18	19 3/4	19 3/4	20 1/4	19 3/4	17	19 3/4	20 5/8	18 7/8	20 5/8	19 3/4	21 5/8	23 7/8	23
B	14 1/4	21 1/2	21 1/2	20 5/8	19 1/4	19 3/4	20 5/8	21 1/2	19 5/8	21 1/2	20 5/8	19 1/2	22 3/8	21 1/2
C	14 1/4	21 1/4	21 1/4	20 7/8	20	20 7/8	20 7/8	21 1/4	19 1/2	21 3/4	21 1/4	18 3/8	21	19 3/4

EXAMPLE FOR USING SPACING CHART



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
2																										
3																										
4																										
5	72	60	6		1	12	18	9	10	11	8 7/8	23	22 1/4	13 1/4	48 1/2	10 1/4		19 1/4	24	7		90		96	7 1/2	

1-2 Digit Bid Area	3 Digit Bid Area
Sq. Ft.	
30	37.5

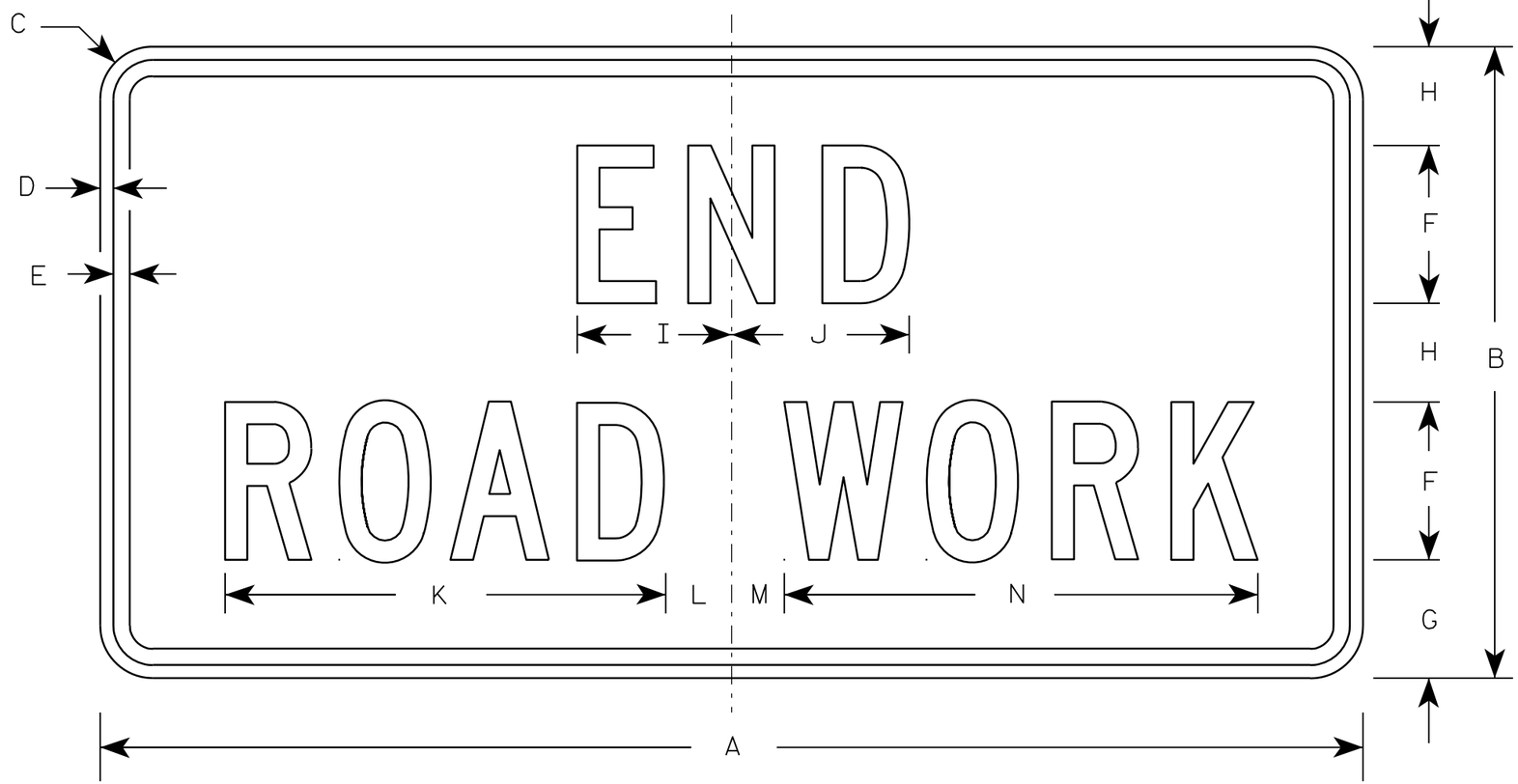
STANDARD SIGN E5-1A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 5/11/10 PLATE NO. E5-1A.12

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 268 | E



G20-2A

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.

Metric equivalent for this sign is:

SIZE	
1	900 mm X 450 mm
2	1200 mm X 600 mm
3	1200 mm X 600 mm
4	1200 mm X 600 mm
5	1200 mm X 600 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	36	18	1 1/8	3/8	1/2	4	3 3/4	2 1/2	4 1/8	4 1/8	11 1/8	2	1	12 1/8													4.5	0.41
2	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
3	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
4	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
5	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72

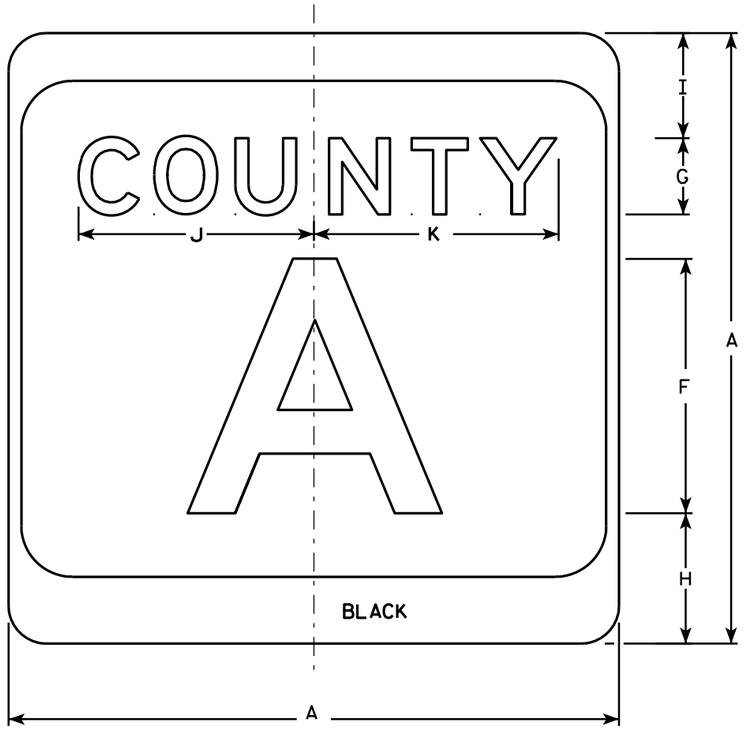
STANDARD SIGN
G20-2A

WISCONSIN DEPT OF TRANSPORTATION

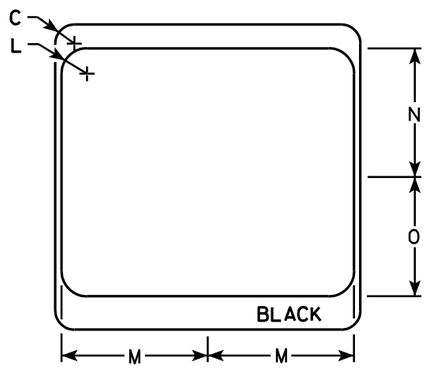
APPROVED Matthew R Rauch
for State Traffic Engineer

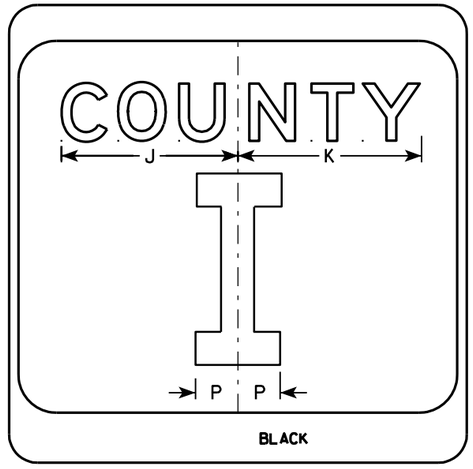
DATE 9/30/09 PLATE NO. G20-2A.8

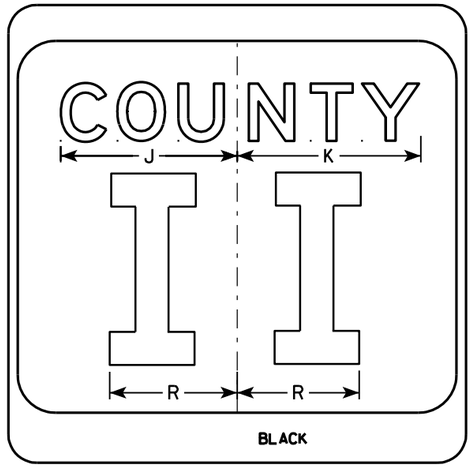
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 269	E



M1-5A







NOTES

1. Sign is Type II - see Note 7 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White & Black - See Note 7
   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. Message Series E for 1 letter.
   Message Series D for 2 letters unless message is too big then Series C.
   Message Series C for 3 letters unless message is too big then Series B.
6. Substitute appropriate letters & optically center to achieve proper balance.
7. Permanent Signs
   Background - Type H Reflective
   Detour or temporary Signs
   Background - Reflective

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		1 1/2			10	3	5 1/8	4 1/8	9 1/4	9 5/8	2	11 1/2	10 1/8	9 3/8	2 1/4		6 5/8									4.0
3	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
4	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
5	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0

CTH MARKER
M1-5A FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

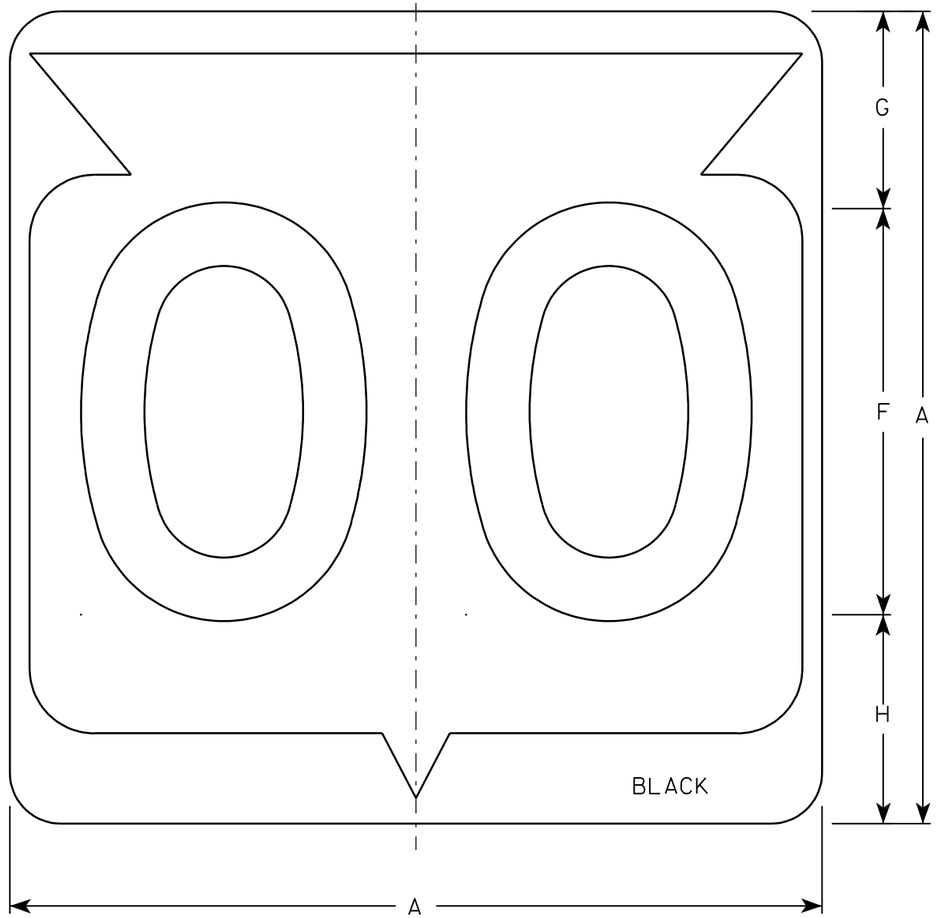
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/27/11 PLATE NO. M1-5A.8

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 270 | E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\M15A.DGN PLOT DATE : 29-SEP-2011 11:25 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 5.959043:1.000000

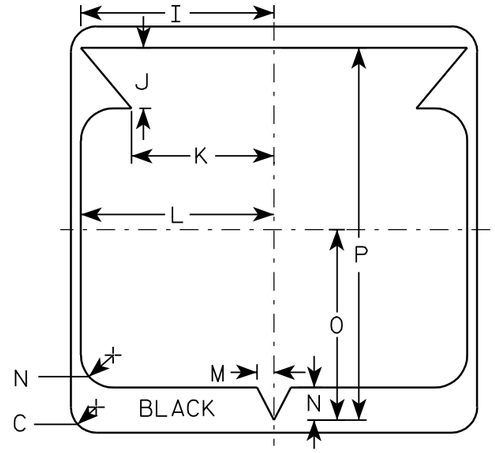
WISDOT/CADDS SHEET 42



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

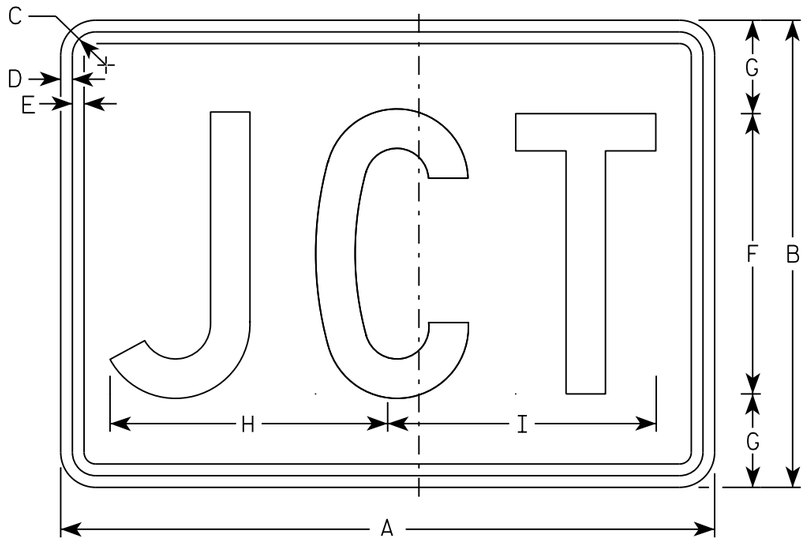
STATE ROUTE MARKER M1-6 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

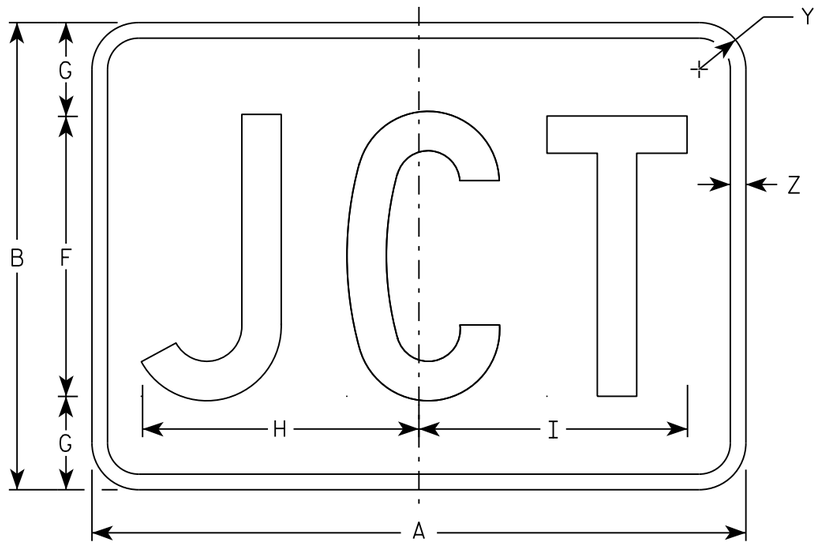
APPROVED Chester J Spang for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 271	E



M2-1
MM2-1
MP2-1



MB2-1
MK2-1
MN2-1
MR2-1

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
   MP2-1 Background - White
   Message - Blue
   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

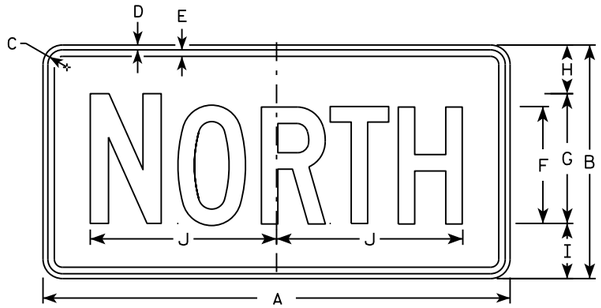
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

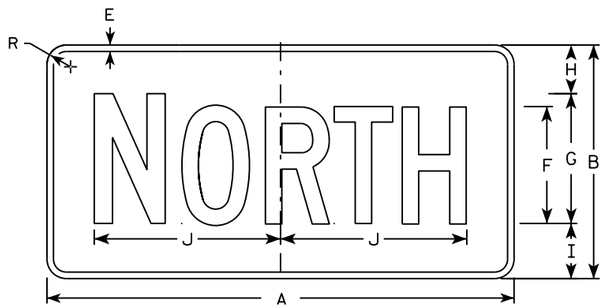
DATE 10/15/15 PLATE 272 12-1.12

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M21.DGN PLOT DATE : 01-DEC-2015 17:54 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 4.864603:1.000000



M3-1
MM3-1
MP3-1



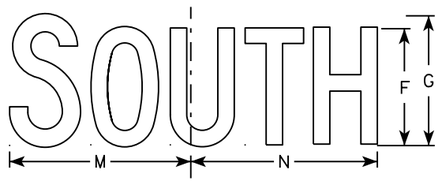
MB3-1
MK3-1
MN3-1



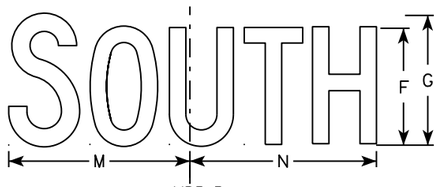
M3-2
MM3-2
MP3-2



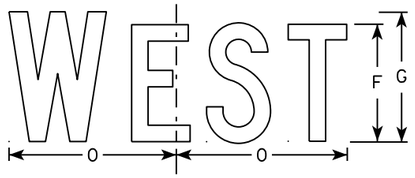
MB3-2
MK3-2
MN3-2



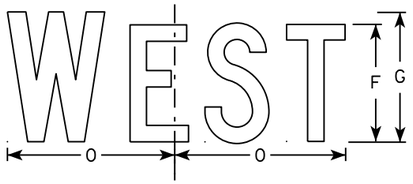
M3-3
MM3-3
MP3-3



MB3-3
MK3-3
MN3-3



M3-4
MM3-4
MP3-4



MB3-4
MK3-4
MN3-4

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
   MP3-1 thru MP3-4 Background - White
   Message - Blue
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

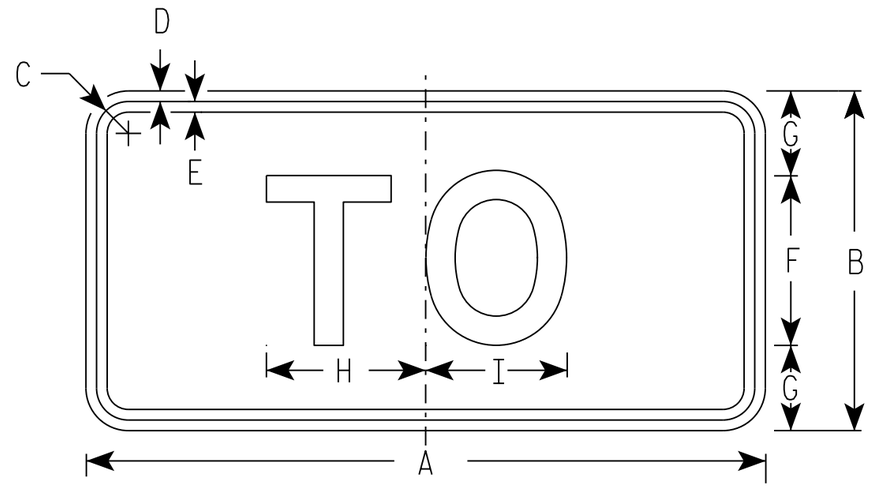
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew P Rauch for State Traffic Engineer

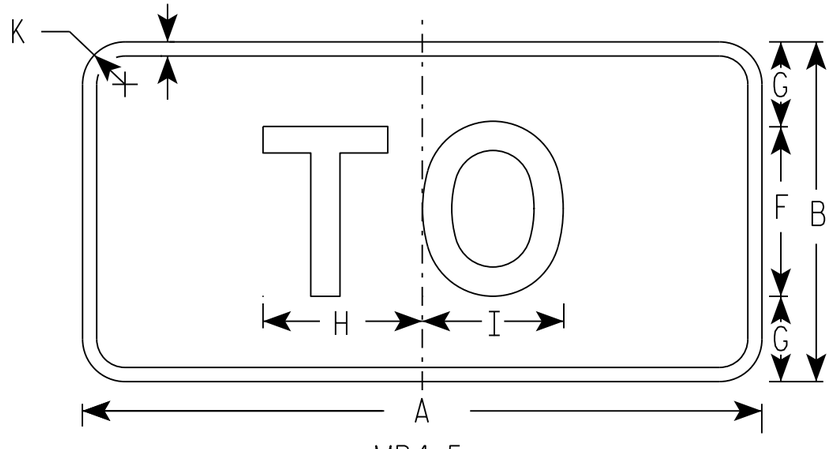
DATE 10/15/15 PLATE NO M3-1.14

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

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M31.DGN PLOT DATE : 01-DEC-2015 17:54 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 11.675051:1.000000



M4-5
MM4-5
MP4-5



MB4-5
MK4-5
MN4-5

NOTES

1. Sign is Type II - Type H
2. Color:
   Background - See note 5
   Message - See note 5
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. M4-5 Background - White
   Message - Black

   MB4-5 Background - Blue
   Message - White

   MK4-5 Background - Green
   Message - White

   MM4-5 Background - White
   Message - Green

   MN4-5 Background - Brown
   Message - White

   MP4-5 Background - White
   Message - Blue

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	3	5 3/8	5 1/4	1/2	1 1/2																2.00
3	36	18	1 3/8	3/8	1/2	9	4 1/2	8 1/4	8 3/8	1/2	1 1/2																4.5
4	36	18	1 3/8	3/8	1/2	9	4 1/2	8 1/4	8 3/8	1/2	1 1/2																4.5
5	36	18	1 3/8	3/8	1/2	9	4 1/2	8 1/4	8 3/8	1/2	1 1/2																4.5

STANDARD SIGN
M4-5

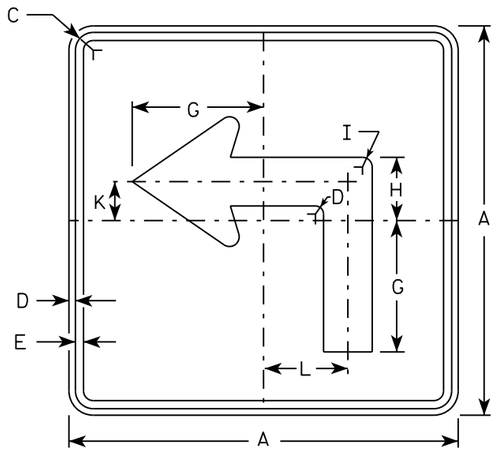
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

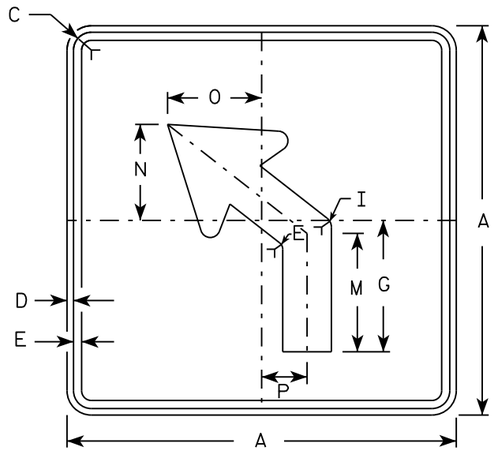
DATE 10/15/15 PLATE 274 M4-5.8

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

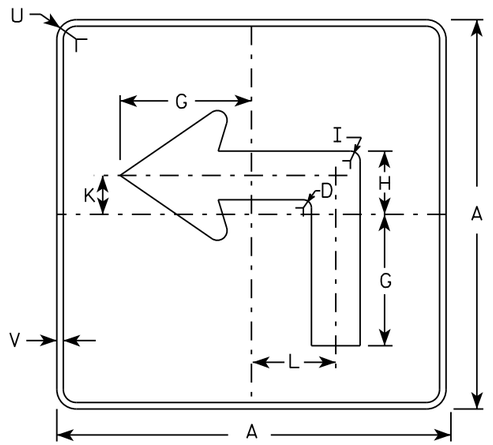
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M45.DGN PLOT DATE : 01-DEC-2015 17:55 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 5.351066:1.000000



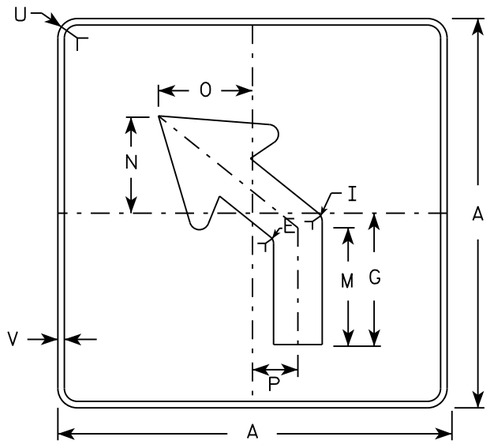
M5-1L
MM5-1L
MO5-1L
MP5-1L



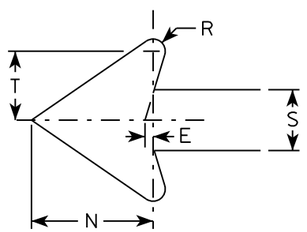
M5-2L
MM5-2L
MO5-2L
MP5-2L



MB5-1L
MK5-1L
MN5-1L
MR5-1L



MB5-2L
MK5-2L
MN5-2L
MR5-2L



NOTES

1. Signs are Type II - Type H reflective 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. M5-1 and M5-2 Background - White
   Message - Black
   MB5-1 and MB5-2 Background - Blue
   Message - White
   MK5-1 and MK5-2 Background - Green
   Message - White
   MM5-1 and MM5-2 Background - White
   Message - Green
   MN5-1 and MN5-2 Background - Brown
   Message - White
   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
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 7/8	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 7/8	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 7/8	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

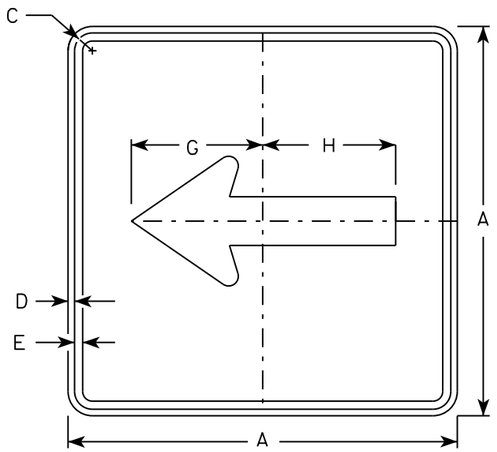
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

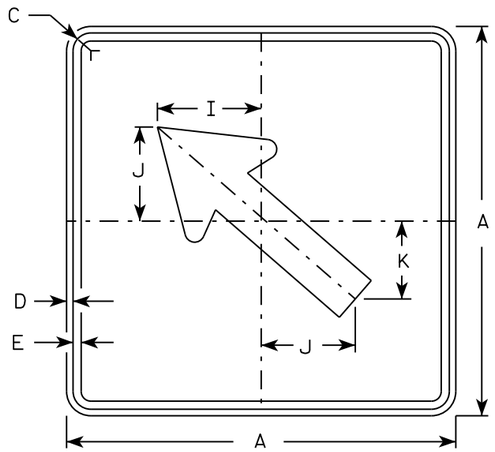
DATE 10/15/15 PLATE NO. M5-1.13

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

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M51.DGN PLOT DATE : 01-DEC-2015 18:07 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 11.675051:1.000000



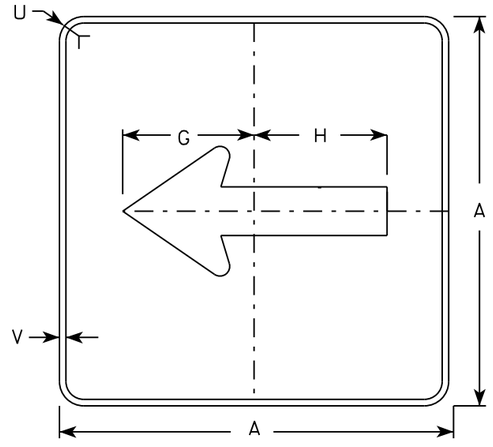
M6-1
MM6-1
MO6-1
MP6-1



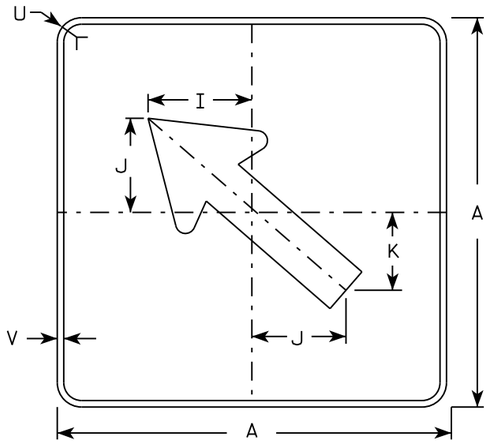
M6-2
MM6-2
MO6-2
MP6-2

NOTES

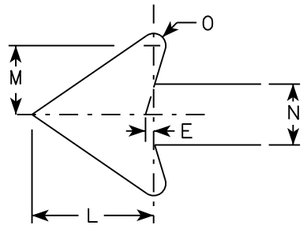
1. Signs are Type II - Type H except as Shown
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-1 and M6-2 Background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



MB6-2
MK6-2
MN6-2
MR6-2



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

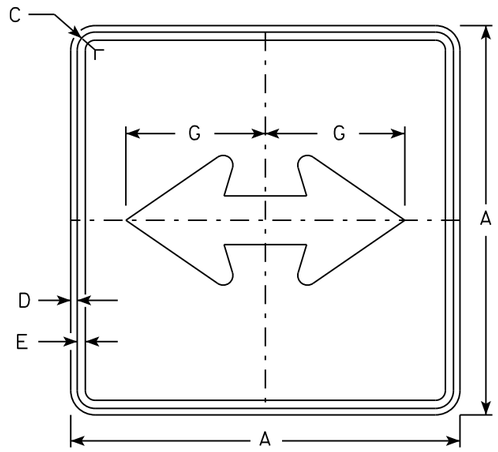
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

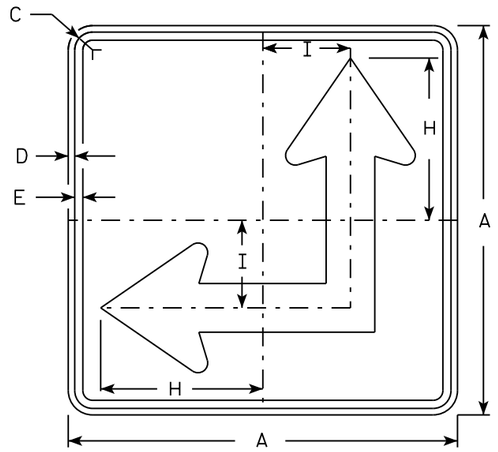
DATE 10/15/15 PLATE 276 M6-1.15

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M61.DGN PLOT DATE : 01-DEC-2015 17:57 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 11.675051:1.000000



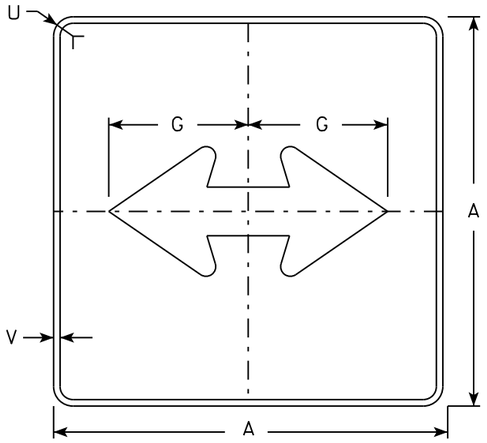
M6-4
MM6-4
MO6-4
MP6-4



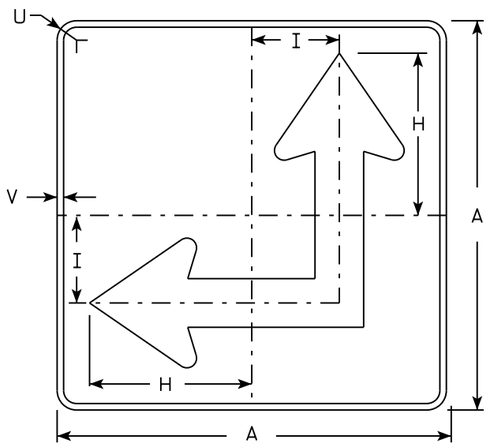
M6-6
MM6-6
MO6-6
MP6-6

NOTES

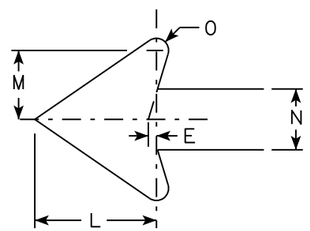
1. Signs are Type II - Type H except as Shown
2. Color:
   Background - See Note 4
   Message - See Note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-4 and M6-6 Background - White
   Message - Black
   MB6-4 and MB6-6 Background - Blue
   Message - White
   MK6-4 and MK6-6 Background - Green
   Message - White
   MM6-4 and MM6-6 Background - White
   Message - Green
   MN6-4 and MN6-6 Background - Brown
   Message - White
   MO6-4 and MO6-6 Background - Orange - Type F Reflective
   Message - Black
   MP6-4 and MP6-6 Background - White
   Message - Blue
   MR6-4 and MR6-6 Background - Brown
   Message - Yellow
5. M6-6R same as M6-6L except arrow points ahead and right.



MB6-4
MK6-4
MN6-4
MR6-4



MB6-6
MK6-6
MN6-6
MR6-6



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	8 3/4	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	12 1/2	6 3/4			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	12 1/2	6 3/4			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	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25

STANDARD SIGN
M6-4 & M6-6
SERIES

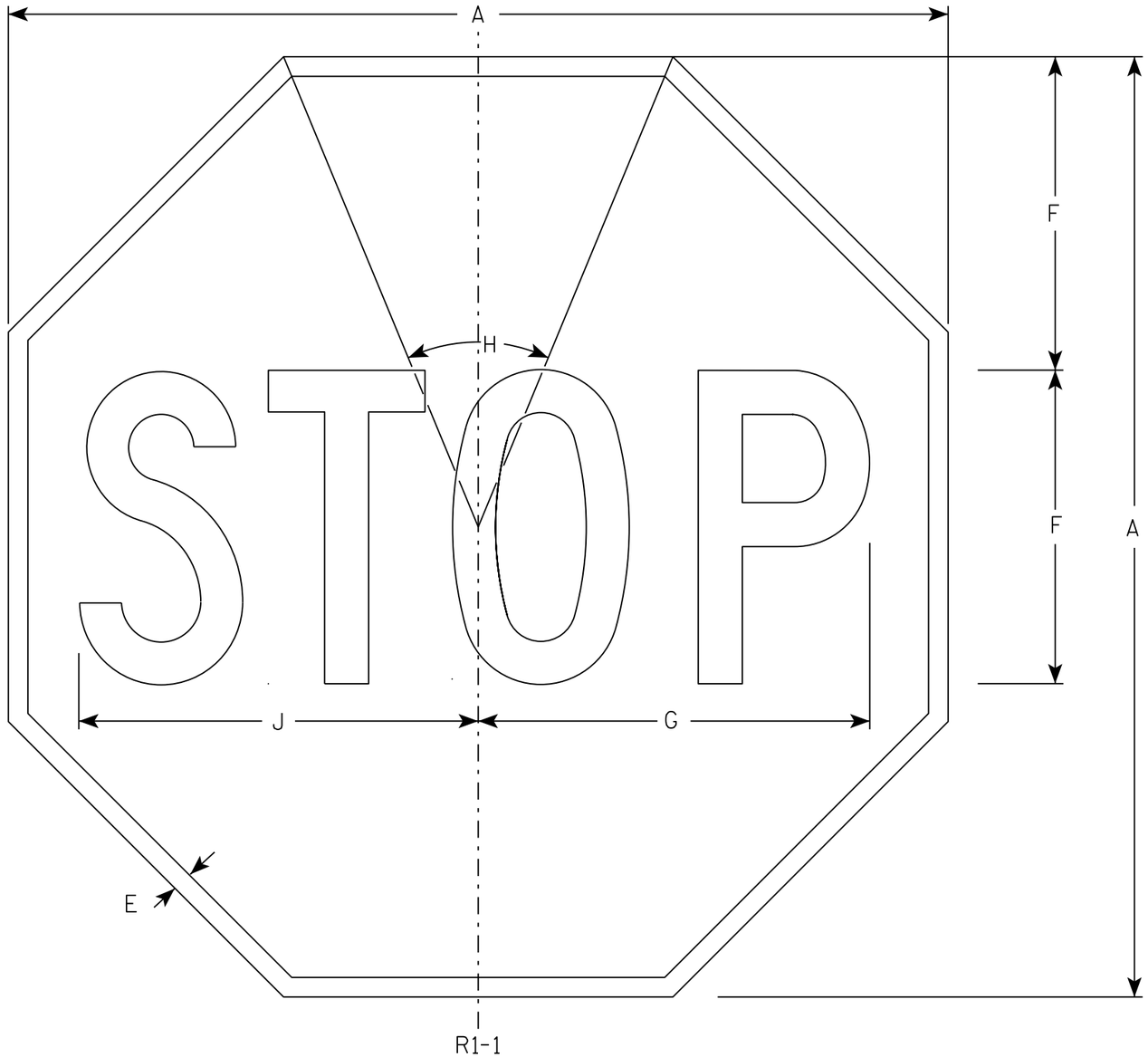
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/15/15 PLATI 277 M6-4.10

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

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M64.DGN PLOT DATE : 01-DEC-2015 17:58 PLOT BY : $$ platuser $$ PLOT NAME : PLOT SCALE : 11.675051:1.000000



NOTES

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

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

STANDARD SIGN
R1-1

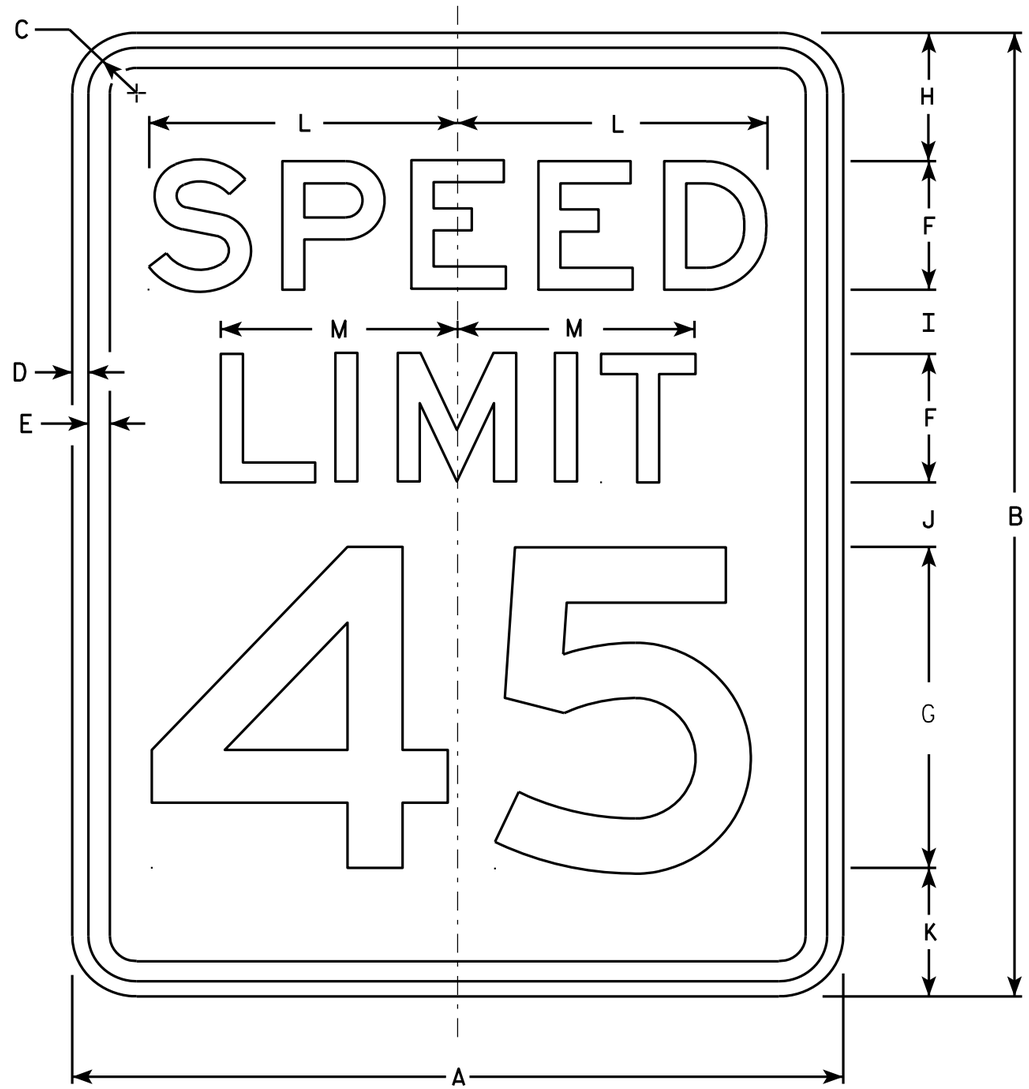
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/12/15 PLATE 278 R1-1.13

PROJECT NO:	HWY:	COUNTY:		SHEET NO: E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\R11.DGN PLOT DATE : 01-DEC-2015 18:07 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 4.378143:1.000000



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

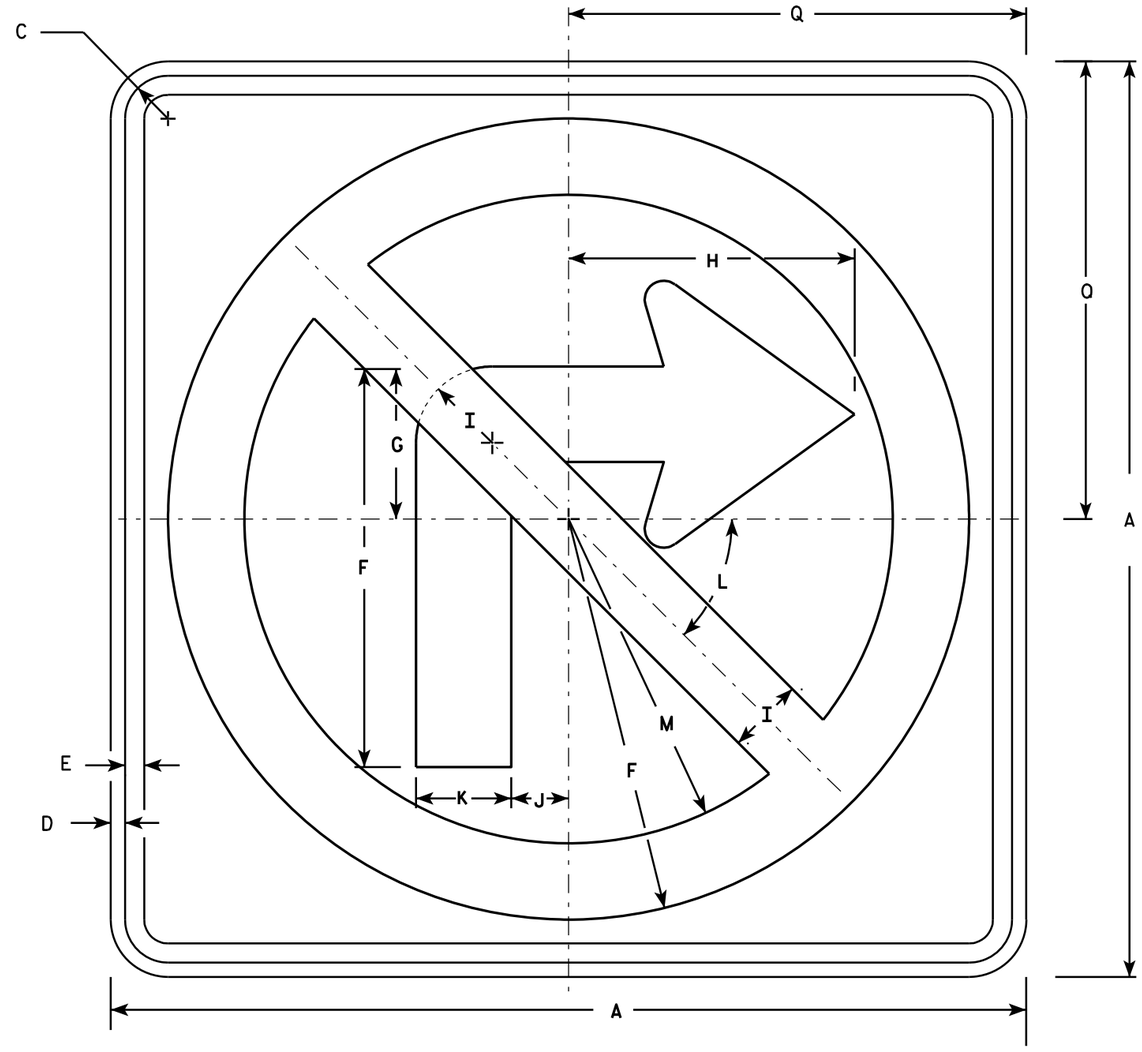
STANDARD SIGN
R2-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

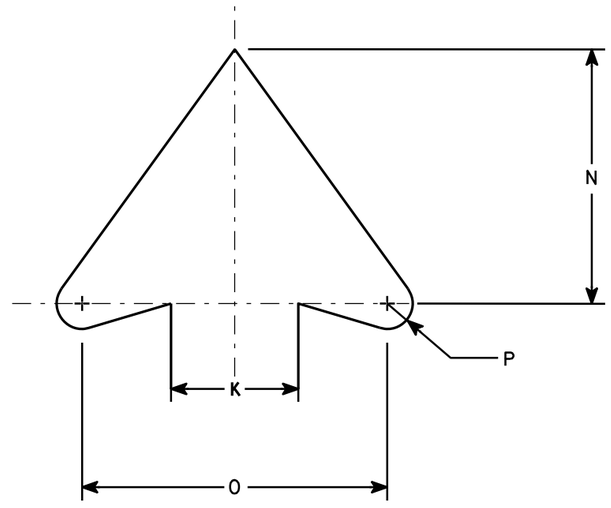
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 279 | E



R3-1

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 - 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. Border & Arrow are non reflective black, the circle with diagonal bar is reflective red.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45	8 1/2	5	6	1/2	12										4.0
2S	24		1 1/8	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45°	8 1/2	5	6	1/2	12										4.0
2M	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45	12 3/4	7 1/2	9	3/4	18										9.0
3	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45	12 3/4	7 1/2	9	3/4	18										9.0
4	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45°	12 3/4	7 1/2	9	3/4	18										9.0
5	48		2 1/4	3/4	1	21	8	15	4	3	5	45°	17	10	12	1	24										16.0

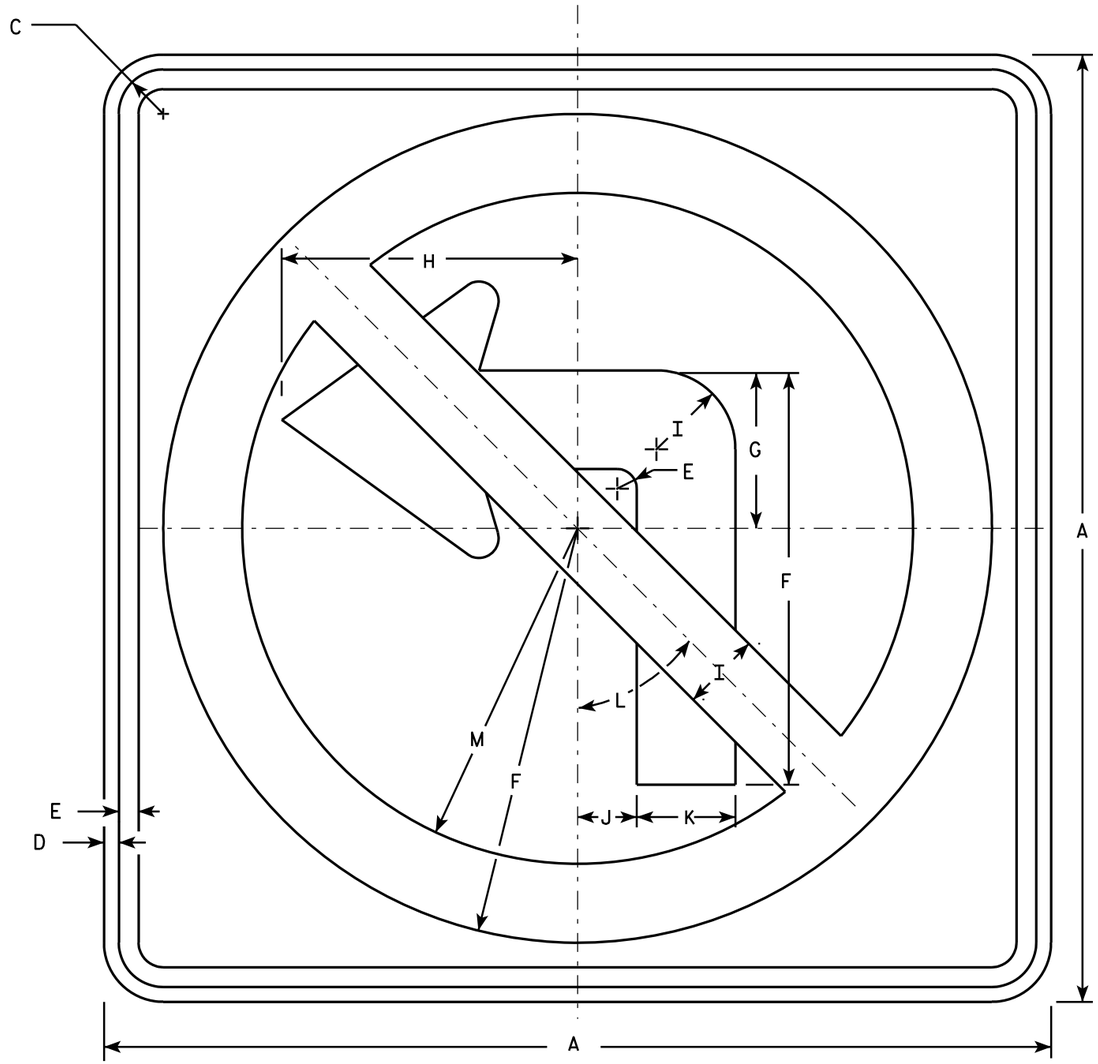
STANDARD SIGN
R3-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/08/10 PLATE NO. R3-1.5

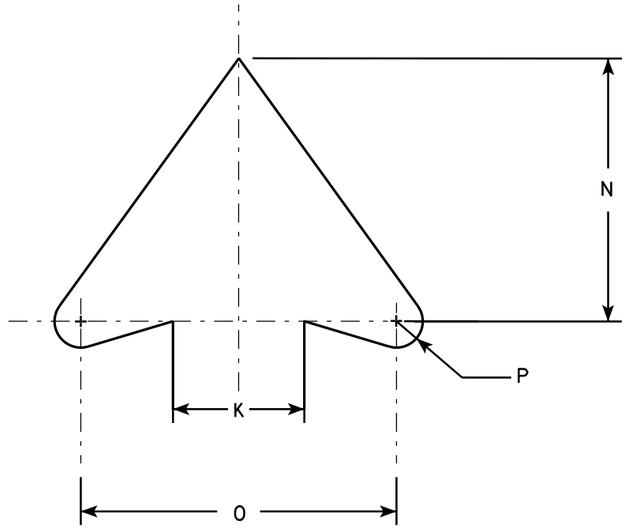
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 280	E



R3-2

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 - 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. Border & Arrow are non reflective black, the circle with diagonal bar is reflective red.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45°	8 1/2	5	6	1/2											4.0
2S	24		1 1/8	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45°	8 1/2	5	6	1/2											4.0
2M	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45°	12 3/4	7 1/2	9	3/4											9.0
3	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45°	12 3/4	7 1/2	9	3/4											9.0
4	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45°	12 3/4	7 1/2	9	3/4											9.0
5	48		2 1/4	3/4	1	21	8	15	4	3	5	45°	17	10	12	1											16.0

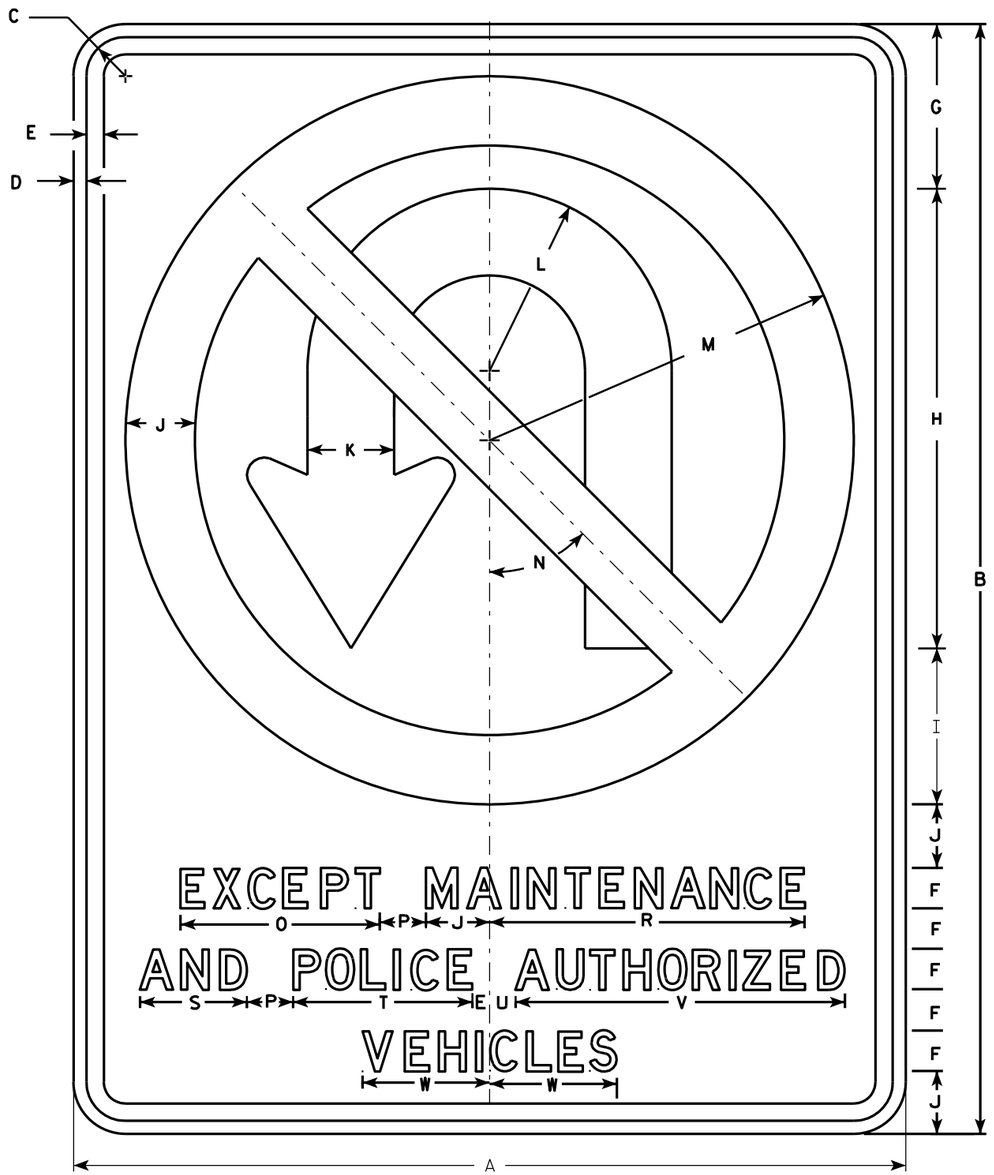
STANDARD SIGN
R3-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/08/10 PLATE NO. R3-2.10

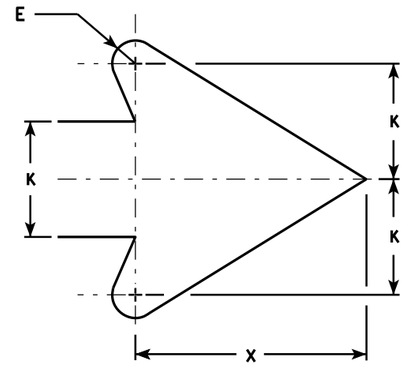
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 281	E



R3-4B

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 - 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. Border & Arrow are non reflective black, the circle with diagonal bar is reflective red.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S																											
2M																											
3																											
4	36	48	1 5/8	5/8	3/4	1 3/4	7 1/8	19 7/8	6 3/4	2 3/4	3 3/4	7 7/8	15 3/4	45°	8 5/8	2		13 5/8	4 5/8	7 3/4	1 1/8	14 1/4	5 1/2	7 5/8			12.0
5	36	48	1 5/8	5/8	3/4	1 3/4	7 1/8	19 7/8	6 3/4	2 3/4	3 3/4	7 7/8	15 3/4	45°	8 5/8	2		13 5/8	4 5/8	7 3/4	1 1/8	14 1/4	5 1/2	7 5/8			12.0

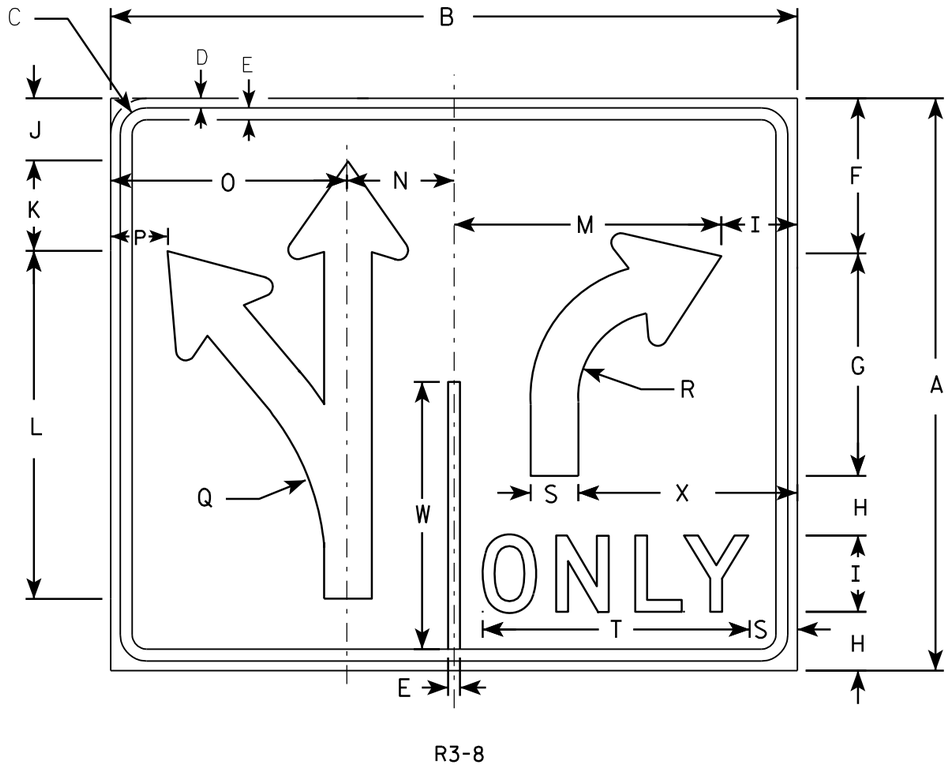
STANDARD SIGN
R3-4B

WISCONSIN DEPT OF TRANSPORTATION

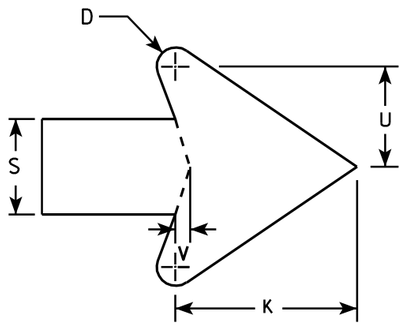
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/17/2011 PLATE NO. R3-4B.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 282	E



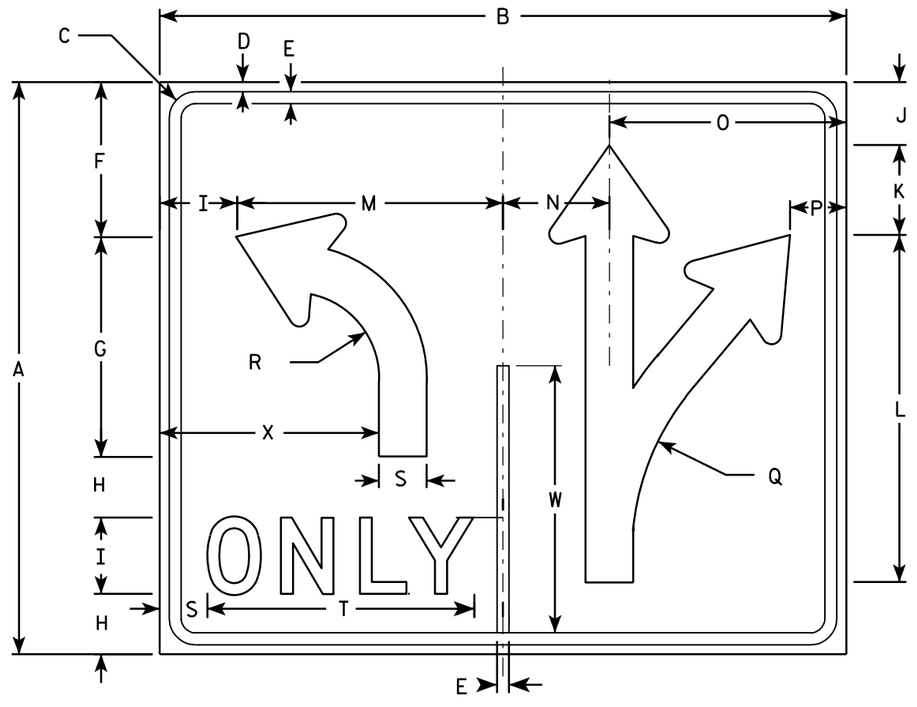
R3-8



ARROW DETAIL

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 - D
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.



R3-8A

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	30	36	1 3/8	1/2	5/8	8 1/8	11 5/8	3 1/8	4	3 1/4	4 3/4	18 1/4	14	5 5/8	12 3/8	3	13 1/4	4 1/2	2 1/2	14	2 5/8	3/8	14	11 1/2			7.5
2M	30	36	1 3/8	1/2	5/8	8 1/8	11 5/8	3 1/8	4	3 1/4	4 3/4	18 1/4	14	5 5/8	12 3/8	3	13 1/4	4 1/2	2 1/2	14	2 5/8	3/8	14	11 1/2			7.5
3																											
4	48	54	2 1/4	3/4	1	13 1/4	18 1/2	5 1/8	6	5 1/4	7 1/8	29 1/8	21	8 3/8	18 5/8	4 3/8	21 7/8	7 1/4	3 3/4	20 5/8	4	5/8	22 3/8	17 1/4			18.0
5	48	54	2 1/4	3/4	1	13 1/4	18 1/2	5 1/8	6	5 1/4	7 1/8	29 1/8	21	8 3/8	18 5/8	4 3/8	21 7/8	7 1/4	3 3/4	20 5/8	4	5/8	22 3/8	17 1/4			18.0

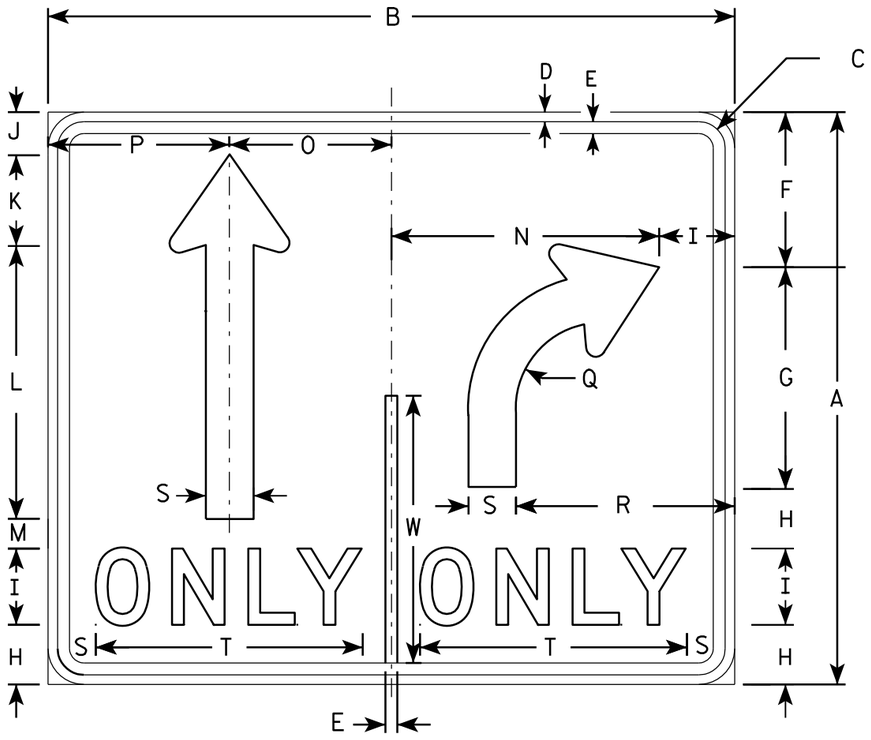
STANDARD SIGN
R3-8 & R3-8A

WISCONSIN DEPT OF TRANSPORTATION

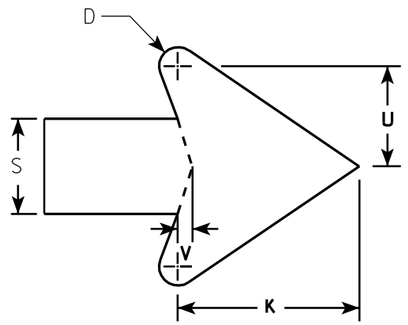
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/2011 PLATE NO. R3-8.5

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 283	E



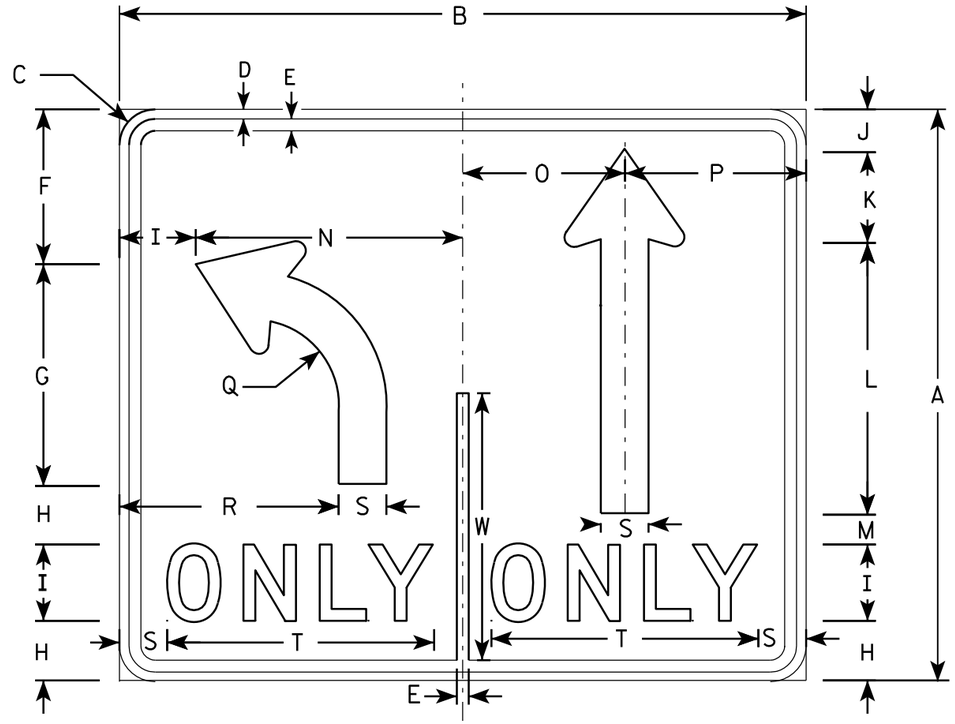
R3-8D



ARROW DETAIL

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 - D
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.



R3-8E

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	36	1 3/8	1/2	5/8	8 1/8	11 5/8	3 1/8	4	2 1/4	4 3/4	14 1/4	1 5/8	14	8 1/2	9 1/2	4 1/2	11 1/2	2 1/2	14	2 5/8	3/8	14				7.5
2M	30	36	1 3/8	1/2	5/8	8 1/8	11 5/8	3 1/8	4	2 1/4	4 3/4	14 1/4	1 5/8	14	8 1/2	9 1/2	4 1/2	11 1/2	2 1/2	14	2 5/8	3/8	14				7.5
3																											
4	48	54	2 1/4	3/4	1	13 1/4	18 1/2	5 1/8	6	3 1/2	7 1/8	21 1/2	4 3/4	21	12 3/4	14 1/4	7 1/4	17 1/8	3 3/4	20 5/8	4	5/8	22 3/8				18.0
5	48	54	2 1/4	3/4	1	13 1/4	18 1/2	5 1/8	6	3 1/2	7 1/8	21 1/2	4 3/4	21	12 3/4	14 1/4	7 1/4	17 1/8	3 3/4	20 5/8	4	5/8	22 3/8				18.0

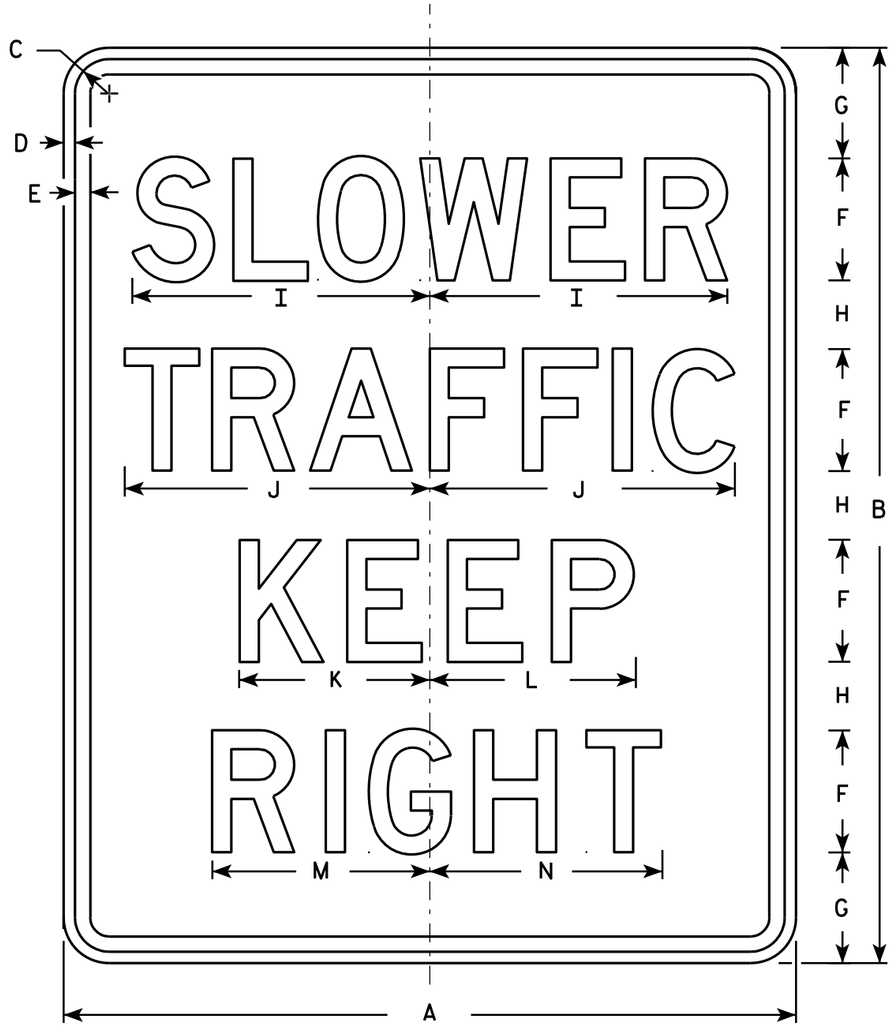
STANDARD SIGN
R3-8D & R3-8E

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/2011 PLATE NO. R3-8D.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 284	E



R4-3

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 - D
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																											
2S	24	30	1 1/8	3/8	1/2	4	3 5/8	2 1/4	9 3/4	10	6 1/4	6 3/4	7 1/8	7 5/8													5.0
2M	24	30	1 1/8	3/8	1/2	4	3 5/8	2 1/4	9 3/4	10	6 1/4	6 3/4	7 1/8	7 5/8													5.0
3	36	48	1 5/8	5/8	3/4	6	6	4	14 5/8	15	9 3/8	10	10 3/4	11 3/8													12.0
4	36	48	1 5/8	5/8	3/4	6	6	4	14 5/8	15	9 3/8	10	10 3/4	11 3/8													12.0
5	48	60	2 1/4	3/4	1	8	7 1/4	4 1/2	19 1/2	20	12 1/2	13 1/2	14 1/4	15 1/4													20.0

STANDARD SIGN
R4-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/25/2011 PLATE NO. R4-3.8

PROJECT NO:

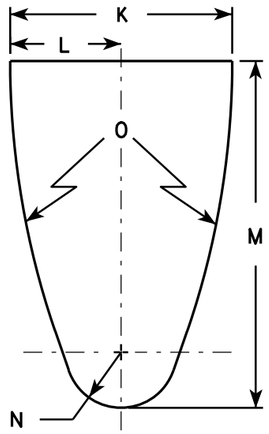
SHEET NO: 285 E

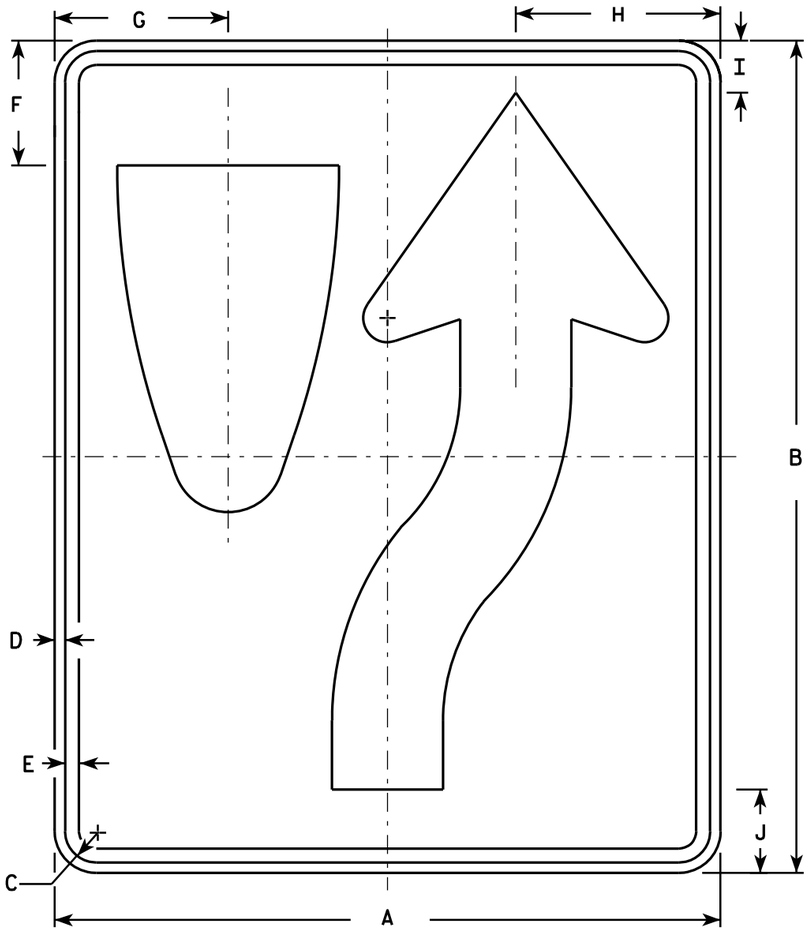
FILE NAME : C:\Users\PROJECTS\tr_stdplate\R43.DGN PLOT DATE : 25-MAR-2011 13:40 PLOT BY : mscsja

WISDOT/CADDS SHEET 42

7

7

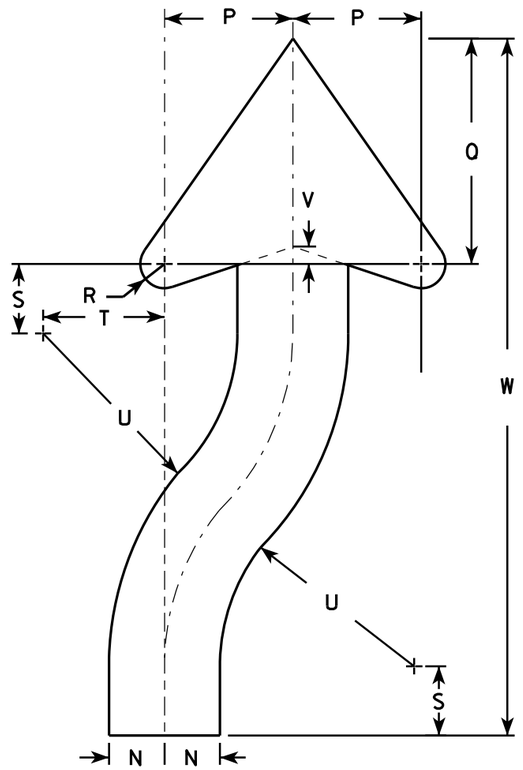




R4-7

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition. material is plywood but borders shall be rounded
2. Color:
   Background - White
   Message - Black
3. Corners may be square or rounded when base as shown. When base material is metal, the corners and borders shall be rounded.
4. R4-8 is the same as R4-7 except Legend is reversed.



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	18	24	1 1/8	3/8	1/2	3 3/8	4 3/4	5 1/2	1 3/8	2 1/4	6	3	9 3/8	1 1/2	22 1/2	3 1/2	6 1/8	5/8	1 7/8	3 1/4	6 3/4	1/2	20 3/8				3.0
2S	24	30	1 1/8	3/8	1/2	4 1/2	6 1/4	7 3/8	1 7/8	3	8	4	12 1/2	2	30	4 5/8	8 1/8	7/8	2 1/2	4 3/8	9	5/8	25 1/8				5.0
2M	24	30	1 1/8	3/8	1/2	4 1/2	6 1/4	7 3/8	1 7/8	3	8	4	12 1/2	2	30	4 5/8	8 1/8	7/8	2 1/2	4 3/8	9	5/8	25 1/8				5.0
3	36	48	1 3/4	1/2	5/8	6 3/4	9 3/8	11 1/8	2 7/8	4 1/2	12	6	18 3/4	3	45	6 7/8	12 1/4	1 1/4	3 3/4	6 5/8	13 1/2	1	40 3/4				12.0
4	36	48	1 3/4	1/2	5/8	6 3/4	9 3/8	11 1/8	2 7/8	4 1/2	12	6	18 3/4	3	45	6 7/8	12 1/4	1 1/4	3 3/4	6 5/8	13 1/2	1	40 3/4				12.0
5	48	60	2 1/4	3/4	1	9	12 1/2	14 3/4	3 3/4	6	16	8	25	4	60	9 1/4	16 1/4	1 5/8	5	8 3/4	18	1 1/4	50 1/4				20.0

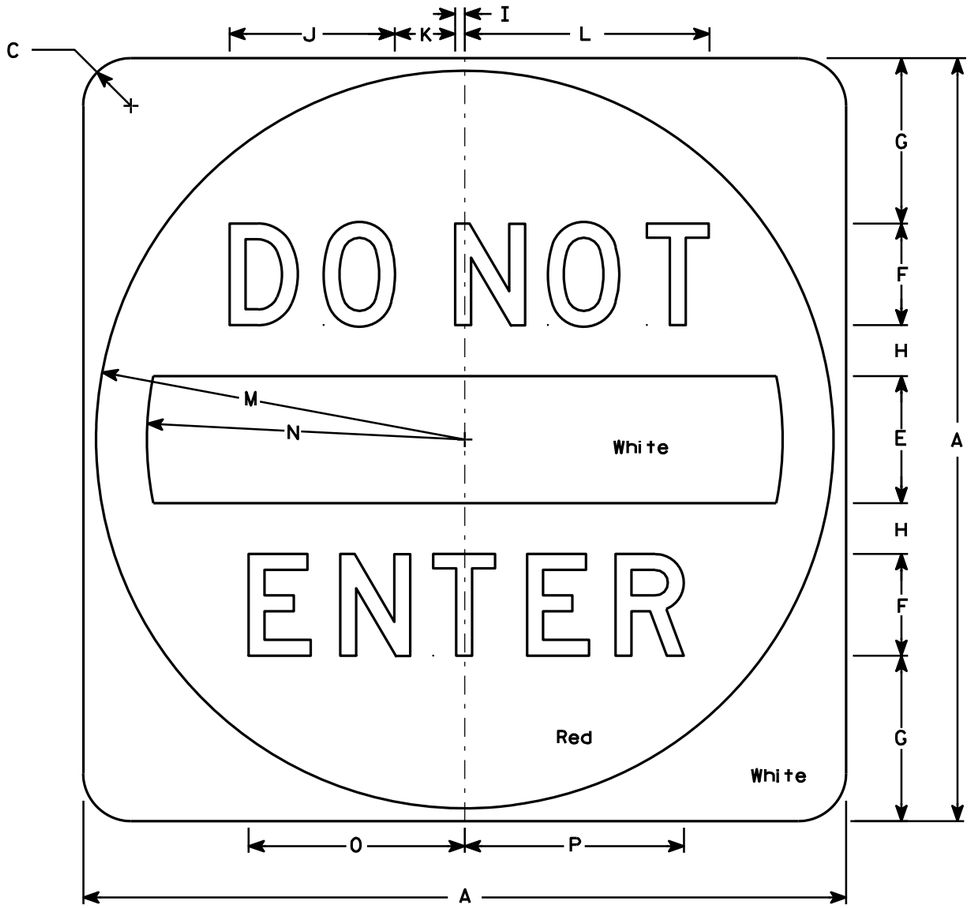
STANDARD SIGN
R4-7 & R4-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 3/25/2011 PLATE NO. R4-7.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 286	E



R5-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - See detail
   Message - White - Type H Reflective
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but when base material is metal, the cornors shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30		1 7/8		5	4	6 1/2	2	3/8	6 1/2	2 3/8	9 5/8	14 1/2	12 1/2	8 1/2	8 5/8											6.26
2M	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
3	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
4	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
5	48		3		8	6	11	3	5/8	9 3/4	3 5/8	14 1/2	23 1/2	20	12 3/4	12 7/8											16.0

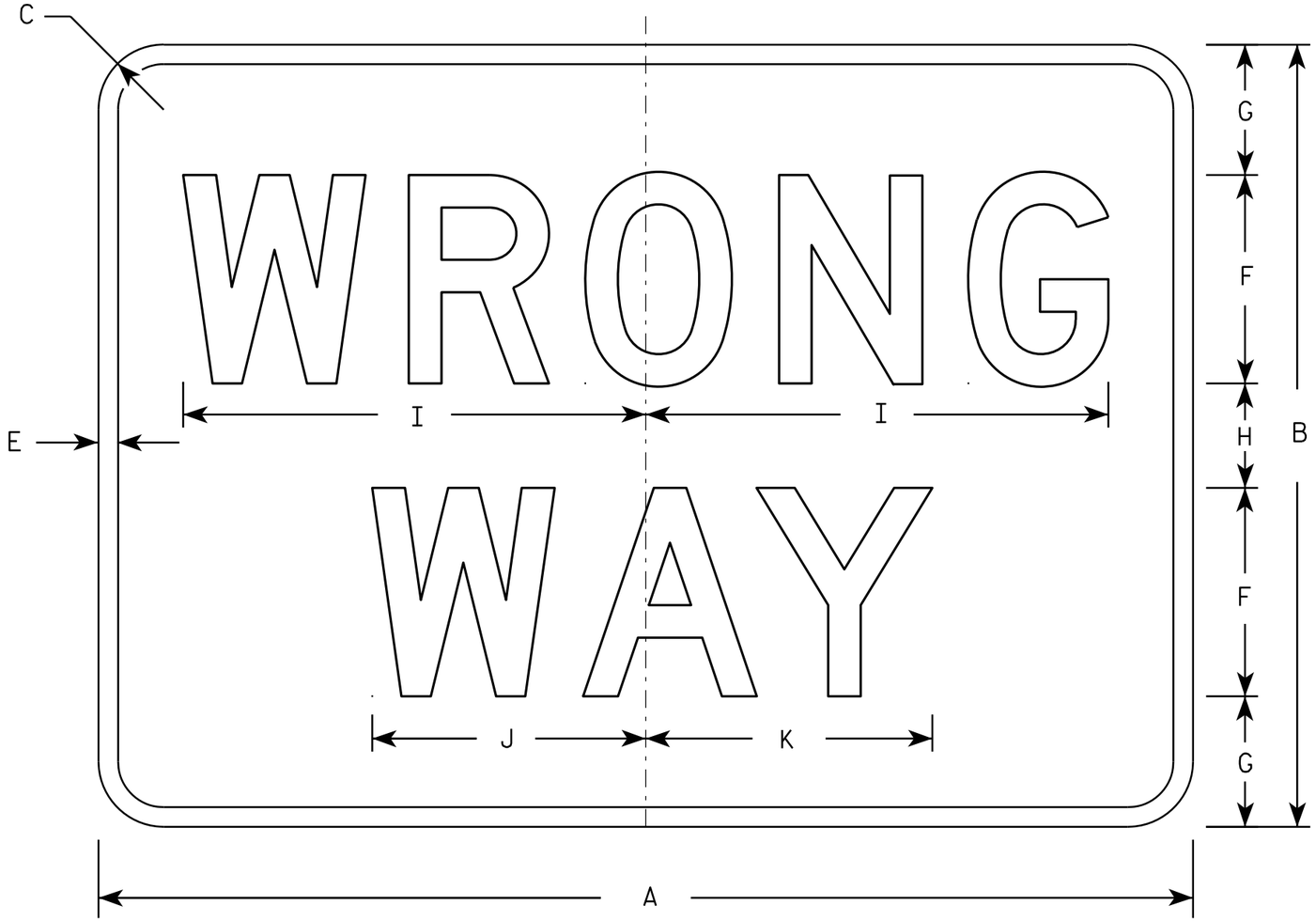
STANDARD SIGN
R5-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/17/10 PLATE NO. R5-1.15

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 287 | E



R5-1A

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 - D
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	30	18	1 1/2		1/2	5	3	2	11	6 1/2	6 7/8																3.75
2S	36	24	2		5/8	6	4 1/2	3	13 1/4	7 7/8	8 1/4																6.00
2M	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
3	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
4	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
5	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75

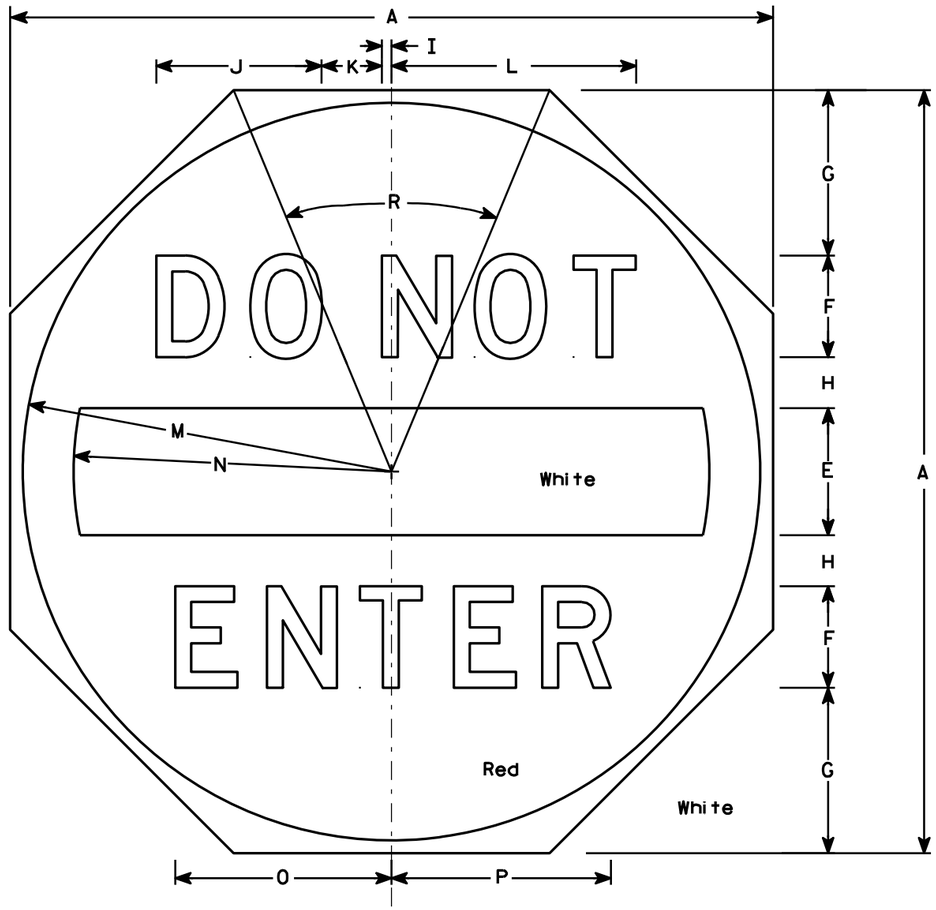
STANDARD SIGN
R5-1A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/17/10 PLATE NO. R5-1A.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 288	E



R5-1C

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - See detail
   Message - White - Type H Reflective
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but when base material is metal, the cornors shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30		1 7/8		5	4	6 1/2	2	3/8	6 1/2	2 3/8	9 5/8	14 1/2	12 1/2	8 1/2	8 5/8		45°									5.18
2M	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4		45°									7.46
3	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4		45°									7.46
4	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4		45°									13.25
5	48		3		8	6	11	3	5/8	9 3/4	3 5/8	14 1/2	23 1/2	20	12 3/4	12 7/8		45°									13.25

STANDARD SIGN
R5-1C

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

State Traffic Engineer

DATE 3/23/11 PLATE NO. R5-1C.1

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 289 | E



R5-57

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 - Lines 1, 2, and 5 are Series C.
   Lines 3 and 4 are 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.

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																											
2M																											
3																											
4	36		1 5/8	5/8	3/4	4	3	2	3 1/2	14 1/4	14 7/8	11	11 1/2	4 3/4	1 3/4	9		1 3/8	10	11	2 1/2	1 3/4	15 1/2	13	13 5/8		9.0
5	36		1 5/8	5/8	3/4	4	3	2	3 1/2	14 1/4	14 7/8	11	11 1/2	4 3/4	1 3/4	9		1 3/8	10	11	2 1/2	1 3/4	15 1/2	13	13 5/8		9.0

STANDARD SIGN
R5-57

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/29/2011 PLATE NO. R5-57.10

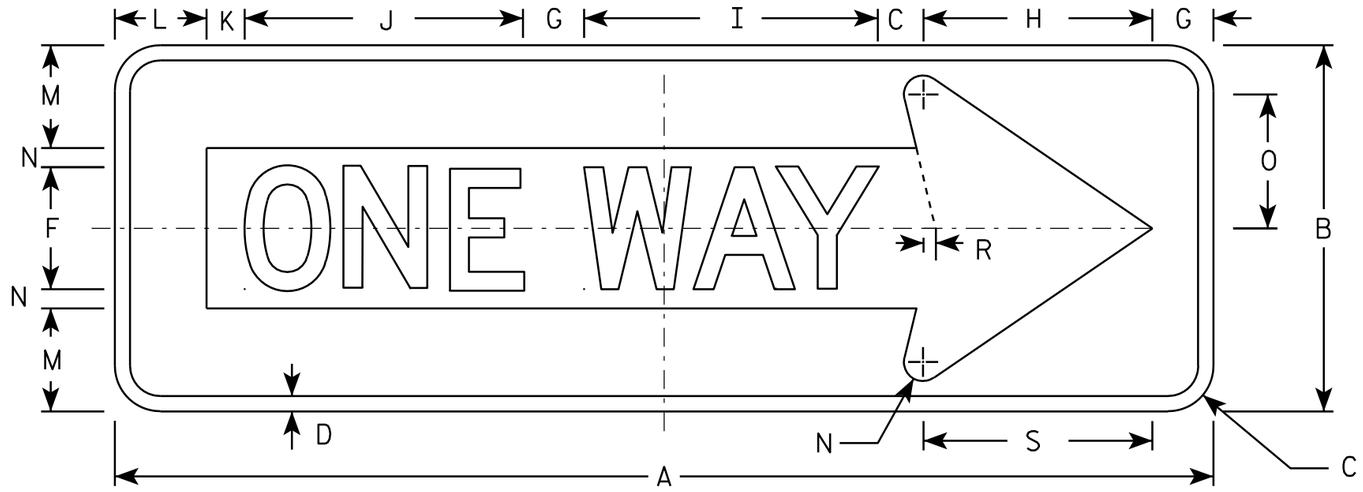
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 290 | E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R557.DGN PLOT DATE : 29-MAR-2011 14:38 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 5.959043:1.000000

WISDOT/CADDS SHEET 42

7

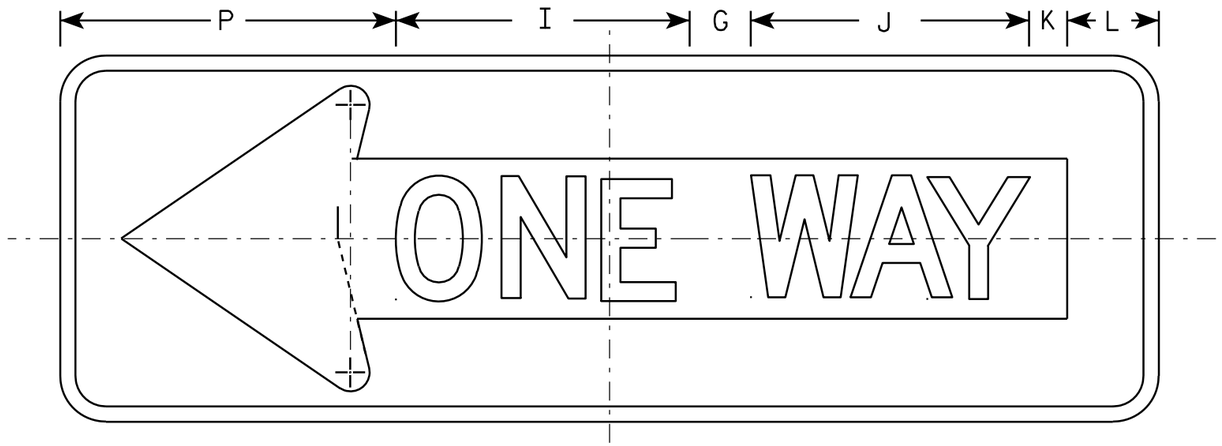
7



R6-1R

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - BLACK
   Message - BLACK LEGEND & WHITE ARROW & BORDER
3. Message Series - D
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.



R6-1L

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	36	12	1 ½	½		4	2	7 ½	9 ⅝	9 ⅛	1 ¼	3	3 ⅜	⅝	4 ⅜	11		⅜	7 ½								3.0
2M	54	18	2 ¼	¾		6	3	11 ¼	14 ½	13 ⅝	1 ⅞	4 ½	5	1	6 ½	16 ½		⅝	11 ¼								6.75
3	54	18	2 ¼	¾		6	3	11 ¼	14 ½	13 ⅝	1 ⅞	4 ½	5	1	6 ½	16 ½		⅝	11 ¼								6.75
4	54	18	2 ¼	¾		6	3	11 ¼	14 ½	13 ⅝	1 ⅞	4 ½	5	1	6 ½	16 ½		⅝	11 ¼								6.75
5																											

STANDARD SIGN
R6-1 L & R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

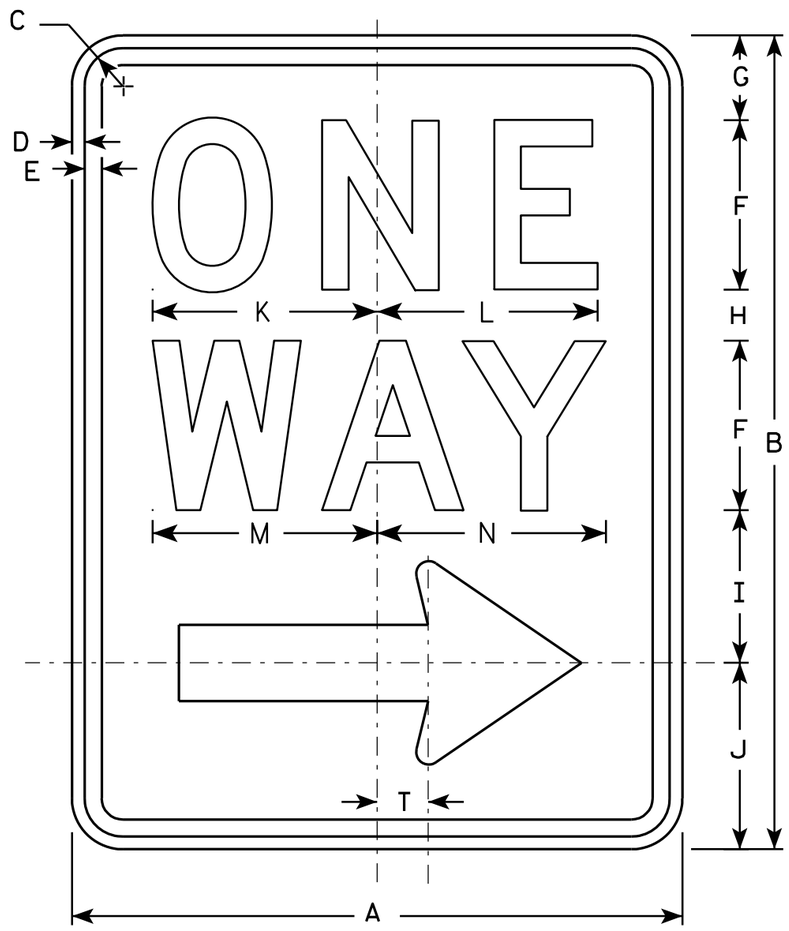
DATE 12/17/10 PLATE NO. R6-1.2

PROJECT NO:

SHEET NO: 291 E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R61.DGN PLOT DATE : 17-DEC-2010 14:11 PLOT BY : dotsja

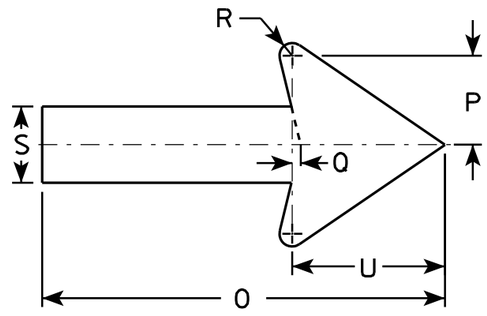
WISDOT/CADDS SHEET 42



R6-2R

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 - D
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. R6-2L same as R6-2R except arrow points to the left.



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z
1	18	24	1 1/8	3/8	1/2	5	2 1/2	1 1/2	4 1/2	5 1/2	6 5/8	6 1/2	6 5/8	6 3/4	11 7/8	2 5/8	1/4	3/8	2 1/4	1 1/2	4 1/2					
2S	24	30	1 1/8	3/8	1/2	6	3	2 1/2	5 1/2	7	8 1/8	8 1/8	8 1/2	8 5/8	16	3 1/2	3/8	1/2	3	2	6					
2M	30	36	1 3/8	1/2	5/8	8	2 1/2	2 5/8	6 7/8	8	10 1/2	10 1/2	11 1/4	11 1/4	20	4 3/8	1/2	5/8	3 3/4	2 1/2	7 1/2					
3	36	48	1 7/8	1/2	5/8	10	5 1/4	3 1/4	9	10 1/2	12 3/4	12 3/4	13 1/4	13 1/2	24	5 5/8	1/2	3/4	4 3/4	3	9					
4	36	48	1 7/8	1/2	5/8	10	5 1/4	3 1/4	9	10 1/2	12 3/4	12 3/4	13 1/4	13 1/2	24	5 5/8	1/2	3/4	4 3/4	3	9					
5																										

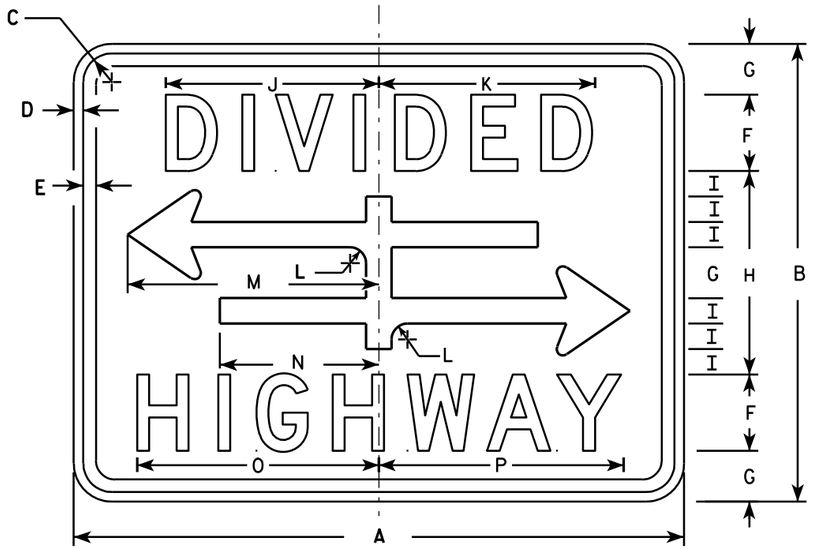
STANDARD SIGN
R6-2 R&L

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/2/10 PLATE NO. R6-2.8

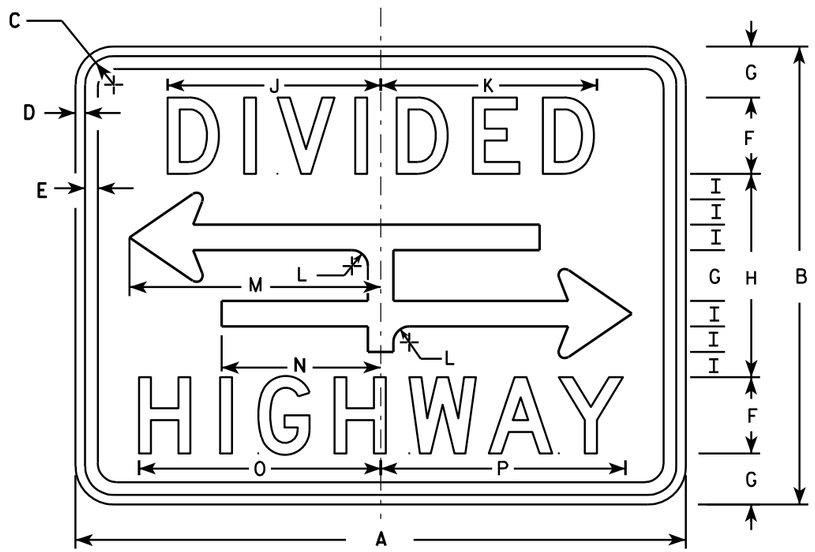
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 292	E



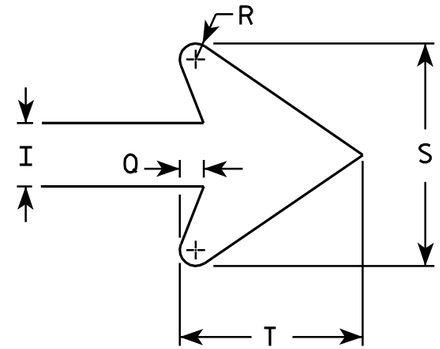
R6-3

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 - D
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.



R6-3A



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24	18	1 1/8	3/8	3/8	3	2	8	1	8 3/8	8 1/2	5/8	9 7/8	6 1/4	9 1/2	9 5/8	3/8	1/4	3 1/2	2 3/4							3.0
2S	30	24	1 1/8	3/8	1/2	4	2 5/8	10 3/4	1 3/8	10 1/2	10 5/8	7/8	12 1/2	7 7/8	12 1/4	12 3/8	1/2	3/8	4 5/8	3 5/8							5.0
2M	30	24	1 1/8	3/8	1/2	4	2 5/8	10 3/4	1 3/8	10 1/2	10 5/8	7/8	12 1/2	7 7/8	12 1/4	12 3/8	1/2	3/8	4 5/8	3 5/8							5.0
3																											
4																											
5																											

STANDARD SIGN
R6-3 & R6-3A

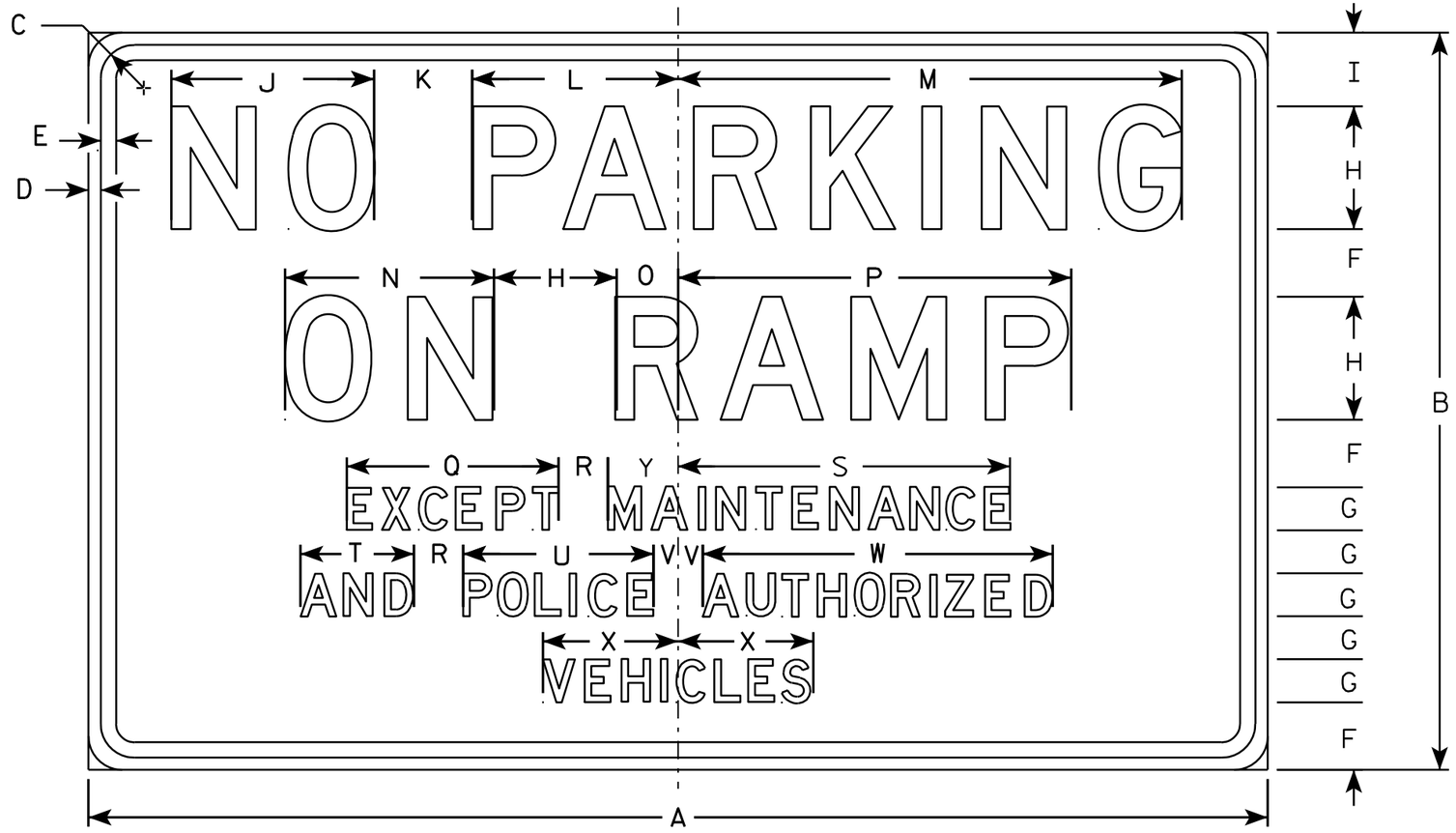
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/31/2011 PLATE NO. R6-3.5

PROJECT NO:

SHEET NO: 293 E



R7-64

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 - Lines 1& 2 and Border are RED
   Lines 3, 4, & 5 are BLACK
3. Message Series - D
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																											
2S																											
2M																											
3	48	30	1 3/8	1/2	5/8	2 3/4	1 3/4	5	3	8 1/4	4	8 3/8	20 1/2	8 1/2	2 1/2	16	8 5/8	2	13 5/8	4 5/8	7 3/4	1	14 1/4	5 1/2			10.0
4																											
5																											

STANDARD SIGN
R7-64

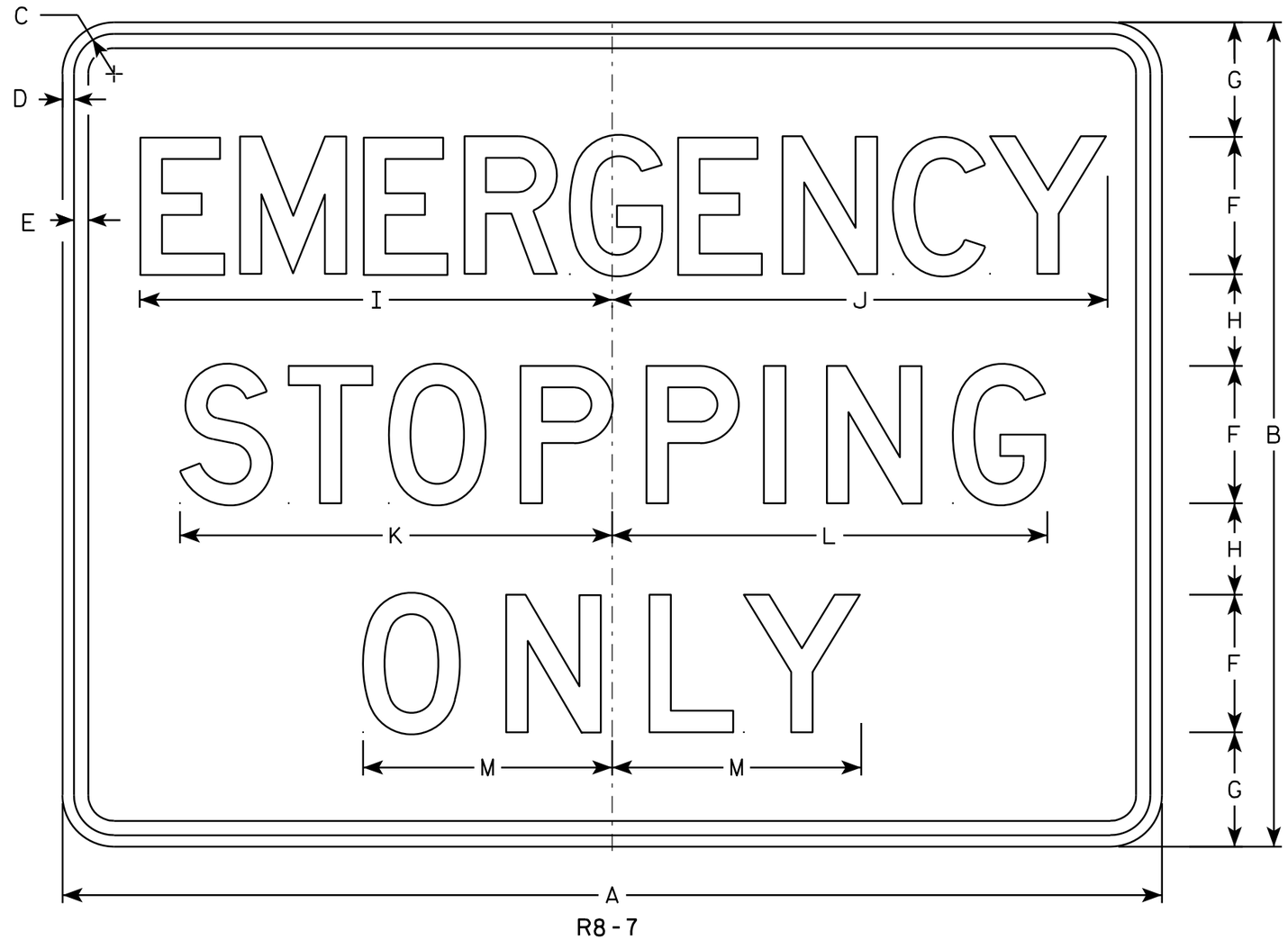
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/31/2011 PLATE NO. R7-64.3

PROJECT NO:

SHEET NO: 294 E



R8 - 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 - White
   Message - Black
3. Message Series - D
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																											
2S																											
2M																											
3																											
4	48	36	1 3/4	1/2	5/8	6	5	4	20 5/8	21 5/8	18 7/8	19	10 7/8														12.0
5	48	36	1 3/4	1/2	5/8	6	5	4	20 5/8	21 5/8	18 7/8	19	10 7/8														12.0

STANDARD SIGN
R8 - 7

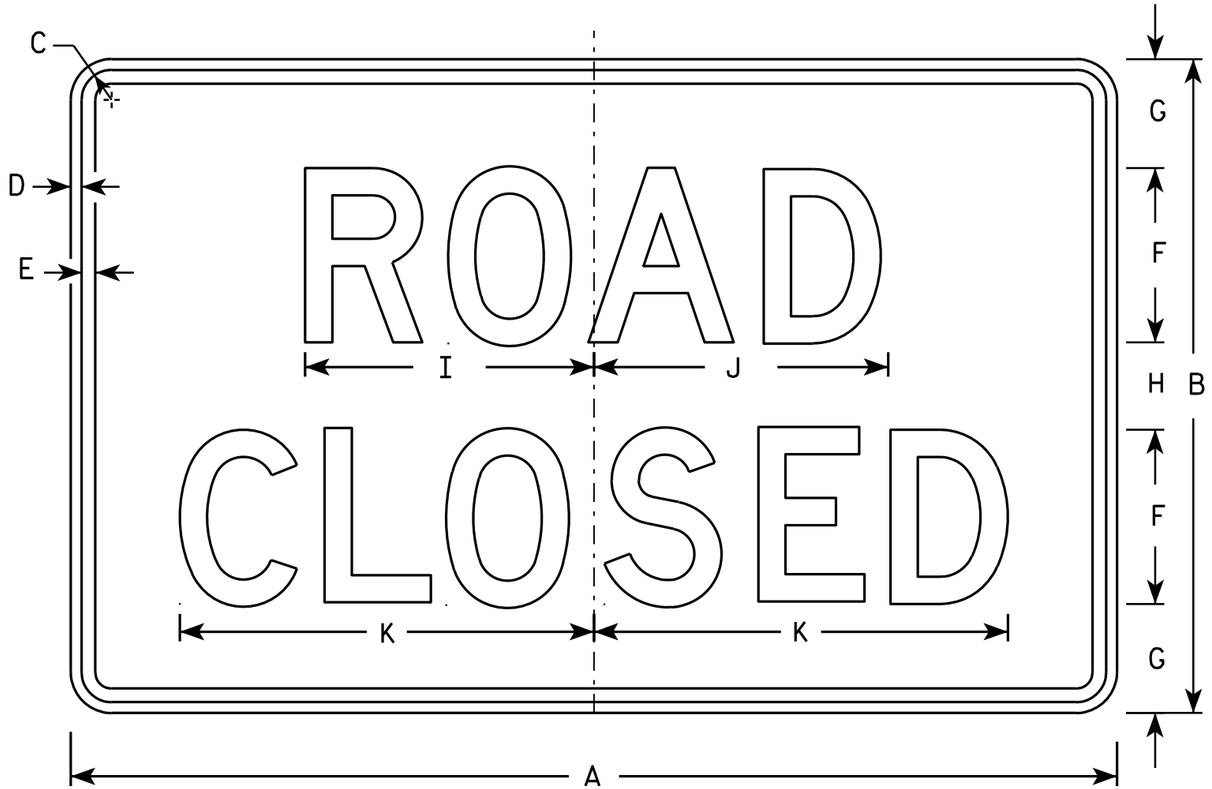
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/31/2011 PLATE NO. R8-7.6

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 295 | E

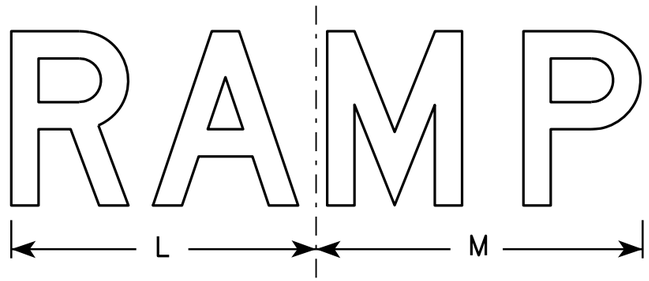
7



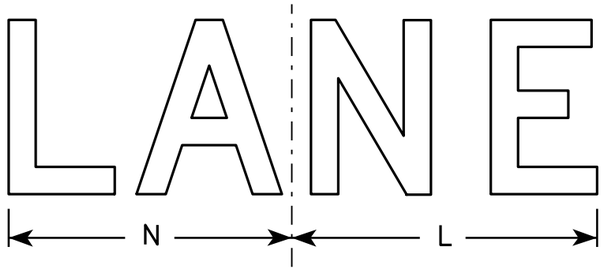
R11-2

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 - D
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. Modify the message as required.



R11-2R



R11-2L

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	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
2M	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
3	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
4	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
5	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0

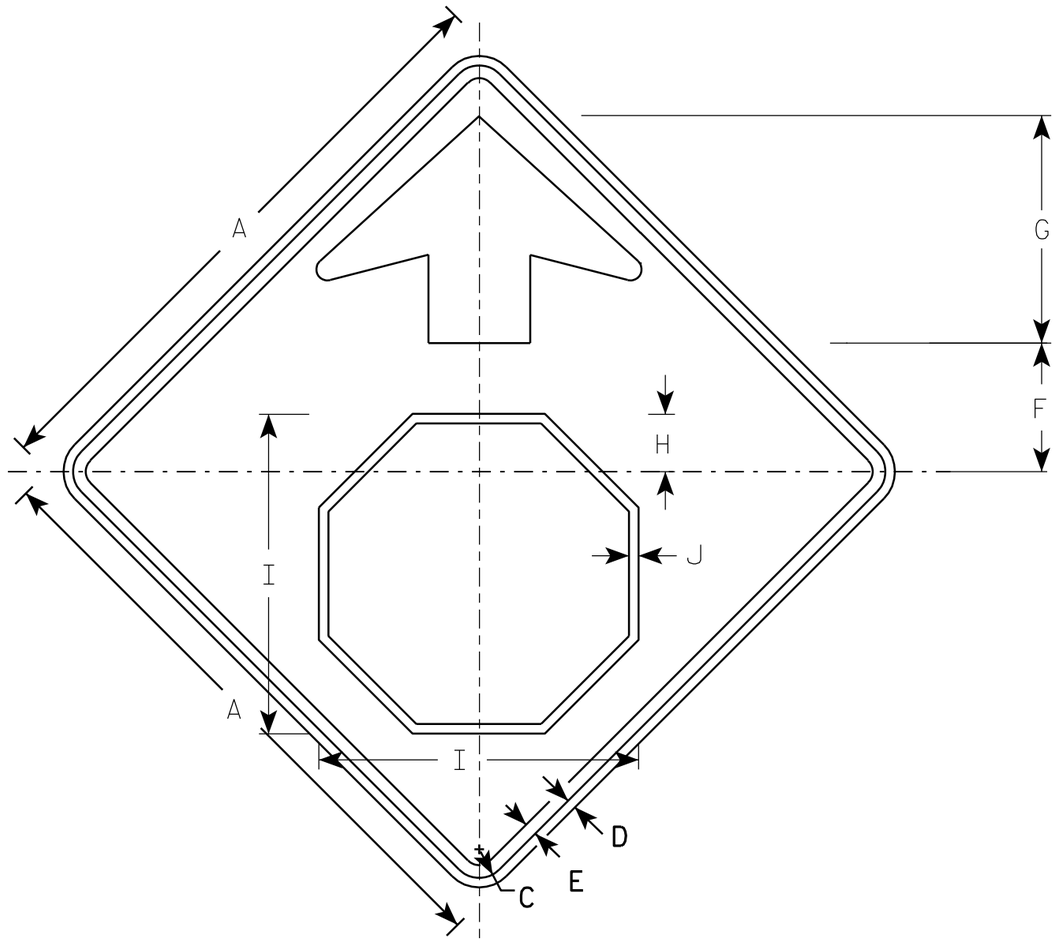
STANDARD SIGN
R11-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/1/11 PLATE NO. R11-2.10

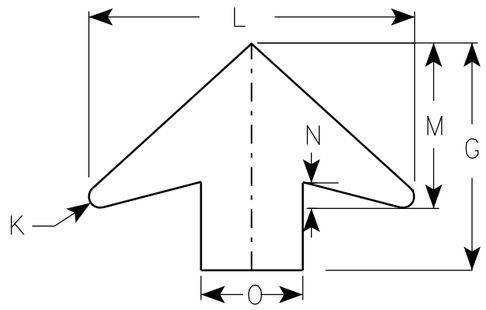
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 296 | E



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

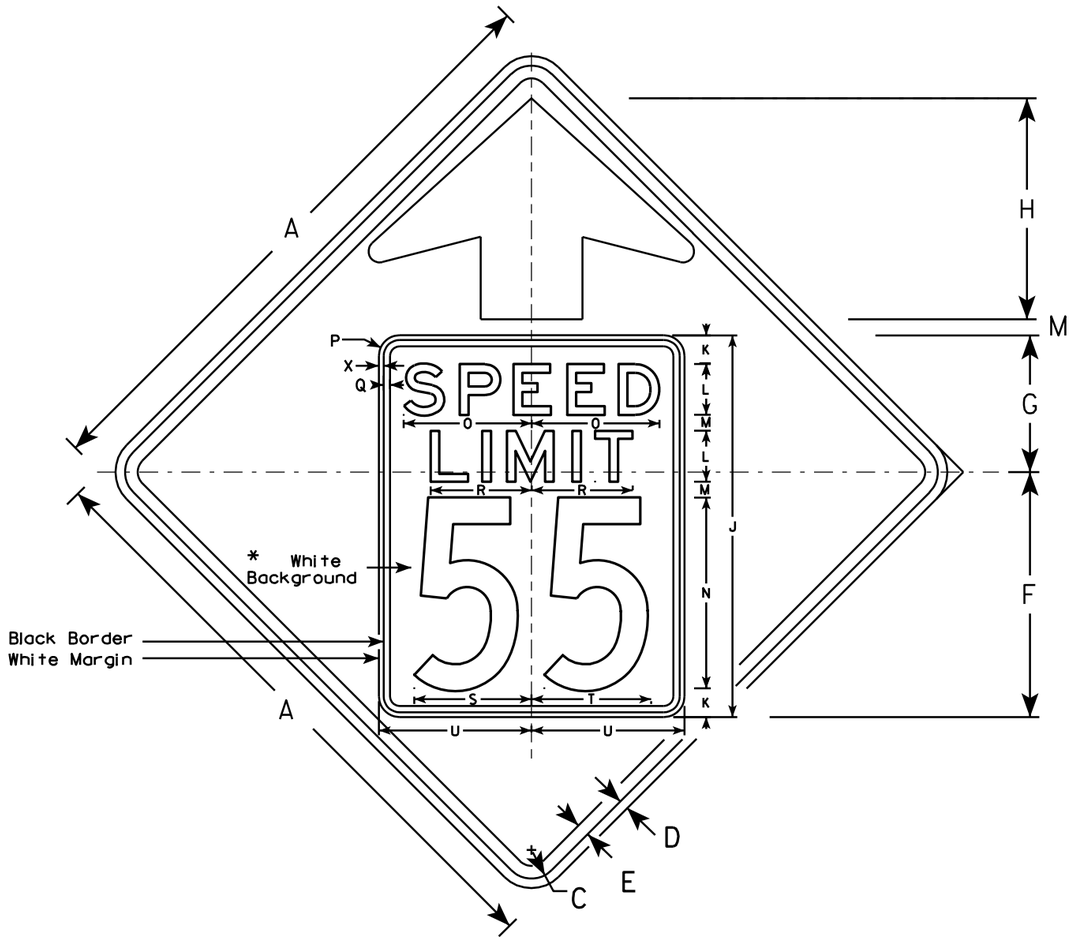
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:

SHEET NO: 297 E

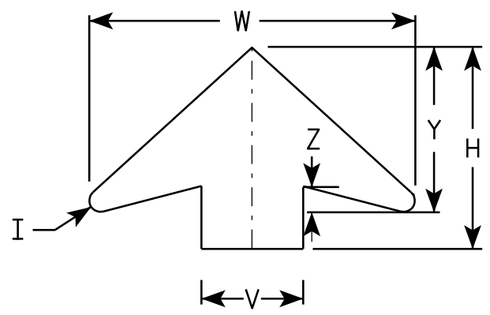


W3-5

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 - C for numbers Series E for wording
4. Substitute appropriate numerals and optically adjust spacing to achieve proper balance

*Speed Limit Sign shall have a White 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																											
2S	36		1 5/8	5/8	3/4	14 1/2	9 1/2	11 1/2	5/8	24	2	3	1	12	7 1/8	1 1/2	3/8	5 3/4	7 1/4	7 1/8	9	6	19 1/4	3/8	9 3/4	1 5/8	9.0
2M	36		1 5/8	5/8	3/4	14 1/2	9 1/2	11 1/2	5/8	24	2	3	1	12	7 1/8	1 1/2	3/8	5 3/4	7 1/4	7 1/8	9	6	19 1/4	3/8	9 3/4	1 5/8	9.0
3	36		1 5/8	5/8	3/4	14 1/2	9 1/2	11 1/2	5/8	24	2	3	1	12	7 1/8	1 1/2	3/8	5 3/4	7 1/4	7 1/8	9	6	19 1/4	3/8	9 3/4	1 5/8	9.0
4	48		2 1/4	3/4	1	19 1/4	10 3/4	17 3/8	7/8	30	2 1/4	4	1 1/4	15	10	1 5/8	1/2	8	9 1/4	9 3/8	12	8	25 5/8	3/8	13	2	16.0
5	48		2 1/4	3/4	1	19 1/4	10 3/4	17 3/8	7/8	30	2 1/4	4	1 1/4	15	10	1 5/8	1/2	8	9 1/4	9 3/8	12	8	25 5/8	3/8	13	2	16.0

STANDARD SIGN
W3-5

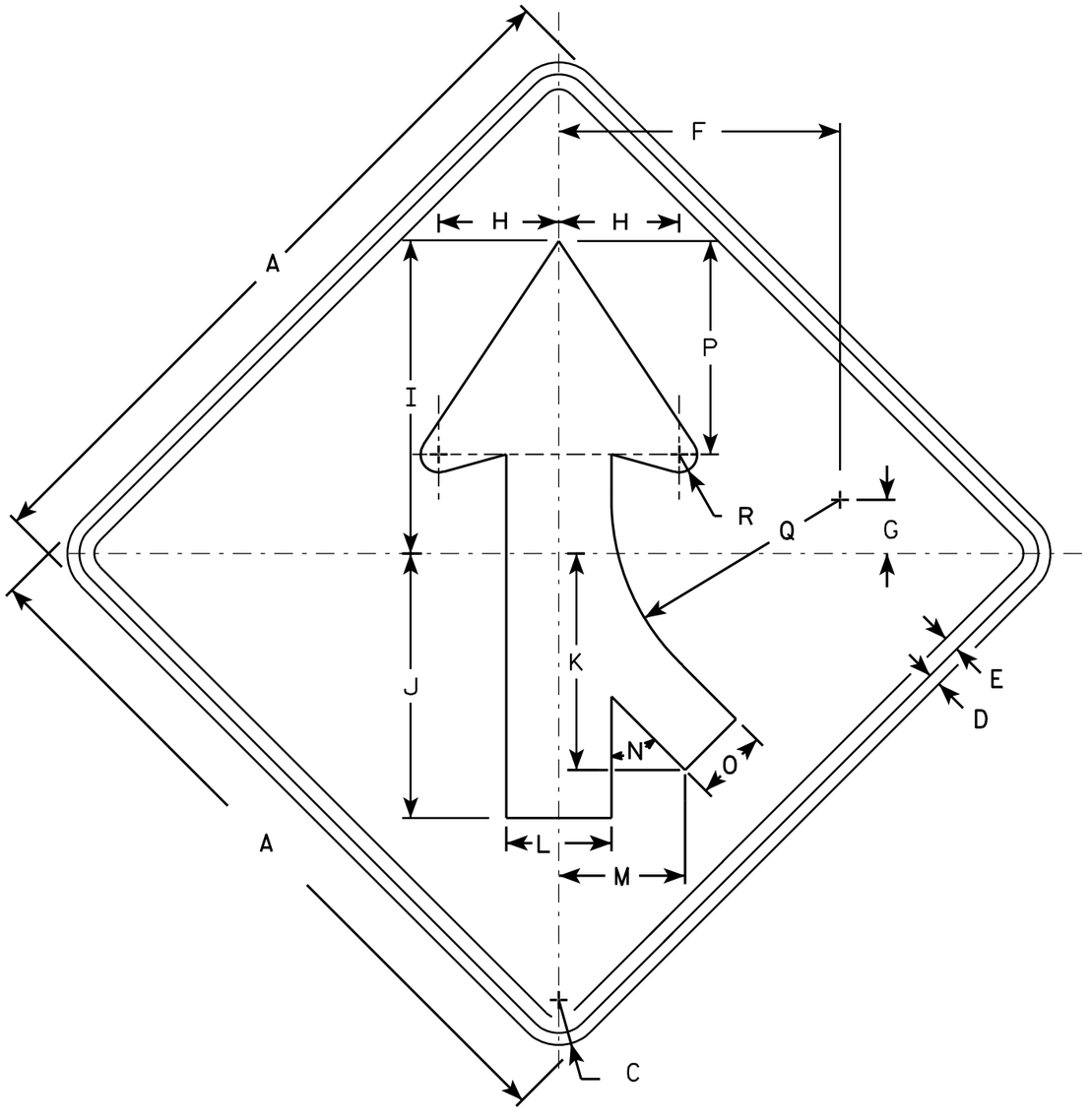
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/29/12 PLATE NO. W3-5.5

PROJECT NO:

SHEET NO: 298 E



W4-1 R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W4-1L is the same as W4-1R except the arrow is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8	11 5/8	2 1/2	5	13	11	9	4 3/8	5 1/4	45°	3	8 7/8	9 1/2	3/4									6.25
2S	36		1 5/8	5/8	3/4	14	2 3/4	6	15 3/4	13 1/4	10 1/4	5 1/4	6 3/8	45°	3 5/8	10 5/8	11 3/8	7/8									9.0
2M	36		1 5/8	5/8	3/4	14	2 3/4	6	15 3/4	13 1/4	10 1/4	5 1/4	6 3/8	45°	3 5/8	10 5/8	11 3/8	7/8									9.0
3	36		1 5/8	5/8	3/4	14	2 3/4	6	15 3/4	13 1/4	10 1/4	5 1/4	6 3/8	45°	3 5/8	10 5/8	11 3/8	7/8									9.0
4	48		2 1/4	3/4	1	18 3/4	3 5/8	8	20 1/2	17 1/2	14 3/8	7	8 3/8	45°	4 3/4	14 1/4	15 1/4	1 1/4									16.0
5	48		2 1/4	3/4	1	18 3/4	3 5/8	8	20 1/2	17 1/2	14 3/8	7	8 3/8	45°	4 3/4	14 1/4	15 1/4	1 1/4									16.0

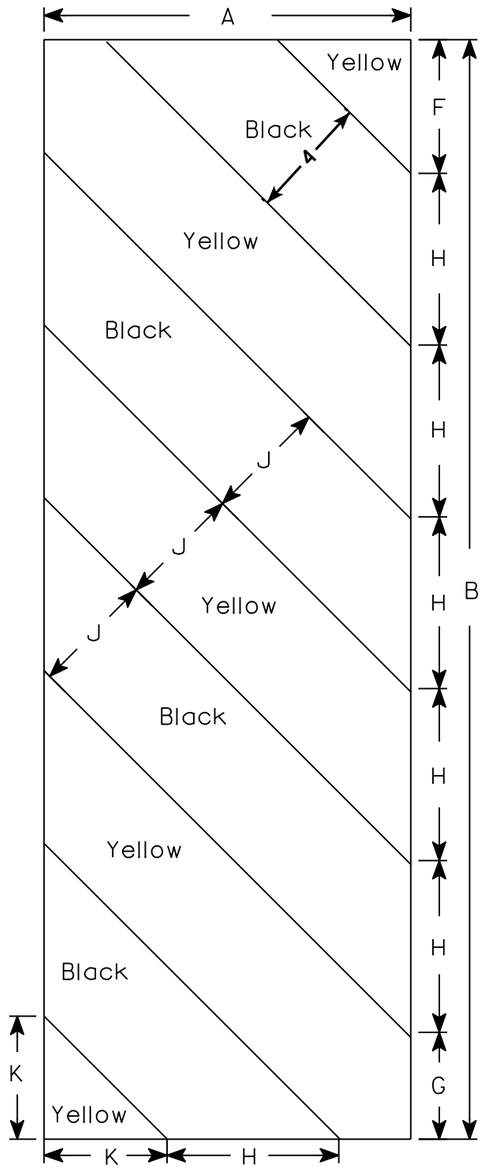
STANDARD SIGN
W4-1

WISCONSIN DEPT OF TRANSPORTATION

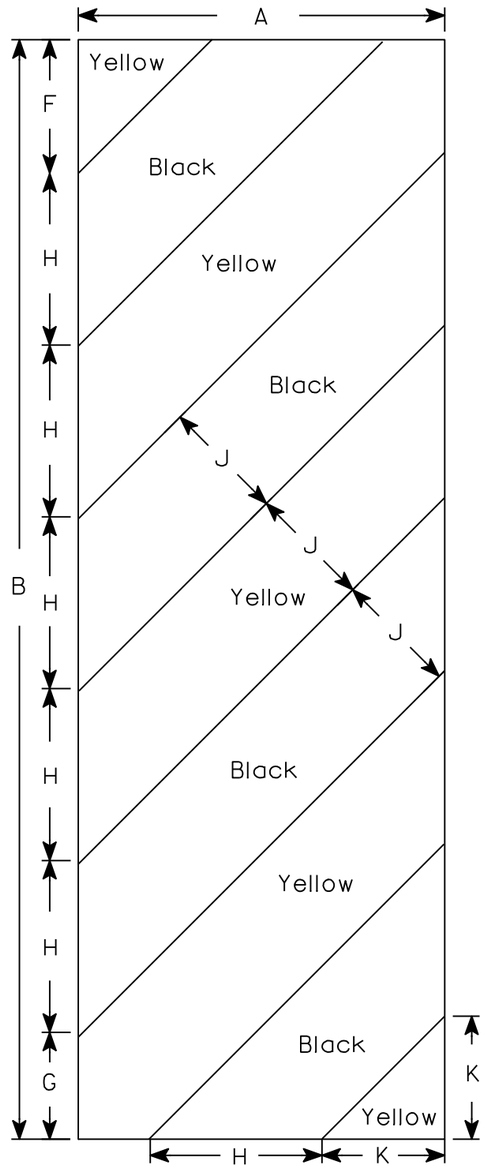
APPROVED Matthew R Rauch for State Traffic Engineer

DATE 03/12/13 PLATE NO. W4-1.14

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 299	E



W5-52L



W5-52R

NOTES

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

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

STANDARD SIGN

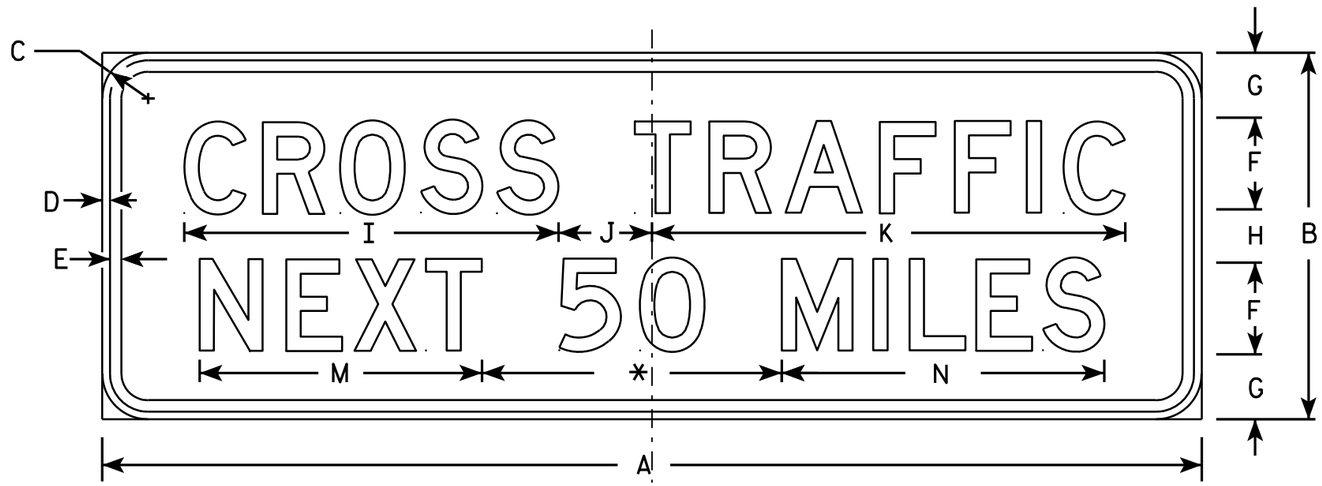
W5-52L & W5-52R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/29/12 PLATE NO. W5-52.9

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 300 | E



W6-53

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 Non - reflective
3. Message Series - D
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.

* Varies (See Note 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.
1																											
2S																											
2M																											
3																											
4	144	48	6	1	1 1/2	12	9	6	49	12 1/4	62		37	42 1/4													48.0
5																											

STANDARD SIGN
W6-53

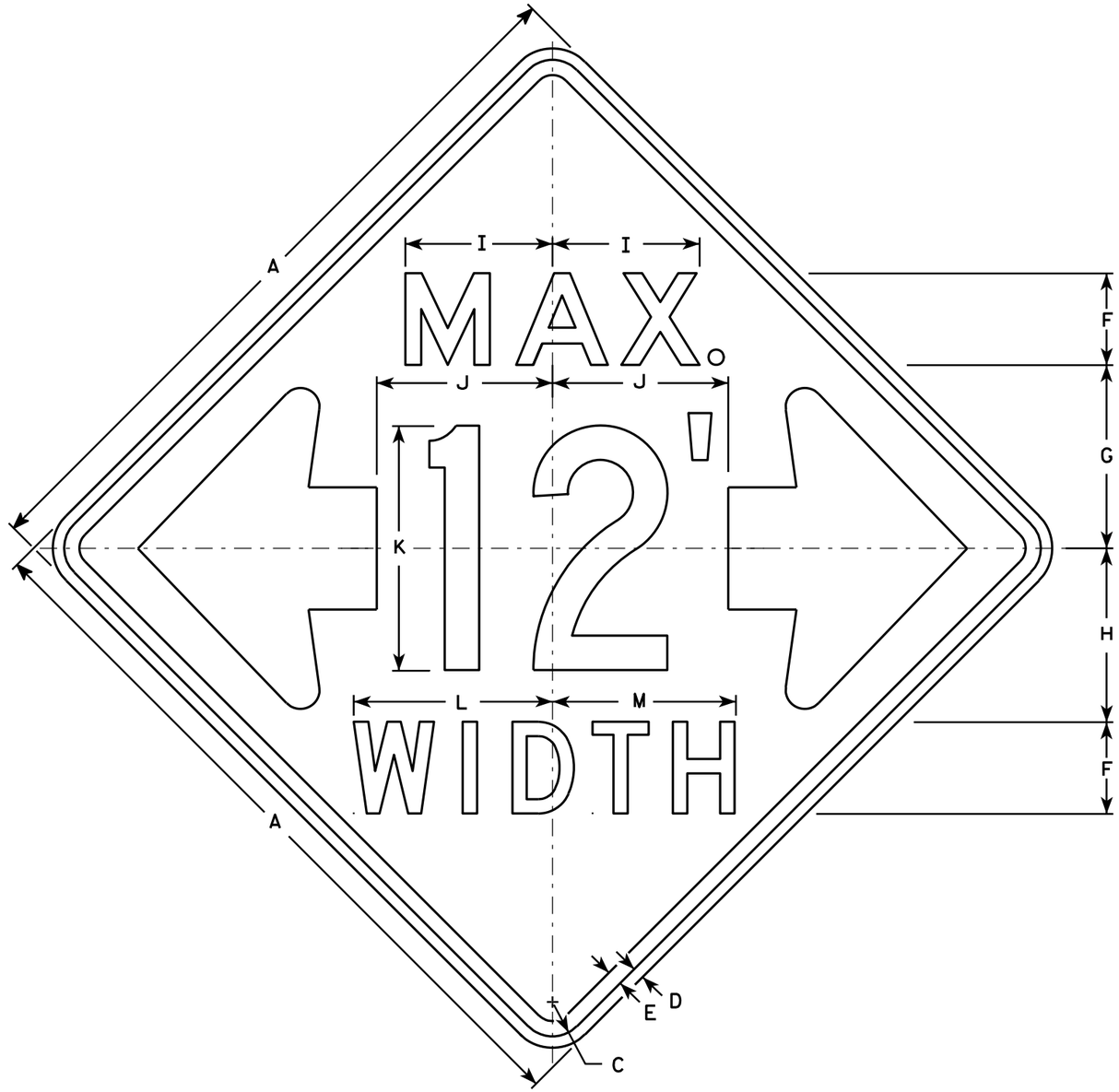
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 03/12/13 PLATE NO. W6-53.6

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 301 | E

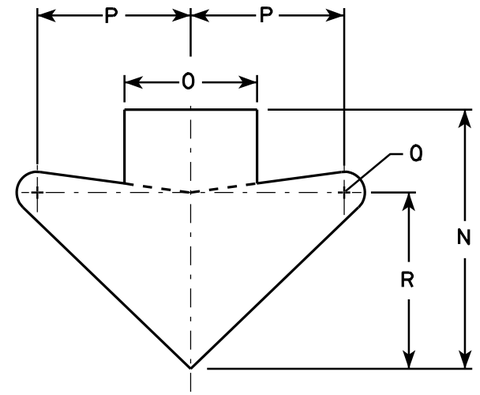
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W653.DGN PLOT DATE : 12-MAR-2013 14:22 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 19.847587:1.000000
WISDOT/CADDS SHEET 42



W12-52

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 - 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. The top line is series E, the numerals are series C, and the bottom line is series D.
6. Substitute appropriate numerals and adjust spacing as required.



ARROW DETAIL

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

STANDARD SIGN
W12-52

WISCONSIN DEPT OF TRANSPORTATION

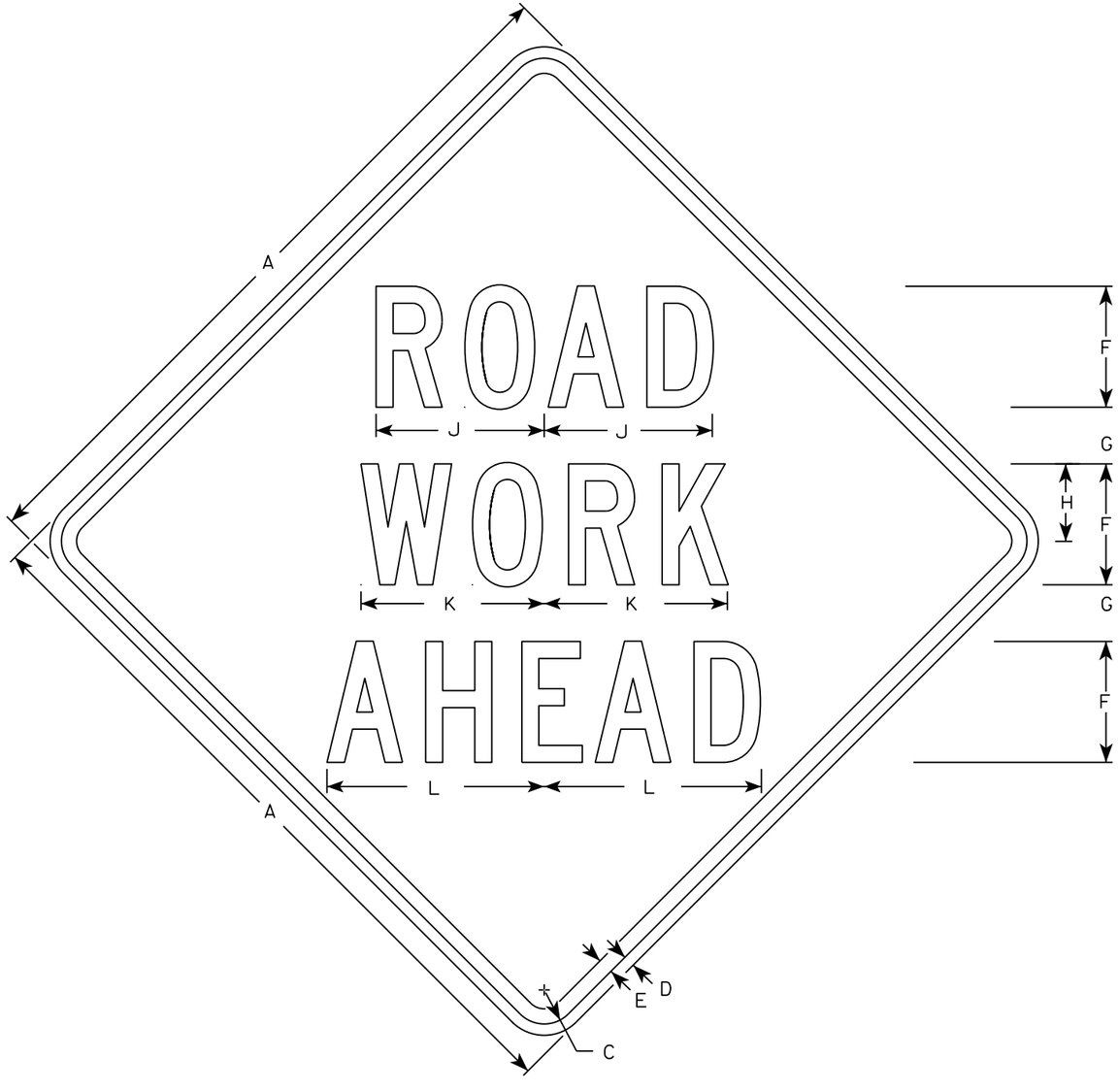
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/16/11 PLATE NO. W12-52.7

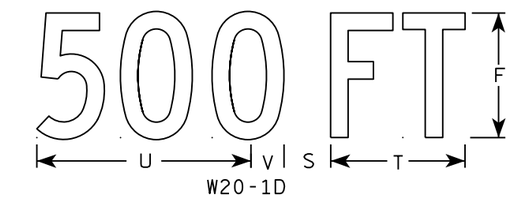
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 302 | E

7

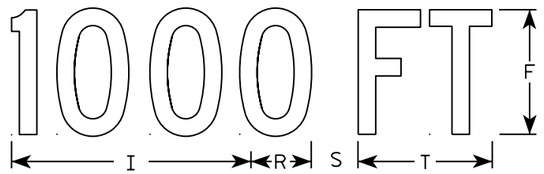
FILE NAME : C:\Users\PROJECTS\tr_stdplate\W1252.DGN PLOT DATE : 16-MAR-2011 14:45 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 9.137199:1.000000
WISDOT/CADDS SHEET 42



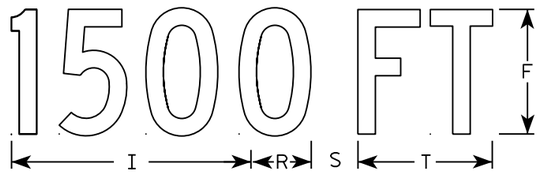
W20-1A



W20-1D



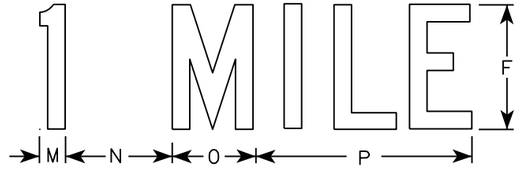
W20-1C



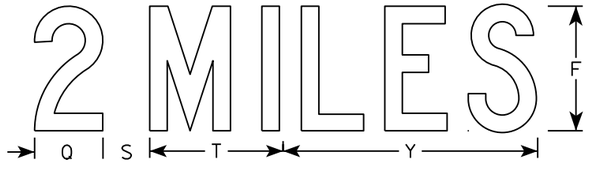
W20-1B



W20-1G



W20-1F



W20-1E

NOTES

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

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

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

WISCONSIN DEPT OF TRANSPORTATION

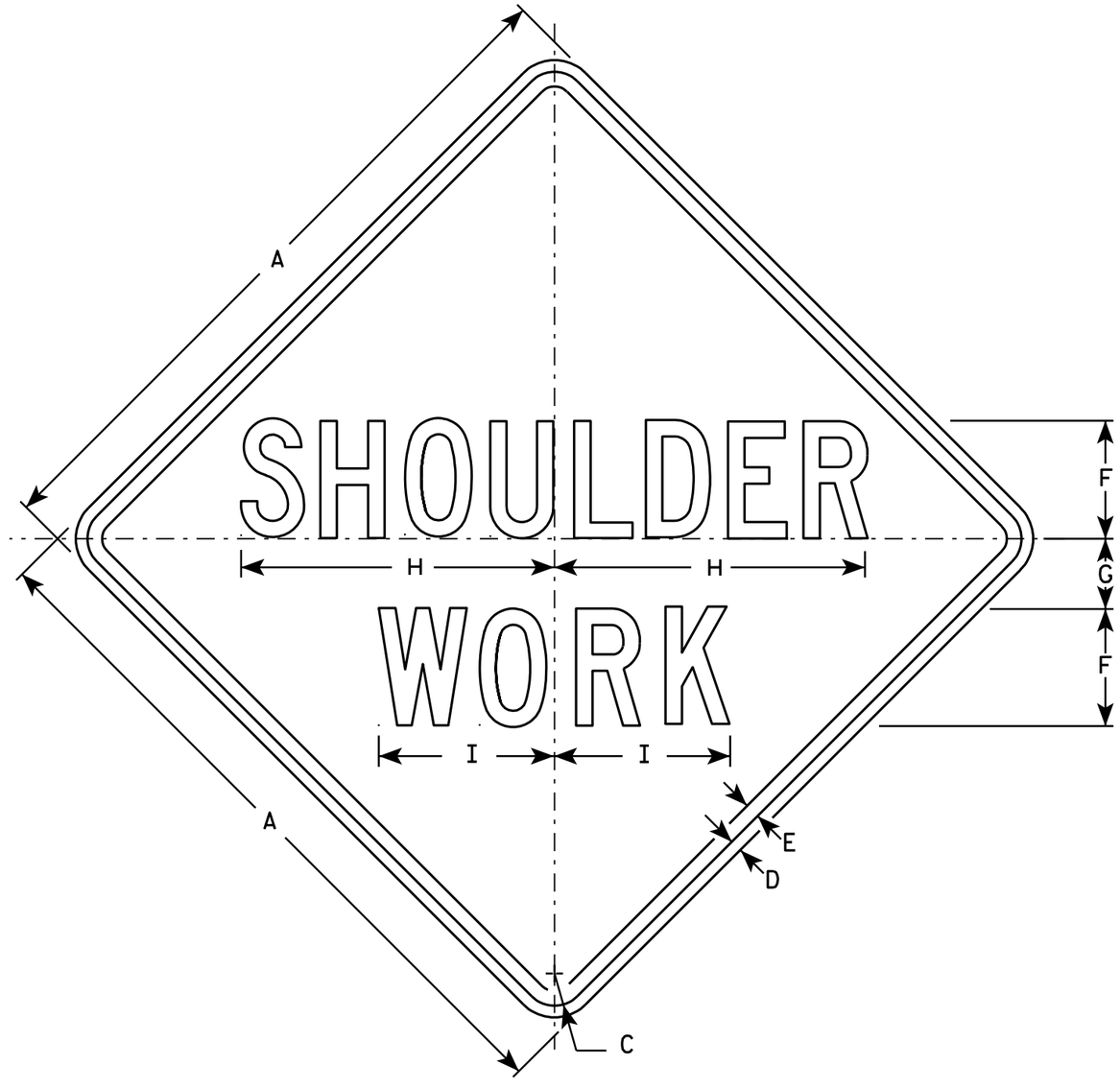
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/07/15 PLATE NO. W20-1.10

PROJECT NO:

SHEET NO: E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W201.DGN PLOT DATE : 01-DEC-2015 18:24 PLOT BY : $$ plotuser $$



W21-5

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	24		1 1/8	3/8	1/2	4	2 1/2	10 3/4	6																		4.0
2S	30		1 3/8	1/2	5/8	5	3	13 3/8	7 1/2																		6.25
2M	30		1 3/8	1/2	5/8	5	3	13 3/8	7 1/2																		6.25
3	36		1 5/8	5/8	3/4	6	3 1/2	16	9																		9.0
4	48		2 1/4	3/4	1	8	5	21 3/8	11 1/4																		16.0
5	48		2 1/4	3/4	1	8	5	21 3/8	11 1/4																		16.0

STANDARD SIGN
W21-5

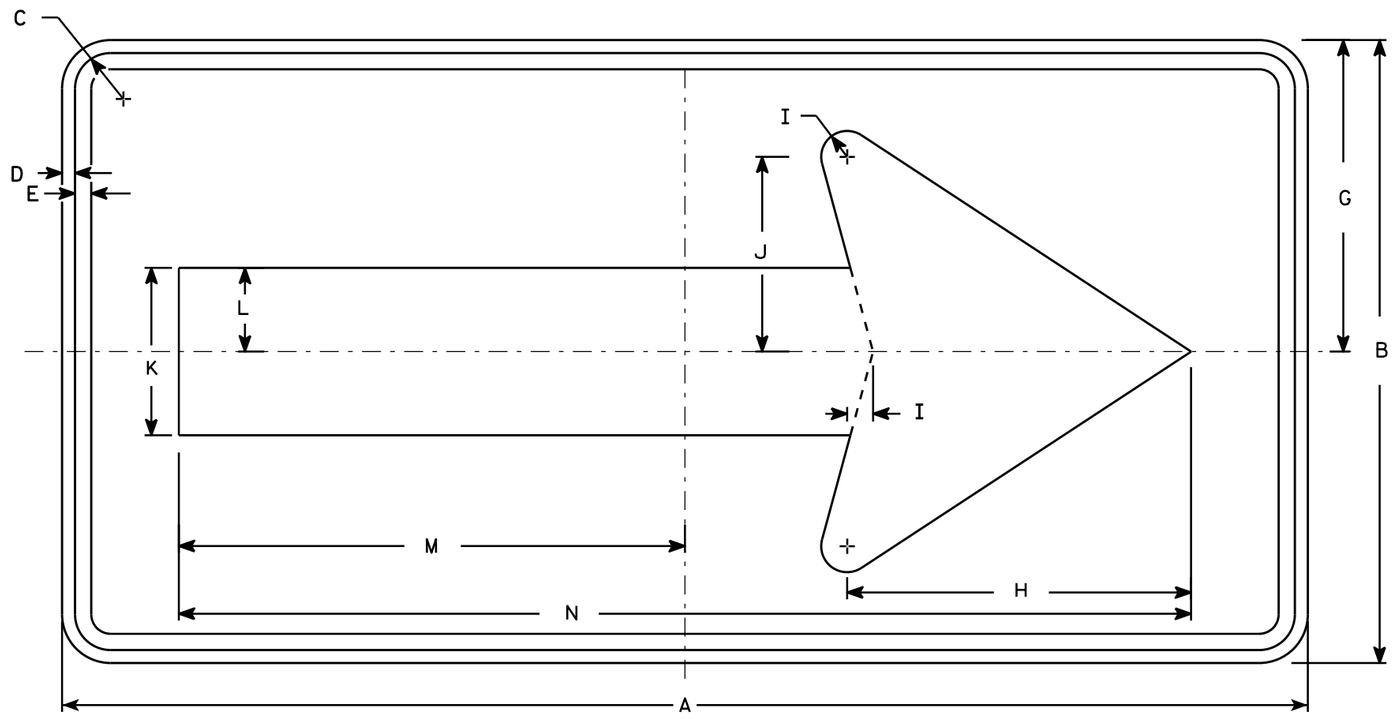
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/21/11 PLATE NO. W21-5.5

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 304 | E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W215.DGN PLOT DATE : 21-MAR-2011 08:01 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 6.207338:1.000000



W01-6

NOTES

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

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

STANDARD SIGN
W01-6

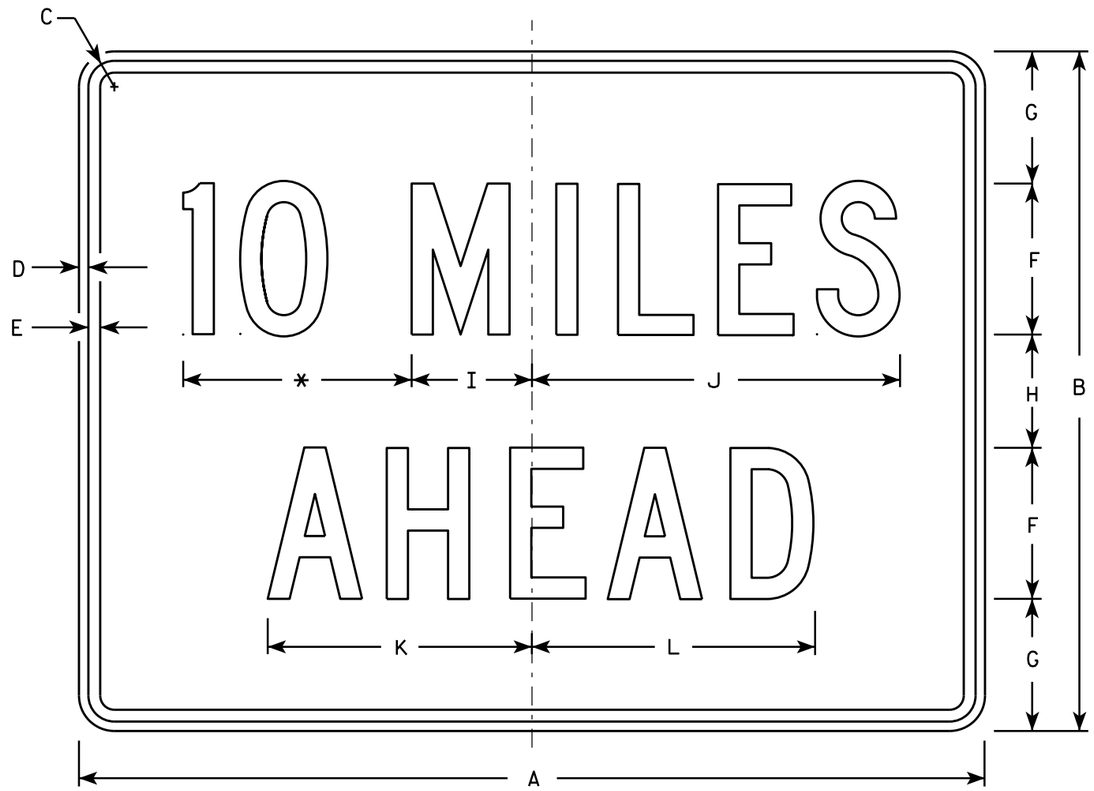
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

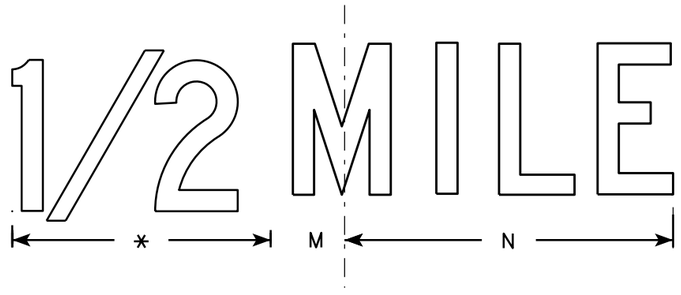
DATE 11/18/13 PLATE W01-6.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W016.DGN PLOT DATE : 28-FEB-2014 11:37 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 5.837526:1.000000 WISDOT/CADDS SHEET 42



W057-52



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.

* See note 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.
1	36	24	1 1/8	3/8	1/2	6	4 1/2	3	4 3/4	14 5/8	10 5/8	11 3/8	2	13													6.0
2S	48	36	1 3/8	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	17 3/8													12.0
2M	48	36	1 3/8	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	17 3/8													12.0
3	48	36	1 3/8	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	17 3/8													12.0
4	48	36	1 3/8	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	17 3/8													12.0
5	48	36	1 3/8	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	17 3/8													12.0

STANDARD SIGN
W057-52

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/20/13 PLATE W057-52.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W05752.DGN PLOT DATE : 28-FEB-2014 11:42 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 8.026599:1.000000 WISDOT/CADDS SHEET 42

1050-01-61
STH 27 - NW WIDENING (ALIGNMENT 'S')

STATION	DISTANCE	AREA (SF)		INCREMENTAL VOL (CY) (UNADJUSTED)		CUMULATIVE VOL (CY)		MASS ORDINATE
		CUT	FILL	CUT NOTE 1	FILL NOTE 2	CUT 1.00 NOTE 1	FILL 1.25 NOTE 3	NOTE 4
101+38	0	0	0	0	0	0	0	0
101+51	13	10	1	3	1	3	2	1
102+00	49	111	0	109	1	112	3	109
102+06	6	138	0	27	0	139	3	136
102+25	19	62	0	71	0	210	3	207
102+48	22	34	0	40	0	250	3	247
102+80	33	0	0	21	0	271	3	268
			COLUMN TOTALS	271	2			

1050-01-61
STH 27 - RAMP SA WIDENING (ALIGNMENT 'SA')

STATION	DISTANCE	AREA (SF)		INCREMENTAL VOL (CY) (UNADJUSTED)		CUMULATIVE VOL (CY)		MASS ORDINATE
		CUT	FILL	CUT NOTE 1	FILL NOTE 2	CUT 1.00 NOTE 1	FILL 1.25 NOTE 3	NOTE 4
607+85	0	0	0	0	0	0	0	0
608+00	15	18	0	5	0	5	0	5
608+20	20	32	1	19	1	24	2	22
608+54	34	31	1	40	2	64	4	60
609+64	109	163	1	390	5	454	10	444
609+78	14	64	0	60	1	514	12	502
609+86	8	41	0	16	0	530	12	518
610+00	14	36	0	20	0	550	12	538
610+21	21	0	0	14	0	564	12	552
			COLUMN TOTALS	564	9			

NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL. SALVAGED/UNUSABLE PAVEMENT MATERIAL IS CALCULATED ON THE SUMMARY SHEET.
2 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME. SALVAGED/UNUSABLE PAVEMENT MATERIAL IS CALCULATED ON THE SUMMARY SHEET.
3 - EXPANDED FILL	(UNEXPANDED FILL)*(FILL FACTOR)
4 - MASS ORDINATE	CUT - (EXPANDED FILL); PLUS INDICATES AN EXCESS OF MATERIAL

1050-01-61

STH 27 - NE WIDENING (ALIGNMENT 'S')

STATION	DISTANCE	AREA (SF)		INCREMENTAL VOL (CY) (UNADJUSTED)		CUMULATIVE VOL (CY)		MASS ORDINATE
		CUT	FILL	CUT NOTE 1	FILL NOTE 2	CUT 1.00 NOTE 1	FILL 1.25 NOTE 3	NOTE 4
101+85	0	0	0	0	0	0	0	0
101+90	5	16	69	2	7	2	9	-7
102+00	10	18	95	7	31	9	48	-39
102+27	27	21	43	19	70	28	135	-107
102+50	23	29	0	21	19	49	159	-110
102+75	25	0	0	14	0	63	159	-96
			COLUMN TOTALS	63	127			

1050-01-61

STH 27 - RAMP SB WIDENING (ALIGNMENT 'SB')

STATION	DISTANCE	AREA (SF)		INCREMENTAL VOL (CY) (UNADJUSTED)		CUMULATIVE VOL (CY)		MASS ORDINATE
		CUT	FILL	CUT NOTE 1	FILL NOTE 2	CUT 1.00 NOTE 1	FILL 1.25 NOTE 3	NOTE 4
611+27	0	0	0	0	0	0	0	0
611+52	25.05	35	0	17	0	17	0	17
611+72	19.17	21	48	20	18	37	23	14
612+00	28.34	19	74	21	65	58	104	-46
612+60	60	19	4	42	87	100	213	-113
612+95	35.09	0	0	13	3	113	217	-104
			COLUMN TOTALS	113	173			

NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL. SALVAGED/UNUSABLE PAVEMENT MATERIAL IS CALCULATED ON THE SUMMARY SHEET.
2 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME. SALVAGED/UNUSABLE PAVEMENT MATERIAL IS CALCULATED ON THE SUMMARY SHEET.
3 - EXPANDED FILL	(UNEXPANDED FILL)*(FILL FACTOR)
4 - MASS ORDINATE	CUT - (EXPANDED FILL); PLUS INDICATES AN EXCESS OF MATERIAL

1052-01-62
STH 27 - SE WIDENING (ALIGNMENT 'S')

STATION	DISTANCE	AREA (SF)		INCREMENTAL VOL (CY) (UNADJUSTED)		CUMULATIVE VOL (CY)		MASS ORDINATE
		CUT	FILL	CUT NOTE 1	FILL NOTE 2	CUT 1.00 NOTE 1	FILL 1.25 NOTE 3	NOTE 4
97+96	0	0	0	0	0	0	0	0
98+45	50	61	0	56	0	56	0	56
98+48	3	60	0	7	0	63	0	63
98+68	20	47	0	39	0	102	0	102
99+00	32	11	3	34	2	136	3	133
99+10	10	11	8	4	2	140	5	135
99+23	13	0	0	3	2	143	8	135
			COLUMN TOTALS	143	6			

1052-01-62
STH 27 - RAMP SC WIDENING (ALIGNMENT 'SC')

STATION	DISTANCE	AREA (SF)		INCREMENTAL VOL (CY) (UNADJUSTED)		CUMULATIVE VOL (CY)		MASS ORDINATE
		CUT	FILL	CUT NOTE 1	FILL NOTE 2	CUT 1.00 NOTE 1	FILL 1.25 NOTE 3	NOTE 4
611+67	0	0	0	0	0	0	0	0
612+00	32.67	52	0	31	0	31	0	31
612+13	13.39	62	0	29	0	60	0	60
612+41	28	69	1	68	1	128	2	126
613+00	58.61	35	11	112	14	240	19	221
613+22	21.83	28	13	25	10	265	32	233
614+00	78.17	18	0	66	19	331	55	276
614+30	30.1	0	0	10	0	341	55	286
			COLUMN TOTALS	341	44			

NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL. SALVAGED/UNUSABLE PAVEMENT MATERIAL IS CALCULATED ON THE SUMMARY SHEET.
2 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME. SALVAGED/UNUSABLE PAVEMENT MATERIAL IS CALCULATED ON THE SUMMARY SHEET.
3 - EXPANDED FILL	(UNEXPANDED FILL)*(FILL FACTOR)
4 - MASS ORDINATE	CUT - (EXPANDED FILL); PLUS INDICATES AN EXCESS OF MATERIAL

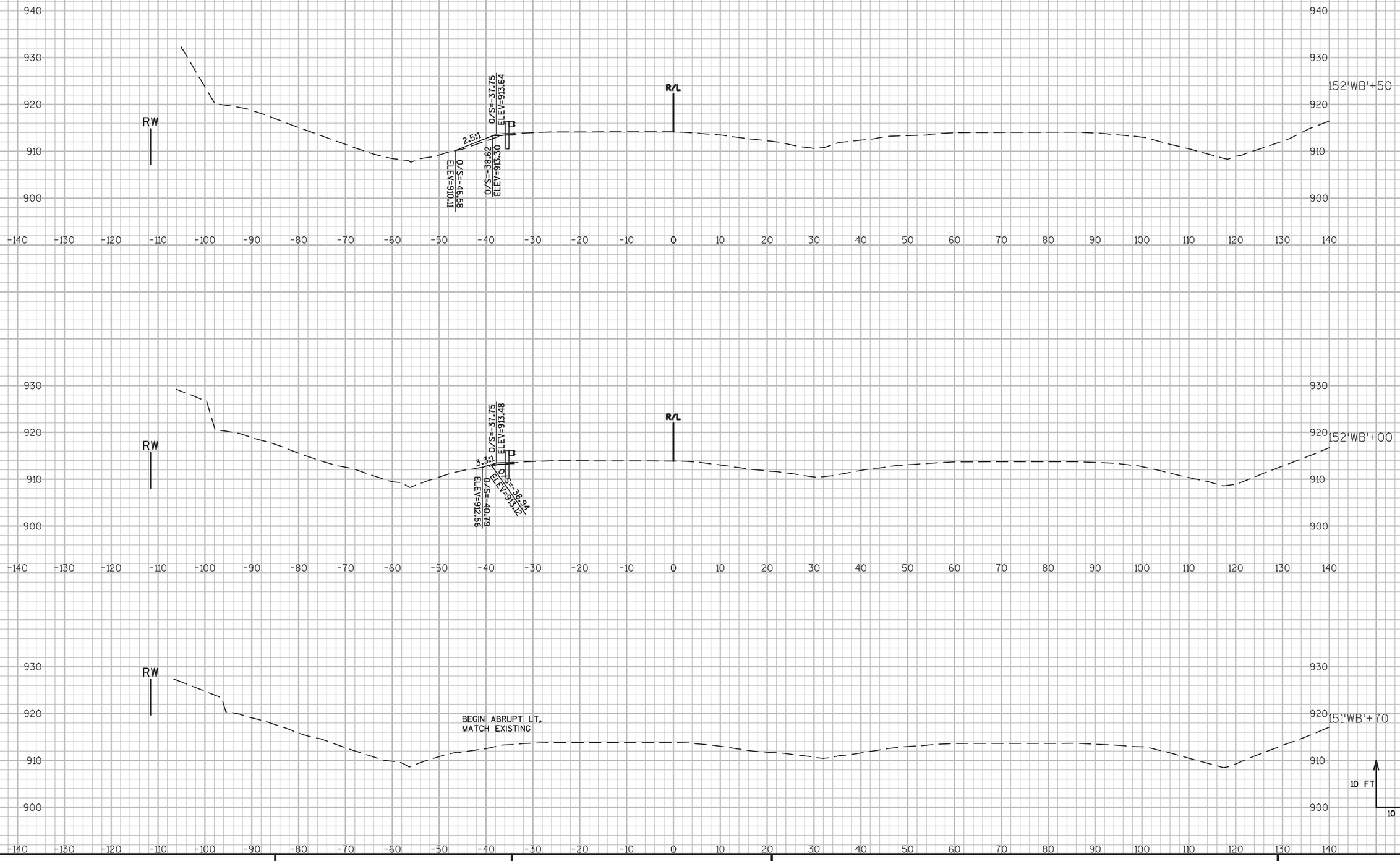
1052-01-62
STH 27 - SW WIDENING (ALIGNMENT 'S')

STATION	DISTANCE	AREA (SF)		INCREMENTAL VOL (CY) (UNADJUSTED)		CUMULATIVE VOL (CY)		MASS ORDINATE
		CUT	FILL	CUT NOTE 1	FILL NOTE 2	CUT 1.00 NOTE 1	FILL 1.25 NOTE 3	NOTE 4
98+04	0	0	0	0	0	0	0	0
98+34	30	30	0	17	0	17	0	17
98+46	12	26	1	13	1	30	2	28
98+74	28	28	4	28	3	58	5	53
98+85	11	14	3	9	2	67	8	59
98+90	5	4	2	2	1	69	9	60
99+00	10	0	0	1	1	70	10	60
			COLUMN TOTALS	70	8			

1052-01-62
STH 27 - RAMP SC WIDENING (ALIGNMENT 'SD')

STATION	DISTANCE	AREA (SF)		INCREMENTAL VOL (CY) (UNADJUSTED)		CUMULATIVE VOL (CY)		MASS ORDINATE
		CUT	FILL	CUT NOTE 1	FILL NOTE 2	CUT 1.00 NOTE 1	FILL 1.25 NOTE 3	NOTE 4
608+40	0	0	0	0	0	0	0	0
608+75	35.09	34	1	22	1	22	2	20
609+00	25	45	1	36	1	58	3	55
610+00	100	83	0	236	2	294	5	289
610+18	17.92	67	0	50	0	344	5	339
610+30	11.82	36	0	23	0	367	5	362
610+45	14.92	32	0	19	0	386	5	381
610+75	30.05	0	0	18	0	404	5	399
			COLUMN TOTALS	404	4			

NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL. SALVAGED/UNUSABLE PAVEMENT MATERIAL IS CALCULATED ON THE SUMMARY SHEET.
2 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME. SALVAGED/UNUSABLE PAVEMENT MATERIAL IS CALCULATED ON THE SUMMARY SHEET.
3 - EXPANDED FILL	(UNEXPANDED FILL)*(FILL FACTOR)
4 - MASS ORDINATE	CUT - (EXPANDED FILL); PLUS INDICATES AN EXCESS OF MATERIAL

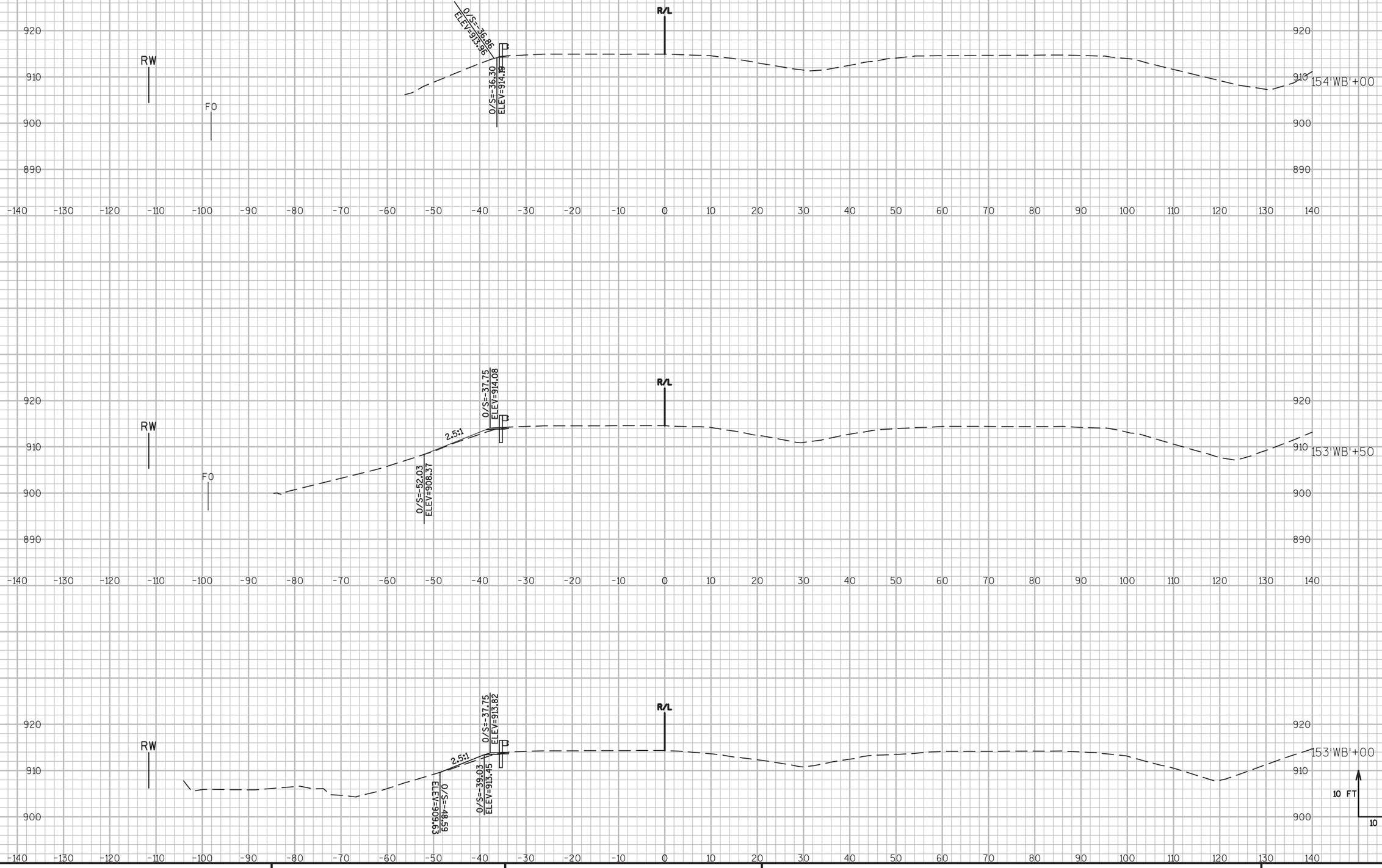


PROJECT NO: 1051-01-61	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 WB	SHEET 311	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 090290-XS

PLOT DATE : 7/29/2016 10:39 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



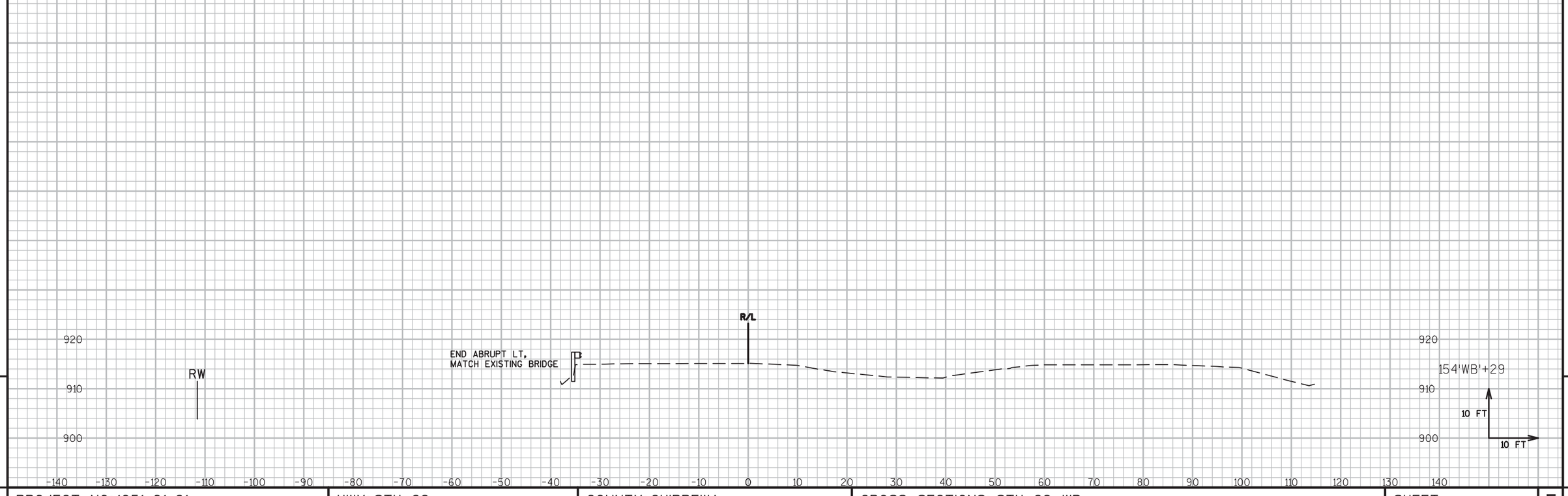
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PROJECT NO: 1051-01-61	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 WB	SHEET 312	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 090290-XS

PLOT DATE : 7/29/2016 10:40 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT



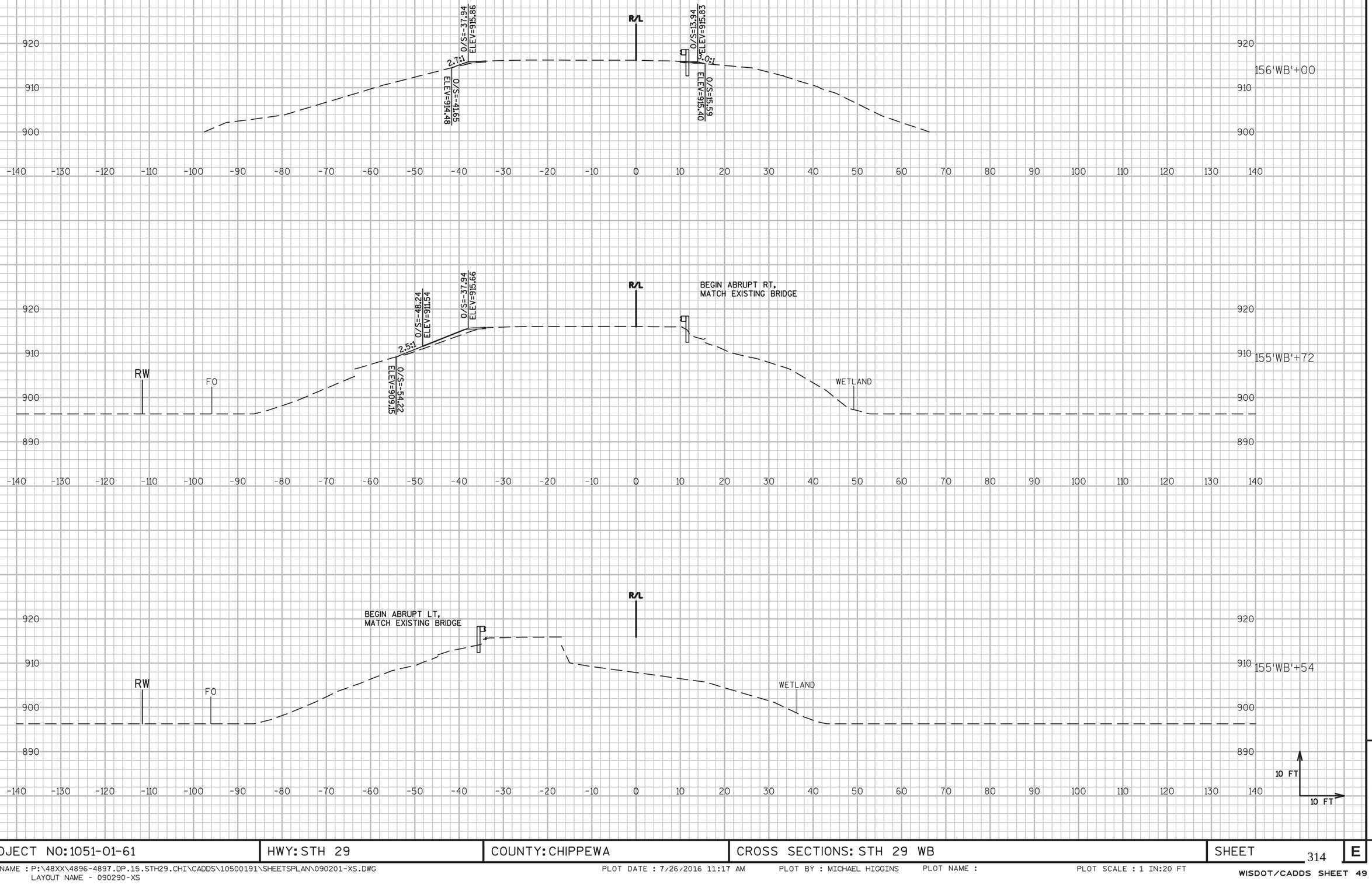
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PROJECT NO: 1051-01-61	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 WB	SHEET 313	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 090290-XS

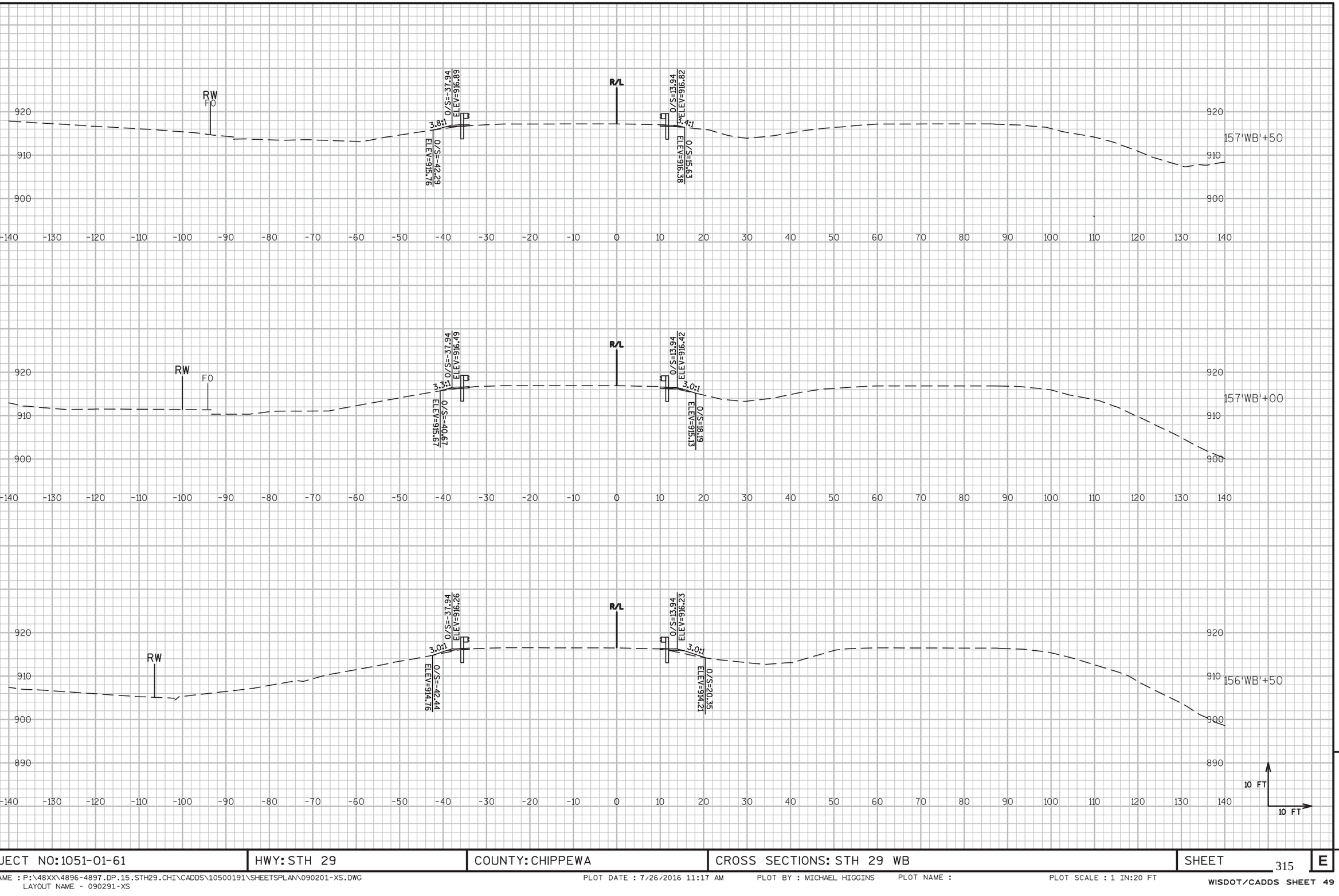
PLOT DATE : 7/26/2016 11:17 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT



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PROJECT NO: 1051-01-61	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 WB	SHEET 314	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 090290-XS
PLOT DATE : 7/26/2016 11:17 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 49



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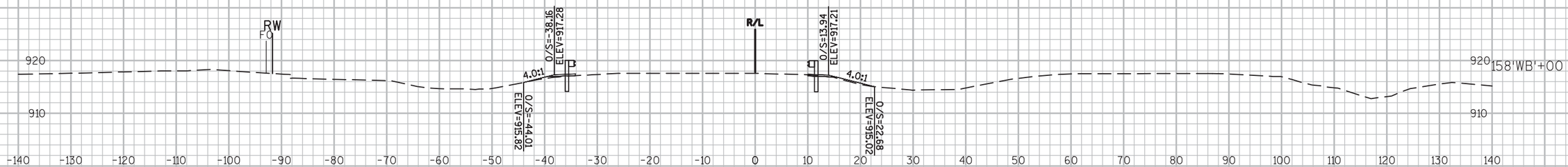
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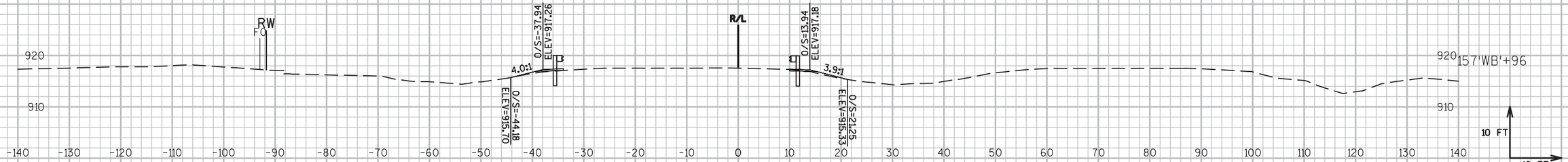
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LAYOUT NAME - 090291-XS

PLOT DATE : 7/26/2016 11:17 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49







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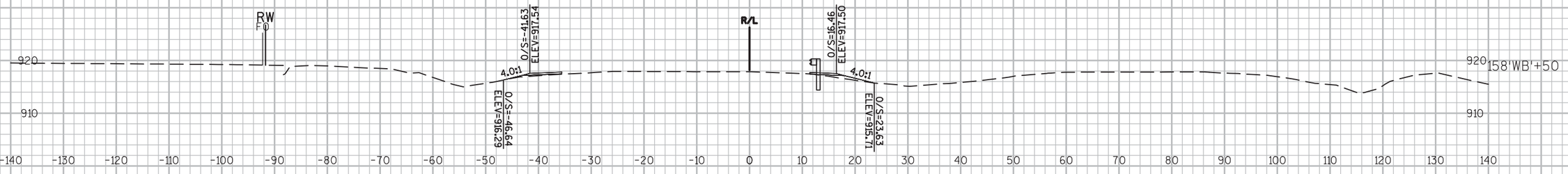
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LAYOUT NAME - 090292-XS

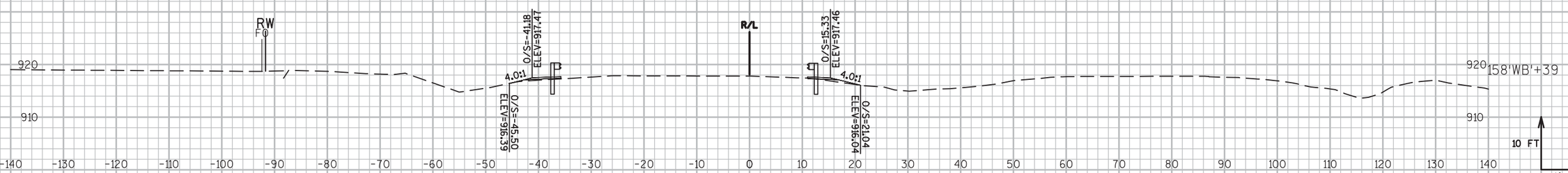
PLOT DATE : 7/26/2016 11:17 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49







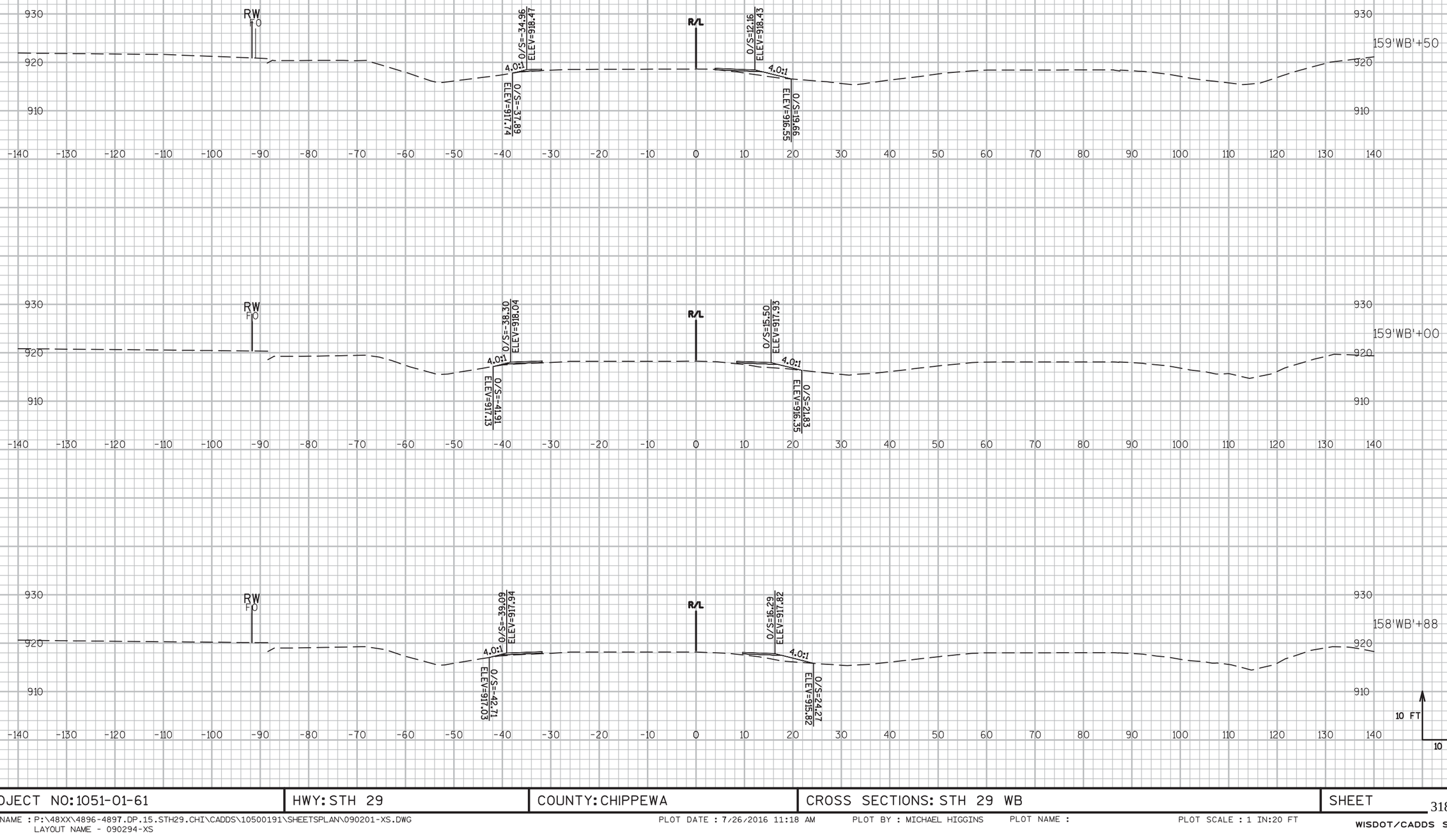


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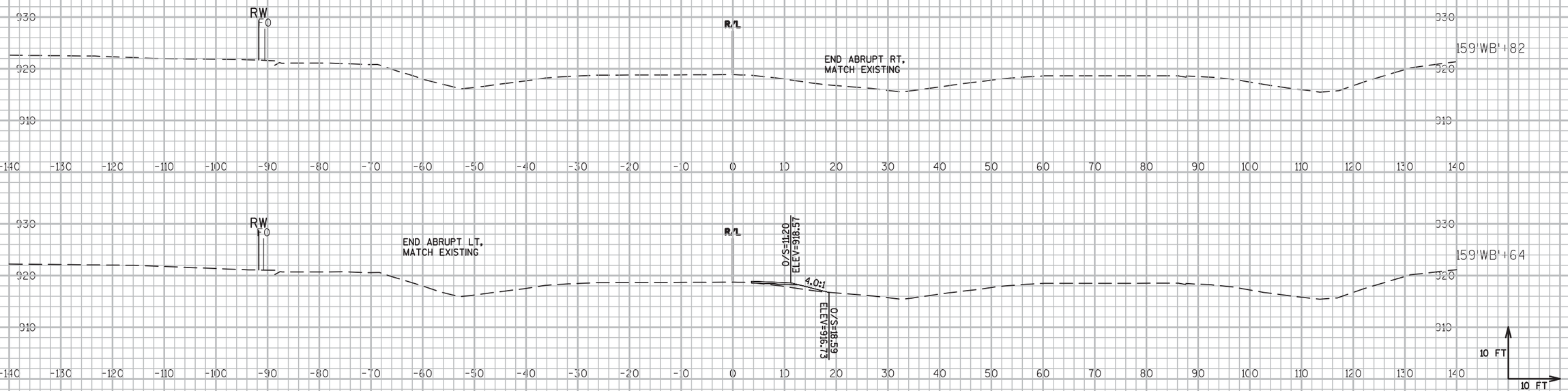
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FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 090293-XS
PLOT DATE : 7/26/2016 11:18 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 49



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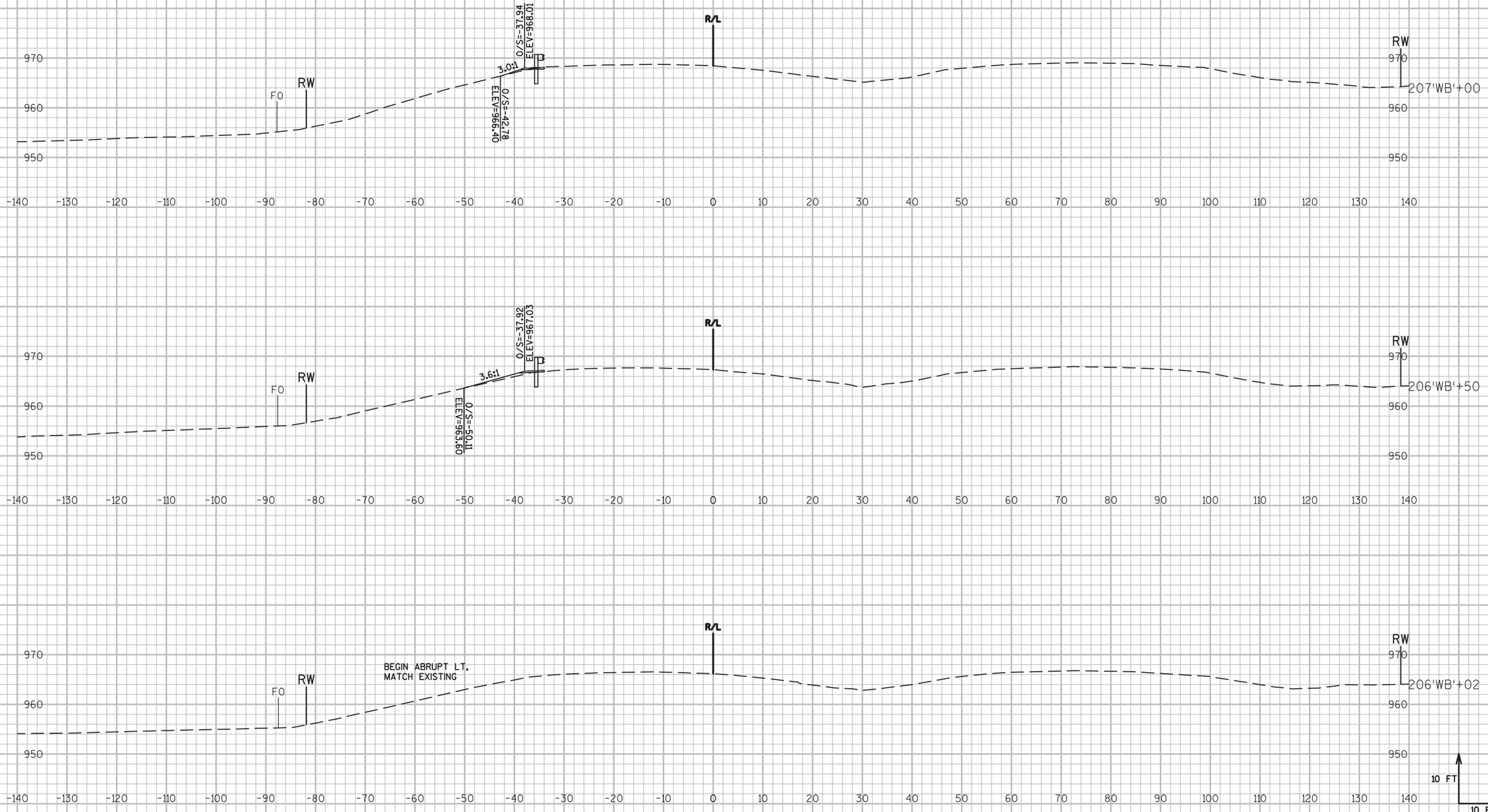
PROJECT NO: 1051-01-61	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 WB	SHEET 318	E



PROJECT NO: 1051-01-61	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 WB	SHEET 319	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 090295-XS

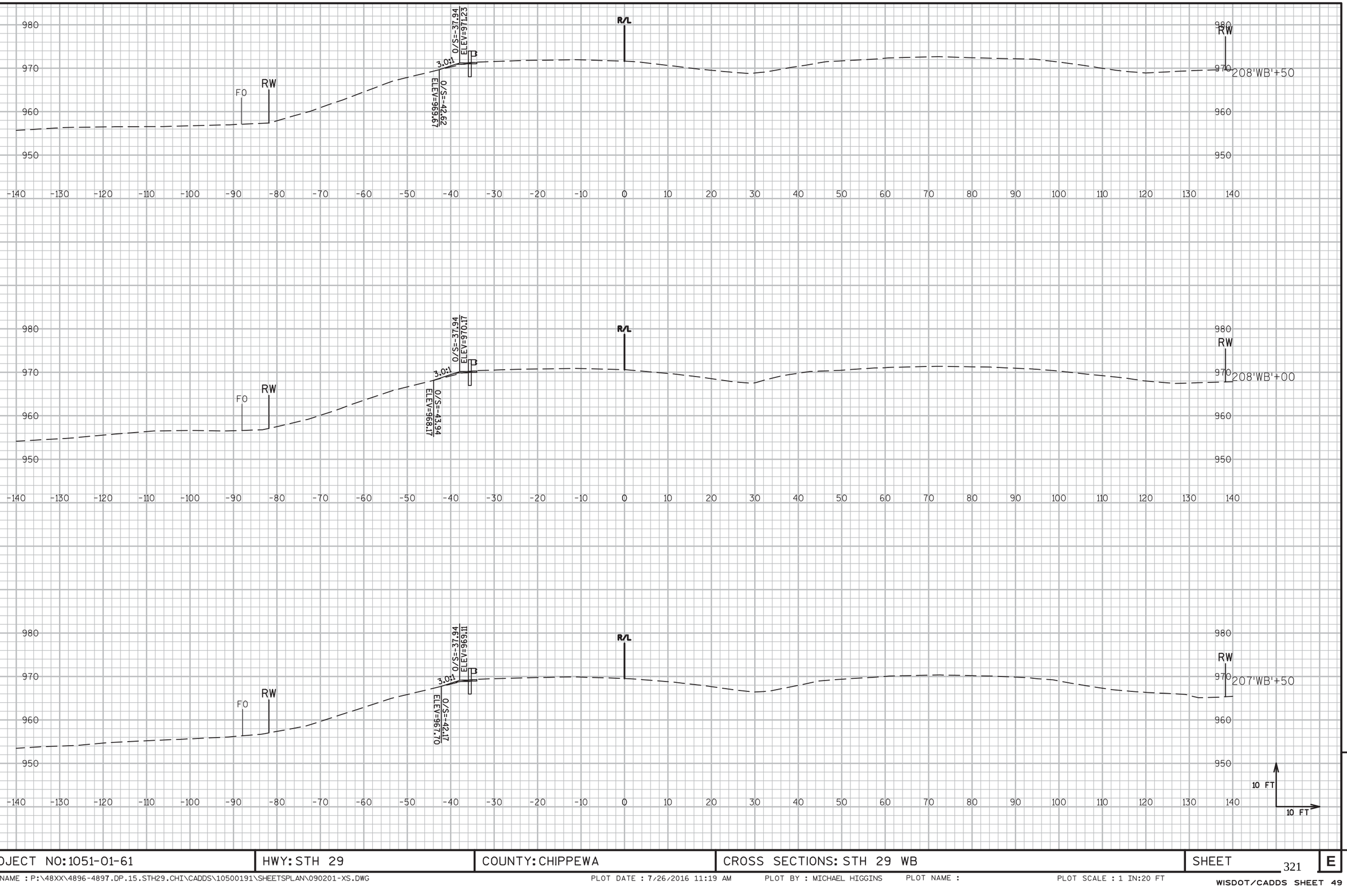
PLOT DATE : 7/26/2016 11:18 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT



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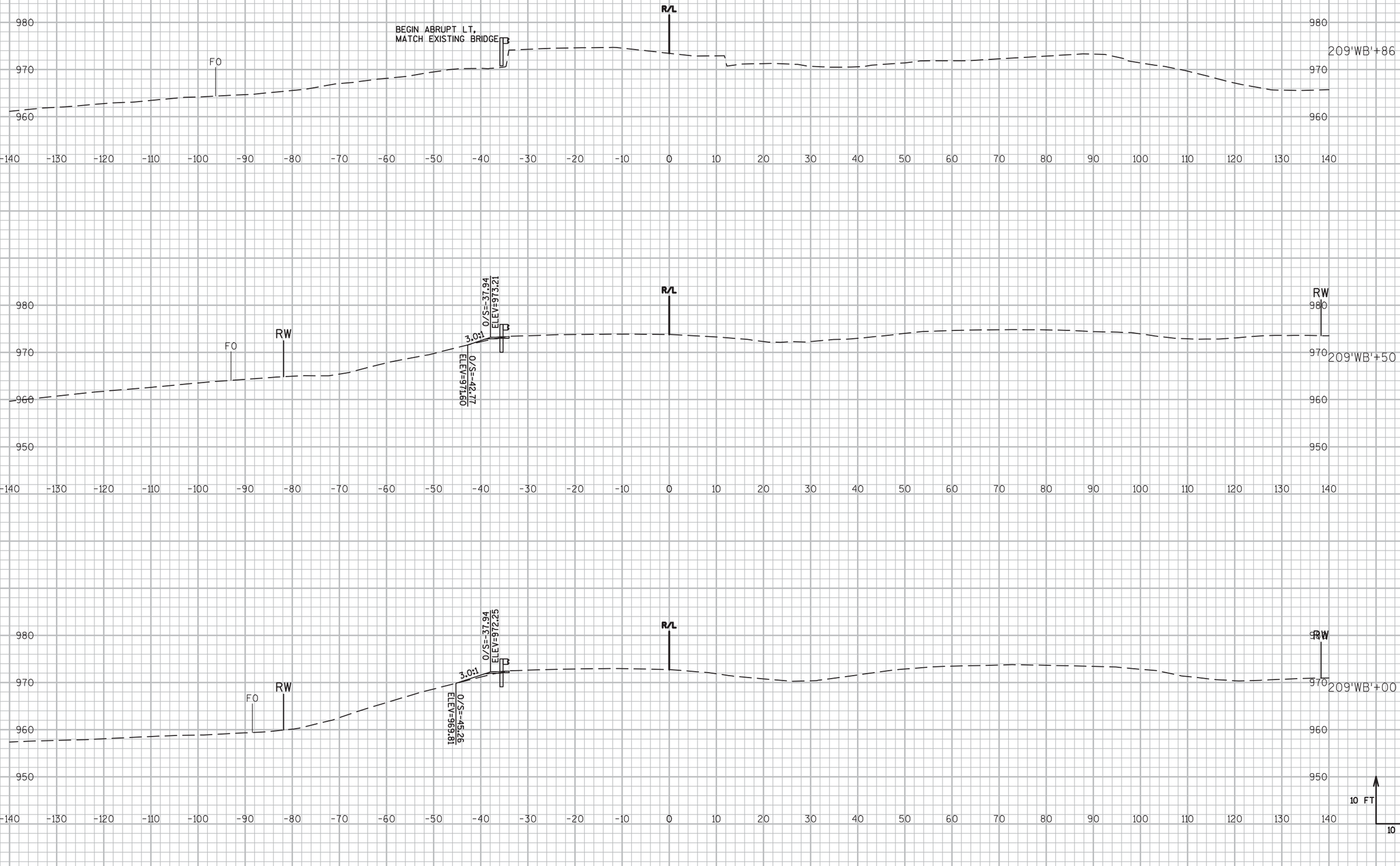
PROJECT NO: 1051-01-61	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 WB	SHEET 320	E



PROJECT NO: 1051-01-61	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 WB	SHEET 321	E

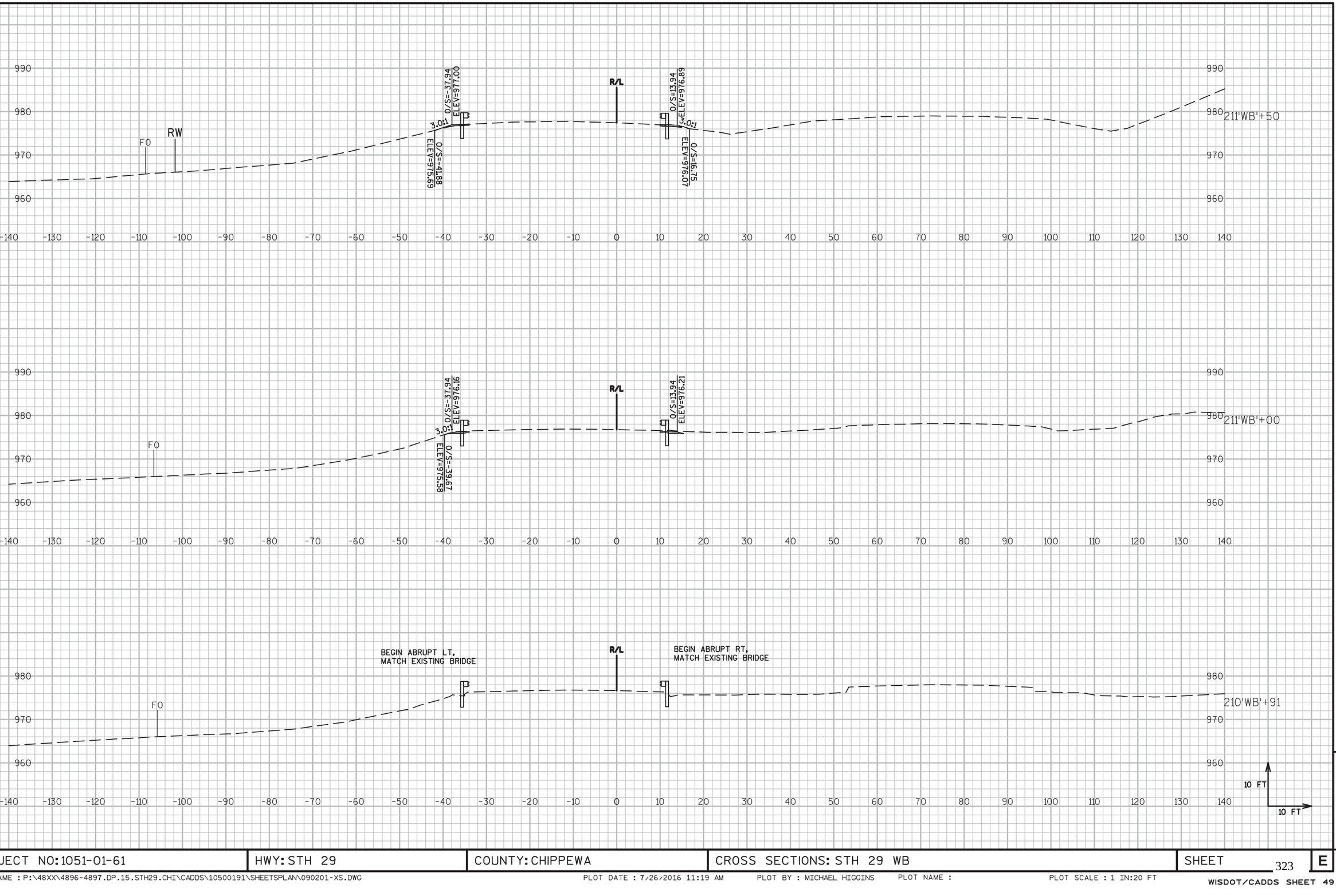
FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090201-XS.DWG PLOT DATE : 7/26/2016 11:19 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



PROJECT NO: 1051-01-61	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 WB	SHEET 322	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090201-XS.DWG PLOT DATE : 7/26/2016 11:19 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 49

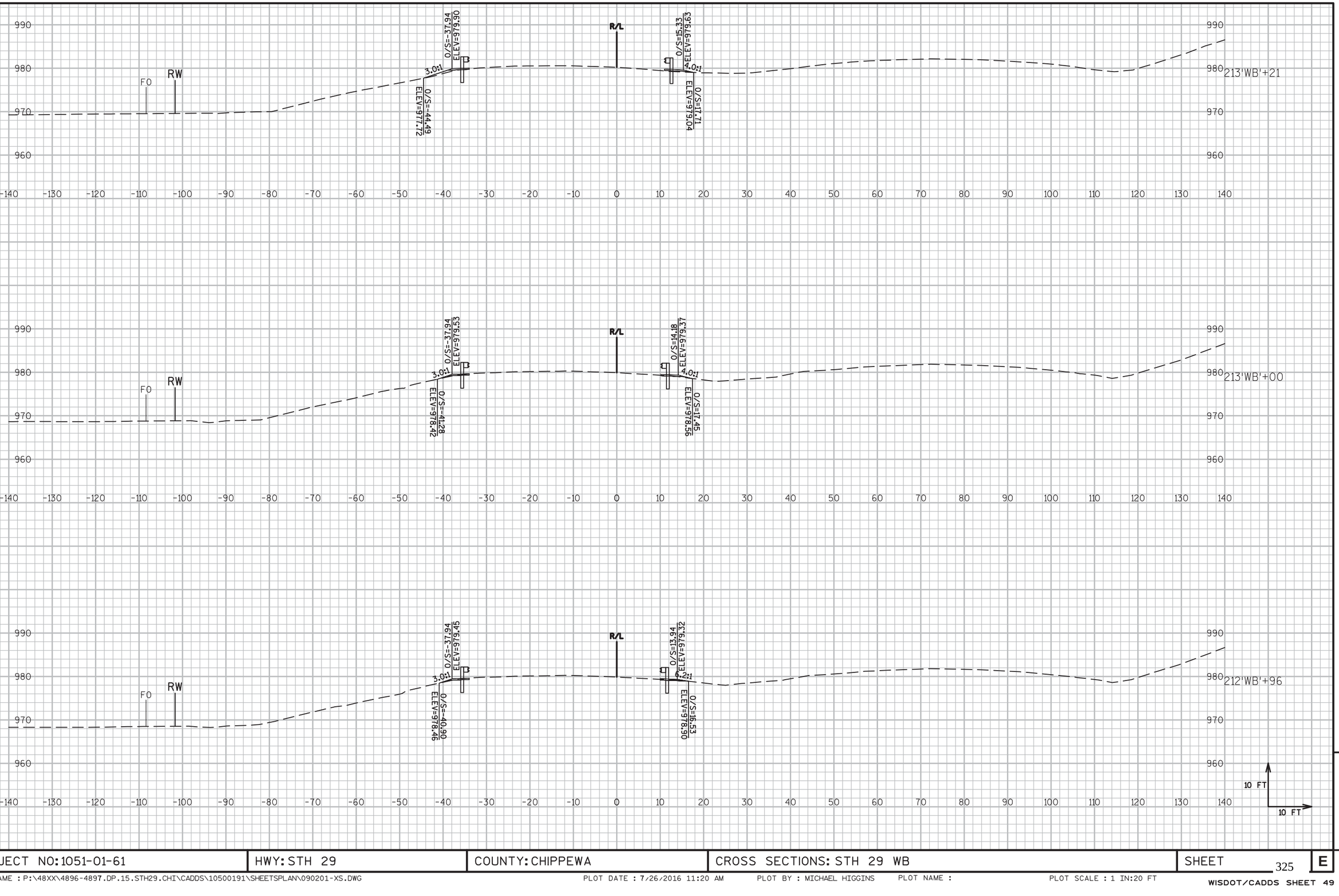


PROJECT NO: 1051-01-61	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 WB	SHEET 323	E

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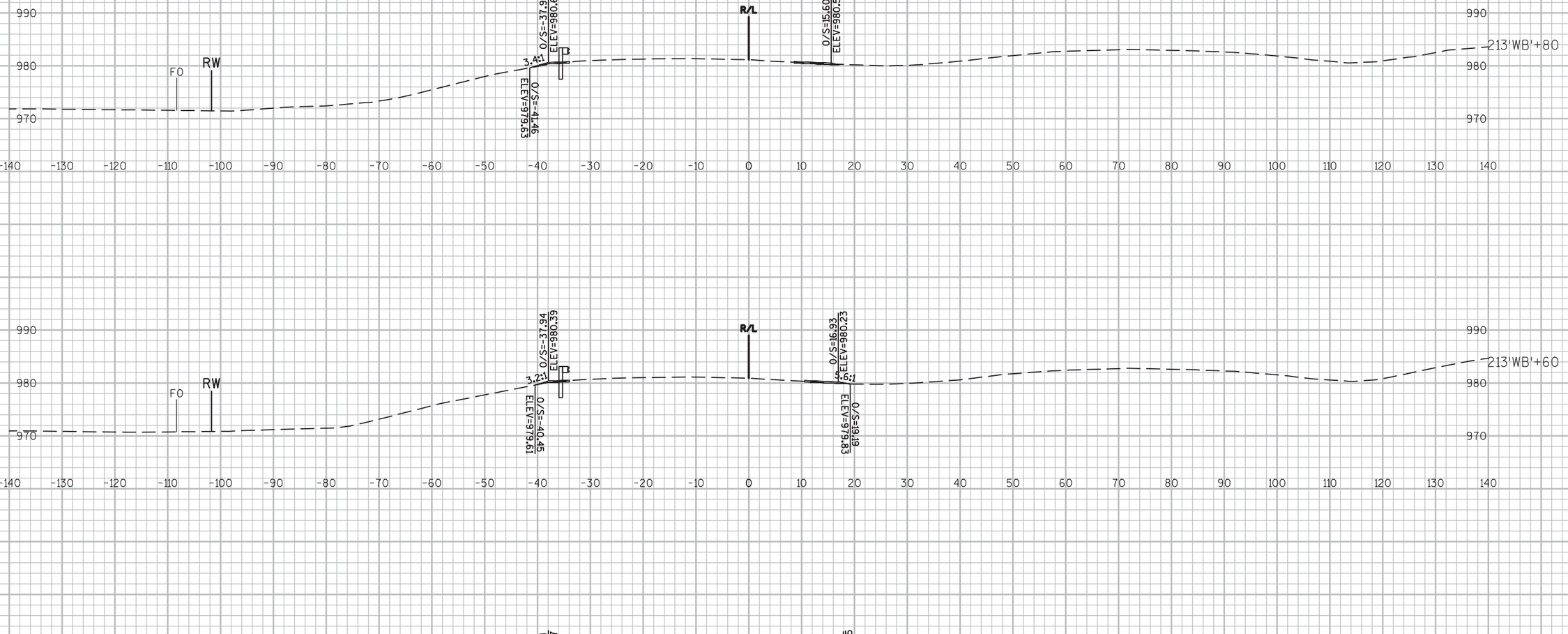
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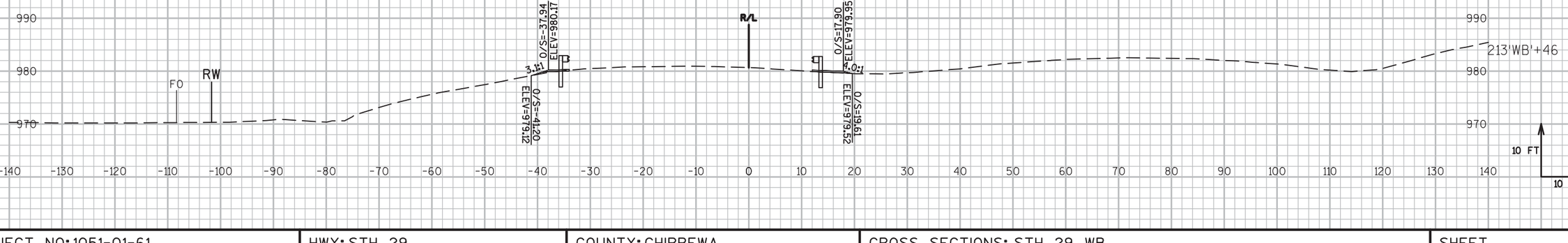


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PROJECT NO: 1051-01-61	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 WB	SHEET 325	E

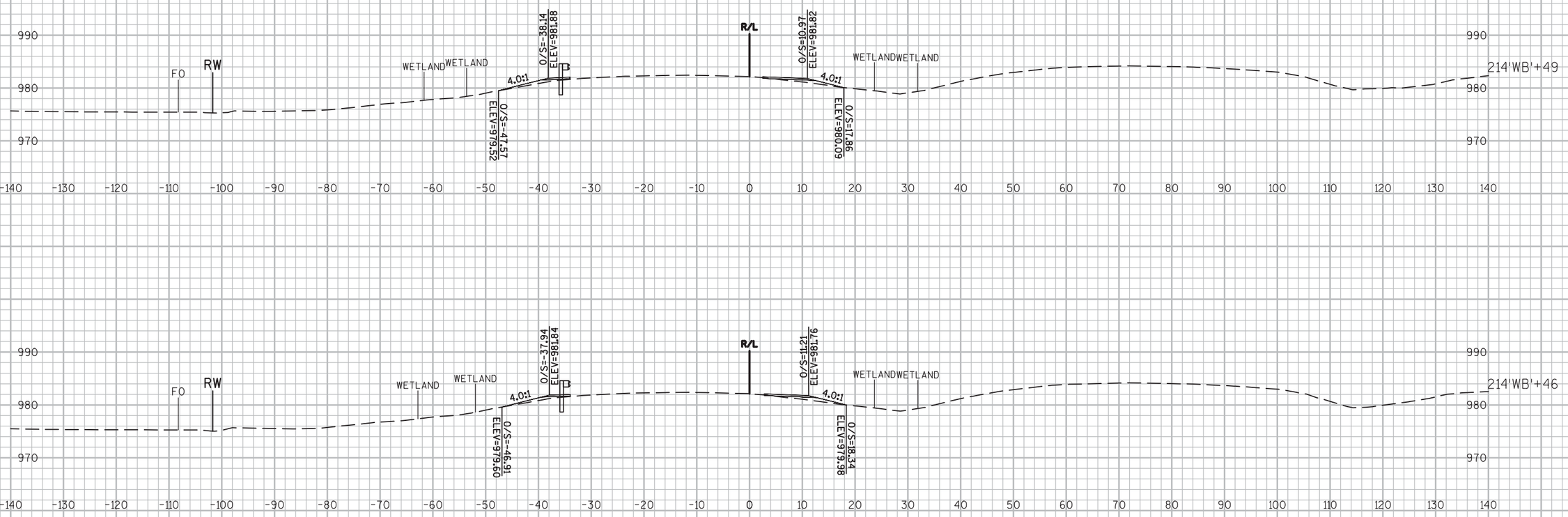


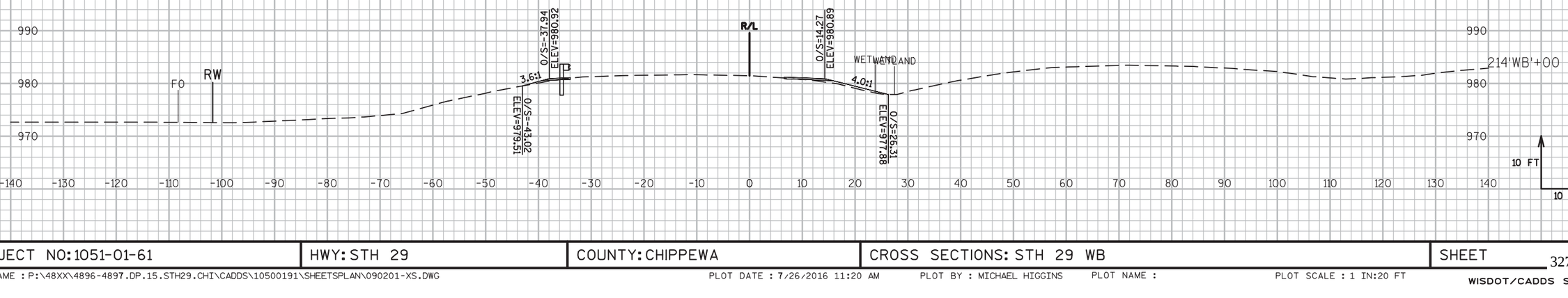


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PROJECT NO: 1051-01-61	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 WB	SHEET 326	E





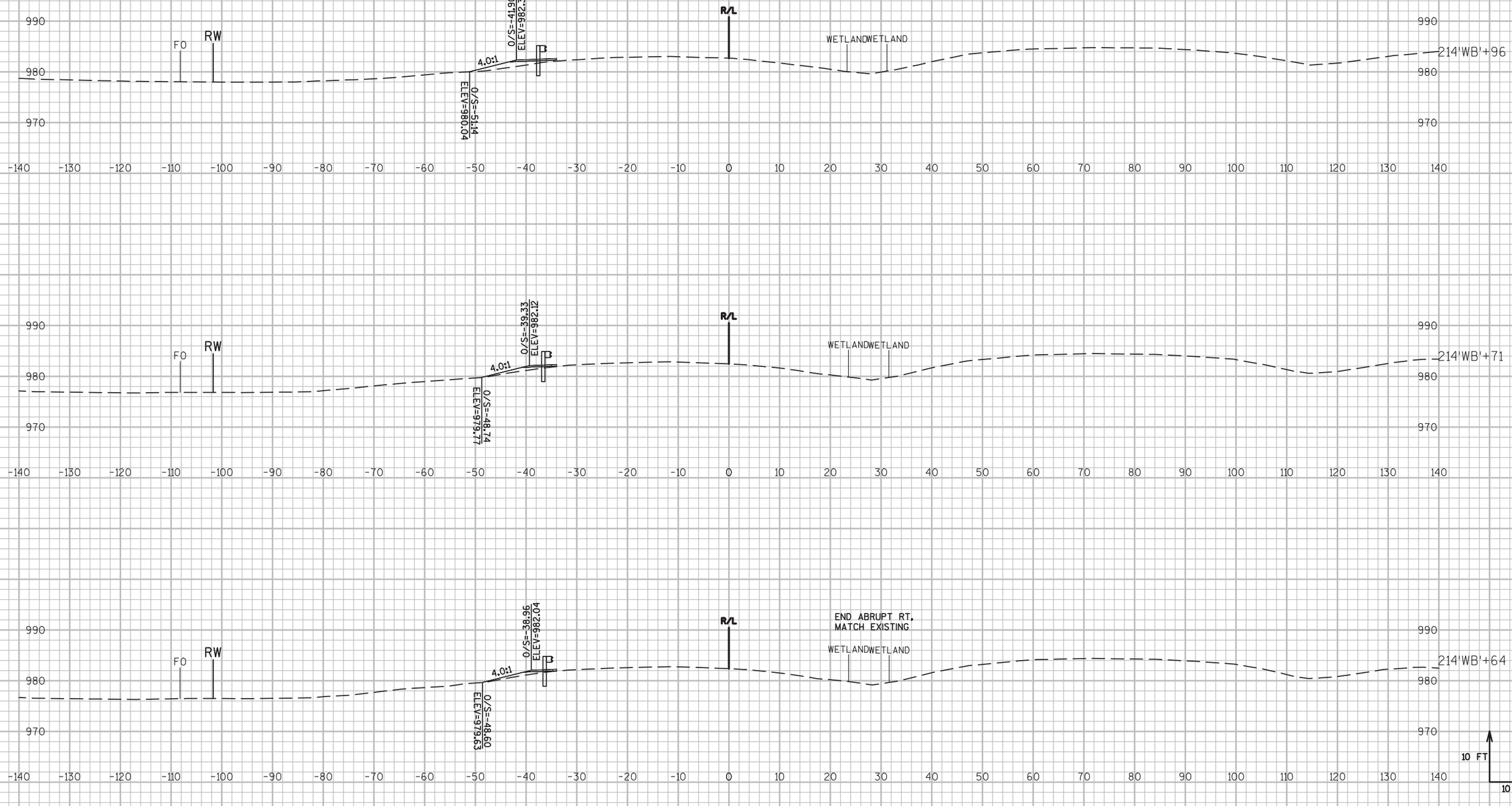
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PROJECT NO: 1051-01-61	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 WB	SHEET 327	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090201-XS.DWG PLOT DATE : 7/26/2016 11:20 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

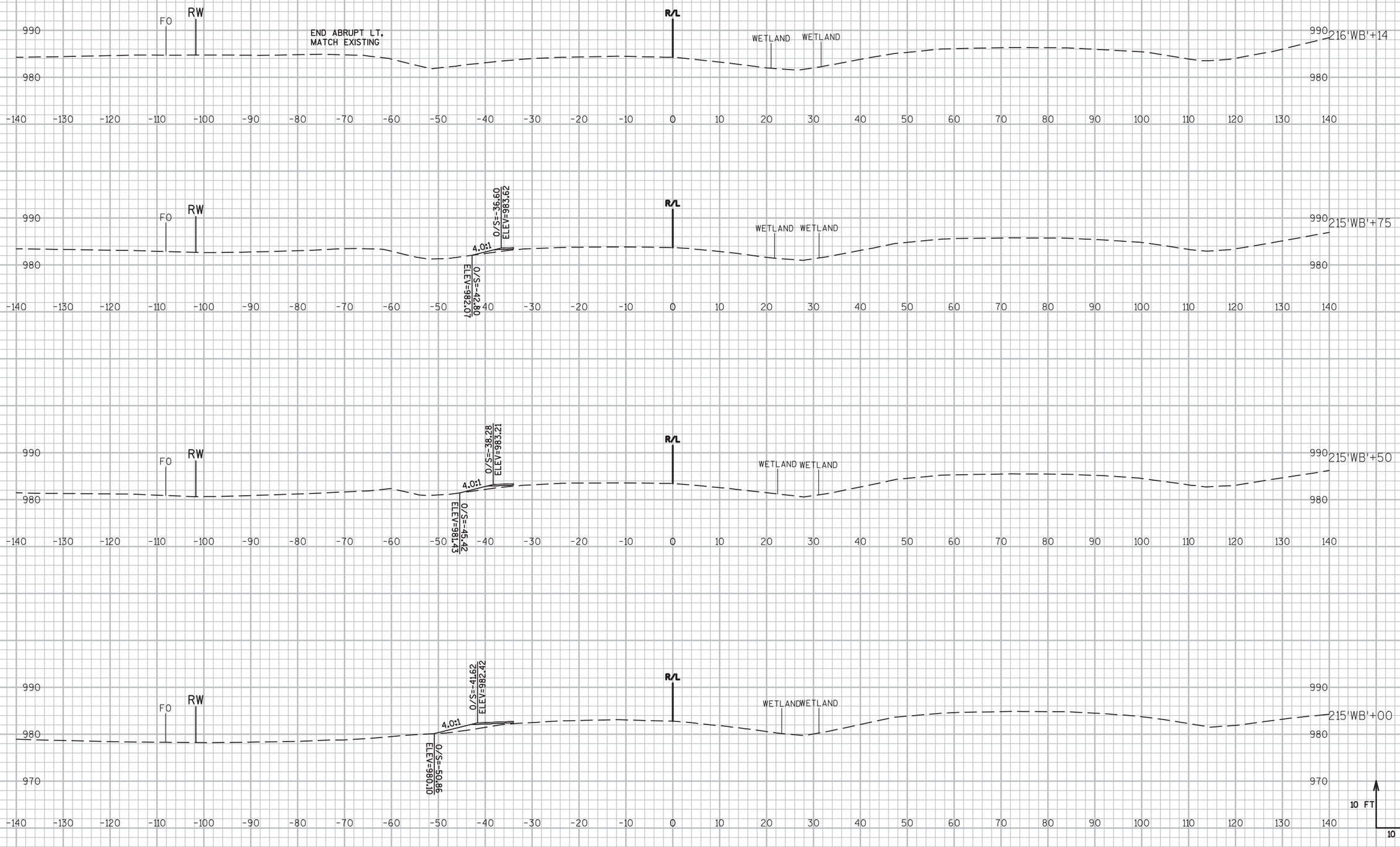


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PROJECT NO: 1051-01-61	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 WB	SHEET 328	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090201-XS.DWG PLOT DATE : 7/26/2016 11:20 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT



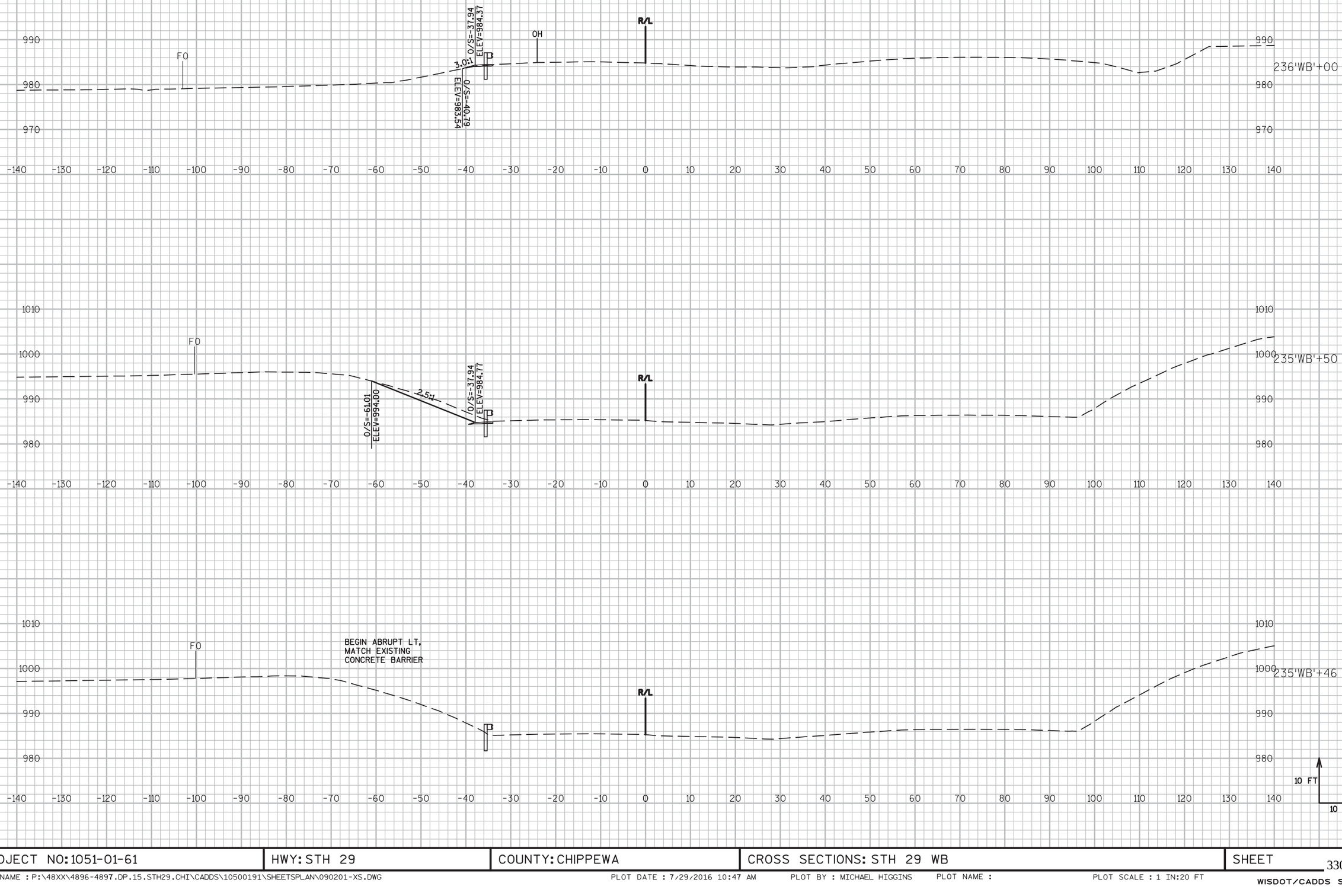
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PROJECT NO: 1051-01-61	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 WB	SHEET 329	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090201-XS.DWG PLOT DATE : 7/26/2016 11:21 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



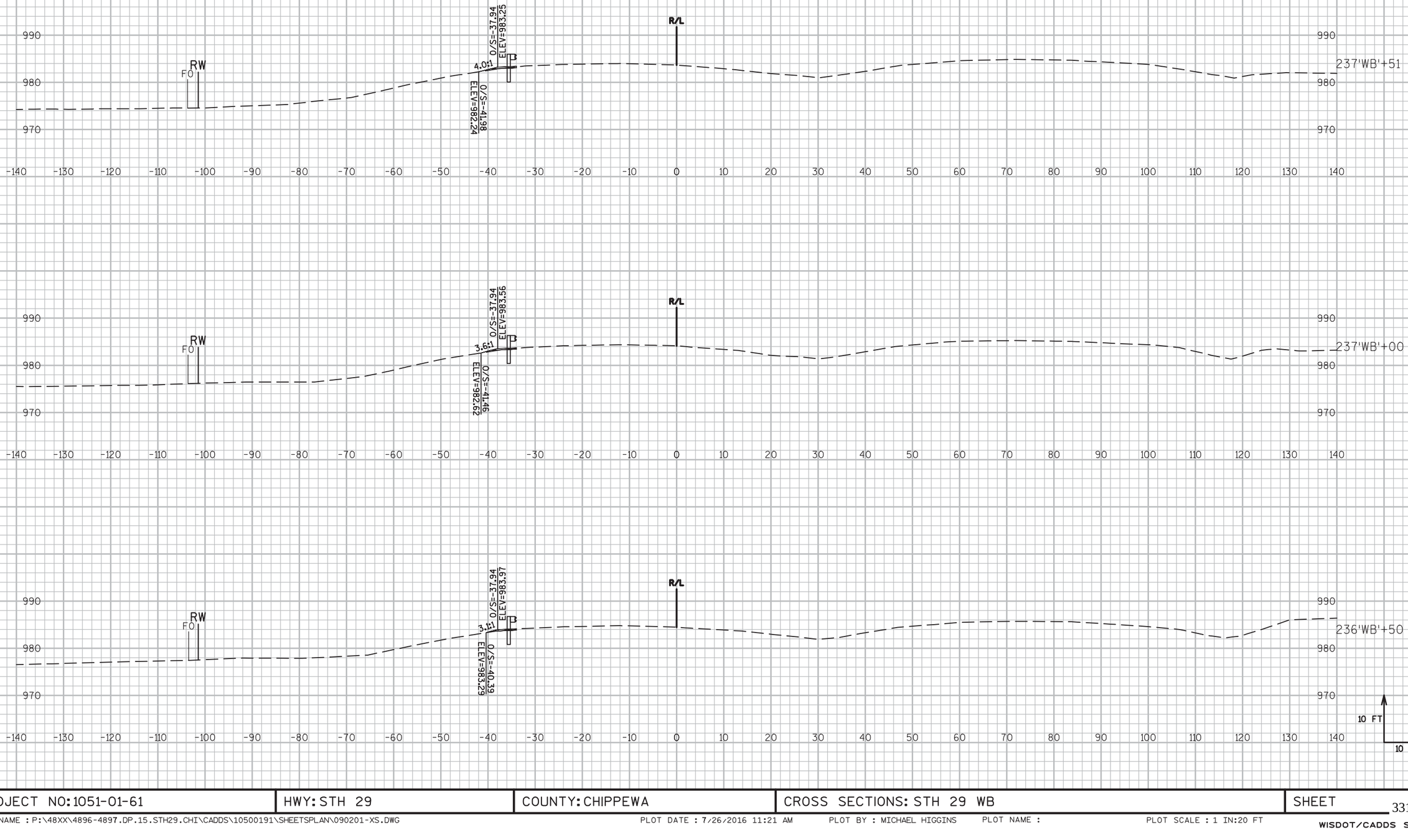
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PROJECT NO: 1051-01-61	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 WB	SHEET 330	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090201-XS.DWG PLOT DATE : 7/29/2016 10:47 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



9

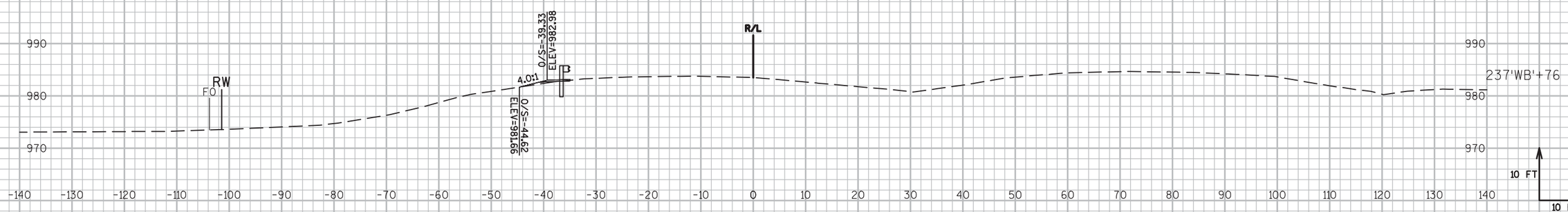
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PROJECT NO: 1051-01-61	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 WB	SHEET 331	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090201-XS.DWG PLOT DATE : 7/26/2016 11:21 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT



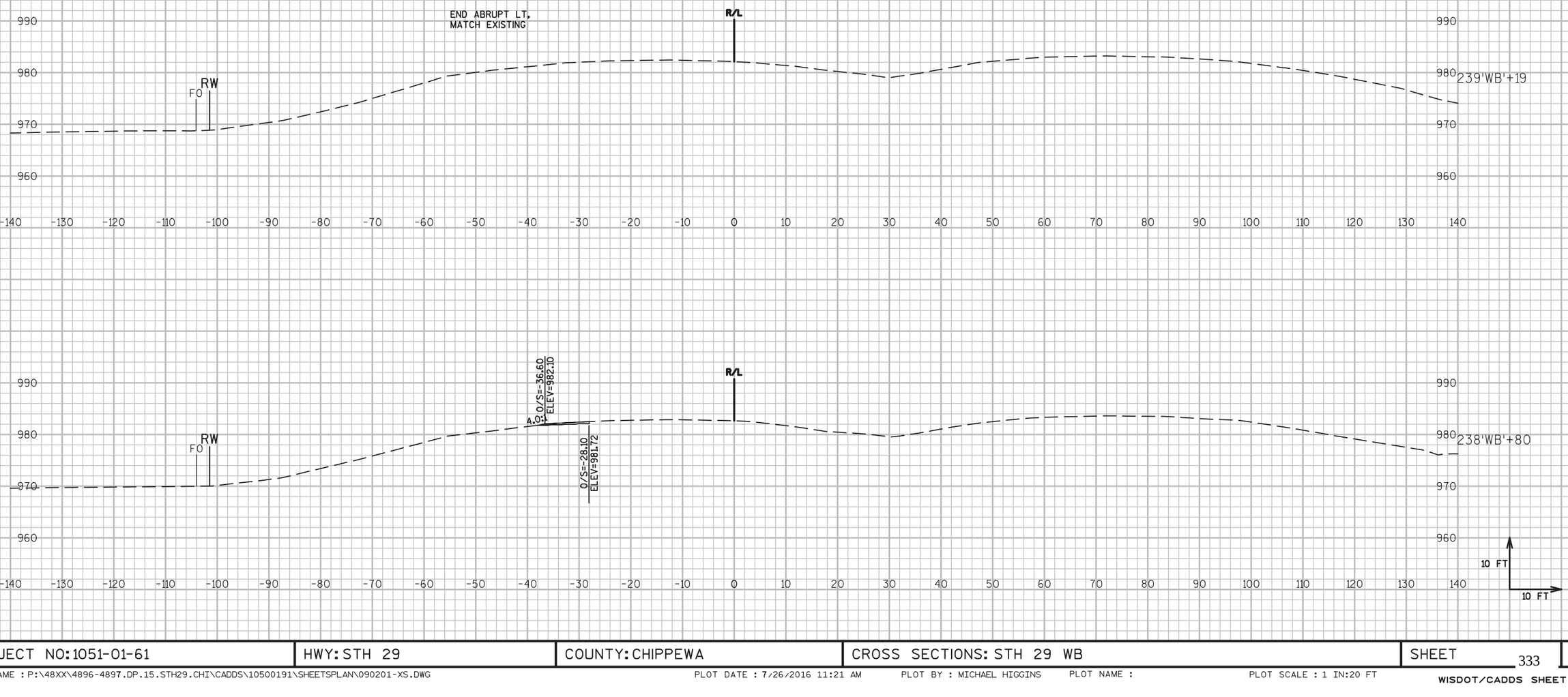




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PROJECT NO: 1051-01-61	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 WB	SHEET 332	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090201-XS.DWG PLOT DATE : 7/26/2016 11:21 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT

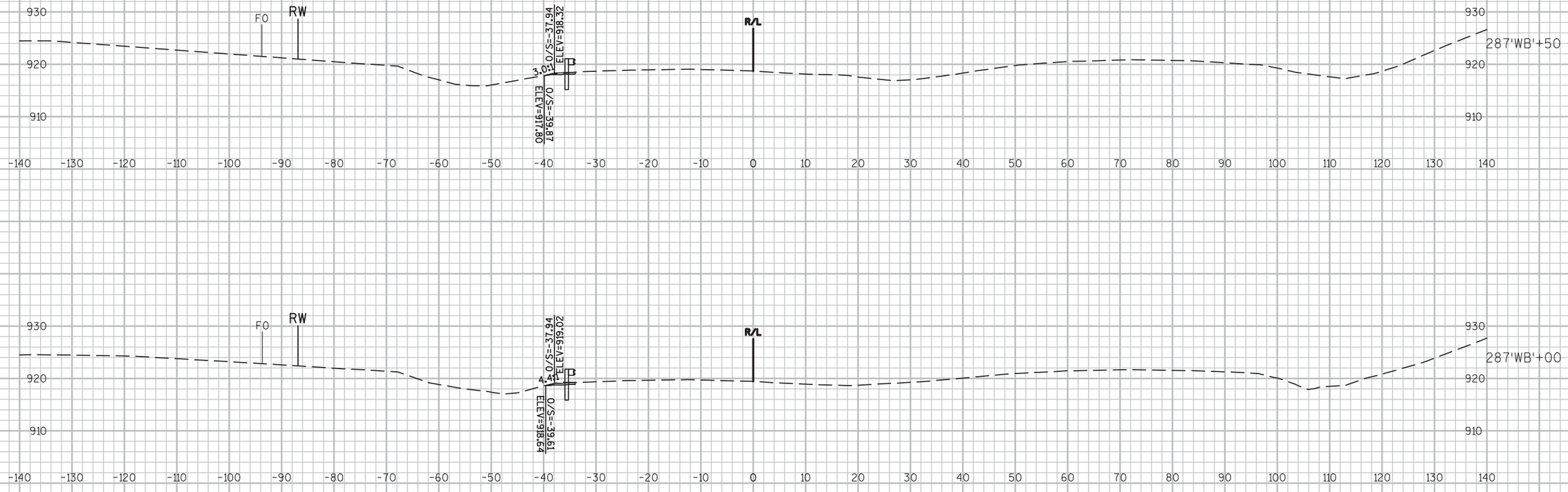


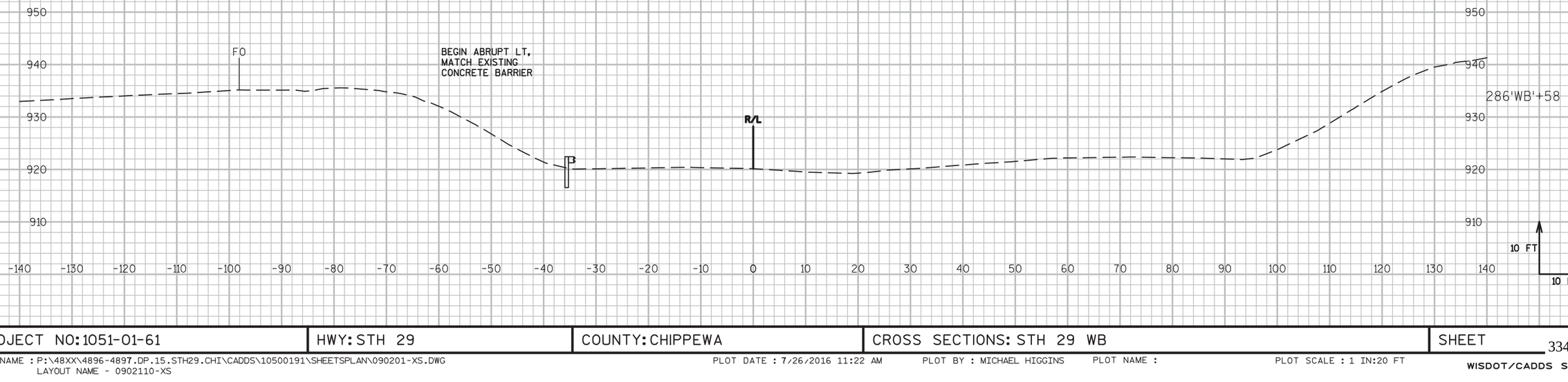
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PROJECT NO: 1051-01-61	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 WB	SHEET 333	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090201-XS.DWG PLOT DATE : 7/26/2016 11:21 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49





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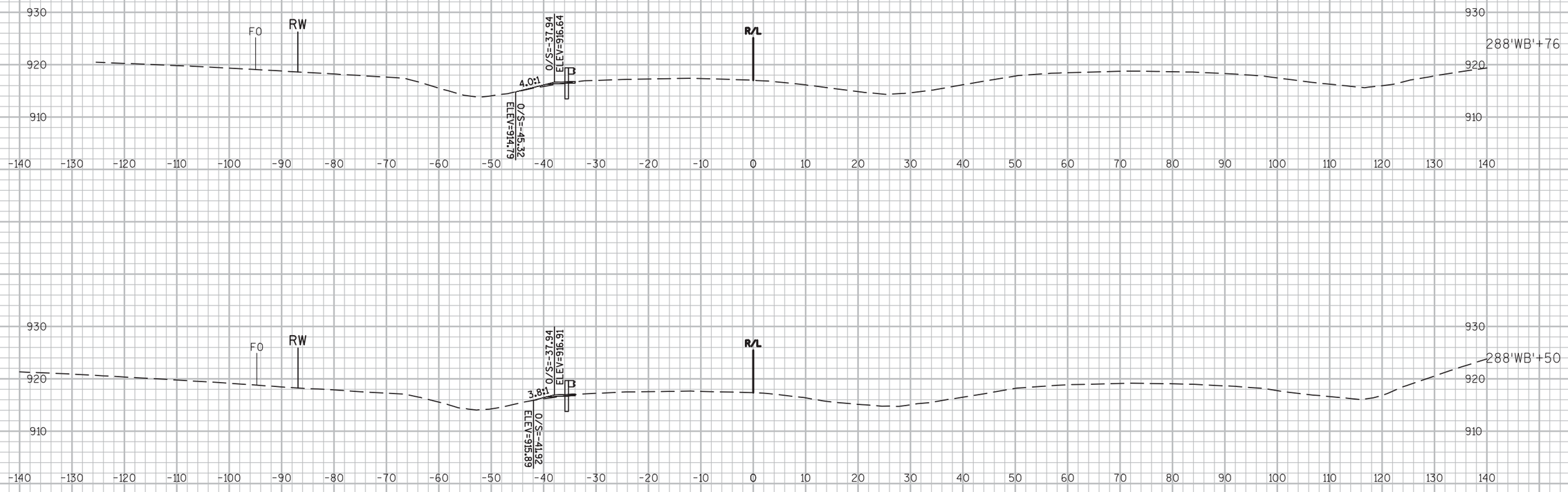
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PROJECT NO: 1051-01-61	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 WB	SHEET 334	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 0902110-XS

PLOT DATE : 7/26/2016 11:22 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49





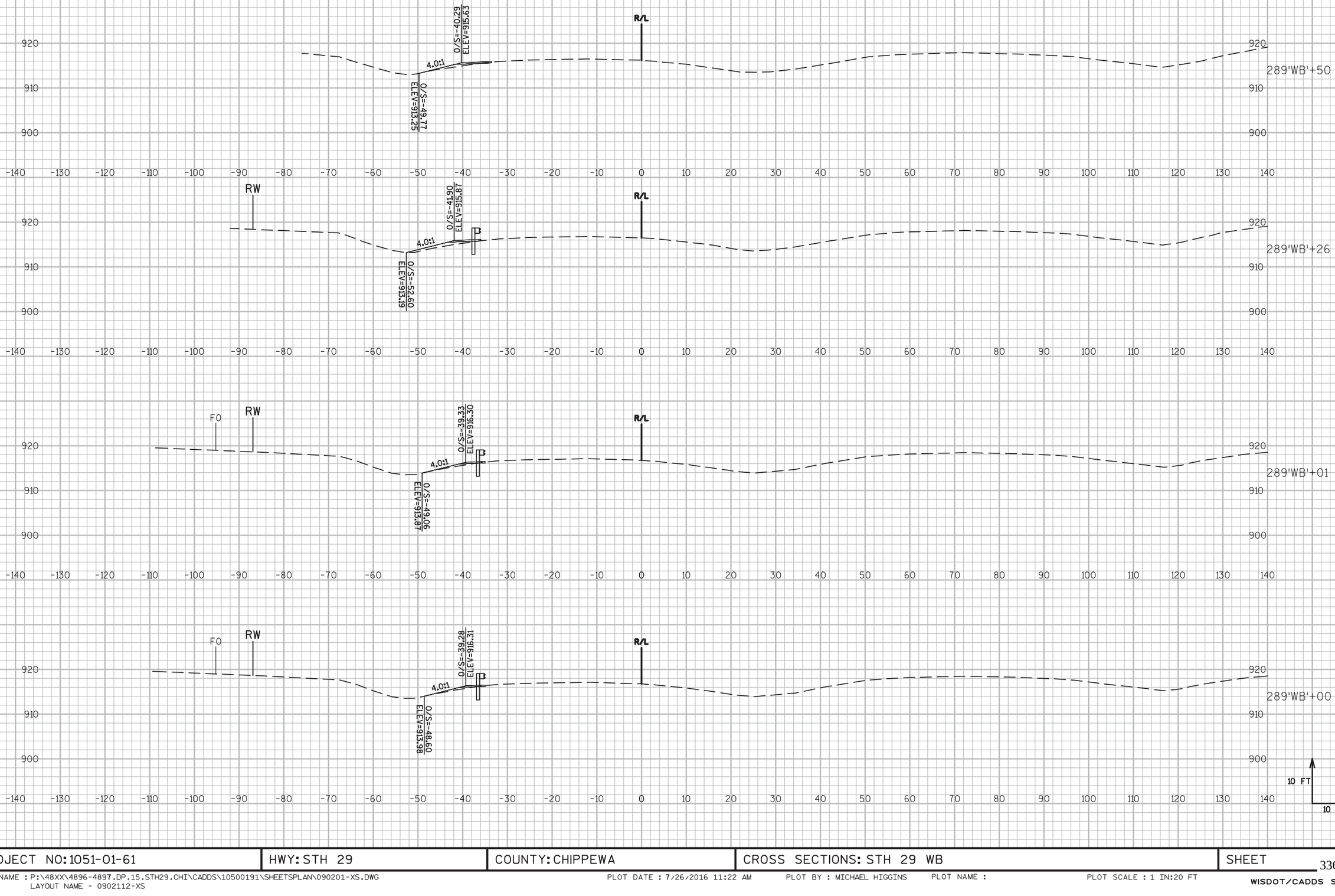
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PROJECT NO: 1051-01-61	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 WB	SHEET 335	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 0902111-XS

PLOT DATE : 7/26/2016 11:22 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT



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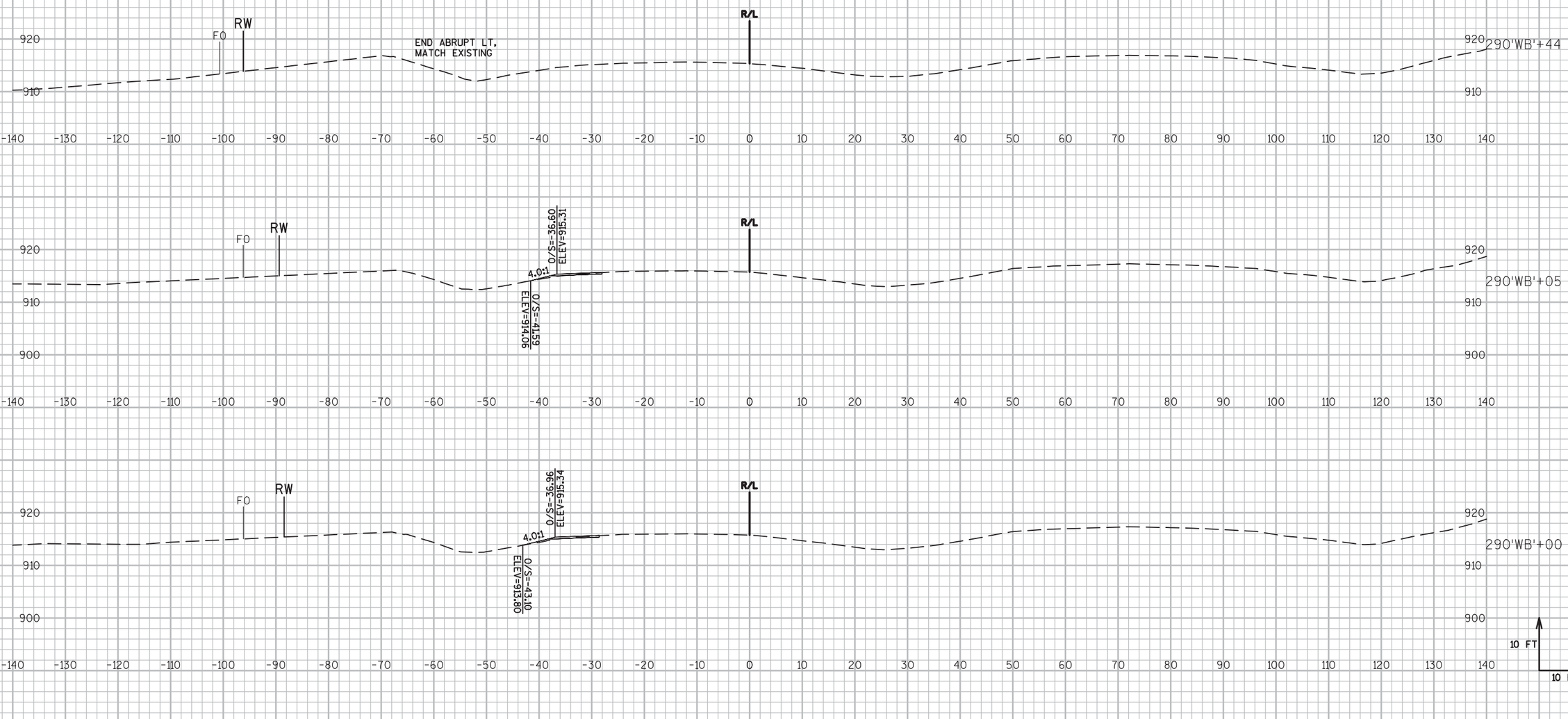
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PROJECT NO: 1051-01-61	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 WB	SHEET 336	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 0902112-XS

PLOT DATE : 7/26/2016 11:22 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



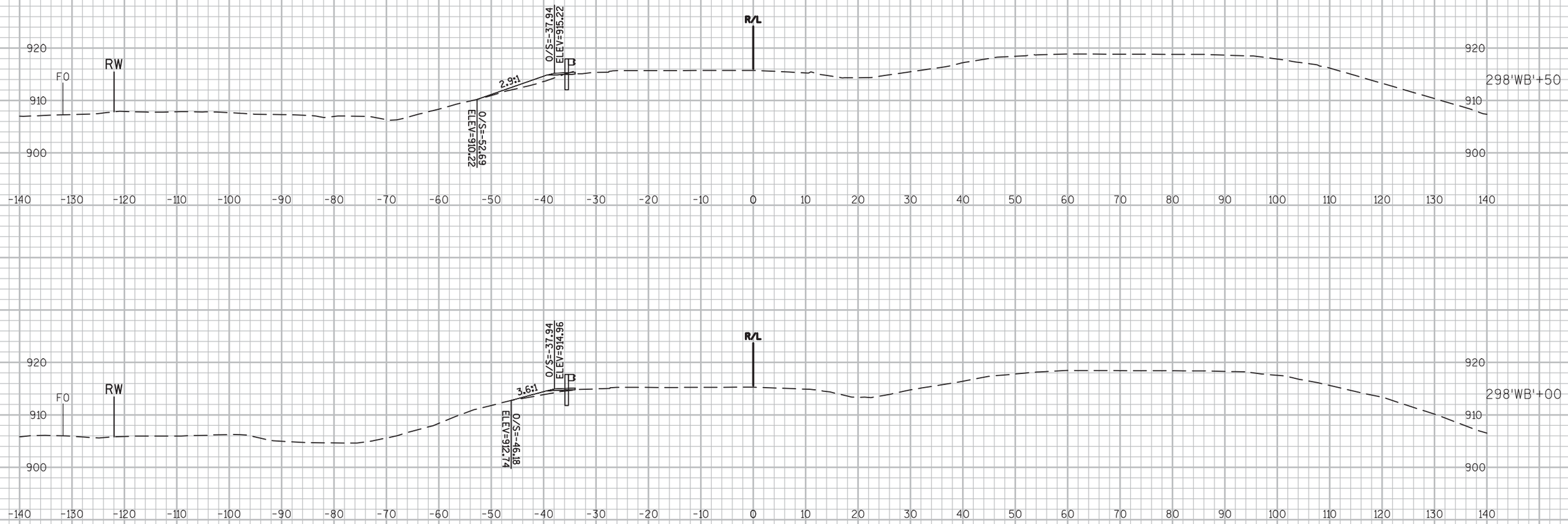
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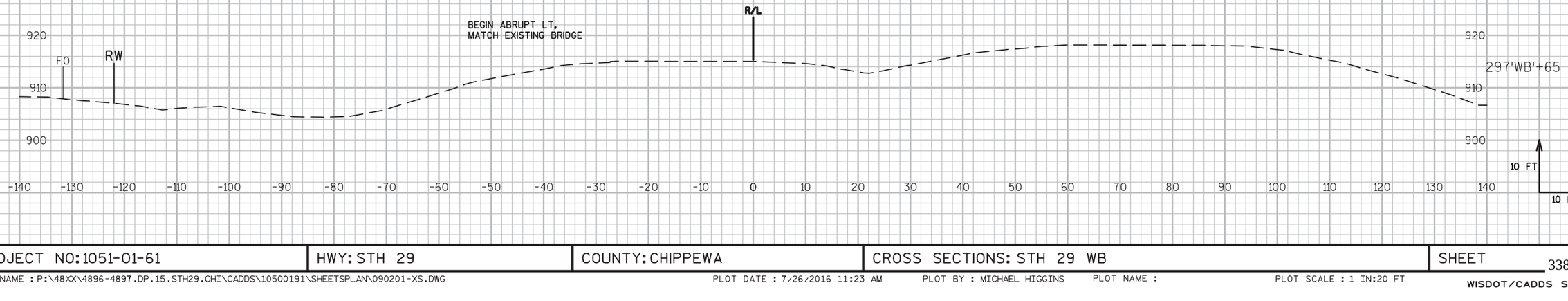
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PROJECT NO: 1051-01-61	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 WB	SHEET 337	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 0902113-XS

PLOT DATE : 7/26/2016 11:22 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT

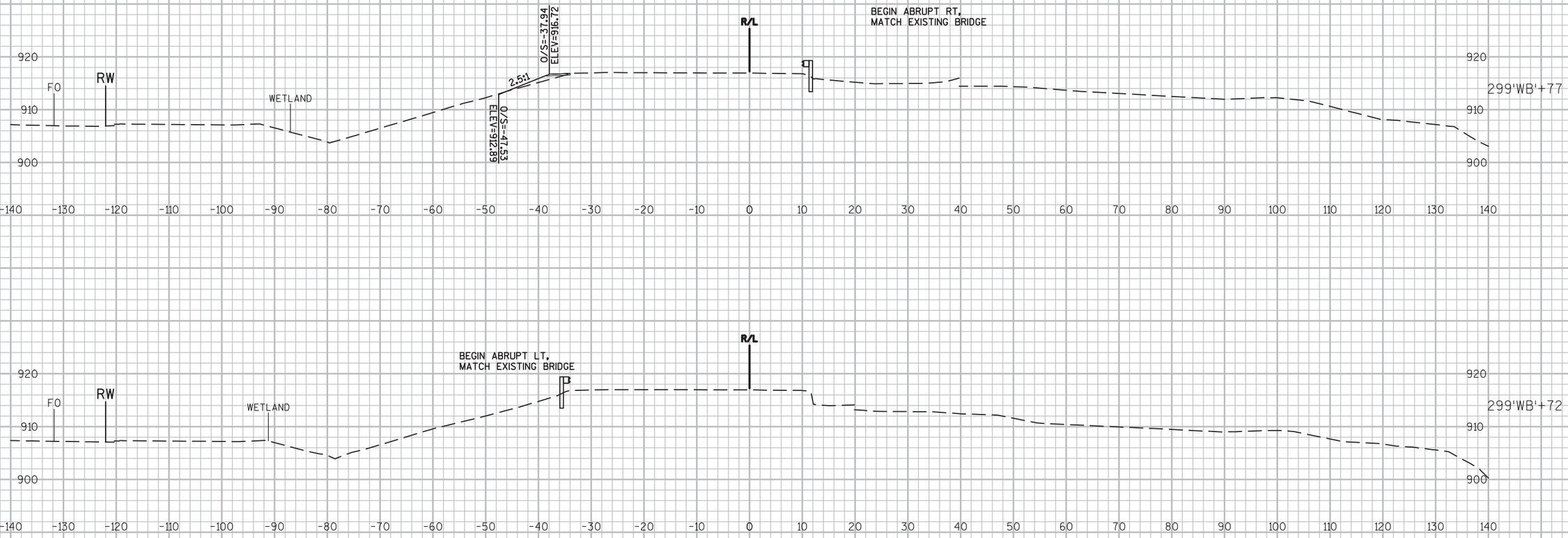




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PROJECT NO: 1051-01-61	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 WB	SHEET 338	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090201-XS.DWG PLOT DATE : 7/26/2016 11:23 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT

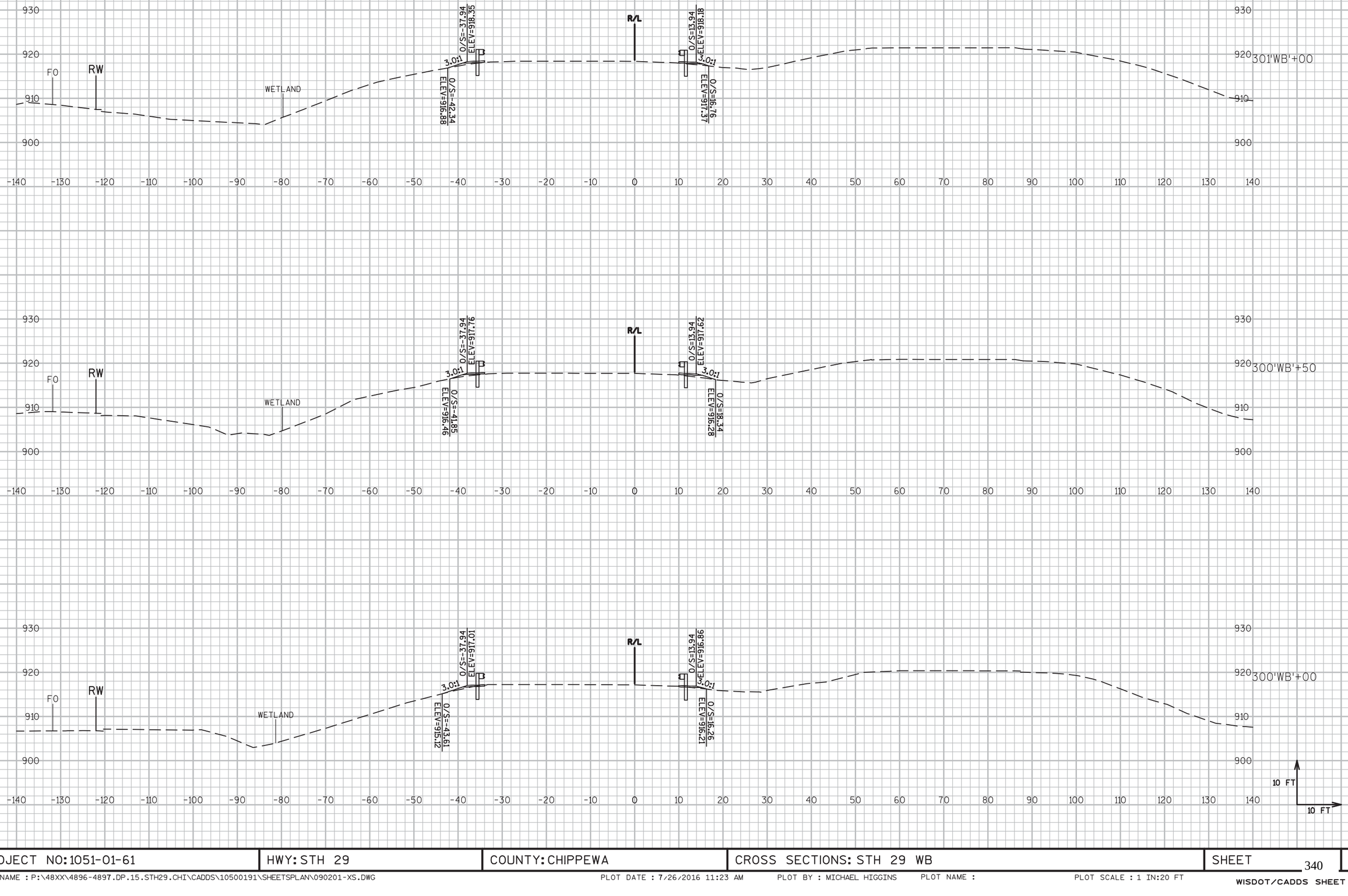


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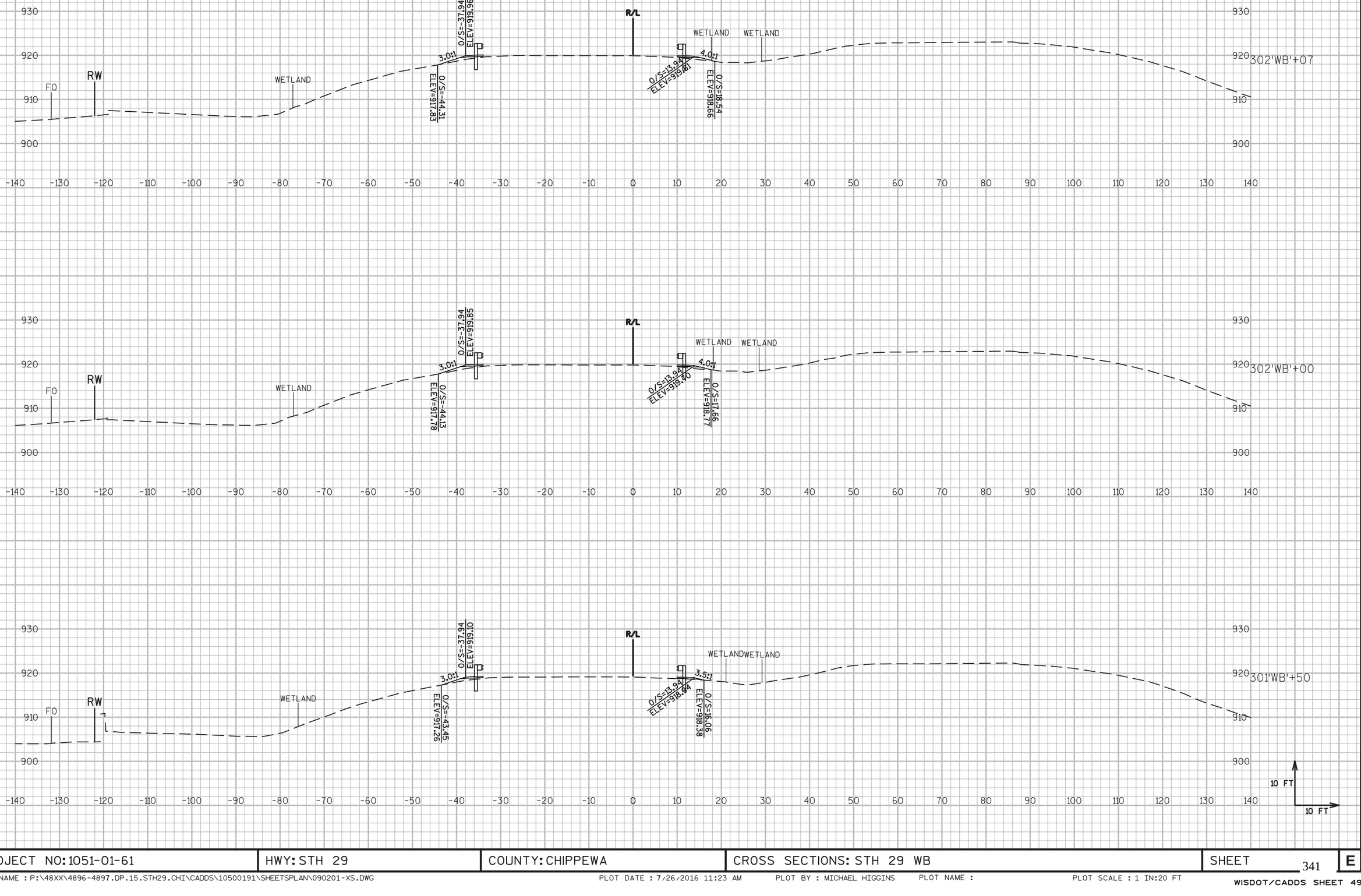
PROJECT NO: 1051-01-61	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 WB	SHEET 339	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090201-XS.DWG PLOT DATE : 7/26/2016 11:23 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT



9 9

PROJECT NO: 1051-01-61	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 WB	SHEET 340	E

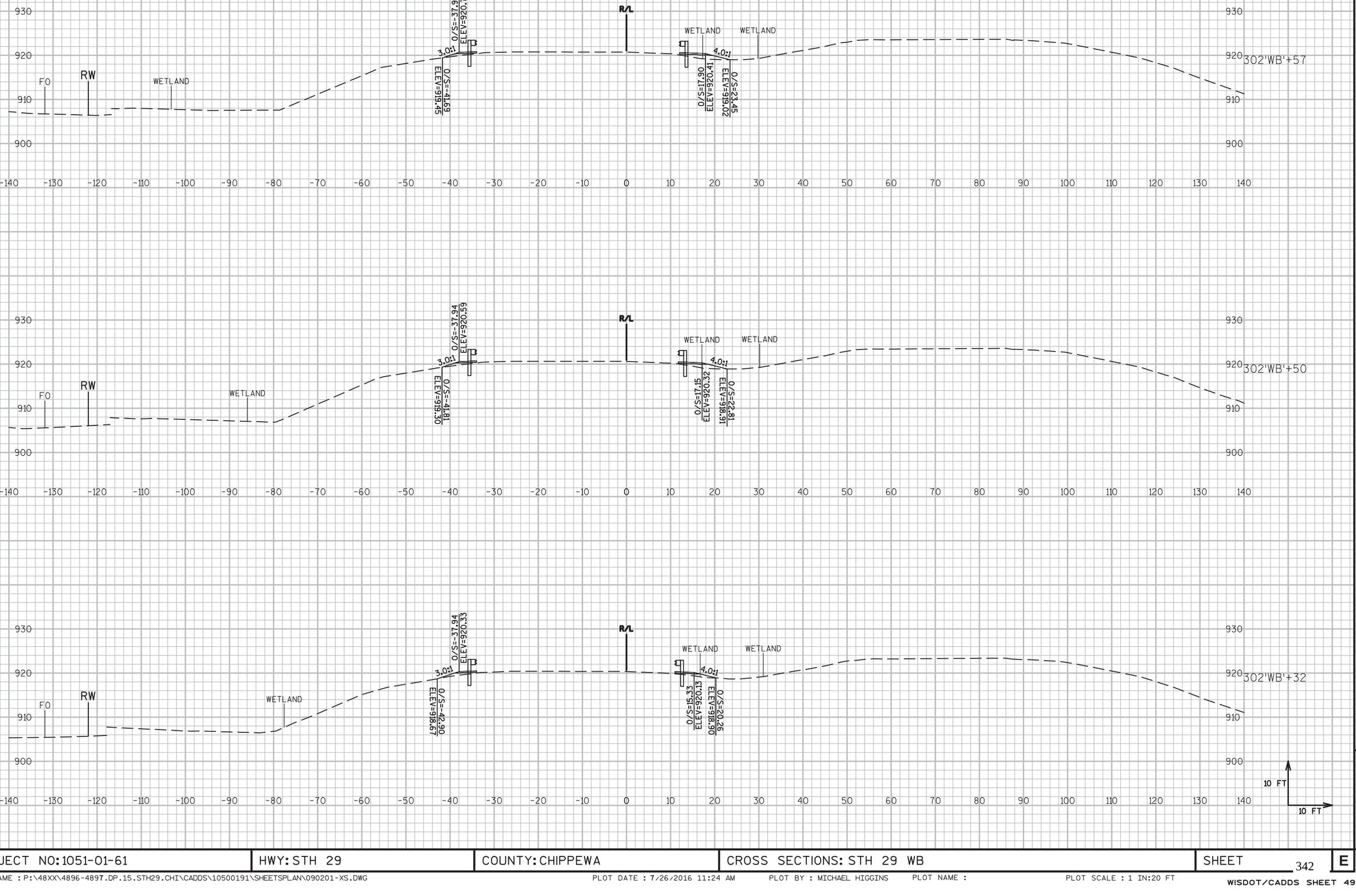


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PROJECT NO: 1051-01-61	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 WB	SHEET 341	E

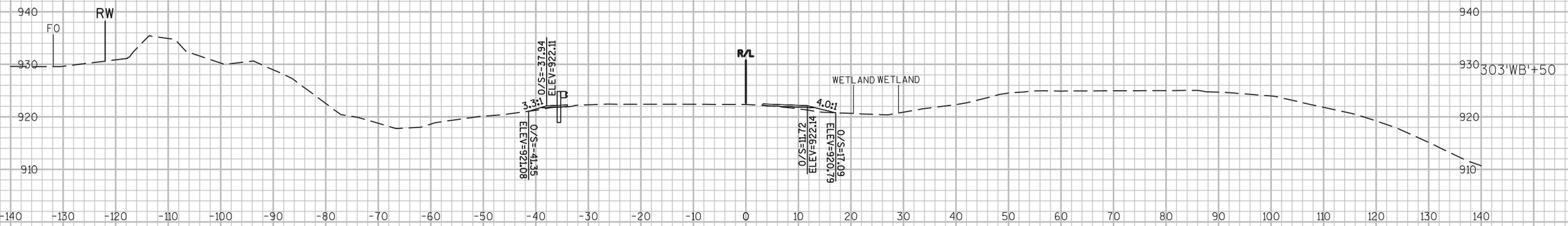
FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090201-XS.DWG PLOT DATE : 7/26/2016 11:23 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT

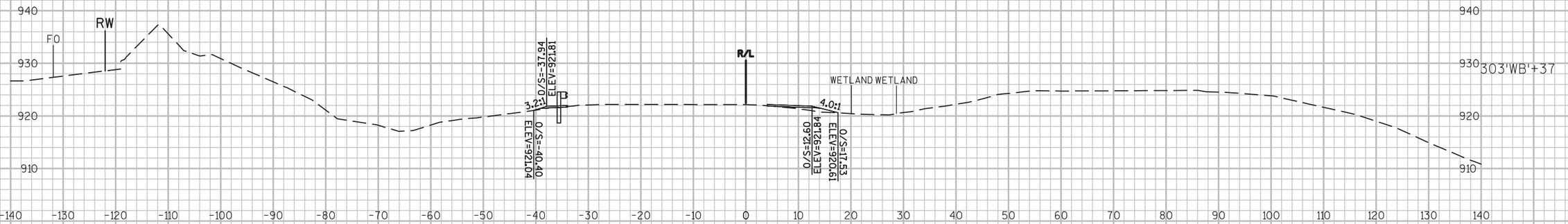


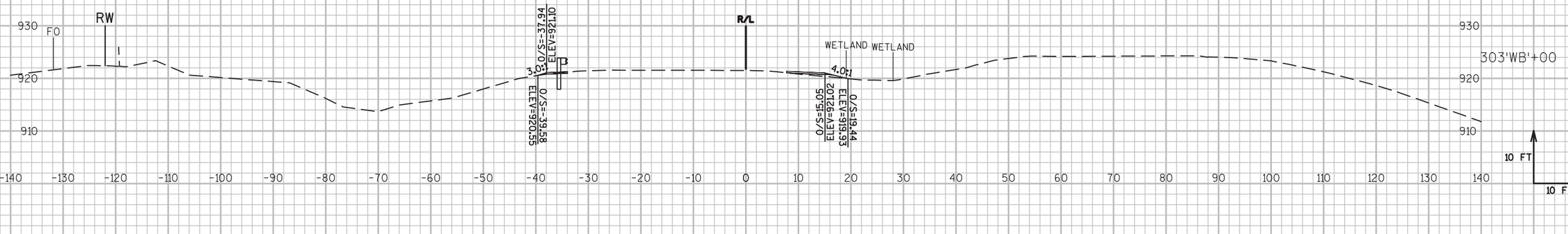
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PROJECT NO: 1051-01-61	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 WB	SHEET 342	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090201-XS.DWG PLOT DATE : 7/26/2016 11:24 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT





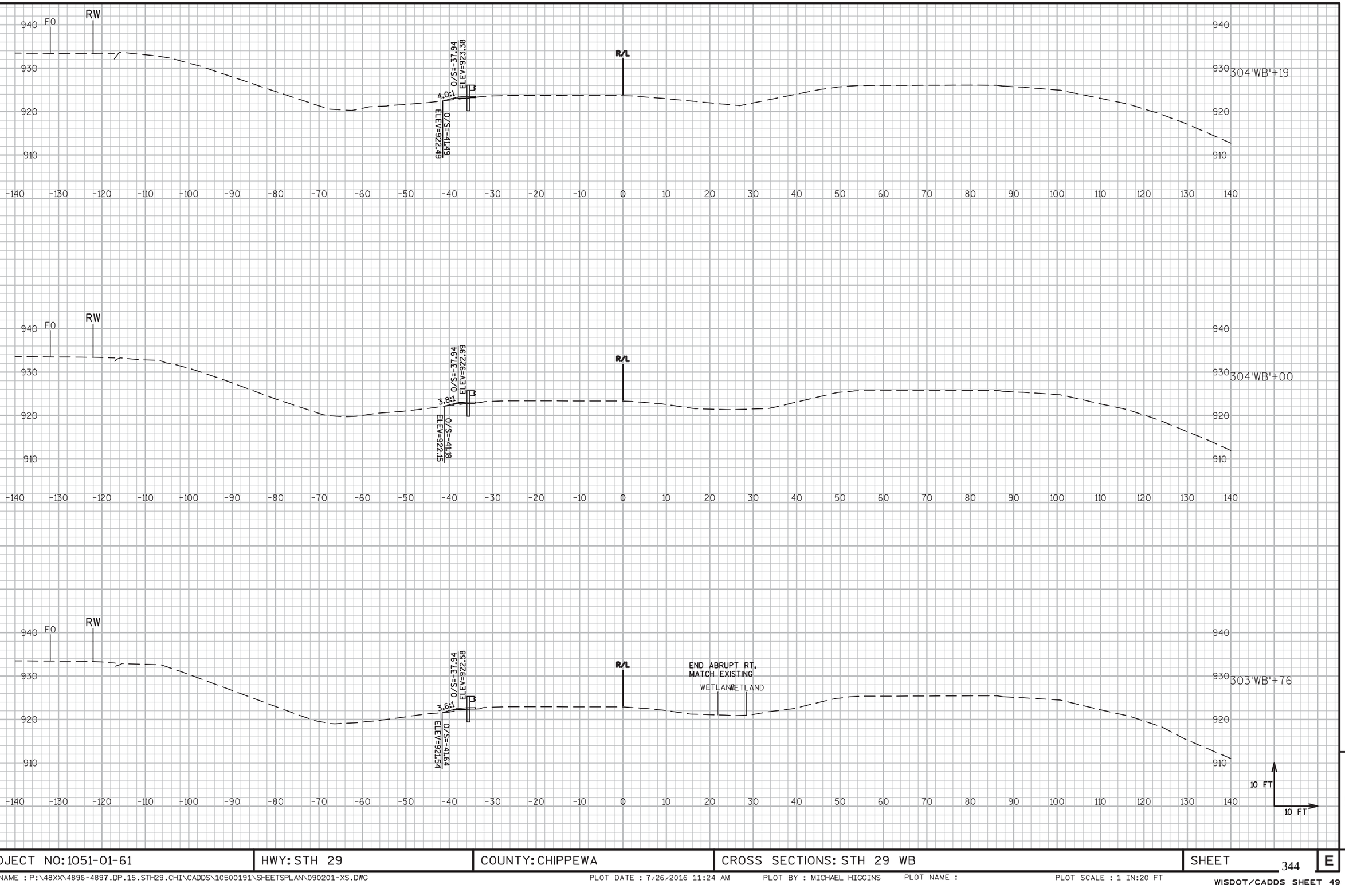


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PROJECT NO: 1051-01-61	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 WB	SHEET 343	E

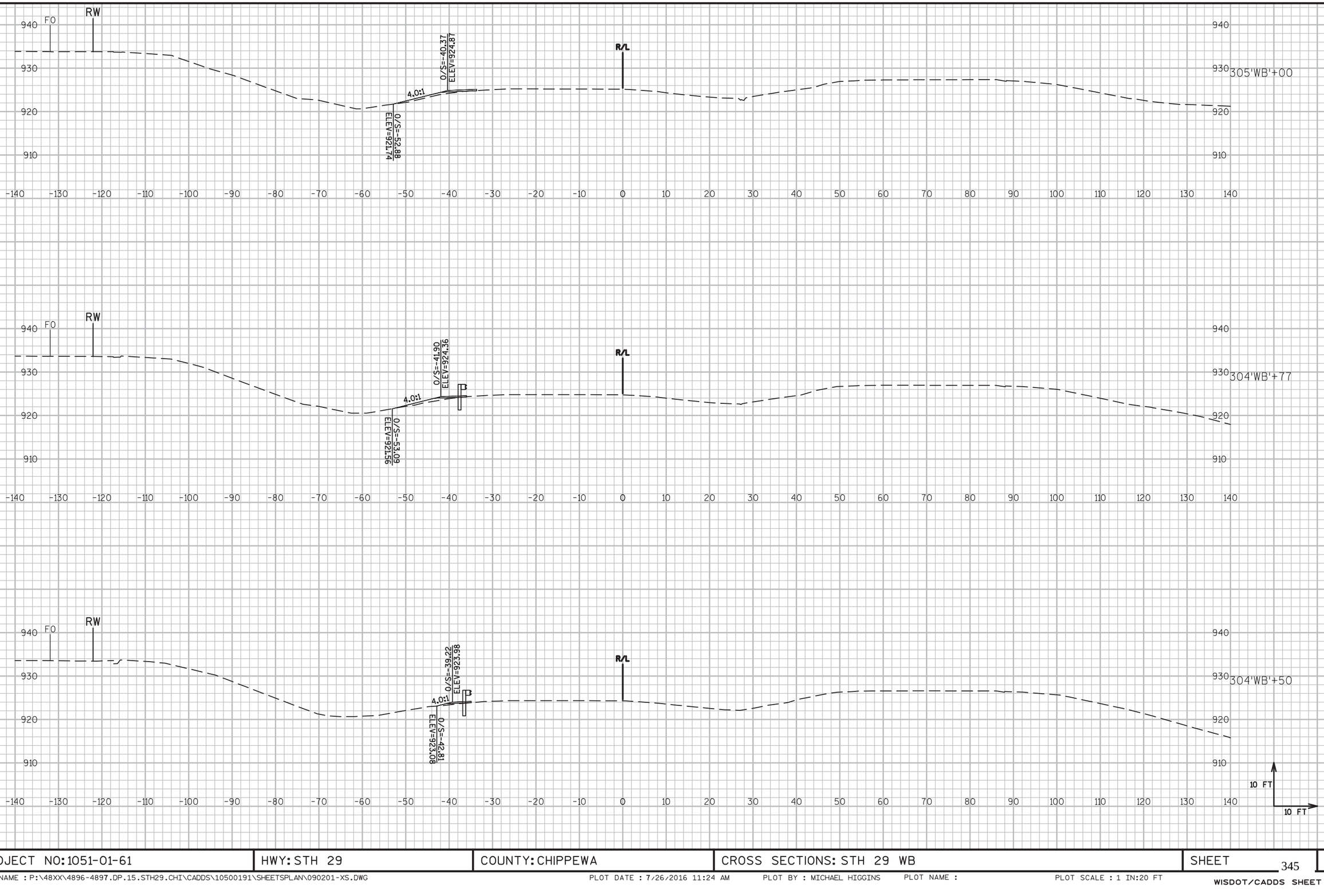
FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090201-XS.DWG PLOT DATE : 7/26/2016 11:24 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



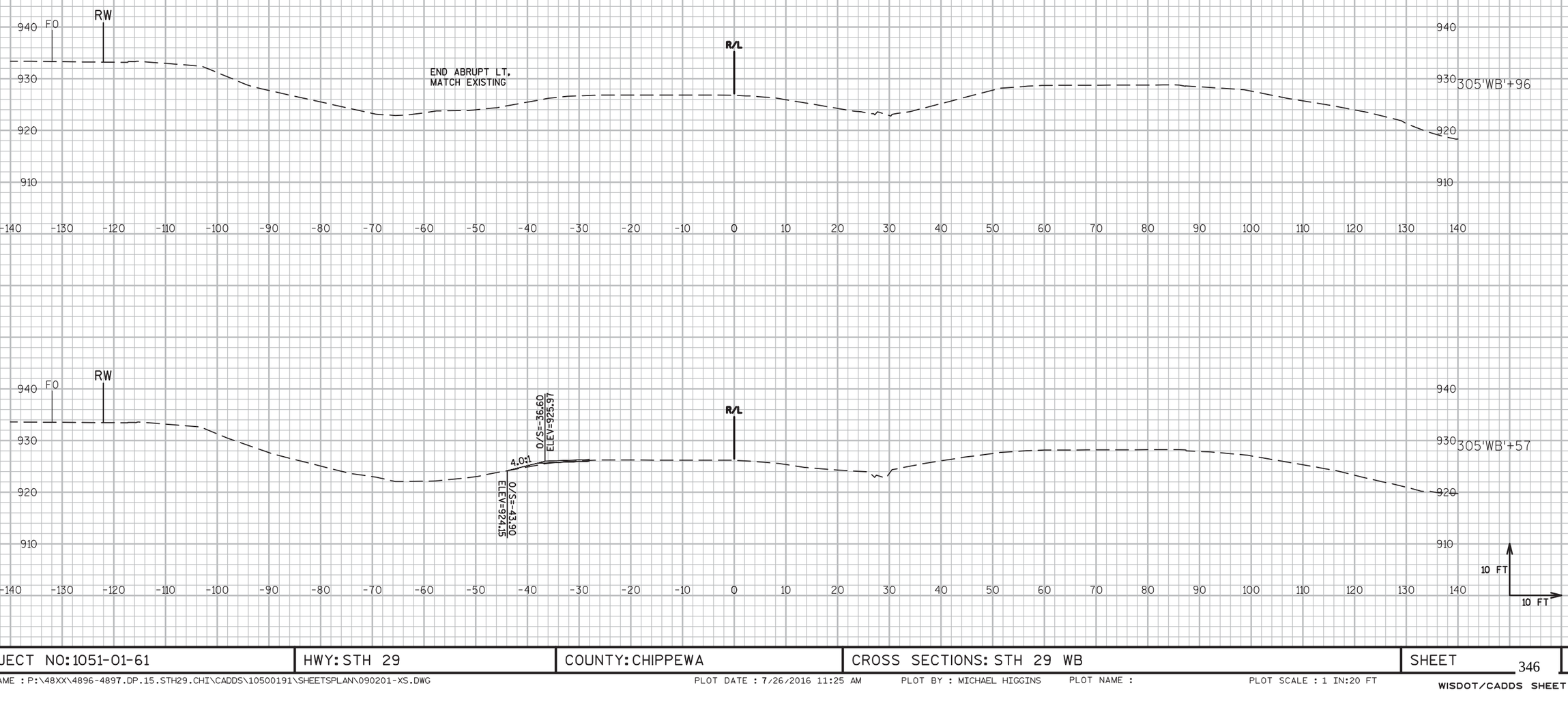
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PROJECT NO: 1051-01-61	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 WB	SHEET 344	E



9 9

PROJECT NO: 1051-01-61	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 WB	SHEET 345	E

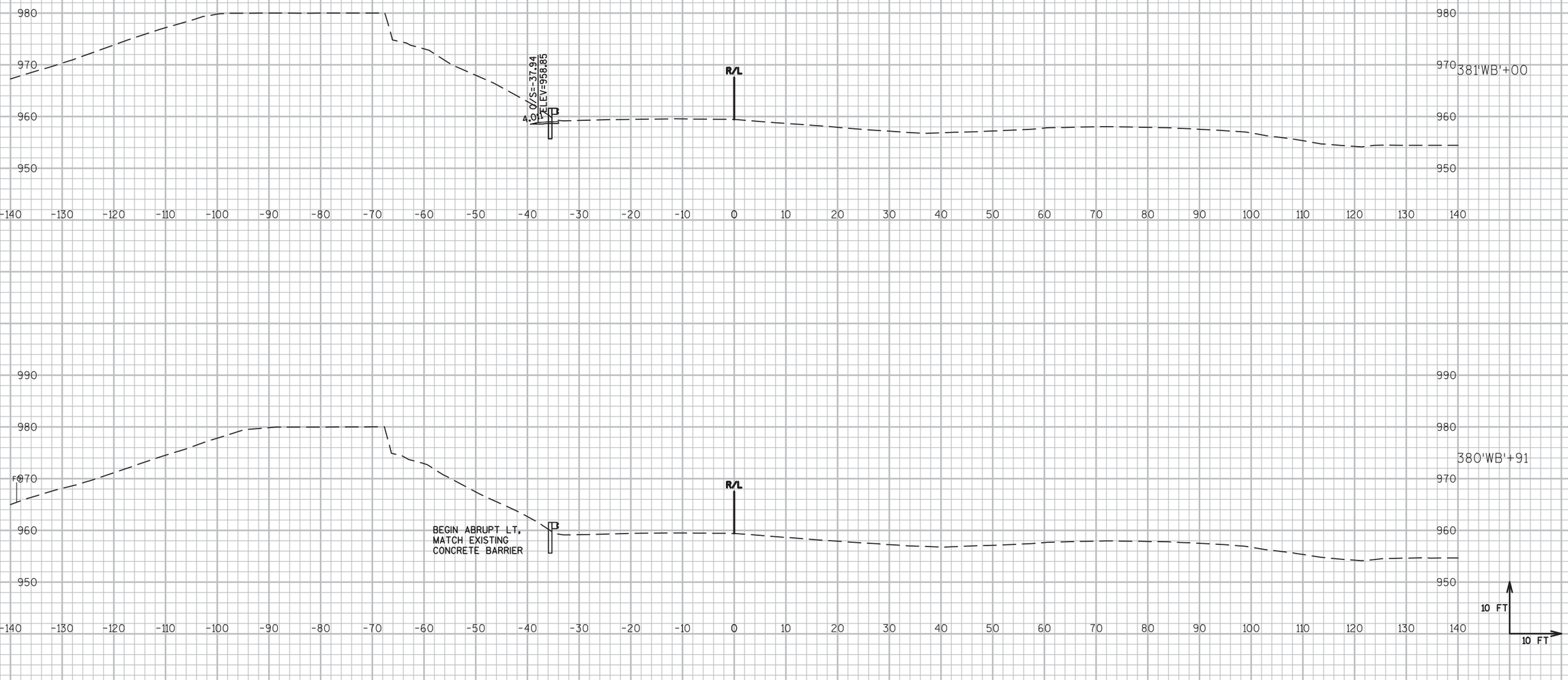


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PROJECT NO: 1051-01-61	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 WB	SHEET 346	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090201-XS.DWG PLOT DATE : 7/26/2016 11:25 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT

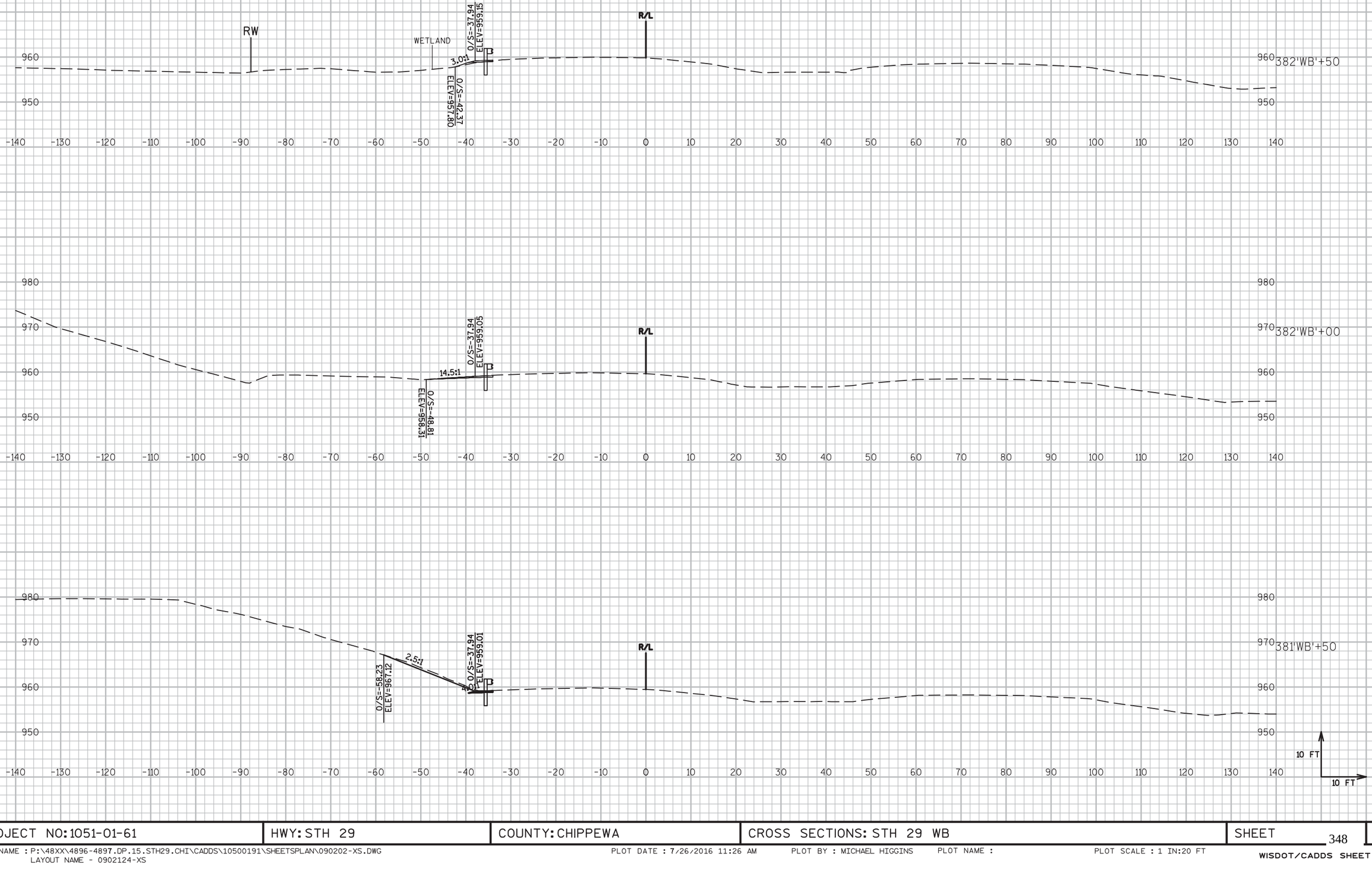


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PROJECT NO: 1051-01-61	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 WB	SHEET 347	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090202-XS.DWG
LAYOUT NAME - 0902123-XS

PLOT DATE : 7/26/2016 11:26 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT



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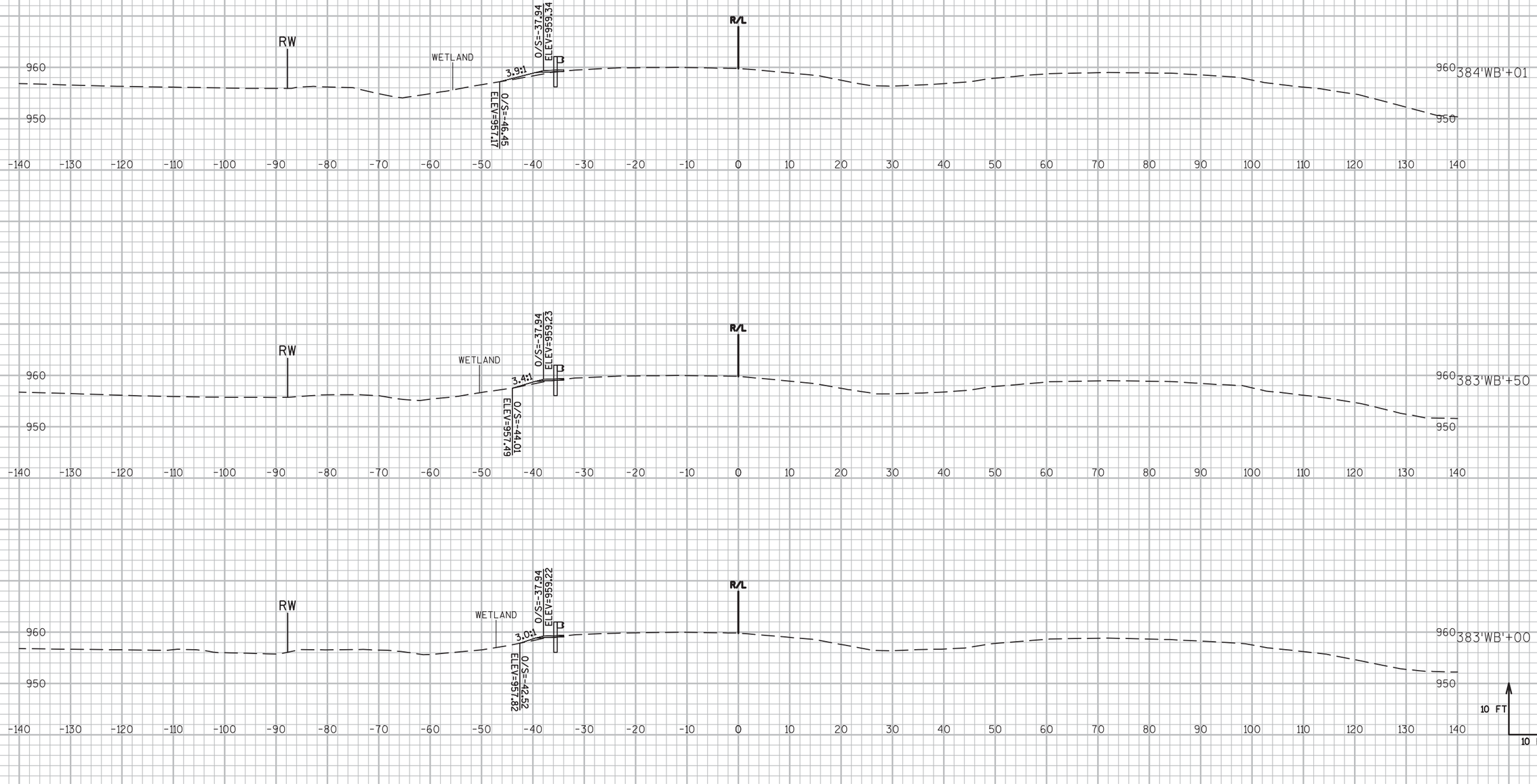
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PROJECT NO: 1051-01-61	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 WB	SHEET 348	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090202-XS.DWG
LAYOUT NAME - 0902124-XS

PLOT DATE : 7/26/2016 11:26 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

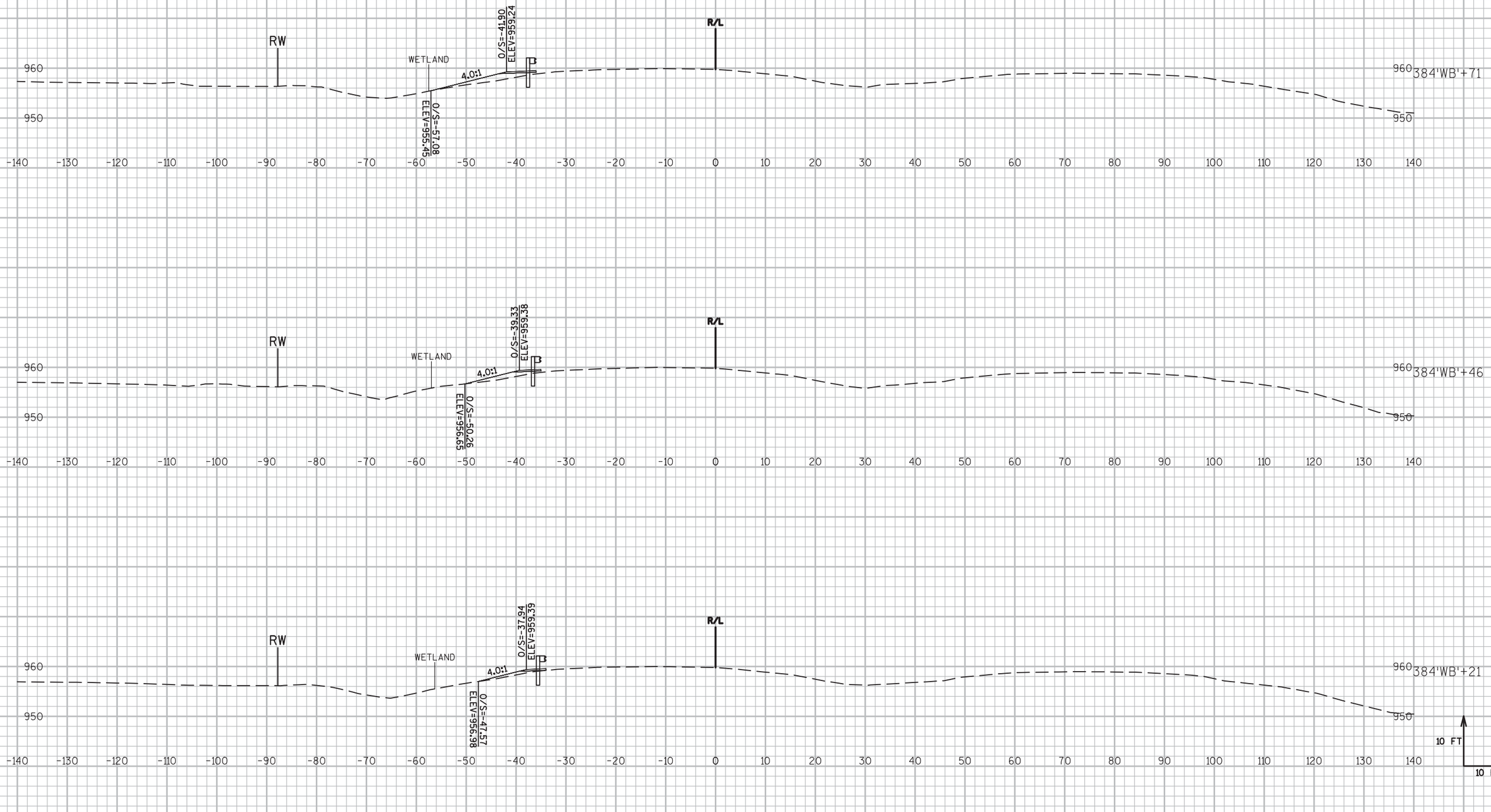


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PROJECT NO: 1051-01-61	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 WB	SHEET 349	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090202-XS.DWG
LAYOUT NAME - 0902125-XS

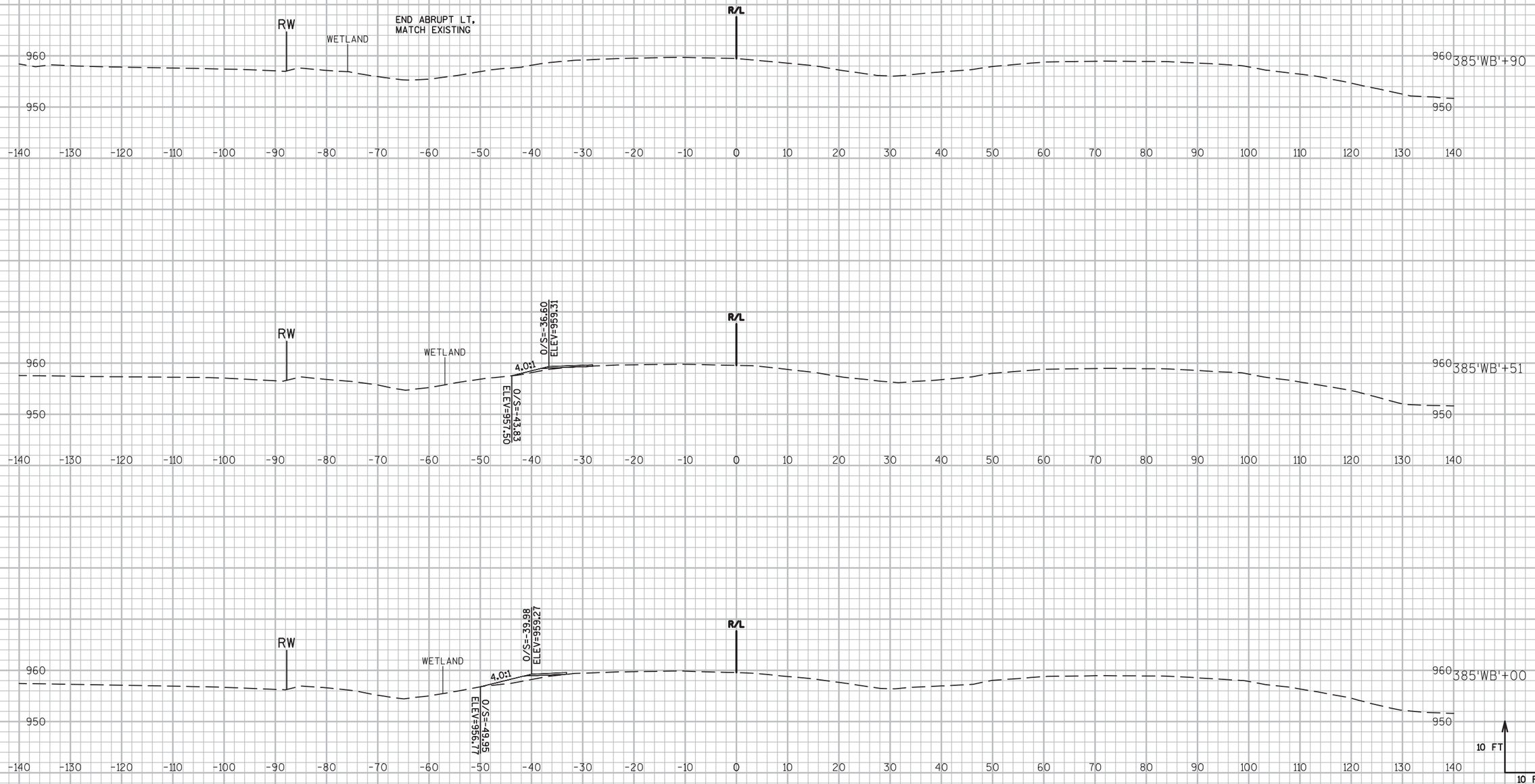
PLOT DATE : 7/26/2016 11:26 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT



9 9

PROJECT NO: 1051-01-61	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 WB	SHEET 350	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090202-XS.DWG
LAYOUT NAME - 0902126-XS
PLOT DATE : 7/26/2016 11:27 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 49



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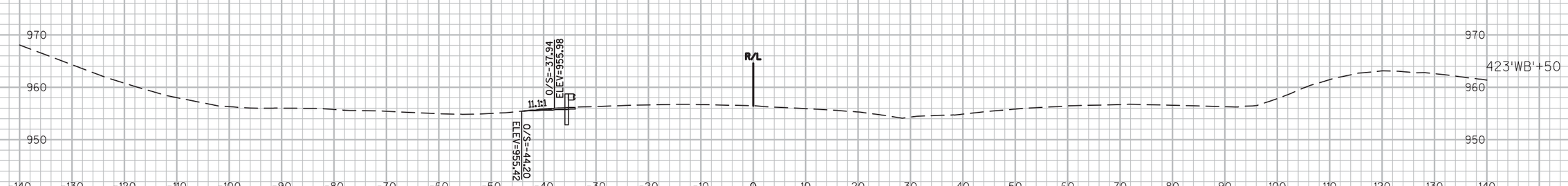
PROJECT NO: 1051-01-61	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 WB	SHEET 351	E

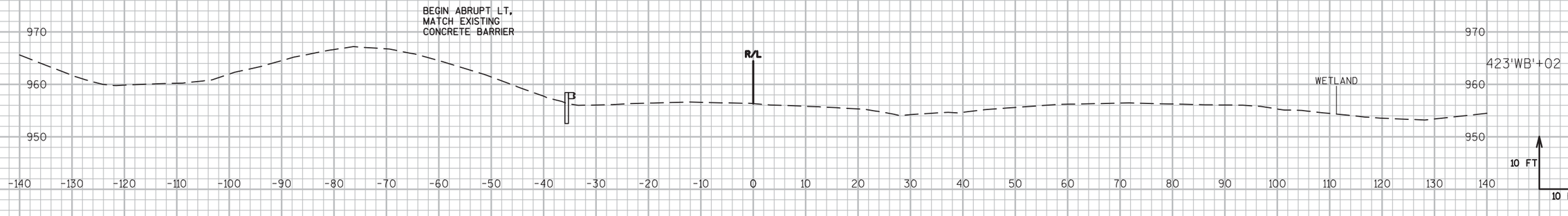
FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090202-XS.DWG
LAYOUT NAME - 0902127-XS

PLOT DATE : 7/26/2016 11:27 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49







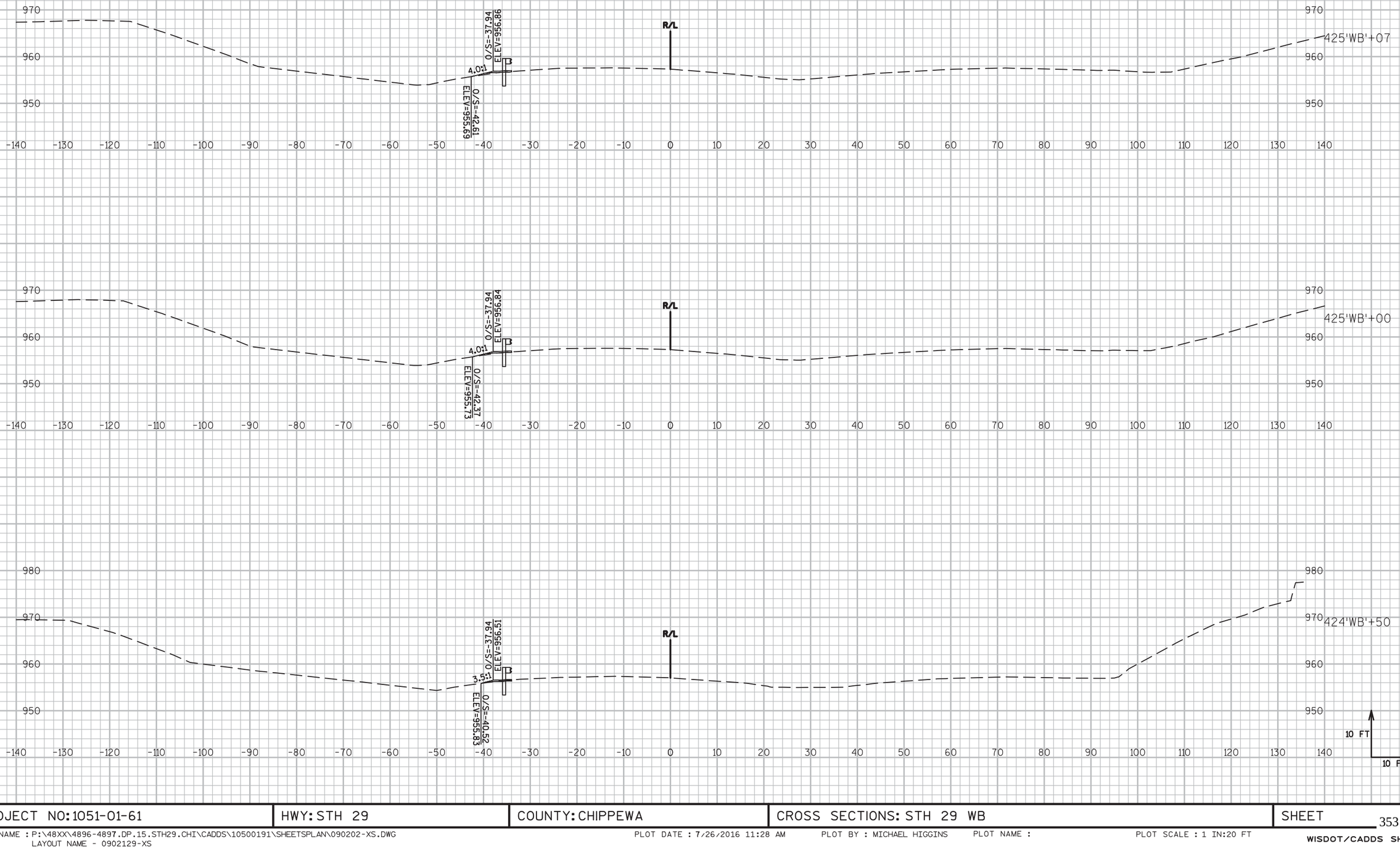
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PROJECT NO: 1051-01-61	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 WB	SHEET 352	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090202-XS.DWG
LAYOUT NAME - 0902128-XS

PLOT DATE : 7/26/2016 11:27 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT



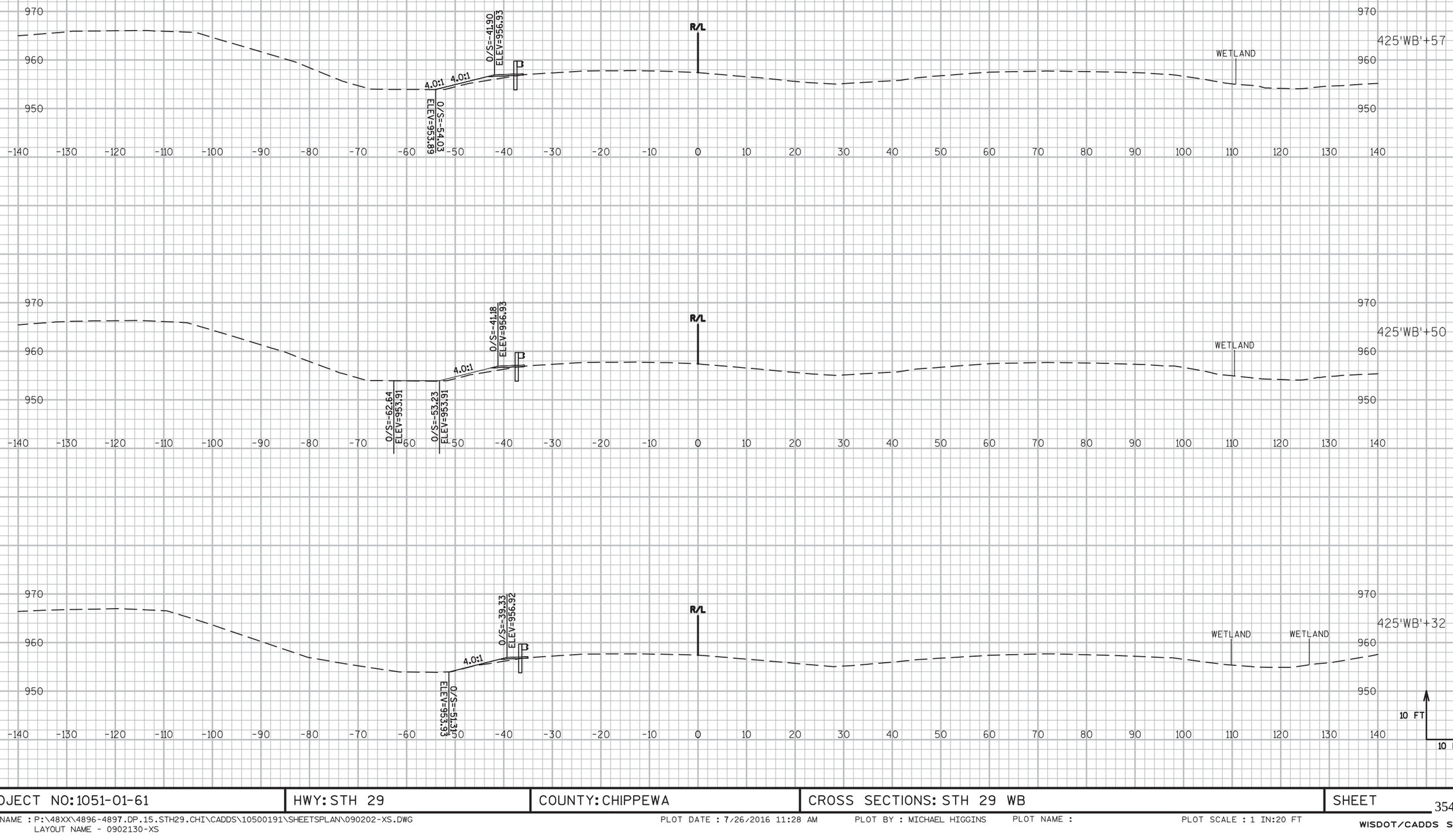
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PROJECT NO: 1051-01-61	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 WB	SHEET 353	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090202-XS.DWG
LAYOUT NAME - 0902129-XS

PLOT DATE : 7/26/2016 11:28 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT

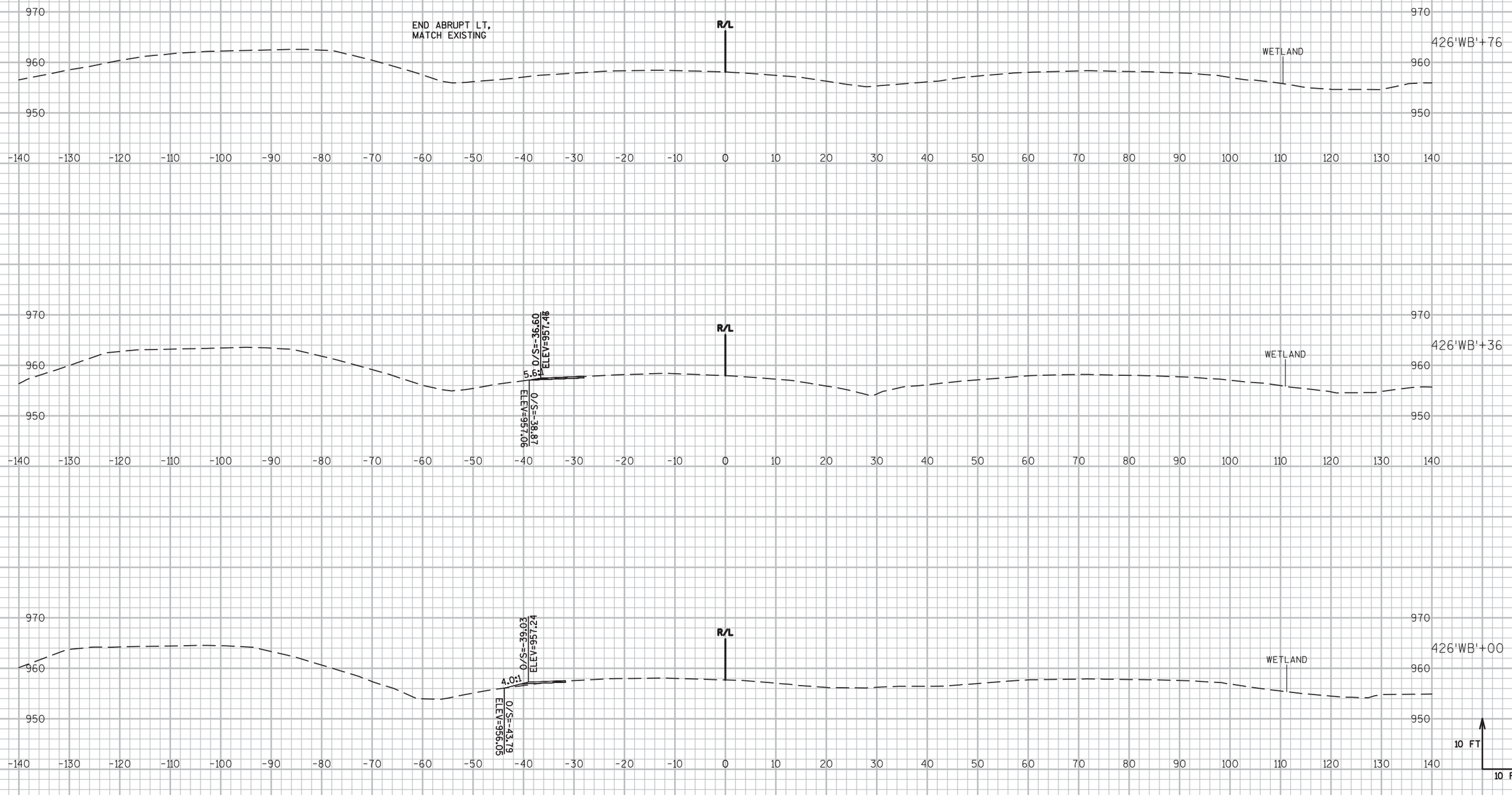


PROJECT NO: 1051-01-61	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 WB	SHEET 354	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090202-XS.DWG
LAYOUT NAME - 0902130-XS

PLOT DATE : 7/26/2016 11:28 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



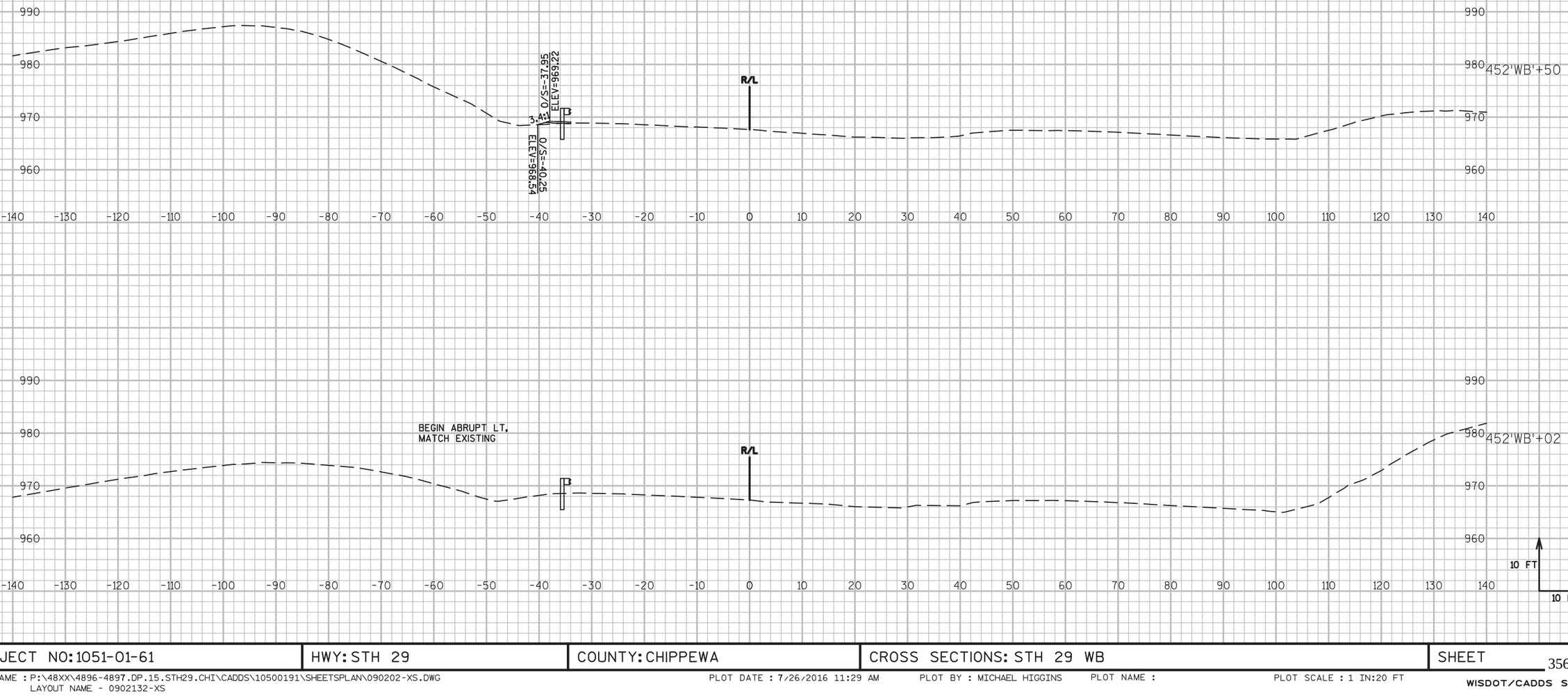
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PROJECT NO: 1051-01-61	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 WB	SHEET 355	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090202-XS.DWG
LAYOUT NAME - 0902131-XS

PLOT DATE : 7/26/2016 11:28 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT



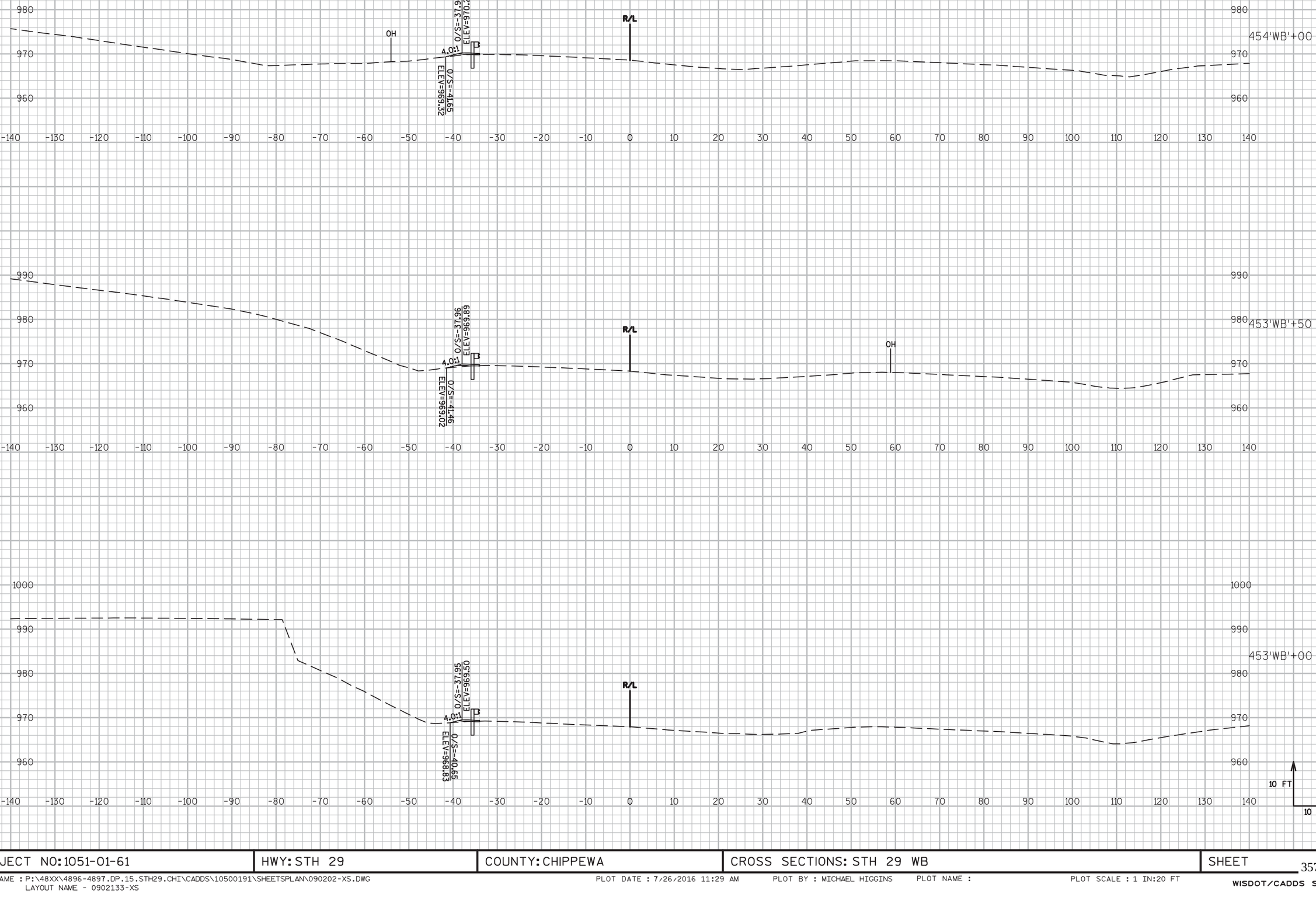
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PROJECT NO: 1051-01-61	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 WB	SHEET 356	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090202-XS.DWG
LAYOUT NAME - 0902132-XS

PLOT DATE : 7/26/2016 11:29 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT



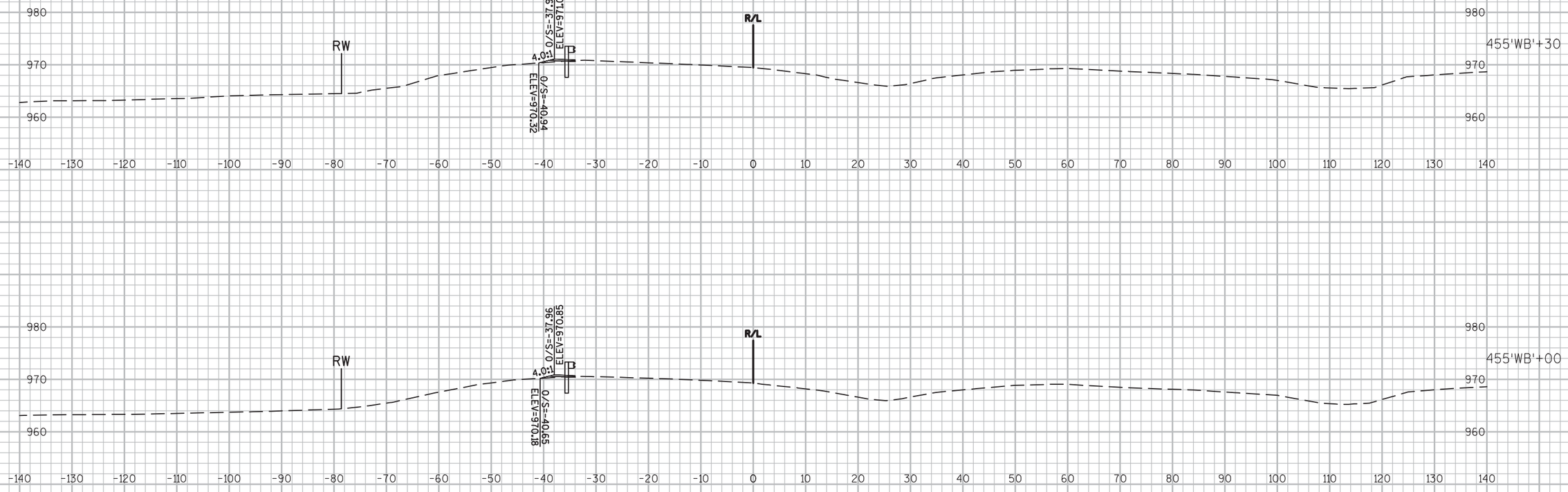
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PROJECT NO: 1051-01-61	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 WB	SHEET 357	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090202-XS.DWG
LAYOUT NAME - 0902133-XS

PLOT DATE : 7/26/2016 11:29 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT



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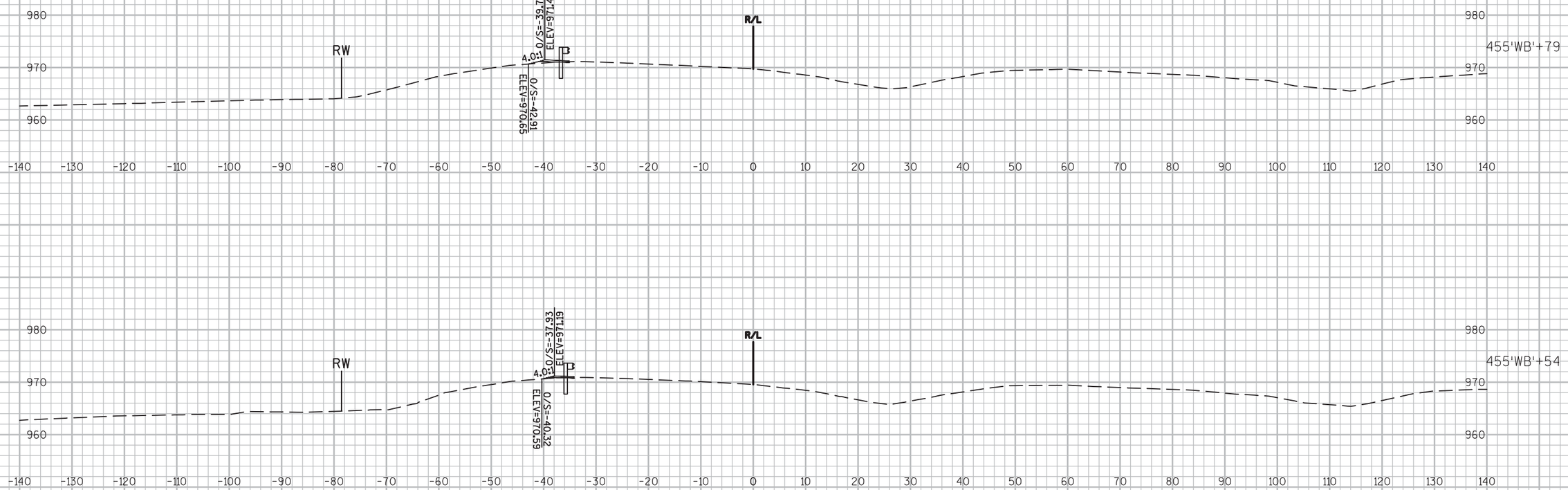
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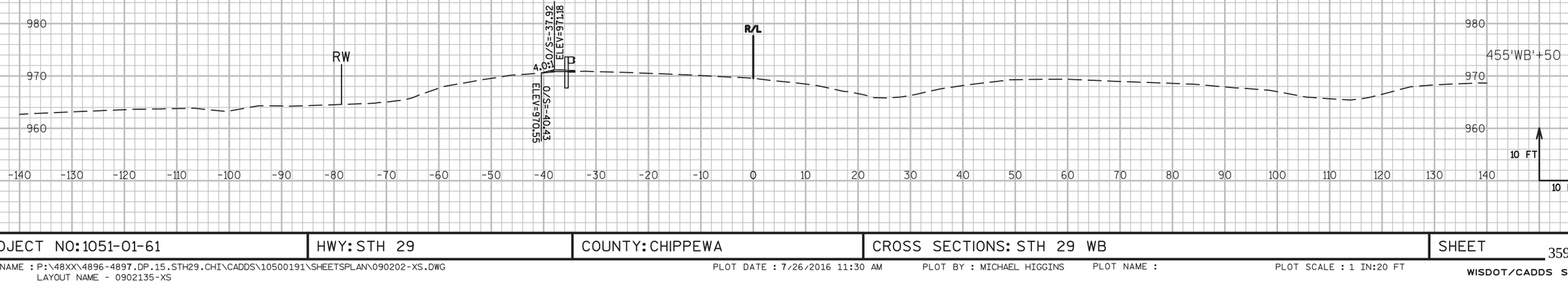
PROJECT NO: 1051-01-61	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 WB	SHEET 358	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090202-XS.DWG
LAYOUT NAME - 0902134-XS

PLOT DATE : 7/26/2016 11:30 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49





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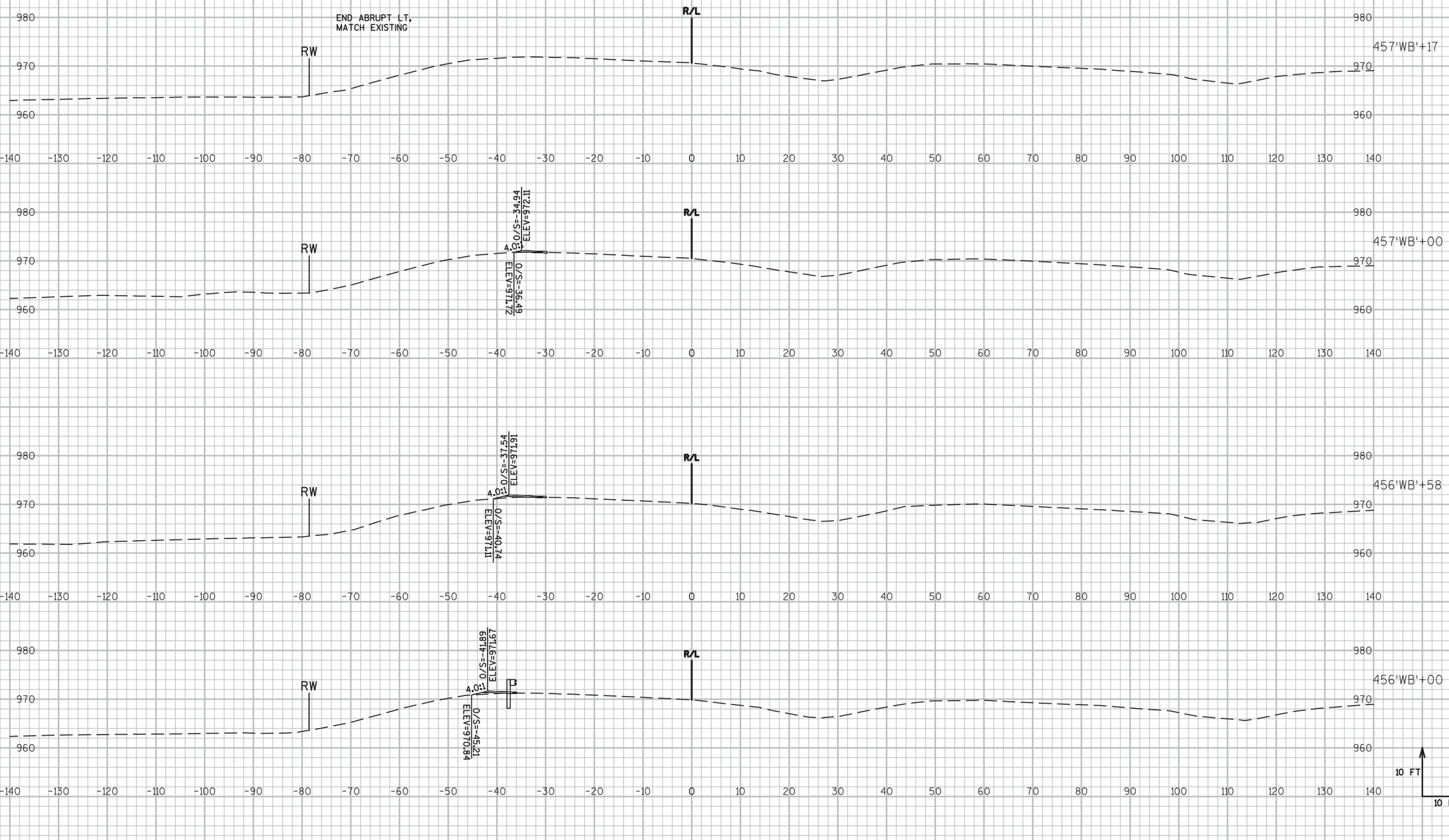
9

PROJECT NO: 1051-01-61	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 WB	SHEET 359	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090202-XS.DWG
LAYOUT NAME - 0902135-XS

PLOT DATE : 7/26/2016 11:30 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



9

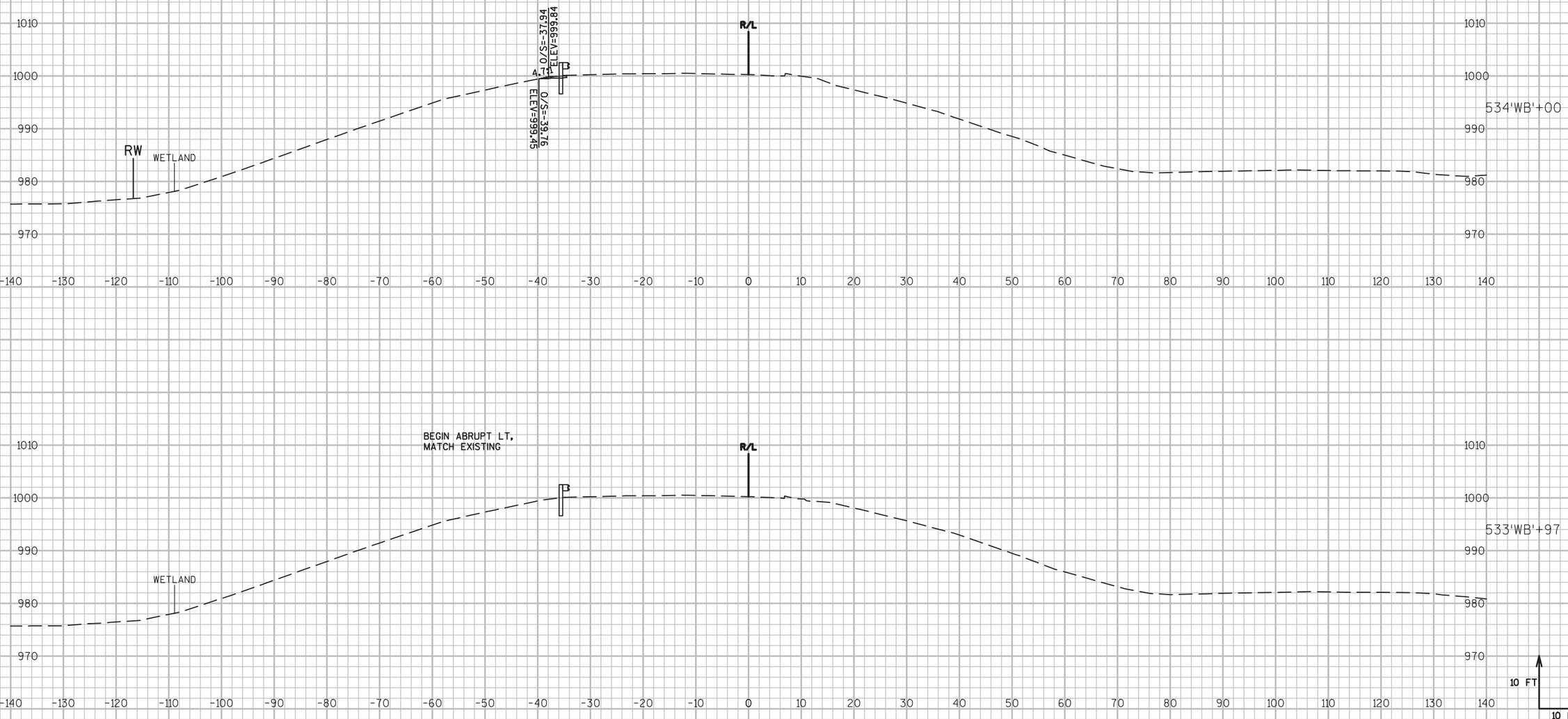
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PROJECT NO: 1051-01-61	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 WB	SHEET 360	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090202-XS.DWG
LAYOUT NAME - 0902136-XS

PLOT DATE : 7/26/2016 11:30 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



9

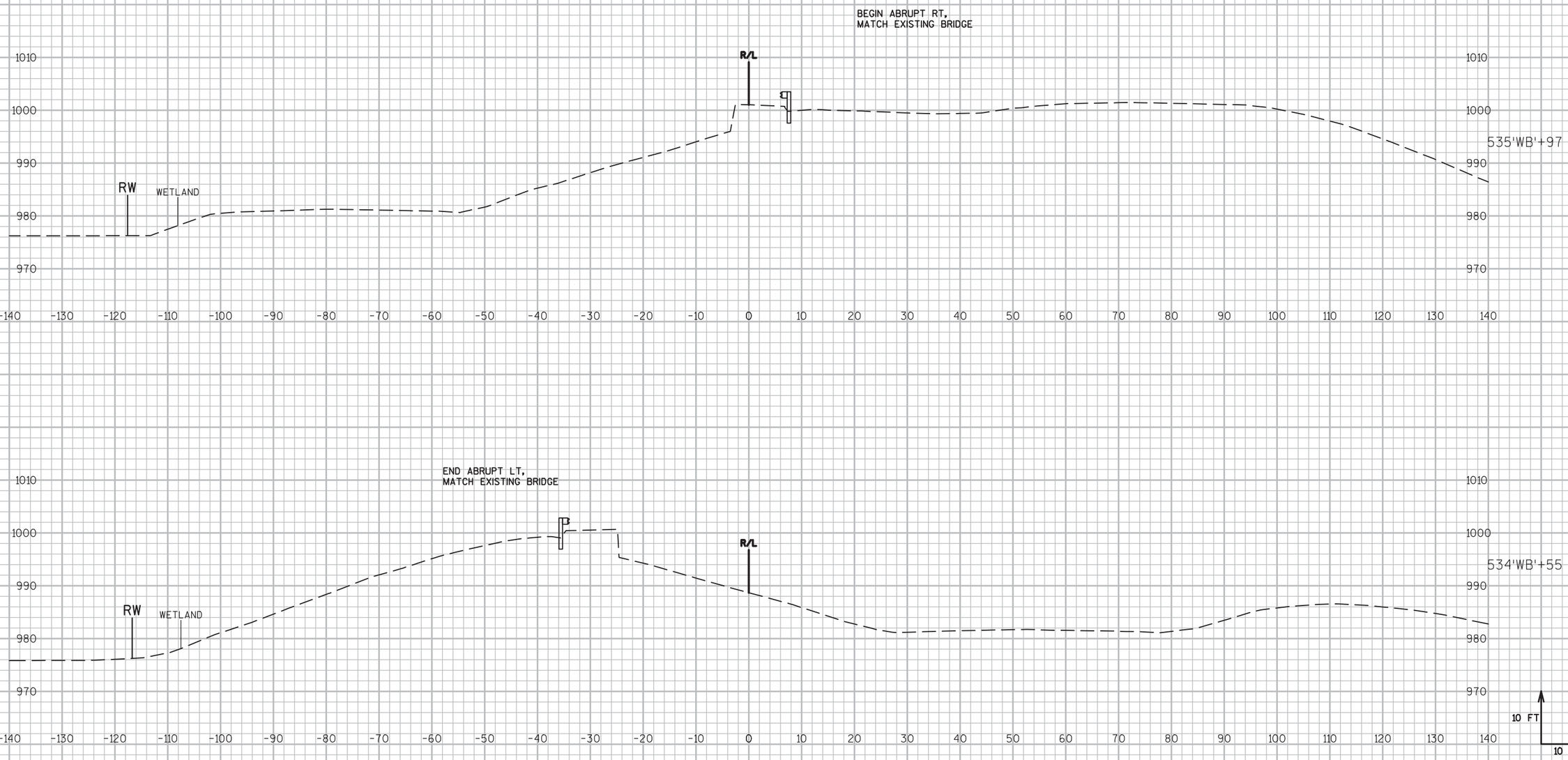
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PROJECT NO: 1051-01-61	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 WB	SHEET 361	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090202-XS.DWG
LAYOUT NAME - 0902137-XS

PLOT DATE : 7/26/2016 11:31 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

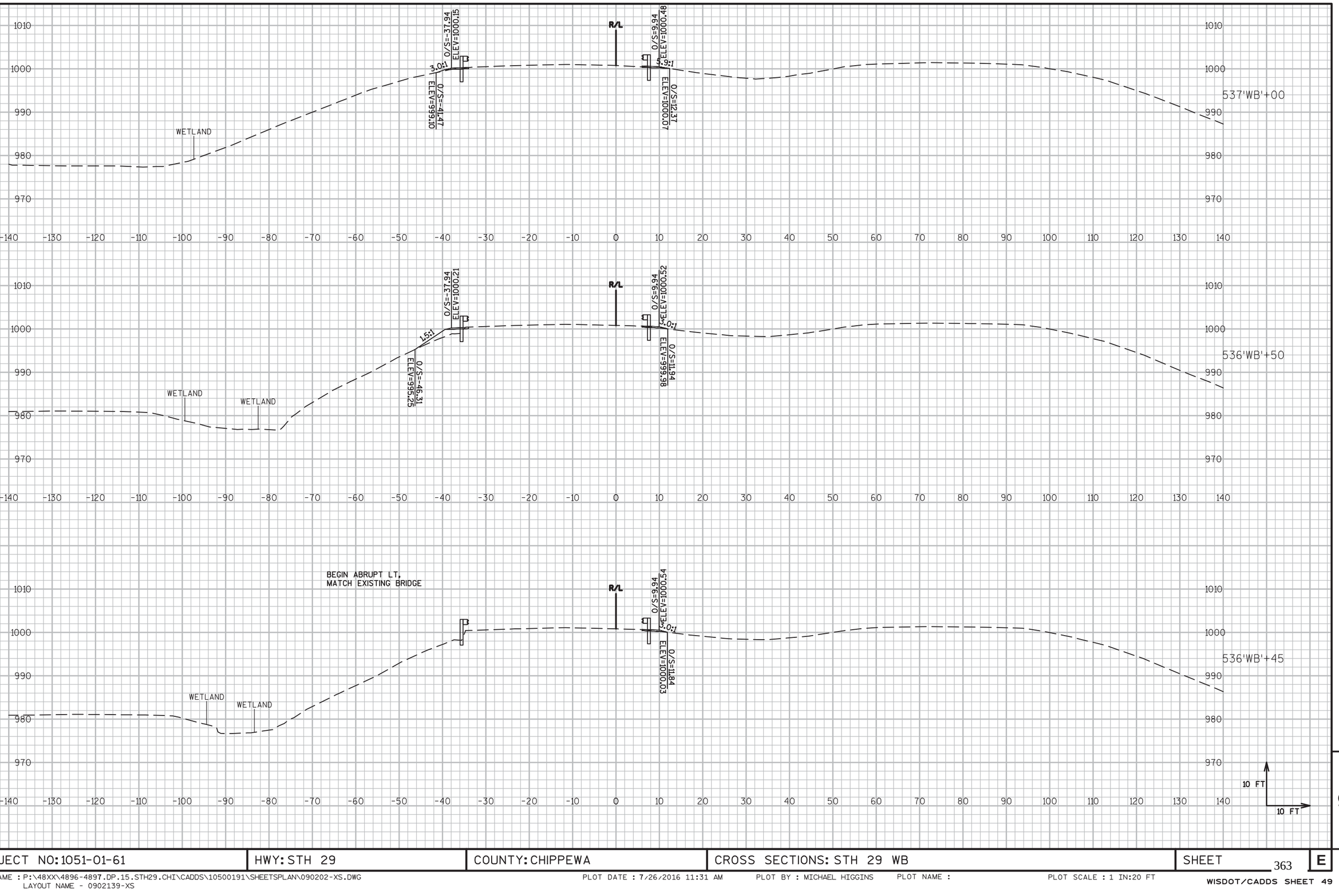


9 9

PROJECT NO: 1051-01-61	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 WB	SHEET 362	E

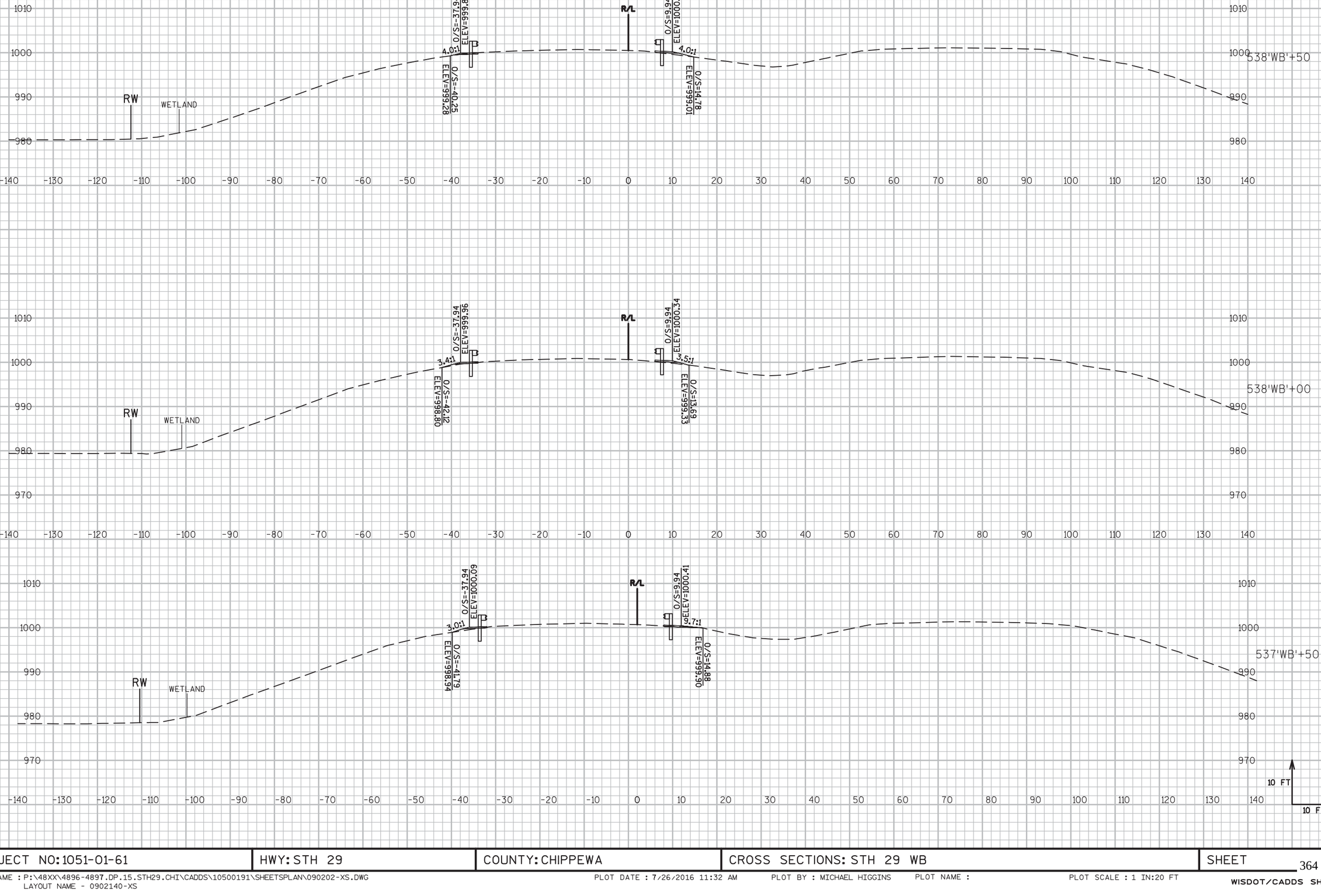
FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090202-XS.DWG
LAYOUT NAME - 0902138-XS

PLOT DATE : 7/26/2016 11:31 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT



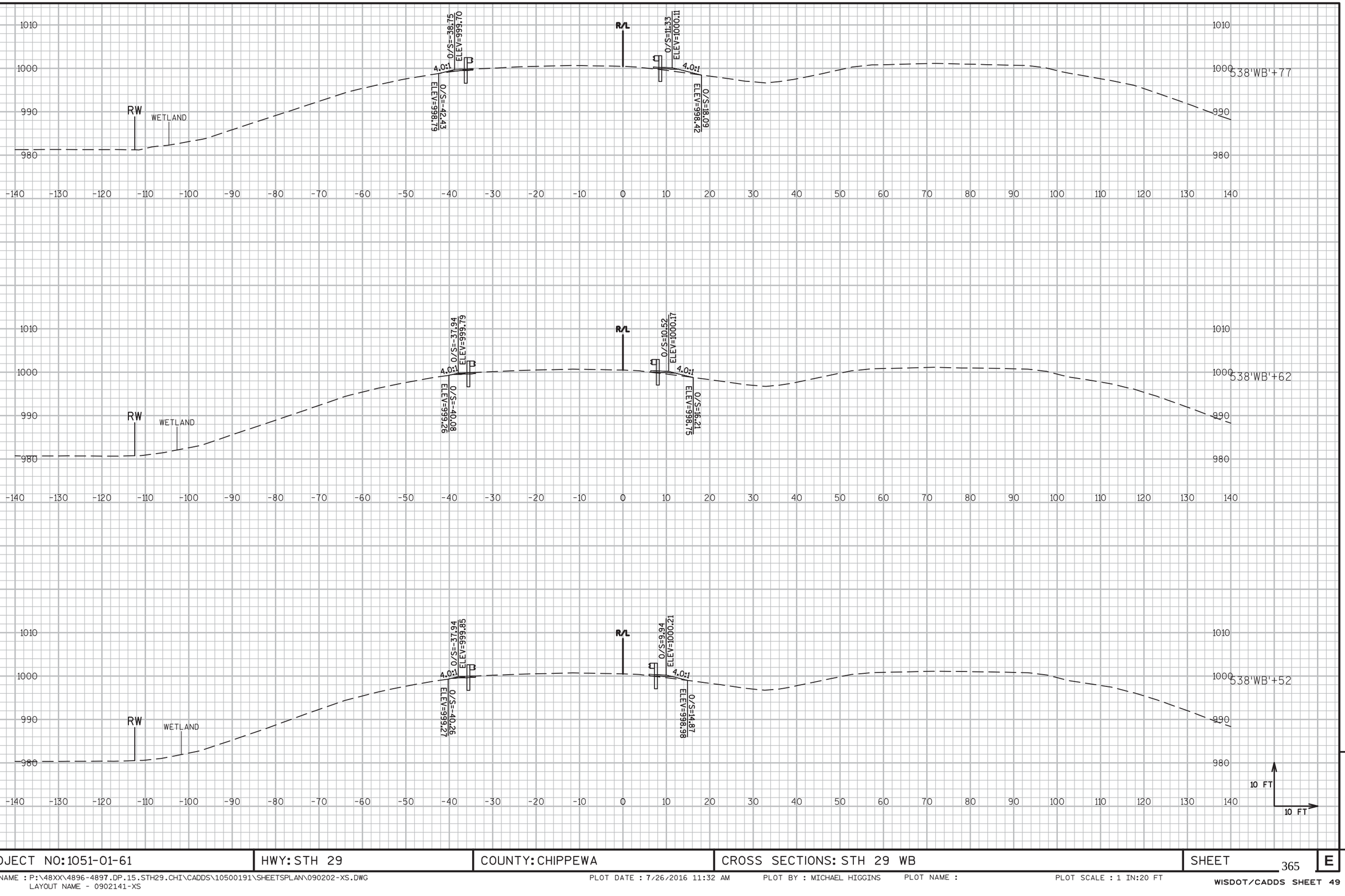
PROJECT NO: 1051-01-61	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 WB	SHEET 363	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090202-XS.DWG
LAYOUT NAME - 0902139-XS
PLOT DATE : 7/26/2016 11:31 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 49



PROJECT NO: 1051-01-61	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 WB	SHEET 364	E

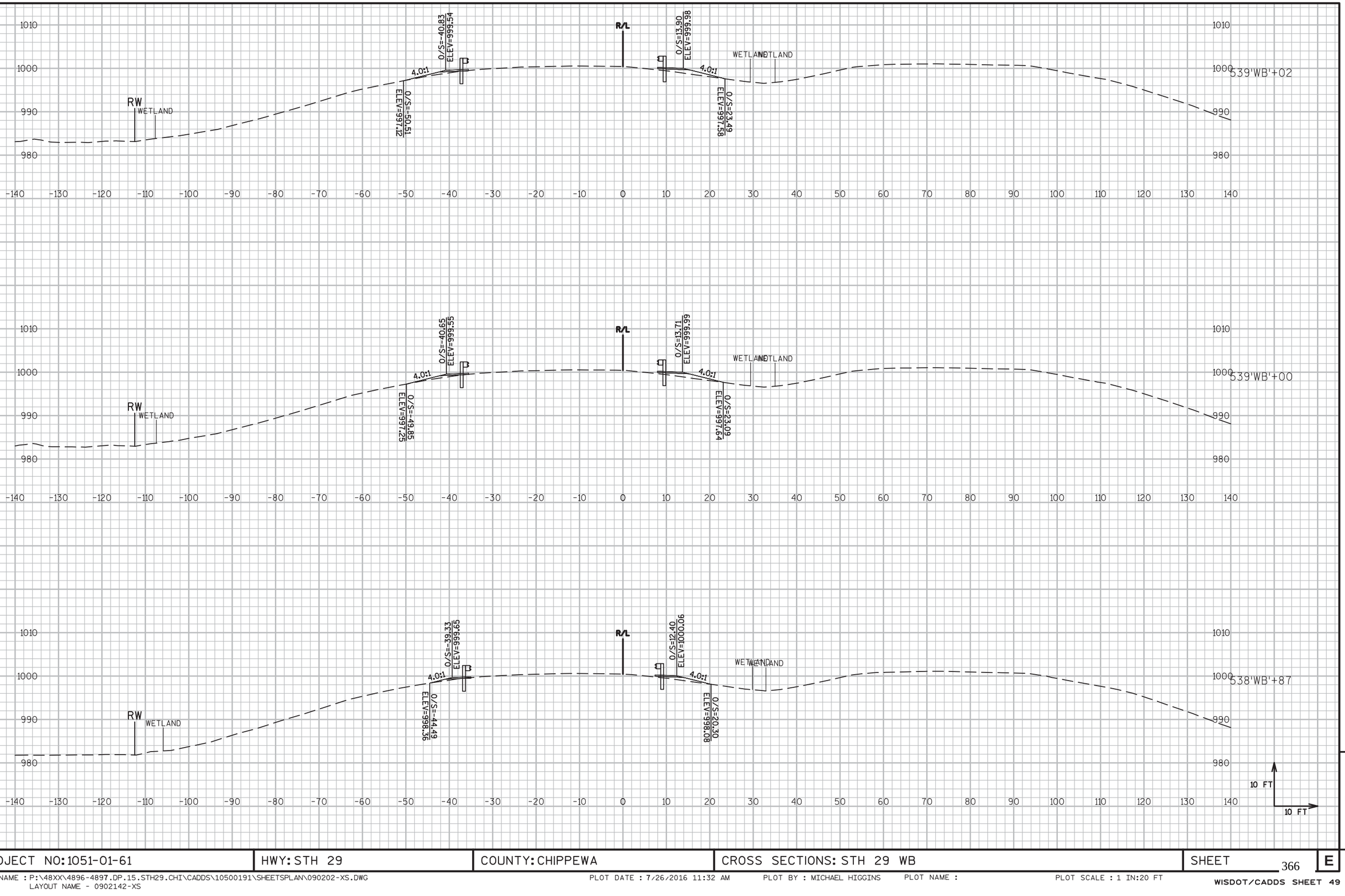
FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090202-XS.DWG
LAYOUT NAME - 0902140-XS
PLOT DATE : 7/26/2016 11:32 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 49



9 9

PROJECT NO: 1051-01-61	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 WB	SHEET 365	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090202-XS.DWG
LAYOUT NAME - 0902141-XS
PLOT DATE : 7/26/2016 11:32 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 49

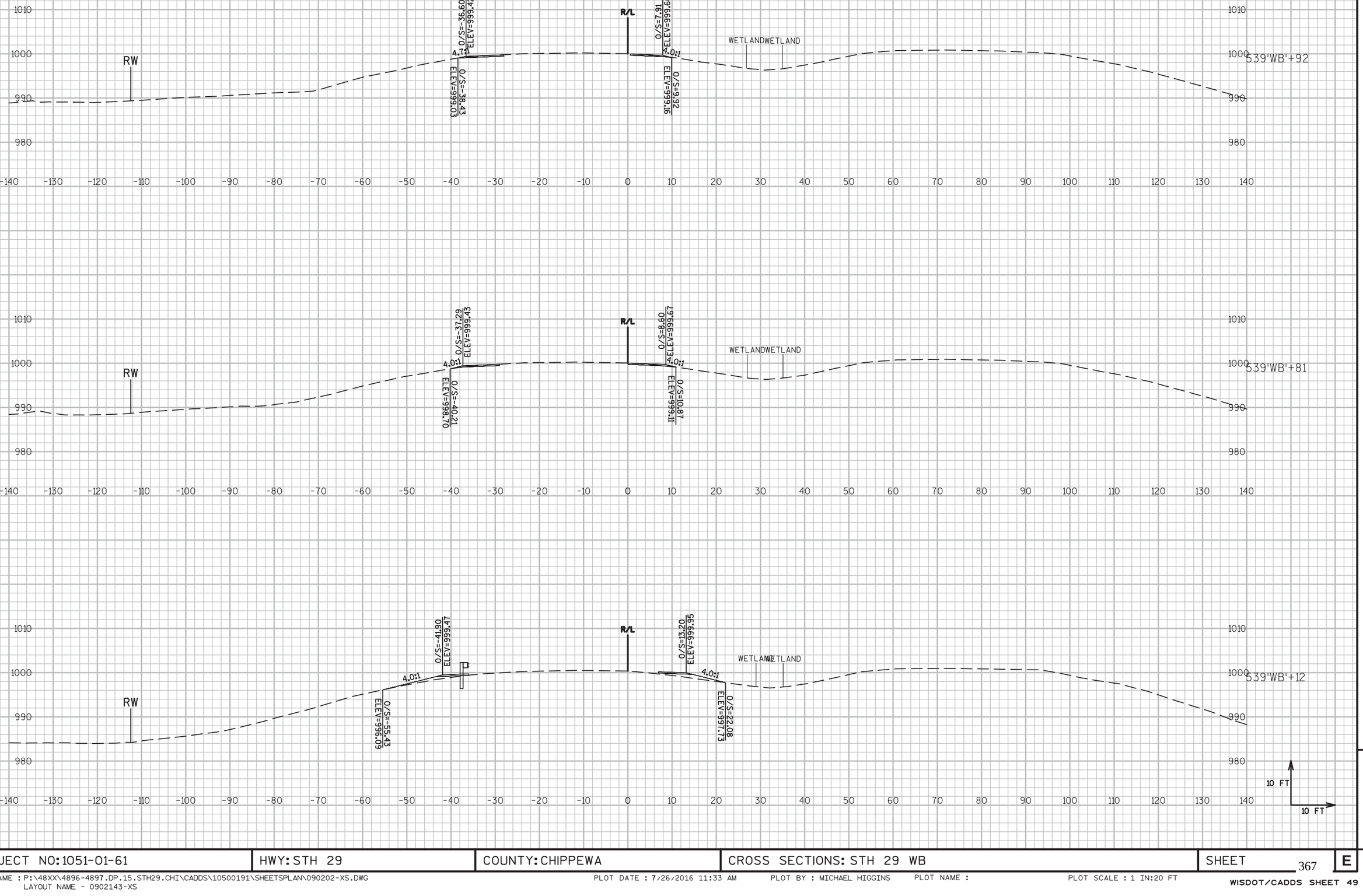


PROJECT NO: 1051-01-61	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 WB	SHEET 366	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090202-XS.DWG
LAYOUT NAME - 0902142-XS

PLOT DATE : 7/26/2016 11:32 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

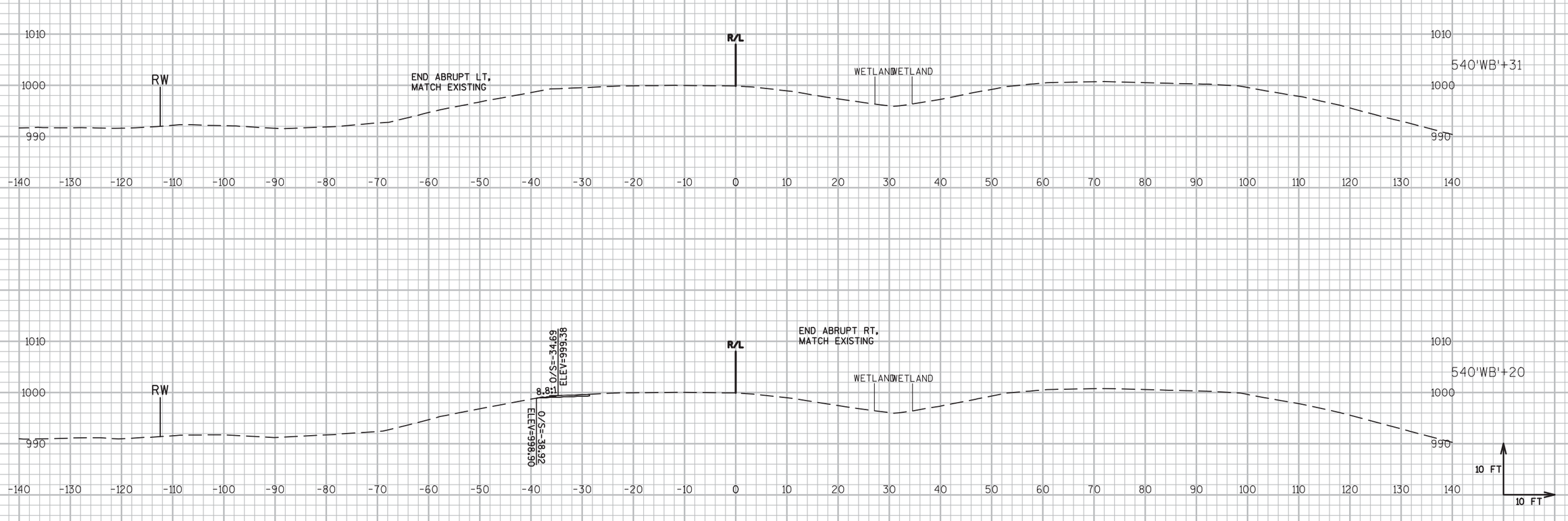


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PROJECT NO: 1051-01-61	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 WB	SHEET 367	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090202-XS.DWG
LAYOUT NAME - 0902143-XS
PLOT DATE : 7/26/2016 11:33 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 49



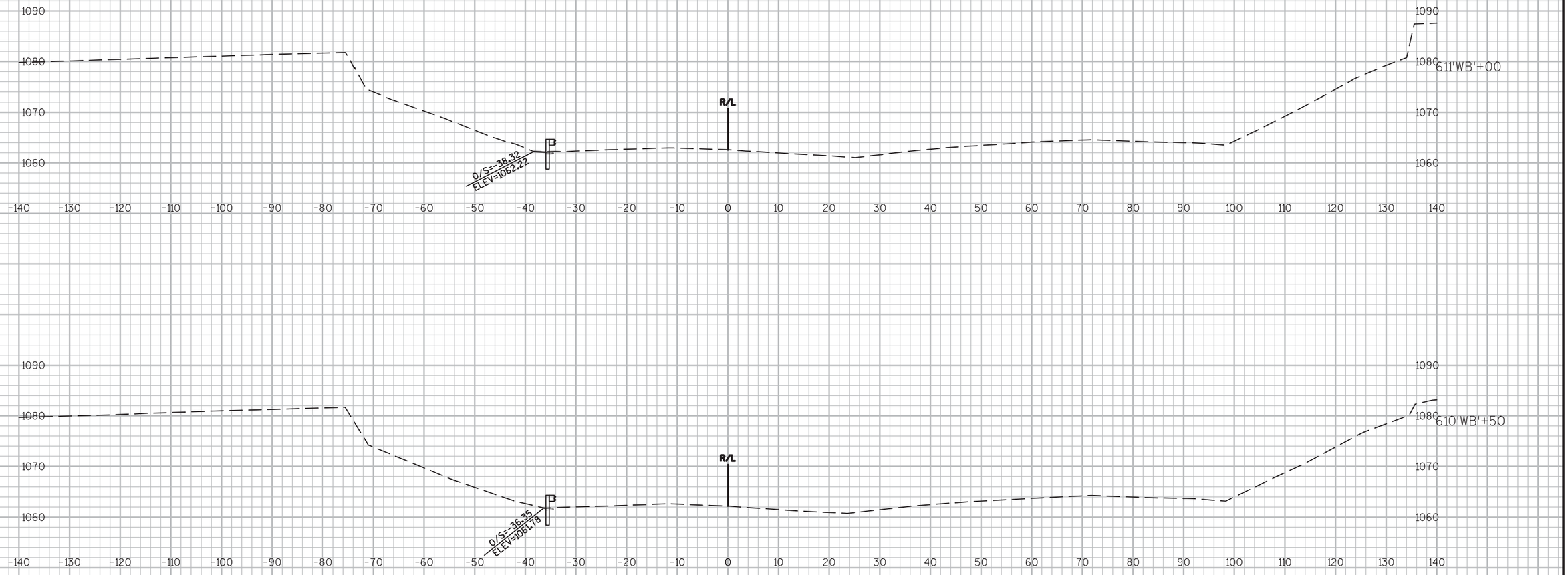
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PROJECT NO: 1051-01-61	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 WB	SHEET 368	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090202-XS.DWG
LAYOUT NAME - 0902144-XS

PLOT DATE : 7/26/2016 11:33 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT



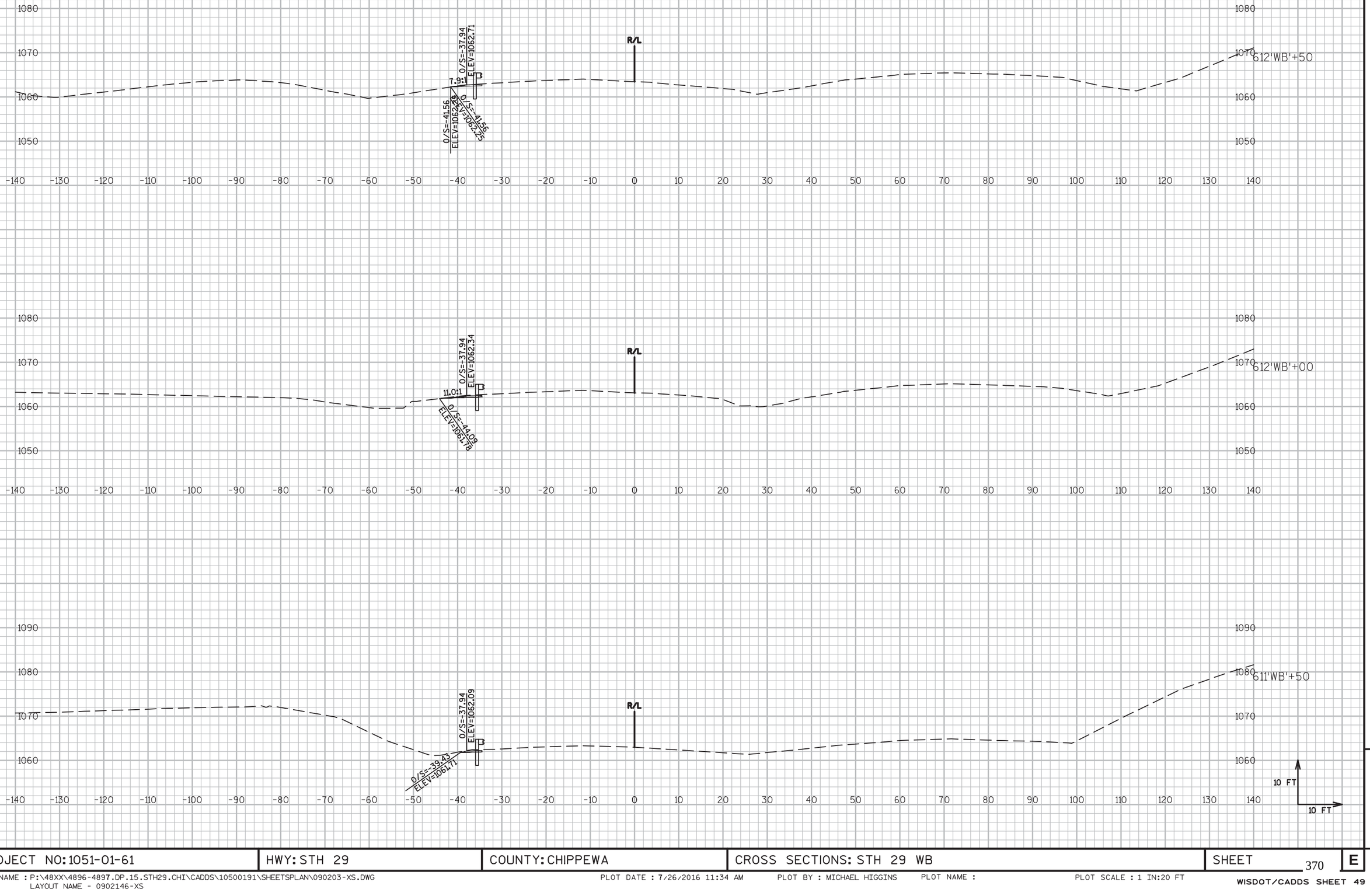
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PROJECT NO: 1051-01-61	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 WB	SHEET 369	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090203-XS.DWG
LAYOUT NAME - 0902145-XS

PLOT DATE : 7/26/2016 11:34 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT

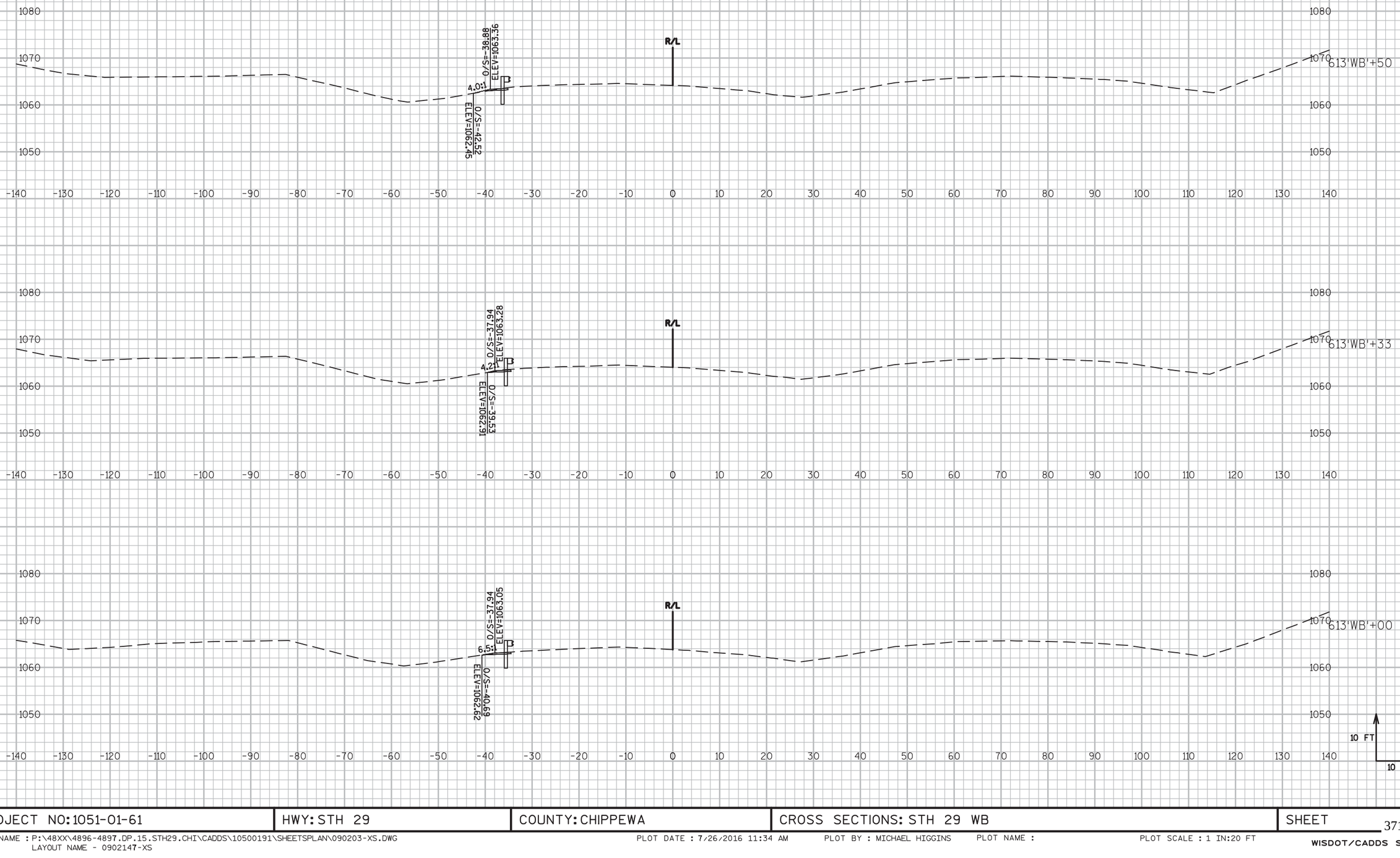


PROJECT NO: 1051-01-61	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 WB	SHEET 370	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090203-XS.DWG
LAYOUT NAME - 0902146-XS

PLOT DATE : 7/26/2016 11:34 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

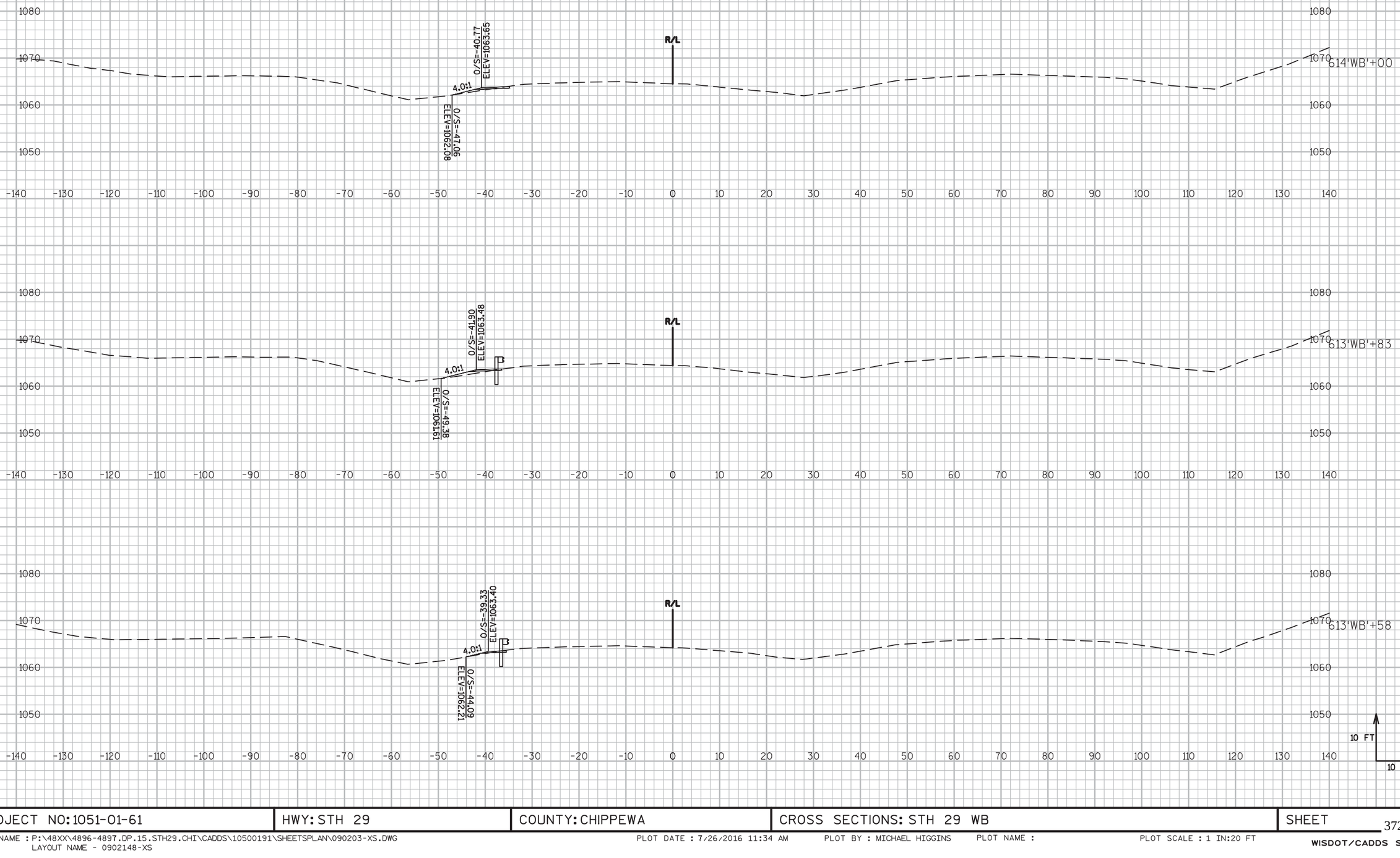


PROJECT NO: 1051-01-61	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 WB	SHEET 371	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090203-XS.DWG
LAYOUT NAME - 0902147-XS

PLOT DATE : 7/26/2016 11:34 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

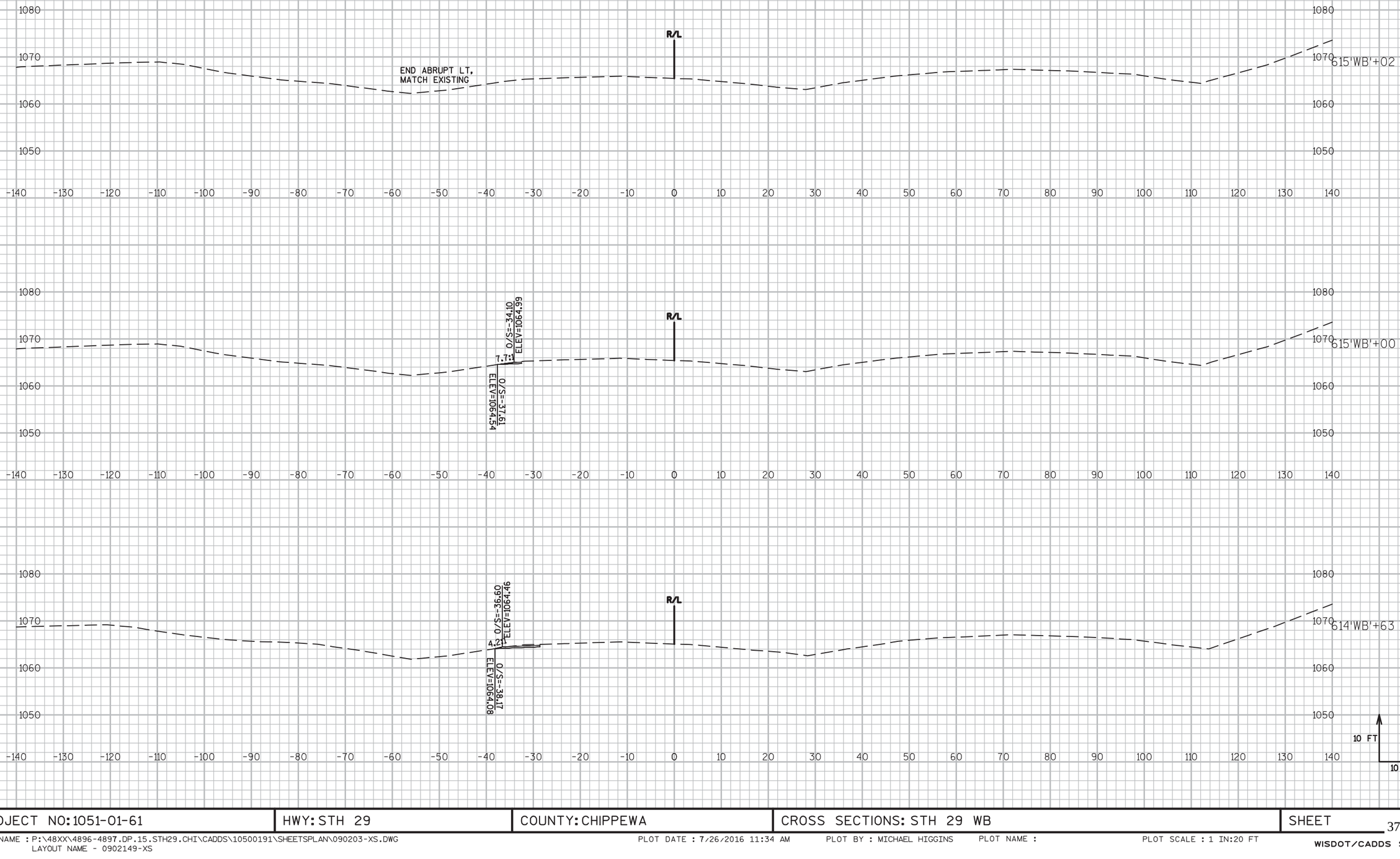


PROJECT NO: 1051-01-61	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 WB	SHEET 372	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090203-XS.DWG
LAYOUT NAME - 0902148-XS

PLOT DATE : 7/26/2016 11:34 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



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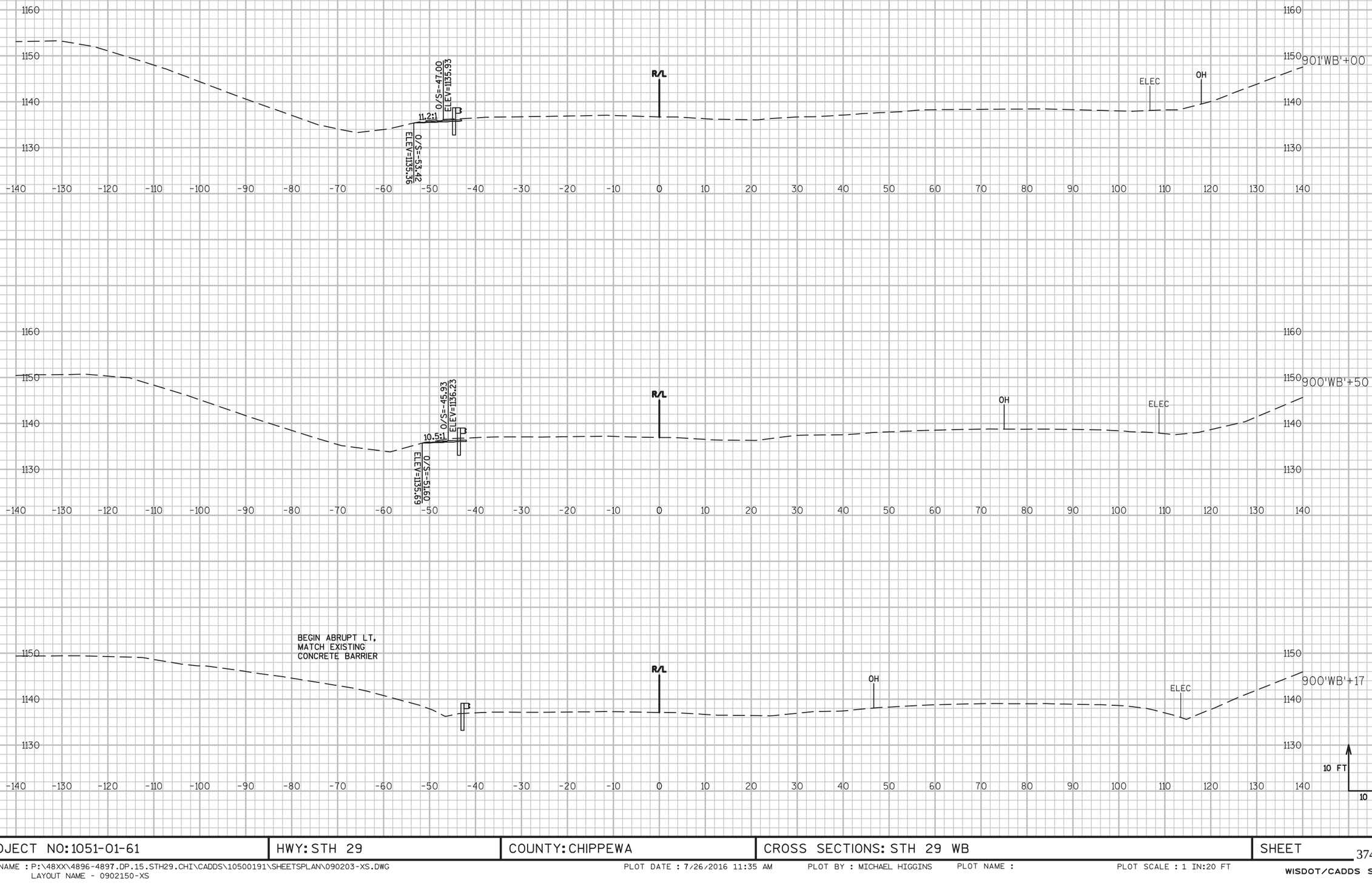
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PROJECT NO: 1051-01-61	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 WB	SHEET 373	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090203-XS.DWG
LAYOUT NAME - 0902149-XS

PLOT DATE : 7/26/2016 11:34 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



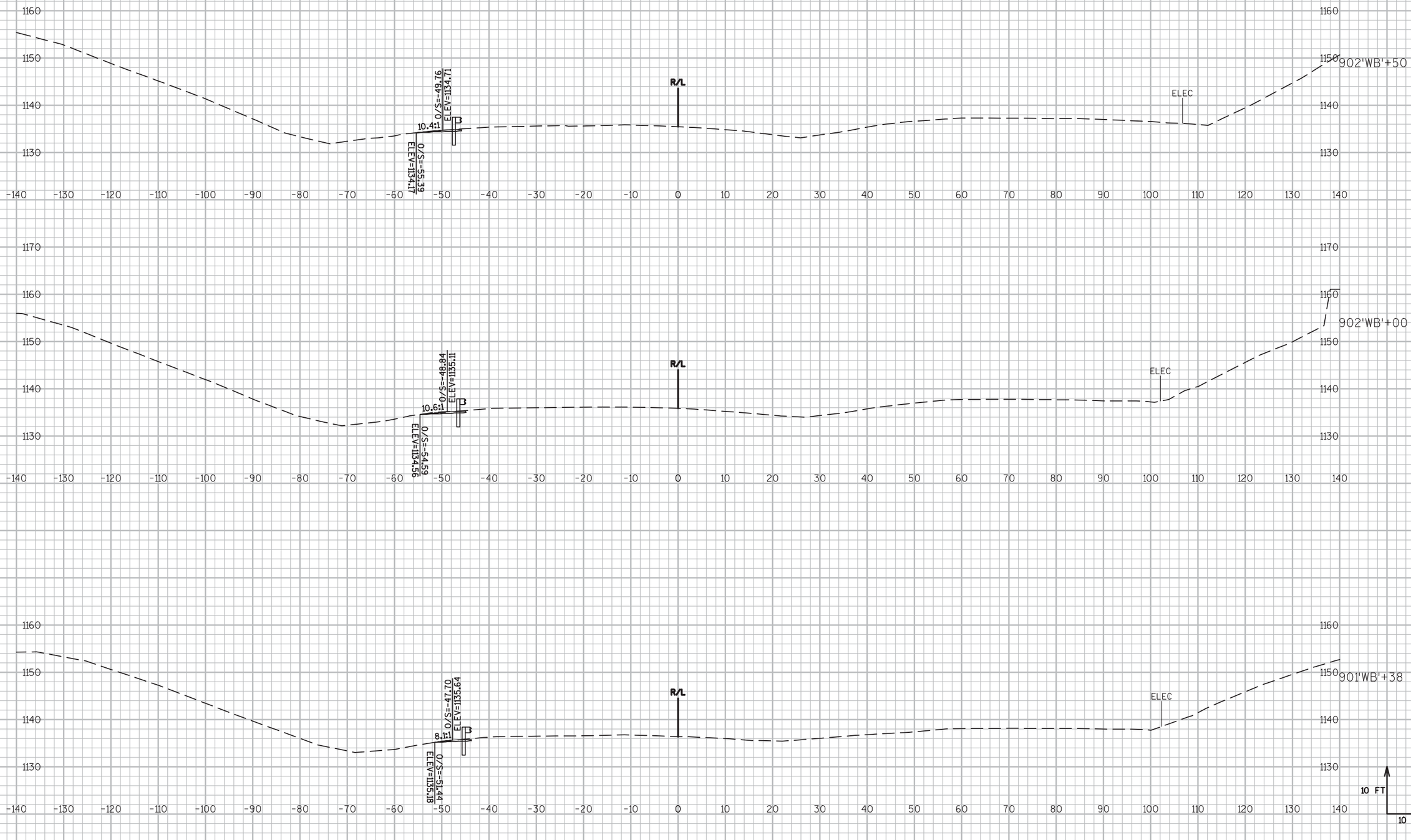
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PROJECT NO: 1051-01-61	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 WB	SHEET 374	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090203-XS.DWG
LAYOUT NAME - 0902150-XS

PLOT DATE : 7/26/2016 11:35 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT

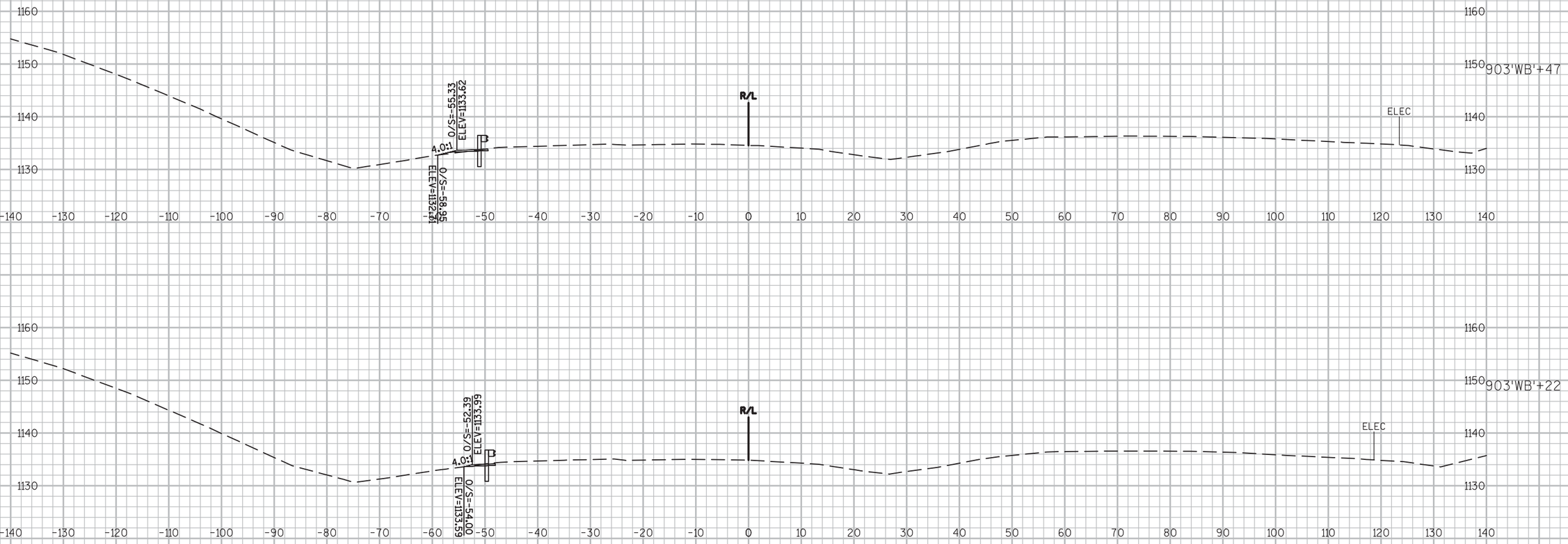


PROJECT NO: 1051-01-61	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 WB	SHEET 375	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090203-XS.DWG
LAYOUT NAME - 0902151-XS

PLOT DATE : 7/26/2016 11:35 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



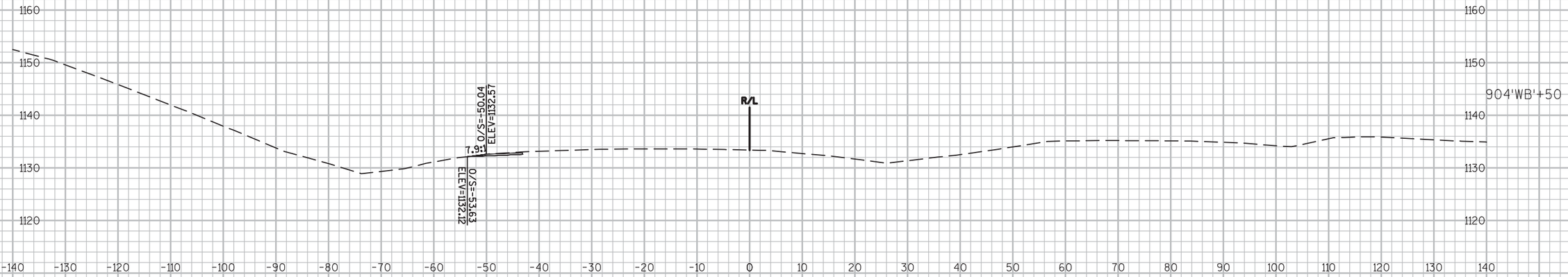
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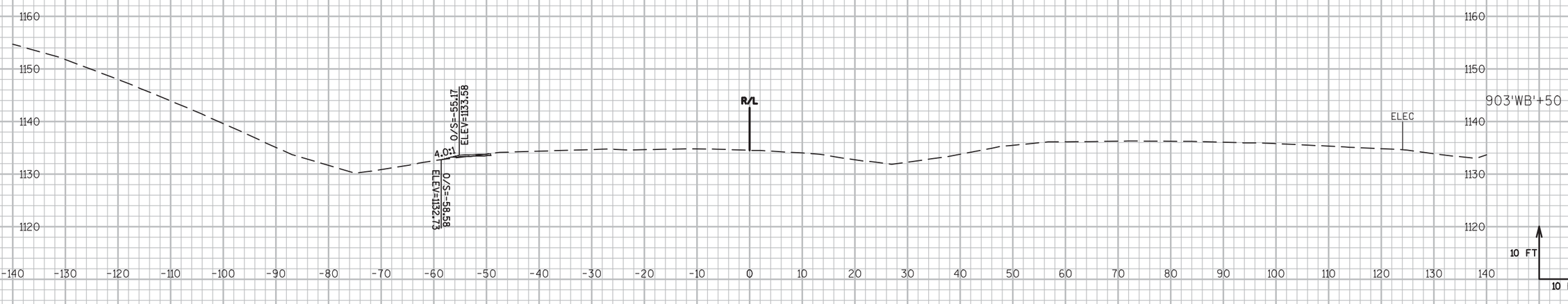
PROJECT NO: 1051-01-61	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 WB	SHEET 376	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090203-XS.DWG
LAYOUT NAME - 0902152-XS

PLOT DATE : 7/26/2016 11:35 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT







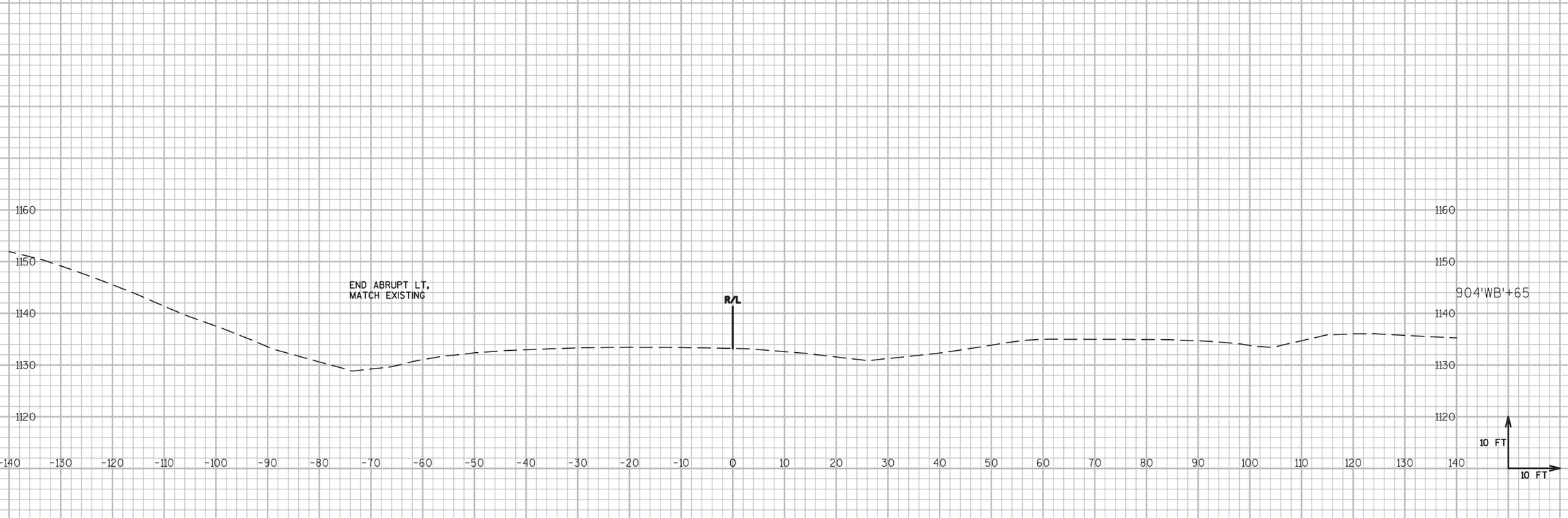
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PROJECT NO: 1051-01-61	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 WB	SHEET 377	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090203-XS.DWG
LAYOUT NAME - 0902153-XS

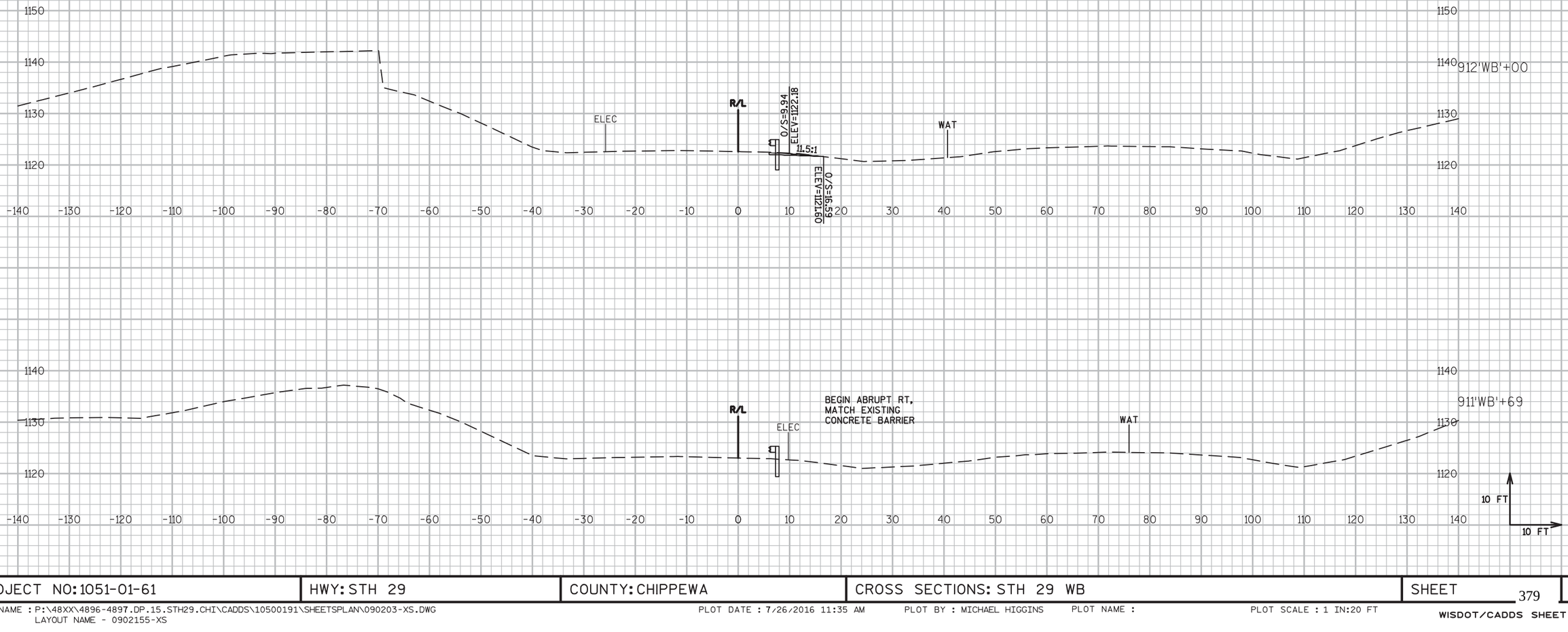
PLOT DATE : 7/26/2016 11:35 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT



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PROJECT NO: 1051-01-61	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 WB	SHEET 378	E

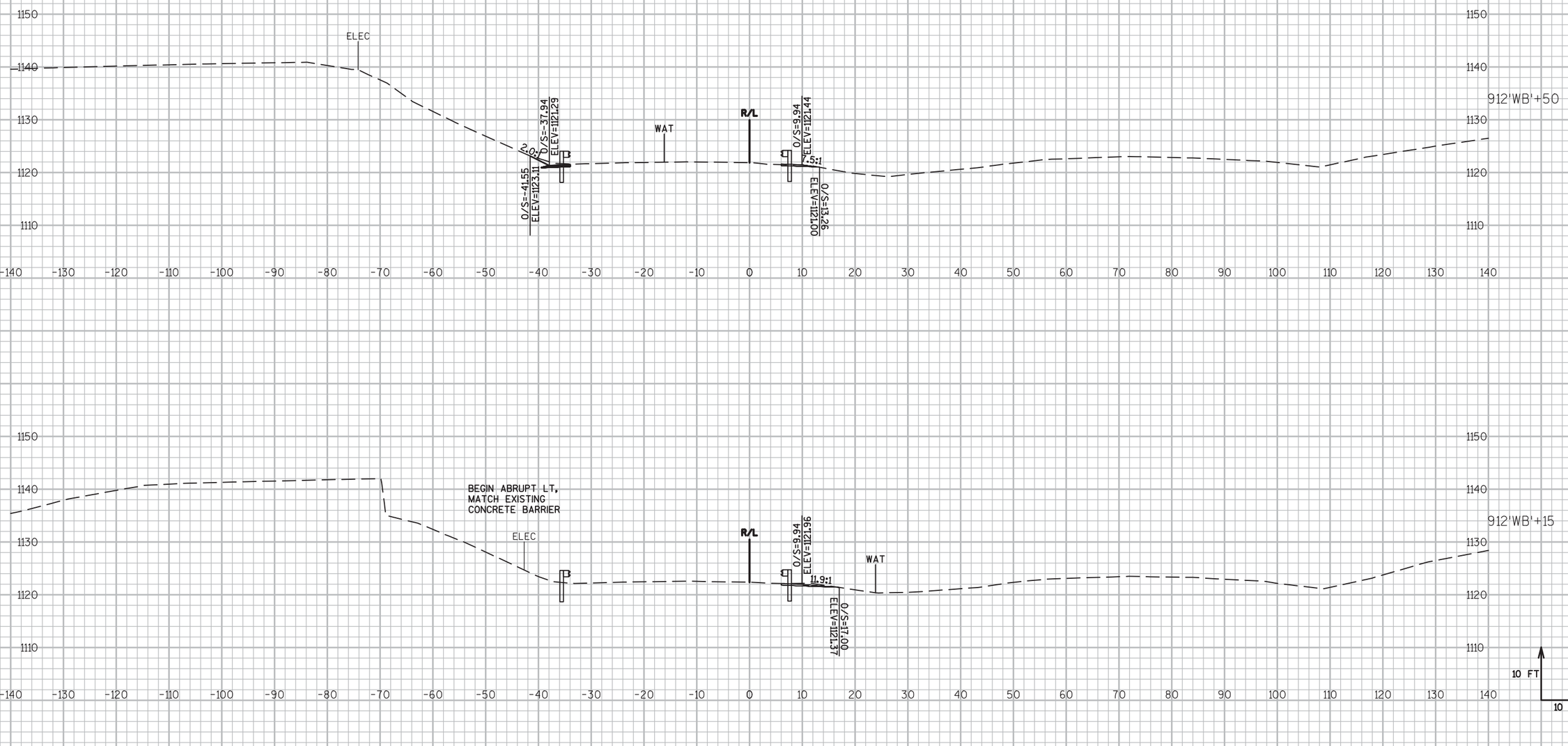
FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090203-XS.DWG
LAYOUT NAME - 0902154-XS
PLOT DATE : 7/26/2016 11:35 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 49



PROJECT NO: 1051-01-61	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 WB	SHEET 379	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090203-XS.DWG
LAYOUT NAME - 0902155-XS

PLOT DATE : 7/26/2016 11:35 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT

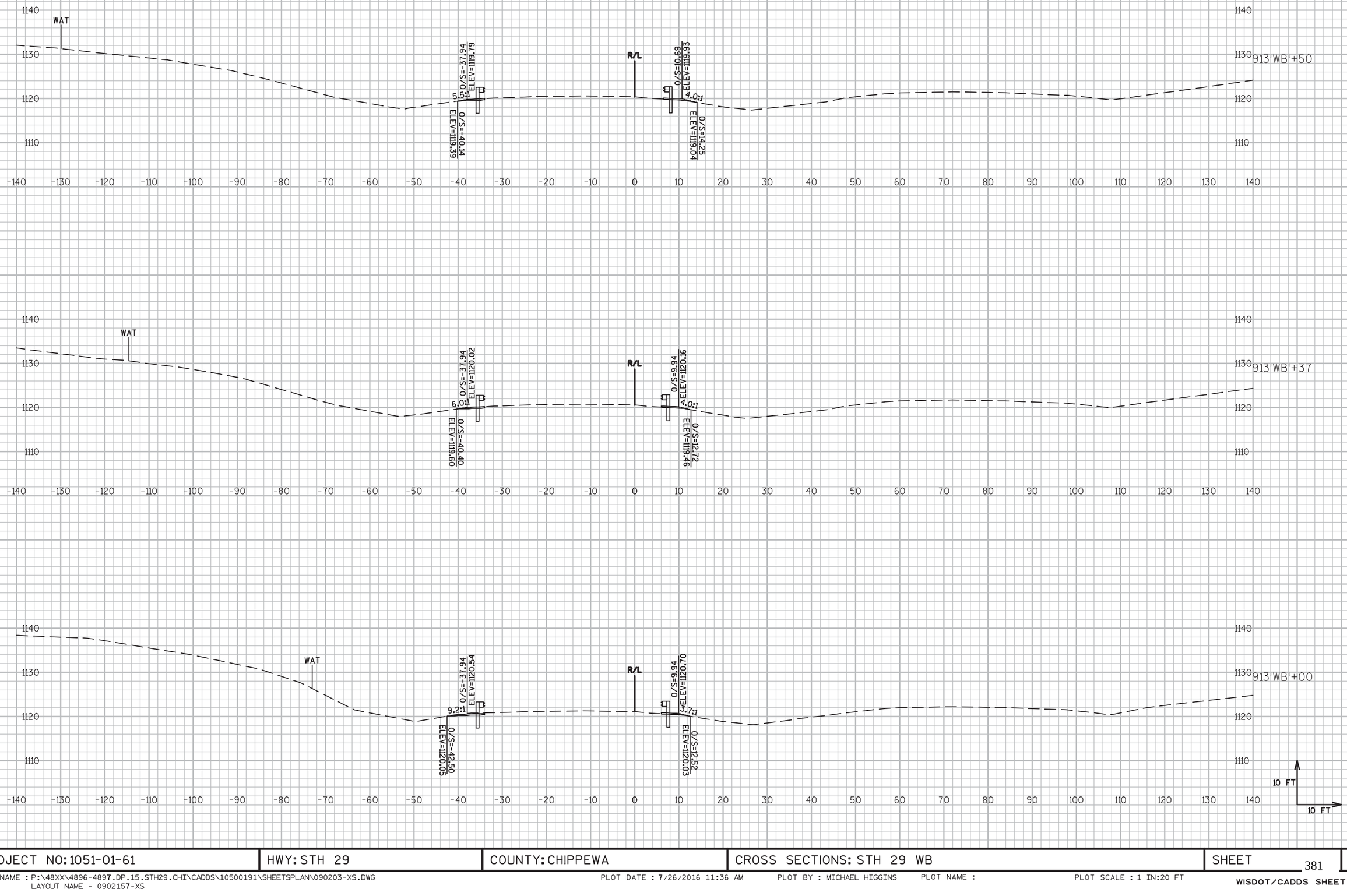


PROJECT NO: 1051-01-61	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 WB	SHEET 380	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090203-XS.DWG
LAYOUT NAME - 0902156-XS

PLOT DATE : 7/26/2016 11:35 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



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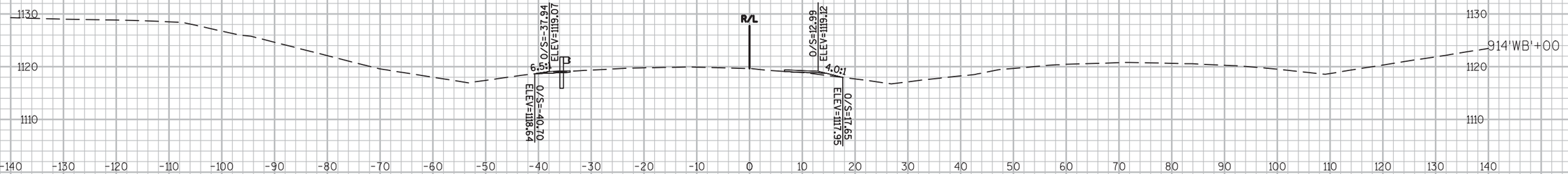
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PROJECT NO: 1051-01-61	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 WB	SHEET 381	E

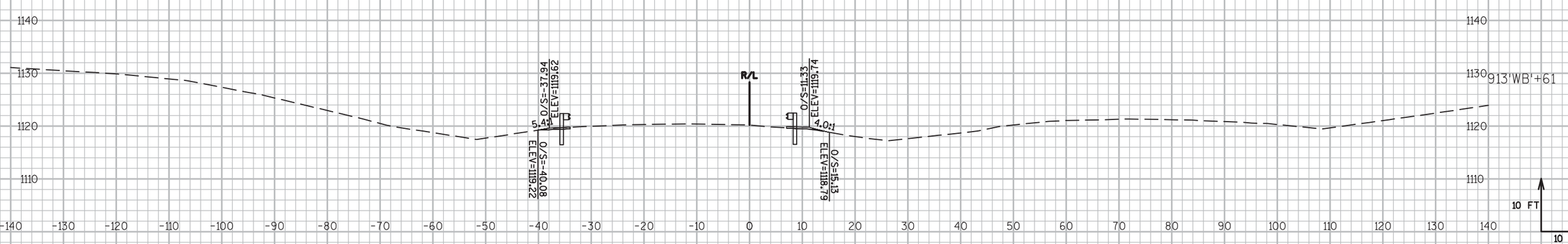
FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090203-XS.DWG
LAYOUT NAME - 0902157-XS

PLOT DATE : 7/26/2016 11:36 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49





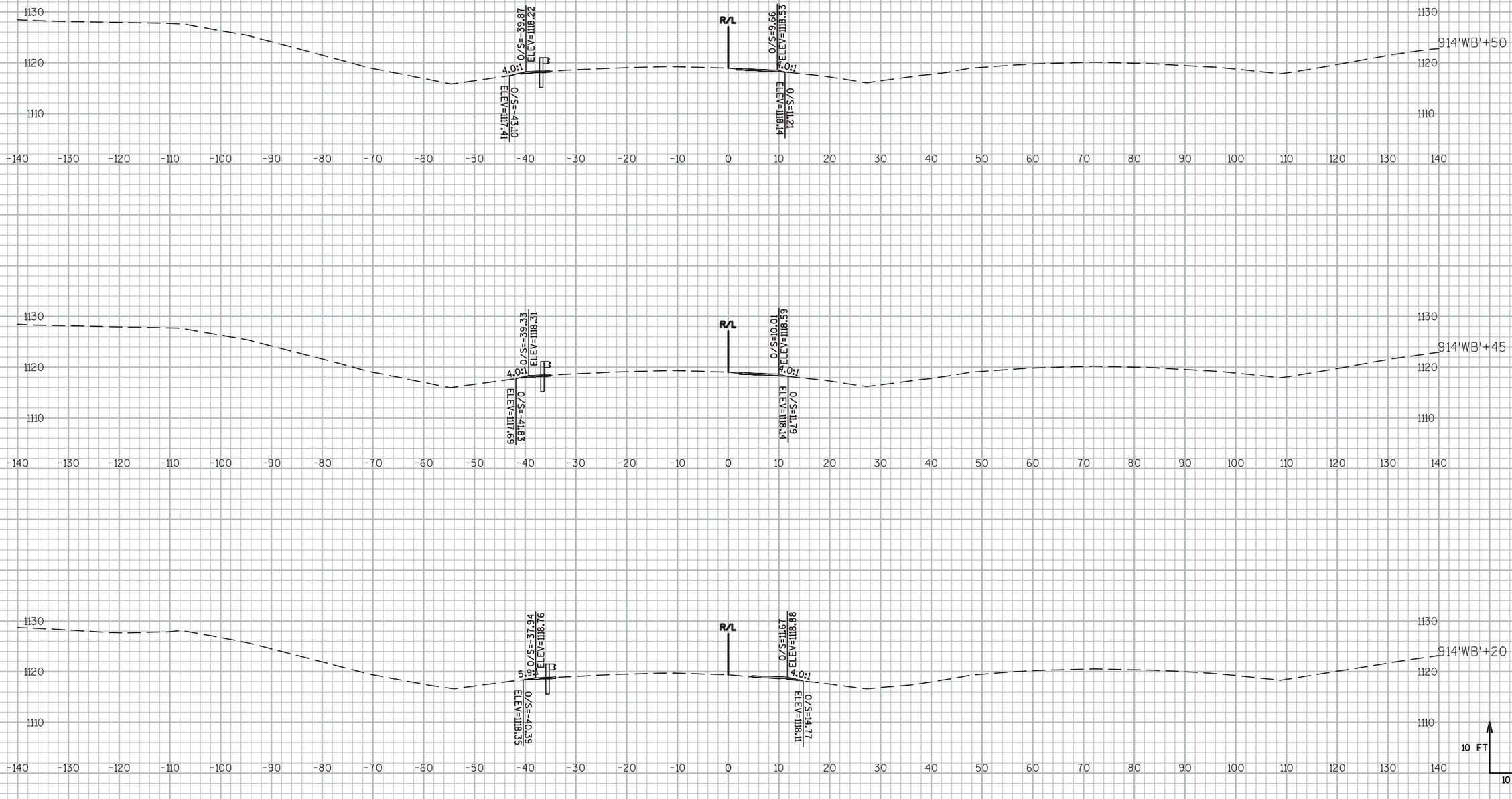


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PROJECT NO: 1051-01-61	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 WB	SHEET 382	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090203-XS.DWG
LAYOUT NAME - 0902158-XS
PLOT DATE : 7/26/2016 11:36 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 49



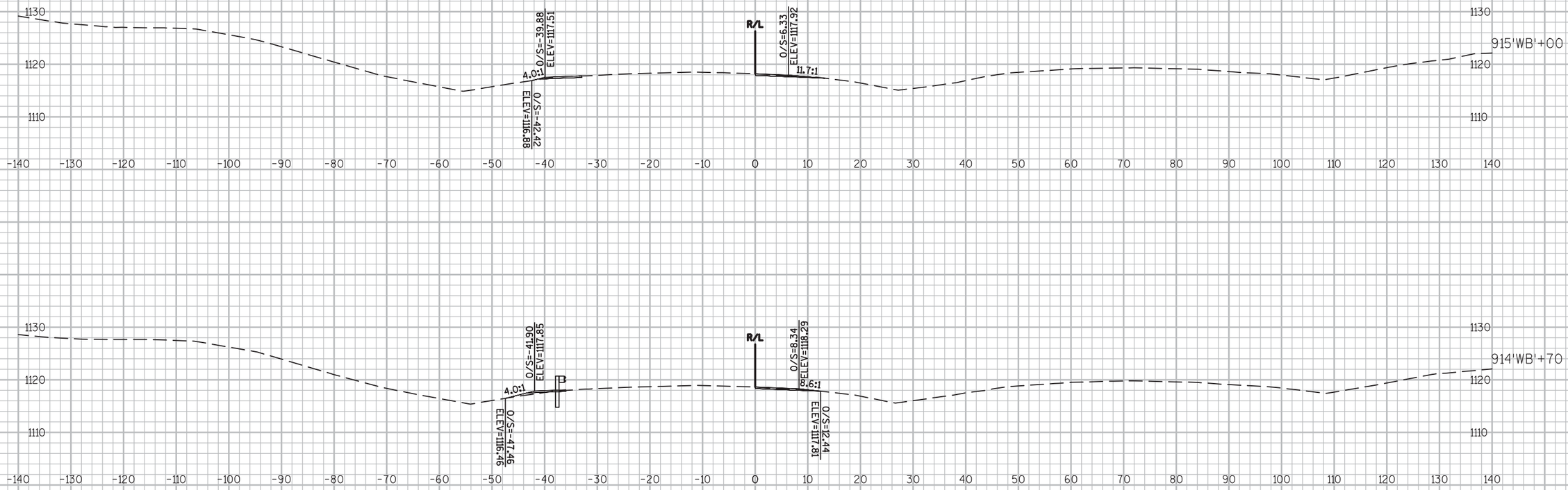
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PROJECT NO: 1051-01-61	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 WB	SHEET 383	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090203-XS.DWG
LAYOUT NAME - 0902159-XS

PLOT DATE : 7/26/2016 11:36 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT



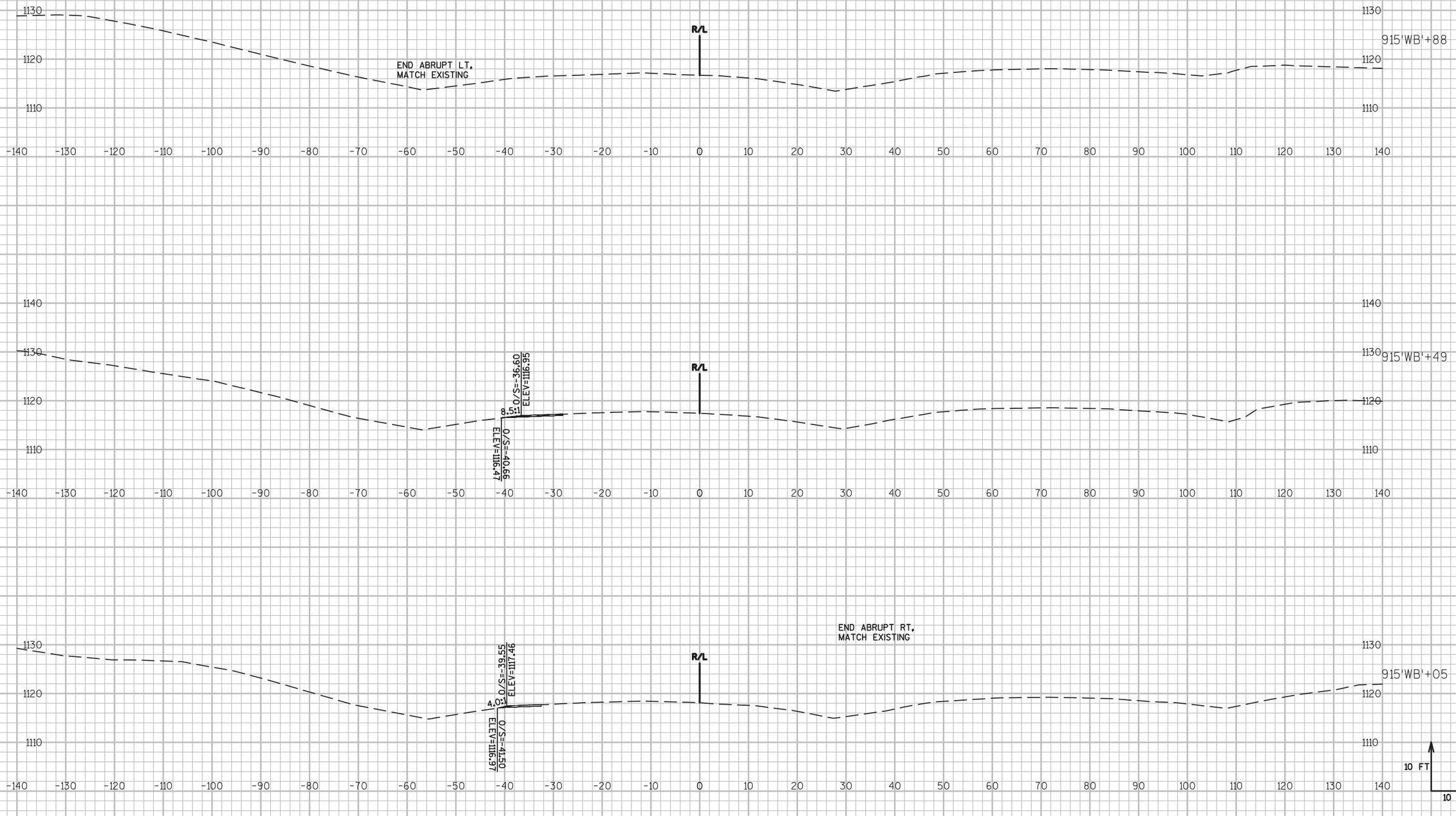
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PROJECT NO: 1051-01-61	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 WB	SHEET 384	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090203-XS.DWG
LAYOUT NAME - 0902160-XS

PLOT DATE : 7/26/2016 11:36 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT

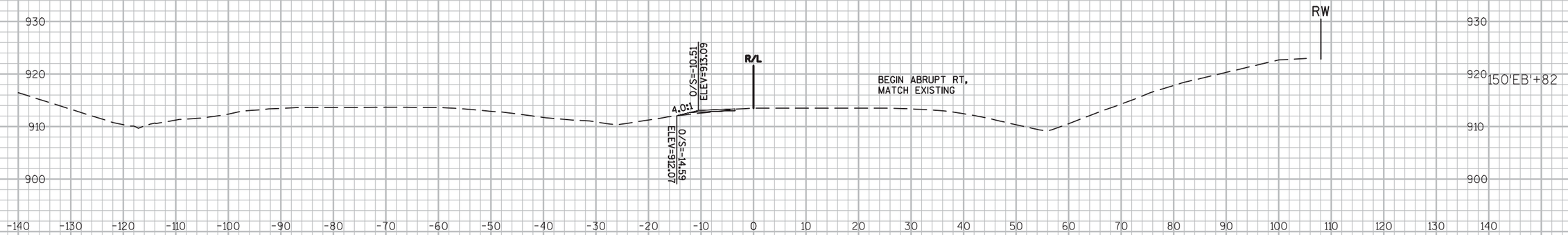


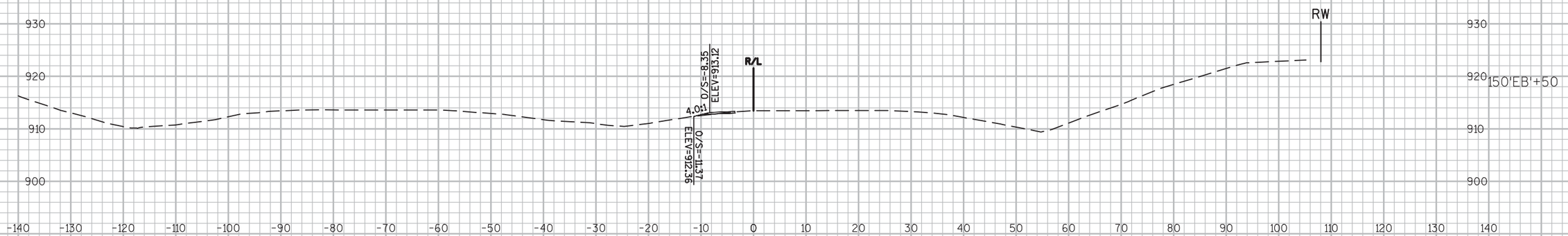
PROJECT NO: 1051-01-61	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 WB	SHEET 385	E

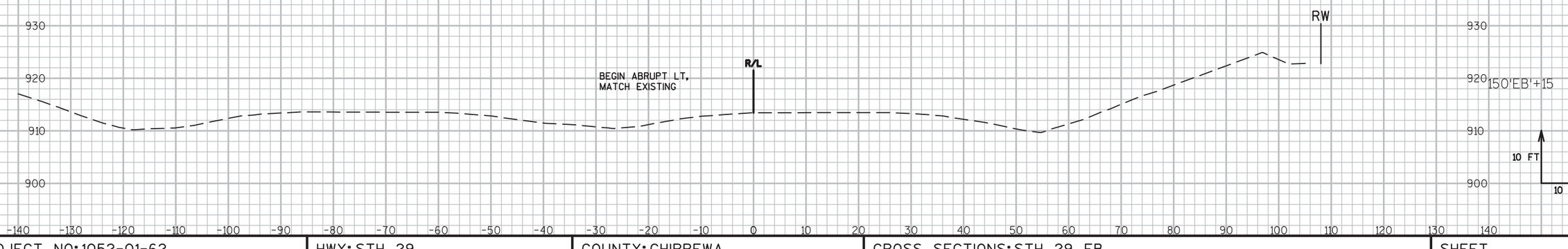
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LAYOUT NAME - 0902161-XS

PLOT DATE : 7/26/2016 11:36 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49





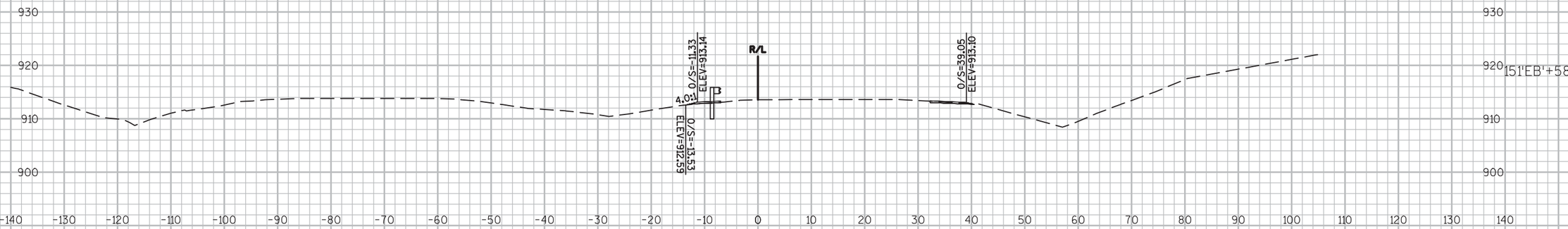


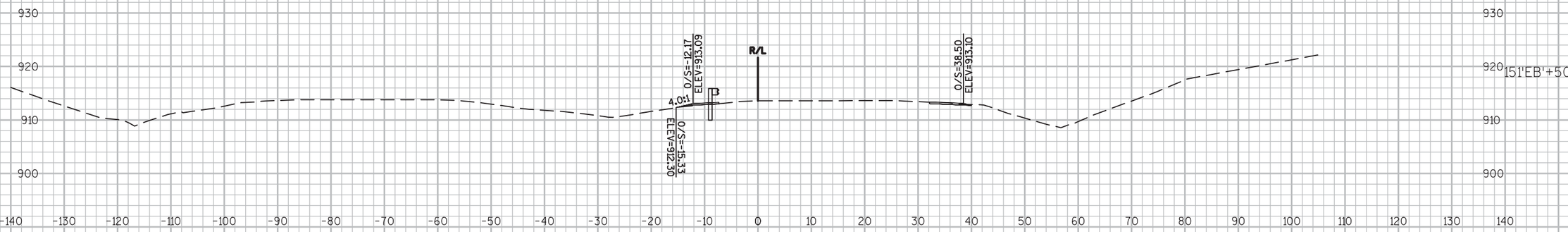
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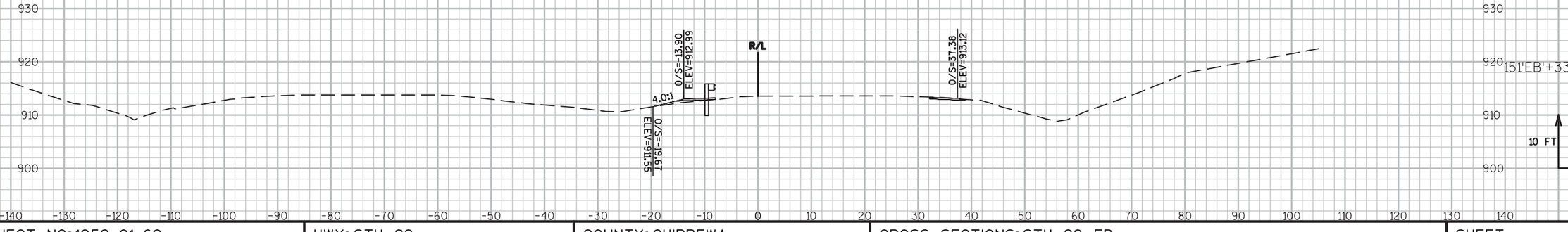
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PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 386	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090204-XS.DWG PLOT DATE : 7/26/2016 11:37 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT



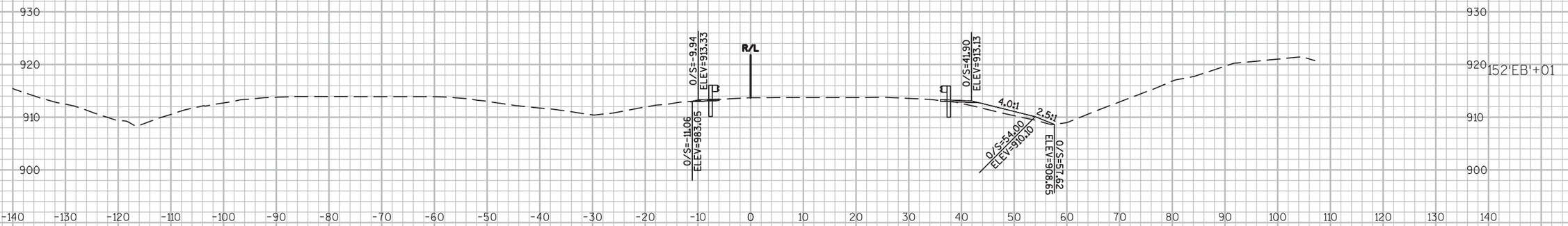


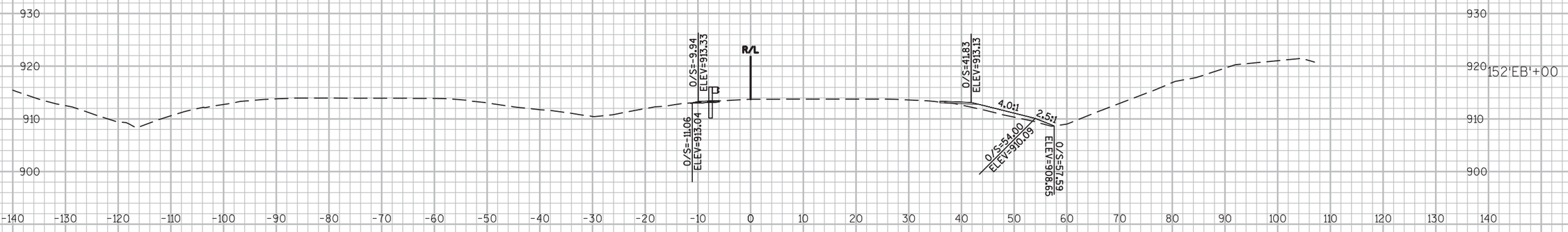


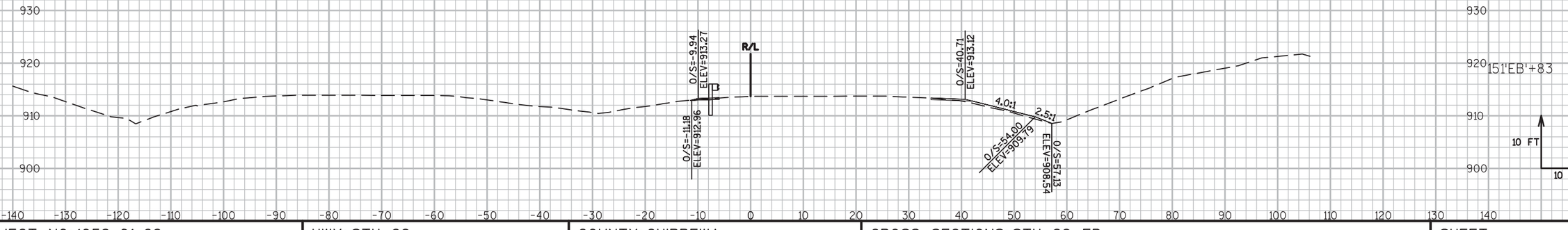
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PROJECT NO:1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 387	E





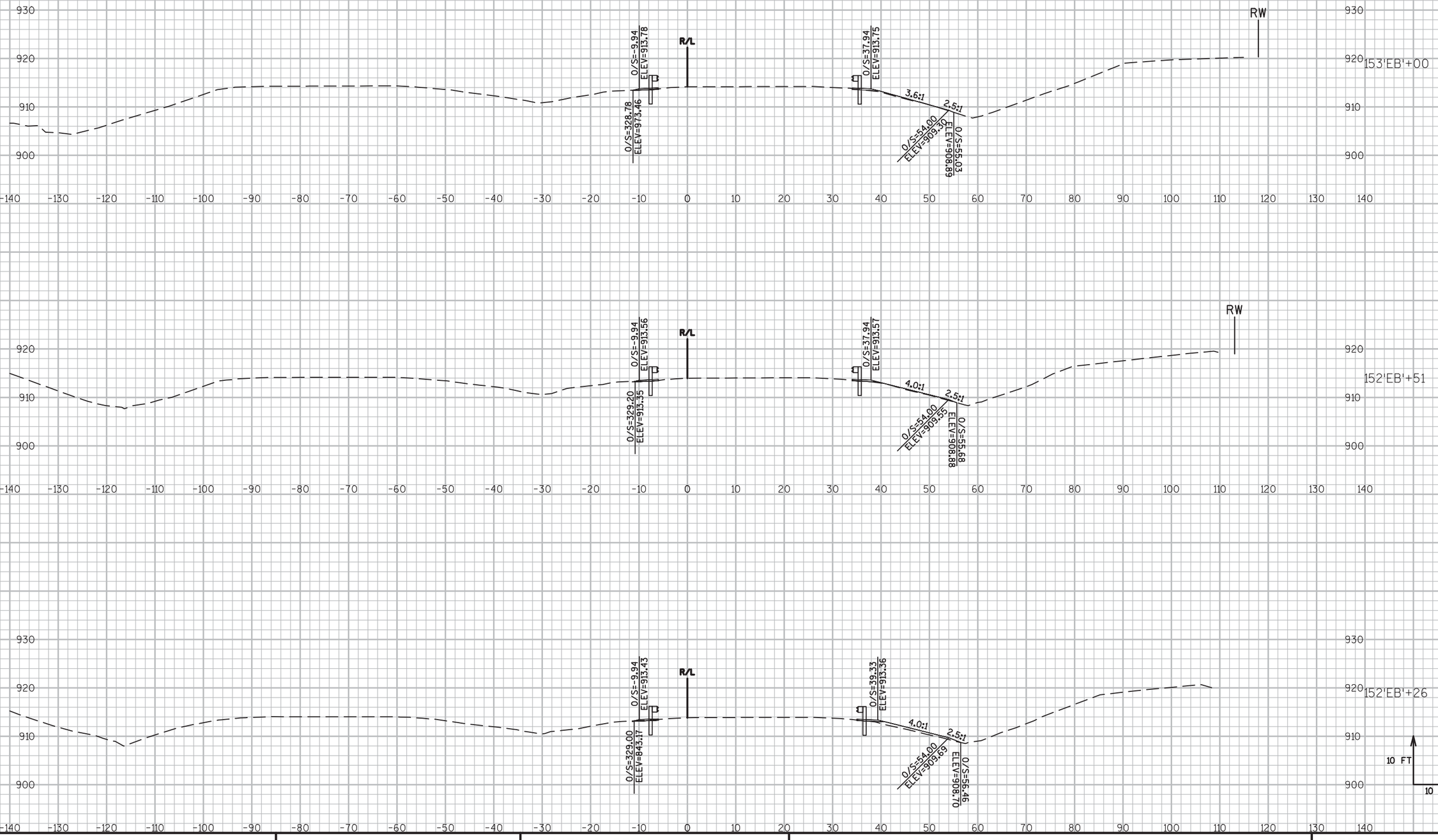


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PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 388	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090204-XS.DWG PLOT DATE : 7/26/2016 11:38 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT

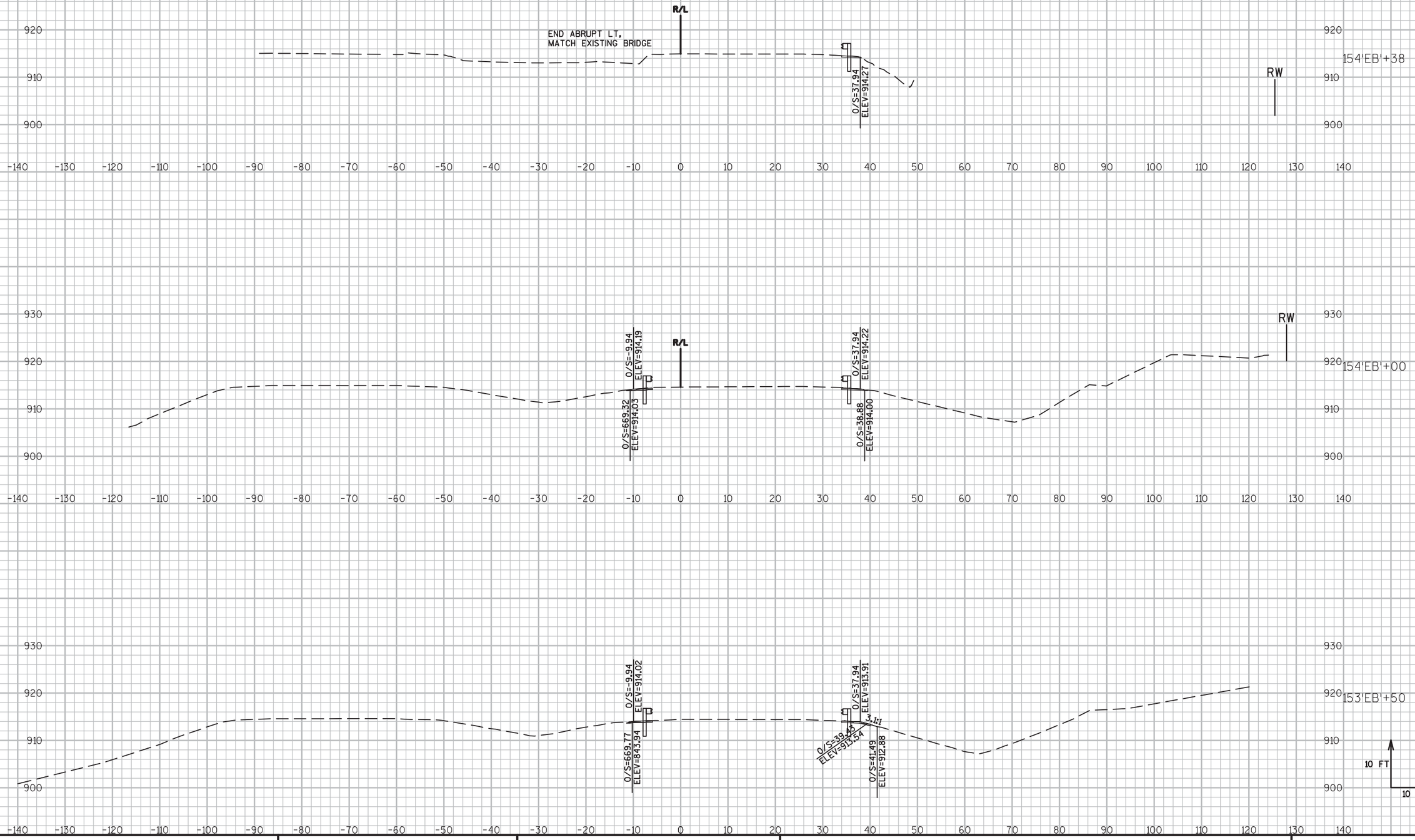


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PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 389	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090204-XS.DWG PLOT DATE : 7/26/2016 11:38 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT



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PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 390	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090204-XS.DWG PLOT DATE : 7/26/2016 11:39 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT

END ABRUPT RT,
MATCH EXISTING BRIDGE

WETLAND

WETLAND

RW

RW

154'EB'+56

154'EB'+50

R/L

O/S=39.63
ELEV=915.63

O/S=38.15
ELEV=914.24

10 FT

10 FT

920
910
900
890

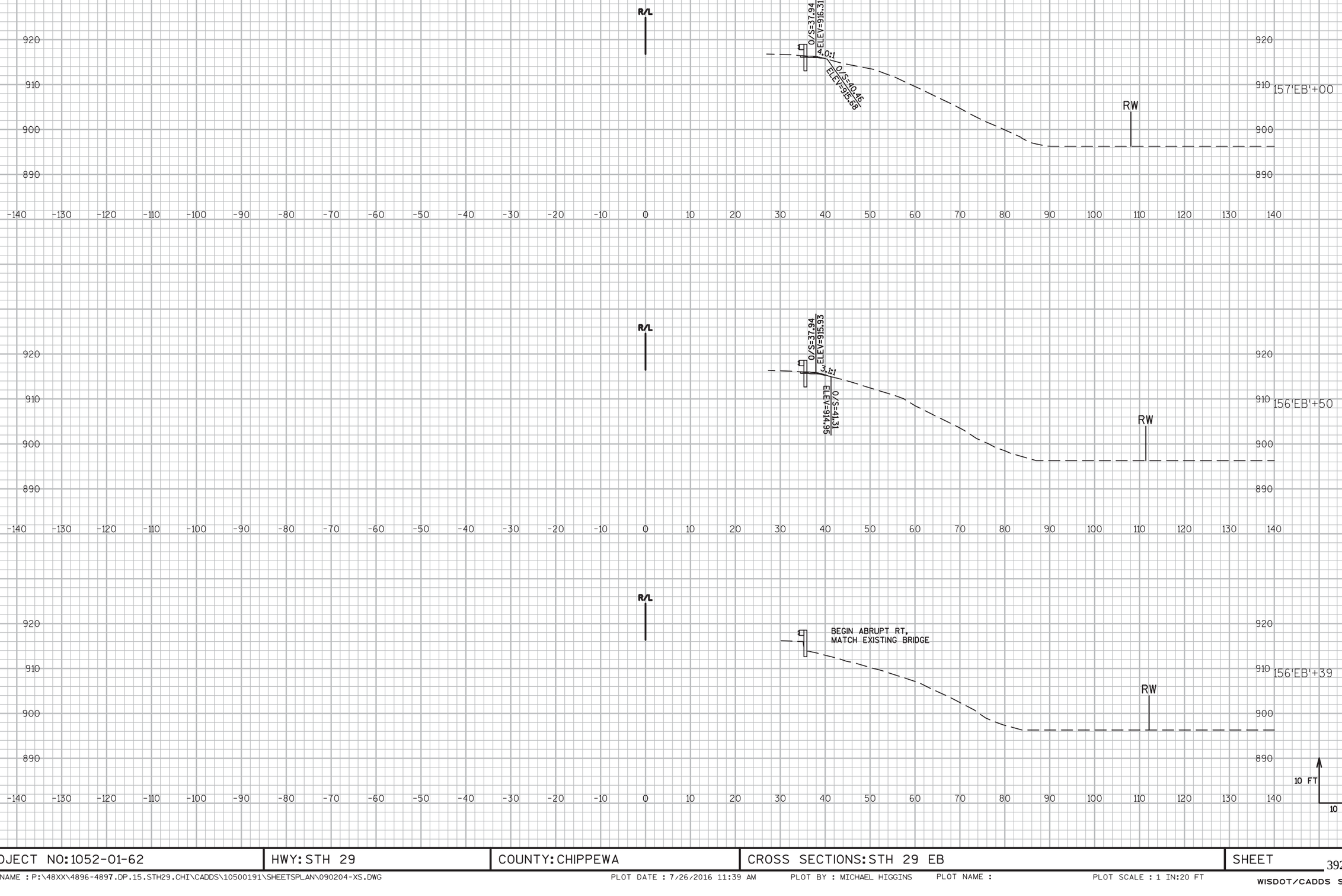
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9

PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 391	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090204-XS.DWG PLOT DATE : 7/26/2016 11:39 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT

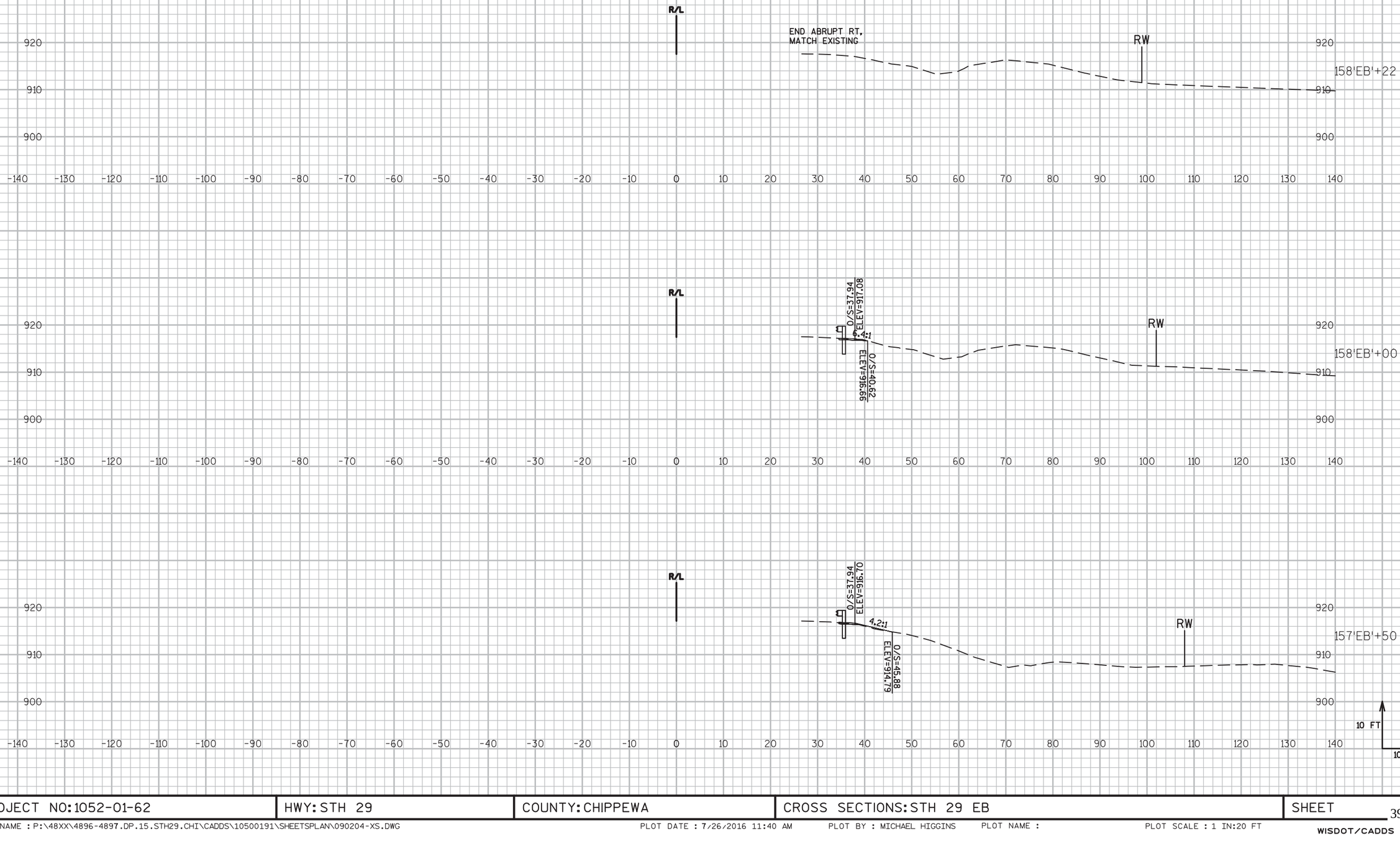


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PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 392	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090204-XS.DWG PLOT DATE : 7/26/2016 11:39 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT

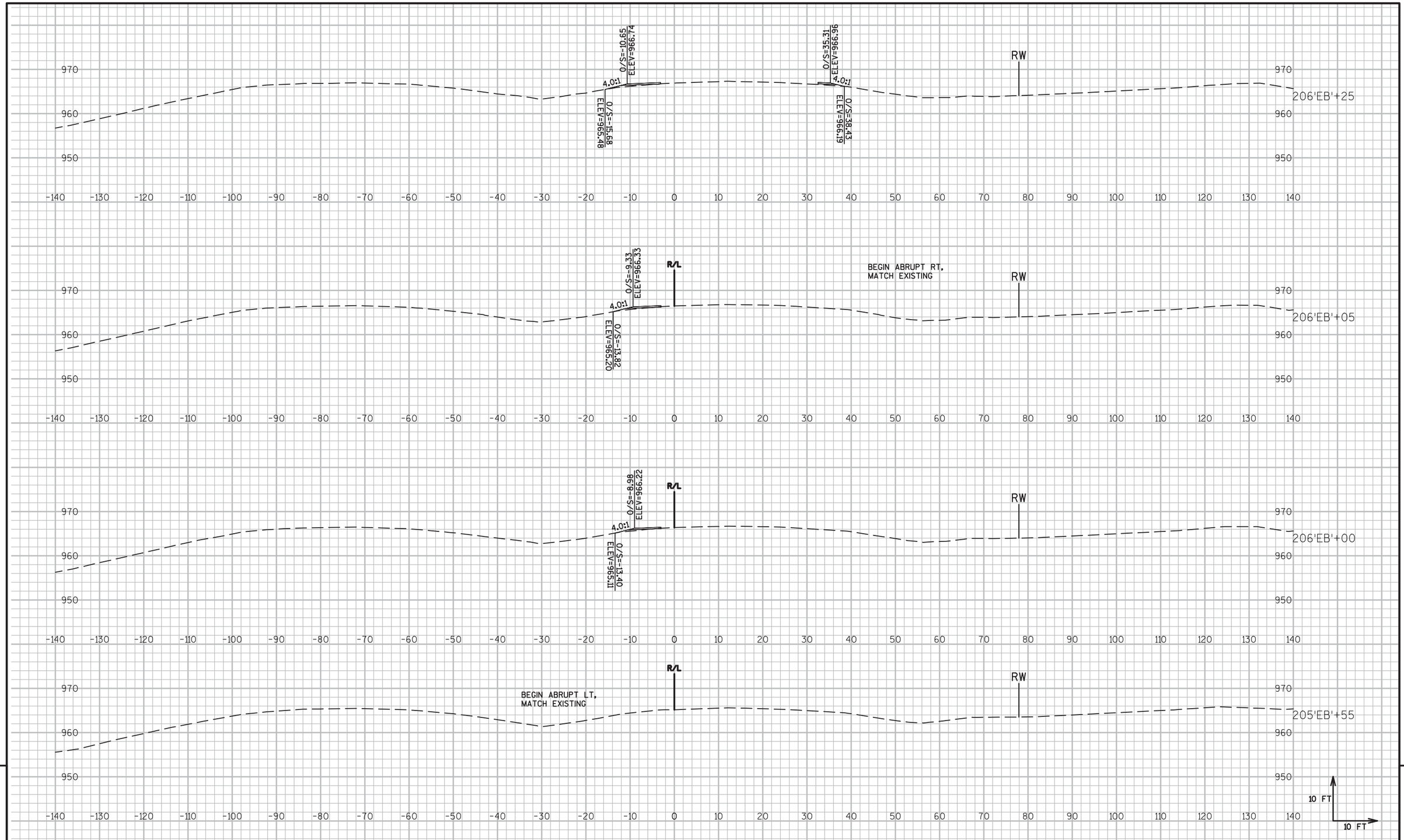


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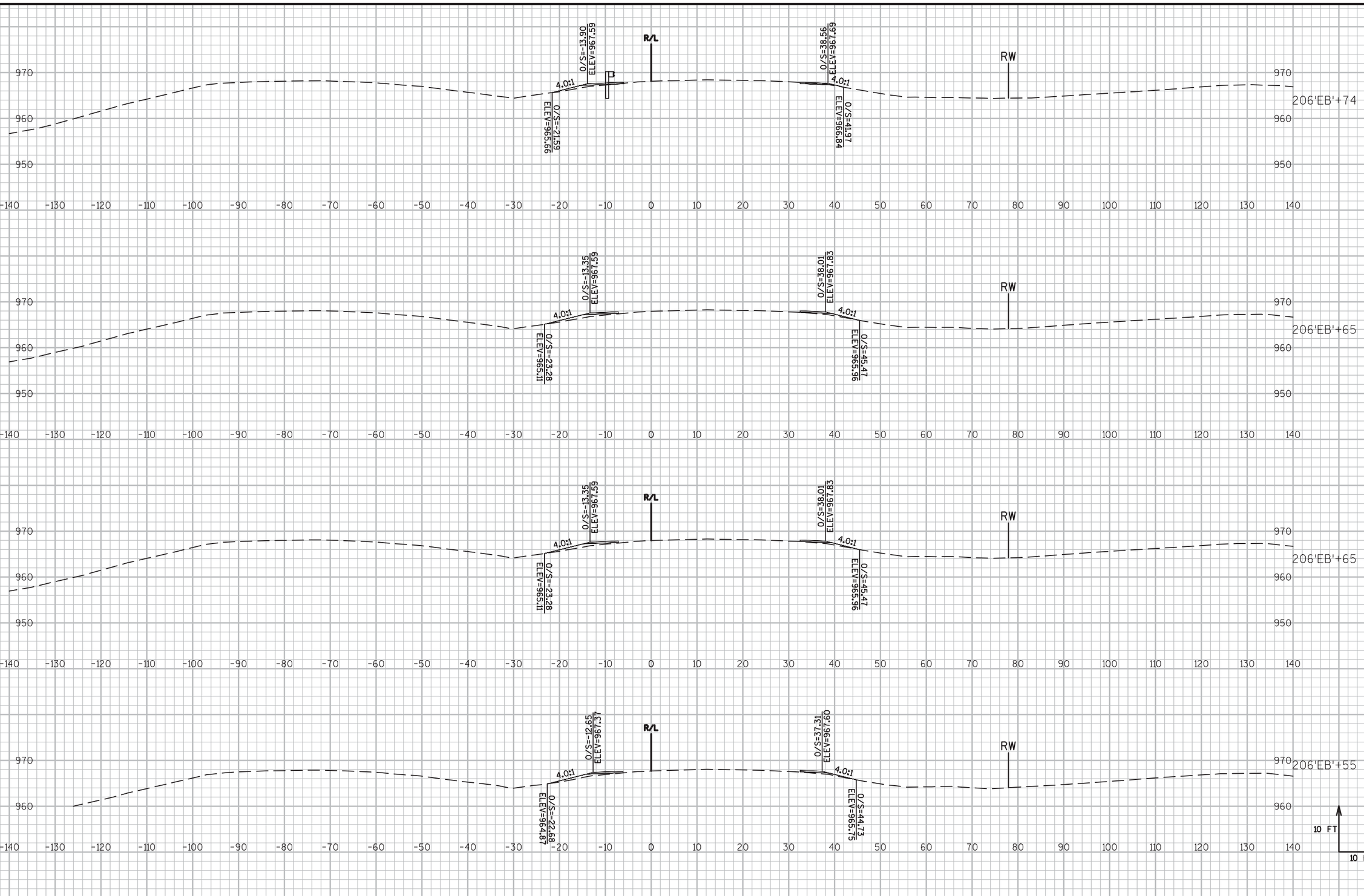
PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 393	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090204-XS.DWG PLOT DATE : 7/26/2016 11:40 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT



9 9

PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 394 E

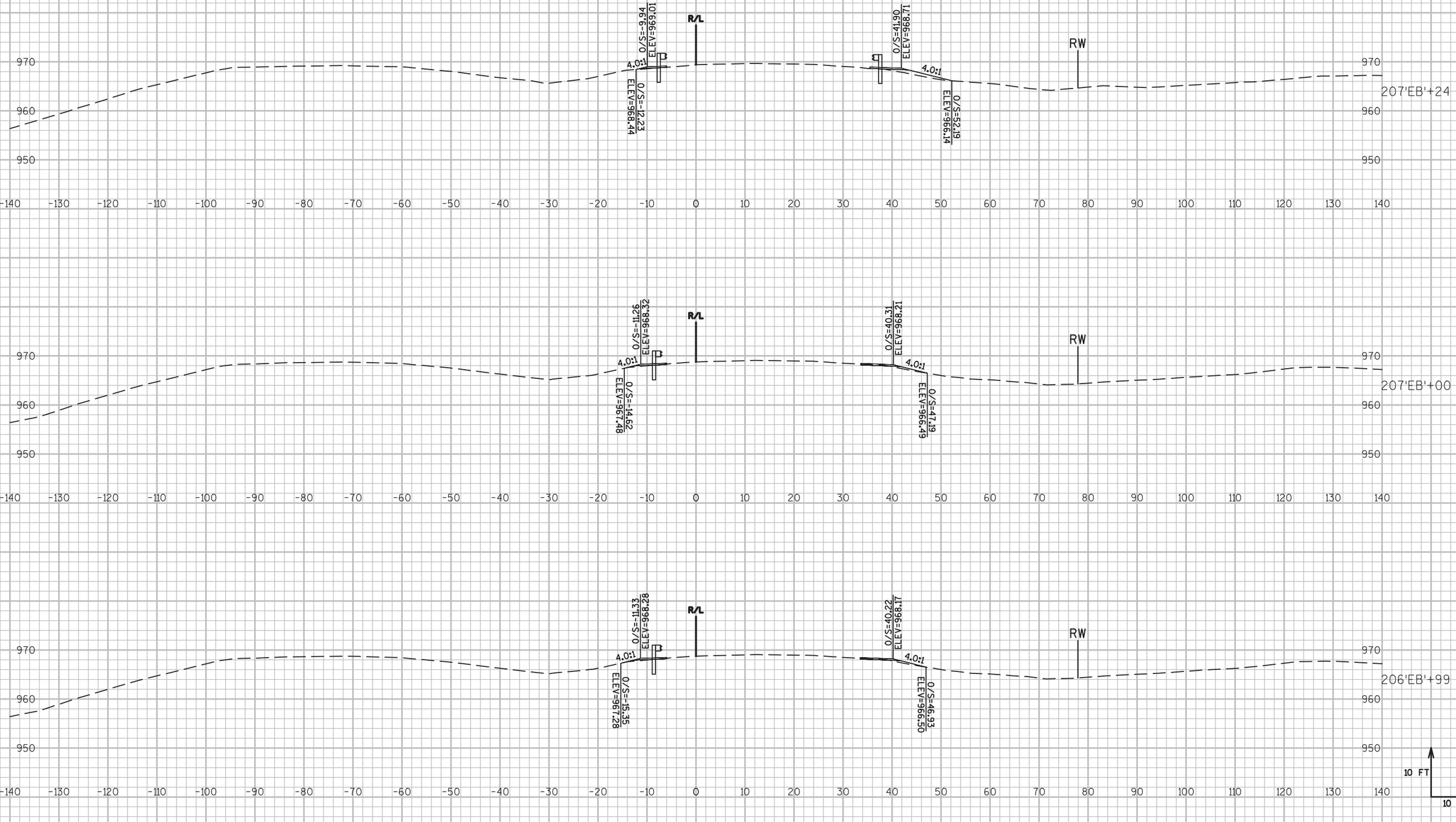


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PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 395	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090204-XS.DWG PLOT DATE : 7/26/2016 11:40 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT

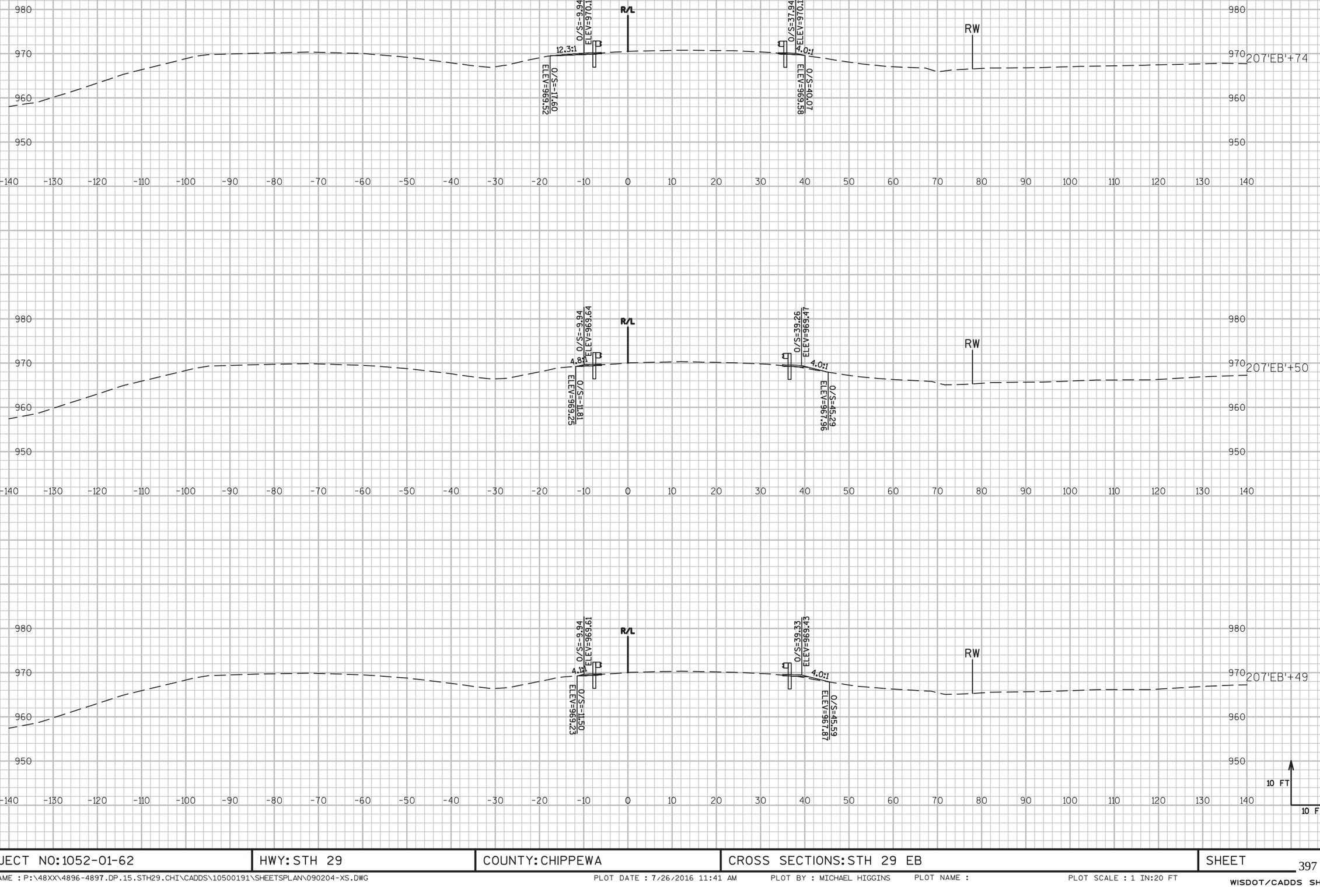


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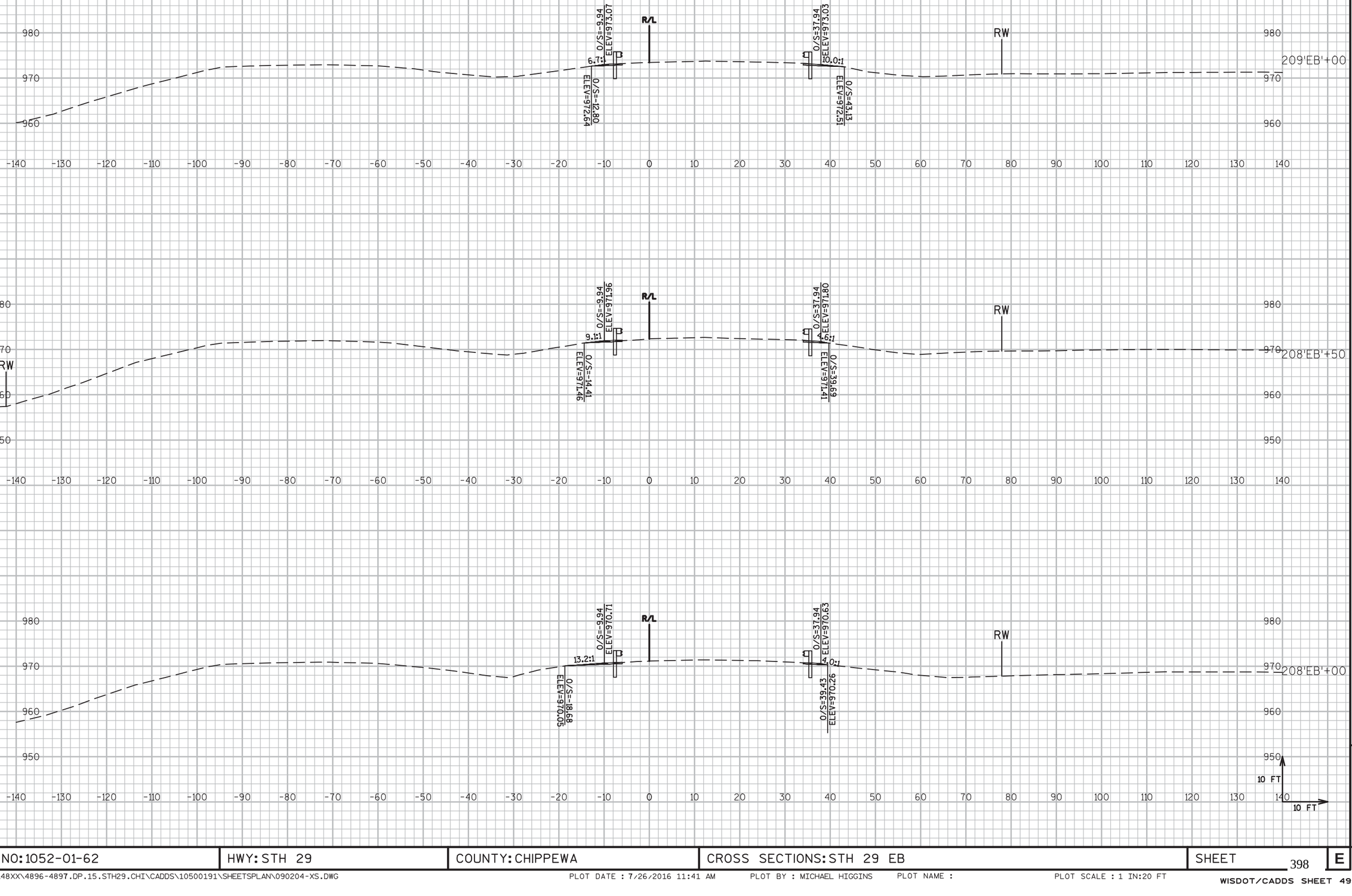
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PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 396	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090204-XS.DWG PLOT DATE : 7/26/2016 11:41 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT



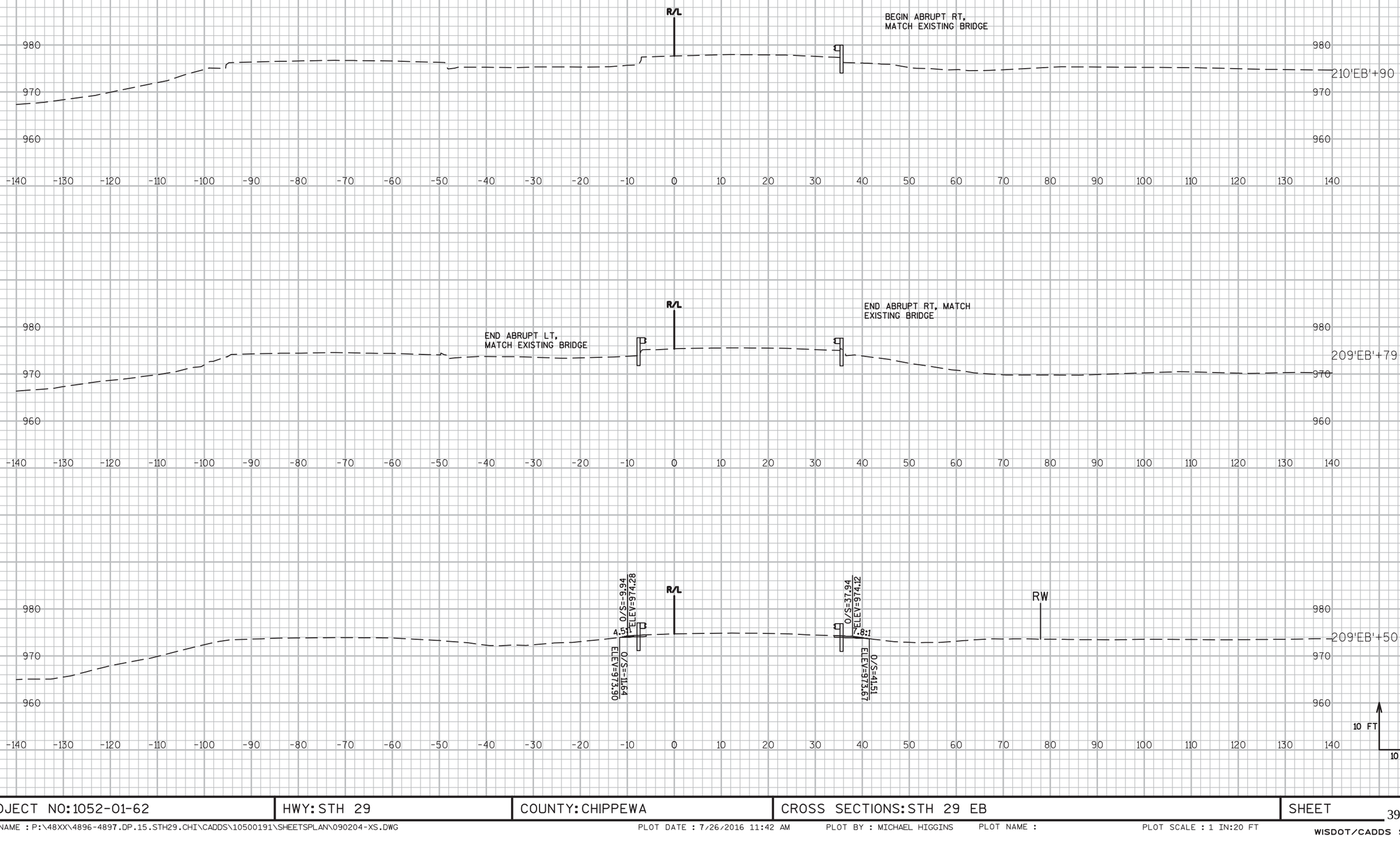
PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 397	E



9 9

PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 398 E

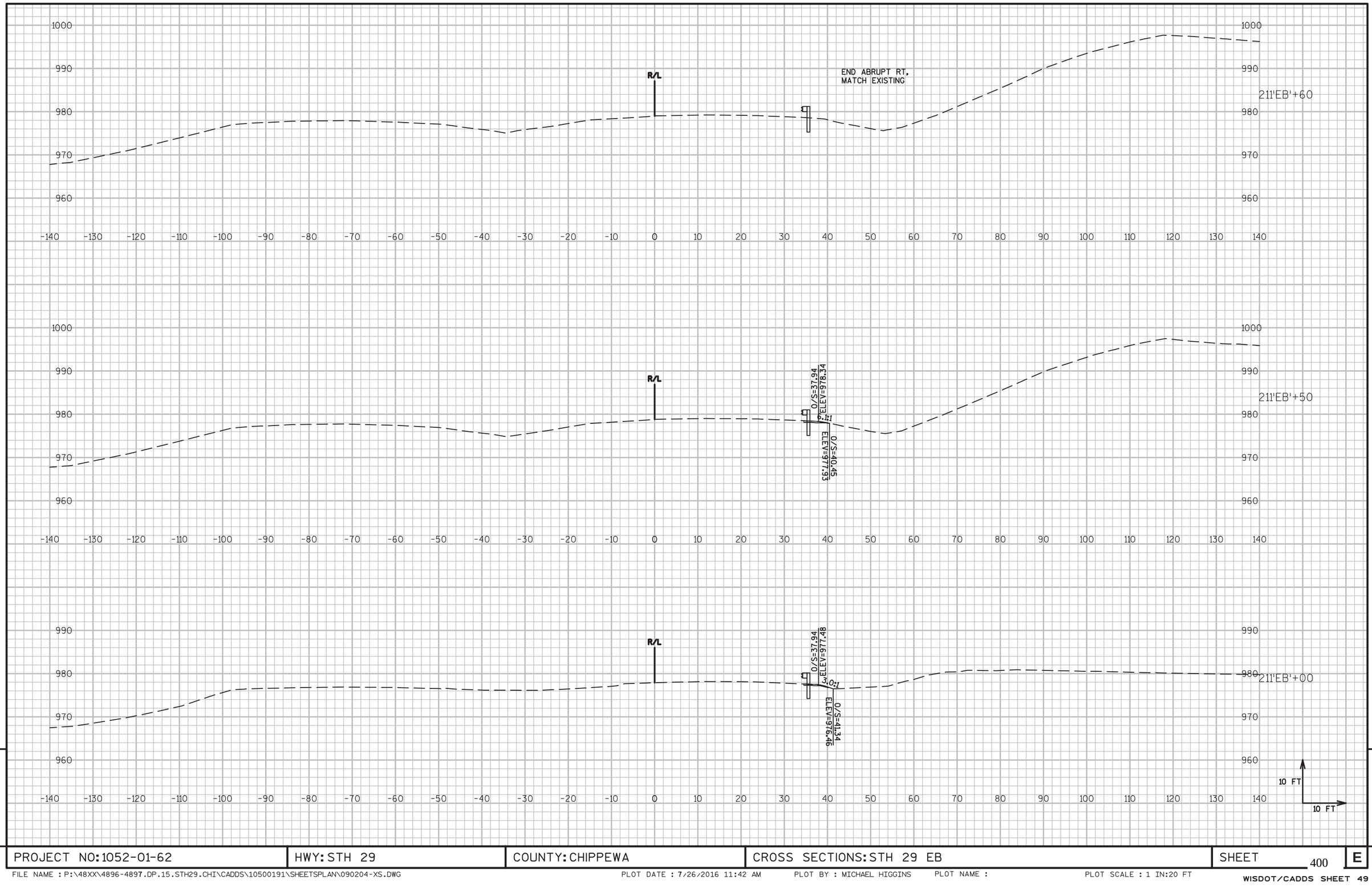
FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090204-XS.DWG PLOT DATE : 7/26/2016 11:41 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT



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PROJECT NO:1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 399	E

9

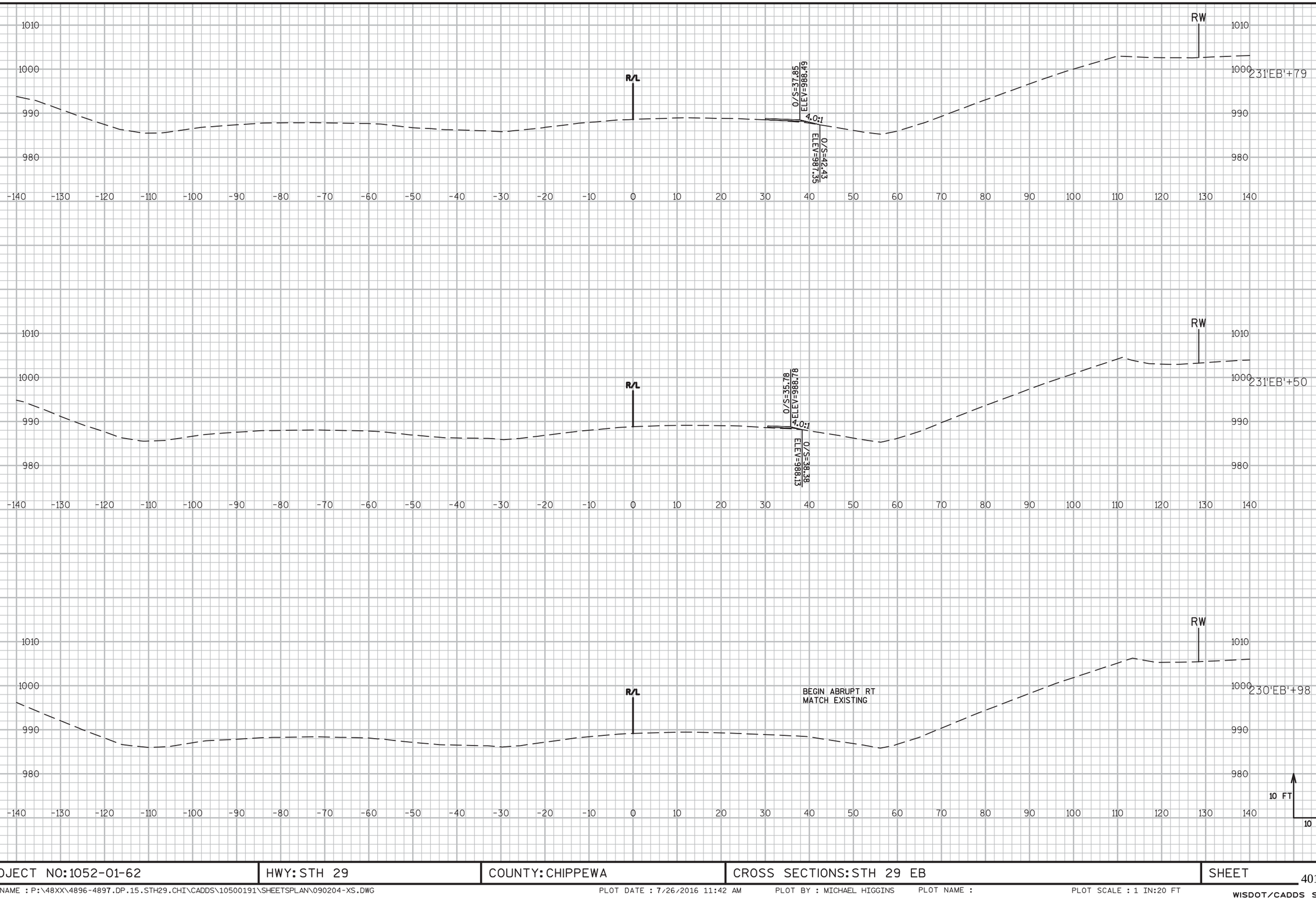


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PROJECT NO:1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 400	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090204-XS.DWG PLOT DATE : 7/26/2016 11:42 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT

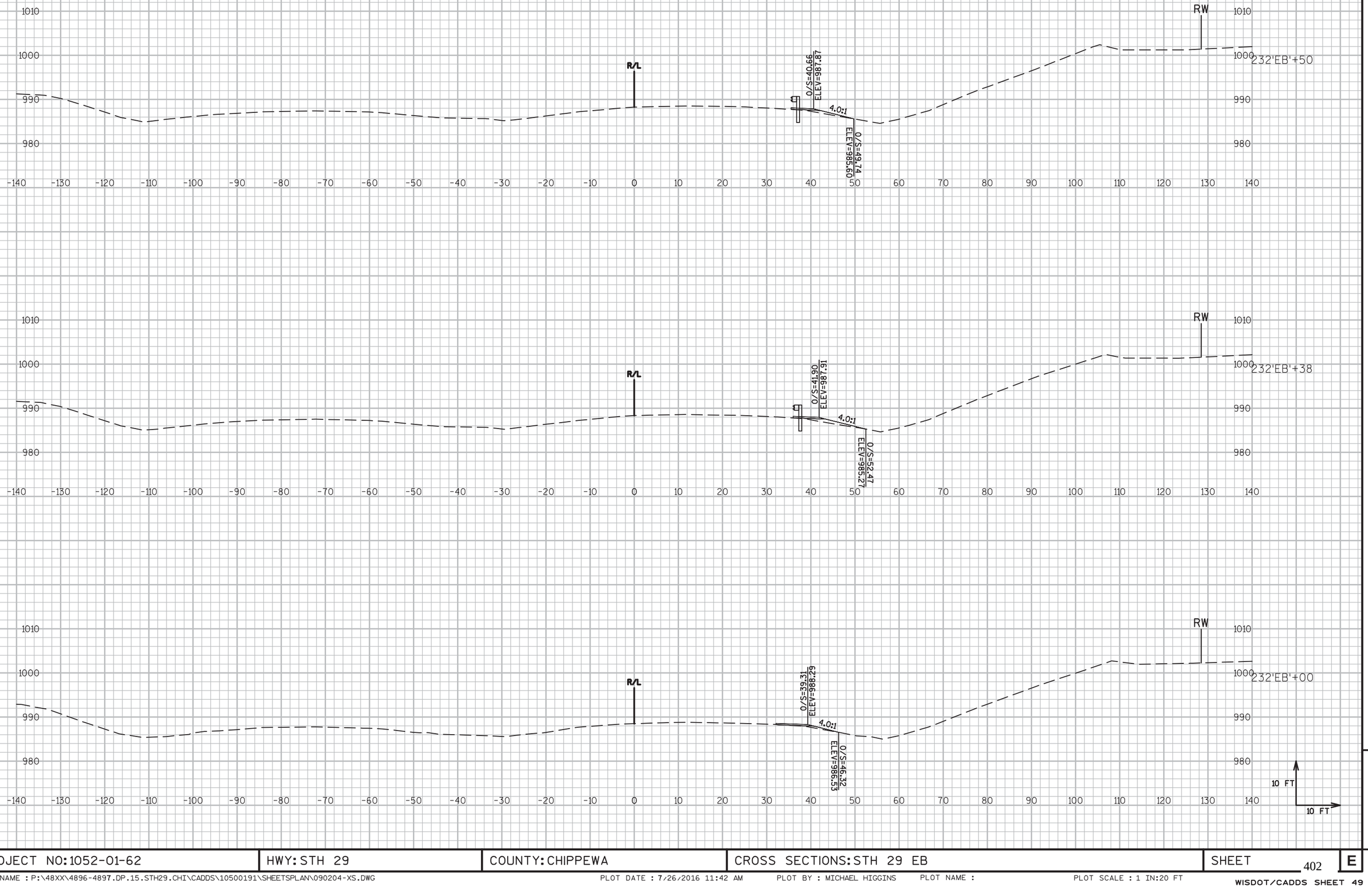


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PROJECT NO:1052-01-62	HWY:STH 29	COUNTY:CHIPPEWA	CROSS SECTIONS:STH 29 EB	SHEET 401	E

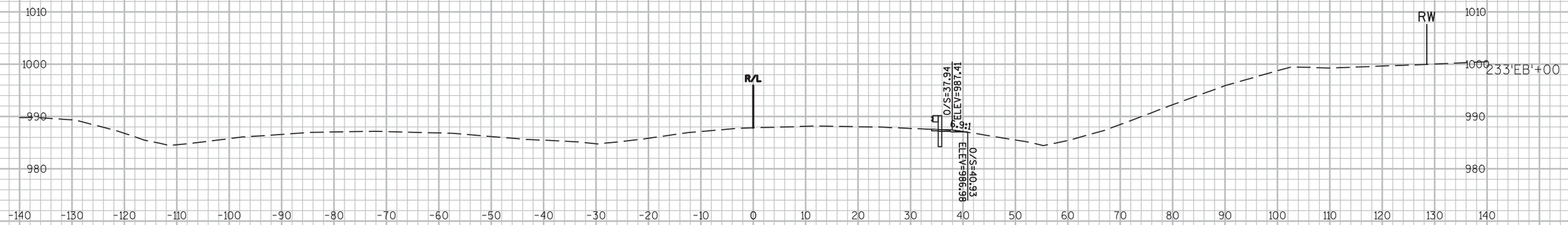
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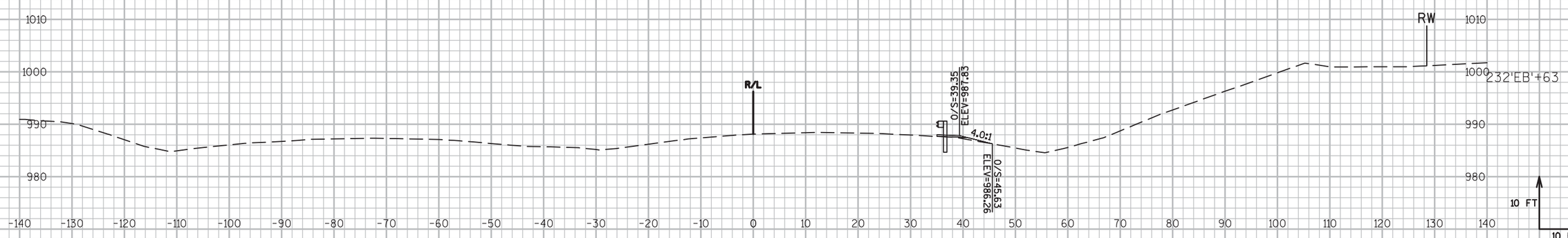
PROJECT NO:1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 402	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090204-XS.DWG PLOT DATE : 7/26/2016 11:42 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49





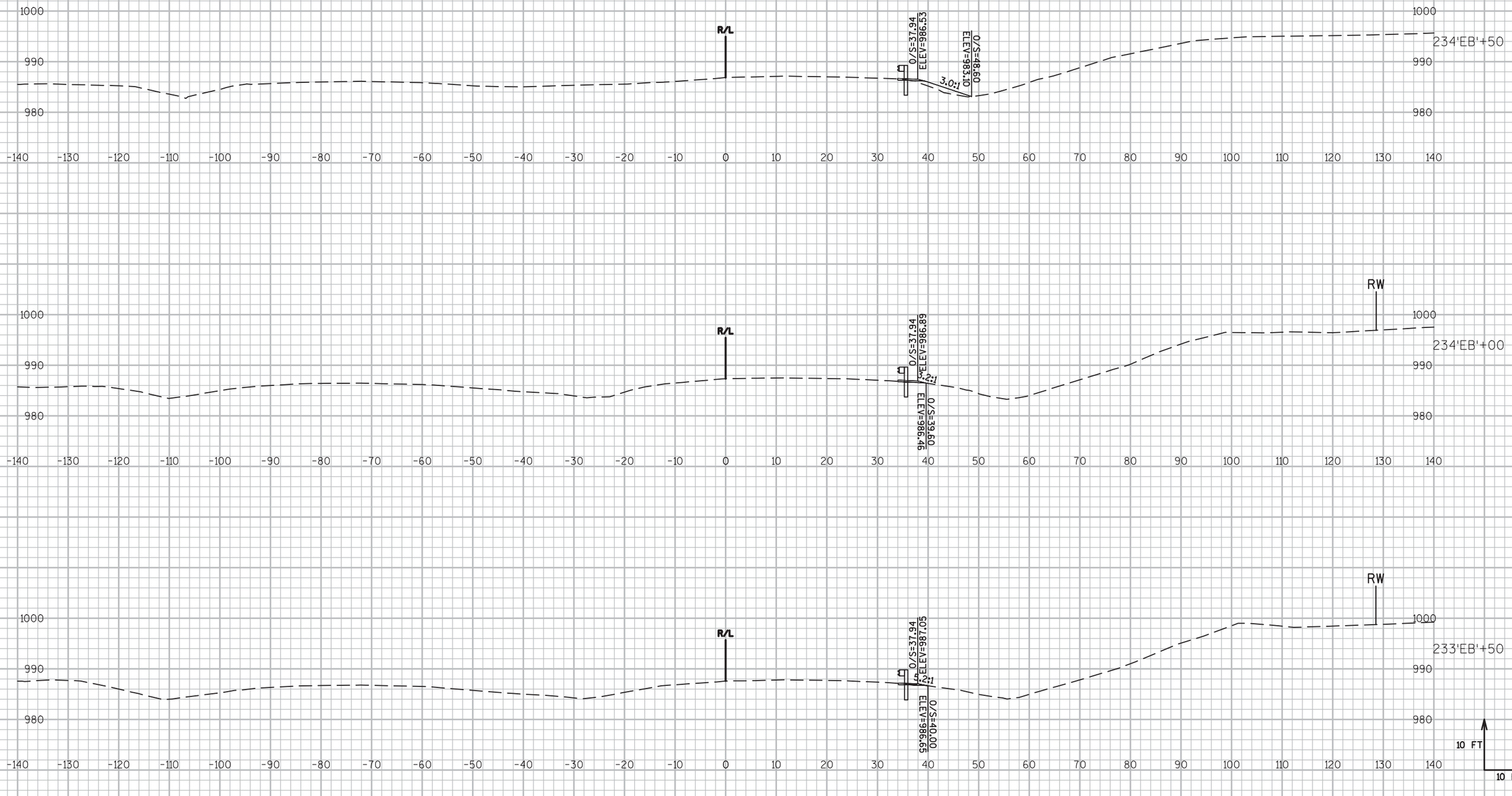


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PROJECT NO:1052-01-62	HWY:STH 29	COUNTY:CHIPPEWA	CROSS SECTIONS:STH 29 EB	SHEET 403	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090204-XS.DWG PLOT DATE : 7/26/2016 11:43 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT



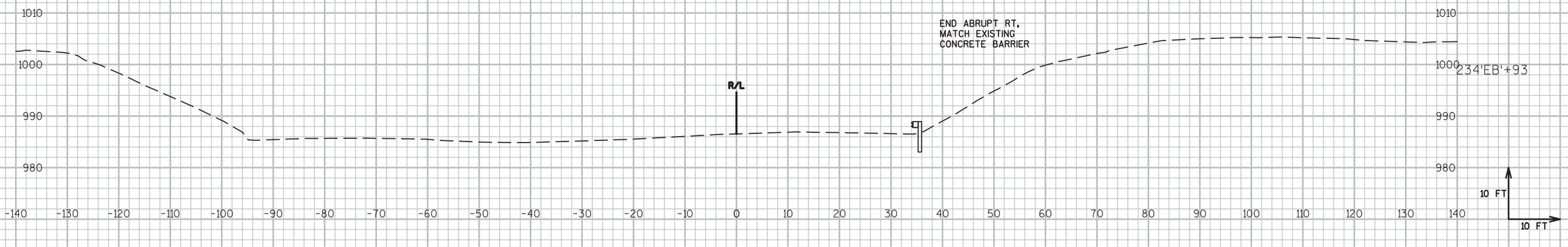
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PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 404	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090204-XS.DWG PLOT DATE : 7/26/2016 11:43 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT

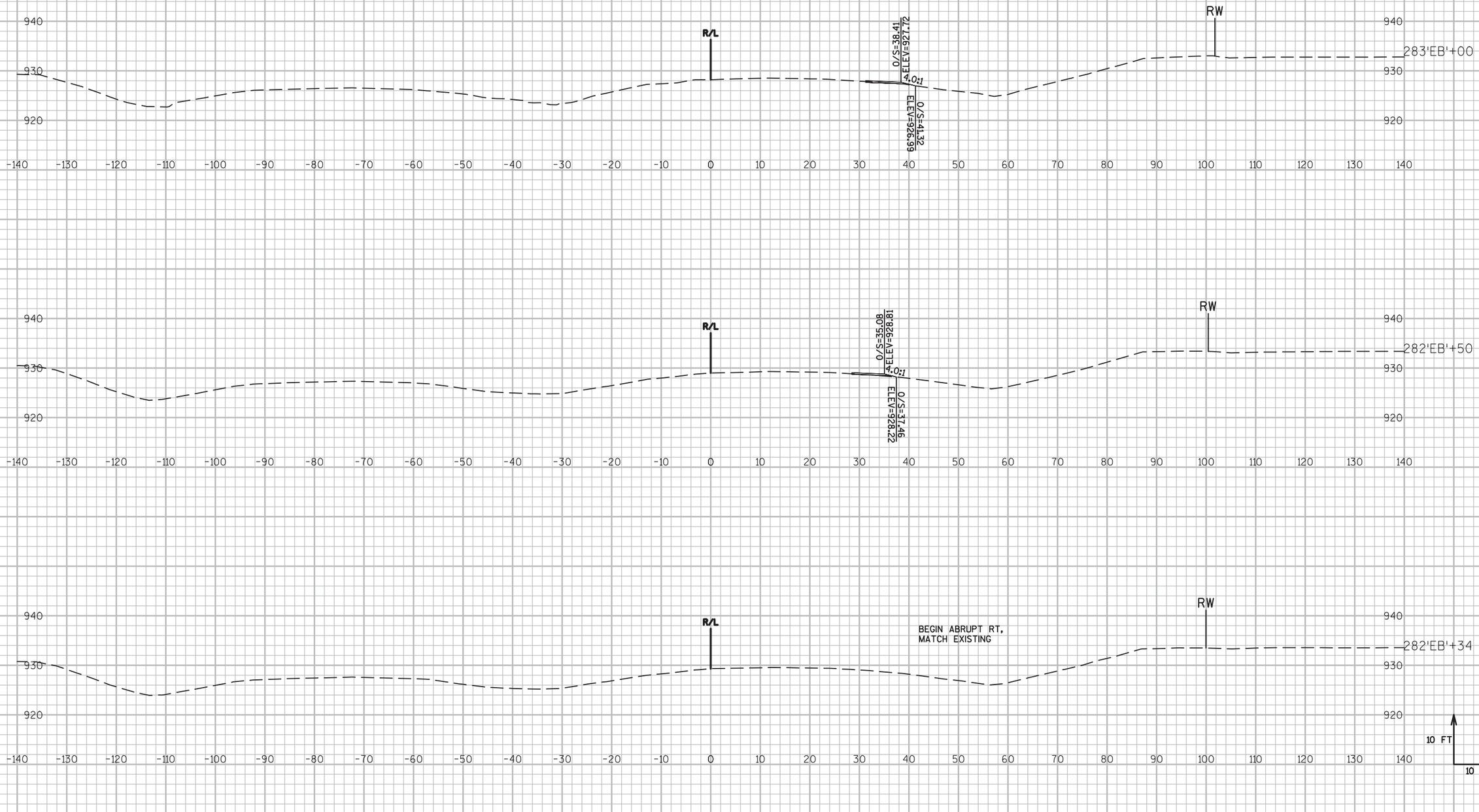
WISDOT/CADDS SHEET 49

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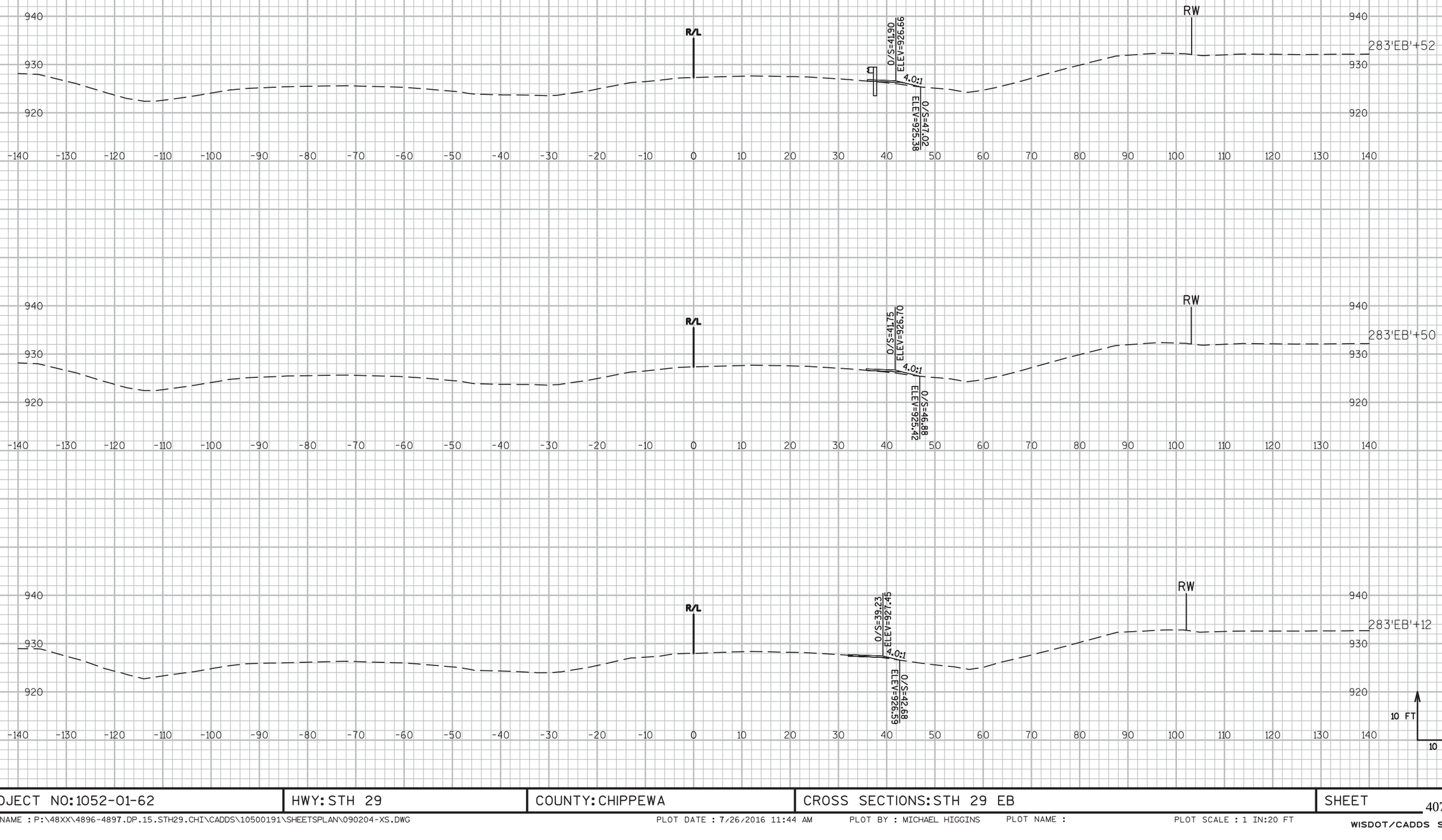
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PROJECT NO:1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 405	E



9 9

PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 406	E

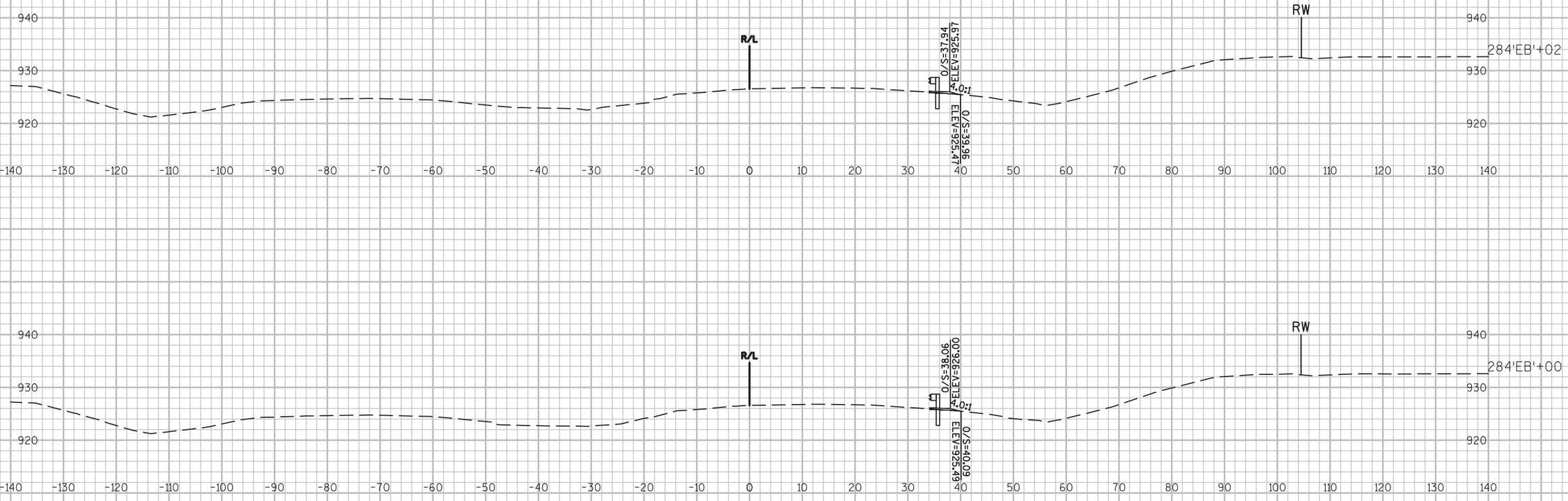


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PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 407	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090204-XS.DWG PLOT DATE : 7/26/2016 11:44 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT



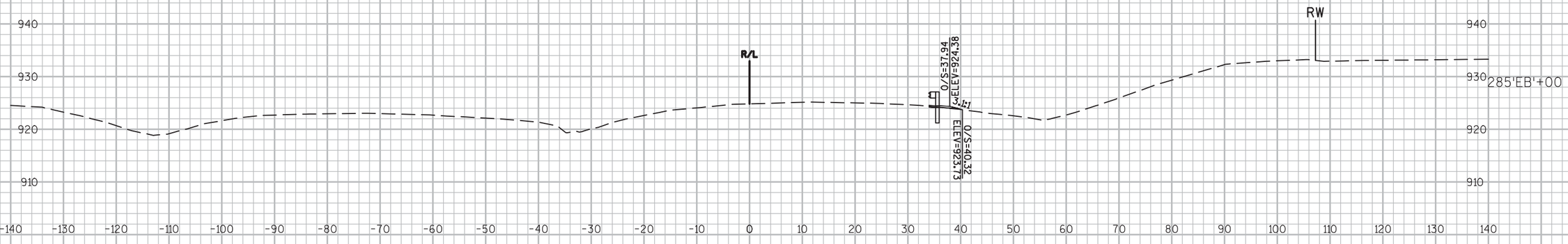
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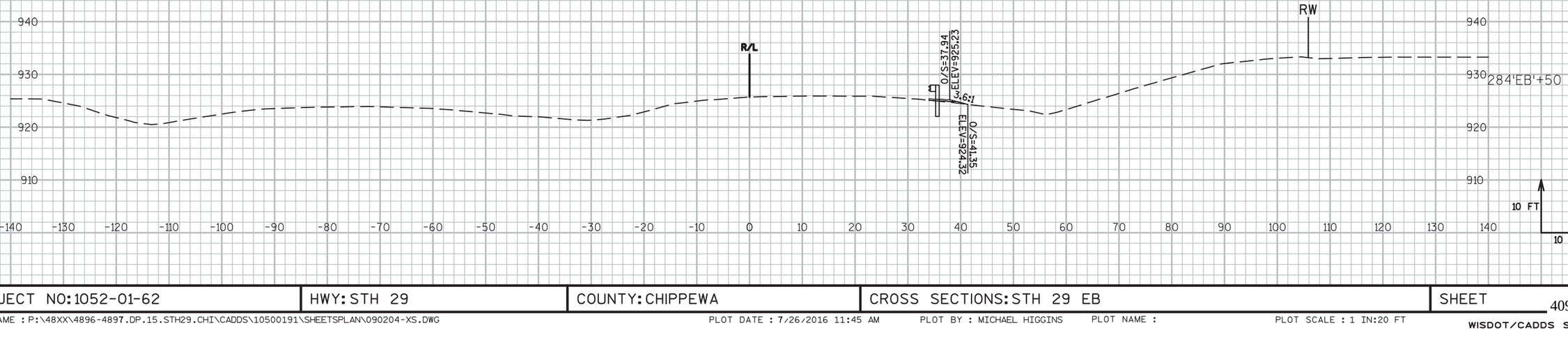
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PROJECT NO:1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 408	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090204-XS.DWG PLOT DATE : 7/26/2016 11:44 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT

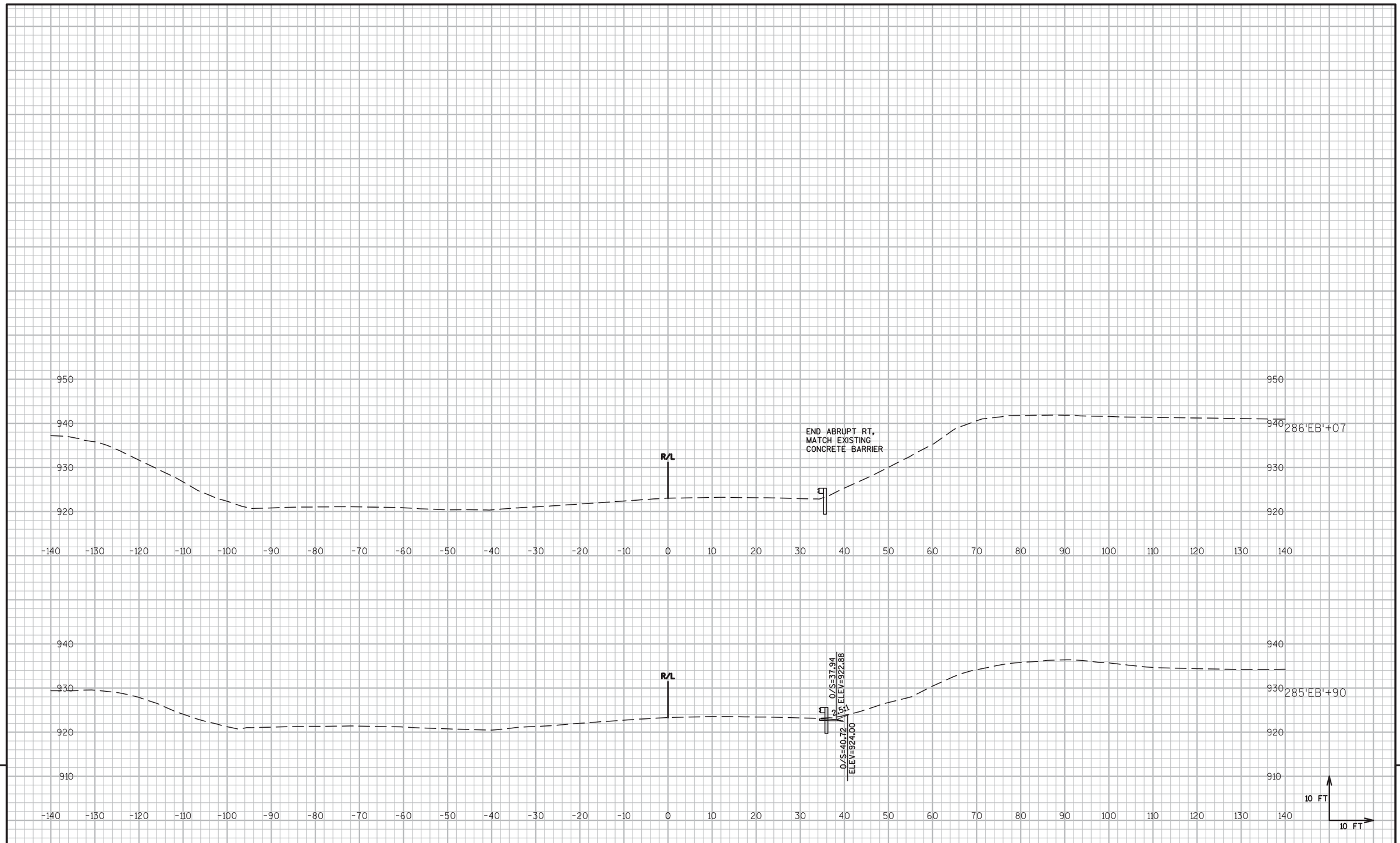






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PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 409	E

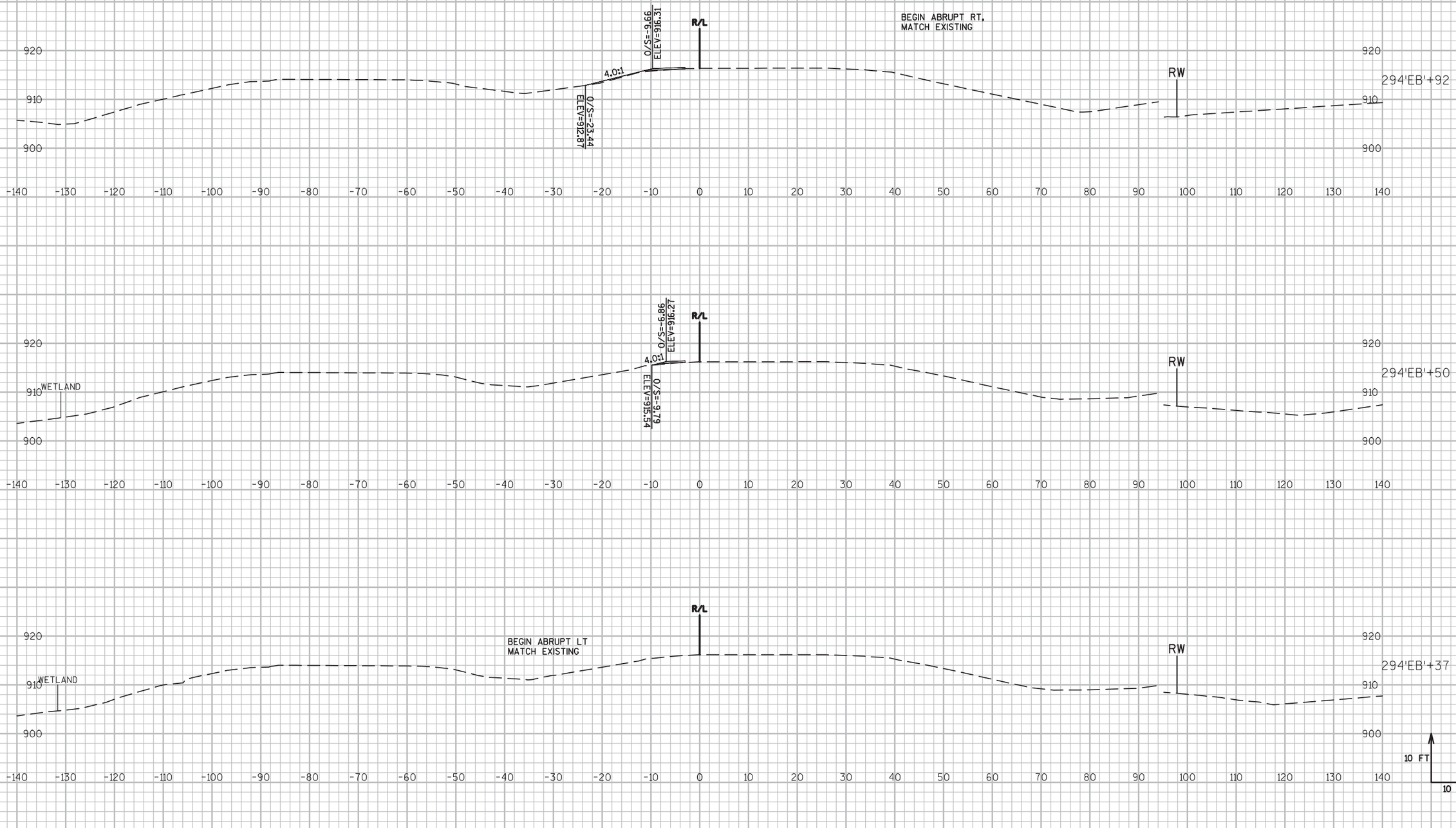


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PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 410	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090204-XS.DWG PLOT DATE : 7/26/2016 11:45 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT

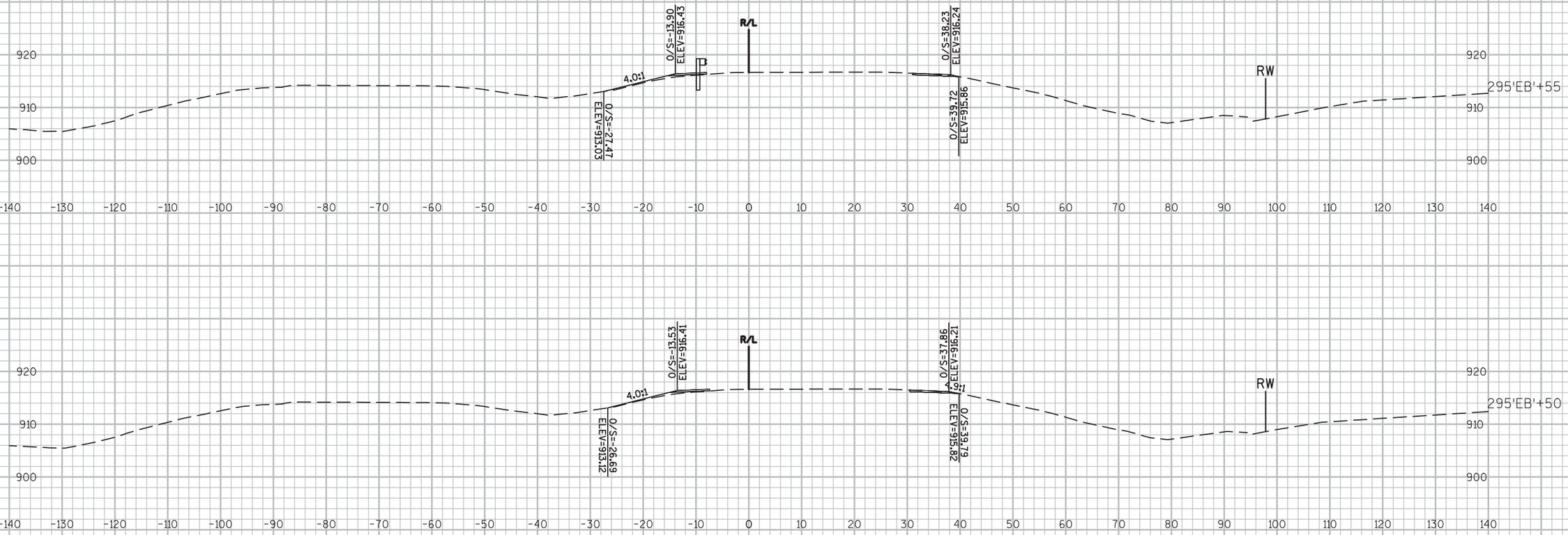


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PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 411	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090204-XS.DWG PLOT DATE : 7/26/2016 11:45 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT

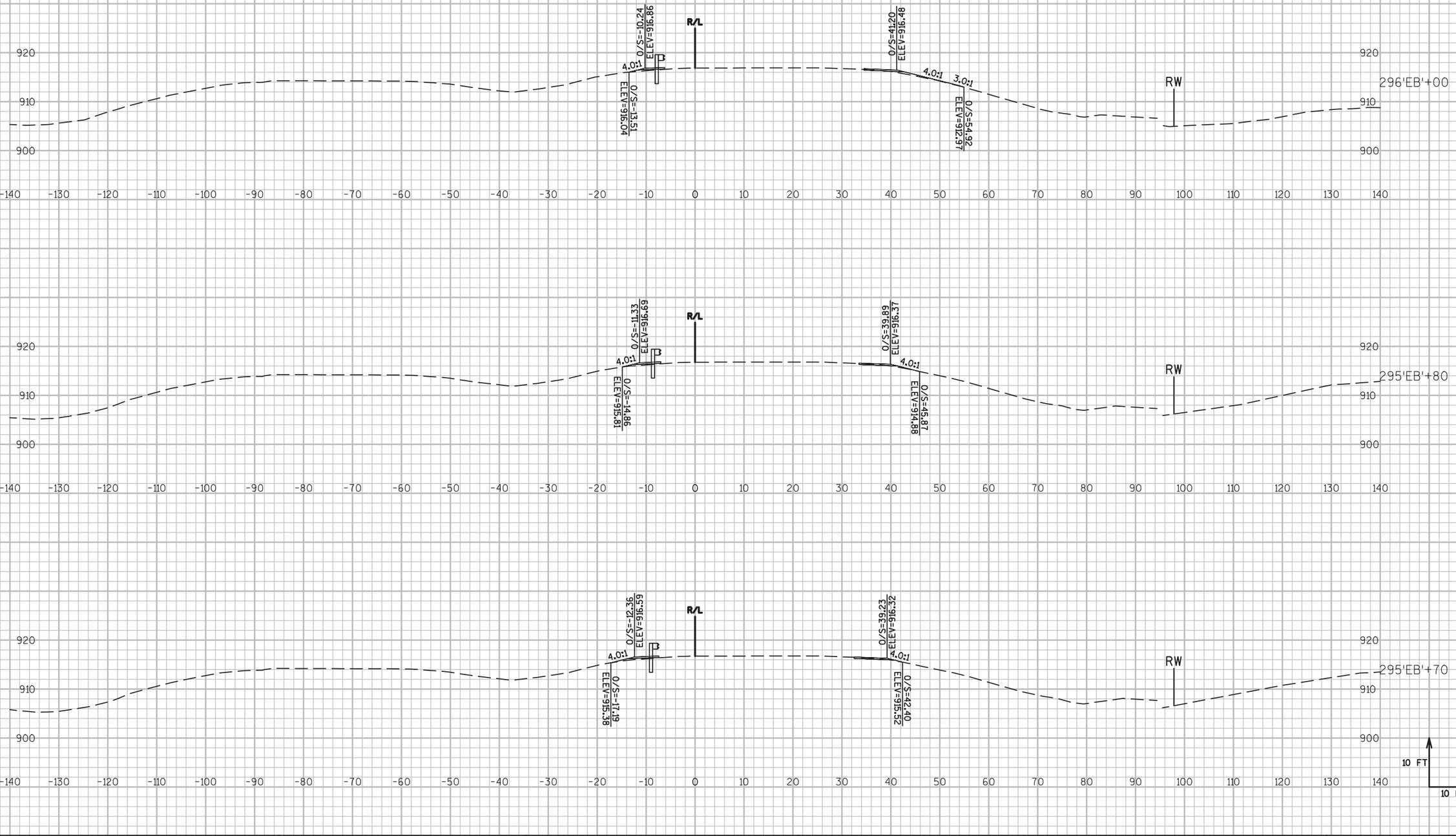


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PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 412	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090204-XS.DWG PLOT DATE : 7/26/2016 11:46 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT

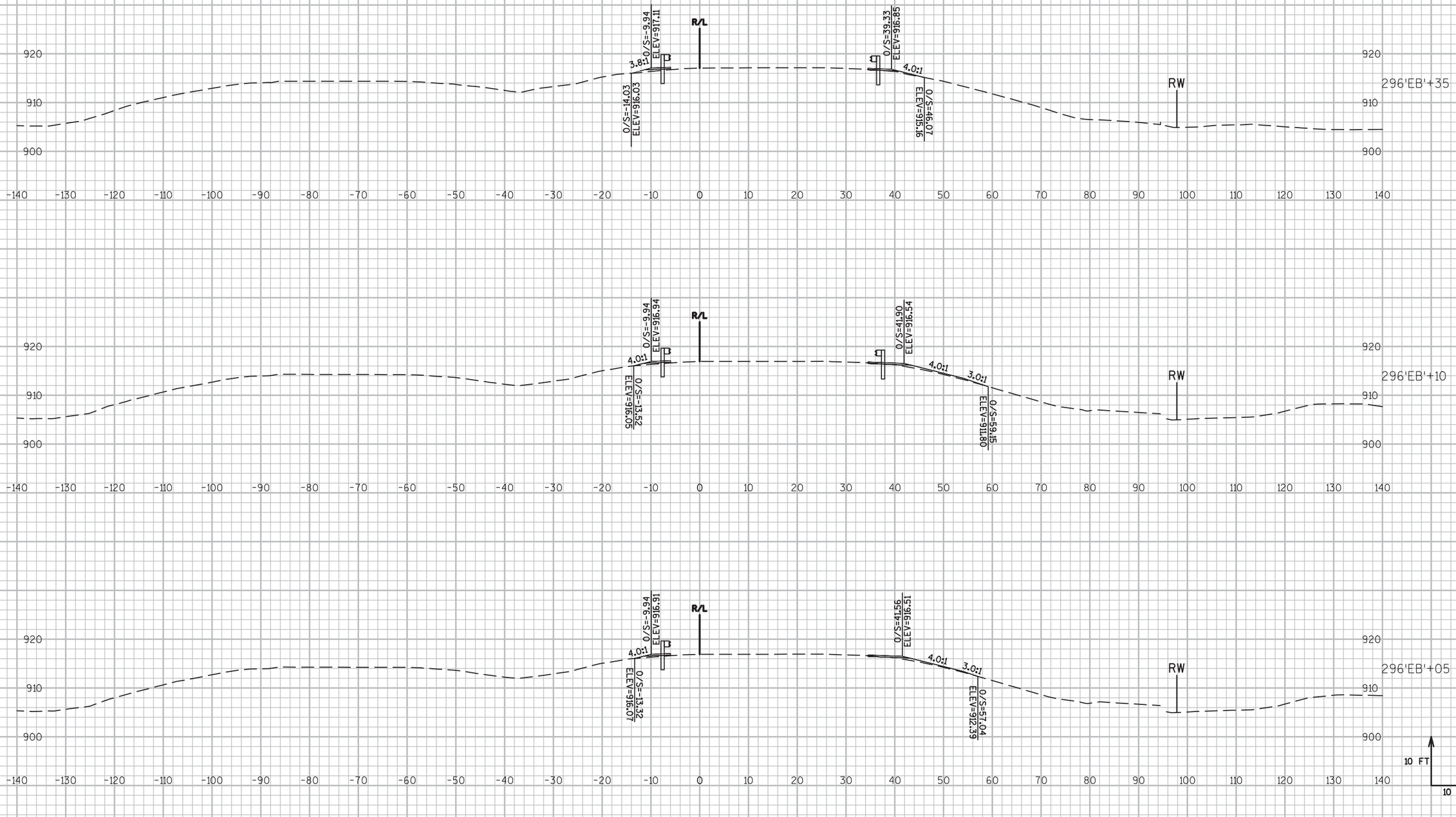


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PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 413	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090204-XS.DWG PLOT DATE : 7/26/2016 11:46 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT

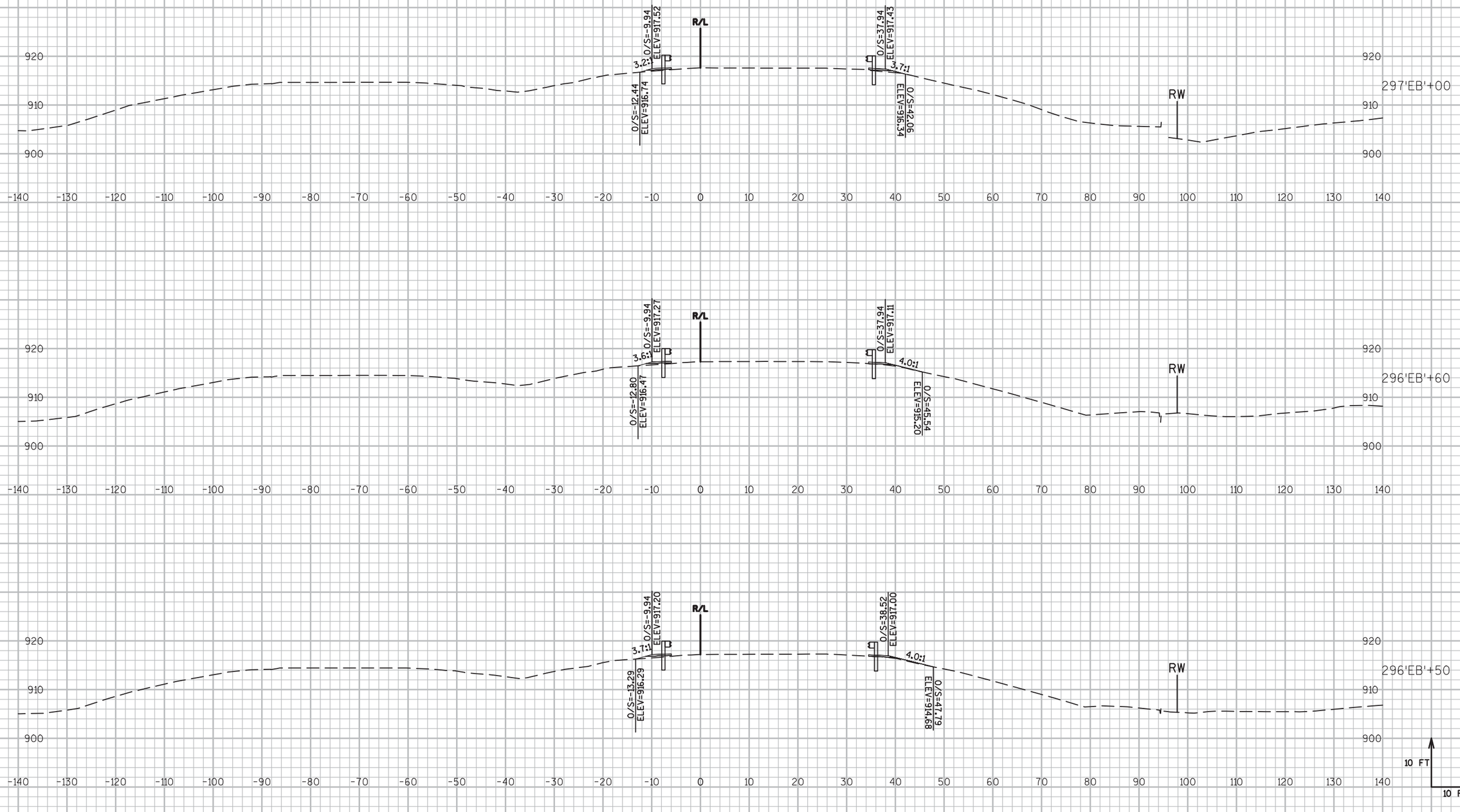


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9

PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 414	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090204-XS.DWG PLOT DATE : 7/26/2016 11:46 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT



9 9

PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 415	E

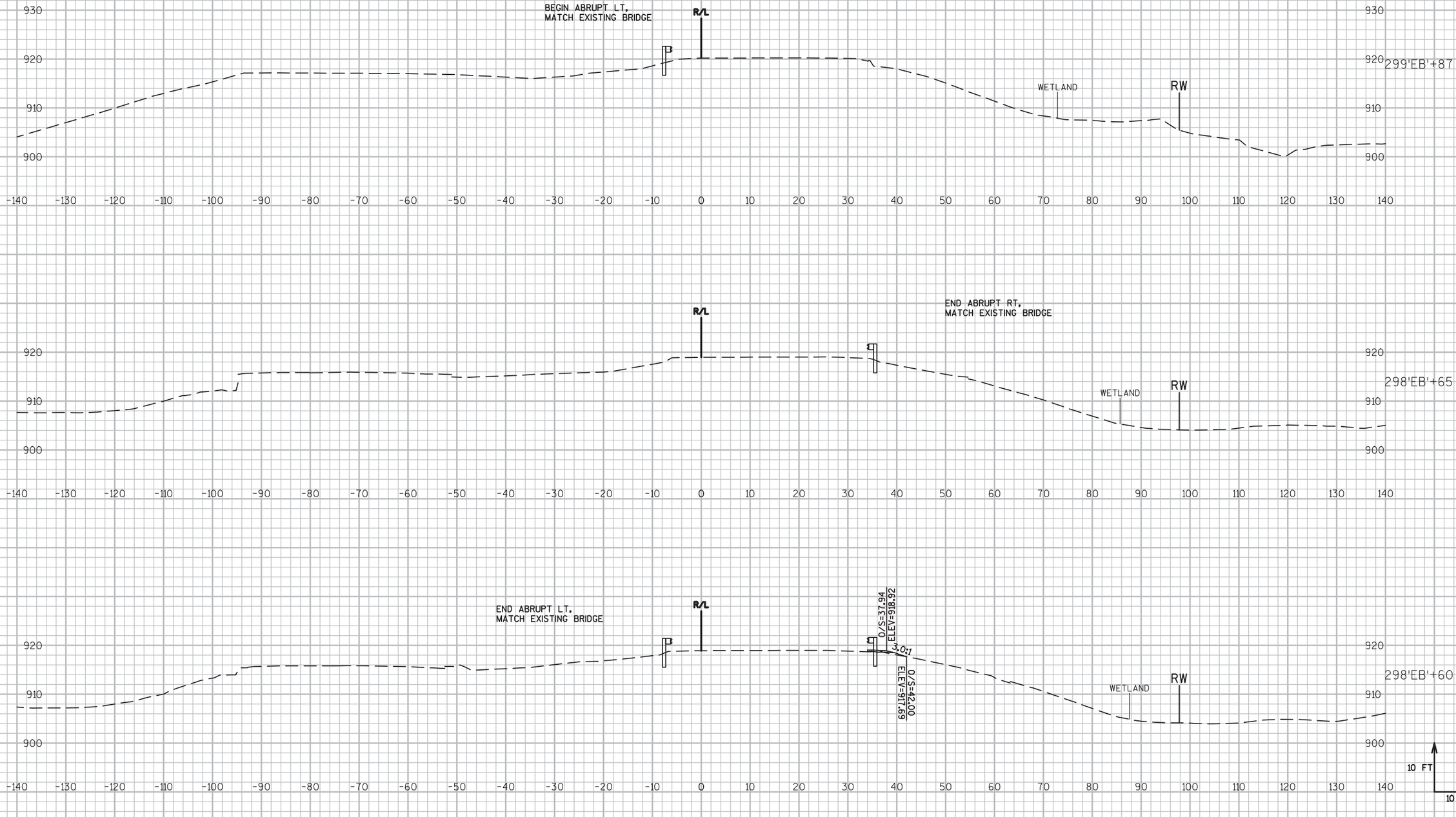
FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090204-XS.DWG PLOT DATE : 7/26/2016 11:47 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT

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PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 416	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090204-XS.DWG PLOT DATE : 7/26/2016 11:47 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT

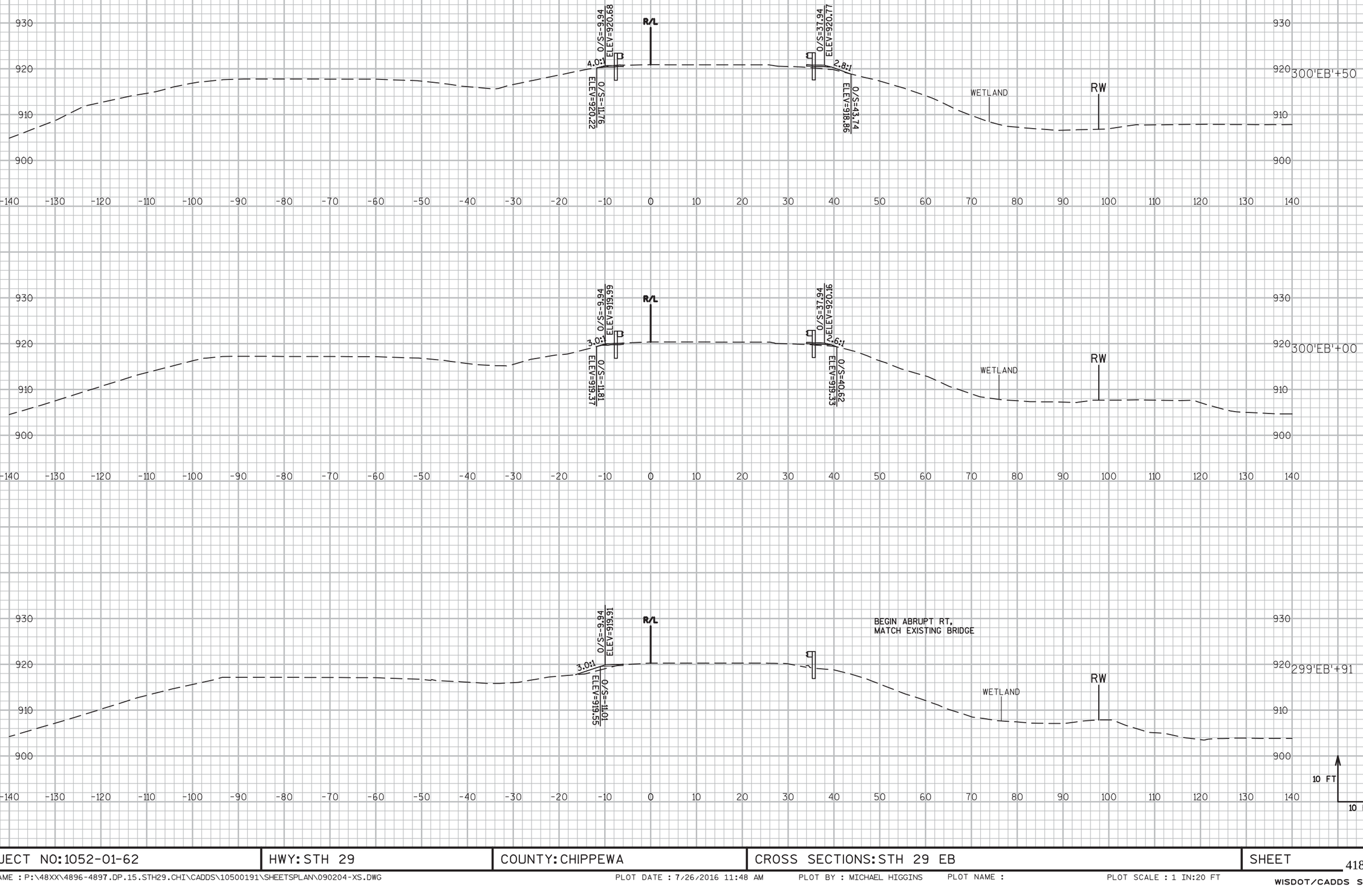


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PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 417	E

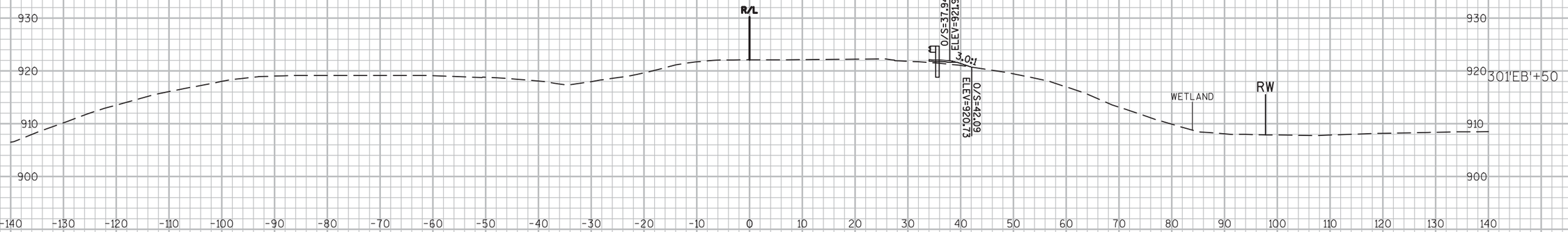
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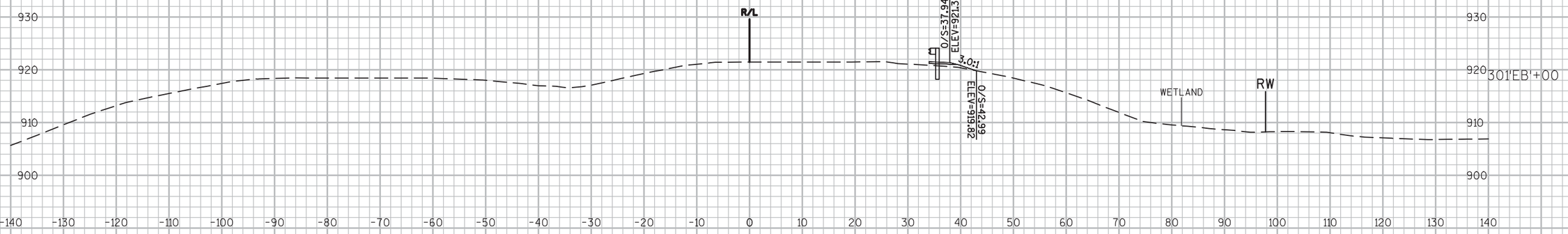


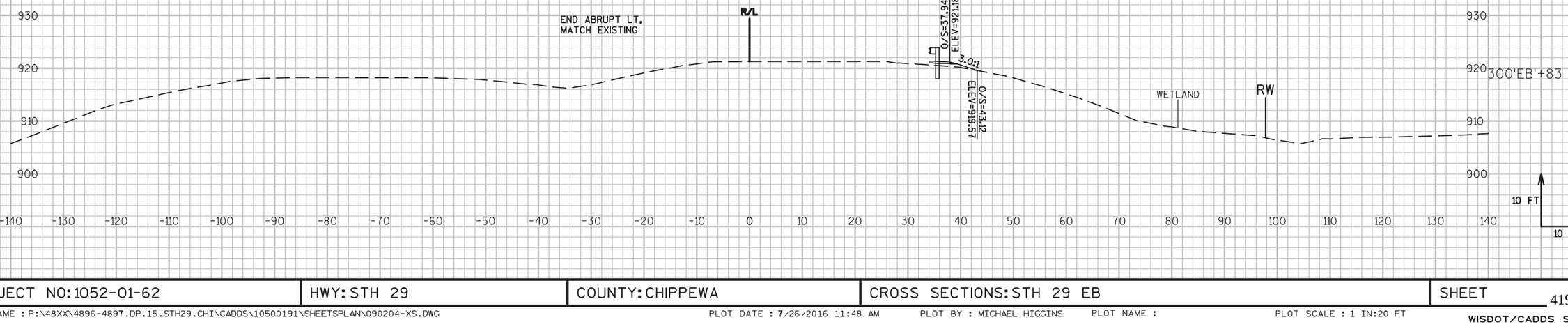
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PROJECT NO:1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 418	E



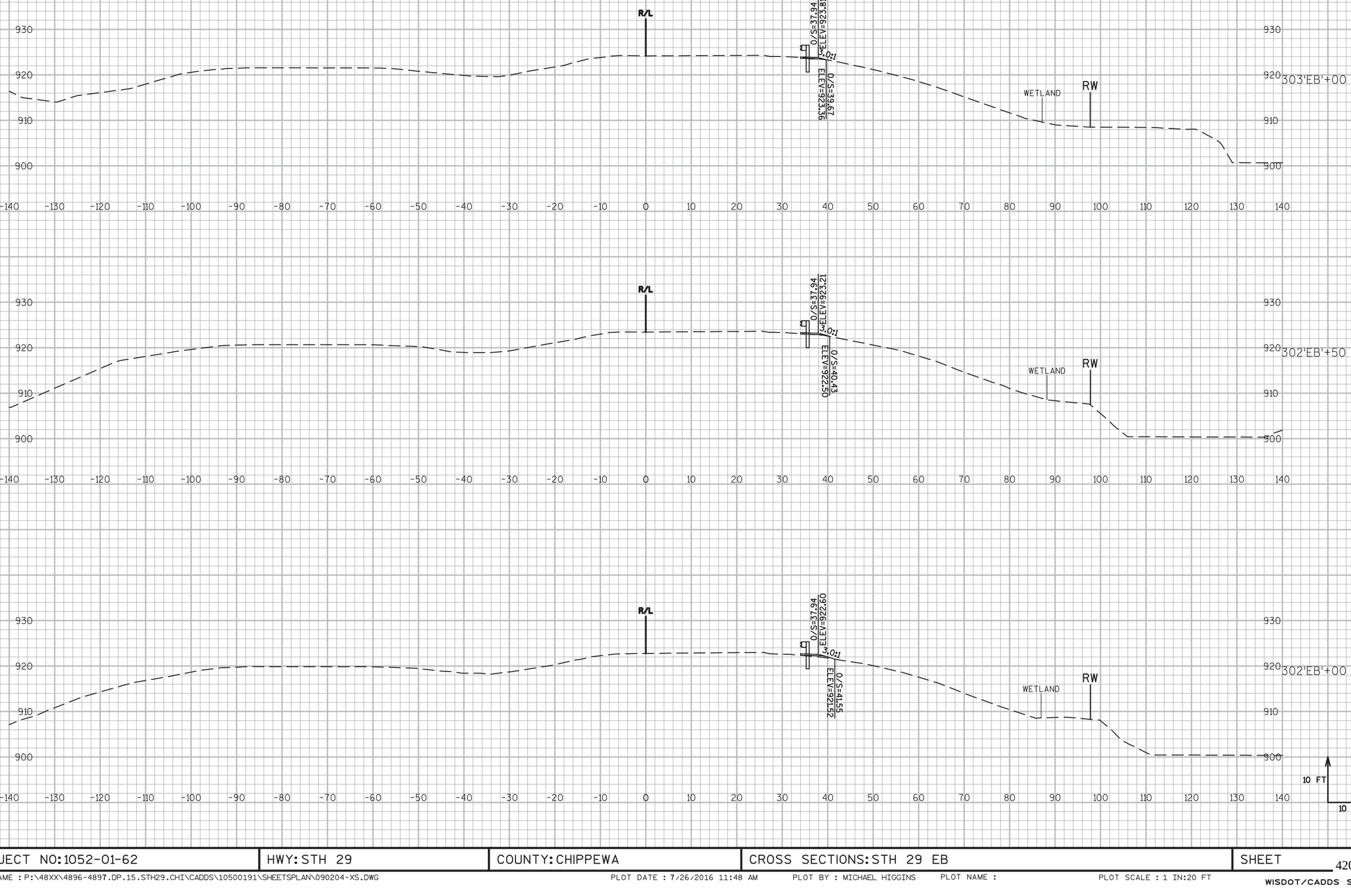




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PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 419	E

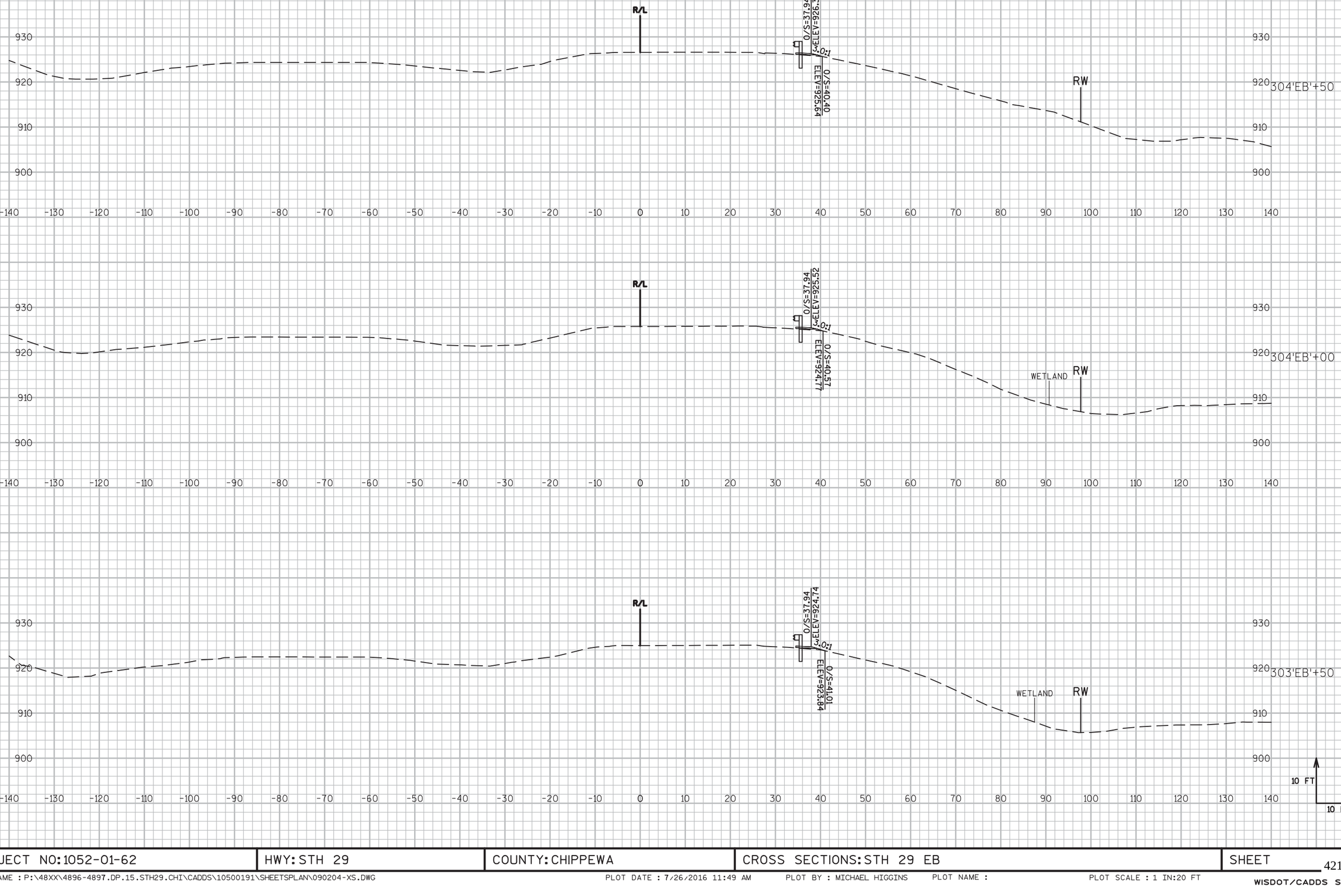


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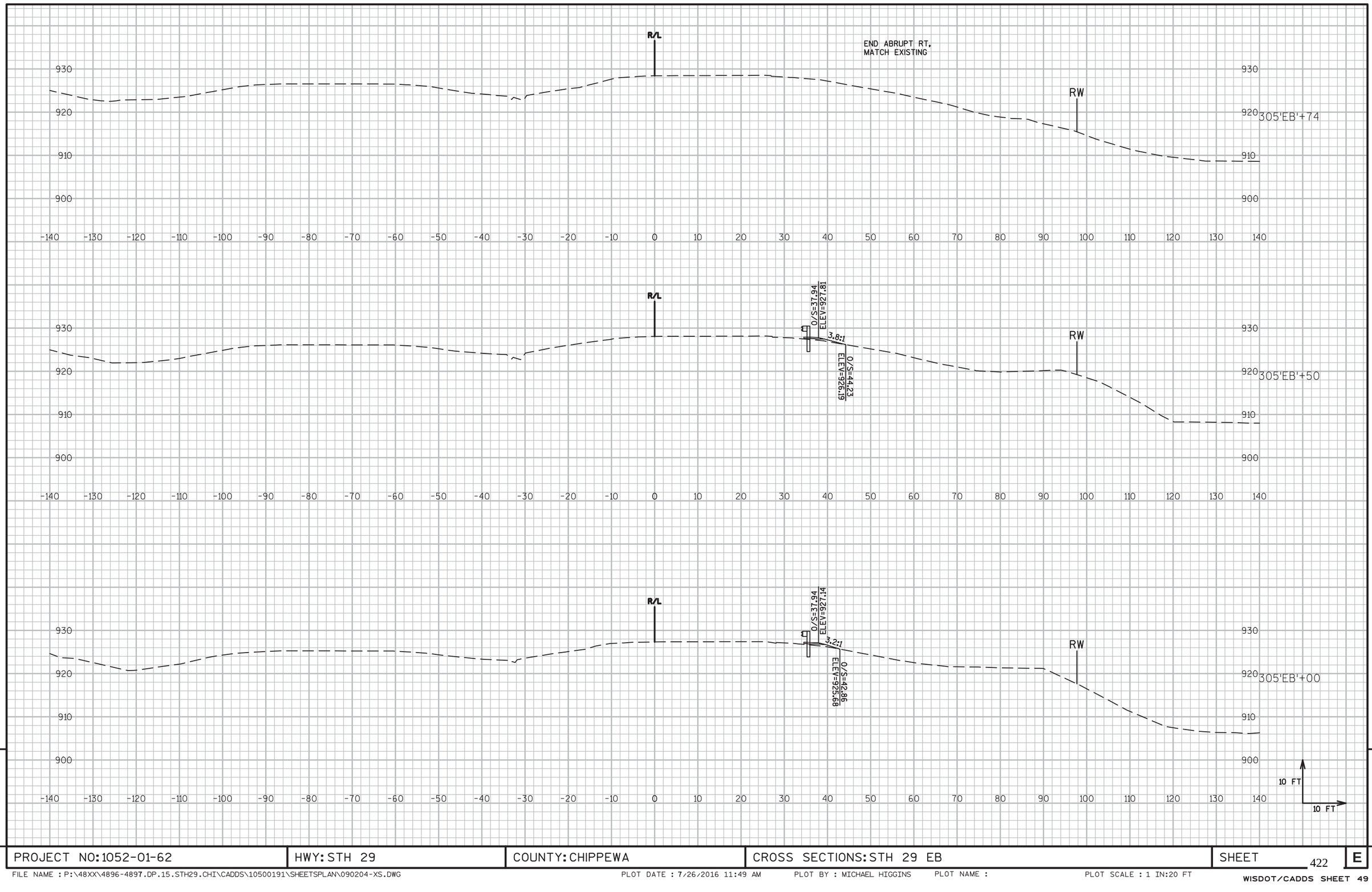
PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 420	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090204-XS.DWG PLOT DATE : 7/26/2016 11:48 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT

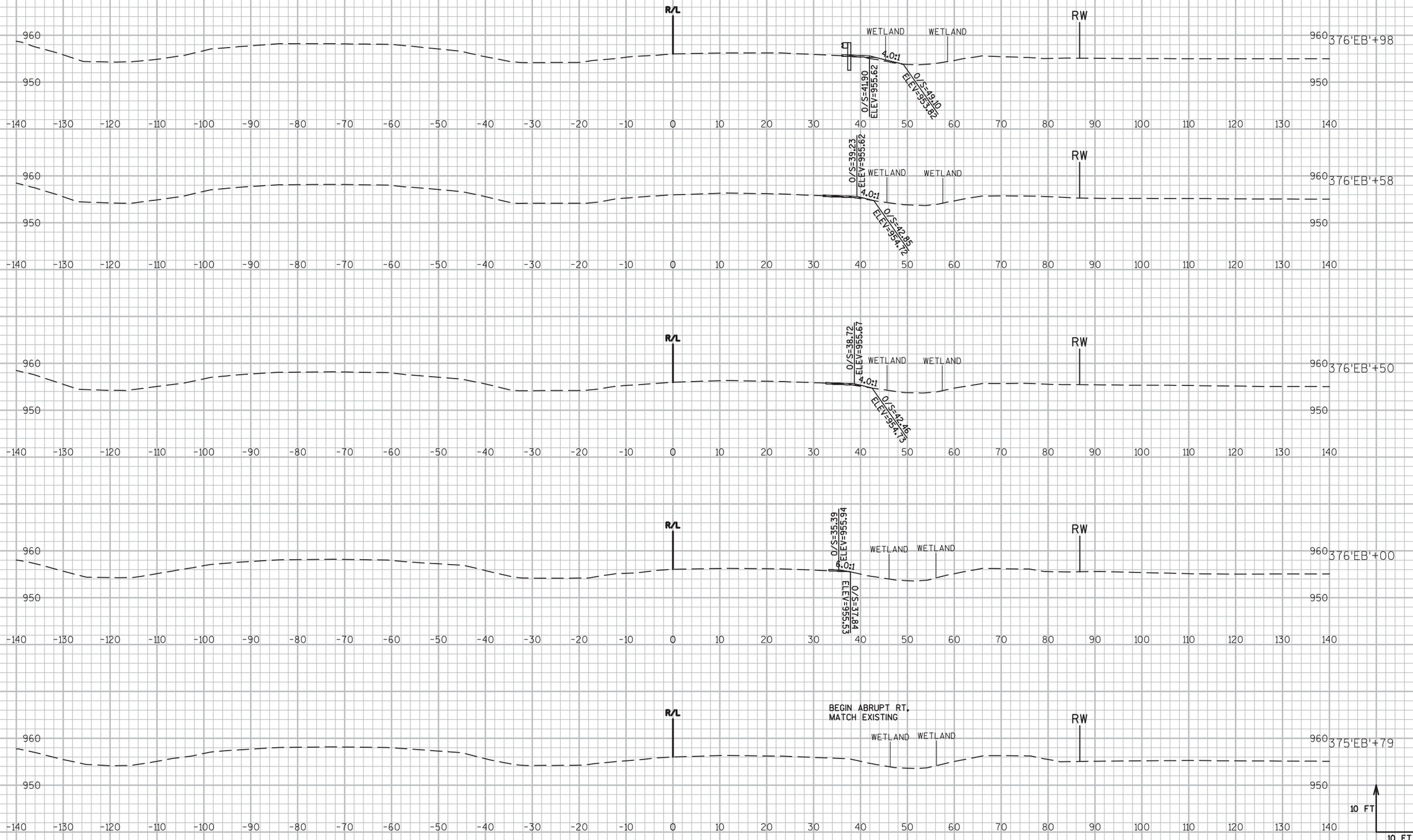


PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 421	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090204-XS.DWG PLOT DATE : 7/26/2016 11:49 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT



PROJECT NO:1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 422	E



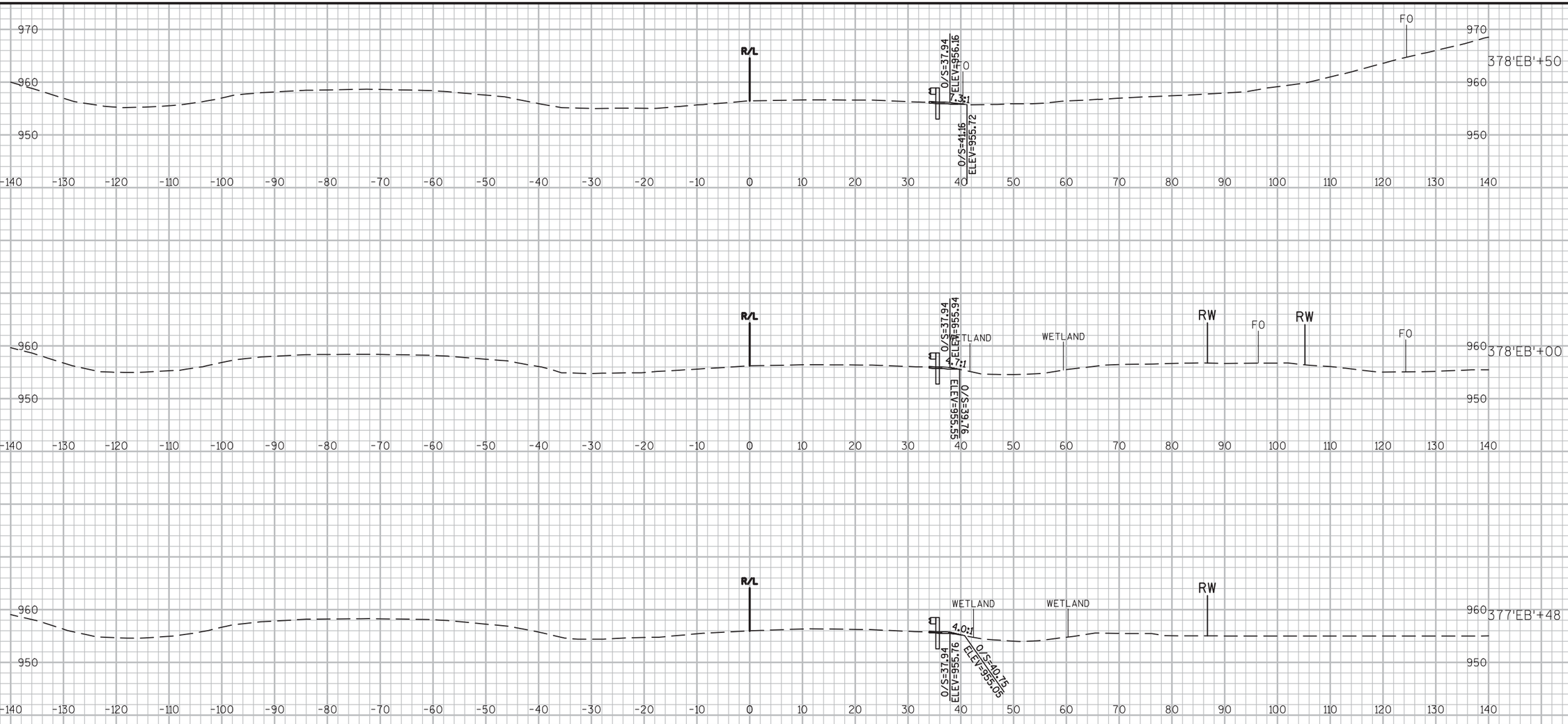
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PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 423	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090205-XS.DWG
LAYOUT NAME - 090231-XS

PLOT DATE : 7/26/2016 11:50 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT



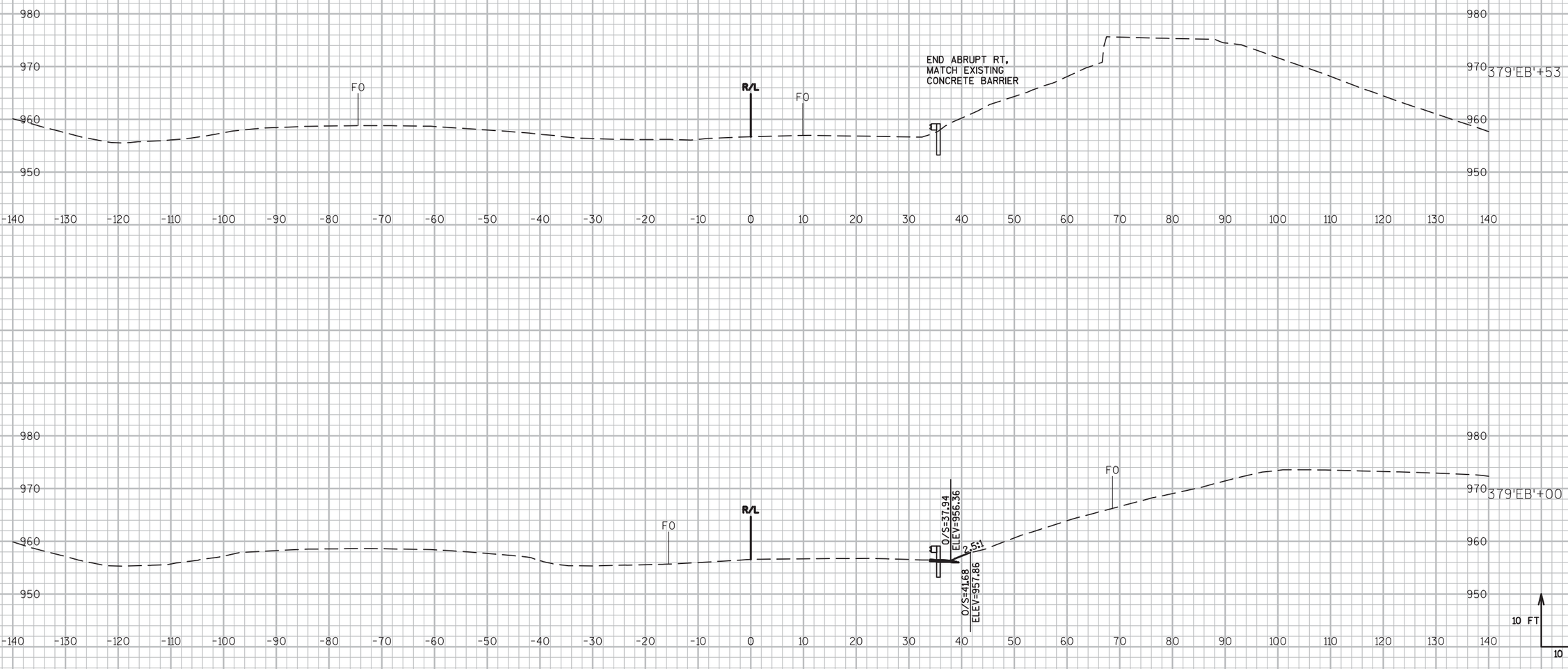
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PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 424	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090205-XS.DWG
LAYOUT NAME - 090232-XS

PLOT DATE : 7/26/2016 11:50 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT



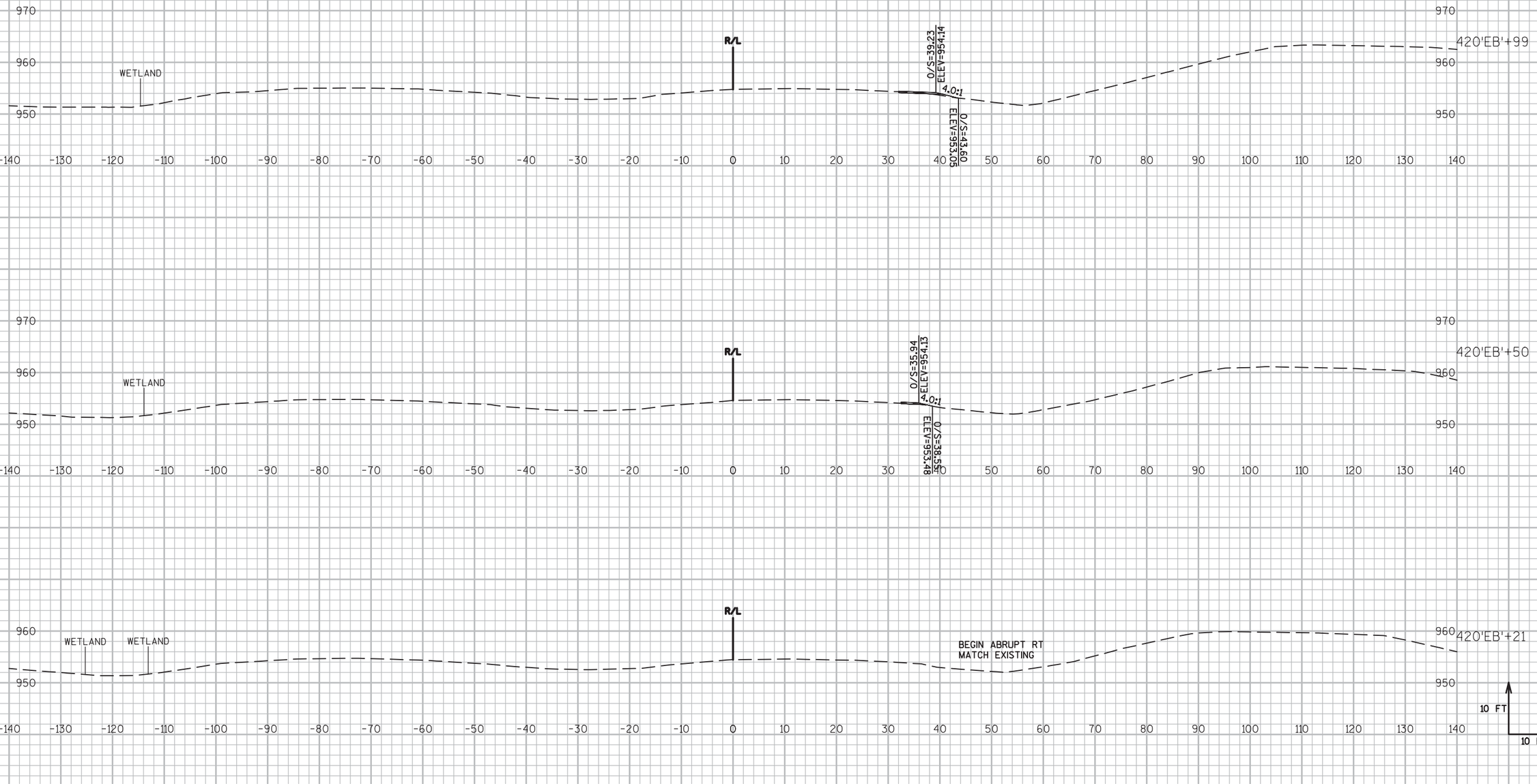
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PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 425	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090205-XS.DWG
LAYOUT NAME - 090233-XS

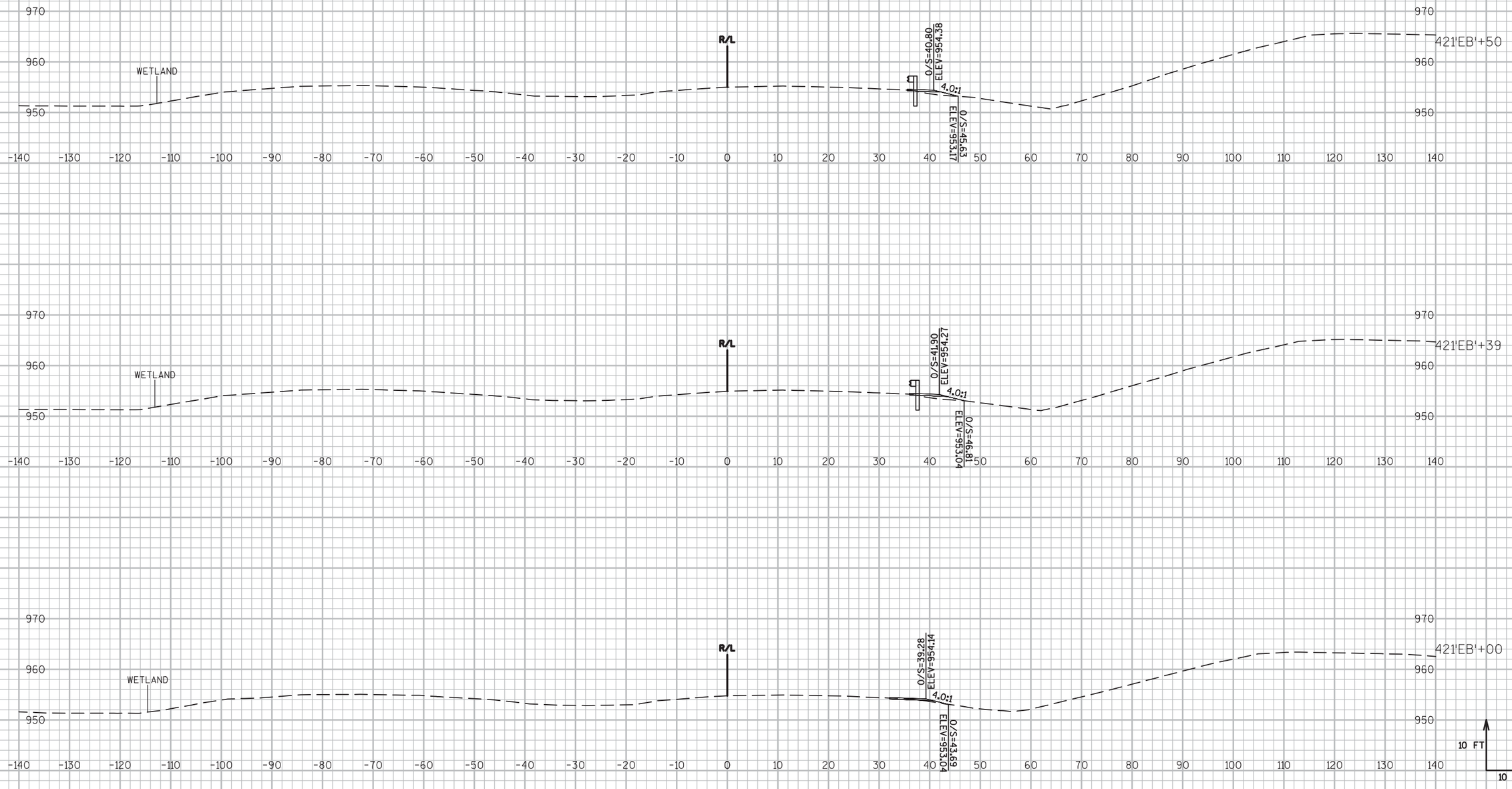
PLOT DATE : 7/26/2016 11:50 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT



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PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 426	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090205-XS.DWG
LAYOUT NAME - 090234-XS
PLOT DATE : 7/26/2016 11:50 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 49



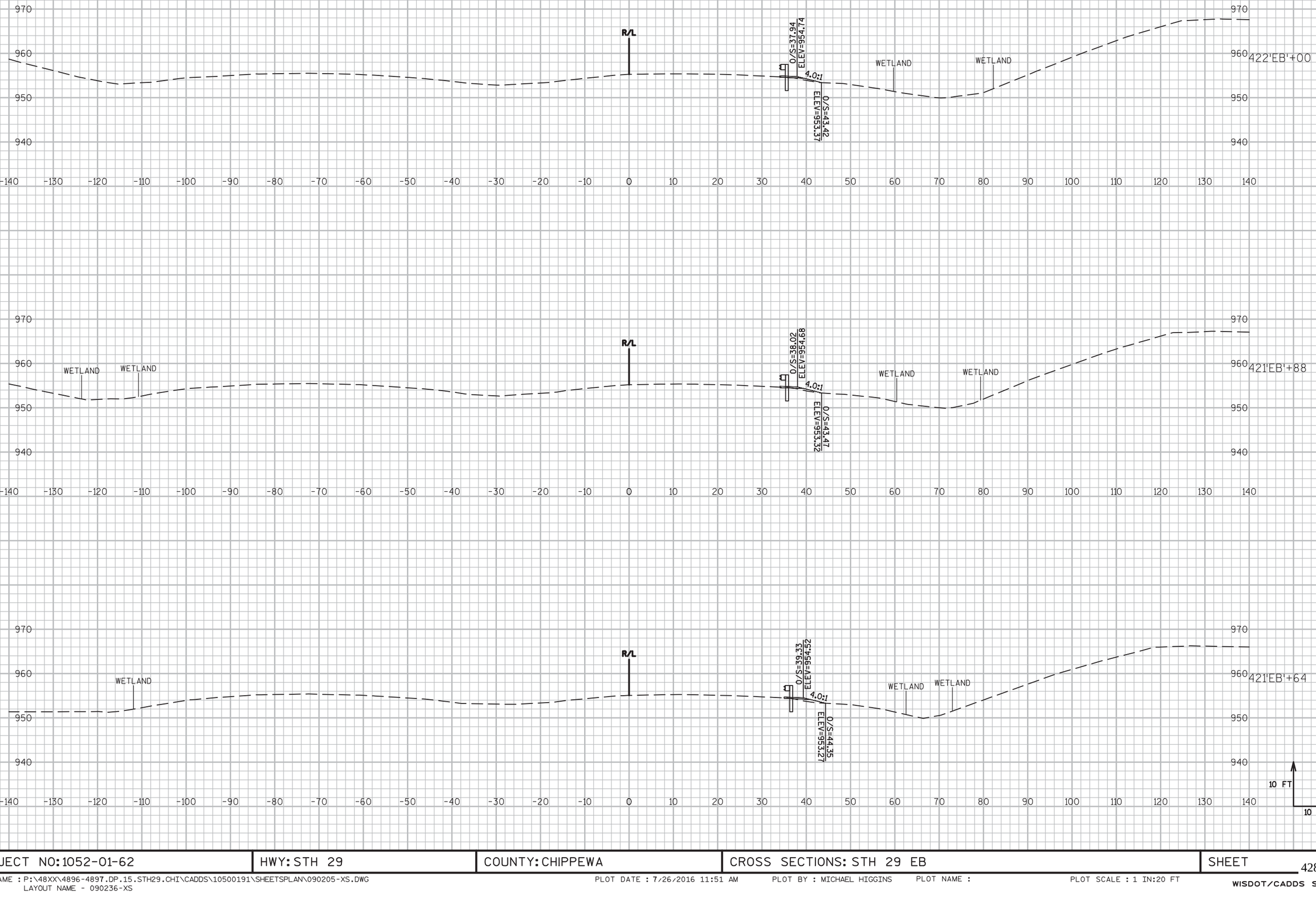
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PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 427	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090205-XS.DWG
LAYOUT NAME - 090235-XS

PLOT DATE : 7/26/2016 11:50 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT



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PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 428	E

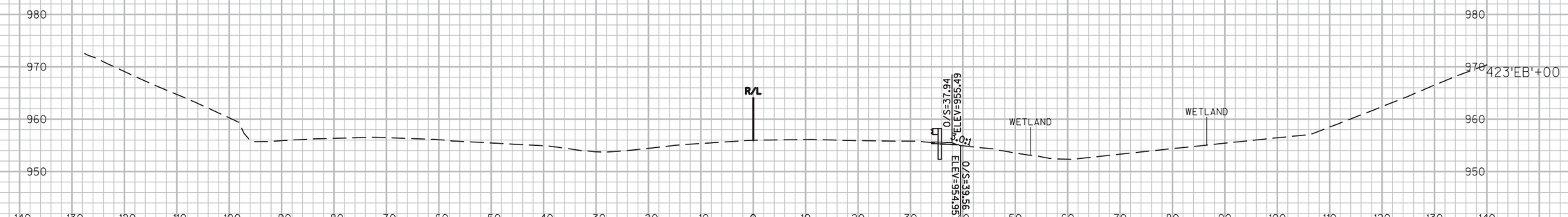
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FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090205-XS.DWG
LAYOUT NAME - 090236-XS

PLOT DATE : 7/26/2016 11:51 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49







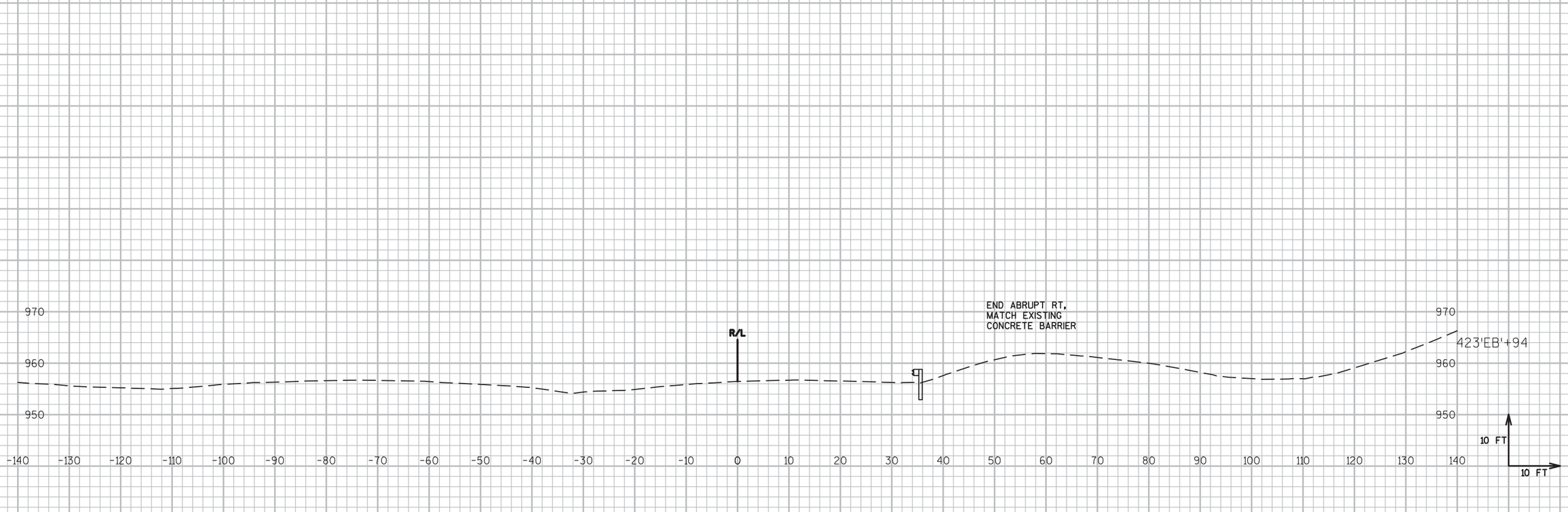
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PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 429	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090205-XS.DWG
LAYOUT NAME - 090237-XS

PLOT DATE : 7/26/2016 11:51 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT

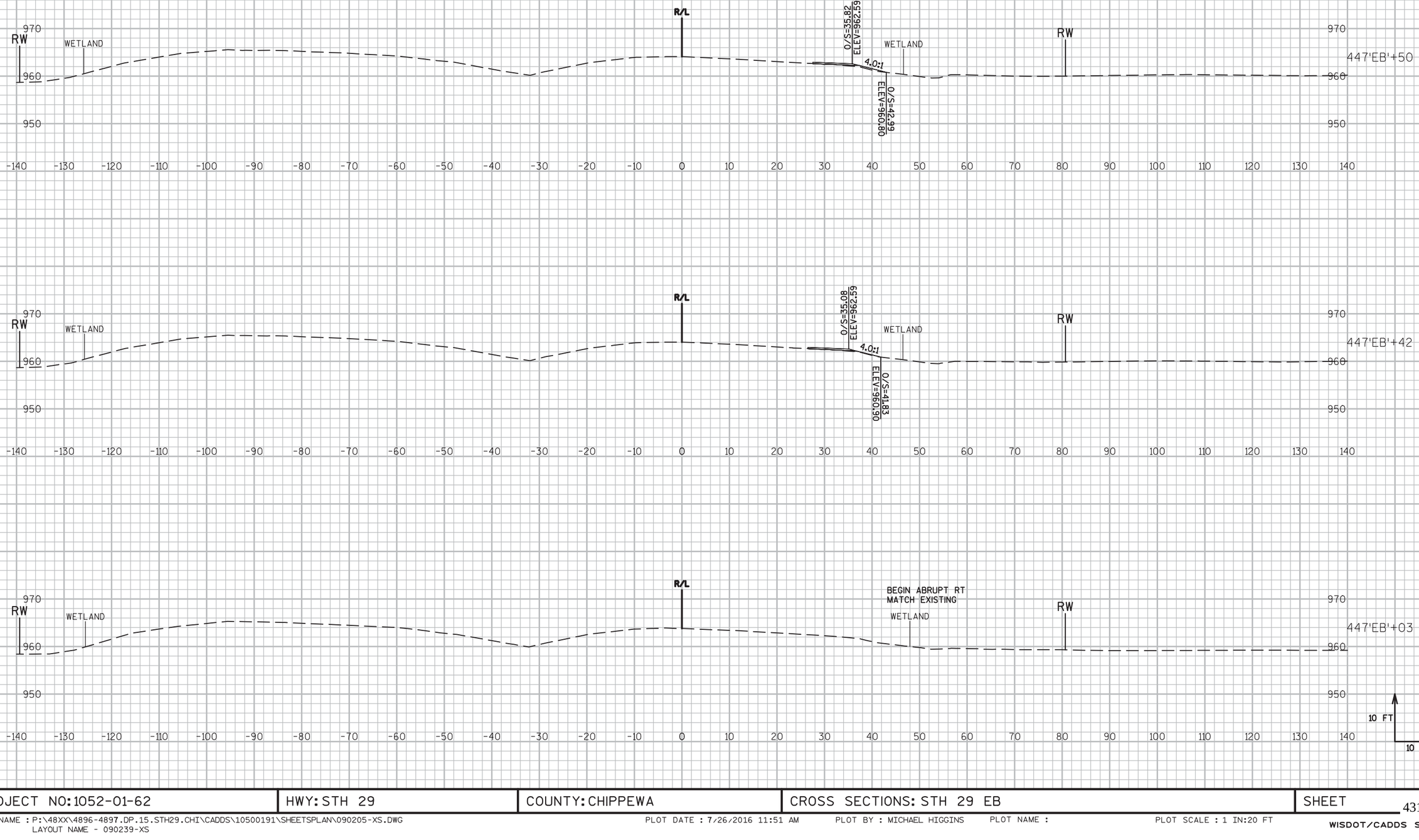
WISDOT/CADDS SHEET 49



9 9

PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 430	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090205-XS.DWG
LAYOUT NAME - 090238-XS
PLOT DATE : 7/26/2016 11:51 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 49



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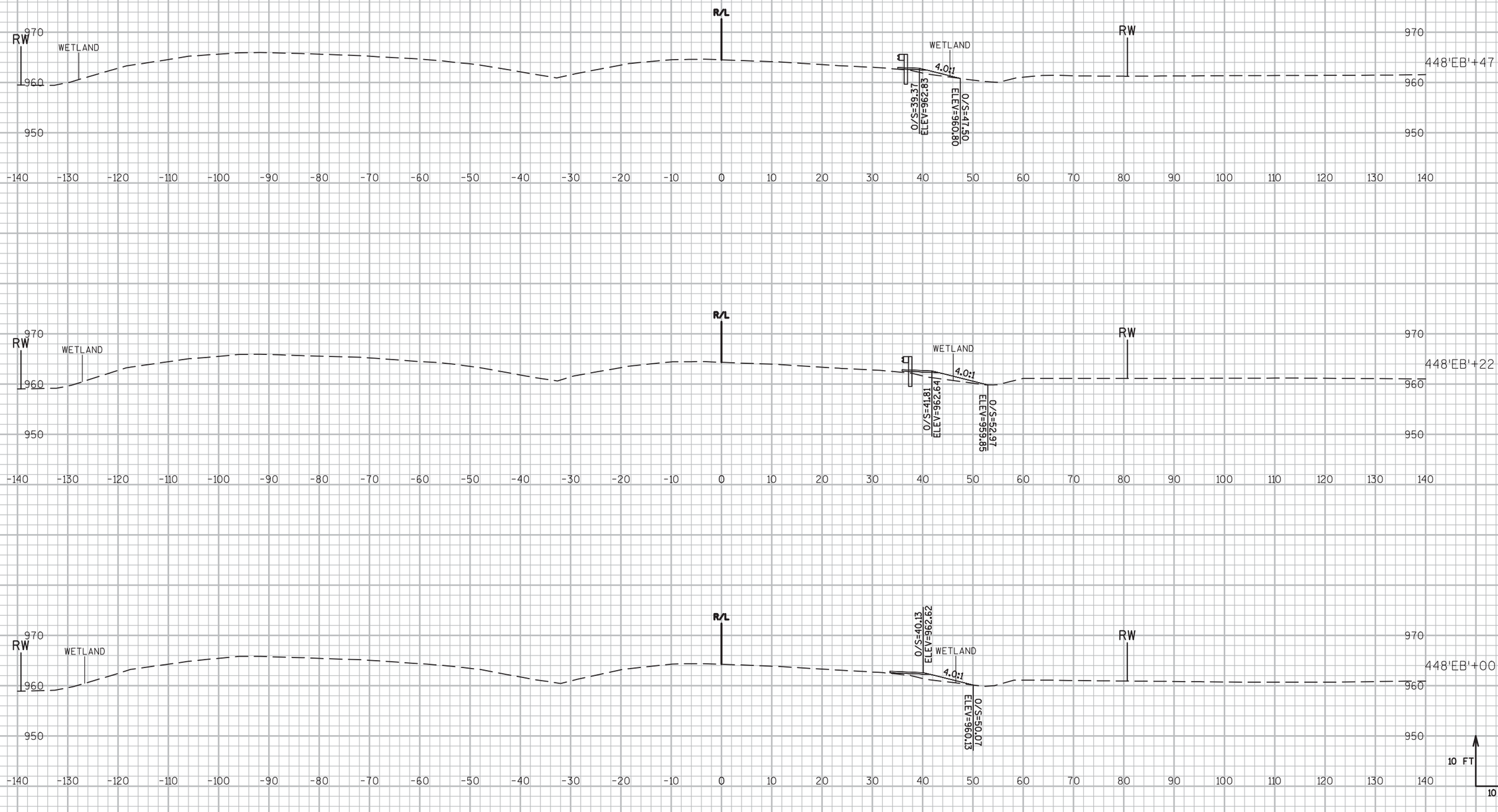
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PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 431	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090205-XS.DWG
LAYOUT NAME - 090239-XS

PLOT DATE : 7/26/2016 11:51 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



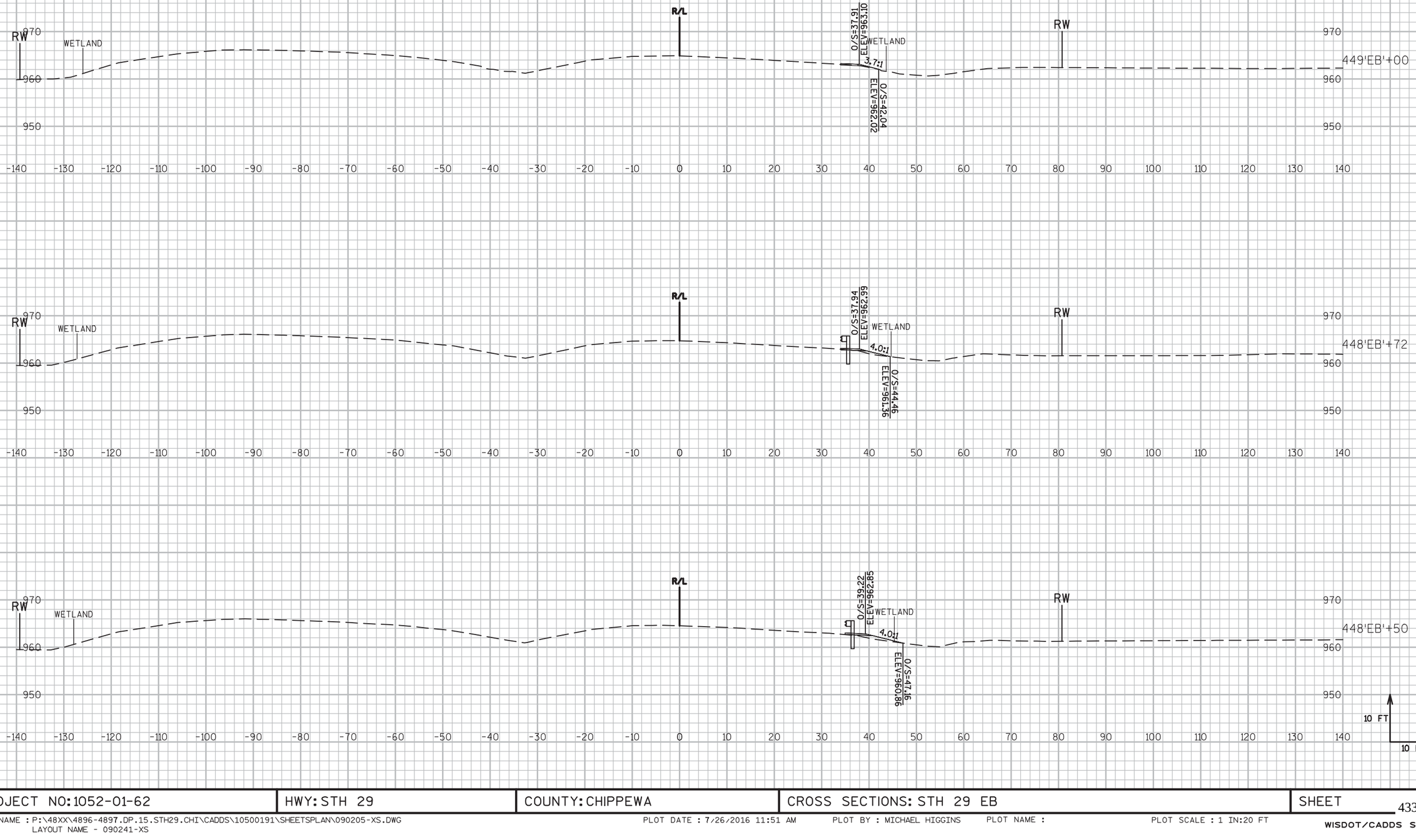
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PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 432	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090205-XS.DWG
LAYOUT NAME - 090240-XS

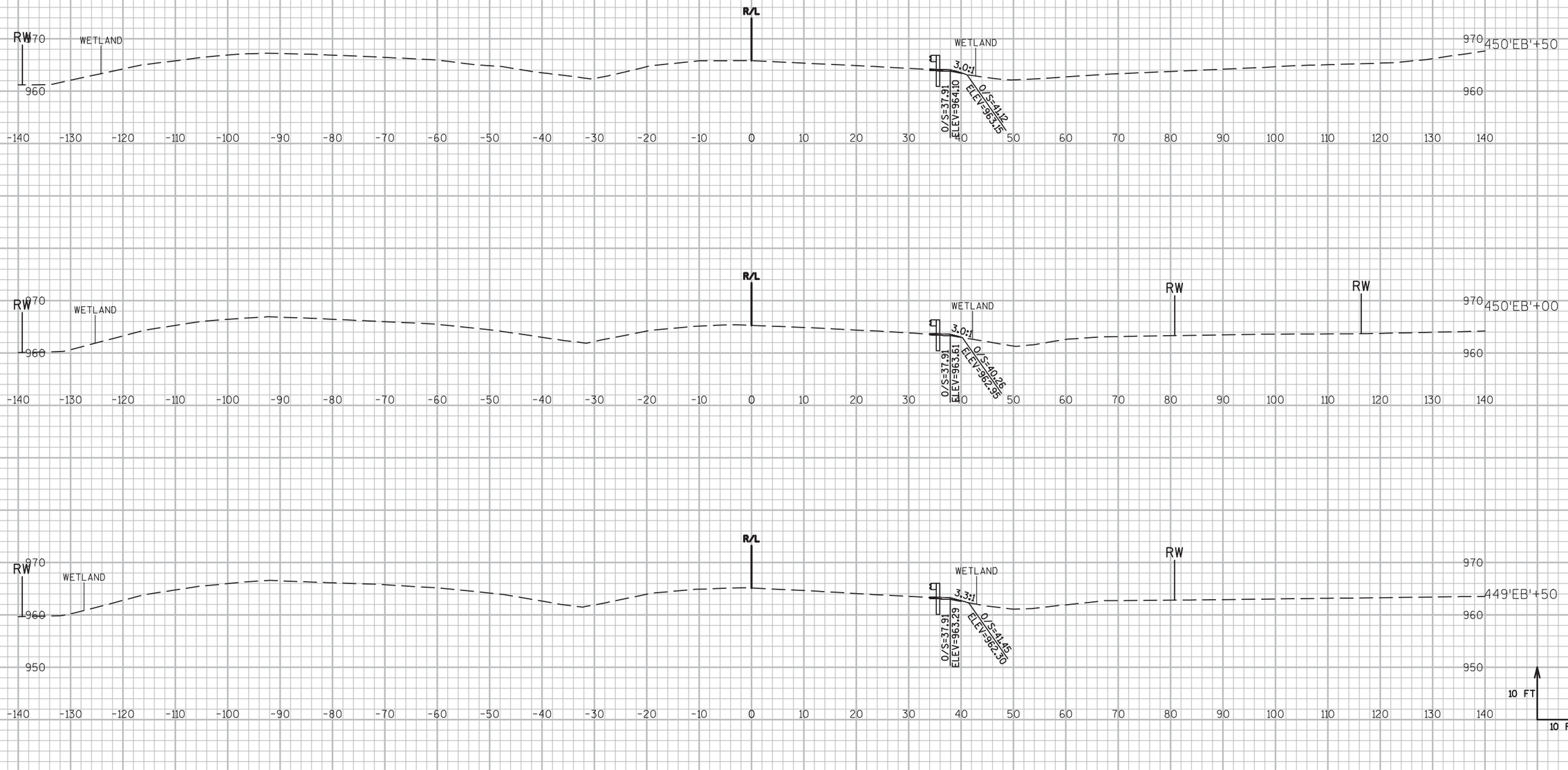
PLOT DATE : 7/26/2016 11:51 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT



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PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 433	E



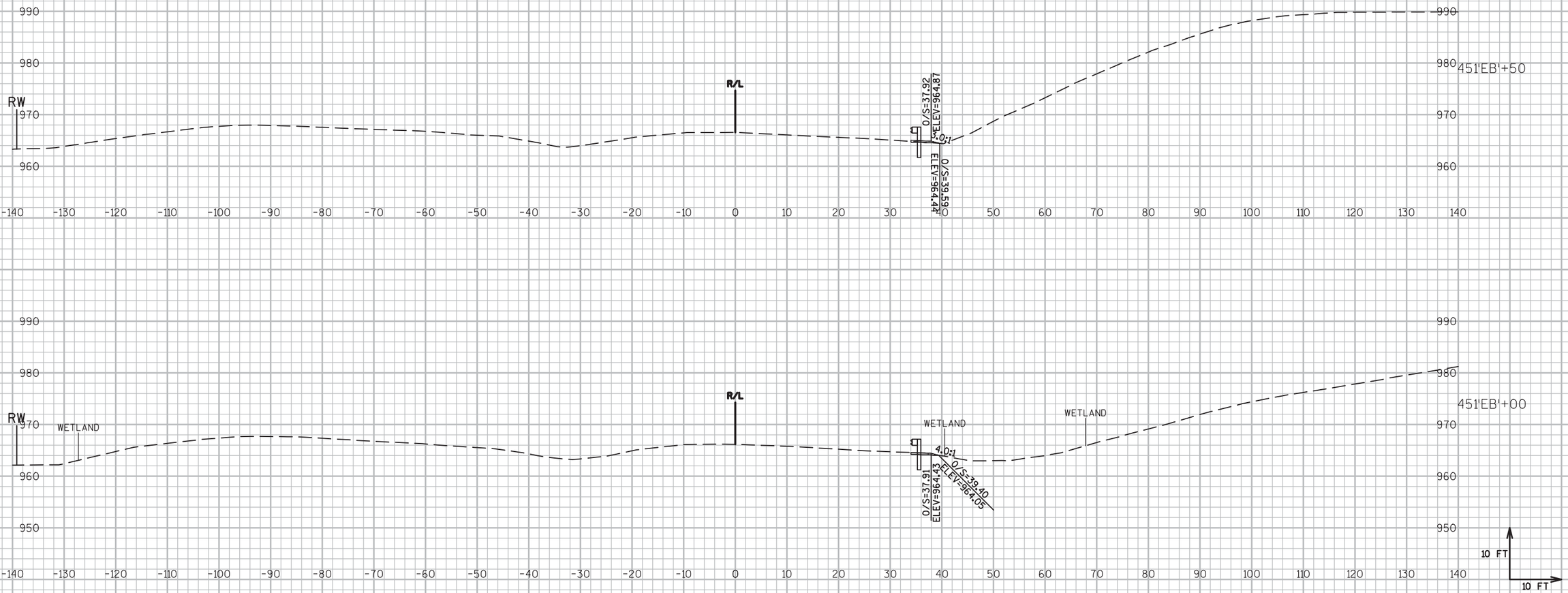
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PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 434	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090205-XS.DWG
LAYOUT NAME - 090242-XS

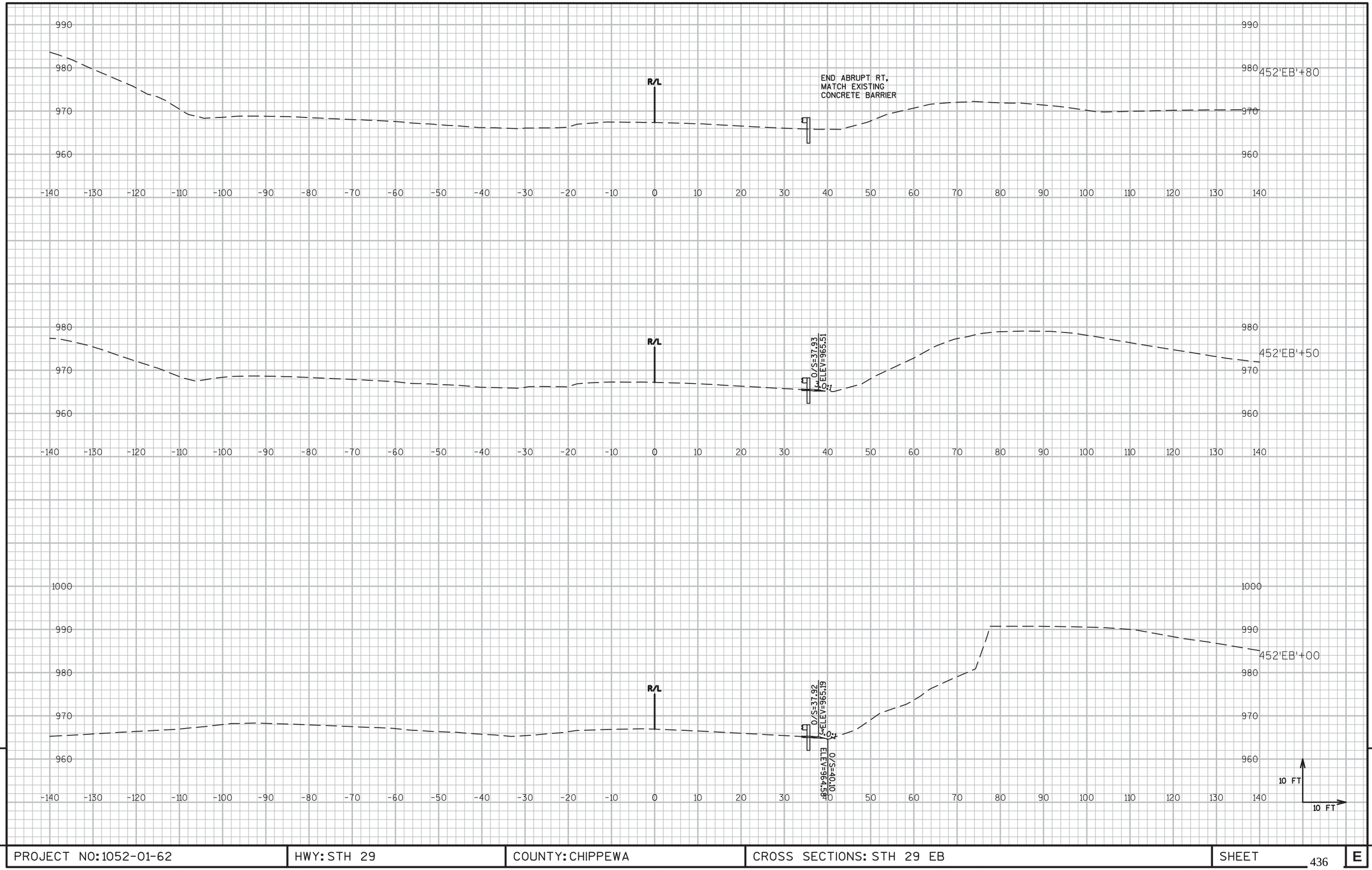
PLOT DATE : 7/26/2016 11:52 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT



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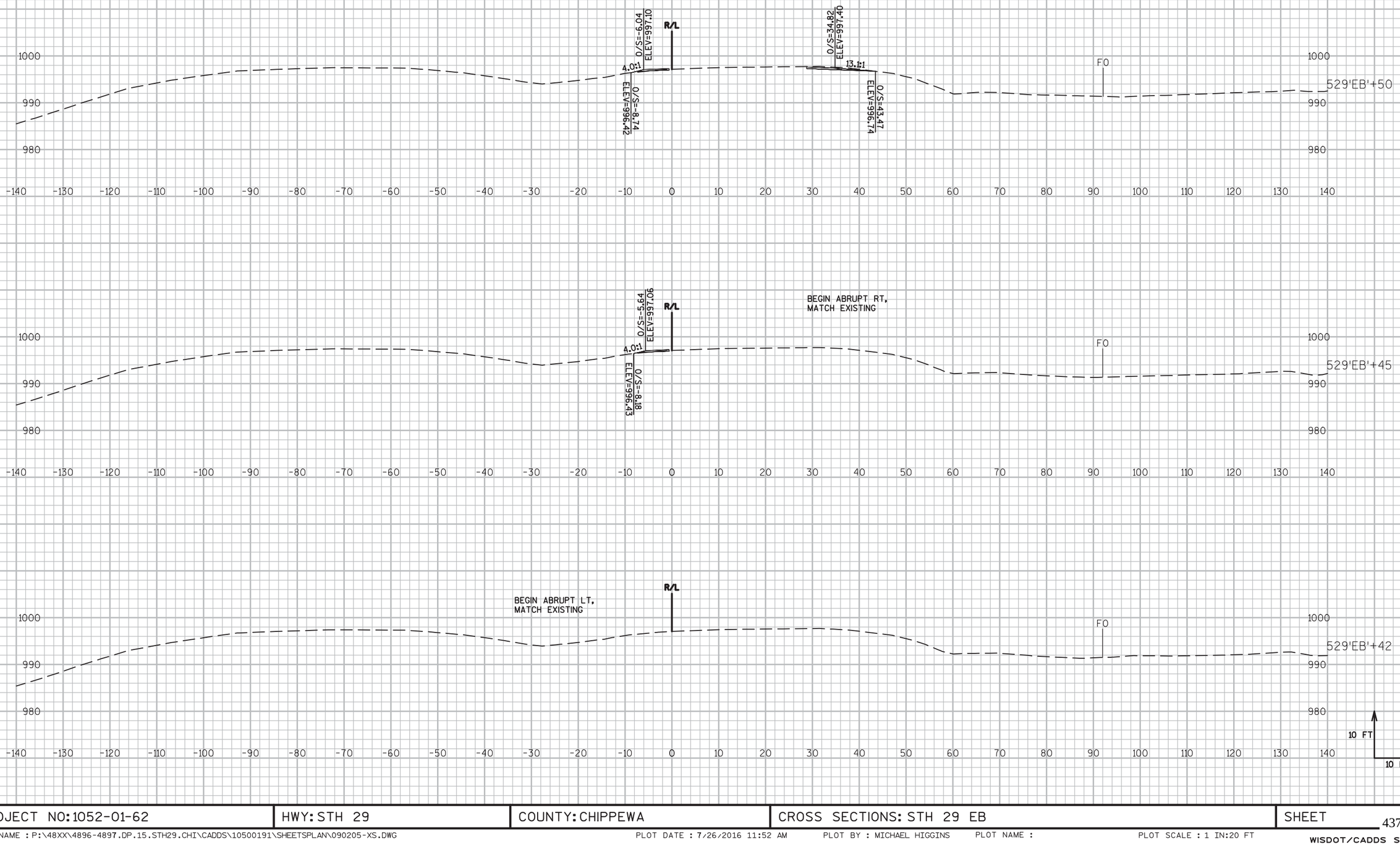
PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 435	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090205-XS.DWG
LAYOUT NAME - 090243-XS
PLOT DATE : 7/26/2016 11:52 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 49



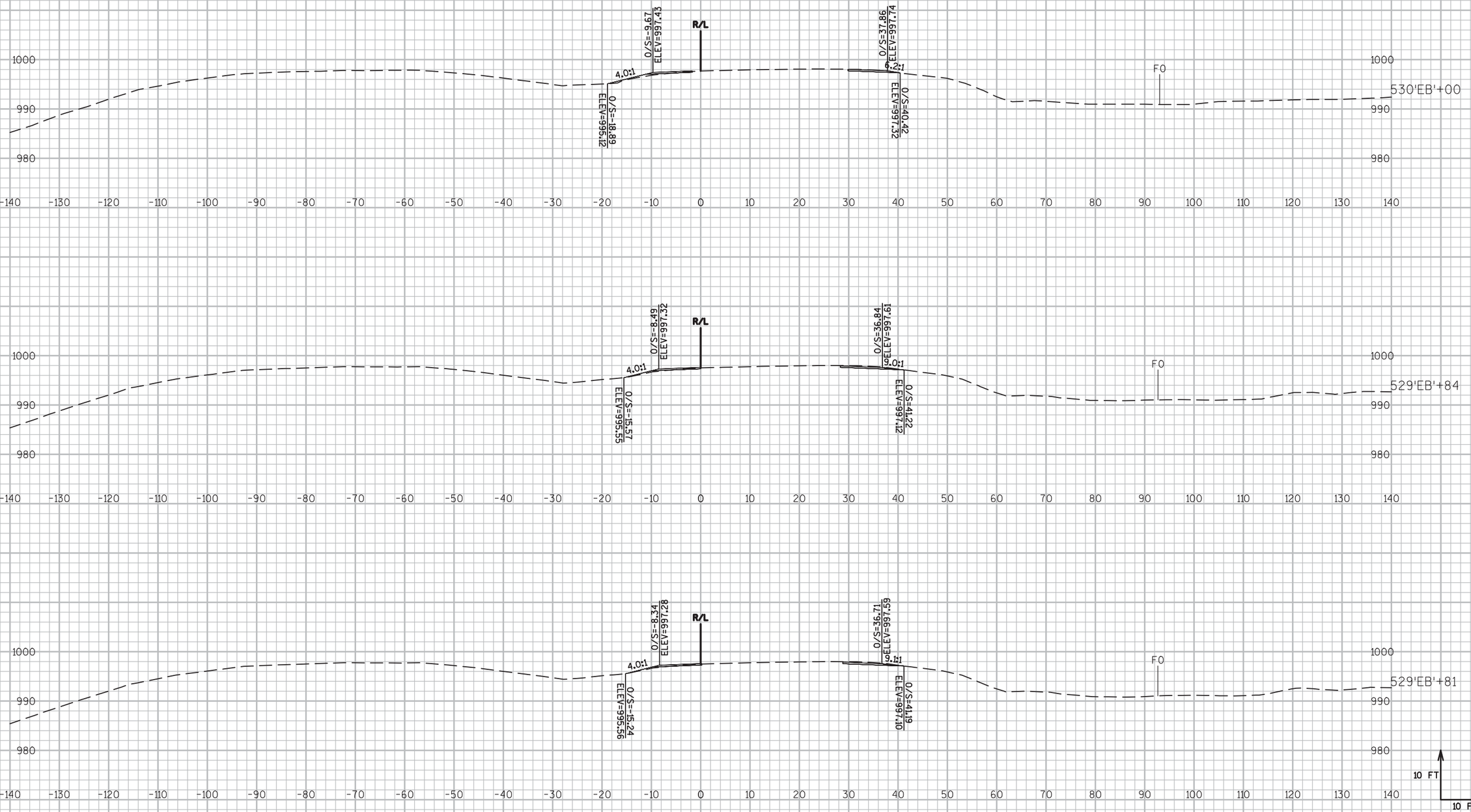
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PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 436	E



PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 437	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090205-XS.DWG PLOT DATE : 7/26/2016 11:52 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT

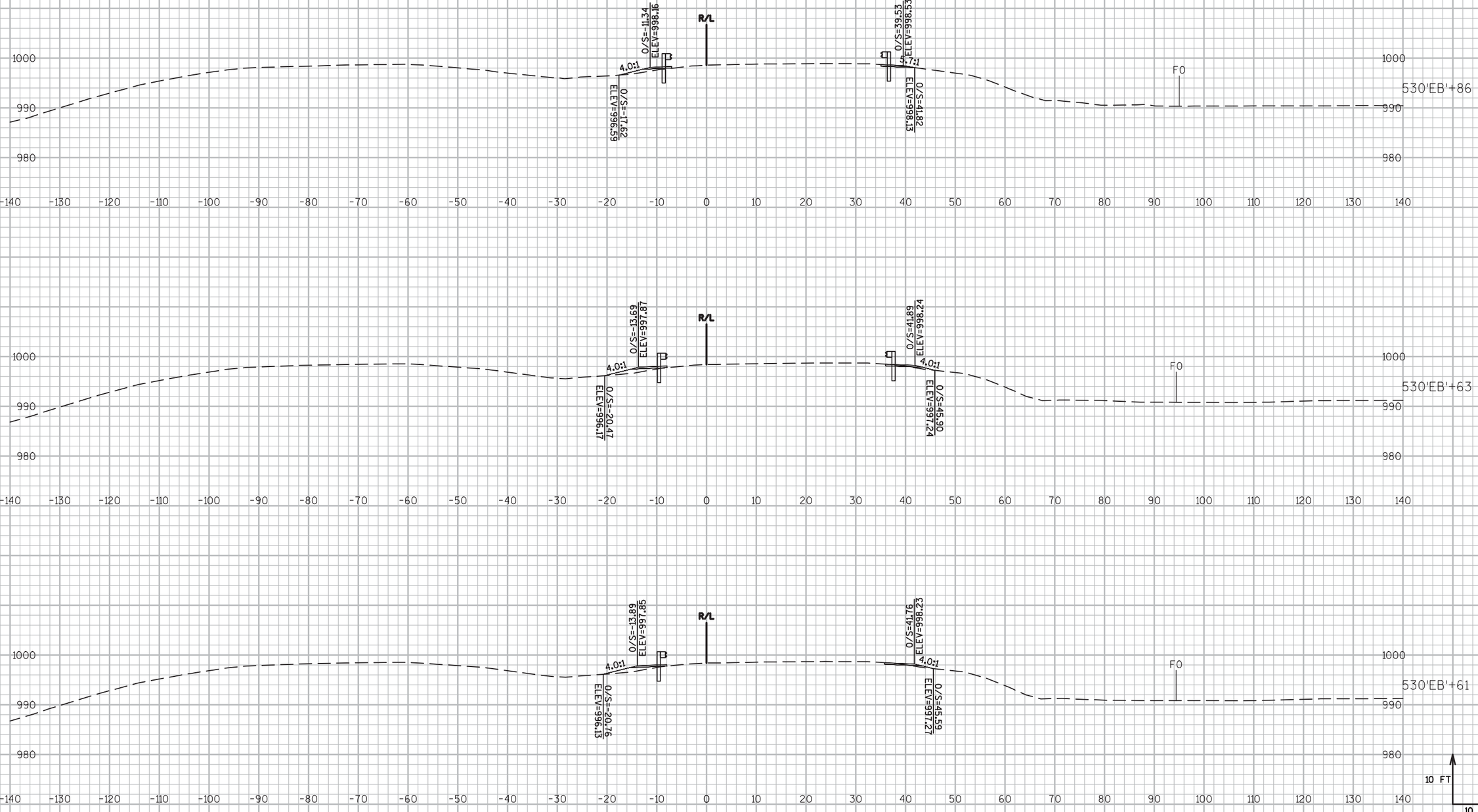


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PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 438	E

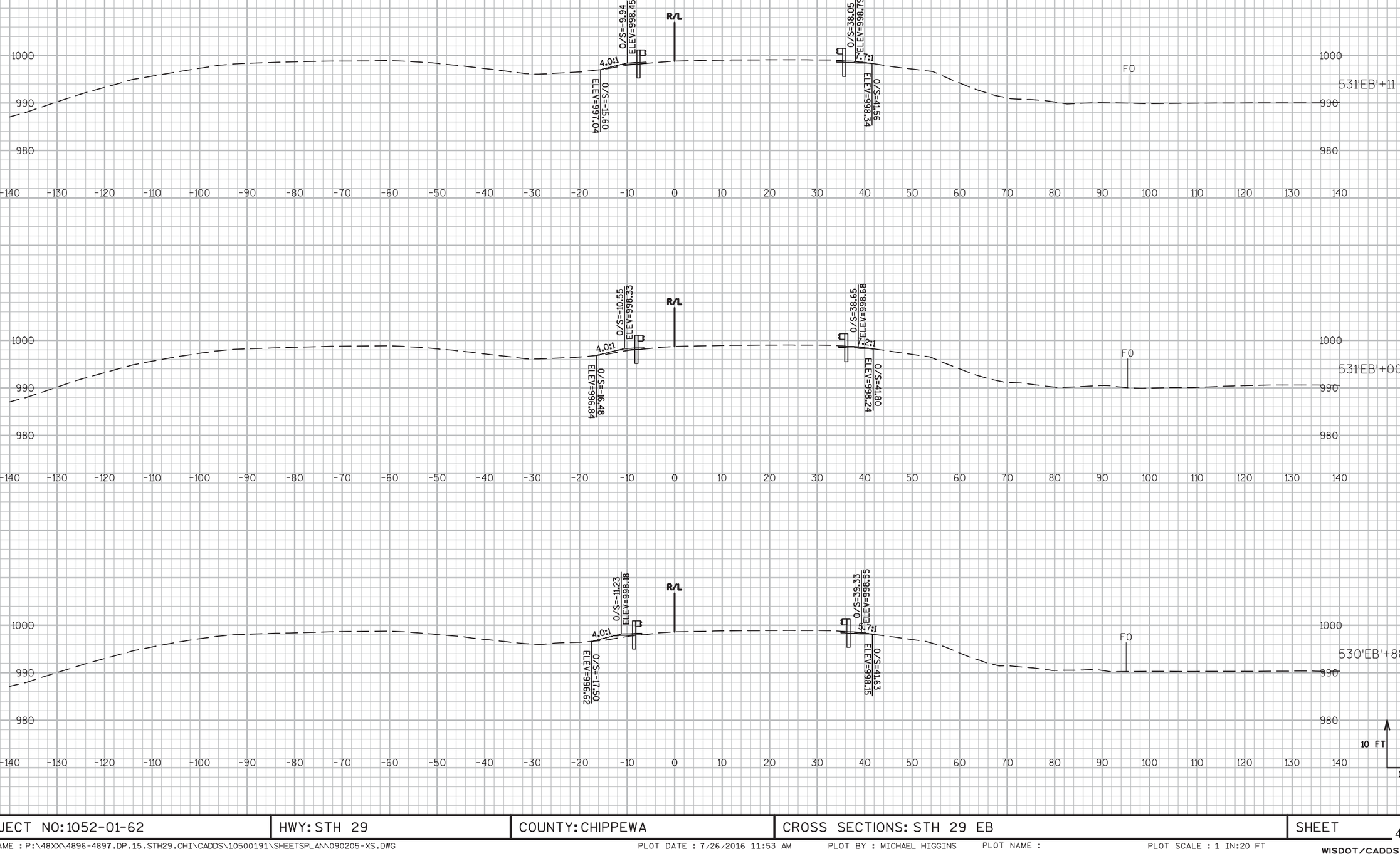
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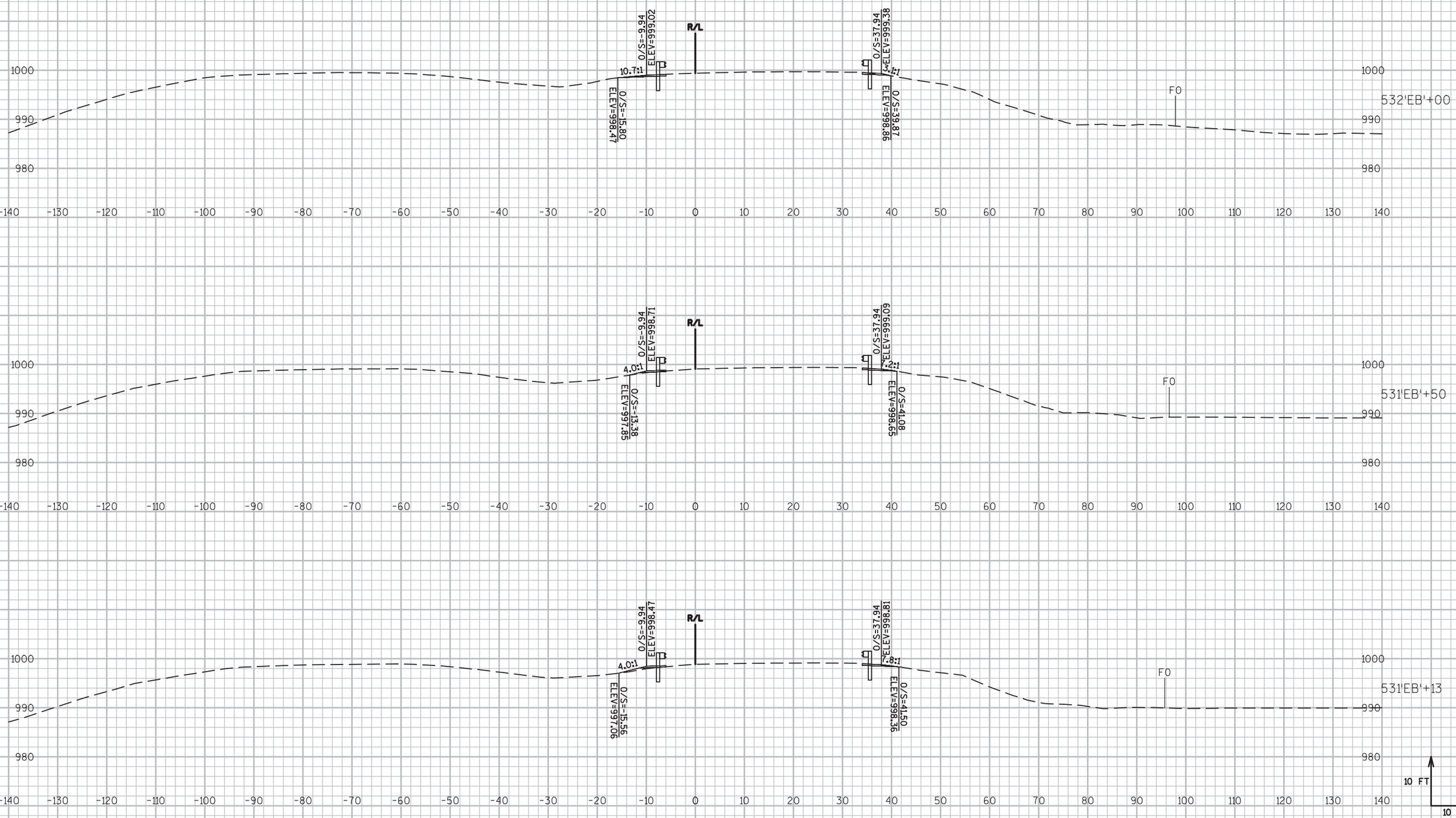
PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 439	E



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PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 440	E

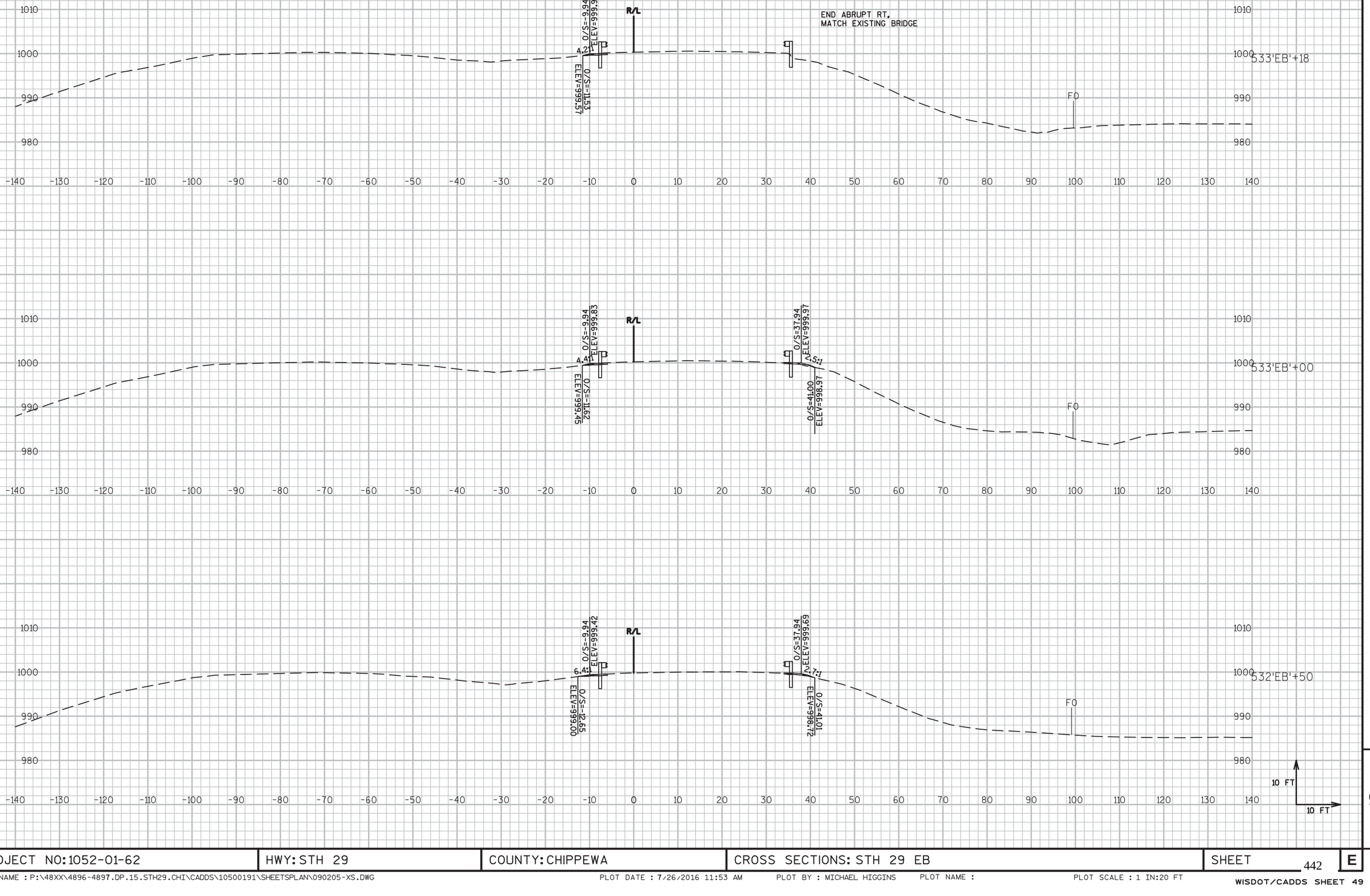


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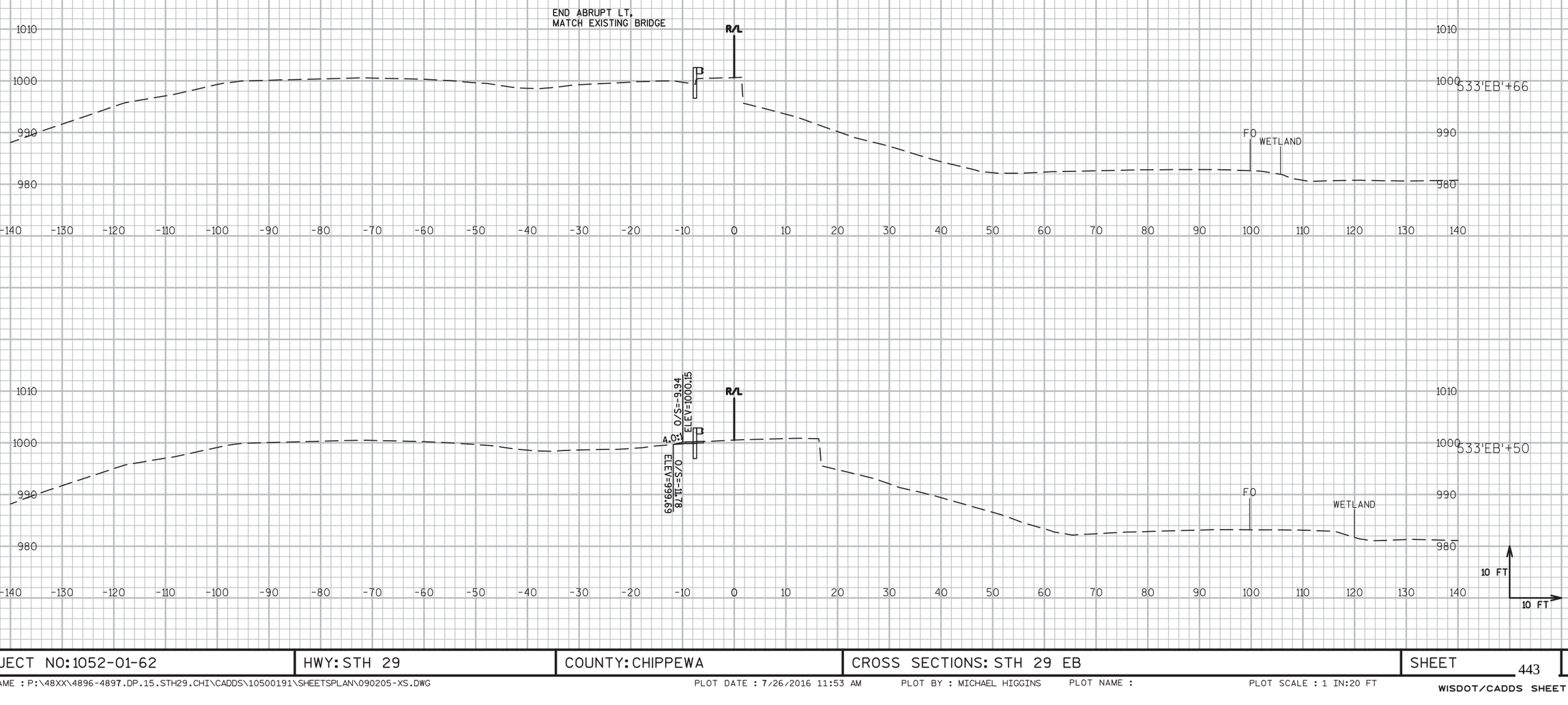
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PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 441	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090205-XS.DWG PLOT DATE : 7/26/2016 11:53 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT



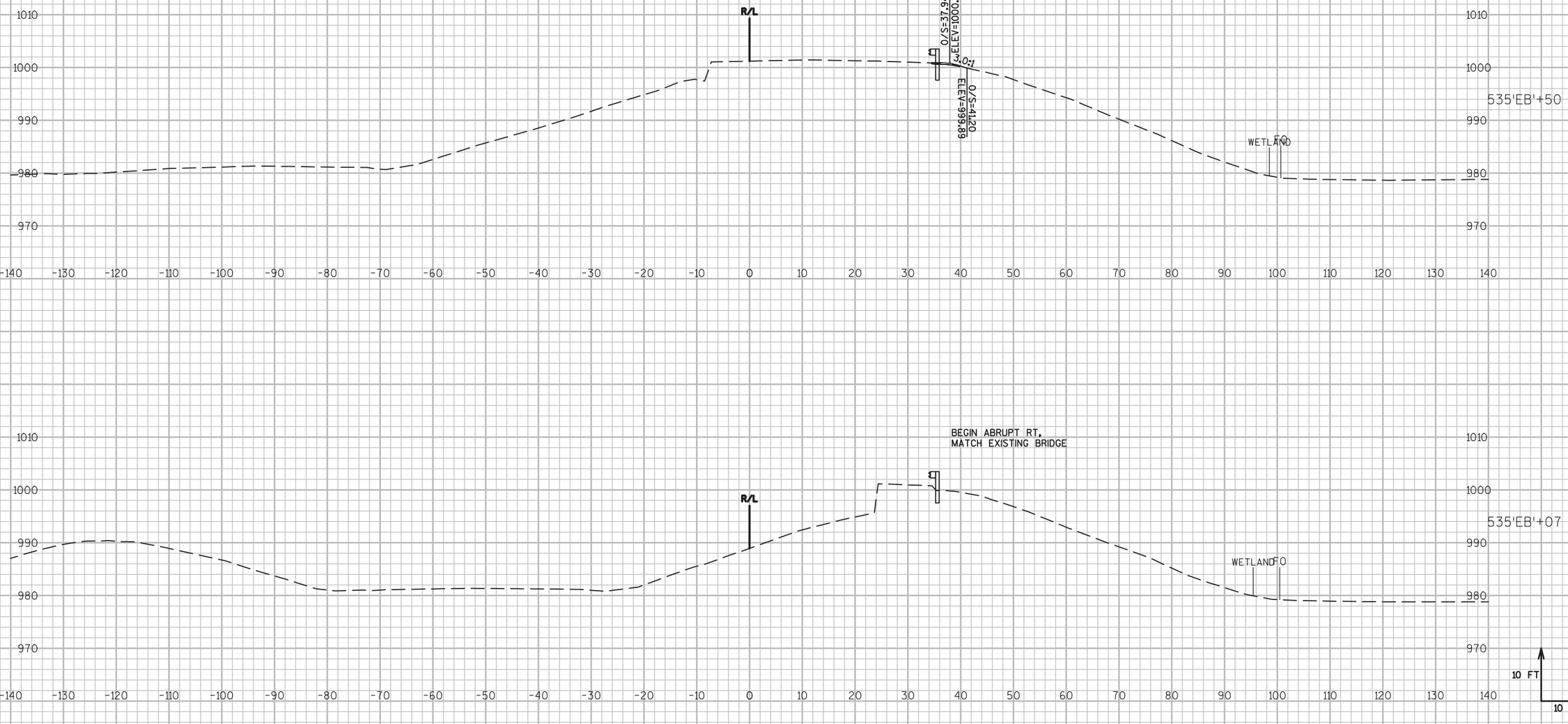
PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 442	E



PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 443	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090205-XS.DWG PLOT DATE : 7/26/2016 11:53 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT

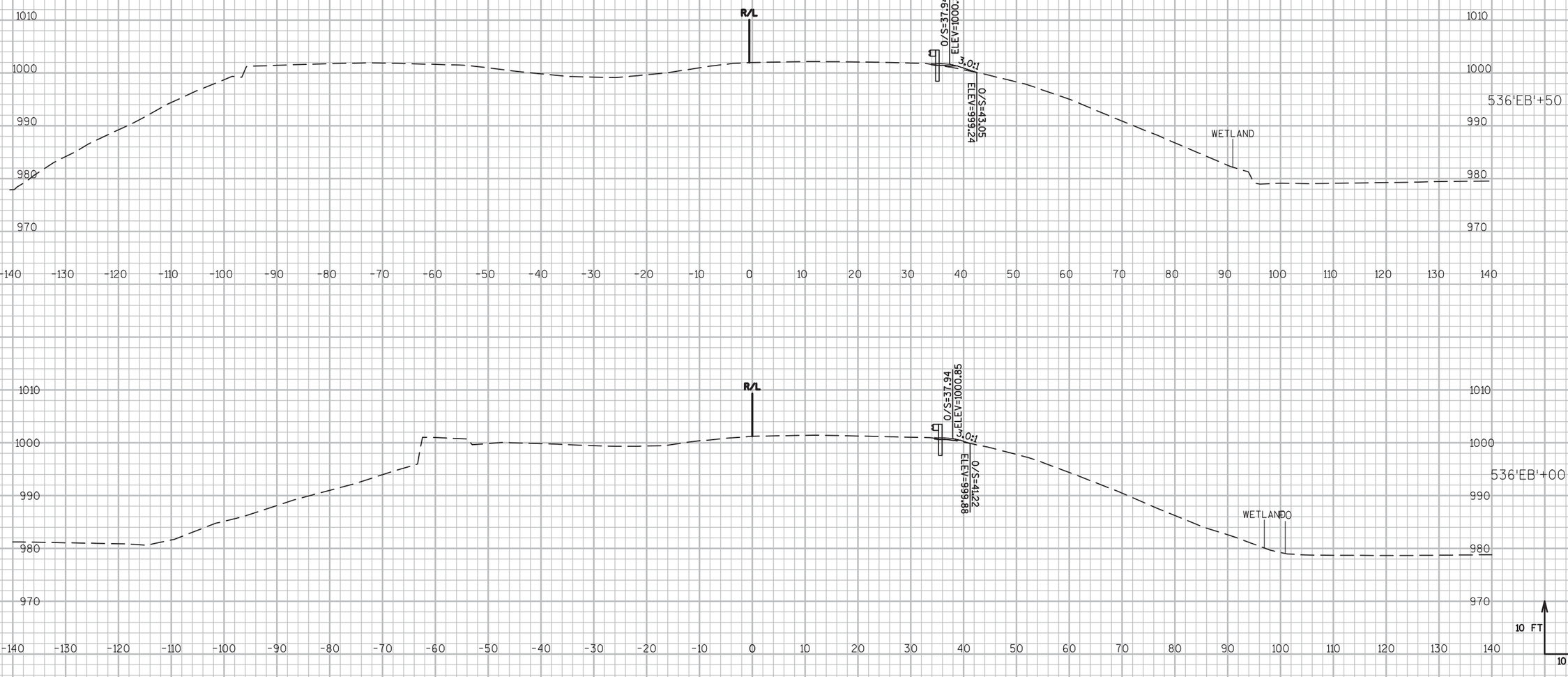
WISDOT/CADDS SHEET 49



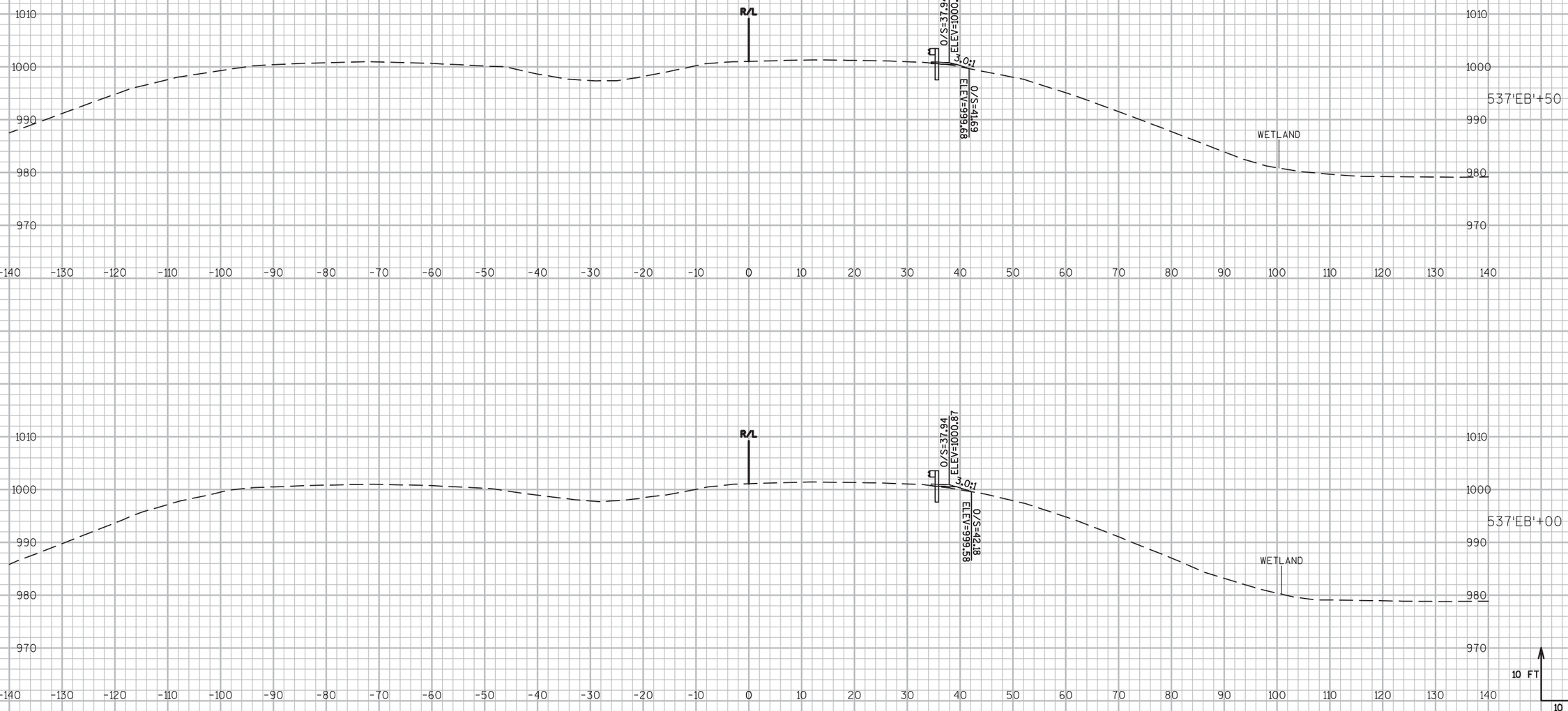
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PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 444	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090205-XS.DWG PLOT DATE : 7/26/2016 11:54 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT

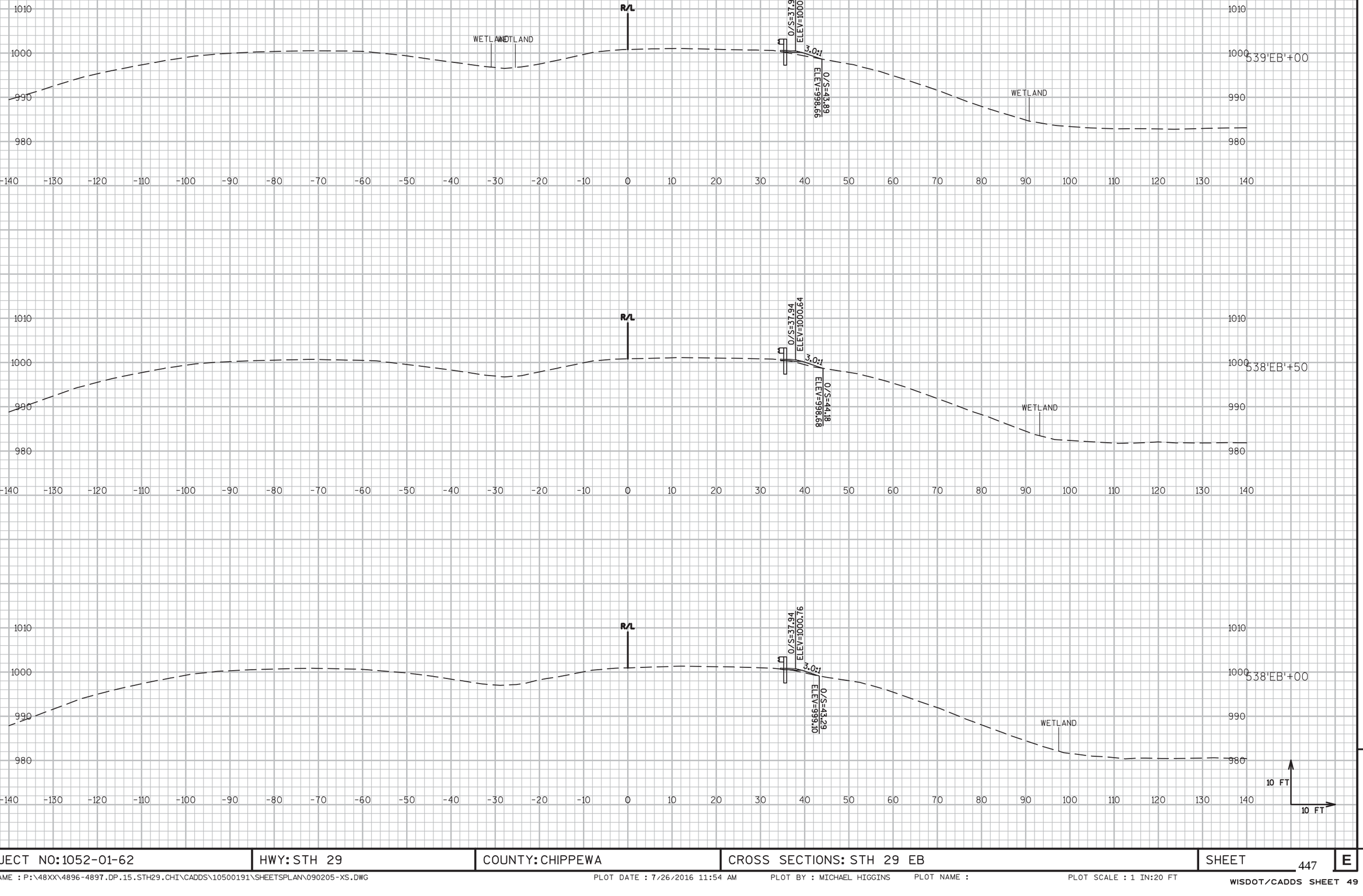


PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 445	E



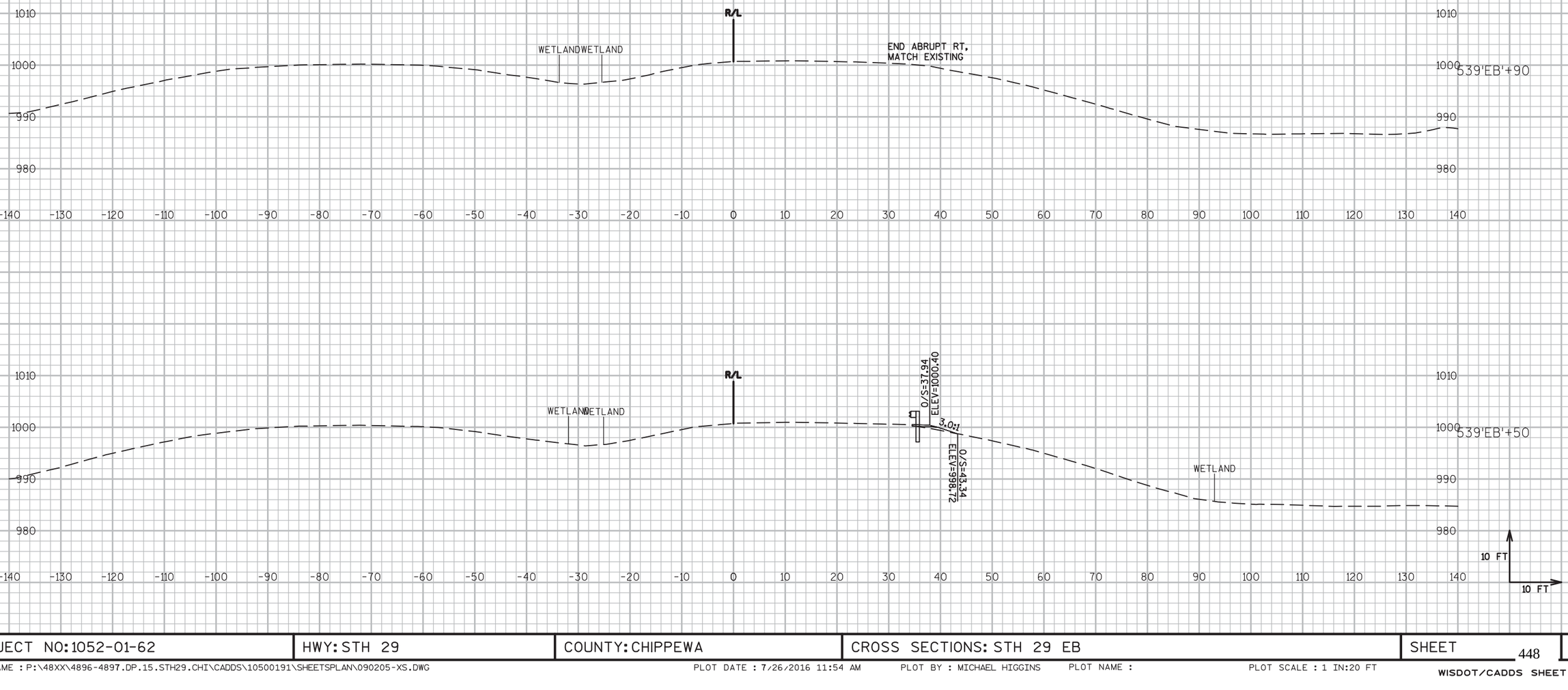
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PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 446	E



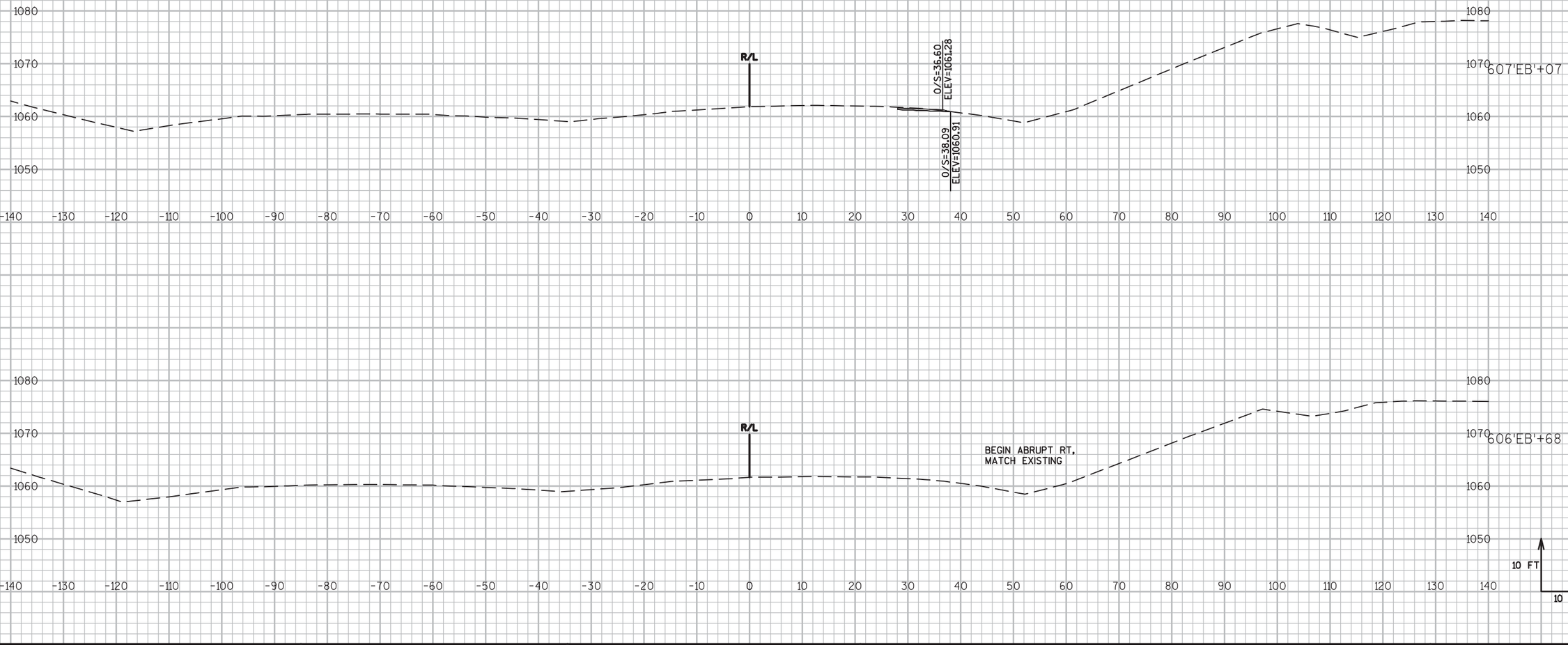
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PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 447	E



PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 448	E

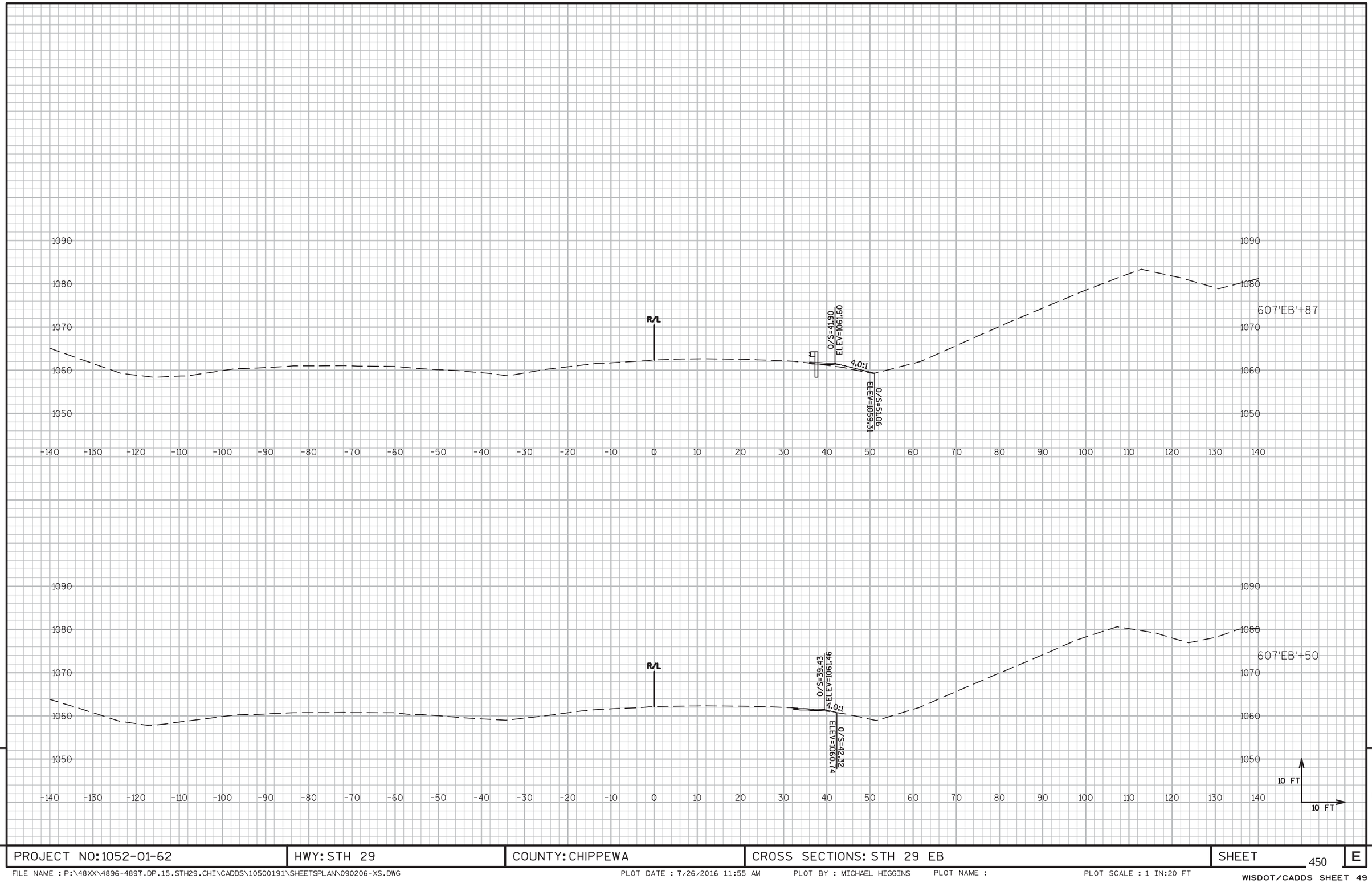
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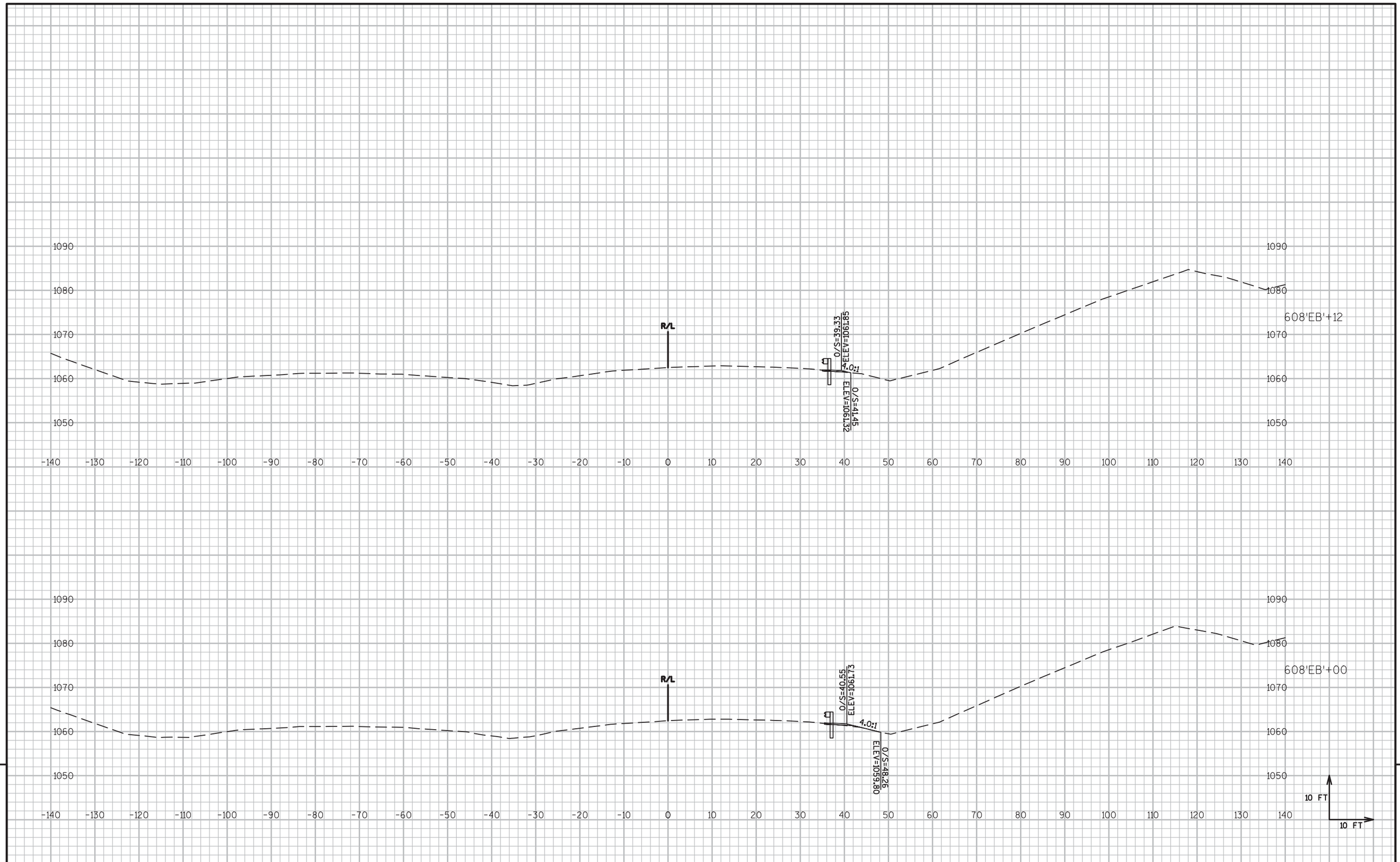
PROJECT NO:1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 449	E



PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 450	E

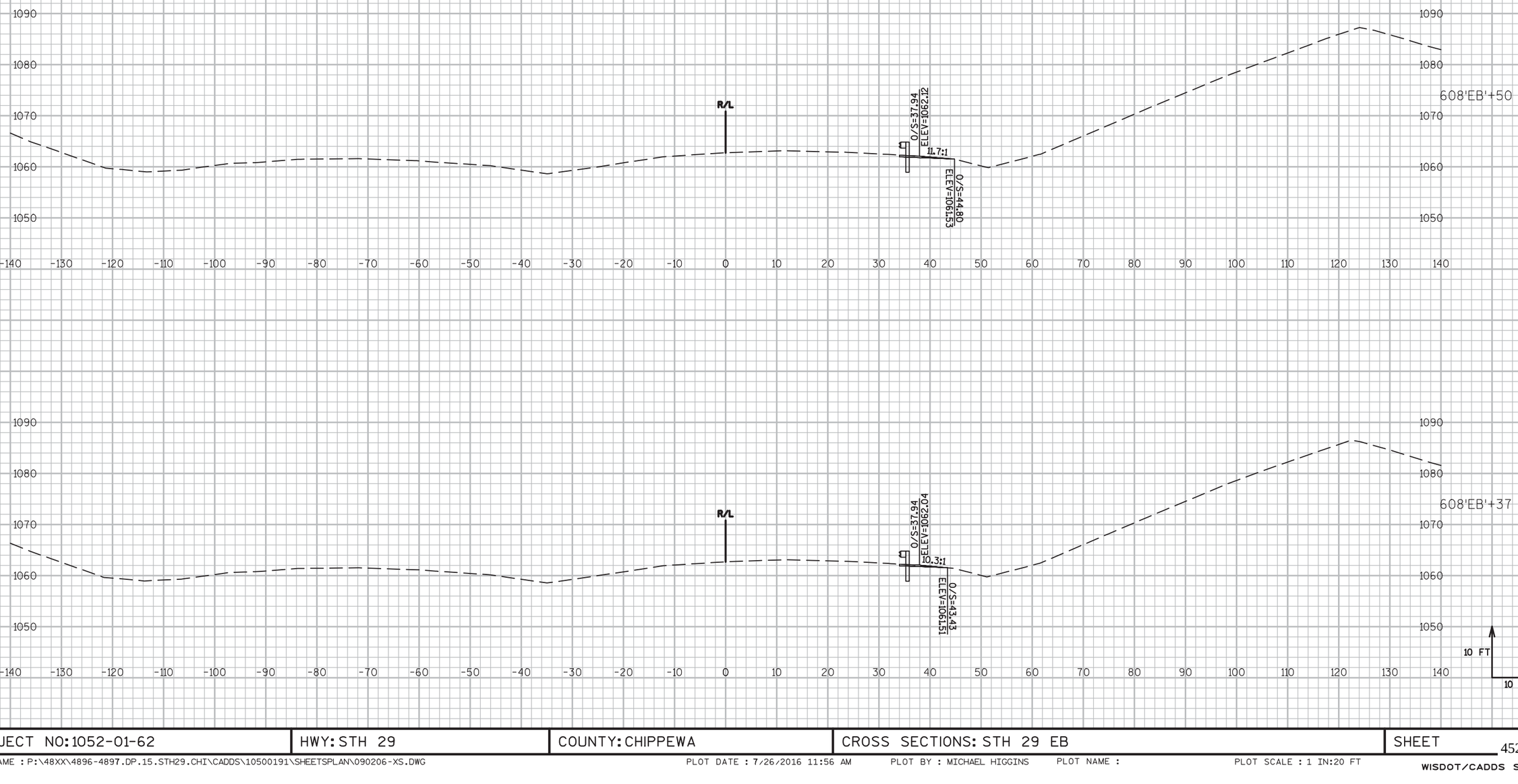
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WISDOT/CADDS SHEET 49



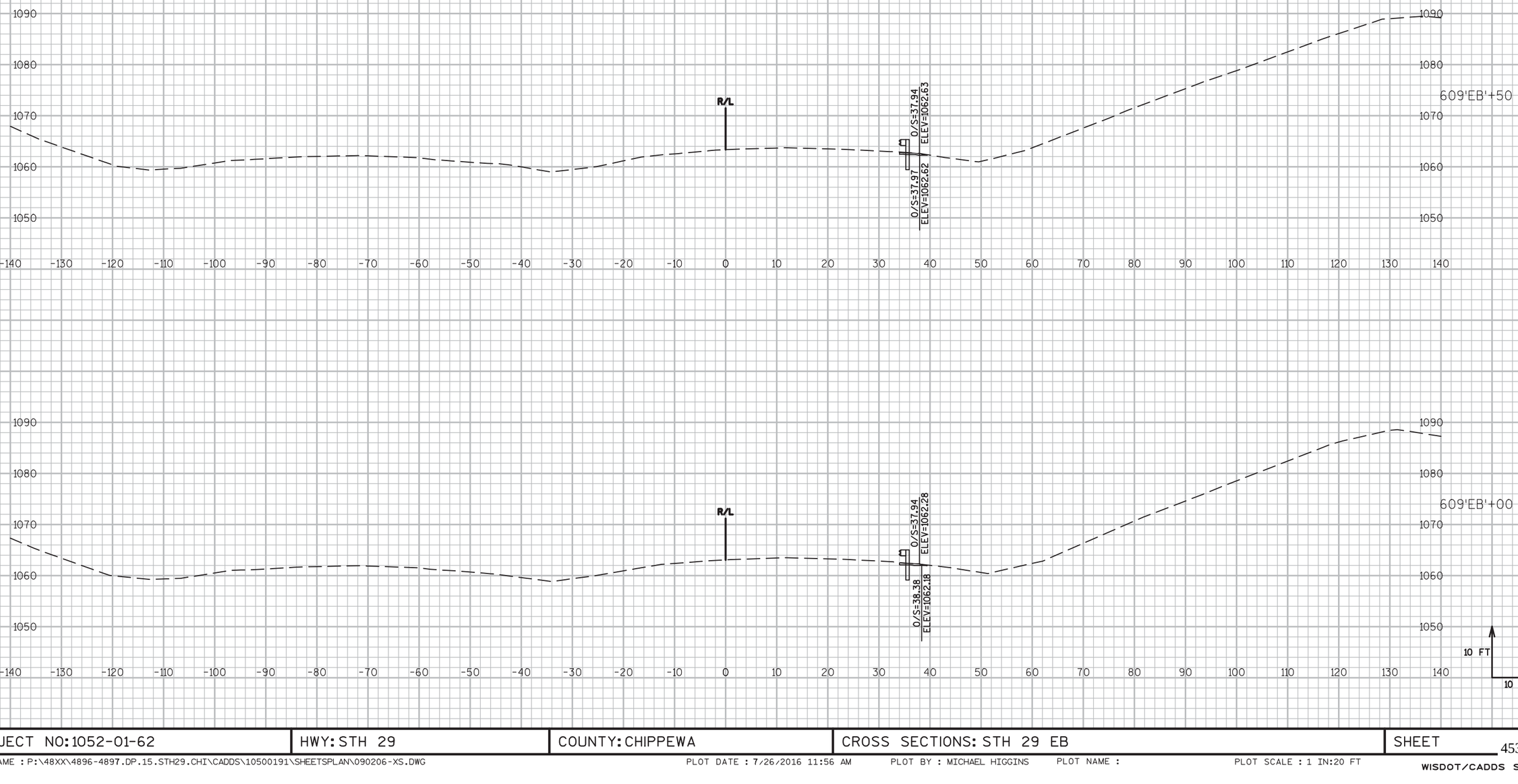
PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 451	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090206-XS.DWG PLOT DATE : 7/26/2016 11:56 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT



PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 452	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090206-XS.DWG PLOT DATE : 7/26/2016 11:56 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT

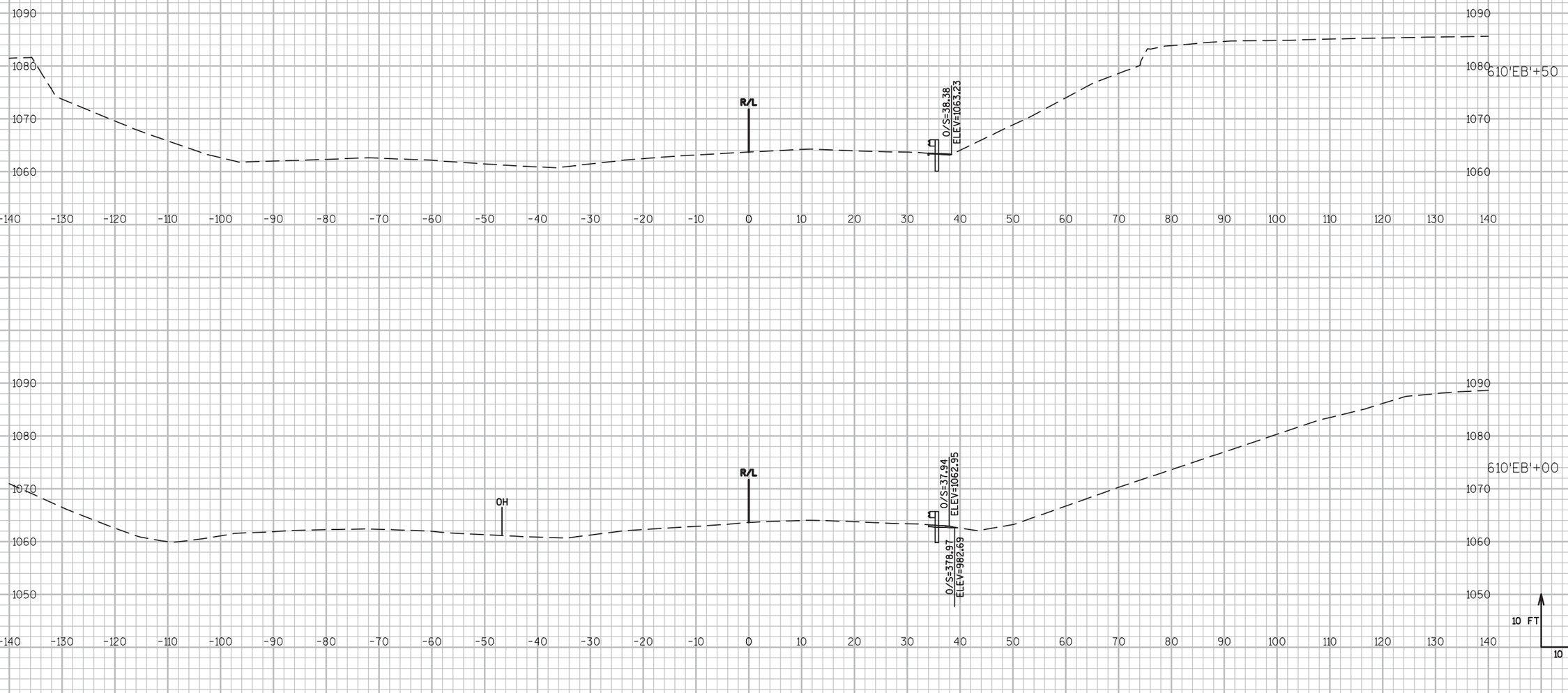


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PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 453	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090206-XS.DWG PLOT DATE : 7/26/2016 11:56 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT

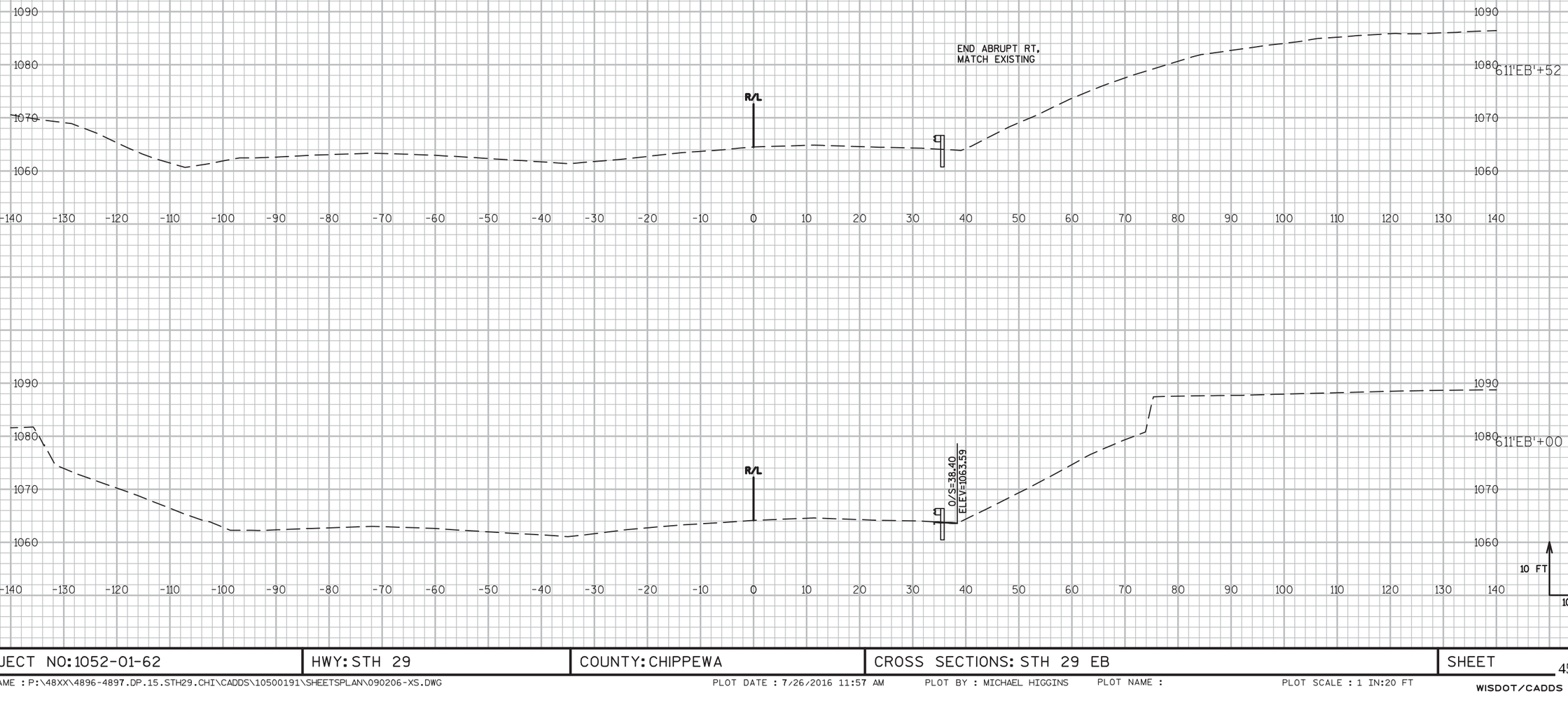


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PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 454	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090206-XS.DWG PLOT DATE : 7/26/2016 11:56 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT



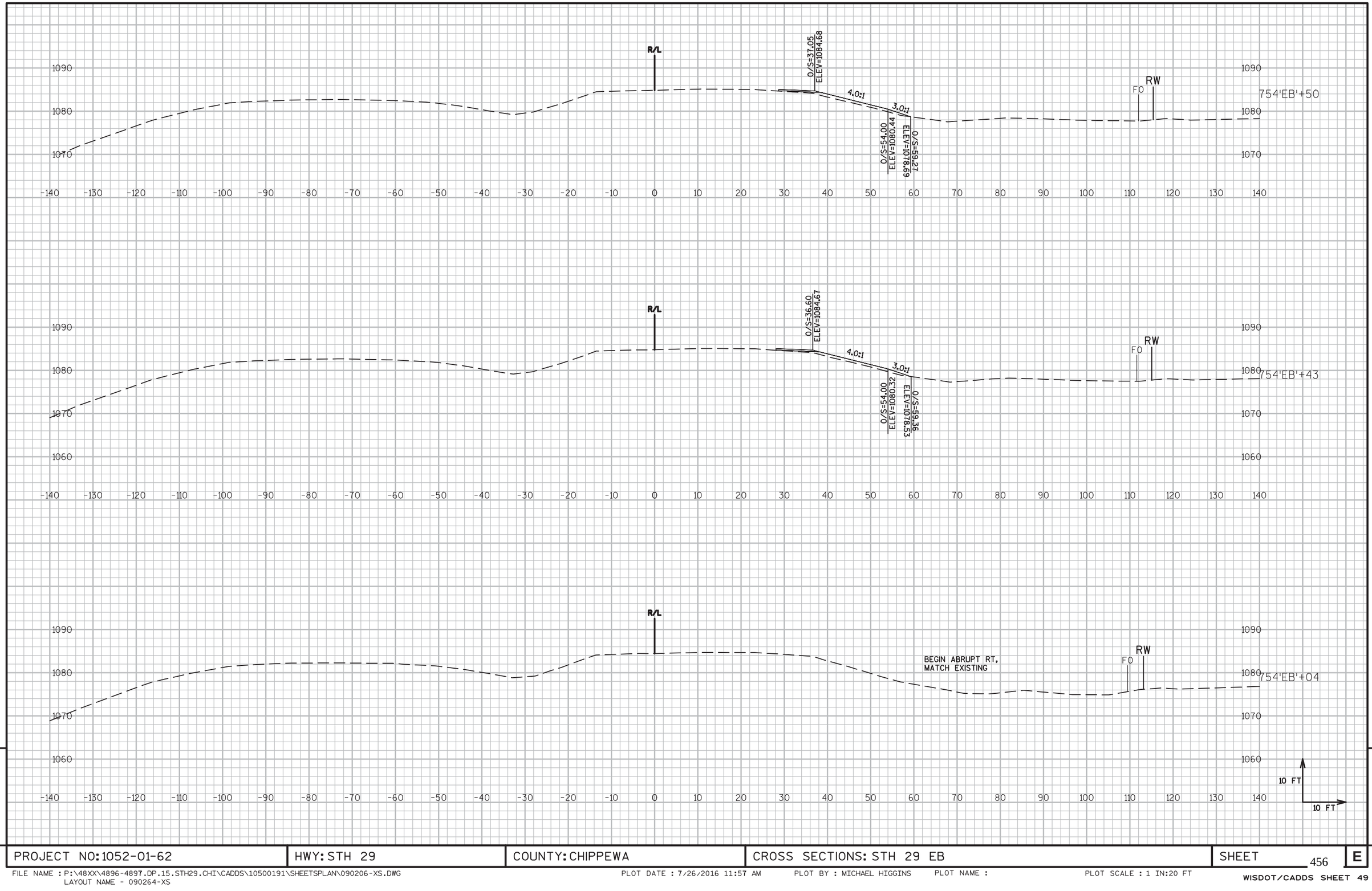
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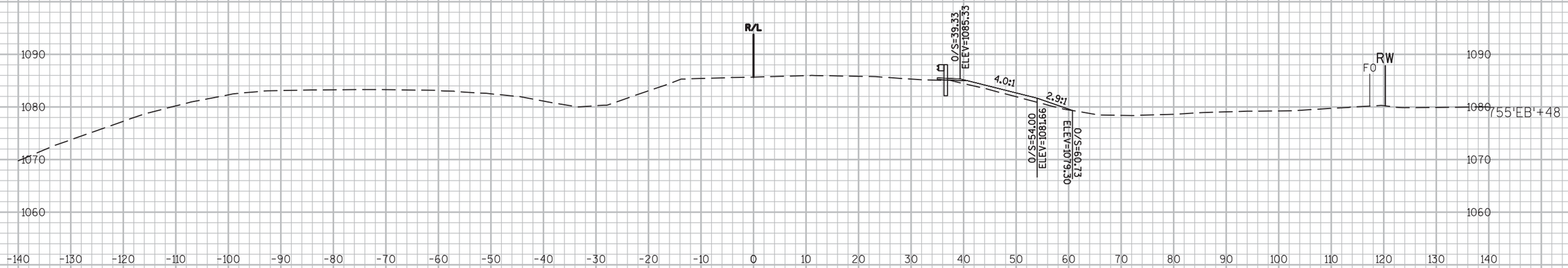
PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 455	E

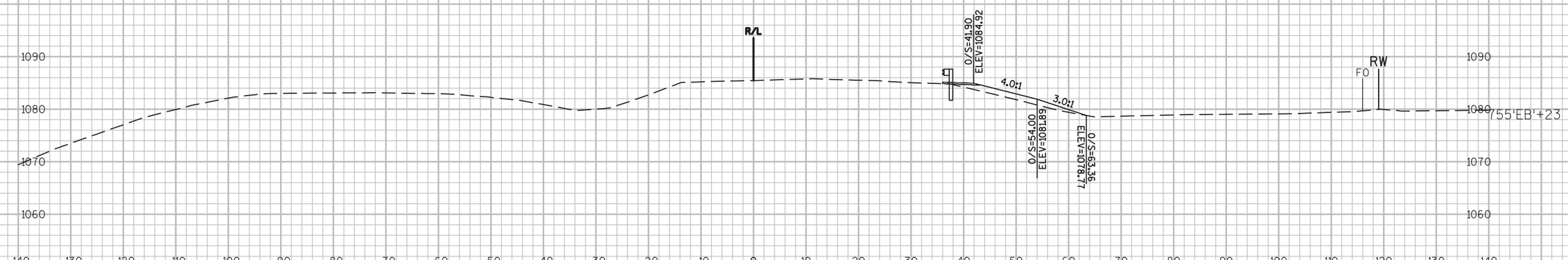
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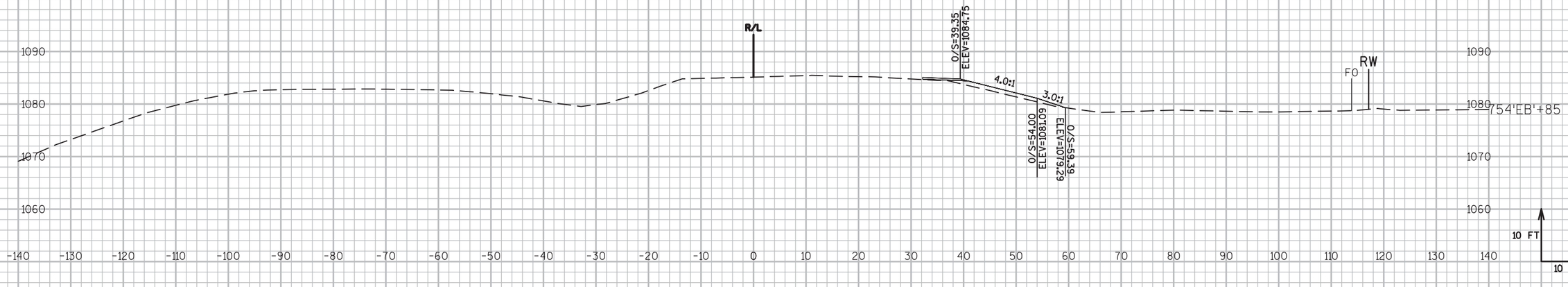
WISDOT/CADDS SHEET 49



PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 456	E







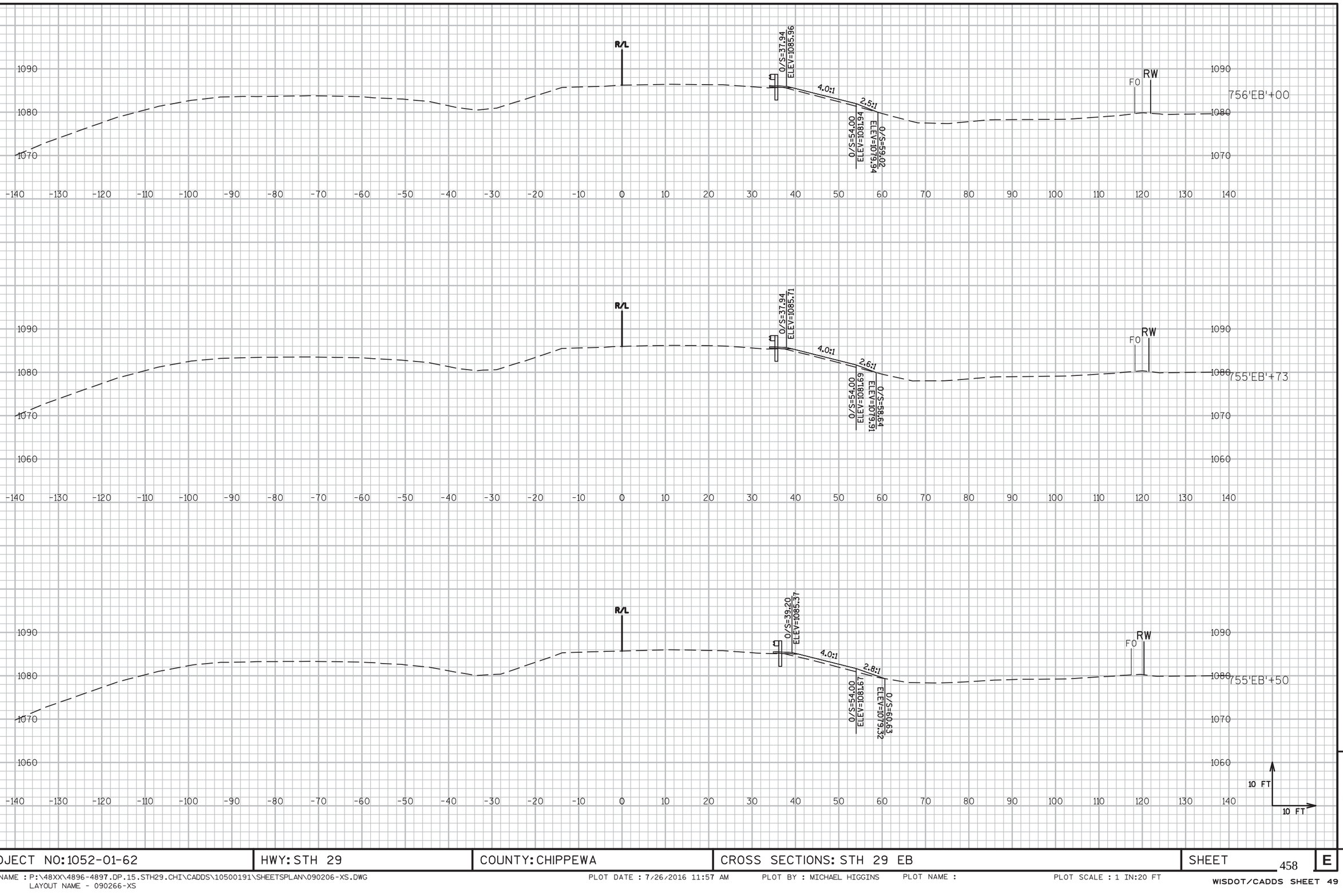
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PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 457	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090206-XS.DWG
LAYOUT NAME - 090265-XS

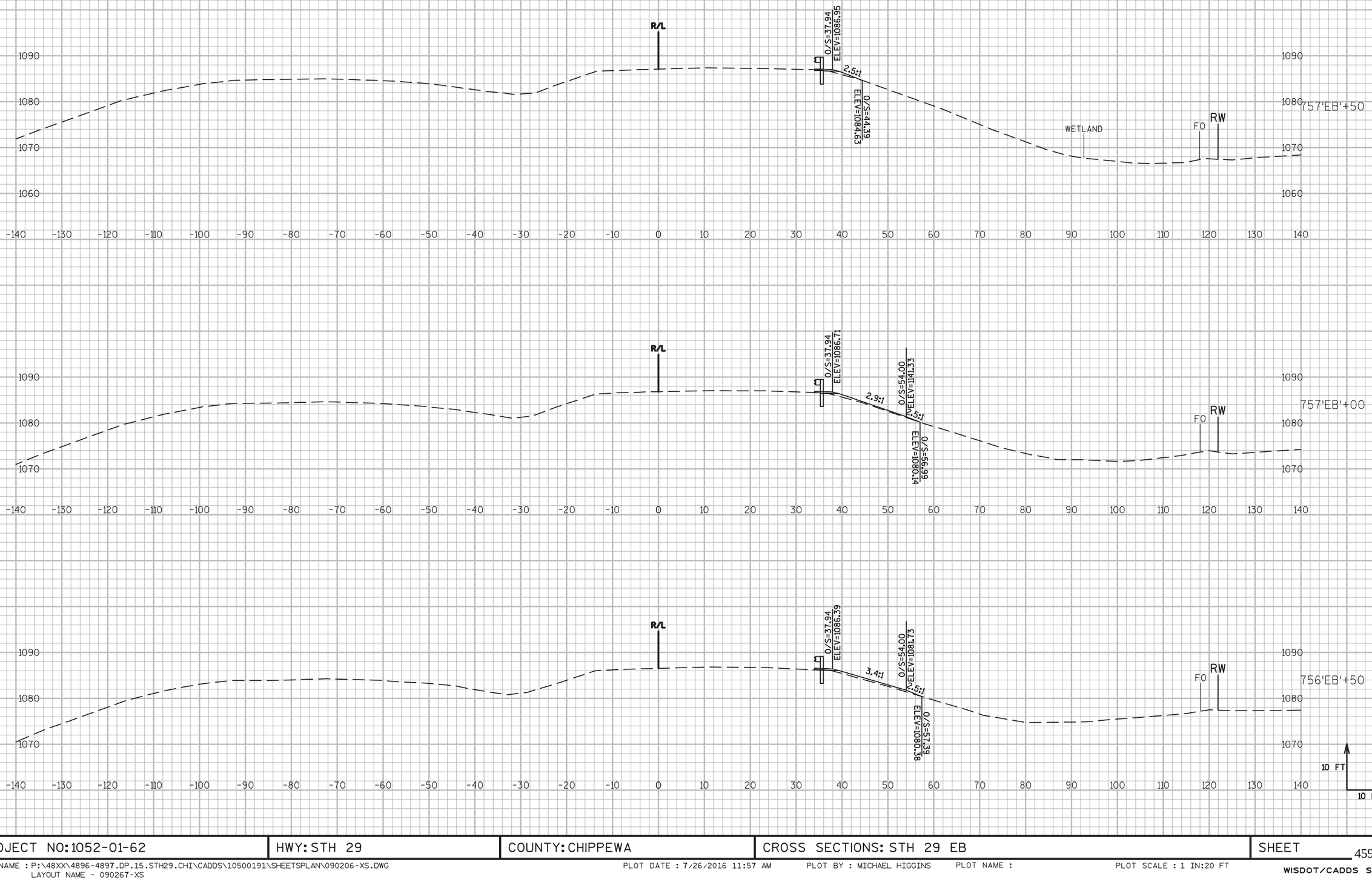
PLOT DATE : 7/26/2016 11:57 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT



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PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 458	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090206-XS.DWG
LAYOUT NAME - 090266-XS
PLOT DATE : 7/26/2016 11:57 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 49



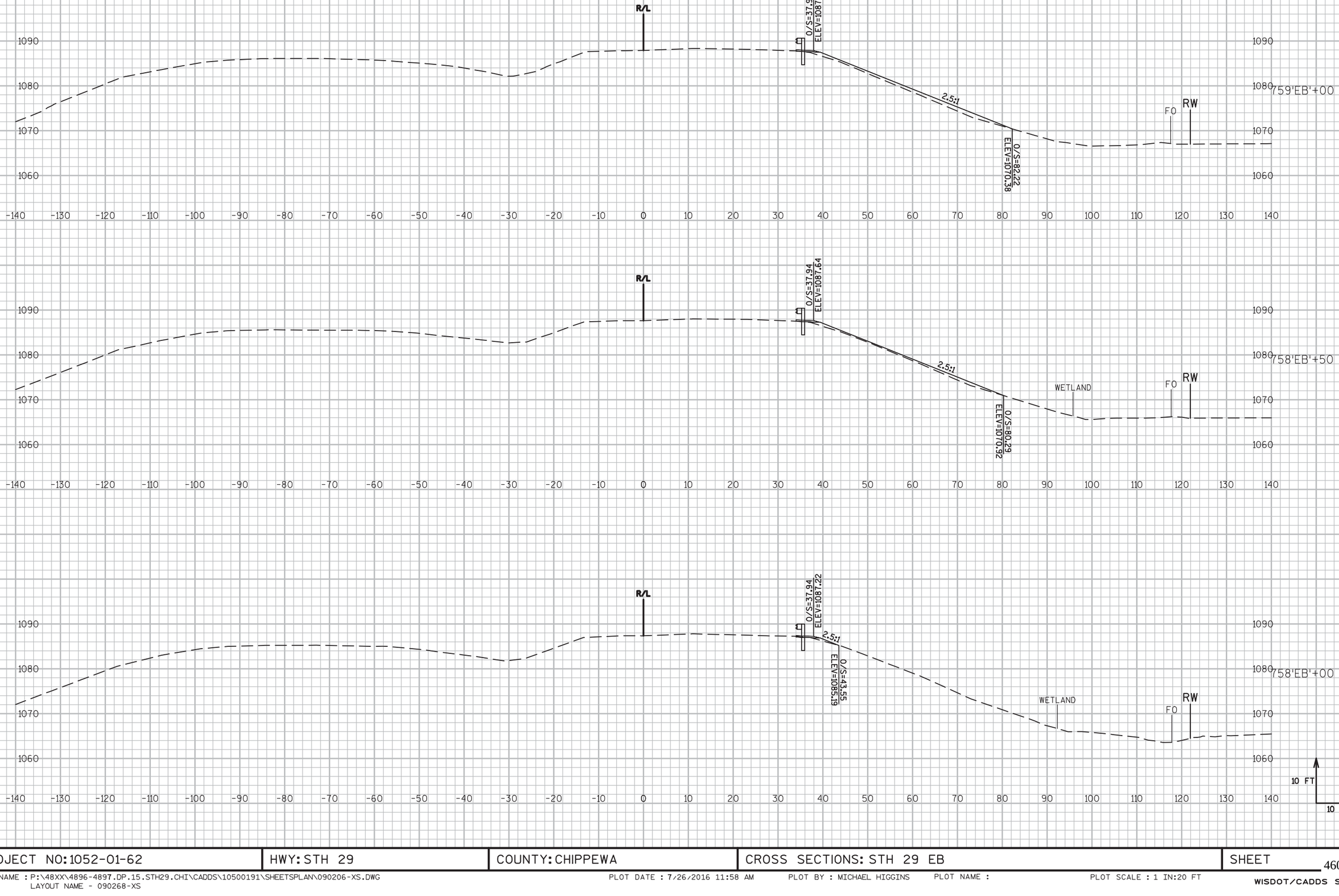
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PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 459	E

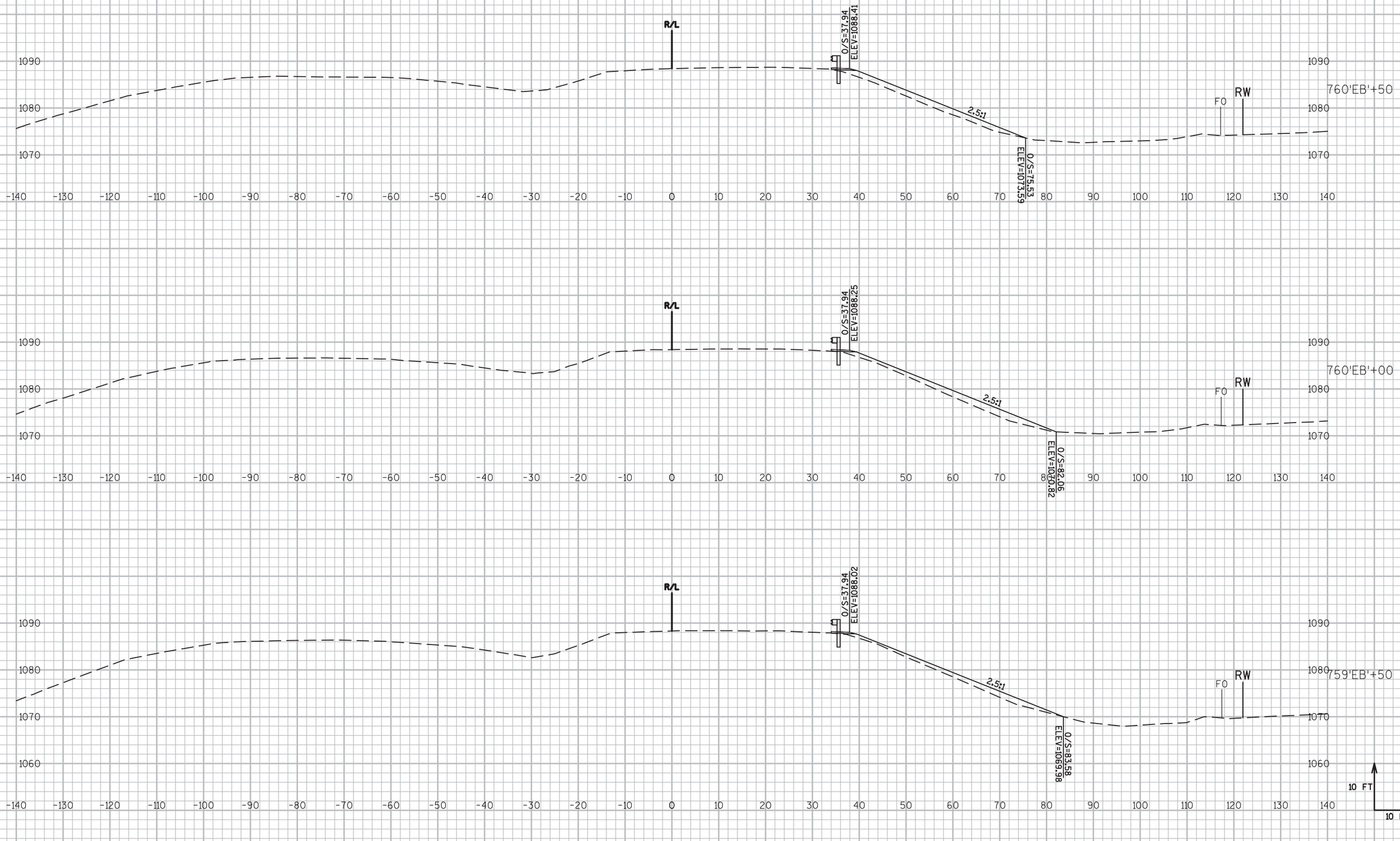
FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090206-XS.DWG
LAYOUT NAME - 090267-XS

PLOT DATE : 7/26/2016 11:57 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT



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PROJECT NO:1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 460	E

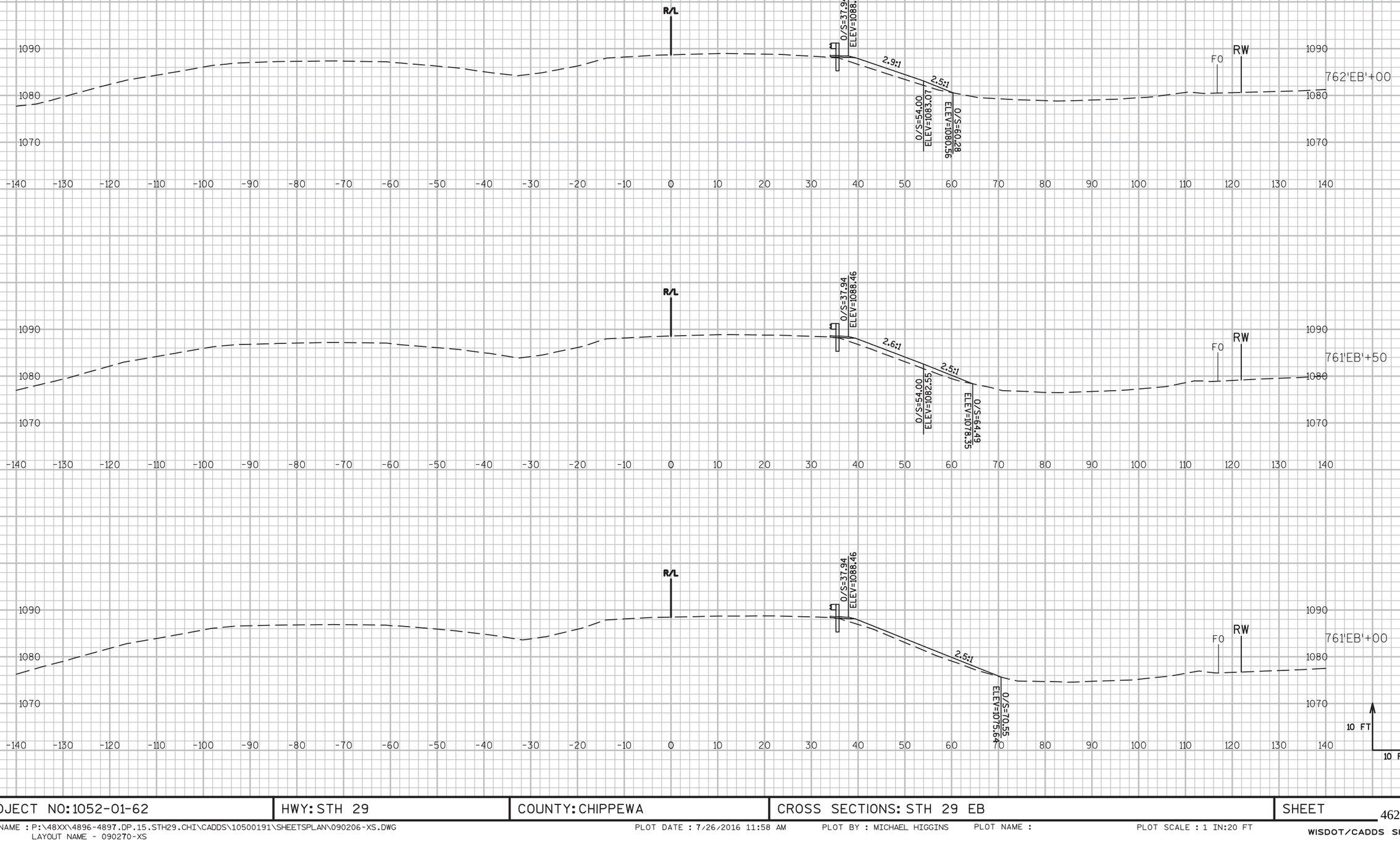


PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 461	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090206-XS.DWG
LAYOUT NAME - 090269-XS

PLOT DATE : 7/26/2016 11:58 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



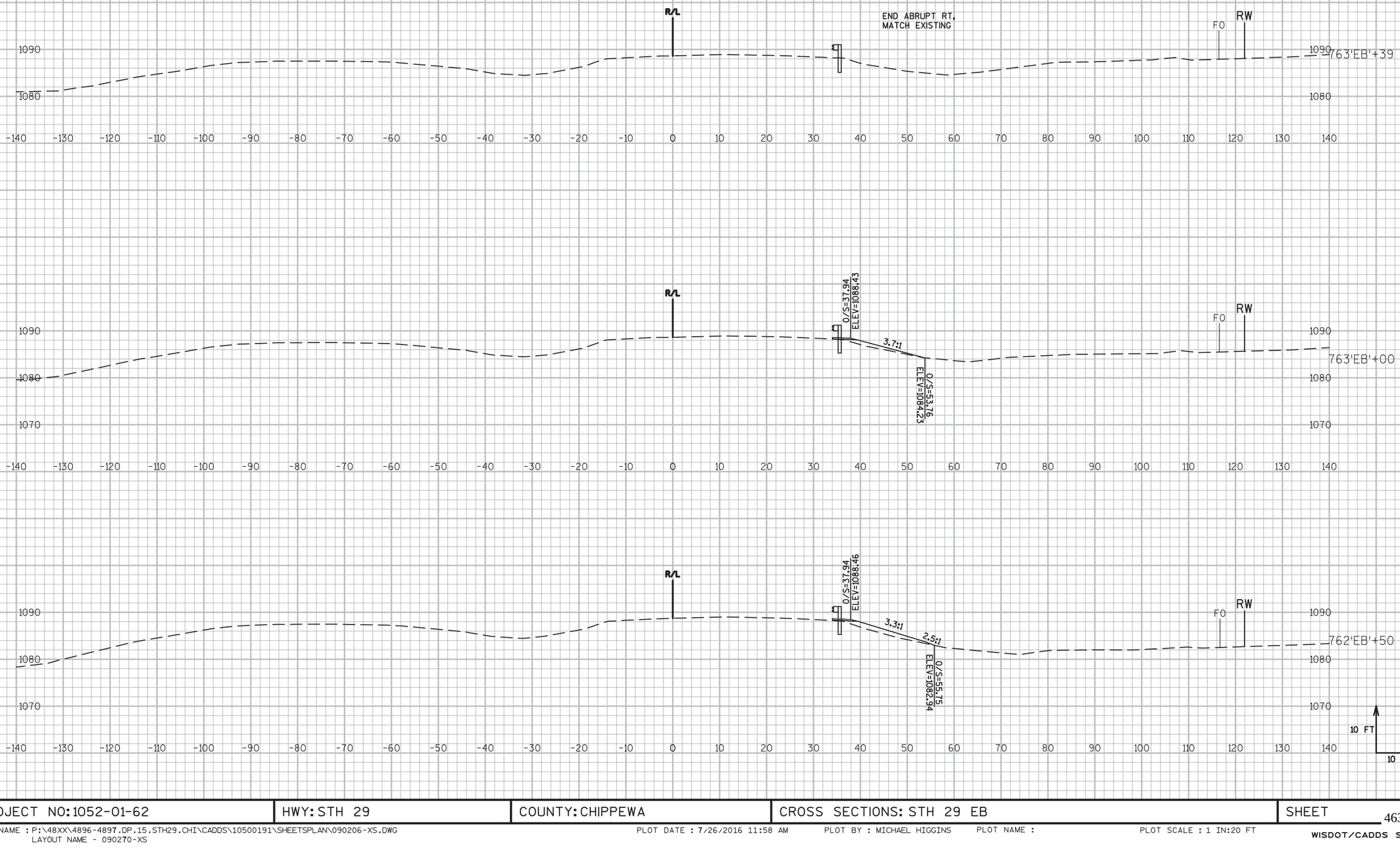
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PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 462	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090206-XS.DWG
LAYOUT NAME - 090270-XS

PLOT DATE : 7/26/2016 11:58 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT



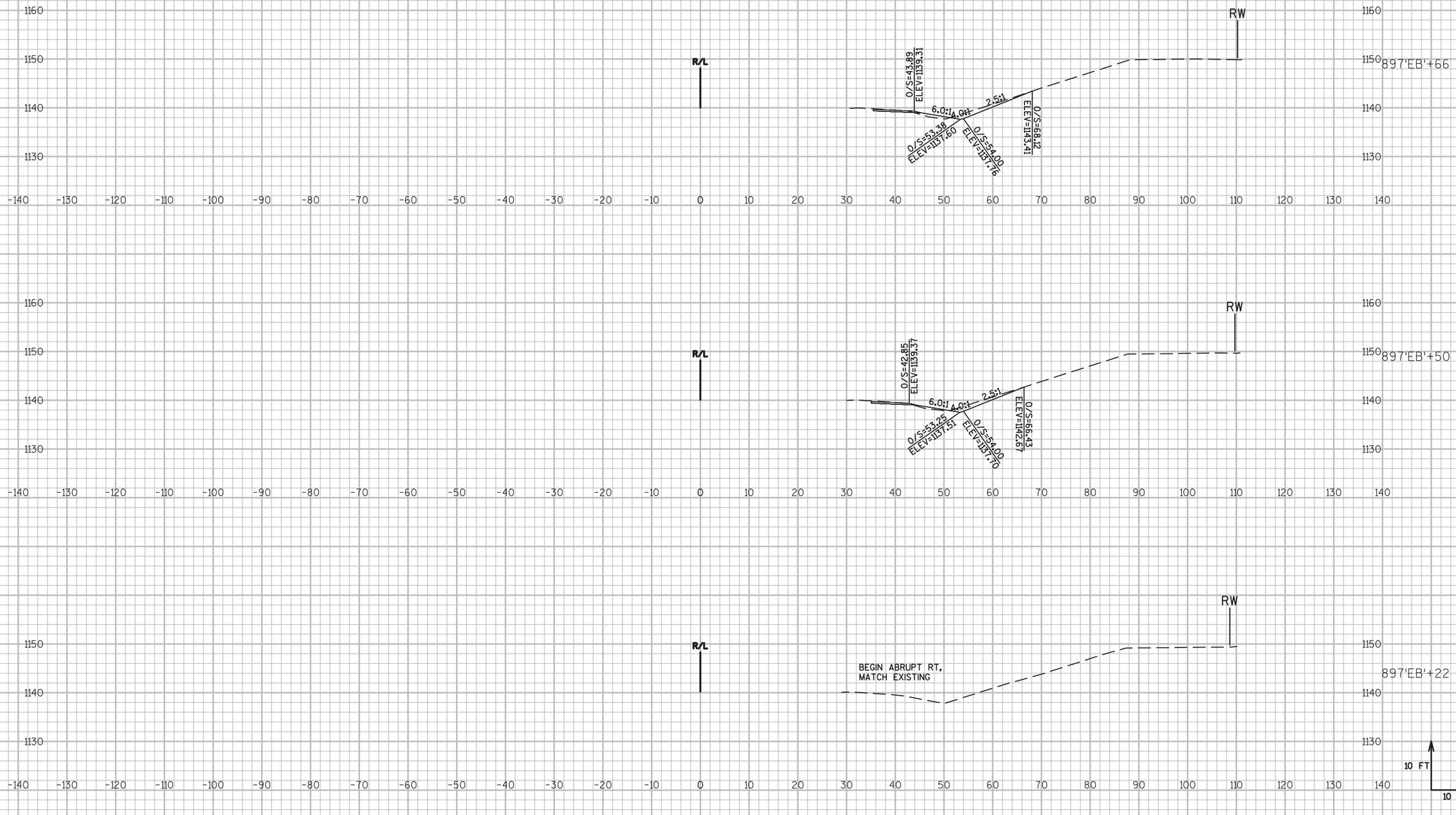
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PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 463	E

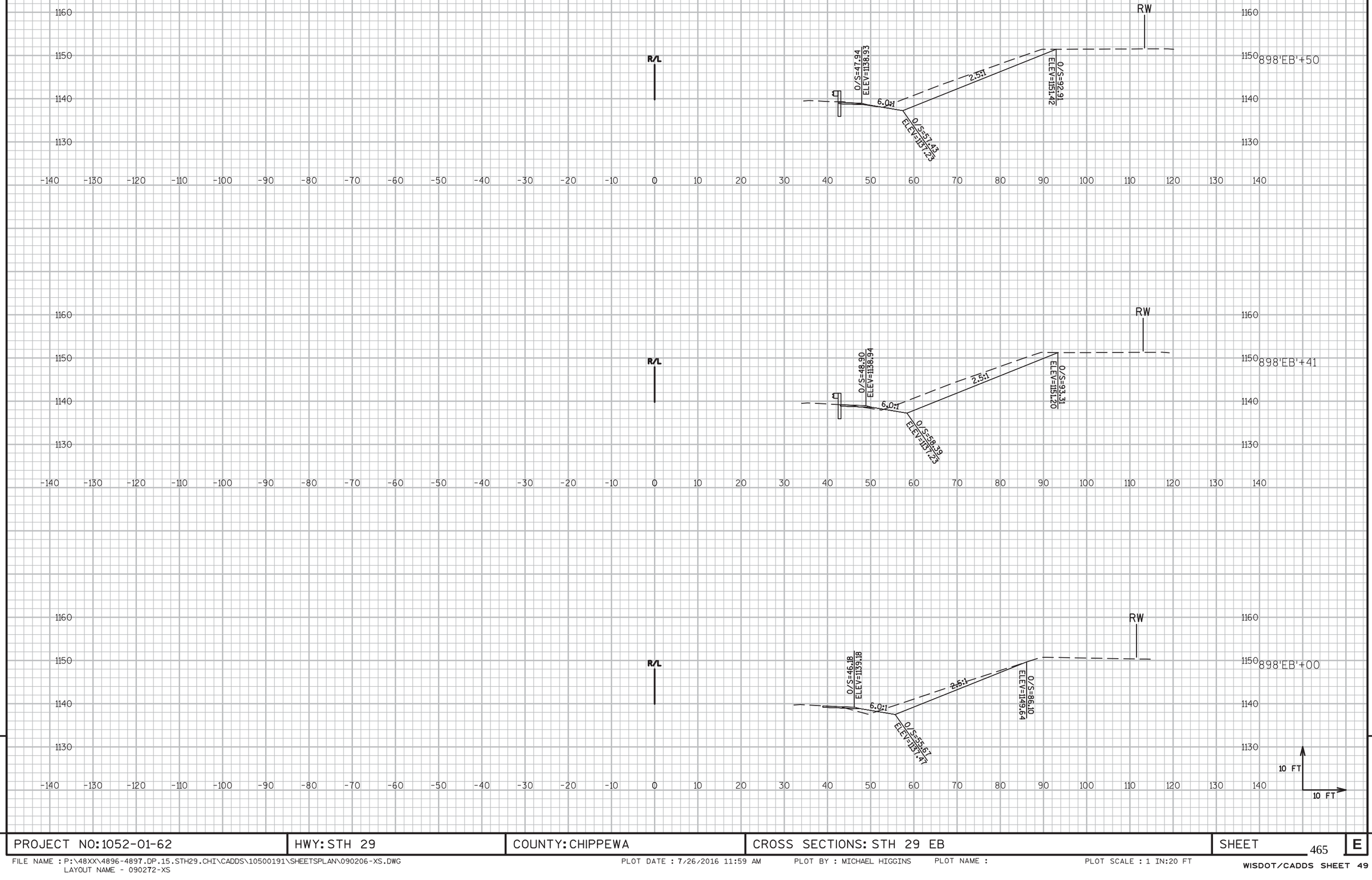
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LAYOUT NAME - 090270-XS

PLOT DATE : 7/26/2016 11:58 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT



PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 464	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090206-XS.DWG
LAYOUT NAME - 090271-XS
PLOT DATE : 7/26/2016 11:59 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 49



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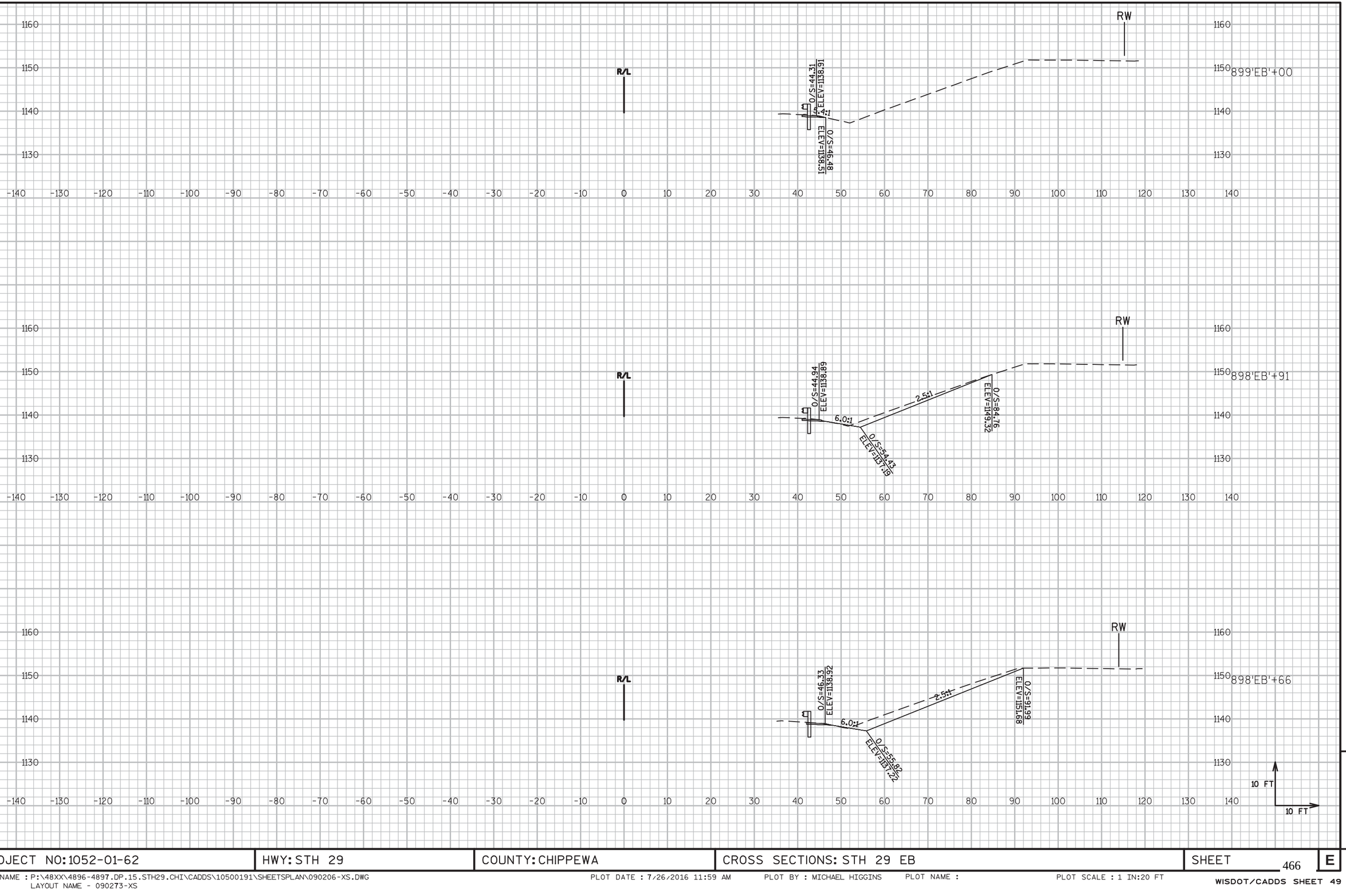
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PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 465	E

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LAYOUT NAME - 090272-XS

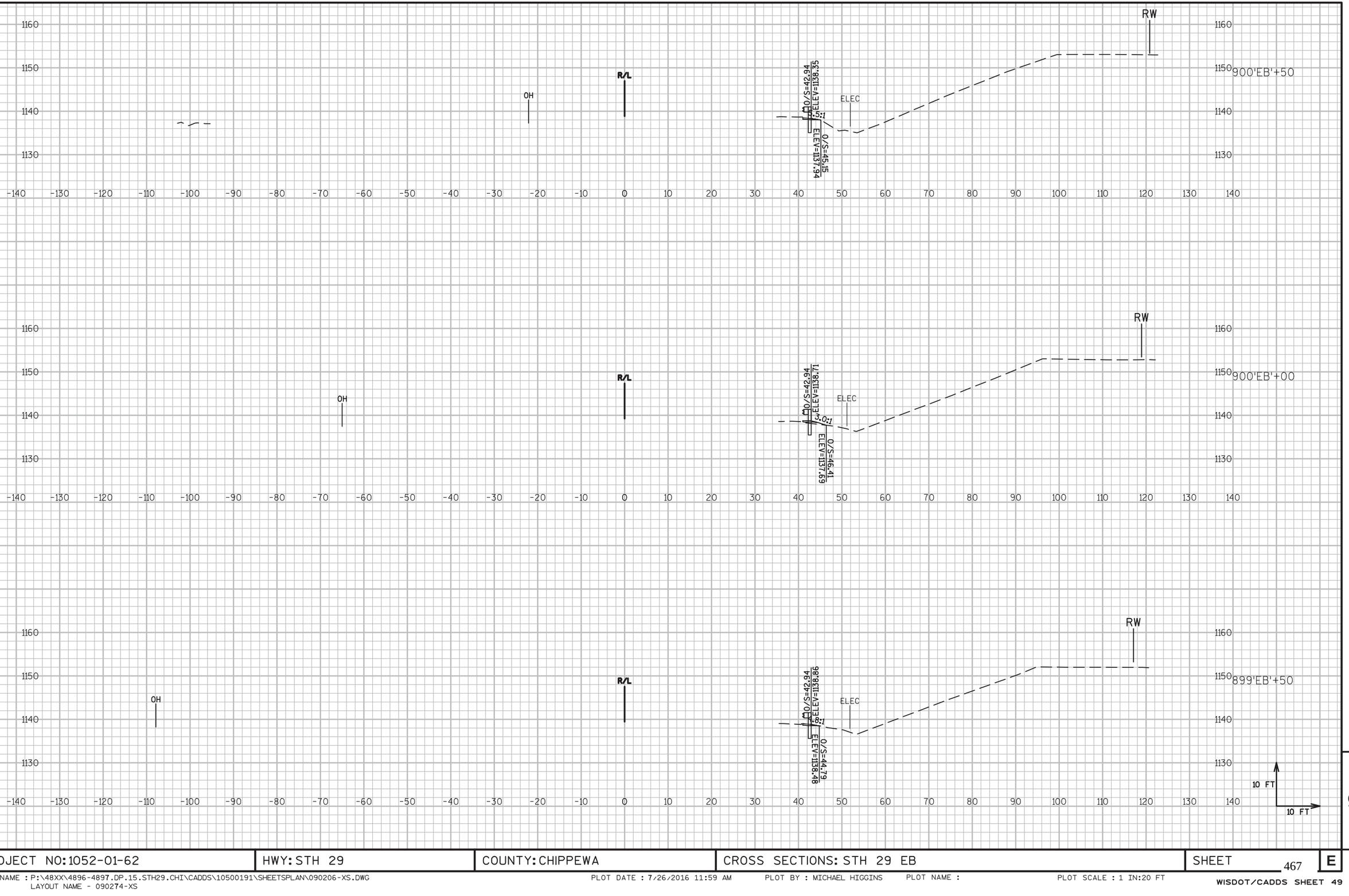
PLOT DATE : 7/26/2016 11:59 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



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PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 466	E



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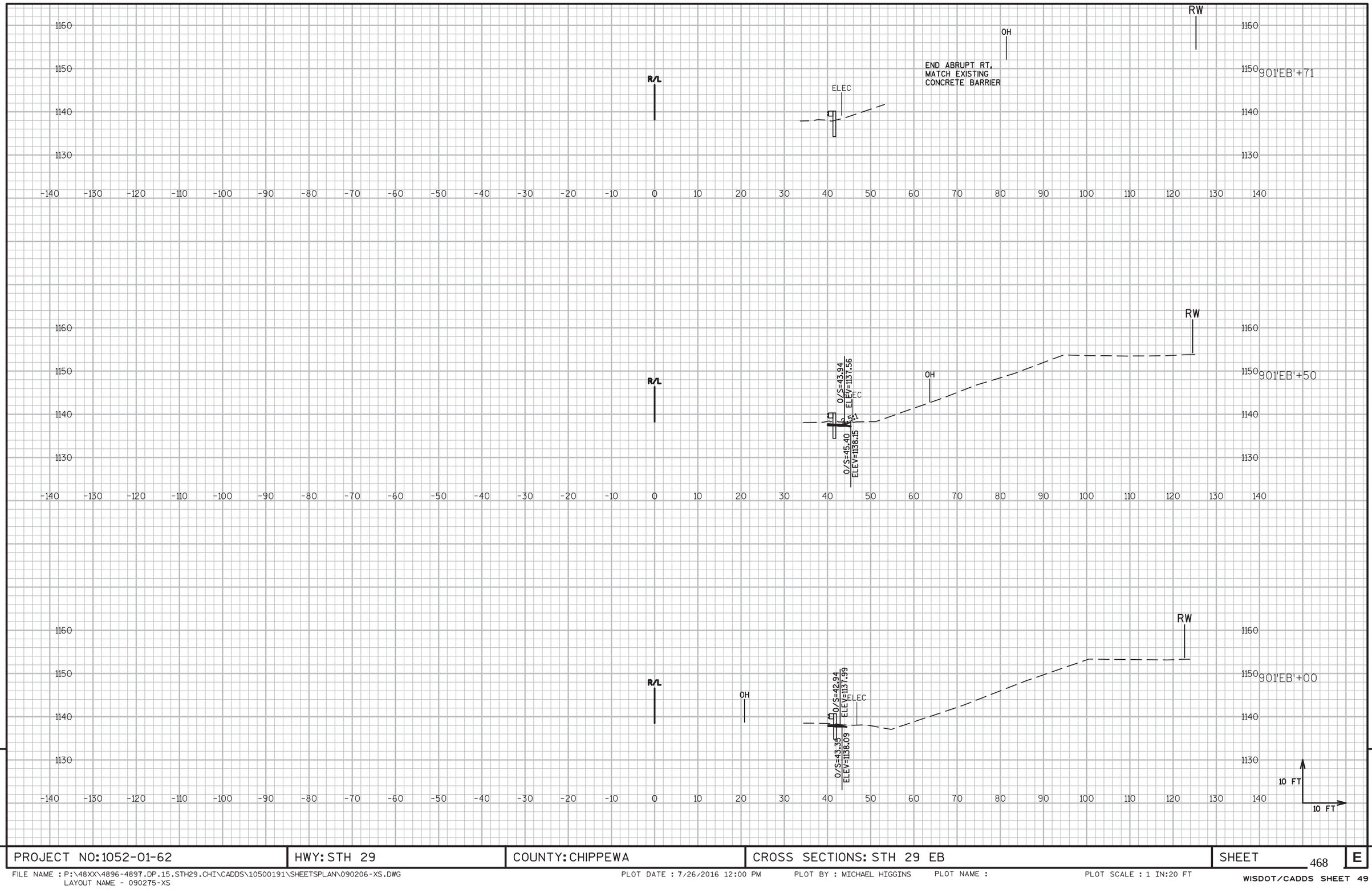
PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 467	E

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FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090206-XS.DWG
LAYOUT NAME - 090274-XS

PLOT DATE : 7/26/2016 11:59 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



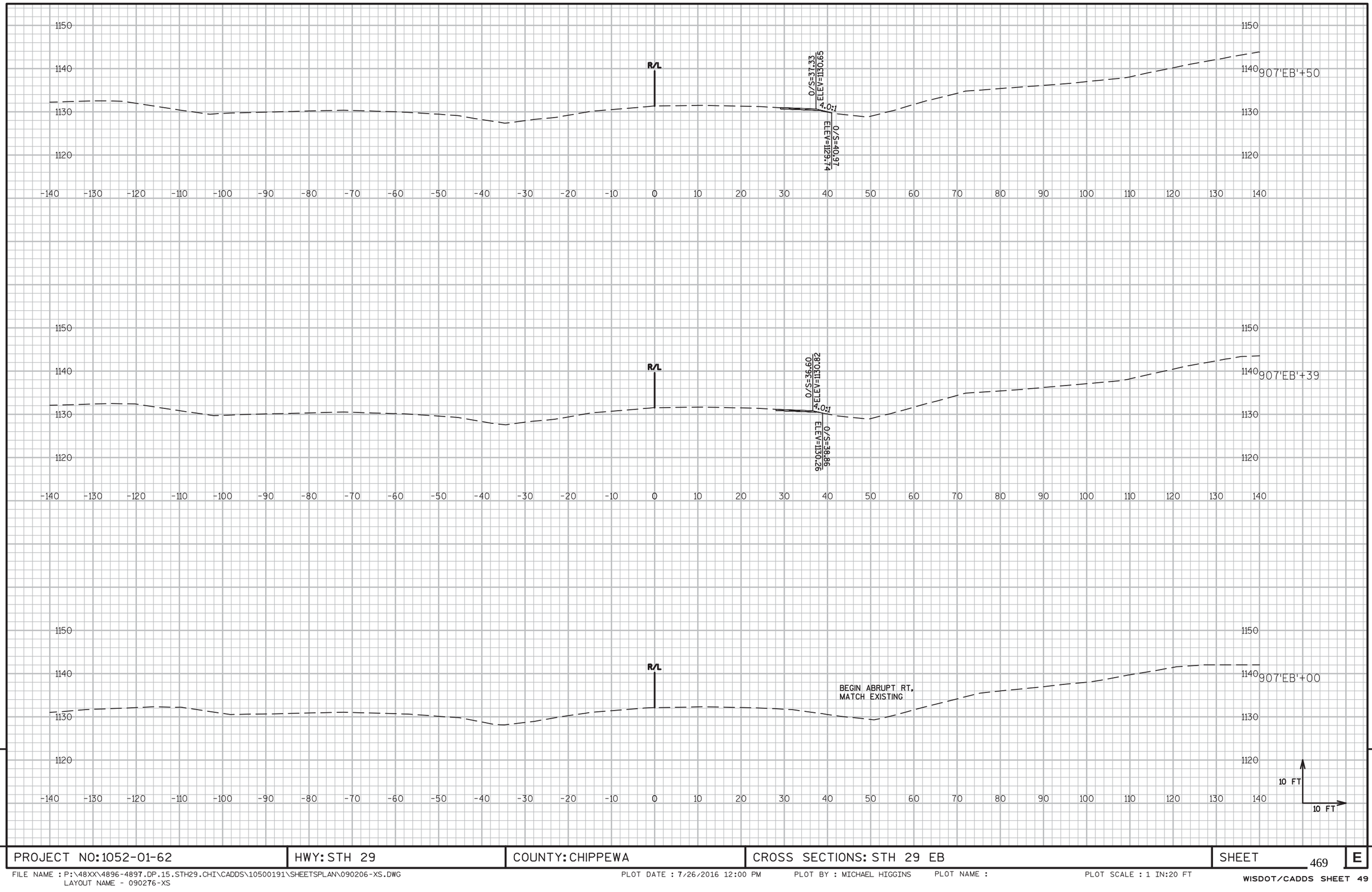
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PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 468	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090206-XS.DWG
LAYOUT NAME - 090275-XS

PLOT DATE : 7/26/2016 12:00 PM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT



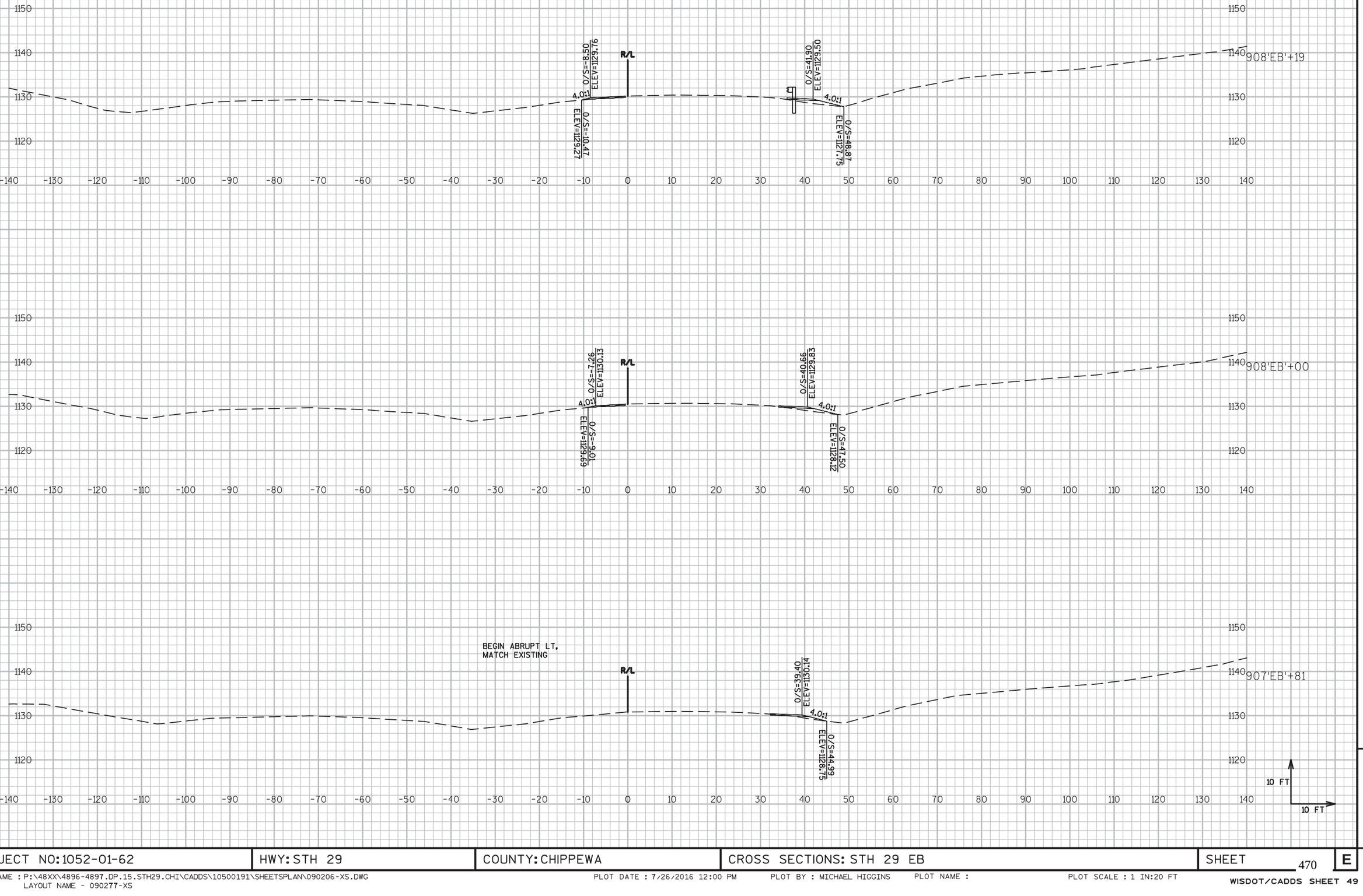
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PROJECT NO:1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 469	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090206-XS.DWG
LAYOUT NAME - 090276-XS

PLOT DATE : 7/26/2016 12:00 PM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT

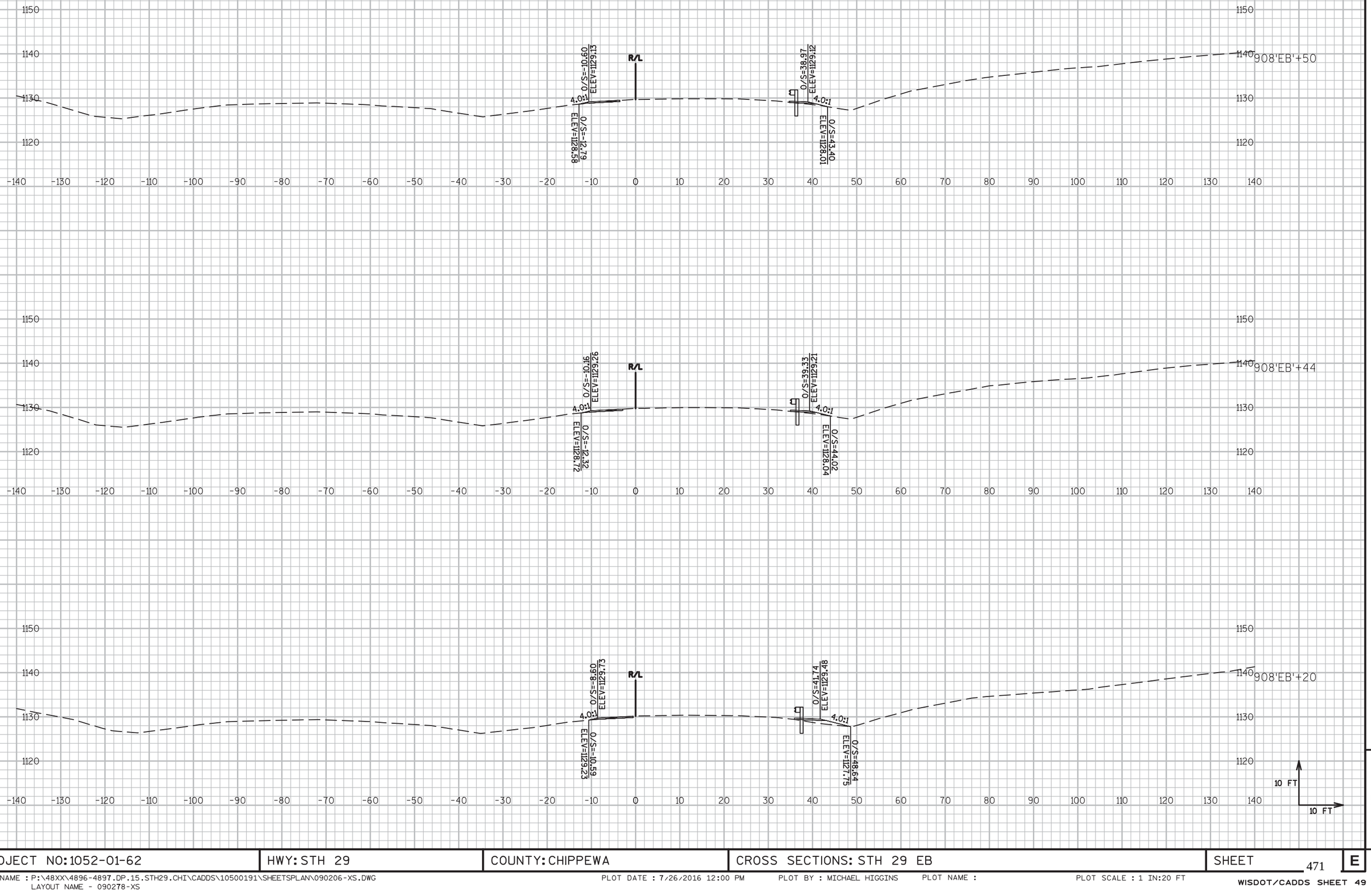


PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 470	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090206-XS.DWG
LAYOUT NAME - 090277-XS

PLOT DATE : 7/26/2016 12:00 PM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

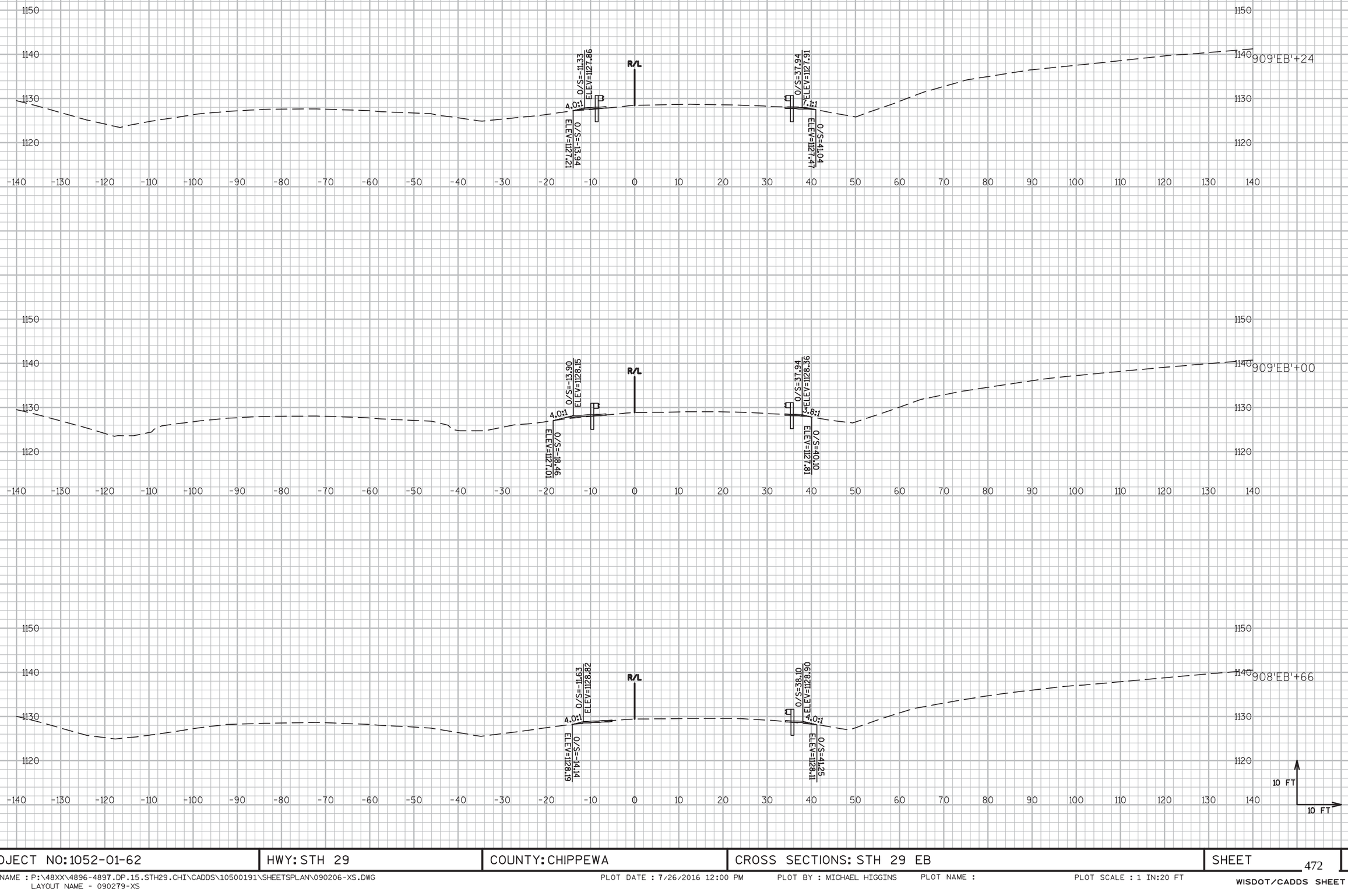


PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 471	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090206-XS.DWG
LAYOUT NAME - 090278-XS

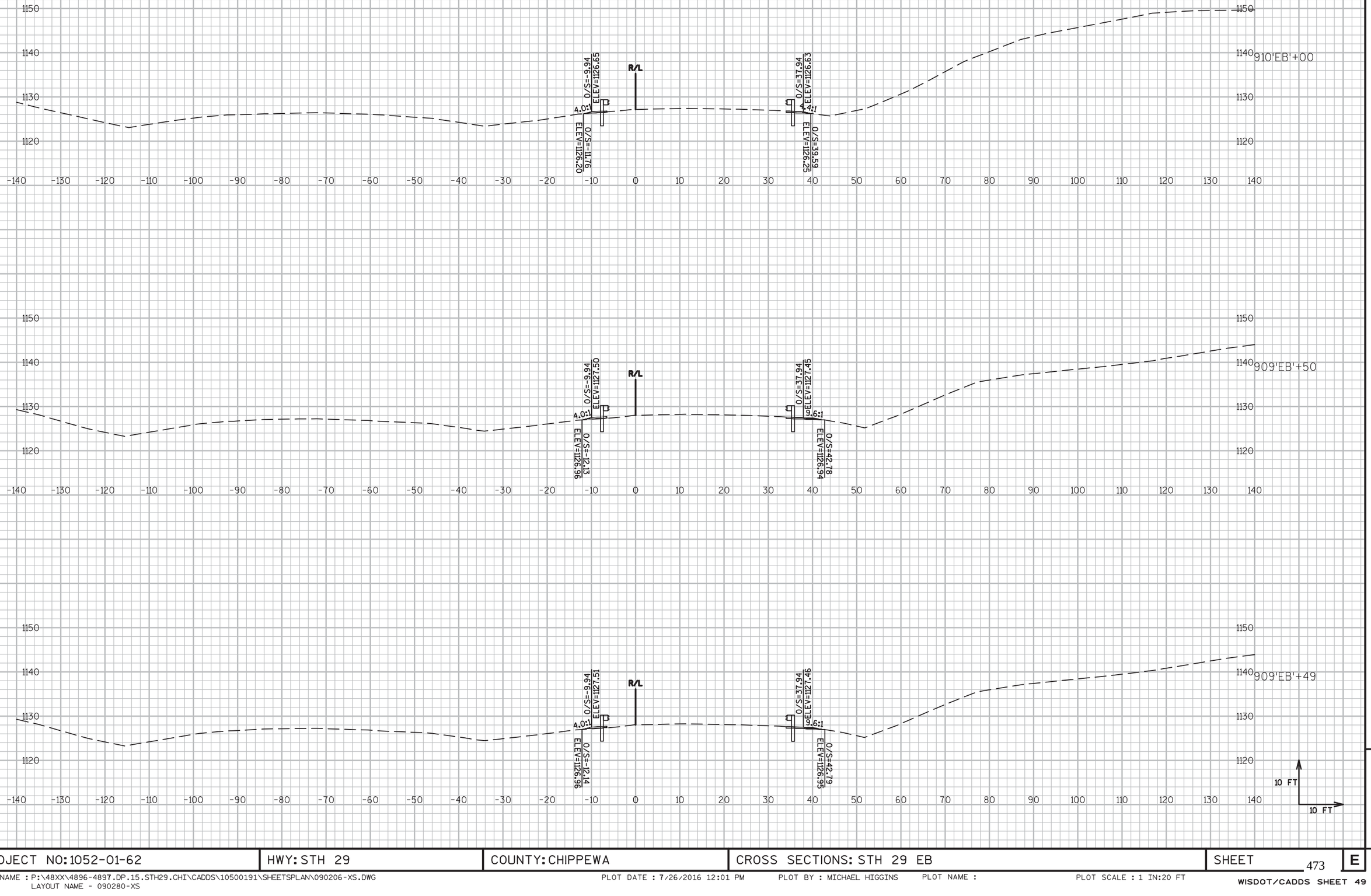
PLOT DATE : 7/26/2016 12:00 PM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 472	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090206-XS.DWG
LAYOUT NAME - 090279-XS
PLOT DATE : 7/26/2016 12:00 PM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 49

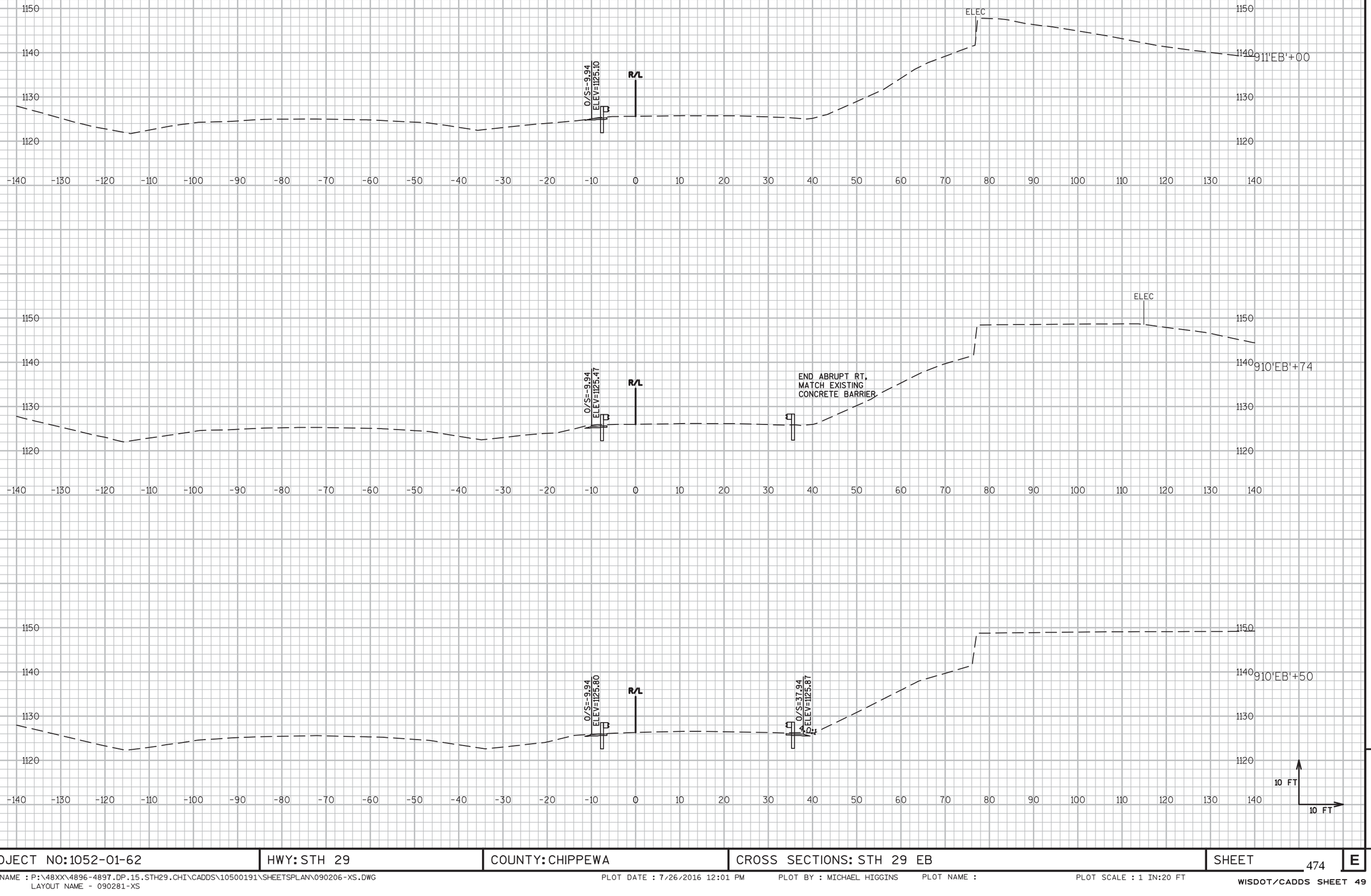


PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 473	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090206-XS.DWG
LAYOUT NAME - 090280-XS

PLOT DATE : 7/26/2016 12:01 PM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



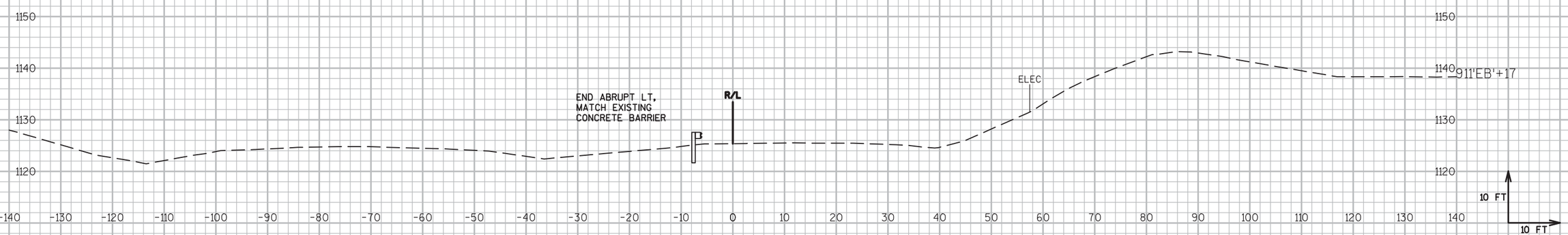
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PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 474	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090206-XS.DWG
LAYOUT NAME - 090281-XS

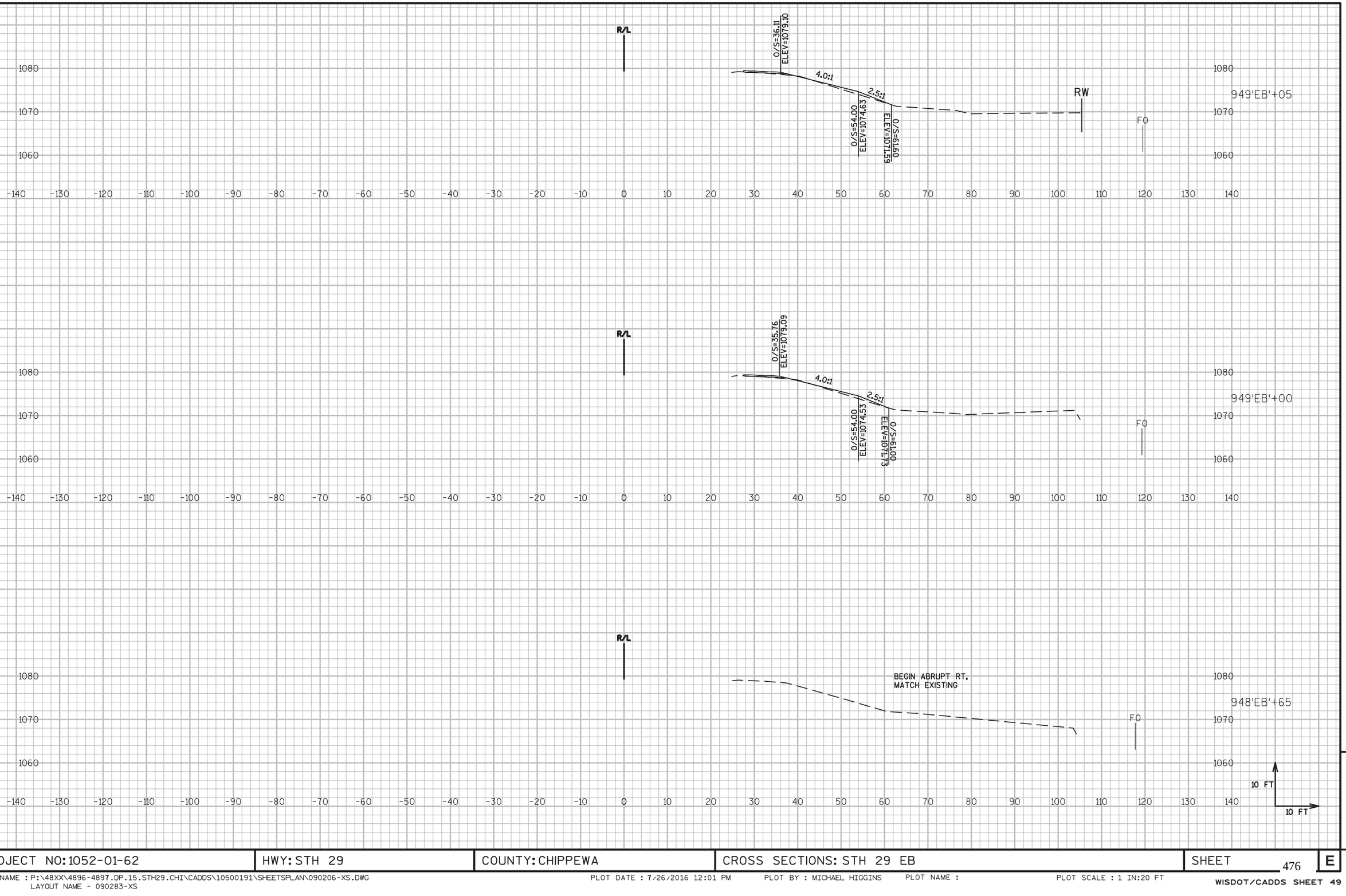
PLOT DATE : 7/26/2016 12:01 PM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT



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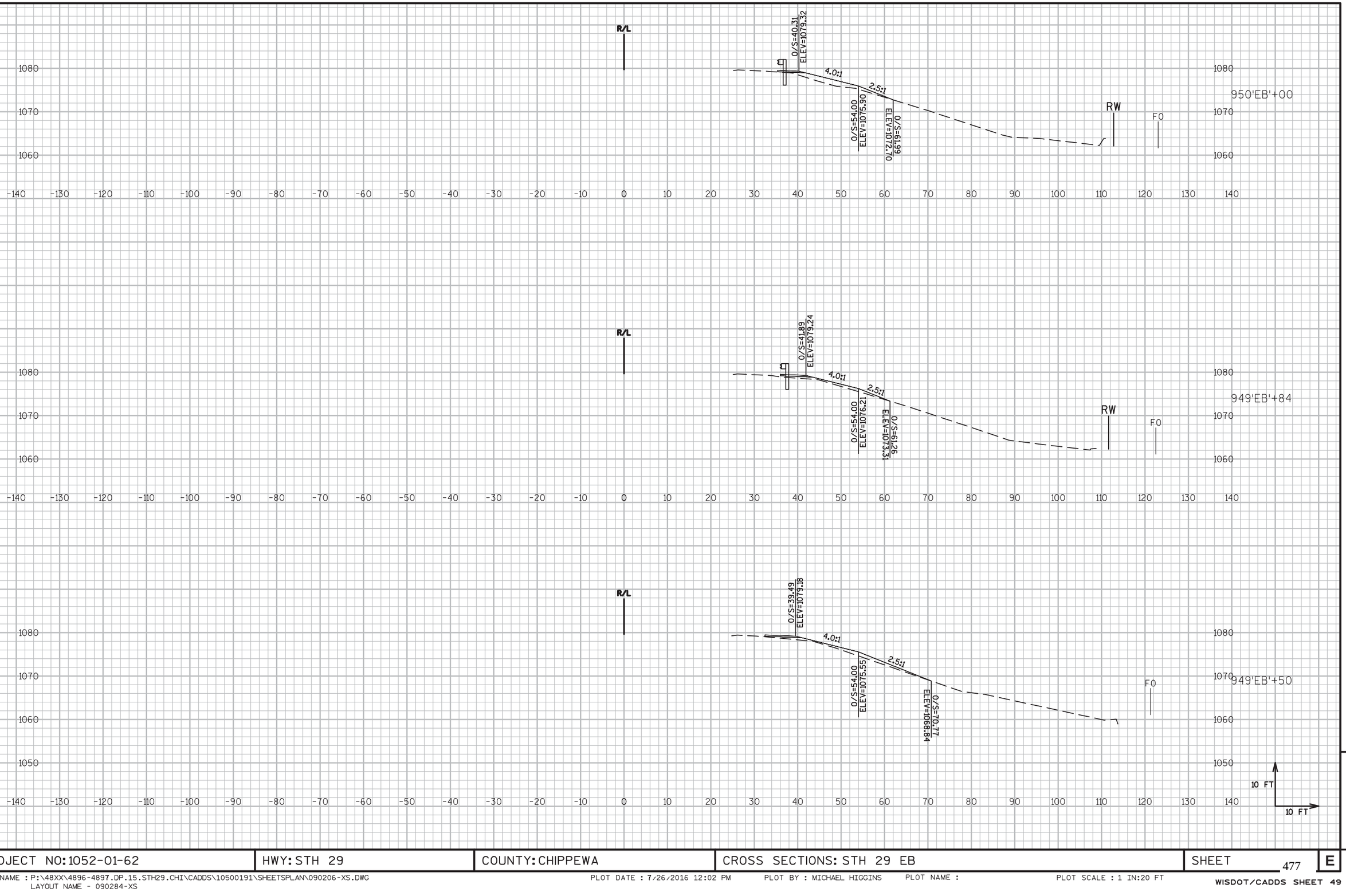
PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 475	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090206-XS.DWG
LAYOUT NAME - 090282-XS
PLOT DATE : 7/26/2016 12:01 PM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 49



9 9

PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 476	E



9

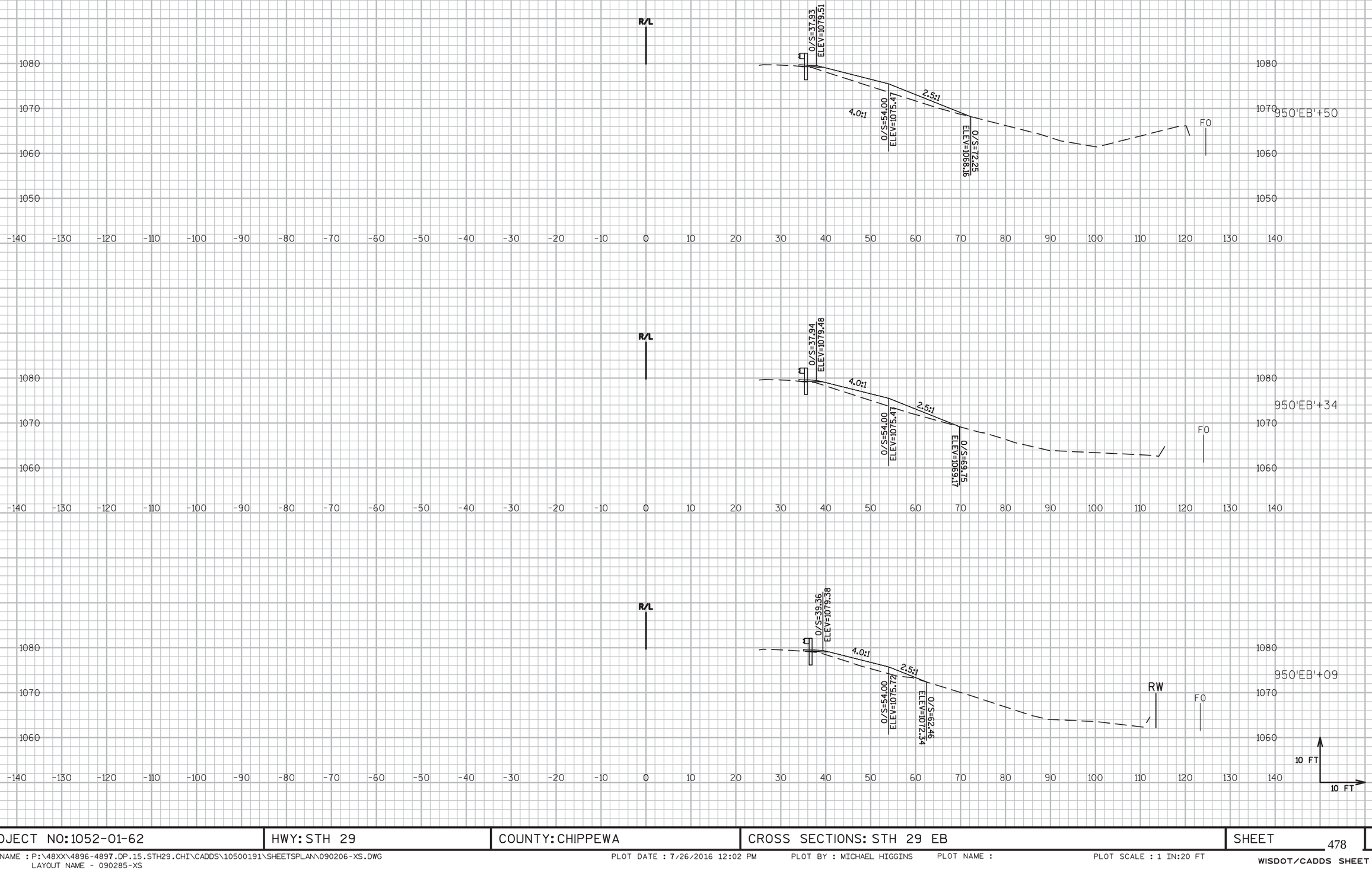
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PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 477	E

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LAYOUT NAME - 090284-XS

PLOT DATE : 7/26/2016 12:02 PM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT

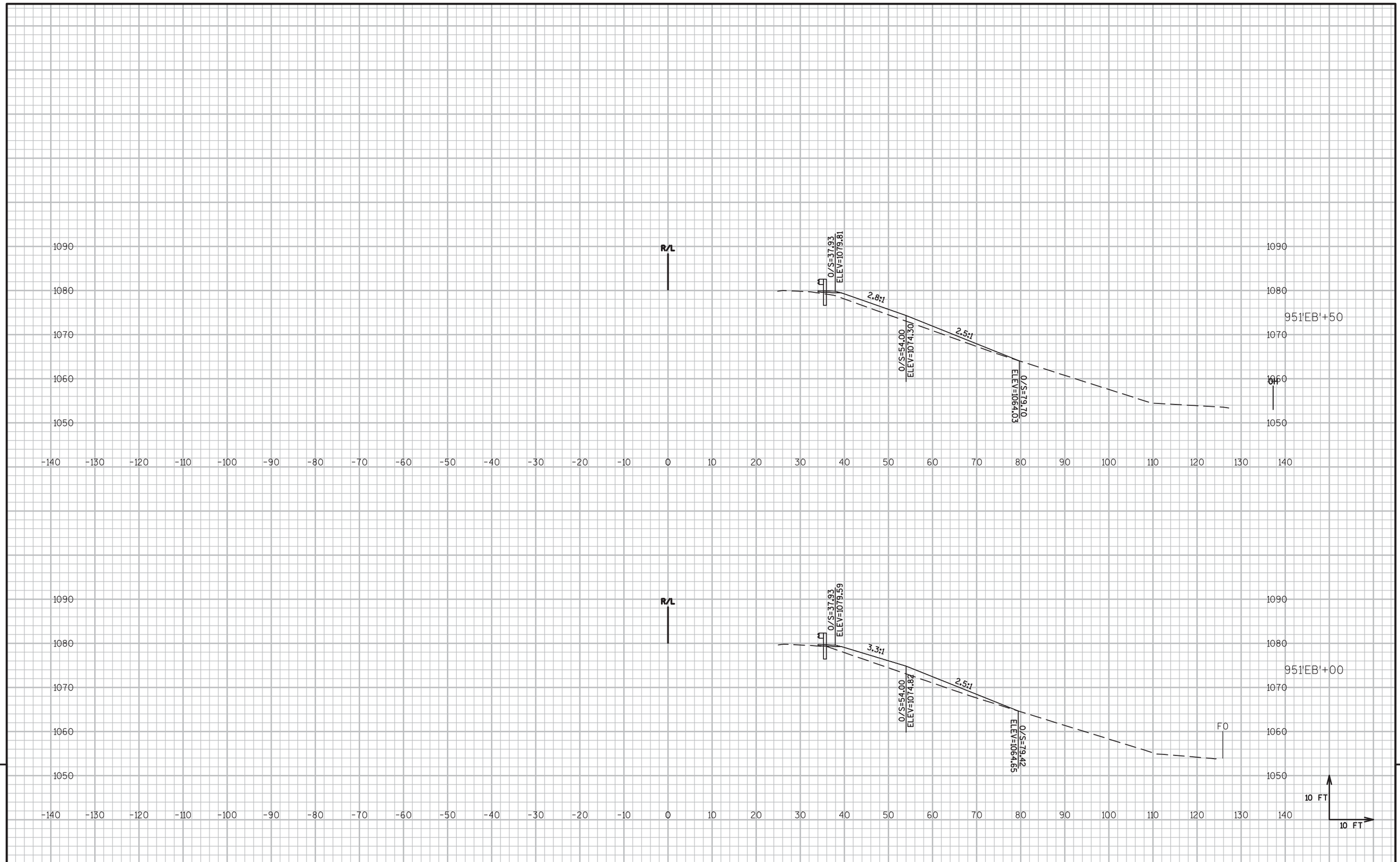
WISDOT/CADDS SHEET 49



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PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 478	E

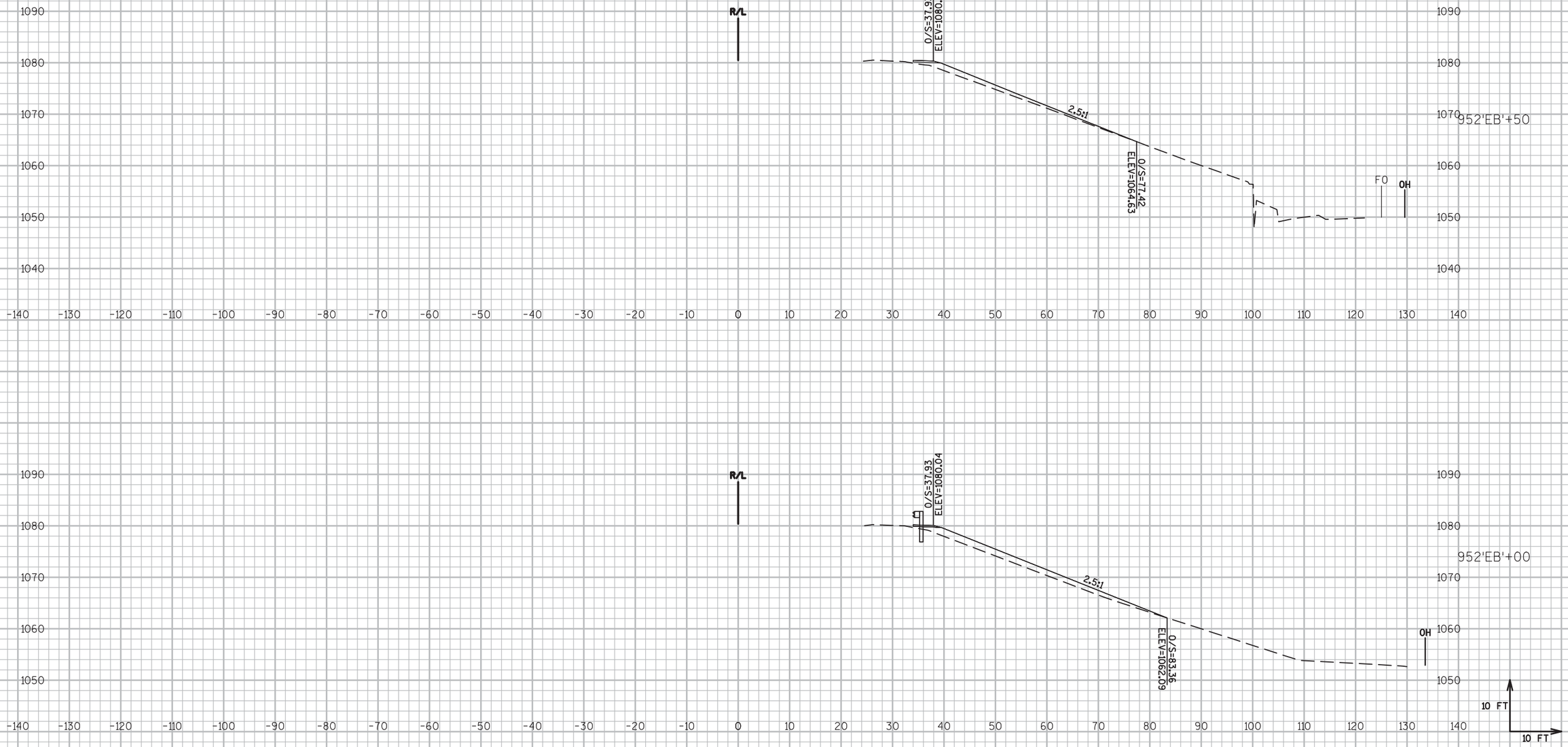
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LAYOUT NAME - 090285-XS
PLOT DATE : 7/26/2016 12:02 PM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 49



PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 479	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090206-XS.DWG
LAYOUT NAME - 090286-XS

PLOT DATE : 7/26/2016 12:02 PM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT

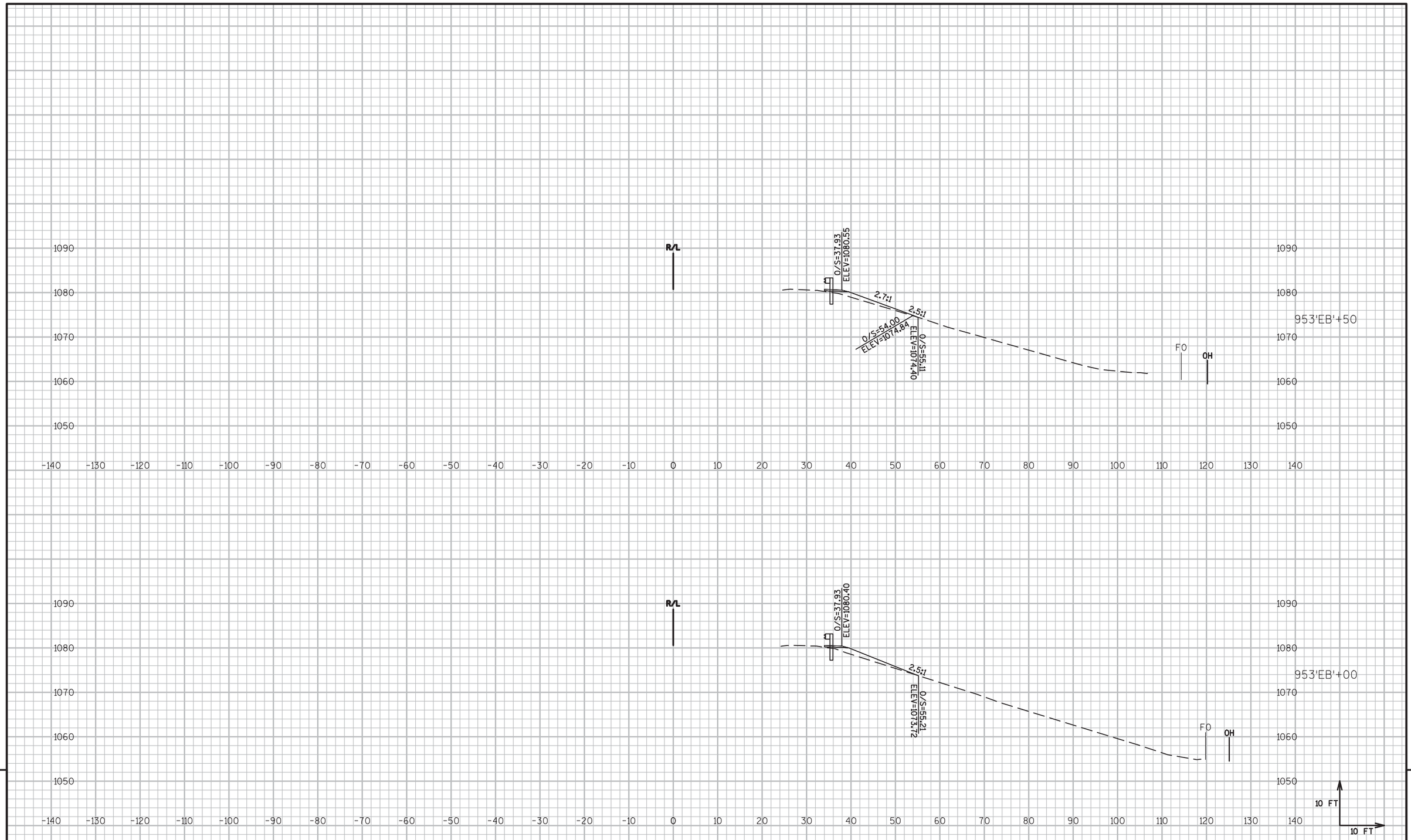


PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 480	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090206-XS.DWG
LAYOUT NAME - 090287-XS

PLOT DATE : 7/26/2016 12:02 PM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



9

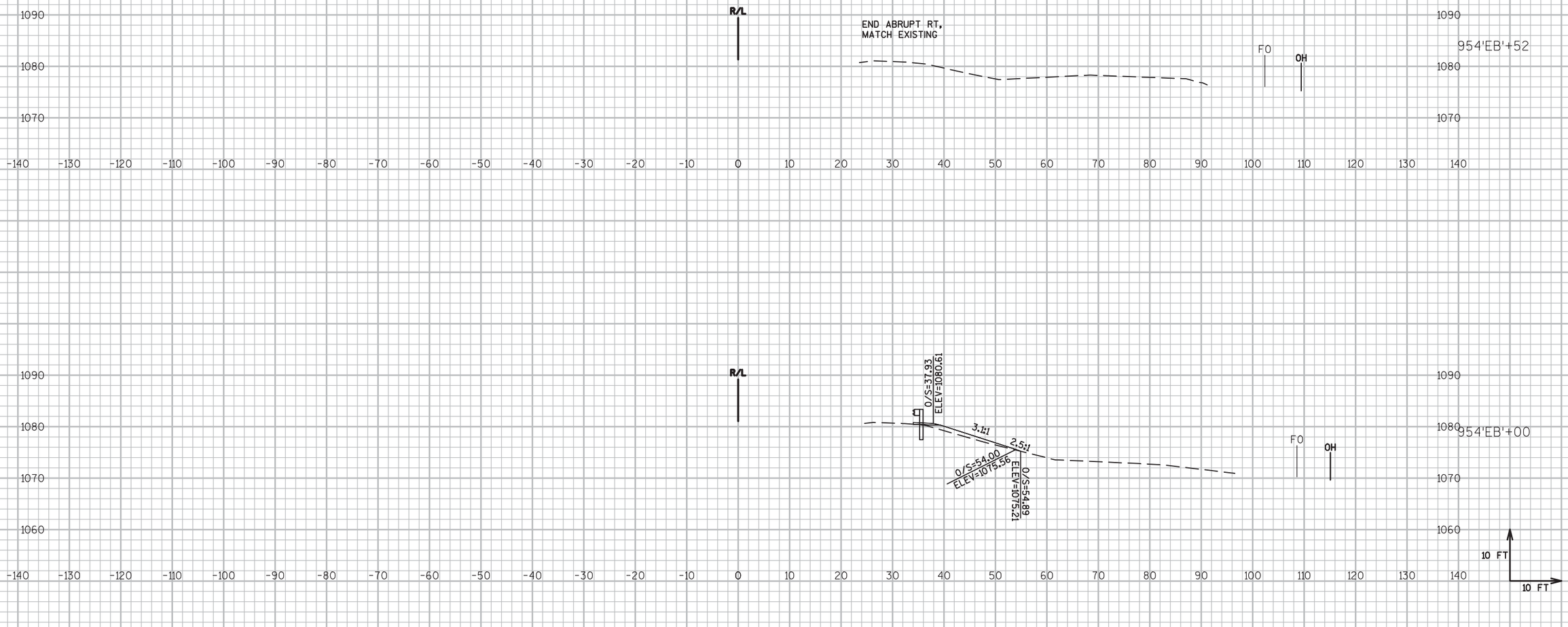
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PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 481	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090206-XS.DWG
LAYOUT NAME - 090288-XS

PLOT DATE : 7/26/2016 12:02 PM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



9

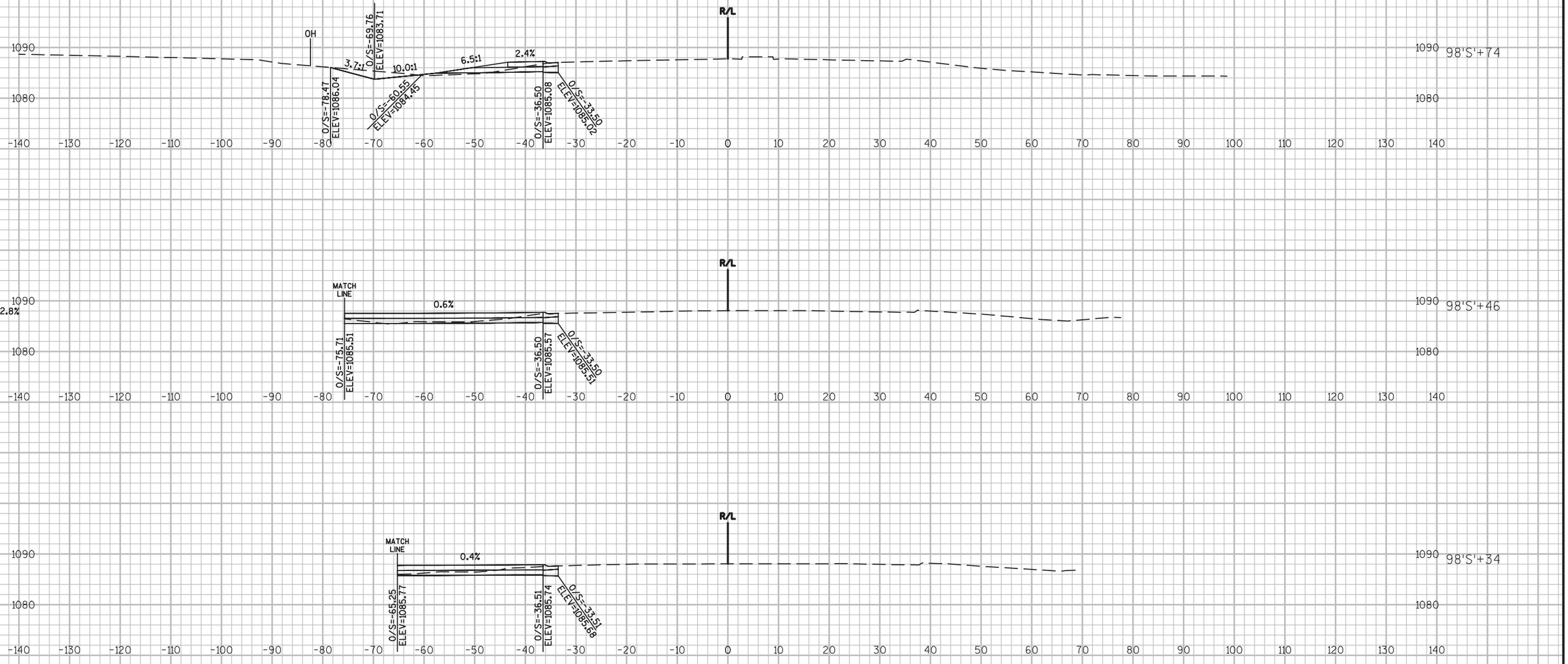
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PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB	SHEET 482	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090206-XS.DWG
LAYOUT NAME - 090289-XS

PLOT DATE : 7/26/2016 12:03 PM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT

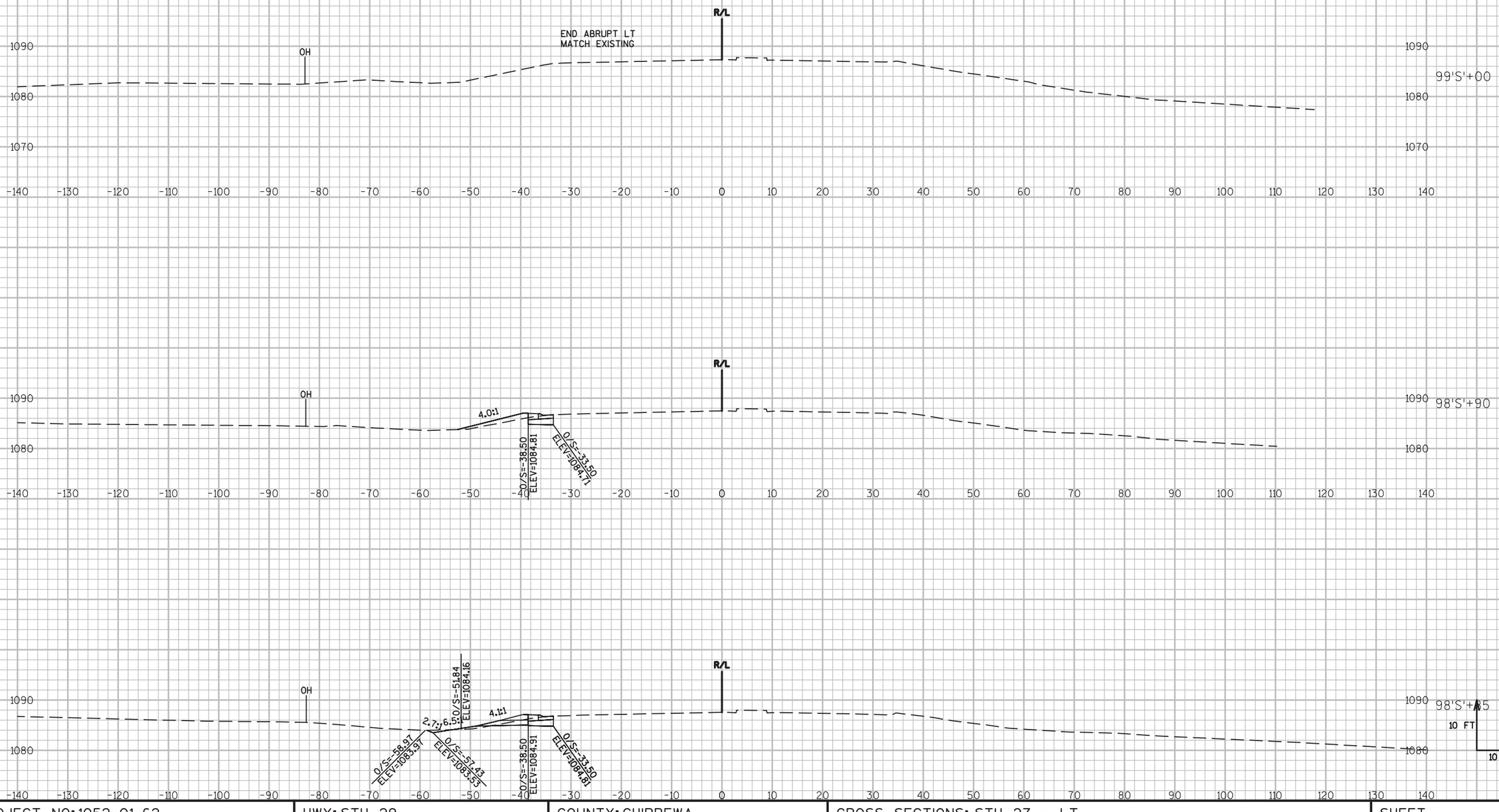
WISDOT/CADDS SHEET 49



9 9

PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 27 - LT	SHEET 483	E

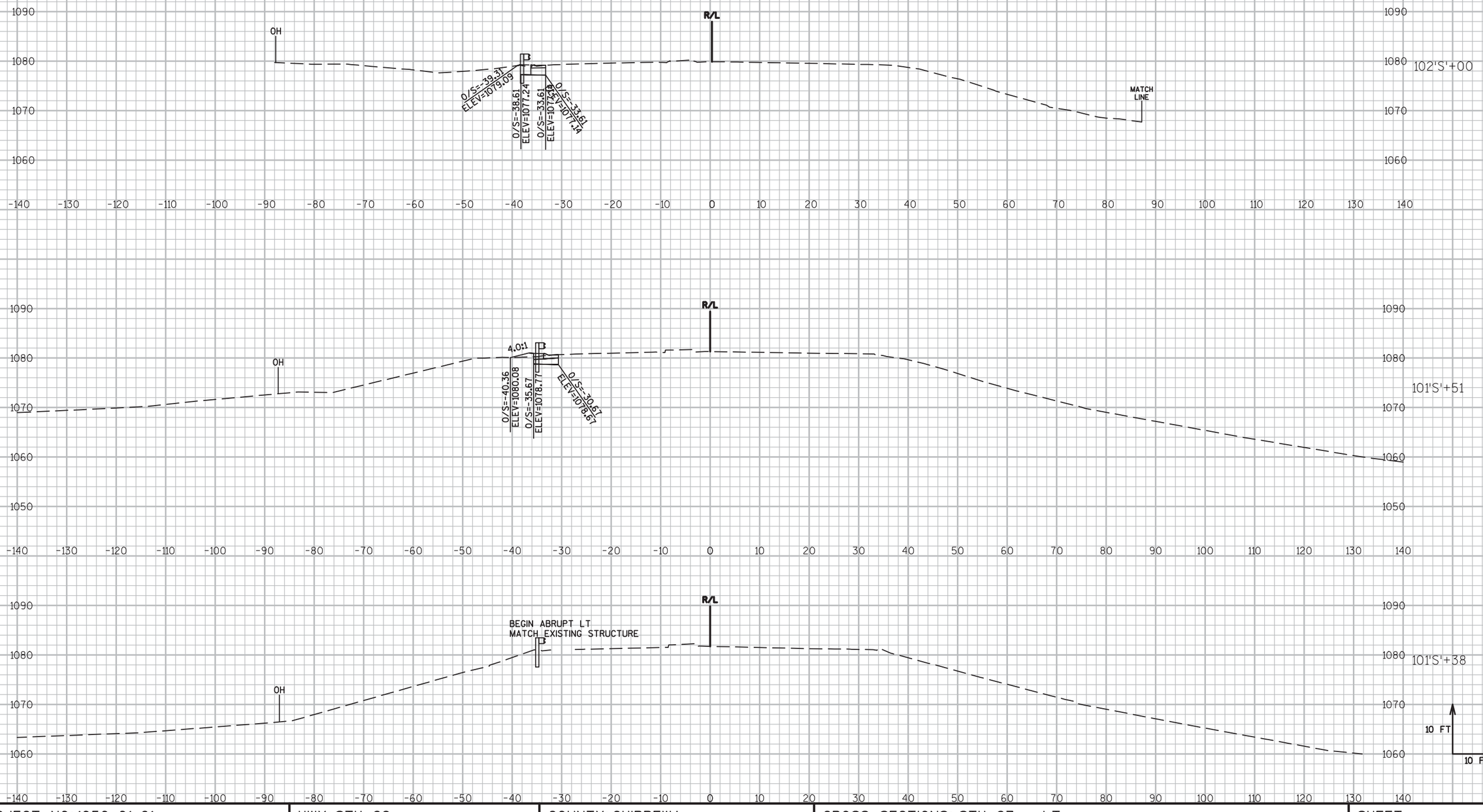
FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090207-XS.DWG
LAYOUT NAME - 090231-XS
PLOT DATE : 7/26/2016 12:04 PM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 49



9 9

PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 27 - LT	SHEET 484	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090207-XS.DWG
LAYOUT NAME - 090231-XS
PLOT DATE : 7/26/2016 12:04 PM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 49



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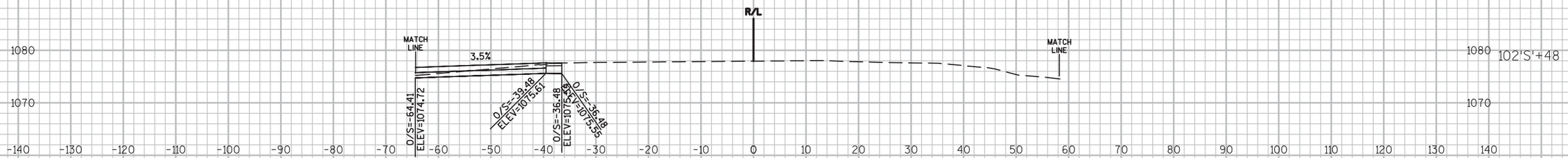
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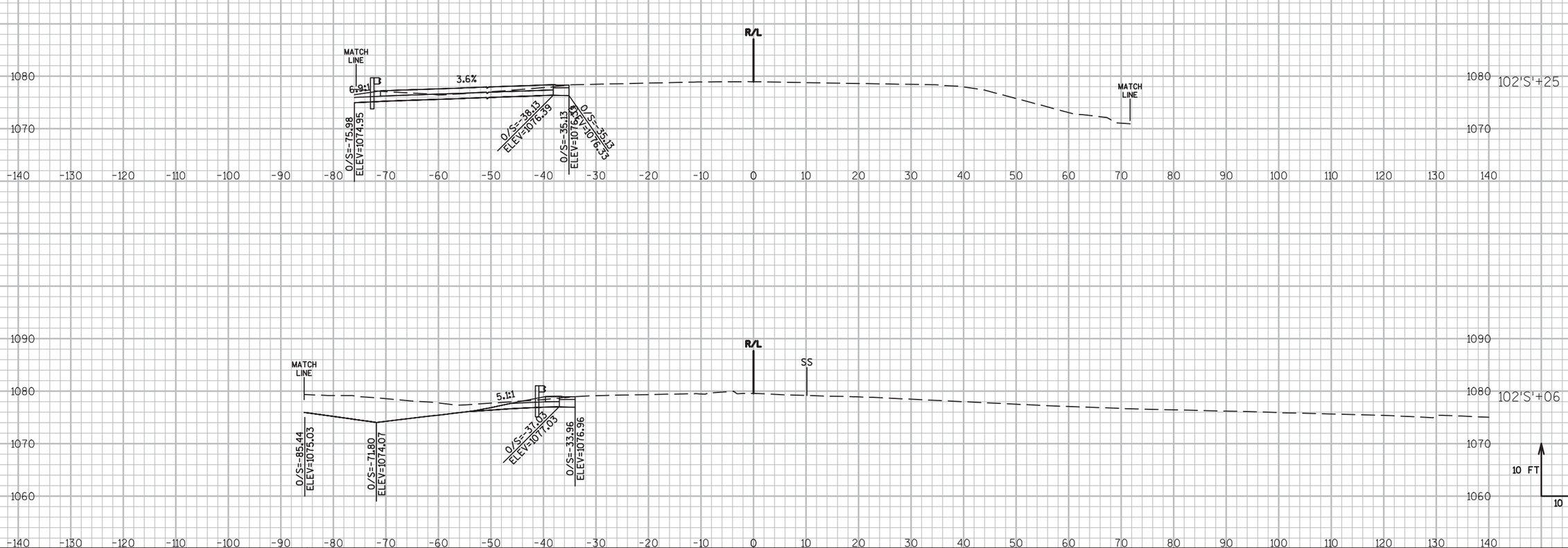
PROJECT NO: 1050-01-61	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 27 - LT	SHEET 485	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090207-XS.DWG
LAYOUT NAME - 090231-XS

PLOT DATE : 7/26/2016 12:04 PM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49





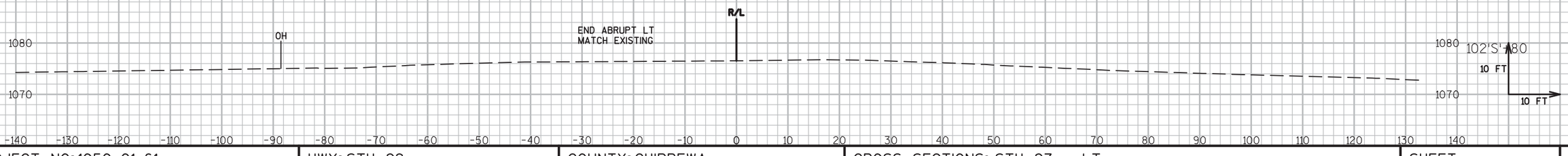
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PROJECT NO: 1050-01-61	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 27 - LT	SHEET 486	E

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LAYOUT NAME - 090231-XS

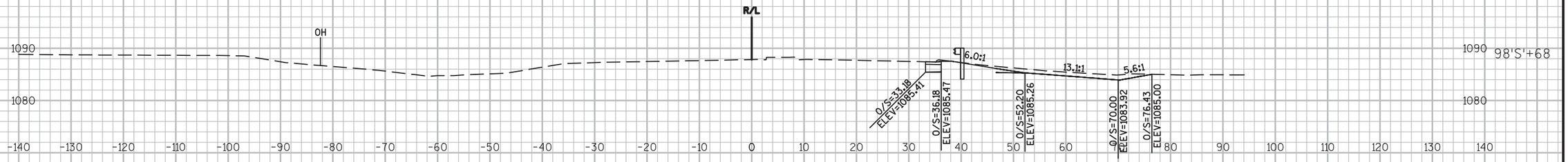
PLOT DATE : 7/26/2016 12:04 PM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT

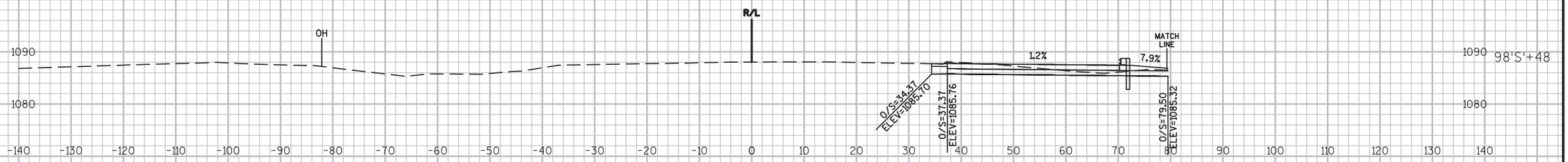


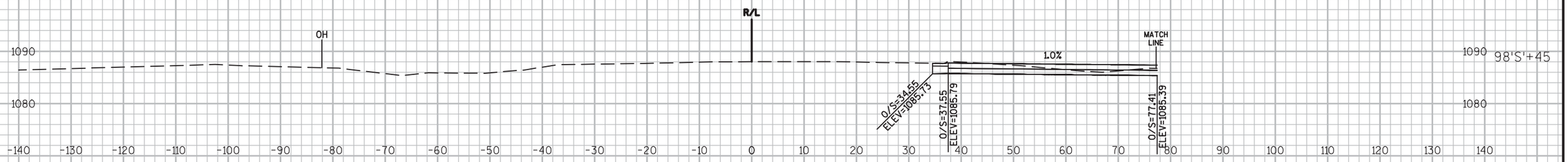
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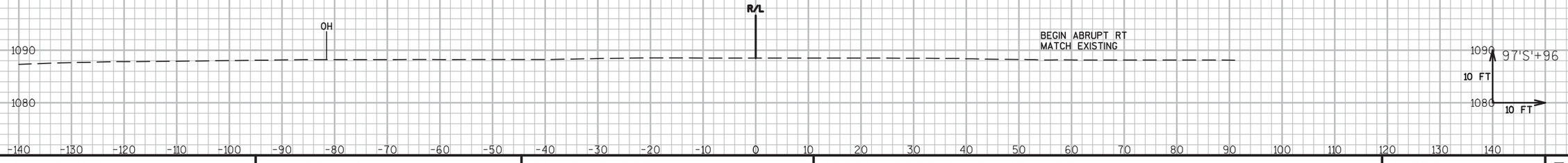
PROJECT NO: 1050-01-61	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 27 - LT	SHEET 487	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090207-XS.DWG
LAYOUT NAME - 090231-XS
PLOT DATE : 7/26/2016 12:04 PM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 49









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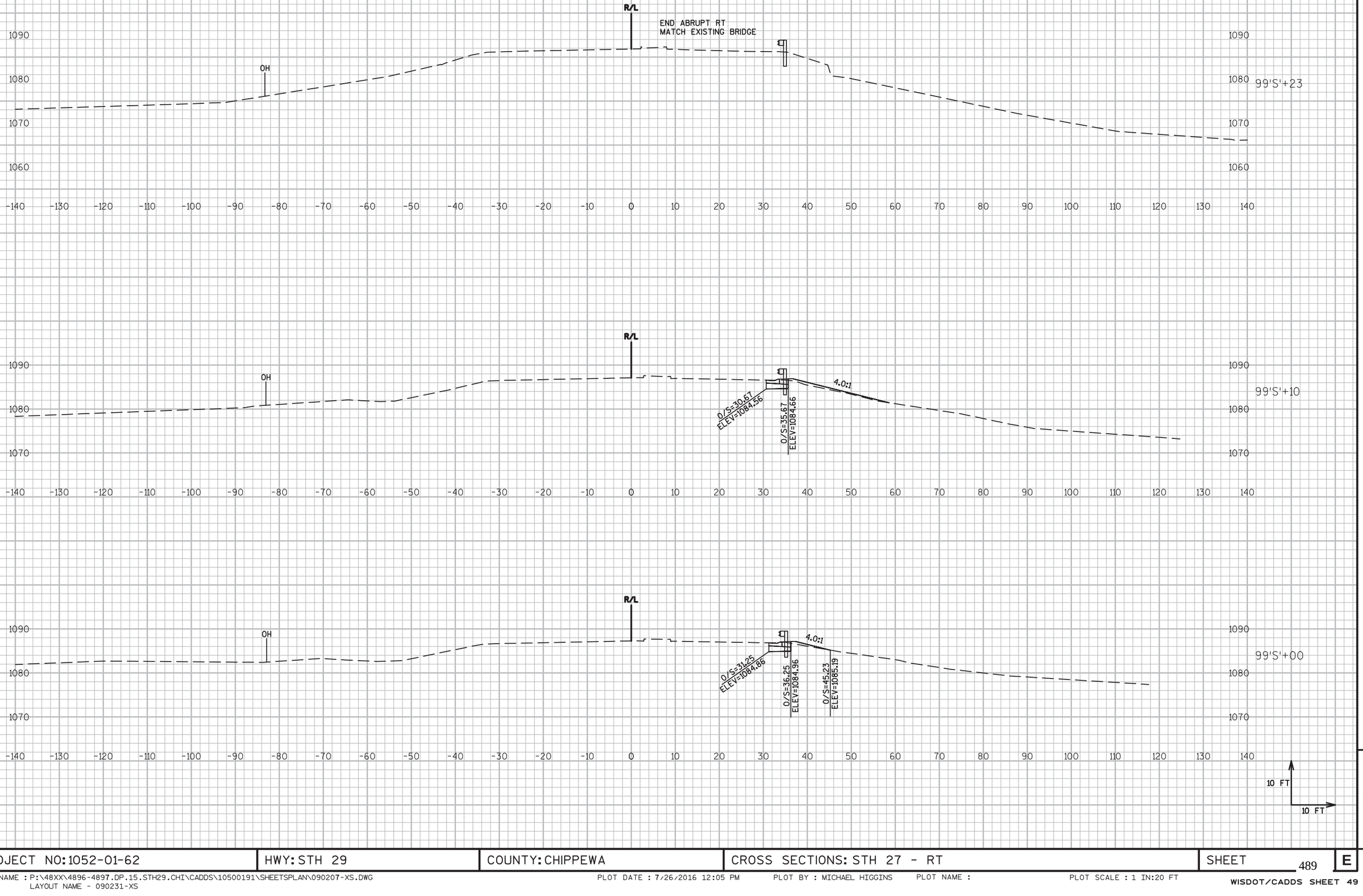
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PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 27 - RT	SHEET 488	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090207-XS.DWG
LAYOUT NAME - 090231-XS

PLOT DATE : 7/26/2016 12:04 PM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



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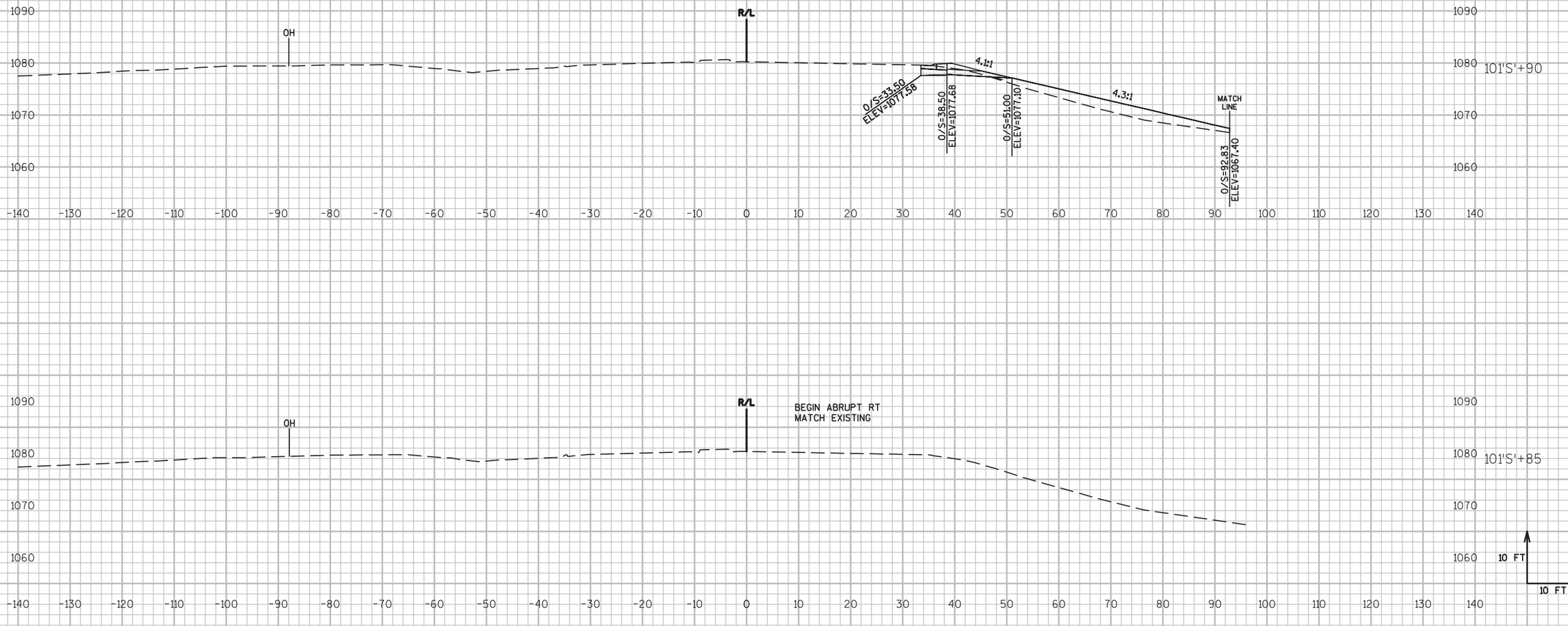
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PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 27 - RT	SHEET 489	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090207-XS.DWG
LAYOUT NAME - 090231-XS

PLOT DATE : 7/26/2016 12:05 PM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



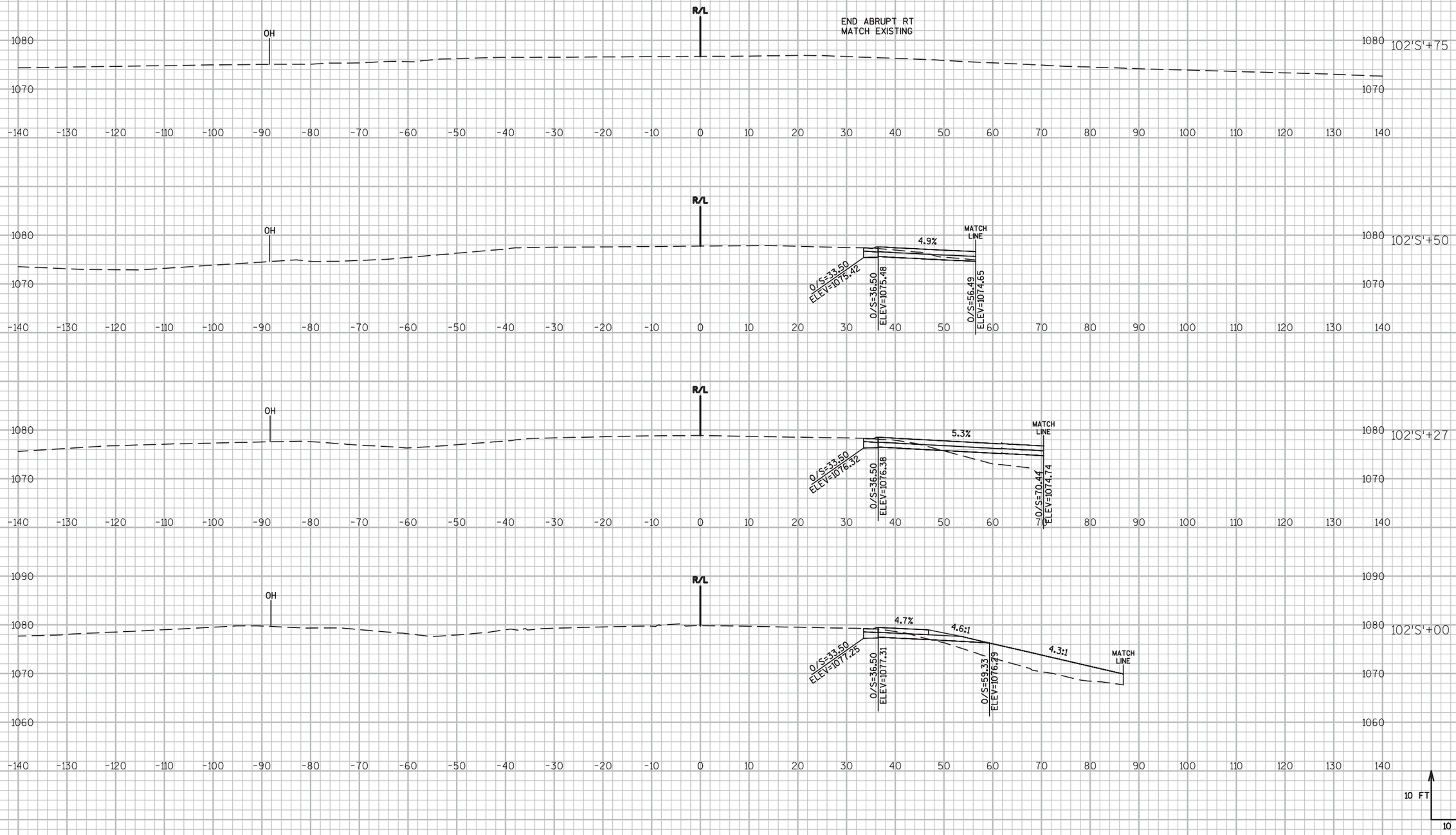
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PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 27 - RT	SHEET 490	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090207-XS.DWG
LAYOUT NAME - 090231-XS

PLOT DATE : 7/26/2016 12:05 PM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT



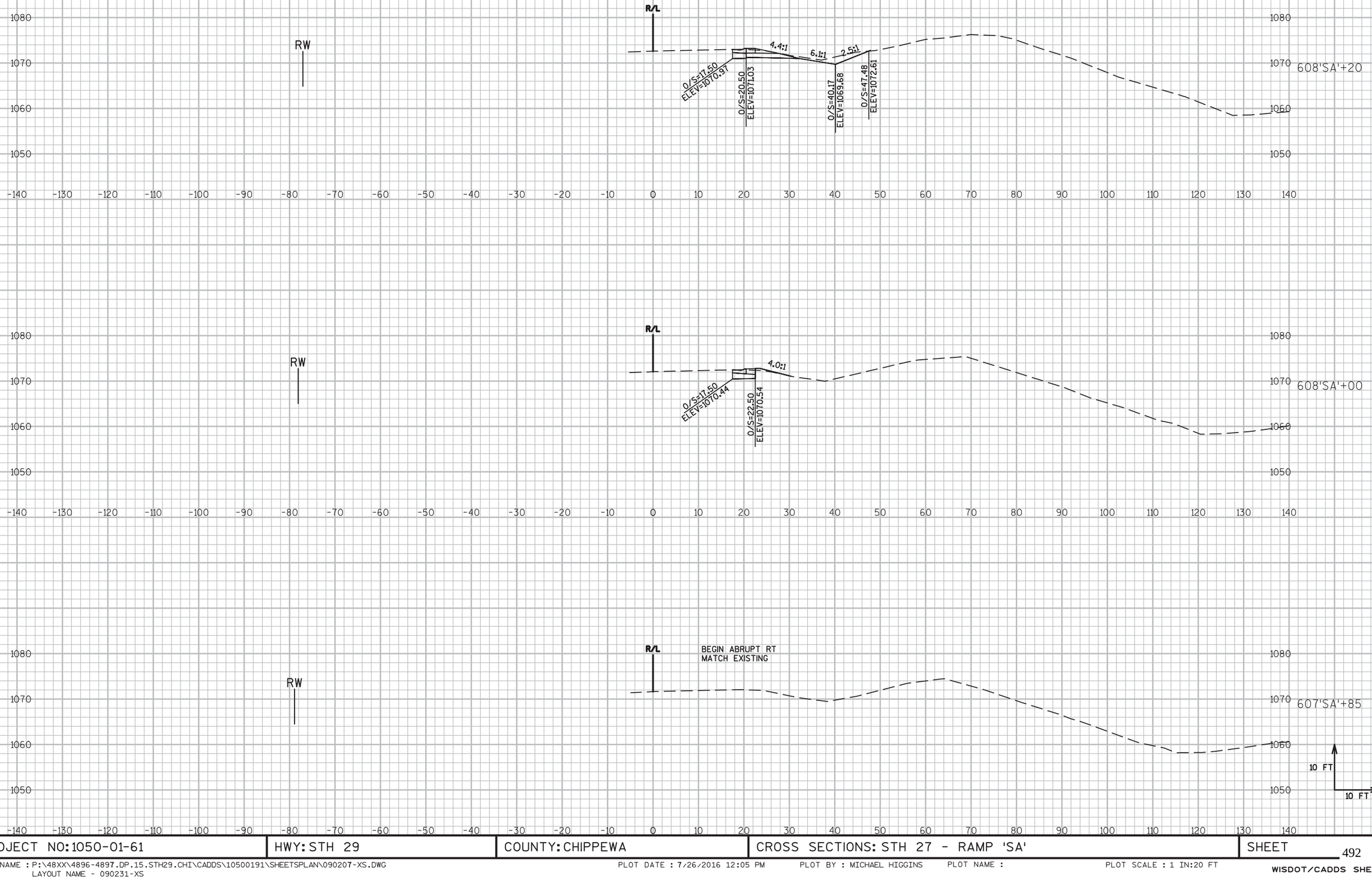
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PROJECT NO: 1050-01-61	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 27 - RT	SHEET 491	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090207-XS.DWG
LAYOUT NAME - 090231-XS

PLOT DATE : 7/26/2016 12:05 PM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT



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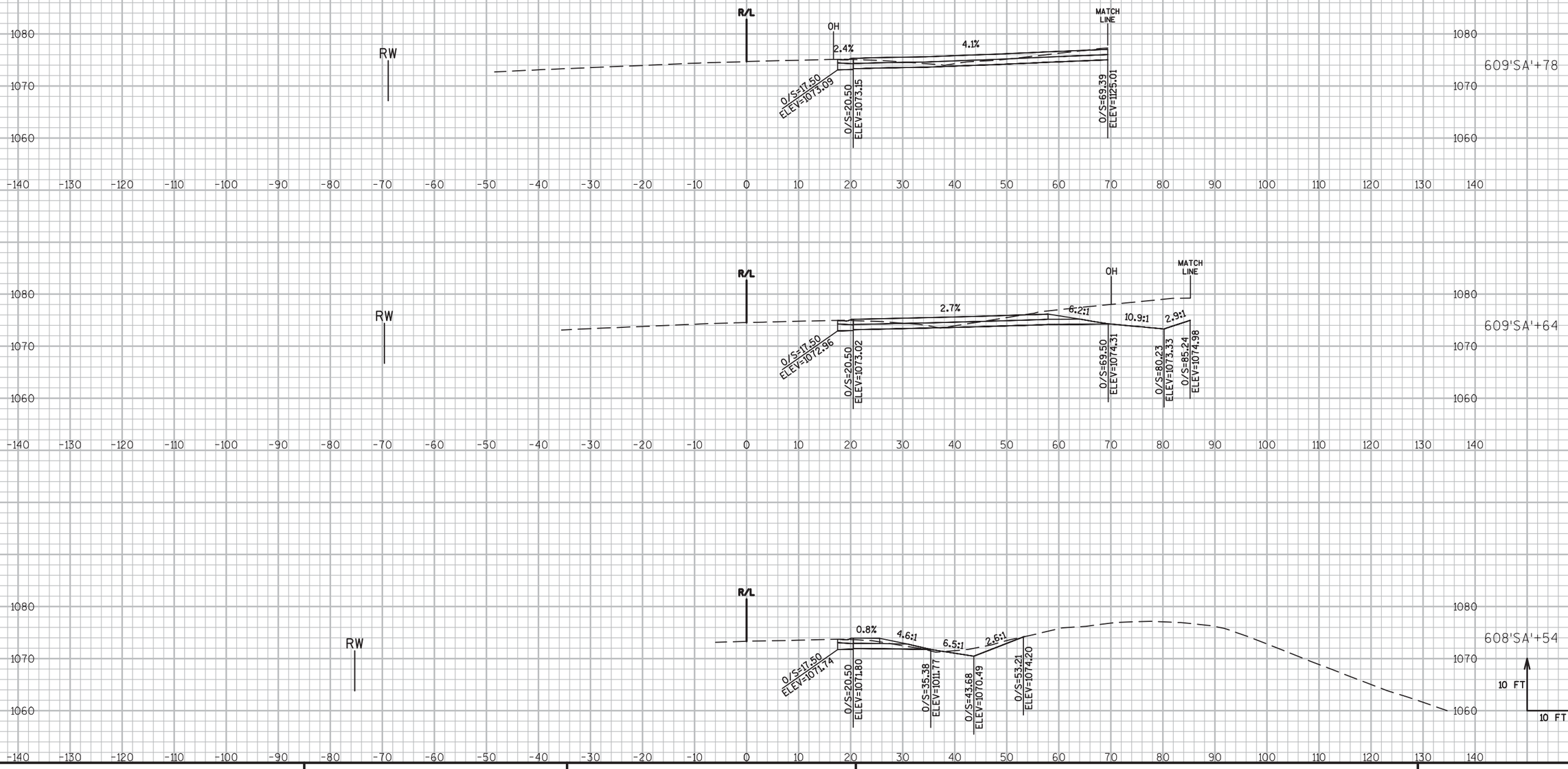
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PROJECT NO: 1050-01-61	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 27 - RAMP 'SA'	SHEET 492	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090207-XS.DWG
LAYOUT NAME - 090231-XS

PLOT DATE : 7/26/2016 12:05 PM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



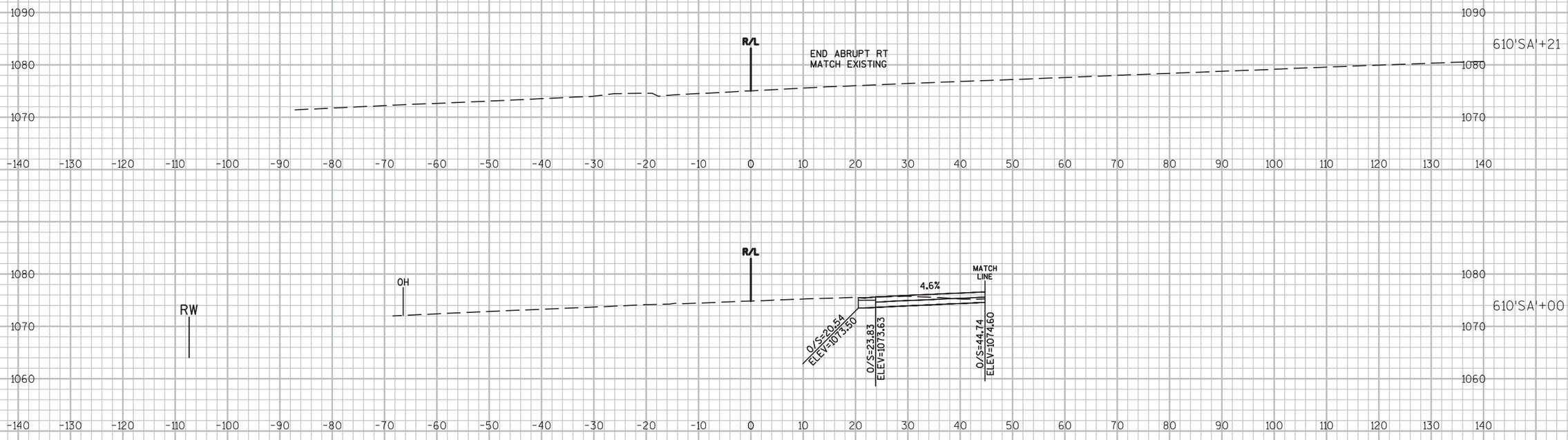
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PROJECT NO: 1050-01-61	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 27 - RAMP 'SA'	SHEET 493	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090207-XS.DWG
LAYOUT NAME - 090231-XS

PLOT DATE : 7/26/2016 12:05 PM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT



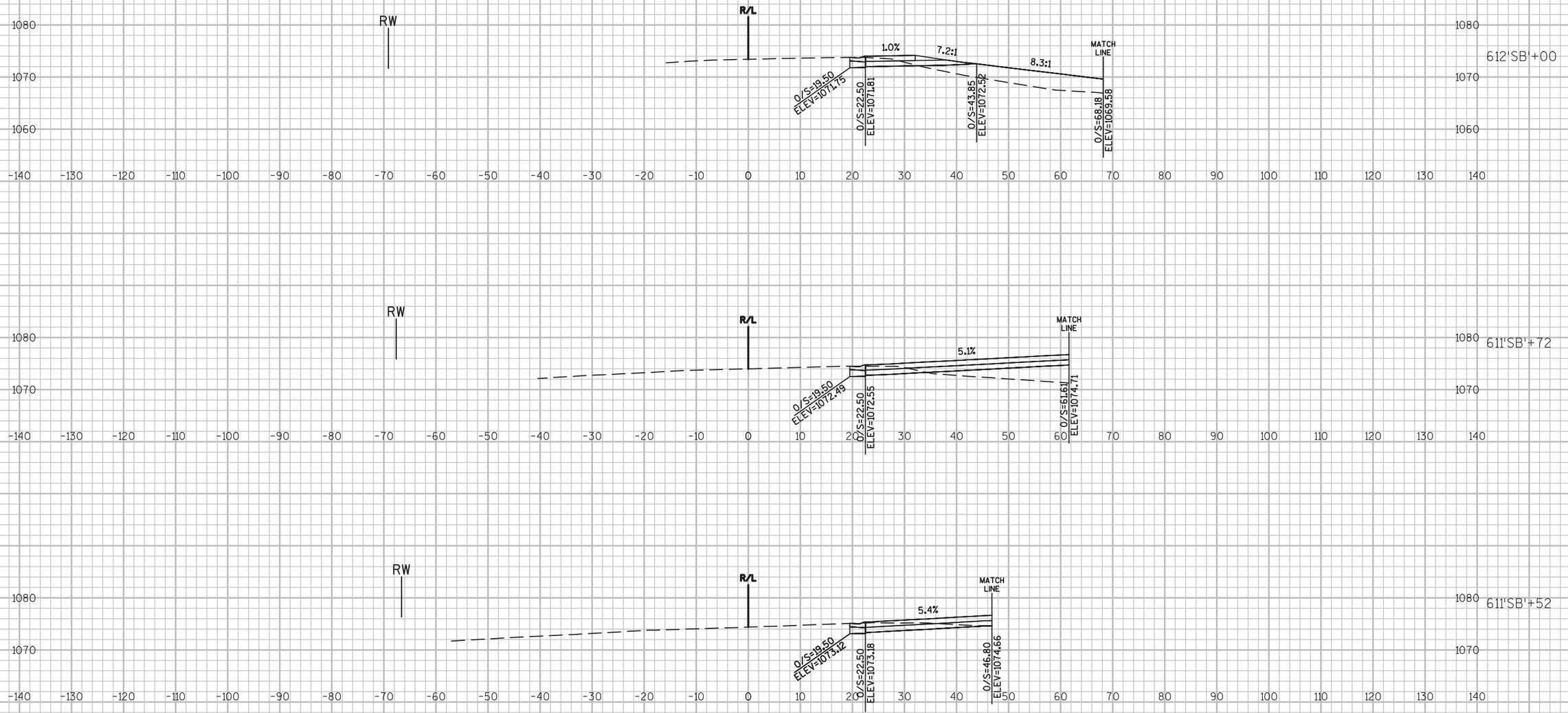
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PROJECT NO: 1050-01-61	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 27 - RAMP 'SA'	SHEET 494	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090207-XS.DWG
LAYOUT NAME - 090231-XS

PLOT DATE : 7/26/2016 12:05 PM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT



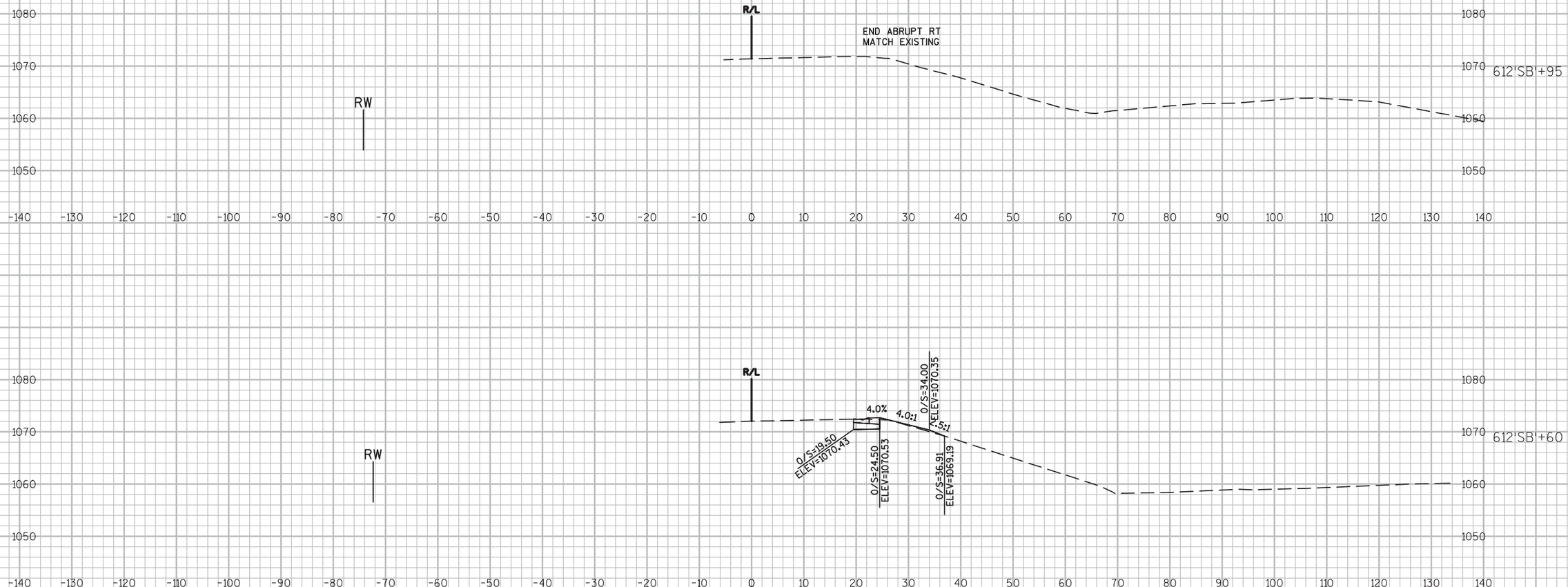
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PROJECT NO: 1050-01-61	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 27 RAMP 'SB'	SHEET 495	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090207-XS.DWG
LAYOUT NAME - 090231-XS

PLOT DATE : 7/26/2016 12:06 PM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT



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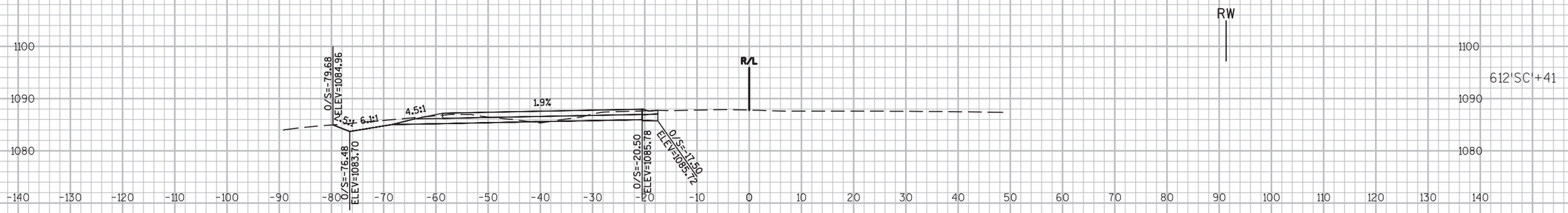
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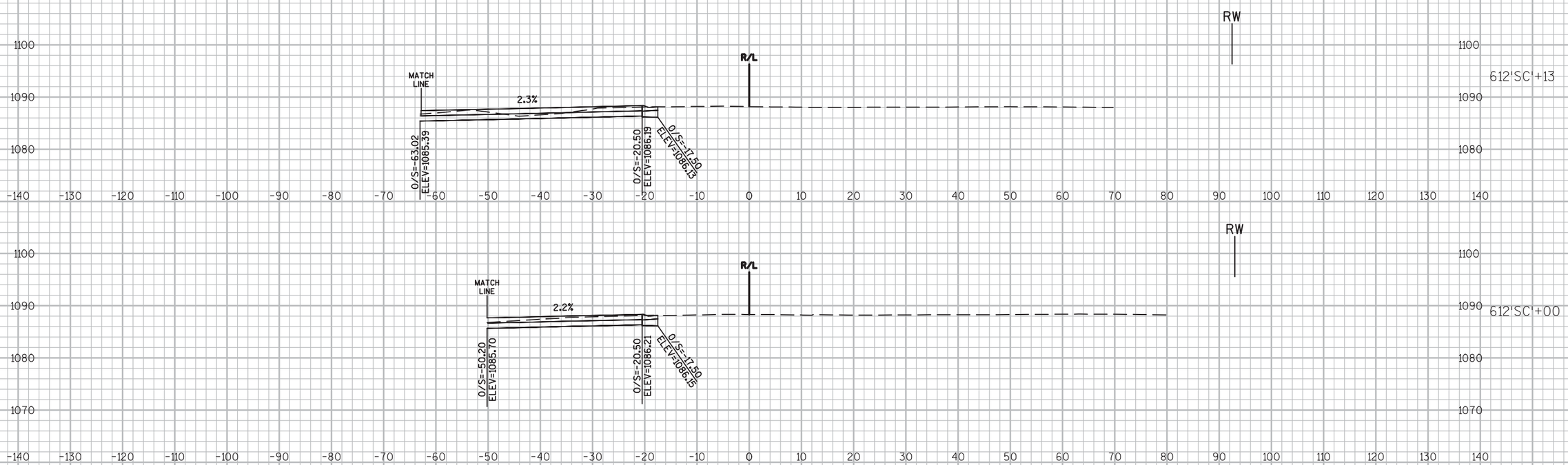
PROJECT NO: 1050-01-61	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 - RAMP 'SB'	SHEET 496	E

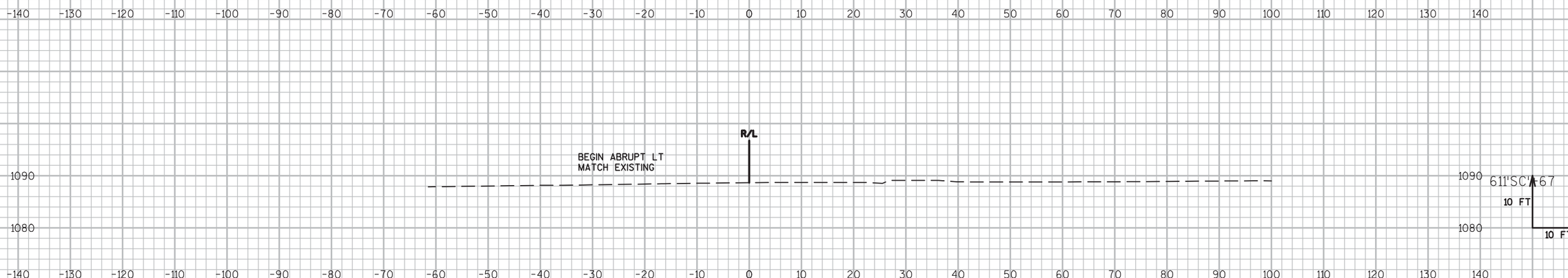
FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090207-XS.DWG
LAYOUT NAME - 090231-XS

PLOT DATE : 7/26/2016 12:06 PM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



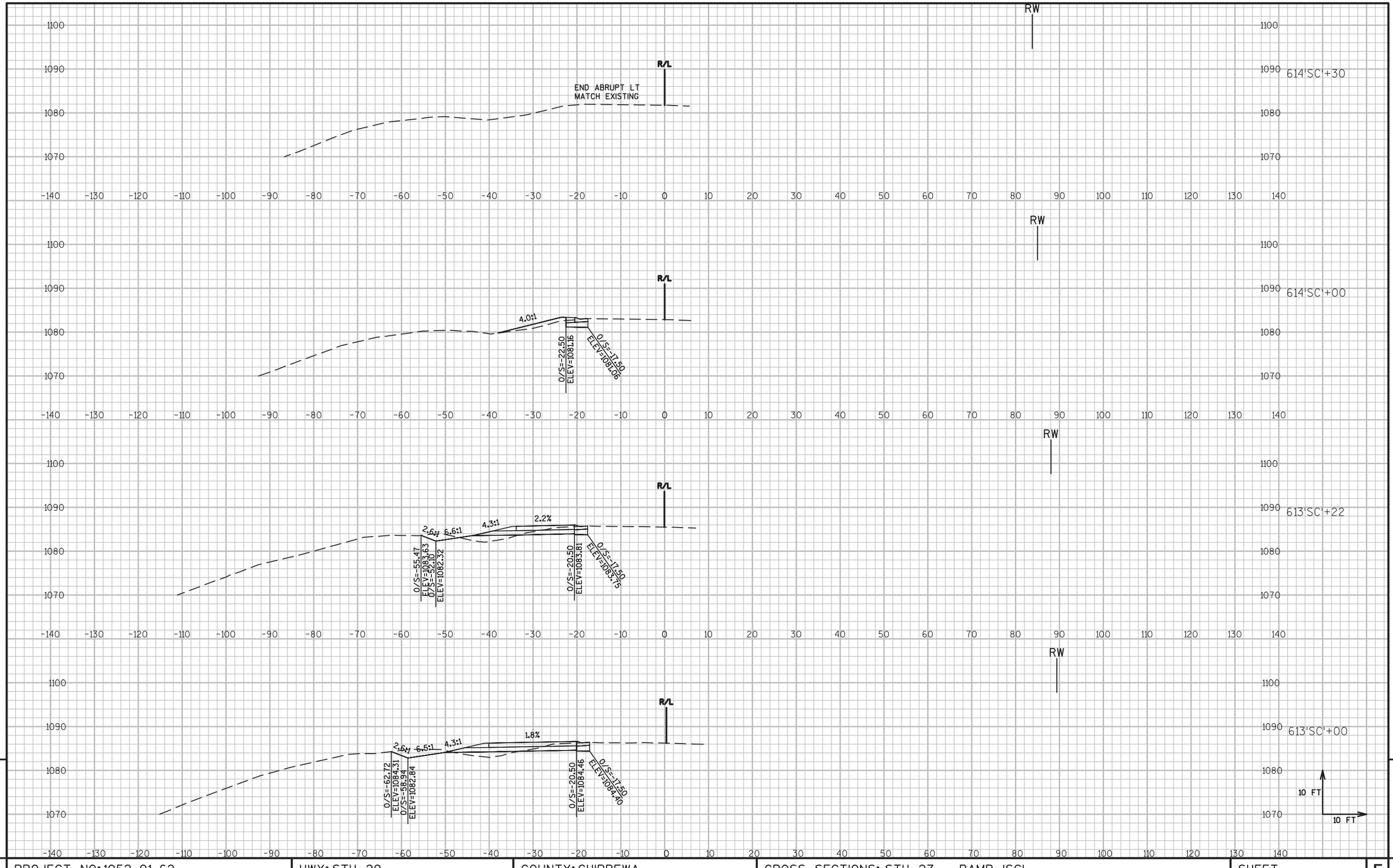




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PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 27 - RAMP 'SC'	SHEET 497	E

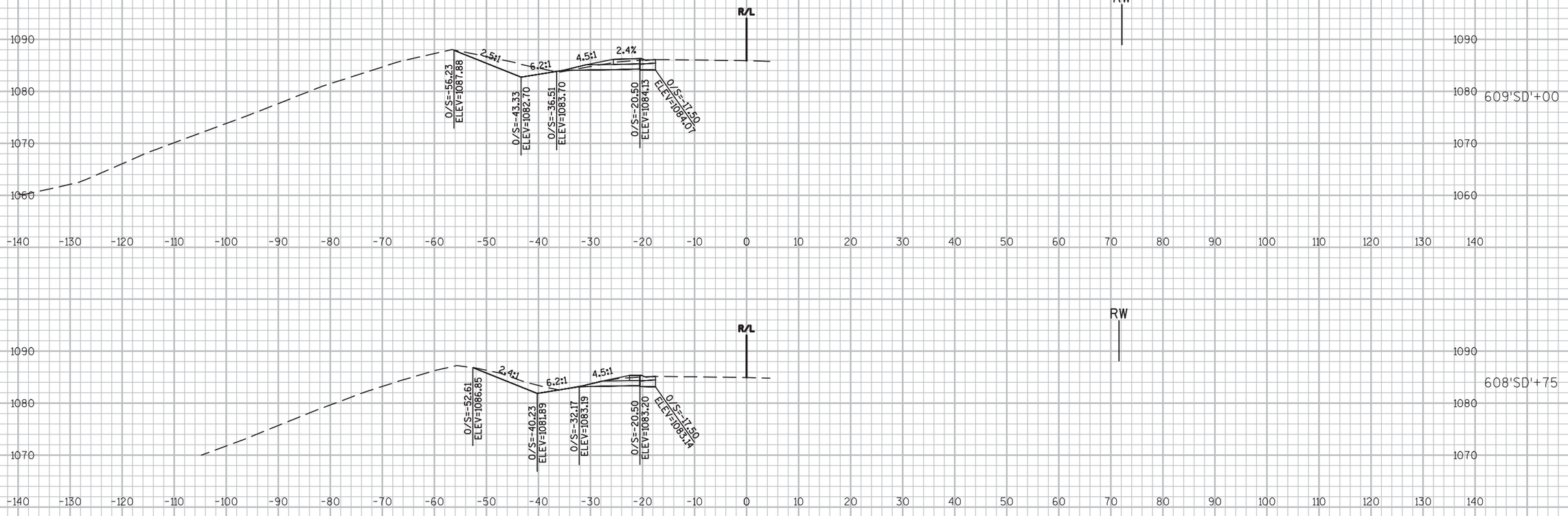


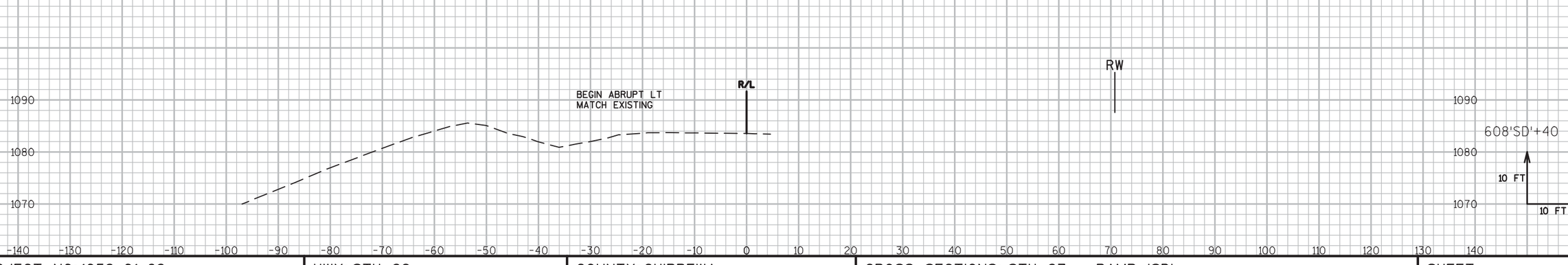
PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 27 - RAMP 'SC'	SHEET 498	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090207-XS.DWG
LAYOUT NAME - 090231-XS

PLOT DATE : 7/29/2016 10:51 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49





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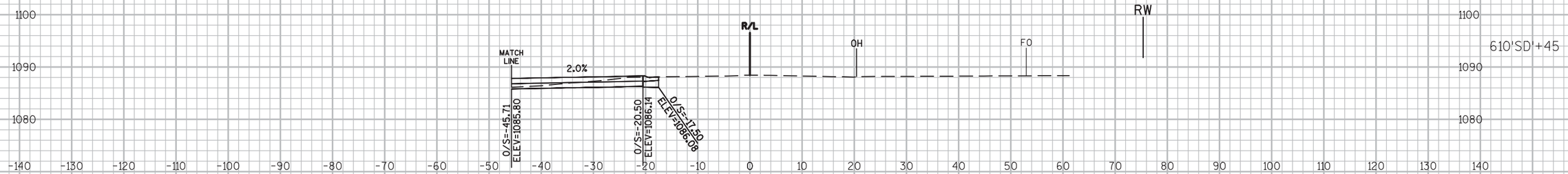
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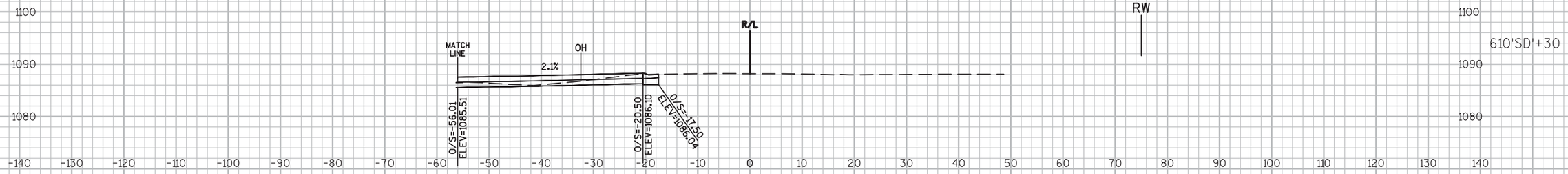
PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 27 - RAMP 'SD'	SHEET 499	E

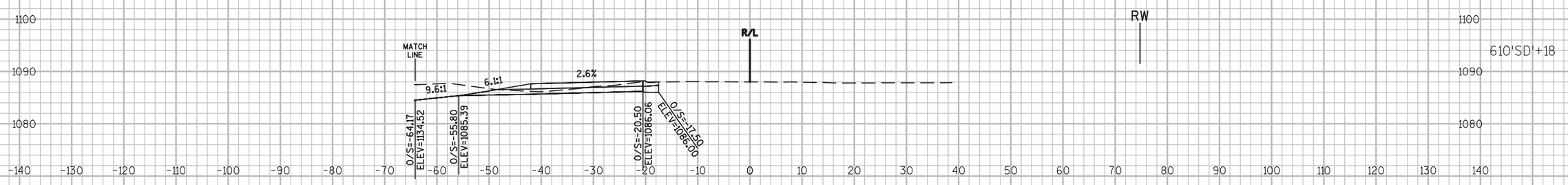
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LAYOUT NAME - 090231-XS

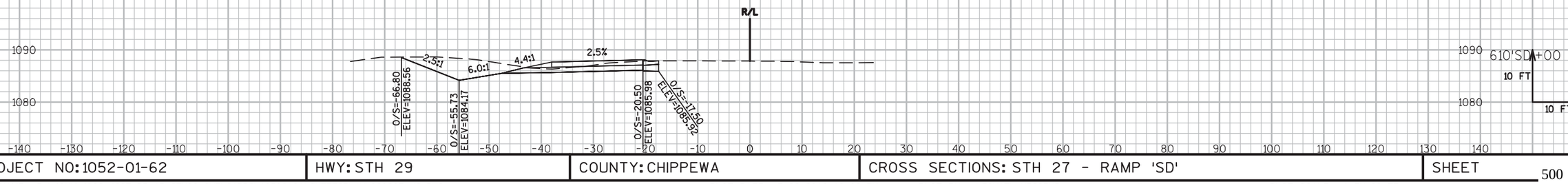
PLOT DATE : 7/26/2016 12:06 PM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49









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PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 27 - RAMP 'SD'	SHEET 500	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090207-XS.DWG
LAYOUT NAME - 090231-XS

PLOT DATE : 7/26/2016 12:06 PM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT



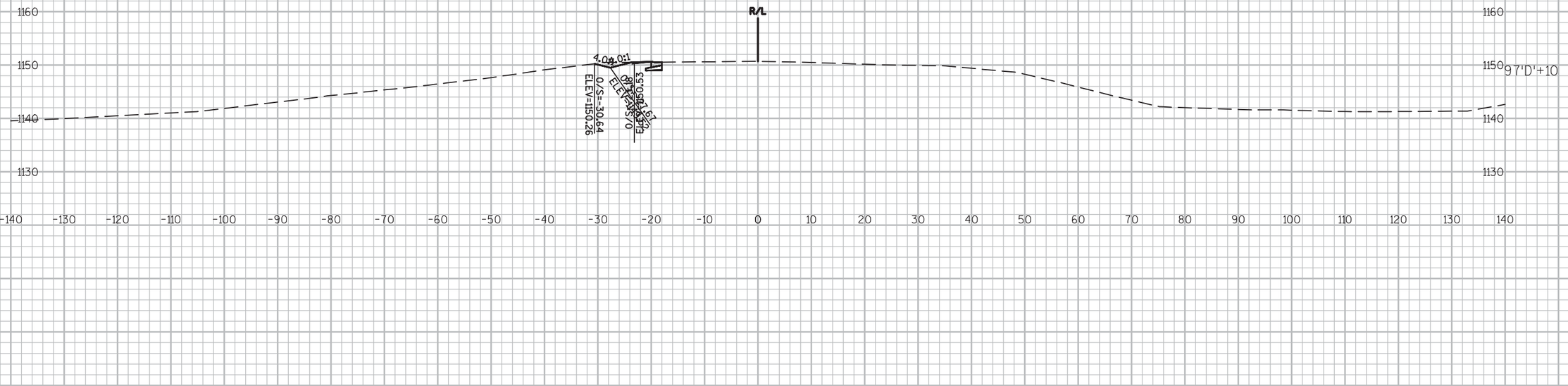
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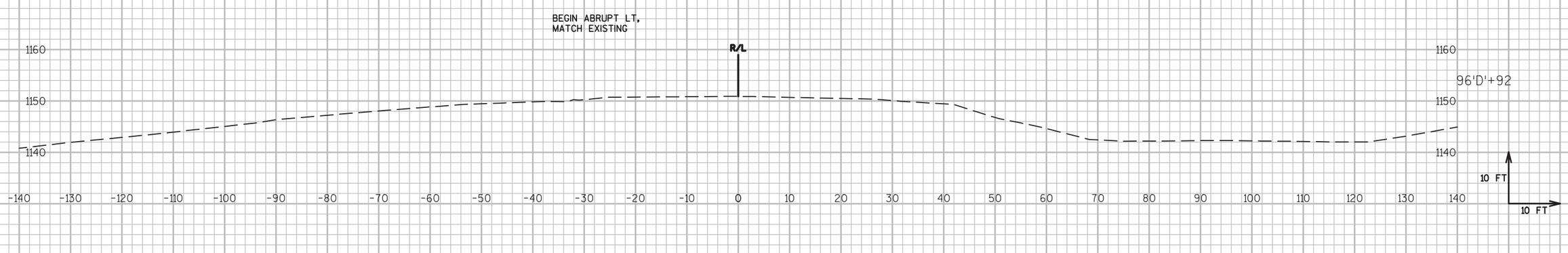
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PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 27 - RAMP 'SD'	SHEET 501	E

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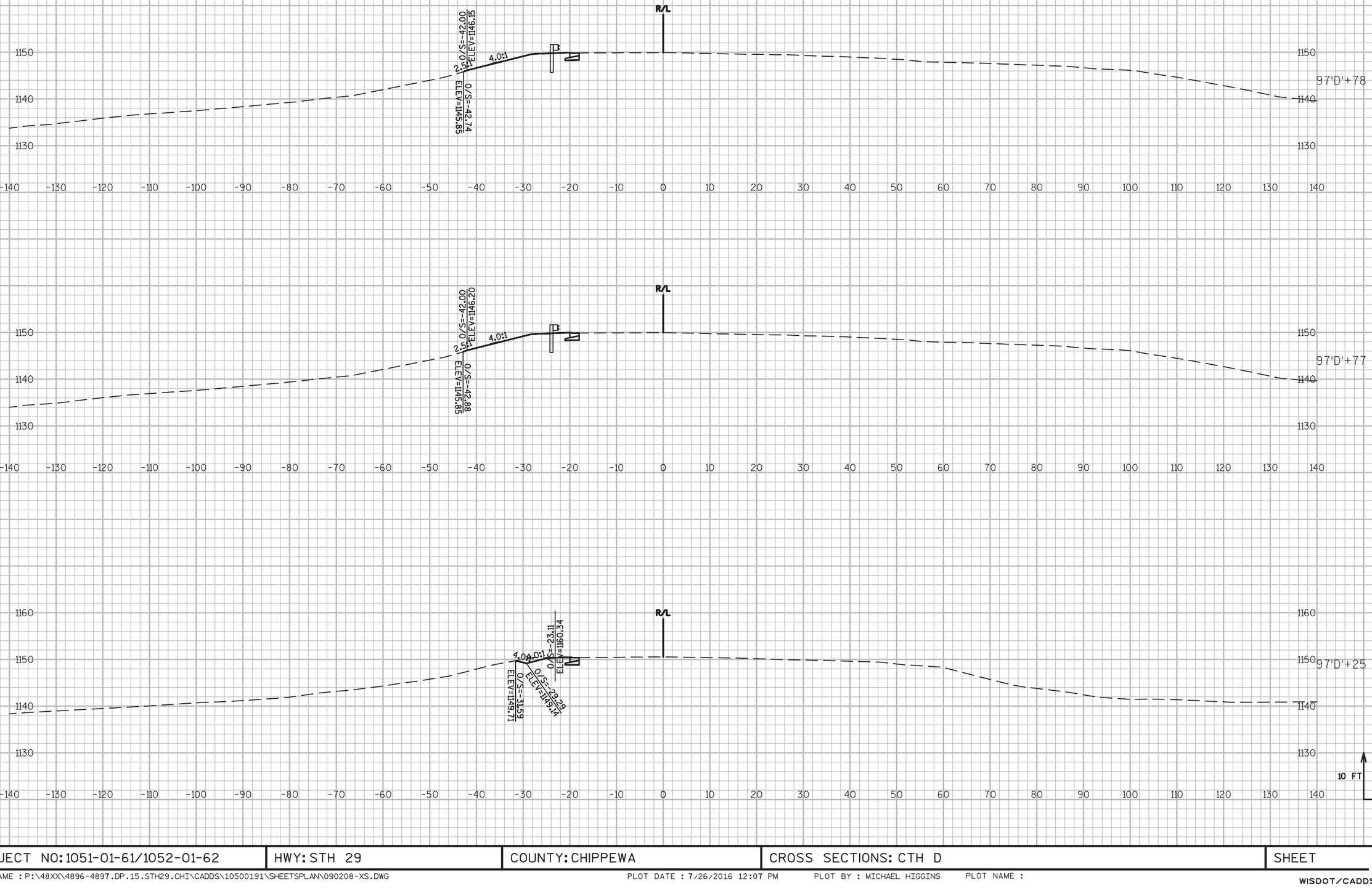
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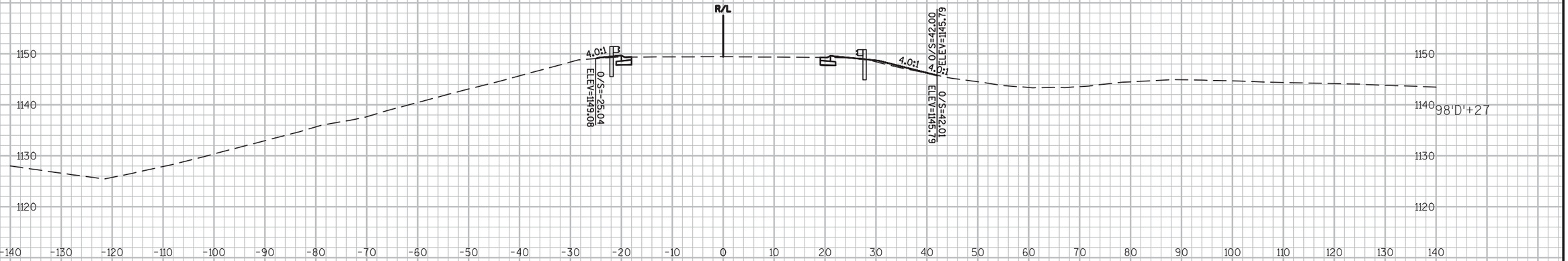
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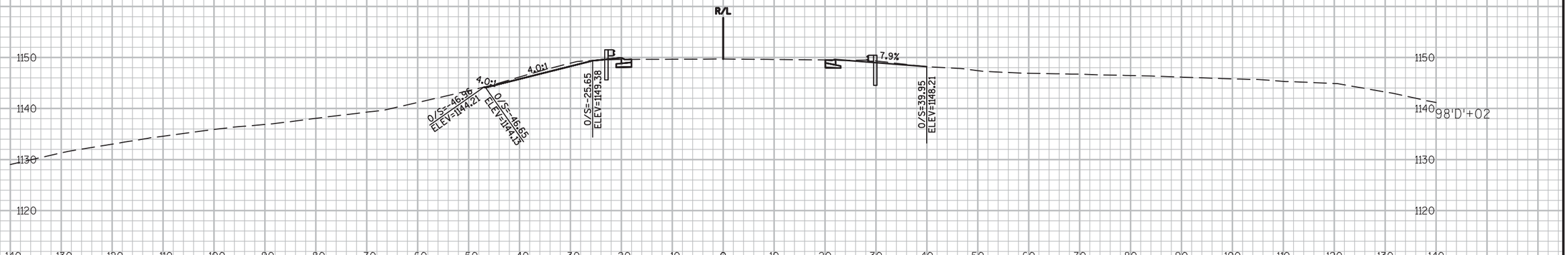


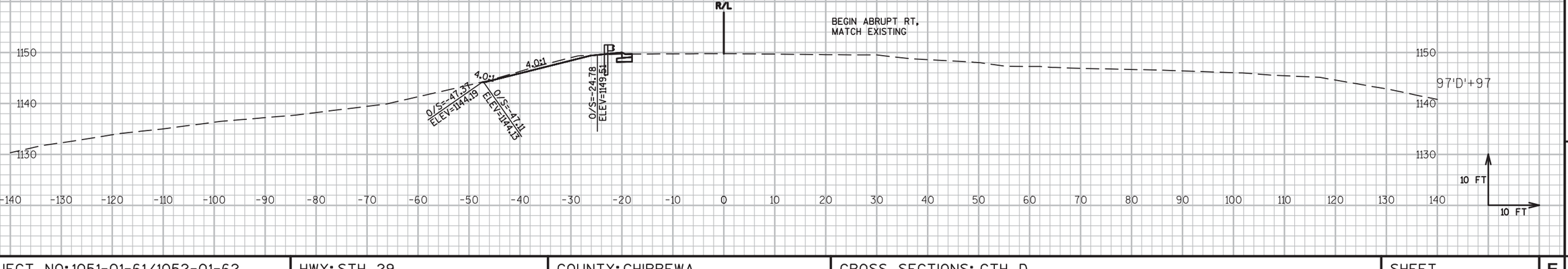
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WISDOT/CADDS SHEET 49

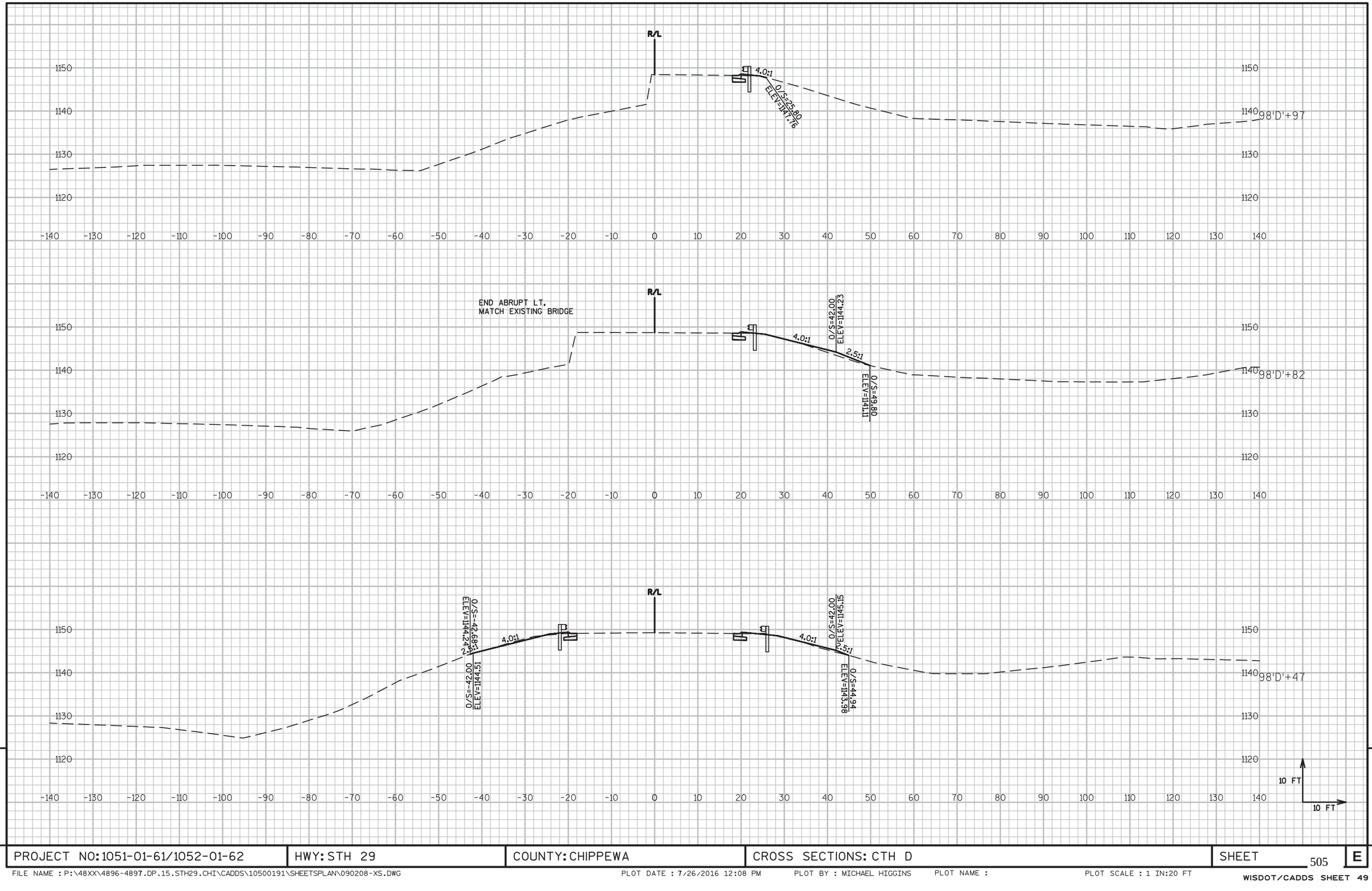




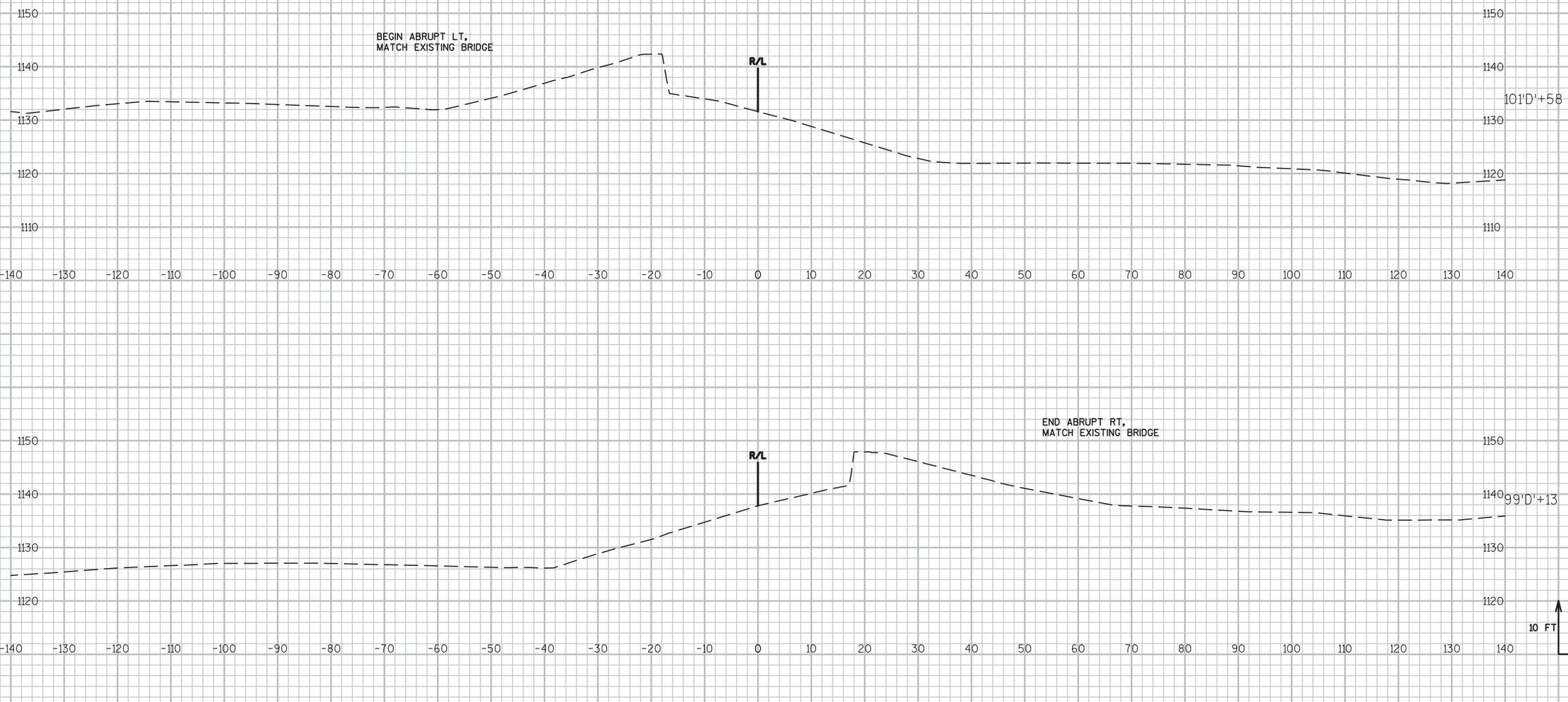


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PROJECT NO: 1051-01-61/1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: CTH D	SHEET 504	E



PROJECT NO: 1051-01-61/1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: CTH D	SHEET 505	E



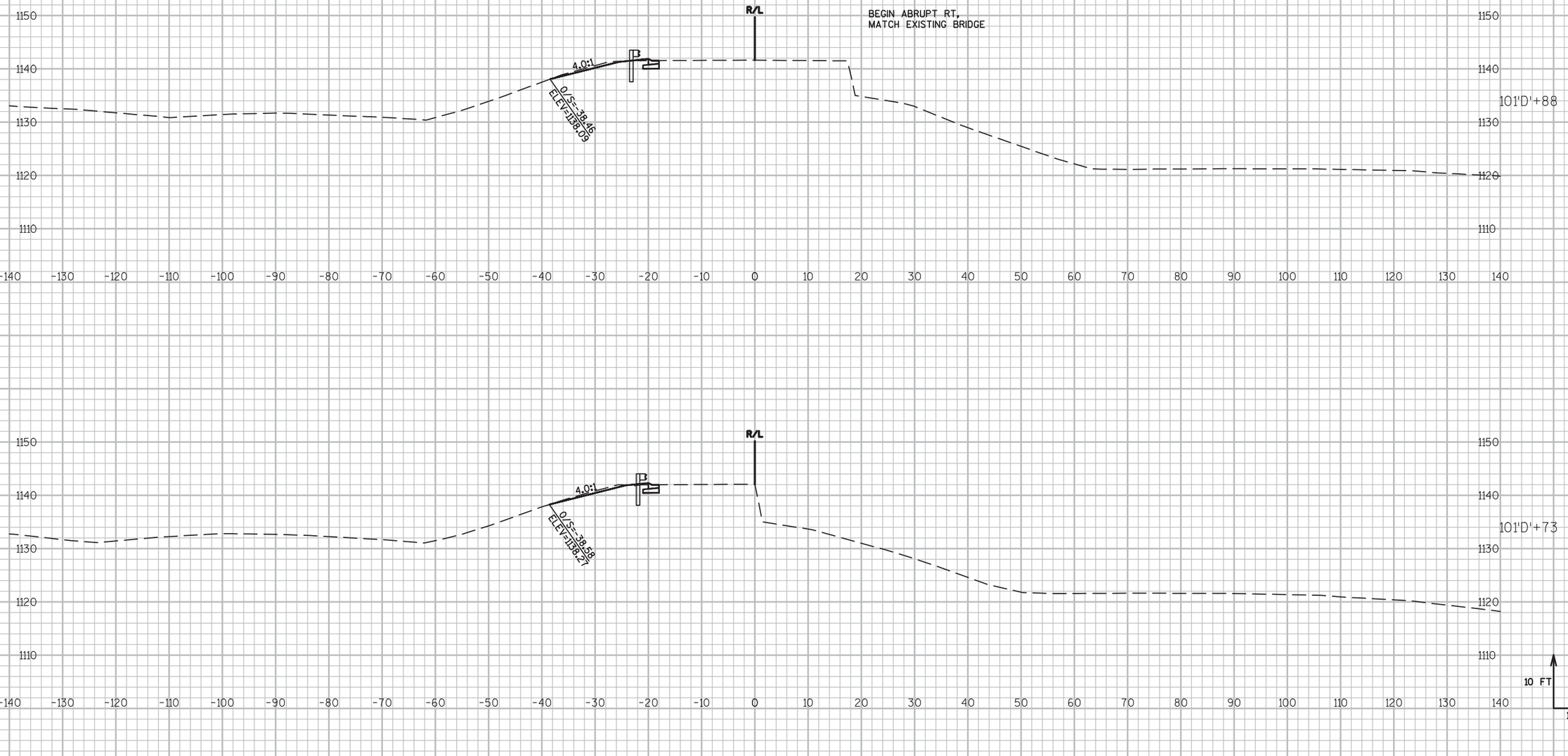
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PROJECT NO: 1051-01-61/1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: CTH D	SHEET 506	E

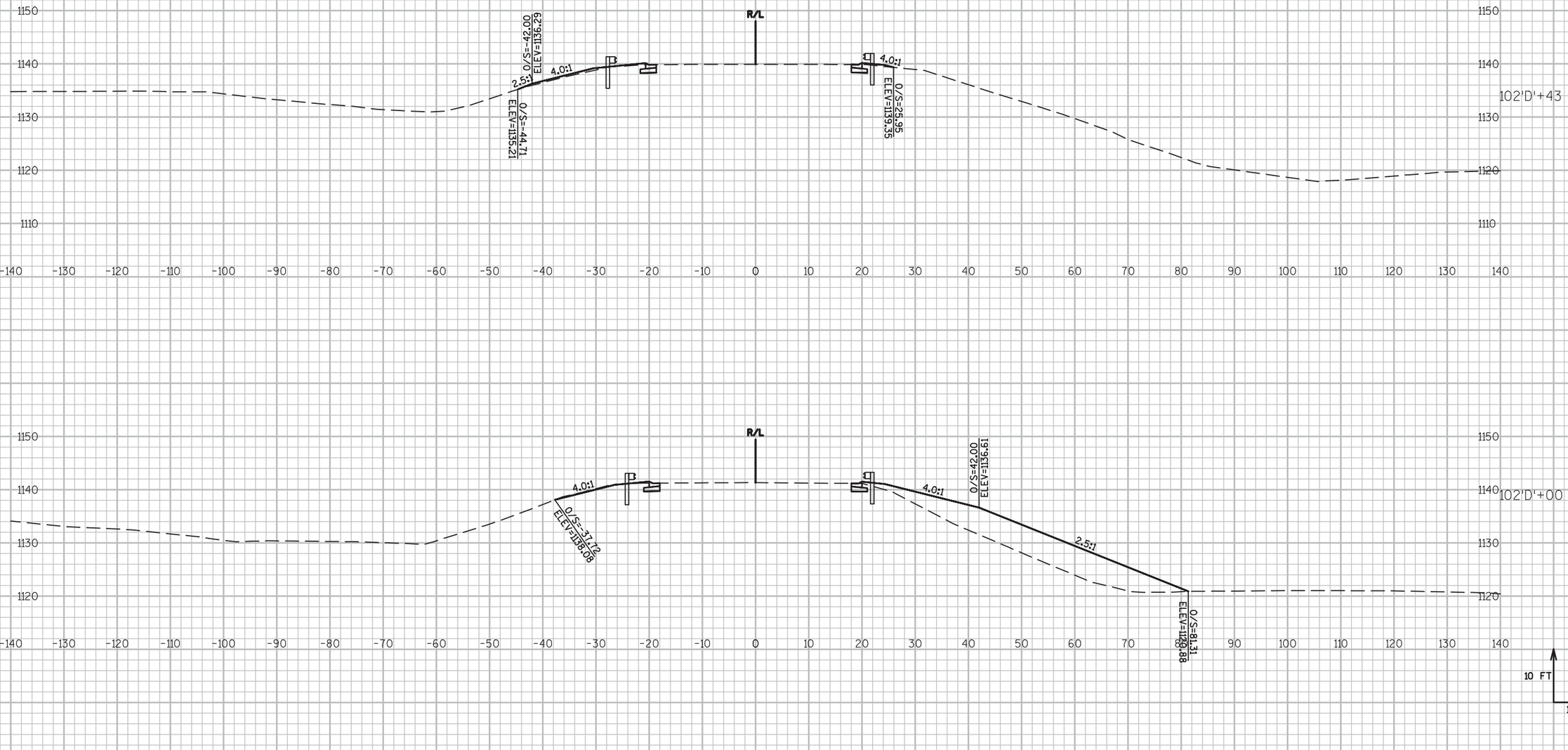
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WISDOT/CADDS SHEET 49



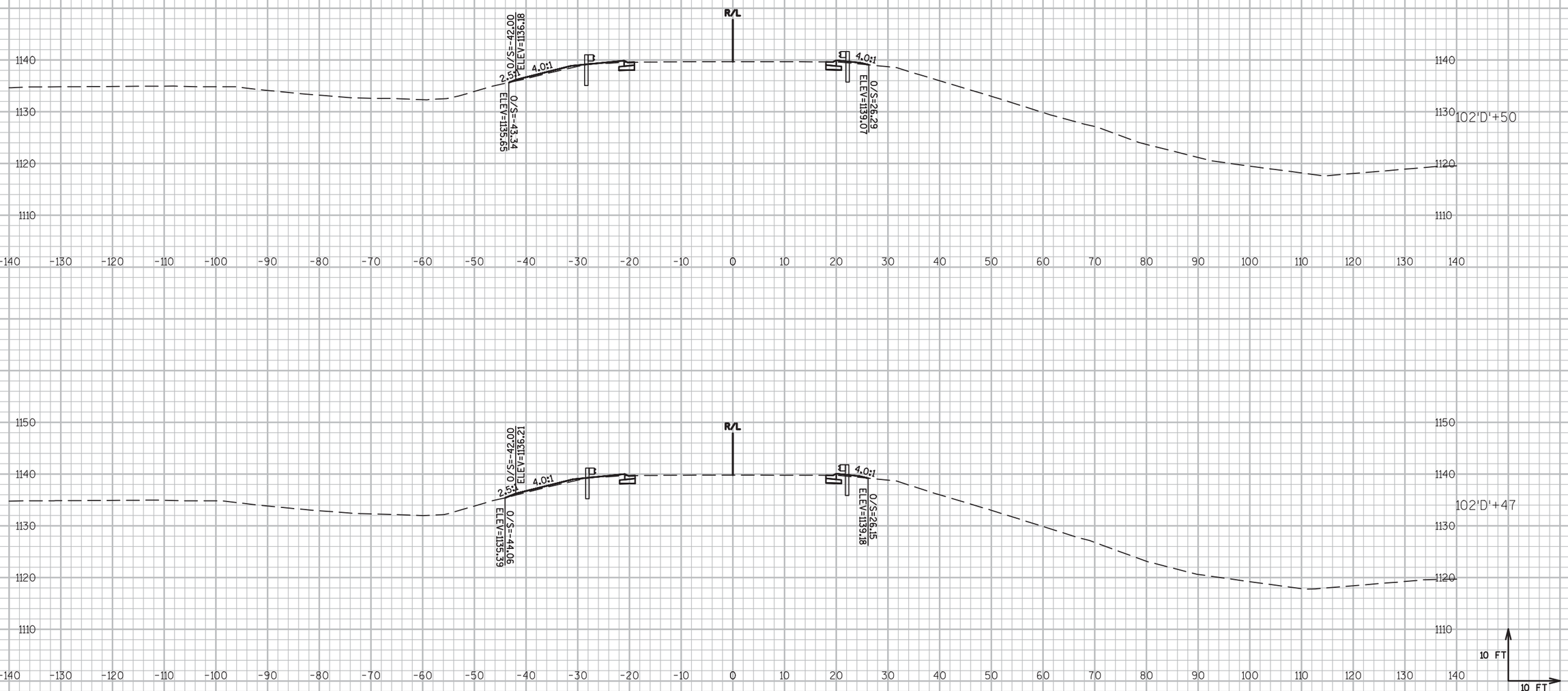
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FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090208-XS.DWG PLOT DATE : 7/26/2016 12:08 PM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT



PROJECT NO: 1051-01-61/1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: CTH D	SHEET 508	E

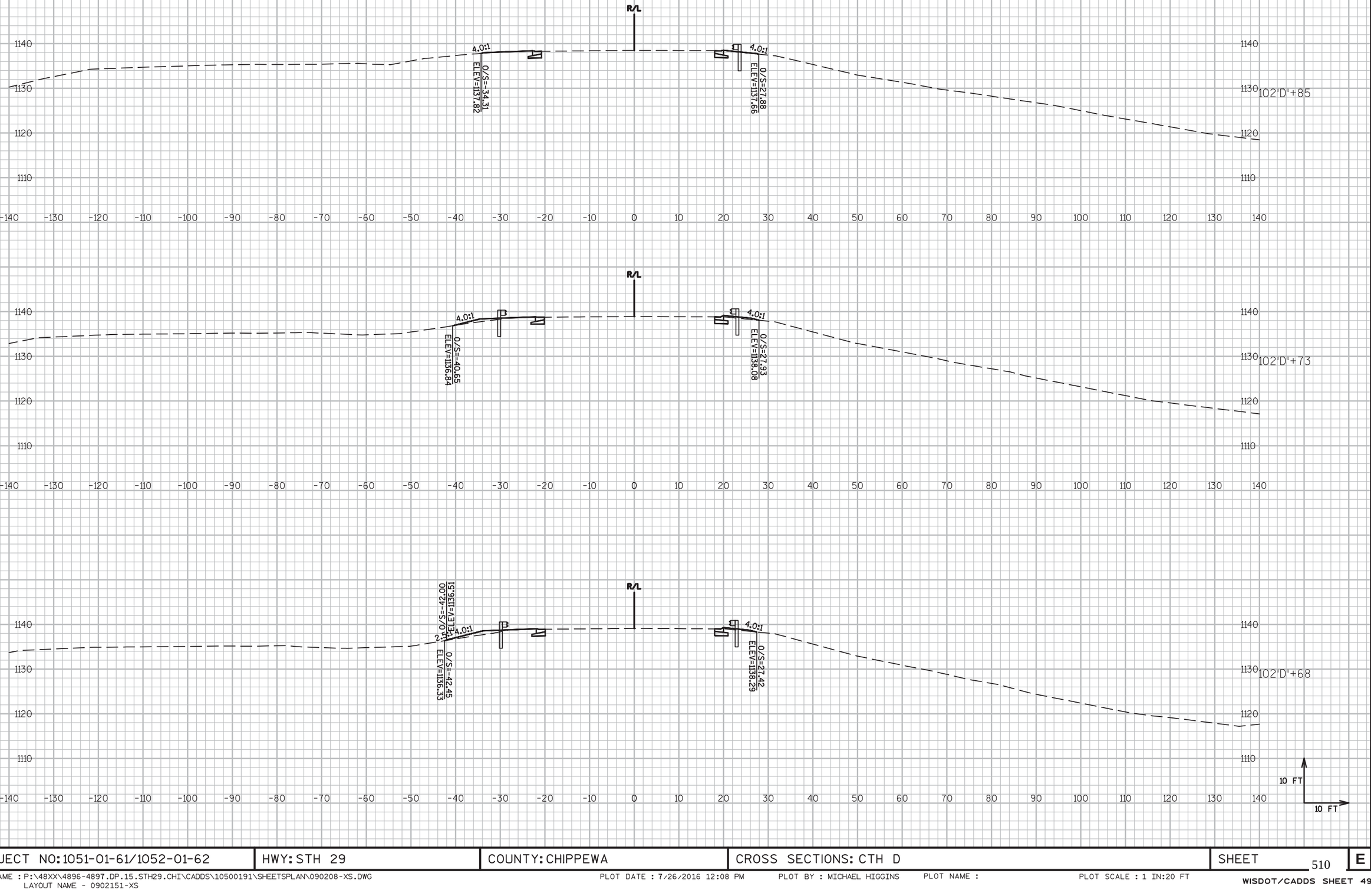
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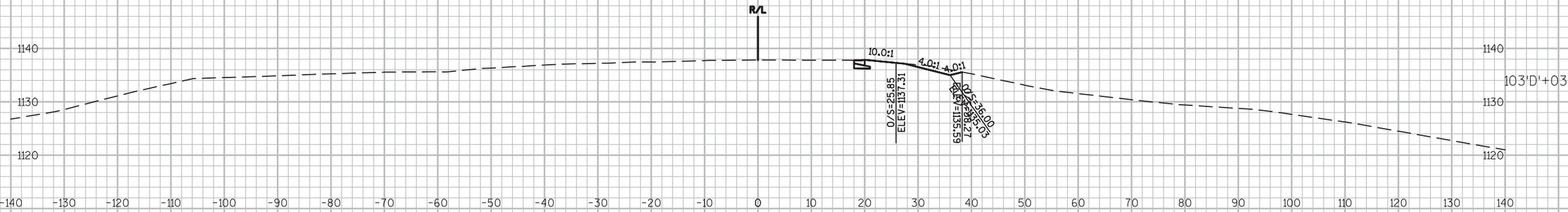
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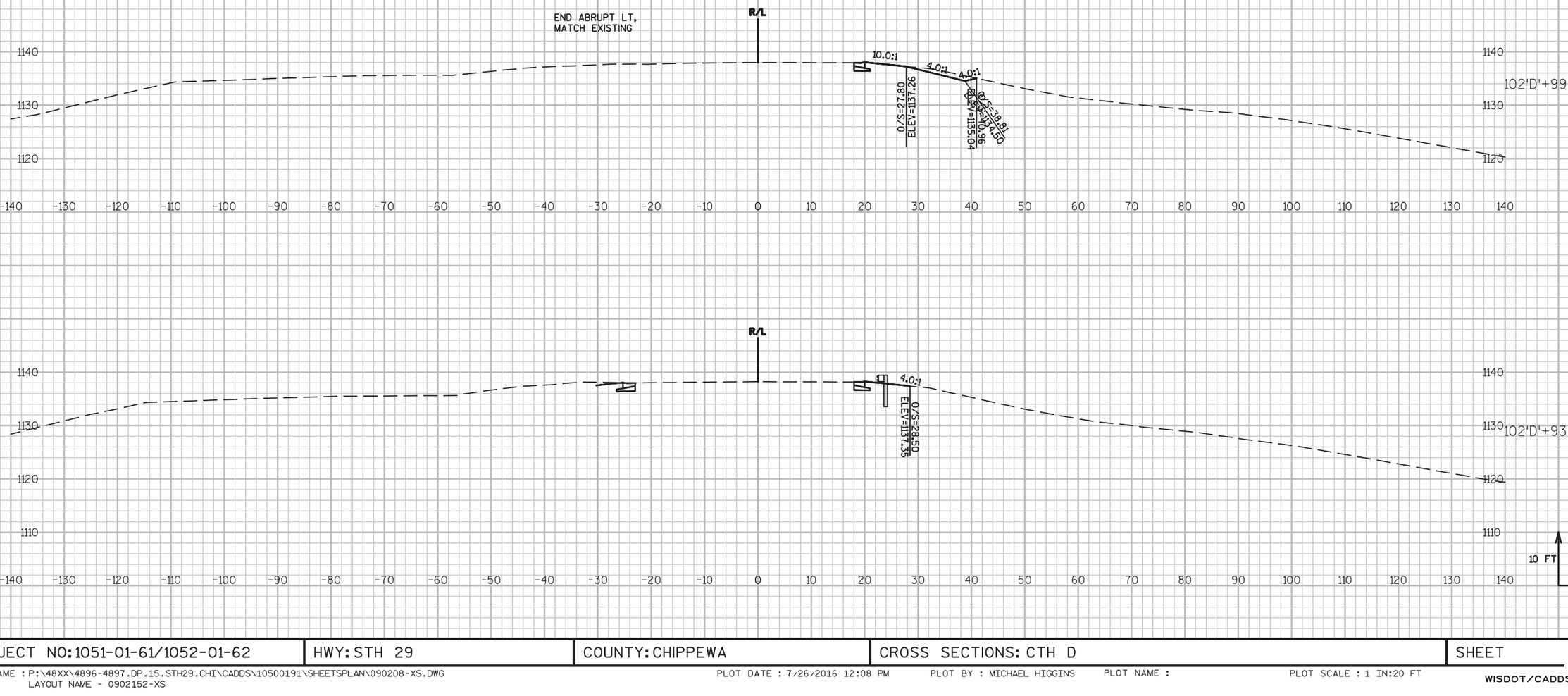
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PROJECT NO: 1051-01-61/1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: CTH D	SHEET 510	E

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LAYOUT NAME - 0902151-XS
PLOT DATE : 7/26/2016 12:08 PM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 49





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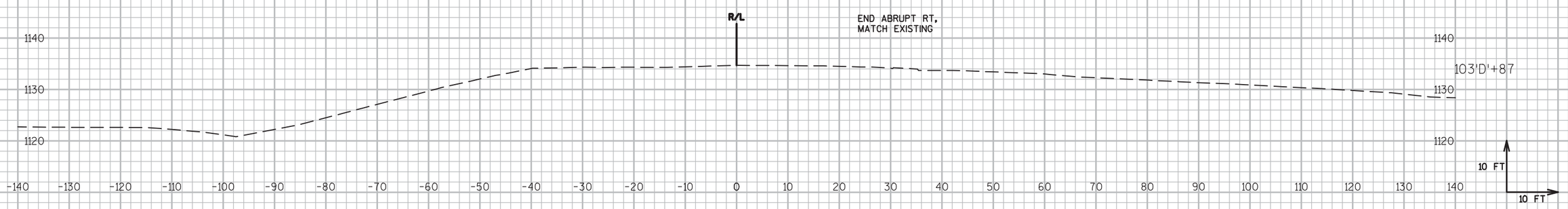
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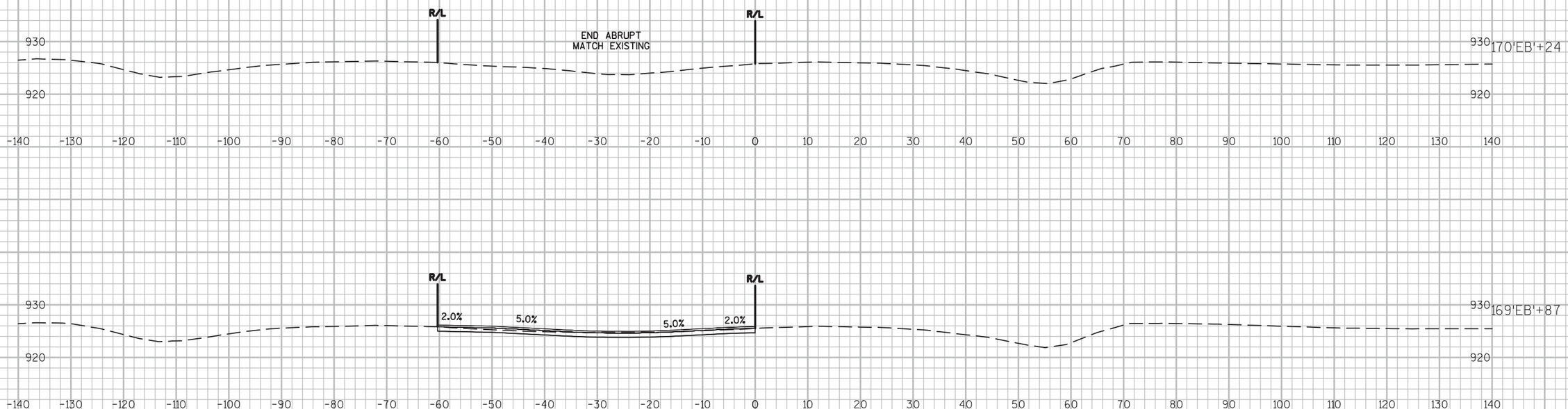
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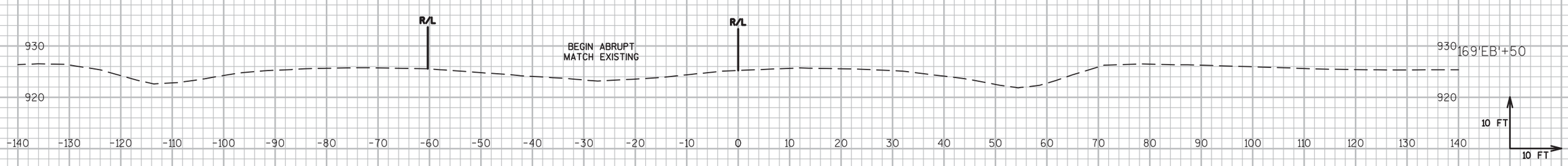
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PROJECT NO: 1051-01-61/1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: CTH D	SHEET 513	E





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PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB-MAINTENANCE CROSSOVERS	SHEET 514	E

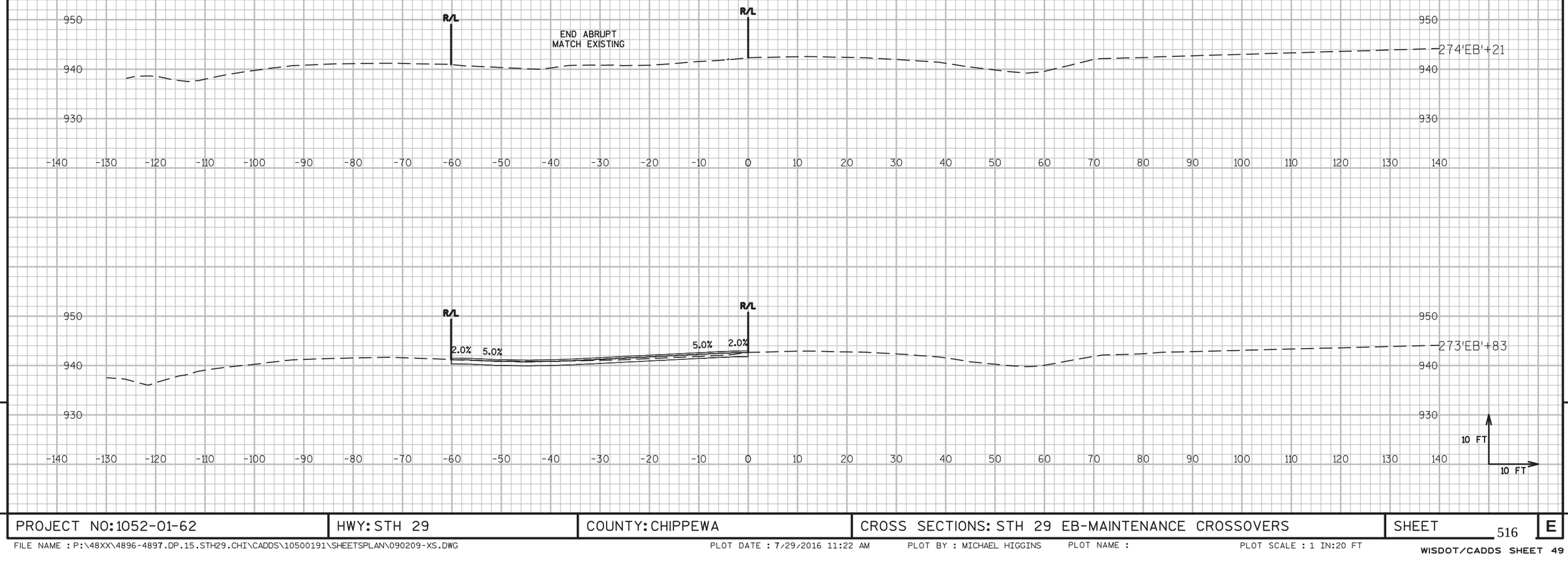


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PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB-MAINTENANCE CROSSOVERS	SHEET 515	E

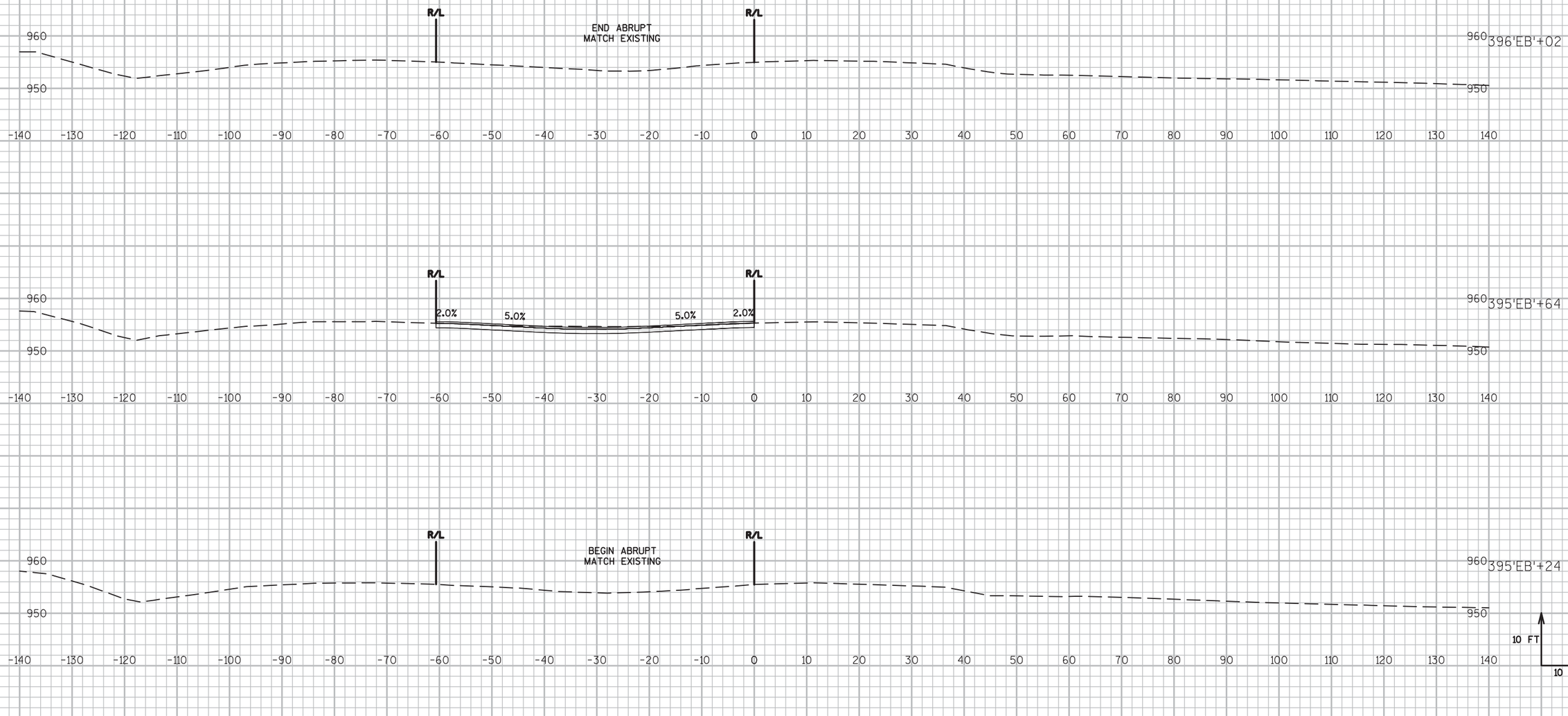
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PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB-MAINTENANCE CROSSOVERS	SHEET 516	E

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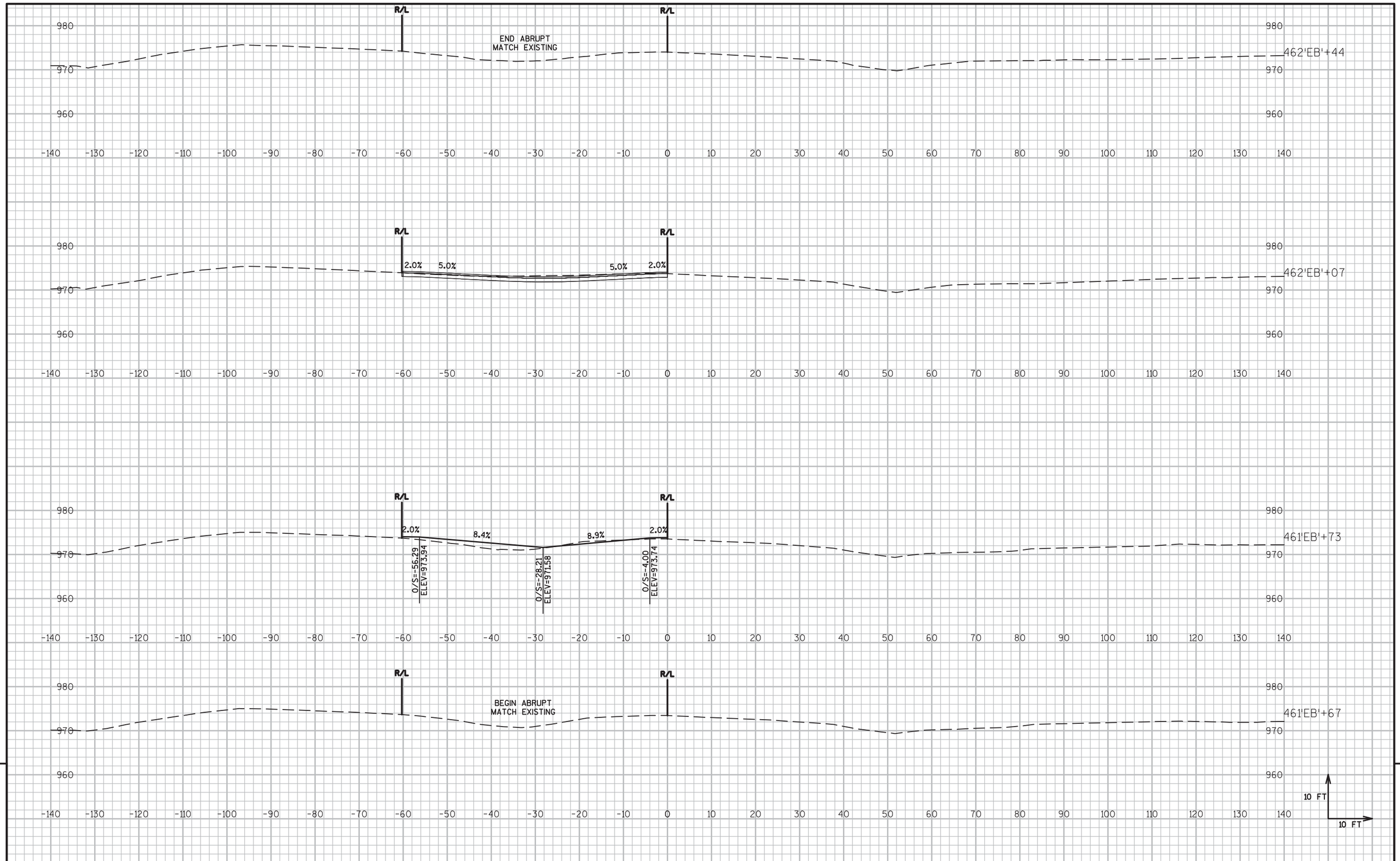


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PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB-MAINTENANCE CROSSOVERS	SHEET 517	E

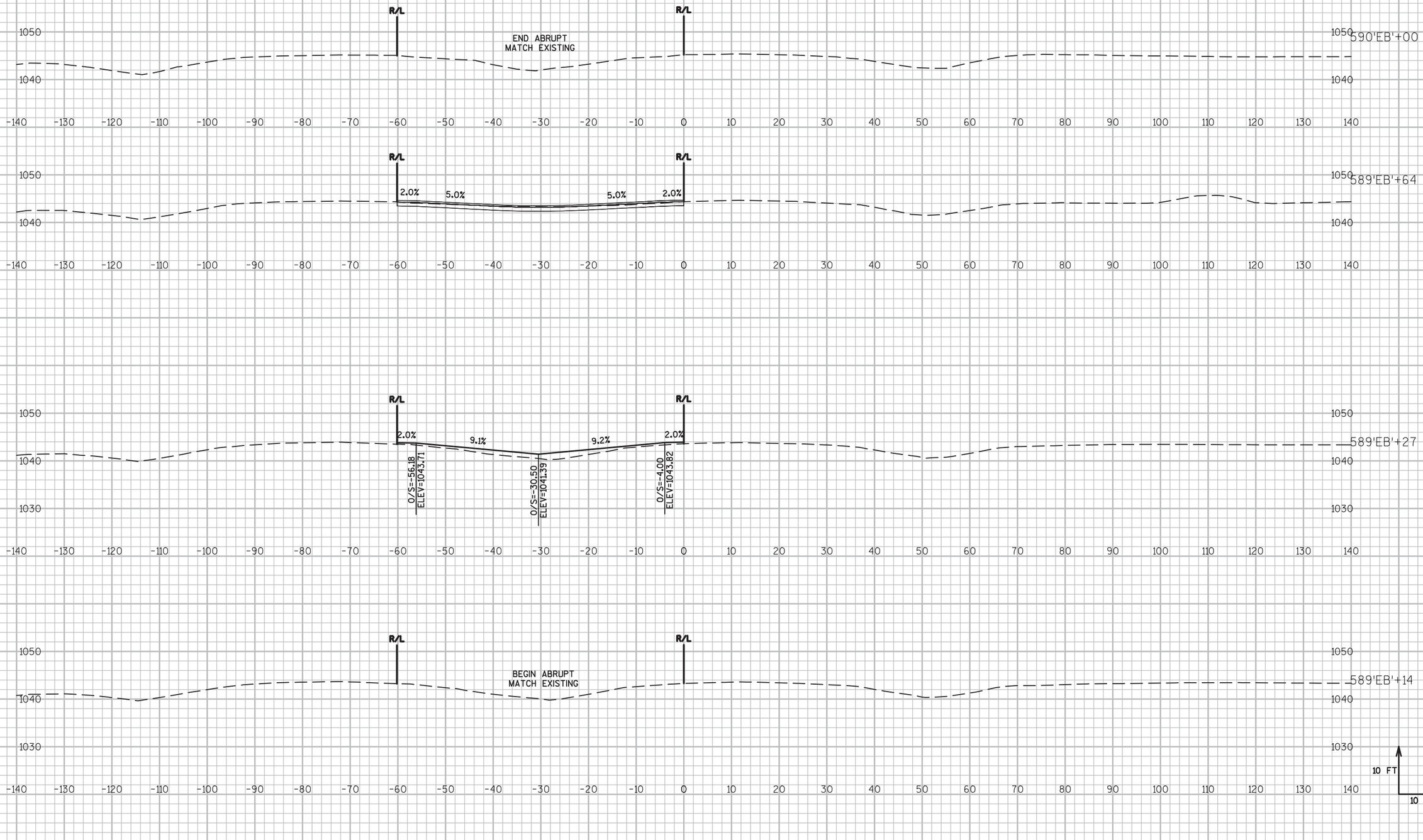
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PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB-MAINTENANCE CROSSOVERS	SHEET 518	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090209-XS.DWG PLOT DATE : 7/29/2016 11:22 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT

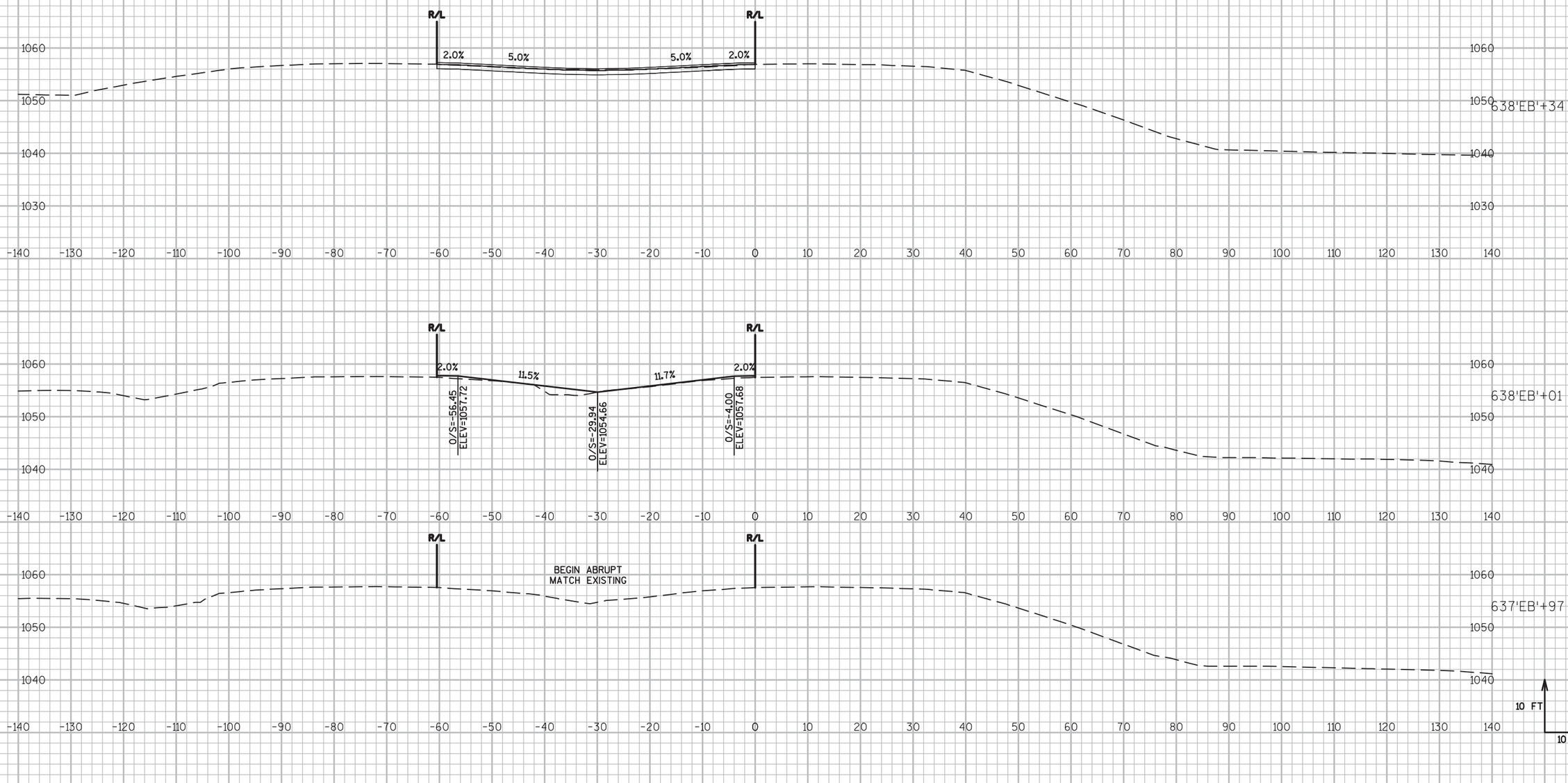
WISDOT/CADDS SHEET 49



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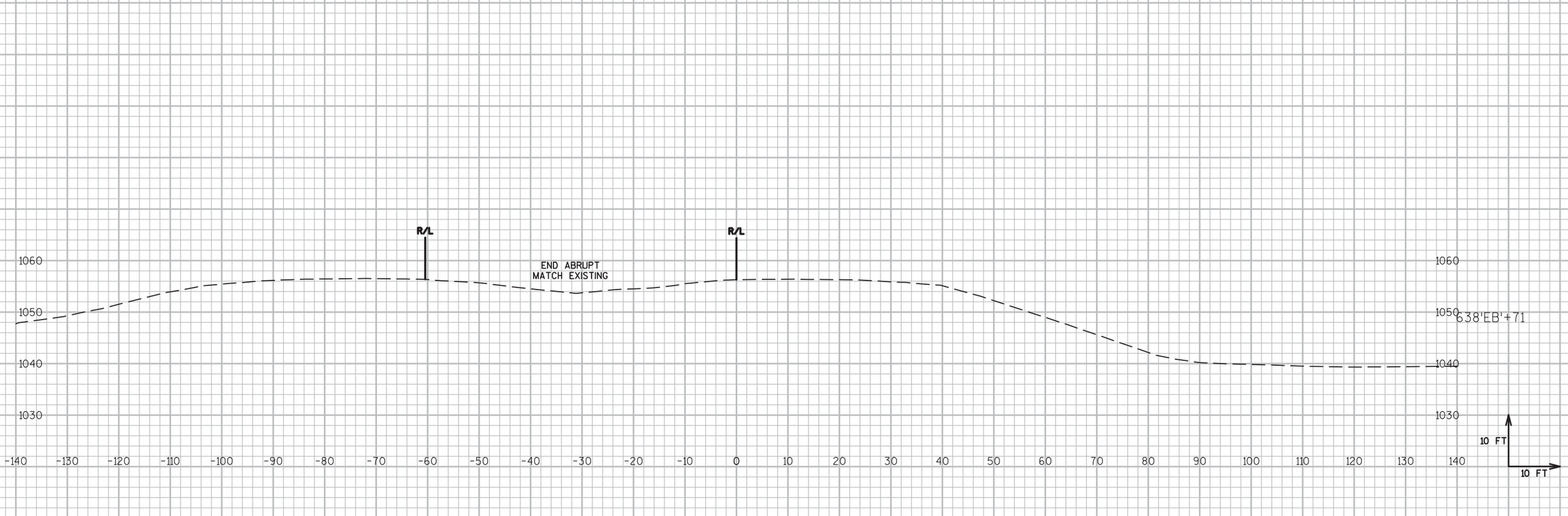
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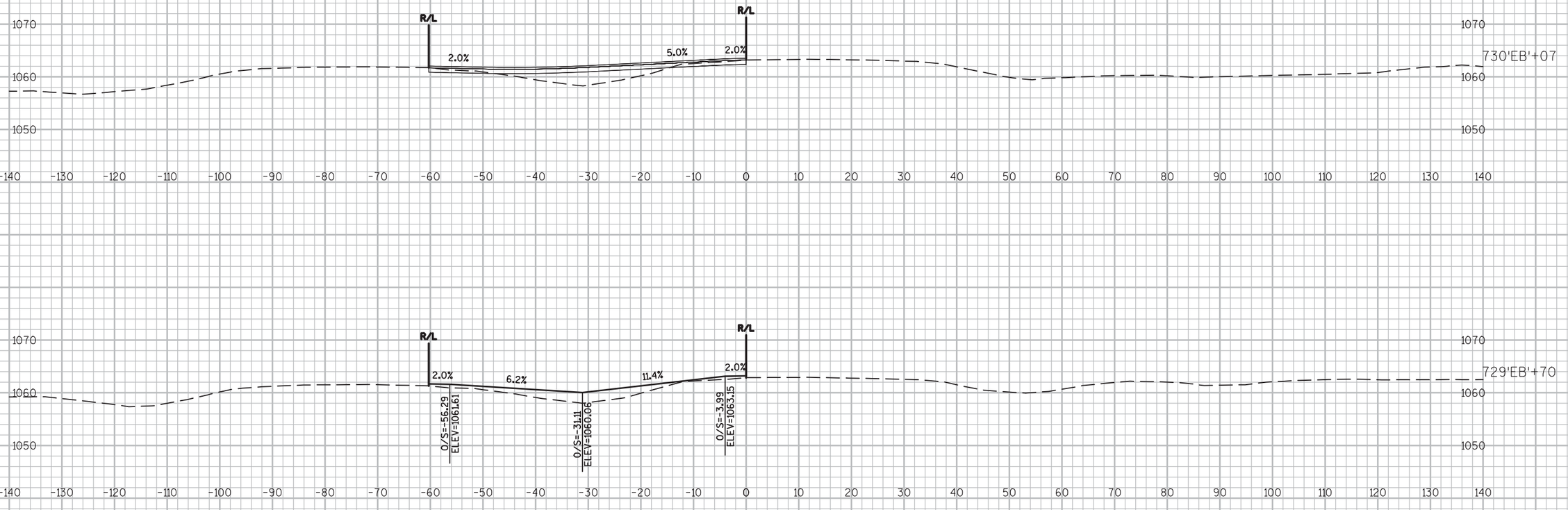
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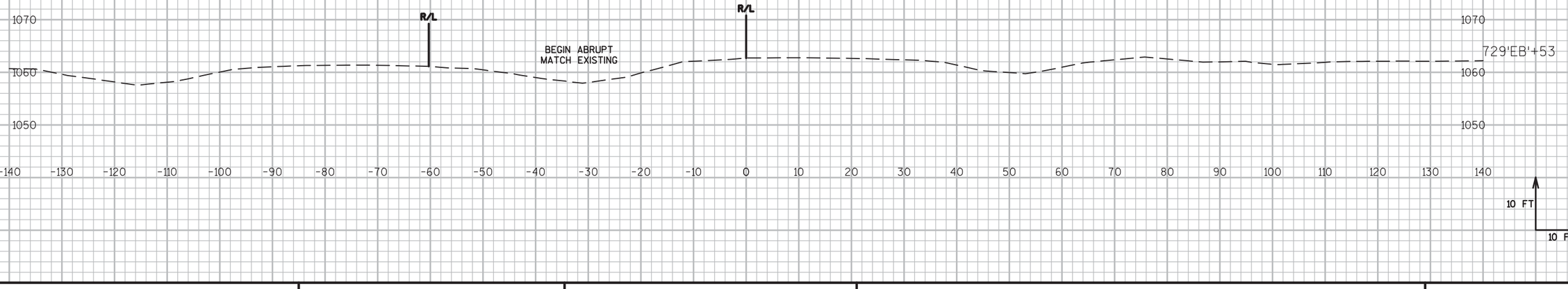
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PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB-MAINTENANCE CROSSOVERS	SHEET 521	E

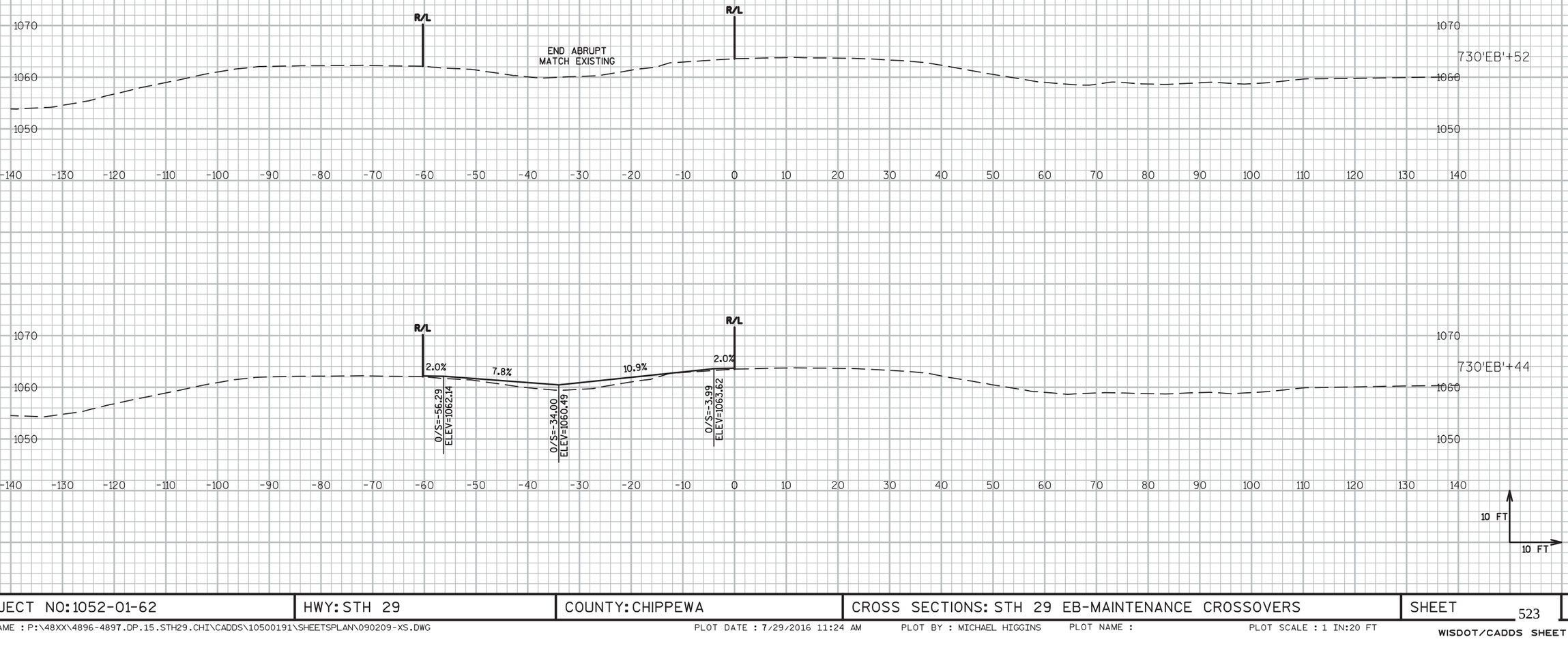




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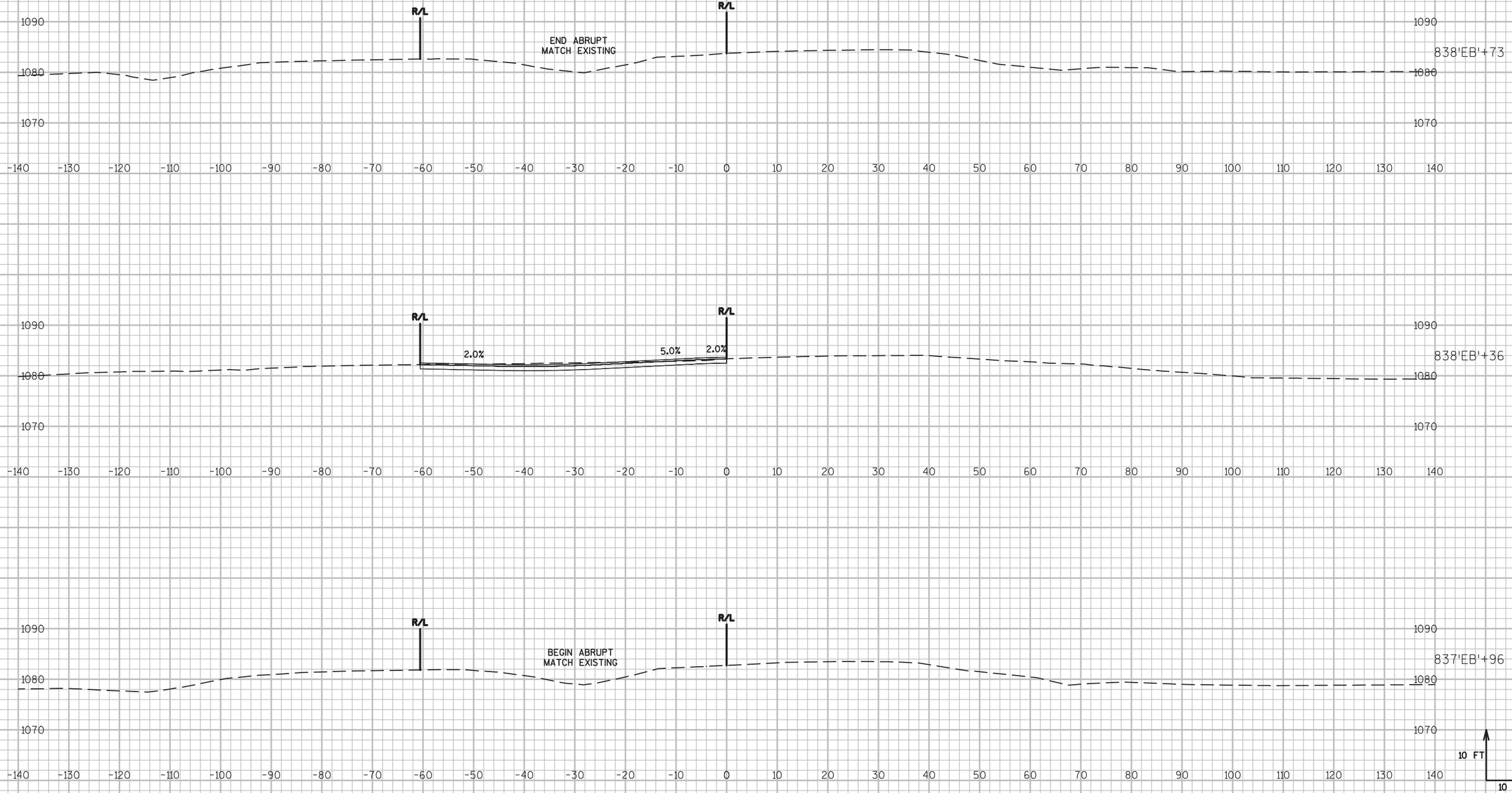
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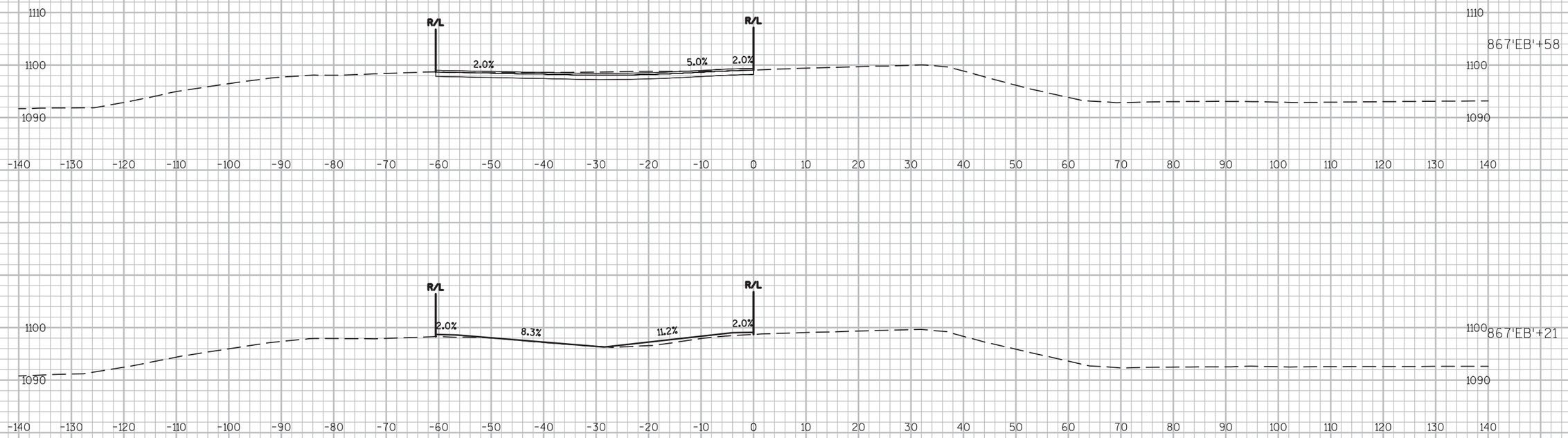
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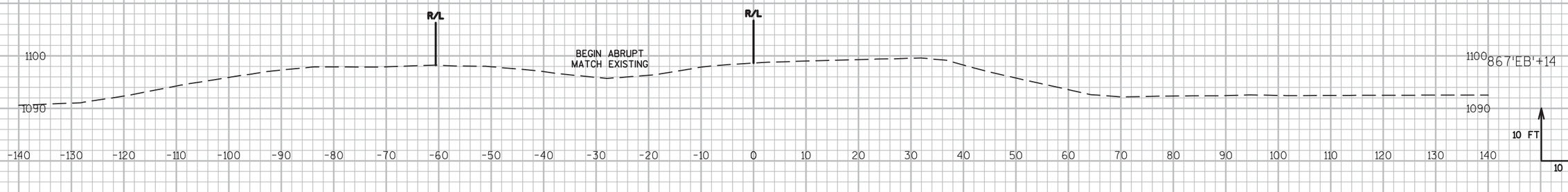


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PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB-MAINTENANCE CROSSOVERS	SHEET 524	E



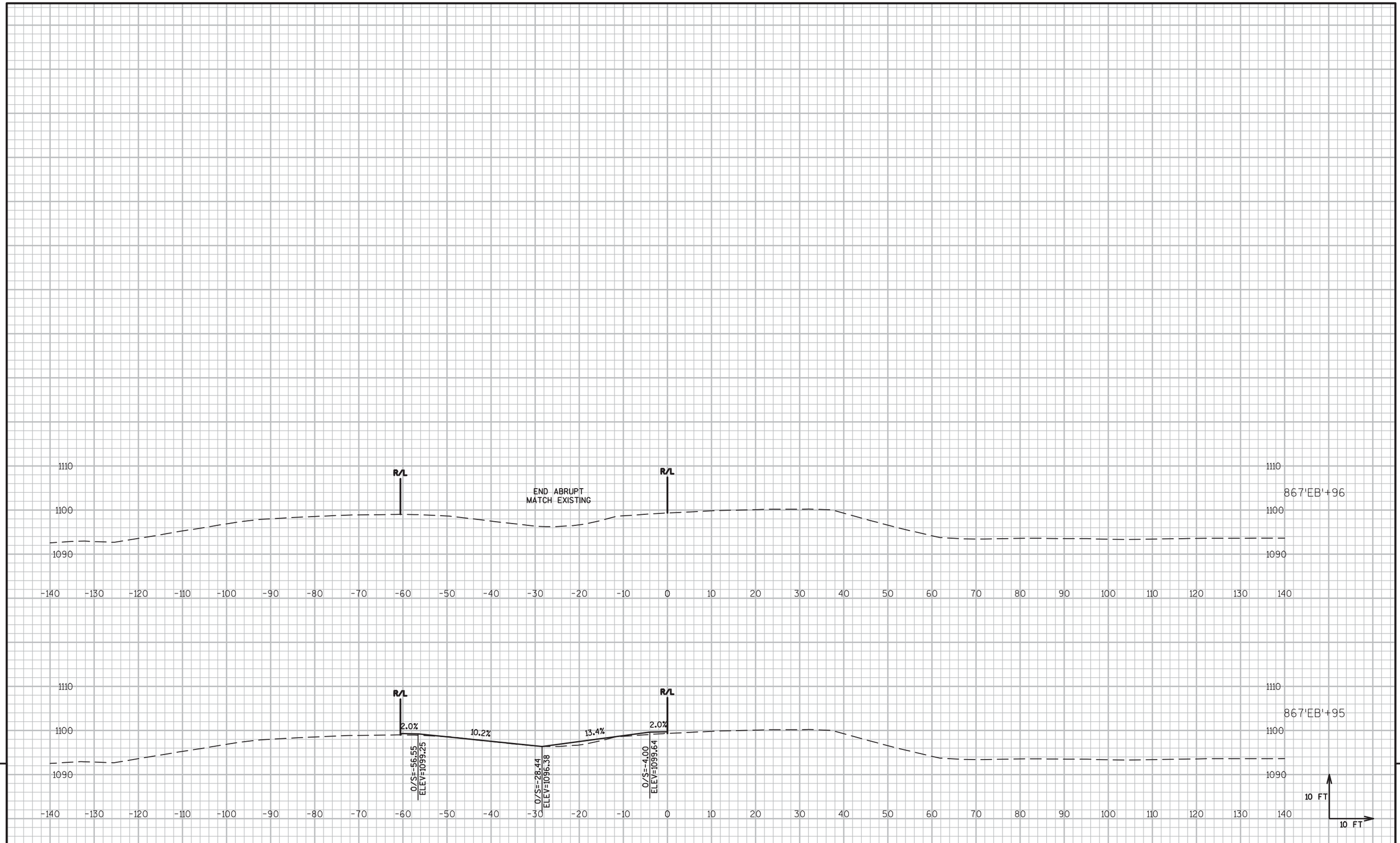


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PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB-MAINTENANCE CROSSOVERS	SHEET 525	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090209-XS.DWG PLOT DATE : 7/29/2016 11:25 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



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PROJECT NO: 1052-01-62	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB-MAINTENANCE CROSSOVERS	SHEET 526	E

FILE NAME : P:\48XX\4896-4897.DP.15.STH29.CHI\CADDS\10500191\SHEETSPLAN\090209-XS.DWG PLOT DATE : 7/29/2016 11:25 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 49

Notes

Wisconsin Department of Transportation

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