WIS

PROJECT ID: **1053-04-84**

COUNTY: **MARATHON**

MARCH 295
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 = 384

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

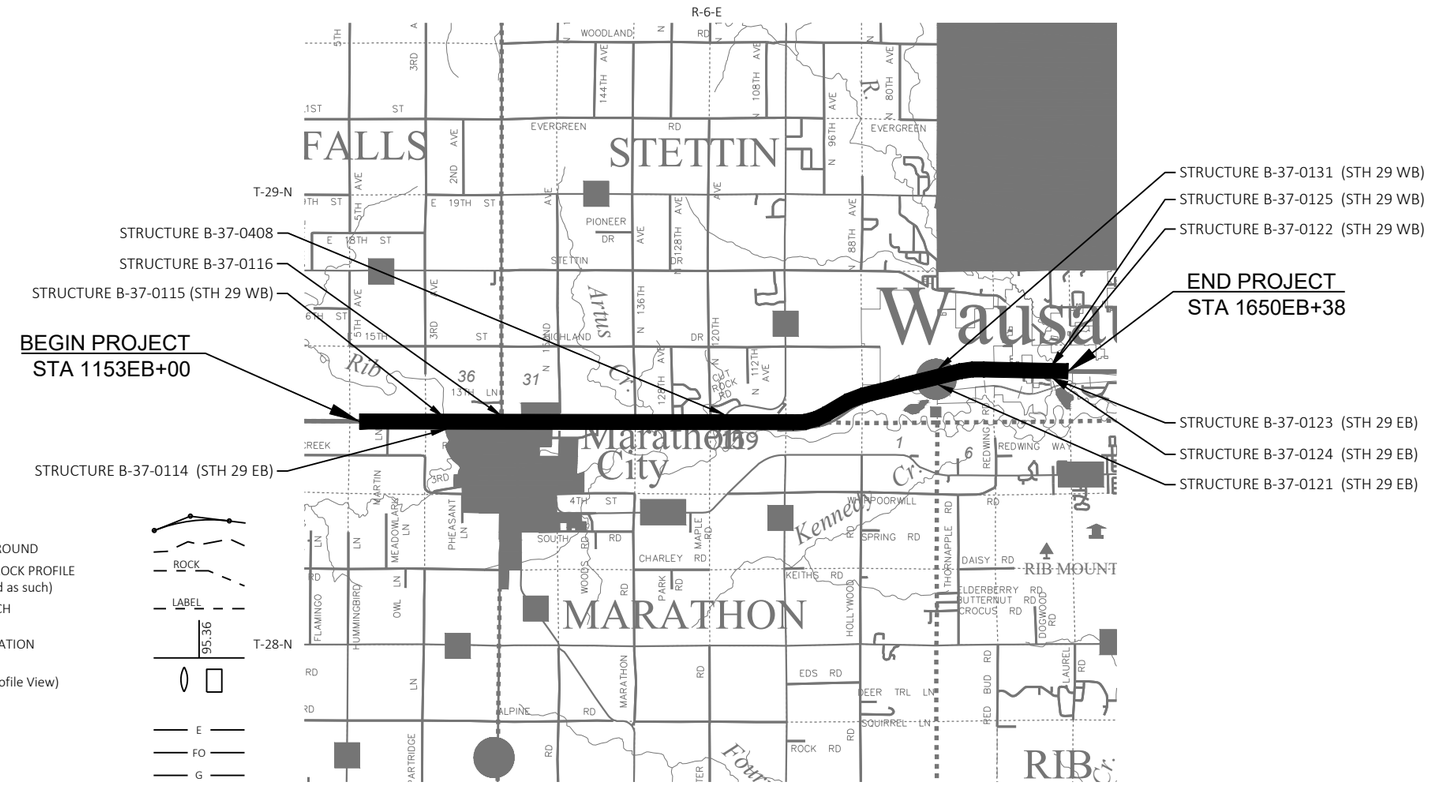
ABBOTSFORD - WAUSAU

PURPLE MARTIN LN TO LITTLE RIB RVR

STH 29
MARATHON

STATE PROJECT NUMBER
1053-04-84

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1053-04-84	WISC 2025386	1



LAYOUT
SCALE 0 2 MI

TOTAL NET LENGTH OF CENTERLINE = 9.420 MI

DESIGN DESIGNATION 1053-04-14

A.A.D.T.	2027	=	23,400
A.A.D.T.	2047	=	27,390
D.H.V.		=	
D.D.		=	60/40
T.		=	21.3
DESIGN SPEED		=	70 MPH
ESALS		=	16,690,000

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

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), MARATHON COUNTY NAD83 (2011), IN U.S. SURVEY FEET. POSITIONS SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES ARE THE SAME AS GROUND DISTANCES.

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

ORIGINAL PLANS PREPARED BY

HNTB
250 E. WISCONSIN AVE
MILWAUKEE, WI 53202
(414) 359-2300

WISCONSIN PROFESSIONAL ENGINEER
NICHOLAS SPITZER
E-44247
BLAINE, MN

10/28/2024 (Date)
Nicholas Spitzer (Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	GREMMER
Designer	HNTB, CORP.
Project Manager	KOREY BOEHM, PE
Regional Examiner	FRED SCHUNKE, PE
Regional Supervisor	ELIZABETH NEMEC, PE

APPROVED FOR THE DEPARTMENT

DATE: 10/28/2024 Korey Boehm (Signature)

E

GENERAL NOTES

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

HMA PAVEMENT WEIGHT CALCULATIONS ARE BASED ON 112 LBS/SY/IN.

RIGHT OF WAY INFORMATION SHOWN ON THE PLANS IS APPROXIMATE.

CURVE DATA IS BASED ON THE ARC DEFINITION.

TOPSOIL SHALL BE PLACED 1-INCH BELOW THE TOP OF ADJACENT CONCRETE CURBS OR SIDEWALKS.

PRIOR TO PLACING THE NEW BASE AGGREGATE DENSE COURSE OR PAVED SHOULDERS EXISTING UNCOMPACTED SHOULDER MATERIAL SHALL BE REMOVED OR DEPOSITED ON THE OUTER PORTION OF THE EXISTING SHOULDER OR AS DIRECTED BY THE ENGINEER.

PRIOR TO PLACEMENT OF BEAM GUARD THE SHOULDERS SHALL BE IN PLACE, SHAPED AND COMPACTED.

DO NOT DRIVE, STORE EQUIPMENT, OR STORE CONSTRUCTION MATERIALS IN ENVIRONMENTALLY SENSITIVE AREAS, WETLANDS OR WATERWAYS.

ORDER OF SECTION 2 DETAIL SHEETS

TITLE SHEET
GENERAL NOTES
PROJECT OVERVIEW
TYPICAL SECTIONS
CONSTRUCTION DETAILS
EROSION CONTROL
TRAFFIC CONTROL
DETOUR
ALIGNMENT DETAILS
PLAN SHEETS
MISCELLANEOUS QUANTITIES
STRUCTURE B-37-115
CROSS SECTIONS

STANDARD ABBREVIATIONS

AP	ACCESS POINT	FL	FLOWLINE	SHLDR	SHOULDER
AC	ACRE	FO	FIBER OPTIC	SB	SOUTHBOUND
AGG	AGGREGATE	FT	FOOT	SS	STORMSEWER
ASPH	ASPHALTIC	HYD	HYDRANT	TEL	TELEPHONE
BL	BASELINE	INL	INLET	TEMP	TEMPORARY
BM	BENCHMARK	INTERS	INTERSECTION	TER	TERRACE
CB	CATCH BASIN	INV	INVERT	TV	TELEVISION
CL	CENTERLINE	JT	JOINT	UG	UNDERGROUND
CONC	CONCRETE	LT	LEFT	VOL	VOLUME
CO	COUNTY	LF	LINEAR FOOT	W	WATER
CABC	CRUSHED AGGREGATE BASE COURSE	MH	MANHOLE	WB	WESTBOUND
		MP	MARKER POST		
CY	CUBIC YARD	MB	MESSAGE BOARD		
CULV	CULVERT	NOM	NOMINAL		
CP	CULVERT PIPE	NB	NORTHBOUND		
C&G	CURB AND GUTTER	PAVT	PAVEMENT		
DIA	DIAMETER	PERM	PERMANENT		
DWY	DRIVEWAY	PU	PIPE UNDERDRAIN		
EB	EASTBOUND	PCC	PROTLAND CEMENT CONCRETE		
ELEV	ELEVATION				
EW	ENDWALL	PE	PRIVATE ENTRANCE		
ENT	ENTRANCE	PROJ	PROJECT		
EXC	EXCAVATION	PL	PROPERTY LINE		
FP	FENCE POST	RL	REFERENCE LINE		
FERT	FERTILIZE	RT	RIGHT		
F	FILL	R/W	RIGHT OF WAY		
FG	FINISHED GRADE	RDWY	ROADWAY		

ALIGNMENT ABBREVIATIONS

STH 29 WB	WB
STH 29 EB	EB
STH 107	107
STH 107 NW RAMP	107 NW
STH 107 NE RAMP	107 NE
STH 107 SW RAMP	107 SW
STH 107 SE RAMP	107 SE
CTH O	O
CTH O NW RAMP	O NW
CTH O NE RAMP	O NE
CTH O SW RAMP	O SW
CTH O SE RAMP	O SE
72ND AVE	72ND
72ND AVE NW RAMP	72 NW
72ND AVE NE RAMP	72 NE
72ND AVE SW RAMP	72 SW
72ND AVE SE RAMP	72 SE

UTILITIES CONTACTS

COMMUNICATIONS

FRONTIER COMMUNICATIONS OF WI LLC
COMMUNICATION LINE
CHRISTOPHER POLLACK
421 N. 4TH ST
WAUSAU, WI 54403
PHONE: (715) 847-1240
EMAIL: christopher.pollack@ftr.com

SPECTRUM
COMMUNICATION LINE
SCOTT GOHDES
853 MCINTOSH ST.
WAUSAU, WI 54403
PHONE: (715) 803-2989
EMAIL: scott.gohdes@charter.com

EVERSTREAM
COMMUNICATION LINE
SHAD GARCIA
324 E WISCONSIN AVE, SUITE 730
MILWAUKEE WI 53208
PHONE: (414) 522-6685
EMAIL: sgarcia@everstream.NET

WATER

VILLAGE OF MARATHON CITY WATER & SEWER
WATER
STEVEN CHEREK
311 WALNUT ST.
MARATHON CITY, WI 54488
PHONE: (715) 443-2221
EMAIL: scherek@marathoncitywi.gov

WAUSAU WATER WORKS
WATER
SHANNON LANE
407 GRANT ST
WAUSAU WI 54403
PHONE: (715) 261-7281
EMAIL: Shannon.Lane@wausauwi.gov

SEWER

VILLAGE OF MARATHON CITY WATER & SEWER
SEWER
STEVEN CHEREK
311 WALNUT ST.
MARATHON CITY, WI 54488
PHONE: (715) 443-2221
EMAIL: scherek@marathoncitywi.gov

WAUSAU WATER WORKS
SEWER
RYAN DWELLY
407 GRANT ST
WAUSAU WI 54403
PHONE: (715) 261-6948
EMAIL: Ryan.Dwelly@wausauwi.gov

ELECTRIC

ATC MANAGEMENT, INC
ELECTRICITY - TRANSMISSION
DOUG VOSBERG
2489 RINDEN ROAD
COTTAGE GROVE, WI 53527
PHONE: (608) 877-7650
EMAIL: dvosberg@atcllc.com

WISCONSIN PUBLIC SERVICE CORPORATION
ELECTRICITY

P.O. BOX 19001
GREEN BAY, WI 54307
PHONE:
EMAIL: utilitiesrelocation@wisconsinpublicservice.com

GAS

WISCONSIN PUBLIC SERVICE CORPORATION
GAS/PETROLEUM
TYLER DAHLSTROM
1701 SHERMAN ST.
WAUSAU, WI 54402
PHONE: (715) 848-7387
EMAIL: tyler.dahlstrom@wisconsinpublicservice.com

WISCONSIN DNR LIAISON

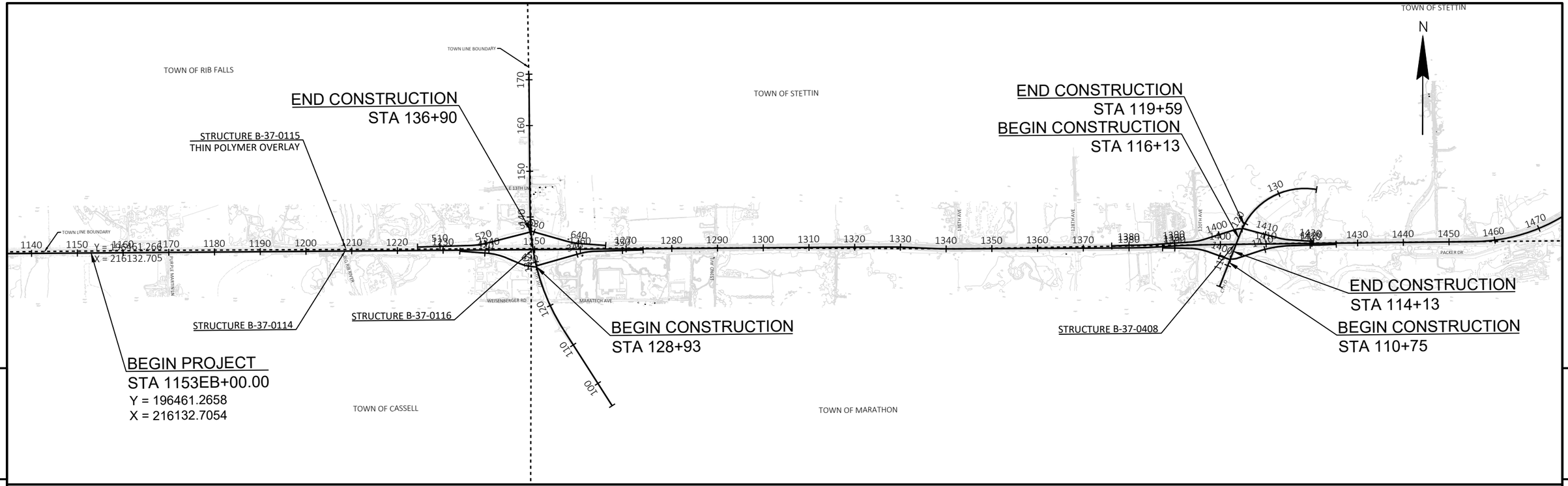
James Doperalski
DNR NORTHEAST REGIONAL HEADQUARTERS
2984 SHAWANO AVE
GREEN BAY, WI 54313
PHONE: 920-412-0165
EMAIL: JAMES.DOPERALSKI@WISCONSIN.GOV

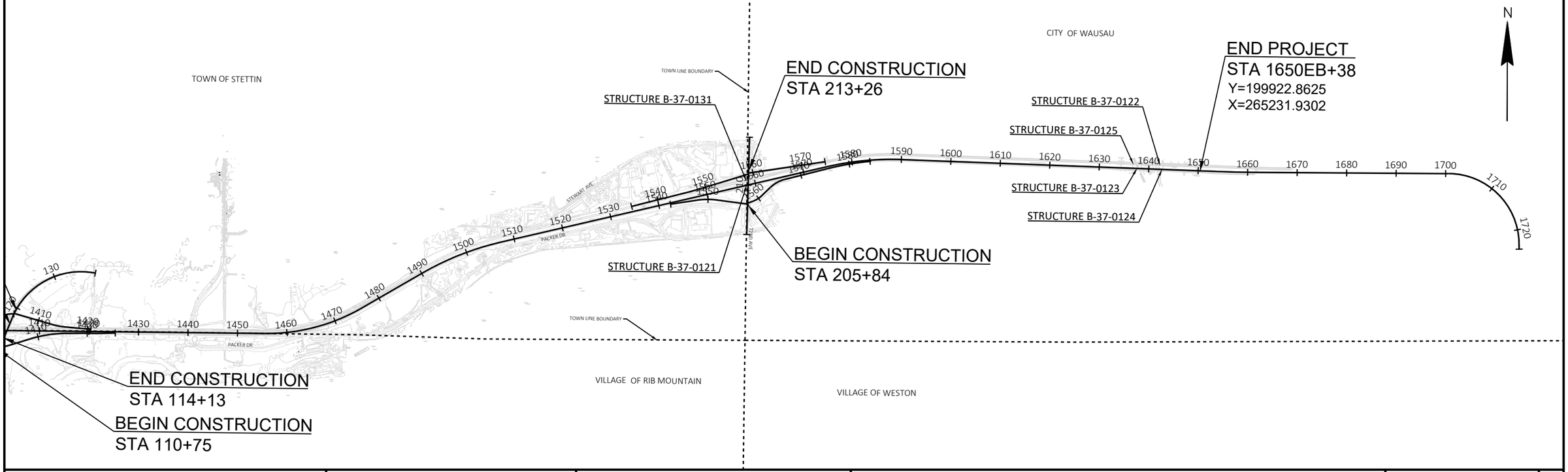
RUNOFF COEFFICIENT TABLE

	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											

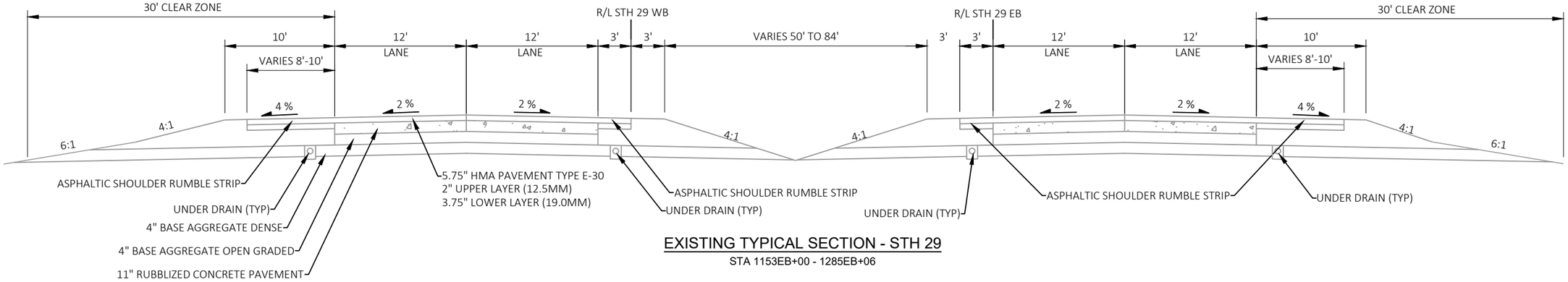
TOTAL PROJECT AREA = 100 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 2.15 ACRES

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



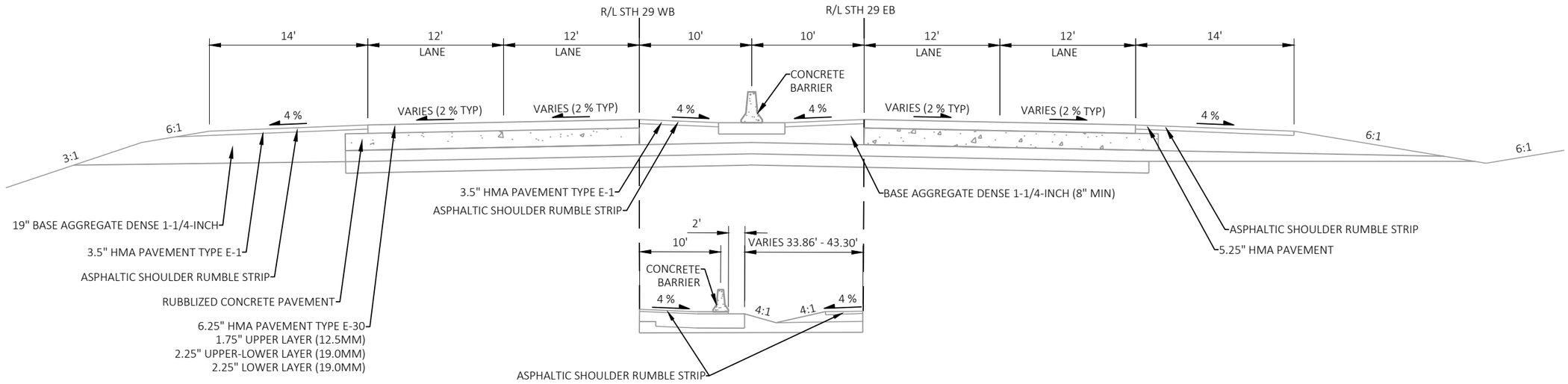


PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	PROJECT OVERVIEW	SHEET 4	E



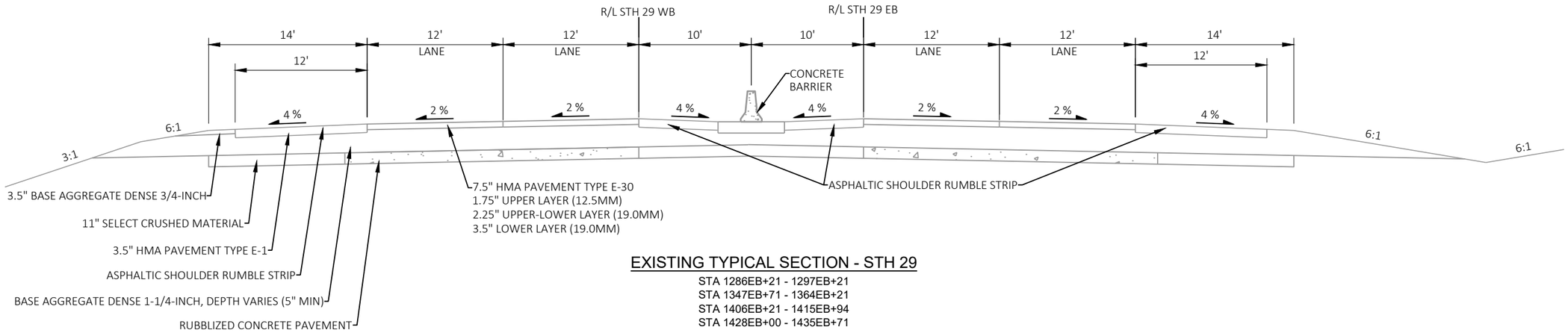
EXISTING TYPICAL SECTION - STH 29

STA 1153EB+00 - 1285EB+06



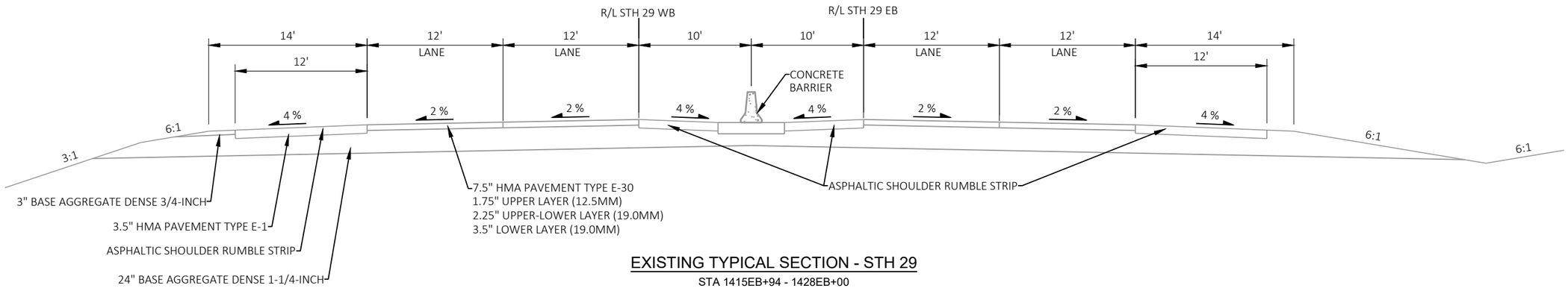
EXISTING TYPICAL SECTION - STH 29

STA 1285EB+06 - 1286EB+21
STA 1297EB+21 - 1347EB+71
STA 1364EB+21 - 1406EB+21
STA 1435EB+71 - 1454EB+00



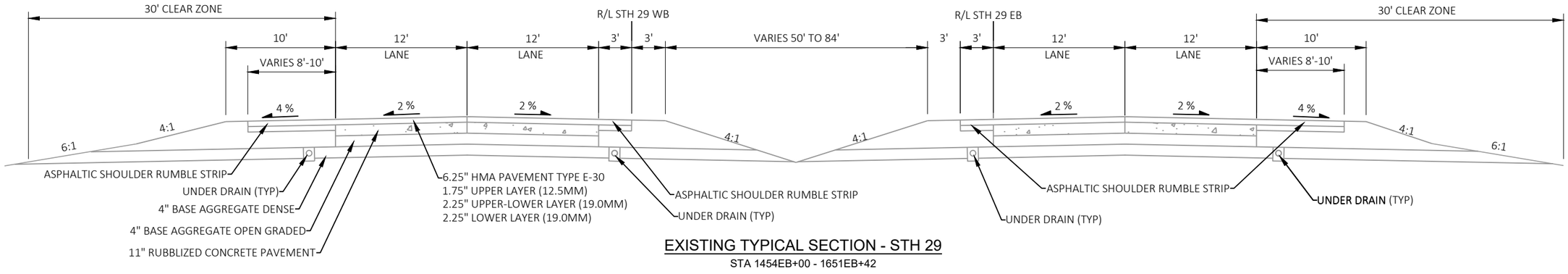
EXISTING TYPICAL SECTION - STH 29

STA 1286EB+21 - 1297EB+21
STA 1347EB+71 - 1364EB+21
STA 1406EB+21 - 1415EB+94
STA 1428EB+00 - 1435EB+71



EXISTING TYPICAL SECTION - STH 29

STA 1415EB+94 - 1428EB+00

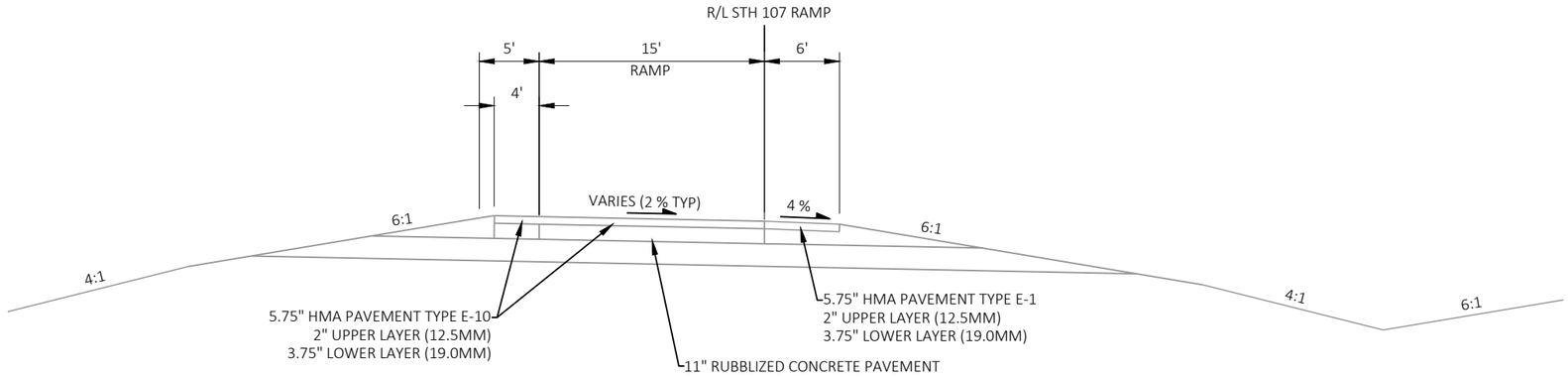


EXISTING TYPICAL SECTION - STH 29

STA 1454EB+00 - 1651EB+42

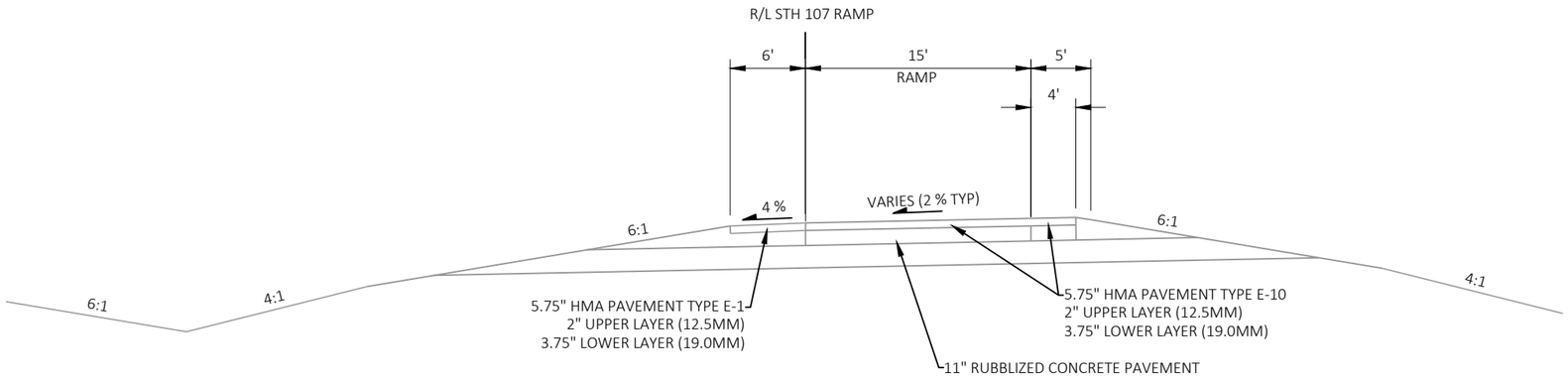
PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	TYPICAL SECTIONS	SHEET 6	E

2



EXISTING TYPICAL SECTION - STH 107 SE & SW RAMPS

STA 414SW+73 - 430SW+84
STA 331SE+58 - 354SE+52



EXISTING TYPICAL SECTION - STH 107 NE & NW RAMPS

STA 505NW+74 - 539NW+37
STA 630NE+00 - 645NE+98

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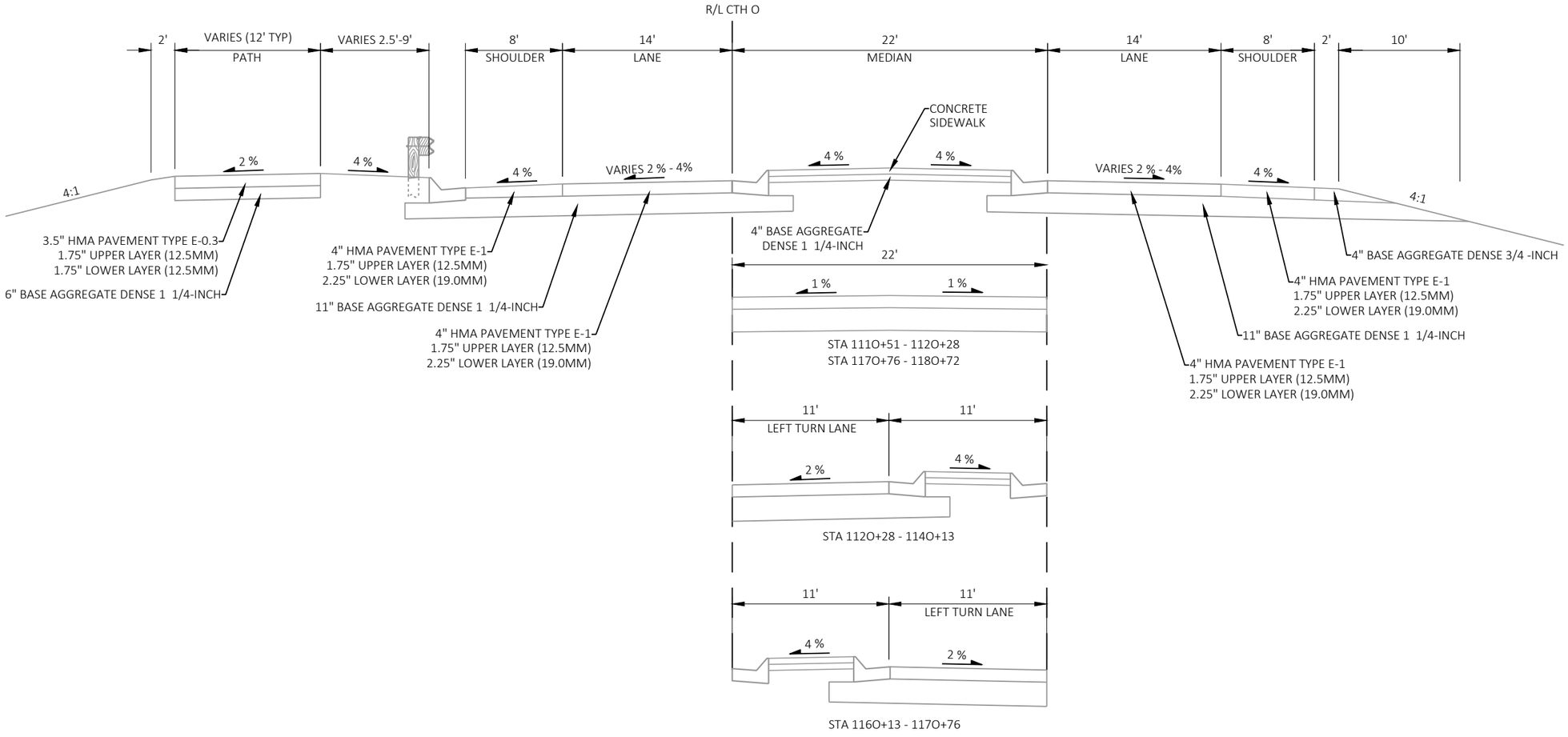
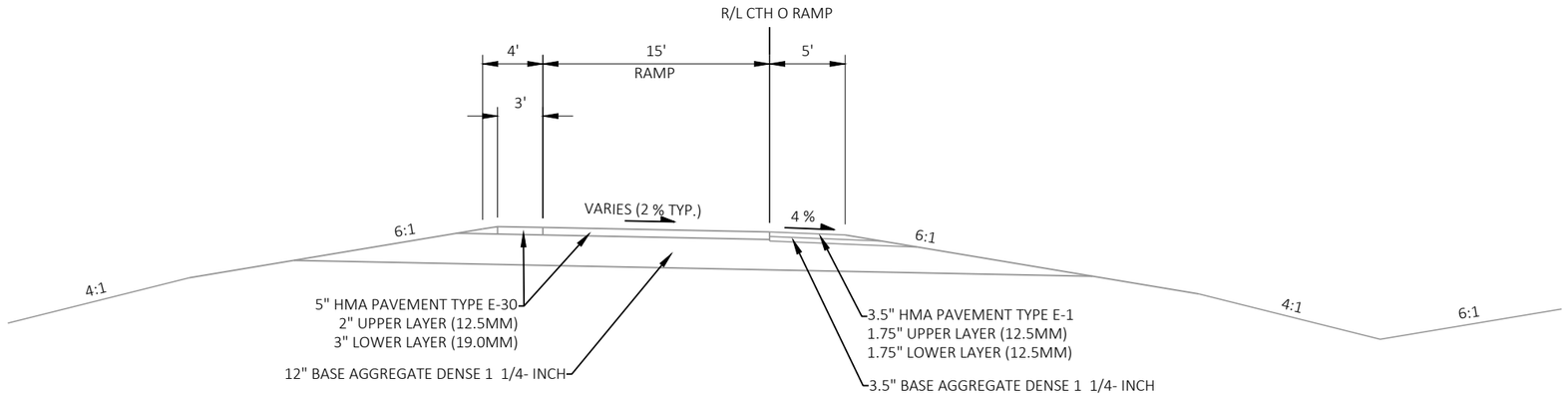


EXISTING TYPICAL SECTION - CTH O

STA 110O+75 - 113O+98
STA 116O+13 - 119O+59

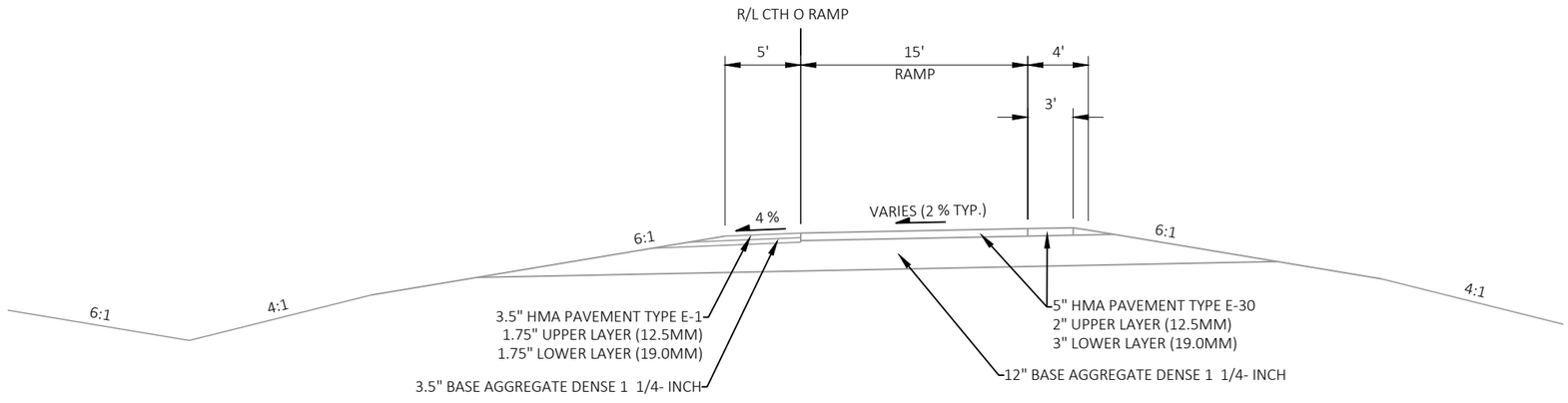
PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	TYPICAL SECTIONS	SHEET 8	E

2



EXISTING TYPICAL SECTION - CTH O SE & SW RAMPS

STA 1388SW+21 - 1402SW+32
STA 1402SE+13 - 1423SE+77

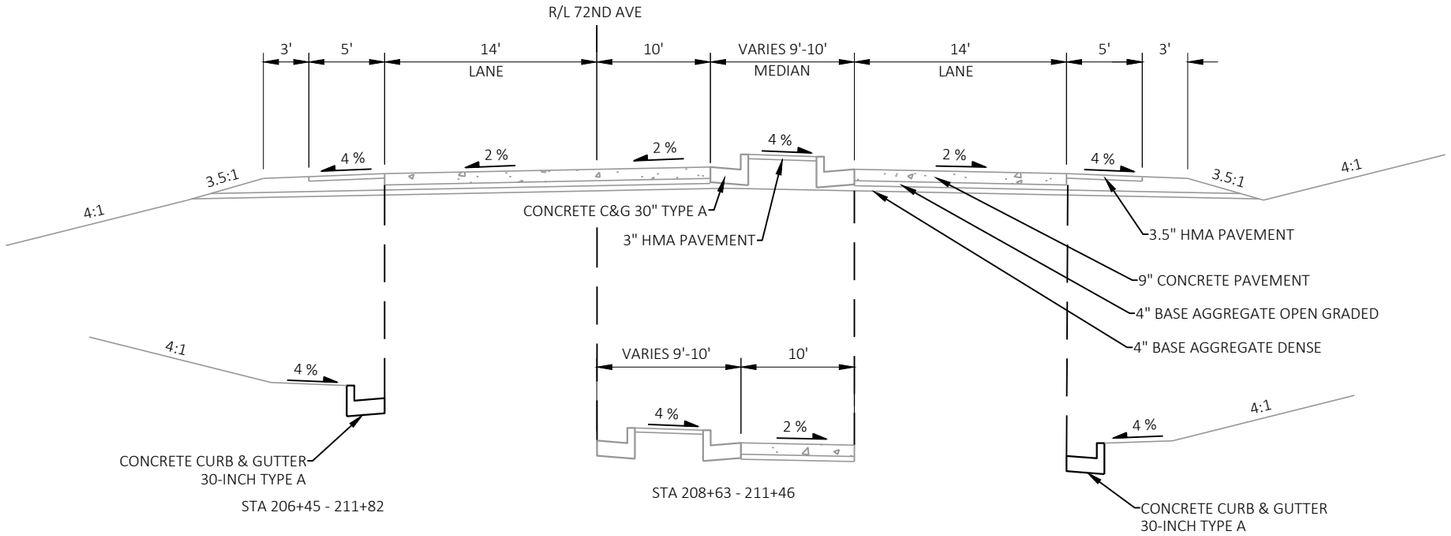


EXISTING TYPICAL SECTION - CTH O NE & NW RAMPS

STA 1378NW+31 - 1404NW+93
STA 1404NE+87 - 1420NE+74

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	TYPICAL SECTIONS	SHEET 9	E

2



STA 206+45 - 211+82

STA 208+63 - 211+46

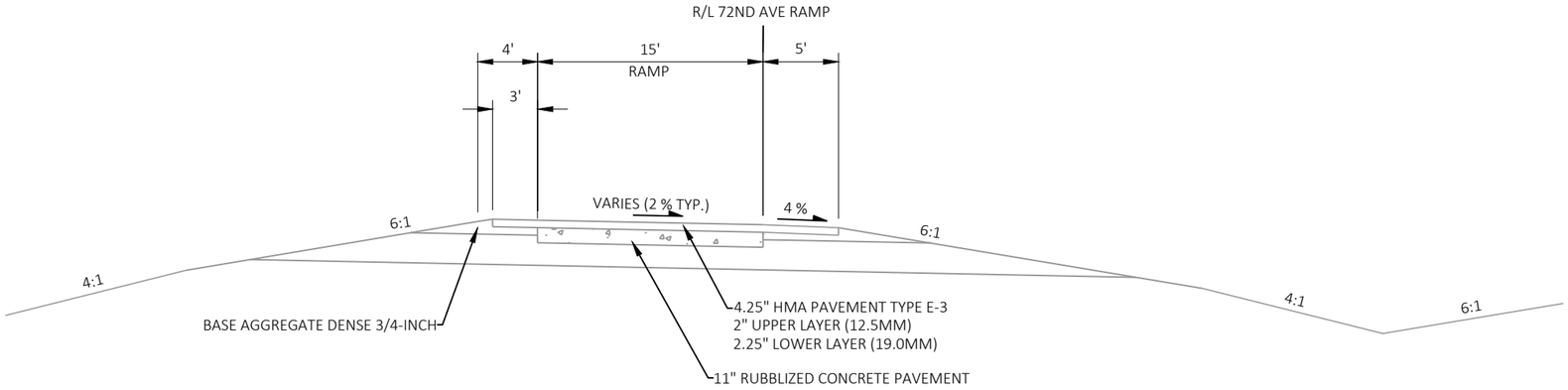
STA 206+85 - 212+24

EXISTING TYPICAL SECTION - 72ND AVE

STA 205+50 - 213+23

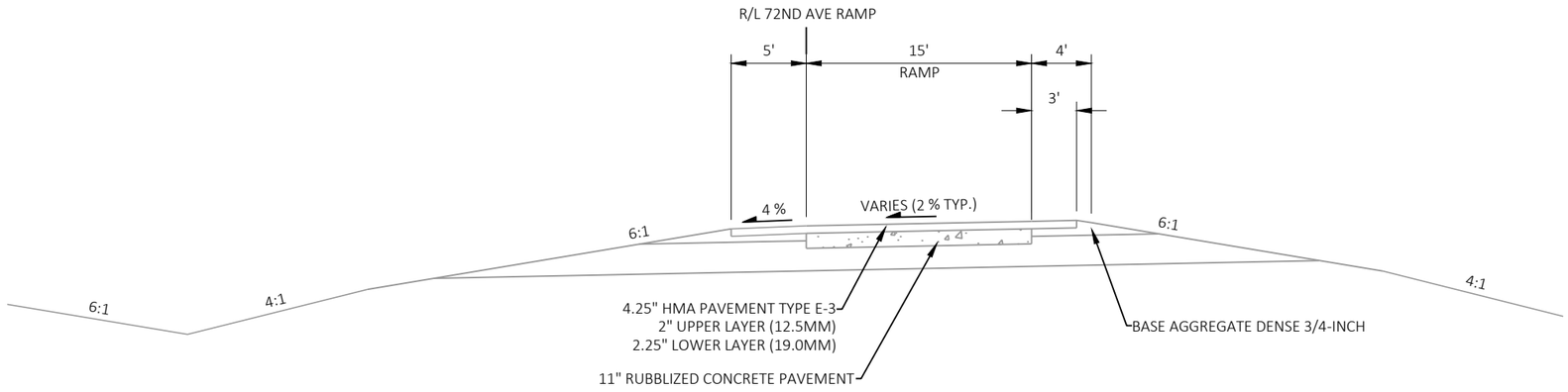
PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	TYPICAL SECTIONS	SHEET 10	E

2



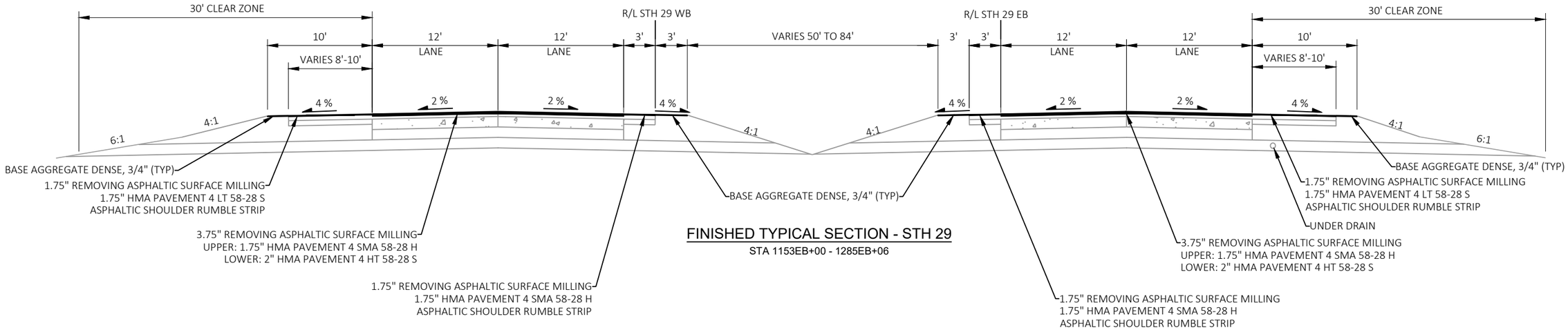
EXISTING TYPICAL SECTION - 72ND AVE SE & SW RAMPS

STA 1542SW+67 - 1558SW+05
STA 1557SE+58 - 1584SE+24



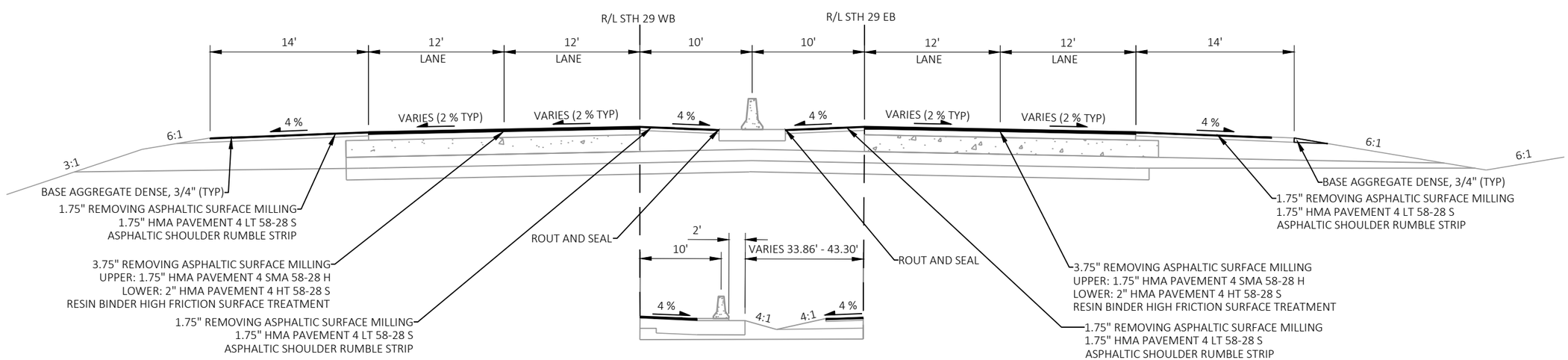
EXISTING TYPICAL SECTION - 72ND AVE NE & NW RAMPS

STA 1534NW+58 - 1559NW+08
STA 1559NE+25 - 1574NE+13



FINISHED TYPICAL SECTION - STH 29

STA 1153EB+00 - 1285EB+06

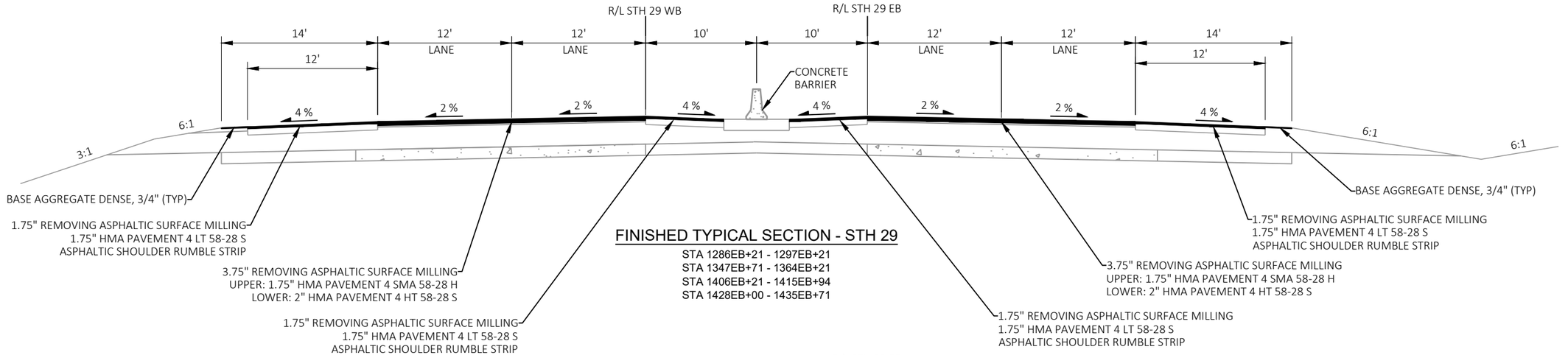


FINISHED TYPICAL SECTION - STH 29

STA 1285EB+06 - 1286EB+21
STA 1297EB+21 - 1347EB+71
STA 1364EB+21 - 1406EB+21
STA 1435EB+71 - 1454EB+00

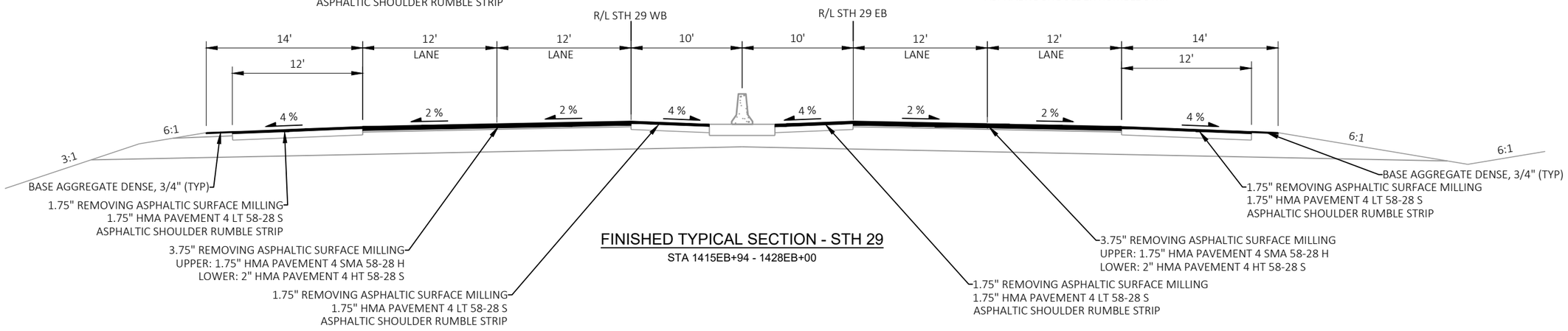
PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	TYPICAL SECTIONS	SHEET 12	E

FILE NAME : C:\CADDLIB\PW\HNTB_APACADA\GREATLAKES\D0382806\020301-TS.DWG
LAYOUT NAME - 020308-ts
PLOT DATE : 1/15/2025 9:13 AM PLOT BY : ALLAN PACADA PLOT NAME : PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 42



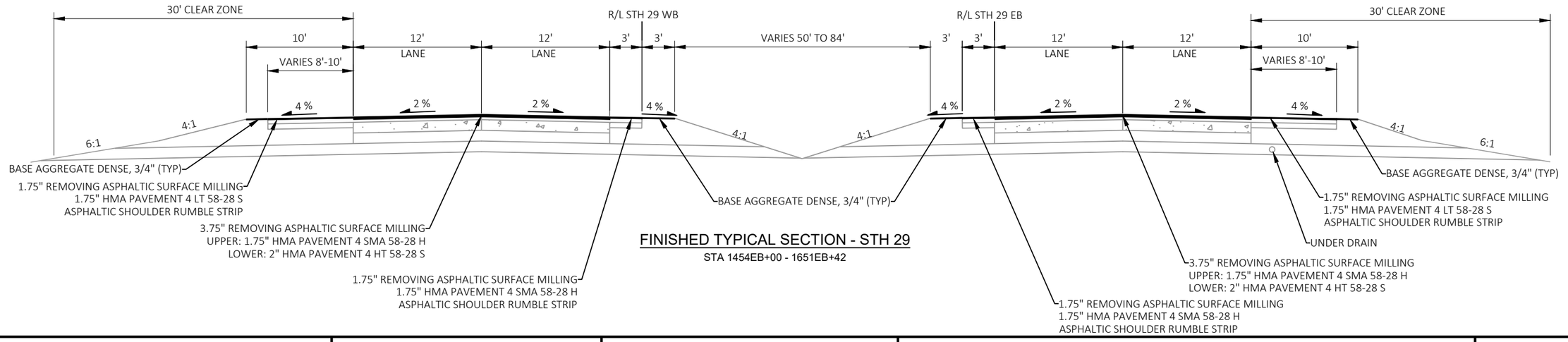
FINISHED TYPICAL SECTION - STH 29

STA 1286EB+21 - 1297EB+21
STA 1347EB+71 - 1364EB+21
STA 1406EB+21 - 1415EB+94
STA 1428EB+00 - 1435EB+71



FINISHED TYPICAL SECTION - STH 29

STA 1415EB+94 - 1428EB+00

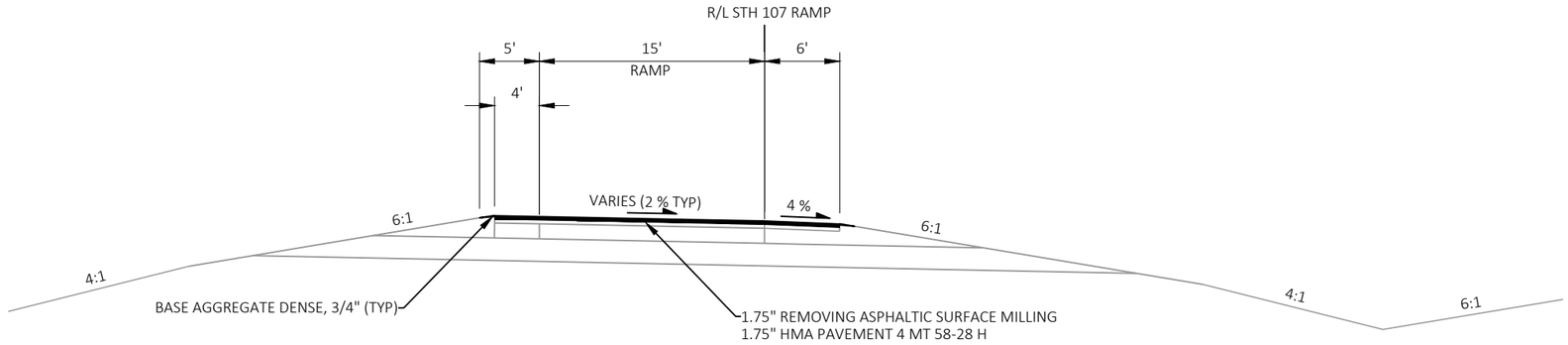


FINISHED TYPICAL SECTION - STH 29

STA 1454EB+00 - 1651EB+42

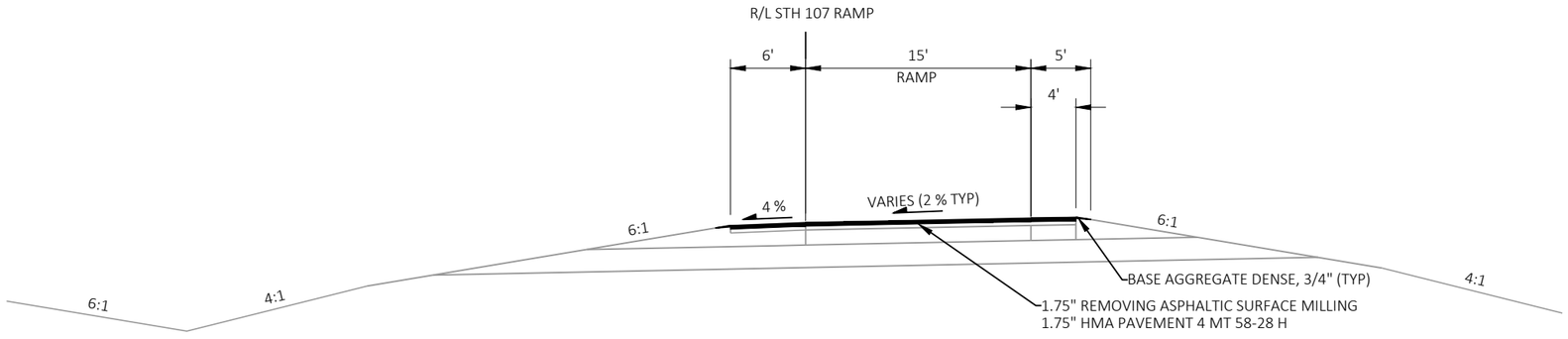
PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	TYPICAL SECTIONS	SHEET 13	E

2



FINISHEDTYPICAL SECTION - STH 107 SE & SW RAMPS

STA 414SW+73 - 430SW+84
STA 331SE+58 - 354SE+52

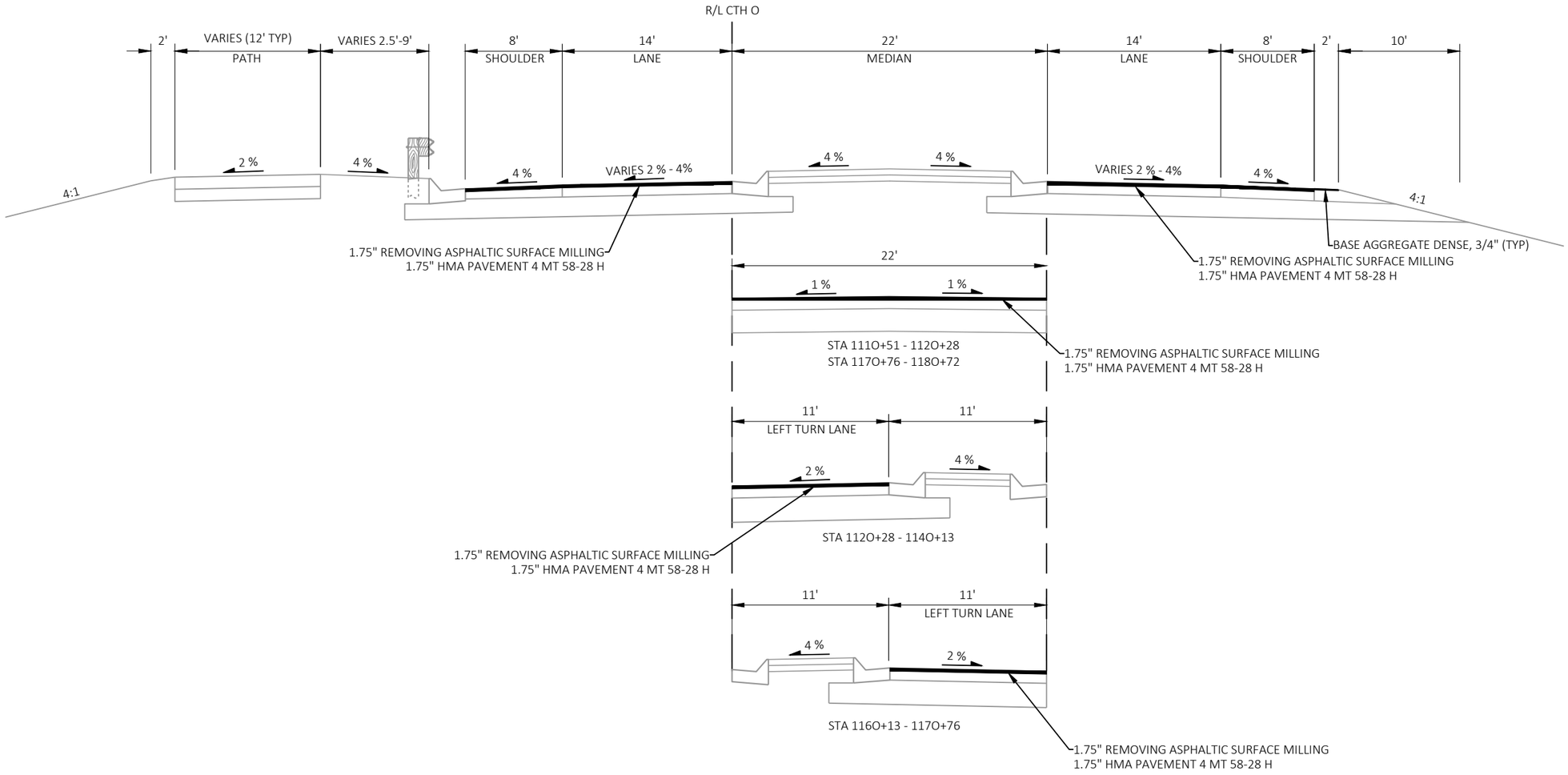


FINISHED TYPICAL SECTION - STH 107 NE & NW RAMPS

STA 505NW+74 - 539NW+37
STA 630NE+00 - 645NE+98

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	TYPICAL SECTIONS	SHEET 14	E

2

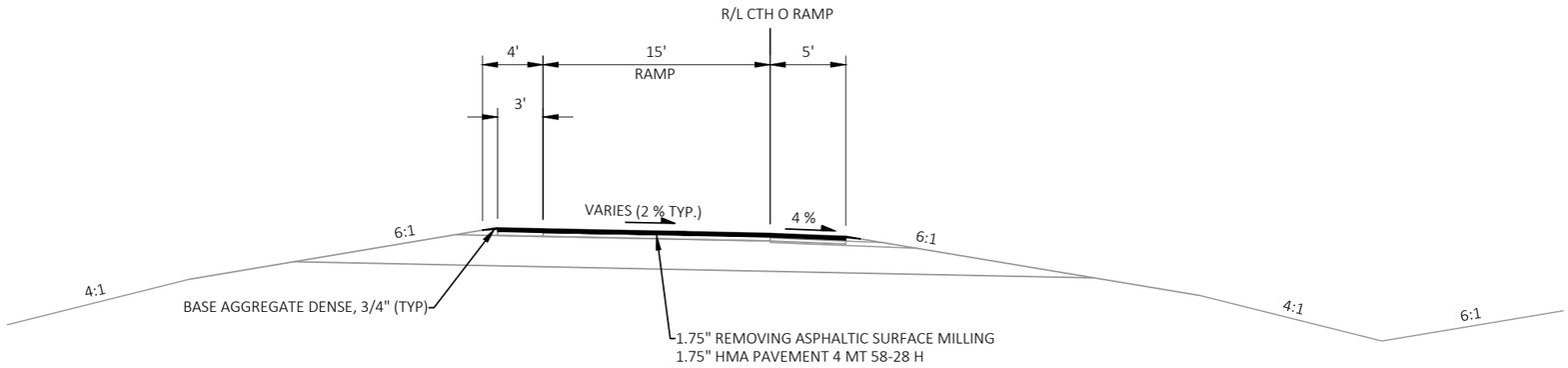


FINISHED TYPICAL SECTION - CTH O

STA 110O+75 - 113O+98
STA 116O+13 - 119O+59

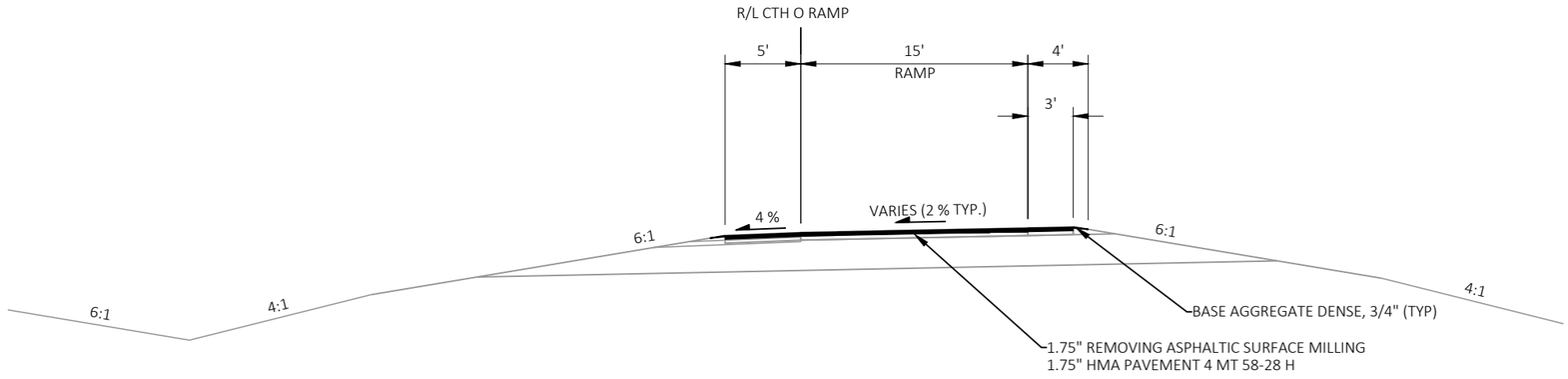
PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	TYPICAL SECTIONS	SHEET 15	E

2



FINISHED TYPICAL SECTION - CTH O SE & SW RAMPS

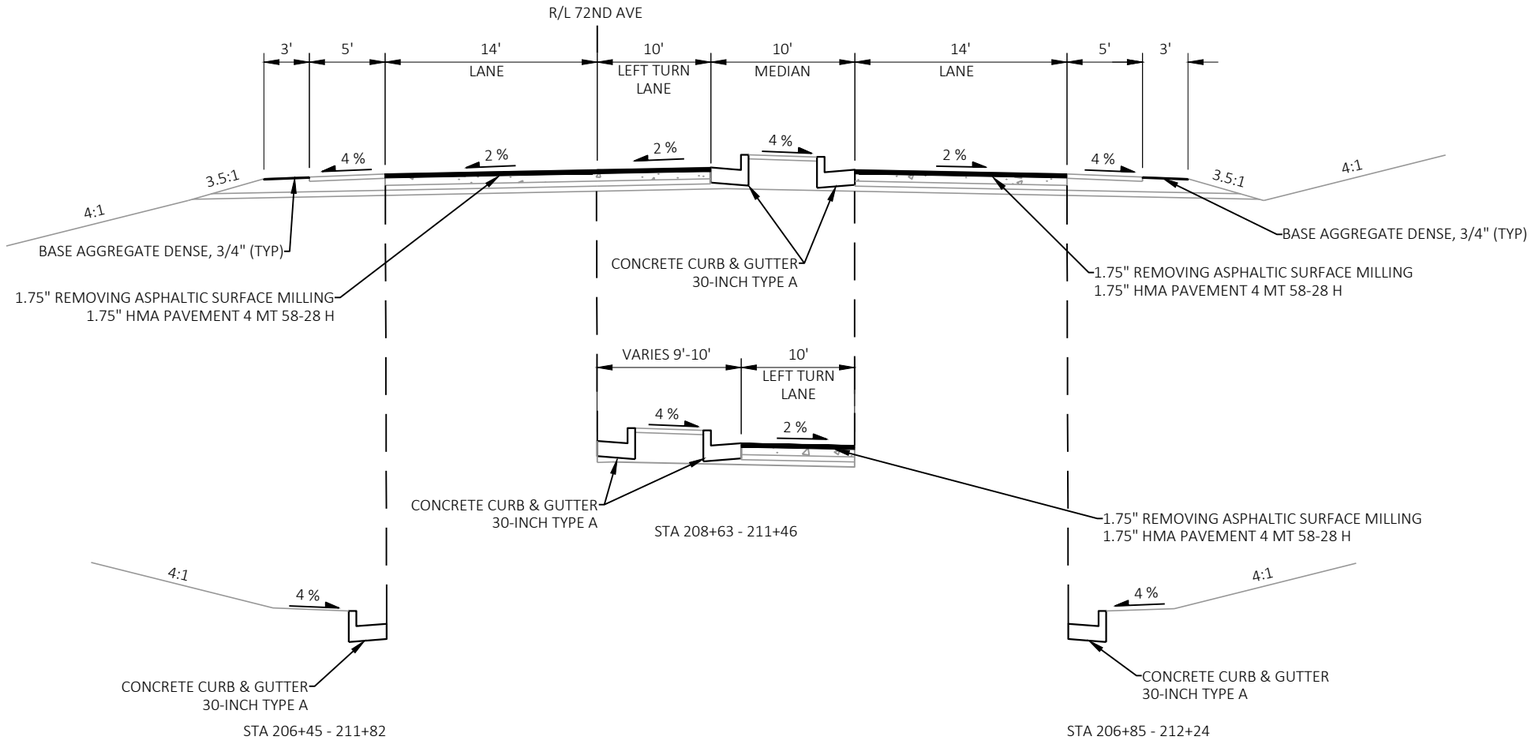
STA 1388SW+21 - 1402SW+32
STA 1402SE+13 - 1423SE+77



FINISHED TYPICAL SECTION - CTH O NE & NW RAMPS

STA 1378NW+31 - 1404NW+93
STA 1404NE+87 - 1420NE+74

2



FINISHED TYPICAL SECTION - 72ND AVE

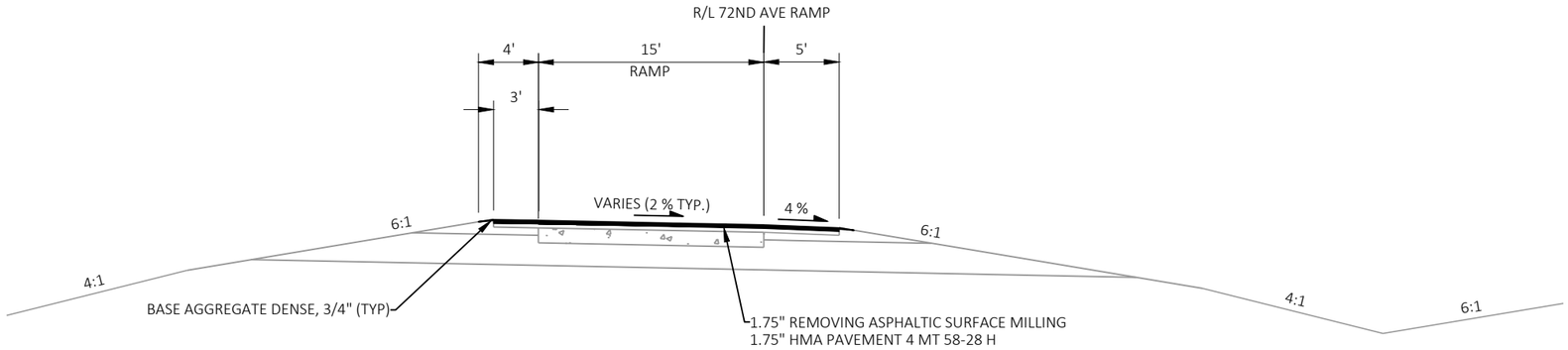
STA 206+60 - 214+27

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	TYPICAL SECTIONS	SHEET 17	E

FILE NAME : C:\CADDLIB\PW\HNTB_APACADA\GREATLAKES\D0382806\020301-TS.DWG
LAYOUT NAME - 020313-ts

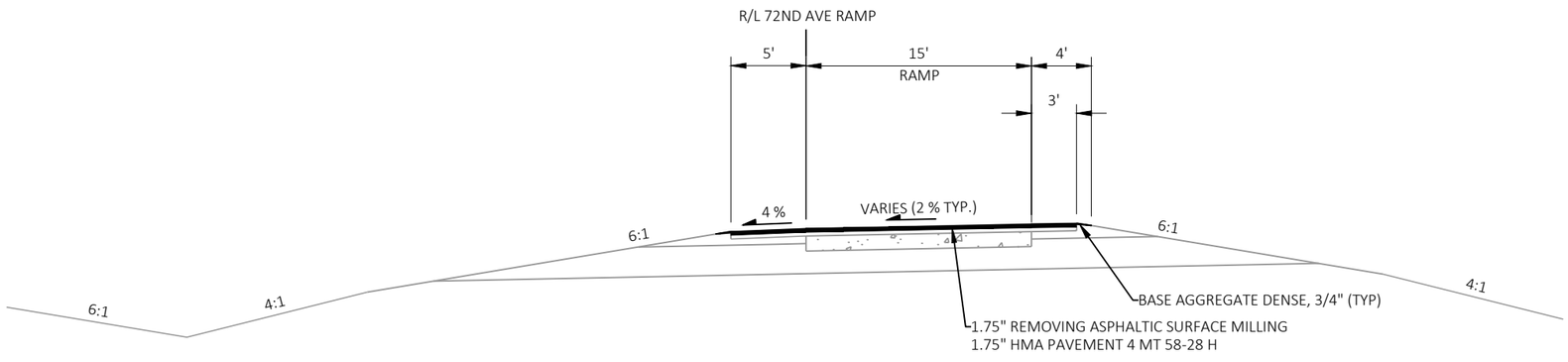
PLOT DATE : 1/15/2025 9:18 AM PLOT BY : ALLAN PACADA PLOT NAME : PLOT SCALE : 1 IN:10 FT

2



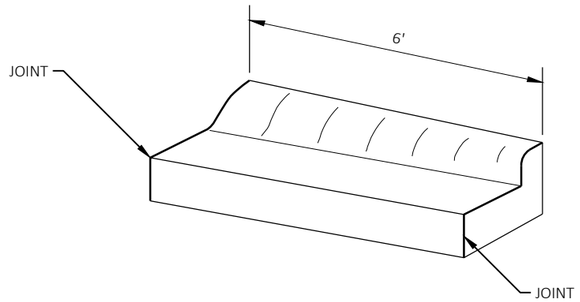
FINISHED TYPICAL SECTION - 72ND AVE SE & SW RAMPS

STA 1542SW+67 - 1558SW+05
STA 1557SE+58 - 1584SE+24



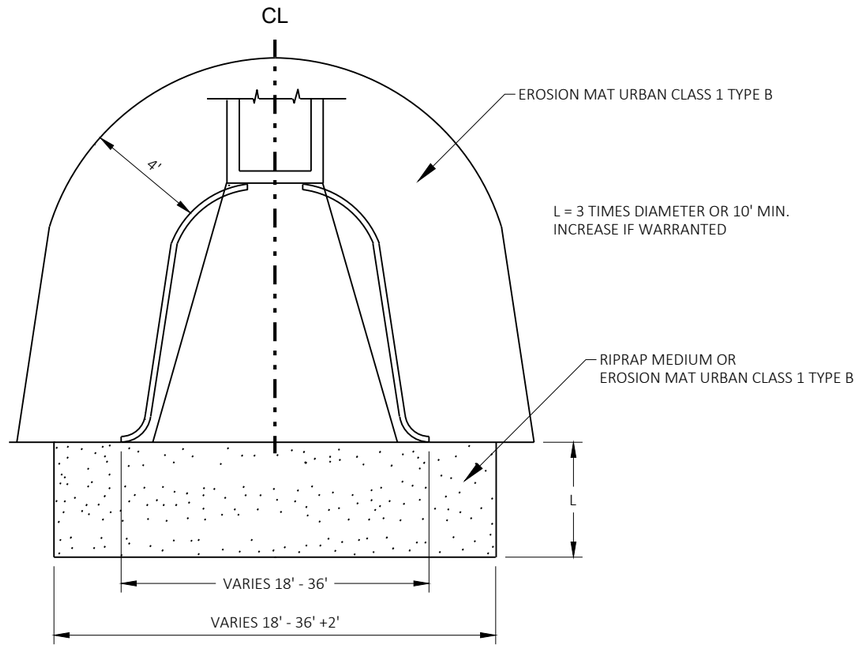
FINISHED TYPICAL SECTION - 72ND AVE NE & NW RAMPS

STA 1534NW+58 - 1559NW+08
STA 1559NE+25 - 1574NE+13

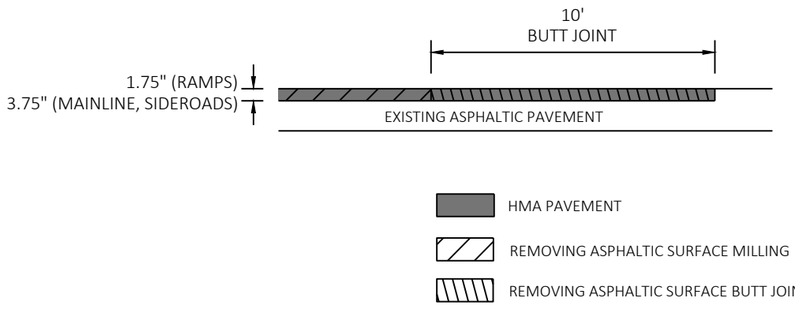


CURB AND GUTTER TRANSITION

36" TYPE A CURB & GUTTER TO 30" TYPE A CURB & GUTTER

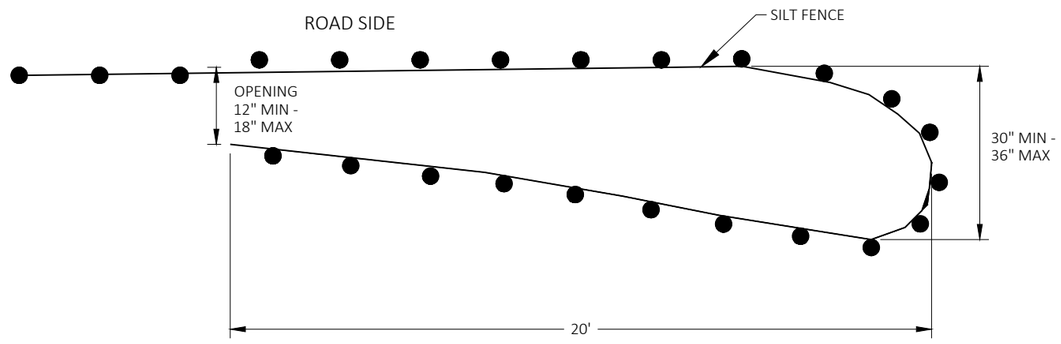


EROSION CONTROL AT PIPE ENDS



BUTT JOINT

MAINLINE, RAMPS, AND SIDE ROADS

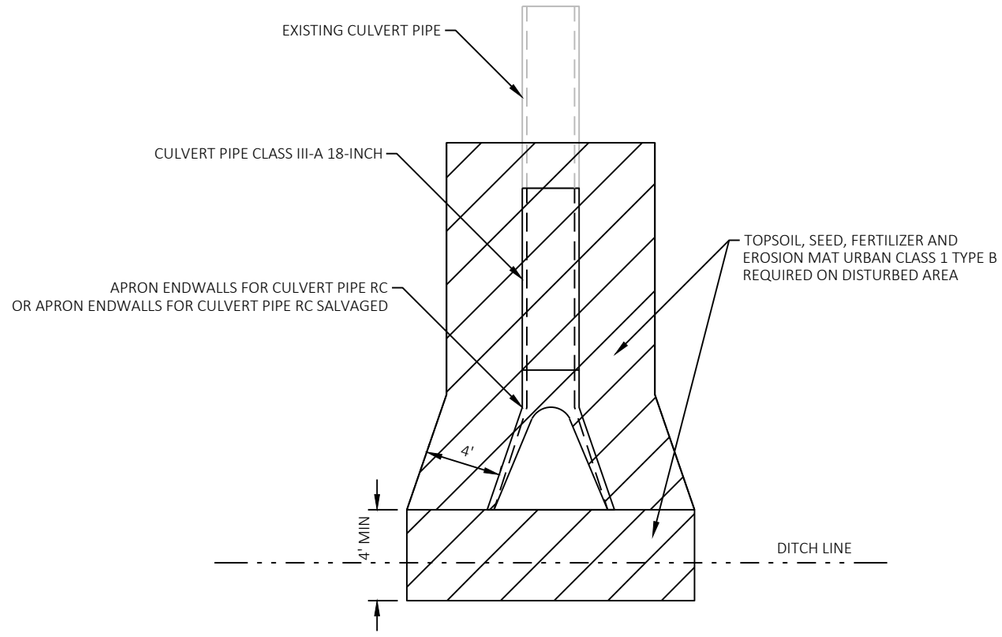


PLAN VIEW

TEMPORARY SMALL ANIMAL TURN-AROUND

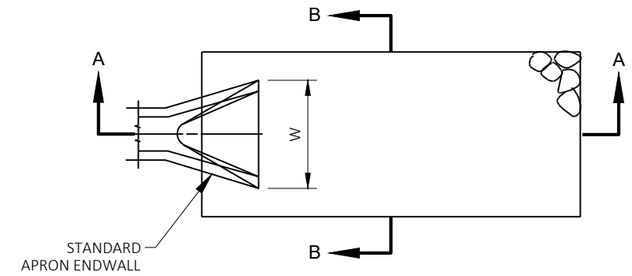
SEE EROSION CONTROL PLANS FOR LOCATIONS

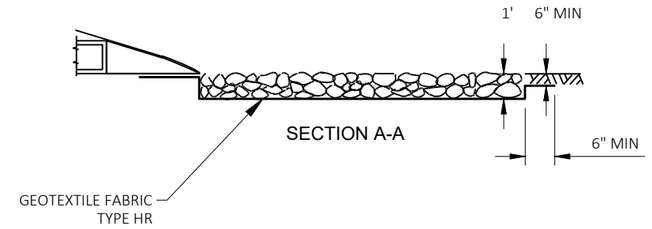
GENERAL NOTES:
SILT FENCE POSTS FOR THE TURN-AROUND SHOULD BE ON THE OUTSIDE OF THE TURN-AROUND. AND TRENCHED IN ACCORDING TO SILT FENCE REQUIREMENTS.

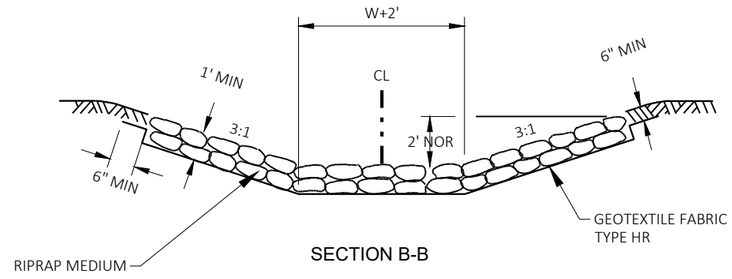


EROSION CONTROL FOR CROSS DRAIN RESTORATION

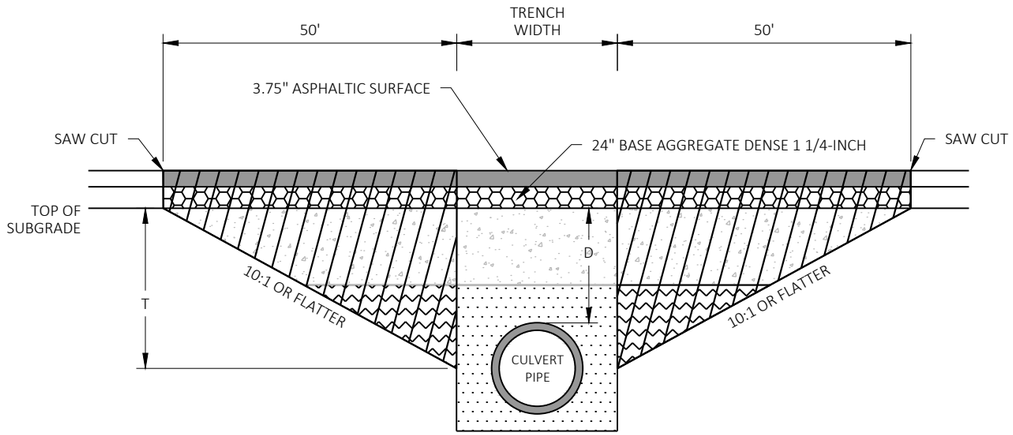
SEE MISCELLANEOUS QUANTITIES FOR LOCATIONS







RIP RAP AND GEOTEXTILE



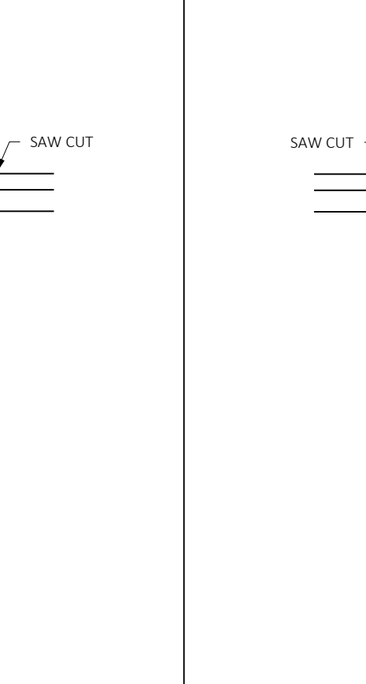
DEPTH D < 6 FT

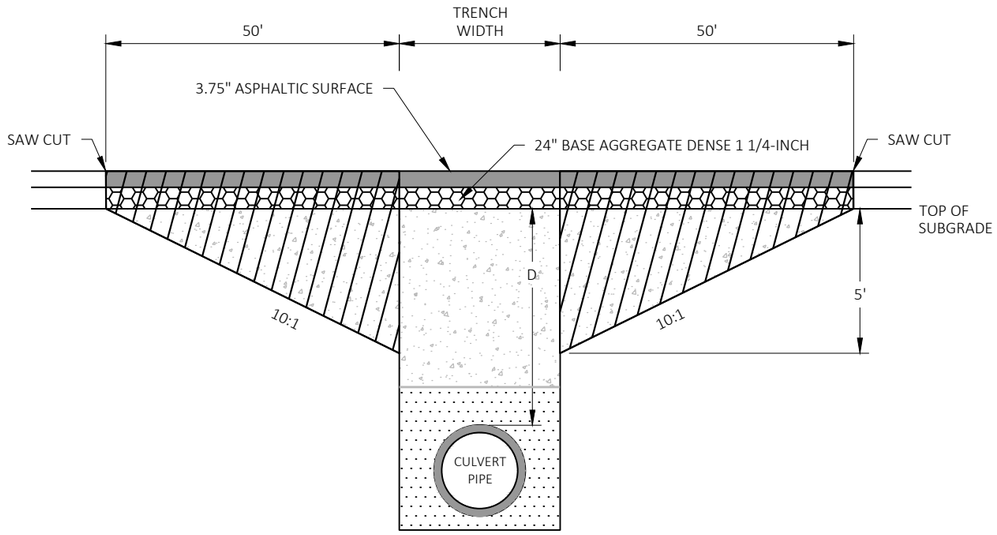
TRANSITION CUT DEPTH (T) = THE LESSER OF DEPTH TO CENTER OF PIPE OR 5 FT.
DO NOT EXTEND TRANSITION CUT BELOW HORIZONTAL CENTER OF PIPE.

CULVERT PIPE REPLACEMENT (DEPTH < 6FT)

SEE PLAN DETAILS FOR LOCATIONS

STH 29 CULVERT PIPE REPLACEMENT LOCATIONS	
STA	PIPE NO.
1202EB+84.8	37029002347
1458WB+19.0	37029002331
1575EB+27.5	37029002132
1634WB+66.0	37029002139
1649EB+68.1	37029002141





DEPTH D ≥ 6 FT

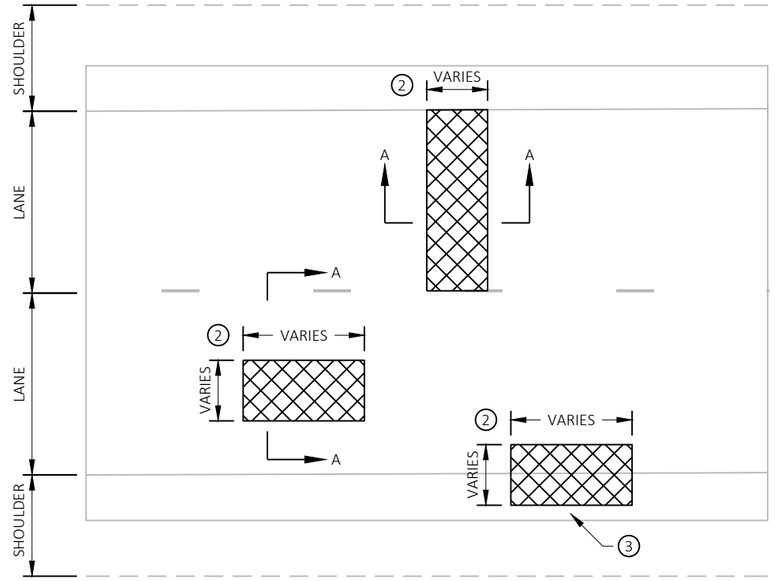
CULVERT PIPE REPLACEMENT (DEPTH ≥ 6FT)

SEE PLAN DETAILS FOR LOCATIONS

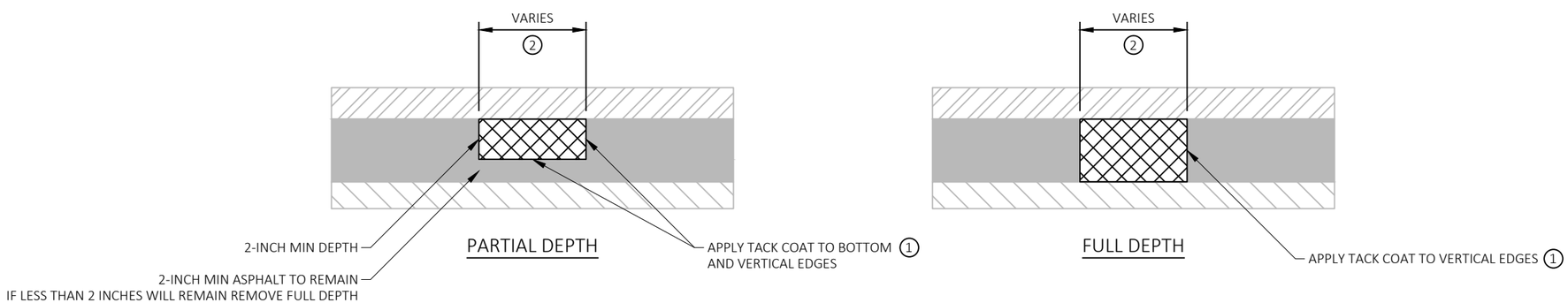
NOTES:

PERFORM REMOVING ASPHALTIC SURFACE MILLING PRIOR TO REMOVING DISTRESSED ASPHALTIC SURFACE MILLING

1. MILLED VERTICAL EDGES ARE ACCEPTABLE, SAW CUTS ARE NOT REQUIRED.
2. THE SMALLEST DIMENSION OF REMOVING DISTRESSED ASPHALTIC SURFACE MILLING IS 4 FEET IN ANY DIRECTION.
3. WHEN THE DISTANCE FROM THE EDGE OF PAVEMENT TO EDGE OF REMOVING DISTRESSED ASPHALTIC SURFACE MILLING IS LESS THAN 1-FOOT, EXTEND THE REMOVING DISTRESSED ASPHALTIC SURFACE MILLING TO THE EDGE OF PAVEMENT.



PLAN VIEW



SECTION A-A

REMOVING ASPHALTIC SURFACE MILLING

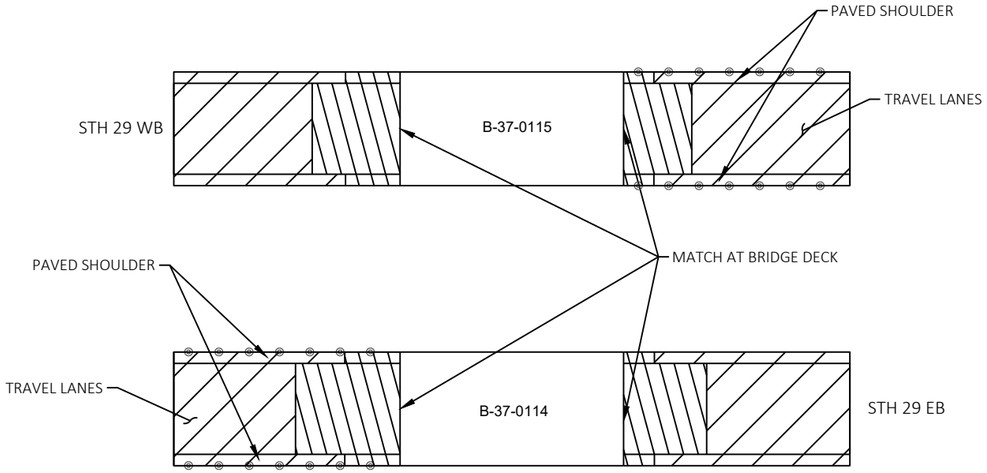
REMOVING DISTRESSED ASPHALTIC SURFACE MILLING
ASPHALTIC SURFACE PATCHING

EXISTING ASPHALT

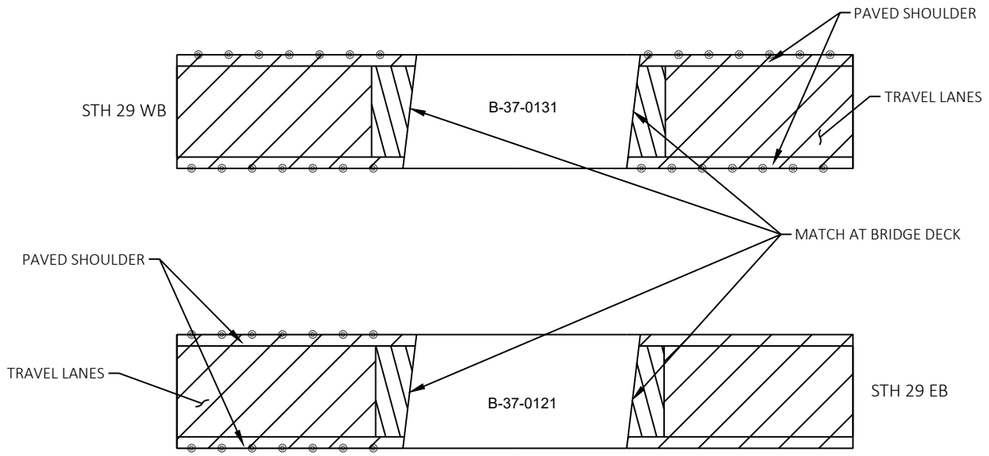
EXISTING BASE COURSE

REMOVING DISTRESSED ASPHALTIC SURFACE MILLING SPV.0180.02

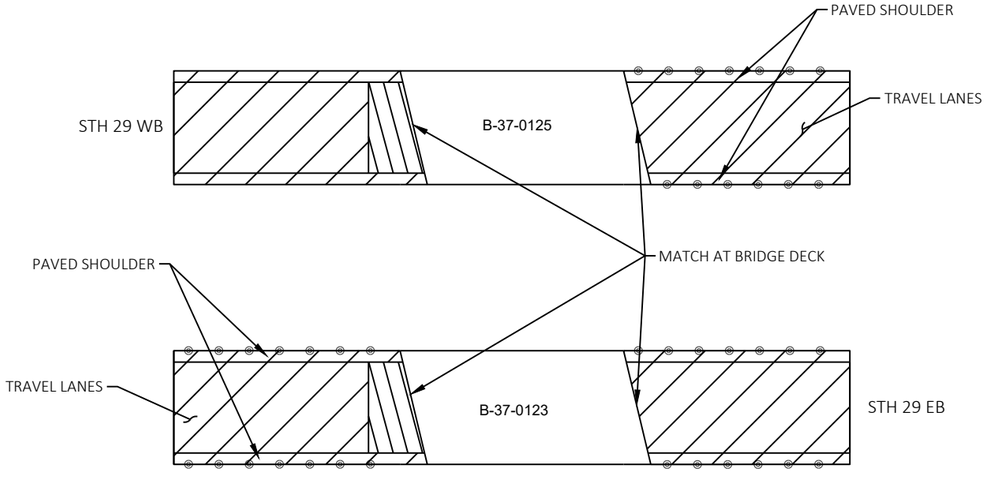
LOCATIONS AND LIMITS DETERMINED BY THE ENGINEER IN THE FIELD



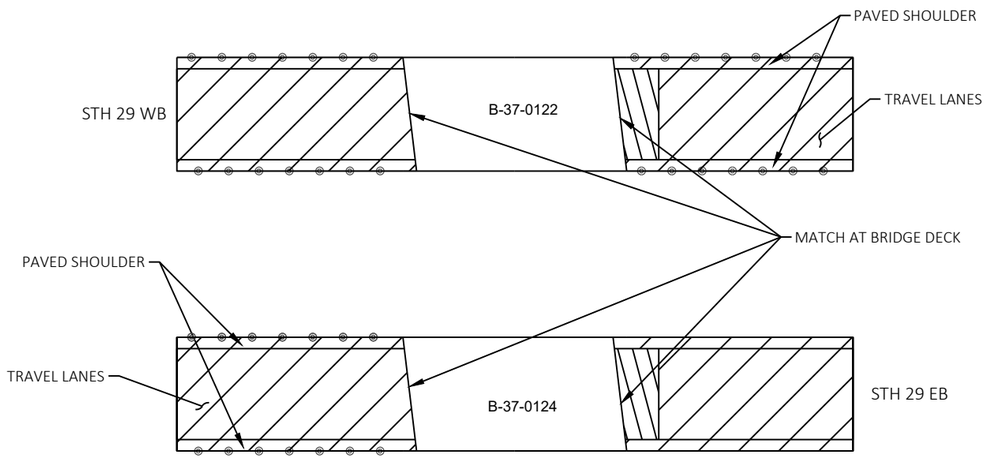
B-37-0114 & B-37-0115 OVER BIG RIB RVIVER



B-37-0131 & B-37-0121 OVER 72ND AVE



B-37-0125 & B-37-0123 OVER 48TH AVE



B-37-0122 & B-37-0124 OVER LITTLE RIB RIVER

STRUCTURE APPROACH
BUTT JOINT DETAILS

REMOVING ASPHALTIC SURFACE MILLING

REMOVING ASPHALTIC SURFACE BUTT JOINTS

2

SIGN

N

2

STH 29 WESTBOUND

GRADING SHAPING AND
FINISHING DRAINAGE DITCHES

GRADING SHAPING AND
FINISHING DRAINAGE DITCHES

1202

1203

1204

1202EB+84.8
25.7' LT
INV = 1213.22

1.1%

1203EB+48.8
25.2' LT
INV = 1212.50

SLOPE INTERCEPT, TYP

SLOPE INTERCEPT, TYP

1202

1203

1204

FOR INFORMATIONAL PURPOSES:
64 LF OF CULVERT PIPE CLASS III-A 18-INCH
2 EACH OF APRON ENDWALLS FOR CULVERT PIPE 18-INCH
1 EACH OF REMOVING SMALL PIPE CULVERT (18" CMCP)

STH 29 EASTBOUND

PROJECT NO: 1053-04-14	HWY: STH 29	COUNTY: MARATHON	CONSTRUCTION DETAILS: CULVERT 37029002347	SHEET 24	E

2

N

RIPRAP MEDIUM

SLOPE INTERCEPT, TYP

FOR INFORMATIONAL PURPOSES:
70 LF OF STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 24-INCH
1 EACH OF APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH
1 EACH OF REMOVING SMALL PIPE CULVERT (24" RCCP)

1458WB+21.2
59.5' LT
INV = 1149.84

1.5%

STH 29 WESTBOUND

1457

1458

1459

INL

INL

1457

1458

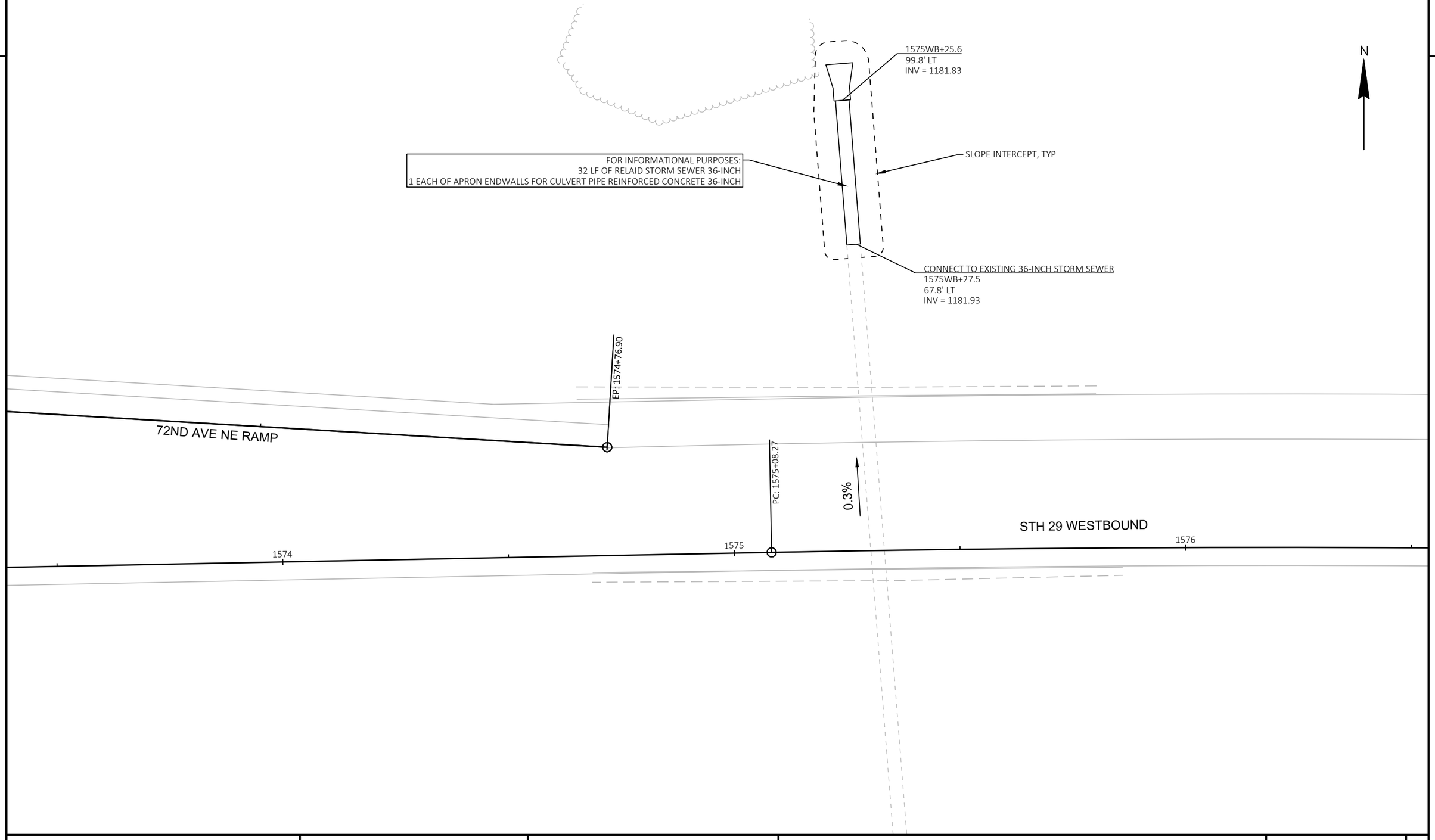
1459

CONNECT TO EXISTING STRUCTURE
1458WB+19.0
12.4' RT
RIM = 1259.42
INV = 1250.92

STH 29 EASTBOUND

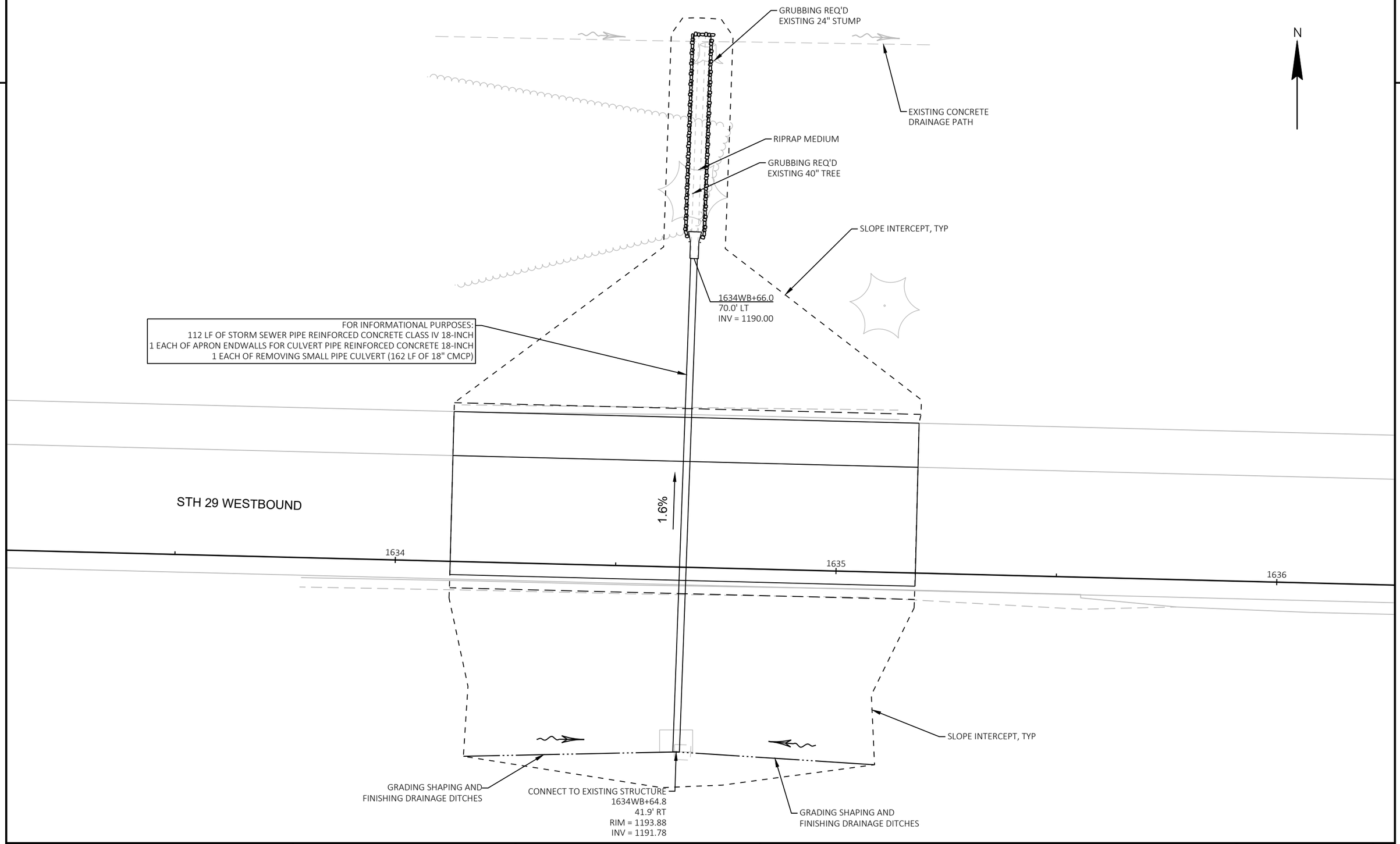
PROJECT NO: 1053-04-14	HWY: STH 29	COUNTY: MARATHON	CONSTRUCTION DETAILS: CULVERT 37029002331	SHEET 25	E

2



PROJECT NO: 1053-04-14	HWY: STH 29	COUNTY: MARATHON	CONSTRUCTION DETAILS: CULVERT 37029002132	SHEET 26	E

2



PROJECT NO: 1053-04-14	HWY: STH 29	COUNTY: MARATHON	CONSTRUCTION DETAILS: CULVERT 37029002139	SHEET 27	E

2

2

CONNECT TO EXISTING STRUCTURE
1649EB+68.2
43.1' LT
RIM = 1179.77
INV = 1173.67

GRADING SHAPING AND
FINISHING DRAINAGE DITCHES

GRADING SHAPING AND
FINISHING DRAINAGE DITCHES

SLOPE INTERCEPT, TYP

N

FOR INFORMATIONAL PURPOSES:
128 LF OF STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 24-INCH
1 EACH OF APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH
1 EACH OF REMOVING SMALL PIPE CULVERT (24" RCCP)

548

1649

1650

1651

STH 29 EASTBOUND

5.0%

GRADING SHAPING AND
FINISHING DRAINAGE DITCHES

1649EB+68.1
84.9' RT
INV = 1167.31

SLOPE INTERCEPT, TYP

EXISTING WETLANDS

WETLANDS

PROJECT NO: 1053-04-14	HWY: STH 29	COUNTY: MARATHON	CONSTRUCTION DETAILS: CULVERT 37029002141	SHEET 28	E

2

2

N

EXISTING R/W

SIGN

R/L STH 29 WB

STH 29 WB

WB 1200+00 WB 1201+00 WB 1202+00 WB 1203+00 WB 1204+00 WB 1205+00 WB 1206+00 WB 120

A

NL

SLOPE INTERCEPT

TEMPORARY SMALL ANIMAL TURN-AROUND

TEMPORARY SMALL ANIMAL TURN-AROUND

EB 1200+00 EB 1201+00 EB 1202+00 EB 1203+00 EB 1204+00 EB 1205+00 EB 1206+00 EB 120

STH 29 EB

R/L STH 29 EB

AP

SIGN

SIGN

EXISTING R/W

LEGEND

- EROSION MAT CLASS I, TYPE B URBAN
- SILT FENCE
- RIP RAP
- SLOPE INTERCEPT
- INLET PROTECTION
- A C D — INLET PROTECTION TYPE
- TEMPORARY DITCH CHECK
- SURFACE WATER FLOW
- CULVERT PIPE CHECK

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	EROSION CONTROL	SHEET 29	E

FILE NAME : C:\CADDLIB\PW\HNTB_APACADA\GREATLAKES\D0382806\022001-EC.DWG
LAYOUT NAME - 16

PLOT DATE : 1/10/2025 5:14 PM PLOT BY : ALLAN PACADA PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

2

N

EXISTING R/W

R/L STH 29 WB

STH 29 WB

1281+00 WB | 1282+00 WB | 1283+00 WB | 1284+00 WB | 1285+00 WB | 1286+00 WB | 1287+00 WB | 1288+00 WB

D D

1281+00 EB | 1282+00 EB | 1283+00 EB | 1284+00 EB | 1285+00 EB | 1286+00 EB | 1287+00 EB | 1288+00 EB

N 196427.416
E 229338.770

STH 29 EB

R/L STH 29 EB

BM1

SIGN

HMH

EXISTING R/W

SIGN

LEGEND

INLET PROTECTION

A C D INLET PROTECTION TYPE

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	EROSION CONTROL	SHEET 30	E

FILE NAME : C:\CADDLIB\PW\HNTB_APACADA\GREATLAKES\D0382806\022001-EC.DWG
LAYOUT NAME - 17

PLOT DATE : 1/10/2025 5:15 PM PLOT BY : ALLAN PACADA PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

2

N

152ND AVE

SIGN

EXISTING R/W

SIGN

POST

STH 29 WB

R/L STH 29 WB

1289+00 WB D | 1290+00 WB D | 1291+00 WB | 1292+00 WB | 1293+00 WB | 1294+00 WB | 1295+00 WB D | 1296+00 WB

1289+00 EB | 1290+00 EB D | 1291+00 EB D | 1292+00 EB | 1293+00 EB | 1294+00 EB | 1295+00 EB D | 1296+00 EB

STH 29 EB

R/L STH 29 EB

POST

GUY

EXISTING R/W

152ND AVE

SIGN

GUY

GUY POLE

LEGEND

INLET PROTECTION

A C D INLET PROTECTION TYPE

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	EROSION CONTROL	SHEET 31	E

FILE NAME : C:\CADDLIB\PW\HNTB_APACADA\GREATLAKES\D0382806\022001-EC.DWG
LAYOUT NAME - 18

PLOT DATE : 1/10/2025 5:17 PM PLOT BY : ALLAN PACADA PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

2

N

EXISTING R/W

STH 29 WB

R/L STH 29 WB

1297+00 WB | 1298+00 WB | 1299+00 WB | 1300+00 WB | 1301+00 WB | 1302+00 WB | 1303+00 WB | 1304+00 WB

1297+00 EB | 1298+00 EB | 1299+00 EB | 1300+00 EB | 1301+00 EB | 1302+00 EB | 1303+00 EB | 1304+00 EB

D

D

R/L STH 29 EB

STH 29 EB

EXISTING R/W

LEGEND

INLET PROTECTION

A C D INLET PROTECTION TYPE

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	EROSION CONTROL	SHEET 32	E

FILE NAME : C:\CADDLIB\PW\HNTB_APACADA\GREATLAKES\D0382806\022001-EC.DWG
LAYOUT NAME - 19

PLOT DATE : 1/10/2025 5:18 PM PLOT BY : ALLAN PACADA PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

2

N

EXISTING R/W

B.G.

STH 29 WB

R/L STH 29 WB

1305+00 WB D

1306+00 WB

1307+00 WB

1308+00 WB

1309+00 WB

1310+00 WB D

1311+00 WB

1312+

1305+00 EB D

1306+00 EB

1307+00 EB

1308+00 EB

1309+00 EB

1310+00 EB D

1311+00 EB

1312+

R/L STH 29 EB

STH 29 EB

EXISTING R/W

WELL

LEGEND

INLET PROTECTION

A C D INLET PROTECTION TYPE

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	EROSION CONTROL	SHEET 33	E

2

2

N

CRITTER CV

POST

STATUE

STATUE

EXISTING R/W

GUY

GUY

GUY

STH 29 WB

R/L STH 29 WB

WB 1314+00 WB 1315+00 WB 1316+00 WB 1317+00 WB 1318+00 WB 1319+00 WB D 1320+00 WB 132

EB 1314+00 EB 1315+00 EB 1316+00 EB 1317+00 EB 1318+00 EB 1319+00 EB D 1320+00 EB 13

STH 29 EB

R/L STH 29 EB

ST

EXISTING R/W

GUY

SIGN

SEPV

WELL

144TH AVE

WELL

WELL

POST POST POST

GUY

BM8

SEPC

SEPV

SEPTIC

RUINS

SIGN

LEGEND

INLET PROTECTION

A C D INLET PROTECTION TYPE

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	EROSION CONTROL	SHEET 34	E

FILE NAME : C:\CADDLIB\PW\HNTB_APACADA\GREATLAKES\D0382806\022001-EC.DWG
LAYOUT NAME - 21

PLOT DATE : 1/10/2025 5:20 PM PLOT BY : ALLAN PACADA PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

2

2

N

GUY

GV

EXISTING R/W

GUY

GUY

SIGN

STH 29 WB

R/L STH 29 WB

321+00 WB | 1322+00 WB | 1323+00 WB | 1324+00 WB | 1325+00 WB | 1326+00 WB | 1327+00 WB | 1328+00 WB

D D D D

321+00 EB | 1322+00 EB | 1323+00 EB | 1324+00 EB | 1325+00 EB | 1326+00 EB | 1327+00 EB | 1328+00 EB

STH 29 EB

R/L STH 29 EB

EXISTING R/W

LEGEND

INLET PROTECTION

A C D INLET PROTECTION TYPE

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	EROSION CONTROL	SHEET 35	E

FILE NAME : C:\CADDLIB\PW\HNTB_APACADA\GREATLAKES\D0382806\022001-EC.DWG
LAYOUT NAME - 22

PLOT DATE : 1/10/2025 5:22 PM PLOT BY : ALLAN PACADA PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

2

N

EXISTING R/W

GUY

GUY

GUY

R/L STH 29 WB

STH 29 WB

1329+00 WB

1330+00 WB

1331+00 WB

1332+00 WB

1333+00 WB

1334+00 WB

1335+00 WB

1336+00 WB

1329+00 EB

1330+00 EB

1331+00 EB

1332+00 EB

1333+00 EB

1334+00 EB

1335+00 EB

1336+00 EB

D

D

D

D

D

STH 29 EB

R/L STH 29 EB

EXISTING R/W

LEGEND

INLET PROTECTION

A C D INLET PROTECTION TYPE

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	EROSION CONTROL	SHEET 36	E

FILE NAME : C:\CADDLIB\PW\HNTB_APACADA\GREATLAKES\D0382806\022001-EC.DWG
LAYOUT NAME - 23

PLOT DATE : 1/10/2025 5:23 PM PLOT BY : ALLAN PACADA PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

2

N

136TH AVE

EXISTING R/W

R/L STH 29 WB

STH 29 WB

1337+00 WB 1338+00 WB 1339+00 WB 1340+00 WB 1341+00 WB 1342+00 WB 1343+00 WB 1344+00 WB

1337+00 EB 1338+00 EB 1339+00 EB 1340+00 EB 1341+00 EB 1342+00 EB 1343+00 EB 1344+00 EB

STH 29 EB

R/L STH 29 EB

EXISTING R/W

SIGN

GUY

GUY

GV

BM3

LEGEND

INLET PROTECTION

A C D INLET PROTECTION TYPE

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	EROSION CONTROL	SHEET 37	E

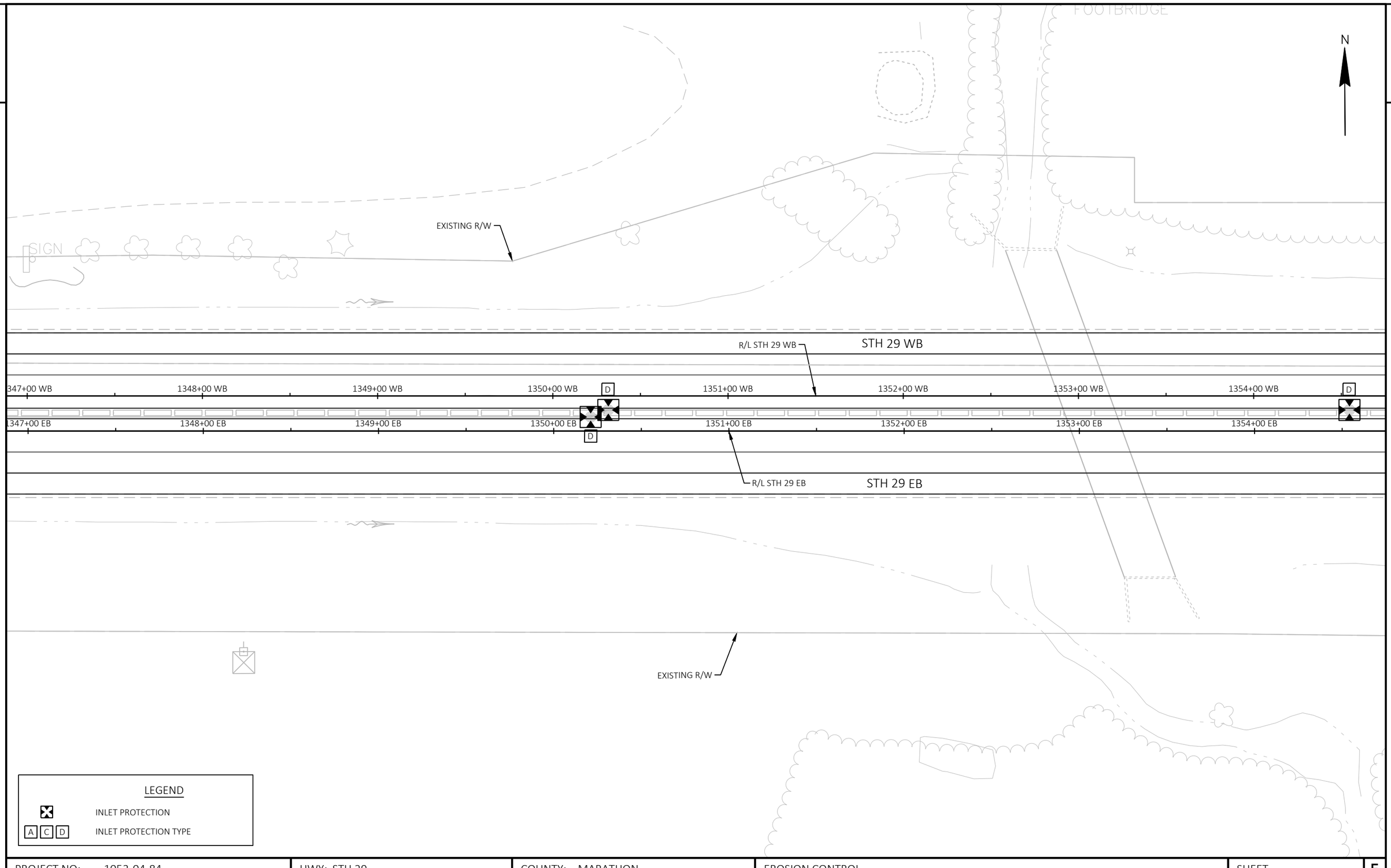
FILE NAME : C:\CADDLIB\PW\HNTB_APACADA\GREATLAKES\D0382806\022001-EC.DWG
LAYOUT NAME - 24

PLOT DATE : 1/10/2025 5:24 PM PLOT BY : ALLAN PACADA PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

2

2



PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	EROSION CONTROL	SHEET 38	E

FILE NAME : C:\CADDLIB\PW\HNTB_APACADA\GREATLAKES\D0382806\022001-EC.DWG
LAYOUT NAME - 25

PLOT DATE : 1/10/2025 5:25 PM PLOT BY : ALLAN PACADA PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

2

N

EXISTING R/W

R/L STH 29 WB

STH 29 WB

1355+00 WB | 1356+00 WB | 1357+00 WB | 1358+00 WB | 1359+00 WB | 1360+00 WB | 1361+00 WB | 1362+00 WB

1355+00 EB | 1356+00 EB | 1357+00 EB | 1358+00 EB | 1359+00 EB | 1360+00 EB | 1361+00 EB | 1362+00 EB

R/L STH 29 EB

STH 29 EB

EXISTING R/W

24" RCP

LEGEND

INLET PROTECTION

A C D INLET PROTECTION TYPE

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	EROSION CONTROL	SHEET 39	E

FILE NAME : C:\CADDLIB\PW\HNTB_APACADA\GREATLAKES\D0382806\022001-EC.DWG
LAYOUT NAME - 26

PLOT DATE : 1/10/2025 5:26 PM PLOT BY : ALLAN PACADA PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

2

2

N

128TH AVE

EXISTING R/W

SIGN

SIGN

SIGN

R/L STH 29 WB

STH 29 WB

1363+00 WB | 1364+00 WB | 1365+00 WB | 1366+00 WB | 1367+00 WB | 1368+00 WB | 1369+00 WB | 1370+00 WB

D D D D

1363+00 EB | 1364+00 EB | 1365+00 EB | 1366+00 EB | 1367+00 EB | 1368+00 EB | 1369+00 EB | 1370+00 EB

R/L STH 29 EB

STH 29 EB

GVT

EXISTING R/W

SIGN

LEGEND

INLET PROTECTION

A C D INLET PROTECTION TYPE

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	EROSION CONTROL	SHEET 40	E

FILE NAME : C:\CADDLIB\PW\HNTB_APACADA\GREATLAKES\D0382806\022001-EC.DWG
LAYOUT NAME - 27

PLOT DATE : 1/10/2025 5:27 PM PLOT BY : ALLAN PACADA PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

N

EXISTING R/W

N 120TH AVE

WELL

GUY

GUY

1379+00 NW 1380+00 NW 1381+00 NW 1382+00 NW 1383+00 NW 1384+00 NW 1385+00 NW 1386+00 NW

STH 29 WB

R/L STH 29 WB

1379+00 WB 1380+00 WB 1381+00 WB 1382+00 WB 1383+00 WB 1384+00 WB 1385+00 WB 1386+00 WB

1379+00 EB 1380+00 EB 1381+00 EB 1382+00 EB 1383+00 EB 1384+00 EB 1385+00 EB 1386+00 EB

D D D D D

STH 29 EB

R/L STH 29 EB

EXISTING R/W

GUY

GV

LEGEND

INLET PROTECTION

A C D INLET PROTECTION TYPE

2

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	EROSION CONTROL	SHEET 41	E

FILE NAME : C:\CADDLIB\PW\HNTB_APACADA\GREATLAKES\D0382806\022001-EC.DWG
LAYOUT NAME - 28

PLOT DATE : 1/10/2025 5:29 PM PLOT BY : ALLAN PACADA PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

N

SEPTIC

EXISTING R/W

N 120TH AVE

SIGN

GV

STH 29 WB

1387+00 NW 1388+00 NW 1389+00 NW 1390+00 NW 1391+00 NW 1392+00 NW 1393+00 NW 1394+00 NW

R/L CTH O NW RAMP

CTH O NW RAMP

R/L STH 29 WB

1387+00 WB 1388+00 WB 1389+00 WB 1390+00 WB 1391+00 WB 1392+00 WB 1393+00 WB 1394+00 WB

1387+00 EB 1388+00 EB 1389+00 EB 1390+00 EB 1391+00 EB 1392+00 EB 1393+00 EB 1394+00 EB

D

STH 29 EB

R/L STH 29 EB

R/L CTH O SW RAMP

1388+00 SW 1389+00 SW 1390+00 SW 1391+00 SW 1392+00 SW 1393+00 SW 1394+00 SW

CTH O SW RAMP

BM4

SIGN

GV

EXISTING R/W

LEGEND

INLET PROTECTION

A C D INLET PROTECTION TYPE

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	EROSION CONTROL	SHEET 42	E

FILE NAME : C:\CADDLIB\PW\HNTB_APACADA\GREATLAKES\D0382806\022001-EC.DWG
LAYOUT NAME - 29

PLOT DATE : 1/10/2025 5:30 PM PLOT BY : ALLAN PACADA PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

N

EXISTING R/W

1400+00 NW

1399+00 NW

1398+00 NW

CTH O NW RAMP

1397+00 NW

1396+00 NW

1395+00 NW

R/L CTH O NW RAMP

SIGN

STH 29 WB

R/L STH 29 WB

1395+00 WB | 1396+00 WB | 1397+00 WB | 1398+00 WB | 1399+00 WB | 1400+00 WB | 1401+00 WB | 1402+

1395+00 EB | 1396+00 EB | 1397+00 EB | 1398+00 EB | 1399+00 EB | 1400+00 EB | 1401+00 EB | 1402+

STH 29 EB

R/L STH 29 EB

1395+00 SW

1396+00 SW

1397+00 SW

CTH O SW RAMP

1398+00 SW

1399+00 SW

1400+00

R/L CTH O SW RAMP

EXISTING R/W

LEGEND

INLET PROTECTION

A C D INLET PROTECTION TYPE

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	EROSION CONTROL	SHEET 43	E

2

N

CTH O

GUY

GUY

STH 29 WB

R/L STH 29 WB

00 WB | 1403+00 WB | 1404+00 WB | 1405+00 WB | 1406+00 WB | 1407+00 WB | 1408+00 WB | 1409+00 WB

D D D D

00 EB | 1403+00 EB | 1404+00 EB | 1405+00 EB | 1406+00 EB | 1407+00 EB | 1408+00 EB | 1409+00 EB

STH 29 EB

R/L STH 29 EB

1409+00 NE

CTH O NE RAMP

1410+00

R/L CTH O NE RAMP

STRUCTURE B-37-0408

CTH O

R/L CTH O SE RAMP

1406+00 SE

1407+00 SE

CTH O SE RAMP

1408+00 SE

1409+00 SE

1410+00 SE

LEGEND

INLET PROTECTION

A C D INLET PROTECTION TYPE

2

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	EROSION CONTROL	SHEET 44	E

FILE NAME : C:\CADDLIB\PW\HNTB_APACADA\GREATLAKES\D0382806\022001-EC.DWG
LAYOUT NAME - 31

PLOT DATE : 1/10/2025 5:32 PM PLOT BY : ALLAN PACADA PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

2

N

NE

1411+00 NE

1412+00 NE

1413+00 NE

1414+00 NE

1415+00 NE

1416+00 NE

1417+00 NE

1418+00 N

R/L CTH O NE RAMP

CTH O NE RAMP

EXISTING R/W

STH 29 WB

R/L STH 29 WB

1410+00 WB

1411+00 WB

1412+00 WB

1413+00 WB

1414+00 WB

1415+00 WB

1416+00 WB

1417+00 WB

1410+00 EB

1411+00 EB

1412+00 EB

1413+00 EB

1414+00 EB

1415+00 EB

1416+00 EB

1417+00 EB

R/L STH 29 EB

STH 29 EB

CTH O SE RAMP

1411+00 SE

1412+00 SE

1413+00 SE

1414+00 SE

1415+00 SE

1416+00 SE

1417+00 SE

1418+00 S

R/L CTH O SE RAMP

SIGN

SIGN

EXISTING R/W

LEGEND

INLET PROTECTION

A C D INLET PROTECTION TYPE

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	EROSION CONTROL	SHEET 45	E

2

2

N

EXISTING R/W

GUY

GUY

R/L CTH O NE RAMP

1419+00 NE

1420+00 NE

CTH O NE RAMP

STH 29 WB

R/L STH 29 WB

1418+00 WB | 1419+00 WB | 1420+00 WB | 1421+00 WB | 1422+00 WB | 1423+00 WB | 1424+00 WB | 1425+00 WB

D D D

1418+00 EB | 1419+00 EB | 1420+00 EB | 1421+00 EB | 1422+00 EB | 1423+00 EB | 1424+00 EB | 1425+00 EB

CTH O SE RAMP

1419+00 SE

1420+00 SE

STH 29 EB

1421+00 SE

R/L STH 29 EB

1422+00 SE

1423+00 SE

1424+00 SE

1425+00 SE

SIGN

BM10

EXISTING R/W

LEGEND

INLET PROTECTION

A C D INLET PROTECTION TYPE

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	EROSION CONTROL	SHEET 46	E

FILE NAME : C:\CADDLIB\PW\HNTB_APACADA\GREATLAKES\D0382806\022001-EC.DWG
LAYOUT NAME - 33

PLOT DATE : 1/10/2025 5:35 PM PLOT BY : ALLAN PACADA PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

2

N

EXISTING R/W

GUY

30" RCP

30" RCP

STH 29 WB

R/L STH 29 WB

1426+00 WB | 1427+00 WB | 1428+00 WB | 1429+00 WB | 1430+00 WB | 1431+00 WB | 1432+00 WB | 1433+00 WB

D D D

1426+00 EB | 1427+00 EB | 1428+00 EB | 1429+00 EB | 1430+00 EB | 1431+00 EB | 1432+00 EB | 1433+00 EB

R/L STH 29 EB

STH 29 EB

SIGN

EXISTING R/W

LEGEND

INLET PROTECTION

A C D INLET PROTECTION TYPE

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	EROSION CONTROL	SHEET 47	E

2

2

N

EXISTING R/W

GUY

GV

CHICKEN LN

42" RCP

STH 29 WB

R/L STH 29 WB

1434+00 WB | 1435+00 WB | 1436+00 WB | 1437+00 WB | 1438+00 WB | 1439+00 WB | 1440+00 WB | 1441+00 WB

D D D

1434+00 EB | 1435+00 EB | 1436+00 EB | 1437+00 EB | 1438+00 EB | 1439+00 EB | 1440+00 EB | 1441+00 EB

STH 29 EB

R/L STH 29 EB

SIGN

PACKER DR

EXISTING R/W

LEGEND

INLET PROTECTION

A C D INLET PROTECTION TYPE

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	EROSION CONTROL	SHEET 48	E

FILE NAME : C:\CADDLIB\PW\HNTB_APACADA\GREATLAKES\D0382806\022001-EC.DWG
LAYOUT NAME - 35

PLOT DATE : 1/10/2025 5:37 PM PLOT BY : ALLAN PACADA PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

2

2

N

EXISTING R/W

STH 29 WB

R/L STH 29 WB

1442+00 WB D D 1443+00 WB 1444+00 WB 1445+00 WB 1446+00 WB 1447+00 WB D D 1448+00 WB 1449+00 WB

1442+00 EB 1443+00 EB 1444+00 EB 1445+00 EB 1446+00 EB 1447+00 EB 1448+00 EB 1449+00 EB

STH 29 EB

R/L STH 29 EB

BM11

EXISTING R/W

SIGNS

GUY

PACKER DR

LEGEND

INLET PROTECTION

A C D INLET PROTECTION TYPE

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	EROSION CONTROL	SHEET 49	E

2

2

LEGEND

- EROSION MAT CLASS I, TYPE B URBAN
- SILT FENCE
- RIP RAP
- SLOPE INTERCEPT
- INLET PROTECTION
- A C D INLET PROTECTION TYPE

N

EXISTING R/W

-AROUND

SLOPE INTERCEPT

TEMPORARY SMALL ANIMAL TURN-AROUND

R/L STH 29 WB

STH 29 WB

1458+00 WB

1459+00 WB

1460+00 WB

1461+00 WB

1462+00 WB

1463+00 WB

1464+00 WB

1458+00 EB

1459+00 EB

1460+00 EB

1461+00 EB

1462+00 EB

1463+00 EB

1464+00 EB

STH 29 EB

R/L STH 29 EB

EXISTING R/W

PACKER DR

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	EROSION CONTROL	SHEET 50	E

2

2

LEGEND

INLET PROTECTION

A C D INLET PROTECTION TYPE

SURFACE WATER FLOW

N

EXISTING R/W

R/L STH 29 WB

STH 29 WB

1468+00 WB

1469+00 WB

1470+00 WB

1471+00 WB

1472+00 WB

1473+00 WB

1474+00 WB

1475+00

1468+00 EB

1469+00 EB

1470+00 EB

1471+00 EB

1472+00 EB

1473+00 EB

1474+00 EB

1475+00 EB

A

STH 29 EB

R/L STH 29 EB

EXISTING R/W

GUY

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	EROSION CONTROL	SHEET 51	E

FILE NAME : C:\CADDLIB\PW\HNTB_APACADA\GREATLAKES\D0382806\022001-EC.DWG
LAYOUT NAME - 39

PLOT DATE : 1/10/2025 5:41 PM PLOT BY : ALLAN PACADA PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

2

2

EXISTING R/W

R/L STH 29 WB

STH 29 WB

TEMPORARY SMALL ANIMAL TURN-AROUND

TEMPORARY SMALL ANIMAL TURN-AROUND

WB 1478+00 WB 1479+00 WB 1480+00 WB 1481+00 WB 1482+00 WB 1483+00 WB 1484+00 WB

SLOPE INTERCEPT

A

1478+00 EB 1479+00 EB 1480+00 EB 1481+00 EB 1482+00 EB 1483+00 EB 1484+00 EB 1485+00 E

STH 29 EB

R/L STH 29 EB

EXISTING R/W

LEGEND

- EROSION MAT CLASS I, TYPE B URBAN
- SLOPE INTERCEPT
- INLET PROTECTION
- A C D — INLET PROTECTION TYPE
- TEMPORARY DITCH CHECK
- SURFACE WATER FLOW

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	EROSION CONTROL	SHEET 52	E

FILE NAME : C:\CADDLIB\PW\HNTB_APACADA\GREATLAKES\D0382806\022001-EC.DWG
LAYOUT NAME - 40

PLOT DATE : 1/10/2025 5:42 PM PLOT BY : ALLAN PACADA PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

2

N

R/L 72ND AVE NW RAMP

EXISTING R/W

1552+00 NW
1553+00 NW
1554+00 NW
1555+00 NW
1556+00 NW
1557+00 NW
1558+00 NW
1559+00 NW

72ND AVE NW RAMP

A
INL

TEMPORARY SMALL ANIMAL TURN-AROUND
SLOPE INTERCEPT
TEMPORARY SMALL ANIMAL TURN-AROUND

STRUCTURE
B-37-0131

STH 29 WB

R/L STH 29 WB

1552+00 WB
1553+00 WB
1554+00 WB
1555+00 WB
1556+00 WB
1557+00 WB
1558+00 WB
1559+00 WB

SLOPE INTERCEPT
TEMPORARY SMALL ANIMAL TURN-AROUND
TEMPORARY SMALL ANIMAL TURN-AROUND

72ND AVE

1552+00 EB
1553+00 EB
1554+00 EB
1555+00 EB
1556+00 EB
1557+00 EB
1558+00 EB
1559+00 EB

STH 29 EB

R/L STH 29 EB

STRUCTURE
B-37-0121

SLOPE INTERCEPT

TEMPORARY SMALL ANIMAL TURN-AROUND

SILT FENCE WITH
ROCK BAG RELIEF

TEMPORARY SMALL ANIMAL TURN-AROUND

LEGEND

- EROSION MAT CLASS I, TYPE B URBAN
- SILT FENCE
- SLOPE INTERCEPT
- INLET PROTECTION
- A C D — INLET PROTECTION TYPE
- TEMPORARY DITCH CHECK
- SURFACE WATER FLOW

R/L 72ND AVE SW RAMP

1552+00 SW
1553+00 SW
1554+00 SW

72ND AVE SW RAMP

I SIGN

2

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	EROSION CONTROL	SHEET 53	E

FILE NAME : C:\CADDLIB\PW\HNTB_APACADA\GREATLAKES\D0382806\022001-EC.DWG
LAYOUT NAME - 41

PLOT DATE : 1/10/2025 5:43 PM PLOT BY : ALLAN PACADA PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

LEGEND

- EROSION MAT CLASS I, TYPE B URBAN
- SILT FENCE
- SLOPE INTERCEPT
- INLET PROTECTION
- A C D — INLET PROTECTION TYPE
- TEMPORARY DITCH CHECK
- SURFACE WATER FLOW

N

SILT FENCE WITH ROCK RELIEF BAG

SLOPE INTERCEPT

EXISTING R/W

1559+00 NW

1560+00 NE

1561+00 NE

1562+00 NE

1563+00 NE

1564+00 NE

1565+00 NE

1566+00 NE

72ND AVE NE RAMP

R/L 72ND AVE NE RAMP

STRUCTURE B-37-0131

R/L STH 29 WB

STH 29 WB

1559+00 WB | 1560+00 WB | 1561+00 WB | 1562+00 WB | 1563+00 WB | 1564+00 WB | 1565+00 WB | 1566+00 WB

SLOPE INTERCEPT

72ND AVE

1559+00 EB | 1560+00 EB | 1561+00 EB | 1562+00 EB | 1563+00 EB | 1564+00 EB | 1565+00 EB | 1566+00 EB

STH 29 EB

R/L STH 29 EB

STRUCTURE B-37-0121

R/L 72ND AVE SE RAMP

72ND AVE SE RAMP

1564+00 SE

1565+00 SE

1566+00 SE

EXISTING R/W

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	EROSION CONTROL	SHEET 54	E

FILE NAME : C:\CADDLIB\PW\HNTB_APACADA\GREATLAKES\D0382806\022001-EC.DWG
LAYOUT NAME - 42

PLOT DATE : 1/10/2025 5:44 PM PLOT BY : ALLAN PACADA PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

2

EXISTING R/W

N

R/L 72ND AVE NE RAMP

1572+00 NE

1573+00 NE

1574+00 NE

72ND AVE NE RAMP

STH 29 WB

1572+00 WB

1573+00 WB

1574+00 WB

1575+00 WB

1576+00 WB

1577+00 WB

1578+00 WB

1579+00 WB

R/L STH 29 WB

R/L STH 29 EB

1572+00 EB

1573+00 EB

1574+00 EB

1575+00 EB

1576+00 EB

1577+00 EB

1578+00 EB

1579+00 EB

STH 29 EB

72ND AVE SE RAMP

1573+00 SE

1574+00 SE

1575+00 SE

1576+00 SE

1577+00 SE

1578+00 SE

1579+00 SE

1580+

R/L 72ND AVE SE RAMP

A

EXISTING R/W

LEGEND

- EROSION MAT CLASS I, TYPE B URBAN
- SILT FENCE
- SLOPE INTERCEPT
- INLET PROTECTION
- A C D — INLET PROTECTION TYPE
- TEMPORARY DITCH CHECK
- SURFACE WATER FLOW

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	EROSION CONTROL	SHEET 55	E

FILE NAME : C:\CADDLIB\PW\HNTB_APACADA\GREATLAKES\D0382806\022001-EC.DWG
LAYOUT NAME - 43

PLOT DATE : 1/10/2025 5:45 PM PLOT BY : ALLAN PACADA PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

2

N

EXISTING R/W

STH 29 WB

1615+00 WB | 1616+00 WB | 1617+00 WB | 1618+00 WB | 1619+00 WB | 1620+00 WB | 1621+00 WB | 1622+00 WB

R/L STH 29 WB

SLOPE INTERCEPT

A

1615+00 EB | 1616+00 EB | 1617+00 EB | 1618+00 EB | 1619+00 EB | 1620+00 EB | 1621+00 EB | 1622+00

STH 29 EB

R/L STH 29 EB

TEMPORARY SMALL ANIMAL TURN-AROUND

TEMPORARY SMALL ANIMAL TURN-AROUND

LEGEND

- EROSION MAT CLASS I, TYPE B URBAN
- SLOPE INTERCEPT
- INLET PROTECTION
- A C D — INLET PROTECTION TYPE
- TEMPORARY DITCH CHECK
- SURFACE WATER FLOW

EXISTING R/W

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	EROSION CONTROL	SHEET 56	E

FILE NAME : C:\CADDLIB\PW\HNTB_APACADA\GREATLAKES\D0382806\022001-EC.DWG
LAYOUT NAME - 44

PLOT DATE : 1/10/2025 5:47 PM PLOT BY : ALLAN PACADA PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

2

2

N

EXISTING R/W

SLOPE INTERCEPT

TEMPORARY SMALL ANIMAL TURN-AROUND

TEMPORARY SMALL ANIMAL TURN-AROUND

R/L STH 29 WB

STRUCTURE B-37-0125

STH 29 WB

1631+00 WB | 1632+00 WB | 1633+00 WB | 1634+00 WB | 1635+00 WB | 1636+00 WB | 1637+00 WB | 1638+00 WB

SLOPE INTERCEPT

TEMPORARY SMALL ANIMAL TURN-AROUND

TEMPORARY SMALL ANIMAL TURN-AROUND

S 48TH AVE

A

1631+00 EB | 1632+00 EB | 1633+00 EB | 1634+00 EB | 1635+00 EB | 1636+00 EB | 1637+00 EB | 1638+00 EB

R/L STH 29 EB

STH 29 EB

TEMPORARY SMALL ANIMAL TURN-AROUND

TEMPORARY SMALL ANIMAL TURN-AROUND

STRUCTURE B-37-0123

A

SLOPE INTERCEPT

EXISTING R/W

LEGEND

- EROSION MAT CLASS I, TYPE B URBAN
- SILT FENCE
- RIP RAP
- SLOPE INTERCEPT
- INLET PROTECTION
- A C D — INLET PROTECTION TYPE
- TEMPORARY DITCH CHECK
- SURFACE WATER FLOW

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	EROSION CONTROL	SHEET 57	E

FILE NAME : C:\CADDLIB\PW\HNTB_APACADA\GREATLAKES\D0382806\022001-EC.DWG
LAYOUT NAME - 46

PLOT DATE : 1/10/2025 5:48 PM PLOT BY : ALLAN PACADA PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

2

N

EXISTING R/W

TEMPOR

STRUCTURE B-37-0125

TEMPORARY SMALL ANIMAL TURN-AROUND

STRUCTURE B-37-0122

TEMPORARY SMALL ANIMAL TURN-AROUND

STH 29 WB

1638+00 WB | 1639+00 WB | 1640+00 WB | 1641+00 WB | 1642+00 WB | 1643+00 WB | 1644+00 WB | 1645+00 WB

TEMPORARY SMALL ANIMAL TURN-AROUND

TEMPORARY SMALL ANIMAL TURN-AROUND

S 48TH AVE

BIG RIB RIVER

R/L STH 29 WB

A

TEMPORARY SMALL ANIMAL TURN-AROUND

TEMPORARY SMALL ANIMAL TURN-AROUND

1638+00 EB | 1639+00 EB | 1640+00 EB | 1641+00 EB | 1642+00 EB | 1643+00 EB | 1644+00 EB | 1645+00 EB

STH 29 EB

R/L STH 29 EB

TEMPORARY SMALL ANIMAL TURN-AROUND

STRUCTURE B-37-0123

STRUCTURE B-37-0124

SLOPE INTERCEPT, TYP.

TEMPORARY SMALL ANIMAL TURN-AROUND

EXISTING R/W

LEGEND

- EROSION MAT CLASS I, TYPE B URBAN
- SILT FENCE
- SLOPE INTERCEPT
- INLET PROTECTION
- A C D — INLET PROTECTION TYPE
- TEMPORARY DITCH CHECK
- SURFACE WATER FLOW

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	EROSION CONTROL	SHEET 58	E

FILE NAME : C:\CADDLIB\PW\HNTB_APACADA\GREATLAKES\D0382806\022001-EC.DWG
LAYOUT NAME - 47

PLOT DATE : 1/10/2025 5:49 PM PLOT BY : ALLAN PACADA PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

2

2

N

EXISTING R/W

TEMPORARY SMALL ANIMAL TURN-AROUND

SLOPE INTERCEPT, TYP.

TEMPORARY SMALL ANIMAL TURN-AROUND

STH 29 WB

1645+00 WB | 1646+00 WB | 1647+00 WB | 1648+00 WB | 1649+00 WB | 1650+00 WB | 1651+00 WB | 1652+00 WB

R/L STH 29 WB

A

TEMPORARY SMALL ANIMAL TURN-AROUND

TEMPORARY SMALL ANIMAL TURN-AROUND

1645+00 EB | 1646+00 EB | 1647+00 EB | 1648+00 EB | 1649+00 EB | 1650+00 EB | 1651+00 EB | 1652

STH 29 EB

R/L STH 29 EB

TEMPORARY SMALL ANIMAL TURN-AROUND

TEMPORARY SMALL ANIMAL TURN-AROUND

SLOPE INTERCEPT, TYP.

EXISTING R/W

LEGEND

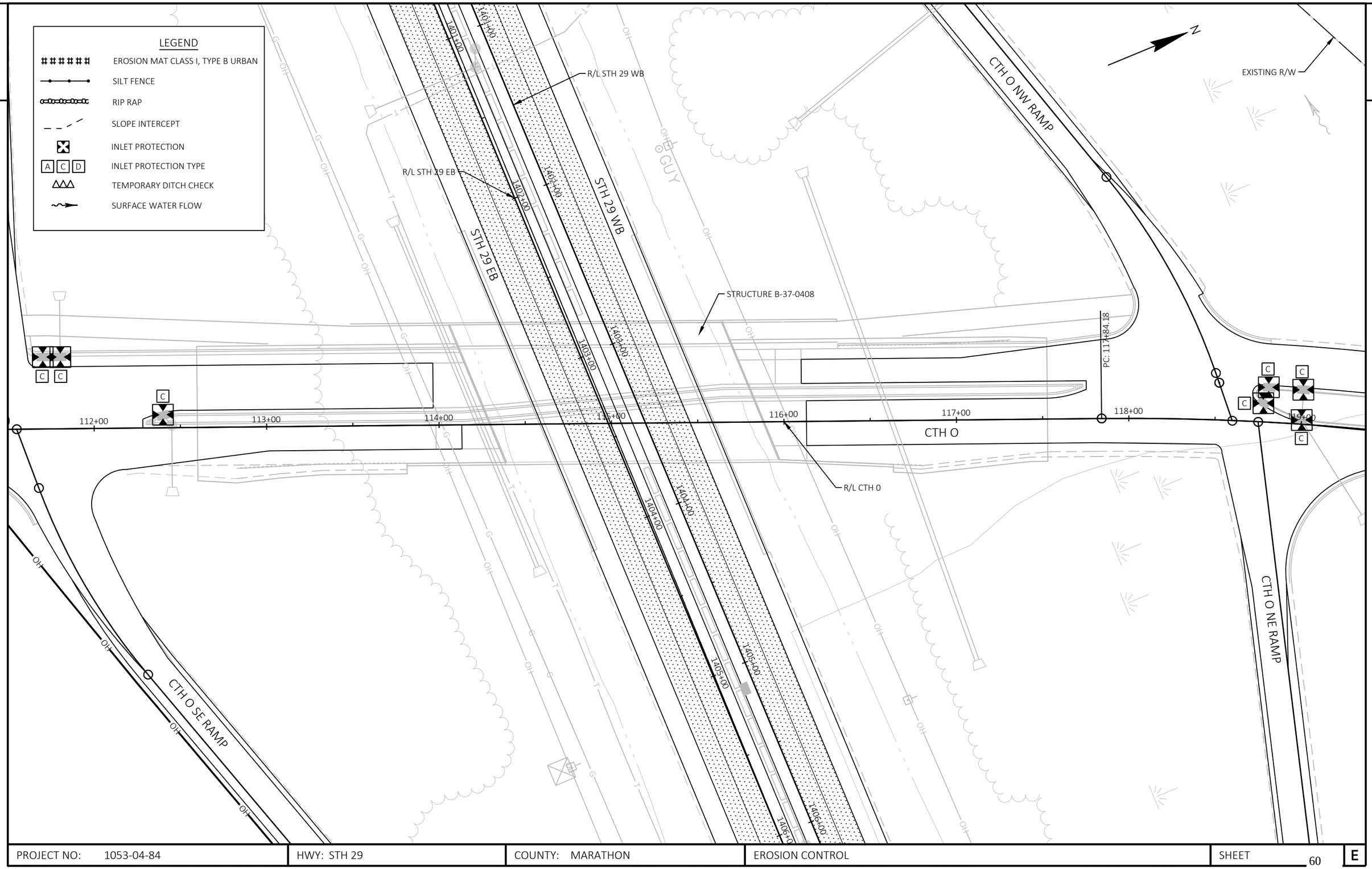
- EROSION MAT CLASS I, TYPE B URBAN
- SILT FENCE
- SLOPE INTERCEPT
- INLET PROTECTION
- A C D — INLET PROTECTION TYPE
- TEMPORARY DITCH CHECK
- SURFACE WATER FLOW

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	EROSION CONTROL	SHEET 59	E

FILE NAME : C:\CADDLIB\PW\HNTB_APACADA\GREATLAKES\D0382806\022001-EC.DWG
LAYOUT NAME - 48

PLOT DATE : 1/10/2025 5:50 PM PLOT BY : ALLAN PACADA PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42



PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	EROSION CONTROL	SHEET 60	E

FILE NAME : C:\CADDLIB\PW\HNTB_APACADA\GREATLAKES\D0382806\022002-EC.DWG
LAYOUT NAME - 50

PLOT DATE : 1/10/2025 5:52 PM PLOT BY : ALLAN PACADA PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

LEGEND

- EROSION MAT CLASS I, TYPE B URBAN
- SILT FENCE
- RIP RAP
- SLOPE INTERCEPT
- INLET PROTECTION
- A C D — INLET PROTECTION TYPE
- TEMPORARY DITCH CHECK
- SURFACE WATER FLOW

N

R/L STH 29 EB

R/L STH 29 WB

STH 29 EB

STH 29 WB

72ND AVE NW RAMP

EXISTING R/W

72ND AVE

R/L 72ND AVE

STRUCTURE B-37-0121

STRUCTURE B-37-0131

72ND AVE SE RAMP

72ND AVE NE RAMP

1557+00

1558+00

1559+00

1560+00

1561+00

208+00

209+00

210+00

211+00

212+00

213+00

214+00

SIGN

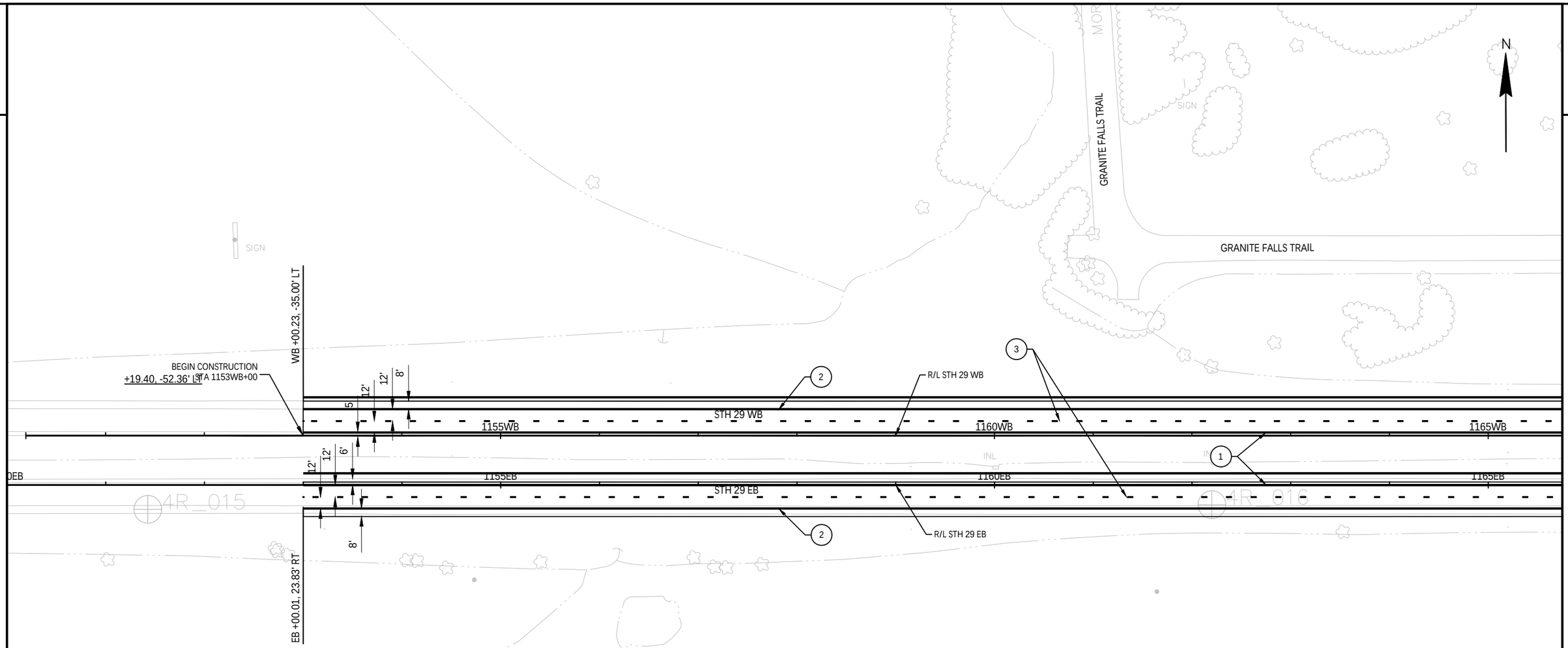
INL

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	EROSION CONTROL	SHEET 61	E

FILE NAME : C:\CADDLIB\PW\HNTB_APACADA\GREATLAKES\D0382806\022002-EC.DWG
LAYOUT NAME - 51

PLOT DATE : 1/10/2025 5:53 PM PLOT BY : ALLAN PACADA PLOT NAME : PLOT SCALE : 1 IN:50 FT

2



LEGEND

1. MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
2. MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
3. MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE 12.5 FT LINE BLACK 12.5 FT LAG 37.5 FT SKIP)
4. MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE) (3 FT LINE 9 FT SKIP)
5. MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
6. MARKING CHEVRON EPOXY 24-INCH (WHITE)
7. MARKING LINE STOP LINE 18-INCH (WHITE)
8. MARKING ARROW EPOXY
9. MARKING WORD EPOXY

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	PAVEMENT MARKINGS	SHEET 62	E

2

2

N

GRANITE FALLS TRAIL

WB +80.21, -38.83' LT

12'
12'
8'

STH 29

STH 29 WB

1170WB

1175WB

1180WB

R/L STH 29 WB

12'
12'
13

4'

1170EB

1175EB

1180EB

STH 29 EB

STH 29

8'

EB +80.10, -11.83' LT

EB +82.68, 57.78' RT

PURPLE MARTIN LN

MARTIN LN.

R/L STH 29 EB

SIGN

INL

LEGEND

1. MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
2. MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
3. MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE 12.5 FT LINE BLACK 12.5 FT LAG 37.5 FT SKIP)
4. MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE) (3 FT LINE 9 FT SKIP)
5. MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
6. MARKING CHEVRON EPOXY 24-INCH (WHITE)
7. MARKING LINE STOP LINE 18-INCH (WHITE)
8. MARKING ARROW EPOXY
9. MARKING WORD EPOXY

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	PAVEMENT MARKINGS	SHEET 63	E

FILE NAME : C:\CADDLIB\PW\HNTB_NIHARRIS\GREATLAKES\D0382806\024501_PM.DWG
LAYOUT NAME - 02

PLOT DATE : 10/31/2024 2:22 PM PLOT BY : NIKKI HARRIS PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

2

N

SIGN

WB +79.21, -26.83' LT
WB +19.06, -38.83' LT
WB +58.30, -38.83' LT
WB +43.10, -38.83' LT
WB +59.75, -26.83' LT

R/L STH 29 WB

STH 29 WB

12'
12'
8'

4'

1185WB
1190WB
1195WB

STH 29

3
2

12'
12'
6'

STH 29 EB

1185EB
1190EB
1195EB

STH 29

8'

4R_018

R/L STH 29 EB

1
2

RIPRAP

4R_019

EB +91.77, 0.17' RT
EB +32.73, -14.83' LT
EB +35.38, -14.83' LT
EB +10.69, -14.83' LT
EB +16.22, 0.17' RT

LEGEND

1. MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
2. MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
3. MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE 12.5 FT LINE BLACK 12.5 FT LAG 37.5 FT SKIP)
4. MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE) (3 FT LINE 9 FT SKIP)
5. MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
6. MARKING CHEVRON EPOXY 24-INCH (WHITE)
7. MARKING LINE STOP LINE 18-INCH (WHITE)
8. MARKING ARROW EPOXY
9. MARKING WORD EPOXY

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	PAVEMENT MARKINGS	SHEET 64	E

FILE NAME : C:\CADDLIB\PW\HNTB_NIHARRIS\GREATLAKES\D0382806\024501_PM.DWG
LAYOUT NAME - 03

PLOT DATE : 10/31/2024 2:22 PM
PLOT BY : NIKKI HARRIS
PLOT NAME :
PLOT SCALE : 1 IN:100 FT

2

2

N

SEPTIC

SIGN

R/L STH 29 WB

WB +44.35, -26.83' LT

BIG RIB RIVER

WB +03, -27.00' LT

RIPRAP

STH 29 WB

1200WB

1205WB

1210WB

STH 29

12'

12'

8'

4'

INL

1200EB

1205EB

1210EB

STH 29 EB

R/L STH 29 EB

EB +43.75, 23.83' RT

EB +01.70, 23.83' RT

4R_020

LEGEND

1. MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
2. MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
3. MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE 12.5 FT LINE BLACK 12.5 FT LAG 37.5 FT SKIP)
4. MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE) (3 FT LINE 9 FT SKIP)
5. MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
6. MARKING CHEVRON EPOXY 24-INCH (WHITE)
7. MARKING LINE STOP LINE 18-INCH (WHITE)
8. MARKING ARROW EPOXY
9. MARKING WORD EPOXY

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	PAVEMENT MARKINGS	SHEET 65	E

2

2

N

12'
12'
8'
6'

STH 29 WB

1215WB

1220WB

1225WB

R/L STH 29 WB

WB +41.09, -24.76' LT

RIPRAP

OH

AP

T207
1214.300

INL

INL

1215EB

1220EB

1225EB

STH 29 EB

R/L STH 29 EB

12'
12'
4'

8'

SIGN

4R_021

4R_022

1

2

2

3

LEGEND

1. MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
2. MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
3. MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE 12.5 FT LINE BLACK 12.5 FT LAG 37.5 FT SKIP)
4. MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE) (3 FT LINE 9 FT SKIP)
5. MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
6. MARKING CHEVRON EPOXY 24-INCH (WHITE)
7. MARKING LINE STOP LINE 18-INCH (WHITE)
8. MARKING ARROW EPOXY
9. MARKING WORD EPOXY

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	PAVEMENT MARKINGS	SHEET 66	E

FILE NAME : C:\CADDLIB\PW\HNTB_NIHARRIS\GREATLAKES\D0382806\024501_PM.DWG
LAYOUT NAME - 05

PLOT DATE : 10/31/2024 2:23 PM PLOT BY : NIKKI HARRIS PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

2

N

510NW

515NW

520NW

525NW

STH 107 NW RAMP

R/L STH 107 NW

NW +34.56, -26.83' LT

NW +50.92, 14.35' RT

WB +83.86, -27.00' LT

STH 29 WB

1230WB

1235WB

1240WB

R/L STH 29 WB

R/L STH 29 EB

12'

12'

8'

5'

15'

4'

1230EB

STH 29 EB

1235EB

1240EB

415SW

420SW

425SW

STH 107 SW RAMP

R/L STH 107 SW

EB +82.30, 23.83' RT

EB +38.37, 23.83' RT

EB +75.50, 23.83' RT

SW +60.32, -14.29' LT

SUBSTATION

INL

SIGN

LEGEND

1. MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
2. MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
3. MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE 12.5 FT LINE BLACK 12.5 FT LAG 37.5 FT SKIP)
4. MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE) (3 FT LINE 9 FT SKIP)
5. MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
6. MARKING CHEVRON EPOXY 24-INCH (WHITE)
7. MARKING LINE STOP LINE 18-INCH (WHITE)
8. MARKING ARROW EPOXY
9. MARKING WORD EPOXY

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	PAVEMENT MARKINGS	SHEET 67	E

FILE NAME : C:\CADDLIB\PW\HNTB_NIHARRIS\GREATLAKES\D0382806\024501_PM.DWG
LAYOUT NAME - 06

PLOT DATE : 10/31/2024 2:23 PM PLOT BY : NIKKI HARRIS PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2

N

530NW

630NE

635NE

640NE

340SE

430SW

STH 107 NW RAMP

STH 107 NE RAMP

STH 107 SW RAMP

STH 107 SE RAMP

STH 107

STH 29 WB

STH 29 EB

R/L STH 107 NW

R/L STH 107 NE

R/L STH 107 SW

R/L STH 107 SE

R/L STH 29 WB

R/L STH 29 EB

1245WB

1250WB

1255WB

1260WB

1245EB

1250EB

1255EB

1260EB

NW +53.21, -0.57' LT

NW +37.78, -10.15' LT

NW +36.03, 14.94' RT

NE +94.42, -7.88' LT

NE +99.31, -0.07' LT

NE +14.86, 15.00' RT

NE +29.22, -0.16' LT

NE +02.53, -21.01' LT

NE +96.43, 0.01' RT

SW +85.15, -13.88' LT

SW +86.61, 0.00'

SW +85.56, 6.40' RT

SW +74.46, 0.46' RT

SW +77.22, 19.41' RT

SE +58.03, -15.11' LT

SE +58.03, 8.04' RT

SE +144.51, -0.45' LT

MH

TOWER

U/C

SIGN

INL

LEGEND

1. MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
2. MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
3. MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE 12.5 FT LINE BLACK 12.5 FT LAG 37.5 FT SKIP)
4. MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE) (3 FT LINE 9 FT SKIP)
5. MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
6. MARKING CHEVRON EPOXY 24-INCH (WHITE)
7. MARKING LINE STOP LINE 18-INCH (WHITE)
8. MARKING ARROW EPOXY
9. MARKING WORD EPOXY

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	PAVEMENT MARKINGS	SHEET 68	E

FILE NAME : C:\CADDLIB\PW\HNTB_NIHARRIS\GREATLAKES\D0382806\024501_PM.DWG
LAYOUT NAME - 07
PLOT DATE : 10/31/2024 2:23 PM
PLOT BY : NIKKI HARRIS
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

2

2

N

R/L STH 107 NE

NE +76.37, 14.58' RT

WB +33.43, -26.83' LT

NE +77.68, -26.83' LT

WB +64.18, -26.83' LT

STH 107 NE RAMP

645NE

STH 29 WB

1265WB

1270WB

1275WB

R/L STH 29 WB

R/L STH 29 EB

1265EB

1270EB

1275EB

STH 29 EB

345SE

STH 107 SE RAMP

350SE

R/L STH 107 SE

EB +27.21, 24.07' RT

EB +68.59, 23.83' RT

SE +50.97, 23.83' RT

SE +31.51, -14.93' LT

12'

12'

8'

3'

12'

12'

2'

11'

SIGN

INL

RCD

4R-026

LEGEND

1. MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
2. MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
3. MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE 12.5 FT LINE BLACK 12.5 FT LAG 37.5 FT SKIP)
4. MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE) (3 FT LINE 9 FT SKIP)
5. MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
6. MARKING CHEVRON EPOXY 24-INCH (WHITE)
7. MARKING LINE STOP LINE 18-INCH (WHITE)
8. MARKING ARROW EPOXY
9. MARKING WORD EPOXY

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	PAVEMENT MARKINGS	SHEET 69	E

FILE NAME : C:\CADDLIB\PW\HNTB_NIHARRIS\GREATLAKES\D0382806\024501_PM.DWG
LAYOUT NAME - 08

PLOT DATE : 10/31/2024 2:24 PM PLOT BY : NIKKI HARRIS PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

2

BEGIN MARKING LINE EPOXY
STA 1278WB+70

STH 29 WB

STH 29 EB

I280WB

I280EB

I285WB

I285EB

I290WB

I290EB

R/L STH 29 WB

R/L STH 29 EB

152TH AVE

154TH AVE

GUY POLE

POST

SIGN

GUY

A/C

CMH

BM1

T202
1244.720

N 190427.416
E 229338.770

245

12'

12'

12'

12'

12'

6'

8'

13'

LEGEND

1. MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
2. MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
3. MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE 12.5 FT LINE BLACK 12.5 FT LAG 37.5 FT SKIP)
4. MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE) (3 FT LINE 9 FT SKIP)
5. MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
6. MARKING CHEVRON EPOXY 24-INCH (WHITE)
7. MARKING LINE STOP LINE 18-INCH (WHITE)
8. MARKING ARROW EPOXY
9. MARKING WORD EPOXY
10. MARKING LINE EPOXY 6-INCH (YELLOW)
11. MARKING LINE EPOXY 6-INCH (WHITE)
12. MARKING LINE EPOXY 6-INCH (WHITE 12.5 FT LINE BLACK 12.5 FT LAG 37.5 SKIP)

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	PAVEMENT MARKINGS	SHEET 70	E

2

2

N

SIGN

POST

B.G.

12

11

10

STH 29 WB

I295WB

I295EB

STH 29 EB

I300WB

I300EB

I305WB

I305EB

R/L STH 29 WB

R/L STH 29 EB

12'

12'

12'

12'

13'

13'

7'

LEGEND

1. MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
2. MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
3. MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE 12.5 FT LINE BLACK 12.5 FT LAG 37.5 FT SKIP)
4. MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE) (3 FT LINE 9 FT SKIP)
5. MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
6. MARKING CHEVRON EPOXY 24-INCH (WHITE)
7. MARKING LINE STOP LINE 18-INCH (WHITE)
8. MARKING ARROW EPOXY
9. MARKING WORD EPOXY
10. MARKING LINE EPOXY 6-INCH (YELLOW)
11. MARKING LINE EPOXY 6-INCH (WHITE)
12. MARKING LINE EPOXY 6-INCH (WHITE 12.5 FT LINE BLACK 12.5 FT LAG 37.5 SKIP)

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	PAVEMENT MARKINGS	SHEET 71	E

2

2

N

CRITTER CV

STH 29 WB

I310WB

I310EB

STH 29 EB

I315WB

I315EB

I320WB

I320EB

R/L STH 29 WB

R/L STH 29 EB

12'

7'

6'

144TH AVE

RUINS

SEPTIC

SIGN

BM8

LEGEND

1. MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
2. MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
3. MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE 12.5 FT LINE BLACK 12.5 FT LAG 37.5 FT SKIP)
4. MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE) (3 FT LINE 9 FT SKIP)
5. MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
6. MARKING CHEVRON EPOXY 24-INCH (WHITE)
7. MARKING LINE STOP LINE 18-INCH (WHITE)
8. MARKING ARROW EPOXY
9. MARKING WORD EPOXY
10. MARKING LINE EPOXY 6-INCH (YELLOW)
11. MARKING LINE EPOXY 6-INCH (WHITE)
12. MARKING LINE EPOXY 6-INCH (WHITE 12.5 FT LINE BLACK 12.5 FT LAG 37.5 FT SKIP)

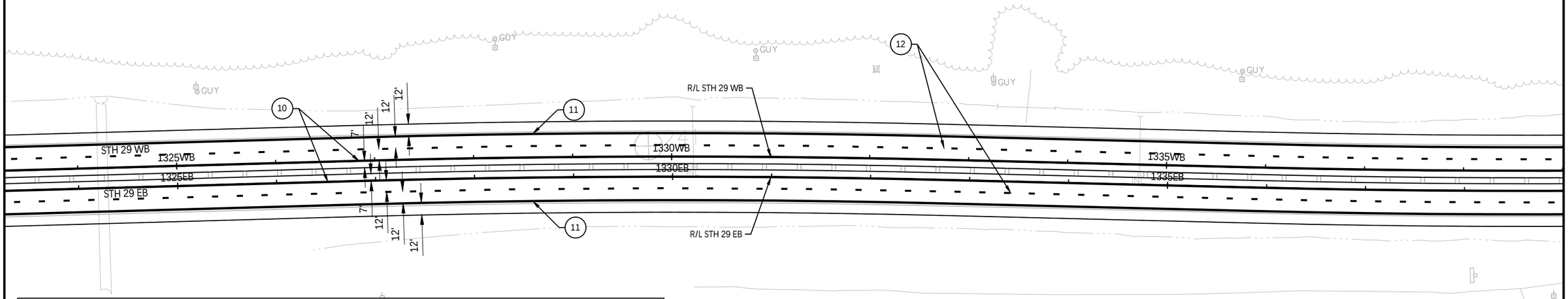
PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	PAVEMENT MARKINGS	SHEET 72	E

FILE NAME : C:\CADDLIB\PW\HNTB_NIHARRIS\GREATLAKES\D0382806\024501_PM.DWG
LAYOUT NAME - 11

PLOT DATE : 10/31/2024 2:24 PM PLOT BY : NIKKI HARRIS PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

N

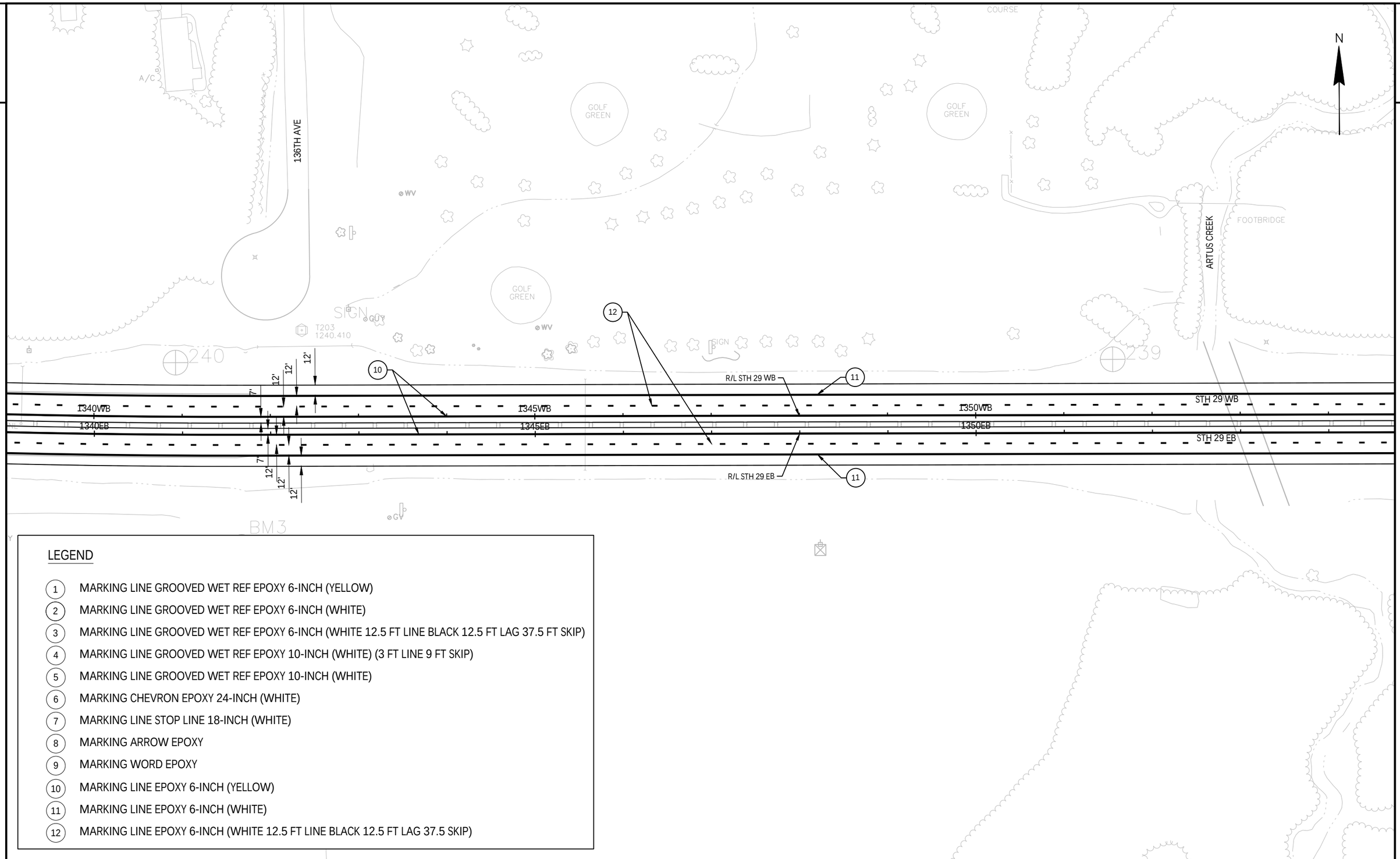


LEGEND

1. MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
2. MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
3. MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE 12.5 FT LINE BLACK 12.5 FT LAG 37.5 FT SKIP)
4. MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE) (3 FT LINE 9 FT SKIP)
5. MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
6. MARKING CHEVRON EPOXY 24-INCH (WHITE)
7. MARKING LINE STOP LINE 18-INCH (WHITE)
8. MARKING ARROW EPOXY
9. MARKING WORD EPOXY
10. MARKING LINE EPOXY 6-INCH (YELLOW)
11. MARKING LINE EPOXY 6-INCH (WHITE)
12. MARKING LINE EPOXY 6-INCH (WHITE 12.5 FT LINE BLACK 12.5 FT LAG 37.5 SKIP)

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	PAVEMENT MARKINGS	SHEET 73	E

FILE NAME : C:\CADDLIB\PW\HNTB_NIHARRIS\GREATLAKES\D0382806\024501_PM.DWG
LAYOUT NAME - 12
PLOT DATE : 10/31/2024 2:25 PM
PLOT BY : NIKKI HARRIS
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42



LEGEND

1. MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
2. MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
3. MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE 12.5 FT LINE BLACK 12.5 FT LAG 37.5 FT SKIP)
4. MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE) (3 FT LINE 9 FT SKIP)
5. MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
6. MARKING CHEVRON EPOXY 24-INCH (WHITE)
7. MARKING LINE STOP LINE 18-INCH (WHITE)
8. MARKING ARROW EPOXY
9. MARKING WORD EPOXY
10. MARKING LINE EPOXY 6-INCH (YELLOW)
11. MARKING LINE EPOXY 6-INCH (WHITE)
12. MARKING LINE EPOXY 6-INCH (WHITE 12.5 FT LINE BLACK 12.5 FT LAG 37.5 SKIP)

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	PAVEMENT MARKINGS	SHEET 74	E

2

2

N

10

11

12

STH 29 WB

STH 29 EB

1355WB

1355EB

1360WB

1360EB

1365WB

1365EB

1370WB

1370EB

R/L STH 29 WB

R/L STH 29 EB

7'

12'

12'

12'

7'

12'

12'

12'

SIGN

SIGN

SIGN

GVT

4R_035

SIGN

LEGEND

1. MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
2. MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
3. MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE 12.5 FT LINE BLACK 12.5 FT LAG 37.5 FT SKIP)
4. MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE) (3 FT LINE 9 FT SKIP)
5. MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
6. MARKING CHEVRON EPOXY 24-INCH (WHITE)
7. MARKING LINE STOP LINE 18-INCH (WHITE)
8. MARKING ARROW EPOXY
9. MARKING WORD EPOXY
10. MARKING LINE EPOXY 6-INCH (YELLOW)
11. MARKING LINE EPOXY 6-INCH (WHITE)
12. MARKING LINE EPOXY 6-INCH (WHITE 12.5 FT LINE BLACK 12.5 FT LAG 37.5 SKIP)

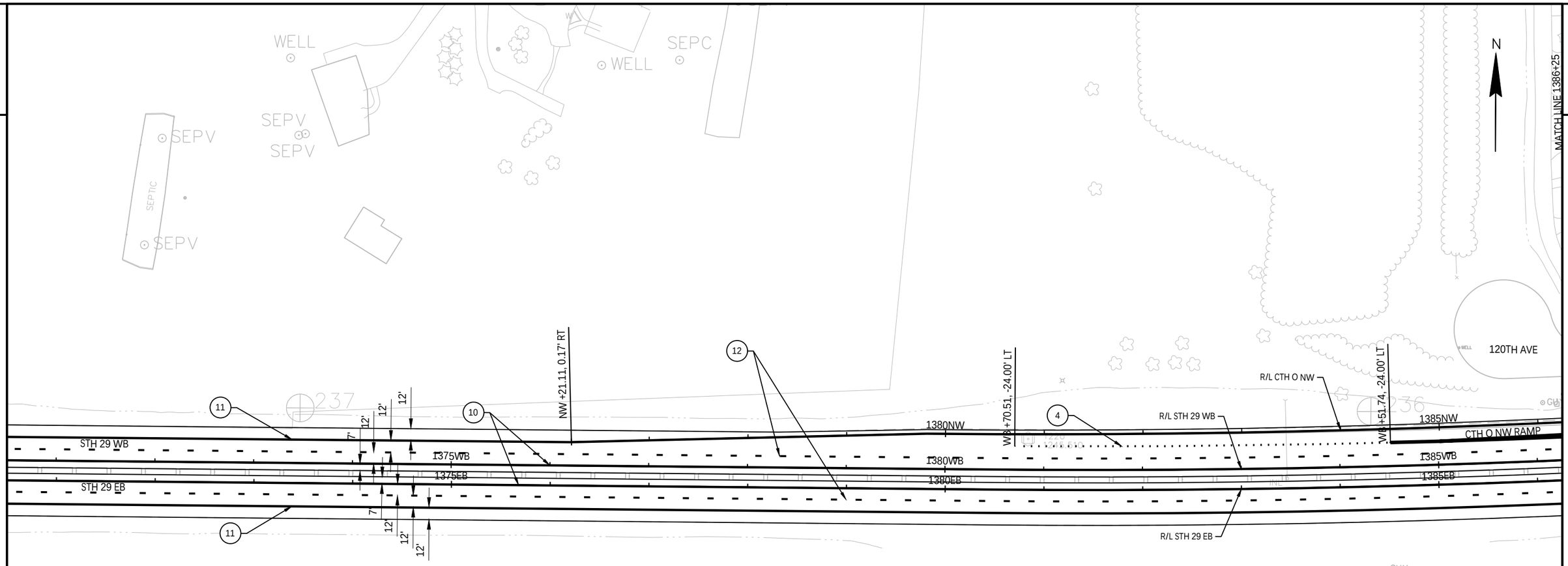
PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	PAVEMENT MARKINGS	SHEET 75	E

FILE NAME : C:\CADDLIB\PW\HNTB_NIHARRIS\GREATLAKES\D0382806\024501_PM.DWG
LAYOUT NAME - 14

PLOT DATE : 10/31/2024 2:25 PM PLOT BY : NIKKI HARRIS PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2

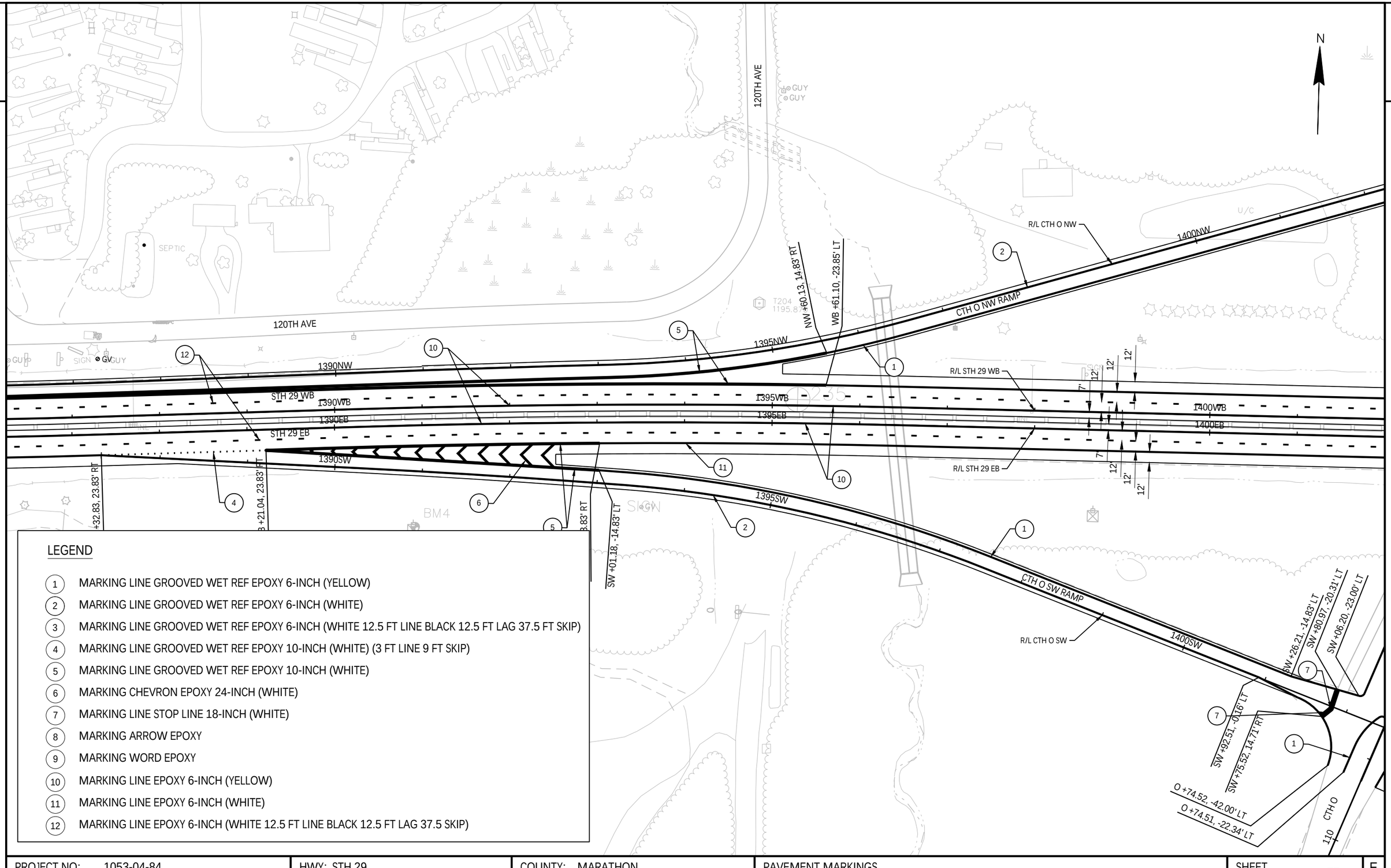


LEGEND

1. MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
2. MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
3. MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE 12.5 FT LINE BLACK 12.5 FT LAG 37.5 FT SKIP)
4. MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE) (3 FT LINE 9 FT SKIP)
5. MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
6. MARKING CHEVRON EPOXY 24-INCH (WHITE)
7. MARKING LINE STOP LINE 18-INCH (WHITE)
8. MARKING ARROW EPOXY
9. MARKING WORD EPOXY
10. MARKING LINE EPOXY 6-INCH (YELLOW)
11. MARKING LINE EPOXY 6-INCH (WHITE)
12. MARKING LINE EPOXY 6-INCH (WHITE 12.5 FT LINE BLACK 12.5 FT LAG 37.5 SKIP)

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	PAVEMENT MARKINGS	SHEET 76	E

FILE NAME : C:\CADDLIB\PW\HNTB_NIHARRIS\GREATLAKES\D0382806\024501_PM.DWG
LAYOUT NAME - 15
PLOT DATE : 10/31/2024 2:25 PM
PLOT BY : NIKKI HARRIS
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

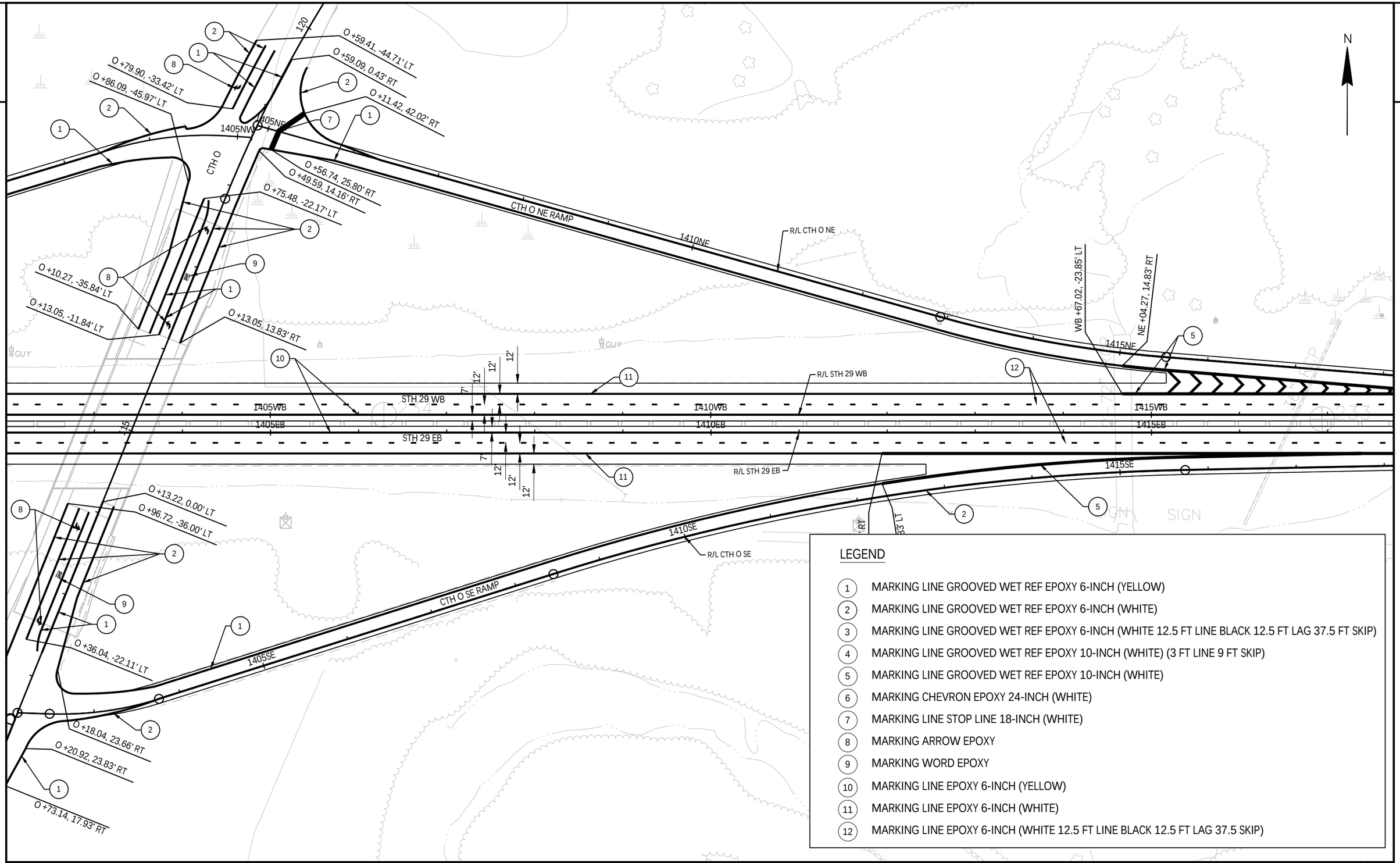


LEGEND

1. MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
2. MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
3. MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE 12.5 FT LINE BLACK 12.5 FT LAG 37.5 FT SKIP)
4. MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE) (3 FT LINE 9 FT SKIP)
5. MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
6. MARKING CHEVRON EPOXY 24-INCH (WHITE)
7. MARKING LINE STOP LINE 18-INCH (WHITE)
8. MARKING ARROW EPOXY
9. MARKING WORD EPOXY
10. MARKING LINE EPOXY 6-INCH (YELLOW)
11. MARKING LINE EPOXY 6-INCH (WHITE)
12. MARKING LINE EPOXY 6-INCH (WHITE 12.5 FT LINE BLACK 12.5 FT LAG 37.5 SKIP)

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	PAVEMENT MARKINGS	SHEET 77	E

2



LEGEND

1. MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
2. MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
3. MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE 12.5 FT LINE BLACK 12.5 FT LAG 37.5 FT SKIP)
4. MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE) (3 FT LINE 9 FT SKIP)
5. MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
6. MARKING CHEVRON EPOXY 24-INCH (WHITE)
7. MARKING LINE STOP LINE 18-INCH (WHITE)
8. MARKING ARROW EPOXY
9. MARKING WORD EPOXY
10. MARKING LINE EPOXY 6-INCH (YELLOW)
11. MARKING LINE EPOXY 6-INCH (WHITE)
12. MARKING LINE EPOXY 6-INCH (WHITE 12.5 FT LINE BLACK 12.5 FT LAG 37.5 SKIP)

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	PAVEMENT MARKINGS	SHEET 78	E

2

2

N

WB +52.40, -23.84' LT

R/L CTH O NE

GUY

4

1420NE

WB +36.28, -23.84' LT

STH 29 WB

1420WB

1420EB

STH 29 EB

1420SE

4

1.21, 23.82' RT

EB +88.08, 23.82' RT

R/L CTH O SE

2

GUY

1425WB

1425EB

1425SE

12

12'

12'

12'

7'

7

12'

12'

12'

10

R/L STH 29 WB

R/L STH 29 EB

11

11

1430WB

1430EB

18" RCP

60" RCP

SIGN

BM10

SIGN

LEGEND

1. MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
2. MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
3. MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE 12.5 FT LINE BLACK 12.5 FT LAG 37.5 FT SKIP)
4. MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE) (3 FT LINE 9 FT SKIP)
5. MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
6. MARKING CHEVRON EPOXY 24-INCH (WHITE)
7. MARKING LINE STOP LINE 18-INCH (WHITE)
8. MARKING ARROW EPOXY
9. MARKING WORD EPOXY
10. MARKING LINE EPOXY 6-INCH (YELLOW)
11. MARKING LINE EPOXY 6-INCH (WHITE)
12. MARKING LINE EPOXY 6-INCH (WHITE 12.5 FT LINE BLACK 12.5 FT LAG 37.5 SKIP)

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	PAVEMENT MARKINGS	SHEET 79	E

FILE NAME : C:\CADDLIB\PW\HNTB_NIHARRIS\GREATLAKES\D0382806\024501_PM.DWG
LAYOUT NAME - 18

PLOT DATE : 10/31/2024 2:26 PM PLOT BY : NIKKI HARRIS PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

2

N

CHICKEN LN

SIGN

GV

GUY

42" RCP

R/L STH 29 WB

STH 29 WB

I435WB

I435EB

I440WB

I440EB

I445WB

I445EB

STH 29 EB

R/L STH 29 EB

12'

7'

10

11

12

BM11

SIGNS

POST

PACKER DR

LEGEND

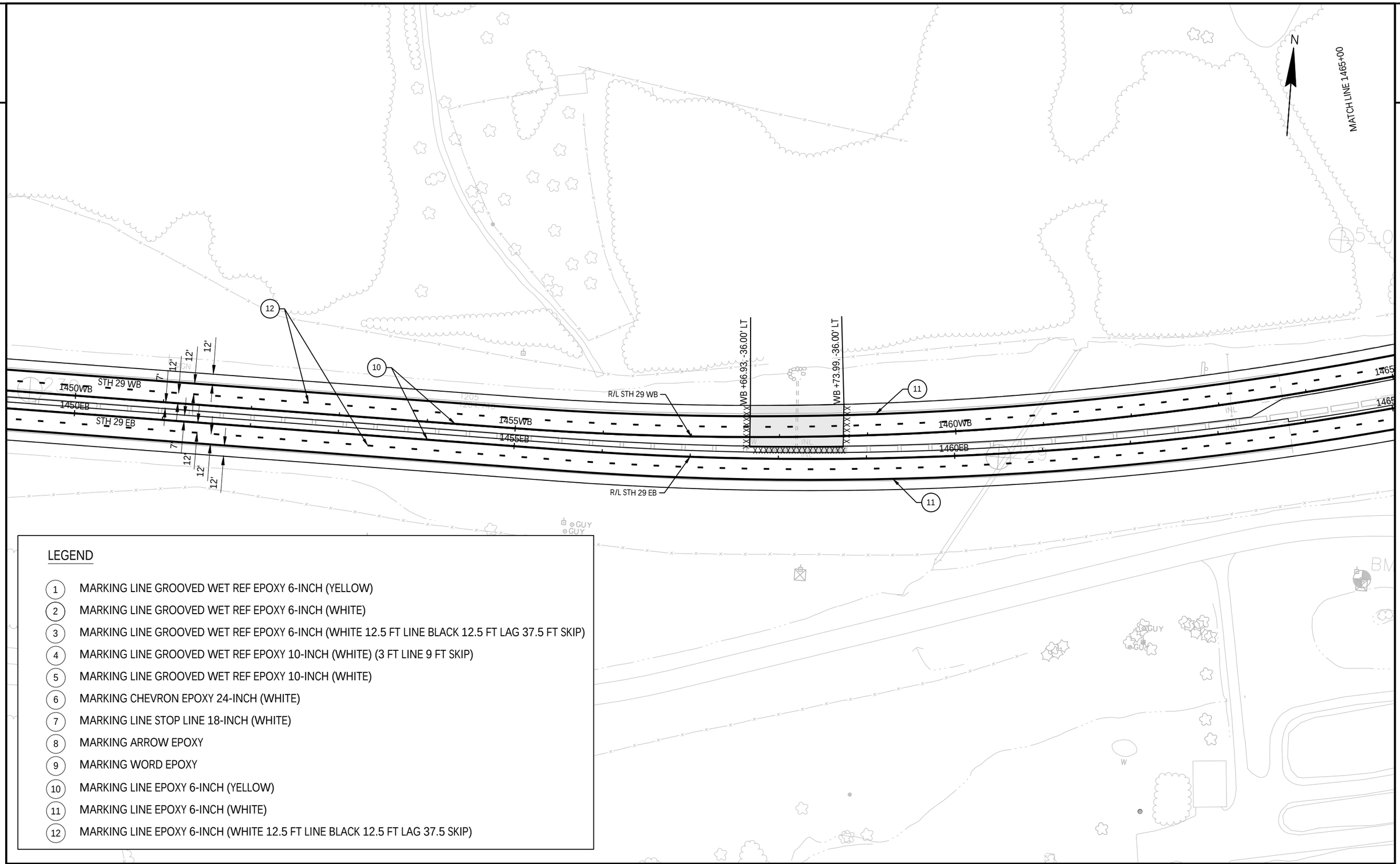
1. MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
2. MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
3. MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE 12.5 FT LINE BLACK 12.5 FT LAG 37.5 SKIP)
4. MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE) (3 FT LINE 9 FT SKIP)
5. MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
6. MARKING CHEVRON EPOXY 24-INCH (WHITE)
7. MARKING LINE STOP LINE 18-INCH (WHITE)
8. MARKING ARROW EPOXY
9. MARKING WORD EPOXY
10. MARKING LINE EPOXY 6-INCH (YELLOW)
11. MARKING LINE EPOXY 6-INCH (WHITE)
12. MARKING LINE EPOXY 6-INCH (WHITE 12.5 FT LINE BLACK 12.5 FT LAG 37.5 SKIP)

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	PAVEMENT MARKINGS	SHEET 80	E

FILE NAME : C:\CADDLIB\PW\HNTB_NIHARRIS\GREATLAKES\D0382806\024501_PM.DWG
LAYOUT NAME - 19

PLOT DATE : 10/31/2024 2:26 PM PLOT BY : NIKKI HARRIS PLOT NAME : PLOT SCALE : 1 IN:100 FT

2



LEGEND

1. MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
2. MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
3. MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE 12.5 FT LINE BLACK 12.5 FT LAG 37.5 FT SKIP)
4. MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE) (3 FT LINE 9 FT SKIP)
5. MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
6. MARKING CHEVRON EPOXY 24-INCH (WHITE)
7. MARKING LINE STOP LINE 18-INCH (WHITE)
8. MARKING ARROW EPOXY
9. MARKING WORD EPOXY
10. MARKING LINE EPOXY 6-INCH (YELLOW)
11. MARKING LINE EPOXY 6-INCH (WHITE)
12. MARKING LINE EPOXY 6-INCH (WHITE 12.5 FT LINE BLACK 12.5 FT LAG 37.5 SKIP)

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	PAVEMENT MARKINGS	SHEET 81	E

2

2

MATCH LINE 1480+75

END MARKING LINE EPOXY
STA 1471WB+70

R/L STH 29 WB

R/L STH 29 EB

1465WB

1465EB

1470WB

1470EB

1475WB

1475EB

1480WB

1480EB

STH 29 WB

STH 29 EB

10'

12'

12'

5'

4'

12'

12'

9'

INL

5-050

5-057

DR

LEGEND

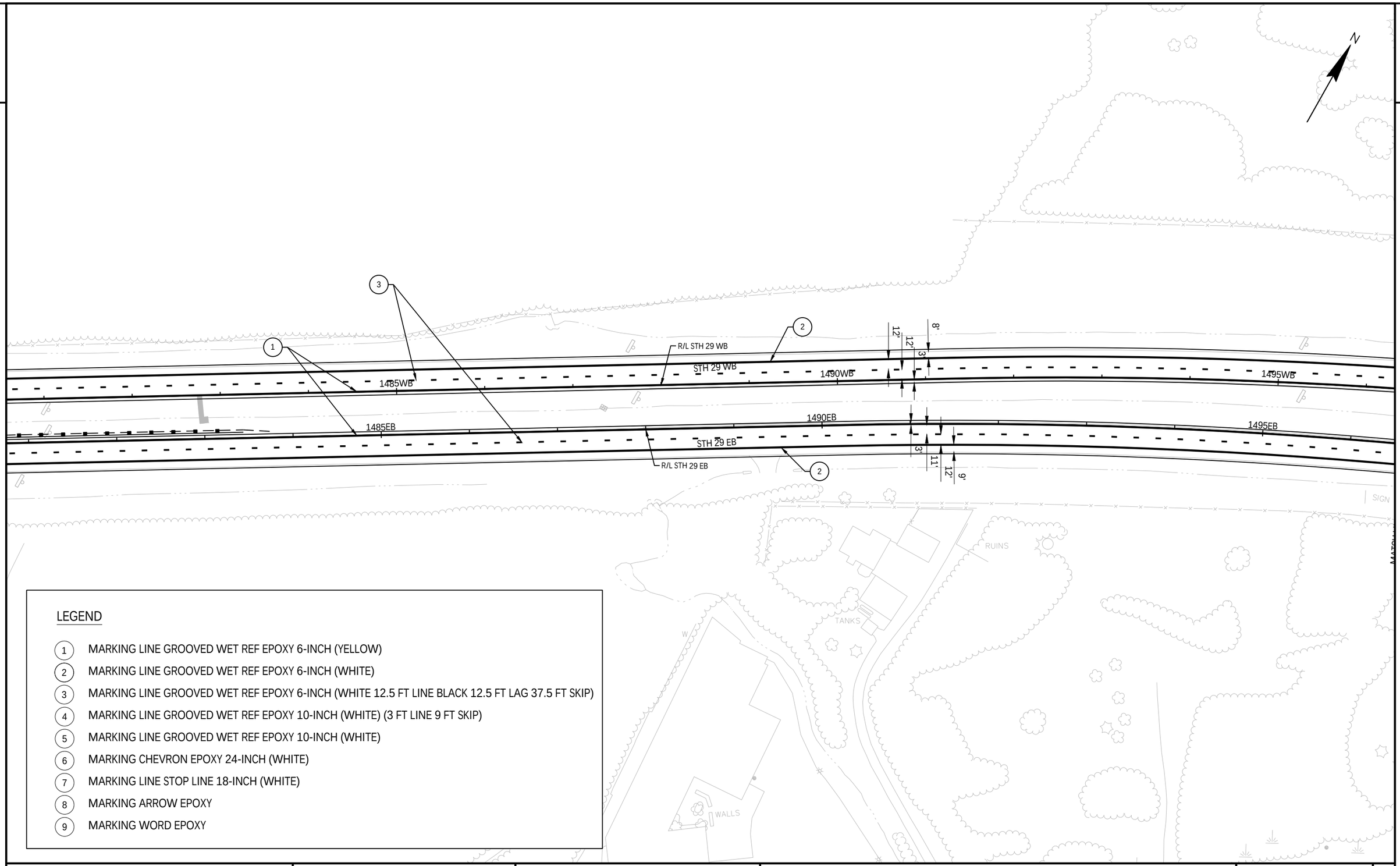
1. MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
2. MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
3. MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE 12.5 FT LINE BLACK 12.5 FT LAG 37.5 FT SKIP)
4. MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE) (3 FT LINE 9 FT SKIP)
5. MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
6. MARKING CHEVRON EPOXY 24-INCH (WHITE)
7. MARKING LINE STOP LINE 18-INCH (WHITE)
8. MARKING ARROW EPOXY
9. MARKING WORD EPOXY
10. MARKING LINE EPOXY 6-INCH (YELLOW)
11. MARKING LINE EPOXY 6-INCH (WHITE)
12. MARKING LINE EPOXY 6-INCH (WHITE 12.5 FT LINE BLACK 12.5 FT LAG 37.5 SKIP)

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	PAVEMENT MARKINGS	SHEET 82	E

FILE NAME : C:\CADDLIB\PW\HNTB_NIHARRIS\GREATLAKES\D0382806\024501_PM.DWG
LAYOUT NAME - 21

PLOT DATE : 10/31/2024 2:27 PM PLOT BY : NIKKI HARRIS PLOT NAME : PLOT SCALE : 1 IN:100 FT

2



LEGEND

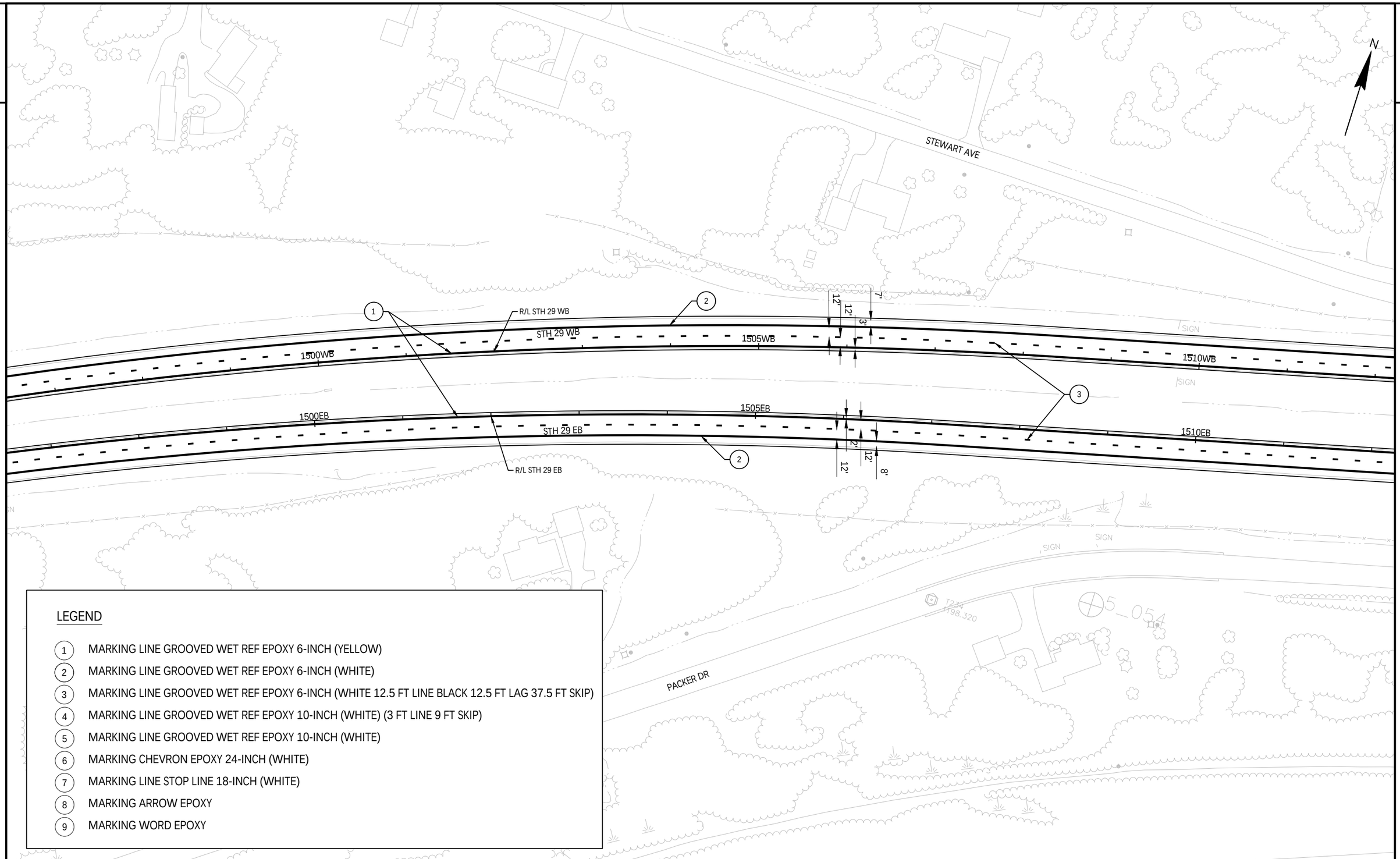
1. MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
2. MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
3. MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE 12.5 FT LINE BLACK 12.5 FT LAG 37.5 FT SKIP)
4. MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE) (3 FT LINE 9 FT SKIP)
5. MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
6. MARKING CHEVRON EPOXY 24-INCH (WHITE)
7. MARKING LINE STOP LINE 18-INCH (WHITE)
8. MARKING ARROW EPOXY
9. MARKING WORD EPOXY

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	PAVEMENT MARKINGS	SHEET 83	E

FILE NAME : C:\CADDLIB\PW\HNTB_NIHARRIS\GREATLAKES\D0382806\024501_PM.DWG
LAYOUT NAME - 22

PLOT DATE : 10/31/2024 2:27 PM PLOT BY : NIKKI HARRIS PLOT NAME : PLOT SCALE : 1 IN:100 FT

2



LEGEND

1. MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
2. MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
3. MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE 12.5 FT LINE BLACK 12.5 FT LAG 37.5 FT SKIP)
4. MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE) (3 FT LINE 9 FT SKIP)
5. MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
6. MARKING CHEVRON EPOXY 24-INCH (WHITE)
7. MARKING LINE STOP LINE 18-INCH (WHITE)
8. MARKING ARROW EPOXY
9. MARKING WORD EPOXY

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	PAVEMENT MARKINGS	SHEET 84	E

2

2

N

84TH AVE

STEWART AVE

SIGN

MH

TOWER

W

INL

12'
12'
8'
3'

STH 29 WB

1515WB

1520WB

1525WB

R/L STH 29 WB

STH 29 EB

1515EB

1520EB

1525EB

R/L STH 29 EB

PACKER DR

LEGEND

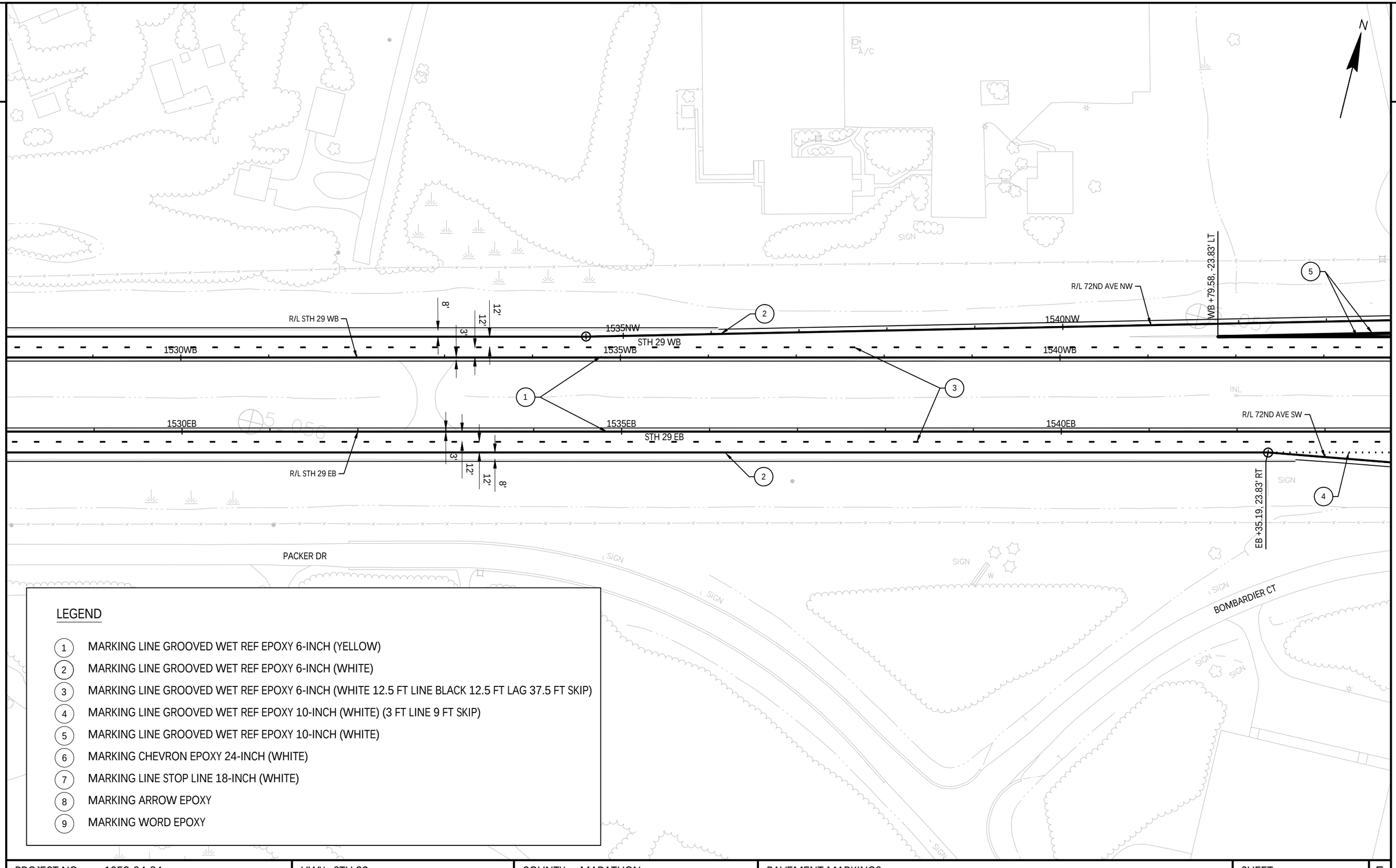
1. MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
2. MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
3. MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE 12.5 FT LINE BLACK 12.5 FT LAG 37.5 FT SKIP)
4. MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE) (3 FT LINE 9 FT SKIP)
5. MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
6. MARKING CHEVRON EPOXY 24-INCH (WHITE)
7. MARKING LINE STOP LINE 18-INCH (WHITE)
8. MARKING ARROW EPOXY
9. MARKING WORD EPOXY

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	PAVEMENT MARKINGS	SHEET 85	E

FILE NAME : C:\CADDLIB\PW\HNTB_NIHARRIS\GREATLAKES\D0382806\024501_PM.DWG
LAYOUT NAME - 24

PLOT DATE : 10/31/2024 2:27 PM PLOT BY : NIKKI HARRIS PLOT NAME : PLOT SCALE : 1 IN:100 FT

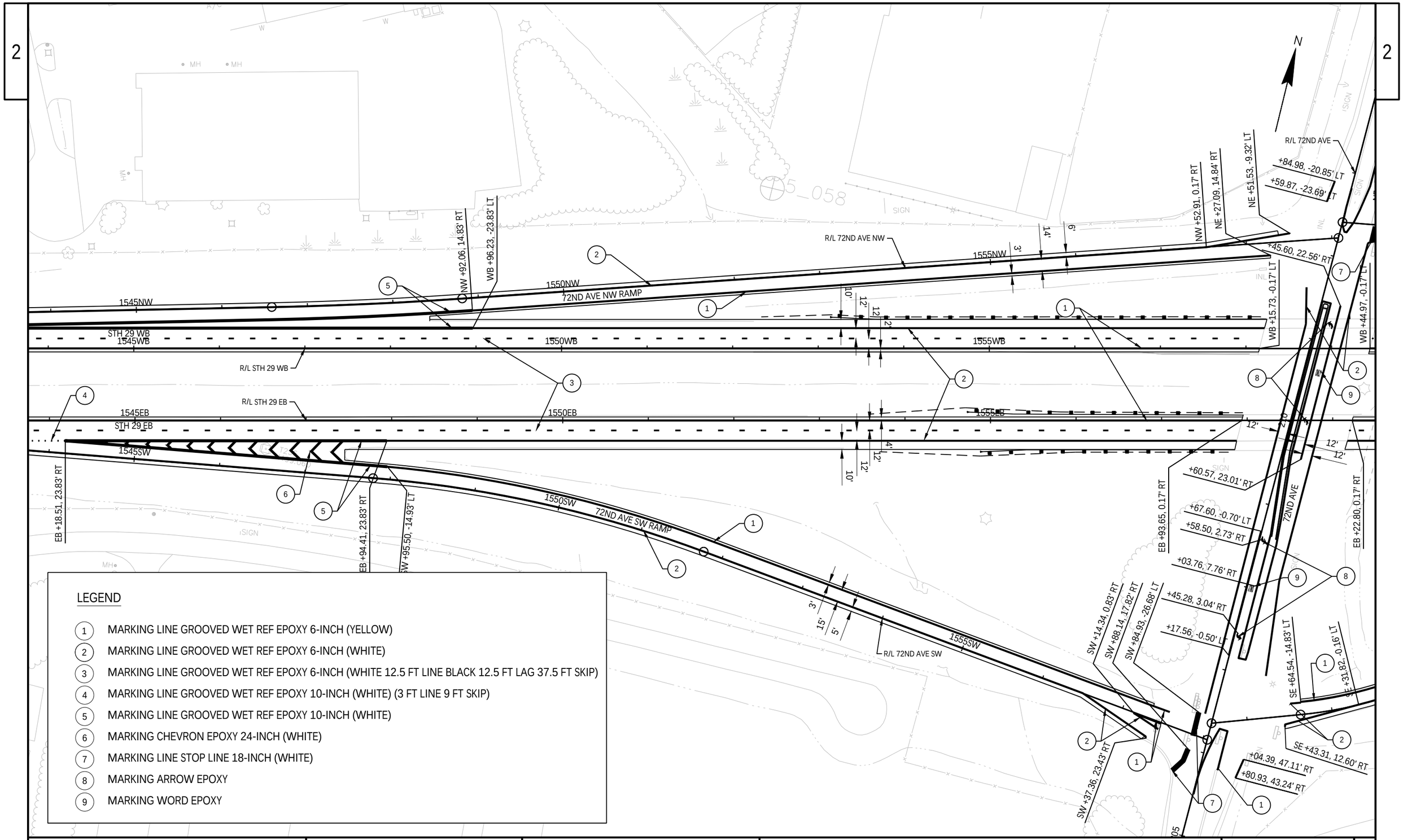
WISDOT/CADDS SHEET 42



LEGEND

1. MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
2. MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
3. MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE 12.5 FT LINE BLACK 12.5 FT LAG 37.5 FT SKIP)
4. MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE) (3 FT LINE 9 FT SKIP)
5. MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
6. MARKING CHEVRON EPOXY 24-INCH (WHITE)
7. MARKING LINE STOP LINE 18-INCH (WHITE)
8. MARKING ARROW EPOXY
9. MARKING WORD EPOXY

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	PAVEMENT MARKINGS	SHEET 86	E



LEGEND

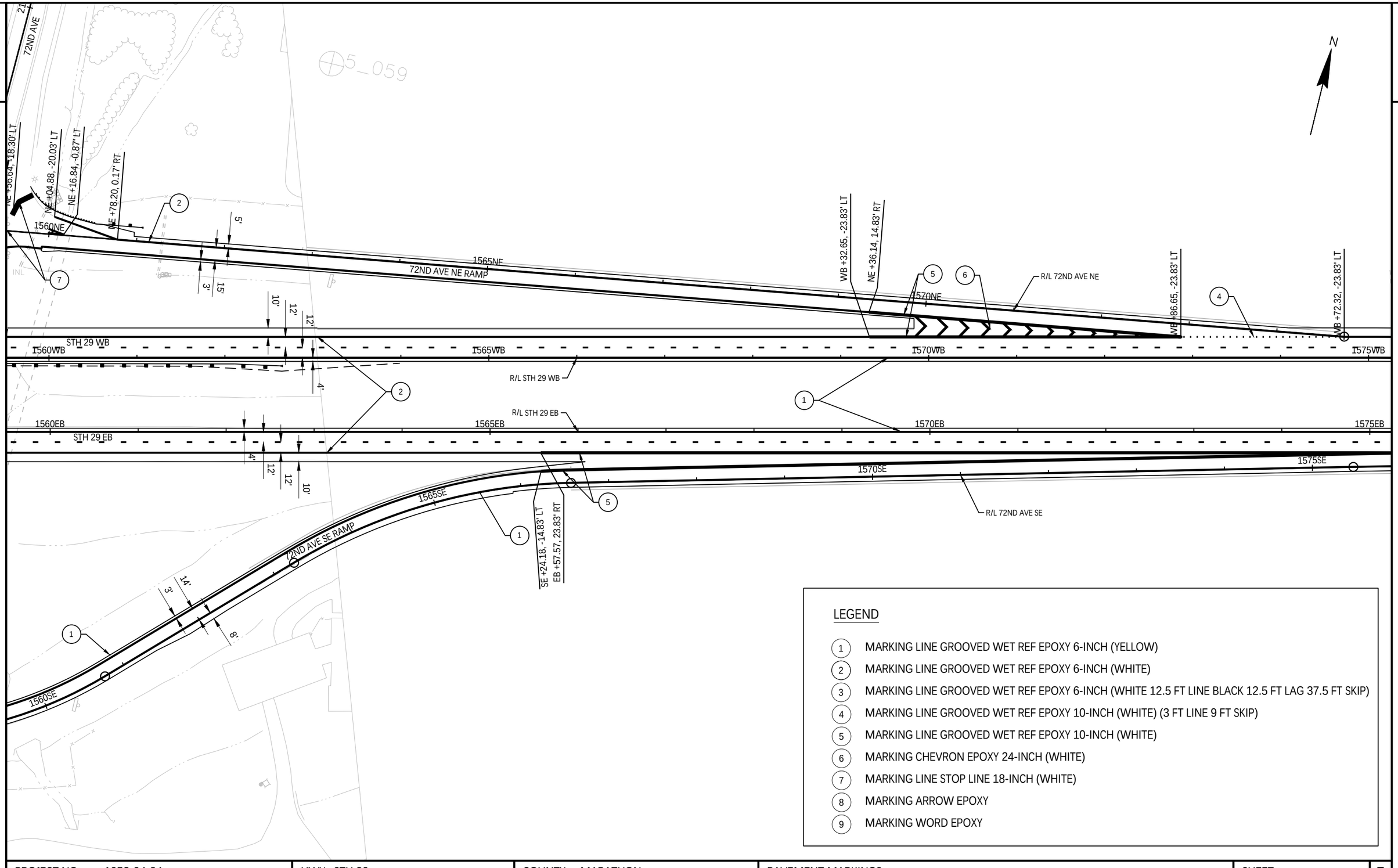
1. MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
2. MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
3. MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE 12.5 FT LINE BLACK 12.5 FT LAG 37.5 FT SKIP)
4. MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE) (3 FT LINE 9 FT SKIP)
5. MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
6. MARKING CHEVRON EPOXY 24-INCH (WHITE)
7. MARKING LINE STOP LINE 18-INCH (WHITE)
8. MARKING ARROW EPOXY
9. MARKING WORD EPOXY

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	PAVEMENT MARKINGS	SHEET 87	E

FILE NAME : C:\CADDLIB\PW\HNTB_NIHARRIS\GREATLAKES\D0382806\024501_PM.DWG
LAYOUT NAME - 26

PLOT DATE : 10/31/2024 2:28 PM PLOT BY : NIKKI HARRIS PLOT NAME : PLOT SCALE : 1 IN:100 FT

2



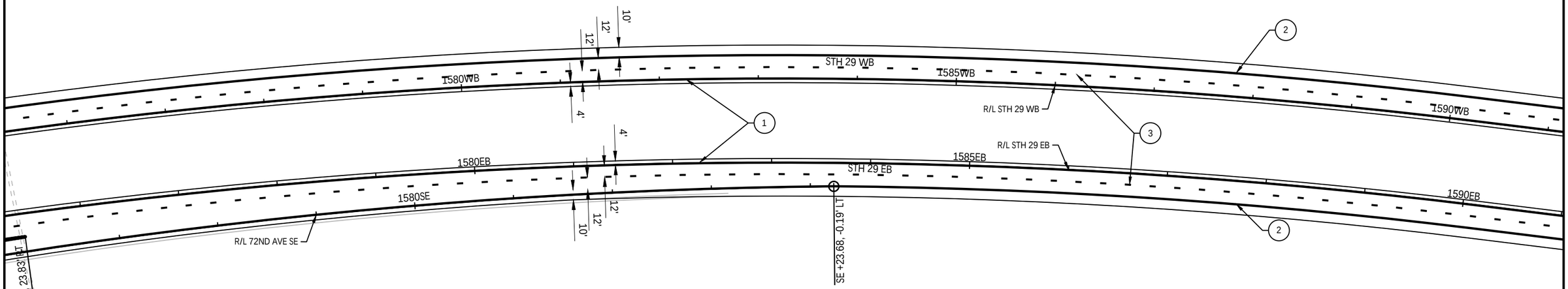
LEGEND

1. MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
2. MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
3. MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE 12.5 FT LINE BLACK 12.5 FT LAG 37.5 FT SKIP)
4. MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE) (3 FT LINE 9 FT SKIP)
5. MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
6. MARKING CHEVRON EPOXY 24-INCH (WHITE)
7. MARKING LINE STOP LINE 18-INCH (WHITE)
8. MARKING ARROW EPOXY
9. MARKING WORD EPOXY

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	PAVEMENT MARKINGS	SHEET 88	E

2

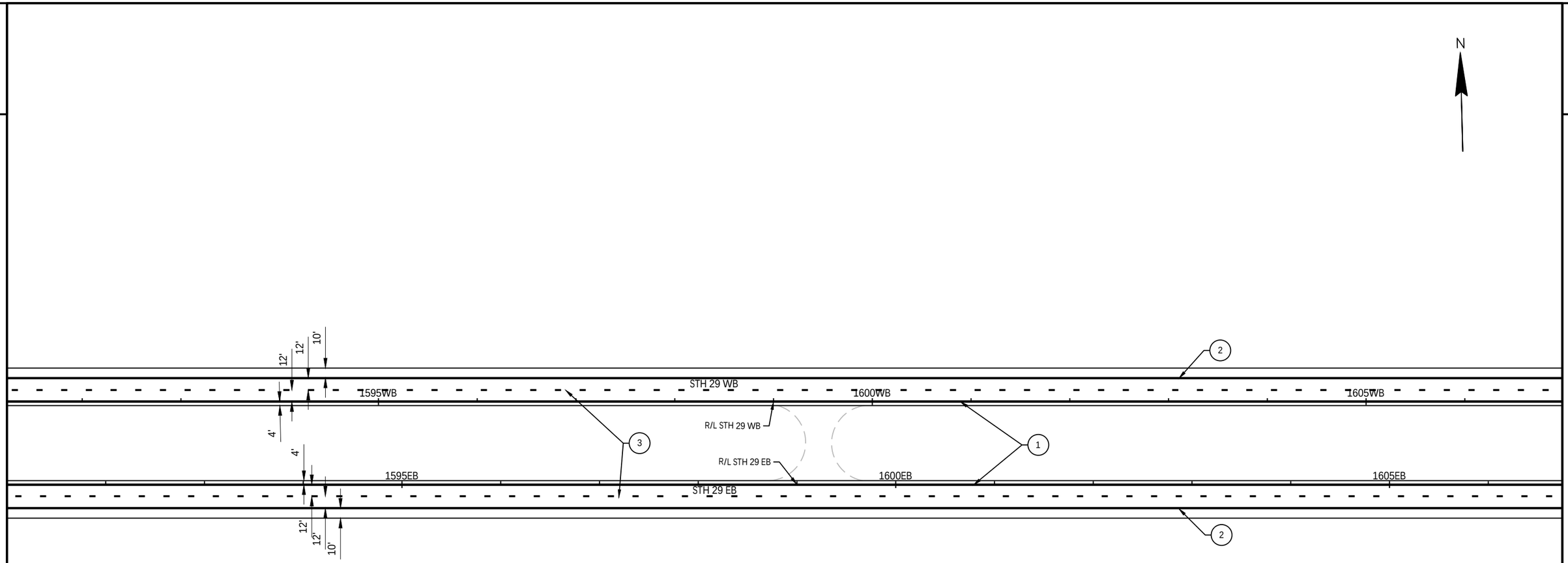
N



LEGEND

1. MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
2. MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
3. MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE 12.5 FT LINE BLACK 12.5 FT LAG 37.5 FT SKIP)
4. MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE) (3 FT LINE 9 FT SKIP)
5. MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
6. MARKING CHEVRON EPOXY 24-INCH (WHITE)
7. MARKING LINE STOP LINE 18-INCH (WHITE)
8. MARKING ARROW EPOXY
9. MARKING WORD EPOXY

2



LEGEND

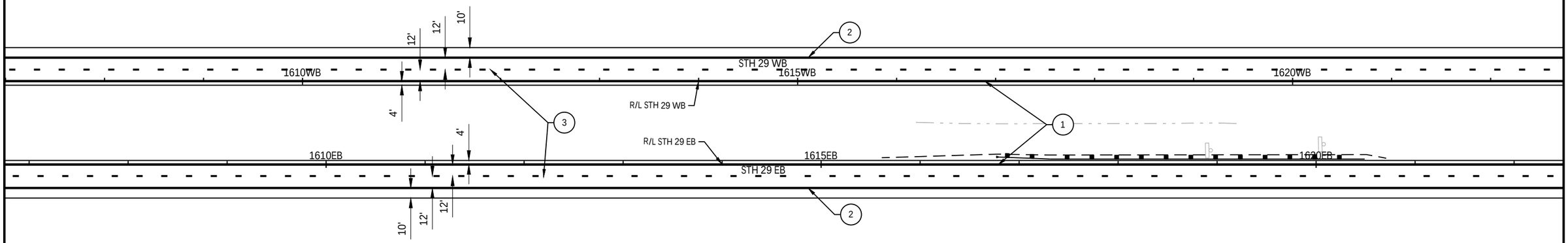
1. MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
2. MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
3. MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE 12.5 FT LINE BLACK 12.5 FT LAG 37.5 FT SKIP)
4. MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE) (3 FT LINE 9 FT SKIP)
5. MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
6. MARKING CHEVRON EPOXY 24-INCH (WHITE)
7. MARKING LINE STOP LINE 18-INCH (WHITE)
8. MARKING ARROW EPOXY
9. MARKING WORD EPOXY

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	PAVEMENT MARKINGS	SHEET 90	E

FILE NAME : C:\CADDLIB\PW\HNTB_NIHARRIS\GREATLAKES\D0382806\024501_PM.DWG
LAYOUT NAME - 29

PLOT DATE : 10/31/2024 2:30 PM PLOT BY : NIKKI HARRIS PLOT NAME : PLOT SCALE : 1 IN:100 FT

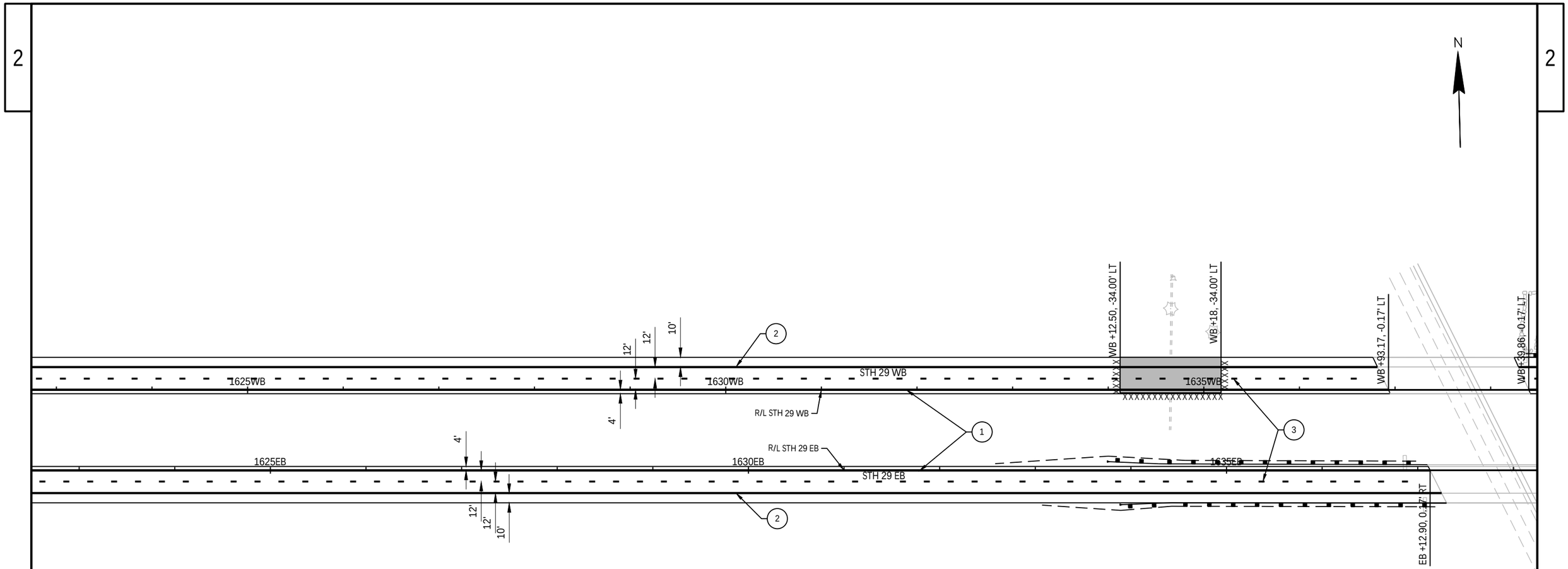
2



LEGEND

1. MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
2. MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
3. MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE 12.5 FT LINE BLACK 12.5 FT LAG 37.5 FT SKIP)
4. MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE) (3 FT LINE 9 FT SKIP)
5. MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
6. MARKING CHEVRON EPOXY 24-INCH (WHITE)
7. MARKING LINE STOP LINE 18-INCH (WHITE)
8. MARKING ARROW EPOXY
9. MARKING WORD EPOXY

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	PAVEMENT MARKINGS	SHEET 91	E



LEGEND

1. MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
2. MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
3. MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE 12.5 FT LINE BLACK 12.5 FT LAG 37.5 FT SKIP)
4. MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE) (3 FT LINE 9 FT SKIP)
5. MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
6. MARKING CHEVRON EPOXY 24-INCH (WHITE)
7. MARKING LINE STOP LINE 18-INCH (WHITE)
8. MARKING ARROW EPOXY
9. MARKING WORD EPOXY

2

2

N

1640WB

1645WB

STH 29 WB

1650WB

1640EB

1645EB

STH 29 EB

1650EB

R/L STH 29 WB

R/L STH 29 EB

WB +09.98, -0.17' LT

WB +92.03, -0.17' LT

WB +64.43, -0.17' LT

EB +60.67, 0.17' RT

EB +08.70, 0.17' RT

EB +88.48, 0.17' RT

EB +15.16, 34.00' RT

EB +21.16, 34.00' RT

EB +38.25, 0.17' RT

12'

12'

10'

4'

4'

10'

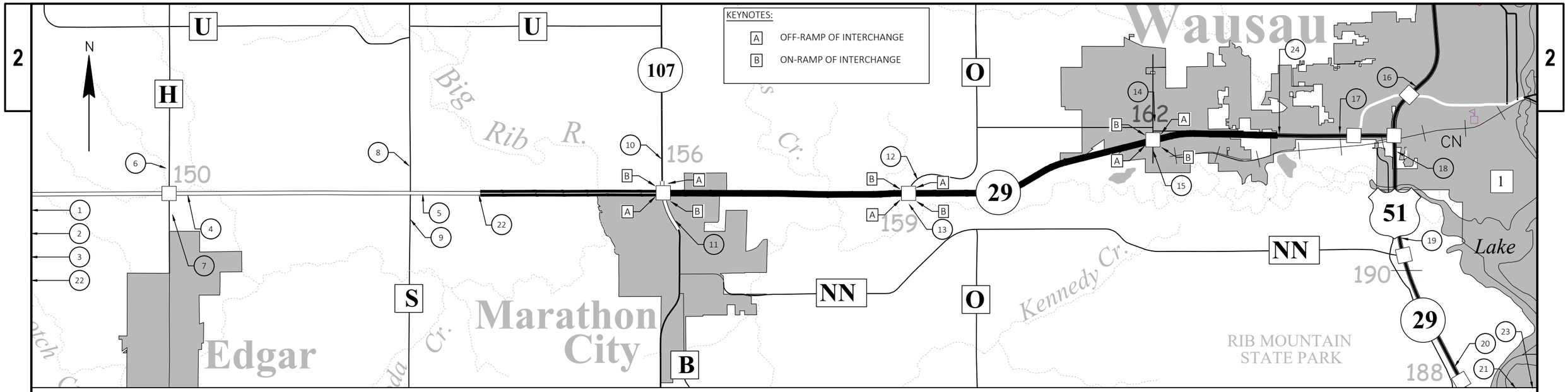
12'

12'

LEGEND

1. MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
2. MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
3. MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE 12.5 FT LINE BLACK 12.5 FT LAG 37.5 FT SKIP)
4. MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE) (3 FT LINE 9 FT SKIP)
5. MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
6. MARKING CHEVRON EPOXY 24-INCH (WHITE)
7. MARKING LINE STOP LINE 18-INCH (WHITE)
8. MARKING ARROW EPOXY
9. MARKING WORD EPOXY

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	PAVEMENT MARKINGS	SHEET 93	E



TRAFFIC CONTROL GENERAL NOTES:

1. ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.
2. "WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.
3. ALL TYPE III BARRICADES SHALL BE EQUIPPED WITH TYPE "A" (LOW INTENSITY FLASHING) LIGHTS PER SDDS.
4. FOR STH 29 STAGE 1 LANE CLOSURES SEE SDD "TRAFFIC CONTROL, LANE CLOSURE".
5. FOR STH 29 NEAR EXIT AND ENTRANCE RAMPS SEE SDD "TRAFFIC CONTROL, PARALLEL ENTRANCE RAMP WITHIN LANE CLOSURE", SDD "TRAFFIC CONTROL, TAPERED ENTRANCE RAMP WITHIN LEFT LANE CLOSURE", AND SDD "TRAFFIC CONTROL, PARALLEL EXIT RAMP WITHIN LANE CLOSURE".
6. FOR STH 29 SHOULDER CLOSURES SEE SDD "TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 M.PH.".
7. FOR 72ND AVENUE LANE CLOSURES SEE SDD "TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION".
8. PLACE G20-57 SIGN 7 DAYS PRIOR TO THE EXPECTED START OF THE 72ND STREET ROAD WORK. ADJUST THE DATE ACCORDINGLY.
9. PLACE UNEVEN LANES SIGN DURING MILL AND OVERLAY PER SDD "TRAFFIC CONTROL FOR DROP-OFF SIGNING".
10. SHIFT TRAFFIC PARTIALLY ONTO PAVED SHOULDERS TO STRADDLE EDGE LINE MARKING AS SHOWN IN THE TRAFFIC CONTROL TYPICAL SECTIONS PER SDD "TRAFFIC CONTROL, PARTIAL LANE SHIFT MULTILANE DIVIDED 50 MPH AND GREATER". ONLY REMOVE EXISTING MARKING AND PLACE TEMPORARY MARKING AT THE CULVERT REPLACEMENT LOCATIONS.
11. TRAFFIC CONTROL PLANS FOR STH 29 PROVIDED SUGGESTED STAGING WITH TRAFFIC CONTROL DEVICE LOCATIONS. STAGING MAY BE ALTERED WITH APPROVAL OF THE ENGINEER BASED ON OPERATIONS PROPOSED BY THE CONTRACTOR.

CONSTRUCTION STAGING SEQUENCE:

1. CONSTRUCT CULVERT OR STORM SEWER REPLACEMENT IN HALVES, AND GUARDRAIL REPLACEMENTS.
2A & 3B. MILL AND ASPHALTIC OVERLAY OF EASTBOUND AND WESTBOUND DRIVING LANES.
2B & 3A. MILL AND ASPHALTIC OVERLAY OF EASTBOUND AND WESTBOUND PASSING LANES.
4. MILL AND ASPHALTIC OVERLAY OF ON AND OFF RAMPS AT INTERCHANGES, POLYMER OVERLAY, AND HIGH FRICTION SURFACE TREATMENT.
5. CONSTRUCT 72ND AVENUE MILL AND ASPHALTIC OVERLAY, SPOT CONCRETE CURB AND GUTTER REPLACEMENT, AND STORM SEWER INLET REPAIRS.

ADVANCED WARNING FOR WIDTH RESTRICTIONS:

INCLUDE THE WO57-52 SIGN AT LOCATIONS THAT HAVE ACCESS POINTS BETWEEN THE SIGN LOCATION AND WIDTH RESTRICTION AREA.

PLACE SIGN M1-4 AND M3-2/M3-4 WHEN ASSEMBLY IS MOUNTED ON ALL ROADWAYS OTHER THAN STH 29.

SEE SDD "ADVANCED WIDTH RESTRICTION SIGNING" FOR ADDITIONAL INFORMATION.

PLACE G20-57 SIGNING 7 DAYS PRIOR TO CONSTRUCTION BEGINS AND REMOVE ONCE CONSTRUCTION BEGINS.

EAST WEST
M3-2 24"X12" M3-4 24"X12"
29
M1-6 24"X24"
MAX. 13' WIDTH
W12-52 48"X48"
XX MILES AHEAD
WO57-52 48"X36"

2. STH 29 EB (STH 97 ON RAMP [EXIT 145]) 9.5 MILES AHEAD
3. STH 29 EB (CTH M) 7 MILES AHEAD
4. STH 29 EB (CTH H ON RAMP [EXIT 150]) 4 MILES AHEAD
5. STH 29 EB (CTH S) 1 MILE AHEAD
18. STH 29 WB/USH 51 NB (EXIT 191A) 1.75 MILES AHEAD
19. STH 29 WB/USH 51 NB (CTH NN ON RAMP [EXIT 190]) 2.5 MILES AHEAD
20. STH 29 WB/USH 51 NB (CTH N ON RAMP [EXIT 188]) 4 MILES AHEAD
22. STH 29 EB (1 MILE PRIOR TO EXIT 132) 23 MILES AHEAD
23. STH 29 WB (1 MILE PRIOR TO EXIT 170) 7 MILE S AHEAD

EAST WEST
M3-2 24"X12" M3-4 24"X12"
29
M1-6 24"X24"
MAX. 13' WIDTH
W12-52 48"X48"

6. CTH H NB
7. CTH H SB
8. CTH S NB
9. CTH S SB
10. STH 107 NB
11. STH 107 SB
12. CTH O NB
13. CTH O SB
14. 72ND AVENUE NB
15. 72ND AVENUE SB
16. USH 51 SB (EXIT 191A)
17. USH 51 SB (ON RAMP [EXIT 192])

1. STH 29 EB (STH 13 OFF RAMP [EXIT132])

WIDE LOADS EXCEEDING 13 FT
R12-70B 114"X42"

21. STH 29 WB (IH 39SB/USH 51SB OFF RAMP [EXIT 170])

WIDE LOADS EXCEEDING 13 FT
R12-70B 114"X42"

HWY 29 ROAD WORK BEGINS XXX-XX
G20-57 96"X48"
24.

PCMS GENERAL NOTES:

ADJUST TRAFFIC CONTROL PCMS MESSAGES AS NEEDED BASED ON CONSTRUCTION SCHEDULE.

CONSIDER GEOMETRICS WHEN LOCATING MESSAGE BOARDS SO THE DRIVER HAS A CLEAR VIEW OF THE BOARD FOR A MINIMUM OF 1,000 FEET IN FRONT OF THE MESSAGE BOARD. PLACE MESSAGE BOARDS AS FAR AWAY FROM LIVE TRAFFIC LANES AS POSSIBLE WITHOUT HAMPERING VISIBILITY.

PLACE TRAFFIC CONTROL SIGNS PCMS AND DISPLAY THE MESSAGES 7 DAYS PRIOR TO THE EXPECTED START OF THE PROPOSED WORK. ADJUST THE MESSAGE DATES ACCORDINGLY.

TRAFFIC CONTROL SIGNS PCMS MESSAGES

PCMS SIGN LOCATION	STAGE/WORK OPERATION	PHASE 1 (2 SEC)	PHASE 2 (2 SEC)
STH 29 0.1 MILES AHEAD OF RAMP	PRIOR TO RAMP CLOSURE	EXIT XXX / TO CLOSE	STARTING DATE
STH 29 0.1 MILES AHEAD OF RAMP	DURING RAMP CLOSURE	EXIT XXX / CLOSED	USE EXIT XXX
STH 107 / CTH O / 72ND AVE 0.1 MILES AHEAD OF RAMP	PRIOR TO RAMP CLOSURE	EXIT XXX / TO CLOSE	STARTING DATE
STH 107 / CTH O / 72ND AVE 0.1 MILES AHEAD OF RAMP	DURING RAMP CLOSURE	EXIT XXX / CLOSED	USE EXIT XXX

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL - OVERVIEW	SHEET 94	E

FILE NAME : P:\PROJECTS_CURRENT\MARATHON\WISDOT_NCR\STH 29 - SUB TO HNTB\ACAD\SHEETSPLAN\025001_TC\025001_TC.DWG
LAYOUT NAME - 01
PLOT DATE : 10/31/2024 1:192 PM PLOT BY : DEXTER KAETTERHENRY PLOT NAME : PLOT SCALE : Custom

2

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.

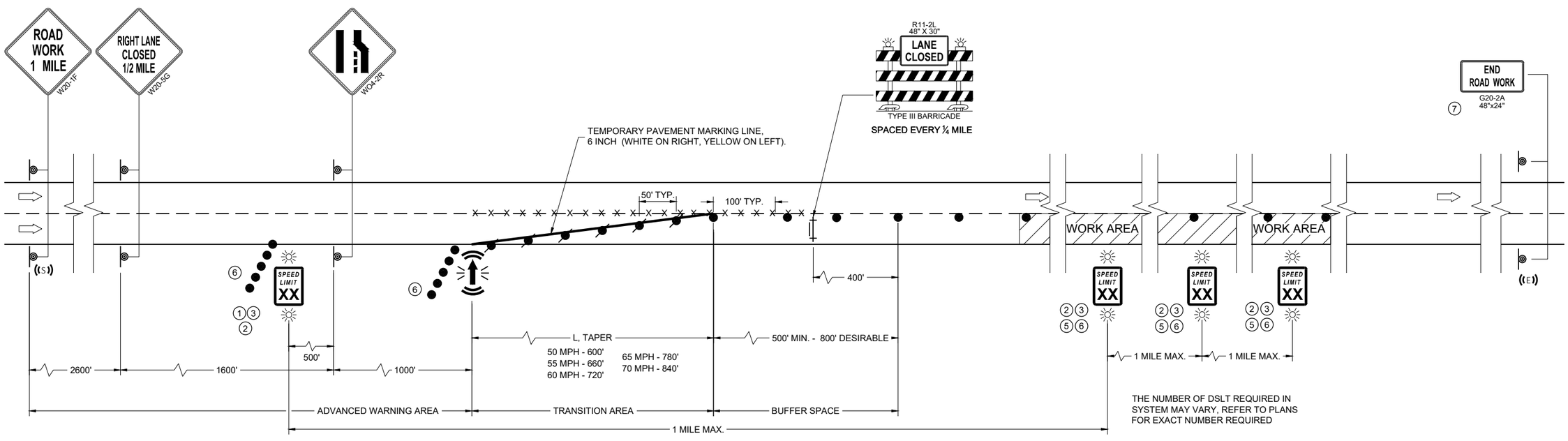
ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP OR INTERSECTION. THE LANE CLOSURE MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE 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.

1. EXISTING POST MOUNTED SPEED LIMIT SIGNS SHOULD BE COVERED OR REMOVED.
2. PLACE DSLT IN ADVANCE WARNING AREA AND THROUGHOUT PROJECT LIMITS. IF THE LANE CLOSURE MOVES DOWNSTREAM, LEAVE DSLT IN PLACE.
3. 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. IF WORK AREA STARTS LESS THAN 1,000 FEET FROM END OF LANE CLOSURE TAPER, OMIT DIGITAL SPEED LIMIT TRAILER AT THAT LOCATION.
5. PLACE A DIGITAL SPEED LIMIT TRAILER A MINIMUM OF EVERY ONE MILE. MODIFY PLACEMENT AS DIRECTED BY ENGINEER WHEN DIGITAL SPEED LIMIT TRAILER IS LOCATED IN CLOSE PROXIMITY TO AN ACCELERATION LANE OF AN ENTRANCE RAMP.
6. 5 DRUMS SPACED @ 10' INTERVALS AS NEEDED.
7. INCLUDE NON-DIGITAL R2-1 RESUME SPEED LIMIT SIGNS 200 FEET MINIMUM (500 FEET DESIRABLE) BEYOND THE "END ROAD WORK" SIGN.

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 DETAIL

PROJECT NO: 1053-04-14	HWY: STH 29	COUNTY: MARATHON	CONSTRUCTION DETAILS: DIGITAL SPEED REDUCTION SYSTEM	SHEET 95	E

2

WO13-1
36"X36"

PLACE ADVISORY SPEED LIMIT SIGNS AT THE BEGINNING OF SINGLE LANE CLOSURES IN EACH DIRECTION.

N

2

TRAFFIC CONTROL DRUMS CAN BE SET ON PASSING LANE SIDE OF CENTERLINE

STH 29 WESTBOUND

1201WB 1202WB 1203WB 1204WB 1205WB 1206WB

EXTEND SINGLE LANE CLOSURE 0.5 MILES PAST END OF WORKZONE
(CONSTRUCTION STAGING AND MOVING OPERATIONS)

WORKZONE

EXTEND SINGLE LANE CLOSURE 0.5 MILES PAST END OF WORKZONE
(CONSTRUCTION STAGING AND MOVING OPERATIONS)

1201EB 1202EB 1203EB 1204EB 1205EB 1206EB

STH 29 EASTBOUND

SET TRAFFIC CONTROL DRUMS ON PASSING LANE SIDE OF CENTERLINE

TRAFFIC CONTROL NOTES:

EXTEND WORK AREA BY 0.5 MILES TO ACCOMMODATE CONSTRUCTION STAGING AND MOVING OPERATIONS.

STAGE 1A

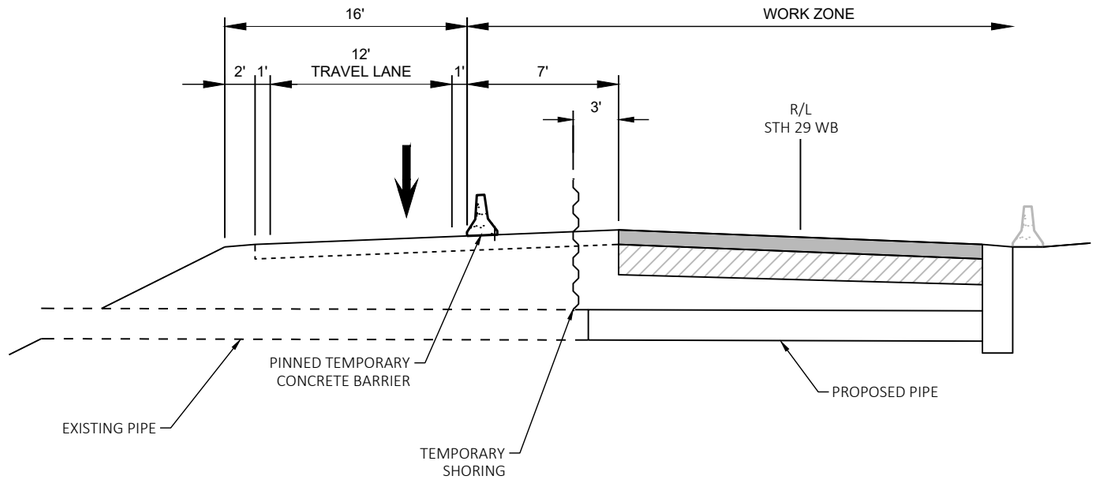
PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL - CULVERT REPLACEMENT (37029002347)	SHEET 96	E

FILE NAME : P:\PROJECTS_CURRENT\MARATHON\WISDOT_NCR\STH 29 - SUB TO HNTB\ACAD\SHEETSPLAN\025001_TC\025001_TC.DWG
LAYOUT NAME - 04

PLOT DATE : 10/31/2024 1:192 PM PLOT BY : DEXTER KAETTERHENRY PLOT NAME : PLOT SCALE : 1 IN:40 FT

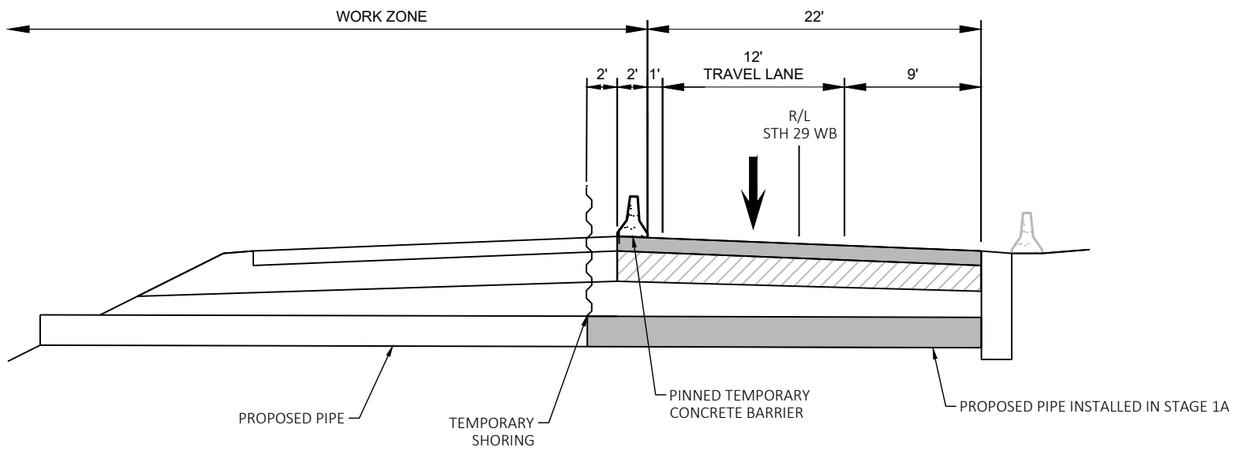
WISDOT/CADDS SHEET 42

2



STAGE 1A - STH 29 WB

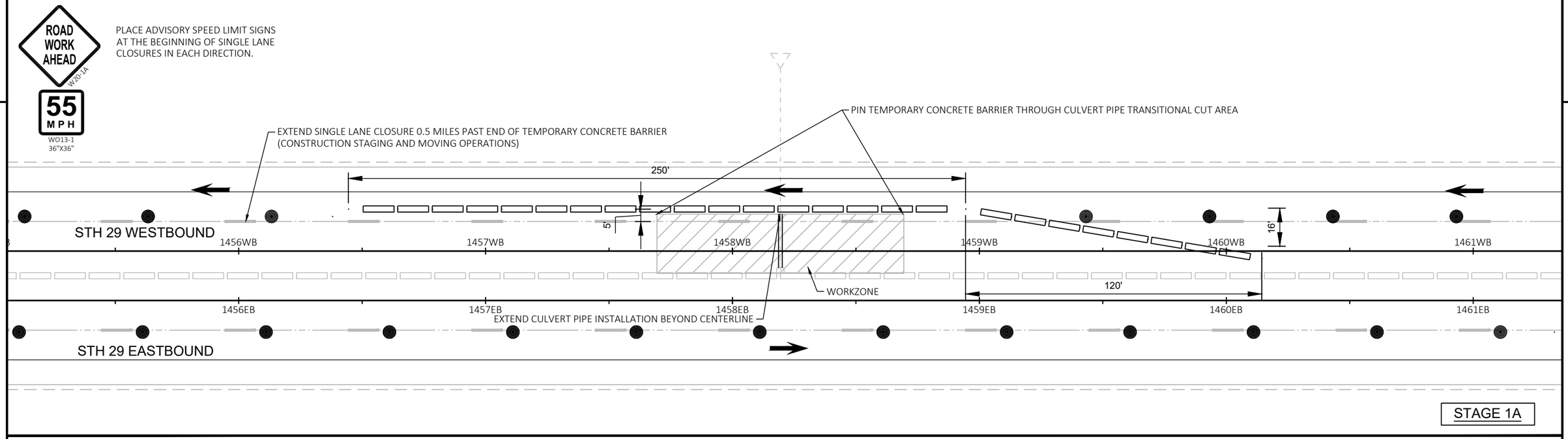
CULVERT 37029002331



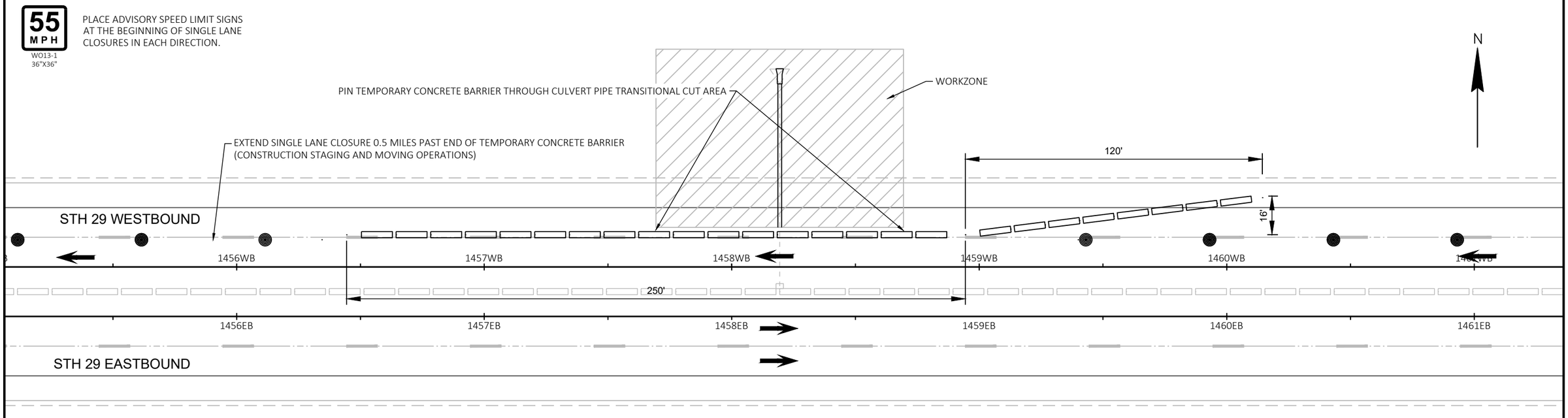
STAGE 1B - STH 29 WB

CULVERT 37029002331

2



STAGE 1A



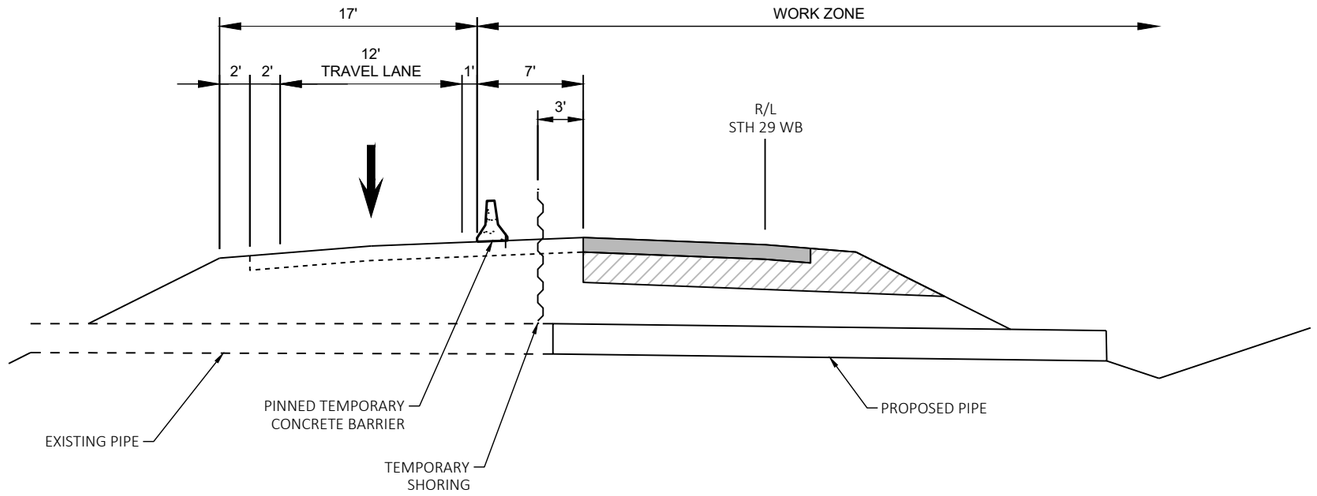
TRAFFIC CONTROL NOTES:

EXTEND WORK AREA BY 0.5 MILES TO ACCOMMODATE CONSTRUCTION STAGING AND MOVING OPERATIONS.

STAGE 1B

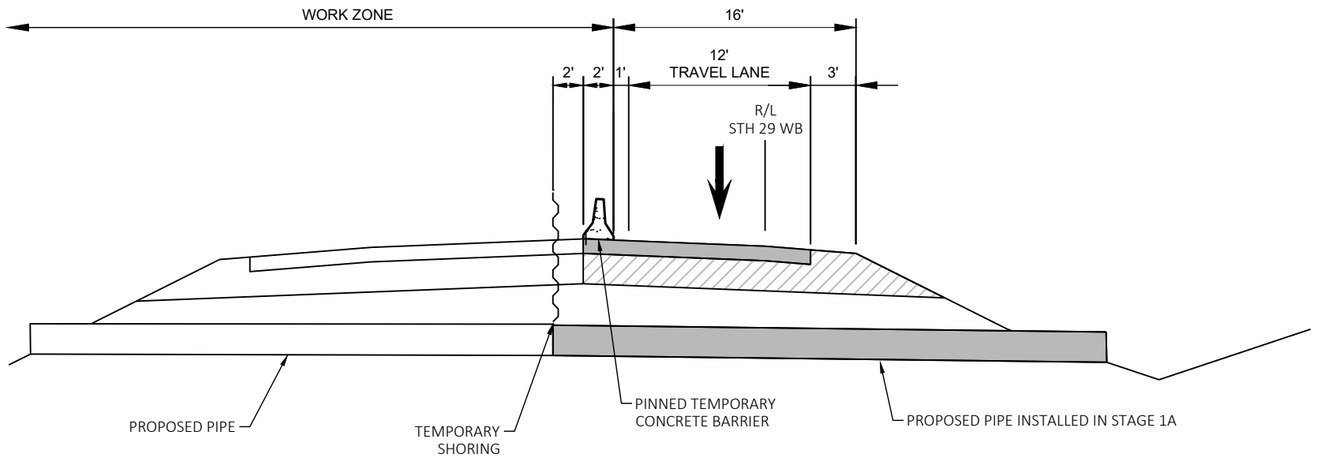
PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL - CULVERT REPLACEMENT (37029002331)	SHEET 98	E

2



STAGE 1A - STH 29 WB

CULVERT 37029002139



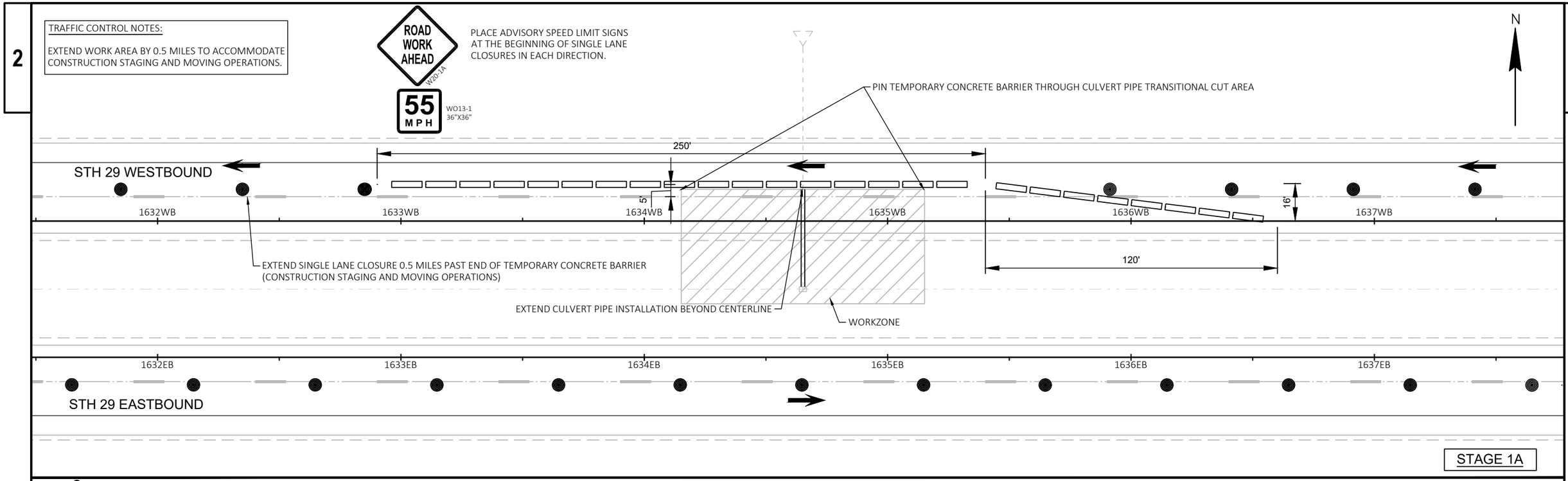
STAGE 1B - STH 29 WB

CULVERT 37029002139

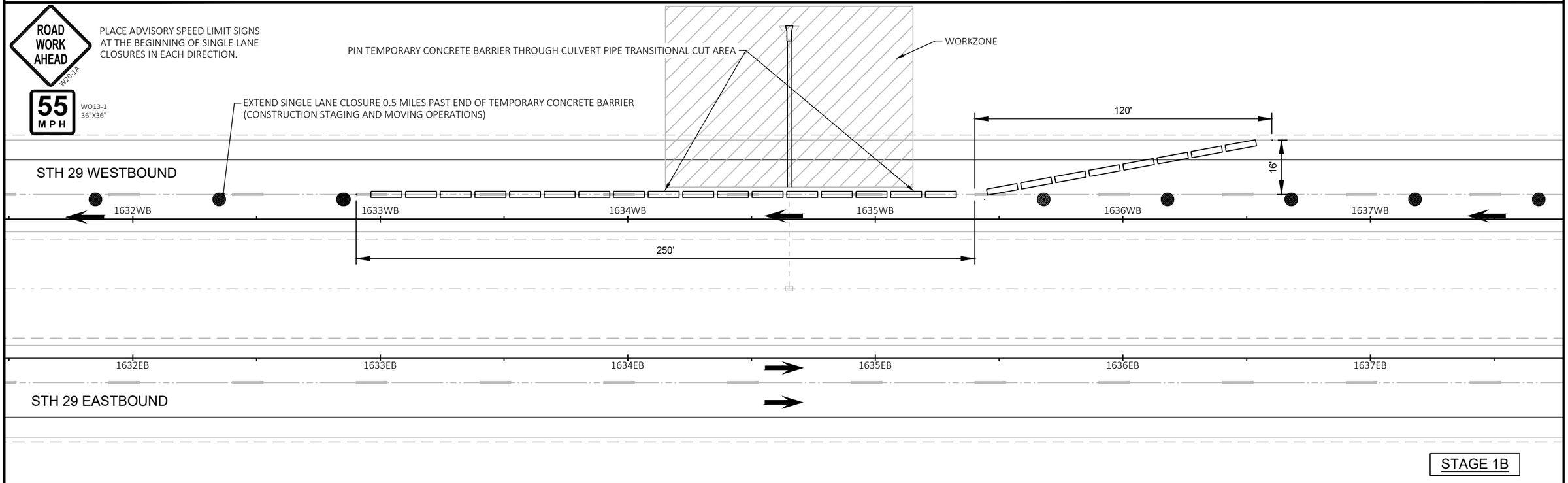
2

TRAFFIC CONTROL NOTES:

EXTEND WORK AREA BY 0.5 MILES TO ACCOMMODATE CONSTRUCTION STAGING AND MOVING OPERATIONS.



STAGE 1A



STAGE 1B

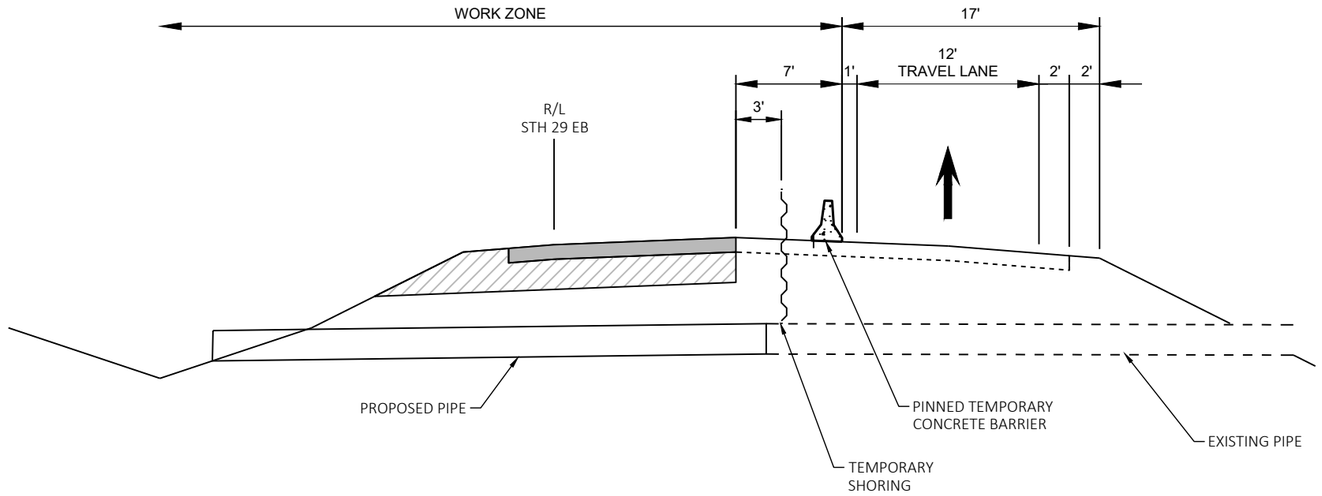
PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL - CULVERT REPLACEMENT (37029002139)	SHEET 100	E

FILE NAME : P:\PROJECTS_CURRENT\MARATHON\WISDOT_NCR\STH 29 - SUB TO HNTB\ACAD\SHEETSPLAN\025001_TC\025001_TC.DWG
LAYOUT NAME - 06

PLOT DATE : 10/31/2024 1:192 PM PLOT BY : DEXTER KAETTERHENRY PLOT NAME : PLOT SCALE : 1 IN:40 FT

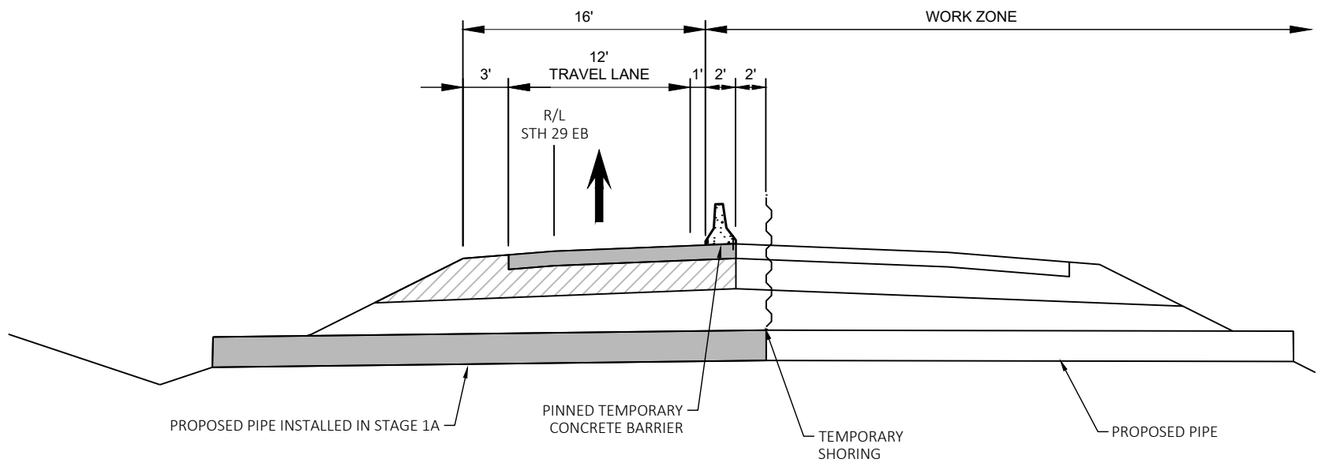
WISDOT/CADDS SHEET 42

2



STAGE 1A - STH 29 EB

CULVERT 37029002141



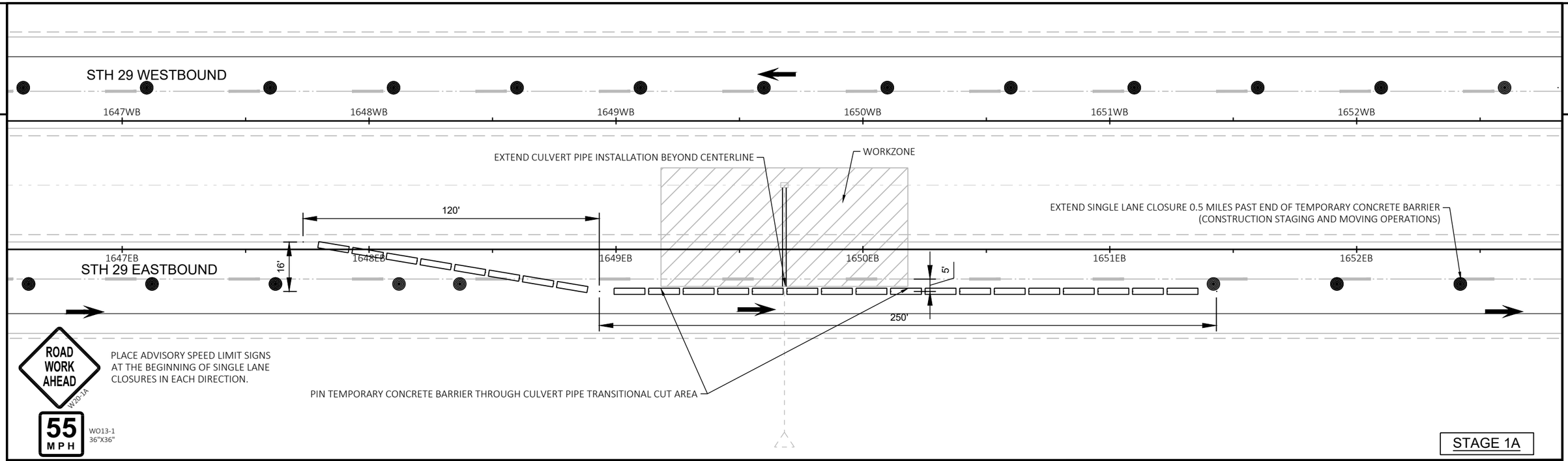
STAGE 1B - STH 29 EB

CULVERT 37029002141

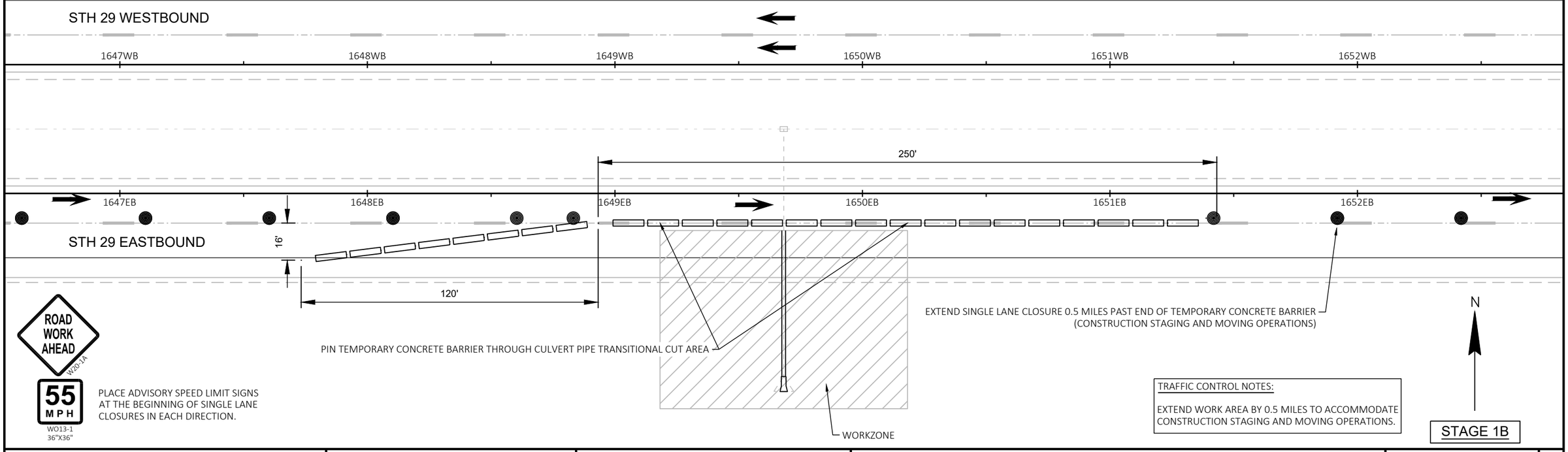
PROJECT NO: 1053-04-14	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL - CULVERT 37029002141 (STAGE 1)	SHEET 101	E

FILE NAME : P:\PROJECTS_CURRENT\MARATHON\WISDOT_NCR\STH 29 - SUB TO HNTB\ACAD\SHEETSPLAN\025001_TC\025001_TC.DWG
LAYOUT NAME - 03 (4)

PLOT DATE : 10/31/2024 1:192 PM PLOT BY : DEXTER KAETTERHENRY PLOT NAME : PLOT SCALE : 1 IN:10 FT



STAGE 1A



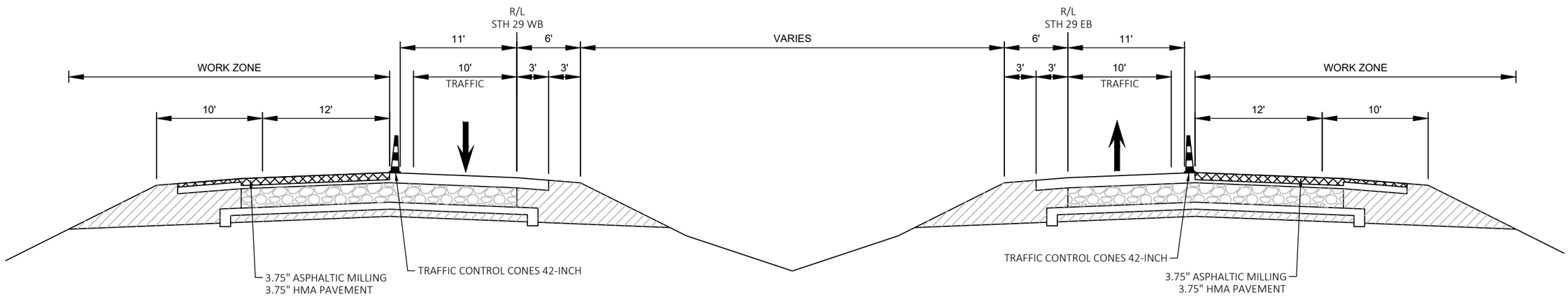
TRAFFIC CONTROL NOTES:

EXTEND WORK AREA BY 0.5 MILES TO ACCOMMODATE CONSTRUCTION STAGING AND MOVING OPERATIONS.

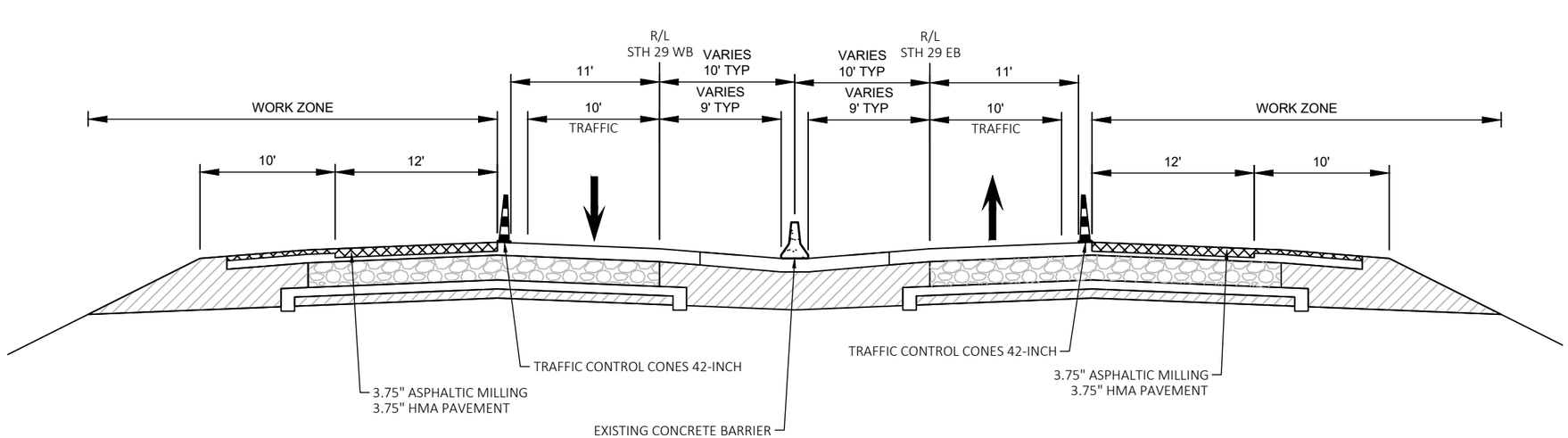
STAGE 1B

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL - CULVERT REPLACEMENT (37029002141)	SHEET 102	E

2



STAGE 2A & 3B
1153+00 - 1278+69
1471+71 - 1650+38



STAGE 2A & 3B
1278+69 - 1471+71

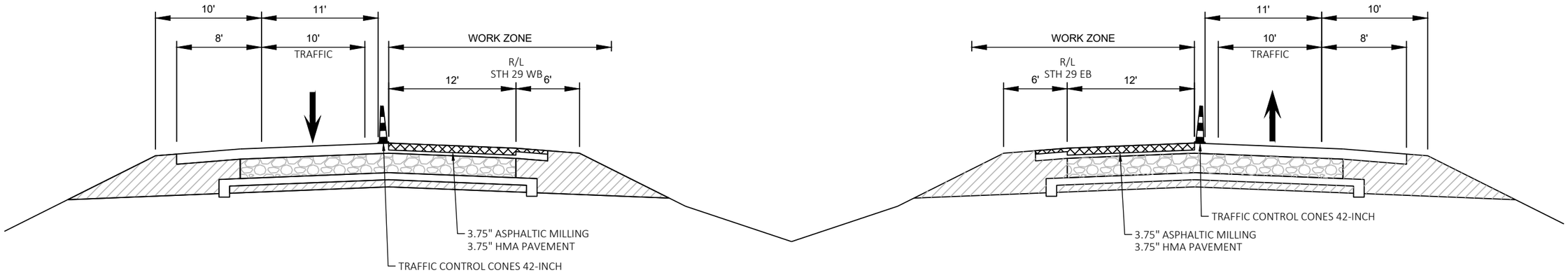
NOTES:

STAGE 2A: COMPLETE ALL REQUIRED MILLING OPERATIONS AND PAVE TRAVEL LANE LOWER LAYER

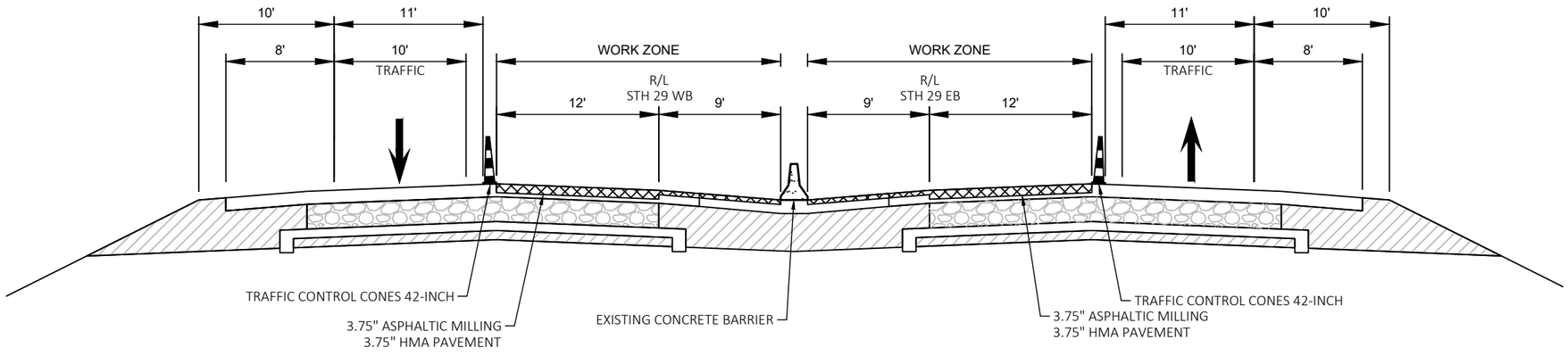
STAGE 3B: PAVE TRAVEL LANE AND SHOULDER UPPER LAYER AND PLACE SHOULDER BASE MATERIAL.

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL - TYPICAL SECTIONS (STAGE 2)	SHEET 103	E

2



STAGE 2B & 3A
1153+00 - 1278+69
1471+71 - 1650+38



STAGE 2B & 3A
1278+69 - 1471+71

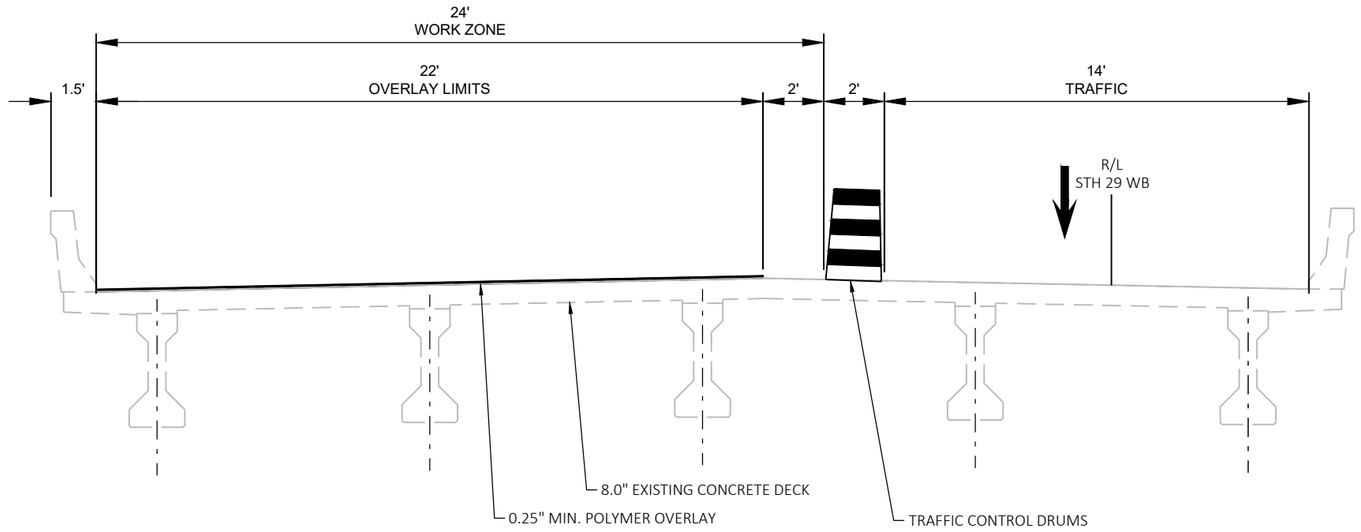
NOTES:

STAGE 2A: COMPLETE ALL REQUIRED MILLING OPERATIONS AND PAVE TRAVEL LANE LOWER LAYER

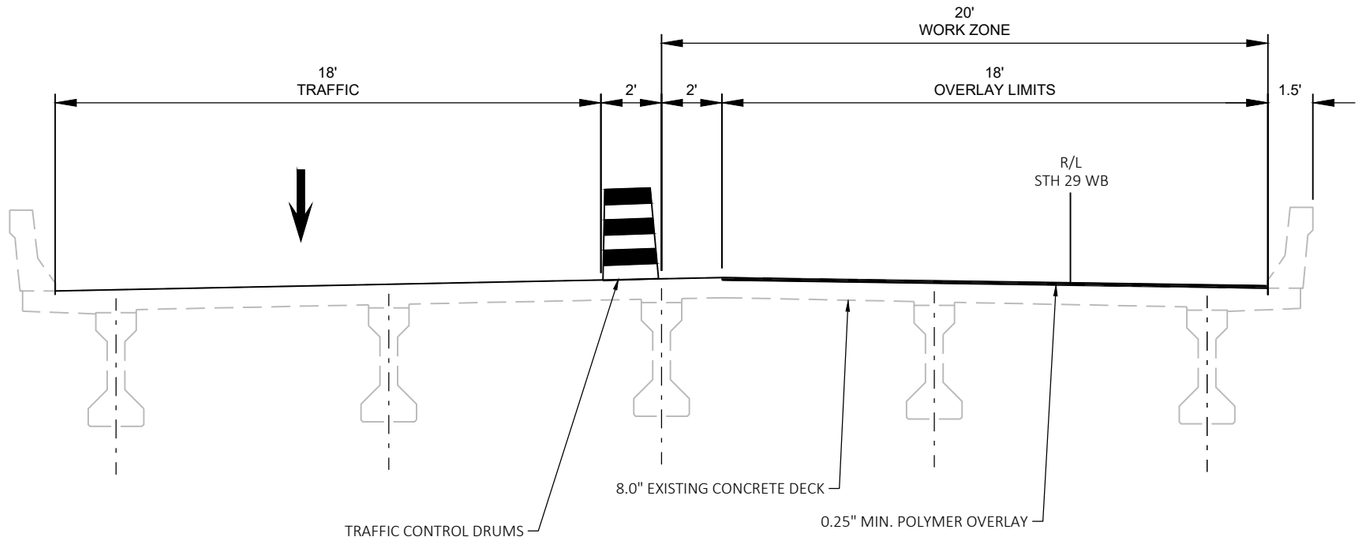
STAGE 3B: PAVE TRAVEL LANE AND SHOULDER UPPER LAYER AND PLACE SHOULDERING MATERIAL.

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL - TYPICAL SECTIONS (STAGE 3)	SHEET 104	E

2

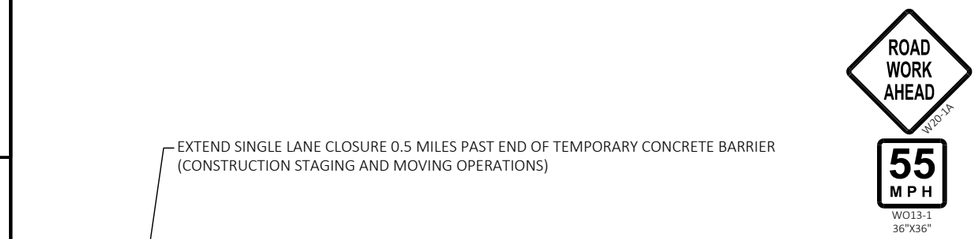


STAGE 2
1207+44- 1211+03



STAGE 3
1207+44 - 1211+03

PROJECT NO: 1053-04-14	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL - TYPICAL SECTIONS (B-37-0115)	SHEET 105	E

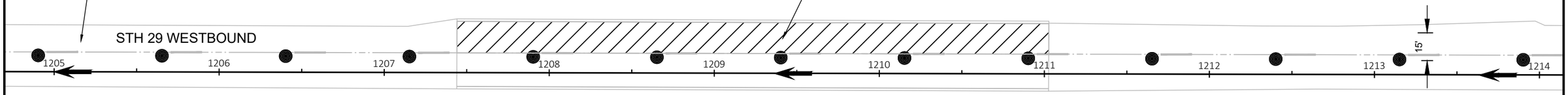


PLACE ADVISORY SPEED LIMIT SIGNS AT THE BEGINNING OF SINGLE LANE CLOSURES IN EACH DIRECTION.

N

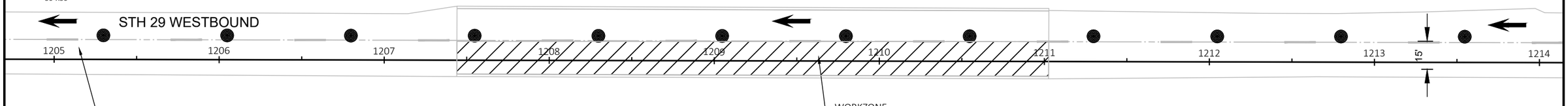
EXTEND SINGLE LANE CLOSURE 0.5 MILES PAST END OF TEMPORARY CONCRETE BARRIER (CONSTRUCTION STAGING AND MOVING OPERATIONS)

WORKZONE



STAGE 1

PLACE ADVISORY SPEED LIMIT SIGNS AT THE BEGINNING OF SINGLE LANE CLOSURES IN EACH DIRECTION.



WORKZONE

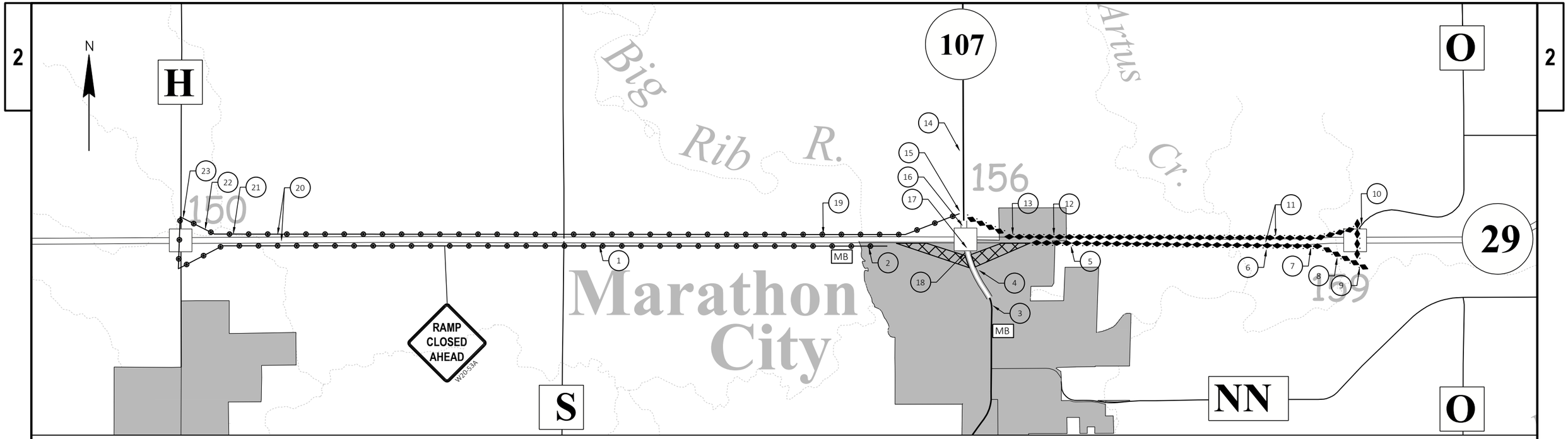
EXTEND SINGLE LANE CLOSURE 0.5 MILES PAST END OF TEMPORARY CONCRETE BARRIER (CONSTRUCTION STAGING AND MOVING OPERATIONS)

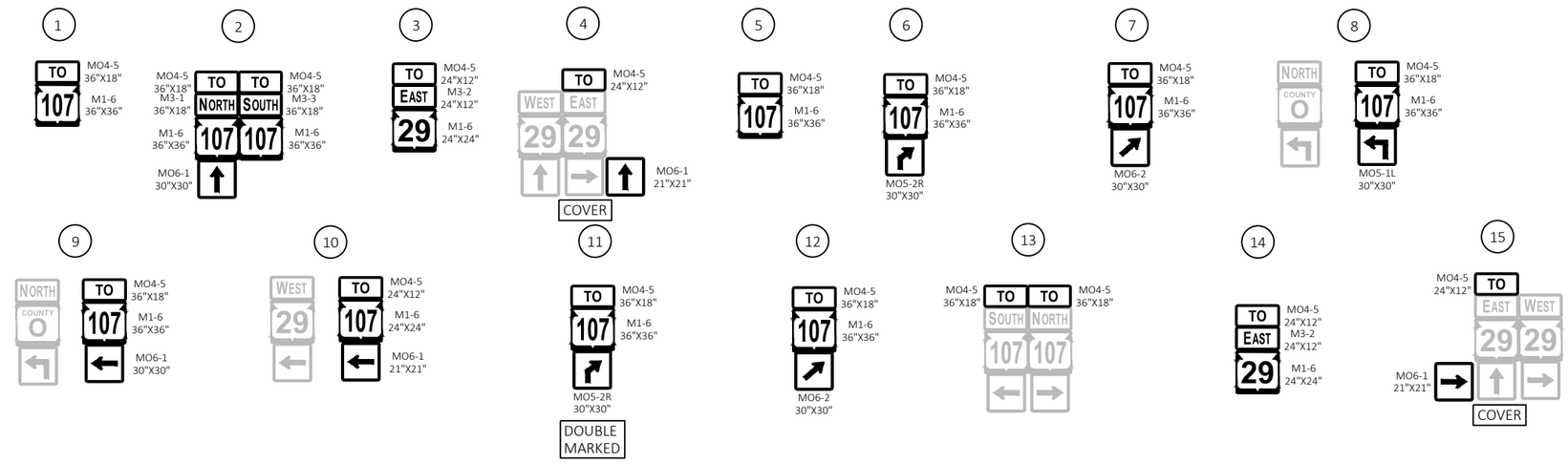
TRAFFIC CONTROL NOTES:

EXTEND WORK AREA BY 0.5 MILES TO ACCOMMODATE CONSTRUCTION STAGING AND MOVING OPERATIONS.

STAGE 2

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL - B-37-0115	SHEET 106	E





LEGEND:

- ROUTE TO STH 107
- ROUTE TO STH 29
- ROAD CLOSED

NOTES:

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

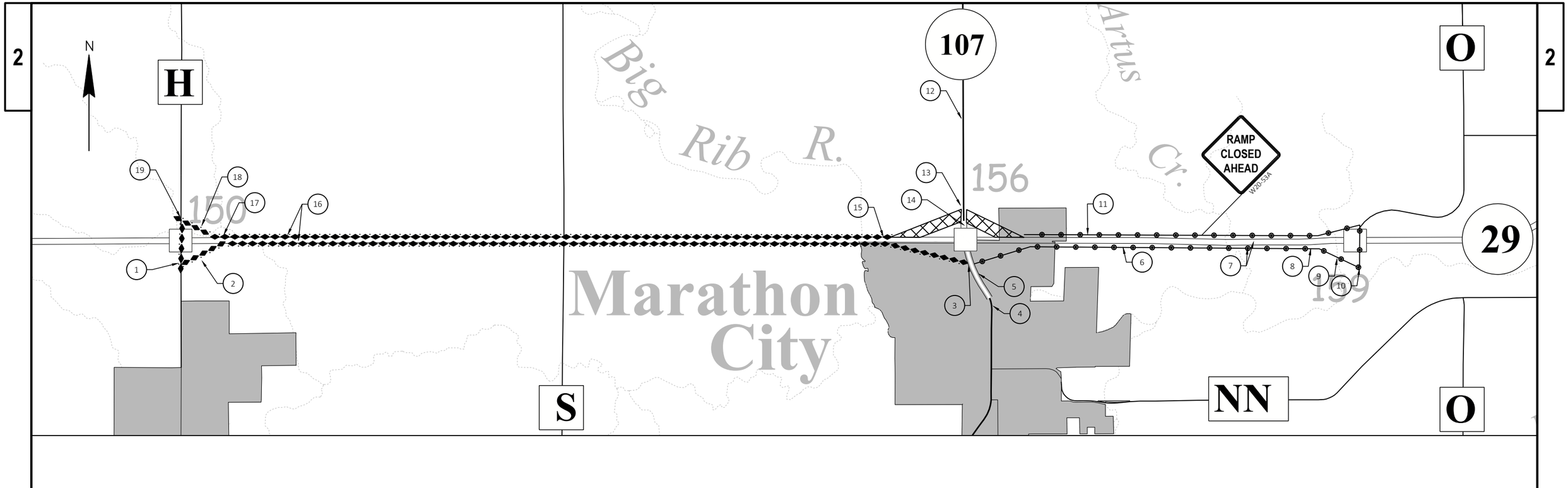
ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND APPROVED BY THE ENGINEER.

SEE S.D.D. "BARRICADES AND SIGNS FOR VARIOUS CLOSURES". USE RAMP CLOSED SIGN FOR EASTBOUND ENTRANCE RAMP.

SEE S.D.D. "TRAFFIC CONTROL, ON RAMP LANE CLOSURE" AND "OFF RAMP LANE CLOSURE FOR RAMP" CLOSURE.

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

PROJECT NO: 1053-04-14	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STH 29 / STH 107 (INTERCHANGE 156 EASTBOUND)	SHEET 107	E



LEGEND:

- ROUTE TO STH 107
- ROUTE TO STH 29
- ROAD CLOSED

NOTES:

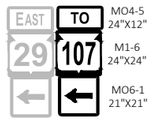
THE EXACT NUMBER, SPACING AND LOCATION OF TRAFFIC CONTROL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

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

SEE S.D.D. "BARRICADES AND SIGNS FOR VARIOUS CLOSURES". USE RAMP CLOSED SIGN FOR EASTBOUND ENTRANCE RAMP.

SEE S.D.D. "TRAFFIC CONTROL, ON RAMP LANE CLOSURE" AND "OFF RAMP LANE CLOSURE FOR RAMP" CLOSURE.

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

1


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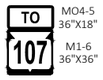

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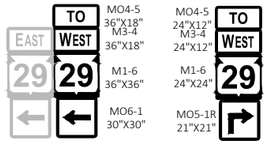

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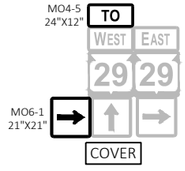
5


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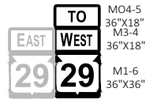

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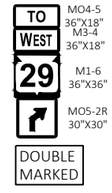

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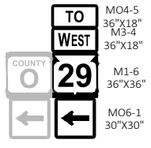
9

10


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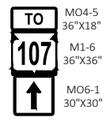

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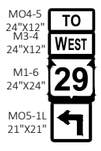

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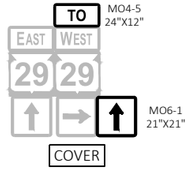

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15

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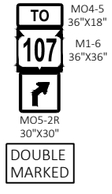

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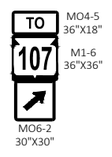

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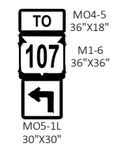

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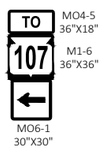
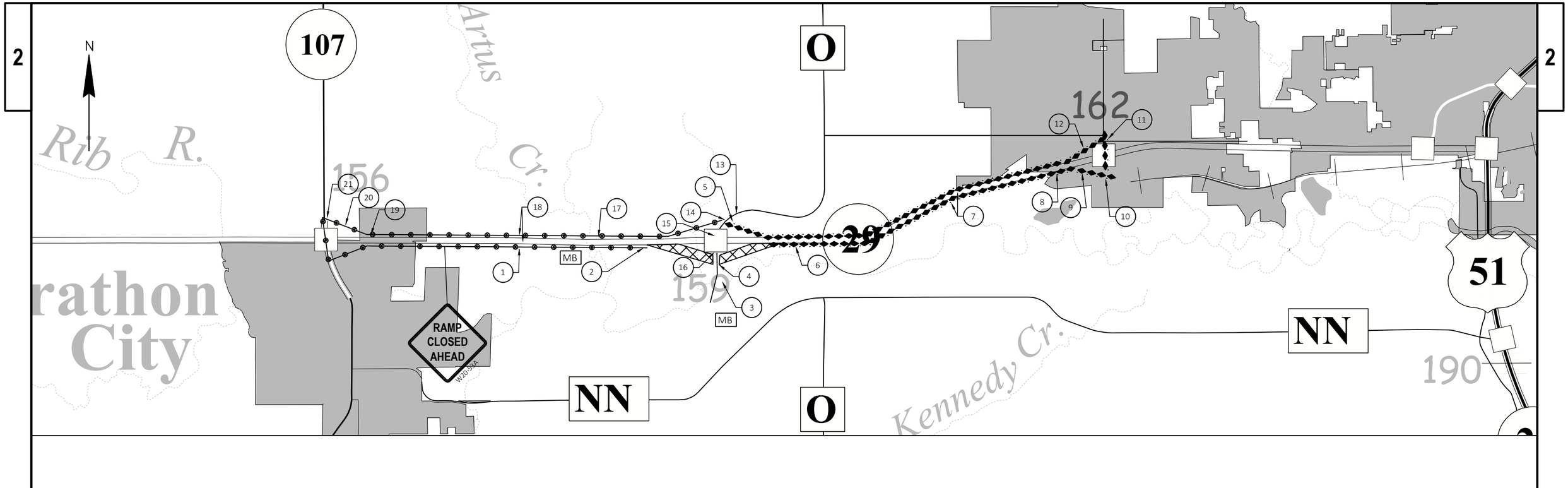


PROJECT NO: 1053-04-14	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STH 29 / STH 107 (INTERCHANGE 156 WESTBOUND)	SHEET 108	E



LEGEND:

- ROUTE TO CTH O
- ROUTE STH 29
- ROAD CLOSED

1
TO / NORTH / COUNTY O
MO4-5 36"X18"
M3-1 36"X18"
M1-5A 36"X36"

2
TO / NORTH / COUNTY O
MO4-5 36"X18"
M3-1 36"X18"
M1-5A 36"X36"
MO6-1 30"X30"

3
TO
MO4-5 24"X12"
WEST 29 | EAST 29
MO5-1L 21"X21"
COVER

4
TO
MO4-5 24"X12"
EAST 29
MO5-1L 21"X21"
COVER

5
TO / EAST / 29
MO4-5 36"X18"
M3-2 36"X18"
M1-6 36"X36"
MO6-1 30"X30"

6
TO / NORTH / COUNTY O
MO4-5 36"X18"
M3-1 36"X18"
M1-5A 36"X36"

7
TO / NORTH / COUNTY O
MO4-5 36"X18"
M3-1 36"X18"
M1-5A 36"X36"
MO5-2R 30"X30"
DOUBLE MARKED

8
TO / NORTH / COUNTY O
MO4-5 36"X18"
M3-1 36"X18"
M1-5A 36"X36"
MO6-2 30"X30"

9
TO / NORTH / COUNTY O
MO4-5 36"X18"
M3-1 36"X18"
M1-5A 36"X36"
MO5-1L 30"X30"

10
TO / NORTH / COUNTY O
MO4-5 36"X18"
M3-1 36"X18"
M1-5A 36"X36"
MO6-1 30"X30"

11
TO / NORTH / COUNTY O
MO4-5 24"X12"
M3-1 24"X12"
M1-5A 24"X24"
MO6-1 21"X21"

NOTES:

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

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

SEE S.D.D. "BARRICADES AND SIGNS FOR VARIOUS CLOSURES". USE RAMP CLOSED SIGN FOR EASTBOUND ENTRANCE RAMP.

SEE S.D.D. "TRAFFIC CONTROL, ON RAMP LANE CLOSURE" AND "OFF RAMP LANE CLOSURE FOR RAMP" CLOSURE.

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

12
TO / NORTH / COUNTY O
MO4-5 36"X18"
M3-1 36"X18"
M1-5A 36"X36"

13
TO
MO4-5 24"X12"
WEST 29 | EAST 29
MO5-1R 21"X21"
COVER

14
TO / EAST / 29
WEST 29
MO4-5 24"X12"
M3-2 24"X12"
M1-6 24"X24"
MO6-1 21"X21"

15
EAST 29
RAMP CLOSED AHEAD

16
EAST 29
RAMP CLOSED AHEAD

17
TO / EAST / 29
MO4-5 36"X18"
M3-2 36"X18"
M1-6 36"X36"

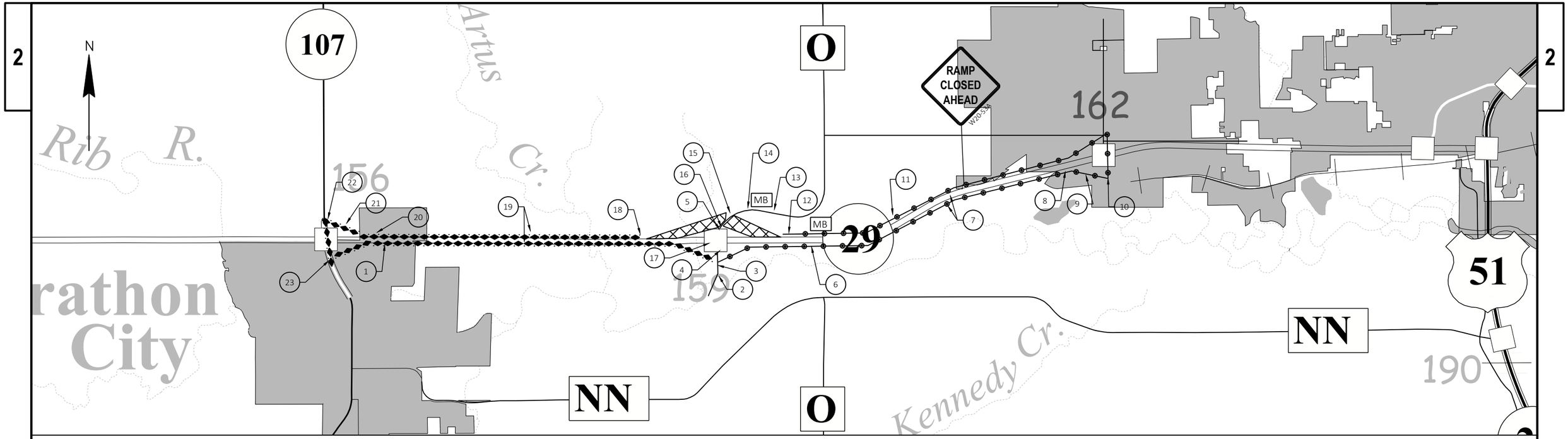
18
TO / EAST / 29
MO4-5 36"X18"
M3-2 36"X18"
M1-6 36"X36"
MO5-2R 30"X30"
DOUBLE MARKED

19
TO / EAST / 29
MO4-5 36"X18"
M3-2 36"X18"
M1-6 36"X36"
MO6-2 30"X30"

20
TO / EAST / 29
MO4-5 36"X18"
M3-2 36"X18"
M1-6 36"X36"
MO5-1L 30"X30"

21
TO / EAST / 29
MO4-5 36"X18"
M3-2 36"X18"
M1-6 36"X36"
MO6-1 30"X30"

PROJECT NO: 1053-04-14	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STH 29 / CTH O (INTERCHANGE 159 EASTBOUND)	SHEET 109	E



LEGEND:

- ROUTE TO CTH O
- ROUTE TO STH 29
- ROAD CLOSED

NOTES:

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

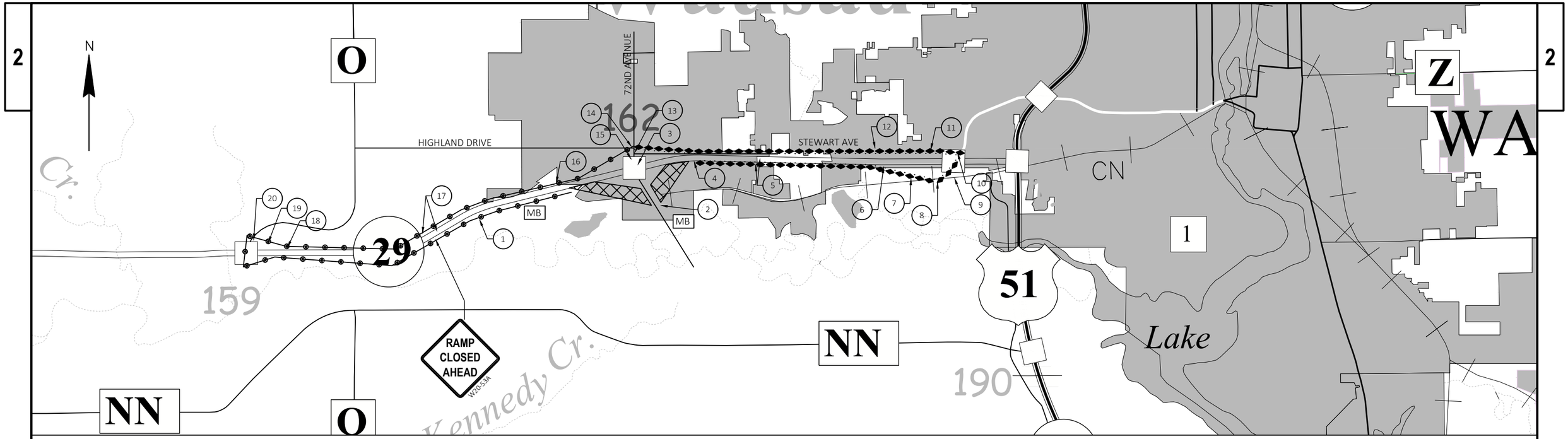
ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND APPROVED BY THE ENGINEER.

SEE S.D.D. "BARRICADES AND SIGNS FOR VARIOUS CLOSURES". USE RAMP CLOSED SIGN FOR EASTBOUND ENTRANCE RAMP.

SEE S.D.D. "TRAFFIC CONTROL, ON RAMP LANE CLOSURE" AND "OFF RAMP LANE CLOSURE FOR RAMP" CLOSURE.

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

PROJECT NO: 1053-04-14	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STH 29 / CTH O (INTERCHANGE 159 WESTBOUND)	SHEET 110	E



1
TO MO4-5 36"X18"
FMS 48"X22"
S 72ND AVE
MO6-1 30"X30"

2
TO MO4-5 24"X12"
WEST EAST
29 29
MO6-1 21"X21"
COVER

3
TO MO4-5 36"X18"
EAST M3-2 36"X18"
29 M1-6 36"X36"
MO6-1 30"X30"

4
TO MO4-5 36"X18"
S 72ND AVE
FMS 48"X22"

5
TO MO4-5 36"X18"
S 72ND AVE FMS 48"X22"
MO5-2R 30"X30"
DOUBLE MARKED

6
TO MO4-5 36"X18"
S 72ND AVE FMS 48"X22"
MO6-2 30"X30"

7
TO MO4-5 36"X18"
S 72ND AVE FMS 48"X22"

8
TO MO4-5 36"X18"
FMS 48"X22"
S 72ND AVE
MO6-2 30"X30"

9
TO MO4-5 36"X18"
S 72ND AVE FMS 48"X22"
MO5-1L 30"X30"

10
TO MO4-5 36"X18"
S 72ND AVE FMS 48"X22"
MO6-1 30"X30"

11
TO MO4-5 36"X18"
S 72ND AVE
FMS 48"X22"

12
TO MO4-5 36"X18"
S 72ND AVE
FMS 48"X22"

13
TO MO4-5 36"X18"
S 72ND AVE
FMS 48"X22"

14
MO4-5 36"X18" M3-2 36"X18"
TO EAST 29
M1-6 36"X36"
MO5-1R 30"X30"

15
TO MO4-5 24"X12"
EAST WEST
29 29
MO6-1 21"X21"
COVER

16
TO MO4-5 36"X18" M3-2 36"X18"
WEST EAST
29 29 M1-6 36"X36"

17
TO MO4-5 36"X18" M3-2 36"X18"
EAST
29 M1-6 36"X36"
DOUBLE MARKED
MO5-2R 30"X30"

18
TO MO4-5 36"X18" M3-2 36"X18"
EAST
29 M1-6 36"X36"
MO6-2 30"X30"

19
MO4-5 36"X18" M3-2 36"X18"
TO EAST NORTH COUNTY O
29
M1-6 36"X36"
MO5-1L 30"X30"

20
MO4-5 36"X18" M3-2 36"X18"
TO EAST NORTH COUNTY O
29
M1-6 36"X36"
MO6-1 30"X30"

LEGEND:

- ROUTE TO 72ND AVE
- ROUTE TO STH 29
- ROAD CLOSED

NOTES:

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

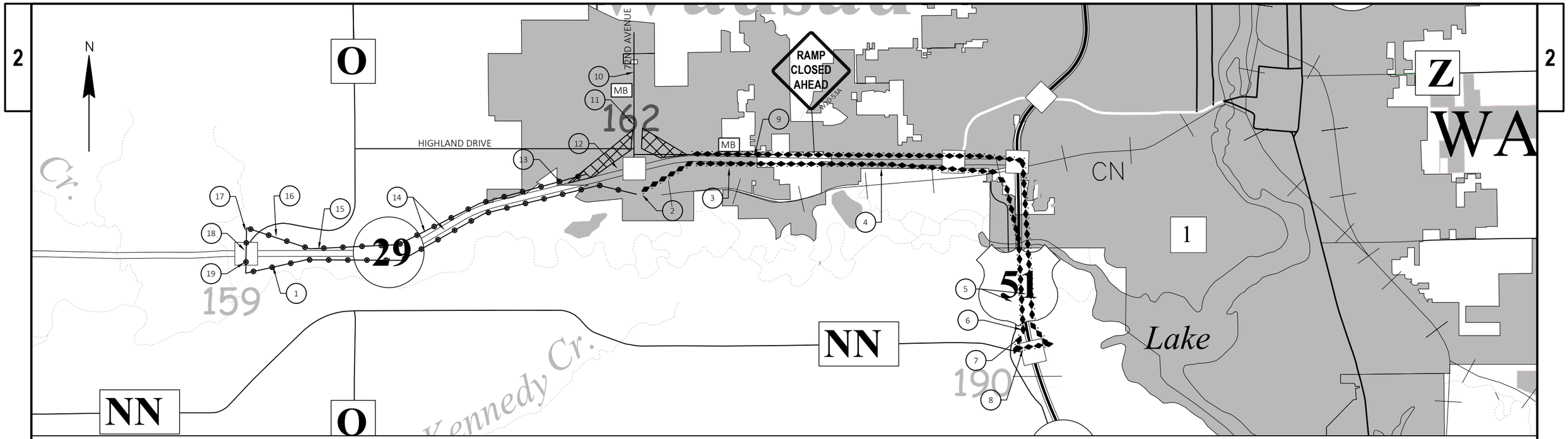
ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND APPROVED BY THE ENGINEER.

SEE S.D.D. "BARRICADES AND SIGNS FOR VARIOUS CLOSURES". USE RAMP CLOSED SIGN FOR EASTBOUND ENTRANCE RAMP.

SEE S.D.D. "TRAFFIC CONTROL, ON RAMP LANE CLOSURE" AND "OFF RAMP LANE CLOSURE FOR RAMP" CLOSURE.

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

PROJECT NO: 1053-04-14	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STH 29 / 72ND STREET (INTERCHANGE 162 EASTBOUND)	SHEET 111	E



1 — TO | MO4-5 36"X18" | S 72ND AVE | FMS 48"X22"

2 — TO | MO4-5 36"X18" | WEST | EAST | 29 | 29 | MO6-1 30"X30"

3 — TO | MO4-5 36"X18" | WEST | M3-4 36"X18" | 29 | M1-6 36"X36"

4 — TO | MO4-5 36"X18" | WEST | M3-4 36"X18" | 29 | M1-6 36"X36" | MO6-1 30"X30"

5 — TO | MO4-5 36"X18" | WEST | M3-4 36"X18" | 29 | M1-6 36"X36" | MO5-2R 30"X30" | DOUBLE MARKED

6 — TO | MO4-5 36"X18" | WEST | M3-4 36"X18" | 29 | M1-6 36"X36" | MO6-2 30"X30"

7 — TO | MO4-5 36"X18" | WEST | M3-4 36"X18" | 29 | M1-6 36"X36" | MO5-1L 30"X30"

8 — TO | MO4-5 36"X18" | WEST | M3-4 36"X18" | COUNTY NN | 29 | M1-6 36"X36" | MO6-1 30"X30"

9 — TO | MO4-5 36"X18" | S 72ND AVE | FMS 48"X22" | MO6-1 30"X30"

10 — TO | MO4-5 36"X18" | WEST | M3-4 36"X18" | 29 | M1-6 36"X36"

11 — TO | MO4-5 36"X18" | EAST | WEST | 29 | 29 | MO6-1 30"X30"

12 — TO | MO4-5 36"X18" | EAST | WEST | M3-4 36"X18" | 29 | M1-6 36"X36" | MO6-1 30"X30"

13 — TO | MO4-5 36"X18" | S 72ND AVE | FMS 48"X22"

14 — TO | MO4-5 36"X18" | S 72ND AVE | FMS 48"X22" | MO5-2R 30"X30" | DOUBLE MARKED

15 — FMS 48"X22" | TO | MO4-5 36"X18" | S 72ND AVE | MO6-2 30"X30"

16 — FMS 48"X22" | TO | MO4-5 36"X18" | S 72ND AVE | COUNTY O | MO5-1L 30"X30"

17 — FMS 48"X22" | TO | MO4-5 36"X18" | S 72ND AVE | COUNTY O | MO6-1 30"X30"

18 — FMS 48"X22" | TO | MO4-5 36"X18" | S 72ND AVE | EAST 29 | MO5-1L 30"X30"

19 — FMS 48"X22" | TO | MO4-5 36"X18" | S 72ND AVE | MO6-1 30"X30"

LEGEND:

- ROUTE TO EXIT 162
- ROUTE TO STH 29
- ROAD CLOSED

NOTES:

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

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

SEE S.D.D. "BARRICADES AND SIGNS FOR VARIOUS CLOSURES". USE RAMP CLOSED SIGN FOR EASTBOUND ENTRANCE RAMP.

SEE S.D.D. "TRAFFIC CONTROL, ON RAMP LANE CLOSURE" AND "OFF RAMP LANE CLOSURE FOR RAMP" CLOSURE.

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

PROJECT NO: 1053-04-14	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL: STH 29 / 72ND ST (INTERCHANGE 162 WESTBOUND)	SHEET 112	E

2

2

N

BP: 1150WB+19.21
N = 196512.034
E = 215851.943

1152WB 1154WB 1156WB 1158WB STH 29 WB 1160WB S89°50'36"E 1162WB 1164WB

0EB 1152EB 1154EB 1156EB 1158EB STH 29 EB 1160EB S89°50'36"E 1162EB 1164EB

BEGIN PROJECT
STA 1153EB+00
N = 196461.266
E = 216132.705

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	ALIGNMENT DETAILS	SHEET 113	E

FILE NAME : C:\CADDLIB\PW\HNTB_APACADA\GREATLAKES\D0382806\027201-AD.DWG
LAYOUT NAME - 01

PLOT DATE : 10/31/2024 8:05 AM PLOT BY : ALLAN PACADA PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

2

N

PI: 1169WB+80.21

1166WB S89°50'36"E 1168WB 1170WB 1172WB S89°51'17"E 1174WB STH 29 WB 1176WB 1178WB 1180WB

1166EB S89°50'36"E 1168EB 1170EB 1172EB S89°51'17"E 1174EB STH 29 EB 1176EB 1178EB 1180EB

PI: 1169EB+80.10

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	ALIGNMENT DETAILS	SHEET 114	E

FILE NAME : C:\CADDLIB\PW\HNTB_APACADA\GREATLAKES\D0382806\027201-AD.DWG
LAYOUT NAME - 02

PLOT DATE : 10/31/2024 8:05 AM PLOT BY : ALLAN PACADA PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

2

N

1182WB 1184WB 1186WB S89°51'17"E 1188WB 1190WB STH 29 WB 1192WB 1194WB 1196WB

1182EB 1184EB 1186EB S89°51'17"E 1188EB 1190EB STH 29 EB 1192EB 1194EB 1196EB

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	ALIGNMENT DETAILS	SHEET 115	E

2

2

N

1198WB 1200WB 1202WB S89°51'17"E 1204WB 1206WB STH 29 WB 1208WB 1210WB 1212WB

1198EB 1200EB 1202EB S89°51'17"E 1204EB 1206EB STH 29 EB 1208EB 1210EB 1212EB

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	ALIGNMENT DETAILS	SHEET 116	E

FILE NAME : C:\CADDLIB\PW\HNTB_APACADA\GREATLAKES\D0382806\027201-AD.DWG
LAYOUT NAME - 04

PLOT DATE : 10/31/2024 8:05 AM PLOT BY : ALLAN PACADA PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

2

N

BP: 505NW+09.24

506NW

STH 107 NW

508NW

1214WB 1216WB 1218WB S89°51'17"E 1220WB STH 29 WB 1222WB 1224WB 1226WB 1228WB

1214EB 1216EB 1218EB S89°51'17"E 1220EB STH 29 EB 1222EB 1224EB 1226EB 1228EB

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	ALIGNMENT DETAILS	SHEET 117	E

FILE NAME : C:\CADDLIB\PW\HNTB_APACADA\GREATLAKES\D0382806\027201-AD.DWG
LAYOUT NAME - 05

PLOT DATE : 10/31/2024 8:05 AM PLOT BY : ALLAN PACADA PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

2

N

CURVE 107 NW-1
PI STA = 518NW+31.39
Y = 196541.696
X = 224595.792
DELTA = 12°38'00" LT
D = 3°58'14"
T = 159.74'
L = 318.18'
R = 1443.03'
PC STA = 516NW+71.66
Y = 196538.784
X = 224436.080
PT STA = 519NW+89.84
Y = 196579.468
X = 224750.999
DB = N88°57'19"E
DA = N76°19'19"E

PC: 516NW+71.66
PT: 519NW+89.84
PI: 518NW+31.39

510NW N88°57'19"E 512NW 514NW 516NW STH 107 RAMP NW 518NW CURVE 107 NW-1 520NW 522NW 524NW N76°19'19"E

1230WB 1232WB 1234WB S89°51'17"E 1236WB STH 29 WB 1238WB 1240WB 1242WB 1244WB

1230EB 1232EB 1234EB S89°51'17"E 1236EB STH 29 EB 1238EB 1240EB 1242EB 1244EB

BP: 414SW+50.68

416SW S85°07'32"E 418SW STH 107 RAMP SW 420SW 422SW 424SW

PC: 420SW+22.88
PI: 422SW+60.54
CURVE 107 SW-1
PT: 424SW+94.11

CURVE 107 SW-1
PI STA = 422SW+60.54
Y = 196348.934
X = 225006.097
DELTA = 18°23'44" RT
D = 3°54'13"
T = 237.66'
L = 471.23'
R = 1467.73'
PC STA = 420SW+22.88
Y = 196369.129
X = 224769.297
PT STA = 424SW+94.11
Y = 196255.043
X = 225224.424
DB = S85°07'32"E
DA = S66°43'48"E

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	ALIGNMENT DETAILS	SHEET 118	E

2

2

N

EP: 530NW+26.80

530NW

BP: 629NE+27.23

526NW

STH 107 RAMP NW

528NW

630NE

632NE

S73°36'47"E

634NE

STH 107 RAMP NE

636NE

PC: 637NE+44.99

638NE

CURVE 107 NE-1

640NE

PT: 640NE+37.62

PI: 638NE+91.80

CURVE 107 NE-1
PI STA = 638NE+91.80
Y = 196568.919
X = 226682.847
DELTA = 11°31'55" LT
D = 3°56'27"
T = 146.81'
L = 292.63'
R = 1453.90'
PC STA = 637NE+44.99
Y = 196610.337
X = 226542.000
PT STA = 640NE+37.62
Y = 196556.494
X = 226829.132
DB = S73°36'47"E
DA = S85°08'43"E

136

134

STA 1249+59.44 WB
STA 133+34.04

1246WB STH 29 WB 1248WB 1250WB 1252WB S89°51'17"E 1254WB 1256WB 1258WB 1260WB

1246EB STH 29 EB 1248EB 1250EB 1252EB S89°51'17"E 1254EB 1256EB 1258EB 1260EB

STA 1249+66.56 EB
STA 132+83.53

132

CURVE 107 SW-2
PI STA = 429SW+35.22
Y = 196080.777
X = 225629.649
DELTA = 16°46'43" LT
D = 7°57'53"
T = 106.09'
L = 210.66'
R = 719.36'
PC STA = 428SW+29.13
Y = 196122.689
X = 225532.190
PT STA = 430SW+39.79
Y = 196068.784
X = 225735.058
DB = S66°43'48"E
DA = S83°30'31"E

426SW

S66°43'48"E

STH 107 RAMP SW

428SW

CURVE 107 SW-2

PT: 430SW+39.79

430SW

S83°30'31"E

PC: 428SW+29.13

PI: 429SW+35.22

BP: 330SE+74.23

EP: 431SW+78.11

332SE

334SE

STH 107 RAMP SE

336SE

N74°46'00"E

338SE

340SE

PC: 340SE+48.62

128

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	ALIGNMENT DETAILS	SHEET 119	E

FILE NAME : C:\CADDLIB\PW\HNTB_APACADA\GREATLAKES\D0382806\027201-AD.DWG
LAYOUT NAME - 07

PLOT DATE : 10/31/2024 8:05 AM PLOT BY : ALLAN PACADA PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2

N

642NE

STH 107 NE

644NE

S85°08'43"E

EP: 645NE+97.75

PI: 1268WB+27.91

1262WB S89°51'17"E 1264WB 1266WB 1268WB STH 29 WB 1270WB S88°39'39"E 1272WB 1274WB

1262EB S89°51'17"E 1264EB 1266EB 1268EB STH 29 EB 1270EB 1272EB 1274EB

PI: 342SE+27.60

342SE

CURVE 107 SE-1

344SE

STH 107 SE

346SE

348SE

N89°00'03"E

350SE

352SE

354SE

PT: 344SE+04.74

EP: 354SE+51.47

CURVE 107 SE-1
PI STA = 342SE+27.60
Y = 196382.018
X = 226979.333
DELTA = 14°14'03" RT
D = 3°59'49"
T = 178.98'
L = 356.12'
R = 1433.46'
PC STA = 340SE+48.62
Y = 196334.991
X = 226806.640
PT STA = 344SE+04.74
Y = 196385.139
X = 227158.287
DB = N74°46'00"E
DA = N89°00'03"E

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	ALIGNMENT DETAILS	SHEET 120	E

2

2

N

PI: 1280WB+62.75

PI: 1286WB+28.27

6WB 1278WB S88°39'39"E 1280WB 1282WB S89°25'11"E 1284WB STH 29 WB 1286WB 1288WB S89°50'34"E 1290WB

6EB 1278EB S89°51'17"E 1280EB 1282EB 1284EB STH 29 EB 1286EB 1288EB S89°50'34"E 1290EB

PI: 1285EB+06.11

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	ALIGNMENT DETAILS	SHEET 121	E

FILE NAME : C:\CADDLIB\PW\HNTB_APACADA\GREATLAKES\D0382806\027201-AD.DWG
LAYOUT NAME - 09

PLOT DATE : 10/31/2024 8:05 AM PLOT BY : ALLAN PACADA PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2

2

N

1292WB 1294WB 1296WB S89°50'34"E 1298WB STH 29 WB 1300WB 1302WB 1304WB 1306WB

1292EB 1294EB 1296EB S89°50'34"E 1298EB STH 29 EB 1300EB 1302EB 1304EB 1306EB

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	ALIGNMENT DETAILS	SHEET 122	E

FILE NAME : C:\CADDLIB\PW\HNTB_APACADA\GREATLAKES\D0382806\027201-AD.DWG
LAYOUT NAME - 10

PLOT DATE : 10/31/2024 8:05 AM PLOT BY : ALLAN PACADA PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

N

PI: 1310WB+32.86

1308WB S89°50'34"E 1310WB 1312WB 1314WB STH 29 WB 1316WB 1318WB S89°43'55"E 1320WB 1322WB

1308EB S89°50'34"E 1310EB 1312EB 1314EB STH 29 EB 1316EB 1318EB S89°43'55"E 1320EB 1322EB

PI: 1310EB+32.45

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	ALIGNMENT DETAILS	SHEET 123	E

FILE NAME : C:\CADDLIB\PW\HNTB_APACADA\GREATLAKES\D0382806\027201-AD.DWG
LAYOUT NAME - 11

PLOT DATE : 10/31/2024 8:05 AM PLOT BY : ALLAN PACADA PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2

N

CURVE WB-1
PI STA = 1329WB+84.84
Y = 196431.407
X = 233817.137
DELTA = 2°59'45" RT
D = 0°29'57"
T = 300.16'
L = 600.19'
R = 11479.16'
PC STA = 1326WB+84.68
Y = 196432.812
X = 233516.979
PT STA = 1332WB+84.86
Y = 196414.318
X = 234116.811
DB = S89°43'55"E
DA = S86°44'10"E

CURVE WB-2
PI STA = 1338WB+84.01
Y = 196380.207
X = 234714.987
DELTA = 2°59'44" LT
D = 0°30'03"
T = 299.10'
L = 598.06'
R = 11439.16'
PC STA = 1335WB+84.91
Y = 196397.236
X = 234416.374
PT STA = 1341WB+82.97
Y = 196378.807
X = 235014.081
DB = S86°44'10"E
DA = S89°43'54"E

PC: 1326WB+84.68
Mid: 1329WB+84.77
PT: 1332WB+84.86
PC: 1335WB+84.91
Mid: 1338WB+83.94
PI: 1329WB+84.84
PI: 1338WB+84.01
CURVE WB-1
CURVE WB-2
1324WB
S89°43'55"E
1326WB
1328WB
1330WB
STH 29 WB
1332WB
1334WB S86°44'10"E
1336WB
1338WB
1324EB
S89°43'55"E
1326EB
1328EB
1330EB
STH 29 EB
1332EB
1334EB S86°44'10"E
1336EB
1338EB
CURVE EB-1
PI: 1329EB+83.89
CURVE EB-2
PC: 1326EB+84.25
PT: 1332EB+83.39
PC: 1335EB+83.44
PI: 1338+83.06 EB

CURVE EB-1
PI STA = 1329EB+83.89
Y = 196411.410
X = 233816.520
DELTA = 2°59'45" RT
D = 0°30'00"
T = 299.64'
L = 599.14'
R = 11459.16'
PC STA = 1326EB+84.25
Y = 196412.812
X = 233516.885
PT STA = 1332EB+83.39
Y = 196394.351
X = 234115.672
DB = S89°43'55"E
DA = S86°44'10"E

CURVE EB-2
PI STA = 1338EB+83.06
Y = 196360.210
X = 234714.370
DELTA = 2°59'44" LT
D = 0°30'00"
T = 299.62'
L = 599.11'
R = 11459.16'
PC STA = 1335EB+83.44
Y = 196377.268
X = 234415.235
PT STA = 1341EB+82.55
Y = 196358.807
X = 235013.988
DB = S86°44'10"E
DA = S89°43'54"E

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	ALIGNMENT DETAILS	SHEET 124	E

2

2

N

PT: 1341WB+82.97

1340WB 1342WB S89°43'54"E 1344WB 1346WB STH 29 WB 1348WB 1350WB 1352WB 1354WB

1340EB 1342EB S89°43'54"E 1344EB 1346EB STH 29 EB 1348EB 1350EB 1352EB 1354EB

PT: 1341EB+82.55

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	ALIGNMENT DETAILS	SHEET 125	E

FILE NAME : C:\CADDLIB\PW\HNTB_APACADA\GREATLAKES\D0382806\027201-AD.DWG
LAYOUT NAME - 13

PLOT DATE : 10/31/2024 8:05 AM PLOT BY : ALLAN PACADA PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

2

N

1356WB 1358WB 1360WB S89°43'54"E 1362WB 1364WB STH 29 WB 1366WB 1368WB 1370WB

1356EB 1358EB 1360EB S89°43'54"E 1362EB 1364EB STH 29 EB 1366EB 1368EB 1370EB

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	ALIGNMENT DETAILS	SHEET 126	E

FILE NAME : C:\CADDLIB\PW\HNTB_APACADA\GREATLAKES\D0382806\027201-AD.DWG
LAYOUT NAME - 14

PLOT DATE : 10/31/2024 8:05 AM PLOT BY : ALLAN PACADA PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2

N

CURVE WB-3
PI STA = 1383WB+87.63
Y = 196359.123
X = 239218.691
DELTA = 3°27'03" LT
D = 0°30'03"
T = 344.58'
L = 688.95'
R = 11439.16'
PC STA = 1380WB+43.05
Y = 196360.736
X = 238874.116
PT STA = 1387WB+32.00
Y = 196378.253
X = 239562.739
DB = S89°43'54"E
DA = N86°49'03"E

CURVE O NW-1
PI STA = 1383NW+86.31
Y = 196395.130
X = 239217.770
DELTA = 3°58'07" LT
D = 0°30'09"
T = 395.07'
L = 789.83'
R = 11403.16'
PC STA = 1379NW+91.24
Y = 196396.983
X = 238822.700
PT STA = 1387NW+81.07
Y = 196420.623
X = 239612.021
DB = S89°43'52"E
DA = N86°18'01"E

BP: 1376NW+21.11
PI: 1379NW+81.31
PC: 1379NW+91.24
PC: 1380WB+43.05
Mid: 1383WB+87.52
PI: 1383NW+86.31
PI: 1383WB+87.63
CURVE O NW-1
CURVE WB-3
CURVE EB-3
1372WB
S89°43'54"E
1374WB
1376WB
1378NWN88°21'35"E
1380NW
S89°43'52"E
CTH O NW
1382NW
1384NW
1386NW
1372EB
S89°43'54"E
1374EB
1376EB
STH 29 WB
STH 29 EB
1378WB
1378EB
1380WB
1380EB
1382WB
1382EB
1384WB
1384EB
1386WB
1386EB

PC: 1380EB+42.62
PI: 1383+87.80 EB

CURVE EB-3
PI STA = 1383EB+87.80
Y = 196339.120
X = 239219.200
DELTA = 3°27'03" LT
D = 0°30'00"
T = 345.18'
L = 690.15'
R = 11459.16'
PC STA = 1380EB+42.62
Y = 196340.736
X = 238874.023
PT STA = 1387EB+32.78
Y = 196358.283
X = 239563.849
DB = S89°43'54"E
DA = N86°49'03"E

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	ALIGNMENT DETAILS	SHEET 127	E

2

2

N

CURVE O NW-1
PI STA = 1391NW+74.49
Y = 196446.010
X = 240004.620
DELTA = 0°45'19" RT
D = 0°29'50"
T = 75.93'
L = 151.87'
R = 11520.00'
PC STA = 1390NW+98.55
Y = 196441.110
X = 239928.844
PT STA = 1392NW+50.42
Y = 196449.911
X = 240080.454
DB = N86°18'01"E
DA = N87°03'20"E

CURVE WB-4
PI STA = 1393WB+40.39
Y = 196412.029
X = 240170.196
DELTA = 3°04'41" RT
D = 0°29'57"
T = 308.41'
L = 616.67'
R = 11479.16'
PC STA = 1390WB+31.99
Y = 196394.907
X = 239862.264
PT STA = 1396WB+48.65
Y = 196412.592
X = 240478.604
DB = N86°49'03"E
DA = N89°53'44"E

CURVE O NW-2
PI STA = 1394NW+85.97
Y = 196462.010
X = 240315.690
DELTA = 13°56'37" LT
D = 4°03'38"
T = 172.55'
L = 343.39'
R = 1411.02'
PC STA = 1393NW+13.42
Y = 196453.147
X = 240143.372
PT STA = 1396NW+56.81
Y = 196512.135
X = 240480.795
DB = N87°03'20"E
DA = N73°06'43"E

PT: 1387WB+32.00
PT: 1387NW+81.07
PC: 1390NW+98.55
PT: 1392NW+50.42
PC: 1393NW+13.42
Mid: 1393WB+40.32
PT: 1396NW+56.81
PT: 1396EB+48.36
1388NW
N86°18'01"E
1390NW
CURVE O NW-1
1392NW
N87°03'20"E
1394NW
CURVE O NW-2
1396NW
1398NW
CTH O RAMP NW
1400NW
N73°06'43"E
1402NW
PC: 1390WB+31.99
PI: 1393WB+40.39
PT: 1396WB+48.65
1388WB
N86°49'03"E
1390WB
1392WB
CURVE WB-4
1394WB
1396WB
STH 29 WB
1398WB
N89°53'44"E
1400WB
1388EB
N86°49'03"E
1390EB
1392EB
1394EB
1396EB
STH 29 EB
1398EB
N89°53'44"E
1400EB
CURVE EB-4
PC: 1390EB+32.76
PI: 1393EB+40.63
PI: 1394+85.97 NW
PI: 1395+46.08 SW
PT: 1387EB+32.78
1388SW
S88°36'32"E
1390SW
1392SW
CURVE O SW-1
1394SW
CURVE O SW-2
1396SW
1398SW
CTH O RAMP SW
1400SW
1402SW
BP: 1387SW+32.76
PC: 1390SW+33.74
PCC: 1393SW+33.08
PT: 1397SW+55.85
EP: 1402SW+46.39
BP: 1402SE+12.85
CTH O

CURVE O SW-1
PI STA = 1391SW+83.42
Y = 196323.380
X = 240015.700
DELTA = 1°32'49" RT
D = 0°31'00"
T = 149.68'
L = 299.34'
R = 11086.82'
PC STA = 1390SW+33.74
Y = 196327.014
X = 239866.065
PT STA = 1393SW+33.08
Y = 196315.708
X = 240165.183
DB = S88°36'32"E
DA = S87°03'43"E

CURVE EB-4
PI STA = 1393EB+40.63
Y = 196392.030
X = 240170.770
DELTA = 3°04'41" RT
D = 0°30'00"
T = 307.87'
L = 615.59'
R = 11459.16'
PC STA = 1390EB+32.76
Y = 196374.938
X = 239863.374
PT STA = 1396EB+48.36
Y = 196392.592
X = 240478.640
DB = N86°49'03"E
DA = N89°53'44"E

CURVE O SW-2
PI STA = 1395SW+46.08
Y = 196304.795
X = 240377.902
DELTA = 17°16'41" RT
D = 4°05'13"
T = 213.00'
L = 422.76'
R = 1401.93'
PC STA = 1393SW+33.08
Y = 196315.708
X = 240165.183
PT STA = 1397SW+55.85
Y = 196231.195
X = 240577.781
DB = S87°03'47"E
DA = S69°47'06"E

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	ALIGNMENT DETAILS	SHEET 128	E

FILE NAME : C:\CADDLIB\PW\HNTB_APACADA\GREATLAKES\D0382806\027201-AD.DWG
LAYOUT NAME - 16
PLOT DATE : 10/31/2024 8:05 AM
PLOT BY : ALLAN PACADA
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

2

N

PC: 1403NW+56.17

PI: 1404+22.30 NW

PI: 1404NW+92.95

BP: 1404NE+87.08

1404NW

S86°34'07" E

S86°34'07" E

CURVE O NW-3

1406NE

1408NE

S74°27'44"E

1410NE

CTH O RAMP NE

1412NE

PC: 1412NE+91.79

CURVE O NE-1

1414NE

PT: 1415NE+52.57

1416NE

S85°31'48"E

1418N

CURVE O NW-3
PI STA = 1404NW+22.30
Y = 196734.510
X = 241213.270
DELTA = 20°19'10" RT
D = 15°31'38"
T = 66.13'
L = 130.86'
R = 369.00'
PC STA = 1403NW+56.17
Y = 196715.300
X = 241149.996
PT STA = 1404NW+87.03
Y = 196730.552
X = 241279.277
DB = N73°06'43"E
DA = S86°34'07"E

PT: 1404NW+87.03

EP: 1405NW+16.31

CURVE O NE-1
PI STA = 1414NE+22.59
Y = 196491.770
X = 242216.210
DELTA = 11°04'05" LT
D = 4°14'39"
T = 130.80'
L = 260.78'
R = 1350.00'
PC STA = 1412NE+91.79
Y = 196526.808
X = 242090.191
PT STA = 1415NE+52.57
Y = 196481.576
X = 242346.611
DB = S74°27'44"E
DA = S85°31'48"E

STA 1403+25.98 WB
STA 115+10.77

1404WB

1406WB

STH 29 WB

1408WB

1410WB

N89°53'44"E

PI: 1412SE+11.86

1412WB

PI: 1414+22.59 NE

1414WB

PT: 1415SE+73.98

1416WB

1404EB

1406EB

STH 29 EB

1408EB

1410EB

N89°53'44"E

1412EB

1414EB

1416EB

STA 1403+49.71 WB
STA 115+19.70

STA 1403+41.34 EB
STA 114+98.13

STA 1403+17.61 EB
STA 114+89.24

1416SE

N88°45'01"E

1418S

1414SE

1412SE

PC: 1408SE+44.71

1410SE

CURVE O SE-2

1408SE

CTH O RAMP SE

1406SE

N72°20'30"E

PT: 1403SE+75.18

1404SE

CURVE O SE-1

S88°06'32"E

BP: 1402SE+12.85

PC: 1402SE+49.27

PI: 1403SE+12.84

CURVE O SE-1
PI STA = 1403SE+12.84
Y = 196072.300
X = 241143.650
DELTA = 19°32'58" LT
D = 15°31'38"
T = 63.57'
L = 125.90'
R = 369.00'
PC STA = 1402SE+49.27
Y = 196074.398
X = 241080.115
PT STA = 1403SE+75.18
Y = 196091.583
X = 241204.225
DB = S88°06'32"E
DA = N72°20'30"E

CURVE O SE-2
PI STA = 1412SE+11.86
Y = 196345.380
X = 242001.480
DELTA = 16°24'31" RT
D = 2°15'00"
T = 367.15'
L = 729.27'
R = 2546.48'
PC STA = 1408SE+44.71
Y = 196234.010
X = 241651.632
PT STA = 1415SE+73.98
Y = 196353.387
X = 242368.540
DB = N72°20'30"E
DA = N88°45'01"E

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	ALIGNMENT DETAILS	SHEET 129	E

FILE NAME : C:\CADDLIB\PW\HNTB_APACADA\GREATLAKES\D0382806\027201-AD.DWG
LAYOUT NAME - 17

PLOT DATE : 10/31/2024 8:05 AM PLOT BY : ALLAN PACADA PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

N

E CTH O NE

1420NE

EP: 1420NE+73.86

PI: 1419SE+06.97

PI: 1422SE+06.97

EP: 1425SE+67.17

PI: 1426+06.27 EB

1418WB 1420WB 1422WB N89°53'44"E 1424WB STH 29 WB 1426WB 1428WB 1430WB 1432WB

1418EB 1420EB 1422EB N89°53'44"E 1424EB STH 29 EB 1426EB 1428EB 1430EB 1432EB

E 1420SE N89°53'42"E 1422SE CTH,O SE 1424SE N87°59'09"E

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	ALIGNMENT DETAILS	SHEET 130	E

FILE NAME : C:\CADDLIB\PW\HNTB_APACADA\GREATLAKES\D0382806\027201-AD.DWG
LAYOUT NAME - 18

PLOT DATE : 10/31/2024 8:05 AM PLOT BY : ALLAN PACADA PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

N

PI: 1449WB+20.90

1434WB 1436WB N89°56'14"E 1438WB 1440WB STH 29 WB 1442WB 1444WB 1446WB 1448WB

1434EB 1436EB N89°55'48"E 1438EB 1440EB STH 29 EB 1442EB 1444EB 1446EB 1448EB

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	ALIGNMENT DETAILS	SHEET 131	E

FILE NAME : C:\CADDLIB\PW\HNTB_APACADA\GREATLAKES\D0382806\027201-AD.DWG
LAYOUT NAME - 19

PLOT DATE : 10/31/2024 8:05 AM PLOT BY : ALLAN PACADA PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2

2

N

1450WB
1450EB
1452WB N89°54'53"E
1452EB
1454WB
1454EB
PC: 1454WB+91.57
1456WB
WB
1456EB
EB
1458WB
1458EB
1460WB
1460EB
1462WB
1462EB
1464WB
1464EB
Mid: 1465WB+12.20
PC: 1455EB+52.65

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	ALIGNMENT DETAILS	SHEET 132	E

FILE NAME : C:\CADDLIB\PW\HNTB_APACADA\GREATLAKES\D0382806\027201-AD.DWG
LAYOUT NAME - 20

PLOT DATE : 10/31/2024 8:05 AM PLOT BY : ALLAN PACADA PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

2

CURVE WB-5
PI STA = 1465WB+37.21
Y = 196422.934
X = 247367.150
DELTA = 30°37'08" LT
D = 1°30'00"
T = 1045.64'
L = 2041.26'
R = 3819.72'
PC STA = 1454WB+91.57
Y = 196421.377
X = 246321.515
PT STA = 1475WB+32.84
Y = 196956.843
X = 248266.203
DB = N89°54'53"E
DA = N59°17'45"E

Mid: 1465WB+12.20

1466WB

CURVE WB-12

1468WB

1470WB

1472WB

STH 29 WB

1474WB

PT: 1475WB+32.84

1476WB

1478WB

N59°17'45"E

1480WB

1466EB

1468EB

CURVE EB-5

1470EB

1472EB

STH 29 EB

1474EB

1476EB

1478EB

N59°19'24"E

1480EB

PT: 1475EB+93.09

PI: 1465WB+37.21

CURVE EB-5
PI STA = 1465EB+97.85
Y = 196402.860
X = 247428.120
DELTA = 30°36'24" LT
D = 1°30'00"
T = 1045.20'
L = 2040.45'
R = 3819.72'
PC STA = 1455EB+52.65
Y = 196401.585
X = 246382.924
PT STA = 1475EB+93.09
Y = 196936.111
X = 248327.053
DB = N89°55'48"E
DA = N59°19'24"E

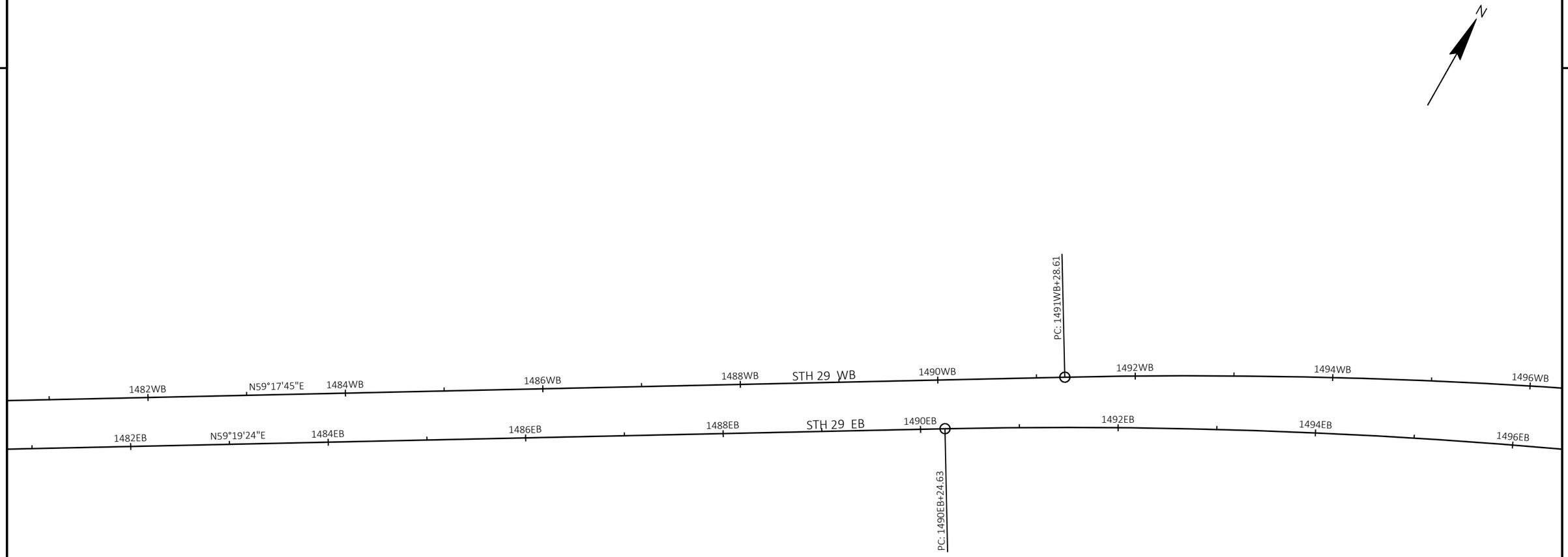
PI: 1465EB+97.85

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	ALIGNMENT DETAILS	SHEET 133	E

FILE NAME : C:\CADDLIB\PW\HNTB_APACADA\GREATLAKES\D0382806\027201-AD.DWG
LAYOUT NAME - 21

PLOT DATE : 10/31/2024 8:05 AM PLOT BY : ALLAN PACADA PLOT NAME : PLOT SCALE : 1 IN:100 FT

2



PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	ALIGNMENT DETAILS	SHEET 134	E

FILE NAME : C:\CADDLIB\PW\HNTB_APACADA\GREATLAKES\D0382806\027201-AD.DWG
LAYOUT NAME - 22

PLOT DATE : 10/31/2024 8:05 AM PLOT BY : ALLAN PACADA PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

N

CURVE WB-6
PI STA = 1499WB+83.69
Y = 198208.263
X = 250373.477
DELTA = 16°58'35" RT
D = 1°00'00"
T = 855.08'
L = 1697.63'
R = 5729.58'
PC STA = 1491WB+28.61
Y = 197771.653
X = 249638.267
PT STA = 1508WB+26.24
Y = 198411.184
X = 251204.130
DB = N59°17'45"E
DA = N76°16'19"E

PI: 1498EB+78.30
PI: 1499WB+83.69
Mid: 1499WB+77.42
CURVE WB-6
PT: 1508WB+26.24
1498WB
1500WB
1502WB
1504WB
WB
1506WB
1508WB
1510WB
N76°16'19"E
1512WB

1498EB
1500EB
1502EB
1504EB
EB
1506EB
1508EB
1510EB
N76°16'19"E
1512EB
CURVE EB-6
PT: 1507EB+19.50

CURVE EB-6
PI STA = 1498EB+78.30
Y = 198102.003
X = 250292.468
DELTA = 16°56'55" RT
D = 1°00'00"
T = 853.67'
L = 1694.86'
R = 5729.58'
PC STA = 1490EB+24.63
Y = 197666.470
X = 249558.264
PT STA = 1507EB+19.50
Y = 198304.588
X = 251121.747
DB = N59°19'24"E
DA = N76°16'19"E

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	ALIGNMENT DETAILS	SHEET 135	E

2

2

N

1514WB 1516WB 1518WB N76°16'19"E 1520WB STH 29 WB 1522WB 1524WB 1526WB 1528

1514EB 1516EB 1518EB N76°16'19"E 1520EB STH 29 EB 1522EB 1524EB 1526EB 152

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	ALIGNMENT DETAILS	SHEET 136	E

FILE NAME : C:\CADDLIB\PW\HNTB_APACADA\GREATLAKES\D0382806\027201-AD.DWG
LAYOUT NAME - 24

PLOT DATE : 10/31/2024 8:05 AM PLOT BY : ALLAN PACADA PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2

N

BP: 1534NW+57.65

1536NW 1538NW 72ND AVE RAMP NW 1540NW N75°06'10"E 1542NW

WB 1530WB N76°16'19"E 1532WB 1534WB 1536WB STH 29 WB 1538WB 1540WB 1542WB

BP: 1542SW+35.19

EB 1530EB N76°16'19"E 1532EB 1534EB 1536EB STH 29 EB 1538EB 1540EB 1542EB

72ND AVE RAMP SW

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	ALIGNMENT DETAILS	SHEET 137	E

FILE NAME : C:\CADDLIB\PW\HNTB_APACADA\GREATLAKES\D0382806\027201-AD.DWG
LAYOUT NAME - 25
PLOT DATE : 10/31/2024 8:05 AM PLOT BY : ALLAN PACADA PLOT NAME : PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

2

2

CURVE 72 NW-1
PI STA = 1547NW+69.73
Y = 199397.055
X = 255025.813
DELTA = 2°47'07" LT
D = 1°15'00"
T = 111.44'
L = 222.83'
R = 4583.66'
PC STA = 1546NW+58.30
Y = 199368.406
X = 254918.122
PT STA = 1548NW+81.13
Y = 199430.903
X = 255131.985
DB = N75°06'10"E
DA = N72°19'02"E

N

PC: 1546NW+58.30
PT: 1548NW+81.13
CURVE 72 NW-1
1544NW
1546NW
1548NW
1550NW
1552NW
72ND AVE RAMP NW
1554NW
N72°19'02"E
1556NW
1558NW
EP: 1559NW+07.71
BP: 1559NE+12.50
214
212
STA 1558+74.22 WB
STA 210+88.49

1544WB
1546WB
N76°16'19"E
1548WB
1550WB
1552WB
STH 29 WB
1554WB
1556WB
1558WB

PI: 1547+69.73 NW

1544EB
1546EB
N76°16'19"E
1548EB
1550EB
1552EB
STH 29 EB
1554EB
1556EB
1558EB

210
STA 1558+50.84 EB
STA 210+01.66

1544SW
N80°51'39"E
1546SW
1548SW
1550SW
CURVE 72 SW-1
1552SW
72ND AVE RAMP SW
1554SW
S83°15'02"E
1556SW
1558SW
N70°44'56"E
1558SE
208
72ND AVE
206
PC: 1547SW+79.91
PI: 1549SW+79.80
PT: 1551SW+77.13
BP: 1557SE+58.28
PC: 1558SE+62.83
EP: 1558SW+05.39

CURVE 72 SW-1
PI STA = 1549SW+79.80
Y = 199233.860
X = 255277.858
DELTA = 15°53'20" RT
D = 4°00'00"
T = 199.89'
L = 397.22'
R = 1432.39'
PC STA = 1547SW+79.91
Y = 199202.111
X = 255080.504
PT STA = 1551SW+77.13
Y = 199210.367
X = 255476.364
DB = N80°51'39"E
DA = S83°15'02"E

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	ALIGNMENT DETAILS	SHEET 138	E

2

2

N

1560NE

1562NE

N80°48'10"E

1564NE

1566NE

72ND AVE RAMP NE

1568NE

1570NE

1572NE

1574NE

EP: 1574NE+76.90

PC: 1575WB+08.27

1560WB

1562WB

N76°16'19"E

1564WB

1566WB

STH 29 WB

1568WB

1570WB

1572WB

1574WB

1560EB

1562EB

N76°16'19"E

1564EB

1566EB

STH 29 EB

1568EB

1570EB

1572EB

1574EB

PC: 1563SE+25.76

1564SE

PI: 1564+95.30SE

CURVE 72 SE-2

1566SE

1568SE

72ND AVE RAMP SE

1570SE

N75°06'21"E

1572SE

1574SE

PT: 1566SE+57.14

PC: 1575SE+46.51

PC: 1574EB+95.67

PT: 1560SE+75.06

1562SEN45°16'53"E

CURVE 72 SE-1

1560SE

PI: 1559SE+70.73

CURVE 72 SE-1

PI STA = 1559SE+70.73
Y = 199226.528
X = 256301.163
DELTA = 25°28'03" LT
D = 12°00'00"
T = 107.90'
L = 212.23'
R = 477.47'
PC STA = 1558SE+62.83
Y = 199190.953
X = 256199.299
PT STA = 1560SE+75.06
Y = 199302.448
X = 256377.833
DB = N70°44'56"E
DA = N45°16'53"E

CURVE 72 SE-2

PI STA = 1564SE+95.30
Y = 199598.136
X = 256676.441
DELTA = 29°49'28" RT
D = 9°00'00"
T = 169.54'
L = 331.38'
R = 636.62'
PC STA = 1563SE+25.76
Y = 199478.846
X = 256555.973
PT STA = 1566SE+57.14
Y = 199641.713
X = 256840.282
DB = N45°16'53"E
DA = N75°06'21"E

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	ALIGNMENT DETAILS	SHEET 139	E

FILE NAME : C:\CADDLIB\PW\HNTB_APACADA\GREATLAKES\D0382806\027201-AD.DWG
LAYOUT NAME - 27

PLOT DATE : 10/31/2024 8:06 AM PLOT BY : ALLAN PACADA PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

N

CURVE WB-7
PI STA = 1582WB+71.24
Y = 200177.975
X = 258436.455
DELTA = 15°10'13" RT
D = 1°00'00"
T = 762.97'
L = 1517.01'
R = 5729.58'
PC STA = 1575WB+08.27
Y = 199996.913
X = 257695.281
PT STA = 1590WB+25.28
Y = 200158.773
X = 259199.183
DB = N76°16'19"E
DA = S88°33'28"E

PI: 1582WB+71.24

Mid: 1582WB+66.78

CURVE WB-7

PT: 1590WB+25.28

1576WB 1578WB 1580WB WB 1582WB 1584WB 1586WB 1588WB 1590WB S88°33'28"E

PI: 1579+85.95 SE

PI: 1582EB+58.64

PT: 1584SE+23.68

CURVE EB-7

1576EB 1578EB 1580EB EB 1582EB 1584EB 1586EB 1588EB 1590EB S88°33'28"E

1576SE 1578SE 1580SE SE 1582SE 1584SE N83°52'39"E

CURVE 72 SE-3

CURVE 72 SE-3
PI STA = 1579SE+85.95
Y = 199983.261
X = 258124.448
DELTA = 8°46'18" RT
D = 1°00'00"
T = 439.44'
L = 877.16'
R = 5729.58'
PC STA = 1575SE+46.51
Y = 199870.310
X = 257699.771
PT STA = 1584SE+23.68
Y = 200030.129
X = 258561.383
DB = N75°06'21"E
DA = N83°52'39"E

CURVE EB-7
PI STA = 1582EB+58.64
Y = 200093.720
X = 258445.521
DELTA = 15°10'12" RT
D = 1°00'00"
T = 762.97'
L = 1517.01'
R = 5729.58'
PC STA = 1574EB+95.67
Y = 199912.658
X = 257704.348
PT STA = 1590EB+12.68
Y = 200074.518
X = 259208.248
DB = N76°16'19"E
DA = S88°33'28"E

PT: 1590EB+12.68

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	ALIGNMENT DETAILS	SHEET 140	E

2

2

N

1592WB 1594WB 1596WB 1598WB STH 29 WB 1600WB S88°33'28"E 1602WB 1604WB 1606WB

1592EB 1594EB 1596EB 1598EB STH 29 EB 1600EB S88°33'28"E 1602EB 1604EB 1606EB

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	ALIGNMENT DETAILS	SHEET 141	E

FILE NAME : C:\CADDLIB\PW\HNTB_APACADA\GREATLAKES\D0382806\027201-AD.DWG
LAYOUT NAME - 29

PLOT DATE : 10/31/2024 8:06 AM PLOT BY : ALLAN PACADA PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2

2

N

1608WB 1610WB 1612WB 1614WB S88°33'28"E 1616WB STH 29 WB 1618WB 1620WB 1622WB

1608EB 1610EB 1612EB 1614EB S88°33'28"E 1616EB STH 29 EB 1618EB 1620EB 1622EB

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	ALIGNMENT DETAILS	SHEET 142	E

FILE NAME : C:\CADDLIB\PW\HNTB_APACADA\GREATLAKES\D0382806\027201-AD.DWG
LAYOUT NAME - 30

PLOT DATE : 10/31/2024 8:06 AM PLOT BY : ALLAN PACADA PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2

2

N

1624WB 1626WB 1628WB S88°33'28"E 1630WB STH 29 WB 1632WB 1634WB 1636WB 1638WB

1624EB 1626EB 1628EB S88°33'28"E 1630EB STH 29 EB 1632EB 1634EB 1636EB 1638EB

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	ALIGNMENT DETAILS	SHEET 143	E

FILE NAME : C:\CADDLIB\PW\HNTB_APACADA\GREATLAKES\D0382806\027201-AD.DWG
LAYOUT NAME - 31

PLOT DATE : 10/31/2024 8:06 AM PLOT BY : ALLAN PACADA PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2

2

N

PI: 1639WB+04.98

1640WB 1642WB 1644WB S88°33'27"E 1646WB STH 29 WB 1648WB 1650WB 1652WB 1654WB

1640EB 1642EB 1644EB S88°33'27"E 1646EB STH 29 EB 1648EB 1650EB 1652EB 165

PI: 1638EB+81.19

END PROJECT
STA 1653+64

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	ALIGNMENT DETAILS	SHEET 144	E

FILE NAME : C:\CADDLIB\PW\HNTB_APACADA\GREATLAKES\D0382806\027201-AD.DWG
LAYOUT NAME - 32

PLOT DATE : 10/31/2024 8:06 AM PLOT BY : ALLAN PACADA PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2

2

N

BP: 94+21.05
N = 193003.084
E = 227493.389

95

100

N32°02'14"W

105

STH 107

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	ALIGNMENT DETAILS	SHEET 145	E

2

N

PT: 142+13.31

145

STH 107

150

155

N0°08'59"

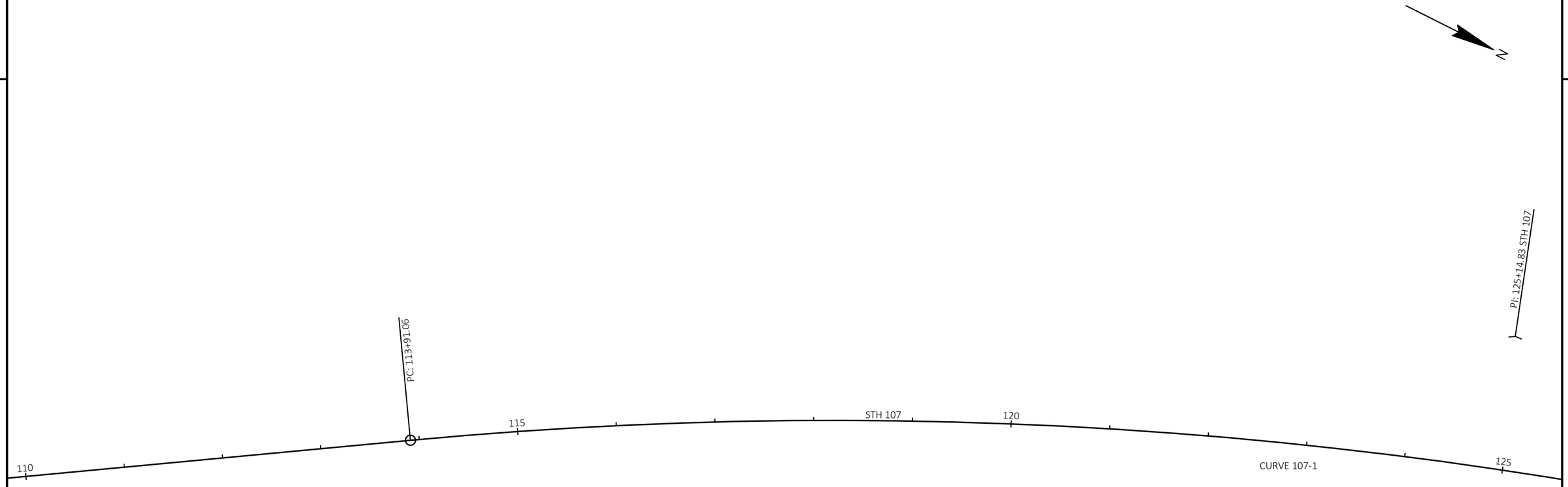
PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	ALIGNMENT DETAILS	SHEET 146	E

FILE NAME : C:\CADDLIB\PW\HNTB_APACADA\GREATLAKES\D0382806\027250-AD.DWG
LAYOUT NAME - 42

PLOT DATE : 10/31/2024 8:06 AM PLOT BY : ALLAN PACADA PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2



CURVE 107-1
PI STA = 125+14.83
Y = 195625.686
X = 225852.228
DELTA = 27°33'03" RT
D = 1°15'00"
T = 1123.76'
L = 2204.06'
R = 4583.66'
PC STA = 113+91.06
Y = 194673.068
X = 226448.353
PCC STA = 135+95.12
Y = 196746.006
X = 225764.319
DB = N32°02'14"W
DA = N04°29'12"W

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	ALIGNMENT DETAILS	SHEET 147	E

2

N

4305W

4285W

STH 29 EB

STH 29 WB

526NW

528NW

530NW

PCC: 135+95.12

PI: 139+04.38

130

135

140

STH 107

CURVE 107-2

STA 1249+59.44 WB
STA 133+34.04 STH 107

STA 1249+66.56 EB
STA 132+83.53 STH 107

1250EB

1250WB

630NE

632NE

634NE

3325E

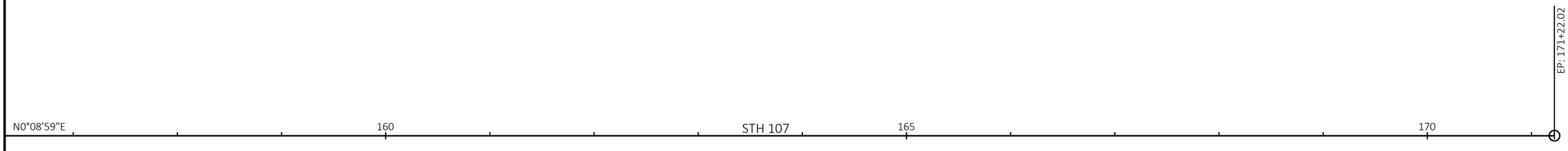
3345E

CURVE 107-2
PI STA = 139+04.38
Y = 197054.325
X = 225740.126
DELTA = 4°38'11" RT
D = 0°45'00"
T = 309.27'
L = 618.20'
R = 7639.53'
PCC STA = 135+95.12
Y = 196746.006
X = 225764.319
PT STA = 142+13.31
Y = 197363.591
X = 225740.935
DB = N04°29'12"W
DA = N00°08'59"E

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	ALIGNMENT DETAILS	SHEET 148	E

2

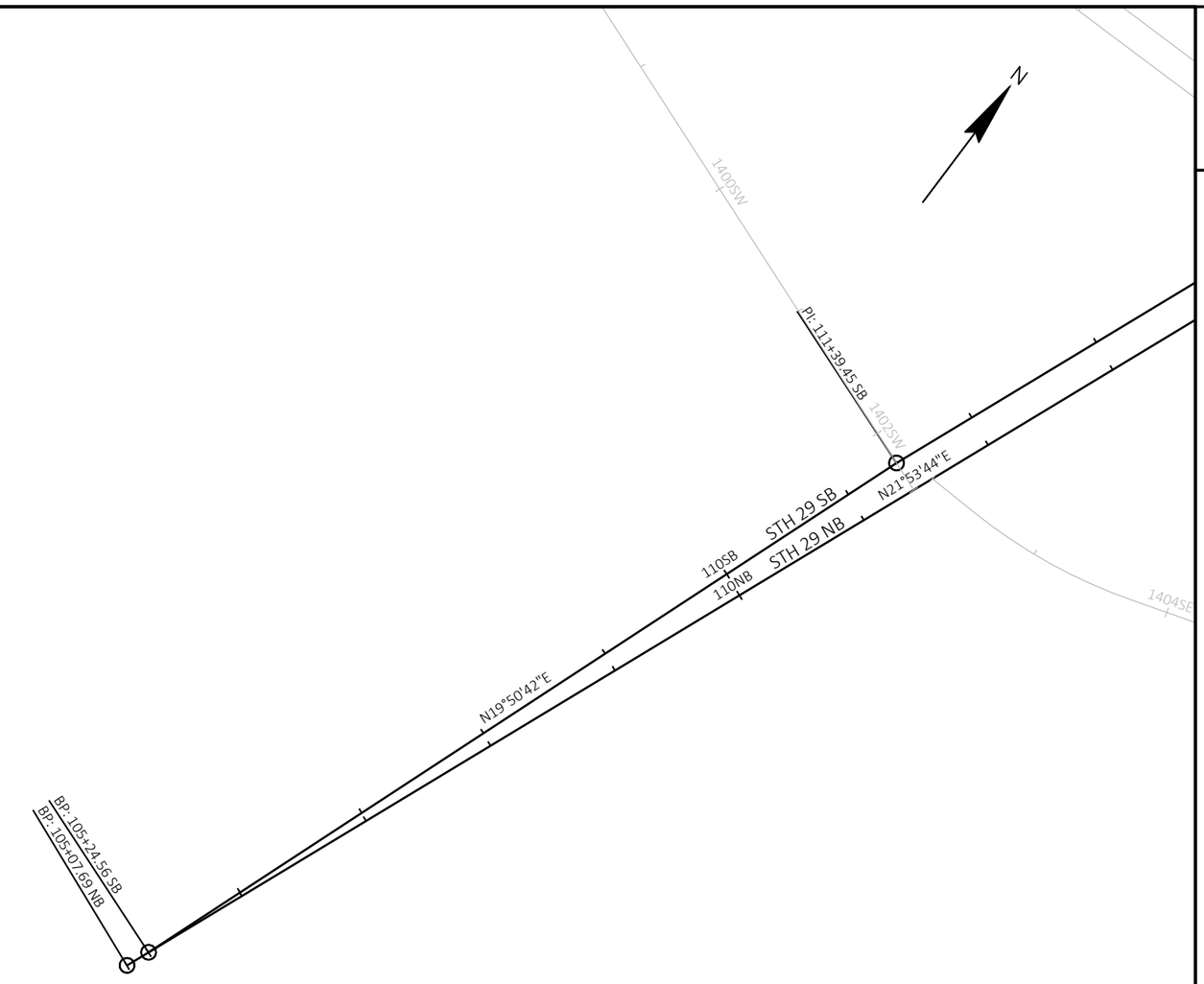
N



PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	ALIGNMENT DETAILS	SHEET 149	E

FILE NAME : C:\CADDLIB\PW\HNTB_APACADA\GREATLAKES\D0382806\027250-AD.DWG
LAYOUT NAME - 027250-ad - 44
PLOT DATE : 10/31/2024 8:06 AM
PLOT BY : ALLAN PACADA
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

2



PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	ALIGNMENT DETAILS	SHEET 150	E

2

2

1400NW

1402NW

1404NW

1406NE

1408NE

1410NE

1400WB

1400EB

1405WB

1405EB

1404SE

1406SE

1408SE

STA 1403+17.61 EB
STA 114+89.20 SB

STA 1403+25.98 WB
STA 115+10.77 SB

N21°53'44"E

115SB

115NB

STA 1403+49.71 WB
STA 115+19.70 NB

STA 1403+41.34 EB
STA 114+98.13 NB

PC: 117+79.75 SB

PC: 117+84.18 NB

120SB

SB

120NB

NB

125SB

125NB

CURVE O SB-1

CURVE O NB-2

NB

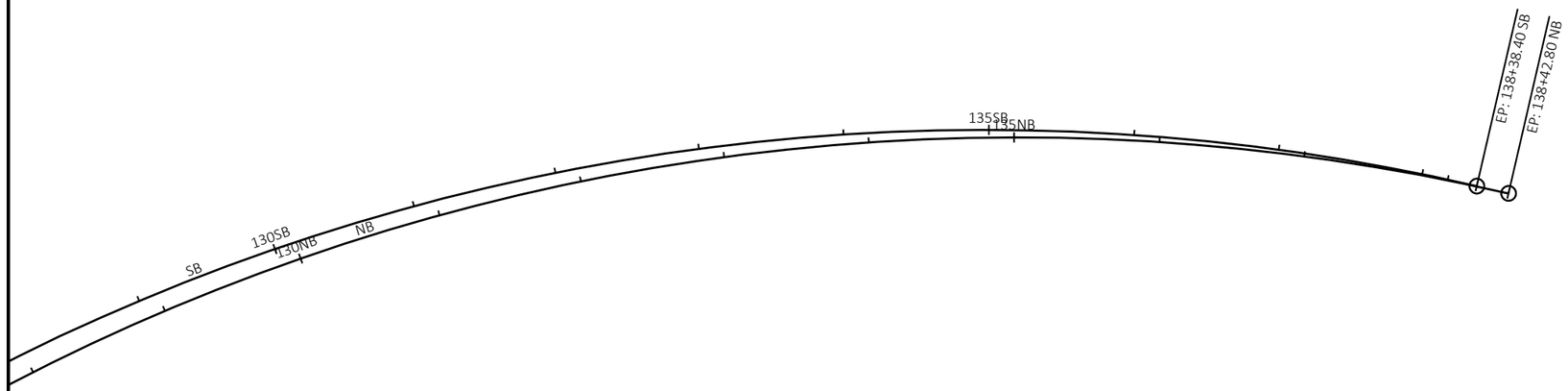
CURVE O SB-1
PI STA = 130+08.24
Y = 197803.280
X = 241714.360
DELTA = 78°38'04" RT
D = 3°49'11"
T = 1228.49'
L = 2058.64'
R = 1500.00'
PC STA = 117+79.75
Y = 196663.407
X = 241256.239
PT STA = 138+40.80
Y = 197578.775
X = 242922.161
DB = N21°53'44"E
DA = S79°28'12"E

CURVE O NB-2
PI STA = 130+12.64
Y = 197799.120
X = 241736.400
DELTA = 78°38'00" RT
D = 3°49'11"
T = 1228.46'
L = 2058.62'
R = 1500.00'
PC STA = 117+84.18
Y = 196659.270
X = 241278.289
PT STA = 138+42.80
Y = 197574.644
X = 242944.181
DB = N21°53'44"E
DA = S79°28'16"E

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	ALIGNMENT DETAILS	SHEET 151	E

2

N



PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	ALIGNMENT DETAILS	SHEET 152	E

2

2

N

1554SW

1555EB

1555WB

STH 29 EB

STH 29 WB

1556SW

BP: 200+00.00
N = 198520.788
E = 256090.312

72ND AVE

205

N0°55'34"E

210

1558NW

1558SE

1560EB

1560SE

1562SE

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	ALIGNMENT DETAILS	SHEET 153	E

FILE NAME : C:\CADDLIB\PW\HNTB_APACADA\GREATLAKES\D0382806\027250-AD.DWG
LAYOUT NAME - 027250-ad - 49

PLOT DATE : 10/31/2024 8:06 AM PLOT BY : ALLAN PACADA PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

N

1555WB

1556NW

1558NW

STH 29 WB

STA 210+88.49 72ND AVE
STA 1558+74.22 WB

EP: 219+65.60

210

215

72ND AVE

STA 210+01.66 72ND AVE
STA 1558+50.84 EB

1560NE

1560WB

1560EB

1562NE

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	ALIGNMENT DETAILS	SHEET 154	E

FILE NAME : C:\CADDLIB\PW\HNTB_APACADA\GREATLAKES\D0382806\027250-AD.DWG
LAYOUT NAME - 027250-ad - 50

PLOT DATE : 10/31/2024 8:06 AM PLOT BY : ALLAN PACADA PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

Estimate Of Quantities

1053-04-84

Line	Item	Item Description	Unit	Total	Qty
0002	201.0205	Grubbing	STA	1.000	1.000
0004	203.0100	Removing Small Pipe Culverts	EACH	5.000	5.000
0006	204.0110	Removing Asphaltic Surface	SY	1,670.000	1,670.000
0008	204.0115	Removing Asphaltic Surface Butt Joints	SY	1,140.000	1,140.000
0010	204.0120	Removing Asphaltic Surface Milling	SY	478,320.000	478,320.000
0012	204.0150	Removing Curb & Gutter	LF	565.000	565.000
0014	204.0165	Removing Guardrail	LF	3,548.000	3,548.000
0016	204.0180	Removing Delineators and Markers	EACH	1,161.000	1,161.000
0018	204.0220	Removing Inlets	EACH	8.000	8.000
0020	205.0100	Excavation Common	CY	1,730.000	1,730.000
0022	206.2001	Excavation for Structures Culverts (structure) 01. C-37-51	EACH	1.000	1.000
0024	208.0100	Borrow	CY	269.000	269.000
0026	211.0101	Prepare Foundation for Asphaltic Paving (project) 01. 1053-04-84	EACH	1.000	1.000
0028	213.0100	Finishing Roadway (project) 01. 1053-04-84	EACH	1.000	1.000
0030	305.0110	Base Aggregate Dense 3/4-Inch	TON	2,535.000	2,535.000
0032	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	2,450.000	2,450.000
0034	415.6000.S	Rout and Seal	LF	22,388.000	22,388.000
0036	450.4000	HMA Cold Weather Paving	TON	38,265.000	38,265.000
0038	455.0605	Tack Coat	GAL	52,134.000	52,134.000
0040	460.0105.S	HMA Percent Within Limits (PWL) Test Strip Volumetrics	EACH	2.000	2.000
0042	460.0110.S	HMA Percent Within Limits (PWL) Test Strip Density	EACH	2.000	2.000
0044	460.0115.S	HMA Pavement Test Strip Volumetrics	EACH	1.000	1.000
0046	460.0120.S	HMA Pavement Test Strip Density	EACH	1.000	1.000
0048	460.2000	Incentive Density HMA Pavement	DOL	47,218.000	47,218.000
0050	460.2005	Incentive Density PWL HMA Pavement	DOL	29,320.000	29,320.000
0052	460.2007	Incentive Density HMA Pavement Longitudinal Joints	DOL	19,586.000	19,586.000
0054	460.2010	Incentive Air Voids HMA Pavement	DOL	29,320.000	29,320.000
0056	460.5224	HMA Pavement 4 LT 58-28 S	TON	12,460.000	12,460.000
0058	460.6424	HMA Pavement 4 MT 58-28 H	TON	6,320.000	6,320.000
0060	460.7224	HMA Pavement 4 HT 58-28 S	TON	29,320.000	29,320.000
0062	460.8424	HMA Pavement 4 SMA 58-28 H	TON	28,430.000	28,430.000
0064	460.9000.S	Material Transfer Vehicle	EACH	1.000	1.000
0066	465.0105	Asphaltic Surface	TON	710.000	710.000
0068	465.0110	Asphaltic Surface Patching	TON	90.000	90.000
0070	465.0510	Asphaltic Rumble Strips, Shoulder Divided Roadway	LF	199,368.000	199,368.000
0072	509.0301	Preparation Decks Type 1	SY	22.000	22.000
0074	509.0302	Preparation Decks Type 2	SY	9.000	9.000
0076	509.0310.S	Sawing Pavement Deck Preparation Areas	LF	220.000	220.000
0078	509.2100.S	Concrete Masonry Deck Repair	CY	3.000	3.000
0080	509.5100.S	Polymer Overlay	SY	1,370.000	1,370.000
0082	511.1100	Temporary Shoring	SF	2,800.000	2,800.000
0084	520.1018	Apron Endwalls for Culvert Pipe 18-Inch	EACH	2.000	2.000
0086	520.3318	Culvert Pipe Class III-A 18-Inch	LF	64.000	64.000
0088	522.1018	Apron Endwalls for Culvert Pipe Reinforced Concrete 18-Inch	EACH	1.000	1.000
0090	522.1024	Apron Endwalls for Culvert Pipe Reinforced Concrete 24-Inch	EACH	2.000	2.000
0092	522.1036	Apron Endwalls for Culvert Pipe Reinforced Concrete 36-Inch	EACH	1.000	1.000
0094	601.0405	Concrete Curb & Gutter 18-Inch Type A	LF	104.000	104.000
0096	601.0409	Concrete Curb & Gutter 30-Inch Type A	LF	458.000	458.000
0098	602.3010	Concrete Surface Drains	CY	6.000	6.000

1053-04-84

Line	Item	Item Description	Unit	Total	Qty
0100	603.8000	Concrete Barrier Temporary Precast Delivered	LF	1,110.000	1,110.000
0102	603.8125	Concrete Barrier Temporary Precast Installed	LF	2,220.000	2,220.000
0104	603.8500	Anchoring Concrete Barrier Temporary Precast	LF	1,200.000	1,200.000
0106	606.0200	Riprap Medium	CY	20.000	20.000
0108	608.0136	Relaid Storm Sewer 36-Inch	LF	32.000	32.000
0110	608.0418	Storm Sewer Pipe Reinforced Concrete Class IV 18-Inch	LF	112.000	112.000
0112	608.0424	Storm Sewer Pipe Reinforced Concrete Class IV 24-Inch	LF	198.000	198.000
0114	611.0624	Inlet Covers Type H	EACH	8.000	8.000
0116	611.3230	Inlets 2x3-FT	EACH	8.000	8.000
0118	614.2300	MGS Guardrail 3	LF	2,875.000	2,875.000
0120	614.2310	MGS Guardrail 3 HS	LF	50.000	50.000
0122	614.2500	MGS Thrie Beam Transition	LF	551.000	551.000
0124	614.2610	MGS Guardrail Terminal EAT	EACH	10.000	10.000
0126	614.2620	MGS Guardrail Terminal Type 2	EACH	3.000	3.000
0128	614.8010	Anchor Post Assembly Top Mount	EACH	4.000	4.000
0130	618.0100	Maintenance and Repair of Haul Roads (project) 01. 1053-04-84	EACH	1.000	1.000
0132	619.1000	Mobilization	EACH	1.000	1.000
0134	620.0300	Concrete Median Sloped Nose	SF	27.000	27.000
0136	625.0100	Topsoil	SY	10,410.000	10,410.000
0138	628.1504	Silt Fence	LF	2,624.000	2,624.000
0140	628.1520	Silt Fence Maintenance	LF	2,624.000	2,624.000
0142	628.1905	Mobilizations Erosion Control	EACH	7.000	7.000
0144	628.1910	Mobilizations Emergency Erosion Control	EACH	4.000	4.000
0146	628.2008	Erosion Mat Urban Class I Type B	SY	10,460.000	10,460.000
0148	628.7005	Inlet Protection Type A	EACH	11.000	11.000
0150	628.7015	Inlet Protection Type C	EACH	16.000	16.000
0152	628.7020	Inlet Protection Type D	EACH	77.000	77.000
0154	628.7504	Temporary Ditch Checks	LF	110.000	110.000
0156	628.7555	Culvert Pipe Checks	EACH	1.000	1.000
0158	628.7570	Rock Bags	EACH	100.000	100.000
0160	629.0210	Fertilizer Type B	CWT	7.000	7.000
0162	630.0120	Seeding Mixture No. 20	LB	468.000	468.000
0164	630.0500	Seed Water	MGAL	818.000	818.000
0166	633.0100	Delineator Posts Steel	EACH	529.000	529.000
0168	633.0500	Delineator Reflectors	EACH	1,161.000	1,161.000
0170	642.5001	Field Office Type B	EACH	1.000	1.000
0172	643.0300	Traffic Control Drums	DAY	16,841.000	16,841.000
0174	643.0420	Traffic Control Barricades Type III	DAY	2,804.000	2,804.000
0176	643.0705	Traffic Control Warning Lights Type A	DAY	5,608.000	5,608.000
0178	643.0715	Traffic Control Warning Lights Type C	DAY	840.000	840.000
0180	643.0800	Traffic Control Arrow Boards	DAY	40.000	40.000
0182	643.0900	Traffic Control Signs	DAY	8,816.000	8,816.000
0184	643.0910	Traffic Control Covering Signs Type I	EACH	6.000	6.000
0186	643.0920	Traffic Control Covering Signs Type II	EACH	12.000	12.000
0188	643.1000	Traffic Control Signs Fixed Message	SF	234.000	234.000
0190	643.1050	Traffic Control Signs PCMS	DAY	74.000	74.000
0192	643.1070	Traffic Control Cones 42-Inch	DAY	69,633.000	69,633.000
0194	643.3180	Temporary Marking Line Removable Tape 6-Inch	LF	6,000.000	6,000.000
0196	643.3280	Temporary Marking Line Removable Tape 10-Inch	LF	3,600.000	3,600.000

1053-04-84

Line	Item	Item Description	Unit	Total	Qty
0198	643.5000	Traffic Control	EACH	1.000	1.000
0200	645.0120	Geotextile Type HR	SY	40.000	40.000
0202	646.2020	Marking Line Epoxy 6-Inch	LF	84,424.000	84,424.000
0204	646.2040	Marking Line Grooved Wet Ref Epoxy 6-Inch	LF	170,304.000	170,304.000
0206	646.4040	Marking Line Grooved Wet Ref Epoxy 10-Inch	LF	13,858.000	13,858.000
0208	646.5020	Marking Arrow Epoxy	EACH	9.000	9.000
0210	646.5120	Marking Word Epoxy	EACH	4.000	4.000
0212	646.6120	Marking Stop Line Epoxy 18-Inch	LF	231.000	231.000
0214	646.6466	Cold Weather Marking Epoxy 6-Inch	LF	25,000.000	25,000.000
0216	646.6470	Cold Weather Marking Epoxy 10-Inch	LF	3,000.000	3,000.000
0218	646.7220	Marking Chevron Epoxy 24-Inch	LF	1,329.000	1,329.000
0220	646.9000	Marking Removal Line 4-Inch	LF	1,260.000	1,260.000
0222	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	562.000	562.000
0224	650.6000	Construction Staking Pipe Culverts	EACH	4.000	4.000
0226	650.8000	Construction Staking Resurfacing Reference	LF	122,948.000	122,948.000
0228	650.9911	Construction Staking Supplemental Control (project) 01. 1053-04-84	EACH	1.000	1.000
0230	690.0150	Sawing Asphalt	LF	1,793.000	1,793.000
0232	740.0440	Incentive IRI Ride	DOL	75,517.000	75,517.000
0234	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	4,800.000	4,800.000
0236	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	2,100.000	2,100.000
0238	SPV.0045	Special 01. Digital Speed Reduction System	DAY	200.000	200.000
0240	SPV.0045	Special 02. Connected Arrow Boards	DAY	200.000	200.000
0242	SPV.0045	Special 03. Connected Work Zone Start and End Location Markers	DAY	200.000	200.000
0244	SPV.0060	Special 01. Connect to Existing Structure	EACH	3.000	3.000
0246	SPV.0060	Special 02. Reconnect Storm Sewer	EACH	8.000	8.000
0248	SPV.0060	Special 03. Locate and Clean Existing Underdrain	EACH	2.000	2.000
0250	SPV.0090	Special 01. Grading Shaping and Finishing Drainage Ditches	LF	280.000	280.000
0252	SPV.0180	Special 01. Resin Binder High Friction Surface Treatment	SY	102,940.000	102,940.000
0254	SPV.0180	Special 02. Removing Distressed Asphaltic Surface Milling	SY	800.000	800.000

GRUBBING ITEMS

CATEGORY	ROADWAY	STATION		STATION	LOCATION	201.0205 GRUBBING STA
0010	STH 29	1634+00	-	1635+00	LT	1
	TOTALS					1

REMOVING CURB & GUTTER

CATEGORY	ROADWAY	STATION	-	STATION	OFFSET	204.0150 LF
0010	72ND AVE	208+62.55		211+45.51	LT	565
	TOTALS					565

REMOVING GUARDRAIL

CATEGORY	ROADWAY	STATION	-	STATION	OFFSET	204.0165 LF
0010	STH 29 EB	1478+45		1483+75	LT	332
		1553+55		1557+95	LT	309
		1553+70		1557+85	RT	259
		1615+70		1620+70	LT	229
		1632+60		1637+10	LT	309
		1633+10		1637+30	RT	242
		1638+70		1641+00	LT	229
		1638+90		1641+10	RT	219
	STH 29 WB	1552+30		1558+25	LT	396
		1559+45		1564+00	RT	309
		1638+25		1640+90	LT	255
		1638+55		1641+10	RT	247
		1645+20		1646+90	LT	53
	72ND AVE	209+25		211+25	LT	65
	72ND AVE NE	1559+80		1560+90	RT	96
	TOTALS					3,548

REMOVING ASPHALTIC SURFACE BUTT JOINTS

CATEGORY	ROADWAY	STATION	-	STATION	OFFSET	204.0115 SY
0010	STH 29 EB	1153+00		1153+00	LT/RT	39
		1169+60		1169+90	RT	33
		1207+50		1207+50	LT/RT	41
		1211+05		1211+05	LT/RT	39
		1637+20		1637+40	LT/RT	47
		1638+55		1638+70	LT/RT	47
		1641+10		1641+20	LT/RT	44
		1642+85		1642+95	LT/RT	43
		1650+45		1650+45	LT/RT	42
	STH 29 WB	1153+00		1153+00	LT/RT	38
		1169+70		1170+00	RT	26
		1192+50		1192+90	LT	34
		1207+50		1207+50	LT/RT	45
		1211+05		1211+05	LT/RT	39
		1636+80		1636+90	LT/RT	47
		1638+30		1638+40	LT/RT	46
		1641+00		1641+10	LT/RT	44
		1642+80		1642+90	LT/RT	44
		1653+60		1653+60	LT/RT	41
	STH 107 NW	529+40		529+40	LT/RT	36
	STH 107 NE	630+30		630+30	LT/RT	64
	STH 107 SW	430+80		430+80	LT/RT	50
	STH 107 SE	331+60		331+60	LT/RT	59
	CTH O NB	110+75		110+75	LT/RT	20
		119+55		119+55	LT/RT	22
	CTH O SB	110+75		110+75	LT/RT	22
		119+55		119+55	LT/RT	27
	72ND AVE NB	205+05		205+05	LT/RT	15
		214+30		214+30	LT/RT	15
	72ND AVE SB	204+55		204+55	LT/RT	16
		213+70		213+70	LT/RT	14
	TOTALS					1,140

REMOVING ASPHALTIC SURFACE MILLING

CATEGORY	ROADWAY	STATION	-	STATION	204.0120 SY
0010	STH 29 EB	1153+00.00		1207+43.76	21,630
		1211+01.70		1557+94.31	151,580
		1559+23.86		1637+30.10	31,920
		1638+58.67		1641+17.86	1,030
		1642+87.55		1649+15.16	2,630
		1650+21.16		1650+38.27	70
	STH 29 WB	1153+00.12		1207+44.40	21,550
		1211+03.01		1457+66.93	107,580
		1458+73.99		1558+23.89	39,290
		1559+43.99		1634+12.50	30,320
		1635+18.00		1636+94.62	690
		1638+24.61		1641+10.78	1,120
		1642+82.82		1653+64.43	4,430
	STH 107 NW	505+73.86		529+37.05	5,500
	STH 107 NE	629+99.28		645+97.75	4,290
	STH 107 SW	414+73.67		430+83.62	4,260
	STH 107 SE	331+58.03		354+51.47	5,280
	CTH O	110+75		113+97	1,860
		116+10		119+62	2,010
	CTH O NW	1376+21.11		1404+42.19	6,170
	CTH O NE	1405+01.67		1420+74	3,870
	CTH O SW	1387+32.76		1402+06.2	3,590
	CTH O SE	1402+67.78		1425+67.17	5,080
	72ND AVE	205+50		213+26	4,130
	72ND AVE NW	1534+57.65		1558+54	5,110
	72ND AVE NE	1559+49		1574+76.9	3,880
	72ND AVE SW	1542+35.19		1557+92	3,870
	72ND AVE SE	1558+46		1575+46.51	5,580
	TOTALS				478,320

3

DIVISION	FROM/TO STATION	LOCATION	205.0100 COMMON EXCAVATION (1)		AVAILABLE MATERIAL (5)	UNEXPANDED FILL	EXPANDED FILL (13)	MASS ORDINATE +/- (14)	WASTE	208.0100 BORROW	COMMENT
			CUT (2)	EBS EXCAVATION (3)			FACTOR 1.00				
DIVISION 1											
72 RAMP	1559+82.75/1561+66.43		5	0	5	55	55	-50			
1480EB	1478+46.52/1483+43.67		16	0	16	16	16	0			
1553EB	1553+57.28/1557+50.00		11	0	11	72	72	-61			
1615EB	1615+61.61/1620+49.06		0	0	0	14	14	-14			
1632EB	1632+57.99/1637+00.00		0	0	0	106	106	-106			
1639EB	1639+00.00/1641+00.00		0	0	0	50	50	-50			
1552WB	1552+33.44/1563+81.85		88	0	88	108	108	-20			
1639WB	1639+00.00/1646+81.89		60	0	60	28	28	32			
DIVISION 1 SUBTOTAL			180	0	180	449	449	-269	0	269	
GRAND TOTAL			180	0	180	449	449	-269	0	269	
	TOTAL COMMON EXC		180								

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.

(3) EBS EXCAVATION TO BE BACKFILLED WITH SELECT BORROW MATERIAL. NOTE: THIS IS DESIGNERS CHOICE, CAN BE BACKFILLED WITH BORROW, OR CUT AS WELL.

5) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSUABLE PAVEMENT MATERIAL

(13) EXPANDED FILL FACTOR = 1.00

DEPENDING ON SELECTIONS: **EXPANDED FILL = (UNEXPANDED FILL - EXPANDED ROCK - REDUCED MARSH - REDUCED EBS) * FILL FACTOR**

OR EXPANDED FILL = (UNEXPANDED FILL - EXPANDED ROCK - REDUCED EBS) * FILL FACTOR

OR EXPANDED FILL = (UNEXPANDED FILL - EXPANDED ROCK - REDUCED MARSH) * FILL FACTOR

OR EXPANDED FILL = (UNEXPANDED FILL - EXPANDED ROCK) * 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.

PLOT DATE : 1/15/2025 10:18:05 PM PLOT BY : APACADA PLOT NAME : 030201_mq PLOT SCALE : 1:1

PREPARE FOUNDATION FOR ASPHALTIC PAVING

CATEGORY	PROJECT	STATION	STATION	211.0101 EACH
0010	STH 29	1153+00 -	1650+38	1
	TOTALS			1

BASE AGGREGATE DENSE

CATEGORY	ROADWAY	STATION	- STATION	* 305.0110 BASE AGGREGATE DENSE 3/4-INCH TON
0010	STH 29 EB	1153+00	1285+06	326
		1285+06	1286+21	2
		1286+21	1297+21	14
		1297+21	1347+71	62
		1347+71	1364+21	20
		1364+21	1406+21	52
		1406+21	1415+94	12
		1415+94	1428+00	14
		1428+00	1435+71	10
		1435+71	1454+00	22
		1454+00	1651+42	487
0010	STH 29 WB	1153+00	1285+06	326
		1285+06	1286+21	2
		1286+21	1297+21	14
		1297+21	1347+71	62
		1347+71	1364+21	20
		1364+21	1406+21	52
		1406+21	1415+94	12
		1415+94	1428+00	14
		1428+00	1435+71	10
		1435+71	1454+00	22
		1454+00	1651+42	487
	STH 107 NW	505+73.86	529+37.05	30
	STH 107 NE	629+99.28	645+97.75	20
	STH 107 SW	414+73.67	430+83.62	20
	STH 107 SE	331+58.03	354+51.47	28
	CTH O	110+75	113+97	--
		116+10	119+62	--
	CTH O NW	1376+21.11	1404+42.19	34
	CTH O NE	1405+01.67	1420+74	20
	CTH O SW	1387+32.76	1402+06.2	18
	CTH O SE	1402+67.78	1425+67.17	28
	72ND AVE	205+50	213+26	--
	72ND AVE NW	1534+57.65	1558+54	30
	72ND AVE NE	1559+49	1574+76.9	18
	72ND AVE SW	1542+35.19	1557+92	20
	72ND AVE SE	1558+46	1575+46.51	22
	SUBTOTAL			2,330
	TOTAL			2,330

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ASPHALTIC PAVEMENT ITEMS

CATEGORY	ROADWAY	STATION	-	STATION	415.6000.S ROUT AND SEAL LF	450.4000 HMA COLD WEATHER PAVING TON	455.0605 TACK COAT GAL	460.5224 HMA PAVEMENT 4 LT 58-28 S OUTSIDE SHLD TON	460.5224 HMA PAVEMENT 4 LT 58-28 S INSIDE SHLD TON	460.5224 HMA PAVEMENT 4 LT 58-28 S CROSSOVER TON	460.6424 HMA PAVEMENT 4 MT 58-28 H MAINLINE TON	460.7224 HMA PAVEMENT 4 HT 58-28 S MAINLINE TON	460.8424 HMA PAVEMENT 4 SMA 58-28 H MAINLINE TON	460.8424 HMA PAVEMENT 4 SMA 58-28 H INSIDE SHLD TON	465.0110 ASPHALTIC SURFACE PATCHING TON	465.0510 ASPHALTIC RUMBLE STRIPS SHOULDER DIVIDED ROADWAY LF	SPV.0180.02 REMOVING DISTRESSED ASPHALTIC SURFACE MILLING SY
0010	STH 29 EB	1153+00	-	1285+06	--	4,375	5,898	1,030	--	150	--	3,840	3,360	520	--	26,412	--
		1285+06		1286+21	115	40	51	10	10	--	--	30	30	--	--	230	--
		1286+21		1297+21	--	425	581	150	80	--	--	330	290	--	--	2,200	--
		1297+21		1347+71	5,050	1,935	2,632	660	380	--	--	1,510	1,320	--	--	10,100	--
		1347+71		1364+21	--	635	860	220	130	--	--	490	430	--	--	3,300	--
		1364+21		1406+21	4,200	1,575	2,140	480	320	--	--	1,250	1,100	--	--	8,400	--
		1406+21		1415+94	--	345	474	80	70	--	--	290	250	--	--	1,946	--
		1415+94		1428+00	--	405	541	40	90	--	--	360	320	--	--	2,412	--
		1428+00		1435+71	--	295	402	100	60	--	--	230	200	--	--	1,542	--
		1435+71		1454+00	1,829	705	953	240	140	--	--	550	480	--	--	3,658	--
		1454+00		1651+42	--	6,730	9,102	1,860	--	--	--	5,730	5,010	860	--	39,484	--
0010	STH 29 WB	1153+00	-	1285+06	--	4,360	5,881	1,050	--	--	--	3,840	3,360	470	--	26,412	--
		1285+06		1286+21	115	35	48	10	10	--	--	30	20	--	--	230	--
		1286+21		1297+21	--	430	583	150	90	--	--	330	290	--	--	2,200	--
		1297+21		1347+71	5,050	1,935	2,630	660	380	--	--	1,510	1,320	--	--	10,100	--
		1347+71		1364+21	--	635	860	220	130	--	--	490	430	--	--	3,300	--
		1364+21		1406+21	4,200	1,485	2,012	300	320	--	--	1,250	1,100	--	--	8,400	--
		1406+21		1415+94	--	365	500	120	70	--	--	290	250	--	--	1,946	--
		1415+94		1428+00	--	435	589	100	90	--	--	360	320	--	--	2,412	--
		1428+00		1435+71	--	295	402	100	60	--	--	230	200	--	--	1,542	--
		1435+71		1454+00	1,829	705	953	240	140	--	--	550	480	--	--	3,658	--
		1454+00		1651+42	--	6,885	9,311	1,920	--	--	--	5,830	5,100	920	--	39,484	--
	STH 107 NW	505+73.86		529+37.05	--	270	385	--	--	--	540	--	--	--	--	--	--
	STH 107 NE	629+99.28		645+97.75	--	210	300	--	--	--	420	--	--	--	--	--	--
	STH 107 SW	414+73.67		430+83.62	--	209	298	--	--	--	417	--	--	--	--	--	--
	STH 107 SE	331+58.03		354+51.47	--	259	370	--	--	--	517	--	--	--	--	--	--
	CTH O	110+75		113+97	--	91	130	--	--	--	183	--	--	--	--	--	--
		116+10		119+62	--	99	141	--	--	--	197	--	--	--	--	--	--
	CTH O NW	1376+21.11		1404+42.19	--	302	432	--	--	--	604	--	--	--	--	--	--
	CTH O NE	1405+01.67		1420+74	--	190	271	--	--	--	380	--	--	--	--	--	--
	CTH O SW	1387+32.76		1402+06.2	--	176	251	--	--	--	352	--	--	--	--	--	--
	CTH O SE	1402+67.78		1425+67.17	--	249	356	--	--	--	498	--	--	--	--	--	--
	72ND AVE	205+50		213+26	--	202	289	--	--	--	405	--	--	--	--	--	--
	72ND AVE NW	1534+57.65		1558+54	--	251	358	--	--	--	501	--	--	--	--	--	--
	72ND AVE NE	1559+49		1574+76.9	--	190	272	--	--	--	380	--	--	--	--	--	--
	72ND AVE SW	1542+35.19		1557+92	--	190	271	--	--	--	380	--	--	--	--	--	--
	72ND AVE SE	1558+46		1575+46.51	--	273	391	--	--	--	547	--	--	--	--	--	--
	UNDISTRIBUTED				--	--	112	--	--	--	--	--	--	--	90	--	800
SUBTOTAL					22,388	38,190	52,030	9,740	2,570	150	6,320	29,320	25,660	2,770	90	199,368	800
TOTAL					22,388	38,190	52,030		12,460		6,320	29,320	28,430		90	199,368	800

3

PWL MIXTURE USE TABLE

THE FOLLOWING ACCEPTANCE CRITERIA ARE APPLICABLE TO THIS PROJECT

LOCATION	MIXTURE USE	UNDERLYING SURFACE	BID ITEM	TONS	THICKNESS	QUALITY MANAGEMENT PROGRAM TO BE USED FOR	
						MIXTURE ACCEPTANCE	DENSITY ACCEPTANCE
DRIVING/TURN LANES (VARIABLE WIDTH)	LOWER LAYER	MILLED EXISTING HMA SURFACE	4 HT 58-28 S	29,320	2 "	PWL INCENTIVES AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT 460.2005
DRIVING/TURN LANES (VARIABLE WIDTH)	UPPER LAYER	MILLED EXISTING HMA SURFACE	4 SMA 58-28 H	25,660	1.75 "	QMP (SS 460.2.8)	INCENTIVE DENSITY HMA PAVEMENT 460.2000
3' SHOULDERS	UPPER LAYER	MILLED EXISTING HMA SURFACE	4 SMA 58-28 H	2,770	1.75 "	QMP (SS 460.2.8)	INCENTIVE DENSITY HMA PAVEMENT 460.2000
RAMPS	UPPER LAYER	MILLED EXISTING HMA SURFACE	4 MT 58-28 H	5,536	1.75 "	QMP (SS 460.2.8)	INCENTIVE DENSITY HMA PAVEMENT 460.2000
SIDE ROAD	UPPER LAYER	MILLED EXISTING HMA SURFACE	4 MT 58-28 H	784	1.75 "	QMP (SS 460.2.8)	INCENTIVE DENSITY HMA PAVEMENT 460.2000
SHOULDERS	UPPER LAYER	MILLED EXISTING HMA SURFACE	4 LT 58-28 S	12,460	1.75 "	QMP (SS 460.2.8)	INCENTIVE DENSITY HMA PAVEMENT 460.2000

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CONCRETE CURB & GUTTER

CATEGORY	LOCATION	STATION - STATION	OFFSET	601.0405 CONCRETE CURB & GUTTER 18-INCH TYPE A LF	601.0409 CONCRETE CURB & GUTTER 30-INCH TYPE A LF	620.0300 CONCRETE MEDIAN SLOPED NOSE SF
0010	72ND AVE	208+65 - 209+69	RT	104	--	--
		208+63 - 211+45	RT	--	282	--
		209+69 - 211+45	RT	--	176	--
		211+38 - 211+44	RT	--	--	27
	TOTALS			104	458	27

STORM SEWER STRUCTURES

CATEGORY	LOCATION	STATION	OFFSET	204.0220 REMOVING INLETS EACH	611.0624 INLET COVERS TYPE H EACH	611.3230 INLET 2X3-FT EACH	SPV.0060.02 RECONNECT STORM SEWER EACH
0010	72ND AVE	210+07	1' RT	1	1	1	1
		210+07	10' RT	1	1	1	1
		210+13	14' LT	1	1	1	1
		210+17	1' RT	1	1	1	1
		210+17	10' RT	1	1	1	1
		210+22	13' LT	1	1	1	1
		211+10	14' LT	1	1	1	1
		212+31	33' LT	1	1	1	1
	TOTALS			8	8	8	8

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GUARDRAIL ITEMS

CATEGORY	ROADWAY	STATION	-	STATION		614.2300 MGS GUARDRAIL 3 LF	614.2310 MGS GUARDRAIL 3 HS LF	614.2500 MGS THRIE BEAM TRANSITION LF	614.2610 MGS GUARDRAIL TERMINAL EAT EACH	614.2620 MGS GUARDRAIL TERMINAL TYPE 2 EACH	614.8010 ANCHOR POST ASSEMBLY TOP MOUNT EACH
0010											
	STH 29 EB	1478+45	-	1483+75	LT	325	--	--	1	1	--
		1553+55	-	1557+95	LT	263	--	39	1	--	--
		1553+70	-	1557+85	RT	238	--	39	1	--	--
		1615+70	-	1620+70	LT	275	--		1	1	--
		1632+60	-	1637+10	LT	275	--	39	1	--	--
		1633+10	-	1637+30	RT	238	--	39	1	--	--
		1638+70	-	1641+00	LT	138	--	79	--	--	--
		1638+90	-	1641+10	RT	138	--	79	--	--	--
	STH 29 WB	1552+30	-	1558+25	LT	450	--	39	1	--	--
		1559+45	-	1564+00	RT	263	--	39	1	--	--
		1638+25	-	1640+90	LT	138	--	79	--	--	--
		1638+55	-	1641+10	RT	138	--	79	--	--	--
		1645+20	-	1646+90	LT	--	--		1	--	--
	72ND AVE NE	1559+80	-	1560+90	RT	--	50	--	1	1	4
	TOTALS					2,875	50	551	10	3	4

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CONCRETE SURFACE DRAINS

CATEGORY	ROADWAY	STATION	-	STATION	602.3010 CONCRETE SURFACE DRAIN CY
0010	STH 29 WB	1207WB+29.52	-	1207WB+34.86	6
	TOTAL				6

RESTORATIONS ITEMS

CATEGORY	LOCATION	STATION	-	STATION	OFFSET	625.0100 TOPSOIL SY	629.0210 FERTILIZER TYPE B CWT	630.0120 SEEDING MIXTURE NO. 20 LB	630.0500 SEED WATER MGAL
0010	STH 29 EB	1202+33	-	1202+92	MEDIAN	193	0.12	9	15
		1203+38	-	1203+90	MEDIAN	169	0.11	8	13
		1478+47	-	1483+69	MEDIAN	918	0.59	41	72
		1553+57	-	1557+95	MEDIAN	991	0.64	45	78
		1553+70	-	1557+85	RIGHT	686	0.44	31	54
		1615+72	-	1620+71	MEDIAN	962	0.62	43	76
		1632+58	-	1637+11	MEDIAN	1181	0.76	53	93
		1632+76	-	1637+30	RIGHT	504	0.32	23	40
		1637+68	-	1640+98	MEDIAN	314	0.20	14	25
		1638+90	-	1641+08	RIGHT	147	0.09	7	12
		1649+15	-	1650+21	MEDIAN	354	0.23	16	28
		1649+15	-	1650+21	RIGHT	414	0.27	19	33
	STH 29 WB	1457+67	-	1457+74	LEFT	226	0.15	10	18
		1552+33	-	1558+24	LEFT	1374	0.88	62	108
		1559+43	-	1563+99	MEDIAN	521	0.34	23	41
		1634+12	-	1635+18	LEFT	353	0.23	16	28
		1638+25	-	1640+91	LEFT	168	0.11	8	13
		1638+57	-	1641+11	MEDIAN	208	0.13	9	16
		1645+21	-	1646+88	LEFT	188	0.12	8	15
	72ND AVE	209+23	-	211+82	LEFT	287	0.18	13	23
	72ND AVE NE	1559+77	-	1561+74	LEFT	252	0.16	11	20
	TOTALS					10,410	7	468	818

PLOT DATE : 1/15/2025 10:18:05 PM PLOT BY : APACADA PLOT NAME : 030201_mq PLOT SCALE : 1:1

EROSION CONTROL ITEMS

CATEGORY	LOCATION	STATION	STATION	OFFSET	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	628.7555 CULVERT PIPE CHECKS EACH	628.7570 ROCK BAGS EACH
0010	STH 29 EB	1202+33	1202+92	MEDIAN	--	--	193	--	--	--
		1203+38	1203+90	MEDIAN	--	--	169	10	1	--
		1478+47	1483+69	MEDIAN	--	--	918	10	--	--
		1553+57	1557+95	MEDIAN	--	--	991	30	--	--
		1553+70	1557+85	RIGHT	485	485	684	--	--	--
		1615+72	1620+71	MEDIAN	--	--	962	10	--	--
		1632+58	1637+11	MEDIAN	--	--	1181	--	--	--
		1632+76	1637+30	RIGHT	551	551	504	--	--	--
		1637+68	1640+98	MEDIAN	--	--	314	--	--	--
		1638+90	1641+08	RIGHT	244	244	147	--	--	--
		1649+15	1650+21	MEDIAN	--	--	354	--	--	--
		1649+15	1650+21	RIGHT	172	172	391	--	--	--
	STH 29 WB	1457+67	1457+74	LEFT	123	123	253	--	--	--
		1552+33	1558+24	LEFT	172	172	1374	40	--	--
		1559+43	1563+99	MEDIAN	--	--	521	10	--	--
		1575+08	1575+43	LEFT	41	41	43	--	--	--
		1634+12	1635+18	LEFT	145	145	357	--	--	--
		1638+25	1640+91	LEFT	262	262	168	--	--	--
		1638+57	1641+11	MEDIAN	--	--	208	--	--	--
		1645+21	1646+88	LEFT	194	194	188	--	--	--
	72ND AVE	209+23	211+82	LEFT	--	--	287	--	--	--
	72ND AVE NE	1559+77	1561+74	LEFT	235	235	252	--	--	--
	UNDISTRIBUTED				--	--	--	--	--	100
	TOTALS				2,624	2,624	10,460	110	1	100

MOBILIZATIONS EROSION CONTROL

CATEGORY	LOCATION	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH
0010	PROJECT	7	4
	TOTALS	7	4

INLET PROTECTION*

CATEGORY	LOCATION	STATION	-	OFFSET	628.7005 INLET PROTECTION TYPE A EACH	628.7015 INLET PROTECTION TYPE C EACH	628.7020 INLET PROTECTION TYPE D EACH
0010	STH 29 EB	1287+20		MEDIAN	--	--	1
0010		1287+20		MEDIAN	--	--	1
0010		1290+30		MEDIAN	--	--	1
0010		1291+21		MEDIAN	--	--	1
0010		1295+19		MEDIAN	--	--	1
0010		1299+44		MEDIAN	--	--	1
0010		1305+15		MEDIAN	--	--	1
0010		1310+20		MEDIAN	--	--	1
0010		1319+71		MEDIAN	--	--	1
0010		1323+71		MEDIAN	--	--	1
0010		1326+71		MEDIAN	--	--	1
0010		1330+11		MEDIAN	--	--	1
0010		1334+61		MEDIAN	--	--	1
0010		1339+06		MEDIAN	--	--	1
0010		1344+21		MEDIAN	--	--	1
0010		1350+20		MEDIAN	--	--	1
0010		1355+41		MEDIAN	--	--	1
0010		1356+27		MEDIAN	--	--	1
0010		1360+19		MEDIAN	--	--	1
0010		1365+19		MEDIAN	--	--	1
0010		1369+21		MEDIAN	--	--	1
0010		1383+22		MEDIAN	--	--	1
0010		1387+21		MEDIAN	--	--	1
0010		1387+71		MEDIAN	--	--	1
0010		1391+59		MEDIAN	--	--	1
0010		1395+40		MEDIAN	--	--	1
0010		1401+21		MEDIAN	--	--	1
0010		1406+21		MEDIAN	--	--	1
0010		1407+35		MEDIAN	--	--	1
0010		1411+71		MEDIAN	--	--	1
0010		1425+21		MEDIAN	--	--	1
0010		1428+21		MEDIAN	--	--	1
0010		1429+10		MEDIAN	--	--	1
0010		1434+21		MEDIAN	--	--	1
0010		1438+21		MEDIAN	--	--	1
0010		1442+31		MEDIAN	--	--	1
0010		1447+21		MEDIAN	--	--	1
0010		1458+09		MEDIAN	--	--	1
0010		1463+08		MEDIAN	--	--	1
0010		1471+23		MEDIAN	--	--	1
0010		1479+21		MEDIAN	1	--	--
0010		1575+39		RIGHT	1	--	--
0010		1619+17		MEDIAN	1	--	--
0010		1634+40		RIGHT	1	--	--
0010		1640+21		MEDIAN	1	--	--
0010		1649+70		MEDIAN	1	--	--
SUBTOTAL					6	0	0
							0
							40

*ADDITIONAL QUANTITY FOUND ELSEWHERE

INLET PROTECTION*

CATEGORY	LOCATION	STATION	-	OFFSET	628.7005 INLET PROTECTION TYPE A EACH	628.7015 INLET PROTECTION TYPE C EACH	628.7020 INLET PROTECTION TYPE D EACH
0010	STH 29 WB	1287+12		MEDIAN	--	--	1
0010		1289+42		MEDIAN	--	--	1
0010		1290+22		MEDIAN	--	--	1
0010		1295+34		MEDIAN	--	--	1
0010		1299+57		MEDIAN	--	--	1
0010		1305+12		MEDIAN	--	--	1
0010		1310+31		MEDIAN	--	--	1
0010		1319+82		MEDIAN	--	--	1
0010		1323+62		MEDIAN	--	--	1
0010		1326+63		MEDIAN	--	--	1
0010		1330+22		MEDIAN	--	--	1
0010		1334+73		MEDIAN	--	--	1
0010		1339+18		MEDIAN	--	--	1
0010		1344+12		MEDIAN	--	--	1
0010		1350+32		MEDIAN	--	--	1
0010		1354+55		MEDIAN	--	--	1
0010		1355+32		MEDIAN	--	--	1
0010		1360+32		MEDIAN	--	--	1
0010		1365+32		MEDIAN	--	--	1
0010		1369+32		MEDIAN	--	--	1
0010		1383+12		MEDIAN	--	--	1
0010		1387+10		MEDIAN	--	--	1
0010		1391+71		MEDIAN	--	--	1
0010		1395+54		MEDIAN	--	--	1
0010		1401+11		MEDIAN	--	--	1
0010		1405+15		MEDIAN	--	--	1
0010		1406+11		MEDIAN	--	--	1
0010		1411+82		MEDIAN	--	--	1
0010		1425+11		MEDIAN	--	--	1
0010		1427+37		MEDIAN	--	--	1
0010		1428+10		MEDIAN	--	--	1
0010		1434+32		MEDIAN	--	--	1
0010		1438+31		MEDIAN	--	--	1
0010		1442+22		MEDIAN	--	--	1
0010		1447+32		MEDIAN	--	--	1
0010		1458+20		MEDIAN	--	--	1
0010		1463+14		MEDIAN	--	--	1
0010		1634+67		MEDIAN	1	--	--
SUBTOTAL					1	0	37

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INLET PROTECTION*

CATEGORY	LOCATION	STATION	OFFSET	628.7005 INLET PROTECTION TYPE A EACH	628.7015 INLET PROTECTION TYPE C EACH	628.7020 INLET PROTECTION TYPE D EACH
0010	CTH O	111+70	LEFT	--	1	--
0010		111+80	LEFT	--	1	--
0010		112+40	MEDIAN	--	1	--
0010		118+82	MEDIAN	--	2	--
0010		119+02	MEDIAN	--	2	--
0010	72ND AVE	210+12	MEDIAN	2	2	--
0010		210+17	LEFT	--	1	--
0010		210+21	MEDIAN	2	2	--
0010		210+26	LEFT	--	1	--
0010		211+14	LEFT	--	1	--
0010		212+34	LEFT	--	1	--
	72ND AVE NW	1558+14	RIGHT	--	1	--
	SUBTOTALS			4	16	--
	TOTALS			11	16	77

DELINEATORS

CATEGORY	ROADWAY	STATION	STATION	LOCATION	204.0180 REMOVING DELINEATORS AND MARKERS EACH	633.0100 DELINEATOR POSTS STEEL EACH	633.0500 DELINEATOR REFLECTORS EACH
0010	STH 29	1150+00	1285+00	RT	38	38	38
		1150+00	1285+00	MEDIAN	16	16	16
		1150+00	1285+00	LT	40	40	40
	STH 29	1285+00	1454+00	RT	130	65	130
		1285+00	1454+00	MEDIAN	400	--	400
		1285+00	1454+00	LT	136	68	136
	STH 29	1464+00	1651+42	RT	50	50	50
		1464+00	1651+42	MEDIAN	--	--	--
		1464+00	1651+42	LT	56	56	56
	STH 107 SE	331+58	354+51	LT	33	25	33
	STH 107 SW	414+74	430+84	LT	19	16	19
	STH 107 NW	505+09	529+37	RT	20	17	20
	STH 107 NE	629+99	645+98	RT	32	25	32
	CTH O NW	1376+21	1404+42	RT	16	8	16
	CTH O NE	1405+02	1420+74	RT	18	9	18
	CTH O SW	1387+33	1402+06	LT	18	9	18
	CTH O SE	1402+68	1425+67	LT	20	10	20
	72ND AVE NW	1534+58	1558+54	LT	37	23	37
	72ND AVE NE	1559+45	1574+77	LT	20	15	20
	72ND AVE SW	1542+35	1557+92	RT	19	14	19
	72ND AVE SE	1558+46	1575+47	RT	43	25	43
	TOTAL				1,161	529	1,161

MARKING LINES

CATEGORY	LOCATION	STATION - STATION	646.2020 MARKING LINE EPOXY 6-INCH YELLOW LF	646.2020 MARKING LINE EPOXY 6-INCH WHITE (SOLID) LF	646.2020 MARKING LINE EPOXY 6-INCH WHITE (12.5' LINE 37.5' SKIP) LF	646.2040 MARKING LINE GROOVED WET REF EPOXY 6-INCH YELLOW LF	646.2040 MARKING LINE GROOVED WET REF EPOXY 6-INCH WHITE (SOLID) LF	646.2040 MARKING LINE GROOVED WET REF EPOXY 6-INCH WHITE (12.5' LINE 37.5' SKIP) LF	646.4040 MARKING LINE GROOVED WET REF EPOXY 10-INCH WHITE (SOLID) LF	646.4040 MARKING LINE GROOVED WET REF EPOXY 10-INCH WHITE (3' LINE 9' SKIP) LF
0010	STH 29 EB	1153+00 - 1211+02	--	--	--	7,612	5,802	1,451	--	--
		1211+02 - 1278+70	--	--	--	6,766	4,956	1,692	--	--
		1278+70 - 1471+70	19,305	17,409	4,828	--	--	--		
		1471+70 - 1558+50	--	--	--	8,619	7,056	2,155		
		1559+24 - 1636+13	--	--	--	8,431	5,359	1,949	--	--
		1638+59 - 1641+18	--	--	--	248	242	61	--	--
		1642+88 - 1650+40	--	--	--	799	744	269	--	--
	STH 29 WB	1153+00 - 1211+02	--	--	--	5,803	7,554	1,451	--	--
		1211+02 - 1278+70	--	--	--	6,766	5,023	1,692	--	--
		1278+70 - 1471+70	19,290	16,771	4,821	--	--	--		
		1471+70 - 1558+50	--	--	--	8,656	6,305	2,165		
		1559+44 - 1636+13	--	--	--	8,730	6,216	1,936	--	--
		1638+60 - 1641+10	--	--	--	248	274	68	--	--
		1642+83 - 1653+65	--	--	--	1,072	1,079	187	--	--
	STH 107 NW	505+74 - 529+37	--	--	--	1,087	2,399	--	1,100	--
	STH 107 NE	629+99 - 645+98	--	--	--	1,165	1,607	--	555	47
	STH 107 SW	414+74 - 430+84	--	--	--	1,125	1,613	--	726	39
	STH 107 SE	331+58 - 354+52	--	--	--	1,075	2,390	--	1,253	--
	CTH O NW	1376+21 - 1404+42	--	--	--	900	2,879	--	2,263	95
	CTH O NE	1405+02 - 1420+74	--	--	--	1,013	1,600	--	772	46
	CTH O SW	1387+83 - 1402+06	--	--	--	910	1,504	--	762	47
	CTH O SE	1402+68 - 1425+67	--	--	--	989	2,359	--	1,140	58
	CTH O	110+75 - 113+97	--	--	--	565	594	--	--	--
		116+00 - 119+62	--	--	--	515	730	--	--	--
	72ND AVE NW	1534+58 - 1558+54	--	--	--	935	2,394	--	1,433	--
	72ND AVE NE	1559+49 - 1574+77	--	--	--	1,009	1,501	--	710	46
	72ND AVE SW	1542+35 - 1557+92	--	--	--	978	1,564	--	754	46
	72ND AVE SE	1558+46 - 1575+47	--	--	--	760	2,596	--	1,966	--
	72ND AVE	205+50 - 213+26	--	--	--	694	1,416	--	--	--
	UNDISTRIBUTED		--	--	--	--	--	--	--	--
	SUBTOTALS		38,595	34,180	9,649	77,469	77,760	15,074	13,433	425
	TOTALS			82,424			170,304		13,858	

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

CONT'D (SEE NEXT PAGE)

PLOT DATE : 1/15/2025 10:18:05 PM PLOT BY : APACADA PLOT NAME : 030201_mq PLOT SCALE : 1:1

MARKING LINES

CATEGORY	LOCATION	STATION - STATION	646.5020 MARKING ARROW EPOXY EACH	646.5120 MARKING WORD EPOXY EACH	646.6120 MARKING STOP LINE EPOXY 18-INCH LF	646.6466 COLD WEATHER MARKING EPOXY 6-INCH LF	646.6470 COLD WEATHER MARKING EPOXY 10-INCH LF	646.7220 MARKING CHEVRON EPOXY 24-INCH LF
0010	STH 29 EB	1153+00 - 1211+02	--	--	20	--	--	--
		1211+02 - 1278+70	--	--	--	--	--	--
		1278+70 - 1471+70						
		1471+70 - 1558+50						
		1559+24 - 1636+13	--	--	--	--	--	--
		1638+59 - 1641+18	--	--	--	--	--	--
		1642+88 - 1650+40	--	--	--	--	--	--
	STH 29 WB	1153+00 - 1211+02	--	--	--	--	--	--
		1211+02 - 1278+70	--	--	--	--	--	--
		1278+70 - 1471+70						
		1471+70 - 1558+50						
		1559+44 - 1636+13	--	--	--	--	--	--
		1638+60 - 1641+10	--	--	--	--	--	--
		1642+83 - 1653+65	--	--	--	--	--	--
	STH 107 NW	505+74 - 529+37	--	--	--	--	--	--
	STH 107 NE	629+99 - 645+98	--	--	--	--	--	96
	STH 107 SW	414+74 - 430+84	--	--	--	--	--	198
	STH 107 SE	331+58 - 354+52	--	--	--	--	--	--
	CTH O NW	1376+21 - 1404+42	--	--	--	--	--	--
	CTH O NE	1405+02 - 1420+74	--	--	58	--	--	273
	CTH O SW	1387+83 - 1402+06	--	--	37	--	--	280
	CTH O SE	1402+68 - 1425+67	--	--	--	--	--	--
	CTH O	110+75 - 113+97	2	1	--	--	--	--
		116+00 - 119+62	3	1	--	--	--	--
	72ND AVE NW	1534+58 - 1558+54	--	--	--	--	--	--
	72ND AVE NE	1559+49 - 1574+77	--	--	56	--	--	222
	72ND AVE SW	1542+35 - 1557+92	--	--	61	--	--	260
	72ND AVE SE	1558+46 - 1575+47	--	--	--	--	--	--
	72ND AVE	205+50 - 213+26	4	2	--	--	--	--
	UNDISTRIBUTED		--	--	--	25,000	3,000	--
	SUBTOTALS		9	4	231	25,000	3,000	1,329
	TOTALS		9	4	231	25,000	3,000	1,329

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

PLOT DATE : 1/15/2025 10:18:05 PM PLOT BY : APACADA PLOT NAME : 030201_mq PLOT SCALE : 1:1

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CONSTRUCTION STAKING ITEMS

CATEGORY	ROADWAY	STATION	-	STATION	650.5500 CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER LF	650.8000 CONSTRUCTION STAKING RESURFACING REFERENCE LF
0010	STH 29 EB	1153+00.00		1207+43.76	--	5,444
		1211+01.70		1557+94.98	--	34,693
		1559+17.14		1637+30.10	--	7,813
		1638+68.50		1641+08.48	--	240
		1642+87.55		1650+38.27	--	751
	STH 29 WB	1153+00.12		1207+44.40	--	5,444
		1211+03.01		1558+23.89	--	34,721
		1559+43.39		1636+94.62	--	7,751
		1638+24.61		1641+10.78	--	286
		1642+82.82		1653+64.43	--	1,082
	STH 107 NW	505+09.24		529+37.05	--	2,428
	STH 107 NE	629+99.28		645+97.75	--	1,598
	STH 107 SW	414+73.67		430+83.62	--	1,610
	STH 107 SE	331+58.03		354+51.47	--	2,293
	CTH O	110+75		113+98	--	323
		116+13		119+59	--	346
	CTH O NW	1376+21.11		1404+42.19	--	2,821
	CTH O NE	1405+01.67		1420+73.86	--	1,572
	CTH O SW	1387+32.76		1402+06.2	--	1,473
	CTH O SE	1402+67.78		1425+67.17	--	2,299
	72ND AVE	205+50		213+23	562	773
	72ND AVE NW	1534+57.65		1558+54	--	2,396
	72ND AVE NE	1559+45		1574+76.9	--	1,532
	72ND AVE SW	1542+35.19		1557+92	--	1,557
	72ND AVE SE	1558+46		1575+46.51	--	1,701
TOTAL					562	122,948

SAWING ITEMS

CATEGORY	ROADWAY	STATION	TO	STATION	* 690.0150 SAWING ASPHALT LF
0010	STH 29 EB	1153+00			35
		1650+38			38
	STH 29 WB	1153+00			35
		1653+64			37
	STH 107 NW	529+37			31
	STH 107 NE	629+99			53
	STH 107 SW	430+84			45
	STH 107 SE	331+58			52
	CTH O NB	110+75			20
		119+62			24
	CTH O SB	110+73			18
		119+59			20
	72ND AVE	204+60			14
		205+06			14
		208+63	-	211+45	584
		212+66			14
		214+27			14
TOTALS					1,048

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

LOCATE AND CLEAN EXISTING UNDERDRAIN

CATEGORY	LOCATION	STATION	-	STATION	OFFSET	SPV.0060.03 LOCATE AND CLEAN EXISTING UNDERDRAIN EACH
0010	STH 29	1153EB+00	-	1285EB+06	RT/LT	1
		1454EB+00	-	1651EB+42	RT/LT	1
TOTALS						2

3

3

RESIN BINDER HIGH FRICTION SURFACE TREATMENT

CATEGORY	ROADWAY	STATION FROM	-	STATION TO	SPV.0180.01 SY
0030	STH 29 EB	1278+70	-	1471+70	51,470
	STH 29 WB	1278+70	-	1471+70	51,470
	TOTALS				102,940

REMOVING SMALL PIPE CULVERTS

STATION	LOCATION	203.0100 REMOVING SMALL PIPE CULVERTS EACH	COMMENTS
CATEGORY CODE 0010			
1203+20	MEDIAN	1	MEDIAN CROSSOVER
1458+21	LT	1	WESTBOUND
1575+30	LT	1	WESTBOUND
1634+60	LT	1	WESTBOUND
1649+65	RT	1	EASTBOUND
	TOTALS	5	

REMOVING ASPHALTIC SURFACE

STATION - STATION	LOCATION	204.0110 REMOVING ASPHALTIC SURFACE SY	COMMENTS
CATEGORY CODE 0010			
1202+80 - 1203+50	LT, MEDIAN	237	MEDIAN CROSS OVER
1457+65 - 1458+70	LT	559	WESTBOUND CULVERT
1634+10 - 1635+20	LT	432	WESTBOUND CULVERT
1649+15 - 1650+20	RT	442	EASTBOUND CULVERT
	TOTALS	1,670	

ASPHALTIC ITEMS

STATION - STATION	LOCATION	465.0105 ASPHALTIC SURFACE TON	COMMENTS
CATEGORY CODE 0010			
1203+20	LT	95	MEDIAN CROSSOVER
1458+21	LT	235	WESTBOUND
1634+60	LT	190	WESTBOUND
1649+65	RT	190	EASTBOUND
	TOTALS	710	

3

BASE AGGREGATE DENSE ITEMS

STATION - STATION	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	COMMENTS
CATEGORY CODE 0010				
1203+20	MEDIAN CROSS OVER	81	330	CULVERT TRANSITION
1459+21	WESTBOUND CULVERT TRANSITION	31	820	CULVERT TRANSITION
1634+60	WESTBOUND CULVERT TRANSITION	31	650	CULVERT TRANSITION
1649+65	EASTBOUND CULVERT TRANSITION	62	650	CULVERT TRANSITION
	TOTALS	205	2,450	

EXCAVATION COMMON

STATION - STATION	LOCATION	205.0100 EXCAVATION COMMON CY	COMMENTS
CATEGORY CODE 0010			
1457+65 - 1458+70	LT	550	WESTBOUND CULVERT
1634+10 - 1635+20	LT	500	WESTBOUND CULVERT
1649+15 - 1650+20	RT	500	EASTBOUND CULVERT
	TOTALS	1,550	

*ADDITIONAL EXCAVATION COMMON QUANTITIES SHOWN ELSEWHERE

CULVERT PIPE ITEMS

STATION		LOCATION	520.1018 APRON ENDWALLS FOR CULVERT PIPE 18-INCH EA	520.3318 CULVERT PIPE CLASS III-A 18-INCH LF	522.1018 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 18-INCH EA	522.1024 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH EA	522.1036 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 36-INCH EA	608.0136 RELAID STORM SEWER 36-INCH LF	608.0418 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 18-INCH LF	608.0424 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 24-INCH LF	650.6000 CONSTRUCTION STAKING PIPE CULVERT EA
CATEGORY CODE 0010											
1203+20	LT	MEDIAN	2	64	--	--	--	--	--	--	1
1459+21	LT	WESTBOUND	--	--	--	1	--	--	--	70	1
1575+30	LT	WESTBOUND	--	--	--	--	1	32	--	--	--
1634+60	LT	WESTBOUND	--	--	1	--	--	--	112	--	1
1649+65	RT	EASTBOUND	--	--	--	1	--	--	--	128	1
		TOTALS	2	64	1	2	1	32	112	198	4

TRAFFIC CONTROL ITEMS

LOCATION	643.0300 TRAFFIC CONTROL DRUMS DAY	NUMBER	TOTAL DAYS	643.0420 TRAFFIC CONTROL BARRICADES TYPE III DAY	NUMBER	TOTAL DAYS	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A DAY	NUMBER	TOTAL DAYS	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C DAY	NUMBER	TOTAL DAYS	643.0800 ARROW BOARDS DAY	NUMBER	TOTAL DAYS	643.1070 TRAFFIC CONTROL CONES 42-INCH DAY	NUMBER	TOTAL DAYS
CATEGORY CODE 0010																		
STAGE 1A WORK (DRIVING LANES)	10	325	3,254	10	38	380	10	76	760	10	12	120	10	2	20	10	995	9,948
CULVERT 1203+15 (MEDIAN)			--			--			--						--			--
STRUCTURE B-37-0115 OVERLAY 1207+70 WB			--			--			--						--			--
CULVERT 1458+20 (WB)			--			--			--						--			--
CULVERT 1634+60 (WB)			--			--			--						--			--
CULVERT 1649+65 (EB)			--			--			--						--			--
STAGE 1B WORK (MEDIAN LANES)	10	145	1,454	10	38	380	10	76	760	10	12	120	10	2	20	10	995	9,948
CULVERT 1203+15 (MEDIAN)			--			--			--						--			--
STRUCTURE B-37-0115 OVERLAY 1207+70 WB			--			--			--						--			--
CULVERT 1458+20 (WB)			--			--			--						--			--
CULVERT 1634+60 (WB)			--			--			--						--			--
CULVERT 1649+65 (EB)			--			--			--						--			--
STAGE 1 MAINLINE	25	325	8,136	25	38	950	25	76	1,900	25	12	300			--	25	995	24,869
TRAFFIC CONTROL MAX WIDTH SIGNING (STAGE 1)			--			--			--						--			--
STAGE 2 MAINLINE	25	145	3,636	25	38	950	25	76	1,900	25	12	300			--	25	995	24,869
RAMP STH 29/107 EXIT 156 EB (ON/OFF)	3	20	60	3	8	24	3	16	48						--			--
RAMP STH 29/107 EXIT 156 WB (ON/OFF)	3	20	60	3	8	24	3	16	48						--			--
RAMP STH 29/CTH 0 EXIT 159 EB (ON/OFF)	3	20	60	3	8	24	3	16	48						--			--
RAMP STH 29/CTH O EXIT 159 WB (ON/OFF)	3	20	60	3	8	24	3	16	48						--			--
RAMP STH 29/72ND AVE EXIT 162 EB (ON/OFF)	3	20	60	3	8	24	3	16	48						--			--
RAMP STH 29/72ND AVE EXIT 162 WB (ON/OFF)	3	20	60	3	8	24	3	16	48						--			--
TOTALS			16,841			2,804			5,608			840			40			69,633

TRAFFIC CONTROL CONTINUED

LOCATION	643.0900 TRAFFIC CONTROL SIGNS DAY	NUMBER	TOTAL DAYS	643.0910 TRAFFIC CONTROL COVERING SIGNS TYPE I EACH	CYCLE	TOTAL EACH	643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II EACH	CYCLE	TOTAL EACH	643.1000 TRAFFIC CONTROL SIGNS FIXED MESSAGE SF	643.1050 TRAFFIC CONTROL SIGNS PCMS DAY	NUMBER	TOTAL DAYS
CATEGORY CODE 0010													
STAGE 1A WORK (DRIVING LANES)	10	86	860			--			--	36			--
CULVERT 1203+15 (MEDIAN)			--			--			--	--			--
STRUCTURE B-37-0115 OVERLAY 1207+70 WB			--			--			--	--			--
CULVERT 1458+20 (WB)			--			--			--	--			--
CULVERT 1634+60 (WB)			--			--			--	--			--
CULVERT 1649+65 (EB)			--			--			--	--			--
STAGE 1B WORK (MEDIAN LANES)	10	74	740			--			--	--			--
CULVERT 1203+15 (MEDIAN)			--			--			--	--			--
STRUCTURE B-37-0115 OVERLAY 1207+70 WB			--			--			--	--			--
CULVERT 1458+20 (WB)			--			--			--	--			--
CULVERT 1634+60 (WB)			--			--			--	--			--
CULVERT 1649+65 (EB)			--			--			--	--			--
STAGE 1 MAINLINE	25	86	2,150			--			--	--			--
TRAFFIC CONTROL MAX WIDTH SIGNING (STAGE 1)	25	66	1,650			--			--	36	7	2	14
STAGE 2 MAINLINE	25	74	1,850			--			--	--			--
RAMP STH 29/107 EXIT 156 EB (ON/OFF)	3	117	351	1	1	1			--	--	10	1	10
RAMP STH 29/107 EXIT 156 WB (ON/OFF)	3	104	312	1	1	1			--	--	10	1	10
RAMP STH 29/CTH 0 EXIT 159 EB (ON/OFF)	3	80	240	1	1	1	3	2	6	--	10	1	10
RAMP STH 29/CTH O EXIT 159 WB (ON/OFF)	3	86	258	1	1	1	3	2	6	--	10	1	10
RAMP STH 29/72ND AVE EXIT 162 EB (ON/OFF)	3	62	186	1	1	1			--	88	10	1	10
RAMP STH 29/72ND AVE EXIT 162 WB (ON/OFF)	3	73	219	1	1	1			--	74	10	1	10
TOTALS			8,816			6			12	234			74

SHORING ITEMS

LOCATION	511.1100 TEMPORARY SHORING SF	COMMENTS
CATEGORY CODE 0010		
1458+20	500	CULVERT INSTALLATION STAGE 1A
1458+20	500	CULVERT INSTALLATION STAGE 1B
1634+60	500	CULVERT INSTALLATION STAGE 1A
1634+60	500	CULVERT INSTALLATION STAGE 1B
1649+65	400	CULVERT INSTALLATION STAGE 1A
1649+65	400	CULVERT INSTALLATION STAGE 1B
	2,800	

TEMPORARY CONCRETE BARRIER

LOCATION	603.8000 CONCRETE BARRIER TEMPORARY PRECAST DELIVERED LF	603.8125 CONCRETE BARRIER TEMPORARY PRECAST INSTALLED LF	603.8500 ANCHORING CONCRETE BARRIER TEMPORARY PRECAST LF
CATEGORY CODE 0010			
STAGE 1A WORK (DRIVING LANES)			
CULVERT 1203+15 (MEDIAN)	--	--	--
CULVERT 1458+20 (WB)	370	370	200
CULVERT 1634+60 (WB)	370	370	200
CULVERT 1649+65 (EB)	370	370	200
STAGE 1B WORK (MEDIAN LANES)			
CULVERT 1203+15 (MEDIAN)	--	--	--
CULVERT 1458+20 (WB)	--	370	200
CULVERT 1634+60 (WB)	--	370	200
CULVERT 1649+65 (EB)	--	370	200
TOTALS	1,110	2,220	1,200

MARKING LINES

LOCATION	646.9000 MARKING LINE REMOVAL 4-INCH LF	643.3180 TEMPORARY MARKING LINE REMOVABLE TAPE 6-INCH LF	643.3280 TEMPORARY MARKING LINE REMOVABLE TAPE 10-INCH LF
CATEGORY CODE 0010			
STAGE 2 MAINLINE			
RAMP STH 29/107 EXIT 156 EB (ON/OFF)	210	1,000	600
RAMP STH 29/107 EXIT 156 WB (ON/OFF)	210	1,000	600
RAMP STH 29/CTH 0 EXIT 159 EB (ON/OFF)	210	1,000	600
RAMP STH 29/CTH O EXIT 159 WB (ON/OFF)	210	1,000	600
RAMP STH 29/72ND AVE EXIT 162 EB (ON/OFF)	210	1,000	600
RAMP STH 29/72ND AVE EXIT 162 WB (ON/OFF)	210	1,000	600
TOTALS	1,260	6,000	3,600

RIPRAP & GEOTEXTILE FABRIC ITEMS

LOCATION	606.0200 RIPRAP MEDIUM CY	645.0120 GEOTEXTILE FABRIC HR SY	COMMENTS
CATEGORY CODE 0010			
1458+21 LT	5	10	NORTH ENDWALL
1634+66 LT	15	30	NORTH ENDWALL
TOTALS	20	40	

SAWING ITEMS

LOCATION	690.0150 SAWING ASPHALT LF	COMMENTS
CATEGORY CODE 0010		
1203+20	183	MEDIAN CROSS OVER ASPHALT
1458+21	200	WESTBOUND CULVERT STAGED (ASPHALT)
1634+60	182	WESTBOUND CULVERT STAGED (ASPHALT)
1649+65	180	EASTBOUND CULVERT STAGED (ASPHALT)
TOTALS	745	

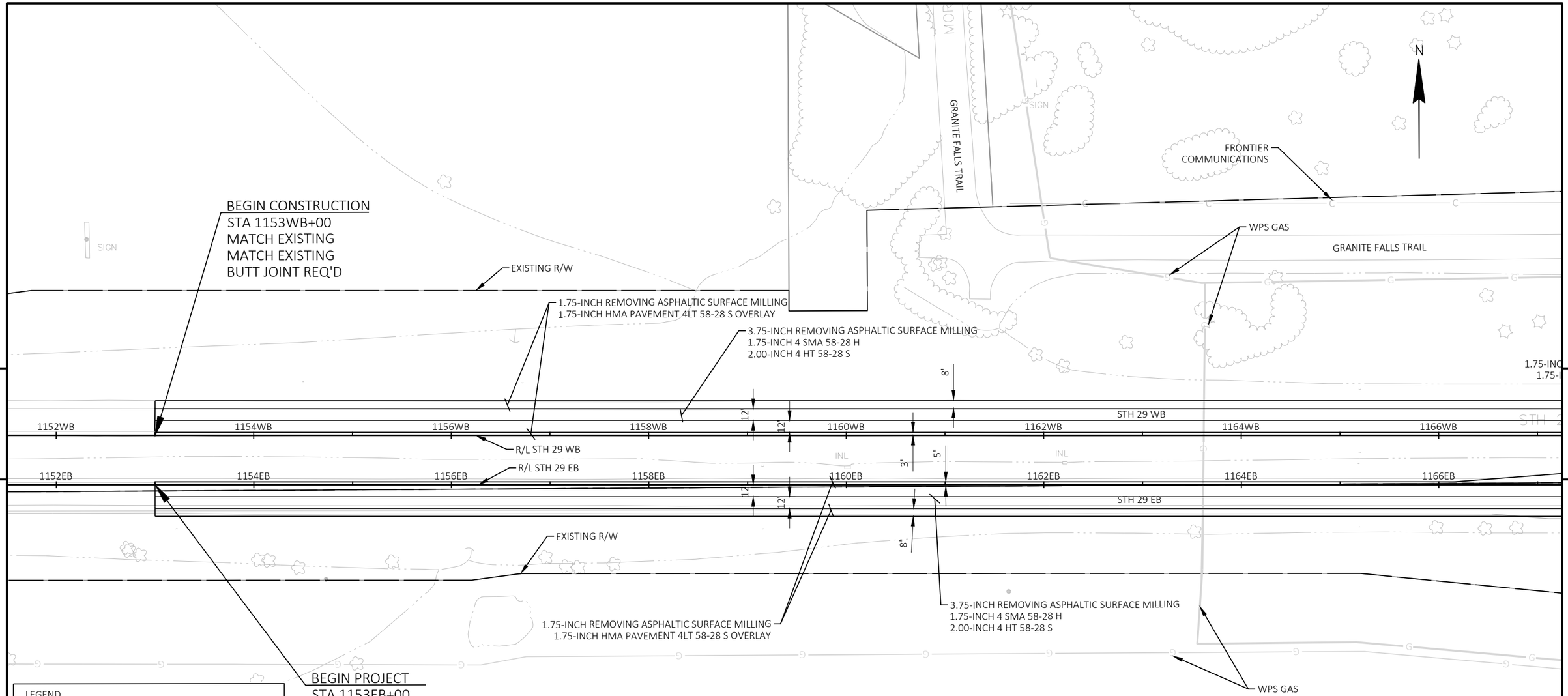
*ADDITIONAL SAWING QUANTITIES SHOWN ELSEWHERE

DIGITAL SPEED REDUCTION SYSTEM

LOCATION	STAGE	# OF SERVICE DAYS	DIGITAL SPEED LIMIT TRAILERS	SPV.0045.01 DIGITAL SPEED REDUCTION SYSTEM (DAY)	SPV.0045.02 CONNECTED ARROW BOARD (DAY)	SPV.0045.03 CONNECTED WORK ZONE START AND END LOCATION MARKERS (DAY)
STH 29 EB	1	--	--	--	--	--
STH 29 WB	1	--	--	--	--	--
STH 29 EB	2A	25	11	25	25	25
STH 29 WB	2A	25	11	25	25	25
STH 29 EB	2B	25	11	25	25	25
STH 29 WB	2B	25	11	25	25	25
STH 29 EB	3A	25	11	25	25	25
STH 29 WB	3A	25	11	25	25	25
STH 29 EB	3B	25	11	25	25	25
STH 29 WB	3B	25	11	25	25	25
			TOTAL	200	200	200

SPECIALS

LOCATION	SPV.0060.01 CONNECT TO EXISTING STRUCTURE EA	SPV.0090.01 GRADING SHAPING AND FINISHING DRAINAGE DITCHES LF	COMMENTS
CATEGORY CODE 0010			
1202+40 - 1203+90	--	80	MEDIAN CROSS OVER
1458+21	1	--	WESTBOUND
1634+10 - 1635+10	1	100	WESTBOUND
1649+40 - 1650+00	1	100	EASTBOUND
TOTALS	3	280	



LEGEND

BG 08	ANCHOR POST ASSEMBLY TOP MOUNT
BG 09	MGS GUARDRAIL HS
BG 10	MGS THRIE BEAM TRANSITION
BG 11	MGS GUARDRAIL
BG 12	MGS GUARDRAIL TERMINAL EAT
BG 13	MGS TYPE 2 TERMINAL
CG30	CONCRETE CURB & GUTTER 30" TYPE A
CG18	CONCRETE CURB & GUTTER 18" TYPE A
CMT1	CONCRETE MEDIAN SLOPED NOSE TYPE 1
CP24	CONCRETE SURFACE DRAINS
	HIGH FRICTION SURFACE TREATMENT
	ASPHALTIC SURFACE FOR CULVERT PIPE REPLACEMENT
	INLET REPLACEMENT

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	PLAN SHEETS	SHEET 176	E

N

GRANITE FALLS TRAIL

END CONSTRUCTION
STA 1169+70
MATCH EXISTING
BUTT JOINT REQ'D

EXISTING R/W

1.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH HMA PAVEMENT 4LT 58-28 S OVERLAY

3.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH 4 SMA 58-28 H
2.00-INCH 4 HT 58-28 S

EXISTING CROSSOVER
1.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH HMA PAVEMENT 4LT 58-28 S OVERLAY

WPS GAS

FRONTIER
COMMUNICATIONS

STH 29 WB

STH 29

1168WB 1170WB 1172WB 1174WB 1176WB 1178WB 1180WB

8' 3' 12'

R/L STH 29 WB

R/L STH 29 EB

1168EB 1170EB 1172EB 1174EB 1176EB 1178EB 1180EB

12' 3' 12'

STH 29 EB

1251.430

12' 8'

WPS ELECTRICITY (UG)

3.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH 4 SMA 58-28 H
2.00-INCH 4 HT 58-28 S

SIGN

EXISTING R/W

1.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH HMA PAVEMENT 4LT 58-28 S OVERLAY

WPS GAS

PURPLE MARTIN LN

MARTIN LN.

END CONSTRUCTION
STA 1169+70
MATCH EXISTING
BUTT JOINT REQ'D

FRONTIER
COMMUNICATIONS

LEGEND

BG 08	ANCHOR POST ASSEMBLY TOP MOUNT
BG 09	MGS GUARDRAIL HS
BG 10	MGS THRIE BEAM TRANSITION
BG 11	MGS GUARDRAIL
BG 12	MGS GUARDRAIL TERMINAL EAT
BG 13	MGS TYPE 2 TERMINAL
CG30	CONCRETE CURB & GUTTER 30" TYPE A
CG18	CONCRETE CURB & GUTTER 18" TYPE A
CMT1	CONCRETE MEDIAN SLOPED NOSE TYPE 1
CP24	CONCRETE SURFACE DRAINS
	HIGH FRICTION SURFACE TREATMENT
	ASPHALTIC SURFACE FOR CULVERT PIPE REPLACEMENT
	INLET REPLACEMENT

5 5

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	PLAN SHEETS	SHEET 177	E

FILE NAME : C:\CADDLIB\PW\HNTB_APACADA\GREATLAKES\D0382806\050201-PN.DWG
LAYOUT NAME - 050202pn

PLOT DATE : 1/15/2025 9:55 PM PLOT BY : ALLAN PACADA PLOT NAME : PLOT SCALE : 1 IN:100 FT

N

FRONTIER COMMUNICATIONS

EXISTING R/W

WPS ELECTRICITY (UG)

WPS GAS

1.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH HMA PAVEMENT 4LT 58-28 S OVERLAY

END CONSTRUCTION
STA 1192+50
MATCH EXISTING
BUTT JOINT REQ'D

MARBLE FALLS RD

3.75-INCH REMOVING
ASPHALTIC SURFACE MILLING
1.75-INCH 4 SMA 58-28 H
2.00-INCH 4 HT 58-28 S

5

1182WB 1184WB 1186WB 1188WB 1190WB STH 29 WB 1192WB 1194WB 1196WB

3' 12' 12' 8'

R/L STH 29 WB

R/L STH 29 EB

1182EB 1184EB 1186EB 1188EB 1190EB 1192EB 1194EB 1196EB

12' 12' 3'

8'

STH 29 EB

1.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH HMA PAVEMENT 4LT 58-28 S OVERLAY

3.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH 4 SMA 58-28 H
2.00-INCH 4 HT 58-28 S

EXISTING CROSSOVER
1.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH HMA PAVEMENT 4LT 58-28 S OVERLAY

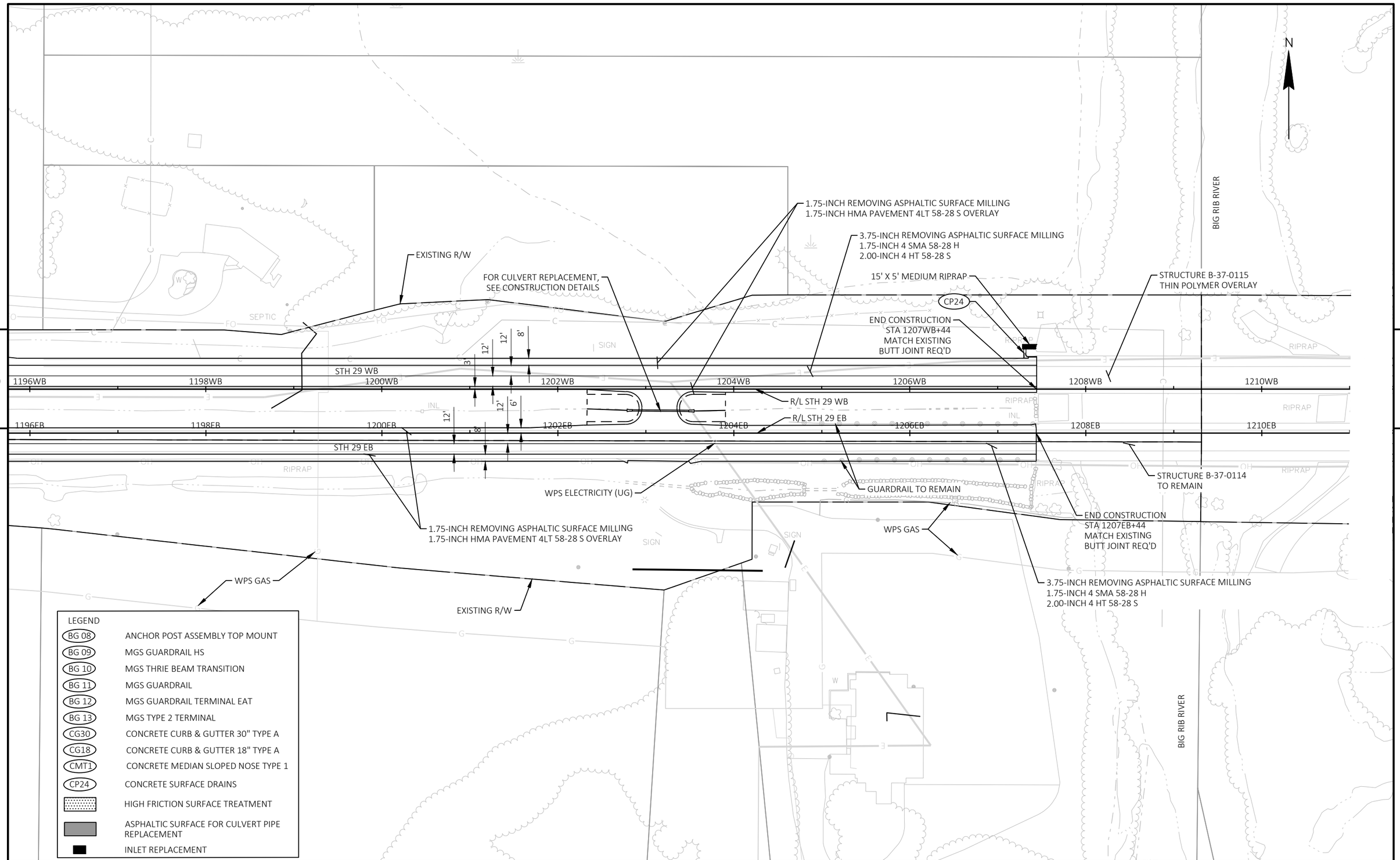
EXISTING R/W

WPS GAS

RIPRAP

LEGEND

BG 08	ANCHOR POST ASSEMBLY TOP MOUNT
BG 09	MGS GUARDRAIL HS
BG 10	MGS THRIE BEAM TRANSITION
BG 11	MGS GUARDRAIL
BG 12	MGS GUARDRAIL TERMINAL EAT
BG 13	MGS TYPE 2 TERMINAL
CG30	CONCRETE CURB & GUTTER 30" TYPE A
CG18	CONCRETE CURB & GUTTER 18" TYPE A
CMT1	CONCRETE MEDIAN SLOPED NOSE TYPE 1
CP24	CONCRETE SURFACE DRAINS
	HIGH FRICTION SURFACE TREATMENT
	ASPHALTIC SURFACE FOR CULVERT PIPE REPLACEMENT
	INLET REPLACEMENT



5 5

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	PLAN SHEETS	SHEET 179 E

FILE NAME : C:\CADDLIB\PW\HNTB_APACADA\GREATLAKES\D0382806\050201-PN.DWG
LAYOUT NAME - 050204pn

PLOT DATE : 1/10/2025 6:02 PM PLOT BY : ALLAN PACADA PLOT NAME : PLOT SCALE : 1 IN:100 FT

N

WPS GAS

WPS ELECTRICITY (UG)

1.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH HMA PAVEMENT 4LT 58-28 S OVERLAY

BEGIN CONSTRUCTION
STA 505NW+74
MATCH EXISTING

BEGIN CONSTRUCTION
STA 1211WB+03
MATCH EXISTING
BUTT JOINT REQ'D

EXISTING R/W

3.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH 4 SMA 58-28 H
2.00-INCH 4 HT 58-28 S

R/L STH 107 NW RAMP

GUARDRAIL TO REMAIN

R/L STH 29 WB

STH 29 WB

506NW

RIPRAP

STH 29

1212WB 1214WB 1216WB 1218WB 1220WB 1222WB 1224WB 1226WB

1212EB 1214EB 1216EB 1218EB 1220EB 1222EB 1224EB 1226EB

T207
1211.300

INL

STH 29 EB

R/L STH 29 EB

1.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH HMA PAVEMENT 4LT 58-28 S OVERLAY

3.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH 4 SMA 58-28 H
2.00-INCH 4 HT 58-28 S

SIGN

BEGIN CONSTRUCTION
STA 1211EB+02
MATCH EXISTING
BUTT JOINT REQ'D

EXISTING R/W

WPS GAS

LEGEND

BG 08	ANCHOR POST ASSEMBLY TOP MOUNT
BG 09	MGS GUARDRAIL HS
BG 10	MGS THRIE BEAM TRANSITION
BG 11	MGS GUARDRAIL
BG 12	MGS GUARDRAIL TERMINAL EAT
BG 13	MGS TYPE 2 TERMINAL
CG30	CONCRETE CURB & GUTTER 30" TYPE A
CG18	CONCRETE CURB & GUTTER 18" TYPE A
CMT1	CONCRETE MEDIAN SLOPED NOSE TYPE 1
CP24	CONCRETE SURFACE DRAINS
	HIGH FRICTION SURFACE TREATMENT
	ASPHALTIC SURFACE FOR CULVERT PIPE REPLACEMENT
	INLET REPLACEMENT

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	PLAN SHEETS	SHEET 180	E

FILE NAME : C:\CADDLIB\PW\HNTB_APACADA\GREATLAKES\D0382806\050201-PN.DWG
LAYOUT NAME - 050205pn

PLOT DATE : 1/10/2025 6:03 PM PLOT BY : ALLAN PACADA PLOT NAME : PLOT SCALE : 1 IN:100 FT

N

1.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH HMA PAVEMENT 4LT 58-28 S OVERLAY

EXISTING R/W

3.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH 4 SMA 58-28 H
2.00-INCH 4 HT 58-28 S

R/L STH 107 NW RAMP

WPS ELECTRICITY (UG)

RIPRAP

6NW 508NW 510NW 512NW 514NW 516NW 518NW 520NW

STH 107 NW RAMP

STH 29 WB

1226WB 1228WB 1230WB 1232WB 1234WB 1236WB 1238WB 1240WB

R/L STH 29 WB

R/L STH 29 EB

1226EB 1228EB 1230EB 1232EB 1234EB 1236EB 1238EB 1240EB

STH 29

STH 29 EB

416SW

STH 107 SW RAMP 418SW

420SW

R/L STH 107 SW RAMP

1.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH HMA PAVEMENT 4LT 58-28 S OVERLAY

BEGIN CONSTRUCTION
STA 414SW+74
MATCH EXISTING
SAW CUT REQ'D

3.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH 4 SMA 58-28 H
2.00-INCH 4 HT 58-28 S

EXISTING R/W

WPS GAS

SUBSTATION

WINDY LN

LEGEND

BG 08	ANCHOR POST ASSEMBLY TOP MOUNT
BG 09	MGS GUARDRAIL HS
BG 10	MGS THRIE BEAM TRANSITION
BG 11	MGS GUARDRAIL
BG 12	MGS GUARDRAIL TERMINAL EAT
BG 13	MGS TYPE 2 TERMINAL
CG30	CONCRETE CURB & GUTTER 30" TYPE A
CG18	CONCRETE CURB & GUTTER 18" TYPE A
CMT1	CONCRETE MEDIAN SLOPED NOSE TYPE 1
CP24	CONCRETE SURFACE DRAINS
	HIGH FRICTION SURFACE TREATMENT
	ASPHALTIC SURFACE FOR CULVERT PIPE REPLACEMENT
	INLET REPLACEMENT

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	PLAN SHEETS	SHEET 181	E

FILE NAME : C:\CADDLIB\PW\HNTB_APACADA\GREATLAKES\D0382806\050201-PN.DWG
LAYOUT NAME - 050206pn

PLOT DATE : 1/10/2025 6:04 PM PLOT BY : ALLAN PACADA PLOT NAME : PLOT SCALE : 1 IN:100 FT

WPS GAS
SPECTRUM TELEPHONE (UG)
N
EXISTING R/W
522NW
524NW
526NW
528NW
530NW
R/L STH 107 NW RAMP
STH 107 NW RAMP
6'
4'
15'
END CONSTRUCTION
STA 539NW+37
MATCH EXISTING
BUTT JOINT REQ'D
EVERSTREAM
COMMUNICATIONS
136
STH 107
630NE
632NE
634NE
636
4'
15'
6'
R/L STH 107 NE RAMP
STH 107 NE RAMP
BEGIN CONSTRUCTION
STA 630NE+00
MATCH EXISTING
BUTT JOINT REQ'D
1.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH HMA PAVEMENT 4LT 58-28 S OVERLAY
1.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH HMA PAVEMENT 4LT 58-28 S OVERLAY
BUG TUSSEL COMMUNICATIONS
WPS ELECTRICITY (UG)
3.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH 4 SMA 58-28 H
2.00-INCH 4 HT 58-28 S
EXISTING CROSSOVER
TO REMAIN (NO WORK)
134
5
5
STH 29 WB
1242WB
1244WB
1246WB
1248WB
1250WB
1252WB
1254WB
R/L STH 29 WB
R/L STH 29 EB
1242EB
1244EB
1246EB
1248EB
1250EB
1252EB
1254EB
STH 29 EB
GUARDRAIL TO REMAIN
12'
12'
8'
3'
12'
12'
3'
8'
3.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH 4 SMA 58-28 H
2.00-INCH 4 HT 58-28 S
STRUCTURE
B-37-0116 TO REMAIN
1.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH HMA PAVEMENT 4LT 58-28 S OVERLAY
132
422SW
424SW
426SW
428SW
430SW
STH 107 SW RAMP
1.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH HMA PAVEMENT 4LT 58-28 S OVERLAY
END CONSTRUCTION
STA 430SW+83
MATCH EXISTING
BUTT JOINT REQ'D
BEGIN CONSTRUCTION
STA 331SE+58
MATCH EXISTING
BUTT JOINT REQ'D
1.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH HMA PAVEMENT 4LT 58-28 S OVERLAY
336SE
334SE
332SE
STH 107 SE RAMP
4'
15'
6'
R/L STH 107 SE RAMP
EXISTING R/W
6'
15'
4'
R/L STH 107 SW RAMP
WPS GAS
ATC ELECTRICITY ELECRICITY
ATC ELECTRICITY OH
WPS GAS
SPECTRUM
TELEPHONE (UG)
130
128
U/C

LEGEND

BG 08	ANCHOR POST ASSEMBLY TOP MOUNT
BG 09	MGS GUARDRAIL HS
BG 10	MGS THRIE BEAM TRANSITION
BG 11	MGS GUARDRAIL
BG 12	MGS GUARDRAIL TERMINAL EAT
BG 13	MGS TYPE 2 TERMINAL
CG30	CONCRETE CURB & GUTTER 30" TYPE A
CG18	CONCRETE CURB & GUTTER 18" TYPE A
CMT1	CONCRETE MEDIAN SLOPED NOSE TYPE 1
CP24	CONCRETE SURFACE DRAINS
	HIGH FRICTION SURFACE TREATMENT
	ASPHALTIC SURFACE FOR CULVERT PIPE REPLACEMENT
	INLET REPLACEMENT

N

1.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH HMA PAVEMENT 4LT 58-28 S OVERLAY

EXISTING R/W

3.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH 4 SMA 58-28 H
2.00-INCH 4 HT 58-28 S

END CONSTRUCTION
STA 645NE+98
MATCH EXISTING
SAW CUT REQ'D

636NE
638NE
640NE
642NE
644NE
STH 107 NE RAMP
R/L STH 107 NE RAMP
15'
6'
4'

WPS GAS
WPS ELECTRICITY (UG)

STH 29 WB
R/L STH 29 WB
R/L STH 29 EB
STH 29 EB

1256WB 1258WB 1260WB 1262WB 1264WB 1266WB 1268WB 1270WB
1256EB 1258EB 1260EB 1262EB 1264EB 1266EB 1268EB 1270EB

3'
12'
12'
3'
12'
12'
8'

R/L STH 107 SE RAMP
342SE
344SE
346SE
348SE
350SE
338SE
336SE
STH 107 SE RAMP
15'
6'
4'

SPECTRUM
TELEPHONE (UG)

ATC ELECTRICITY OH

EXISTING R/W

WPS GAS

3.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH 4 SMA 58-28 H
2.00-INCH 4 HT 58-28 S

1.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH HMA PAVEMENT 4LT 58-28 S OVERLAY

ATC ELECTRICITY OH

1.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH HMA PAVEMENT 4LT 58-28 S OVERLAY

LEGEND

BG 08	ANCHOR POST ASSEMBLY TOP MOUNT
BG 09	MGS GUARDRAIL HS
BG 10	MGS THRIE BEAM TRANSITION
BG 11	MGS GUARDRAIL
BG 12	MGS GUARDRAIL TERMINAL EAT
BG 13	MGS TYPE 2 TERMINAL
CG30	CONCRETE CURB & GUTTER 30" TYPE A
CG18	CONCRETE CURB & GUTTER 18" TYPE A
CMT1	CONCRETE MEDIAN SLOPED NOSE TYPE 1
CP24	CONCRETE SURFACE DRAINS
	HIGH FRICTION SURFACE TREATMENT
	ASPHALTIC SURFACE FOR CULVERT PIPE REPLACEMENT
	INLET REPLACEMENT

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	PLAN SHEETS	SHEET 183	E

FILE NAME : C:\CADDLIB\PW\HNTB_APACADA\GREATLAKES\D0382806\050201-PN.DWG
LAYOUT NAME - 050208pn
PLOT DATE : 1/10/2025 6:07 PM PLOT BY : ALLAN PACADA PLOT NAME : PLOT SCALE : 1 IN:100 FT

N

TELEPHONE?

EXISTING R/W

VILLAGE OF MARATHON COUNTY WATER STORM SEWER

VILLAGE OF MARATHON COUNTY WATER

BEGIN HIGH FRICTION
SURFACE TREATMENT
STA 1278WB+70

WPS ELECTRICITY

3.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH 4 SMA 58-28 H
2.00-INCH 4 HT 58-28 S

5

S.T.H. 29

1270WB 1272WB 1274WB 1276WB 1278WB 1280WB 1282WB 1284WB

R/L STH 29 WB

STH 29 WB

8' 12' 12' 3'

1270EB 1272EB 1274EB 1276EB 1278EB 1280EB 1282EB 1284EB

R/L STH 29 EB

S.T.H. 29

STH 29 EB

352SE 354SE

R/L STH 107 SE RAMP

ATC ELECTRICITY OH

12' 12' 10' 3'

BEGIN HIGH FRICTION
SURFACE TREATMENT
STA 1278EB+70

1.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH HMA PAVEMENT 4LT 58-28 S OVERLAY

ATC ELECTRICITY OH

WPS GAS

EXISTING R/W

3.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH 4 SMA 58-28 H
2.00-INCH 4 HT 58-28 S

END CONSTRUCTION
STA 354SE+51
MATCH EXISTING
SAW CUT REQ'D

LEGEND

BG 08	ANCHOR POST ASSEMBLY TOP MOUNT
BG 09	MGS GUARDRAIL HS
BG 10	MGS THRIE BEAM TRANSITION
BG 11	MGS GUARDRAIL
BG 12	MGS GUARDRAIL TERMINAL EAT
BG 13	MGS TYPE 2 TERMINAL
CG30	CONCRETE CURB & GUTTER 30" TYPE A
CG18	CONCRETE CURB & GUTTER 18" TYPE A
CMT1	CONCRETE MEDIAN SLOPED NOSE TYPE 1
CP24	CONCRETE SURFACE DRAINS
	HIGH FRICTION SURFACE TREATMENT
	ASPHALTIC SURFACE FOR CULVERT PIPE REPLACEMENT
	INLET REPLACEMENT

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	PLAN SHEETS	SHEET 184	E

FILE NAME : C:\CADDLIB\PW\HNTB_APACADA\GREATLAKES\D0382806\050201-PN.DWG
LAYOUT NAME - 050209pn

PLOT DATE : 1/10/2025 6:08 PM PLOT BY : ALLAN PACADA PLOT NAME : PLOT SCALE : 1 IN:100 FT

N

SPECTRUM COMMUNICATION

1.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH HMA PAVEMENT 4LT 58-28 S OVERLAY

TELEPHONE

FIBER OPTIC

SPECTRUM COMMUNICATION

SPECTRUM COMMUNICATION FO

EXISTING R/W

3.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH 4 SMA 58-28 H
2.00-INCH 4 HT 58-28 S

MARATHON WATER
MARATHON SEWER

SPECTRUM COMMUNICATION FO

R/L STH 29 WB

STH 29 WB

STH 29 EB

R/L STH 29 EB

ATC ELECTRICITY OH

ATC ELECTRICITY OH

154TH AVE

WPS GAS

WPS GAS

SPECTRUM COMMUNICATION OH

EXISTING R/W

3.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH 4 SMA 58-28 H
2.00-INCH 4 HT 58-28 S

152ND AVE

WPS ELECTRICITY (UG)

LEGEND

BG 08	ANCHOR POST ASSEMBLY TOP MOUNT
BG 09	MGS GUARDRAIL HS
BG 10	MGS THRIE BEAM TRANSITION
BG 11	MGS GUARDRAIL
BG 12	MGS GUARDRAIL TERMINAL EAT
BG 13	MGS TYPE 2 TERMINAL
CG30	CONCRETE CURB & GUTTER 30" TYPE A
CG18	CONCRETE CURB & GUTTER 18" TYPE A
CMT1	CONCRETE MEDIAN SLOPED NOSE TYPE 1
CP24	CONCRETE SURFACE DRAINS
	HIGH FRICTION SURFACE TREATMENT
	ASPHALTIC SURFACE FOR CULVERT PIPE REPLACEMENT
	INLET REPLACEMENT

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	PLAN SHEETS	SHEET 185 E

FILE NAME : C:\CADDLIB\PW\HNTB_APACADA\GREATLAKES\D0382806\050201-PN.DWG
LAYOUT NAME - 050210pn

PLOT DATE : 1/10/2025 6:09 PM PLOT BY : ALLAN PACADA PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

N

1.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH HMA PAVEMENT 4LT 58-28 S OVERLAY

WPS GAS

WPS ELECTRICAL OH

SPECTRUM
COMMUNICATION OH

EXISTING R/W

3.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH 4 SMA 58-28 H
2.00-INCH 4 HT 58-28 S

R/L STH 29 WB

STH 29 WB

1301WB 1302WB 1304WB 1306WB 1308WB 1310WB 1312WB 1314WB

1300EB 1302EB 1304EB 1306EB 1308EB 1310EB 1312EB 1314EB

12' 12' 12' 7'

STH 29 EB

7' 12' 12' 12'

ATC ELECTRICITY OH

R/L STH 29 EB

WPS GAS

ATC ELECTRICITY OH

SPECTRUM
COMMUNICATION

3.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH 4 SMA 58-28 H
2.00-INCH 4 HT 58-28 S

EXISTING R/W

5 5

LEGEND

BG 08	ANCHOR POST ASSEMBLY TOP MOUNT
BG 09	MGS GUARDRAIL HS
BG 10	MGS THRIE BEAM TRANSITION
BG 11	MGS GUARDRAIL
BG 12	MGS GUARDRAIL TERMINAL EAT
BG 13	MGS TYPE 2 TERMINAL
CG30	CONCRETE CURB & GUTTER 30" TYPE A
CG18	CONCRETE CURB & GUTTER 18" TYPE A
CMT1	CONCRETE MEDIAN SLOPED NOSE TYPE 1
CP24	CONCRETE SURFACE DRAINS
	HIGH FRICTION SURFACE TREATMENT
	ASPHALTIC SURFACE FOR CULVERT PIPE REPLACEMENT
	INLET REPLACEMENT

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	PLAN SHEETS	SHEET 186	E

N

WPS ELECTRICAL UG

EXISTING R/W

1.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH HMA PAVEMENT 4LT 58-28 S OVERLAY

3.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH 4 SMA 58-28 H
2.00-INCH 4 HT 58-28 S

R/L STH 29 WB

STH 29 WB

STH 29 EB

R/L STH 29 EB

ATC ELECTRICITY OH

WPS ELECTRICAL UG

ATC ELECTRICITY OH

WPS GAS

EXISTING R/W

3.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH 4 SMA 58-28 H
2.00-INCH 4 HT 58-28 S

144TH AVE

CRITTER CV

SEPTIC

RUINS

SIGN

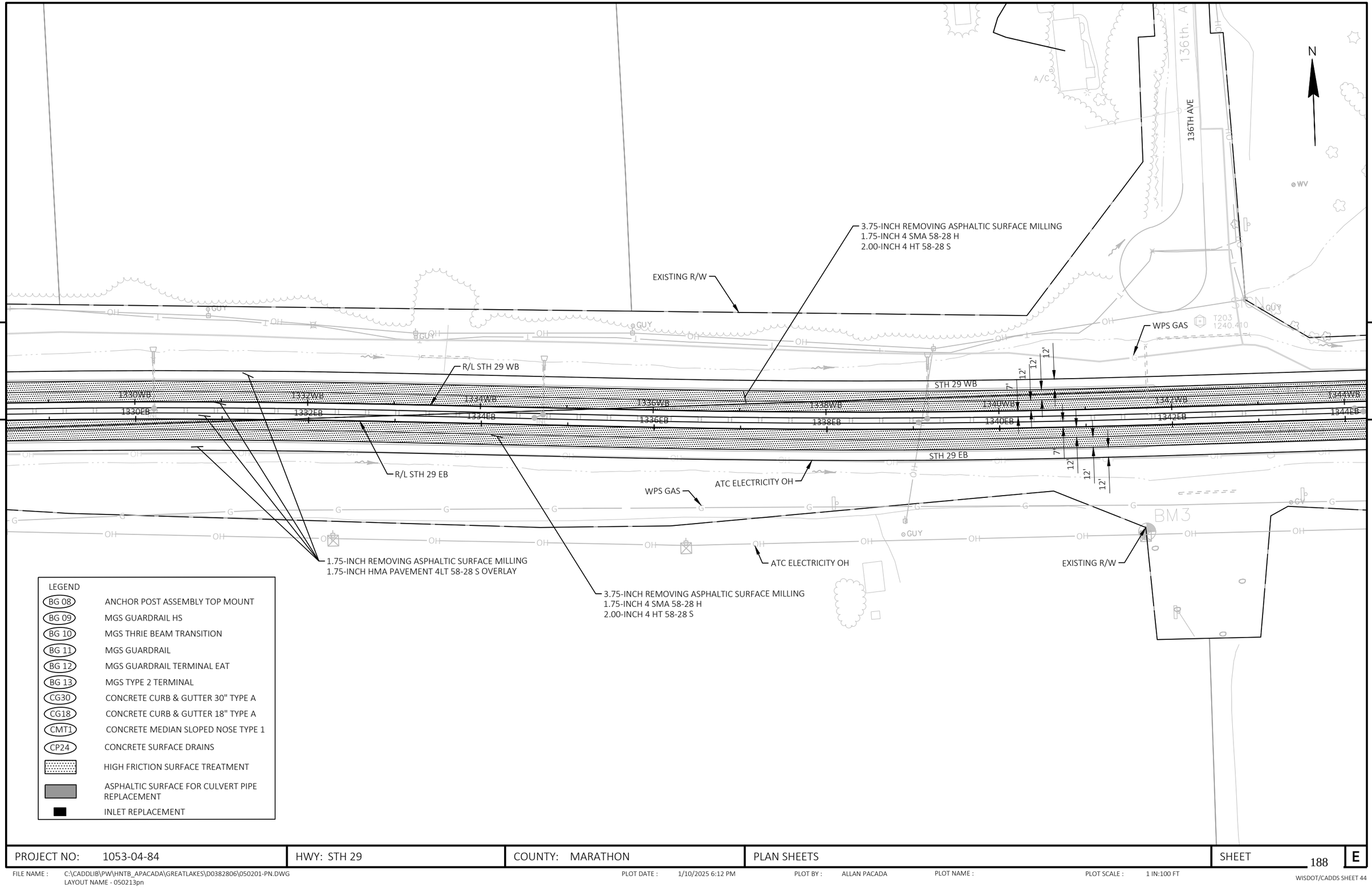
LEGEND

BG 08	ANCHOR POST ASSEMBLY TOP MOUNT
BG 09	MGS GUARDRAIL HS
BG 10	MGS THRIE BEAM TRANSITION
BG 11	MGS GUARDRAIL
BG 12	MGS GUARDRAIL TERMINAL EAT
BG 13	MGS TYPE 2 TERMINAL
CG30	CONCRETE CURB & GUTTER 30" TYPE A
CG18	CONCRETE CURB & GUTTER 18" TYPE A
CMT1	CONCRETE MEDIAN SLOPED NOSE TYPE 1
CP24	CONCRETE SURFACE DRAINS
	HIGH FRICTION SURFACE TREATMENT
	ASPHALTIC SURFACE FOR CULVERT PIPE REPLACEMENT
	INLET REPLACEMENT

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	PLAN SHEETS	SHEET 187	E

FILE NAME : C:\CADDLIB\PW\HNTB_APACADA\GREATLAKES\D0382806\050201-PN.DWG
LAYOUT NAME - 050212pn

PLOT DATE : 1/10/2025 6:11 PM PLOT BY : ALLAN PACADA PLOT NAME : PLOT SCALE : 1 IN:100 FT

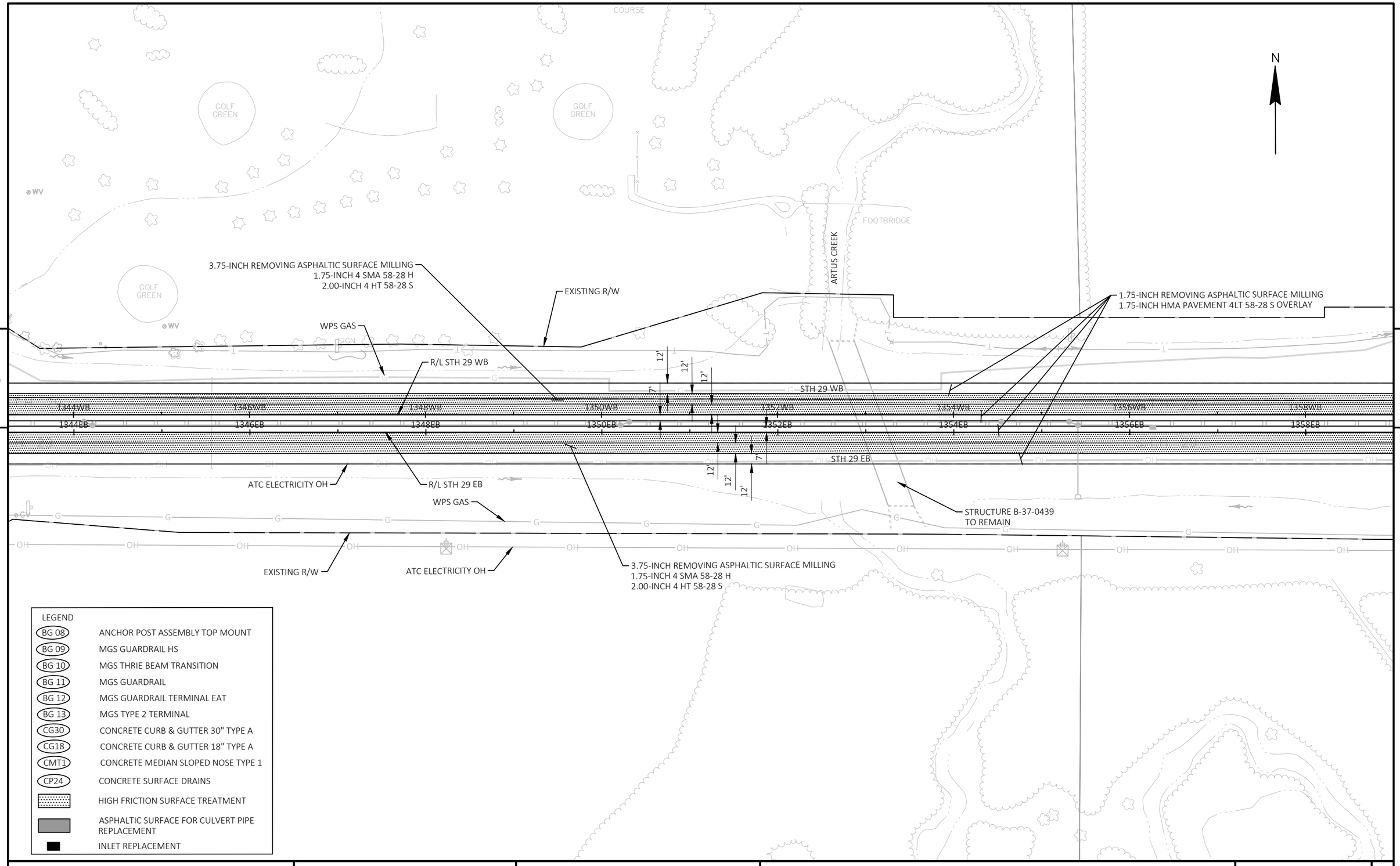


5 5

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	PLAN SHEETS	SHEET 188	E

FILE NAME : C:\CADDLIB\PW\HNTB_APACADA\GREATLAKES\D0382806\050201-PN.DWG
LAYOUT NAME - 050213pn

PLOT DATE : 1/10/2025 6:12 PM PLOT BY : ALLAN PACADA PLOT NAME : PLOT SCALE : 1 IN:100 FT



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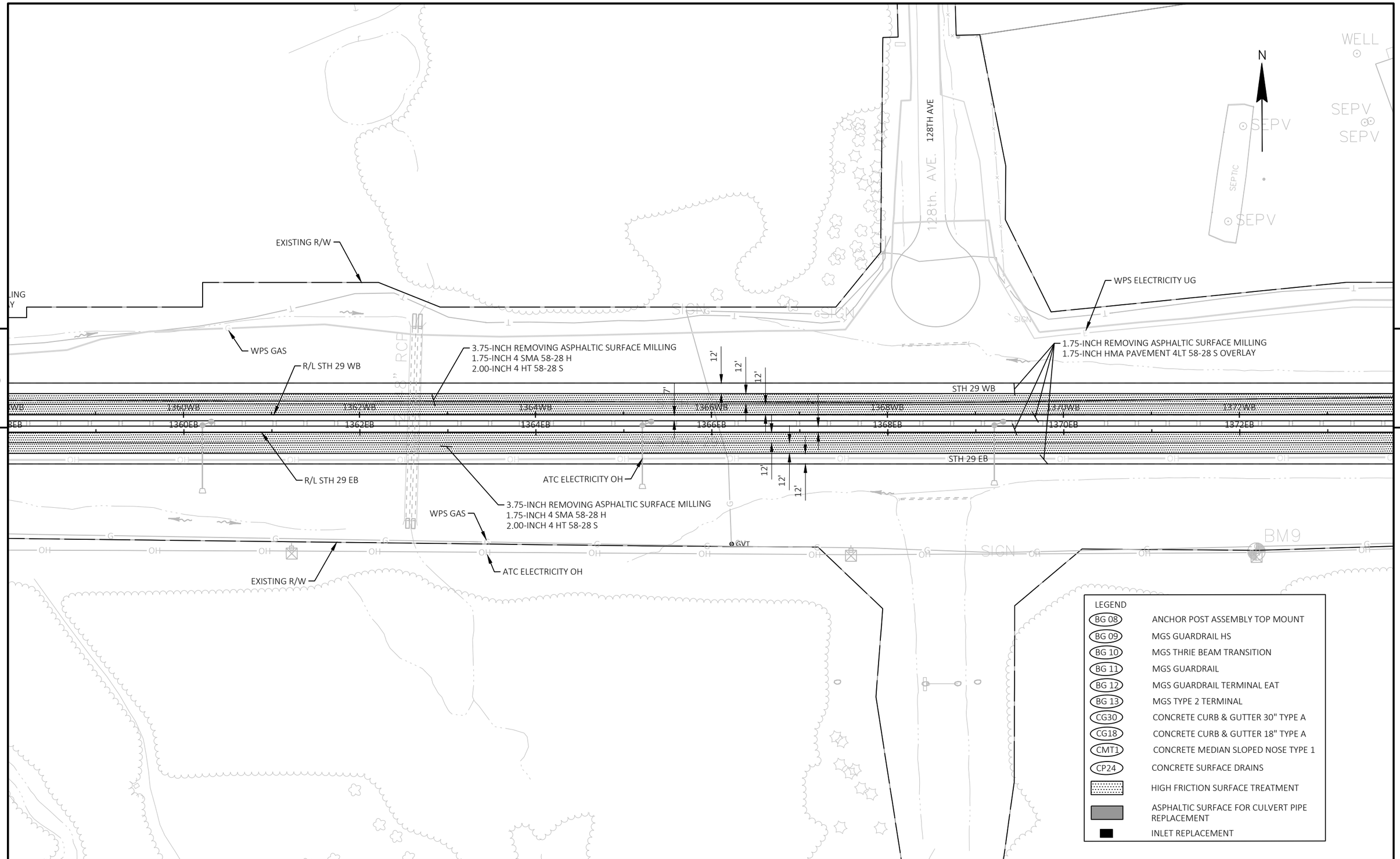
5

LEGEND

BG 08	ANCHOR POST ASSEMBLY TOP MOUNT
BG 09	MGS GUARDRAIL HS
BG 10	MGS THRIE BEAM TRANSITION
BG 11	MGS GUARDRAIL
BG 12	MGS GUARDRAIL TERMINAL EAT
BG 13	MGS TYPE 2 TERMINAL
CG30	CONCRETE CURB & GUTTER 30" TYPE A
CG18	CONCRETE CURB & GUTTER 18" TYPE A
CMT1	CONCRETE MEDIAN SLOPED NOSE TYPE 1
CP24	CONCRETE SURFACE DRAINS
	HIGH FRICTION SURFACE TREATMENT
	ASPHALTIC SURFACE FOR CULVERT PIPE REPLACEMENT
	INLET REPLACEMENT

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	PLAN SHEETS	SHEET 189	E



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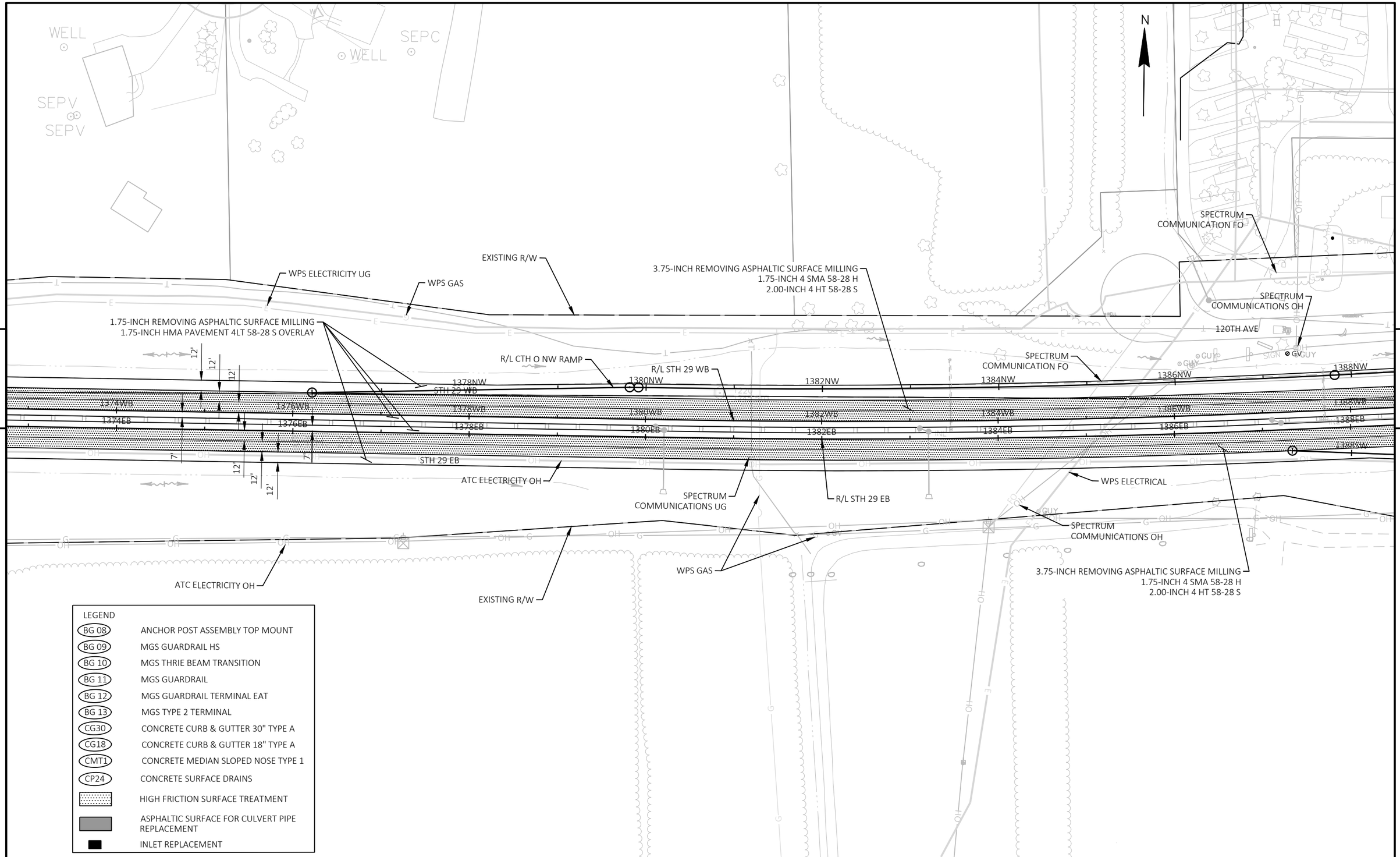
5

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	PLAN SHEETS	SHEET 190	E

FILE NAME : C:\CADDLIB\PW\HNTB_APACADA\GREATLAKES\D0382806\050201-PN.DWG
LAYOUT NAME - 050215pn

PLOT DATE : 1/10/2025 6:15 PM PLOT BY : ALLAN PACADA PLOT NAME : PLOT SCALE : 1 IN:100 FT

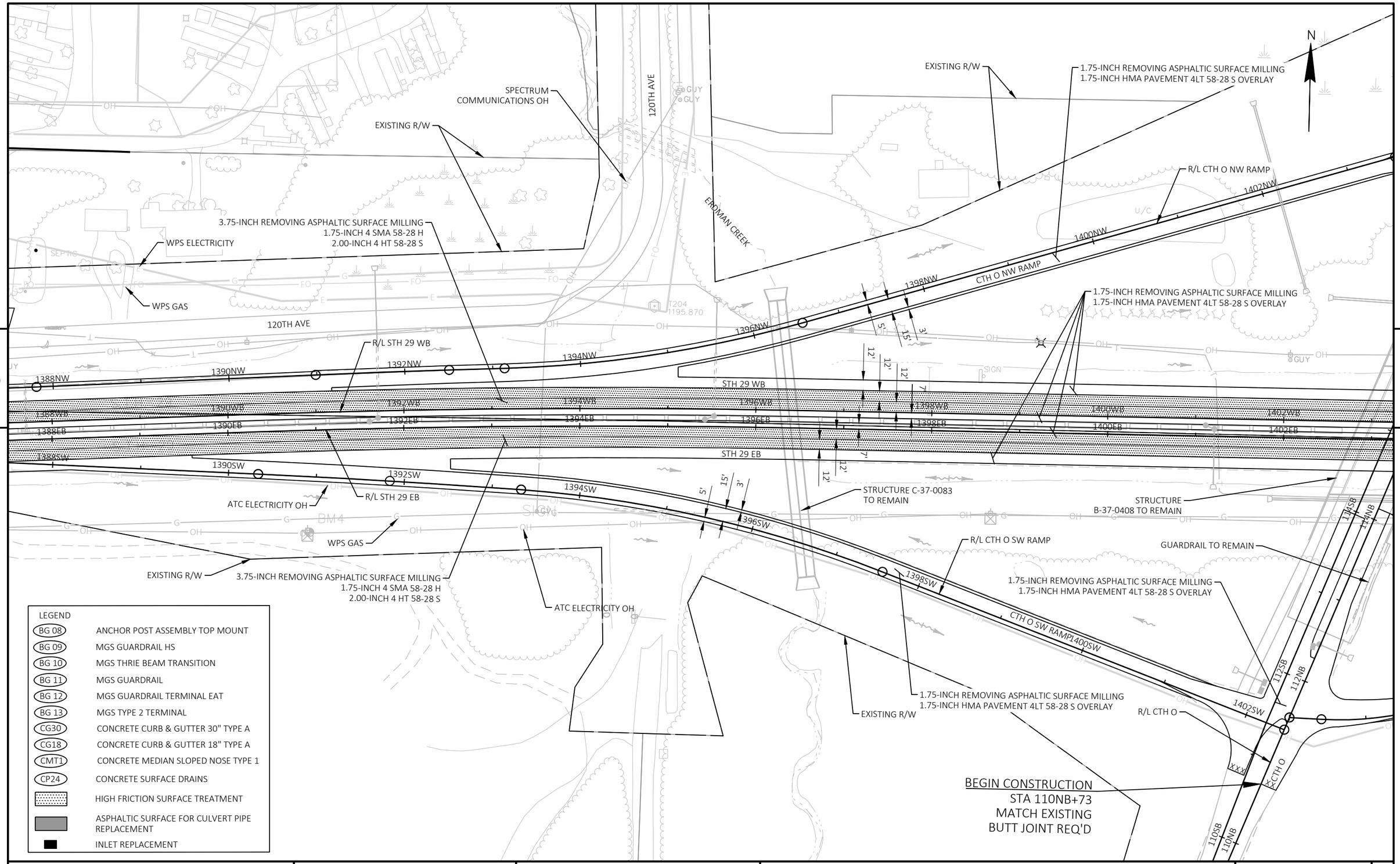


PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	PLAN SHEETS	SHEET 191	E

FILE NAME : C:\CADDLIB\PW\HNTB_APACADA\GREATLAKES\D0382806\050201-PN.DWG
LAYOUT NAME - 050216pn

PLOT DATE : 1/10/2025 6:16 PM PLOT BY : ALLAN PACADA PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44



PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	PLAN SHEETS	SHEET 192	E

FILE NAME : C:\CADDLIB\PW\HNTB_APACADA\GREATLAKES\D0382806\050201-PN.DWG
LAYOUT NAME - 050217pn

PLOT DATE : 1/10/2025 6:17 PM PLOT BY : ALLAN PACADA PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

END CONSTRUCTION
STA 119NB+59
MATCH EXISTING
BUTT JOINT REQ'D

120SB
120NB
XXX
XXX
1404NW
1406NE
R/L CTH O NE RAMP
CTH O NE RAMP
1408NE
EXISTING R/W
3'
15'
5'
1410NE
1412NE
1414NE
1416NE
1418NE
118SB
118NB
R/L CTH O
GUARDRAIL TO REMAIN
14'
26'
CTH O
1.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH HMA PAVEMENT 4LT 58-28 S OVERLAY
GUARDRAIL TO REMAIN
BEGIN CONSTRUCTION
STA 116NB+13
MATCH EXISTING
BUTT JOINT REQUIRED
116SB
116NB
STRUCTURE B-37-0408
TO REMAIN
1.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH HMA PAVEMENT 4LT 58-28 S OVERLAY
12'
12'
12'
12'
7'
12'
12'
GUY
3.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH 4 SMA 58-28 H
2.00-INCH 4 HT 58-28 S
R/L STH 29 WB
STH 29 WB
STH 29 EB
R/L STH 29 EB
1404WB
1406WB
1408WB
1410WB
1412WB
1414WB
1416WB
1404EB
1406EB
1408EB
1410EB
1412EB
1414EB
1416EB
1414SE
1416SE
1418SE
1412SE
1410SE
WPS GAS
SIGN
ATC ELECTRICITY OH
3.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH 4 SMA 58-28 H
2.00-INCH 4 HT 58-28 S
114SB
114NB
END CONSTRUCTION
STA 114NB+13
MATCH EXISTING
BUTT JOINT REQUIRED
1408SE
3'
15'
5'
1406SE
1404SE
TH O SE RAMP
R/L CTH O SE RAMP
EXISTING R/W
ATC ELECTRICITY OH
BIG RIB RIVER
1.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH HMA PAVEMENT 4LT 58-28 S OVERLAY
N

LEGEND

BG 08	ANCHOR POST ASSEMBLY TOP MOUNT
BG 09	MGS GUARDRAIL HS
BG 10	MGS THRIE BEAM TRANSITION
BG 11	MGS GUARDRAIL
BG 12	MGS GUARDRAIL TERMINAL EAT
BG 13	MGS TYPE 2 TERMINAL
CG30	CONCRETE CURB & GUTTER 30" TYPE A
CG18	CONCRETE CURB & GUTTER 18" TYPE A
CMT1	CONCRETE MEDIAN SLOPED NOSE TYPE 1
CP24	CONCRETE SURFACE DRAINS
	HIGH FRICTION SURFACE TREATMENT
	ASPHALTIC SURFACE FOR CULVERT PIPE REPLACEMENT
	INLET REPLACEMENT

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	PLAN SHEETS	SHEET 193	E

FILE NAME : C:\CADDLIB\PW\HNTB_APACADA\GREATLAKES\D0382806\050201-PN.DWG
LAYOUT NAME - 050218pn

PLOT DATE : 1/10/2025 6:18 PM PLOT BY : ALLAN PACADA PLOT NAME : PLOT SCALE : 1 IN:100 FT

N

EXISTING R/W

1.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH HMA PAVEMENT 4LT 58-28 S OVERLAY

3.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH 4 SMA 58-28 H
2.00-INCH 4 HT 58-28 S

EXISTING R/W

5

5

1418NE
1420NE

1418WB 1420WB 1422WB 1424WB 1426WB 1428WB 1430WB 1432WB

1418EB 1420EB 1422EB 1424EB 1426EB 1428EB 1430EB 1432EB

R/L STH 29 WB

STH 29 WB

STH 29 EB

R/L STH 29 EB

12' 12' 12' 7'

12' 12' 12' 7'

1418SE 1420SE 1422SE 1424SE

ATC ELECTRICITY OH

WPS GAS

ATC ELECTRICITY OH

BM10

SIGN

3.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH 4 SMA 58-28 H
2.00-INCH 4 HT 58-28 S

EXISTING R/W

EXISTING R/W

LEGEND

BG 08	ANCHOR POST ASSEMBLY TOP MOUNT
BG 09	MGS GUARDRAIL HS
BG 10	MGS THRIE BEAM TRANSITION
BG 11	MGS GUARDRAIL
BG 12	MGS GUARDRAIL TERMINAL EAT
BG 13	MGS TYPE 2 TERMINAL
CG30	CONCRETE CURB & GUTTER 30" TYPE A
CG18	CONCRETE CURB & GUTTER 18" TYPE A
CMT1	CONCRETE MEDIAN SLOPED NOSE TYPE 1
CP24	CONCRETE SURFACE DRAINS
	HIGH FRICTION SURFACE TREATMENT
	ASPHALTIC SURFACE FOR CULVERT PIPE REPLACEMENT
	INLET REPLACEMENT

N

3.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH 4 SMA 58-28 H
2.00-INCH 4 HT 58-28 S

EXISTING R/W

SPECTRUM COMMUNICATION FO

WPS GAS

CHICKEN LN

1.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH HMA PAVEMENT 4LT 58-28 S OVERLAY

5

5

R/L STH 29 WB

STH 29 WB

12'

12'

12'

7'

1432WB 1434WB 1436WB 1438WB 1440WB 1442WB 1444WB 1446WB

1432EB 1434EB 1436EB 1438EB 1440EB 1442EB 1444EB 1446EB

7'

STH 29 EB

12'

12'

12'

WPS GAS

R/L STH 29 EB

SPECTRUM COMMUNICATIONS OH

ATC ELECTRICITY OH

EXISTING R/W

ATC ELECTRICITY OH

3.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH 4 SMA 58-28 H
2.00-INCH 4 HT 58-28 S

ELECTRICAL STATION?

EXISTING R/W

WPS ELECTRICAL

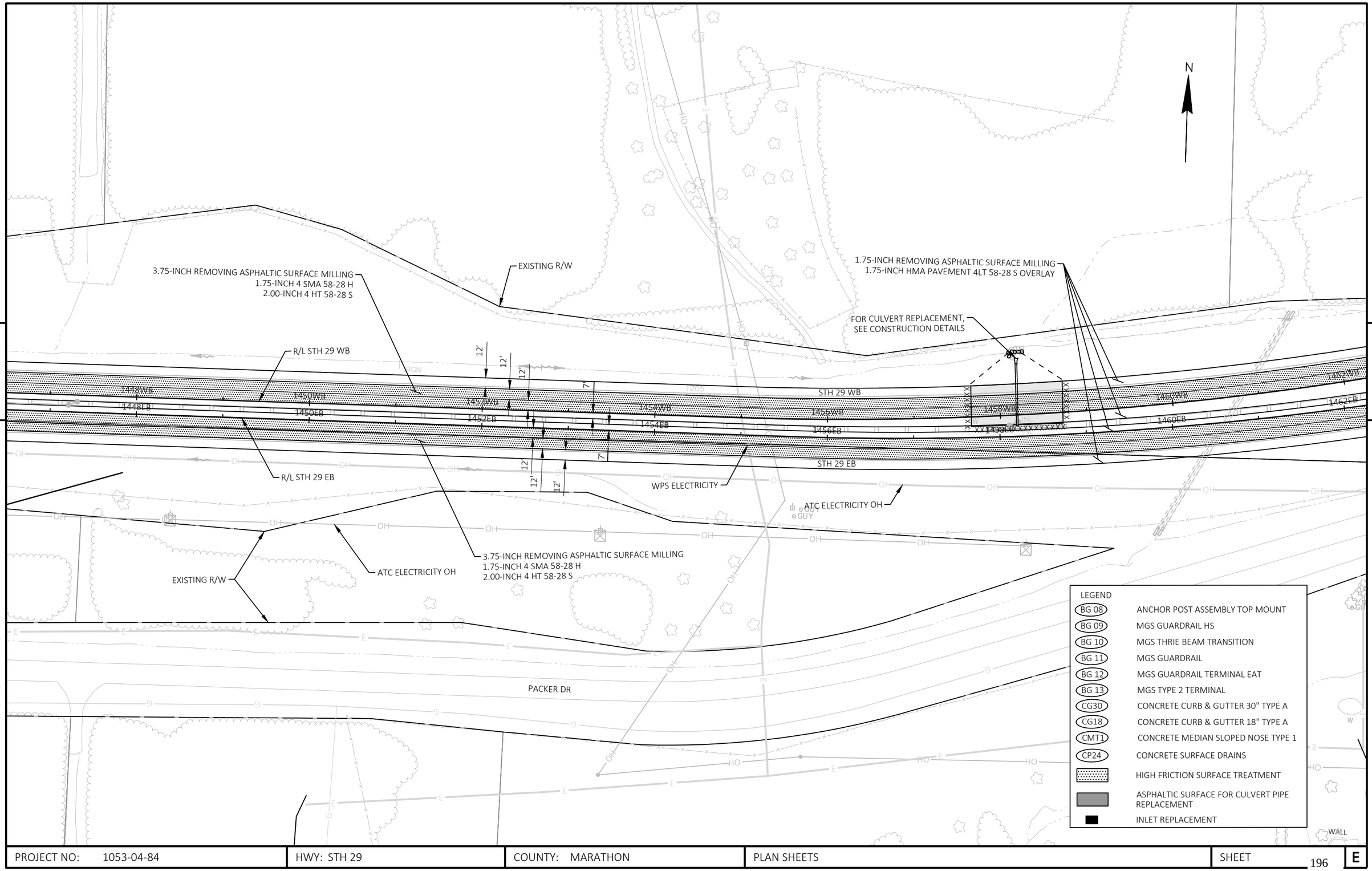
PACKER DR

WPS GAS

LEGEND

BG 08	ANCHOR POST ASSEMBLY TOP MOUNT
BG 09	MGS GUARDRAIL HS
BG 10	MGS THRIE BEAM TRANSITION
BG 11	MGS GUARDRAIL
BG 12	MGS GUARDRAIL TERMINAL EAT
BG 13	MGS TYPE 2 TERMINAL
CG30	CONCRETE CURB & GUTTER 30" TYPE A
CG18	CONCRETE CURB & GUTTER 18" TYPE A
CMT1	CONCRETE MEDIAN SLOPED NOSE TYPE 1
CP24	CONCRETE SURFACE DRAINS
	HIGH FRICTION SURFACE TREATMENT
	ASPHALTIC SURFACE FOR CULVERT PIPE REPLACEMENT
	INLET REPLACEMENT

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	PLAN SHEETS	SHEET 195	E



PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	PLAN SHEETS	SHEET 196	E

FILE NAME : C:\CADDLIB\PW\HNTB_APACADA\GREATLAKES\D0382806\050201-PN.DWG
LAYOUT NAME - 050221pn

PLOT DATE : 1/10/2025 6:21 PM PLOT BY : ALLAN PACADA PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

1.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH HMA PAVEMENT 4LT 58-28 S OVERLAY

EXISTING R/W

3.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH 4 SMA 58-28 H
2.00-INCH 4 HT 58-28 S

END HIGH FRICTION
SURFACE TREATMENT
STA 1471WB+57

R/L STH 29 WB

1462WB
1462EB
1464WB
1464EB
1466EB
1468WB
1468EB
1470WB
1470EB
1472WB
1472EB
1474WB
1474EB
1476WB
1476EB
STH 29 WB
STH 29 EB
STH 29

12'
12'
3'
8'
3'
12'
12'
8'

R/L STH 29 EB

END HIGH FRICTION
SURFACE TREATMENT
STA 1471EB+70

ATC ELECTRICITY OH

PACKER DR

WPS ELECTRICITY

3.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH 4 SMA 58-28 H
2.00-INCH 4 HT 58-28 S

EXISTING R/W

V206
1222.91

1231
1222.260

SIGN

LEGEND

BG 08	ANCHOR POST ASSEMBLY TOP MOUNT
BG 09	MGS GUARDRAIL HS
BG 10	MGS THRIE BEAM TRANSITION
BG 11	MGS GUARDRAIL
BG 12	MGS GUARDRAIL TERMINAL EAT
BG 13	MGS TYPE 2 TERMINAL
CG30	CONCRETE CURB & GUTTER 30" TYPE A
CG18	CONCRETE CURB & GUTTER 18" TYPE A
CMT1	CONCRETE MEDIAN SLOPED NOSE TYPE 1
CP24	CONCRETE SURFACE DRAINS
	HIGH FRICTION SURFACE TREATMENT
	ASPHALTIC SURFACE FOR CULVERT PIPE REPLACEMENT
	INLET REPLACEMENT

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	PLAN SHEETS	SHEET 197 E

FILE NAME : C:\CADDLIB\PW\HNTB_APACADA\GREATLAKES\D0382806\050201-PN.DWG
LAYOUT NAME - 050222pn

PLOT DATE : 1/10/2025 6:21 PM PLOT BY : ALLAN PACADA PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

1.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH HMA PAVEMENT 4LT 58-28 S OVERLAY

EXISTING R/W

SLOPE INTERCEPT

EXISTING SIGN
STRUCTURE TO REMAIN

3.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH 4 SMA 58-28 H
2.00-INCH 4 HT 58-28 S

EXISTING R/W

R/L STH 29 WB

GUARDRAIL TO REMAIN

STH 29 WB

1476WB 1478WB 1480WB 1482WB 1484WB 1486WB 1488WB 1490WB

1478EB 1480EB 1482EB 1484EB 1486EB 1488EB 1490EB

+65.61 +15.60
-8.43' LT -6.45' LT

+90.61
-7.45' LT

10'
4'
12'
12'
4'
8'
12'
12'

STH 29

STH 29 EB

BG12 BG11 BG13

R/L STH 29 EB

EXISTING R/W

3.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH 4 SMA 58-28 H
2.00-INCH 4 HT 58-28 S

ATC ELECTRICITY OH

TANKS

WALLS

LEGEND

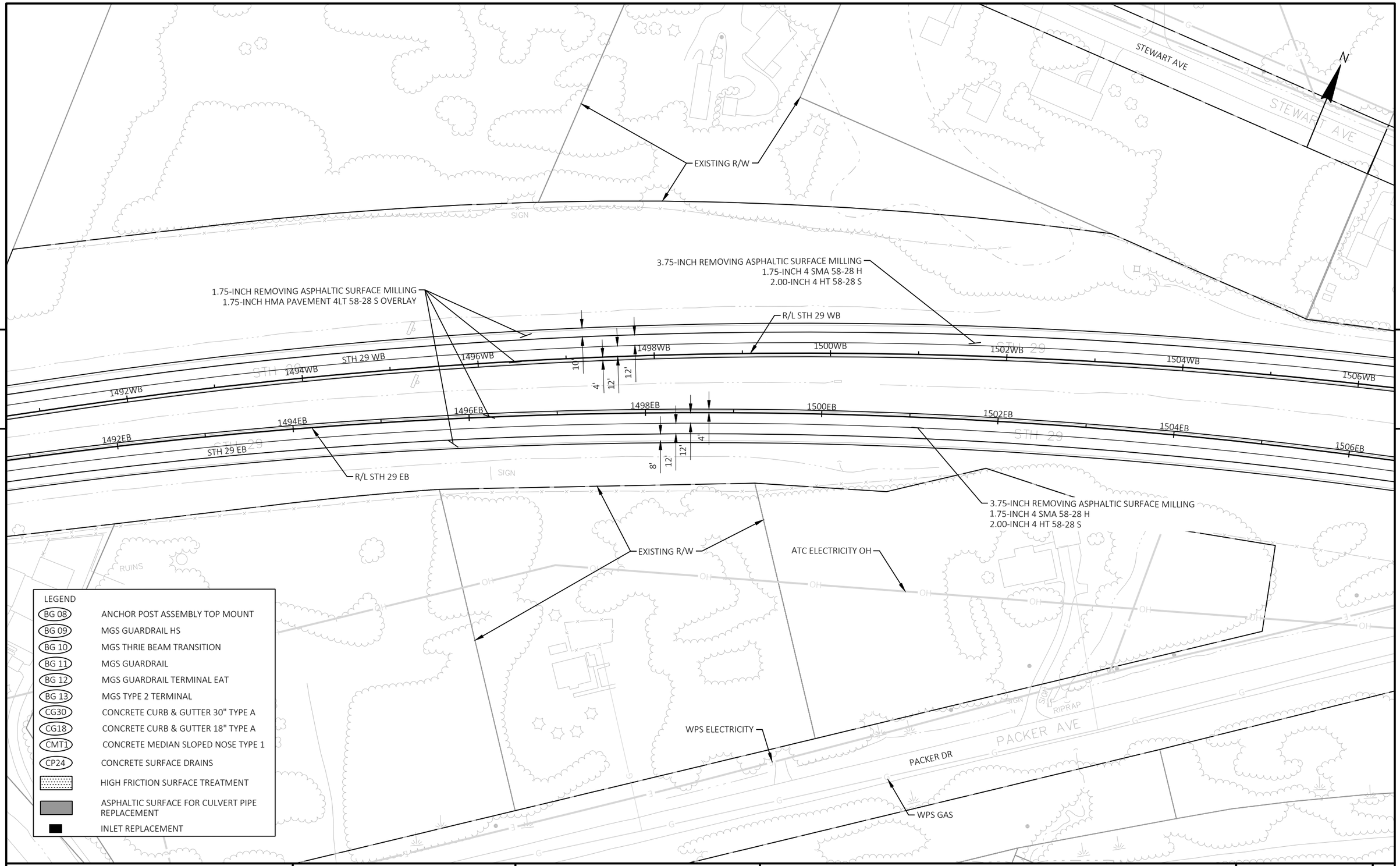
BG 08	ANCHOR POST ASSEMBLY TOP MOUNT
BG 09	MGS GUARDRAIL HS
BG 10	MGS THRIE BEAM TRANSITION
BG 11	MGS GUARDRAIL
BG 12	MGS GUARDRAIL TERMINAL EAT
BG 13	MGS TYPE 2 TERMINAL
CG30	CONCRETE CURB & GUTTER 30" TYPE A
CG18	CONCRETE CURB & GUTTER 18" TYPE A
CMT1	CONCRETE MEDIAN SLOPED NOSE TYPE 1
CP24	CONCRETE SURFACE DRAINS
	HIGH FRICTION SURFACE TREATMENT
	ASPHALTIC SURFACE FOR CULVERT PIPE REPLACEMENT
	INLET REPLACEMENT

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	PLAN SHEETS	SHEET 198 E

FILE NAME : C:\CADDLIB\PW\HNTB_APACADA\GREATLAKES\D0382806\050201-PN.DWG
LAYOUT NAME - 050223pn

PLOT DATE : 1/10/2025 6:22 PM PLOT BY : ALLAN PACADA PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44



5 5

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	PLAN SHEETS	SHEET 199	E

FILE NAME : C:\CADDLIB\PW\HNTB_APACADA\GREATLAKES\D0382806\050201-PN.DWG
LAYOUT NAME - 050224pn

PLOT DATE : 1/10/2025 6:22 PM PLOT BY : ALLAN PACADA PLOT NAME : PLOT SCALE : 1 IN:100 FT

WPS ELECTRICITY (UG)
WPS GAS
EXISTING R/W
3.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH 4 SMA 58-28 H
2.00-INCH 4 HT 58-28 S
SPECTRUM
COMMUNICATION FO
84TH AVE
N
STEWART AVE
STEWART AVE
1.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH HMA PAVEMENT 4LT 58-28 S OVERLAY
R/L STH 29 WB
STH 29 WB
1506WB
1508WB
1510WB
1512WB
1514WB
1516WB
1518WB
1520WB
12'
12'
4'
8'
5
5
1506EB
1508EB
1510EB
1512EB
1514EB
1516EB
1518EB
1520EB
WPS GAS
STH 29 EB
4'
8'
12'
12'
R/L STH 29 EB
3.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH 4 SMA 58-28 H
2.00-INCH 4 HT 58-28 S
WPS ELECTRICITY (UG)
ATC ELECTRICITY OH
PACKER AVE
PACKER DR
WPS GAS
EXISTING R/W

LEGEND

BG 08	ANCHOR POST ASSEMBLY TOP MOUNT
BG 09	MGS GUARDRAIL HS
BG 10	MGS THRIE BEAM TRANSITION
BG 11	MGS GUARDRAIL
BG 12	MGS GUARDRAIL TERMINAL EAT
BG 13	MGS TYPE 2 TERMINAL
CG30	CONCRETE CURB & GUTTER 30" TYPE A
CG18	CONCRETE CURB & GUTTER 18" TYPE A
CMT1	CONCRETE MEDIAN SLOPED NOSE TYPE 1
CP24	CONCRETE SURFACE DRAINS
	HIGH FRICTION SURFACE TREATMENT
	ASPHALTIC SURFACE FOR CULVERT PIPE REPLACEMENT
	INLET REPLACEMENT

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	PLAN SHEETS	SHEET 200	E

STEWART AVE

80TH AVE

N

EXISTING R/W

1.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH HMA PAVEMENT 4LT 58-28 S OVERLAY

3.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH 4 SMA 58-28 H
2.00-INCH 4 HT 58-28 S

EXISTING CROSSOVER
TO REMAIN (NO WORK)

STH 29 WB

1522WB 1524WB 1526WB 1528WB 1530WB 1532WB 1534WB

3' 12' 12' 10'

R/L STH 29 WB

3.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH 4 SMA 58-28 H
2.00-INCH 4 HT 58-28 S

1522EB 1524EB 1526EB 1528EB 1530EB 1532EB 1534EB

STH 29 EB

3' 12' 12' 4'

R/L STH 29 EB

WPS ELECTRICITY (UG)

WPS GAS

PACKER AVE

PACKER DR

EXISTING R/W

ATC ELECTRICITY OH

RUINS

LEGEND

BG 08	ANCHOR POST ASSEMBLY TOP MOUNT
BG 09	MGS GUARDRAIL HS
BG 10	MGS THRIE BEAM TRANSITION
BG 11	MGS GUARDRAIL
BG 12	MGS GUARDRAIL TERMINAL EAT
BG 13	MGS TYPE 2 TERMINAL
CG30	CONCRETE CURB & GUTTER 30" TYPE A
CG18	CONCRETE CURB & GUTTER 18" TYPE A
CMT1	CONCRETE MEDIAN SLOPED NOSE TYPE 1
CP24	CONCRETE SURFACE DRAINS
	HIGH FRICTION SURFACE TREATMENT
	ASPHALTIC SURFACE FOR CULVERT PIPE REPLACEMENT
	INLET REPLACEMENT

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	PLAN SHEETS	SHEET 201	E

FILE NAME : C:\CADDLIB\PW\HNTB_APACADA\GREATLAKES\D0382806\050201-PN.DWG
LAYOUT NAME - 050226pn

PLOT DATE : 1/10/2025 6:24 PM PLOT BY : ALLAN PACADA PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

80TH AVE

77TH AVE

80TH AVE

WPS ELECTRICITY (UG)

SPECTRUM COMMUNICATION FO

1.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH HMA PAVEMENT 4LT 58-28 S OVERLAY

EXISTING R/W

1.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH HMA PAVEMENT 4LT 58-28 S OVERLAY

R/L 72ND AVE NW RAMP

72ND AVE NW RAMP

R/L STH 29 WB

STH 29 WB

STH 29

1536NW 1538NW 1540NW 1542NW 1544NW 1546NW 1548NW 1550NW

1536WB 1538WB 1540WB 1542WB 1544WB 1546WB 1548WB 1550WB

10' 4' 12' 12' 15'

3.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH 4 SMA 58-28 H
2.00-INCH 4 HT 58-28 S

1536EB 1538EB 1540EB 1542EB 1544EB 1546EB 1548EB 1550EB

STH 29

STH 29 EB

R/L STH 29 EB

10' 12' 12' 4'

3.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH 4 SMA 58-28 H
2.00-INCH 4 HT 58-28 S

1544SW 1546SW 1548SW 1550SW

72ND AVE SW RAMP

15' 5'

R/L 72ND AVE SW RAMP

WPS GAS

WPS ELECTRICITY (UG)

BOMBARDIER CT

1.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH HMA PAVEMENT 4LT 58-28 S OVERLAY

EXISTING R/W

PACKER DR

PACKER AVE

BOMBARDIER CT

ATC ELECTRICITY OH

LEGEND

BG 08	ANCHOR POST ASSEMBLY TOP MOUNT
BG 09	MGS GUARDRAIL HS
BG 10	MGS THRIE BEAM TRANSITION
BG 11	MGS GUARDRAIL
BG 12	MGS GUARDRAIL TERMINAL EAT
BG 13	MGS TYPE 2 TERMINAL
CG30	CONCRETE CURB & GUTTER 30" TYPE A
CG18	CONCRETE CURB & GUTTER 18" TYPE A
CMT1	CONCRETE MEDIAN SLOPED NOSE TYPE 1
CP24	CONCRETE SURFACE DRAINS
	HIGH FRICTION SURFACE TREATMENT
	ASPHALTIC SURFACE FOR CULVERT PIPE REPLACEMENT
	INLET REPLACEMENT

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	PLAN SHEETS	SHEET 202 E

FILE NAME : C:\CADDLIB\PW\HNTB_APACADA\GREATLAKES\D0382806\050201-PN.DWG
LAYOUT NAME - 050227pn

PLOT DATE : 1/10/2025 6:24 PM PLOT BY : ALLAN PACADA PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

1.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH HMA PAVEMENT 4LT 58-28 S OVERLAY

3.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH 4 SMA 58-28 H
2.00-INCH 4 HT 58-28 S

1.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH HMA PAVEMENT 4LT 58-28 S OVERLAY

+66
0.00'

END CONSTRUCTION
STA 214+27
MATCH EXISTING
BUTT JOINT REQ'D

EXISTING R/W

SLOPE INTERCEPT

1.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH HMA PAVEMENT 4LT 58-28 S OVERLAY

EVERSTREAM
COMMUNICATIONS

EXISTING R/W

R/L 72ND AVE NW RAMP

EXISTING R/W

1550NW
1552NW
1554NW
1556NW
1558NW
1560NE
1562NE
1564NE

72ND AVE NW RAMP

72ND AVE NE RAMP

+15.32
35.56' LT
+38.32
35.54' LT
+65.32
34.34' LT

+81.82
44.38' LT
+92.33
33.28' LT
+52.14
15.78' LT
+06.17
15.74' LT

+45
0.83' RT

BEGIN CONSTRUCTION
STA 1559WB+45
MATCH EXISTING
BUTT JOINT REQ'D

END CONSTRUCTION
STA 1558WB+16
MATCH EXISTING
BUTT JOINT REQ'D

GUARDRAIL
TO REMAIN

R/L 72ND AVE NE RAMP

STH 29 WB

1550WB
1552WB
1554WB
1556WB
1558WB
1560WB
1562WB
1564WB

STA 1558WB+16

STRUCTURE B-37-0131 TO REMAIN

STA 1559WB+45

GUARDRAIL TO REMAIN

+73.77
9.73' LT
+98.77
8.62' LT
+23.76
7.51' LT
+14.46
7.05' RT
+39.46
8.15' RT
+64.46
9.17' RT

SLOPE INTERCEPT

R/L STH 29 WB

1550EB
1552EB
1554EB
1556EB
1558EB
1560EB
1562EB
1564EB

STH 29 EB

STA 1559EB+23

1.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH HMA PAVEMENT 4LT 58-28 S OVERLAY

R/L STH 29 EB

SLOPE INTERCEPT

+14.21
35.66' RT
+39.20
34.65' RT
+89.20
36.66' RT

3.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH 4 SMA 58-28 H
2.00-INCH 4 HT 58-28 S

STA 1557EB+94

END CONSTRUCTION
STA 1557EB+94
MATCH EXISTING
BUTT JOINT REQ'D

+68
9.73' RT
+70
0.89' RT
+63
20.46' RT
+64
11.62' RT

BEGIN CONSTRUCTION
STA 1559EB+23
MATCH EXISTING
BUTT JOINT REQ'D

STRUCTURE B-37-0121
TO REMAIN

1550SW
72ND AVE SW RAMP
1552SW
1554SW
1556SW
1558SW
1560SE
1562SE
1564SE
1566S

GUARDRAIL
TO REMAIN

R/L 72ND AVE SW RAMP

EXISTING R/W

R/L 72ND AVE

1.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH HMA PAVEMENT 4LT 58-28 S OVERLAY

72ND AVE SE RAMP

1558SE

R/L 72ND AVE SE RAMP

1.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH HMA PAVEMENT 4LT 58-28 S OVERLAY

BEGIN CONSTRUCTION
STA 204+60
MATCH EXISTING
BUTT JOINT REQ'D

EXISTING R/W

+06
20.60' RT

*SEE BEAM GUARD POST
ANCHOR LAYOUT SHEET FOR
MORE DETAILS

LEGEND

BG 08	ANCHOR POST ASSEMBLY TOP MOUNT
BG 09	MGS GUARDRAIL HS
BG 10	MGS THRIE BEAM TRANSITION
BG 11	MGS GUARDRAIL
BG 12	MGS GUARDRAIL TERMINAL EAT
BG 13	MGS TYPE 2 TERMINAL
CG30	CONCRETE CURB & GUTTER 30" TYPE A
CG18	CONCRETE CURB & GUTTER 18" TYPE A
CMT1	CONCRETE MEDIAN SLOPED NOSE TYPE 1
CP24	CONCRETE SURFACE DRAINS
	HIGH FRICTION SURFACE TREATMENT
	ASPHALTIC SURFACE FOR CULVERT PIPE REPLACEMENT
	INLET REPLACEMENT

LEGEND

E — EXISTING UTILITIES SHOWN IN BOLD WERE NOT MARKED AND ARE APPROXIMATE LOCATIONS BASED ON SYSTEM MAPS

E — EXISTING UTILITIES SHOWN IN GRAY SCALE WERE SURVEYED BASED ON FIELD MARKINGS

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	PLAN SHEETS	SHEET 203	E

FILE NAME : C:\CADDLIB\PW\HNTB_APACADA\GREATLAKES\D0382806\050201-PN.DWG
LAYOUT NAME - 050228pn

PLOT DATE : 1/10/2025 6:25 PM PLOT BY : ALLAN PACADA PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

STEWART AVE

BUG TUSSEL COMMUNICATIONS

N

EVERSTREAM COMMUNICATIONS

1.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH HMA PAVEMENT 4LT 58-28 S OVERLAY

R/L 72ND AVE NE RAMP

3.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH 4 SMA 58-28 H
2.00-INCH 4 HT 58-28 S

EXISTING R/W

1.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH HMA PAVEMENT 4LT 58-28 S OVERLAY

FOR CULVERT REPLACEMENT,
SEE CONSTRUCTION DETAILS

WPS GAS

1566NE 1568NE 1570NE 1572NE 1574NE

15' 5' 3'

72ND AVE NE RAMP

STH 29 WB

1566WB 1568WB 1570WB 1572WB 1574WB 1576WB 1578WB 1580WB

R/L STH 29 WB

12' 12' 3' 10'

WPS ELECTRICAL

WAUSAU WATER

WAUSAU SEWER

R/L STH 29 EB

1566EB 1568EB 1570EB 1572EB 1574EB 1576EB 1578EB 1580EB

STH 29 EB

1566SE 1568SE 1570SE 1572SE 1574SE 1576SE 1578SE 1580SE

72ND AVE SE RAMP

15' 5'

R/L 72ND AVE SE RAMP

12' 4'

5'

1.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH HMA PAVEMENT 4LT 58-28 S OVERLAY

1.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH HMA PAVEMENT 4LT 58-28 S OVERLAY

3.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH 4 SMA 58-28 H
2.00-INCH 4 HT 58-28 S

SPECTRUM
COMMUNICATION FO

EXISTING R/W

EXISTING R/W

LEGEND

BG 08	ANCHOR POST ASSEMBLY TOP MOUNT
BG 09	MGS GUARDRAIL HS
BG 10	MGS THRIE BEAM TRANSITION
BG 11	MGS GUARDRAIL
BG 12	MGS GUARDRAIL TERMINAL EAT
BG 13	MGS TYPE 2 TERMINAL
CG30	CONCRETE CURB & GUTTER 30" TYPE A
CG18	CONCRETE CURB & GUTTER 18" TYPE A
CMT1	CONCRETE MEDIAN SLOPED NOSE TYPE 1
CP24	CONCRETE SURFACE DRAINS
	HIGH FRICTION SURFACE TREATMENT
	ASPHALTIC SURFACE FOR CULVERT PIPE REPLACEMENT
	INLET REPLACEMENT

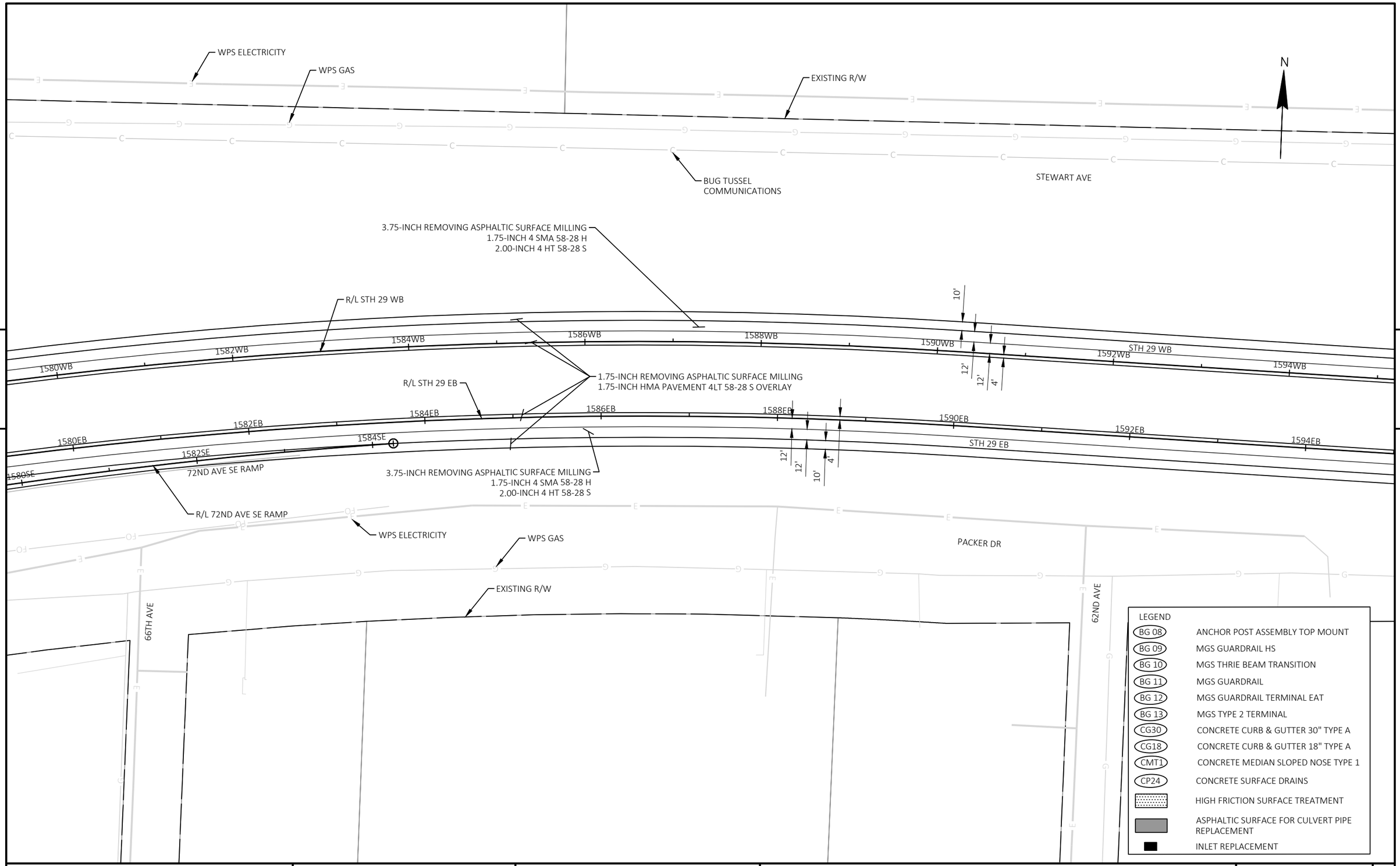
5

5

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	PLAN SHEETS	SHEET 204	E

FILE NAME : C:\CADDLIB\PW\HNTB_APACADA\GREATLAKES\D0382806\050201-PN.DWG
LAYOUT NAME - 050229pn

PLOT DATE : 1/10/2025 6:26 PM PLOT BY : ALLAN PACADA PLOT NAME : PLOT SCALE : 1 IN:100 FT



5

5

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	PLAN SHEETS	SHEET 205	E

FILE NAME : C:\CADDLIB\PW\HNTB_APACADA\GREATLAKES\D0382806\050201-PN.DWG
LAYOUT NAME - 050230pn

PLOT DATE : 1/10/2025 6:26 PM PLOT BY : ALLAN PACADA PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

N

STEWART AVE

EXISTING R/W

3.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH 4 SMA 58-28 H
2.00-INCH 4 HT 58-28 S

EXISTING CROSSOVER
TO REMAIN (NO WORK)

R/L STH 29 WB

STH 29 WB

1596WB 1598WB 1600WB 1602WB 1604WB 1606WB 1608WB 161

12' 10' 12' 4'

1.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH HMA PAVEMENT 4LT 58-28 S OVERLAY

5

5

4EB 1596EB 1598EB 1600EB 1602EB 1604EB 1606EB 1608EB

STH 29 EB

WPS ELECTRICITY

WPS GAS

R/L STH 29 EB

10' 12' 12' 4'

3.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH 4 SMA 58-28 H
2.00-INCH 4 HT 58-28 S

PACKER DR

60TH AVE

EXISTING R/W

LEGEND

BG 08	ANCHOR POST ASSEMBLY TOP MOUNT
BG 09	MGS GUARDRAIL HS
BG 10	MGS THRIE BEAM TRANSITION
BG 11	MGS GUARDRAIL
BG 12	MGS GUARDRAIL TERMINAL EAT
BG 13	MGS TYPE 2 TERMINAL
CG30	CONCRETE CURB & GUTTER 30" TYPE A
CG18	CONCRETE CURB & GUTTER 18" TYPE A
CMT1	CONCRETE MEDIAN SLOPED NOSE TYPE 1
CP24	CONCRETE SURFACE DRAINS
	HIGH FRICTION SURFACE TREATMENT
	ASPHALTIC SURFACE FOR CULVERT PIPE REPLACEMENT
	INLET REPLACEMENT

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	PLAN SHEETS	SHEET 206	E

STEWART AVE

N

1.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH HMA PAVEMENT 4LT 58-28 S OVERLAY

EXISTING R/W

3.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH 4 SMA 58-28 H
2.00-INCH 4 HT 58-28 S

R/L STH 29 WB

STH 29 WB

10'
12'
4'

1610WB 1612WB 1614WB 1616WB 1618WB 1620WB 1622WB 1624WB

5

WPS ELECTRICITY

SLOPE INTERCEPT

BG12 +78.24 7.43' LT +03.24 6.50' LT

BG11 +28.24 5.56' LT

BG13 +49.06 -5.40' LT

12'
12'
4'
12'

1610EB 1612EB 1614EB 1616EB 1618EB 1620EB 1622EB 1624EB

STH 29 EB

10'

R/L STH 29 EB

3.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH 4 SMA 58-28 H
2.00-INCH 4 HT 58-28 S

56TH AVE

PACKER DR

54TH AVE

WPS GAS

WPS ELECTRICITY

EXISTING R/W

LEGEND

BG 08	ANCHOR POST ASSEMBLY TOP MOUNT
BG 09	MGS GUARDRAIL HS
BG 10	MGS THRIE BEAM TRANSITION
BG 11	MGS GUARDRAIL
BG 12	MGS GUARDRAIL TERMINAL EAT
BG 13	MGS TYPE 2 TERMINAL
CG30	CONCRETE CURB & GUTTER 30" TYPE A
CG18	CONCRETE CURB & GUTTER 18" TYPE A
CMT1	CONCRETE MEDIAN SLOPED NOSE TYPE 1
CP24	CONCRETE SURFACE DRAINS
	HIGH FRICTION SURFACE TREATMENT
	ASPHALTIC SURFACE FOR CULVERT PIPE REPLACEMENT
	INLET REPLACEMENT

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	PLAN SHEETS	SHEET 207	E

STEWART AVE

N

BEGIN CONSTRUCTION
STA 1638WB+40
MATCH EXISTING
BUTT JOINT REQ'D

EXISTING R/W

1.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH HMA PAVEMENT 4LT 58-28 S OVERLAY

FOR CULVERT REPLACEMENT,
SEE CONSTRUCTION DETAILS

STRUCTURE B-37-0125
TO REMAIN

3.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH 4 SMA 58-28 H
2.00-INCH 4 HT 58-28 S

END CONSTRUCTION
STA 1636WB+93
MATCH EXISTING
BUTT JOINT REQ'D

12' 12' 10'

R/L STH 29 WB

STH 29 WB

1624WB 1626WB 1628WB 1630WB 1632WB 1634WB 1636WB 1638WB

4'

12' 4'

1624EB 1626EB 1628EB 1630EB 1632EB 1634EB 1636EB 1638EB

STH 29 EB

10' 12'

R/L STH 29 EB

SLOPE INTERCEPT

+76.30
9.02' LT

+81.30
-7.94' LT

+26.27
-6.87' LT

GUARDRAIL
TO REMAIN

BG11

48TH AVE

BG12

+89.53
35.95' RT

+14.53
35.00' RT

+39.53
34.06' RT

BG10

3.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH 4 SMA 58-28 H
2.00-INCH 4 HT 58-28 S

END CONSTRUCTION
STA 1637EB+13
MATCH EXISTING
BUTT JOINT REQ'D

PACKER DR

52ND AVE

WPS ELECTRICITY

STRUCTURE B-37-0123
TO REMAIN

EXISTING R/W

PACKER DR

LEGEND

BG 08	ANCHOR POST ASSEMBLY TOP MOUNT
BG 09	MGS GUARDRAIL HS
BG 10	MGS THRIE BEAM TRANSITION
BG 11	MGS GUARDRAIL
BG 12	MGS GUARDRAIL TERMINAL EAT
BG 13	MGS TYPE 2 TERMINAL
CG30	CONCRETE CURB & GUTTER 30" TYPE A
CG18	CONCRETE CURB & GUTTER 18" TYPE A
CMT1	CONCRETE MEDIAN SLOPED NOSE TYPE 1
CP24	CONCRETE SURFACE DRAINS
	HIGH FRICTION SURFACE TREATMENT
	ASPHALTIC SURFACE FOR CULVERT PIPE REPLACEMENT
	INLET REPLACEMENT

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	PLAN SHEETS	SHEET 208	E

FILE NAME : C:\CADDLIB\PW\HNTB_APACADA\GREATLAKES\D0382806\050201-PN.DWG
LAYOUT NAME - 050233pn

PLOT DATE : 1/10/2025 6:28 PM PLOT BY : ALLAN PACADA PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

END CONSTRUCTION
STA 1641WB+06
MATCH EXISTING
BUTT JOINT REQ'D

BEGIN CONSTRUCTION
STA 1642WB+94
MATCH EXISTING
BUTT JOINT REQ'D

SLOPE INTERCEPT

EXISTING R/W

3.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH 4 SMA 58-28 H
2.00-INCH 4 HT 58-28 S

STRUCTURE B-37-0122
TO REMAIN

BG10

BG11

+38.66
-34.48' LT
+35.65
-34.42' LT

+63.65
-35.25' LT

+88.65
-35.98' LT

SLOPE INTERCEPT

3'
12'
12'
10'

R/L STH 29 WB

STH 29 WB

1640WB
1642WB
1644WB
1646WB
1648WB
1650WB
1652WB
1654WB

5

5

LITTLE RIB RIVER

BG10

GUARDRAIL
TO REMAIN

BG12

4'
12'
12'

END CONSTRUCTION
STA 1653WB+64
MATCH EXISTING

1640EB
1642EB
1644EB
1646EB
1648EB
1650EB
1652EB

STH 29 EB

BG10
BG11
BG10

R/L STH 29 EB

END PROJECT
STA 1650EB+38
MATCH EXISTING

BEGIN CONSTRUCTION
STA 1642EB+96
MATCH EXISTING
BUTT JOINT REQ'D

10'

FOR CULVERT REPLACEMENT,
SEE CONSTRUCTION DETAILS

SLOPE INTERCEPT

END CONSTRUCTION
STA 1641EB+05
MATCH EXISTING
BUTT JOINT REQ'D

STRUCTURE B-37-0124
TO REMAIN

EXISTING R/W

3.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH 4 SMA 58-28 H
2.00-INCH 4 HT 58-28 S

1.75-INCH REMOVING ASPHALTIC SURFACE MILLING
1.75-INCH HMA PAVEMENT 4LT 58-28 S OVERLAY

BEGIN CONSTRUCTION
STA 1638EB+61
MATCH EXISTING
BUTT JOINT REQ'D

LEGEND

BG 08	ANCHOR POST ASSEMBLY TOP MOUNT
BG 09	MGS GUARDRAIL HS
BG 10	MGS THRIE BEAM TRANSITION
BG 11	MGS GUARDRAIL
BG 12	MGS GUARDRAIL TERMINAL EAT
BG 13	MGS TYPE 2 TERMINAL
CG30	CONCRETE CURB & GUTTER 30" TYPE A
CG18	CONCRETE CURB & GUTTER 18" TYPE A
CMT1	CONCRETE MEDIAN SLOPED NOSE TYPE 1
CP24	CONCRETE SURFACE DRAINS
	HIGH FRICTION SURFACE TREATMENT
	ASPHALTIC SURFACE FOR CULVERT PIPE REPLACEMENT
	INLET REPLACEMENT

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	PLAN SHEETS	SHEET 209	E

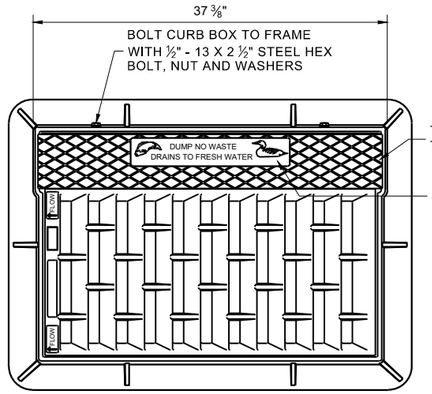
Standard Detail Drawing List

08A05-21A	INLET COVERS TYPE A, H, A-S, H-S & Z
08C07-03	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT, 2.5X3-FT & 2X3.5-FT
08D01-23A	CONCRETE CURB & GUTTER
08D01-23B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08E15-01	CULVERT PIPE CHECK
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F04-08	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
08F06-04	REINFORCED CONCRETE APRON ENDWALL FOR PIPE UNDERDRAIN
08F10-02	CONCRETE MASONRY ENDWALLS FOR CULVERT PIPE AND PIPE ARCH
13A05-06A	SHOULDER RUMBLE STRIPS, DIVIDED ROADWAY
13A05-06B	SHOULDER RUMBLE STRIPS, DIVIDED ROADWAY
13A10-03A	SHOULDER RUMBLE STRIPS - ASPHALT
13C14-07A	BASE PATCHING CONCRETE
13C14-07B	BASE PATCHING CONCRETE
13C14-07C	BASE PATCHING CONCRETE
13C19-03	HMA LONGITUDINAL JOINTS
14B07-16A	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16B	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16C	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16D	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16E	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16F	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16G	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16H	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16I	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16J	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16K	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16L	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16M	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16N	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
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)
14B47-05A	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-05B	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-05C	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-05D	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-05E	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-05F	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-05G	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B51-03B	ANCHOR POST ASSEMBLY TOP-MOUNTED
14B51-03C	ANCHOR POST ASSEMBLY TOP-MOUNTED
14B52-03A	CABLE BARRIER TYPE 1 LAYOUT
15A04-08C	DELINEATOR POST WITH REFLECTIVE SHEETING
15C02-09A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-09B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C02-09C	DETOUR SIGNING FOR MAINLINE CLOSURES

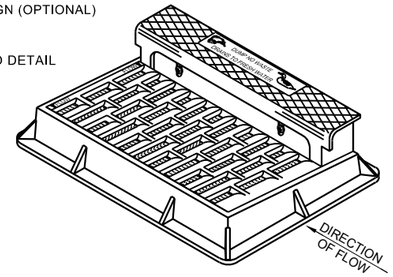
6

Standard Detail Drawing List

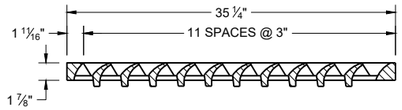
15C02-09D	ON RAMP LANE CLOSURE
15C02-09E	OFF RAMP LANE CLOSURE
15C02-09F	ADVANCED WIDTH RESTRICTION SIGNING
15C02-09G	TRAFFIC CONTROL FOR ENTRANCE RAMP CLOSURE
15C02-09H	MODIFIED ROUTE ASSEMBLY FOR DETOUR SIGNING
15C07-15A	PAVEMENT MARKING SYMBOLS
15C07-15B	PAVEMENT MARKING WORDS
15C07-15C	PAVEMENT MARKING ARROWS
15C08-23A	PERMANENT LONGITUDINAL PAVEMENT MARKINGS
15C11-10B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C12-09A	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15C12-09B	TRAFFIC CONTROL, LANE CLOSURE WITH AUTOMATED FLAGGER ASSISTANCE DEVICE
15C31-07A	PAVEMENT MARKING EXIT RAMP AND PARALLEL EXIT RAMP
15C31-07C	PAVEMENT MARKING ENTRANCE RAMP AND PARALLEL ENTRANCE RAMP
15C31-07D	PAVEMENT MARKING LANE DROP AND LANE REDUCTION
15D12-13B	TRAFFIC CONTROL, PARALLEL EXIT RAMP WITHIN LANE CLOSURE
15D15-07A	TRAFFIC CONTROL, PARALLEL ENTRANCE RAMP WITHIN LANE CLOSURE
15D15-07C	TRAFFIC CONTROL, TAPERED ENTRANCE RAMP WITHIN LANE CLOSURE
15D15-07D	TRAFFIC CONTROL, TAPERED ENTRANCE RAMP WITHIN LANE CLOSURE
15D15-07E	TRAFFIC CONTROL, PARALLEL EXIT RAMP WITHIN LANE CLOSURE
15D16-06	TRAFFIC CONTROL, EXIT RAMP CLOSURE
15D27-03	TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH
15D39-02	TRAFFIC CONTROL, DROP-OFF SIGNING
15D40-05D	TRAFFIC CONTROL, PARTIAL LANE SHIFT MULTILANE DIVIDED 50 MPH AND GREATER
15D43-02	TRAFFIC CONTROL, SHORT DURATION MOBILE OPERATIONS
15D44-02	TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH MILLED SURFACES

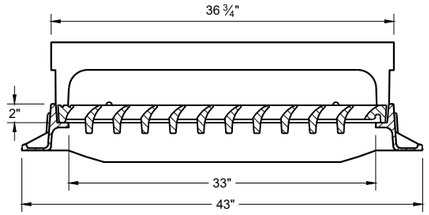


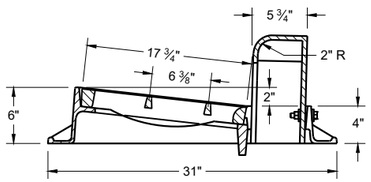
NOTE: EITHER CASTING IS ACCEPTABLE

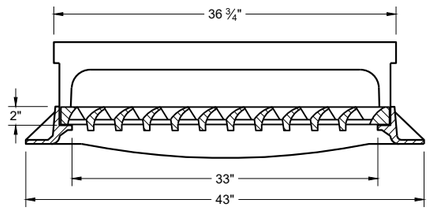


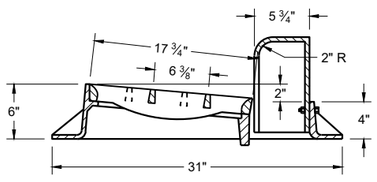
NOTE: CURB BOX HEIGHT ADJUSTABLE 6" - 9"







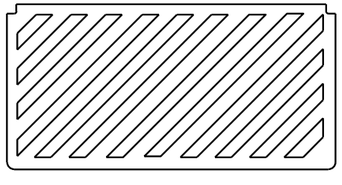




TYPE "H"

NOTE: EITHER CASTING IS ACCEPTABLE

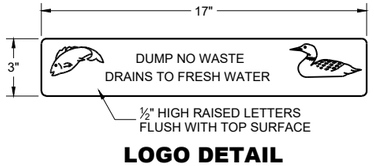
1 1/8" DIAGONAL BARS WITH 1 5/8" OPENINGS



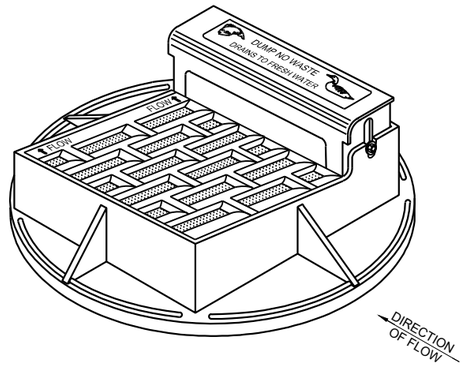
SPECIAL GRATE FOR TYPE "H" COVER

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

(NOTED AS TYPE H-S ON DRAINAGE TABLE)

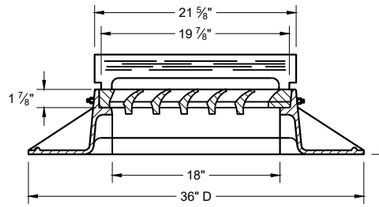


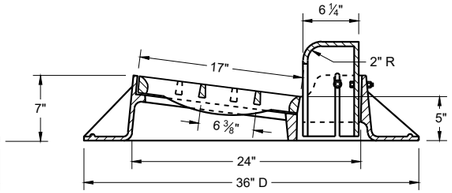
LOGO DETAIL



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" - 9"

NOTE: EITHER CASTING IS ACCEPTABLE





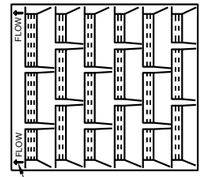
TYPE "A"

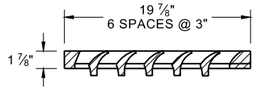
GENERAL NOTES

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.

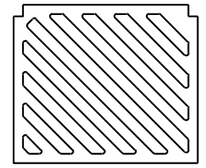
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

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





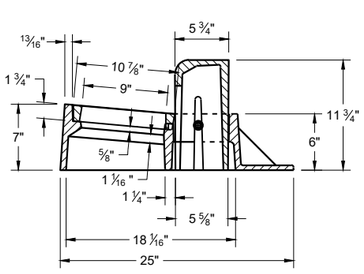
1" DIAGONAL BARS WITH 1 1/2" OPENINGS



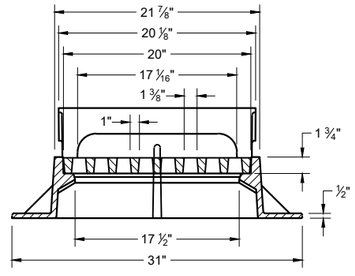
SPECIAL GRATE FOR TYPE "A" COVER

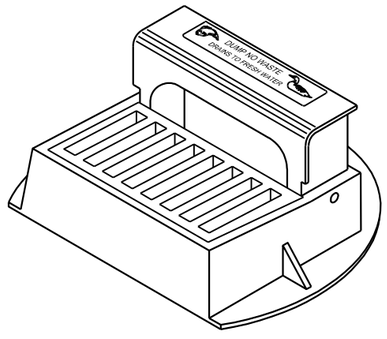
(MEASURES 19 3/4" X 17" X 1 7/8")

(NOTED AS TYPE A-S ON DRAINAGE TABLE)



TYPE "Z"





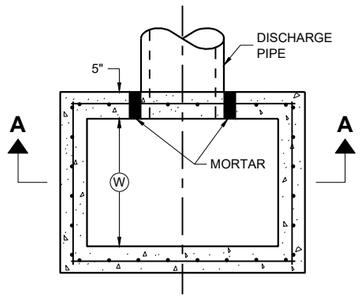
INLET COVERS
TYPES A, H, A-S, H-S AND Z

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

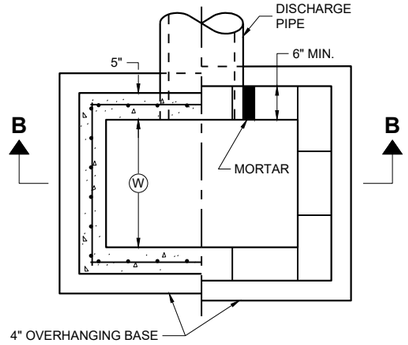
APPROVED
December 2023
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR

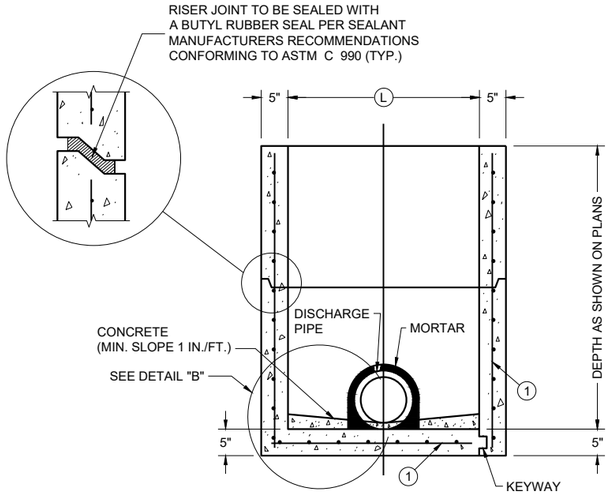
FHWA



PLAN VIEW



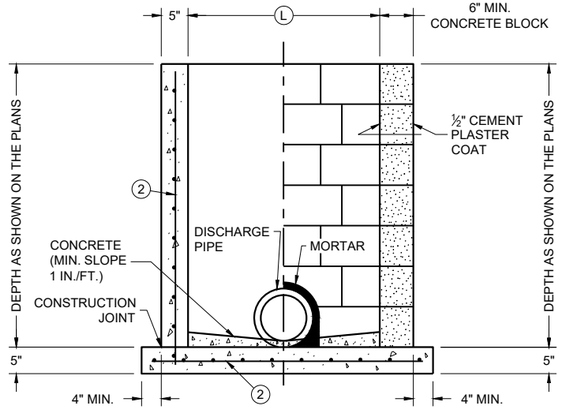
PLAN VIEW



PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE

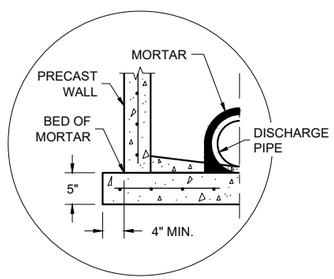
SECTION A - A



CAST IN PLACE REINFORCED CONCRETE

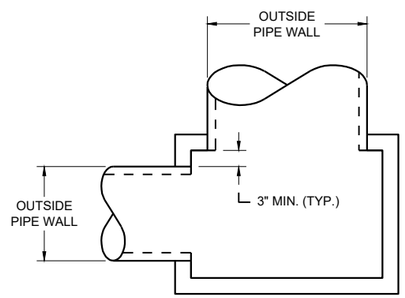
CONCRETE BLOCK WITH CAST IN PLACE OR PRECAST REINFORCED CONCRETE BASE (1)

SECTION B - B



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "B"



DETAIL "A"

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP N0T SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

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

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATES THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF FOUNDATION BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

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

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

4" OVERHANGING BASES ARE REQUIRED FOR CAST-IN-PLACE REINFORCED CONCRETE AND CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

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

(1) FOR PRECAST INLETS AND REINFORCED CONCRETE BASES PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913
(2) CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

CATCH BASIN COVER MATRIX

INLET SIZE	WIDTH (W) (FT.)	LENGTH (L) (FT.)	INLET COVER TYPE									
			ALL A'S	ALL B'S	BW	F	ALL H'S	S	T	V	WM	V V-B
2 X 2-FT	2	2	X	X				X				
2 X 2.5-FT	2	2.5			X			X	X	X	X	
2 X 3-FT	2	3					X					
2.5 X 3-FT	2.5	3				X						
2 X 3.5-FT	2	3.5										X

PIPE MATRIX

CATCH BASIN SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	WIDTH (IN)	LENGTH (IN)
2 X 2-FT	12	12
2 X 2.5-FT	12	18
2 X 3-FT	12	24
2.5 X 3-FT	18	24
2 X 3.5-FT	12	30

INLETS 2 X 2-FT, 2 X 2.5-FT, 2 X 3-FT, 2.5 X 3-FT AND 2X3.5-FT

INLETS 2 X 2-FT, 2 X 2.5-FT, 2 X 3-FT, 2.5 X 3-FT AND 2 X 3.5-FT

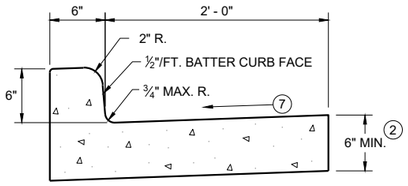
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
December 2023
DATE

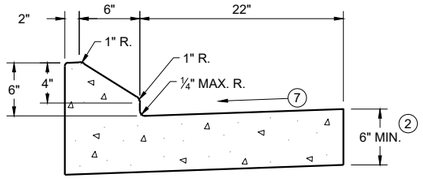
/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

FHWA

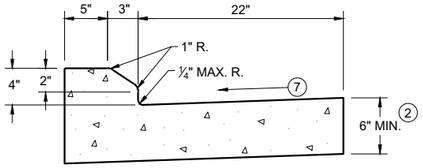
6
SDD 08C07-03



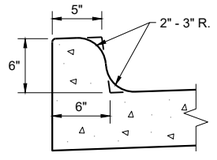
TYPES A (1) & D



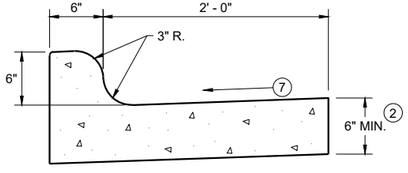
6" SLOPED CURB TYPES G (1) & J



4" SLOPED CURB TYPES G (1) & J

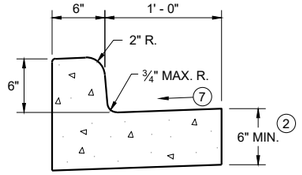


TYPES K (1) & L
(OPTIONAL CURB SHAPE)



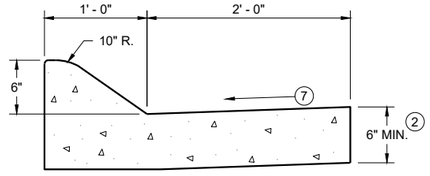
TYPES K (1) & L

CONCRETE CURB AND GUTTER 30"

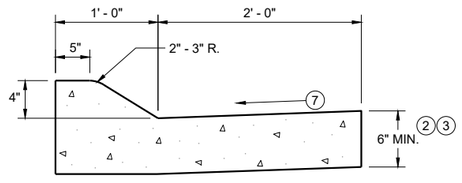


TYPES A (1) & D

CONCRETE CURB AND GUTTER 18"

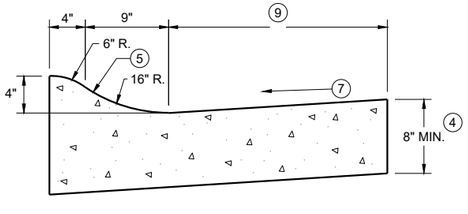


6" SLOPED CURB TYPES A (1) & D



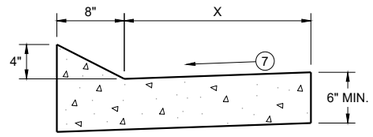
4" SLOPED CURB TYPES A (1) & D

CONCRETE CURB AND GUTTER 36"



4" SLOPED CURB TYPES R (1) & T

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

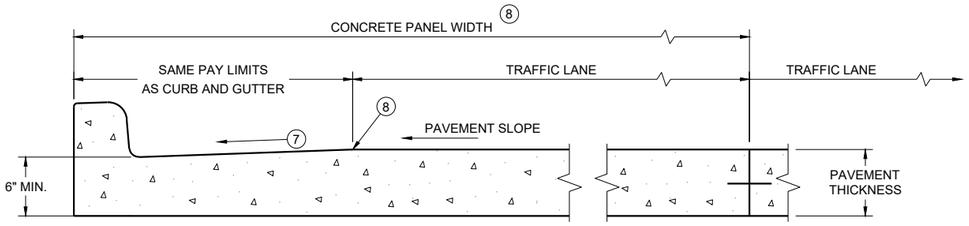


TYPES TBT & TBTT (1)

CONCRETE CURB AND GUTTER

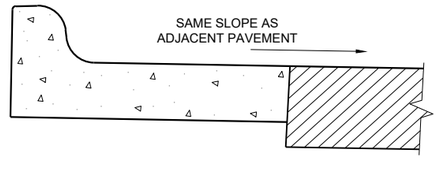
PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE

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



PARTIAL SECTION OF PAVEMENT * WITH INTEGRAL CURB AND GUTTER

* BIKE LANE IS NOT SHOWN



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

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

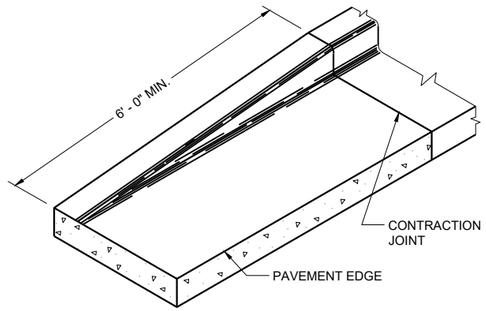
(8) INCLUDE LONGITUDINAL JOINT AND TIE BARS ALONG LANE EDGE WHEN CONCRETE PANEL WIDTH EXCEEDS THE MAXIMUM WIDTH PER TABLE BELOW. LONGITUDINAL JOINT(S) ARE NOT ALLOWED WITHIN TRAFFIC LANES AND BIKE LANES. LONGITUDINAL JOINT MAY BE SAWED.

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

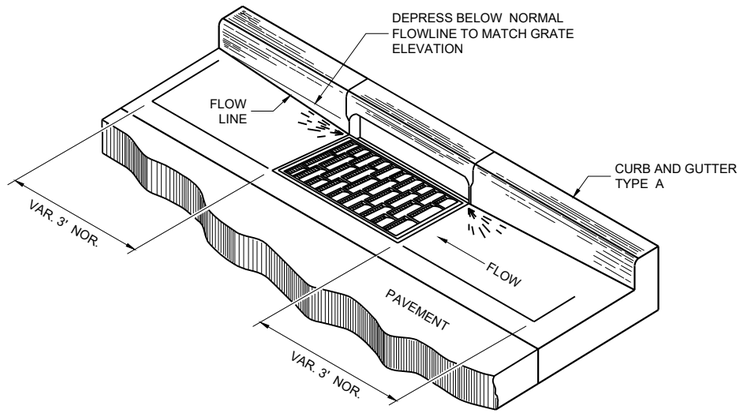
CONCRETE CURB AND GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 08D01-23a



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.

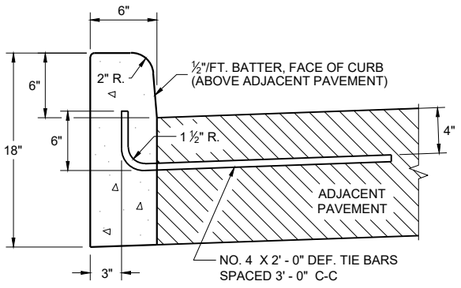
UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2' - 0" BEHIND THE BACK OF CURBS.

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

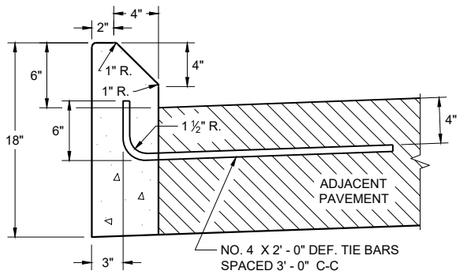
(2) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

(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.

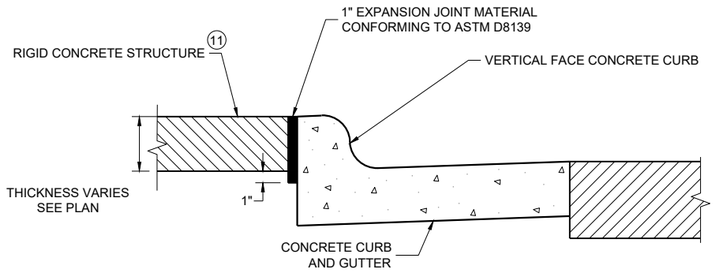


TYPES A (1) & D

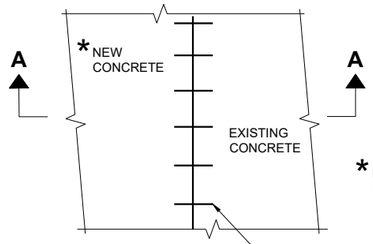


TYPES G (1) & J

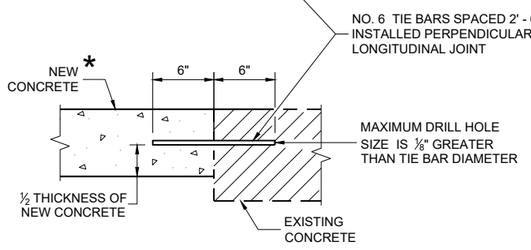
CONCRETE CURB



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

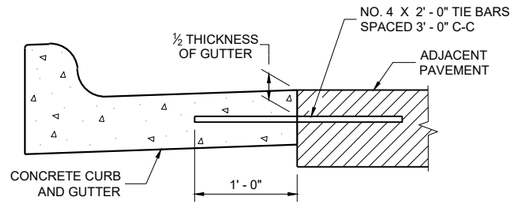


PLAN VIEW

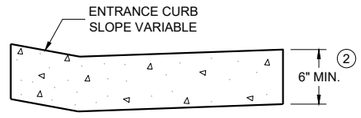


SECTION A - A

TIE BARS DRILLED INTO EXISTING PAVEMENT



TYPICAL TIE BAR LOCATION (1)



DRIVEWAY ENTRANCE CURB (10)

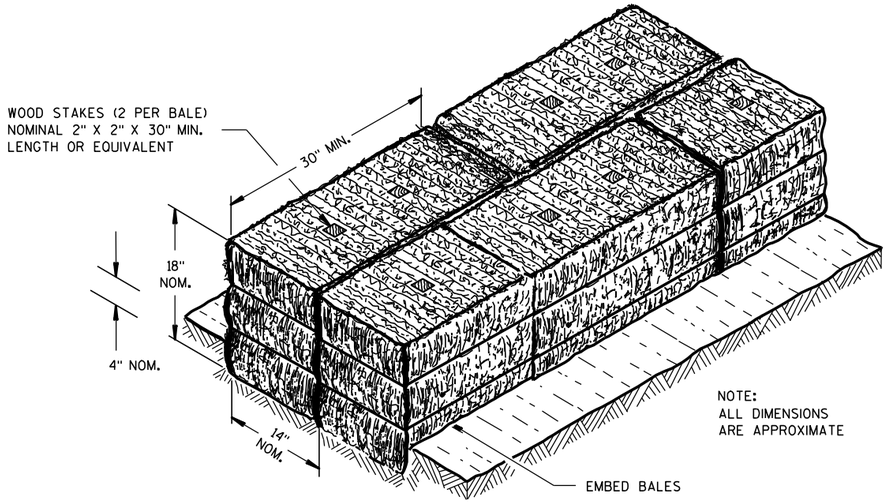
(WHEN DIRECTED BY THE ENGINEER)

CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

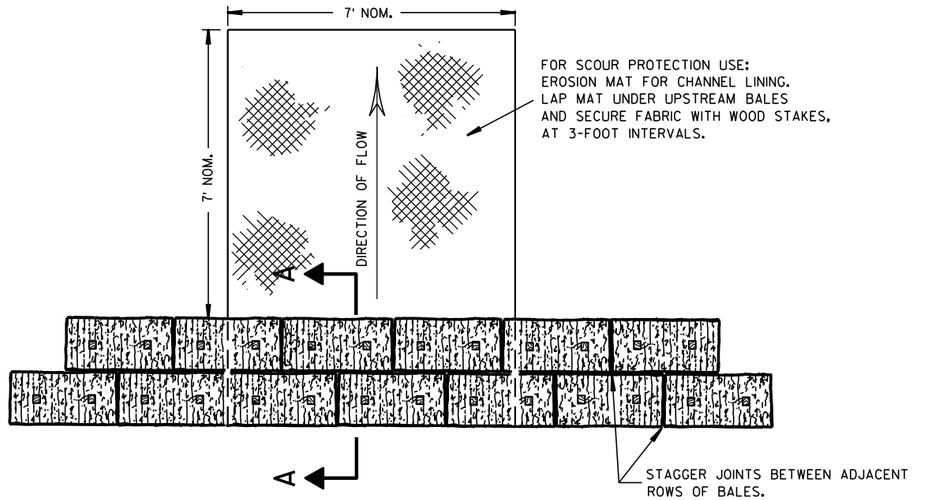
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 — DATE
/S/ Rodnery Taylor — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

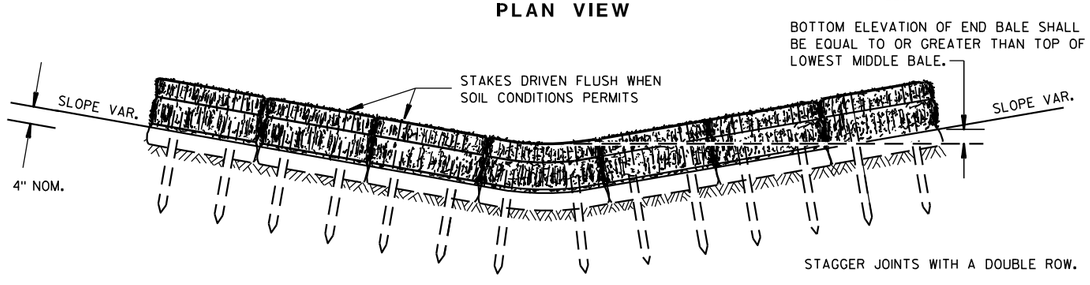
FHWA



SECTION A-A



PLAN VIEW



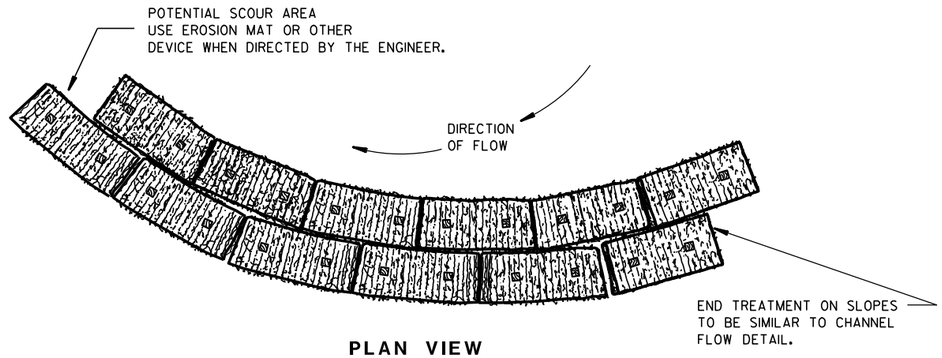
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES (1)

GENERAL NOTES

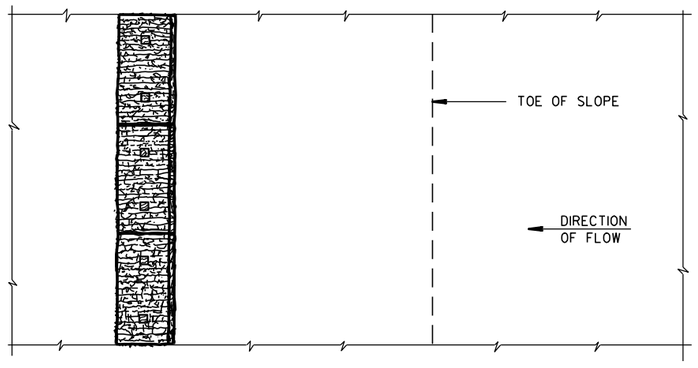
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

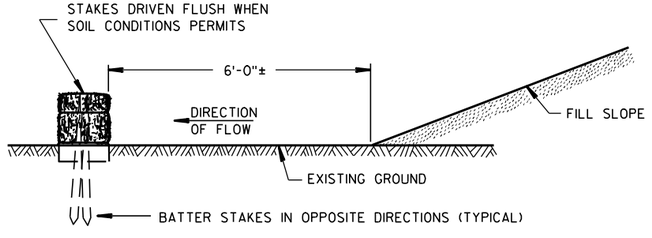


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/04/02 DATE

/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER

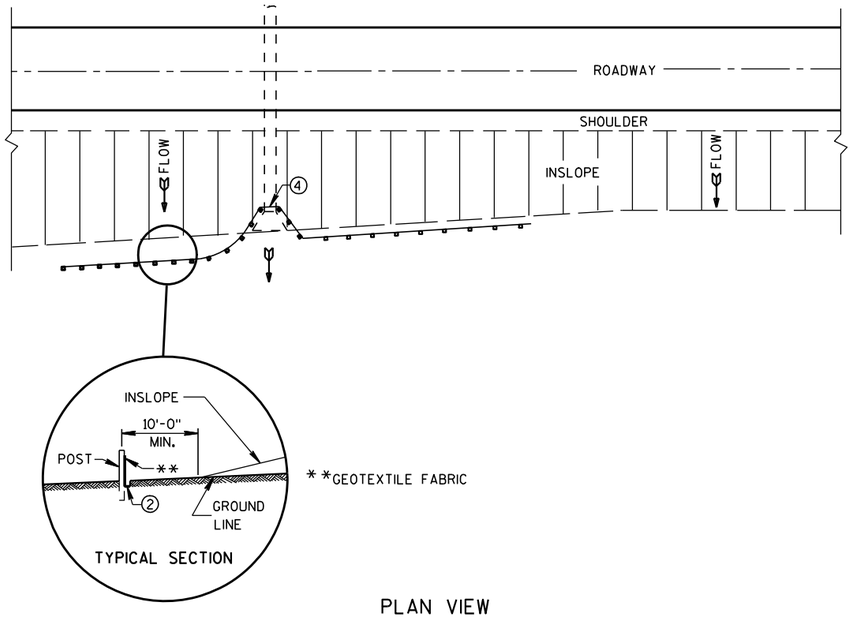
FHWA

6

S.D.D. 8 E 8-3

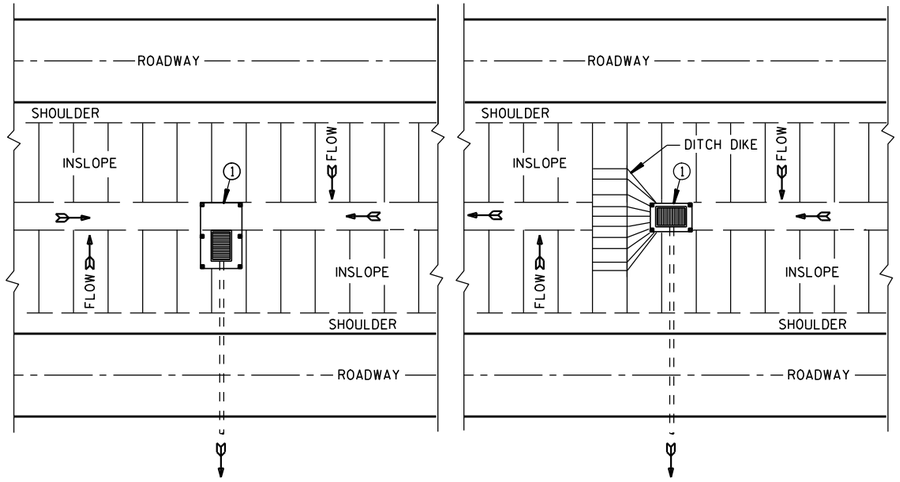
6

S.D.D. 8 E 8-3



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



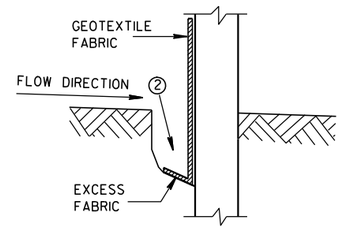
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

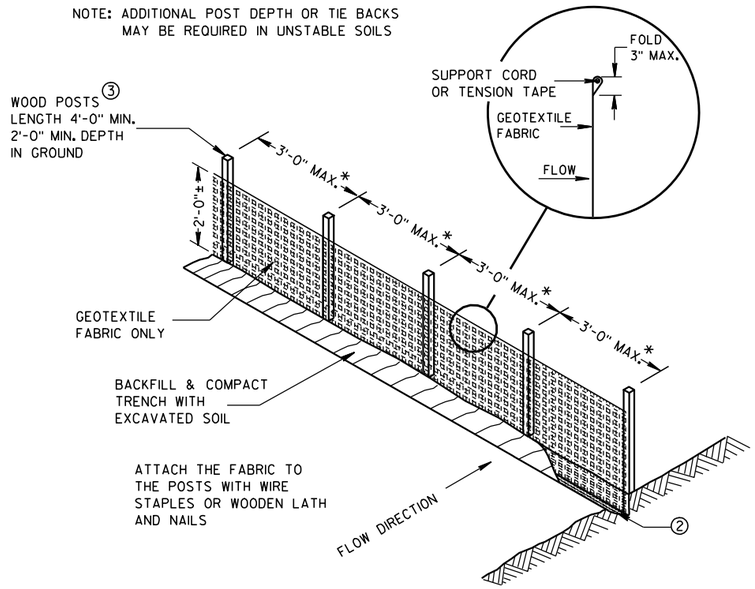
GENERAL NOTES

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

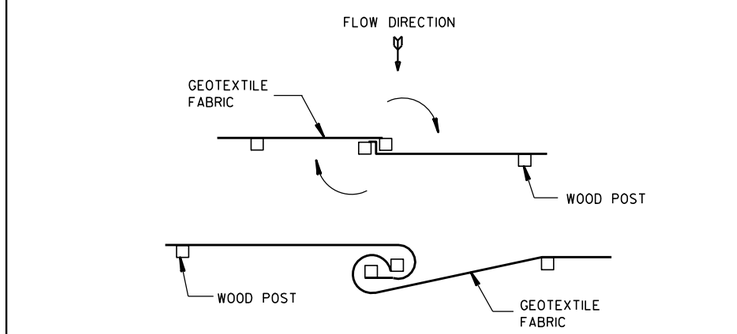
1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.
4. SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
5. CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



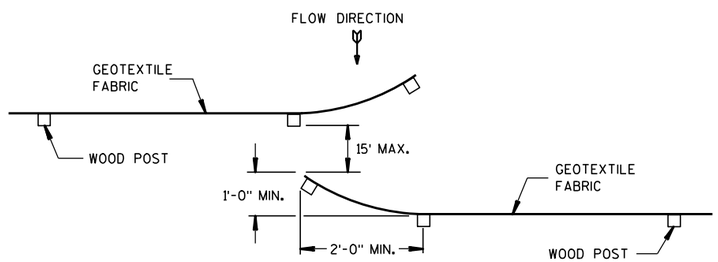
TRENCH DETAIL



SILT FENCE

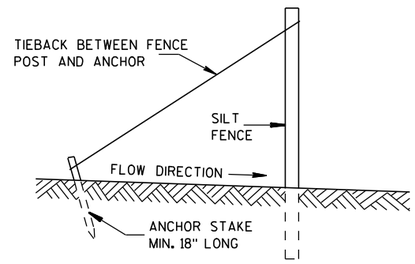


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE 5



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

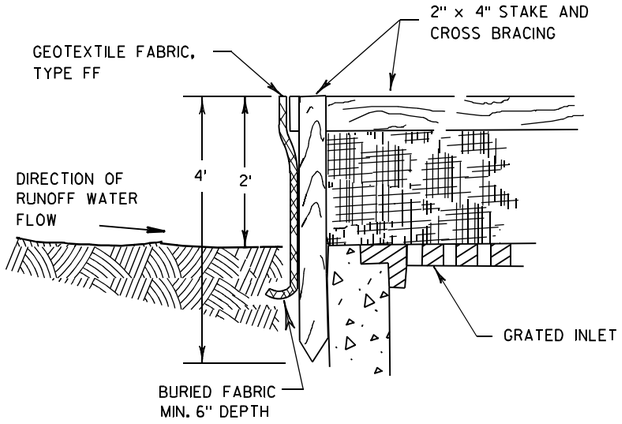
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

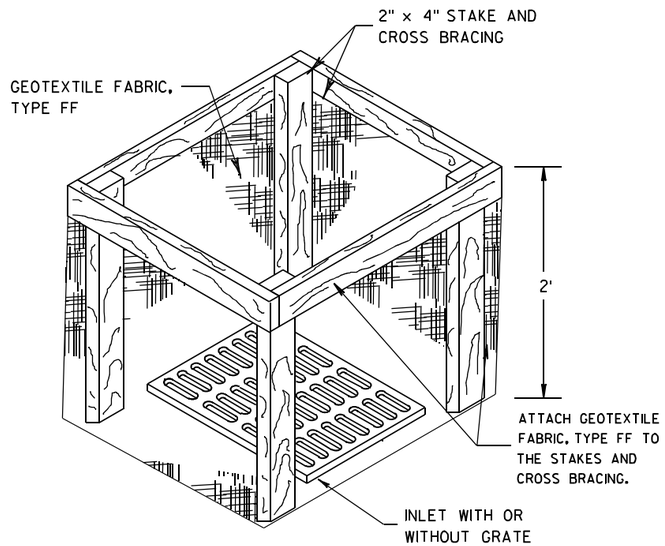
6

S.D.D. 8 E 9-6

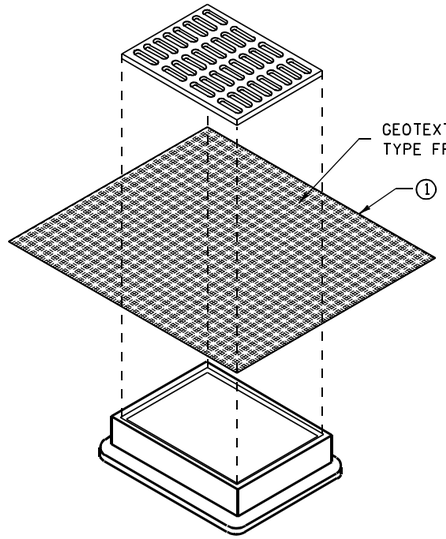
6

S.D.D. 8 E 9-6



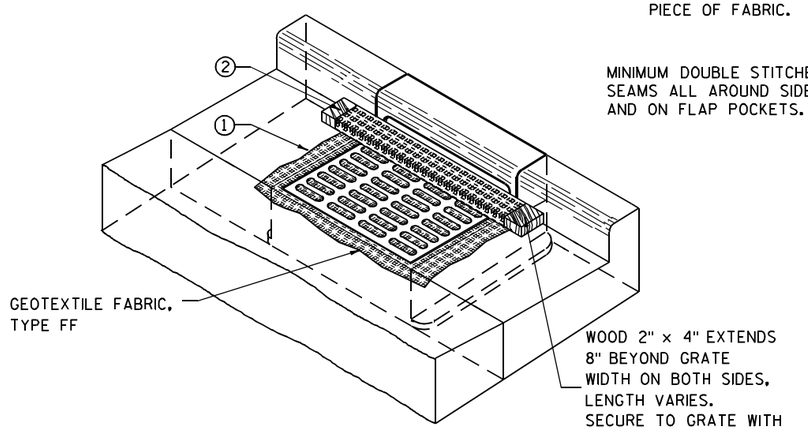


INLET PROTECTION, TYPE A

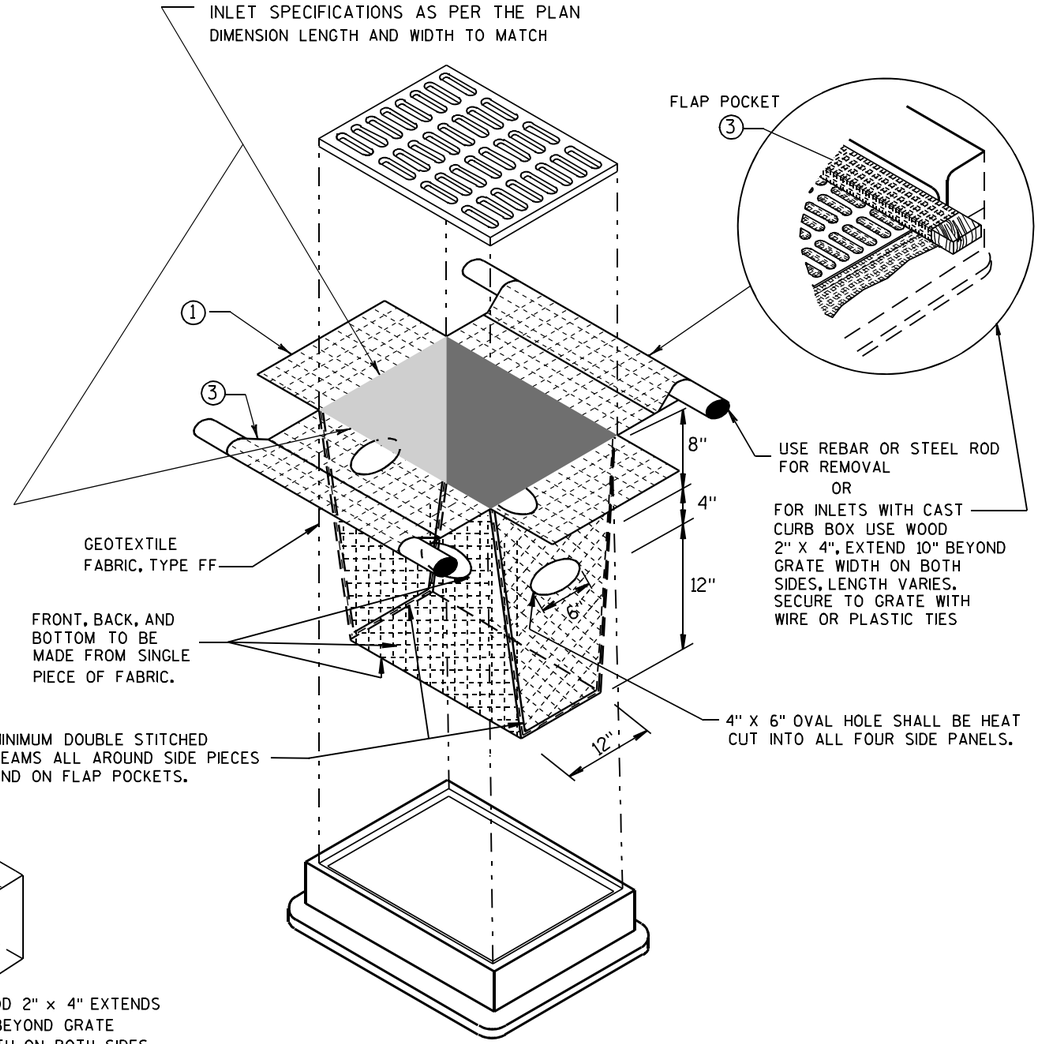


INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

(CAN BE INSTALLED IN ANY INLET WITHOUT A CURB BOX)



INLET PROTECTION, TYPE C (WITH CURB BOX)



INLET PROTECTION, TYPE D

(CAN BE INSTALLED IN ANY INLET TYPE WITH
OR WITHOUT A CURB BOX AS PER NOTE ②)

GENERAL NOTES

INLET PROTECTION DEVICES SHALL BE MAINTAINED OR REPLACED AT THE DIRECTION OF THE ENGINEER.

MANUFACTURED ALTERNATIVES APPROVED AND LISTED ON THE DEPARTMENT'S EROSION CONTROL PRODUCT ACCEPTABILITY LIST MAY BE SUBSTITUTED.

WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

① FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.

② FOR INLET PROTECTION, TYPE C (WITH CURB BOX), AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX OPENING.

③ FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2X4.

INSTALLATION NOTES

TYPE B & C

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

TYPE D

DO NOT INSTALL INLET PROTECTION TYPE D IN INLETS SHALLOWER THAN 30", MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE.

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE BOTTOM OF THE BAG.

INLET PROTECTION
TYPE A, B, C, AND D

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

10/16/02
DATE

/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER

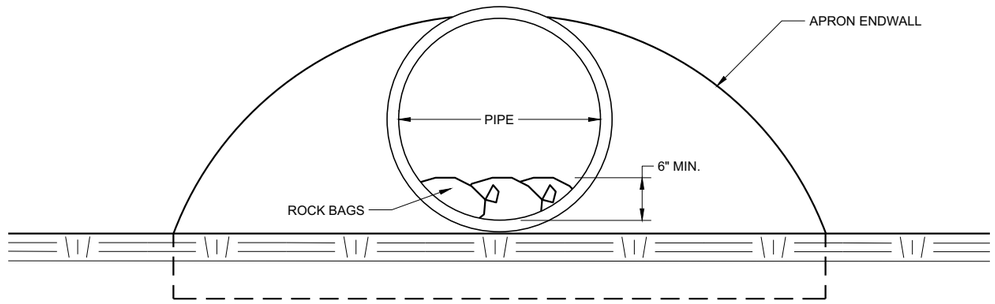
FHWA

6

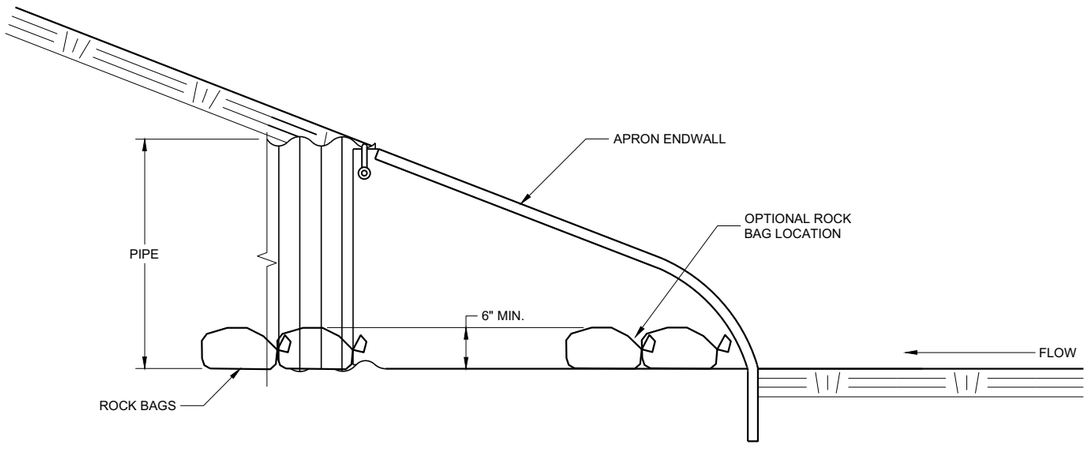
S.D.D. 8 E 10-2

6

S.D.D. 8 E 10-2



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

6

SDD 08E15 - 01

6

SDD 08E15 - 01

METAL APRON ENDWALLS

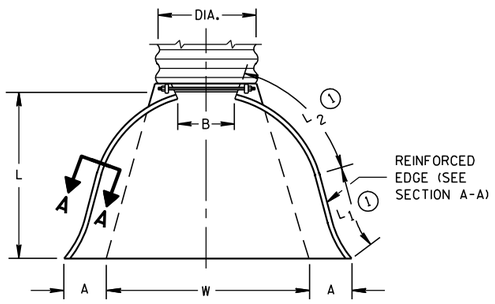
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4	36	2 1/2 to 1	1 Pc.
21	.064	.060	9	12	6	36	18	29 5/8	42	2 1/2 to 1	1 Pc.
24	.064	.075	10	13	6	41	18	37 1/4	48	2 1/2 to 1	1 Pc.
30	.079	.075	12	16	8	51	18	52 1/4	60	2 1/2 to 1	1 Pc.
36	.079	.105	14	19	9	60	24	59 3/4	72	2 1/2 to 1	2 Pc.
42	.109	.105	16	22	11	69	24	75 5/8	84	2 1/2 to 1	2 Pc.
48	.109	.105	18	27	12	78	24	81	90	2 1/4 to 1	3 Pc.
54	.109	.105	18	30	12	84	30	85 1/2	102	2 1/4 to 1	3 Pc.
60	.109×	.105×	18	33	12	87	—	—	114	2 to 1	3 Pc.
66	.109×	.105×	18	36	12	87	—	—	120	2 to 1	3 Pc.
72	.109×	.105×	18	39	12	87	—	—	126	2 to 1	3 Pc.
78	.109×	.105×	18	42	12	87	—	—	132	1 1/2 to 1	3 Pc.
84	.109×	.105×	18	45	12	87	—	—	138	1 1/2 to 1	3 Pc.
90	.109×	.105×	18	37	12	87	—	—	144	1 1/2 to 1	3 Pc.
96	.109×	.105×	18	35	12	87	—	—	150	1 1/2 to 1	3 Pc.

× EXCEPT CENTER PANEL SEE GENERAL NOTES

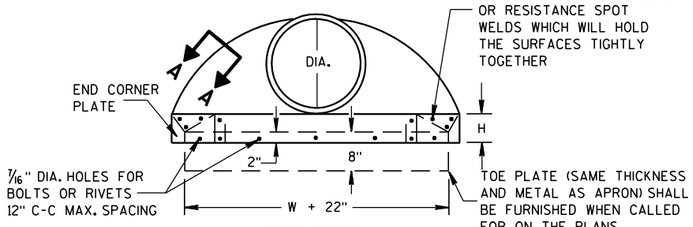
REINFORCED CONCRETE APRON ENDWALLS

PIPE DIA. (IN.)	DIMENSIONS (Inches) T	A	B	C	D	E	G	APPROX. SLOPE
12	2	4	24	48 7/8	72 1/8	24	2	3 to 1
15	2 1/4	6	27	46	73	30	2 1/4	3 to 1
18	2 1/2	9	27	46	73	36	2 1/2	3 to 1
21	2 3/4	9	36	37 1/2	73 1/2	42	2 3/4	3 to 1
24	3	9 1/2	43 1/2	30	73 1/2	48	3	3 to 1
27	3 1/4	10 1/2	49 1/2	24	73 1/2	54	3 1/4	3 to 1
30	3 1/2	12	54	19 3/4	73 1/2	60	3 1/2	3 to 1
36	4	15	63	34 3/4	97 3/4	72	4	3 to 1
42	4 1/2	21	63	35	98	78	4 1/2	3 to 1
48	5	24	72	26	98	84	5	3 to 1
54	5 1/2	27	65	* 33 1/4 - ** 35	* 98 1/4 - ** 100	90	5 1/2	2 2/5 to 1
60	6	* 30 - ** 35	60	39	99	96	5	2 to 1
66	6 1/2	* 24 - ** 30	* 72 - ** 78	* 21 - ** 27	99	102	5 1/2	2 to 1
72	7	* 24 - ** 36	78	21	99	108	6	2 to 1
78	7 1/2	* 24 - ** 36	78	21	99	114	6 1/2	2 to 1
84	8	36	90 1/2	21	111 1/2	120	6 1/2	1 1/2 to 1
90	8 1/2	41	87 1/2	24	111 1/2	132	6 1/2	1 1/2 to 1

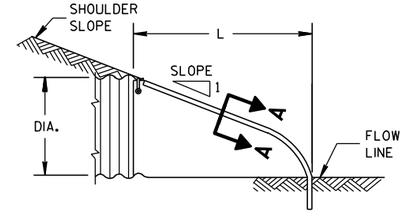
*MINIMUM
**MAXIMUM



PLAN VIEW

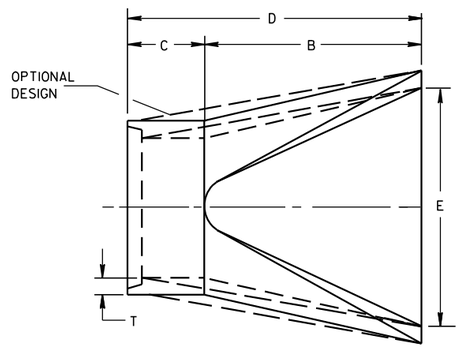


END VIEW

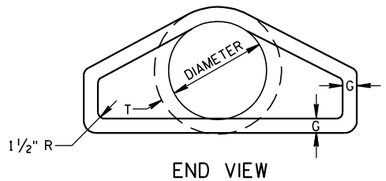


SIDE ELEVATION

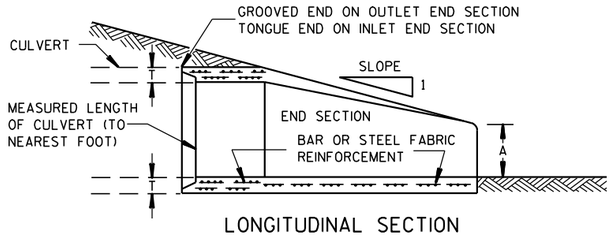
METAL ENDWALLS



PLAN

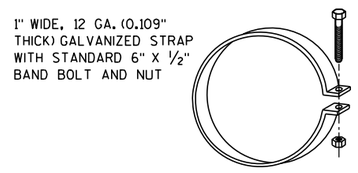


END VIEW



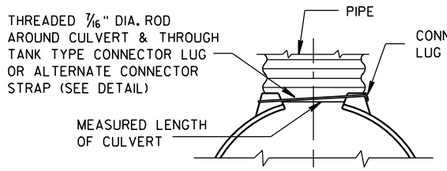
LONGITUDINAL SECTION

CONCRETE ENDWALLS

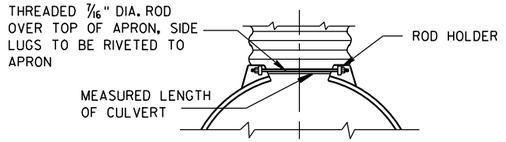


ALTERNATE FOR TYPE 1 CONNECTION

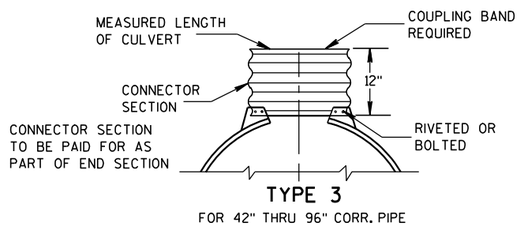
END SECTION CONNECTOR STRAP



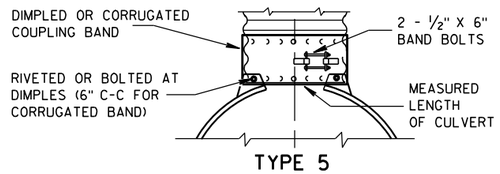
TYPE 1
FOR 12" THRU 24" CORR. PIPE



TYPE 2
FOR 30" THRU 96" CORR. PIPE



TYPE 3
FOR 42" THRU 96" CORR. PIPE



TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

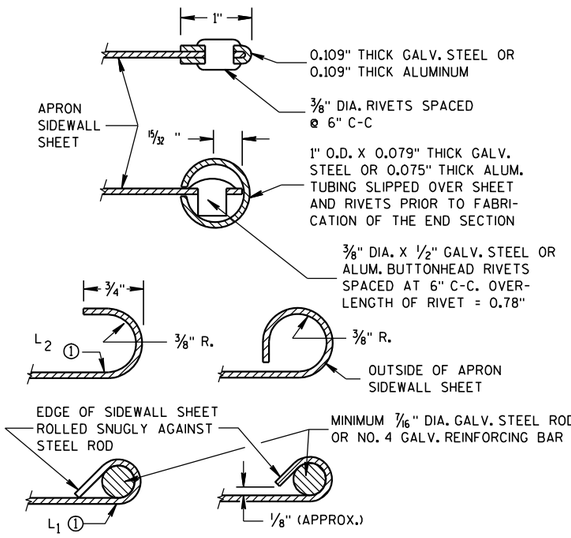
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

FOR CIRCUMFERENTIALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2, 3 OR 5 AS APPLICABLE.

FOR HELICALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2 OR 5.

FOR HELICALLY CORRUGATED PIPES WITH TWO CIRCUMFERENTIAL CORRUGATIONS AT EACH END USE ENDWALL CONNECTION DETAILS 1, 2 OR 3.

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

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

CONCRETE CULVERT ENDWALLS MAY NOT BE USED WITH GALVANIZED STEEL OR ALUMINUM CULVERT PIPE OR VISE VERSA. GALVANIZED STEEL OR ALUMINUM ENDWALLS SHALL NORMALLY BE INSTALLED ON CULVERT PIPE OF THE SAME METAL.

ALL THREE PIECE STEEL APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT OF THE PIPE PERIMETER.

LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS. FOR THE 60" THROUGH 96" DIAMETER APRON ENDWALL SIZES, THE REINFORCED EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES. THE ANGLES SHALL BE ATTACHED BY GALVANIZED NUTS AND BOLTS FOR STEEL UNITS AND ALUMINUM NUTS AND BOLTS FOR ALUMINUM UNITS.

WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

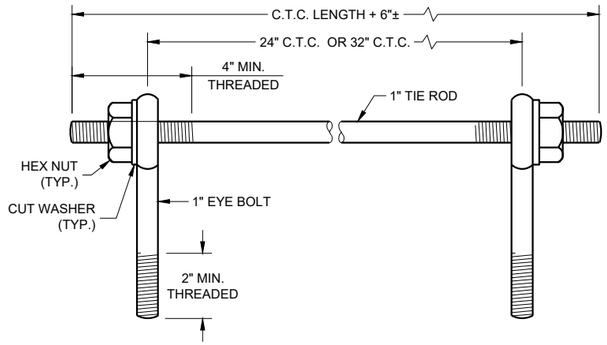
APRON ENDWALLS FOR CULVERT PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

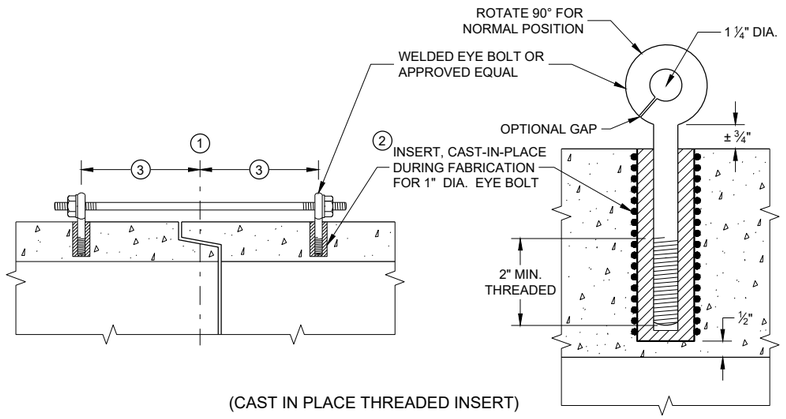
APPROVED
11/30/94 DATE
/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOP 220 NEER
FHWA

6

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.

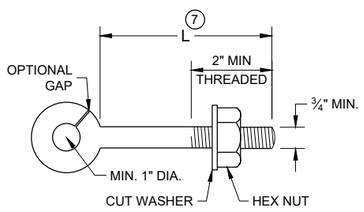
(3) HOLES SHALL BE CAST-IN-PLACE OR DRILLED PER THE APPLICABLE DETAIL, AND EQUAL DISTANCE FROM THE CENTERLINE OF THE JOINT.

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

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

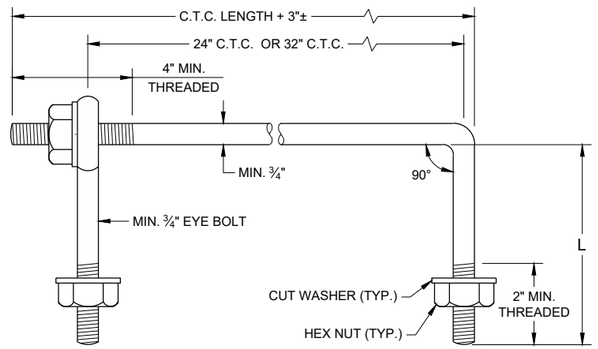
(6) LENGTH ADEQUATE TO EXTEND TO WITHIN ½ INCH OF THE INNER SURFACE OF THE PIPE.

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

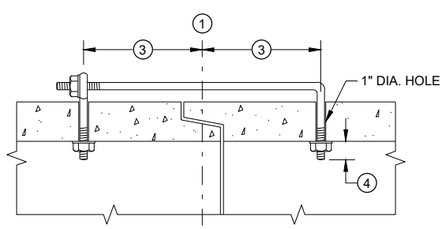


EYE BOLT (7)

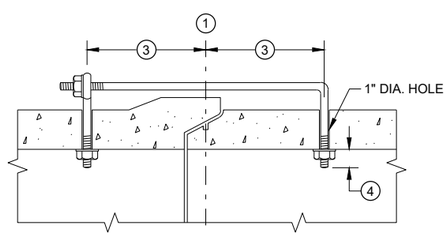
NOTE: TWO EYE BOLTS MAY BE USED WITH A 30" OR 38" LONG THREADED ROD IN LIEU OF THE 90° BENT TIE ROD.



EYE BOLT AND TIE ROD



(TONGUE AND GROOVE PIPE)



(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

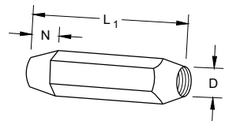
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

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



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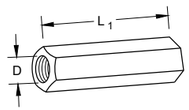
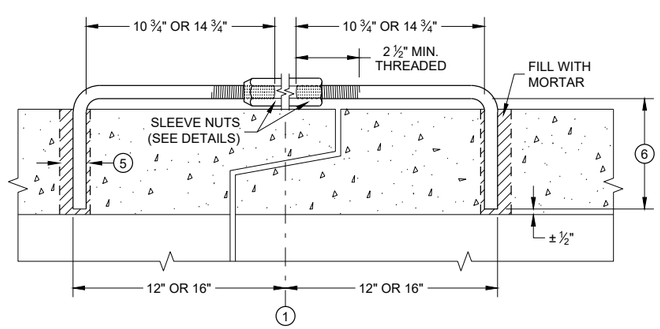


PLAIN

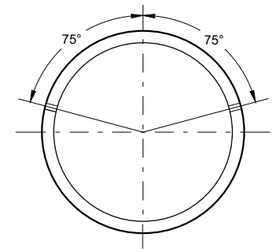
RIGHT AND LEFT THREADS

SLEEVE NUTS



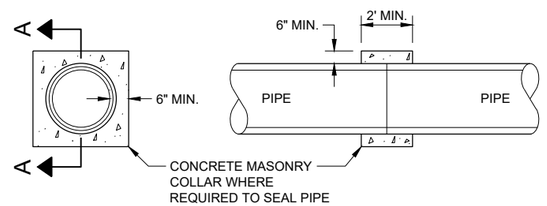
LONGITUDINAL SECTION

ADJUSTABLE TIE ROD (ALTERNATE NO. 3)



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

TRANSVERSE SECTION



SECTION A - A

CONCRETE COLLAR DETAIL

JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

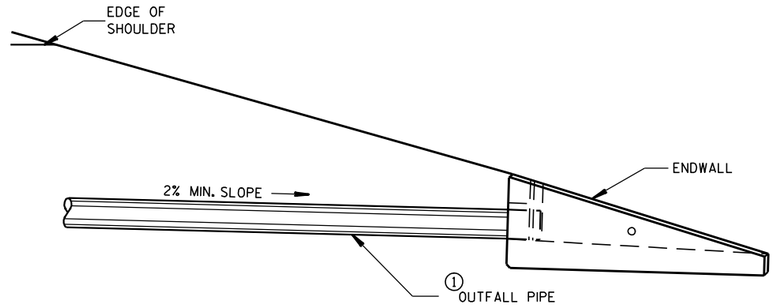
FHWA

SDD 08F04 - 08

SDD 08F04 - 08

DIMENSIONS IN INCHES											
PIPE DIA.	A	B	C	D	E	F	G	H	J	L	Z
**4	6	12	5 1/4	9	8	32	36	11	2 3/8	6 1/2	4
6	8	14	7 1/4	11	10	42	44	13	3 5/8	8 1/2	6

**APRON ENDWALL FOR 6 INCH DIAMETER PIPE MAY BE SUBSTITUTED FOR THIS SIZE PROVIDED THE HOLE IN THE HEADWALL IS SIZED AND LOCATED TO CONFORM TO THE 4 INCH DIAMETER PIPE DIMENSIONS (C & J)



INSTALLATION 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.

ALTERNATIVE DESIGNS WHICH PROVIDE EQUIVALENT CAPACITY AND STRENGTH MAY BE USED WHEN APPROVED BY THE ENGINEER. ENDWALL MAY BE EITHER PRECAST OR CAST-IN-PLACE CONCRETE.

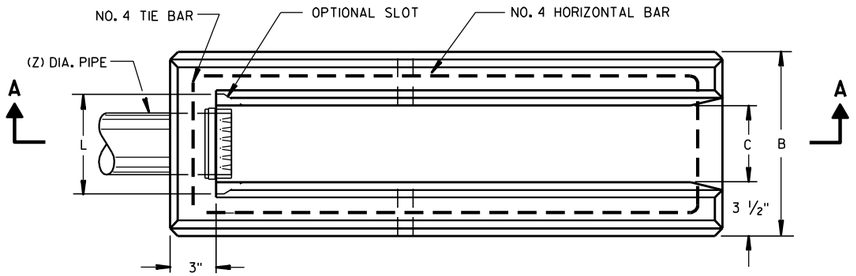
THE UNDERDRAIN PIPE SHALL BE FULLY INSERTED AND SEALED INTO THE ENDWALL WITH CEMENT MORTAR PRIOR TO BACKFILLING AROUND THE STRUCTURE.

THE UPPERMOST POINT OF THE ENDWALL SHALL BE PLACED FLUSH WITH THE ROADWAY SLOPE. ADJACENT EMBANKMENT SLOPES SHALL BE SHAPED TO FIT THE SIDES AND TOE OF THE ENDWALL. EXACT PLACEMENT OF THE OUTFALL PIPE AND ENDWALL SHALL BE DETERMINED BY THE ENGINEER TO MATCH THE ELEVATIONS AND FLOW DIRECTION OF THE ROADSIDE DITCH.

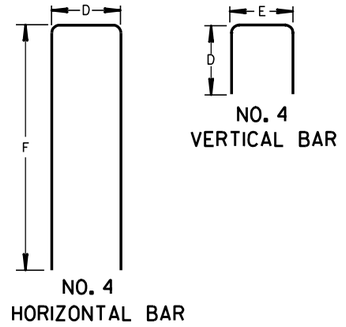
① THE OUTFALL PIPE UNDERDRAIN AND FITTINGS SHALL CONFORM TO THE REQUIREMENTS OF THE SPECIFICATION FOR POLY (VINYL CHORIDE) (PVC) PLASTIC DRAIN, WASTE AND VENT PIPE AND FITTINGS, ASTM DESIGNATION: D 2665, SCHEDULE 40 PVC OR THE STANDARD SPECIFICATION FOR TYPE PSM POLY (VINYL CHORIDE) (PVC) SEWER PIPE AND FITTINGS, ASTM DESIGNATION: D 3034, TYPE PSM SDR 23.5 PVC SEWER PIPE, ALL JOINTS SHALL BE SOLVENT WELDED.

THE OUTFALL PIPE INCLUDING ALL FITTINGS AND THE RODENT SHIELD SHALL BE MEASURED AND PAID FOR AS PIPE UNDERDRAIN UNPERFORATED.

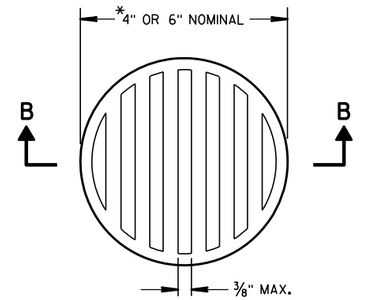
② THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE OUTFALL PIPE. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.



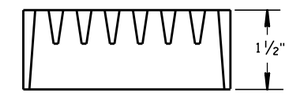
PLAN VIEW



BAR STEEL REINFORCEMENT DETAILS



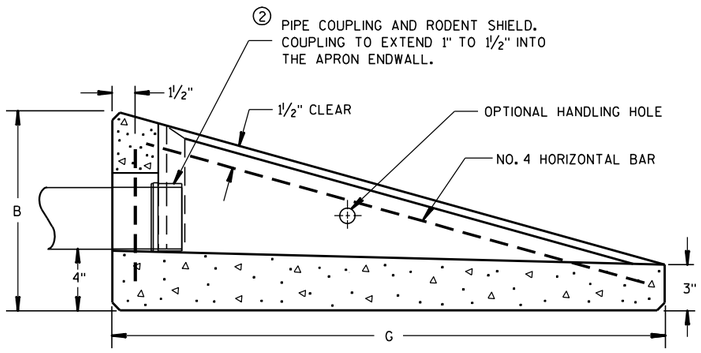
NOTE: ORIENT SHIELD SO SLOTS ARE VERTICAL.



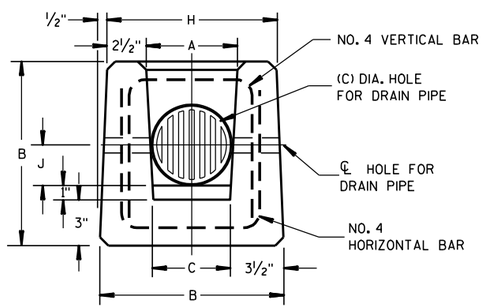
SECTION B-B

② RODENT SHIELD

*NOTE: DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING.



SECTION A-A



END VIEW

CONCRETE APRON ENDWALL FOR UNDERDRAIN

REINFORCED CONCRETE APRON ENDWALL FOR PIPE UNDERDRAIN

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
3/10/98 DATE
/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 8 F 6-4

6

S.D.D. 8 F 6-4

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.

FILL SLOPES FLATTER THAN 2 ½:1 SHALL BE WARPED TO MEET THE TOP OF THE WINGWALLS.

ALL STEEL REINFORCEMENT AND WELDED STEEL WIRE FABRIC SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE NOTED.

(1) MINIMUM REINFORCEMENT SHALL BE 6" X 6" - W4.0 X W4.0 OR NO. 3 BARS SPACED 12" C-C IN BOTH DIRECTIONS.

(2) THE SPACE BETWEEN PIPES SHALL BE AS FOLLOWS:

DIAMETER OR SPAN	SPACE
UP TO AND INCLUDING 48"	2' - 0"
OVER 48" TO 72"	½ DIA. OR SPAN
OVER 72"	3' - 0"

(3) LIMITS OF TRENCH BACKFILL

(4) LIMITS OF FOUNDATION BACKFILL

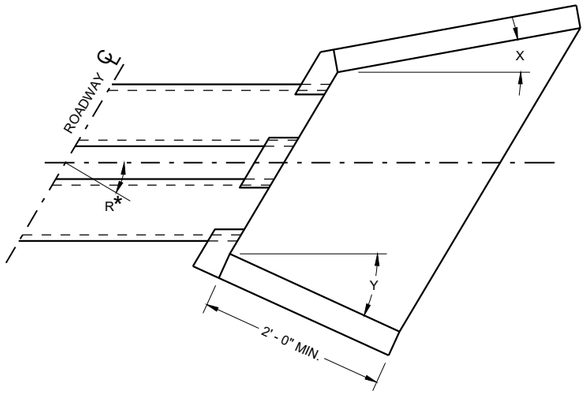
(5) FOUNDATION AND TRENCH BACKFILL ARE MATERIALS INCLUDED IN PAYMENT FOR CULVERT PIPE, PIPE ARCH, CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPSE OR CONCRETE MASONRY ENDWALLS.

(6) DO NOT PLACE FOUNDATION BACK FILL OR ANY OTHER GRANULAR BACKFILL AROUND OR BELOW CUT OFF WALL. POUR CUT OFF WALL AGAINST NATIVE SOIL

(7) MINIMUM HEIGHT SHALL BE THE GREATER OF 1'- 0" OR ¼ HEIGHT OF CULVERT PIPE.

TRENCH BACKFILL

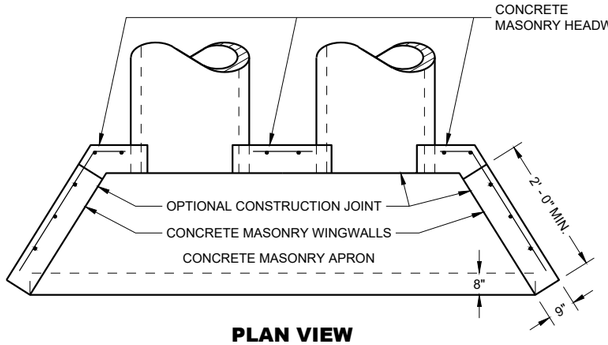
FOUNDATION BACKFILL



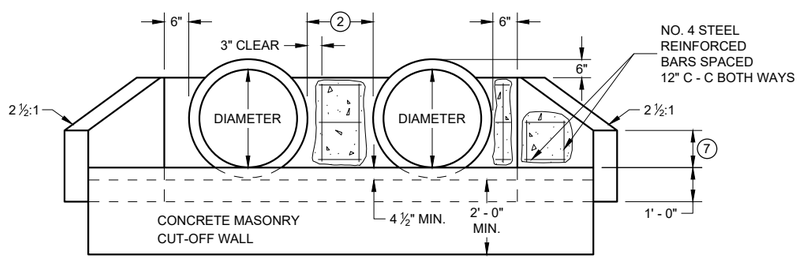
WINGWALL ANGLE DETAILS

INLET			OUTLET		
R*	X	Y	R*	X	Y
0 - 7°	30°	30°	0 - 15°	15°	15°
8 - 22°	25°	30°	16 - 45°	10°	15°
23 - 37°	20°	30°	46 - 75°	5°	15°
38 - 52°	15°	30°	OVER 75°	0°	15°
53 - 67°	10°	30°			
68 - 82°	5°	30°			
OVER 82°	0°	30°			

R* = NUMBER OF DEGREES RIGHT OR LEFT HAND FORWARD

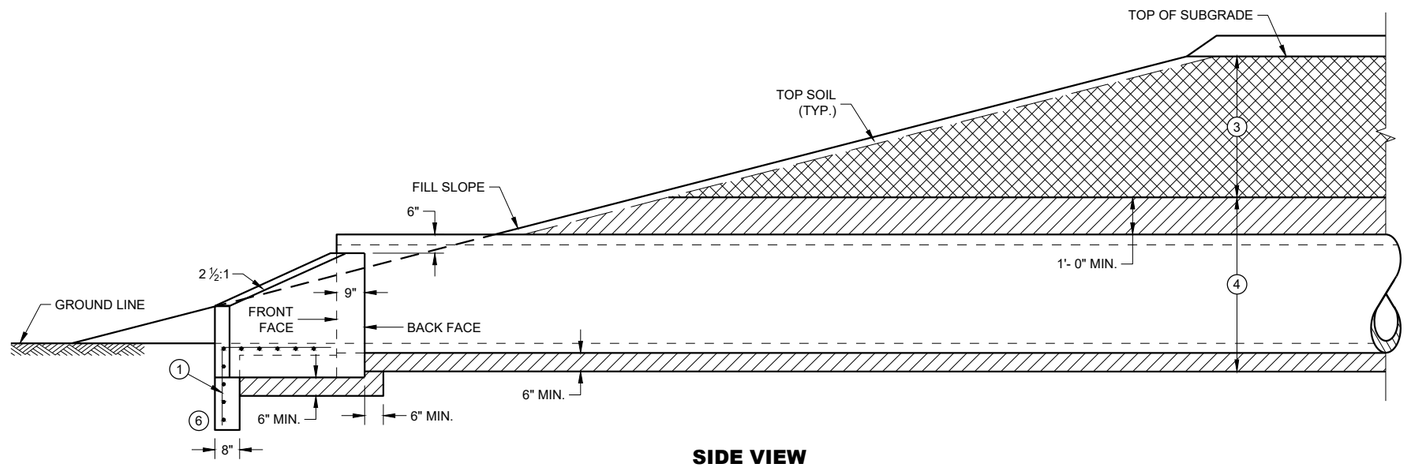


PLAN VIEW



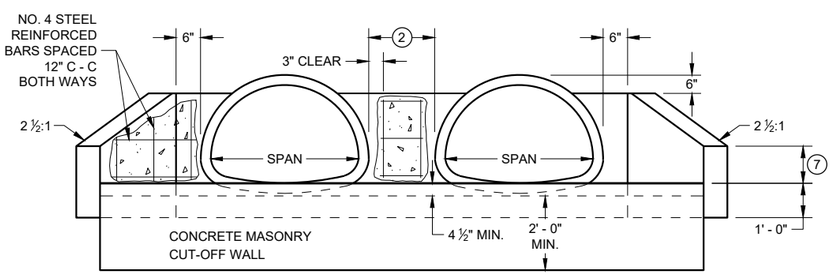
END VIEW

CIRCULAR PIPE



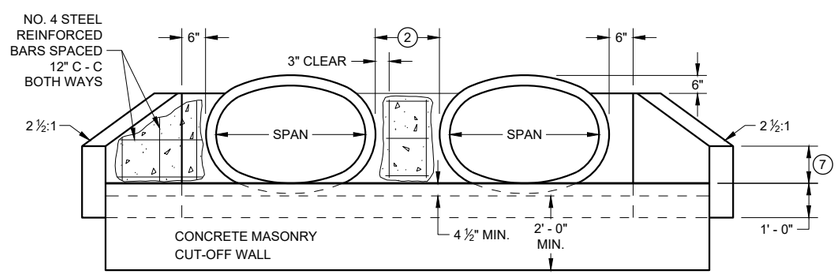
SIDE VIEW

CIRCULAR PIPE, PIPE ARCH OR HORIZONTAL ELLIPSE



END VIEW

PIPE ARCH



END VIEW

HORIZONTAL ELLIPSE

CONCRETE MASONRY ENDWALLS FOR CULVERT PIPE AND PIPE ARCH

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

May 2022
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS DEVE ENGINEER

FHWA

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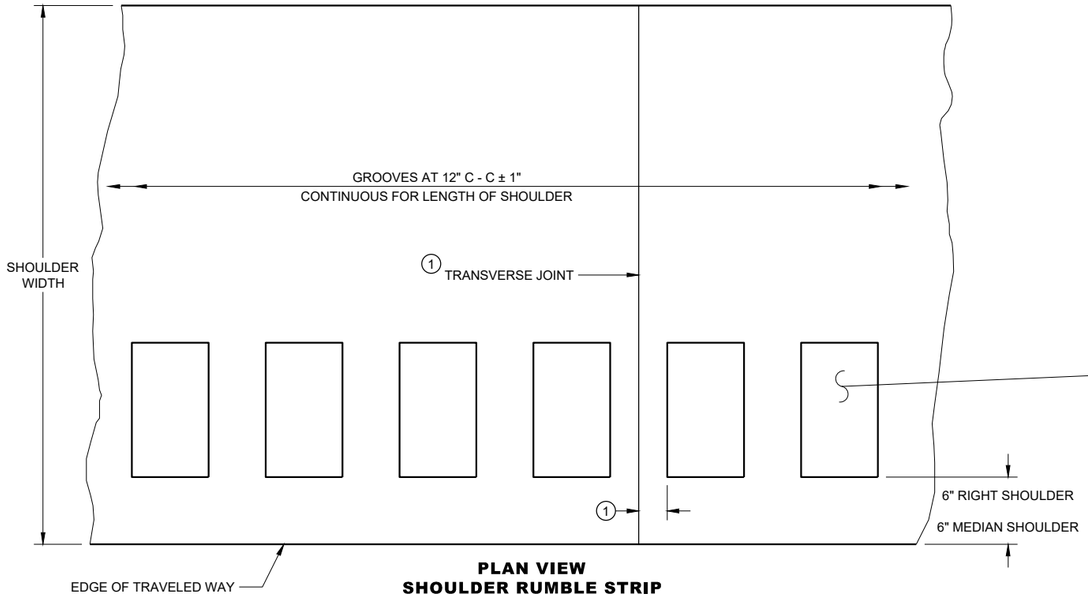
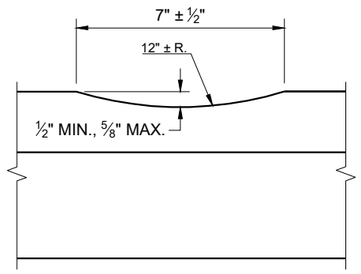
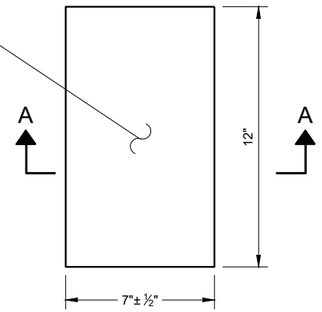
SDD 08F10 - 02



PLAN VIEW
SHOULDER RUMBLE STRIP



SECTION A - A



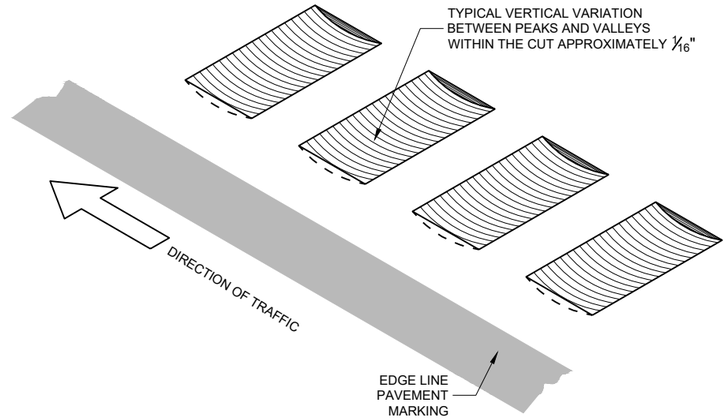
PLAN VIEW
(SINGLE GROOVE)

GENERAL NOTES

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

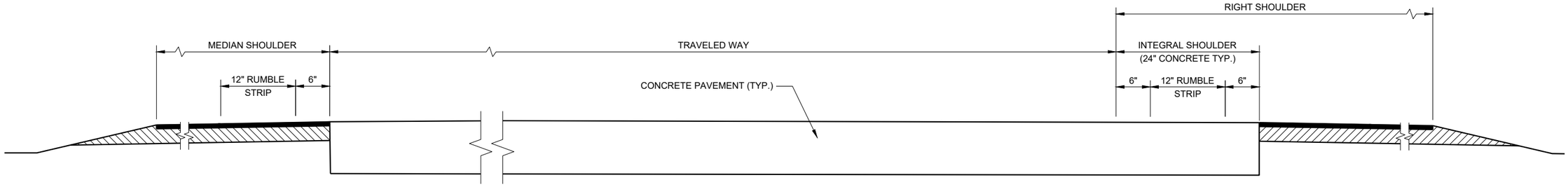
RUMBLE STRIPS ON EXPRESSWAYS:
DO NOT INSTALL SHOULDER RUMBLE STRIPS ACROSS SIDE ROAD INTERSECTIONS, COMMERCIAL AND PRIVATE DRIVEWAYS, ADJACENT TO RIGHT TURN LANES, LEFT TURN LANES, TURN LANE TAPERS, 25' IN ADVANCE OF BRIDGE DECKS, 25' IN ADVANCE OF BRIDGE APPROACHES, OR 100 FEET IN ADVANCE OF RAILROAD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

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



ISOMETRIC

PLACEMENT DETAIL FOR RUMBLE STRIP



SECTION VIEW

TYPICAL SHOULDER RUMBLE STRIPS
(ONE ROADWAY IS SHOWN)

SHOULDER RUMBLE STRIPS, DIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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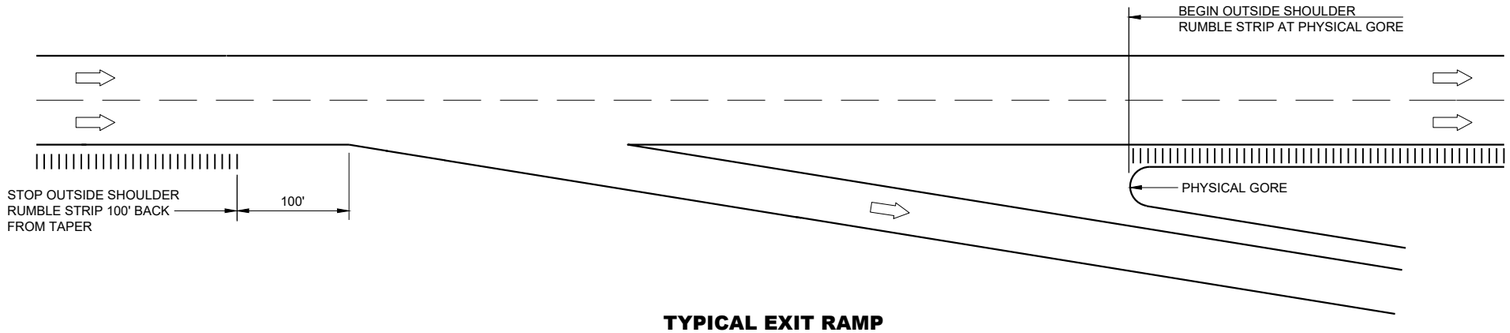
SDD 13A05-06a



TYPICAL EXIT RAMP

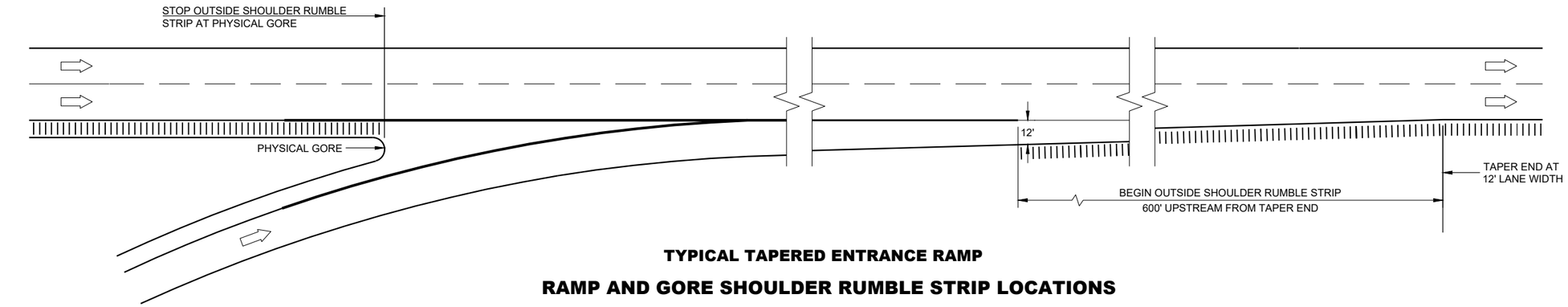
GENERAL NOTES

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.

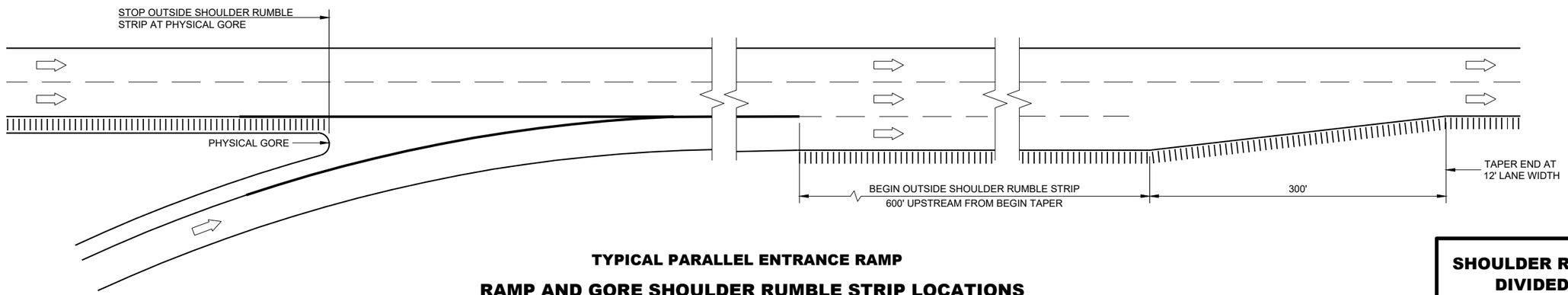
LEGEND

DIRECTION OF TRAFFIC



TYPICAL TAPERED ENTRANCE RAMP

RAMP AND GORE SHOULDER RUMBLE STRIP LOCATIONS



TYPICAL PARALLEL ENTRANCE RAMP

RAMP AND GORE SHOULDER RUMBLE STRIP LOCATIONS

SHOULDER RUMBLE STRIPS, DIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE

/S/ Rodney Taylor
ROADWAY DESIGN STANDARDS
UNIT SUPERVISOR

FHWA

6

SDD 13A05-06b

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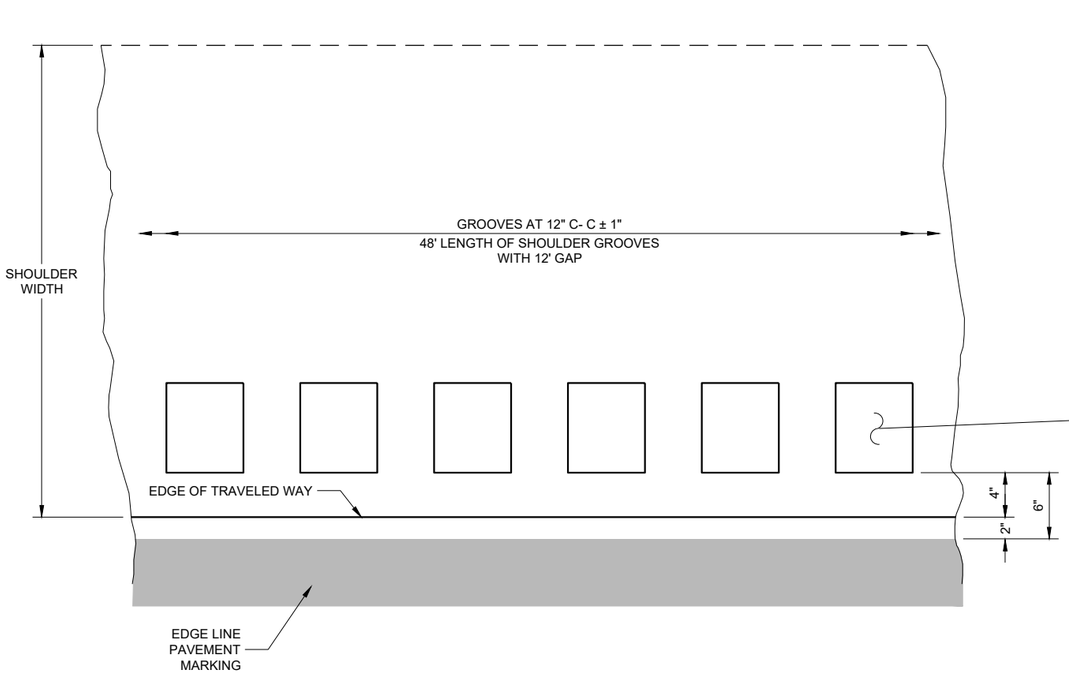
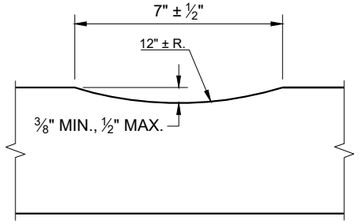
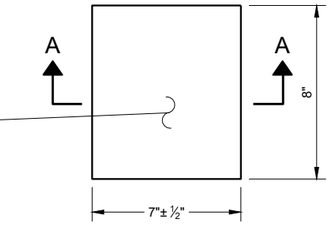
SDD 13A05-06b



PLAN DETAIL VIEW
SHOULDER WITH GROOVES



SECTION A - A

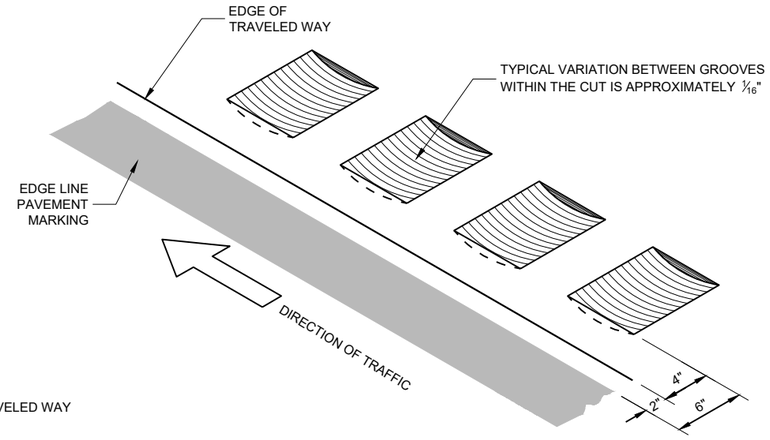


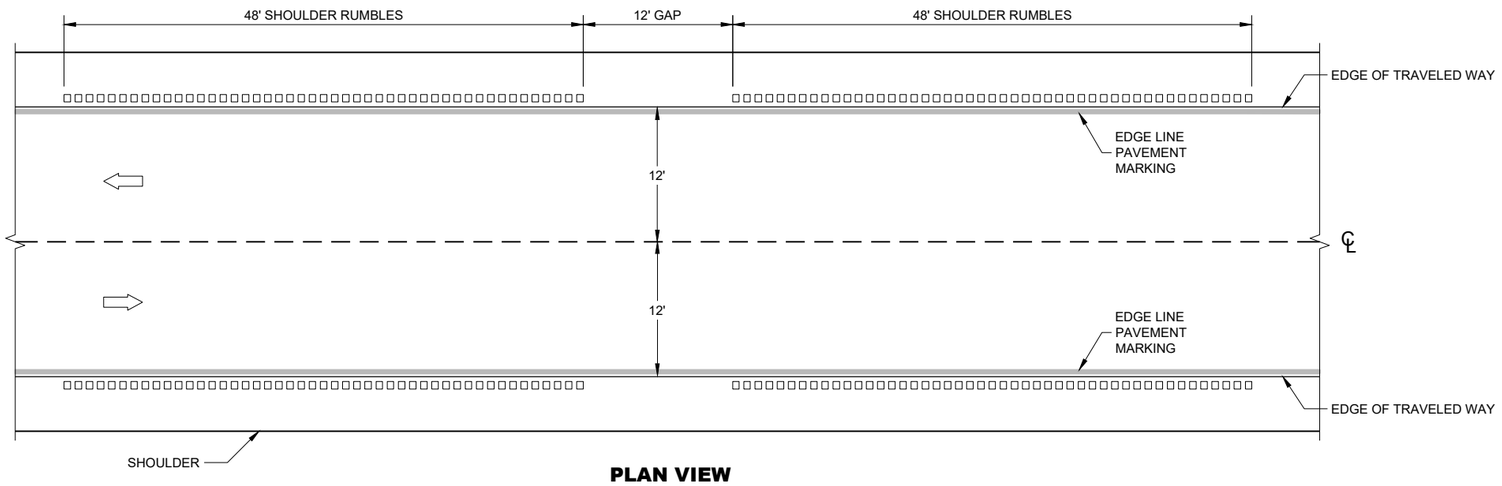
PLAN VIEW
(SINGLE GROOVE)

GENERAL NOTES

DO NOT MILL SHOULDER GROOVES THROUGH INTERSECTIONS, MARKED CROSSWALKS, NON-MOTORIZED PATH CROSSINGS, ETC. REFER TO SDD 13A10 SHEETS "g" AND "h".

SHOULDER GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS WHEN DIRECTED BY THE ENGINEER.





PLAN VIEW

SHOULDER RUMBLE STRIPS - ASPHALT

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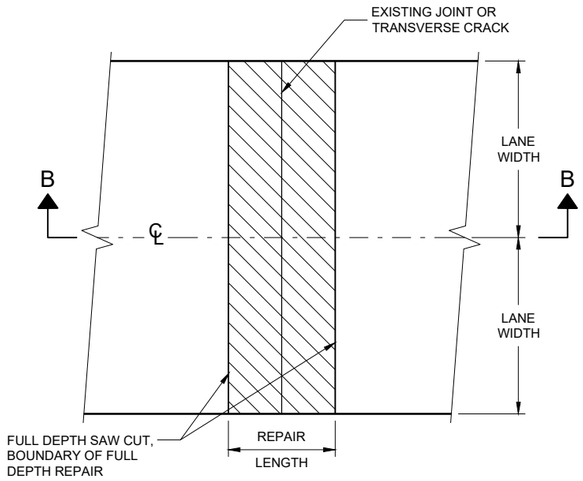
SDD 13A10 - 03a

SHOULDER RUMBLE STRIPS ASPHALT

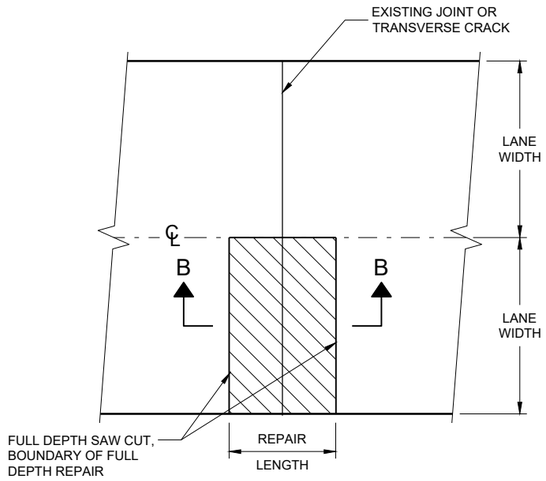
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTA

6

SDD 13A10 - 03a



PLAN VIEW
DOUBLE LANE REPAIR



PLAN VIEW
SINGLE LANE REPAIR

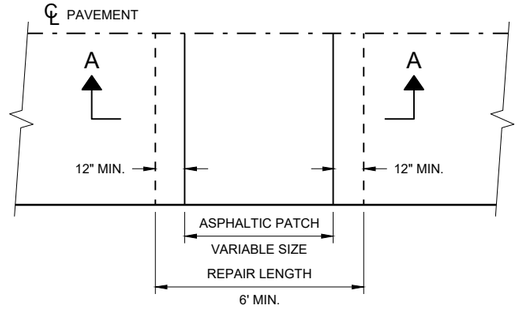
GENERAL NOTES

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.

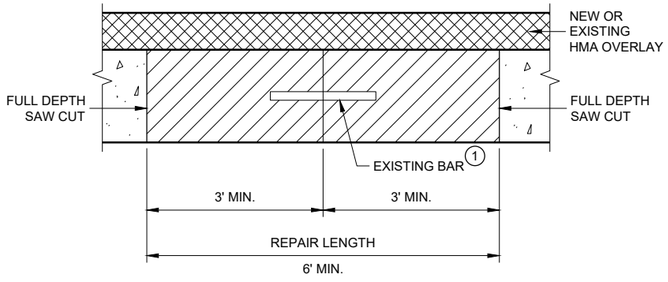
THE LENGTH OF THE REPAIRS MAY VARY FROM THE DIMENSIONS SHOWN IF THE EXISTING CONCRETE PAVEMENT IS NON-DOWELED AND THE PAVEMENT IS TO BE OVERLAID AFTER REPAIRING.

(1) DOWEL BARS MAY NOT BE PRESENT.

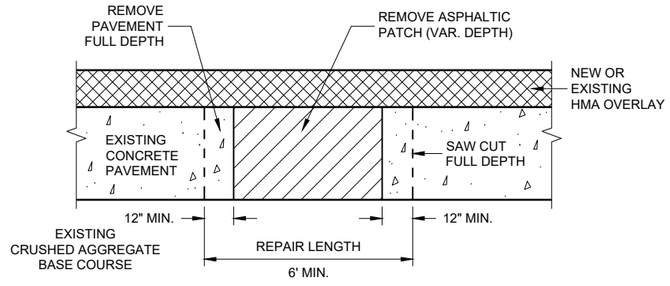


PLAN VIEW

FULL DEPTH CONCRETE PAVEMENT REMOVAL



SECTION B - B
CONCRETE REMOVAL



SECTION A - A

HMA PATCH REMOVAL

BASE PATCHING CONCRETE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTA

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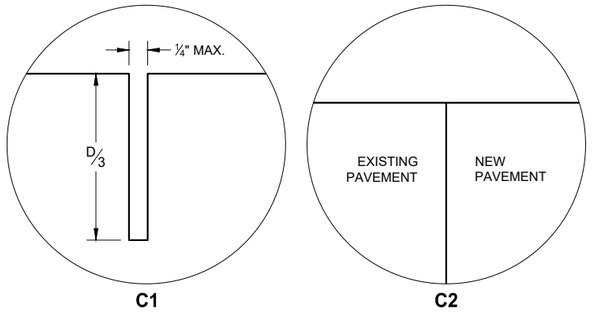
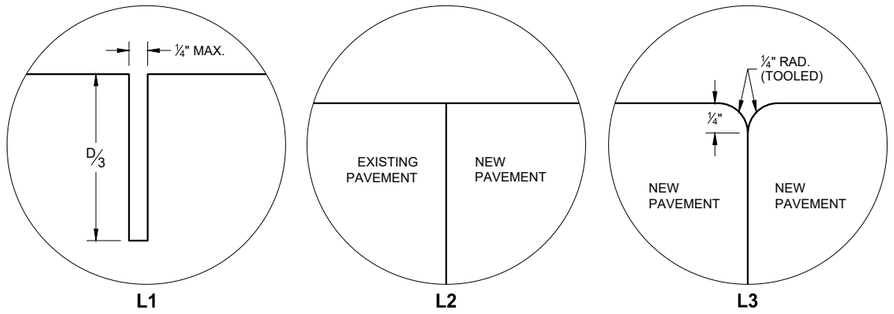
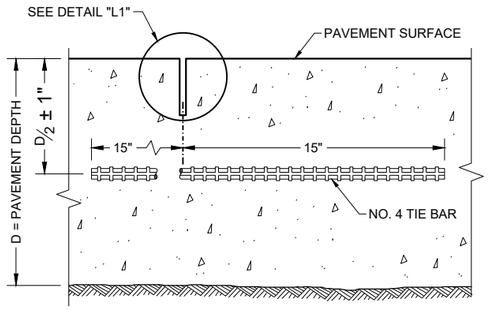
SDD 13C14 - 07a



TRANSVERSE JOINTS

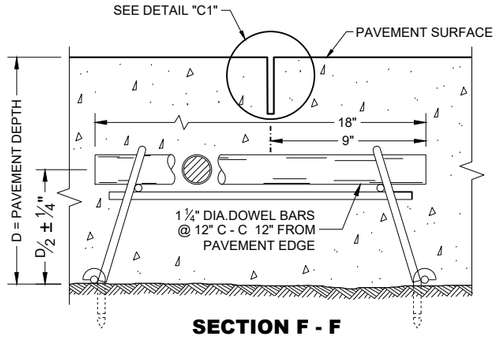


LONGITUDINAL JOINTS



SECTION C - C

SAWED LONGITUDINAL JOINT



SECTION F - F

CONTRACTION JOINT

GENERAL NOTES

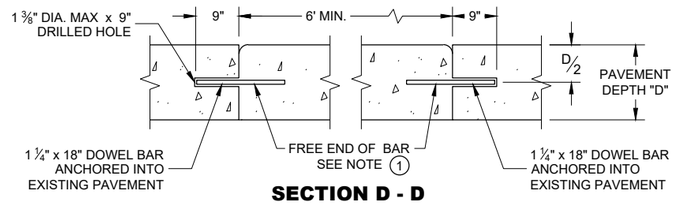
INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

CONCRETE BASE PATCHES OF EXISTING NON-DOWELED CONCRETE PAVEMENTS DO NOT NEED TO BE DOWELED.

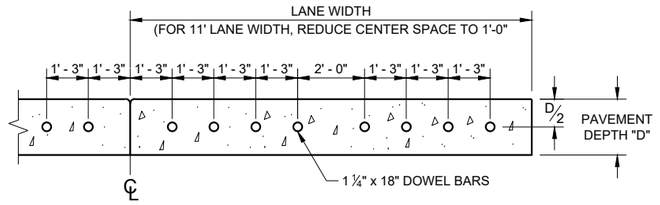
ANCHOR DOWEL BARS AND TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

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 O EDGE.

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

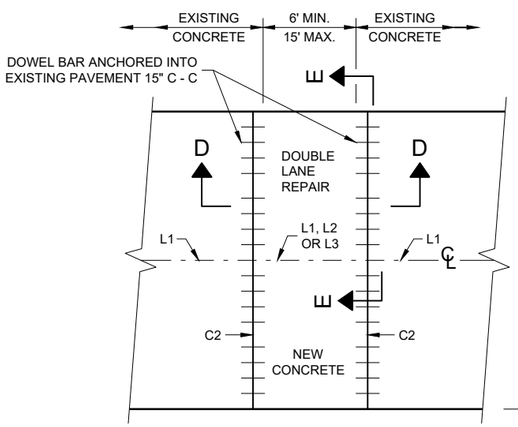


SECTION D - D



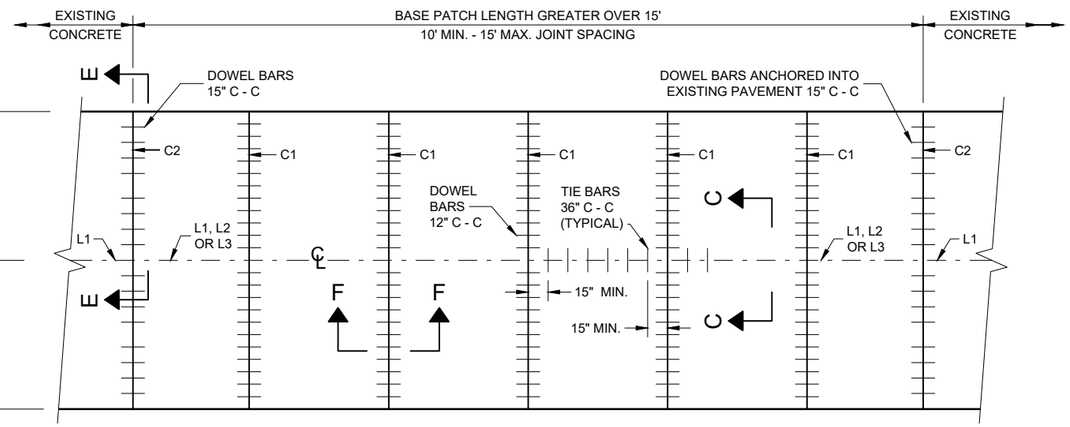
SECTION E - E

SPACING OF DOWEL BARS ANCHORED INTO EXISTING PAVEMENT



PLAN VIEW

MULTILANE CONCRETE BASE PATCH 15' MAXIMUM LENGTH



PLAN VIEW

MULTILANE CONCRETE BASE PATCH GREATER THAN 15' IN LENGTH

BASE PATCHING CONCRETE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTAT 228

SDD 13C14 - 07b

SDD 13C14 - 07b

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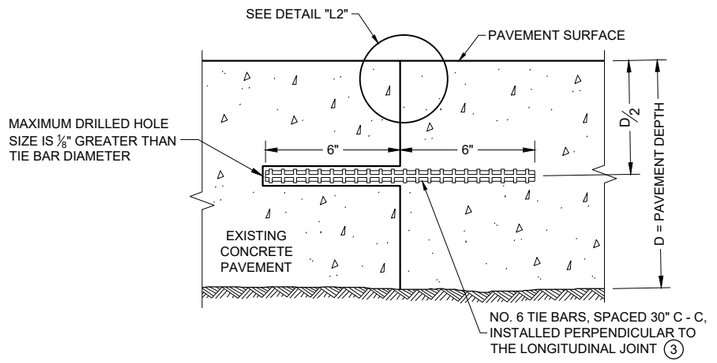
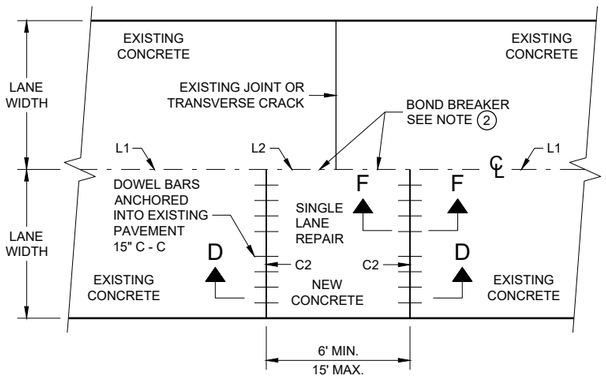


SECTION G - G

TIE BARS ANCHORED INTO EXISTING PAVEMENT

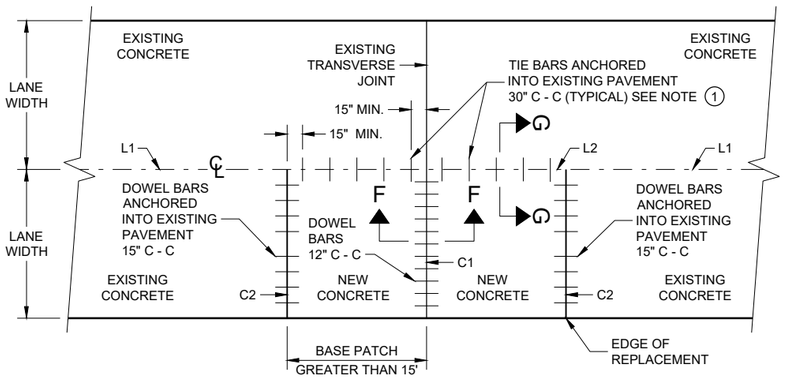
GENERAL NOTES

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 HOES WITH AN EPOXY.



PLAN VIEW

SINGLE LANE CONCRETE BASE PATCH 15' MAXIMUM LENGTH



PLAN VIEW

SINGLE LANE CONCRETE BASE PATCH GREATER THAN 15' LENGTH

BASE PATCHING CONCRETE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018
DATE
/S/ Peter Kemp, P.E.
PAVEMENT SUPERVIS

FHWA

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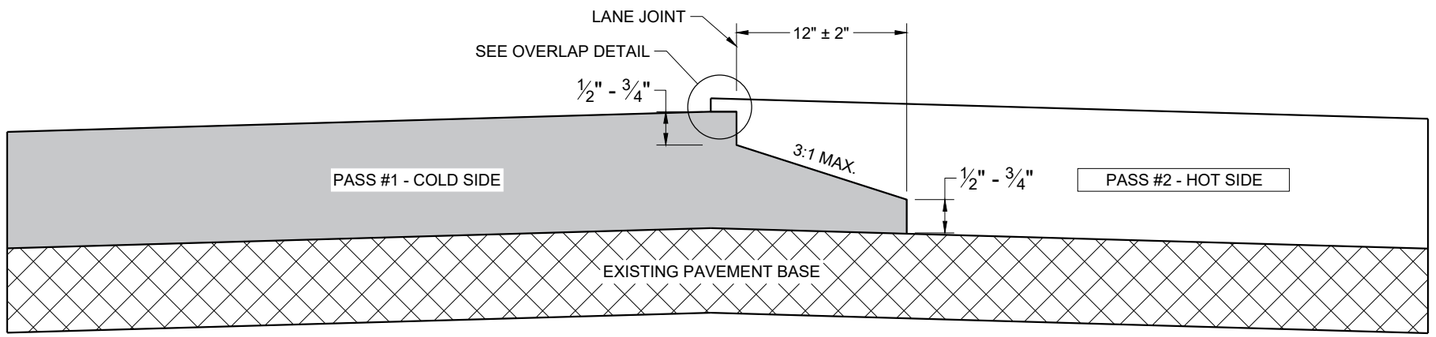
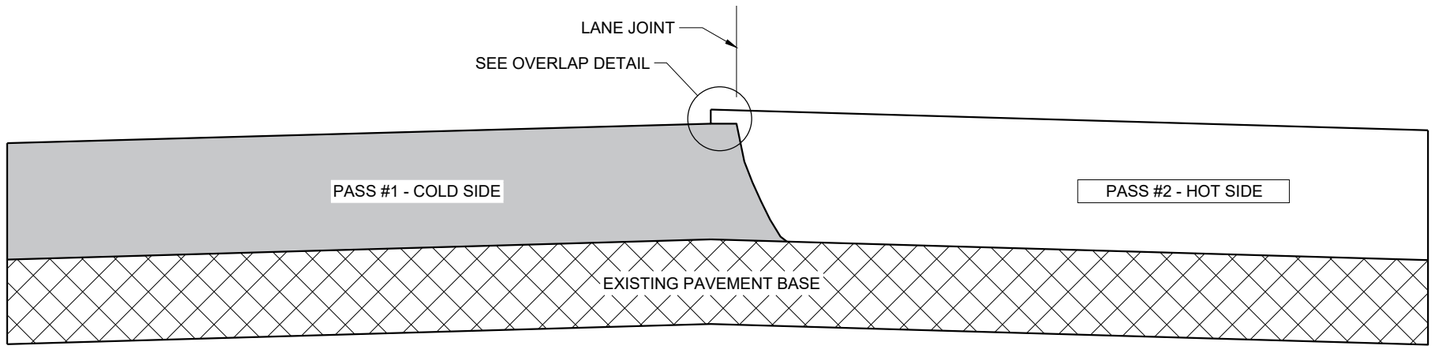
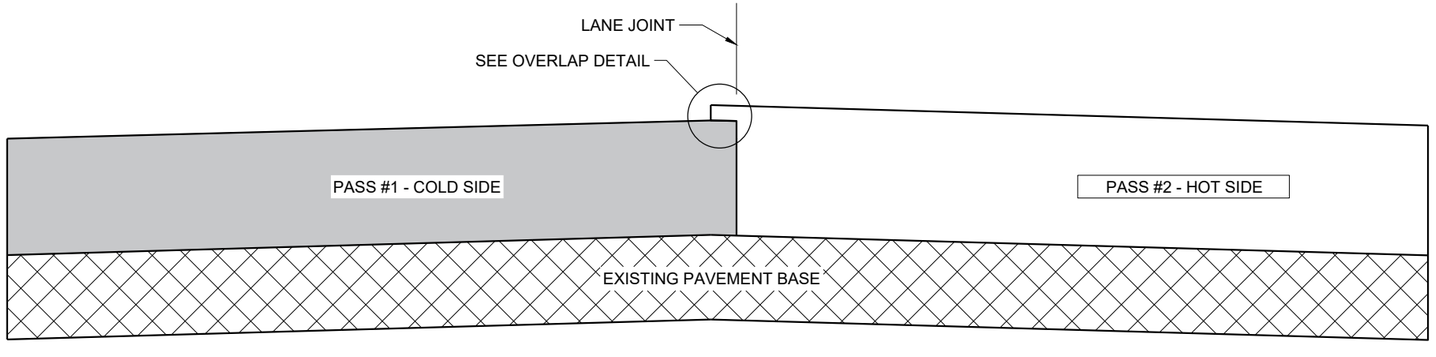
SDD 13C14 - 07c
SDD 13C14 - 07c



TYPICAL PAVEMENT CROSS SECTION
NOTCHED WEDGE JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT (MILLED)

GENERAL NOTES

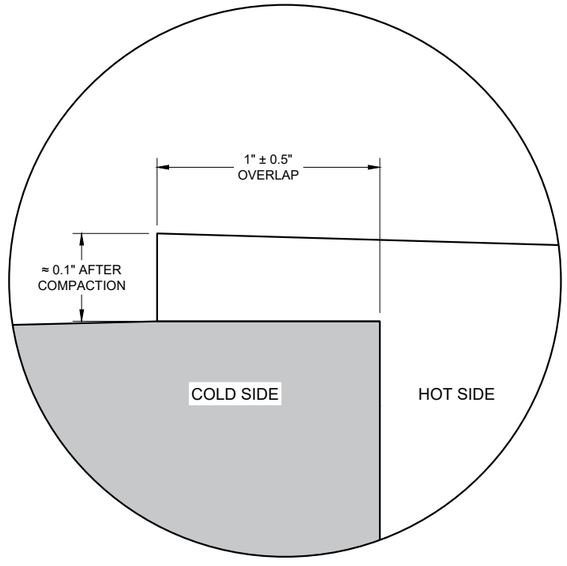
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

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

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

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

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



OVERLAP DETAIL (TYPICAL)

6

6

SDD 13C19 - 03

SDD 13C19 - 03

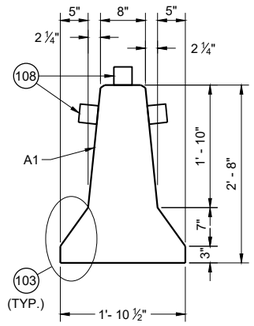
HMA LONGITUDINAL JOINTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

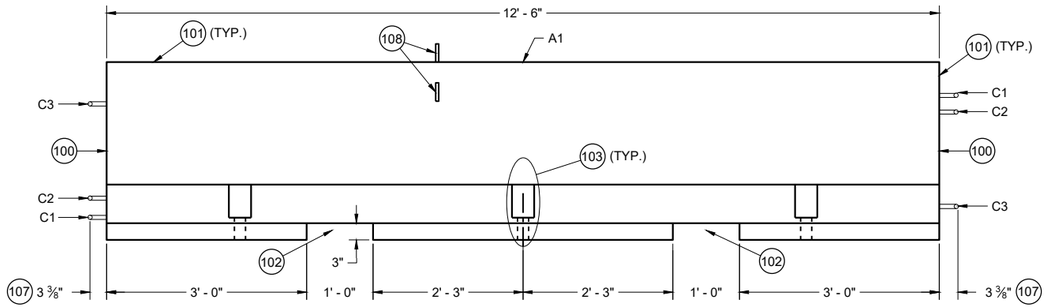
APPROVED
November 2020
DATE

/S/ Steven Hefel
HMA PAVEMENT ENGIN

FHWA



CROSS SECTION



PROFILE VIEW

GENERAL NOTES

PLACE BARRIER ON PAVED SURFACE. BEFORE PLACEMENT OF TEMPORARY BARRIER, REMOVE ALL LOOSE MATERIAL FROM PAVED SURFACE.

LOOP BARS C1, C2 AND C3 ARE NOT FOR PLACEMENT OR MOVEMENT OF BARRIER.

(100) PERMANENTLY FORM INTO ONE END OF BARRIER THE FOLLOWING INFORMATION:
- A. TYPE OF BARRIER: WI-CBTP
- B. MANUFACTURER
- C. DATE OF MANUFACTURE (MONTH AND YEAR)

(101) 1" OPTIONAL CHAMFER

(102) SEE LIFTING SLOT DETAIL

(103) SEE ANCHOR BLOCK DETAIL

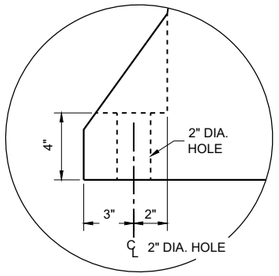
(104) 1 ¾" MIN. CLEAR COVER

(105) 2" MIN. CLEAR COVER

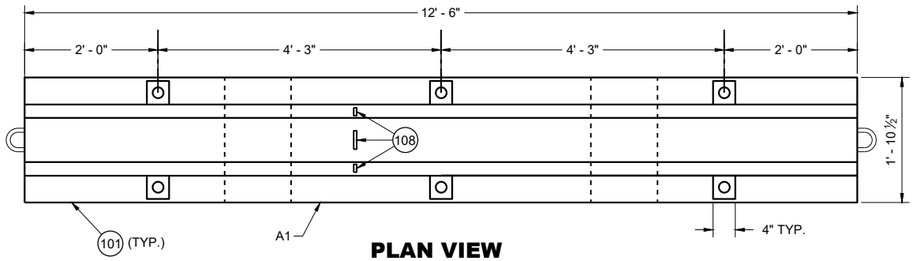
(106) 1" MIN. CLEAR COVER

(107) ± ⅛" MEASURED FROM FACE OF CONCRETE BARRIER TO OUTSIDE OF LOOP BAR (TYP.)

(108) USE DELINEATORS CONFORMING TO SECTION 633 OF THE STANDARD SPECIFICATIONS. CONTRACTOR MY USE ALTERNATE SHAPES AND HOUSING. INSTALL DELINEATORS ACCORDING TO MANUFACTURERS INSTRUCTION. INSTALL YELLOW REFLECTORS WHEN BARRIER IS LOCATED LEFT OF TRAFFIC AND WHITE WHEN BARRIER IS LOCATED RIGHT OF TRAFFIC. SPACE DELINEATORS A MAXIMUM OF 25 FEET APART, PROVIDE TOP MOUNTED DELINEATORS IN ADDITION TO SIDE MOUNTED DELINEATORS ON BARRIER INSTALLATIONS LOCATED ON A CURVED ALIGNMENT LONGER THAT 200 FEET AND ON BARRIERS USED TO SEPARATE OPPOSING TRAFFIC.

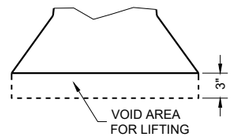


ANCHOR BLOCK DETAIL

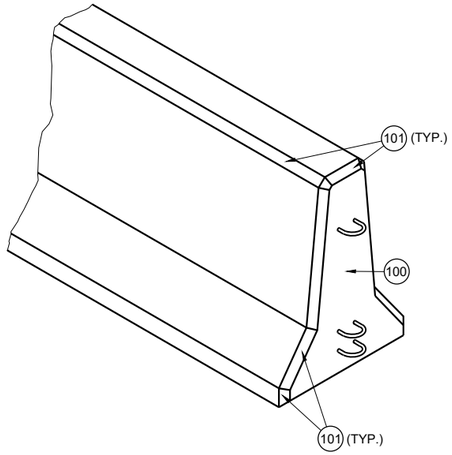


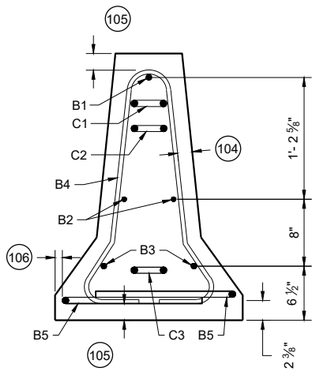
PLAN VIEW

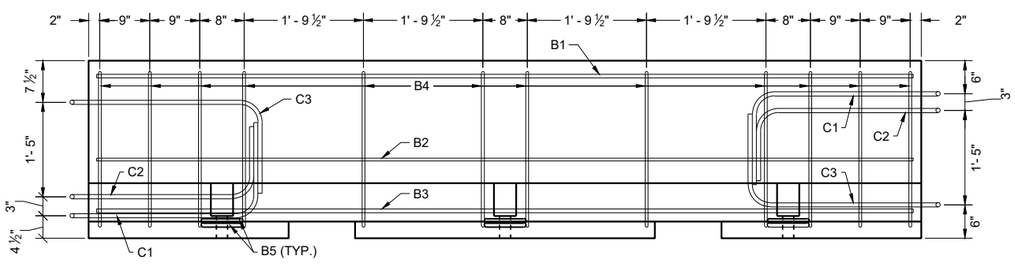
TEMPORARY BARRIER



LIFTING SLOT DETAIL (TYP.)







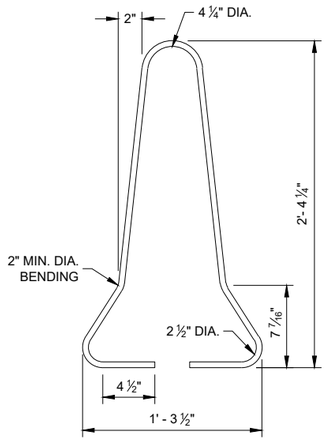
PROFILE VIEW

TEMPORARY BARRIER REINFORCEMENT

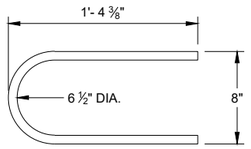
CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

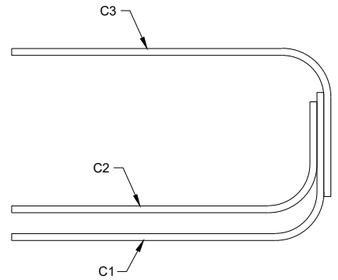
SDD 14B07-16a



B4 BAR DETAIL

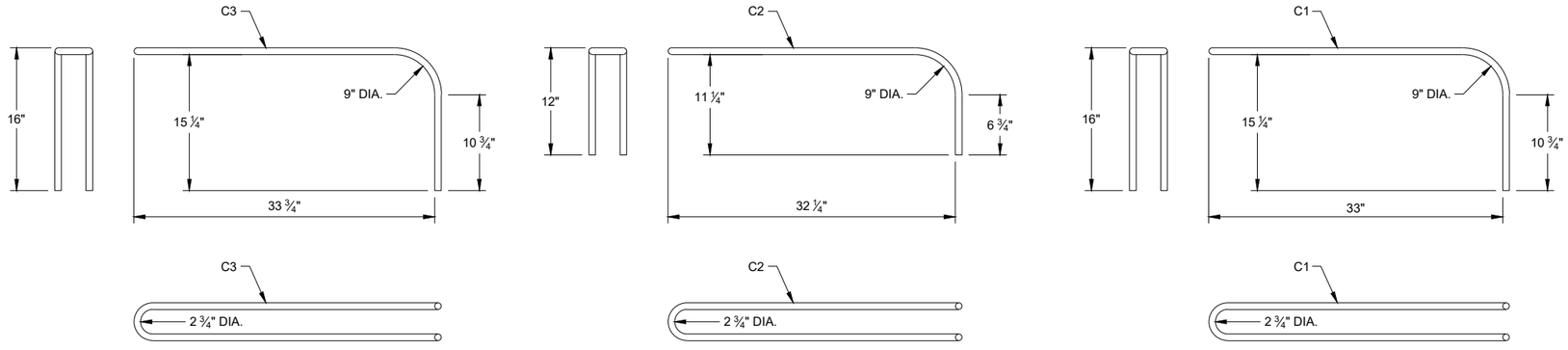


B5 BAR DETAIL



PROFILE VIEW

LOOP BAR ASSEMBLY



C BAR DETAILS

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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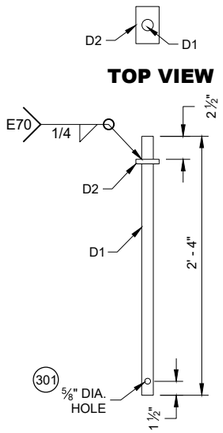
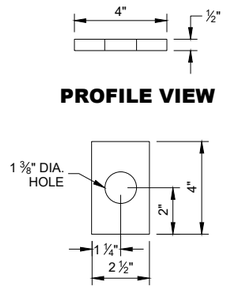
SDD 14B07-16b



TOP VIEW

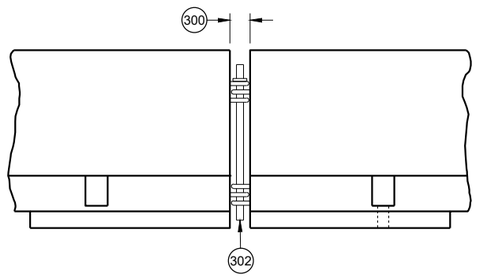
PROFILE VIEW

CONNECTOR PIN ASSEMBLY



PROFILE VIEW

TOP VIEW D2



CONNECTING TEMPORARY BARRIER SECTIONS

GENERAL NOTES

300 SET WITH 3 ⅝" WOOD BLOCK.

301 HOLE IS OPTIONAL.

302 CONNECTOR PIN ASSEMBLY.

303 CONCRETE PAVEMENT, APPROACH SLAB, OR DECK.

304 CONCRETE DECK.

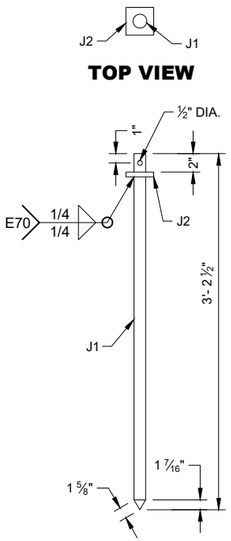
305 DO NOT USE ON CONCRETE BRIDGE DECK WITH ASPHALT OVERLAY OR CONCRETE PAVEMENT WITH ASPHALT OVERLAY.

306 MINIMUM OF 2" OF ASPHALT.

307 ASPHALT ANCHOR PIN ASSEMBLY

308 IF DRILLING A PILOT HOLE, THE MAX, DIA. OF THE HOLE IS 3/4"

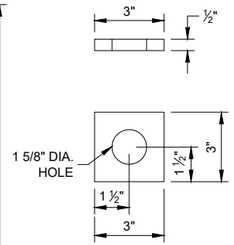
309 WHEN THERE IS ASPHALT OVERLAYING CONCRETE PAVEMENT, A 1 5/8" DIA. PILOT HOLE CAN BE DRILLED INTO THE OVERLAY AND CONCRETE. IF NEEDED DRILL A 3/4" PILOT HOLE IN BASE COURSE.



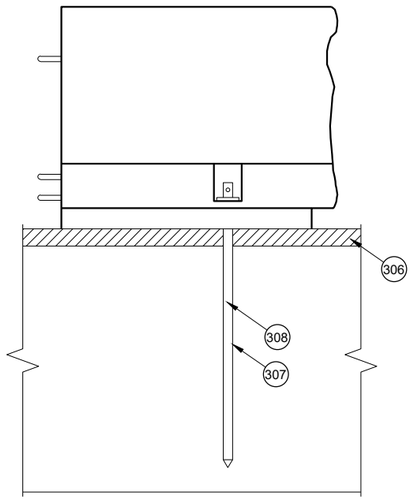
TOP VIEW

PROFILE VIEW

ASPHALT ANCHOR PIN ASSEMBLY

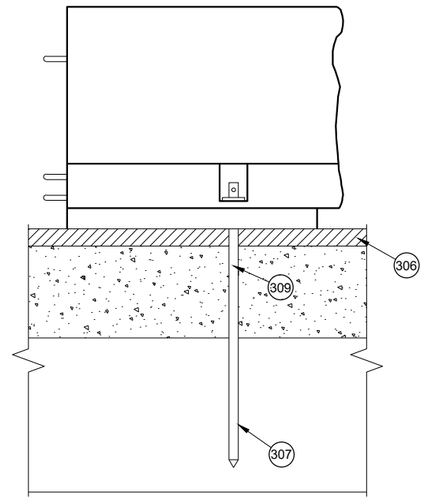


TOP VIEW J2



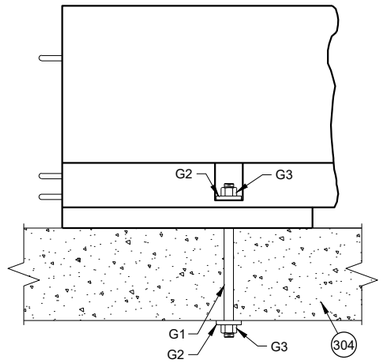
SIDE VIEW

ASPHALT ANCHOR INSTALLATION THROUGH ASPHALT PAVEMENT



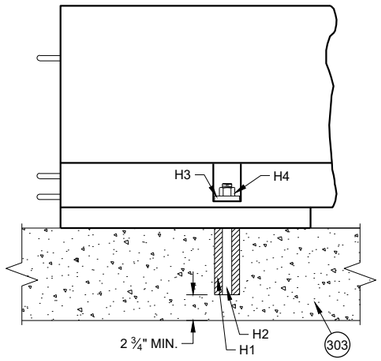
SIDE VIEW

ASPHALT ANCHOR INSTALLATION THROUGH ASPHALT OVERLAY ON TOP OF CONCRETE PAVEMENT



SIDE VIEW

THROUGH BOLT ANCHOR INSTALLATION (305)



SIDE VIEW

ADHESIVE ANCHOR INSTALLATION (305)

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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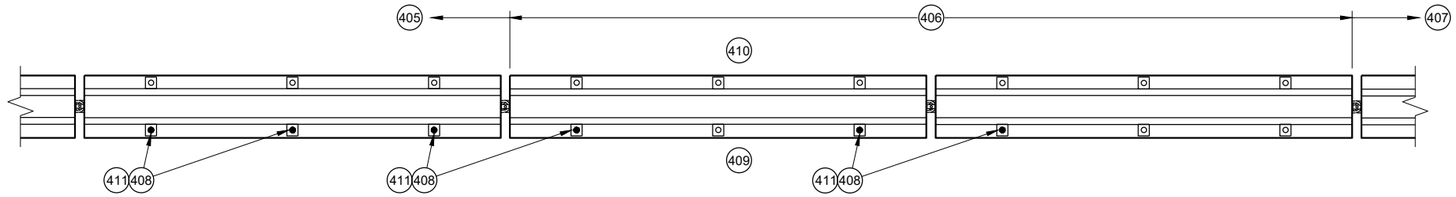
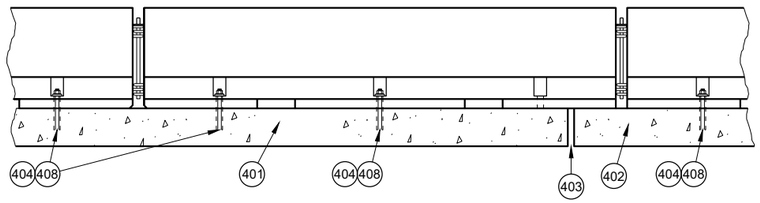
SDD 14B07-16c



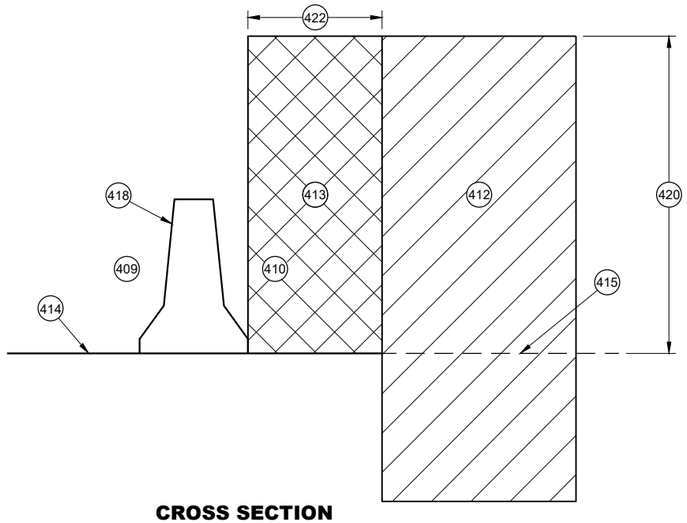
PLAN VIEW

TRANSITION FROM FREE STANDING TO ANCHORED BARRIER



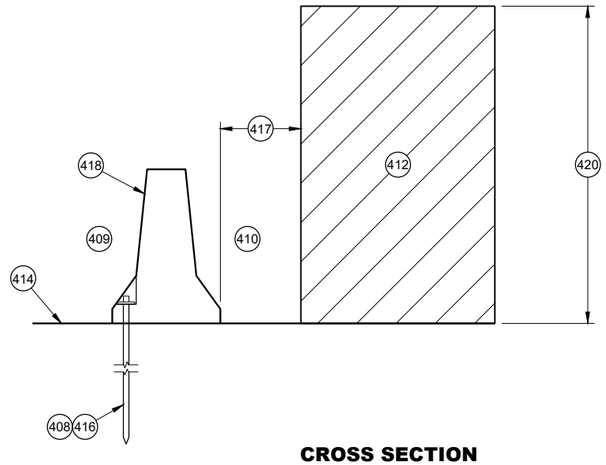
PROFILE VIEW

ANCHORED BARRIER NEAR EXPANSION JOINT (400)



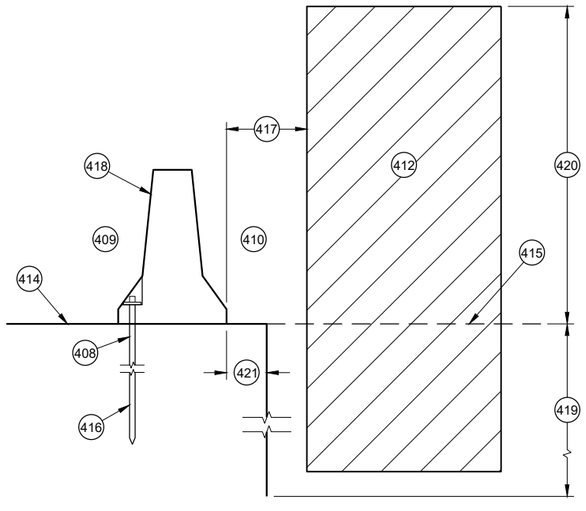
CROSS SECTION

FREE STANDING BARRIER



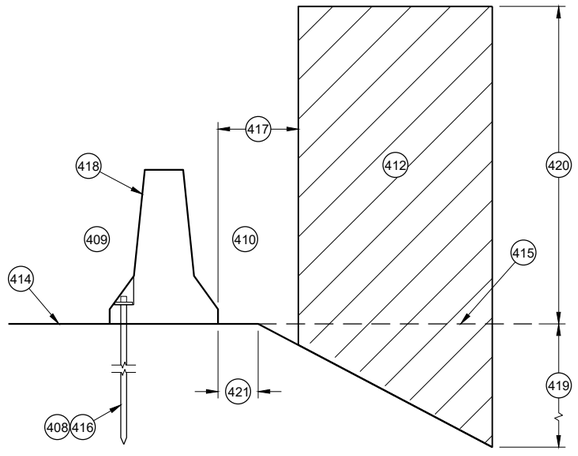
CROSS SECTION

ANCHORED BARRIER FOR OBJECTS ABOVE THE GRADE LINE AND NEAR THE BARRIER



CROSS SECTION

ANCHORED BARRIER NEAR VERTICAL DROP OFF



CROSS SECTION

ANCHORED BARRIER NEAR A SLOPE

GENERAL NOTES

(400) NO SINGLE CONCRETE BARRIER SECTION SHALL BE ANCHORED TO BOTH THE BRIDGE DECK AND THE APPROACH SLAB. ALL ANCHOR BOLT LOCATIONS SHALL BE ANCHORED TO THE DECK IN ACCORDANCE WITH THE DETAIL. NO MORE THAN ONE ANCHOR BOLT SHALL BE ELIMINATED FROM A BARRIER SECTION WHEN SPANNING AN EXPANSION JOINT.

(401) CONCRETE DECK

(402) CONCRETE DECK OR APPROACH SLAB.

(403) EXPANSION JOINT

(404) ADHESIVE ANCHOR SHOWN. SEE ANCHOR DETAILS.

(405) ANCHORED TEMPORARY BARRIER

(406) TRANSITION FROM ANCHORED TEMPORARY BARRIER TO FREE STANDING

(407) FREE STANDING BARRIER

(408) REMOVE ALL ANCHORS WHEN NO LONGER NEEDED. FILL CONCRETE PAVEMENTS, DECKS AND APPROACH SLABS WITH NON-SHRINK COMMERCIAL GROUT FROM THE APPROVED PRODUCT LIST. FILL ASPHALT PAVEMENTS WITH ASTM D6690 TYPE II RUBBERIZED CRACK FILLER.

(409) TRAFFIC SIDE

(410) NON-TRAFFIC SIDE

(411) ANCHOR LOCATION. SEE ANCHORING DETAILS.

(412) WORK AREA

(413) AREA FREE OF OBJECTS AND WORKERS

(414) GRADE LINE

(415) EXTENDED GRADE LINE

(416) ANCHORED TEMPORARY BARRIER. SEE BOLT THROUGH DECK, REMOVABLE ADHESIVE ANCHOR, OR AN ASPHALT ANCHOR ROD DETAILS FOR MORE INFORMATION. ASPHALT ANCHOR ROD SHOWN.

(417) WHEN OBJECTS EXTEND ABOVE THE GRADE. A MINIMUM OF 1 FOOT IS REQUIRED FROM BACK OF BARRIER TO OBJECT.

(418) OBJECTS ARE NOT TO BE PLACED ON, MOUNTED TO, OR ALLOWED TO LEAN AGAINST THE BARRIER WITHOUT WRITTEN PERMISSION OF THE PROJECT ENGINEER.

(419) DEPTHS OF 3 FEET OR MORE.

(420) Y = 6.5'

(421) OFFSET FROM BACK OF BARRIER EDGE:

CONCRETE PAVEMENT	0.5'
ASPHALT	0.5'

(422) POSTED SPEED (MPH):

45 OR GREATER	4.0'
40 OR LOWER	2.0'

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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SDD 14B07-16d

GENERAL NOTES

(500) EXISTING RIGID BARRIERS (VARIES)

(501) TEMPORARY BARRIER

(502) SEE OTHER DETAIL ON HOW TO ANCHOR TEMPORARY BARRIER (BARRIER ASPHALT ANCHOR SHOWN).

(503) ANCHORS ARE REQUIRED ON BOTH SIDE OF THE TEMPORARY BARRIER.

(504) NESTED RAILS ARE REQUIRED ON BOTH SIDES OF THE TEMPORARY BARRIER FOR ALL INSTALLATIONS.

(505) TRAFFIC TRAVELS FROM PERMANENT BARRIER TO TEMPORARY BARRIER.

(506) TRAFFIC TRAVELS FROM TEMPORARY BARRIER TO PERMANENT BARRIER.

(507) VERTICAL BARRIER

(508) SAFETY SHAPE BARRIER

(509) SINGLE SLOPE BARRIER

(510) CAP END PLATE PLACED FLUSH WITH UPSTREAM END OF RIGID BARRIER.

(511) BENT THRIE BEAM TO FIT.

(512) THRIE BEAM PIECES ARE OFFSET 15 ¼" TO PREVENT INTERFERENCE FROM THE ANCHORS ON OPPOSING SIDES.

(513) TWO (2) P1, P2 AND P3 ARE REQUIRED

(514) FIVE (5) N1, N2 AND N3 ARE REQUIRED

(515) TWO (2) R1, R2 AND R3 ARE REQUIRED

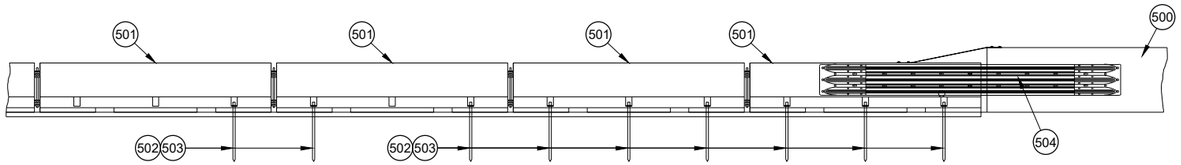
(516) CUT WOOD BLOCK TO FIT.

(517) SEE THRIE BEAM RAIL TERMINAL CONNECTOR DETAIL ASSEMBLY.

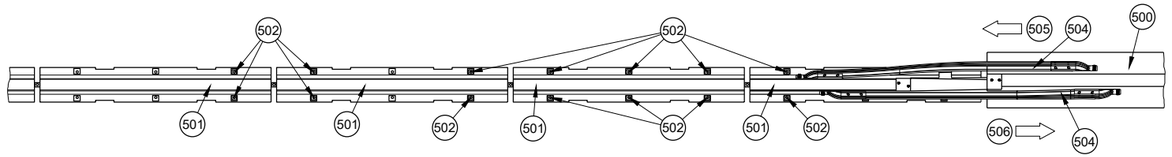
(518) CAP ASSEMBLY

(519) 4" MAX. GAP BETWEEN TEMPORARY BARRIER AND RIGID BARRIER.

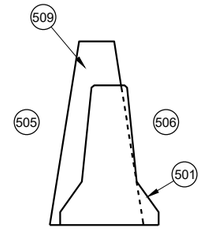
(520) ALL TWELVE SPLICE HOLES REQUIRE M1 AND M2



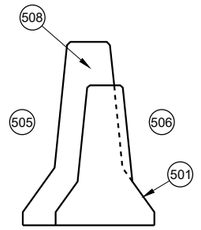
PROFILE VIEW



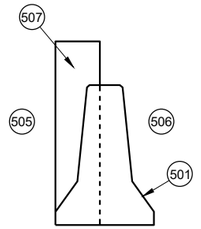
PLAN VIEW
TRANSITION TO RIGID BARRIER



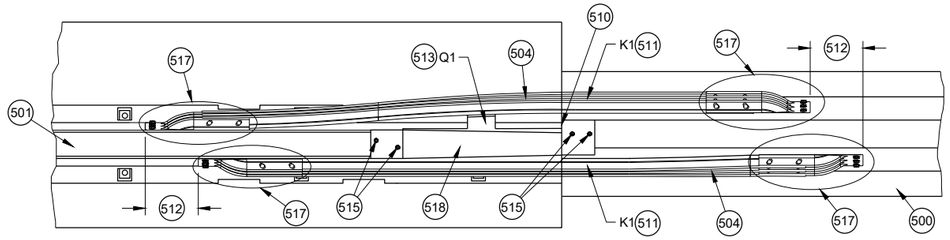
CROSS SECTION TEMPORARY BARRIER PLACEMENT SINGLE SLOPE



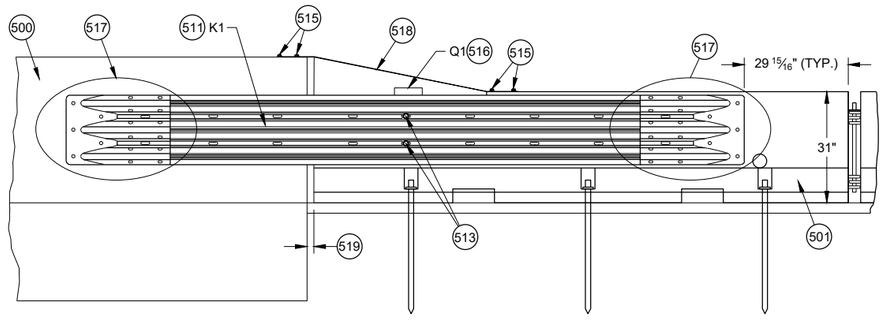
CROSS SECTION TEMPORARY BARRIER PLACEMENT SAFETY SHAPE



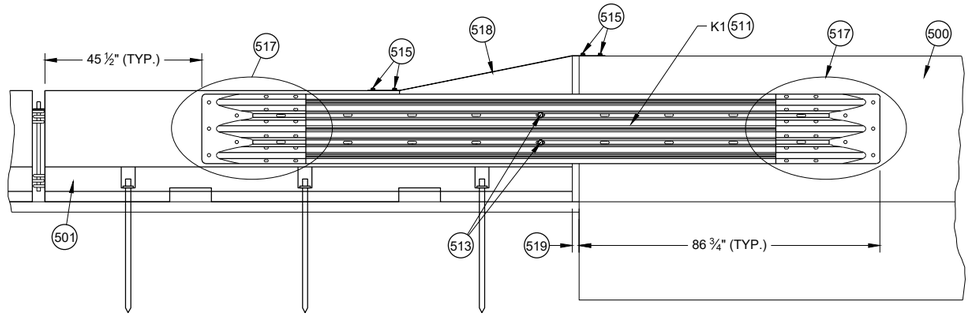
CROSS SECTION TEMPORARY BARRIER PLACEMENT VERTICAL



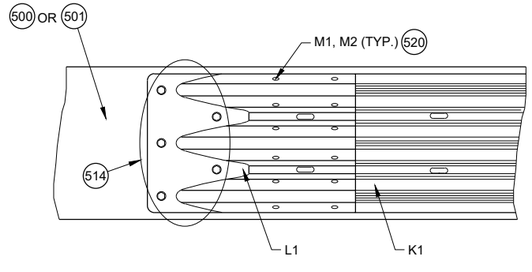
PLAN DETAIL VIEW
TRANSITION TO RIGID BARRIER



BACK DETAIL VIEW
TRANSITION TO RIGID BARRIER



FRONT DETAIL VIEW
TRANSITION TO RIGID BARRIER



(517) **DETAIL PLAN VIEW**
THRIE BEAM RAIL TERMINAL CONNECTOR ASSEMBLY

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
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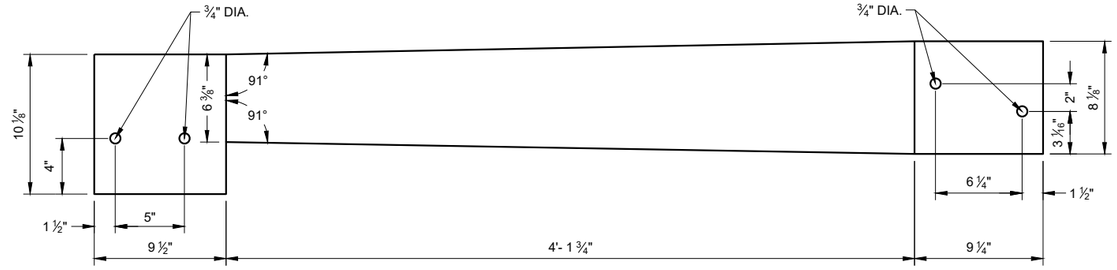
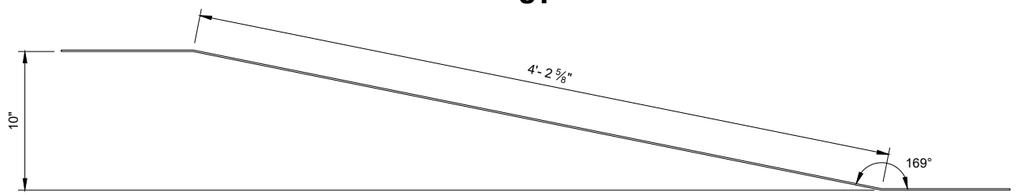
6

SDD 14B07-16e



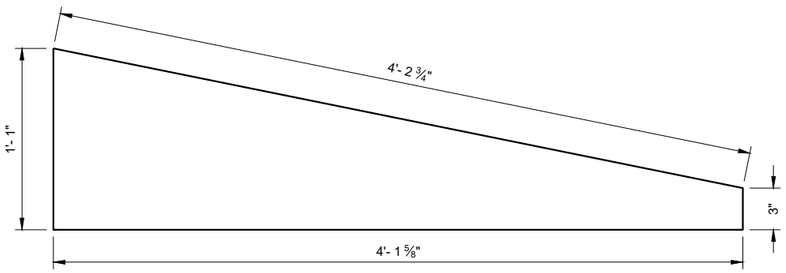
TOP VIEW

S1



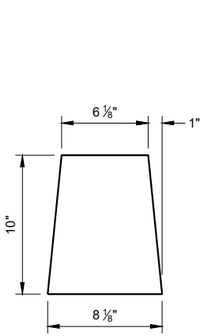
ELEVATION VIEW

S1



SIDE VIEW

S3



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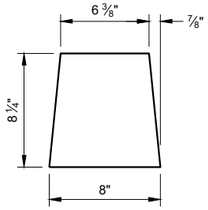

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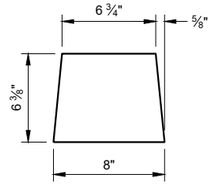

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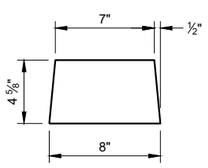

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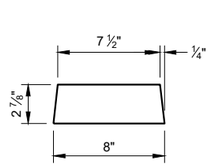

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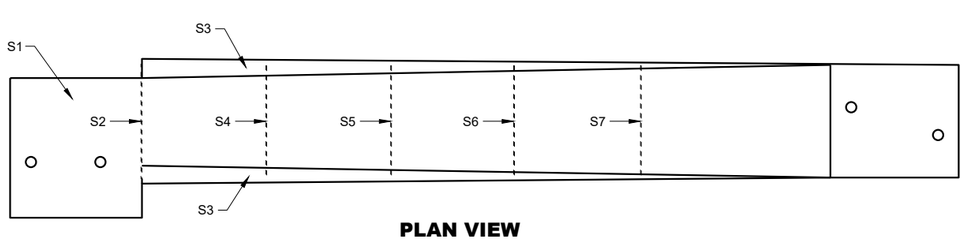
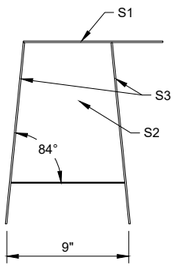
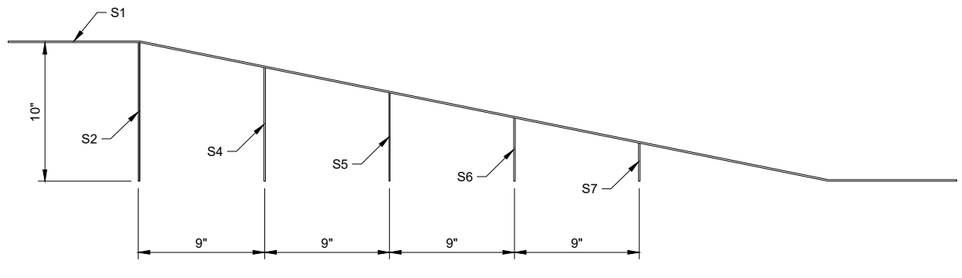


PLAN VIEW



BACK VIEW



SIDE VIEW (600)

42" TOP CAP ASSEMBLY

GENERAL NOTES

STITCH WELD GUSSET PLATES AND END PLATES ON THREE SIDES

STITCH WELD TWO SIDE PLATES TO TOP PLATE, END PLATE AND GUSSETS.

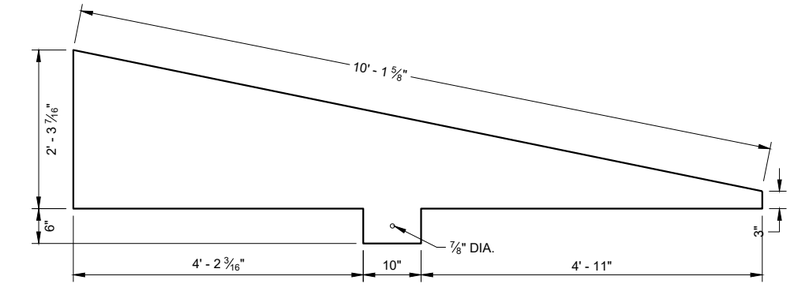
(600) SIDE PLATES (S3) NOT SHOWN FOR CLARITY.

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

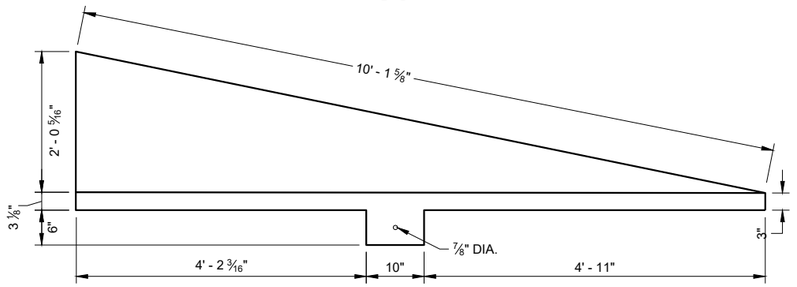
6

SDD 14B07-16f



SIDE VIEW
T4

END VIEW



SIDE VIEW
T3

END VIEW

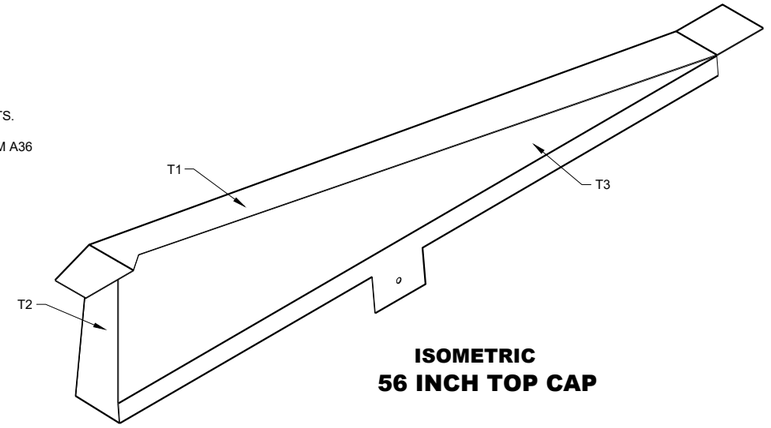
GENERAL NOTES

STITCH WELD GUSSET PLATES AND END PLATES ON THRIE SIDES

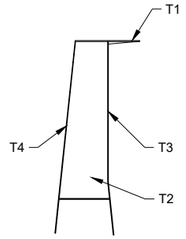
STITCH WELD TWO SIDE PLATES TO TOP PLATE, END PLATE AND GUSSETS.

SIDE PLATES, TOP PLATE, END PLATE AND GUSSETS ARE 12 GAUGE ASTM A36 GALVANIZED STEEL.

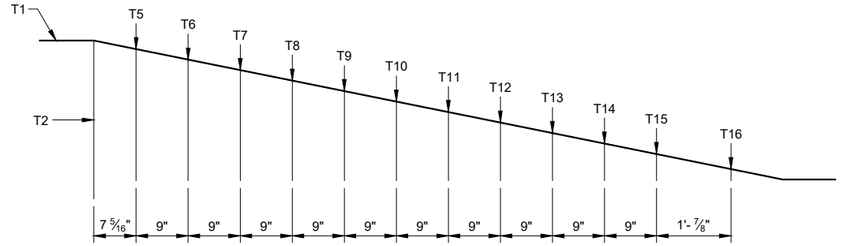
(700) SIDE PLATES (T3 AND T4) NOT SHOWN FOR CLARITY.



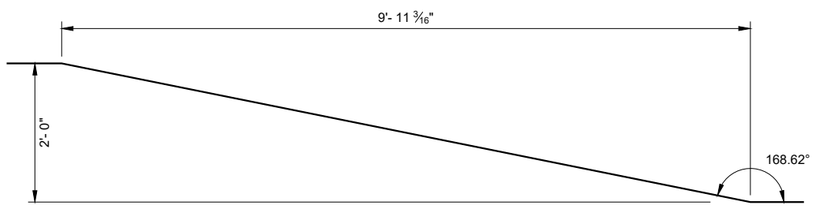
ISOMETRIC
56 INCH TOP CAP



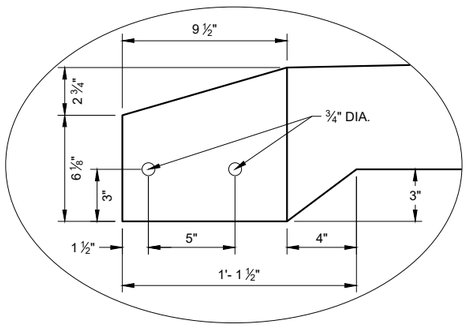
END VIEW
56 INCH TOP CAP



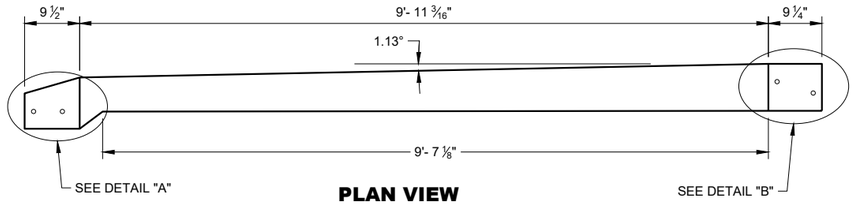
SIDE VIEW (700)
56 INCH TOP CAP



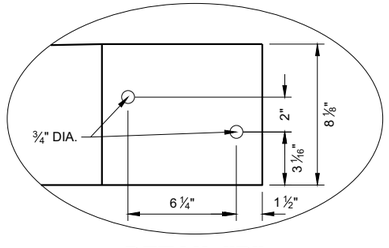
SIDE VIEW
TOP PLATE T1



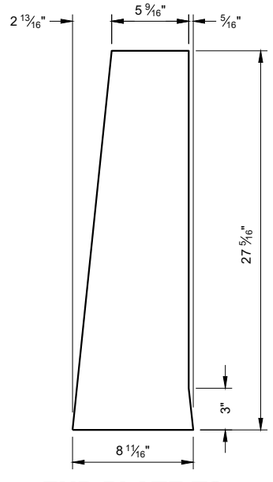
DETAIL "A"



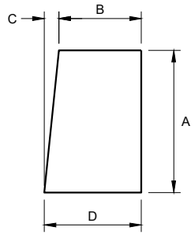
PLAN VIEW
TOP PLATE T1



DETAIL "B"



END PLATE T2



GUSSET PLATES
T5 - T16

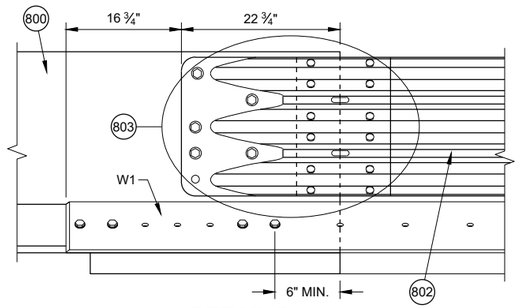
GUSSET DIMENSIONS				
GUSSET NO.	A	B	C	D
T5	22 13/16"	5 1/16"	2 5/16"	8 1/16"
T6	21"	5 7/8"	2 3/16"	8 1/16"
T7	19 3/16"	6 1/16"	1 15/16"	8 1/16"
T8	17 3/8"	6 1/4"	1 13/16"	8 1/16"
T9	15 5/16"	6 7/16"	1 9/16"	8 1/16"
T10	13 3/4"	6 5/8"	1 7/16"	8 1/16"
T11	11 15/16"	6 13/16"	1 1/4"	8 1/16"
T12	10 1/8"	7"	1 1/16"	8 1/16"
T13	8 5/16"	7 3/16"	7/8"	8 1/16"
T14	6 1/2"	7 3/8"	1 1/16"	8 1/16"
T15	4 11/16"	7 9/16"	1/2"	8"
T16	2 7/8"	7 3/4"	1/4"	8"

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

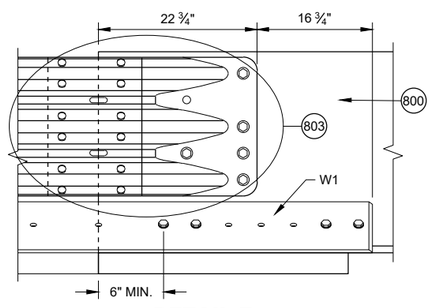
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 14B07-16g



DETAIL D



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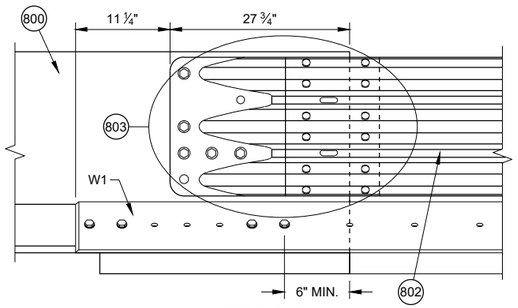

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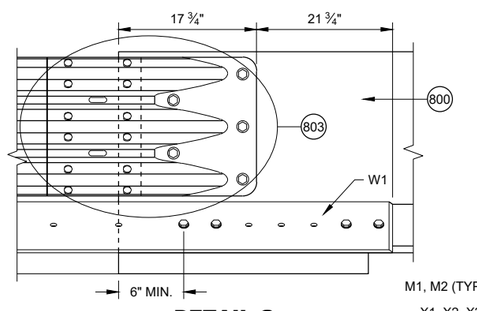
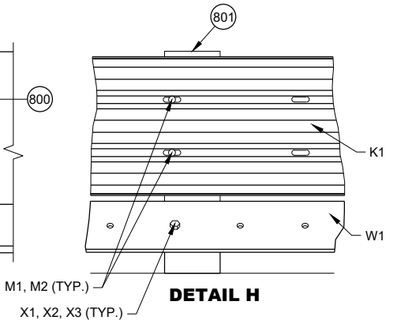
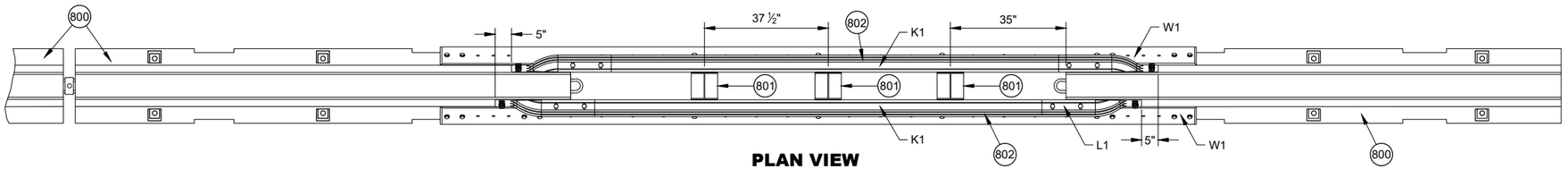


DETAIL G



DETAIL H



PLAN VIEW

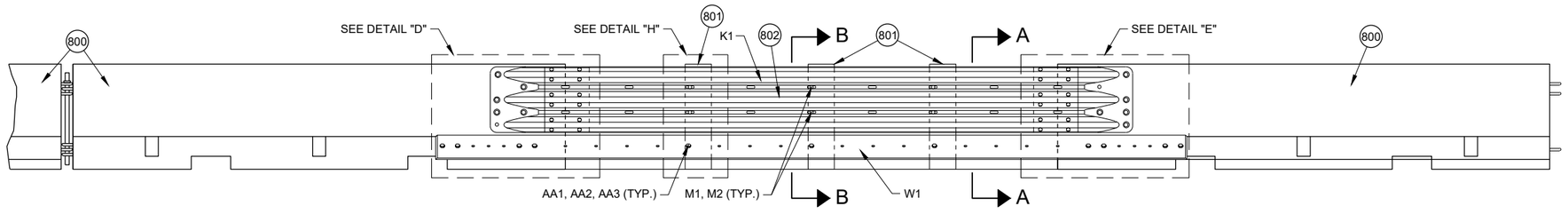
GENERAL NOTES

(800) FREE STANDING TEMPORARY BARRIER

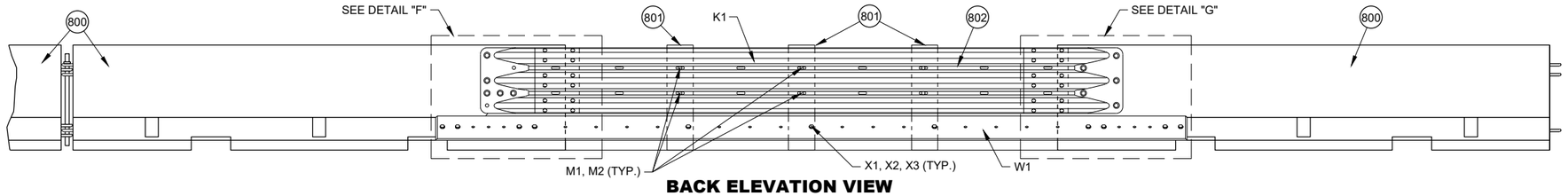
(801) GAP STIFFENER ASSEMBLY

(802) THRIE BEAMS ARE NESTED ON BOTH SIDES OF THE TEMPORARY BARRIER.

(803) SEE THRIE BEAM RAIL TERMINAL CONNECTOR DETAIL



FRONT ELEVATION VIEW



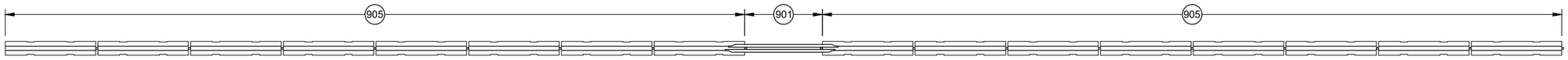
BACK ELEVATION VIEW

PORTABLE CONCRETE BARRIER GAP THRIE BEAM COVER

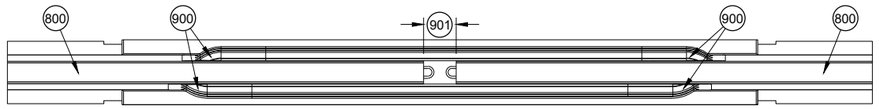
CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
SDD 14B07-16h



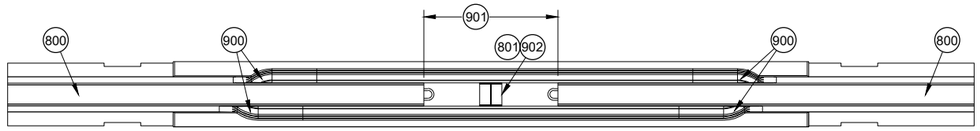
PLAN VIEW
GAP WITHIN SPACING



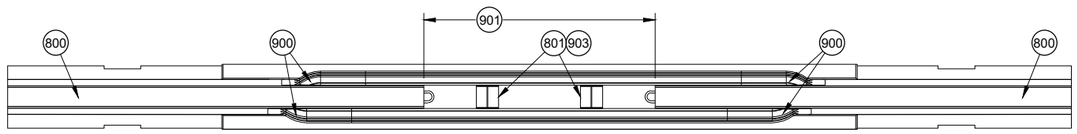
PLAN VIEW
TEMPORARY BARRIER GAP OVER 4" TO 1' MAX. (904)

GENERAL NOTES

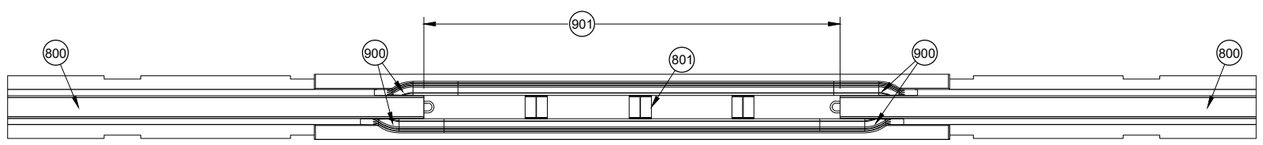
(900) SEE OTHER DETAILS FOR TEMPORARY GAP HARDWARE (TYP.)
(901) TEMPORARY BARRIER GAP
(902) GAP STIFFENER ASSEMBLY CENTERED IN THE GAP.
(903) GAP STIFFENER ASSEMBLY IS OFFSET 18 ¾" FROM CENTER
(904) MINIMUM NUMBER OF GAP STIFFENERS SHOWN FOR THE GAP RANGE SHOWN.
(905) MINIMUM OF 8 CONTINUOUS FREE STANDING TEMPORARY BARRIERS



PLAN VIEW
TEMPORARY BARRIER GAP OVER 1' TO 4' MAX. (904)



PLAN VIEW
TEMPORARY BARRIER GAP OVER 4' TO 7' MAX. (904)



PLAN VIEW
TEMPORARY BARRIER GAP OVER 7' TO 12.5' MAX. (904)

6

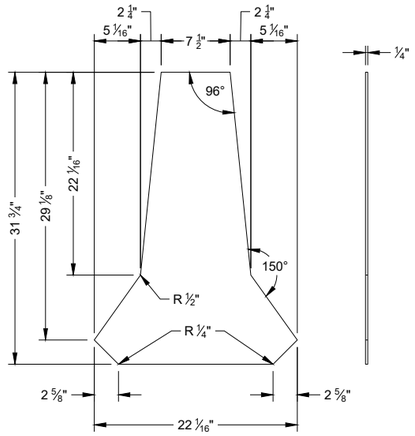
SDD 14B07-16i

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

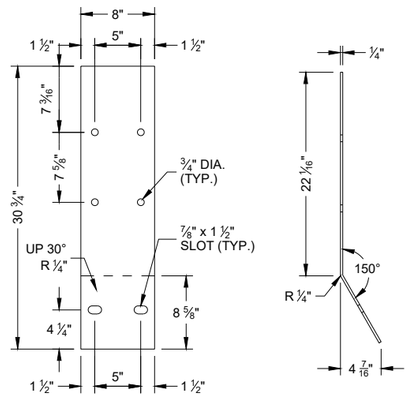
6

SDD 14B07-16i



PROFILE VIEW SIDE VIEW

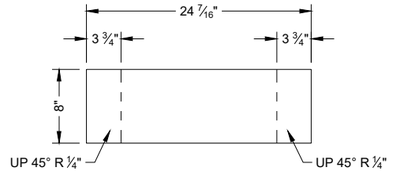
STIFFENER ASSEMBLY CENTER PANEL U1



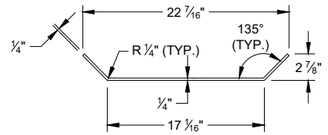
FLAT PATTERN

SIDE VIEW

STIFFENER ASSEMBLY SIDE PANEL U2

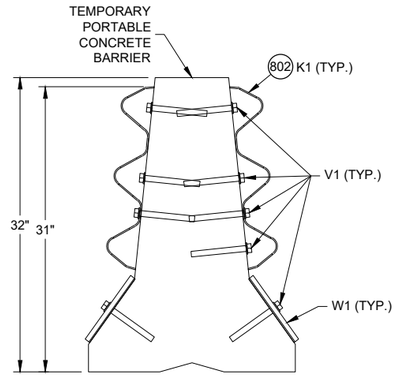


FLAT PATTERN

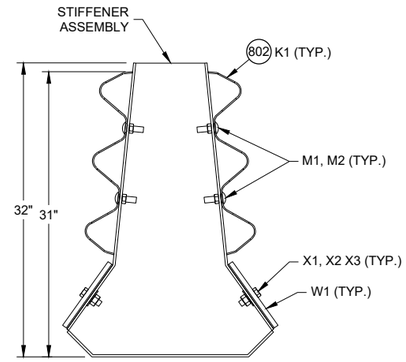


PROFILE VIEW

STIFFENER ASSEMBLY BOTTOM PANEL U3

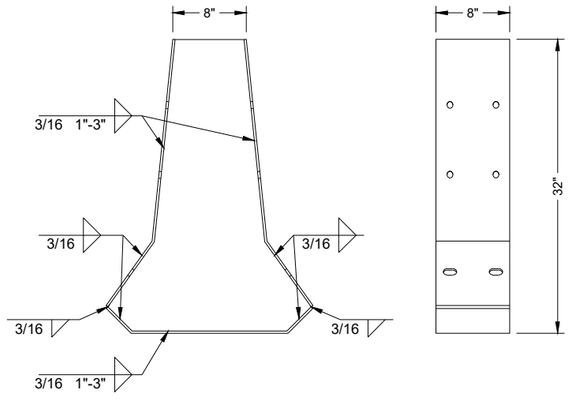


SECTION A - A



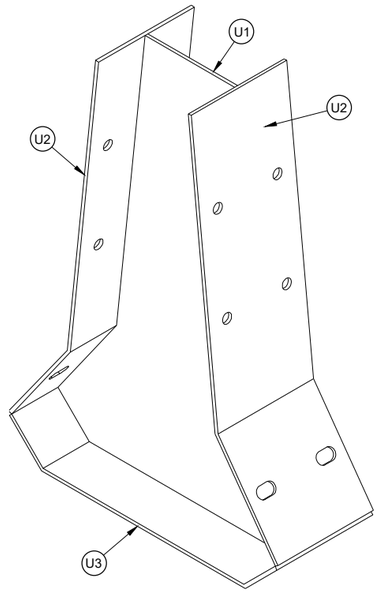
SECTION B - B

PLAN VIEW



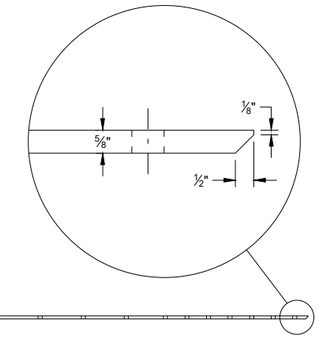
PROFILE VIEW

SIDE VIEW

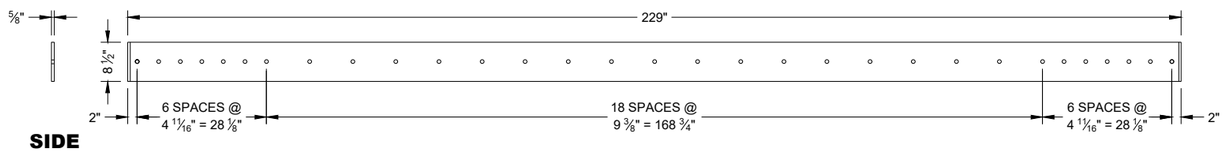


ISOMETRIC

GAP STIFFENER ASSEMBLY



PLAN VIEW



SIDE VIEW

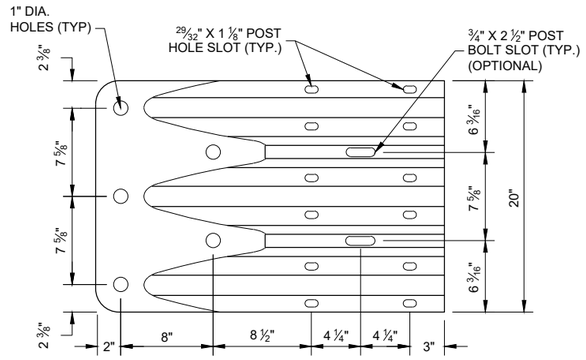
ELEVATION VIEW

W1 TOE PLATE

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

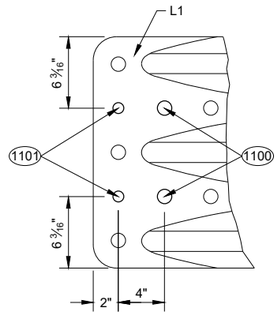
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
SDD 14B07-16j



ELEVATION VIEW

THRIE BEAM TERMINAL CONNECTOR



ELEVATION VIEW

ADDITIONAL THRIE BEAM (1102) TERMINAL CONNECTOR HOLE DETAIL

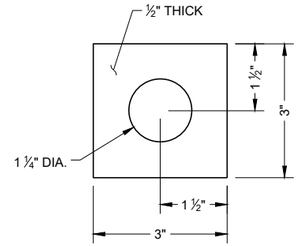


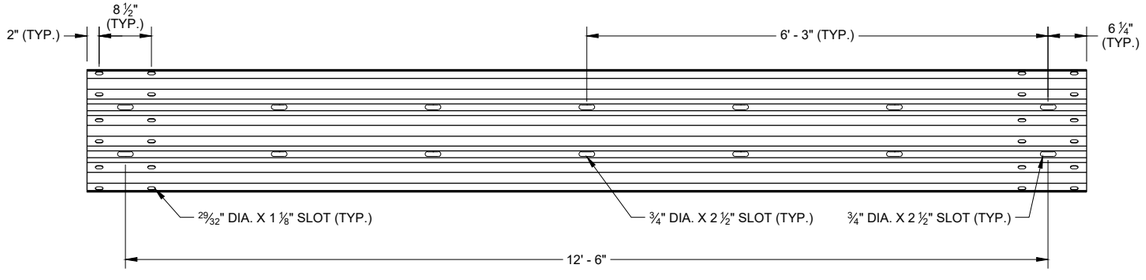
PLATE WASHER DETAIL G2, H3

GENERAL NOTES

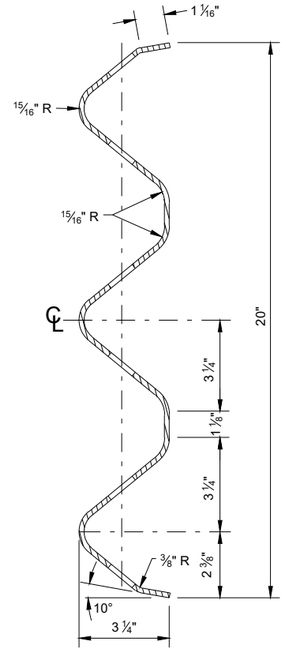
(1100) 1" DIA. HOLE

(1101) 3/4" DIA. HOLE

(1102) PROVIDE HOLES IN THRIE BEAM TERMINAL CONNECTOR TO LIMIT STEEL REINFORCEMENT OR LOOP BAR CONFLICT. CONTRACTOR MAY FIELD DRILL ADDITIONAL HOLE OR PROVIDE THRIE BEAM TERMINAL CONNECTOR WITH ADDITIONAL HOLES FROM SUPPLIER.



SLOTTED THRIE BEAM RAIL K1



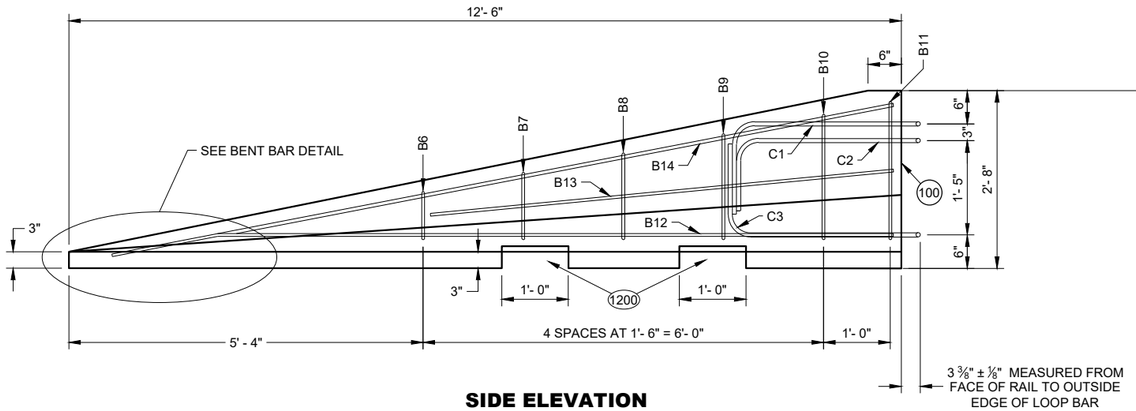
SECTION THROUGH BEAM K1

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

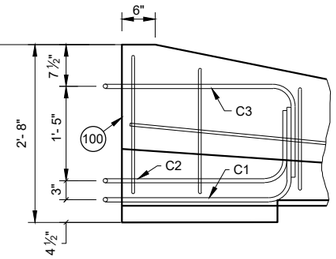
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 14B07-16k



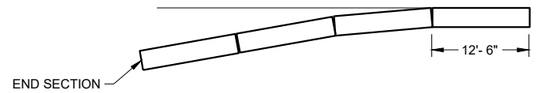
SIDE ELEVATION
(FOR CONNECTION TO LEFT END OF BARRIER)



SIDE ELEVATION
LOOP BAR ASSEMBLY INVERTED FOR OPPOSITE END
(FOR CONNECTION TO RIGHT END OF BARRIER)

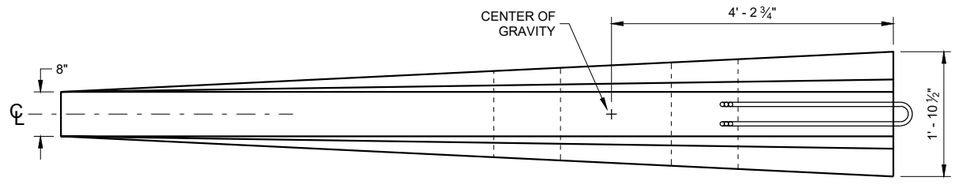
GENERAL NOTES

(1200) SEE LIFTING SLOT DETAIL. LOCATION OF LIFTING SLOTS DETERMINED BY CONTRACTOR.

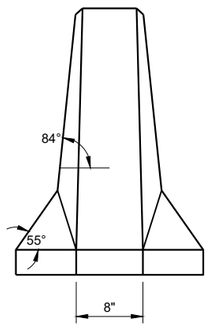


FLARE AT BARRIER END

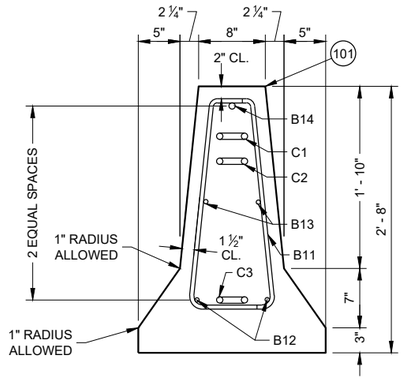
POSTED SPEED, (MPH)	FLARE RATE
40 OR LESS	6:1
45 OR GREATER	8:1



PLAN VIEW

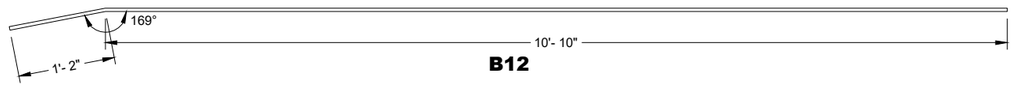


FRONT ELEVATION

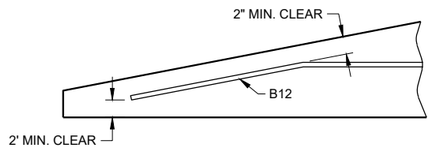


END SECTION

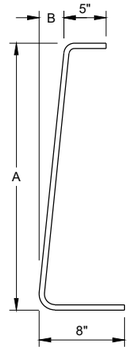
DETAILS OF BARRIER TAPER SECTION



B12



BENT BAR DETAIL



BAR	A	B
B6	10"	1"
B7	1'- 1"	1 ¼"
B8	1'- 5"	1 ⅝"
B9	1'- 8"	1 ⅞"
B10	2'- 0 ½"	2 ⅜"
B11	2'- 3"	2 ¾"

B BARS
2 OF EACH SIZE REQUIRED FOR STIRRUP ASSEMBLY

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

BILL OF MATERIALS - CONCRETE BARRIER PRECAST

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
A1	PRECAST TEMPORARY BARRIER - CONCRETE	MIN. = f'c 5000 PSI	
B1	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#5 REBAR, LENGTH 12'-2"
B2	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 12'-2"
B3	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#5 REBAR, LENGTH 12'-2"
B4	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 6'-0"
B5	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#6 REBAR, LENGTH 2'-11"
B6	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 1'-11"
B7	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 2'-2"
B8	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 2'-6"
B9	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 2'-9"
B10	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 3'-2"
B11	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 3'-4"
B12	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 12'-0"
B13	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 7'-9"
B14	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#5 REBAR, LENGTH 11'-9"
C1	LOOP BAR	ASTM A709 GRADE 70 SMOOTH BAR OR ASTM A706 GRADE 60 REBAR UNCOATED	¾" DIA.
C2	LOOP BAR	ASTM A709 GRADE 70 SMOOTH BAR OR ASTM A706 GRADE 60 REBAR UNCOATED	¾" DIA.
C3	LOOP BAR	ASTM A709 GRADE 70 SMOOTH BAR OR ASTM A706 GRADE 60 REBAR UNCOATED	¾" DIA.
D1	CONNECTION PIN - ROD	ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI	1 ¼" DIA.
D2	CONNECTION PIN - TOP PLATE	ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI	
G1	BOLT THROUGH ANCHOR - THREADED ROD	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 A307 GRADE A OR SAE J429 GRADE 2 UNC	1 ⅛" DIA.
G2	BOLT THROUGH ANCHOR - WASHER, SQUARE	ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI	
G3	BOLT THROUGH ANCHOR - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	
H1	ADHESIVE ANCHOR - ADHESIVE	ICC-ES-AC308 5 ¼" EMBEDMENT WITH A MIN. BOND STRENGTH OF 1,650 PSI. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.	
H2	ADHESIVE ANCHOR - THREADED ROD	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 A307 GRADE A / SAE J429 GRADE 2 UNC	1 ⅛" DIA.
H3	ADHESIVE ANCHOR - WASHER, SQUARE	ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI	
H4	ADHESIVE ANCHOR - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	
J1	ASPHALT ANCHOR PIN - ROD	ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI	1 ½" DIA.
J2	ASPHALT ANCHOR PIN - STOP PLATE	ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI	
K1	THRIE BEAM RAIL	AASHTO M180 CLASS A TYPE 2 APPROVED PRODUCER	12 GAUGE
L1	THRIE BEAM RAIL - TERMINAL	AASHTO M180 CLASS A TYPE 2 APPROVED PRODUCER	12 GAUGE

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
M1	SPLICE BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 UNC AASHTO M180 HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36	⅝" DIA.
M2	SPLICE BOLT - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 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	
N1	THRIE BEAM RAIL TERMINAL - MECHANICAL ANCHOR	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 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	¾" DIA. LENGTH 6"
N2	THRIE BEAM RAIL TERMINAL - WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 F436 TYPE 1	
N3	THRIE BEAM RAIL TERMINAL MECHANICAL OR ADHESIVE ANCHOR	MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 17.9 KIPS AND ULTIMATE SHEAR LOAD 21.96 KIPS. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.	
P1	THRIE BEAM RAIL CONNECTION 1-BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 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	¾" DIA.
P2	THRIE BEAM RAIL CONNECTION 1-WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 F436 TYPE 1	
P3	THRIE BEAM RAIL CONNETION 1- MECHANICAL OR ADHESIVE ANCHOR	MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 9.48 KIPS AND ULTIMATE SHEAR LOAD 10.48 KIPS. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.	
Q1	BLOCK WOOD	SEE STANDARD SPEC. 614	
R1	CAP - BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 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	⅝" DIA.
R2	CAP- BOLT - WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 F436 TYPE 1	
R3	CAP - BOLT - MECHANICAL ANCHOR	MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS ULTIMATE TENSILE LOAD 12.14 KIPS AND ULTIMATE SHEAR LOAD 17.5 KIPS.SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.	12 GAUGE
S1	CAP 42-INCH TOP 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	12 GAUGE
S2	CAP 42-INCH 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	12 GAUGE
S3	CAP 42-INCH SIDE 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	12 GAUGE
S4	CAP 42-INCH GUSSET 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	12 GAUGE
S5	CAP 42-INCH GUSSET 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	12 GAUGE
S6	CAP 42-INCH GUSSET 3	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	12 GAUGE
S7	CAP 42-INCH GUSSET 4	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	12 GAUGE

6

SDD 14B07-16m

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

6

SDD 14B07-16m

BILL OF MATERIALS - CONCRETE BARRIER PRECAST

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
T1	CAP 56-INCH TOP 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	12 GAUGE
T2	CAP 56-INCH 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	12 GAUGE
T3	CAP 56-INCH SIDE 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	12 GAUGE
T4	CAP 56-INCH SIDE 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	12 GAUGE
T5	CAP 56-INCH GUSSET 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	12 GAUGE
T6	CAP 56-INCH GUSSET 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	12 GAUGE
T7	CAP 56-INCH GUSSET 3	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	12 GAUGE
T8	CAP 42-INCH GUSSET 4	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	12 GAUGE
T9	CAP 42-INCH GUSSET 5	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	12 GAUGE
T10	CAP 42-INCH GUSSET 6	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	12 GAUGE
T11	CAP 42-INCH GUSSET 7	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	12 GAUGE
T12	CAP 42-INCH GUSSET 8	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	12 GAUGE
T13	CAP 42-INCH GUSSET 9	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	12 GAUGE
T14	CAP 42-INCH GUSSET 10	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	12 GAUGE
T15	CAP 42-INCH GUSSET 11	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	12 GAUGE
T16	CAP 42-INCH GUSSET 12	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	12 GAUGE
U1	GAP STIFFENER	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	
U2	GAP STIFFENER - CONNECTOR 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	
U3	GAP STIFFENER - CONNECTOR 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	

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
V1	THRIE BEAM RAIL TERMINAL MECHANICAL OR ADHESIVE ANCHOR	MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS ULTIMATE TENSILE LOAD 24.0 KIPS AND ULTIMATE SHEAR LOAD 21.5 KIPS. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.	¾" DIA.
V2	GAP STIFFENER - BOLT - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C O R MECHANICAL GALVANIZE 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	
W1	TOE 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	
X1	TOE PLATE - CONNECTION BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 UNC HEAVY HEX HEAD OR AASTHO M180 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.	¾" DIA.
X2	TOE PLATE - CONNECTION BOLT - WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 F436 TYPE 1 (HARDEN WASHER ONLY)	
X3	TOE PLATE - CONNECTION BOLT - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	

6

SDD 14B07-16n

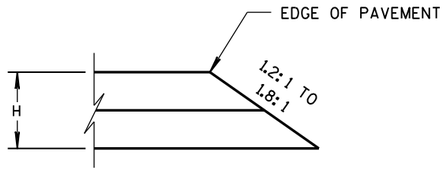
CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

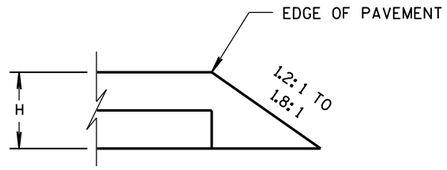
6

SDD 14B07-16n



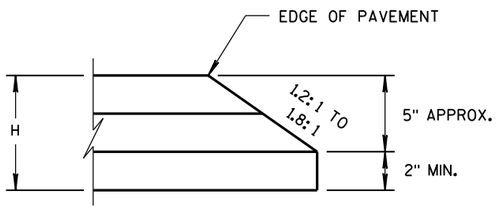
CONSTRUCTED WITH FINAL TWO LAYERS

FOR H 5" OR LESS



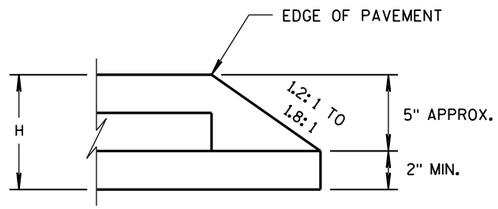
CONSTRUCTED WITH FINAL LAYER

FOR H 5" OR LESS



CONSTRUCTED WITH FINAL TWO LAYERS

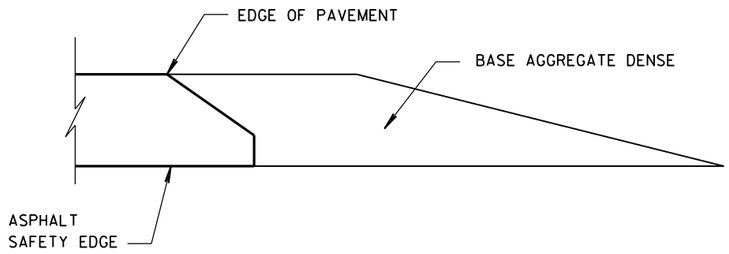
FOR H GREATER THAN 5"



CONSTRUCTED WITH FINAL LAYER

FOR H GREATER THAN 5"

HMA PAVEMENT AND HMA OVERLAYS



FINISHED SHOULDER AGGREGATE PLACEMENT

6

6

S.D.D. 14 B 29-1

S.D.D. 14 B 29-1

SAFETY EDGE SM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

11/30/2012
DATE

/S/ Jerry H. Zoda
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

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

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

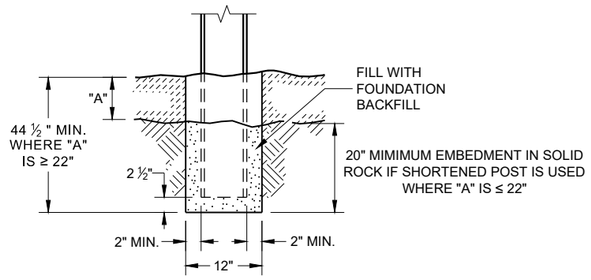
(3) IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL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

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

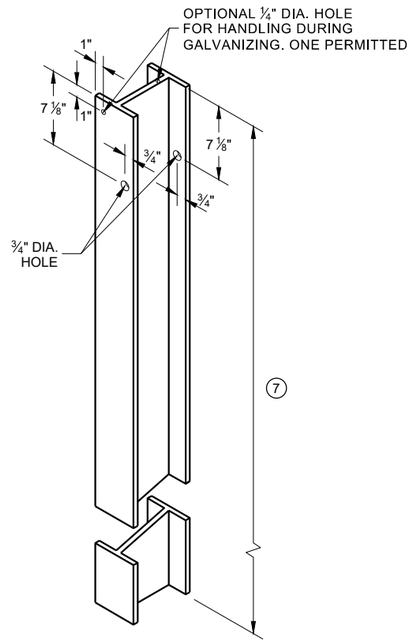
(5) FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ±1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 ¾" TO 32".

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

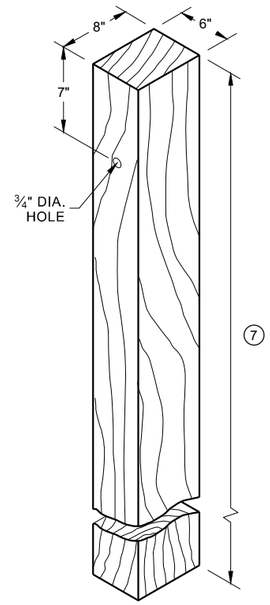
(7) TOTAL POST LENGTH FOR TYPE K IS 7' - 0".
TOTAL POST LENGTH FOR OTHER MGS TYPES IS 6' - 0".



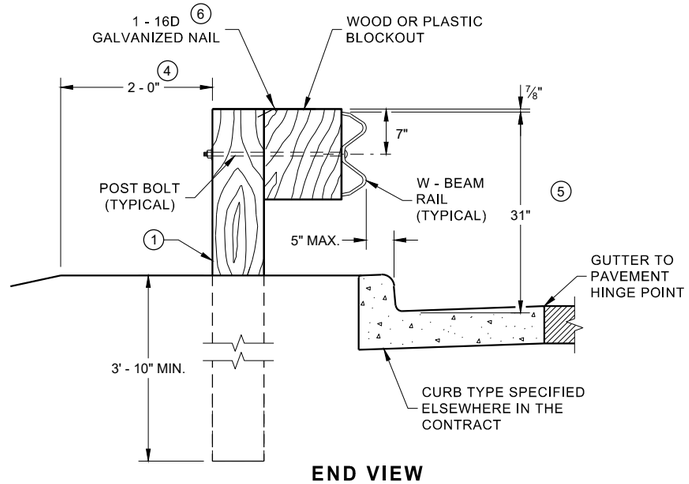
END VIEW
SETTING STEEL OR WOOD POST IN ROCK (3)



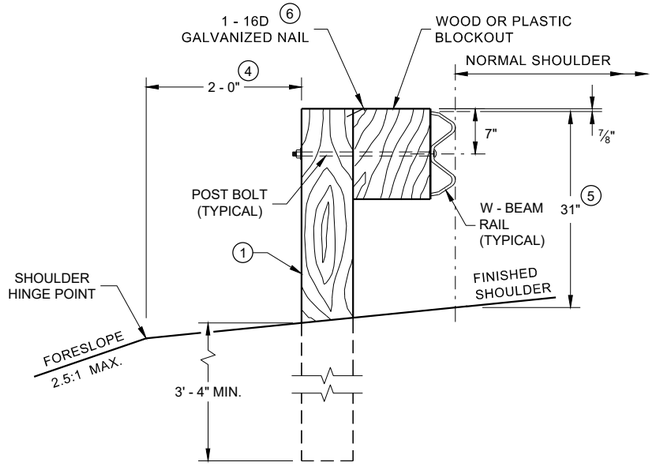
STEEL POST & HOLE PUNCHING DETAIL (W 6 X 9) (1)



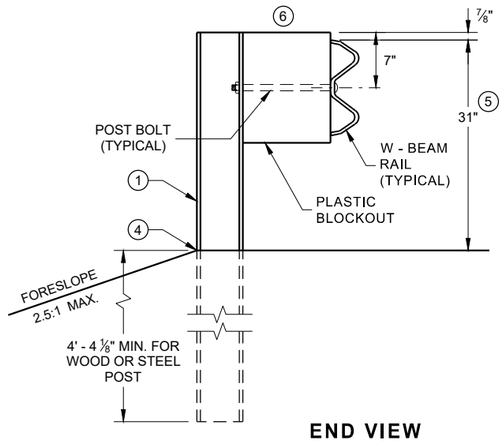
WOOD POST (6" X 8") NOMINAL (1)



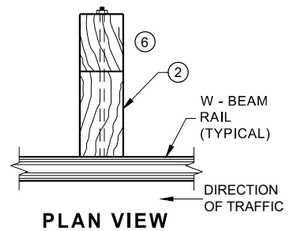
END VIEW
LOCATED ALONG A CURBED ROADWAY



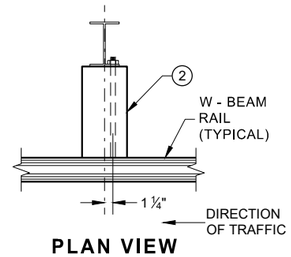
END VIEW
LOCATED ALONG A ROADWAY SHOULDER STANDARD INSTALLATION



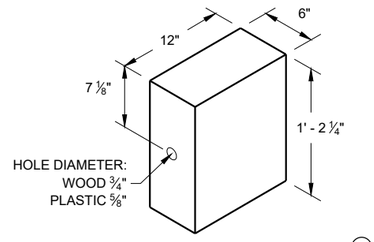
END VIEW
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



PLAN VIEW
WOOD POST, BLOCKOUT & BEAM



PLAN VIEW
STEEL POST, PLASTIC BLOCKOUT & BEAM



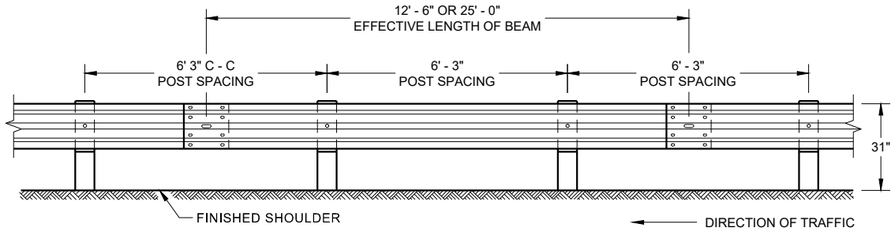
WOOD OR PLASTIC BLOCKOUT (2)

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

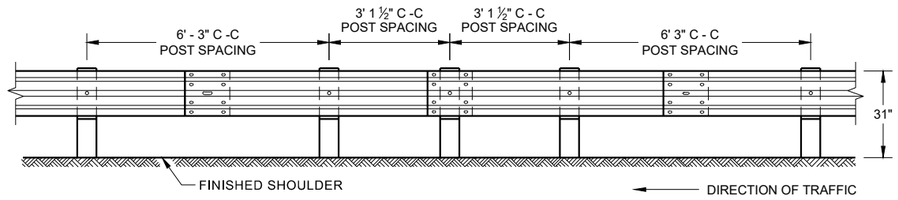
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B42 - 07a

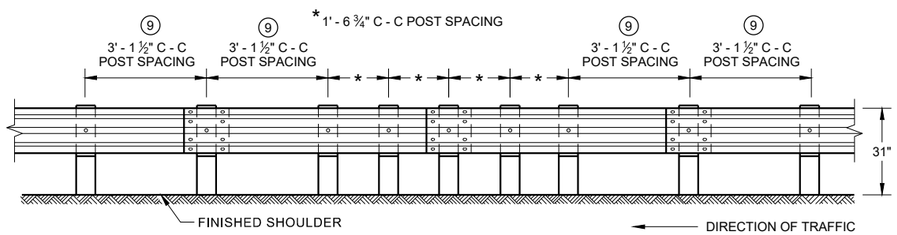
SDD 14B42 - 07a



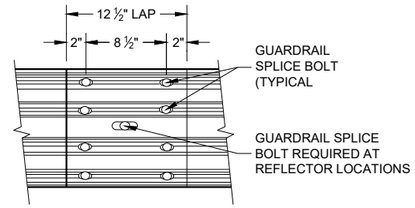
FRONT VIEW
POST SPACING STANDARD INSTALLATION



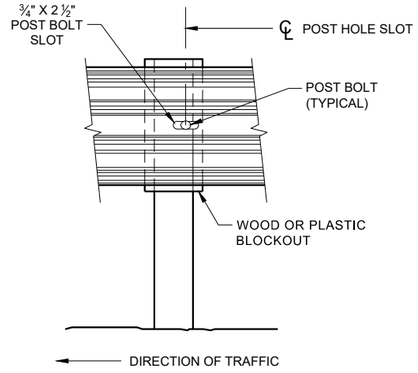
FRONT VIEW
HALF POST SPACING (HS) AND HALF POST SPACING WITH LONGER POSTS (K)



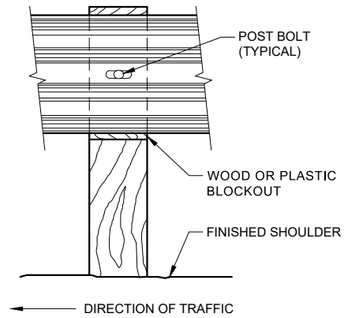
FRONT VIEW
QUARTER POST SPACING (QS)



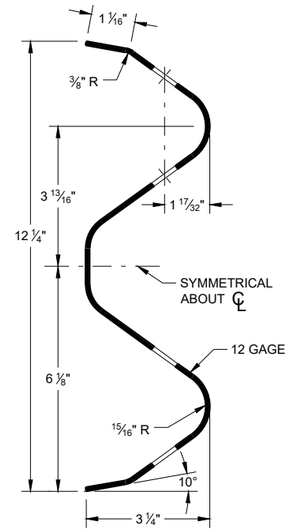
FRONT VIEW
MID-SPAN BEAM SPLICE



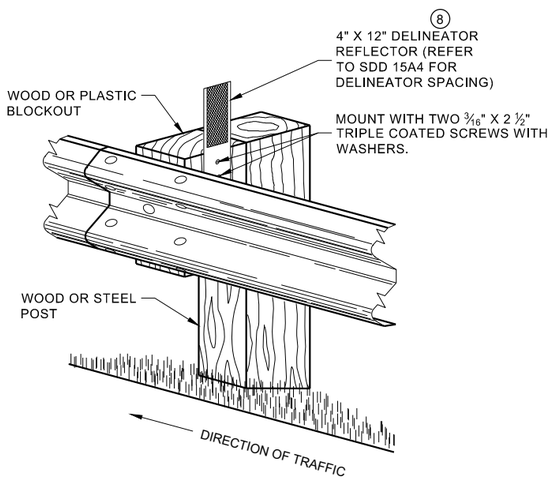
FRONT VIEW AT STEEL POST



FRONT VIEW AT WOOD POST



SECTION THRU W-BEAM RAIL



ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION

GENERAL NOTES

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

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

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

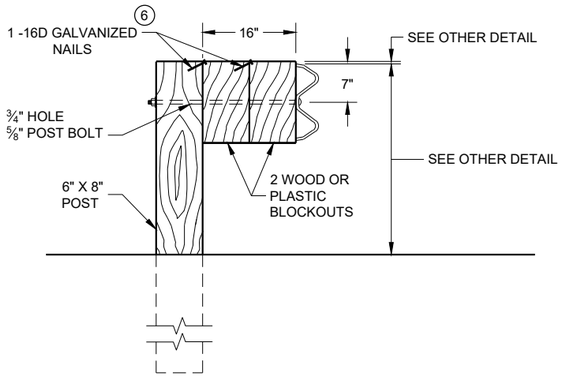
GUARD RAIL SPLICE BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 14B42 - 07b

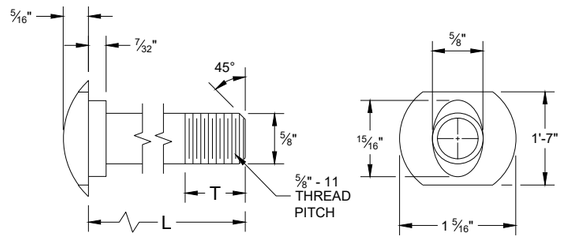


DETAIL FOR 16" BLOCKOUT DEPTH

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

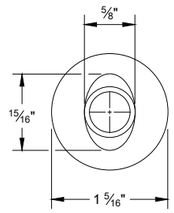
NOTE:

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

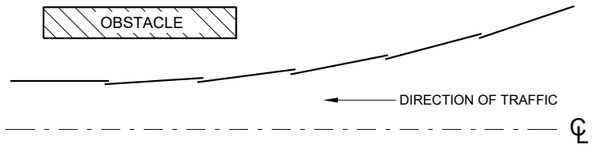


POST BOLT TABLE

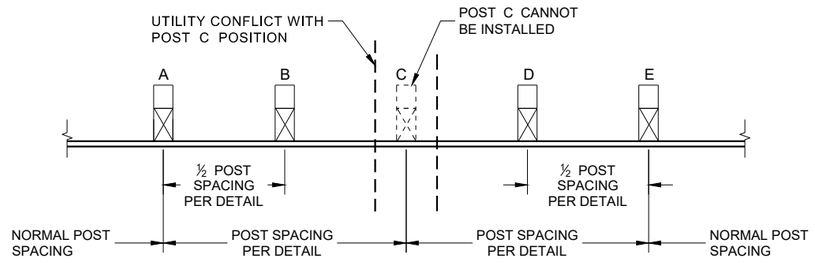
L	T (MIN.)
1 ¼"	1 ⅛"
2"	1 ¾"
10"	4"
14"	4 1⁄16"
18"	4"
21"	4 1⁄16"
25"	4"



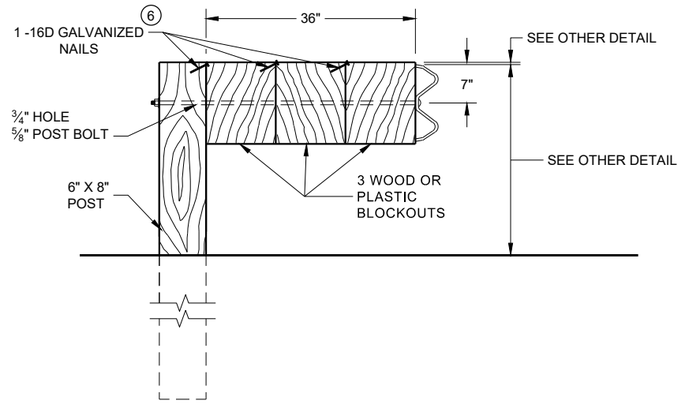
ALTERNATE BOLT HEAD



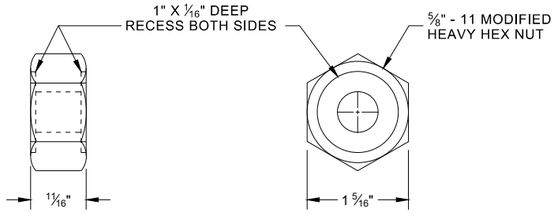
PLAN VIEW
BEAM LAPPING DETAIL



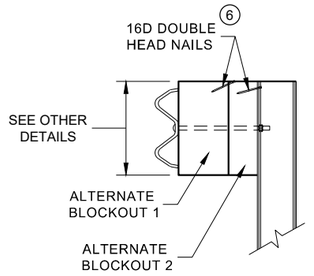
POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



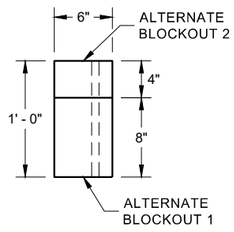
DETAIL FOR 36" BLOCKOUT DEPTH



POST BOLT, SPLICE BOLT AND RECESS NUT



SIDE VIEW



PLAN VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

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

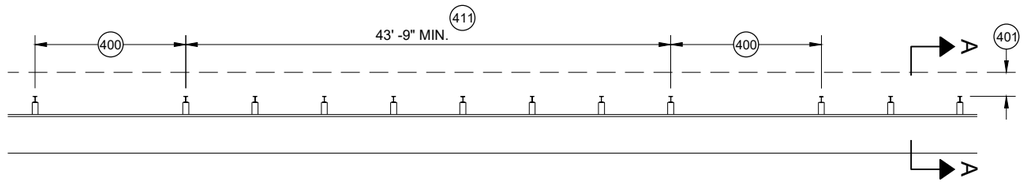
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

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

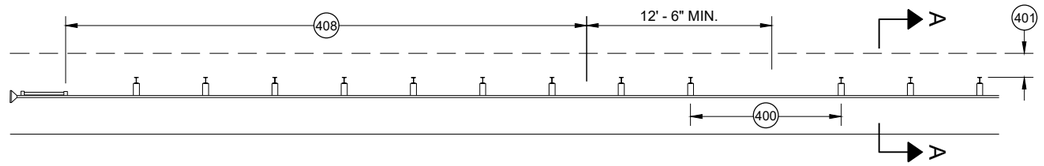
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

6

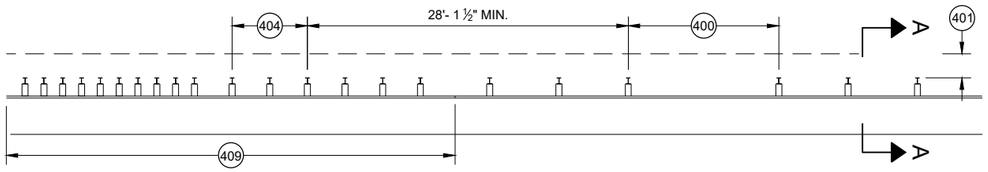
SDD 14B42 - 07c



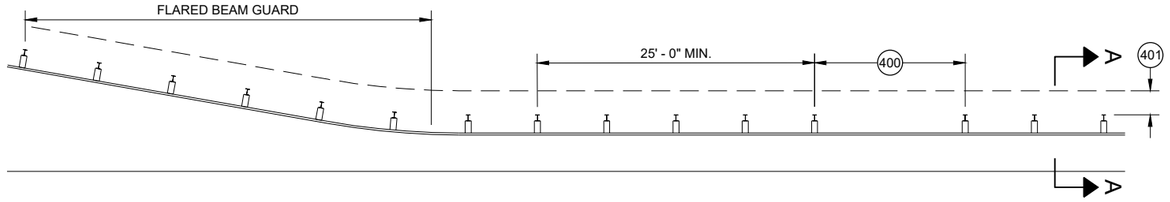
MISSING POST IN MGS GUARDRAIL



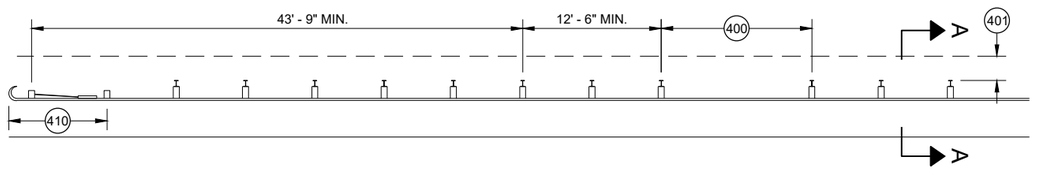
MISSING POST IN MGS GUARDRAIL NEAR EAT



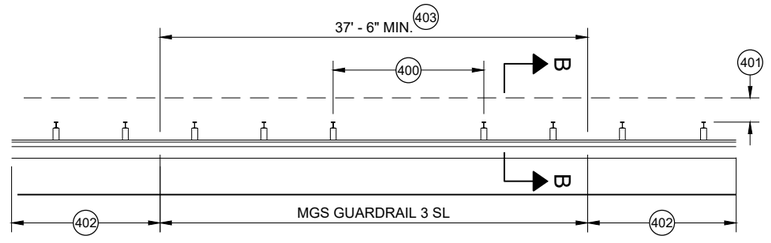
MISSING POST IN MGS GUARDRAIL NEAR AN APPROACH TRANSITION



MISSING POST IN MGS GUARDRAIL NEAR FLARED BEAM GUARD

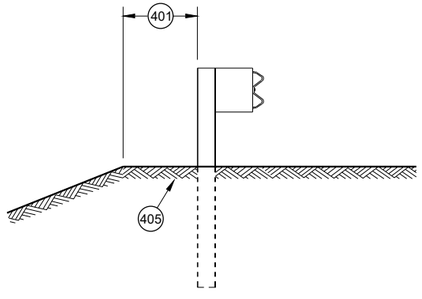


MISSING POST IN MGS GUARDRAIL NEAR A TYPE 2 END TERMINAL

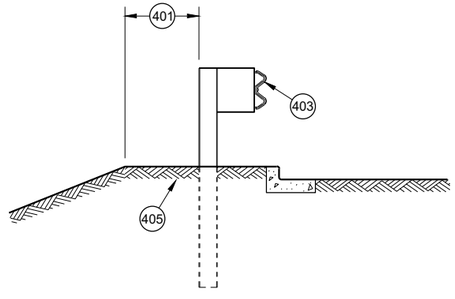


MISSING POST IN SHORT SPAN MGS GUARDRAIL NEAR CURB (SL) 407

(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.

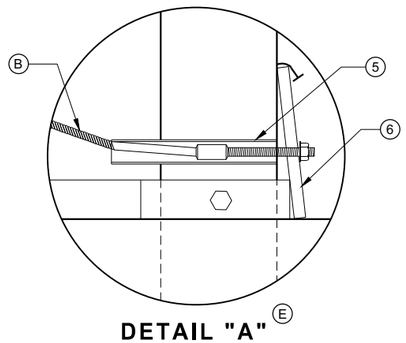
SEE SDD 14B42 FOR MORE INFORMATION.

* DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.

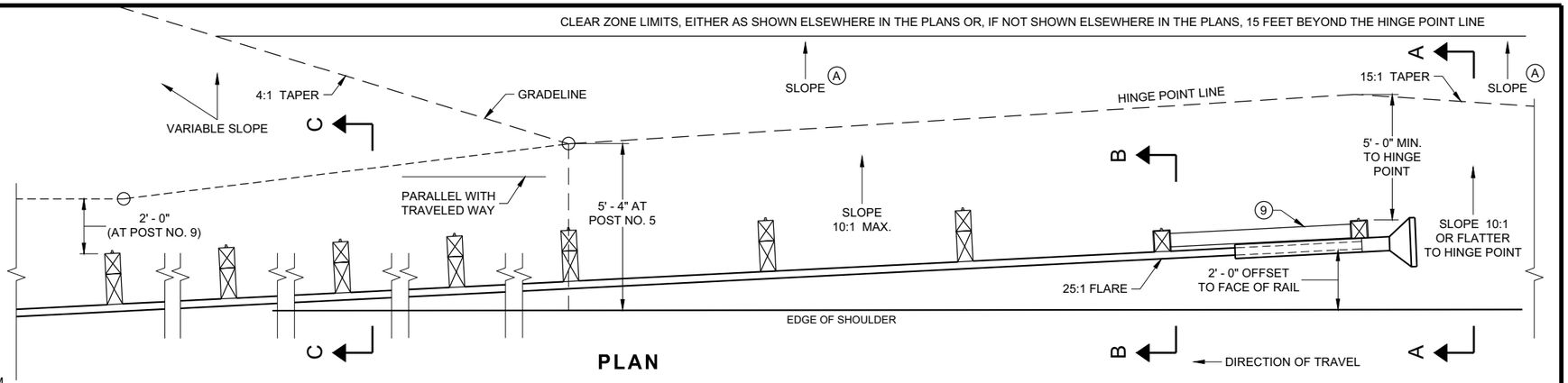
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

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

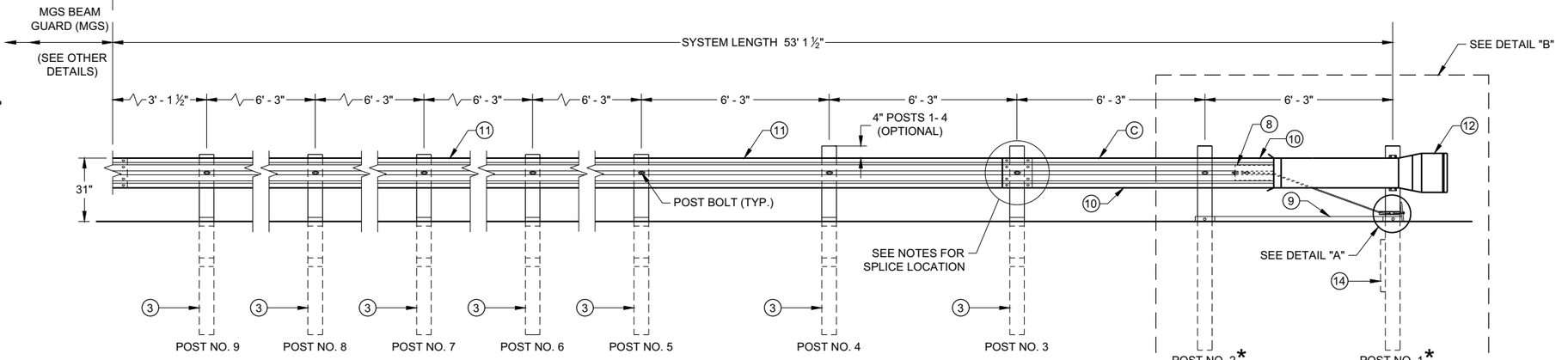
THE CENTER OF THE UPPER 3 ½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE. WOOD BLOCKS ON POSTS NUMBERED 3 THROUGH 9 MAY BE ADJUSTED UP TO 3" ABOVE THE TOP OF POST.



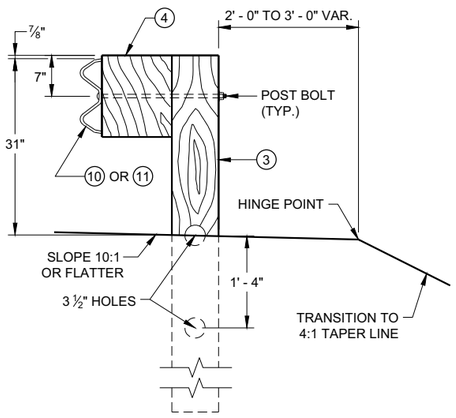
DETAIL "A" (E)



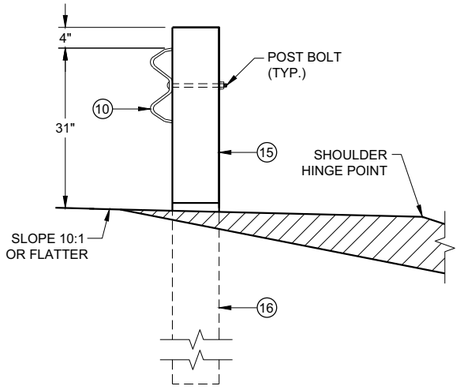
PLAN



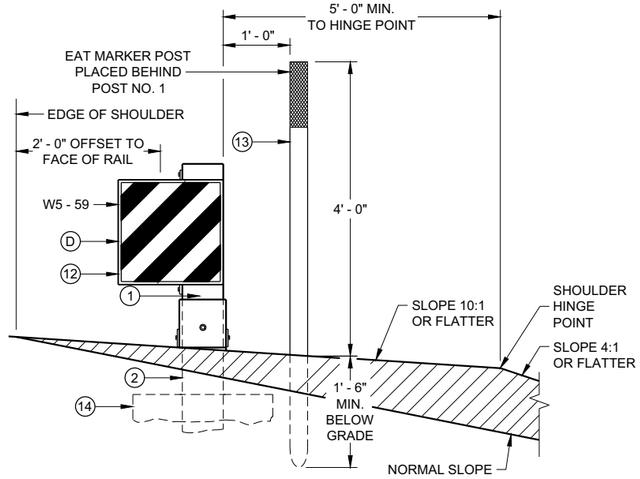
ELEVATION



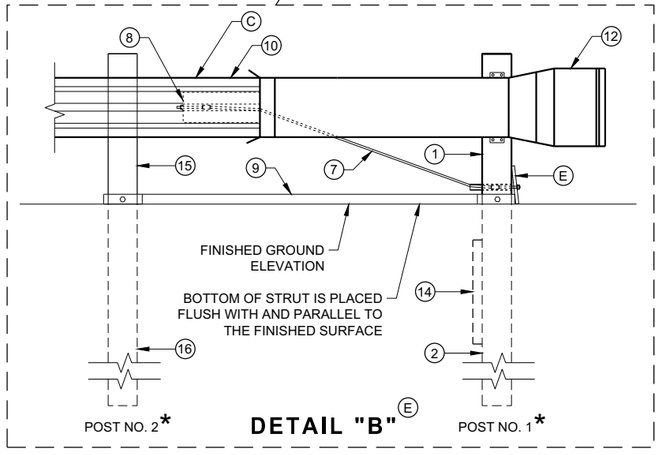
SECTION C - C
TYPICAL AT POST NOS. 3 - 9



SECTION B - B
TYPICAL AT POST NO. 2*



SECTION A - A
TYPICAL AT POST NO. 1*



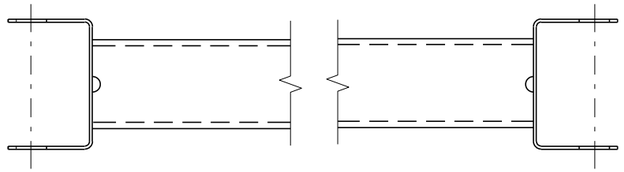
DETAIL "B" (E)

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B44 - 04a

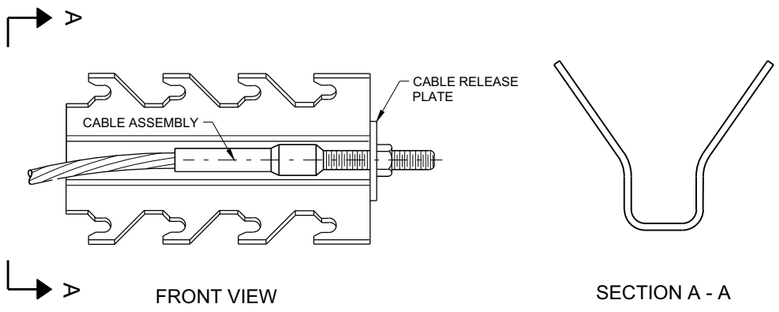
SDD 14B44 - 04a



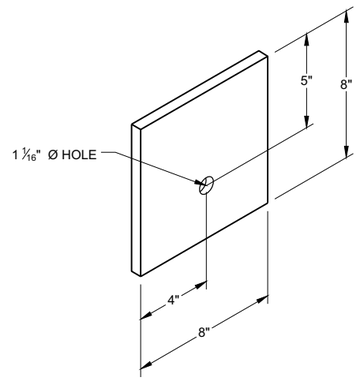
GENERIC GROUND STRUT (9) (E)

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 (9) (E)



BEARING PLATE (6) (E)

6

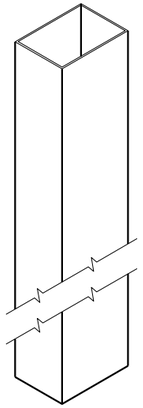
6

SDD 14B44 - 04b

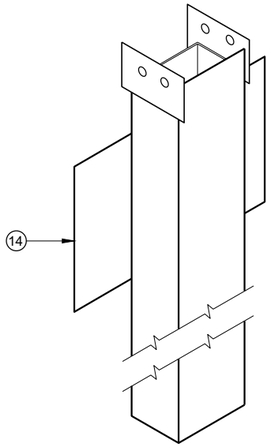
SDD 14B44 - 04b

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

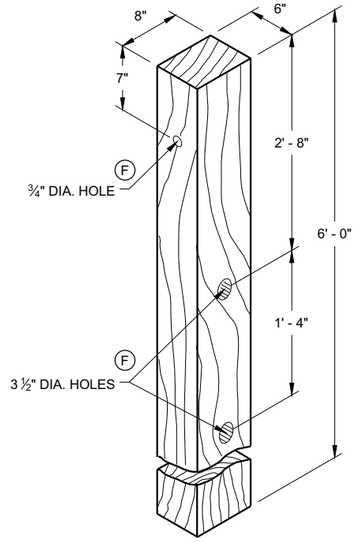
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



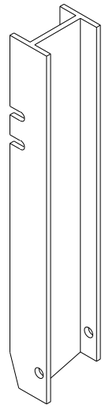
UPPER POST NO. 1 (1) (E)



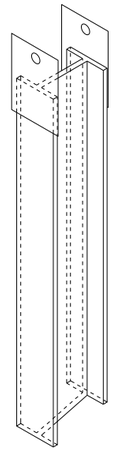
LOWER POST NO. 1 (2) (E)



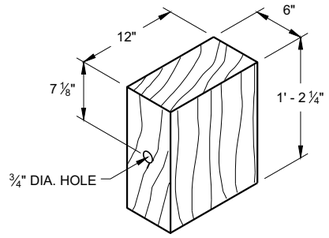
WOOD CRT POST (3) (E)
POSTS NUMBER 3-9



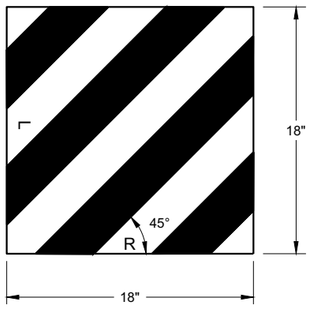
UPPER POST NO. 2 (15) (E)



LOWER POST NO. 2 (16) (E)

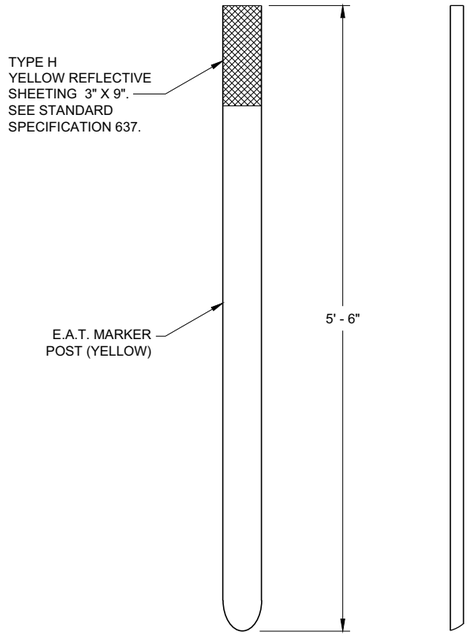


WOOD BLOCKOUT (4)
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



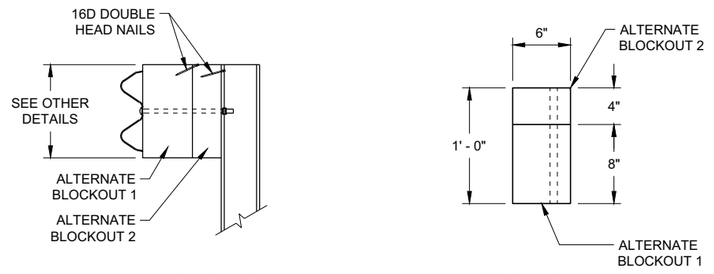
W5 - 59

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)

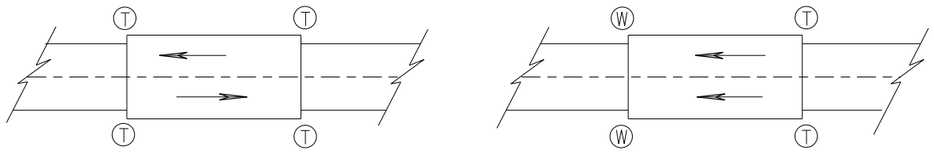
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

6

SDD 14B44 - 04c



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.

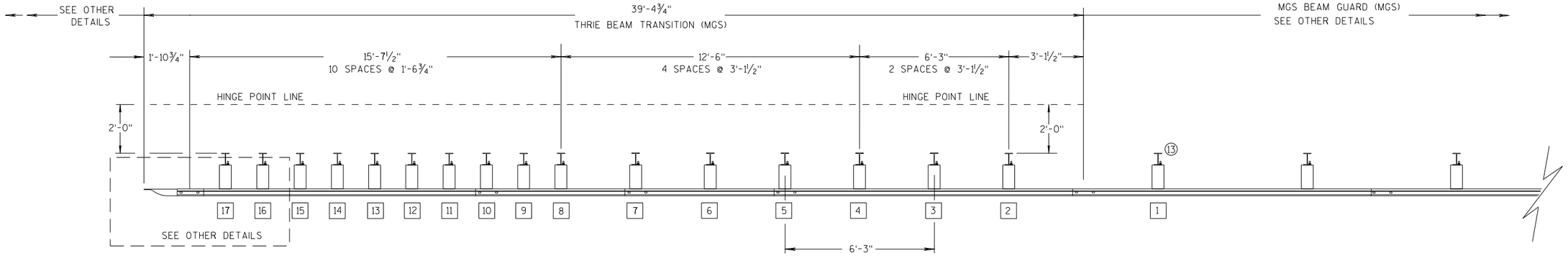
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

POST 2 THROUGH 17 USES STEEL POST ONLY

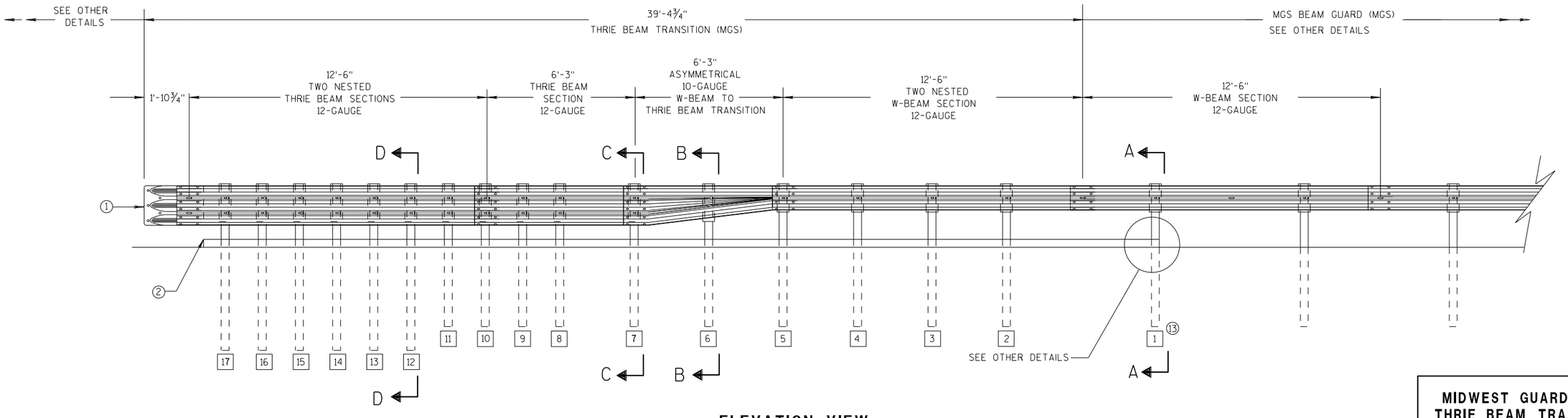
(1) BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.

(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 253

6

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

6

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

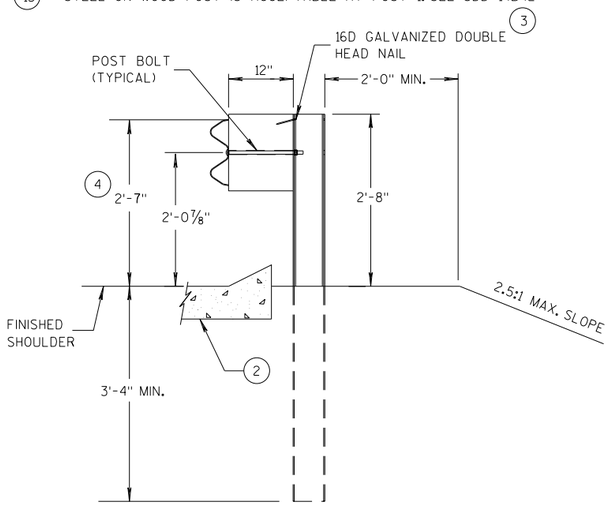
GENERAL NOTES

(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.

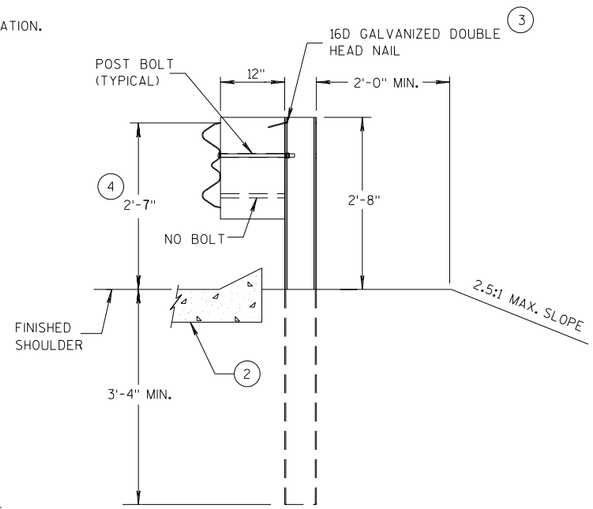
(4) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".

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



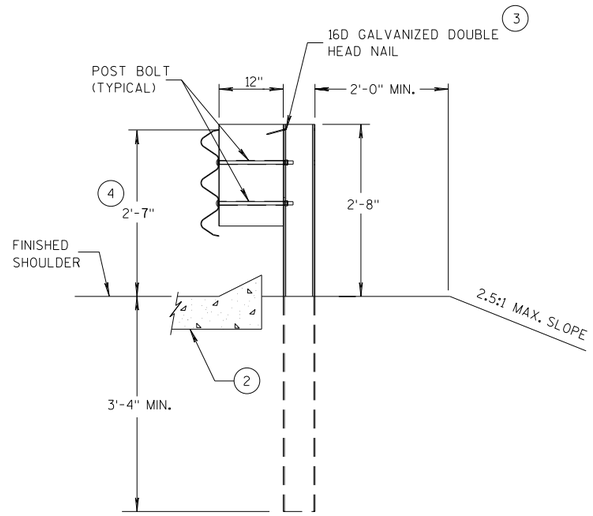
SECTION A-A (13)

POSTS 1-5



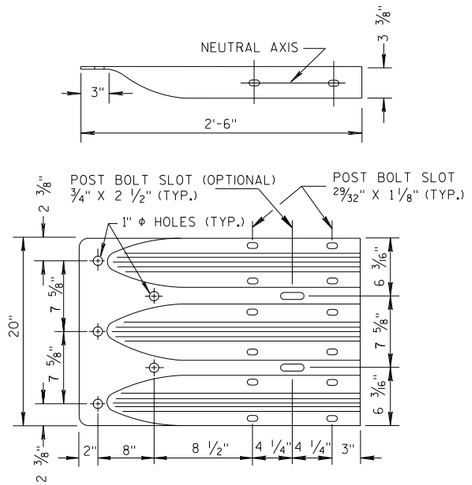
SECTION B-B

POST 6

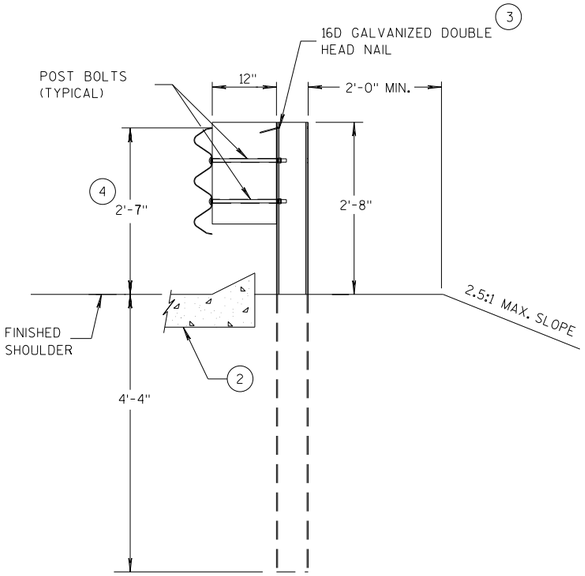


SECTION C-C

POSTS 7-11

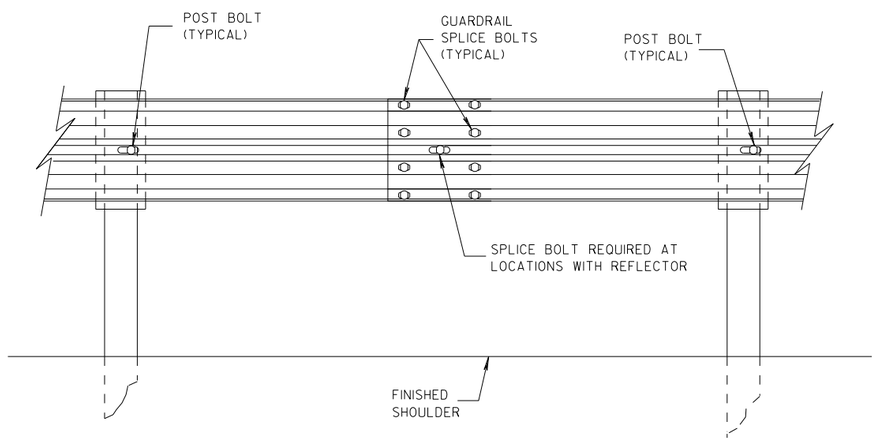


THRIE BEAM TERMINAL CONNECTOR



SECTION D-D

POSTS 12-17



SPLICE DETAIL

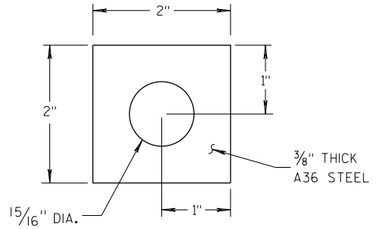
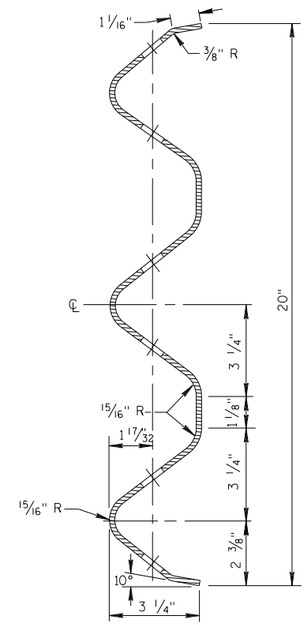


PLATE WASHER DETAIL



SECTION THRU THRIE BEAM RAIL ELEMENT

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

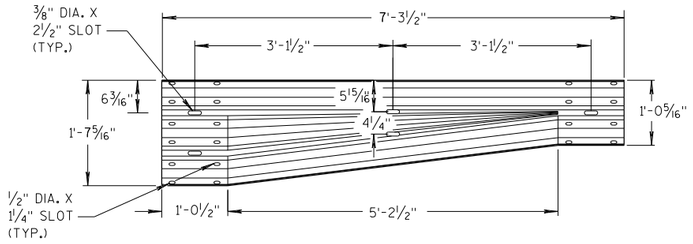
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR 254

6

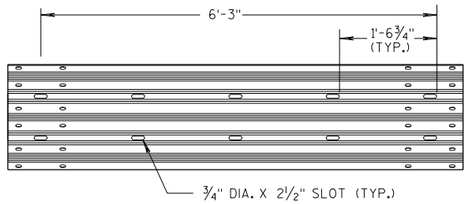
S.D.D. 14 B 45-5b

6

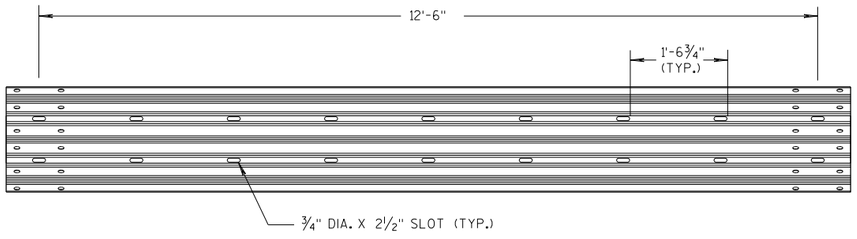
S.D.D. 14 B 45-5b



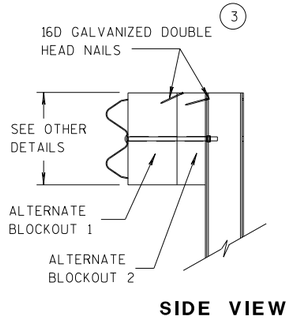
W-BEAM TO THRIE BEAM TRANSITION SECTION



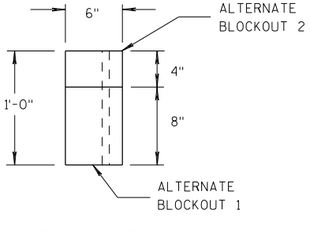
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

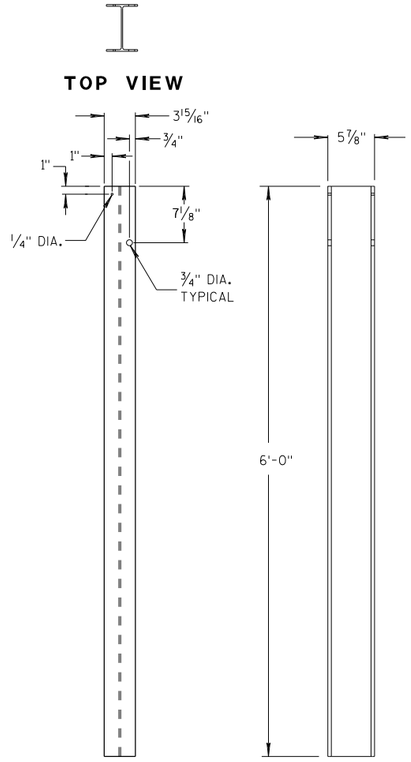


SIDE VIEW



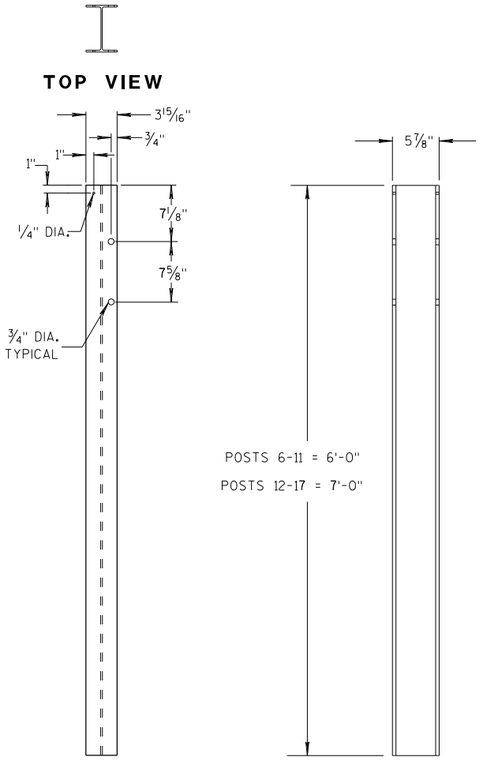
TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL



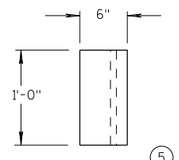
FRONT VIEW SIDE VIEW

STEEL POSTS 1-5 (13)

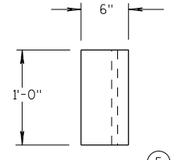


FRONT VIEW SIDE VIEW

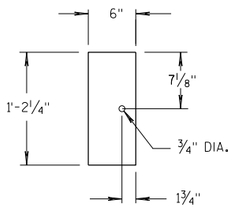
STEEL POSTS 6-17



TOP VIEW (5)

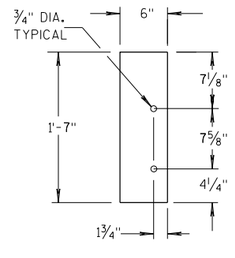


TOP VIEW (5)



FRONT VIEW

BLOCKOUT POSTS 1-5



FRONT VIEW

BLOCKOUT POSTS 6-17

GENERAL NOTES

STEEL POSTS ARE W6X9 OR W6X8.5.

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

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

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

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

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR 255

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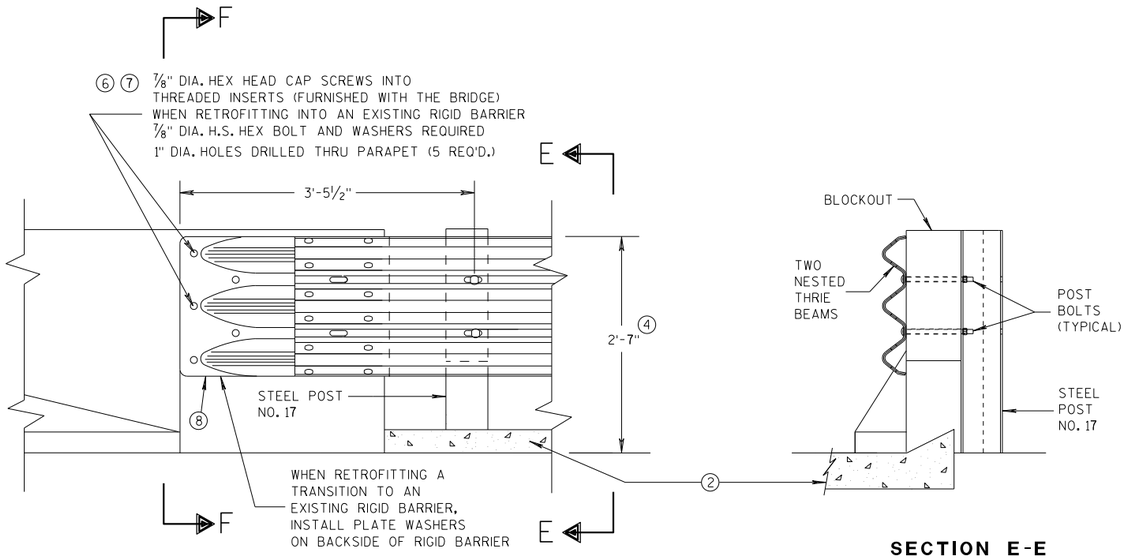


FRONT VIEW

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.

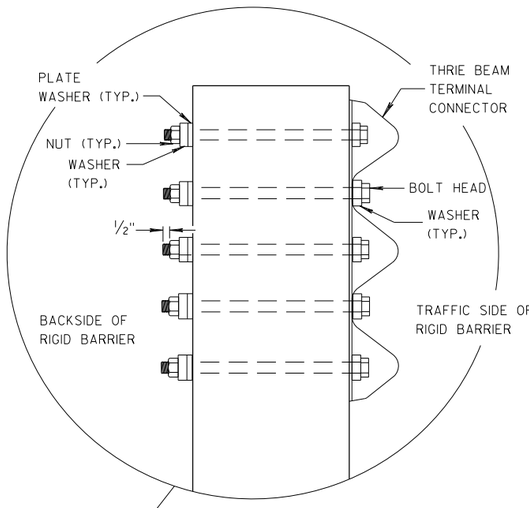
② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

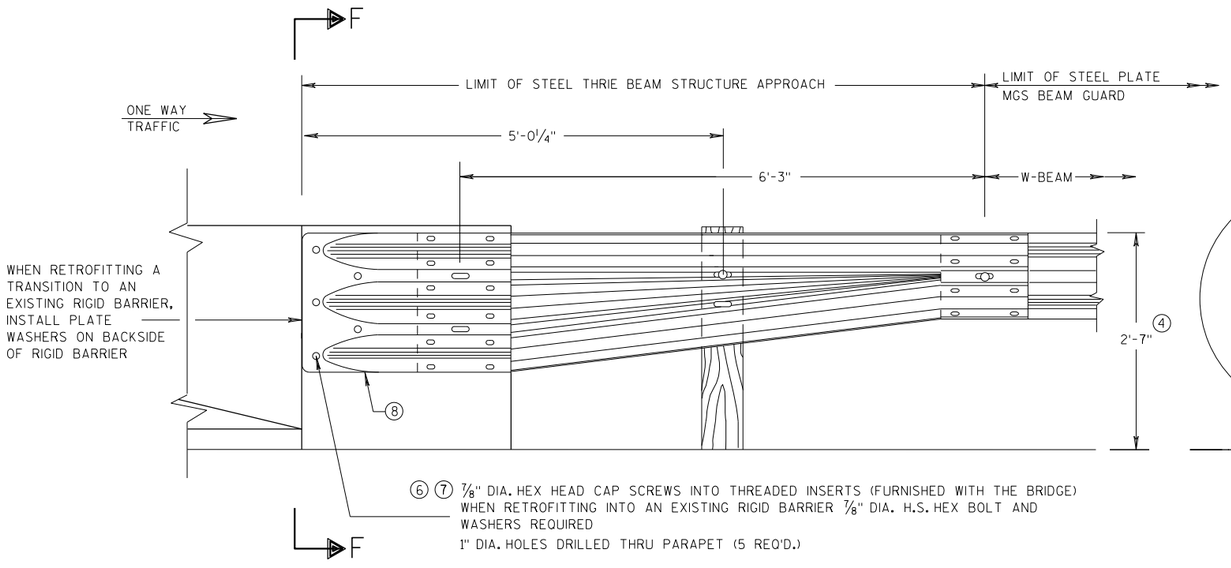
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

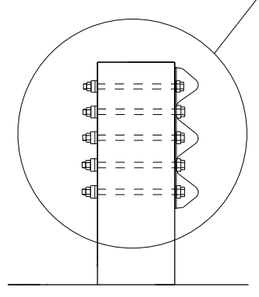
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. 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".

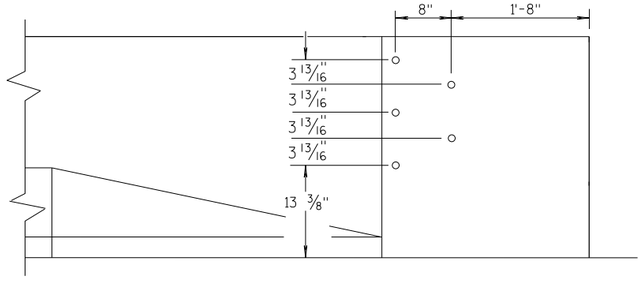




FRONT VIEW



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

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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.

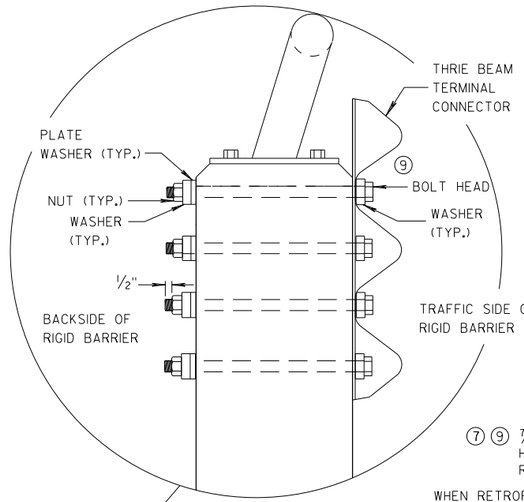
(4) TOLERANCE FOR TOP OF BEAM IS ± 1".

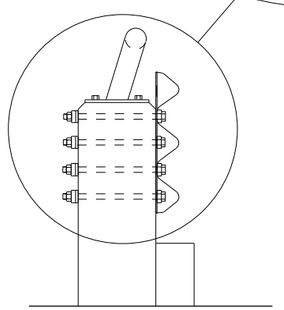
(6) DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

(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.

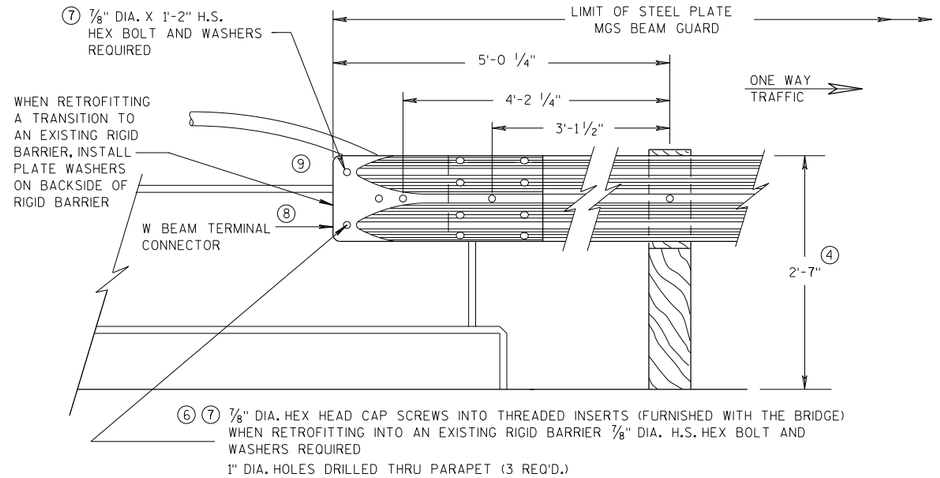
(8) THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 ½".

(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.





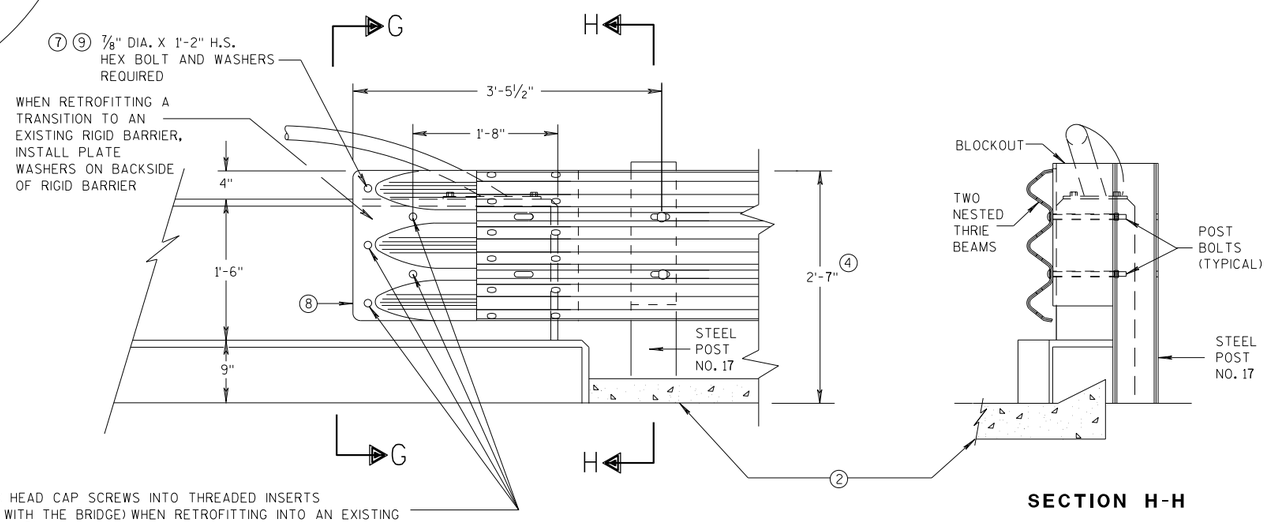
SECTION G-G



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
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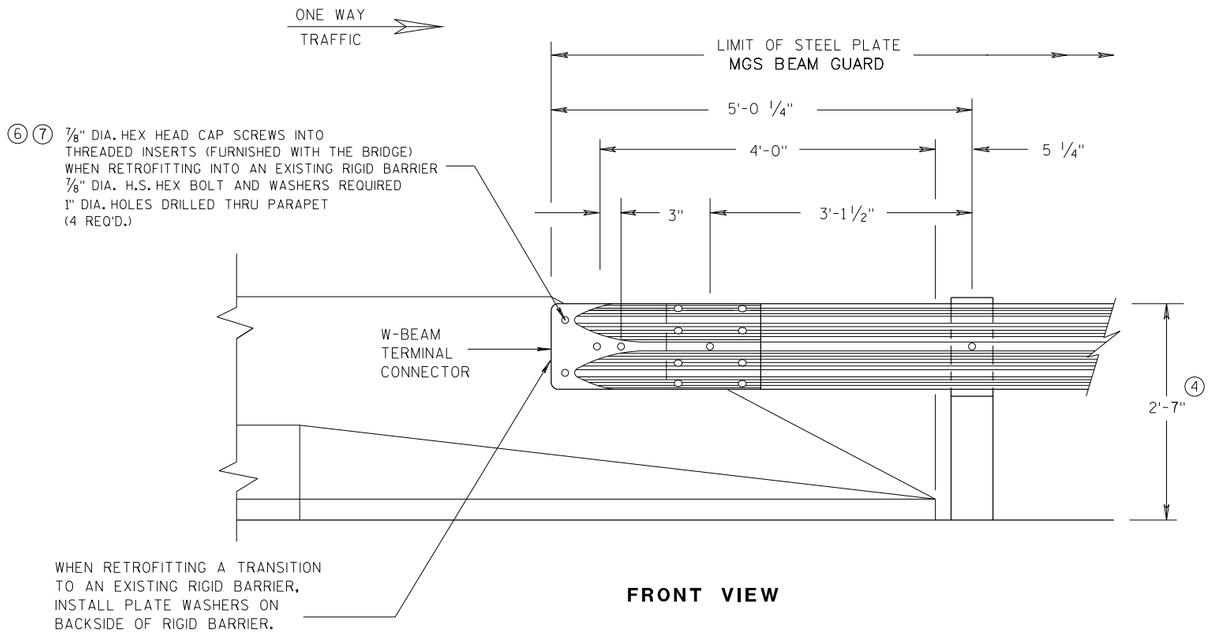


FRONT VIEW

W BEAM CONNECTION TO PARAPETS WITH SLOPED ENDS

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

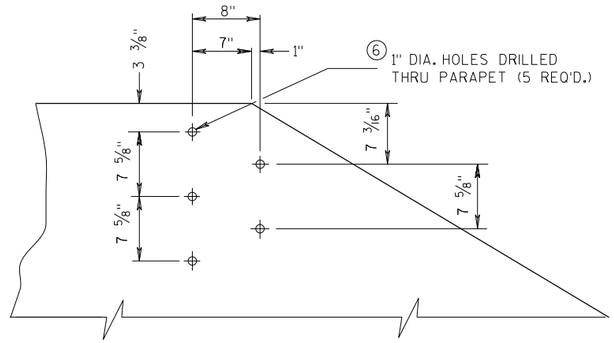
GENERAL NOTES

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

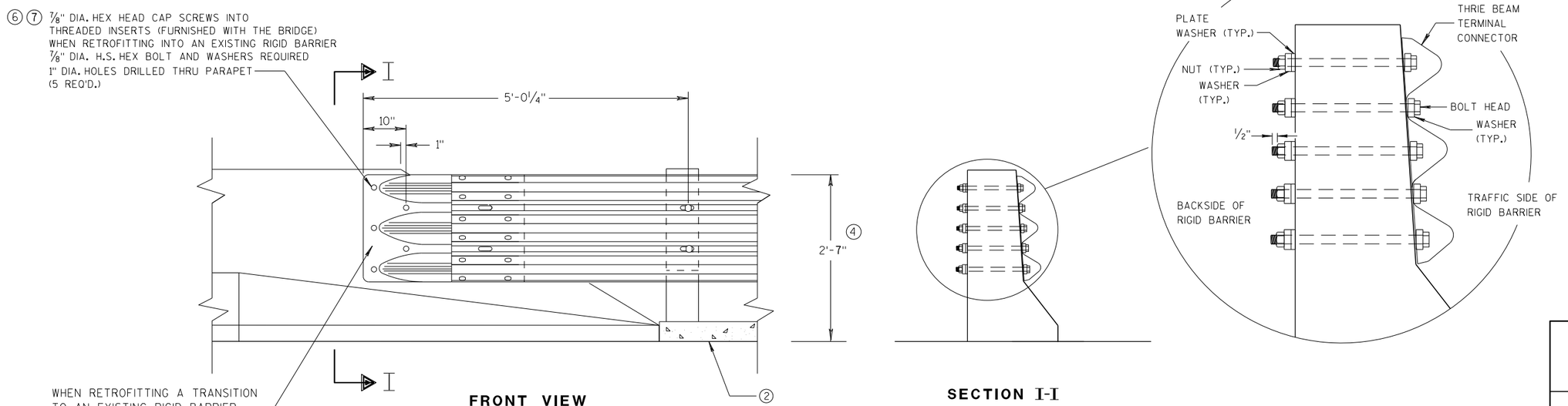
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

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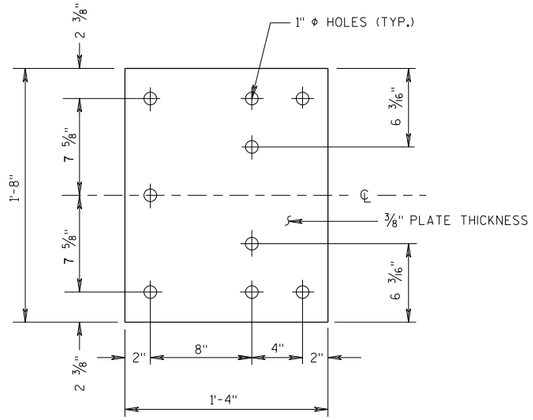
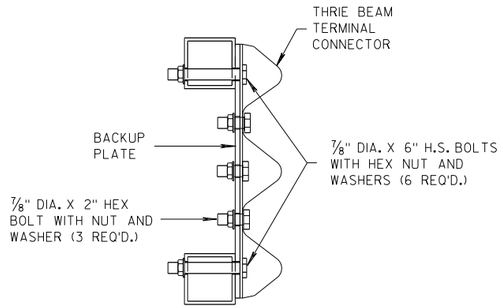
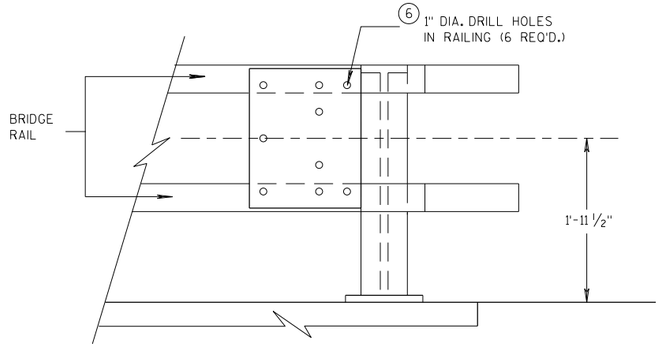


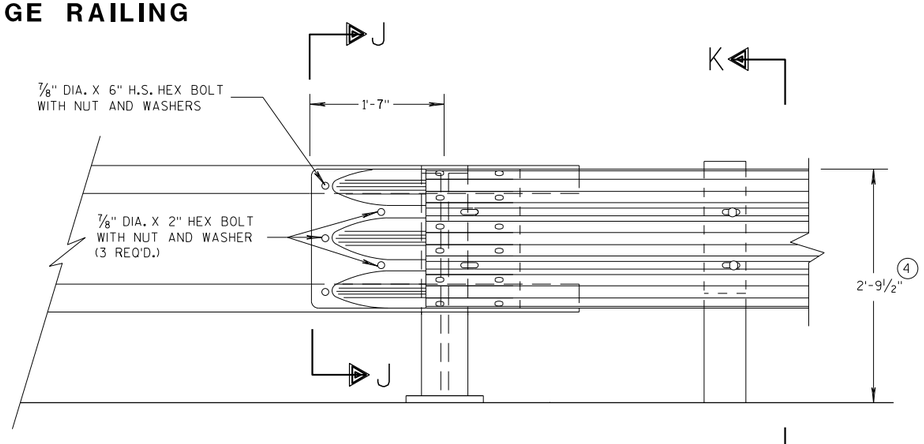
BACK-UP PLATE DETAIL



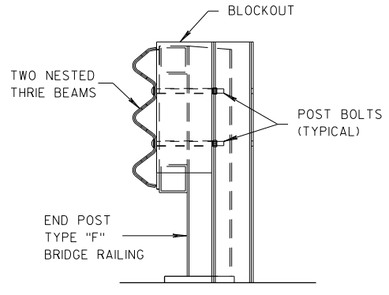
SECTION J-J



BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING



FRONT VIEW



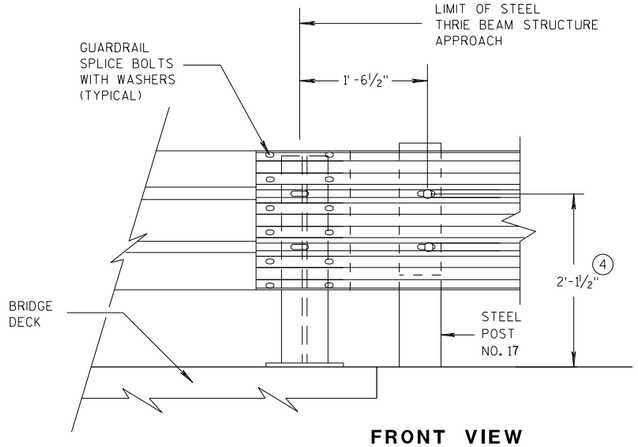
SECTION K-K

THRIE BEAM CONNECTION TO TUBULAR RAILING TYPE "F"

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"

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED 07/2018 — DATE
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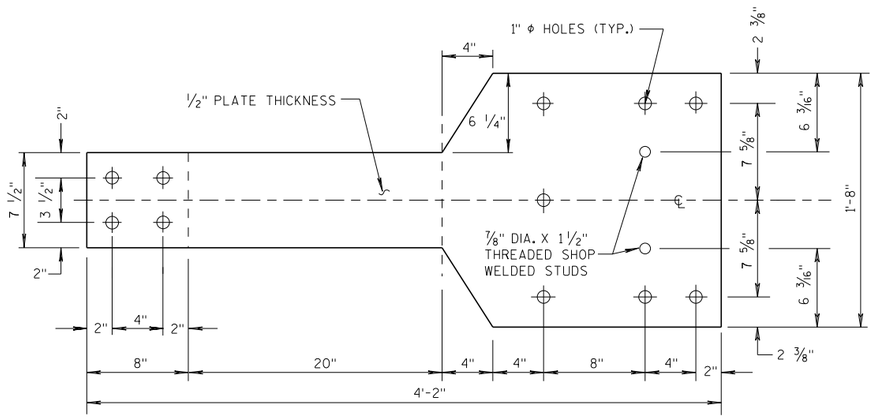
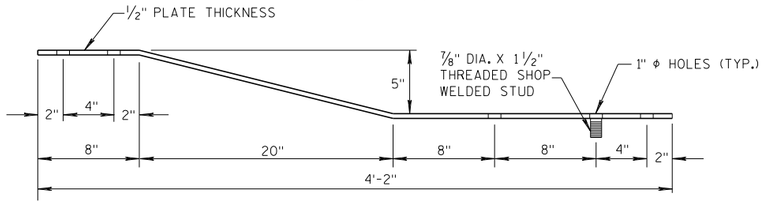
GENERAL NOTES

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

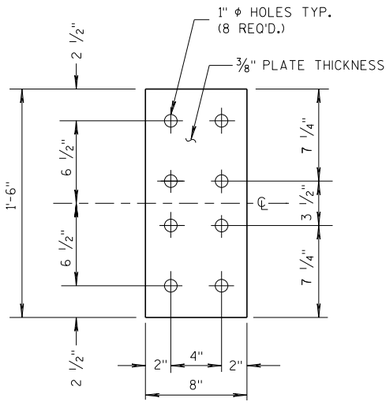


FRONT VIEW



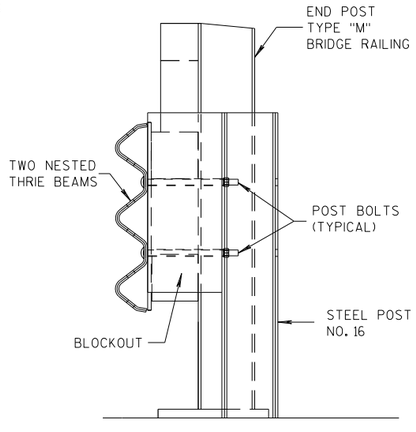
PLAN VIEW

BACK-UP PLATE DETAIL, TYPE "M"

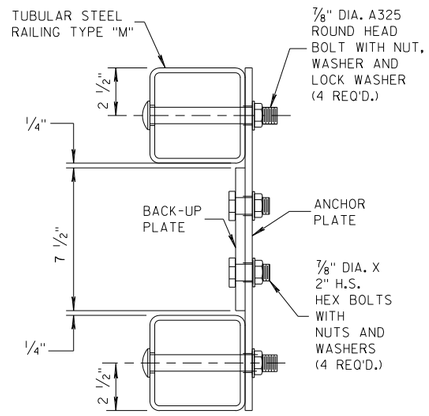


FRONT VIEW

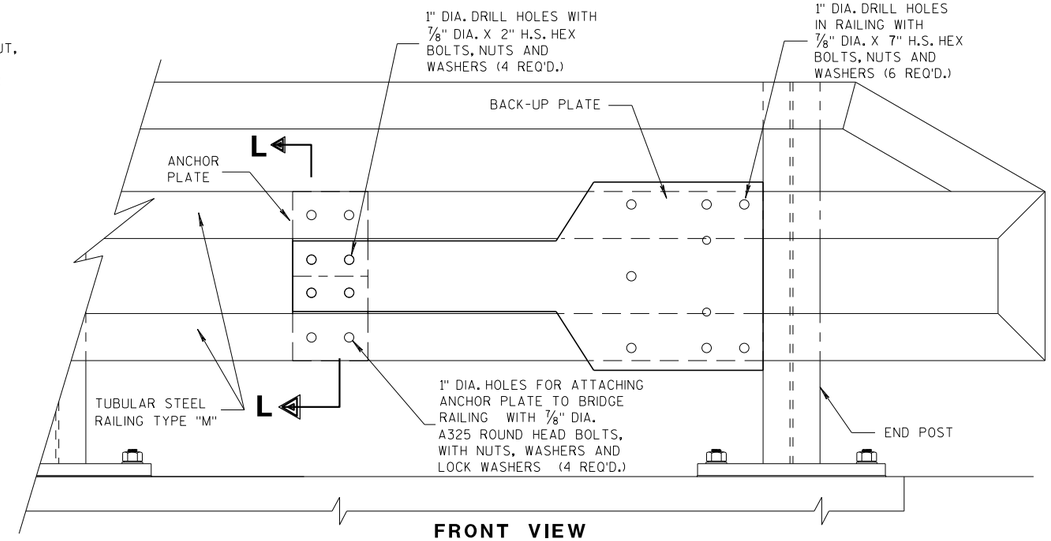
ANCHOR PLATE DETAIL, TYPE "M"



SECTION M-M

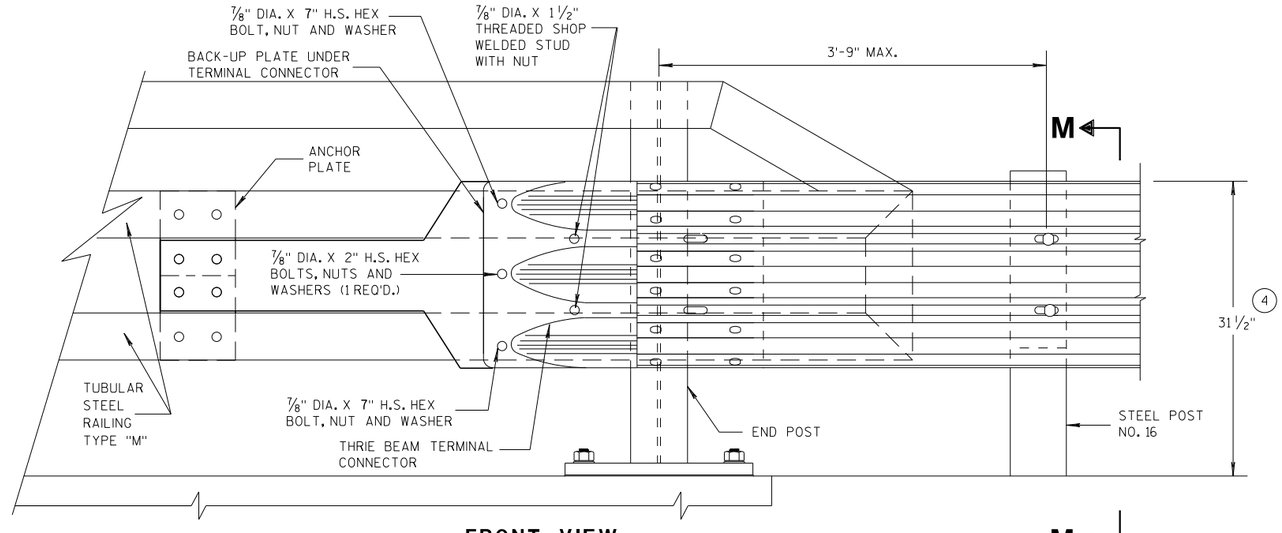


SECTION L-L

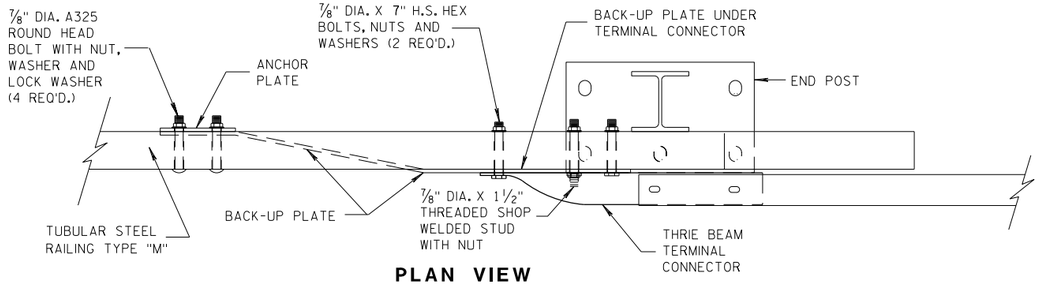


FRONT VIEW

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

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07/2018 — DATE
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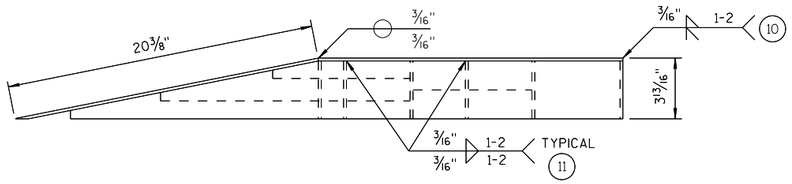

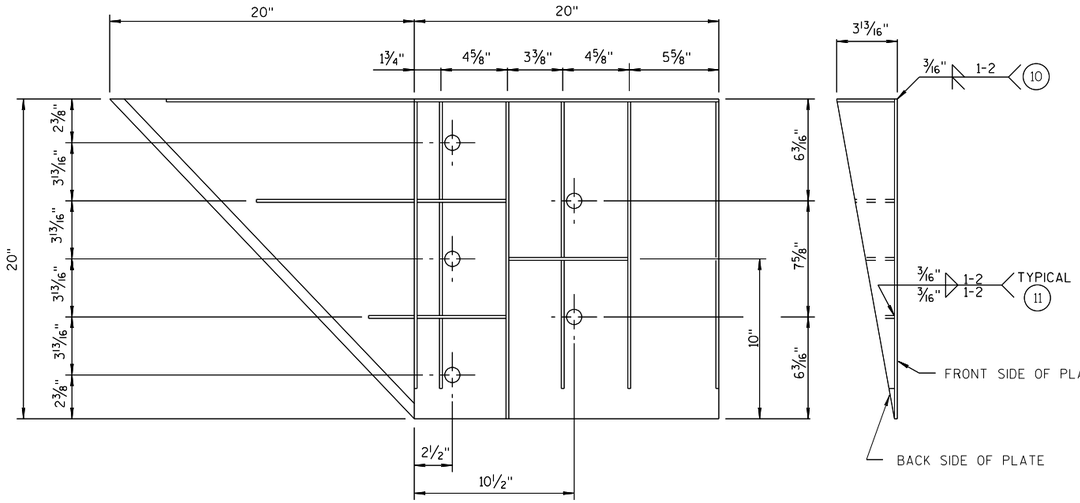

WELDING INSTRUCTION

(VIEWED FROM BACK SIDE OF PLATE)

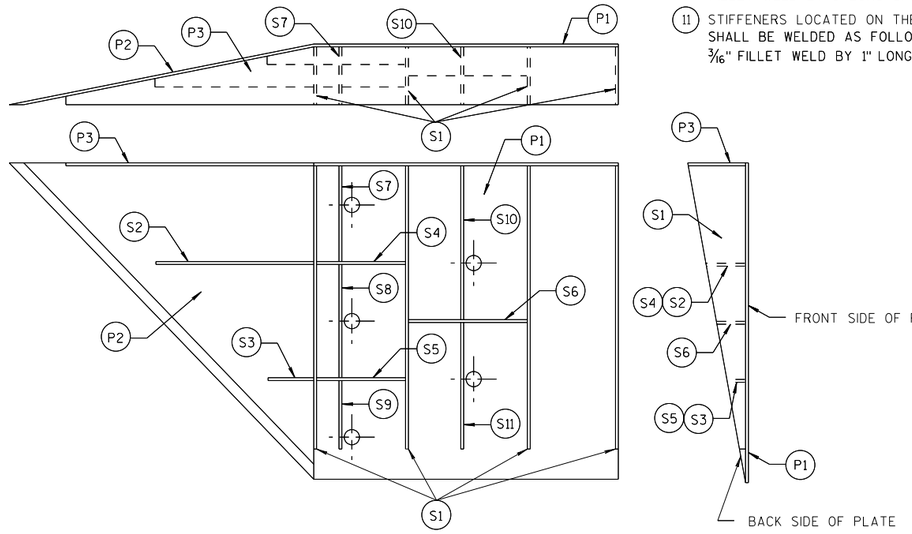

PLATE AND STIFFENER IDENTIFICATION

(VIEWED FROM BACK SIDE OF PLATE)

GENERAL NOTES

COVER PLATE PANELS ARE 3/16" THICK.

ALL STIFFENERS ARE 1/4" THICK.

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

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

ALL HOLE DIAMETERS SHALL BE 1".

FOR OPPOSITE SIDE INSTALLATION MIRROR DRAWINGS.

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

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

CONNECTOR PLATE DIMENSION (PER ASSEMBLY)

PLATE	QUANTITY	SHAPE	SIZE (A x B x C x D)	THICKNESS
P1	1		20" x 20"	3/16"
P2	1		20" x 20" x 28 9/16"	3/16"
P3	1		39" x 3 5/8" x 20" x 19 5/16"	3/16"
S1	4		18 7/16" x 3 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

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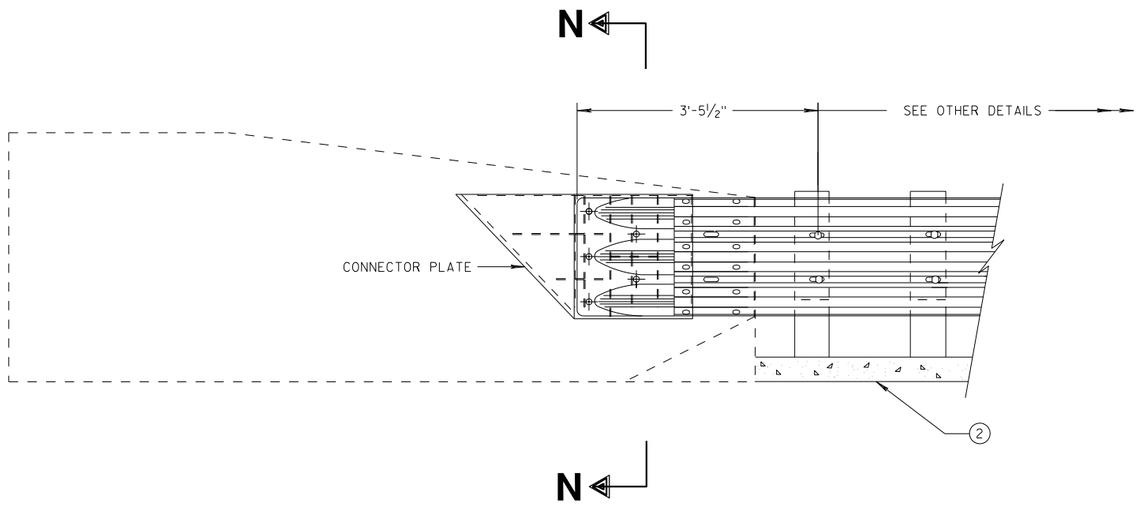
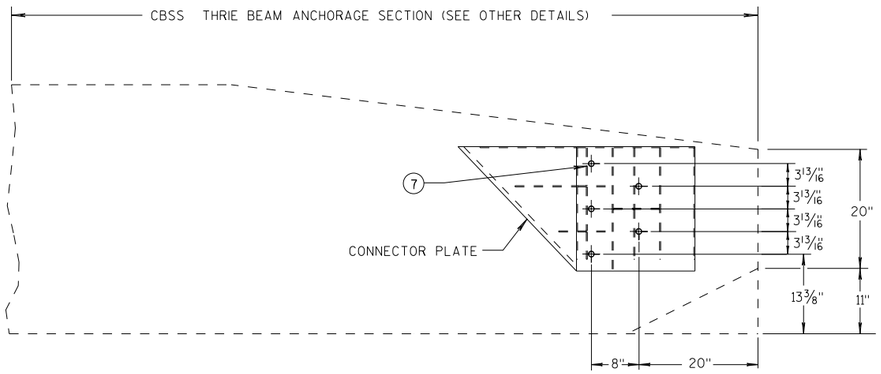


THRIE BEAM CONNECTION TO SINGLE SLOPE BARRIER



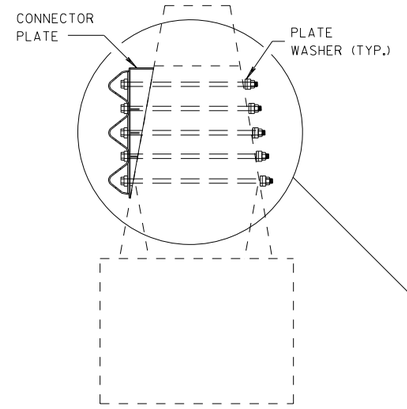
SINGLE SLOPE CONNECTION PLATE PLACEMENT

GENERAL NOTES

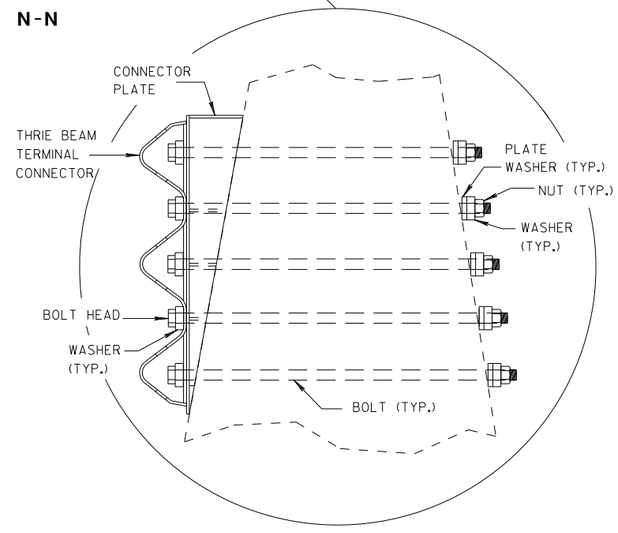
CONNECTOR PLATE, DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

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

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



SECTION N-N



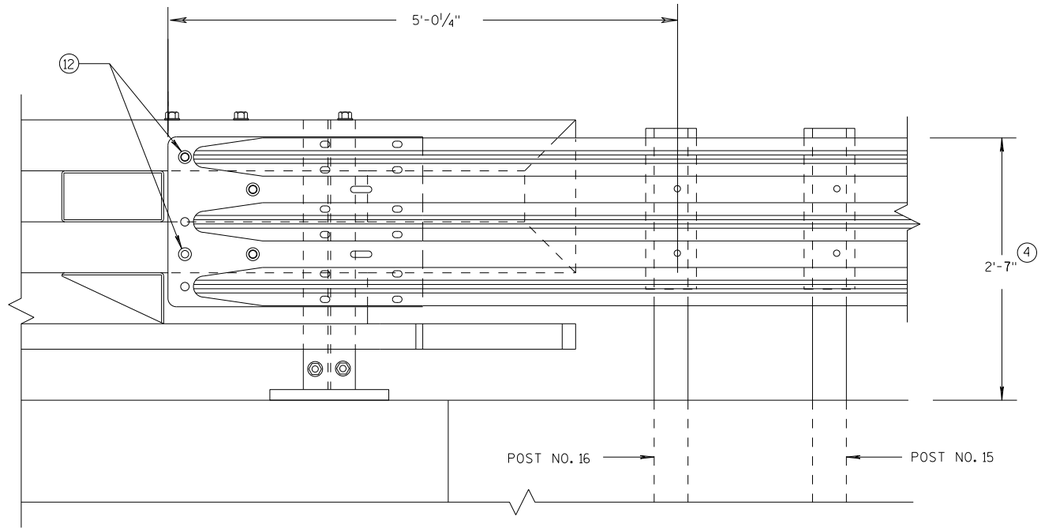
MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS DI[illegible]NT
UNIT SUPERVIS
FHWA

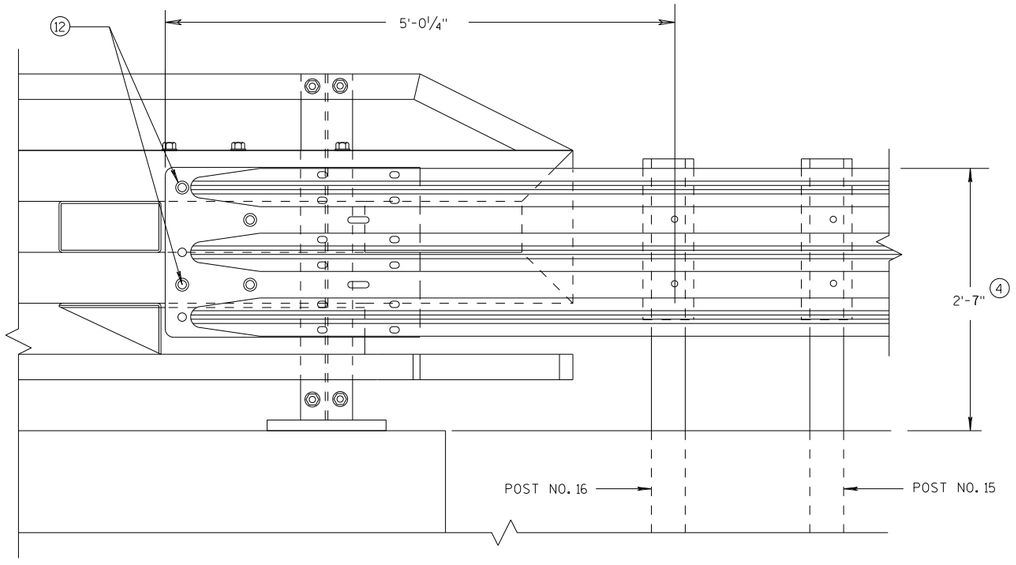
6

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

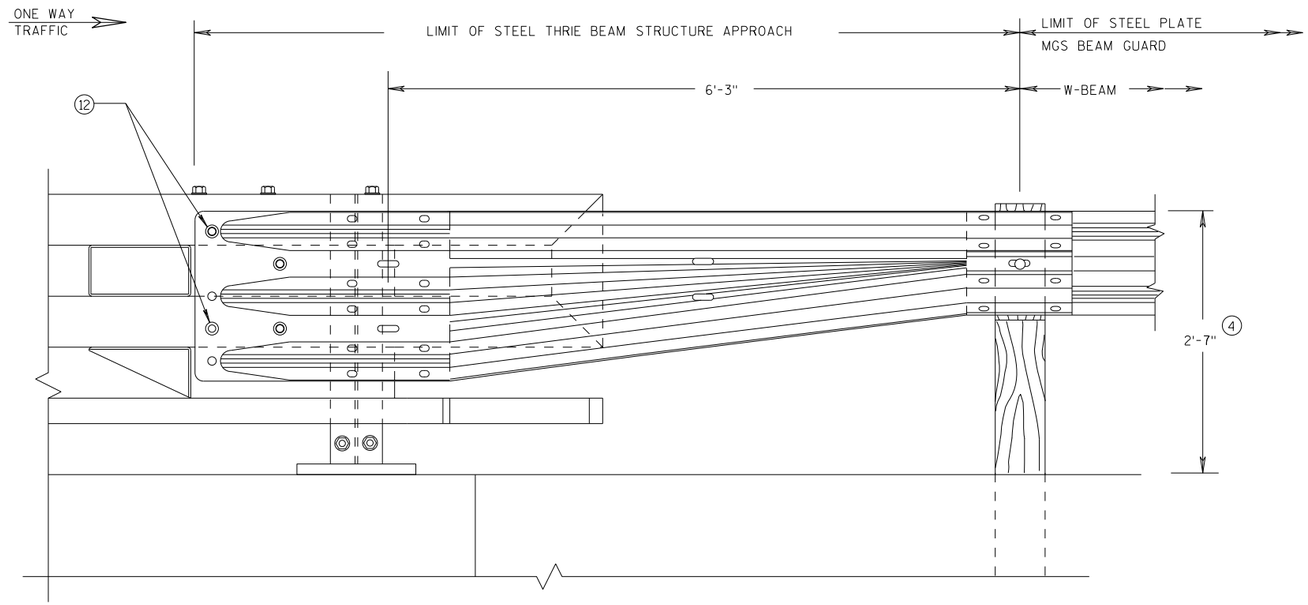
APPROVED
7/2018
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS D 263 NT
UNIT SUPERVIS
FHWA

6

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

6

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



FRONT VIEW

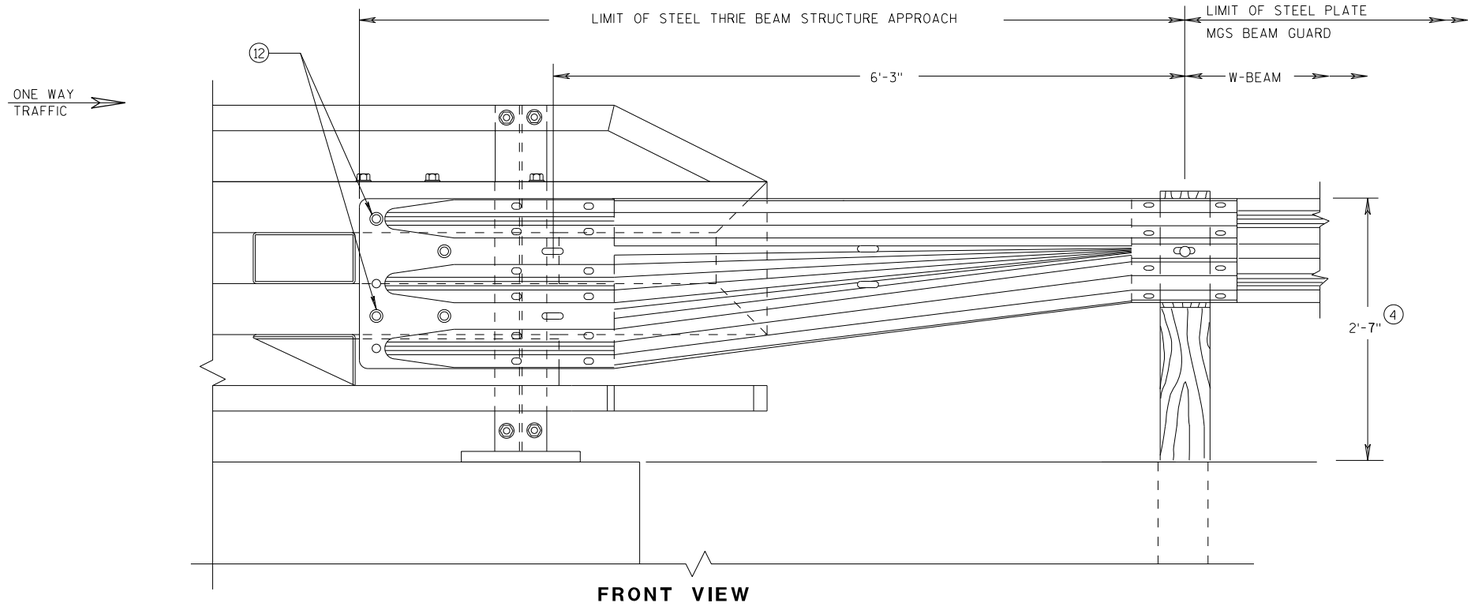
W BEAM TRANSITION AND CONNECTION TO BRIDGE RAILING TYPE "NY3"

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

GENERAL NOTES

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

(12) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. ON BACKSIDE OF PARAPET ONE ROUND WASHER, AND NUT REQUIRED. BOLT THREAD IS TO EXTEND 1/2-INCH BEYOND NUT.



FRONT VIEW

W BEAM TRANSITION AND CONNECTION TO BRIDGE RAILING TYPE "NY4"

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

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

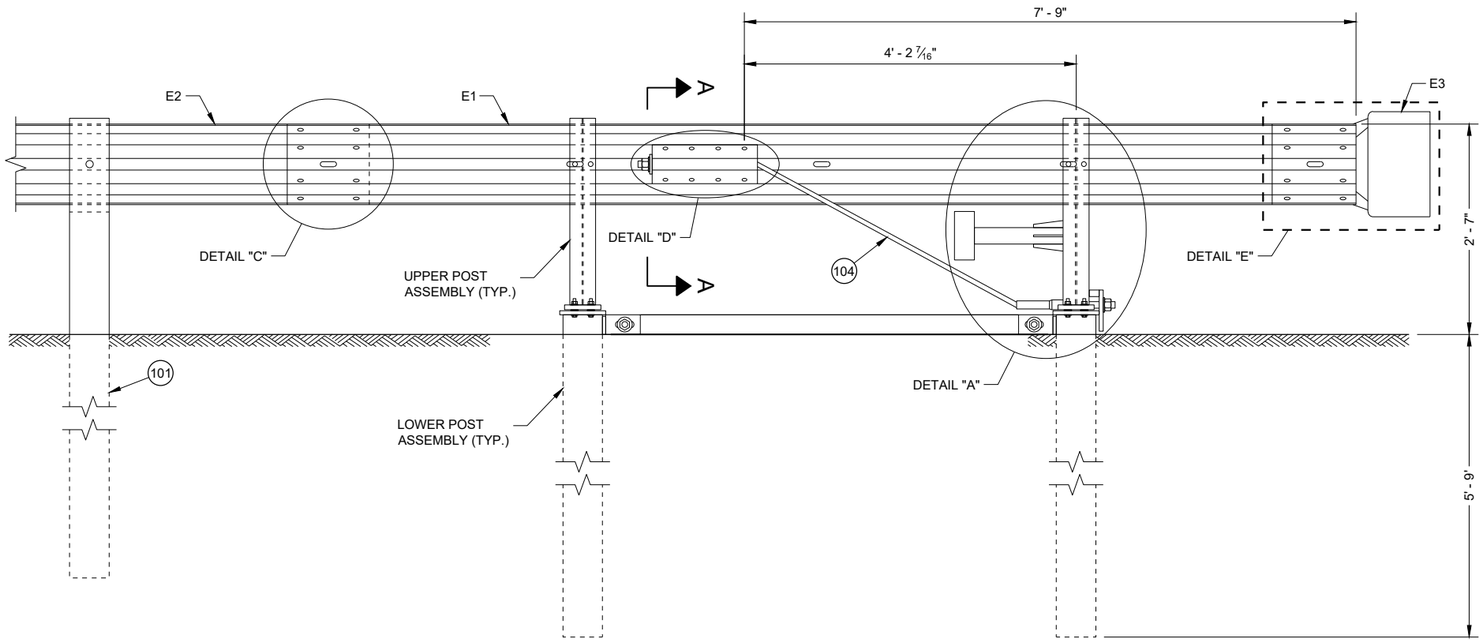
APPROVED
7/2018 DATE
/S/ Rodney Taylor
ROADWAY STANDARDS D UNIT SUPERVIS
NT
FHWA

6

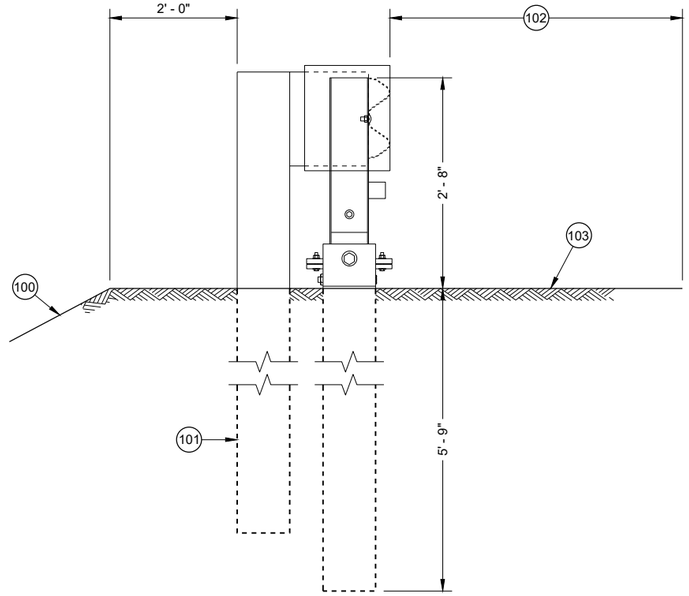
S.D.D. 14 B 45-5L

6

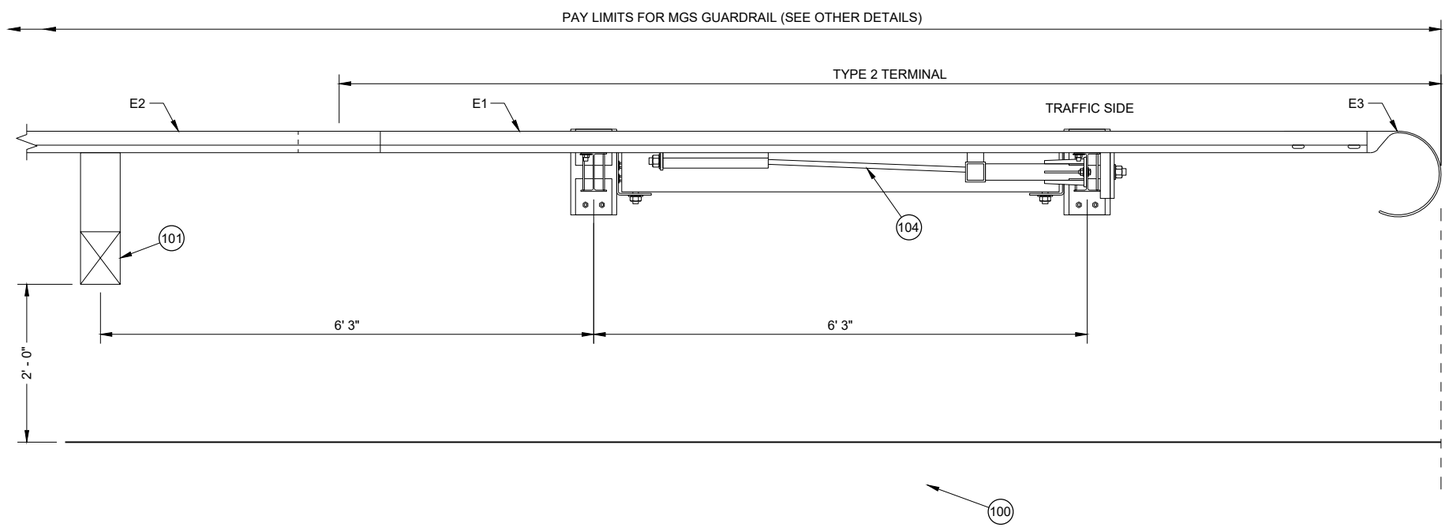
S.D.D. 14 B 45-5L



BACK VIEW
TYPE 2 TERMINAL



SIDE VIEW
TYPE 2 TERMINAL



TOP VIEW
TYPE 2 TERMINAL

GENERAL NOTES

(100) MAXIMUM SLOPE IS 2.5:1.

(101) SEE SDD 14B42 FOR MORE INFORMATION.

(102) SHOULDER

(103) MAXIMUM SLOPE IS 10:1.

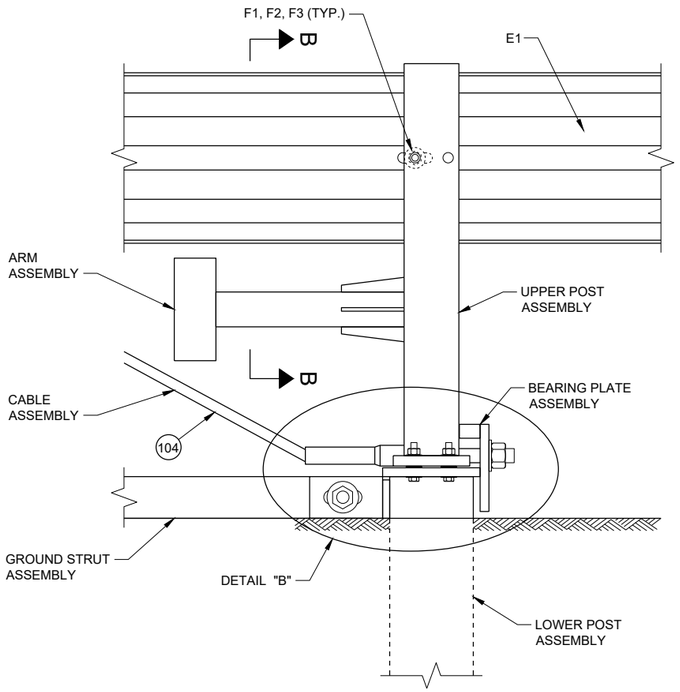
(104) AFTER ASSEMBLY, CABLE IS TO BE TIGHTENED WITHOUT TWISTING THE CABLE.

MIDWEST GUARDRAIL SYSTEM (MGS)
TYPE 2 TERMINAL

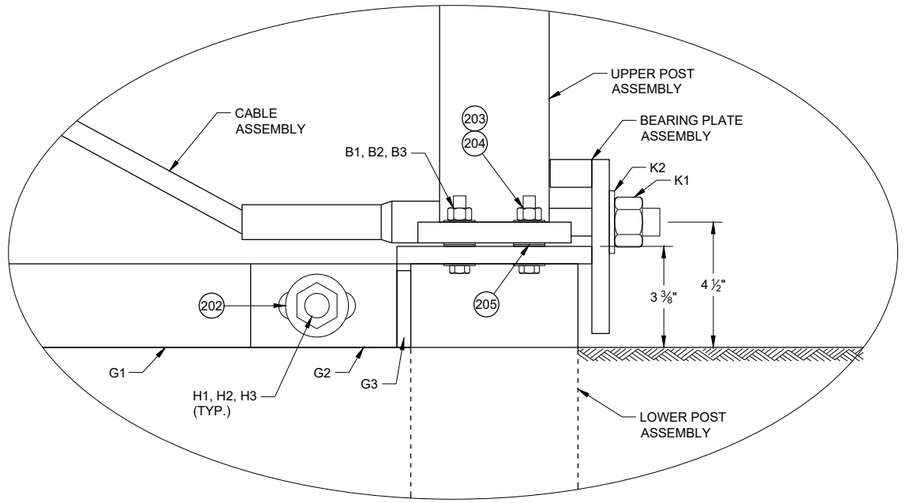
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

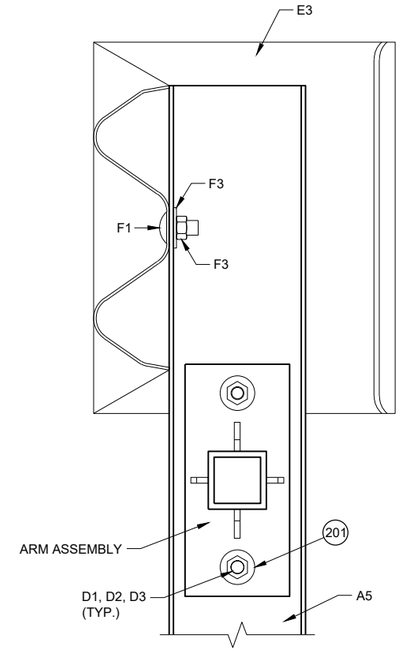
SDD 14B47 - 05a



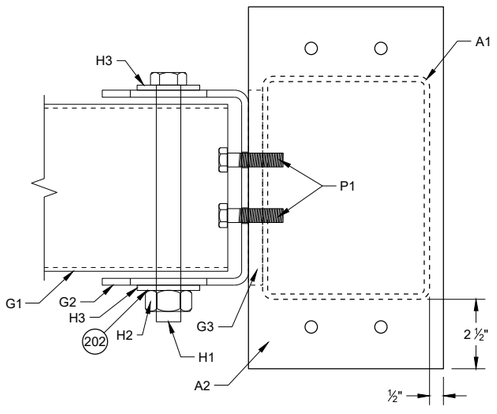
DETAIL "A"



DETAIL "B"

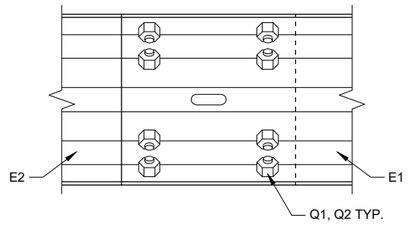


SECTION B - B



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.

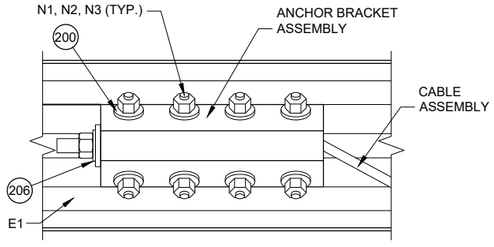
202 INSTALL ONE WASHER UNDER BOLT HEAD AND GROUND STRUT CONNECTOR AND ONE WASHER BETWEEN NUT AND GROUND STRUT CONNECTOR.

203 INSTALL ONE WASHER UNDER BOLT HEAD AND LOWER POST ASSEMBLY AND ONE WASHER BETWEEN NUT AND UPPER POST ASSEMBLY.

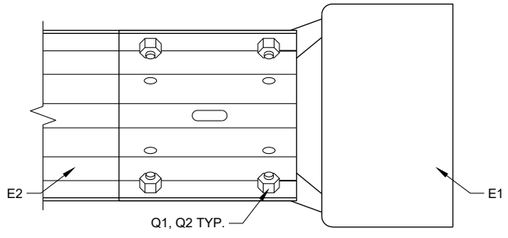
204 TORQUE VALUE IS BETWEEN 60 - 75 FT-LB.

205 TWO WASHERS BETWEEN UPPER AND LOWER POST ASSEMBLY.

206 INSTALL ONE WASHER BETWEEN NUT AND ANCHOR BRACKET ASSEMBLY.



DETAIL "D"



DETAIL "E"

MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

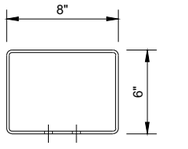
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

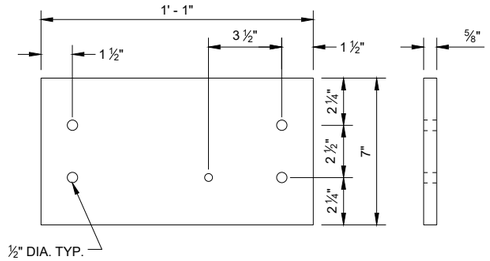
SDD 14B47 - 05b

GENERAL NOTES

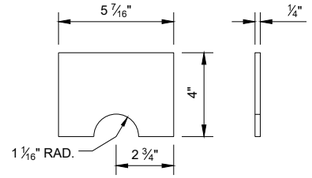
(300) TAP FOR 1/2" AFTER GALVANIZATION



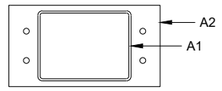
TOP VIEW



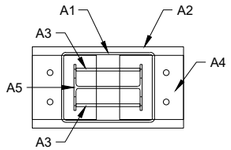
LOWER PLATE (A2)

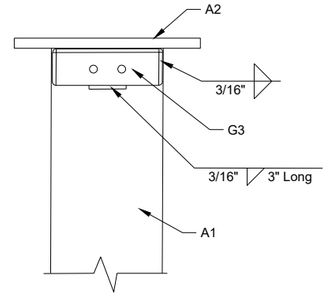


POST GUSSET (A3)

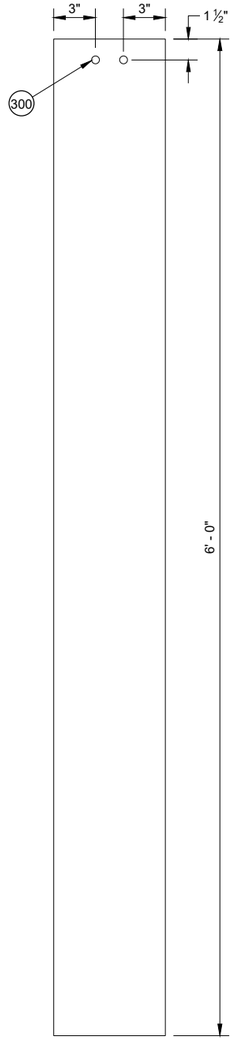


PLAN VIEW



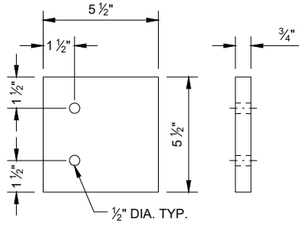


WELDING DETAIL
G3 AND A1

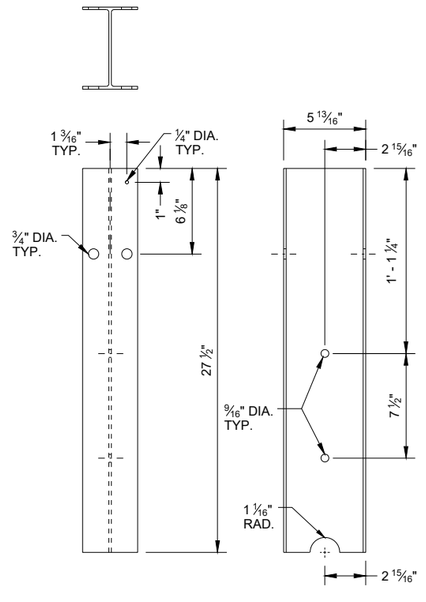


SIDE VIEW

FOUNDATION TUBE (A1)

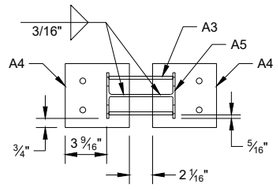


UPPER PLATE (A4)

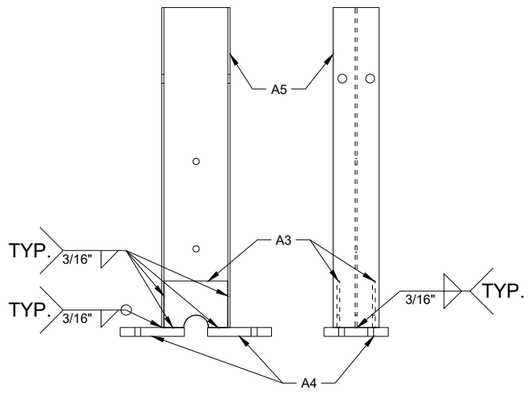


FRONT VIEW SIDE VIEW

TYPE 2 POST (A5)

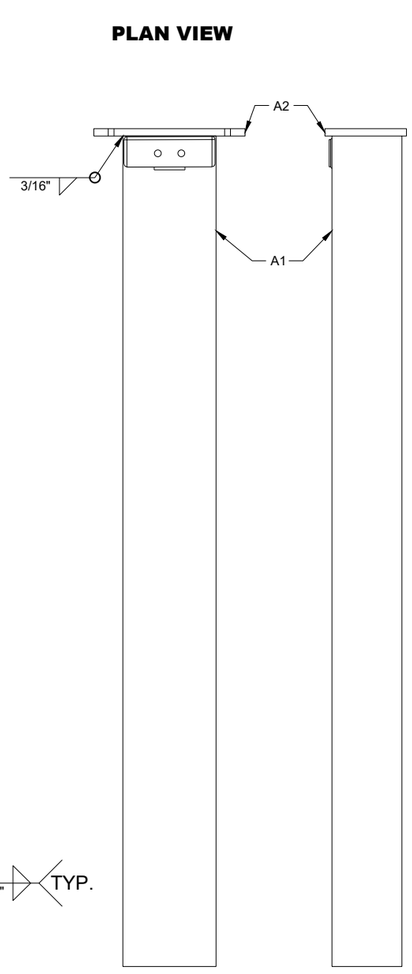


PLAN VIEW



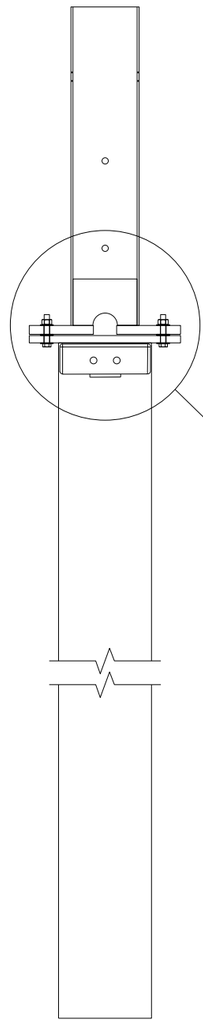
SIDE VIEW FRONT VIEW

UPPER POST ASSEMBLY

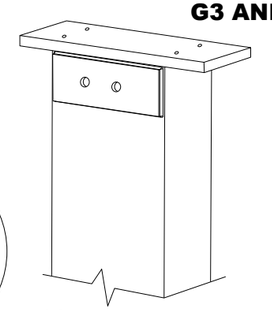


FRONT VIEW SIDE VIEW

LOWER POST ASSEMBLY



ASSEMBLED POST



ASSEMBLY DETAIL
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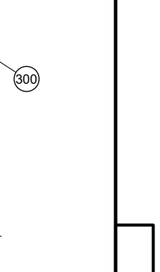
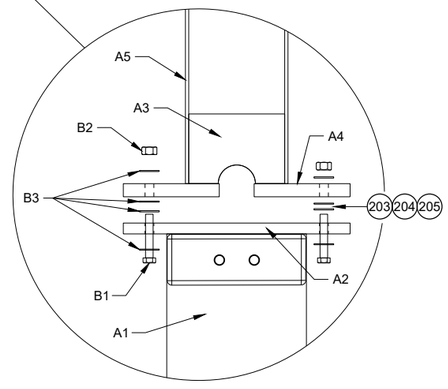


A1



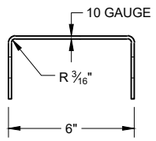
POST CONNECTION DETAIL

MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

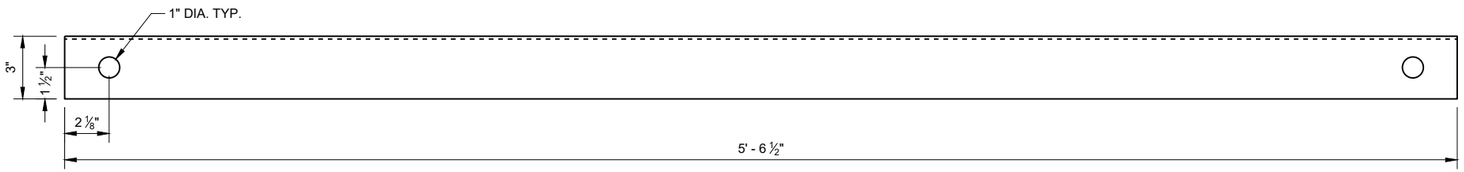
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD14B47 - 05c

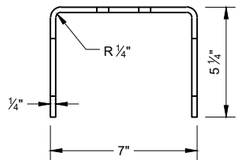


SIDE VIEW

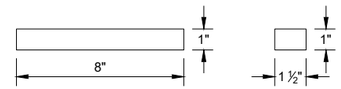


FRONT VIEW

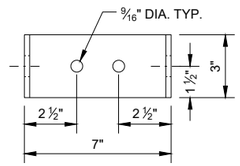
GROUND STRUT CHANNEL (G1)



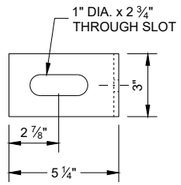
TOP VIEW



BEARING PLATE FLANGE (L2)

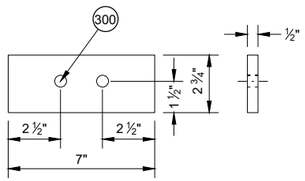


FRONT VIEW

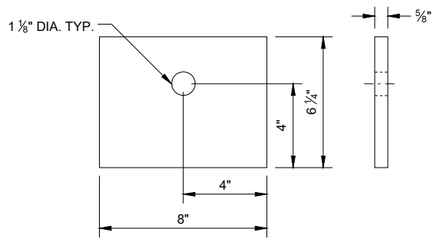


SIDE VIEW

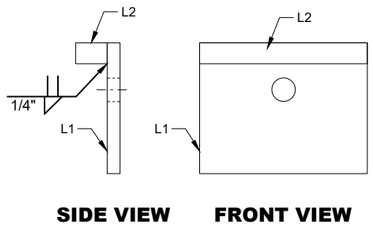
GROUND STRUT CONNECTOR (G2)



GROUND STRUT PLATE (G3)

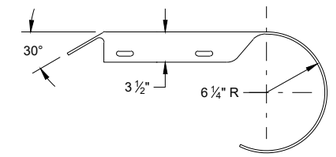


BEARING PLATE (L1)

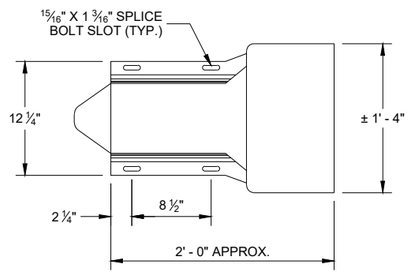


SIDE VIEW FRONT VIEW

BEARING PLATE ASSEMBLY

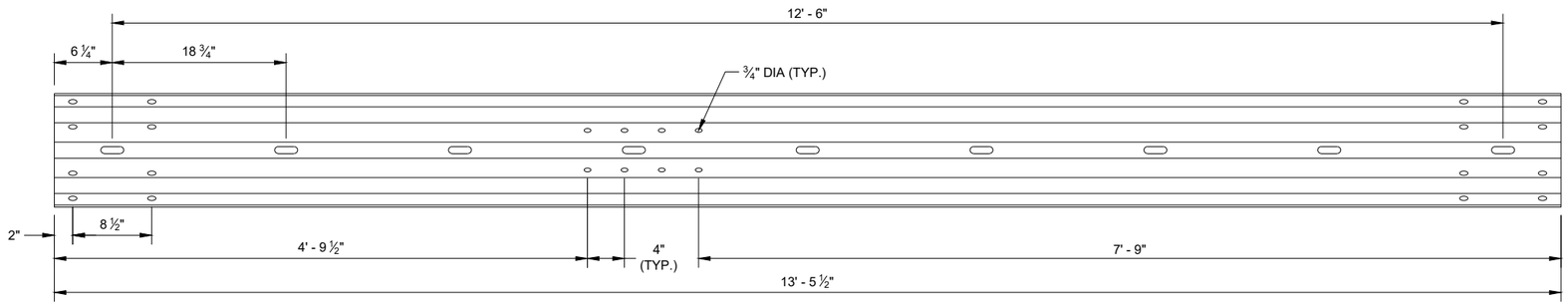


PLAN VIEW

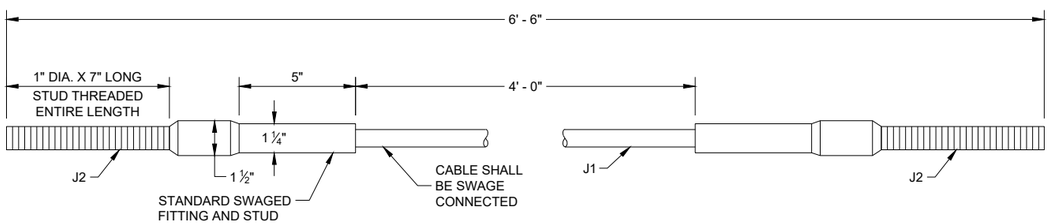


ELEVATION VIEW

ROUNDED BUFFER END (E3)



TYPE 2 GUARDRAIL (E1)



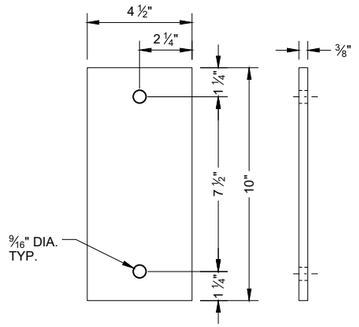
CABLE ASSEMBLY

MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

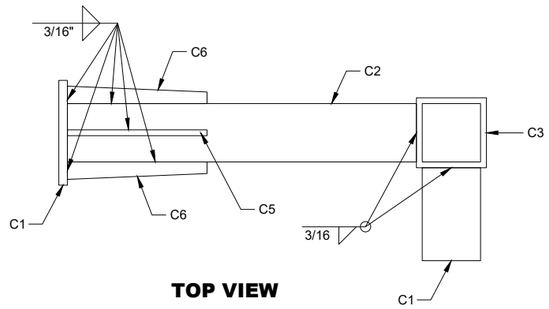
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

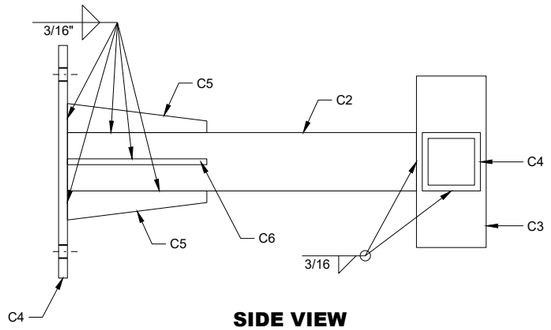
SDD 14B47 - 05d



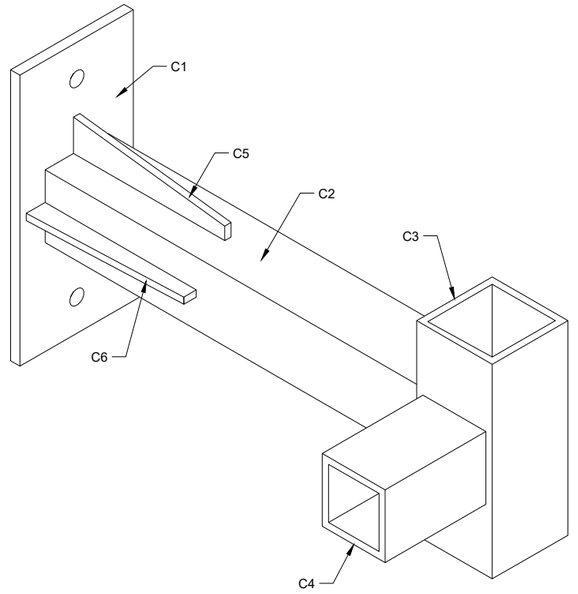
ARM PLATE (C1)



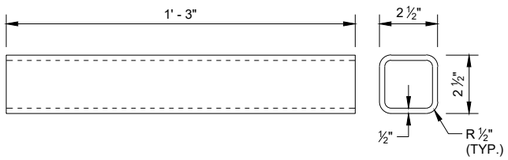
TOP VIEW
ARM ASSEMBLY



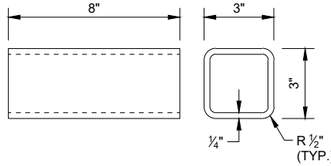
SIDE VIEW
ARM ASSEMBLY



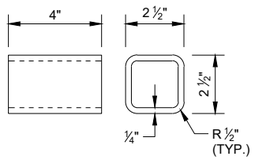
ISOMETRIC VIEW
ARM ASSEMBLY



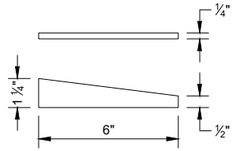
ARM TUBE 1 (C2)



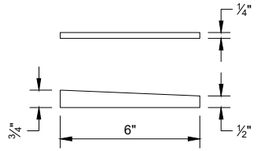
ARM TUBE 2 (C3)



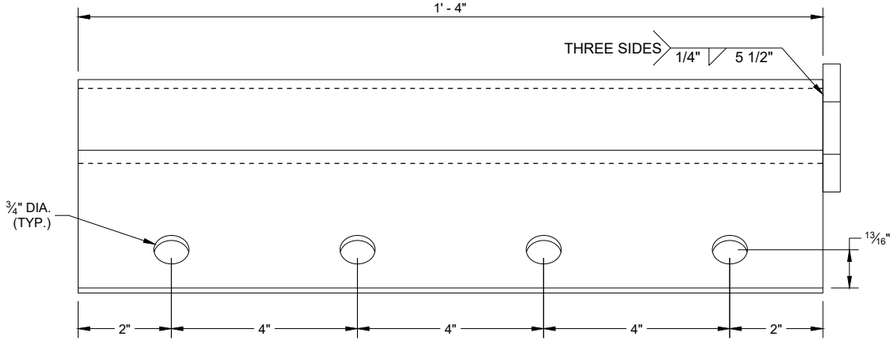
ARM TUBE 3 (C4)

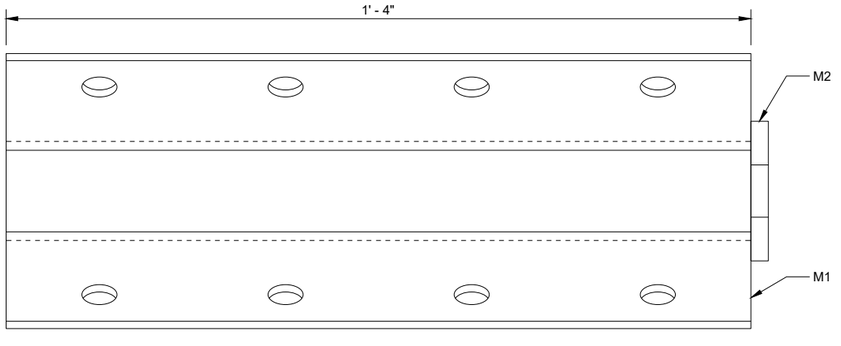


ARM GUSSET PLATE 1 (C5)

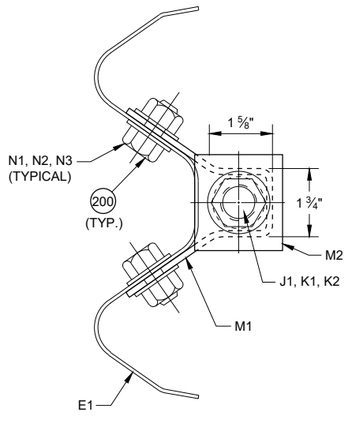


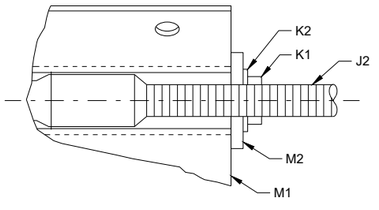
ARM GUSSET PLATE 2 (C6)



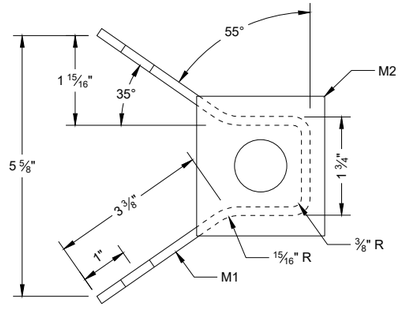


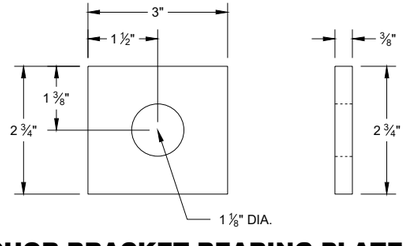
ANCHOR BRACKET (M1, M2)





SECTION A - A





ANCHOR BRACKET BEARING PLATE (M2)

MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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SDD 14B47 - 05e

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

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SDD 14B47 - 05f

MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTA

6

SDD 14B47 - 05f

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.

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SDD 14B47 - 05g

MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

May 2023
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS DEVE ENGINEER

FHWA

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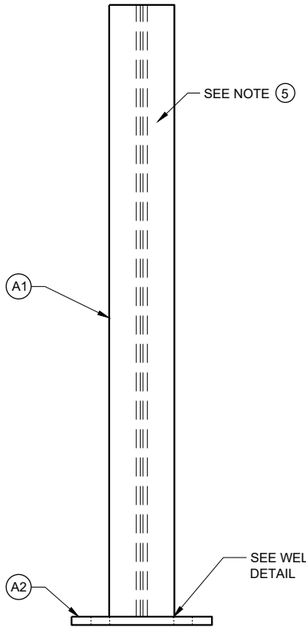
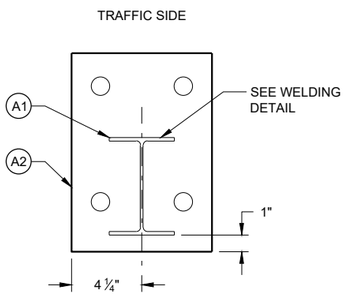
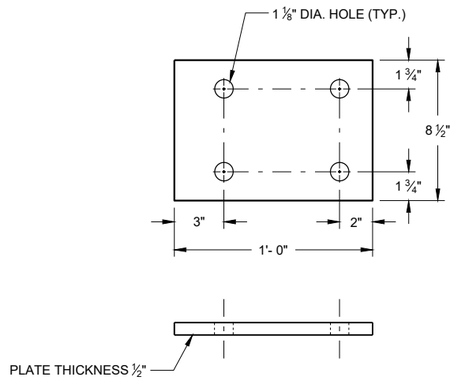
SDD 14B47 - 05g



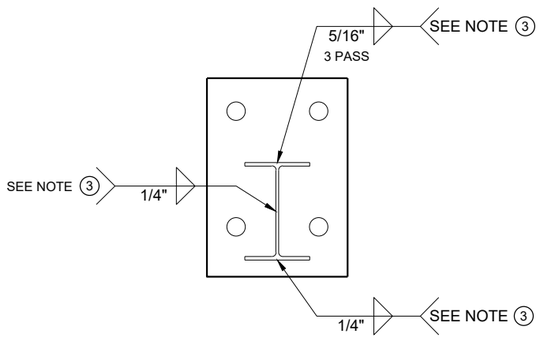
PROFILE VIEW
POST ASSEMBLY



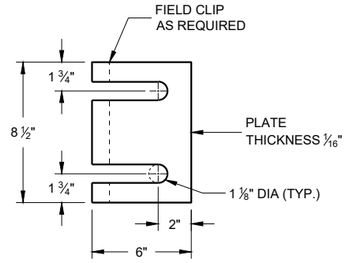
PLAN VIEW
POST ASSEMBLY



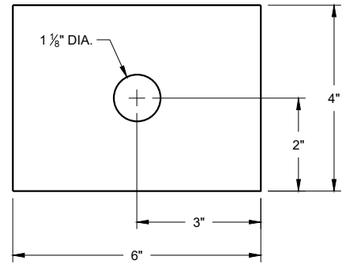
(A2) **STEEL BASE PLATE**



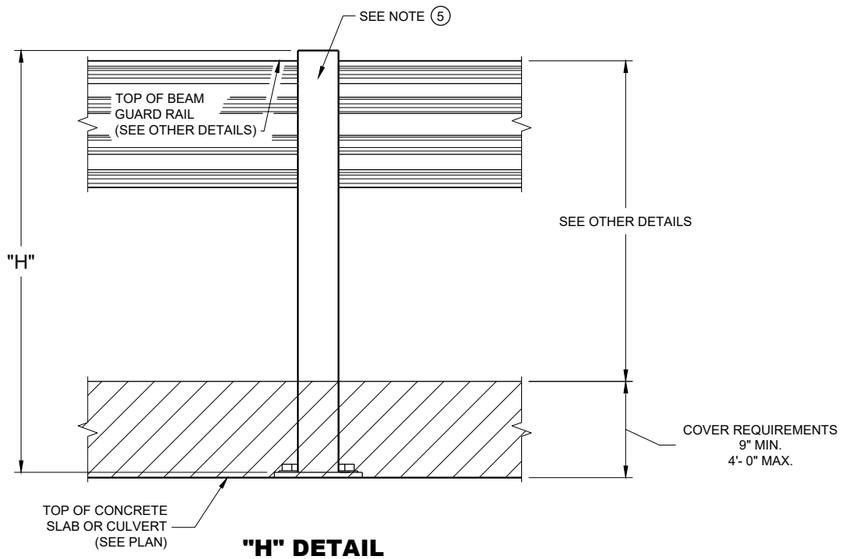
POST ASSEMBLY
WELDING DETAIL



(A10) **SHIM PLATE**



(A7) **PLATE WASHER**



"H" DETAIL

SEE NOTE (4)

6

SDD 14B51 - 03b

ANCHOR POST ASSEMBLY
TOP MOUNTED

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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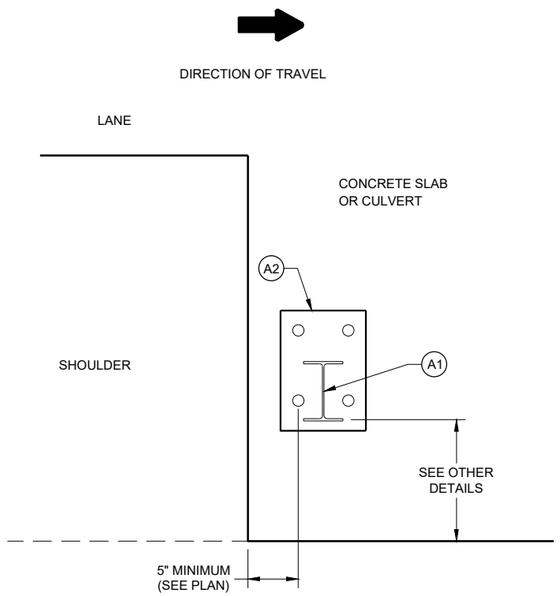
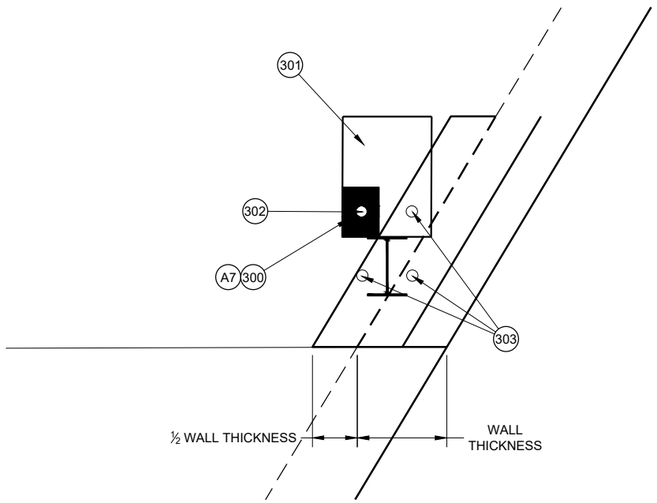
SDD 14B51 - 03b



EDGE PLACEMENT

SEE NOTE (4)



TOP MOUNT OPTION NEAR EDGE OF SLAB

BILL OF MATERIALS LIST

ITEM	DESCRIPTION	MATERIAL SPECIFICATIONS	NOTES
A1	W6x9 or W6x8.5	ASTM A992 50 KSI MIN., ASTM A709 GRADE 50, OR ASTM A36	SEE SDD 14B15 OR 14B42 LENGTH WILL VARY
A2	STEEL BASE PLATE	ASTM A992 50 KSI MIN., ASTM A529 GRADE 50, ASTM A572 GRADE 50, OR ASTM A36	
A3	1" DIA. THREADED ROD	SAE J429 GRADE 2, OR ASTM F1554 GRADE 55	LENGTH WILL VARY
A4	1" DIA. FLAT WASHER	ASTM F844	
A5	1" HEX NUT	ASTM A563A	
A6	1" DIA. HEX BOLT	ASTM A307	LENGTH WILL VARY
A7	PLATE WASHER	ASTM A992 50 KSI MIN., ASTM A529 GRADE 50, ASTM A572 GRADE 50, OR ASTM A36	¼" THICKNESS
A8	1" DIA. FLAT WASHER	ASTM F844	
A9	1" DIA. HEX NUT	ASTM A563A	
A10	SHIM PLATE	SEE (A2)	4 MAX PER POST

NOTES

300. Plate washer installed on underside of slab or culvert

301. Top plate assembly on top of slab or culvert

302. Bolt through option allowed

303. Adhesive Anchors

ANCHOR POST ASSEMBLY TOP MOUNTED

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

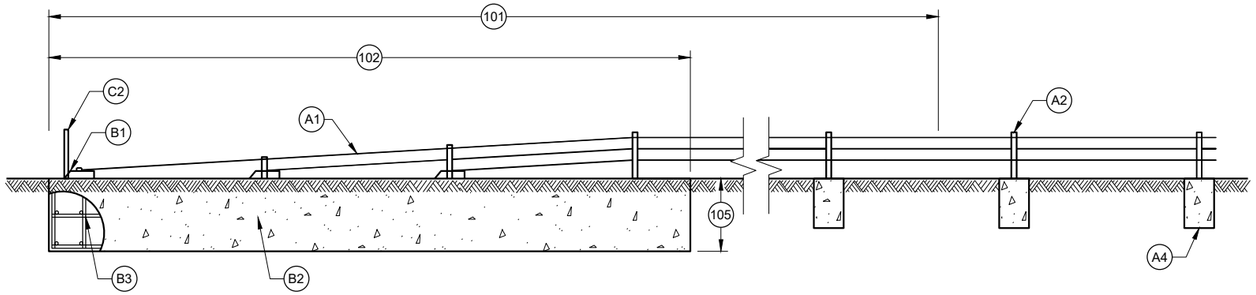
May 2023
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS DEVE ENGINEER

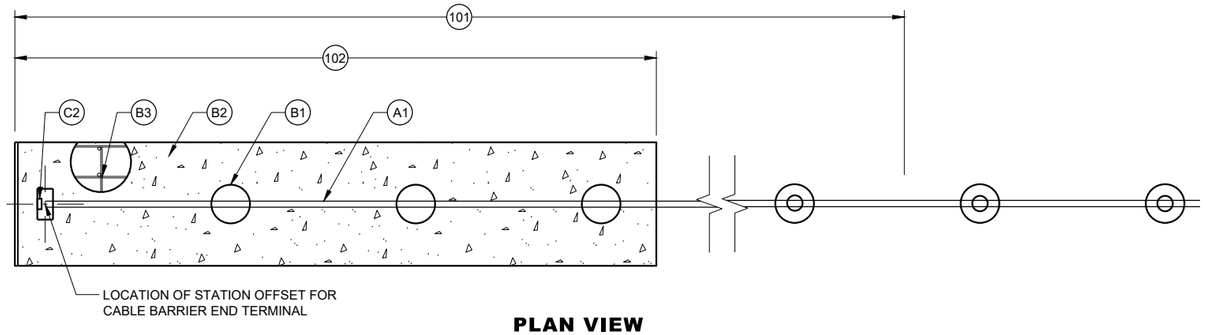
FHWA

6

SDD 14B51 - 03c

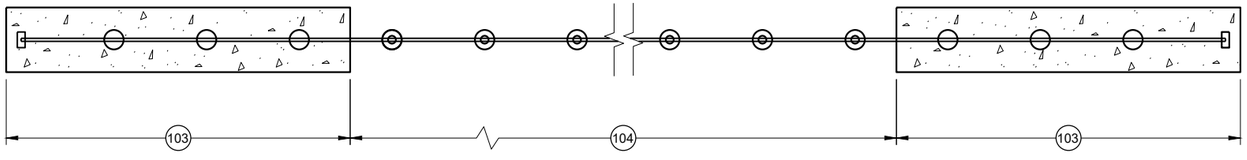


PROFILE VIEW

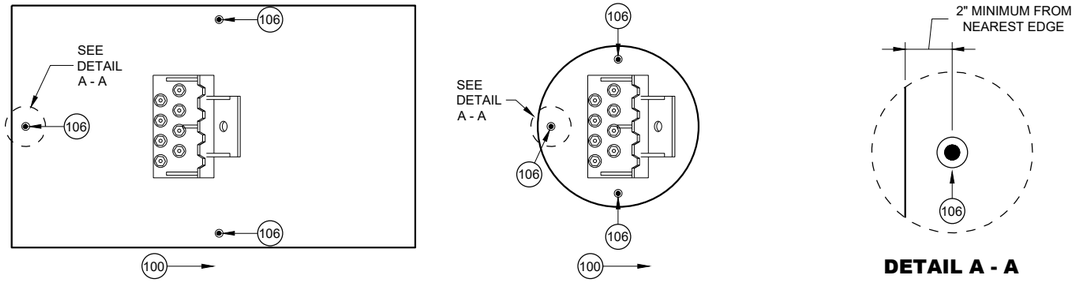


PLAN VIEW

TRANSITION FROM CABLE BARRIER TERMINAL TO CABLE BARRIER LINE POSTS



TYPICAL PLAN VIEW



DETAIL A - A

ANCHOR MONITOR POINTS FOR CABLE BARRIER END TERMINAL ANCHORS

GENERAL NOTES

DRAWINGS ARE GENERAL IN NATURE. SEE MANUFACTURER'S INFORMATION FOR MORE DETAIL.

PROVIDE 2 INCH CLEAR COVER FROM OUTER EDGE OF CONCRETE FOOTINGS TO REINFORCEMENT.

INSTALL LINE POSTS PLUMB. LINE POSTS ARE TO BE EASILY REMOVED BY HAND AND HOLD CABLES AT THE PROPER ELEVATION.

PROVIDE CABLE BARRIER SYSTEM FROM APPROVED PRODUCT LIST.

PROVIDE A SYSTEM TO HAVE THE WORKING WIDTH INDICATED IN PLAN.

PROVIDE DOCUMENTATION HOW POST SPACING, RADIUS OF CURVE AND ANCHOR SPACING INFLUENCES WORKING WIDTH TO CONSTRUCTION STAFF.

CONSTRUCT SHAFTS VERTICALLY. VERTICAL TOLERANCE OF SHAFT IS $\frac{1}{8}$" PER FOOT OF DEPTH. SHAFTS ARE TO MINIMIZE DISTURBANCE TO ADJACENT SOILS.

SECURE STEEL REINFORCEMENT AND STEEL SLEEVE PRIOR TO PLACEMENT OF CONCRETE. MAINTAIN CLEAR DISTANCE BETWEEN SOIL AND REINFORCEMENT CAGE.

PLACE CONCRETE IN ONE CONTINUOUS POUR FOR EACH FOOTING. USE VIBRATION TO CONSOLIDATE CONCRETE.

PROVIDE CASING AS NECESSARY TO PREVENT INTRUSION OF UNCONSOLIDATED MATERIALS OR WATER. USE CASINGS WHEN THERE IS 3 OR MORE INCHES OF WATER IN EXCAVATION.

PROVIDE WISCONSIN PROFESSIONAL ENGINEER SIGNED AND APPROVED FOOTING DESIGN USING A CASING AND CONSTRUCTION SEQUENCE. PROJECT ENGINEER WILL REVIEW AND APPROVED CASING DESIGN AND CONSTRUCTION SEQUENCE. CASING IS TO HAVE INTIMATE CONTACT WITH SHAFT SIDEWALL. CASING IT TO WITHSTAND INSERTION STRESS, REMOVAL STRESS, CONCRETE PRESSURE AND SOIL PRESSURE. REMOVE CASING DURING CONCRETE PLACEMENT OR IMMEDIATELY AFTER CONCRETE PLACEMENT. NO TEMPORARY CASING MAY REMAIN IN-PLACE.

PROVIDE WISCONSIN PROFESSIONAL ENGINEER SIGNED AND APPROVED FOOTING DESIGN AND CONSTRUCTION SEQUENCE WHEN OVER EXCAVATION IS REQUIRED NEAR A FOOTING. PROJECT ENGINEER WILL REVIEW AND APPROVED DESIGN AND CONSTRUCTION SEQUENCE.

FINISH TOP OF FOOTINGS TO THE DIMENSIONS INDICATED IN PLAN. REMOVE EXCESS CONCRETE.

DESIGN POST FOOTINGS SO THAT LINE POST FOOTING MOVE LESS THAN 1 INCH WHEN LINE POST IS IMPACTED BY A NCHRP 350 TL-3 SMALL CAR.

USE MARINE GRADE ANTI-SEIZE LUBRICANT FOR THREADING FITTINGS THAT IS ACCEPTABLE FOR USE ON GALVANIZED STEEL.

(100) DIRECTION THAT THE CABLE PULLS THE END ANCHOR FOOTING

(101) LOCATION OF LENGTH OF NEED POINT FOR CABLE BARRIER END TERMINAL VARIES. (SEE MANUFACTURER'S INFORMATION)

(102) PAY LIMIT FOR CABLE BARRIER END TERMINAL. LENGTH OF CABLE BARRIER END TERMINAL VARIES. (SEE MANUFACTURER'S INFORMATION)

(103) CABLE BARRIER END TERMINAL

(104) CABLE BARRIER AND LINE POSTS

(105) IN SOIL MINIMUM DEPTH OF CABLE BARRIER END TERMINAL FOOTING IS 60 INCHES. DEEPER FOOTINGS PER MANUFACTURER'S RECOMMENDATION ARE ACCEPTABLE.

(106) ANCHOR MONITOR POINTS ARE GALVANIZED SURVEY NAIL, OR MASONRY NAIL, PLACED INTO CONCRETE FOOTING BEFORE HARDENING. IF THERE ARE MULTIPLE ANCHOR POINTS WITHIN A PAY LIMIT FOR A CABLE BARRIER END TERMINAL, EACH ANCHOR POINT NEEDS THREE ANCHOR MONITOR POINTS.

CABLE BARRIER TYPE 1 LAYOUT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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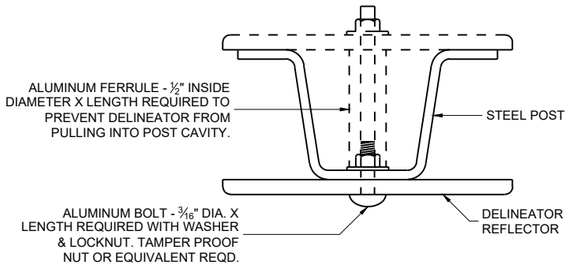
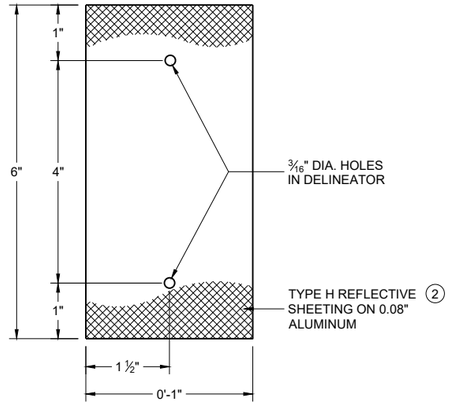
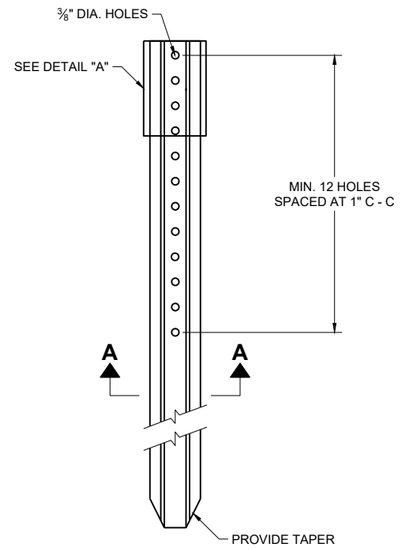
SDD14B52 - 03a



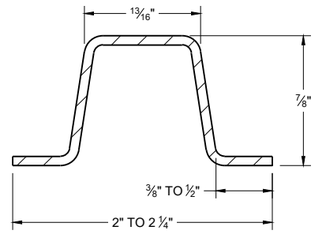
MOUNTING DETAIL FOR DELINEATOR REFLECTOR



DETAIL "A" 3" X 6" DELINEATOR REFLECTOR



DELINEATOR POST



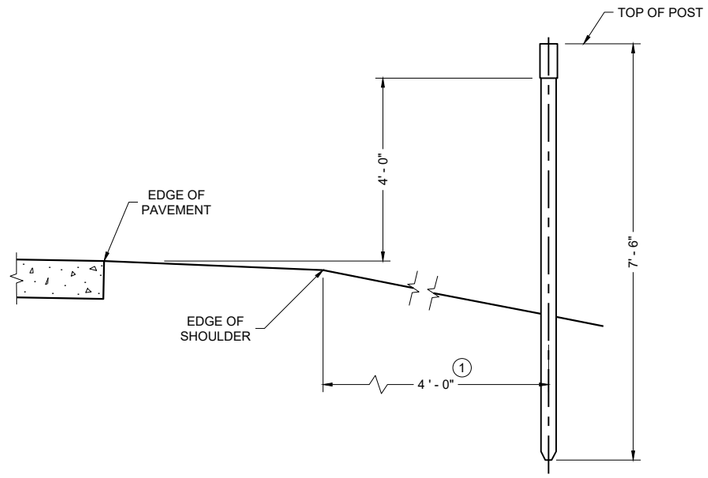
SECTION A - A

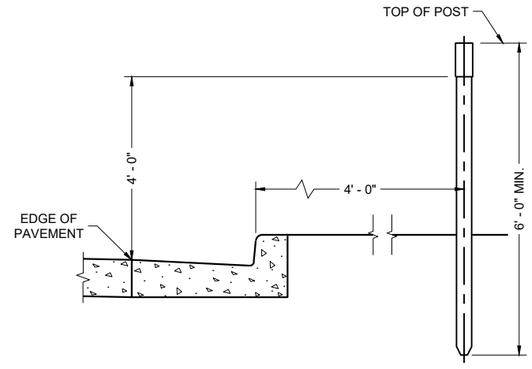
WEIGHT 1.12 LBS PER FT. \ 0.1 LB.

REFLECTOR SPACING TABLE

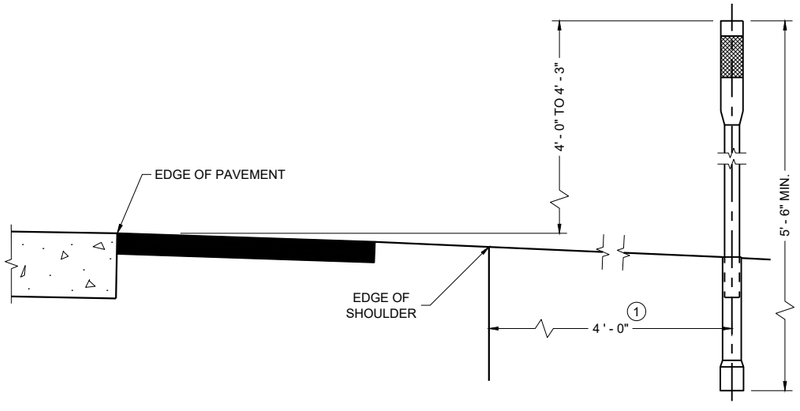
REFLECTOR SPACING	LOCATION
* 100' C-C	RAMPS
400' C-C	MAINLINE

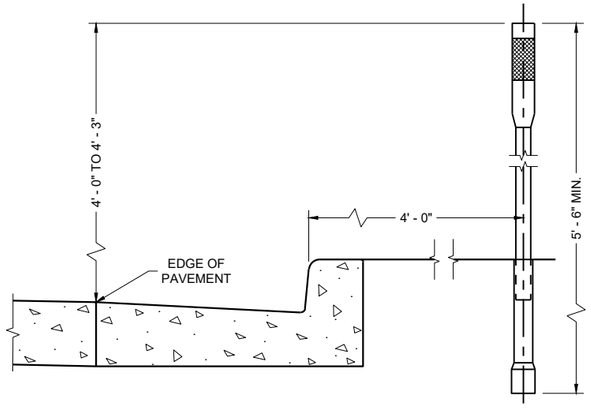
* START AT BEGINNING OF RAMP TAPER AND END AT END OF RAMP TAPER





TYPICAL INSTALLATIONS OF DELINEATOR POSTS





TYPICAL INSTALLATIONS OF FLEXIBLE DELINEATOR POSTS

GENERAL NOTES

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

(1) DELINEATORS SHALL BE PLACED AT A CONSTANT DISTANCE FROM THE EDGE OF THE SHOULDER FOR THE LENGTH OF THE INSTALLATION.

(2) FURNISH TYPE H SHEETING FROM THE APPROVED PRODUCTS LIST.

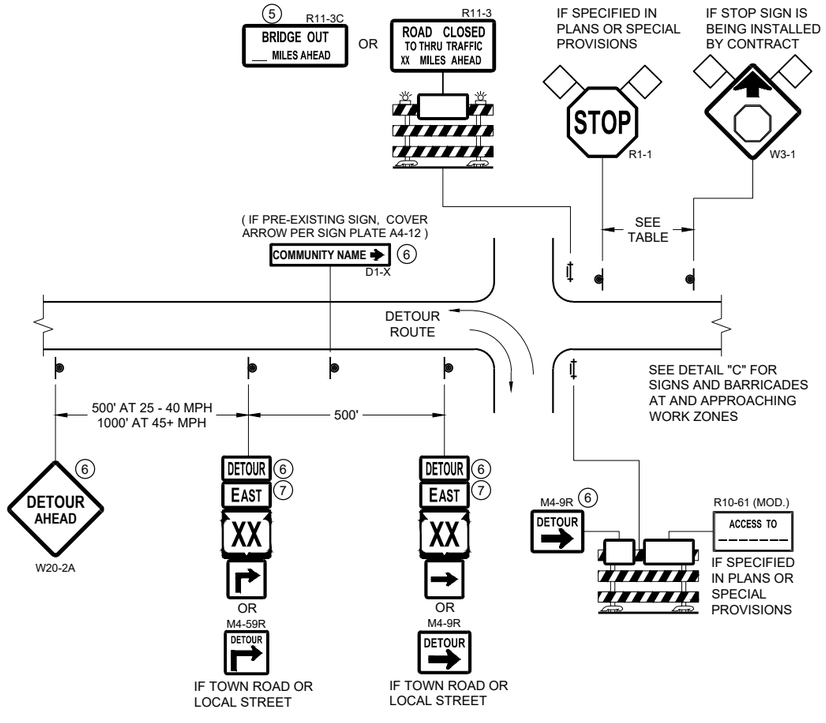
DELINEATOR POST WITH REFLECTIVE SHEETING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2024
DATE
/S/ Jeannie Silver
Statewide Pavement Marking Engineer

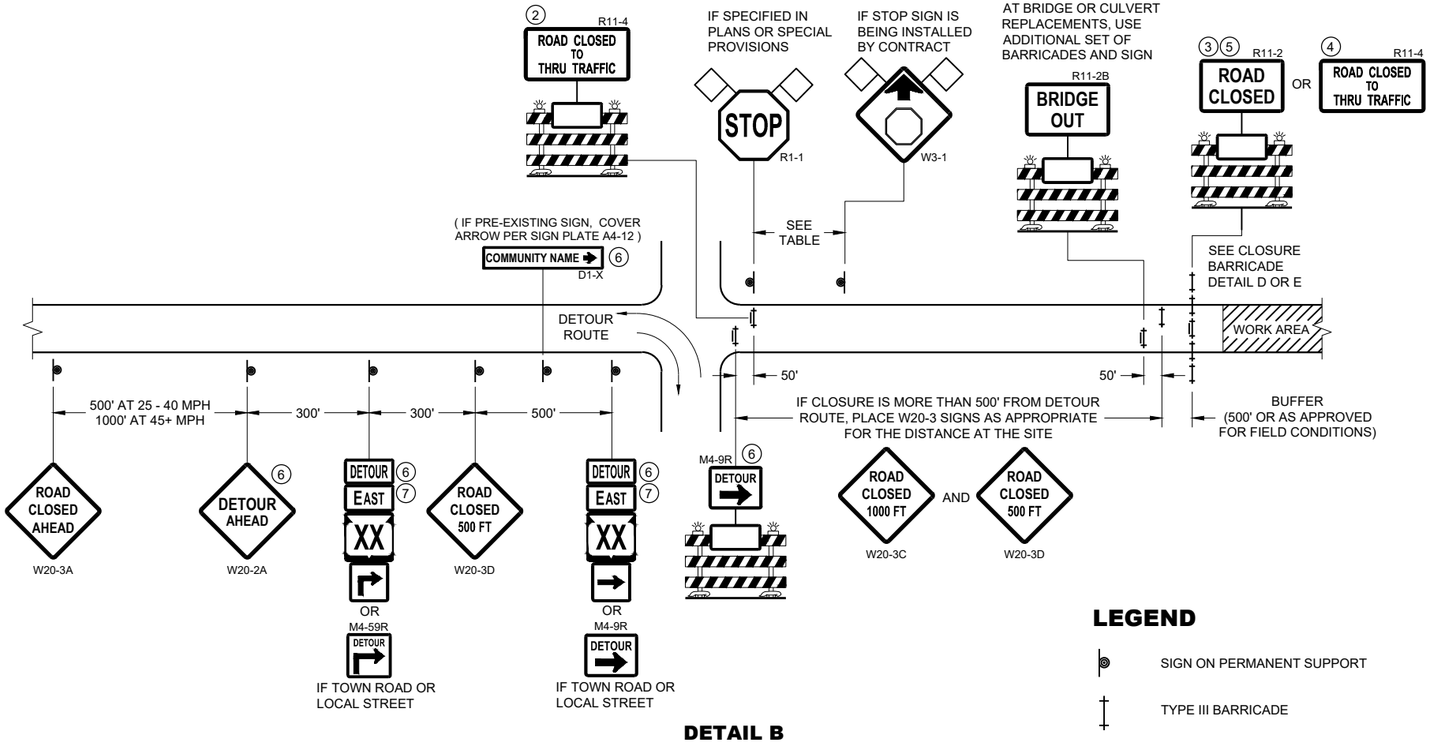
FHWA

6
SDD 15A04-08c



DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE GREATER THAN OR EQUAL TO ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



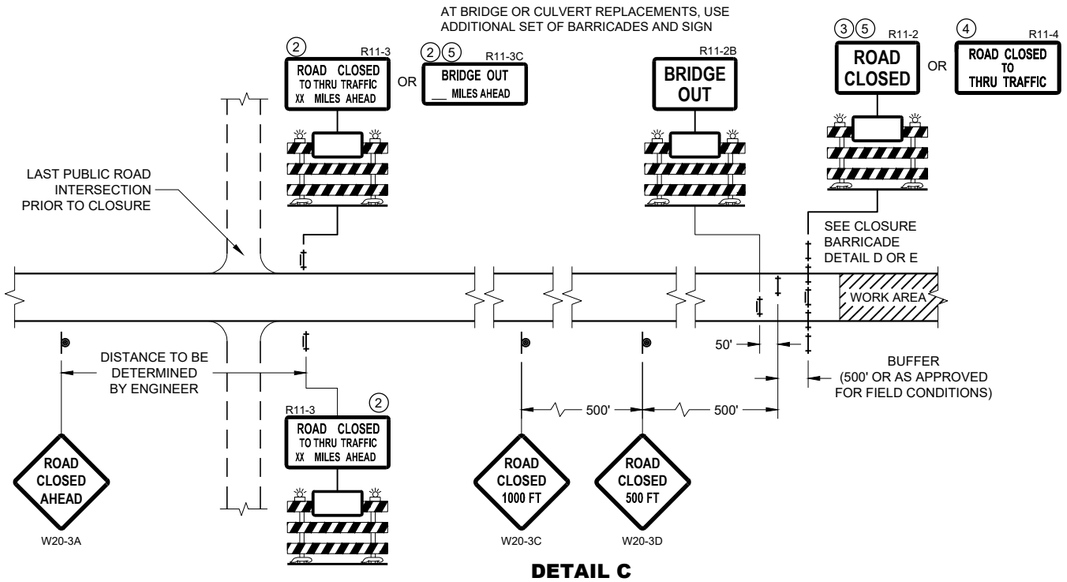
DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE LESS THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)

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



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

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEER

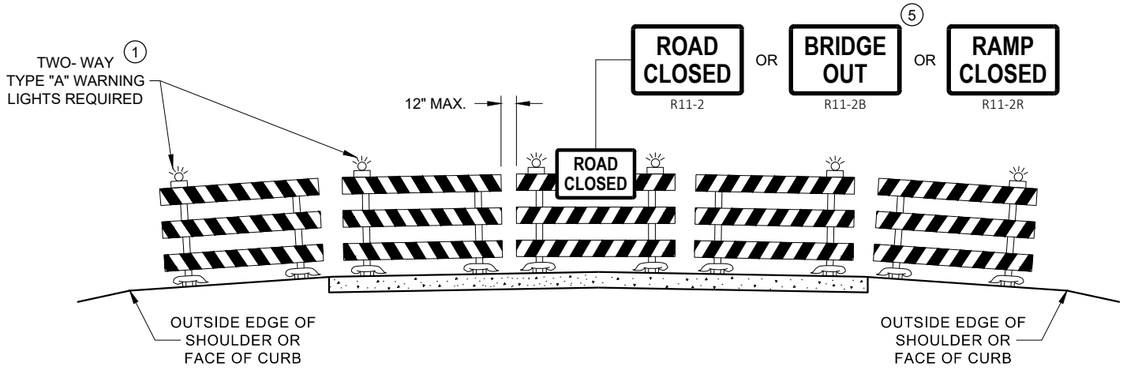
FHWA

6

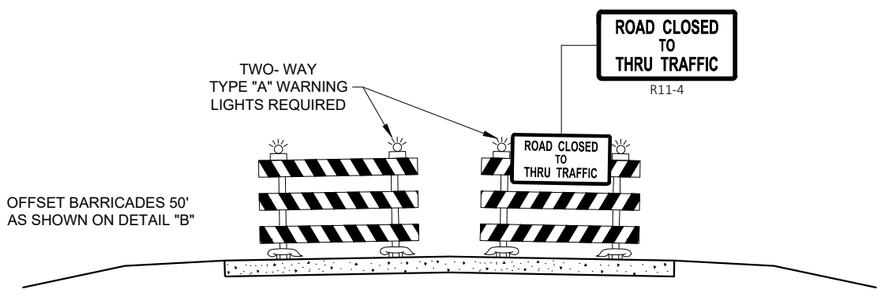
SDD 15C02 - 09a

6

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

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.

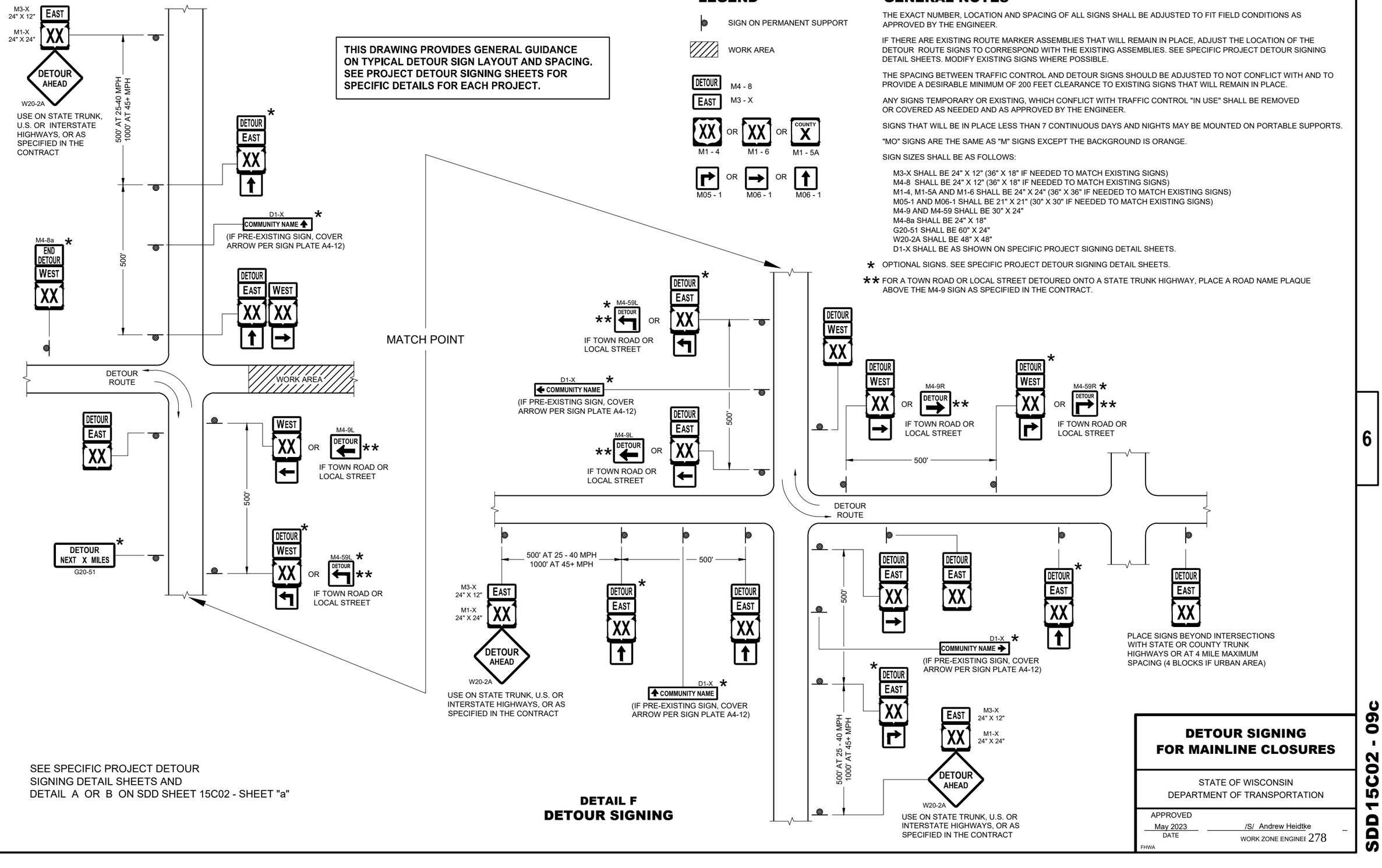
"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

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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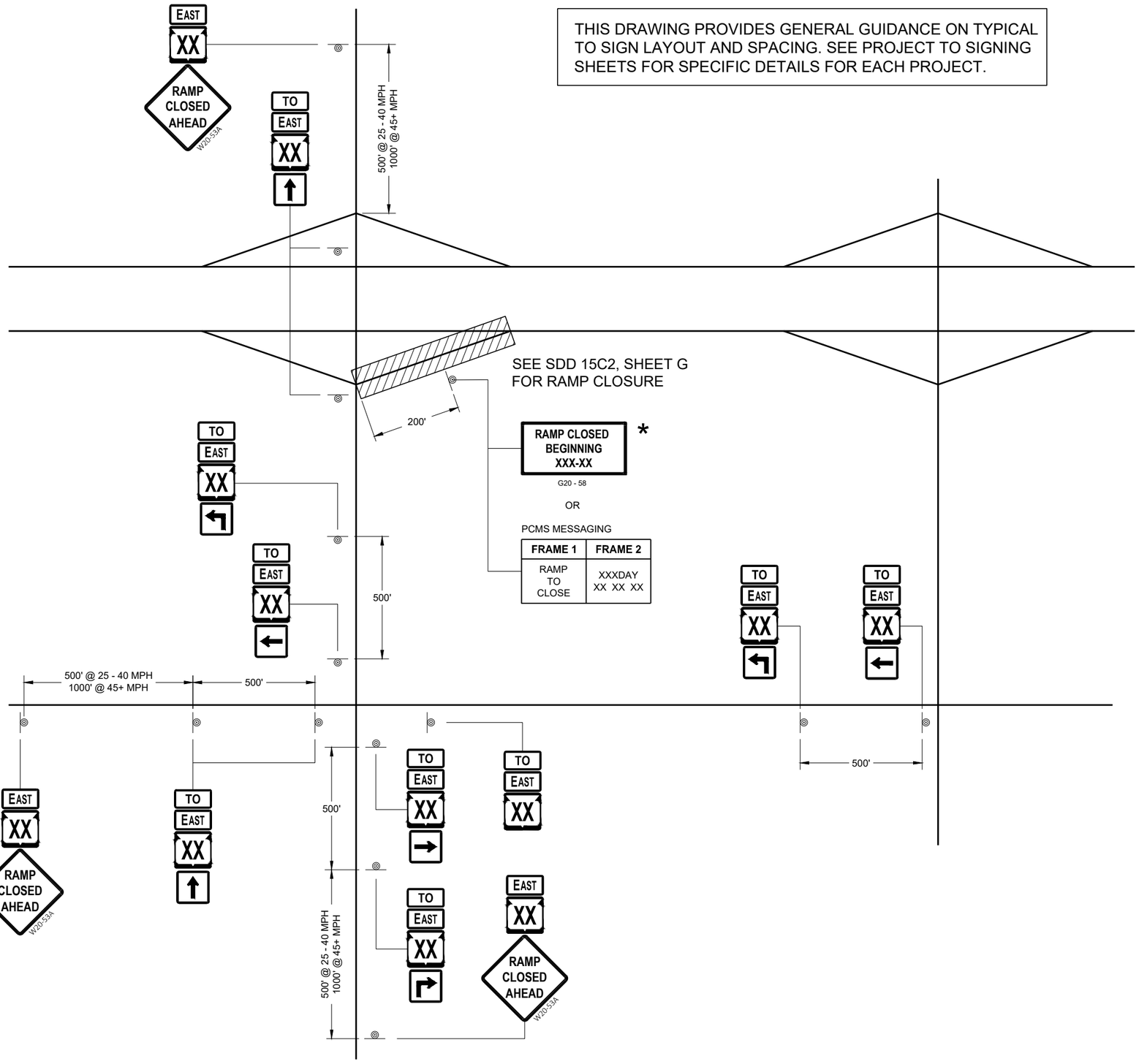
SDD 15C02 - 09c



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
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINEER

FHWA

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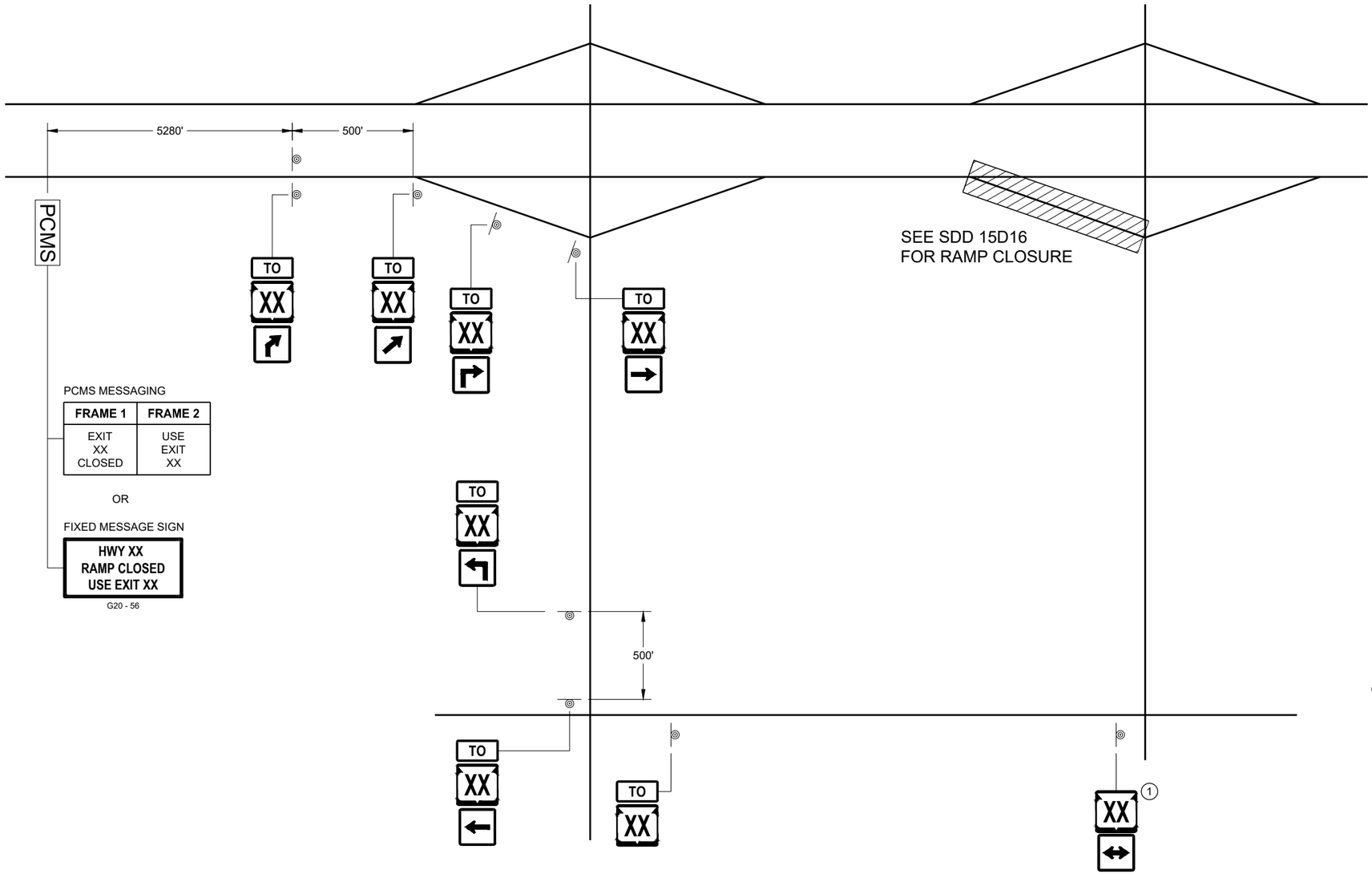
SDD 15C02 - 09d

SDD 15C02 - 09d

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 ENGINEER
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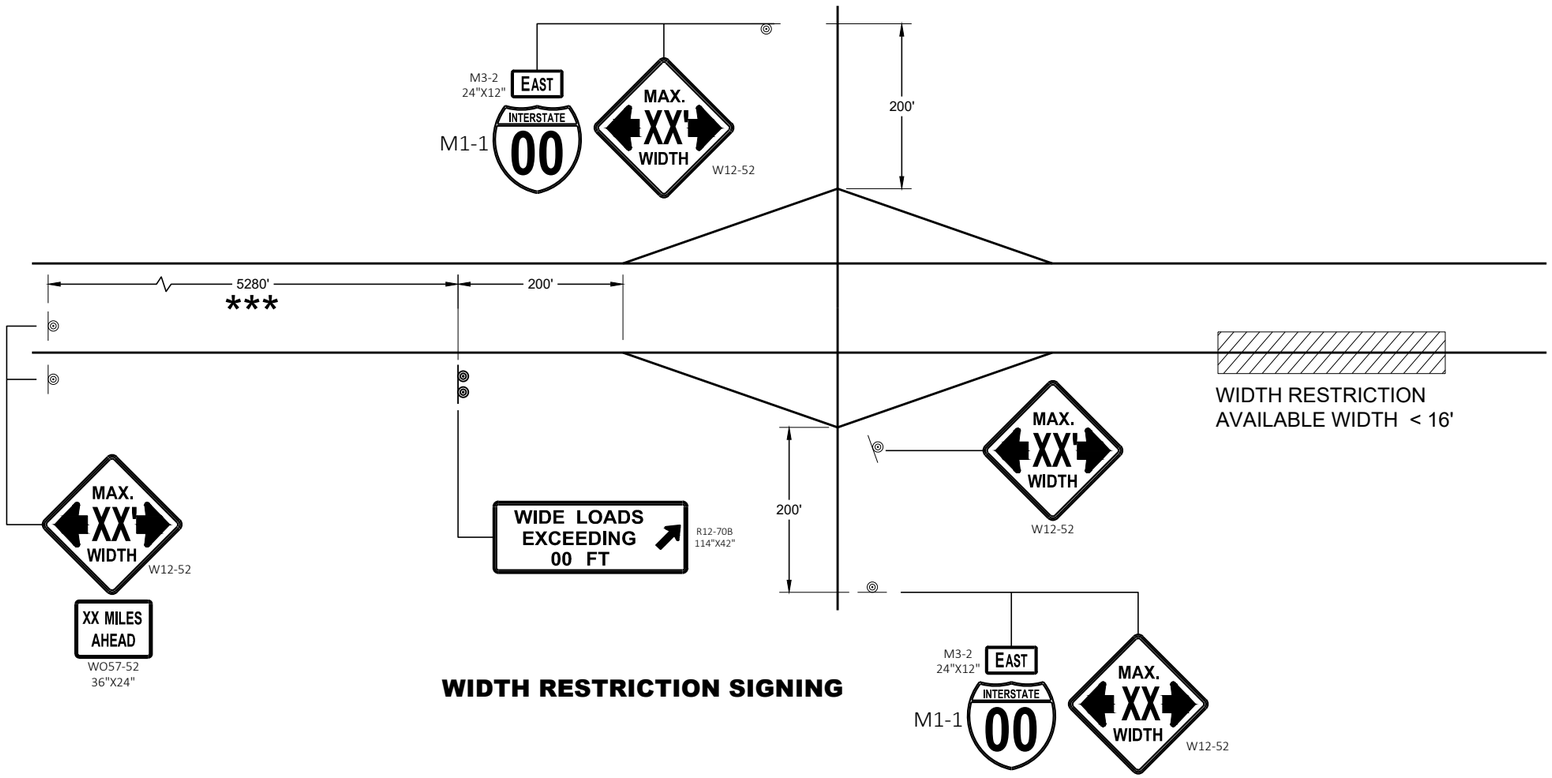
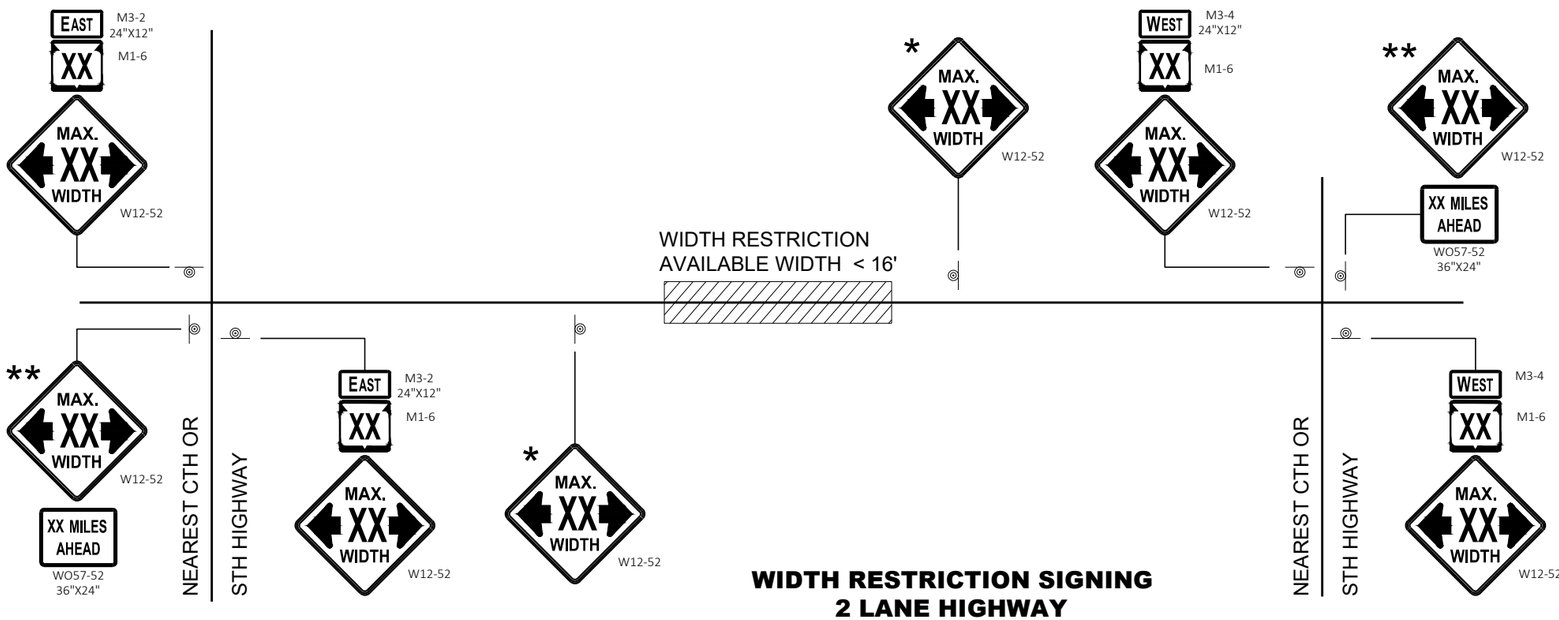
SDD 15C02 - 09e



WIDTH RESTRICTION SIGNING



WIDTH RESTRICTION SIGNING
2 LANE HIGHWAY

LEGEND

SIGN ON PERMANENT SUPPORT

GENERAL NOTES

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

THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

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

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

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

WIDTH ON SIGN TO BE APPROXIMATELY ONE FOOT LESS THAN AVAILABLE WIDTH.

* PLACE 500 FEET AFTER THE W20 - 1A AND 500 FEET BEFORE ADDITIONAL SIGNS FOR ROADWAYS WITH A PRE - CONSTRUCTION SPEED LIMIT OF 45 MPH OR MORE. FOR 35-40 MPH, USE 350 FOOT TYPICAL SPACING. FOR 25-30 MPH, USE 200 FOOT TYPICAL SPACING.

** SIGN SHALL BE VISIBLE FROM ROADWAY.

*** ADDITIONAL SIGNS NEEDED IF THERE IS AN ON RAMP BETWEEN SIGNS.

WIDTH ON SIGN TO BE APPROX. 1 - FOOT LESS THAN AVAILABLE WIDTH

ADVANCED WIDTH RESTRICTION SIGNING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

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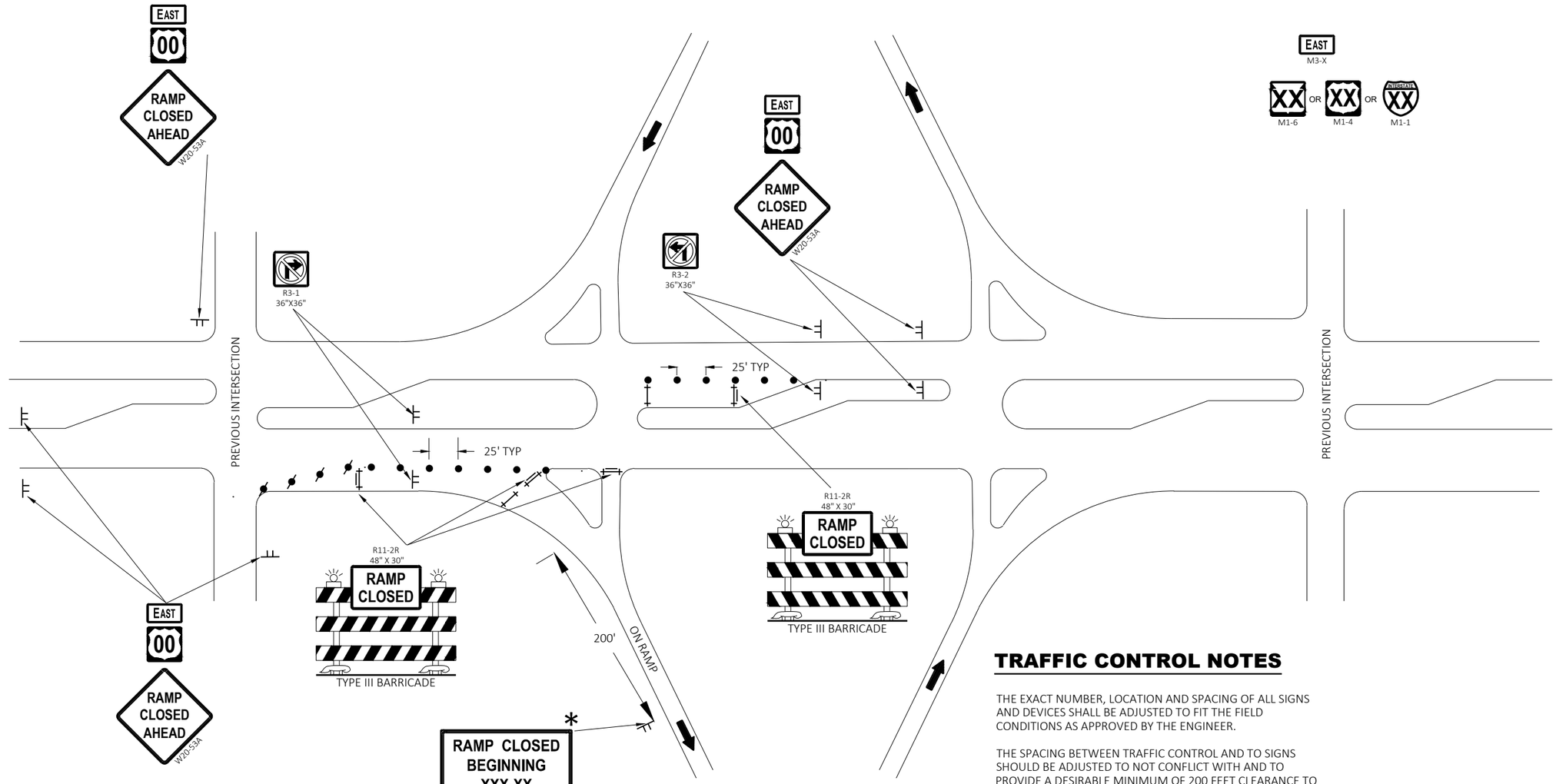

LEGEND

- 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
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APPROVED
May 2023 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINEE

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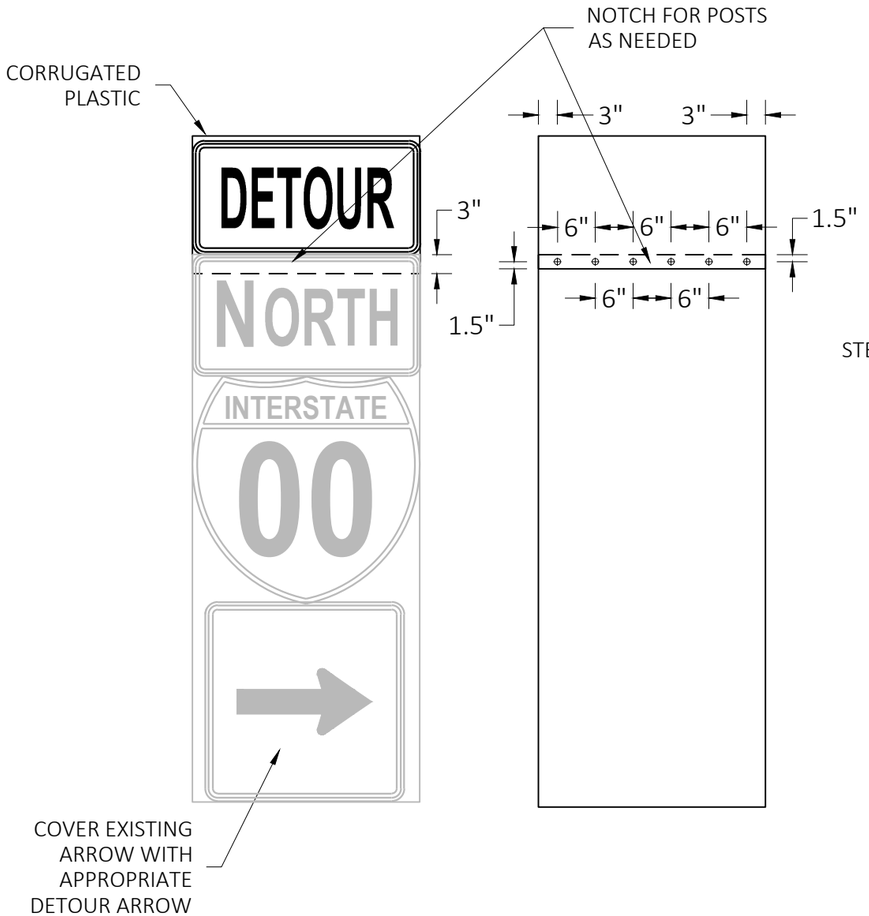
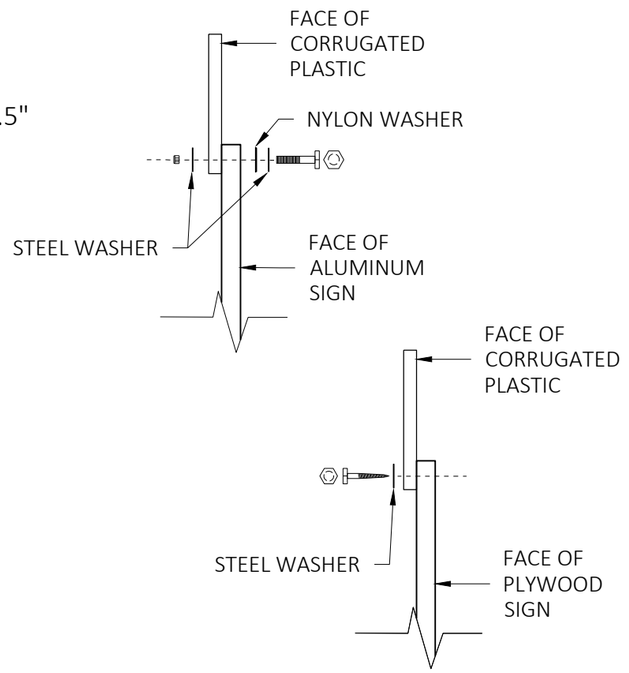
FRONT SIDE

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

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MODIFIED ROUTE ASSEMBLY FOR DETOUR SIGNING

MODIFIED ROUTE ASSEMBLY FOR DETOUR SIGNING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

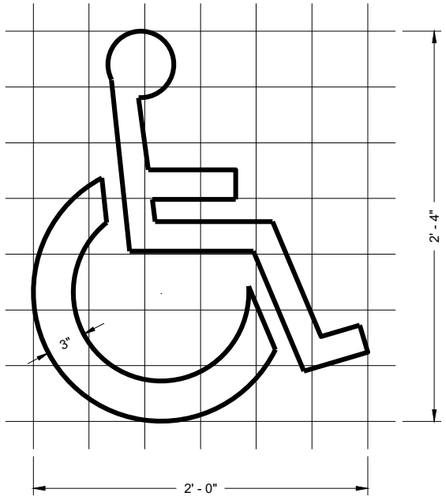
APPROVED
May 2023
DATE

/S/ Andrew Heidtke
ROADWAY STANDARDS DEVEL ENGINEER

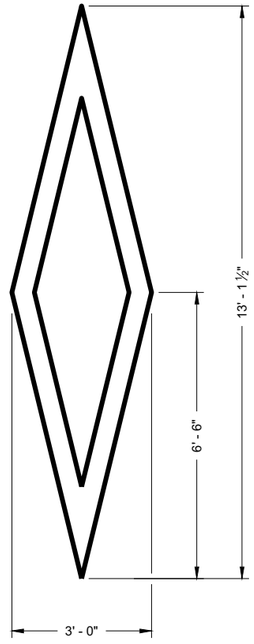
FHWA

GENERAL NOTES

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



HANDICAP SYMBOL



PREFERENTIAL LANE SYMBOL

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SDD 15C07 - 15a

SDD 15C07 - 15a

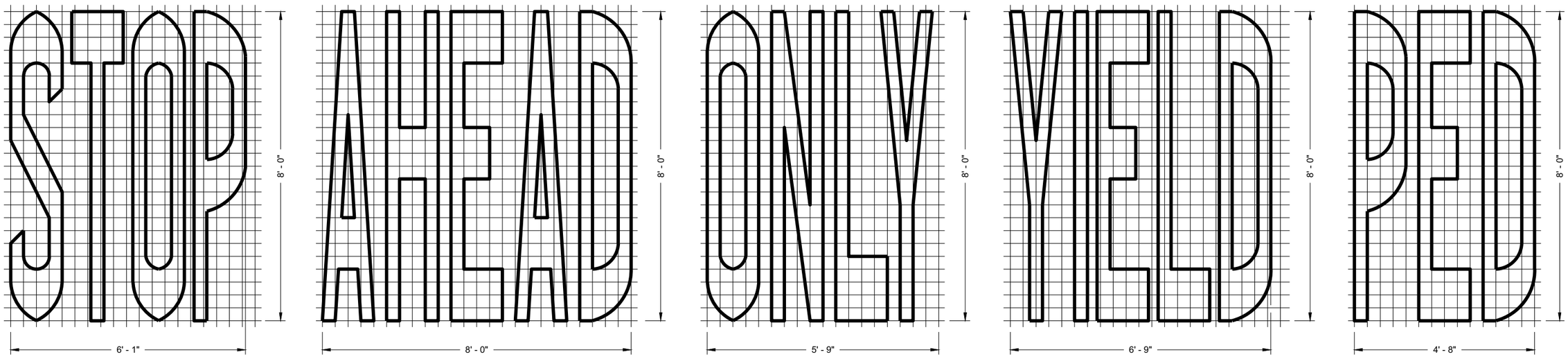
PAVEMENT MARKING SYMBOLS

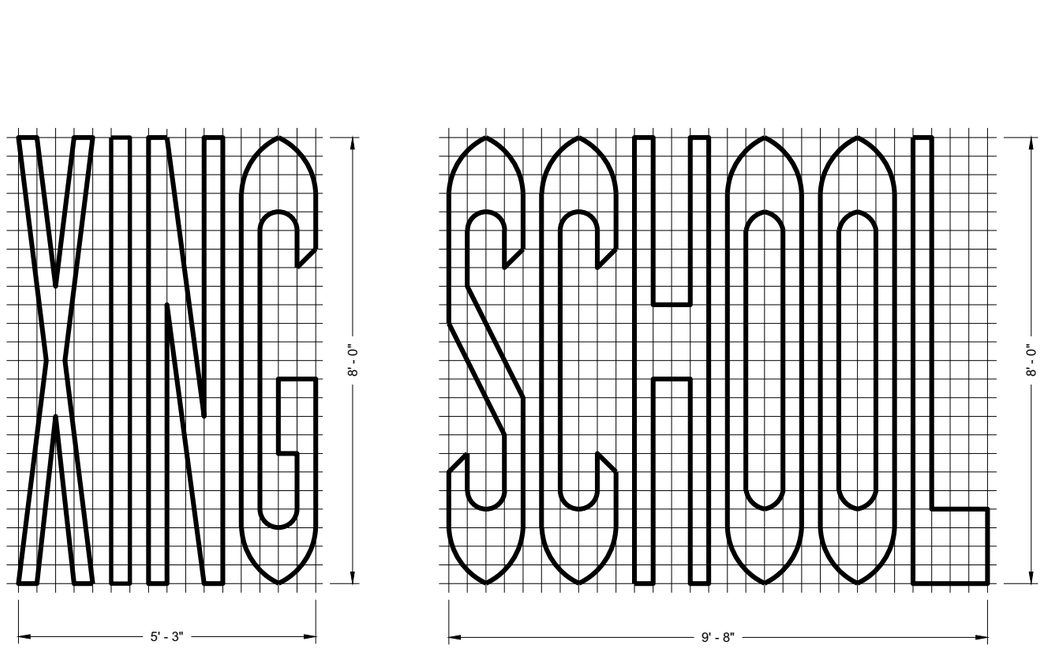
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2019
DATE

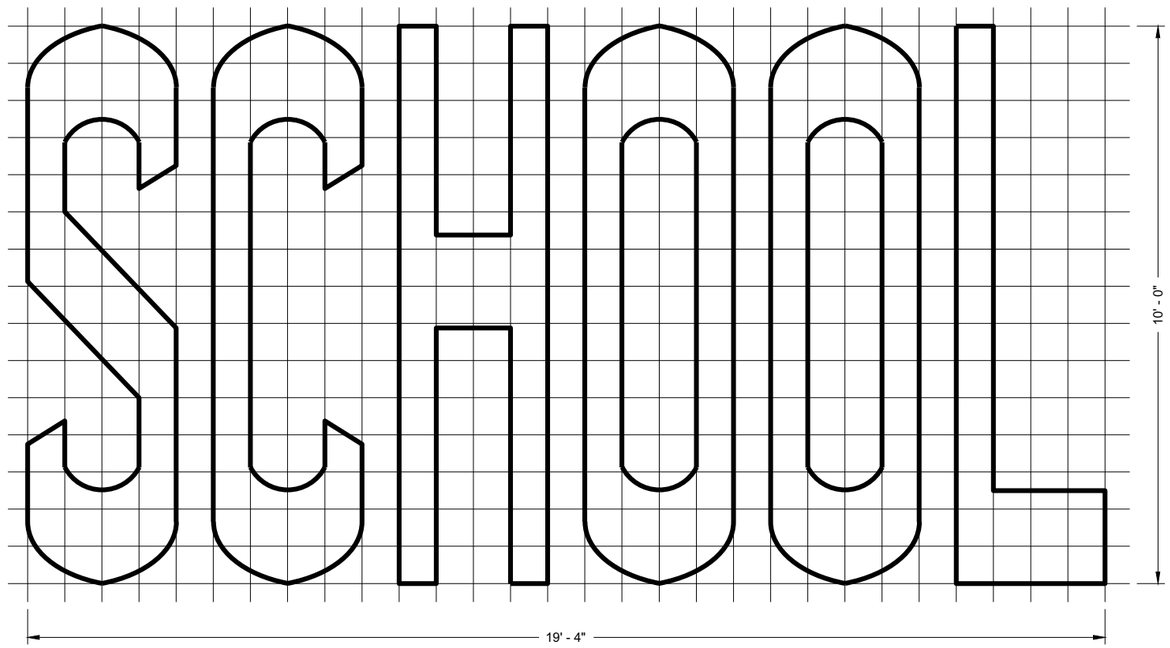
/S/ Matthew Rauch
STATE SIGNING AND MAR ENGINEER

FHWA





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 2019
DATE

/S/ Matthew Rauch
STATE SIGNING AND MAF ENGINEER

FHWA

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SDD 15C07 - 15b

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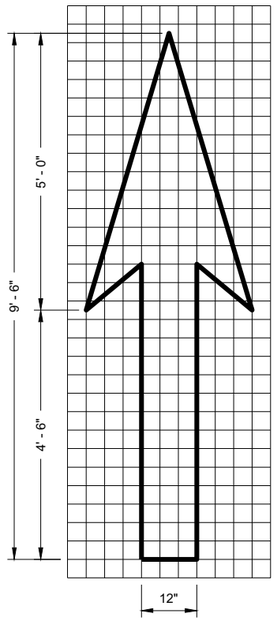
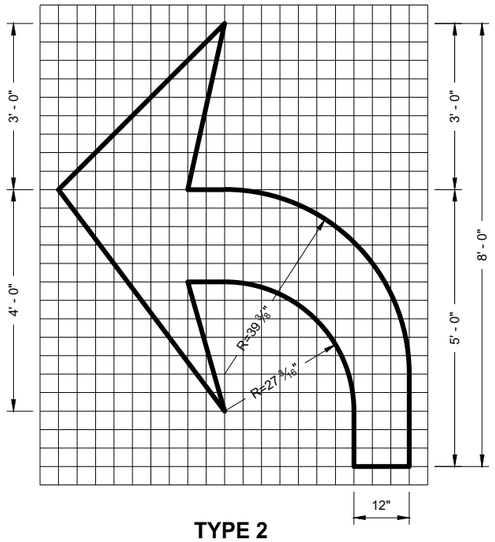
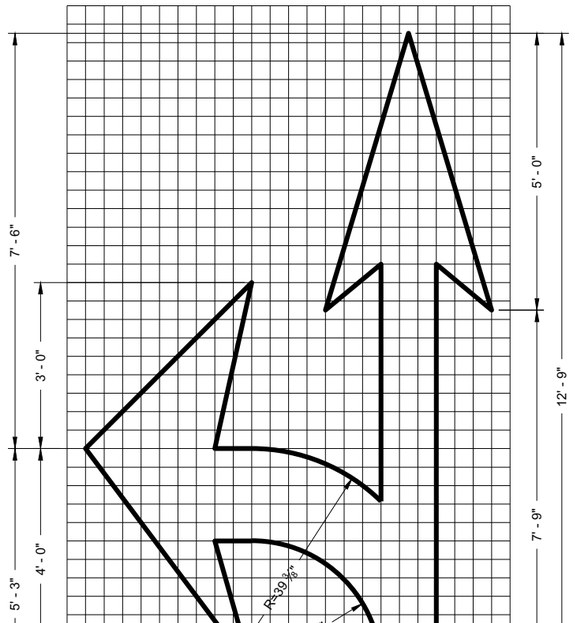


TYPE 1



TYPE 2



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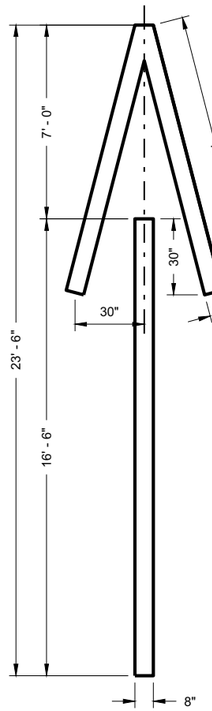
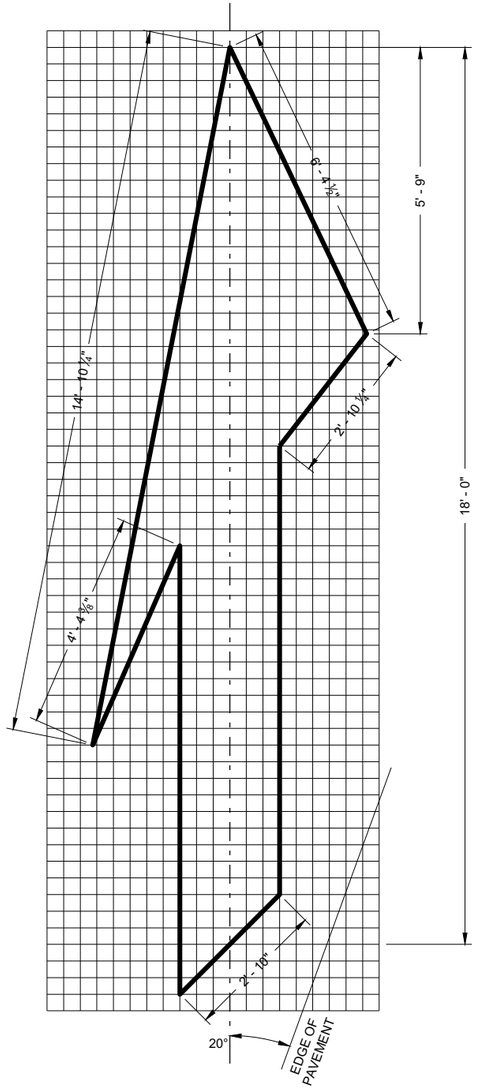


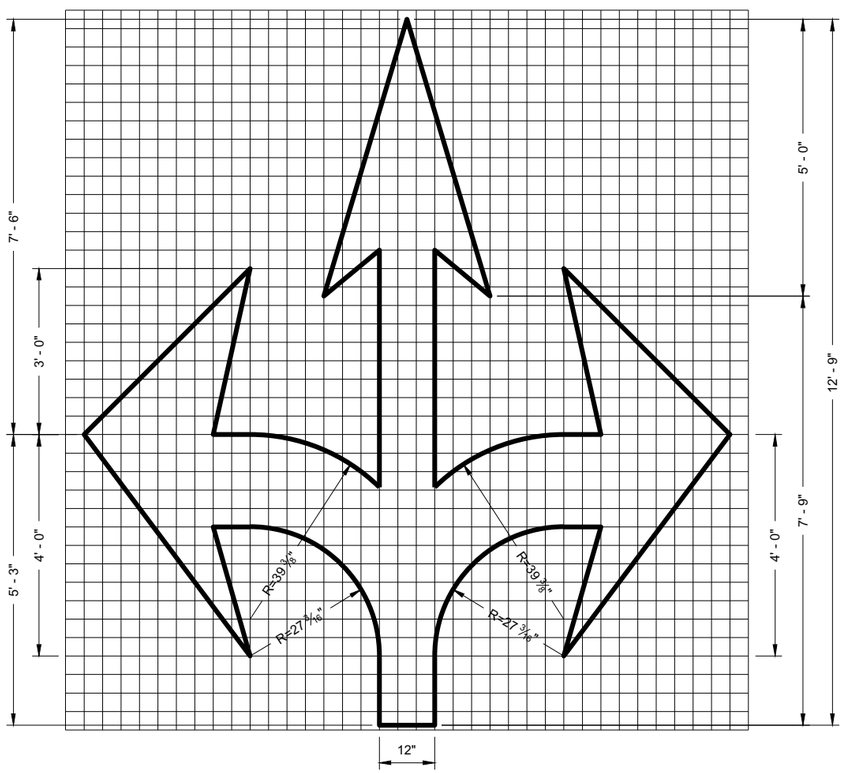
TYPE 4

GENERAL NOTES

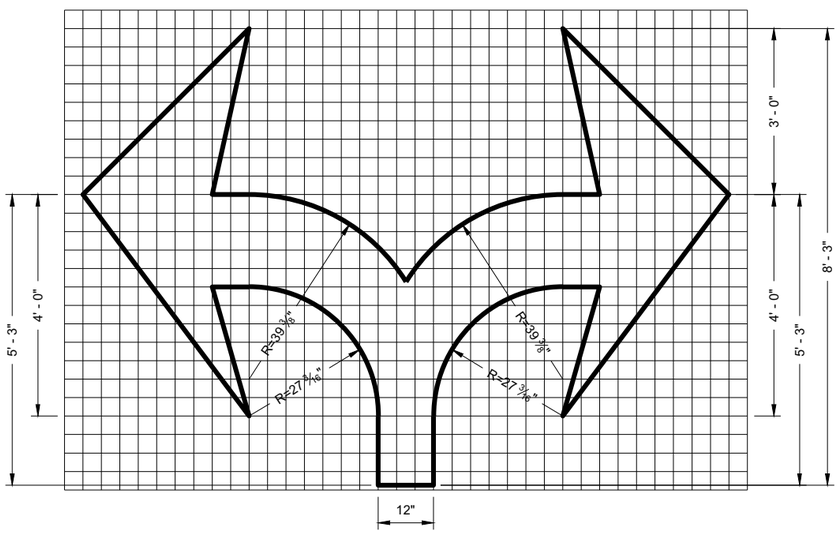
DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.



TYPE 5 LANE DROP ARROW



TYPE 6



TYPE 7

PAVEMENT MARKING ARROWS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2019
DATE

/S/ Matthew Rauch
STATE SIGNING AND MAF ENGINEER

FHWA

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SDD 15C07 - 15c

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SDD 15C07 - 15c

GENERAL NOTES

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

(1) LOCATE THE NO PASSING ZONE W14-3 SIGN WITHIN 50 FEET OF THE "T" MARKING

(2) MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

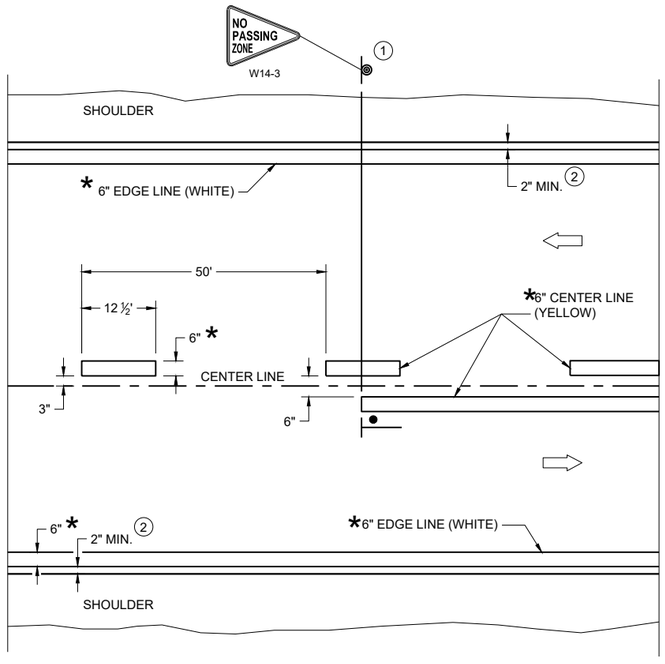
LEGEND

"T" MARKING

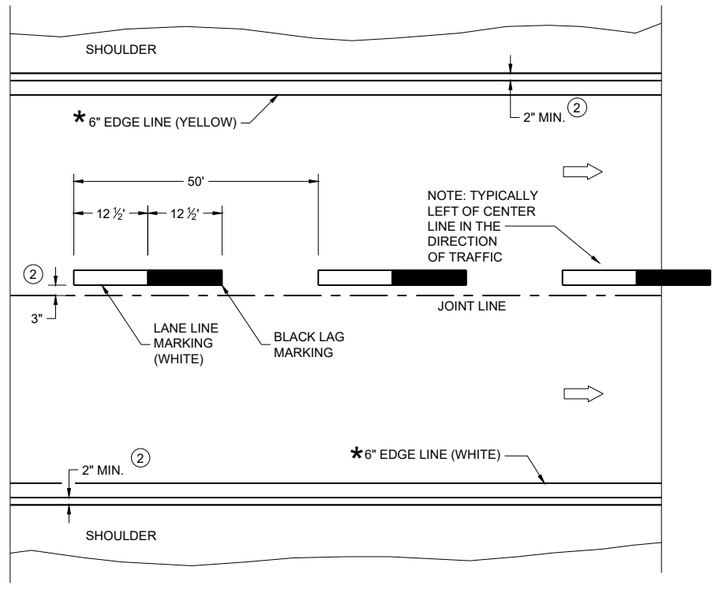
SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC

*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



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

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SDD 15C08-23a

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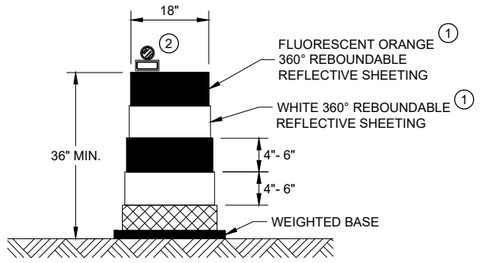
SDD 15C08-23a

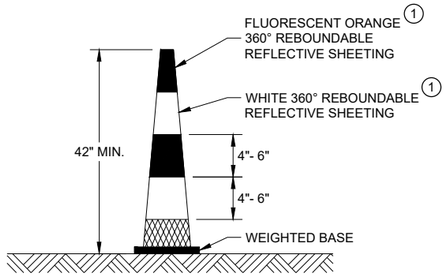
GENERAL NOTES

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

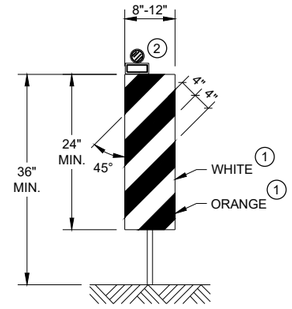
BALLAST WIDTHS
RANGE FROM 24"-36"



42" CONE

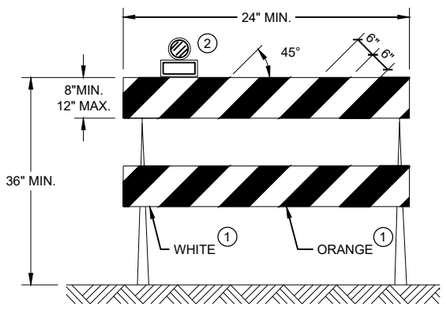
DO NOT USE IN TAPERS
½ SPACING OF DRUMS

BALLAST WIDTHS
RANGE FROM 14"-20"



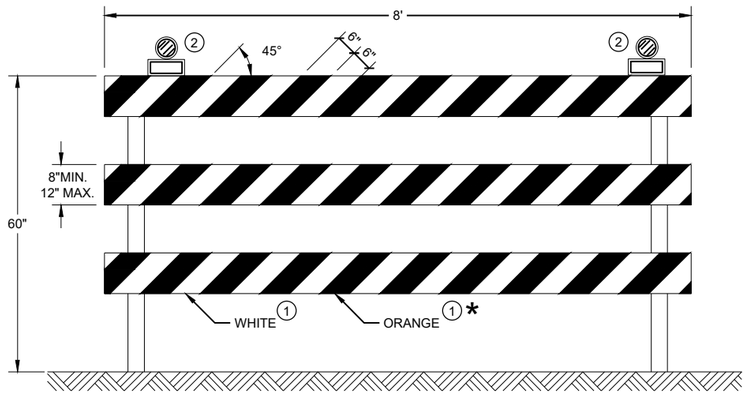
VERTICAL PANEL

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 ENGINEER

FHWA

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LEGEND

SIGN ON PORTABLE OR PERMANENT SUPPORT

TEMPORARY PORTABLE RUMBLE STRIP ARRAY

DIRECTION OF TRAFFIC

WORK AREA

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

GENERAL NOTES

DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

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

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

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

THE FIRST ADVANCE WARNING SIGN SHOULD TYPICALLY BE LOCATED IN ADVANCE OF THE ANTICIPATED TRAFFIC BACKUP OR QUEUE.

WHEN A SIDE ROAD OR RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

FLAGGING

FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT REMOVE TEMPORARY PORTABLE RUMBLE STRIPS PRIOR TO COVERING OR REMOVING ALL ADVANCE SIGNING.

(1) FOR MOVING WORK OPERATIONS, POST ADDITIONAL W20-7A FLAGGER SIGNS AT APPROXIMATELY 3,500' INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.

(2) SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

WHEN THE DISTANCE BETWEEN FLAGGERS EXCEEDS 2 MILES, A PILOT CAR IS REQUIRED. WHEN CURVES REDUCE SIGHT DISTANCE BELOW 400', A PILOT CAR IS REQUIRED.

TEMPORARY PORTABLE RUMBLE STRIPS

UTILIZE TEMPORARY PORTABLE RUMBLE STRIPS ON ALL FLAGGING OPERATIONS.

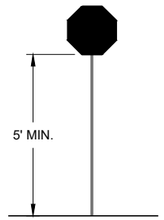
(3) EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS PLACED TRANSVERSE ACROSS THE LANE AT THE LOCATIONS SHOWN. WITHIN EACH ARRAY, SPACING BETWEEN RUMBLE STRIPS SHALL BE 15 FEET ON CENTER

ONLY USE TEMPORARY PORTABLE RUMBLE STRIPS FROM THE APPROVED PRODUCTS LIST.

INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS.

PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.

DO NOT INSTALL TEMPORARY PORTABLE RUMBLE STRIPS ON GRAVEL, MILLED SURFACES, OR ASPHALT THAT HAS BEEN PAVED LESS THAN 12 HOURS.



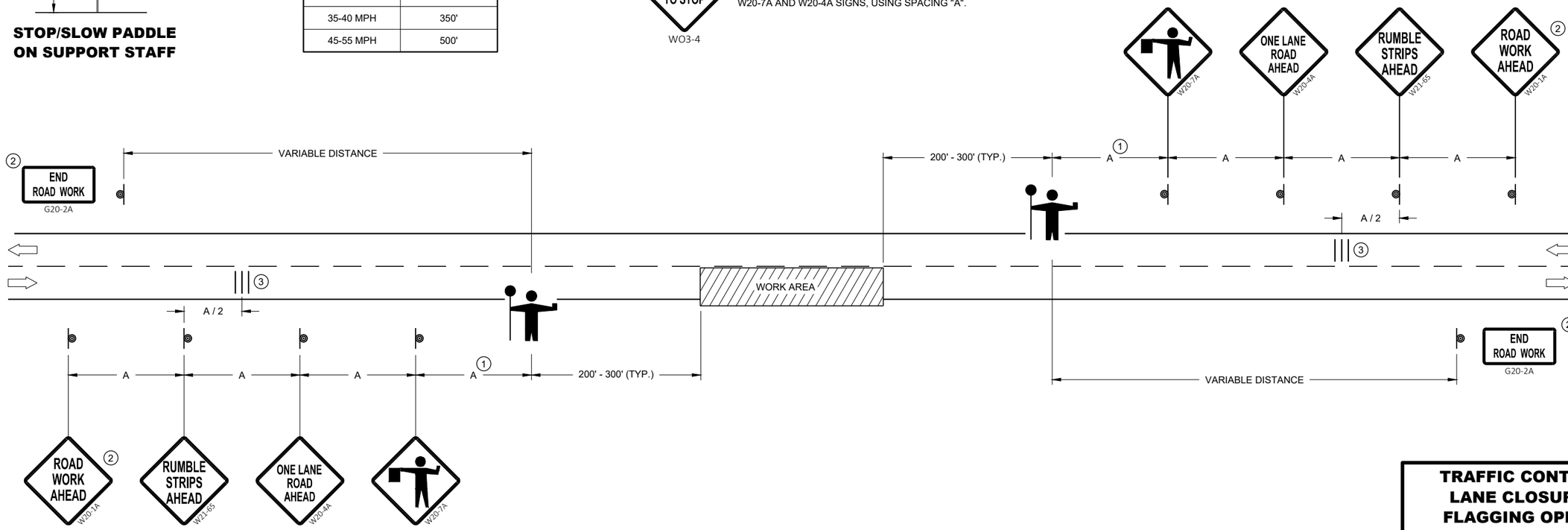
STOP/SLOW PADDLE ON SUPPORT STAFF

SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

SPEED LIMIT	SPACING "A"
25-30 MPH	200'
35-40 MPH	350'
45-55 MPH	500'

WO3-4

USE OF WO3-4 SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7A AND W20-4A SIGNS, USING SPACING "A".



TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2022
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

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SDD 15C12 - 09a

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SDD 15C12 - 09a

GENERAL NOTES

SIGN ON PERMANENT SUPPORT

TRAFFIC CONTROL CONE 42-INCH

TRAFFIC CONTROL DRUM

TEMPORARY PORTABLE RUMBLE STRIP ARRAY

DIRECTION OF TRAFFIC

WORK AREA

AFAD — AUTOMATED FLAGGER ASSISTANCE DEVICE (AFAD)

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

IF THE AUTOMATED FLAGGER ASSISTANCE DEVICE (AFAD) STOPS WORKING, 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.

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.

(1) SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

(2) IF FLAGGERS ARE PHYSICALLY NEEDED TO FLAG, REPLACE WO3-4 SIGNS WITH W20-7A SIGNS.

TEMPORARY PORTABLE RUMBLE STRIPS

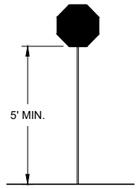
UTILIZE TEMPORARY PORTABLE RUMBLE STRIPS ON ALL FLAGGING OPERATIONS.

ONLY USE TEMPORARY PORTABLE RUMBLE STRIPS FROM THE APPROVED PRODUCTS LIST.

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.

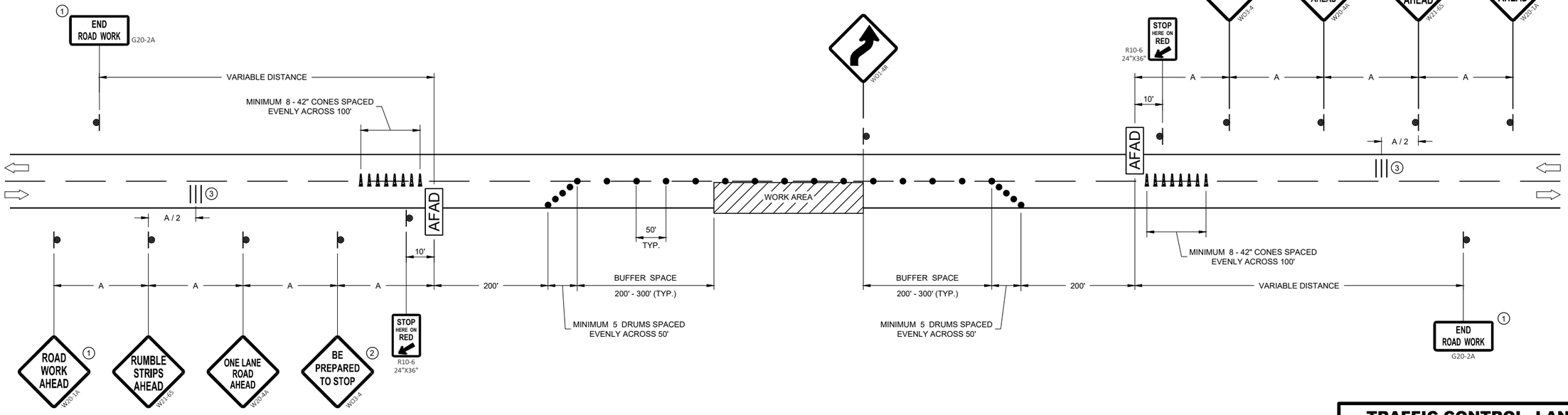
(3) EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS PLACED TRANSVERSELY AT THE LOCATIONS SHOWN. WITHIN EACH ARRAY, SPACING BETWEEN RUMBLE STRIPS SHALL BE 15 FEET ON CENTER.



STOP/SLOW PADDLE ON SUPPORT STAFF

SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

SPEED LIMIT	SPACING "A"
25-30 MPH	200'
35-40 MPH	350'
45-55 MPH	500'



TRAFFIC CONTROL, LANE CLOSURE WITH AUTOMATED FLAGGER ASSISTANCE DEVICE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

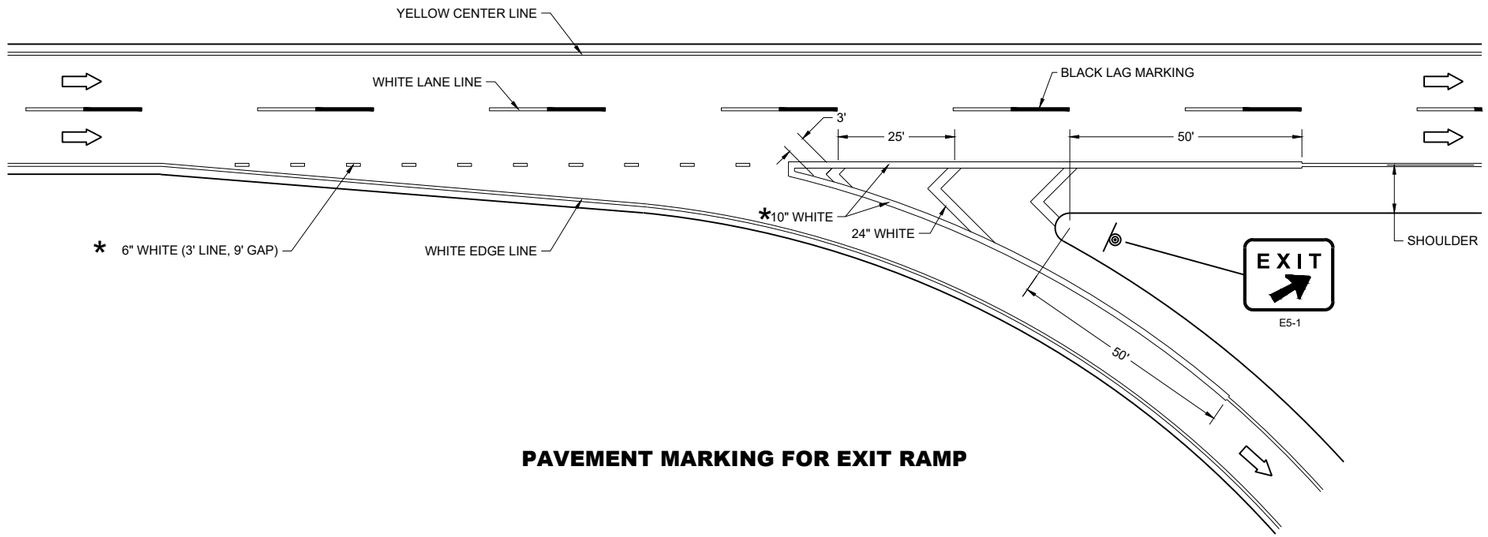
APPROVED
May 2022
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

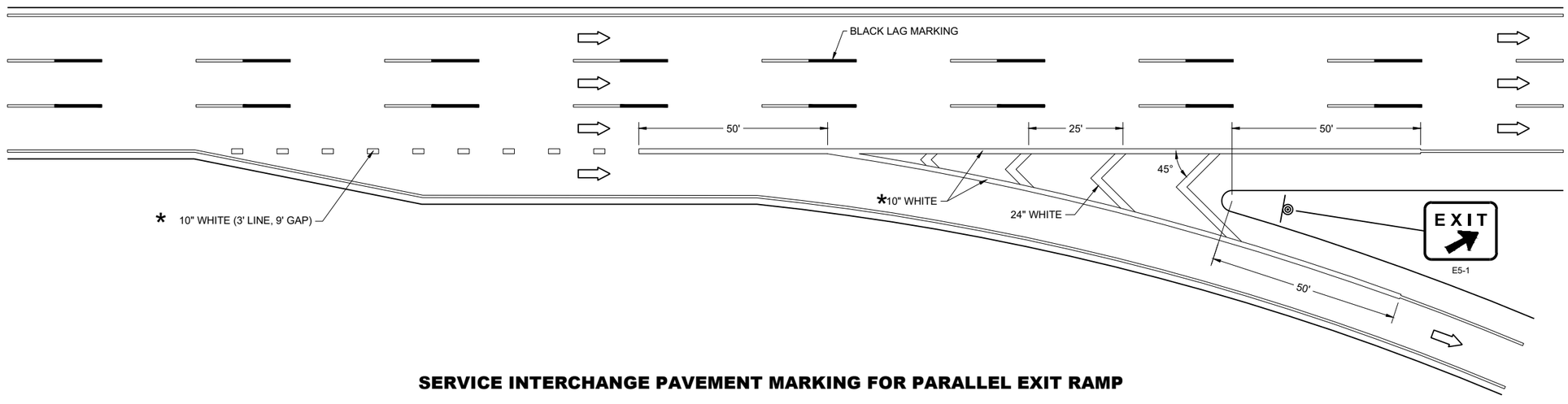
FHWA

SDD 15C12 - 09b

SDD 15C12 - 09b



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

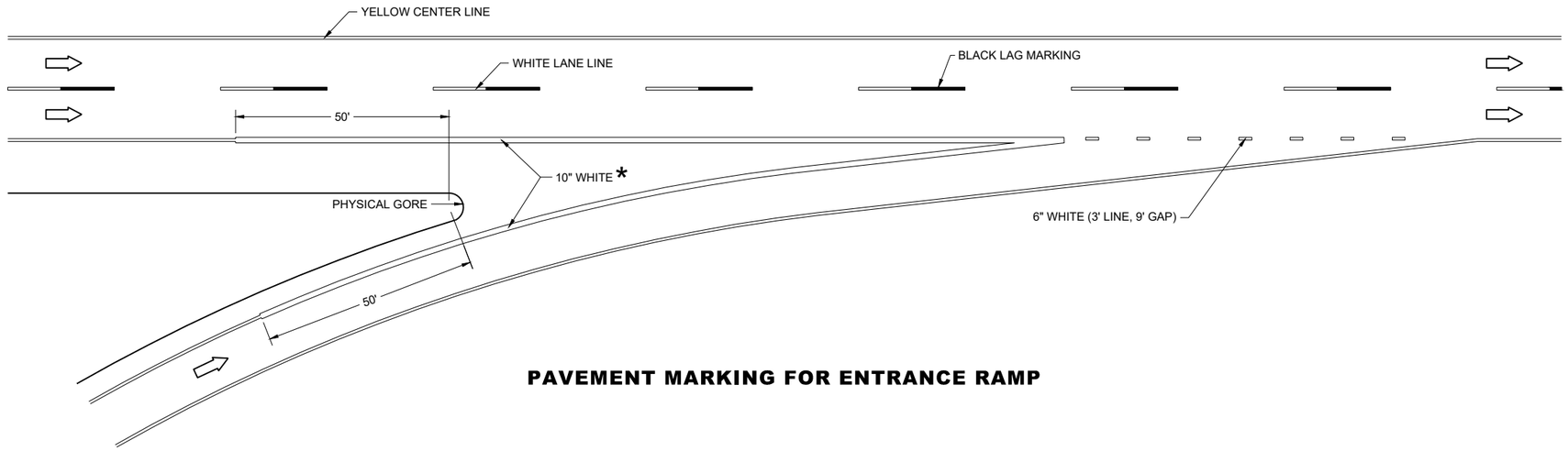
*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

PAVEMENT MARKING, EXIT RAMP AND PARALLEL EXIT RAMP

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

PLACE GROOVE 3 INCHES LEFT OF JOINT.

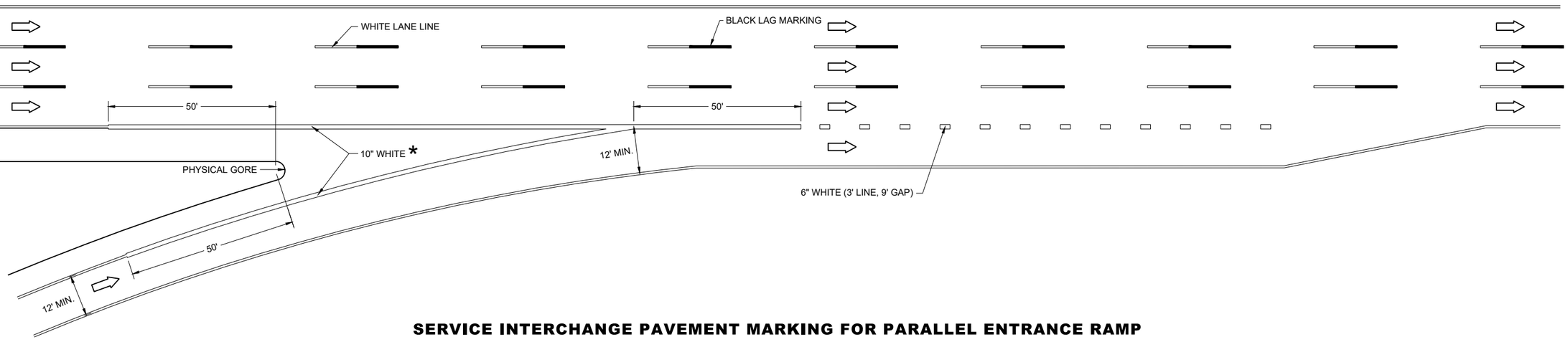


PAVEMENT MARKING FOR ENTRANCE RAMP

LEGEND

DIRECTION OF TRAVEL

*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



SERVICE INTERCHANGE PAVEMENT MARKING FOR PARALLEL ENTRANCE RAMP

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SDD 15C31-07c

PAVEMENT MARKING, ENTRANCE RAMP AND PARALLEL ENTRANCE RAMP

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

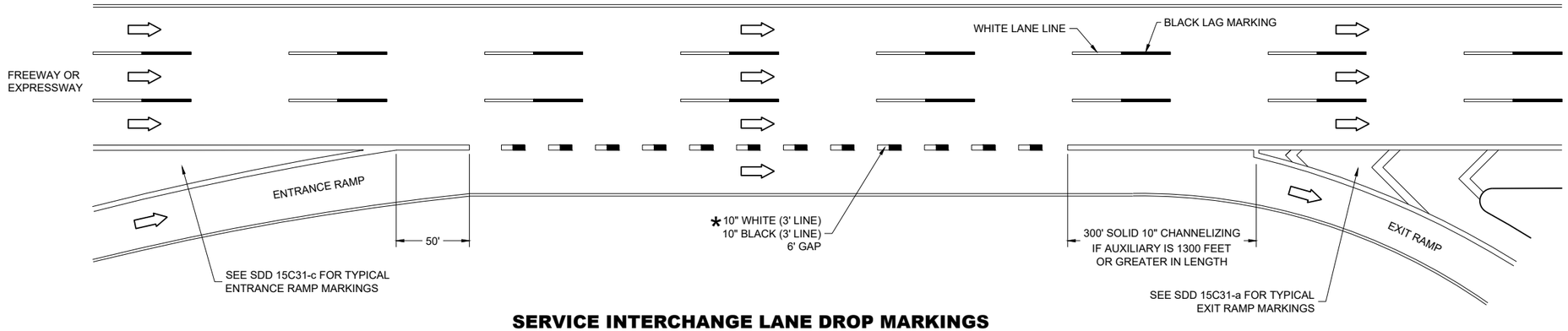
LEGEND

DIRECTION OF TRAVEL

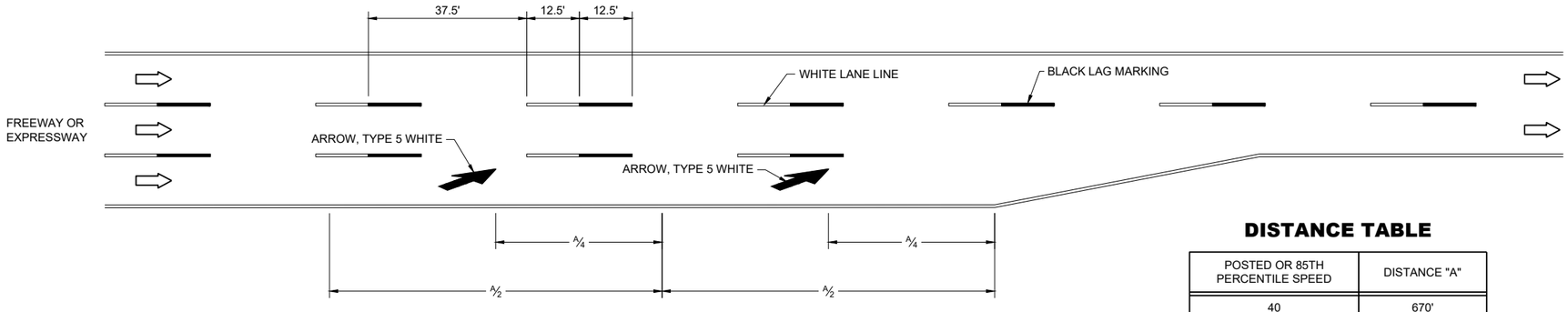
*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

GENERAL NOTES

PLACE GROOVE 3 INCHES LEFT OF JOINT.



SERVICE INTERCHANGE LANE DROP MARKINGS



LANE REDUCTION MARKINGS

DISTANCE TABLE

POSTED OR 85TH PERCENTILE SPEED	DISTANCE "A"
40	670'
45	775'
50	885'
55	990'
60	1100'
65	1200'
70	1250'

PAVEMENT MARKING, LANE DROP AND LANE REDUCTION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
August 2024
DATE

/S/ Matthew Rauch
WORK ZONE ENGINEER

FHWA

6

SDD 15C31-07d

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.

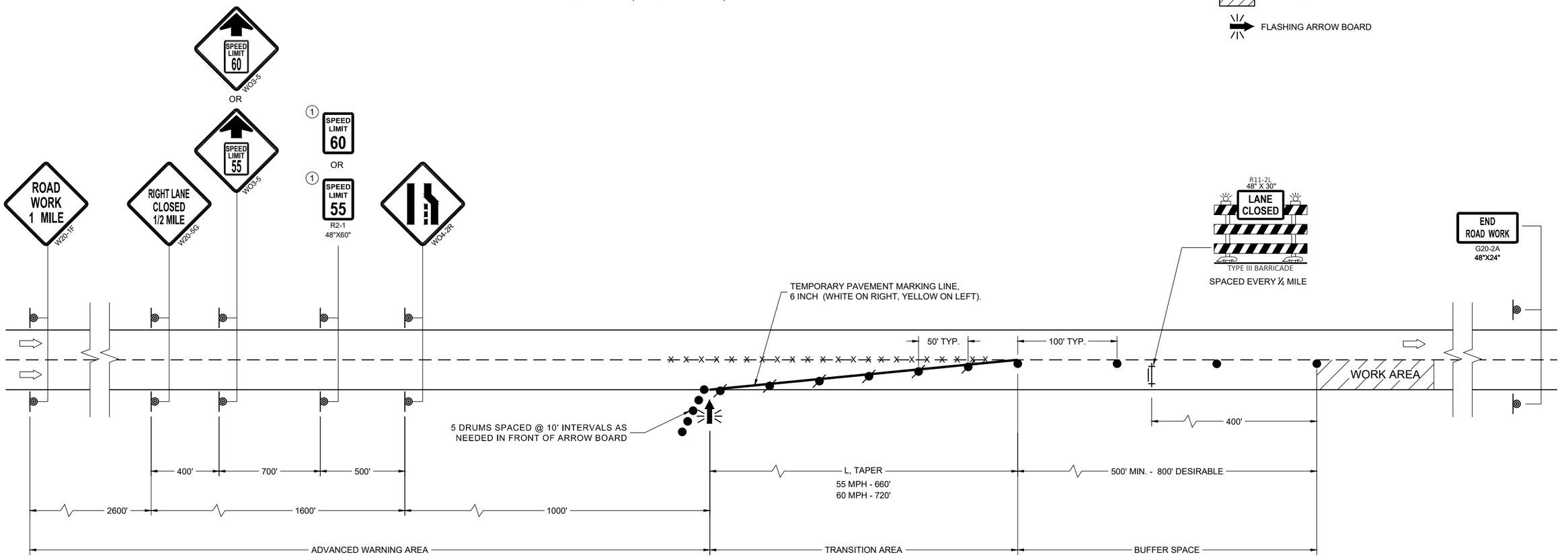
IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

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.

(1) A SPEED LIMIT SIGN SHALL BE LOCATED 1500 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP. PLACE A SPEED LIMIT SIGN A MINIMUM OF EVERY 3 MILES. INCLUDE A RESUME SPEED LIMIT SIGN 200 FEET MINIMUM (500 FEET DESIRABLE) BEYOND THE "END OF ROADWORK" SIGN.

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
- FLASHING ARROW BOARD



TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2024 — DATE
/S/ Andrew Heidtke — Work Zone Engineer

FHWA

6
SDD 15D12-13b

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
- 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.

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.

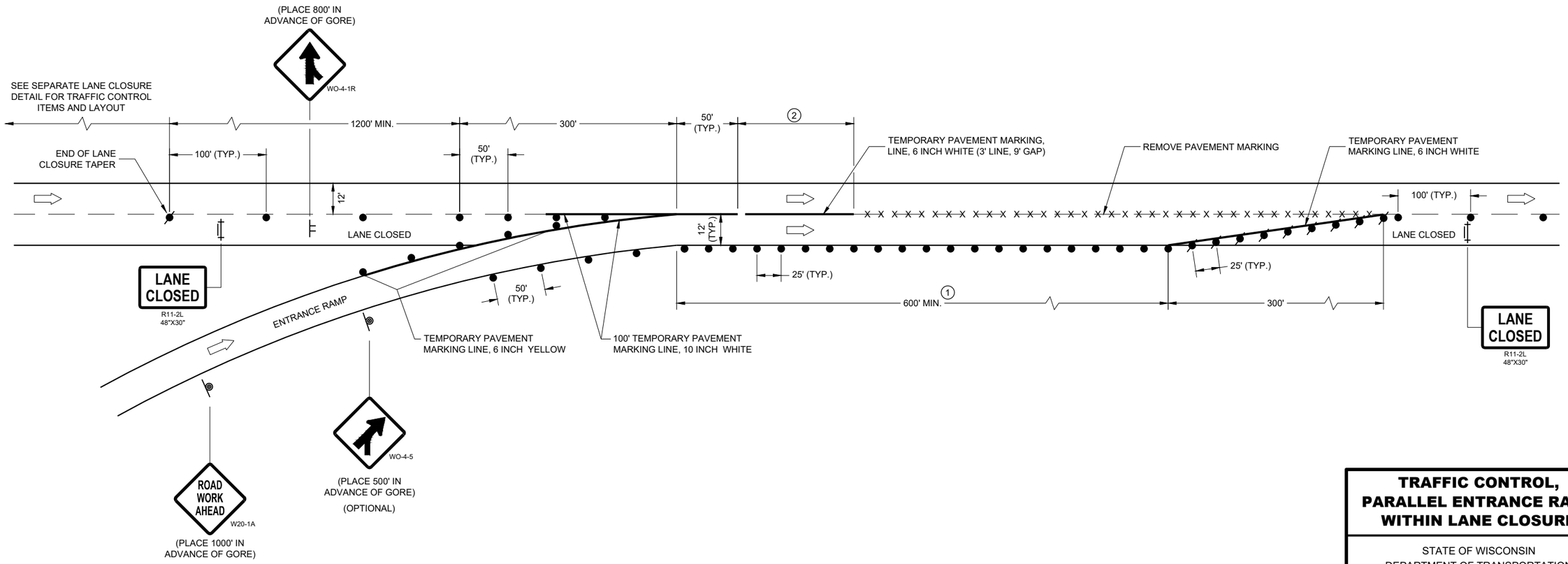
ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

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) EXTEND THE LENGTH OF THE MERGE ARE IF THE ENTERING (DESIGN) SPEED IS LESS THAN 50MPH OR IF THE MAINLINE GRADE EXCEEDS ±2.2%.

(2) END TEMPORARY PAVEMENT MARKING LINE AT ½ THE LENGTH OF FULL WIDTH OF THE ACCELERATION LANE.



TRAFFIC CONTROL, PARALLEL ENTRANCE RAMP WITHIN LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

6

SDD 15D15-07a

6

SDD 15D15-07a

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.

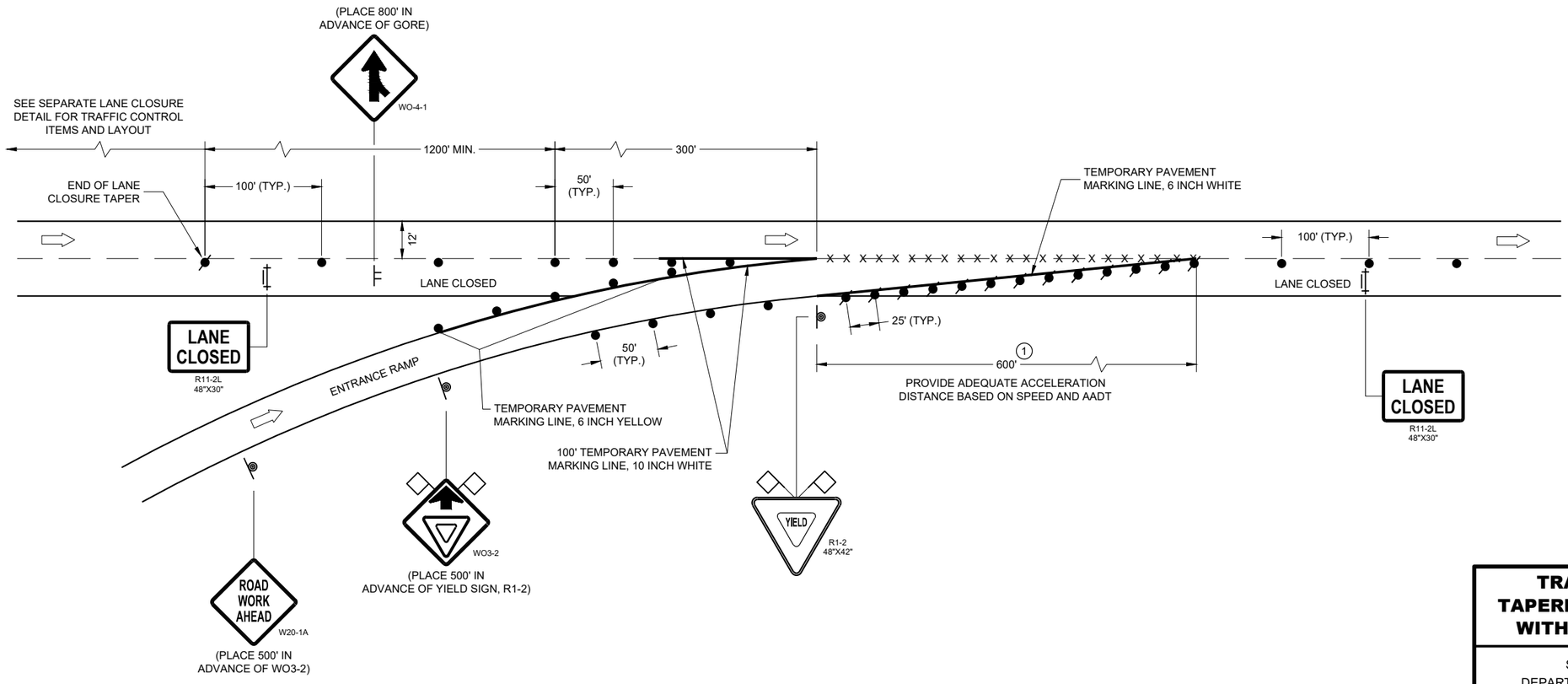
IF INDICATED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE FLEXIBLE TUBULAR MARKERS FOR DRUMS IN THE GORE BETWEEN THE ENTRANCE RAMP AND MAINLINE TRAFFIC.

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 ENGINEE

FHWA

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.

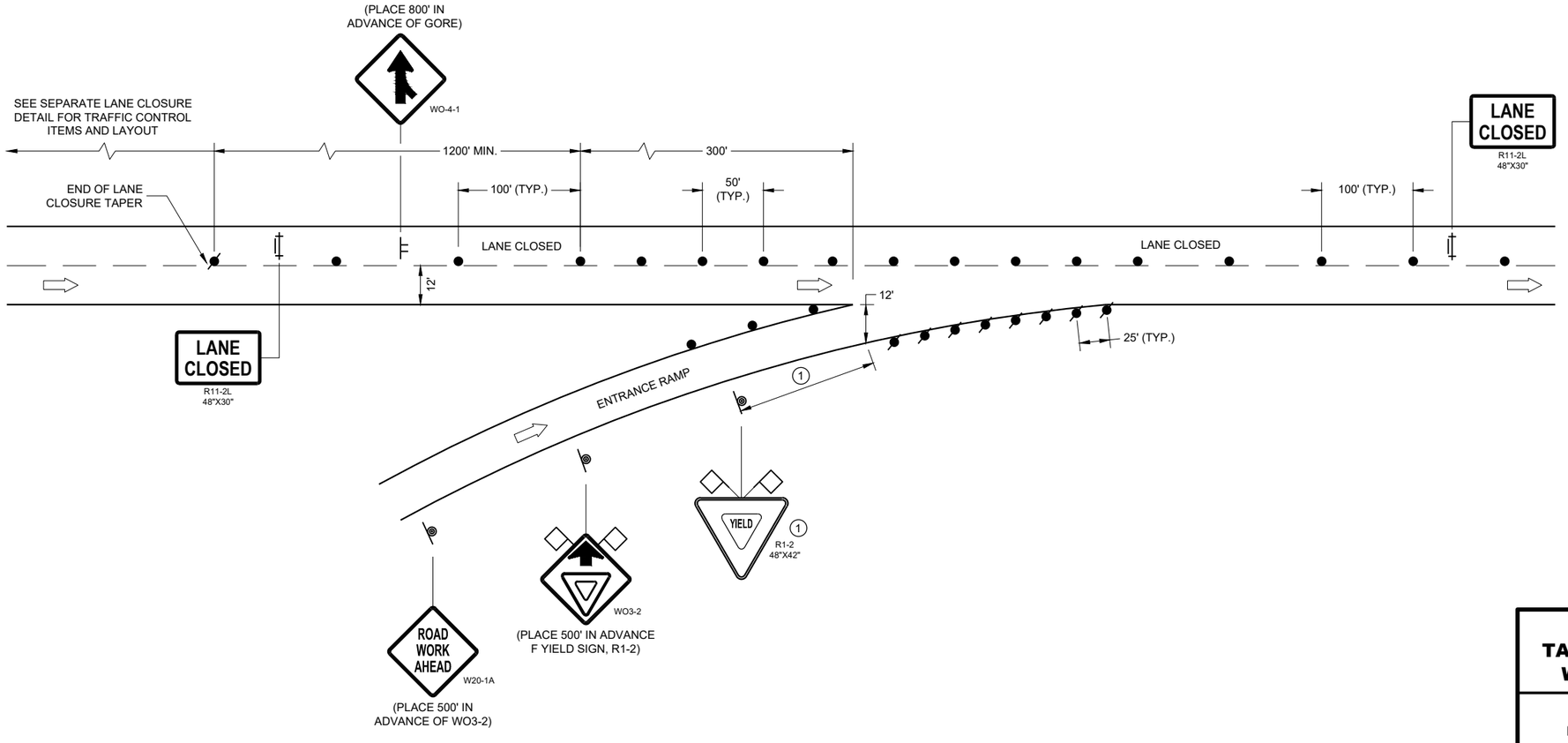
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONSECUTIVE DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS. USE SUPPORTS THAT PROVIDE A MINIMUM OF 5 FEET FROM THE BOTTOM OF THE SIGN TO THE PAVEMENT.

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

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
- 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.

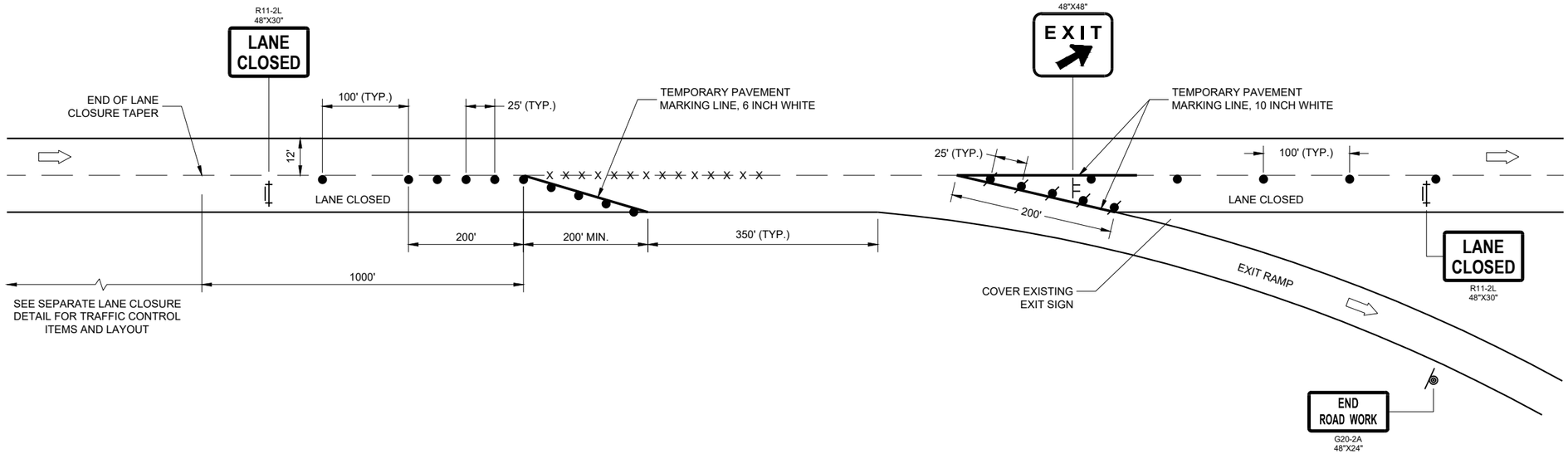
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONSECUTIVE DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS.

IF INDICATED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE FLEXIBLE TUBULAR MARKERS FOR DRUMS IN THE GORE BETWEEN THE EXIT 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.



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SDD 15D15-07e

TRAFFIC CONTROL, PARALLEL EXIT RAMP WITHIN LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15D15-07e

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.

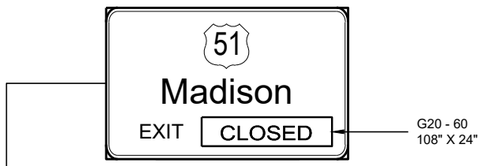
PLACE TEMPORARY PAVEMENT MARKING LINE IF RAMP CLOSURE IS TO BE IN PLACE 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

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.



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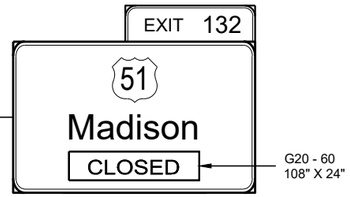
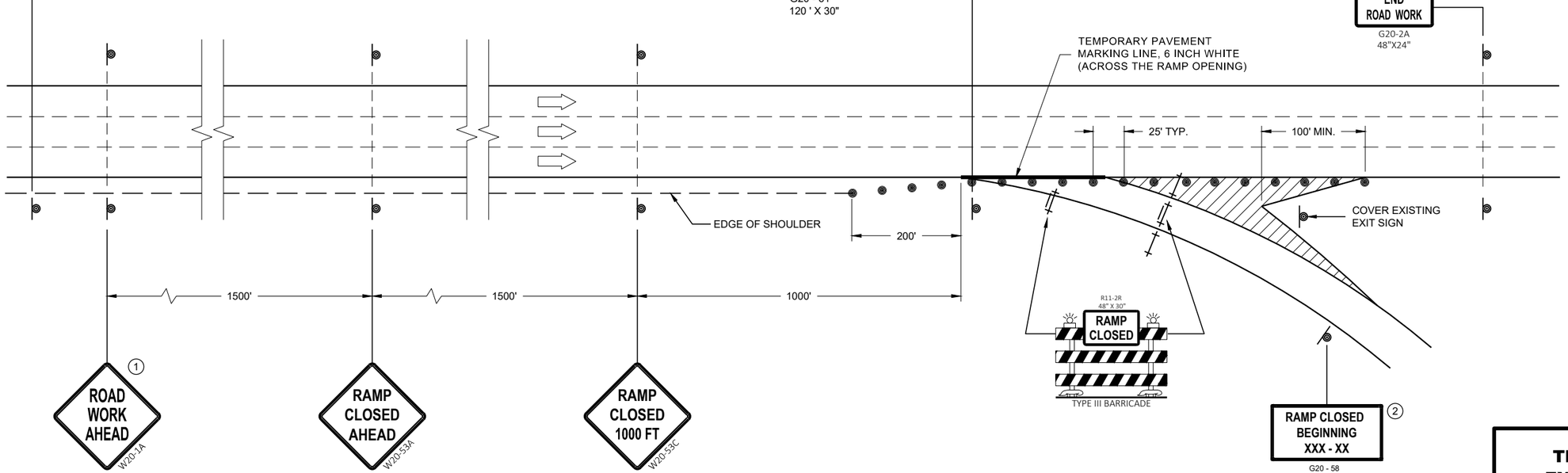


PLACE SIGN G20 - 60 OVER MILEAGE ON EXISTING E1 - 1A SIGN

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

SDD 15D16-06
6

LEGEND

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

GENERAL NOTES

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

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

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

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

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

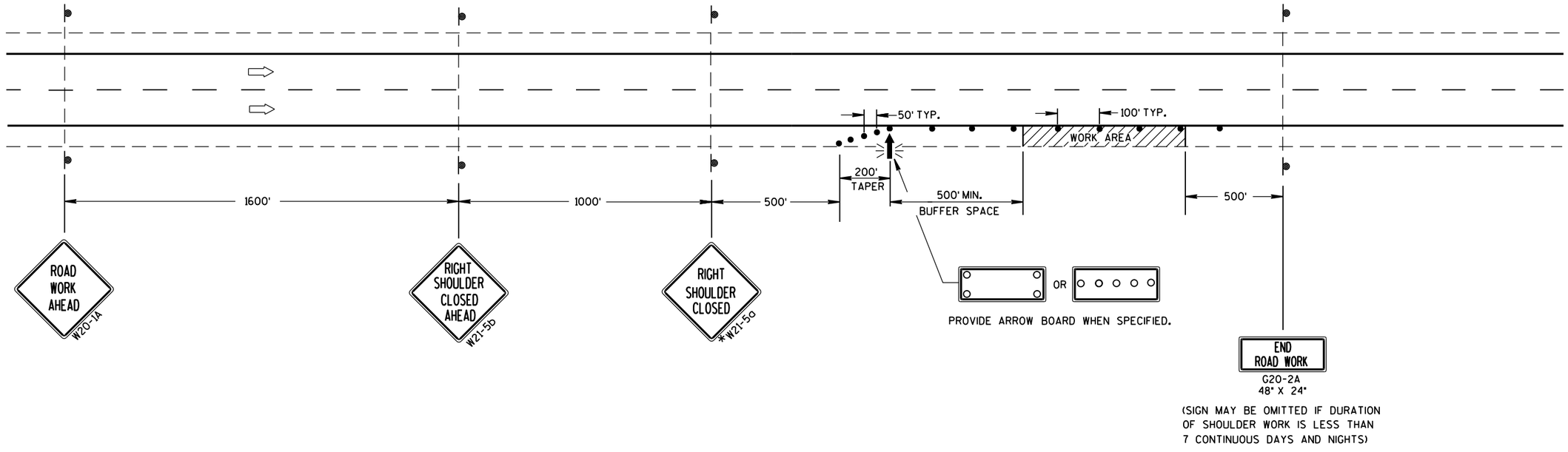
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

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

WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

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



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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June 2016 — DATE

/S/ Peter Amakobe Atepe
STATEWIDE WORK ZO 300 FIC
SAFETY ENGI

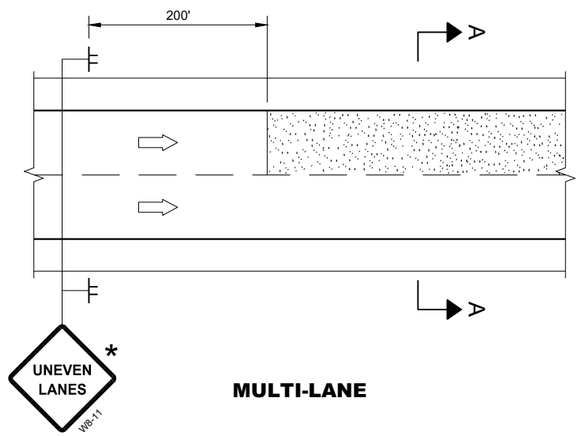
FHWA

6

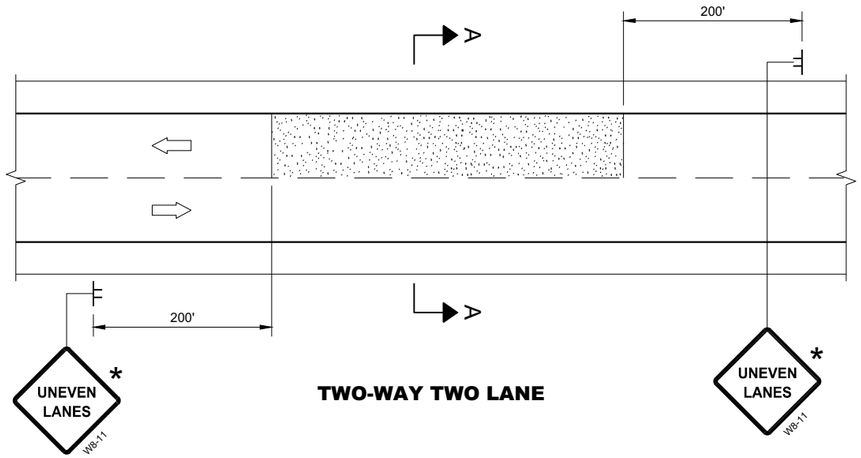
S.D.D. 15 D 27-3

6

S.D.D. 15 D 27-3



MULTI-LANE



TWO-WAY TWO LANE

GENERAL NOTES

FOR SPOT LOCATIONS USE ENGINEERING JUDGEMENT WHEN PLACING ADDITIONAL SIGNS.

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

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

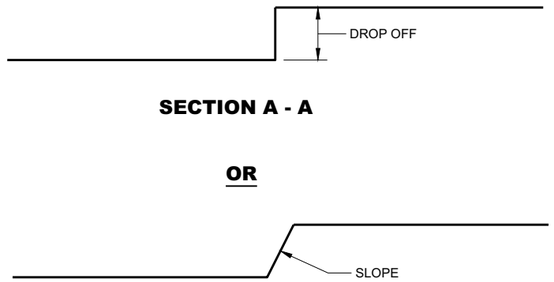
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

* IF THE DROP-OFF IS CONTINUOUS ALONG THE PROJECT, PLACE ADDITIONAL SIGNS EVERY 1 MILE AND AFTER EVERY ENTRANCE RAMP.

(1) USE CLOSER SPACING WHEN DELINEATING DROP-OFF.

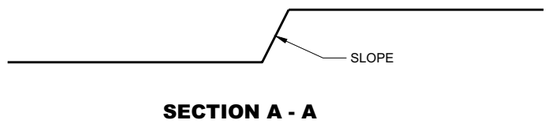
LEGEND

- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC
- WORK AREA WITH DROP-OFF
- MILLED SURFACE

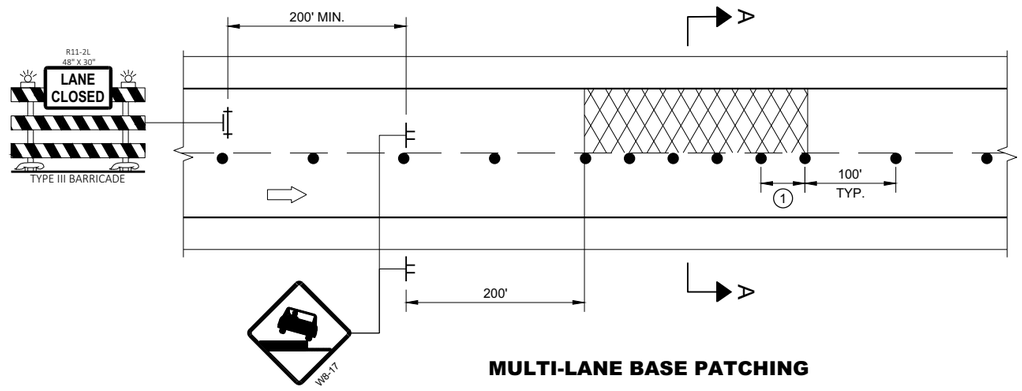


SECTION A - A

OR

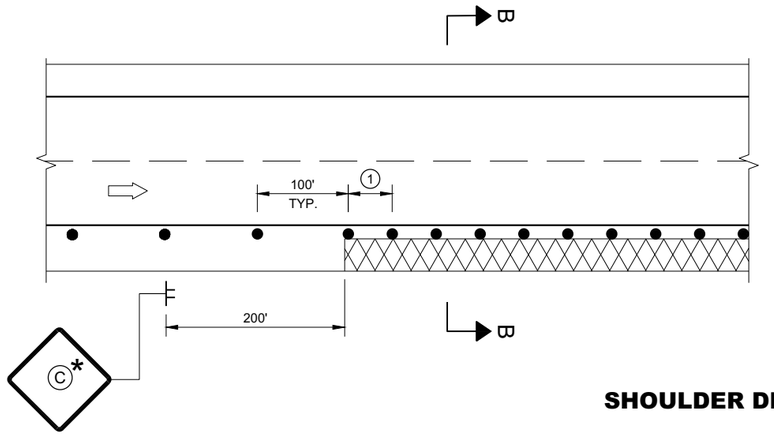


SECTION A - A

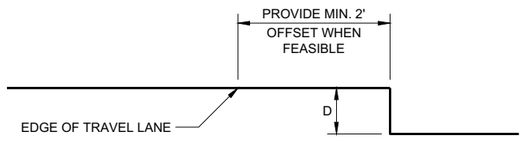


MULTI-LANE BASE PATCHING

ADJACENT LANE DROP-OFFS



SHOULDER DROP-OFFS



SECTION B - B

D	SIGN (C)
< 2" WITH A SLOPE STEEPER THAN 3:1	LOW SHOULDER WO8-9
2" < 6" WITH A SLOPE STEEPER THAN 3:1	SHOULDER DROP - OFF W8-9A PROVIDE A 3:1 OR FLATTER SLOPE OF MATERIAL ADJACENT TO THE PAVEMENT

TRAFFIC CONTROL, DROP-OFF SIGNING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15D39 - 02

LEGEND

- 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)								
	1	2	3	4	5	6	7	8	9
50	25	50	75	100	125	150	175	200	225
55	28	55	83	110	138	165	193	220	248
60	30	60	90	120	150	180	210	240	270
65	33	65	98	130	163	195	228	260	293
70	35	70	105	140	175	210	245	280	315

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 LEFT - REVERSE FOR SHIFTING RIGHT.

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.

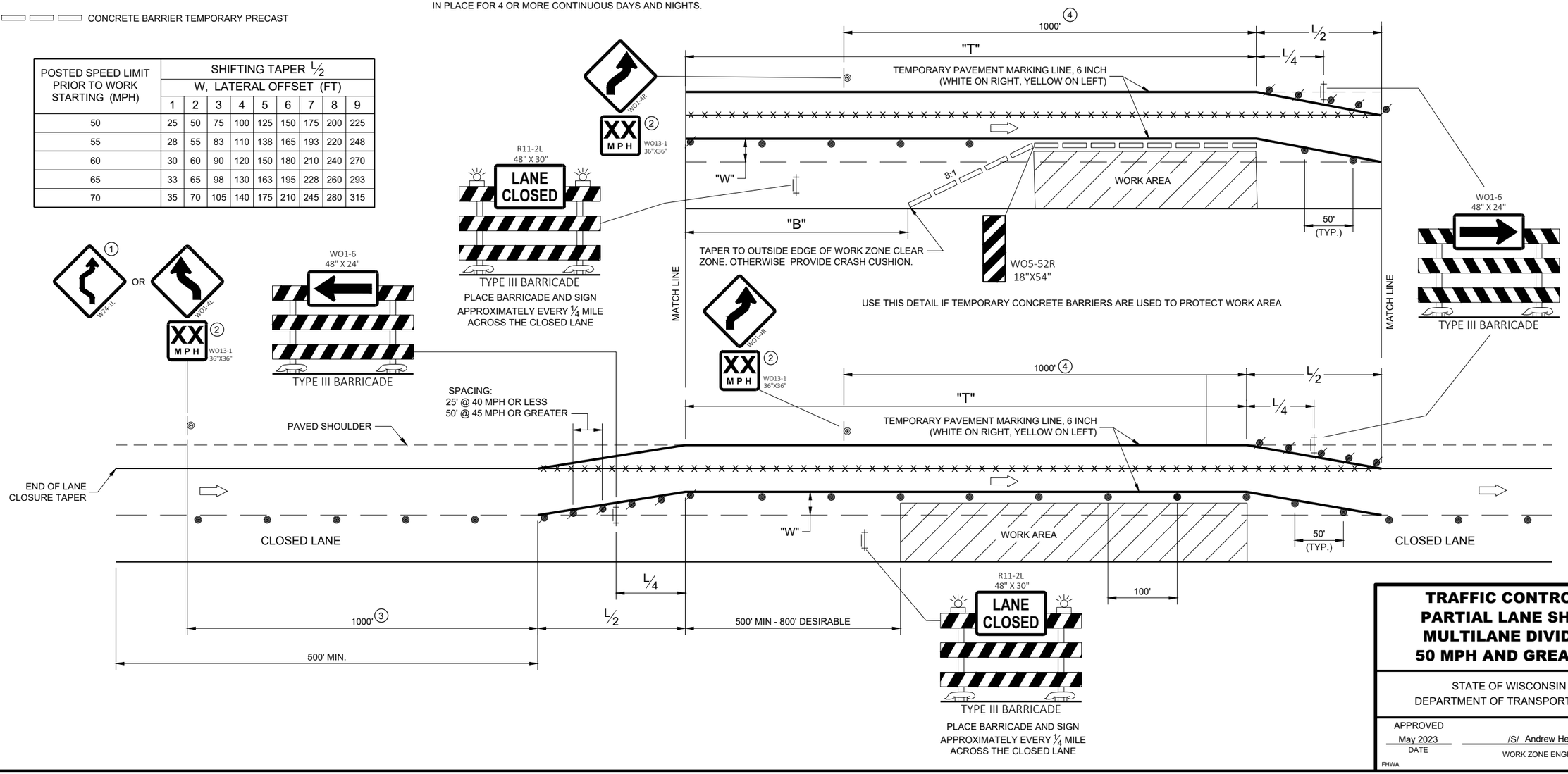
REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING LINES IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

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 1/2 THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.

1. USE ONLY WHEN T<600', OMIT WO1-4R.
2. IF NEEDED, USE ONLY IF DESIGN SPEED IS 10 MPH BELOW POSTED SPEED.
3. IF THE BEGINNING OF LANE SHIFT TAPER IS 1200 FEET OR LESS FROM END OF LANE CLOSURE TAPER, PLACE THE WO1-4L SIGN 200 FEET AFTER THE END OF THE LANE CLOSURE TAPER.
4. IF THE BEGINNING OF THE SECOND LANE SHIFT TAPER IS 1200 FEET OR LESS FROM END OF THE FIRST LANE CLOSURE TAPER, PLACE THE WO1-4L SIGN 200 FEET AFTER THE END OF THE FIRST LANE CLOSURE TAPER.



TRAFFIC CONTROL, PARTIAL LANE SHIFT MULTILANE DIVIDED 50 MPH AND GREATER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

6

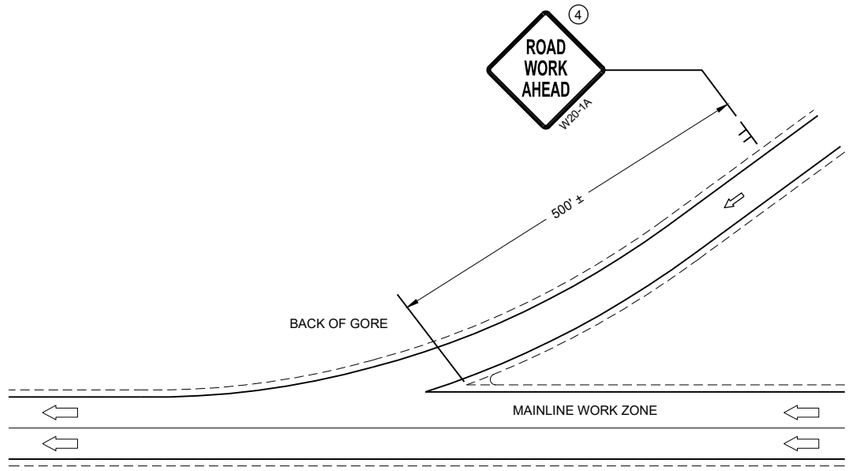
SDD 15D40-05d

6

SDD 15D40-05d

LEGEND

- V1 SHADOW VEHICLE 1
- V2 SHADOW VEHICLE 2
- V3 ADVANCE WARNING TRUCK
- ● TRAFFIC CONTROL DRUM
- TRUCK MOUNTED ATTENUATOR (TMA)
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC
- FLASHING ARROW PANEL (MERGE)
- FLASHING ARROW PANEL (CAUTION)
- PCMS PORTABLE CHANGEABLE MESSAGE SIGN
- WORK AREA



GENERAL NOTES

SHORT DURATION IS WORK THAT OCCUPIES A LOCATION UP TO 1 HOUR.

MOBILE IS WORK THAT MOVES INTERMITTENTLY OR CONTINUOUSLY.

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

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

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

WHEN WORK ACTIVITY BLOCKS THE RIGHT LANE, REVERSE TRAFFIC CONTROL.

WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, PROVIDE ADDITIONAL TRAFFIC CONTROLS AS SPECIFIED IN THE CONTRACT OR AS APPROVED BY THE ENGINEER.

USE DOUBLE ARROWS WHEN CONVOY IS IN CENTER LANE ONLY.

WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR LAY STATIONARY SIGNS AND SUPPORTS FLAT ON THE GRADE WITH UPRIGHTS ORIENTED PARALLEL TO AND DOWNSTREAM FROM TRAFFIC

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

(2) DRUMS ARE TO BE USED FOR BRIDGE DECK SEALING AND OTHER PROJECTS THAT REQUIRE DELINEATION.

(3) WITHIN 5 MILES, RELOCATE SIGNS AS WORK PROGRESSES AND NECESSARY OR AS DIRECTED BY THE ENGINEER.

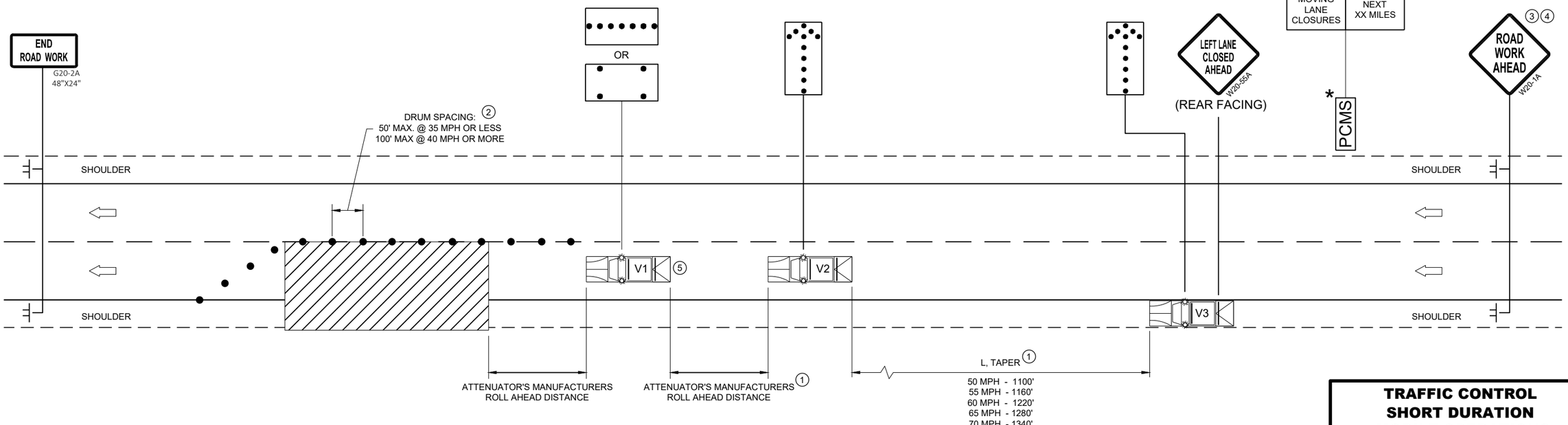
(4) SIGN NOT REQUIRED IF MOVING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

(5) SHADOW VEHICLE 1 (V1) IS OPTIONAL

* PCMS OPTIONAL

PCMS MESSAGING

FRAME 1	FRAME 2
MOVING LANE CLOSURES	NEXT XX MILES



TRAFFIC CONTROL SHORT DURATION MOBILE OPERATIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
August 2021
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15D43 - 02

6

SDD 15D43 - 02

GENERAL NOTES

DRAWING NOT TO SCALE. ALL SIGNS AND POSTS ON THIS SHEET SHALL BE PAID FOR WITH 'TRAFFIC CONTROL SIGNS' BID ITEM. ALL SIDE ROADS WHICH ARE UNDER CONSTRUCTION OF CURB AND GUTTER AND/OR GRADING SHALL BE ADEQUATELY SIGNED.

ALL SIGNS AND DEVICES SHALL BE IN CONFORMANCE WITH THE WISCONSIN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (WMUTCD). SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE WISDOT STANDARD SIGN PLATES.

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

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

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

ALL SIGNS INAPPROPRIATE TO THE STATUS OF THE CONTROL ZONE, INCLUDING PRE-EXISTING SIGNS IN THE VICINITY, SHALL BE COVERED OR REMOVED AS DIRECTED BY THE ENGINEER.

SEE 15C34 FOR ADDITIONAL TRAFFIC CONTROL SIGNING WHEN CENTERLINE PAVEMENT MAKINGS ARE MISSING. 'DO NOT PASS' SIGNS MUST BE INSTALLED ON THE SAME DAY AS MILLING OPERATIONS.

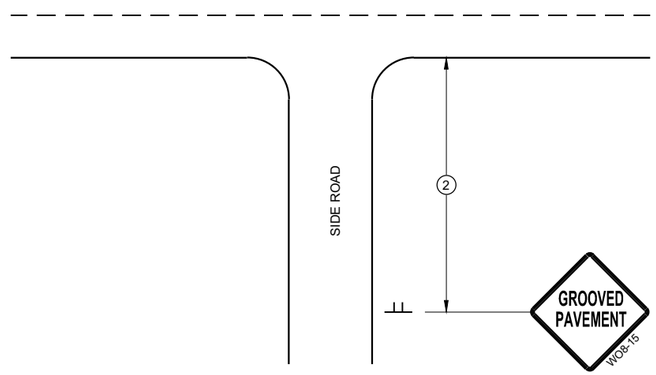
(1) PLACE SIGNS 350' IN ADVANCE OF MILLED SURFACES AND AT 1 MILE INTERVALS, OR AS DIRECTED BY THE ENGINEER.

(2) PLACE SIGN 200' MIN. FROM INTERSECTION AND 200' MIN. AFTER ADVANCE WARNING SIGN SHOWN IN SDD 15C04.

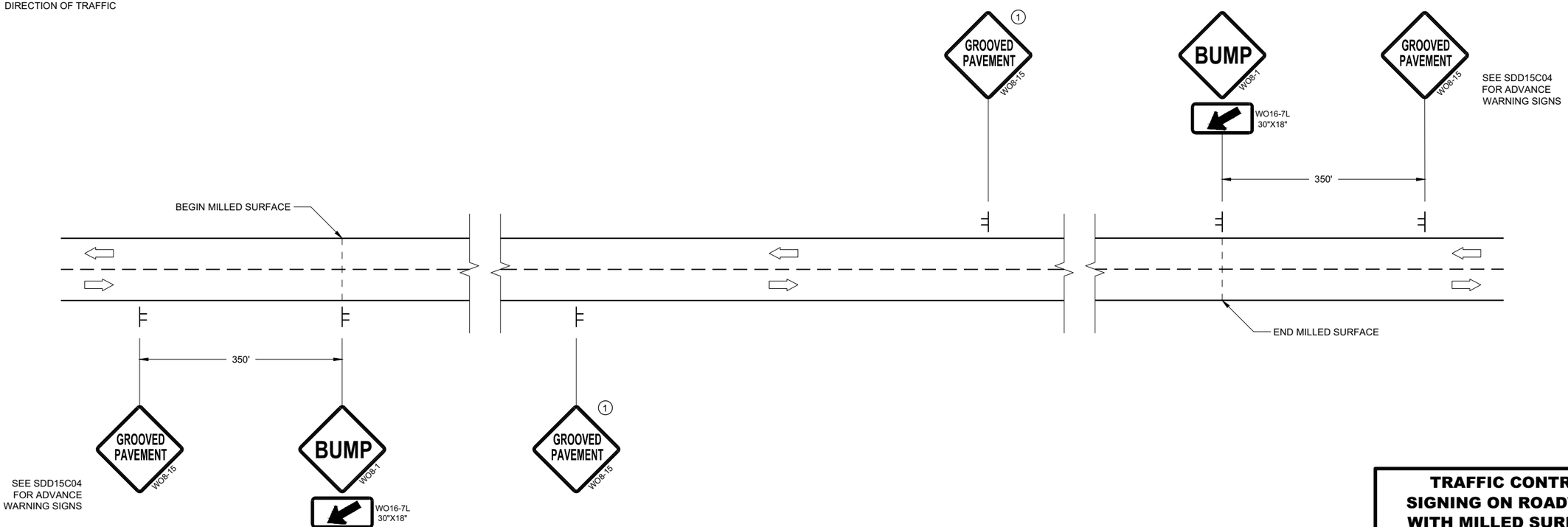
LEGEND

SIGN ON TEMPORARY SUPPORT

DIRECTION OF TRAFFIC



TYPICAL SIDE ROAD APPROACH SIGN DETAIL



DETAIL FOR SIGNING ON MILLED SURFACES

TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH MILLED SURFACES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

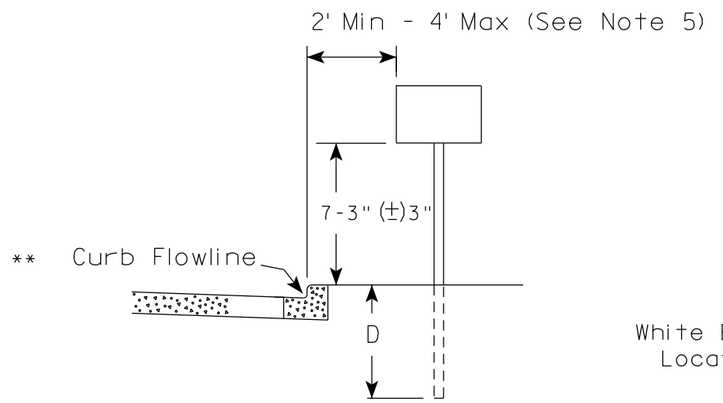
APPROVED
February 2020
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

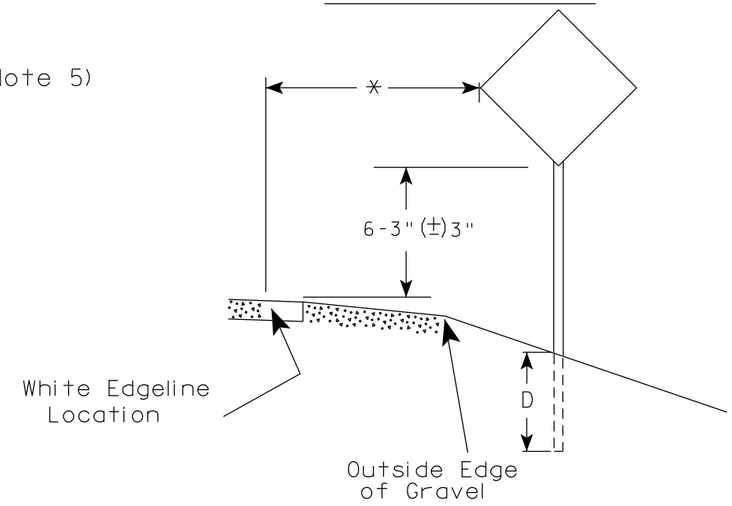
FHWA

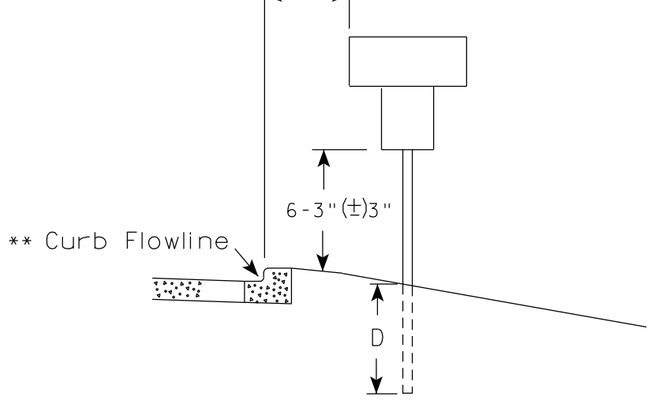
6
SDD 15D44 - 02

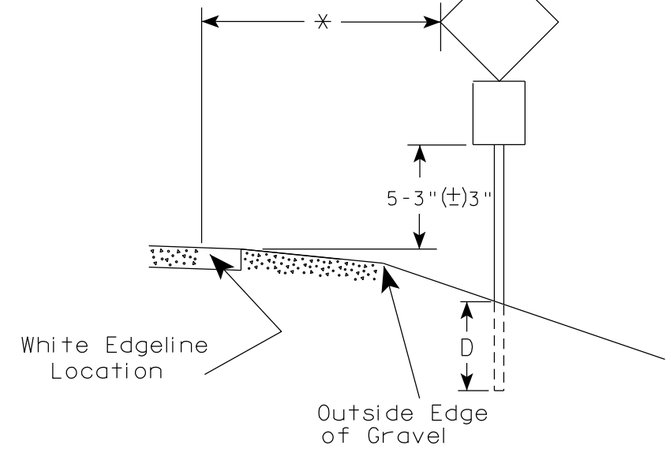
URBAN AREA



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.

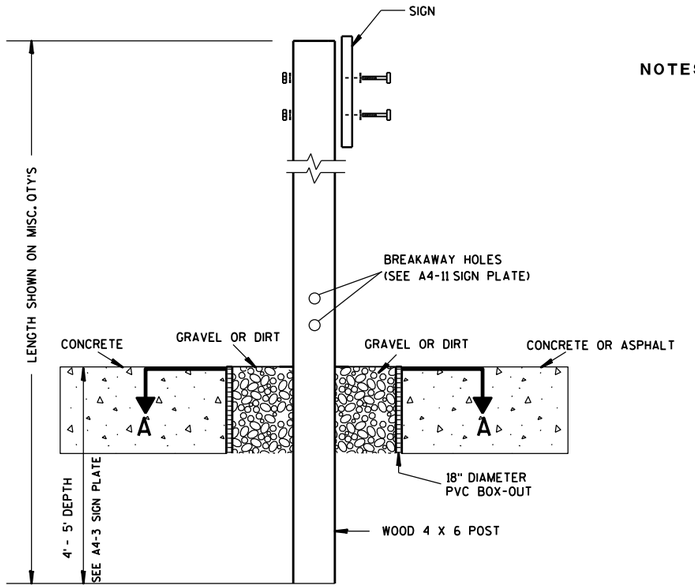
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/6/23 PLATE NO. A4-3.23

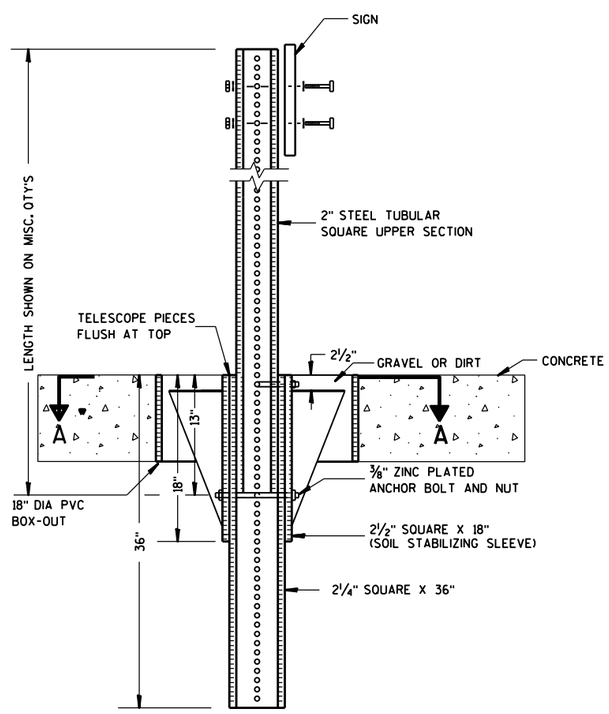
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 305	E



ELEVATION VIEW

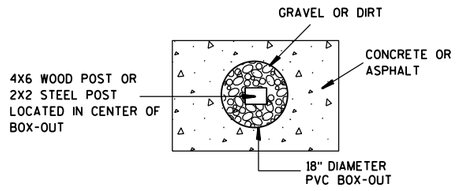
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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

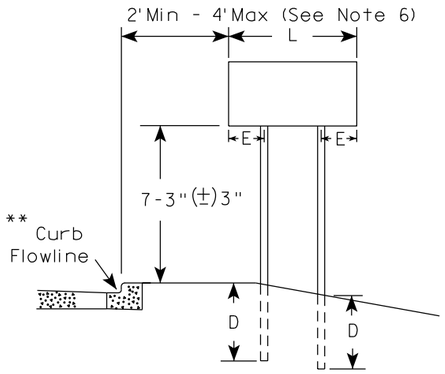
APPROVED Matthew R Rauch
for State Traffic Engineer

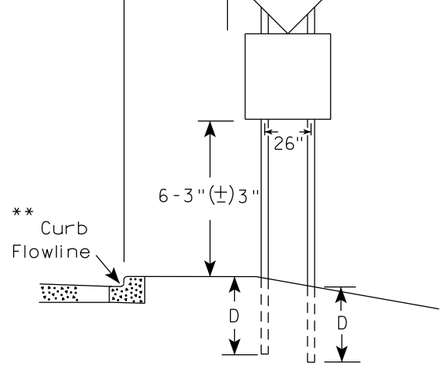
DATE 1/27/14 PLATE NO. A4-3B.1

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

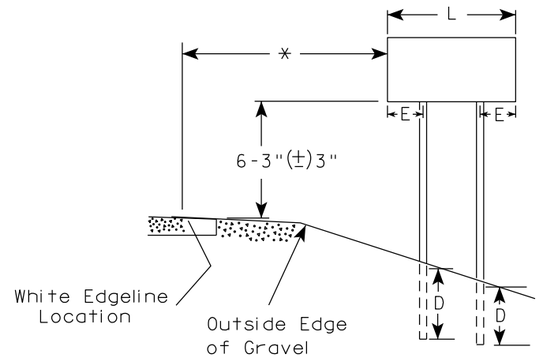
URBAN AREA

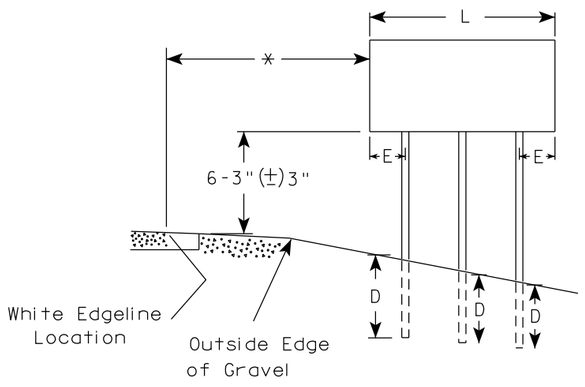


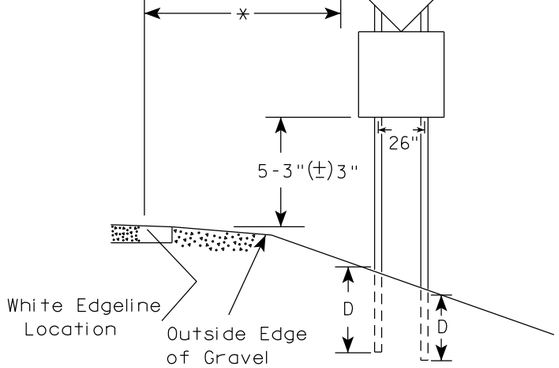


48" DIAMOND WARNING SIGN

RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN

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.

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"

POST EMBEDMENT DEPTH

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

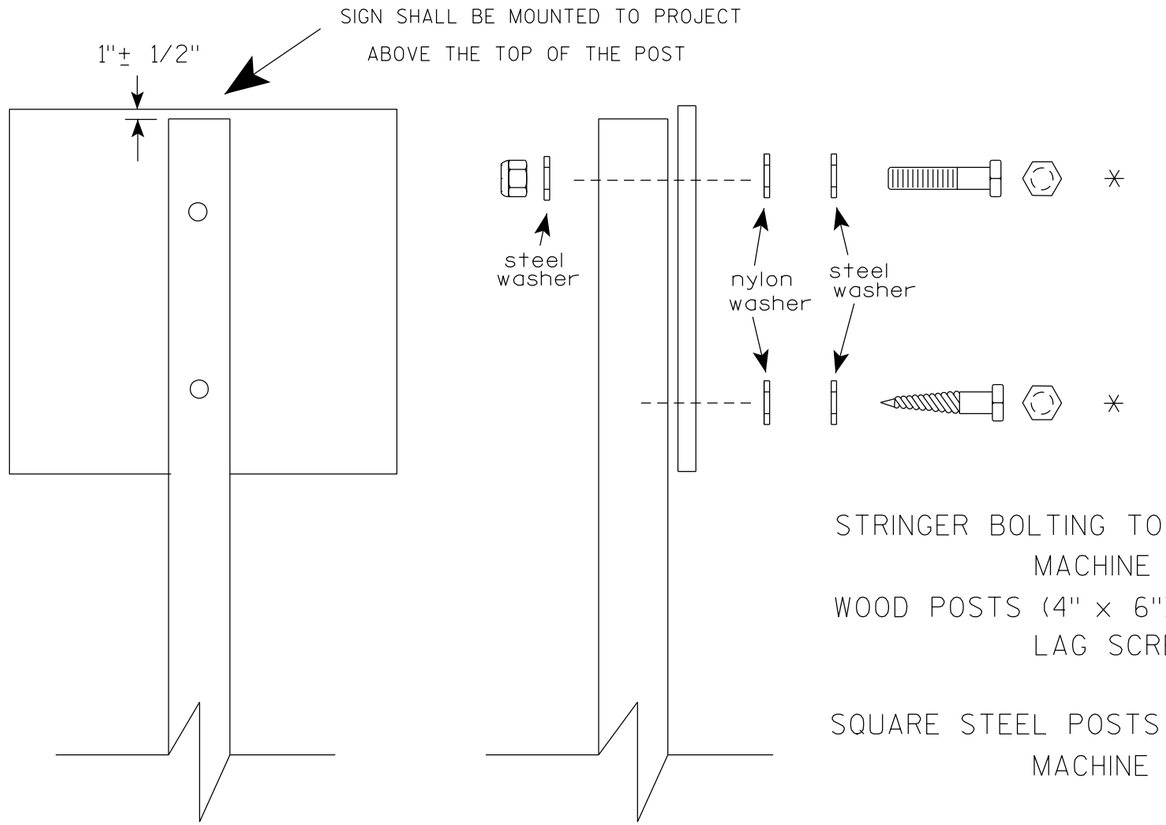
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

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: 307	E



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

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

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

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

STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)

MACHINE BOLTS - 5/16" X 1-3/4" Length w/ 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

PROJECT NO:

SHEET NO: 308 E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A48.DGN PLOT DATE : 01-APRIL-2020 PLOT BY : dotc4c

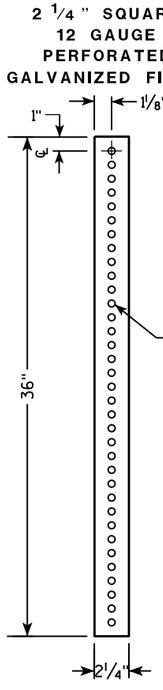
WISDOT/CADDS SHEET 42

7

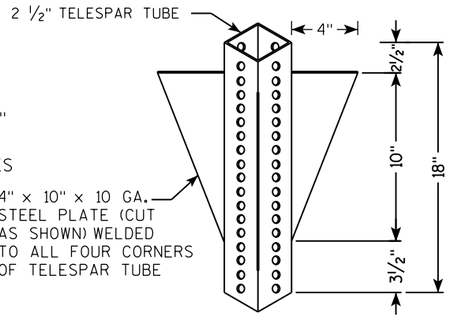
7

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

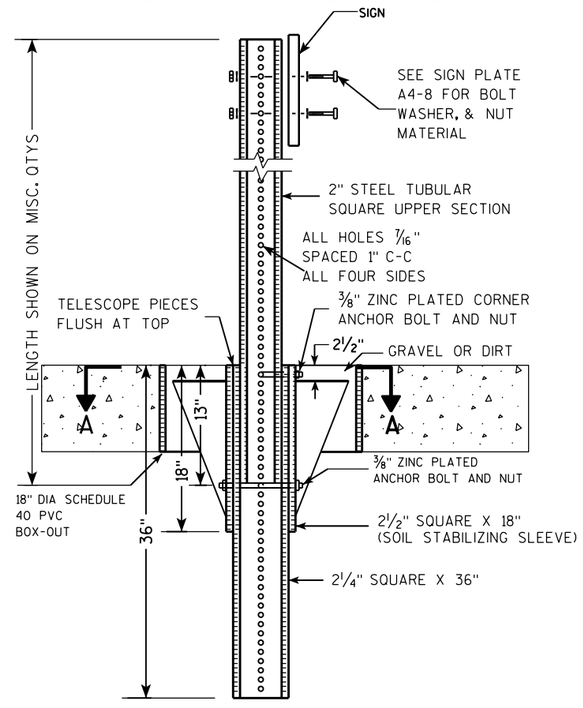
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



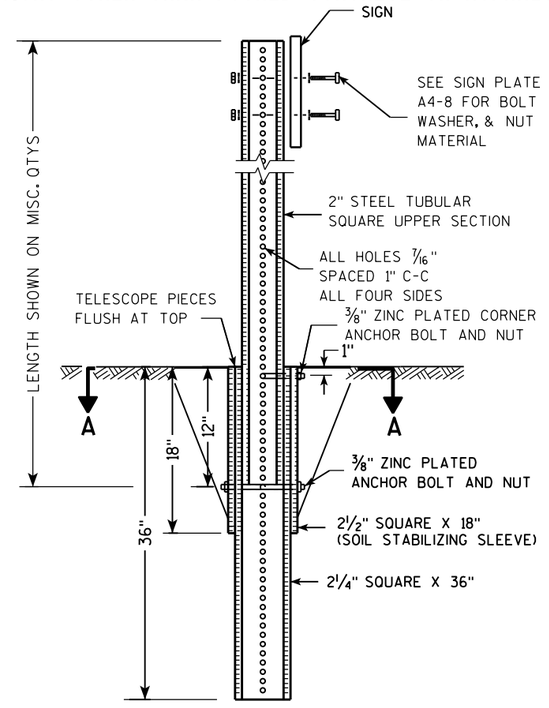
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

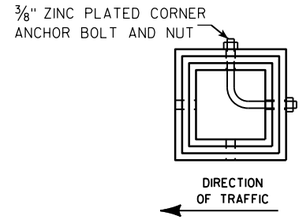


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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).

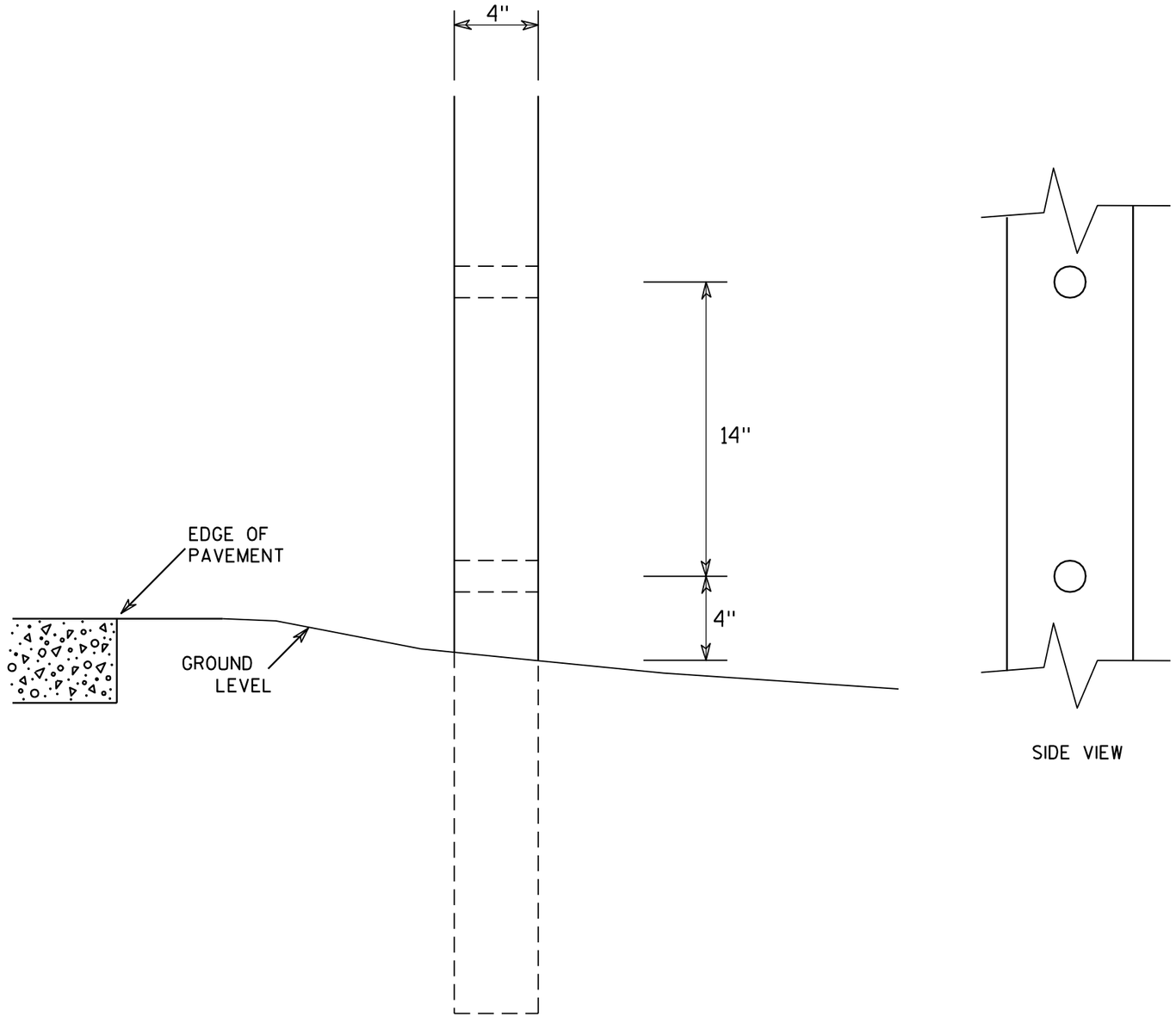
TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE 309 A4-9.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



SIDE VIEW

GENERAL NOTES

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

7

7

4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

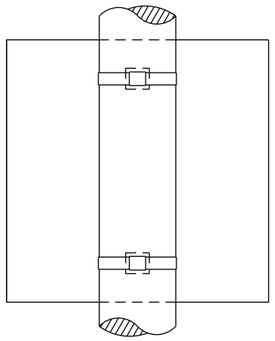
APPROVED Chester J Spang for State Traffic Engineer

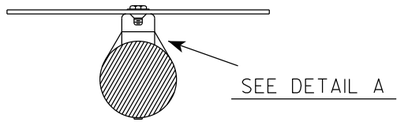
DATE 3/27/97 PLATE NO. A4-11.2

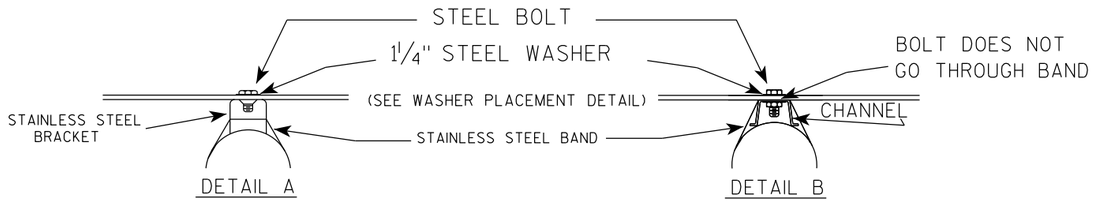
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 310	E

BANDING

SINGLE SIGN



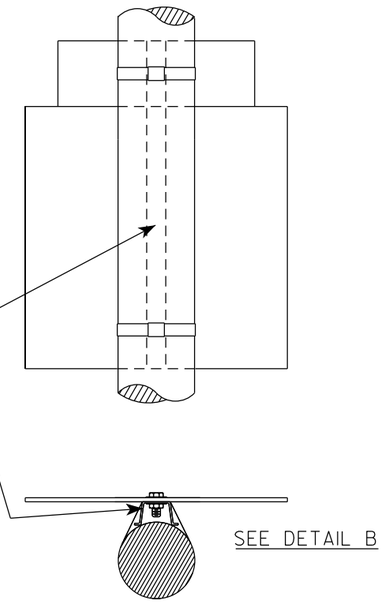




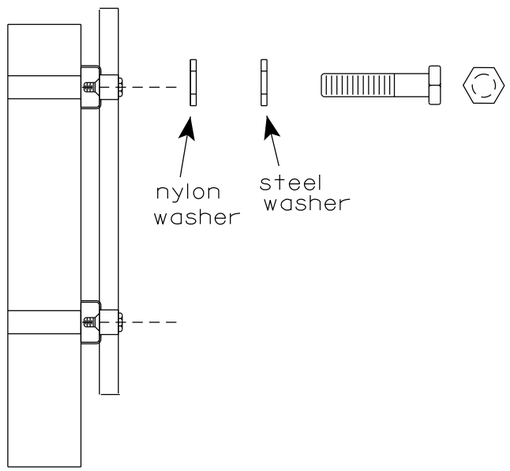
GENERAL NOTES

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

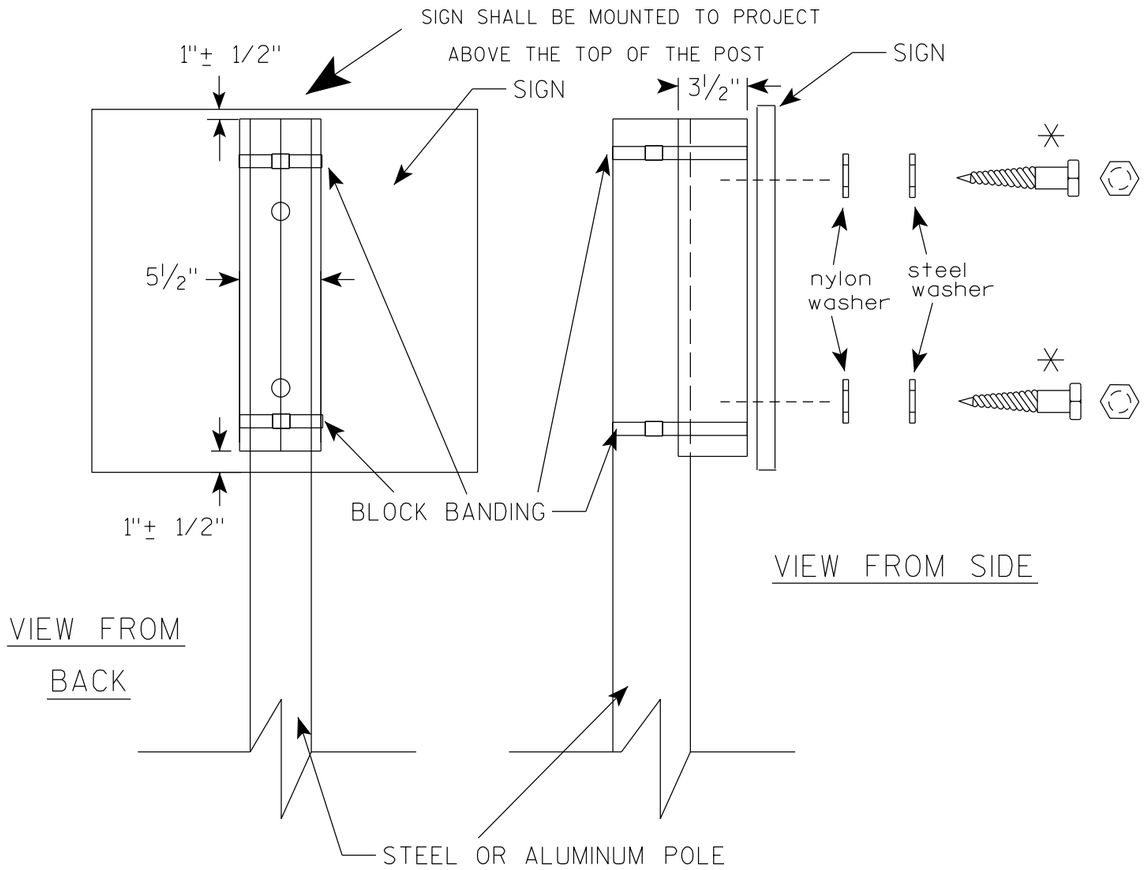
DATE 6/10/19 PLATE NO. A5-9.4

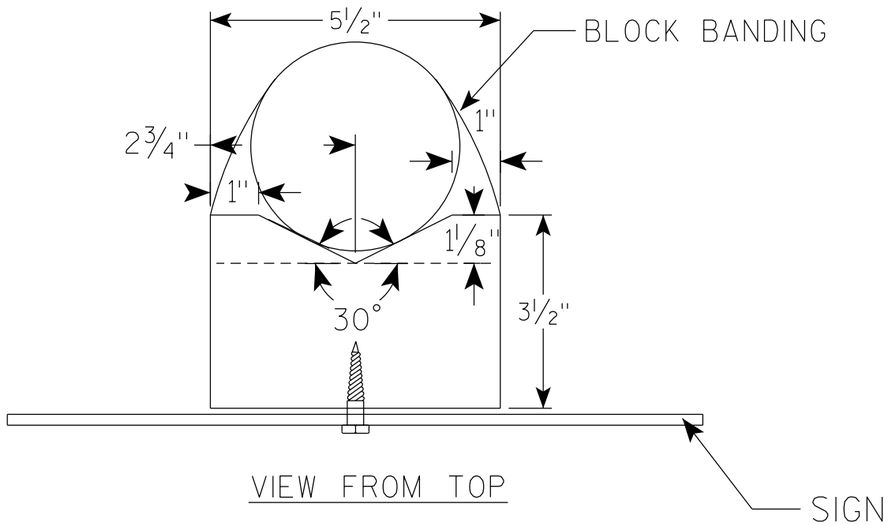
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 311	E

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)

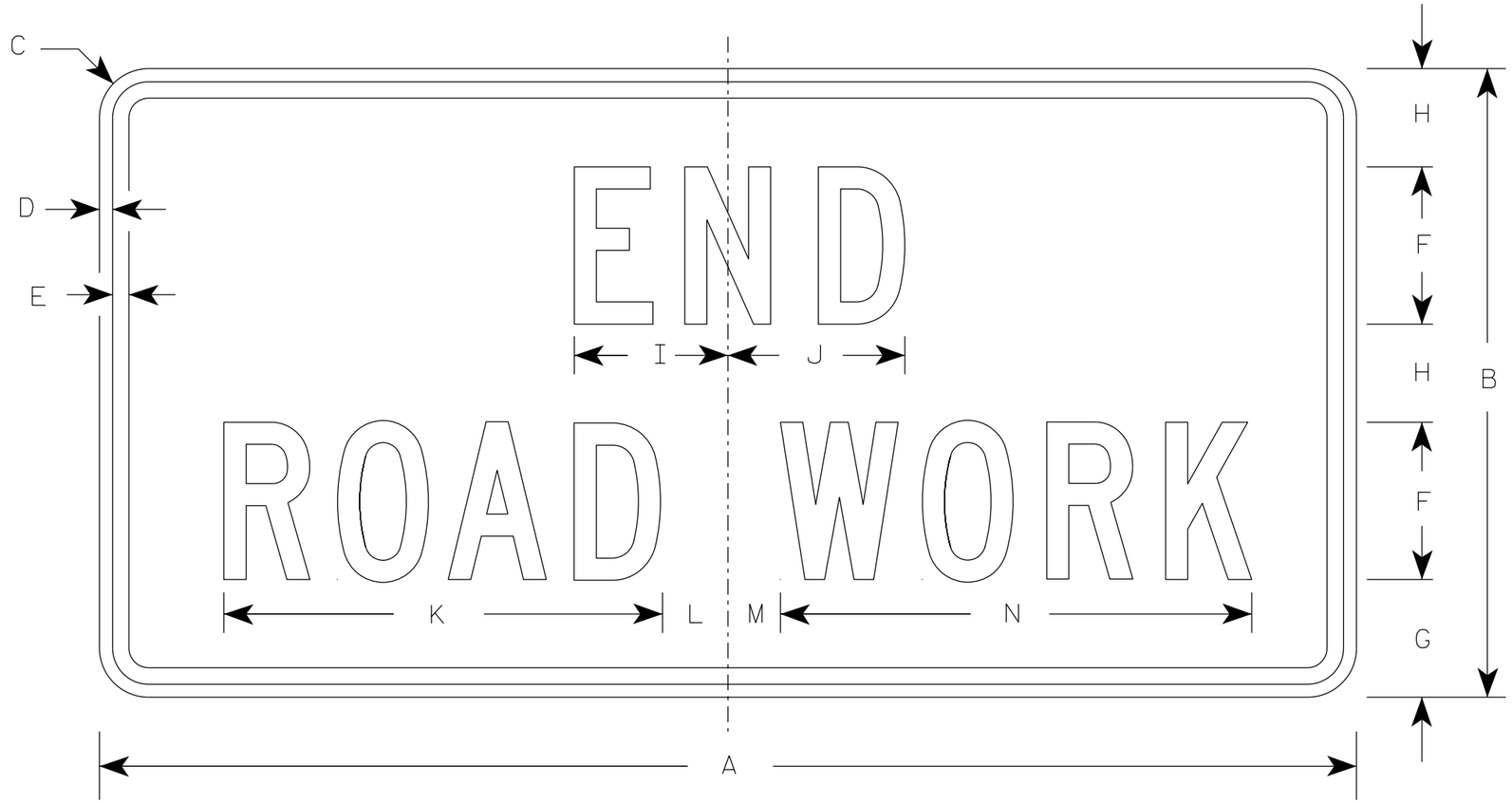
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/19/2022 PLATE NO. A5-10.3

PROJECT NO:

SHEET NO: 312 E



G20-2A

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	18	1 1/2	3/8	1/2	4	3 3/4	2 1/2	4 1/8	4 1/8	11 1/8	2	1	12 1/8													4.5
2	48	24	1 7/8	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0
2M	48	24	1 7/8	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0
3	48	24	1 7/8	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0
4	48	24	1 7/8	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0
5	48	24	1 7/8	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0

STANDARD SIGN

G20-2A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

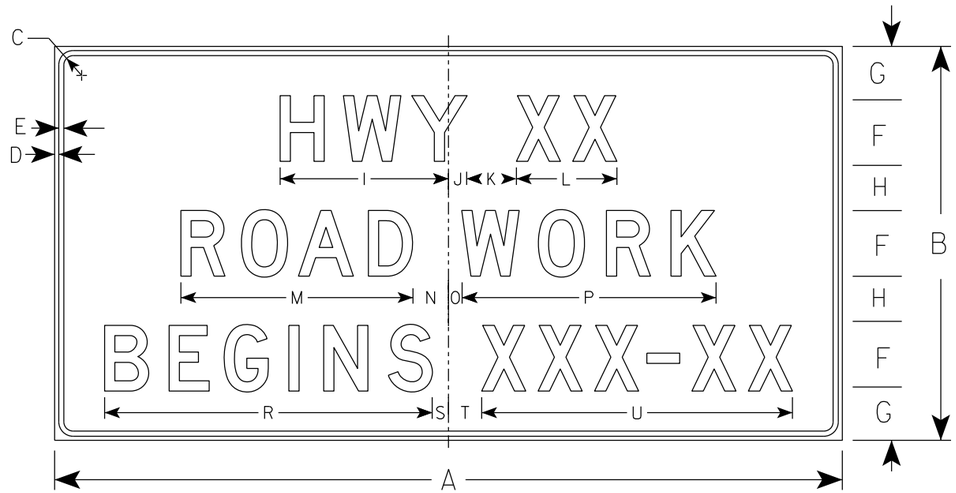
DATE 1/26/2023 PLATE NO. G20-2A.10

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

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\G202A.dgn PLOT DATE : 26-JAN 2023 8:27 PLOT BY : dotc4c PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - D
4. Substitute appropriate numeral and adjust spacing to achieve proper balance.



G20-57

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	72	36	1 1/8	1/2	5/8	6	5	4	15 5/8	1 5/8	5	9 1/4	21 1/4	3 1/2	1 1/2	23 1/4		29 7/8	1 3/4	3 1/4	28 1/2						18.0
4	96	48	2 1/4	3/4	1	8	6 1/2	5 1/2	20 5/8	2 1/4	6	12 1/4	28 1/4	4 3/8	1 5/8	31		39 1/4	2	4	37 7/8						32.0
5																											

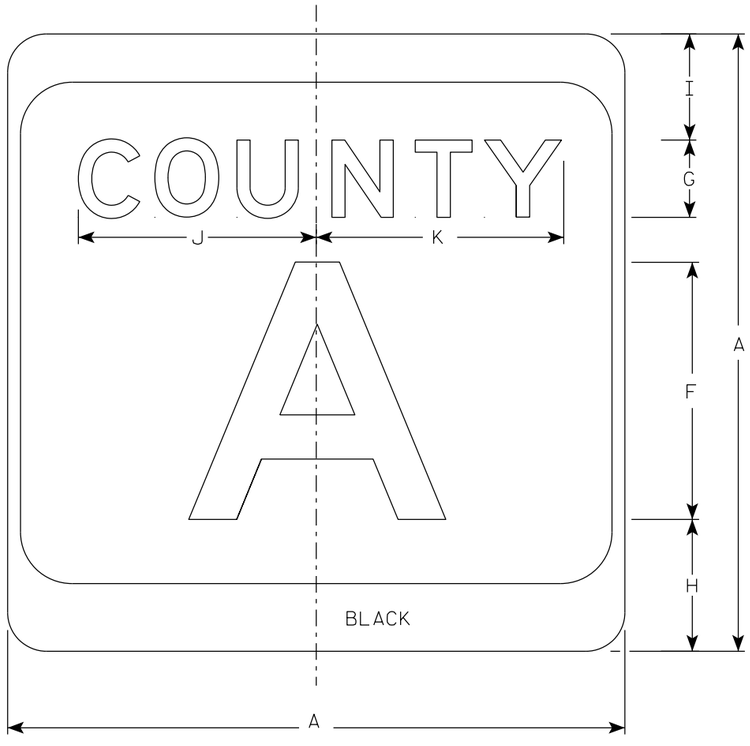
STANDARD SIGN
G20-57

WISCONSIN DEPT OF TRANSPORTATION

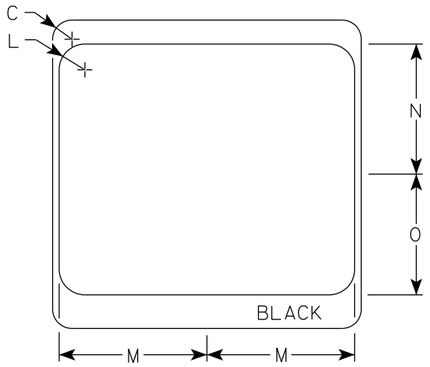
APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 1/22/19 PLATE NO. G20-57.3

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 314 | E

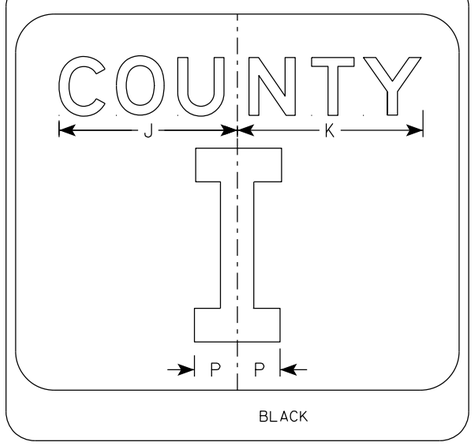


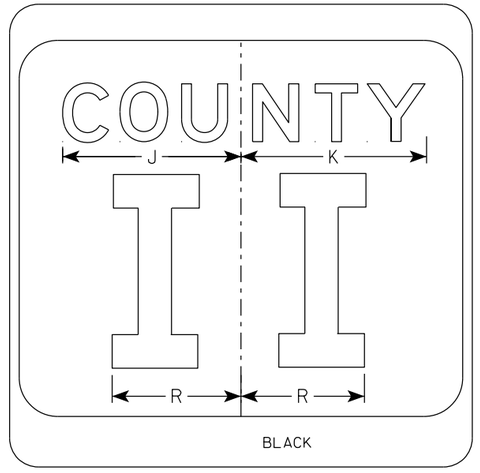
M1-5A



NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White & Black
   Message - Black
3. Message Series - see Note 4
4. Message Series E for 1 letter.
   Message Series D for 2 letters unless message is too big then Series C.
   Message Series C for 3 letters unless message is too big then Series B.
5. Substitute appropriate letters & optically center to achieve proper balance.





SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24		1 1/2			10	3	5 1/8	4 1/8	9 1/4	9 5/8	2	11 1/2	10 1/8	9 3/8	2 1/4		6 5/8									4.0
2M	24		1 1/2			10	3	5 1/8	4 1/8	9 1/4	9 5/8	2	11 1/2	10 1/8	9 3/8	2 1/4		6 5/8									4.0
3	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
4	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
5	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0

CTH MARKER
M1-5A FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

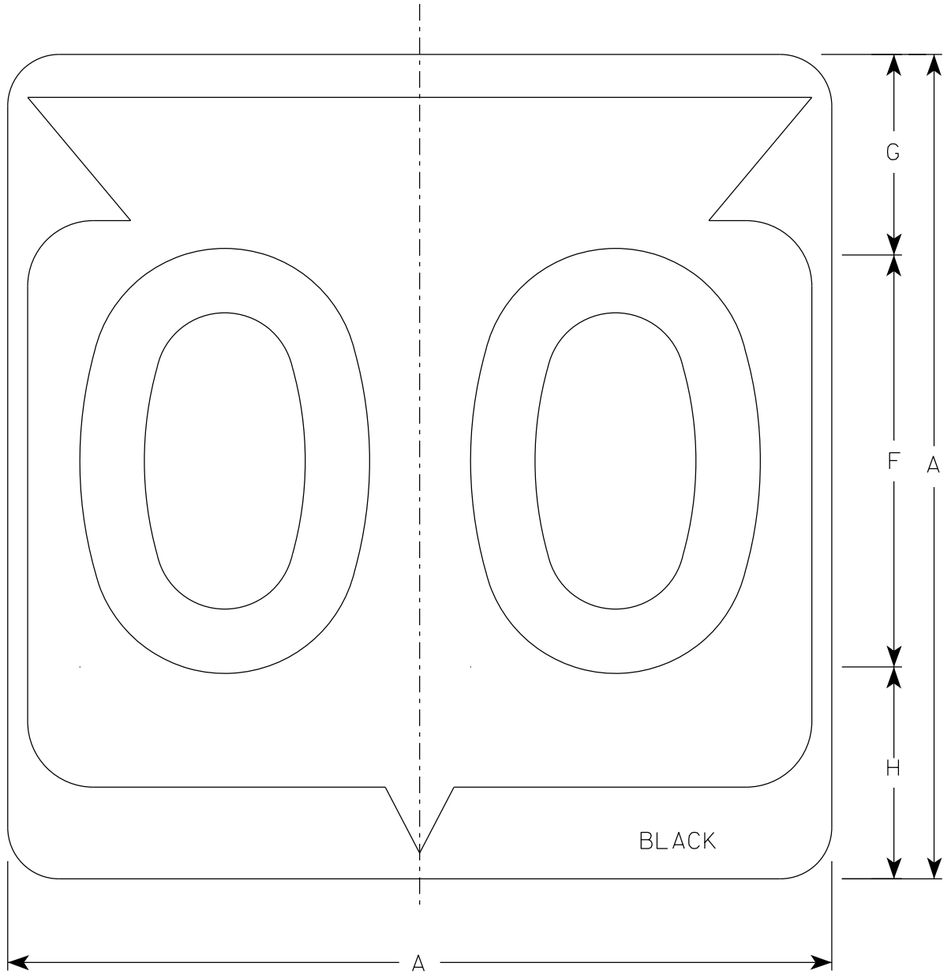
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/8/2022 PLATE NO. M1-5A.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M15A.dgn PLOT DATE : 8-NOV 2022 8:26 PLOT BY : dotc4c PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42

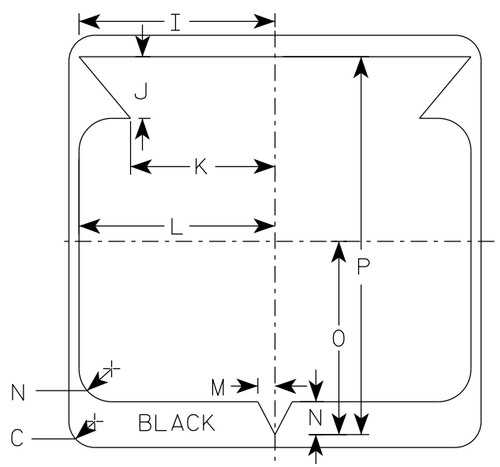
7



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

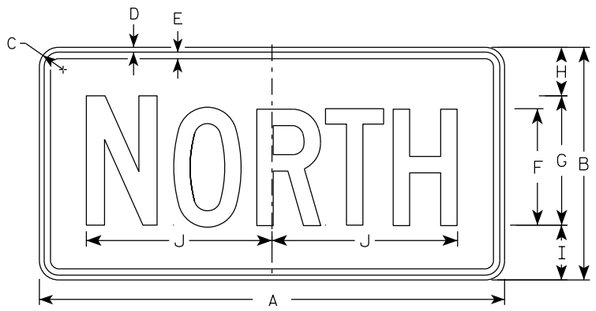
STATE ROUTE MARKER
M1-6 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

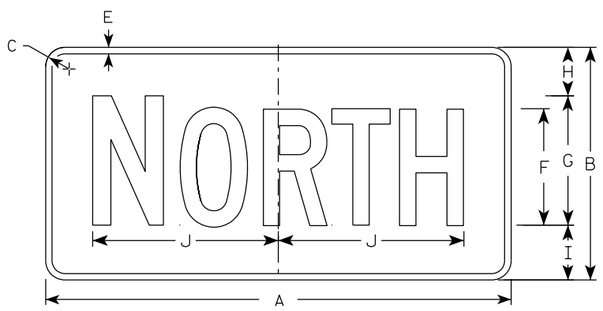
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/8/2022 PLATE NO. M1-6.11

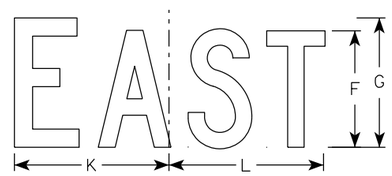
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 316	E



M3-1
MM3-1
MP3-1

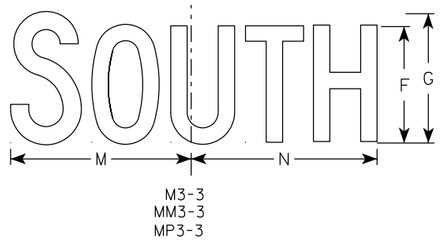


MB3-1
MK3-1
MN3-1

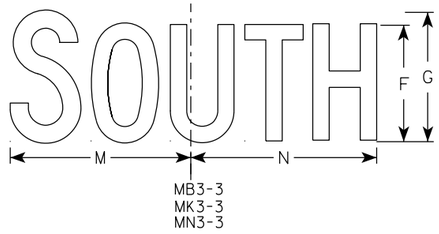


M3-2
MM3-2
MP3-2

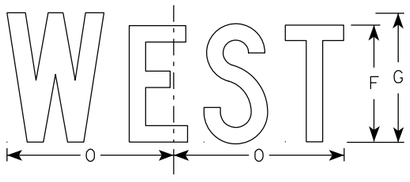
MB3-2
MK3-2
MN3-2



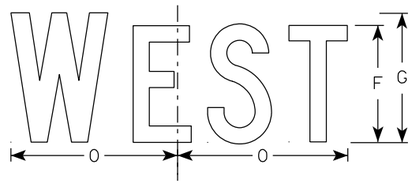
M3-3
MM3-3
MP3-3



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

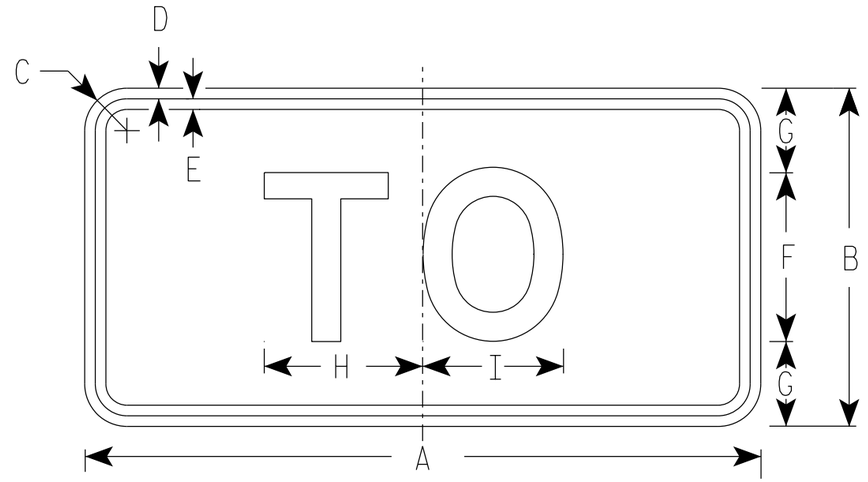
STANDARD SIGNS
M3-1 THRU M3-4
SERIES

WISCONSIN DEPT OF TRANSPORTATION

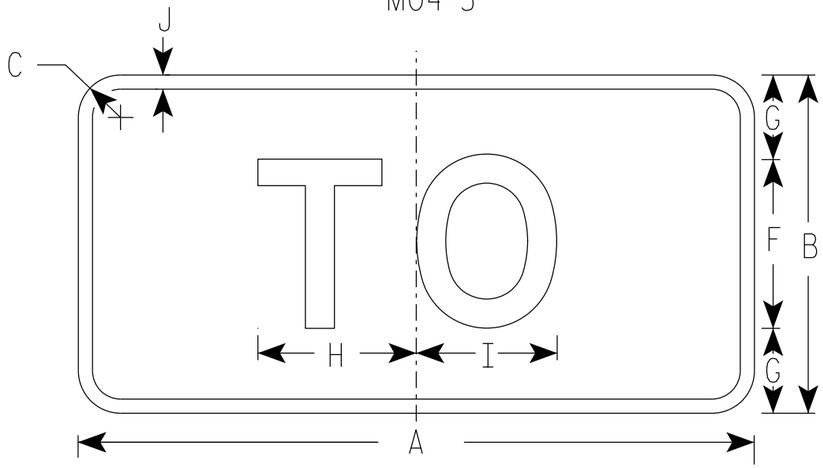
APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 2/8/2023 PLATE NO. M3-1.15

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 317 | 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 ½	⅜	⅜	6	3	5 ⅜	5 ¼	½																	2.00
2M	24	12	1 ½	⅜	⅜	6	3	5 ⅜	5 ¼	½																	2.00
3	36	18	1 ½	⅜	½	9	4 ½	8 ¼	8 ⅜	½																	4.5
4	36	18	1 ½	⅜	½	9	4 ½	8 ¼	8 ⅜	½																	4.5
5	36	18	1 ½	⅜	½	9	4 ½	8 ¼	8 ⅜	½																	4.5

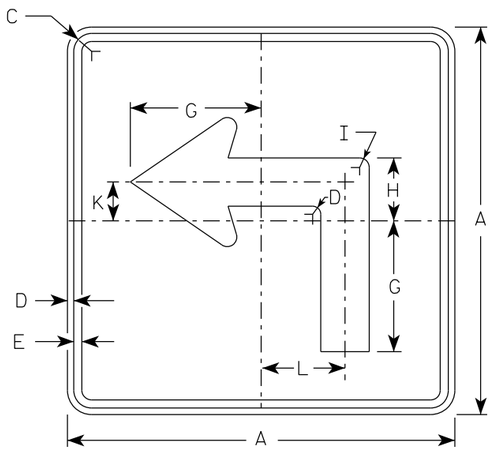
STANDARD SIGN
M4-5

WISCONSIN DEPT OF TRANSPORTATION

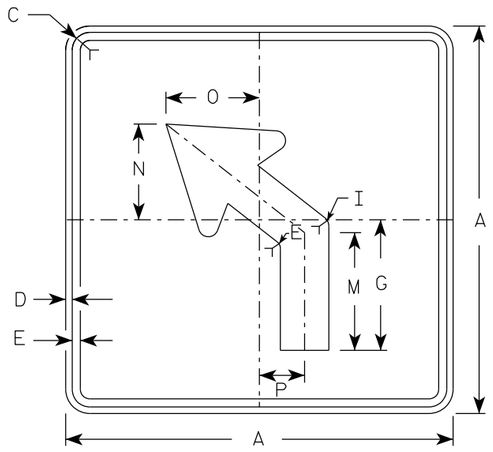
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/8/2023 PLATE NO. M4-5.11

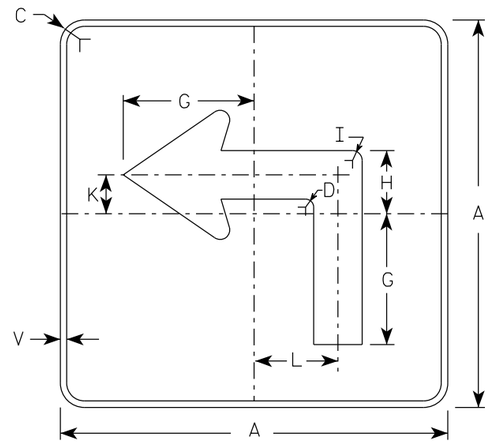
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 318 E



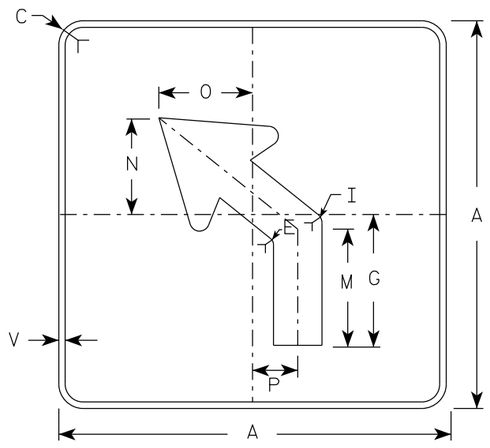
M5-1L
MM5-1L
MO5-1L
MP5-1L



M5-2L
MM5-2L
MO5-2L
MP5-2L



MB5-1L
MK5-1L
MN5-1L
MR5-1L

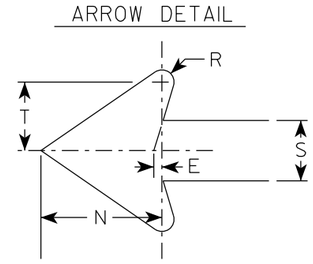


MB5-2L
MK5-2L
MN5-2L
MR5-2L

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

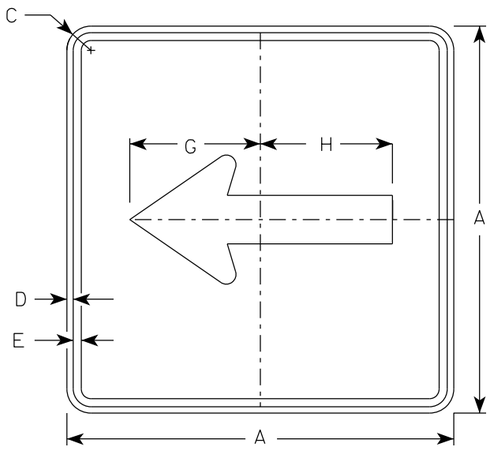
STANDARD SIGN
M5-1 & M5-2

WISCONSIN DEPT OF TRANSPORTATION

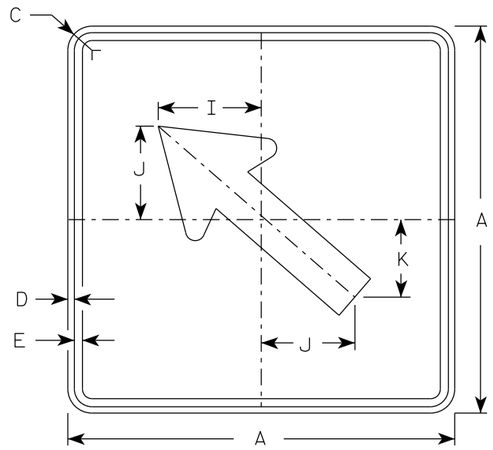
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/13/2023 PLATE NO. M5-1.15

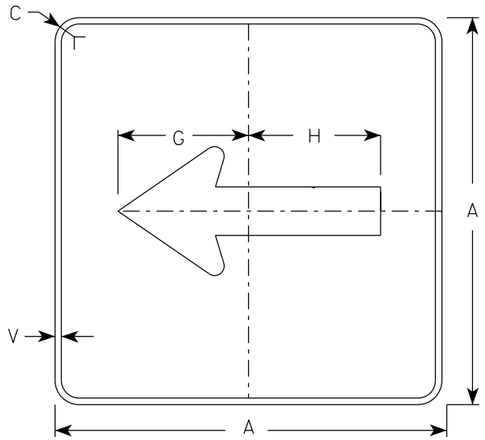
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 319 | E



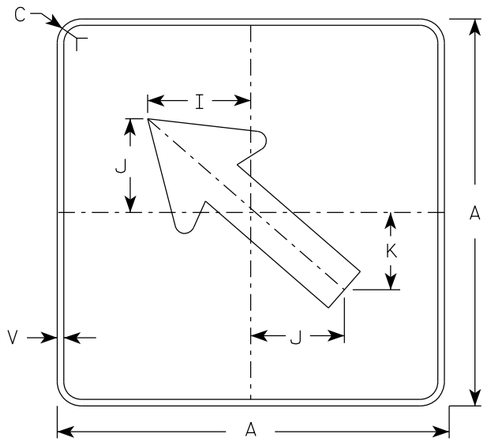
M6-1
MM6-1
MO6-1
MP6-1



M6-2
MM6-2
MO6-2
MP6-2



MB6-1
MK6-1
MN6-1
MR6-1

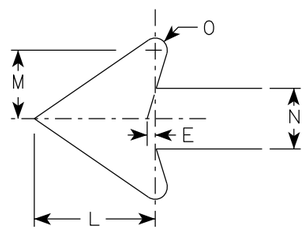


MB6-2
MK6-2
MN6-2
MR6-2

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

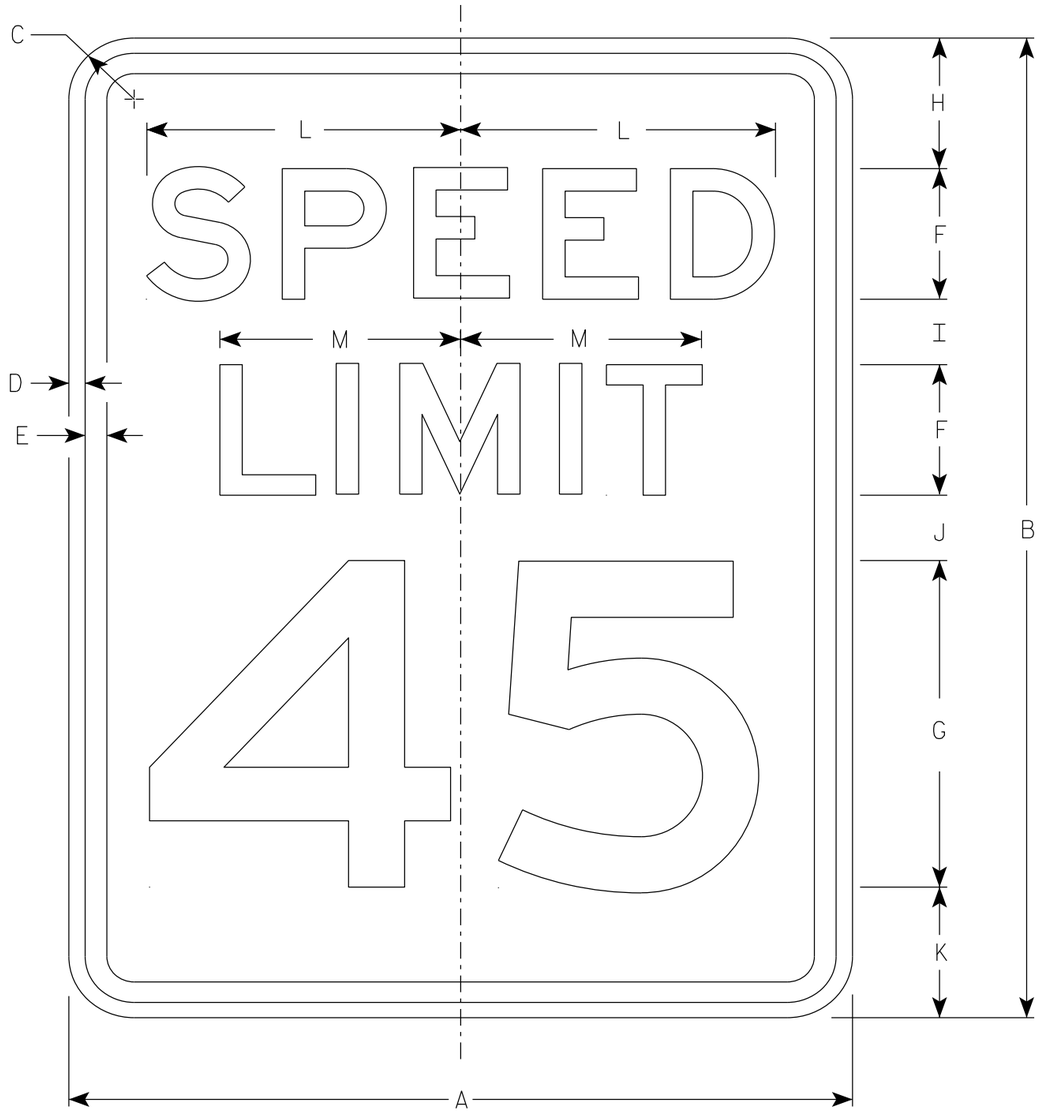
APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 2/13/2023 PLATE NO. M6-1.16

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 320 | E

7

7



R2-1

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - E
4. Substitute appropriate numerals and optically adjust spacing to achieve proper balance.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18	24	1 1/2	3/8	1/2	3	8	3	2	2	3	7 1/4	5 1/2														3.0
2S	24	30	1 1/2	3/8	1/2	4	10	3	2 1/4	3 3/8	3 3/8	9 5/8	7 3/8														5.0
2M	30	36	1 7/8	1/2	5/8	5	12	5	2 1/2	2 1/2	4	12	9 1/4														7.5
3	36	48	1 7/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
4	36	48	1 7/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
5	48	60	3	3/4	1	8	20	6	4 1/2	6 3/4	6 3/4	19 1/4	14 5/8														20.0

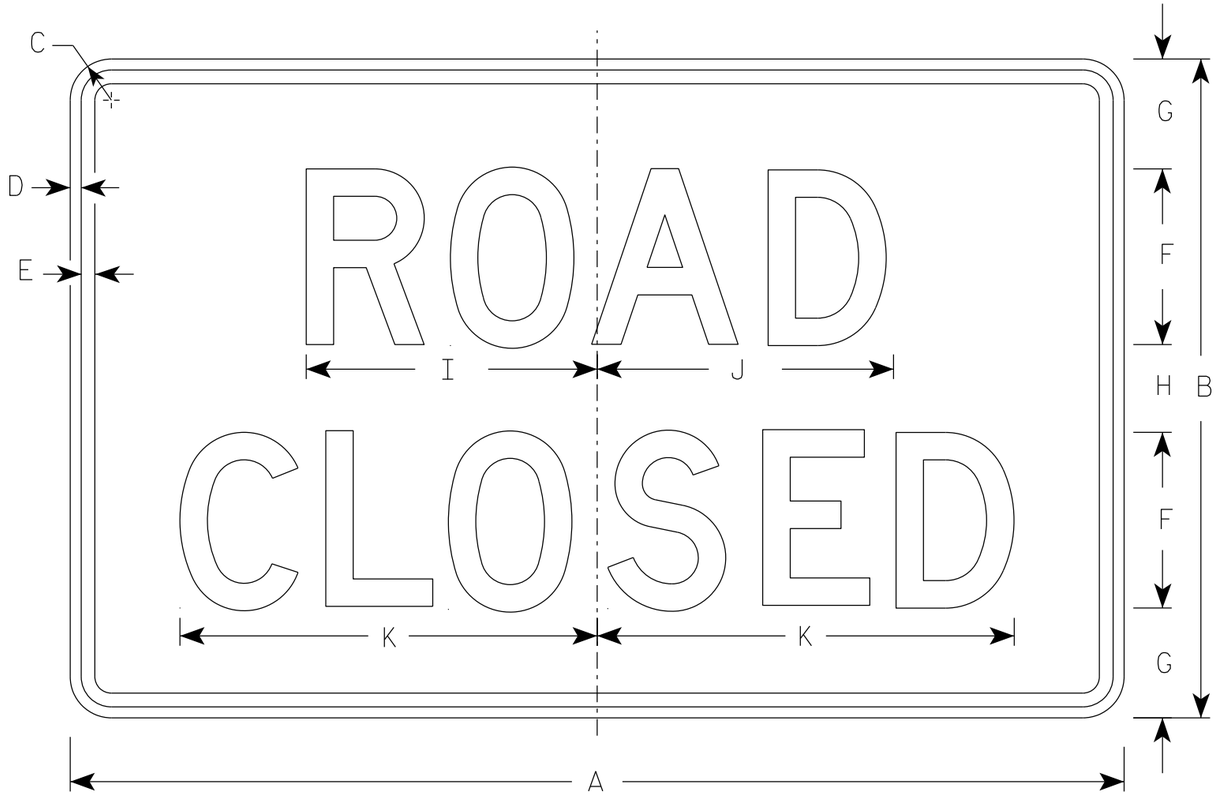
STANDARD SIGN
R2-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/1/23 PLATE NO. R2-1.14

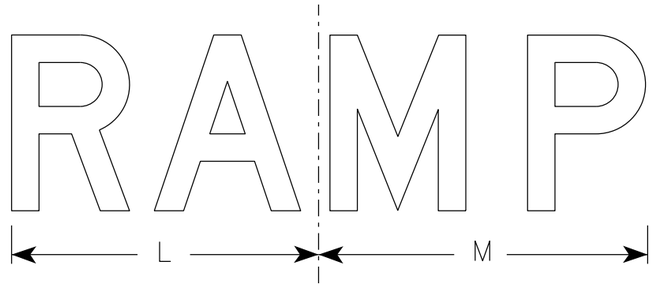
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 321 | E



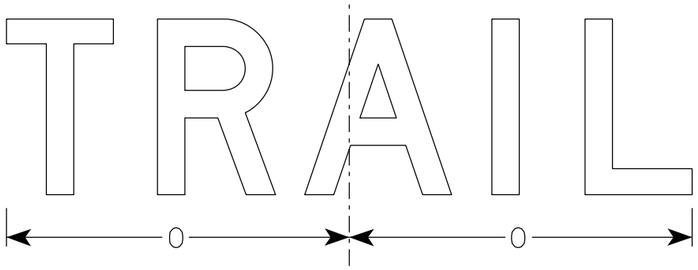
R11-2

NOTES

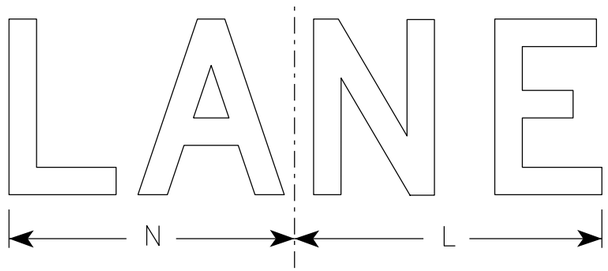
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Modify the 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

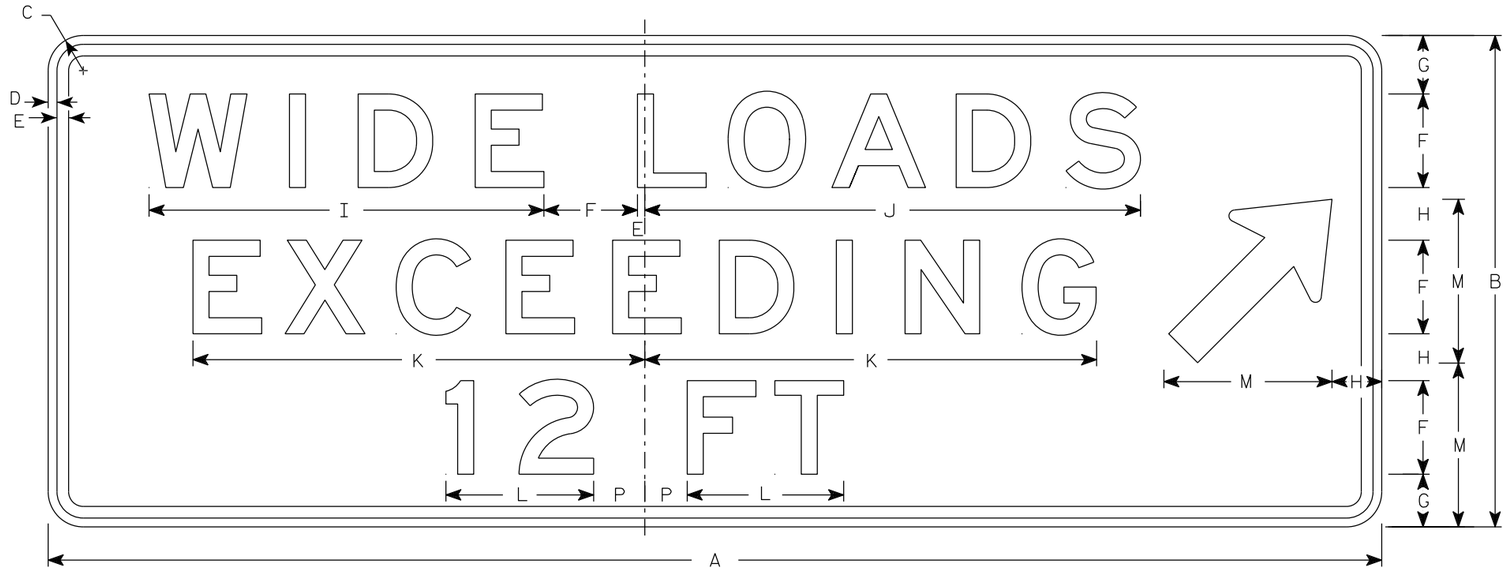
PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

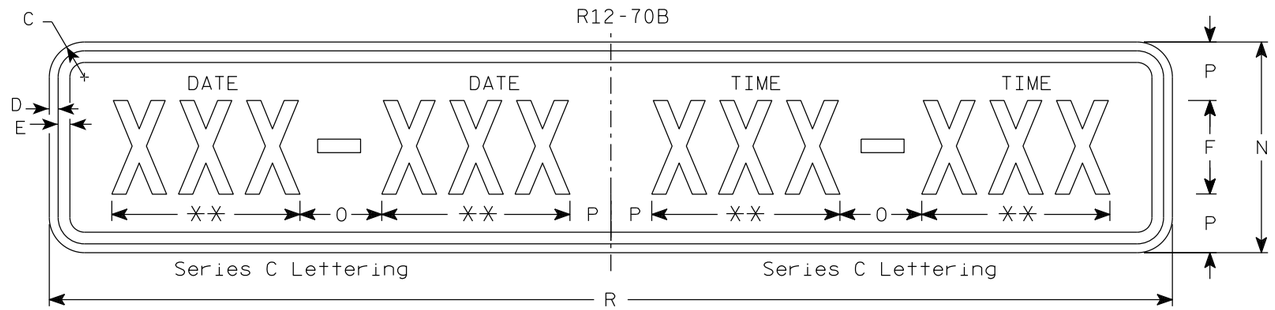
7

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - E except as noted
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.

** Substitute appropriate message, optically center message





R12-70C

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	R12-70 Area sq. ft.	R12-70C Area sq. ft.
1																												
2S	90	36	3	1/2	5/8	6	4	5	20 7/8	28 3/8	24 5/8	8 1/8	12	12	6	3		66									22.5	5.5
2M	90	36	3	1/2	5/8	6	4	5	20 7/8	28 3/8	24 5/8	8 1/8	12	12	6	3		66									22.5	5.5
3	90	36	3	1/2	5/8	6	4	5	20 7/8	28 3/8	24 5/8	8 1/8	12	12	6	3		66									22.5	5.5
4	114	42	3	3/4	1	8	5	4	34	42	39	13	14	18	7	3 1/2		96									36.75	12.0
5	114	42	3	3/4	1	8	5	4	34	42	39	13	14	18	7	3 1/2		96									36.75	12.0

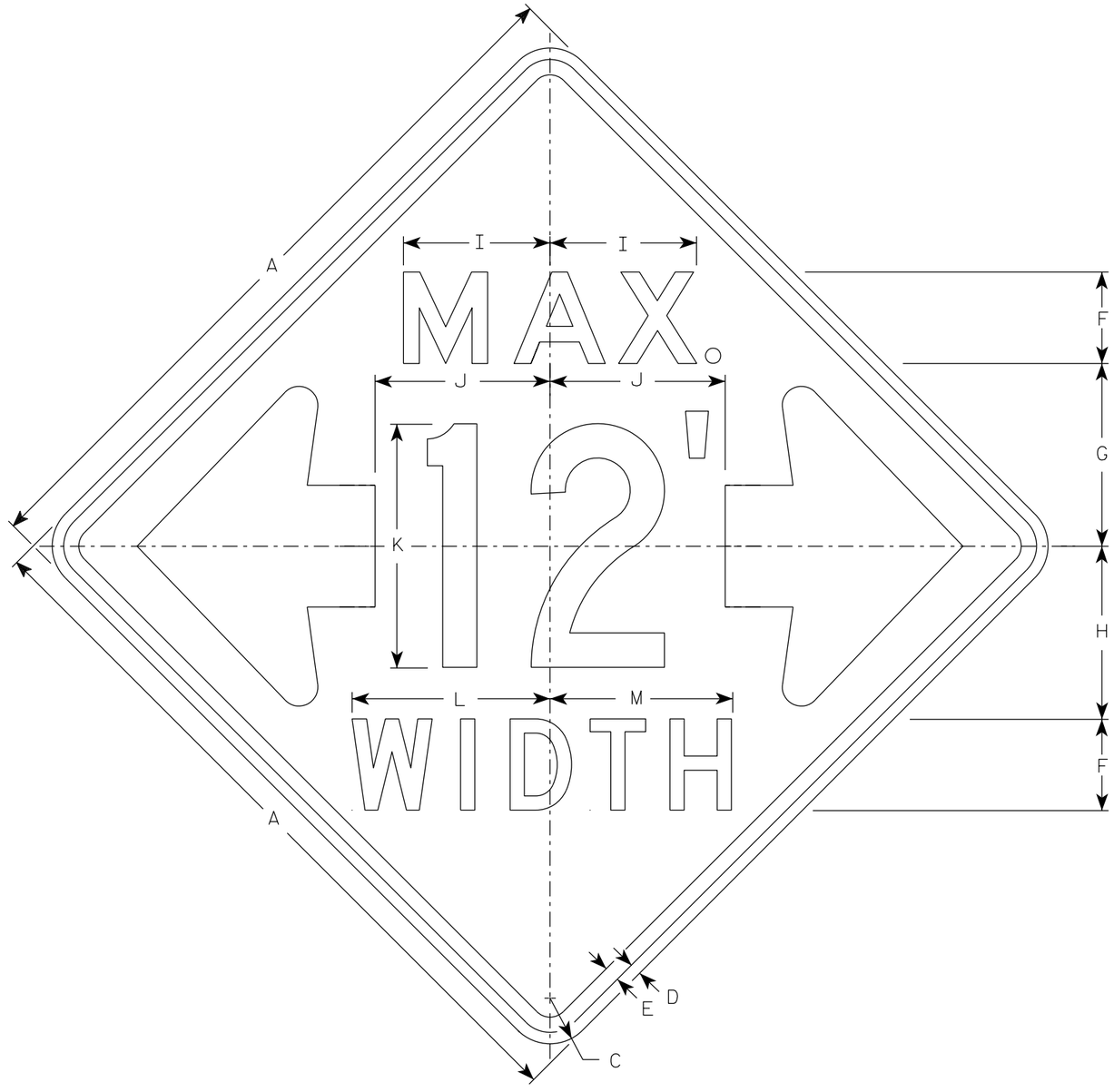
TYPICAL SIGN
R12-70B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/9/24 PLATE NO. R12-70B.4

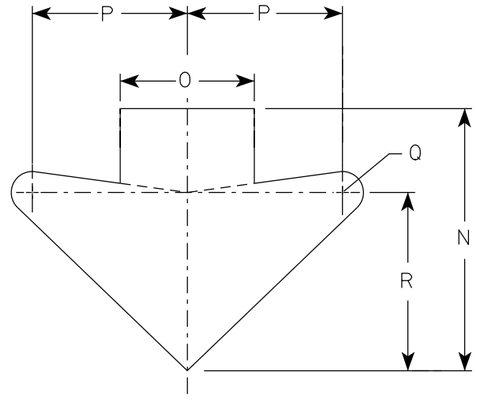
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 323	E



W12-52

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - See note 5
4. The top line is series E, the numerals are series C, and the bottom line is series D.
5. Substitute appropriate numerals and adjust spacing as required.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48		3	¾	1	6	12	11 ⅜	9 ⅝	11 ½	16	13	12	15 ⅝	8	9 ¼	1 ¼	10 ⅝									16.0
2M	48		3	¾	1	6	12	11 ⅜	9 ⅝	11 ½	16	13	12	15 ⅝	8	9 ¼	1 ¼	10 ⅝									16.0
3																											
4																											
5																											

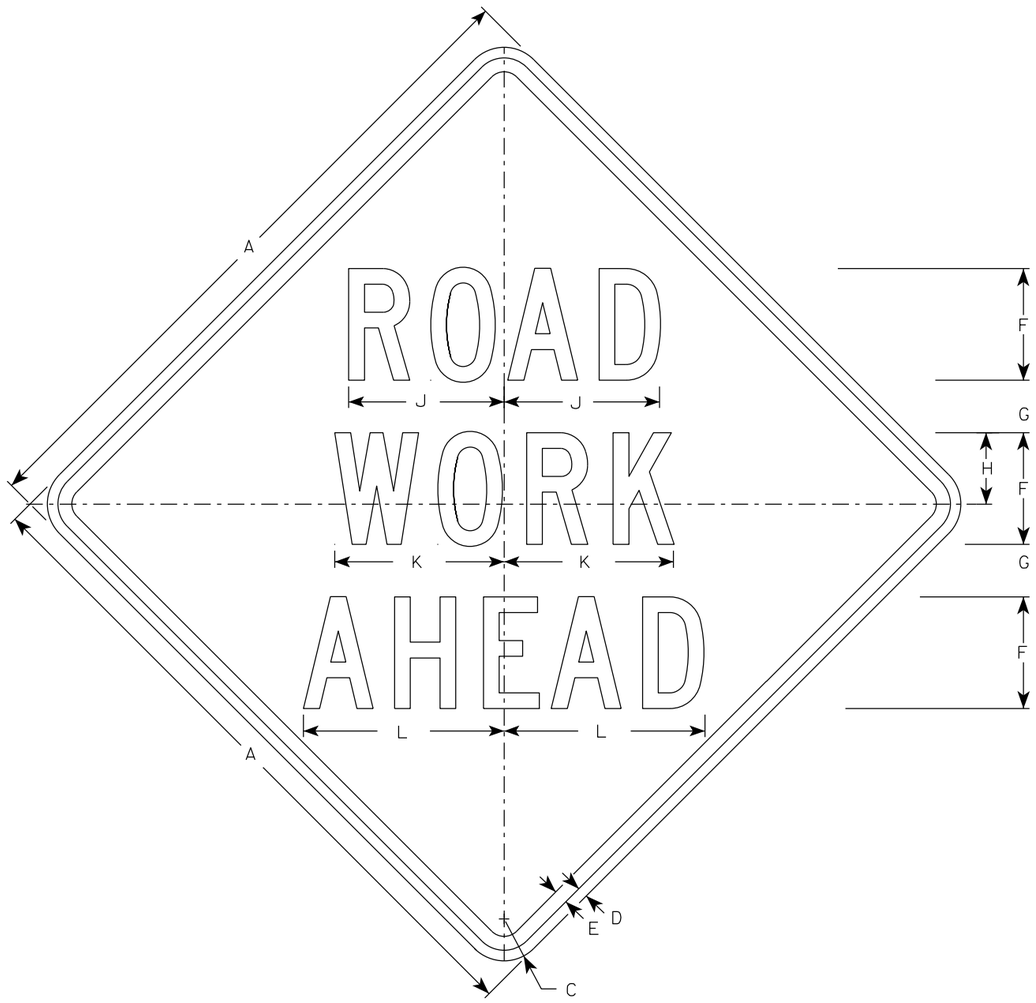
STANDARD SIGN
W12-52

WISCONSIN DEPT OF TRANSPORTATION

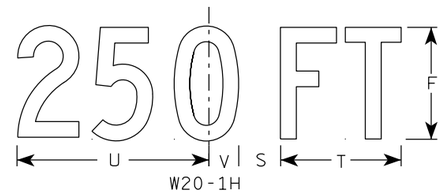
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/10/2024 PLATE NO. W12-52.8

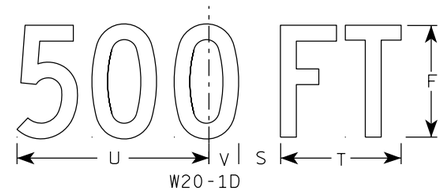
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 324 | E



W20-1A



W20-1H



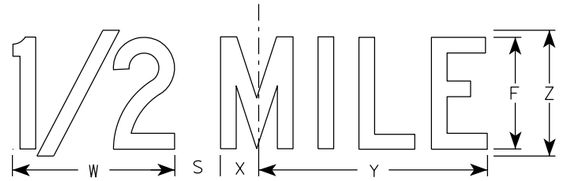
W20-1D

W20-1C

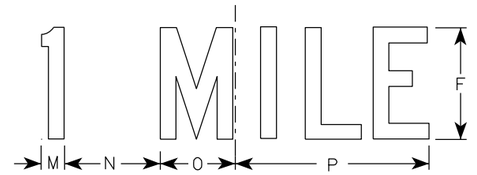
W20-1B

NOTES

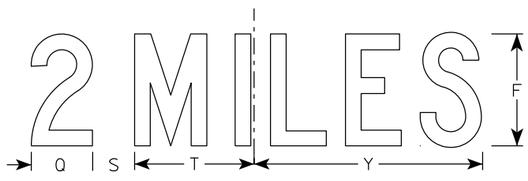
1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



W20-1G



W20-1F



W20-1E

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	2 5/8	3 1/4	10 1/8	7	7 5/8	8 7/8	1 1/8	4 1/2	3 1/2	9	3 1/4	2 1/2	2 1/4	5 5/8	9	1 3/8	8	1 3/4	10 3/4	6	9.0
2S	48		3	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
2M	48		3	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
3	48		3	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
4	48		3	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
5	48		3	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0

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

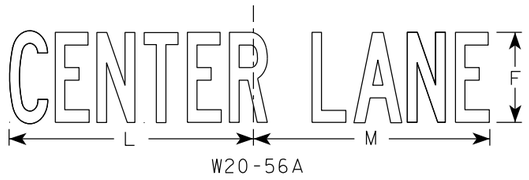
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

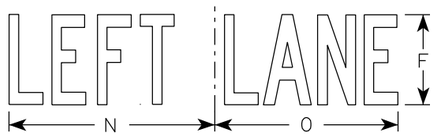
DATE 1/10/2024 PLATE NO. W20-1.12

PROJECT NO:

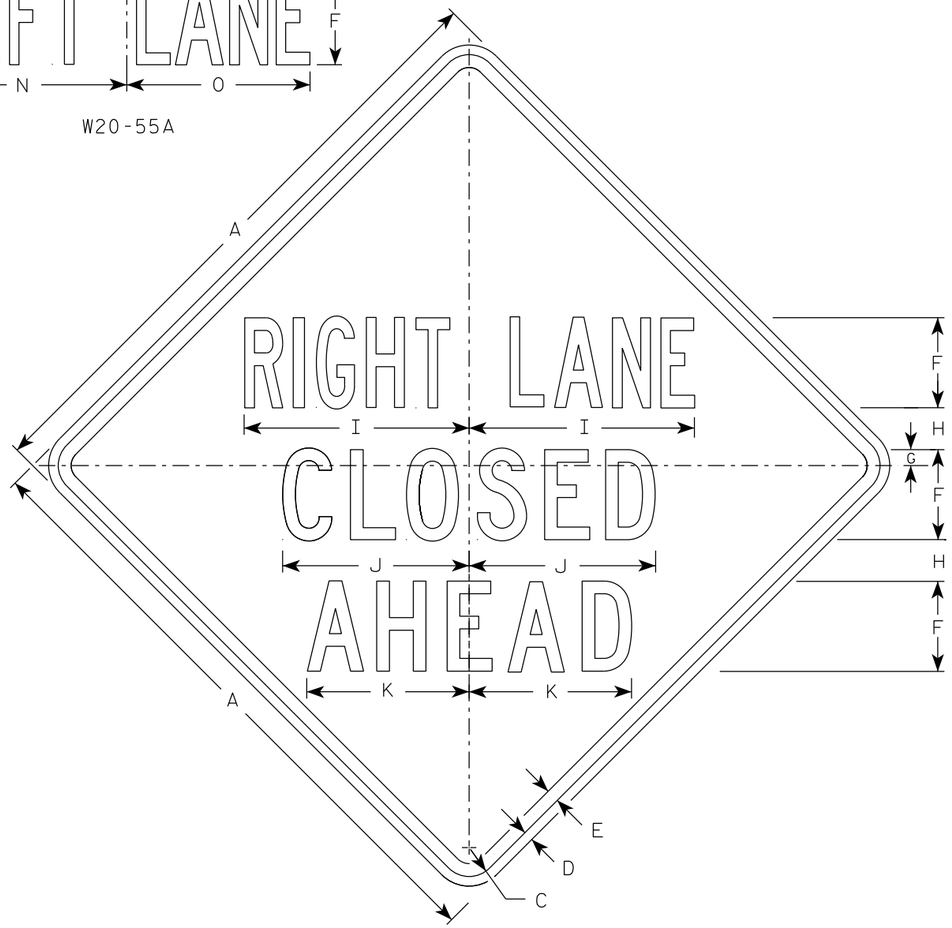
SHEET NO: 325 E



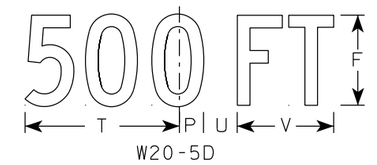
W20-56A



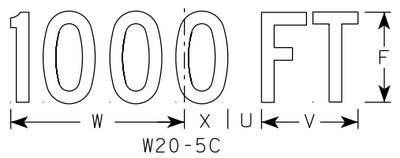
W20-55A



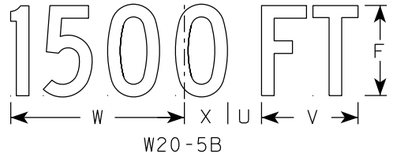
W20-5A



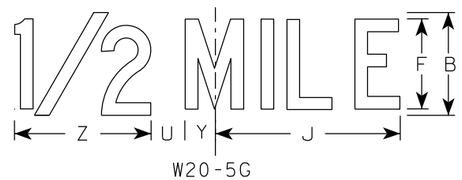
W20-5D



W20-5C



W20-5B



W20-5G

W20-5F

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. " _____ LANE" is Series B.
   All other copy is 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	36	6	2 1/4	5/8	3/4	5	7/8	2 1/2	13 1/8	10 3/4	9 1/2	14 1/4	13 5/8	12	12	1 3/8	1 1/8	4 1/2	3 1/2	9	1 7/8	5 5/8	10 1/8	2 1/2	1 3/4	8	9.0
2S	48	8	3	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
2M	48	8	3	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
3	48	8	3	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
4	48	8	3	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
5	48	8	3	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0

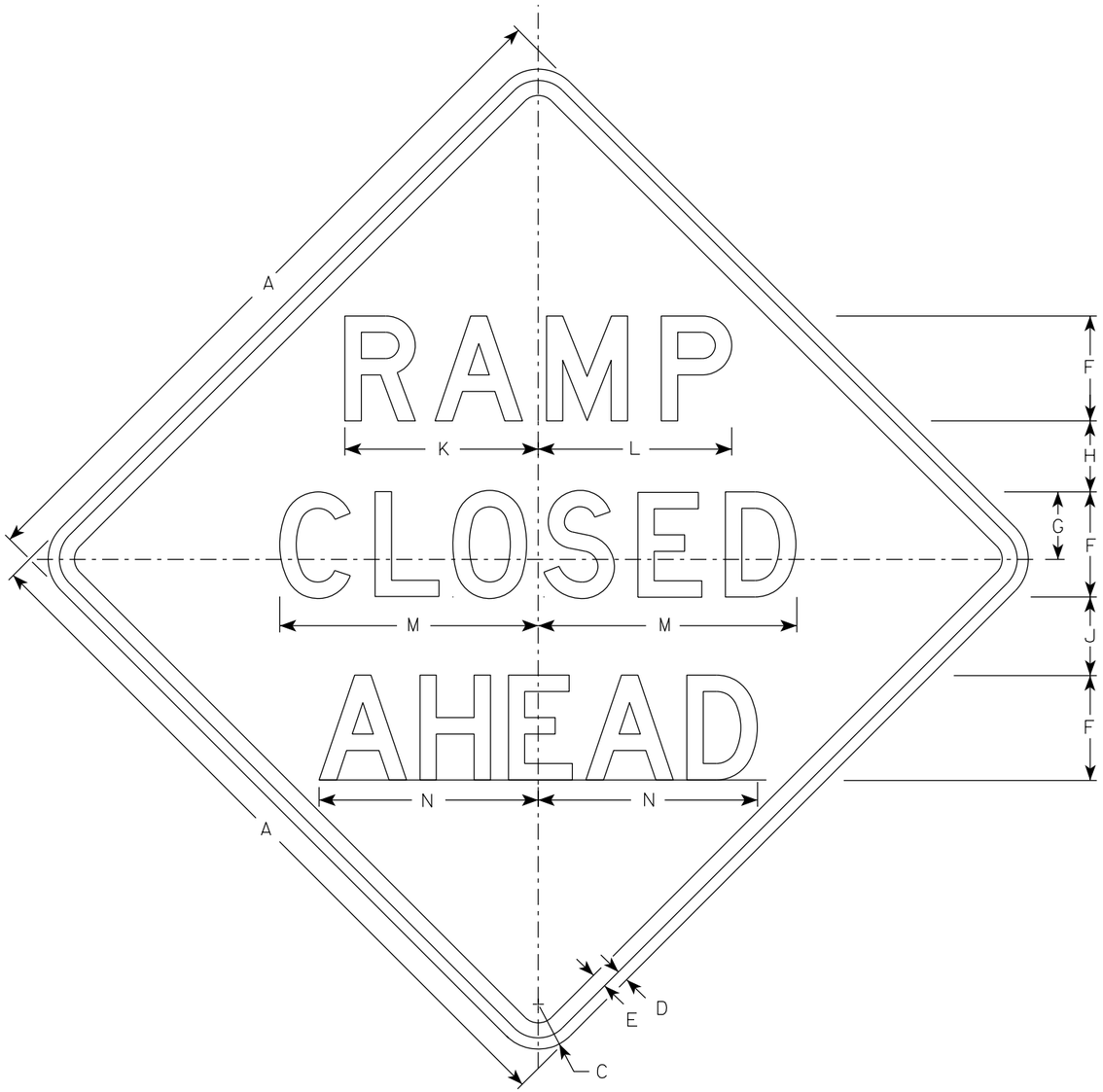
STANDARD SIGN
W20-5A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

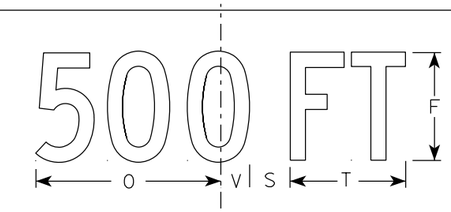
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/27/24 PLATE NO. W20-5.12

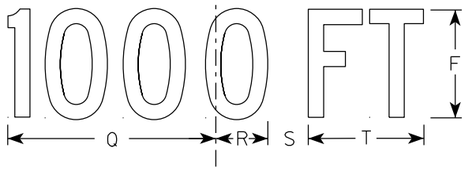
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 326	E



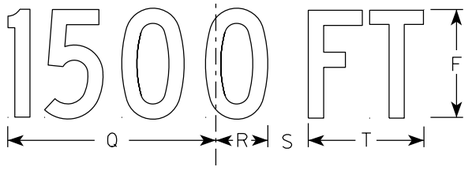
W20-53A



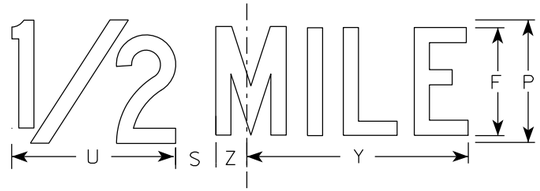
W20-53D



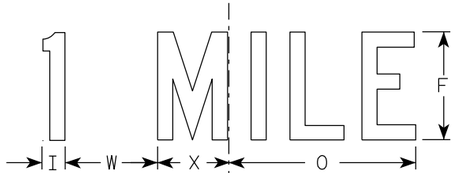
W20-53C



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

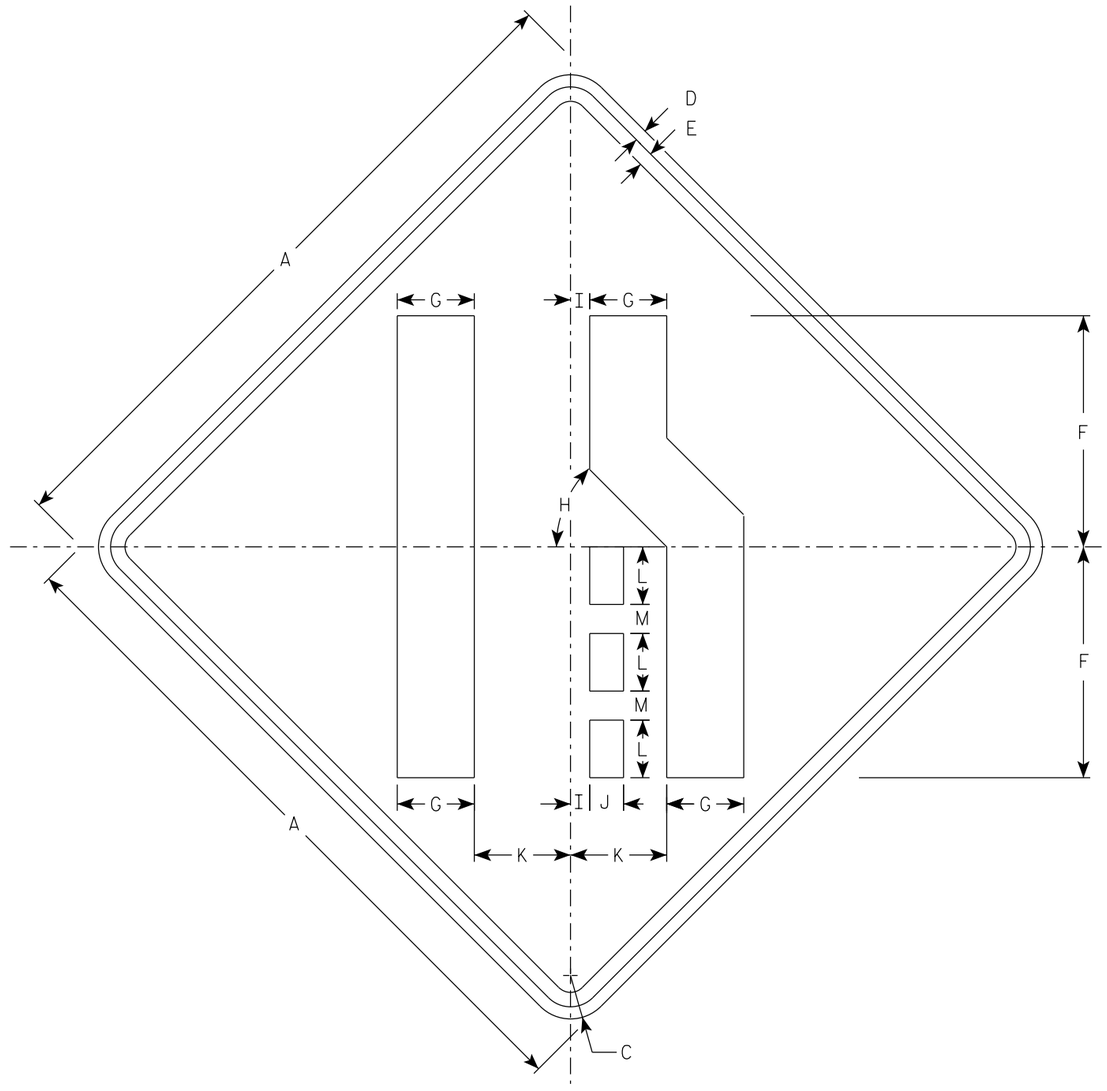
STANDARD SIGN
W20-53A,B,C,D,F,G

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



W04-2R

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W04-2L is the same as W04-2R except the symbol is reversed along the vertical centerline.

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

STANDARD SIGN
W04-2

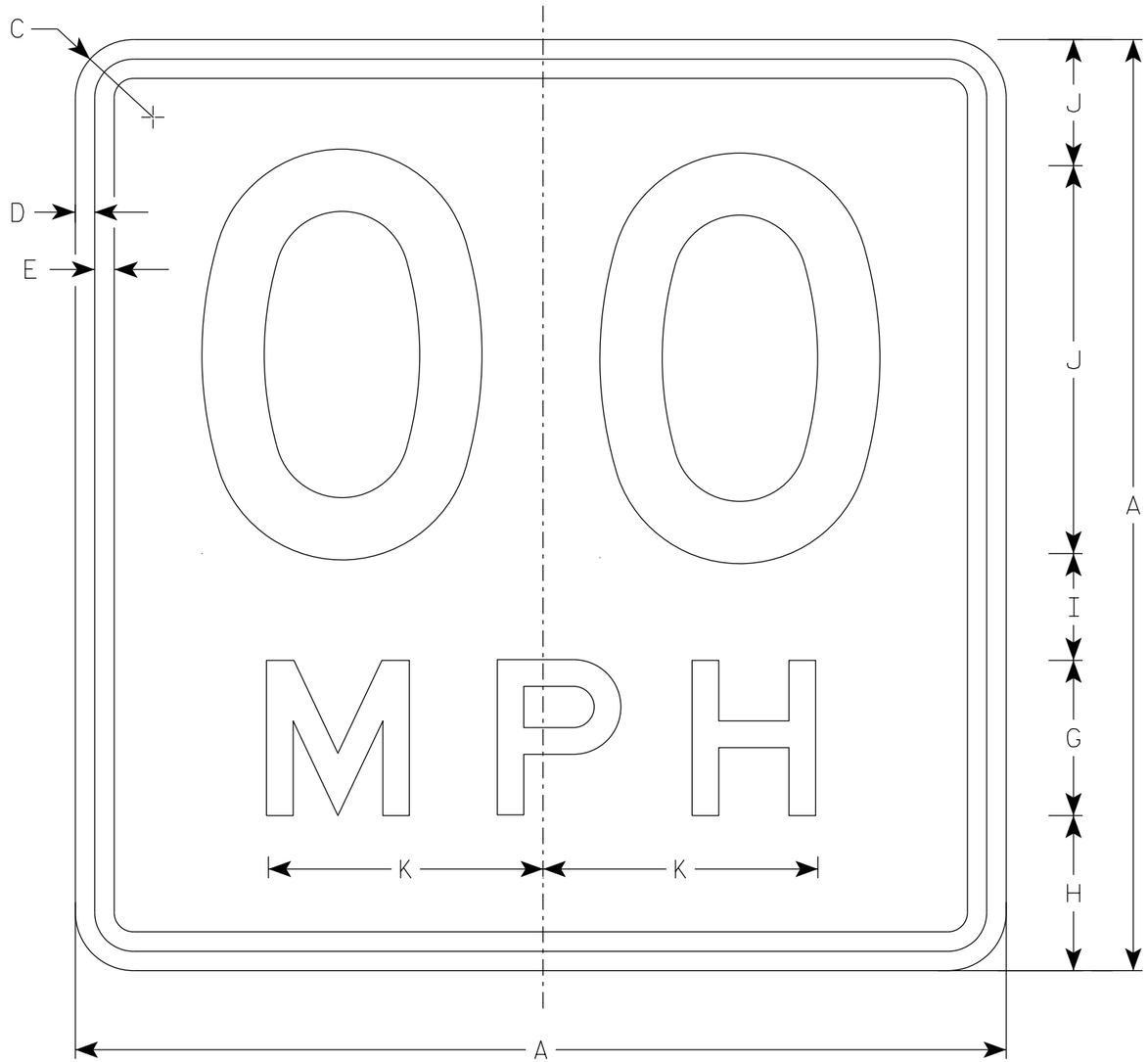
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/25/2024 PLATE NO. W04-2.2

PROJECT NO:

SHEET NO: 328 E



W013-1

NOTES

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

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

STANDARD SIGN

W013-1

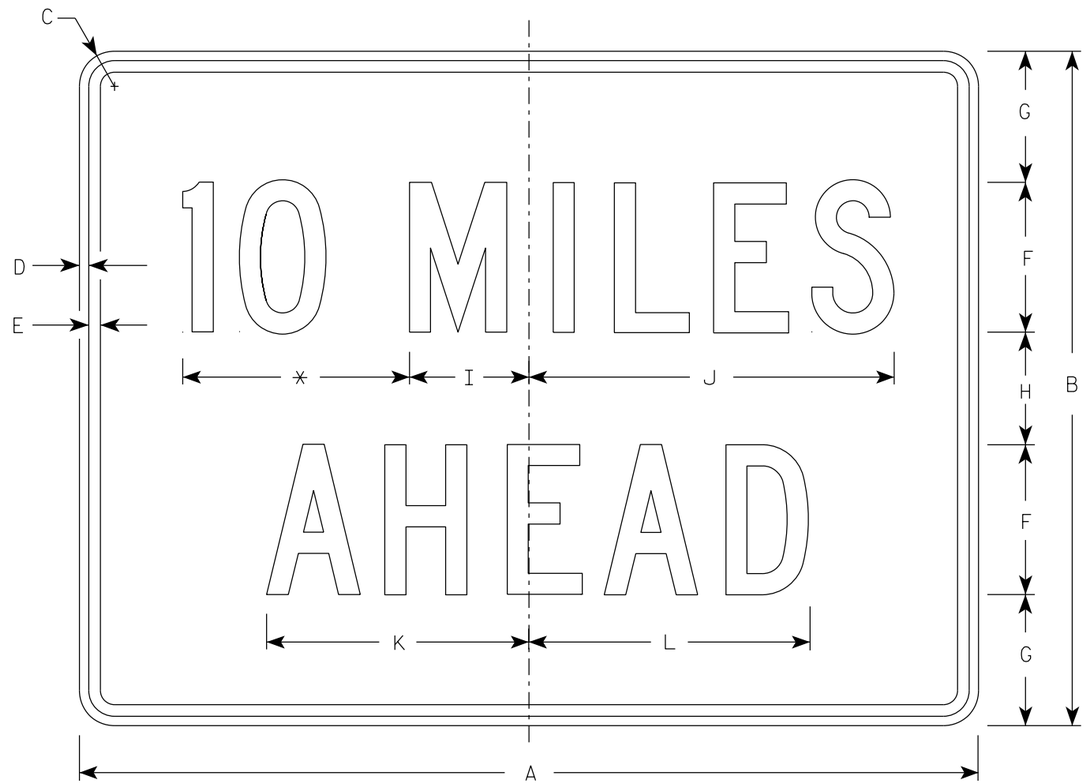
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

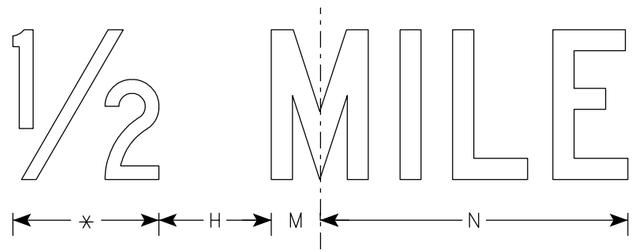
DATE 2/1/2024 PLATE NO. W013-1.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W0131.dgn PLOT DATE : 1-FEB 2024 9:56 PLOT BY : dotc4c PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42



W057-52



NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals to the nearest quarter mile and optically adjust spacing to achieve proper balance.

* See note 5

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	24	1 1/2	3/8	1/2	6	4 1/2	3	4 3/4	14 5/8	10 5/8	11 3/8	2	12													6.0
2S	48	36	2 1/4	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	16 3/8													12.0
2M	48	36	2 1/4	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	16 3/8													12.0
3	48	36	2 1/4	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	16 3/8													12.0
4	48	36	2 1/4	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	16 3/8													12.0
5	48	36	2 1/4	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	16 3/8													12.0

STANDARD SIGN
W057-52

WISCONSIN DEPT OF TRANSPORTATION

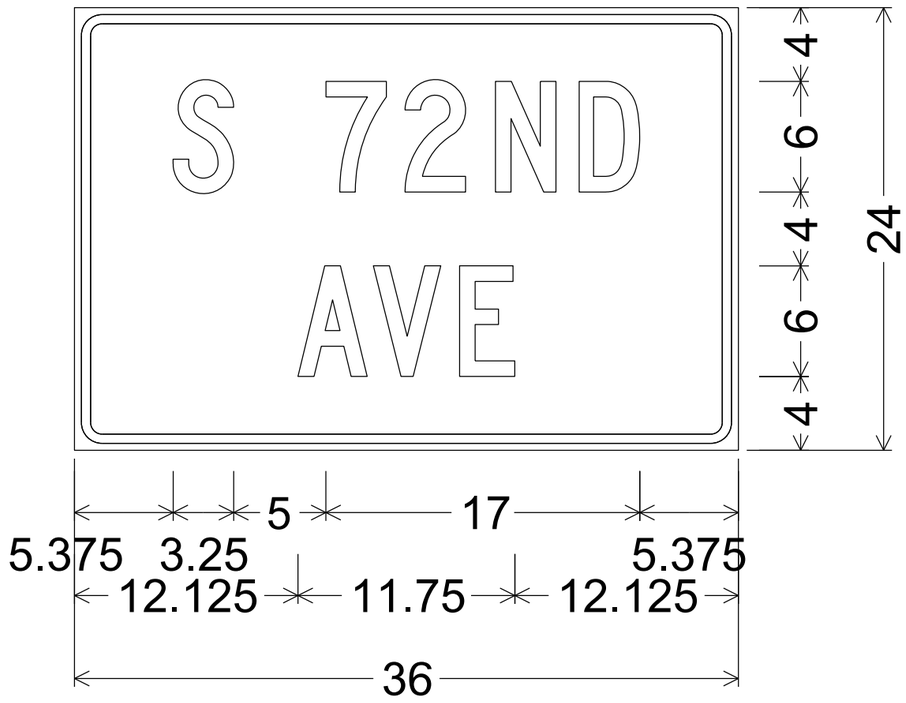
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/1/2024 PLATE NO. W057-52.3

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 330 E

NOTES

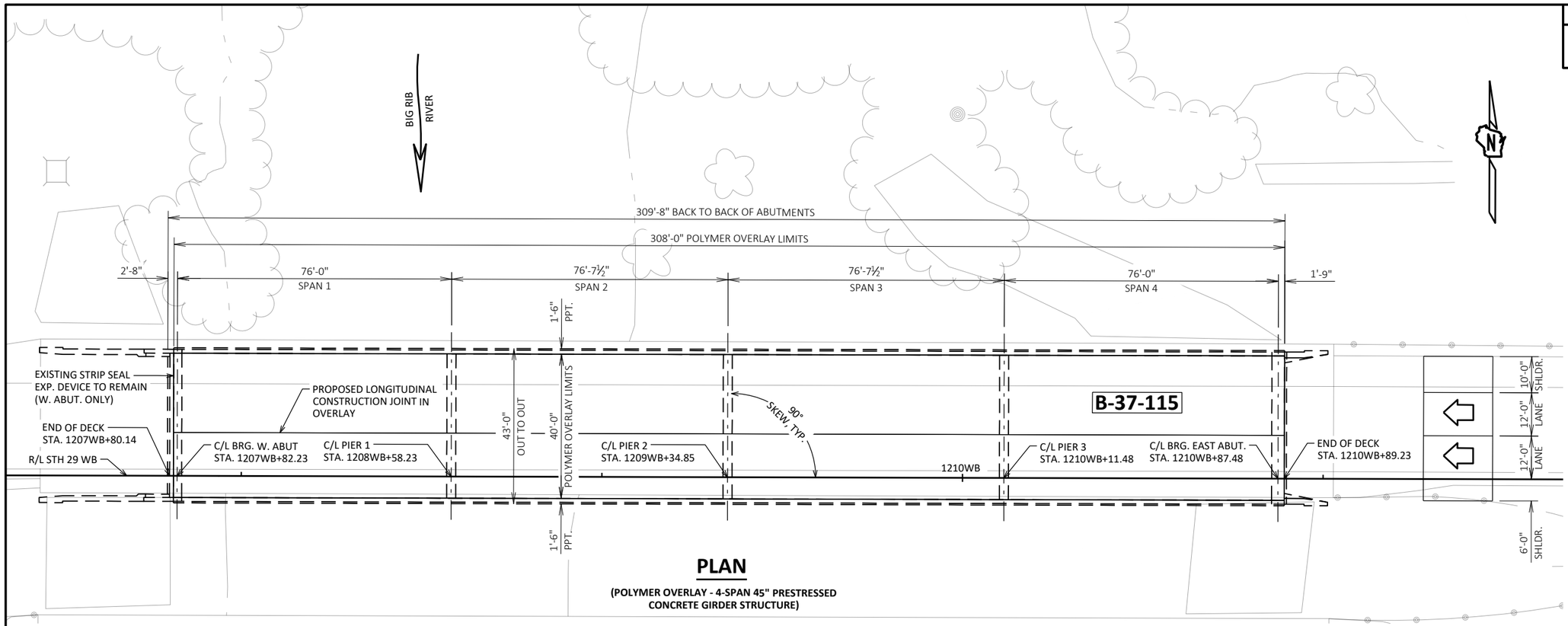
1. Fixed Message Sign Type II- Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C



1.500" Radius, 0.500" Border, 0.375" Indent

STATE PROJECT NUMBER

1053-04-84



PLAN

(POLYMER OVERLAY - 4-SPAN 45" PRESTRESSED CONCRETE GIRDER STRUCTURE)

DESIGN DATA

LIVE LOAD

INVENTORY RATING: HS22
OPERATING RATING: HS37
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = 250 KIPS

MATERIAL PROPERTIES

CONCRETE MASONRY DECK REPAIR ---------- f'c = 4,000 P.S.I.
CONCRETE MASONRY OTHER ---------- f'c = 3,500 P.S.I.

TRAFFIC DATA

STH 29 WB

A.A.D.T. = 11,700 (2027)
A.A.D.T. = 13,695 (2047)
R.D.S = 65 M.P.H.

LEGEND

TRAFFIC DIRECTION

LIST OF DRAWINGS

1. GENERAL PLAN
2. TYPICAL SECTION, GENERAL NOTES, AND QUANTITIES
3. CONSTRUCTION STAGING

STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:
AARON BONK (608) 261-0261
CONSULTANT:
HEATHER ANDERS (414) 410-6899

NO.	DATE	REVISION	BY

ORIGINAL PLANS PREPARED BY

HNTB
250 E WISCONSIN AVE #2000
MILWAUKEE, WI 53202
(414) 359-2300

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORATION

ACCEPTED SDR 11/18/24
CHIEF STRUCTURES DESIGN ENGINEER DATE

WISCONSIN
HEATHER D. ANDERS, P.E.
33441-006
CEDARBURG, WI
08/28/2024
PROFESSIONAL ENGINEER

STRUCTURE B-37-115

STH 29 WB OVER BIG RIB RIVER

COUNTY	TOWN
MARATHON	RIB FALLS

DESIGN SPEC.
REHABILITATION N/A

DESIGNED BY	DESIGNED CK'D	DRAWN BY	PLANS CK'D
AAW	RJK	AAW	RJK/HDA

GENERAL PLAN

SHEET 1 OF 3
332

SCALE = 32.00

I.D. 1053-04-14

8

8

STATE PROJECT NUMBER

1053-04-84

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON THE EXISTING STRUCTURE PLANS.

ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE NOTED. ALL STATIONS AND ELEVATIONS ARE IN FEET.

AREAS OF "PREPARATION DECKS TYPE 1" SHALL BE DEFINED BY A SAW CUT.

"PREPARATION DECKS TYPE 1" AND "PREPARATION DECKS TYPE 2" AREAS ARE BASED ON THE BRIDGE INSPECTION REPORT AND INFRARED SCAN DATED 10/27/20 AND ARE APPROXIMATE. EXACT AREA OF REPAIR SHALL BE DETERMINED IN THE FIELD BY THE PROJECT ENGINEER. DECK PREPARATION REPAIR AREAS SHALL BE FILLED WITH "CONCRETE MASONRY DECK REPAIR".

DECK REPAIRS SHALL BE FILLED PRIOR TO OVERLAY PLACEMENT. DECK REPAIRS USING A PORTLAND CEMENT BASED CONCRETE REQUIRES A MINIMUM CURE TIME OF 28 DAYS PRIOR TO OVERLAY PLACEMENT.

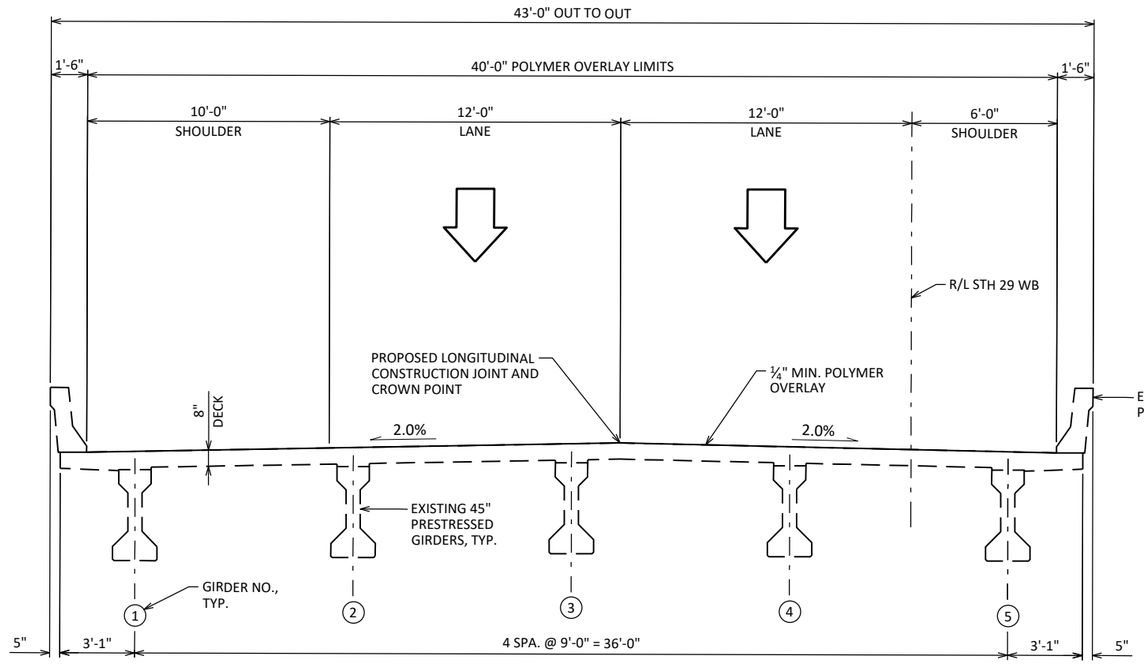
SHOT BLASTING, DECK SURFACE PREPARATIONS, AND TRANSITIONAL AREAS ARE INCLUDED IN THE BID ITEM "POLYMER OVERLAY".

THE UTILITY INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING THEIR OWN DETERMINATION AS TO TYPE AND LOCATION OF UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE.

TOTAL ESTIMATED QUANTITIES

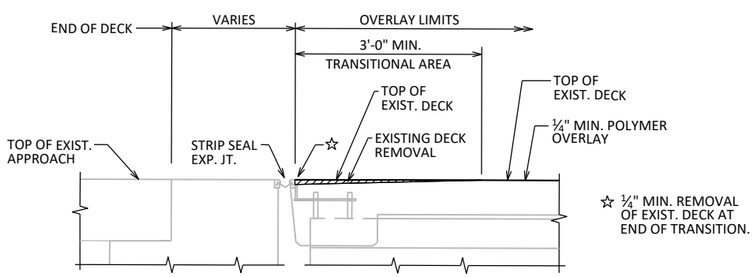
ITEM NO.	BID ITEM	UNIT	TOTAL
509.0301	PREPARATION DECKS TYPE 1	SY	22
509.0302	PREPARATION DECKS TYPE 2	SY	9
509.0310.S	SAWING PAVEMENT DECK PREPARATION AREAS	LF	220
509.2100.S	CONCRETE MASONRY DECK REPAIR	CY	3
509.5100.S	POLYMER OVERLAY	SY	1370

ALL ITEMS ARE CATEGORY 0020



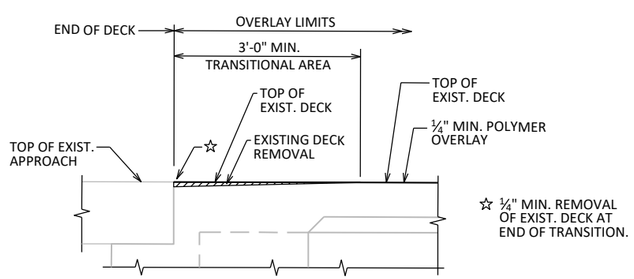
TYPICAL SECTION

(LOOKING EAST)



SECTION THRU ABUTMENT TRANSITIONAL AREA ON DECK AT WEST ABUTMENT

(REMOVAL AND OVERLAY THICKNESS NOT TO SCALE)



SECTION THRU ABUTMENT TRANSITIONAL AREA ON DECK AT EAST ABUTMENT

(REMOVAL AND OVERLAY THICKNESS NOT TO SCALE)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-115

DRAWN BY AAW | PLANS CK'D RJK/HDA

TYPICAL SECTION, GENERAL NOTES & QUANTITIES

SHEET 2

333

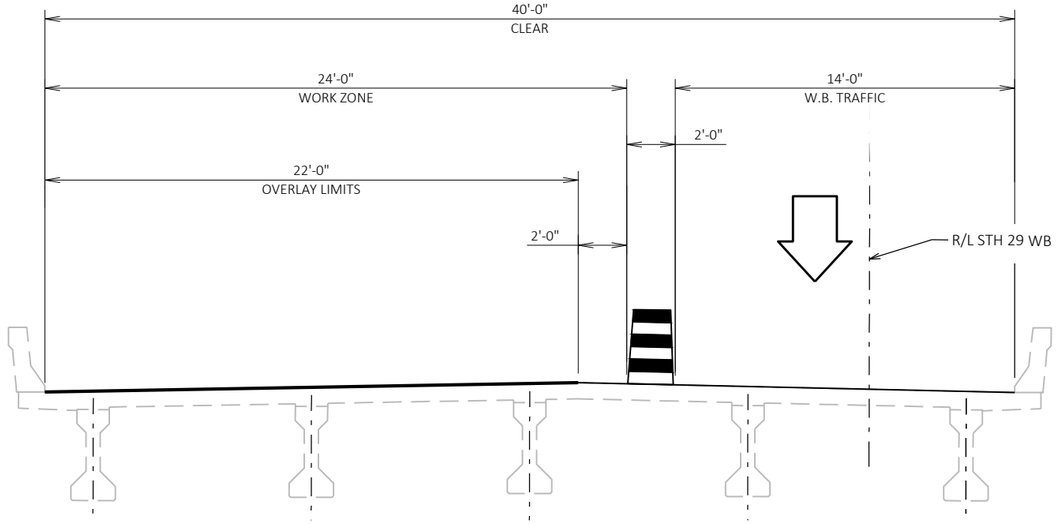
SCALE = 6.00

8

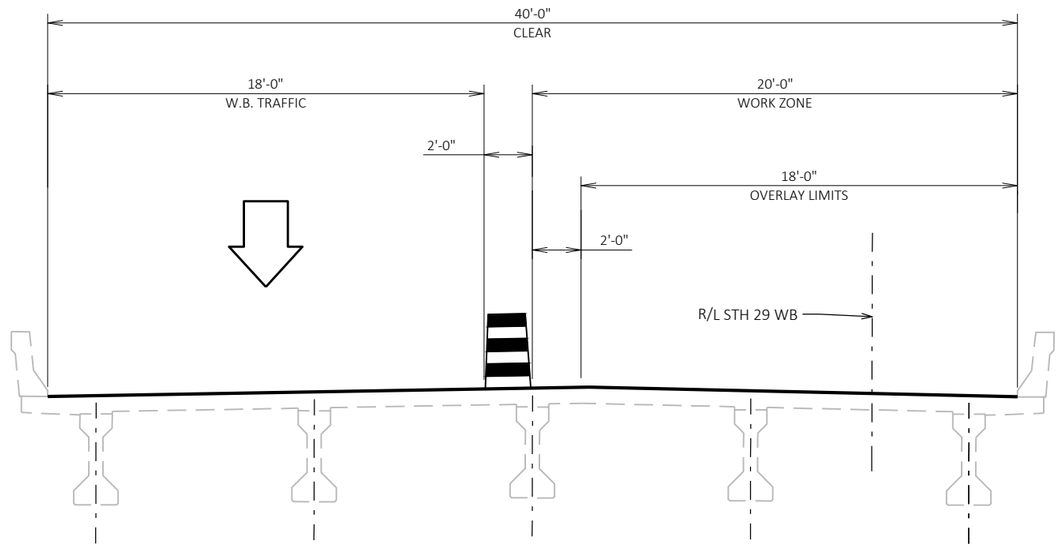
8

STATE PROJECT NUMBER

1053-04-84



CROSS SECTION THRU ROADWAY
STAGE 2
(LOOKING EAST)



CROSS SECTION THRU ROADWAY
STAGE 3
(LOOKING EAST)

NOTES

SEE ROADWAY PLANS FOR COMPLETE PROJECT STAGING DETAILS

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-115

DRAWN BY SAS | PLANS CK'D HDA

CONSTRUCTION STAGING

SHEET 3
334

SCALE = 6.25

DIVISION 1 - 29EB-RL

STATION	REAL STATION	DISTANCE	AREA (SF)		INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
			CUT	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL	MASS ORDINATE
								1.00	1.00	
					NOTE 1	NOTE 2	NOTE 3	NOTE 1		NOTE 8
1478+46.52	147846.52	0.00	0.00	3.70	0	0	0	0	0	0
1479+00.00	147900.00	53.48	0.00	2.56	0	0	6	0	6	-6
1479+50.00	147950.00	50.00	0.05	1.60	0	0	4	0	10	-10
1479+65.60	147965.60	15.60	0.00	1.24	0	0	1	0	11	-11
1479+90.61	147990.61	25.01	0.30	0.02	0	0	1	0	12	-12
1480+15.61	148015.61	25.00	0.63	0.00	0	0	0	0	12	-12
1480+50.00	148050.00	34.39	0.31	0.00	1	0	0	1	12	-11
1481+00.00	148100.00	50.00	0.16	0.00	0	0	0	1	12	-11
1481+50.00	148150.00	50.00	0.37	0.00	0	0	0	1	12	-11
1482+00.00	148200.00	50.00	0.02	0.00	0	0	0	1	12	-11
1482+23.52	148223.52	23.52	0.01	0.04	0	0	0	1	12	-11
1482+53.53	148253.53	30.01	0.18	1.15	0	0	1	1	13	-12
1483+00.00	148300.00	46.47	9.00	0.00	8	0	1	9	14	-5
1483+43.67	148343.67	43.67	0.00	2.87	7	0	2	16	16	0

NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	THIS DOES NOT SHOW UP IN CROSS SECTIONS
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
8 - MASS ORDINATE	IF MARSH OR EBS TO BE BACKFILLED WITH COMMON OR BORROW: [(CUT - SALVAGED PAVT - EXPANDED MARSH EXC - EXPANDED EBS) - ((FILL - REDUCED MARSH IN FILL - REDUCED EBS IN FILL - EXPANDED ROCK) * FILL FACTOR)]

9

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DIVISION 1 - 29EB-RL

STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL	MASS ORDINATE
									1.00	1.00	
						NOTE 1	NOTE 2	NOTE 3	NOTE 1		NOTE 8
1553+57.28	155357.28	0.00	0.00	0.00	12.17	0	0	0	0	0	0
1553+70.25	155370.25	12.97	0.00	0.00	13.46	0	0	6	0	6	-6
1554+00.00	155400.00	29.75	0.00	0.00	9.57	0	0	13	0	19	-19
1554+50.00	155450.00	50.00	0.00	0.00	4.22	0	0	13	0	32	-32
1554+73.80	155473.80	23.80	0.00	0.00	13.09	0	0	8	0	40	-40
1554+89.20	155489.20	15.40	0.00	0.00	8.49	0	0	6	0	46	-46
1554+98.77	155498.77	9.57	0.00	0.00	6.61	0	0	3	0	49	-49
1555+14.20	155514.20	15.43	0.00	0.00	4.42	0	0	3	0	52	-52
1555+23.76	155523.76	9.56	0.00	0.00	3.80	0	0	1	0	53	-53
1555+39.20	155539.20	15.44	0.00	0.00	5.51	0	0	3	0	56	-56
1556+00.00	155600.00	60.80	0.00	0.00	1.85	0	0	8	0	64	-64
1556+50.00	155650.00	50.00	0.00	0.00	1.13	0	0	3	0	67	-67
1557+00.00	155700.00	50.00	0.00	0.00	0.83	0	0	2	0	69	-69
1557+50.00	155750.00	50.00	11.45	0.00	2.13	11	0	3	11	72	-61

NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	THIS DOES NOT SHOW UP IN CROSS SECTIONS
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
8 - MASS ORDINATE	IF MARSH OR EBS TO BE BACKFILLED WITH COMMON OR BORROW: [(CUT - SALVAGED PAVT - EXPANDED MARSH EXC - EXPANDED EBS) - ((FILL - REDUCED MARSH IN FILL - REDUCED EBS IN FILL - EXPANDED ROCK) * FILL FACTOR)]

9

9

PROJECT NO: 1053-04-84 | HWY: STH 29 | COUNTY: MARATHON | EARTHWORK DATA | SHEET 336 | E

FILE NAME : C:\CADDLIB\PW\HNTB_APACADA\GREATLAKES\D0382806\090101-EW.DWG
LAYOUT NAME - 02

PLOT DATE : 1/13/2025 8:25 PM PLOT BY : ALLAN PACADA PLOT NAME : PLOT SCALE : 1" = 1'

DIVISION 1 - 29EB-RL

STATION	REAL STATION	DISTANCE	AREA (SE)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL	MASS ORDINATE
									1.00	1.00	
						NOTE 1	NOTE 2	NOTE 3	NOTE 1		NOTE 8
1615+61.61	161561.61	0.00	0.00	0.00	0.02	0	0	0	0	0	0
1616+00.00	161600.00	38.39	0.00	0.00	1.42	0	0	1	0	1	-1
1616+50.00	161650.00	50.00	0.02	0.00	1.34	0	0	3	0	4	-4
1616+78.42	161678.42	28.42	0.00	0.00	3.99	0	0	3	0	7	-7
1617+03.24	161703.24	24.82	0.00	0.00	1.04	0	0	2	0	9	-9
1617+28.24	161728.24	25.00	0.00	0.00	0.46	0	0	1	0	10	-10
1617+50.00	161750.00	21.76	0.00	0.00	0.14	0	0	0	0	10	-10
1618+00.00	161800.00	50.00	0.01	0.00	0.10	0	0	0	0	10	-10
1618+50.00	161850.00	50.00	0.00	0.00	0.80	0	0	1	0	11	-11
1619+00.00	161900.00	50.00	0.00	0.00	1.08	0	0	2	0	13	-13
1619+50.00	161950.00	50.00	0.00	0.00	0.00	0	0	1	0	14	-14
1620+00.00	162000.00	50.00	0.00	0.00	0.00	0	0	0	0	14	-14
1620+49.06	162049.06	49.06	0.00	0.00	0.00	0	0	0	0	14	-14

NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	THIS DOES NOT SHOW UP IN CROSS SECTIONS
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
8 - MASS ORDINATE	IF MARSH OR EBS TO BE BACKFILLED WITH COMMON OR BORROW: [(CUT - SALVAGED PAVT - EXPANDED MARSH EXC - EXPANDED EBS) - ((FILL - REDUCED MARSH IN FILL - REDUCED EBS IN FILL - EXPANDED ROCK) * FILL FACTOR)]

9

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DIVISION 1 - 29EB-RL

STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL	MASS ORDINATE
									1.00	1.00	
						NOTE 1	NOTE 2	NOTE 3	NOTE 1		NOTE 8
1632+57.99	163257.99	0.00	0.71	0.00	0.00	0	0	0	0	0	0
1632+78.68	163278.68	20.69	0.00	0.00	1.44	0	0	1	0	1	-1
1633+00.00	163300.00	21.32	0.00	0.00	2.08	0	0	1	0	2	-2
1633+50.00	163350.00	50.00	0.00	0.00	14.85	0	0	16	0	18	-18
1633+76.30	163376.30	26.30	0.00	0.00	20.49	0	0	17	0	35	-35
1633+89.53	163389.53	13.23	0.00	0.00	20.15	0	0	10	0	45	-45
1634+01.27	163401.27	11.74	0.00	0.00	17.61	0	0	8	0	53	-53
1634+14.50	163414.50	13.23	0.00	0.00	15.62	0	0	8	0	61	-61
1634+26.25	163426.25	11.75	0.00	0.00	15.63	0	0	7	0	68	-68
1634+39.48	163439.48	13.23	0.00	0.00	14.77	0	0	7	0	75	-75
1634+50.00	163450.00	10.52	0.00	0.00	8.92	0	0	5	0	80	-80
1635+00.00	163500.00	50.00	0.00	0.00	6.77	0	0	15	0	95	-95
1635+50.00	163550.00	50.00	0.00	0.00	1.34	0	0	8	0	103	-103
1636+00.00	163600.00	50.00	0.00	0.00	0.50	0	0	2	0	105	-105
1636+50.00	163650.00	50.00	0.00	0.00	0.30	0	0	1	0	106	-106
1637+00.00	163700.00	50.00	0.00	0.00	0.00	0	0	0	0	106	-106

NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	THIS DOES NOT SHOW UP IN CROSS SECTIONS
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
8 - MASS ORDINATE	IF MARSH OR EBS TO BE BACKFILLED WITH COMMON OR BORROW: [(CUT - SALVAGED PAVT - EXPANDED MARSH EXC - EXPANDED EBS) - ((FILL - REDUCED MARSH IN FILL - REDUCED EBS IN FILL - EXPANDED ROCK) * FILL FACTOR)]

9

9

PROJECT NO: 1053-04-84 | HWY: STH 29 | COUNTY: MARATHON | EARTHWORK DATA | SHEET 338 | E

FILE NAME : C:\CADDLIB\PW\HNTB_APACADA\GREATLAKES\D0382806\090101-EW.DWG
LAYOUT NAME - 04

PLOT DATE : 1/13/2025 8:25 PM PLOT BY : ALLAN PACADA PLOT NAME : PLOT SCALE : 1" = 1'

DIVISION 1 - 29EB-RL

STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED EILL	MASS ORDINATE
									1.00	1.00	
						NOTE 1	NOTE 2	NOTE 3	NOTE 1		NOTE 8
1639+00.00	163900.00	0.00	0.00	0.00	2.27	0	0	0	0	0	0
1639+50.00	163950.00	50.00	0.00	0.00	8.40	0	0	10	0	10	-10
1640+00.00	164000.00	50.00	0.00	0.00	7.48	0	0	15	0	25	-25
1640+50.00	164050.00	50.00	0.00	0.00	9.43	0	0	16	0	41	-41
1641+00.00	164100.00	50.00	0.00	0.00	0.69	0	0	9	0	50	-50

NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	THIS DOES NOT SHOW UP IN CROSS SECTIONS
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
8 - MASS ORDINATE	IF MARSH OR EBS TO BE BACKFILLED WITH COMMON OR BORROW: [(CUT - SALVAGED PAVT - EXPANDED MARSH EXC - EXPANDED EBS) - ((FILL - REDUCED MARSH IN FILL - REDUCED EBS IN FILL - EXPANDED ROCK) * FILL FACTOR)]

9

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PROJECT NO: 1053-04-84 | HWY: STH 29 | COUNTY: MARATHON | EARTHWORK DATA | SHEET 339 | E

FILE NAME : C:\CADDLIB\PW\HNTB_APACADA\GREATLAKES\D0382806\090101-EW.DWG
LAYOUT NAME - 05

PLOT DATE : 1/13/2025 8:25 PM PLOT BY : ALLAN PACADA PLOT NAME : PLOT SCALE : 1" = 1'

WISDOT/CADDS SHEET 49

DIVISION 1 - 29WB

STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT 1.00	EXPANDED FILL 1.00	MASS ORDINATE
						NOTE 1	NOTE 2	NOTE 3	NOTE 1		NOTE 8
1552+33.44	155233.44	0.00	0.00	0.00	0.54	0	0	0	0	0	0
1552+50.00	155250.00	16.56	0.00	0.00	1.89	0	0	1	0	1	-1
1553+00.00	155300.00	50.00	0.00	0.00	14.18	0	0	15	0	16	-16
1553+15.32	155315.32	15.32	0.00	0.00	23.26	0	0	11	0	27	-27
1553+38.32	155338.32	23.00	0.00	0.00	14.00	0	0	16	0	43	-43
1553+62.32	155362.32	24.00	0.00	0.00	8.85	0	0	10	0	53	-53
1554+00.00	155400.00	37.68	0.00	0.00	6.49	0	0	11	0	64	-64
1554+50.00	155450.00	50.00	0.02	0.00	0.67	0	0	7	0	71	-71
1555+00.00	155500.00	50.00	0.01	0.00	0.00	0	0	1	0	72	-72
1555+50.00	155550.00	50.00	0.03	0.00	0.00	0	0	0	0	72	-72
1556+00.00	155600.00	50.00	0.05	0.00	0.00	0	0	0	0	72	-72
1556+50.00	155650.00	50.00	0.05	0.00	0.00	0	0	0	0	72	-72
1557+00.00	155700.00	50.00	0.36	0.00	0.00	0	0	0	0	72	-72
1557+50.00	155750.00	50.00	1.97	0.00	0.00	2	0	0	2	72	-70
1558+00.00	155800.00	50.00	18.14	0.00	0.21	19	0	0	21	72	-51
1560+00.00	156000.00	200.00	0.00	0.00	7.26	67	0	28	88	100	-12
1560+50.00	156050.00	50.00	0.00	0.00	0.33	0	0	7	88	107	-19
1561+00.00	156100.00	50.00	0.06	0.00	0.00	0	0	0	88	107	-19
1561+50.00	156150.00	50.00	0.12	0.00	0.00	0	0	0	88	107	-19
1562+00.00	156200.00	50.00	0.01	0.00	0.00	0	0	0	88	107	-19
1562+14.49	156214.49	14.49	0.04	0.00	0.00	0	0	0	88	107	-19
1562+39.49	156239.49	25.00	0.30	0.00	0.00	0	0	0	88	107	-19
1562+50.00	156250.00	10.51	0.60	0.00	0.00	0	0	0	88	107	-19
1562+64.46	156264.46	14.46	0.91	0.00	0.00	0	0	0	88	107	-19
1562+69.05	156269.05	4.59	1.05	0.00	0.00	0	0	0	88	107	-19
1562+94.74	156294.74	25.69	0.00	0.00	0.47	0	0	0	88	107	-19
1563+81.85	156381.85	87.11	0.00	0.00	0.25	0	0	1	88	108	-20

NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	THIS DOES NOT SHOW UP IN CROSS SECTIONS
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
8 - MASS ORDINATE	IF MARSH OR EBS TO BE BACKFILLED WITH COMMON OR BORROW: [(CUT - SALVAGED PAVT - EXPANDED MARSH EXC - EXPANDED EBS) - ((FILL - REDUCED MARSH IN FILL - REDUCED EBS IN FILL - EXPANDED ROCK) * FILL FACTOR)]

9

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PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	EARTHWORK DATA	SHEET 340	E

FILE NAME : C:\CADDLIB\PW\HNTB_APACADA\GREATLAKES\D0382806\090101-EW.DWG
LAYOUT NAME - 06

PLOT DATE : 1/13/2025 8:25 PM PLOT BY : ALLAN PACADA PLOT NAME : PLOT SCALE : 1" = 1'

DIVISION 1 - 29WB

STATION	REAL STATION	DISTANCE	AREA (SE)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT 1.00	EXPANDED FILL 1.00	MASS ORDINATE
						NOTE 1	NOTE 2	NOTE 3	NOTE 1		NOTE 8
1639+00.00	163900.00	0.00	6.50	0.00	0.00	0	0	0	0	0	0
1639+50.00	163950.00	50.00	3.63	0.00	0.50	9	0	0	9	0	9
1640+00.00	164000.00	50.00	2.94	0.00	0.19	6	0	1	15	1	14
1640+50.00	164050.00	50.00	1.19	0.00	2.47	4	0	2	19	3	16
1641+00.00	164100.00	50.00	0.45	0.00	2.51	2	0	5	21	8	13
1645+39.00	164539.00	439.00	3.28	0.00	0.00	30	0	20	51	28	23
1645+50.00	164550.00	11.00	4.14	0.00	0.00	2	0	0	53	28	25
1645+63.65	164563.65	13.65	1.97	0.00	0.79	2	0	0	55	28	27
1645+88.65	164588.65	25.00	0.14	0.00	0.05	1	0	0	56	28	28
1646+11.37	164611.37	22.72	0.69	0.00	0.10	0	0	0	56	28	28
1646+36.36	164636.36	24.99	0.58	0.00	0.06	1	0	0	57	28	29
1646+81.89	164681.89	45.53	2.82	0.00	0.07	3	0	0	60	28	32

NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	THIS DOES NOT SHOW UP IN CROSS SECTIONS
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
8 - MASS ORDINATE	IF MARSH OR EBS TO BE BACKFILLED WITH COMMON OR BORROW: [(CUT - SALVAGED PAVT - EXPANDED MARSH EXC - EXPANDED EBS) - ((FILL - REDUCED MARSH IN FILL - REDUCED EBS IN FILL - EXPANDED ROCK) * FILL FACTOR)]

9

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PROJECT NO: 1053-04-84 | HWY: STH 29 | COUNTY: MARATHON | EARTHWORK DATA | SHEET 341 | E

FILE NAME : C:\CADDLIB\PW\HNTB_APACADA\GREATLAKES\D0382806\090101-EW.DWG
LAYOUT NAME - 07

PLOT DATE : 1/13/2025 8:26 PM PLOT BY : ALLAN PACADA PLOT NAME : PLOT SCALE : 1" = 1'

DIVISION 1 - 29-72 NE

STATION	REAL STATION	DISTANCE	AREA (SE)		INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
			CUT	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL	MASS ORDINATE
								1.00	1.00	
					NOTE 1	NOTE 2	NOTE 3	NOTE 1		NOTE 8
1559+82.75	155982.75	0.00	2.90	1.65	0	0	0	0	0	0
1560+00.00	156000.00	17.25	0.00	17.52	1	0	6	1	6	-5
1560+50.00	156050.00	50.00	0.00	14.36	0	0	30	1	36	-35
1560+56.37	156056.37	6.37	0.02	11.39	0	0	3	1	39	-38
1560+81.37	156081.37	25.00	1.73	5.64	1	0	8	2	47	-45
1561+00.00	156100.00	18.63	1.51	4.35	1	0	3	3	50	-47
1561+06.37	156106.37	6.37	2.01	4.22	0	0	1	3	51	-48
1561+50.00	156150.00	43.63	0.63	0.41	2	0	4	5	55	-50
1561+66.43	156166.43	16.43	0.52	0.00	0	0	0	5	55	-50

NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	THIS DOES NOT SHOW UP IN CROSS SECTIONS
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
8 - MASS ORDINATE	IF MARSH OR EBS TO BE BACKFILLED WITH COMMON OR BORROW: [(CUT - SALVAGED PAVT - EXPANDED MARSH EXC - EXPANDED EBS) - ((FILL - REDUCED MARSH IN FILL - REDUCED EBS IN FILL - EXPANDED ROCK) * FILL FACTOR)]

9

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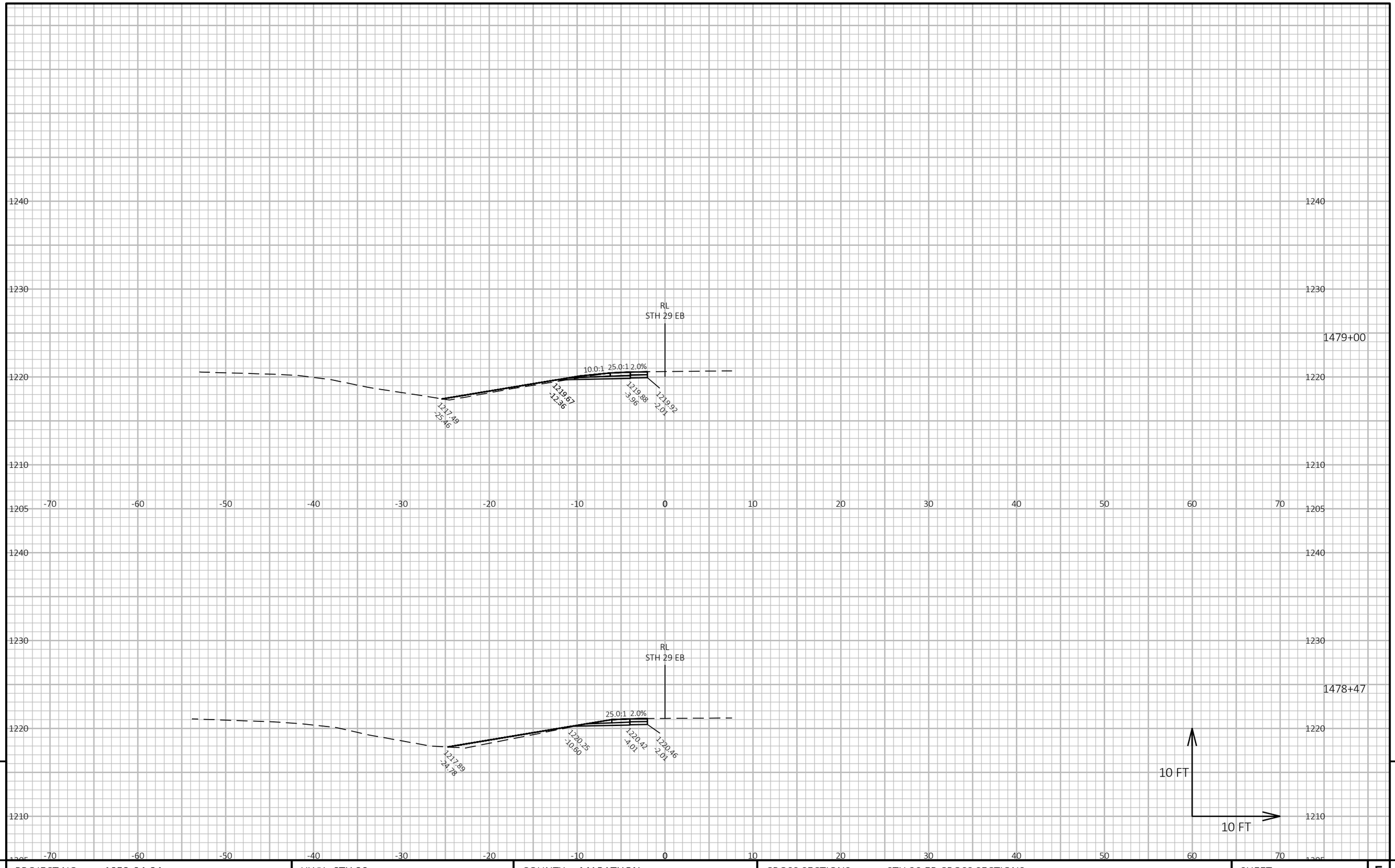
PROJECT NO: 1053-04-84 | HWY: STH 29 | COUNTY: MARATHON | EARTHWORK DATA | SHEET 342 | E

FILE NAME : C:\CADDLIB\PW\HNTB_APACADA\GREATLAKES\D0382806\090101-EW.DWG
LAYOUT NAME - 08

PLOT DATE : 1/13/2025 8:26 PM PLOT BY : ALLAN PACADA PLOT NAME : PLOT SCALE : 1" = 1'



9

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PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 EB CROSS SECTIONS	SHEET 343	E

FILE NAME : C:\CADDLIB\PW\HNTB_CSTRAIT\GREATLAKES\D0382806\090201-XS.DWG
LAYOUT NAME - EB-01

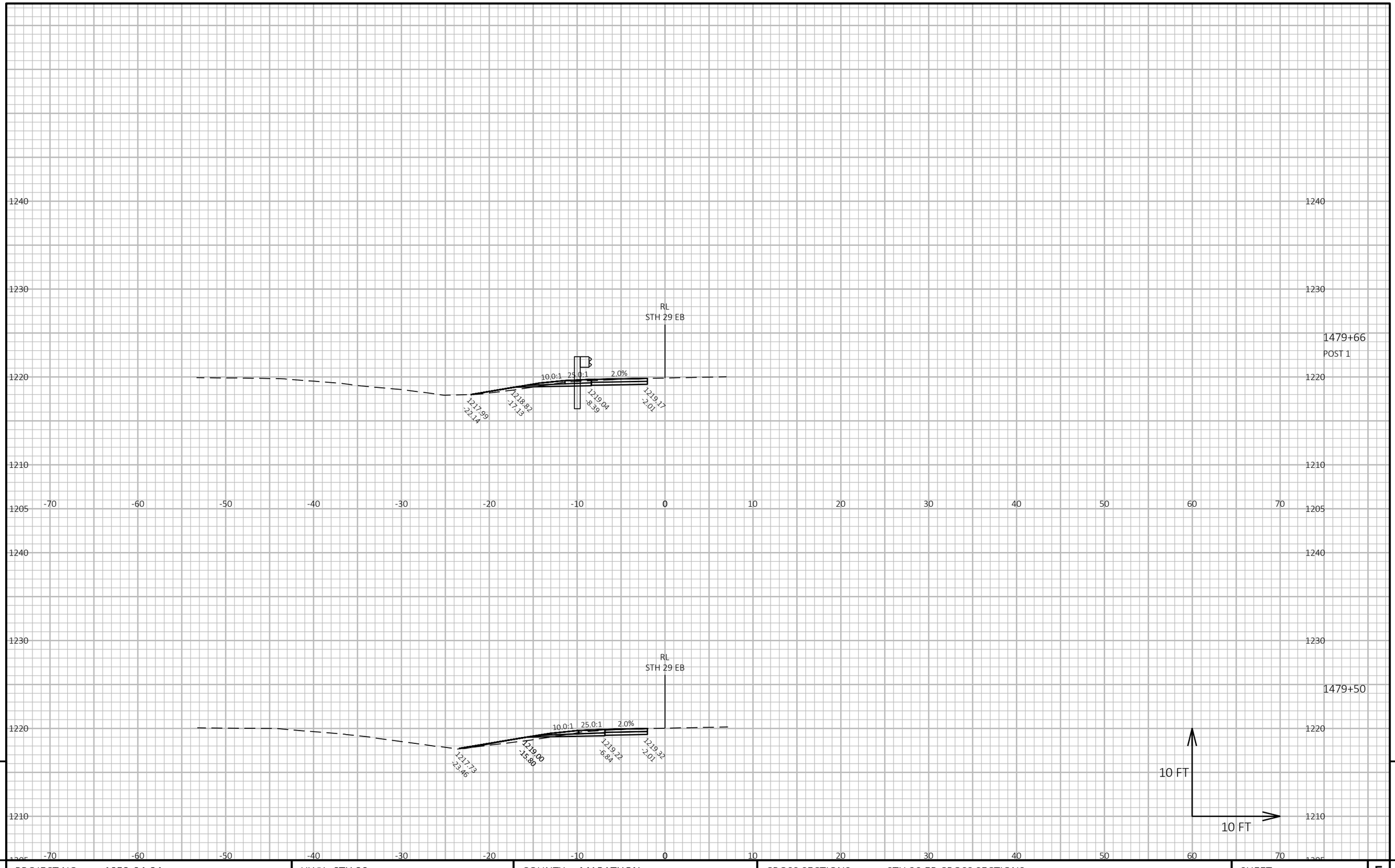
PLOT DATE : 1/13/2025 5:33 PM

PLOT BY : CRYSTAL STRAIT

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 EB CROSS SECTIONS	SHEET 344	E

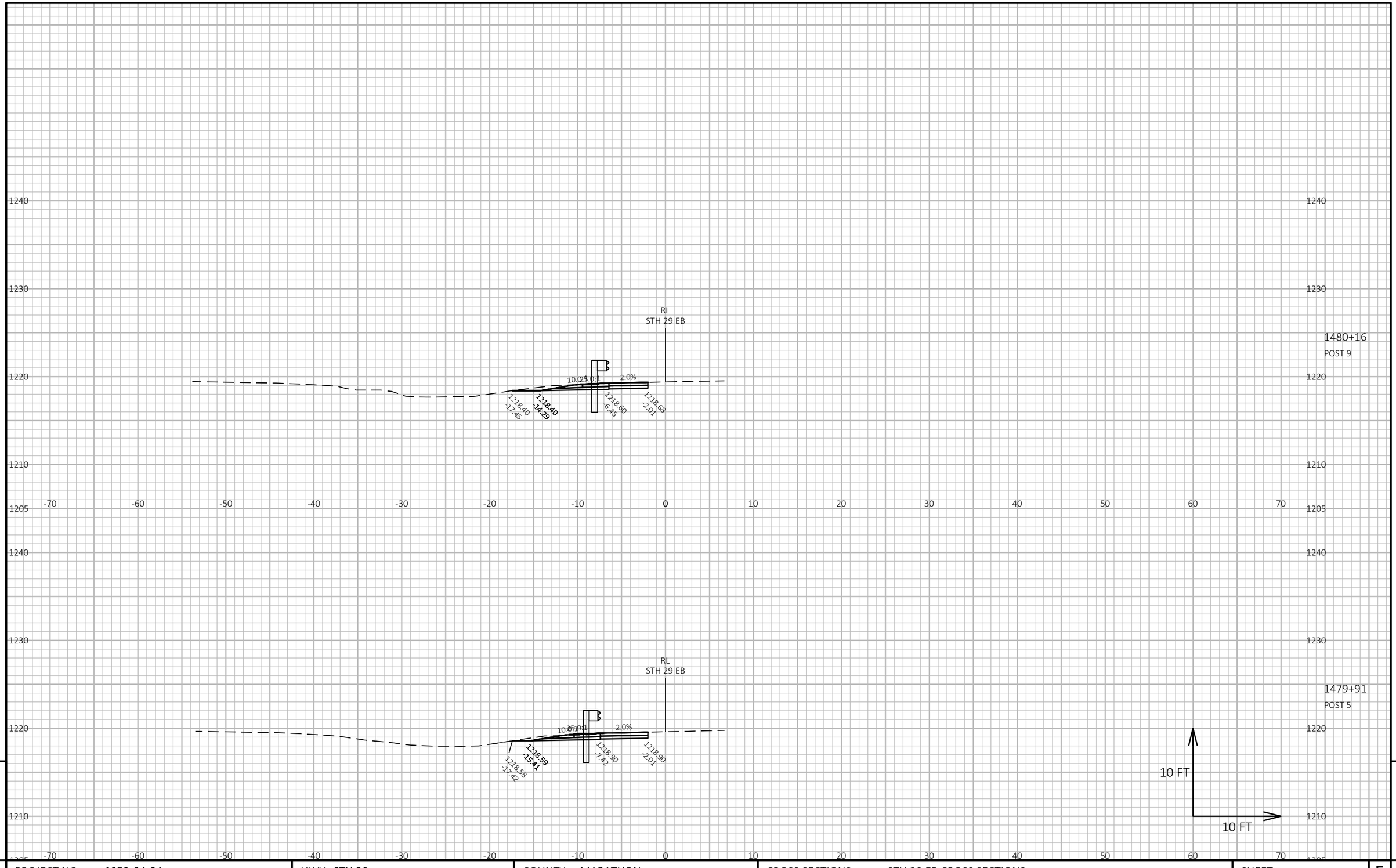
FILE NAME : C:\CADDLIB\PW\HNTB_CSTRAIT\GREATLAKES\D0382806\090201-XS.DWG
LAYOUT NAME - EB-02

PLOT DATE : 1/13/2025 5:33 PM

PLOT BY : CRYSTAL STRAIT

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



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PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 EB CROSS SECTIONS	SHEET 345	E

FILE NAME : C:\CADDLIB\PW\HNTB_CSTRAIT\GREATLAKES\D0382806\090201-XS.DWG
LAYOUT NAME - EB-03

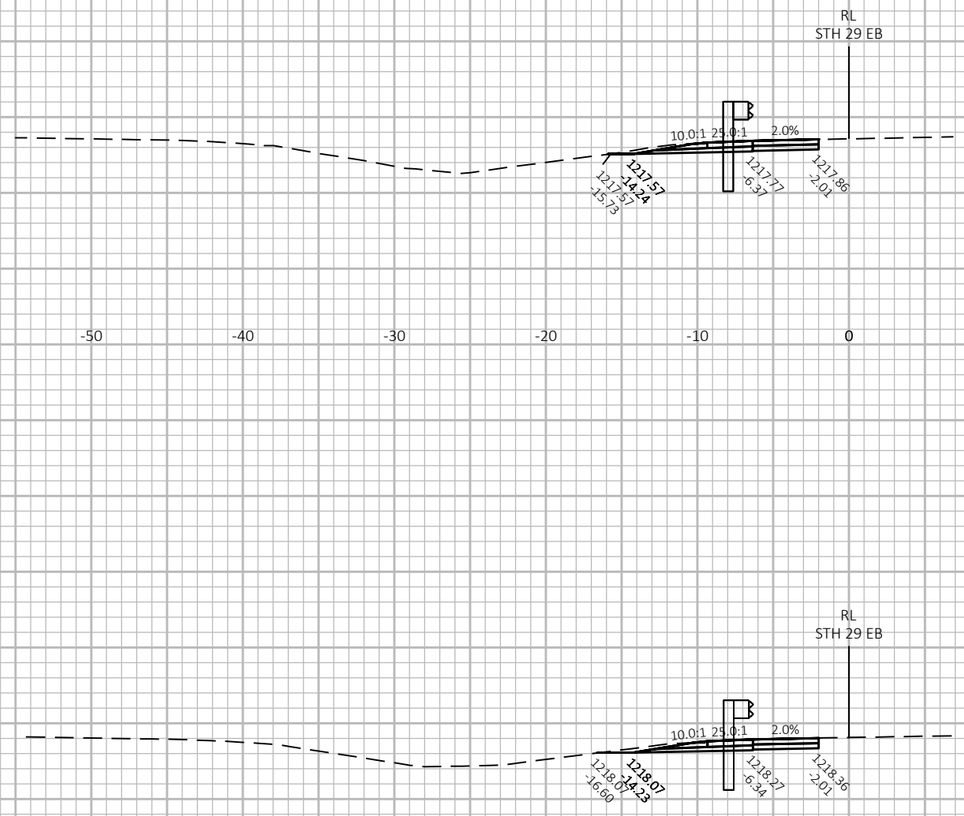
PLOT DATE : 1/13/2025 5:33 PM

PLOT BY : CRYSTAL STRAIT

PLOT NAME :

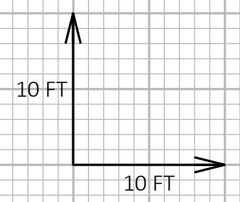
PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



1481+00

1480+50

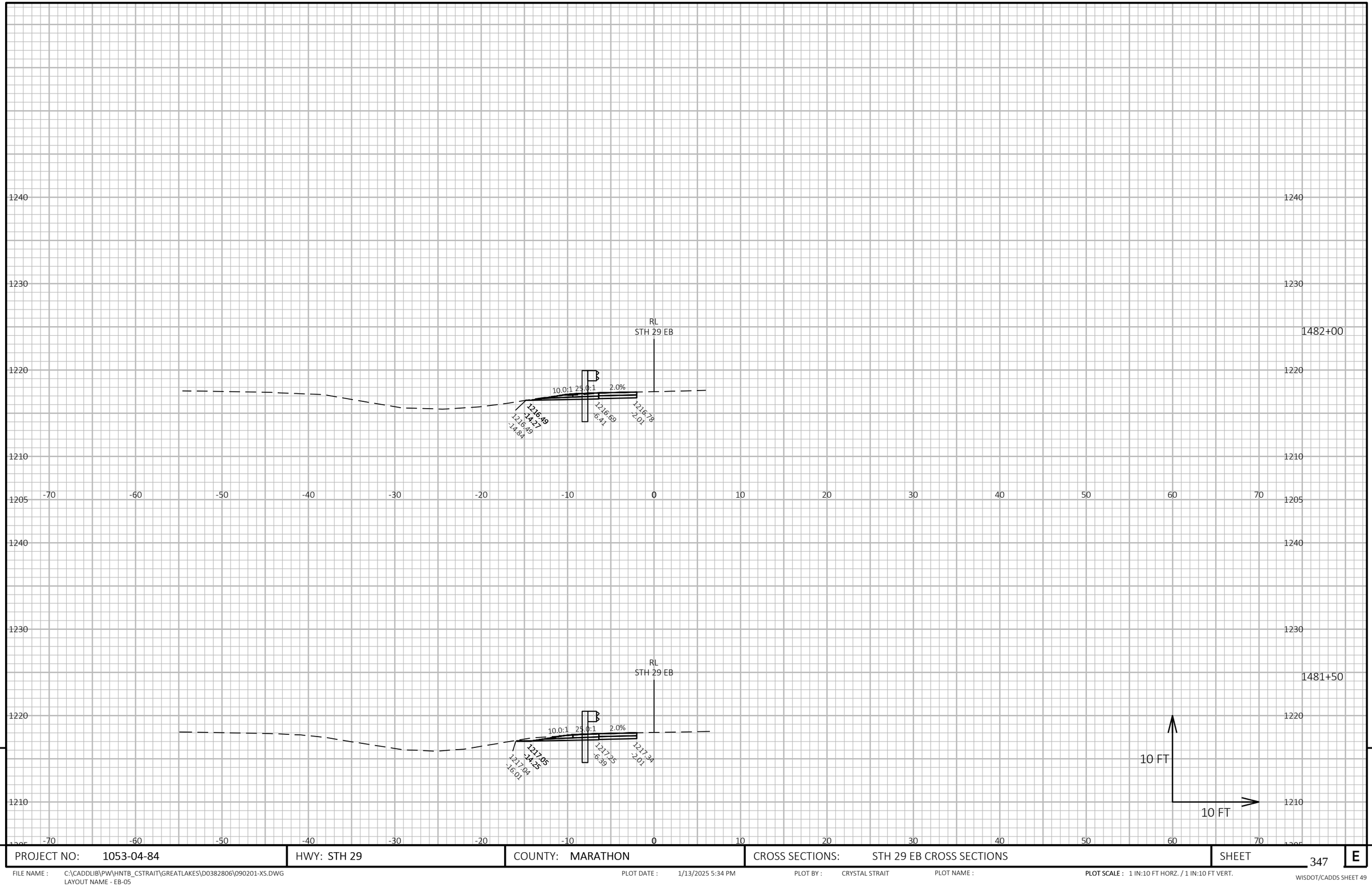


PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 EB CROSS SECTIONS	SHEET 346	E

FILE NAME : C:\CADDLIB\PW\HNTB_CSTRAIT\GREATLAKES\D0382806\090201-XS.DWG
LAYOUT NAME - EB-04

PLOT DATE : 1/13/2025 5:33 PM PLOT BY : CRYSTAL STRAIT 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: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 EB CROSS SECTIONS	SHEET 347	E

FILE NAME : C:\CADDLIB\PW\HNTB_CSTRAIT\GREATLAKES\D0382806\090201-XS.DWG
LAYOUT NAME - EB-05

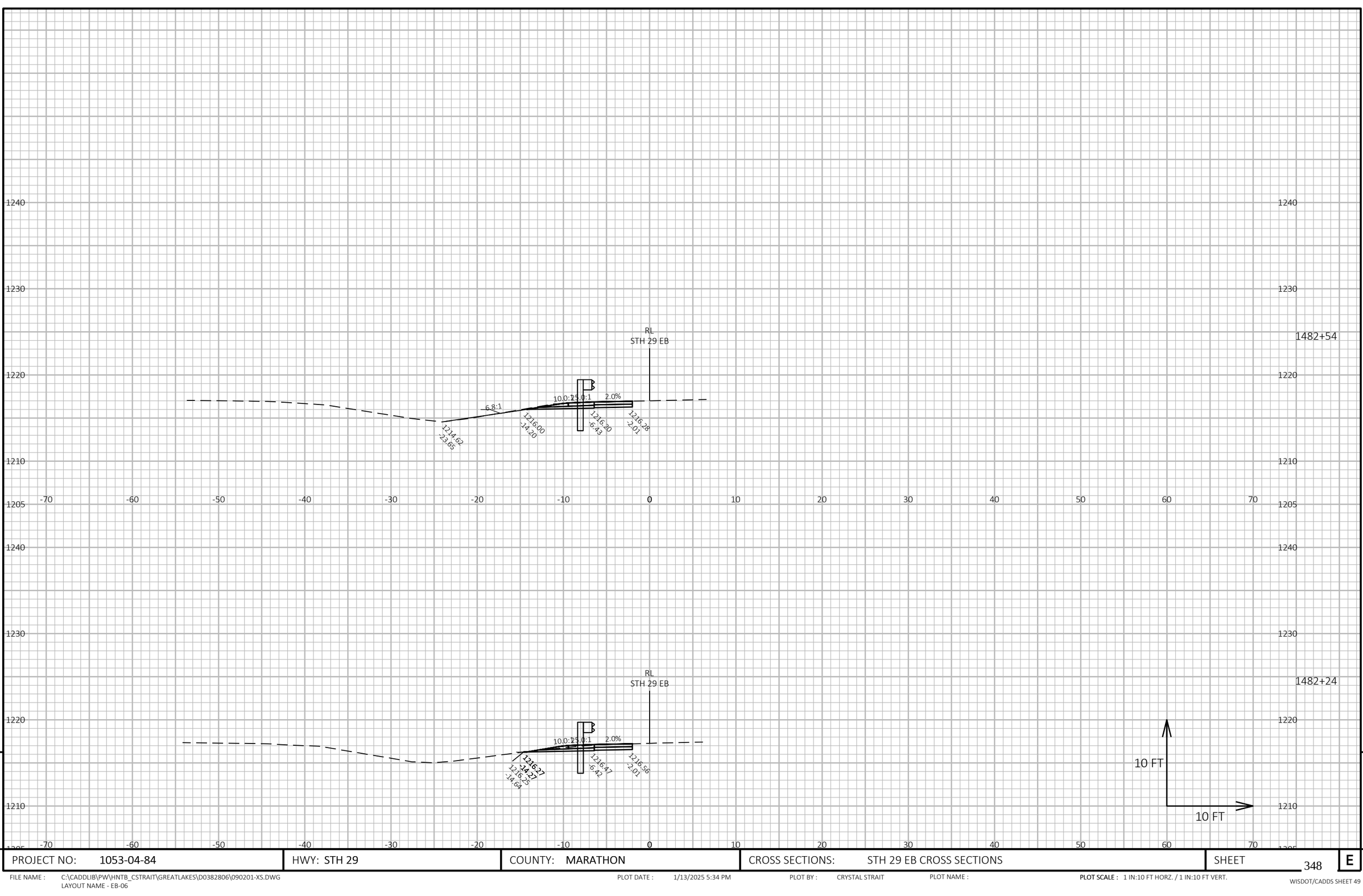
PLOT DATE : 1/13/2025 5:34 PM

PLOT BY : CRYSTAL STRAIT

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: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 EB CROSS SECTIONS	SHEET 348	E

FILE NAME : C:\CADDLIB\PW\HNTB_CSTRAIT\GREATLAKES\D0382806\090201-XS.DWG
LAYOUT NAME - EB-06

PLOT DATE : 1/13/2025 5:34 PM PLOT BY : CRYSTAL STRAIT PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

1483+44

RL
STH 29 EB

1213.50
-24.16

1214.66
-28.00

15.8%

10.0:25.0:1

2.0%

1215.15
-14.30

1215.45
-14.35

1215.30
-6.47

1215.75
-6.45

1215.43
-2.01

1215.84
-2.01

1483+00

10 FT

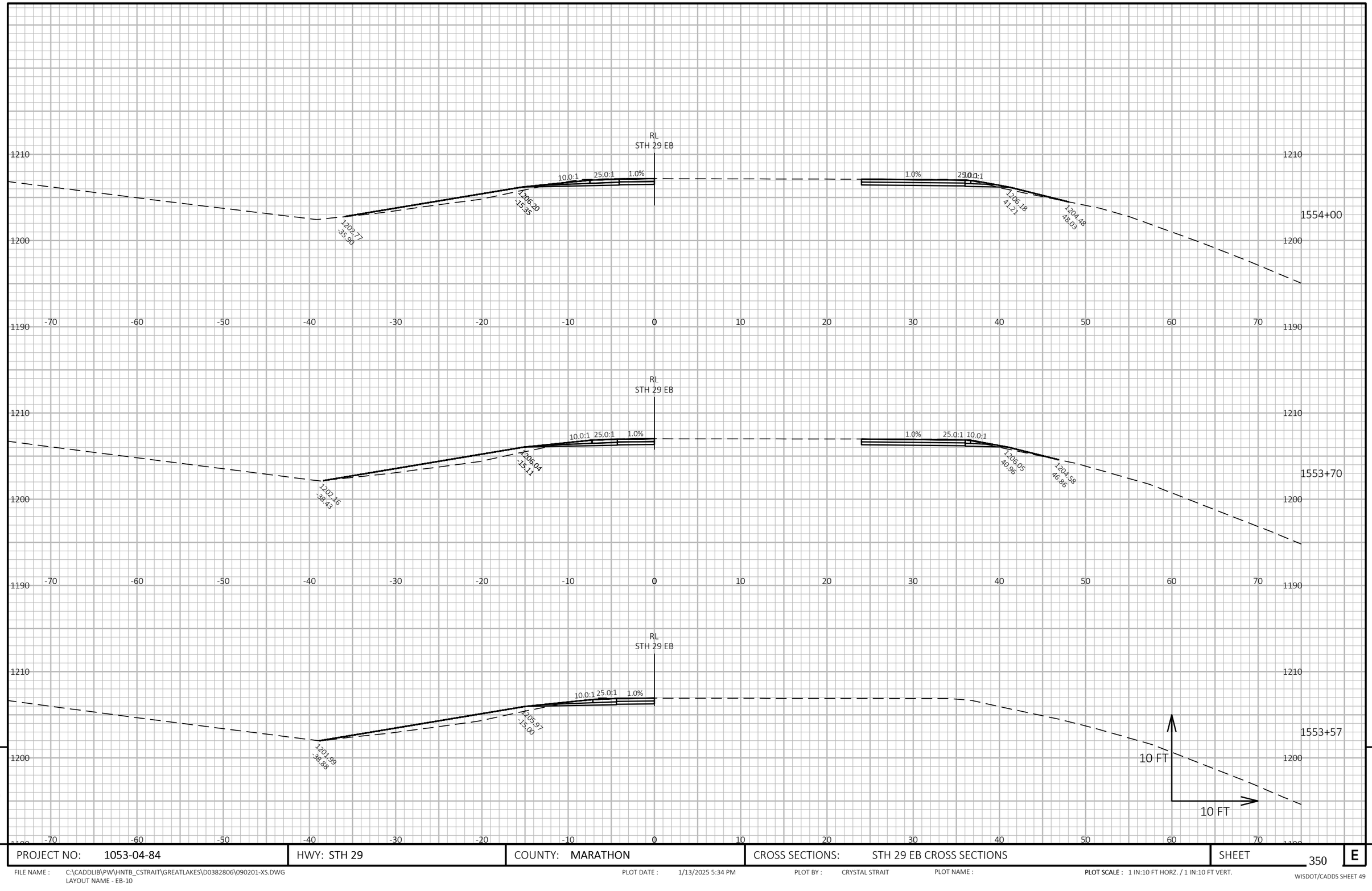
10 FT

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 EB CROSS SECTIONS	SHEET 349	E

FILE NAME : C:\CADDLIB\PW\HNTB_CSTRAIT\GREATLAKES\D0382806\090201-XS.DWG
LAYOUT NAME - EB-07

PLOT DATE : 1/13/2025 5:34 PM PLOT BY : CRYSTAL STRAIT PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

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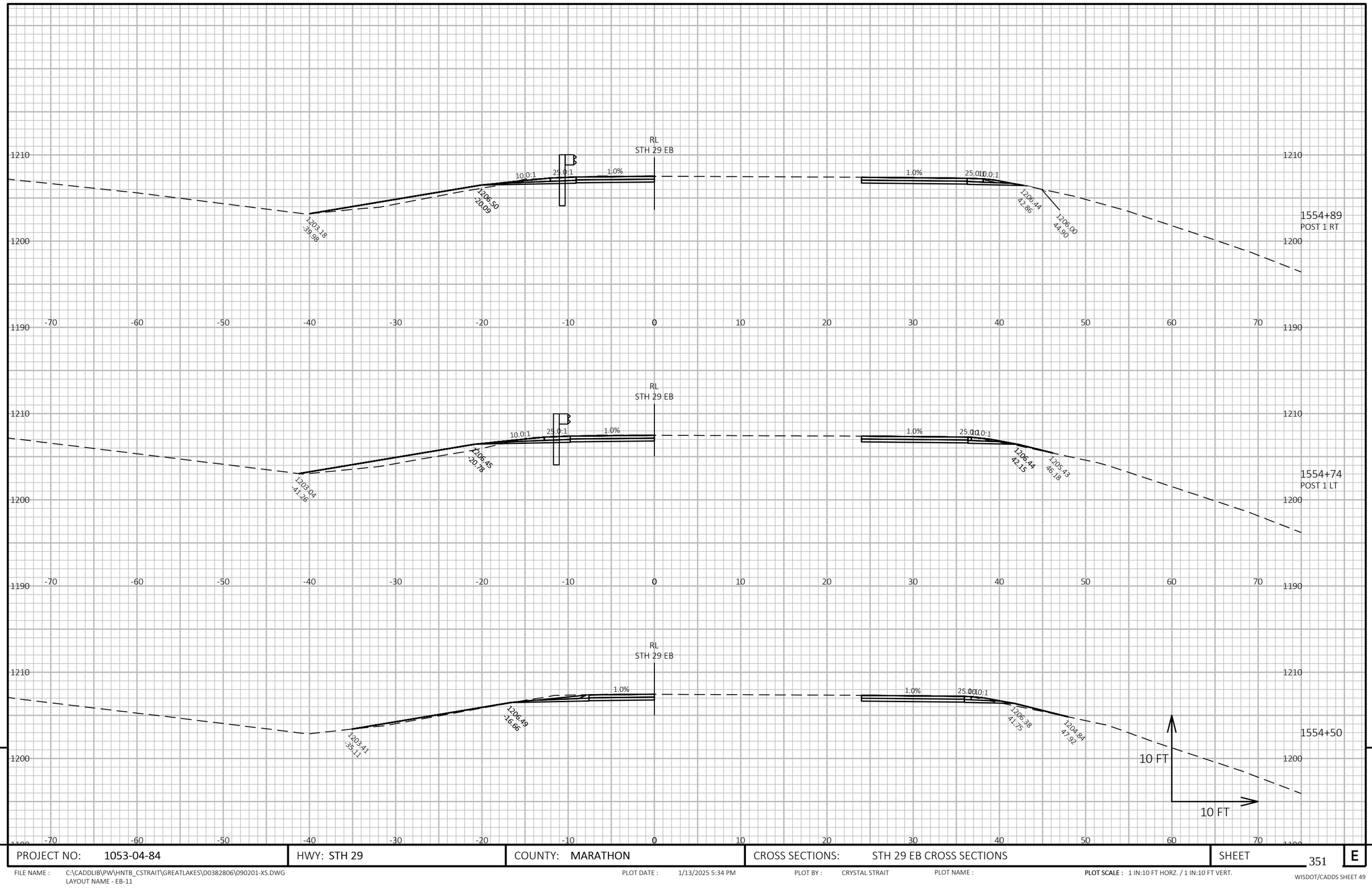
PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 EB CROSS SECTIONS	SHEET 350	E

FILE NAME : C:\CADDLIB\PW\HNTB_CSTRAIT\GREATLAKES\D0382806\090201-XS.DWG
LAYOUT NAME - EB-10

PLOT DATE : 1/13/2025 5:34 PM PLOT BY : CRYSTAL STRAIT PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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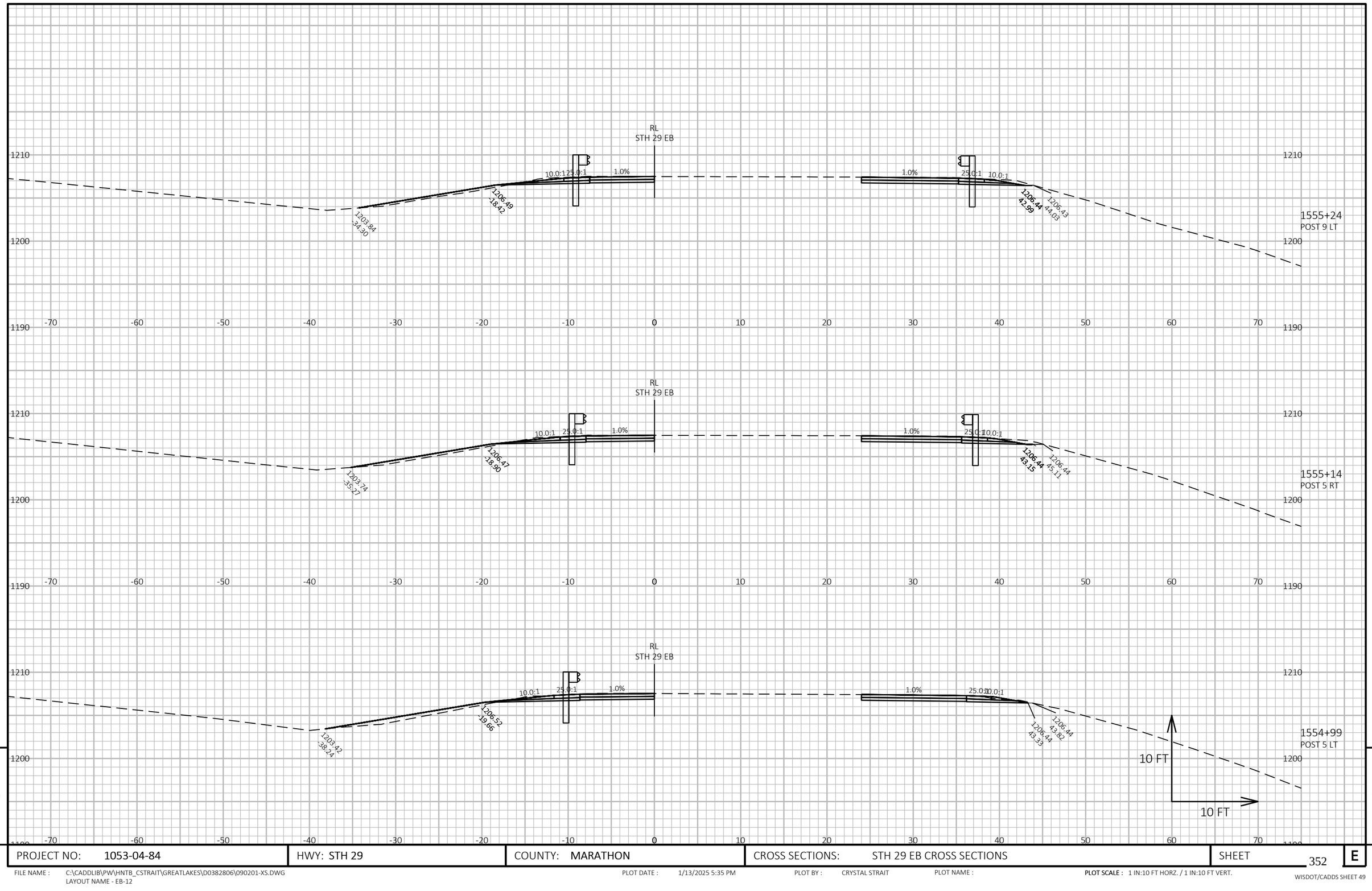
PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 EB CROSS SECTIONS	SHEET 351	E

FILE NAME : C:\CADDLIB\PW\HNTB_CSTRAIT\GREATLAKES\D0382806\090201-XS.DWG
LAYOUT NAME - EB-11

PLOT DATE : 1/13/2025 5:34 PM PLOT BY : CRYSTAL STRAIT PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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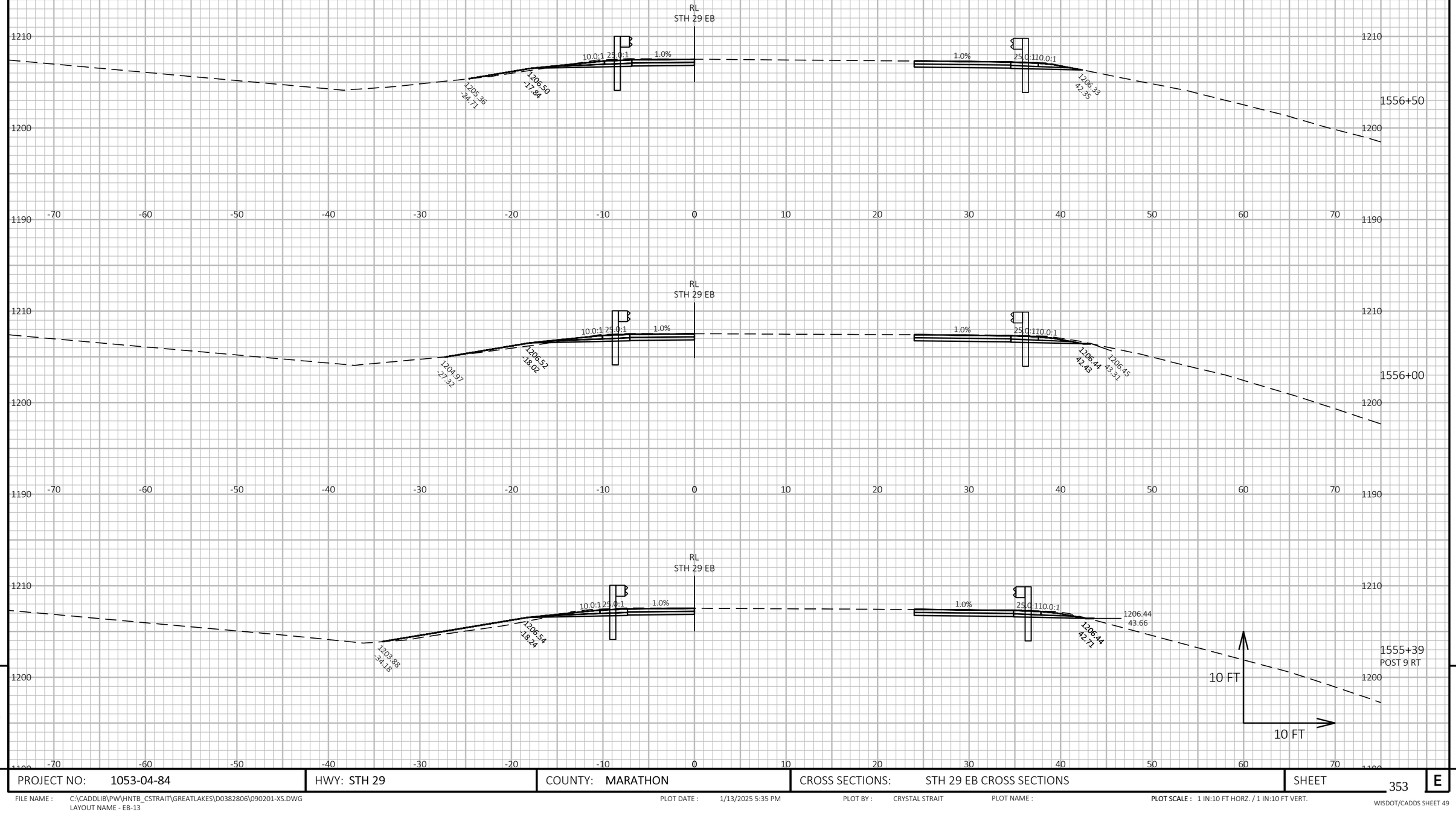
PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 EB CROSS SECTIONS	SHEET 352	E

FILE NAME : C:\CADDLIB\PW\HNTB_CSTRAIT\GREATLAKES\D0382806\090201-XS.DWG
LAYOUT NAME - EB-12

PLOT DATE : 1/13/2025 5:35 PM PLOT BY : CRYSTAL STRAIT PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 EB CROSS SECTIONS	SHEET 353	E

FILE NAME : C:\CADDLIB\PW\HNTB_CSTRAIT\GREATLAKES\D0382806\090201-XS.DWG
LAYOUT NAME - EB-13

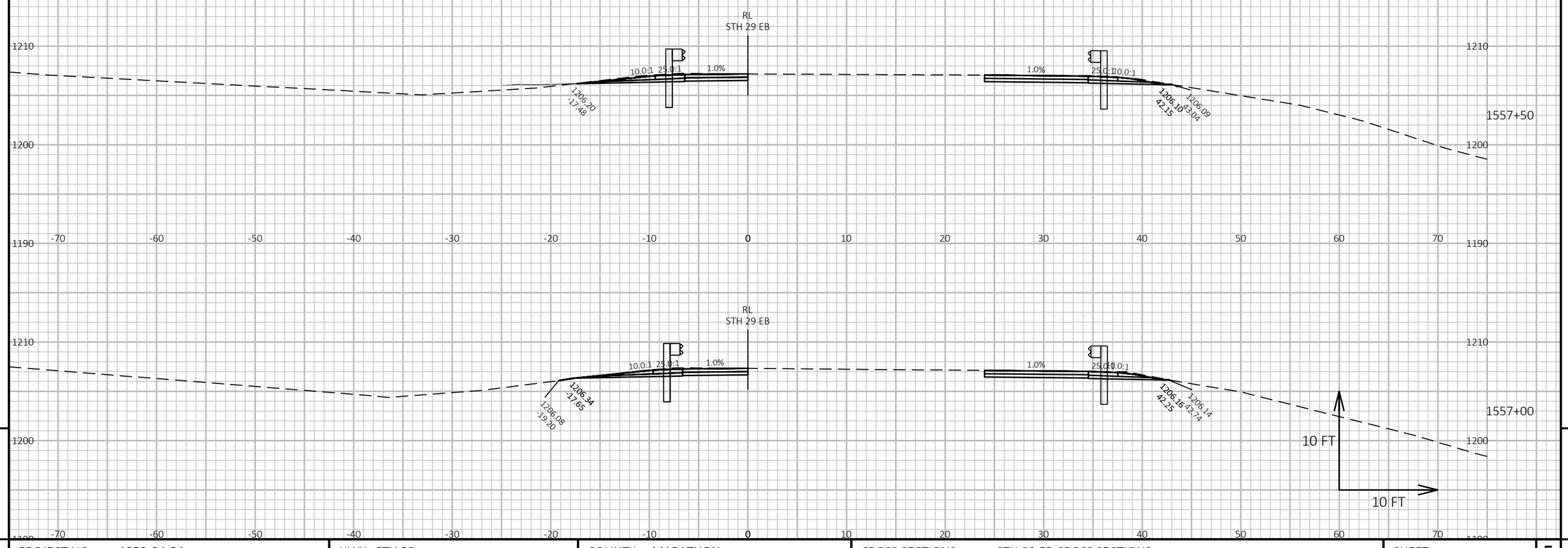
PLOT DATE : 1/13/2025 5:35 PM

PLOT BY : CRYSTAL STRAIT

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: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 EB CROSS SECTIONS	SHEET 354	E

FILE NAME : C:\CADDLIB\PW\HNTB_CSTRAIT\GREATLAKES\D0382806\090201-XS.DWG
LAYOUT NAME - EB-14

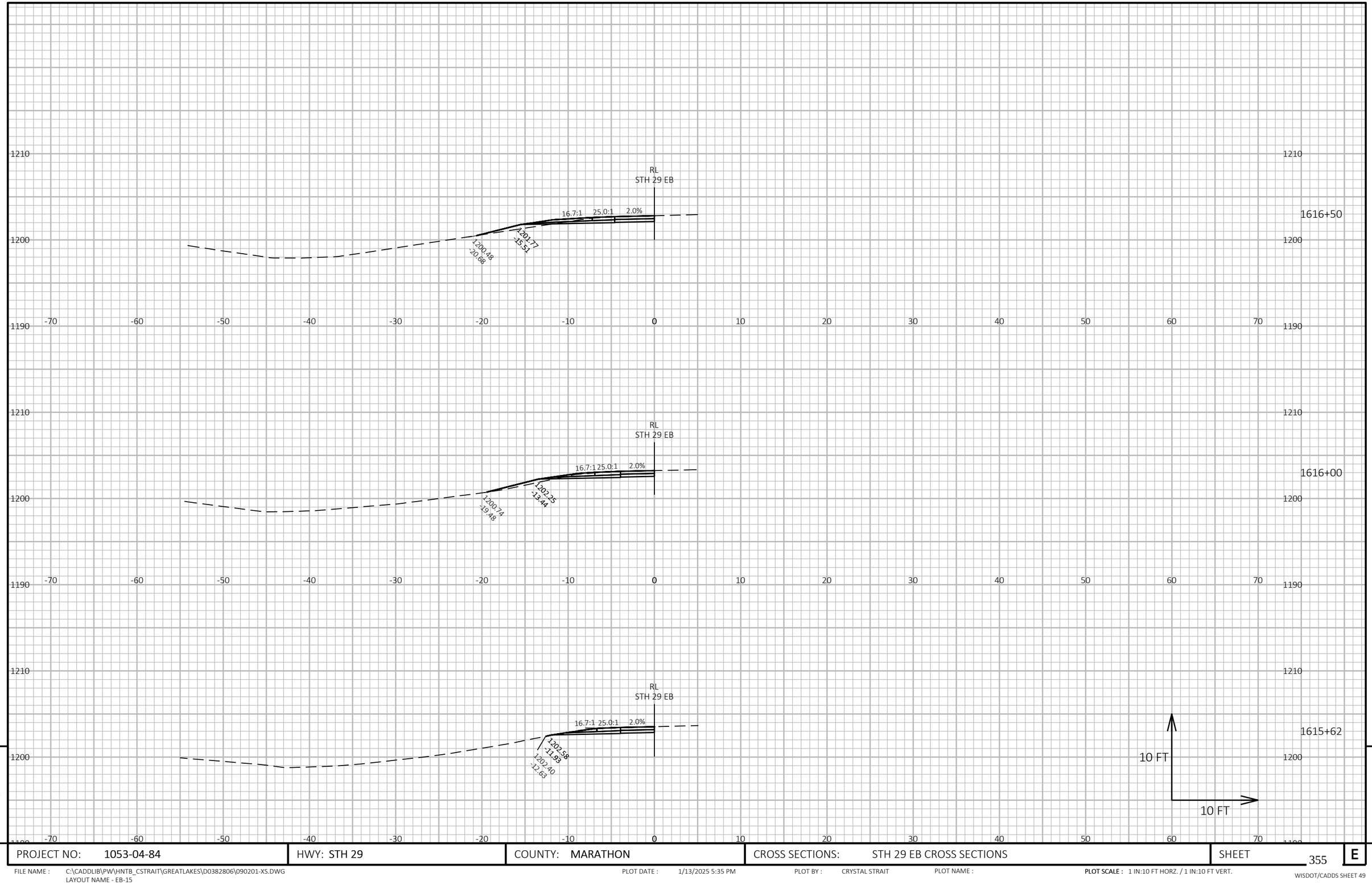
PLOT DATE : 1/13/2025 5:35 PM

PLOT BY : CRYSTAL STRAIT

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 EB CROSS SECTIONS	SHEET 355	E

FILE NAME : C:\CADDLIB\PW\HNTB_CSTRAIT\GREATLAKES\D0382806\090201-XS.DWG
LAYOUT NAME - EB-15

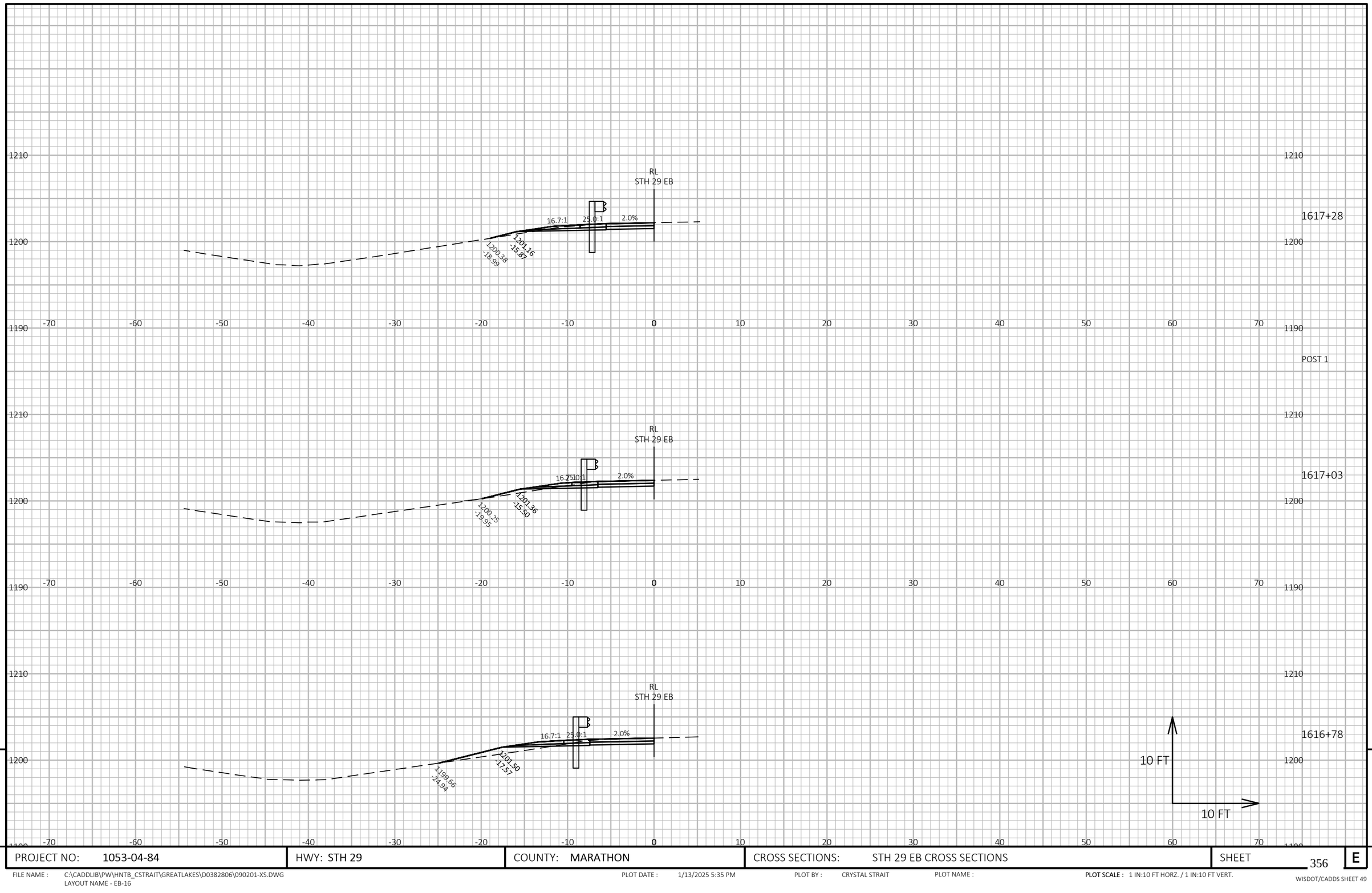
PLOT DATE : 1/13/2025 5:35 PM

PLOT BY : CRYSTAL STRAIT

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

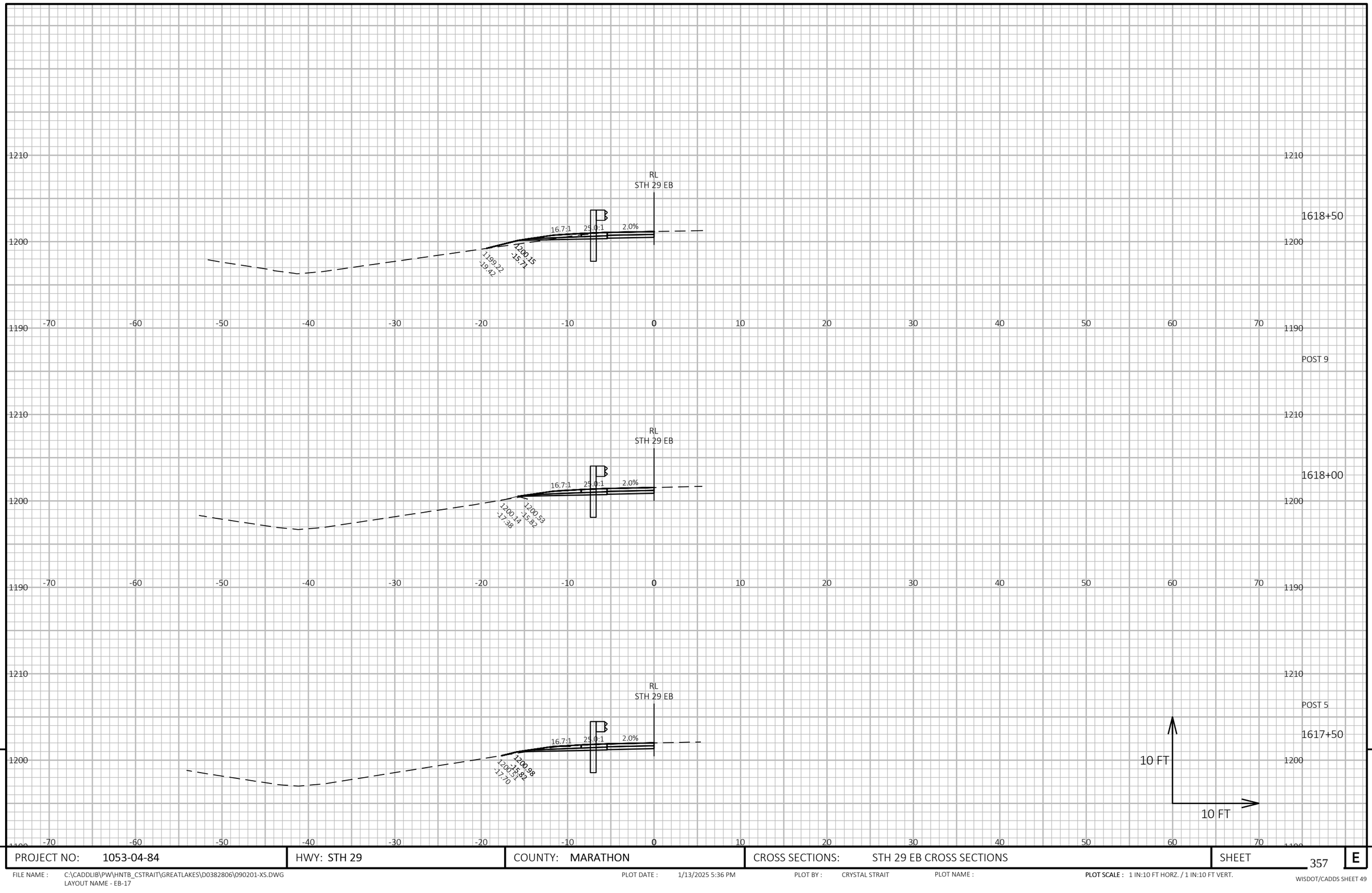


PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 EB CROSS SECTIONS	SHEET 356	E

FILE NAME : C:\CADDLIB\PW\HNTB_CSTRAIT\GREATLAKES\D0382806\090201-XS.DWG
LAYOUT NAME - EB-16

PLOT DATE : 1/13/2025 5:35 PM PLOT BY : CRYSTAL STRAIT PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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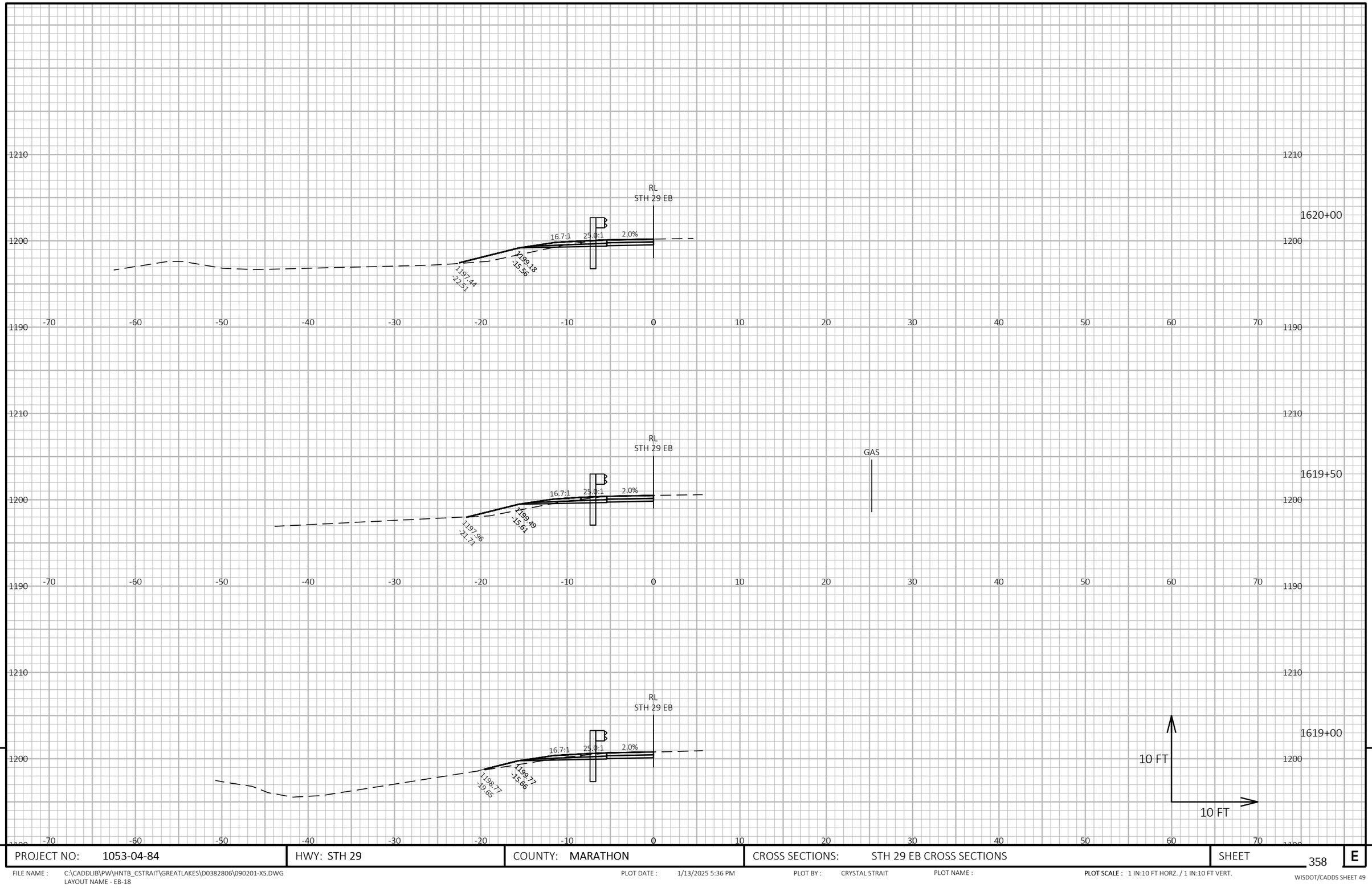
PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 EB CROSS SECTIONS	SHEET 357	E

FILE NAME : C:\CADDLIB\PW\HNTB_CSTRAIT\GREATLAKES\D0382806\090201-XS.DWG
LAYOUT NAME - EB-17

PLOT DATE : 1/13/2025 5:36 PM PLOT BY : CRYSTAL STRAIT PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 EB CROSS SECTIONS	SHEET 358	E

FILE NAME : C:\CADDLIB\PW\HNTB_CSTRAIT\GREATLAKES\D0382806\090201-XS.DWG
LAYOUT NAME - EB-18

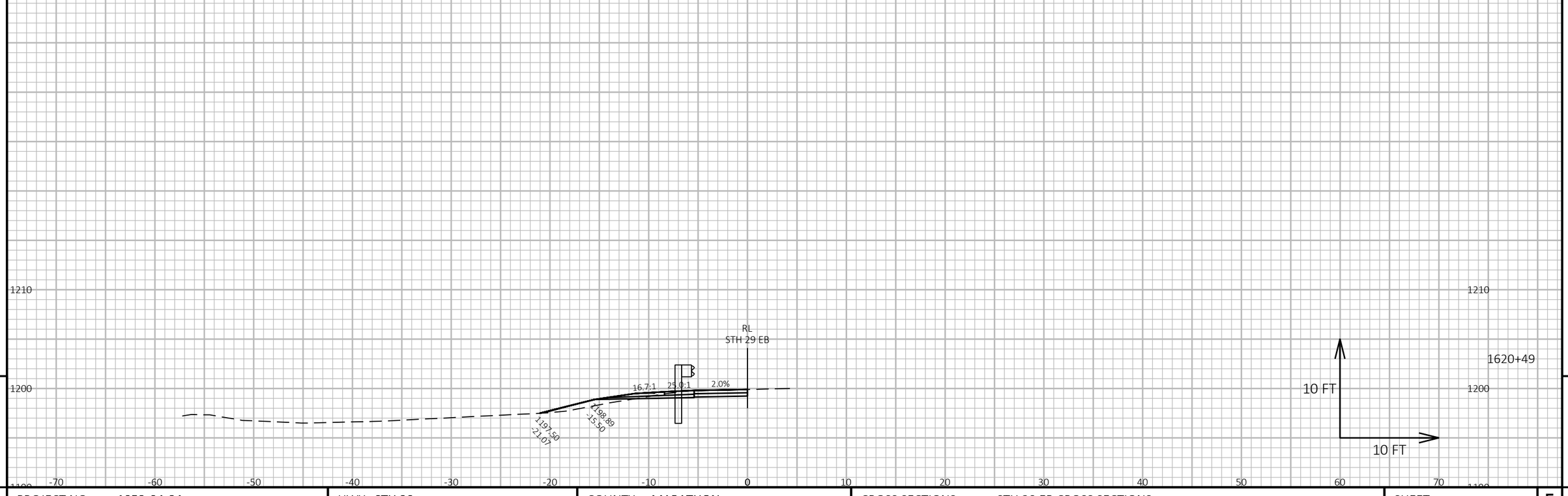
PLOT DATE : 1/13/2025 5:36 PM

PLOT BY : CRYSTAL STRAIT

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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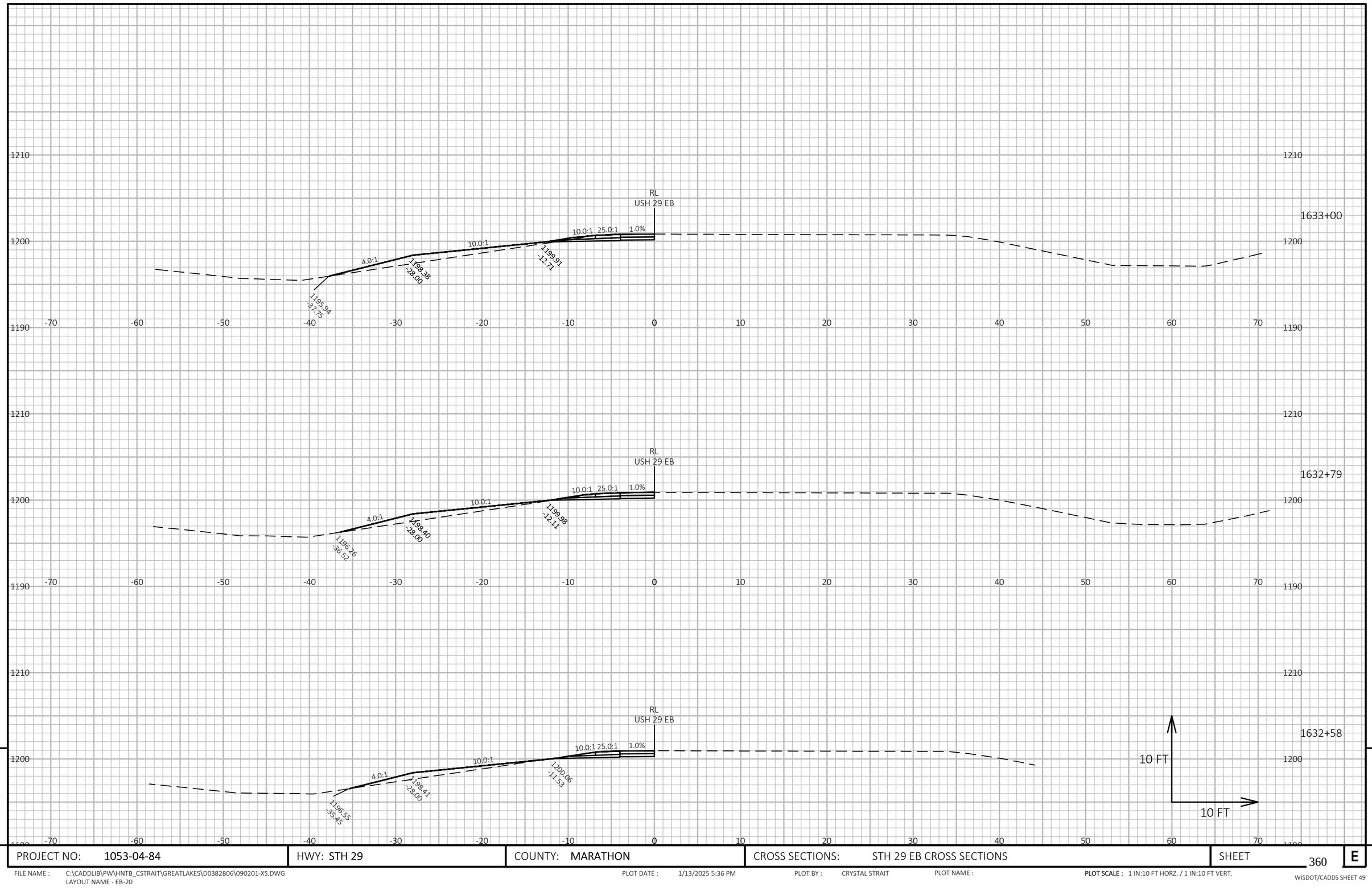
PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 EB CROSS SECTIONS	SHEET 359	E

FILE NAME : C:\CADDLIB\PW\HNTB_CSTRAIT\GREATLAKES\D0382806\090201-XS.DWG
LAYOUT NAME - EB-19

PLOT DATE : 1/13/2025 5:36 PM PLOT BY : CRYSTAL STRAIT PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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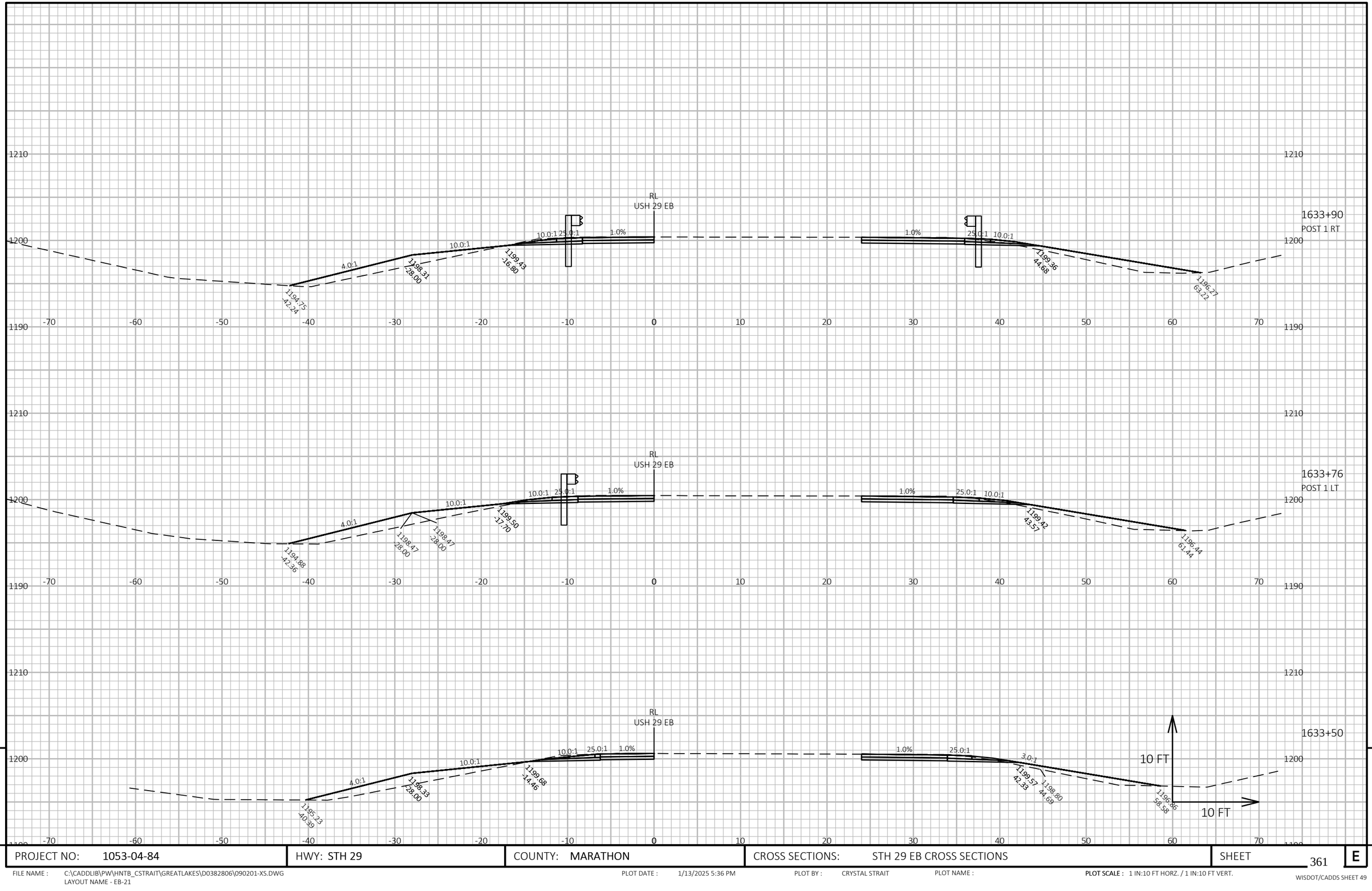
PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 EB CROSS SECTIONS	SHEET 360	E

FILE NAME : C:\CADDLIB\PW\HNTB_CSTRAIT\GREATLAKES\D0382806\090201-XS.DWG
LAYOUT NAME - EB-20

PLOT DATE : 1/13/2025 5:36 PM PLOT BY : CRYSTAL STRAIT PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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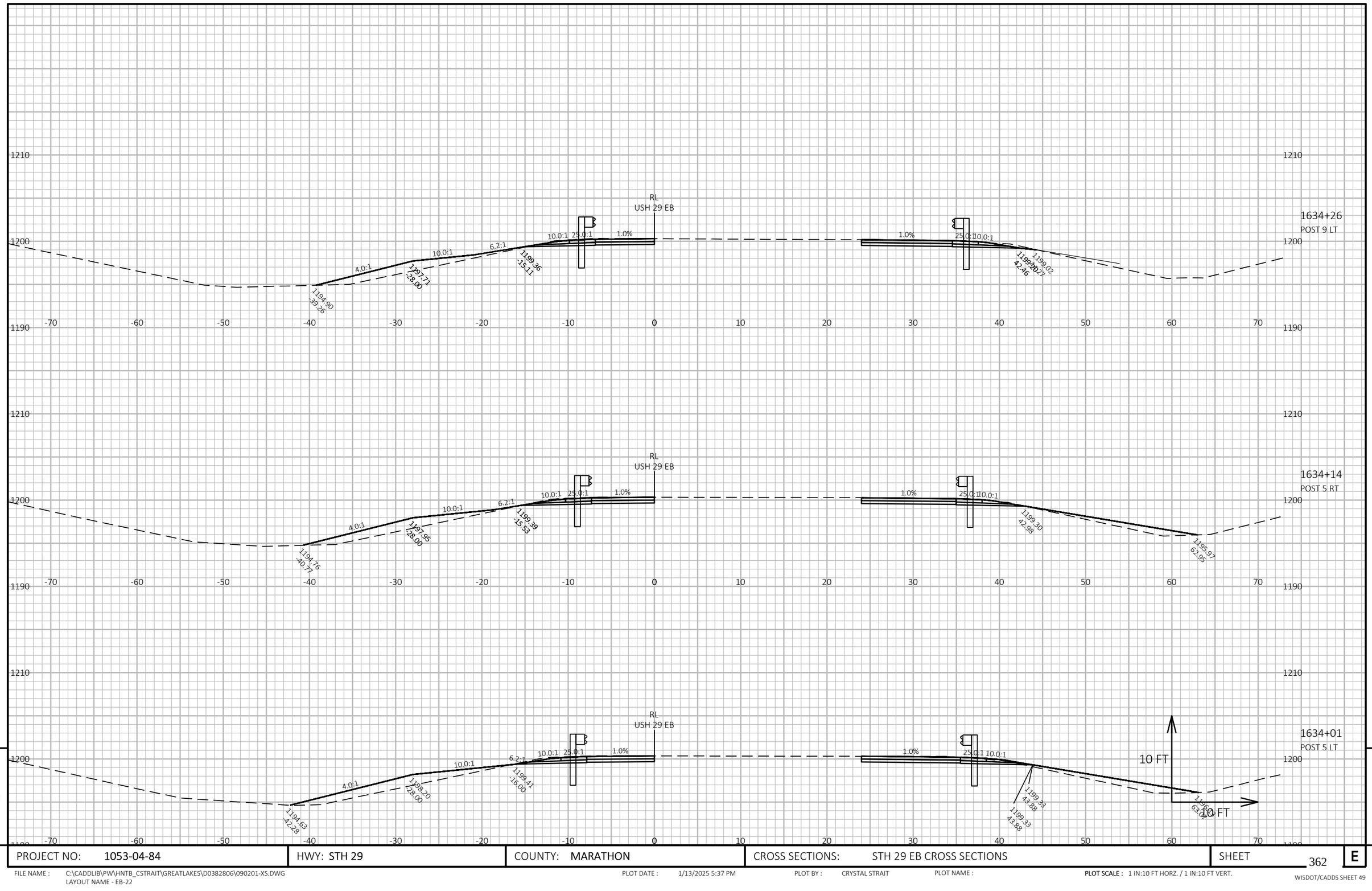
PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 EB CROSS SECTIONS	SHEET 361	E

FILE NAME : C:\CADDLIB\PW\HNTB_CSTRAIT\GREATLAKES\D0382806\090201-XS.DWG
LAYOUT NAME - EB-21

PLOT DATE : 1/13/2025 5:36 PM PLOT BY : CRYSTAL STRAIT PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

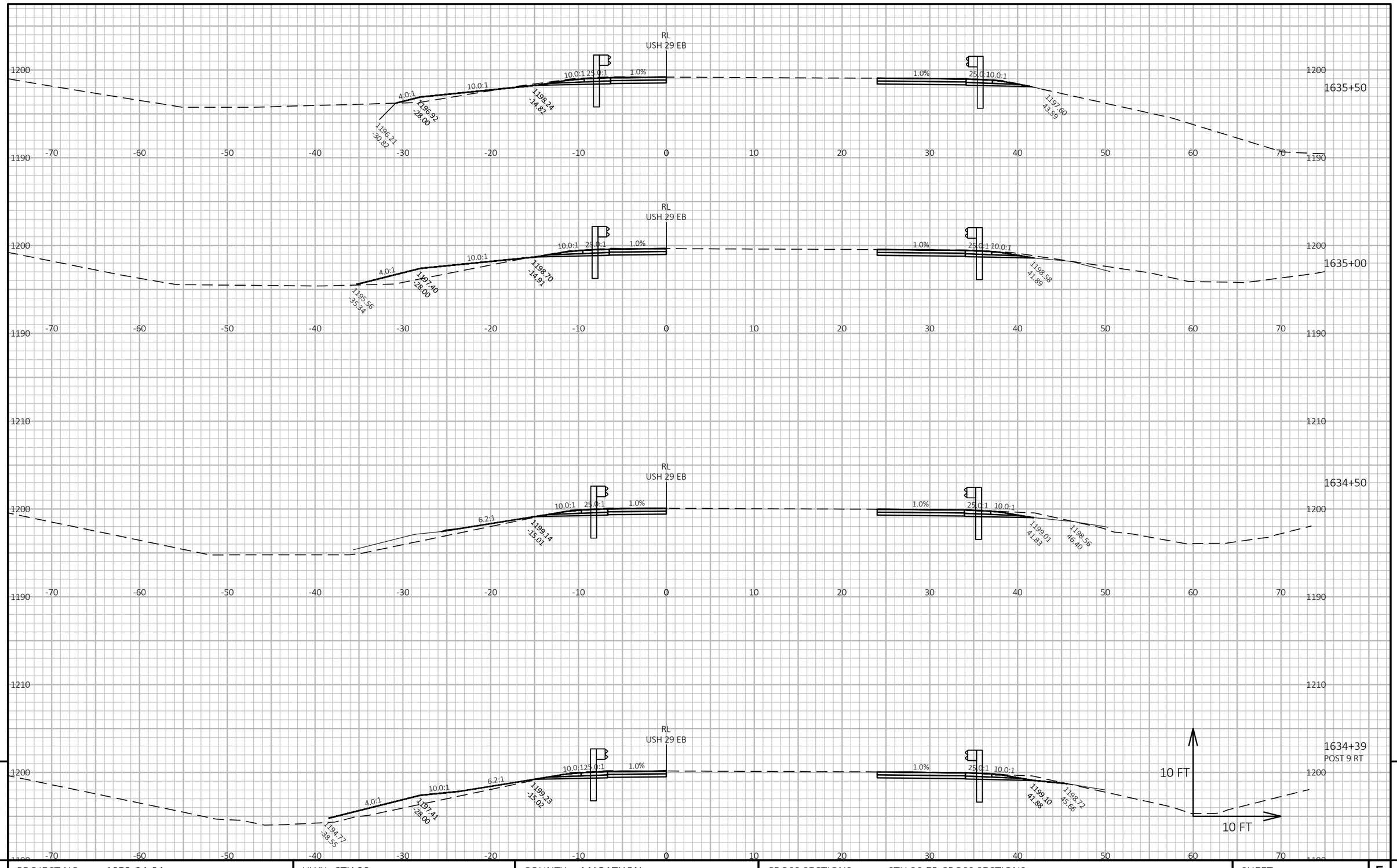


PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 EB CROSS SECTIONS	SHEET 362	E

FILE NAME : C:\CADDLIB\PW\HNTB_CSTRAIT\GREATLAKES\D0382806\090201-XS.DWG
LAYOUT NAME - EB-22

PLOT DATE : 1/13/2025 5:37 PM PLOT BY : CRYSTAL STRAIT PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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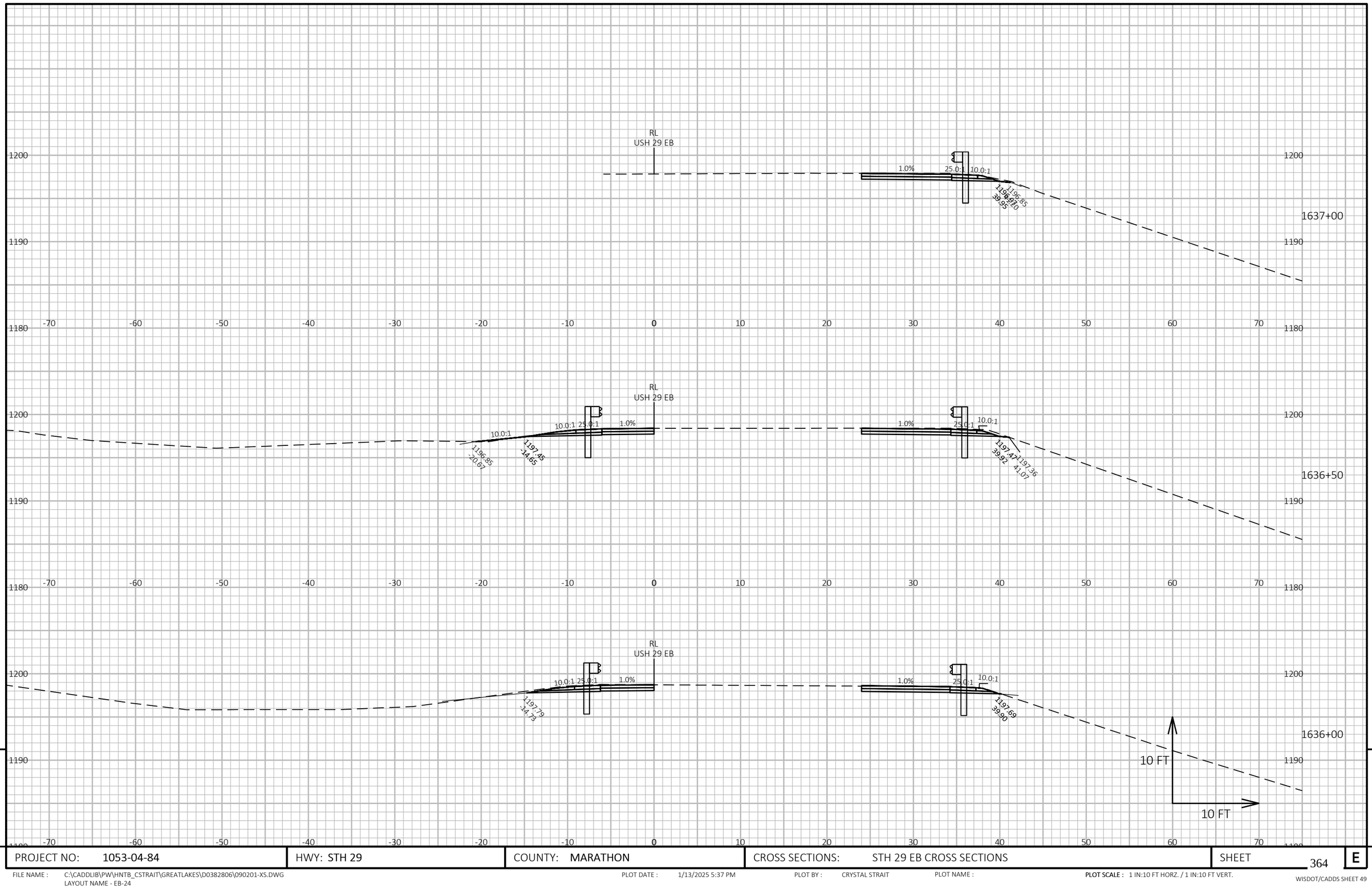
PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 EB CROSS SECTIONS	SHEET 363	E

FILE NAME : C:\CADDLIB\PW\HNTB_CSTRAIT\GREATLAKES\D0382806\090201-XS.DWG
LAYOUT NAME - EB-23

PLOT DATE : 1/13/2025 5:37 PM PLOT BY : CRYSTAL STRAIT PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 EB CROSS SECTIONS	SHEET 364	E

FILE NAME : C:\CADDLIB\PW\HNTB_CSTRAIT\GREATLAKES\D0382806\090201-XS.DWG
LAYOUT NAME - EB-24

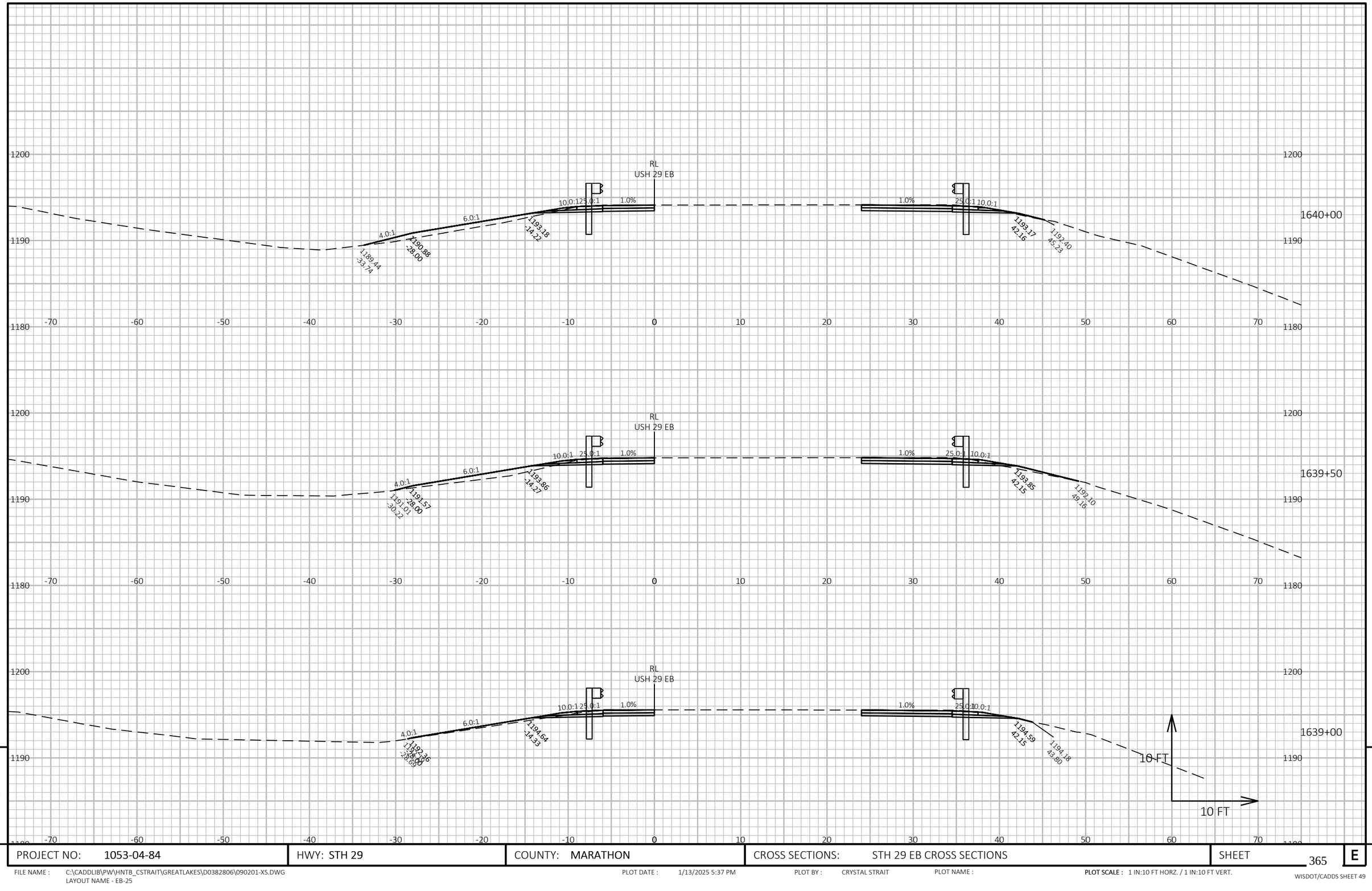
PLOT DATE : 1/13/2025 5:37 PM

PLOT BY : CRYSTAL STRAIT

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



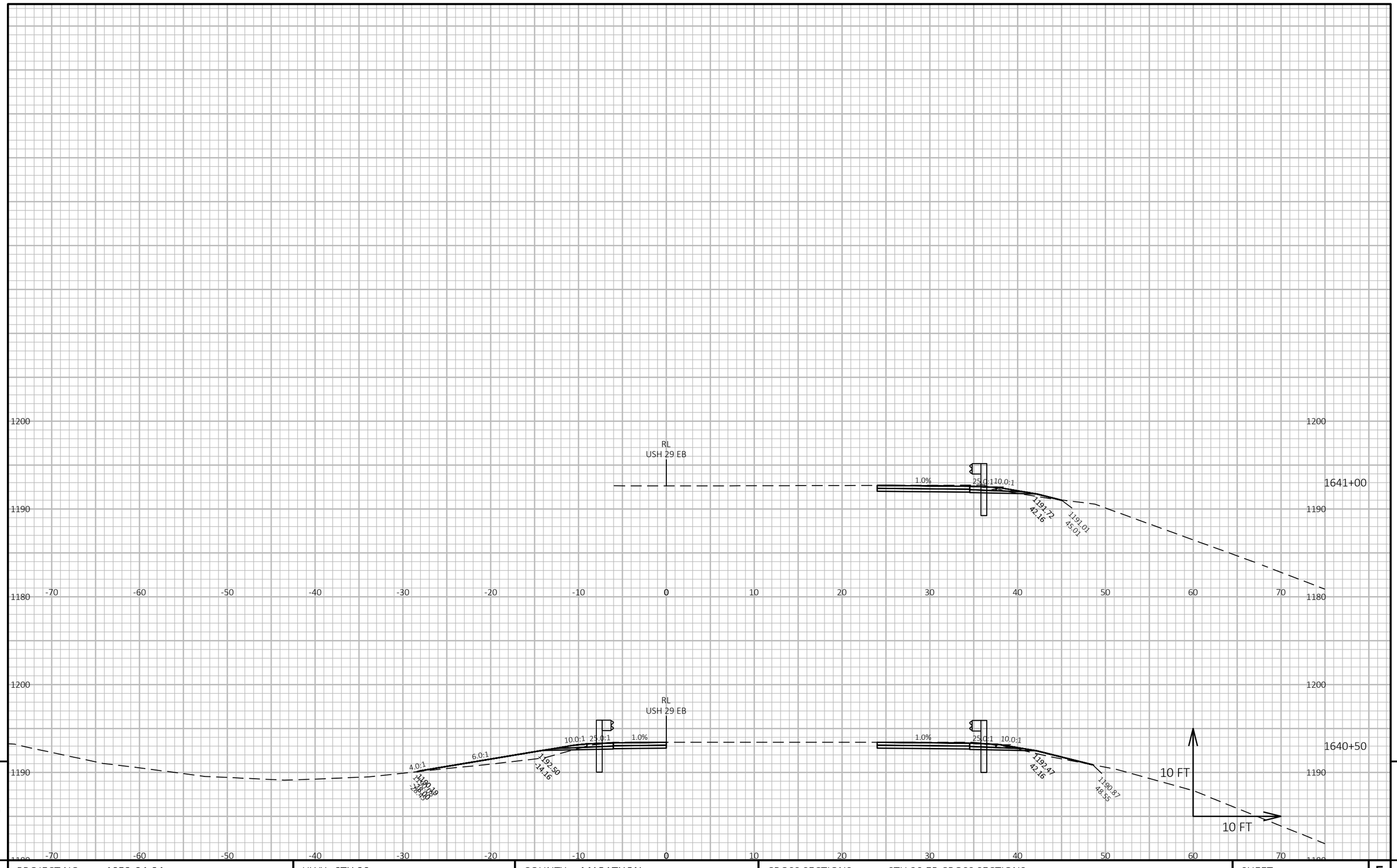
PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 EB CROSS SECTIONS	SHEET 365	E

FILE NAME : C:\CADDLIB\PW\HNTB_CSTRAIT\GREATLAKES\D0382806\090201-XS.DWG
LAYOUT NAME - EB-25

PLOT DATE : 1/13/2025 5:37 PM PLOT BY : CRYSTAL STRAIT PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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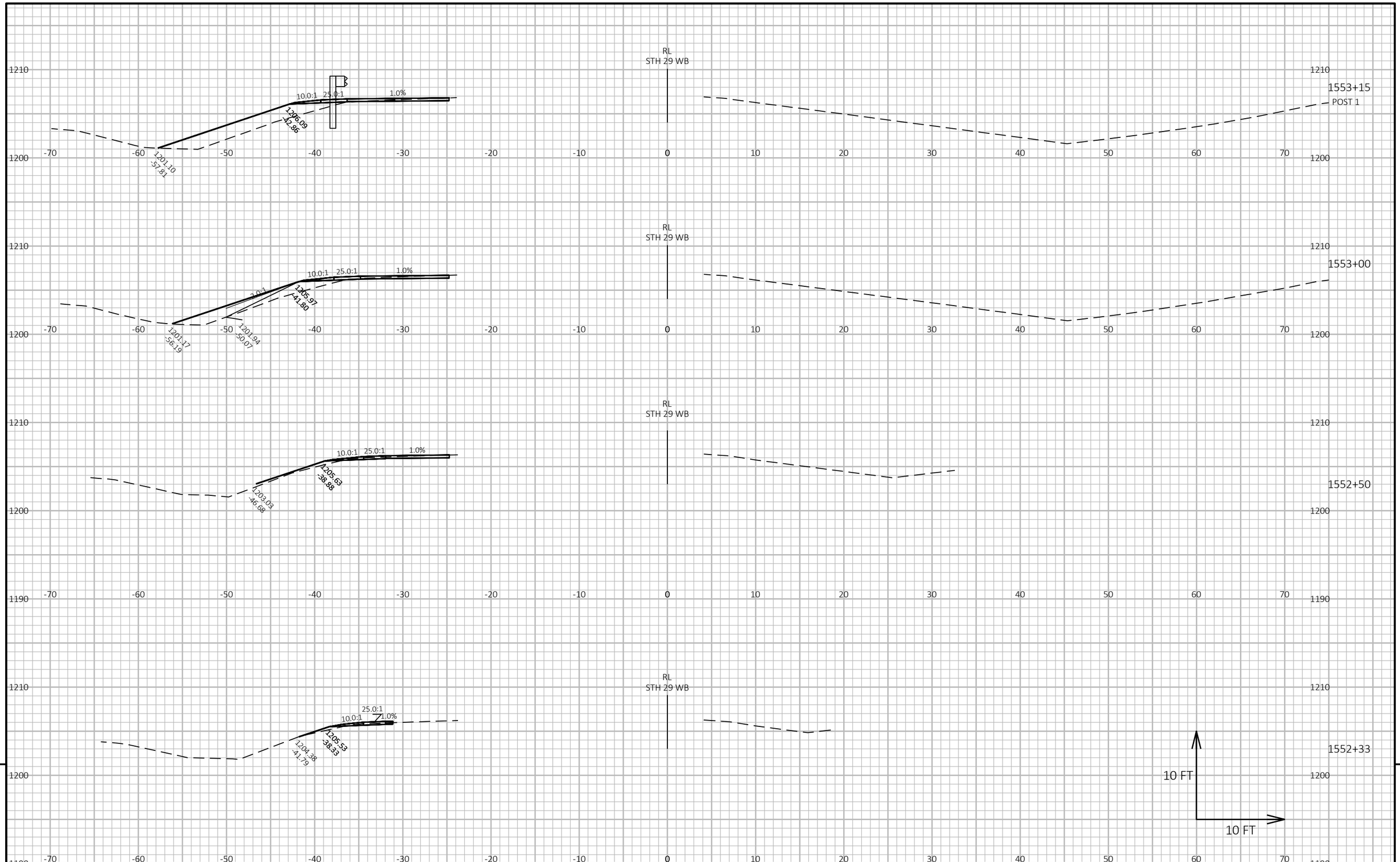
PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 EB CROSS SECTIONS	SHEET 366	E

FILE NAME : C:\CADDLIB\PW\HNTB_CSTRAIT\GREATLAKES\D0382806\090201-XS.DWG
LAYOUT NAME - EB-26

PLOT DATE : 1/13/2025 5:37 PM PLOT BY : CRYSTAL STRAIT PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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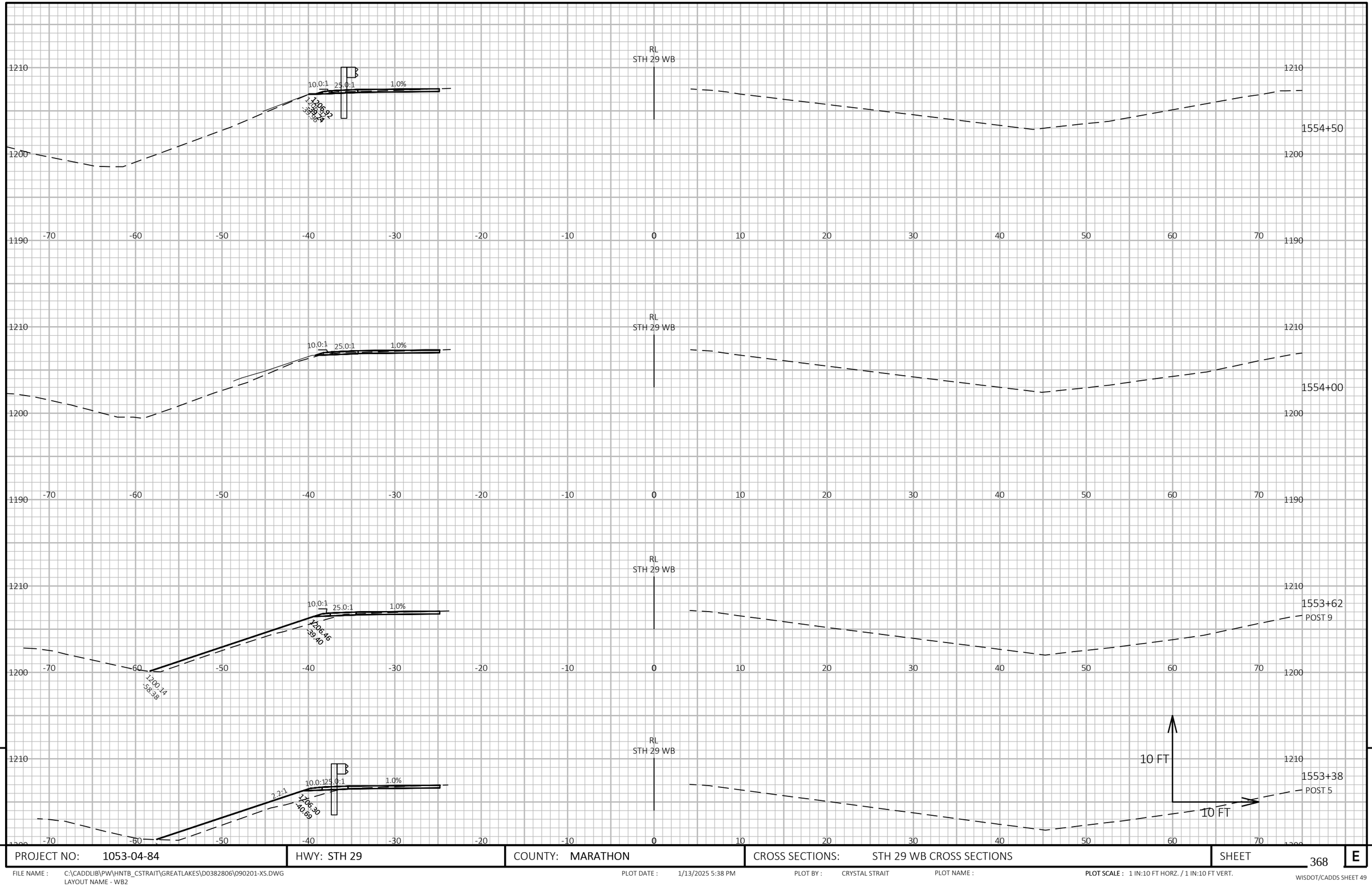
PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 WB CROSS SECTIONS	SHEET 367	E

FILE NAME : C:\CADDLIB\PW\HNTB_CSTRAIT\GREATLAKES\D0382806\090201-XS.DWG
LAYOUT NAME - WB1

PLOT DATE : 1/13/2025 5:38 PM PLOT BY : CRYSTAL STRAIT PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 WB CROSS SECTIONS	SHEET 368	E

FILE NAME : C:\CADDLIB\PW\HNTB_CSTRAIT\GREATLAKES\D0382806\090201-XS.DWG
LAYOUT NAME - WB2

PLOT DATE : 1/13/2025 5:38 PM PLOT BY : CRYSTAL STRAIT PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

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PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 WB CROSS SECTIONS	SHEET 369	E

FILE NAME : C:\CADDLIB\PW\HNTB_CSTRAIT\GREATLAKES\D0382806\090201-XS.DWG
LAYOUT NAME - WB3

PLOT DATE : 1/13/2025 5:38 PM

PLOT BY : CRYSTAL STRAIT

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

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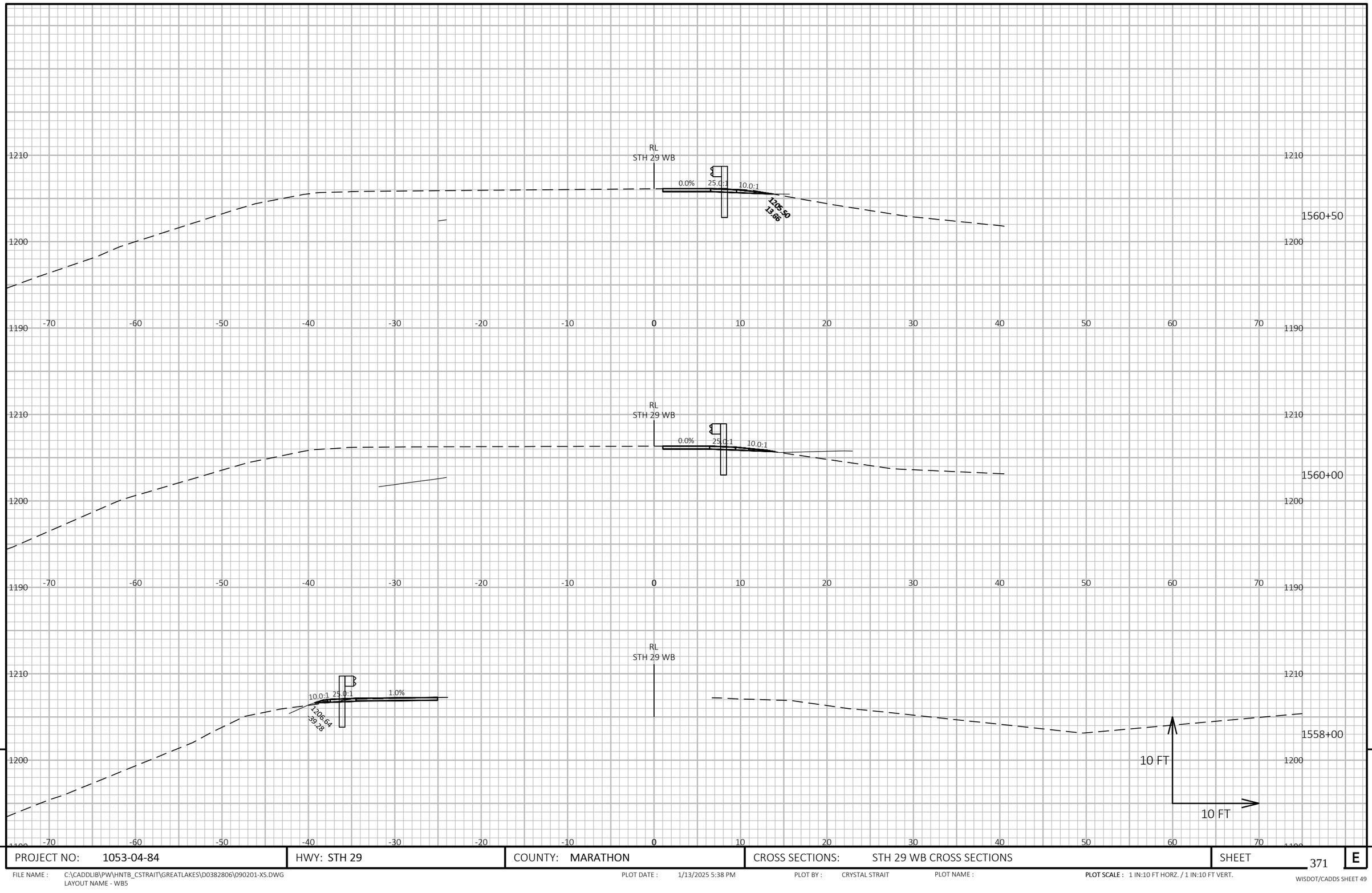
9

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 WB CROSS SECTIONS	SHEET 370	E

FILE NAME : C:\CADDLIB\PW\HNTB_CSTRAIT\GREATLAKES\D0382806\090201-XS.DWG
LAYOUT NAME - WB4

PLOT DATE : 1/13/2025 5:38 PM PLOT BY : CRYSTAL STRAIT PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 WB CROSS SECTIONS	SHEET 371	E

FILE NAME : C:\CADDLIB\PW\HNTB_CSTRAIT\GREATLAKES\D0382806\090201-XS.DWG
LAYOUT NAME - WB5

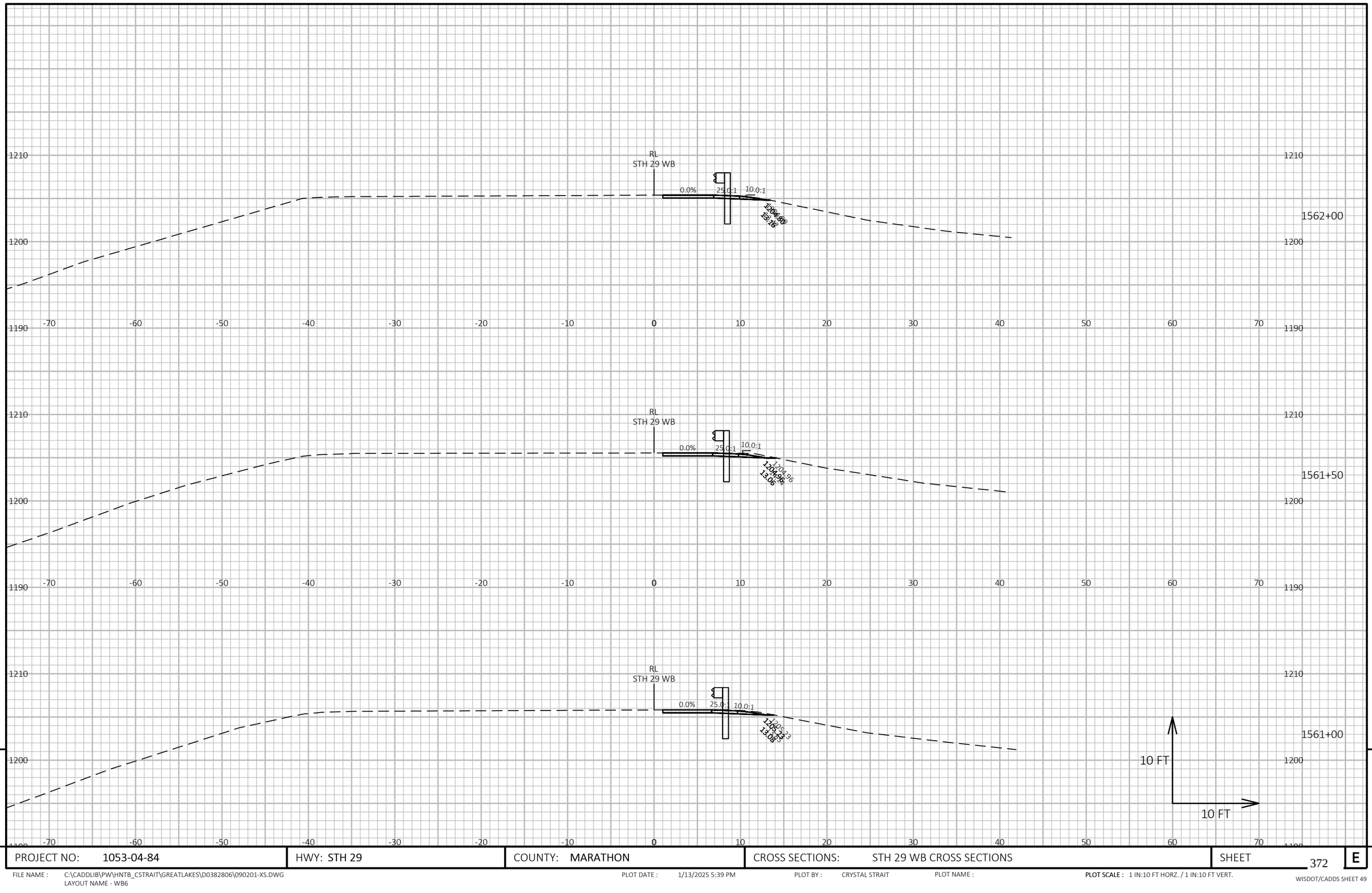
PLOT DATE : 1/13/2025 5:38 PM

PLOT BY : CRYSTAL STRAIT

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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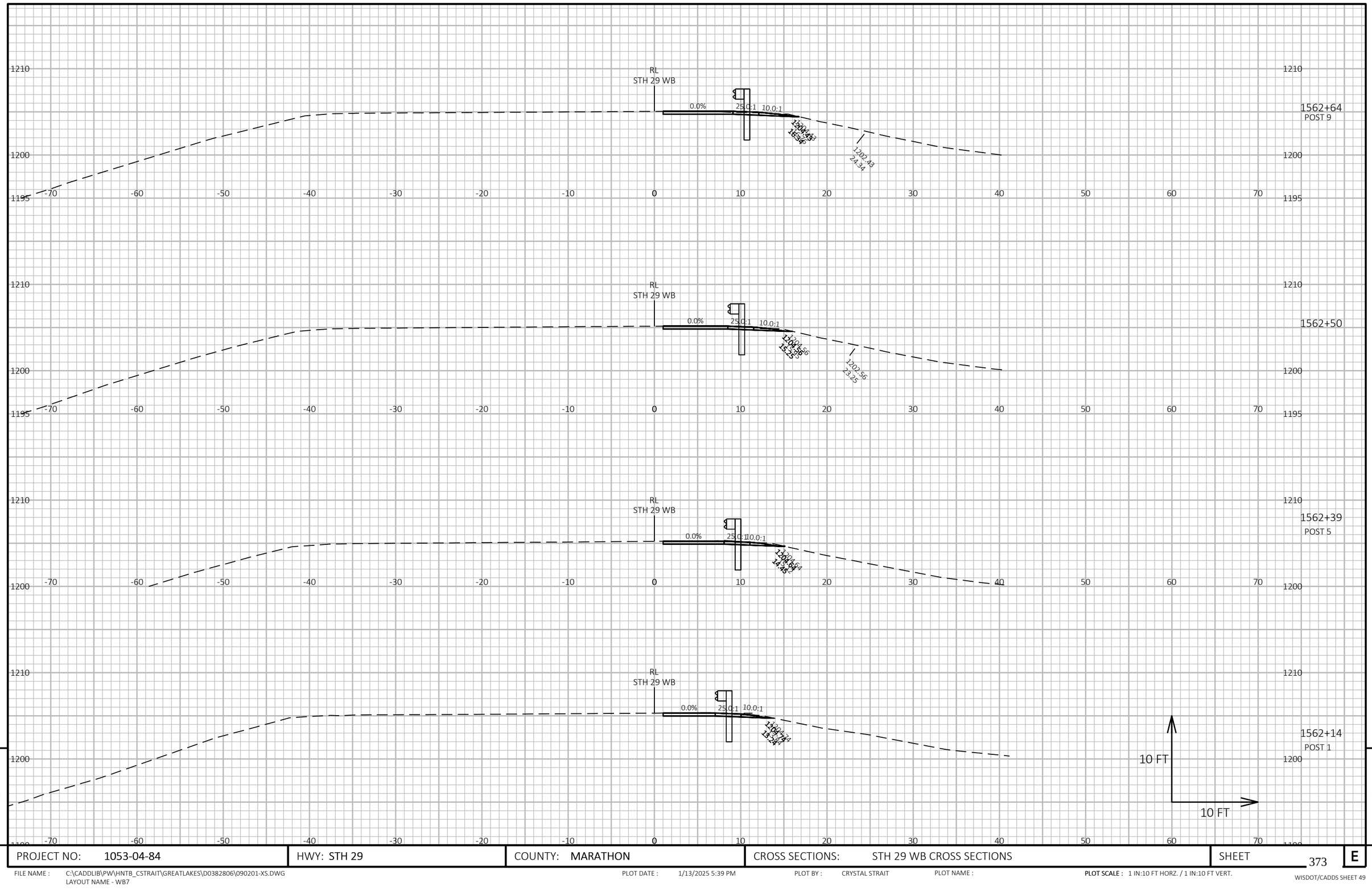
PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 WB CROSS SECTIONS	SHEET 372	E

FILE NAME : C:\CADDLIB\PW\HNTB_CSTRAIT\GREATLAKES\D0382806\090201-XS.DWG
LAYOUT NAME - WB6

PLOT DATE : 1/13/2025 5:39 PM PLOT BY : CRYSTAL STRAIT PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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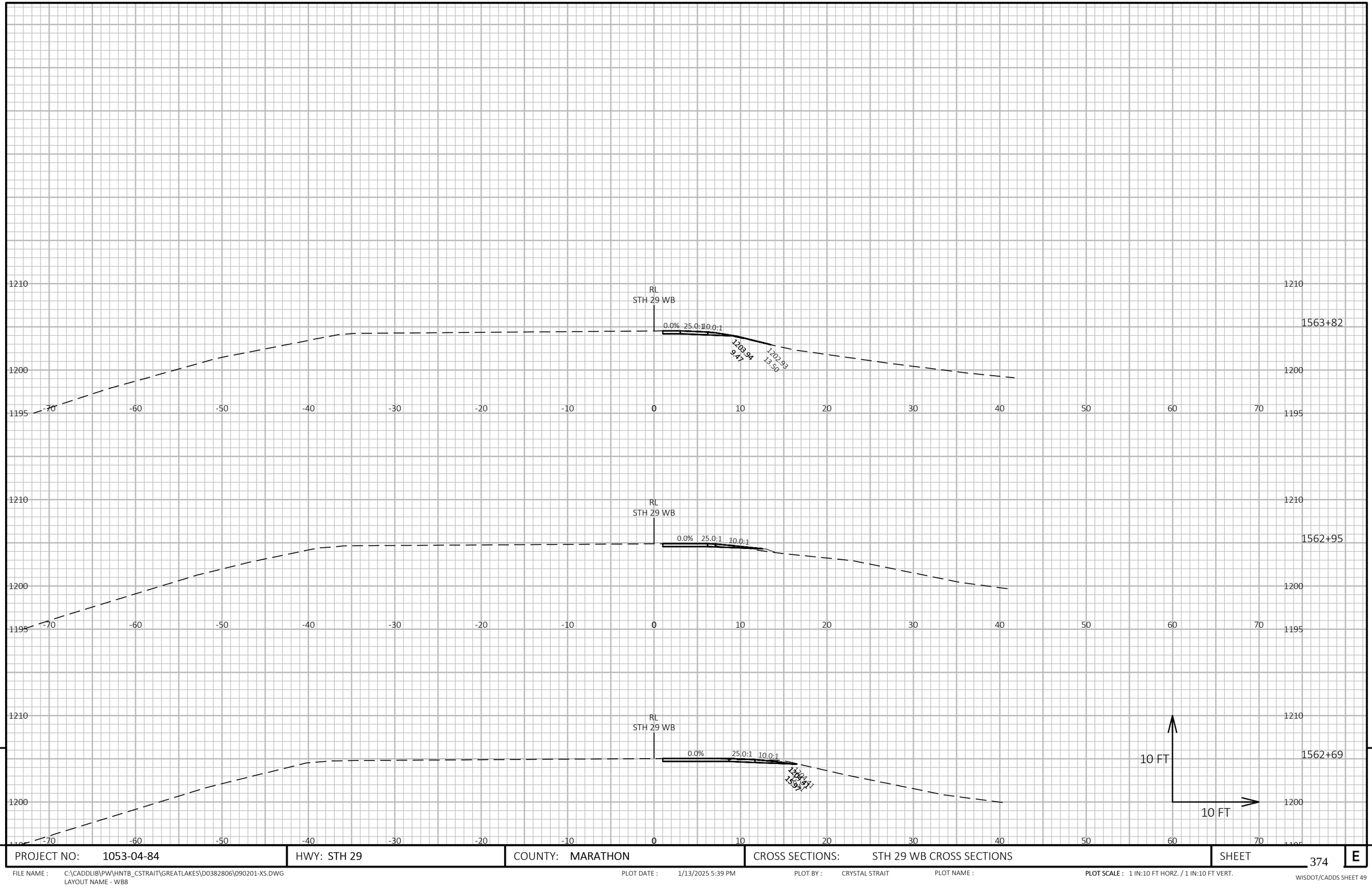
PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 WB CROSS SECTIONS	SHEET 373	E

FILE NAME : C:\CADDLIB\PW\HNTB_CSTRAIT\GREATLAKES\D0382806\090201-XS.DWG
LAYOUT NAME - WB7

PLOT DATE : 1/13/2025 5:39 PM PLOT BY : CRYSTAL STRAIT PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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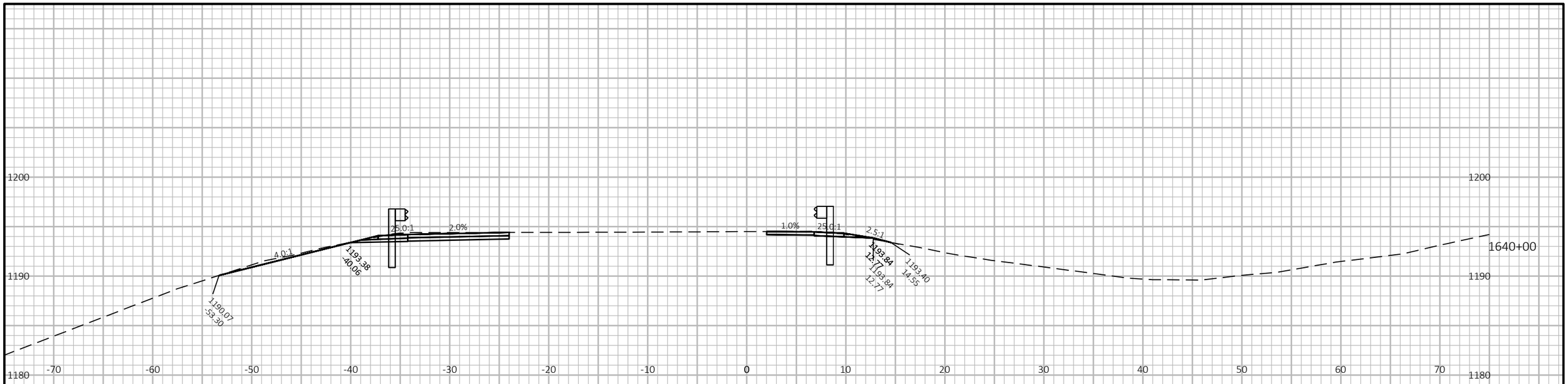
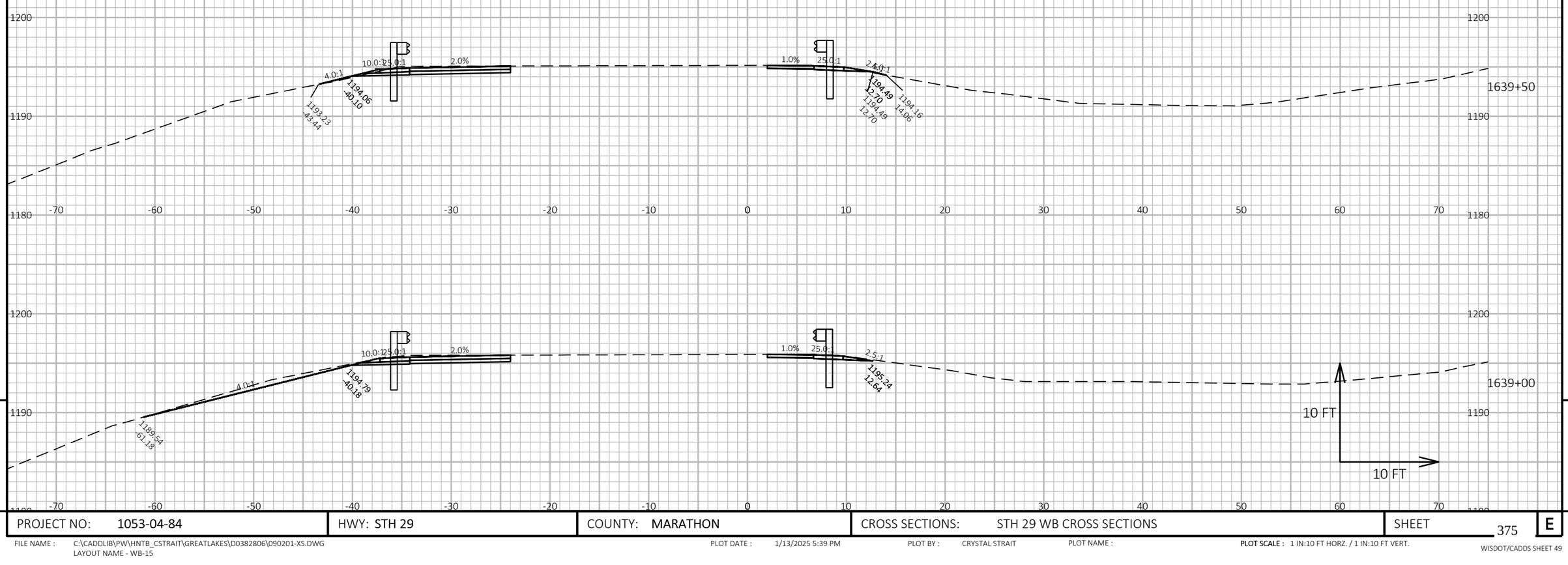
PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 WB CROSS SECTIONS	SHEET 374	E

FILE NAME : C:\CADDLIB\PW\HNTB_CSTRAIT\GREATLAKES\D0382806\090201-XS.DWG
LAYOUT NAME - WB8

PLOT DATE : 1/13/2025 5:39 PM PLOT BY : CRYSTAL STRAIT PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



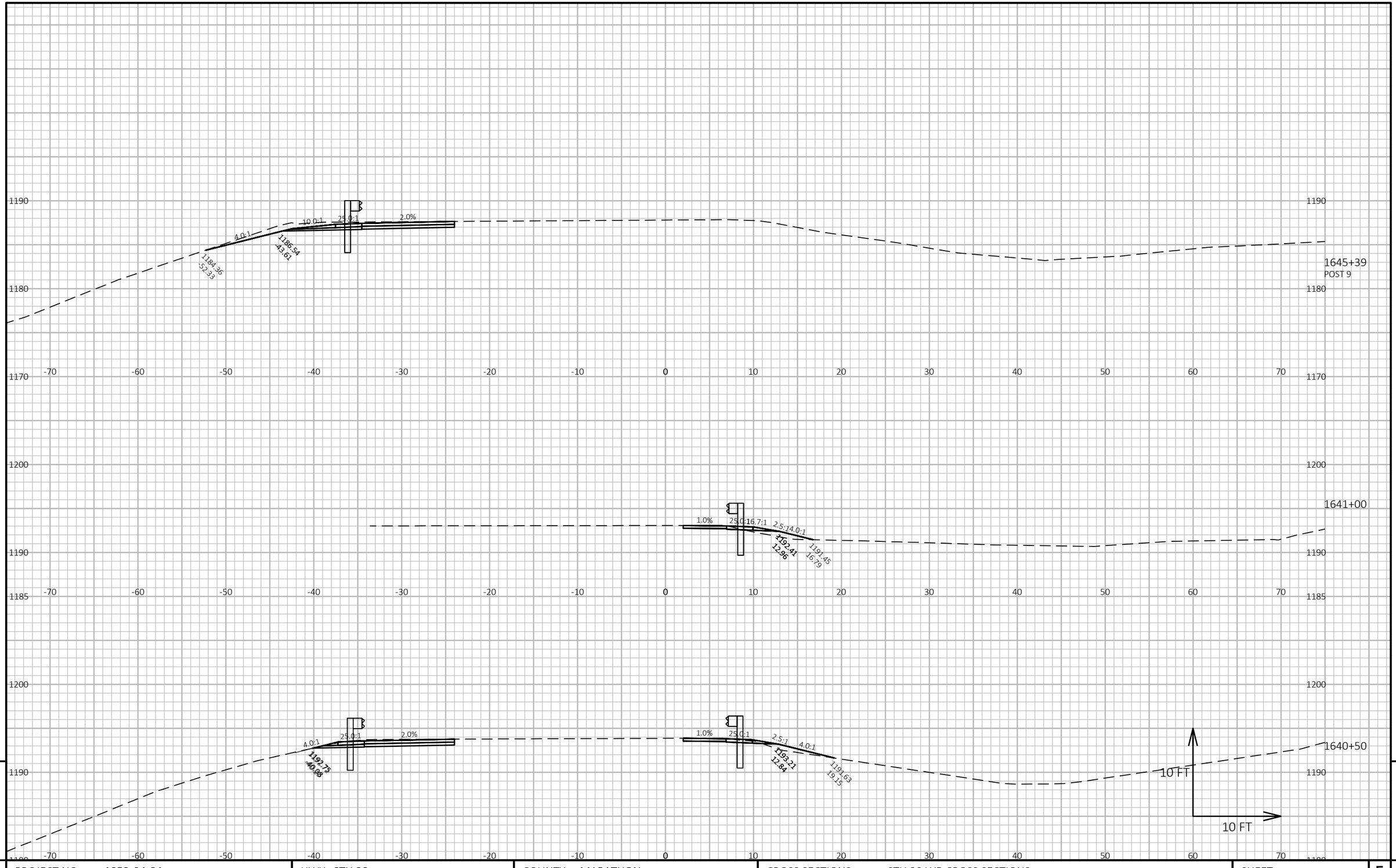


PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 WB CROSS SECTIONS	SHEET 375 E

FILE NAME : C:\CADDLIB\PW\HNTB_CSTRAIT\GREATLAKES\D0382806\090201-XS.DWG
LAYOUT NAME - WB-15

PLOT DATE : 1/13/2025 5:39 PM PLOT BY : CRYSTAL STRAIT PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

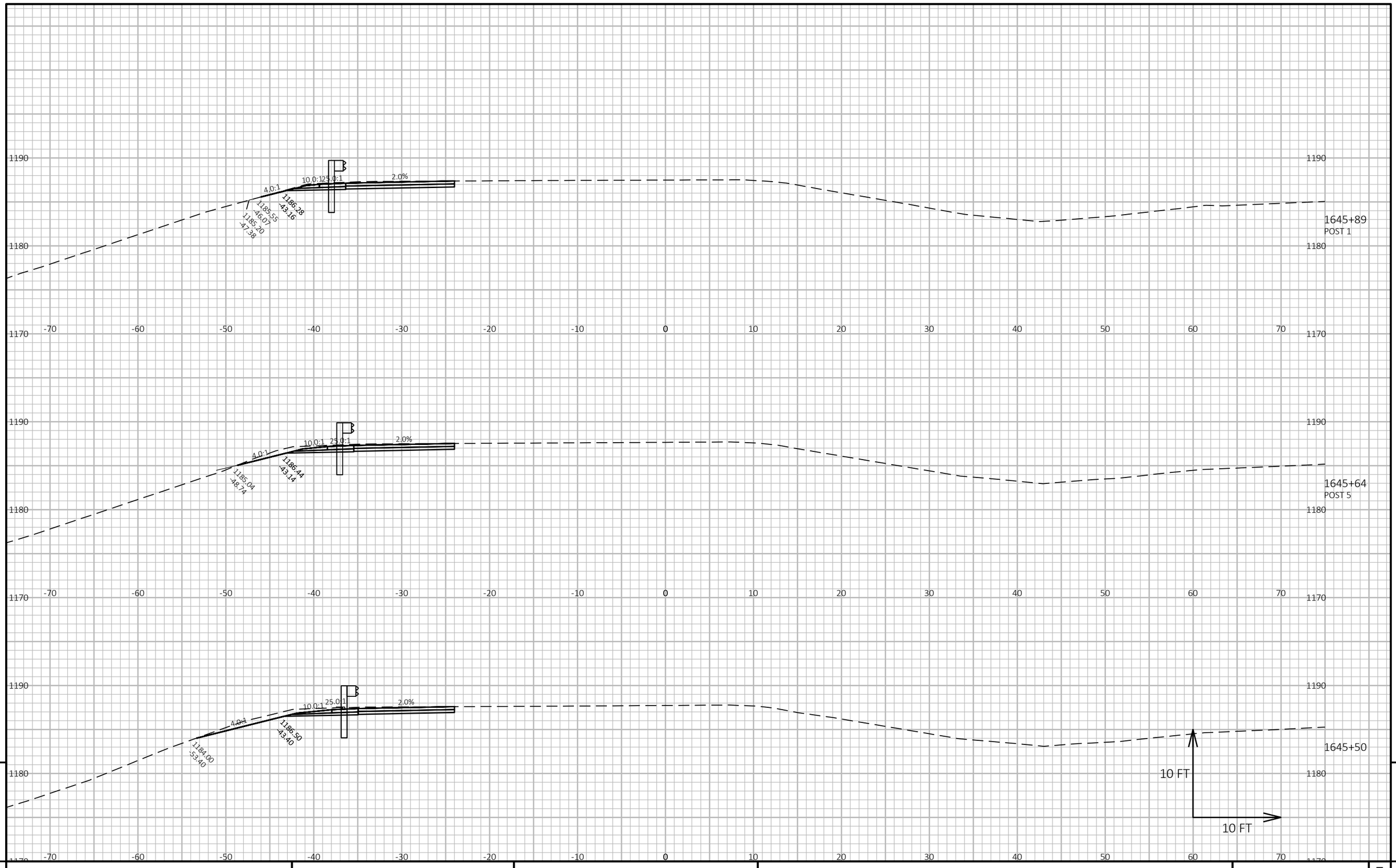


PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 WB CROSS SECTIONS	SHEET 376 E

FILE NAME : C:\CADDLIB\PW\HNTB_CSTRAIT\GREATLAKES\D0382806\090201-XS.DWG
LAYOUT NAME - WB-16

PLOT DATE : 1/13/2025 5:39 PM PLOT BY : CRYSTAL STRAIT PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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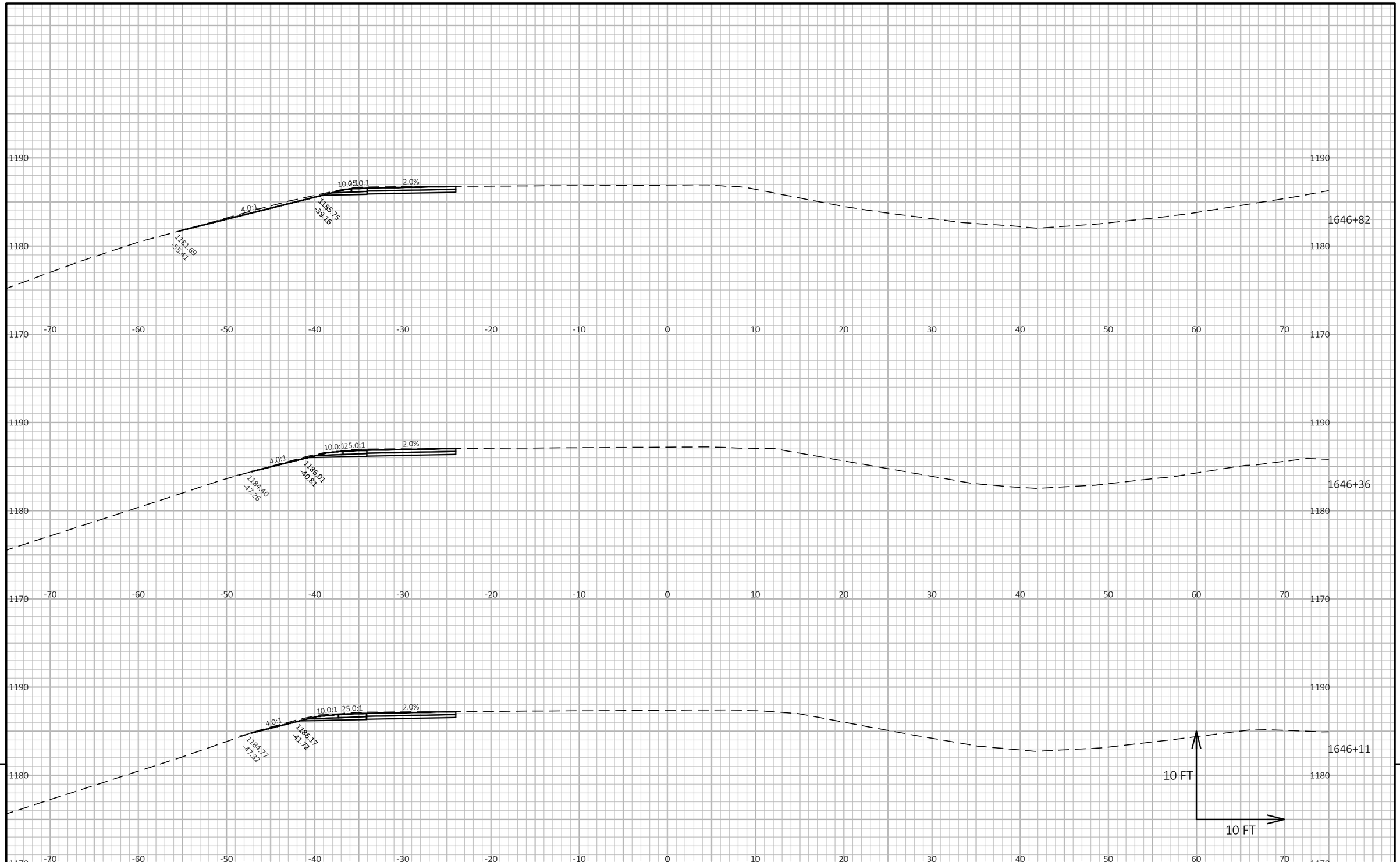
PROJECT NO: 1053-04-14	HWY: STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 WB CROSS SECTIONS	SHEET 377	E

FILE NAME : C:\CADDLIB\PW\HNTB_CSTRAIT\GREATLAKES\D0382806\090201-XS.DWG
LAYOUT NAME - WB-17

PLOT DATE : 1/13/2025 5:40 PM PLOT BY : CRYSTAL STRAIT PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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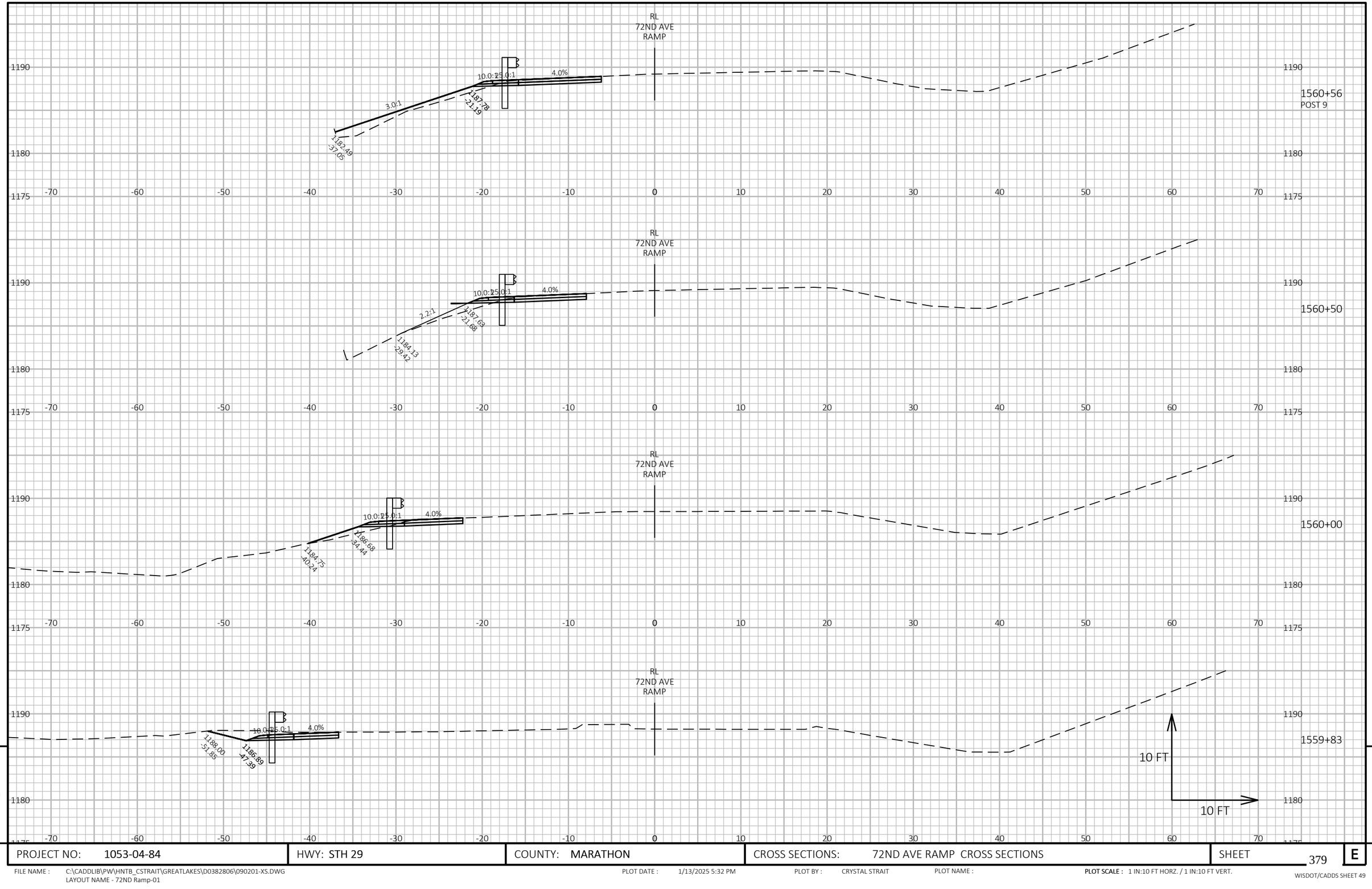
PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 WB CROSS SECTIONS	SHEET 378	E

FILE NAME : C:\CADDLIB\PW\HNTB_CSTRAIT\GREATLAKES\D0382806\090201-XS.DWG
LAYOUT NAME - WB-18

PLOT DATE : 1/13/2025 5:40 PM PLOT BY : CRYSTAL STRAIT PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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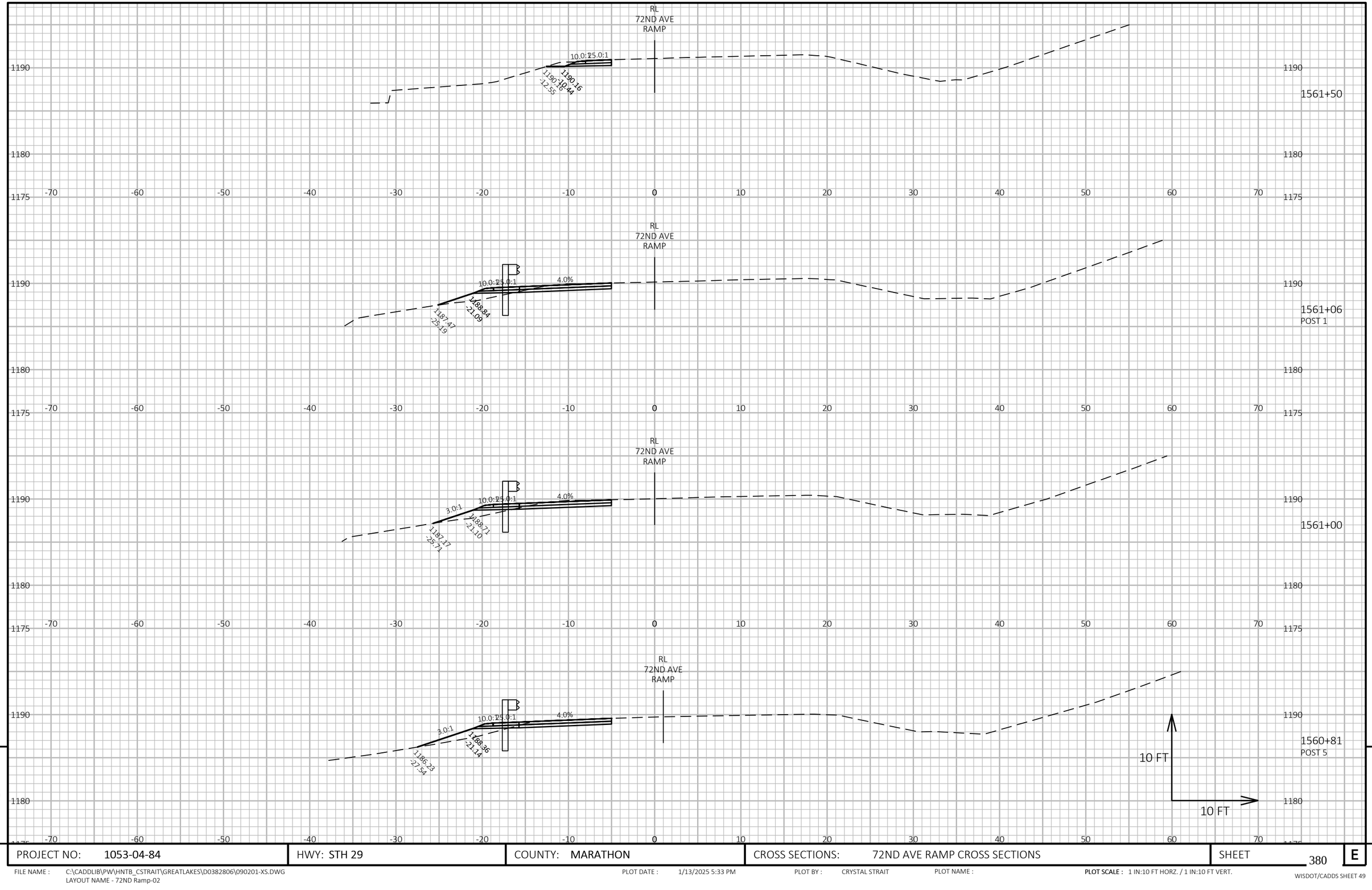
9

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	CROSS SECTIONS: 72ND AVE RAMP CROSS SECTIONS	SHEET 379	E

FILE NAME : C:\CADDLIB\PW\HNTB_CSTRAIT\GREATLAKES\D0382806\090201-XS.DWG
LAYOUT NAME - 72ND Ramp-01

PLOT DATE : 1/13/2025 5:32 PM PLOT BY : CRYSTAL STRAIT PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

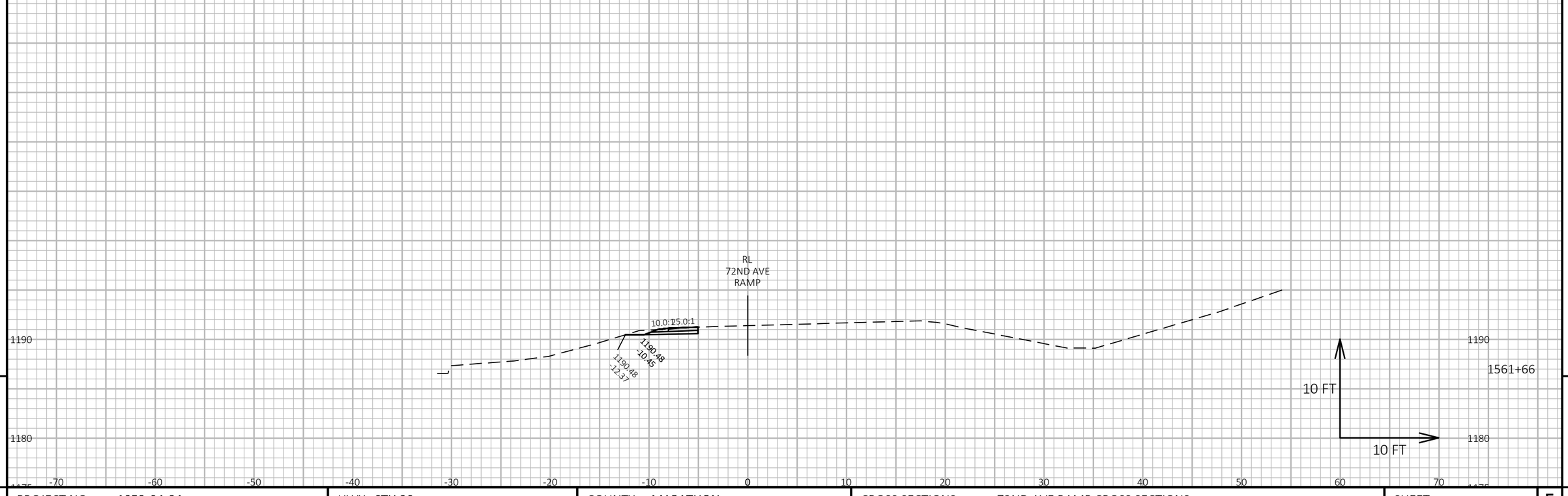


PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	CROSS SECTIONS: 72ND AVE RAMP CROSS SECTIONS	SHEET 380 E

FILE NAME : C:\CADDLIB\PW\HNTB_CSTRAIT\GREATLAKES\D0382806\090201-XS.DWG
LAYOUT NAME - 72ND Ramp-02

PLOT DATE : 1/13/2025 5:33 PM PLOT BY : CRYSTAL STRAIT PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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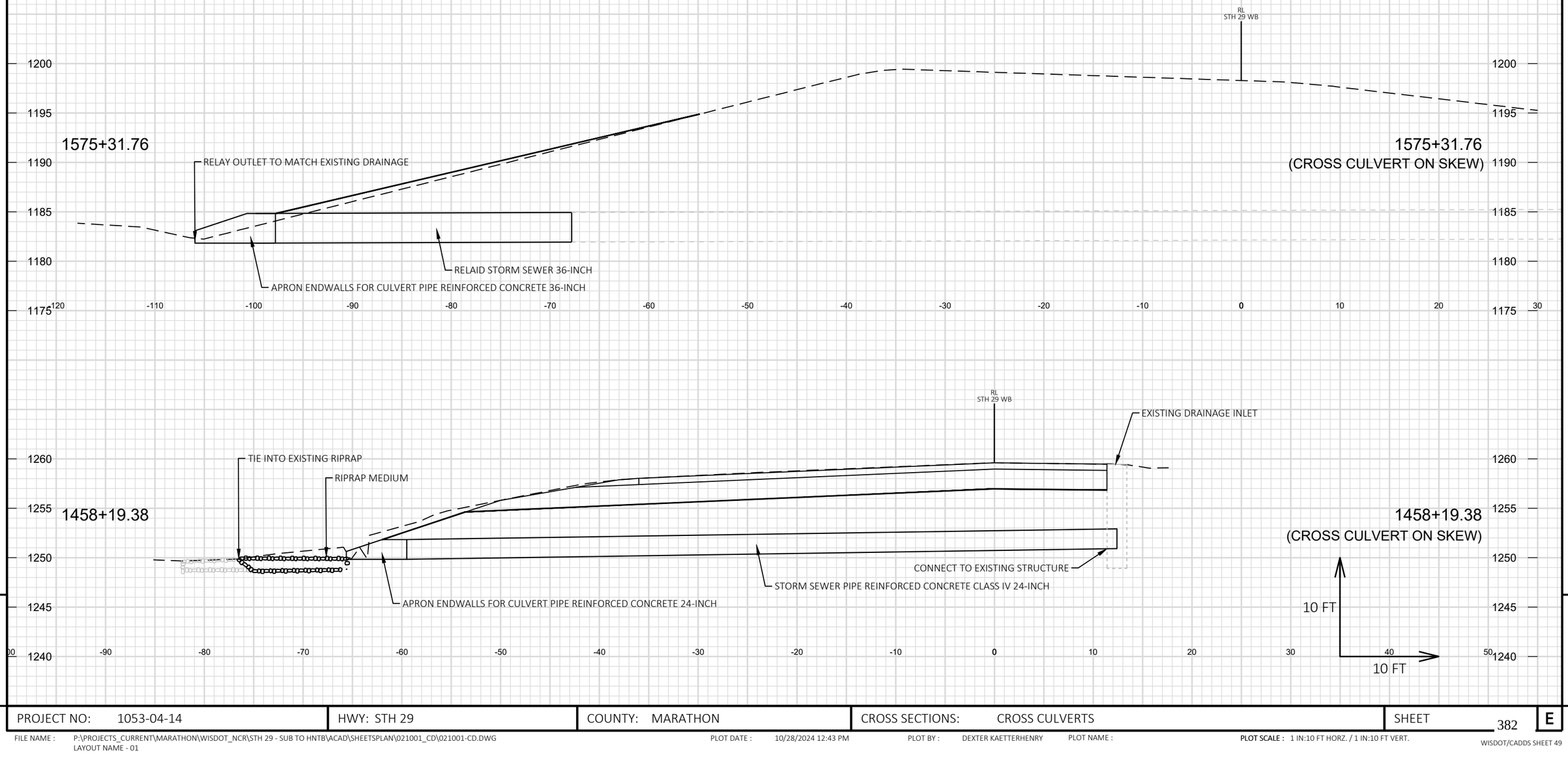
9

PROJECT NO: 1053-04-84	HWY: STH 29	COUNTY: MARATHON	CROSS SECTIONS: 72ND AVE RAMP CROSS SECTIONS	SHEET 381	E

FILE NAME : C:\CADDLIB\PW\HNTB_CSTRAIT\GREATLAKES\D0382806\090201-XS.DWG
LAYOUT NAME - 72ND Ramp-03

PLOT DATE : 1/13/2025 5:33 PM PLOT BY : CRYSTAL STRAIT 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: 1053-04-14	HWY: STH 29	COUNTY: MARATHON	CROSS SECTIONS: CROSS CULVERTS	SHEET 382	E

RL
STH 29 EB

EXISTING DRAINAGE INLET

1649+68.16

CONNECT TO EXISTING STRUCTURE

STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 24-INCH

1649+68.16
(CROSS CULVERT ON SKEW)

APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH

OUTLET TO MATCH EXISTING DRAINAGE

RL
STH 29 WB

OUTLET TO MATCH EXISTING EMBANKMENT

RIPRAP MEDIUM

1634+65.25

APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 18-INCH

STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 18-INCH

EXISTING DRAINAGE INLET

CONNECT TO EXISTING STRUCTURE

1634+65.25
(CROSS CULVERT ON SKEW)

10 FT

10 FT

9

9

PROJECT NO: 1053-04-14	HWY: STH 29	COUNTY: MARATHON	CROSS SECTIONS: CROSS CULVERTS	SHEET 383	E

FILE NAME : P:\PROJECTS_CURRENT\MARATHON\WISDOT_NCR\STH 29 - SUB TO HNTB\ACAD\SHEETSPLAN\021001_CD\021001-CD.DWG
LAYOUT NAME - 02

PLOT DATE : 10/28/2024 12:43 PM PLOT BY : DEXTER KAETTERHENRY PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

Wisconsin Department of Transportation

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