EAU

JANUARY 2026

PROJECT ID: 1050-00-60

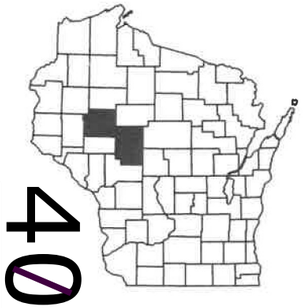
WITH: N/A

COUNTY: CHIPPEWA/CLARK

ORDER OF SHEETS

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

TOTAL SHEETS = 238



40

N

DESIGN DESIGNATION

A.A.D.T.	2026	=	15,580
A.A.D.T.	2046	=	18,290
D.H.V.		=	2,140
D.D.		=	60/40
T.		=	20.2%
DESIGN SPEED		=	65 MPH
ESALS		=	5,330,000

CONVENTIONAL SYMBOLS

PLAN

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

PROFILE

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

UTILITIES

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

CHIPPEWA FALLS - ABBOTSFORD

320TH ST TO KOSER AVE EB & WB

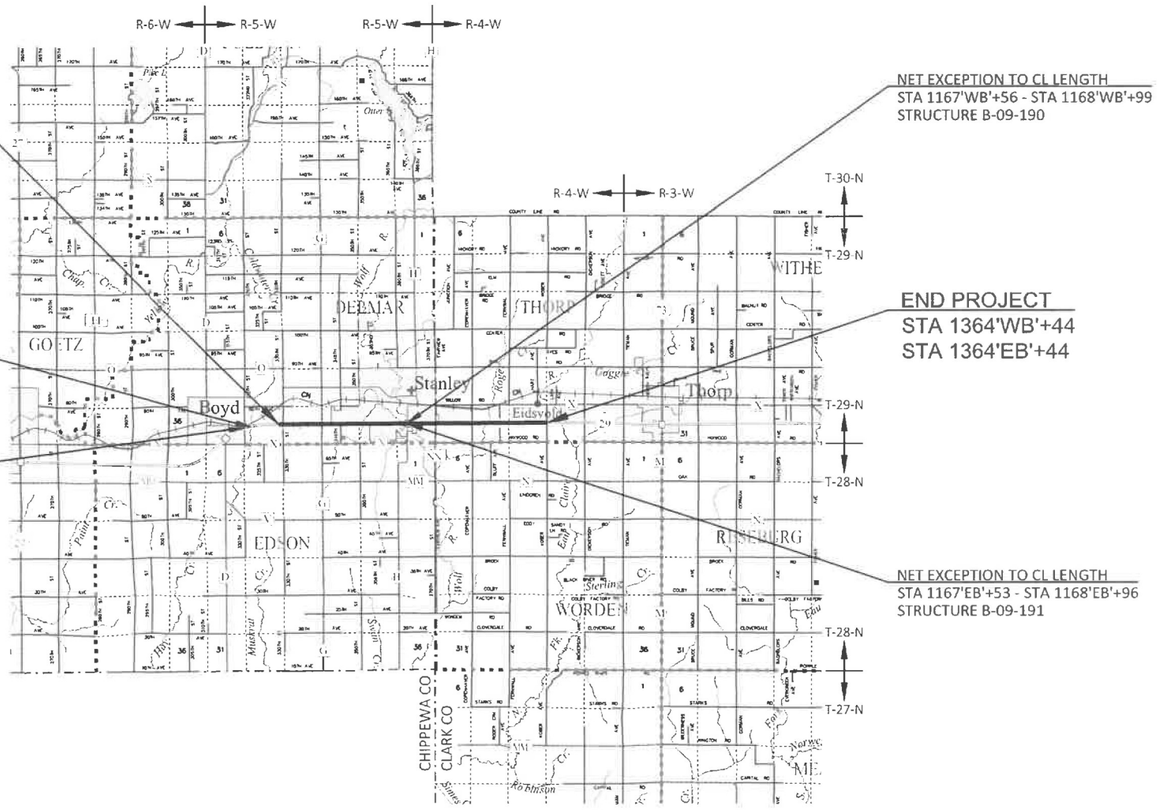
STH 29

CHIPPEWA AND CLARK COUNTIES

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1050-00-60	WISC 2026157	1

STATE PROJECT NUMBER

1050-00-60



BEGIN PROJECT
STA 990'WB'+00
Y=135324.322
X=271532.807
STA 990'EB'+00
Y=135264.492
X=271534.761

STRUCTURE B-09-0029

BEGIN CONSTRUCTION
STA 941'WB'+24
STA 940'EB'+29

NET EXCEPTION TO CL LENGTH
STA 1167'WB'+56 - STA 1168'WB'+99
STRUCTURE B-09-190

END PROJECT
STA 1364'WB'+44
STA 1364'EB'+44

NET EXCEPTION TO CL LENGTH
STA 1167'EB'+53 - STA 1168'EB'+96
STRUCTURE B-09-191

LAYOUT

SCALE 0 4 MI

TOTAL NET LENGTH OF CENTERLINE = 7.064 MI.

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATES CALIBRATED TO, CHIPPEWA COUNTY, NAD83 (2011), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES. CALIBRATED CONTROL PROVIDED BY THE DEPARTMENT MUST BE USED FOR THIS PROJECT.

ELEVATIONS ARE REFERENCED TO NAVD 88 (2012). GPS DERIVED ELEVATIONS ARE BASED ON GEOID 12.

ORIGINAL PLANS PREPARED BY

CORRE ENGINEERING

MADISON | EAU CLAIRE | WAUKESHA | APPLETON | TOMAH | WAUSAU

WISCONSIN KEVIN L. MEYER E-38309-006 ELK MOUND WI PROFESSIONAL ENGINEER

DATE: _____ (Professional Engineer Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	WISDOT & CORRE, INC.
Designer	CORRE, INC.
Project Manager	NICHOLAS PITSCH, PE
Regional Examiner	TOU YANG, PE
Regional Supervisor	TYLER RONGSTAD, PE

APPROVED FOR THE DEPARTMENT

DATE: _____ Nicholas Pitsch (Signature)

E

FILE NAME : C:\OD\ONEDRIVE - CORRE, INC\00_NW REGION\1050-00-30_CLARK CO_STH 29\500_CADD\501_C3D_2024\10500030\SHEETS\010101-TI.DWG

PLOT DATE : 6/23/2025 3:06 PM

PLOT BY : NOAH BELLING

PLOT NAME :

GENERAL NOTES:

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

UTILITIES WERE SURVEYED IN AREAS OF PROPOSED GRADING.

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

CURVE DATA IS BASED ON THE ARC DEFINITION.

THE EXACT LOCATION OF THE EROSION CONTROL DEVICES SHALL BE DETERMINED IN THE FIELD.

ALL CURB AND GUTTER RADII, PAVEMENT DIMENSIONS, AND STATIONS ARE SHOWN TO THE EDGE OF PAVEMENT UNLESS NOTED OTHERWISE.

A VERTICAL SAWCUT SHALL BE MADE THROUGH EXISTING DRIVEWAYS AND PAVEMENTS AT REMOVAL LIMITS.

BEARINGS SHOWN ON THE PLAN ARE REFERENCED TO THE EXISTING ROADWAY CENTERLINE AND ARE ASSUMED.

ACCESS TO ALL RESIDENCES, BUSINESSES, AND DRIVEWAYS SHALL BE MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT.

WHEN THE QUANTITY OF THE ITEM OF BASE AGGREGATE DENSE OR HMA PAVEMENT IS MEASURED BY THE TON, THE DEPTH OR THICKNESS OF THE COARSE SHOWN ON THE PLANS IS APPROXIMATE, AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER.

HMA PAVEMENT AND ASPHALTIC SURFACE CALCULATIONS ARE BASED ON 112 LB/SY/IN.

MATCH EXISTING SUPERELEVATION RATES.

SDD "TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION" SHALL ONLY BE USED AS NEEDED FOR WORK OPERATIONS ON SIDE ROADS AND MEDIANS. THIS DETAIL SHALL NOT BE USED FOR MAINLINE WORK ON STH 29 EB OR WB.

PIPE UNDERDRAIN CURRENTLY EXISTS WITHIN THE PROJECT LIMITS. IF ANY IS DAMAGED DURING CONSTRUCTION ACTIVITIES, THE UNDERDRAIN SHALL BE REPAIRED, AT THE DIRECTION OF THE ENGINEER, AT NO COST TO THE DEPARTMENT.

AFTER THE PREPARATION OF FOUNDATION FOR ASPHALTIC PAVING AND PRIOR TO PLACEMENT OF THE LOWER LIFT OF HMA PAVEMENT, REFILL THE AREAS OF REMOVAL TO THE SURFACE OF THE CONCRETE SURFACE. THE DEPARTMENT WILL PAY FOR REFILLING THESE AREAS UNDER THE ASPHALTIC SURFACE PATCHING BID ITEM. BEFORE THE LOWER LAYER OF HMA PAVEMENT IS PLACED, CORRECT PATCHING MATERIAL THAT EXTENDS MORE THAN $\frac{1}{2}$ INCH ABOVE THE CONCRETE PAVEMENT SURFACE.

PROPOSED TRANSVERSE REMOVAL LIMITS FOR CONCRETE REPAIR AND REPLACEMENT SHALL BE PERPENDICULAR TO THE CENTERLINE OF THE AFFECTED ROADWAY.

THE EXACT LOCATIONS AND QUANTITIES OF CONCRETE PAVEMENT REPAIR AND REPLACEMENT SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

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 STRIPTURF:	.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 SLOPETURF:			.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 = 56.152 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 2.89 ACRES

UTILITIES CONTACTS

BRIGHTSPEED OF NORTH CENTRAL WISCONSIN, LLC
COMMUNICATION
TAYLOR AYLESWORTH
135 N 21ST ST
SUPERIOR, WI 54880
PHONE: (980) 376-1577
EMAIL: TAYLOR.AYLESWORTH@BRIGHTSPEED.COM

BRIGHTSPEED TELEVIDEO, INC.
COMMUNICATION
TAYLOR AYLESWORTH
135 N 21ST ST
SUPERIOR, WI 54880
PHONE: (980) 376-1577
EMAIL: TAYLOR.AYLESWORTH@BRIGHTSPEED.COM

BRIGHTSPEED OF WESTERN WI, LLC
COMMUNICATION
TAYLOR AYLESWORTH
135 N 21ST ST
SUPERIOR, WI 54880
PHONE: (980) 376-1577
EMAIL: TAYLOR.AYLESWORTH@BRIGHTSPEED.COM

CENTURYLINK COMMUNICATIONS, LLC
COMMUNICATION LINE
RYAN HEIKKILA
6540 SHINGLE CREEK PKWY
BROOKLYN CENTER, MN 55430
PHONE: (612) 741-2782
EMAIL: RYAN.HEIKKILA@LUMEN.COM

CLARK ELECTRIC COOPERATIVE
ELECTRICITY
JOSH BURNS
1209 W DAL-BERG ST
GREENWOOD, WI 54437-0190
PHONE: (715) 456-3364
EMAIL: JBURNS@CECOOP.COM

CHIPPEWA VALLEY ELECTRIC COOPERATIVE
ELECTRICITY
NIC ALBERSON
317 S 8TH ST
CORNELL, WI, 54732
PHONE: (715) 239-6800
EMAIL: NALBERSON@CVE.COOP

DAIRYLAND POWER COOPERATIVE
ELECTRICITY
MIKE LYDON
3200 EAST AVE S
LA CROSSE, WI 54602-0817
PHONE: (608) 787-1381
EMAIL: MICHAEL.LYDON@DAIRYLANDPOWER.COM

STANLEY MUNICIPAL WATERWORKS
WATER
JON STRAND
770 TECHNOLOGY WAY, SUITE 1A
CHIPPEWA FALLS, WI 54729
PHONE: (715) 829-7979
EMAIL: JSTRAND@CBSSQUAREDINC.COM

SPECTRUM
COMMUNICATION
SUNNY RICHARDSON
1201 McCANN DRIVE
ALTOONA, WI 54720
PHONE: (715) 896-6503
EMAIL: SUNNY.RICHARDSON@CHARTER.COM

STANLEY WASTEWATER TREATMENT FACILITY
SEWER
NICK MARTIN
200 STATE STREET
STANLEY, WI, 54768
PHONE: (715) 703-0859
EMAIL: NMARTIN@CI.STANLEY.WI.GOV

WE ENERGIES
GAS/PETROLEUM
SANDRA BEHLEN
1921 8TH STREET SOUTH
WISCONSIN RAPIDS, WI 54494
PHONE: (715) 213-5189
EMAIL: WE-UTILITY-RELOCATIONS@WE-ENERGIES.COM

XCEL ENERGY
ELECTRICITY
KELLI GAGO
310 HICKORY HILLS LANE
PHILLIPS, WI 54555
PHONE: (715) 737-1150
EMAIL: KELLI.K.GAGO@XCELENERGY.COM

XCEL ENERGY
ELECTRICITY TRANSMISSION
MITCHELL DIENGER
414 NICOLLET MALL
MINNEAPOLIS, MN 55401
PHONE: (612) 321-3109
EMAIL: MITCHELL.A.DIENGER@XCELENERGY.COM

WISDOT CONTACT

WISDOT
NICHOLAS PITSCH
718 W CLAIREMONT AVE
EAU CLAIRE, WI, 54701
PHONE: (715) 225-1271
EMAIL: NICHOLAS.PITSCH@DOT.WI.GOV

WISDOT CONTACT

WISDOT RWIS PROGRAM
MICHAEL ADAMS
PO BOX 7986
MADISON, WI, 53707
PHONE: (608) 266-5004
EMAIL: MICHAEL.ADAMS@DOT.WI.GOV

CONSULTANT CONTACT

CORRE, INC.
KEVIN MEYER
1802 WARDEN ST
EAU CLAIRE, WI 54701
PHONE: (715) 299-1894
EMAIL: KMEYER@CORREINC.COM

DNR CONTACT - CHIPPEWA CO

DNR EAU CLAIRE
LEAH NICOL
1300 W CLAIREMONT AVE
EAU CLAIRE, WI 54701
PHONE: (715) 934-9014
EMAIL: LEAH.NICOL@WISCONSIN.GOV

DNR CONTACT - CLARK CO

DNR BLACK RIVER FALLS
BRAD BETTHAUSER
910 STH 54
BLACK RIVER FALLS, WI 54615
PHONE: (715) 213-9064
EMAIL: BRAD.BETTHAUSER@WISCONSIN.GOV

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

ORDER OF SECTION 2 DETAIL SHEETS

GENERAL NOTES
PROJECT OVERVIEW
TYPICAL SECTIONS
CONSTRUCTION DETAILS
INTERSECTION DETAILS
PLAN DETAILS
PAVEMENT MARKING
DETOURS

2

Boyd

Stanley

80TH AVE

320TH ST

330TH ST

345TH ST

Cr.

Hay

Wolf

R.

BEGIN CONSTRUCTION
STA 941'WB'+24
STA 940'EB'+29

STRUCTURE B-09-302
TO REMAIN
BR. HAY CREEK

STRUCTURE B-09-029
SEE STRUCTURE PLANS
HAY CREEK

BEGIN PROJECT
STA 990'WB'+00
STA 990'EB'+00

950 1000 1050 1100 1150

29

97

COUNTY D
COUNTY X
COUNTY G
COUNTY H

STRUCTURE C-09-007
TO REMAIN
BR WOLF RIVER

STRUCTURE C-09-008
TO REMAIN
BR WOLF RIVER

NET EXCEPTION TO CL LENGTH
STA 1167'WB'+56 - STA 1168'WB'+99
STRUCTURE B-09-190 TO REMAIN
CTH H

NET EXCEPTION TO CL LENGTH
STA 1167'EB'+53 - STA 1168'EB'+96
STRUCTURE B-09-191 TO REMAIN
CTH H

STRUCTURE C-09-034
TO REMAIN
WOLF RIVER

STRUCTURE B-09-025
TO REMAIN
WOLF RIVER

STA 1195+00

325TH ST

N

2

CHIPPEWA CO
CLARK CO

COPENHAVER AVE

CN

HWY 29

Eau

Claire

R.

PINE ST

COUNTY X
COUNTY NN
COUNTY N

RD NO. 2

KOSER AVE

DICKERSON AVE

BIR

Stanley

Eidsvold

Thorp

1200 1250 1300 1350

29

Roger

Cr.

STRUCTURE B-10-029
TO REMAIN
ROGER CREEK

END PROJECT
STA 1364'WB'+44
STA 1364'EB'+44

STA 1195+00

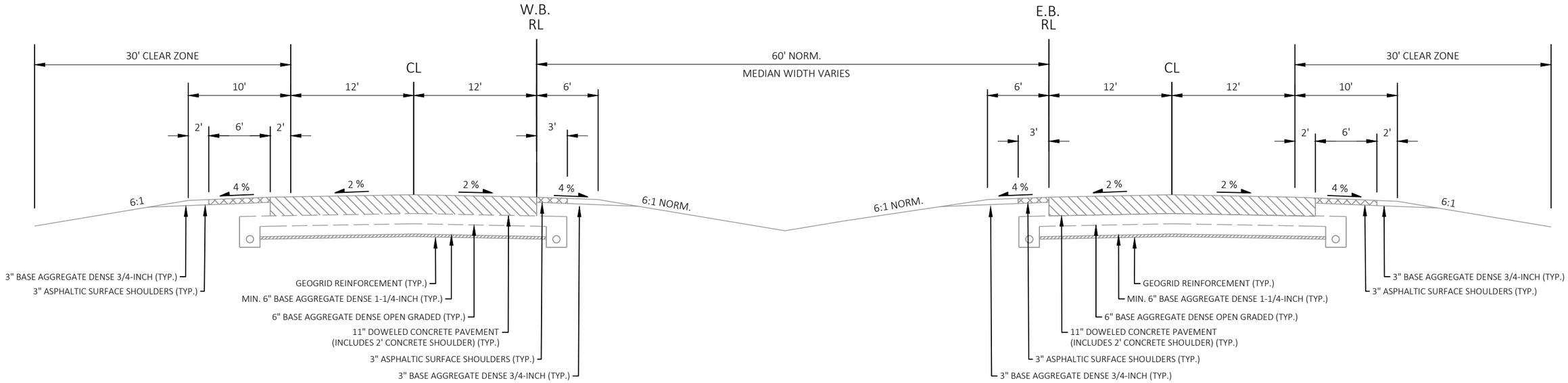
THORP WORDEN TOWNLINE RD

PROJECT NO: 1050-00-60	HWY: STH 29	COUNTY: CHIPPEWA & CLARK	PROJECT OVERVIEW	SHEET 3	E

FILE NAME : C:\OD\ONEDRIVE - CORRE, INC\MY PROJECTS\1050-00-30_CLARK CO_STH 29\500_CADD\501_C3D_2024\10500030\SHEETS\020201-PO.DWG
LAYOUT NAME - 01

PLOT DATE : 11/21/2025 11:51 AM PLOT BY : ANDREW PETERSON, PE PLOT NAME : PLOT SCALE : 1 IN:2000 FT

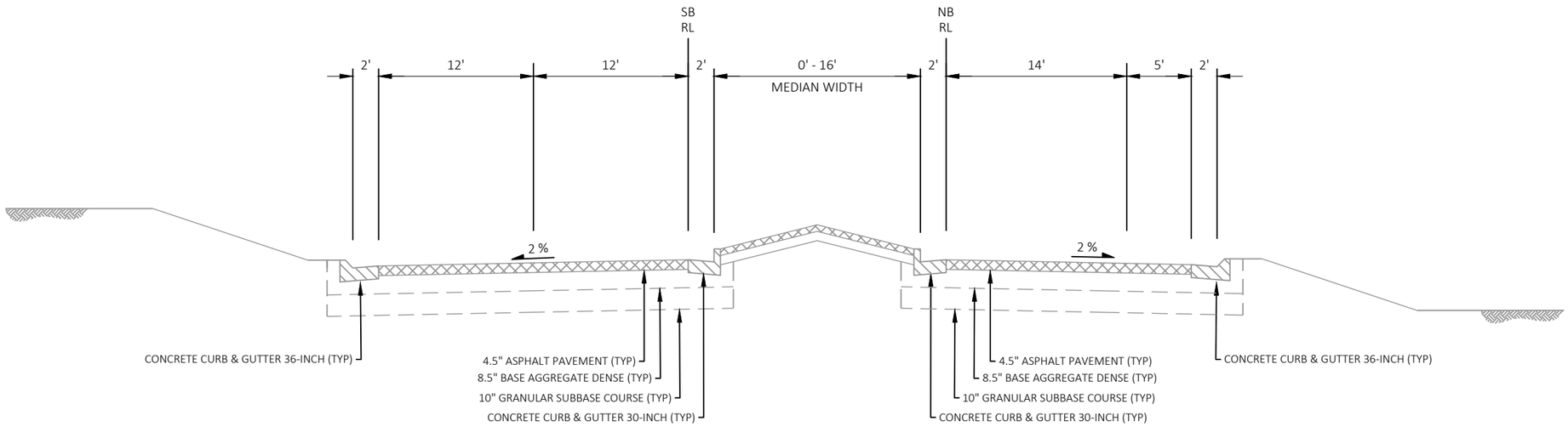
WISDOT/CADDS SHEET 44



EXISTING TYPICAL SECTION - STH 29

STA 990'WB'+00 - 1167+'WB'+56
STA 1168'WB'+99 - 1364'WB'+44

STA 990'EB'+00 - 1167+'EB'+53
STA 1168'EB'+96 - 1364'EB'+44

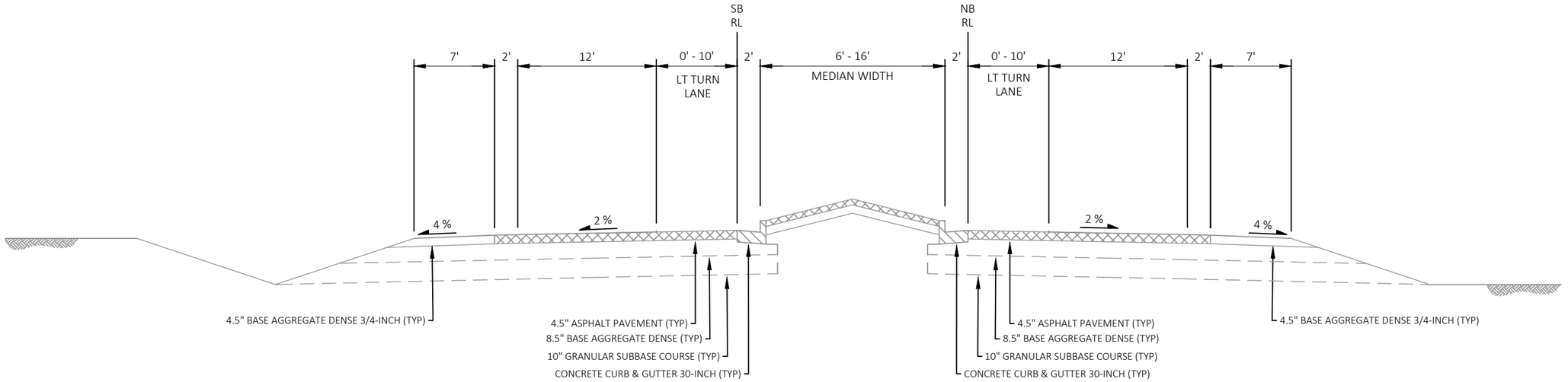


EXISTING TYPICAL SECTION - CTH H

STA 96'SB'+42 - 97'SB'+80
STA 98'NB'+62 - 100'NB'+00

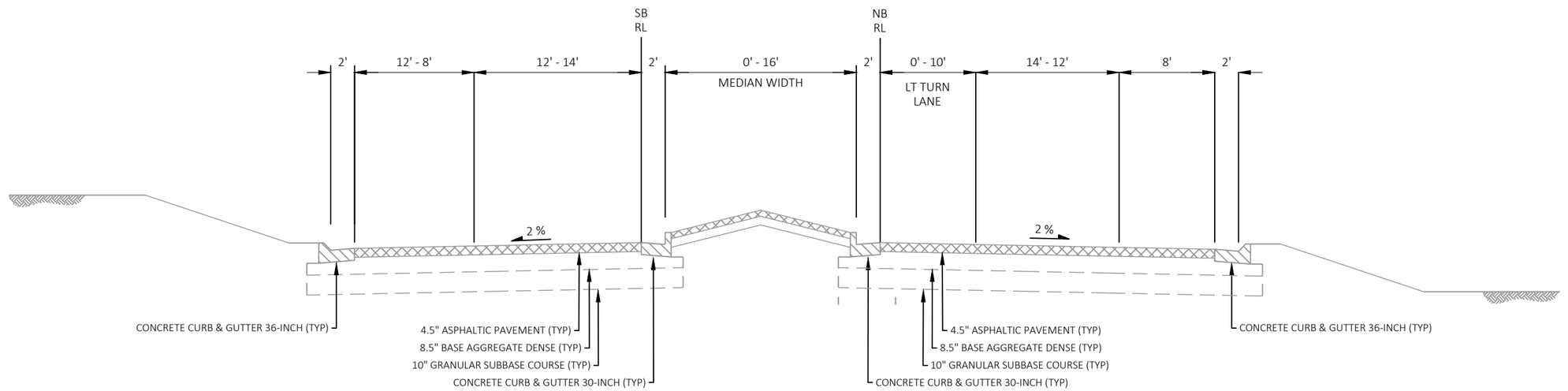
PROJECT NO: 1050-00-60	HWY: STH 29	COUNTY: CHIPPEWA & CLARK	TYPICAL SECTIONS	SHEET 4	E

2



EXISTING TYPICAL SECTION - CTH H

STA 97'SB'+80 - 102'SB'+30
STA 100'NB'+00 - 104'NB'+50

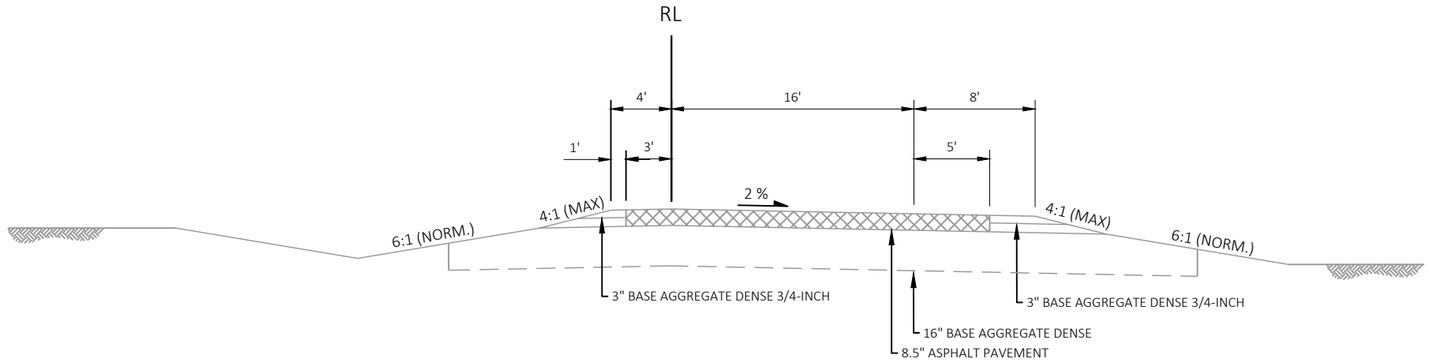


EXISTING TYPICAL SECTION - CTH H

STA 102'SB'+30 - 103'SB'+27
STA 104'NB'+50 - 105'NB'+47

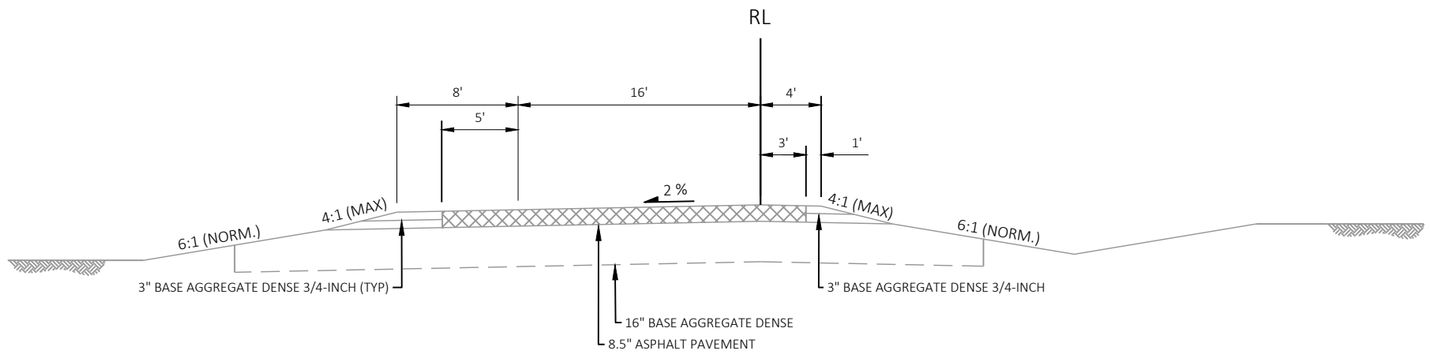
PROJECT NO: 1050-00-60	HWY: STH 29	COUNTY: CHIPPEWA & CLARK	TYPICAL SECTIONS	SHEET 5	E

2



EXISTING TYPICAL SECTION - EB ON/OFF RAMP

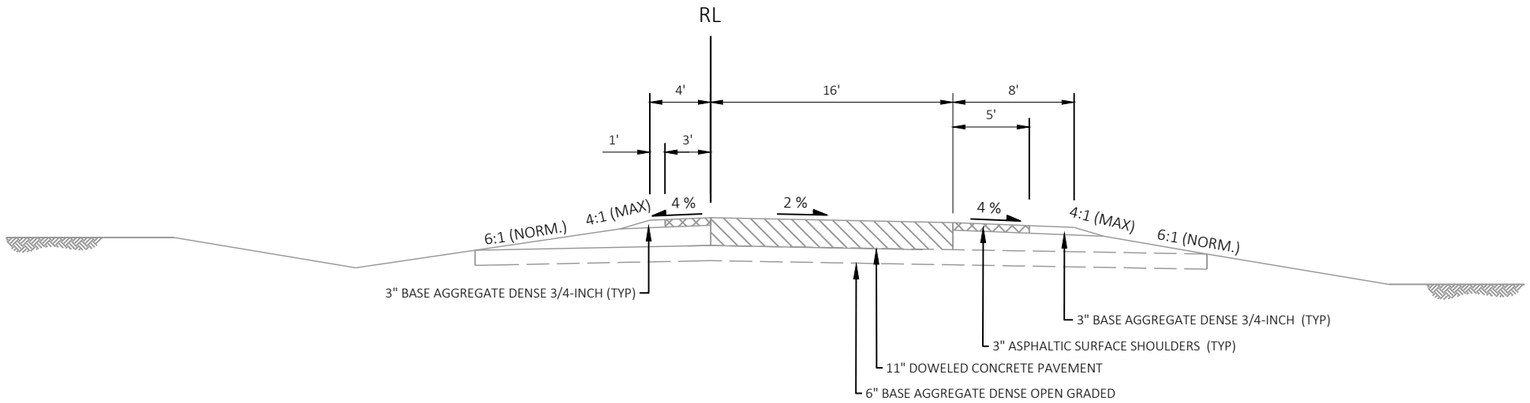
STA 33+34 - 41+08
STA 45+31 - 50+66



EXISTING TYPICAL SECTION - WB ON/OFF RAMP

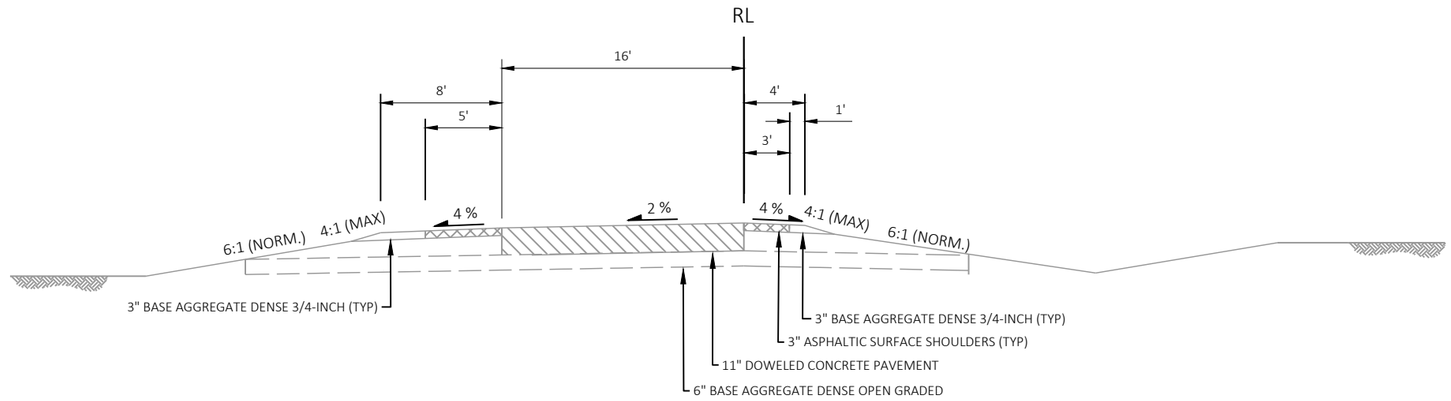
STA 19+23 - 24+56
STA 0+42 - 8+17

2



EXISTING TYPICAL SECTION - EB ON/OFF RAMP

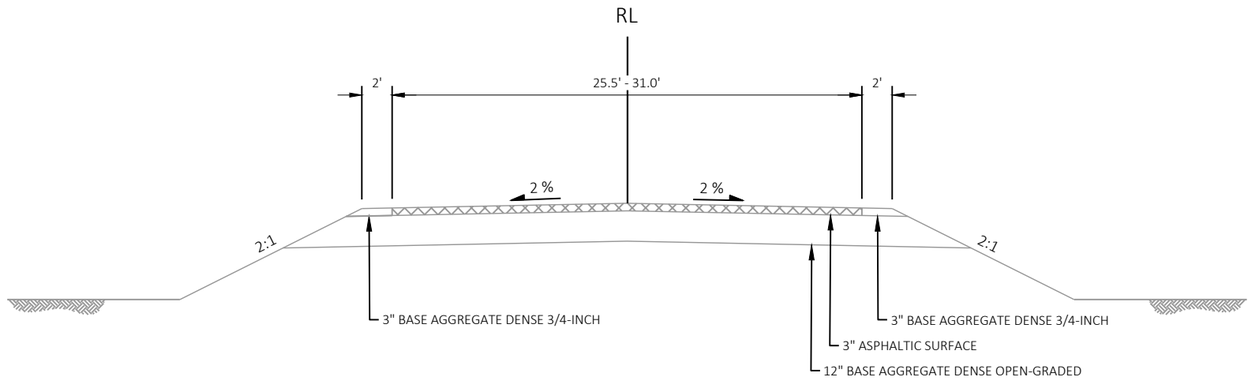
STA 30+00 - 33+34
STA 50+66 - 54+72



EXISTING TYPICAL SECTION - WB ON/OFF RAMP

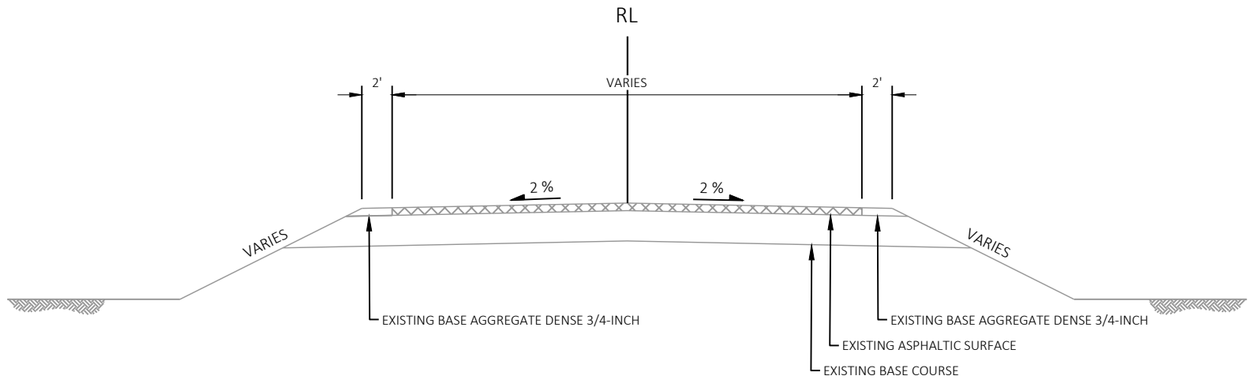
STA 15+00 - 19+23
STA 8+17 - 11+55

2



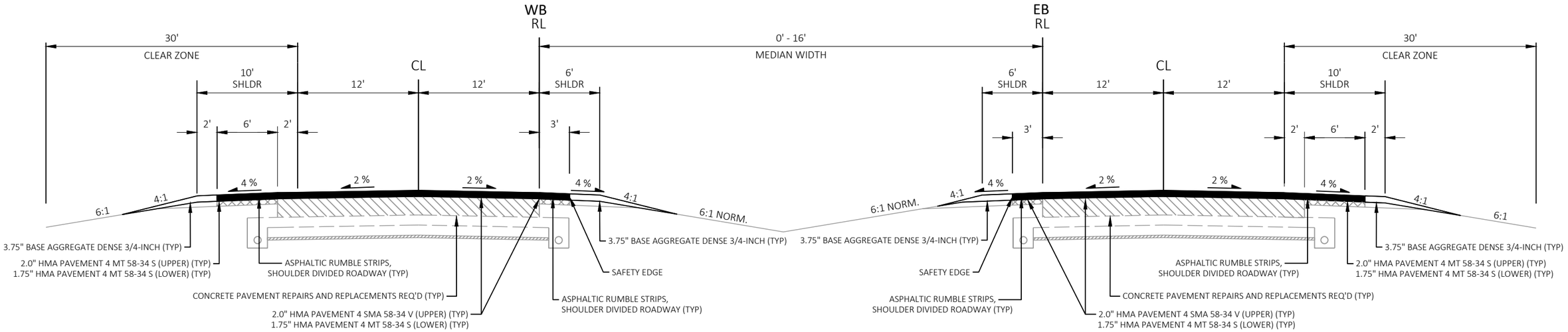
EXISTING TYPICAL SECTION - 320TH ST

STA 11+93 - 12+53



EXISTING TYPICAL SECTION - SIDE ROADS

330TH ST
CTH G
345TH ST
CTH NN
COPENHAVER AVE



* PLACE HMA PAVEMENT LAYERS WITH THE FOLLOWING THICKNESS, LOCATION, AND TYPE:

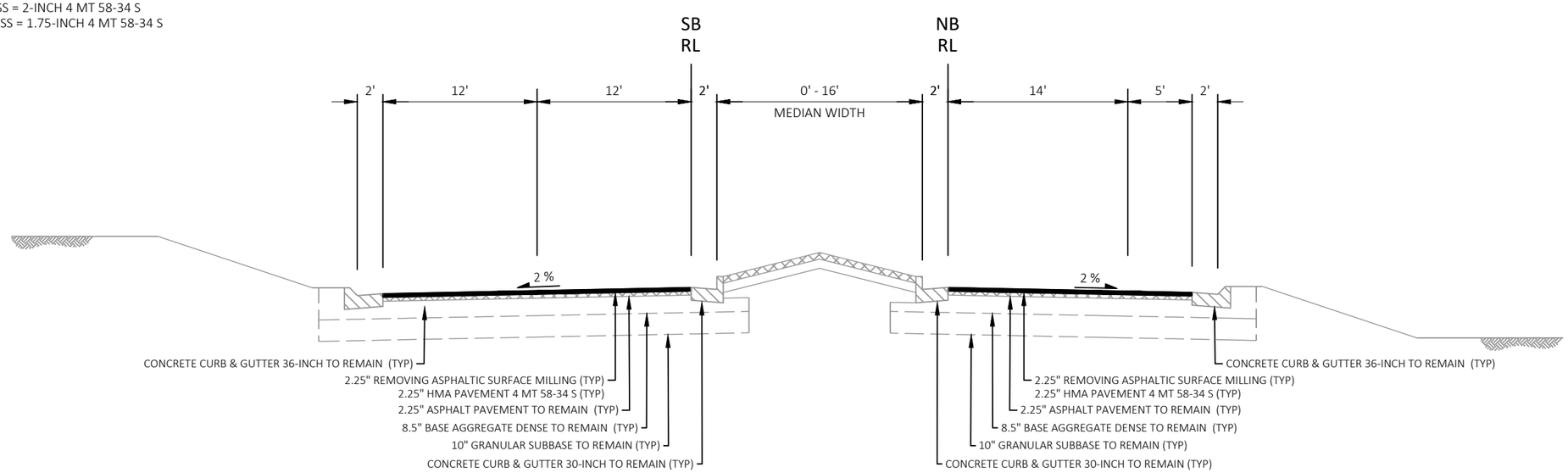
HMA PAVEMENT 3.75-INCH (MAINLINE, INSIDE SHOULDER, AND INNER 2' OF OUTSIDE SHOULDER)
UPPER LAYER THICKNESS = 2-INCH 4 SMA 58-34 V
LOWER LAYER THICKNESS = 1.75-INCH 4 MT 58-34 V

HMA PAVEMENT 3.75-INCH (OUTER 6' OF OUTSIDE SHOULDER)
UPPER LAYER THICKNESS = 2-INCH 4 MT 58-34 S
LOWER LAYER THICKNESS = 1.75-INCH 4 MT 58-34 S

FINISHED TYPICAL SECTION - STH 29*

STA 990'WB'+00 - 1167+'WB'+56
STA 1168'WB'+99 - 1364'WB'+44

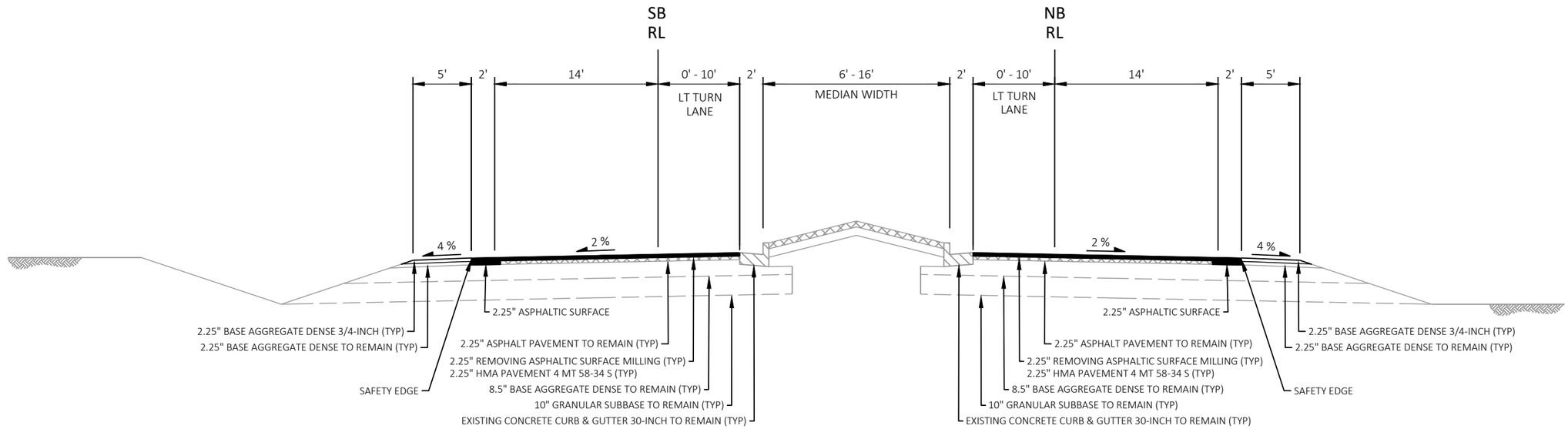
STA 990'EB'+00 - 1167+'EB'+53
STA 1168'EB'+96 - 1364'EB'+44



FINISHED TYPICAL SECTION - CTH H

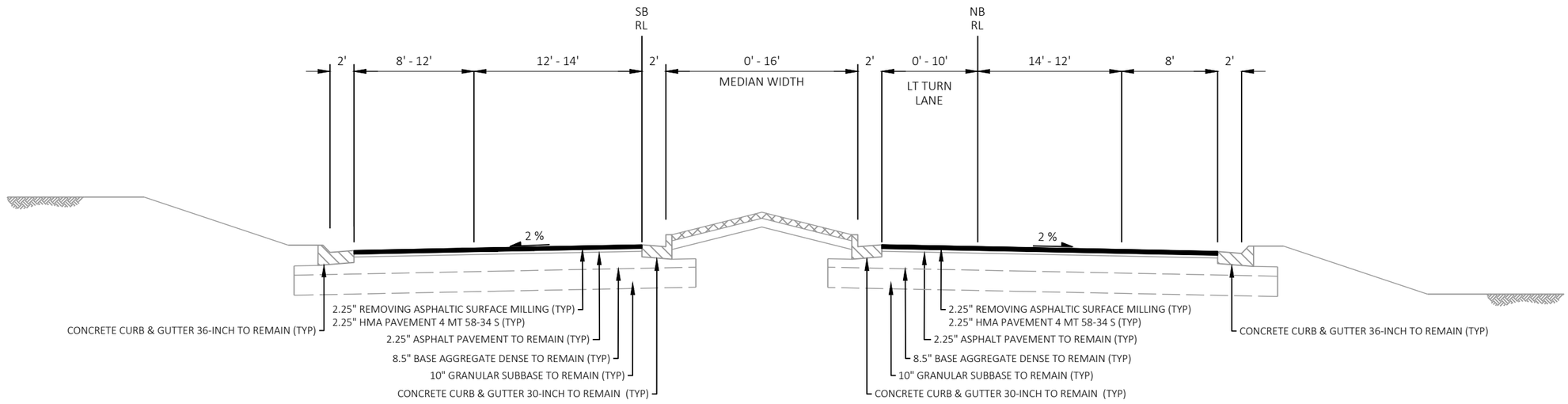
STA 96'SB'+42 - 97'SB'+80
STA 98'NB'+62 - 100'NB'+00

PROJECT NO: 1050-00-60	HWY: STH 29	COUNTY: CHIPPEWA & CLARK	TYPICAL SECTIONS	SHEET 9	E



FINISHED TYPICAL SECTION - CTH H

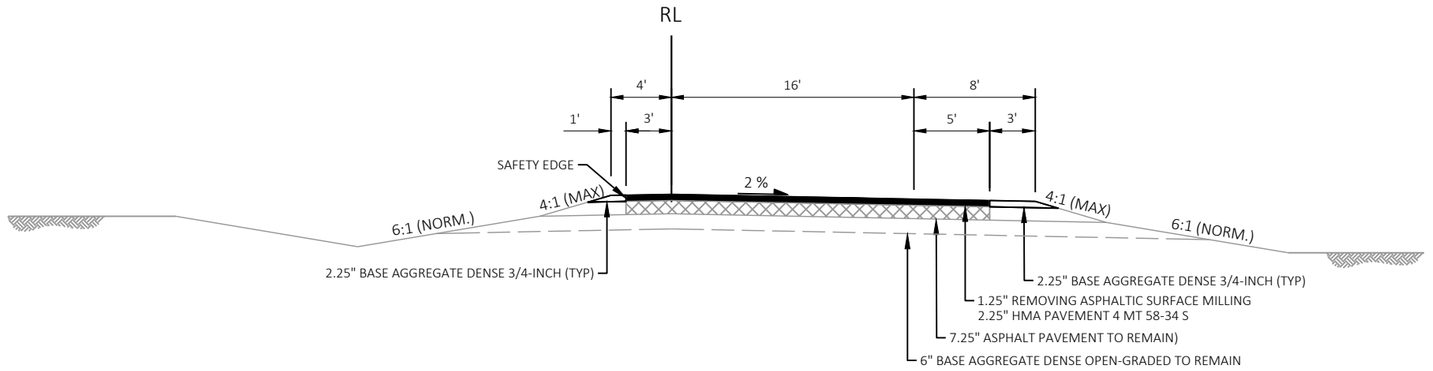
STA 97'SB'+80 - 102'SB'+30
STA 100'NB'+00 - 104'NB'+50



FINISHED TYPICAL SECTION - CTH H

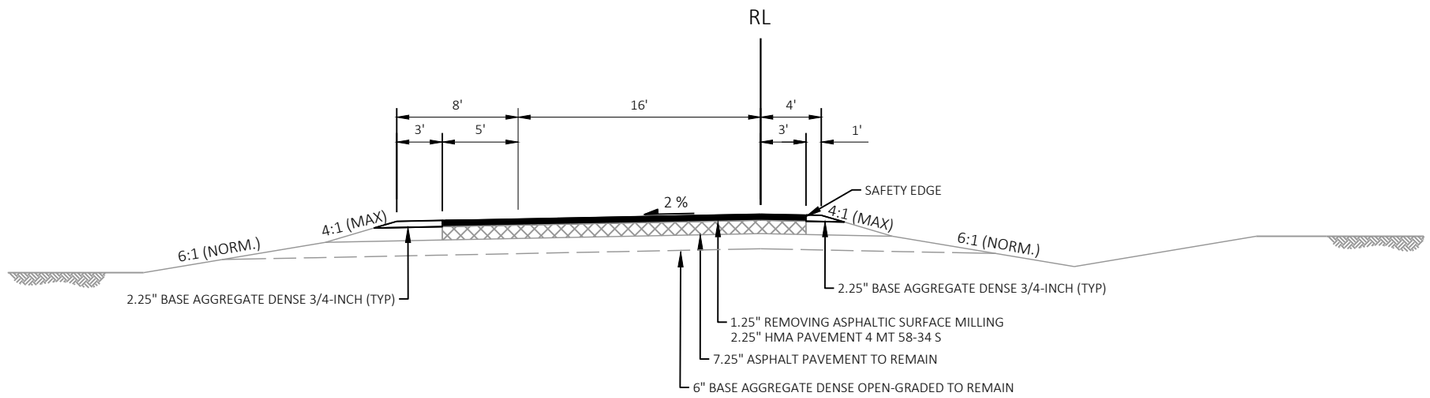
STA 102'SB'+30 - 103'SB'+27
STA 104'NB'+50 - 105'NB'+47

PROJECT NO: 1050-00-60	HWY: STH 29	COUNTY: CHIPPEWA & CLARK	TYPICAL SECTIONS	SHEET 10	E



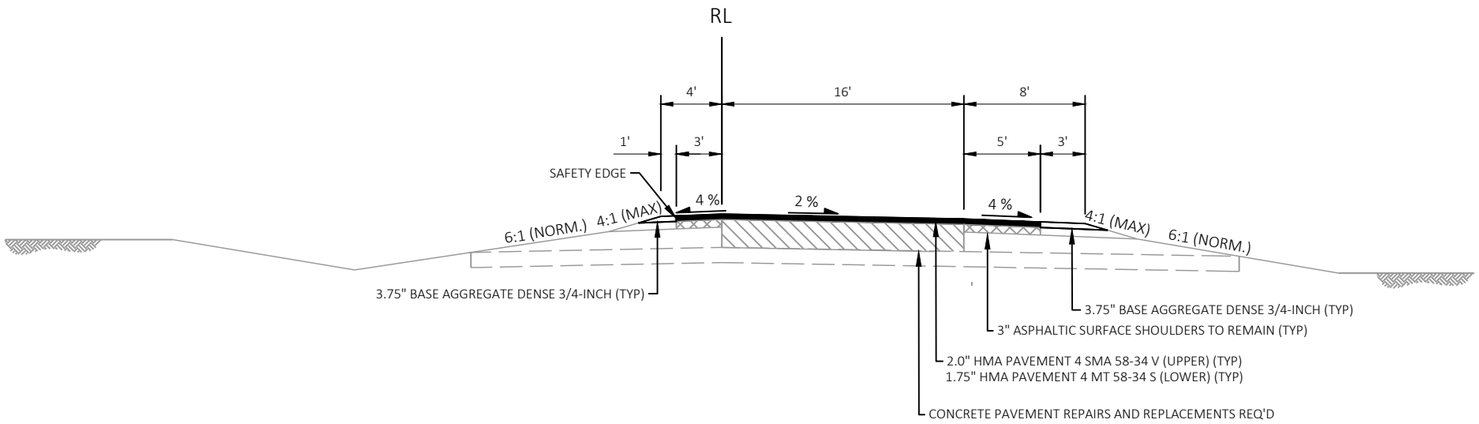
FINISHED TYPICAL SECTION - EB ON/OFF RAMP

STA 33+34 - 41+08
STA 45+31 - 50+66



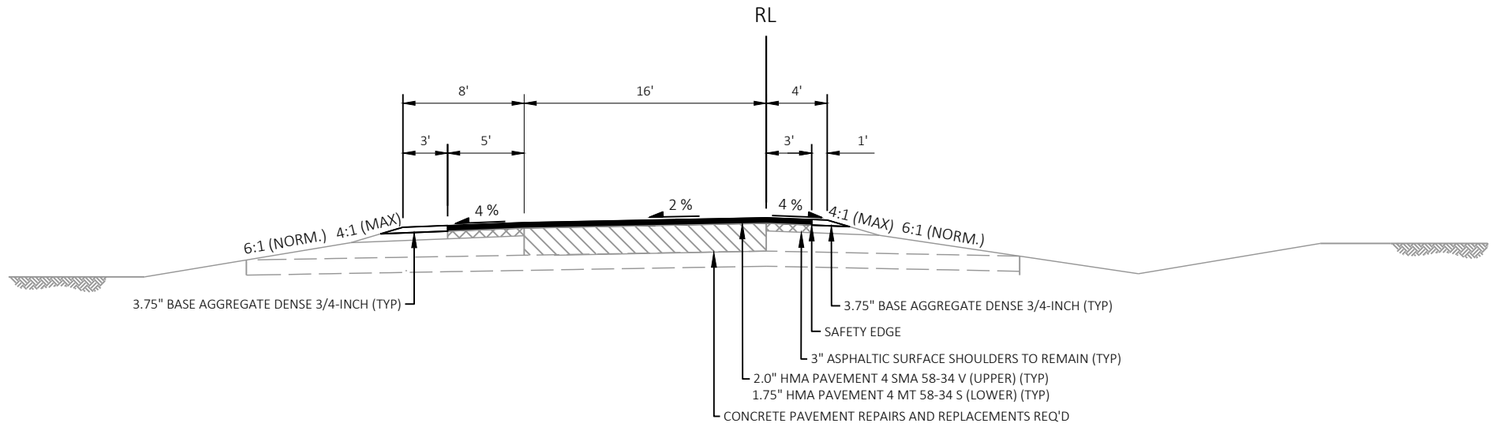
FINISHED TYPICAL SECTION - WB ON/OFF RAMP

STA 19+23 - 24+56
STA 0+42 - 8+17



FINISHED TYPICAL SECTION - EB ON/OFF RAMP

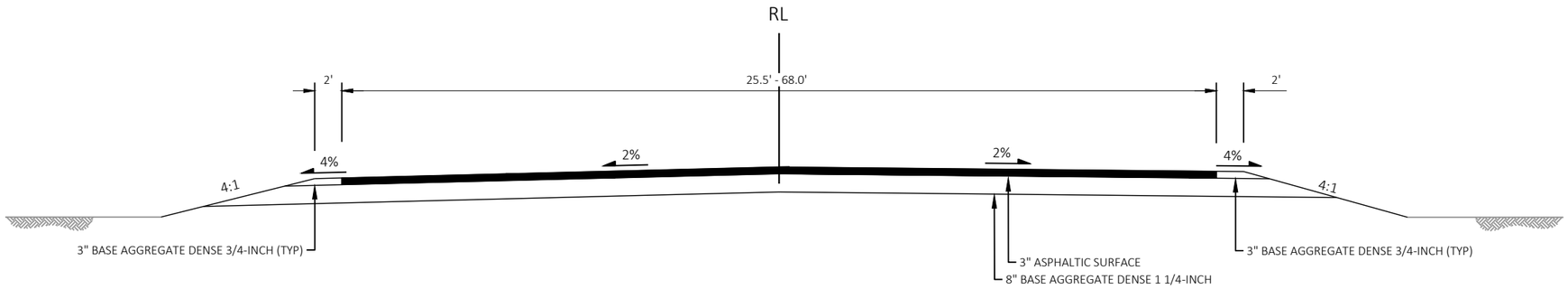
STA 30+00 - 33+34
STA 50+66 - 54+72



FINISHED TYPICAL SECTION - WB ON/OFF RAMP

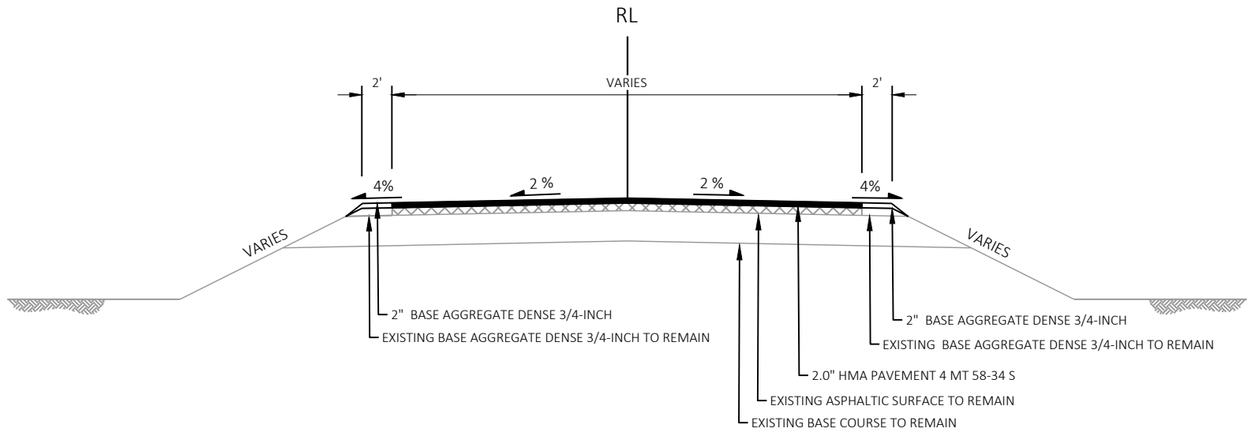
STA 15+00 - 19+23
STA 8+17 - 11+55

2



PROPOSED TYPICAL SECTION - 320TH ST

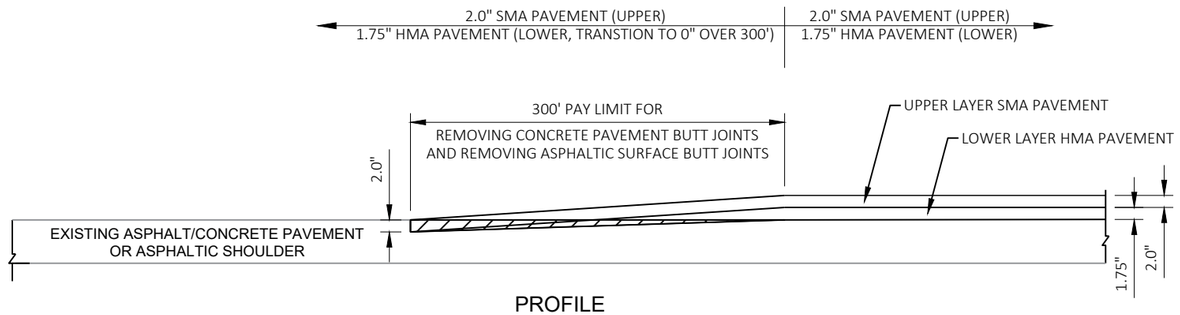
STA 11+93 - 12+53



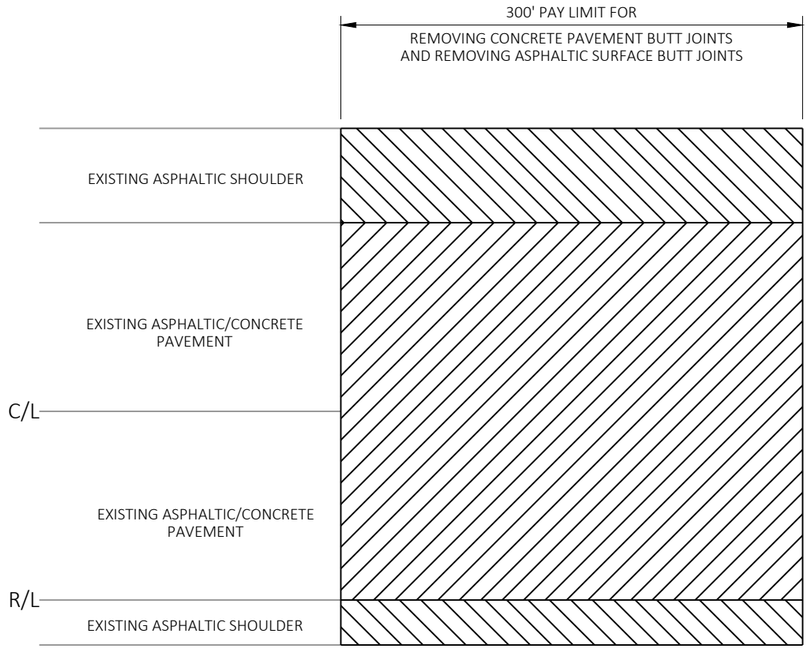
PROPOSED TYPICAL SECTION - SIDE ROADS

330TH ST
CTH G
345TH ST
CTH NN
COPENHAVER AVE

2



PROFILE



PLAN

REMOVING CONCRETE PAVEMENT BUTT JOINTS

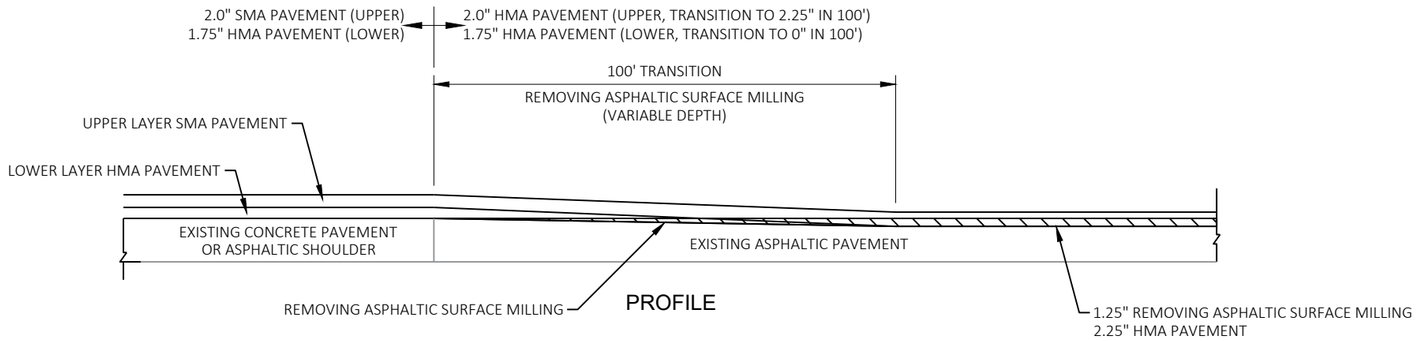
REMOVING ASPHALTIC SURFACE BUTT JOINTS

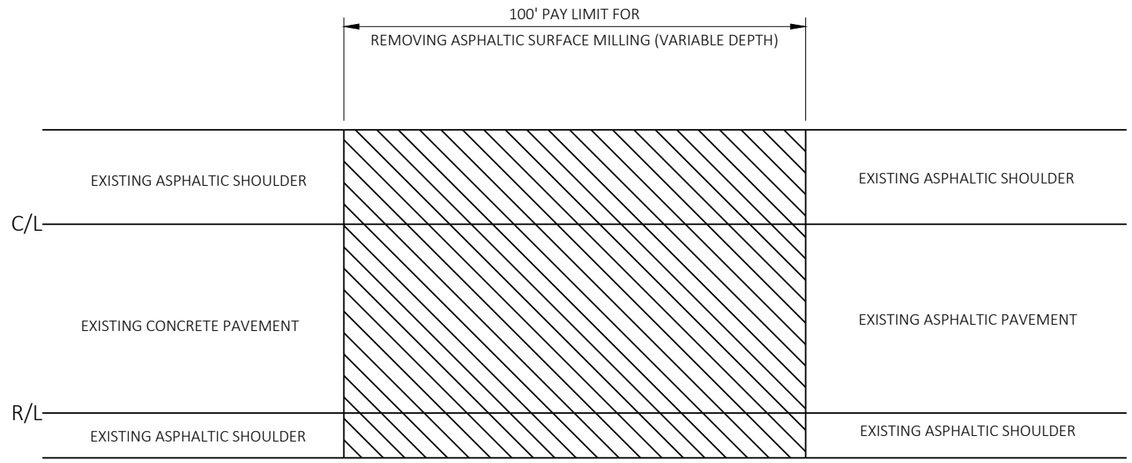
BUTT JOINTS

STH 29: STA 990'EB'+00 - 993'EB'+00
STH 29: STA 1164'EB'+32 - 1167'EB'+32
STH 29: STA 1169'EB'+17 - 1172'EB'+17
STH 29: STA 1361'EB'+44 - 1364'EB'+44

STH 29: STA 990'WB'+00 - 993'WB'+00
STH 29: STA 1164'WB'+35 - 1167'WB'+35
STH 29: STA 1169'WB'+20 - 1172'WB'+20
STH 29: STA 1361WB'+44 - 1364'WB'+44

2





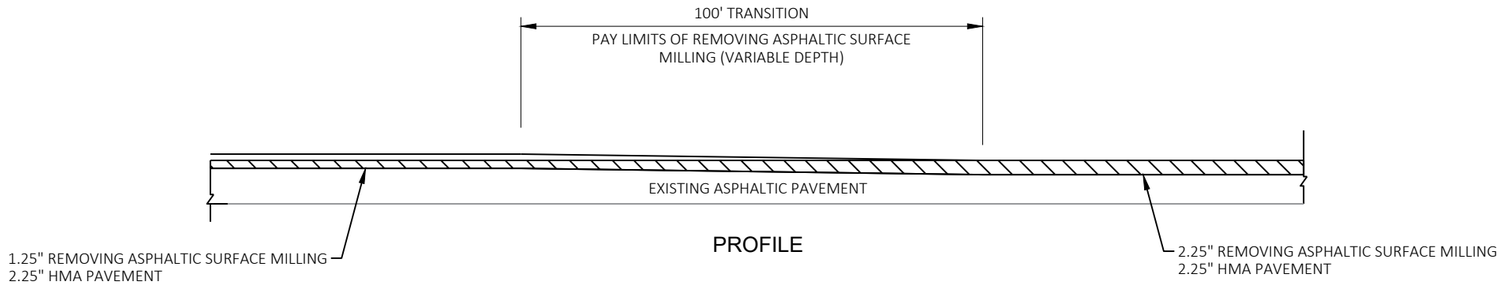
PLAN

REMOVING ASPHALTIC SURFACE BUTT JOINTS

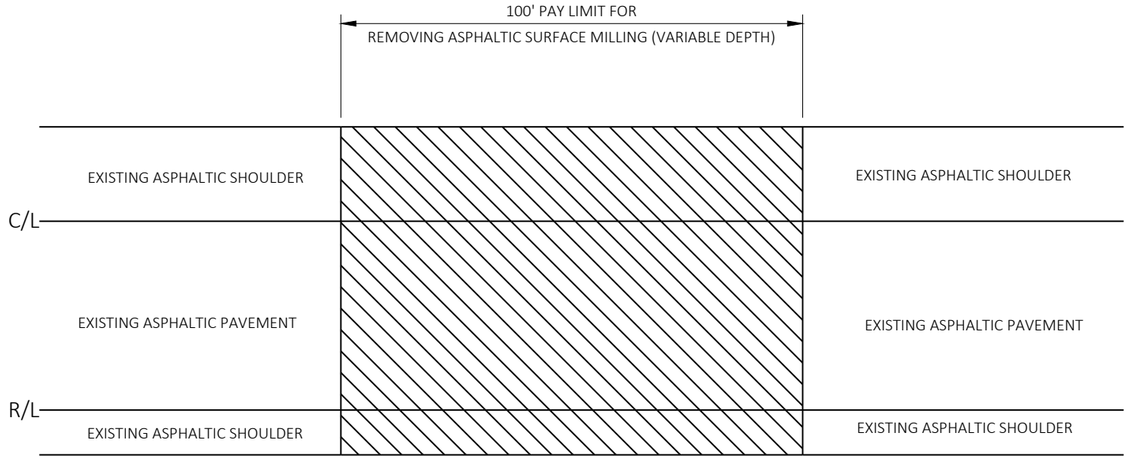
REMOVING ASPHALTIC SURFACE MILLING (VARIABLE DEPTH) AT RAMPS

CTH H RAMP (NW): STA 19+23 - 20+23
CTH H RAMP (SW): STA 33+34 - 34+34
CTH H RAMP (NE): STA 7+17 - 8+17
CTH H RAMP (SE): STA 49+66 - 50+66

2



PROFILE

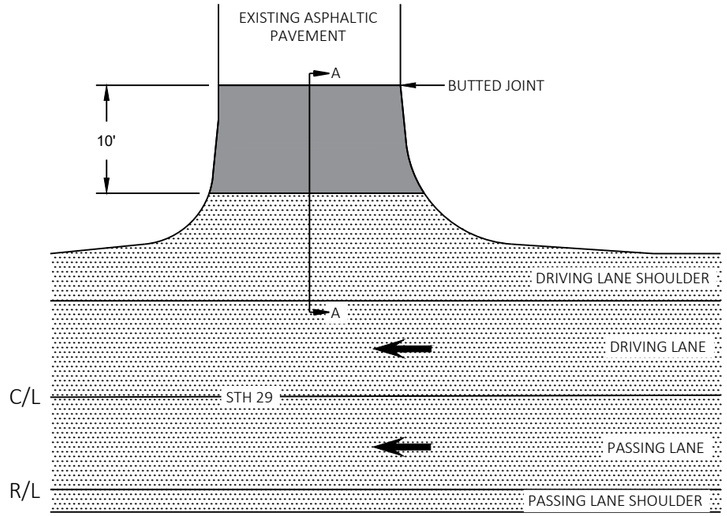


PLAN

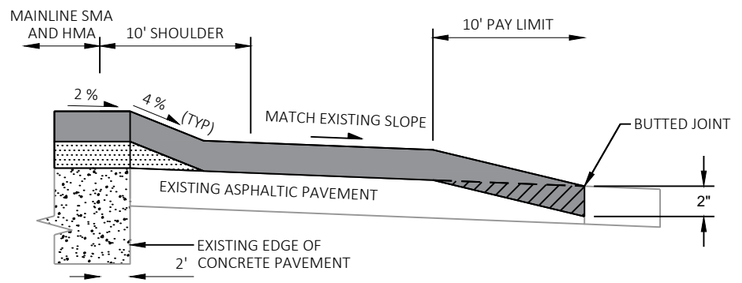
REMOVING ASPHALTIC SURFACE BUTT JOINTS

REMOVING ASPHALTIC SURFACE MILLING (VARIABLE DEPTH) AT CTH H

CTH H RAMP (NW): STA 23+56 - 24+56
CTH H RAMP (SW): STA 40+08 - 41+08
CTH H RAMP (NE): STA 0+42 - 1+42
CTH H RAMP (SE): STA 45+31 - 46+31



PLAN



PROFILE
SECTION A-A
(ALONG SIDE ROAD)

NOTES
OFFSET TO BUTTED JOINT SHOWN ON SECTION 2 INTERSECTION DETAILS AND SECTION 5 PLAN SHEETS.

SAW CUT REQUIRED WHEN ADJOINING EXISTING ASPHALTIC PAVEMENT.

REMOVING ASPHALTIC SURFACE BUTT JOINTS

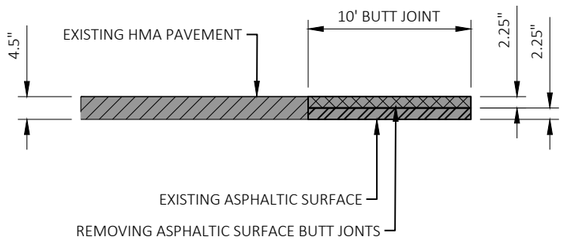
PROPOSED LOWER LAYER HMA PAVEMENT OVERLAY

PROPOSED UPPER LAYER HMA OR SMA OVERLAY

REMOVING ASPHALTIC SURFACE BUTT JOINTS AT SIDE ROADS

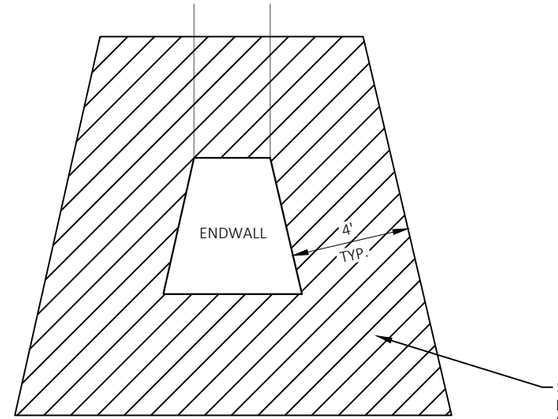
330TH ST
CTH G
345TH ST
CTH NN
COPENHAVER AVE

NOTE: SAWCUT REQ'D WHEN
ADJOINING EXISTING PAVEMENT.

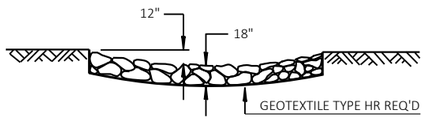


REMOVING ASPHALTIC SURFACE BUTT JOINTS

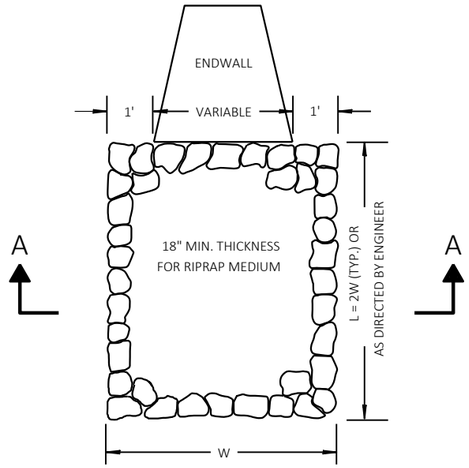
CTH H (NB)
CTH H (SB)



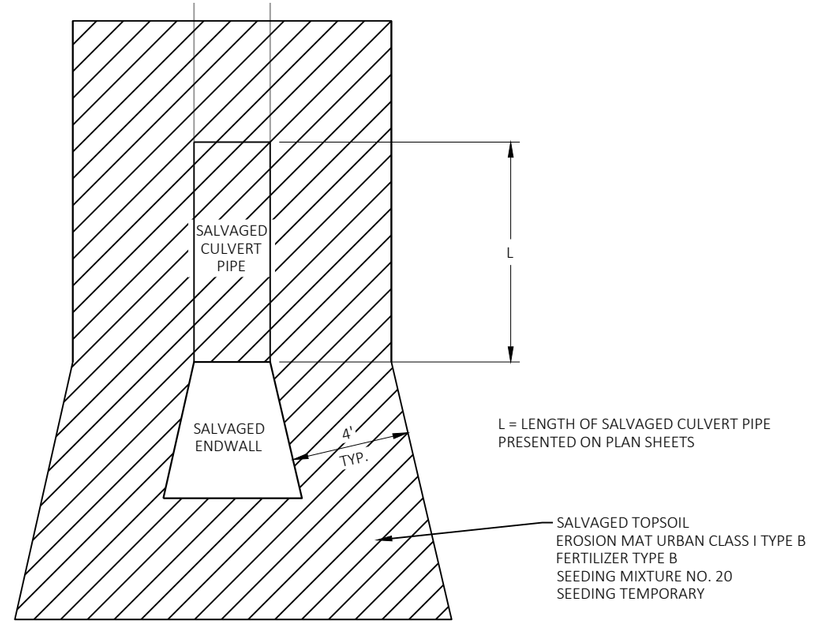
RESTORATION AT APRON ENDWALL REPLACEMENTS



SECTION A-A

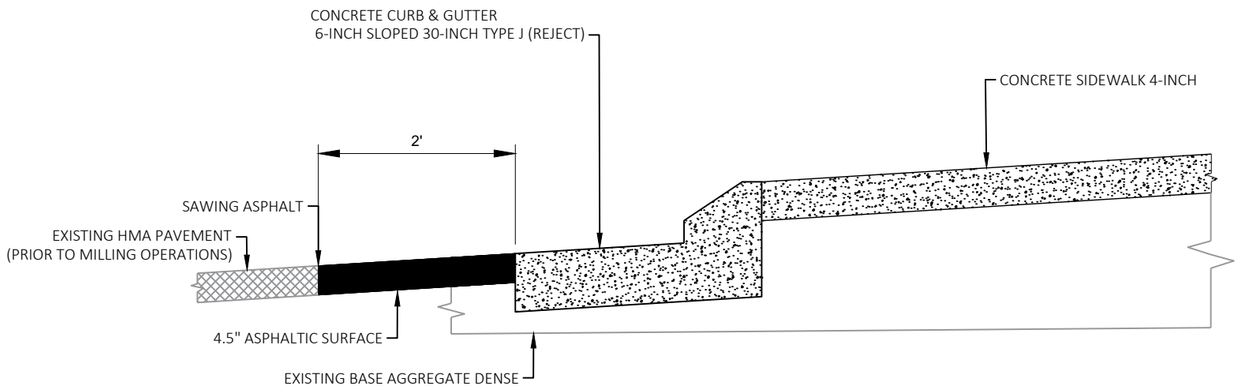


RIPRAP TREATMENT AT CULVERTS



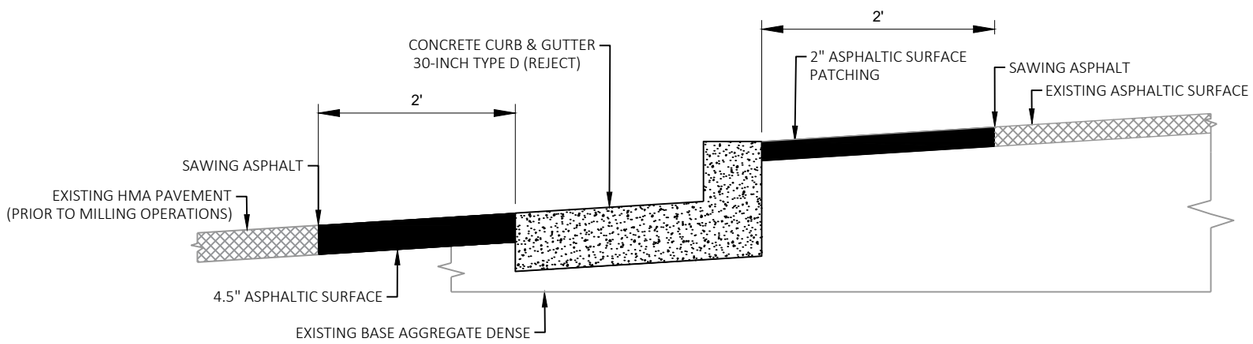
RESTORATION AT CULVERT PIPE SALVAGED INSTALLATIONS

2



RIGHT TURN ISLANDS

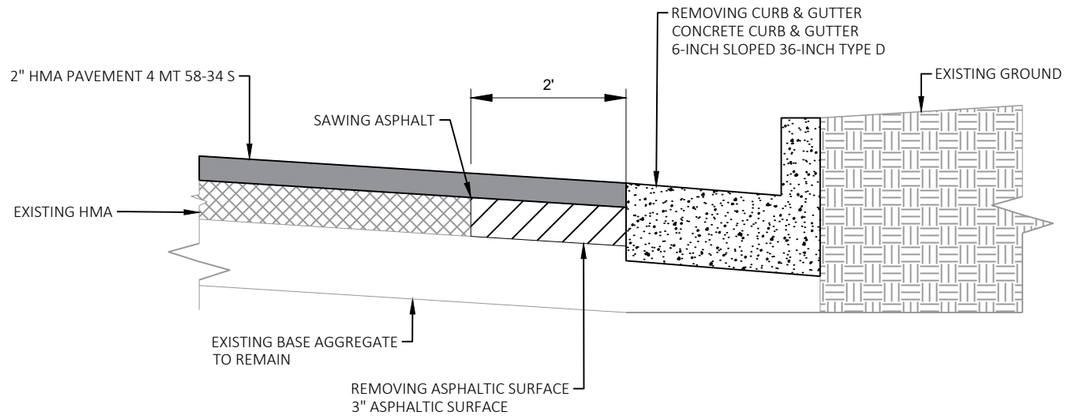
STH 29 EB OFF-RAMP
STH 29 WB OFF-RAMP
CTH NN



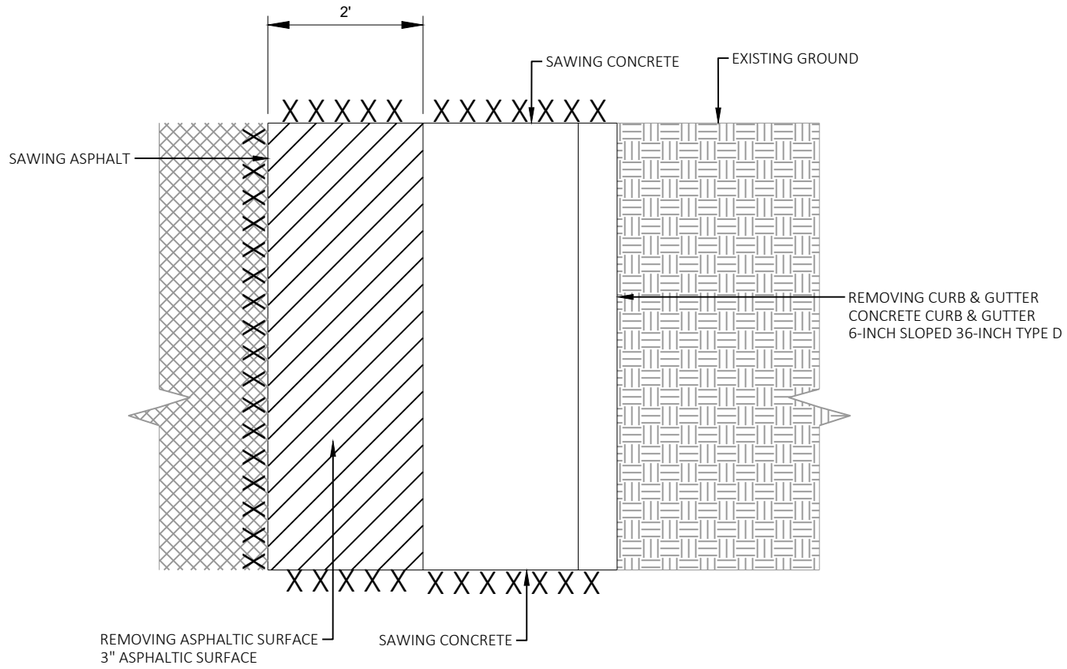
MEDIAN ISLAND

CTH H

2



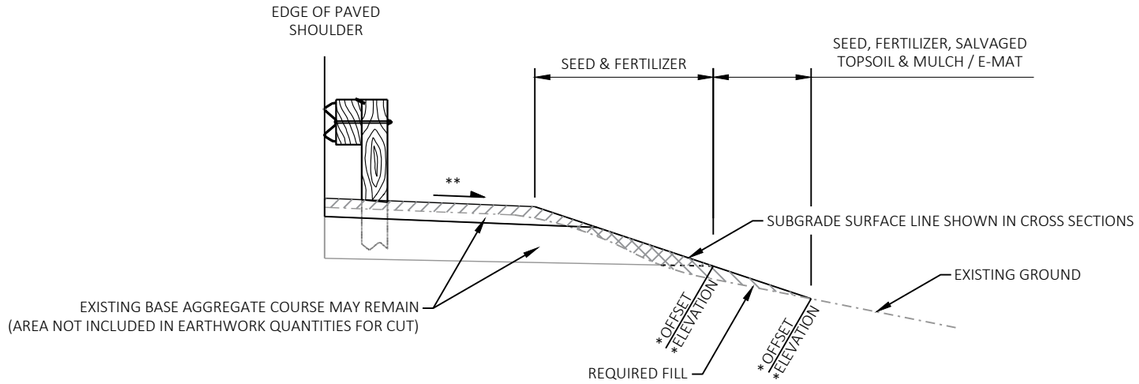
SECTION VIEW



PLAN VIEW

CURB REPLACEMENT - PATCHING DETAIL - SIDE ROADS

2



NOTES

BENCH FILL AS REQUIRED PER STANDARD SPECIFICATION 205.3.2(4)

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

** SHOULDER SLOPE PROVIDED ON CROSS SECTIONS

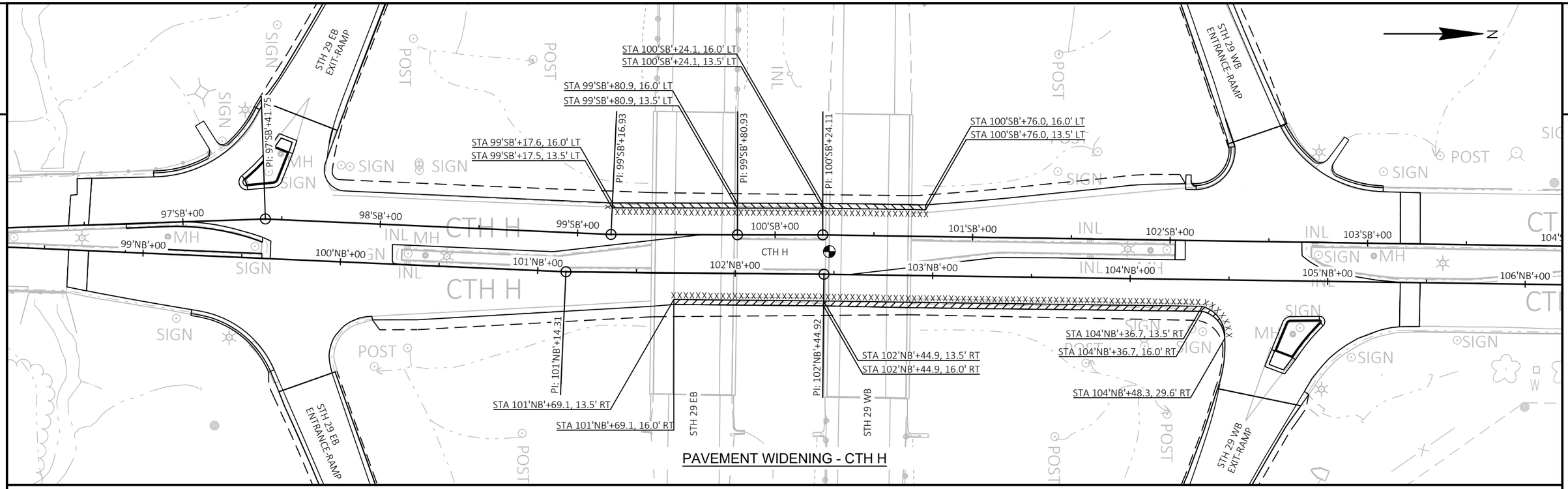
NEW BASE AGGREGATE DENSE 3/4 - INCH

NEW BASE AGGREGATE DENSE 1 1/4 - INCH

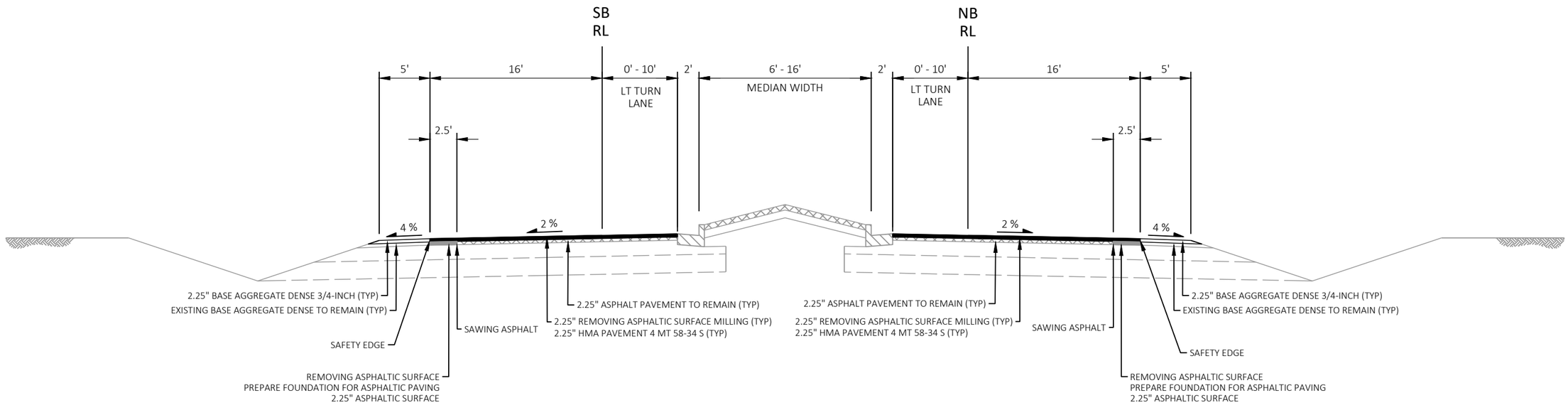
FILL

SHOULDER WIDENING EARTHWORK & BASE AGGREGATE FOR GUARDRAIL DETAIL

SEE SECTION 5 PLAN SHEETS AND CROSS SECTIONS FOR LOCATIONS



PAVEMENT WIDENING - CTH H



PAVEMENT WIDENING TYPICAL SECTION - CTH H

PROJECT NO: 1050-00-60	HWY: STH 29	COUNTY: CHIPPEWA & CLARK	CONSTRUCTION DETAILS	SHEET 22	E

2

STH 29 WB

939'WB' 940'WB' 941'WB' 942'WB' 943'WB' 944'WB' 945'WB'

STA 941'EB'+40.8
52.1, LT

SLOPE INTERCEPT

STA 941'EB'+32.1
10.0, LT

STA 944'EB'+44.7
52.3, LT

SLOPE INTERCEPT

STA 944'EB'+08.5
10.0, LT

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

STH 29 WB

STH 29 EB

STH 29 EB

STA 940'EB'+28.9
36.0, RT

STA 944'EB'+44.1
34.3, RT

CENTURYLINK

RW

W5-56
18"X18"

13+00

44'

30'

STA 941'EB'+89.8
130.0, RT

STA 942'EB'+68.1
130.0, RT

SLOPE INTERCEPT

20'

STA 942'EB'+68.1
150.0, RT

CENTURYLINK

R20'

R20'

12+00

SLOPE INTERCEPT

STA 941'EB'+89.8
150.0, RT

STA 942'EB'+60
150.0, RT

XCEL ENERGY - ELECTRICITY

STA 941'EB'+89.7
170.0, RT
X = 134,600.301
Y = 266,826.701

STA 942'EB'+60
170.0, RT
X = 134,621.013
Y = 266,892.694

STA 942'EB'+09.3
175.3, RT

STA 942'EB'+21.3
178.8, RT

STA 942'EB'+41
163.0, RT

STA 942'EB'+34.2
182.7, RT

N

N0°30'36"W

320TH ST

11+00

LEGEND

SALVAGED TOPSOIL, SEEDING MIXTURE NO. 20, FERTILIZER, & MULCHING

SILT FENCE

SURFACE WATER FLOW

PROJECT NO: 1050-00-60	HWY: STH 29	COUNTY: CHIPPEWA & CLARK	INTERSECTION DETAILS	SHEET 23	E

FILE NAME : C:\OD\ONEDRIVE - CORRE, INC\MY PROJECTS\1050-00-30_CLARK CO_STH 29\500_CADD\501_C3D_2024\10500030\SHEETS\021101-ID.DWG
LAYOUT NAME - 01

PLOT DATE : 11/21/2025 11:51 AM PLOT BY : ANDREW PETERSON, PE PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

REMOVING ASPHALTIC
SURFACE BUTT JOINTS
STA 995+76.2, 96.4' LT

995'WB'+20.84
75.93' LT
Y = 135403.34
X = 272053.19

R40'

15' 15'

330 TH ST

REMOVING CURB & GUTTER
CONCRETE CURB & GUTTER 6-INCH SLOPED 36-INCH TYPE D

CONCRETE SURFACE DRAIINS

EXISTING CURB &
GUTTER TO REMAIN

3
1122.84

2
1122.61

1
1122.02

36'

STH 29'WB'

995+00 996+00 997+00

995+00 996+00 997+00

POST

SIGN

SIGN

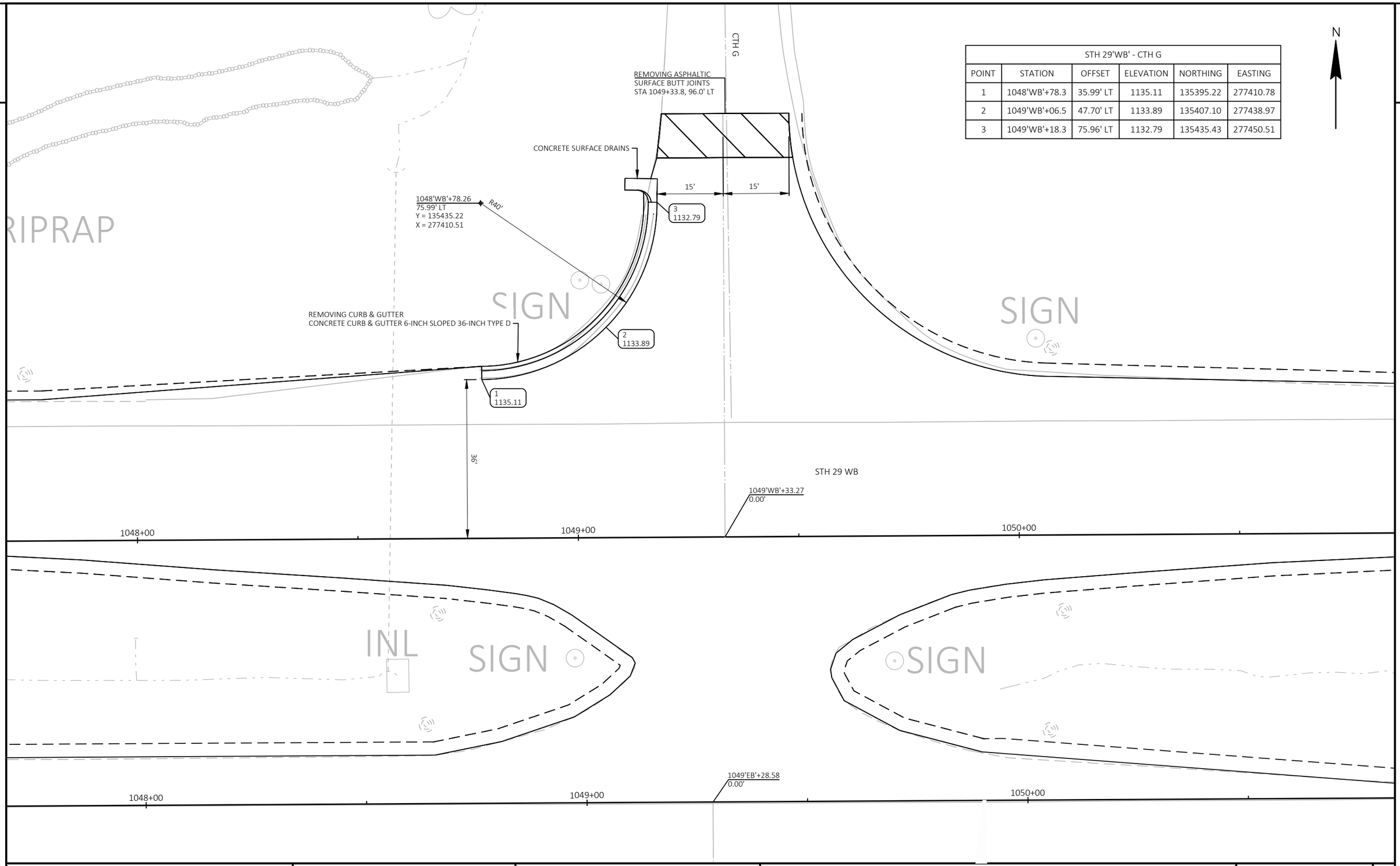
INL

SIGN

STH 29'WB' - 330TH					
POINT NUMBER	STATION	OFFSET	ELEVATION	NORTHING	EASTING
1	995'WB'+20.81	35.93' LT	1122.02	135363.35	272053.39
2	995'WB'+50.13	48.69' LT	1122.61	135376.28	272082.64
3	995'WB'+60.84	75.23' LT	1122.84	135402.88	272093.19

N

STH 29'WB' - CTH G					
POINT	STATION	OFFSET	ELEVATION	NORTHING	EASTING
1	1048'WB'+78.3	35.99' LT	1135.11	135395.22	277410.78
2	1049'WB'+06.5	47.70' LT	1133.89	135407.10	277438.97
3	1049'WB'+18.3	75.96' LT	1132.79	135435.43	277450.51



PROJECT NO: 1050-00-60	HWY: STH 29	COUNTY: CHIPPEWA & CLARK	INTERSECTION DETAILS	SHEET 25	E

2

1048+00

1049+00

1050+00

2

N

INL

SIGN

SIGN

1049'EB'+28.58
0.00'

1048+00

1049+00

1050+00

STH 29 'EB'

36'

3
1132.78

CONCRETE SURFACE DRAINS

2
1133.52

REMOVING CURB & GUTTER
CONCRETE CURB & GUTTER 6-INCH SLOPED 36-INCH TYPE D

SIGN

SIGN

EXISTING CURB & GUTTER TO REMAIN

21'

21'

R50'

1050'EB'+00.04
86.00' RT
Y = 135213.87
X = 277535.22

1
1133.76

REMOVING ASPHALTIC
SURFACE BUTT JOINTS
STA 1049+29.4, 85.2' RT

CTH G

POST

POST

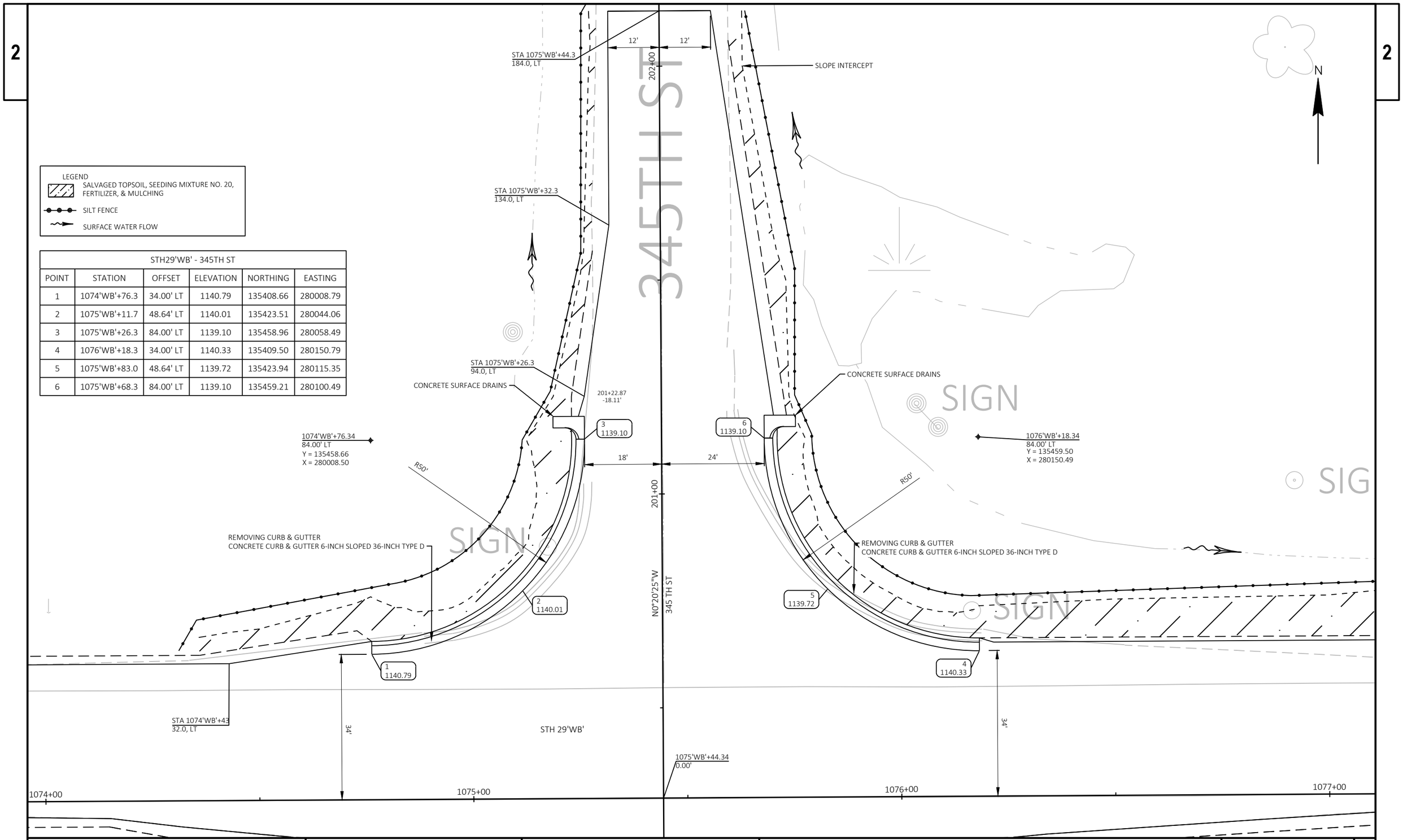
STH 29 'EB' - CTH G					
POINT	STATION	OFFSET	ELEVATION	NORTHING	EASTING
1	1049'EB'+50.0	85.61' RT	1133.76	135213.97	277485.22
2	1049'EB'+64.8	50.51' RT	1133.52	135249.16	277499.80
3	1050'EB'+00.0	36.00' RT	1132.78	135263.87	277534.93

PROJECT NO: 1050-00-60	HWY: STH 29	COUNTY: CHIPPEWA & CLARK	INTERSECTION DETAILS	SHEET 26	E

2

LEGEND
- SALVAGED TOPSOIL, SEEDING MIXTURE NO. 20, FERTILIZER, & MULCHING
- SILT FENCE
- SURFACE WATER FLOW

STH29'WB' - 345TH ST					
POINT	STATION	OFFSET	ELEVATION	NORTHING	EASTING
1	1074'WB'+76.3	34.00' LT	1140.79	135408.66	280008.79
2	1075'WB'+11.7	48.64' LT	1140.01	135423.51	280044.06
3	1075'WB'+26.3	84.00' LT	1139.10	135458.96	280058.49
4	1076'WB'+18.3	34.00' LT	1140.33	135409.50	280150.79
5	1075'WB'+83.0	48.64' LT	1139.72	135423.94	280115.35
6	1075'WB'+68.3	84.00' LT	1139.10	135459.21	280100.49



PROJECT NO: 1050-00-60	HWY: STH 29	COUNTY: CHIPPEWA & CLARK	INTERSECTION DETAILS	SHEET 27	E

2

2

SIGN

SIGN

1074+00

1075+00

1076+00

107

1075'EB'+42.54
0.12' RT

STH 29'EB'

36'

36'

1
1140.19

SIGN

2
1139.22

REMOVING CURB & GUTTER
CONCRETE CURB & GUTTER
6-INCH SLOPED 36-INCH TYPE D, REQ'D

REMOVING SURFACE DRAINS
CONCRETE SURFACE DRAINS
1075'EB'+09.91
54.94' RT

345 TH ST

EXISTING CURB & GUTTER
TO REMAIN

SIGN

15'

15'

3
1139.74

R60'

1074'EB'+67.73
96.00' RT
Y = 135218.42
X = 280002.93

N

REMOVING ASPHALTIC
SURFACE BUTT JOINTS
STA 1075+41.4, 106.1' RT

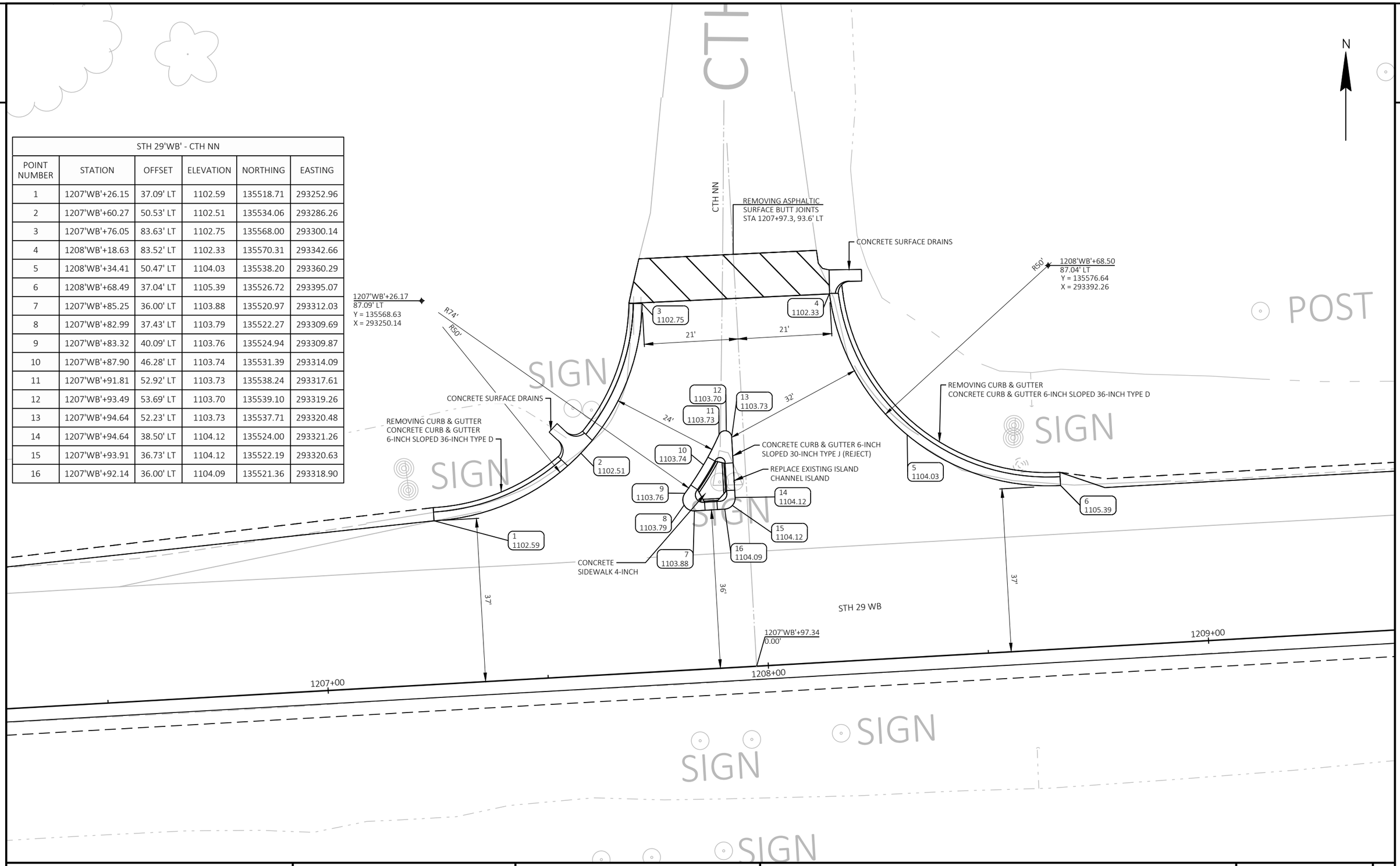
H ST

EXISTING CURB & GUTTER

STH 29'EB' - 345TH ST					
POINT	STATION	OFFSET	ELEVATION	NORTHING	EASTING
1	1074'EB'+67.7	36.00' RT	1140.19	135278.42	280002.58
2	1075'EB'+10.1	53.53' RT	1139.22	135261.14	280045.06
3	1075'EB'+27.7	95.88' RT	1139.74	135218.89	280062.93

PROJECT NO: 1050-00-60	HWY: STH 29	COUNTY: CHIPPEWA & CLARK	INTERSECTION DETAILS	SHEET 28	E

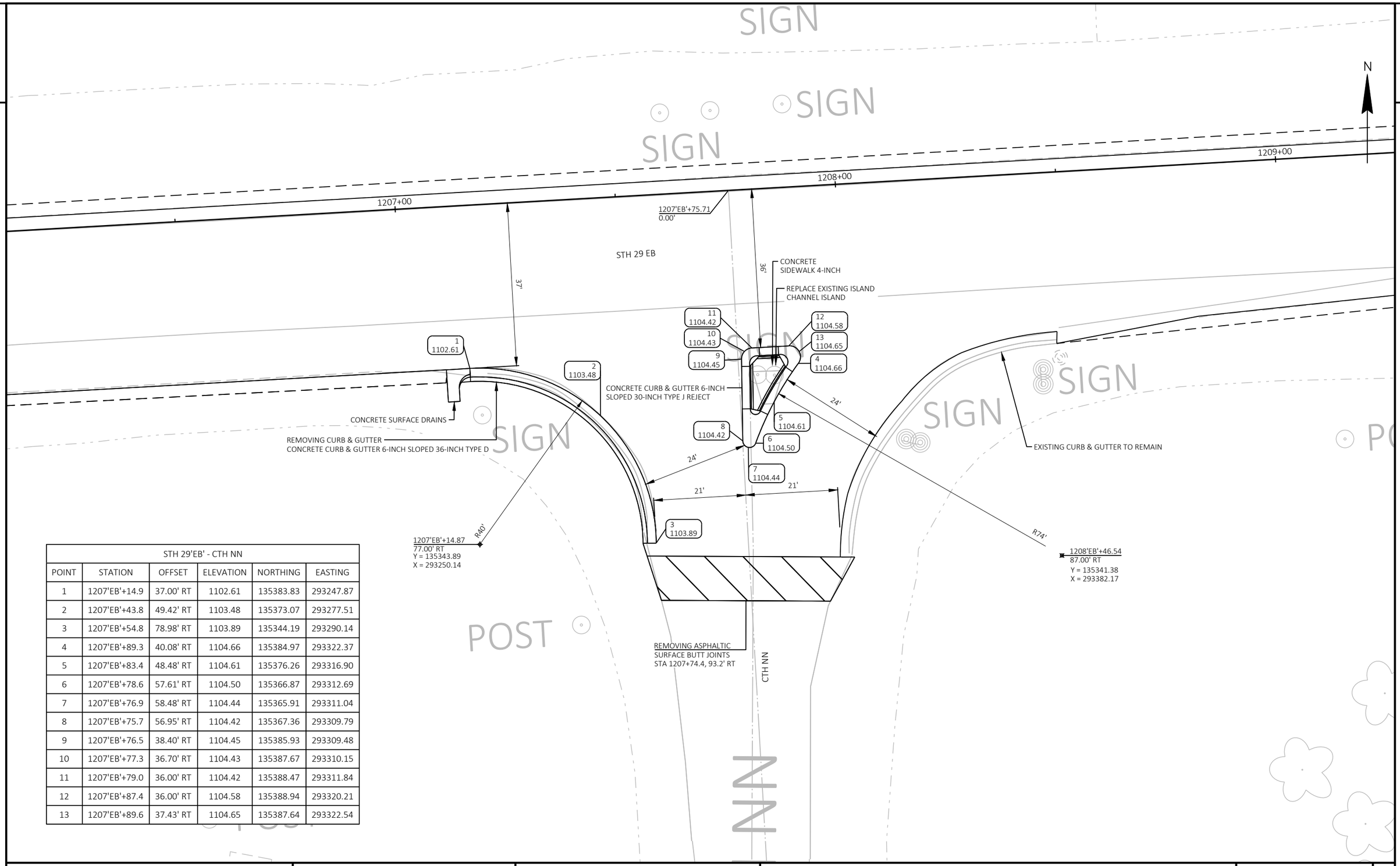
STH 29'WB' - CTH NN					
POINT NUMBER	STATION	OFFSET	ELEVATION	NORTHING	EASTING
1	1207'WB'+26.15	37.09' LT	1102.59	135518.71	293252.96
2	1207'WB'+60.27	50.53' LT	1102.51	135534.06	293286.26
3	1207'WB'+76.05	83.63' LT	1102.75	135568.00	293300.14
4	1208'WB'+18.63	83.52' LT	1102.33	135570.31	293342.66
5	1208'WB'+34.41	50.47' LT	1104.03	135538.20	293360.29
6	1208'WB'+68.49	37.04' LT	1105.39	135526.72	293395.07
7	1207'WB'+85.25	36.00' LT	1103.88	135520.97	293312.03
8	1207'WB'+82.99	37.43' LT	1103.79	135522.27	293309.69
9	1207'WB'+83.32	40.09' LT	1103.76	135524.94	293309.87
10	1207'WB'+87.90	46.28' LT	1103.74	135531.39	293314.09
11	1207'WB'+91.81	52.92' LT	1103.73	135538.24	293317.61
12	1207'WB'+93.49	53.69' LT	1103.70	135539.10	293319.26
13	1207'WB'+94.64	52.23' LT	1103.73	135537.71	293320.48
14	1207'WB'+94.64	38.50' LT	1104.12	135524.00	293321.26
15	1207'WB'+93.91	36.73' LT	1104.12	135522.19	293320.63
16	1207'WB'+92.14	36.00' LT	1104.09	135521.36	293318.90



PROJECT NO: 1050-00-60	HWY: STH 29	COUNTY: CHIPPEWA & CLARK	INTERSECTION DETAILS	SHEET 29	E

FILE NAME : C:\OD\ONEDRIVE - CORRE, INC\MY PROJECTS\1050-00-30_CLARK CO_STH 29\500_CADD\501_C3D_2024\10500030\SHEETS\021102-ID.DWG
LAYOUT NAME - 06
PLOT DATE : 11/21/2025 11:52 AM
PLOT BY : ANDREW PETERSON, PE
PLOT NAME :
PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 42

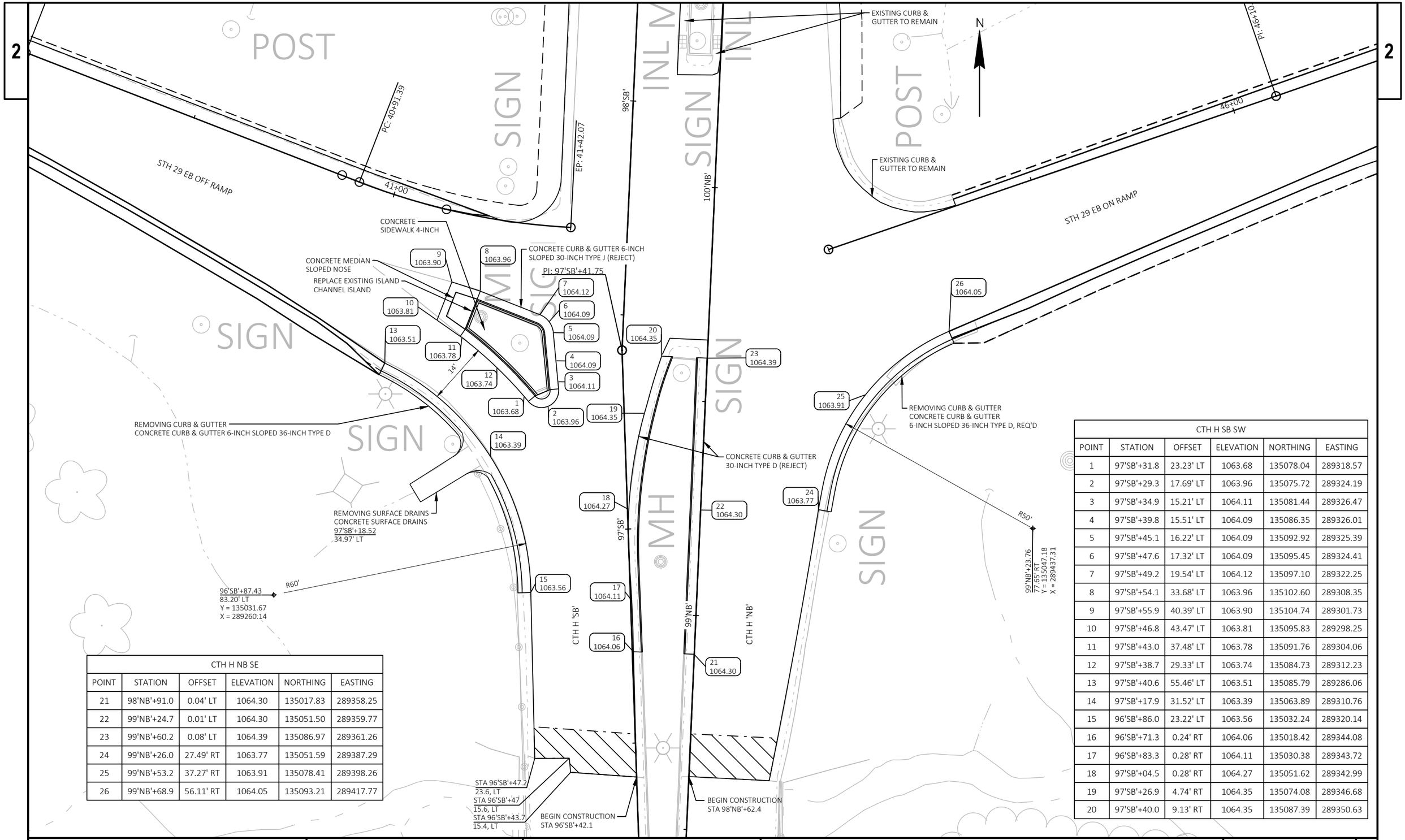
2



STH 29'EB' - CTH NN					
POINT	STATION	OFFSET	ELEVATION	NORTHING	EASTING
1	1207'EB'+14.9	37.00' RT	1102.61	135383.83	293247.87
2	1207'EB'+43.8	49.42' RT	1103.48	135373.07	293277.51
3	1207'EB'+54.8	78.98' RT	1103.89	135344.19	293290.14
4	1207'EB'+89.3	40.08' RT	1104.66	135384.97	293322.37
5	1207'EB'+83.4	48.48' RT	1104.61	135376.26	293316.90
6	1207'EB'+78.6	57.61' RT	1104.50	135366.87	293312.69
7	1207'EB'+76.9	58.48' RT	1104.44	135365.91	293311.04
8	1207'EB'+75.7	56.95' RT	1104.42	135367.36	293309.79
9	1207'EB'+76.5	38.40' RT	1104.45	135385.93	293309.48
10	1207'EB'+77.3	36.70' RT	1104.43	135387.67	293310.15
11	1207'EB'+79.0	36.00' RT	1104.42	135388.47	293311.84
12	1207'EB'+87.4	36.00' RT	1104.58	135388.94	293320.21
13	1207'EB'+89.6	37.43' RT	1104.65	135387.64	293322.54

PROJECT NO: 1050-00-60	HWY: STH 29	COUNTY: CHIPPEWA & CLARK	INTERSECTION DETAILS	SHEET 30	E

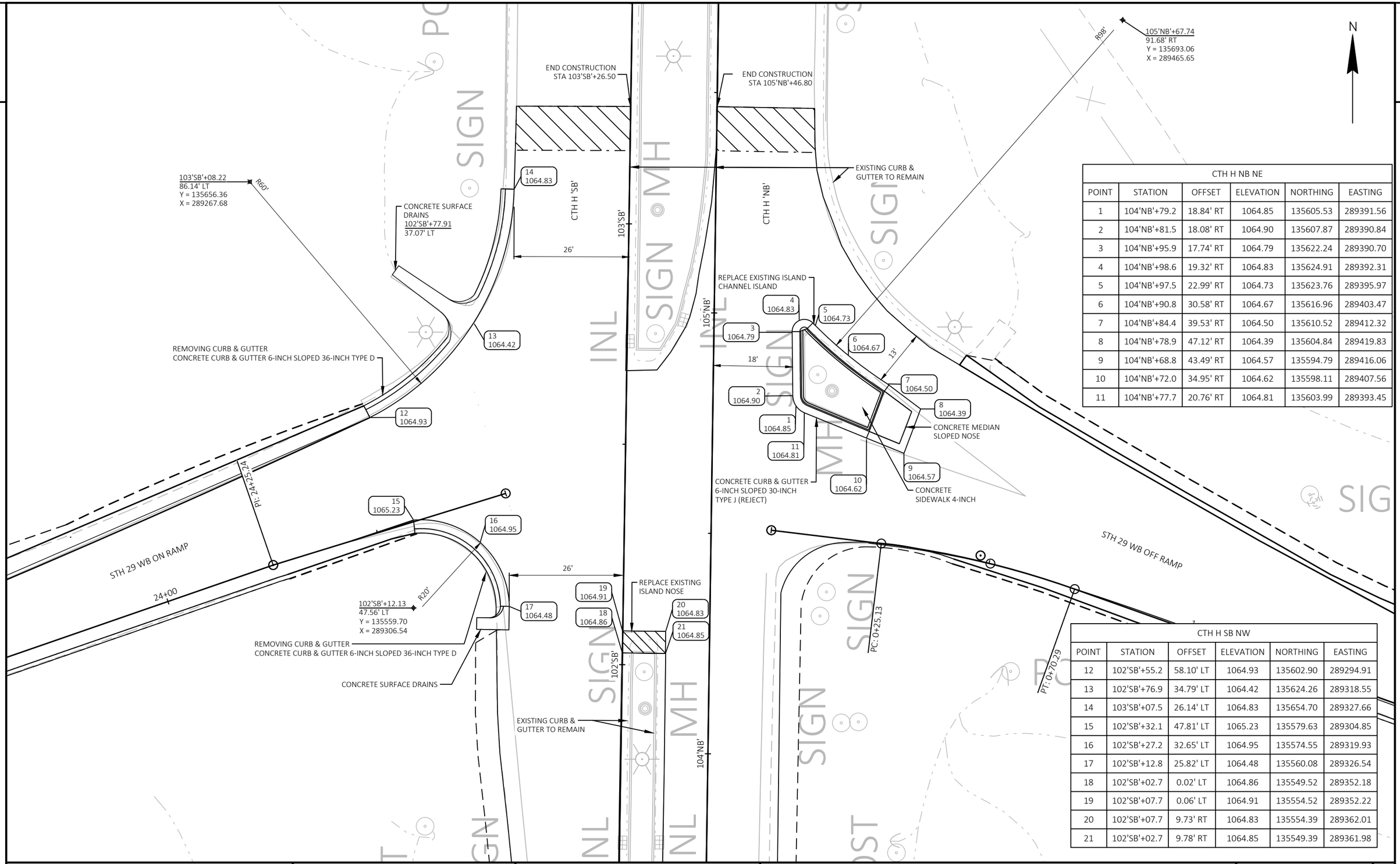
FILE NAME : C:\OD\ONEDRIVE - CORRE, INC\MY PROJECTS\1050-00-30_CLARK CO_STH 29\500_CADD\501_C3D_2024\10500030\SHEETS\021102-ID.DWG
LAYOUT NAME - 07
PLOT DATE : 11/21/2025 11:52 AM PLOT BY : ANDREW PETERSON, PE PLOT NAME : PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 42



CTH H NB SE					
POINT	STATION	OFFSET	ELEVATION	NORTHING	EASTING
21	98'NB'+91.0	0.04' LT	1064.30	135017.83	289358.25
22	99'NB'+24.7	0.01' LT	1064.30	135051.50	289359.77
23	99'NB'+60.2	0.08' LT	1064.39	135086.97	289361.26
24	99'NB'+26.0	27.49' RT	1063.77	135051.59	289387.29
25	99'NB'+53.2	37.27' RT	1063.91	135078.41	289398.26
26	99'NB'+68.9	56.11' RT	1064.05	135093.21	289417.77

CTH H SB SW					
POINT	STATION	OFFSET	ELEVATION	NORTHING	EASTING
1	97'SB'+31.8	23.23' LT	1063.68	135078.04	289318.57
2	97'SB'+29.3	17.69' LT	1063.96	135075.72	289324.19
3	97'SB'+34.9	15.21' LT	1064.11	135081.44	289326.47
4	97'SB'+39.8	15.51' LT	1064.09	135086.35	289326.01
5	97'SB'+45.1	16.22' LT	1064.09	135092.92	289325.39
6	97'SB'+47.6	17.32' LT	1064.09	135095.45	289324.41
7	97'SB'+49.2	19.54' LT	1064.12	135097.10	289322.25
8	97'SB'+54.1	33.68' LT	1063.96	135102.60	289308.35
9	97'SB'+55.9	40.39' LT	1063.90	135104.74	289301.73
10	97'SB'+46.8	43.47' LT	1063.81	135095.83	289298.25
11	97'SB'+43.0	37.48' LT	1063.78	135091.76	289304.06
12	97'SB'+38.7	29.33' LT	1063.74	135084.73	289312.23
13	97'SB'+40.6	55.46' LT	1063.51	135085.79	289286.06
14	97'SB'+17.9	31.52' LT	1063.39	135063.89	289310.76
15	96'SB'+86.0	23.22' LT	1063.56	135032.24	289320.14
16	96'SB'+71.3	0.24' RT	1064.06	135018.42	289344.08
17	96'SB'+83.3	0.28' RT	1064.11	135030.38	289343.72
18	97'SB'+04.5	0.28' RT	1064.27	135051.62	289342.99
19	97'SB'+26.9	4.74' RT	1064.35	135074.08	289346.68
20	97'SB'+40.0	9.13' RT	1064.35	135087.39	289350.63

PROJECT NO: 1050-00-60	HWY: STH 29	COUNTY: CHIPPEWA & CLARK	INTERSECTION DETAILS	SHEET 31	E



CTH H NB NE					
POINT	STATION	OFFSET	ELEVATION	NORTHING	EASTING
1	104'NB'+79.2	18.84' RT	1064.85	135605.53	289391.56
2	104'NB'+81.5	18.08' RT	1064.90	135607.87	289390.84
3	104'NB'+95.9	17.74' RT	1064.79	135622.24	289390.70
4	104'NB'+98.6	19.32' RT	1064.83	135624.91	289392.31
5	104'NB'+97.5	22.99' RT	1064.73	135623.76	289395.97
6	104'NB'+90.8	30.58' RT	1064.67	135616.96	289403.47
7	104'NB'+84.4	39.53' RT	1064.50	135610.52	289412.32
8	104'NB'+78.9	47.12' RT	1064.39	135604.84	289419.83
9	104'NB'+68.8	43.49' RT	1064.57	135594.79	289416.06
10	104'NB'+72.0	34.95' RT	1064.62	135598.11	289407.56
11	104'NB'+77.7	20.76' RT	1064.81	135603.99	289393.45

CTH H SB NW					
POINT	STATION	OFFSET	ELEVATION	NORTHING	EASTING
12	102'SB'+55.2	58.10' LT	1064.93	135602.90	289294.91
13	102'SB'+76.9	34.79' LT	1064.42	135624.26	289318.55
14	103'SB'+07.5	26.14' LT	1064.83	135654.70	289327.66
15	102'SB'+32.1	47.81' LT	1065.23	135579.63	289304.85
16	102'SB'+27.2	32.65' LT	1064.95	135574.55	289319.93
17	102'SB'+12.8	25.82' LT	1064.48	135560.08	289326.54
18	102'SB'+02.7	0.02' LT	1064.86	135549.52	289352.18
19	102'SB'+07.7	0.06' LT	1064.91	135554.52	289352.22
20	102'SB'+07.7	9.73' RT	1064.83	135554.39	289362.01
21	102'SB'+02.7	9.78' RT	1064.85	135549.39	289361.98

PROJECT NO: 1050-00-60	HWY: STH 29	COUNTY: CHIPPEWA & CLARK	INTERSECTION DETAILS	SHEET 32	E

2

MATCH LINE STA 19+23.1

REMOVING GUARDRAIL, STA 1164'EB'+34 - 1167'EB'+44, LT
MGS THRIE BEAM TRANSITION, STA 1167'EB'+06.7 - 1167'EB'+45.7, 6.0' LT
MGS GUARDRAIL 3, STA 1164'EB'+93.8 - 1167'EB'+06.7, 6.0' LT
MGS POST 9, STA 1164'EB'+90.7, 6.0' LT
MGS POST 5, STA 1164'EB'+72.0, 6.7' LT
MGS POST 1, STA 1164'EB'+40.7, 8.0' LT

N

CPAS
CP6
CP12

STH 29 WB

1161'WB' 1162'WB' 1163'WB' 1164'WB' 1165'WB' 1166'WB' 1167'WB'

B-09-190

INL

EAT MGS THRIE

1161'EB' 1162'EB' 1163'EB' 1164'EB' 1165'EB' 1166'EB' 1167'EB'

STH 29 EB

MATCH LINE STA 1167+75

SIGN

MATCH LINE STA 33+33.9

LEGEND

CPAS	CONCRETE PAVEMENT APPROACH SLAB	EAT	MGS GUARDRAIL TERMINAL EAT
CP6	CONCRETE PAVEMENT 6-INCH	TT2	MGS GUARDRAIL TERMINAL TYPE 2
CP12	CONCRETE PAVEMENT 12-INCH	CG36A	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBT
THRIE	MGS THRIE BEAM TRANSITION	CSD	CONCRETE SURFACE DRAINS
MGS	MGS GUARDRAIL 3		

REMOVING GUARDRAIL, STA 1164'EB'+84 - 1167'EB'+44, RT
MGS THRIE BEAM TRANSITION, STA 1167'EB'+06.3 - 1167'EB'+45.7, 34.0' RT
MGS GUARDRAIL 3, STA 1165'EB'+43.8 - 1167'EB'+06.3, 34.0' RT
MGS POST 9, STA 1165'EB'+40.7, 34.0' RT
MGS POST 5, STA 1165'EB'+15.7, 35.0' RT
MGS POST 1, STA 1164'EB'+90.7, 36.0' RT

EAT MGS THRIE CP12 CP6 CPAS

B-09-191

2

MATCH LINE STA 1167+75

B-09-190

CPAS CP6 CP12 CG36A CSD

POST SIGN

MGS EAT THRIE

1168'WB' 1169'WB' 1170'WB' 1171'WB' 1172'WB' 1173'WB' 1174'WB' 1175'WB'

CTH H CTH H CTH H

1168'EB' 1169'EB' 1170'EB' 1171'EB' 1172'EB' 1173'EB' 1174'EB' 1175'EB'

B-09-191

STH 29 WB

STH 29 EB

MGS EAT POST 1171'WB'+88.7 36.0' LT

1172'WB'+28.71 -32.00' LT

MGS EAT POST 1172'WB'+13.4 8.0' RT

1172'WB'+63.50 3.00' RT

N

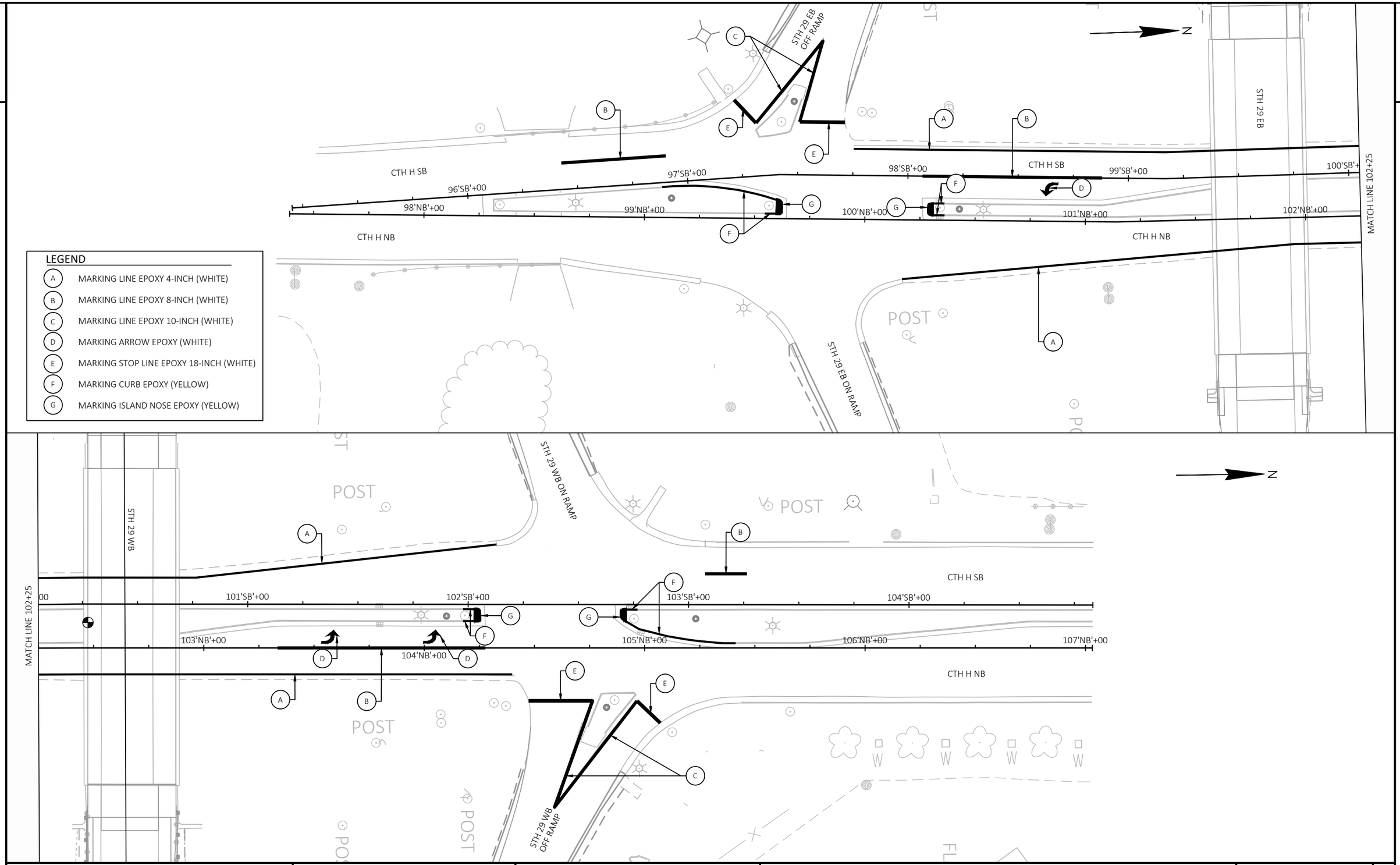
REMOVING GUARDRAIL, STA 1169'WB'+09 - 1171'WB'+94, LT
MGS THRIE BEAM TRANSITION, STA 1169'WB'+11.2 - 1169'WB'+50.6, 34.0' LT
MGS GUARDRAIL 3, STA 1169'WB'+50.6 - 1171'WB'+35.6, 34.0' LT
MGS POST 9, STA 1171'WB'+38.7, 34.0' LT
MGS POST 5, STA 1171'WB'+63.7, 35.0' LT
MGS POST 1, STA 1171'WB'+88.7, 36.0', LT

REMOVING GUARDRAIL, STA 1169'WB'+09 - 1172'WB'+19, RT
MGS THRIE BEAM TRANSITION, STA 1169'WB'+11.0 - 1169'WB'+50.6, 6.0' RT
MGS GUARDRAIL 3, STA 1169'WB'+50.6 - 1171'WB'+60.4, 6.0' RT
MGS POST 9, STA 1171'WB'+63.5, 6.0' RT
MGS POST 5, STA 1171'EB'+88.5, 7.0' RT
MGS POST 1, STA 1172'EB'+13.5, 8.0' RT

MATCH LINE 50+65.6

PROJECT NO: 1050-00-60	HWY: STH 29	COUNTY: CHIPPEWA & CLARK	PLAN DETAILS	SHEET 33	E

2



PROJECT NO: 1050-00-60	HWY: STH 29	COUNTY: CHIPPEWA & CLARK	PAVEMENT MARKING - CTH H	SHEET 34	E

FILE NAME : C:\OD\ONEDRIVE - CORRE, INC\MY PROJECTS\1050-00-30_CLARK CO_STH 29\500_CADD\501_C3D_2024\10500030\SHEETS\024501-PM.DWG
LAYOUT NAME - 01
PLOT DATE : 11/21/2025 11:53 AM PLOT BY : ANDREW PETERSON, PE PLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

2

2

N

E 1ST AVE: MARKING RAILROAD CROSSING EPOXY

WILLOW RD: MARKING RAILROAD CROSSING EPOXY

COPENHAVER AVE: MARKING RAILROAD CROSSING EPOXY

E 1ST AVE

WILLOW RD

CTH X

CTH NN: MARKING RAILROAD CROSSING EPOXY

JUNCTION AVE: MARKING RAILROAD CROSSING EPOXY

COPENHAVER AVE: MARKING RAILROAD CROSSING EPOXY

PINE ST

CTH NN

JUNCTION AVE

COPENHAVER AVE

1200'WB'

1210'WB'

1220'WB'

1230'WB'

1240'WB'

1250'WB'

1260'WB'

STH 29

1200'EB'

1210'EB'

1220'EB'

1230'EB'

1240'EB'

1250'EB'

1260'EB'

NOTE:

SEE SDD SIGNING AND PAVEMENT MARKING DETAILS FOR RAILROAD - HIGHWAY GRADE CROSSINGS FOR MARKING DIMENSIONS AND LOCATIONS.

COMPLETE PAVEMENT MARKINGS ON THIS SHEET PRIOR TO UTILIZING DETOUR ALONG CTH X.

PROJECT NO: 1050-00-60	HWY: STH 29	COUNTY: CHIPPEWA & CLARK	PAVEMENT MARKING - RRX	SHEET 35	E

FILE NAME : C:\OD\ONEDRIVE - CORRE, INC\00_NW REGION\1050-00-30_CLARK CO_STH 29\500_CADD\501_C3D_2024\10500030\SHEETS\024502-PM.DWG
LAYOUT NAME - 01

PLOT DATE : 7/30/2025 12:21 PM PLOT BY : NOAH BELLING PLOT NAME : PLOT SCALE : 1 IN:500 FT

2

LEGEND

- SIGN ON TEMPORARY SUPPORT
- EXISTING SIGN ON SINGLE PERMANENT SUPPORT
- EXISTING SIGN ON DOUBLE PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH SIGN
- EXISTING SIGN TO REMAIN
- EXISTING SIGN TO BE COVERED
- DETOUR ROUTE
- PROJECT ROUTE
- WORK ZONE

B1
R11-2R
48" X 30"
RAMP CLOSED
TYPE III BARRICADE

B2
TYPE III BARRICADE

A1
WEST 29
M3-4 24"X12"
M1-6 24"X24"
RAMP CLOSED AHEAD
W20-53A 48"X48"

C1
R3-1 24"X24"

C2
R3-2 24"X24"

B3
R11-2R
48" X 30"
RAMP CLOSED
TYPE III BARRICADE (x5)

D1
TO WEST 29
MO4-5 24"X12"
M3-4 24"X12"
M1-6 24"X24"
MO5-1L 21"X21"

D3
TO WEST 29
MO4-5 24"X12"
M3-4 24"X12"
M1-6 24"X24"
MO5-1R 21"X21"

D5
TO WEST 29
MO4-5 24"X12"
M3-4 24"X12"
M1-6 24"X24"
MO6-1 21"X21"

D2
TO WEST 29
MO4-5 24"X12"
M3-4 24"X12"
M1-6 24"X24"
MO6-1 21"X21"

D4
TO WEST 29
MO4-5 24"X12"
M3-4 24"X12"
M1-6 24"X24"
MO6-1 21"X21"

D6
TO WEST 29
MO4-5 24"X12"
M3-4 24"X12"
M1-6 24"X24"

GENERAL NOTES

ALL SIGNS SHALL BE PLACED IN ACCORDANCE WITH THE WISCONSIN MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

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

ANY EXISTING SIGNS THAT CONFLICT WITH THIS WORK SHALL BE COVERED AS DIRECTED BY THE ENGINEER.

PCMS MESSAGES USED FOR 7 DAY ADVANCED WARNING OF DETOUR BEGINNING.

FINAL LOCATION OF ALL PCMS SIGNS TO BE DETERMINED BY THE ENGINEER.

APPLICABLE SDD TO FOLLOW

SDD FOR BARRICADES AND SIGNS FOR MAINLINE CLOSURES

SDD FOR BARRICADES AND SIGNS FOR VARIOUS CLOSURES

SDD FOR ON RAMP LANE CLOSURE

SDD FOR TRAFFIC CONTROL FOR ENTRANCE RAMP CLOSURE

2

STH 29 WB ON RAMP DETOUR OVERVIEW

N

DETAIL A

X

29

G

H

345TH STREET

350TH STREET

D6

D4

D3

D2

D1

A1

WEST 29 EAST 29

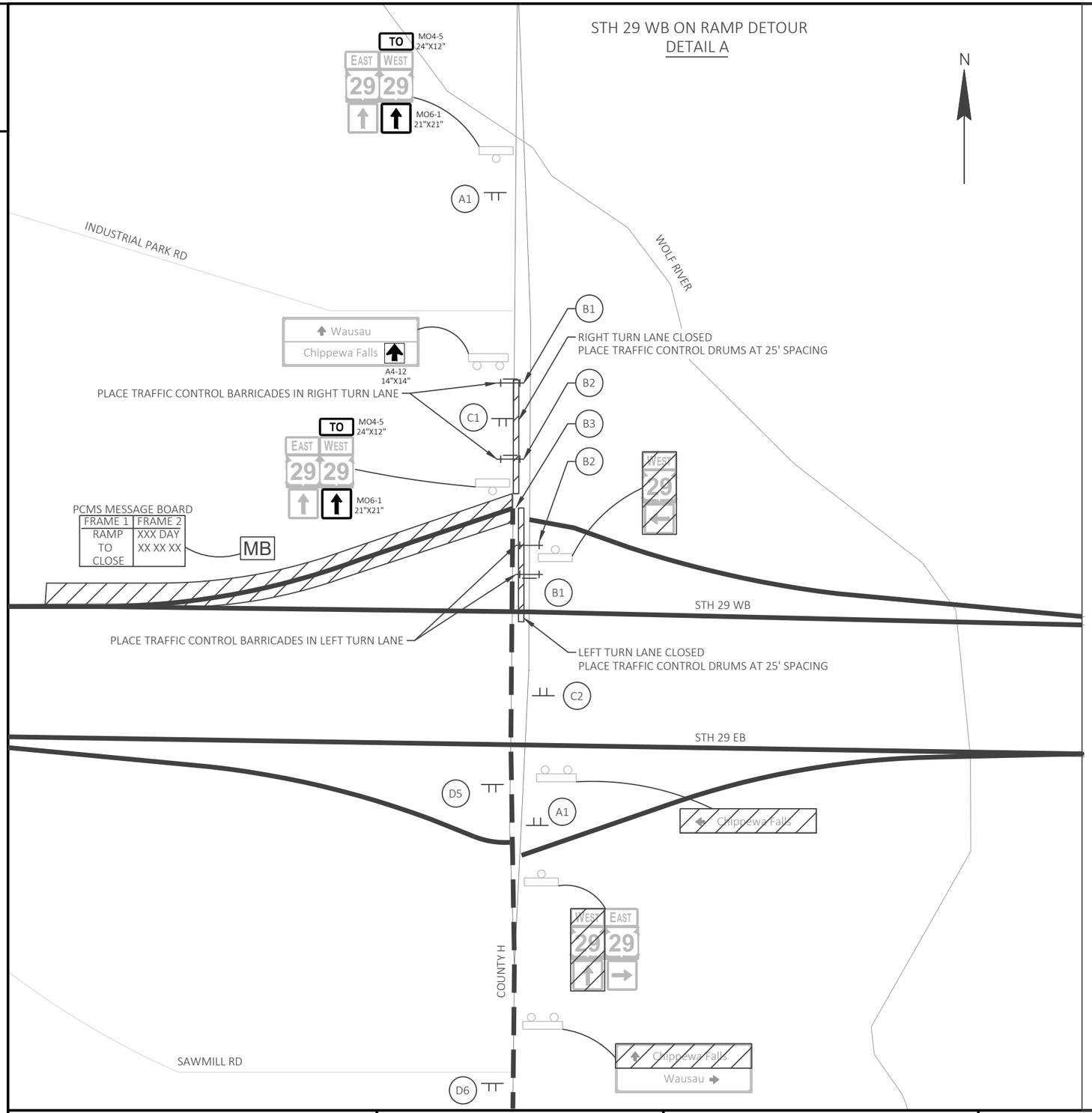
PROJECT NO: 1050-00-60	HWY: STH 29	COUNTY: CHIPPEWA & CLARK	DETOURS	SHEET 36	E

FILE NAME : C:\OD\ONEDRIVE - CORRE, INC\MY PROJECTS\1050-00-30_CLARK CO_STH 29\500_CADD\501_C3D_2024\10500030\SHEETS\027001-DT.DWG
LAYOUT NAME - 01

PLOT DATE : 11/21/2025 11:54 AM PLOT BY : ANDREW PETERSON, PE PLOT NAME : PLOT SCALE : 1 IN:1000 FT

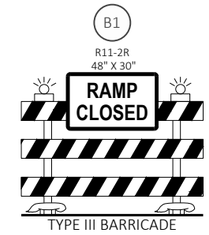
WISDOT/CADDS SHEET 42

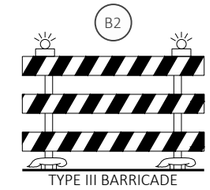
STH 29 WB ON RAMP DETOUR
DETAIL A

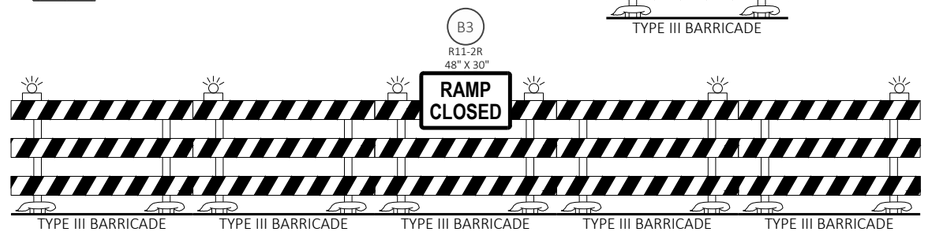


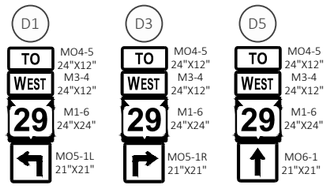
LEGEND

- SIGN ON TEMPORARY SUPPORT
- EXISTING SIGN ON SINGLE PERMANENT SUPPORT
- EXISTING SIGN ON DOUBLE PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH SIGN
- 29 EXISTING SIGN TO REMAIN
- 29 EXISTING SIGN TO BE COVERED
- DETOUR ROUTE
- PROJECT ROUTE
- WORK ZONE









GENERAL NOTES

ALL SIGNS SHALL BE PLACED IN ACCORDANCE WITH THE WISCONSIN MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

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

ANY EXISTING SIGNS THAT CONFLICT WITH THIS WORK SHALL BE COVERED AS DIRECTED BY THE ENGINEER.

PCMS MESSAGES USED FOR 7 DAY ADVANCED WARNING OF DETOUR BEGINNING.

FINAL LOCATION OF ALL PCMS SIGNS TO BE DETERMINED BY THE ENGINEER.

APPLICABLE SDD TO FOLLOW

SDD FOR BARRICADES AND SIGNS FOR MAINLINE CLOSURES

SDD FOR BARRICADES AND SIGNS FOR VARIOUS CLOSURES

SDD FOR ON RAMP LANE CLOSURE

SDD FOR TRAFFIC CONTROL FOR ENTRANCE RAMP CLOSURE

2

LEGEND

- SIGN ON TEMPORARY SUPPORT
- EXISTING SIGN ON SINGLE PERMANENT SUPPORT
- EXISTING SIGN ON DOUBLE PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH SIGN
- 29 EXISTING SIGN TO REMAIN
- 29 EXISTING SIGN TO BE COVERED
- DETOUR ROUTE
- PROJECT ROUTE
- WORK ZONE

B1
R11-2R
48" X 30"
RAMP CLOSED
TYPE III BARRICADE

B2
TYPE III BARRICADE

B3
R11-2R
48" X 30"
RAMP CLOSED
TYPE III BARRICADE | TYPE III BARRICADE | TYPE III BARRICADE | TYPE III BARRICADE | TYPE III BARRICADE

E1
EAST 29
M3-2 24"X12"
M1-6 24"X24"
RAMP CLOSED AHEAD
W20-5aL 48"X48"

C1
R3-1 24"X24"

C2
R3-2 24"X24"

F1
TO EAST 29
MO4-5 24"X12"
M3-2 24"X12"
M1-6 24"X24"
MO5-1L 21"X21"

F2
TO EAST 29
MO4-5 24"X12"
M3-2 24"X12"
M1-6 24"X24"
MO6-1 21"X21"

F3
TO EAST 29
MO4-5 24"X12"
M3-2 24"X12"
M1-6 24"X24"
MO5-1R 21"X21"

F4
TO EAST 29
MO4-5 24"X12"
M3-2 24"X12"
M1-6 24"X24"
MO6-1 21"X21"

F5
TO EAST 29
MO4-5 24"X12"
M3-2 24"X12"
M1-6 24"X24"
MO6-1 21"X21"

F6
TO EAST 29
MO4-5 24"X12"
M3-2 24"X12"
M1-6 24"X24"

GENERAL NOTES

ALL SIGNS SHALL BE PLACED IN ACCORDANCE WITH THE WISCONSIN MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

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

ANY EXISTING SIGNS THAT CONFLICT WITH THIS WORK SHALL BE COVERED AS DIRECTED BY THE ENGINEER.

PCMS MESSAGES USED FOR 7 DAY ADVANCED WARNING OF DETOUR BEGINNING.

FINAL LOCATION OF ALL PCMS SIGNS TO BE DETERMINED BY THE ENGINEER.

APPLICABLE SDD TO FOLLOW

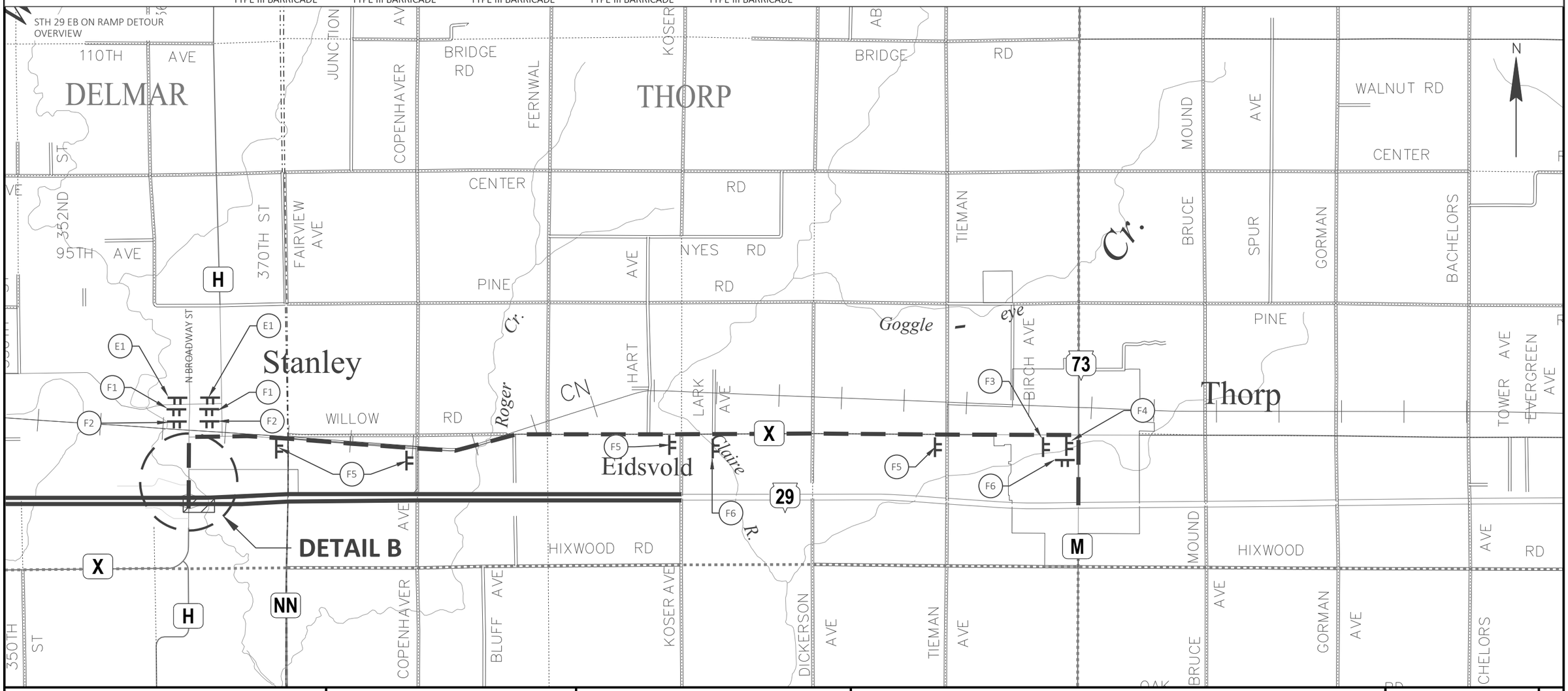
SDD FOR BARRICADES AND SIGNS FOR MAINLINE CLOSURES

SDD FOR BARRICADES AND SIGNS FOR VARIOUS CLOSURES

SDD FOR ON RAMP LANE CLOSURE

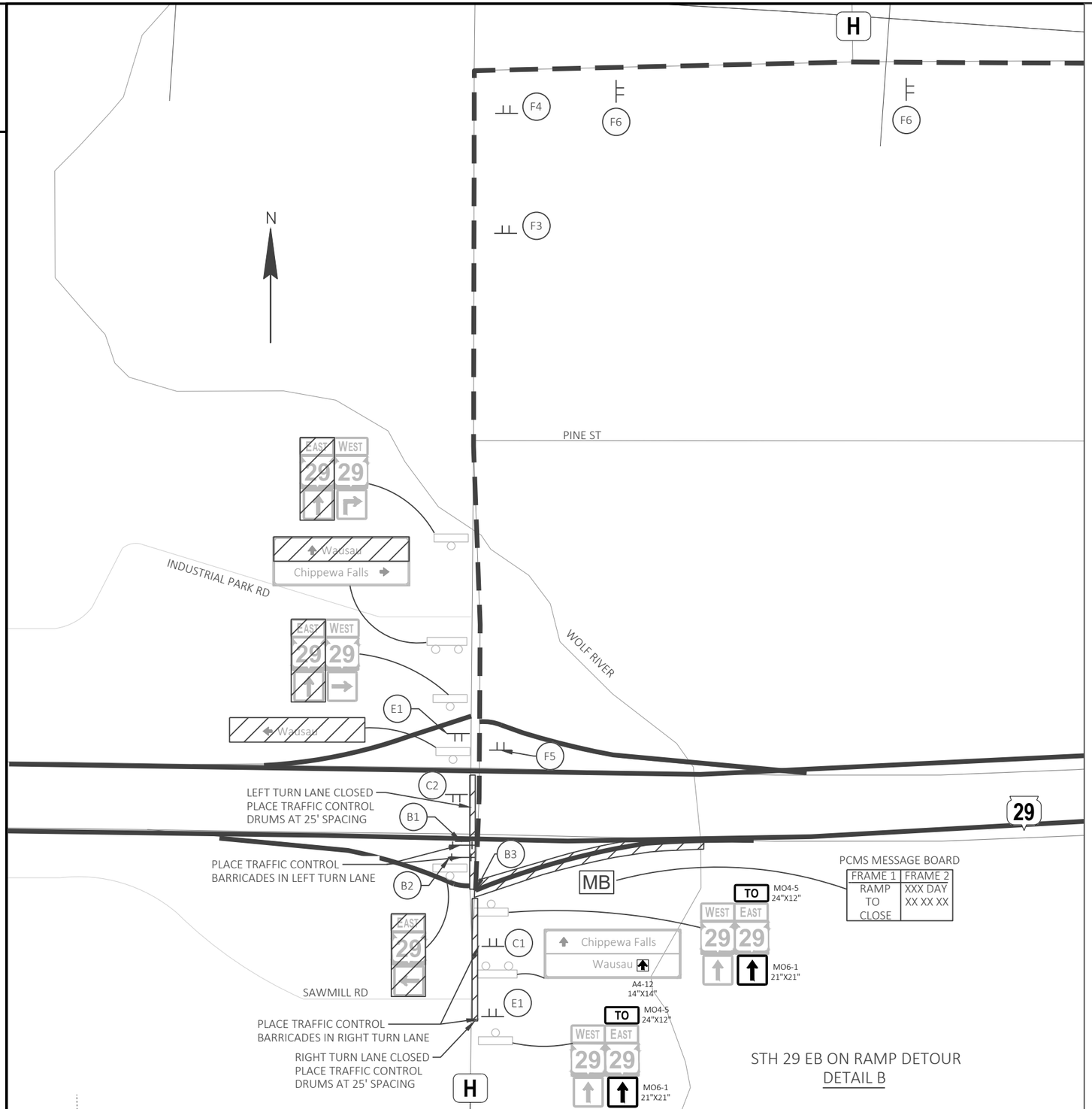
SDD FOR TRAFFIC CONTROL FOR ENTRANCE RAMP CLOSURE

STH 29 EB ON RAMP DETOUR OVERVIEW



PROJECT NO: 1050-00-60	HWY: STH 29	COUNTY: CHIPPEWA & CLARK	DETOURS	SHEET 38	E

FILE NAME : C:\OD\ONEDRIVE - CORRE, INC\MY PROJECTS\1050-00-30_CLARK CO_STH 29\500_CADD\501_C3D_2024\10500030\SHEETS\027001-DT.DWG
LAYOUT NAME - 03
PLOT DATE : 11/21/2025 11:54 AM
PLOT BY : ANDREW PETERSON, PE
PLOT NAME :
PLOT SCALE : 1 IN: 0.75 MI



STH 29 EB ON RAMP DETOUR
DETAIL B

LEGEND

- SIGN ON TEMPORARY SUPPORT
- EXISTING SIGN ON SINGLE PERMANENT SUPPORT
- EXISTING SIGN ON DOUBLE PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH SIGN
- 29 EXISTING SIGN TO REMAIN
- 29 EXISTING SIGN TO BE COVERED
- DETOUR ROUTE
- PROJECT ROUTE
- WORK ZONE

B1
R11-2R
48" X 30"
RAMP CLOSED
TYPE III BARRICADE

B2
TYPE III BARRICADE

B3
R11-2R
48" X 30"
RAMP CLOSED
TYPE III BARRICADE | TYPE III BARRICADE | TYPE III BARRICADE | TYPE III BARRICADE | TYPE III BARRICADE

E1
EAST M3-2 24"X12"
29 M1-6 24"X24"
RAMP CLOSED AHEAD
W20-5JA 48"X48"

F1
TO MO4-5 24"X12"
EAST M3-2 24"X12"
29 M1-6 24"X24"
MO5-1L 21"X21"

F3
TO MO4-5 24"X12"
EAST M3-2 24"X12"
29 M1-6 24"X24"
MO5-1R 21"X21"

F5
TO MO4-5 24"X12"
EAST M3-2 24"X12"
29 M1-6 24"X24"
MO6-1 21"X21"

F2
TO MO4-5 24"X12"
EAST M3-2 24"X12"
29 M1-6 24"X24"
MO6-1 21"X21"

F4
TO MO4-5 24"X12"
EAST M3-2 24"X12"
29 M1-6 24"X24"
MO6-1 21"X21"

F6
TO MO4-5 24"X12"
EAST M3-2 24"X12"
29 M1-6 24"X24"

C1
R3-1
24"X24"

C2
R3-2
24"X24"

GENERAL NOTES

ALL SIGNS SHALL BE PLACED IN ACCORDANCE WITH THE WISCONSIN MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

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

ANY EXISTING SIGNS THAT CONFLICT WITH THIS WORK SHALL BE COVERED AS DIRECTED BY THE ENGINEER.

PCMS MESSAGES USED FOR 7 DAY ADVANCED WARNING OF DETOUR BEGINNING.

FINAL LOCATION OF ALL PCMS SIGNS TO BE DETERMINED BY THE ENGINEER.

APPLICABLE SDD TO FOLLOW

SDD FOR BARRICADES AND SIGNS FOR MAINLINE CLOSURES

SDD FOR BARRICADES AND SIGNS FOR VARIOUS CLOSURES

SDD FOR ON RAMP LANE CLOSURE

SDD FOR TRAFFIC CONTROL FOR ENTRANCE RAMP CLOSURE

PROJECT NO: 1050-00-60	HWY: STH 29	COUNTY: CHIPPEWA & CLARK	DETOURS	SHEET 39	E

Estimate Of Quantities

1050-00-60

Line	Item	Item Description	Unit	Total	Qty
0002	201.0110	Clearing	SY	90.000	90.000
0004	201.0210	Grubbing	SY	90.000	90.000
0006	203.0220	Removing Structure (structure) 01. B-09-29	EACH	1.000	1.000
0008	204.0100	Removing Concrete Pavement	SY	360.000	360.000
0010	204.0105	Removing Concrete Pavement Butt Joints	SY	6,960.000	6,960.000
0012	204.0110	Removing Asphaltic Surface	SY	425.000	425.000
0014	204.0115	Removing Asphaltic Surface Butt Joints	SY	3,290.000	3,290.000
0016	204.0120	Removing Asphaltic Surface Milling	SY	11,320.000	11,320.000
0018	204.0126.S	Removing Asphaltic Longitudinal Notched Wedge Joint Milling	LF	77,800.000	77,800.000
0020	204.0130	Removing Curb	LF	180.000	180.000
0022	204.0150	Removing Curb & Gutter	LF	1,100.000	1,100.000
0024	204.0165	Removing Guardrail	LF	2,360.000	2,360.000
0026	204.0190	Removing Surface Drains	EACH	8.000	8.000
0028	204.9060.S	Removing (item description) 01. Apron Endwalls for Culvert Pipe	EACH	16.000	16.000
0030	205.0100	Excavation Common	CY	1,685.000	1,685.000
0032	205.9016.S	Grading Shaping and Finishing Intersection (location) 01. 345th St	EACH	1.000	1.000
0034	206.2001	Excavation for Structures Culverts (structure) 01. B-9-29	EACH	1.000	1.000
0036	206.5001	Cofferdams (structure) 01. B-9-29	EACH	1.000	1.000
0038	210.2500	Backfill Structure Type B	TON	200.000	200.000
0040	211.0101	Prepare Foundation for Asphaltic Paving (project) 01. 1050-00-60	EACH	1.000	1.000
0042	213.0100	Finishing Roadway (project) 01. 1050-00-60	EACH	1.000	1.000
0044	305.0110	Base Aggregate Dense 3/4-Inch	TON	11,160.000	11,160.000
0046	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	294.000	294.000
0048	311.0110	Breaker Run	TON	45.000	45.000
0050	415.0060	Concrete Pavement 6-Inch	SY	40.000	40.000
0052	415.0120	Concrete Pavement 12-Inch	SY	72.000	72.000
0054	415.0410	Concrete Pavement Approach Slab	SY	176.000	176.000
0056	416.0610	Drilled Tie Bars	EACH	1,926.000	1,926.000
0058	416.0620	Drilled Dowel Bars	EACH	8,693.000	8,693.000
0060	416.1710	Concrete Pavement Repair	SY	5,212.000	5,212.000
0062	416.1720	Concrete Pavement Replacement	SY	1,460.000	1,460.000
0064	455.0605	Tack Coat	GAL	37,080.000	37,080.000
0066	460.0105.S	HMA Percent Within Limits (PWL) Test Strip Volumetrics	EACH	1.000	1.000
0068	460.0110.S	HMA Percent Within Limits (PWL) Test Strip Density	EACH	1.000	1.000
0070	460.0115.S	HMA Pavement Test Strip Volumetrics	EACH	1.000	1.000
0072	460.0120.S	HMA Pavement Test Strip Density	EACH	1.000	1.000
0074	460.2000	Incentive Density HMA Pavement	DOL	17,950.000	17,950.000
0076	460.2005	Incentive Density PWL HMA Pavement	DOL	19,490.000	19,490.000
0078	460.2007	Incentive Density HMA Pavement Longitudinal Joints	DOL	14,910.000	14,910.000
0080	460.2010	Incentive Air Voids HMA Pavement	DOL	37,660.000	37,660.000
0082	460.6244	HMA Pavement 4 MT 58-34 S	TON	37,660.000	37,660.000
0084	460.8644	HMA Pavement 4 SMA 58-34 V	TON	28,040.000	28,040.000
0086	460.9000.S	Material Transfer Vehicle	EACH	1.000	1.000
0088	465.0105	Asphaltic Surface	TON	1,136.000	1,136.000
0090	465.0110	Asphaltic Surface Patching	TON	400.000	400.000
0092	465.0510	Asphaltic Rumble Strips, Shoulder Divided Roadway	LF	138,600.000	138,600.000
0094	504.0100	Concrete Masonry Culverts	CY	33.000	33.000
0096	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	2,880.000	2,880.000
0098	509.1500	Concrete Surface Repair	SF	80.000	80.000

1050-00-60

Line	Item	Item Description	Unit	Total	Qty
0100	511.1200	Temporary Shoring (structure) 01. B-09-0029	SF	550.000	550.000
0102	516.0500	Rubberized Membrane Waterproofing	SY	19.000	19.000
0104	520.8000	Concrete Collars for Pipe	EACH	6.000	6.000
0106	520.8700	Cleaning Culvert Pipes	EACH	31.000	31.000
0108	522.1018	Apron Endwalls for Culvert Pipe Reinforced Concrete 18-Inch	EACH	12.000	12.000
0110	522.1024	Apron Endwalls for Culvert Pipe Reinforced Concrete 24-Inch	EACH	4.000	4.000
0112	524.0118	Culvert Pipe Salvaged 18-Inch	LF	24.000	24.000
0114	524.0124	Culvert Pipe Salvaged 24-Inch	LF	64.000	64.000
0116	524.0130	Culvert Pipe Salvaged 30-Inch	LF	8.000	8.000
0118	524.0148	Culvert Pipe Salvaged 48-Inch	LF	16.000	16.000
0120	524.0618	Apron Endwalls for Culvert Pipe Salvaged 18-Inch	EACH	1.000	1.000
0122	524.0624	Apron Endwalls for Culvert Pipe Salvaged 24-Inch	EACH	5.000	5.000
0124	524.0630	Apron Endwalls for Culvert Pipe Salvaged 30-Inch	EACH	1.000	1.000
0126	524.0648	Apron Endwalls for Culvert Pipe Salvaged 48-Inch	EACH	1.000	1.000
0128	601.0411	Concrete Curb & Gutter 30-Inch Type D	LF	139.000	139.000
0130	601.0415	Concrete Curb & Gutter 6-Inch Sloped 30-Inch Type J	LF	152.000	152.000
0132	601.0557	Concrete Curb & Gutter 6-Inch Sloped 36-Inch Type D	LF	818.000	818.000
0134	602.0405	Concrete Sidewalk 4-Inch	SF	490.000	490.000
0136	602.3010	Concrete Surface Drains	CY	38.000	38.000
0138	606.0200	Riprap Medium	CY	39.000	39.000
0140	614.0010	Barrier System Grading Shaping Finishing	EACH	7.000	7.000
0142	614.2300	MGS Guardrail 3	LF	1,550.000	1,550.000
0144	614.2500	MGS Thrie Beam Transition	LF	160.000	160.000
0146	614.2610	MGS Guardrail Terminal EAT	EACH	7.000	7.000
0148	614.2620	MGS Guardrail Terminal Type 2	EACH	3.000	3.000
0150	618.0100	Maintenance and Repair of Haul Roads (project) 01. 1050-00-60	EACH	1.000	1.000
0152	619.1000	Mobilization	EACH	1.000	1.000
0154	620.0300	Concrete Median Sloped Nose	SF	389.000	389.000
0156	624.0100	Water	MGAL	115.000	115.000
0158	625.0100	Topsoil	SY	6,860.000	6,860.000
0160	625.0500	Salvaged Topsoil	SY	1,980.000	1,980.000
0162	627.0200	Mulching	SY	6,460.000	6,460.000
0164	628.1504	Silt Fence	LF	7,089.000	7,089.000
0166	628.1520	Silt Fence Maintenance	LF	7,089.000	7,089.000
0168	628.1905	Mobilizations Erosion Control	EACH	6.000	6.000
0170	628.1910	Mobilizations Emergency Erosion Control	EACH	4.000	4.000
0172	628.2008	Erosion Mat Urban Class I Type B	SY	2,390.000	2,390.000
0174	628.7504	Temporary Ditch Checks	LF	90.000	90.000
0176	628.7555	Culvert Pipe Checks	EACH	30.000	30.000
0178	629.0210	Fertilizer Type B	CWT	9.000	9.000
0180	630.0120	Seeding Mixture No. 20	LB	394.000	394.000
0182	630.0200	Seeding Temporary	LB	234.000	234.000
0184	630.0500	Seed Water	MGAL	214.000	214.000
0186	633.5200	Markers Culvert End	EACH	124.000	124.000
0188	634.0612	Posts Wood 4x6-Inch X 12-FT	EACH	6.000	6.000
0190	637.1220	Signs Type I Reflective SH	SF	856.000	856.000
0192	637.2220	Signs Type II Reflective SH	SF	13.500	13.500
0194	638.2102	Moving Signs Type II	EACH	1.000	1.000
0196	638.2601	Removing Signs Type I	EACH	11.000	11.000

1050-00-60

Line	Item	Item Description	Unit	Total	Qty
0198	638.2602	Removing Signs Type II	EACH	10.000	10.000
0200	638.3000	Removing Small Sign Supports	EACH	8.000	8.000
0202	638.4000	Moving Small Sign Supports	EACH	1.000	1.000
0204	642.5001	Field Office Type B	EACH	1.000	1.000
0206	643.0300	Traffic Control Drums	DAY	195,178.000	195,178.000
0208	643.0370.S	Digital Speed Reduction System (DSRS)	DAY	334.000	334.000
0210	643.0420	Traffic Control Barricades Type III	DAY	1,478.000	1,478.000
0212	643.0705	Traffic Control Warning Lights Type A	DAY	2,872.000	2,872.000
0214	643.0715	Traffic Control Warning Lights Type C	DAY	13,864.000	13,864.000
0216	643.0810	Traffic Control Connected Arrow Boards	DAY	334.000	334.000
0218	643.0900	Traffic Control Signs	DAY	8,756.000	8,756.000
0220	643.0910	Traffic Control Covering Signs Type I	EACH	10.000	10.000
0222	643.0920	Traffic Control Covering Signs Type II	EACH	10.000	10.000
0224	643.1050	Traffic Control Signs PCMS	DAY	14.000	14.000
0226	643.1220	Traffic Control Connected Work Zone Start and End Location Markers	DAY	334.000	334.000
0228	643.3165	Temporary Marking Line Paint 6-Inch	LF	174,971.000	174,971.000
0230	643.3180	Temporary Marking Line Removable Tape 6-Inch	LF	2,920.000	2,920.000
0232	643.3265	Temporary Marking Line Paint 10-Inch	LF	2,523.000	2,523.000
0234	643.5000	Traffic Control	EACH	1.000	1.000
0236	645.0120	Geotextile Type HR	SY	104.000	104.000
0238	646.1020	Marking Line Epoxy 4-Inch	LF	1,342.000	1,342.000
0240	646.2025	Marking Line Grooved Black Epoxy 6-Inch	LF	18,650.000	18,650.000
0242	646.2040	Marking Line Grooved Wet Ref Epoxy 6-Inch	LF	151,950.000	151,950.000
0244	646.2050	Marking Line Grooved Permanent Tape 6-Inch	LF	18,650.000	18,650.000
0246	646.3020	Marking Line Epoxy 8-Inch	LF	281.000	281.000
0248	646.4040	Marking Line Grooved Wet Ref Epoxy 10-Inch	LF	174.000	174.000
0250	646.4050	Marking Line Grooved Permanent Tape 10-Inch	LF	5,241.000	5,241.000
0252	646.5120	Marking Word Epoxy	EACH	3.000	3.000
0254	646.5320	Marking Railroad Crossing Epoxy	EACH	6.000	6.000
0256	646.5420	Marking Aerial Enforcement Bar Epoxy	EACH	45.000	45.000
0258	646.6120	Marking Stop Line Epoxy 18-Inch	LF	120.000	120.000
0260	646.7220	Marking Chevron Epoxy 24-Inch	LF	639.000	639.000
0262	646.8120	Marking Curb Epoxy	LF	134.000	134.000
0264	646.8220	Marking Island Nose Epoxy	EACH	4.000	4.000
0266	646.9002	Marking Removal Line 6-Inch	LF	880.000	880.000
0268	650.4500	Construction Staking Subgrade	LF	156.000	156.000
0270	650.5000	Construction Staking Base	LF	156.000	156.000
0272	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	199.000	199.000
0274	650.8000	Construction Staking Resurfacing Reference	LF	80,223.000	80,223.000
0276	650.9500	Construction Staking Sidewalk (project) 01. 1050-00-60	EACH	1.000	1.000
0278	650.9911	Construction Staking Supplemental Control (project) 01. 1050-00-60	EACH	1.000	1.000
0280	650.9920	Construction Staking Slope Stakes	LF	449.000	449.000
0282	690.0150	Sawing Asphalt	LF	3,493.000	3,493.000
0284	690.0250	Sawing Concrete	LF	22,273.000	22,273.000
0286	715.0502	Incentive Strength Concrete Structures	DOL	500.000	500.000
0288	715.0720	Incentive Compressive Strength Concrete Pavement	DOL	500.000	500.000
0290	740.0440	Incentive IRI Ride	DOL	56,516.000	56,516.000
0292	999.2100.S	Installing and Maintaining Climbing Turtle Exclusion Fence	LF	580.000	580.000
0294	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	2,400.000	2,400.000

Estimate Of Quantities

1050-00-60

Line	Item	Item Description	Unit	Total	Qty
0296	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	2,000.000	2,000.000
0298	SPV.0180	Special 01. Ditch Cleaning	SY	394.000	394.000

STATION	LOCATION	201.0110 CLEARING SY	201.0210 GRUBBING SY
1307+67	RT	45	45
1330+89	RT	45	45
	TOTAL 0010	90	90

STATION	TO	STATION	LOCATION	204.0126.S REMOVING ASPHALTIC LONGITUDINAL NOTCHED WEDGE JOINT MILLING LF
990+00	-	1364+44	29EB	38,900
990+00	-	1364+44	29WB	38,900
			TOTAL 0010	77,800

STATION	TO	STATION	LOCATION	204.0165 REMOVING GUARDRAIL LF
1050+84	-	1057+50	STH 29 EB, RT	670
1164+34	-	1167+44	STH 29 EB, LT	310
1164+84	-	1167+44	STH 29 EB, RT	260
1169+09	-	1171+94	STH 29 WB, LT	290
1169+09	-	1172+19	STH 29 WB, RT	310
1175+25	-	1177+29	STH 29 EB, RT	210
1277+67	-	1280+70	STH 29 EB, RT	310
			TOTAL 0010	2,360

STATION	LOCATION	204.9060.S.01 REMOVING (ITEM DESCRIPTION) (01. APRON ENDWALLS FOR CULVERT PIPE) EACH
1107+00	LT	1
1151+01	LT	1
1186+01	LT	1
1191+98	LT	2
1205+98	LT	2
1208+61	LT	2
1213+99	LT	1
1249+87	RT	1
1274+00	LT	1
1281+00	MED	1
1297+01	MED	1
1325+29	RT	1
1356+00	LT	1
	TOTAL 0010	16

STATION	TO	STATION	LOCATION	204.0100 REMOVING CONCRETE PAVEMENT SY	204.0105 REMOVING CONCRETE 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
990+00	-	1364+44	29EB	180	-	-	-	-
990+00	-	1364+44	29WB	180	-	-	-	-
990+00	-	993+00	29 EB/WB	-	1,740	-	600	-
1164+41	-	1167+41	29WB	-	870	-	320	-
1164+38	-	1167+38	29EB	-	870	-	460	-
1169+17	-	1172+17	29EB	-	870	-	320	-
1169+20	-	1172+20	29WB	-	870	-	470	-
1361+44	-	1364+44	29EB/WB	-	1,740	-	700	-
96+79	-	103+64	CTH H	-	-	58	100	4,070
4+23	-	9+56	NW RAMP - CTH H	-	-	23	-	1,460
33+30	-	41+08	SW RAMP - CTH H	-	-	66	-	2,160
0+42	-	8+18	NE RAMP - CTH H	-	-	57	-	2,150
45+31	-	50+66	SE RAMP - CTH H	-	-	12	-	1,480
940+00	-	1364+44	SIDEROADS	-	-	209	320	-
			TOTAL 0010	360	6,960	425	3,290	11,320

DIVISION	FROM/TO STATION	COMMON EXCAVATION (1) CUT (2)	AVAILABLE MATERIAL (5)	UNEXPANDED FILL	EXPANDED FILL (13) FACTOR 1.25	MASS ORDINATE +/- (14)	WASTE	208.0100 BORROW	COMMENT
DIVISION 1									
STH29WB_320TH	941+41.00/943+92.00	337	337	19	24	313			
DIVISION 1 SUBTOTAL		337	337	19	24	313	313	0	
DIVISION 2									
STH29EB_320THST	940+29.00/944+44.00	1,348	1,348	976	1,220	128			
DIVISION 2 SUBTOTAL		1,348	1,348	976	1,220	128	128	0	
GRAND TOTAL		1,685	1,685	995	1,244	441	441	0	

NOTES:
(1) COMMON EXCAVATION IS THE SUM OF THE CUT AND EBS EXCAVATION COLUMNS. ITEM NUMBER 205.0100
(2) SALVAGED/UNSUABLE PAVEMENT MATERIAL IS INCLUDED IN CUT.
5) AVAILABLE MATERIAL = CUT
(13) EXPANDED FILL FACTOR = 1.25
EXPANDED FILL = UNEXPANDED FILL * FILL FACTOR
(14) THE MASS ORDINATE + OR - QTY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION. MINUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION.

STATION	TO	STATION	LOCATION	205.9016.S.01 GRADING SHAPING AND FINISHING INTERSECTION (LOCATION) (01. 345TH ST) EACH
1074+36	-	1081+18	STH 29 WB, LT	1
			TOTAL 0010	1

FOR REFERENCE ONLY
GRADING SHAPING AND FINISHING INTERSECTION 345TH ST

205.0100 EXCAVATION COMMON CY	208.0100 BORROW CY	625.0100 TOPSOIL SY	627.0200 MULCHING SY	629.0210 FERTILIZER TYPE B CWT	630.0120 SEEDING MIXTURE NO. 20 LB	630.0200 SEEDING TEMPORARY LB
1	38	830	830	0.6	37	23
1	38	830	830	0.6	37	23

STATION	TO	STATION	LOCATION	455.0605 TACK COAT GAL	460.6244 HMA PAVEMENT 4 MT 58-34 S TON	460.8644 HMA PAVEMENT 4 SMA 58-34 V TON	REMARKS
990+00	-	1364+44	STH 29 EB & WB	14,550	24,070	-	LOWER LAYER MAINLINE, INSIDE SHOULDER, AND INNER 2' OF OUTSIDE SHOULDER
990+00	-	1364+44	STH 29 EB & WB	14,550	-	27,380	UPPER LAYER MAINLINE, INSIDE SHOULDER, AND INNER 2' OF OUTSIDE SHOULDER
990+00	-	1364+44	STH 29 EB & WB	2,930	4,800	-	LOWER LAYER OUTER 6' OF OUTSIDE SHOULDER AND GORES
990+00	-	1364+44	STH 29 EB & WB	2,930	5,480	-	UPPER LAYER OUTER 6' OF OUTSIDE SHOULDER AND GORES
1160+05	-	1176+50	CTH H	270	542	-	CTH H MAINLINE LIMITS
1160+05	-	1176+50	CTH H RAMPS	1,150	1,540	660	MAINLINE LIMITS TO CTH H MATCHLINES
990+00	-	1364+44	CROSSOVERS	420	710	-	
990+00	-	1364+44	SIDEROADS	280	510	-	
			TOTAL 0010	37,080	37,652	28,040	

STATION	LOCATION	SPV.0180.01 SPECIAL (01. DITCH CLEANING) SY
996+37	LT	14
1004+00	LT	11
1018+99	LT	14
1038+48	LT	14
1069+51	LT/RT	67
1097+02	LT	14
1124+03	LT	67
1178+02	LT	20
1191+98	LT	14
1198+04	LT	27
1205+98	LT	14
1221+51	LT	14
1238+01	LT	14
1258+78	LT	14
1267+01	LT	14
1274+00	LT	14
1297+01	MED	14
1356+00	LT	14
1364+44	LT	20
	TOTAL 0010	394

STATION	TO	STATION	LOCATION	415.0060 CONCRETE PAVEMENT 6-INCH SY	415.0120 CONCRETE PAVEMENT 12-INCH SY	415.0410 CONCRETE PAVEMENT APPROACH SLAB SY
1167+35	-	1167+56	29WB	10	18	44
1167+32	-	1167+53	29EB	10	18	44
1168+99	-	1169+20	29WB	10	18	44
1168+96	-	1169+17	29EB	10	18	44
			TOTAL 0010	40	72	176

STATION	TO	STATION	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	624.0100 WATER MGAL	REMARKS
940+00	-	1364+44	STH 29 EB & RAMPS	2420	80	25	OUTER SHOULDER
990+00	-	1364+44	STH 29 WB & RAMPS	2330	20	24	OUTER SHOULDER
940+00	-	1364+44	STH 29 EB & RAMPS	3050	4	31	INSIDE SHOULDERS
940+00	-	1364+44	STH 29 WB & RAMPS	3060	-	31	INSIDE SHOULDERS
990+00	-	1364+44	STH 29	210	-	3	CROSSOVERS
990+00	-	1364+44	320TH, 345TH, CTH H	90	190	1	SIDEROADS & TURN LANE
			TOTAL 0010	11,160	294	115	

DESCRIPTION	STATION	MIXTURE USE	UNDERLYING SURFACE	BID ITEM	TONS	THICKNESS	QUALITY MANAGEMENT PROGRAM TO USE	
							MIXTURE ACCEPTANCE	DENSITY ACCEPTANCE
12-FOOT DRIVING LANE	990+00 - 1167+40, 1196+10 - 1364+44	LOWER LAYER	EXISTING CONCRETE PAVEMENT	4 MT 58-34 S	19,480	1.75"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT 460.2005
12-FOOT DRIVING LANE	990+00 - 1167+40, 1196+10 - 1364+44	UPPER LAYER	4 MT 58-34 S	4 SMA 58-34 V	22,263	2.00"	QMP AS PER STP 460-020	INCENTIVE DENSITY HMA PAVEMENT STP 460-020
3-FOOT SHOULDER	990+00 - 1167+40, 1196+10 - 1364+44	LOWER LAYER	EXISTING HMA SURFACE	4 MT 58-34 S	2,740	1.75"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPARTMENT; NOT ELEGIBLE FOR INCENTIVE
3-FOOT SHOULDER	990+00 - 1167+40, 1196+10 - 1364+44	UPPER LAYER	4 MT 58-34 S	4 SMA 58-34 V	3,002	2.00"	QMP AS PER STP 460-020	INCENTIVE DENSITY HMA PAVEMENT STP 460-020
2-FOOT SHOULDER	990+00 - 1167+40, 1196+10 - 1364+44	LOWER LAYER	EXISTING CONCRETE PAVEMENT	4 MT 58-34 S	1,625	1.75"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPARTMENT; NOT ELEGIBLE FOR INCENTIVE
2-FOOT SHOULDER	990+00 - 1167+40, 1196+10 - 1364+44	UPPER LAYER	4 MT 58-34 S	4 SMA 58-34 V	1,855	2.00"	QMP AS PER STP 460-020	INCENTIVE DENSITY HMA PAVEMENT STP 460-020
6-FOOT SHOULDER	990+00 - 1167+40, 1196+10 - 1364+44	LOWER LAYER	EXISTING HMA SURFACE	4 MT 58-34 S	4,670	1.75"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPARTMENT; NOT ELEGIBLE FOR INCENTIVE
6-FOOT SHOULDER	990+00 - 1167+40, 1196+10 - 1364+44	UPPER LAYER	4 MT 58-34 S	4 MT 58-34 S	5,340	2.00"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPARTMENT; NOT ELEGIBLE FOR INCENTIVE
6-FOOT SHOULDER, ADJACENT TO RAMPS	1154+19 - 1157+62, 1149+48 - 1161+31, 1175+50 - 1187+11, 1179+01 - 1182+89	LOWER LAYER	EXISTING CONCRETE PAVEMENT	4 MT 58-34 S	220	1.75"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPARTMENT; NOT ELEGIBLE FOR INCENTIVE
6-FOOT SHOULDER, ADJACENT TO RAMPS	1154+19 - 1157+62, 1149+48 - 1161+31, 1175+50 - 1187+11, 1179+01 - 1182+89	UPPER LAYER	4 MT 58-34 S	4 SMA 58-34 V	240	2.00"	QMP AS PER STP 460-020	INCENTIVE DENSITY HMA PAVEMENT STP 460-020
WIDENING FOR BEAMGUARD	1163+91 - 1167+38, 1169+14 - 1172+64	LOWER LAYER	EXISTING HMA SURFACE	4 MT 58-34 S	22	1.75"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPARTMENT; NOT ELEGIBLE FOR INCENTIVE
WIDENING FOR BEAMGUARD	1163+91 - 1167+38, 1169+14 - 1172+64	UPPER LAYER	4 MT 58-34 S	4 SMA 58-34 V	25	2.00"	QMP AS PER STP 460-020	INCENTIVE DENSITY HMA PAVEMENT STP 460-020
WIDENING FOR BEAMGUARD & 345TH ST TURN LANE	1050+84 - 1057+69, 1164+51 - 1167+38, 1076+18 - 1081+18, 1196+63 - 1175+29, 1203+65 - 1207+10, 1208+69 - 1212+18, 1277+22 - 1280+97	LOWER LAYER	EXISTING HMA SURFACE	4 MT 58-34 S	90	1.75"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPARTMENT; NOT ELEGIBLE FOR INCENTIVE
WIDENING FOR BEAMGUARD & 345TH ST TURN LANE	1050+84 - 1057+69, 1164+51 - 1167+38, 1076+18 - 1081+18, 1196+63 - 1175+29, 1203+65 - 1207+10, 1208+69 - 1212+18, 1277+22 - 1280+97	UPPER LAYER	4 MT 58-34 S	4 MT 58-34 S	100	1.75"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPARTMENT; NOT ELEGIBLE FOR INCENTIVE
CROSSOVERS	990+00 - 1167+40, 1196+10 - 1364+44	LOWER LAYER	EXISTING HMA SURFACE	4 MT 58-34 S	330	1.75"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPARTMENT; NOT ELEGIBLE FOR INCENTIVE
CROSSOVERS	990+00 - 1167+40, 1196+10 - 1364+44	UPPER LAYER	4 MT 58-34 S	4 MT 58-34 S	380	2.00"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPARTMENT; NOT ELEGIBLE FOR INCENTIVE
RAMPS	1154+19 - 1160+04, 1149+48 - 1162+58, 1173+99 - 1187+11, 1176+52 - 1182+89	LOWER LAYER	EXISTING CONCRETE PAVEMENT	4 MT 58-34 S	580	1.75"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPARTMENT; NOT ELEGIBLE FOR INCENTIVE
RAMPS	1154+19 - 1160+04, 1149+48 - 1162+58, 1173+99 - 1187+11, 1176+52 - 1182+89	UPPER LAYER	4 MT 58-34 S	4 SMA 58-34 V	660	2.00"	QMP AS PER STP 460-020	INCENTIVE DENSITY HMA PAVEMENT STP 460-020
RAMPS	33+34 - 41+08, 19+23 - 24+56, 45+31 - 50+66, 0+42 - 8+17	UPPER LAYER	MILLED EXISTING HMA SURFACE	4 MT 58-34 S	960	2.25" - 3.75"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPARTMENT; NOT ELEGIBLE FOR INCENTIVE
CTH H	96+42 - 103+27, 98+62 - 105+47	UPPER LAYER	MILLED EXISTING HMA SURFACE	4 MT 58-34 S	545	2.25"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPARTMENT; NOT ELEGIBLE FOR INCENTIVE
GORES	1157+62 - 1159+10, 1161+31 - 1162+18, 1174+41 - 1175+50, 1177+49 - 1179+01	LOWER LAYER	EXISTING HMA SURFACE	4 MT 58-34 S	25	1.75"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPARTMENT; NOT ELEGIBLE FOR INCENTIVE
GORES	1157+62 - 1159+10, 1161+31 - 1162+18, 1174+41 - 1175+50, 1177+49 - 1179+01	UPPER LAYER	4 MT 58-34 S	4 MT 58-34 S	30	2.00"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPARTMENT; NOT ELEGIBLE FOR INCENTIVE
SIDE ROADS & MISC	990+00 - 1167+40, 1196+10 - 1364+44	UPPER LAYER	EXISTING HMA SURFACE	4 MT 58-34 S	515	2.00"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPARTMENT; NOT ELEGIBLE FOR INCENTIVE

STATION	TO	STATION	LOCATION	465.0105 ASPHALTIC SURFACE TON	465.0110 ASPHALTIC SURFACE PATCHING TON	REMARKS
990+00	-	1364+44	PROJECT	-	100	MINOR REPAIRS
990+00	-	1364+44	PROJECT	1,000	300	MISCELLANEOUS REPAIRS
940+00	-	945+00	320TH ST	50	-	PAVEMENT SURFACE
96+42	-	105+47	CTH H	40	-	MEDIAN ISLAND
990+00	-	1364+44	SIDEROADS	30	-	C&G REPLACEMENT
99+17	-	104+48	CTH H	16	-	PAVEMENT WIDENING
			TOTAL 0010	1,136	400	

STATION	TO	STATION	LOCATION	520.8700 CLEANING CULVERT PIPES EACH
940+00	-	1364+44	LT/RT	31
			TOTAL 0010	31

STATION	LOCATION	602.0405 CONCRETE SIDEWALK 4-INCH SF
0+12	STH 29WB OFF RAMP - CTH H	210
41+32	STH29EB OFF RAMP - CTH H	200
1207+93	CTH NN	30
1207+82	CTH NN	50
	TOTAL 0010	490

STATION	TO	STATION	LOCATION	465.0510 ASPHALTIC RUMBLE STRIPS, SHOULDER DIVIDED ROADWAY LF
990+00	-	1363+39	STH 29 EB, INSIDE SHOULDER	35,500
990+00	-	1362+96	STH 29 EB, OUTSIDE SHOULDER	34,000
990+00	-	1363+87	STH 29 WB, INSIDE SHOULDER	35,700
990+00	-	1363+57	STH 29 WB, OUTSIDE SHOULDER	33,400
			TOTAL 0010	138,600

LOCATION	204.0190 REMOVING SURFACE DRAINS EACH	602.3010 CONCRETE SURFACE DRAINS CY	REMARKS
320TH ST	1	-	SW
330TH ST	-	2	NW
CTH G	-	2	NW
CTH G	-	2	SE
345TH ST	-	2	NW
345TH ST	-	2	NE
345TH ST	1	2	SW
STH29WB ON-RAMP	1	4	NW
STH29WB ON-RAMP	-	2	SW
STH29EB OFF-RAMP	1	4	SW
STH29WB CTH H BRIDGE	2	7	-
STH29EB CTH H BRIDGE	2	3	-
CTH NN	-	2	NW
CTH NN	-	2	NE
CTH NN	-	2	SW
TOTAL 0010	8	38	

STATION	LOCATION	520.8000 CONCRETE COLLARS FOR PIPE EACH	522.1018 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 18-INCH EACH	522.1024 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH EACH	* 524.0118 CULVERT PIPE SALVAGED 18-INCH LF	* 524.0124 CULVERT PIPE SALVAGED 24-INCH LF	* 524.0130 CULVERT PIPE SALVAGED 30-INCH LF	* 524.0148 CULVERT PIPE SALVAGED 48-INCH LF	* 524.0618 APRON ENDWALLS FOR CULVERT PIPE SALVAGED 18-INCH EACH	* 524.0624 APRON ENDWALLS FOR CULVERT PIPE SALVAGED 24-INCH EACH	* 524.0630 APRON ENDWALLS FOR CULVERT PIPE SALVAGED 30-INCH EACH	* 524.0648 APRON ENDWALLS FOR CULVERT PIPE SALVAGED 48-INCH EACH
1009+48	RT	1	-	-	-	32	-	-	-	1	-	-
1028+56	LT	1	-	-	-	24	-	-	-	1	-	-
1052+04	LT	1	-	-	-	-	-	16	-	-	-	1
1053+97	LT	1	-	-	-	8	-	-	-	1	-	-
1069+51	LT/RT	-	-	-	-	-	-	-	-	2	-	-
1107+00	LT	-	-	1	-	-	-	-	-	-	-	-
1116+00	LT	1	-	-	24	-	-	-	1	-	-	-
1151+01	LT	-	1	-	-	-	-	-	-	-	-	-
1186+01	LT	-	-	1	-	-	-	-	-	-	-	-
1191+98	LT	-	2	-	-	-	-	-	-	-	-	-
1205+98	LT	-	2	-	-	-	-	-	-	-	-	-
1208+61	LT	-	2	-	-	-	-	-	-	-	-	-
1213+99	LT	-	1	-	-	-	-	-	-	-	-	-
1249+87	RT	-	-	1	-	-	-	-	-	-	-	-
1274+00	LT	-	1	-	-	-	-	-	-	-	-	-
1281+00	MED	-	1	-	-	-	-	-	-	-	-	-
1297+01	MED	-	1	-	-	-	-	-	-	-	-	-
1325+29	RT	-	-	1	-	-	-	-	-	-	-	-
1330+89	LT/RT	1	-	-	-	-	8	-	-	-	1	-
1356+00	LT	-	1	-	-	-	-	-	-	-	-	-
TOTAL 0010		6	12	4	24	64	8	16	1	5	1	1

* INSTALL JOINT TIES ON ALL SALVAGED CULVERT PIPE SECTIONS. FURNISHING AND INSTALLING JOINT TIES, INCLUDING ANY REQUIRED DRILLING, IS INCIDENTAL TO THE SALVAGED PIPE BID ITEMS.

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STATION	TO	STATION	LOCATION	614.0010 BARRIER SYSTEM GRADING SHAPING FINISHING EACH	614.2300 MGS GUARDRAIL 3 LF	614.2500 MGS THRIE BEAM TRANSITION LF	614.2610 MGS GUARDRAIL TERMINAL EAT EACH	614.2620 MGS GUARDRAIL TERMINAL TYPE 2 EACH
1050+84	-	1057+49	STH 29 EB, RT	1	350.0	-	1	1
1164+41	-	1167+46	STH 29 EB, LT	1	212.5	40	1	-
1164+91	-	1167+46	STH 29 EB, RT	1	162.5	40	1	-
1169+09	-	1171+89	STH 29 WB, LT	1	187.5	40	1	-
1169+09	-	1172+14	STH 29 WB, RT	1	212.5	40	1	-
1277+62	-	1280+77	STH 29 EB, RT	1	250.0	-	1	1
51+67	-	53+96	SE RAMP, RT	1	175.0	-	1	1
			TOTAL 0010	7	1,550	160	7	3

LOCATION	204.0130 REMOVING CURB LF	204.0150 REMOVING CURB & GUTTER LF	601.0411 CONCRETE CURB & GUTTER 30-INCH TYPE D LF	601.0415 CONCRETE CURB & GUTTER 6-INCH SLOPED 30-INCH TYPE J LF	601.0557 CONCRETE CURB & GUTTER 6-INCH SLOPED 36-INCH TYPE D LF	620.0300 CONCRETE MEDIAN SLOPED NOSE SF	REMARKS
SW 320TH ST	-	110	-	-	-	-	-
SE 320TH ST	-	60	-	-	-	-	-
NW 330TH ST	-	70	-	-	60	-	-
NW CTH G	-	60	-	-	60	-	-
SE CTH G	-	70	-	-	75	-	-
NW 345TH ST	-	60	-	-	75	-	-
NE 345TH ST	-	90	-	-	75	-	-
SW 345TH ST	-	90	-	-	82	-	-
29WB OFF RAMP	60	-	-	56	-	117	RT ISLAND
29WB ON RAMP	-	100	-	-	80	-	-
29EB OFF RAMP	60	70	-	54	53	93	RT ISLAND
29EB ON RAMP	-	60	-	-	60	-	-
CTH H NORTH	-	20	-	-	-	49	MEDIAN
CTH H SOUTH	-	140	139	-	-	-	MEDIAN
NW CTH NN	30	10	-	17	64	62	RT ISLAND
NE CTH NN	-	30	-	-	72	-	-
SW CTH NN	-	60	-	-	62	-	-
SE CTH NN	30	-	-	25	-	68	RT ISLAND
TOTAL 0010	180	1,100	139	152	818	389	

FOR REFERENCE ONLY

BARRIER SYSTEM GRADING SHAPING FINISHING

205.0100 EXCAVATION COMMON CY	208.0100 BORROW CY	625.0100 TOPSOIL SY	627.0200 MULCHING SY	628.2008 EROSION MAT URBAN CLASS I TYPE B SY	629.0210 FERTILIZER TYPE B CWT	630.0120 SEEDING MIXTURE NO. 20 LB
2	147	1150	280	870	0.80	52
-	8	230	230	-	0.20	11
4	54	640	250	390	0.50	29
-	7	300	300	-	0.20	14
-	-	120	120	-	0.10	6
-	39	500	290	210	0.40	23
6	122	770	280	490	0.50	35
12	377	3,710	1,750	1,960	2.7	170

STATION	LOCATION	628.7555 CULVERT PIPE CHECKS EACH
1004+00	MED	2
1052+04	LT	10
1191+98	MED	2
1205+98	MED	2
1208+61	MED	2
1213+99	MED	2
1281+00	MED	2
1297+01	MED	2
	UNDISTRIBUTED	6
	TOTAL 0010	30

LOCATION	625.0100 TOPSOIL SY	625.0500 SALVAGED TOPSOIL SY	627.0200 MULCHING SY	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.2008 EROSION MAT URBAN CLASS I TYPE B SY	628.7504 TEMPORARY DITCH CHECKS LF	629.0210 FERTILIZER TYPE B CWT	630.0120 SEEDING MIXTURE NO. 20 LB	630.0200 SEEDING TEMPORARY LB	630.0500 SEED WATER MGAL	999.2100.S. INSTALLING AND MAINTAINING TURTLE EXCLUSION FENCE LF	REMARKS
PROJECT	400	-	-	-	-	400	-	1	18	10	9	-	DITCH CLEANING
PROJECT	90	470	-	64	64	560	-	1	25	15	12	-	CULVERT/SLOPE REPAIR
PROJECT	-	-	-	3,090	3,090	-	-	-	-	-	-	460	BEAMGUARD REPLACEMENTS
PROJECT	-	-	-	500	500	-	-	-	-	-	15	-	TURN LANE
PROJECT	-	650	-	1,250	1,250	650	-	1	29	18	18	-	CURB & GUTTER REPLACEMENTS
320TH ST	5,000	-	5,000	600	600	-	72	4	230	140	113	-	INTERSECTION REMOVAL
B-09-029	-	300	-	165	165	300	-	1	2	1	7	-	WINGWALL REPLACEMENTS
UNDISTRIBUTED	1,370	560	1,460	1,420	1,420	480	18	1	90	50	40	120	-
TOTAL 0010	6,860	1,980	6,460	7,089	7,089	2,390	90	9	394	234	214	580	

LOCATION	646.5120 MARKING WORD EPOXY EACH	646.5320 MARKING RAILROAD CROSSING EPOXY EACH	646.5420 MARKING AERIAL ENFORCEMENT BAR EPOXY EACH
CTH H	3	-	-
STH 29	-	-	45
E 1ST AVE	-	1	-
WILLOW RD	-	1	-
CTH NN	-	1	-
JUNCTION AVE	-	1	-
COPENHAVER AVE	-	2	-
TOTAL 0010	3	6	45

STATION	TO	STATION	LOCATION	633.5200 MARKERS CULVERT END EACH
990+00	-	1364+44	PROJECT	124
			TOTAL 0010	124

STATION	LOCATION	606.0200 RIPRAP MEDIUM CY	645.0120 GEOTEXTILE TYPE HR SY	REMARKS
953+80	B-09-029, LT	10	30	REPAIR LINED CHANNEL
1158+01	CULVERT 9029024060	29	74	REPAIR ENBANKMENT WASHOUT
	TOTAL 0010	39	104	

STATION	LOCATION	SIGN CODE	SIGN SIZE (WXH) INCHES	634.0612 POSTS WOOD 4X6-INCH X 12-FT EACH	637.1220 SIGNS TYPE I REFLECTIVE SH SF	637.2220 SIGNS TYPE II REFLECTIVE SH SF	638.2601 REMOVING SIGNS TYPE I EACH	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	REMARKS
941+94	320TH ST	W5-56	18x18	1	-	2.25	-	-	-	BLANK
942+11	320TH ST	W5-56	18x18	1	-	2.25	-	-	-	BLANK
942+28	320TH ST	W5-56	18x18	1	-	2.25	-	-	-	BLANK
942+37	320TH ST	W5-56	18x18	1	-	2.25	-	-	-	BLANK
942+45	320TH ST	W5-56	18x18	1	-	2.25	-	-	-	BLANK
942+62	320TH ST	W5-56	18x18	1	-	2.25	-	-	-	BLANK
942+85	320TH ST	R1-1	36x36	-	-	-	-	1	1	STOP
942+85	320TH ST	R6-3A	30x24	-	-	-	-	1	-	DIVIDED HIGHWAY
942+85	320TH ST	R6-1L	54x18	-	-	-	-	1	-	ONE WAY
942+85	320TH ST	R6-1R	54x18	-	-	-	-	1	-	ONE WAY
942+49	MEDIAN	R4-7	48x60	-	-	-	-	1	1	DIVIDER RIGHT
943+22	MEDIAN	R4-7	48x60	-	-	-	-	1	1	DIVIDER RIGHT
943+81	MEDIAN	R5-1	48x48	-	-	-	-	1	1	DO NOT ENTER
943+02	LT	R6-2L	36x48	-	-	-	-	1	1	ONE WAY
946+03	MEDIAN	R5-1A	42X30	-	-	-	-	1	1	DO NOT ENTER
952+75	LT	D1-1	90X21	-	-	-	-	1	2	320TH ST
1105+63	RT	E1-5P	108X30	-	22.5	-	1	-	-	1-1 & R1-1
1105+63	RT	E1-1A	156X120	-	130	-	1	-	-	1-2 & R1-1
1132+66	RT	E10-61	144X54	-	54	-	1	-	-	2-1 & R2-1
1133+52	LT	D2-2	240x60	-	100	-	1	-	-	2-2 & R2-2
1154+25	RT	E4-1A	192X90	-	120	-	1	-	-	3-2 & R3-1
1154+25	RT	E1-5P	108X30	-	22.5	-	1	-	-	3-1 & R3-1
1182+50	LT	E4-1A	192X90	-	120	-	1	-	-	3-4 & R3-2
1182+50	LT	E1-5P	108X30	-	22.5	-	1	-	-	3-3 & R3-2
1203+00	RT	D2-2	192X84	-	112	-	1	-	-	4-1 & R4-1
1235+15	LT	E1-1A	156X120	-	130	-	1	-	-	5-2 & R5-1
1235+15	LT	E1-5P	108X30	-	22.5	-	1	-	-	5-1 & R5-1
TOTAL 0010				6	856	13.5	11	10	8	

STATION	LOCATION	638.2102 MOVING SIGNS TYPE II EACH	638.4000 MOVING SMALL SIGN SUPPORTS EACH	REMARKS
1075+16	345TH ST	1	1	STOP SIGN/ONE WAY
	TOTAL 0010	1	1	

LOCATION	STAGE	DIGITAL SPEED LIMIT TRAILERS (DSLT) EACH	643.0370.S DIGITAL SPEED REDUCTION SYSTEM (DSRS) DAY	643.0810 TRAFFIC CONTROL CONNECTED ARROW BOARDS EACH	643.0810 TRAFFIC CONTROL CONNECTED ARROW BOARDS DAY	643.1220 TRAFFIC CONTROL CONNECTED WORK ZONE START AND END LOCATION MARKERS DAY
STH 29 EB, DRIVING LANE	1	9	38	1	38	38
STH 29 EB, PASSING LANE	1	9	38	1	38	38
STH 29 WB, DRIVING LANE	1	9	38	1	38	38
STH 29 WB, PASSING LANE	1	9	38	1	38	38
STH 29 EB, DRIVING LANE	2	9	18	1	18	18
STH 29 EB, PASSING LANE	2	9	17	1	17	17
STH 29 WB, DRIVING LANE	2	9	18	1	18	18
STH 29 WB, PASSING LANE	2	9	17	1	17	17
STH 29 EB, DRIVING LANE	3	9	28	1	28	28
STH 29 EB, PASSING LANE	3	9	28	1	28	28
STH 29 WB, DRIVING LANE	3	9	28	1	28	28
STH 29 WB, PASSING LANE	3	9	28	1	28	28
TOTAL 0010			334		334	334

LOCATION	DAYS	643.0300 TRAFFIC CONTROL DRUMS EACH	643.0300 TRAFFIC CONTROL DRUMS DAY	643.0420 TRAFFIC CONTROL BARRICADES TYPE III EACH	643.0420 TRAFFIC CONTROL BARRICADES TYPE III DAY	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A EACH	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A DAY	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C EACH	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C DAY	643.0900 TRAFFIC CONTROL SIGNS EACH	643.0900 TRAFFIC CONTROL SIGNS DAY	643.0910 TRAFFIC CONTROL COVERING SIGNS TYPE I NUMBER OF SIGNS	643.0910 TRAFFIC CONTROL COVERING SIGNS TYPE I NUMBER OF CYCLES	643.0910 TRAFFIC CONTROL COVERING SIGNS TYPE I EACH	643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II NUMBER OF SIGNS	643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II NUMBER OF CYCLES	643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II EACH	643.1050 TRAFFIC CONTROL SIGNS PCMS EACH	643.1050 TRAFFIC CONTROL SIGNS PCMS DAY	643.3180 TEMPORARY MARKING LINE REMOVABLE TAPE 6-INCH LF
PROJECT	7	10	70	-	-	-	-	-	-	-	-	-	-	-	4	1	4	2	14	1,320
DETOUR (ENTRANCE RAMP PAVING)	7	-	-	16	112	24	168	-	-	131	917	4	1	4	6	1	6	-	-	-
STH 29 EB, DRIVING LANE	84	588	49,392	5	420	10	840	43	3,612	21	1,764	-	-	-	-	-	-	-	-	600
STH 29 EB, PASSING LANE	83	579	48,057	3	249	6	498	40	3,320	17	1,411	-	-	-	-	-	-	-	-	-
STH 29 WB, DRIVING LANE	84	588	49,392	5	420	10	840	43	3,612	21	1,764	-	-	-	-	-	-	-	-	600
STH 29 WB, PASSING LANE	83	579	48,057	3	249	6	498	40	3,320	17	1,411	-	-	-	-	-	-	-	-	-
EXIT RAMP PAVING	7	30	210	4	28	4	28	-	-	7	49	6	1	6	-	-	-	-	-	400
SIDE ROADS ADVANCED WARNING	120	-	-	-	-	-	-	-	-	12	1,440	-	-	-	-	-	-	-	-	-
TOTAL 0010			195,178		1,478		2,872		13,864		8,756			10			10		14	2,920

STATION	TO	STATION	LOCATION	643.3165 TEMPORARY MARKING LINE PAINT 6-INCH LF	643.3265 TEMPORARY MARKING LINE PAINT 10-INCH LF	646.1020 MARKING LINE EPOXY 4-INCH LF	646.2025 MARKING LINE GROOVED BLACK EPOXY 6-INCH LF	646.2040 MARKING LINE GROOVED WET REF EPOXY 6-INCH LF	646.2050 MARKING LINE GROOVED PERMANENT TAPE 6-INCH LF	646.3020 MARKING LINE EPOXY 8-INCH LF	646.4040 MARKING LINE GROOVED WET REF EPOXY 10-INCH LF	646.4050 MARKING LINE GROOVED PERMANENT TAPE 10-INCH LF	646.7220 MARKING CHEVRON EPOXY 24-INCH LF	TYPE/COLOR
990+00	-	1364+44	STH 29 EB	9,325	-	-	9,325	-	9,325	-	-	-	-	CENTERLINE/WHITE
990+00	-	1364+44	STH 29 WB	9,325	-	-	9,325	-	9,325	-	-	-	-	CENTERLINE/WHITE
990+00	-	1364+44	STH 29 WB	36,341	200	-	-	35,562	-	-	-	979	-	EDGELINE/WHITE
990+00	-	1364+44	STH 29 WB	37,115	-	-	-	37,115	-	-	-	-	-	MEDIAN/YELLOW
990+00	-	1364+44	STH 29 EB	36,336	200	-	-	35,525	-	-	-	1,011	-	EDGELINE/WHITE
990+00	-	1364+44	STH 29 EB	37,110	-	-	-	37,110	-	-	-	-	-	MEDIAN/YELLOW
1154+80	-	1181+87	ENTRANCE/EXIT RAMPS	9,419	400	-	-	6,638	-	-	-	1,983	639	EDGELINE/WHITE
990+00	-	1364+44	TURN LANES	-	1,268	-	-	-	-	-	-	1,268	-	CHANNELIZING/WHITE
			CTH H/SIDE ROADS	-	455	-	-	-	-	281	174	-	-	CHANNELIZING/WHITE
			CTH H/SIDE ROADS	-	-	978	-	-	-	-	-	-	-	EDGELINE/WHITE
			CTH H/SIDE ROADS	-	-	364	-	-	-	-	-	-	-	CENTERLINE/YELLOW
			TOTAL 0010	174,971	2,523	1,342	18,650	151,950	18,650	281	174	5,241	639	

LOCATION	646.6120 MARKING STOP LINE EPOXY 18-INCH LF	646.8120 MARKING CURB EPOXY LF	646.8220 MARKING ISLAND NOSE EPOXY EACH	TYPE/COLOR
SIDE ROADS/CTH H	120	-	-	STOP/WHITE
CTH H	-	134	4	MISC/YELLOW
TOTAL 0010	120	134	4	

STATION	TO	STATION	LOCATION	650.4500 CONSTRUCTION STAKING SUBGRADE LF	650.5000 CONSTRUCTION STAKING BASE LF	650.5500 CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER LF	650.8000 CONSTRUCTION STAKING RESURFACING REFERENCE LF	650.9920 CONSTRUCTION STAKING SLOPE STAKES LF
990+00	-	1364+44	29 EB	-	-	-	37,301	449
990+00	-	1364+44	29 WB	-	-	-	37,301	-
96+42	-	103+27	CTH H SB	-	-	-	685	-
98+62	-	105+47	CTH H NB	-	-	-	685	-
45+00	-	54+73	CTH H, SE RAMP	-	-	-	973	-
30+00	-	41+43	CTH H, SW RAMP	-	-	76	1,143	-
15+00	-	24+80	CTH H, NW RAMP	-	-	-	980	-
0+00	-	11+55	CTH H, NE RAMP	-	-	81	1,155	-
990+00	-	1364+44	SIDE ROADS	156	156	42	-	-
			TOTAL 0010	156	156	199	80,223	449

STATION	TO	STATION	LOCATION	416.0610 DRILLED TIE BARS EACH	416.0620 DRILLED DOWEL BARS EACH	416.1710 CONCRETE PAVEMENT REPAIR SY	416.1720 CONCRETE PAVEMENT REPLACEMENT SY	* 690.0250 SAWING CONCRETE LF
990+00	-	996+00	BEGIN PROJECT - 330TH ST	33	168	117	-	410
996+00	-	1049+00	330TH ST - CTH G	312	1,430	838	242	3,510
1049+00	-	1076+00	CTH G - 345TH ST	212	975	591	152	2,490
1076+00	-	1168+00	345TH ST - CTH H BRIDGE	473	2,160	1,370	258	5,390
1168+00	-	1208+00	CTH H BRIDGE - CTH NN	222	866	507	301	2,540
1208+00	-	1260+00	CTH NN - COPENHAVER AVE	241	1,160	680	108	2,690
1260+00	-	1364+44	COPENHAVER AVE - END PROJECT	402	1,850	1,060	305	4,520
1158+00	-	1183+00	NW AND SE RAMPS	31	84	49	94	366
			TOTAL 0010	1,926	8,693	5,212	1,460	21,916

*ITEM SHOWN ELSEWHERE IN PLANS

LOCATION	646.9002 MARKING REMOVAL LINE 6-INCH LF
STH 29 EB	165
STH 29 WB	165
STH 29 EB/WB OFF RAMPS	275
STH 29 EB/WB ENTRANCE RAMPS	275
TOTAL 0010	880

LOCATION	690.0150 SAWING ASPHALT LF	* 690.0250 SAWING CONCRETE LF
STH 29 WB	350	204
STH 29 EB	739	131
CTH H	1,256	22
SIDEROADS	1,148	-
TOTAL 0010	3,493	357

*ITEM SHOWN ELSEWHERE IN PLANS

STATION & OFFSET TABLE							
POINT	STATION 'EB'	OFFSET	STATION 'WB'	OFFSET	NORTHING	EASTING	ELEVATION
37	942+19.87	188.70 RT	942+03.62	246.84	134591.391	266860.583	1079.68
38	943+07.29	101.00 LT	942+91.76	42.79	134893.874	266857.951	1079.92

STA 946'WB'+85
18" CPRC TO REMAIN
MARKERS CULVERT END - LT/MED

SEE INTERSECTION DETAILS

STA 941'EB'+99
18" CPRC TO REMAIN

CP 38

940'WB' 942'WB' 944'WB' 946'WB' STH 29 WB 948'WB' 950'WB' 952'WB' 954'WB'

N71°58'14"E

940'EB' 942'EB' 944'EB' 946'EB' 948'EB' 950'EB' 952'EB' 954'EB'

N72°01'05"E

STH 29 EB

RIPRAP MEDIUM
GEOTEXTILE TYPE HR

STA 952'EB'+58
STRUCTURE B-09-029
SEE STRUCTURE PLANS
MARKERS CULVERT END - LT/RT

CENTURYLINK

HAY CREEK

WETLAND BOUNDARY

MATCH LINE 955+10

BRIGHTSPEED
(DISCONTINUED)

320TH ST

SEE INTERSECTION DETAILS

XCEL ENERGY - ELECTRICITY

BEGIN CONSTRUCTION
STA 941'WB'+24
STA 940'EB'+29

CENTURYLINK

CP 37

LEGEND

- SALVAGED TOPSOIL, SEEDING MIXTURE NO. 20, FERTILIZER, & EROSION MAT, URBAN, CLASS I TYPE B
- SALVAGED TOPSOIL, SEEDING MIXTURE NO. 20, FERTILIZER, & MULCHING
- SILT FENCE
- RIPRAP MEDIUM
- SLOPE INTERCEPT
- SURFACE WATER FLOW

STA 961'WB'+78
24" CPRC TO REMAIN
MARKERS CULVERT END - LT/MED/RT
CLEANING CULVERT PIPES

PI STA = 955+70.25
Y = 135303.741
X = 268067.214
DELTA = 19°39'51" RT
D = 0°32'38"
T = 1825.33'
L = 3614.76'
R = 10532.40'
PC STA = 937+44.92
PT STA = 973+59.68

956'WB' 958'WB' 960'WB' 962'WB' STH 29 WB 964'WB' 966'WB' 968'WB' 970'WB'

956'EB' 958'EB' 960'EB' 962'EB' STH 29 EB 964'EB' 966'EB' 968'EB' 970'EB'

STH 29

STA 961'EB'+83
24" CPRC TO REMAIN

WETLAND BOUNDARY

PI STA = 955+77.61
Y = 135244.104
X = 268076.945
DELTA = 19°36'56" RT
D = 0°32'46"
T = 1814.05'
L = 3592.59'
R = 10493.68'
PC STA = 937+63.56
PT STA = 973+56.15

MATCH LINE 970+40

PROJECT NO: 1050-00-60	HWY: STH 29	COUNTY: CHIPPEWA & CLARK	PLAN SHEETS	SHEET 55	E

FILE NAME : C:\OD\ONEDRIVE - CORRE, INC\MY PROJECTS\1050-00-30_CLARK CO_STH 29\500_CADD\501_C3D_2024\10500030\SHEETS\050201-PN.DWG
LAYOUT NAME - 01

PLOT DATE : 11/21/2025 11:55 AM PLOT BY : ANDREW PETERSON, PE PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

STA 970'WB'+99
24" CPRC TO REMAIN
MARKERS CULVERT END - LT/MED
CLEANING CULVERT PIPES

STA 973'WB'+25
STRUCTURE B-09-302
TO REMAIN
MARKERS CULVERT END - LT/RT

PT: 973'WB'+59.68

BR HAY CREEK

STA 977'WB'+61
2 - 30" CPRC TO REMAIN
CLEANING CULVERT PIPES
MARKERS CULVERT END - LT/MED/RT

WETLAND BOUNDARY

MATCH LINE 970+40

972'WB' 974'WB' STH 29 976'WB' 978'WB' N89°39'35"E 980'WB' 982'WB' STH 29 984'WB'

STH 29 WB

972'EB' 974'EB' 976'EB' 978'EB' N89°39'44"E 980'EB' 982'EB' 984'EB'

STH 29 EB

STH 29 STH 29

PT: 973'EB'+56.15

STA 977'EB'+75
2 - 30" CPRC TO REMAIN

MATCH LINE 985+60

N

LEGEND

- SALVAGED TOPSOIL, SEEDING MIXTURE NO. 20, FERTILIZER, & EROSION MAT, URBAN, CLASS I TYPE B
- SALVAGED TOPSOIL, SEEDING MIXTURE NO. 20, FERTILIZER, & MULCHING
- SILT FENCE
- RIPRAP MEDIUM
- SLOPE INTERCEPT
- SURFACE WATER FLOW

5

5

STA 988'WB'+00
18" CPRC TO REMAIN

WETLAND BOUNDARY

BEGIN PROJECT
STA 990'WB'+00
Y = 135324.322
X = 271532.807

3' AGGREGATE PASSING SHOULDER
3' PAVED PASSING SHOULDER
12' LANES
8' PAVED DRIVING SHOULDER
2' AGGREGATE DRIVING SHOULDER

REMOVING ASPHALTIC
SURFACE BUTT JOINTS (TYP)

CP 40

REMOVING ASPHALTIC
SURFACE BUTT JOINTS
STA 995'WB'+76.2, 96.4' LT

330TH ST

STA 996'WB'+37
EXISTING 18" CPRC
DITCH CLEANING - 10 LF, LT
MARKER CULVERT END, LT/MED

REMOVING CURB & GUTTER
CONCRETE CURB & GUTTER
6-INCH SLOPED 36-INCH TYPE D

EXISTING CURB & GUTTER
TO REMAIN

N

MATCH LINE 985+60

986'WB' 988'WB' 990'WB' STH 29 992'WB' 40' 994'WB' 996'WB' N89°39'35"E 998'WB' STH 29 1000'WB'

STH 29 WB

986'EB' 988'EB' 990'EB' STH 29 992'EB' 40' 994'EB' 996'EB' N89°39'44"E 998'EB' 1000'EB'

STH 29 EB

STH 29

993'EB'+00.00
32.00' RT

REMOVING CONCRETE
PAVEMENT BUTT JOINTS (TYP)

3' AGGREGATE PASSING SHOULDER
3' PAVED PASSING SHOULDER
12' LANES
8' PAVED DRIVING SHOULDER
2' AGGREGATE DRIVING SHOULDER

CP 39
CHIPPEWA VALLEY
ELECTRIC COOP

BEGIN PROJECT
STA 990'EB'+00
Y = 135264.492
X = 271534.761

330TH ST

MATCH LINE 1000+90

STATION & OFFSET TABLE

POINT	STATION 'EB'	OFFSET	STATION 'WB'	OFFSET	NORTHING	EASTING	ELEVATION
39	995+75.40	68.31 RT	995+77.01	128.17	135199.579	272110.571	1123.14
40	995+75.91	223.16 LT	995+77.54	163.29	135491.043	272109.367	1121.78

MATCH LINE 1000+90

STA 1004'WB'+00
EXISTING 18" CPRC
CLEANING CULVERT PIPES
DITCH CLEANING - 8 LF, LT
MARKER CULVERT END, LT/MED

3' AGGREGATE PASSING SHOULDER
3' PAVED PASSING SHOULDER
12' LANES
8' PAVED DRIVING SHOULDER
2' AGGREGATE DRIVING SHOULDER

STA 1009'WB'+49
EXISTING 24" CPRC
MARKERS CULVERT END, LT

N

1002'WB' 1004'WB' 1006'WB' STH 29 WB 1008'WB' 1010'WB' 1012'WB' 1014'WB' 1016'WB'

N89°39'35"E

40'

1002'EB' 1004'EB' 1006'EB' N89°39'44"E 1008'EB' 1010'EB' 1012'EB' 1014'EB' 1016'EB'

STH 29 EB

STH 29

WETLAND BOUNDARY

3' AGGREGATE PASSING SHOULDER
3' PAVED PASSING SHOULDER
12' LANES
8' PAVED DRIVING SHOULDER
2' AGGREGATE DRIVING SHOULDER

STA 1009'EB'+48
EXISTING 24" CPRC
SALVAGE AND RELAY 4 SECTIONS, RT
SALVAGE AND RELAY AEW, RT
(REPAIR JOINT SEPARATION)
1 CONCRETE COLLARS FOR PIPE
SLOPE REPAIR, RT
MARKERS CULVERT END, MED/RT

MATCH LINE 1016+10

5

5

MATCH LINE 1016+10

STA 1018'WB'+99
EXISTING 18" CPRC
CLEANING CULVERT PIPES
DITCH CLEANING - 10 LF, LT
MARKERS CULVERT END, LT/MED

WETLAND BOUNDARY

3' AGGREGATE PASSING SHOULDER
3' PAVED PASSING SHOULDER
12' LANES
8' PAVED DRIVING SHOULDER
2' AGGREGATE DRIVING SHOULDER

STA 1028'WB'+56
EXISTING 24" CPRC
CLEANING CULVERT PIPES, LT
SALVAGE AND RELAY 3 SECTIONS, LT
SALVAGE AND RELAY AEW, LT
1 CONCRETE COLLARS FOR PIPE
SLOPE REPAIR, LT
MARKERS CULVERT END - LT/MED/RT

N

1018'WB' 1020'WB' STH 29 WB 1022'WB' 1024'WB' 1026'WB' 1028'WB' 1030'WB'

N89°39'35"E

40'

1018'EB' 1020'EB' N89°39'44"E 1022'EB' 1024'EB' 1026'EB' 1028'EB' 1030'EB'

STH 29 EB

STH 29

3' AGGREGATE PASSING SHOULDER
3' PAVED PASSING SHOULDER
12' LANES
8' PAVED DRIVING SHOULDER
2' AGGREGATE DRIVING SHOULDER

MATCH LINE 1031+40

PROJECT NO: 1050-00-60	HWY: STH 29	COUNTY: CHIPPEWA & CLARK	PLAN SHEETS	SHEET 57	E

FILE NAME : C:\OD\ONEDRIVE - CORRE, INC\MY PROJECTS\1050-00-30_CLARK CO_STH 29\500_CADD\501_C3D_2024\10500030\SHEETS\050201-PN.DWG
LAYOUT NAME - 03

PLOT DATE : 11/21/2025 11:56 AM PLOT BY : ANDREW PETERSON, PE PLOT NAME : PLOT SCALE : 1 IN:100 FT

MATCH LINE 1031+40

3' AGGREGATE PASSING SHOULDER
3' PAVED PASSING SHOULDER
12' LANES
8' PAVED DRIVING SHOULDER
2' AGGREGATE DRIVING SHOULDER

STA 1038'WB'+48
EXISTING 18" CPRC
CLEANING CULVERT PIPES
DITCH CLEANING - 10 LF, LT
MARKERS CULVERT ENDS, LT / MED

N

U/C

SIGN

POST

RIPRAP

1032'WB' 1034'WB' 1036'WB' 1038'WB' N89°39'35"E 1040'WB' 1042'WB' 1044'WB' 1046'WB'

40'

STH 29 WB

1032'EB' 1034'EB' 1036'EB' 1038'EB' N89°39'44"E 1040'EB' 1042'EB' 1044'EB' 1046'EB'

STH 29 EB

STH 29

1046'EB'+18.55
32.00' RT

MATCH LINE 1046+60

3' AGGREGATE PASSING SHOULDER
3' PAVED PASSING SHOULDER
12' LANES
8' PAVED DRIVING SHOULDER
2' AGGREGATE DRIVING SHOULDER

LEGEND

- CPAS — CONCRETE PAVEMENT APPROACH SLAB
- CP6 — CONCRETE PAVEMENT 6-INCH
- CP12 — CONCRETE PAVEMENT 12-INCH
- THRIE — MGS THRIE BEAM TRANSITION
- MGS — MGS GUARDRAIL 3
- EAT — MGS GUARDRAIL TERMINAL EAT
- TT2 — MGS GUARDRAIL TERMINAL TYPE 2
- CG36A — CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBT
- CSD — CONCRETE SURFACE DRAINS

LEGEND

- SALVAGED TOPSOIL, SEEDING MIXTURE NO. 20, FERTILIZER, & EROSION MAT, URBAN, CLASS I TYPE B
- SALVAGED TOPSOIL, SEEDING MIXTURE NO. 20, FERTILIZER, & MULCHING
- SILT FENCE
- RIPRAP MEDIUM
- SLOPE INTERCEPT
- SURFACE WATER FLOW

5

5

MATCH LINE 1046+60

STA 1048'WB'+57
EXISTING 18" CPRC TO REMAIN
MARKERS CULVERT ENDS, LT / MED

CP 42

REMOVING ASPHALTIC
SURFACE BUTT JOINTS
STA 1049'WB'+34.1, 96.0' LT

REMOVING CURB & GUTTER
CONCRETE CURB & GUTTER
6-INCH SLOPED 36-INCH TYPE D

CENTURYLINK

CHIPPEWA VALLEY
ELECTRIC COOP

CTH G

STA 1052'WB'+04
EXISTING 48" CPRC
SALVAGE AND RELAY 2 SECTIONS, LT
SALVAGE AND RELAY AEW, LT
1 CONCRETE COLLARS FOR PIPE
MARKERS CULVERT END - LT/MED/RT

STA 1053'WB'+97
EXISTING 24" CPRC
SALVAGE AND RELAY 1 SECTION, LT
SALVAGE AND RELAY AEW, LT
1 CONCRETE COLLARS FOR PIPE
SLOPE REPAIR, LT
MARKERS CULVERT ENDS, LT / MED

3' AGGREGATE PASSING SHOULDER
3' PAVED PASSING SHOULDER
12' LANES
8' PAVED DRIVING SHOULDER
2' AGGREGATE DRIVING SHOULDER

N

RIPRAP

SIGN

POST

1048'WB' 1050'WB' 1052'WB' 1054'WB' STH 29 WB 1056'WB' 1058'WB' 1060'WB'

40'

N89°39'35"E

WETLAND BOUNDARY

1048'EB' 1050'EB' 1052'EB' 1054'EB' N89°39'44"E 1056'EB' 1058'EB' 1060'EB'

STH 29 EB

STH 29

1046'EB'+68.63
36.00' RT

EXISTING CURB & GUTTER
TO REMAIN

CENTURYLINK

REMOVING ASPHALTIC
SURFACE BUTT JOINTS
STA 1049'EB'+29.4, 85.2' RT

CP 41

REMOVING CURB & GUTTER
CONCRETE CURB & GUTTER
6-INCH SLOPED 36-INCH TYPE D

MGS EAT POST 1
STA 1050 'EB'+84
36.0' R

EAT

MGS

STA 1052'EB'+79
EXISTING 38" CMCP WITH LINER

TT2

TYPE 2 TERMINAL
STA 1057 'EB'+49.1
34.0' RT

1057'EB'+69.13
32.00' RT

1058'EB'+09.13
34.00' RT

3' AGGREGATE PASSING SHOULDER
3' PAVED PASSING SHOULDER
12' LANES
8' PAVED DRIVING SHOULDER
2' AGGREGATE DRIVING SHOULDER

REMOVING GUARDRAIL, STA 1050'EB'+84 - 1057'EB'+50, RT
MGS GUARDRAIL 3, STA 1051'EB'+37.1 - 1057'EB'+33.1, RT
MGS POST 9, STA 1051'EB'+34.0, 34.0' RT
MGS POST 5, STA 1051'EB'+08.9, 35.0' RT
MGS POST 1, STA 1050'EB'+84.0, 36.0' RT
CLASS A TYPE 2 GUARDRAIL, STA 1057'EB'+33.1 - 1057'EB'+49.1, 34.0' RT

STATION & OFFSET TABLE

POINT	STATION 'EB'	OFFSET	STATION 'WB'	OFFSET	NORTHING	EASTING	ELEVATION
41	1049+31.22	187.03 RT	1049+32.83	247.12	135112.437	277467.002	1133.54
42	1049+32.08	215.31 LT	1049+33.71	155.21	135514.771	277465.489	1131.14

MATCH LINE 1061+90

PROJECT NO: 1050-00-60	HWY: STH 29	COUNTY: CHIPPEWA & CLARK	PLAN SHEETS	SHEET 58	E

MATCH LINE 1061+90

STATION & OFFSET TABLE							
POINT	STATION 'EB'	OFFSET	STATION 'WB'	OFFSET	NORTHING	EASTING	ELEVATION
43	1076+07.06	143.00 LT	1076+08.69	82.79	135458.236	280140.850	1136.73
44	1075+92.32	92.83 RT	1075+93.94	153.04	135222.323	280127.500	1139.95

STA 1062'WB'+01
EXISTING 18" CPRC
CLEANING CULVERT PIPES
MARKERS CULVERT ENDS, LT / MED

3' AGGREGATE PASSING SHOULDER
3' PAVED PASSING SHOULDER
12' LANES
8' PAVED DRIVING SHOULDER
2' AGGREGATE DRIVING SHOULDER

1075'WB'+44.3
184.0' LT

345TH ST

1076'WB'+21.67
36.00' LT

CP 43

REMOVING CURB & GUTTER
CONCRETE CURB & GUTTER
6-INCH SLOPED 36-INCH TYPE D

N

1062'WB' 1064'WB' 1066'WB' 40' 1068'WB' STH 29 WB STH 29 1070'WB' 1072'WB' 1074'WB' 1076'WB'

N89°39'35"E

1062'EB' 1064'EB' 1066'EB' 1068'EB' N89°39'44"E 1070'EB' 1072'EB' 1074'EB' 1076'EB'

STH 29 EB STH 29

40'

WETLAND BOUNDARY

3' AGGREGATE PASSING SHOULDER
3' PAVED PASSING SHOULDER
12' LANES
8' PAVED DRIVING SHOULDER
2' AGGREGATE DRIVING SHOULDER

STA 1069'EB'+51
EXISTING 24" CPRC
SALVAGE AND RELAY AEW, LT/RT
DITCH CLEANING - 50 LF, RT
MARKERS CULVERT ENDS, LT/MED/RT

LEGEND

- SALVAGED TOPSOIL, SEEDING MIXTURE NO. 20, FERTILIZER, & EROSION MAT, URBAN, CLASS I TYPE B
- SALVAGED TOPSOIL, SEEDING MIXTURE NO. 20, FERTILIZER, & MULCHING
- SILT FENCE
- RIPRAP MEDIUM
- SLOPE INTERCEPT
- SURFACE WATER FLOW

REMOVING CURB & GUTTER
CONCRETE CURB & GUTTER
6-INCH SLOPED 36-INCH TYPE D

CP 44

EXISTING CURB & GUTTER
TO REMAIN

REMOVING ASPHALTIC
SURFACE BUTT JOINTS
STA 1075'EB'+42.1, 106.1' RT

CENTURYLINK

345TH ST

MATCH LINE 1077+10

MATCH LINE 1077+10

STA 1080'WB'+02
EXISTING 18" CPRC
CLEANING CULVERT PIPES
MARKERS CULVERT ENDS, LT / MED

1081'WB'+18.34
32.00' LT

1080'WB'+68.34
36.00' LT

3' AGGREGATE PASSING SHOULDER
3' PAVED PASSING SHOULDER
12' LANES
8' PAVED DRIVING SHOULDER
2' AGGREGATE DRIVING SHOULDER

N

STA 1088'WB'+00
EXISTING 18" CPRC
CLEANING CULVERT PIPES
MARKERS CULVERT ENDS, LT / MED

1078'WB' 1080'WB' N89°39'35"E 1082'WB' 1084'WB' 40' STH 29 1086'WB' 1088'WB' 1090'WB' 1092'WB'

STH 29 WB

WETLAND BOUNDARY

1078'EB' 1080'EB' N89°39'44"E 1082'EB' 1084'EB' 1086'EB' 1088'EB' 1090'EB' 1092'EB'

STH 29 EB STH 29

40'

3' AGGREGATE PASSING SHOULDER
3' PAVED PASSING SHOULDER
12' LANES
8' PAVED DRIVING SHOULDER
2' AGGREGATE DRIVING SHOULDER

MATCH LINE 1092+40

PROJECT NO: 1050-00-60	HWY: STH 29	COUNTY: CHIPPEWA & CLARK	PLAN SHEETS	SHEET 59	E

FILE NAME : C:\OD\ONEDRIVE - CORRE, INC\MY PROJECTS\1050-00-30_CLARK CO_STH 29\500_CADD\501_C3D_2024\10500030\SHEETS\050201-PN.DWG
LAYOUT NAME - 05
PLOT DATE : 11/21/2025 11:56 AM PLOT BY : ANDREW PETERSON, PE PLOT NAME : PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44

MATCH LINE 1092+40

3' AGGREGATE PASSING SHOULDER
3' PAVED PASSING SHOULDER
12' LANES
8' PAVED DRIVING SHOULDER
2' AGGREGATE DRIVING SHOULDER

STA 1097'WB'+02
EXISTING 18" CPRC
DITCH CLEANING - 10 LF, LT
TOPSOIL/FERTILIZER/SEEDING, LT (SLOPE REPAIR)
MARKERS CULVERT ENDS, LT / MED

WETLAND BOUNDARY

STA 1107'WB'+00
EXISTING 24" CPRC
REMOVING APRON ENDWALLS FOR CPRC 24-INCH, LT
1 - APRON ENDWALLS FOR CPRC 24-INCH, LT
MARKERS CULVERT ENDS, LT / MED

STA 1106'EB'+08
STRUCTURE C-09-007
TO REMAIN
MARKERS CULVERT END, LT/RT

BR WOLF RIVER

N

TH 29 | 1094'WB' | 1096'WB' | 1098'WB' | STH 29 WB | 1100'WB' | STH 29 | 1102'WB' | 1104'WB' | 1106'WB'

40'

N89°39'35"E

1094'EB' | 1096'EB' | 1098'EB' | N89°39'44"E | 1100'EB' | 1102'EB' | 1104'EB' | 1106'EB'

TH 29 | STH 29 EB | STH 29

40'

3' AGGREGATE PASSING SHOULDER
3' PAVED PASSING SHOULDER
12' LANES
8' PAVED DRIVING SHOULDER
2' AGGREGATE DRIVING SHOULDER

LEGEND

- SALVAGED TOPSOIL, SEEDING MIXTURE NO. 20, FERTILIZER, & EROSION MAT, URBAN, CLASS I TYPE B
- SALVAGED TOPSOIL, SEEDING MIXTURE NO. 20, FERTILIZER, & MULCHING
- SILT FENCE
- RIPRAP MEDIUM
- SLOPE INTERCEPT
- SURFACE WATER FLOW

R1-1 REMOVE

EXIT 101
H X
Stanley
1 MILE

1-1 E1-5-P
108"X30"

EXIT 101
H X
Stanley
1 MILE

1-2 E1-51-A
156"X120"

SIGN

BR WOLF RIVER

MATCH LINE 1107+60

5

MATCH LINE 1107+60

3' AGGREGATE PASSING SHOULDER
3' PAVED PASSING SHOULDER
12' LANES
8' PAVED DRIVING SHOULDER
2' AGGREGATE DRIVING SHOULDER

STA 1116'WB'+00
EXISTING 18" CPRC
SALVAGE AND RELAY 3 SECTIONS, LT
SALVAGE AND RELAY AEW, LT
CONCRETE COLLARS FOR PIPE
CLEANING CULVERT PIPES
MARKERS CULVERT ENDS, LT / MED

N

1108'WB' | N89°39'35"E | 1110'WB' | 1112'WB' | 1114'WB' | 1116'WB' | 1118'WB' | 1120'WB' | 1122'WB'

STH 29 WB

40'

1108'EB' | N89°39'44"E | 1110'EB' | 1112'EB' | 1114'EB' | 1116'EB' | 1118'EB' | 1120'EB' | 1122'EB'

STH 29 | STH 29 EB | STH 29

40'

3' AGGREGATE PASSING SHOULDER
3' PAVED PASSING SHOULDER
12' LANES
8' PAVED DRIVING SHOULDER
2' AGGREGATE DRIVING SHOULDER

MATCH LINE 1122+90

5

PROJECT NO: 1050-00-60	HWY: STH 29	COUNTY: CHIPPEWA & CLARK	PLAN SHEETS	SHEET 60	E

FILE NAME : C:\OD\ONEDRIVE - CORRE, INC\MY PROJECTS\1050-00-30_CLARK CO_STH 29\500_CADD\501_C3D_2024\10500030\SHEETS\050201-PN.DWG
LAYOUT NAME - 06

PLOT DATE : 11/21/2025 11:57 AM PLOT BY : ANDREW PETERSON, PE PLOT NAME : PLOT SCALE : 1 IN:100 FT

STA 1124'WB'+03
EXISTING 18" CPRC
CLEANING CULVERT PIPES
DITCH CLEANING - 50 LF, LT
MARKERS CULVERT ENDS, LT / MED

WETLAND BOUNDARY

R2-2

Boyd 6
Chippewa Falls 24

REMOVE

2-2 D2-2
240"X60"

Boyd 6
Chippewa Falls 24

WE ENERGIES

3' AGGREGATE PASSING SHOULDER
3' PAVED PASSING SHOULDER
12' LANES
8' PAVED DRIVING SHOULDER
2' AGGREGATE DRIVING SHOULDER

N

MATCH LINE 1122+90

1124'WB' 1126'WB' 1128'WB' STH 29 WB 1130'WB' 1132'WB' 1134'WB' 1136'WB' 40' 1138'WB'

N89°39'35"E

CAUTION

1124'EB' 1126'EB' 1128'EB' N89°39'44"E 1130'EB' 1132'EB' 1134'EB' 1136'EB' 1138'EB'

STH 29 EB

STH 29

40'

STA 1135'EB'+34
EXISTING 2 - 30" CPRC
MARKERS CULVERT ENDS, LT/MED/RT

3' AGGREGATE PASSING SHOULDER
3' PAVED PASSING SHOULDER
12' LANES
8' PAVED DRIVING SHOULDER
2' AGGREGATE DRIVING SHOULDER

R2-1

HOSPITAL
EXIT 101

REMOVE

2-1

HOSPITAL
EXIT 101

E10-61
144"X54"

MATCH LINE 1138+10

5

5

PI STA = 1143+46.41
Y = 135415.460
X = 286878.950
DELTA = 1°09'15" RT
D = 0°12'55"
T = 268.19'
L = 536.36'
R = 26625.06'
PC STA = 1140+78.23
PT STA = 1146+14.58

PC: 1140'WB'+78.23

3' AGGREGATE PASSING SHOULDER
3' PAVED PASSING SHOULDER
12' LANES
8' PAVED DRIVING SHOULDER
2' AGGREGATE DRIVING SHOULDER

STA 1144'WB'+05
EXISTING 18" CPRC
CLEANING CULVERT PIPES
MARKERS CULVERT ENDS, LT / MED

PT: 1146'WB'+14.58

STA 1151'WB'+01
EXISTING 18" CPRC
REMOVING APRON ENDWALLS FOR CULVERT PIPE, LT
1 - APRON ENDWALLS FOR CPRC 18-INCH, LT
MARKERS CULVERT ENDS, LT / MED

1149'WB'+47.72
32.00' LT

N

MATCH LINE 1138+10

STH 29 WB 1140'WB' 1142'WB' 40' 1144'WB' 1146'WB' STH 29 1148'WB' 1150'WB' 1152'WB' STH 29 WB

N89°39'35"E S89°11'10"E

N89°39'44"E 1140'EB' 1142'EB' 1144'EB' 1146'EB' 1148'EB' 1150'EB' 1152'EB' S89°11'22"E

STH 29 EB STH 29 STH 29 EB

40'

PC: 1141'EB'+88.90

PT: 1144'EB'+99.07

SAWMILL RD SAWMILL RD SAWMILL RD

3' AGGREGATE PASSING SHOULDER
3' PAVED PASSING SHOULDER
12' LANES
8' PAVED DRIVING SHOULDER
2' AGGREGATE DRIVING SHOULDER

PI STA = 1143+43.99
Y = 135354.963
X = 286878.502
DELTA = 1°08'54" RT
D = 0°22'13"
T = 155.09'
L = 310.17'
R = 15474.13'
PC STA = 1141+88.90
PT STA = 1144+99.07

MATCH LINE 1153+40

PROJECT NO: 1050-00-60	HWY: STH 29	COUNTY: CHIPPEWA & CLARK	PLAN SHEETS	SHEET 61	E

STATION & OFFSET TABLE							
POINT	STATION 'EB'	OFFSET	STATION 'WB'	OFFSET	NORTHING	EASTING	ELEVATION
1	1168+22.91	54.39 LT	1168+25.74	5.97 RT	135374.272	289357.958	1067.26
45	1165+61.99	107.93 LT	1165+64.81	47.56 LT	135431.498	289097.818	1084.18

STA 1158'WB'+01
EXISTING 18" CPRC
CLEANING CULVERT PIPES, LT
RIPRAP MEDIUM GEOTEXTILE TYPE HR, LT
MARKERS CULVERT ENDS, LT / MED

RIPRAP MEDIUM
GEOTEXTILE TYPE HR

BR WOLF CREEK

STA 1158'WB'+34.89
28.32' LT
Y=135422.637
X=288367.695

MATCH LINE 1153+40

MATCH LINE
STA 19+23.1

STH 29 WB ENTRANCE RAMP

B-09-190
STH 29 WB OVER CTH H
STRUCTURE TO REMAIN

REMOVING CONCRETE
PAVEMENT BUTT JOINTS (TYP)
REMOVING ASPHALTIC
SURFACE BUTT JOINTS (TYP)

1164'WB'+34.90
0.00'

CPAS
CP6
CP12

45

N89°38'46"E

1154'WB' 1156'WB' 1158'WB' 1160'WB' 1162'WB' 1164'WB' 1166'WB' 1168'WB' BM 1

STH 29 WB

S89°11'10"E

WETLAND BOUNDARY

CAUTION

MGS EAT POST
1164 'EB'+40.7
8.0' LT

EAT
MGS
THRIE

STA 1167+33 'EB'
6" CPPVC TO REMAIN

1154'EB' 1156'EB' 1158'EB' 1160'EB' 1162'EB' 1164'EB' 1166'EB' 1168'EB'

S89°11'22"E

STH 29 EB

1154'EB'+19.3
32.0' RT

1154'EB'+80.4
32.9' RT

S84°33'47"E

STA 1156'EB'+75.19
28.03' RT
Y=135308.103
X=288209.185

STA 1159'EB'+73
STRUCTURE C-09-008 TO REMAIN
MARKERS CULVERT END, LT/RT

MATCH LINE
STA 33+33.9

1164'EB'+32.20
0.00'

STH 29 EB EXIT RAMP

WE ENERGIES

MGS EAT POST
1164 'EB'+90.7
36.0' RT

CPAS
CP6
CP12

MGS
THRIE
EAT

B-09-191
STH 29 EB OVER CTH H
STRUCTURE TO REMAIN

CTH H 'SB'
CTH H 'NB'

MATCH LINE 1168+60

R3-1
EXIT 101
H X Stanley

3-1 E1-5-P 108"X30"
3-2 E4-1-A 192"X90"

BR WOLF CREEK

LEGEND

CPAS	CONCRETE PAVEMENT APPROACH SLAB	EAT	MGS GUARDRAIL TERMINAL EAT
CP6	CONCRETE PAVEMENT 6-INCH	TT2	MGS GUARDRAIL TERMINAL TYPE 2
CP12	CONCRETE PAVEMENT 12-INCH	CG36A	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBT
THRIE	MGS THRIE BEAM TRANSITION	CSD	CONCRETE SURFACE DRAINS
MGS	MGS GUARDRAIL 3		

STA 1175'EB'+23
STRUCTURE C-09-034 TO REMAIN
MARKERS CULVERT END, LT/RT

WOLF RIVER

STA 1175'WB'+74
STRUCTURE B-09-025 TO REMAIN
MARKERS CULVERT END, LT/RT

WETLAND BOUNDARY

STA 1178'WB'+02
EXISTING 18" CPRC
CLEANING CULVERT PIPES
DITCH CLEANING 15 LF, LT
MARKERS CULVERT END, LT/MED

STA 1179'WB'+88.42
28.07' LT
Y=135391.790
X=290521.006

R3-2 EXIT 101 H X Stanley

E1-5-P 108"X30"

3-3 EXIT 101 H X Stanley

3-4 E4-1-A 192"X90"

REPLACE RWIS SENSORS (WORK BY OTHERS)

MGS EAT POST
1171 'WB'+88.6
36.0' LT

1172'WB'+19.99
0.00'

1172+28.11
32.0' LT

STH 29 WB EXIT RAMP

CP 46

MATCH LINE
8+17.2

S84°39'31"E

1181'WB'+89.5
33.2' LT

1182'WB'+88.8
32.0' LT

1170'WB' 1172'WB' 1174'WB' 1176'WB' 1178'WB' 1180'WB' 1182'WB'

STH 29 WB

S89°11'10"E

MGS EAT POST
1172 'WB'+13.4
8.0' RT

1172'WB'+63.5
3.0' RT

1172'EB' 1174'EB' 1176'EB' 1178'EB' 1180'EB' 1182'EB'

S89°11'22"E

STH 29 EB

REMOVING CONCRETE
PAVEMENT BUTT JOINTS (TYP)
REMOVING ASPHALTIC
SURFACE BUTT JOINTS (TYP)

1172'EB'+17.21
0.00'

MATCH
LINE
50+65.6

N89°36'07"E

51+27.31
22.00' RT

MGS EAT POST
1175 'EB'+02
61.9' RT

1175'EB'+54.83
57.54' RT

54+15.62
22.00' RT

54+55.62
24.00' RT

STA 1178'EB'+05.19
28.21' RT
Y=135277.792
X=290338.967

CLIMBING TURTLE EXCLUSION FENCE

PC: 1181'WB'+15.84

PC: 1181'EB'+09.25

STH 29 EB ENTRANCE RAMP

MATCH LINE 1168+60

MATCH LINE 1183+90

STATION & OFFSET TABLE							
POINT	STATION 'EB'	OFFSET	STATION 'WB'	OFFSET	NORTHING	EASTING	ELEVATION
46	1172+56.24	105.33 LT	1172+59.06	45.00	135419.080	289791.962	1080.80

REMOVING GUARDRAIL, STA 1175'EB'+25 - 1177'EB'+29, RT
MGS GUARDRAIL 3, STA 1175'EB'+54.8 - 1177'EB'+28.7
MGS POST 9, STA 1175'EB'+51.7, 57.7' RT
MGS POST 5, STA 1175'EB'+26.7, 59.5' RT
MGS POST 1, STA 1175'EB'+01.9, 61.9' RT
MGS GUARDRAIL TERMINAL TYPE 2, STA 1177'EB'+28.7, 53.8' RT

LEGEND

- SALVAGED TOPSOIL, SEEDING MIXTURE NO. 20, FERTILIZER, & EROSION MAT, URBAN, CLASS I TYPE B
- SALVAGED TOPSOIL, SEEDING MIXTURE NO. 20, FERTILIZER, & MULCHING
- SILT FENCE
- RIPRAP MEDIUM
- SLOPE INTERCEPT
- SURFACE WATER FLOW

PI STA = 1185+13.12
Y = 135356.269
X = 291045.257
DELTA = 4°03'44" LT
D = 0°30'41"
T = 397.28'
L = 794.23'
R = 11202.53'
PC STA = 1181+15.84
PT STA = 1189+10.07

STA 1186'WB'+01
EXISTING 24" CPRC
REMOVING APRON ENDWALLS FOR CULVERT PIPE, LT
1 - APRON ENDWALLS FOR CPRC 24-INCH, LT
MARKERS CULVERT ENDS, LT / MED

WETLAND BOUNDARY

PT: 1189'WB'+10.07

3' AGGREGATE PASSING SHOULDER
3' PAVED PASSING SHOULDER
12' LANES
8' PAVED DRIVING SHOULDER
2' AGGREGATE DRIVING SHOULDER

STA 1191'WB'+98
EXISTING 18" CPRC
REMOVING APRON ENDWALLS FOR CULVERT PIPE, LT/MED
2 - APRON ENDWALLS FOR CPRC 18-INCH, LT/MED
DITCH CLEANING - 10 LF, LT
MARKERS CULVERT ENDS, LT / MED

STA 1198'WB'+04
EXISTING 2 - 36" CPRC
CLEANING CULVERT PIPES, LT
DITCH CLEANING - 20 LF, LT
MARKERS CULVERT ENDS, LT/MED/RT

MATCH LINE 1183+90

1184'WB' 1186'WB' 1188'WB' 1190'WB' STH 29 WB 1192'WB' 1194'WB' 1196'WB' 1198'WB'

N86°45'07"E

1184'EB' 1186'EB' 1188'EB' 1190'EB' N86°44'47"E 1192'EB' 1194'EB' 1196'EB' 1198'EB'

STH 29 EB

40'

1187'EB'+06.34
33.25' RT

1187'EB'+10.49
32.00' RT

PT: 1189'EB'+22.13

3' AGGREGATE PASSING SHOULDER
3' PAVED PASSING SHOULDER
12' LANES
8' PAVED DRIVING SHOULDER
2' AGGREGATE DRIVING SHOULDER

PI STA = 1185+15.86
Y = 135295.940
X = 291049.971
DELTA = 4°03'52" LT
D = 0°30'00"
T = 406.61'
L = 812.88'
R = 11459.16'
PC STA = 1181+09.25
PT STA = 1189+22.13

STA 1188'EB'+49
EXISTING 18" CPRC
CLEANING CULVERT PIPES
MARKERS CULVERT END - MED/RT

MATCH LINE 1199+10

LEGEND

- SALVAGED TOPSOIL, SEEDING MIXTURE NO. 20, FERTILIZER, & EROSION MAT, URBAN, CLASS I TYPE B
- SALVAGED TOPSOIL, SEEDING MIXTURE NO. 20, FERTILIZER, & MULCHING
- SILT FENCE
- RIPRAP MEDIUM
- SLOPE INTERCEPT
- SURFACE WATER FLOW

STA 1205'WB'+98
EXISTING 18" CPRC
2 - REMOVING APRON ENDWALLS FOR CULVERT PIPE, LT/MED
2 - APRON ENDWALLS FOR CPRC 18-INCH, LT/MED
DITCH CLEANING - 10 LF, LT
MARKERS CULVERT ENDS, LT / MED

3' AGGREGATE PASSING SHOULDER
3' PAVED PASSING SHOULDER
12' LANES
8' PAVED DRIVING SHOULDER
2' AGGREGATE DRIVING SHOULDER

WETLAND BOUNDARY

1206'WB'+26.1
32.0' LT

REMOVE AND REPLACE INTERSECTION ISLAND

CTH NN

REMOVING ASPHALTIC SURFACE BUTT JOINTS
STA 1207'WB'+96.1, 93.6' LT

CP 48

REMOVING CURB & GUTTER
CONCRETE CURB & GUTTER
6-INCH SLOPED 36-INCH TYPE D

STA 1208'WB'+61
EXISTING 18" CPRC
2 - REMOVING APRON ENDWALLS FOR CULVERT PIPE, LT/MED
2 - APRON ENDWALLS FOR CPRC 18-INCH, LT/MED
CLEANING CULVERT PIPES
MARKERS CULVERT ENDS, LT / MED

PC: 1210'WB'+40.97

1210'WB'+68.4
36.0' LT

1212'WB'+18.2
32.0' LT

MATCH LINE 1199+10

1200'WB' 1202'WB' STH 29 WB 1204'WB' 1206'WB' 1208'WB' STH 29 WB 1210'WB' 1212'WB' 1214'WB'

N86°45'07"E

CENTURYLINK

1200'EB' 1202'EB' N86°44'47"E 1204'EB' 1206'EB' 1208'EB' N86°44'47"E 1210'EB' 1212'EB' 1214'EB'

STH 29 EB

40'

3' AGGREGATE PASSING SHOULDER
3' PAVED PASSING SHOULDER
12' LANES
8' PAVED DRIVING SHOULDER
2' AGGREGATE DRIVING SHOULDER

1203'EB'+64.9
32.0' RT

1205'EB'+14.9
37.0' RT

REMOVING CURB & GUTTER
CONCRETE CURB & GUTTER
6-INCH SLOPED 36-INCH TYPE D

CENTURYLINK

CTH NN

EXISTING CURB & GUTTER TO REMAIN

REMOVE AND REPLACE INTERSECTION ISLAND

1209'EB'+46.5
32.0' RT

REMOVING ASPHALTIC SURFACE BUTT JOINTS
STA 1207'EB'+74.4, 93.2' RT

PC: 1210'EB'+53.52

CP 47

STA 1213'WB'+99
EXISTING 18" CPRC
REMOVING APRON ENDWALLS FOR CULVERT PIPE, MED
APRON ENDWALLS FOR CPRC 18-INCH, MED
MARKERS CULVERT ENDS, LT / MED

PI STA = 1216+10.95
Y = 135471.629
X = 294140.409
DELTA = 2°47'12" RT
D = 0°15'00"
T = 557.43'
L = 1114.64'
R = 22918.31'
PC STA = 1210+53.52
PT STA = 1221+68.16

R4-1 REMOVE

Thorp 6
Wausau 64
Green Bay 157

4-1 D2-2 192"X84"

Thorp 6
Wausau 64
Green Bay 157

STATION & OFFSET TABLE

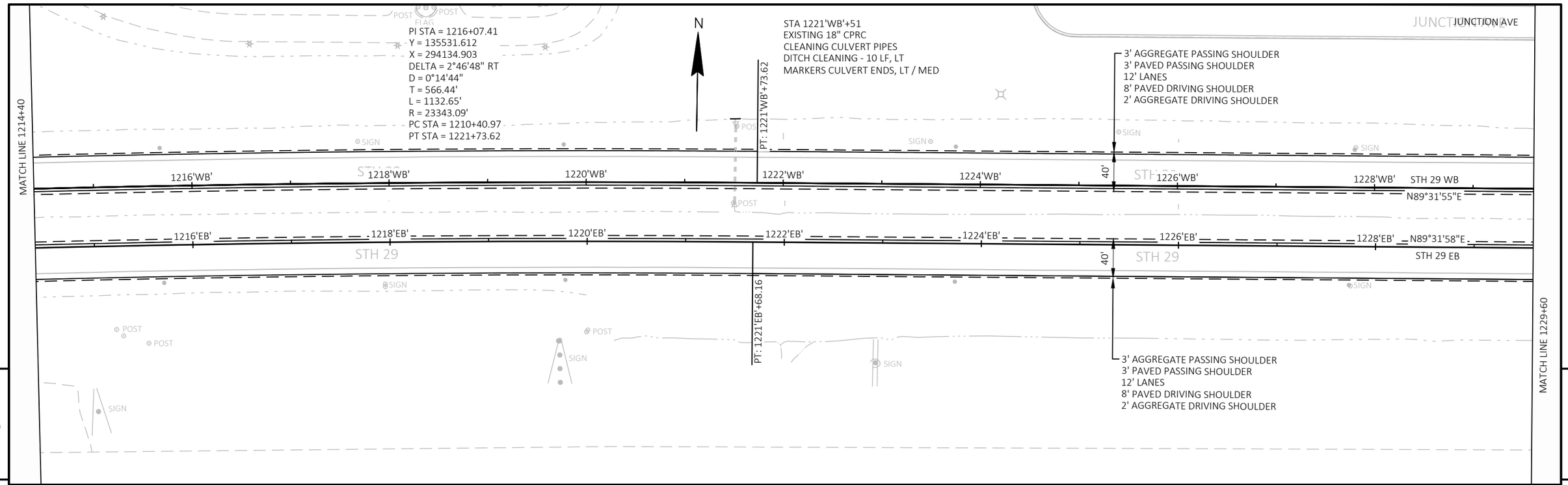
POINT	STATION 'EB'	OFFSET	STATION 'WB'	OFFSET	NORTHING	EASTING	ELEVATION
47	1210+75.73	90.58 RT	1210+74.42	150.81	135350.806	293611.106	1116.13
48	1209+49.66	187.02 LT	1209+48.19	126.76	135620.813	293469.566	1104.90

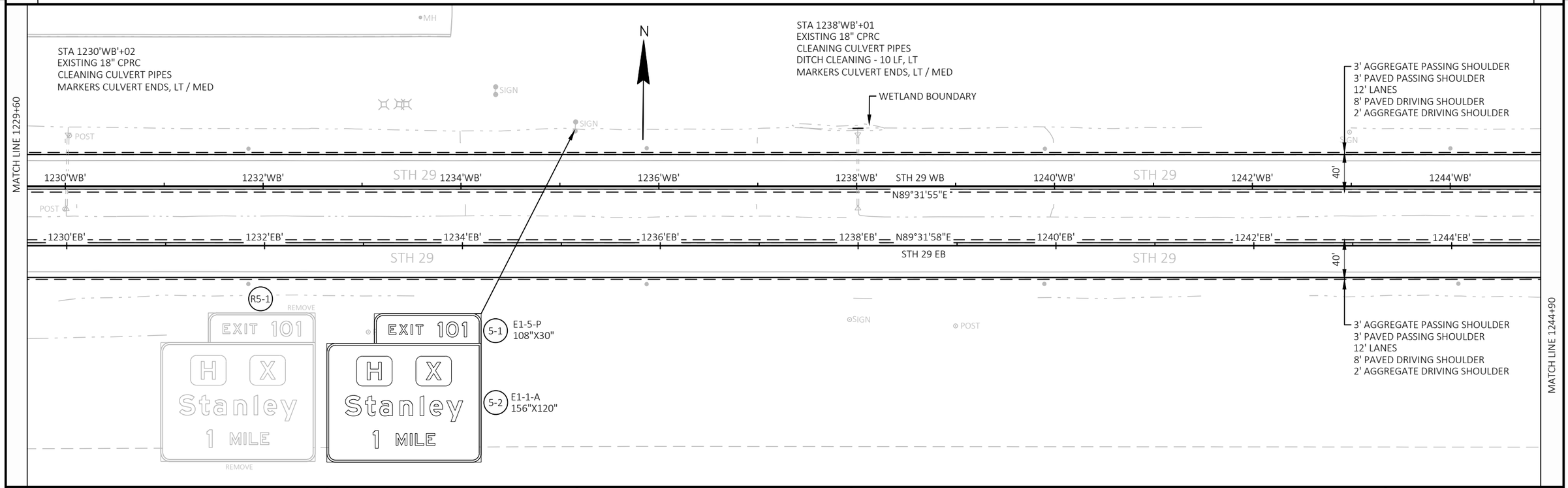
MATCH LINE 1214+40

5

5

PROJECT NO: 1050-00-60	HWY: STH 29	COUNTY: CHIPPEWA & CLARK	PLAN SHEETS	SHEET 63	E





PROJECT NO: 1050-00-60	HWY: STH 29	COUNTY: CHIPPEWA & CLARK	PLAN SHEETS	SHEET 64	E

FILE NAME : C:\OD\ONEDRIVE - CORRE, INC\MY PROJECTS\1050-00-30_CLARK CO_STH 29\500_CADD\501_C3D_2024\10500030\SHEETS\050201-PN.DWG
LAYOUT NAME - 10
PLOT DATE : 11/21/2025 11:58 AM
PLOT BY : ANDREW PETERSON, PE
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44

MATCH LINE 1244+90

DAIRYLAND POWER COOOP

3' AGGREGATE PASSING SHOULDER
3' PAVED PASSING SHOULDER
12' LANES
8' PAVED DRIVING SHOULDER
2' AGGREGATE DRIVING SHOULDER

N

STA 1258'WB'+78
EXISTING 18" CPRC
CLEANING CULVERT PIPES
DITCH CLEANING - 10 LF, LT
MARKERS CULVERT ENDS, LT / MED

REMOVING ASPHALTIC
SURFACE BUTT JOINTS
STA 1259'WB'+63.5, 91.6' LT

COPENHAVER AVE

EXISTING CONCRETE CURB
& GUTTER TO REMAIN

1258'WB'+09.7
32.0' LT

1246'WB' | STH 29 WB | 1248'WB' | 1250'WB' | 1252'WB' | 1254'WB' | 1256'WB' | STH 29 WB | 1258'WB' | 1260'WB'

N89°31'55"E

40'

1246'EB' | N89°31'58"E | 1248'EB' | 1250'EB' | 1252'EB' | 1254'EB' | 1256'EB' | N89°31'58"E | 1258'EB' | 1260'EB'

STH 29 EB

STA 1249'EB'+87
EXISTING 18" CPRC
REMOVING APRON ENDWALLS FOR CULVERT PIPE, RT
APRON ENDWALLS FOR CPRC 24-INCH, RT
MARKERS CULVERT ENDS, LT/MED/RT

WETLAND BOUNDARY

BRIGHTSPEED

1257'EB'+65.7
32.0' RT

EXISTING CONCRETE CURB &
GUTTER TO REMAIN

REMOVING ASPHALTIC
SURFACE BUTT JOINTS
STA 1259'EB'+59.4, 98.2' RT

CENTURYLINK

3' AGGREGATE PASSING SHOULDER
3' PAVED PASSING SHOULDER
12' LANES
8' PAVED DRIVING SHOULDER
2' AGGREGATE DRIVING SHOULDER

MATCH LINE 1260+10

STA 1267'WB'+01
EXISTING 18" CPRC
DITCH CLEANING - 10 LF, LT
MARKERS CULVERT ENDS, LT / MED

STA 1274'WB'+00
EXISTING 18" CPRC
REMOVING APRON ENDWALLS FOR CULVERT PIPE, LT
APRON ENDWALLS FOR CPRC 18-INCH, LT
DITCH CLEANING - 10 LF, LT
MARKERS CULVERT ENDS, LT / MED

EXISTING CONCRETE CURB & GUTTER TO REMAIN

DAIRYLAND
POWER COOP - ELECTRICITY

1261'WB'+83.4
32.0' LT

3' AGGREGATE PASSING SHOULDER
3' PAVED PASSING SHOULDER
12' LANES
8' PAVED DRIVING SHOULDER
2' AGGREGATE DRIVING SHOULDER

1262'WB' | 1264'WB' | 1266'WB' | 1268'WB' | 1270'WB' | 1272'WB' | STH 29 WB | 1274'WB'

N89°31'55"E

40'

1262'EB' | 1264'EB' | 1266'EB' | 1268'EB' | 1270'EB' | 1272'EB' | N89°31'58"E | 1274'EB'

STH 29 EB

1261'EB'+16.0
32.0' RT

3' AGGREGATE PASSING SHOULDER
3' PAVED PASSING SHOULDER
12' LANES
8' PAVED DRIVING SHOULDER
2' AGGREGATE DRIVING SHOULDER

MATCH LINE 1275+40

LEGEND

- SALVAGED TOPSOIL, SEEDING MIXTURE NO. 20, FERTILIZER, & EROSION MAT, URBAN, CLASS I TYPE B
- SALVAGED TOPSOIL, SEEDING MIXTURE NO. 20, FERTILIZER, & MULCHING
- SILT FENCE
- RIPRAP MEDIUM
- SLOPE INTERCEPT
- SURFACE WATER FLOW

5

5

PROJECT NO: 1050-00-60	HWY: STH 29	COUNTY: CHIPPEWA & CLARK	PLAN SHEETS	SHEET 65	E

FILE NAME : C:\OD\ONEDRIVE - CORRE, INC\MY PROJECTS\1050-00-30_CLARK CO_STH 29\500_CADD\501_C3D_2024\10500030\SHEETS\050201-PN.DWG
LAYOUT NAME - 11

PLOT DATE : 11/21/2025 11:58 AM PLOT BY : ANDREW PETERSON, PE PLOT NAME : PLOT SCALE : 1 IN:100 FT

MATCH LINE 1275+40

STA 1279'WB'+99
EXISTING 18" CPRC
CLEANING CULVERT PIPES
MARKERS CULVERT ENDS, LT / MED

STA 1281'WB'+00
EXISTING 18" CPRC
REMOVING APRON ENDWALLS FOR CULVERT PIPE, MED
APRON ENDWALLS FOR CPRC 18-INCH, MED
MARKERS CULVERT ENDS, LT / MED

3' AGGREGATE PASSING SHOULDER
3' PAVED PASSING SHOULDER
12' LANES
8' PAVED DRIVING SHOULDER
2' AGGREGATE DRIVING SHOULDER

STA 1289'WB'+02
EXISTING 18" CPRC
MARKERS CULVERT ENDS, LT/MED

ROGER CREEK

1276'WB' 1278'WB' 1280'WB' 1282'WB' 1284'WB' STH 29 WB 1286'WB' 1288'WB' 1290'WB'

N89°31'55"E

1276'EB' 1278'EB' 1280'EB' 1282'EB' 1284'EB' N89°31'58"E 1286'EB' 1288'EB' 1290'EB'

STH 29 EB

40'

1277'EB'+21.7
32.0' RT

MGS EAT POST
1277'EB'+61.8
36.0' RT

EAT

MGS

STA 1280'EB'+46
STRUCTURE B-10-029
TO REMAIN
MARKERS CULVERT END, LT/RT

TT2

MGS TYPE 2 TERMINAL
STA 1280'EB'+77.3
34.0' RT

1280'EB'+97.3
32.0' RT

ROGER CREEK

REMOVING GUARDRAIL, STA 1277'EB'+67 - 1280'EB'+70, RT
CLASS A TYPE 2 GUARDRAIL, STA 1280'EB'+64.8 - 1280'EB'+77.3, 34.0' RT
MGS GUARDRAIL 3, STA 1278'EB'+14.8 - 1280'EB'+64.8, 34.0' RT
MGS POST 9, STA 1278'EB'+11.7, 34.0' RT
MGS POST 5, STA 1277'EB'+86.7, 35.0' RT
MGS POST 1, STA 1277'EB'+61.8, 36.0' RT

LEGEND

CPAS	CONCRETE PAVEMENT APPROACH SLAB
CP6	CONCRETE PAVEMENT 6-INCH
CP12	CONCRETE PAVEMENT 12-INCH
THRIE	MGS THRIE BEAM TRANSITION
MGS	MGS GUARDRAIL 3
EAT	MGS GUARDRAIL TERMINAL EAT
TT2	MGS GUARDRAIL TERMINAL TYPE 2
CG36A	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBT
CSD	CONCRETE SURFACE DRAINS

3' AGGREGATE PASSING SHOULDER
3' PAVED PASSING SHOULDER
12' LANES
8' PAVED DRIVING SHOULDER
2' AGGREGATE DRIVING SHOULDER

MATCH LINE 1290+60

5

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MATCH LINE 1290+60

STA 1297'WB'+01
EXISTING 18" CPRC
REMOVING APRON ENDWALLS FOR CULVERT PIPE, MED
APRON ENDWALLS FOR CPRC 18-INCH, MED
CLEANING CULVERT PIPES
DITCH CLEANING - 10 LF, LT
MARKERS CULVERT ENDS, LT / MED

WETLAND BOUNDARY

3' AGGREGATE PASSING SHOULDER
3' PAVED PASSING SHOULDER
12' LANES
8' PAVED DRIVING SHOULDER
2' AGGREGATE DRIVING SHOULDER

1292'WB' 1294'WB' 1296'WB' 1298'WB' STH 29 WB 1300'WB' 1302'WB' 1304'WB'

N89°31'55"E

1292'EB' 1294'EB' 1296'EB' 1298'EB' N89°31'58"E 1300'EB' 1302'EB' 1304'EB'

STH 29 EB

40'

3' AGGREGATE PASSING SHOULDER
3' PAVED PASSING SHOULDER
12' LANES
8' PAVED DRIVING SHOULDER
2' AGGREGATE DRIVING SHOULDER

LEGEND

- SALVAGED TOPSOIL, SEEDING MIXTURE NO. 20, FERTILIZER, & EROSION MAT, URBAN, CLASS I TYPE B
- SALVAGED TOPSOIL, SEEDING MIXTURE NO. 20, FERTILIZER, & MULCHING
- SILT FENCE
- RIPRAP MEDIUM
- SLOPE INTERCEPT
- SURFACE WATER FLOW

MATCH LINE 1305+90

PROJECT NO: 1050-00-60	HWY: STH 29	COUNTY: CHIPPEWA & CLARK	PLAN SHEETS	SHEET 66	E

FILE NAME : C:\OD\ONEDRIVE - CORRE, INC\MY PROJECTS\1050-00-30_CLARK CO_STH 29\500_CADD\501_C3D_2024\10500030\SHEETS\050201-PN.DWG
LAYOUT NAME - 12
PLOT DATE : 11/21/2025 11:59 AM PLOT BY : ANDREW PETERSON, PE PLOT NAME : PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44

MATCH LINE 1305+90

N

WETLAND BOUNDARY

3' AGGREGATE PASSING SHOULDER
3' PAVED PASSING SHOULDER
12' LANES
8' PAVED DRIVING SHOULDER
2' AGGREGATE DRIVING SHOULDER

1306'WB' 1308'WB' 1310'WB' STH 29 1312'WB' 1314'WB' STH 29 WB 1316'WB' 40' 1318'WB' STH 29 1320'WB'

N89°31'55"E

1306'EB' 1308'EB' 1310'EB' 1312'EB' 1314'EB' N89°31'58"E 1316'EB' 1318'EB' 1320'EB'

STH 29 STH 29 EB STH 29

40'

3' AGGREGATE PASSING SHOULDER
3' PAVED PASSING SHOULDER
12' LANES
8' PAVED DRIVING SHOULDER
2' AGGREGATE DRIVING SHOULDER

STA 1307'EB'+67
EXISTING 42" CPRC
BRUSHING CULVERT ENDS - 20' X 20', RT
CLEANING CULVERT PIPES - LT/RT
MARKERS CULVERT ENDS, LT/MED/RT

STA 1314'EB'+16
EXISTING 38" CPRC
TOPSOIL/FERTILIZER/SEEDING, LT/RT (SLOPE REPAIR)
MARKERS CULVERT ENDS, LT/MED/RT

LEGEND

- SALVAGED TOPSOIL, SEEDING MIXTURE NO. 20, FERTILIZER, & EROSION MAT, URBAN, CLASS I TYPE B
- SALVAGED TOPSOIL, SEEDING MIXTURE NO. 20, FERTILIZER, & MULCHING
- SILT FENCE
- RIPRAP MEDIUM
- SLOPE INTERCEPT
- SURFACE WATER FLOW

MATCH LINE 1321+10

N

3' AGGREGATE PASSING SHOULDER
3' PAVED PASSING SHOULDER
12' LANES
8' PAVED DRIVING SHOULDER
2' AGGREGATE DRIVING SHOULDER

1322'WB' 1324'WB' 1326'WB' STH 29 1328'WB' STH 29 WB 1330'WB' 1332'WB' 40' 1334'WB' STH 29 1336'WB'

N89°31'55"E

1322'EB' 1324'EB' 1326'EB' 1328'EB' N89°31'58"E 1330'EB' 1332'EB' 1334'EB' 1336'EB'

STH 29 STH 29 EB STH 29

40'

3' AGGREGATE PASSING SHOULDER
3' PAVED PASSING SHOULDER
12' LANES
8' PAVED DRIVING SHOULDER
2' AGGREGATE DRIVING SHOULDER

WETLAND BOUNDARY

STA 1325'EB'+29
EXISTING 24" CPRC
REMOVING APRON ENDWALLS FOR CULVERT PIPE, RT
APRON ENDWALLS FOR CPRC 24-INCH, RT
TOPSOIL/FERTILIZER/SEEDING, MED (SLOPE REPAIR)
MARKERS CULVERT ENDS, LT/MED/RT

STA 1330'EB'+89
EXISTING 2 - 30" CPRC
SALVAGE AND RELAY 1 SECTION, LT
SALVAGE AND RELAY AEW, LT
CONCRETE COLLARS FOR PIPE, LT
2 - CLEANING CULVERT PIPES, RT
BRUSHING CULVERT ENDS - 20' X 20', RT
SLOPE REPAIR, LT
MARKERS CULVERT END, LT/MED/RT

MATCH LINE 1336+40

5

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PROJECT NO: 1050-00-60	HWY: STH 29	COUNTY: CHIPPEWA & CLARK	PLAN SHEETS	SHEET 67	E

FILE NAME : C:\OD\ONEDRIVE - CORRE, INC\MY PROJECTS\1050-00-30_CLARK CO_STH 29\500_CADD\501_C3D_2024\10500030\SHEETS\050201-PN.DWG
LAYOUT NAME - 13

PLOT DATE : 11/21/2025 11:59 AM PLOT BY : ANDREW PETERSON, PE PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

MATCH LINE 1336+40

STA 1339'WB'+01
EXISTING 18" CPRC
CLEANING CULVERT PIPES
MARKERS CULVERT ENDS, LT / MED

3' AGGREGATE PASSING SHOULDER
3' PAVED PASSING SHOULDER
12' LANES
8' PAVED DRIVING SHOULDER
2' AGGREGATE DRIVING SHOULDER

N

1338'WB' 1340'WB' 1342'WB' STH 29 1344'WB' 1346'WB' 40' 1348'WB' 1350'WB' STH 29 WB
N89°31'55"E

1338'EB' 1340'EB' 1342'EB' 1344'EB' 1346'EB' 1348'EB' 1350'EB' N89°31'58"E
STH 29 40' STH 29 EB

3' AGGREGATE PASSING SHOULDER
3' PAVED PASSING SHOULDER
12' LANES
8' PAVED DRIVING SHOULDER
2' AGGREGATE DRIVING SHOULDER

POST POST POST POST POST

MATCH LINE 1351+60

5

5

LEGEND

- SALVAGED TOPSOIL, SEEDING MIXTURE NO. 20, FERTILIZER, & EROSION MAT, URBAN, CLASS I TYPE B
- SALVAGED TOPSOIL, SEEDING MIXTURE NO. 20, FERTILIZER, & MULCHING
- SILT FENCE
- RIPRAP MEDIUM
- SLOPE INTERCEPT
- SURFACE WATER FLOW

STA 1356'WB'+00
EXISTING 18" CPRC
REMOVING APRON ENDWALLS FOR CULVERT PIPE, LT
APRON ENDWALLS FOR CPRC 18-INCH, LT
CLEANING CULVERT PIPES
DITCH CLEANING - 10 LF, LT
MARKERS CULVERT ENDS, LT / MED

WETLAND BOUNDARY

3' AGGREGATE PASSING SHOULDER
3' PAVED PASSING SHOULDER
12' LANES
8' PAVED DRIVING SHOULDER
2' AGGREGATE DRIVING SHOULDER

REMOVING ASPHALTIC SURFACE BUTT JOINTS (TYP)

REMOVING CONCRETE PAVEMENT BUTT JOINTS (TYP)

STA 1364'WB'+44
EXISTING 18" CPRC
CLEANING CULVERT PIPES
DITCH CLEANING - 15 LF, LT
TOPSOIL/FERTILIZER/SEEDING, MED (SLOPE REPAIR)
MARKERS CULVERT ENDS, LT / MED

KOSER AVE

CP 49

END PROJECT
STA 1364'WB'+44

MATCH LINE 1351+60

1352'WB' 1354'WB' 1356'WB' STH 29 WB 1358'WB' STH 29 40' 1360'WB' STA 1361'WB'+44.00 0.00' 1362'WB' 1364'WB' 1366'WB'
N89°31'55"E

1352'EB' 1354'EB' 1356'EB' N89°31'58"E 1358'EB' 1360'EB' 1362'EB' 1364'EB' 1366'EB'
STH 29 EB STH 29 40' STA 1361'EB'+44.00 0.00' STH 29

3' AGGREGATE PASSING SHOULDER
3' PAVED PASSING SHOULDER
12' LANES
8' PAVED DRIVING SHOULDER
2' AGGREGATE DRIVING SHOULDER

SIGN SIGN SIGN SIGN SIGN SIGN SIGN SIGN SIGN

POST POST POST POST POST POST POST POST POST POST

CP 2719
CP 50

KOSER AVE

END PROJECT
STA 1364'EB'+44

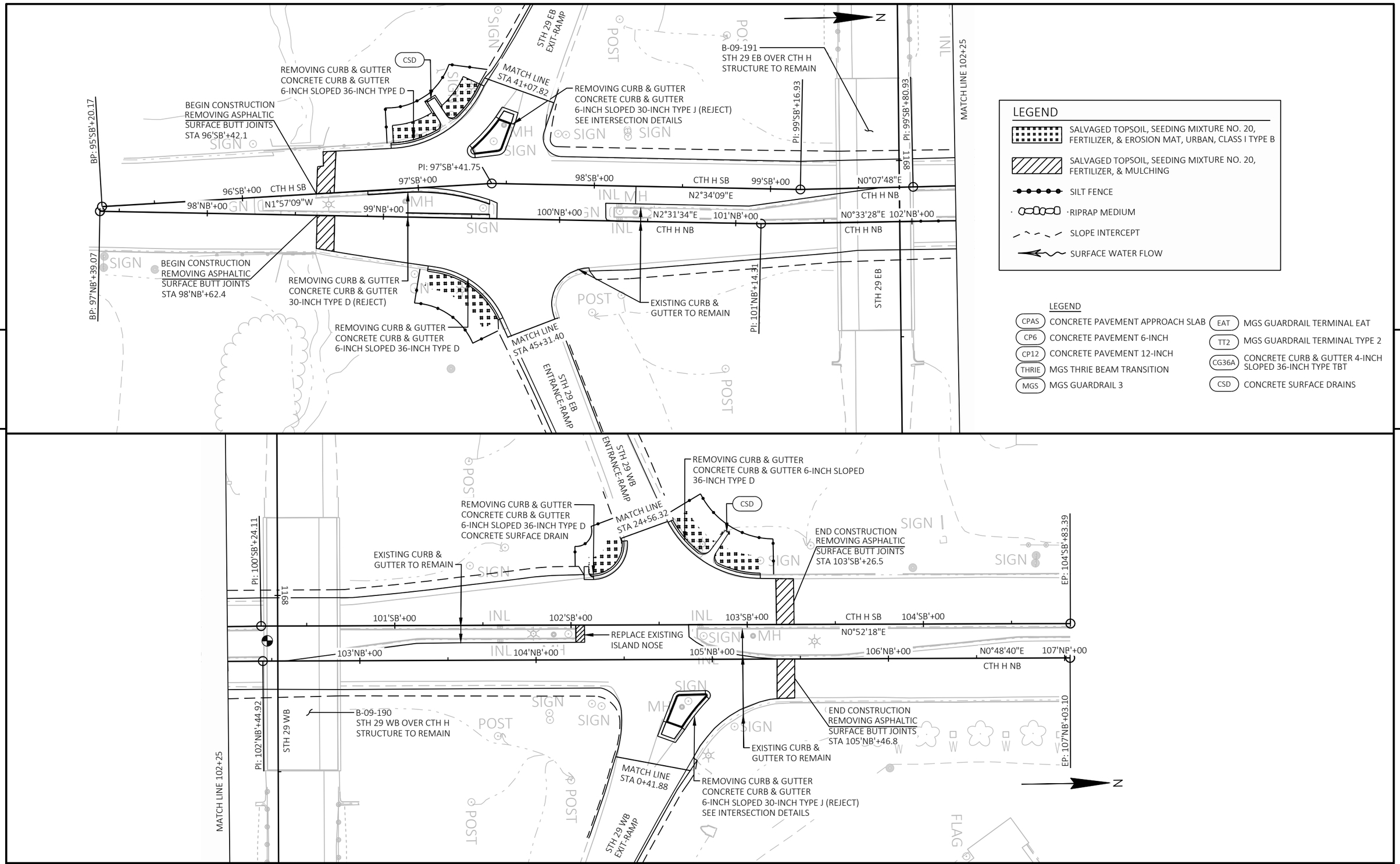
N

MATCH LINE 1366+90

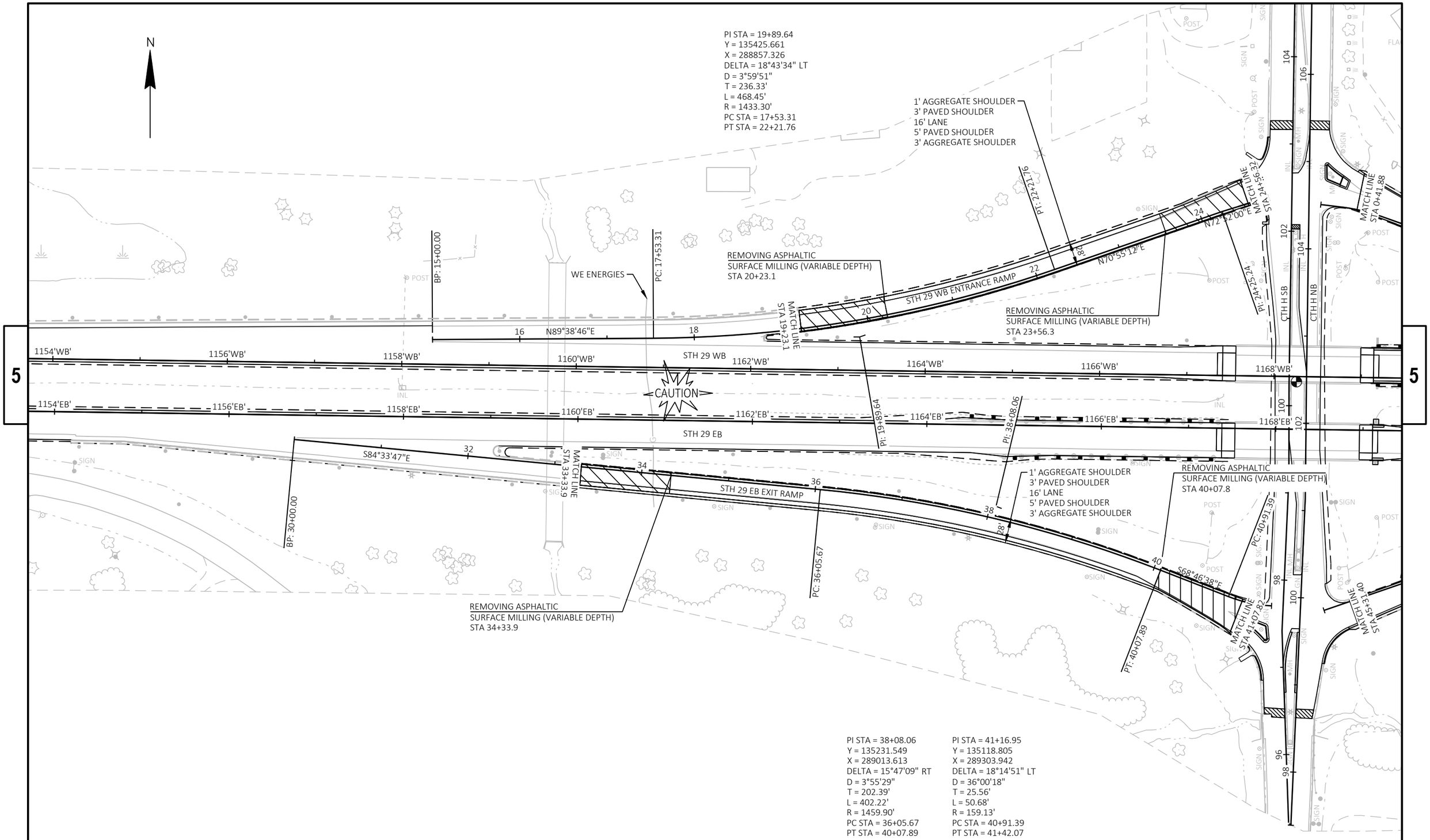
STATION & OFFSET TABLE							
POINT	STATION 'EB'	OFFSET	STATION 'WB'	OFFSET	NORTHING	EASTING	ELEVATION
49	1366+49.21	211.47 LT	1366+50.68	151.20	135805.696	309176.663	1156.14
50	1363+99.44	140.67 RT	1364+00.91	200.93	135451.534	308929.775	1171.17
2719	1363+97.74	134.01 RT	1363+99.21	194.28	135458.177	308928.018	1171.38

PROJECT NO: 1050-00-60	HWY: STH 29	COUNTY: CHIPPEWA & CLARK	PLAN SHEETS	SHEET 68	E

FILE NAME : C:\OD\ONEDRIVE - CORRE, INC\MY PROJECTS\1050-00-30_CLARK CO_STH 29\500_CADD\501_C3D_2024\10500030\SHEETS\050201-PN.DWG
LAYOUT NAME - 14
PLOT DATE : 11/21/2025 12:00 PM PLOT BY : ANDREW PETERSON, PE PLOT NAME : PLOT SCALE : 1 IN:100 FT



PROJECT NO: 1050-00-60	HWY: STH 29	COUNTY: CHIPPEWA & CLARK	CTH H	SHEET 69	E



PROJECT NO: 1050-00-60	HWY: STH 29	COUNTY: CHIPPEWA & CLARK	WEST RAMPS	SHEET 70	E

FILE NAME : C:\OD\ONEDRIVE - CORRE, INC\MY PROJECTS\1050-00-30_CLARK CO_STH 29\500_CADD\501_C3D_2024\10500030\SHEETS\050203-PN.DWG
LAYOUT NAME - 01

PLOT DATE : 11/21/2025 12:00 PM PLOT BY : ANDREW PETERSON, PE PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

PI STA = 0+47.80
Y = 135571.605
X = 289433.424
DELTA = 12°44'16" RT
D = 28°12'37"
T = 22.67'
L = 45.15'
R = 203.10'
PC STA = 0+25.13
PT STA = 0+70.29

PI STA = 3+63.12
Y = 135465.687
X = 289730.612
DELTA = 14°16'30" LT
D = 3°46'13"
T = 190.30'
L = 378.62'
R = 1519.70'
PC STA = 1+72.82
PT STA = 5+51.44

N

PI STA = 49+94.82
Y = 135274.445
X = 289857.141
DELTA = 18°47'10" RT
D = 3°58'51"
T = 238.09'
L = 471.91'
R = 1439.28'
PC STA = 47+56.73
PT STA = 52+28.64

PI STA = 49+94.82
Y = 135274.445
X = 289857.141
DELTA = 18°47'10" RT
D = 3°58'51"
T = 238.09'
L = 471.91'
R = 1439.28'
PC STA = 47+56.73
PT STA = 52+28.64

PROJECT NO: 1050-00-60	HWY: STH 29	COUNTY: CHIPPEWA & CLARK	EAST RAMPS	SHEET 71 E

FILE NAME : C:\OD\ONEDRIVE - CORRE, INC\MY PROJECTS\1050-00-30_CLARK CO_STH 29\500_CADD\501_C3D_2024\10500030\SHEETS\050204-PN.DWG
LAYOUT NAME - 01
PLOT DATE : 11/21/2025 12:00 PM PLOT BY : ANDREW PETERSON, PE PLOT NAME : PLOT SCALE : 1 IN:100 FT

Standard Detail Drawing List

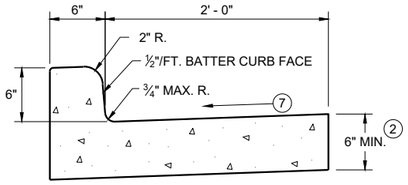
08D01-24A	CONCRETE CURB & GUTTER
08D01-24B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D02-08A	CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES
08D02-08B	CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES
08D02-08C	CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES
08D04-07	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08E09-06	SILT FENCE
08E15-01	CULVERT PIPE CHECK
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F04-08	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
09A01-14A	AT-GRADE SIDE ROAD INTERSECTION, TYPES "B1", "B2", "C" AND D AND TEE INTERSECTION BYPASS LANE
09A01-14B	AT-GRADE SIDE ROAD INTERSECTION, TYPE "A1" & "A2"
11B02-02	CONCRETE MEDIAN NOSE
12A03-10	NAME PLATE (STRUCTURES)
13A03-07	CONCRETE PAVEMENT SHOULDERS
13A05-06A	SHOULDER RUMBLE STRIPS, DIVIDED ROADWAY
13A05-06B	SHOULDER RUMBLE STRIPS, DIVIDED ROADWAY
13B02-09A	CONCRETE PAVEMENT APPROACH SLAB
13C01-19	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
13C09-17A	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C09-17B	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C09-17C	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C19-03	HMA LONGITUDINAL JOINTS
14B29-01	SAFETY EDGE
14B42-07A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07D	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-04A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B45-05A	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05B	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05C	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05D	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05E	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05F	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05G	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05H	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05I	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05J	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05K	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05L	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B47-06A	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-06B	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-06C	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-06D	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-06E	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-06F	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-06G	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14D01-01	TURTLE EXCLUSION FENCE CLIMBING TURTLE
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15C02-09A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-09B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C02-09C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C02-09D	ON RAMP LANE CLOSURE
15C02-09E	OFF RAMP LANE CLOSURE
15C02-09G	TRAFFIC CONTROL FOR ENTRANCE RAMP CLOSURE
15C02-09H	MODIFIED ROUTE ASSEMBLY FOR DETOUR SIGNING
15C04-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C05-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS
15C07-16B	PAVEMENT MARKING WORDS
15C07-16C	PAVEMENT MARKING ARROWS
15C08-23A	PERMANENT LONGITUDINAL PAVEMENT MARKINGS
15C08-23B	TEMPORARY LONGITUDINAL PAVEMENT MARKING

6

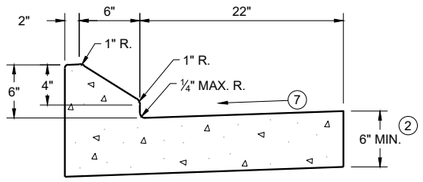
Standard Detail Drawing List

15C08-23D	PAVEMENT MARKING (TURN LANES)
15C09-13A	SIGNING AND PAVEMENT MARKING DETAILS FOR RAILROAD-HIGHWAY GRADE CROSSINGS
15C11-10B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C12-09A	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15C14-05	AERIAL ENFORCEMENT BARS PAVEMENT MARKING DETAILS
15C18-09A	MEDIAN ISLAND PAVEMENT MARKINGS
15C18-09B	PAVEMENT MARKINGS, MEDIAN ISLAND NOSE
15C18-09C	MEDIAN PAVEMENT MARKINGS DOUBLE ARROW WARNING SIGN PLACEMENT
15C19-09C	MOVING PAVEMENT MARKING OPERATION MULTI-LANE DIVIDED ROADWAY
15C26-04	END-OF-ROADWAY SIGNING
15C31-08A	PAVEMENT MARKING EXIT RAMP AND PARALLEL EXIT RAMP
15C31-08C	PAVEMENT MARKING ENTRANCE RAMP AND PARALLEL ENTRANCE RAMP
15C33-05	STOP LINE AND CROSSWALK PAVEMENT MARKING
15C35-06A	PAVEMENT MARKING (INTERSECTIONS)
15D12-15G	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D15-07C	TRAFFIC CONTROL, TAPERED ENTRANCE RAMP WITHIN LANE CLOSURE
15D15-07D	TRAFFIC CONTROL, TAPERED ENTRANCE RAMP WITHIN LANE CLOSURE
15D16-06	TRAFFIC CONTROL, EXIT RAMP CLOSURE
15D21-07A	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
15D21-07B	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
15D27-04	TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH
15D39-03	TRAFFIC CONTROL, DROP-OFF SIGNING
15D40-06B	TRAFFIC CONTROL, FULL LANE SHIFT MULTILANE DIVIDED 50 MPH AND OVER
15D47-03B	TRAFFIC CONTROL, INGRESS/EGRESS WITHOUT BARRIER

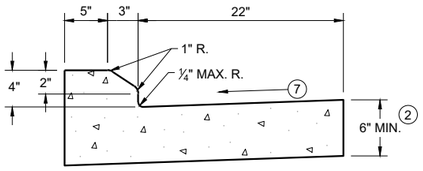
6



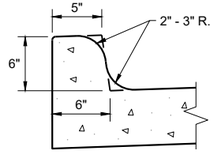
TYPES A (1) & D



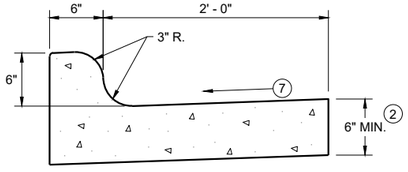
6" SLOPED CURB TYPES G (1) & J



4" SLOPED CURB TYPES G (1) & J

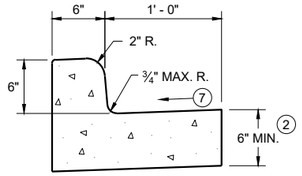


TYPES K (1) & L
(OPTIONAL CURB SHAPE)



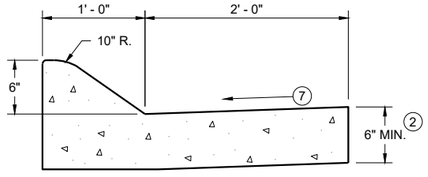
TYPES K (1) & L

CONCRETE CURB AND GUTTER 30"

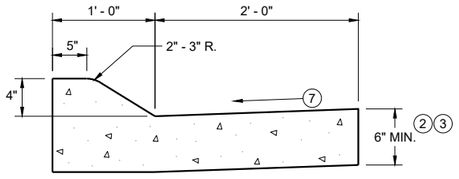


TYPES A (1) & D

CONCRETE CURB AND GUTTER 18"

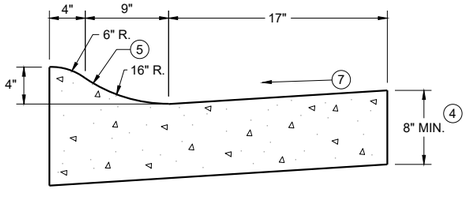


6" SLOPED CURB TYPES A (1) & D



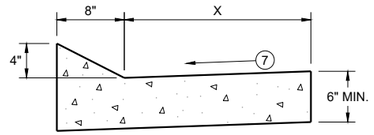
4" SLOPED CURB TYPES A (1) & D

CONCRETE CURB AND GUTTER 36"



4" SLOPED CURB TYPES R (1) & T
CONCRETE CURB AND GUTTER 30"

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

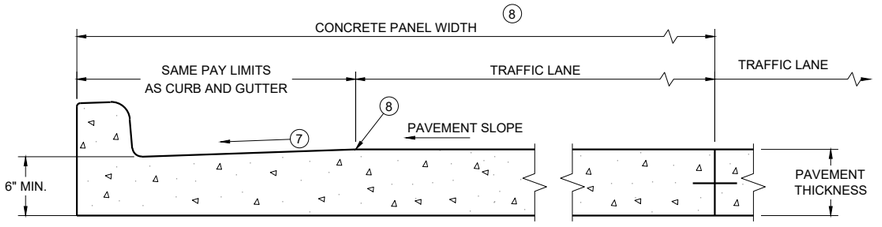


TYPES TBT & TBTT (1)

CONCRETE CURB AND GUTTER

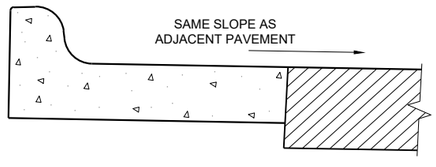
PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE

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



PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB AND GUTTER *

* BIKE LANE IS NOT SHOWN



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

GENERAL NOTES

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

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

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

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

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

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

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

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

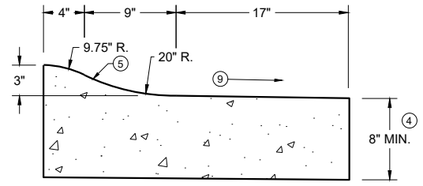
(5) UNLESS OTHERWISE NOTED, FOR STAKING PURPOSES THE FACE OF CURB IS 6" FROM THE BACK OF CURB.

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

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

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

(9) SLOPE TO BE REVERSE SLOPE MATCHING THE SLOPE OF THE PAVEMENT AND THE CIRCULATORY ROADWAY



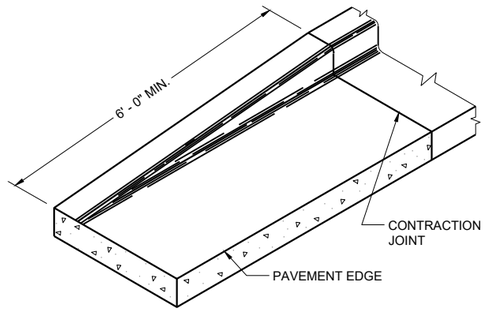
3" SLOPED CURB TYPES R (1) & T

CONCRETE CURB AND GUTTER

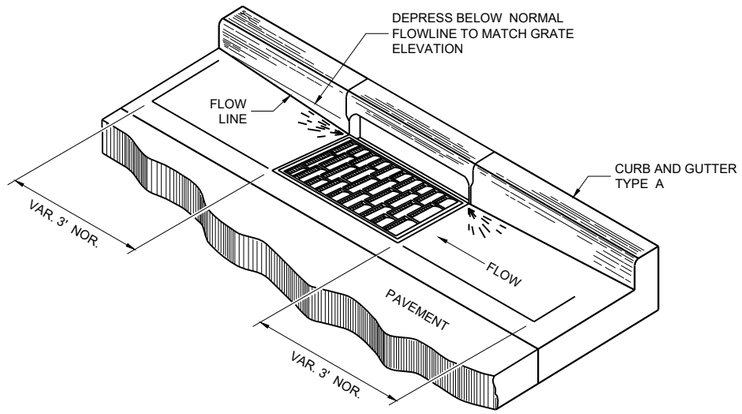
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 08D01-24a



END SECTION CURB AND GUTTER



DETAIL OF CURB AND GUTTER AT INLETS

(TYPICAL H INLET COVER SHOWN)

GENERAL NOTES

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

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

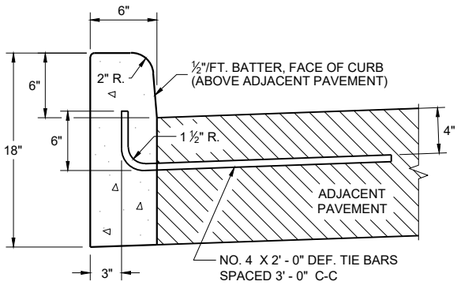
UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2' - 0" BEHIND THE BACK OF CURBS.

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

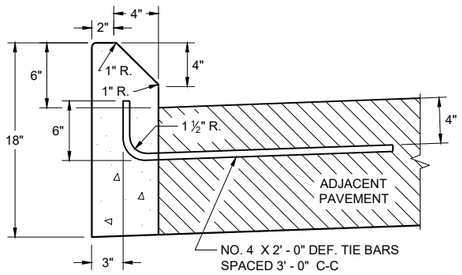
(2) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

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

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

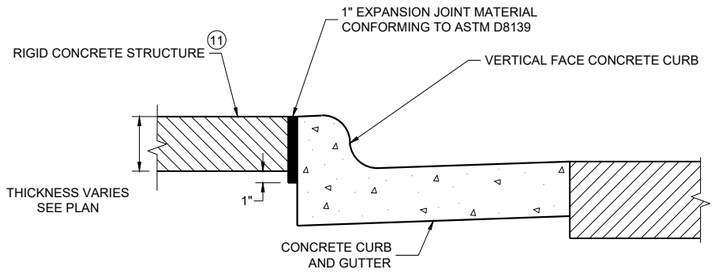


TYPES A (1) & D

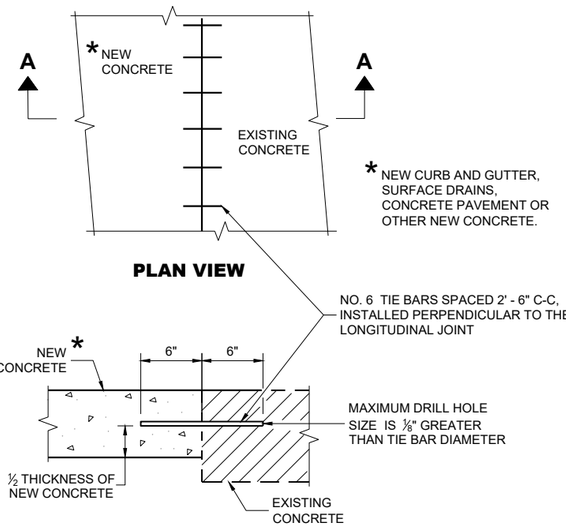


TYPES G (1) & J

CONCRETE CURB



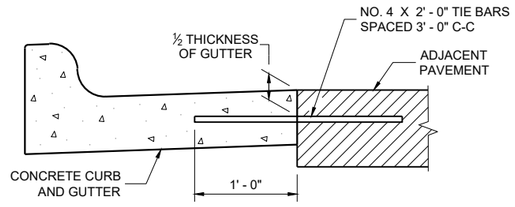
EXPANSION JOINT DETAIL FOR VERTICAL CURB ABUTTING A RIGID STRUCTURE (11)



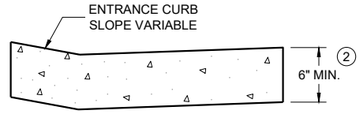
PLAN VIEW

SECTION A - A

TIE BARS DRILLED INTO EXISTING PAVEMENT



TYPICAL TIE BAR LOCATION (1)



DRIVEWAY ENTRANCE CURB (10)

(WHEN DIRECTED BY THE ENGINEER)

CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2025 — DATE
/S/ Rodnery Taylor — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

FHWA

6
SDD 08D01-24b

GENERAL NOTES

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

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

(1) USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.

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

(3) PAVED CONCRETE SHOULDER (SDD 13A03) OR CONCRETE DRAINAGE SLAB.

(4) CONCRETE PAVEMENT APPROACH SLAB (SHOWN) OR STRUCTURE APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB. SEE SDD 13B02.

(5) PAVED CONCRETE SHOULDER (SDD 13A03) OR ASPHALT SHOULDER.

(6) CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE TBT OR TBTT. USE TYPE TBTT CURB WITH NO. 4 X 2' -0" TIE BARS SPACED AT 3' - 0" C-C ONLY WHEN ADJACENT TO CONCRETE PAVEMENTS.

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

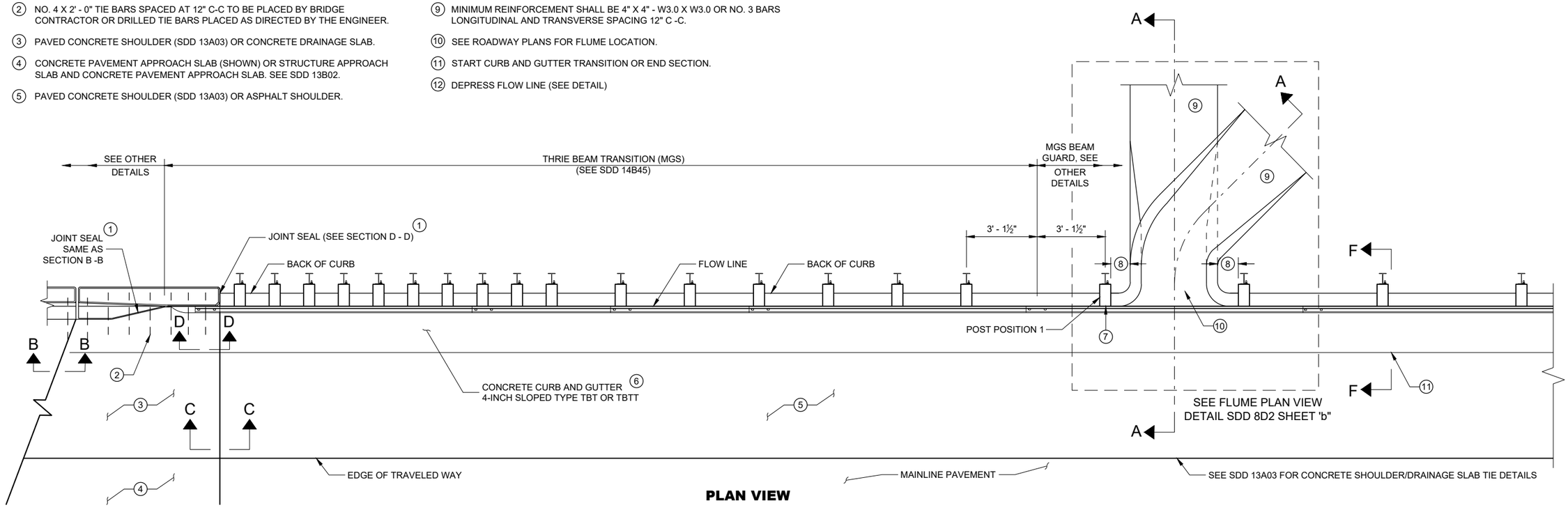
(8) CENTER FLUME BETWEEN POSTS. 6-INCH MINIMUM SEPARATION FROM OUTSIDE EDGE OF FLUME TO POSTS.

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

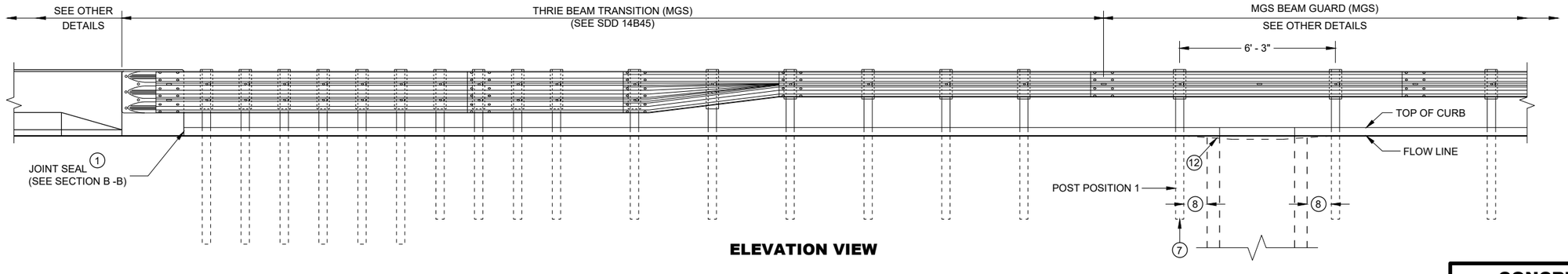
(10) SEE ROADWAY PLANS FOR FLUME LOCATION.

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

(12) DEPRESS FLOW LINE (SEE DETAIL)



PLAN VIEW



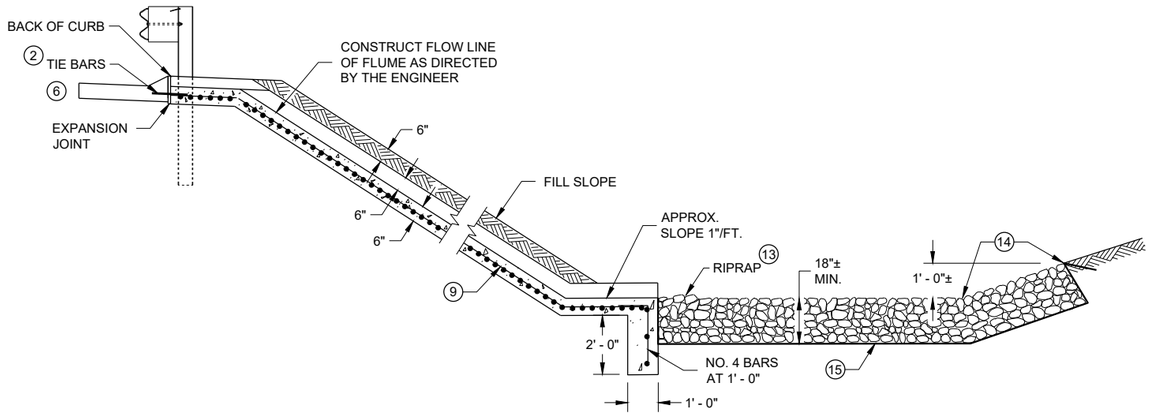
ELEVATION VIEW

CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES

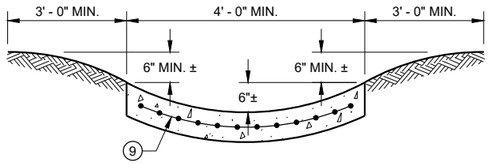
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

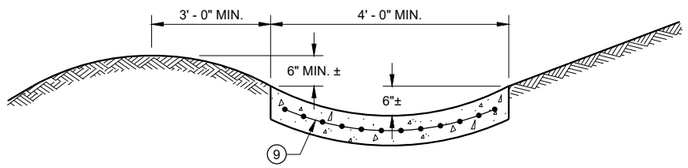
SDD 08D02 - 08a



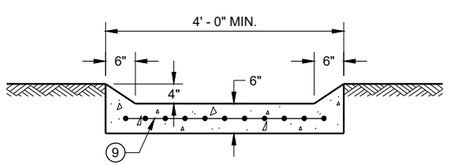
SECTION A - A



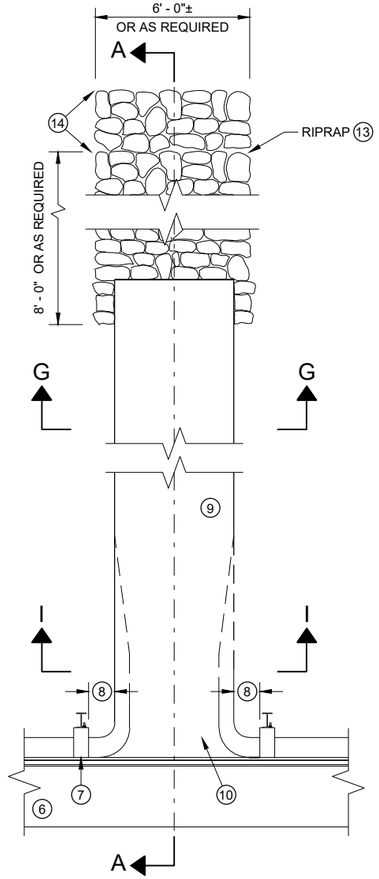
SECTION G - G



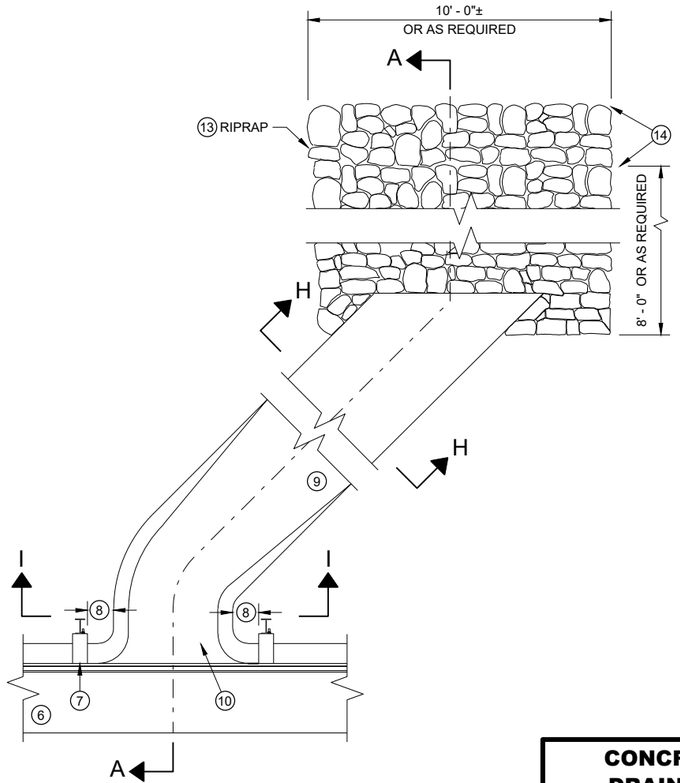
SECTION H - H



SECTION I - I



PLAN VIEW PERPENDICULAR FLUME



PLAN VIEW SKEWED FLUME

GENERAL NOTES

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

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

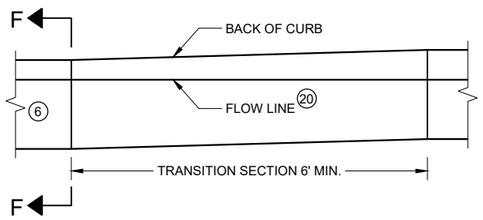
1. USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.
2. NO. 4 X 2' - 0" TIE BARS SPACED AT 12" C-C TO BE PLACED BY BRIDGE CONTRACTOR OR DRILLED TIE BARS PLACED AS DIRECTED BY THE ENGINEER.
3. PAVED CONCRETE SHOULDER (SDD 13A03) OR CONCRETE DRAINAGE SLAB.
4. CONCRETE PAVEMENT APPROACH SLAB (SHOWN) OR STRUCTURE APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB. SEE SDD 13B02 AND STRUCTURE PLANS.
5. PAVED CONCRETE SHOULDER (SDD 13A03) OR ASPHALT SHOULDER.
6. CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE TBT OR TBTT. USE TYPE TBTT CURB WITH NO. 4 X 2' -0" TIE BARS SPACED AT 3' - 0" C-C ONLY WHEN ADJACENT TO CONCRETE PAVEMENTS.
7. PLACE FLUME BEFORE MSG THRIE BEAM TRANSITION POST 1 (SEE SDD 14B45)
8. CENTER FLUME BETWEEN POSTS. 6-INCH MINIMUM SEPARATION FROM OUTSIDE EDGE OF FLUME TO POSTS.
9. MINIMUM REINFORCEMENT SHALL BE 4" X 4" - W3.0 X W3.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C -C.
10. SEE ROADWAY PLANS FOR FLUME LOCATION.
11. START CURB AND GUTTER TRANSITION OR END SECTION.
12. DEPRESS FLOW LINE (SEE DETAIL)
13. MEDIUM RIPRAP UNLESS OTHERWISE SPECIFIED.
14. LIMITS OF ADDITIONAL RIPRAP WHEN SPECIAL DITCH AS REQUIRED.
15. GEOTEXTILE TYPE HR.

CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES

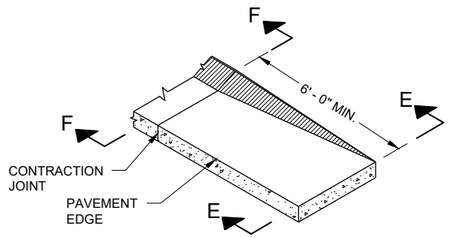
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

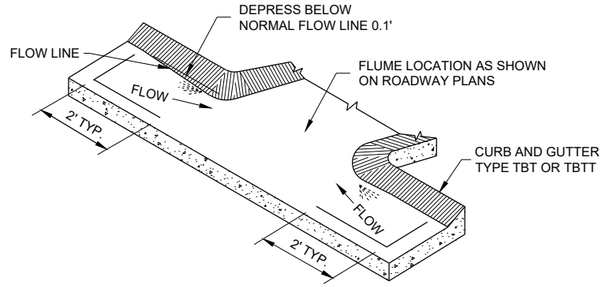
SDD 08D02 - 08b



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



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



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

GENERAL NOTES

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

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

(1) USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.

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

(3) PAVED CONCRETE SHOULDER (SDD 13A03) OR CONCRETE DRAINAGE SLAB.

(4) CONCRETE PAVEMENT APPROACH SLAB (SHOWN) OR STRUCTURE APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB. SEE SDD 13B02 AND STRUCTURE PLANS.

(5) PAVED CONCRETE SHOULDER (SDD 13A03) OR ASPHALT SHOULDER.

(6) CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE TBT OR TBTT. USE TYPE TBTT CURB WITH NO. 4 X 2' -0" TIE BARS SPACED AT 3' - 0" C-C ONLY WHEN ADJACENT TO CONCRETE PAVEMENTS.

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

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

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

(10) SEE ROADWAY PLANS FOR FLUME LOCATION.

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

(12) DEPRESS FLOW LINE (SEE DETAIL)

(13) MEDIUM RIPRAP UNLESS OTHERWISE SPECIFIED.

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

(15) GEOTEXTILE TYPE HR.

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

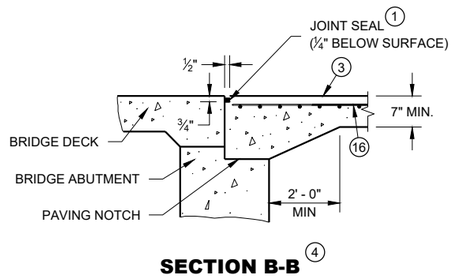
(17) MSG THRIE BEAM TRANSITION POST 1. SEE SDD 14B45 FOR ADDITIONAL CONSTRUCTION DETAILS AND ACCEPTABLE MATERIALS.

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

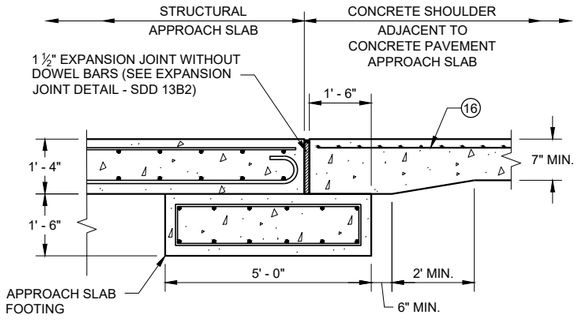
(19) ALIGN FACE OF POST BLOCK WITH FLOW LINE.

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

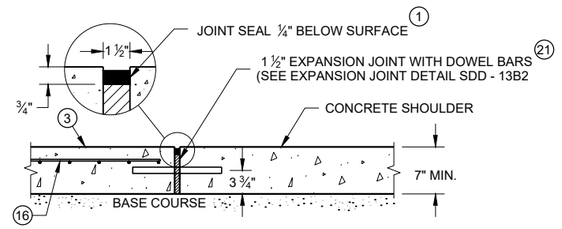
(21) DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING HMA PAVEMENTS.



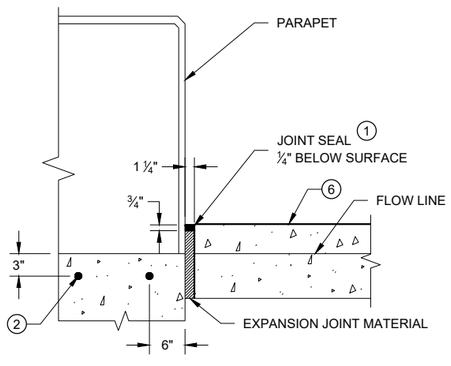
SECTION B-B (4)



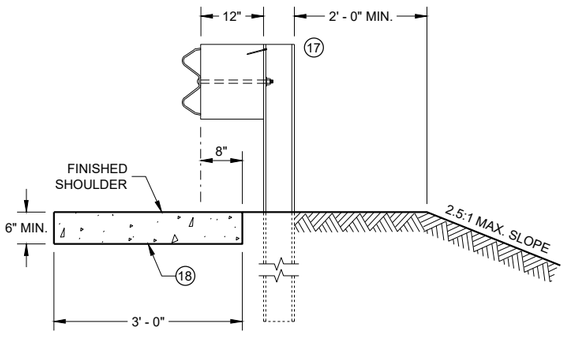
SECTION C - C
JOINT DETAIL FOR BRIDGE WITH STRUCTURAL APPROACH SLAB AND CONCRETE APPROACH SLAB



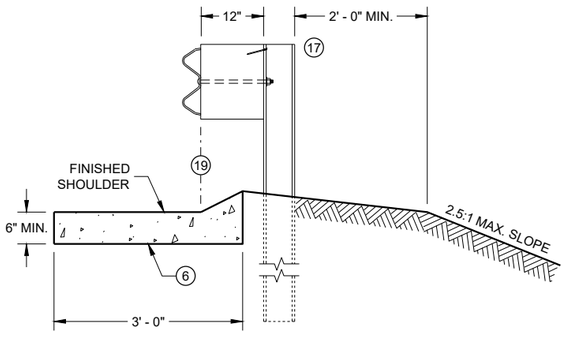
SECTION C - C
JOINT DETAIL FOR BRIDGE APPROACH WITH CONCRETE SHOULDERS



SECTION D - D



SECTION E - E



SECTION F - F

CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES

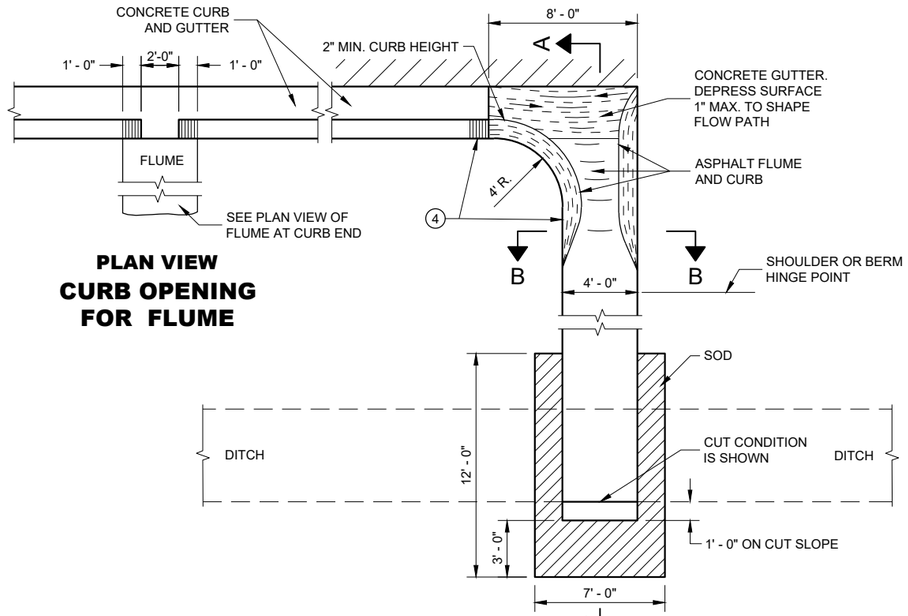
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6
SDD 08D02 - 08c

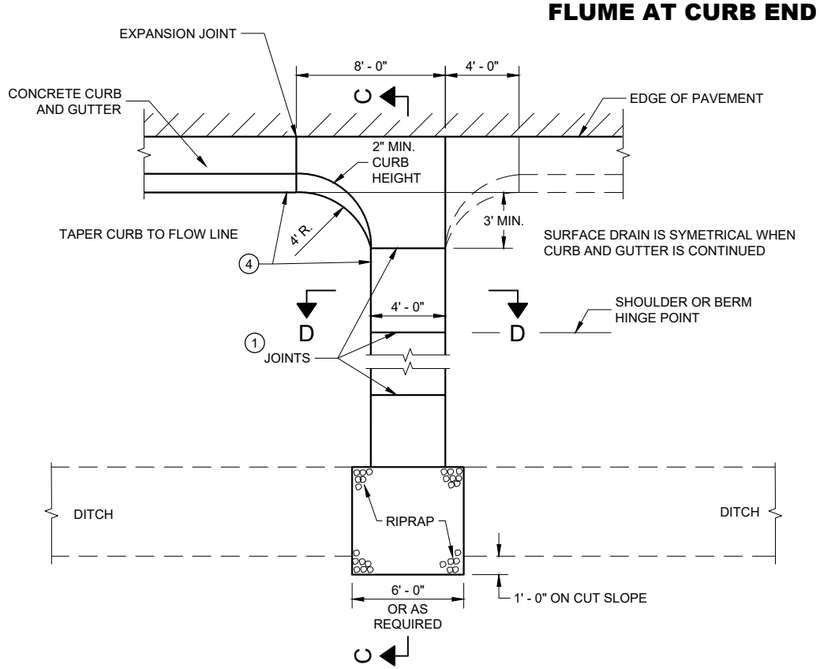
NOTE: TAPER CURB ENDS TO GUTTER IN 1' - 0"

ASPHALTIC FLUME



PLAN VIEW
CURB OPENING FOR FLUME

PLAN VIEW
FLUME AT CURB END



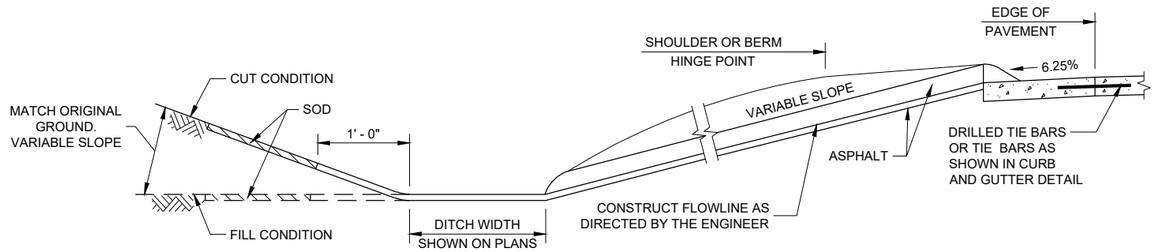
PLAN VIEW
CONCRETE SURFACE DRAIN

GENERAL NOTES

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

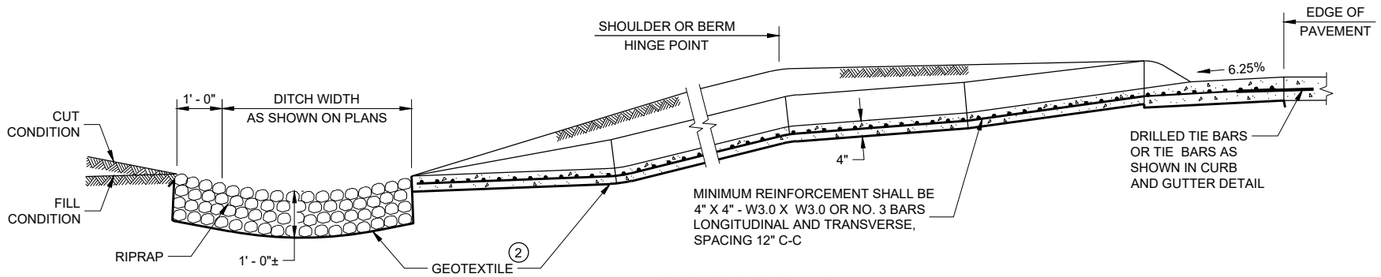
4" X 4" - W3.0 X W3.0 CONCRETE REINFORCEMENT SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

1. JOINTS SHALL BE ⅛" TO ¼" WIDE BY 1½" DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.
2. GEOTEXTILE TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.
3. CONCRETE SURFACE DRAIN WITHOUT CURB AND GUTTER MAY BE USED ON BACKSLOPES WHEN SPECIFIED.
4. ANGLE OF FLUME IN RELATION TO BACK OF CURB TO BE CONSTRUCTED PER THE PLAN DETAILS OR AS DIRECTED BY THE ENGINEER. ANGLE OF FLUME MAY BE OTHER THAN 90 DEGREES AS SHOWN.

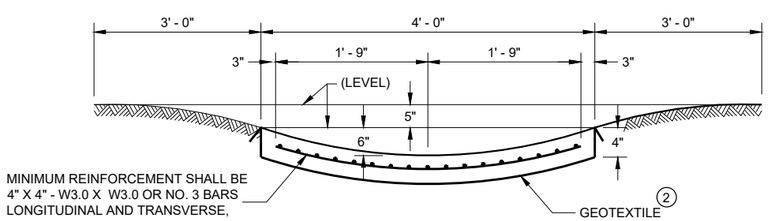


SECTION A - A

SECTION B - B



SECTION C - C



SECTION D - D

CONCRETE SURFACE DRAINS AND ASPHALTIC FLUMES

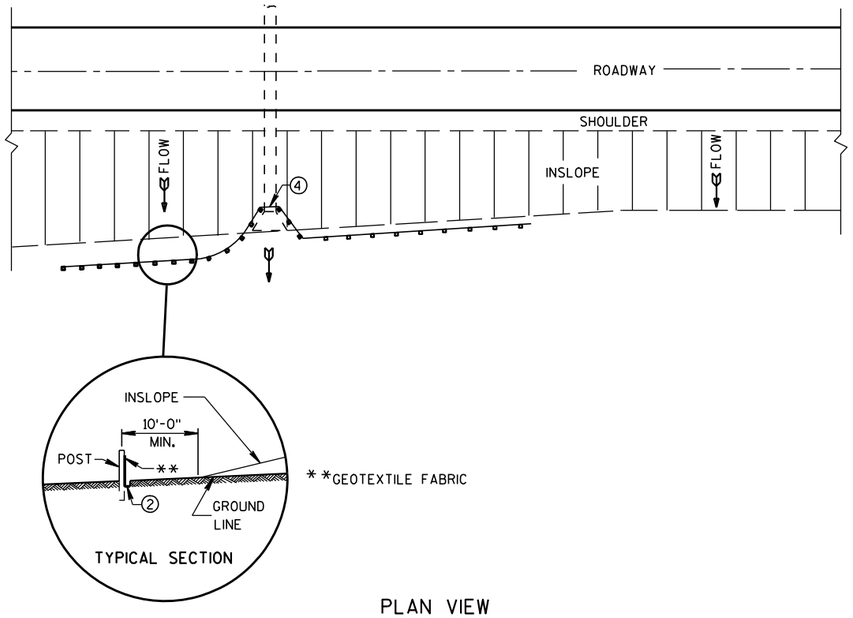
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS DEVE ENGINEER

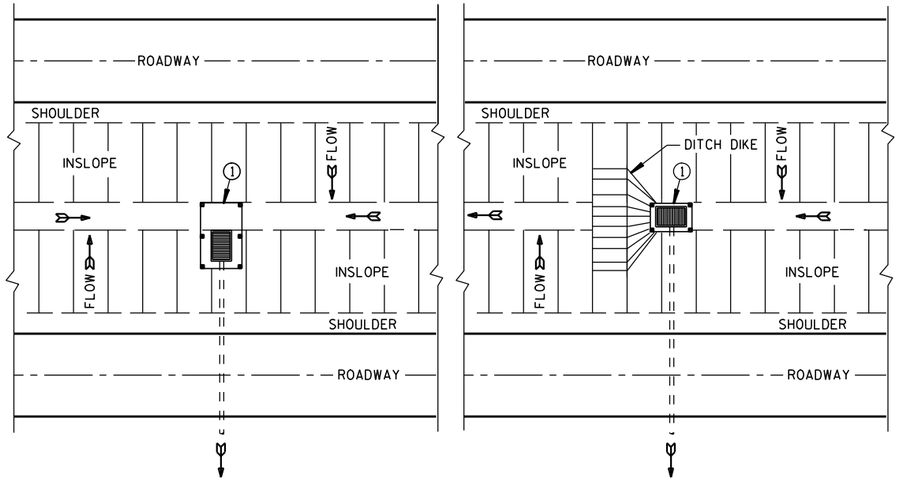
FHWA

6
SDD 08D04 - 07



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

GENERAL NOTES

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

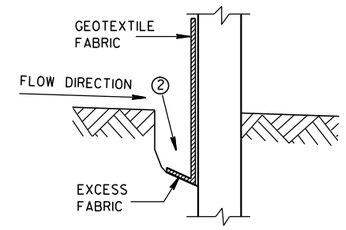
① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

② FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.

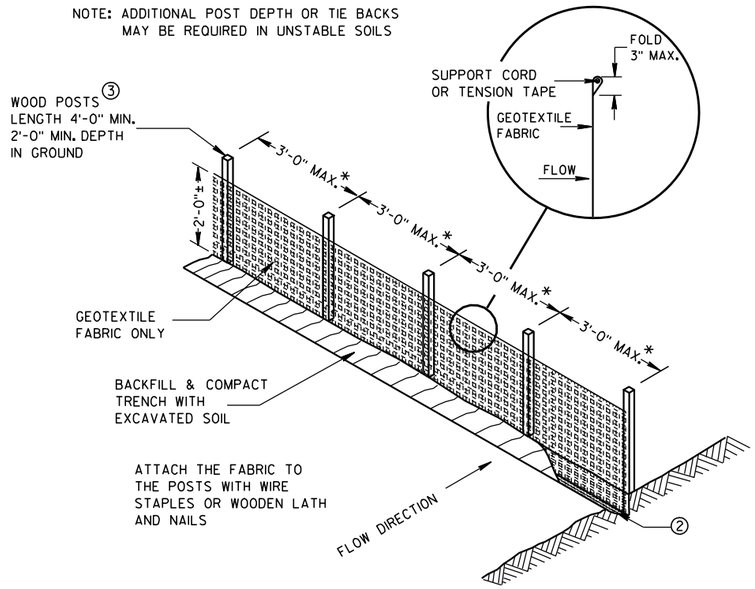
③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

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

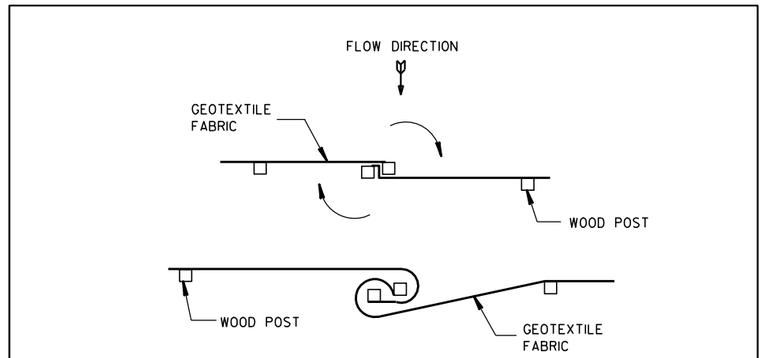
⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



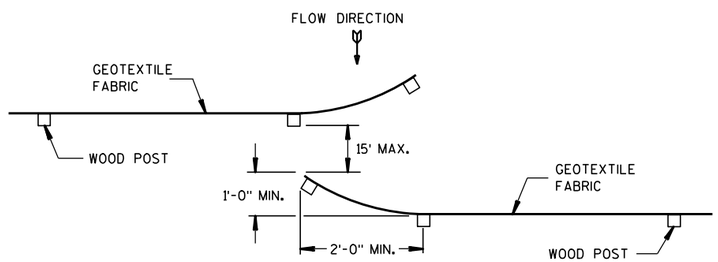
TRENCH DETAIL



SILT FENCE

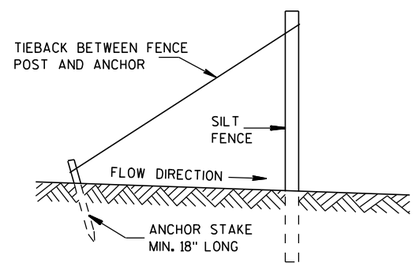


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE ⑤



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

S.D.D. 8 E 9-6

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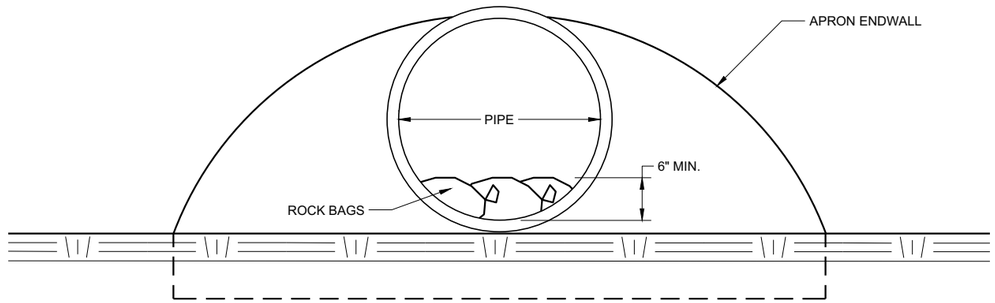
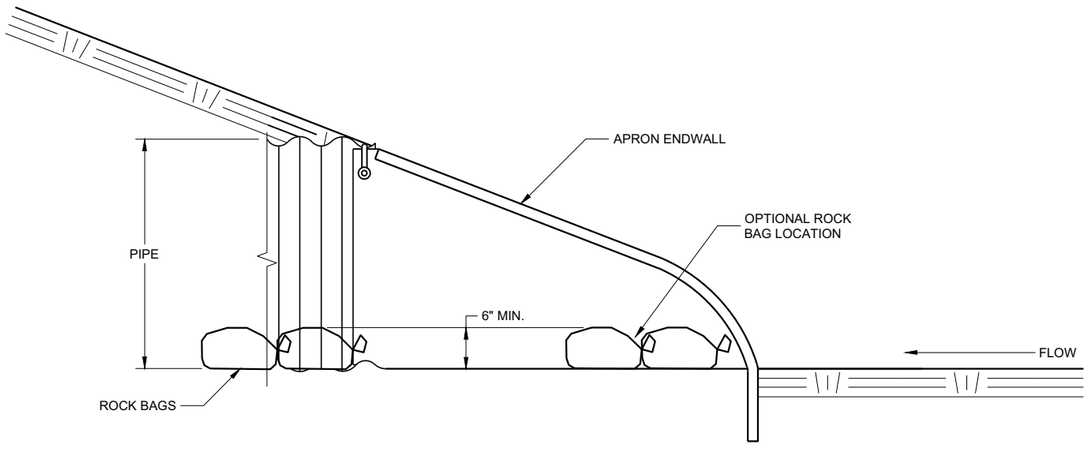
S.D.D. 8 E 9-6



END VIEW



SIDE VIEW

CULVERT PIPE CHECK

(INSTALL ON INLET END ONLY)

CULVERT PIPE CHECK	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2019 DATE	/S/ Daniel Schave EROSION CONTROL ENGI
FHWA	

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SDD 08E15 - 01

METAL APRON ENDWALLS

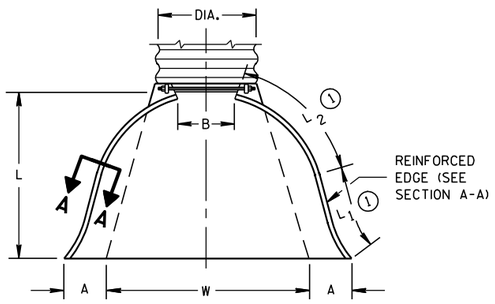
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4	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

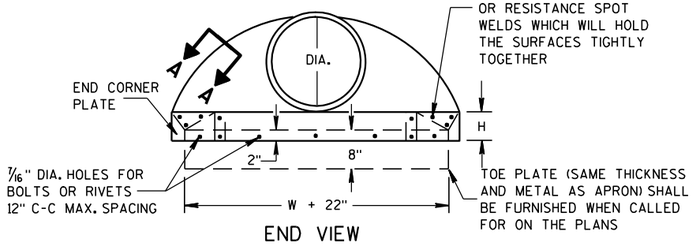
REINFORCED CONCRETE APRON ENDWALLS

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

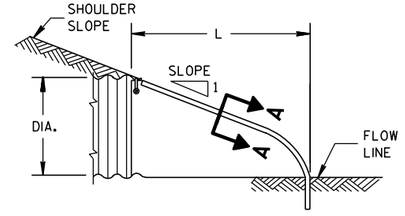
*MINIMUM
**MAXIMUM



PLAN VIEW

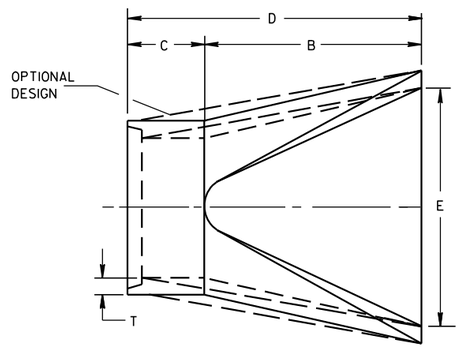


END VIEW

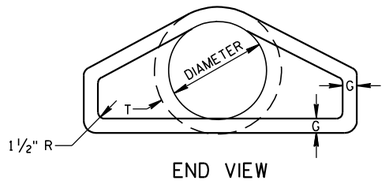


SIDE ELEVATION

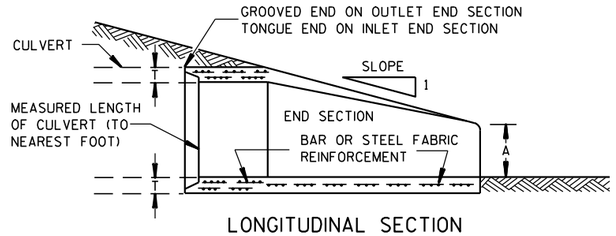
METAL ENDWALLS



PLAN

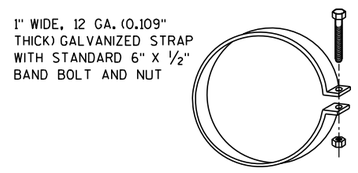


END VIEW



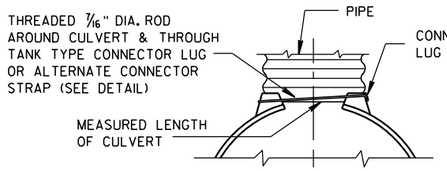
LONGITUDINAL SECTION

CONCRETE ENDWALLS

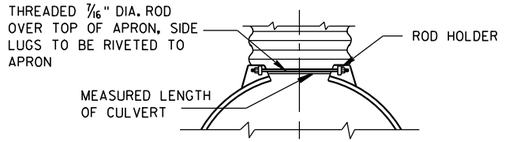


ALTERNATE FOR TYPE 1 CONNECTION

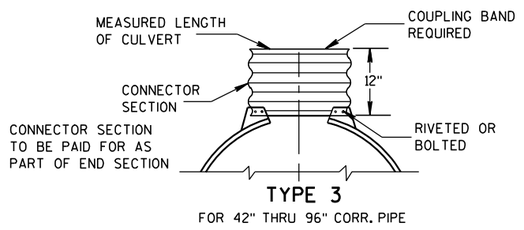
END SECTION CONNECTOR STRAP



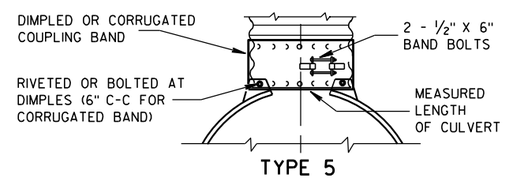
TYPE 1
FOR 12" THRU 24" CORR. PIPE



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

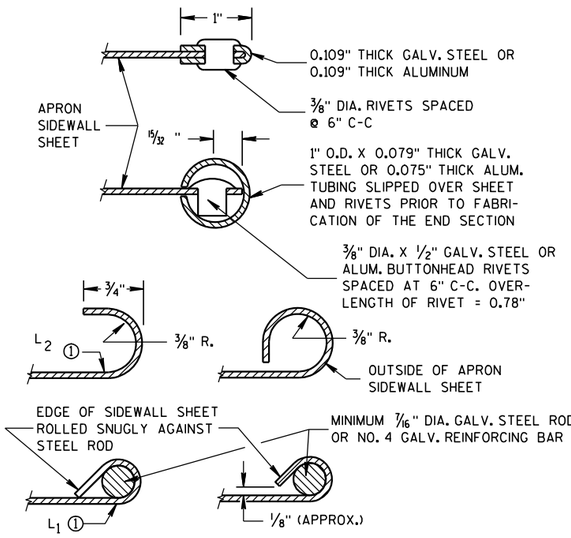
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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

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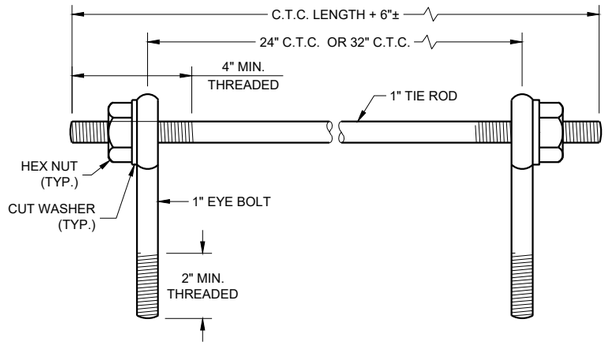
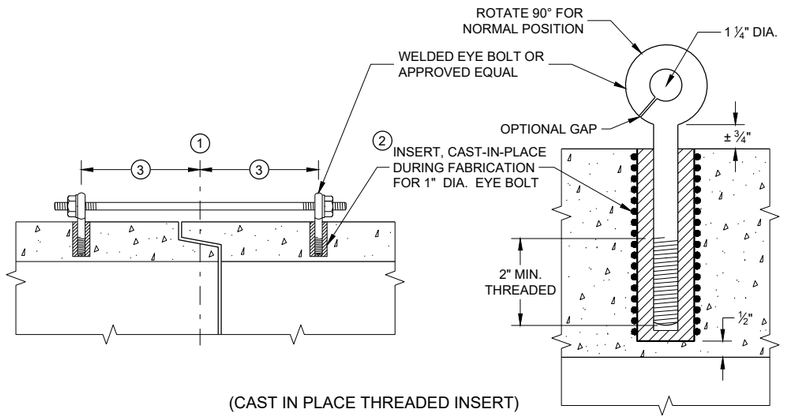
S.D.D. 8 F 1-11



EYE BOLTS AND TIE ROD



(CAST IN PLACE THREADED INSERT)

LONGITUDINAL SECTIONS

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

GENERAL NOTES

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

CONCRETE CULVERT AND STORM SEWER PIPE SHALL BE TIED TOGETHER IN THE MANNER ILLUSTRATED BY THIS DETAIL AT LOCATIONS DESIGNATED IN THE STANDARD SPECIFICATIONS AND THE PLAN. THE CONTRACTOR MAY USE EITHER ALTERNATE 1, 2 OR 3 FOR DRAINAGE STRUCTURES. ONLY ALTERNATE 1 AND 3 MAY BE USED FOR CATTLE PASSES, UNLESS OTHERWISE STATED IN THE CONTRACT. THE MATERIALS, FABRICATION AND WORK NECESSARY TO TIE THE PIPE BY THIS DETAIL WILL BE CONSIDERED INCIDENTAL TO THE PIPE AND APRON ENDWALLS IF REQUIRED.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR JOINT TIES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

JOINT TIES TO BE HOT-DIP GALVANIZED PER ASTM A 153.

(1) CENTER LINE OF TONGUE AND GROOVE OR BELL AND SPIGOT JOINTS.

(2) THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.

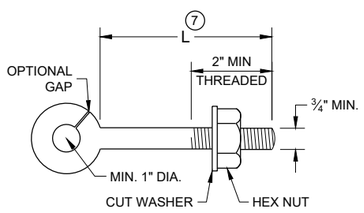
(3) HOLES SHALL BE CAST-IN-PLACE OR DRILLED PER THE APPLICABLE DETAIL, AND EQUAL DISTANCE FROM THE CENTERLINE OF THE JOINT.

(4) BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.

(5) OPENING TO BE ROD DIAMETER PLUS 1 INCH.

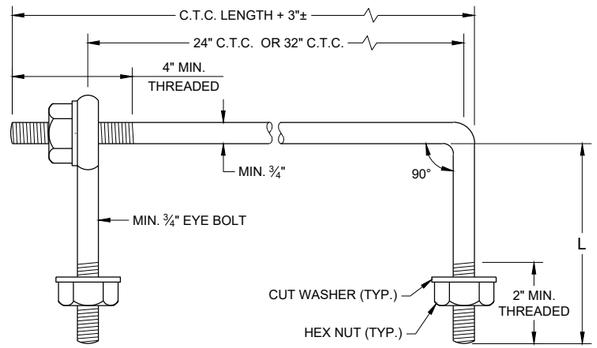
(6) LENGTH ADEQUATE TO EXTEND TO WITHIN ½ INCH OF THE INNER SURFACE OF THE PIPE.

(7) EYE BOLT LENGTH DETERMINED BY WALL THICKNESS, BELL THICKNESS AND BOLT PROJECTION INSIDE PIPE.

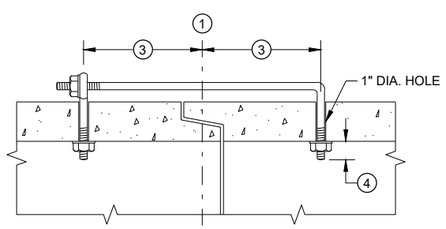


EYE BOLT (7)

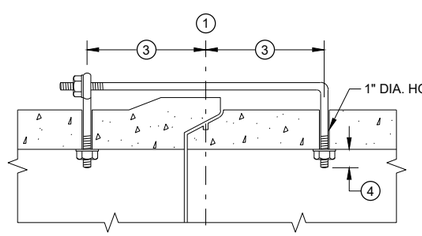
NOTE: TWO EYE BOLTS MAY BE USED WITH A 30" OR 38" LONG THREADED ROD IN LIEU OF THE 90° BENT TIE ROD.



EYE BOLT AND TIE ROD



(TONGUE AND GROOVE PIPE)



(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

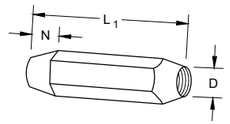
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

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

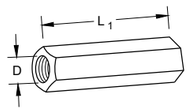
ADJUSTABLE TIE ROD TABLE

PIPE DIAMETER	TIE ROD DIAMETER	D	L_1	N
12 - 60	⅝	⅝	5	½
66 - 84	¾	¾	5	½
90 - 144	1	1	7	1 7/16

DIMENSIONS SHOWN ARE IN INCHES



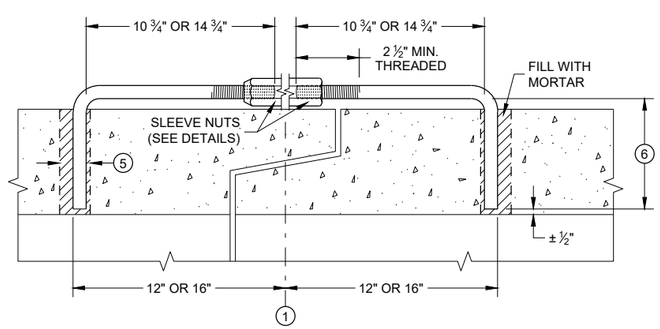
TAPERED



PLAIN

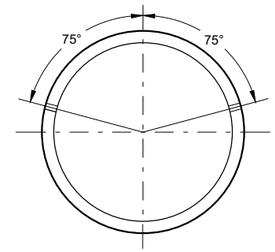
RIGHT AND LEFT THREADS

SLEEVE NUTS



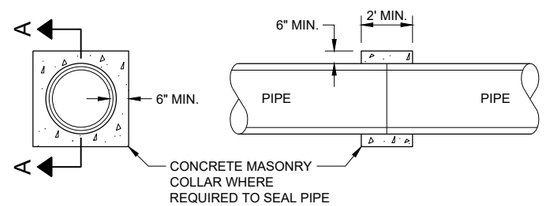
LONGITUDINAL SECTION

ADJUSTABLE TIE ROD (ALTERNATE NO. 3)



PLACEMENT OF (2) CAST-IN-PLACE INSERTS OR HOLES DURING FABRICATION FOR PIPE SECTIONS REQUIRING TIE RODS

TRANSVERSE SECTION



SECTION A - A

CONCRETE COLLAR DETAIL

JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2021 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE ENGINEER

FHWA

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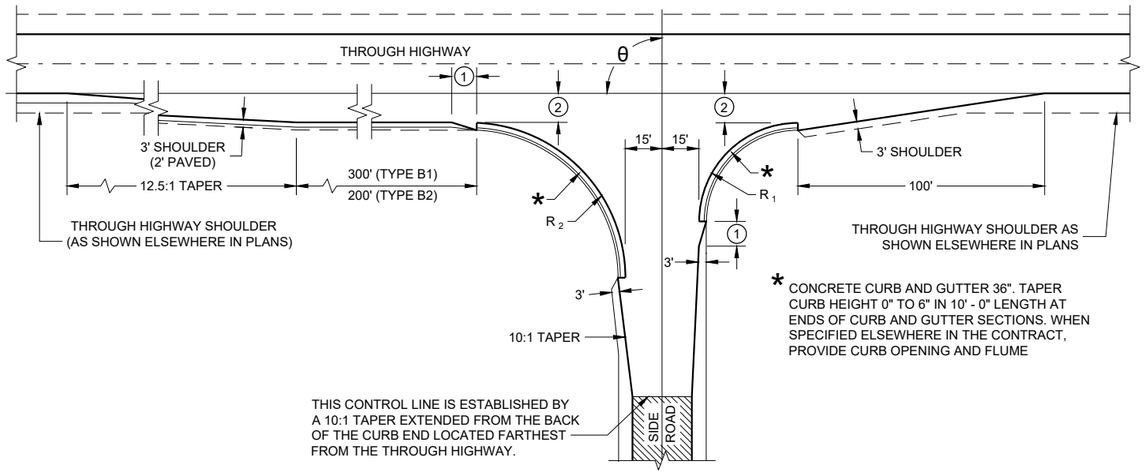
SDD 08F04 - 08



* CONCRETE CURB AND GUTTER 36". TAPER CURB HEIGHT 0" TO 6" IN 10' - 0" LENGTH AT ENDS OF CURB AND GUTTER SECTIONS. WHEN SPECIFIED ELSEWHERE IN THE CONTRACT, PROVIDE CURB OPENING AND FLUME

TYPE "B1" AND "B2"

RADII DIMENSIONS FOR TYPES "B1", "B2", "C" AND "D" INTERSECTIONS

θ	R_1	R_2
65 - 70	35	70
71 - 80	40	70
81 - 90	40	60
91 - 100	50	55
101 - 110	60	45

GENERAL NOTES

DESIGNS MAY BE USED INTERCHANGEABLY IN COMBINATION OR SEPARATELY FOR ANY ONE COMPLETE INTERSECTION DEPENDING UPON INTERSECTION ANGLE AND SURFACING OF EACH APPROACH ROADWAY.

SIDE ROAD SURFACING NOTE

WHEN THE SIDE ROAD IS NOT PRESENTLY PAVED, PAVEMENT SHALL BE PLACED TO THE LIMITS SHOWN UNLESS OTHERWISE PROVIDED IN THE CONTRACT. WHERE THE CONSTRUCTION LIMITS ARE BEYOND THE PAVING LIMITS, CRUSHED AGGREGATE SURFACING SHALL BE PLACED BETWEEN THE PAVING LIMITS AND CONSTRUCTION LIMITS.

WHEN THE SIDE ROAD IS PRESENTLY PAVED, NEW PAVEMENT SHALL BE PLACED TO THE LIMITS OF DESIGN AS SHOWN AND BEYOND, IF NECESSARY, TO MEET EXISTING PAVEMENT.

WHEN THE SIDE ROAD IS THE CONSTRUCTION PROJECT, THE INTERSECTION SURFACING SHALL BE THE SAME AS FOR THE PROJECT.

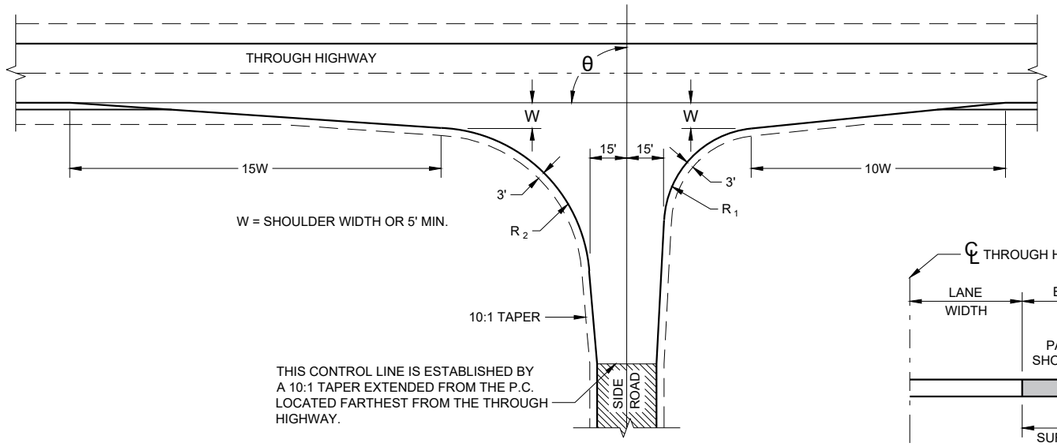
(1) 10-FT TYPICAL.

(2) 12-FT** PLUS ADDITIONAL WIDTH FOR BIKE LANE IF SHOWN ELSEWHERE IN THE PLAN.

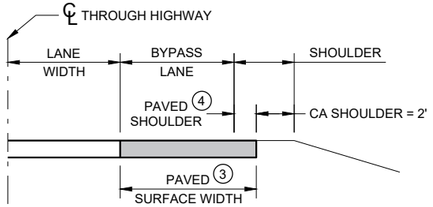
**10-FT MAY BE USED ON TYPE B2 ON RESURFACING PROJECTS IF SPECIFIED IN THE CONTRACT.

(3) BYPASS LANE PAVED SURFACE WIDTH OUTSIDE OF TRAVEL LANE
- ASPHALT = 12-FT PLUS PAVED SHOULDER WIDTH
- PC CONCRETE = 13-FT PLUS PAVED SHOULDER WIDTH

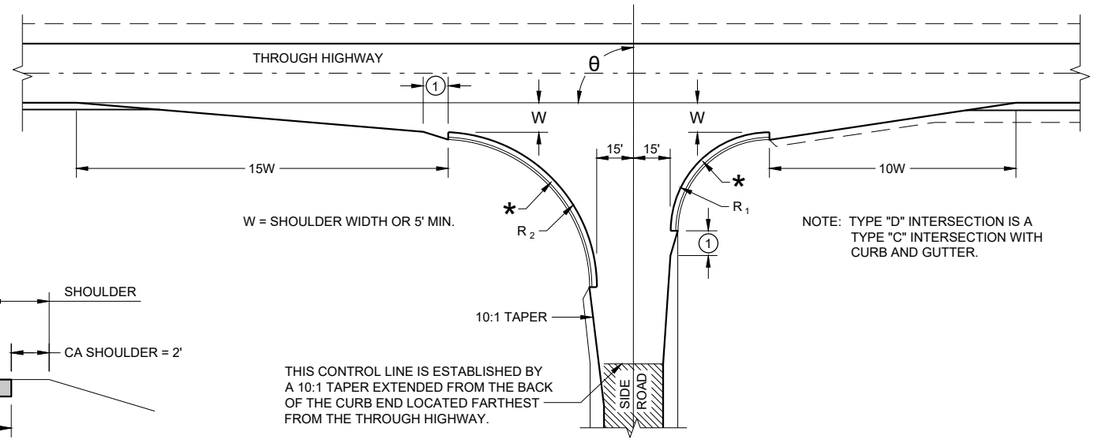
(4) BYPASS LANE PAVED SHOULDER WIDTH = THE GREATER OF 1-FT OR THE PAVED SHOULDER WIDTH OF THE THROUGH HIGHWAY.



TYPE "C"

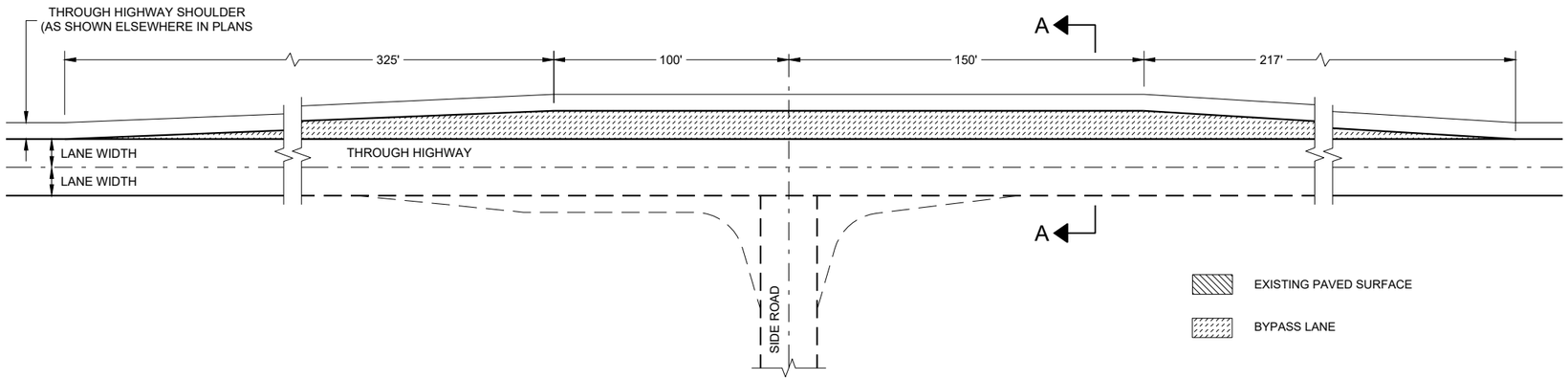


SECTION A - A
(SHOWING BYPASS LANE AND SHOULDER)



NOTE: TYPE "D" INTERSECTION IS A TYPE "C" INTERSECTION WITH CURB AND GUTTER.

TYPE "D"



TEE INTERSECTION BYPASS LANE DETAIL

AT GRADE SIDE ROAD INTERSECTION TYPES "B1", "B2", "C", "D" AND TEE INTERSECTION BYPASS LANE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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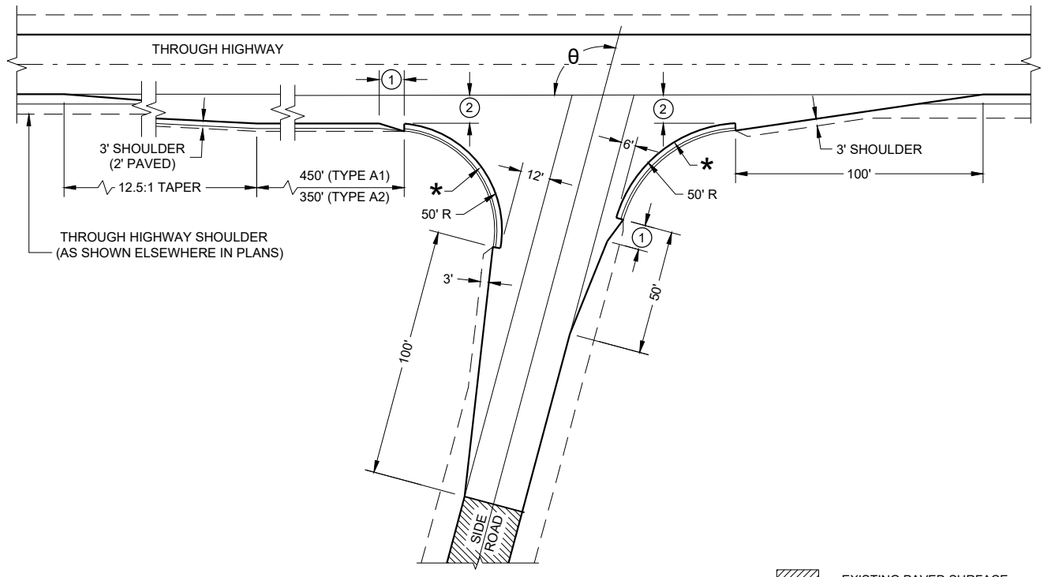
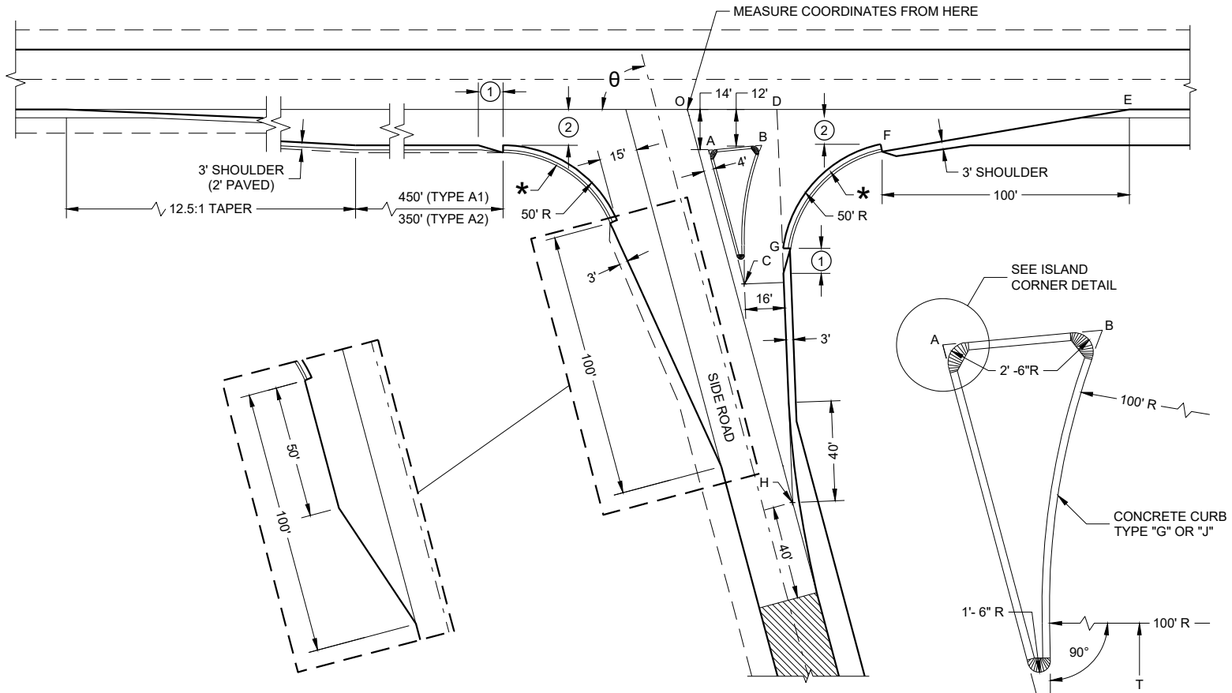
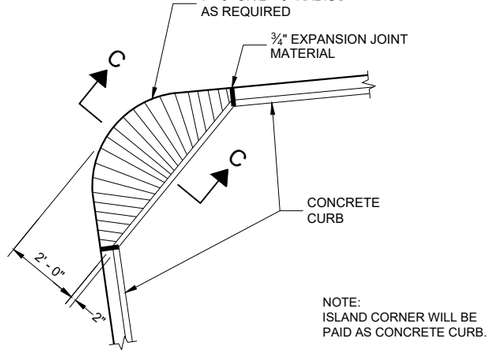


θ = MORE THAN 80°



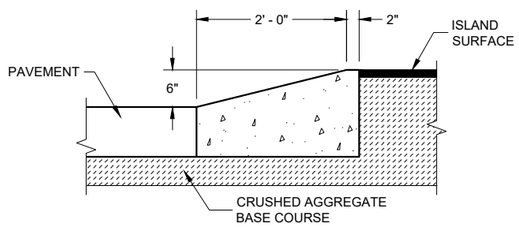
SIDE ROAD WIDENING AND TAPER REQUIRED WHERE THE THROUGH HIGHWAY CARRIES TWO-WAY TRAFFIC
θ = ACUTE ANGLES 70° OR LESS

θ = ACUTE ANGLES 80° OR LESS



PLAN VIEW

NOTE:
ISLAND CORNER WILL BE
PAID AS CONCRETE CURB.



SECTION C - C

ISLAND CORNER DETAIL

(TO BE CONSTUCTED AT ALL ISLAND CORNERS)

TABLE OF DIMENSIONS FOR VARIABLE SIDE ROAD INTERSECTION ANGLES

(INTERPOLATE VALUES FOR ANGLES NOT SHOWN)

ANGLE θ DEGREES	COORDINATES IN FEET (MEASURED FROM POINT 'O') X / Y								LENGTH IN FEET				
	A	B	C	D	E	F	G	H	AB	AC	T	OJ	OH
60	12.7 / -14.0	44.9 / -12.0	46.4 / -72.4	41.9 / 0.0	205.0 / 0.0	104.6 / -12.0	64.0 / -75.5	85.0 / -147.1	32.3	67.4	4.9	85.9	169.9
65	10.9 / -14.0	39.0 / -12.0	37.8 / -71.6	39.4 / 0.0	196.1 / 0.0	95.7 / -12.0	54.1 / -71.5	70.5 / -151.3	28.2	63.6	8.5	80.9	166.9
70	9.4 / -14.0	33.9 / -12.0	29.8 / -70.1	37.4 / 0.0	188.3 / 0.0	87.8 / -12.0	45.6 / -67.5	56.1 / -154.2	24.6	59.7	11.5	76.1	164.1
75	7.9 / -14.0	29.3 / -12.0	22.3 / -67.9	35.7 / 0.0	181.2 / 0.0	80.7 / -12.0	38.2 / -63.4	41.8 / -155.9	21.5	55.8	13.8	71.4	161.4
80	6.5 / -14.0	25.4 / -12.0	15.6 / -65.2	34.4 / 0.0	174.8 / 0.0	74.4 / -12.0	31.8 / -59.3	27.6 / -156.5	18.9	52.0	15.6	66.9	158.9

TYPE 'A1" AND "A2" SIDE ROAD INTERSECTION DETAILS

AT GRADE SIDE ROAD INTERSECTIONS
TYPES "A1" AND "A2"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2022 — DATE
/S/ John Jenkins — ROADWAY STANDARDS DEVE ENGINEER
FHWA

SDD 09A01 - 14b

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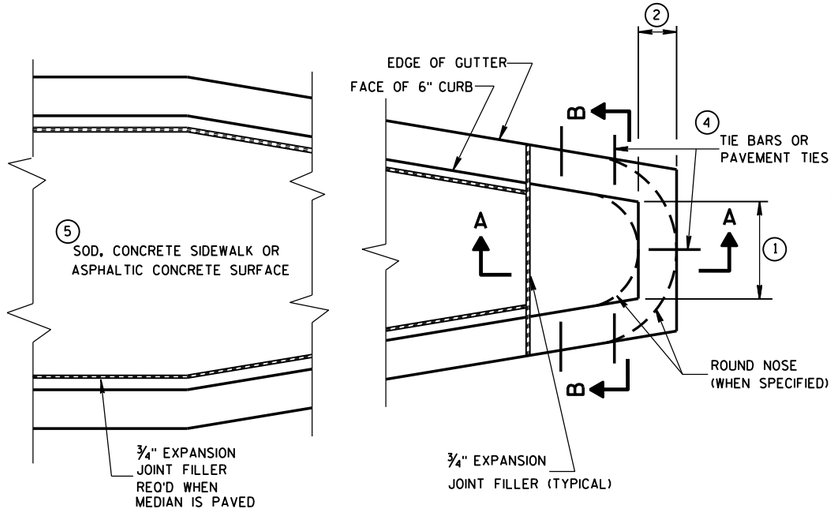
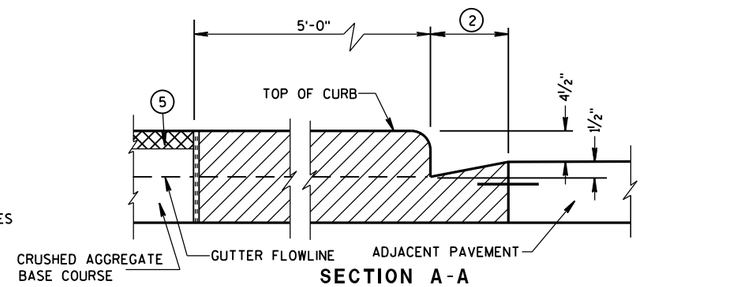
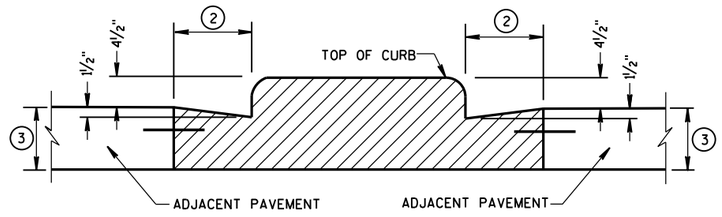
SDD 09A01 - 14b





SECTION A-A



SECTION B-B

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.

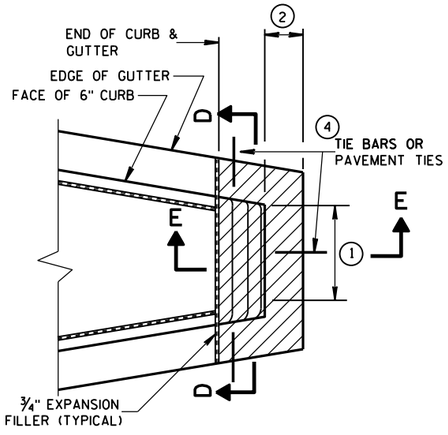
(2) ASPHALTIC CONCRETE PAVEMENT OVER NEW OR EXISTING CONCRETE BASE COURSE.

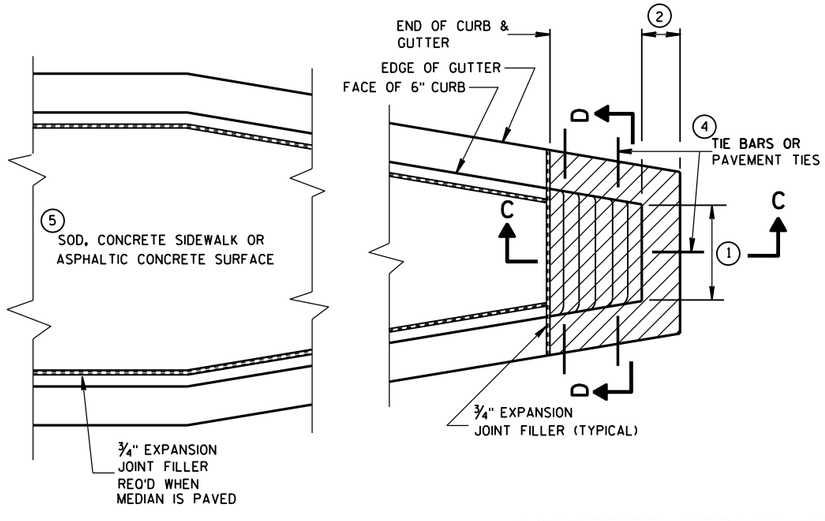
(3) ASPHALTIC CONCRETE PAVEMENT OVER CRUSHED AGGREGATE BASE COURSE.

(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.

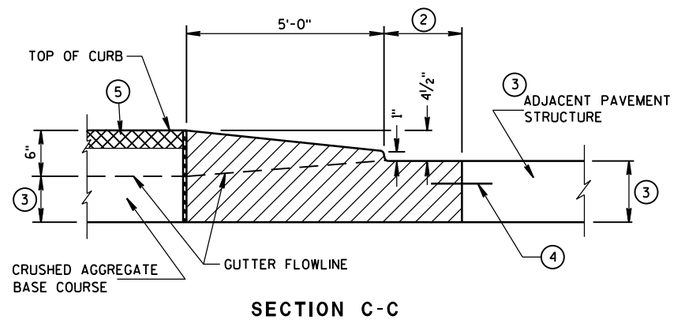
PAVEMENT TIES REQUIRED IN EXISTING CONCRETE BASE COURSE. PAVEMENT TIES SHALL BE NO. 6 X 1'-0" SPACED AT 3'-0" C-C INSTALLED ON A HORIZONTAL SKEW OF 6:1. THE DIRECTION OF SKEW SHALL ALTERNATE AFTER EVERY ONE OR TWO BARS.

(5) SURFACE TYPE AND DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.

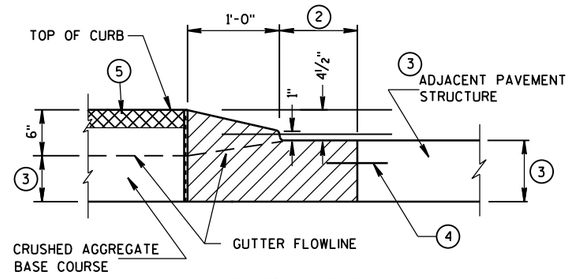




CONCRETE MEDIAN SLOPED NOSE TYPE 1

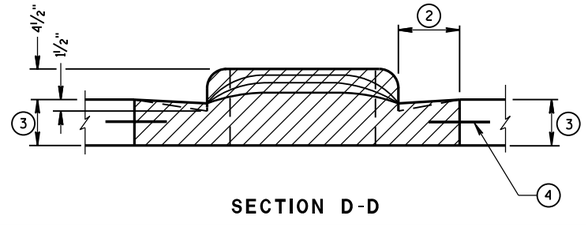


SECTION C-C



SECTION E-E

CONCRETE MEDIAN SLOPED NOSE TYPE 2



SECTION D-D

CONCRETE MEDIAN NOSE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/8/2006
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

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S.D.D. 11 B 2-2

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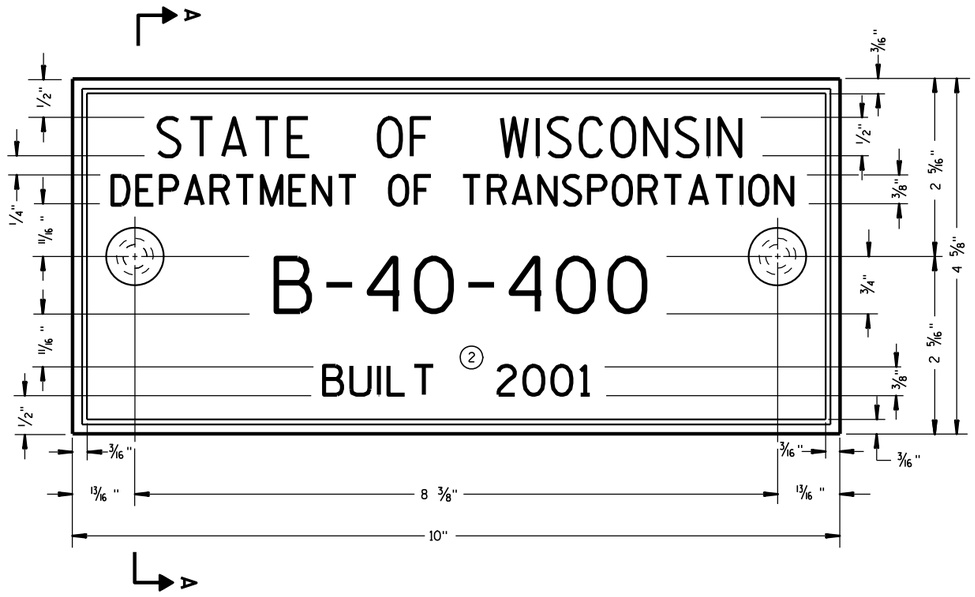
S.D.D. 11 B 2-2



TYPICAL NAME PLATE
(BRIDGES, CULVERTS, AND RETAINING WALLS)

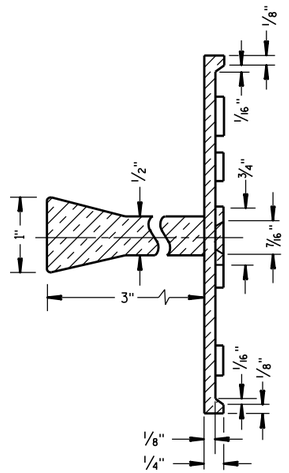
GENERAL NOTES

NAME PLATES TO BE INSTALLED ON BRIDGES, CULVERTS, AND RETAINING WALLS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS.

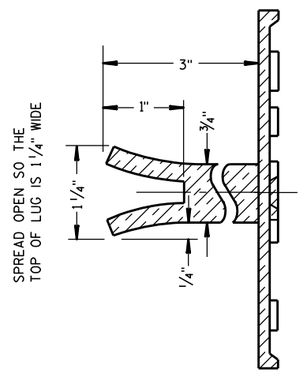
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

(1) EPOXY RESIN SHALL BE FROM AN APPROVED MANUFACTURER AND USED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A



ALTERNATE LUG

FOR MULTI-UNIT STRUCTURES LINE 3 ABOVE SHALL READ

B = BRIDGE
C = CULVERT
R = RETAINING WALL

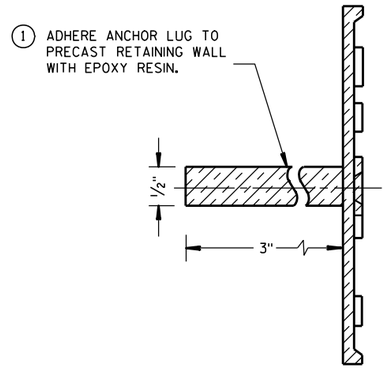
COUNTY NO.

BRIDGE NO.

UNIT NO. FOR MULTIPLE UNIT BRIDGE

B-40-400-1A

NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES



ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/26/10 DATE

/S/ Scot Beck-- CHIEF STRUCTURAL DEVELOP ENGINEER

FHWA

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S.D.D. 12 A 3-10

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S.D.D. 12 A 3-10

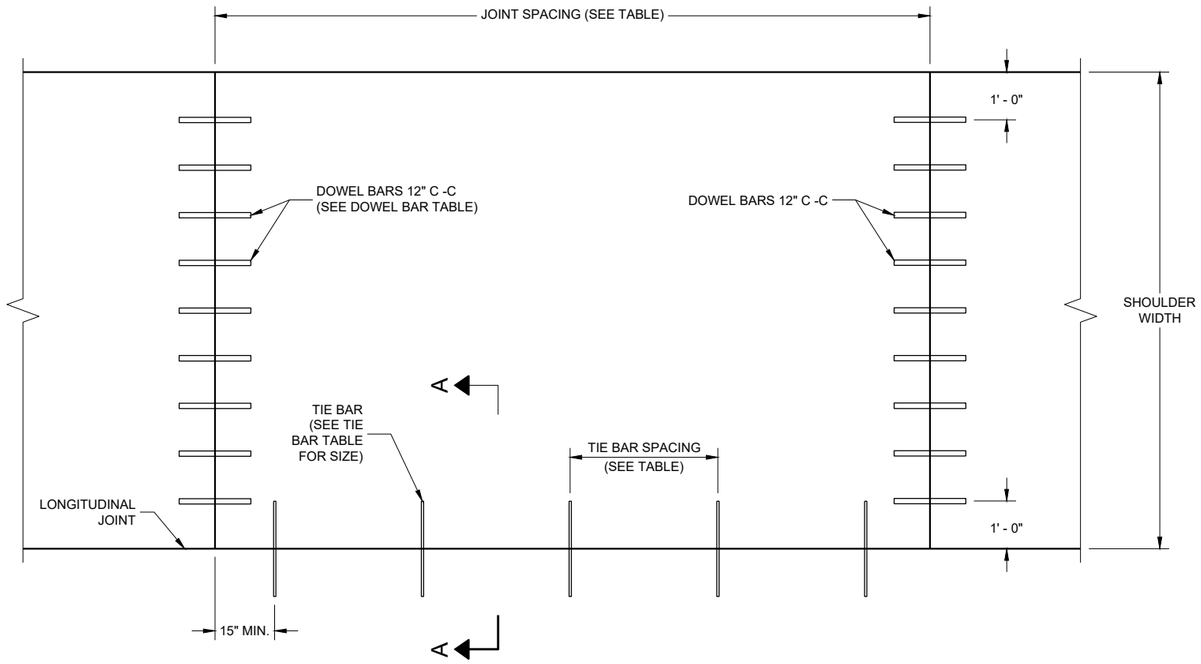
GENERAL NOTES

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

TRANSVERSE JOINT DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.

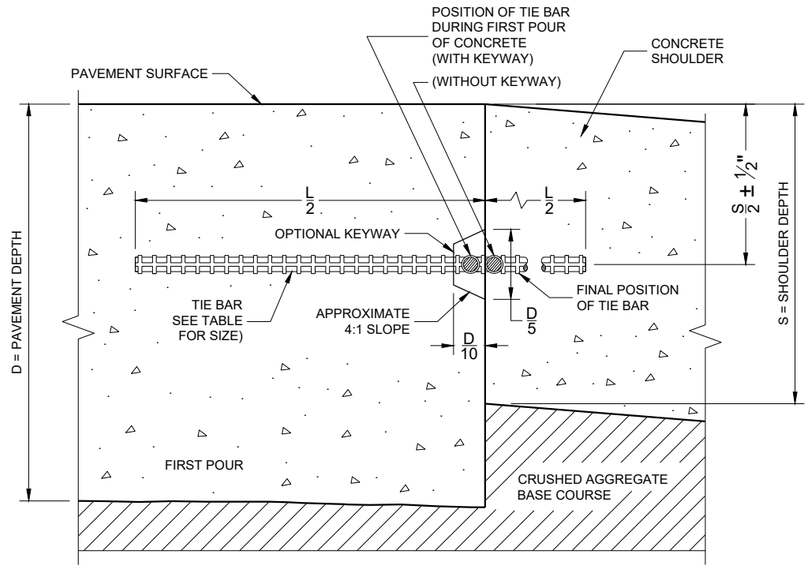
FINISH THE SHOULDER PAVEMENT CONFORMING TO SUBSECTION 415.3.8 OF THE STANDARD SPECIFICATIONS.

TIE BARS SHALL CONFORM TO SUBSECTION 505.2.4 OF THE STANDARD SPECIFICATIONS.



PLAN VIEW

CONCRETE PAVEMENT SHOULDER



SECTION A - A

LONGITUDINAL CONSTRUCTION JOINT

TIE BAR TABLE

PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
<10 ½"	NO. 4	30"	36"
>10 ½"	NO. 5	36"	36"
	NO. 4*	30"	24"**

* SUBSTITUTE BENT BATS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES.

** CONFORM TO 15" MINIMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.

PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER ***	CONTRACTION JOINT SPACING
6", 6 ½"	NONE	12"
7", 7 ½"	1"	14"
8" & ABOVE	1 ¼"	15"

*** FOR DOWELED CONCRETE SHOULDERS WITH TRAPEZOIDAL CROSS SECTIONS, CHOSE THE APPROPRIATE DOWEL BAR DIAMETER BASED ON THE SMALLER PAVEMENT DEPTH (LIKELY THE OUTSIDE EDGE OF THE SHOULDER). IF USING BASKETS, USE BASKETS FRO THE AVERAGE THICKNESS OF THE CROSS SECTION.

CONCRETE PAVEMENT SHOULDERS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2022
DATE

/S/ Peter Kemp
PAVEMENT SUPERVIS

FHWA

6

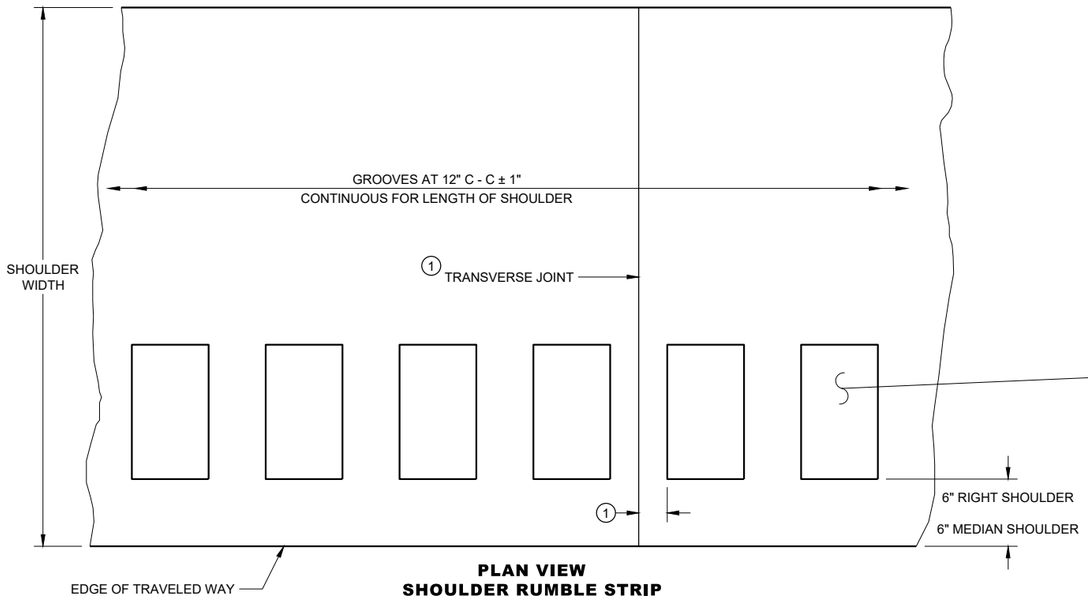
SDD 13A03 - 07

GENERAL NOTES

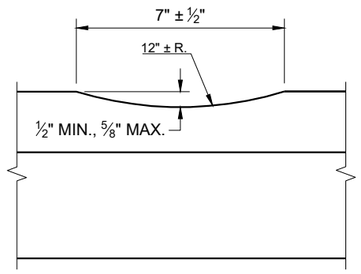
SDD 13A5, SHEET "b" SHOWS THE LOCATION OF THE RUMBLE STRIPS AT RAMP AND GORE LOCATIONS.

RUMBLE STRIPS ON EXPRESSWAYS:
DO NOT INSTALL SHOULDER RUMBLE STRIPS ACROSS SIDE ROAD INTERSECTIONS, COMMERCIAL AND PRIVATE DRIVEWAYS, ADJACENT TO RIGHT TURN LANES, LEFT TURN LANES, TURN LANE TAPERS, 25' IN ADVANCE OF BRIDGE DECKS, 25' IN ADVANCE OF BRIDGE APPROACHES, OR 100 FEET IN ADVANCE OF RAILROAD CROSSINGS.

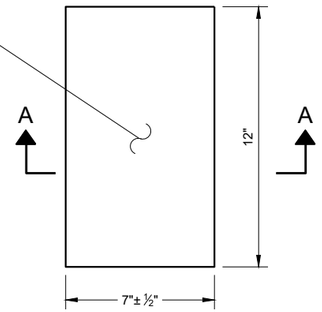
(1) CONCRETE PAVEMENT - RUMBLE STRIPS SHALL BE A MINIMUM OF 6 INCHES AWAY FROM TRANSVERSE JOINTS.



PLAN VIEW
SHOULDER RUMBLE STRIP

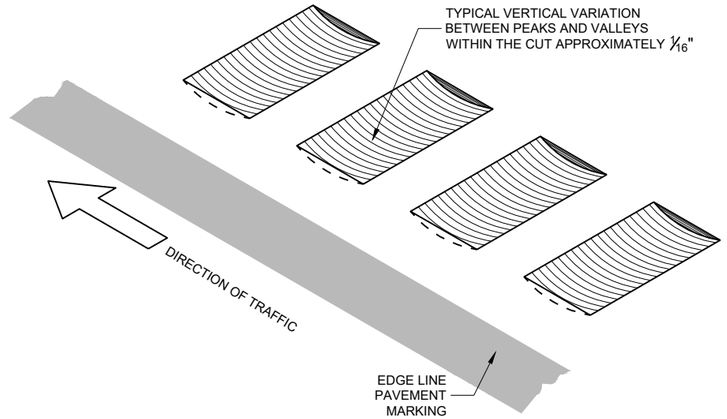


SECTION A - A

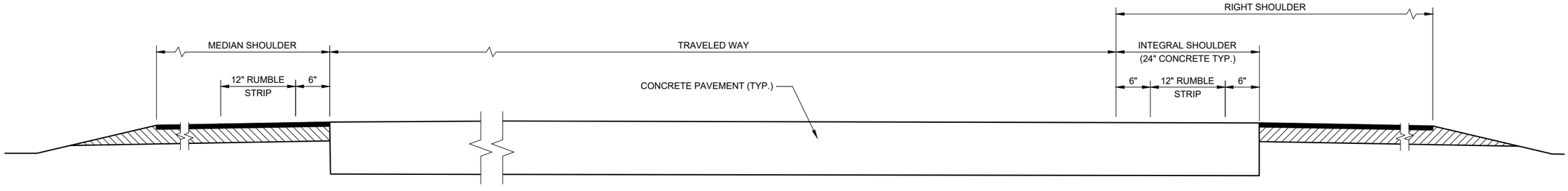


PLAN VIEW
(SINGLE GROOVE)

PLACEMENT DETAIL FOR RUMBLE STRIP



ISOMETRIC



SECTION VIEW

TYPICAL SHOULDER RUMBLE STRIPS
(ONE ROADWAY IS SHOWN)

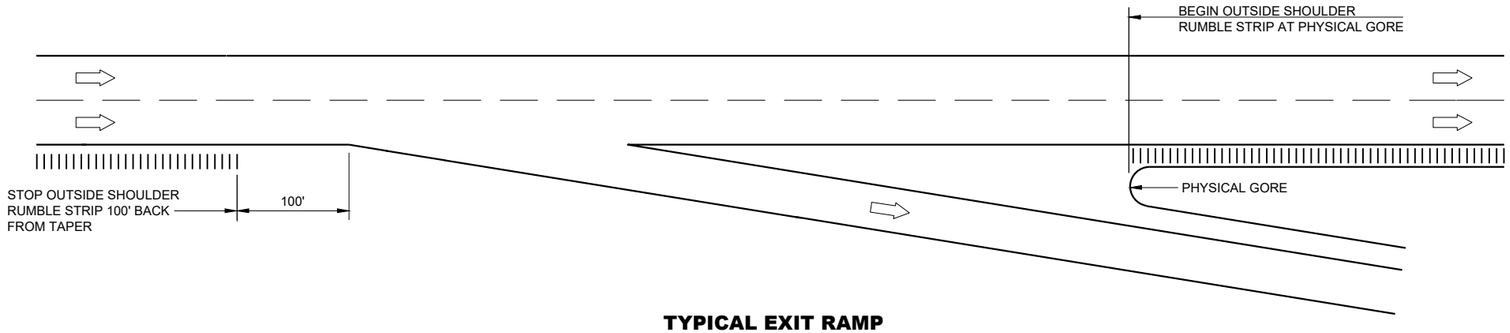
SHOULDER RUMBLE STRIPS, DIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

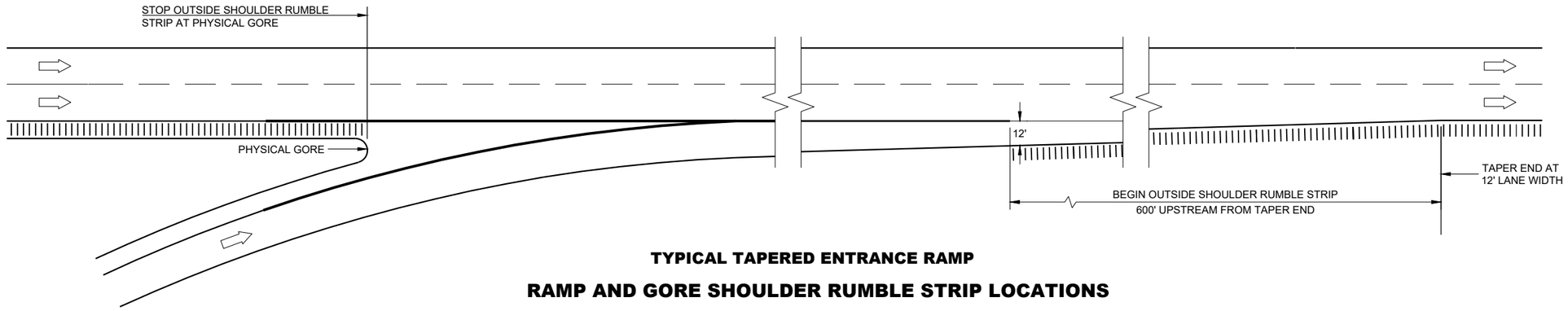
6

SDD 13A05-06a

SDD 13A05-06a

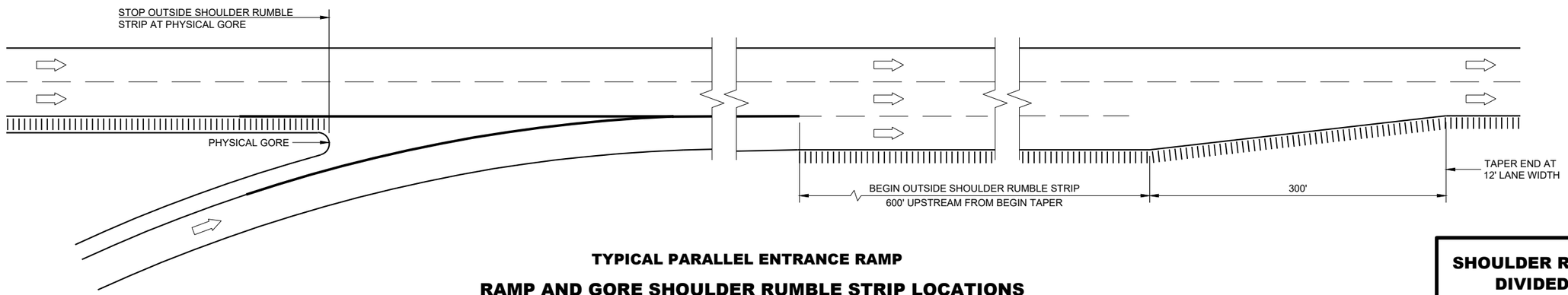


TYPICAL EXIT RAMP



TYPICAL TAPERED ENTRANCE RAMP

RAMP AND GORE SHOULDER RUMBLE STRIP LOCATIONS



TYPICAL PARALLEL ENTRANCE RAMP

RAMP AND GORE SHOULDER RUMBLE STRIP LOCATIONS

GENERAL NOTES

NO RUMBLE STRIP ON EXIT, DIRECTIONAL OR ENTRANCE RAMPS, EXCEPT NEAR THE ENTRANCE TAPER END AND ALONG THE PARALLEL RAMP AREA AS SHOWN.

RUMBLE STRIPS ON EXPRESSWAYS:
DO NOT INSTALL SHOULDER RUMBLE STRIPS ACROSS SIDE ROAD INTERSECTIONS, COMMERCIALAND PRIVATE DRIVEWAYS, ADJACENT TO RIGHT TURN LANES, LEFT TURN LANES, TURN LANE TAPERS, 25' IN ADVANCE OF BRIDGE DECKS, 25' IN ADVANCE OF BRIDGE APPROACHES, OR 100 FEET IN ADVANCE OF RAILROAD CROSSINGS.

LEGEND

DIRECTION OF TRAFFIC

SHOULDER RUMBLE STRIPS, DIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 — DATE
/S/ Rodney Taylor — ROADWAY DESIGN STANDARDS UNIT SUPERVISOR

FHWA

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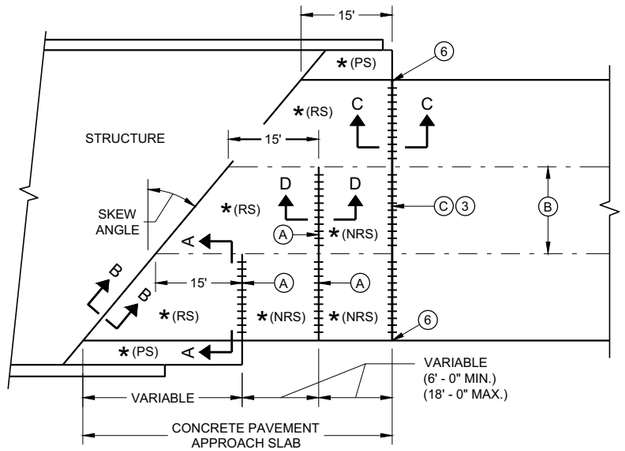
SDD 13A05-06b

SDD 13A05-06b



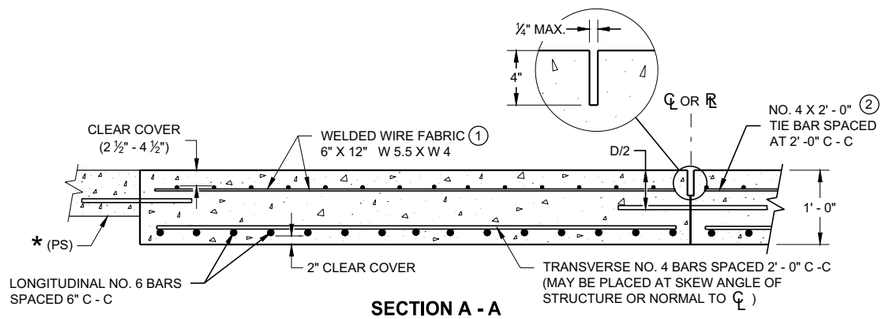
SKEWED APPROACH
(PAVEMENT MORE THAN TWO LANES)

* (RS) = REINFORCED CONCRETE SLAB

* (PS) = PAVED CONCRETE SHOULDER OR CONCRETE DRAINAGE SLAB

* (NRS) - NON - REINFORCED CONCRETE SLAB

*** STANDARD DOWEL BAR DIAMETER (SEE SDD 13C11 AND SDD 13C13)



SECTION A - A
REINFORCEMENT POSITIONING DETAIL

GENERAL NOTES

THE CONTRACTOR MAY SPLICE NO. 6 BARS IN THE APPROACH SLAB FOR SKEWED STRUCTURES ONLY. STAGGER SPLICES WITH A MAXIMUM OF ONE SPLICE PER BAR. THE LENGTH OF LAP IS 20 INCHES.

TACK WELD DOWEL BARS TO THE BASKETS ON ALTERNATE ENDS.

(1) THE CONTRACTOR MAY USE NO. 4 BARS SPACED AT 2' - 0 " C - C IN BOTH THE LONGITUDINAL AND TRANSVERSE DIRECTIONS FOR TOP REINFORCEMENT AS AN ALTERNATIVE TO THE WELDED WIRE FABRIC.

(2) THE CONTRACTOR MAY OMIT THE BARS BETWEEN REINFORCED SLABS WHERE SLAB REINFORCEMENT BARS EXTEND ACROSS THE CENTERLINE OR REFERENCE LINE.

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

(4) USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.

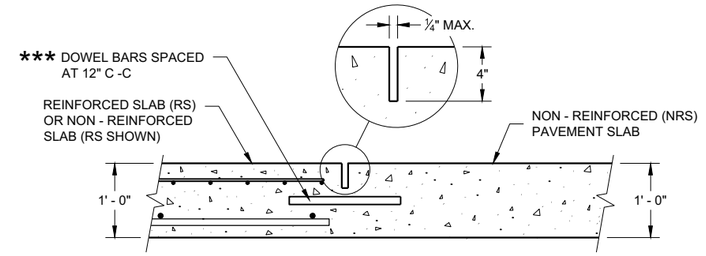
(5) PLACE EXPANSION CAP ON THE END OF THE DOWEL THAT IS NOT TACK WELDED TO THE BASKET. DO NOT FORCE DOWEL BAR PAST THE DOWEL STOP.

(6) EXTEND EXPANSION JOINT THROUGH ANY ADJACENT TIED CONCRETE.

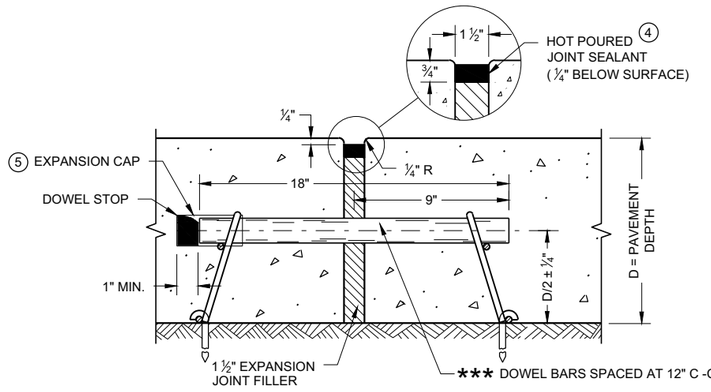
(A) STANDARD CONTRACTION JOINT NORMAL TO ℄ OR ℞.

(B) STANDARD LONGITUDINAL JOINT WITH TIE BARS.

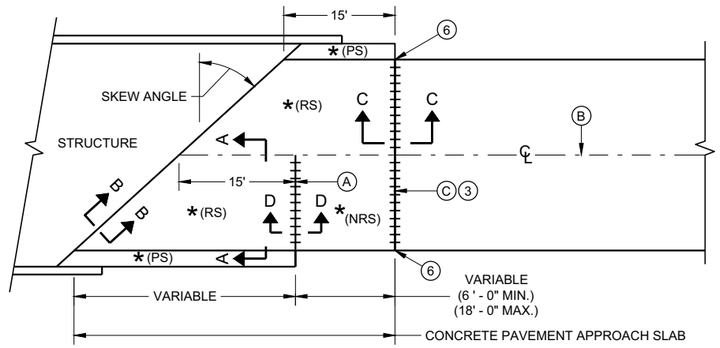
(C) 1 ½" EXPANSION JOINT WITH DOWEL BARS NORMAL TO ℄ OR ℞ .



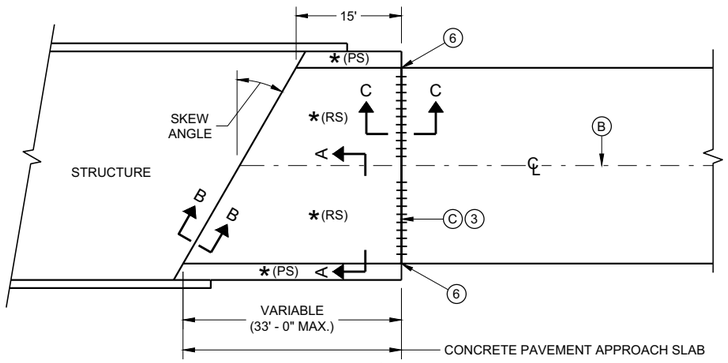
SECTION D - D
CONTRACTION JOINT



EXPANSION JOINT DETAIL

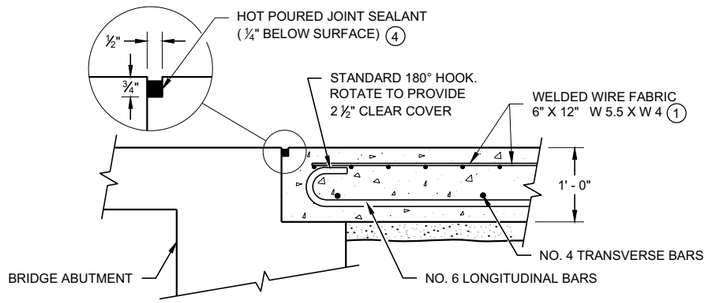


SKEWS > 20°
(PAVEMENT WIDTH ≤ 30')

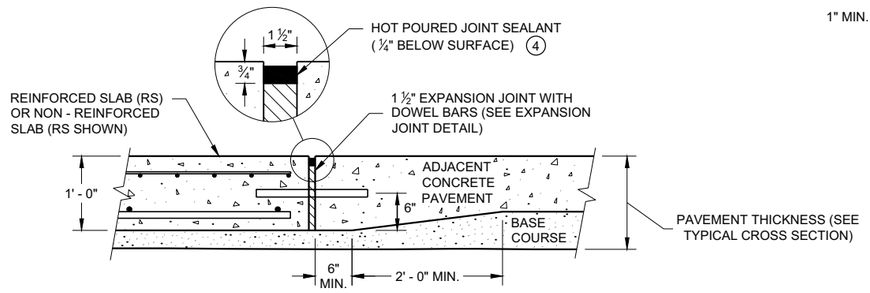


SKEWS ≤ 20°
(PAVEMENT WIDTH ≤ 30')

APPROACH SLAB AND ADJACENT PAVEMENT



SECTION B - B
BEND DETAIL
BOTTOM REINFORCEMENT



SECTION C - C
TRANSITION DETAIL
APPROACH SLAB TO ADJACENT PAVEMENT

CONCRETE PAVEMENT APPROACH SLAB

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE

/S/ Peter Kemp, P.E.
PAVEMENT SUPERVISOR

FHWA

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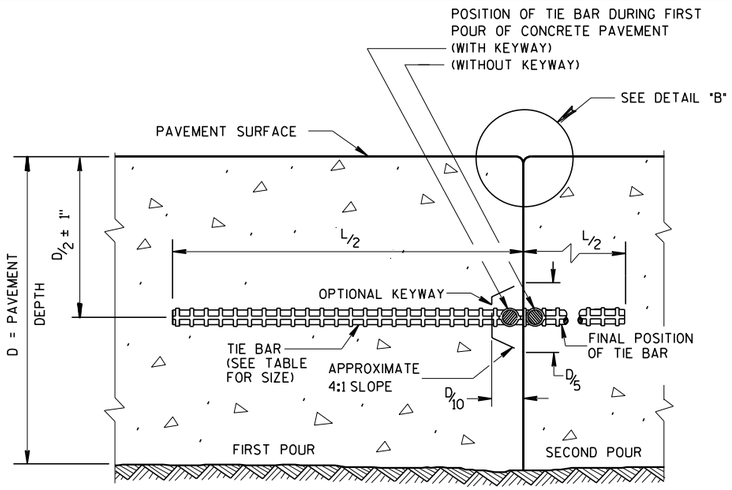
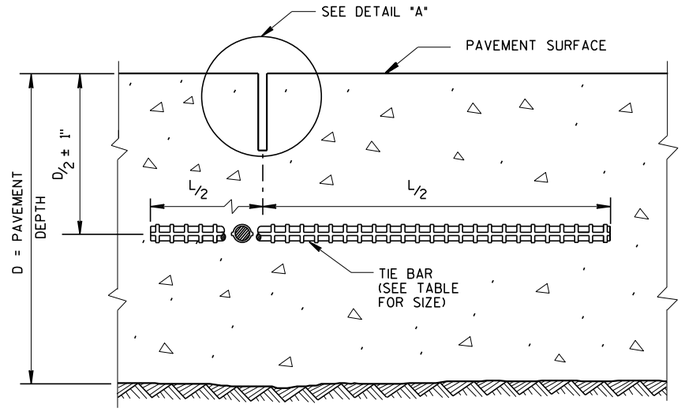
SDD 13B02 - 09a

SDD 13B02 - 09a



CONSTRUCTION JOINT



SAWED JOINT

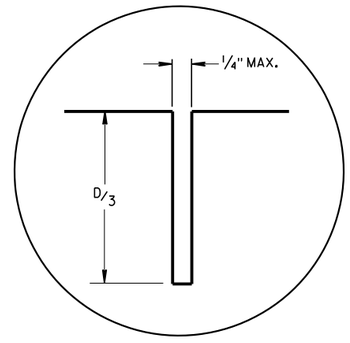
GENERAL NOTES

CREATE A LONGITUDINAL JOINT FOR PAVEMENT WIDTHS GREATER THAN 15 FEET.

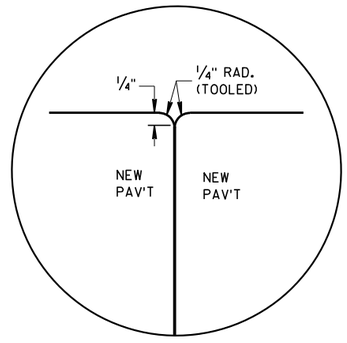
CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

(1) ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

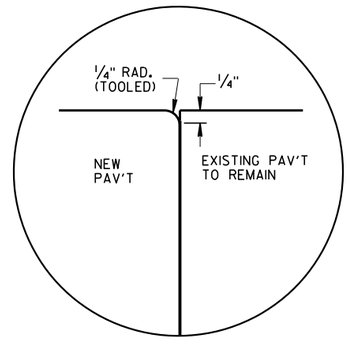
(2) PAVEMENT THAT WAS IN PLACE PRIOR TO THE CONTRACT.



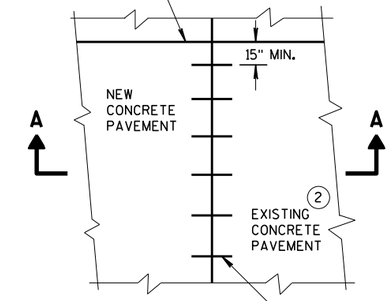
DETAIL "A"



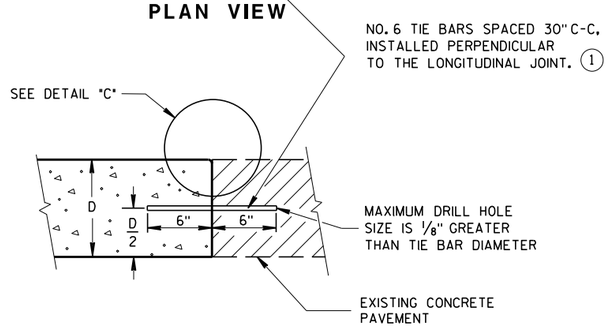
DETAIL "B"



DETAIL "C"



PLAN VIEW



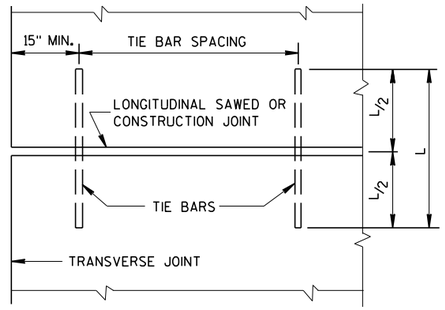
SECTION A-A
LONGITUDINAL CONSTRUCTION JOINT TIE BARS ANCHORED INTO EXISTING PAVEMENT

TIE BAR TABLE

PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 1/2"	NO. 4	30"	36"
≥ 10 1/2"	NO. 5	36"	36"
	NO. 4 *	30"	24" **

* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

** CONFORM TO 15" MINUMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.



PLAN VIEW
SHOWING LOCATION OF TIE BARS

CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018 — DATE
/S/ Peter Kemp — PAVEMENT SUPE
FHWA

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S.D.D. 13 C 1-19

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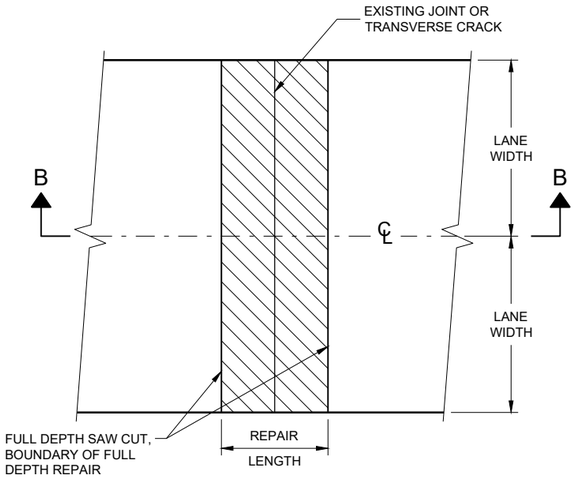
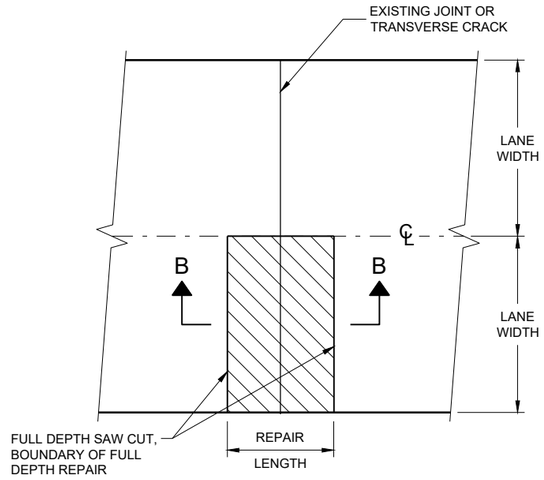
S.D.D. 13 C 1-19



PLAN VIEW
(DOUBLE LANE REPAIR)



PLAN VIEW
(SINGLE LANE REPAIR)

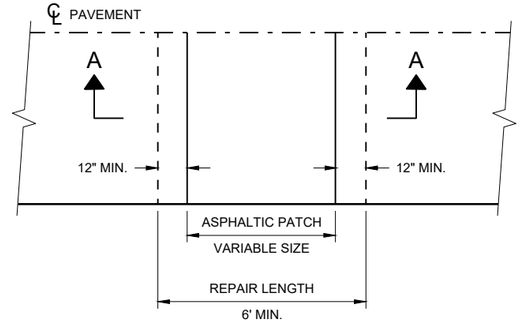
GENERAL NOTES

SAW CUT, DRILL, AND LIFT OUT EXISTING CONCRETE PAVEMENT WITHIN THE BOUNDARIES OF CONCRETE REPAIR AREAS. THE CONTRACTOR MAY MAKE ADDITIONAL SAW CUTS INSIDE THE REPAIR LIMITS TO REDUCE WEIGHT AND SIZE OF CONCRETE PIECES.

PROVIDE A 6 FOOT MINIMUM DISTANCE FROM BOUNDARIES OF CONCRETE REPAIR AREA TO ADJACENT TRANSVERSE JOINT OR CRACK.

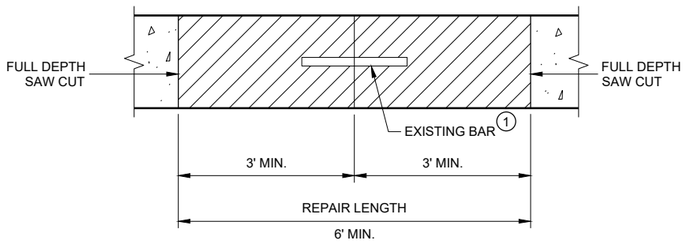
THE LENGTH OF THE REPAIRS MAY VARY FROM THE DIMENSIONS SHOWN IF THE EXISTING CONCRETE PAVEMENT IS NON-DOWELED AND THE PAVEMENT IS TO BE OVERLAID AFTER REPAIRING.

(1) DOWEL BARS MAY NOT BE PRESENT.

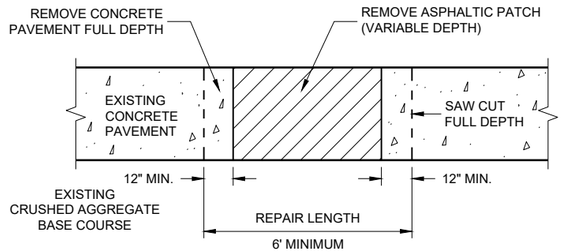


PLAN VIEW

FULL DEPTH CONCRETE PAVEMENT REMOVAL



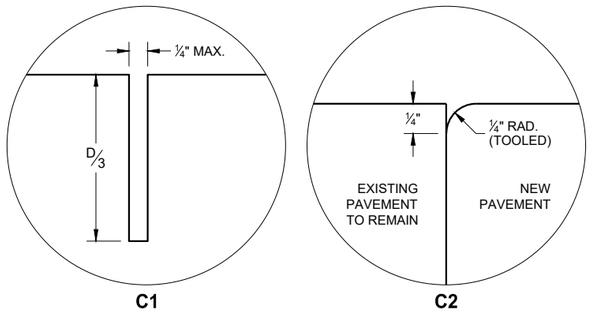
SECTION B - B
CONCRETE REMOVAL



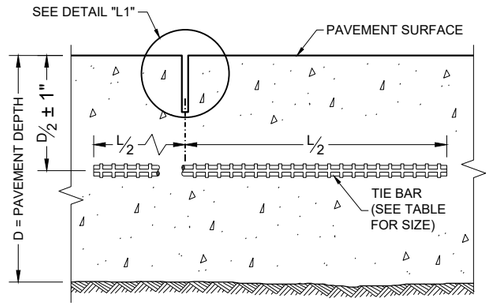
SECTION A - A

HMA PATCH REMOVAL

CONCRETE PAVEMENT REPAIR AND REPLACEMENT

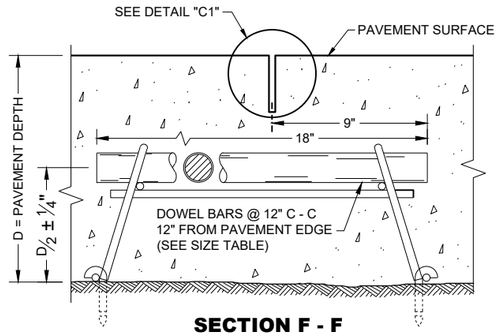


TRANSVERSE JOINTS



SECTION C - C

SAWED LONGITUDINAL JOINT



SECTION F - F

DOWELED CONTRACTION JOINT

GENERAL NOTES

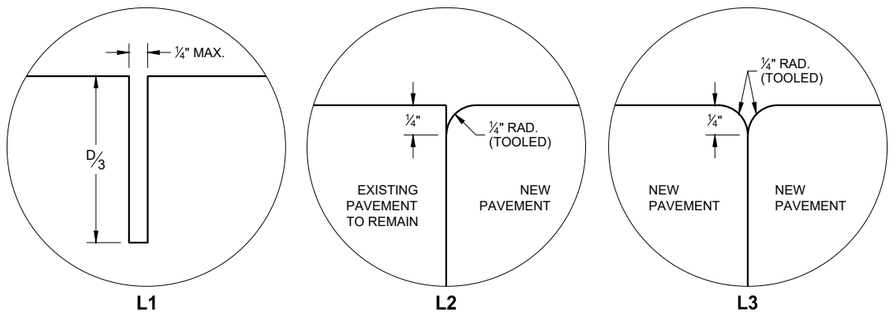
INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

CONCRETE PAVEMENT REPAIRS OF EXISTING NON-DOWELED CONCRETE PAVEMENTS DO NOT NEED TO BE DOWELED.

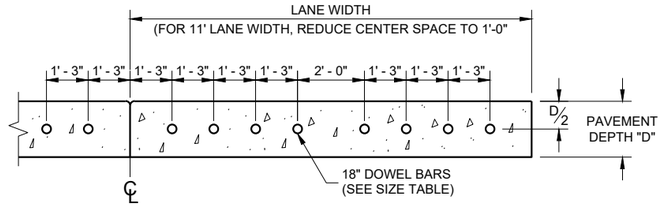
ANCHOR DOWEL BARS AND TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

FOR MULTI-LANE CONCRETE PAVEMENT REPLACEMENTS, PROVIDE A MINIMUM DISTANCE OF 15 INCHES FROM ALL TRANSVERSE JOINTS OR EDGES OF REPLACEMENT TO THE CENTER OF THE TIE BAR NEAREST THAT JOINT OR EDGE.

(1) APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.

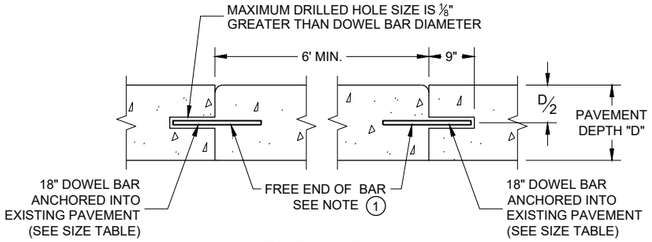


LONGITUDINAL JOINTS



SECTION E - E

DRILLED DOWEL BAR CONSTRUCTION JOINT



SECTION D - D

TIE BAR TABLE

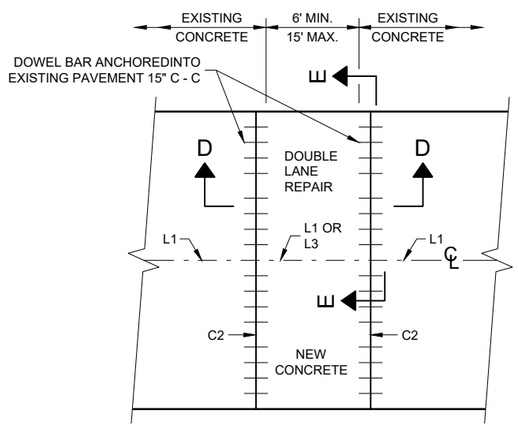
PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 ½"	NO. 4	30"	36"
≥ 10 ½"	NO. 5	36"	36"
	NO. 4 *	30"	24" **

* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

** CONFORM TO 15" MINIMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.

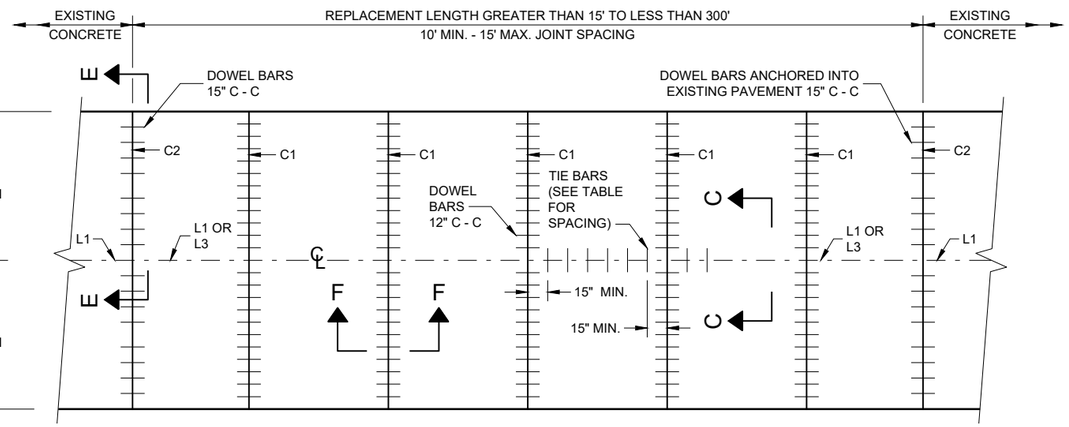
PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	DRILLED DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
6", 6 ½"	NONE	NONE	12'
7", 7 ½"	1"	1"	14'
8" & ABOVE	1 ¼"	1 ¼"	15'



PLAN VIEW

MULTILANE CONCRETE PAVEMENT REPAIR



PLAN VIEW

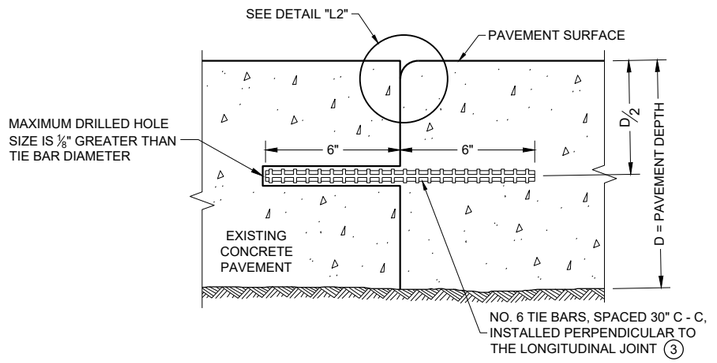
MULTILANE CONCRETE PAVEMENT REPLACEMENT

CONCRETE PAVEMENT REPAIR AND REPLACEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 13C09 - 17b

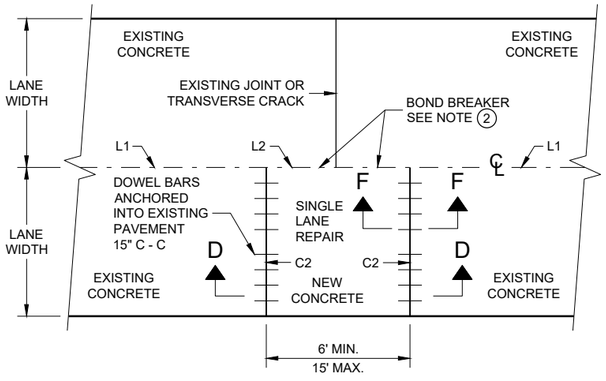


SECTION G - G

TIE BARS ANCHORED INTO EXISTING PAVEMENT

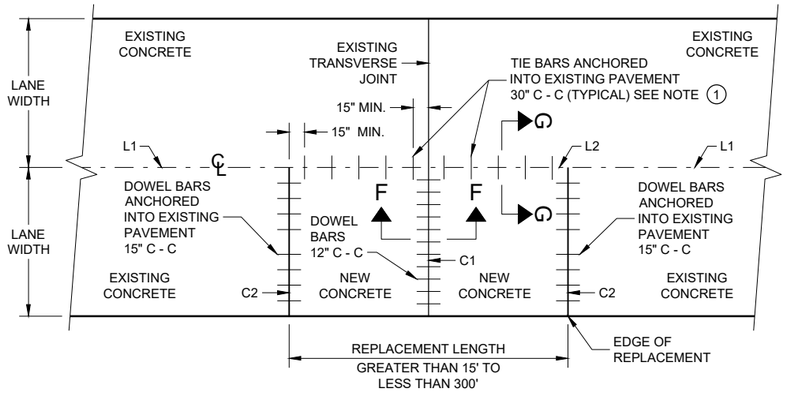
GENERAL NOTES

1. WITH THE APPROVAL OF THE ENGINEER, FOR SINGLE LANE PAVEMENT REPLACEMENTS LESS THAN 30 FEET IN LENGTH, THE CONTRACTOR MAY INSTALL DRILLED TIE BARS ON 6:1 SKEW HORIZONTALLY, DIRECTION OF SKEW ALTERNATING WITH EACH SUCCESSIVE BAR. DRIVE SKEWED TIE BARS TO A DEPTH OF 6 INCHES IN A HOLE OF SUCH A DIAMETER AS TO PROVIDE A TIGHT DRIVEN FIT.
2. USE AN ENGINEER APPROVED BOND BREAKER (E.G. RELEASE AGENT, CURING COMPOUND) FOR SINGLE LANE REPAIRS UP TO 15 FEET IN LENGTH.
3. ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.



PLAN VIEW

SINGLE LANE CONCRETE PAVEMENT REPAIR



PLAN VIEW

SINGLE LANE CONCRETE PAVEMENT REPLACEMENT

CONCRETE REPAIR AND REPLACEMENT

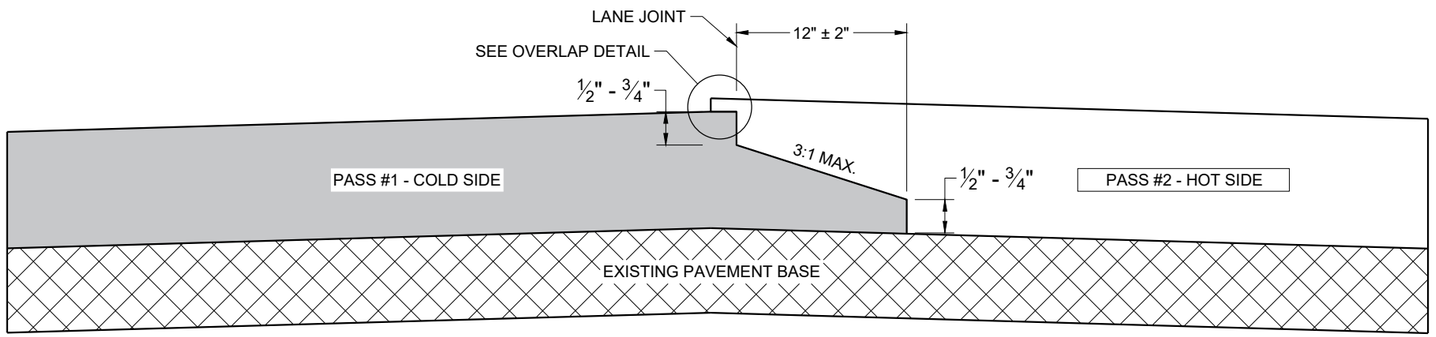
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2022
DATE
/S/ Peter Kemp P.E.
PAVEMENT SUPERVIS

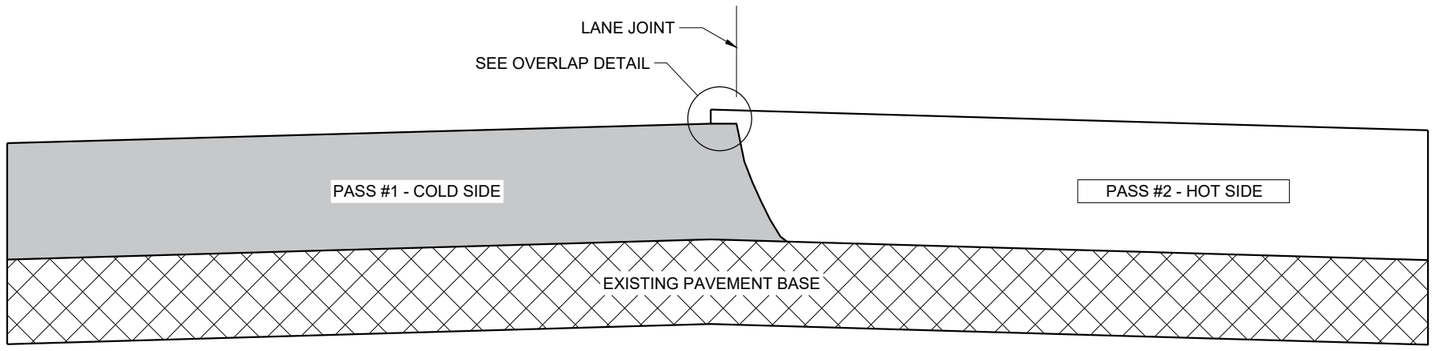
FHWA

6

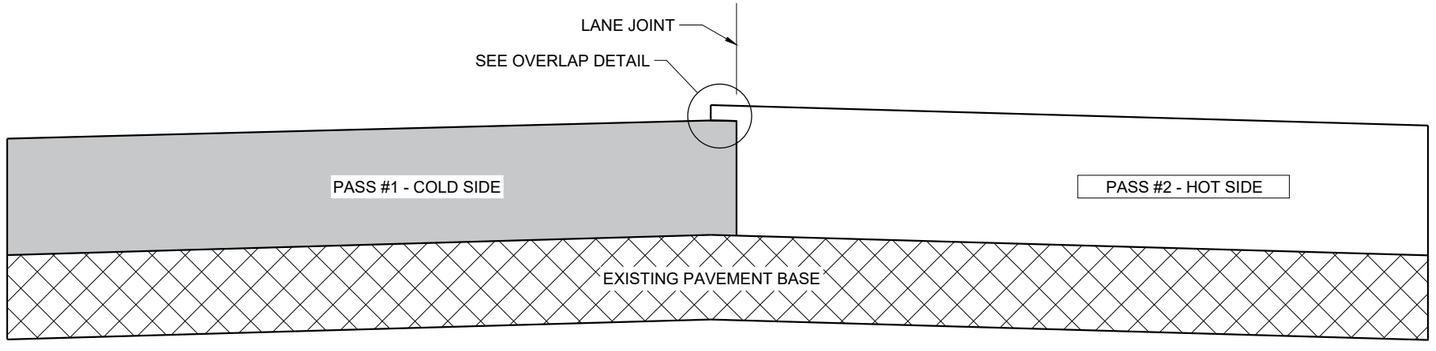
SDD 13C09 - 17c



TYPICAL PAVEMENT CROSS SECTION
NOTCHED WEDGE JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT (MILLED)

GENERAL NOTES

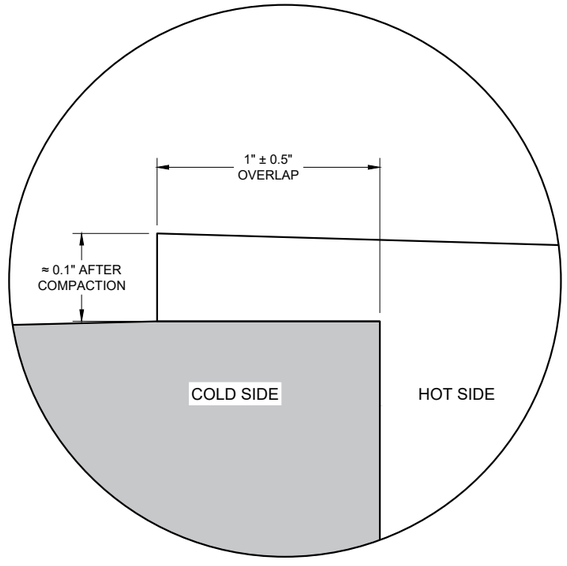
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

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

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

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

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



OVERLAP DETAIL (TYPICAL)

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

FHWA

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SDD 13C19 - 03

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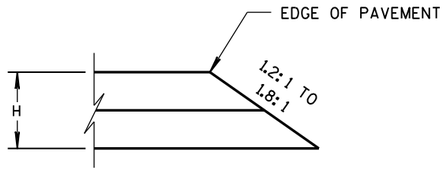
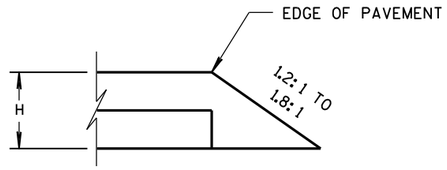
SDD 13C19 - 03



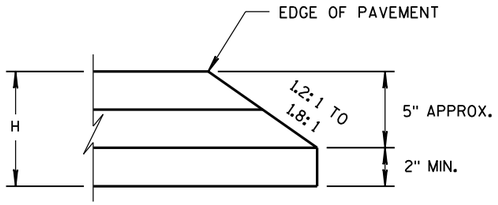
CONSTRUCTED WITH FINAL TWO LAYERS

FOR H 5" OR LESS



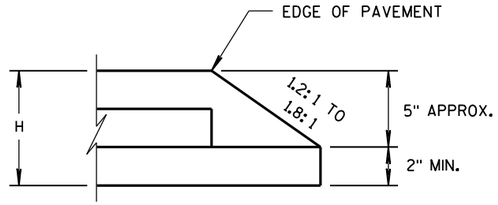
CONSTRUCTED WITH FINAL LAYER

FOR H 5" OR LESS



CONSTRUCTED WITH FINAL TWO LAYERS

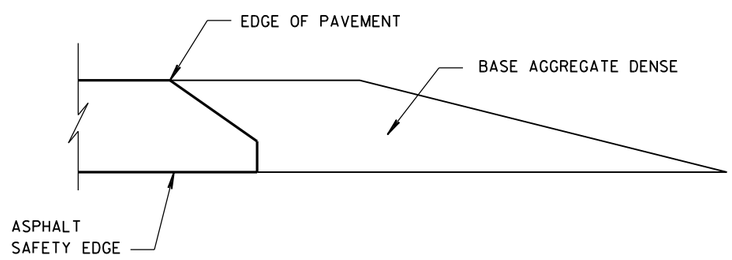
FOR H GREATER THAN 5"



CONSTRUCTED WITH FINAL LAYER

FOR H GREATER THAN 5"

HMA PAVEMENT AND HMA OVERLAYS



FINISHED SHOULDER AGGREGATE PLACEMENT

6

SAFETY EDGE SM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

11/30/2012
DATE

/S/ Jerry H. Zoda
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

S.D.D. 14 B 29-1

S.D.D. 14 B 29-1

(1) WOOD OR STEEL POSTS (w6X9 OR w6X8.5) MAY BE USED. DO NOT INTERMIX WOOD AND STEEL POSTS. INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.

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

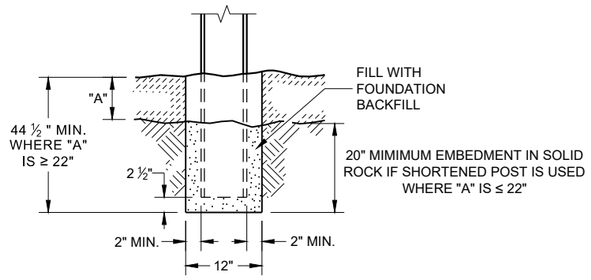
(3) IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL IS TO BE FREE OF LARGE ROCKS.

(4) WHEN THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING (K).

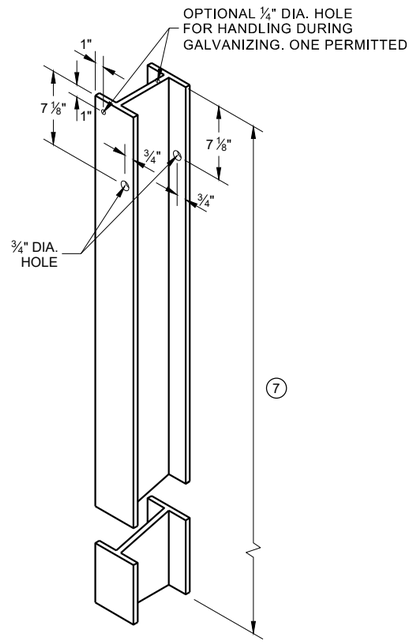
(5) FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ±1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 ¾" TO 32".

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

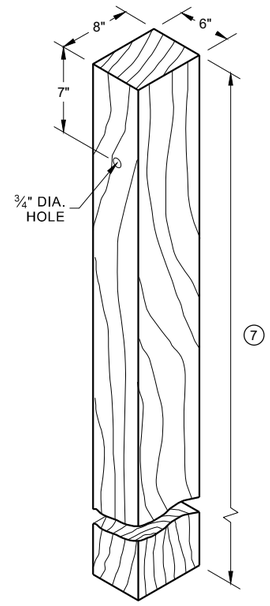
(7) TOTAL POST LENGTH FOR TYPE K IS 7' - 0".
TOTAL POST LENGTH FOR OTHER MGS TYPES IS 6' - 0".



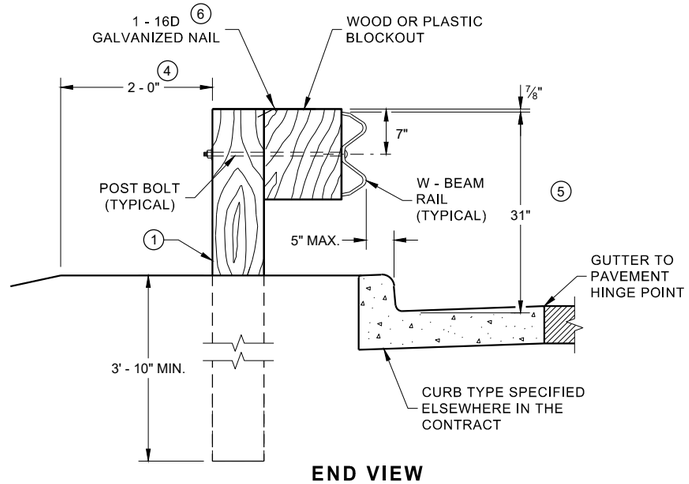
END VIEW
SETTING STEEL OR WOOD POST IN ROCK (3)



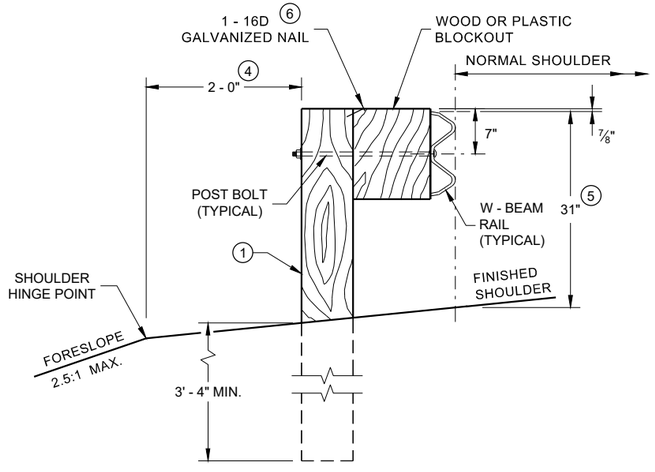
STEEL POST & HOLE PUNCHING DETAIL (W 6 X 9) (1)



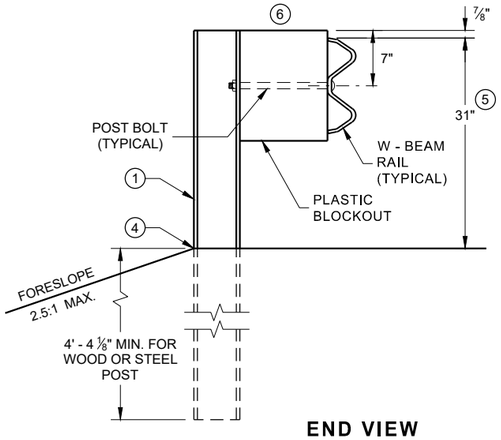
WOOD POST (6" X 8") NOMINAL (1)



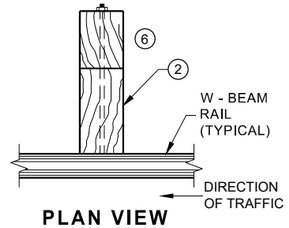
END VIEW
LOCATED ALONG A CURBED ROADWAY



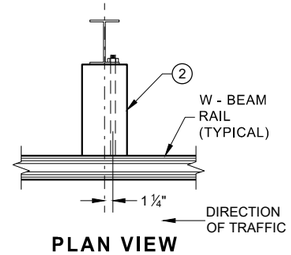
END VIEW
LOCATED ALONG A ROADWAY SHOULDER STANDARD INSTALLATION



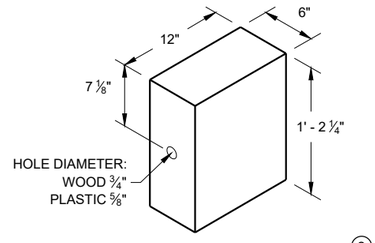
END VIEW
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



PLAN VIEW
WOOD POST, BLOCKOUT & BEAM



PLAN VIEW
STEEL POST, PLASTIC BLOCKOUT & BEAM



WOOD OR PLASTIC BLOCKOUT (2)

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 14B42 - 07a

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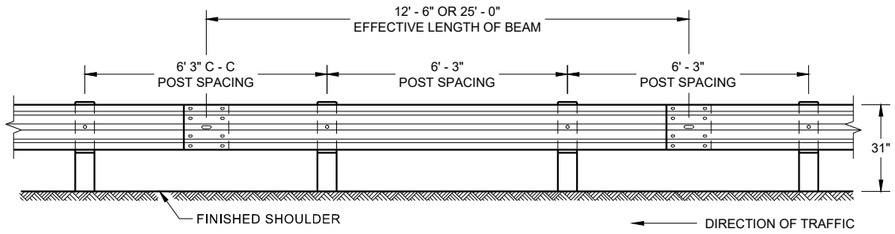
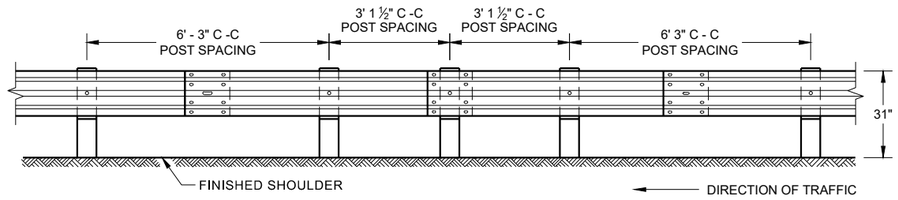
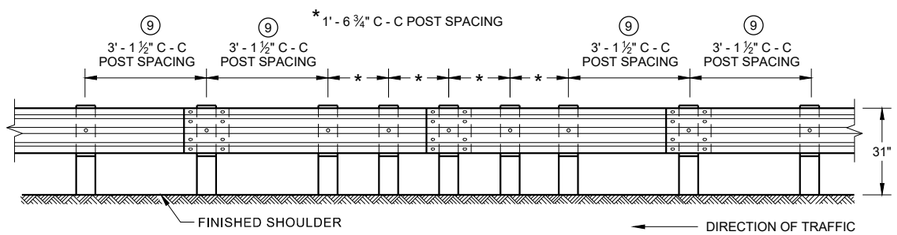
SDD 14B42 - 07a



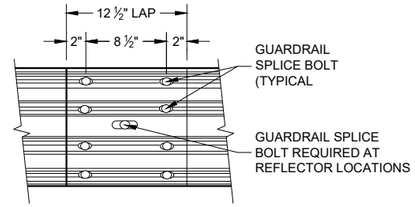
FRONT VIEW
POST SPACING STANDARD INSTALLATION



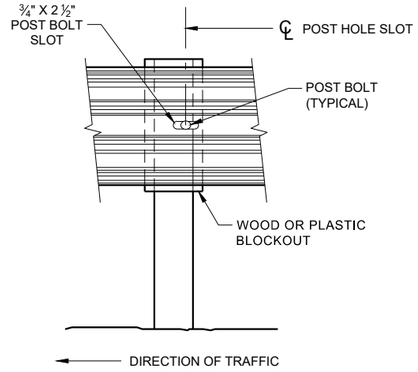
FRONT VIEW
HALF POST SPACING (HS) AND HALF POST SPACING WITH LONGER POSTS (K)



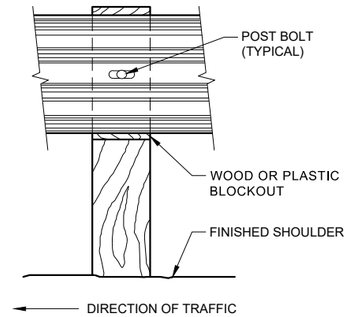
FRONT VIEW
QUARTER POST SPACING (QS)



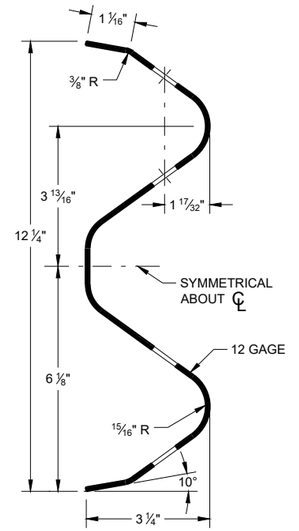
FRONT VIEW
MID-SPAN BEAM SPLICE



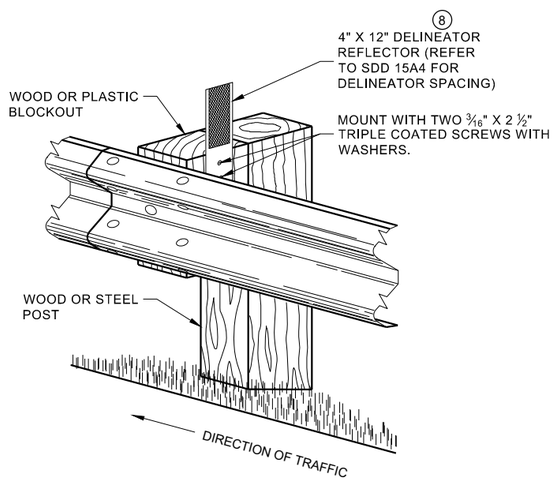
FRONT VIEW AT STEEL POST



FRONT VIEW AT WOOD POST



SECTION THRU W-BEAM RAIL



ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION

GENERAL NOTES

⑧ DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

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

POST BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND ⅝" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

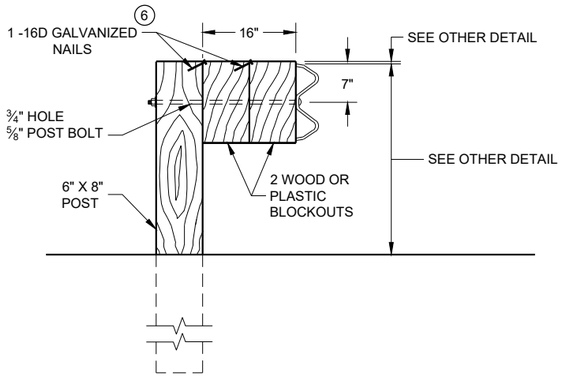
GUARD RAIL SPLICE BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 14B42 - 07b
SDD 14B42 - 07b

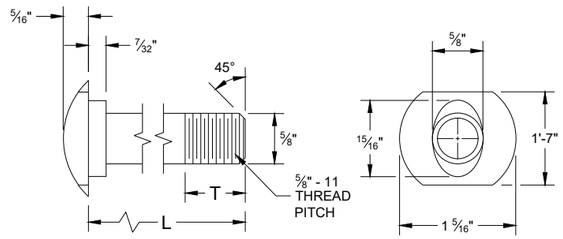


DETAIL FOR 16" BLOCKOUT DEPTH

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

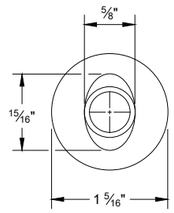
NOTE:

1. ALL FILLETS SHALL HAVE A MINIMUM RADIUS OF 3⁄16".
2. IF THE BOLT EXTENDS MORE THAN ¼" FROM THE NUT THE BOLT SHOULD BE TRIMMED BACK.

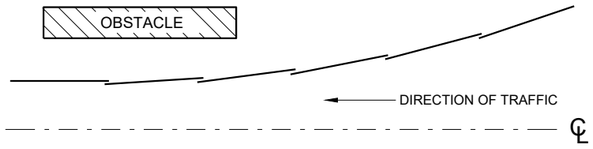


POST BOLT TABLE

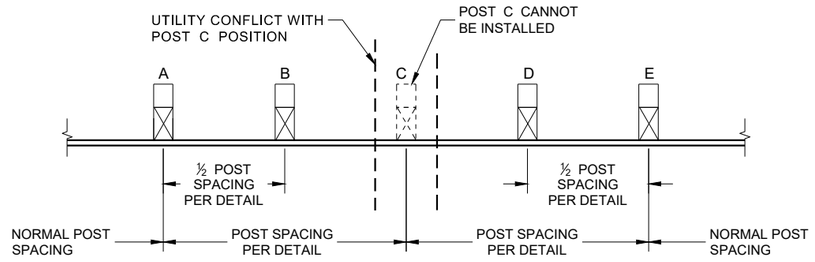
L	T (MIN.)
1 ¼"	1 ⅛"
2"	1 ¾"
10"	4"
14"	4 1⁄16"
18"	4"
21"	4 1⁄16"
25"	4"



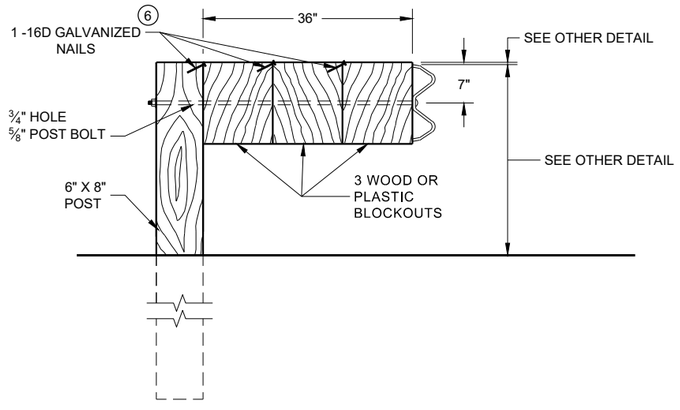
ALTERNATE BOLT HEAD



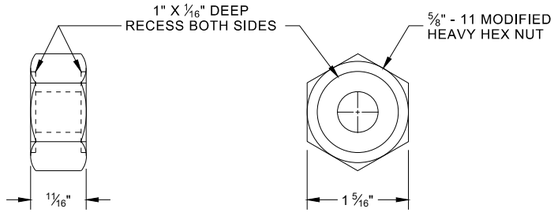
PLAN VIEW
BEAM LAPPING DETAIL



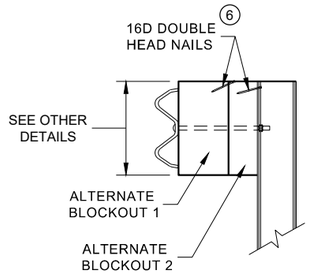
POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



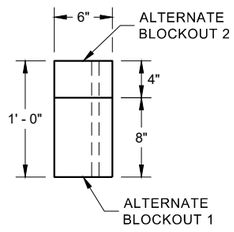
DETAIL FOR 36" BLOCKOUT DEPTH



POST BOLT, SPLICE BOLT AND RECESS NUT



SIDE VIEW



PLAN VIEW

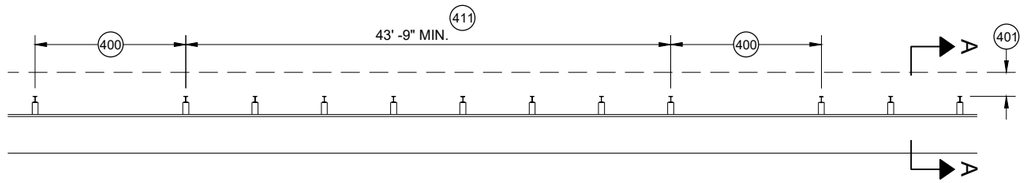
ALTERNATE WOOD BLOCKOUT DETAIL

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

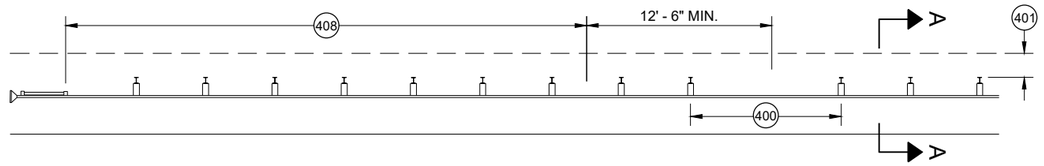
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

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

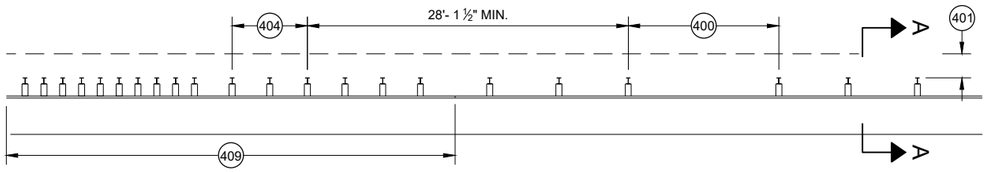
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL



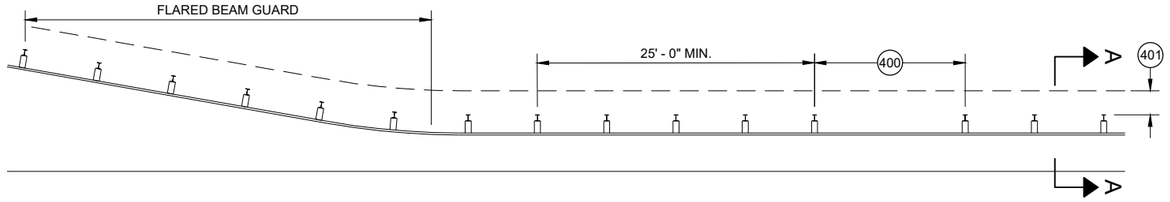
MISSING POST IN MGS GUARDRAIL



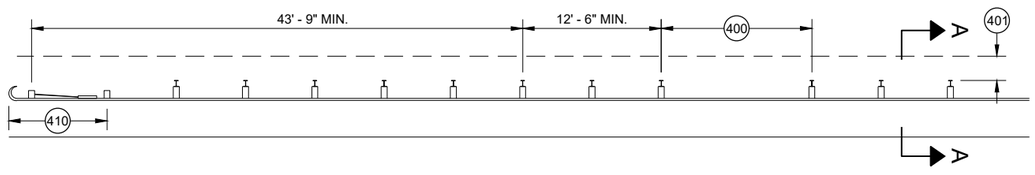
MISSING POST IN MGS GUARDRAIL NEAR EAT



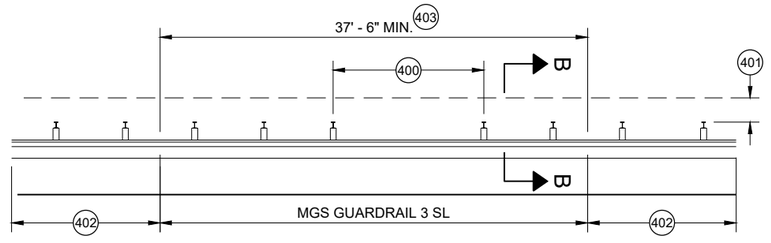
MISSING POST IN MGS GUARDRAIL NEAR AN APPROACH TRANSITION



MISSING POST IN MGS GUARDRAIL NEAR FLARED BEAM GUARD

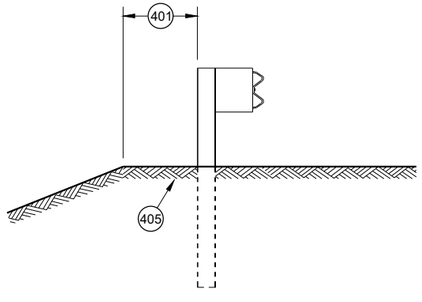


MISSING POST IN MGS GUARDRAIL NEAR A TYPE 2 END TERMINAL

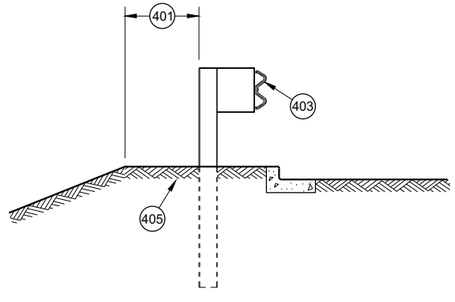


MISSING POST IN SHORT SPAN MGS GUARDRAIL NEAR CURB (SL) 407

(400) MAX SPAN 12' - 6"
(401) 2' MIN.
(402) MGS GUARDRAIL 3
(403) NESTING BEAM GUARD
(404) ASYMMETRIC TRANSITION
(405) SOIL WELL DRAINED AND COMPACTED
(406) SEE OTHER DRAWINGS IN THIS SDD
(407) SEE OTHER DRAWINGS FOR MIN. SPACING BETWEEN SPANS
(408) SEE SDD 14B44
(409) SEE SDD 14B45
(410) SEE SDD 14B47
(411) MINIMUM DISTANCE BETWEEN MISSING POST SPANS.



SECTION A - A 406



SECTION B - B 406

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2021
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS DEVE
UNIT SUPERVISOR

FHWA

6

SDD 14B42 - 07d

GENERAL NOTES

(A) THE SLOPE IN THE AREA BOUNDED BY THE GRADELINE, THE HINGE POINT LINE (HPL) AND THE CLEAR ZONE LIMITS (CZL) SHALL BE 4:1 OR FLATTER.

(B) AFTER FINAL ASSEMBLY, RECHECK CABLE TO BE SURE IT IS TAUT AND HAS NOT RELAXED

(C) DIFFERENT MANUFACTURERS REQUIRE DIFFERENT PERFORATED W - BEAM RAIL END PANELS. SEE MANUFACTURER'S INFORMATION.

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

(E) HARDWARE MAY VARY BETWEEN MANUFACTURER. SEE MANUFACTURER'S DRAWING FOR INFORMATION.

DIMENSIONS MAY VARY, MANUFACTURER'S INFORMATION.

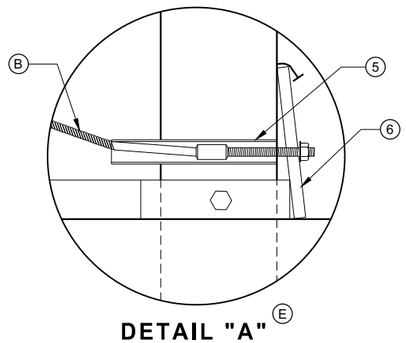
SEE SDD 14B42 FOR MORE INFORMATION.

* DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.

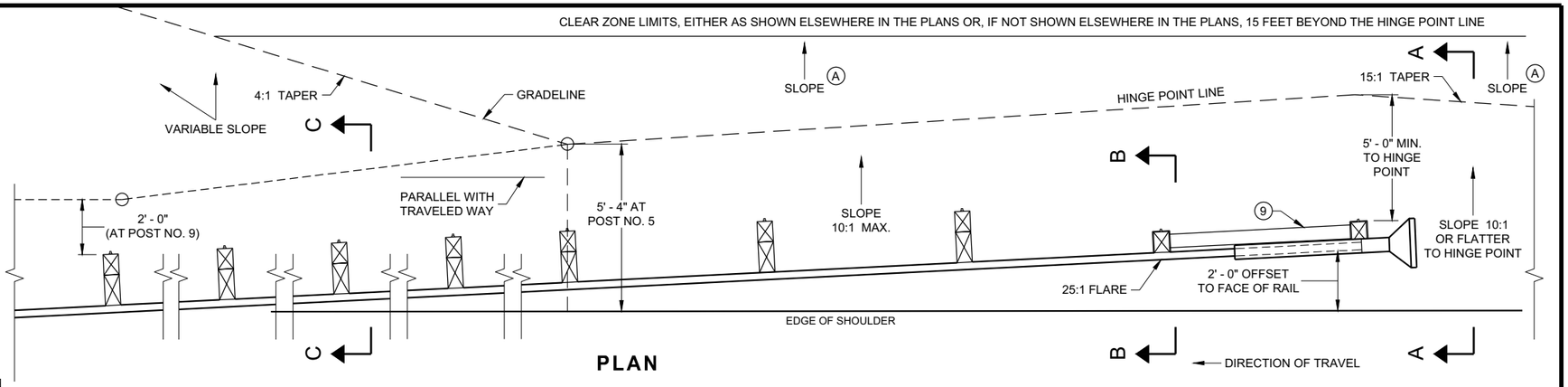
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

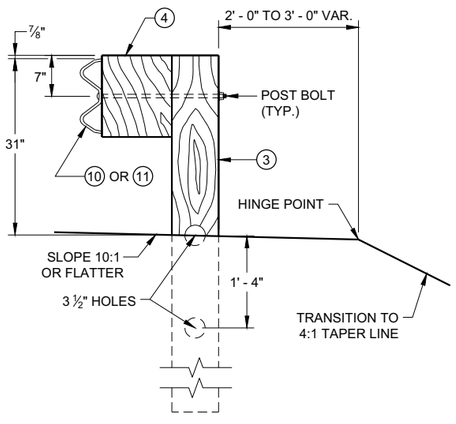
SEE MANUFACTURER'S DRAWING FOR SPLICE LOCATION, HARDWARE DIMENSIONS AND INSTALLATION INSTRUCTIONS.

THE CENTER OF THE UPPER 3 ½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE. WOOD BLOCKS ON POSTS NUMBERED 3 THROUGH 9 MAY BE ADJUSTED UP TO 3" ABOVE THE TOP OF POST.

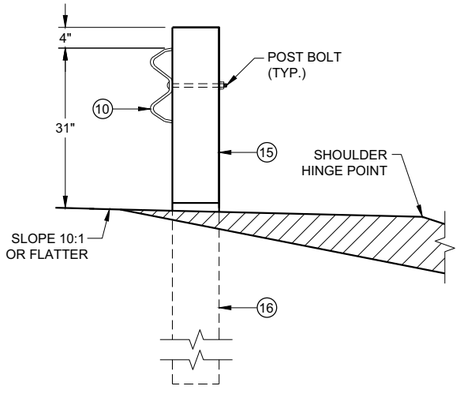


DETAIL "A" (E)

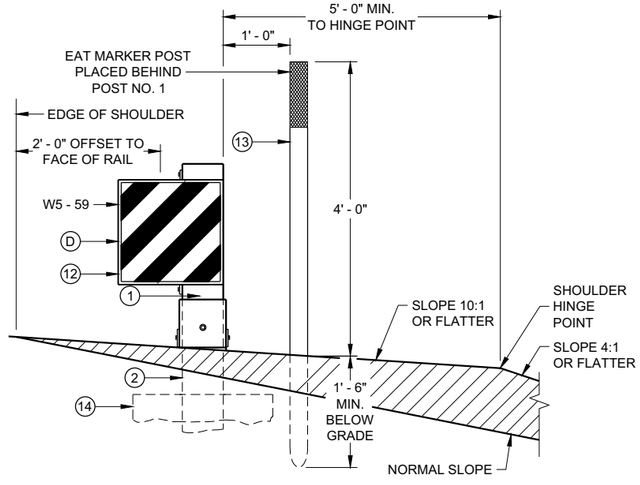




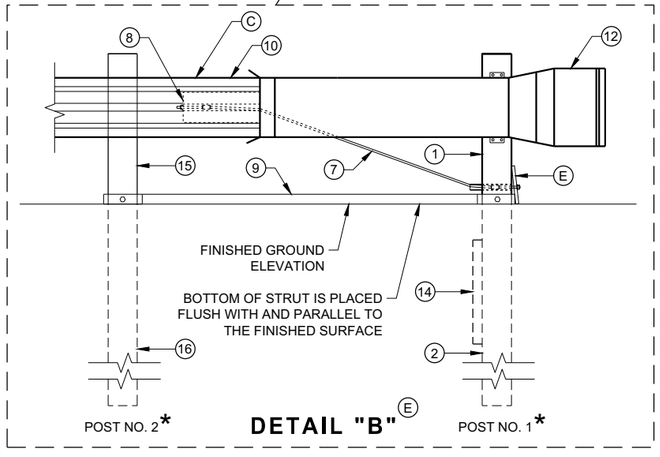
SECTION C - C
TYPICAL AT POST NOS. 3 - 9



SECTION B - B
TYPICAL AT POST NO. 2*



SECTION A - A
TYPICAL AT POST NO. 1*



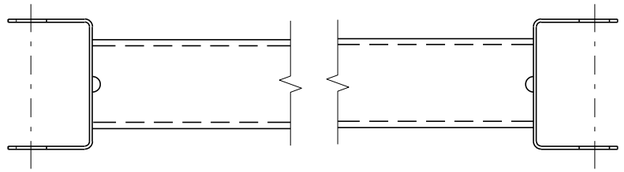
DETAIL "B" (E)

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B44 - 04a

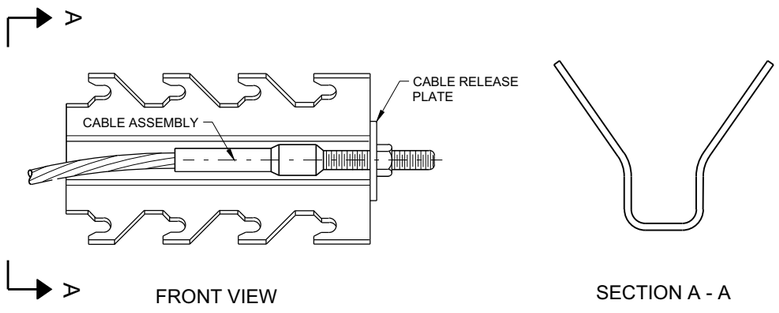
SDD 14B44 - 04a



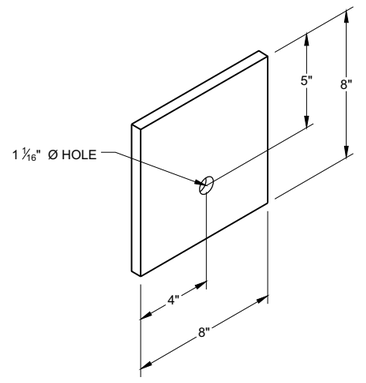
GENERIC GROUND STRUT ⑨ Ⓔ

BILL OF MATERIALS

PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUGACTURER'S DETAILS FOR MORE INFORMATION.
①	UPPER POST NO. 1 6" X 6" TUBE
②	LOWER POST NO. 1
③	WOOD CRT
④	WOOD BLOCKOUT
⑤	PIPE SLEEVE
⑥	BEARING PLATE
⑦	BCT CABLE ASSEMBLY
⑧	ANCHOR CABLE BOX
⑨	GROUND STRUT
⑩	PERFORATED W-BEAM RAIL END PANEL, 12'-6" LONG.
⑪	STANDARD W-BEAM RAIL. MULTIPLE SECTIONS REQUIRED. SECTIONS VARY IN LENGTH.
⑫	IMPACT HEAD
⑬	EAT MARKER POST - YELLOW (SEE APPROVED PRODUCTS LIST)
⑭	SOIL PLATE
⑮	UPPER POST NO. 2
⑯	LOWER POST NO. 2



GENERIC ANCHOR CABLE BOX ⑧ Ⓔ



BEARING PLATE ⑥ Ⓔ

6

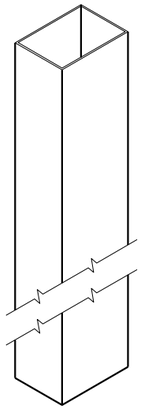
6

SDD 14B44 - 04b

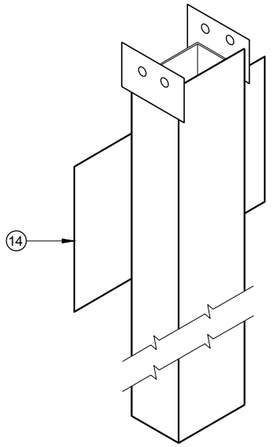
SDD 14B44 - 04b

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

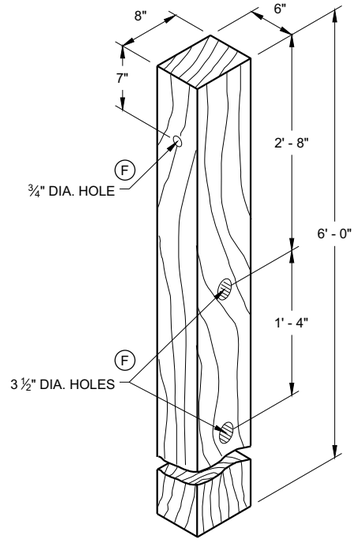
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



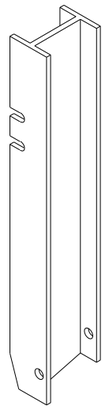
UPPER POST NO. 1 (1) (E)



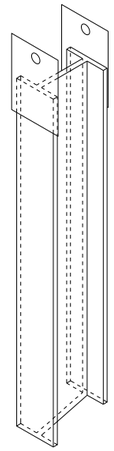
LOWER POST NO. 1 (2) (E)



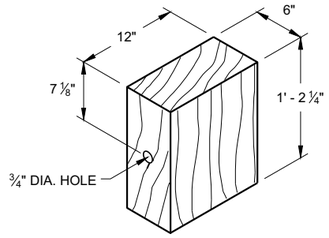
WOOD CRT POST (3) (E)
POSTS NUMBER 3-9



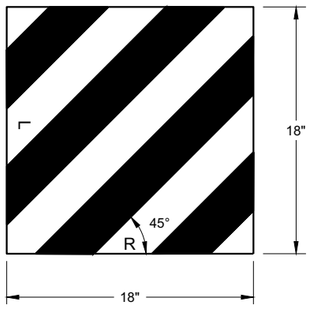
UPPER POST NO. 2 (15) (E)



LOWER POST NO. 2 (16) (E)

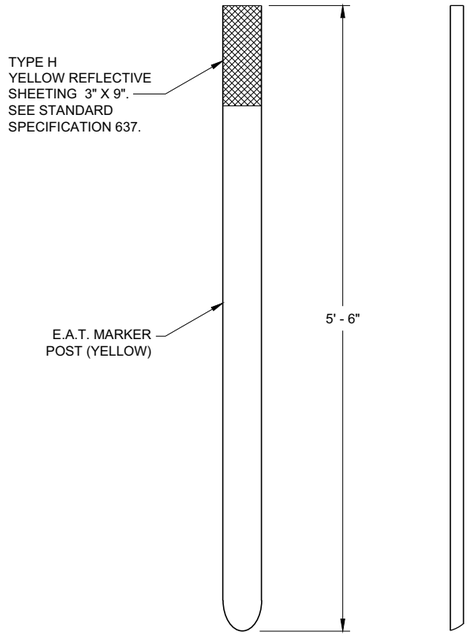


WOOD BLOCKOUT (4)
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



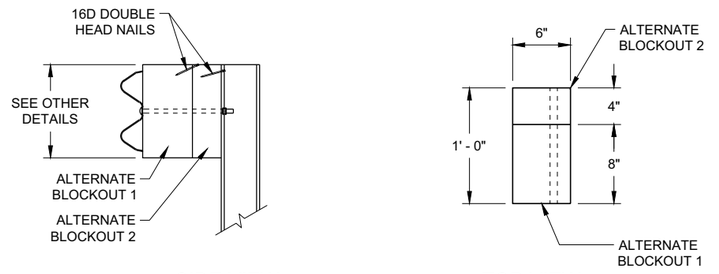
W5 - 59

REFLECTIVE SHEETING DETAIL (E)



FRONT VIEW SIDE VIEW

E.A.T. MARKER POST (13)



SIDE VIEW TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

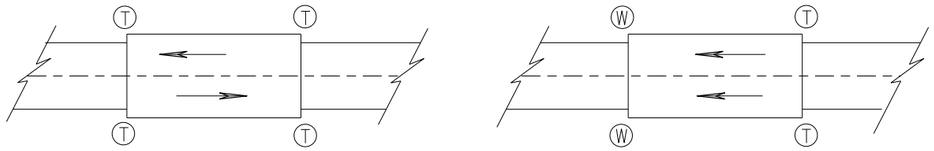
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

6

SDD 14B44 - 04c
SDD 14B44 - 04c



TWO WAY TRAFFIC

ONE WAY TRAFFIC

(T) THRIE BEAM CONNECTION

(W) W-BEAM CONNECTION WHEN REQUIRED

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

GENERAL NOTES

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

TRANSITION USES STEEL POSTS ONLY.

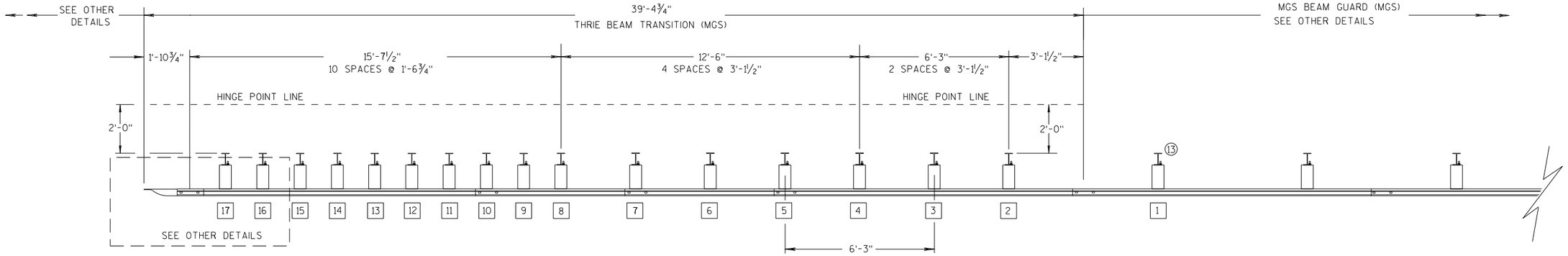
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

POST 2 THROUGH 17 USES STEEL POST ONLY

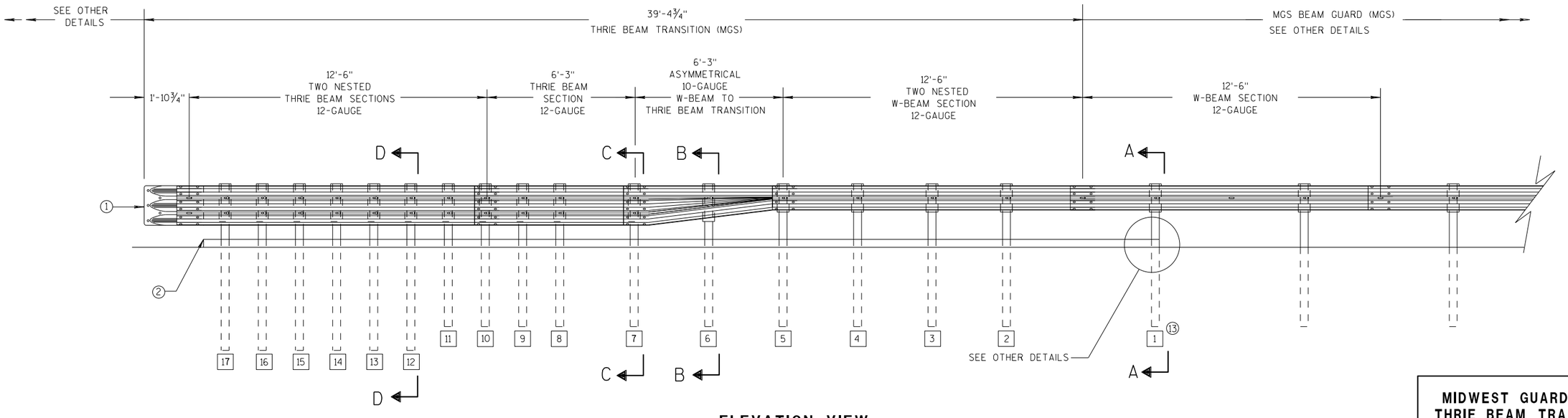
(1) BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.

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

(13) STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD14B42



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

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

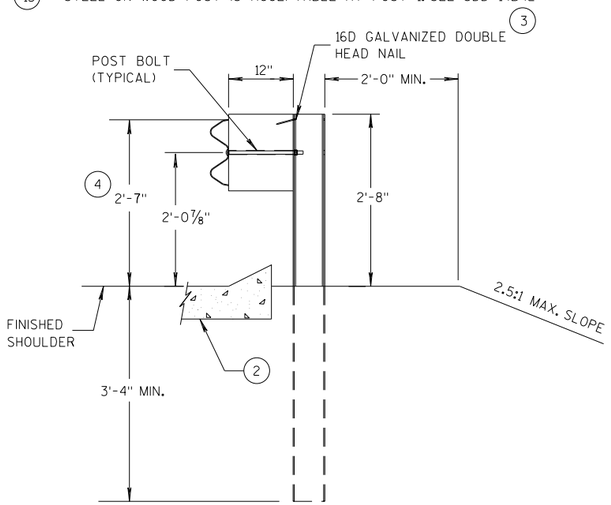
GENERAL NOTES

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

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

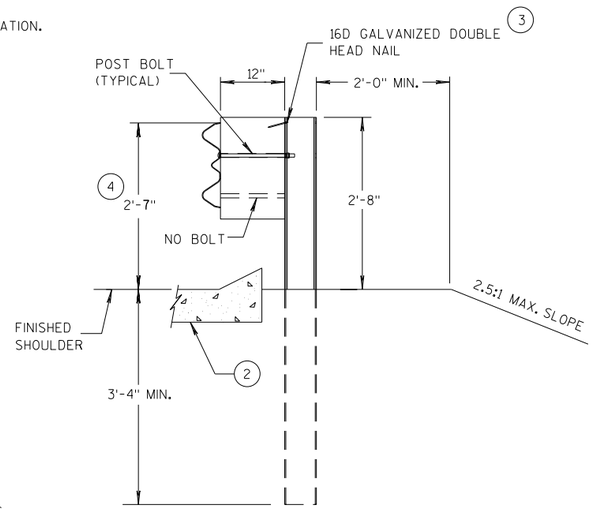
(4) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".

(13) STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD 14B42



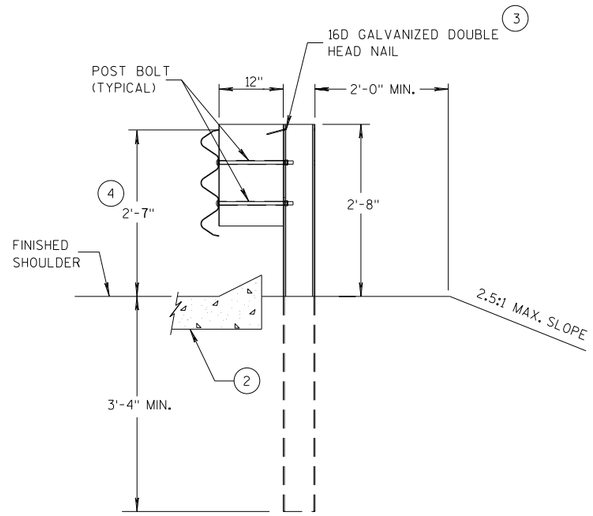
SECTION A-A (13)

POSTS 1-5



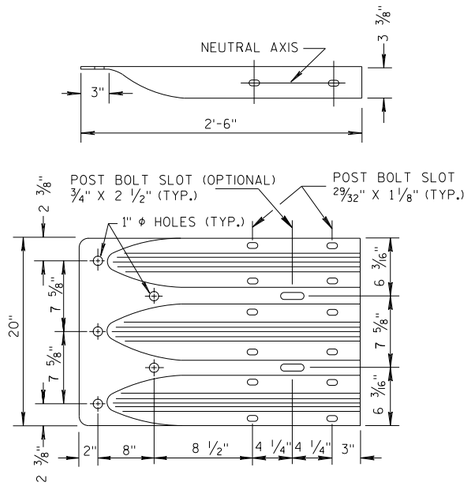
SECTION B-B

POST 6

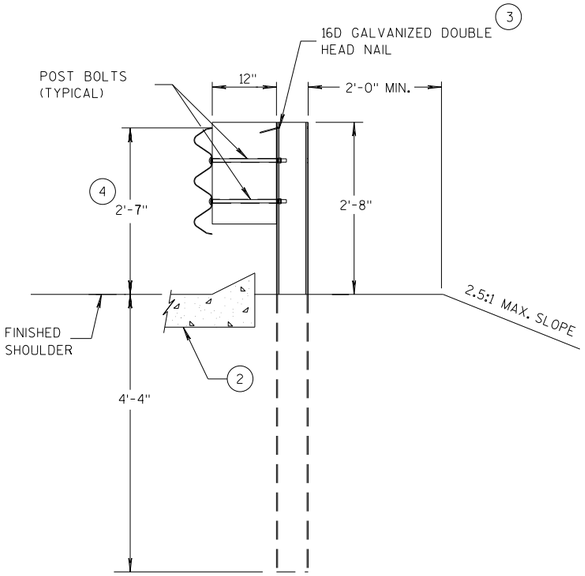


SECTION C-C

POSTS 7-11

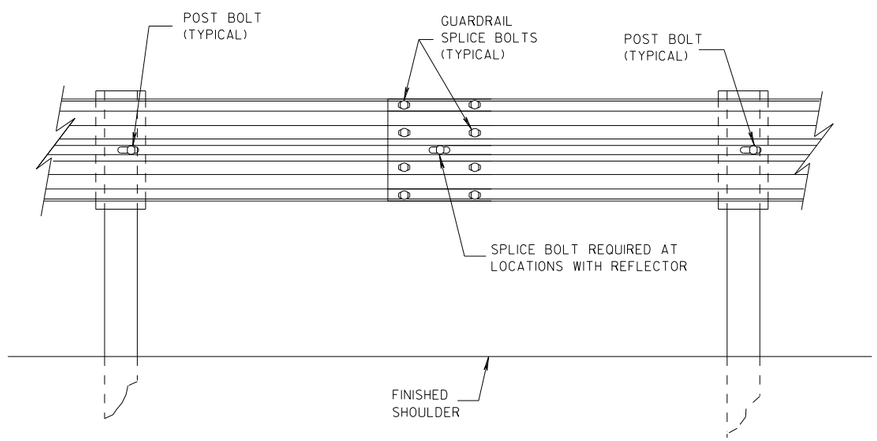


THRIE BEAM TERMINAL CONNECTOR



SECTION D-D

POSTS 12-17



SPLICE DETAIL

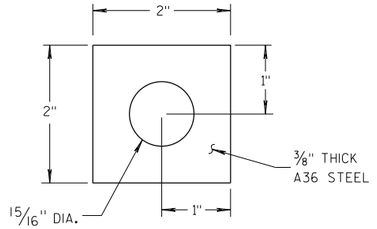
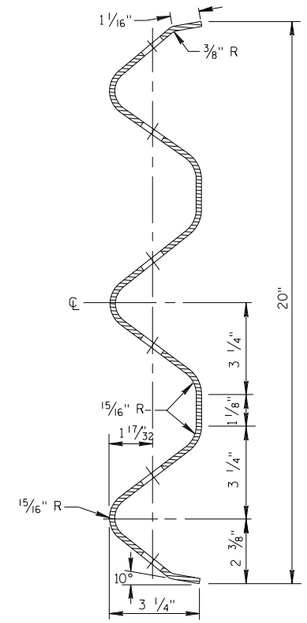


PLATE WASHER DETAIL



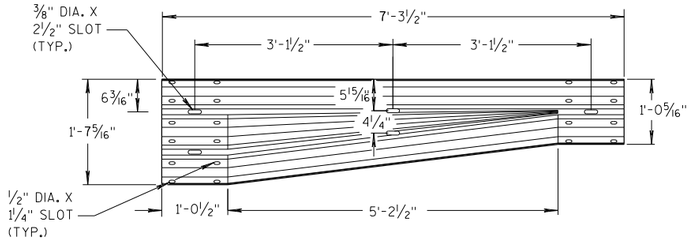
SECTION THRU THRIE BEAM RAIL ELEMENT

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

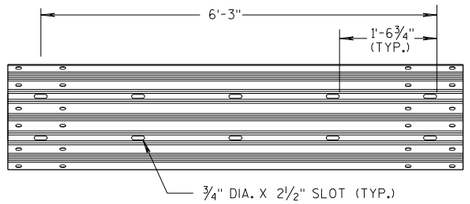
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

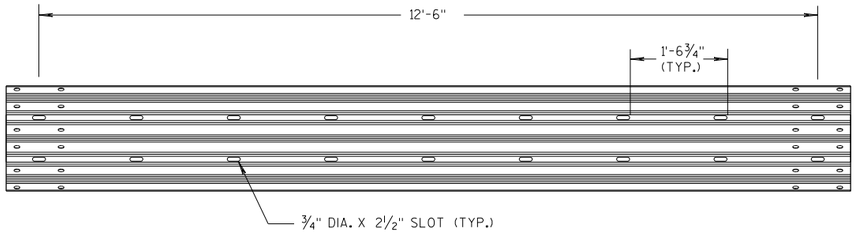
S.D.D. 14 B 45-5b



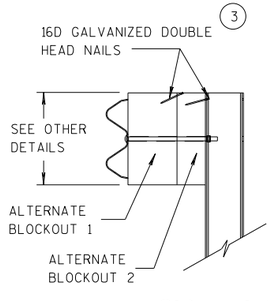
W-BEAM TO THRIE BEAM TRANSITION SECTION



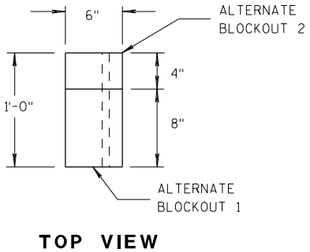
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

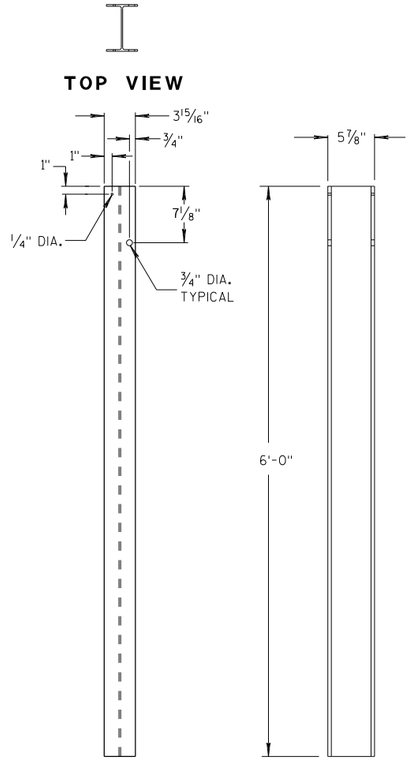


SIDE VIEW



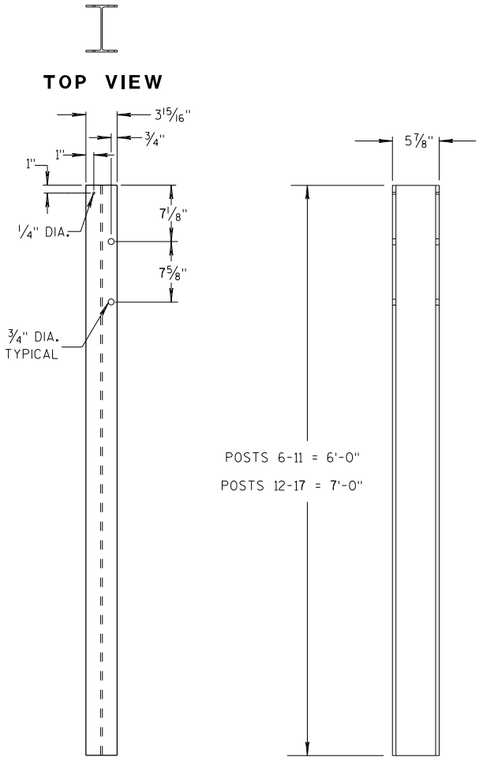
TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL



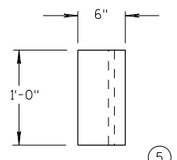
FRONT VIEW SIDE VIEW

STEEL POSTS 1-5 (13)

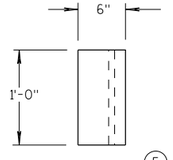


FRONT VIEW SIDE VIEW

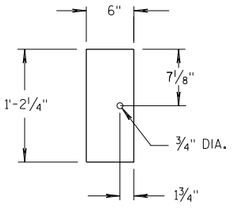
STEEL POSTS 6-17



TOP VIEW (5)

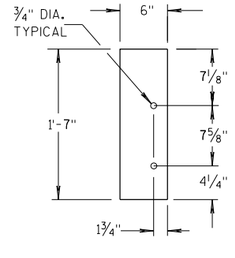


TOP VIEW (5)



FRONT VIEW

BLOCKOUT POSTS 1-5



FRONT VIEW

BLOCKOUT POSTS 6-17

GENERAL NOTES

STEEL POSTS ARE W6X9 OR W6X8.5.

BOLT HOLES FOR POST ARE ON FRONT AND OF SIDE OF POST.

(3) WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

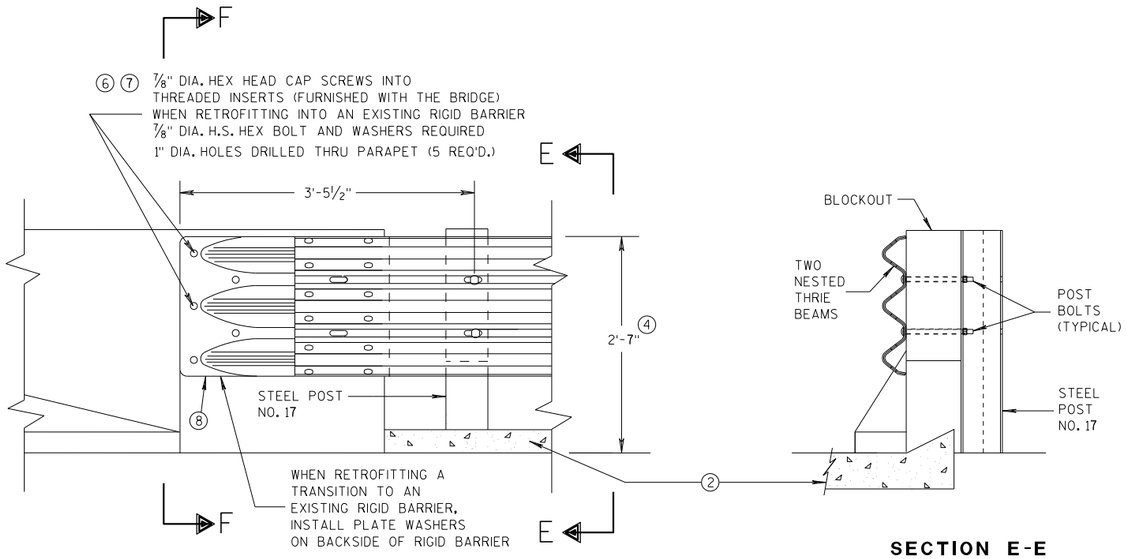
(5) WOOD BLOCKS MAY BE CONSTRUCTED OUT OF 2 WOOD BLOCKS. SEE ALTERNATE WOOD BLOCK DETAIL.

(13) STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD 14B42.

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOF

6
S.D.D. 14 B 45-5c



FRONT VIEW

SECTION E-E

THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS

GENERAL NOTES

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

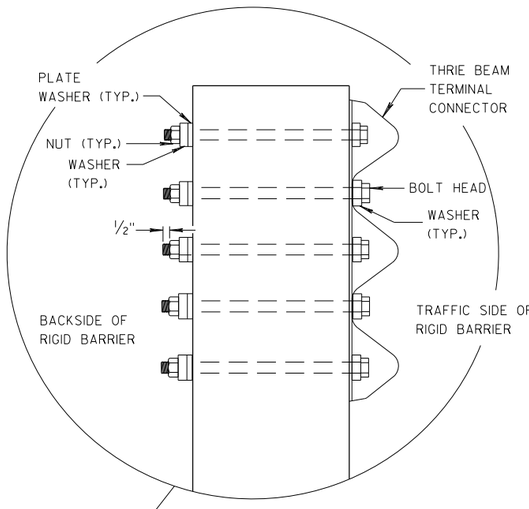
② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

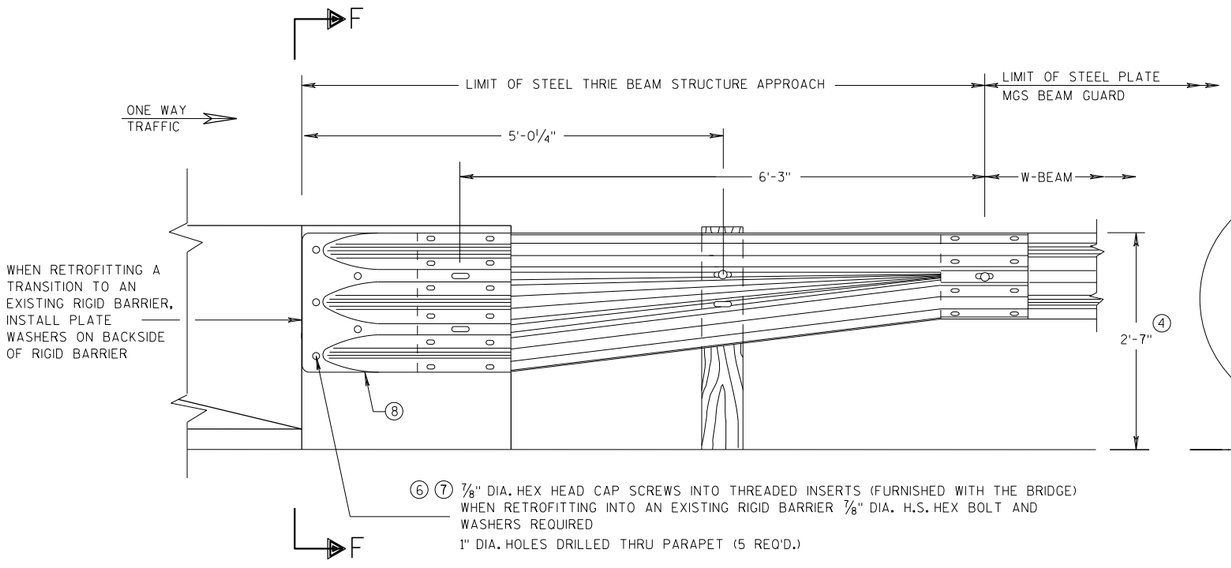
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

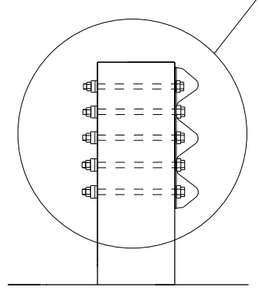
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE.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

⑧ THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2".

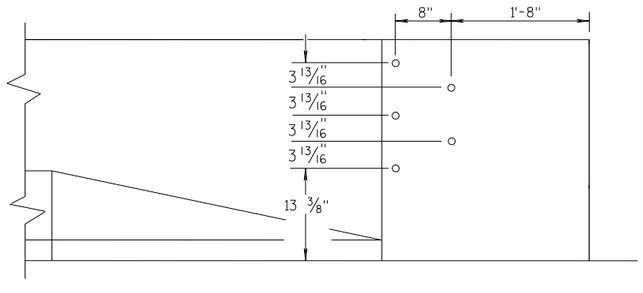




FRONT VIEW



SECTION F-F



DRILL HOLE LOCATION

W BEAM TRANSITION AND CONNECTION TO BRIDGE PARAPETS WITH SQUARE ENDS

(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
07/2018 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS D UNIT SUPERVIS ...NT
FHWA

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

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

GENERAL NOTES

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

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

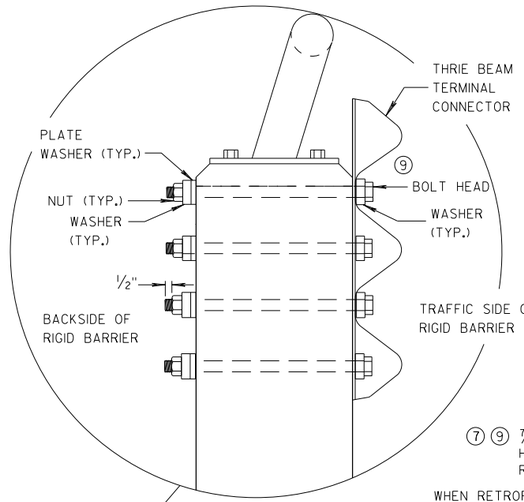
(4) TOLERANCE FOR TOP OF BEAM IS ± 1".

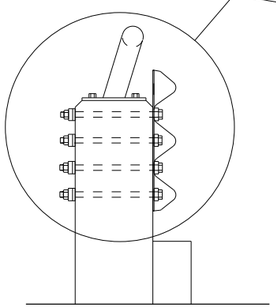
(6) DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

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

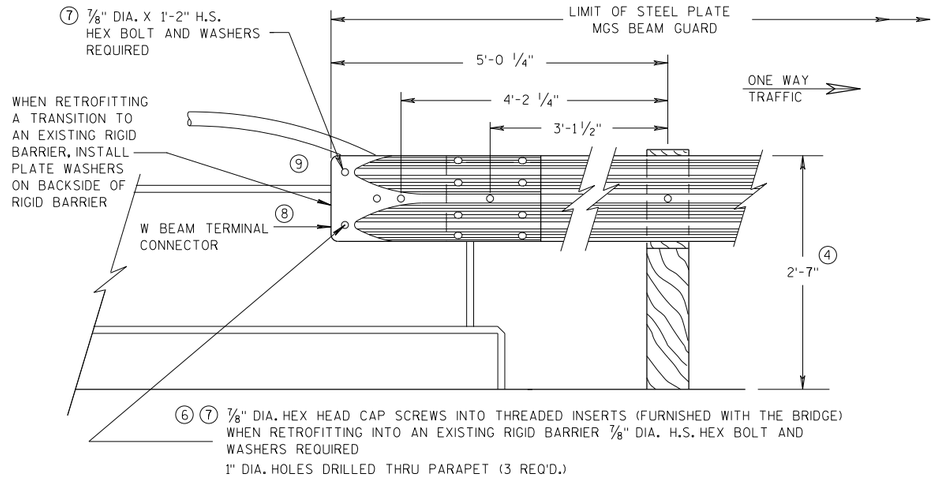
(8) THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 ½".

(9) BOLT, NUT AND WASHERS NOT REQUIRED FOR THIS LOCATION WHEN RETROFITTING AN EXISTING PAPAPET AND THE HOLE IS EITHER ABOVE PARAPET OR WITHIN 4 INCHES OF THE EDGE OF PARAPET.





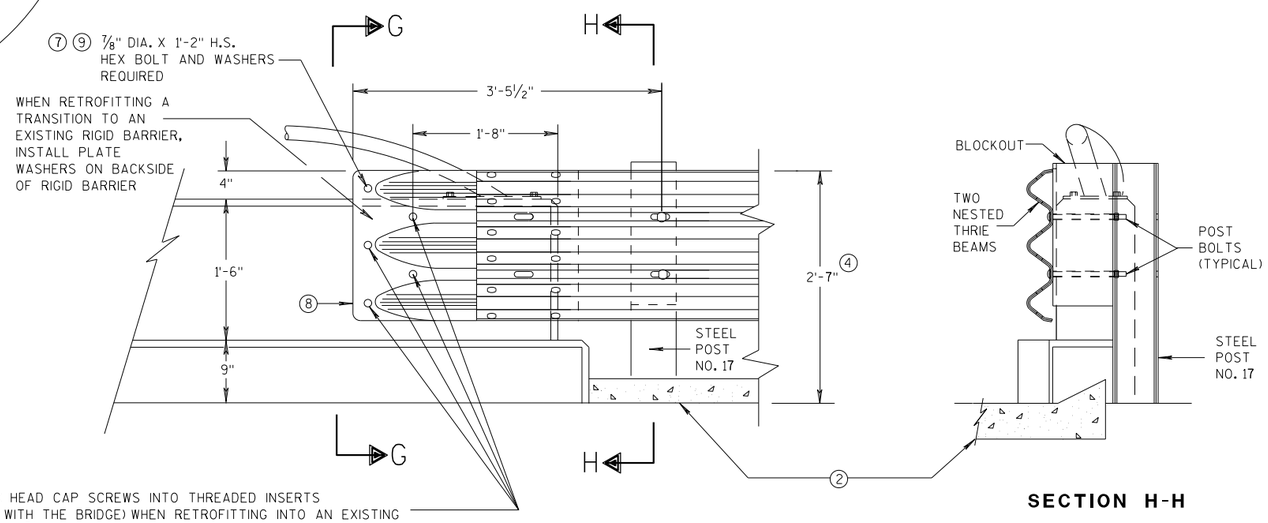
SECTION G-G



FRONT VIEW

W BEAM CONNECTION TO VERTICAL FACE PARAPET

(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)



FRONT VIEW

SECTION H-H

THRIE BEAM CONNECTION TO VERTICAL FACED PARAPETS

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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07/2018 — DATE
/S/ Rodney Taylor
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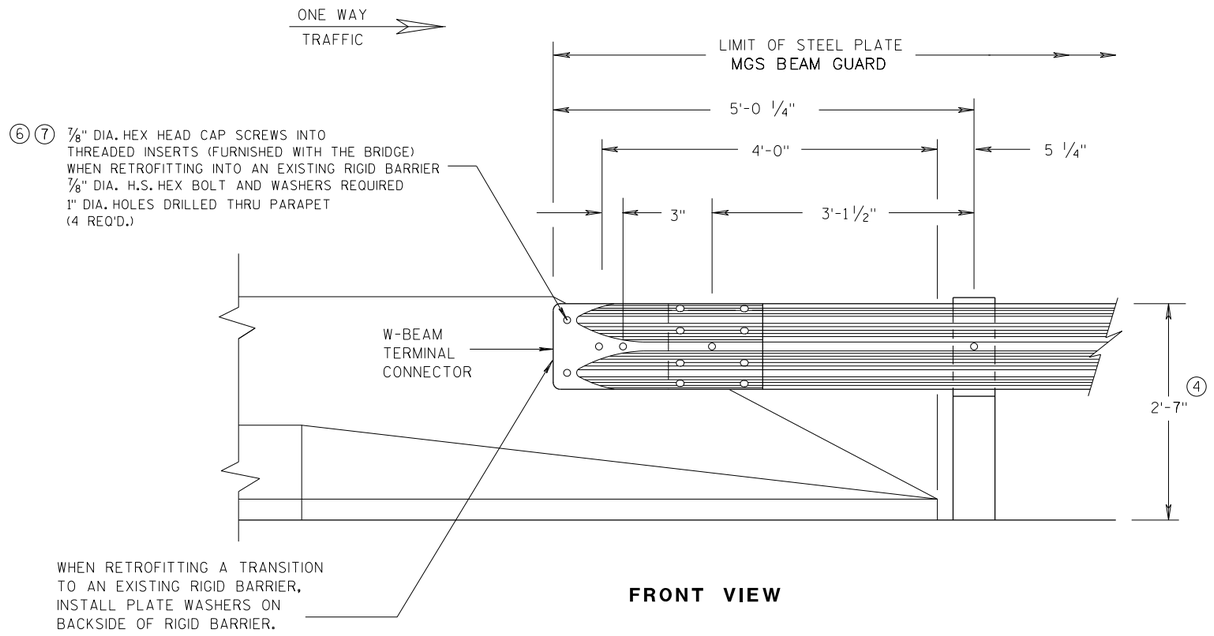


FRONT VIEW

W BEAM CONNECTION TO PARAPETS WITH SLOPED ENDS

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

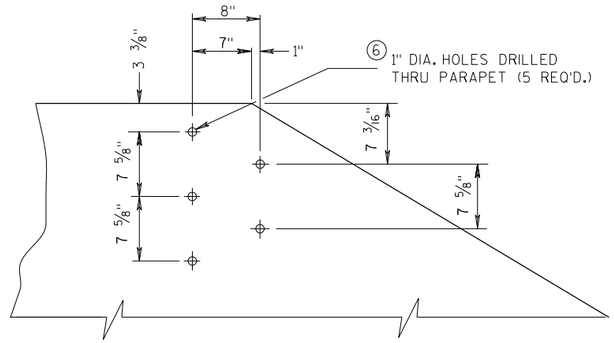
GENERAL NOTES

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

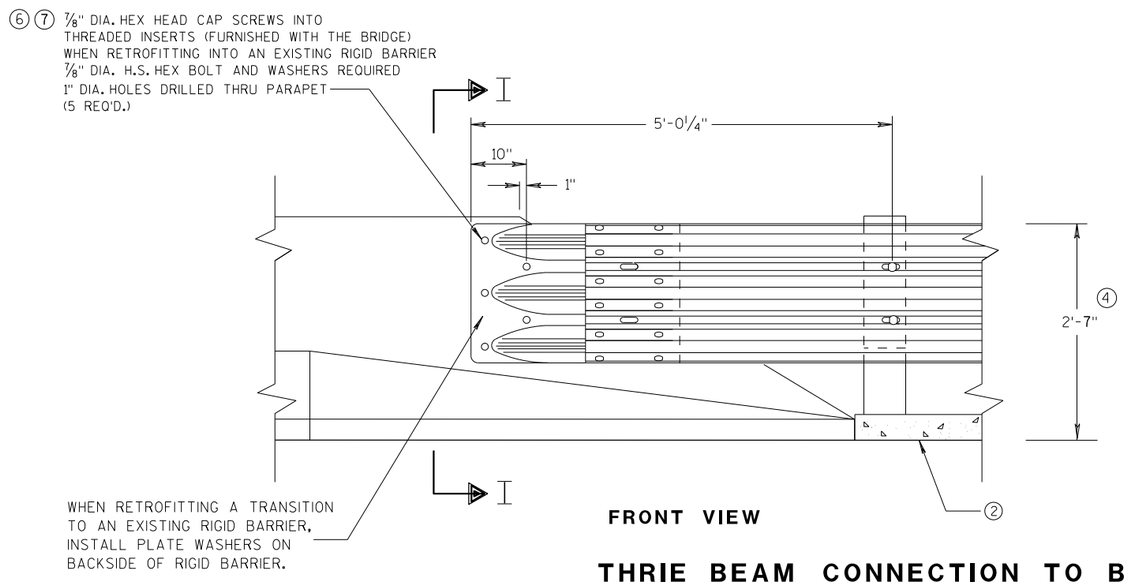
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

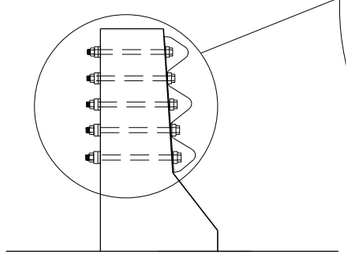
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE.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



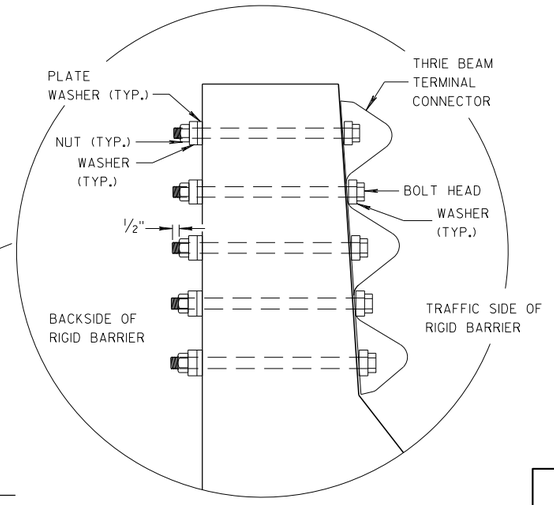
DRILL HOLE LOCATION AND PATTERN FOR THRIE BEAM CONNECTION



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

APPROVED
07/2018
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS [illegible] UNIT SUPERVI[illegible]ENT
FHWA

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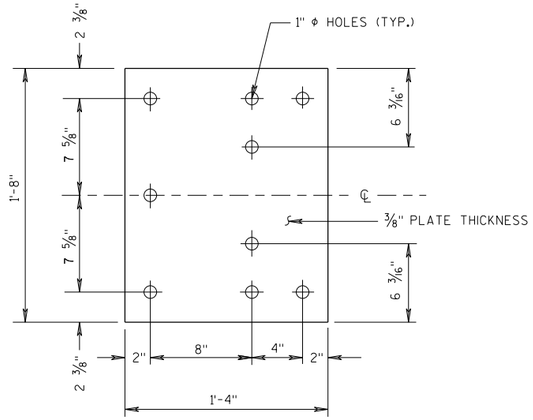
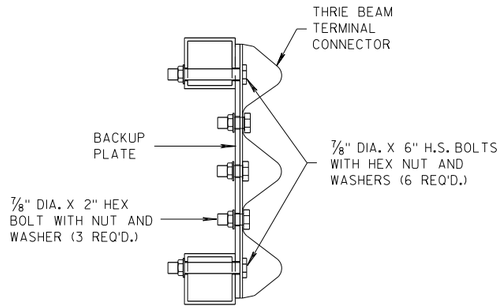


BACK-UP PLATE DETAIL

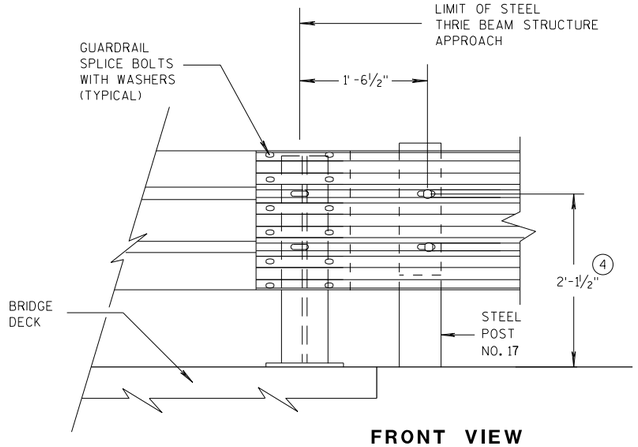


SECTION J-J

GENERAL NOTES

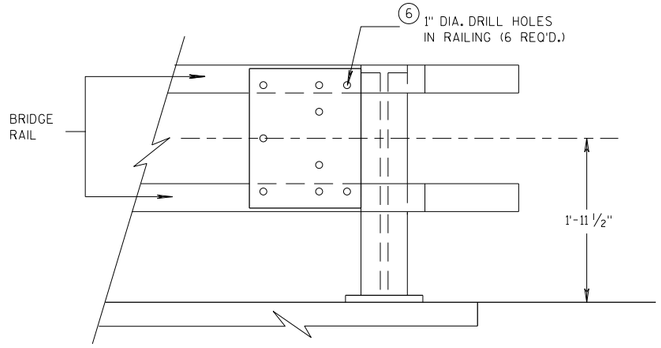
(4) TOLERANCE FOR TOP OF BEAM IS ± 1".

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

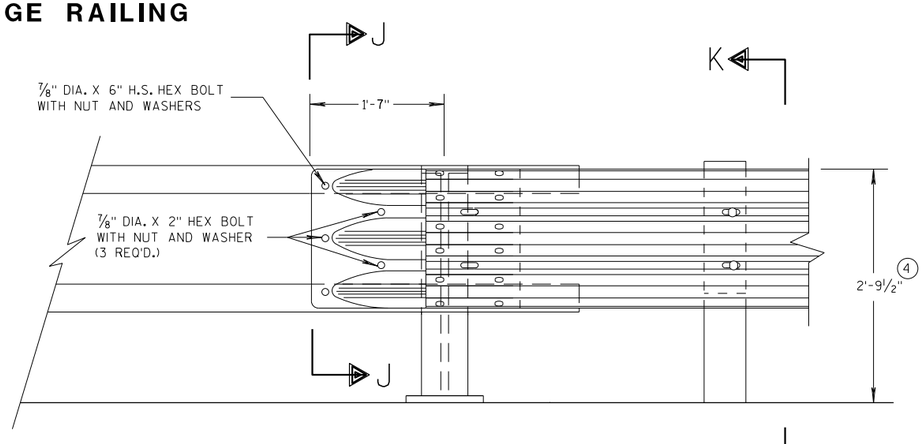


FRONT VIEW

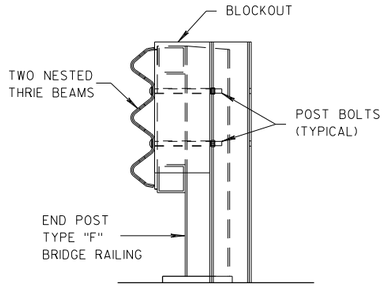
THRIE BEAM CONNECTION TO STEEL RAILING TYPE "W"



BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING



FRONT VIEW



SECTION K-K

THRIE BEAM CONNECTION TO TUBULAR RAILING TYPE "F"

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED 07/2018 — DATE
FHWA

/S/ Rodney Taylor — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

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

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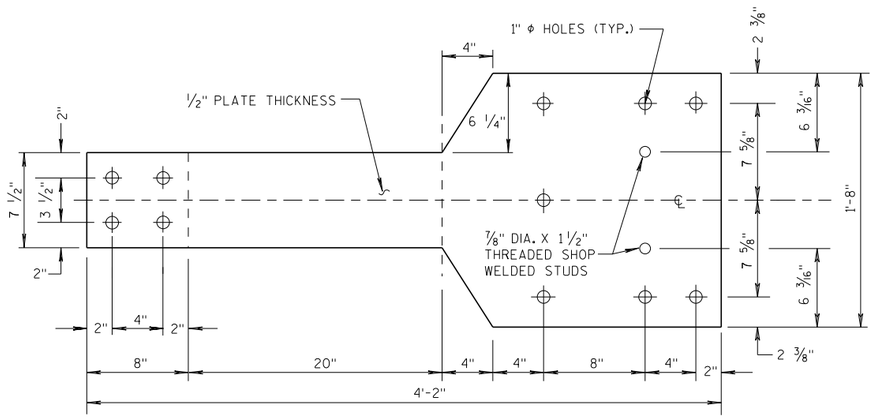
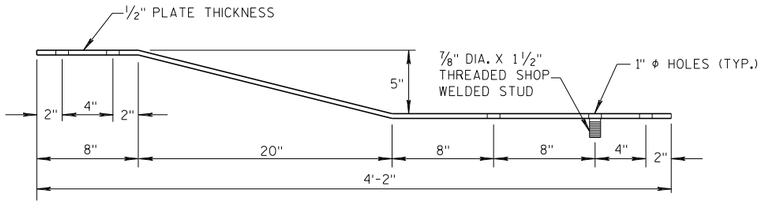
S.D.D. 14 B 45-5g

GENERAL NOTES

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

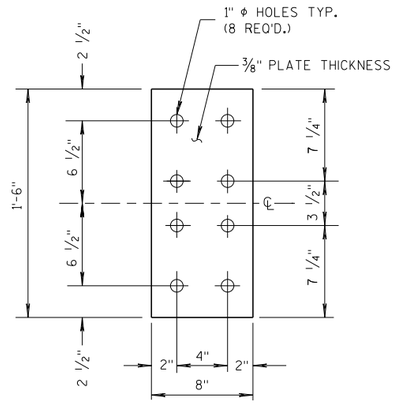


FRONT VIEW



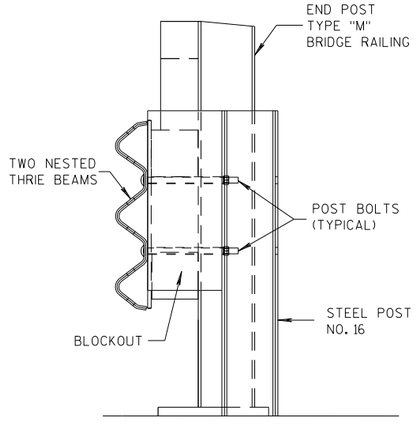
PLAN VIEW

BACK-UP PLATE DETAIL, TYPE "M"

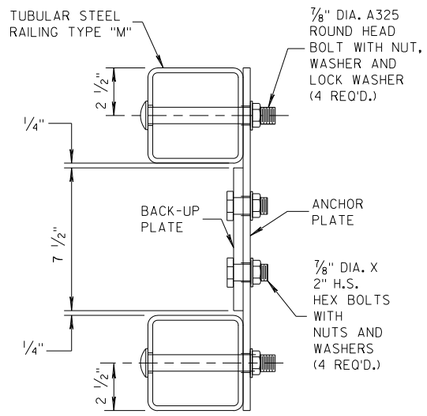


FRONT VIEW

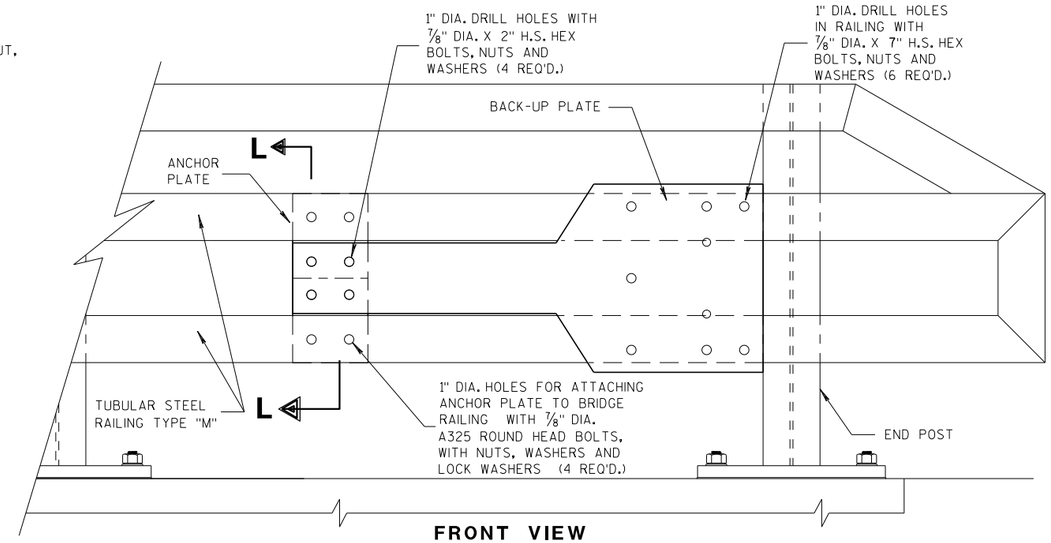
ANCHOR PLATE DETAIL, TYPE "M"



SECTION M-M

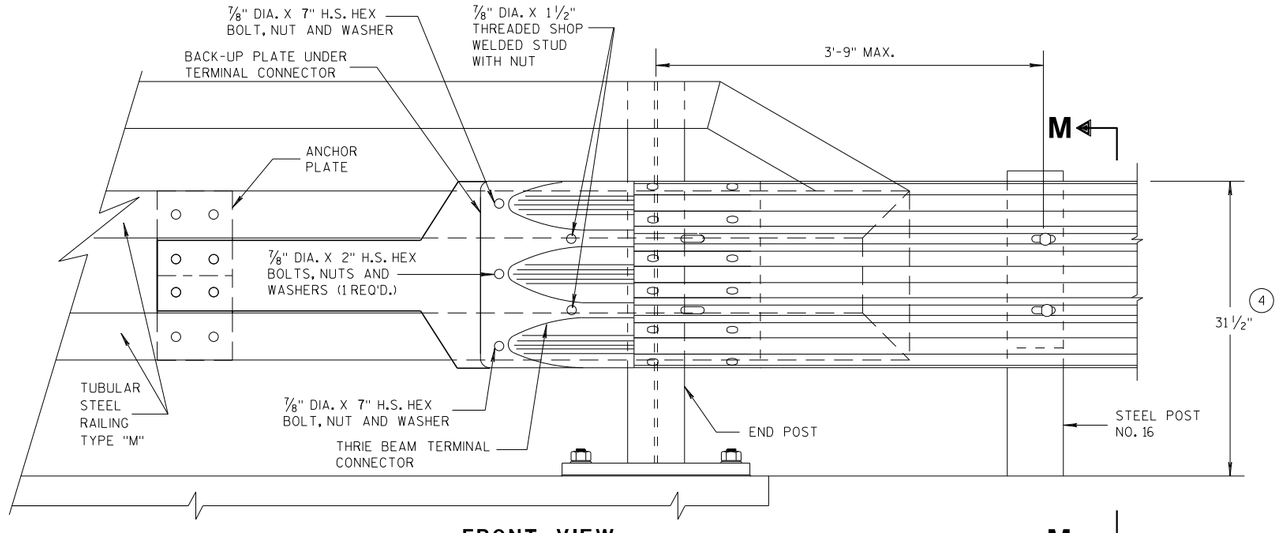


SECTION L-L

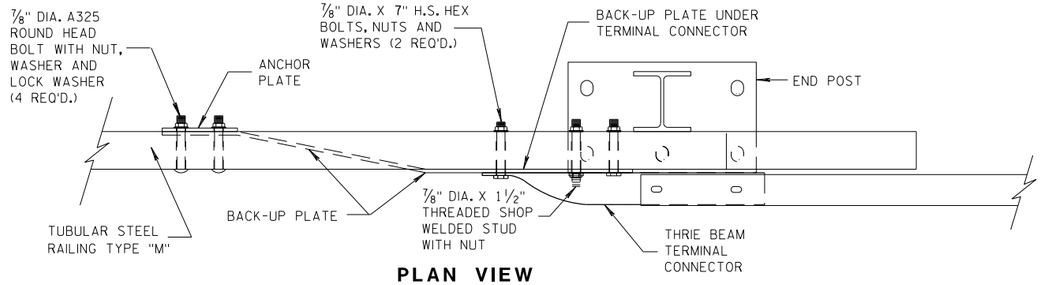


FRONT VIEW

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



FRONT VIEW



PLAN VIEW

THRIE BEAM CONNECTION TO TUBULAR RAILING, TYPE "M"

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

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

6

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

GENERAL NOTES

COVER PLATE PANELS ARE 3/16" THICK.

ALL STIFFENERS ARE 1/4" THICK.

CONNECTOR PLATE SHALL BE FABRICATED FROM ASTM GRADE A36 STEEL AND GALVANIZED.

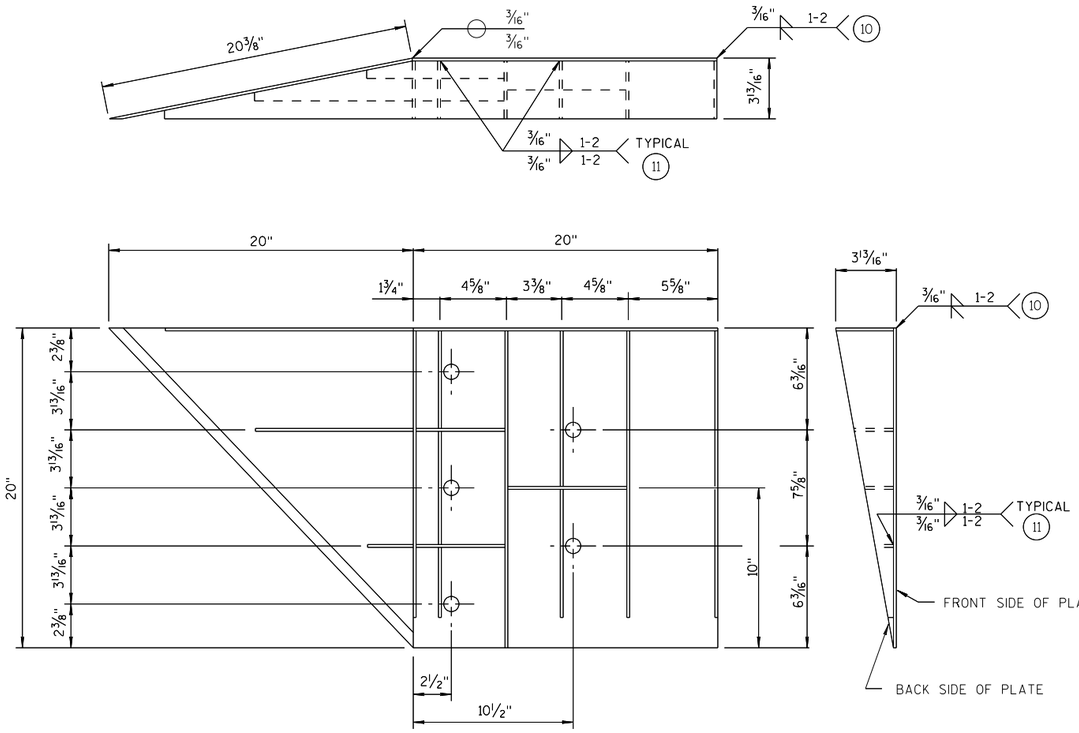
FOR GALVANIZED REQUIREMENTS, SEE SECTION 614 OF THE STANDARD SPECIFICATIONS.

ALL HOLE DIAMETERS SHALL BE 1".

FOR OPPOSITE SIDE INSTALLATION MIRROR DRAWINGS.

(10) STIFFENERS LOCATED AT THE OUTSIDE EDGES OF THE COVER PLATES SHALL BE WELDED AS FOLLOWS:
SINGLE BEVEL GROOVE WELD ON EXTERNAL SIDES AND 3/16" FILLET WELD BY 1" LONG SPACED AT 2" ON INTERNAL SIDES.

(11) STIFFENERS LOCATED ON THE INSIDE OF THE COVER PLATE SHALL BE WELDED AS FOLLOWS:
3/16" FILLET WELD BY 1" LONG SPACED AT 2".



WELDING INSTRUCTION

(VIEWED FROM BACK SIDE OF PLATE)

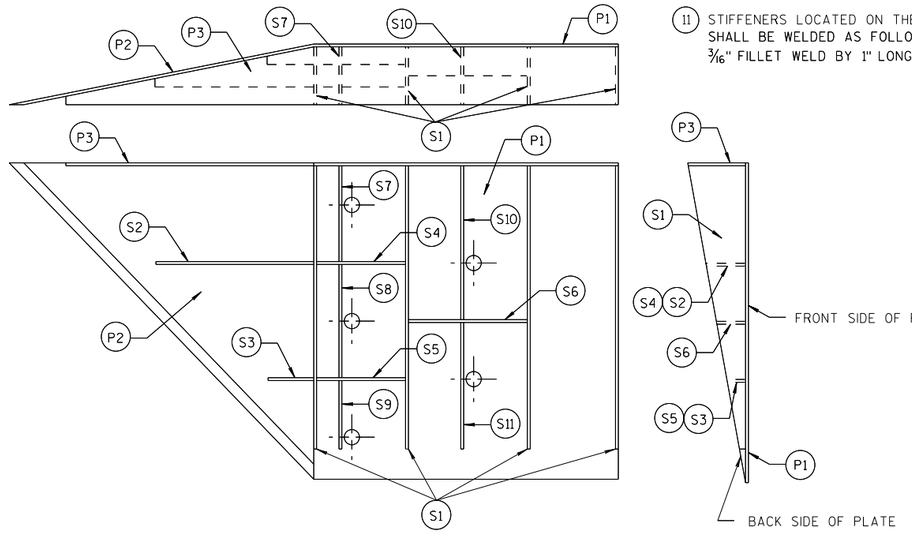


PLATE AND STIFFENER IDENTIFICATION

(VIEWED FROM BACK SIDE OF PLATE)

CONNECTOR PLATE DIMENSION (PER ASSEMBLY)

PLATE	QUANTITY	SHAPE	SIZE (A x B x C x D)	THICKNESS
P1	1		20" x 20"	3/16"
P2	1		20" x 20" x 28 9/16"	3/16"
P3	1		39" x 3 5/8" x 20" x 19 5/16"	3/16"
S1	4		18 7/16" x 3 5/8" x 18 3/4"	1/4"
S2	1		10 1/4" x 2 7/16" x 10 3/8" x 1/2"	1/4"
S3	1		3" x 1 1/16" x 3 1/8" x 1/2"	1/4"
S4	1		6 1/8" x 2 7/16"	1/4"
S5	1		6 1/8" x 1 1/16"	1/4"
S6	1		7 3/4" x 1 3/4"	1/4"
S7	1		2 9/16" x 6" x 3 5/8" x 5 7/8"	1/4"
S8	1		1 5/32" x 7 1/2" x 2 1/2" x 7 3/8"	1/4"
S9	1		6 1/16" x 6 3/16" x 1 3/32"	1/4"
S10	1		1 7/8" x 9 7/8" x 3 5/8" x 9 11/16"	1/4"
S11	1		8 1/2" x 8 3/4" x 1 13/16"	1/4"

SINGLE SLOPE CONNECTION PLATE

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018
DATE
FHWA

/S/ Rodney Taylor
ROADWAY STANDARDS I
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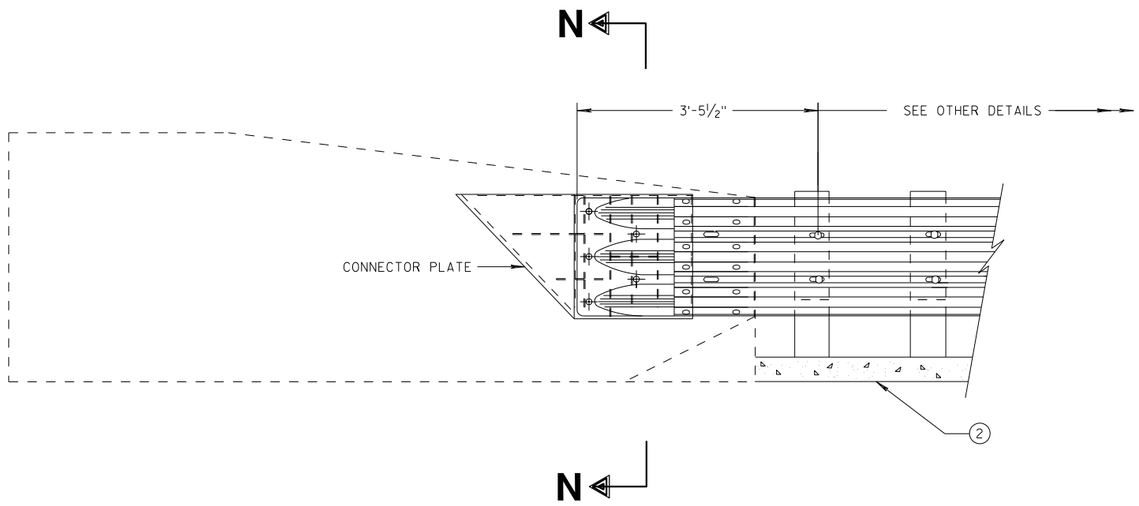
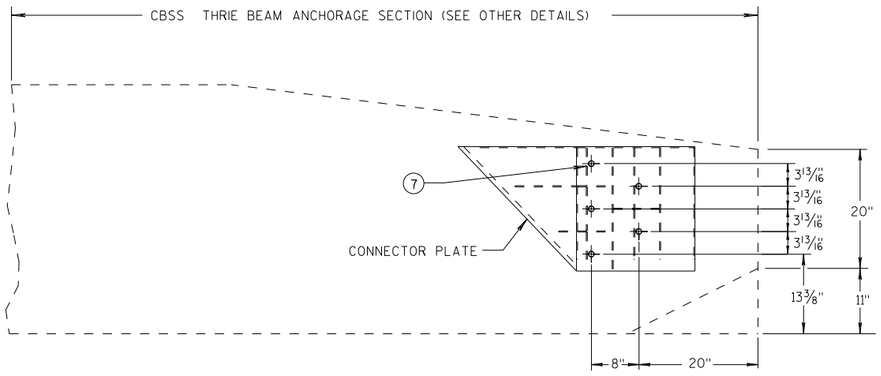
S.D.D. 14 B 45-5i



THRIE BEAM CONNECTION TO SINGLE SLOPE BARRIER



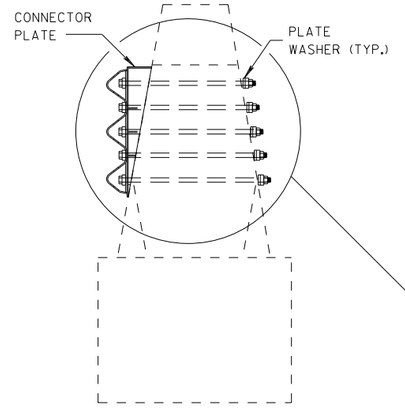
SINGLE SLOPE CONNECTION PLATE PLACEMENT

GENERAL NOTES

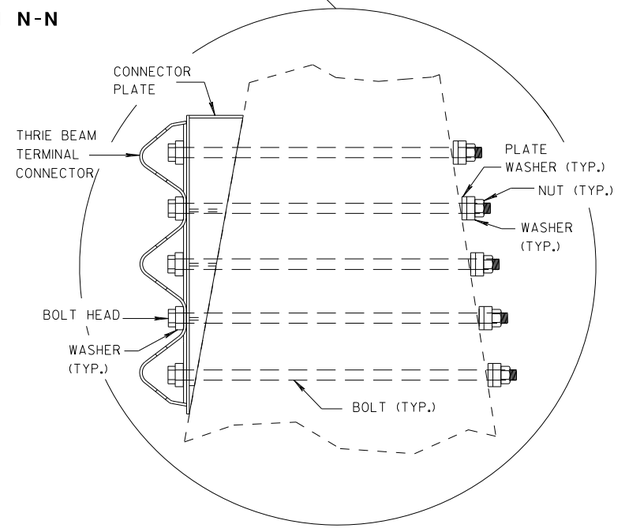
CONNECTOR PLATE, DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

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

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



SECTION N-N



MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS DI UNIT SUPERVIS
FHWA

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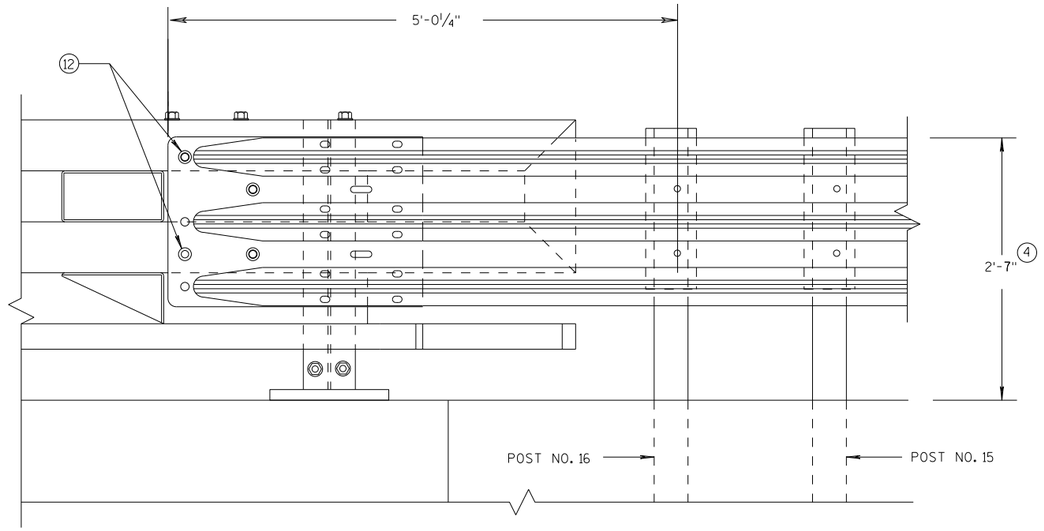
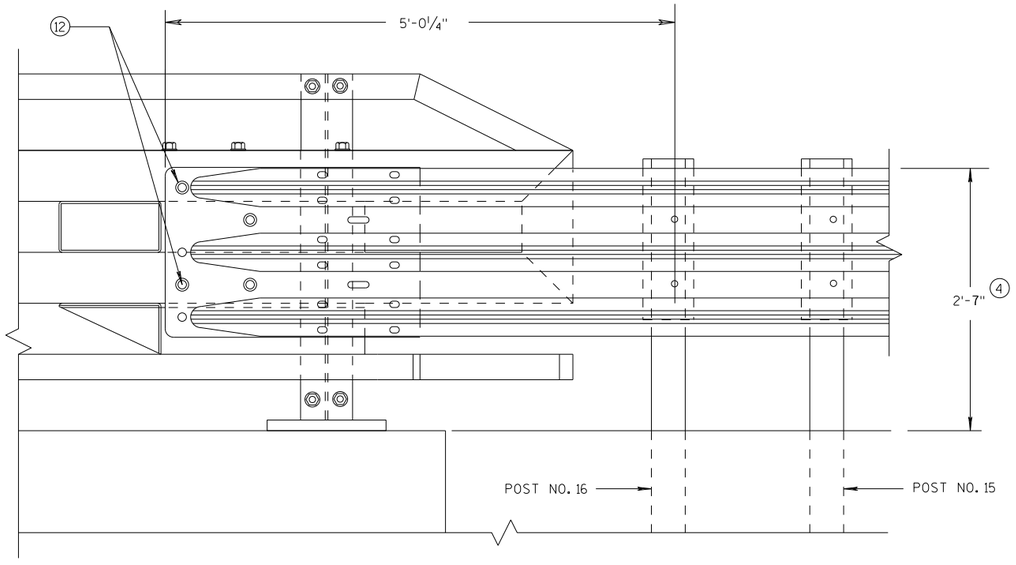
S.D.D. 14 B 45-5j



ELEVATION OF DETAIL AT NY3 END POST

THRIE BEAM RAIL ATTACHMENT



ELEVATION OF DETAIL AT NY4 END POST

THRIE BEAM RAIL ATTACHMENT

GENERAL NOTES

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

(12) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. ON BACKSIDE OF PARAPET ONE ROUND WASHER, AND NUT REQUIRED. BOLT THREAD IS TO EXTEND 1/2-INCH BEYOND NUT.

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018
DATE
/S/ Rodney Taylor
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UNIT SUPERVIS
FHWA

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

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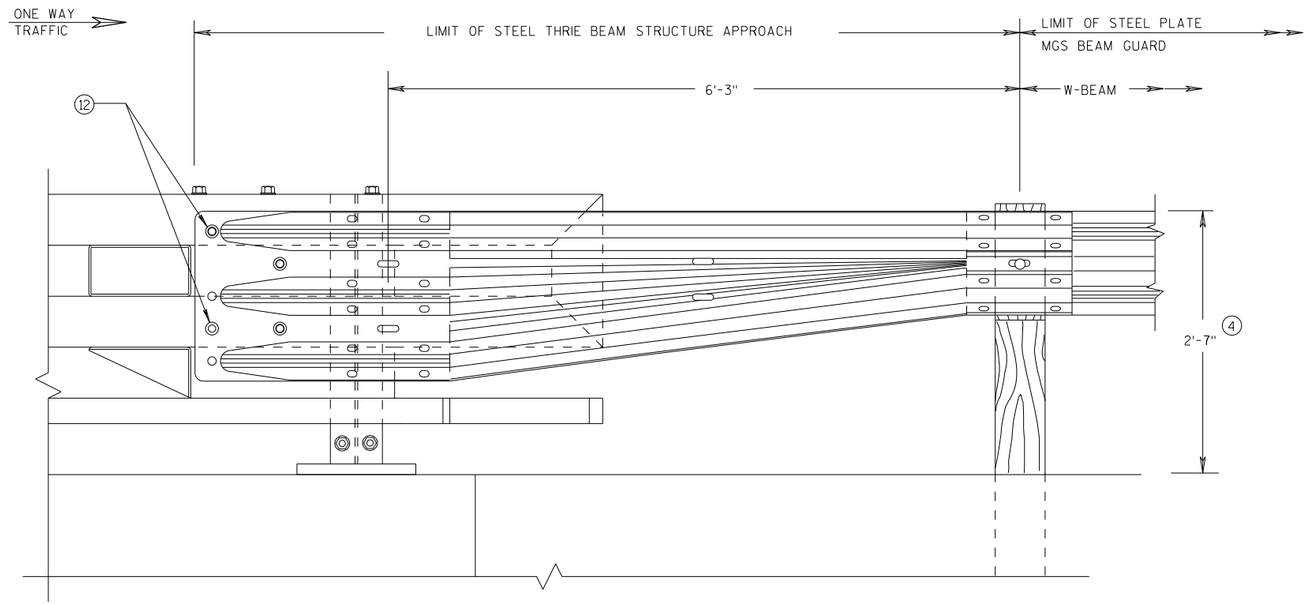
S.D.D. 14 B 45-5k



FRONT VIEW

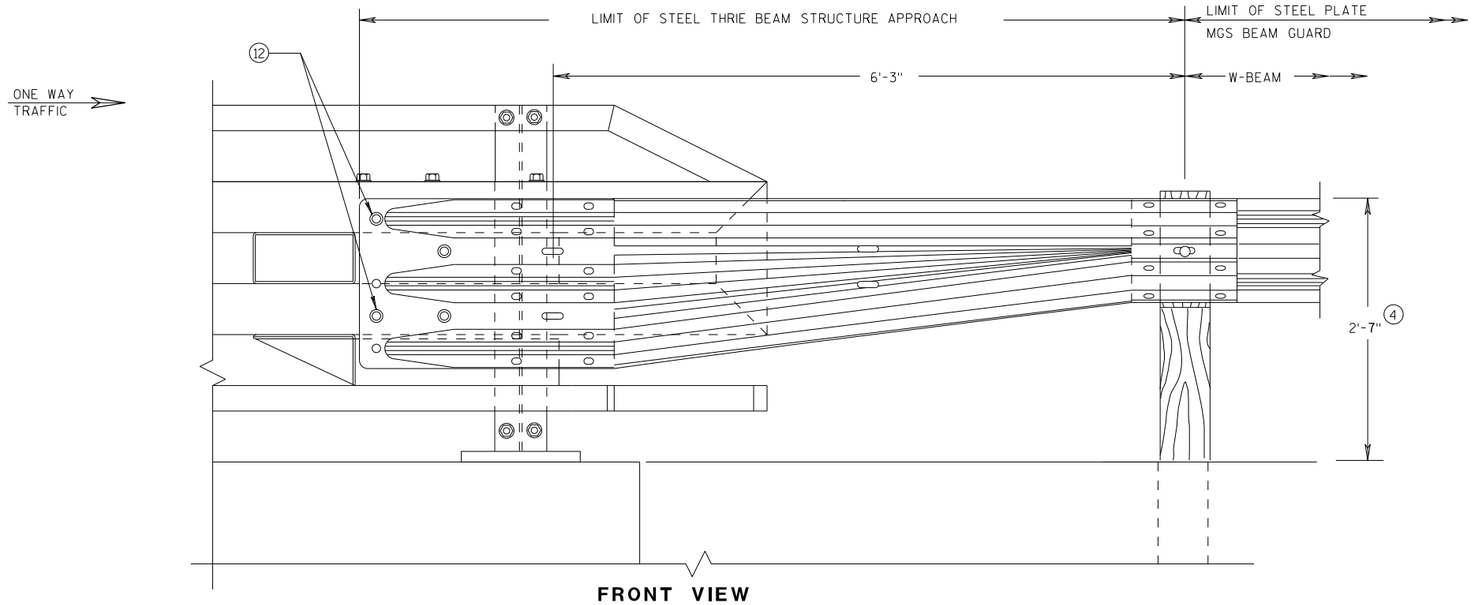
W BEAM TRANSITION AND CONNECTION TO BRIDGE RAILING TYPE "NY3"

(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

GENERAL NOTES

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

(12) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. ON BACKSIDE OF PARAPET ONE ROUND WASHER, AND NUT REQUIRED. BOLT THREAD IS TO EXTEND $\frac{1}{2}$-INCH BEYOND NUT.



FRONT VIEW

W BEAM TRANSITION AND CONNECTION TO BRIDGE RAILING TYPE "NY4"

(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018 DATE
FHWA

/S/ Rodney Taylor
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UNIT SUPERVIS

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6

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

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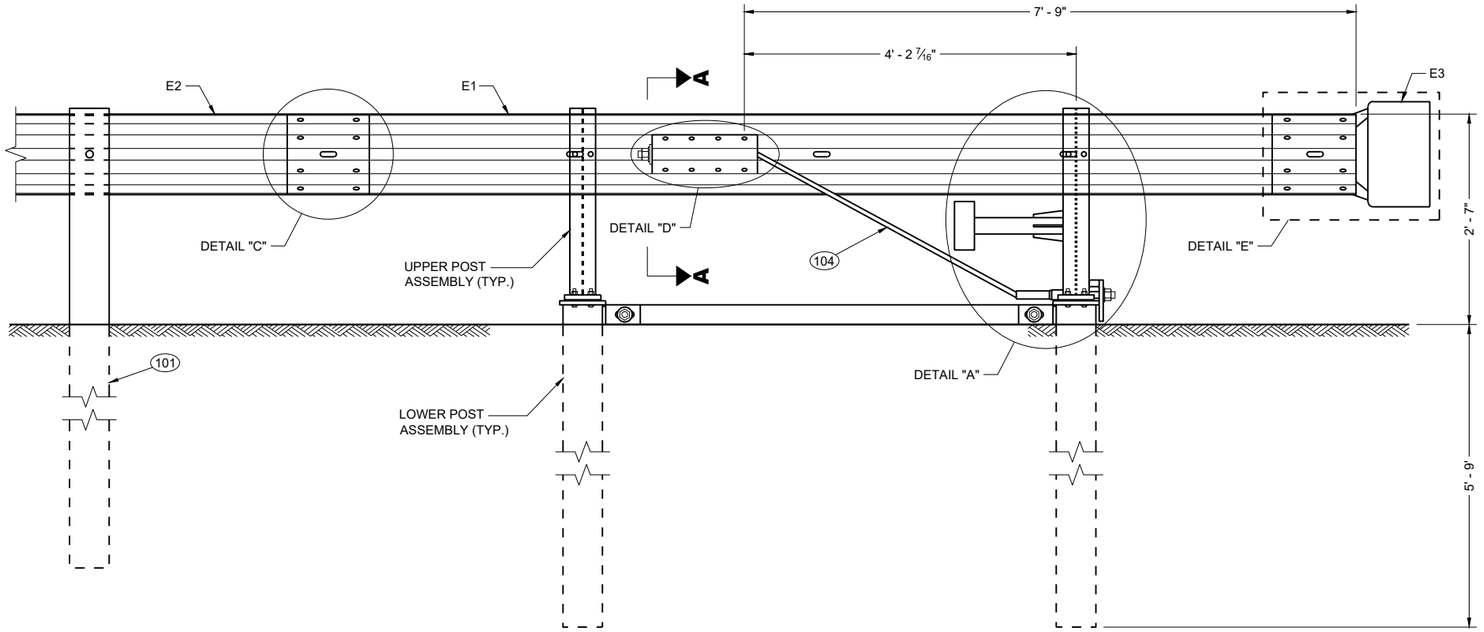
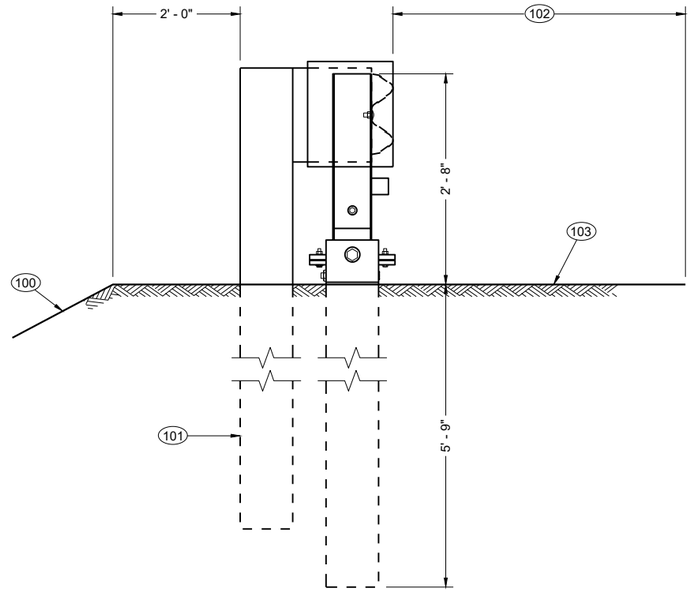
S.D.D. 14 B 45-5L



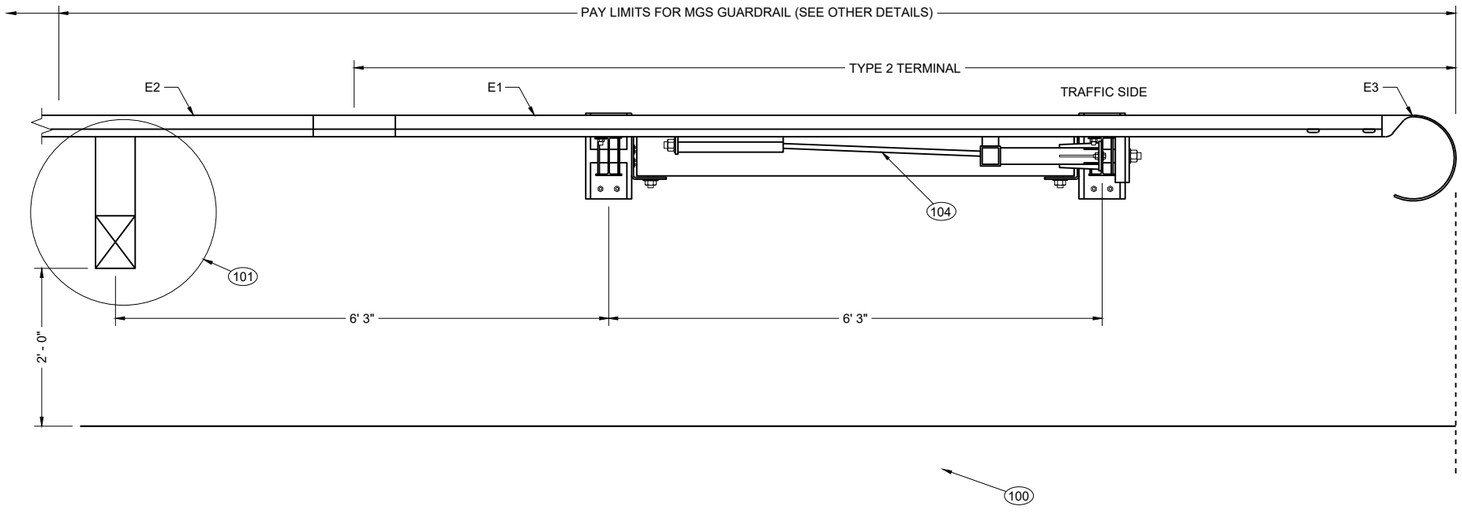
BACK VIEW

TYPE 2 TERMINAL



SIDE VIEW

TYPE 2 TERMINAL



TOP VIEW

TYPE 2 TERMINAL

GENERAL NOTES

SEE SDD 14B42 FOR MORE INFORMATION

(100) MAXIMUM SLOPE IS 2.5:1.

(101) SEE SDD 14B42 FOR MORE INFORMATION.

(102) SHOULDER

(103) MAXIMUM SLOPE IS 10:1.

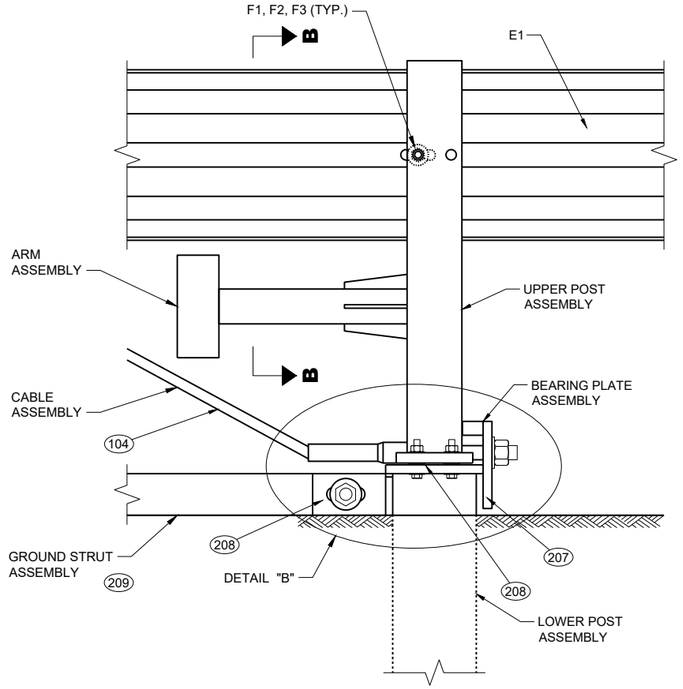
(104) AFTER ASSEMBLY, CABLE IS TO BE TIGHTENED WITHOUT TWISTING THE CABLE.

MIDWEST GUARDRAIL SYSTEM (MGS)
TYPE 2 TERMINAL

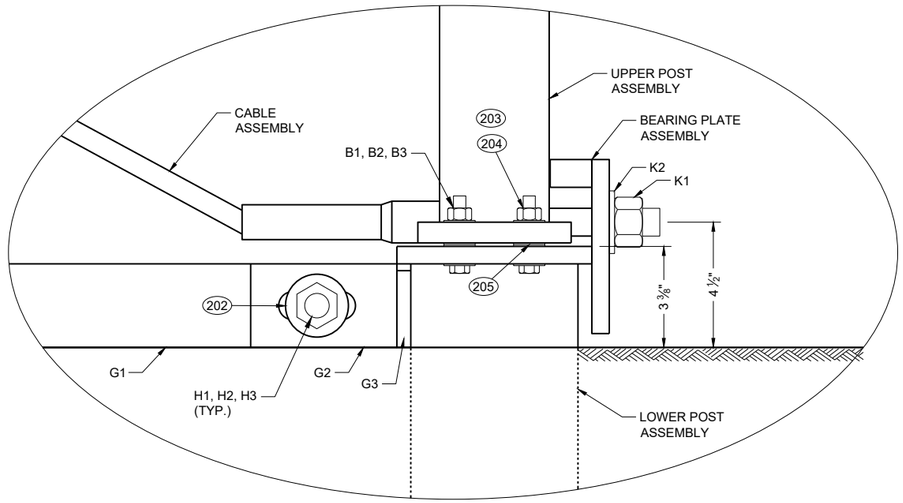
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

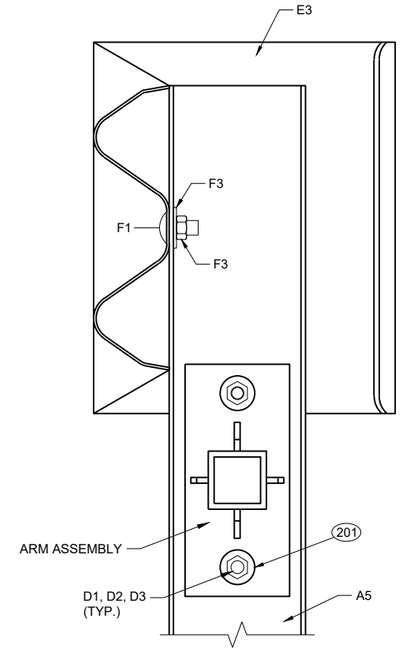
SDD 14B47-07a



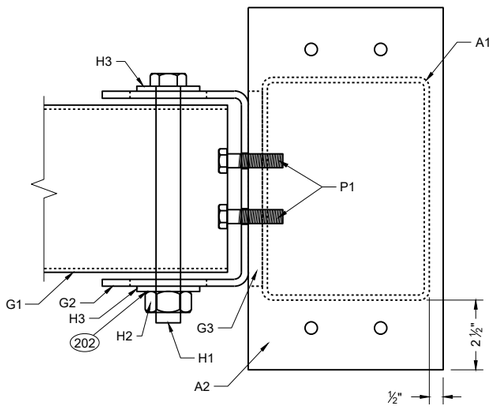
DETAIL "A"



DETAIL "B"

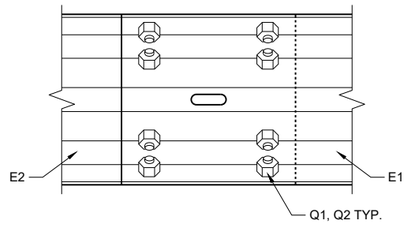


SECTION B - B



TOP VIEW

GROUND STRUT CONNECTION DETAIL



DETAIL "C"

GENERAL NOTES

200 INSTALL ONE WASHER UNDER BOLT HEAD AND RAIL AND ON WASHER BETWEEN NUT AND ANCHOR BRACKET ASSEMBLY.

201 INSTALL ONE WASHER UNDER BOLT HEAD AND UPPER POST ASSEMBLY AND ONE WASHER BETWEEN NUT AND ARM PLATE.

202 INSTALL ONE WASHER UNDER BOLT HEAD AND GROUND STRUT CONNECTOR AND ONE WASHER BETWEEN NUT AND GROUND STRUT CONNECTOR.

203 INSTALL ONE WASHER UNDER BOLT HEAD AND LOWER POST ASSEMBLY AND ONE WASHER BETWEEN NUT AND UPPER POST ASSEMBLY.

204 TORQUE VALUE IS BETWEEN 60 - 75 FT-LB.

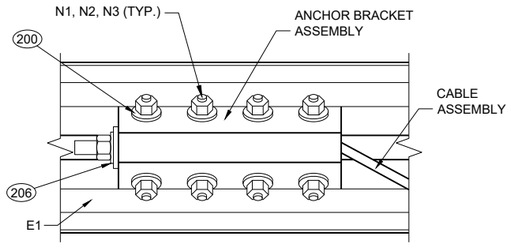
205 TWO WASHERS BETWEEN UPPER AND LOWER POST ASSEMBLY.

206 INSTALL ONE WASHER BETWEEN NUT AND ANCHOR BRACKET ASSEMBLY.

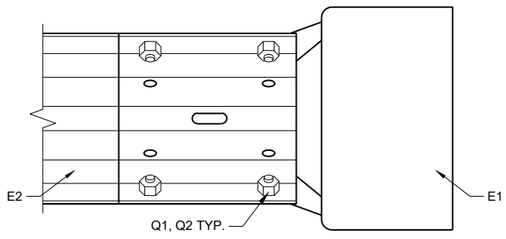
207 NO MATERIAL IS TO BE PLACED AGAINST THE VERTICAL FACES OF BEARING PLATE.

208 PREVENT OR REMOVE MATERIALS THAT BLOCK ACCESS TO BOLTS FOR POST ASSEMBLIES AND GROUND STRUT.

209 PREVENT OR REMOVE MATERIALS THAT IMPEDE REMOVAL OF GROUND STRUT.



DETAIL "D"



DETAIL "E"

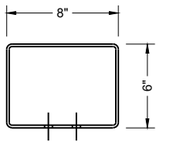
MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

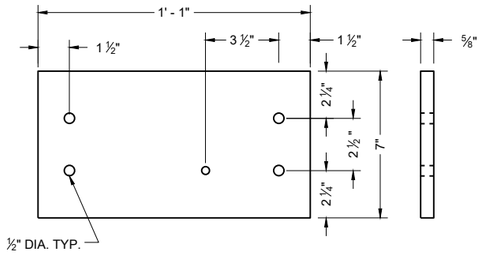
6
SDD 14B47-07b

GENERAL NOTES

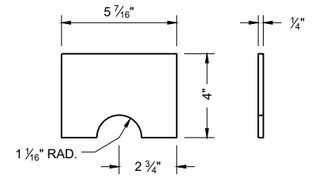
(300) TAP FOR 1/2" AFTER GALVANIZATION



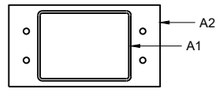
TOP VIEW



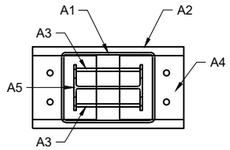
LOWER PLATE (A2)

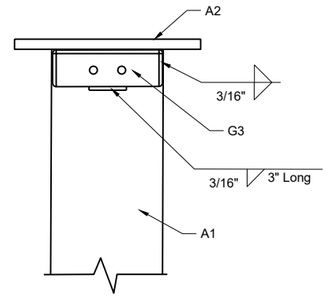


POST GUSSET (A3)

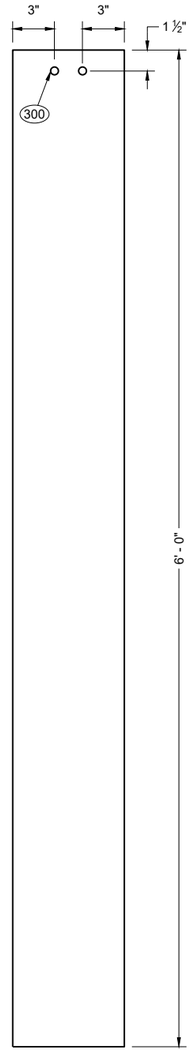


PLAN VIEW



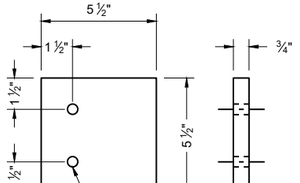


WELDING DETAIL
G3 AND A1

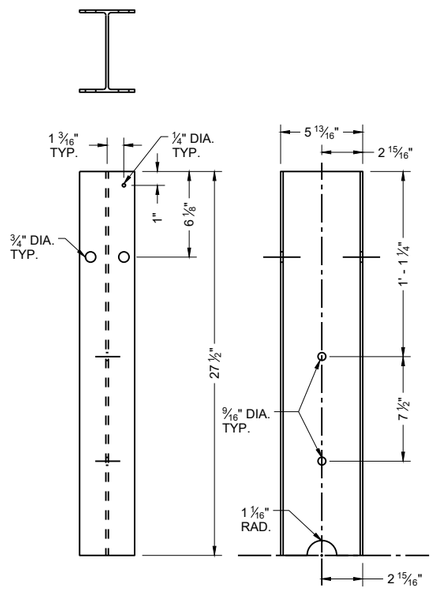


SIDE VIEW

FOUNDATION TUBE (A1)

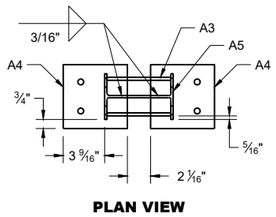


UPPER PLATE (A4)

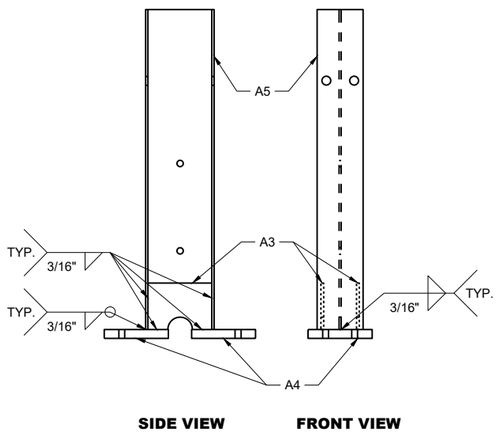


FRONT VIEW SIDE VIEW

TYPE 2 POST (A5)

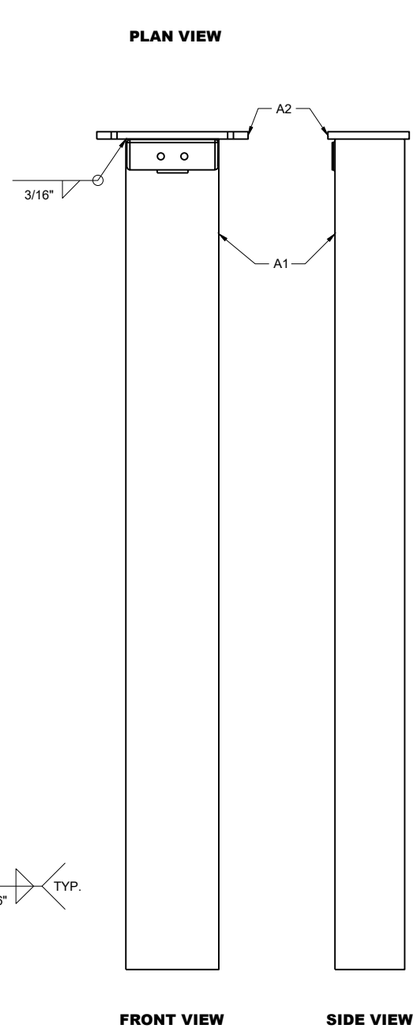


PLAN VIEW



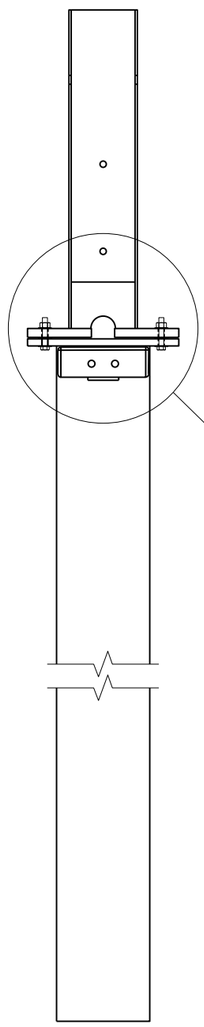
SIDE VIEW FRONT VIEW

UPPER POST ASSEMBLY

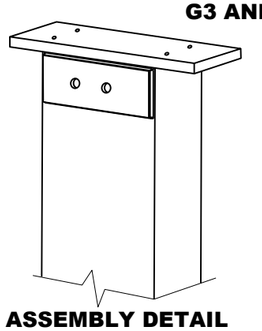


FRONT VIEW SIDE VIEW

LOWER POST ASSEMBLY

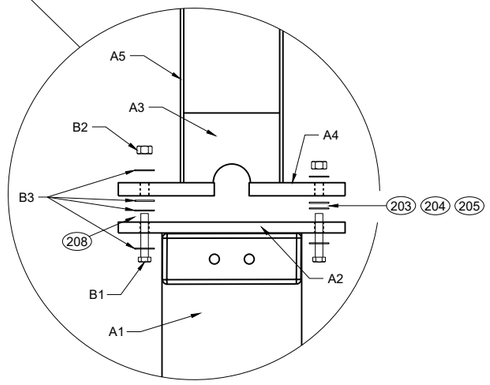


ASSEMBLED POST



ASSEMBLY DETAIL ISOMETRIC

A1



POST CONNECTION DETAIL

MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B47-07c

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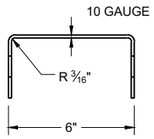
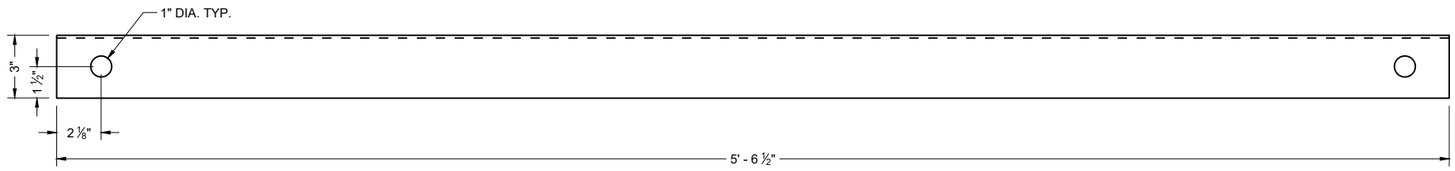
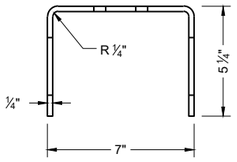


SIDE VIEW

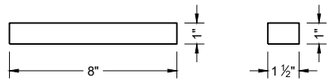


FRONT VIEW

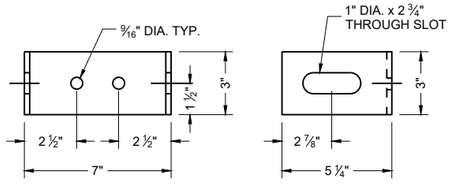
GROUND STRUT CHANNEL (G1)



TOP VIEW



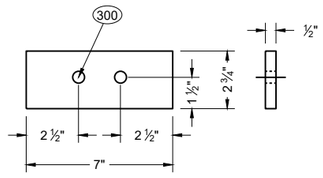
BEARING PLATE FLANGE (L2)



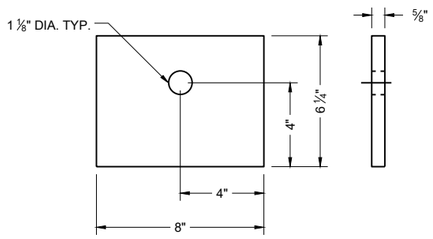
FRONT VIEW

SIDE VIEW

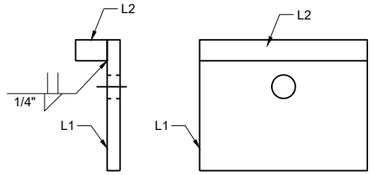
GROUND STRUT CONNECTOR (G2)



GROUND STRUT PLATE (G3)



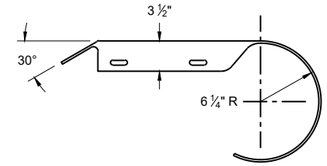
BEARING PLATE (L1)



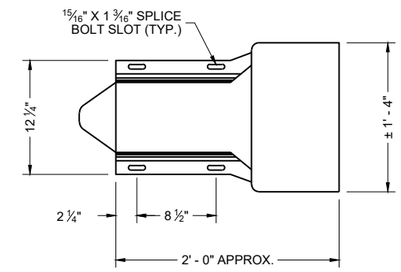
SIDE VIEW

FRONT VIEW

BEARING PLATE ASSEMBLY

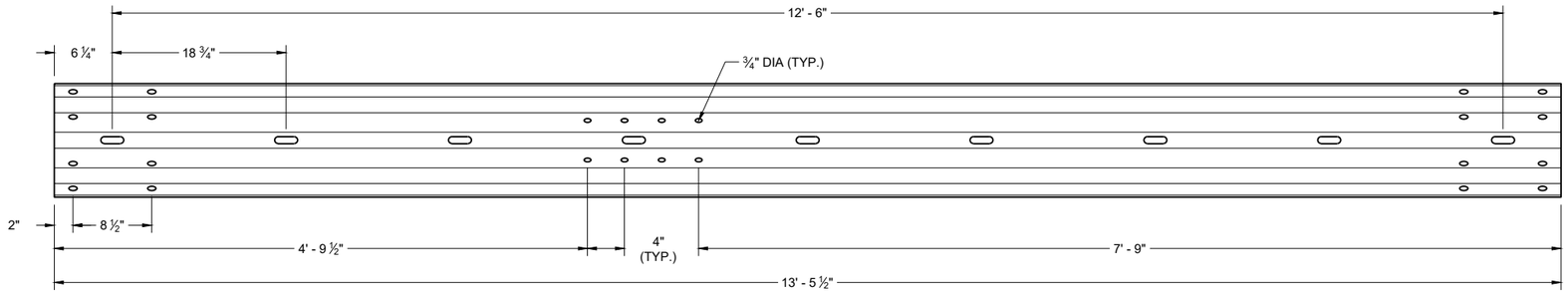


PLAN VIEW

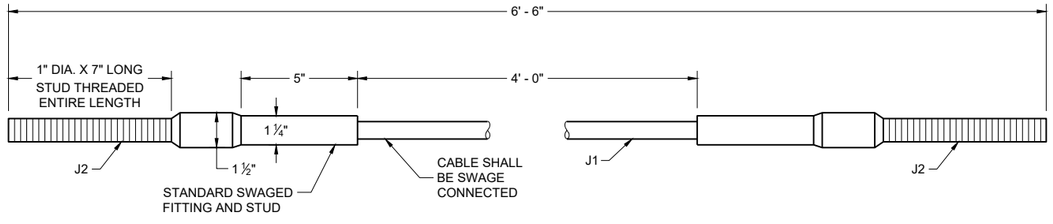


ELEVATION VIEW

ROUNDED BUFFER END (E3)



TYPE 2 GUARDRAIL (E1)

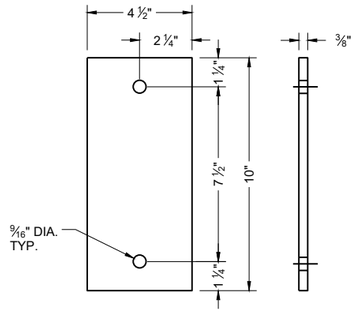


CABLE ASSEMBLY

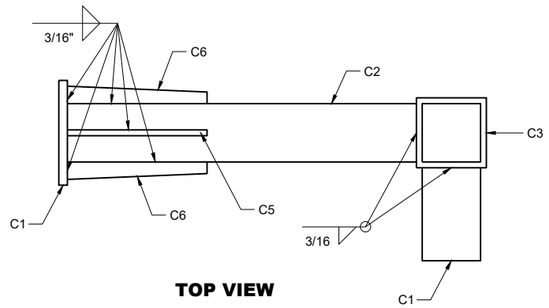
MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

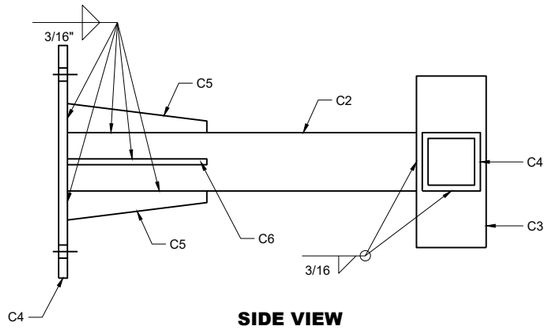
SDD 14B47-07d



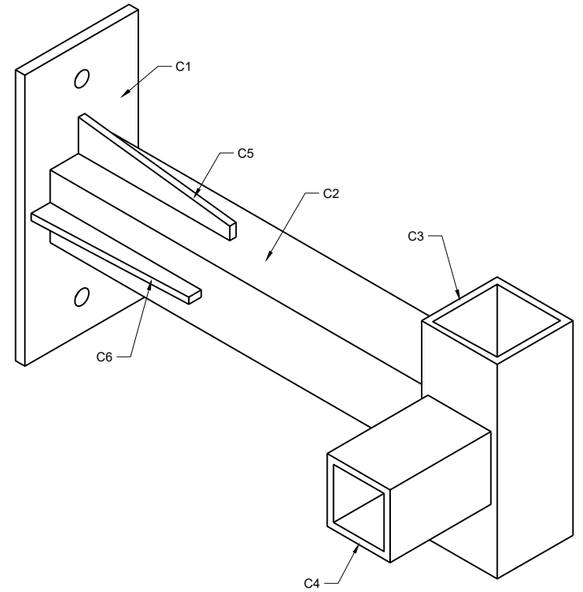
ARM PLATE (C1)



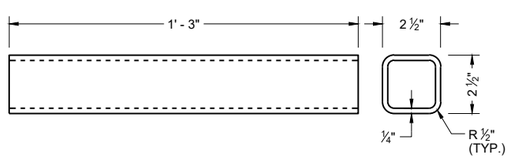
TOP VIEW
ARM ASSEMBLY



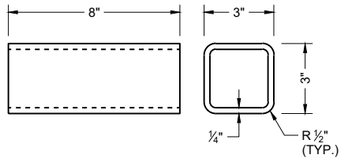
SIDE VIEW
ARM ASSEMBLY



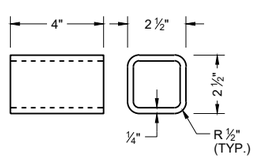
ISOMETRIC VIEW
ARM ASSEMBLY



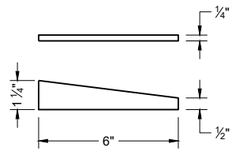
ARM TUBE 1 (C2)



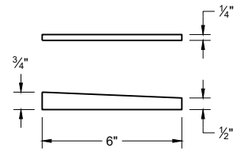
ARM TUBE 2 (C3)



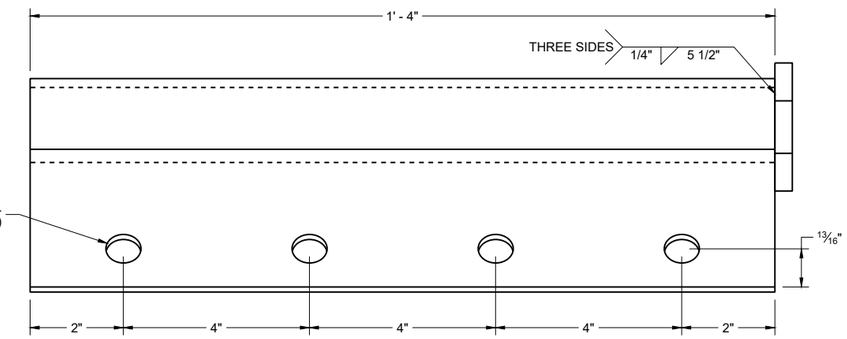
ARM TUBE 3 (C4)

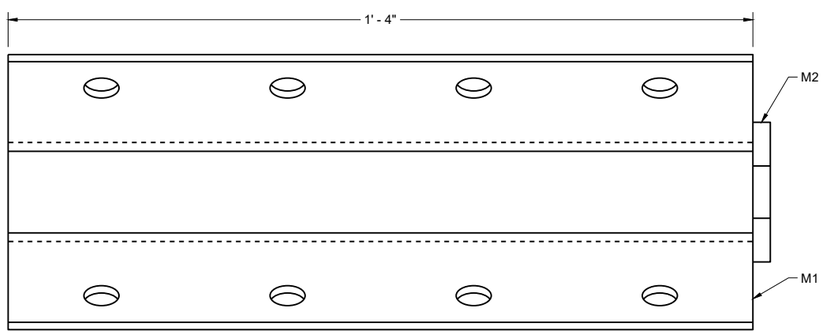


ARM GUSSET PLATE 1 (C5)

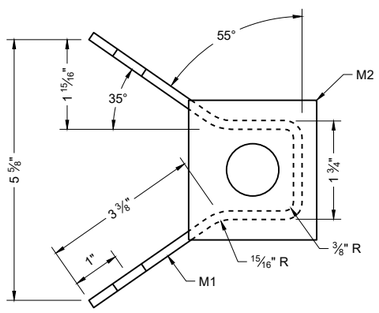


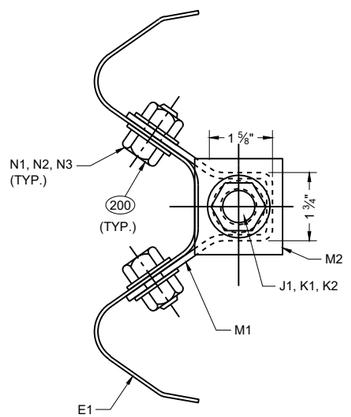
ARM GUSSET PLATE 2 (C6)

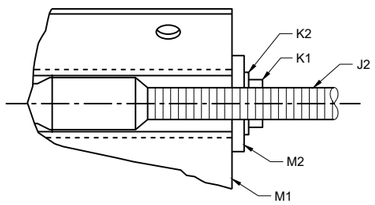




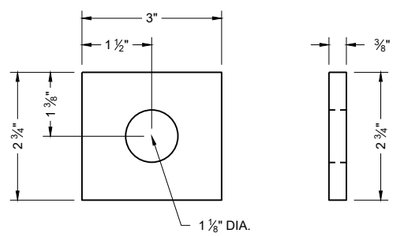
ANCHOR BRACKET (M1, M2)







SECTION A - A



ANCHOR BRACKET BEARING PLATE (M2)

MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

BILL OF MATERIALS - TYPE 2 TERMINAL (MGS)

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
A1	TYPE 2 FOUNDATION TUBE	AASHTO M111 / ASTM A123 ASTM A500 GRADE B OR ASTM A-501	TS 8" x 6" x 3/16"
A2	LOWER PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	5/8" THICKNESS
A3	POST GUSSET	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	1/4" THICKNESS
A4	UPPER PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	3/4" THICKNESS
A5	TYPE 2 POST	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI, w6x9 or w6x8.5	
B1	BREAKAWAY BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC HEAVY HEX HEAD ASTM F3125 GRADE A325 TYPE 1 HEAVY HEX HEAD OR SAE J429 GRADE 5 HEAVY HEX HEAD / ASTM A449 TYPE 1 HEAVY HEX HEAD. BOLTS MAY BE FULLY THREADED . PROVIDE ENOUGH THREADING FOR PROPER TIGHTENING OF BOLT.	7/16" DIA.
B2	BREAKAWAY BOLT WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER ONLY)	7/16" DIA.
B3	BREAKAWAY BOLT NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291/ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	
C1	ARM ASSEMBLY PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	3/8" THICKNESS
C2	ARM ASSEMBLY TUBE 1	AASHTO M111 / ASTM A123 ASTM A500 GRADE B OR ASTM A-501	TS 8" x 6" x 3/16"
C3	ARM ASSEMBLY TUBE 2	AASHTO M111 / ASTM A123 ASTM A500 GRADE B OR ASTM A-501	TS 3" x 3" x 1/4"
C4	ARM ASSEMBLY TUBE 3	AASHTO M111 / ASTM A123 ASTM A500 GRADE B OR ASTM A-501	TS 2 1/2" x 2 1/2" X 1/4"
C5	ARM ASSEMBLY GUSSET PLATE 1	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	1/4" THICKNESS
C6	ARM ASSEMBLY GUSSET PLATE 2	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	1/4" THICKNESS
D1	ARM ASSEMBLY BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC HEAVY HEX HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36	1/2" DIA.
D2	ARM ASSEMBLY WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER ONLY)	1/2" DIA.
D3	ARM ASSEMBLY NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	1/2" DIA.
E1	TYPE 2 GUARD RAIL	AASHTO M180 CLASS A TYPE 2 12 GAUGE APPROVED PRODUCER	
E2	BEAM GUARD RAIL	AASHTO M180 CLASS A TYPE 2 12 GAUGE APPROVED PRODUCER	
E3	BEAM GUARD ROUNDED BUFFER END	AASHTO M180 CLASS A TYPE 2 12 GAUGE APPROVED PRODUCER	
F1	POST BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC UNC HEAVY HEX HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36	5/8" DIA.
F2	POST BOLT WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER ONLY)	5/8" DIA.
F3	POST BOLT NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291/ASTM A 563 AASHTO M180 RECESSED HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	
G1	GROUND STRUT CHANNEL	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	1/2" x 11 3/4" x 10 GAUGE
G2	GROUND STRUT CONNECTOR	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	1/4" THICKNESS
G3	GROUND STRUT PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	1/2" THICKNESS

MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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SDD 14B47-07f

BILL OF MATERIALS - TYPE 2 TERMINAL (MGS)

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
H1	GROUND STRUT BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC HEAVY HEX HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36	7/8" DIA.
H2	GROUND STRUT BOLT WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER ONLY)	7/8" DIA.
H3	GROUND STRUT BOLT NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC HEAVY HEX HEAD 5/8" ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36	
J1	BCT CABLE	AASHTO M30 / ASTM A741 6 x 19 INDEPENDENT WIRE CORE (IWRC) IMPROVED PLOW STEEL (IPS), 6 x 19 INDEPENDENT WIRE CORE (IWRC) IMPROVED PLOW STEEL (IPS) TYPE II OR IIC, CLASS C ZINC COATED MIN. BREAKING STRENGTH OF 42.7 KIPS	3/4" DIA.
J2	BCT CABLE	UNC 1" ASTM A576 GRADE 1035 SWAGE FITTINGS ARE TO BE FACTORY SWEDGED. MIN BREAKING STRENGTH OF 42.7 KIPS ASME B30.26 "FORGED, CAST, OR DIE STAMPED WITH THE FOLLOWING IN TO CONNECTION: NAME OF MANUFACTURE OR TRADEMARK OF CONNECTION'S MANUFACTURER, SIZE OR RATED LOAD, GRADE FOR ALLOY EYEBOLTS."	
K1	CABLE ASSEMBLY NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	1" DIA.
K2	CABLE ASSEMBLY WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1	1" DIA.
L1	BEARING PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	5/8" THICKNESS
L2	BEARING PLATE FLANGE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	1" THICKNESS
M1	BEAM GUARD ANCHOR BRACKET	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	
M2	BEAM GUARD ANCHOR END PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	3/8" THICKNESS
N1	ANCHOR BRACKET BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC AASHTO M180 HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36	5/8" DIA.
N2	ANCHOR BRACKET BOLT WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER ONLY)	5/8" DIA.
N3	ANCHOR BRACKET BOLT NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 /ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	
P1	FOUNDATION TUBE BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	1/2" DIA.
Q1	SPLICE BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC AASHTO M180 HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36	
Q2	SPLICE NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 AASHTO M180 RECESSED HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	5/8" DIA.

MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2025 — DATE
/S/ Rodney Taylor — <position>
FHWA

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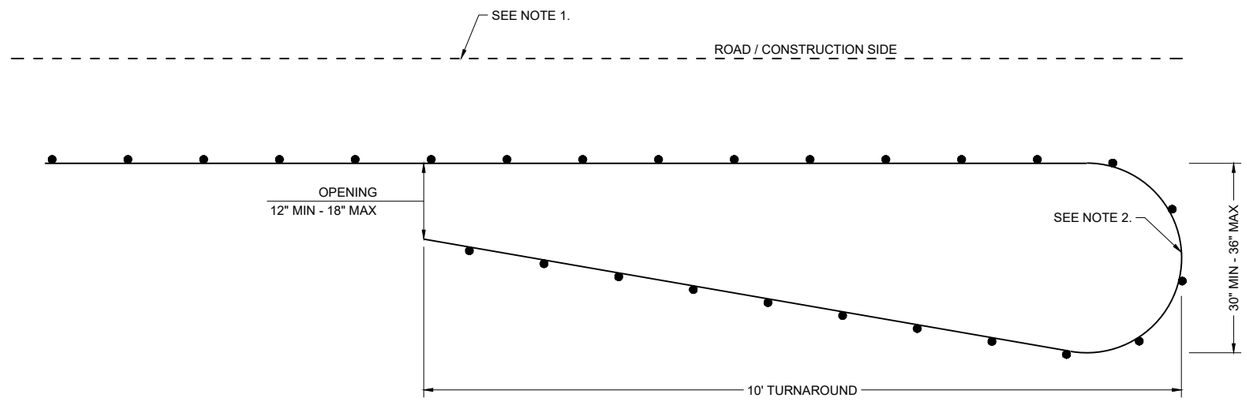
SDD 14B47-07g

GENERAL NOTES:

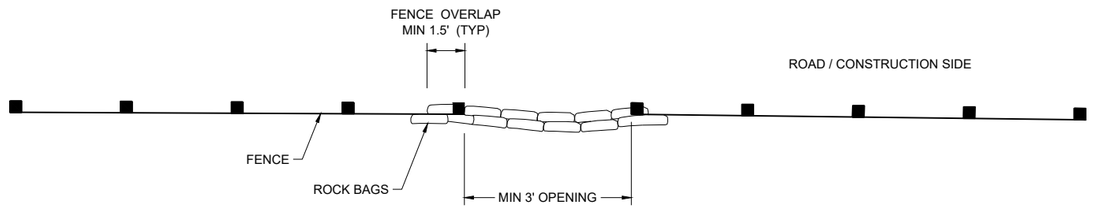
1. WHERE SILT FENCE IS REQUIRED, IT SHALL BE PLACED ON THE CONSTRUCTION SIDE OF THE EXCLUSION FENCING, OR COMBINED WITH THE EXCLUSION FENCING AS ALLOWED IN THE SPECIFICATIONS. STAKES ON THIS DETAIL ARE OPPOSITE OF STANDARD SILT FENCE FOR SEDIMENT CONTROL.
2. PLACE TURNAROUNDS AT ALL TERMINI ENDS OF THE EXCLUSION FENCING.
3. IF TEMPORARY ACCESS POINTS ARE NEEDED DURING CONSTRUCTION THAT REQUIRE OPENINGS IN THE EXCLUSION FENCING, ACCESS OPENINGS SHOULD BE TIGHTLY SECURED WITH BALES OF HAY OR STRAW WHENEVER CONSTRUCTION RELATED ACTIVITIES ARE NOT OCCURRING. REINSTALL EXCLUSION FENCING WHEN THE WORK REQUIRING THE TEMPORARY ACCESS OPENING IS COMPLETED.
4. THE FENCE CAP MAY BE A 6" UNDER DRAIN PIPE, SLIT DOWN THE CENTER AND PLACED OVER THE FENCE. COMMERCIALLY AVAILABLE SAFETY CAPS WITH A LIP MAY BE USED. OTHER DNR APPROVED METHODS TO PREVENT TURTLES FROM PASSING OVER THE TOP OF THE FENCE MAY BE USED.

   SECURELY FASTEN THE CAP TO PREVENT IT FROM BEING DISLODGED.

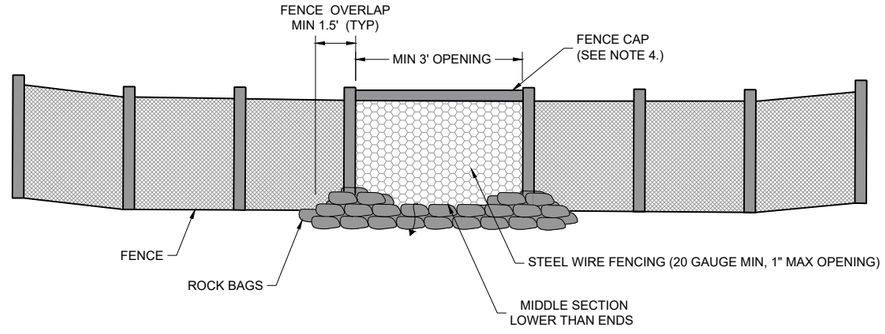


PLAN VIEW

CLIMBING TURTLE EXCLUSION FENCE DETAIL



PLAN VIEW



FRONT VIEW

CLIMBING TURTLE FENCE RELIEF DETAIL

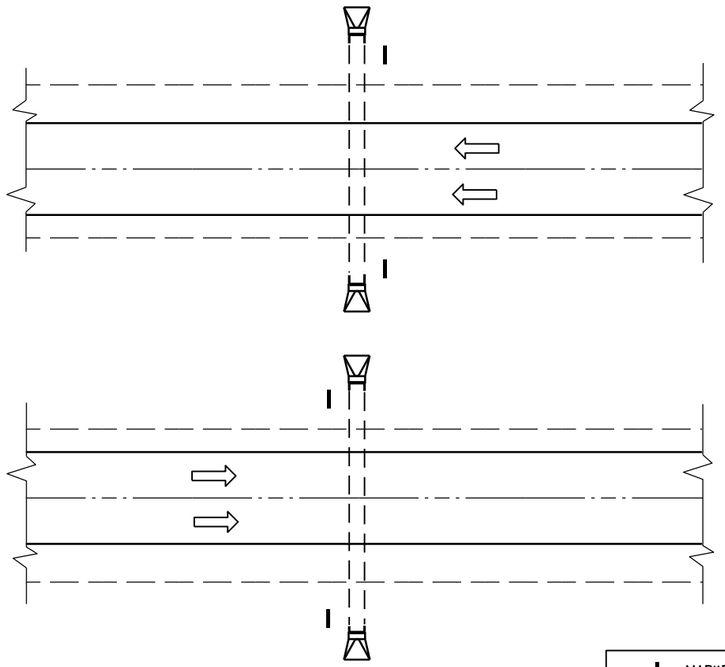
TURTLE EXCLUSION FENCE
CLIMBING TURTLE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
AUGUST 2025
DATE

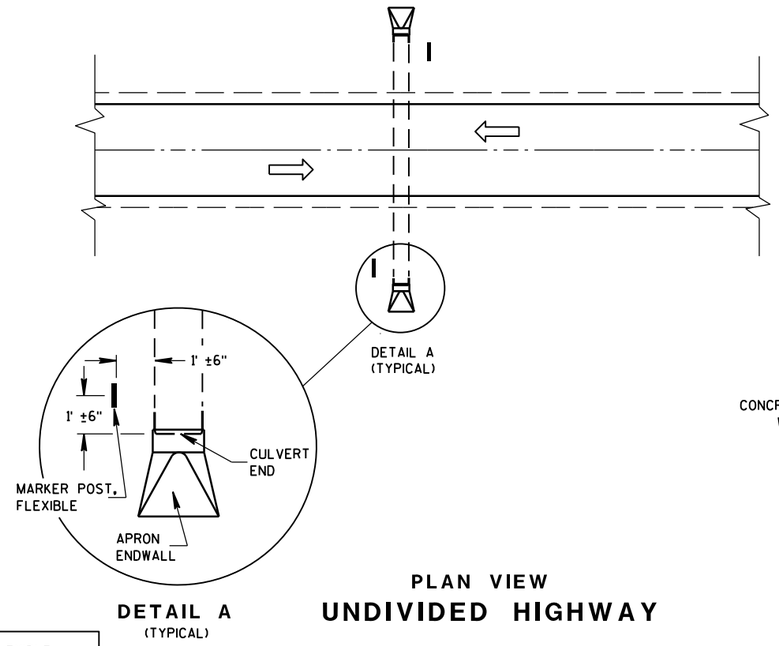
/S/ ALYSSA BARRETTE
CHIEF STATEWIDE ENVIRONMENTAL SERVICES
BUREAU OF TECHNICAL SER

FHWA



PLAN VIEW

DIVIDED HIGHWAY



DETAIL A
(TYPICAL)

PLAN VIEW

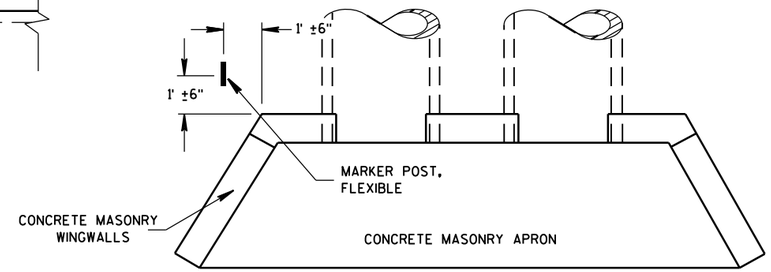
UNDIVIDED HIGHWAY

MARKER POST, FLEXIBLE

DIRECTION OF TRAFFIC FLOW

GENERAL NOTES

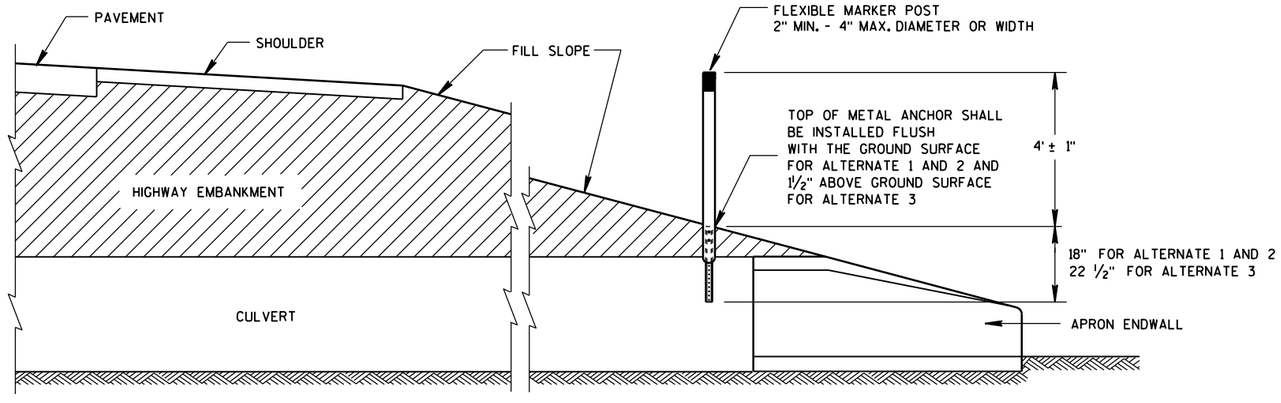
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



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

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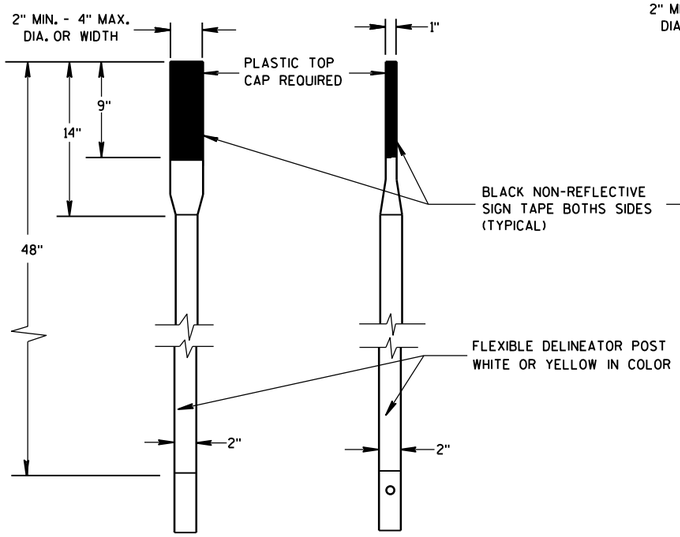
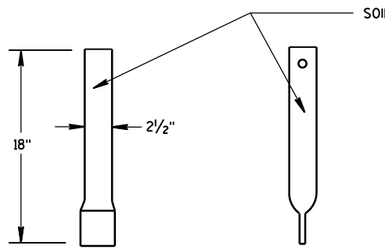
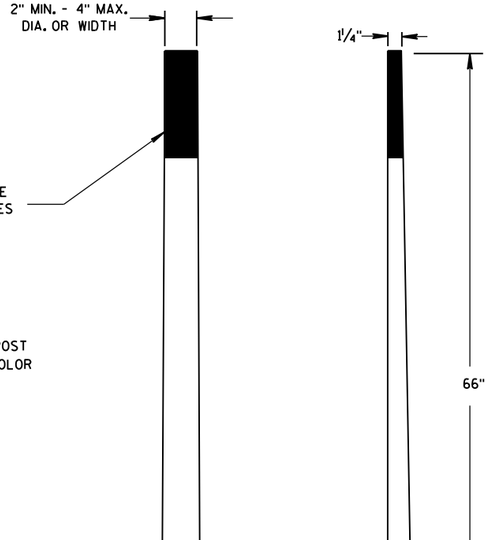
S.D.D. 15 A 3-2a





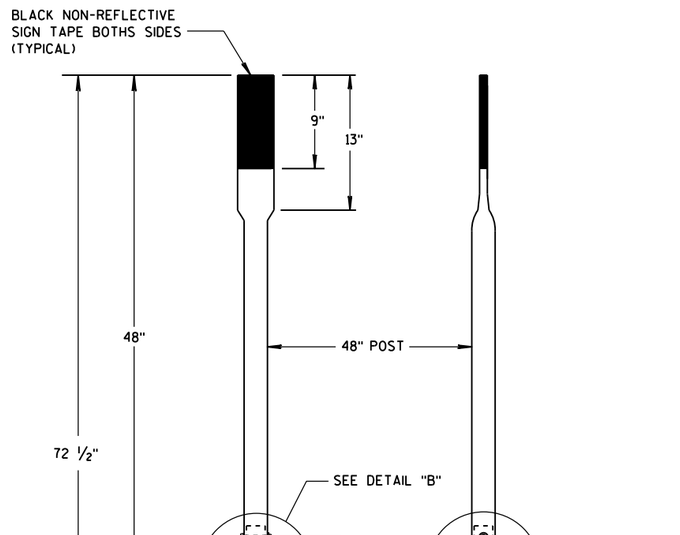
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

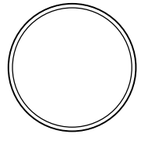
ALTERNATE 2



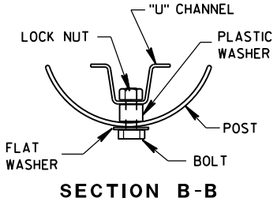
FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POSTS



SECTION A-A



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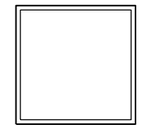
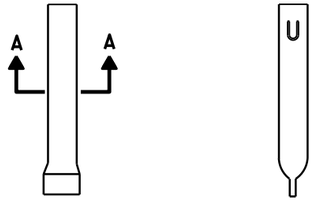
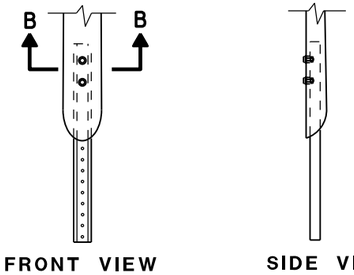


SECTION C-C



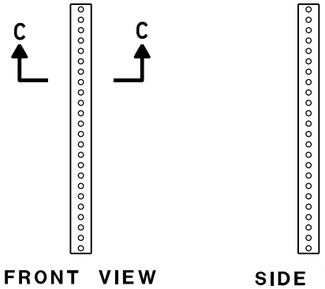
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

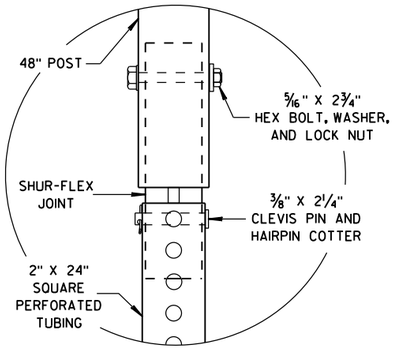
ALTERNATE 2



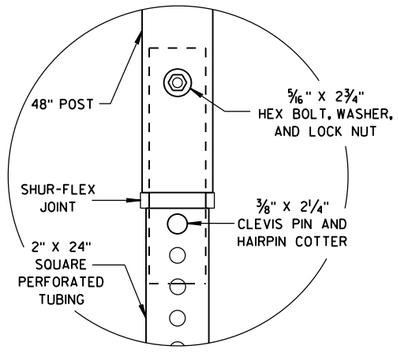
FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POST ANCHORS



DETAIL B



DETAIL C

FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/1/2012 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

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

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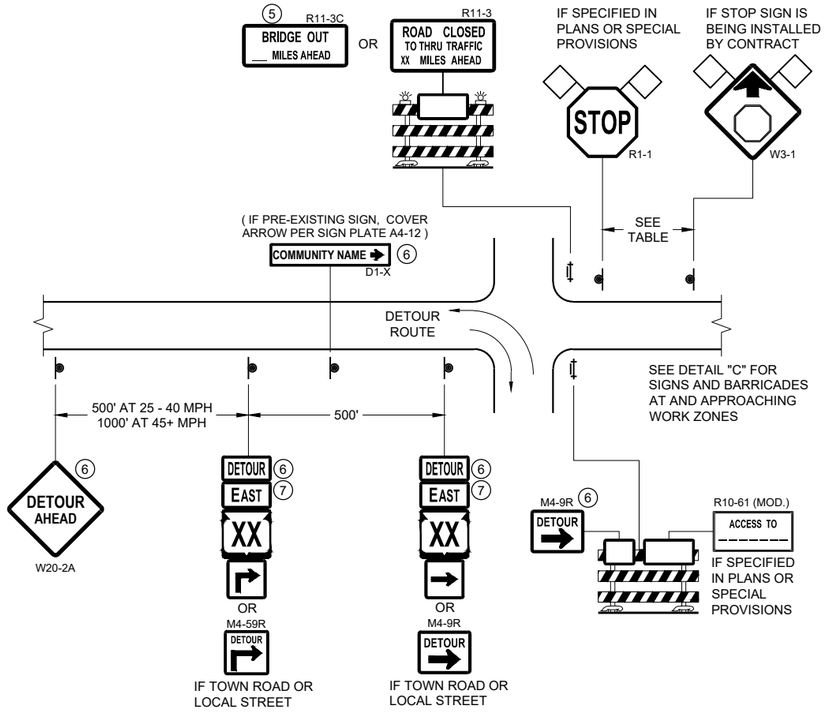
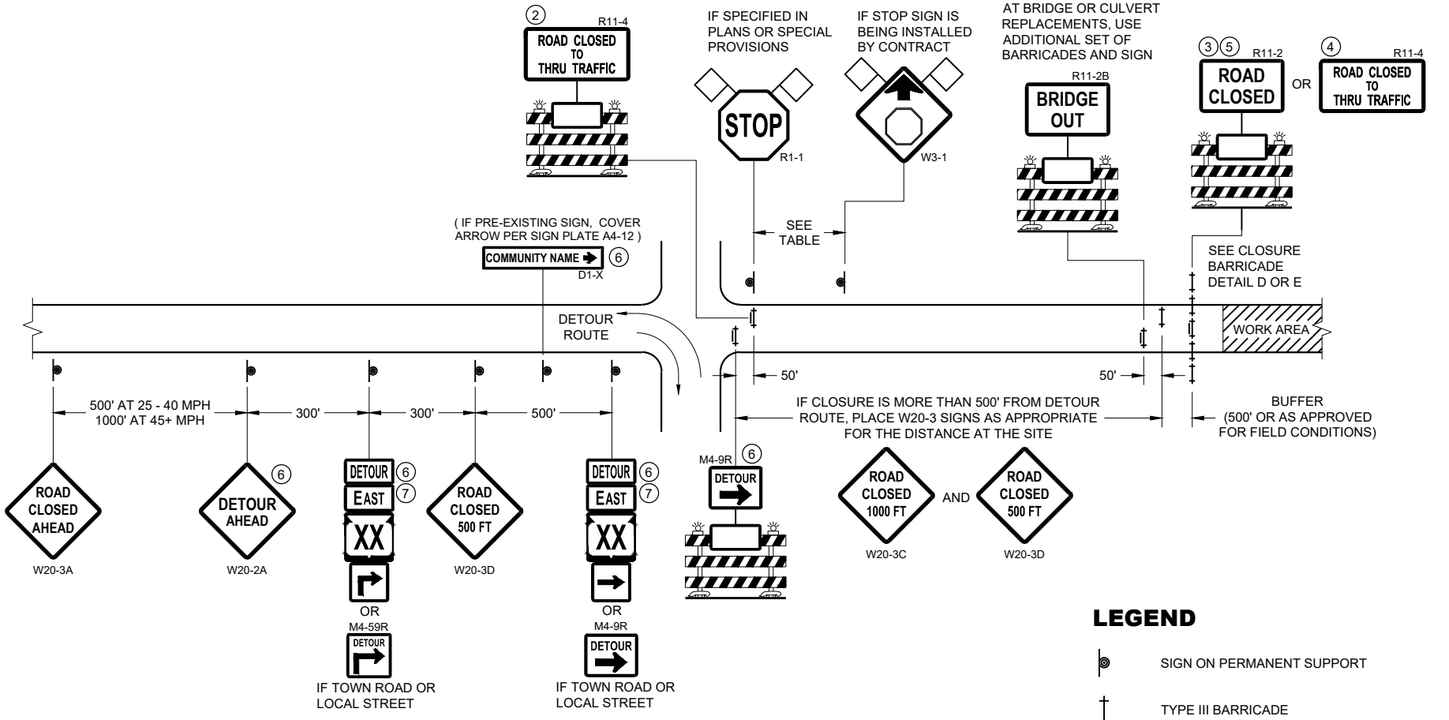
S.D.D. 15 A 3-2b



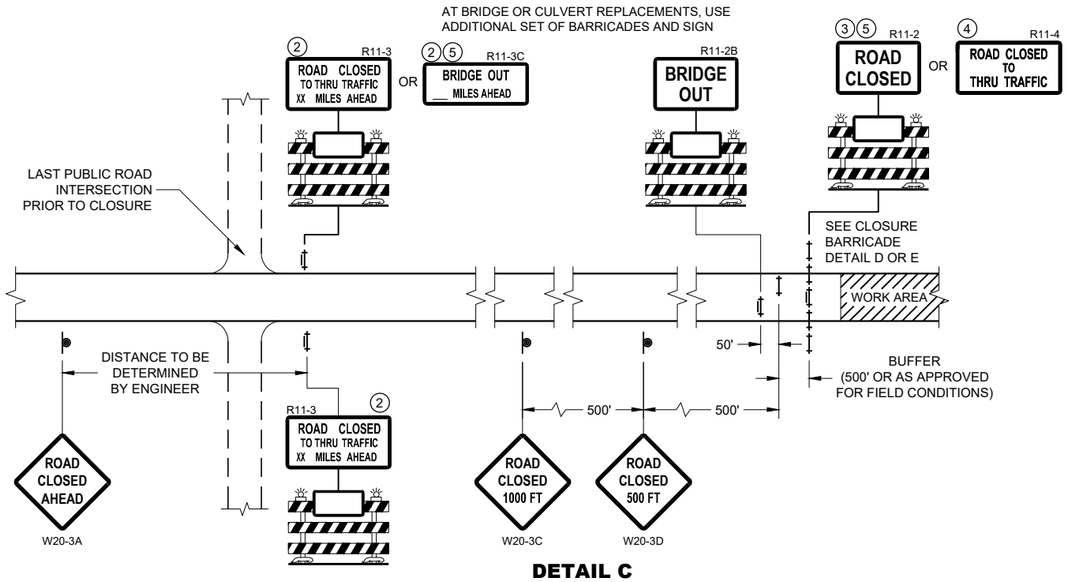
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE GREATER THAN OR EQUAL TO ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE LESS THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

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

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

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA
- FLAGS, 16" X 16" MIN. (ORANGE)
- DETOUR — M4 - 8
- EAST — M3 - X
- XX — M1 - 4 OR XX — M1 - 6 OR COUNTY X — M1 - 5A
- M05 - 1 OR M06 - 1

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

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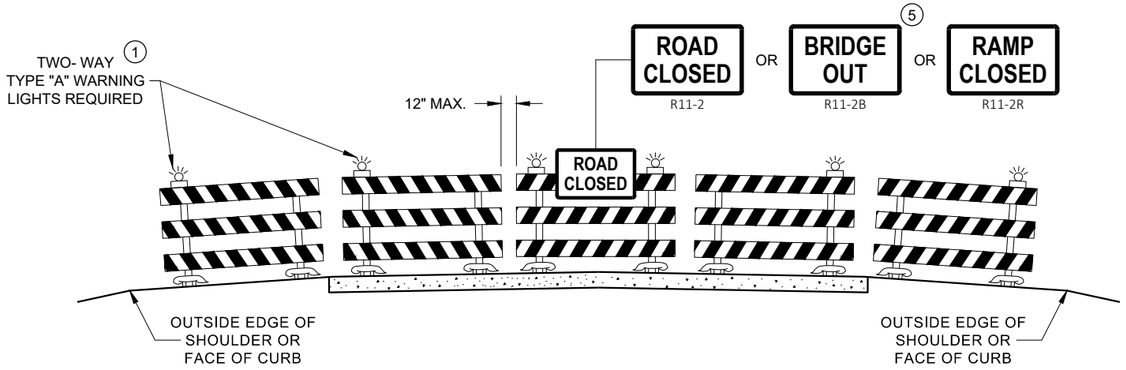
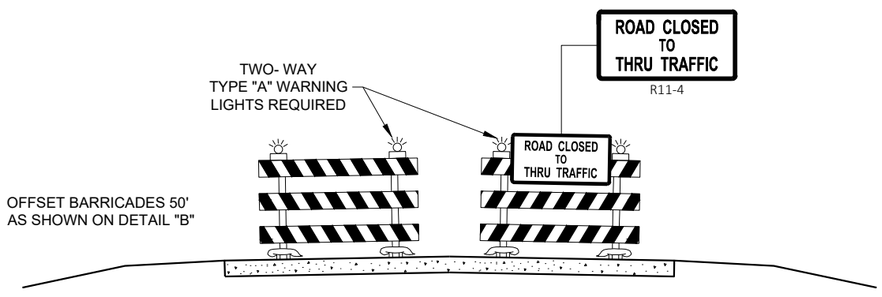
SDD 15C02 - 09a



DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW



DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW

SEE SDD 15C2 - SHEET "a" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

(1) TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8 FOOT LIGHT SPACING.

(2) THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT AN INTERSECTION.

(3) FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "D".

(4) FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "E".

(5) FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11 - 2 AND R11 - 3 SIGNS.

(6) INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.

(7) "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

BARRICADES AND SIGNS FOR VARIOUS CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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SDD 15C02 - 09b

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SDD 15C02 - 09b

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

LEGEND

- SIGN ON PERMANENT SUPPORT
- WORK AREA
- DETOUR — M4 - 8
- EAST — M3 - X
- XX — M1 - 4 OR XX — M1 - 6 OR COUNTY X — M1 - 5A
- M05 - 1 OR M06 - 1 OR M06 - 1

GENERAL NOTES

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

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

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

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

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

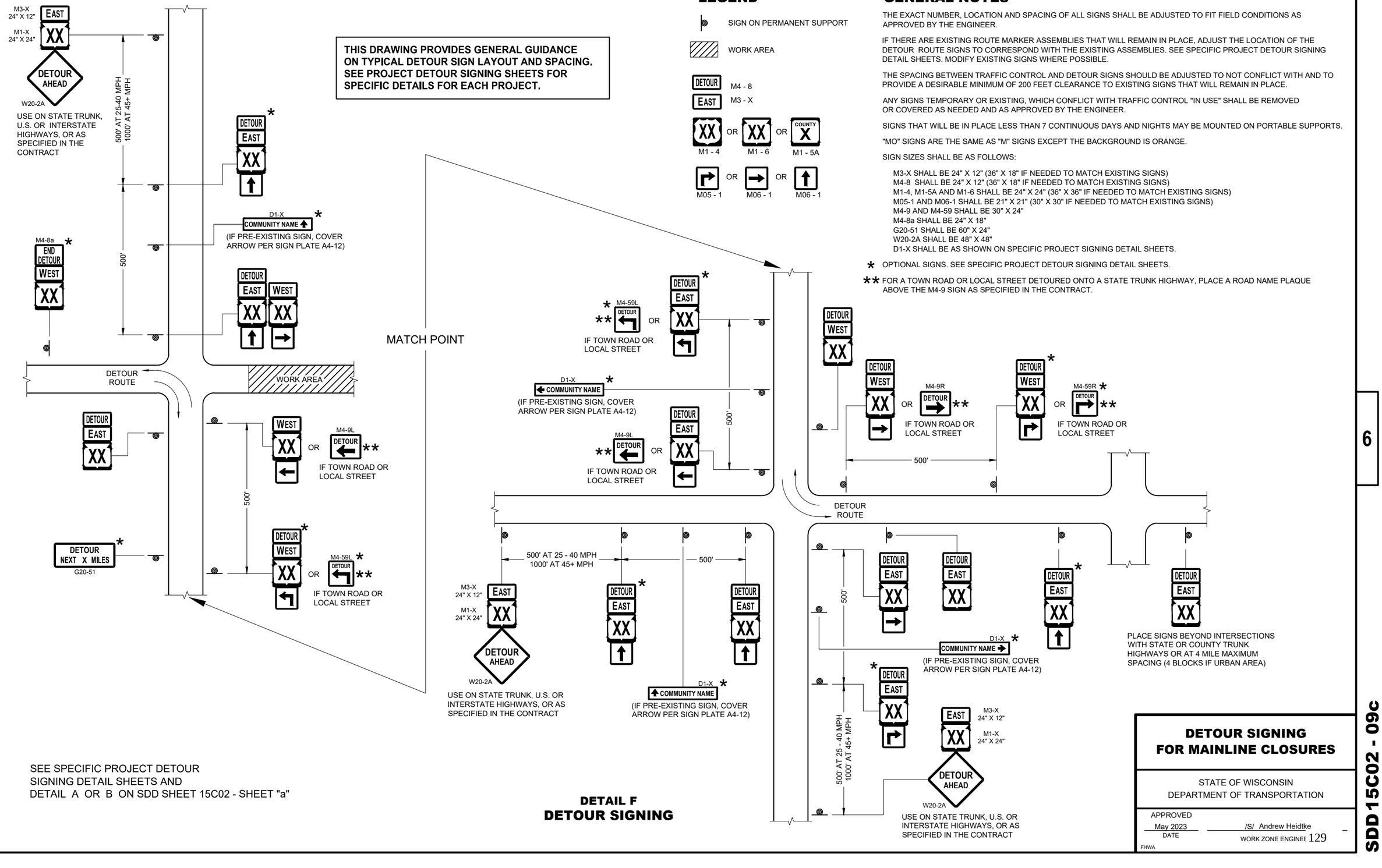
"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGN SIZES SHALL BE AS FOLLOWS:

- M3-X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4-8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1-4, M1-5A AND M1-6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS)
- M05-1 AND M06-1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
- M4-9 AND M4-59 SHALL BE 30" X 24"
- M4-8a SHALL BE 24" X 18"
- G20-51 SHALL BE 60" X 24"
- W20-2A SHALL BE 48" X 48"
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.

* OPTIONAL SIGNS. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS.

** FOR A TOWN ROAD OR LOCAL STREET DETOURED ONTO A STATE TRUNK HIGHWAY, PLACE A ROAD NAME PLAQUE ABOVE THE M4-9 SIGN AS SPECIFIED IN THE CONTRACT.



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

DETAIL F
DETOUR SIGNING

DETOUR SIGNING FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

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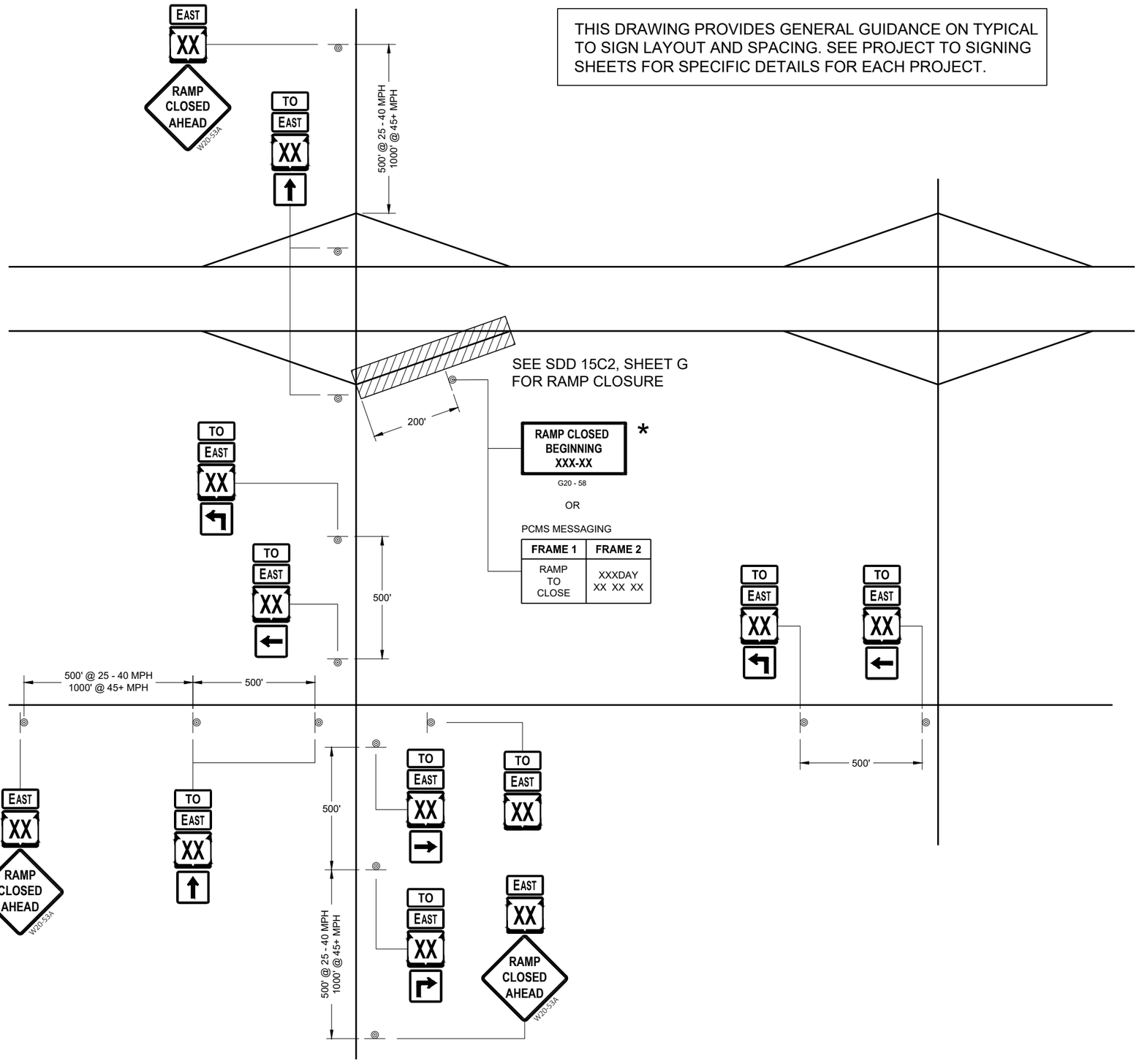
6



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

LEGEND

SIGN ON PERMANENT SUPPORT

TO EAST — MO4 - 5, M3 - X

XX M1 - 6 OR XX M1 - 4 OR INTERSTATE XX M1 - 1

M05 - 1 OR M06 - 1 OR M06 - 1

GENERAL NOTES

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

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

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

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

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

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

SIGN SIZES SHALL BE AS FOLLOW:
- M3 - X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS).
- MO4 - 5 SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS).
- M1 - 1, M1 - 4, AND M1 - 6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS).
- MO5 - 1, MO5 - 2, AND MO6 - 1, SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS).
- W20 - 53A SHALL BE 48" X 48"

* PLACE "RAMP CLOSED BEGINNING" SIGN 7 CALENDAR DAYS PRIOR TO CLOSURE OR AS DIRECTED BY THE ENGINEER. SEE WISCONSIN STANDARD SIGN PLATES FOR LAYOUT.

ON RAMP LANE CLOSURE

STATE OF WISCONSIN
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May 2023 — DATE
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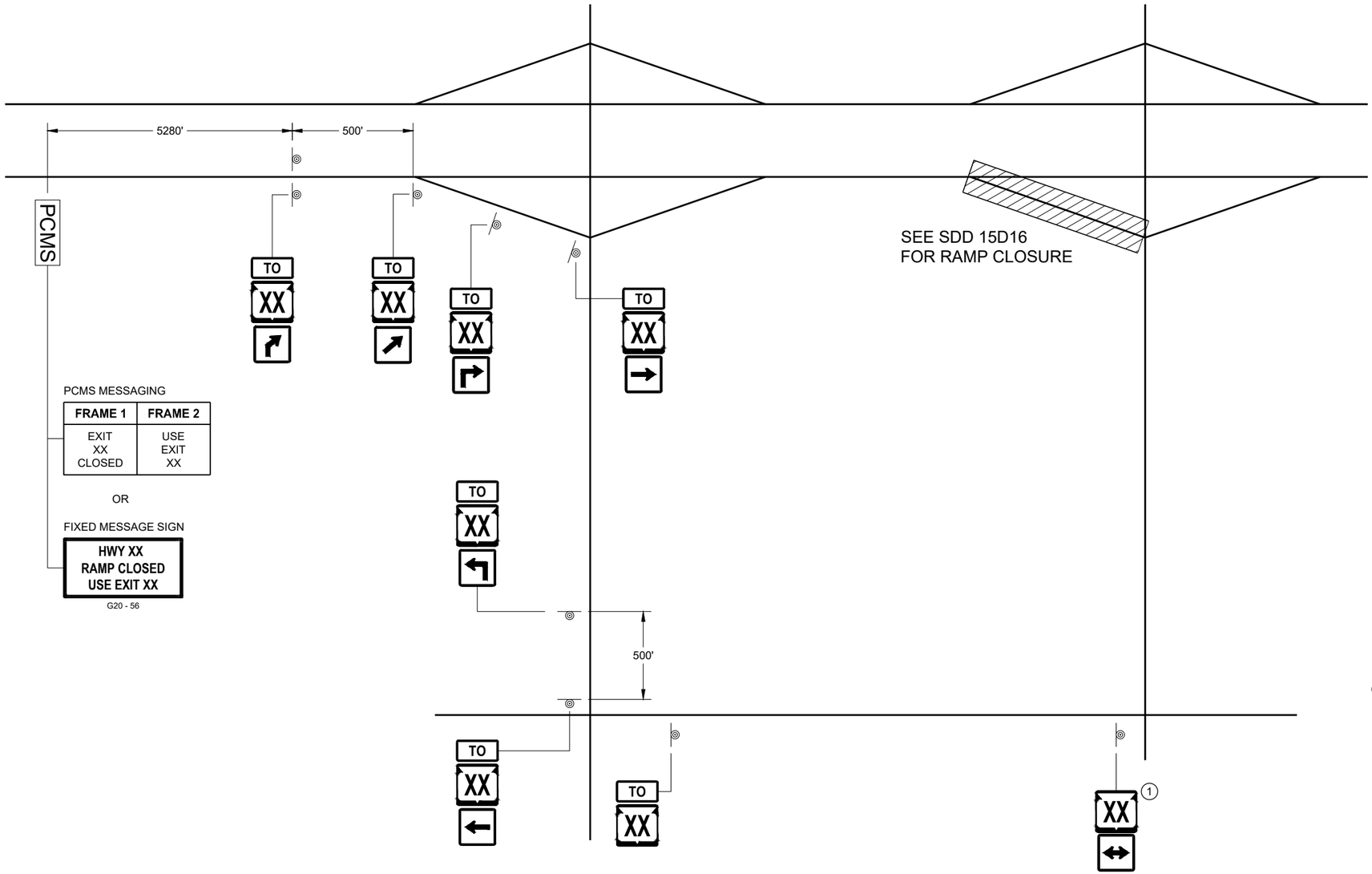
THIS DRAWING PROVIDES GENERAL GUIDANCE ON TYPICAL "TO" MO-4 SIGN LAYOUT AND SPACING. SEE PROJECT TO SIGNING SHEETS FOR SPECIFIC DETAILS FOR EACH PROJECT.



PCMS MESSAGING

FRAME 1	FRAME 2
EXIT XX CLOSED	USE EXIT XX

OR

FIXED MESSAGE SIGN

HWY XX
RAMP CLOSED
USE EXIT XX

G20 - 56

LEGEND

SIGN ON PERMANENT SUPPORT

PCMS PORTABLE CHANGEABLE MESSAGE SIGN

TO MO4 - 5

XX M1 - 4 OR XX M1 - 6 OR COUNTY X M1 - 5A

M05 - 1 OR M05 - 2 OR M06 - 1 OR M06 - 2 OR M06 - 4

GENERAL NOTES

SEE SDD 15D16 "TRAFFIC CONTROL, EXIT RAMP CLOSURE" DETAIL FOR TRAFFIC CONTROL AT EXIT RAMP CLOSURE.

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

IF THERE ARE ANY ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE "TO" MO-4 ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. SEE SPECIFIC PROJECT TO SIGNING DETAIL SHEETS. MODIFY EXISTING SIGNS WHERE POSSIBLE.

THE SPACING BETWEEN TRAFFIC CONTROL AND "TO" MO-4 SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

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

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

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

SIGN SIZES SHALL BE AS FOLLOW:
- MO4 - 5 SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS).
- M1 - 4, M1 - 5A, AND M1 - 6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS).
- MO5 - 1, MO5 - 2, AND MO6 - 1, SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS).

(1) ONLY ADD IF THERE ARE NO EXISTING ROUTE MARKERS FOR THE INTERSECTING ROADWAY.

OFF RAMP
LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

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SDD 15C02 - 09e

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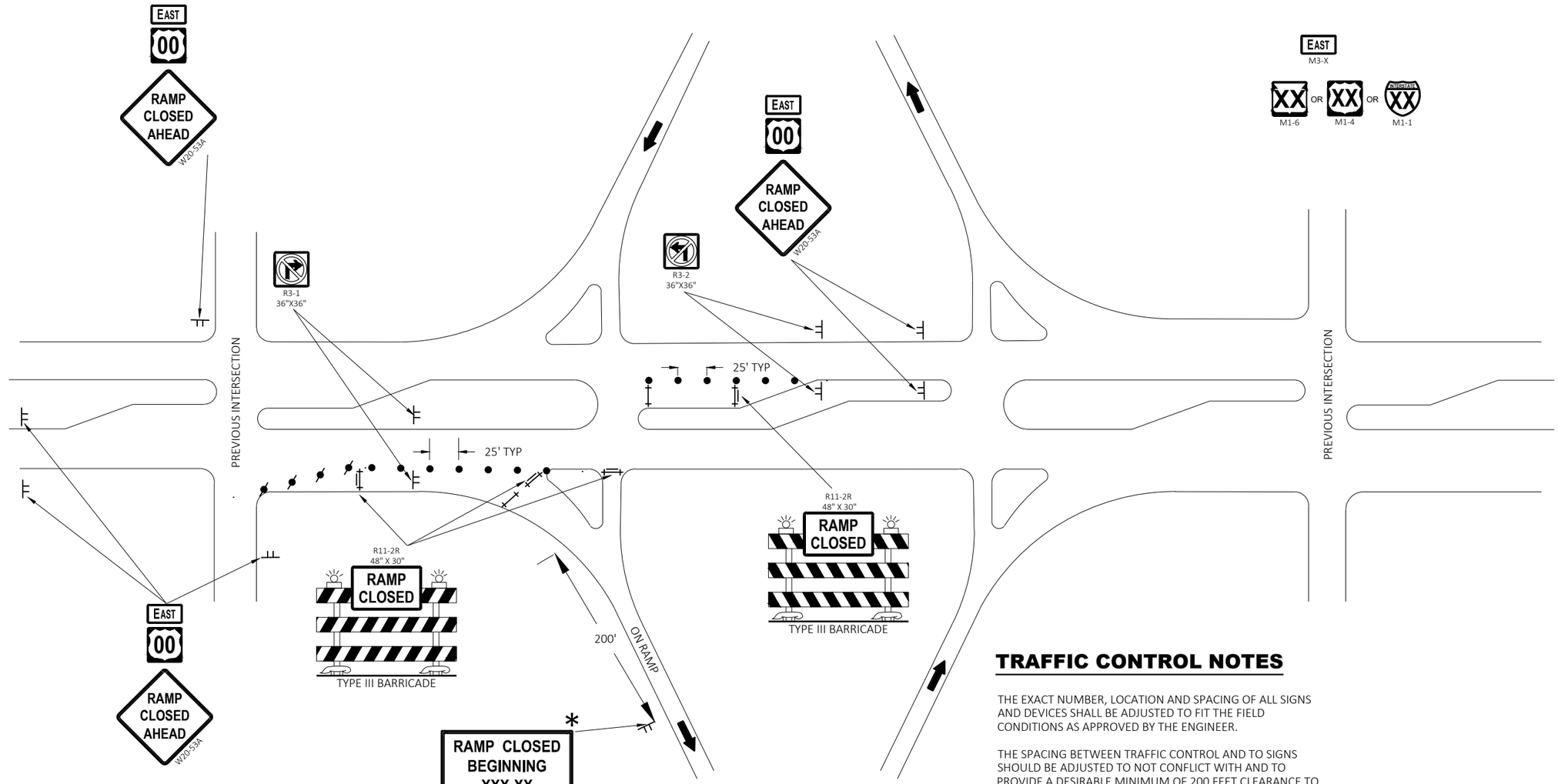
SDD 15C02 - 09e



LEGEND

- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC

TRAFFIC CONTROL NOTES

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

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

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

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

SIGN SIZES SHALL BE AS FOLLOWS:

- M3-X SHALL BE 24"x24" (36" x18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1-1, M1-4, AND M1-6 SHALL BE 24"x24" (36"x36" IF NEEDED TO MATCH EXISTING SIGNS)
- W20-53A SHALL BE 48"X48"

* PLACE "RAMP CLOSED BEGINNING" SIGN 7 CALENDAR DAYS PRIOR TO CLOSURE OR AS DIRECTED BY THE ENGINEER. SEE WISCONSIN STANDARD SIGN PLATES FOR LAYOUT.

TRAFFIC CONTROL FOR ENTRANCE RAMP CLOSURE

TRAFFIC CONTROL FOR ENTRANCE RAMP CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINEE
FHWA

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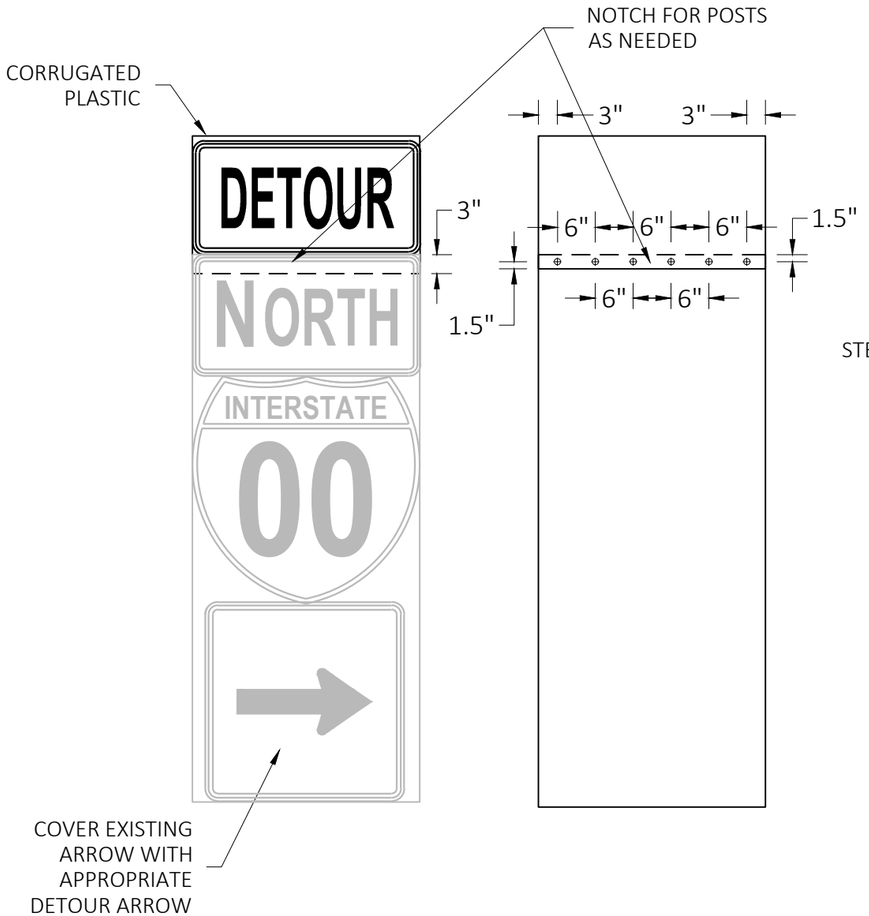
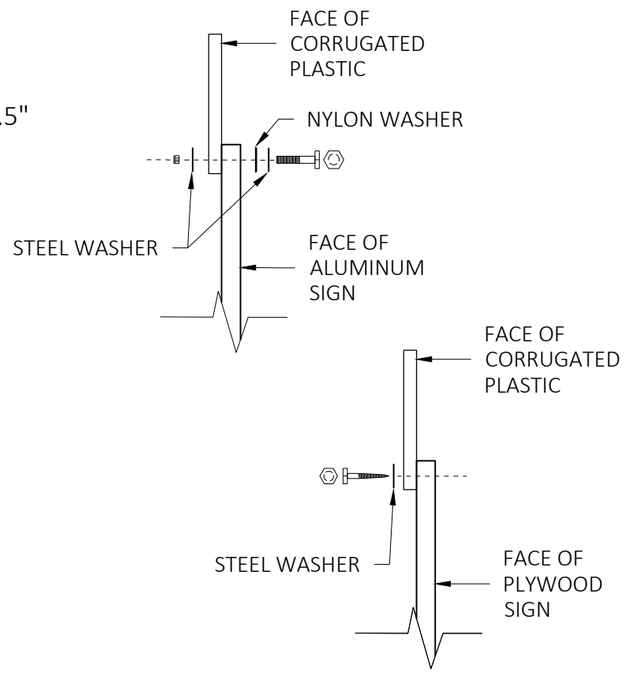
SDD 15C02-09g

FRONT SIDE

BACK SIDE

SIDE VIEW





GENERAL NOTES

CELLS OF CORRUGATED PLASTIC SHALL BE VERTICALLY ORIENTED.

PROVIDE A 0.4-INCH THICK BASE CORRUGATED PLASTIC WITH A 0.035-INCH WALL THICKNESS AND 0.4-INCH CELL SIZE.

FOR 36" WIDE SIGNS: USE 6 FASTENERS AS SHOWN.

FOR 24" WIDE SIGNS: USE 4 FASTENERS WITH EDGE SPACING AS SHOWN AND 6" SPACING BETWEEN FASTENERS.

METAL WASHERS, NUTS, BOLTS AND LAGS SHALL HAVE HEXAGONAL HEADS AND SHALL BE EITHER:

A. HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: A 153, CLASS D, OR SC 3.

B. ELECTRO-GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: B 633, TYPE III, SC3

THREADS ON BOLTS AND NUTS SHALL BE MANUFACTURED WITH SUFFICIENT ALLOWANCE FOR THE CADMIUM PLATE OR GALVANIZED COATING TO PERMIT THE NUTS TO RUN FREELY ON THE BOLTS.

PLYWOOD SIGNS:
LAG SCREWS - 5/16" x 1"
ALUMINUM SIGNS:
MACHINE BOLTS - 5/16" x 1-1/4" LENGTH W/NUTS
WASHERS:
1-1/4" O.D. x 3/8" I.D. x 1/16" STEEL
1-1/4" O.D. x 3/8" I.D. x .080 NYLON

MODIFIED ROUTE ASSEMBLY FOR DETOUR SIGNING

MODIFIED ROUTE ASSEMBLY FOR DETOUR SIGNING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 — DATE
/S/ Andrew Heidtke — ROADWAY STANDARDS DEVEL ENGINEER
FHWA

6
SDD 15C02-09h

GENERAL NOTES

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

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

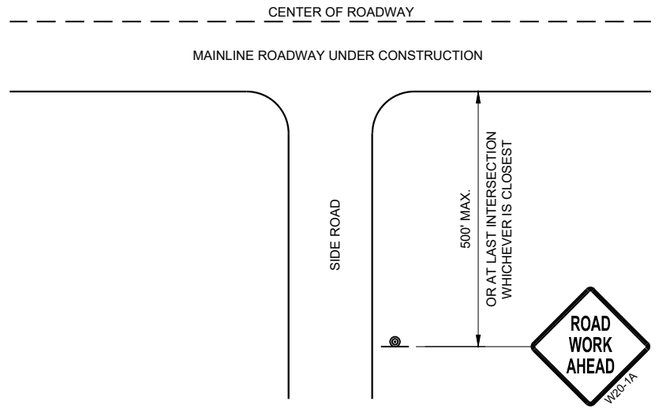
ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

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

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

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

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



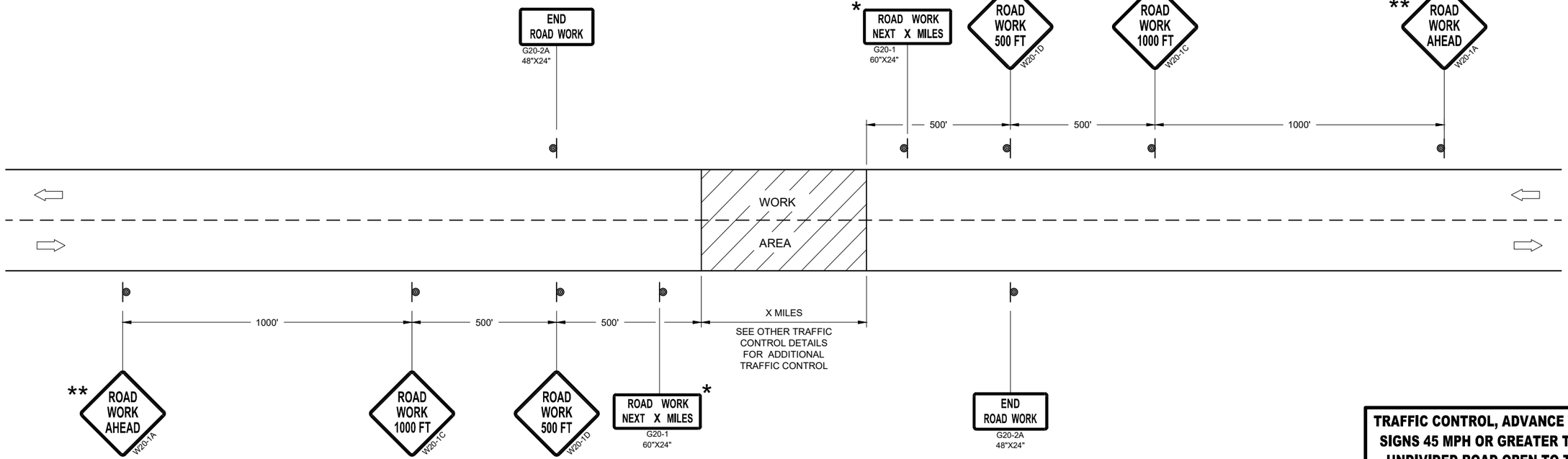
TYPICAL SIDE ROAD APPROACH WARNING SIGN DETAIL

LEGEND

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC

WORK AREA



TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45MPH OR GREATER

TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 MPH OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

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SDD 15C04 - 05

GENERAL NOTES

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

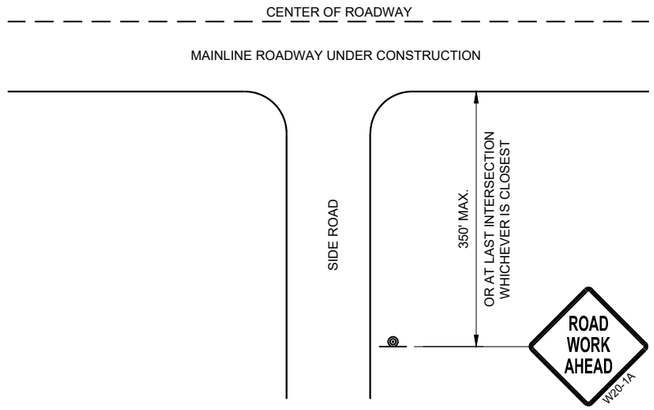
THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

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

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

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

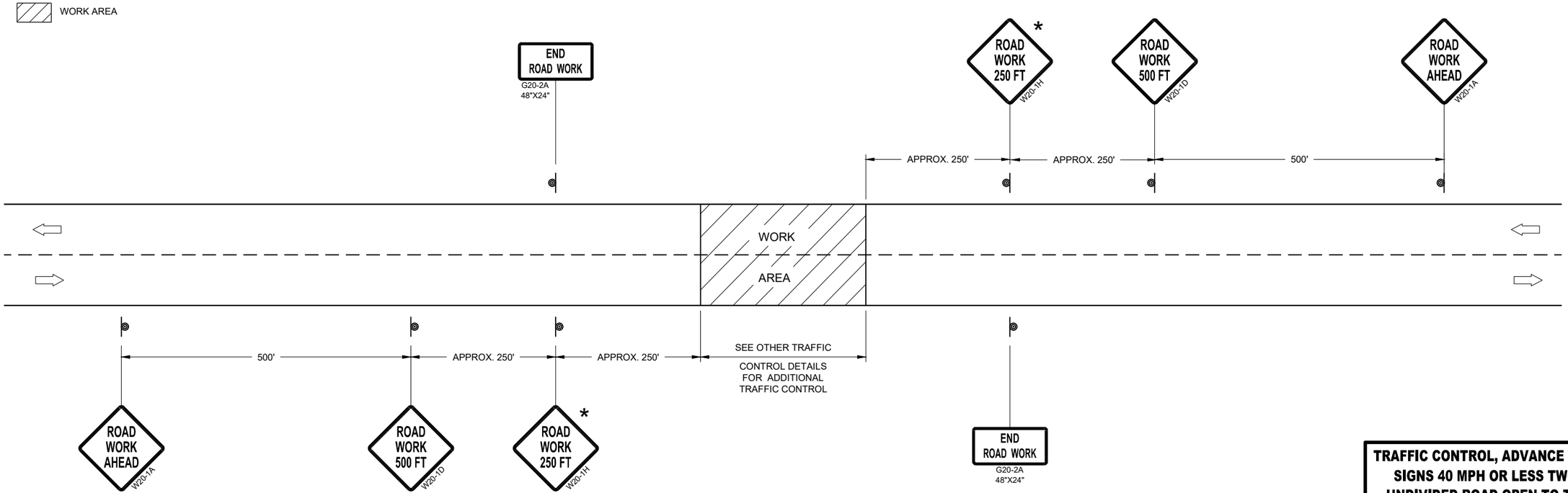
* THE THIRD W20-1 SIGN IS REQUIRED ONLY IF THERE IS AN INTERSECTION BETWEEN THE "ROAD WORK 500 FEET" SIGN AND THE WORK ZONE. ADJUST THE PLACEMENT OF THIS SIGN BASED ON INTERSECTION LOCATION AND OTHER FIELD CONDITIONS.



TYPICAL SIDE ROAD APPROACH WARNING SIGN DETAIL

LEGEND

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



TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40MPH OR LESS

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2018
DATE

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WORK ZONE ENGINEE

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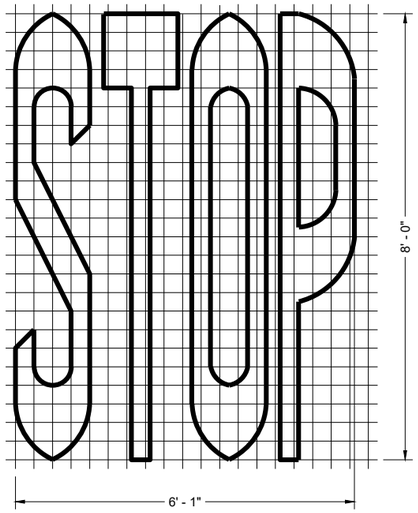
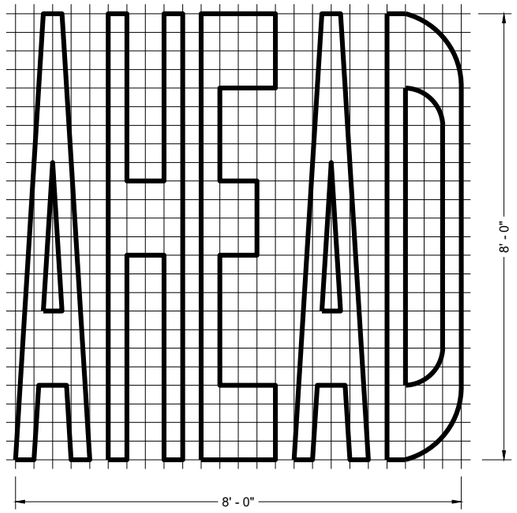
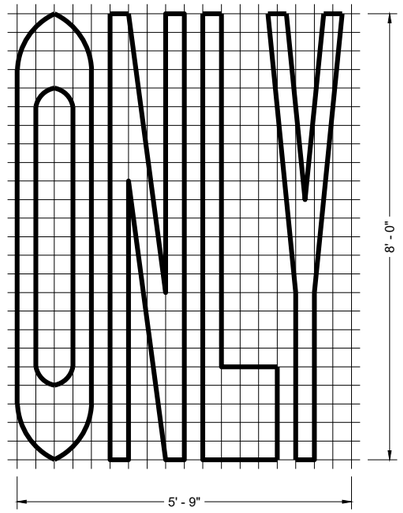
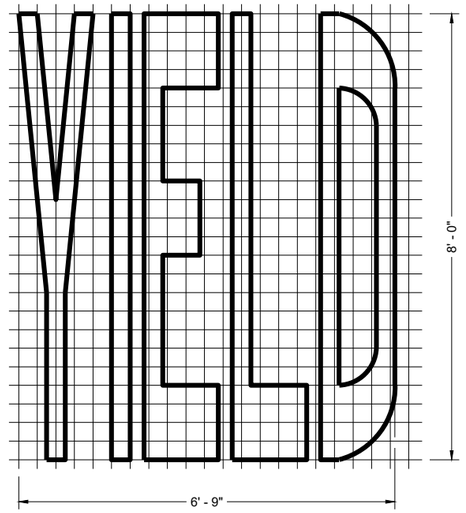
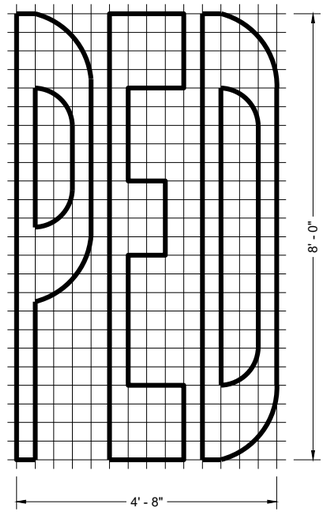
SDD 15C05 - 05

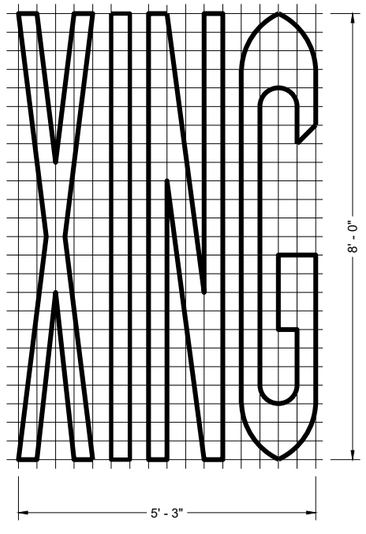


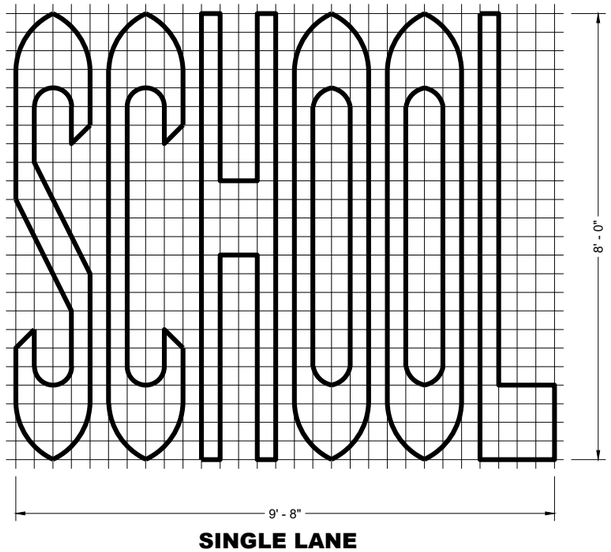




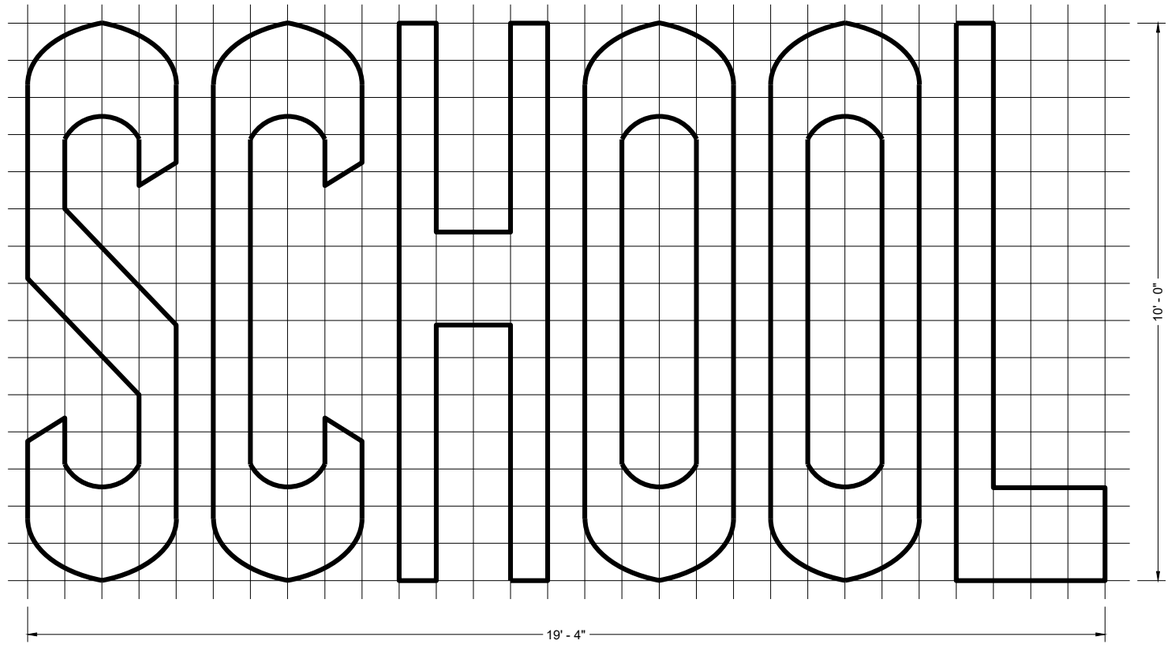








SINGLE LANE



TWO - LANE

GENERAL NOTES

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

PAVEMENT MARKING WORDS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2024 — DATE
/S/ Jeannie Silver — STATE SIGNING AND MARKING ENGINEER

FHWA

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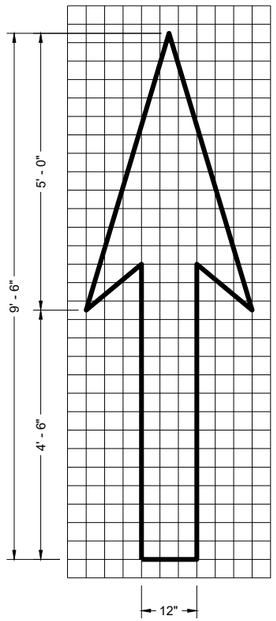
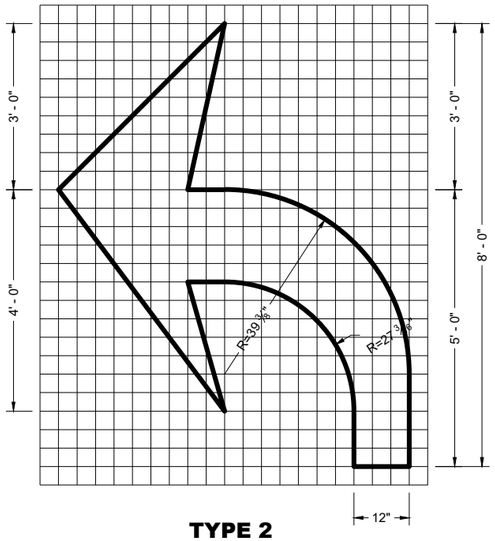
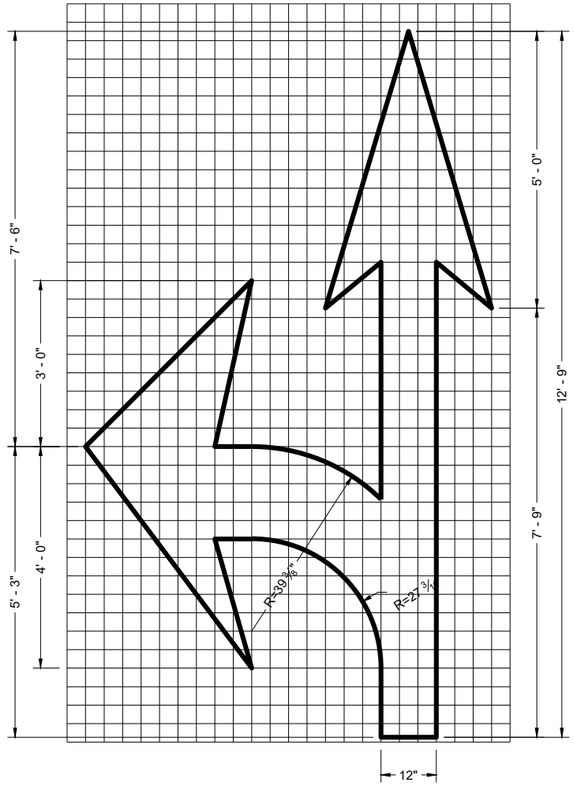
SDD 15C07-16b



TYPE 1



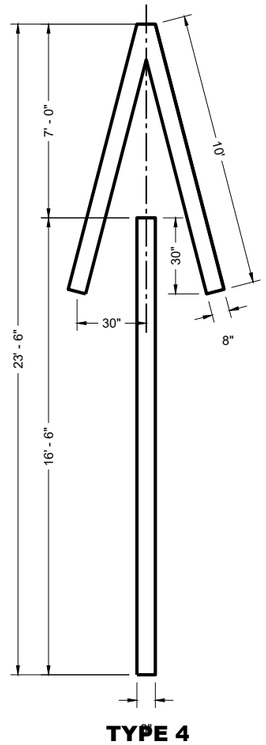
TYPE 2



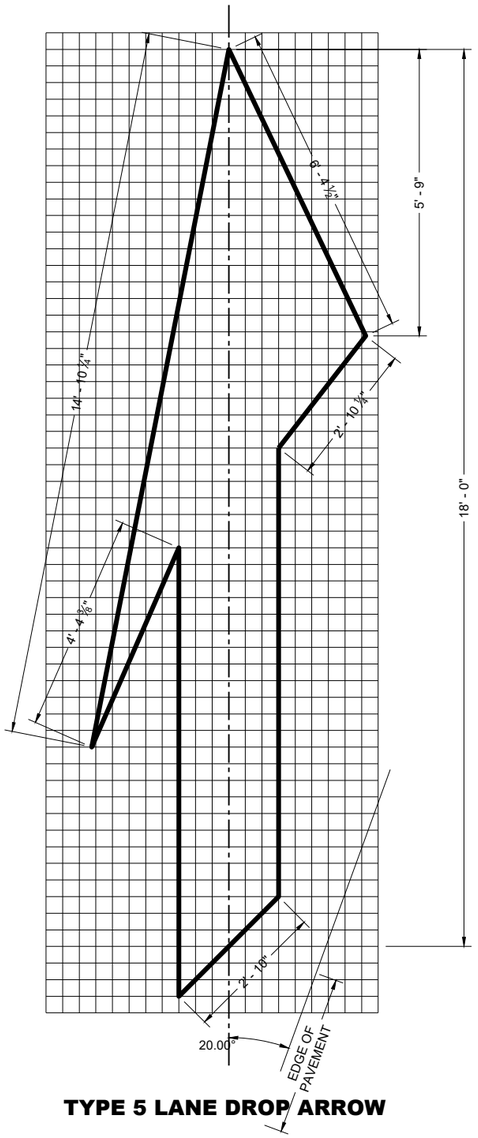
TYPE 3

GENERAL NOTES

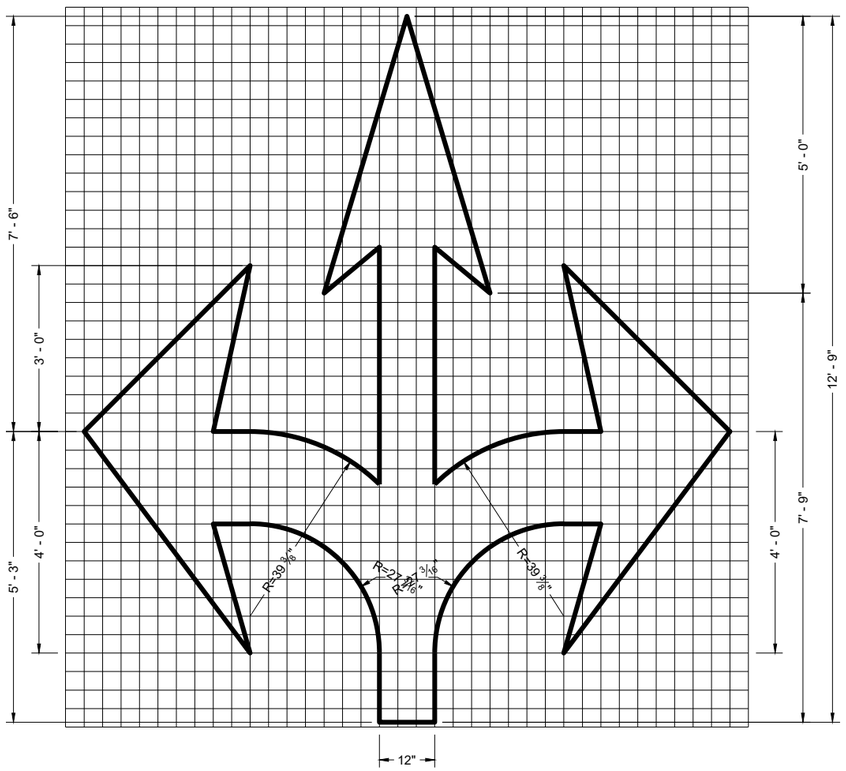
DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.



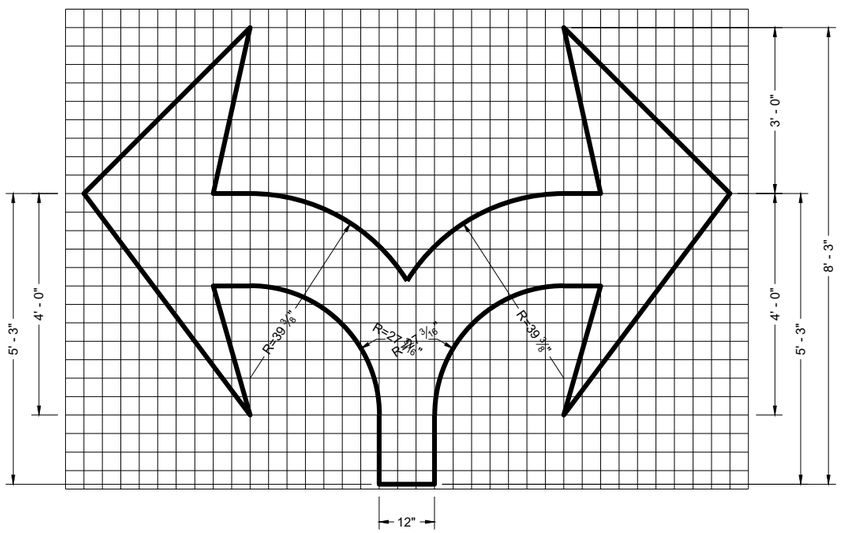
TYPE 4



TYPE 5 LANE DROP ARROW



TYPE 6



TYPE 7

PAVEMENT MARKING ARROWS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2024 — DATE
/S/ Jeannie Silver — STATE SIGNING AND MARKING ENGINEER

FHWA

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SDD 15C07-16c

6

SDD 15C07-16c

GENERAL NOTES

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

(1) LOCATE THE NO PASSING ZONE W14-3 SIGN WITHIN 50 FEET OF THE "T" MARKING

(2) MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

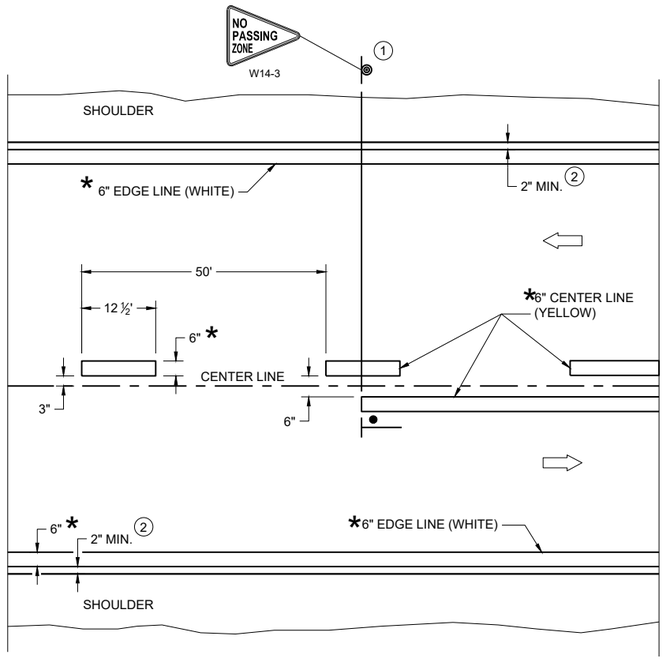
*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

LEGEND

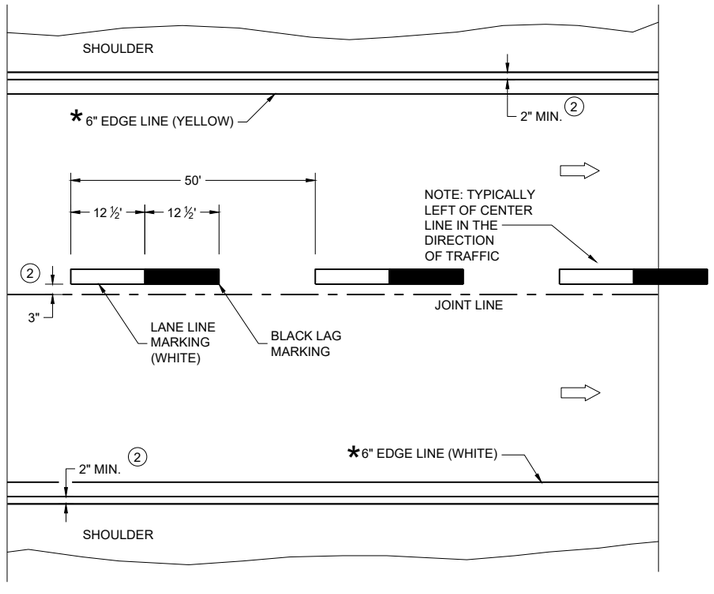
"T" MARKING

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

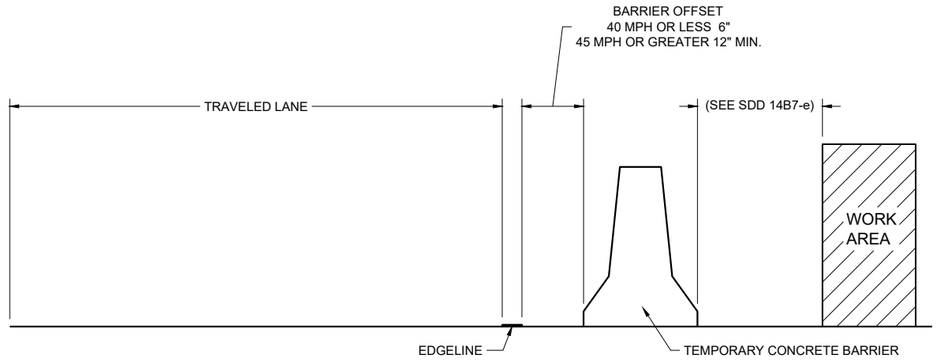
PERMANENT LONGITUDINAL PAVEMENT MARKINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 — DATE
/S/ Jeannie Silver — Statewide Pavement Marking Engineer
FHWA

6

SDD 15C08-23a



TEMPORARY BARRIER OFFSET FROM EDGELINE

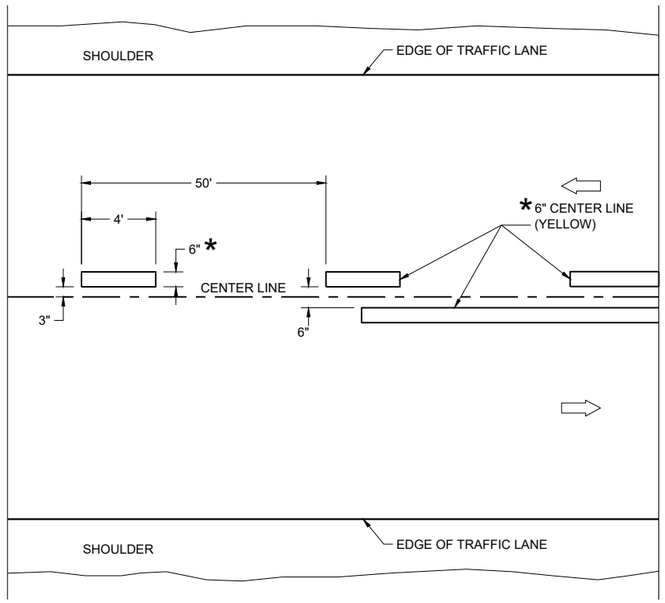
GENERAL NOTES

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

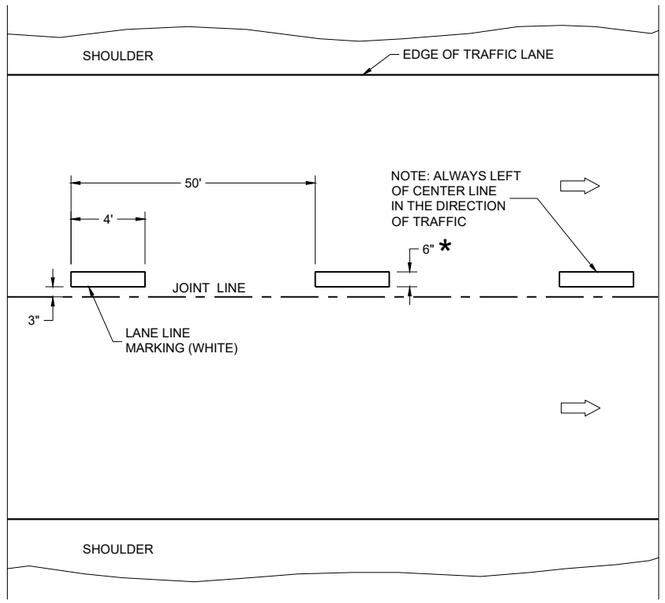
LEGEND

DIRECTION OF TRAFFIC

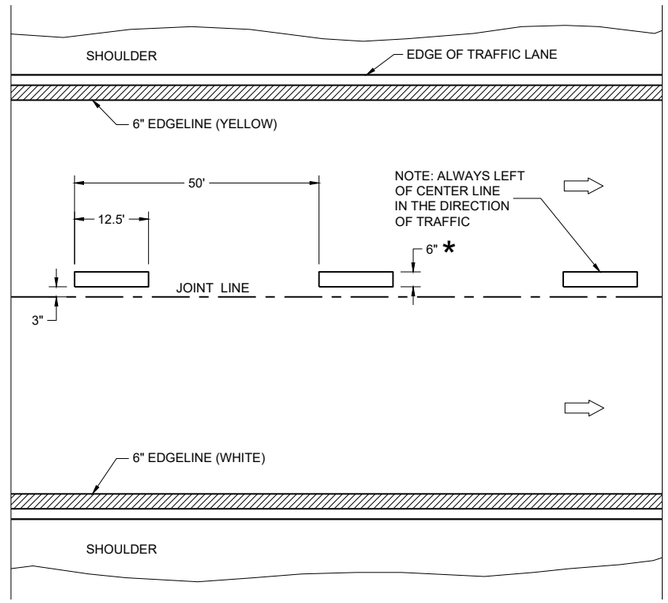
*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



TWO WAY TRAFFIC



ONE WAY TRAFFIC



FREEWAYS AND EXPRESSWAYS

TEMPORARY PAVEMENT MARKING

TEMPORARY LONGITUDINAL PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 — DATE
/S/ Jeannie Silver — Statewide Pavement Marking Engineer

FHWA

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SDD 15C08-23b

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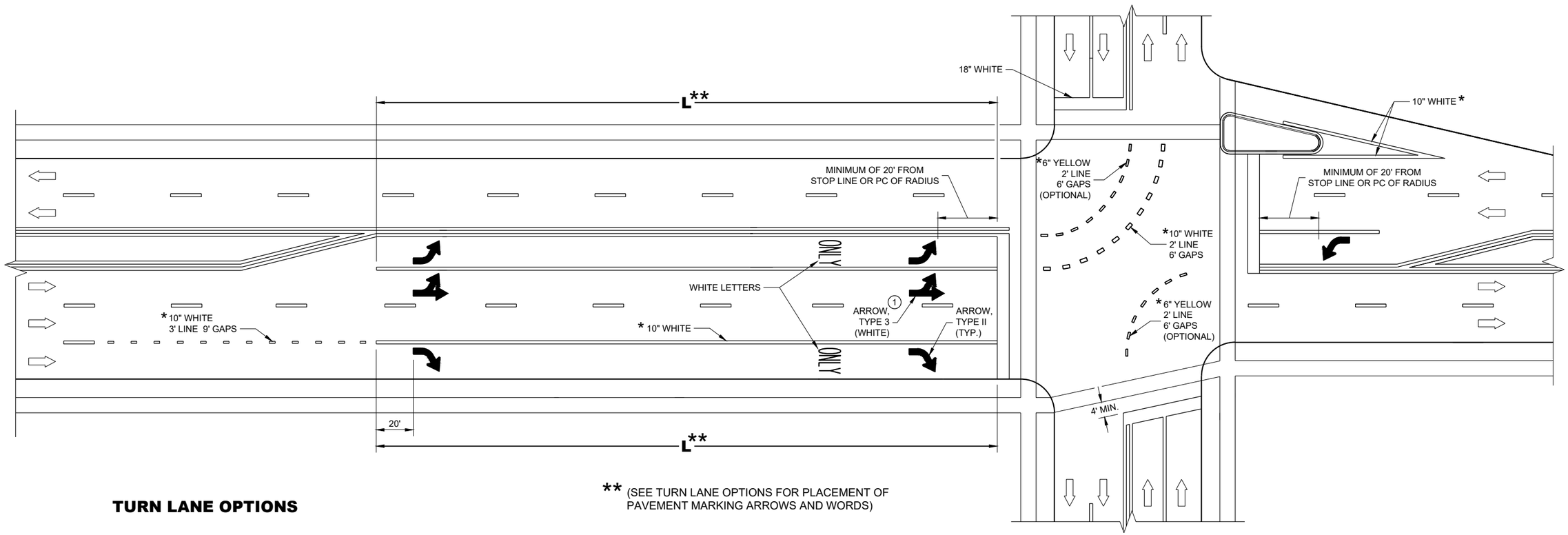
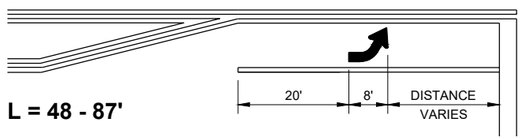


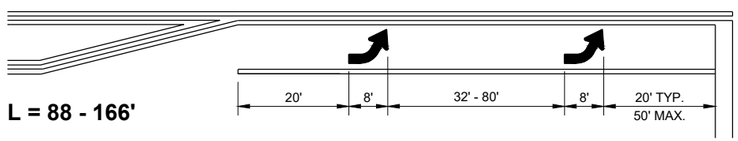
** (SEE TURN LANE OPTIONS FOR PLACEMENT OF PAVEMENT MARKING ARROWS AND WORDS)

TURN LANE OPTIONS

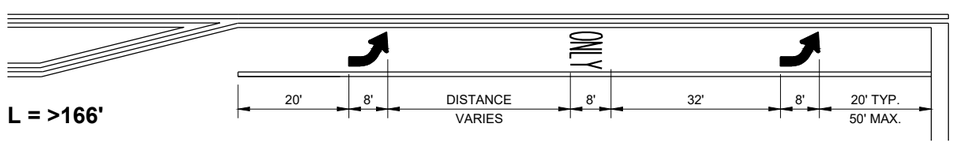
LENGTH OF TURN BAY (**L**) OF 0 - 47' DOES NOT REQUIRE PAVEMENT MARKING ARROWS OR WORDS



L = 48 - 87'



L = 88 - 166'



L = >166'

GENERAL NOTES

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

DIRECTION OF TRAFFIC

L = LENGTH OF TURN BAY

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

PAVEMENT MARKING (TURN LANES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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SDD 15C08-23d

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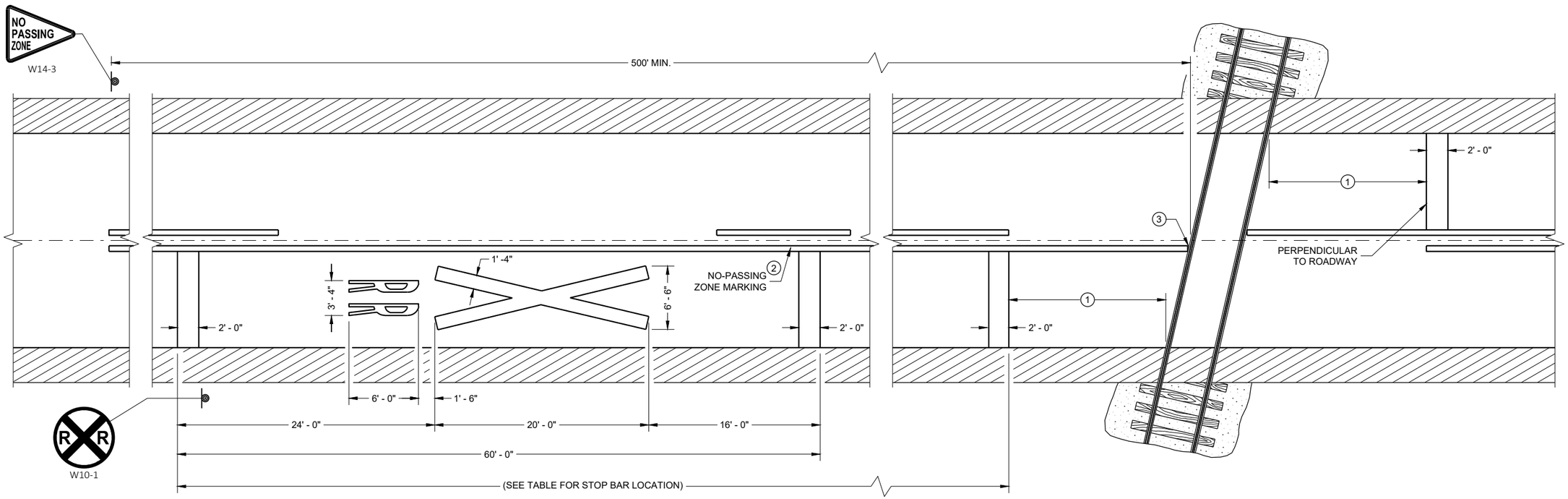
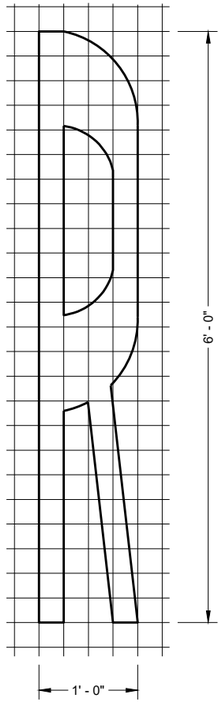


PAVEMENT MARKING



LEGEND

SIGN ON PERMANENT SUPPORT

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.

ON MULTI-LANE ROADS THE TRANSVERSE BANDS SHOULD EXTEND ACROSS ALL APPROACH LANES, AND INDIVIDUAL R X R SYMBOLS SHOULD BE USED IN EACH APPROACH LANE.

CENTER OR LANE LINES AND NO-PASSING ZONE MARKINGS SHOWN ON THIS DRAWING ARE REQUIRED AND PAID FOR UNDER OTHER ITEMS IN THE CONTRACT.

TRACE EXISTING SYMBOL WHERE EXISTING SYMBOLS ARE PLACED.

(1) PLACE STOP BAR APPROXIMATELY 8 FEET IN ADVANCE OF THE GATE (IF PRESENT), BUT NO CLOSER THAN 15 FEET IN ADVANCE OF THE NEAREST RAIL. FIELD-FIT STOP BAR TO MAXIMIZE VIEW OF APPROACHING TRAIN.

(2) 500' MINIMUM. MARKING LIMITS MAY BE EXTENDED AS DIRECTED BY THE ENGINEER TO MEET ADJACENT NO-PASSING ZONE MARKINGS.

(3) FOR MULTIPLE TRACK CROSSINGS, THE BARRIER LINE SHALL EXTEND TO THE NEAR RAIL OF THE FURTHEST TRACK IN THE DIRECTION OF HIGHWAY TRAVEL.

DISTANCE TABLE

TABLE BASED UPON 2C-4 WISCONSIN SUPPLEMENT OF MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

POSTED SPEED (M.P.H.)	DIMENSION RANGE (FEET)
25	150* - 250'
30	200* - 300'
35	250* - 450'
40	300* - 500'
45	400* - 650'
50	550* - 800'
55	750* - 1000'
60	1000* - 1250'
65	1000* - 1250'

* THE MINIMUM DISTANCES IN THE TABLE ARE DESIRABLE AND SHOULD BE USED. THE DISTANCES MAY BE INCREASED UP TO THE MAXIMUM TO ALLOW FOR FIELD CONDITIONS SUCH AS THE CLOSED PROXIMITY OF DRIVEWAYS, BRIDGES, SIDE ROADS OR OTHER FEATURES THAT WOULD PROHIBIT THE MINIMUM DISTANCES FROM BEING USED.

SIGNING AND PAVEMENT MARKING DETAILS FOR RAILROAD - HIGHWAY GRADE CROSSINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

May 2023
DATE

/S/ Matthew R. Rauch
STATE SIGNING AND MAR ENGINEER

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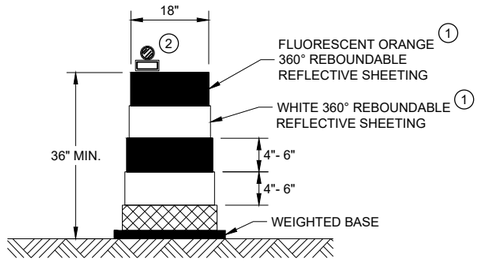
SDD 15C09-13a

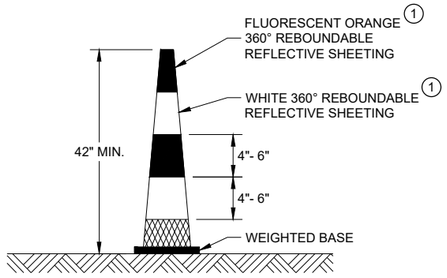
GENERAL NOTES

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



DRUM

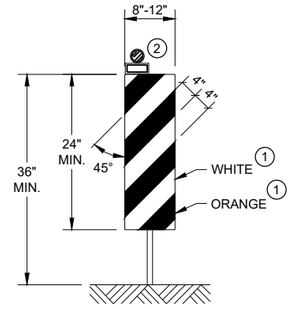
BALLAST WIDTHS
RANGE FROM 24"-36"



42" CONE

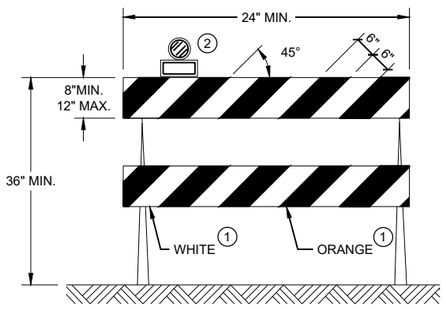
DO NOT USE IN TAPERS
½ SPACING OF DRUMS

BALLAST WIDTHS
RANGE FROM 14"-20"



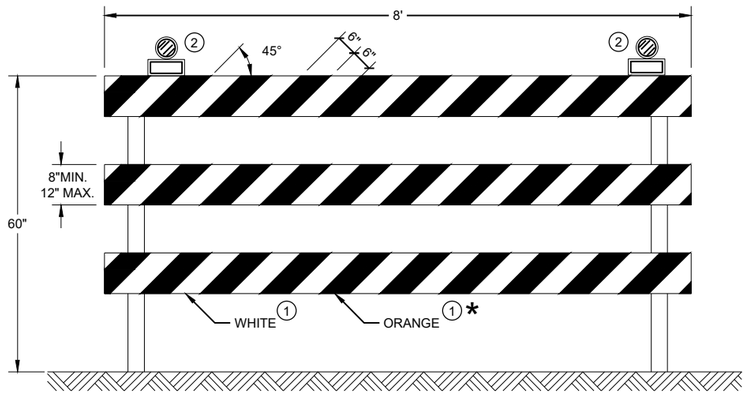
VERTICAL PANEL

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



TYPE II BARRICADE

FOR RAILS LESS THAN 36" LONG, 4" WIDE STRIPES
MAY BE USED. ALL STRIPES SHALL SLOPE DOWNWARD
TO THE TRAFFIC SIDE FOR CHANNELIZATION.



TYPE III BARRICADE

IF SIGN MOUNTED, DO NOT COVER MORE THAN 50% OF THE TOP
TWO RAILS OR 33% OF THE TOTAL AREA OF THE THREE RAILS.

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2022
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

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SDD 15C11 - 10b

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LEGEND

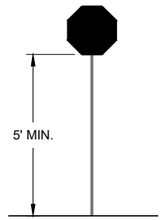
SIGN ON PORTABLE OR PERMANENT SUPPORT

TEMPORARY PORTABLE RUMBLE STRIP ARRAY

DIRECTION OF TRAFFIC

WORK AREA

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



STOP/SLOW PADDLE ON SUPPORT STAFF

GENERAL NOTES

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

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

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

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

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

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

FLAGGING

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

(1) FOR MOVING WORK OPERATIONS, POST ADDITIONAL W20-7A FLAGGER SIGNS AT APPROXIMATELY 3,500' INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.

(2) SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

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

TEMPORARY PORTABLE RUMBLE STRIPS

UTILIZE TEMPORARY PORTABLE RUMBLE STRIPS ON ALL FLAGGING OPERATIONS.

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

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

INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS.

PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.

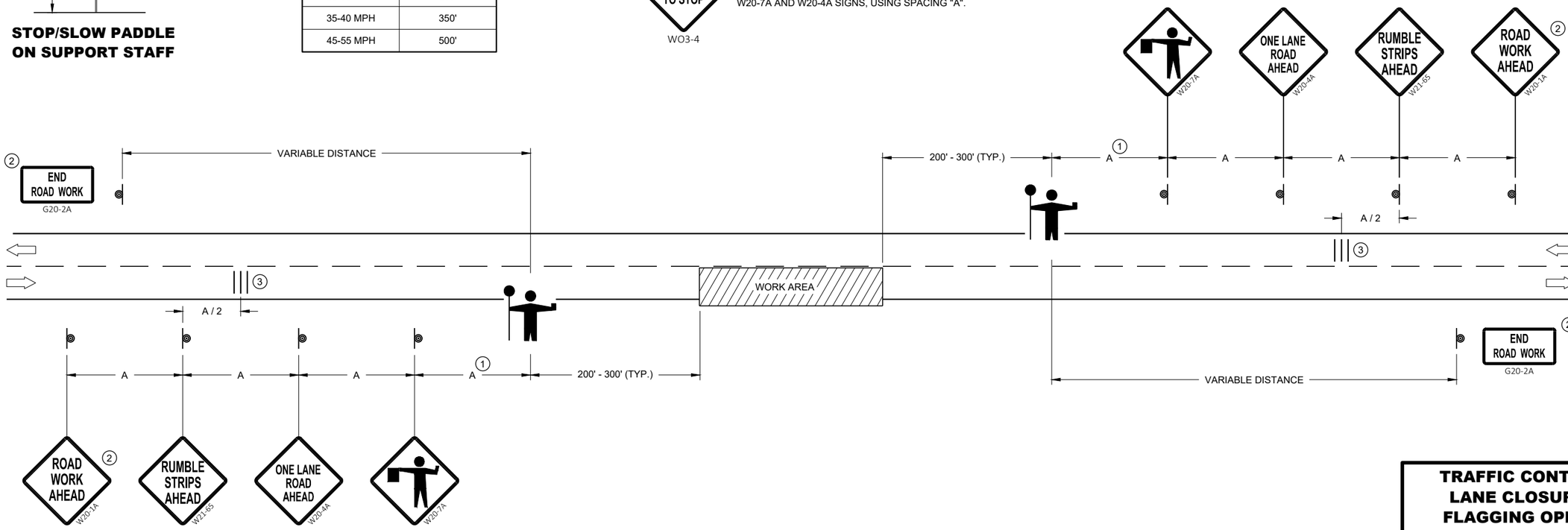
DO NOT INSTALL TEMPORARY PORTABLE RUMBLE STRIPS ON GRAVEL, MILLED SURFACES, OR ASPHALT THAT HAS BEEN PAVED LESS THAN 12 HOURS.

SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

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

WO3-4

USE OF WO3-4 SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7A AND W20-4A SIGNS, USING SPACING "A".



TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2022
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

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SDD 15C12 - 09a

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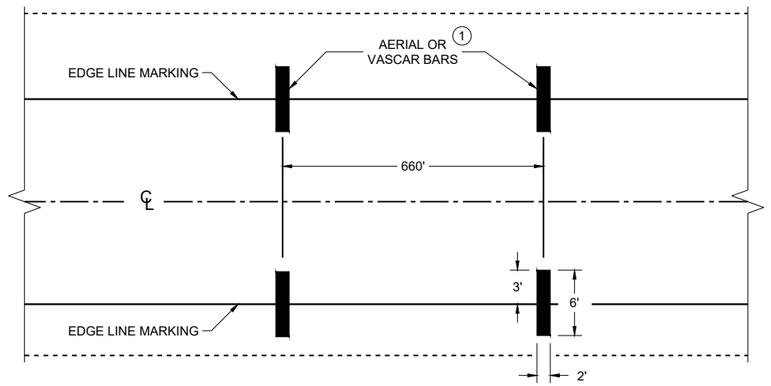
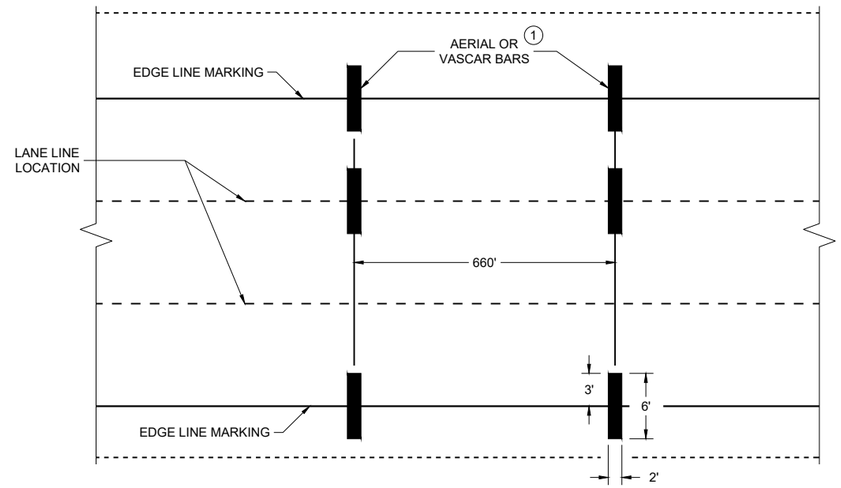
SDD 15C12 - 09a

GENERAL NOTES

(1) PLACE TWO TO FIVE AERIAL OR VASCAR BARS AT 660 FOOT SPACING.



TYPICAL FOR TWO WAY OR ONE WAY TRAFFIC



TYPICAL FOR MULTILANE TRAFFIC

SPEED ENFORCEMENT ZONE WITH AERIAL OR VASCAR BARS

AERIAL ENFORCEMENT BARS PAVEMENT MARKING DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2025
DATE

/S/ Matthew R. Rauch
STATE SIGNING AND MARKING ENGINEER

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SDD 15C14-05

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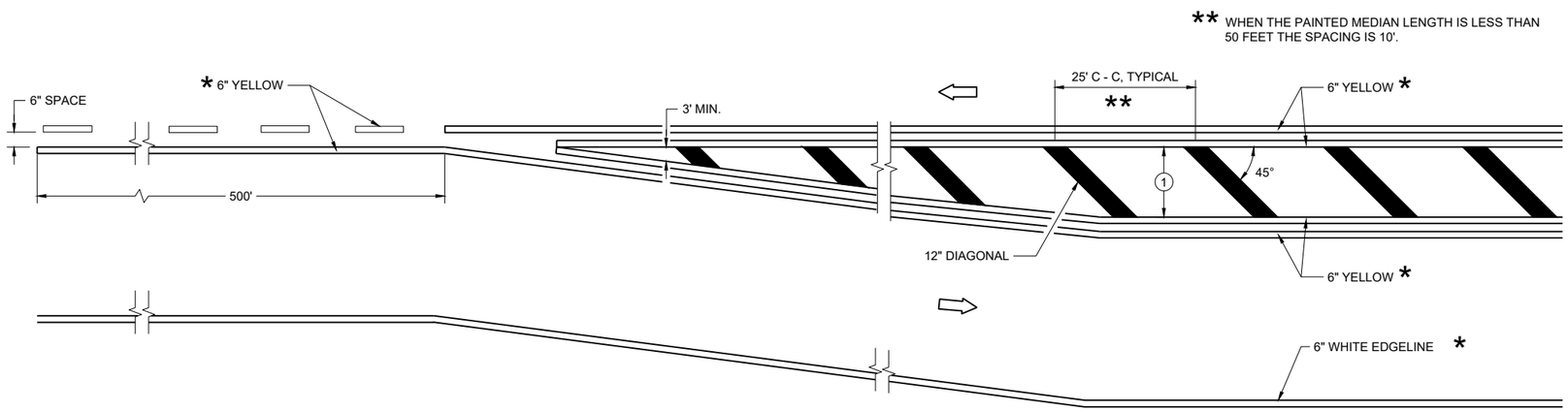


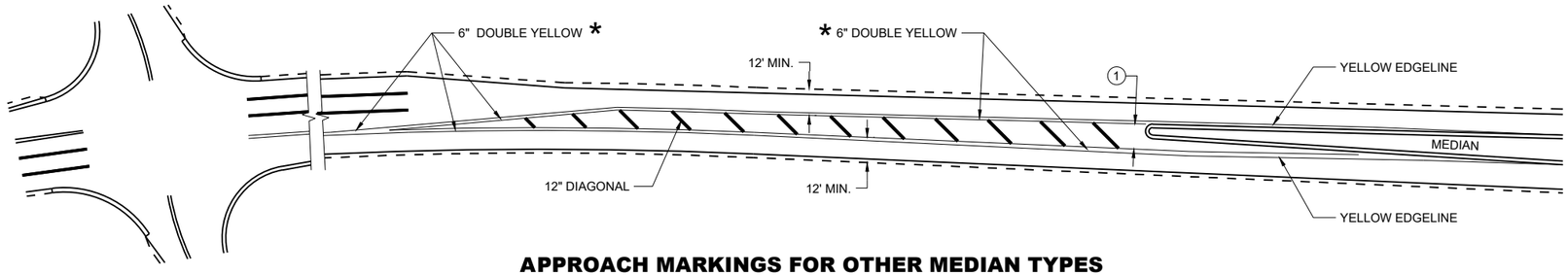
MEDIAN ISLAND DETAIL

GENERAL NOTES

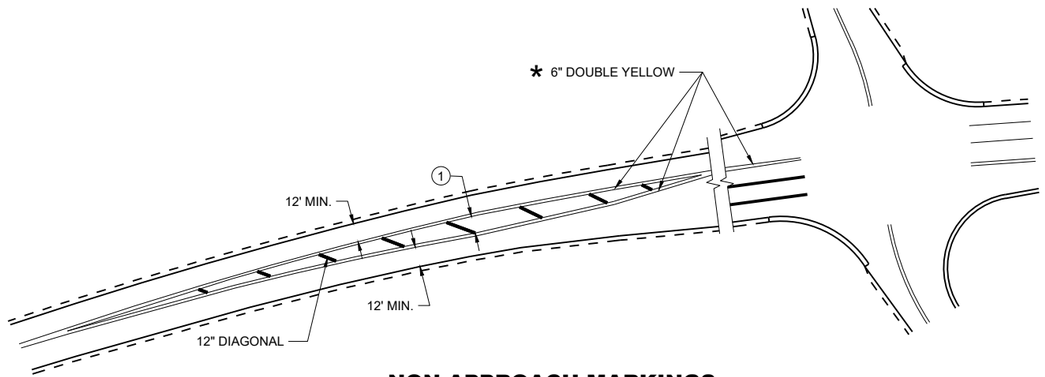
(1) DIAGONALS ARE OPTIONAL WHEN PAINTED ISLAND IS LESS THAN 6 FEET AT THE WIDEST POINT. OMIT DIAGONALS IF WIDTH IS LESS THAN 4 FEET.

DIRECTION OF TRAVEL

*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



APPROACH MARKINGS FOR OTHER MEDIAN TYPES



NON-APPROACH MARKINGS

MEDIAN ISLAND PAVEMENT MARKINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
August 2024
DATE

/S/ Jeannie Silver
Statewide Pavement Marking Engineer

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SDD 15C18-09a

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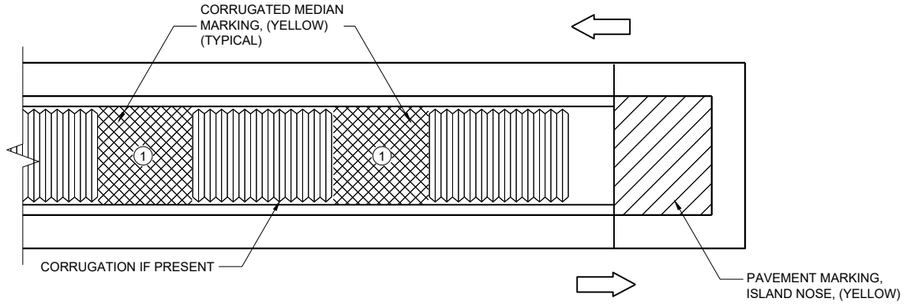
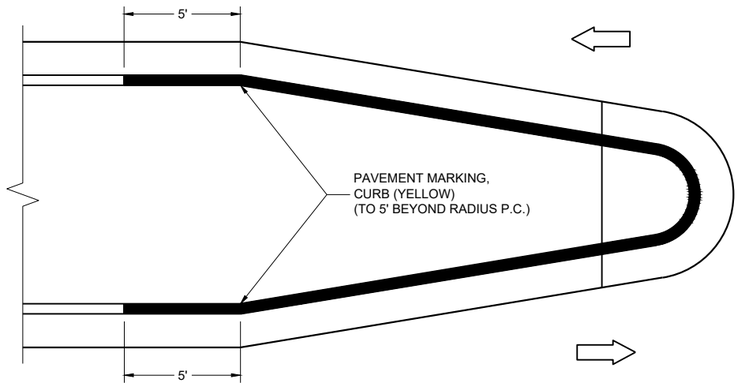
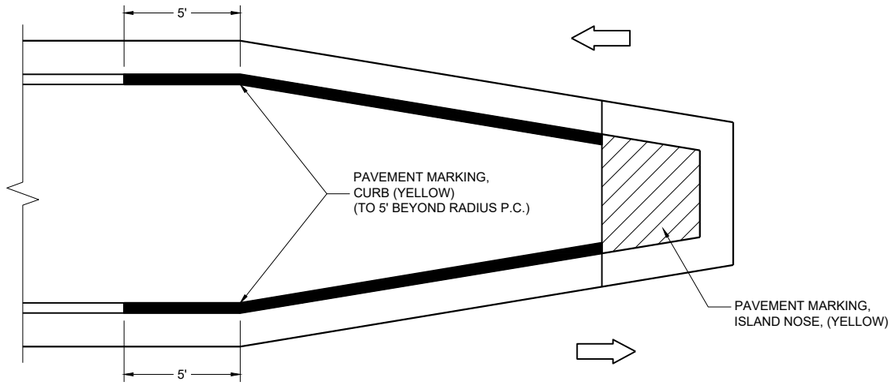


MEDIAN ISLAND WITH SQUARE BLUNT NOSE



MEDIAN ISLAND WITH ROUND BLUNT NOSE



MEDIAN ISLAND WITH SLOPED NOSE

**TYPICAL PLACEMENT OF
PAVEMENT MARKING ON MEDIAN ISLANDS**

GENERAL NOTES

WHEN CONCRETE CORRUGATED MEDIAN IS CONSTRUCTED TO SEPARATE TRAFFIC OPERATING IN THE OPPOSING DIRECTION, YELLOW PAVEMENT MARKING SHALL BE APPLIED TO THE FLAT PORTION OF THE CONCRETE CORRUGATED MEDIAN. THE ITEM OF PAVEMENT MARKING, CONCRETE CORRUGATED MEDIAN, WILL BE MEASURED IN PLACE AND ACCEPTED IN ACCORDANCE WITH THE CONTRACT AND PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE FOOT.

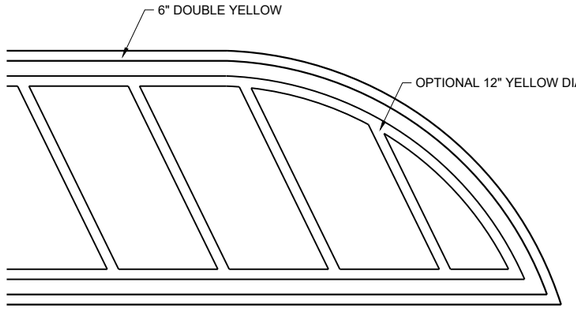
(1) APPLY PAVEMENT MARKING TO THE FLAT PORTION OF CORRUGATED MEDIAN.

ISLAND NOSE MARKING

CURB MARKING

CORRUGATED MEDIAN MARKING

DIRECTION OF TRAVEL



FLUSH MEDIAN ISLAND NOSE

**PAVEMENT MARKINGS,
MEDIAN ISLAND NOSE**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
August 2024
DATE

/S/ Jeannie Silver
Statewide Pavement Marking Engineer

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REQUIREMENTS FOR EDGE LINES		
POSTED SPEED	IS THERE CONTINUOUS LIGHTING?	
	YES	NO
≤ 30 MPH	NO	OPTIONAL
35 OR 40 MPH	OPTIONAL	RECOMMENDED
≥ 45 MPH	RECOMMENDED	REQUIRED

GENERAL NOTES

APPLIES TO ISLANDS AT LEFT TURNS AT ONE WAY ROADWAYS AS WELL.

SEE MISCELLANEOUS QUANTITIES FOR SIGN SIZE.

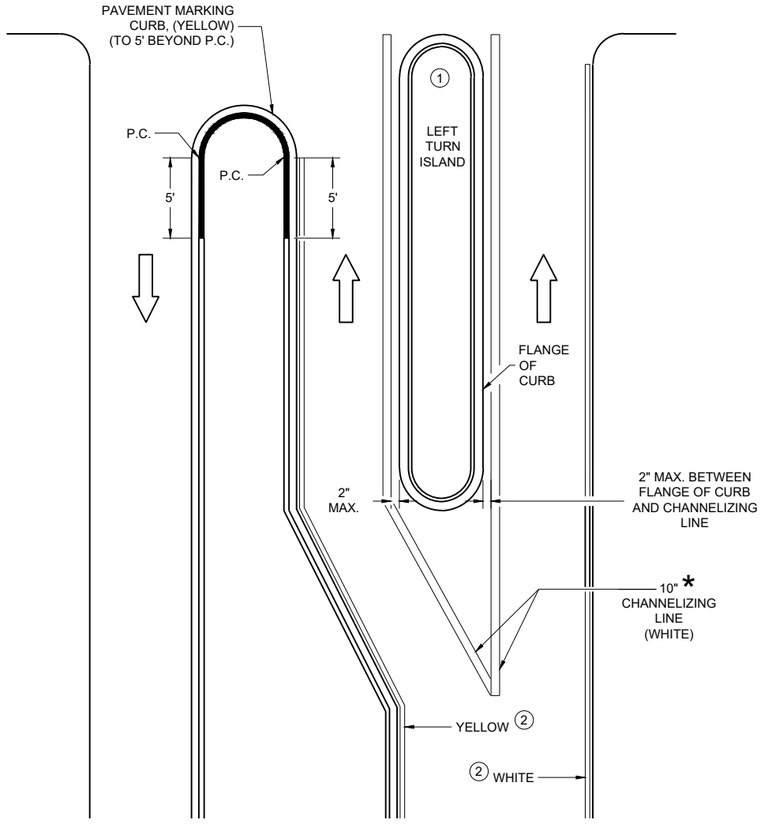
(1) MARK CURB NOSES YELLOW.

(2) MARK ACCORDING TO TABLE.

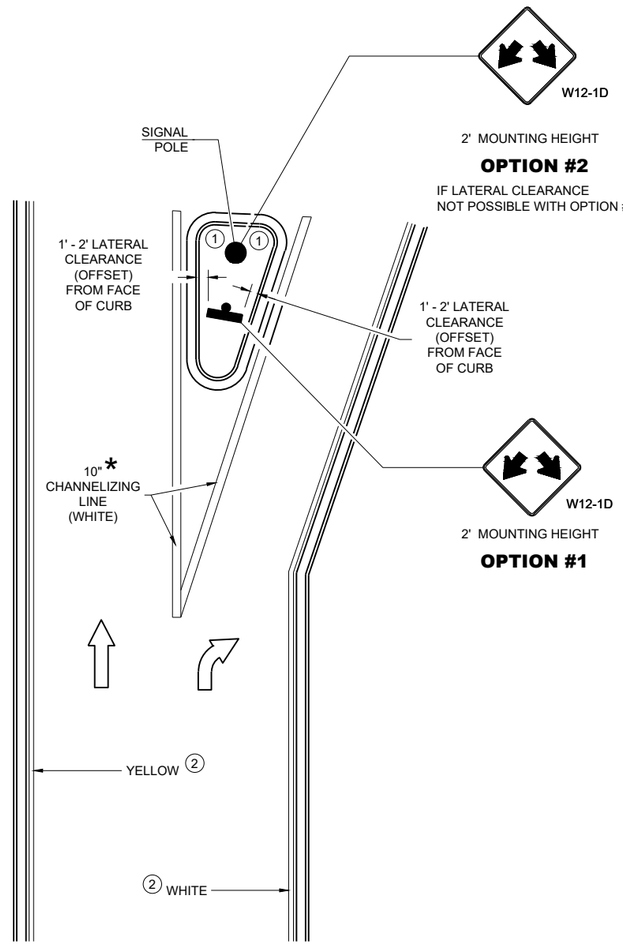
(3) CHEVRON MAY BE OMITTED IF LESS THAN 4" WIDE

DIRECTION OF TRAVEL

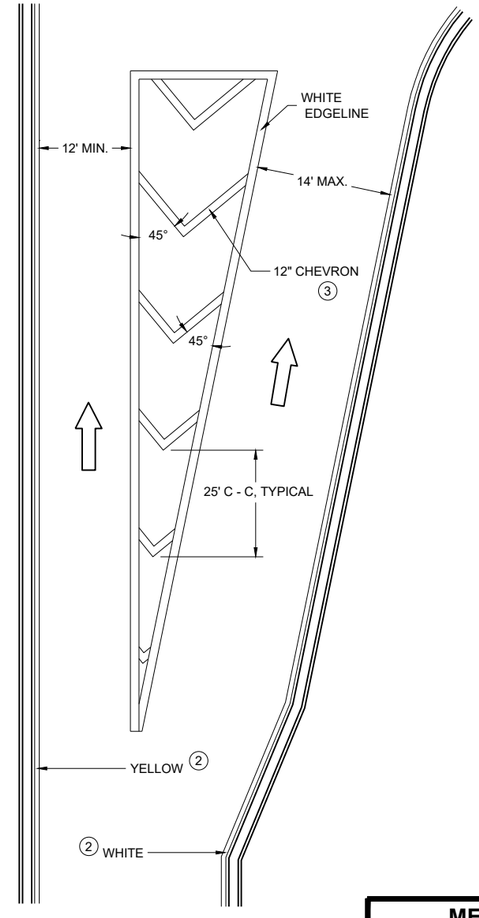
*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



LEFT TURN & MEDIAN ISLAND



RIGHT TURN ISLAND



TURN LANE DETAIL

MEDIAN PAVEMENT MARKINGS, DOUBLE ARROW WARNING SIGN PLACEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
August 2024
DATE

/S/ Jeannie Silver
Statewide Pavement Marking Engineer

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SDD 15C18-09c

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LEGEND

V1 MARKING VEHICLE

V2 SHADOW VEHICLE

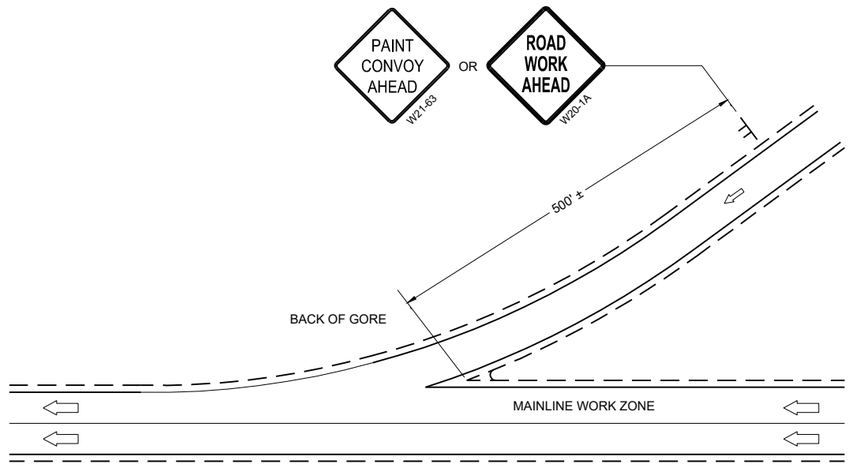
V3 TRAIL VEHICLE

TRUCK MOUNTED ATTENUATOR (TMA)

SIGN ON TEMPORARY SUPPORT

DIRECTION OF TRAFFIC

FLASHING ARROW PANEL (MERGE)



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.

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

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.

IF THE SHOULDER IS TOO NARROW TO ACCOMMODATE THE LAST TRAILING VEHICLE, THE VEHICLE SHOULD STRADDLE THE EDGE LINE.

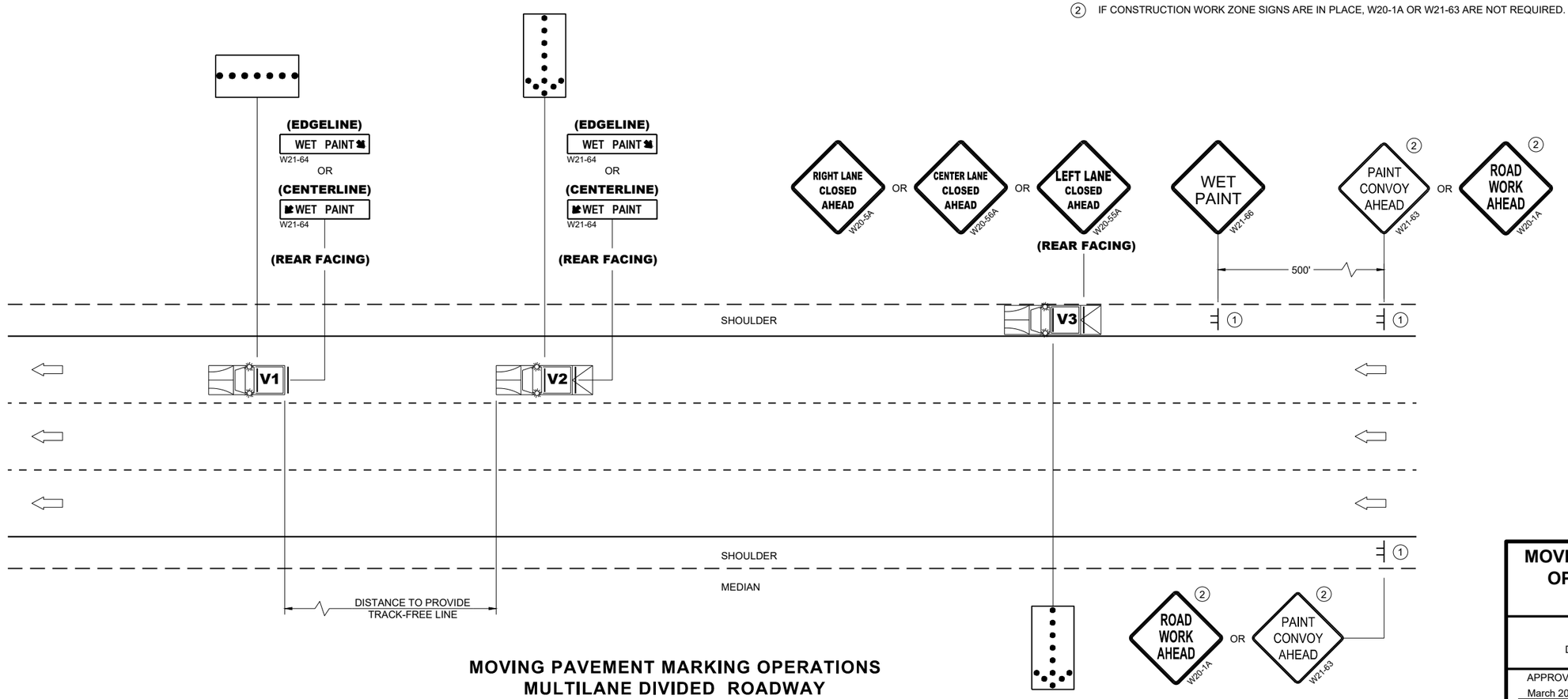
WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR LAY STATIONARY SIGNS AND SUPPORTS FLAT ON THE GRADE WITH UPRIGHTS ORIENTED PARALLEL TO AND DOWNSTREAM FROM TRAFFIC

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

CONES SHALL BE A MINIMUM HEIGHT OF 28" FOR WET PAVEMENT MARKINGS

(1) SIGNS SHALL BE REPEATED APPROXIMATELY EVERY THREE MILES AND AFTER EVERY ON RAMP.

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



MOVING PAVEMENT MARKING OPERATIONS MULTILANE DIVIDED ROADWAY

MOVING PAVEMENT MARKING OPERATION MULTI-LANE DIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2024
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

6

SDD 15C19-9c

6

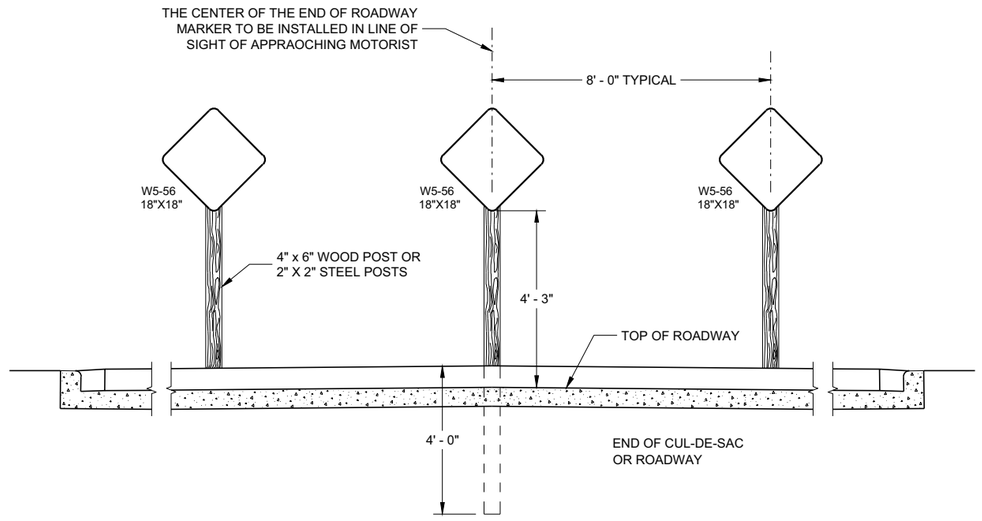
SDD 15C19-9c

GENERAL NOTES

SIGN LOCATIONS SHOWN ARE TYPICAL PLACEMENT AND MAY BE ADJUSTED BY THE ENGINEER AS FIELD CONDITIONS DICTATE.

THE MINIMUM NUMBER OF END-OF-ROADWAY SIGNS ARE THREE (AS SHOWN). ADDITIONAL END-OF-ROADWAY SIGNS MAY BE INSTALLED AS FIELD CONDITIONS DICTATE. (SEE SIGNING PLAN).

WHEN BEAMGUARD IS REQUIRED, PLACE END-OF-ROADWAY SIGNING BEHIND BEAMGUARD.



TYPICAL SIGN INSTALLATION

6

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SDD 15C26 - 04

SDD 15C26 - 04

END-OF-ROADWAY SIGNING

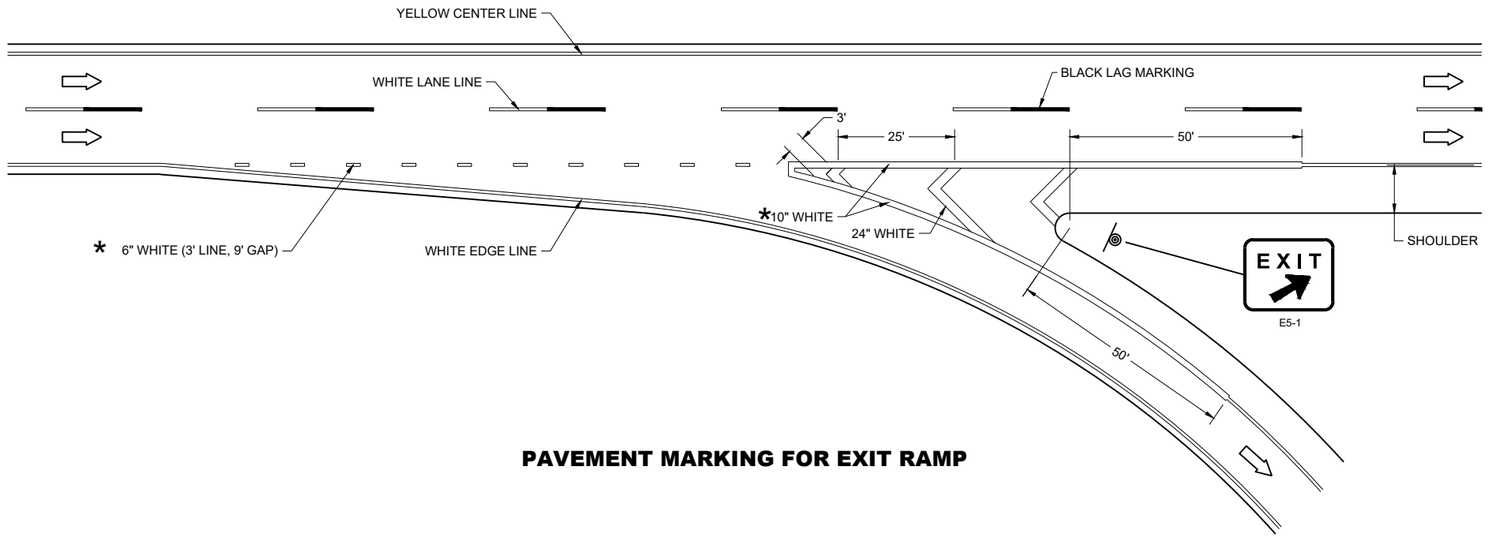
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

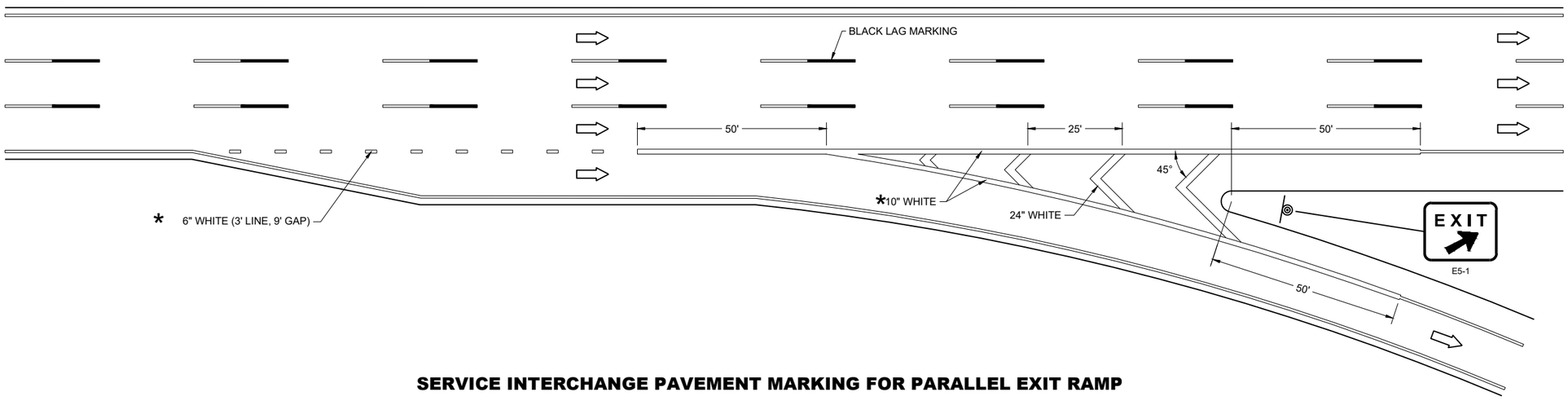
May 2019
DATE

/S/ Matthew Rauch
STATE SIGNING AND MAR ENGINEER

FHWA



PAVEMENT MARKING FOR EXIT RAMP



SERVICE INTERCHANGE PAVEMENT MARKING FOR PARALLEL EXIT RAMP

GENERAL NOTES

PLACE GROOVE 3 INCHES LEFT OF JOINT.

LEGEND

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAVEL

*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

6

SDD 15C31-08a

PAVEMENT MARKING, EXIT RAMP AND PARALLEL EXIT RAMP

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

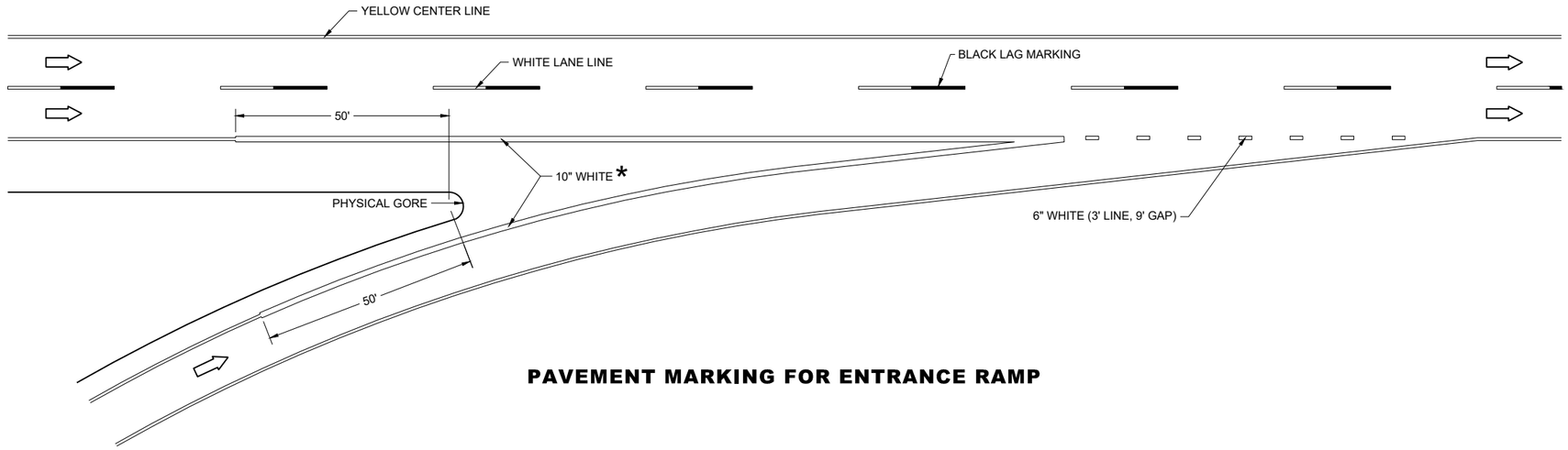
GENERAL NOTES

PLACE GROOVE 3 INCHES LEFT OF JOINT.

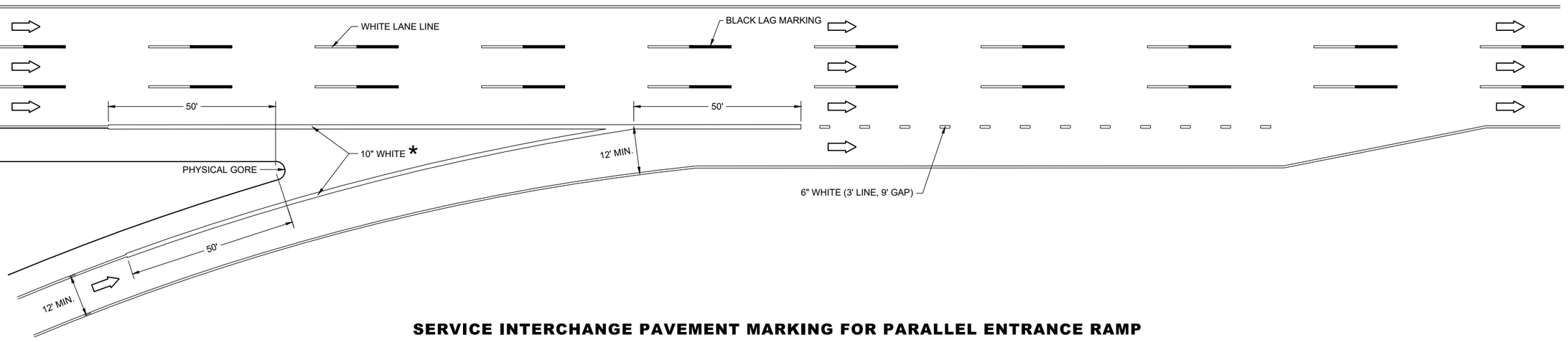
LEGEND

DIRECTION OF TRAVEL

*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



PAVEMENT MARKING FOR ENTRANCE RAMP



SERVICE INTERCHANGE PAVEMENT MARKING FOR PARALLEL ENTRANCE RAMP

6

SDD 15C31-08c

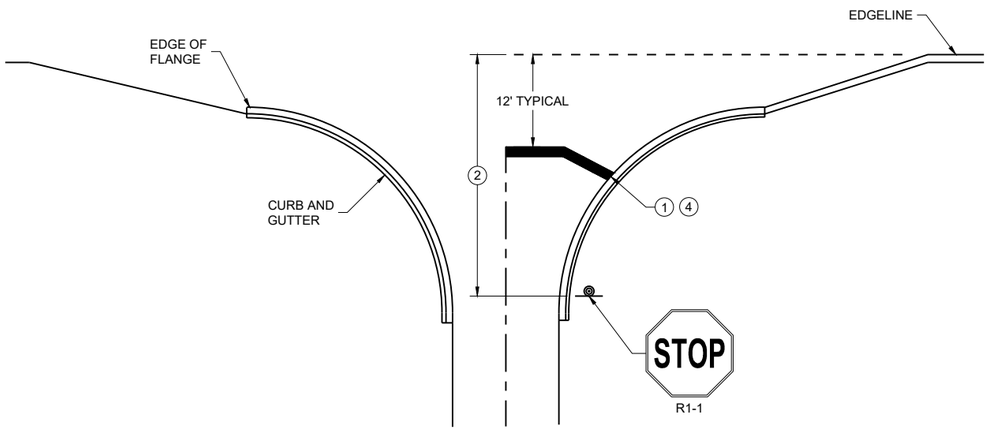
PAVEMENT MARKING, ENTRANCE RAMP AND PARALLEL ENTRANCE RAMP

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

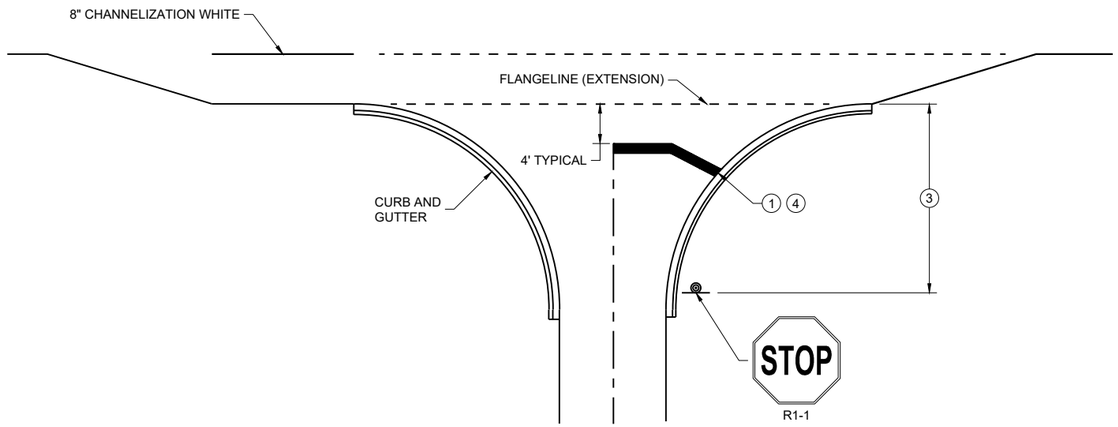
GENERAL NOTES

STOP SIGN SHALL BE PLACED A MINIMUM OF 6 FEET TO A MAXIMUM OF 50 FEET FROM THE EDGELINE LOCATION.

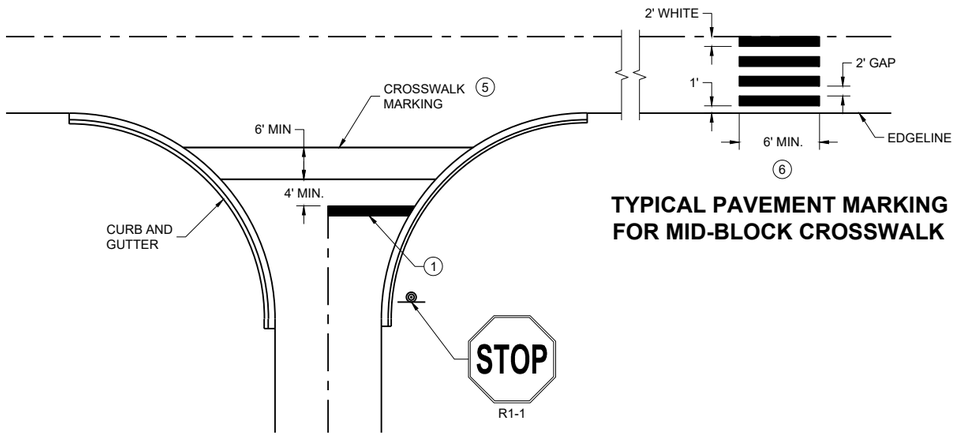
1. 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE REGION MARKING ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
2. NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE.
3. NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGE LINE EXTENSION.
4. MOVE CLOSER TO THE EDGE OF TRAVEL LINE AS NEEDED FOR VISIBILITY AND SIGHT LINES (NO CLOSER THAN 4 FEET).
5. LADDER BAR CROSSWALKS SHOULD ONLY BE USED FOR MID BLOCK CROSSINGS. USE 2 - 6" TRANSVERSE LINES.
6. POSTED SPEED LIMITS OF 40 MPH OR GREATER USE A MINIMUM WIDTH OF 8' FOR MIDBLOCK CROSSWALKS



TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER

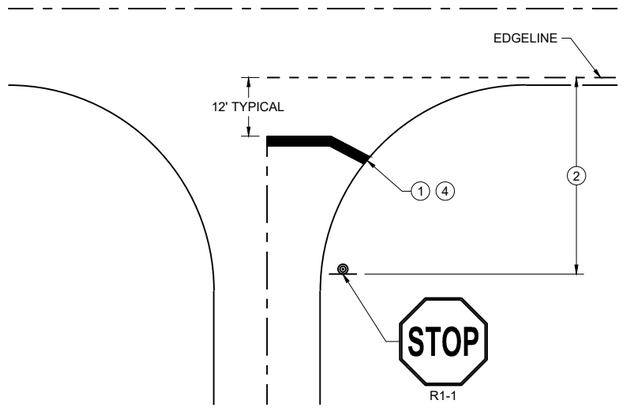


TYPICAL STOP LINE PAVEMENT MARKING FOR SIDE ROADS WITH RIGHT TURN LANE



TYPICAL PAVEMENT MARKING FOR MID-BLOCK CROSSWALK 5

TYPICAL STOP LINE PAVEMENT MARKING FOR SIDE ROADS WITH CROSSWALK MARKING



TYPICAL STOP LINE PAVEMENT MARKING WITHOUT CURB AND GUTTER

STOP LINE AND CROSSWALK PAVEMENT MARKING

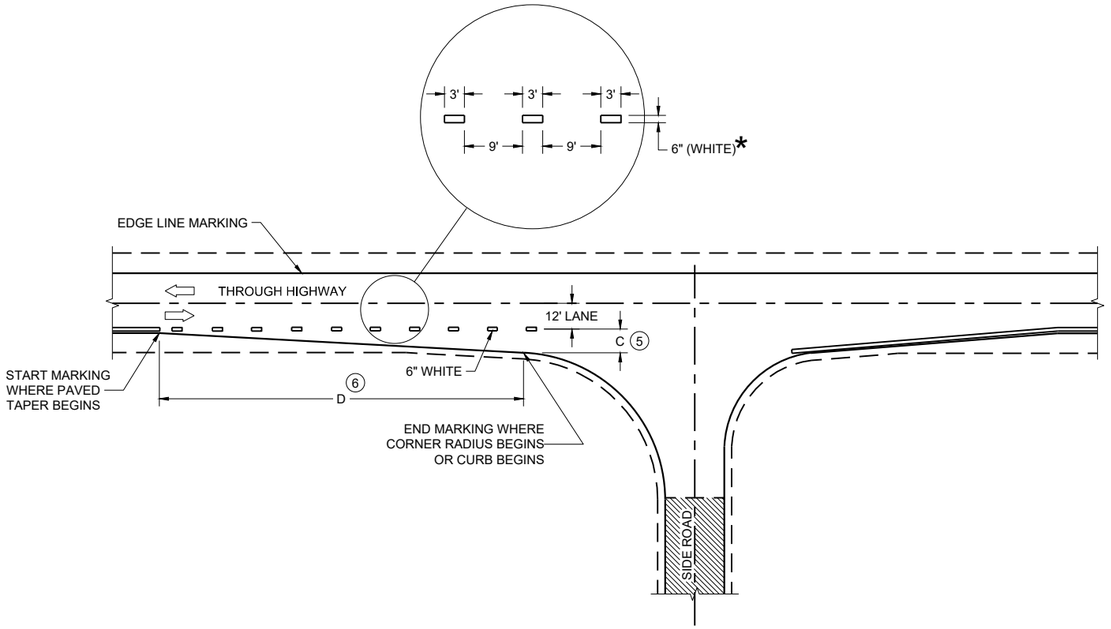
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

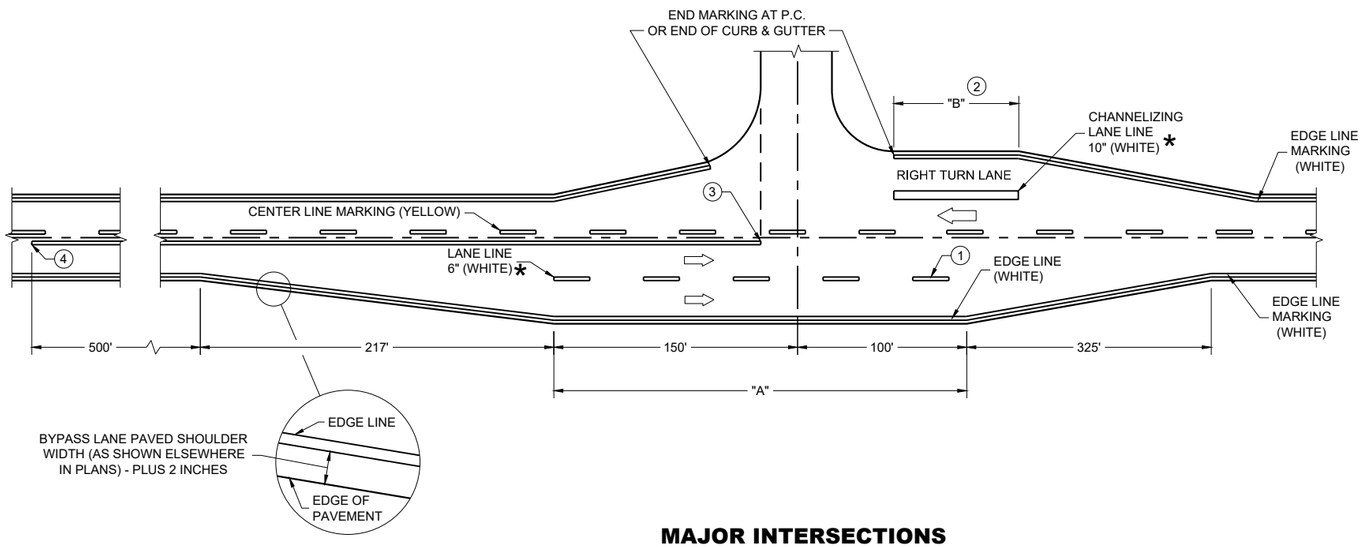
March 2024 — DATE

/S/ Matthew Rauch — STATE SIGNING AND MARKING ENGINEER

FHWA



MINOR INTERSECTION



MAJOR INTERSECTIONS

(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANE)

*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

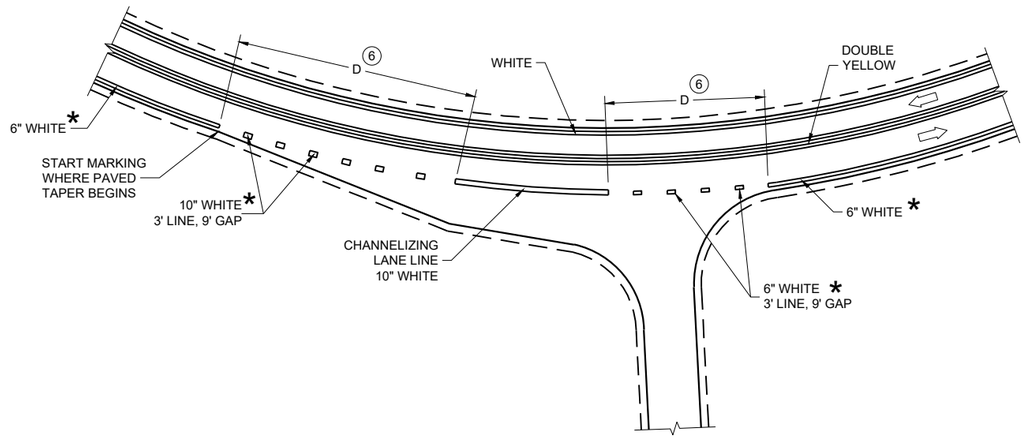
GENERAL NOTES

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

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

LEGEND

DIRECTION OF TRAVEL



INTERSECTION ON OUTSIDE OF CURVE

PAVEMENT MARKING (INTERSECTIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

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

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

THIS LANE CLOSURE IS TYPICAL FOR CLOSING RIGHT LANE - REVERSE FOR CLOSING LEFT LANE.

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

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

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

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

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

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

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

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

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

IF THE SPEED LIMIT WILL CHANGE BASED ON THE PRESENCE OF WORKERS, USE THE TAPER LENGTH THAT MATCHES THE HIGHER OF THE TWO SPEEDS FOR A CONTINUOUS LANE CLOSURE.

EXISTING POST MOUNTED SPEED LIMIT SIGNS SHOULD BE COVERED OR REMOVED.

(1) POST NON-CONSTRUCTION SPEED LIMIT.

(2) IF THE LANE CLOSURE MOVES DOWNSTREAM, LEAVE DSLT IN PLACE.

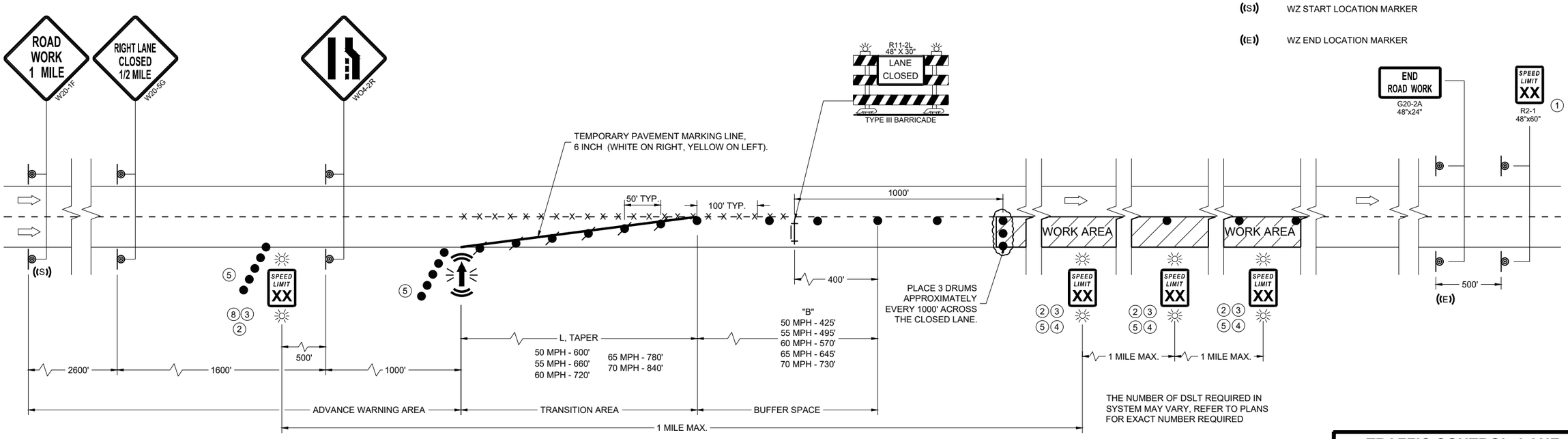
(3) PLACE DSLT AT EXISTING POST MOUNTED SPEED LIMIT SIGN AFTER THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP. IF THERE IS NOT AN EXISTING SIGN, PLACE 1,500 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP

(4) FOR LEFT LANE CLOSURES, DSLT REMAINS ON RIGHT SHOULDER.

(5) 5 DRUMS SPACED @ 10' INTERVALS AS NEEDED.

LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- REMOVING PAVEMENT MARKINGS
- DIRECTION OF TRAFFIC
- WORK AREA
- CONNECTED ARROW BOARD
- DIGITAL SPEED LIMIT TRAILER (DSLT)
- WZ START LOCATION MARKER
- WZ END LOCATION MARKER



TRAFFIC CONTROL, LANE CLOSURE, DIGITAL SPEED REDUCTION SYSTEM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2025 — DATE
/S/ Andrew Heidtke — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

FHWA

6

SDD 15D12-16g

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

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" X 48" 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 CONSECUTIVE DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS. USE SUPPORTS THAT PROVIDE A MINIMUM OF 5 FEET FROM THE BOTTOM OF THE SIGN TO THE PAVEMENT.

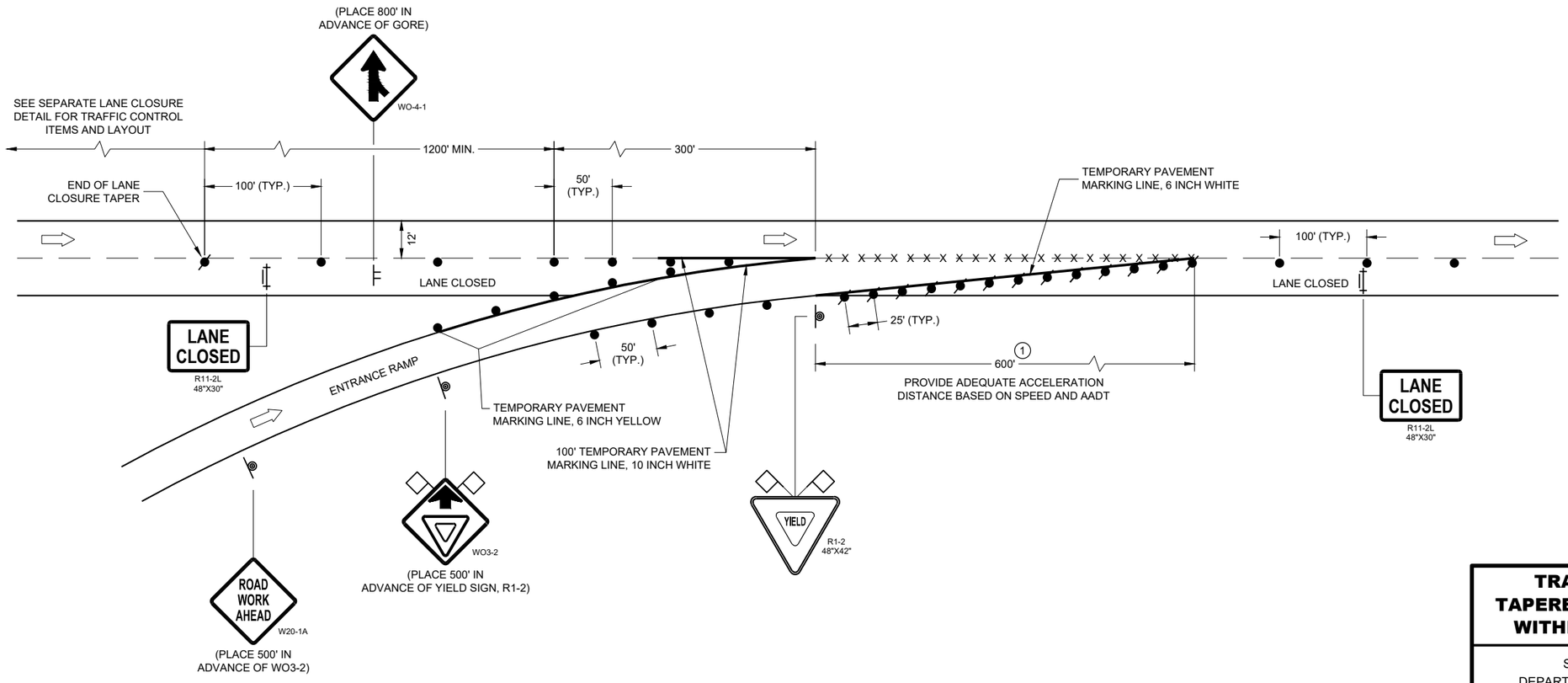
IF INDICATED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE FLEXIBLE TUBULAR MARKERS FOR DRUMS IN THE GORE BETWEEN THE ENTRANCE RAMP AND MAINLINE TRAFFIC.

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 LINES IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

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

(1) CONSULT WITH REGIONAL WORK ZONE ENGINEER IF NEED TO REDUCE LENGTH EXISTS.



TRAFFIC CONTROL, TAPERED ENTRANCE RAMP WITHIN LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

SDD 15D15-07c

6

SDD 15D15-07c

LEGEND

SIGN ON PERMANENT SUPPORT

SIGN ON TEMPORARY SUPPORT

TRAFFIC CONTROL DRUM

TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT

TYPE III BARRICADE WITH ATTACHED SIGN

FLAGS, 16" X 16" MIN., ORANGE

DIRECTION OF TRAFFIC

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" X 48" 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.

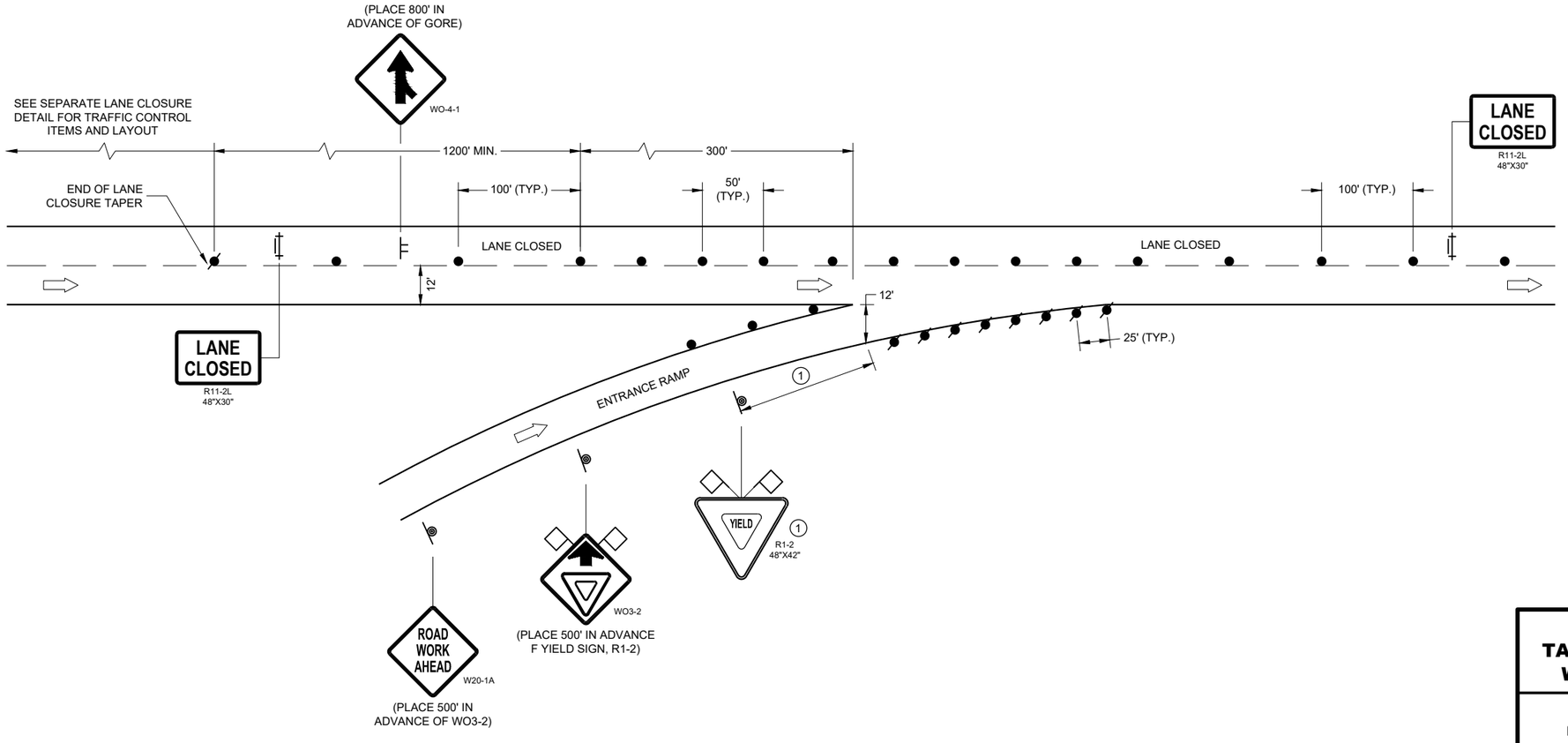
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONSECUTIVE DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS. USE SUPPORTS THAT PROVIDE A MINIMUM OF 5 FEET FROM THE BOTTOM OF THE SIGN TO THE PAVEMENT.

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.

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

(1) PLACE YIELD SIGN TO PROVIDE ADEQUATE SIGHT DISTANCE AND ACCELERATION DISTANCE.



TRAFFIC CONTROL, TAPERED ENTRANCE RAMP WITHIN LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

6

SDD 15D15-07d

6

SDD 15D15-07d

LEGEND

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

GENERAL NOTES

THIS RAMP CLOSURE DETAIL IS TYPICAL FOR CLOSING A RIGHT SIDE EXIT RAMP. FOR A LEFT SIDE EXIT RAMP, REVERSE THE TRAFFIC CONTROL.

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" X 48" UNLESS OTHERWISE NOTED.

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.

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

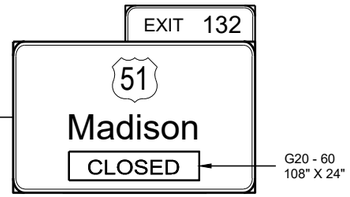
WORK AREAS WITH A DROP OFF ALONG THE EDGE OF AN OPEN TRAVEL LANE SHALL BE LEVELED WITH TEMPORARY FILL WHEN THE CONTRACTOR IS NOT WORKING ADJACENT TO THE TRAVEL LANE. DRUMS SHALL BE PLACED ENTIRELY OUTSIDE THE TRAVEL LANE, ALLOWING THE FULL UNOBSTRUCTED LANE WIDTH, WHEN WORK IS NOT IN PROGRESS.

WHERE MEDIAN BARRIER IS IN PLACE, SIGNS SHOWN ON LEFT SIDE OF ROADWAY MAY BE OMITTED FOR RIGHT SIDE RAMP CLOSURES OF LESS THAN 12 - HOUR DURATION.

(1) W20 - 1A AND G20 - 2A SIGNS ARE NOT REQUIRED IF THE RAMP CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

(2) PLACE "RAMP CLOSED BEGINNING" SIGN OR PCMS 7 CALENDAR DAYS PRIOR TO CLOSURE OR AS DIRECTED BY THE ENGINEER. SEE WISCONSIN STANDARD SIGN PLATES FOR SIGN LAYOUT.

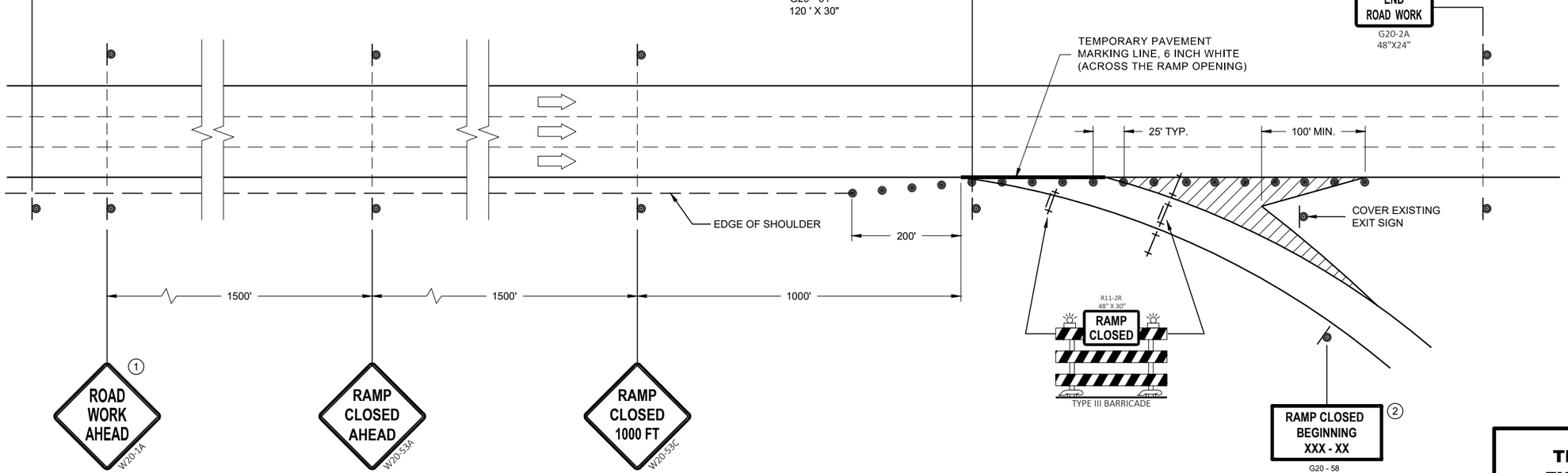
OR



PLACE SIGN G20 - 60 OVER MILEAGE ON EXISTING E1 - 1A SIGN

G20 - 61
120 ' X 30"

COVER ARROW ON EXISTING E4 - 1 SIGN (COVERING SIGNS TYPE I)



OR

PCMS MESSAGING

FRAME 1	FRAME 2
RAMP TO CLOSE	XXXDAY XX XX XX

TRAFFIC CONTROL, EXIT RAMP CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

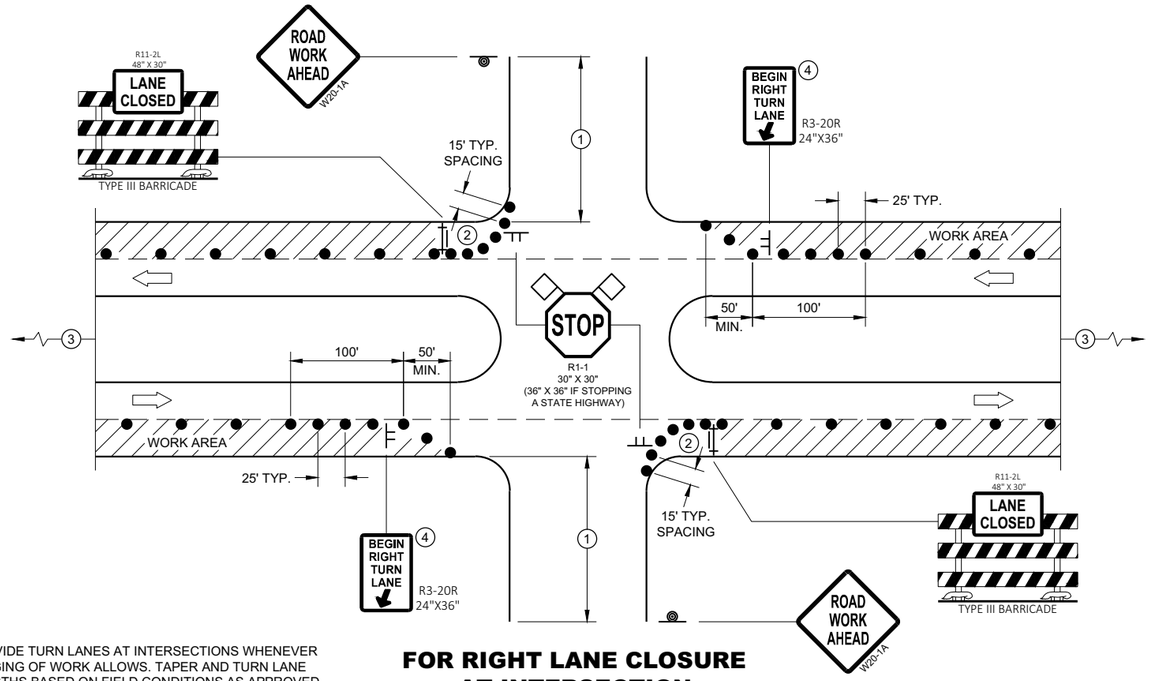
APPROVED
May 2023
DATE

/S/ Andrew Heidtke
ROADWAY STANDARDS DEVE ENGINEER

FHWA

6

SDD 15D16-06



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

FOR RIGHT LANE CLOSURE AT INTERSECTION

GENERAL NOTES

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" MAY BE USED IF APPROVED BY THE DISTRICT TRAFFIC UNIT.

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON COVERED OR "DOWNED" SIGNS.

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

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

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

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

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

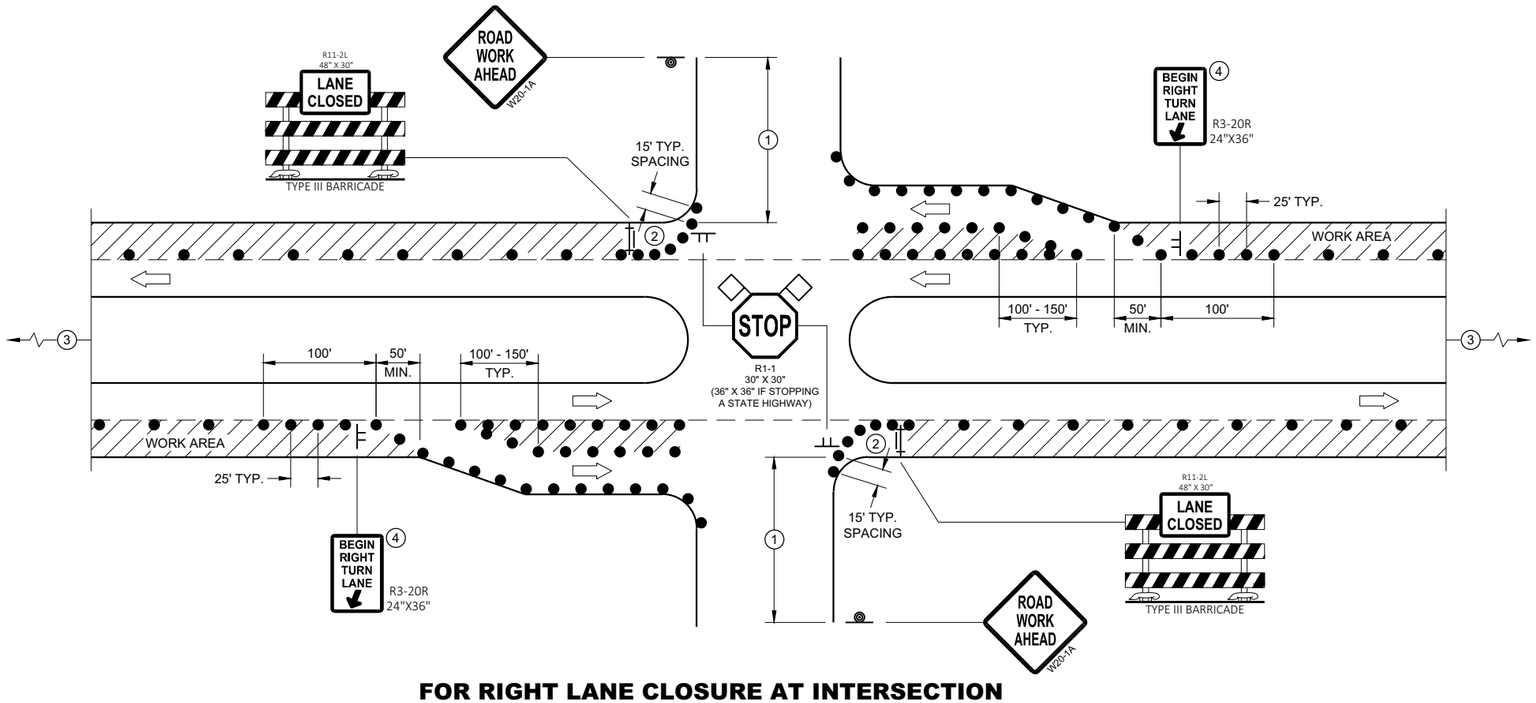
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

(1) 500' TYPICAL OR AT LAST INTERSECTION, WHICHEVER IS CLOSER.
350' IF 35 - 40 MPH.
200' IF 25 - 30 MPH.

(2) ALSO USE BARRICADE AND 15 FOOT TYPICAL DRUM SPACING AT COMMERCIAL DRIVEWAYS

(3) SEE SEPARATE LANE CLOSURE DETAIL FOR ADDITIONAL TRAFFIC CONTROL.

(4) MINIMUM MOUNTING HEIGHT OF 5 FEET FROM EDGE OF PAVEMENT (AT EDGE LINE LOCATION) TO BOTTOM OF SIGN.

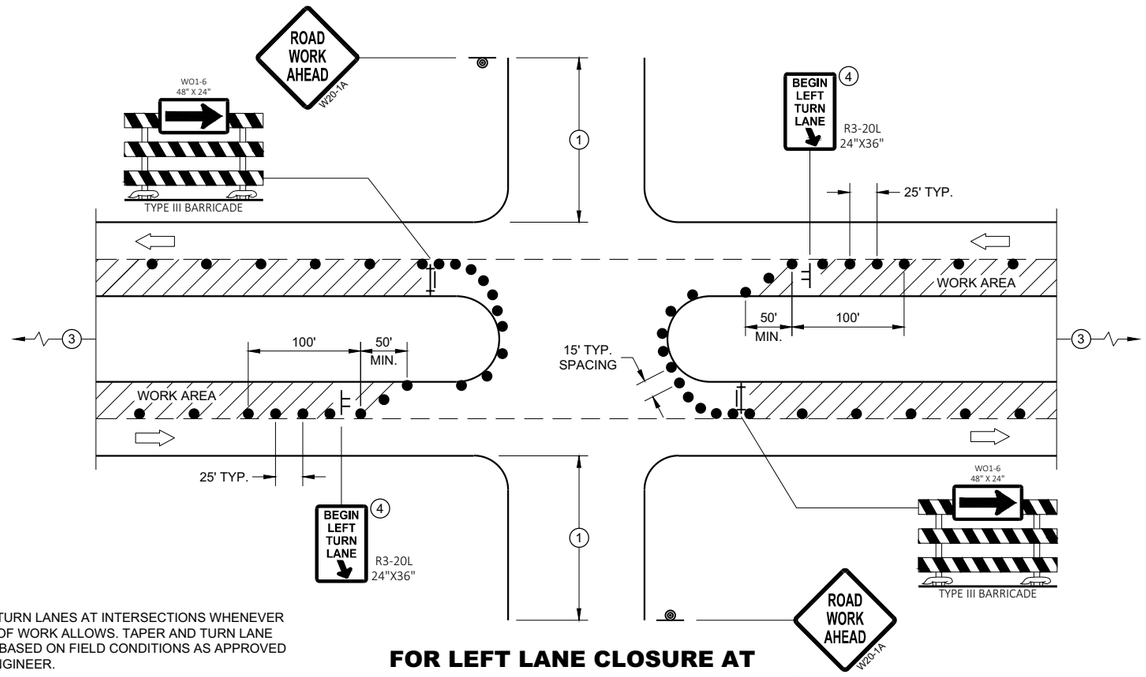


FOR RIGHT LANE CLOSURE AT INTERSECTION (WITH RIGHT TURN BAY OPEN)

LEGEND

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

TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE RIGHT LANE CLOSURE



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

FOR LEFT LANE CLOSURE AT INTERSECTION OR MEDIAN OPENING

GENERAL NOTES

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" MAY BE USED IF APPROVED BY THE DISTRICT TRAFFIC UNIT.

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON COVERED OR "DOWNED" SIGNS.

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

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

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

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

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

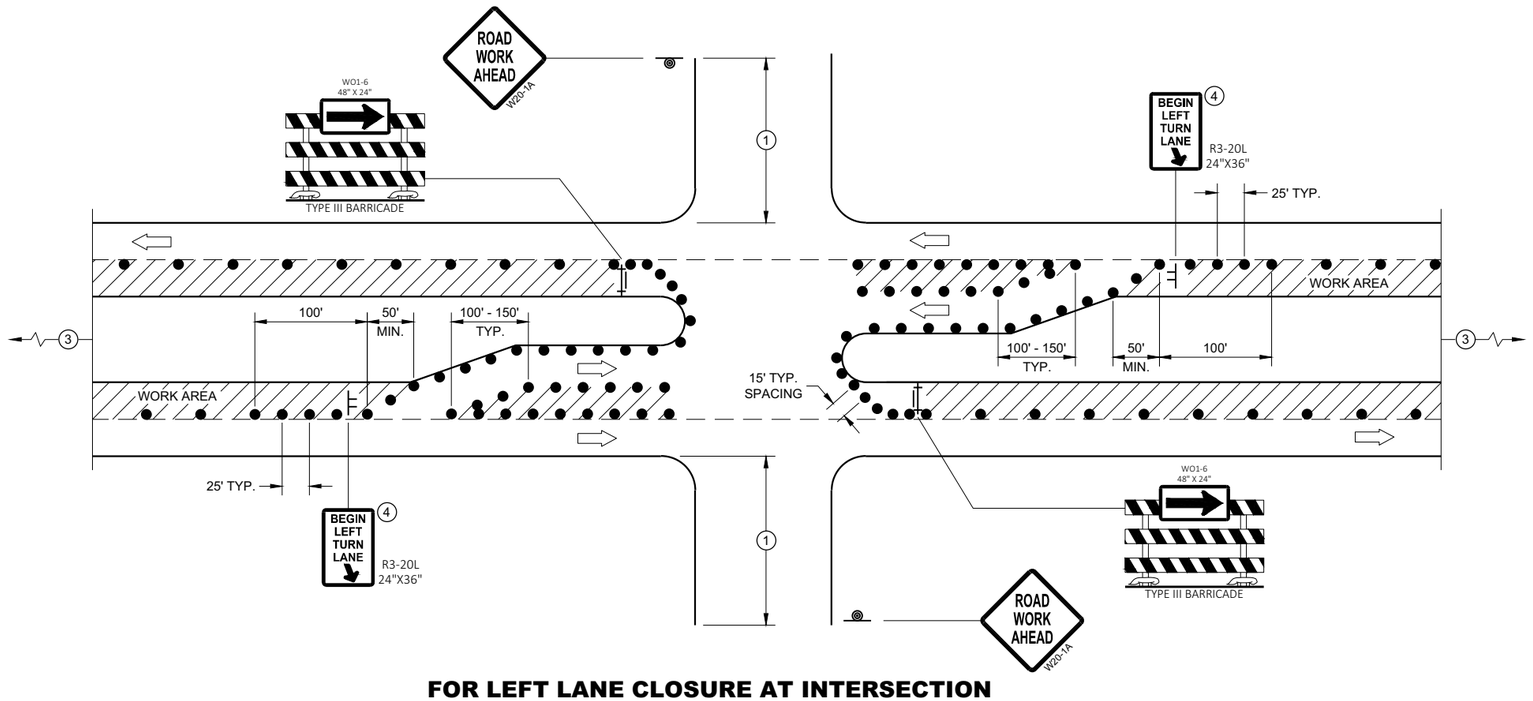
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

(1) 500' TYPICAL OR AT LAST INTERSECTION, WHICHEVER IS CLOSER.
350' IF 35 - 40 MPH.
200' IF 25 - 30 MPH.

(2) ALSO USE BARRICADE AND 15 FOOT TYPICAL DRUM SPACING AT COMMERCIAL DRIVEWAYS

(3) SEE SEPARATE LANE CLOSURE DETAIL FOR ADDITIONAL TRAFFIC CONTROL.

(4) MINIMUM MOUNTING HEIGHT OF 5 FEET FROM EDGE OF PAVEMENT (AT EDGE LINE LOCATION) TO BOTTOM OF SIGN.



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

LEGEND

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

TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LEFT LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
August 2020 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINEER

FHWA

6

SDD 15D21 - 07b

6

SDD 15D21 - 07b

LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- DIRECTION OF TRAFFIC
- CONNECTED ARROW BOARD
- WORK AREA
- (S) WZ START LOCATION MARKER
- (E) WZ END LOCATION MARKER

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.

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.

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

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

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

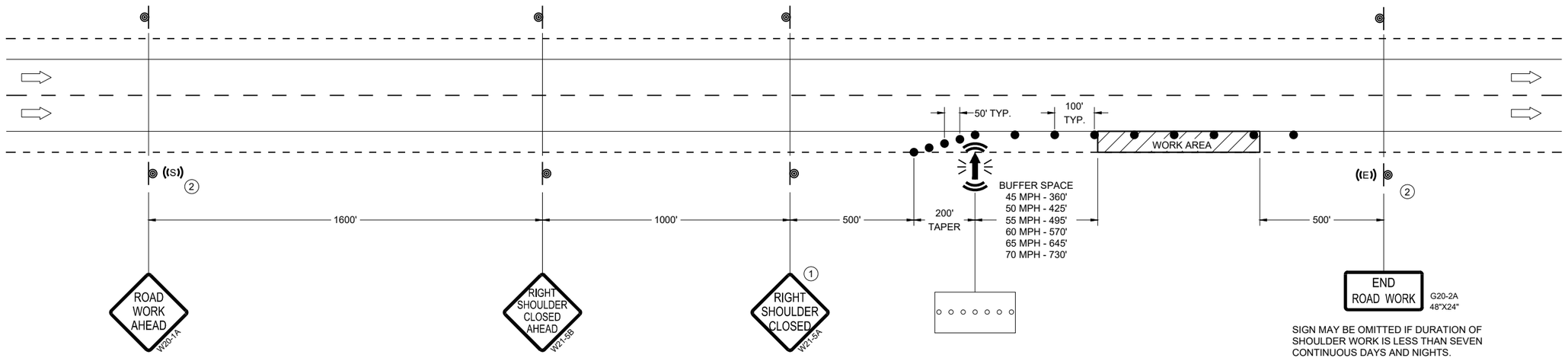
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

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

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

(1) FOR SHORT DURATION SHOULDER WORK OF LESS THAN ONE HOUR THE W21-5A SIGN MAY BE OMITTED.

(2) IF ALREADY PRESENT WITHIN PROJECT , DO NOT INCLUDE ADDITIONAL DEVICE.



SIGN MAY BE OMITTED IF DURATION OF SHOULDER WORK IS LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS.

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

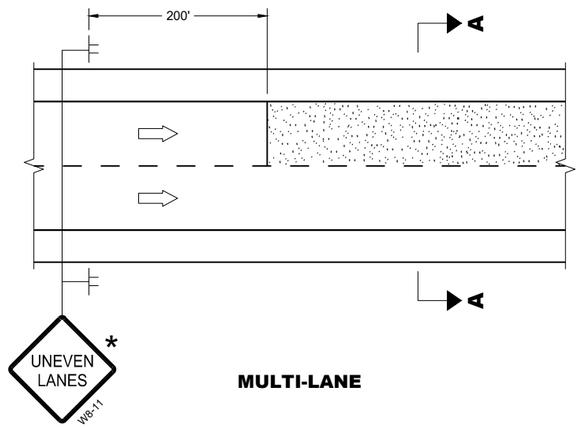
APPROVED

Noveber 2025
DATE

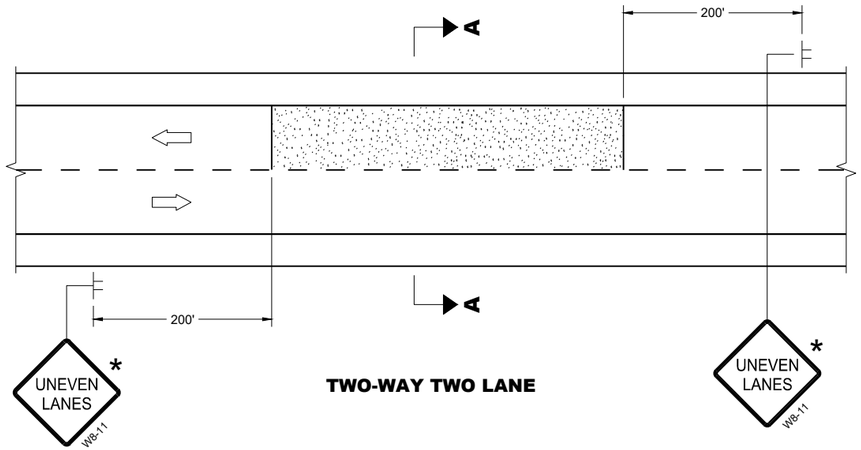
/S/ Andrew Heidtke
STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER

FHWA

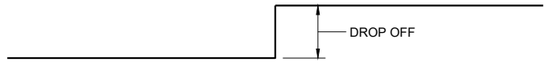
6
SDD 15D27-05



MULTI-LANE

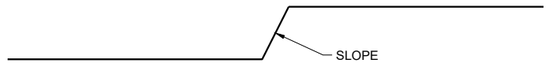


TWO-WAY TWO LANE

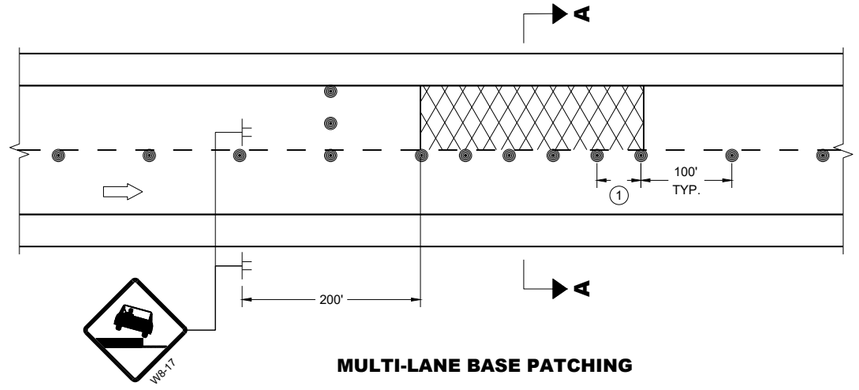


SECTION A - A

OR



SECTION A - A



MULTI-LANE BASE PATCHING

ADJACENT LANE DROP-OFFS

GENERAL NOTES

FOR SPOT LOCATIONS USE ENGINEERING JUDGEMENT WHEN PLACING ADDITIONAL SIGNS.

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

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

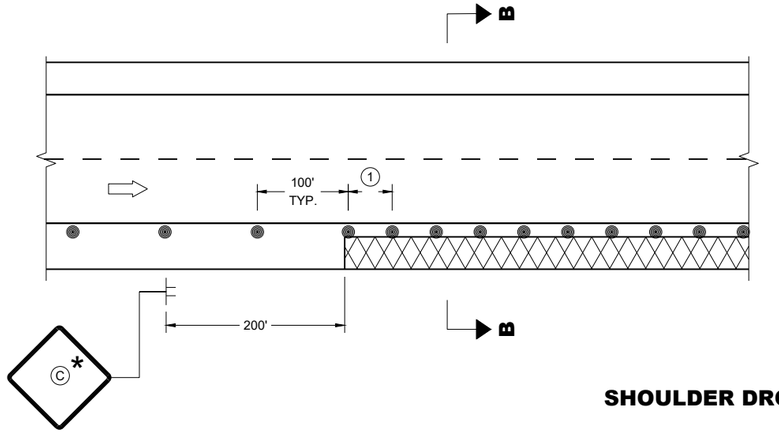
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

* IF THE DROP-OFF IS CONTINUOUS ALONG THE PROJECT, PLACE ADDITIONAL SIGNS EVERY 1 MILE AND AFTER EVERY ENTRANCE RAMP.

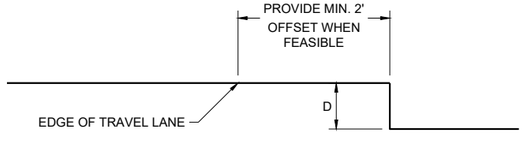
(1) USE CLOSER SPACING WHEN DELINEATING DROP-OFF.

LEGEND

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



SHOULDER DROP-OFFS



SECTION B - B

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

TRAFFIC CONTROL, DROP-OFF SIGNING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2025 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINEER

FHWA

6
SDD 15D39-03

LEGEND

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

POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	SHIFTING TAPER L/2 W, LATERAL OFFSET (FT)					BUFFER SPACE (B) FEET
	10	11	12	13	14	
50	250	275	300	325	350	425
55	275	303	330	358	385	495
60	300	330	360	390	420	570
65	325	358	390	423	455	645
70	350	385	420	455	490	730

GENERAL NOTES

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

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

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

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON ANY "COVERED" OR "DOWNED" SIGNS.

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

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

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

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

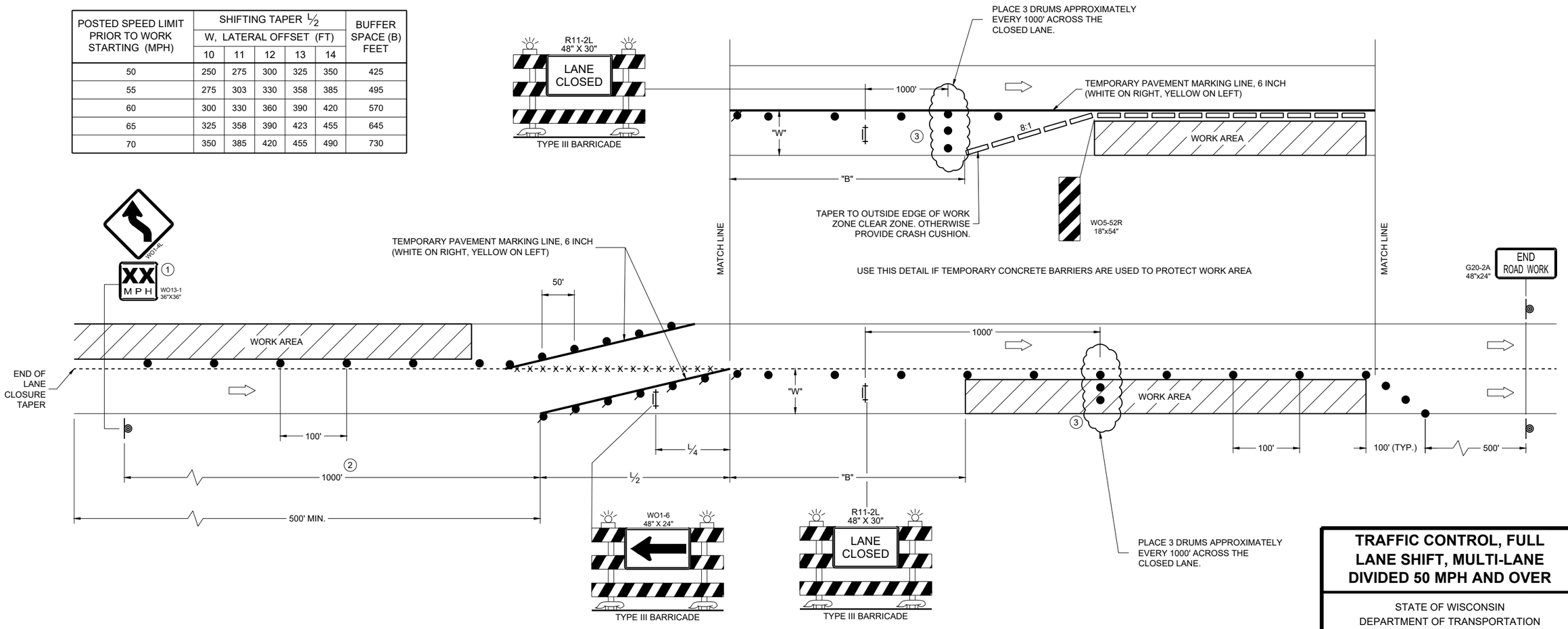
IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE SHIFT OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP. THE LANE SHIFT MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE THE LENGTH OF ½ THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.

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

(2) IF BEGINNING OF LANE SHIFT IS 1200' OF LESS FROM THE END OF THE LANE CLOSURE TAPER, PLACE THE WO1-4L SIGN 200 FEET AFTER THE END OF THE LANE CLOSURE TAPER.

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



TRAFFIC CONTROL, FULL LANE SHIFT, MULTI-LANE DIVIDED 50 MPH AND OVER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2025 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINEER
FHWA

6
SDD 15D40-07b

LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE III BARRICADE WITH ATTACHED SIGN
- DIRECTION OF TRAFFIC
- CONSTRUCTION TRAFFIC
- WORK AREA

TABLE 1

S (MPH)	INGRESS, L	EGRESS, L
50	435'	720'
55	480'	960'
60	530'	1200'
65	570'	1410'
70	615'	1620'

LEGEND

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON COVERED OR "DOWNED" SIGNS.

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

WORK ZONE INGRESS/EGRESS LOCATIONS SHALL BE APPROVED BY THE ENGINEER. LOCATIONS FOR WORK ZONE ACCESS TO/FROM THE FREEWAY SHALL NOT BE USED FOR INGRESS AND EGRESS AT THE SAME TIME.

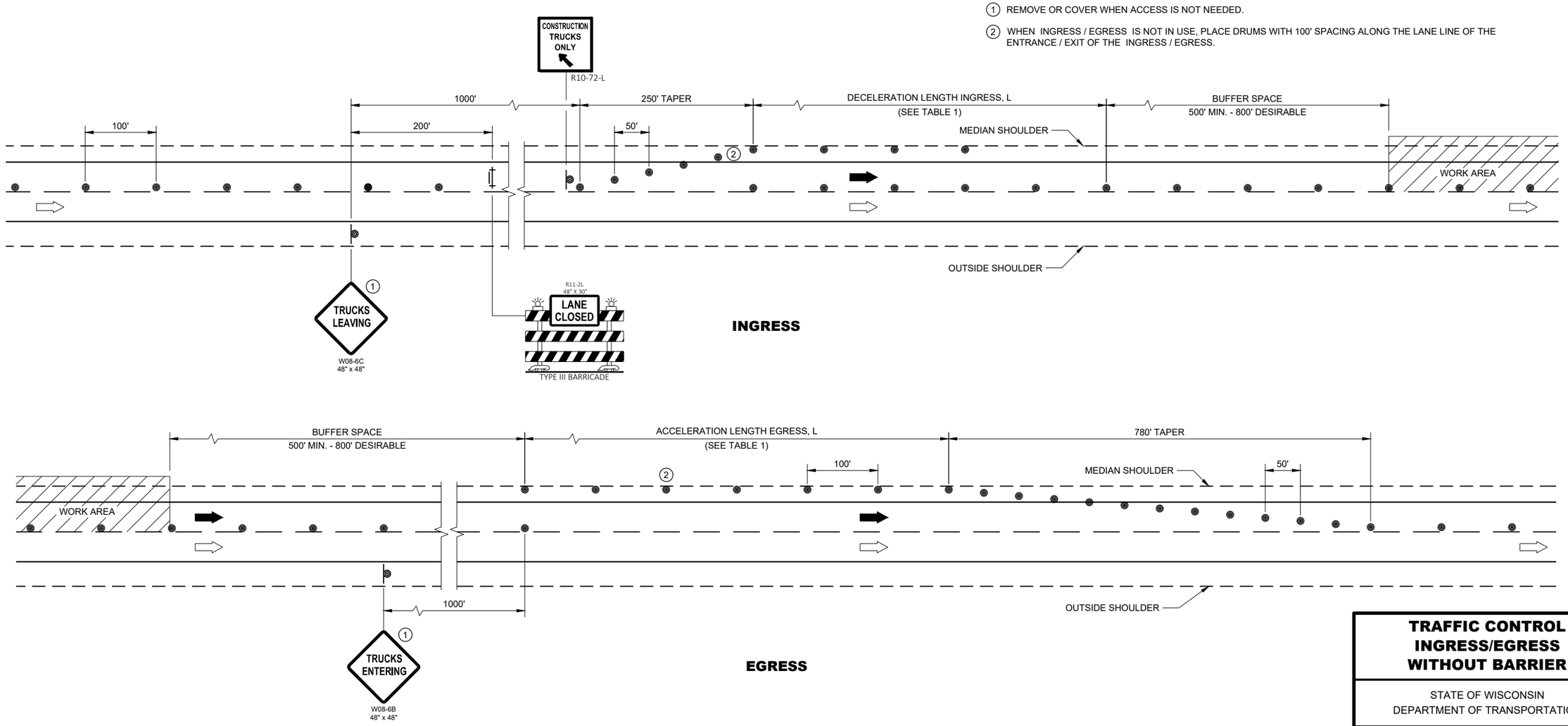
THIS ACCESS DETAIL IS TYPICAL FOR LEFT LANE ACCESS, FOR RIGHT LANE ACCESS, REVERSE THE TRAFFIC CONTROL

TEMPORARY SUPPORTS MAY BE USED IF PLACED BEHIND TEMPORARY BARRIER WALL

TRUCKS SHALL USE FLASHING YELLOW BEACON WHEN ENTERING AND EXITING LIVE TRAFFIC.

(1) REMOVE OR COVER WHEN ACCESS IS NOT NEEDED.

(2) WHEN INGRESS / EGRESS IS NOT IN USE, PLACE DRUMS WITH 100' SPACING ALONG THE LANE LINE OF THE ENTRANCE / EXIT OF THE INGRESS / EGRESS.



TRAFFIC CONTROL INGRESS/EGRESS WITHOUT BARRIER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

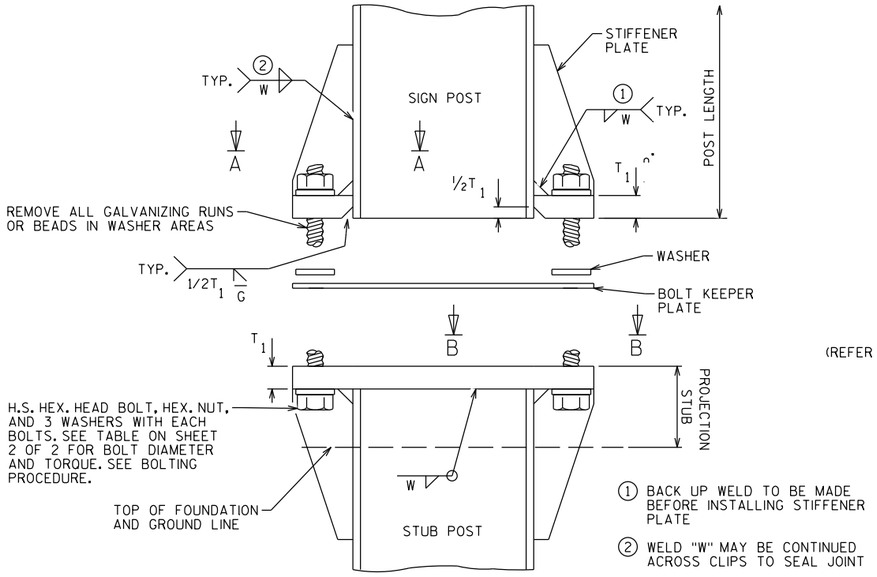
FHWA

6

SDD 15D47-03b

6

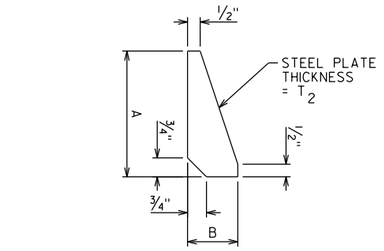
SDD 15D47-03b



① BACK UP WELD TO BE MADE BEFORE INSTALLING STIFFENER PLATE

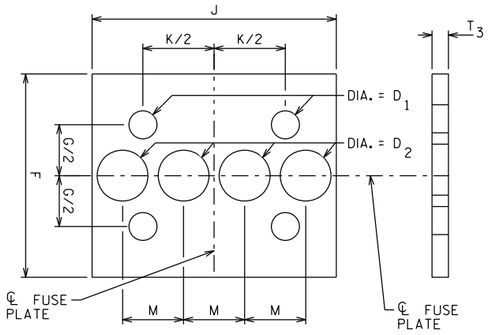
② WELD "W" MAY BE CONTINUED ACROSS CLIPS TO SEAL JOINT

SIGN POST & STUB POST ELEVATION



STIFFENER PLATE DETAIL

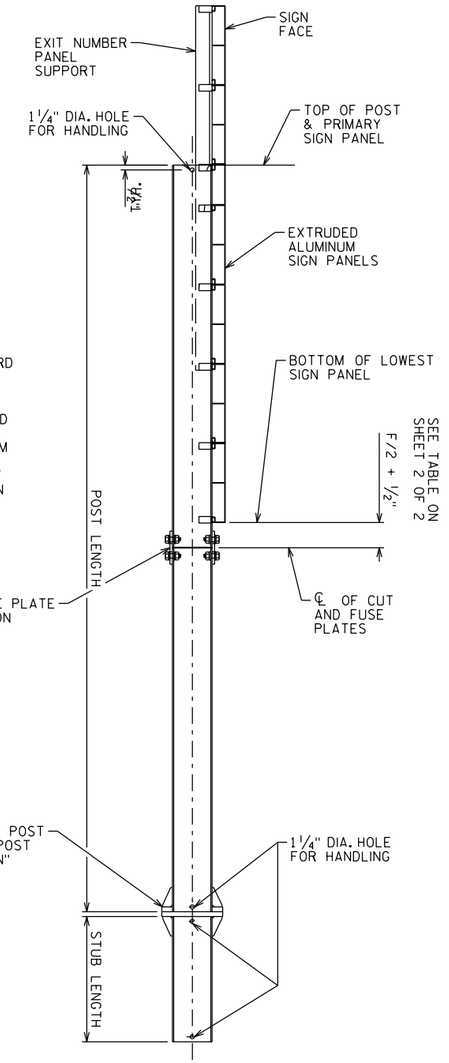
(REFER TO TABLE ON SHEET 2 OF 2 FOR DIMENSIONS)



PERFORMED FUSE PLATE DETAIL

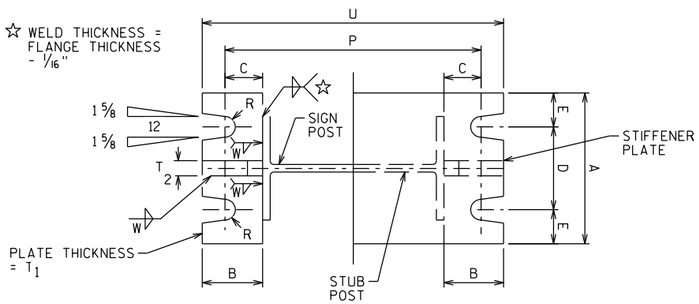
USE H.S. HEX HEAD BOLTS, HEX HEAD NUT AND FLAT WASHER UNDER NUT. INSTALL BOLTS PER THE WISCONSIN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATION SECTION 506.3.12.3.

ALL HOLES SHALL BE DRILLED, SUB-PUNCHED AND REAMED. ALL PLATE CUTS SHALL PREFERABLY BE SAW CUTS. HOWEVER, FLAME CUTTING WILL BE PERMITTED PROVIDED ALL EDGES ARE GROUND. METAL PROJECTING BEYOND THE PLANE OF THE PLATE FACE WILL NOT BE PERMITTED. STEEL FUSE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A36. ASTM A572 GRADE 50 OR ASTM A588 MAY BE SUBSTITUTED FOR A36 AT THE OPTION OF THE FABRICATOR. MILL TEST REPORTS SHALL BE SUBMITTED FOR FUSE PLATES. STEEL USED SHALL HAVE AN ULTIMATE TENSILE STRENGTH NOT TO EXCEED 80 KSI.



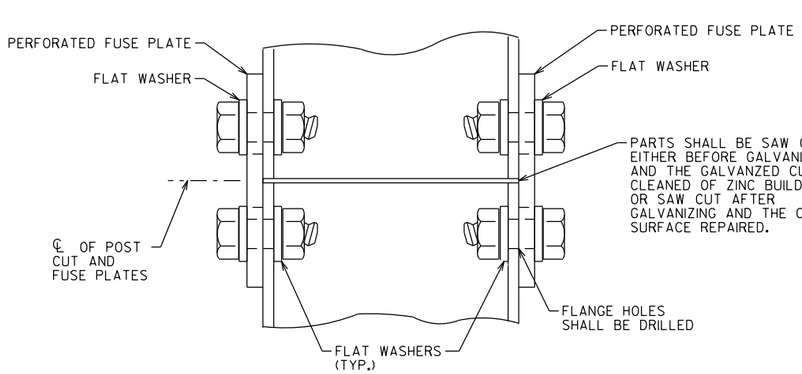
POST DETAIL

☆ WELD THICKNESS = FLANGE THICKNESS - 1/16"

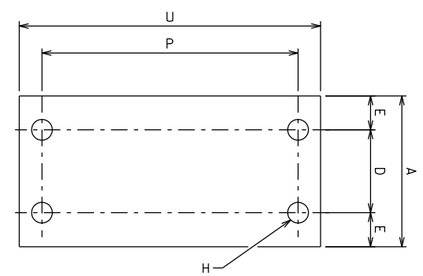


SECTION A-A

SECTION B-B



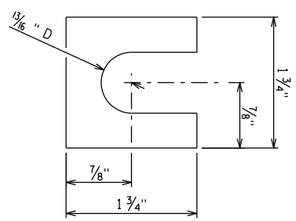
FUSE PLATE CONNECTION DETAIL



H = BOLT DIA. + 1/8"

BOLT KEEPER PLATE DETAIL

30 GA GALVANIZED SHEET STEEL



SHIM DETAIL

FURNISH TWO .012"± THICK AND TWO .032"± THICK SHIMS PER POST. SHIMS SHALL BE FABRICATED FROM BRASS SHIM STOCK OR STRIP CONFORMING TO ASTM B36.

BOLTING PROCEDURE FOR BASE CONNECTION

1. ASSEMBLE SIGN POST, BOLT KEEPER PLATE, AND STUB POST WITH BOLTS AND THREE FLAT WASHERS PER BOLT AS SHOWN.
2. SHIM AS REQUIRED 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 A 12" OR 15" WRENCH TO BED WASHERS & SHIMS AND TO CLEAN BOLT THREADS.
5. LOOSEN EACH BOLT IN TURN AND RETIGHTEN IN A SYSTEMATIC ORDER TO THE PERSCRIBED TORQUE. (SEE TABLE FOR PERSCRIBED TORQUE). DO NOT OVER-TIGHTEN.
6. BURR THREADS AT JUNCTION WITH NUT USING A CENTER PUNCH TO PREVENT NUT LOOSENING.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE BTO TYPE I SIGNS

DRAWN BY	PLANS CK'D.

CONNECTION & FOUNDATION DETAILS 1 OF 2

SHEET A3-1.20

164

7

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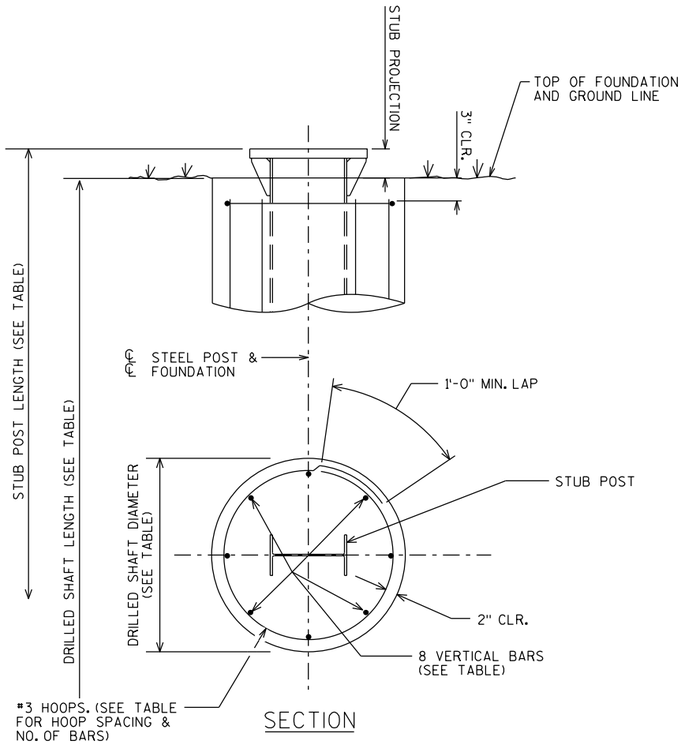
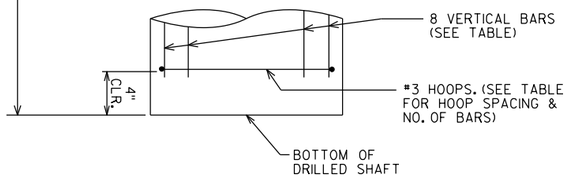
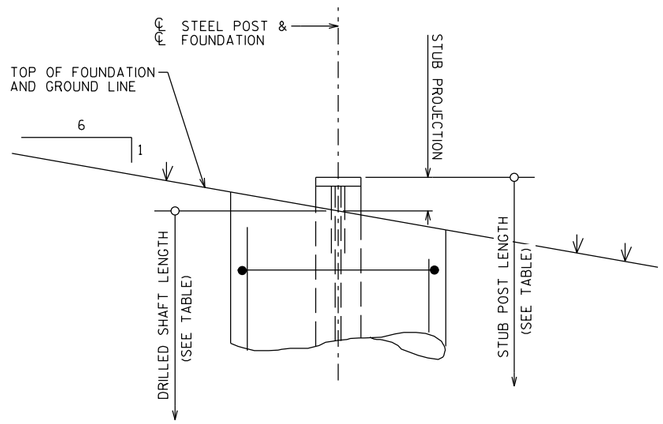


SECTION



FOUNDATION DETAIL



SHAFT PLACEMENT

FOUNDATION DATA TABLE

POST SHAPE	STUB LENGTH	STUB PROJECTION	DRILLED SHAFT DIAMETER	DRILLED SHAFT LENGTH	VERTICAL BARS		HOOPS		CONCRETE VOLUME ◆	TOTAL REINF. WEIGHT ◆
					SIZE	LENGTH	MAX SPA.	NO.		
W6X15	2'-6"	3"	24"	6'-6"	#5	5'-11"	10"	9	0.8 CY	71 LB
W8X18	2'-6"	3"	24"	7'-6"	#6	6'-11"	12"	8	0.9 CY	102 LB
W8X21	3'-0"	2½"	24"	8'-0"	#6	7'-5"	12"	9	1.0 CY	110 LB
W10X22	3'-0"	2½"	24"	8'-6"	#7	7'-11"	12"	9	1.0 CY	151 LB
W12X26	3'-0"	2½"	24"	10'-0"	#7	9'-5"	12"	11	1.2 CY	180 LB

◆ QUANTITIES SHOWN ARE FOR ONE DRILLED SHAFT

BASE CONNECTION & FUSE PLATE DATA TABLE

POST SHAPE	WEIGHT PER FOOT	BASE CONNECTION DATA: BOLT SIZE & TORQUE	A	B	C	D	E	T1	T2	W	R	BOLT KEEPER PLATE DATA: P	U	PERFORATED FUSE PLATE DATA: F	G	J	K	M	D1	D2	T3	BOLT DIA.	WGT. EA. LBS	BOLT LENGTH	V ◪
W6X15	15 LB	⅝" DIA. X 4" 36 TO 38 FT-LB	5"	2"	1¼"	2¾"	1⅛"	1¼"	½"	¼"	11/32"	8½"	10"	5"	2½"	6"	3½"	1½"	11/16"	1¼"	⅜"	⅝"	2.4	2	73.0 LB
W8X18	18 LB											10⅝"	12⅛"	5"	2½"	5¼"	2¾"	1¼"	11/16"	1 1/16"	⅜"	⅝"	2.0	2	83.0 LB
W8X21	21 LB	¾" DIA. X 4¾" 62 TO 63 FT-LB	6"	2¼"	1⅜"	3½"	1¼"	1½"	¾"	5/16"	13/32"	11"	12¾"	5½"	2½"	5¼"	2¾"	1¼"	13/16"	1"	½"	¾"	3.1	2¼"	124.0 LB
W10X22	22 LB											12⅞"	14⅝"	6"	3"	5¾"	2¾"	1⅜"	13/16"	1⅛"	½"	¾"	3.9	2¼"	134.0 LB
W12X26	26 LB											15"	16¾"	6"	3"	6½"	3½"	1⅝"	13/16"	1 5/16"	½"	¾"	4.5	2¼"	152.0 LB

◪ TOTAL STRUCTURAL CARBON STEEL WEIGHT FOR ONE POST = V + (POST LENGTH X POST WEIGHT PER FOOT)

"V" INCLUDES STUB POST, BASE PLATES, STIFFENER PLATES, PERFORATED FUSE PLATES, BOLTS, NUTS, AND WASHERS.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED

MATERIALS SHALL CONFORM TO THE WISCONSIN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS SECTION 506, UNLESS NOTED OTHERWISE.

FABRICATION SHALL CONFORM TO THE WISCONSIN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS SECTION 506.

ALL POST, POST STUBS & ATTACHMENTS SHALL BE ASTM A709 GRADE 50, GALVANIZED IN ACCORDANCE WITH ASTM A123.

THE POST, BASE PLATES, UPPER SIX INCHES OF STUB POST, FLANGE SPLICE PLATE AND FUSE PLATE SHALL BE GALVANIZED AFTER FABRICATION.

H.S. BOLTS, WASHERS, & NUTS SHALL BE A325 GALVANIZED.

FOUNDATION MATERIAL PROPERTIES

CONCRETE MASONRY	F'C = 3,500 P.S.I.
BAR STEEL REINFORCEMENT (UNCOATED), GRADE 60	FY = 60,000 P.S.I.

DESIGN DATA

DESIGN CONFORMS TO AASHTO LRFD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS 1ST EDITION 2015 (WITH 2017 & 2018 INTERIM REVISIONS).

DEAD LOADS (DL):

- STEEL POST SELF WEIGHT
- SIGN PANEL WEIGHT = 3 PSF

WIND LOADS (WL):

WIND LOADS WERE APPLIED TO THE PROJECTED AREAS OF THE SIGN PANELS AND THE STEEL SIGN POSTS.

- BASIC WIND SPEED = 76 MPH
- MEAN RECURRANCE INTERVAL (MRI) = 10 YEARS
- HEIGHT & EXPOSURE FACTOR = 1.00
- DIRECTIONALITY FACTOR = 0.85
- GUST EFFECT FACTOR = 1.14

WIND LOAD CASES:

- WL CASE 1: 1.0 X NORMAL WIND
- WL CASE 2: 1.0 X TRANSVERSE WIND
- WL CASE 3: 0.75 X NORMAL WIND + 0.75 X TRANSVERSE WIND

LOAD COMBINATIONS:

LOAD COMBINATION	TYPE	DL FACTOR	WL FACTOR
STRENGTH I	GRAVITY	1.25	-
EXTREME I	WIND	1.10	1.0
		0.9	1.0
SERVICE I	DEFLECTION	1.0	1.0

FOUNDATION DESIGN DATA

THE FOUNDATION DESIGN ASSUMED COHESIONLESS SOILS (LOOSE SAND) ABOVE THE WATER TABLE WITH THE FOLLOWING PROPERTIES:

- SOIL UNIT WEIGHT = 115 PCF
- ANGLE OF INTERNAL FRICTION = 24 DEGREES
- SOIL MODULUS PARAMETER = 25 LB/IN3

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE BTO TYPE I SIGNS

DRAWN BY | PLANS CK'D.

CONNECTION & FOUNDATION DETAILS 2 OF 2

SHEET A3-1.20

165

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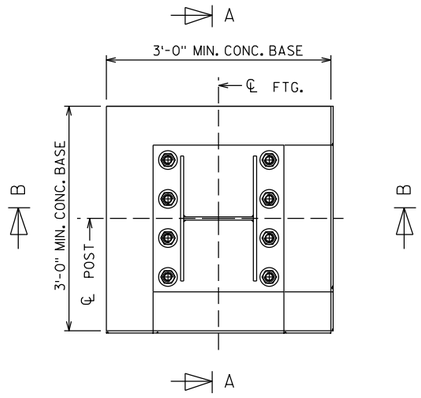
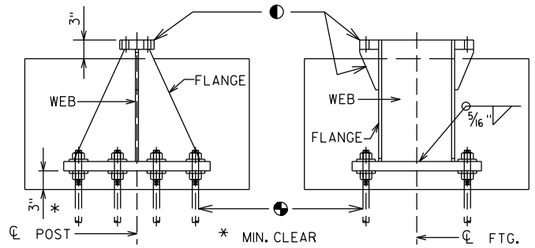
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A31.DGN
PLOT DATE : 3-MAR-2020
PLOT BY : dotc4c

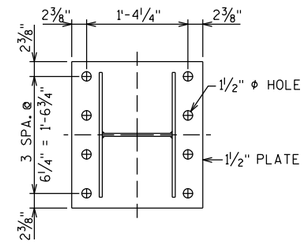
STUB AND ADHESIVE ANCHOR DETAILS



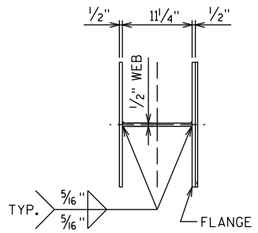
STUB SECTION



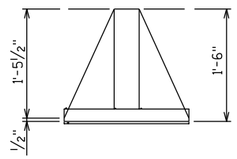
SECTION A-A SECTION B-B



BASE PLATE



STUB



FLANGE

◐ SEE BASE CONNECTION DETAILS ON "CONNECTIONS & FOUNDATION DETAILS" SHEETS.

◔ ADHESIVE ANCHORS 1¼-INCHES. ALLOWABLE PULL OUT CAPACITY = 15 KIPS. EMBED 1'-3" INTO ROCK.

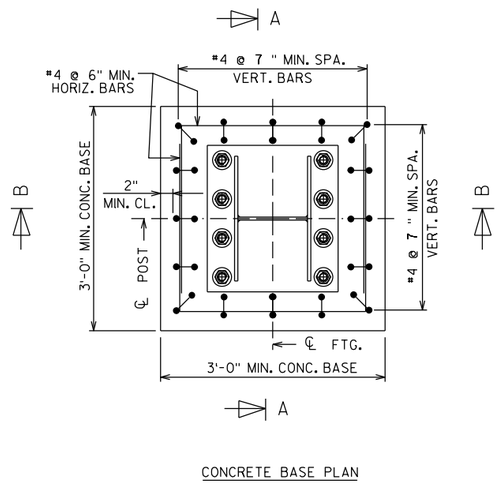
GENERAL NOTES:

QUANTITIES PER BASE:
REINFORCING STEEL = 62 LB
CONCRETE = 0.6 CY
STRUCTURAL STEEL = 335 LB

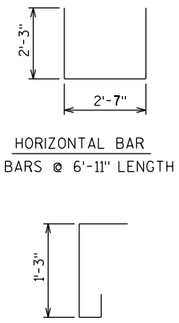
ALL MATERIALS, EXCEPT FOR ANCHOR ROD, NUTS, AND WASHERS, SHALL BE ASTM A709 GRADE 50. ALL MATERIALS TO BE GALVANIZED AFTER FABRICATION.

IF ROCK IS ENCOUNTERED PRIOR TO REACHING THE MINIMUM DRILLED SHAFT EMBEDMENT DEPTH DEFINED ON THE FOUNDATION DATA TABLE OF THE "CONNECTIONS & FOUNDATION DETAILS 2 OF 2" SHEET, THE CONTRACTOR SHALL INSTALL A TEST ADHESIVE ANCHOR AND DETERMINE THE PULL-OUT CAPACITY. IF THE FIELD TEST RESULTS IN A PULL-OUT CAPACITY GREATER THAN OR EQUAL TO 15 KIPS, THE CONTRACTOR MAY INSTALL THE ALTERNATE CONCRETE BASE AND BREAK-WAY STUB PER THE DETAILS ON THIS SHEET.

CONCRETE BASE DETAILS

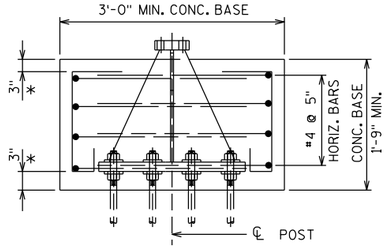


CONCRETE BASE PLAN

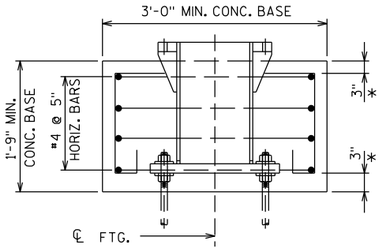


HORIZONTAL BAR
8 BARS @ 6'-11" LENGTH

VERTICAL BARS
16 BARS @ 2'-4" LENGTH
MAY BE PLACED IN SKEW
FOR CLEARANCE NEED



SECTION A-A



SECTION B-B

* MIN. CLEAR

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE BTO TYPE I SIGNS

DRAWN BY	PLANS CK'D.

ALTERNATE BREAK-AWAY BASE ON ROCK

SHEET A3-1M.2

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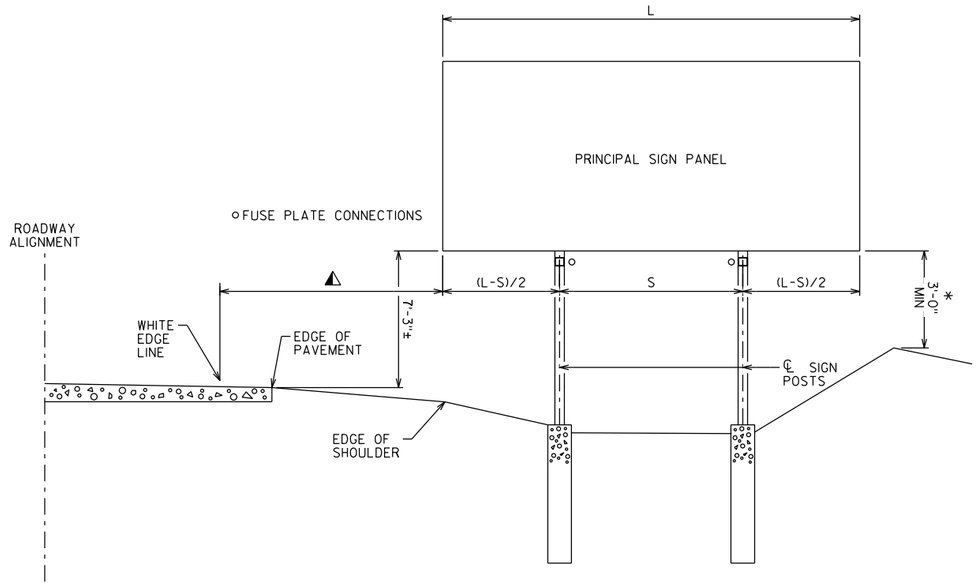
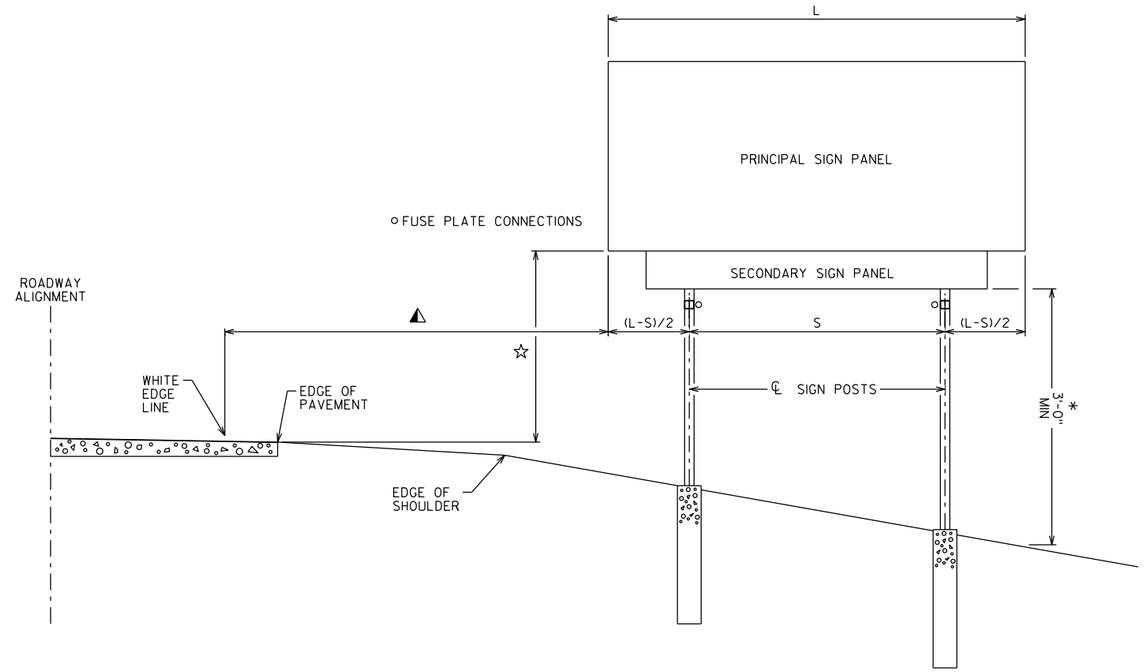


INSTALLATION WITHOUT SECONDARY SIGN



INSTALLATION WITH SECONDARY SIGN

TYPE 1 SIGN INSTALLATION NOTES:

FOR A 2-POST INSTALLATION, "S" EQUALS 3L/5, BUT SHALL NOT BE LESS THAN 6'-0".

FOR A 3-POST INSTALLATION, "S" EQUALS 5L/7, BUT SHALL NOT BE LESS THAN 12'-0". THE SPACING BETWEEN ANY TWO POSTS SHALL NOT BE LESS THAN 6'-0".

◭ UNLESS NOTED IN THE PLANS, THE SIGN OFFSET DISTANCE SHALL BE A MINIMUM OF 17'-6" FROM THE WHITE EDGE LINE, DESIRABLE 30'-0".

WHERE SIGNS ARE MOUNTED BEHIND CRASH WORTHY PROTECTION SUCH AS GUARDRAIL OR BARRIER WALL, THE LATERAL OFFSET MAY BE 4'-6" BEHIND THE GUARDRAIL OR BARRIER WALL.

THE ± TOLERANCE SHOWN ON THIS SHEETS IS 3".

THE VERTICAL SIGN HEIGHT CLEARANCES SHOWN ON THIS SHEET ARE MEASURED FROM THE BOTTOM OF THE SIGN PANEL TO THE NEAR EDGE OF PAVEMENT.

☆ THE VERTICAL CLEARANCE SHALL BE 8'-3"± WHEN THE SECONDARY SIGN HEIGHT IS 3'-0" OR LESS. FOR SECONDARY SIGN HEIGHTS LARGER THAN 3'-0", THE VERTICAL CLEARANCE TO THE BOTTOM OF THE SECONDARY SIGN PANEL SHALL BE 5'-3"±.

* THE VERTICAL SIGN GROUND CLEARANCE ON RIGHT END OF SIGN SHALL BE A MINIMUM OF 3'-0"±.

○ FOR 2-POST SIGNS, IF THERE IS A SECONDARY SIGN THAT IS NOT AS WIDE AS THE POSTS, INSTALL FUSE PLATES BENEATH PRINCIPAL SIGN.

FOR SECONDARY SIGNS THAT ARE NOT AS WIDE AS THE EXTERIOR POSTS, SECURE SIGN WITH CHANNEL STEEL AS DESCRIBED IN A4-6.

POST LENGTHS SHOWN IN THE MISCELLANEOUS QUANTITIES ARE ESTIMATED LENGTHS. THE CONTRACTOR SHALL VERIFY POST LENGTHS AT THE TIME OF FINAL GRADING.

REFER TO THE TRAFFIC ENGINEERING OPERATIONS AND SAFETY MANUAL FOR FURTHER GUIDANCE ON MINIMUM VERTICAL CLEARANCE REQUIREMENTS.

NO.	DATE	REVISION	BY
	2/29/24		

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE BTO TYPE I SIGNS

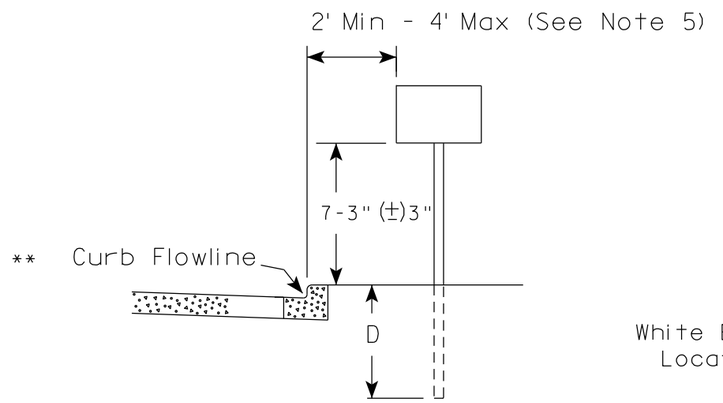
DRAWN BY	PLANS CK'D.

TYPICAL TYPE I SIGN INSTALLATION

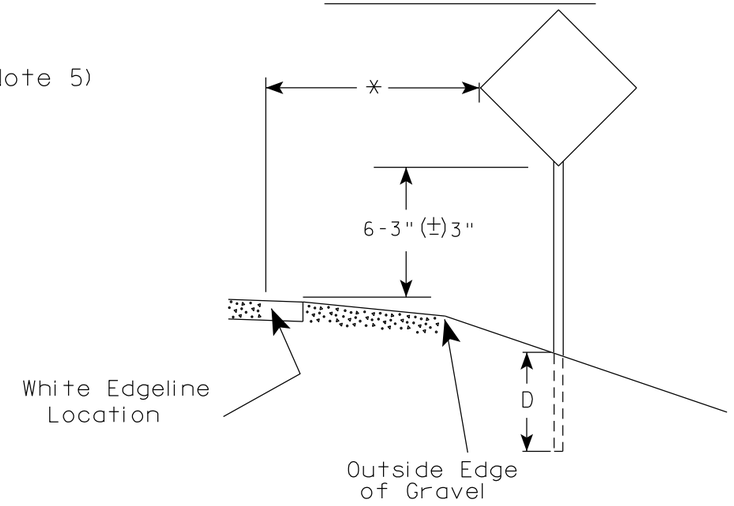
SHEET A4-1.11

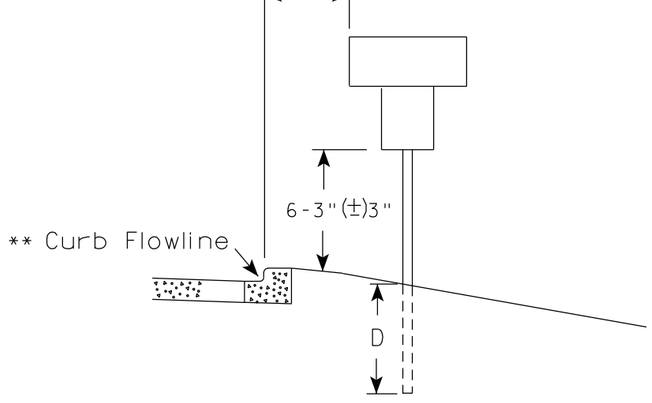
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 167	E

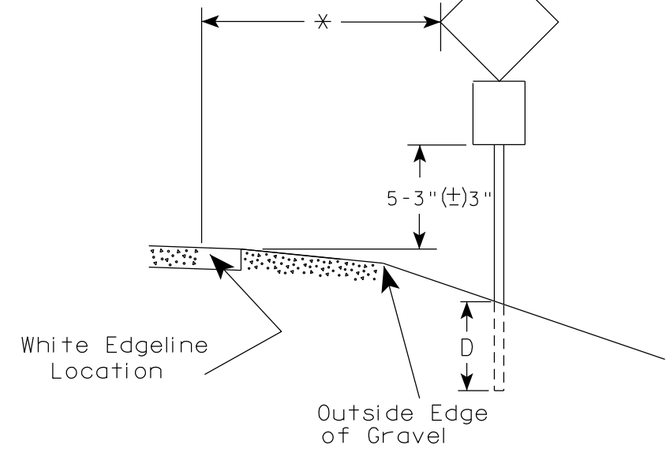
URBAN AREA



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 or behind barrier wall, see A4-10 sign plate.
   The Double Arrow sign (W12-1D) shall be mounted at a height of 2'-3" (±) 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" (±) 3".
3. For expressways and freeways, mounting height is 7'- 3" (±) 3" or 6'-3" (±) 3" depending upon existence of a sub-sign.
4. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±) 3".
5. Offset distance shall be consistent with existing signs or consistent throughout length of project.
6. Folding signs shall be mounted at a height of 5'-3" (±) 3" or as directd by the Engineer.

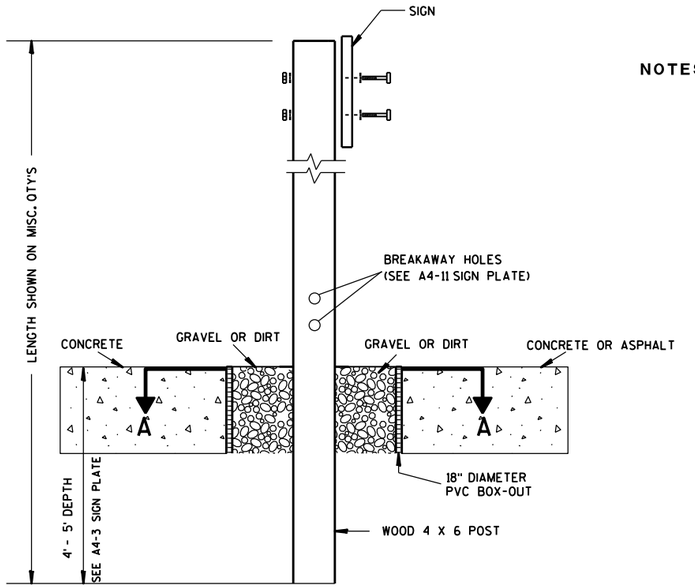
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/6/23 PLATE NO. A4-3.23

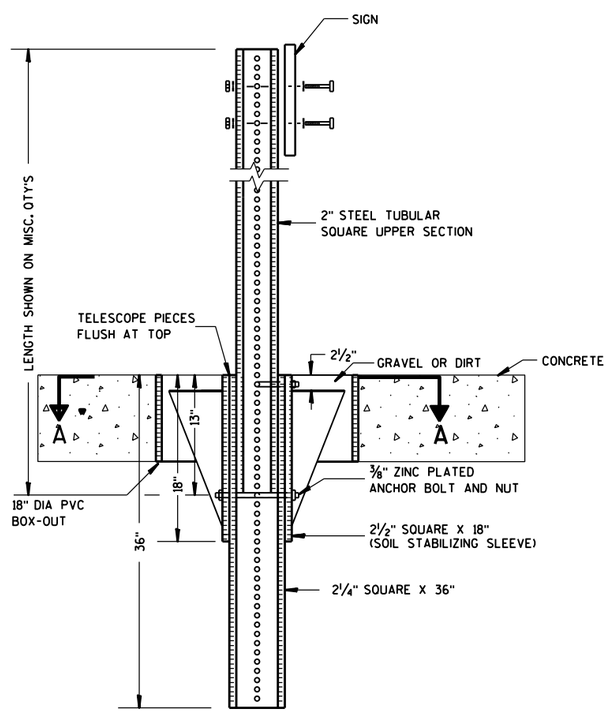
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 168	E



ELEVATION VIEW

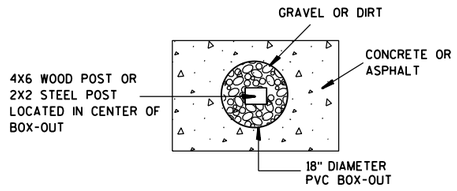
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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

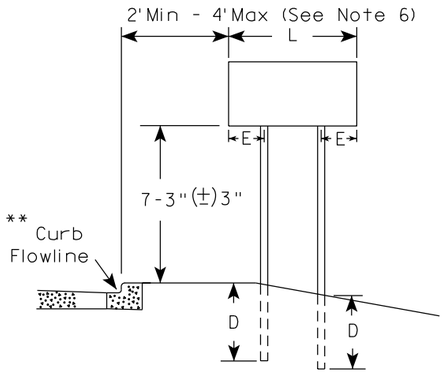
APPROVED Matthew R Rauch
for State Traffic Engineer

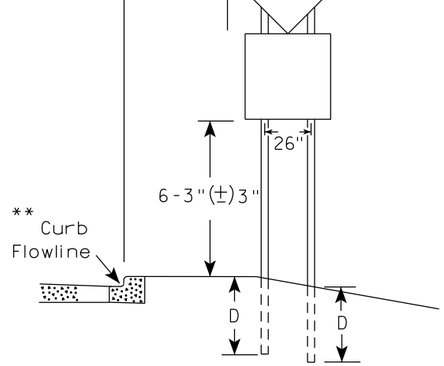
DATE 1/27/14 PLATE NO. A4-3B.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

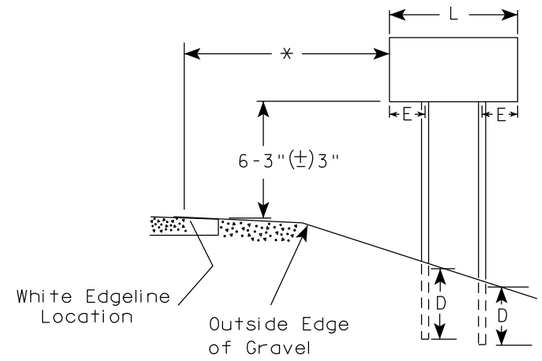
URBAN AREA

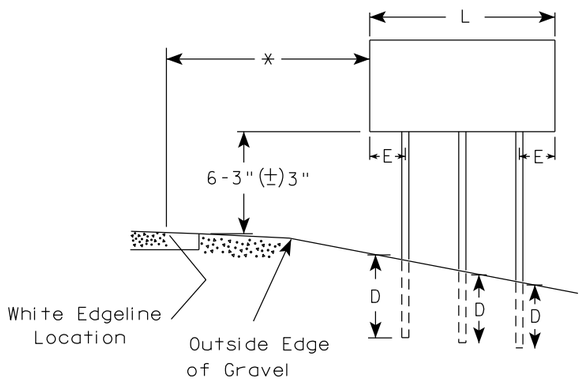


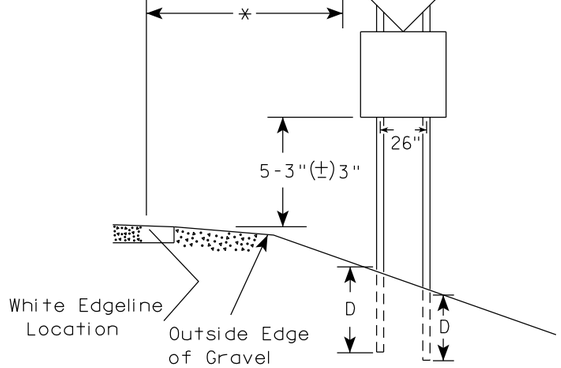


48" DIAMOND WARNING SIGN

RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN

SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED)		
	L	E
***	Greater than 48" Less than 60"	12"
	60" to 108"	L/5

SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 108" to 144"	12"

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" (±) 3" or 6'-3" (±) 3" depending upon existence of sub-sign.
4. The (±) tolerance for mounting height is 3 inches.
5. J-Assemblies are considered to be one sign for mounting height.
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" (±) 3" or as directed by the engineer.
8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±) 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" (±) 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.

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

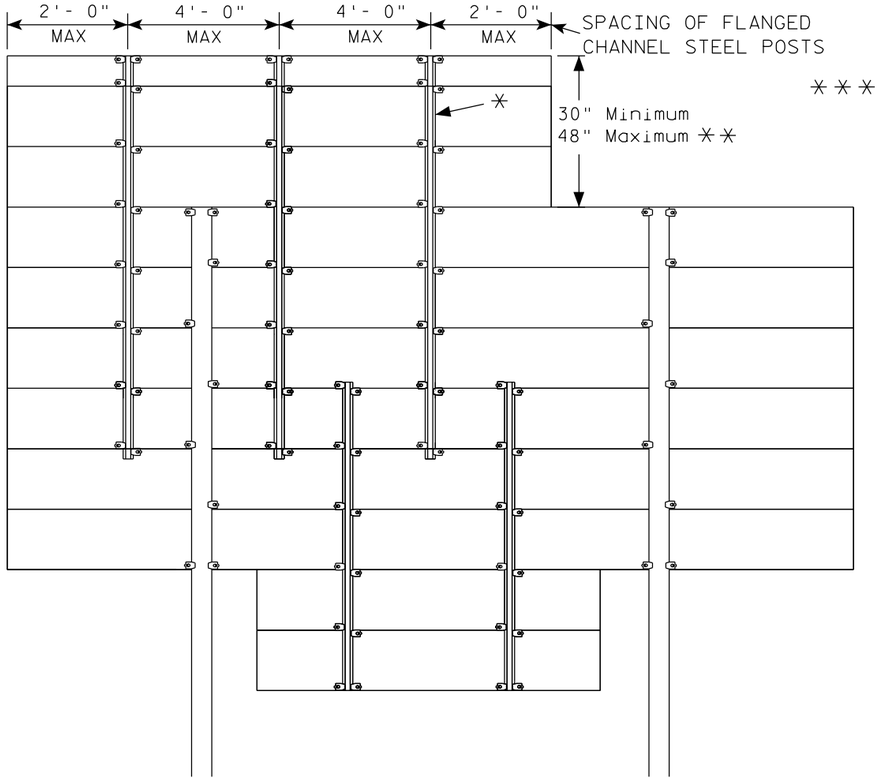
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/6/23 PLATE NO. A4-4.16

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 170	E

GROUND MOUNTED SIGN



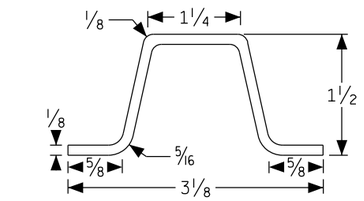
✳=2.00 lb/ft AND 4.00 lb/ft FLANGED CHANNEL, MIN. YIELD STRENGTH = 60,000 PSI (GRADE 60) GALVANIZED

✳✳=FOR 48" HEIGHT PANELS ON OVERHEAD STRUCTURES, ENTIRE SIGN SHALL BE CENTERED VERTICALLY ABOUT THE DEPTH OF THE TRUSS.

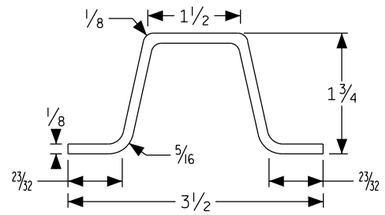
✳✳✳ THESE SPACING DISTANCES SHALL ONLY BE USED WHEN THE MAIN SIGN HAS A MAXIMUM HEIGHT (DIMENSION H) OF 15 FT OR LESS. FOR SIGNS WITH A HEIGHT OF GREATER THAN 15 FT, STRUCTURAL CALCULATIONS SHALL BE PERFORMED.

FLANGE CHANNEL DETAILS

NOT TO SCALE

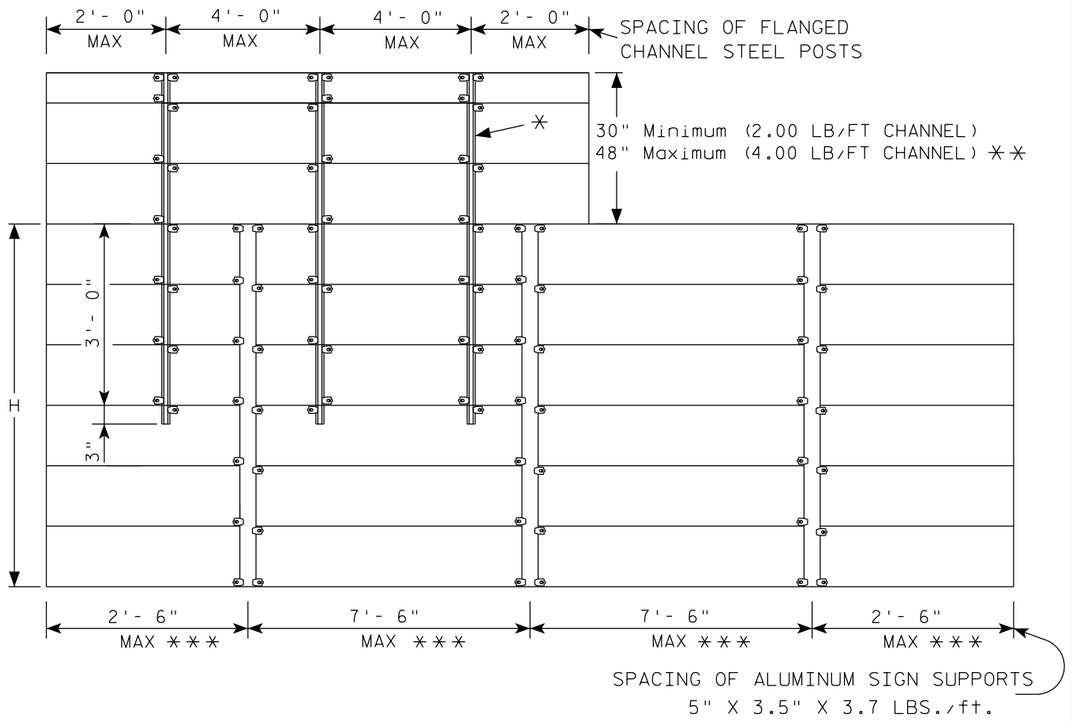


2.00 LB/FT CHANNEL



4.00 LB/FT CHANNEL

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

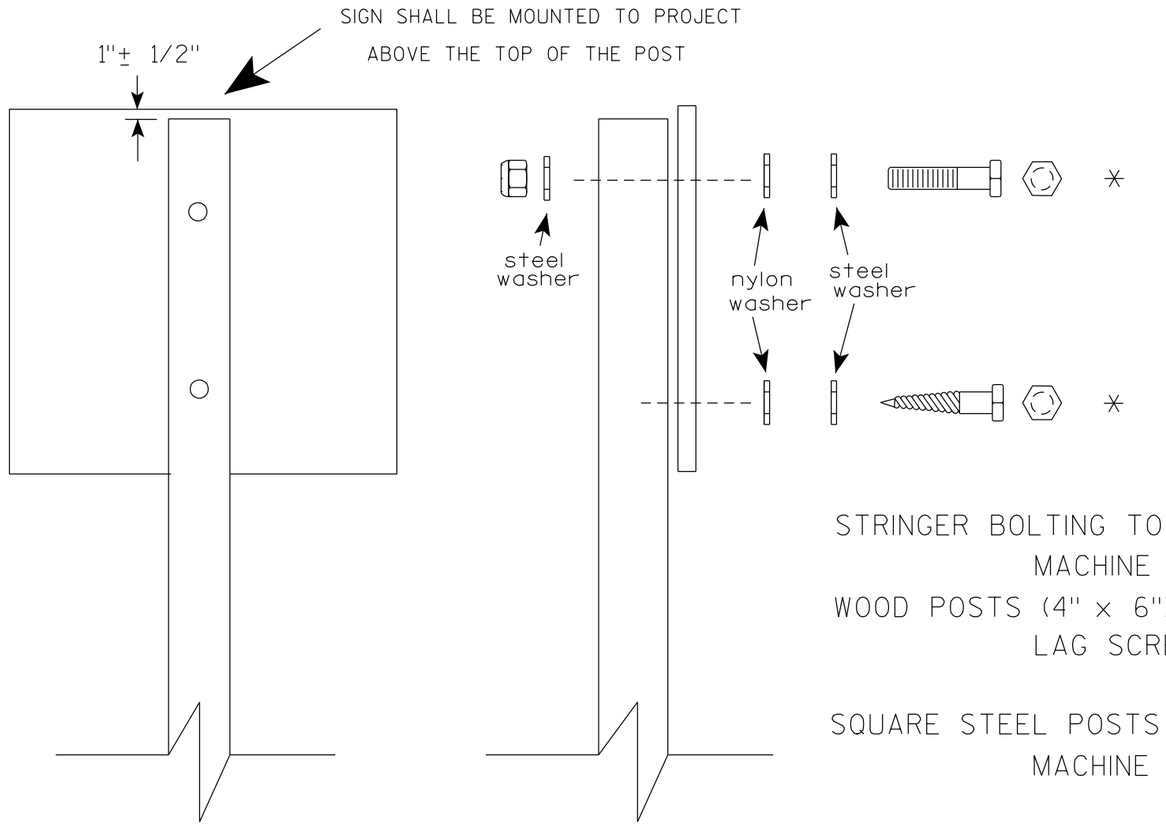
   If the flanged channel steel posts can not be horizontally spaced as shown, they can be moved so as to securely hold the sign.
3. The EXIT NUMBER PANEL shall normally be positioned above the guide sign aligned with the right edge of the guide sign. If the guide sign indicates a left exit, the EXIT NUMBER 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 1/07/20 PLATE NO. A4-6.12



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/ lock nuts

WOOD POSTS (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

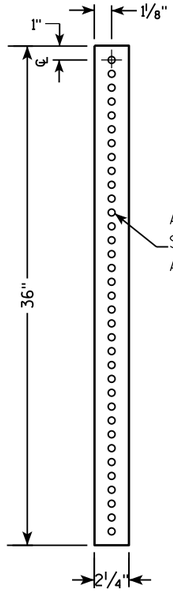
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

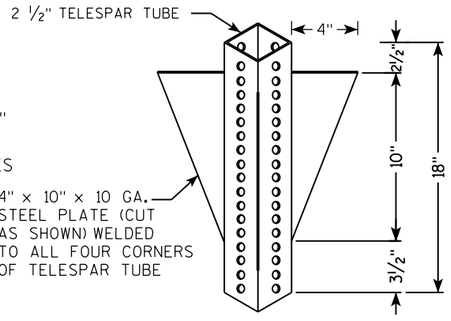
DATE 4/1/2020 PLATE NO. A4-8.9

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

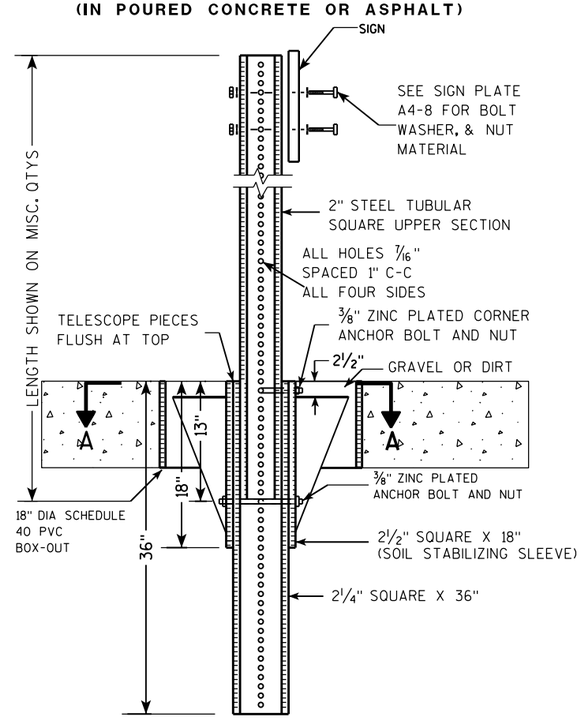
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



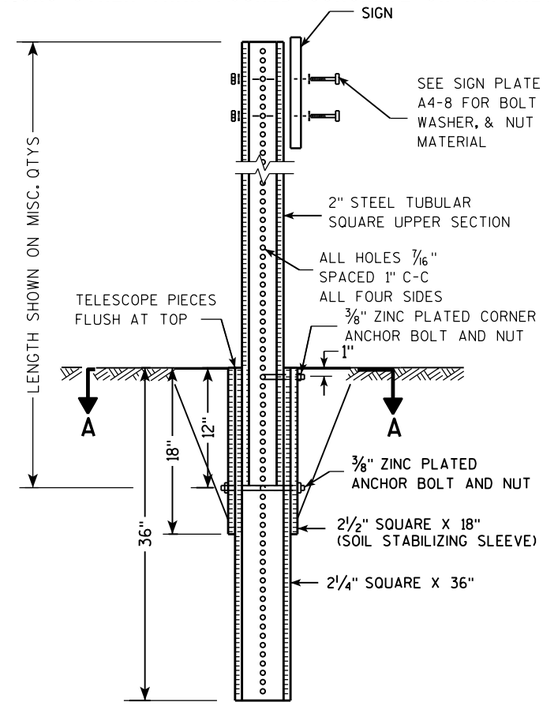
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

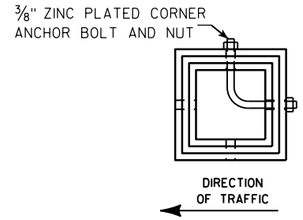


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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

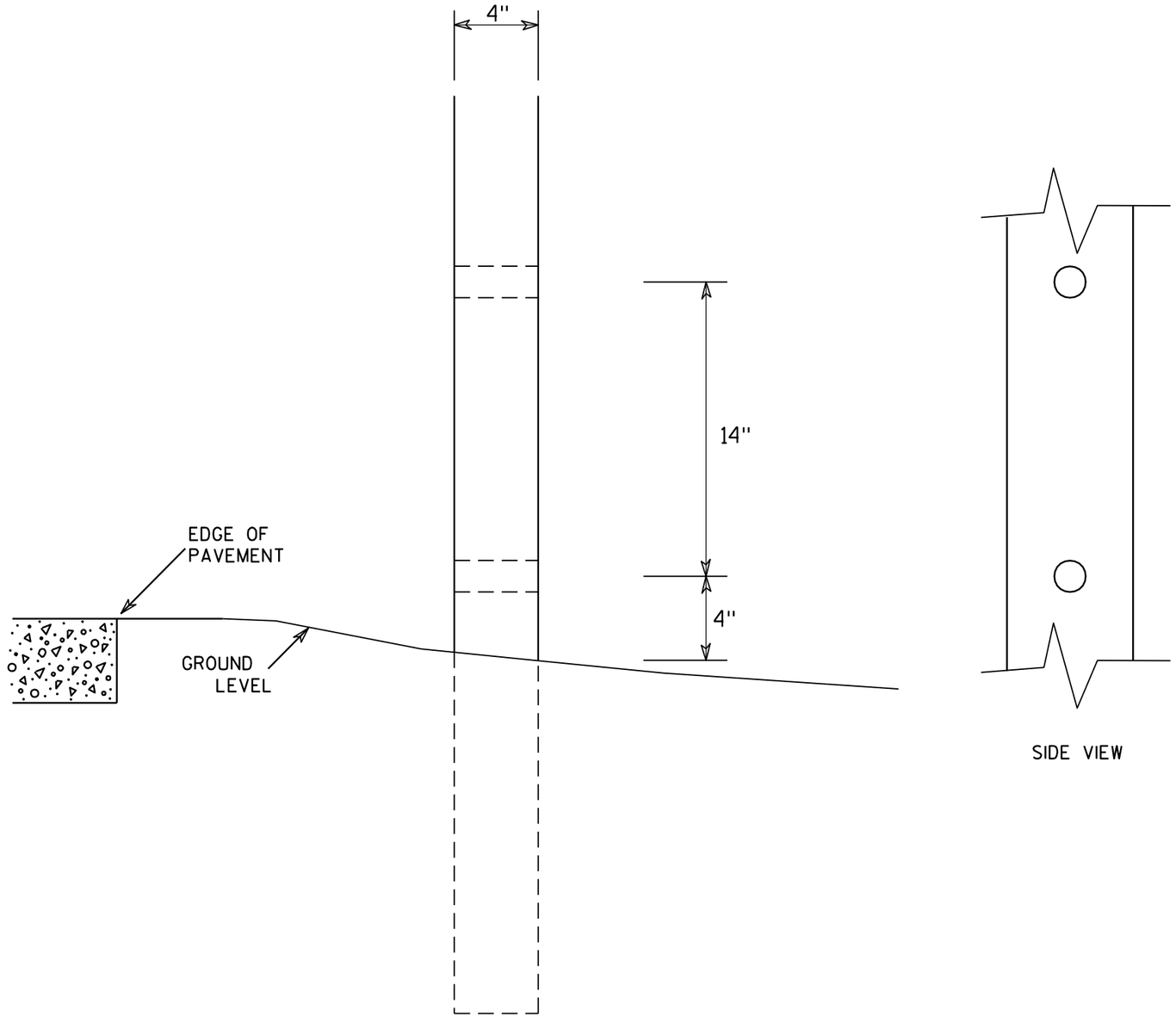
WISCONSIN DEPT OF TRANSPORTATION

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.

7

7

4 X 6 WOOD POST MODIFICATIONS

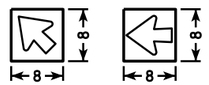
WISCONSIN DEPT OF TRANSPORTATION

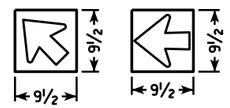
APPROVED Chester J Spang
for State Traffic Engineer

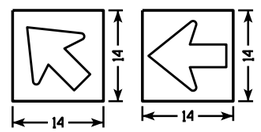
DATE 3/27/97 PLATE NO. A4-11.2

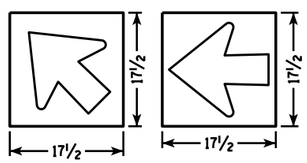
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 174	E

SIGN LAYOUT WITH VARIOUS SIZED MESSAGES







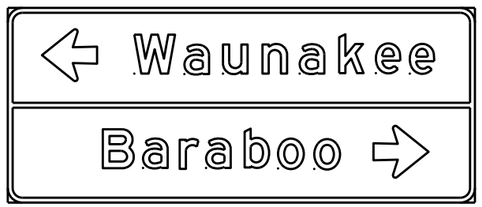


GENERAL NOTES

1. Materials shall conform to Standard Specification Section 637.
   Base - Sheet Aluminum 0.040" Thickness
   Sheeting - Orange Type F Reflective
   Arrow - Black Non-Reflective
2. Arrow signs shall be fastened to permanent sign by either aluminum rivets or aluminum self-tapping sheet metal screws. There shall be a minmum of 2 fasteners used per arrow sign.
3. There shall be a spacer consisting of a 0.08" nylon washer between the back of the arrow sign and the face of the permanent sign.
4. Arrows are per standard plate A1-2
5. Use separate arrow sign for each destination
6. Tilt arrow is always at 45 degrees
7. Arrow is centered on arrow sign

Lower Case Copy Size	Standard Width (Single Arrow)	2 Line Tilt Arrow Cover Width	3 Line Tilt Arrow Cover Width	Height
3¾" Series C	8	9 ½	14 ½	8
4½" Series D & E	9 ½	10	15	9 ½
6" Series D & E	14	16	20 ½	14
8" Series E	17 ½	20 ½	25	17 ½

BEFORE



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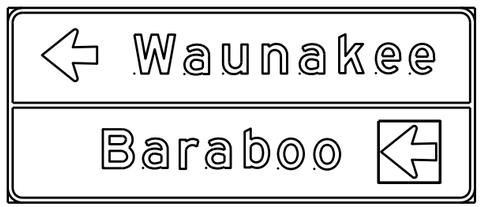
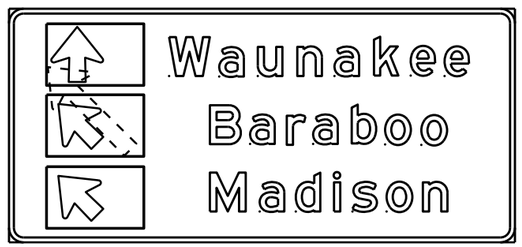




DESTINATION DIRECTIONAL ARROW FOR DETOUR SIGNS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/08/14

A4-12.2

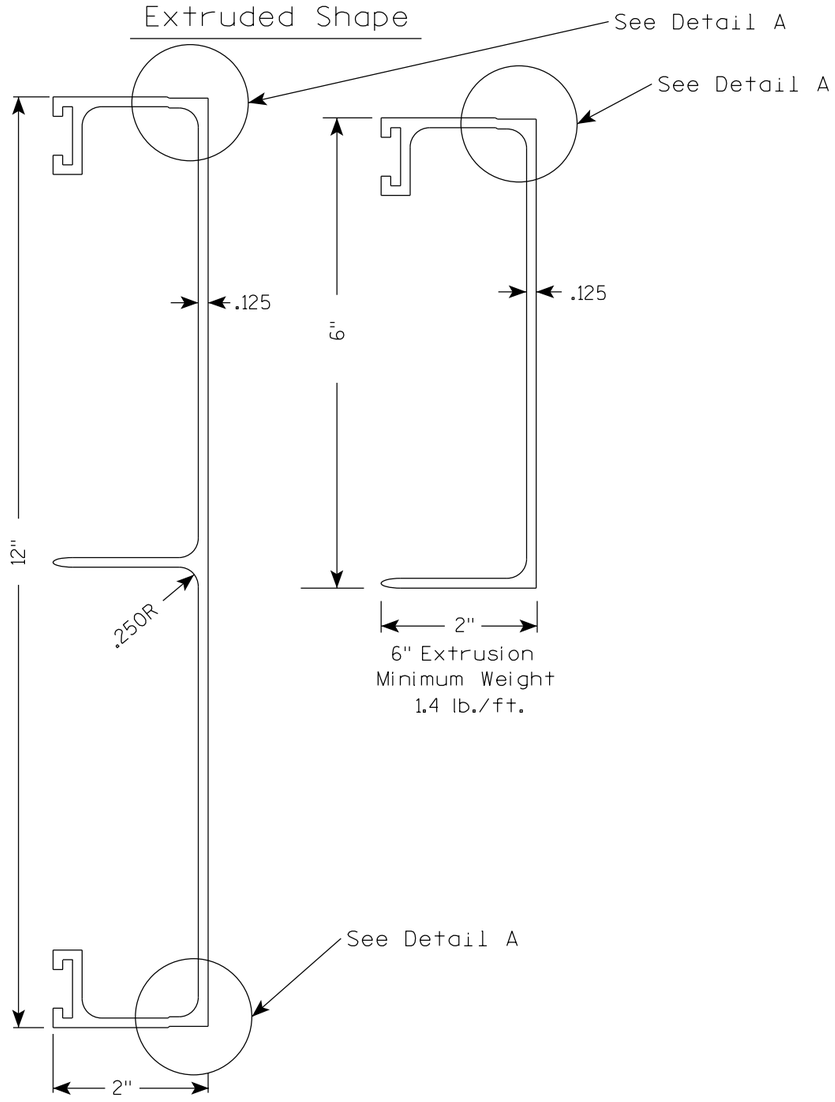
PROJECT NO:

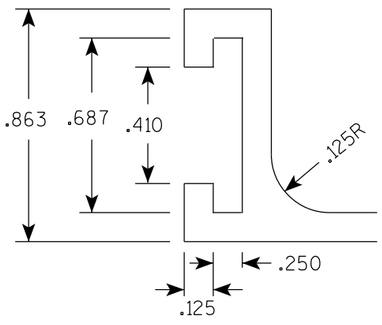
SHEET NO: E

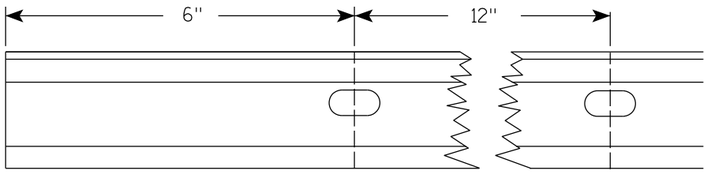
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A412.DGN PLOT DATE : 08-OCT-2014 11:50 PLOT BY : mscsja

WISDOT/CADDS SHEET 42

Extruded Shape







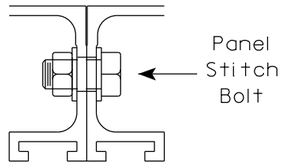
Punch 7/16" x 7/8" oval holes beginning 6" in from end of extrusion 12" CC on both edges of 6" and 12" panels.

Hardware

STITCH BOLT, WASHER & NUT

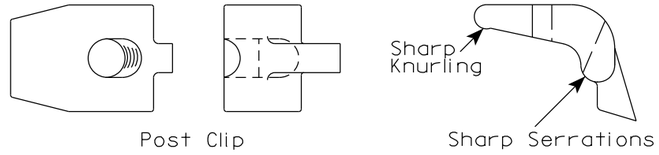
The hardware includes:

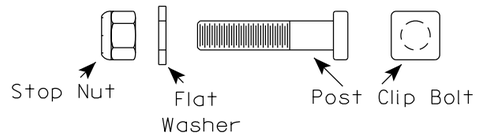
3/8 " - 16 X 3/4 " Economy Bolt 2024-T4 alloy
3/8 " - Stainless steel stop nut
3/8" X .064 Flat Washers, Alclad 2024-T4 alloy



POST CLIP, POST CLIP BOLT, WASHER & NUT

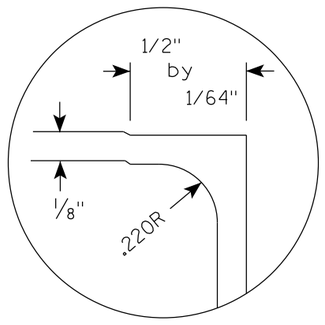
Post Clip shall be Alum. Alloy 356-T6
Post Clip Bolt shall be Stainless Steel.
Flat washer shall be 3/8" X .091, Stainless Steel.
Stop nut shall be stainless steel.





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.
4. Edge wrapping of sign sheeting required on all extrusions joints shown in Detail A.



DETAIL A (EDGE WRAP JOINT)

ALUMINUM EXTRUSIONS FOR TYPE I SIGNS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

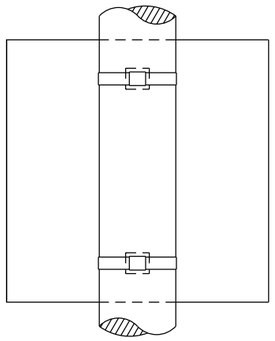
DATE 1/07/20 PLATE NO. A5-2.10

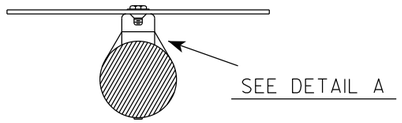
PROJECT NO:

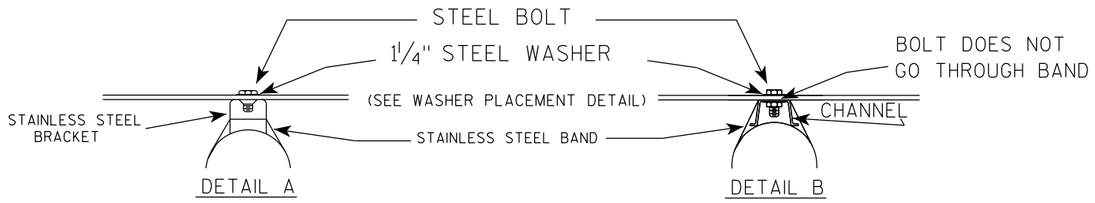
SHEET NO: 176 E

BANDING

SINGLE SIGN



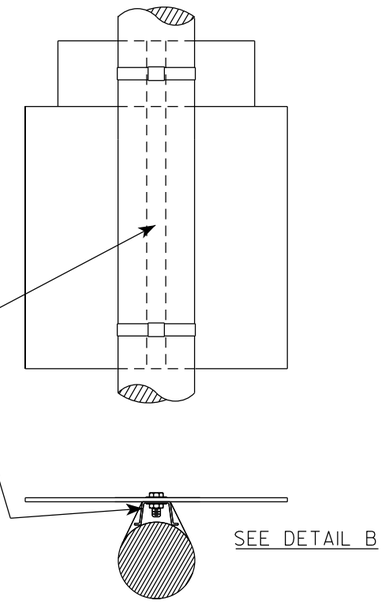




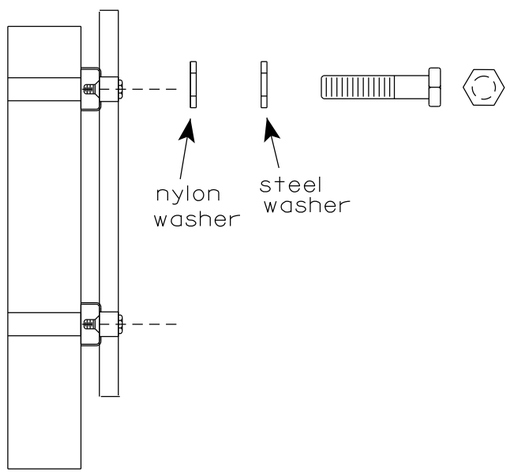
GENERAL NOTES

1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be ¾" in width and 0.025" thickness.
4. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
   a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
   b. Electro-galvanized in accordance with ASTM designation: B 633, Type III, SC 3

"J" ASSEMBLY



WASHER PLACEMENT



WASHERS (ALL POSTS) -
1-1/4" O.D. X ⅜" I.D. X 1/16" STEEL
1-1/4" O.D. X ⅜" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

STANDARD SIGN
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

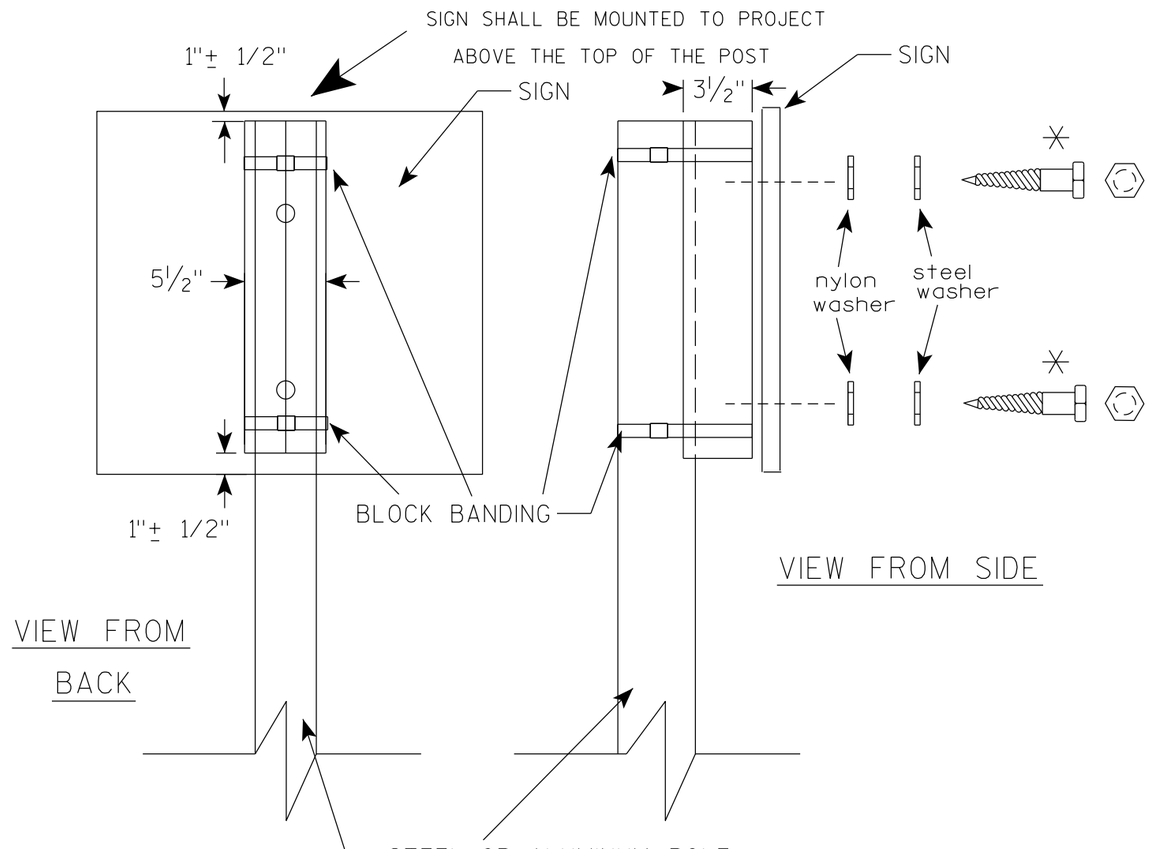
DATE 6/10/19 PLATE NO. A5-9.4

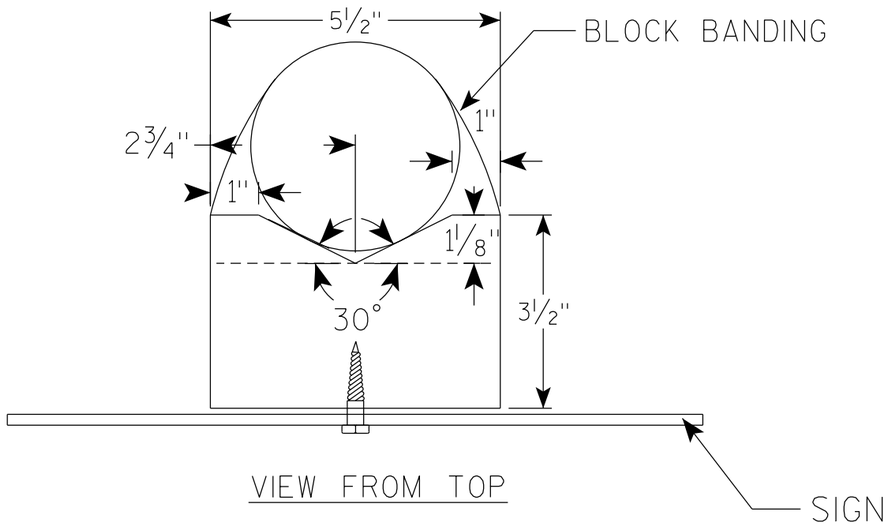
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 177	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A59.dgn PLOT DATE : 10-JUN 2019 4:10 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42

7

7





GENERAL NOTES

1. WOOD 4"X6" POST MATERIAL SHALL CONFORM TO 507.2.2 OF THE WisDOT STANDARD SPECIFICATIONS
2. BLOCK BANDING AND CLIPS SHALL BE STAINLESS STEEL, ¾" WIDTH AND 0.025" THICKNESS
3. SIGNS 3' OR GREATER IN HEIGHT SHALL UTILIZE 3 BLOCK BANDS. SIGNS UNDER 3' IN HEIGHT SHALL UTILIZE 2 BLOCK BANDS
4. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA, BUT NORNALLY THERE ARE TWO. FOR SIGNS GREATER THAN 9 S.F. 3 FASTENERS SHALL BE USED.
5. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
   a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
   b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3
6. ALL BOLTS SHALL HAVE HEXAGONAL HEADS.
7. STEEL WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X 1/16"
8. NYLON WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

✳ LAG BOLTS SHALL BE ⅜" X 2½"

BLOCK BANDING DETAIL (V-BLOCK OPTION)

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

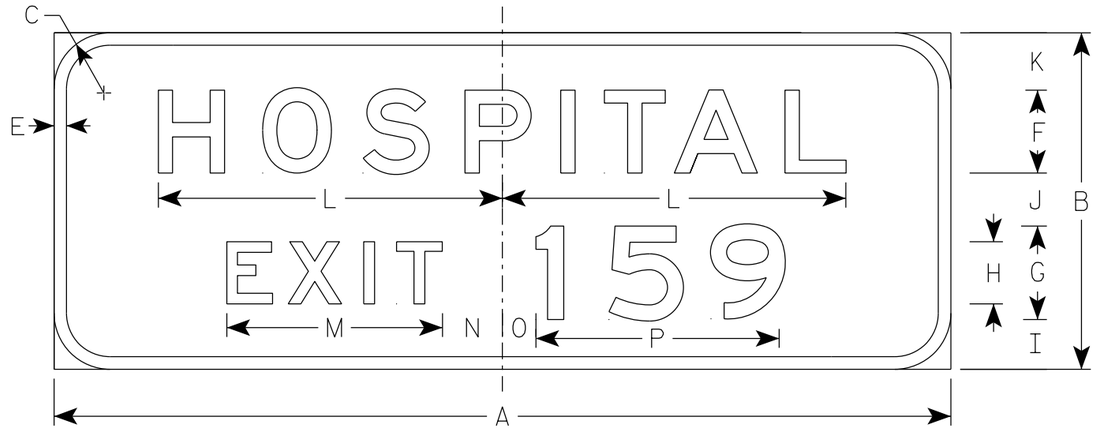
DATE 4/19/2022 PLATE NO. A5-10.3

PROJECT NO:

SHEET NO: 178 E

NOTES

1. Sign is Type I - Type SH Reflective
2. Color:
   Background - Blue
   Message - White
3. Message Series - E
4. Apply proper Exit Numbers and letters, optically center to adjust spacing to achieve proper balance.



E10-61

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																											
3																											
4	144	54	9		2	13 3/8	15	10	8	8 1/2	9 1/4	55 1/4	34 5/8	9 5/8	5 3/8	39											54.0
5	144	54	9		2	13 3/8	15	10	8	8 1/2	9 1/4	55 1/4	34 5/8	9 5/8	5 3/8	39											54.0

TYPICAL SIGNS

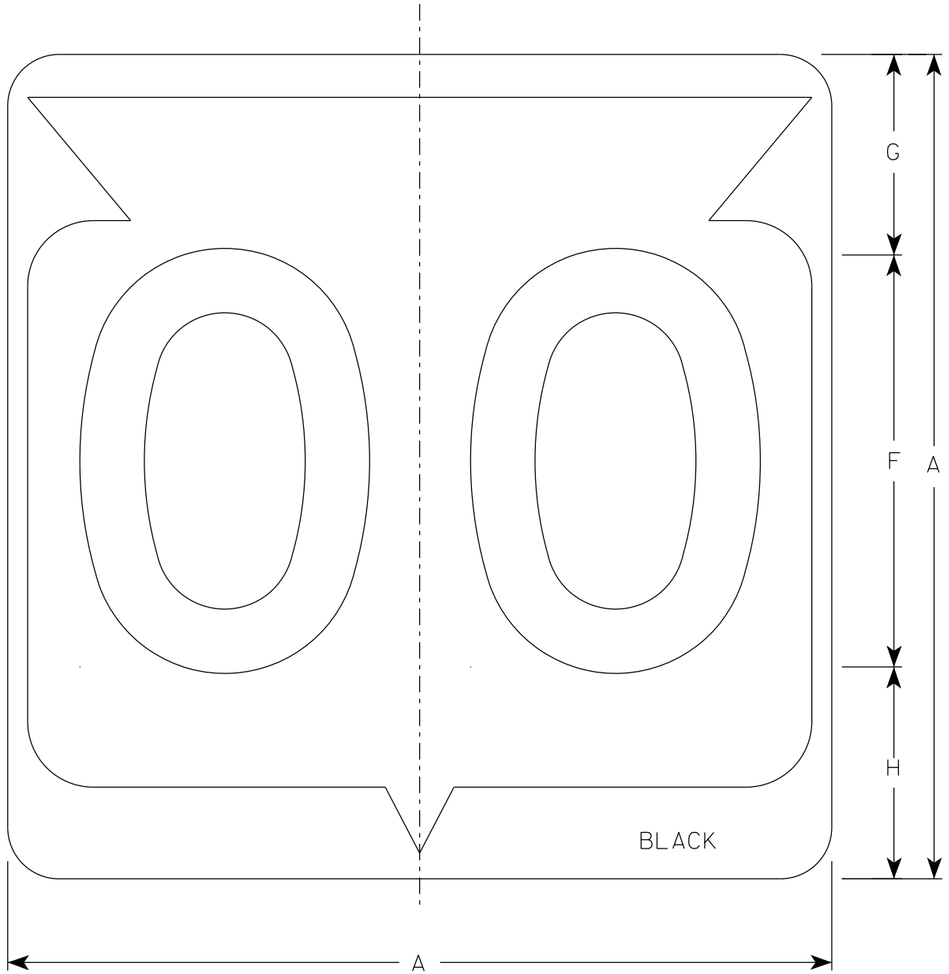
E10-61

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/5/2020 PLATE NO. E10-61.4

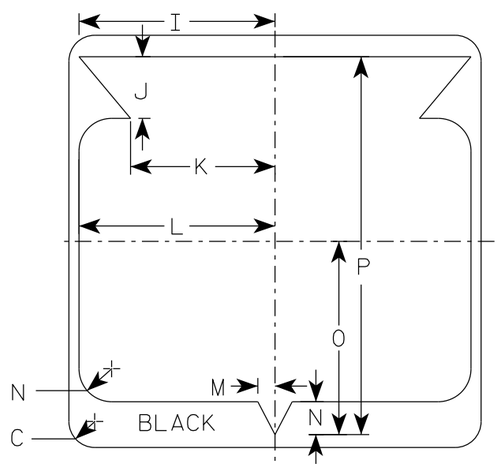
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 179 | E



M1-6

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D except 3 number signs 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																											
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
2M	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
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
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
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

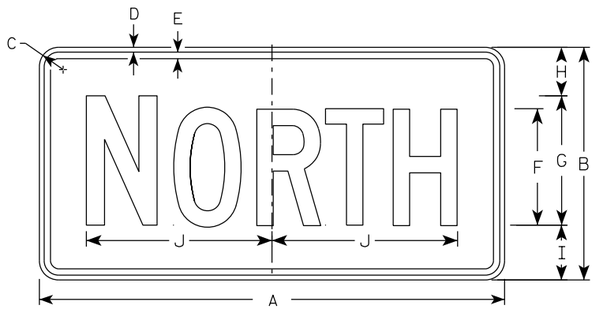
STATE ROUTE MARKER
M1-6 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

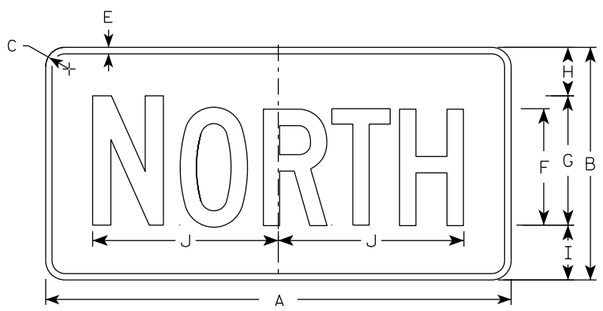
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/8/2022 PLATE NO. M1-6.11

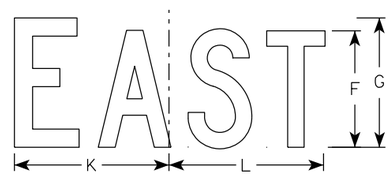
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 180	E



M3-1
MM3-1
MP3-1

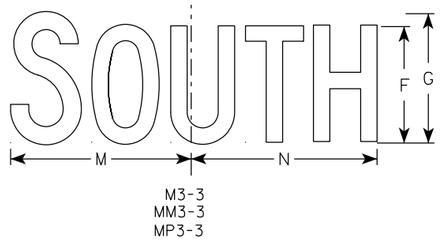


MB3-1
MK3-1
MN3-1

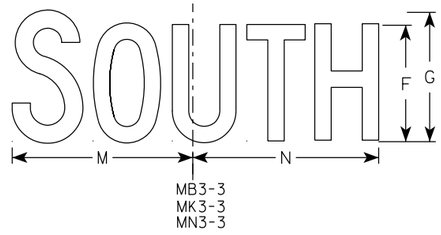


M3-2
MM3-2
MP3-2

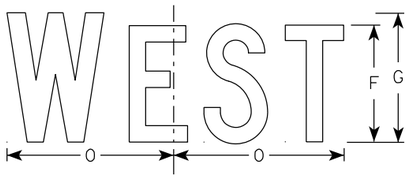
MB3-2
MK3-2
MN3-2



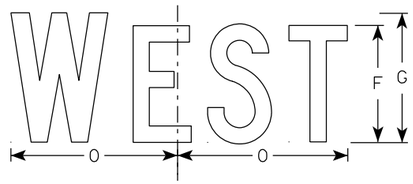
M3-3
MM3-3
MP3-3



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 Reflective
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																											
2S	24	12	1 1/2	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												2.00
2M	24	12	1 1/2	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												2.00
3	36	18	1 1/2	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13												4.5
4	36	18	1 1/2	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13												4.5
5	36	18	1 1/2	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13												4.5

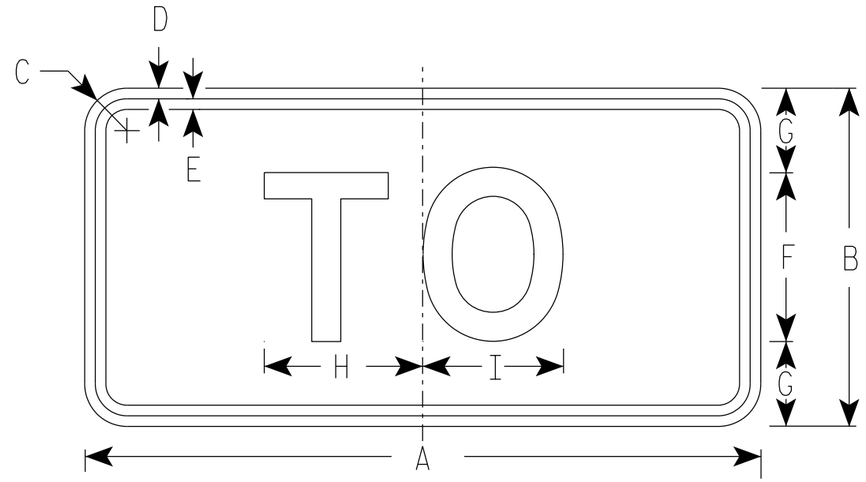
STANDARD SIGNS
M3-1 THRU M3-4
SERIES

WISCONSIN DEPT OF TRANSPORTATION

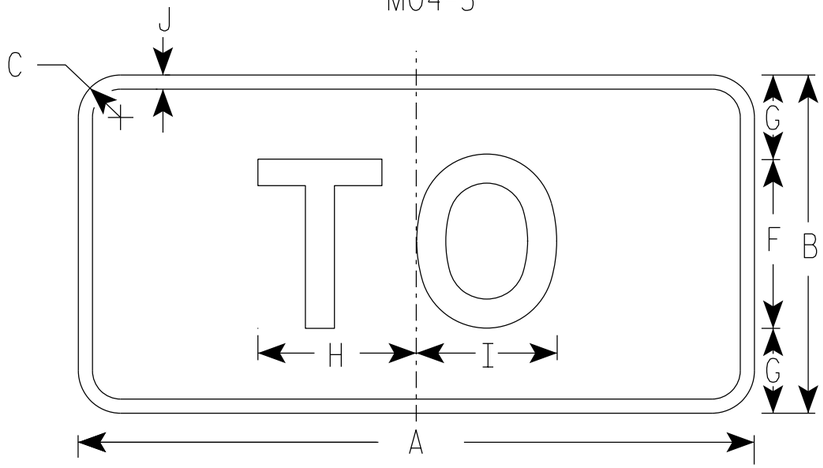
APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 2/8/2023 PLATE NO. M3-1.15

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 181	E



M4-5
MM4-5
MP4-5
M04-5



MB4-5
MK4-5
MN4-5

NOTES

1. Sign is Type II - Type H Reflective
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
   M04-5 Background - Orange Type F Reflective
   Message - Black

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	12	1 1/2	3/8	3/8	6	3	5 3/8	5 1/4	1/2																	2.00
2M	24	12	1 1/2	3/8	3/8	6	3	5 3/8	5 1/4	1/2																	2.00
3	36	18	1 1/2	3/8	1/2	9	4 1/2	8 1/4	8 3/8	1/2																	4.5
4	36	18	1 1/2	3/8	1/2	9	4 1/2	8 1/4	8 3/8	1/2																	4.5
5	36	18	1 1/2	3/8	1/2	9	4 1/2	8 1/4	8 3/8	1/2																	4.5

STANDARD SIGN
M4-5

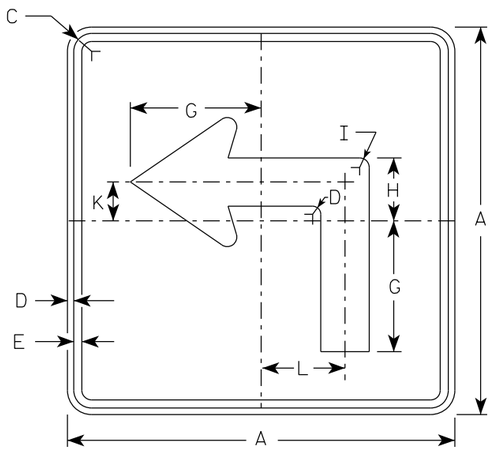
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

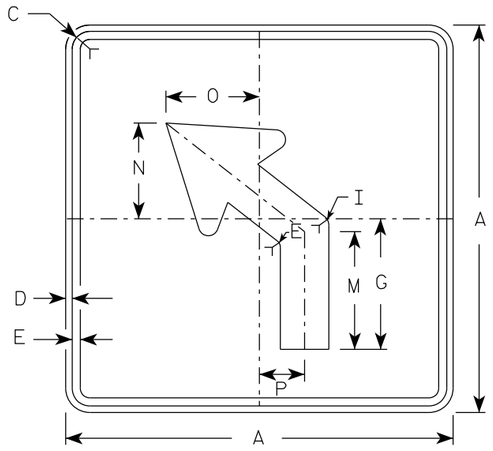
DATE 2/8/2023 PLATE NO. M4-5.11

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 182 E

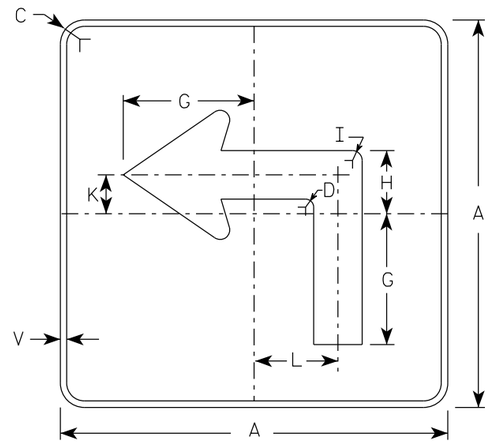
7



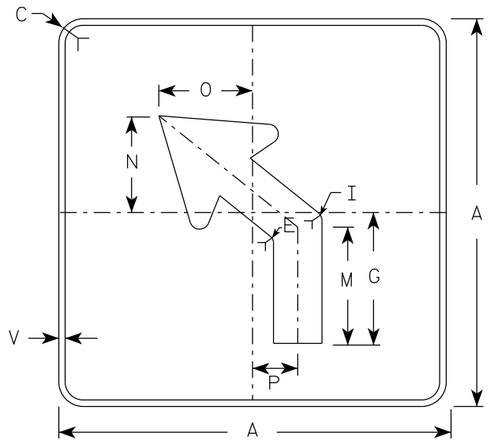
M5-1L
MM5-1L
MO5-1L
MP5-1L



M5-2L
MM5-2L
MO5-2L
MP5-2L



MB5-1L
MK5-1L
MN5-1L
MR5-1L

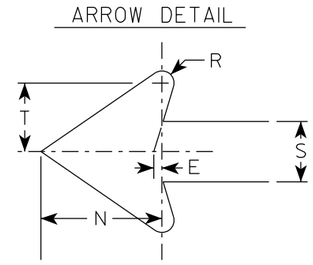


MB5-2L
MK5-2L
MN5-2L
MR5-2L

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
   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.

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	21		1 1/2	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		1/2					3.06
2M	21		1 1/2	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		1/2					3.06
3	30		1 7/8	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		1/2					6.25
4	30		1 7/8	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		1/2					6.25
5	30		1 7/8	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		1/2					6.25

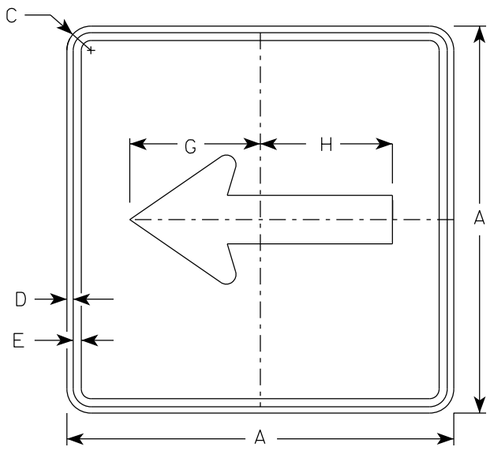
STANDARD SIGN
M5-1 & M5-2

WISCONSIN DEPT OF TRANSPORTATION

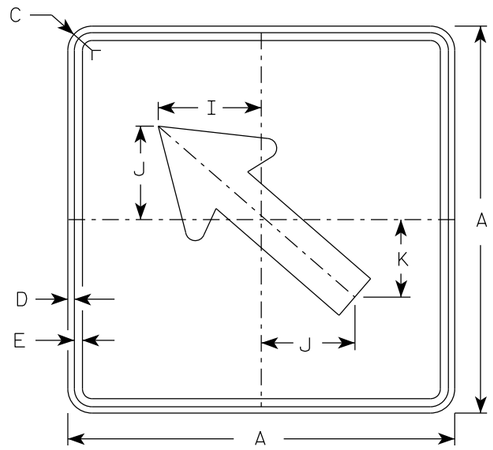
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/13/2023 PLATE NO. M5-1.15

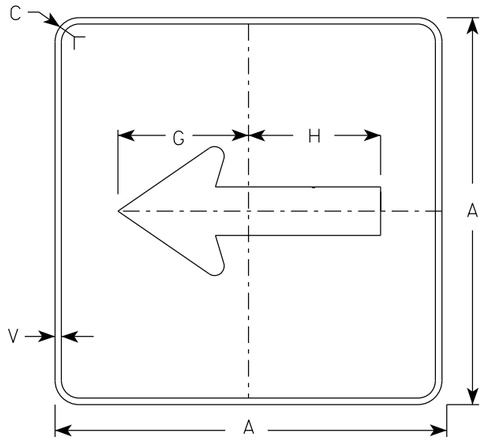
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 183 | E



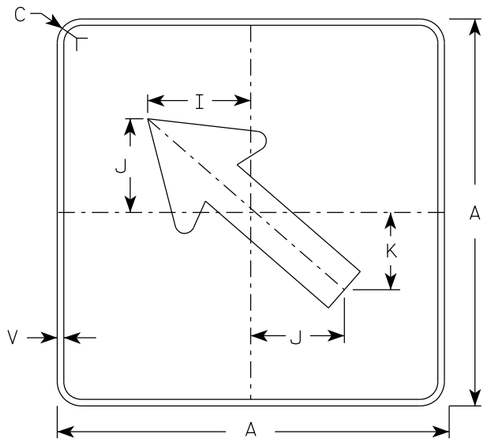
M6-1
MM6-1
MO6-1
MP6-1



M6-2
MM6-2
MO6-2
MP6-2



MB6-1
MK6-1
MN6-1
MR6-1

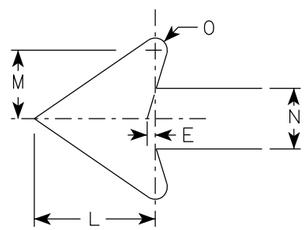


MB6-2
MK6-2
MN6-2
MR6-2

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. 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

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	21		1 1/2	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							1/2					3.06
2M	21		1 1/2	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							1/2					3.06
3	30		1 7/8	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							1/2					6.25
4	30		1 7/8	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							1/2					6.25
5	30		1 7/8	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							1/2					6.25

STANDARD SIGN
M6-1 & M6-2
SERIES

WISCONSIN DEPT OF TRANSPORTATION

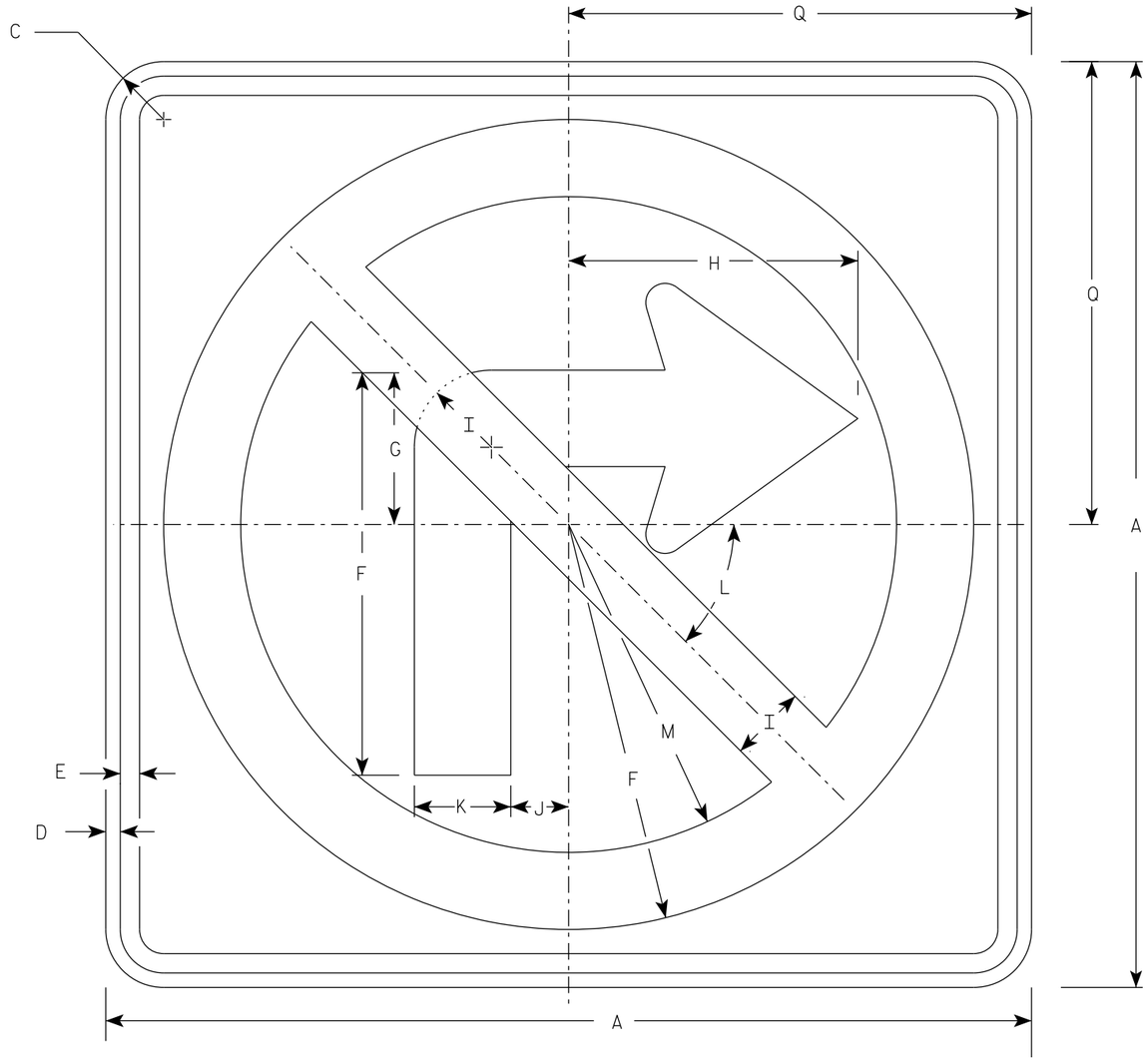
APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 2/13/2023 PLATE NO. M6-1.16

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 184 | E

7

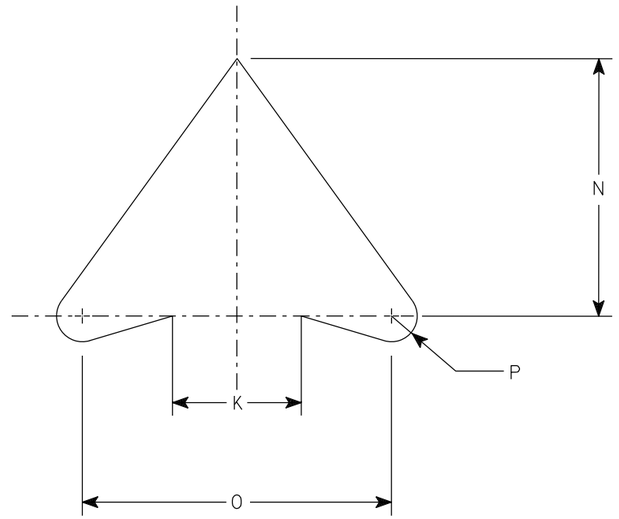
7



R3-1

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - See note 3
3. 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 ½	⅜	½	10 ½	4	7 ½	2	1 ½	2 ½	45	8 ½	5	6	½	12										4.0
2S	24		1 ½	⅜	½	10 ½	4	7 ½	2	1 ½	2 ½	45°	8 ½	5	6	½	12										4.0
2M	36		2 ¼	⅝	¾	15 ¾	6	11 ¼	3	2 ¼	3 ¾	45	12 ¾	7 ½	9	¾	18										9.0
3	36		2 ¼	⅝	¾	15 ¾	6	11 ¼	3	2 ¼	3 ¾	45	12 ¾	7 ½	9	¾	18										9.0
4	36		2 ¼	⅝	¾	15 ¾	6	11 ¼	3	2 ¼	3 ¾	45°	12 ¾	7 ½	9	¾	18										9.0
5	48		2 ¼	¾	1	21	8	15	4	3	5	45°	17	10	12	1	24										16.0

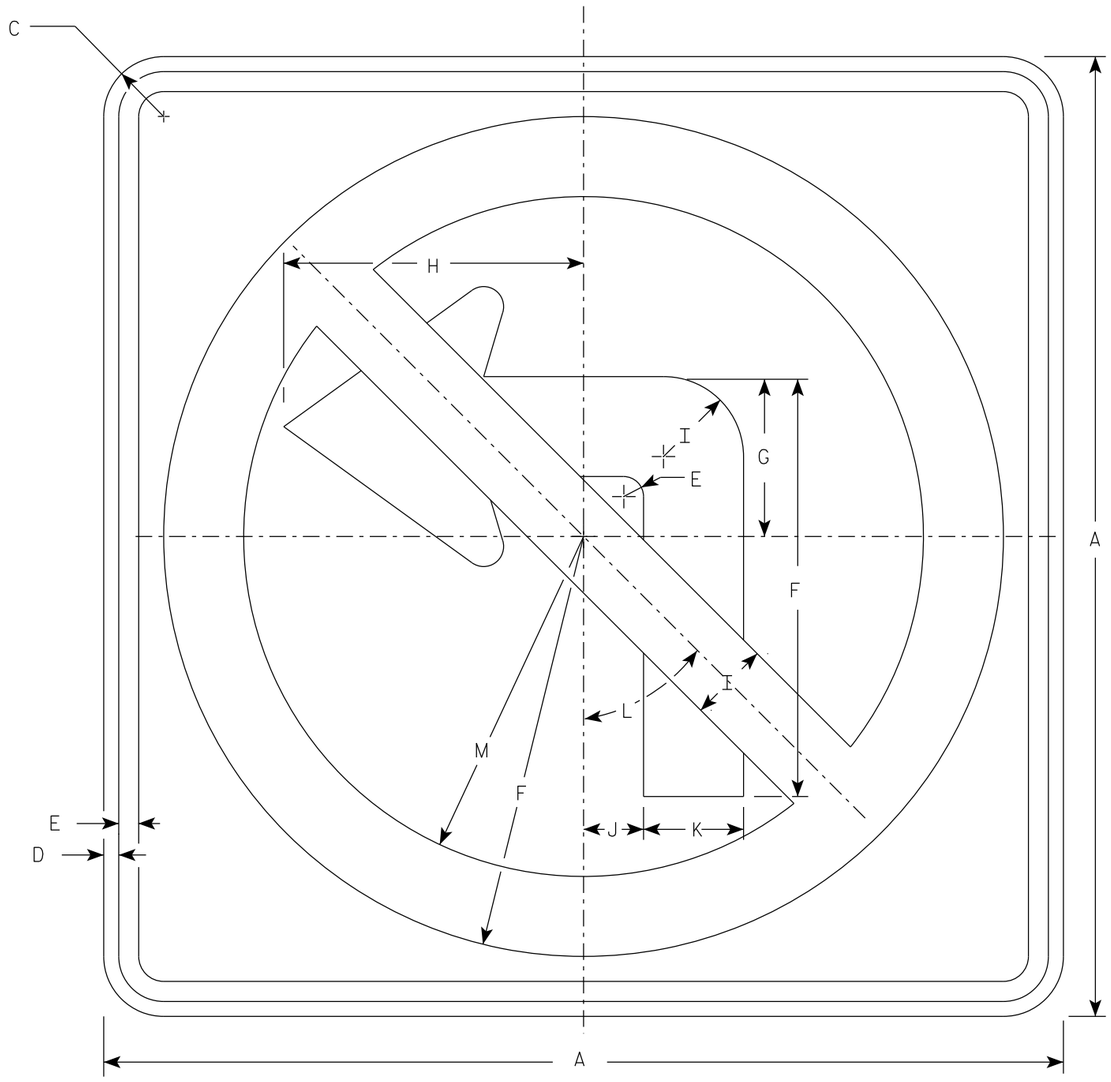
STANDARD SIGN
R3-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/2/23 PLATE NO. R3-1.6

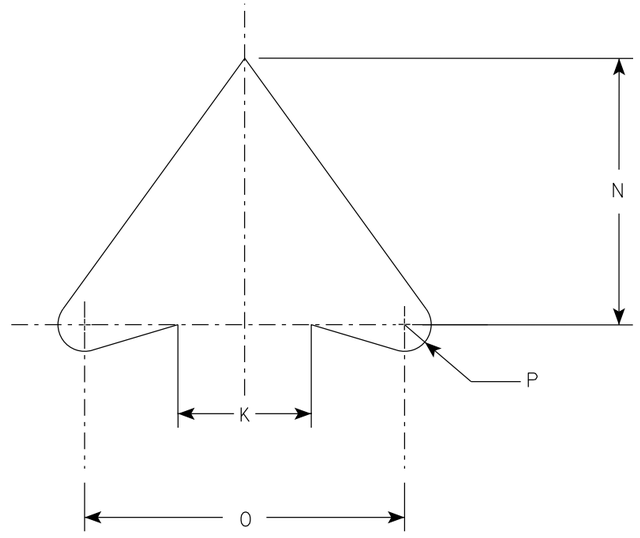
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 185 | E



R3-2

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - See note 3
3. 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 ½	⅜	½	10 ½	4	7 ½	2	1 ½	2 ½	45°	8 ½	5	6	½											4.0
2S	24		1 ½	⅜	½	10 ½	4	7 ½	2	1 ½	2 ½	45°	8 ½	5	6	½											4.0
2M	36		2 ¼	⅝	¾	15 ¾	6	11 ¼	3	2 ¼	3 ¾	45°	12 ¾	7 ½	9	¾											9.0
3	36		2 ¼	⅝	¾	15 ¾	6	11 ¼	3	2 ¼	3 ¾	45°	12 ¾	7 ½	9	¾											9.0
4	36		2 ¼	⅝	¾	15 ¾	6	11 ¼	3	2 ¼	3 ¾	45°	12 ¾	7 ½	9	¾											9.0
5	48		2 ¼	¾	1	21	8	15	4	3	5	45°	17	10	12	1											16.0

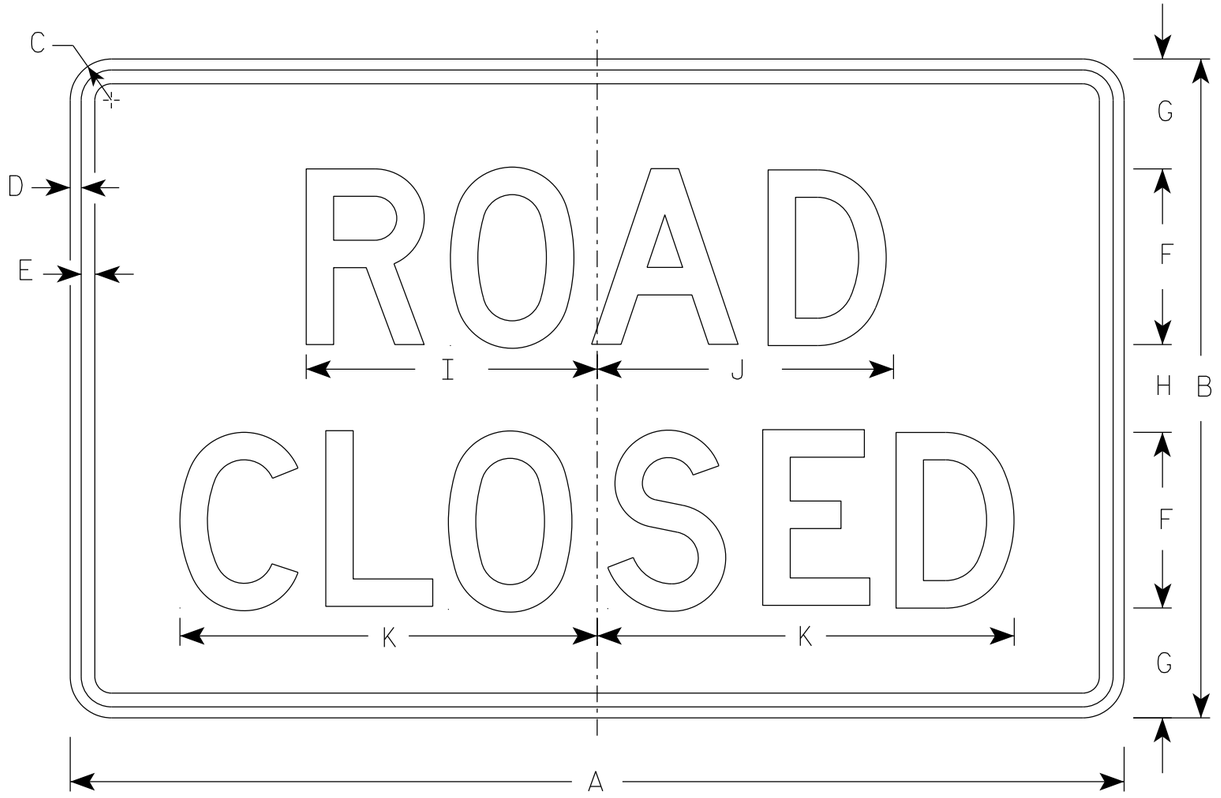
STANDARD SIGN
R3-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/2/23 PLATE NO. R3-2.11

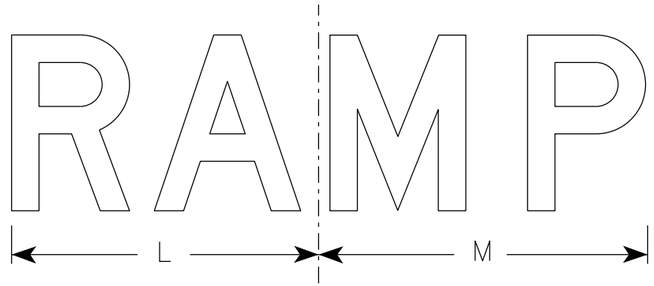
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 186 | E



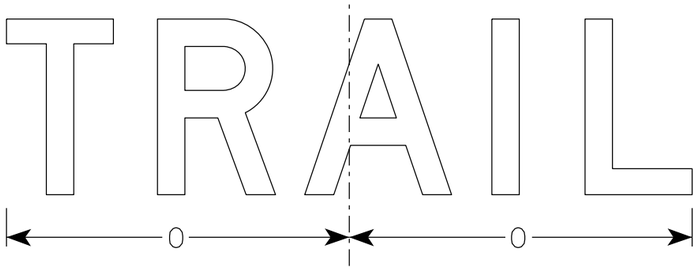
R11-2

NOTES

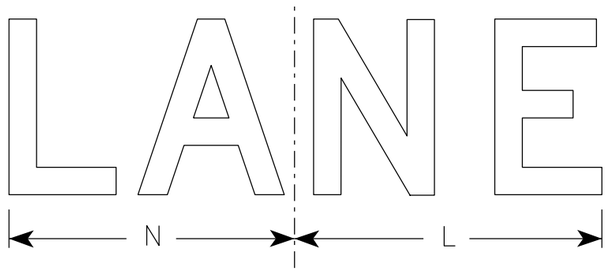
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Modify the message as required.



R11-2R



R11-2T



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 7/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0
2M	48	30	1 7/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0
3	48	30	1 7/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0
4	48	30	1 7/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0
5	48	30	1 7/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0

STANDARD SIGN
R11-2

WISCONSIN DEPT OF TRANSPORTATION

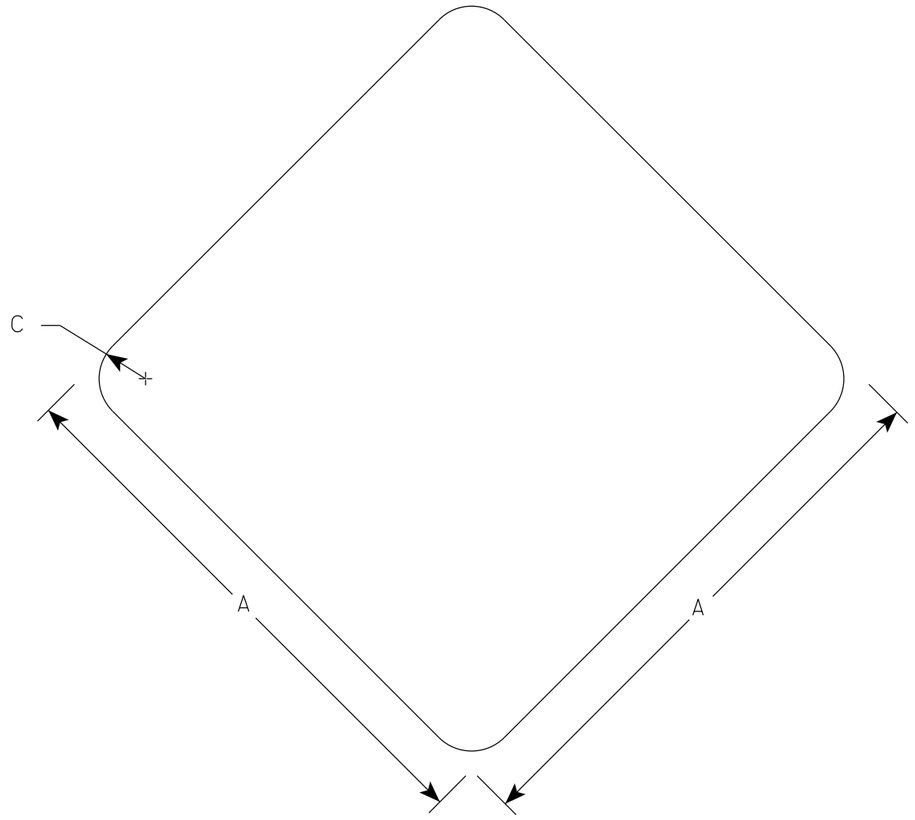
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/5/24 PLATE NO. R11-2.12

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

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R112.dgn PLOT DATE : 5-FEB 2024 2:10 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42

7



W5-56

NOTES

1. Sign is Type II - Type SH Reflective
2. Color:
   Background - Red

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	12		1 ½																								1.0
2S	18		1 ½																								2.25
2M	18		1 ½																								2.25
3																											
4																											
5																											

STANDARD SIGN

W5-56

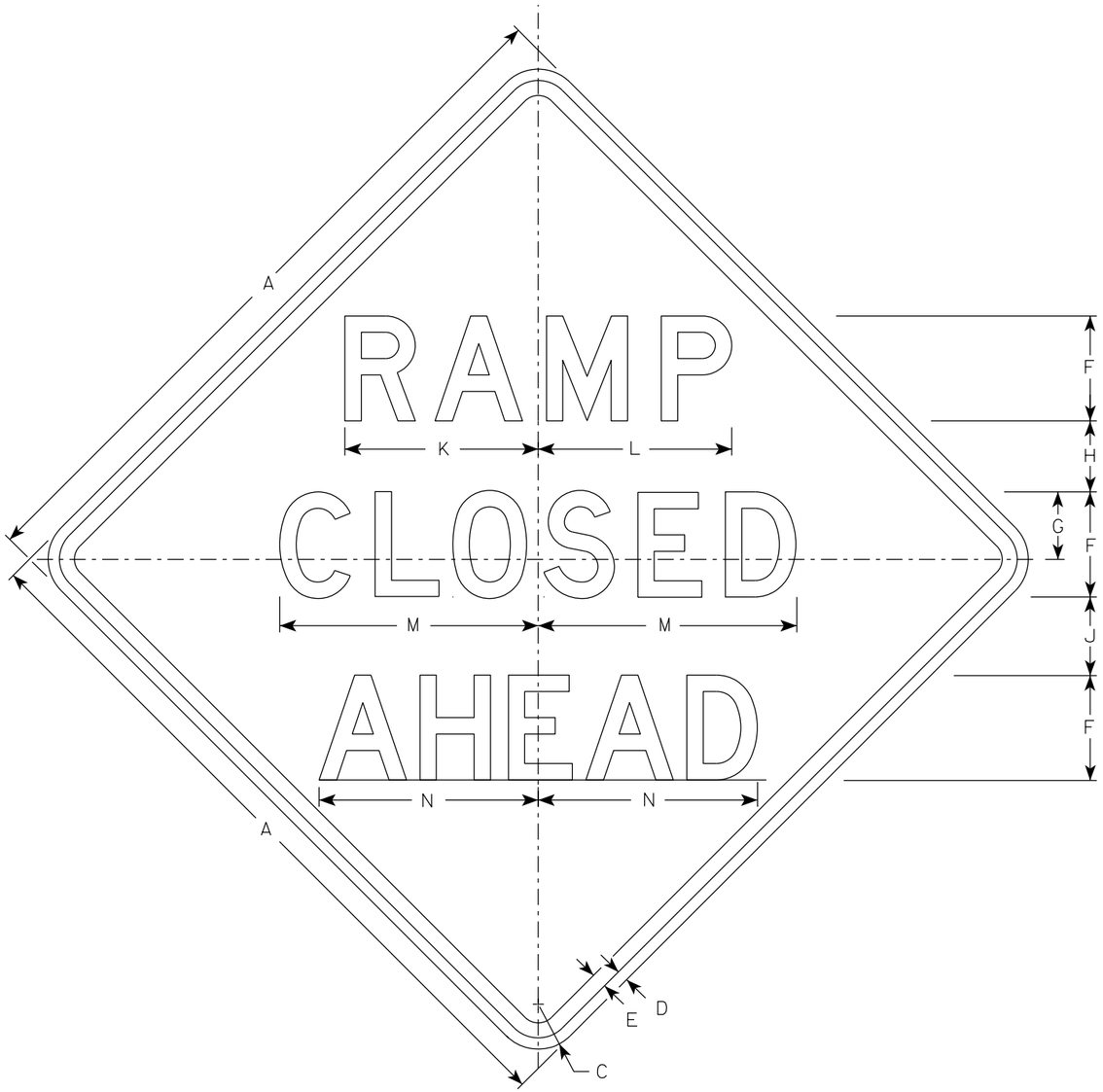
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

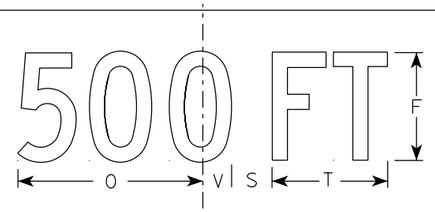
DATE 3/5/2024 PLATE NO. W5-56.7

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

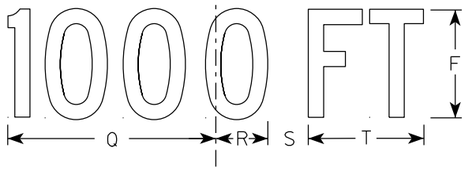
FILE NAME : C:\CAEfiles\Projects\tr_stdplate_W556.dgn PLOT DATE : 5-MARCH 2024 1:56 PLOT BY : dotc4c PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42



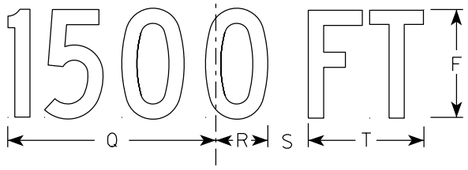
W20-53A



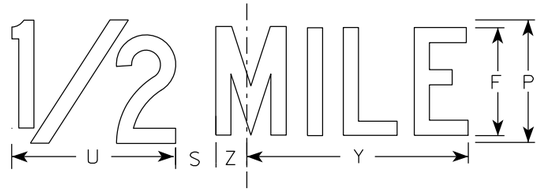
W20-53D



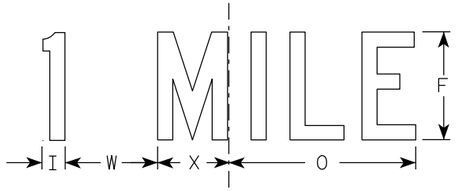
W20-53C



W20-53B



W20-53G



W20-53F

NOTES

1. Sign is Type II - Type F Reflective
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. Lines 1 and 2 are Series D.
   Line 3 is Series D for AHEAD and Series C for all other distances.

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		2 1/4	5/8	3/4	5	3 3/8	3 1/2	1 1/8	4	9 1/4	9 1/4	12 1/2	11	9	6	10 1/8	2 1/2	1 7/8	5 5/8	8	1 3/8	4 1/2	3 1/2	10 3/4	1 3/4	9.0
2S	48		3	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	12 7/8	12 7/8	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
2M	48		3	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	12 7/8	12 7/8	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
3	48		3	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	12 7/8	12 7/8	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
4	48		3	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	12 7/8	12 7/8	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
5	48		3	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	12 7/8	12 7/8	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0

STANDARD SIGN
W20-53A,B,C,D,F,G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/10/2024 PLATE NO. W20-53.2

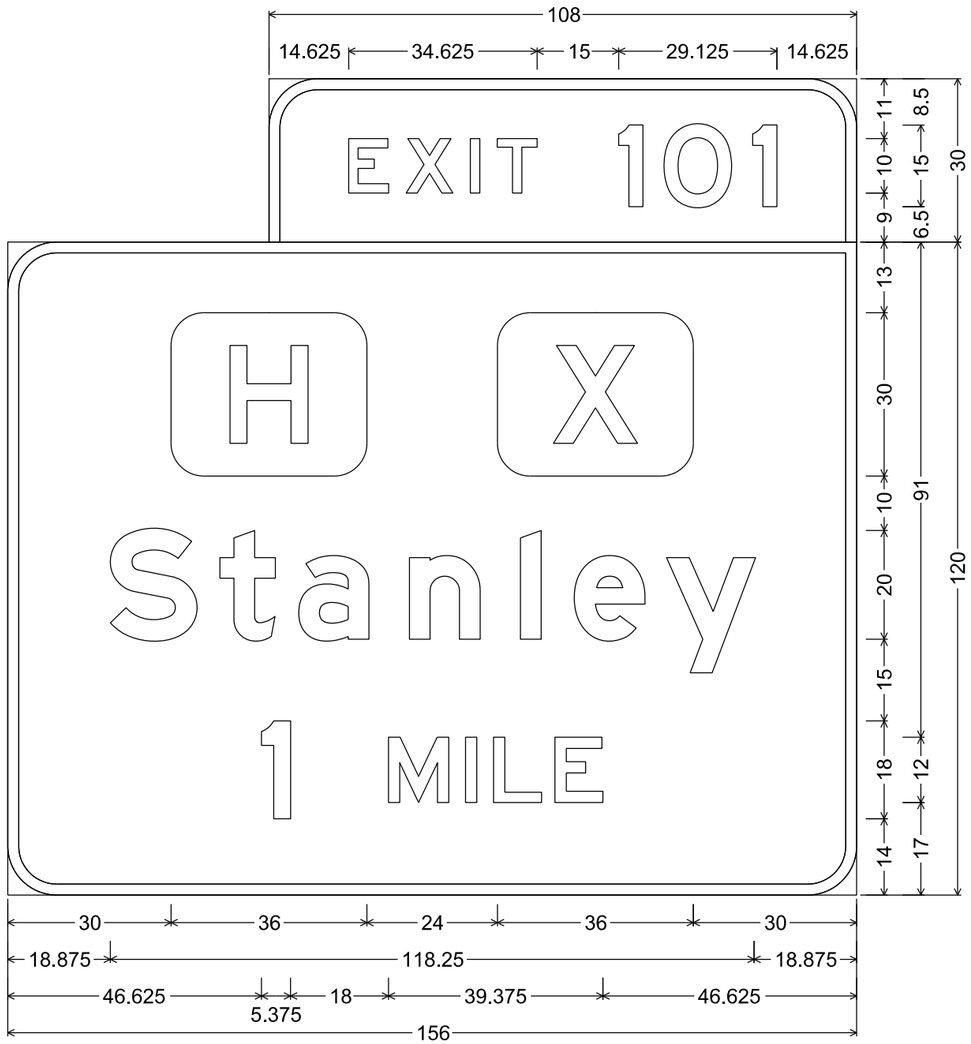
PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W2053.DGN PLOT DATE : 10-JAN 2024 2:38 PLOT BY : dotc4c PLOT NAME : PLOT SCALE : $$.....plotscale.....$$

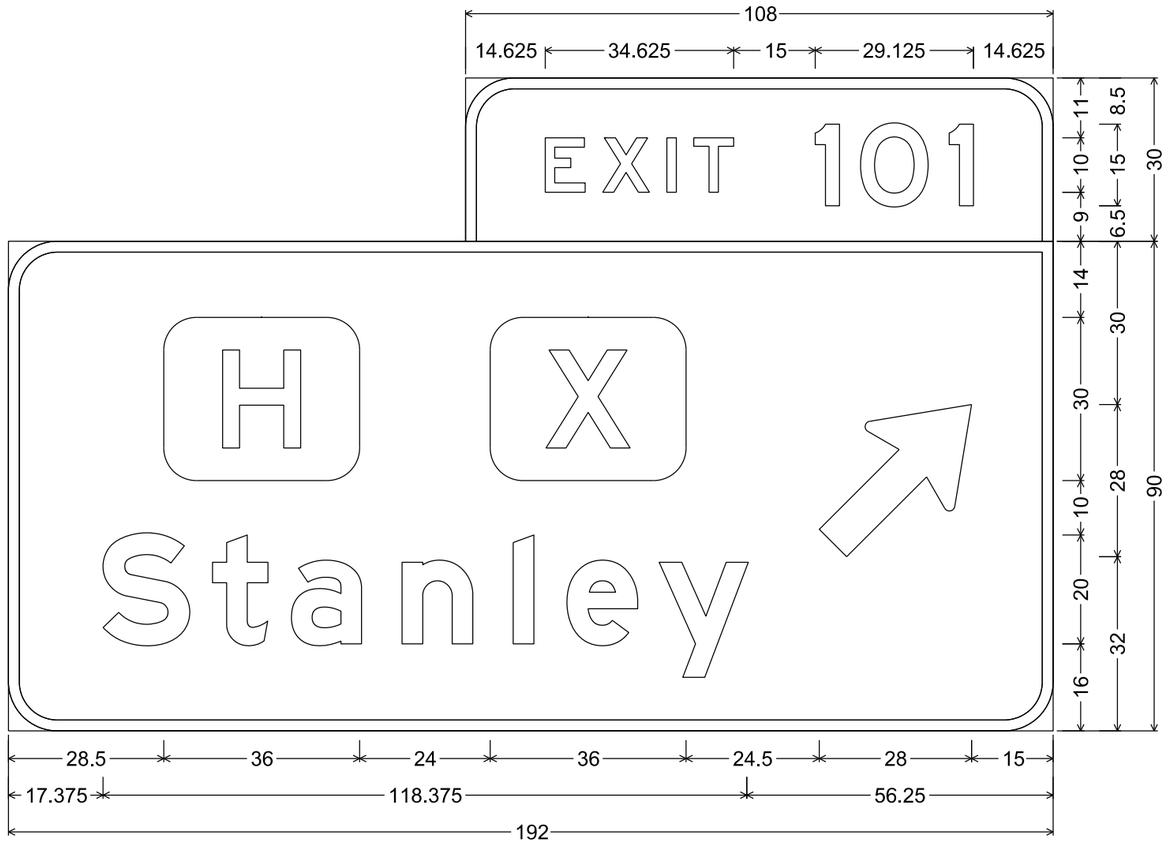
7

NOTES

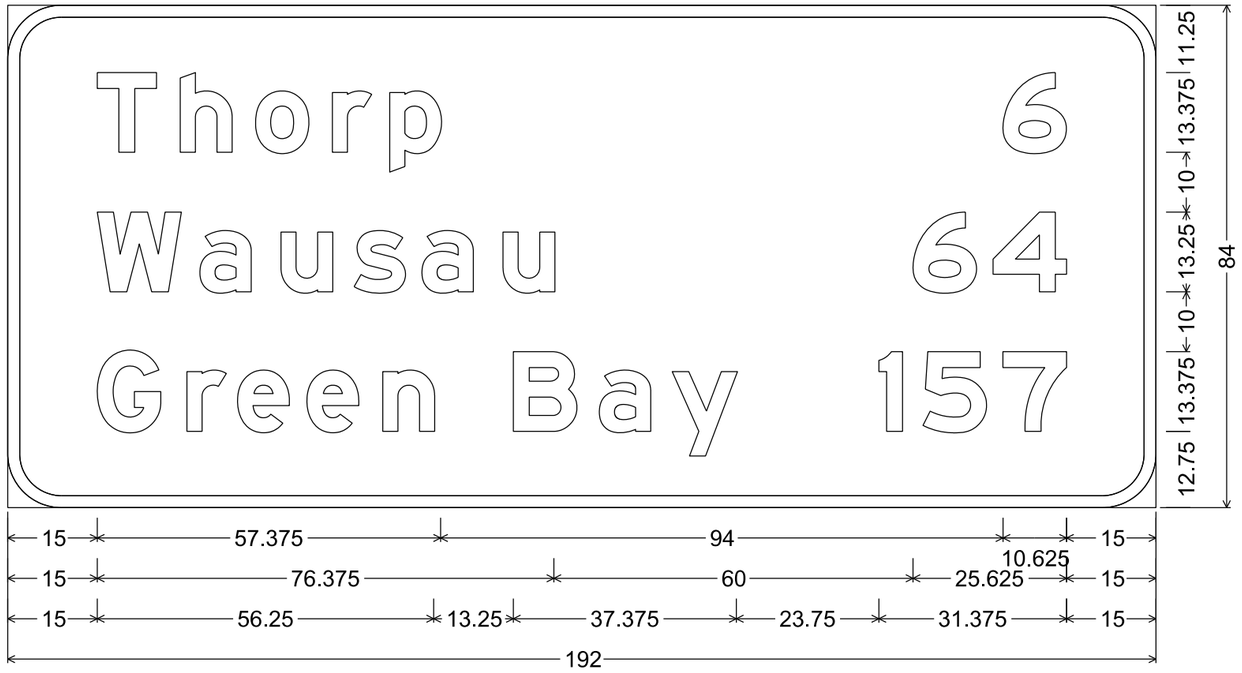
1. All Signs Type I - Type SH Reflective
2. Color:
   Background - Green
   Message - White
3. Message Series - E Modified except all CAP words Series E



E1-5P; 9.000" Radius, 2.000" Border
E1-1A; 9.000" Radius, 2.000" Border



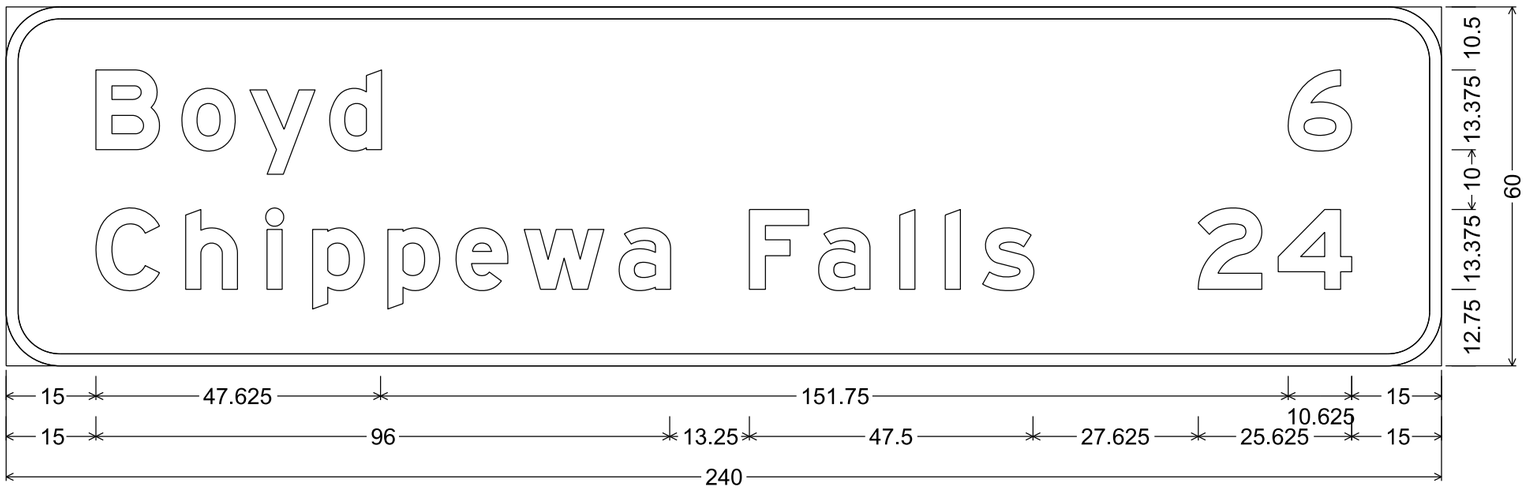
E1-5P; 9.000" Radius, 2.000" Border
E4-1A; 9.000" Radius, 2.000" Border



D2-3; 9.000" Radius, 2.000" Border

NOTES

1. All Signs Type I - Type SH Reflective
2. Color:
   Background - Green
   Message - White
3. Message Series - E Modified



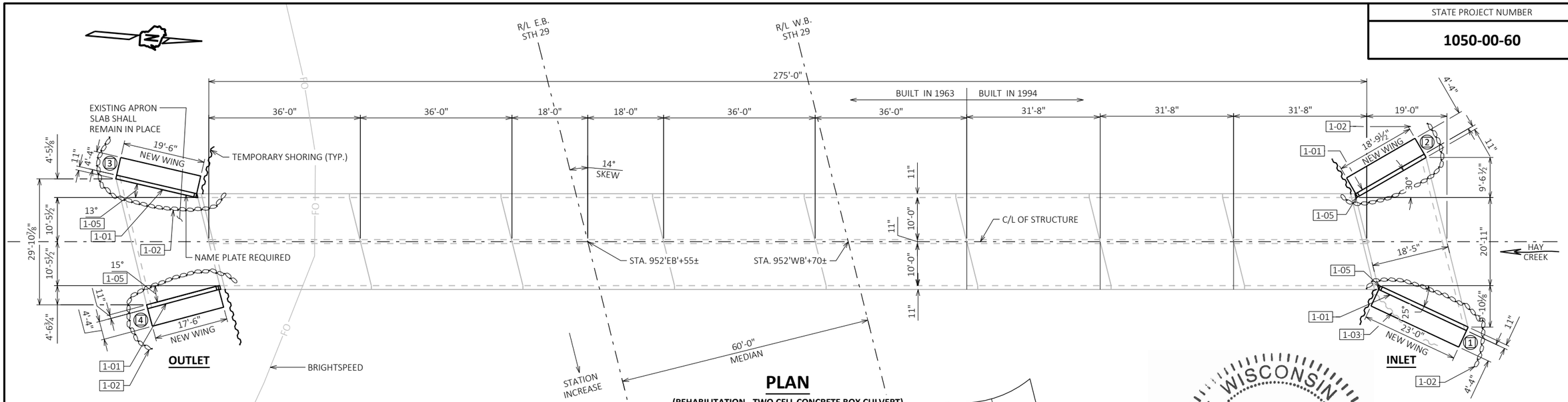
D2-2; 9.000" Radius, 2.000" Border

7

7

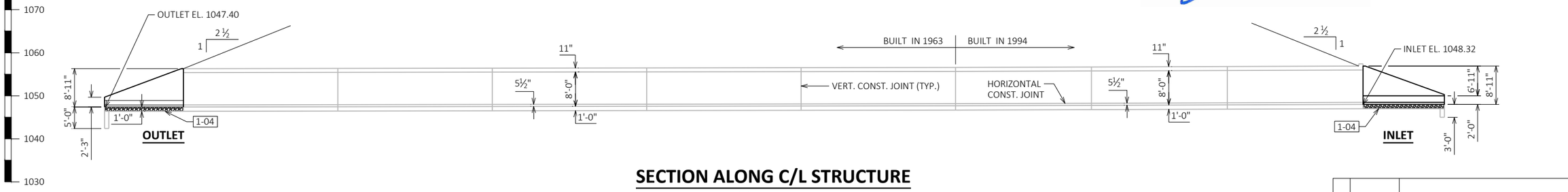
STATE PROJECT NUMBER

1050-00-60



PLAN

(REHABILITATION - TWO CELL CONCRETE BOX CULVERT)



SECTION ALONG C/L STRUCTURE

(LOOKING WEST)

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HS20
INVENTORY RATING: HS16
OPERATING RATING: HS27
WISCONSIN STANDARD PERMIT VEHICLE WIS-SPV: 170 KIPS
RATINGS TAKEN FROM HSI 5/29/2025

EARTH LOAD:

DESIGNED FOR: 24' OF FILL (FROM HSI)

MATERIAL PROPERTIES:

CONCRETE MASONRY:
BOX CULVERT ——— f'_c = 3,500 PSI

BAR STEEL REINFORCEMENT
GRADE 60 ——— f_y = 60,000 PSI

TRAFFIC DATA

STH 29
ADT = 18,290 (2046)
R.D.S. = 65 MPH

SCOPE OF WORK B-9-29

1. REPLACE ALL FOUR WINGS.
2. PERFORM CONCRETE SURFACE REPAIR. LOCATIONS INCLUDE WEST WALL OF WEST BARREL SOUTH OF NORTH CONSTRUCTION JOINT AND OTHER LOCATIONS DESIGNATED BY ENGINEER.

LEGEND

(X) INDICATES WING NUMBER

1-01 REMOVE EXISTING WING DOWN TO EXISTING HORIZ. CONST. JOINT. SALVAGE EXISTING VERTICAL REINFORCEMENT AND EXTEND 1'-0" MIN. INTO NEW WORK.

1-02 SANDBAGS OR OTHER TECHNIQUE TO DIVERT WATER FROM WING REPLACEMENT, INCLUDED IN BID ITEM "COFFERDAMS B-9-29".

1-03 REMOVE EXISTING SHEET PILING TO BELOW PROPOSED FOOTING ELEVATION. REMOVAL IS INCLUDED IN 'REMOVING STRUCTURE' ITEM.

1-04 UNDER CUT 1'-0". EXCAVATION FOR UNDER CUT TO BE INCLUDED IN EXCAVATION FOR STRUCTURES. PLACE GEOTEXTILE TYPE C AND BACKFILL WITH BREAKER RUN.

1-05 MATCH EXISTING FRONT FACE WING ALIGNMENT

LIST OF DRAWINGS:

1. GENERAL PLAN
2. NOTES, QUANTITIES & MISC. DETAILS
3. WINGS 1 & 2 DETAILS
4. WINGS 3 & 4 DETAILS

BUREAU OF STRUCTURES CONTACT:
AARON BONK P.E. (608) 261-0261

CONSULTANT CONTACT:
ERIC PRICE P.E. (608) 826-6145

WISCONSIN
ERIC T. PRICE E-39027 MADISON WI
PROFESSIONAL ENGINEER
May 30, 2025

NO.	DATE	REVISION	BY

CORRE ENGINEERING

STATE OF WISCONSIN DEPARTMENT OF TRANSPORATION

ACCEPTED JLR 08/14/25
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-9-29

STH 29 OVER HAY CREEK

COUNTY: CHIPPEWA | TOWN: DELMAR

DESIGN SPEC.
REHABILITATION N/A

DESIGNED BY	DESIGN CK'D	DRAWN BY	PLANS CK'D
WCAB	ETP	PKF	ETP

GENERAL PLAN

SHEET 1 OF 4
192

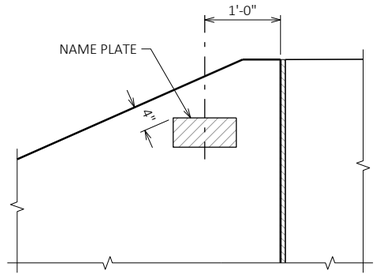
SCALE =

8

8

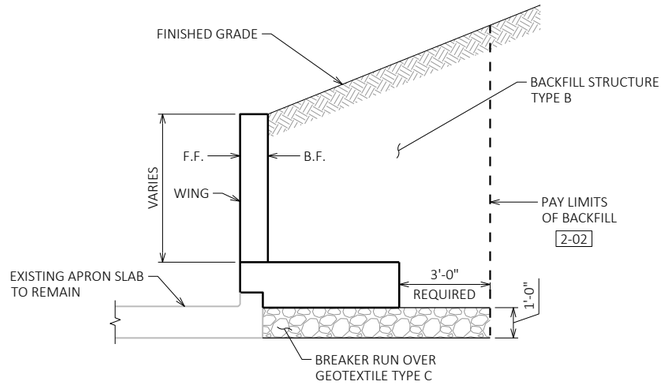
STATE PROJECT NUMBER

1050-00-60



NAME PLATE DETAIL

(WING 3)



TYPICAL SECTION THRU NEW WING

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS AND ELEVATIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS FROM 1963 AND 1994.

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

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES CULVERTS B-9-29" SHALL BE THE EXISTING GROUND LINE.

THE BACKFILL QUANTITIES ARE BASED ON THE PAY LIMITS SHOWN ON THE PLANS AND MAY NOT REFLECT ACTUAL PLACED QUANTITIES. "BACKFILL STRUCTURE TYPE B" REQUIRED BEHIND WING FOOTINGS FOR 3 FEET. BACKFILL PLACED BEYOND PAY LIMITS OR EXCEEDING PLAN QUANTITIES SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES.

PLACE 18" (MIN.) WIDE SHEET OF "RUBBERIZED MEMBRANE WATERPROOFING" ON VERTICAL AND HORIZONTAL WING CONSTRUCTION JOINTS.

THE CONTRACTOR SHALL SUPPLY A NEW NAME PLATE IN ACCORDANCE WITH SECTION 504.3.4 OF THE STANDARD SPECIFICATIONS AND THE STANDARD DETAIL DRAWINGS. NAME PLATE TO SHOW ORIGINAL CONSTRUCTION YEAR 1963 AND 1994.

ALL CONCRETE REMOVALS SHALL BE DEFINED BY A 1" DEEP SAW CUT UNLESS THE REMOVAL LINE IS AN EXISTING CONSTRUCTION JOINT OR SPECIFIED OTHERWISE.

LEGEND

2-01 CONCRETE SURFACE REPAIR QUANTITIES ARE APPROXIMATE. CONTRACTOR SHALL COORDINATE THE FIELD IDENTIFICATION AND DETERMINATION OF ALL REPAIR LOCATIONS WITH THE ENGINEER.

2-02 BACKFILL PAY LIMITS. BACKFILL BEYOND BACKFILL PAY LIMITS SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES. LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.

TOTAL ESTIMATED QUANTITIES

	BID ITEM NUMBER	BID ITEMS	UNIT	TOTALS
	203.0220	REMOVING STRUCTURE B-9-29	EACH	1
	206.2001	EXCAVATION FOR STRUCTURES CULVERTS B-9-29	EACH	1
	206.5001	COFFERDAMS B-9-29	EACH	1
	210.2500	BACKFILL STRUCTURE TYPE B	TON	200
	311.0110	BREAKER RUN	TON	45
	504.0100	CONCRETE MASONRY CULVERTS	CY	33
	505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	2880
2-01	509.1500	CONCRETE SURFACE REPAIR	SF	80
	511.1200	TEMPORARY SHORING B-9-29	SF	550
	516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	19
		NON-BID ITEMS		
		FILLER	SIZE	¾"
		NAME PLATE	EACH	1

ALL ITEMS ARE CATEGORY 0020

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-9-29

DRAWN BY PKF | PLANS CK'D ETP

NOTES, QUANTITIES AND MISC. DETAILS

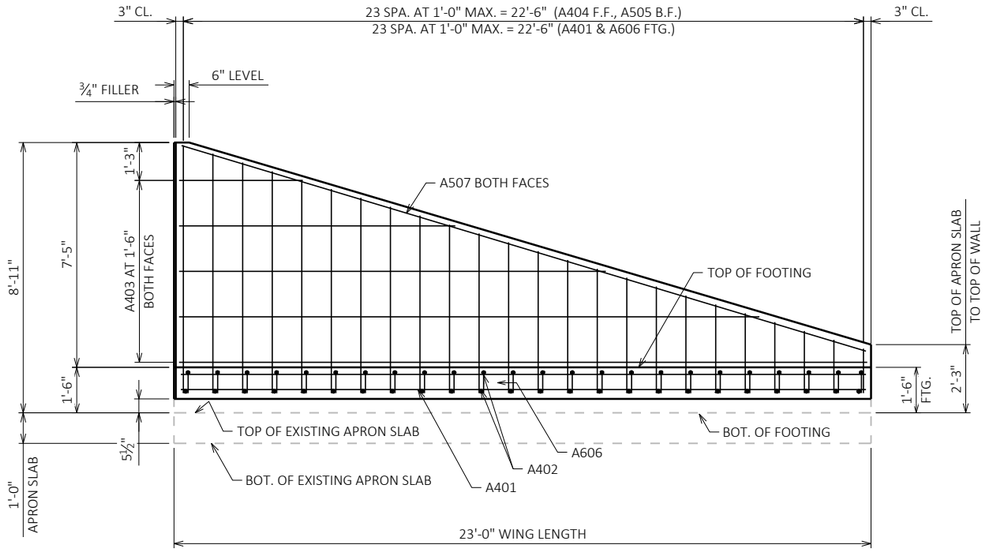
SHEET 2 OF 4

193

SCALE =

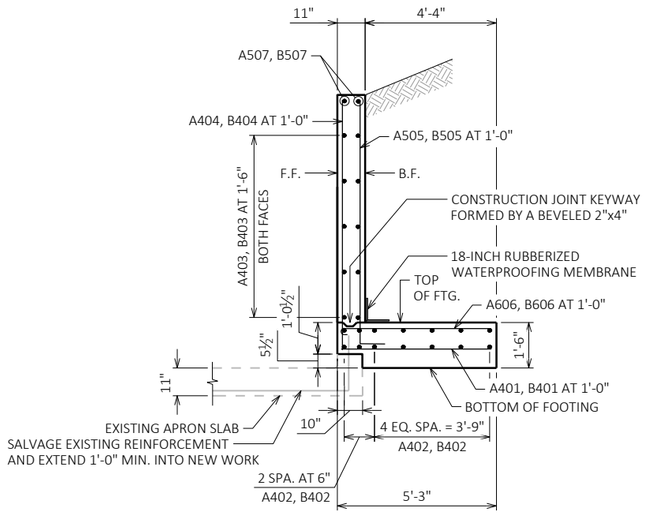
STATE PROJECT NUMBER

1050-00-60



WING 1

LOOKING AT BACK FACE OF WING



SECTION THRU WING DETAIL

BILL OF BARS - WINGS 1 & 2

BAR MARK	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION	
COATED BARS					TOTAL WEIGHT =	1,540 LBS
A401	24	4'-11"			WING 1 FOOTING	TRANS.
A402	14	22'-8"			WING 1 FOOTING	LONG.
A403	10	13'-6"		X	WING 1 WALL	LONG.
A404	24	4'-9"		X	WING 1 WALL F.F.	VERT.
A505	24	5'-6"	X	X	WING 1 WALL B.F.	VERT.
A606	24	5'-7"	X		WING 1 FOOTING	TRANS.
A507	2	23'-7"			WING 1 TOP	LONG.
B401	20	4'-11"			WING 2 FOOTING	TRANS.
B402	14	18'-5"			WING 2 FOOTING	LONG.
B403	10	10'-11"		X	WING 2 WALL	LONG.
B404	20	4'-9"		X	WING 2 WALL F.F.	VERT.
B505	20	5'-6"	X	X	WING 2 WALL B.F.	VERT.
B606	20	5'-7"	X		WING 2 FOOTING	TRANS.
B507	2	19'-6"			WING 2 TOP	LONG.

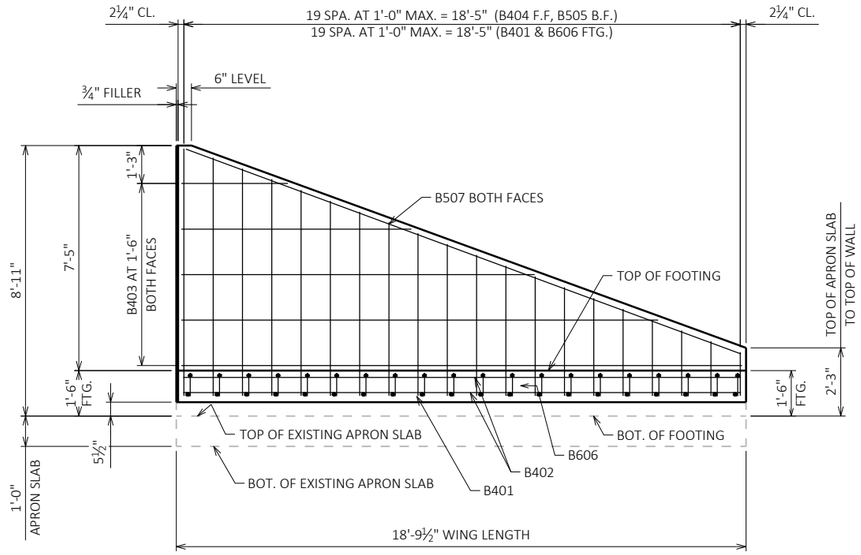
THE FIRST DIGIT OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

DIMENSIONS IN BENDING DETAILS ARE OUT-TO-OUT OF BAR.

BAR SERIES TABLE

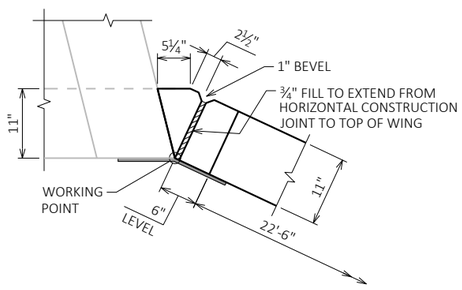
BAR MARK	NO. REQ'D	LENGTH
A403	2 SERIES OF 5	4'-4" TO 22'-8"
A404	1 SERIES OF 24	1'-5" TO 8'-1"
A505	1 SERIES OF 24	2'-2" TO 8'-10"
B403	2 SERIES OF 5	3'-6" TO 18'-5"
B404	1 SERIES OF 20	1'-5" TO 8'-1"
B505	1 SERIES OF 20	2'-2" TO 8'-10"

BUNDLE AND TAG EACH SERIES SEPARATELY.

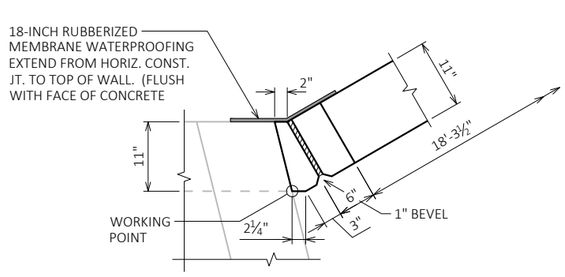


WING 2

LOOKING AT BACK FACE OF WING

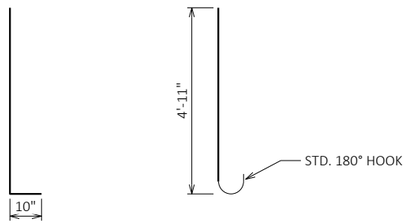


WING 1 CORNER



WING 2 CORNER

CORNER DETAILS



A505, B505 **A606, B606**

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-9-29

DRAWN BY PKF | PLANS CK'D ETP

WINGS 1 & 2 DETAILS

SHEET 3 OF 4
194

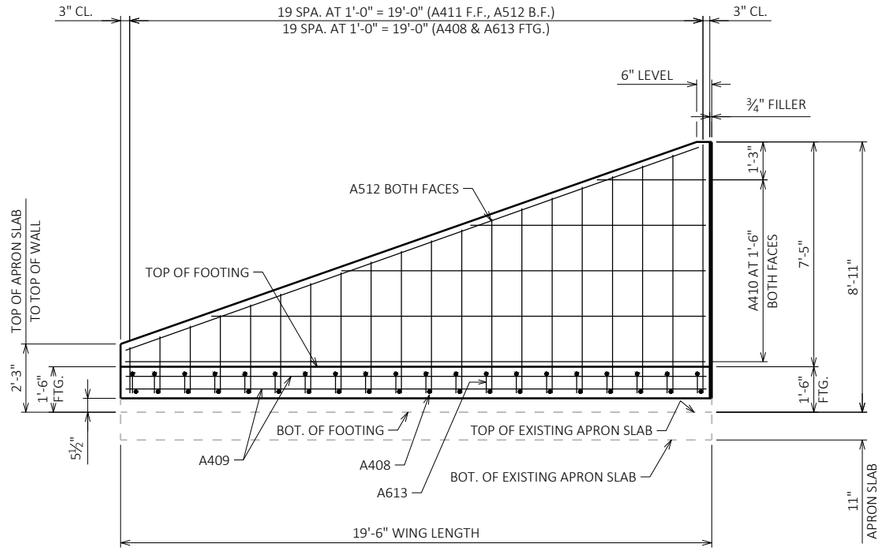
SCALE =

8

8

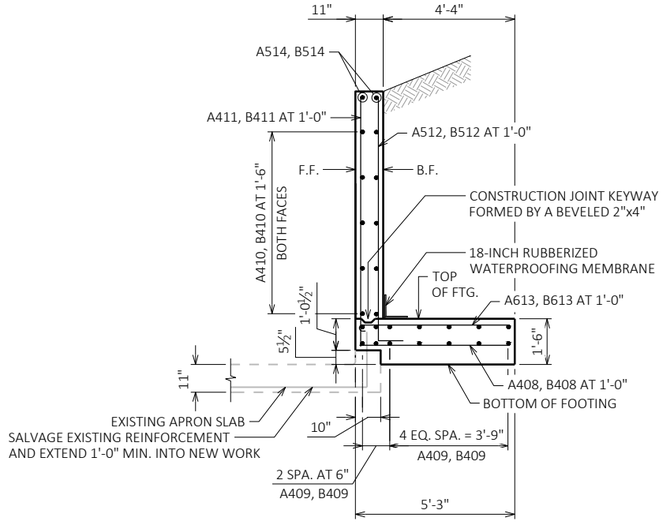
STATE PROJECT NUMBER

1050-00-60



WING 3

LOOKING AT BACK FACE OF WING



SECTION THRU WING DETAIL

BILL OF BARS - WINGS 3 & 4

BAR MARK	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION	
COATED BARS					TOTAL WEIGHT =	1,340 LBS
A408	20	4'-11"			WING 3 FOOTING	TRANS.
A409	14	19'-2"			WING 3 FOOTING	LONG.
A410	10	11'-2"		X	WING 3 WALL	LONG.
A411	20	4'-9"		X	WING 3 WALL F.F.	VERT.
A512	20	5'-6"	X	X	WING 3 WALL B.F.	VERT.
A613	20	5'-7"	X		WING 3 FOOTING	TRANS.
A514	2	20'-4"			WING 3 TOP	LONG.
B408	18	4'-11"			WING 4 FOOTING	TRANS.
B409	14	17'-2"			WING 4 FOOTING	LONG.
B410	10	8'-9"		X	WING 4 WALL	LONG.
B411	18	4'-9"		X	WING 4 WALL F.F.	VERT.
B512	18	5'-6"	X	X	WING 4 WALL B.F.	VERT.
B613	18	5'-7"	X		WING 4 FOOTING	TRANS.
B514	2	18'-4"			WING 4 TOP	LONG.

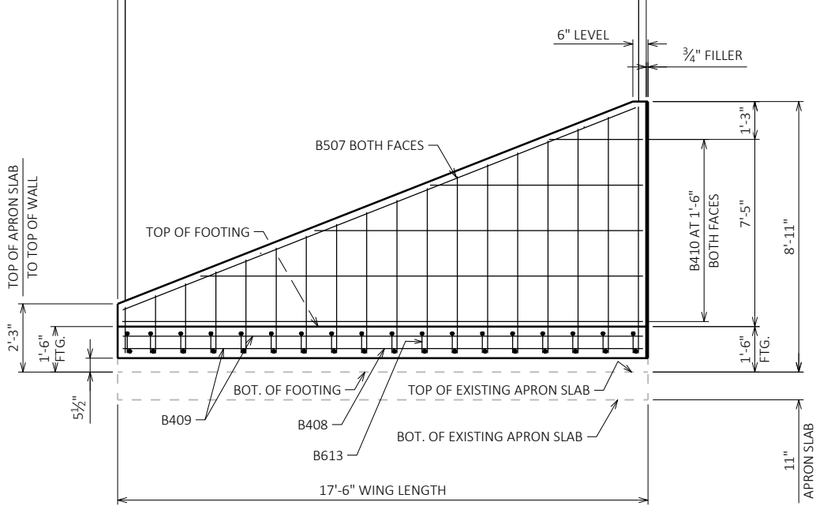
THE FIRST DIGIT OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

DIMENSIONS IN BENDING DETAILS ARE OUT-TO-OUT OF BAR.

BAR SERIES TABLE

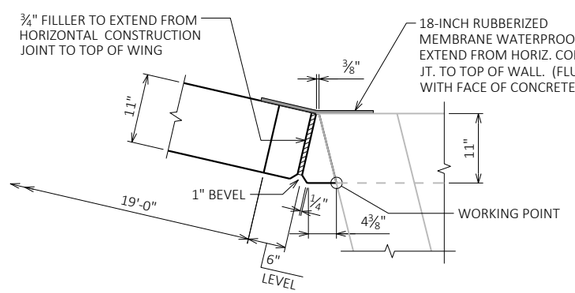
BAR MARK	NO. REQ'D	LENGTH
A410	2 SERIES OF 5	3'-2" TO 19'-2"
A411	1 SERIES OF 20	1'-5" TO 8'-1"
A512	1 SERIES OF 20	2'-2" TO 8'-10"
B410	2 SERIES OF 5	3'-6" TO 17'-2"
B411	1 SERIES OF 18	1'-5" TO 8'-1"
B512	1 SERIES OF 18	2'-2" TO 8'-10"

BUNDLE AND TAG EACH SERIES SEPARATELY.

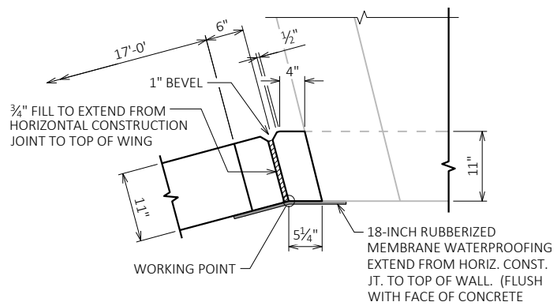


WING 4

LOOKING AT BACK FACE OF WING

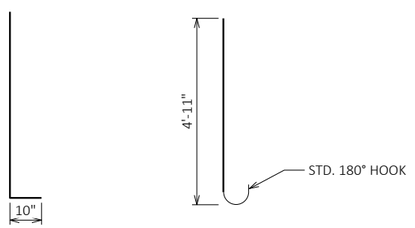


WING 3 CORNER



WING 4 CORNER

CORNER DETAILS



A512, B512 **A613, B613**

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-9-29

DRAWN BY PKF | PLANS CK'D ETP

WINGS 3 & 4 DETAILS

SHEET 4 OF 4

195

SCALE =

8

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DIVISION - 29EB

STATION	REAL STATION	DISTANCE	AREA (SF)		INCREMENTAL VOL (CY) (UNADJUSTED)		CUMULATIVE VOL (CY)		
			CUT	FILL	CUT NOTE 1	FILL NOTE 3	CUT 1.00 NOTE 1	EXPANDED FILL 1.25	MASS ORDINATE NOTE 8
940+29.00	94029.00	0.00	0.53	83.27	0	0	0	0	0
940+50.00	94050.00	21.00	1.08	75.13	1	62	1	78	-77
941+00.00	94100.00	50.00	1.73	48.24	3	114	4	220	-216
941+50.00	94150.00	50.00	2.34	162.73	4	195	8	464	-456
942+00.00	94200.00	50.00	143.71	161.27	135	300	143	839	-696
942+50.00	94250.00	50.00	444.35	0.00	545	149	688	1025	-337
943+00.00	94300.00	50.00	116.91	37.34	520	35	1208	1069	139
943+50.00	94350.00	50.00	13.37	14.37	121	48	1329	1129	200
944+00.00	94400.00	50.00	3.66	22.95	16	35	1345	1173	173
944+44.00	94444.00	44.00	0.59	23.56	3	38	1348	1220	128

DIVISION - 29WB

STATION	REAL STATION	DISTANCE	AREA (SF)		INCREMENTAL VOL (CY) (UNADJUSTED)		CUMULATIVE VOL (CY)		
			CUT	FILL	CUT NOTE 1	FILL NOTE 3	CUT 1.00 NOTE 1	EXPANDED FILL 1.25	MASS ORDINATE NOTE 8
941+41.00	94141.00	0.00	3.93	5.09	0	0	0	0	0
941+82.12	94182.12	41.12	11.83	2.90	12	6	12	8	5
942+70.00	94270.00	87.88	73.37	0.00	139	5	151	14	137
943+92.00	94392.00	122.00	8.82	3.67	186	8	337	24	313

DIVISION - 29WB

STATION	REAL STATION	DISTANCE	AREA (SF)		INCREMENTAL VOL (CY) (UNADJUSTED)		CUMULATIVE VOL (CY)		
			CUT	FILL	CUT NOTE 1	FILL NOTE 3	CUT 1.00 NOTE 1	EXPANDED FILL 1.25	MASS ORDINATE NOTE 8
1074+35.94	107435.94	0.00	0.00	0.00	0	0	0	0	0
1077+00.00	107700.00	264.06	0.00	0.80	0	4	0	5	-5
1078+00.00	107800.00	100.00	0.00	0.87	0	3	0	9	-9
1079+00.00	107900.00	100.00	0.00	3.58	0	8	0	19	-19
1080+00.00	108000.00	100.00	0.00	2.92	0	12	0	34	-34
1080+68.34	108068.34	68.34	0.00	2.94	0	7	0	43	-43
1081+18.32	108118.32	49.98	0.00	0.00	0	3	0	46	-46

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

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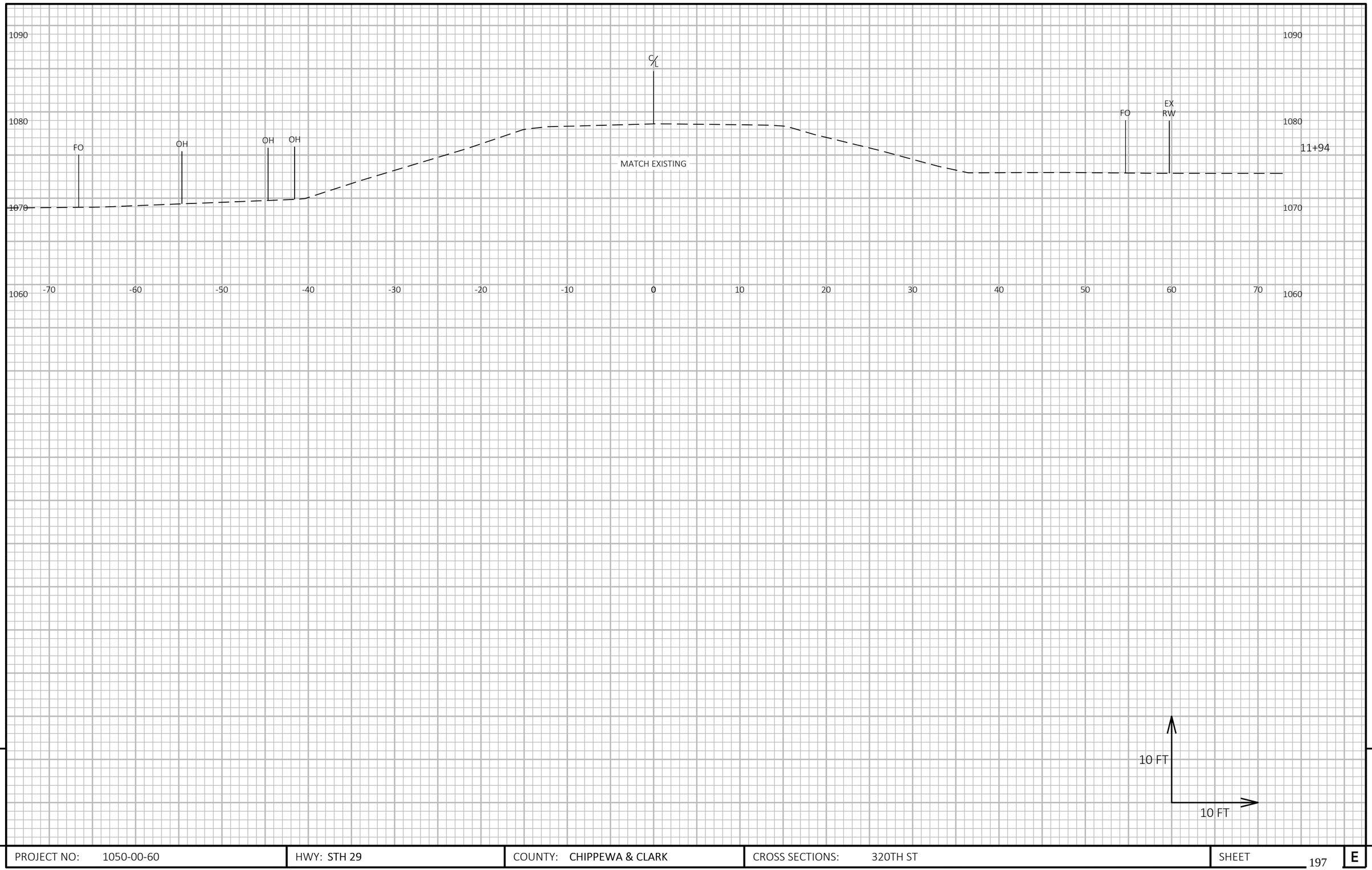
PROJECT NO: 1050-00-60	HWY: STH 29	COUNTY: CHIPPEWA & CLARK	EARTHWORK DATA	SHEET 196	E

FILE NAME : C:\OD\ONEDRIVE - CORRE, INC\MY PROJECTS\1050-00-30_CLARK CO_STH 29\500_CADD\501_C3D_2024\10500030\SHEETS\090101-EW.DWG
LAYOUT NAME - 01

PLOT DATE : 11/21/2025 12:00 PM PLOT BY : ANDREW PETERSON, PE PLOT NAME : PLOT SCALE : 1" = 1'

WISDOT/CADDS SHEET 49



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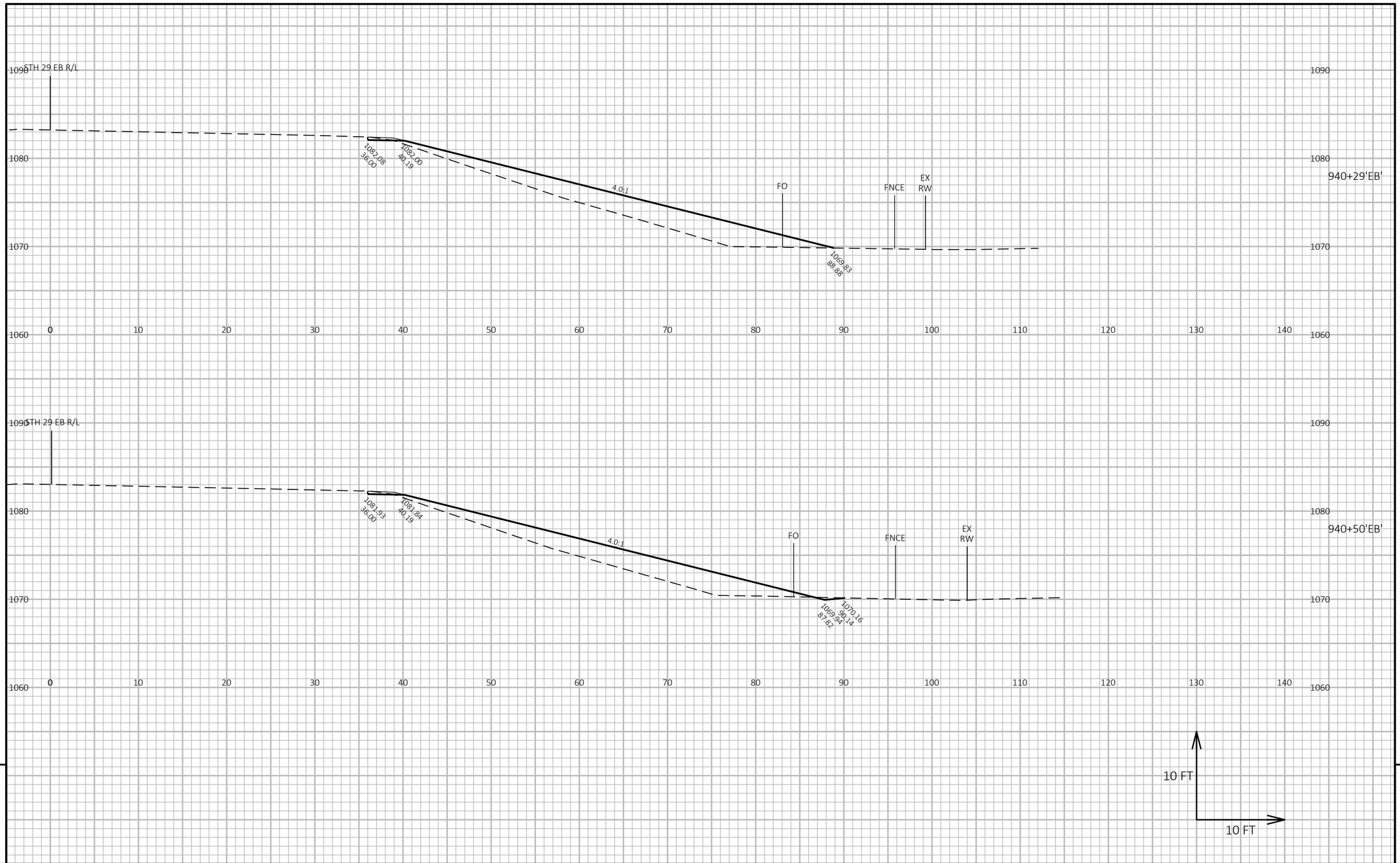
PROJECT NO: 1050-00-60	HWY: STH 29	COUNTY: CHIPPEWA & CLARK	CROSS SECTIONS: 320TH ST	SHEET 197	E

FILE NAME : C:\OD\ONEDRIVE - CORRE, INC\MY PROJECTS\1050-00-30_CLARK CO_STH 29\500_CADD\501_C3D_2024\10500030\SHEETS\090201-XS.DWG
LAYOUT NAME - 01

PLOT DATE : 11/21/2025 12:29 PM PLOT BY : ANDREW PETERSON, PE PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



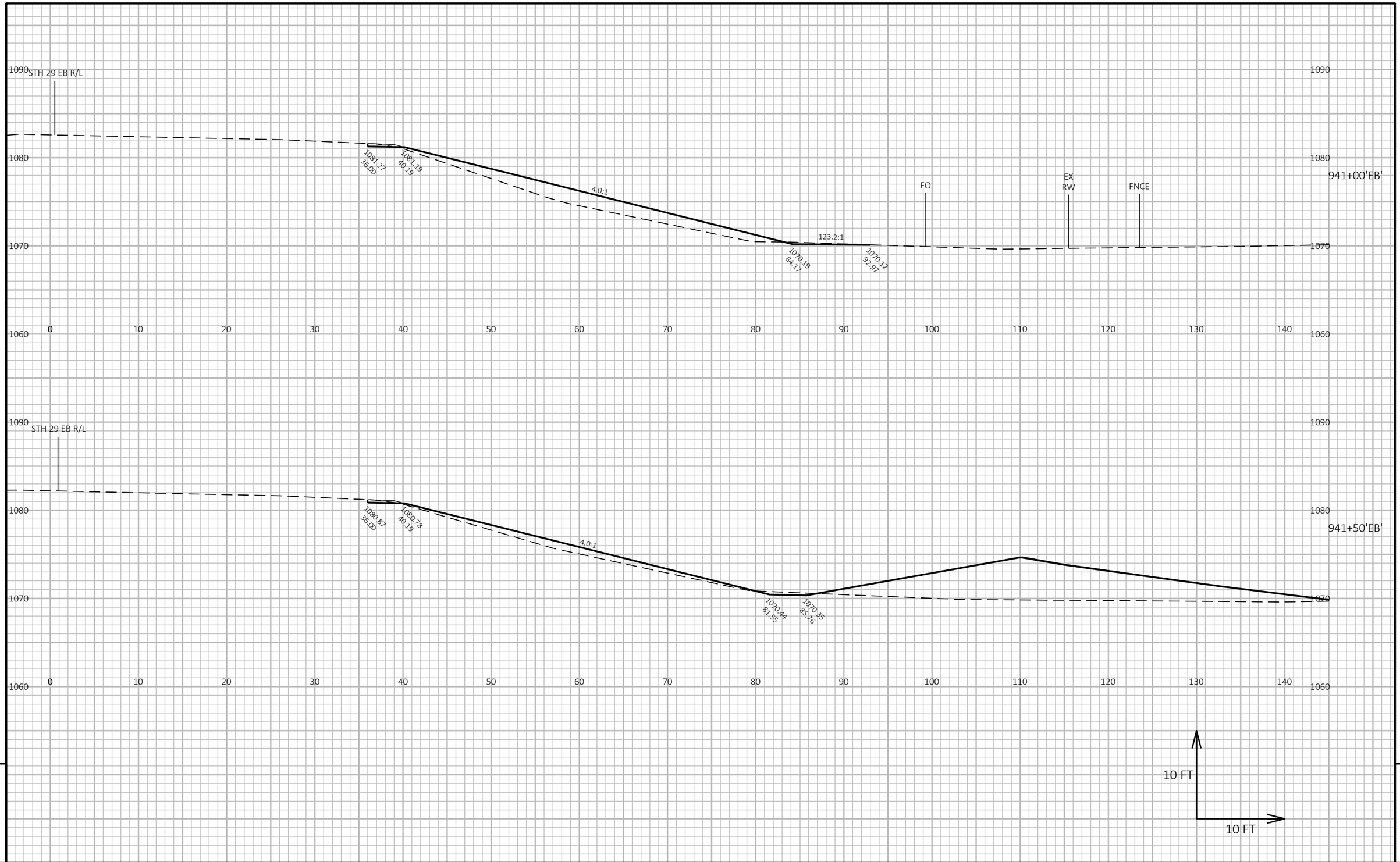
PROJECT NO: 1050-00-60	HWY: STH 29	COUNTY: CHIPPEWA & CLARK	CROSS SECTIONS: STH 29 AT 320TH ST	SHEET 198	E

FILE NAME : C:\OD\ONEDRIVE - CORRE, INC\MY PROJECTS\1050-00-30_CLARK CO_STH 29\500_CADD\501_C3D_2024\10500030\SHEETS\090201-XS.DWG
LAYOUT NAME - 02

PLOT DATE : 11/21/2025 12:29 PM PLOT BY : ANDREW PETERSON, PE PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



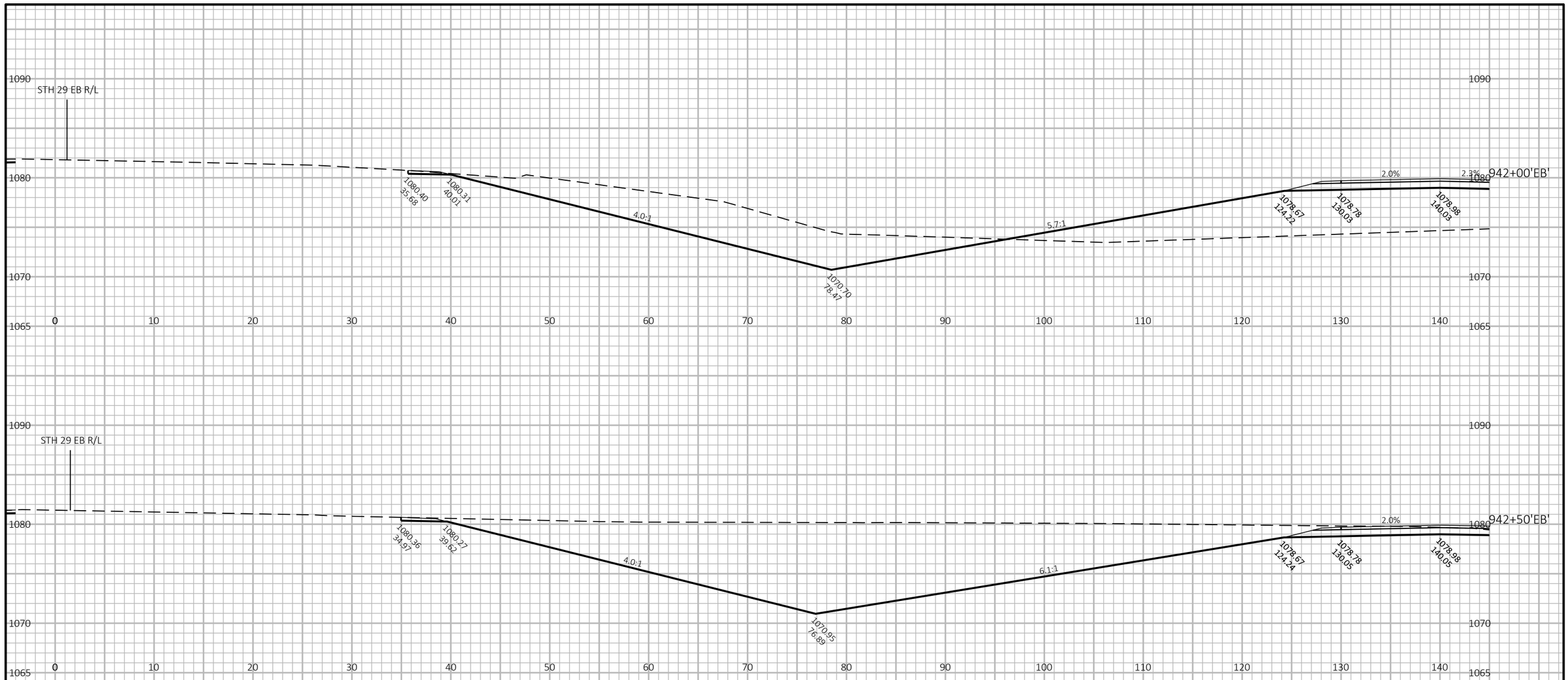
PROJECT NO: 1050-00-60	HWY: STH 29	COUNTY: CHIPPEWA & CLARK	CROSS SECTIONS: STH 29 AT 320TH ST	SHEET 199	E

FILE NAME : C:\OD\ONEDRIVE - CORRE, INC\MY PROJECTS\1050-00-30_CLARK CO_STH 29\500_CADD\501_C3D_2024\10500030\SHEETS\090201-XS.DWG
LAYOUT NAME - 03

PLOT DATE : 11/21/2025 12:29 PM PLOT BY : ANDREW PETERSON, PE PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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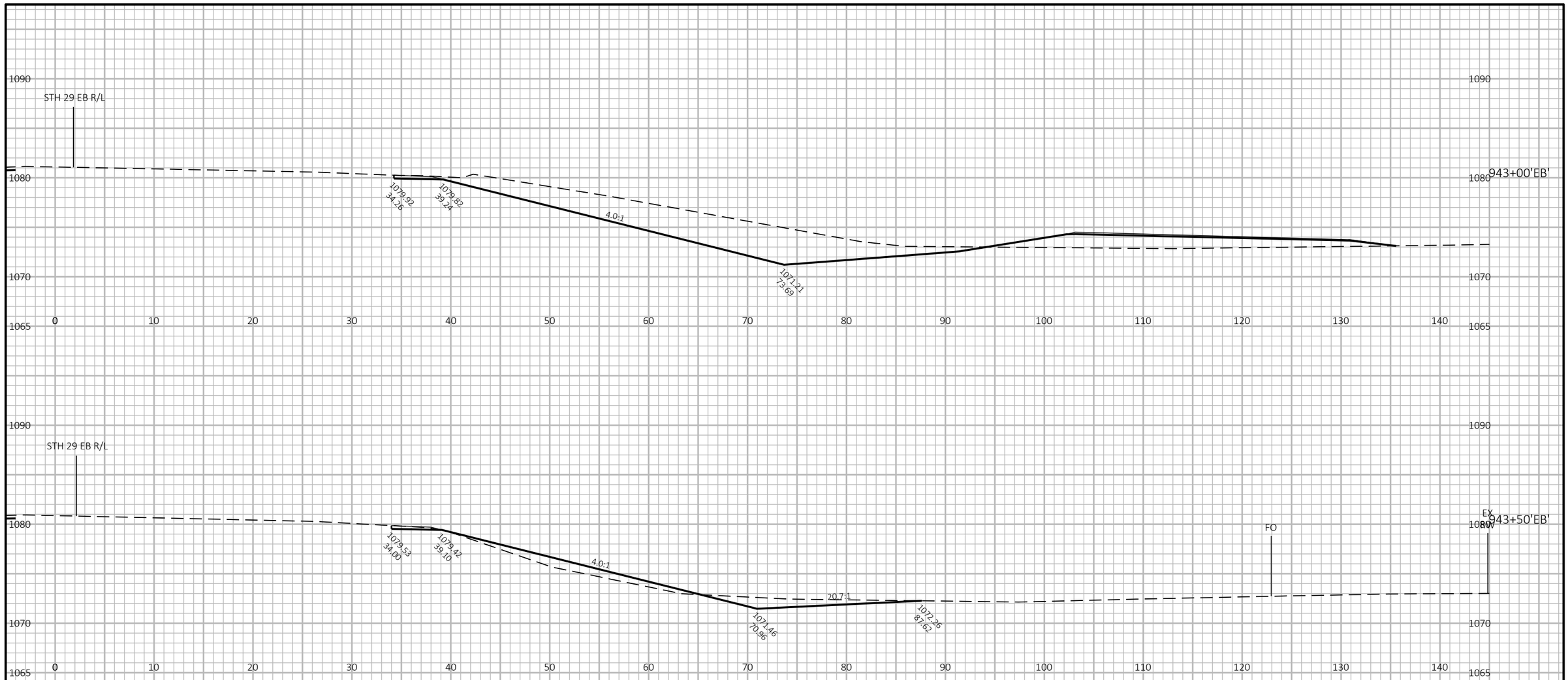
PROJECT NO: 1050-00-60	HWY: STH 29	COUNTY: CHIPPEWA & CLARK	CROSS SECTIONS: STH 29 AT 320TH ST	SHEET 200	E

FILE NAME : C:\OD\ONEDRIVE - CORRE, INC\MY PROJECTS\1050-00-30_CLARK CO_STH 29\500_CADD\501_C3D_2024\10500030\SHEETS\090201-XS.DWG
LAYOUT NAME - 04

PLOT DATE : 11/21/2025 12:29 PM PLOT BY : ANDREW PETERSON, PE PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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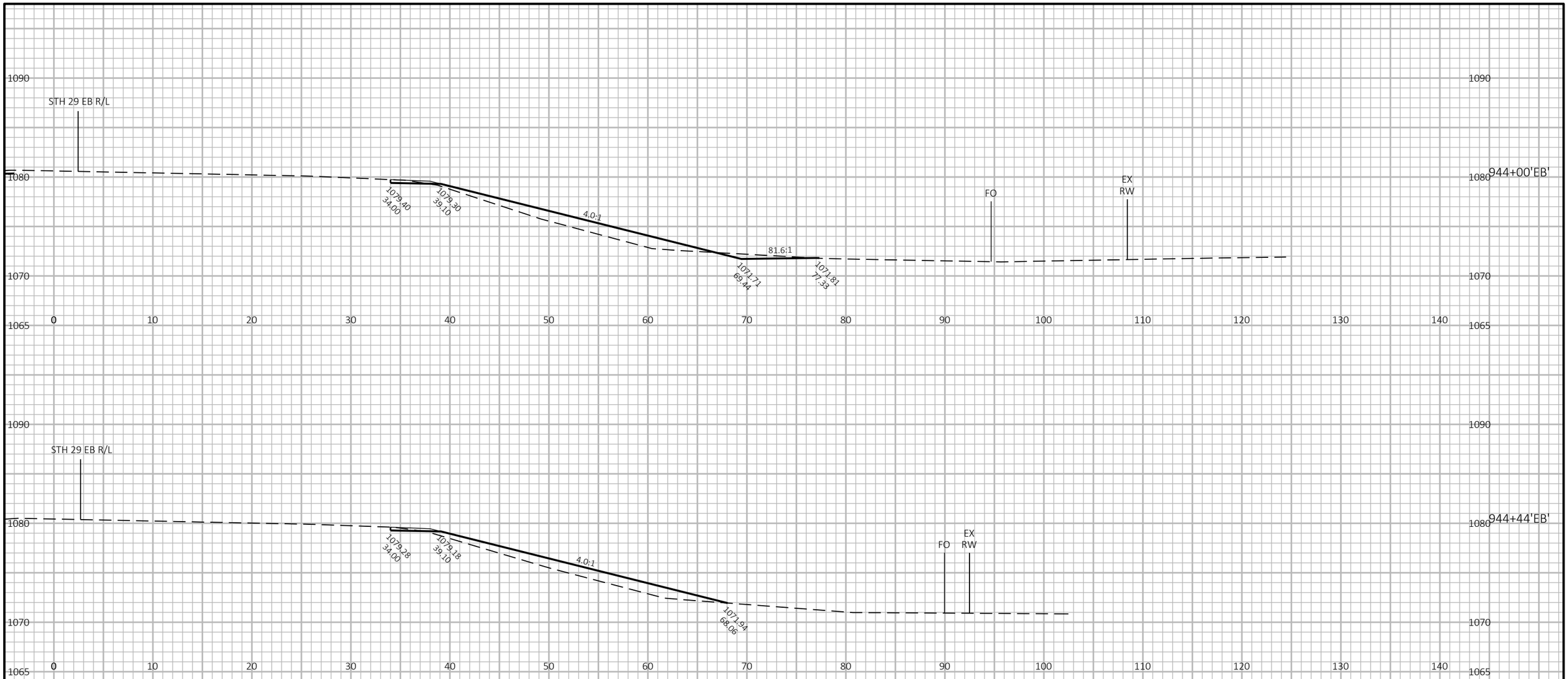
PROJECT NO: 1050-00-60	HWY: STH 29	COUNTY: CHIPPEWA & CLARK	CROSS SECTIONS: STH 29 AT 320TH ST	SHEET 201	E

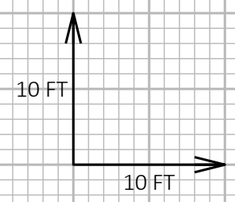
FILE NAME : C:\OD\ONEDRIVE - CORRE, INC\MY PROJECTS\1050-00-30_CLARK CO_STH 29\500_CADD\501_C3D_2024\10500030\SHEETS\090201-XS.DWG
LAYOUT NAME - 05

PLOT DATE : 11/21/2025 12:29 PM PLOT BY : ANDREW PETERSON, PE PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49





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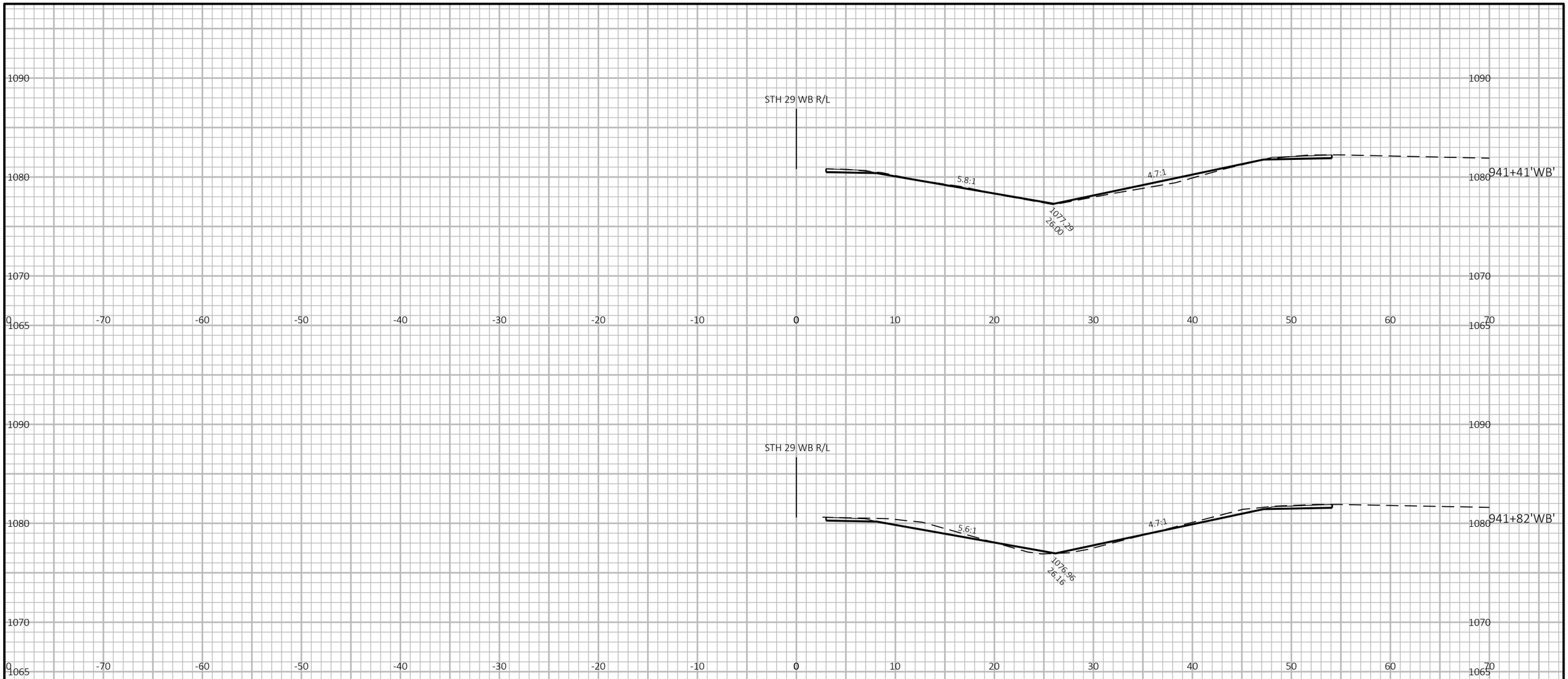
PROJECT NO: 1050-00-60	HWY: STH 29	COUNTY: CHIPPEWA & CLARK	CROSS SECTIONS: STH 29 AT 320TH ST	SHEET 202	E

FILE NAME : C:\OD\ONEDRIVE - CORRE, INC\MY PROJECTS\1050-00-30_CLARK CO_STH 29\500_CADD\501_C3D_2024\10500030\SHEETS\090201-XS.DWG
LAYOUT NAME - 06

PLOT DATE : 11/21/2025 12:29 PM PLOT BY : ANDREW PETERSON, PE PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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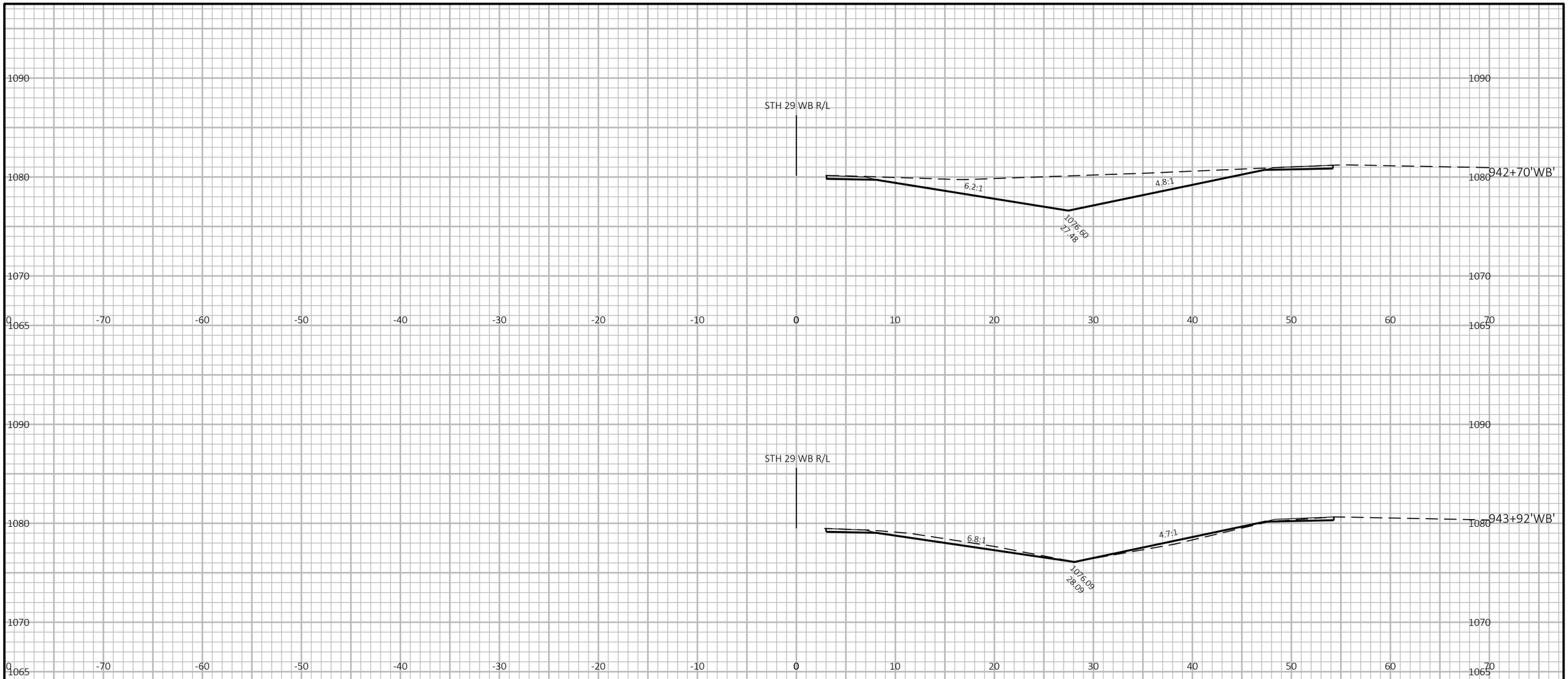
PROJECT NO: 1050-00-60	HWY: STH 29	COUNTY: CHIPPEWA & CLARK	CROSS SECTIONS: STH 29 AT 320TH ST	SHEET 203	E

FILE NAME : C:\OD\ONEDRIVE - CORRE, INC\MY PROJECTS\1050-00-30_CLARK CO_STH 29\500_CADD\501_C3D_2024\10500030\SHEETS\090201-XS.DWG
LAYOUT NAME - 07

PLOT DATE : 11/21/2025 12:29 PM PLOT BY : ANDREW PETERSON, PE PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1050-00-60	HWY: STH 29	COUNTY: CHIPPEWA & CLARK	CROSS SECTIONS: STH 29 AT 320TH ST	SHEET 204	E

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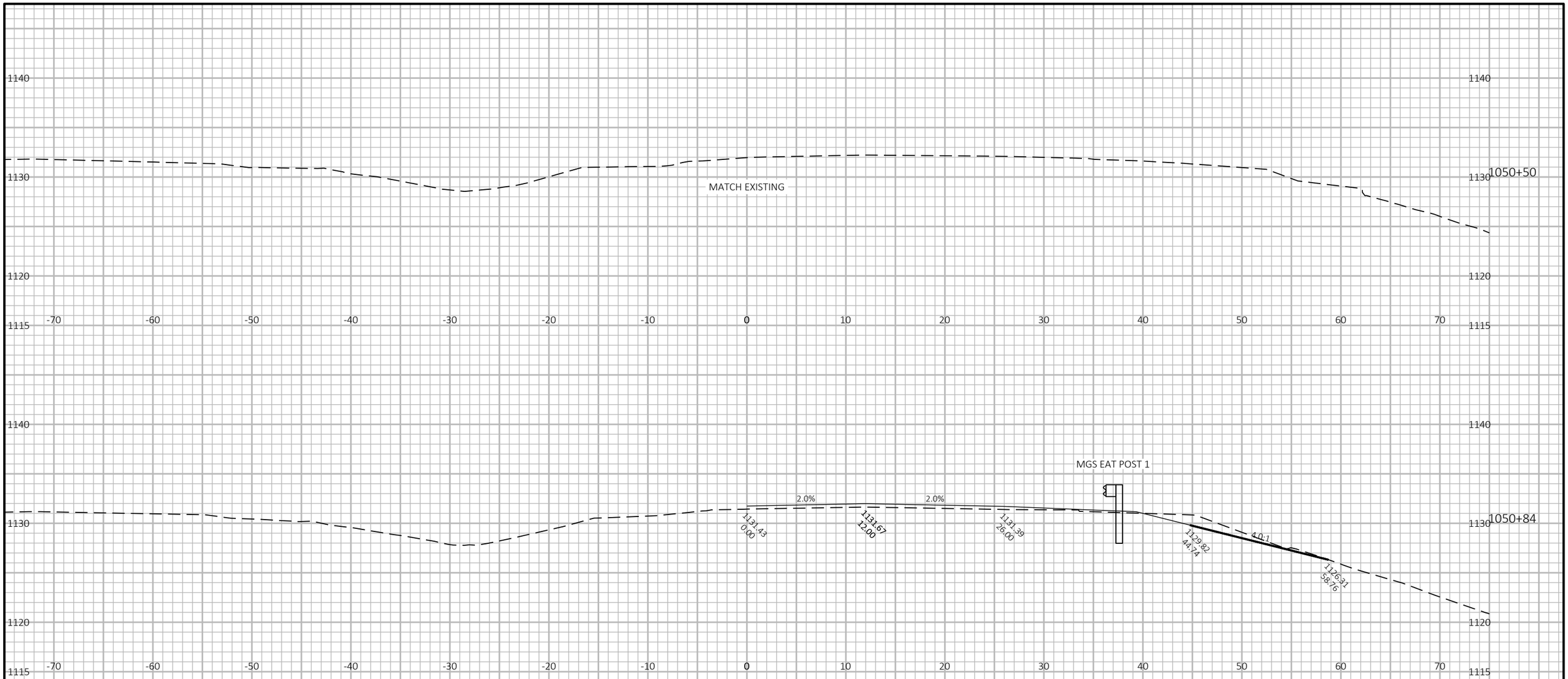
LAYOUT NAME - 08

PLOT DATE : 11/21/2025 12:29 PM PLOT BY : ANDREW PETERSON, PE PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



10 FT

10 FT

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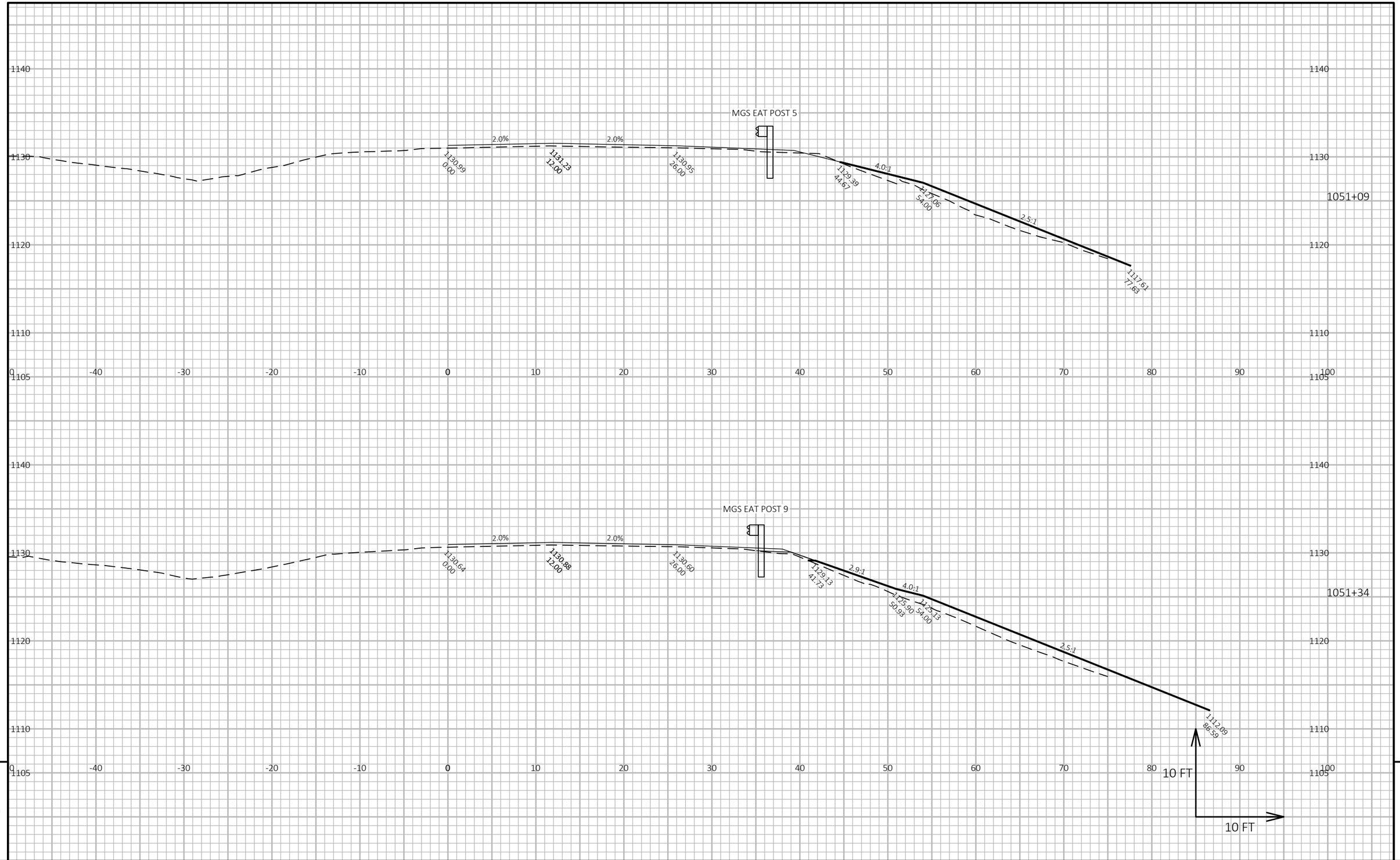
PROJECT NO: 1050-00-60	HWY: STH 29	COUNTY: CHIPPEWA & CLARK	CROSS SECTIONS: STH 29 'EB'	SHEET 205	E

FILE NAME : C:\OD\ONEDRIVE - CORRE, INC\MY PROJECTS\1050-00-30_CLARK CO_STH 29\500_CADD\501_C3D_2024\10500030\SHEETS\090202-XS.DWG
LAYOUT NAME - 01

PLOT DATE : 11/21/2025 12:29 PM PLOT BY : ANDREW PETERSON, PE PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

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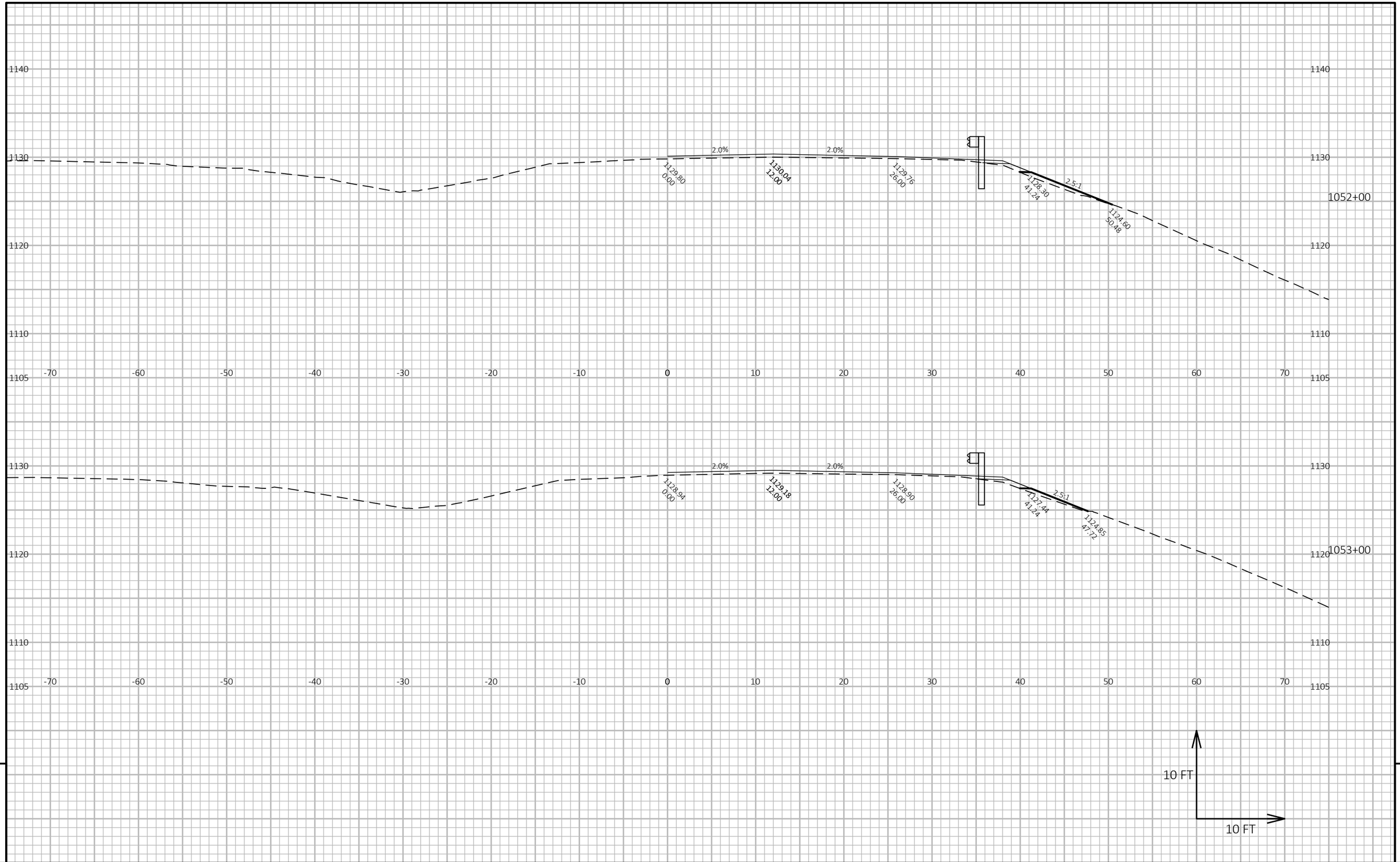
PROJECT NO: 1050-00-60	HWY: STH 29	COUNTY: CHIPPEWA & CLARK	CROSS SECTIONS: STH 29 'EB'	SHEET 206	E

FILE NAME : C:\OD\ONEDRIVE - CORRE, INC\MY PROJECTS\1050-00-30_CLARK CO_STH 29\500_CADD\501_C3D_2024\10500030\SHEETS\090202-XS.DWG
LAYOUT NAME - 02

PLOT DATE : 11/21/2025 12:29 PM PLOT BY : ANDREW PETERSON, PE PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

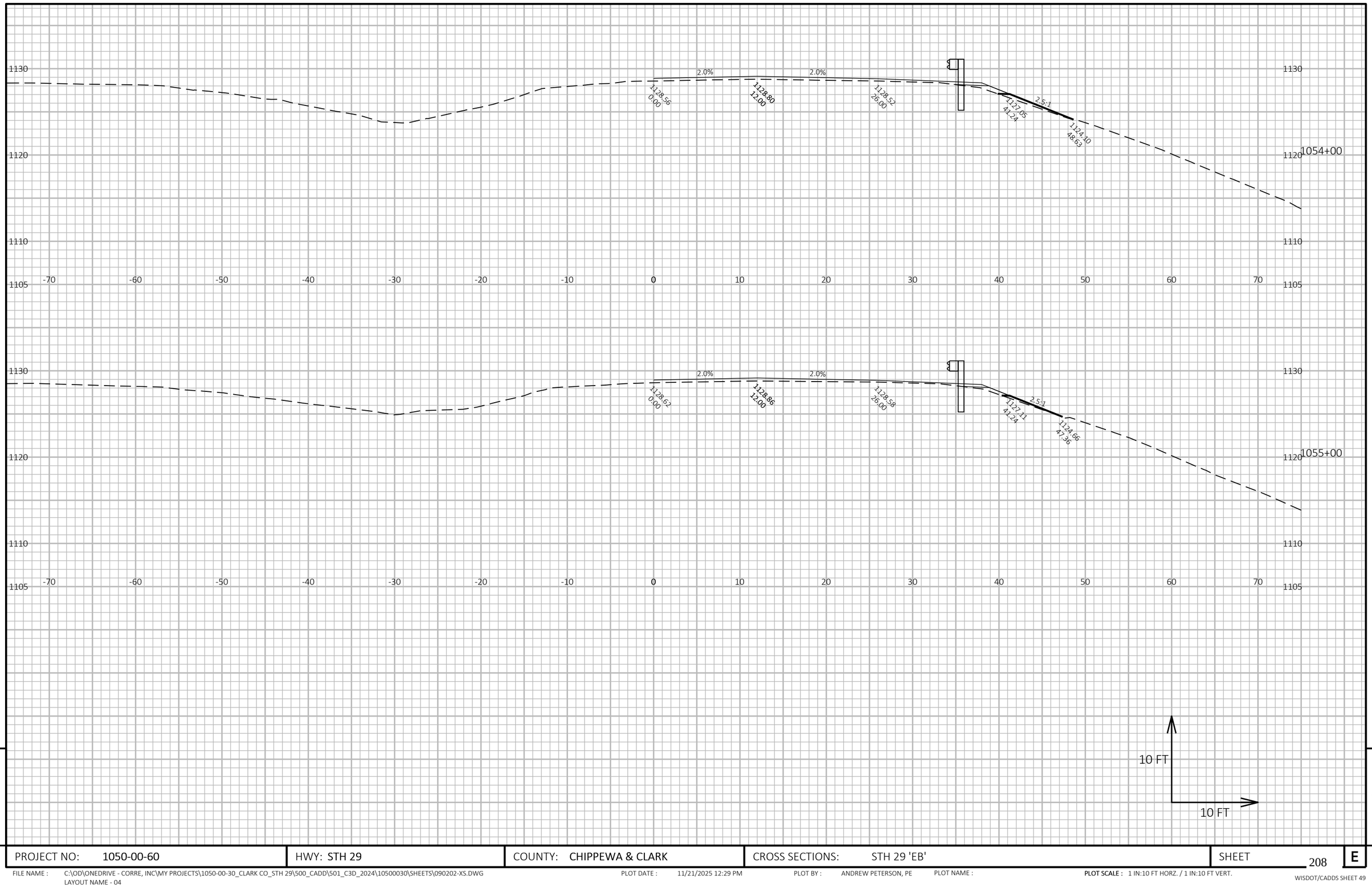


PROJECT NO: 1050-00-60	HWY: STH 29	COUNTY: CHIPPEWA & CLARK	CROSS SECTIONS: STH 29 'EB'	SHEET 207	E

FILE NAME : C:\OD\ONEDRIVE - CORRE, INC\MY PROJECTS\1050-00-30_CLARK CO_STH 29\500_CADD\501_C3D_2024\10500030\SHEETS\090202-XS.DWG
LAYOUT NAME - 03

PLOT DATE : 11/21/2025 12:29 PM PLOT BY : ANDREW PETERSON, PE PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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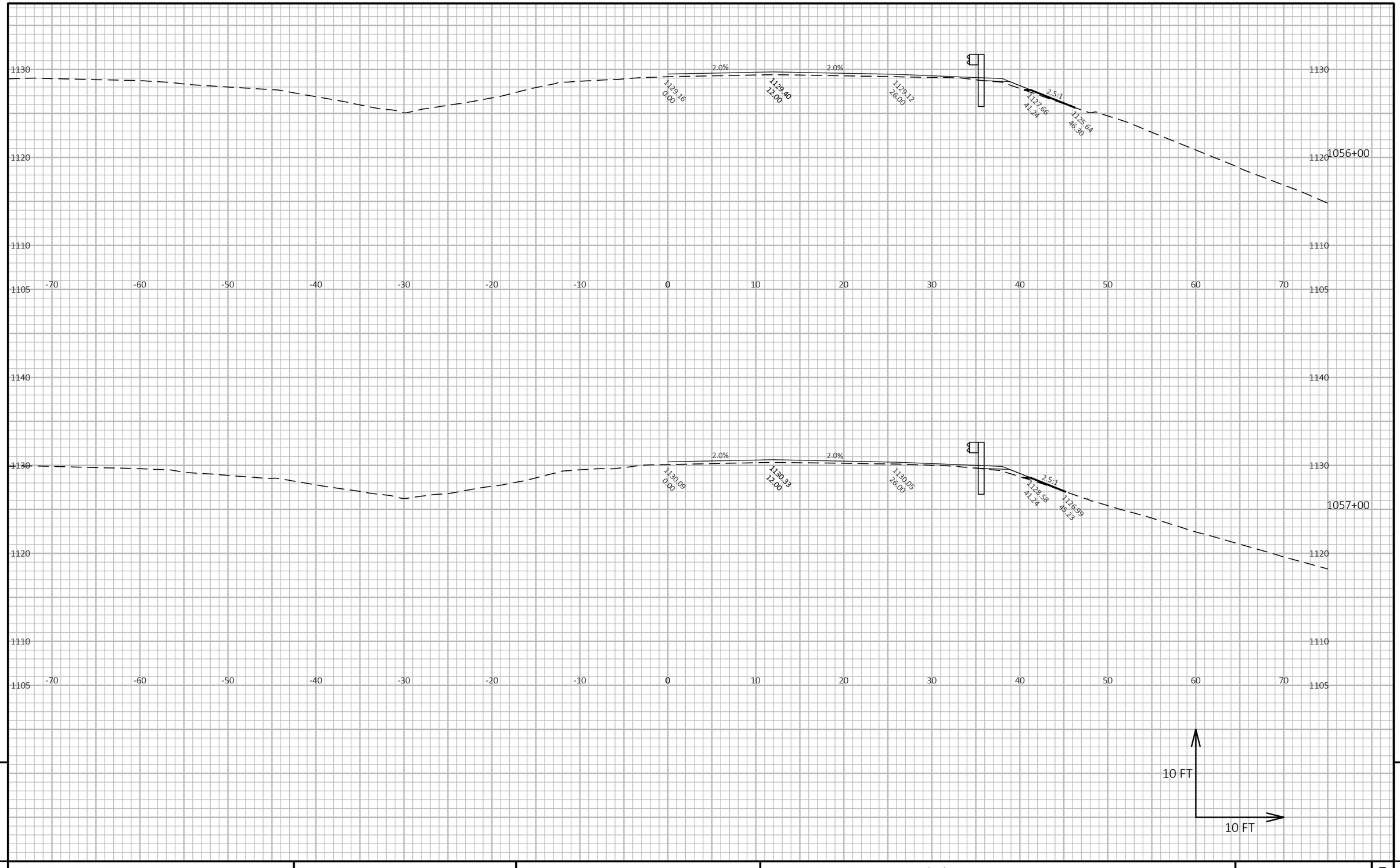
PROJECT NO: 1050-00-60	HWY: STH 29	COUNTY: CHIPPEWA & CLARK	CROSS SECTIONS: STH 29 'EB'	SHEET 208	E

FILE NAME : C:\OD\ONEDRIVE - CORRE, INC\MY PROJECTS\1050-00-30_CLARK CO_STH 29\500_CADD\501_C3D_2024\10500030\SHEETS\090202-XS.DWG
LAYOUT NAME - 04

PLOT DATE : 11/21/2025 12:29 PM PLOT BY : ANDREW PETERSON, PE PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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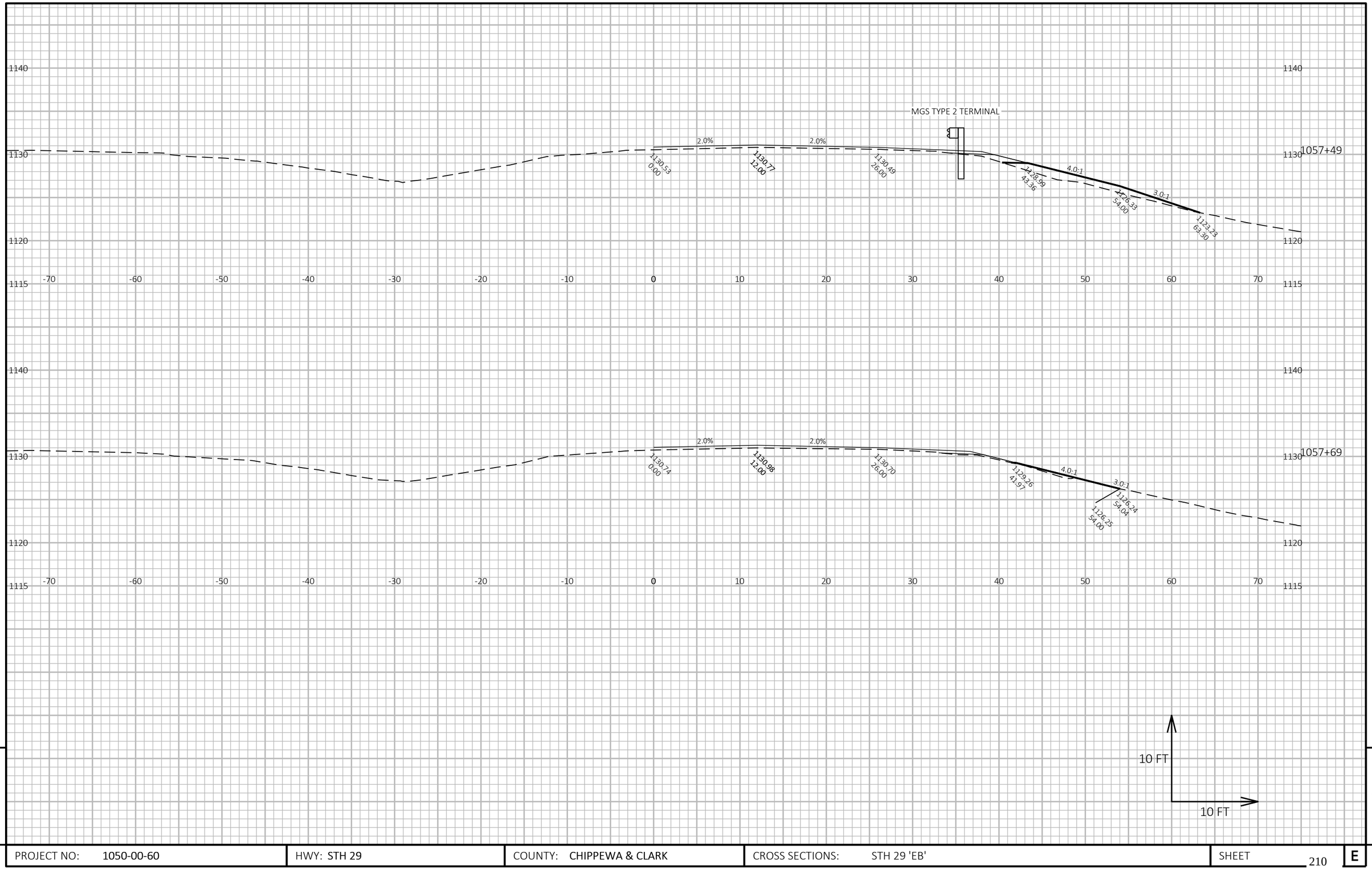
PROJECT NO: 1050-00-60	HWY: STH 29	COUNTY: CHIPPEWA & CLARK	CROSS SECTIONS: STH 29 'EB'	SHEET 209	E

FILE NAME : C:\OD\ONEDRIVE - CORRE, INC\MY PROJECTS\1050-00-30_CLARK CO_STH 29\500_CADD\501_C3D_2024\10500030\SHEETS\090202-XS.DWG
LAYOUT NAME - 05

PLOT DATE : 11/21/2025 12:30 PM PLOT BY : ANDREW PETERSON, PE PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

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PROJECT NO: 1050-00-60	HWY: STH 29	COUNTY: CHIPPEWA & CLARK	CROSS SECTIONS: STH 29 'EB'	SHEET 210	E

FILE NAME : C:\OD\ONEDRIVE - CORRE, INC\MY PROJECTS\1050-00-30_CLARK CO_STH 29\500_CADD\501_C3D_2024\10500030\SHEETS\090202-XS.DWG
LAYOUT NAME - 06

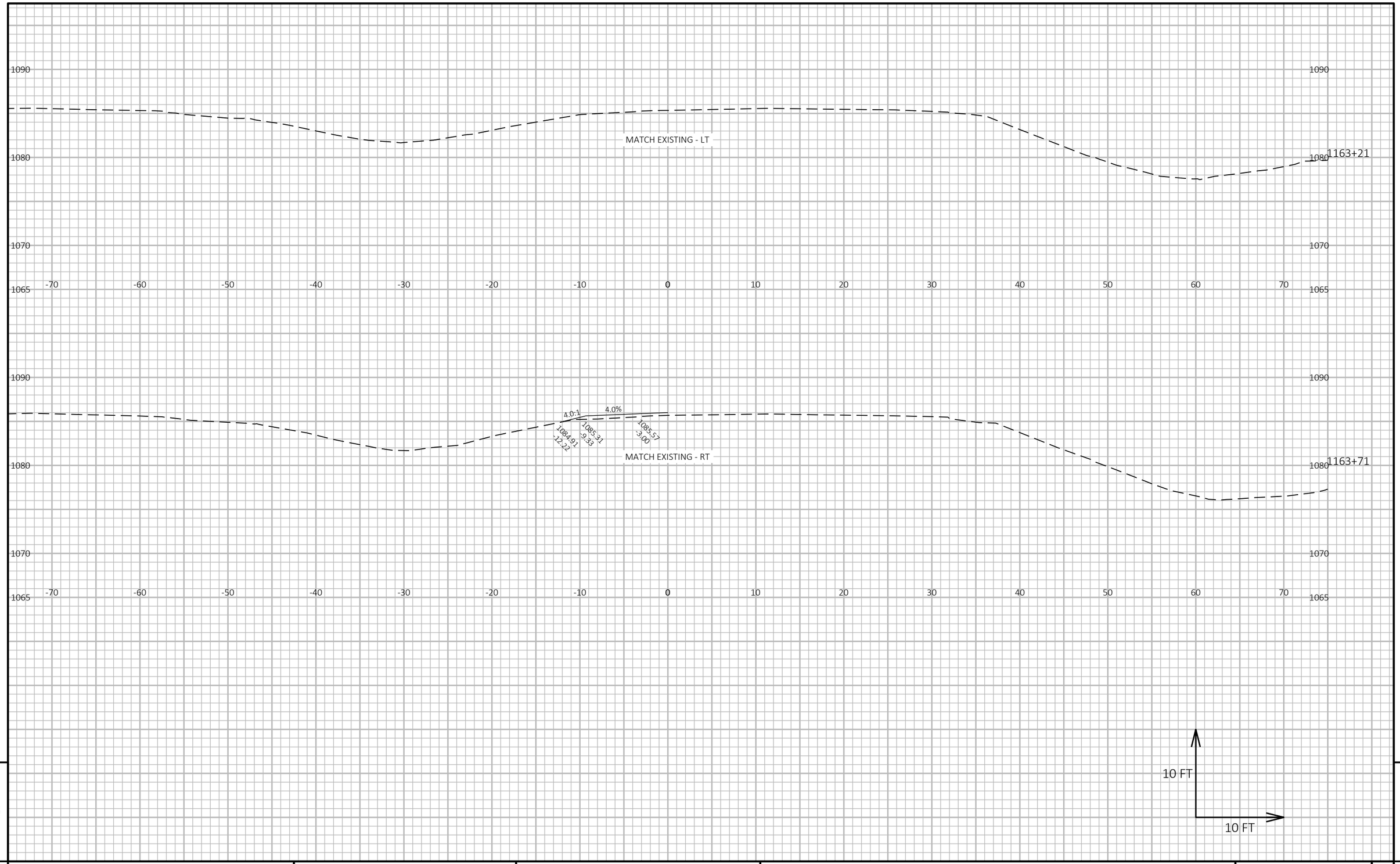
PLOT DATE : 11/21/2025 12:30 PM PLOT BY : ANDREW PETERSON, PE PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

1140
1130
1120
1115
-70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70
1140
1130
1120
1115
1058+00
MATCH EXISTING
10 FT
10 FT
9
9

PROJECT NO: 1050-00-60	HWY: STH 29	COUNTY: CHIPPEWA & CLARK	CROSS SECTIONS: STH 29 'EB'	SHEET 211	E

FILE NAME : C:\OD\ONEDRIVE - CORRE, INC\MY PROJECTS\1050-00-30_CLARK CO_STH 29\500_CADD\501_C3D_2024\10500030\SHEETS\090202-XS.DWG
LAYOUT NAME - 07
PLOT DATE : 11/21/2025 12:30 PM PLOT BY : ANDREW PETERSON, PE PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



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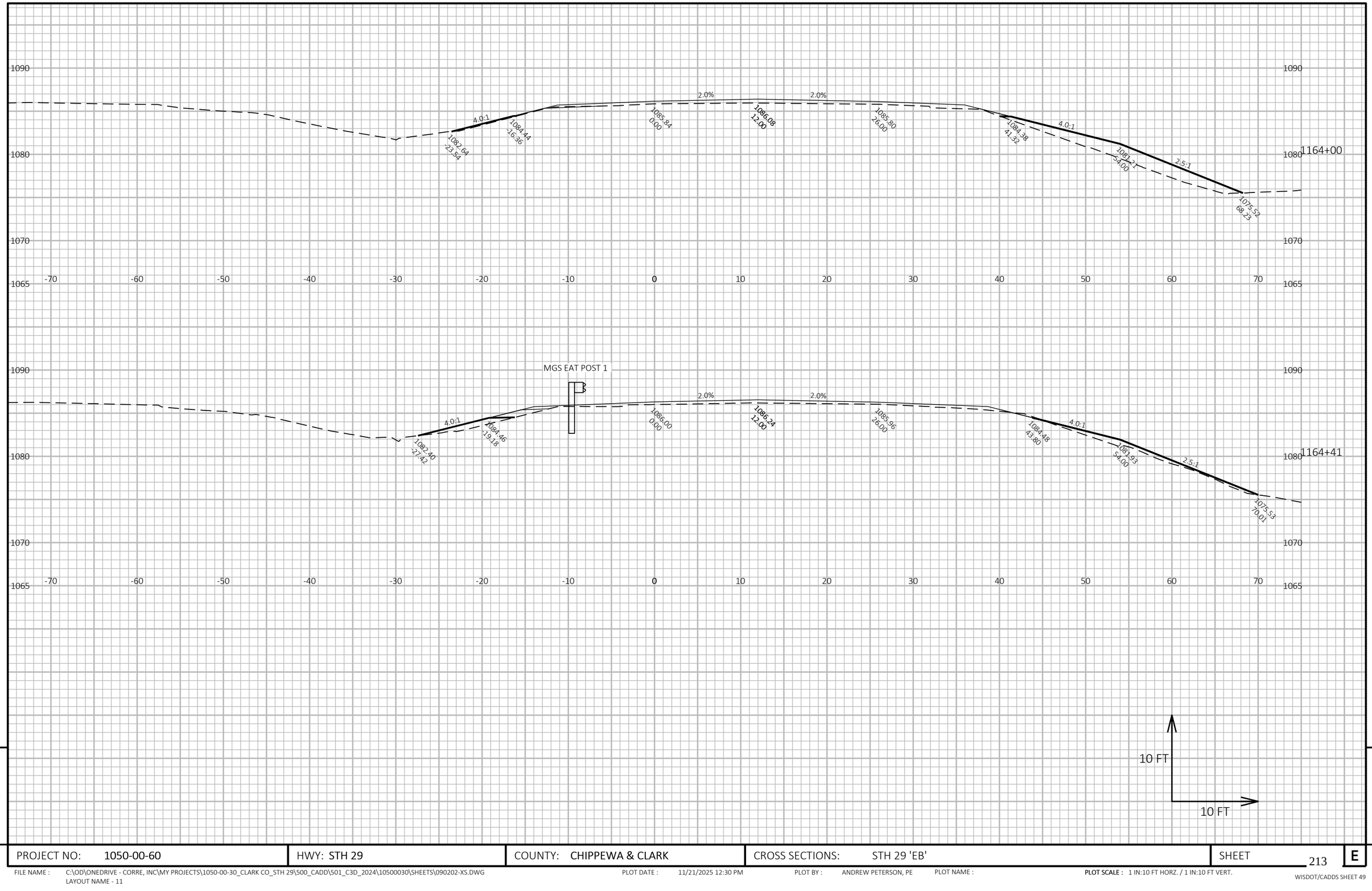
PROJECT NO: 1050-00-60	HWY: STH 29	COUNTY: CHIPPEWA & CLARK	CROSS SECTIONS: STH 29 'EB'	SHEET 212	E

FILE NAME : C:\OD\ONEDRIVE - CORRE, INC\MY PROJECTS\1050-00-30_CLARK CO_STH 29\500_CADD\501_C3D_2024\10500030\SHEETS\090202-XS.DWG
LAYOUT NAME - 10

PLOT DATE : 11/21/2025 12:30 PM PLOT BY : ANDREW PETERSON, PE PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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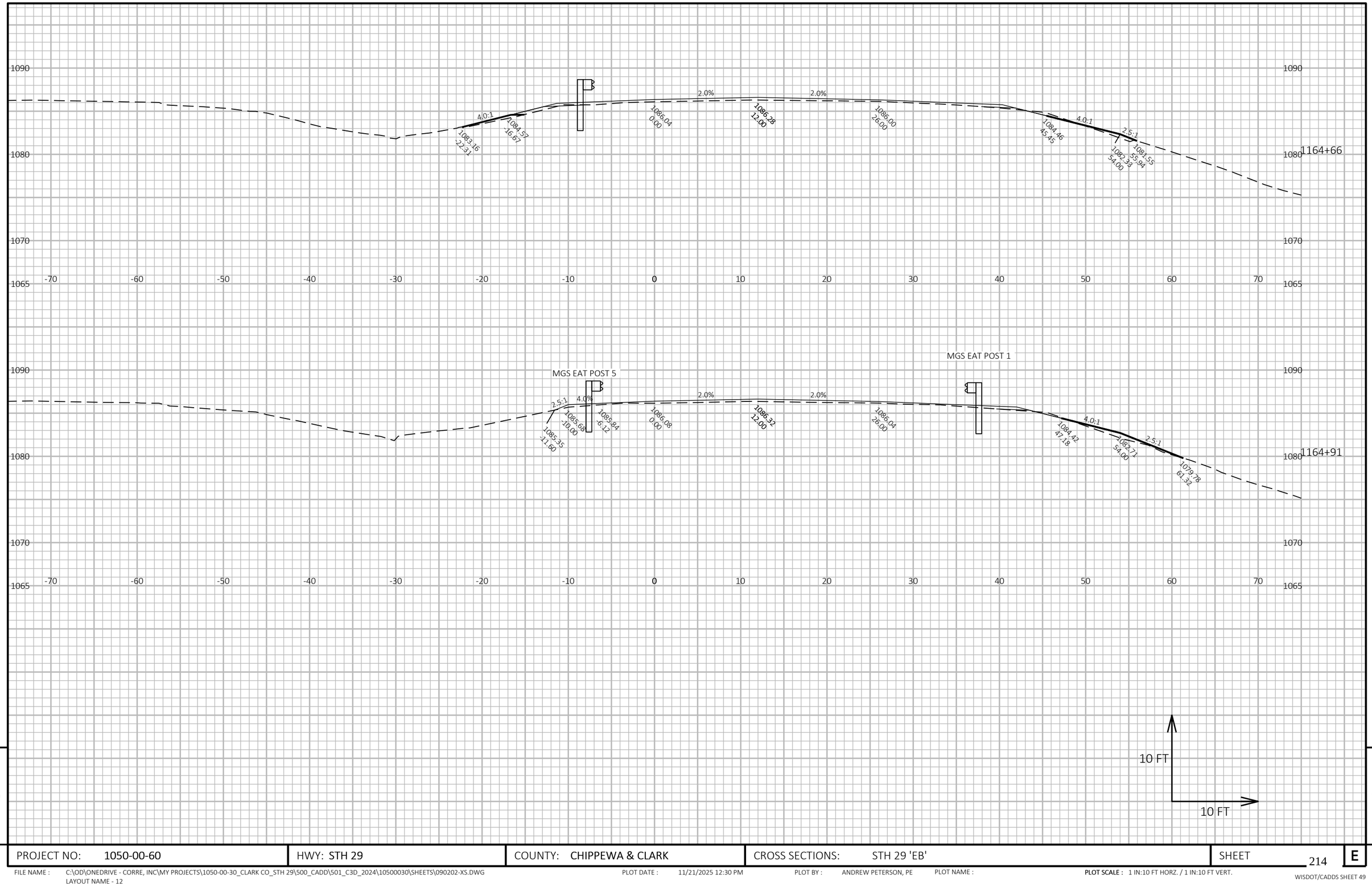
PROJECT NO: 1050-00-60	HWY: STH 29	COUNTY: CHIPPEWA & CLARK	CROSS SECTIONS: STH 29 'EB'	SHEET 213	E

FILE NAME : C:\OD\ONEDRIVE - CORRE, INC\MY PROJECTS\1050-00-30_CLARK CO_STH 29\500_CADD\501_C3D_2024\10500030\SHEETS\090202-XS.DWG
LAYOUT NAME - 11

PLOT DATE : 11/21/2025 12:30 PM PLOT BY : ANDREW PETERSON, PE PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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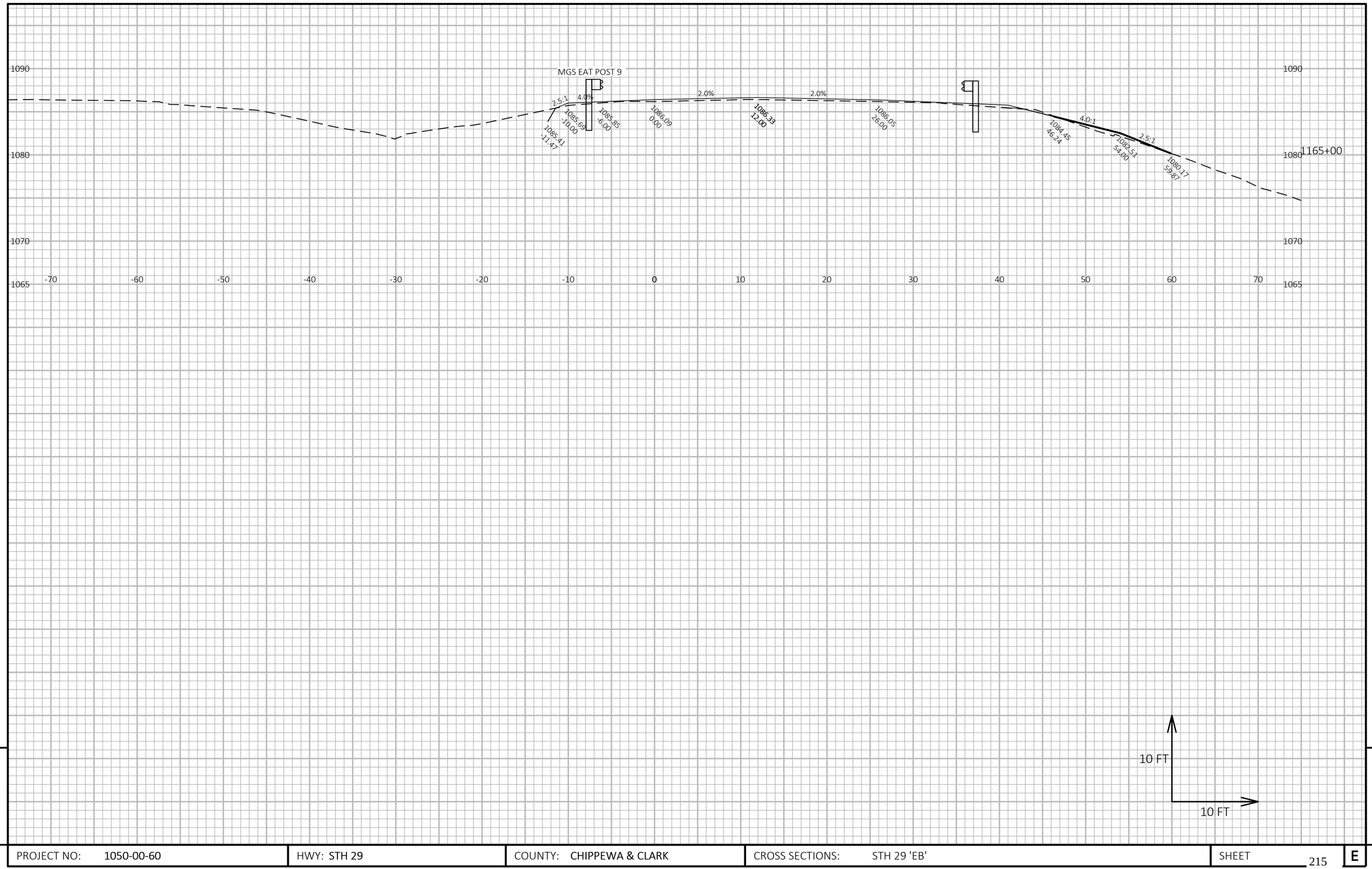
9

PROJECT NO: 1050-00-60	HWY: STH 29	COUNTY: CHIPPEWA & CLARK	CROSS SECTIONS: STH 29 'EB'	SHEET 214	E

FILE NAME : C:\OD\ONEDRIVE - CORRE, INC\MY PROJECTS\1050-00-30_CLARK CO_STH 29\500_CADD\501_C3D_2024\10500030\SHEETS\090202-XS.DWG
LAYOUT NAME - 12

PLOT DATE : 11/21/2025 12:30 PM PLOT BY : ANDREW PETERSON, PE PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



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9

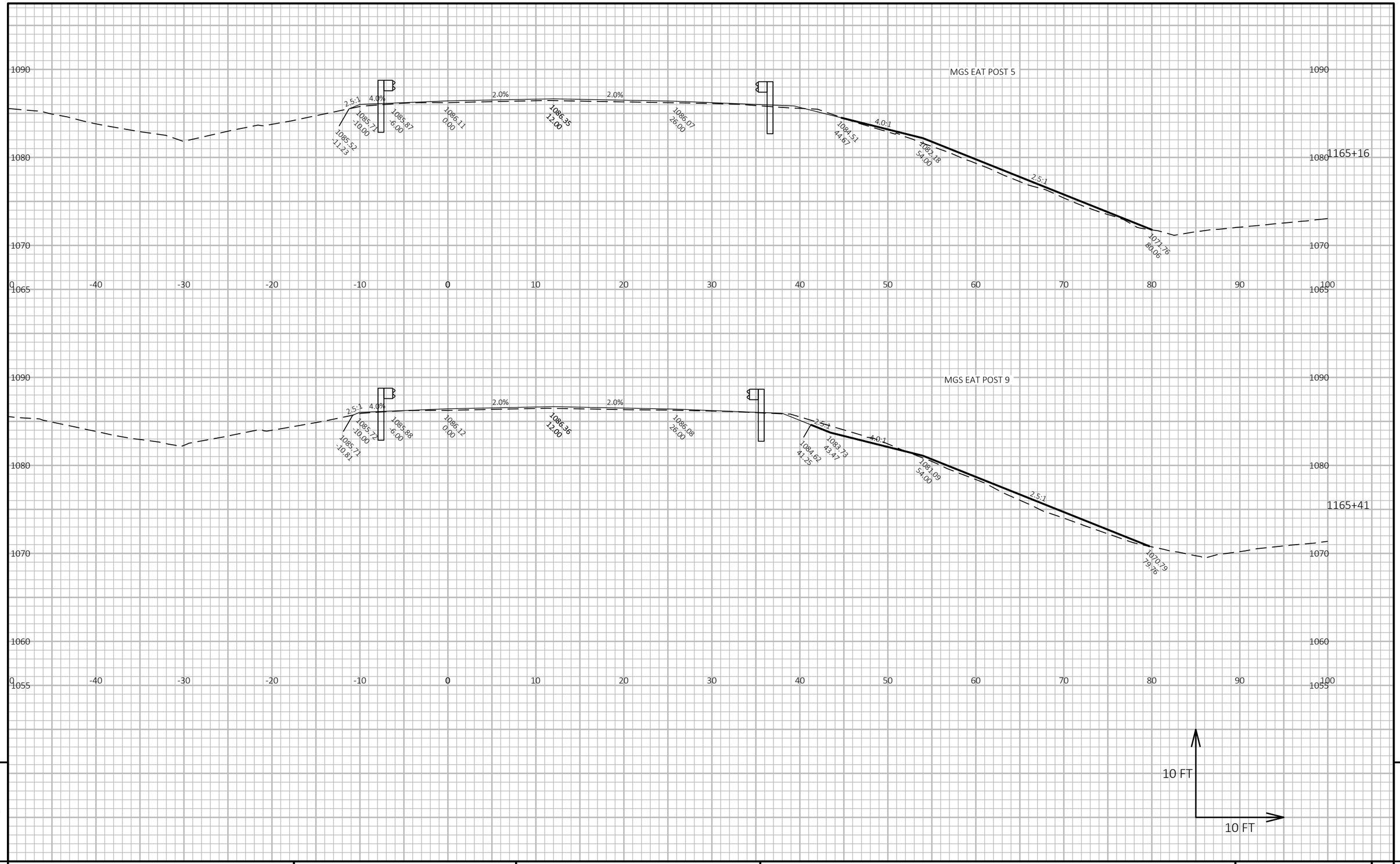
PROJECT NO: 1050-00-60	HWY: STH 29	COUNTY: CHIPPEWA & CLARK	CROSS SECTIONS: STH 29 'EB'	SHEET 215	E

FILE NAME : C:\OD\ONEDRIVE - CORRE, INC\MY PROJECTS\1050-00-30_CLARK CO_STH 29\500_CADD\501_C3D_2024\10500030\SHEETS\090202-XS.DWG
LAYOUT NAME - 13

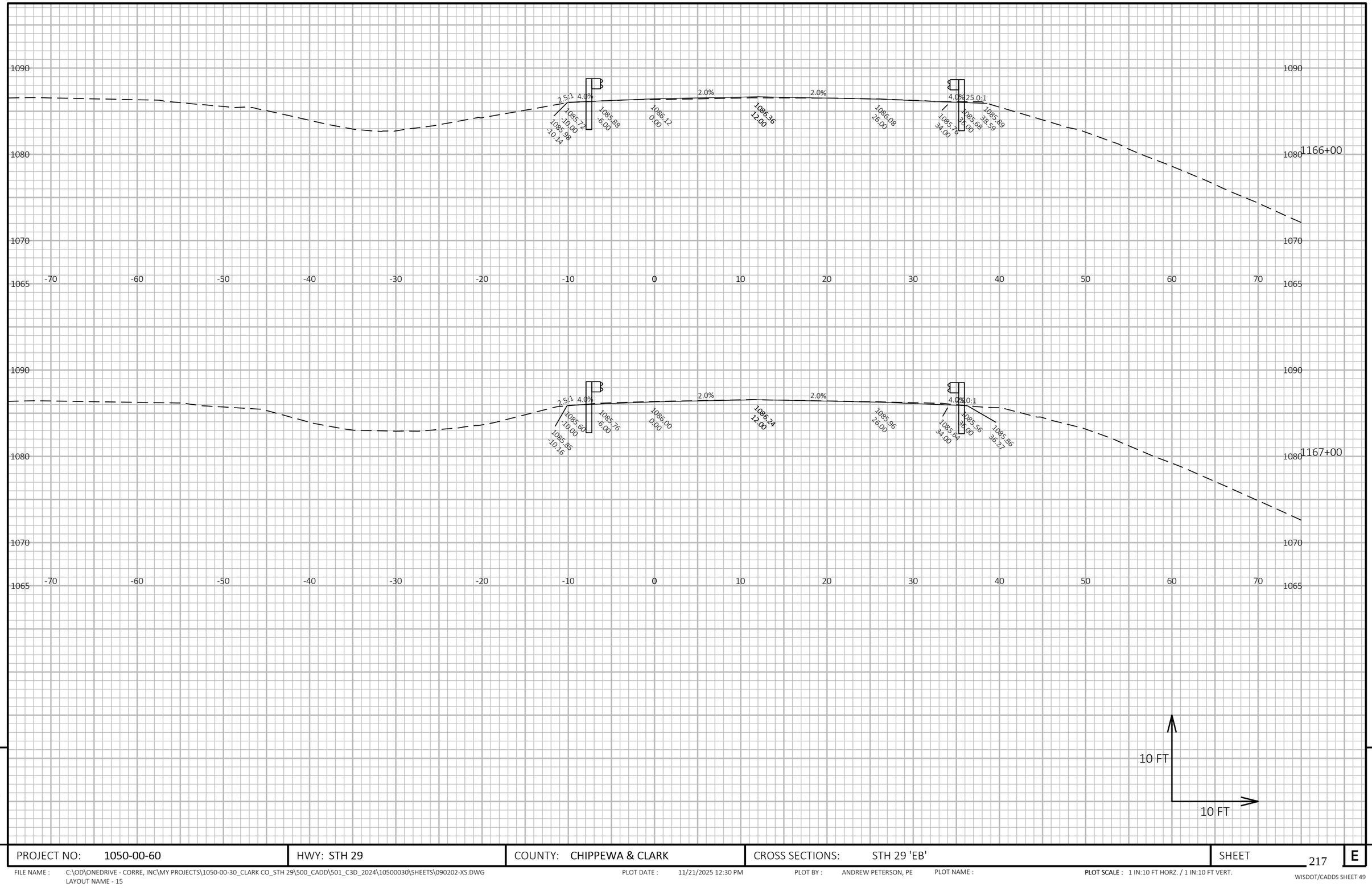
PLOT DATE : 11/21/2025 12:30 PM PLOT BY : ANDREW PETERSON, PE PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



PROJECT NO: 1050-00-60	HWY: STH 29	COUNTY: CHIPPEWA & CLARK	CROSS SECTIONS: STH 29 'EB'	SHEET 216 E



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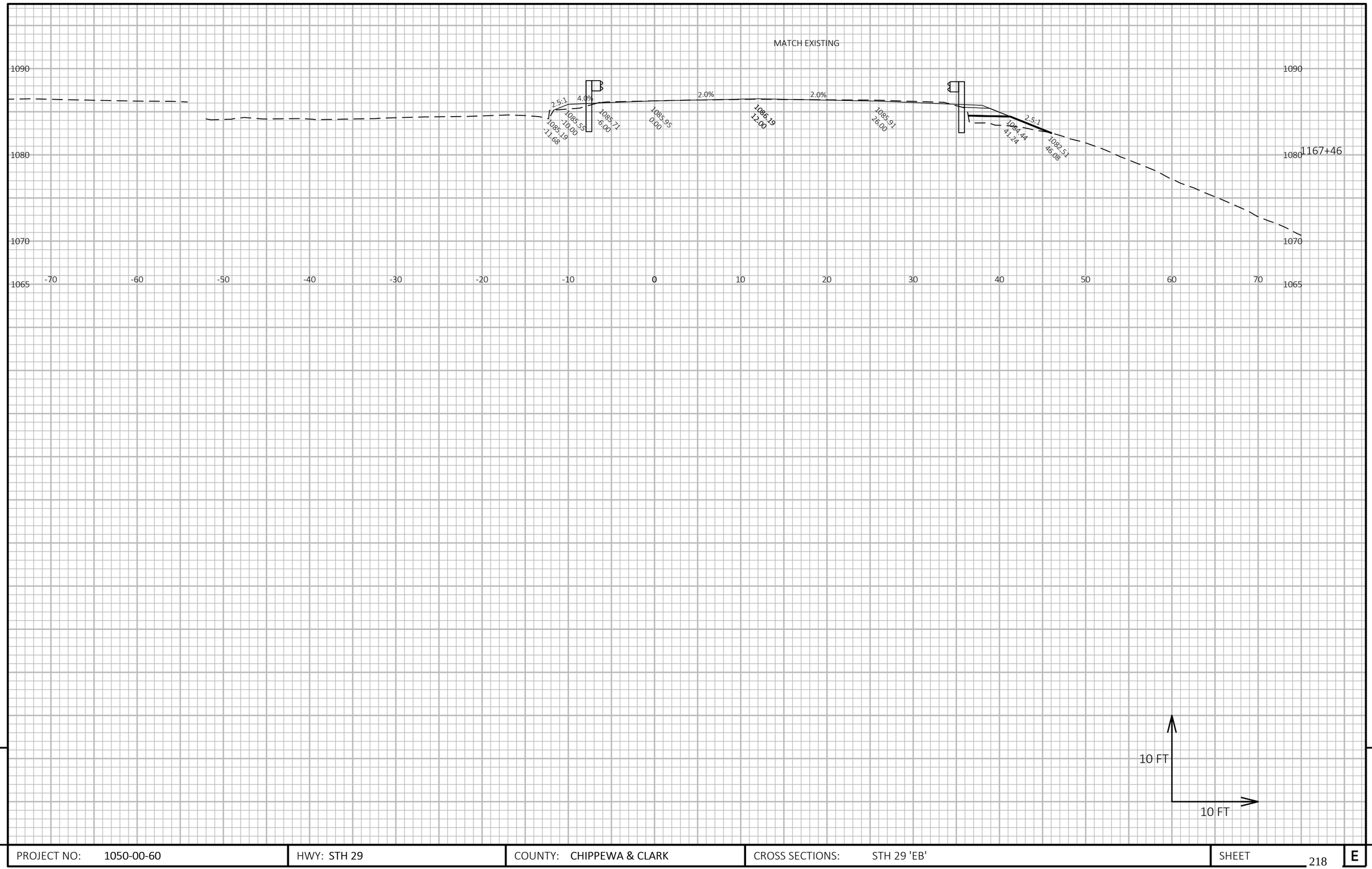
PROJECT NO: 1050-00-60	HWY: STH 29	COUNTY: CHIPPEWA & CLARK	CROSS SECTIONS: STH 29 'EB'	SHEET 217	E

FILE NAME : C:\OD\ONEDRIVE - CORRE, INC\MY PROJECTS\1050-00-30_CLARK CO_STH 29\500_CADD\501_C3D_2024\10500030\SHEETS\090202-XS.DWG
LAYOUT NAME - 15

PLOT DATE : 11/21/2025 12:30 PM PLOT BY : ANDREW PETERSON, PE PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



9

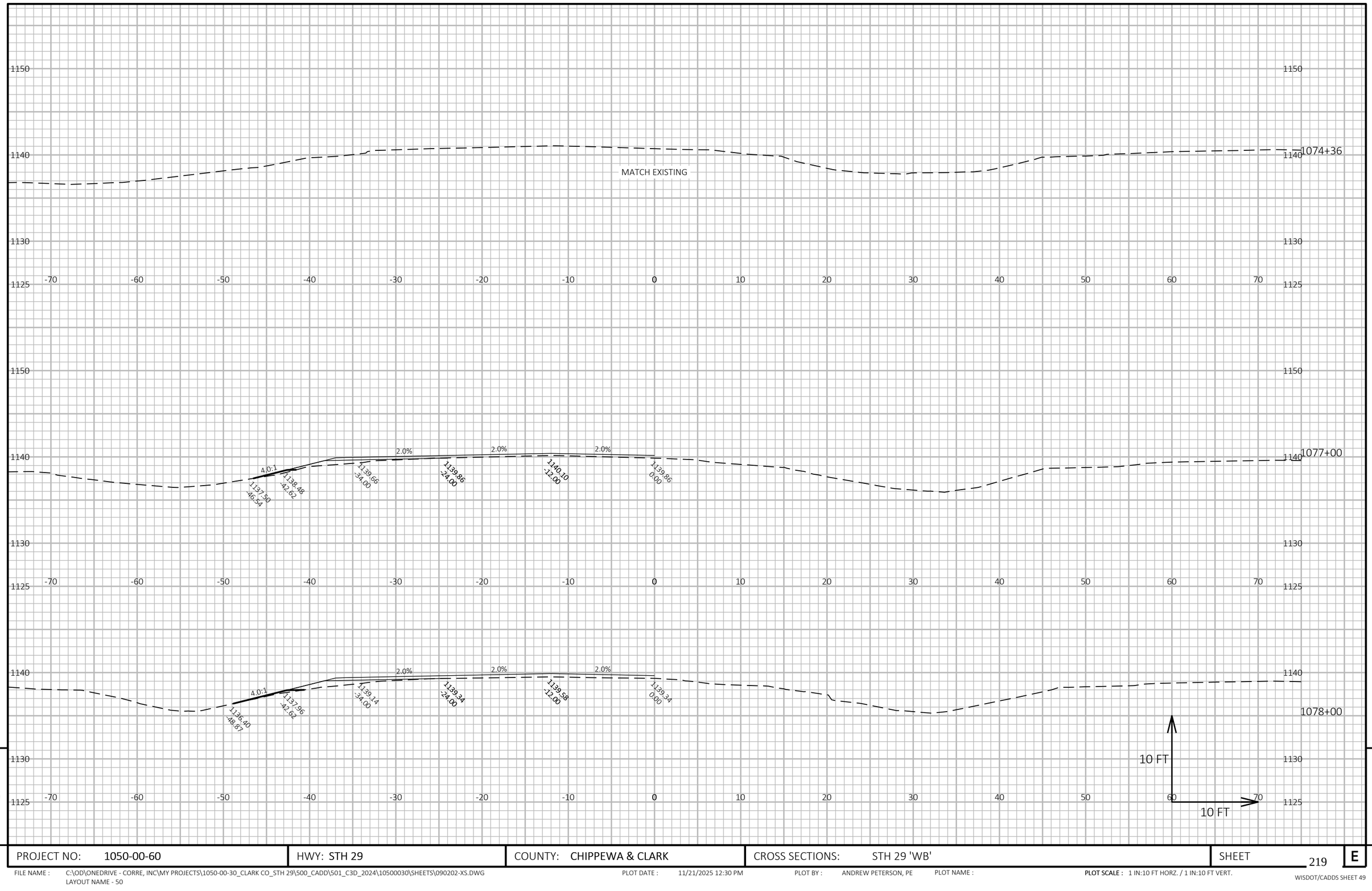
PROJECT NO: 1050-00-60	HWY: STH 29	COUNTY: CHIPPEWA & CLARK	CROSS SECTIONS: STH 29 'EB'	SHEET 218	E

9

FILE NAME : C:\OD\ONEDRIVE - CORRE, INC\MY PROJECTS\1050-00-30_CLARK CO_STH 29\500_CADD\501_C3D_2024\10500030\SHEETS\090202-XS.DWG
LAYOUT NAME - 16

PLOT DATE : 11/21/2025 12:30 PM PLOT BY : ANDREW PETERSON, PE PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

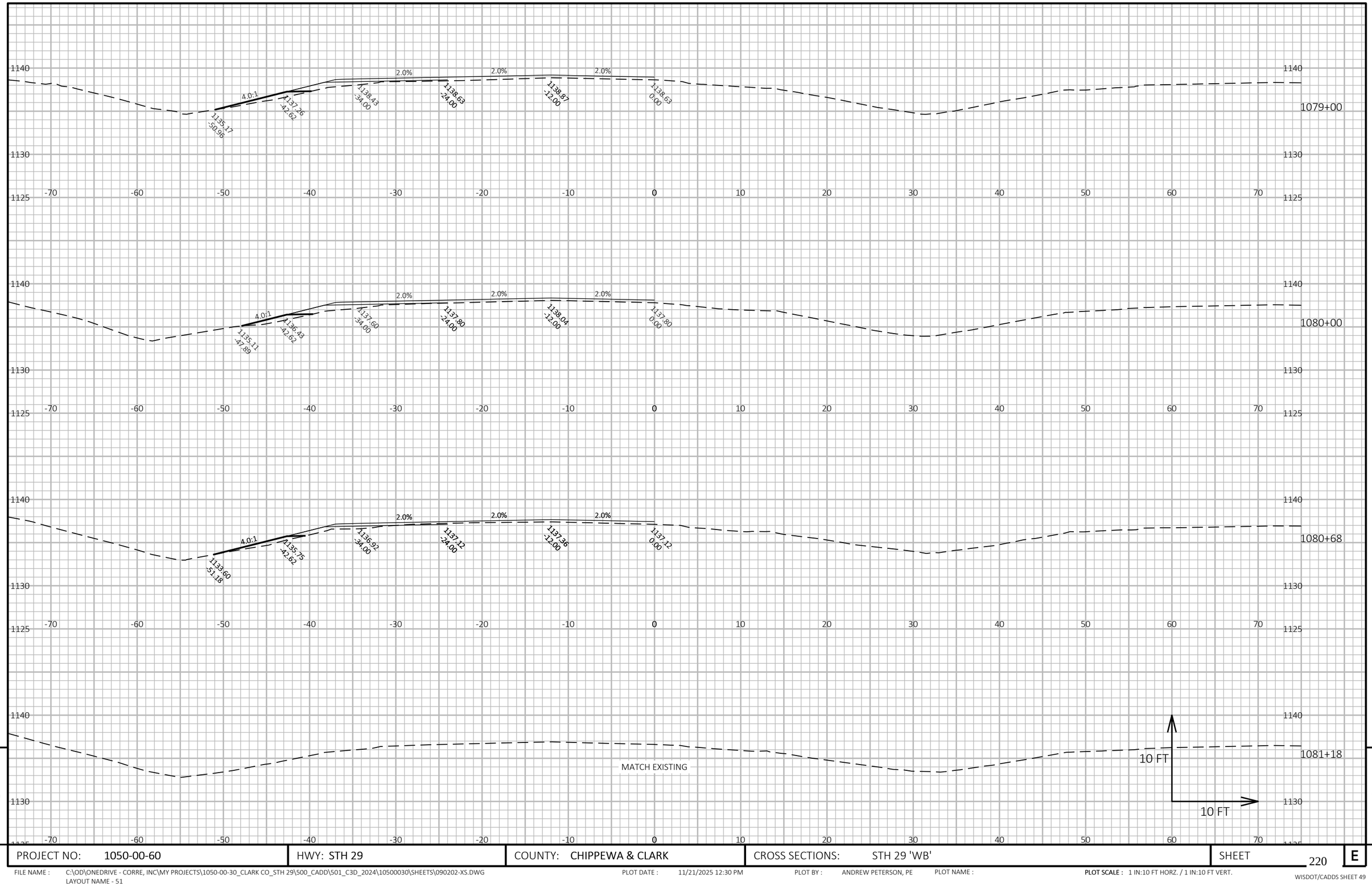


PROJECT NO: 1050-00-60	HWY: STH 29	COUNTY: CHIPPEWA & CLARK	CROSS SECTIONS: STH 29 'WB'	SHEET 219	E

FILE NAME : C:\OD\ONEDRIVE - CORRE, INC\MY PROJECTS\1050-00-30_CLARK CO_STH 29\500_CADD\501_C3D_2024\10500030\SHEETS\090202-XS.DWG
LAYOUT NAME - 50

PLOT DATE : 11/21/2025 12:30 PM PLOT BY : ANDREW PETERSON, PE PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



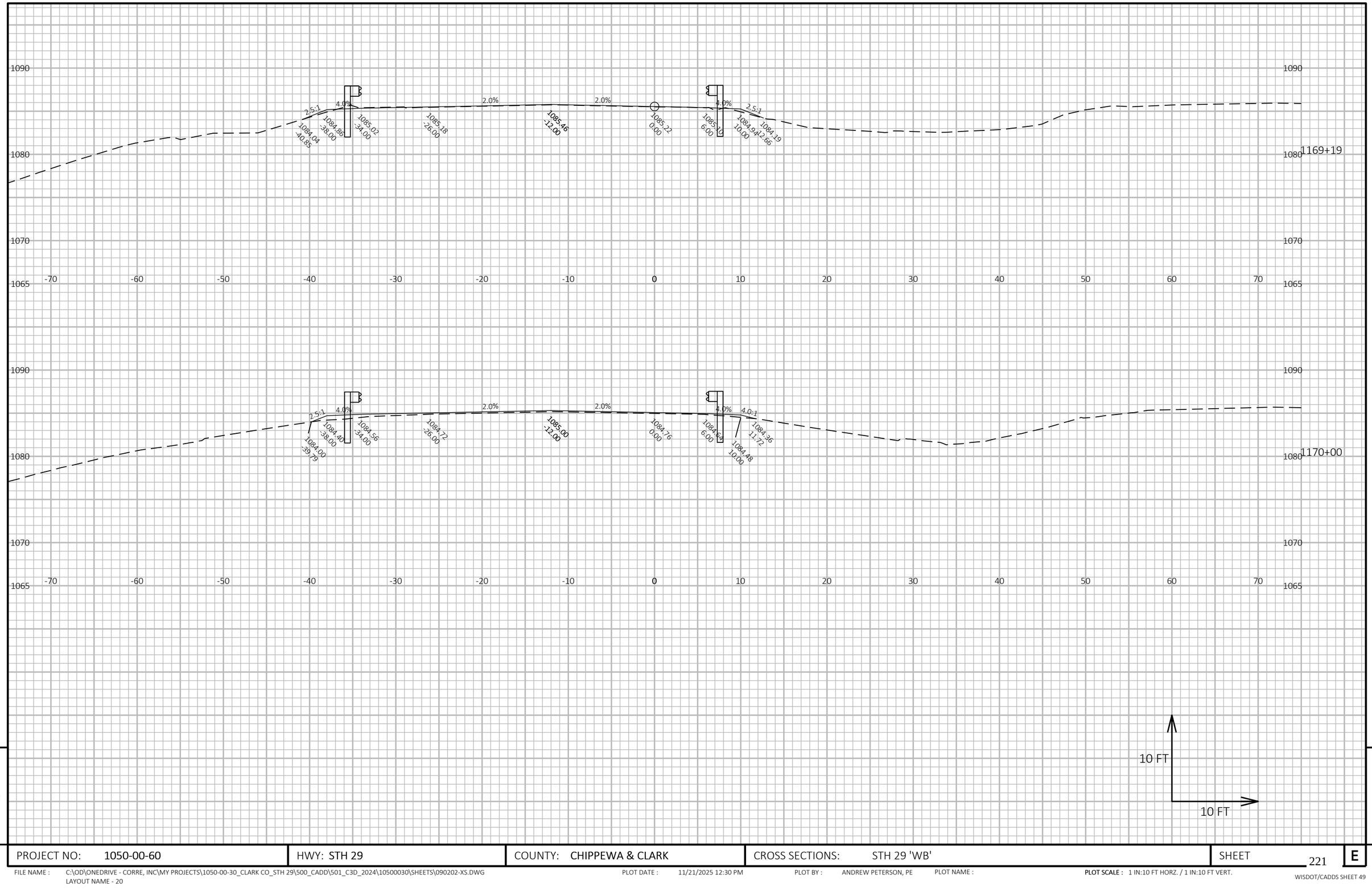
PROJECT NO: 1050-00-60	HWY: STH 29	COUNTY: CHIPPEWA & CLARK	CROSS SECTIONS: STH 29 'WB'	SHEET 220	E

FILE NAME : C:\OD\ONEDRIVE - CORRE, INC\MY PROJECTS\1050-00-30_CLARK CO_STH 29\500_CADD\501_C3D_2024\10500030\SHEETS\090202-XS.DWG
LAYOUT NAME - 51

PLOT DATE : 11/21/2025 12:30 PM PLOT BY : ANDREW PETERSON, PE PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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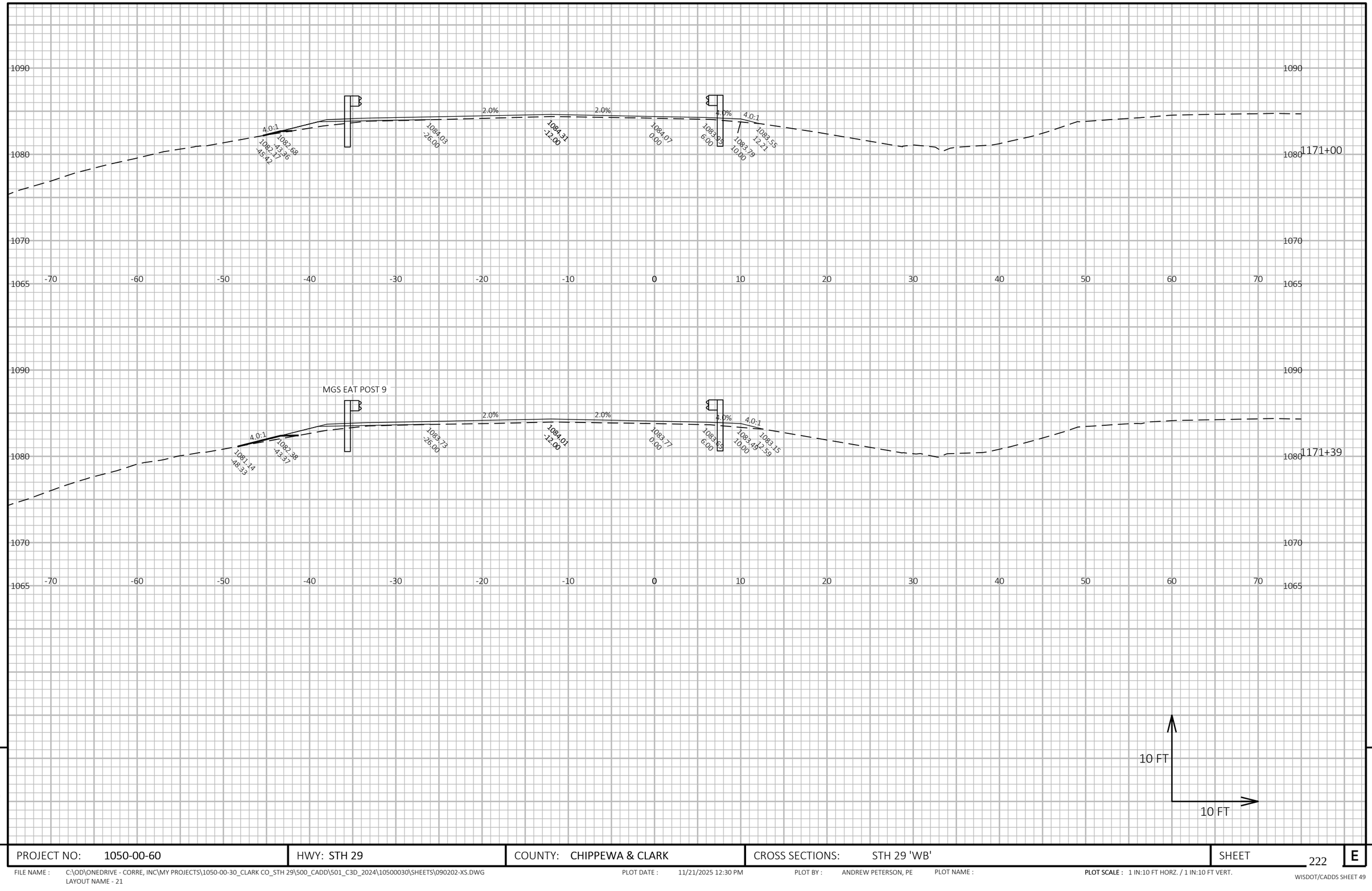
PROJECT NO: 1050-00-60	HWY: STH 29	COUNTY: CHIPPEWA & CLARK	CROSS SECTIONS: STH 29 'WB'	SHEET 221	E

FILE NAME : C:\OD\ONEDRIVE - CORRE, INC\MY PROJECTS\1050-00-30_CLARK CO_STH 29\500_CADD\501_C3D_2024\10500030\SHEETS\090202-XS.DWG
LAYOUT NAME - 20

PLOT DATE : 11/21/2025 12:30 PM PLOT BY : ANDREW PETERSON, PE PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

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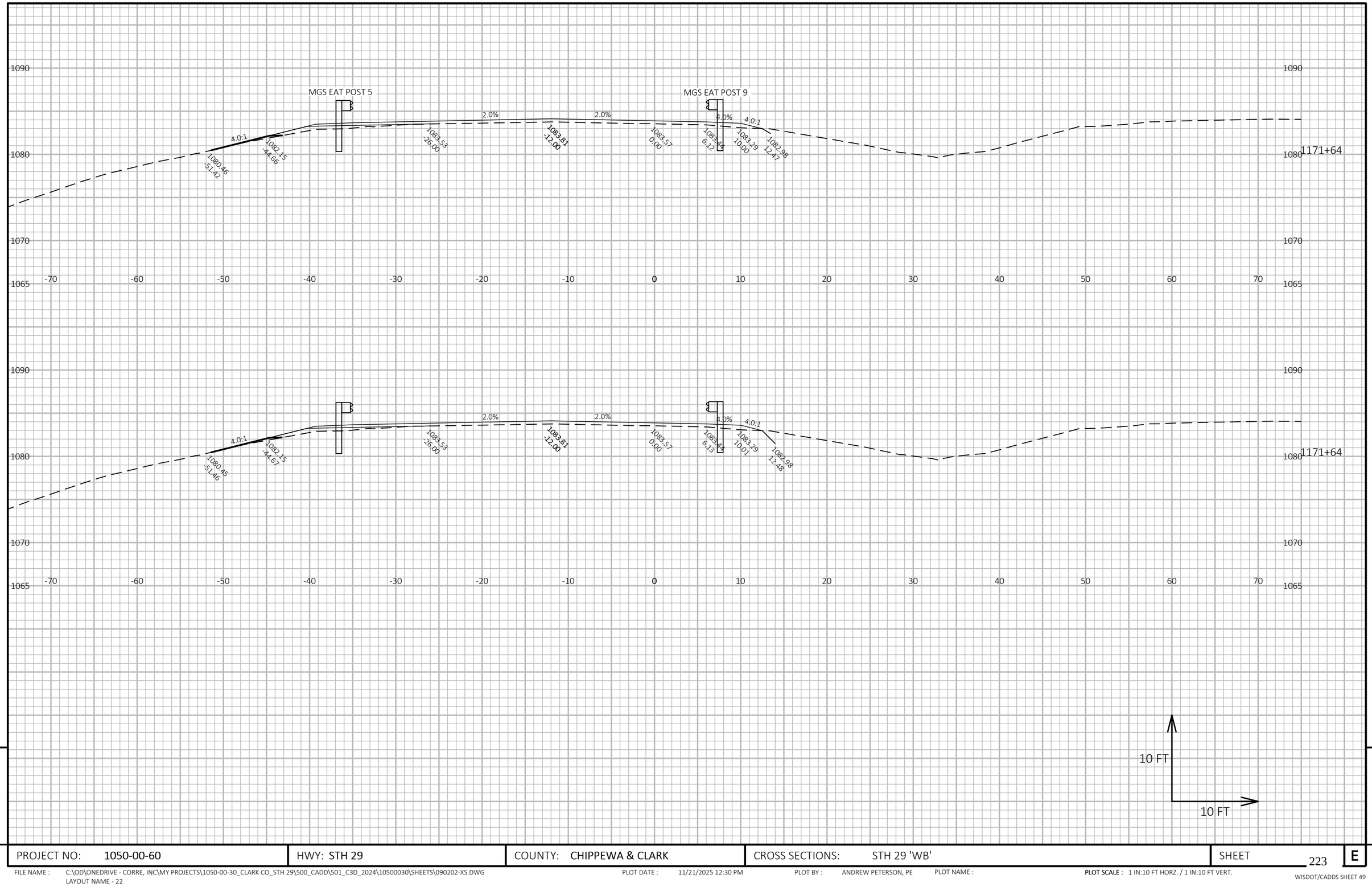
PROJECT NO: 1050-00-60	HWY: STH 29	COUNTY: CHIPPEWA & CLARK	CROSS SECTIONS: STH 29 'WB'	SHEET 222	E

FILE NAME : C:\OD\ONEDRIVE - CORRE, INC\MY PROJECTS\1050-00-30_CLARK CO_STH 29\500_CADD\501_C3D_2024\10500030\SHEETS\090202-XS.DWG
LAYOUT NAME - 21

PLOT DATE : 11/21/2025 12:30 PM PLOT BY : ANDREW PETERSON, PE PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

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PROJECT NO: 1050-00-60	HWY: STH 29	COUNTY: CHIPPEWA & CLARK	CROSS SECTIONS: STH 29 'WB'	SHEET 223	E

FILE NAME : C:\OD\ONEDRIVE - CORRE, INC\MY PROJECTS\1050-00-30_CLARK CO_STH 29\500_CADD\501_C3D_2024\10500030\SHEETS\090202-XS.DWG
LAYOUT NAME - 22

PLOT DATE : 11/21/2025 12:30 PM PLOT BY : ANDREW PETERSON, PE PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

MGS EAT POST 5

1090
1080
1070
1065
-70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70

3.0:1
1078.69
-58.48
1080.18
-54.00
1081.89
-47.17
2.0%
1083.31
-26.00
1083.59
-12.00
2.0%
1083.35
0.00
4.0%
1083.21
7.06
4.0:1
1083.04
11.33
1082.76
13.71

1171+88

MGS EAT POST 1

1090
1080
1070
1065
-70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70

3.0:1
1078.68
-58.51
1080.19
-54.00
1081.89
-47.18
2.0%
1083.31
-26.00
1083.59
-12.00
2.0%
1083.35
0.00
4.0%
1083.21
7.07
4.0:1
1083.04
11.35
1082.76
13.73

1171+89

1090
1080
1070
1065
-70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70

3.0:1
1079.15
-56.26
1079.90
-54.00
1081.80
-46.40
2.0%
1083.21
-26.00
1083.49
-12.00
2.0%
1083.25
0.00
4.0%
1083.10
7.49
4.0:1
1082.90
12.56
1082.52
15.31

1172+00

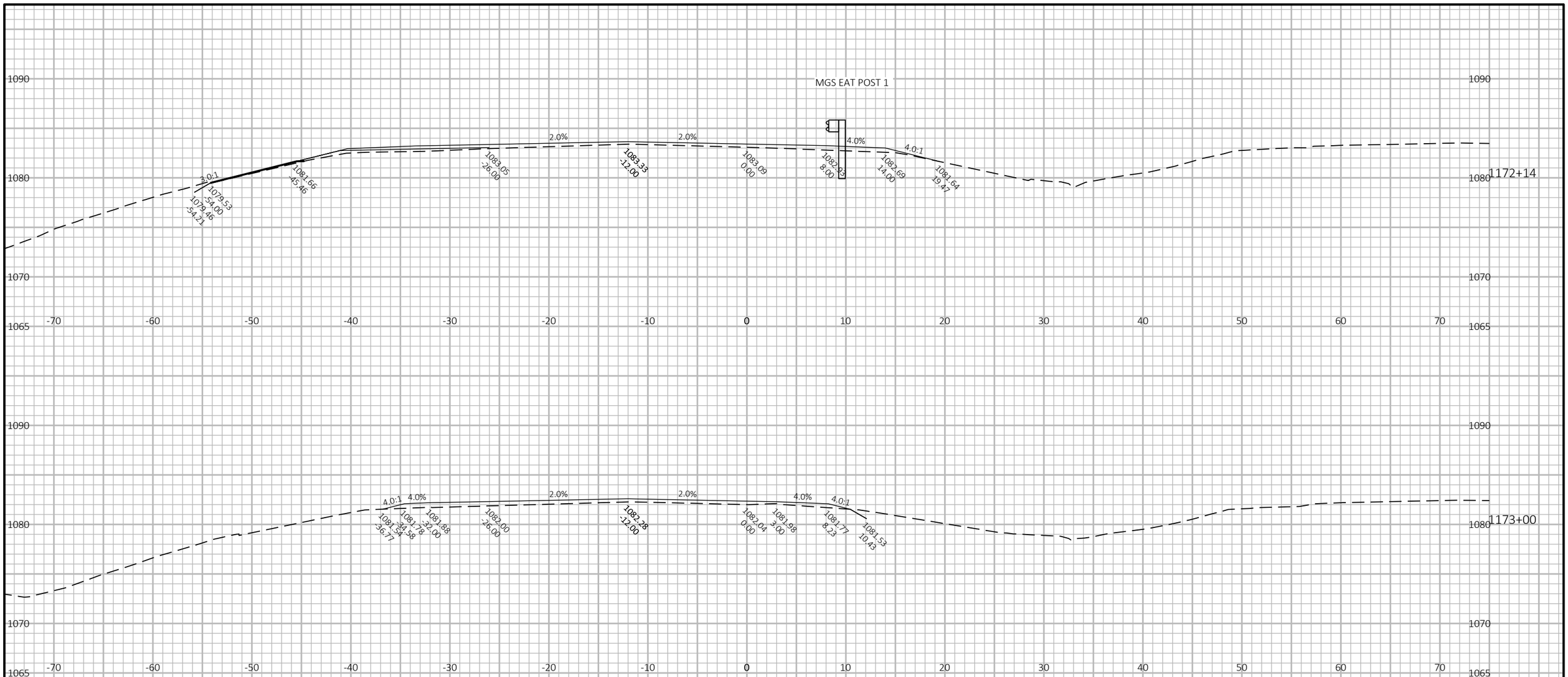
10 FT
10 FT

9 9

PROJECT NO: 1050-00-60	HWY: STH 29	COUNTY: CHIPPEWA & CLARK	CROSS SECTIONS: STH 29 'WB'	SHEET 224	E

FILE NAME : C:\OD\ONEDRIVE - CORRE, INC\MY PROJECTS\1050-00-30_CLARK CO_STH 29\500_CADD\501_C3D_2024\10500030\SHEETS\090202-XS.DWG
LAYOUT NAME - 23

PLOT DATE : 11/21/2025 12:30 PM PLOT BY : ANDREW PETERSON, PE PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



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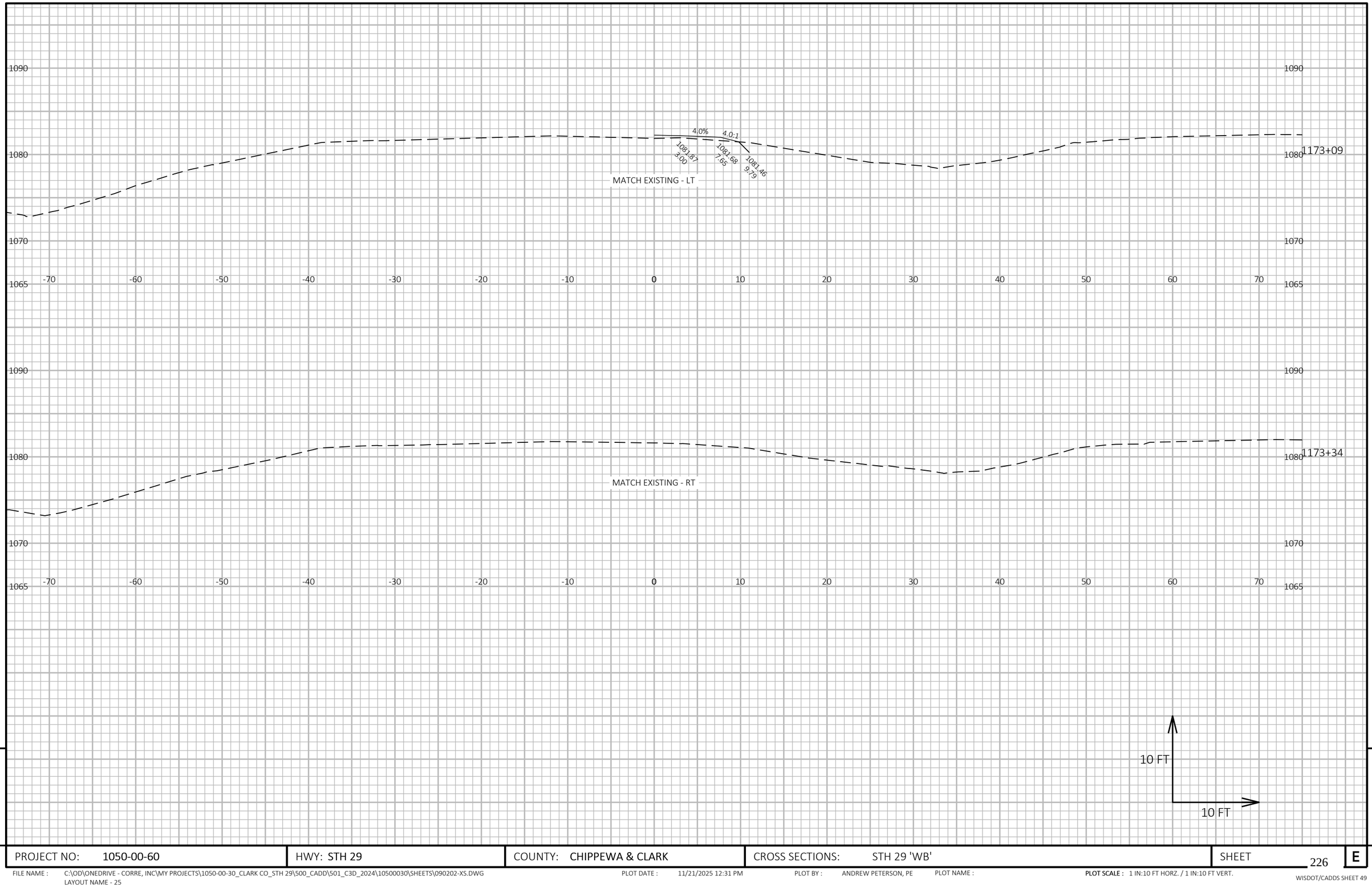
PROJECT NO: 1050-00-60	HWY: STH 29	COUNTY: CHIPPEWA & CLARK	CROSS SECTIONS: STH 29 'WB'	SHEET 225	E

FILE NAME : C:\OD\ONEDRIVE - CORRE, INC\MY PROJECTS\1050-00-30_CLARK CO_STH 29\500_CADD\501_C3D_2024\10500030\SHEETS\090202-XS.DWG
LAYOUT NAME - 24

PLOT DATE : 11/21/2025 12:30 PM PLOT BY : ANDREW PETERSON, PE PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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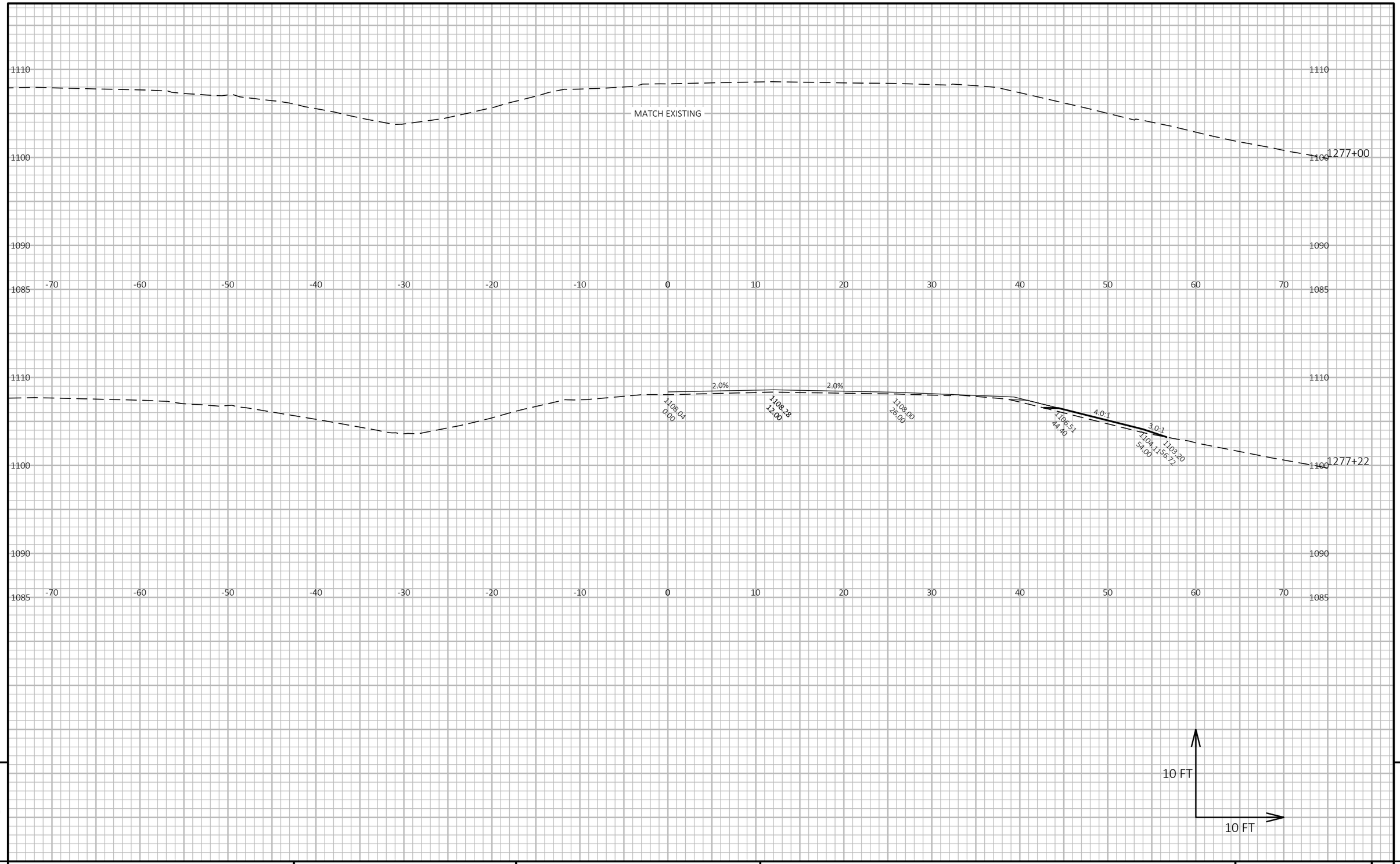
9

PROJECT NO: 1050-00-60	HWY: STH 29	COUNTY: CHIPPEWA & CLARK	CROSS SECTIONS: STH 29 'WB'	SHEET 226	E

FILE NAME : C:\OD\ONEDRIVE - CORRE, INC\MY PROJECTS\1050-00-30_CLARK CO_STH 29\500_CADD\501_C3D_2024\10500030\SHEETS\090202-XS.DWG
LAYOUT NAME - 25

PLOT DATE : 11/21/2025 12:31 PM PLOT BY : ANDREW PETERSON, PE PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

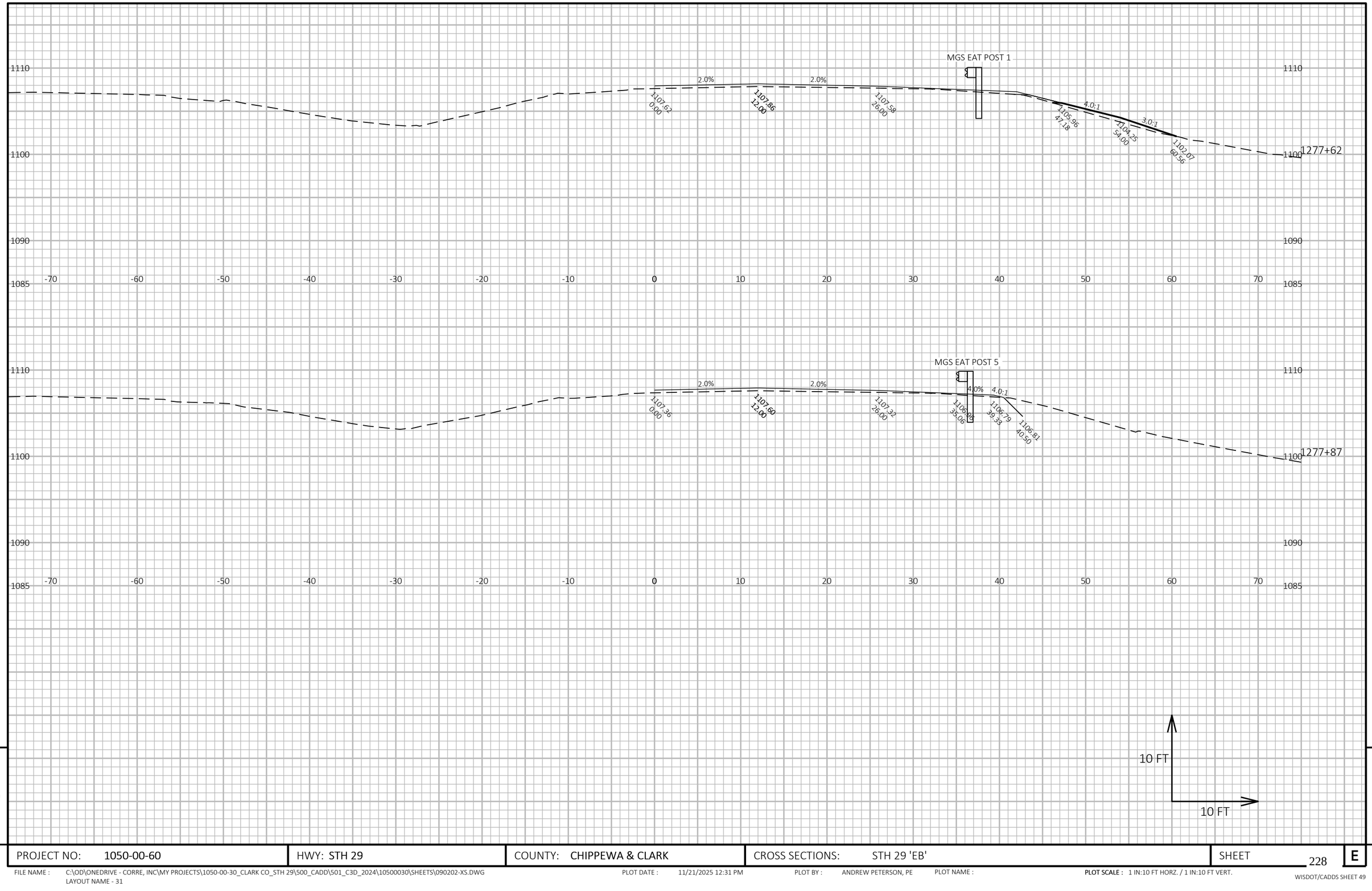
9

PROJECT NO: 1050-00-60	HWY: STH 29	COUNTY: CHIPPEWA & CLARK	CROSS SECTIONS: STH 29 'EB'	SHEET 227	E

FILE NAME : C:\OD\ONEDRIVE - CORRE, INC\MY PROJECTS\1050-00-30_CLARK CO_STH 29\500_CADD\501_C3D_2024\10500030\SHEETS\090202-XS.DWG
LAYOUT NAME - 30

PLOT DATE : 11/21/2025 12:31 PM PLOT BY : ANDREW PETERSON, PE PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

9

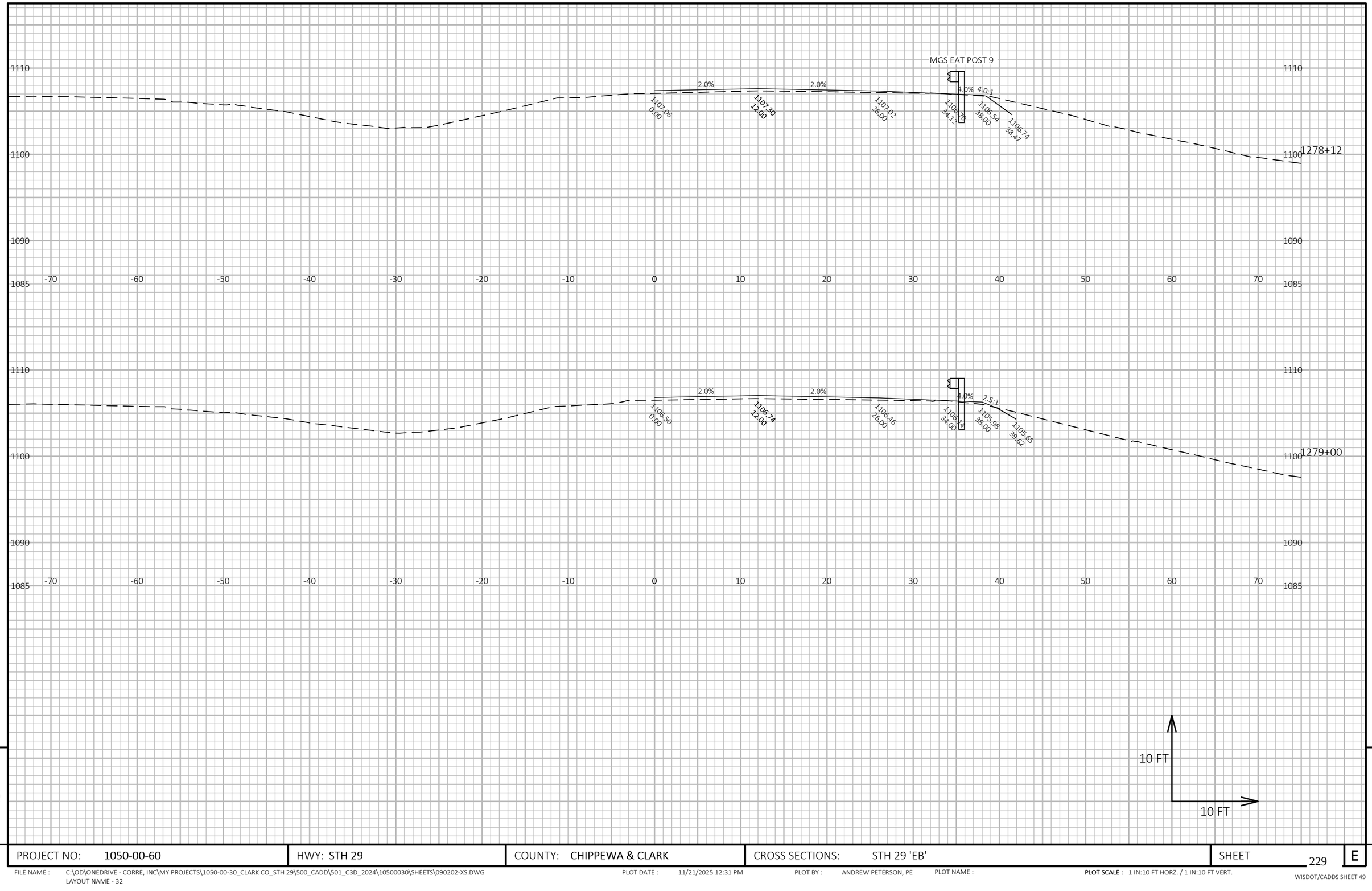
PROJECT NO: 1050-00-60	HWY: STH 29	COUNTY: CHIPPEWA & CLARK	CROSS SECTIONS: STH 29 'EB'	SHEET 228	E

FILE NAME : C:\OD\ONEDRIVE - CORRE, INC\MY PROJECTS\1050-00-30_CLARK CO_STH 29\500_CADD\501_C3D_2024\10500030\SHEETS\090202-XS.DWG
LAYOUT NAME - 31

PLOT DATE : 11/21/2025 12:31 PM PLOT BY : ANDREW PETERSON, PE PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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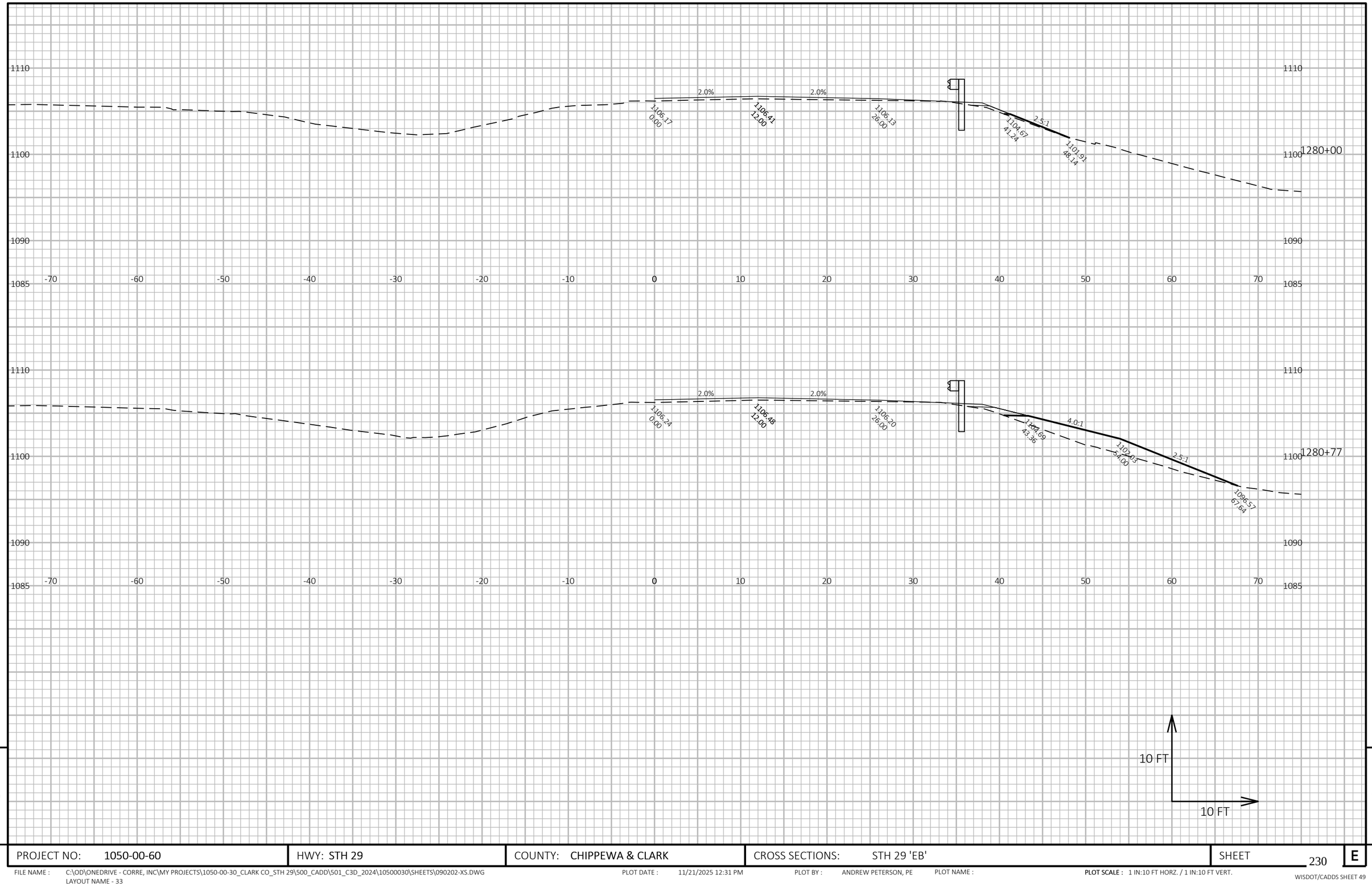
9

PROJECT NO: 1050-00-60	HWY: STH 29	COUNTY: CHIPPEWA & CLARK	CROSS SECTIONS: STH 29 'EB'	SHEET 229	E

FILE NAME : C:\OD\ONEDRIVE - CORRE, INC\MY PROJECTS\1050-00-30_CLARK CO_STH 29\500_CADD\501_C3D_2024\10500030\SHEETS\090202-XS.DWG
LAYOUT NAME - 32

PLOT DATE : 11/21/2025 12:31 PM PLOT BY : ANDREW PETERSON, PE PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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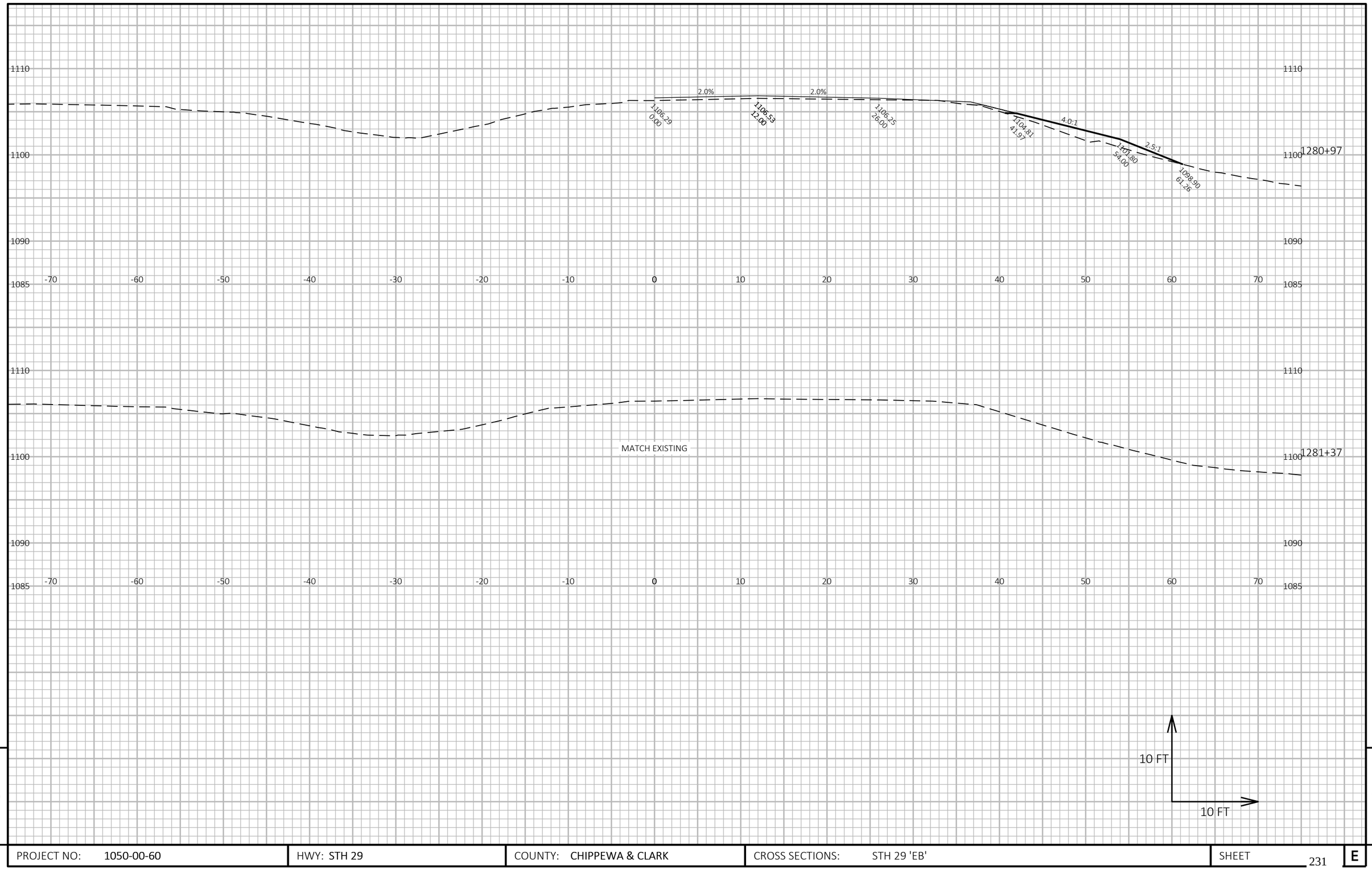
PROJECT NO: 1050-00-60	HWY: STH 29	COUNTY: CHIPPEWA & CLARK	CROSS SECTIONS: STH 29 'EB'	SHEET 230	E



9

9

PROJECT NO: 1050-00-60	HWY: STH 29	COUNTY: CHIPPEWA & CLARK	CROSS SECTIONS: STH 29 'EB'	SHEET 231	E

FILE NAME : C:\OD\ONEDRIVE - CORRE, INC\MY PROJECTS\1050-00-30_CLARK CO_STH 29\500_CADD\501_C3D_2024\10500030\SHEETS\090202-XS.DWG
LAYOUT NAME - 34

PLOT DATE : 11/21/2025 12:31 PM PLOT BY : ANDREW PETERSON, PE PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

1090
1080
1070
1060
1055

-70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70

MATCH EXISTING

50+47

4.5%
6.0%
4.0:1

1079.46
0.00
1078.74
16.00
1077.41
22.90
1077.08
27.51
1077.28
32.19

51+00

10 FT
10 FT

9

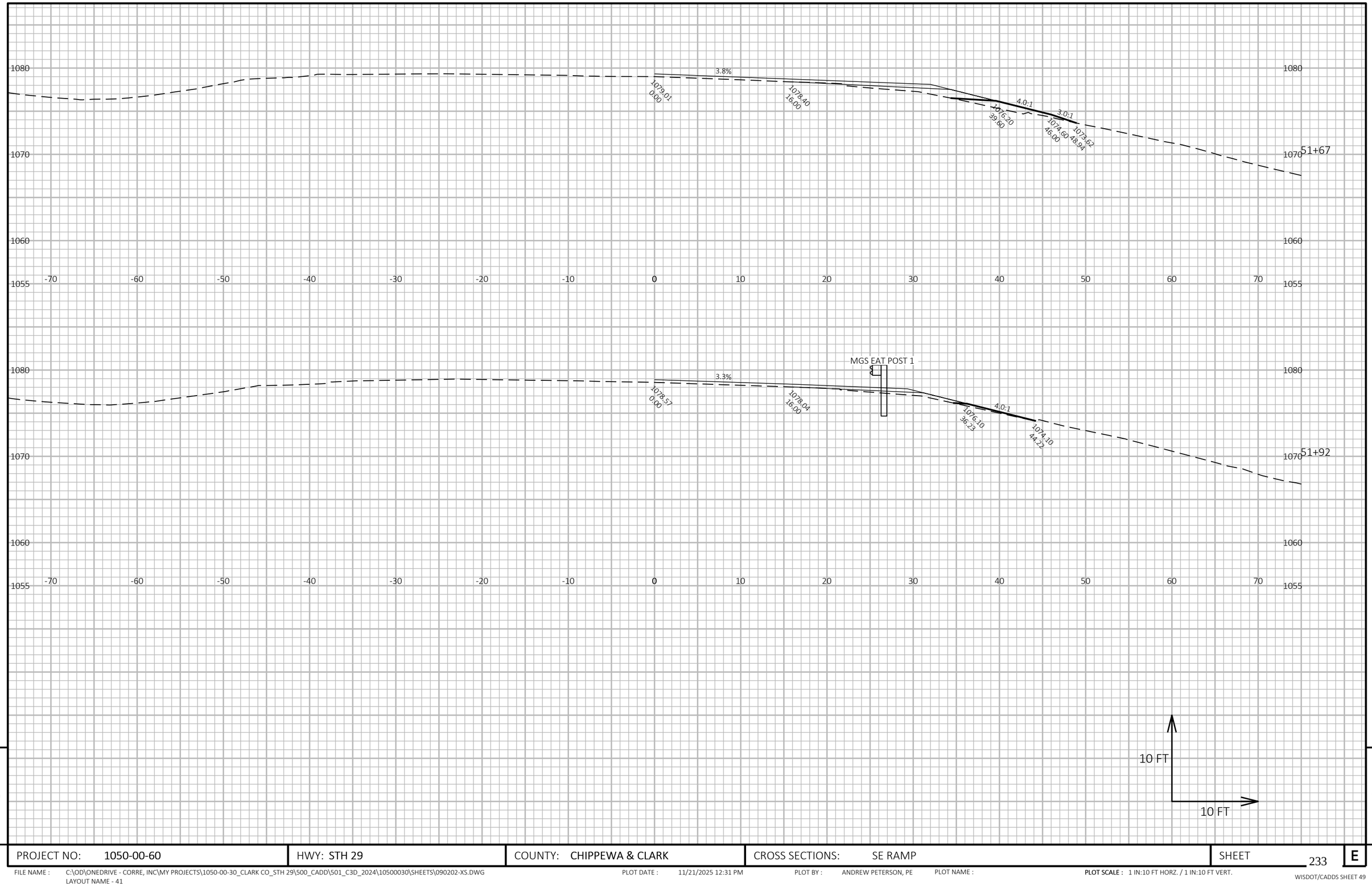
9

PROJECT NO: 1050-00-60	HWY: STH 29	COUNTY: CHIPPEWA & CLARK	CROSS SECTIONS: SE RAMP	SHEET 232	E

FILE NAME : C:\OD\ONEDRIVE - CORRE, INC\MY PROJECTS\1050-00-30_CLARK CO_STH 29\500_CADD\501_C3D_2024\10500030\SHEETS\090202-XS.DWG
LAYOUT NAME - 40

PLOT DATE : 11/21/2025 12:31 PM PLOT BY : ANDREW PETERSON, PE PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

9

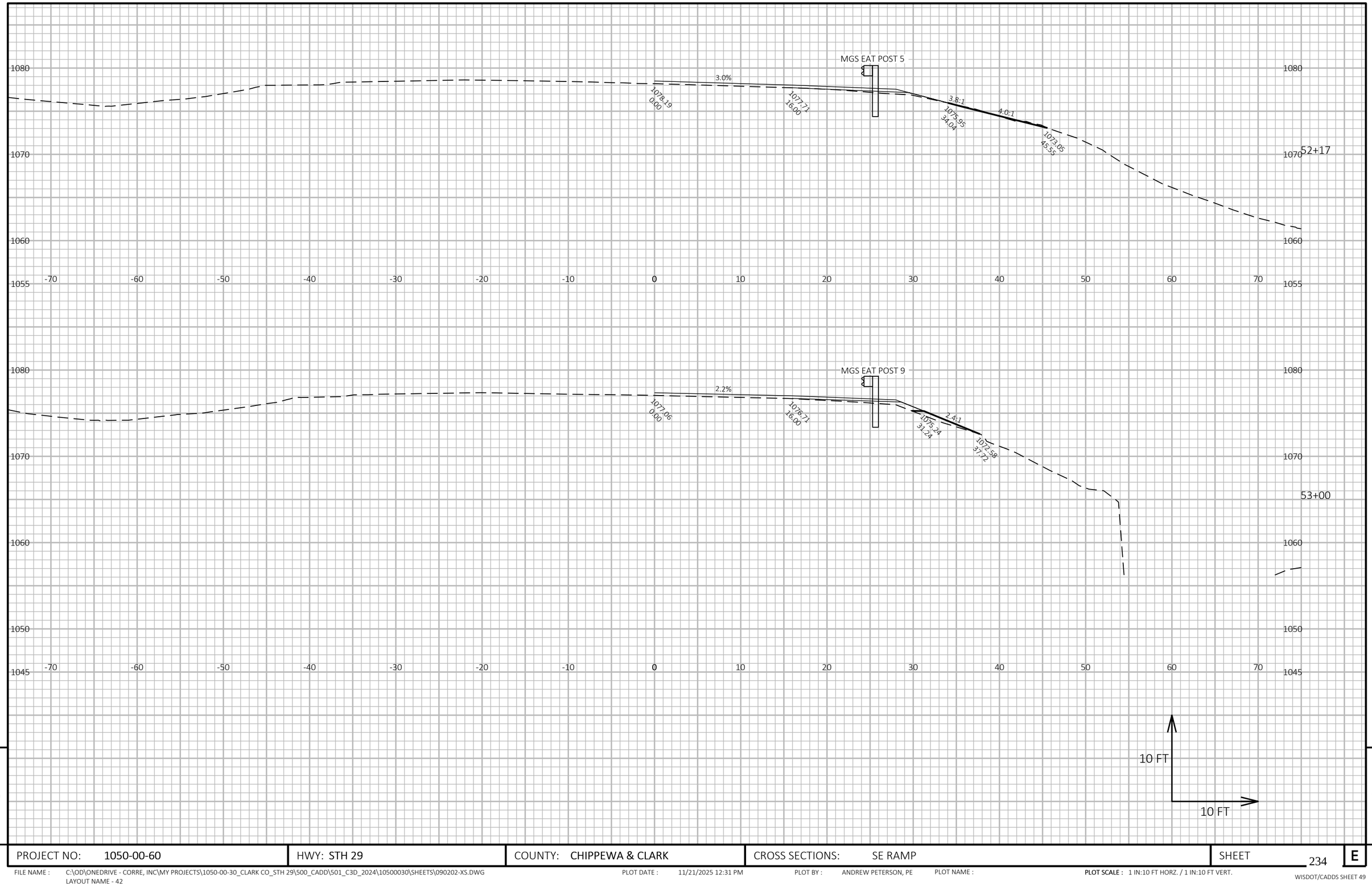
PROJECT NO: 1050-00-60	HWY: STH 29	COUNTY: CHIPPEWA & CLARK	CROSS SECTIONS: SE RAMP	SHEET 233	E

FILE NAME : C:\OD\ONEDRIVE - CORRE, INC\MY PROJECTS\1050-00-30_CLARK CO_STH 29\500_CADD\501_C3D_2024\10500030\SHEETS\090202-XS.DWG
LAYOUT NAME - 41

PLOT DATE : 11/21/2025 12:31 PM PLOT BY : ANDREW PETERSON, PE PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

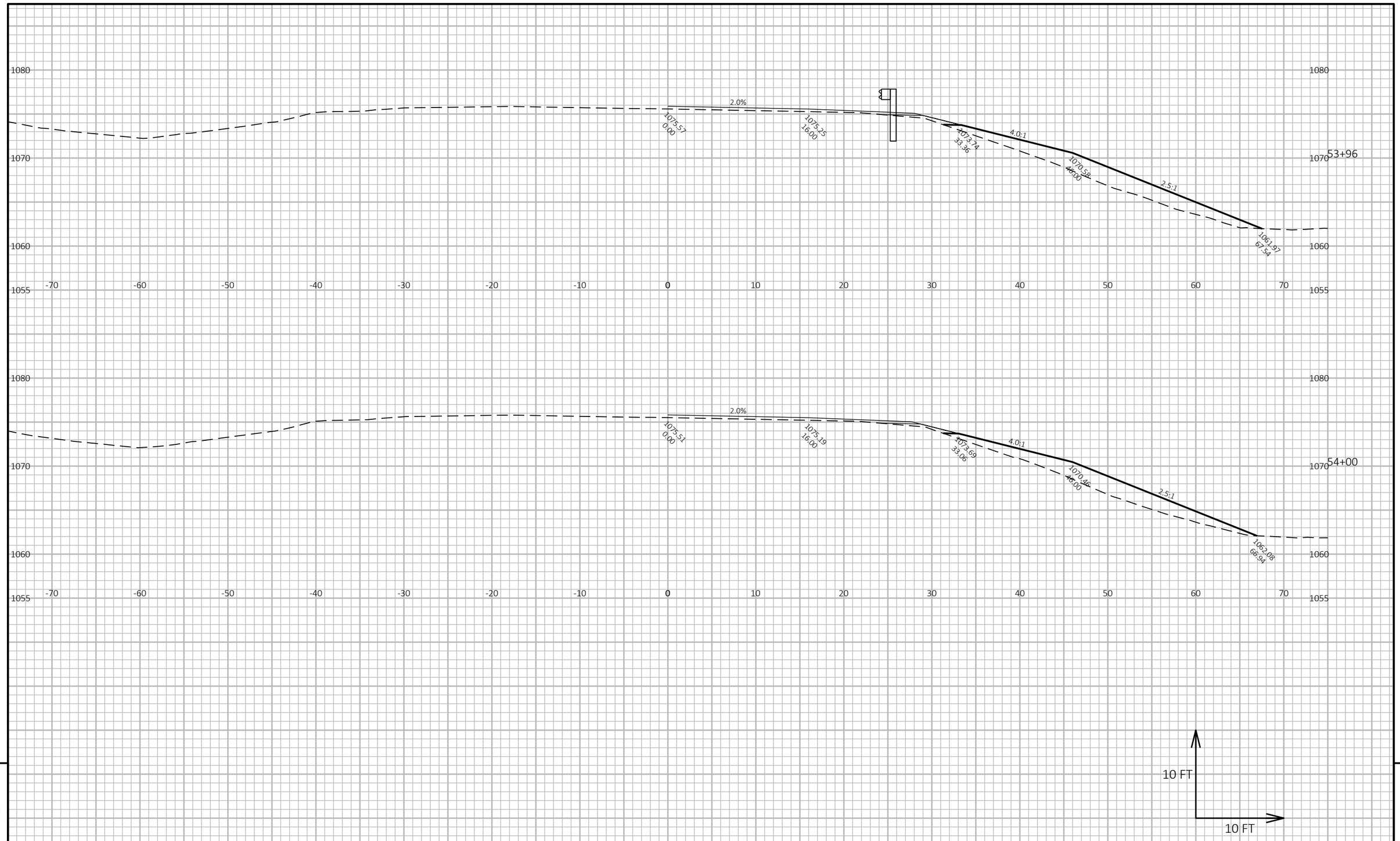
9

PROJECT NO: 1050-00-60	HWY: STH 29	COUNTY: CHIPPEWA & CLARK	CROSS SECTIONS: SE RAMP	SHEET 234	E

FILE NAME : C:\OD\ONEDRIVE - CORRE, INC\MY PROJECTS\1050-00-30_CLARK CO_STH 29\500_CADD\501_C3D_2024\10500030\SHEETS\090202-XS.DWG
LAYOUT NAME - 42

PLOT DATE : 11/21/2025 12:31 PM PLOT BY : ANDREW PETERSON, PE PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1050-00-60	HWY: STH 29	COUNTY: CHIPPEWA & CLARK	CROSS SECTIONS: SE RAMP	SHEET 235	E

FILE NAME : C:\OD\ONEDRIVE - CORRE, INC\MY PROJECTS\1050-00-30_CLARK CO_STH 29\500_CADD\501_C3D_2024\10500030\SHEETS\090202-XS.DWG
LAYOUT NAME - 43

PLOT DATE : 11/21/2025 12:32 PM PLOT BY : ANDREW PETERSON, PE PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

1080
1070
1060
1055
-70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70
MATCH EXISTING
54+56
10 FT
10 FT
9
9

PROJECT NO: 1050-00-60	HWY: STH 29	COUNTY: CHIPPEWA & CLARK	CROSS SECTIONS: SE RAMP	SHEET 236	E

FILE NAME : C:\OD\ONEDRIVE - CORRE, INC\MY PROJECTS\1050-00-30_CLARK CO_STH 29\500_CADD\501_C3D_2024\10500030\SHEETS\090202-XS.DWG
LAYOUT NAME - 44
PLOT DATE : 11/21/2025 12:32 PM
PLOT BY : ANDREW PETERSON, PE
PLOT NAME :
PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.
WISDOT/CADDS SHEET 49

Notes

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

http://www.dot.wisconsin.gov