GRE

NOVEMBER 2025

PROJECT ID: 9670-16-71

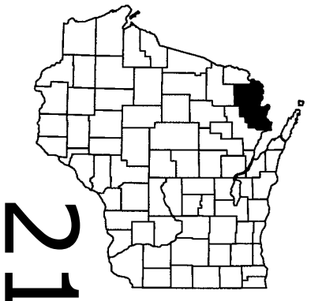
WITH: N/A

COUNTY: MARINETTE

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 = 212



21

N

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

MARINETTE - WAUSAUKEE

STH 64 - USH 141

STH 180

MARINETTE COUNTY

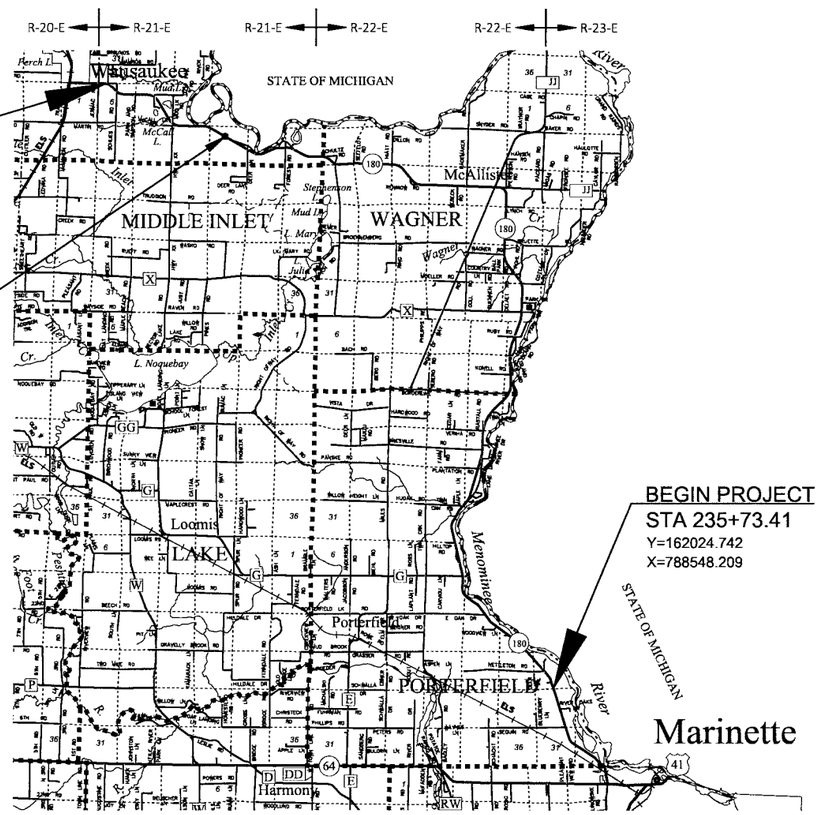
STATE PROJECT NUMBER
9670-16-71

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
9670-16-71	WISC2026053	1

END PROJECT
STA 1633+09.64
Y=246164.161
X=725887.576

STRUCTURE C-38-0128
STA 1437+04

BEGIN PROJECT
STA 235+73.41
Y=162024.742
X=788548.209



LAYOUT

SCALE 0 4 MI

TOTAL NET LENGTH OF CENTERLINE = 0.00 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), MARINETTE 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 18.

DESIGN DESIGNATION

A.A.D.T.	(2026)	=	4,600
A.A.D.T.	(2046)	=	5,000
D.H.V.		=	223
D.D.		=	60/40
T.		=	5.3%
DESIGN SPEED		=	55 MPH
ESALS		=	450,000 HMA

CONVENTIONAL SYMBOLS

PLAN		PROFILE	
CORPORATE LIMITS		GRADE LINE	
PROPERTY LINE		ORIGINAL GROUND	
LOT LINE		MARSH OR ROCK PROFILE (To be noted as such)	ROCK
LIMITED HIGHWAY EASEMENT		SPECIAL DITCH	LABEL
EXISTING RIGHT OF WAY		GRADE ELEVATION	95.36
PROPOSED OR NEW R/W LINE			
SLOPE INTERCEPT		CULVERT (Profile View)	
REFERENCE LINE	300'FB'	UTILITIES	
EXISTING CULVERT		ELECTRIC	E
PROPOSED CULVERT (Box or Pipe)		FIBER OPTIC	FO
COMBUSTIBLE FLUIDS	CAUTION	GAS	G
		SANITARY SEWER	SAN
MARSH AREA		STORM SEWER	SS
		TELEPHONE	T
WOODED OR SHRUB AREA		WATER	W
		UTILITY PEDESTAL	
		POWER POLE	
		TELEPHONE POLE	

ORIGINAL PLANS PREPARED BY

GREMMER & ASSOCIATES, INC.
CONSULTING ENGINEERS

WISCONSIN
JEFFREY A. CHVOSTA
E-39047
SLINGER, WI
PROFESSIONAL ENGINEER

DATE: 7/8/25

JEFFREY A. CHVOSTA, PE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	GREMMER & ASSOCIATES, INC.
Designer	GREMMER & ASSOCIATES, INC.
Project Manager	KURT VOGEL
Regional Examiner	NORTHEAST REGION
Regional Supervisor	KIMBERLY SLEZAK

APPROVED FOR THE DEPARTMENT

DATE: 7/11/2025

(Signature)

E

FILE NAME : S:\CURRPROJ\MARINETTE COUNTY\STH 180\CIVIL3D\96701600\SHEETSPLAN\96701671-010101-TI.DWG

PLOT DATE : 7/8/2025 7:59 AM

PLOT BY : AARON SARAUER

PLOT NAME :

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.

THE EXACT LOCATION AND LAYOUT OF PRIVATE ENTRANCES IS TO BE DETERMINED IN THE FIELD BY THE ENGINEER.

NO FERTILIZER SHALL BE APPLIED WITHIN 20 FEET OF A BODY OF WATER OR WETLAND.

SECTIONS AS SHOWN ON THE CROSS-SECTIONS INCLUDE THE THICKNESS OF TOPSOIL WHERE REQUIRED.

BASE AGGREGATE DENSE ¾-INCH WEIGHT CALCULATIONS ARE BASED ON 2.1 TONS/CY. BASE AGGREGATE DENSE 1¼-INCH WEIGHT CALCULATIONS ARE BASED ON 2.0 TONS/CY.

HMA PAVEMENT WEIGHT CALCULATIONS BASED ON 112 LBS/SY/INCH.

ABBREVIATIONS

AGG	AGGREGATE
AH	AHEAD
ASPH	ASPHALT
BK	BACK
BAD	BASE AGGREGATE DENSE
BM	BENCH MARK
CC	CENTER OF CURVATURE
CE	COMMERCIAL ENTRANCE
C&G	CURB AND GUTTER
C/L	CENTER OR CONSTRUCTION LINE
CMCE	CORRUGATED METAL ELLIPTICAL CULVERT PIPE
CONC	CONCRETE
CY	CUBIC YARD
D	DEGREE OF CURVE
Δ	DELTA
E	EXTERNAL DISTANCE FROM MIDPOINT OF CIRCULAR CURVE FROM ANGLE INTERSECTION
ELEV	ELEVATION
FE	FIELD ENTRANCE
HMA	HOT MIX ASPHALT
L	LENGTH OF CURVE
LT	LEFT
MAX	MAXIMUM
MIN	MINIMUM
M/L	MATCHLINE
PAVT	PAVEMENT
PC	POINT OF CURVE
PCC	POINT OF COMPOUND CURVE
PE	PRIVATE ENTRANCE
PI	POINT OF INTERSECTION
PT	POINT OF TANGENT
R	RADIUS OF CURVE
R/L	REFERENCE LINE
REQ'D	REQUIRED
RO	RUN OFF LENGTH
RT	RIGHT
SALV	SALVAGED
SDD	STANDARD DETAIL DRAWING
SE	SUPER ELEVATION
SEG	SEGMENT
SF	SQUARE FOOT
STA	STATION
SY	SQUARE YARD
T	TANGENT LENGTH
TYP	TYPICAL
V	VELOCITY OR DESIGN SPEED

ORDER OF SECTION 2 SHEETS

GENERAL NOTES
PROJECT OVERVIEW
TYPICAL SECTIONS
CONSTRUCTION DETAILS
PLAN DETAILS
EROSION CONTROL PLAN
TRAFFIC CONTROL
DETOUR
ALIGNMENT PLAN

UTILITIES

COMMUNICATIONS

BRIGHTSPEED OF WESTERN WISCONSIN, LLC
N18670 ALGONQUIN TRAIL
PEMBINE, WI 54156
ATTN: CRAIG OBERG
PHONE: (980) 376-1576
EMAIL: craig.oberg@brightspeed.com

COMMUNICATIONS

SPECTRUM
2580 W MASON STREET
GREEN BAY, WI 54303
ATTN: DAVE BERGSTROM
PHONE: (920) 831-9174
EMAIL: dave.bergstrom@charter.com

ELECTRIC

WISCONSIN PUBLIC SERVICE CORPORATION
2820 S ASHLAND AVENUE
GREEN BAY, WI 54302
ATTN: CODY RYE
PHONE: (920) 617-5139
EMAIL: cody.rye@wisconsinpublicservice.com

GAS

WISCONSIN PUBLIC SERVICE CORPORATION
1717 10TH AVENUE
MENOMINEE, MI 49858
ATTN: STEVE BONECK
PHONE: (906) 863-4320
EMAIL: steve.boneck@wisconsinpublicservice.com

RUNOFF COEFFICIENT TABLE

	HYDROLOGIC SOIL GROUP											
	A			B			C			D		
	SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)		
LAND USE:	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER
ROW CROPS	.08 .22	.16 .30	.22 .38	.12 .26	.20 .34	.27 .44	.15 .30	.24 .37	.33 .50	.19 .34	.28 .41	.38 .56
MEDIAN STRIP-TURF	.19 .24	.20 .26	.24 .30	.19 .25	.22 .28	.26 .33	.20 .26	.23 .30	.30 .37	.20 .27	.25 .32	.30 .40
SIDE SLOPE-TURF			.25 .32			.27 .34			.28 .36			.25 .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 = 11.227 ACRES

TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 5.303 ACRES

NE REGION SURVEY COORDINATOR

MICHAEL ANDRASCHKO
WISCONSIN DEPARTMENT OF TRANSPORTATION
944 VANDERPERREN WAY
GREEN BAY, WI 54304
PHONE: (920) 492-4166
EMAIL: michael.andraschko@dot.wi.gov

DNR AREA LIAISON

JIM DOPERALSKI JR.
WISCONSIN DEPT. OF NATURAL RESOURCES
WDNR NORTHEAST REGIONAL HQ
2984 SHAWANO AVENUE
GREEN BAY, WI 54313
PHONE: (920) 412-0165
EMAIL: james.doperalski@wiscosnsin.gov

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

NE REGION PROJECT MANAGER

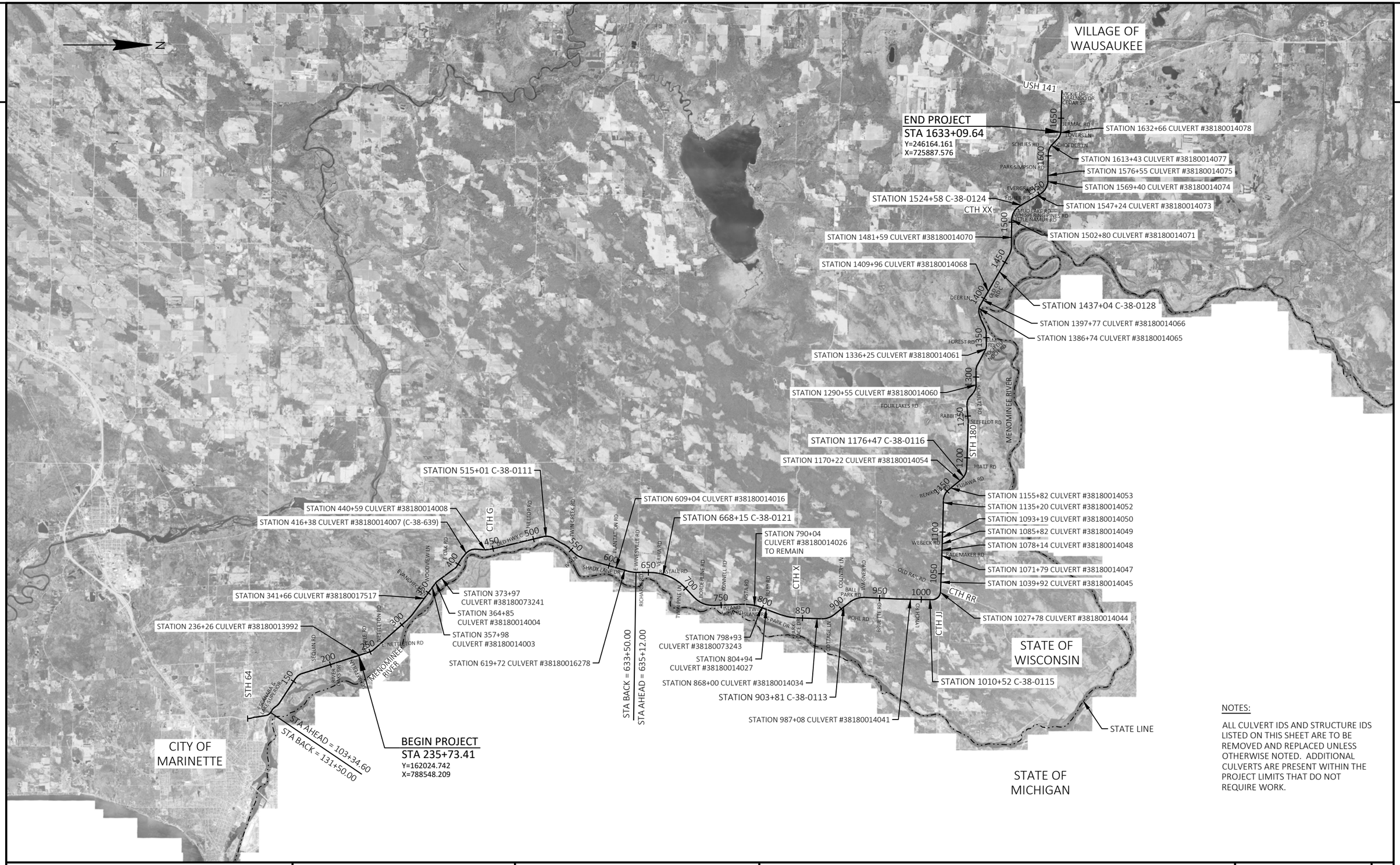
KURT VOGEL, PE
WISCONSIN DEPARTMENT OF TRANSPORTATION
944 VANDERPERREN WAY
GREEN BAY, WI 54304
PHONE: (920) 362-1732
EMAIL: kurt.vogel@dot.wi.gov

DESIGN CONTACT

JEFFREY A. CHVOSTA, PE
GREMMER & ASSOCIATES, INC.
W175 N117 STONEWOOD DRIVE, SUITE 200
GERMANTOWN, WI 53022
PHONE: (920) 924-5720
EMAIL: j.chvosta@gremmerassociates.com

MARINETTE COUNTY CONTACT

ERIC BURMEISTER
HIGHWAY COMMISSIONER
501 PINE STREET
PESHTIGO, WI 54157
PHONE: (715) 582-3771
EMAIL: eburmeister@marinettecounty.com



NOTES:

ALL CULVERT IDS AND STRUCTURE IDS LISTED ON THIS SHEET ARE TO BE REMOVED AND REPLACED UNLESS OTHERWISE NOTED. ADDITIONAL CULVERTS ARE PRESENT WITHIN THE PROJECT LIMITS THAT DO NOT REQUIRE WORK.

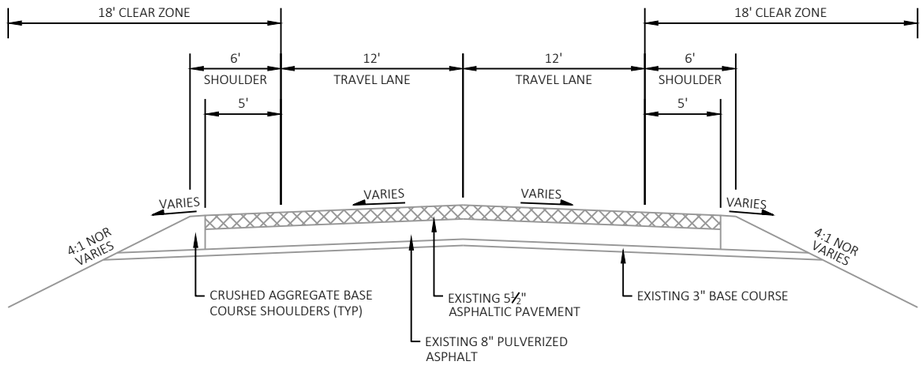
PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	PROJECT OVERVIEW	SHEET 3	E

FILE NAME : S:\CURRPROJ\MARINETTE COUNTY\STH 180\CIVIL3D\96701600\SHEETSPLAN\96701671-020201-PO.DWG
LAYOUT NAME - Sheet-01

PLOT DATE : 7/31/2025 7:09 AM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : NTS

WISDOT/CADDS SHEET 42

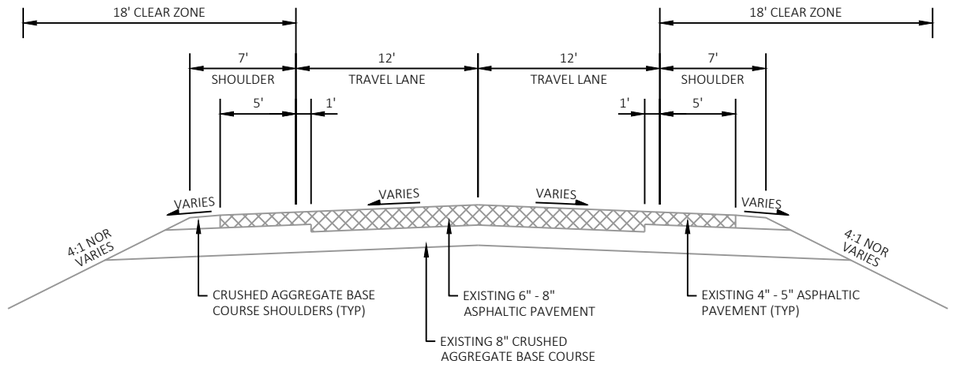
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TYPICAL EXISTING SECTION

STH 180

STA 235+73 - STA 236+79
STA 341+57 - STA 341+77
STA 357+54 - STA 358+37
STA 364+68 - STA 365+05
STA 373+86 - STA 374+08
STA 416+08 - STA 416+68
STA 440+18 - STA 441+01

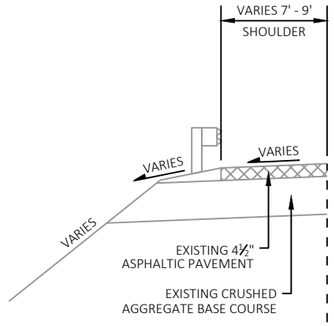


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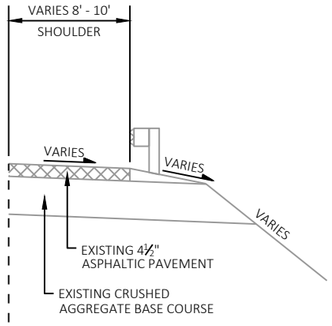
STH 180

STA 515+51 - STA 515+56
STA 608+62 - STA 609+46
STA 619+31 - STA 620+14
STA 667+75 - STA 668+50
STA 798+27 - STA 799+51
STA 804+40 - STA 805+45

2



BEAM GUARD SECTION
STA 1523+59 - STA 1526+01



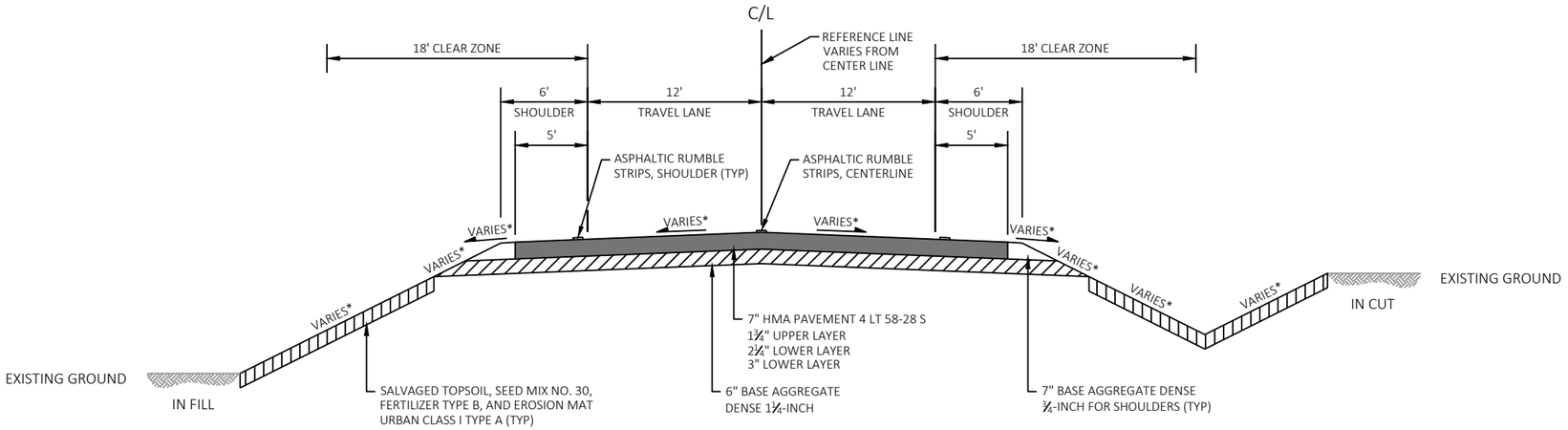
BEAM GUARD SECTION
STA 1175+50 - STA 1177+53

TYPICAL EXISTING SECTION

STH 180

STA 867+83 - STA 868+18	STA 1290+11 - STA 1290+97
STA 903+52 - STA 904+10	STA 1335+83 - STA 1336+68
STA 986+66 - STA 987+49	STA 1386+48 - STA 1386+99
STA 1010+05 - STA 1010+98	STA 1397+35 - STA 1398+18
STA 1027+36 - STA 1028+20	STA 1409+52 - STA 1410+36
STA 1039+50 - STA 1040+33	STA 1436+25 - STA 1437+50
STA 1071+37 - STA 1072+20	STA 1481+18 - STA 1482+00
STA 1077+73 - STA 1078+56	STA 1502+65 - STA 1502+97
STA 1085+40 - STA 1086+23	STA 1522+78 - STA 1527+07
STA 1093+06 - STA 1093+32	STA 1547+10 - STA 1547+39
STA 1134+79 - STA 1135+63	STA 1568+98 - STA 1569+82
STA 1155+67 - STA 1155+97	STA 1576+14 - STA 1576+97
STA 1169+81 - STA 1170+64	STA 1613+33 - STA 1613+54
STA 1174+19 - STA 1178+23	STA 1632+22 - STA 1633+10

2

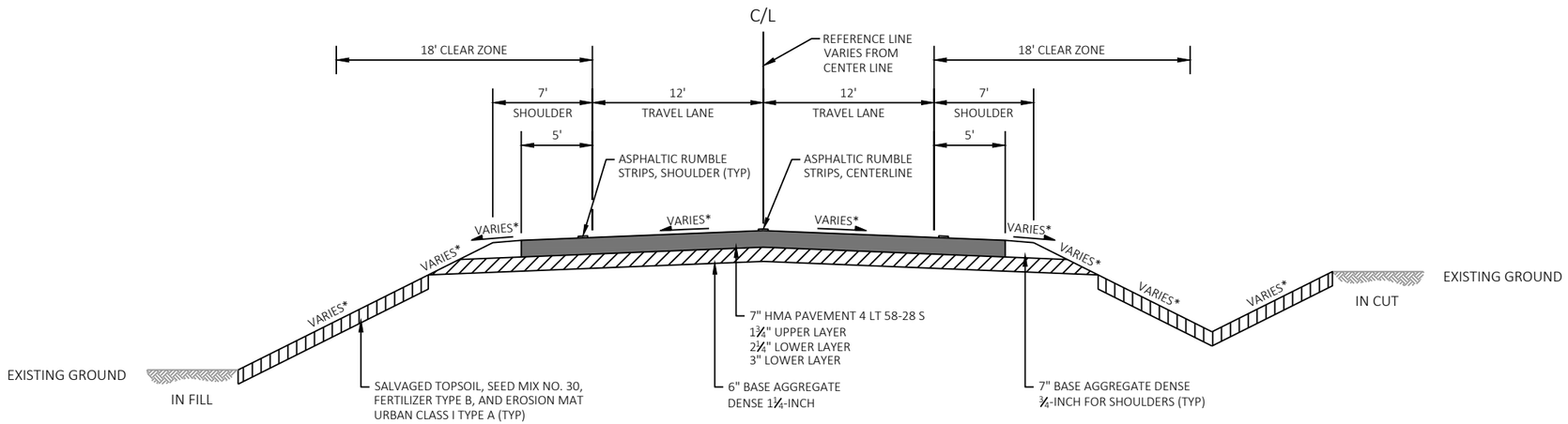


TYPICAL FINISHED SECTION AT CROSS DRAIN CULVERT REMOVAL/REPLACEMENT LOCATIONS

STH 180
STA 235+73 - STA 236+79
STA 341+57 - STA 341+77
STA 357+54 - STA 358+37
STA 364+68 - STA 365+05
STA 373+86 - STA 374+08
STA 416+08 - STA 416+68
STA 440+18 - STA 441+01

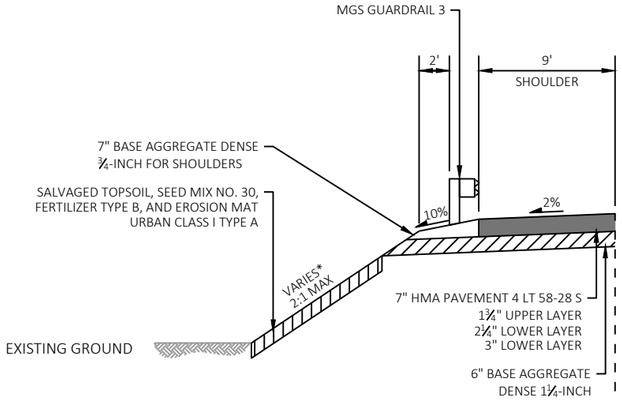
NOTES:

* SEE CROSS SECTIONS FOR SLOPES SPECIFIC TO EACH LOCATION

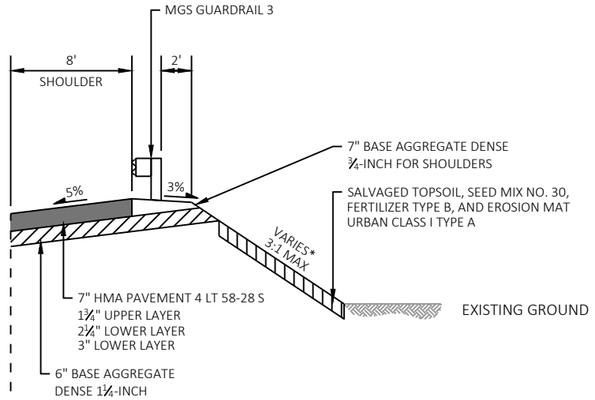


TYPICAL FINISHED SECTION AT CROSS DRAIN CULVERT REMOVAL/REPLACEMENT LOCATIONS

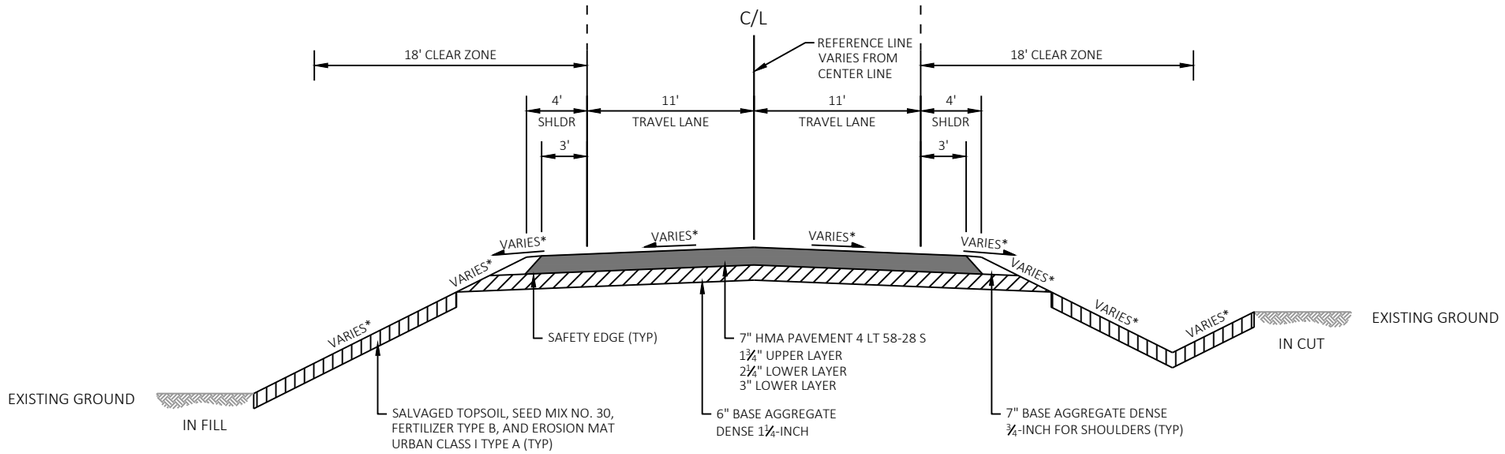
STH 180
STA 515+51 - STA 515+56
STA 608+62 - STA 609+46
STA 619+31 - STA 620+14
STA 667+75 - STA 668+50
STA 798+27 - STA 799+51
STA 804+40 - STA 805+45



BEAM GUARD SECTION
STA 1524+28 - STA 1524+88



BEAM GUARD SECTION
STA 1175+99 - STA 1176+96



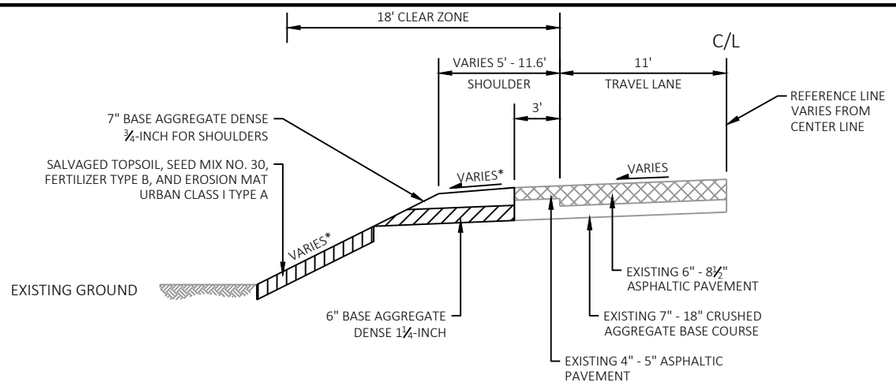
NOTES:

* SEE CROSS SECTIONS FOR SLOPES SPECIFIC TO EACH LOCATION

TYPICAL FINISHED SECTION AT CROSS DRAIN CULVERT REMOVAL/REPLACEMENT LOCATIONS

STH 180

STA 867+83 - STA 868+18	STA 1290+11 - STA 1290+97
STA 903+52 - STA 904+10	STA 1335+83 - STA 1336+68
STA 986+66 - STA 987+49	STA 1386+48 - STA 1386+99
STA 1010+05 - STA 1010+98	STA 1397+35 - STA 1398+18
STA 1027+36 - STA 1028+20	STA 1409+52 - STA 1410+36
STA 1039+50 - STA 1040+33	STA 1436+25 - STA 1437+50
STA 1071+37 - STA 1072+20	STA 1481+18 - STA 1482+00
STA 1077+73 - STA 1078+56	STA 1502+65 - STA 1502+97
STA 1085+40 - STA 1086+23	STA 1524+28 - STA 1524+88
STA 1093+06 - STA 1093+32	STA 1547+10 - STA 1547+39
STA 1134+79 - STA 1135+63	STA 1568+98 - STA 1569+82
STA 1155+67 - STA 1155+97	STA 1576+14 - STA 1576+97
STA 1169+81 - STA 1170+64	STA 1613+33 - STA 1613+54
STA 1175+99 - STA 1176+96	STA 1632+22 - STA 1633+10

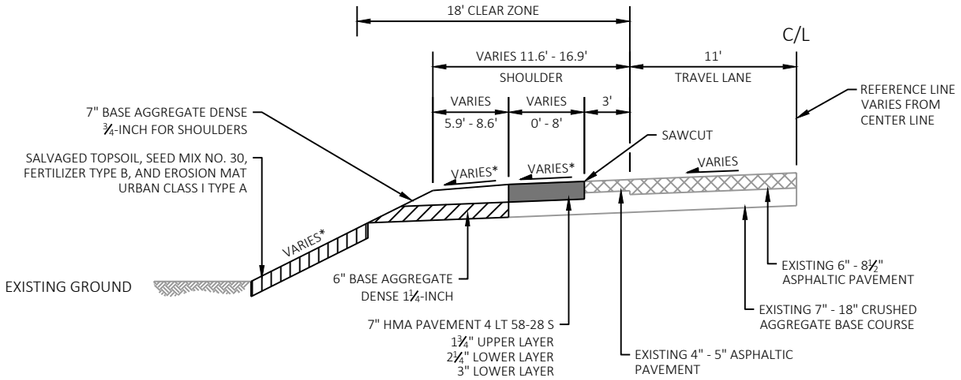


TYPICAL HALF FINISHED SECTION AT BEAM GUARD REMOVAL/REPLACEMENT LOCATIONS

STH 180

STA 1521+56 - STA 1522+78

STA 1527+07 - STA 1528+06

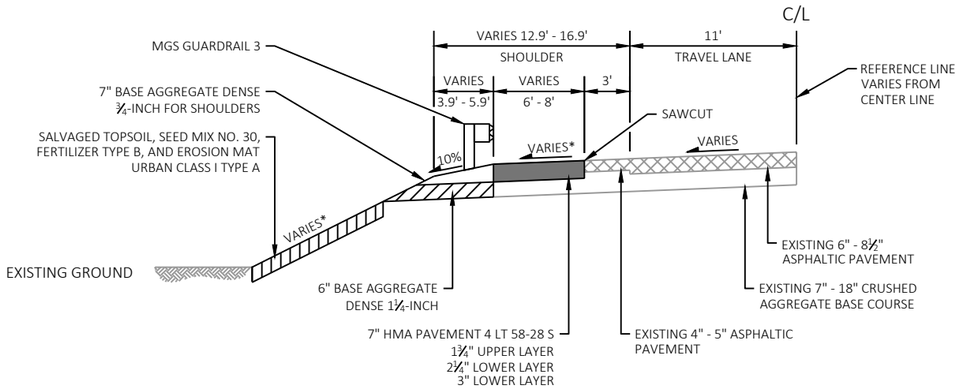


TYPICAL HALF FINISHED SECTION AT BEAM GUARD REMOVAL/REPLACEMENT LOCATIONS

STH 180

STA 1522+78 - STA 1523+59

STA 1526+27 - STA 1527+07



TYPICAL HALF FINISHED SECTION AT BEAM GUARD REMOVAL/REPLACEMENT LOCATIONS

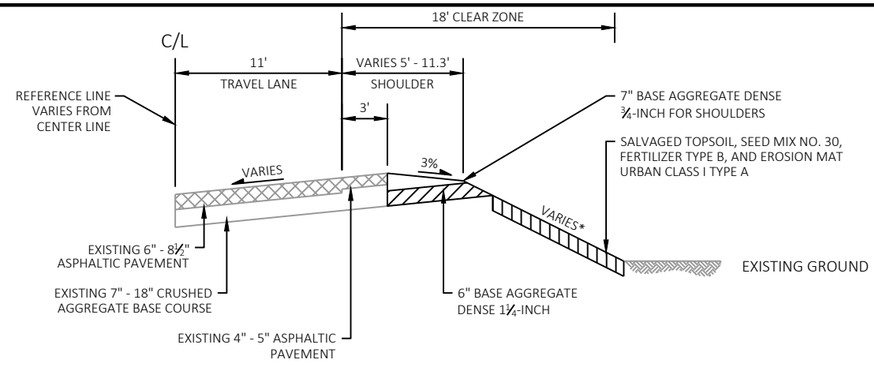
STH 180

STA 1523+59 - STA 1524+28

STA 1524+88 - STA 1526+27

NOTES:

* SEE CROSS SECTIONS FOR SLOPES SPECIFIC TO EACH LOCATION

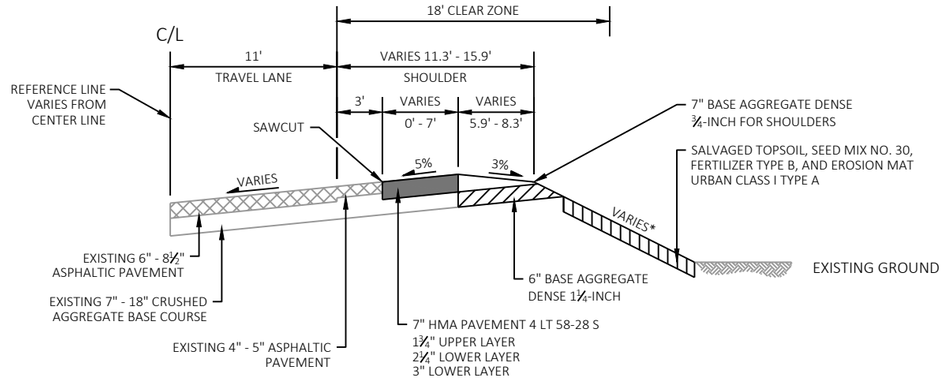


TYPICAL HALF FINISHED SECTION AT BEAM GUARD REMOVAL/REPLACEMENT LOCATIONS

STH 180

STA 1173+25 - STA 1174+19

STA 1178+23 - STA 1179+17

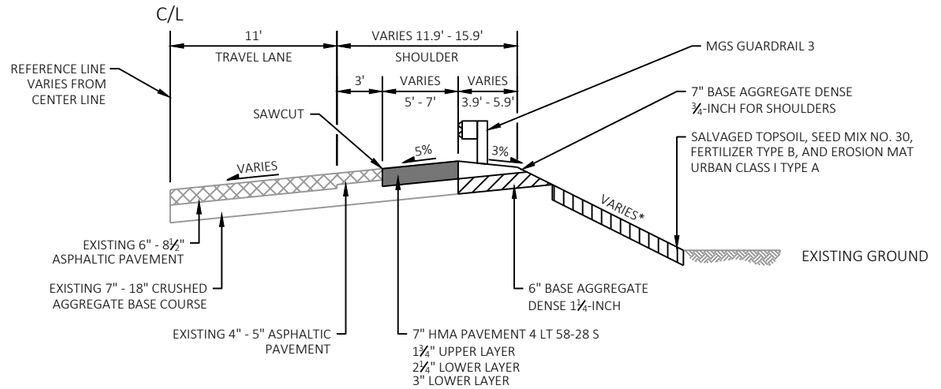


TYPICAL HALF FINISHED SECTION AT BEAM GUARD REMOVAL/REPLACEMENT LOCATIONS

STH 180

STA 1174+19 - STA 1174+88

STA 1177+54 - STA 1178+23

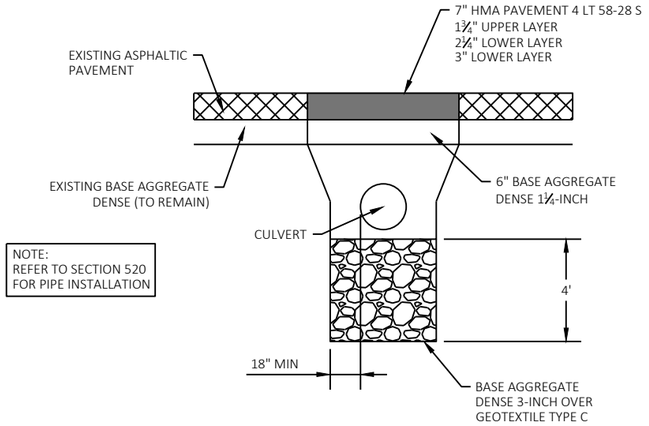


TYPICAL HALF FINISHED SECTION AT BEAM GUARD REMOVAL/REPLACEMENT LOCATIONS

STH 180

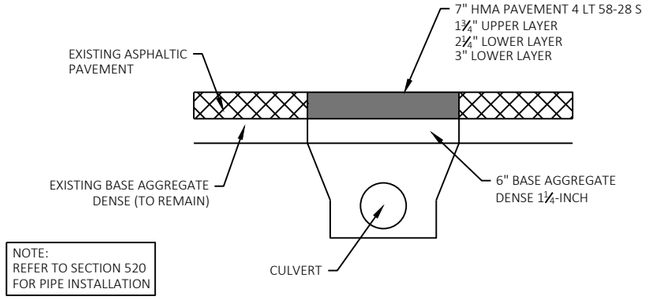
STA 1174+88 - STA 1175+99

STA 1176+96 - STA 1177+54



	CULVERT PIPE DEPTHS	EXCAVATION BELOW CULVERT OFFSETS	
STATION	APPROX. DEPTH C/L TO TOP OF PIPE	START OFFSET	END OFFSET
1524+57	5.5	43.3' RT	63.0' RT

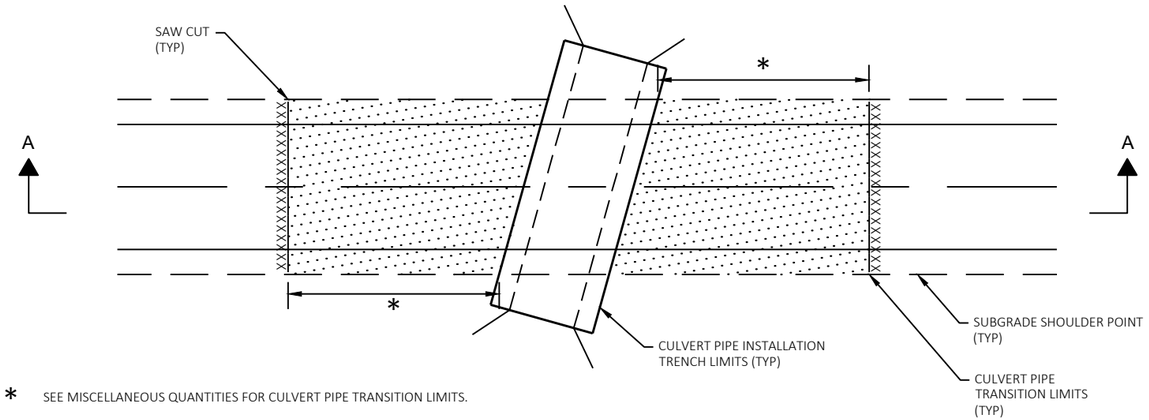
EXCAVATION BELOW CULVERTS DETAIL



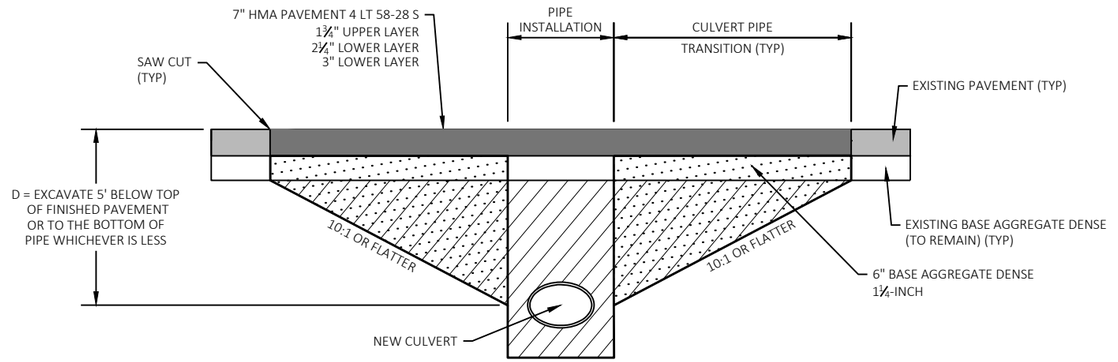
CULVERT PIPE DEPTHS	
STATION	APPROX. DEPTH C/L TO TOP OF PIPE
341+66	4.7
364+85	7.6
373+97	4.2
416+38	9.9
515+01	6.0
668+15	8.7
868+00	6.1

CULVERT PIPE DEPTHS	
STATION	APPROX. DEPTH C/L TO TOP OF PIPE
903+81	6.1
1093+19	5.6
1155+82	7.1
1386+74	8.0
1502+80	4.7
1547+24	5.8
1613+43	4.2

PAVEMENT AT CULVERT REPLACEMENTS



* SEE MISCELLANEOUS QUANTITIES FOR CULVERT PIPE TRANSITION LIMITS.



SECTION A-A

COMMON EXCAVATION

FOUNDATION BACKFILL

CULVERT PIPE DEPTHS	
STATION	APPROX. DEPTH C/L TO TOP OF PIPE
236+26	3.4
357+96	2.8
440+59	3.4
609+04	2.9
619+72	2.4
798+93	1.8
804+94	3.7
987+08	3.2
1010+52	2.2
1027+78	3.8
1039+92	3.2
1071+79	3.3
1078+14	2.7

CULVERT PIPE DEPTHS	
STATION	APPROX. DEPTH C/L TO TOP OF PIPE
1085+82	3.7
1135+20	3.8
1170+22	3.3
1176+47	3.3
1290+55	3.2
1336+25	2.9
1397+77	3.4
1409+96	1.9
1481+59	3.1
1569+40	2.2
1576+55	1.6
1632+66	2.2

PIPE INSTALLATION AREA WILL FOLLOW SECTION 520 FOR INSTALLATION, WIDTHS AND PAYMENT.

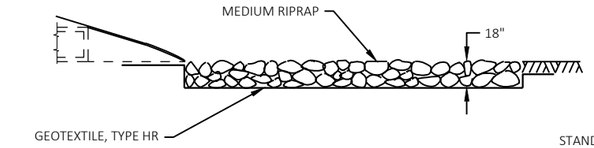
CONSTRUCT TRANSITION PERPENDICULAR TO CULVERT PIPE.

CULVERT PIPE TRANSITION AREAS WILL BE PAID BY COMMON EXCAVATION & SPV FOUNDATION BACKFILL.

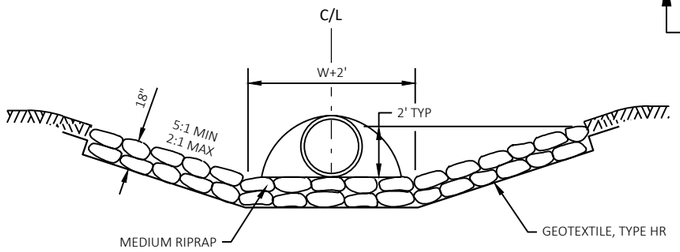
PAVEMENT SAW CUT TO BE PERPENDICULAR TO ROADWAY ALIGNMENT.

NEW CULVERT PIPES WITH TRANSITION

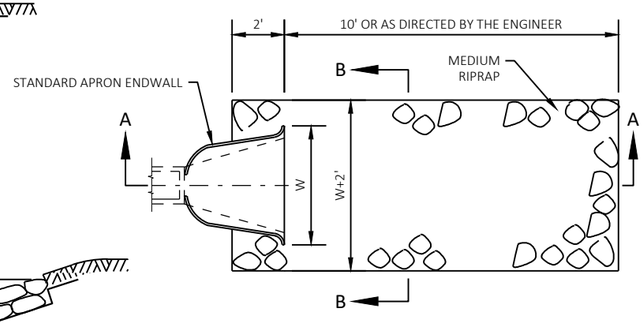
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SECTION A-A

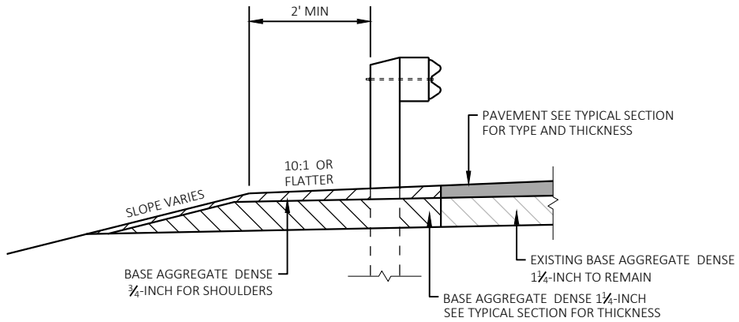


SECTION B-B

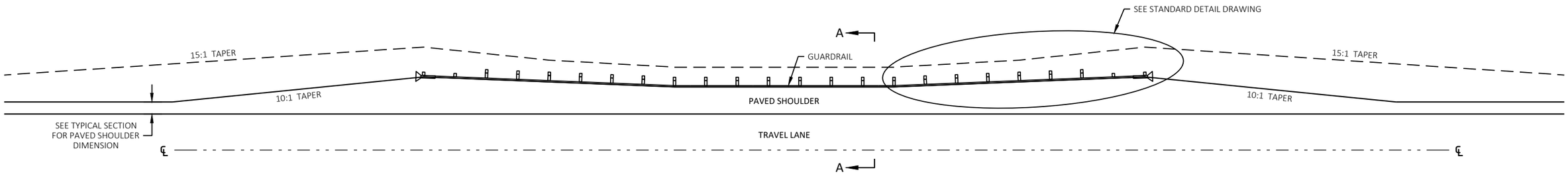


PLAN VIEW

MEDIUM RIPRAP AND GEOTEXTILE DETAIL AT APRON ENDWALLS



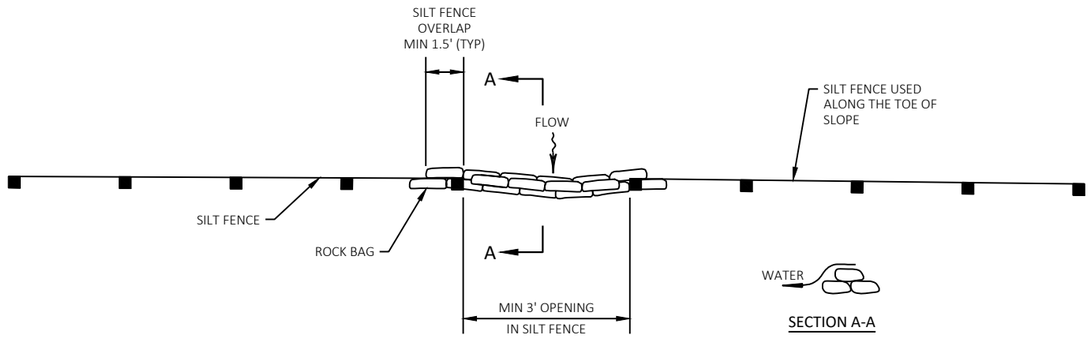
SECTION A-A



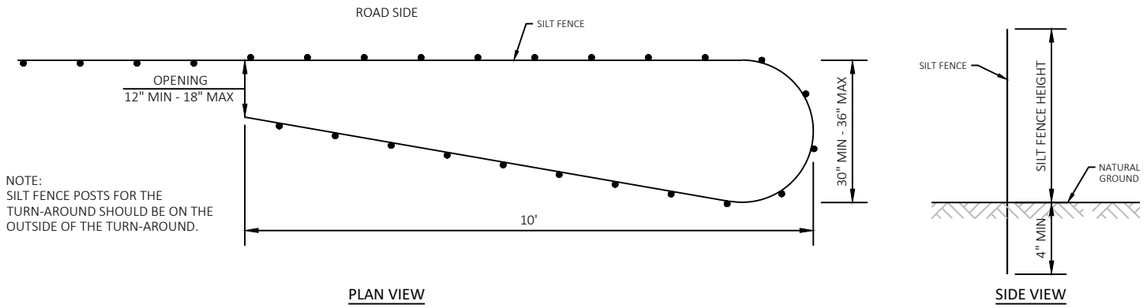
DETAIL FOR PAVED SHOULDER AT GUARDRAIL

PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	CONSTRUCTION DETAILS	SHEET 10	E

2

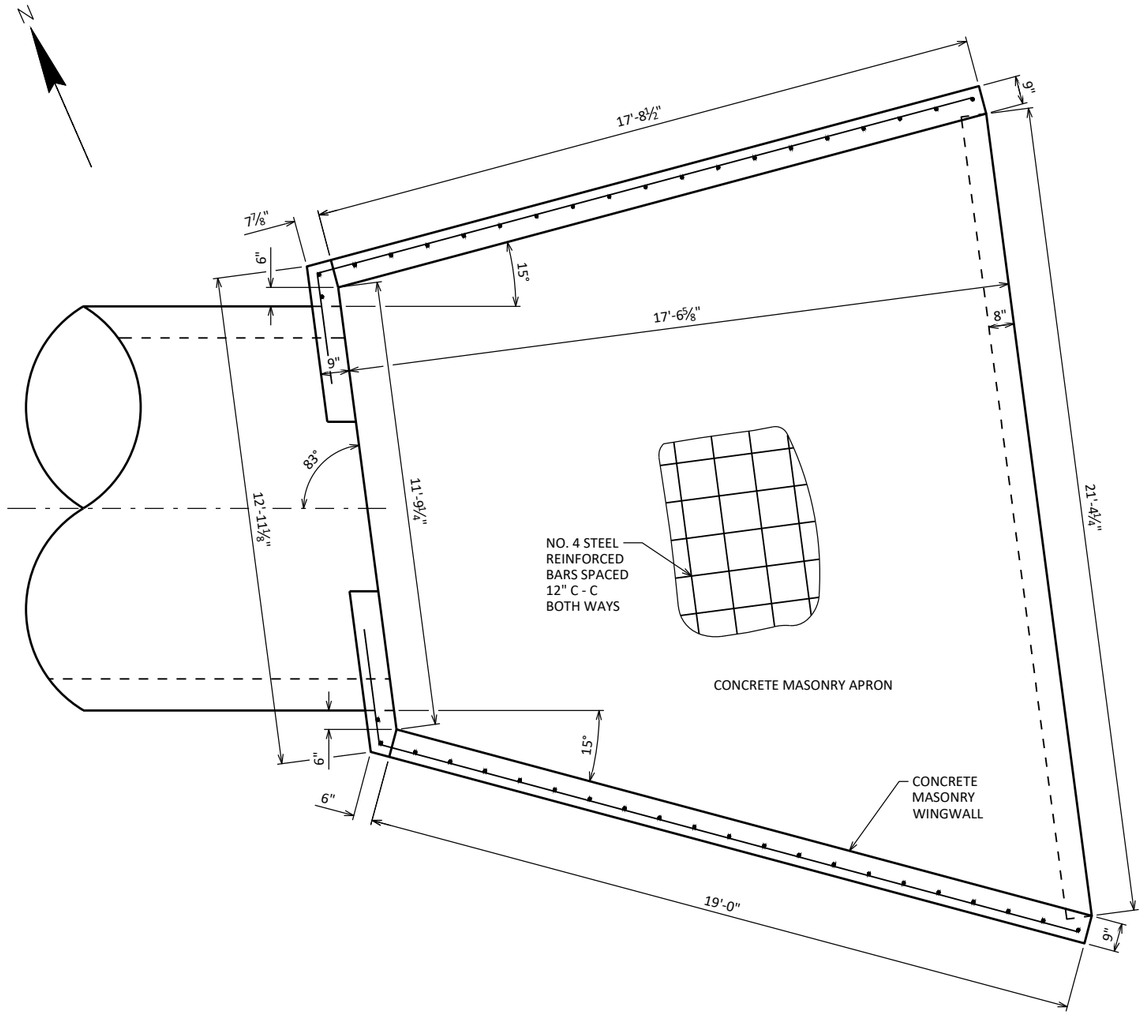


ROCK BAGS USED FOR SILT FENCE RELIEF DETAIL

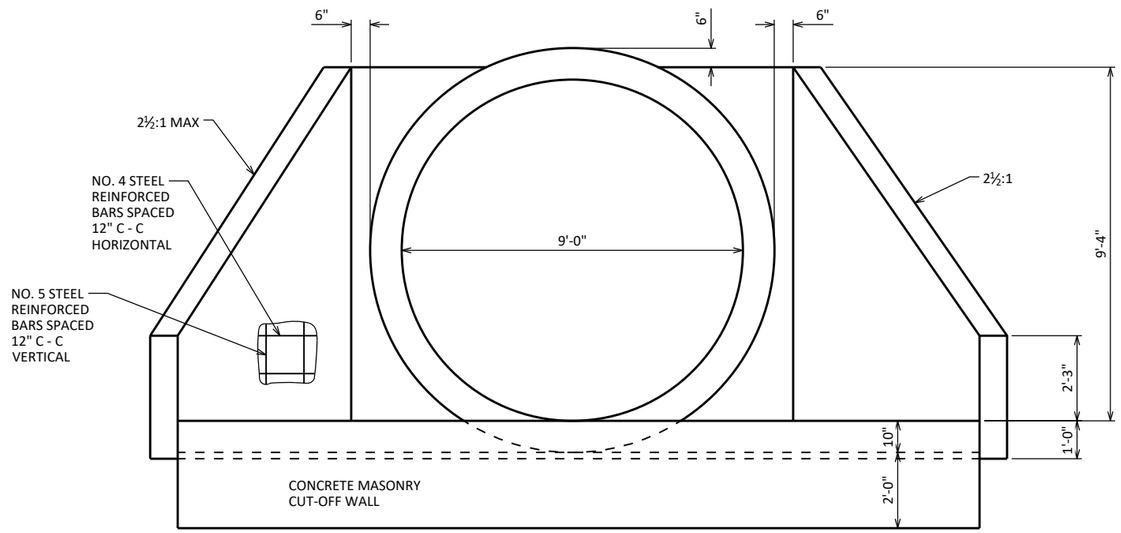


SILT FENCE TURN-AROUND DETAIL

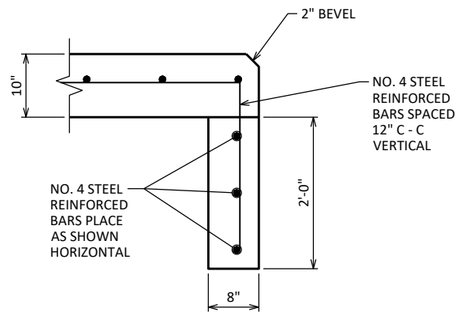
PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	CONSTRUCTION DETAILS	SHEET 11	E



PLAN VIEW



END VIEW



CUT-OFF WALL

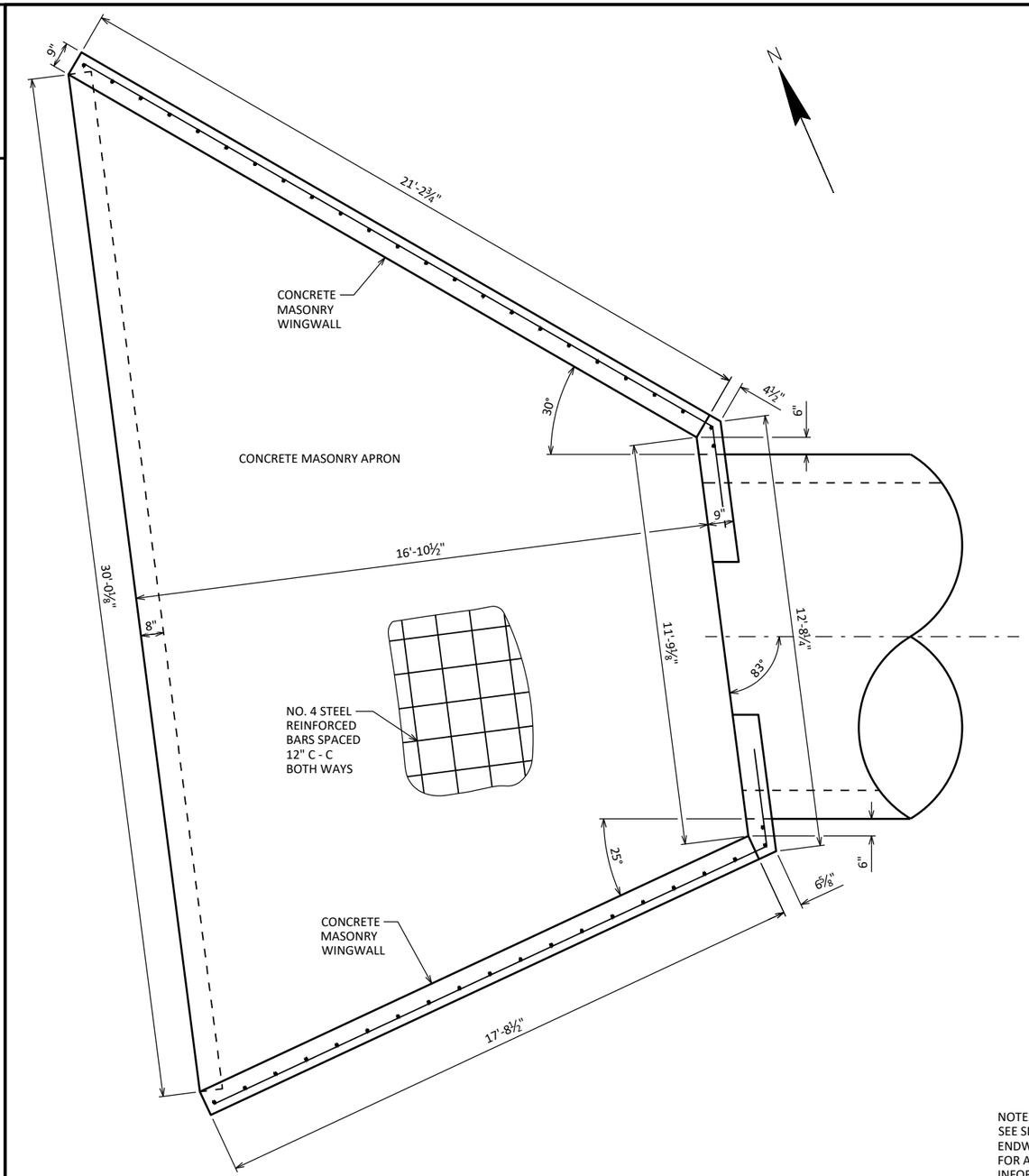
NOTES:
SEE SDD CONCRETE MASONRY
ENDWALLS FOR CULVERT PIPES
FOR ALL OTHER PERTINENT
INFORMATION

CONCRETE MASONRY ENDWALL DETAIL

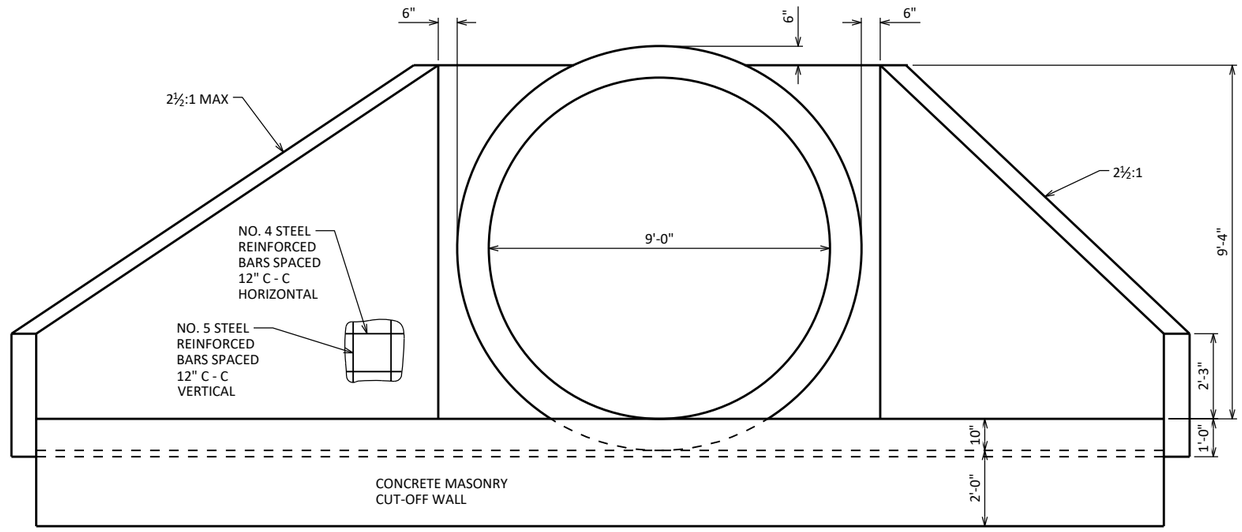
STA 668+05 RT

PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	CONSTRUCTION DETAILS	SHEET 12	E

FILE NAME : S:\CURRPROJ\MARINETTE COUNTY\STH 180\CIVIL3D\96701600\SHEETSPLAN\96701671-021002-CD.DWG
LAYOUT NAME - Sheet-01
PLOT DATE : 9/15/2015 4:01 PM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 4.00
WISDOT/CADDS SHEET 42

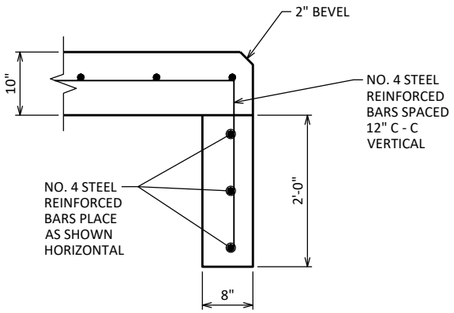


PLAN VIEW



END VIEW

NOTES:
SEE SDD CONCRETE MASONRY ENDWALLS FOR CULVERT PIPES FOR ALL OTHER PERTINENT INFORMATION



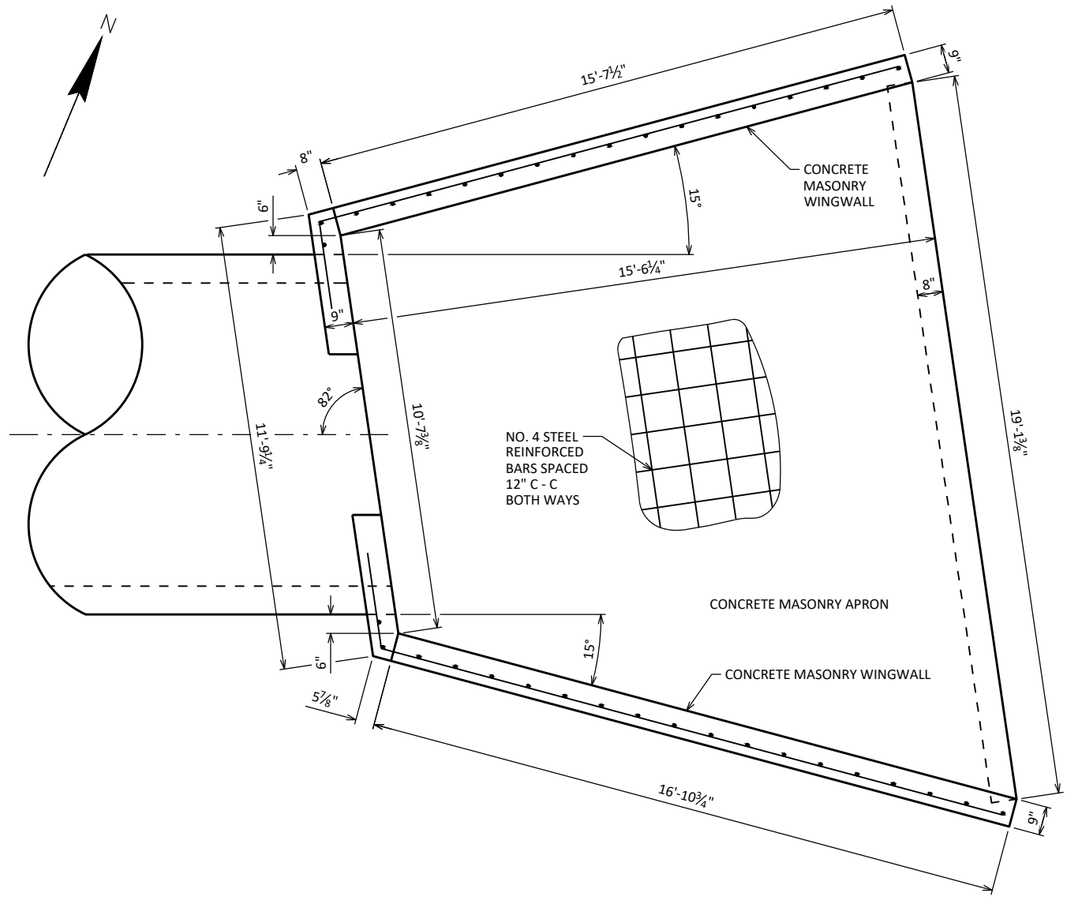
CUT-OFF WALL

CONCRETE MASONRY ENDWALL DETAIL

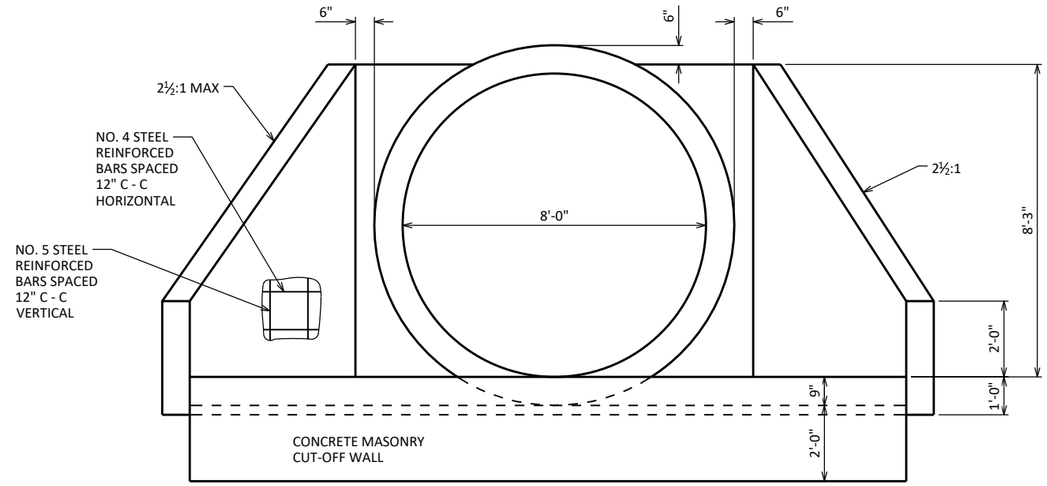
STA 668+05 LT

PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	CONSTRUCTION DETAILS	SHEET 13	E

FILE NAME : S:\CURRPROJ\MARINETTE COUNTY\STH 180\CIVIL3D\96701600\SHEETSPLAN\96701671-021002-CD.DWG
LAYOUT NAME - Sheet-02
PLOT DATE : 9/15/2015 4:01 PM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 4.00
WISDOT/CADDS SHEET 42

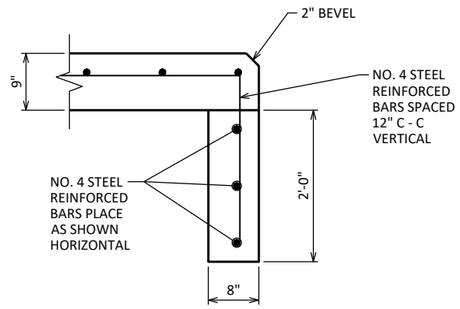


PLAN VIEW



END VIEW

NOTES:
SEE SDD CONCRETE MASONRY ENDWALLS FOR CULVERT PIPES FOR ALL OTHER PERTINENT INFORMATION

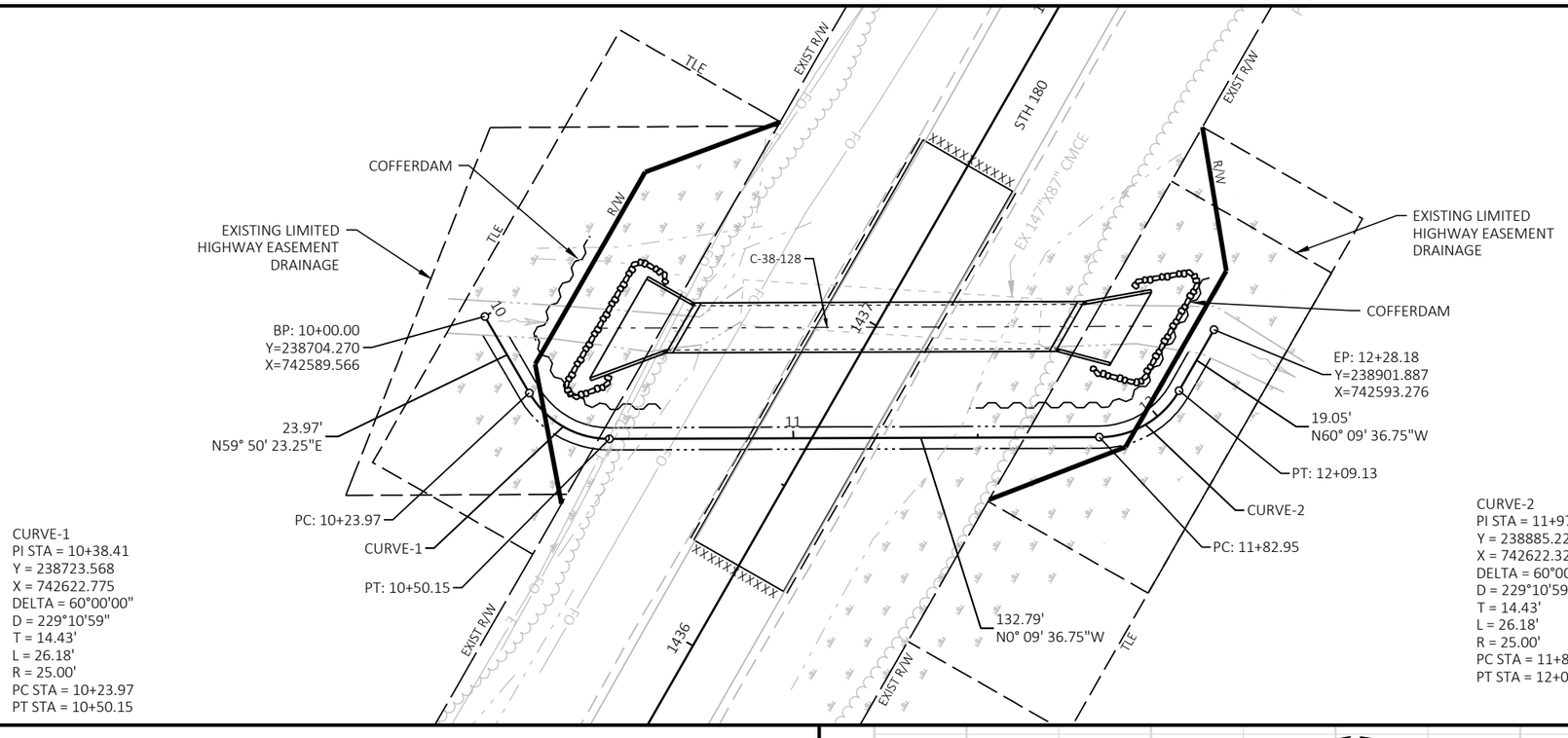


CUT-OFF WALL

CONCRETE MASONRY ENDWALL DETAIL

STA 1524+51 RT

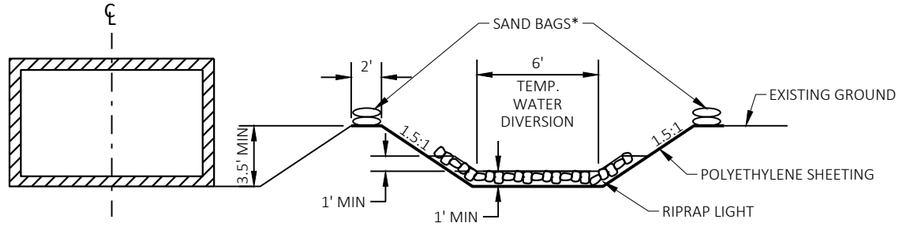
PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	CONSTRUCTION DETAILS	SHEET 14	E



CURVE-1
PI STA = 10+38.41
Y = 238723.568
X = 742622.775
DELTA = 60°00'00"
D = 229°10'59"
T = 14.43'
L = 26.18'
R = 25.00'
PC STA = 10+23.97
PT STA = 10+50.15

CURVE-2
PI STA = 11+97.38
Y = 238885.225
X = 742622.323
DELTA = 60°00'00"
D = 229°10'59"
T = 14.43'
L = 26.18'
R = 25.00'
PC STA = 11+82.95
PT STA = 12+09.13

C-38-0128

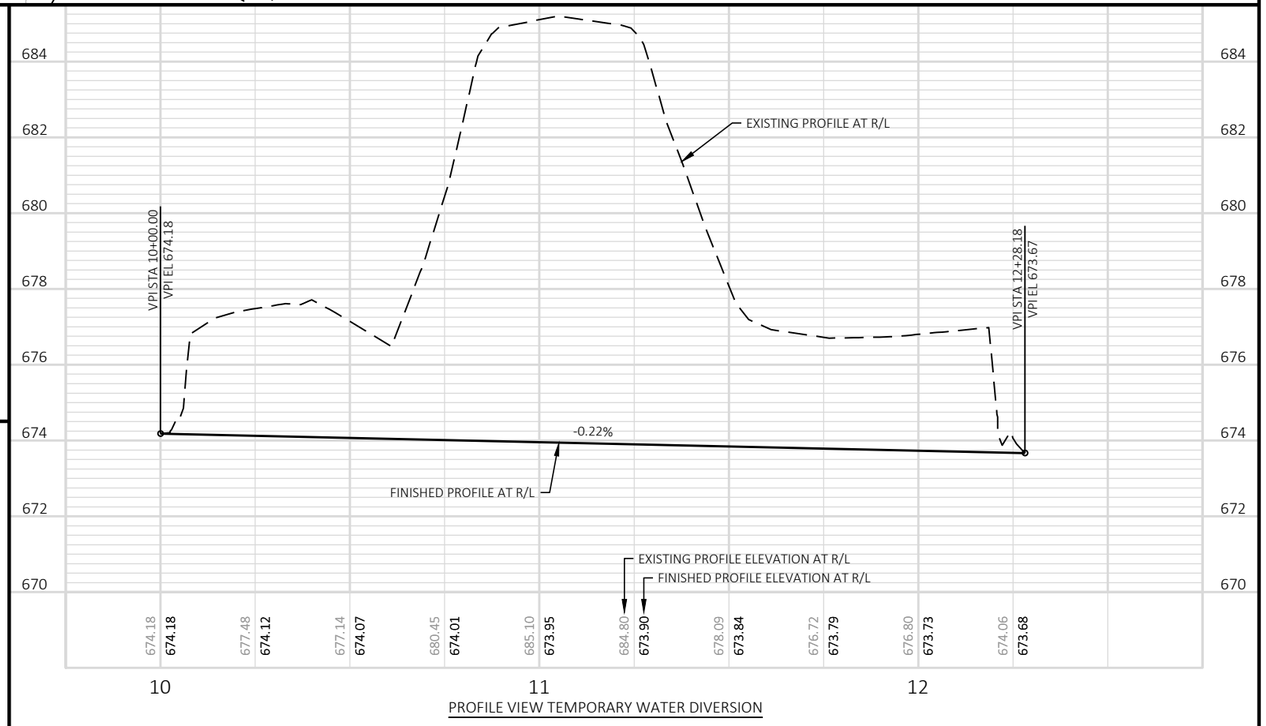


TYPICAL SECTION TEMPORARY WATER DIVERSION

NOTES

THE PROVIDED SCHEMATIC IS FOR INFORMATION ONLY, SELECTED METHOD OF BYPASSING LIVE FLOW SHALL MEET THE SPECIFICATIONS OF THE ECIP SUBMITTED TO AND ACCEPTED BY THE ENGINEER.

COFFERDAMS ARE REQUIRED ON THE UPSTREAM AND DOWNSTREAM ENDS OF NEW BOX CULVERT WORK AREA TO ISOLATE THE WORK AREA FROM ACTIVE FLOW. BOX CULVERT WORK AREA SHALL BE DEWATERED AND CONSTRUCTED UNDER DRY CONDITIONS.

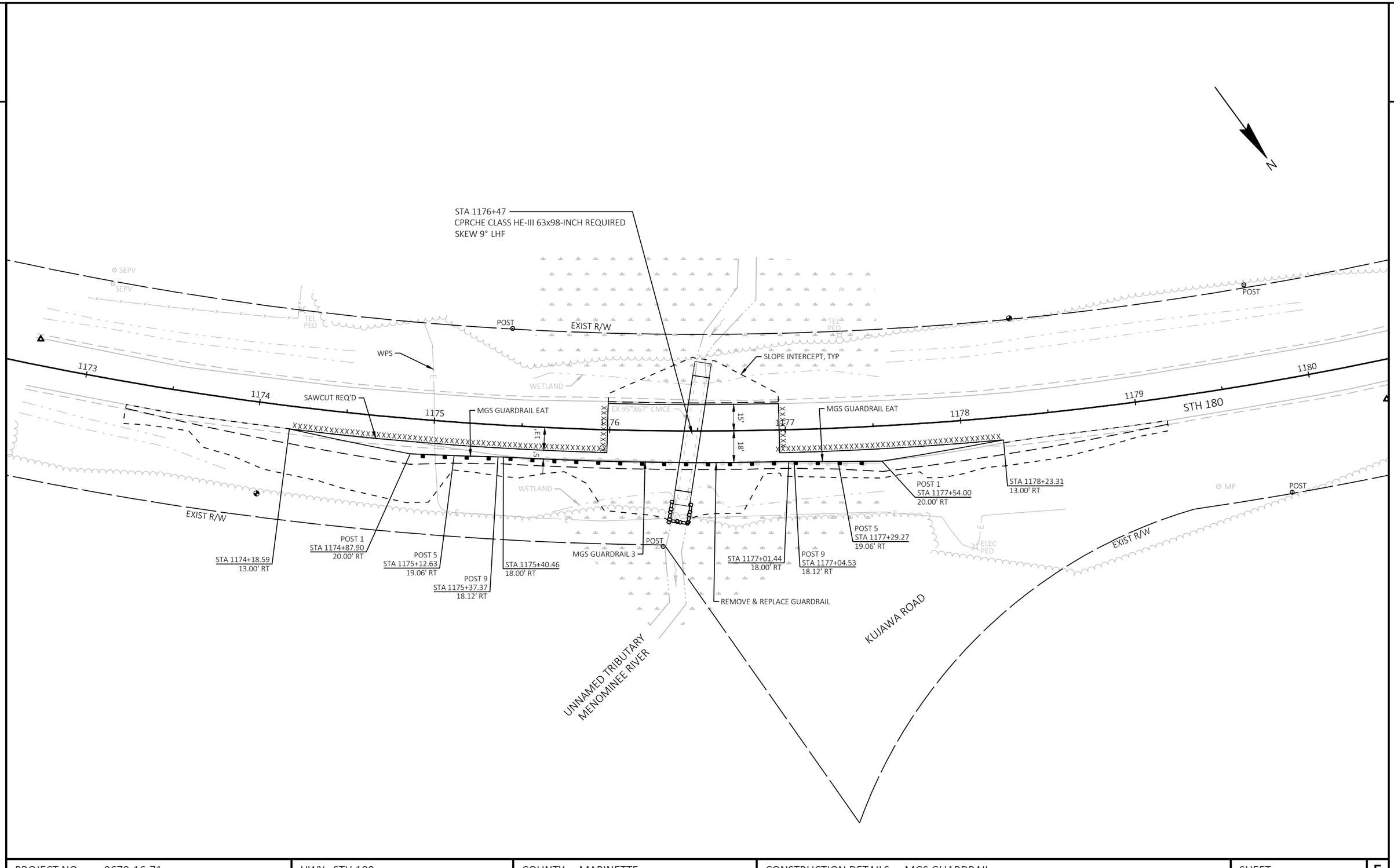


PROFILE VIEW TEMPORARY WATER DIVERSION

PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	CONSTRUCTION DETAILS	SHEET 15	E

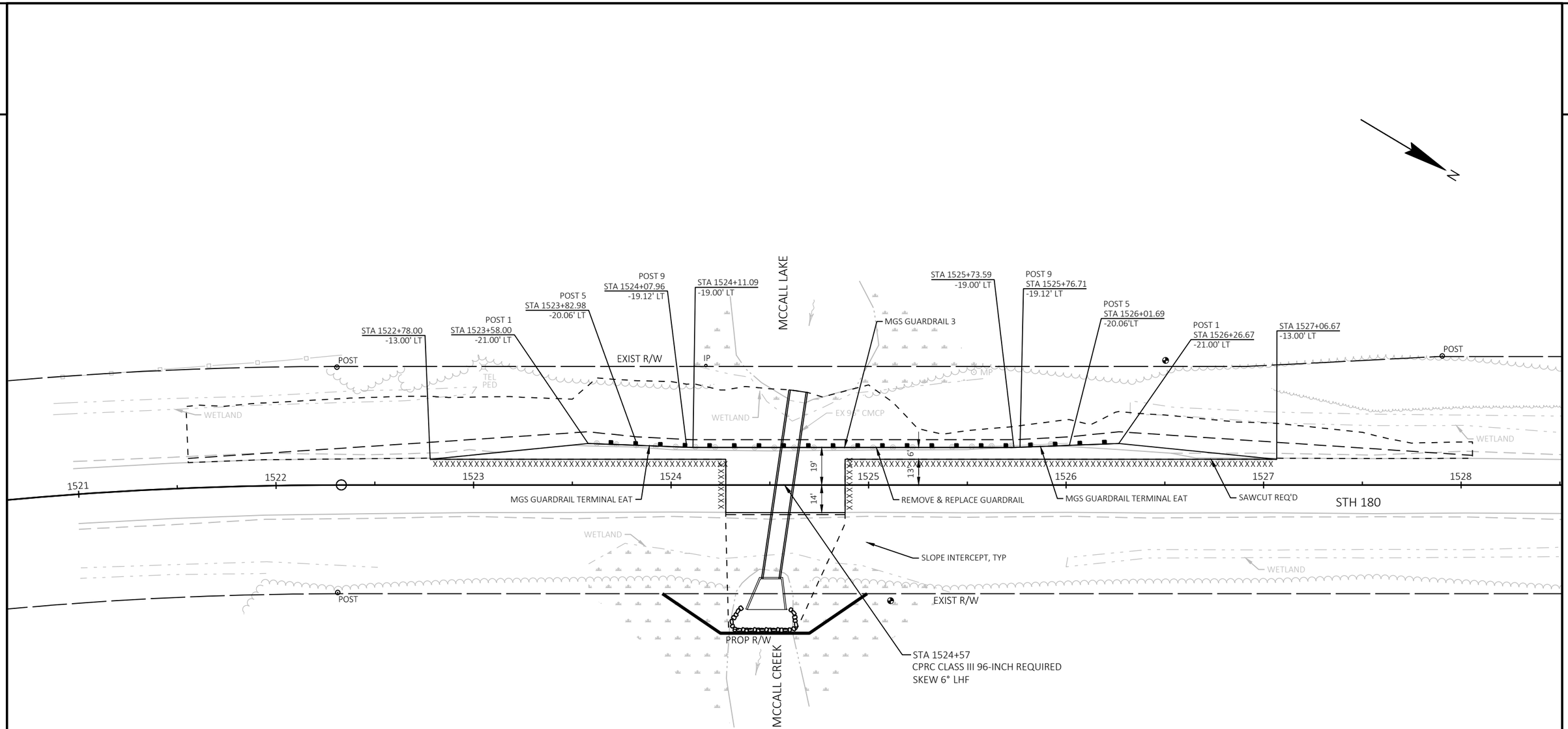
FILE NAME : S:\CURRPROJ\MARINETTE COUNTY\STH 180\CIVIL3D\96701600\SHEETSPLAN\96701671-021011-CD.DWG
LAYOUT NAME - Sheet-01
PLOT DATE : 7/31/2025 7:10 AM
PLOT BY : AARON SARAUER
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

2



PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	CONSTRUCTION DETAILS - MGS GUARDRAIL	SHEET 16	E

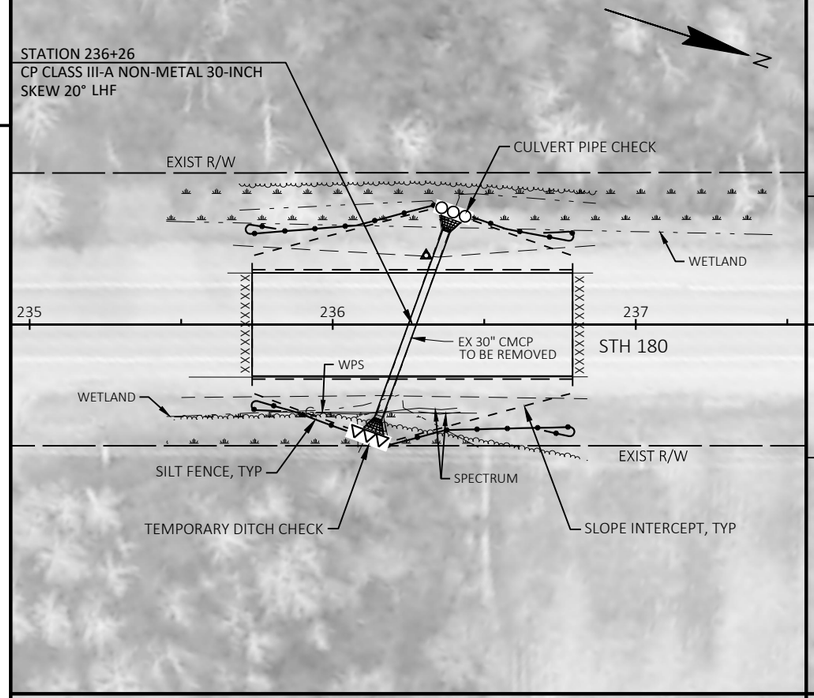
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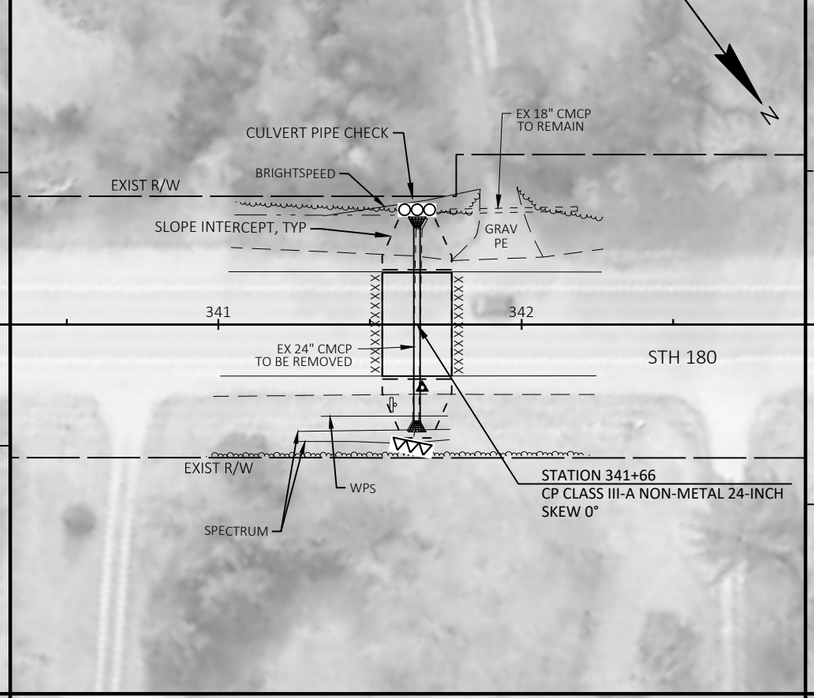
PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	CONSTRUCTION DETAILS - MGS GUARDRAIL	SHEET 17	E

FILE NAME : S:\CURRPROJ\MARINETTE COUNTY\STH 180\CIVIL3D\96701600\SHEETSPLAN\96701671-021021-CD.DWG
LAYOUT NAME - Sheet-02
PLOT DATE : 7/31/2025 7:10 AM
PLOT BY : AARON SARAUER
PLOT NAME :
PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 42

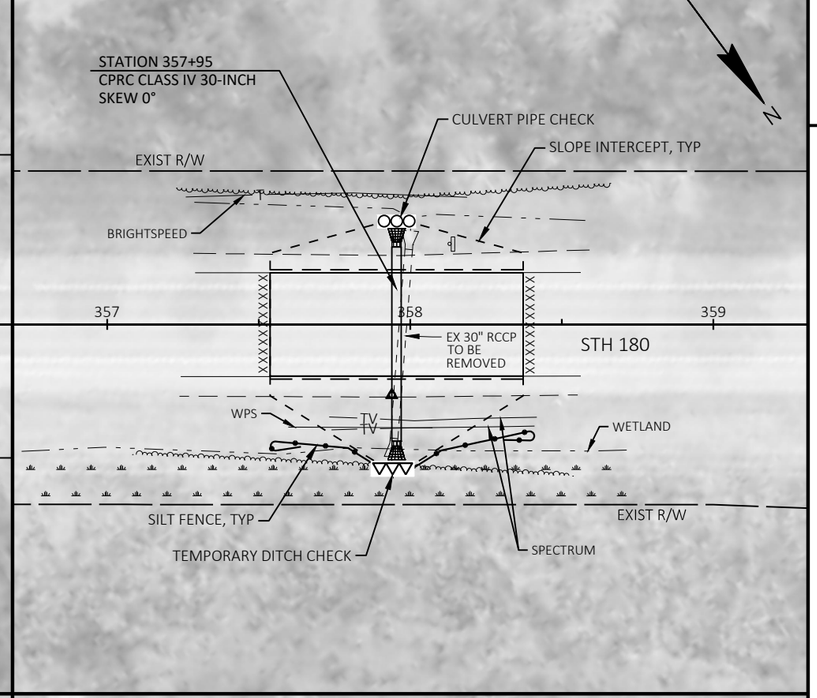
CULVERT #38180013992



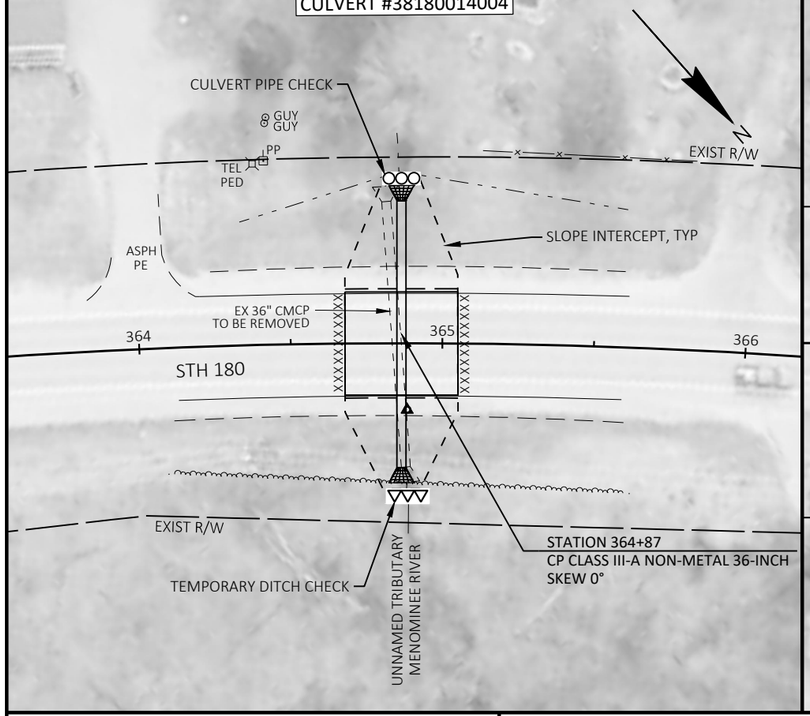
CULVERT #38180017517



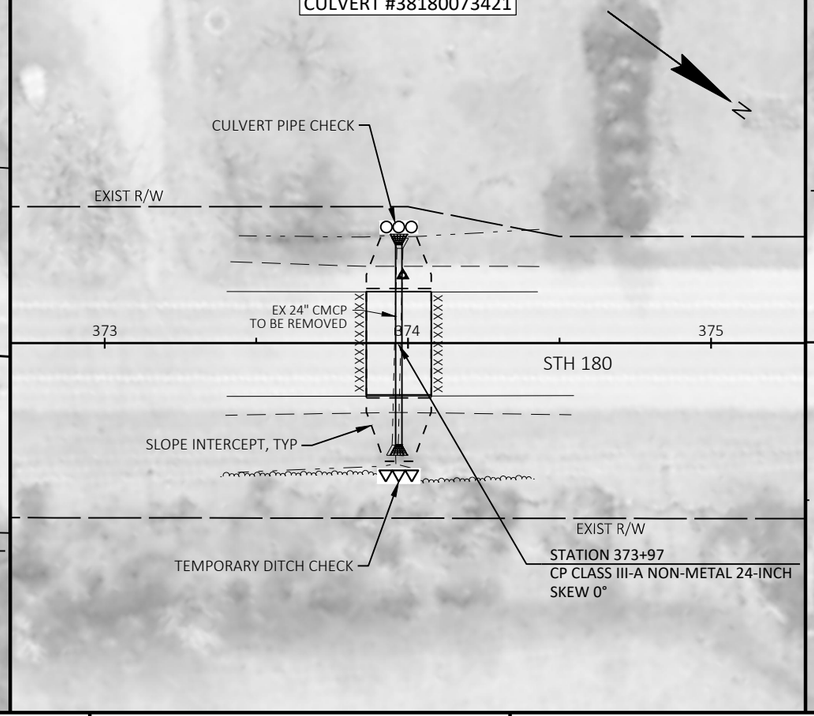
CULVERT #38180014003



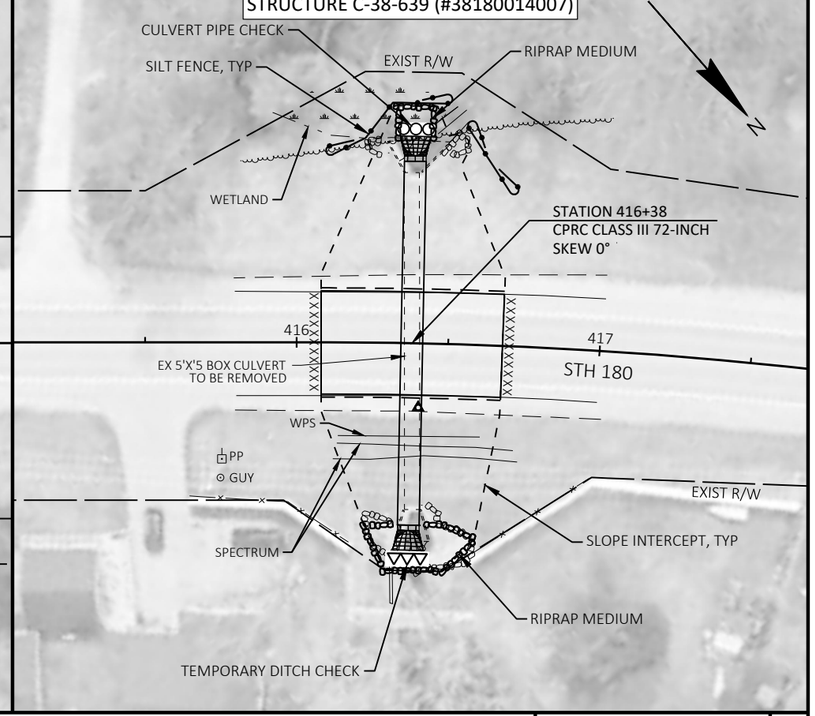
CULVERT #38180014004



CULVERT #38180073421



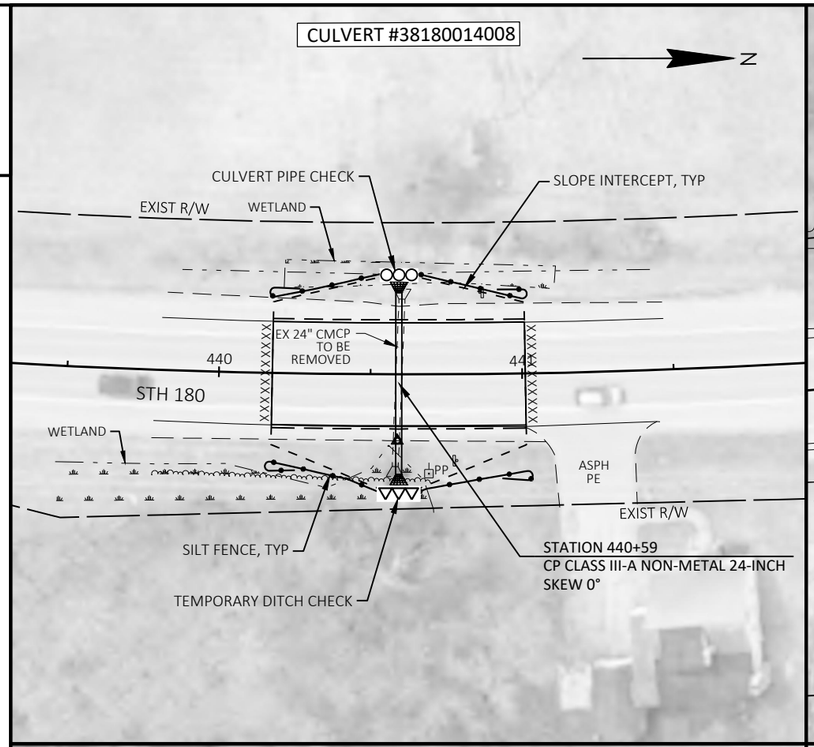
STRUCTURE C-38-639 (#38180014007)

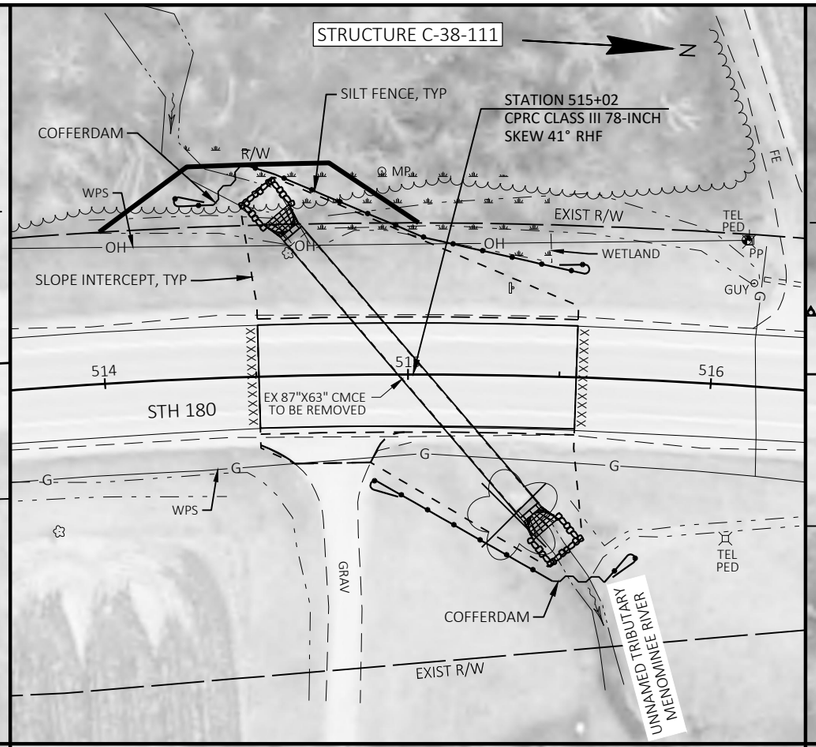


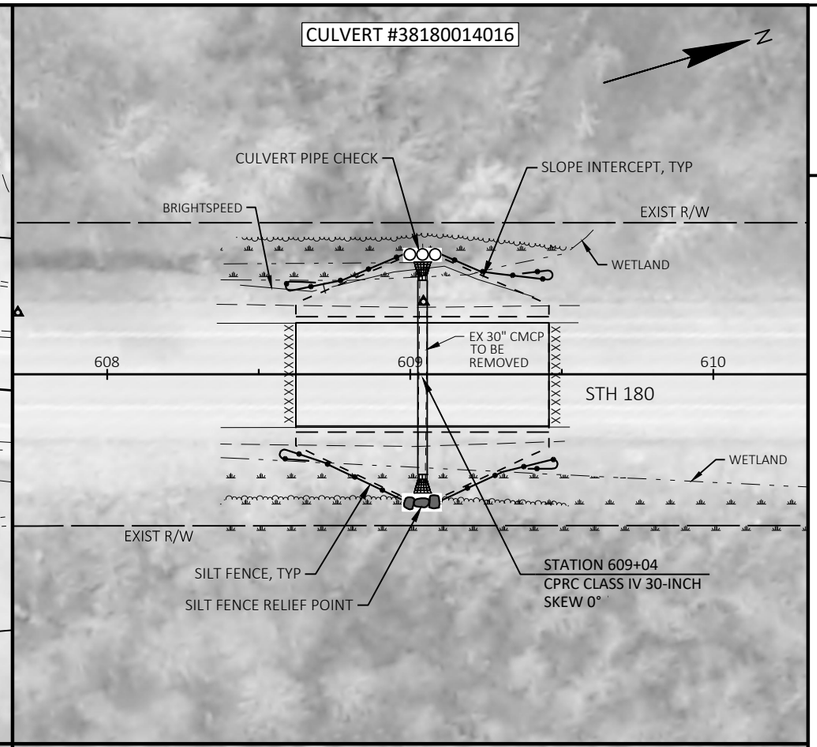
PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	EROSION CONTROL PLAN	SHEET 18	E

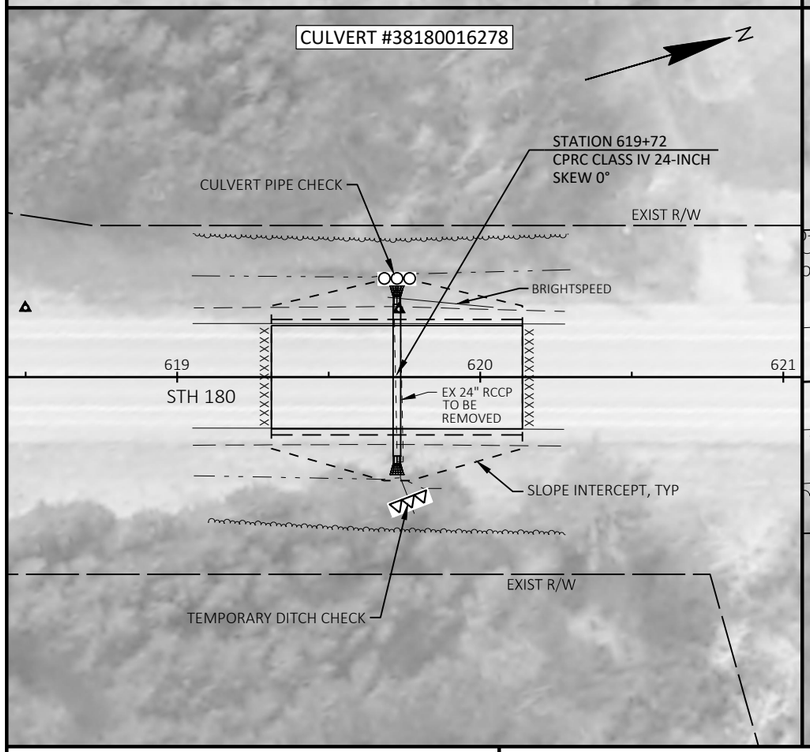
FILE NAME : S:\CURRPROJ\MARINETTE COUNTY\STH 180\CIVIL3D\96701600\SHEETSPLAN\96701671-022001-EC.DWG
LAYOUT NAME - Sheet-01
PLOT DATE : 7/31/2025 7:16 AM
PLOT BY : AARON SARAUER
PLOT NAME :
PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 44

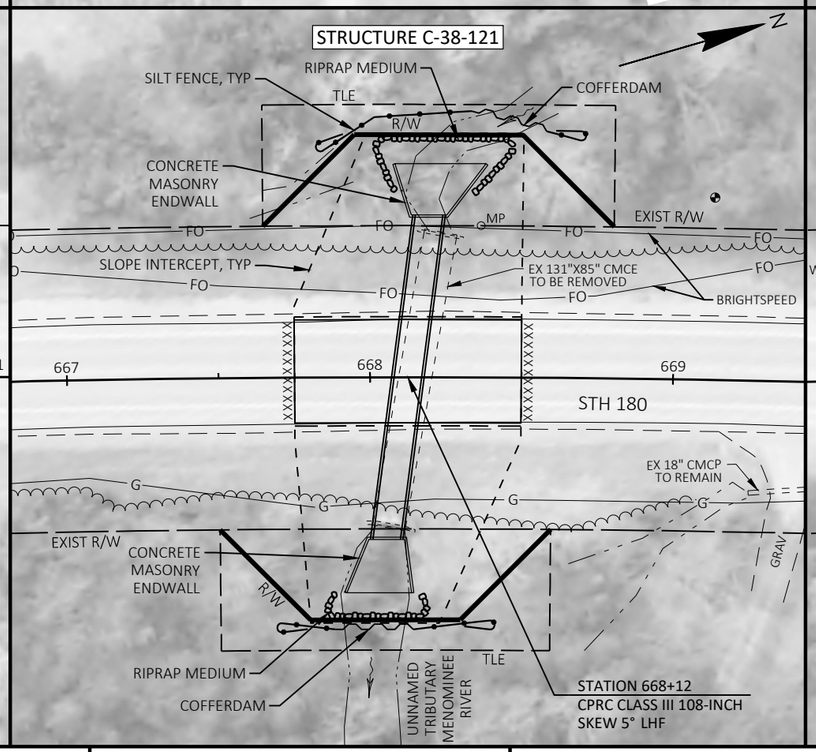
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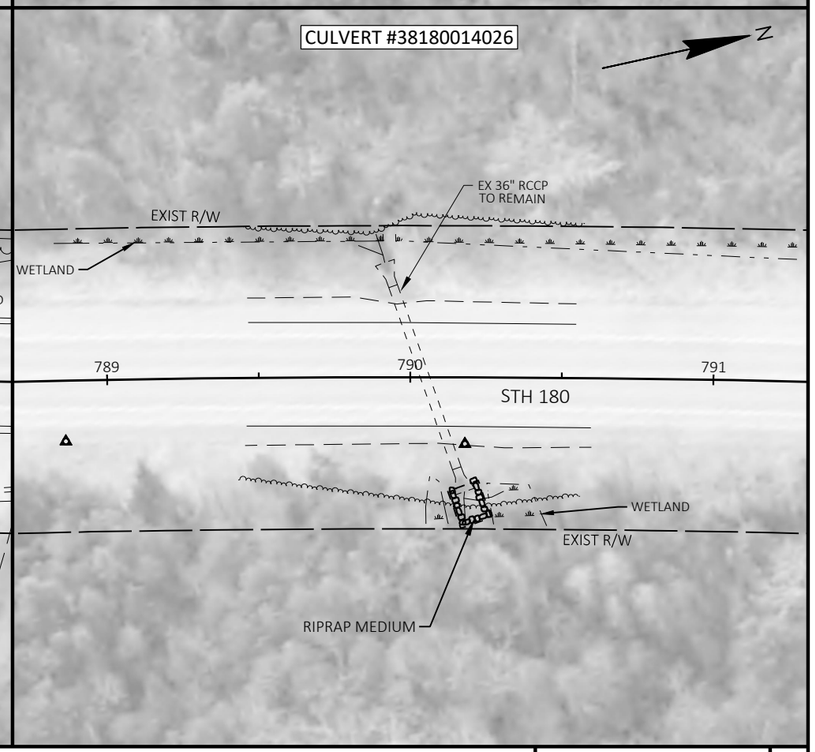




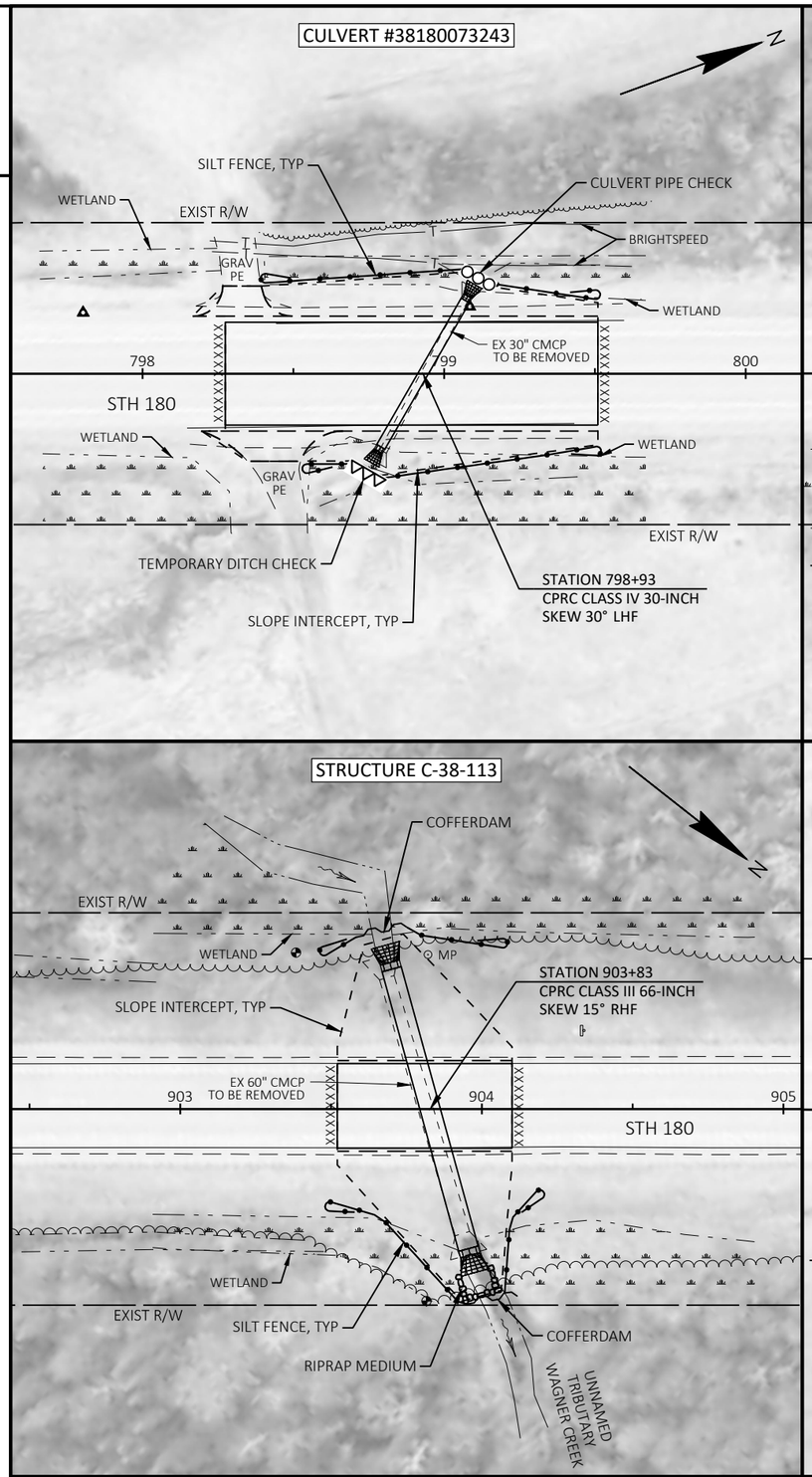


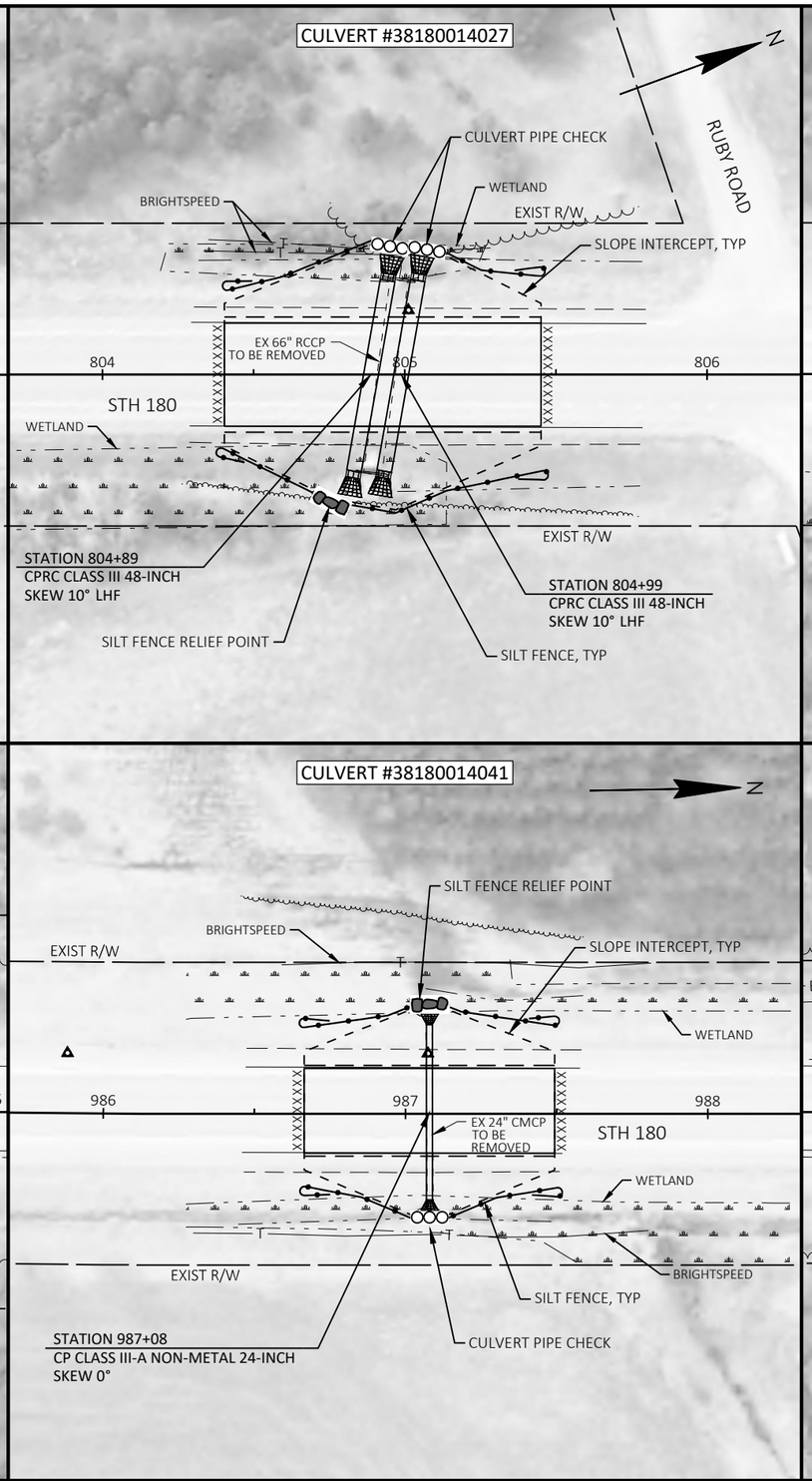


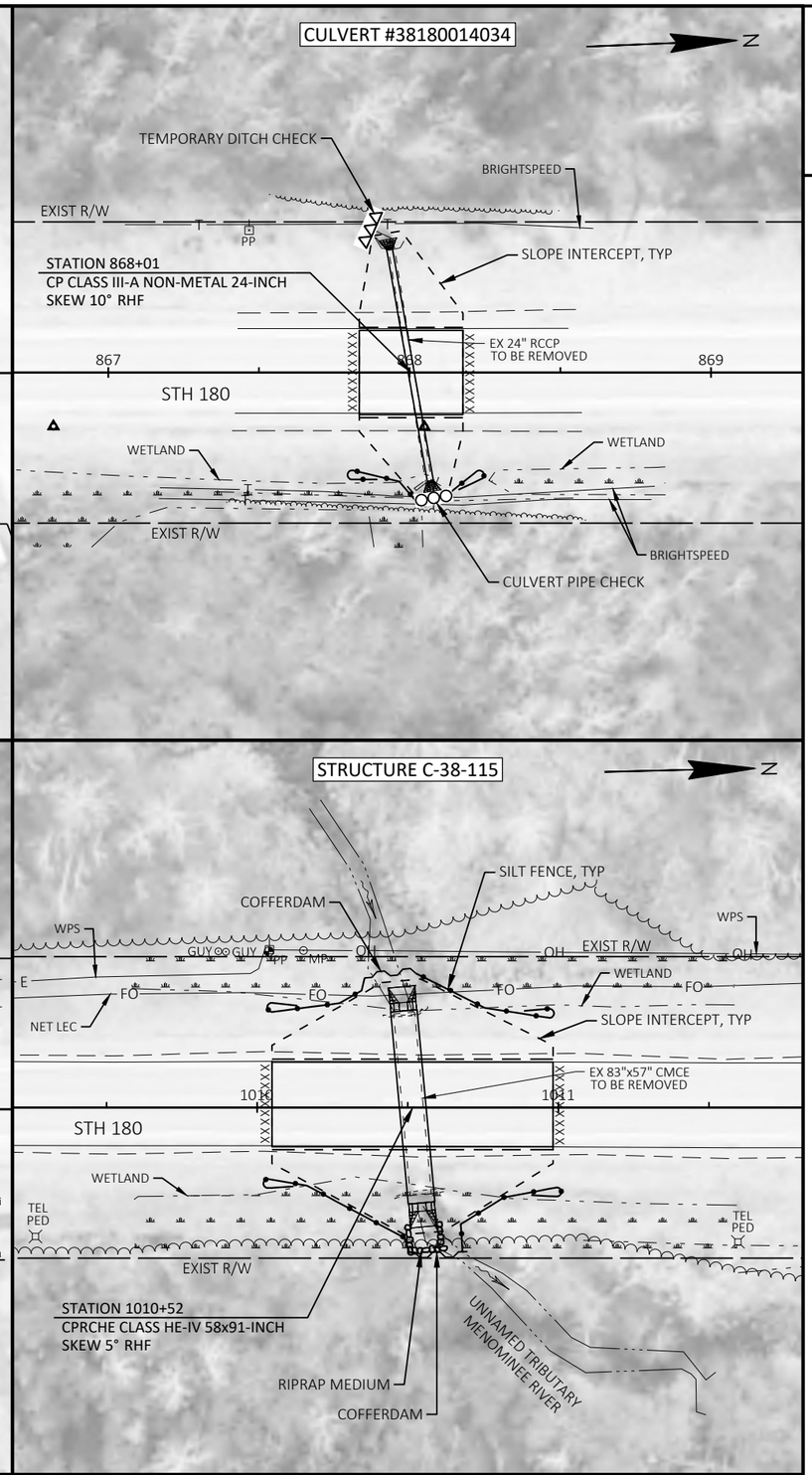




PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	EROSION CONTROL PLAN	SHEET 19	E







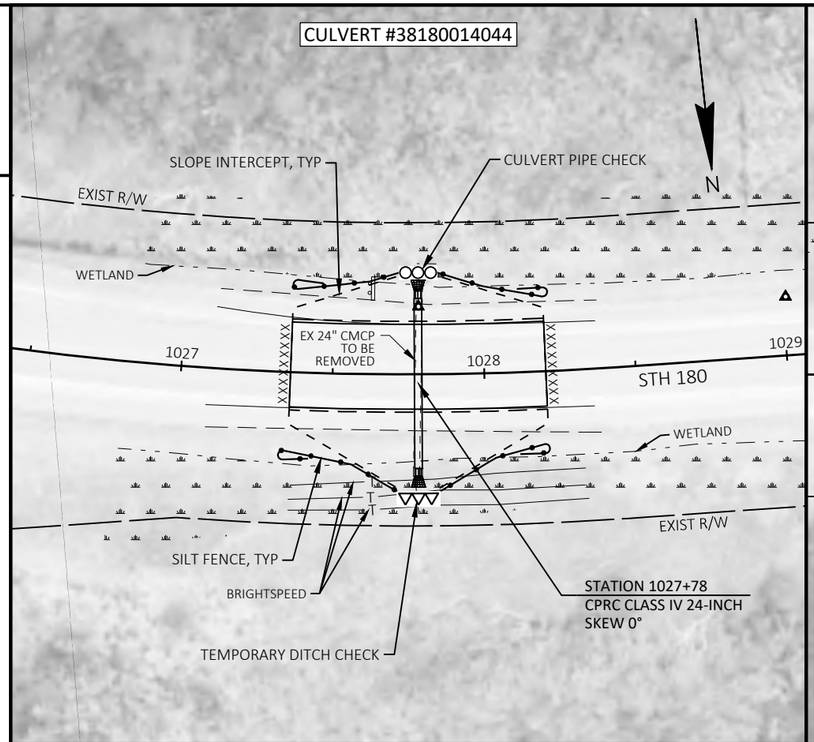
PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	EROSION CONTROL PLAN	SHEET 20	E

FILE NAME : S:\CURRPROJ\MARINETTE COUNTY\STH 180\CIVIL3D\96701600\SHEETSPLAN\96701671-022001-EC.DWG
LAYOUT NAME - Sheet-03

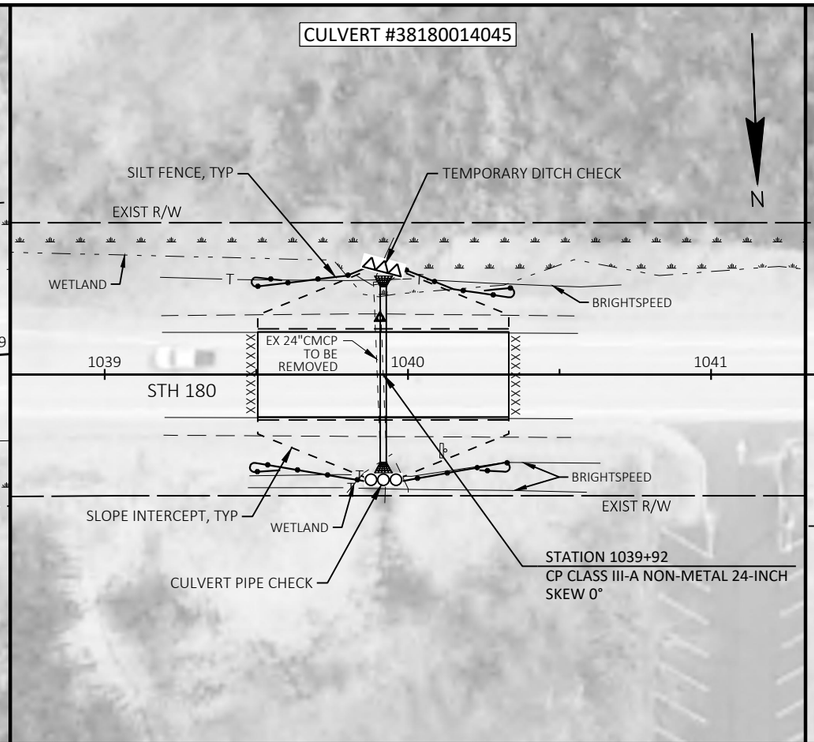
PLOT DATE : 7/31/2025 7:20 AM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 44

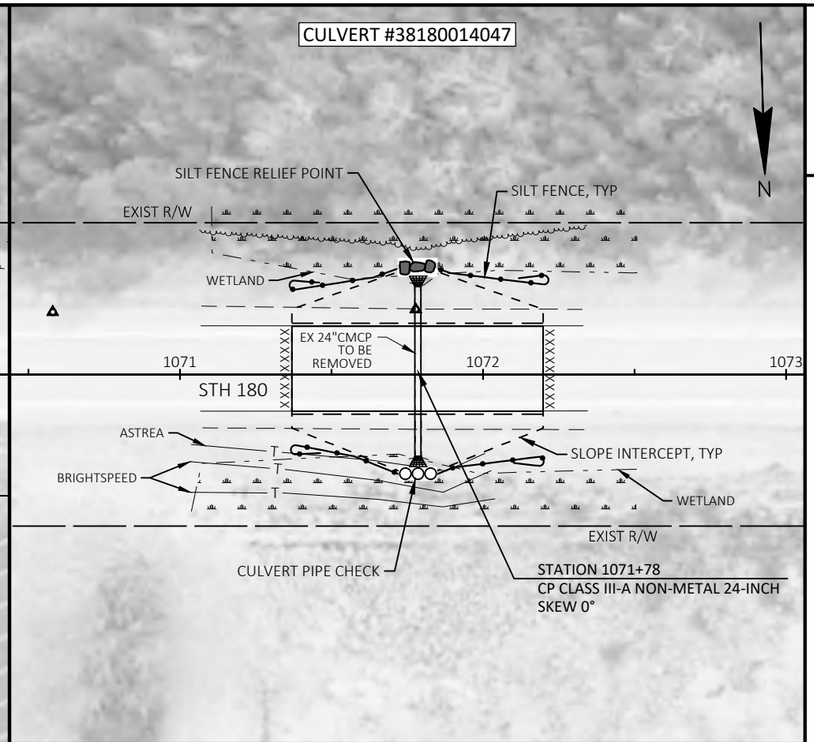
CULVERT #38180014044



CULVERT #38180014045

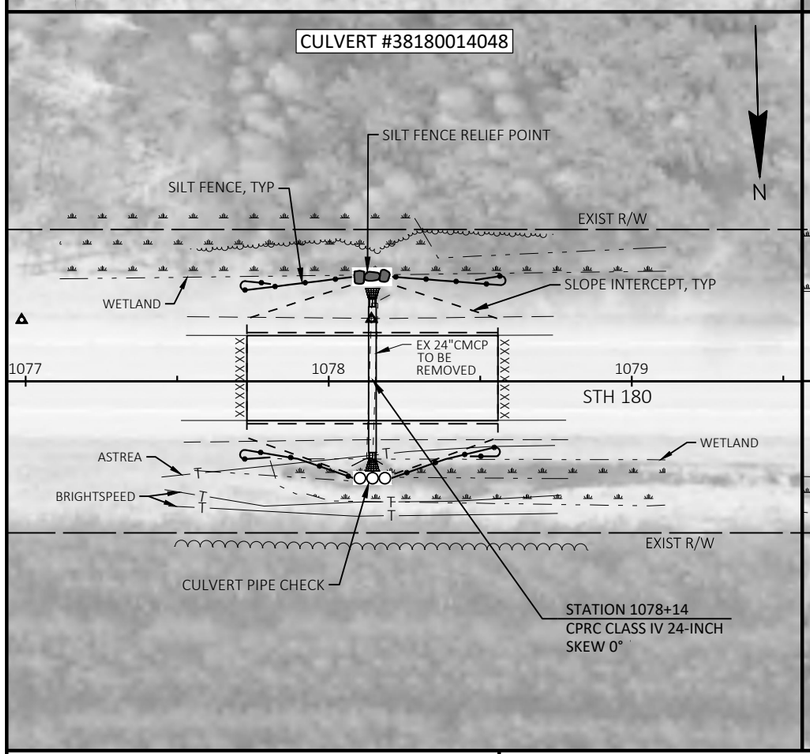


CULVERT #38180014047

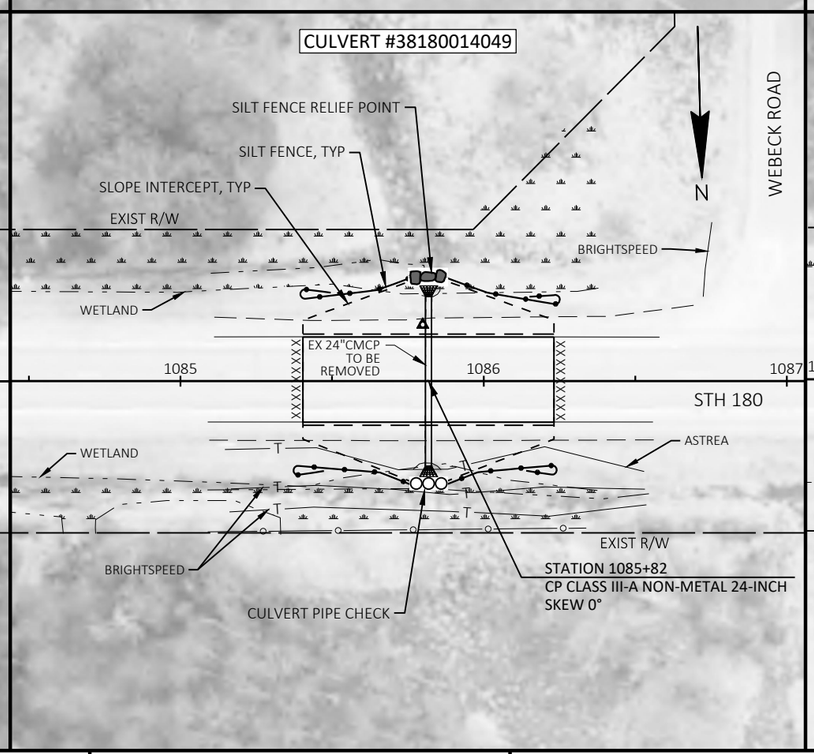


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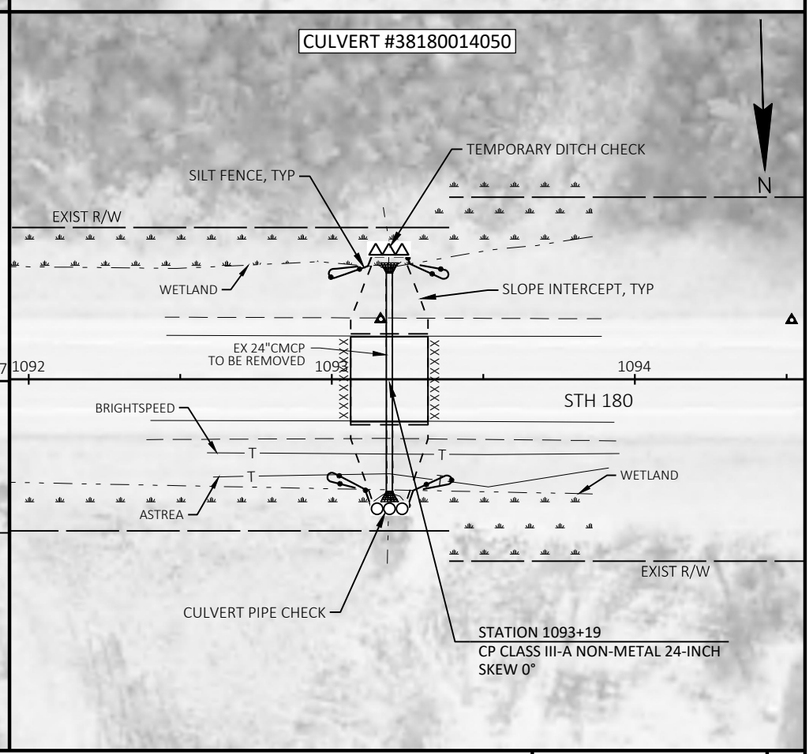
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CULVERT #38180014049



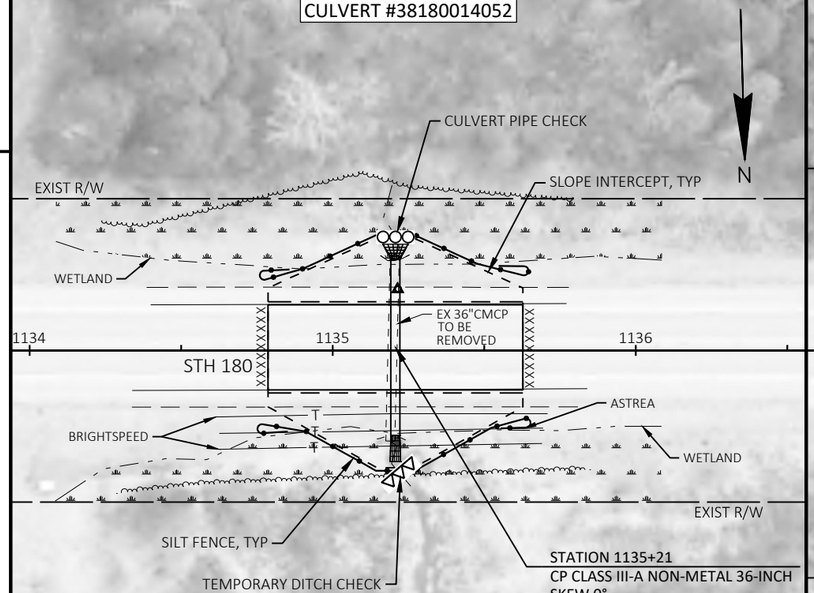
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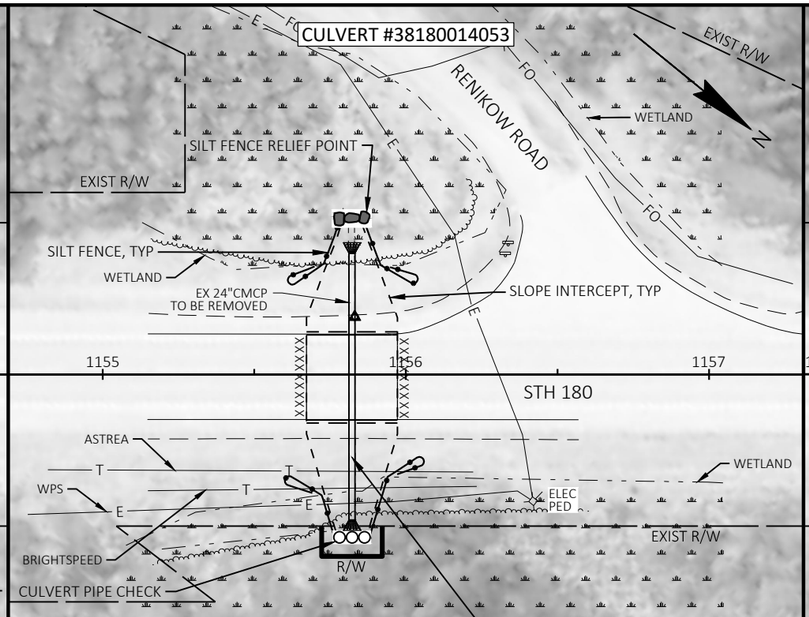
PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	EROSION CONTROL PLAN	SHEET 21	E

FILE NAME : S:\CURRPROJ\MARINETTE COUNTY\STH 180\CIVIL3D\96701600\SHEETSPLAN\96701671-022001-EC.DWG
LAYOUT NAME - Sheet-04
PLOT DATE : 7/31/2025 7:22 AM
PLOT BY : AARON SARAUER
PLOT NAME :
PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 44

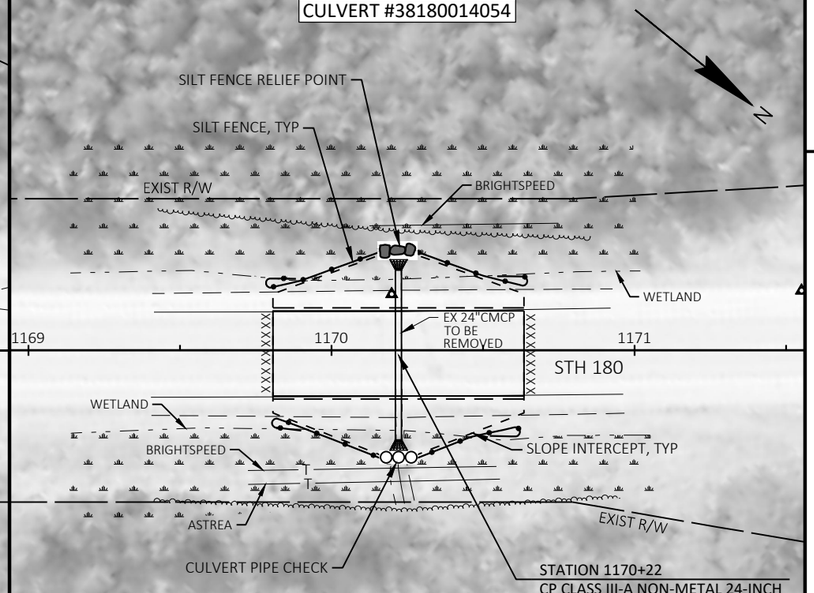
CULVERT #38180014052



CULVERT #38180014053

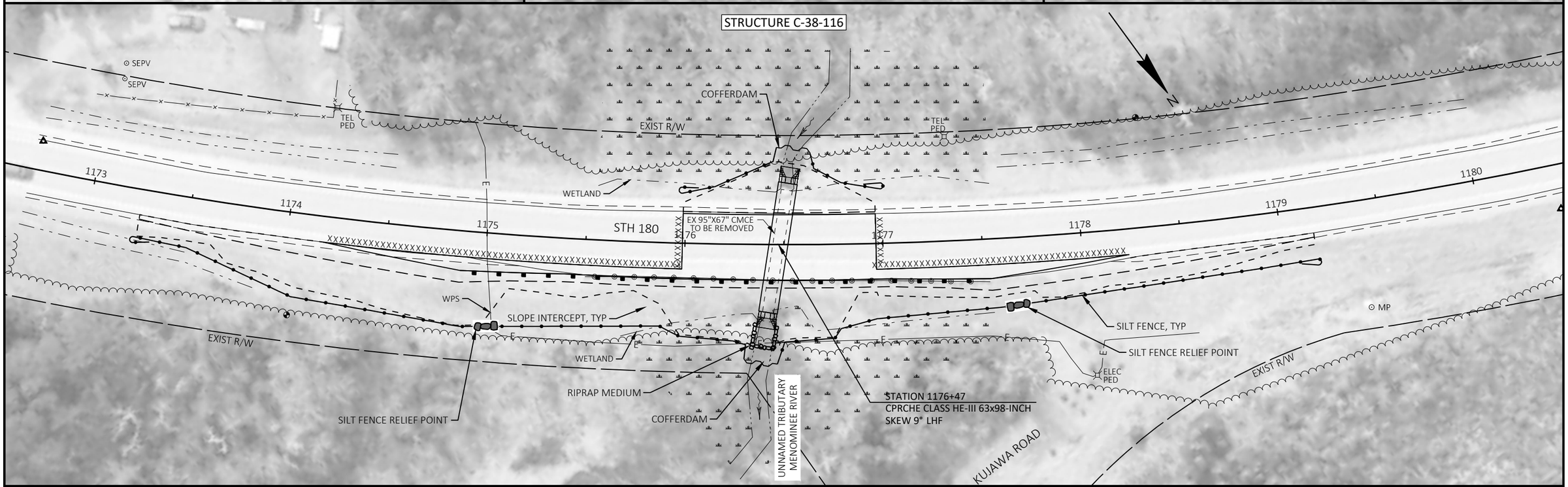


CULVERT #38180014054



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STRUCTURE C-38-116

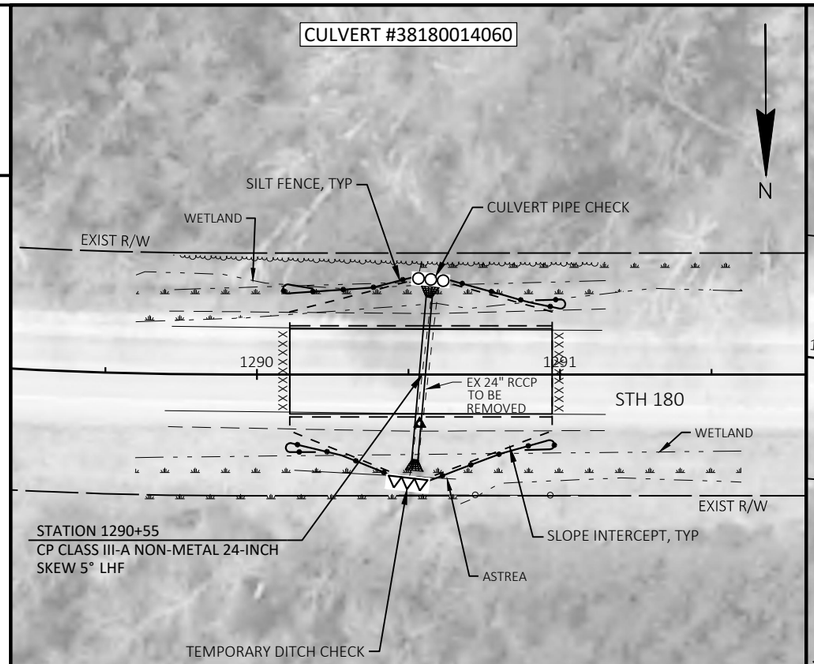


PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	EROSION CONTROL PLAN	SHEET 22	E

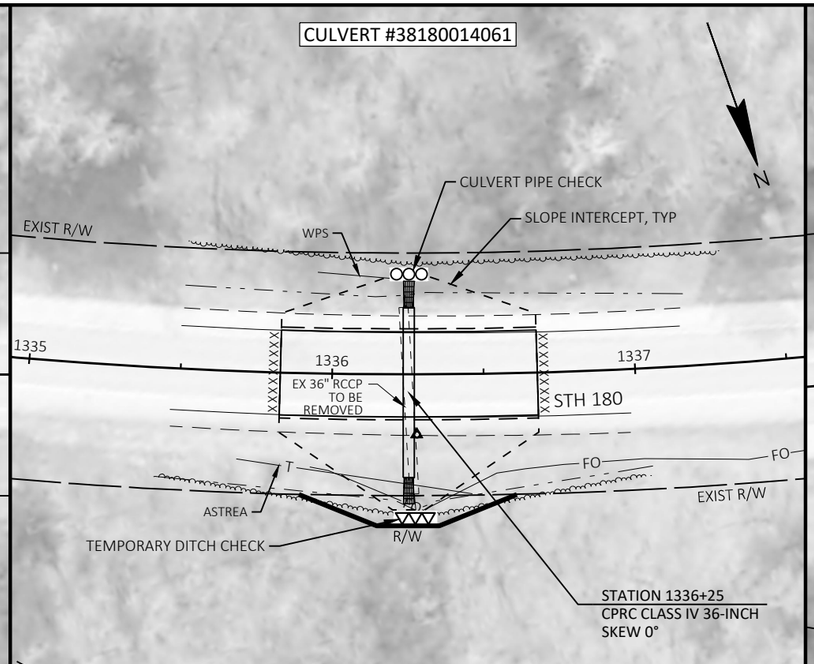
FILE NAME : S:\CURRPROJ\MARINETTE COUNTY\STH 180\CIVIL3D\96701600\SHEETSPLAN\96701671-022001-EC.DWG
LAYOUT NAME - Sheet-05
PLOT DATE : 7/31/2025 7:24 AM
PLOT BY : AARON SARAUER
PLOT NAME :
PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 44

2

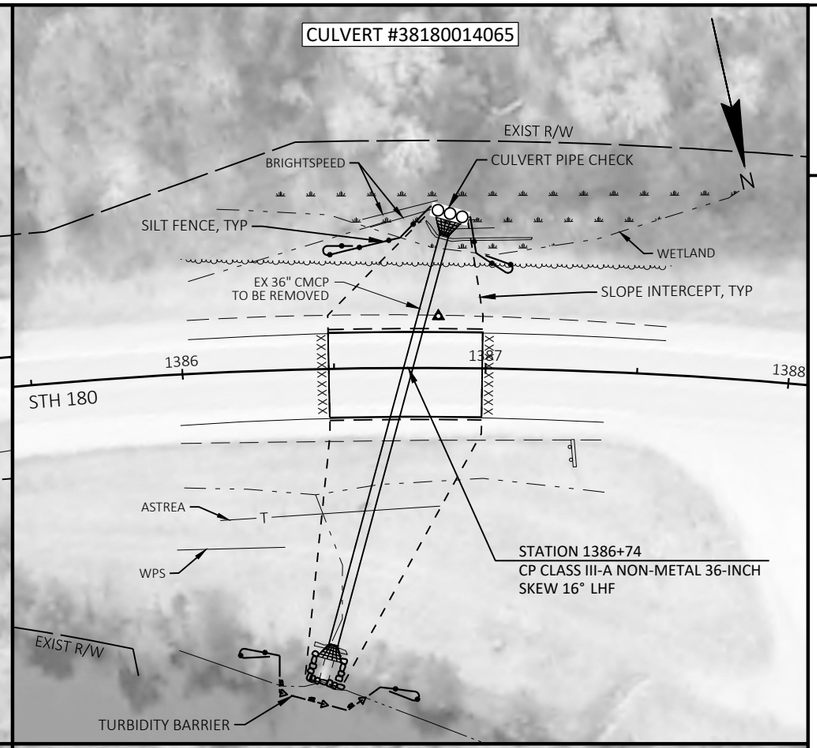
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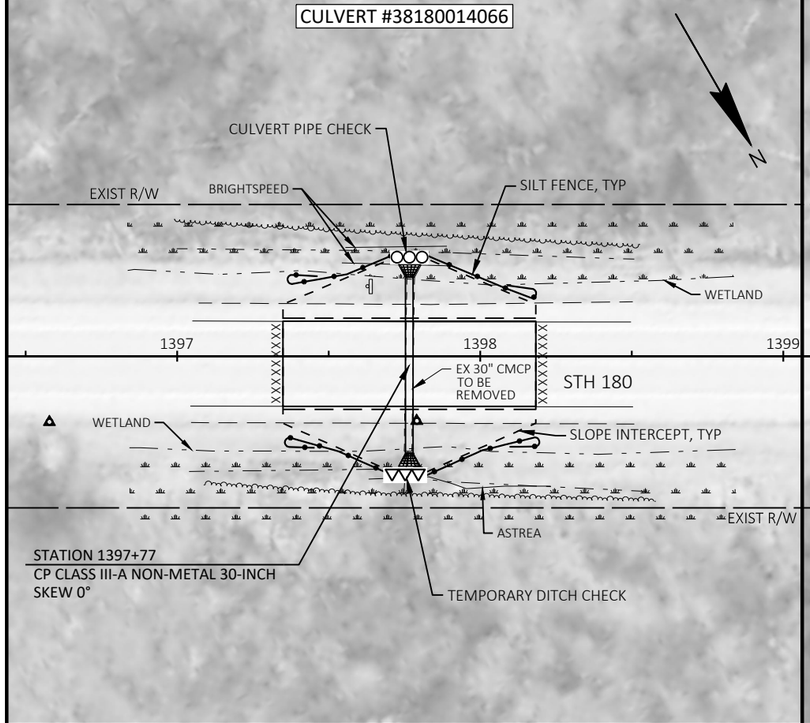
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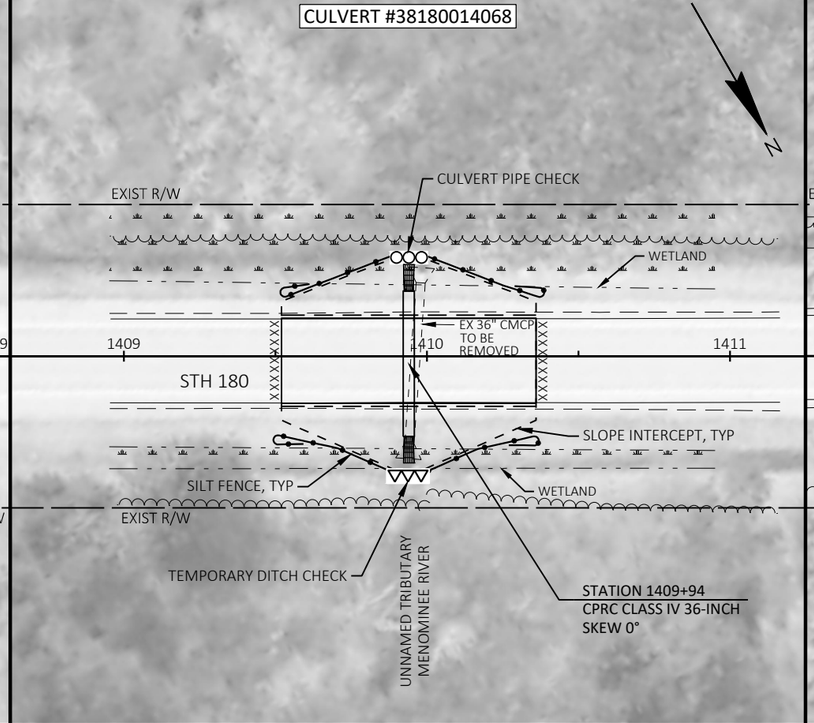
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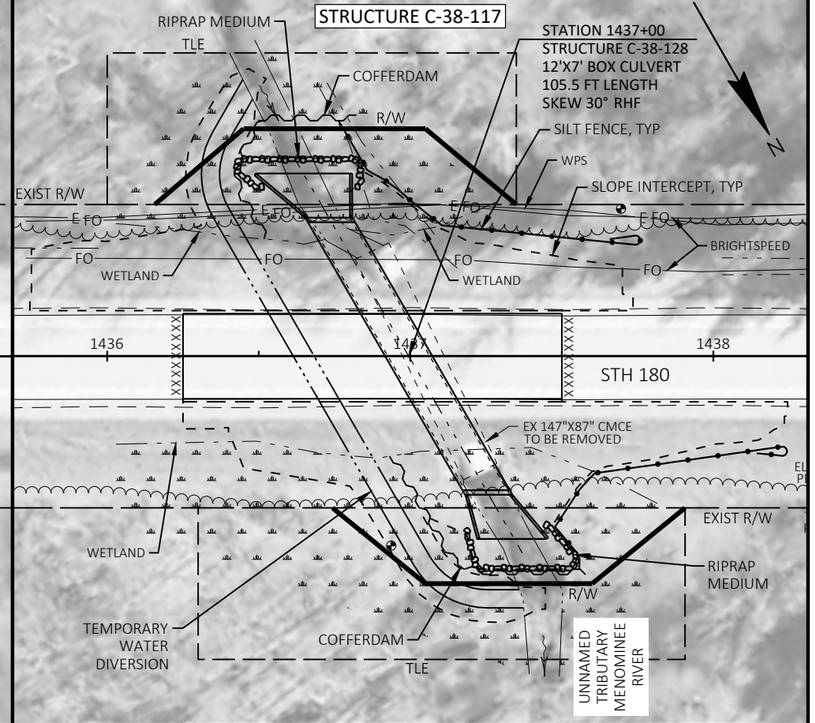
CULVERT #38180014066



CULVERT #38180014068



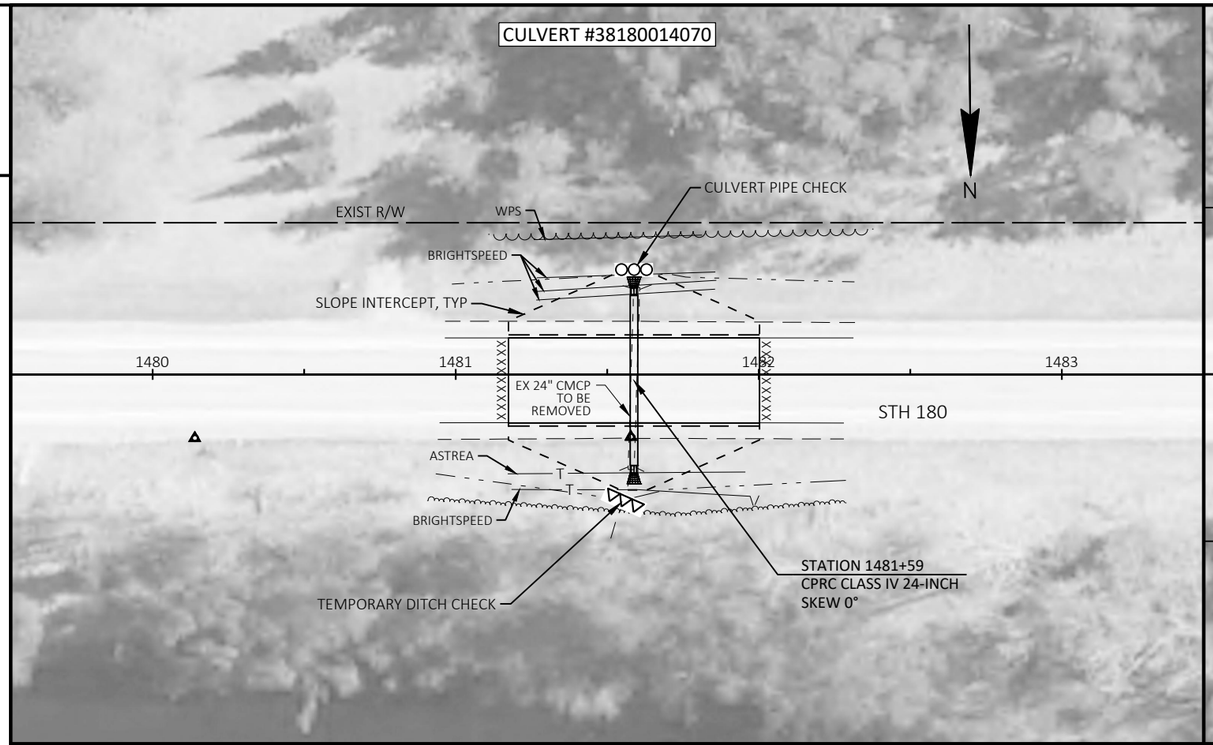
STRUCTURE C-38-117

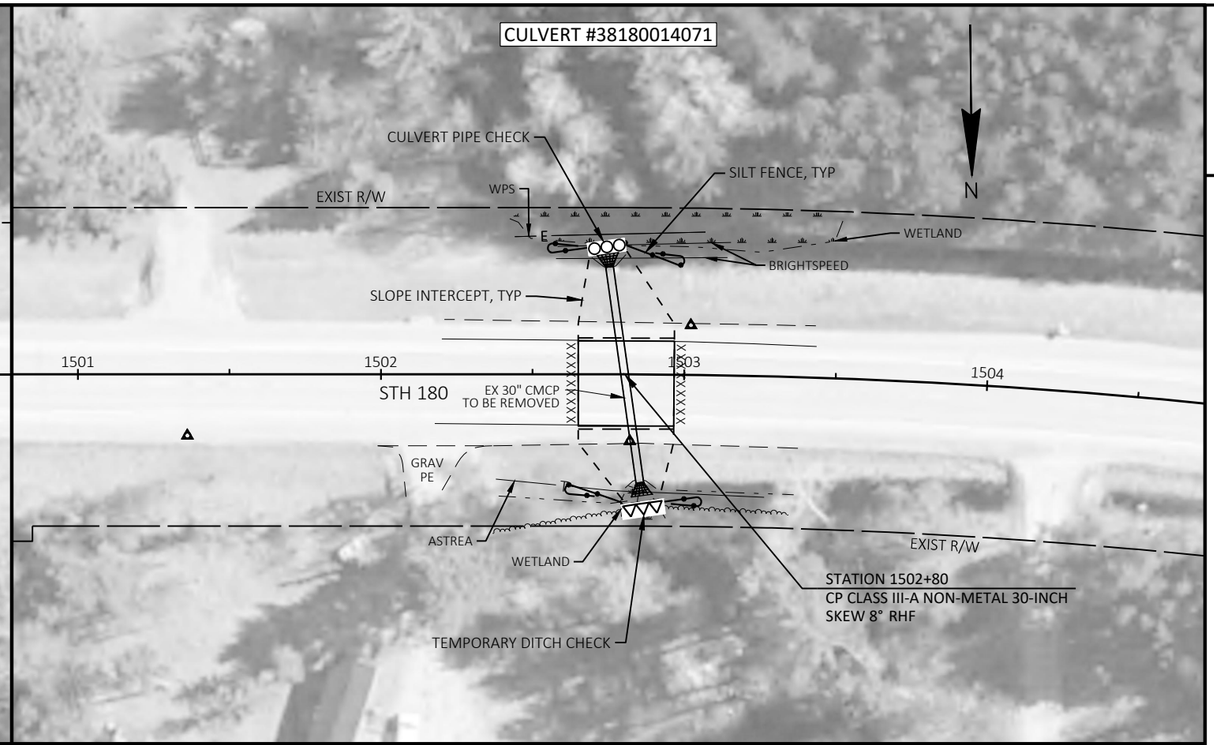


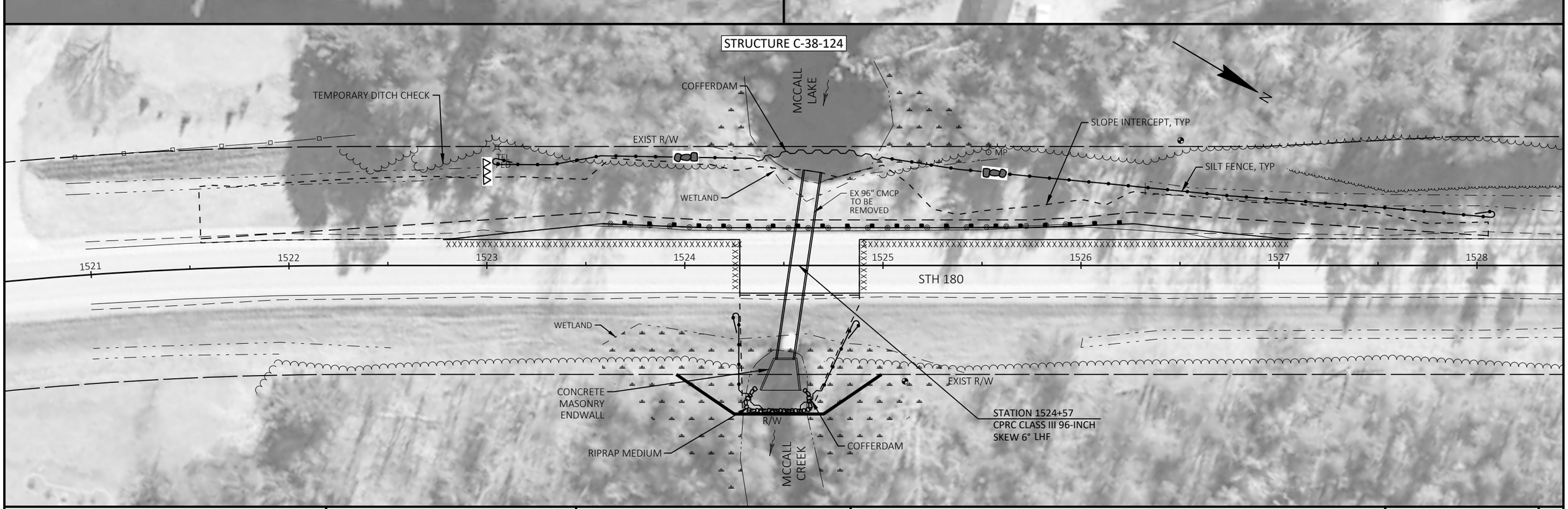
PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	EROSION CONTROL PLAN	SHEET 23	E

FILE NAME : S:\CURRPROJ\MARINETTE COUNTY\STH 180\CIVIL3D\96701600\SHEETSPLAN\96701671-022001-EC.DWG
LAYOUT NAME - Sheet-06
PLOT DATE : 7/31/2025 7:26 AM
PLOT BY : AARON SARAUER
PLOT NAME :
PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 44

2





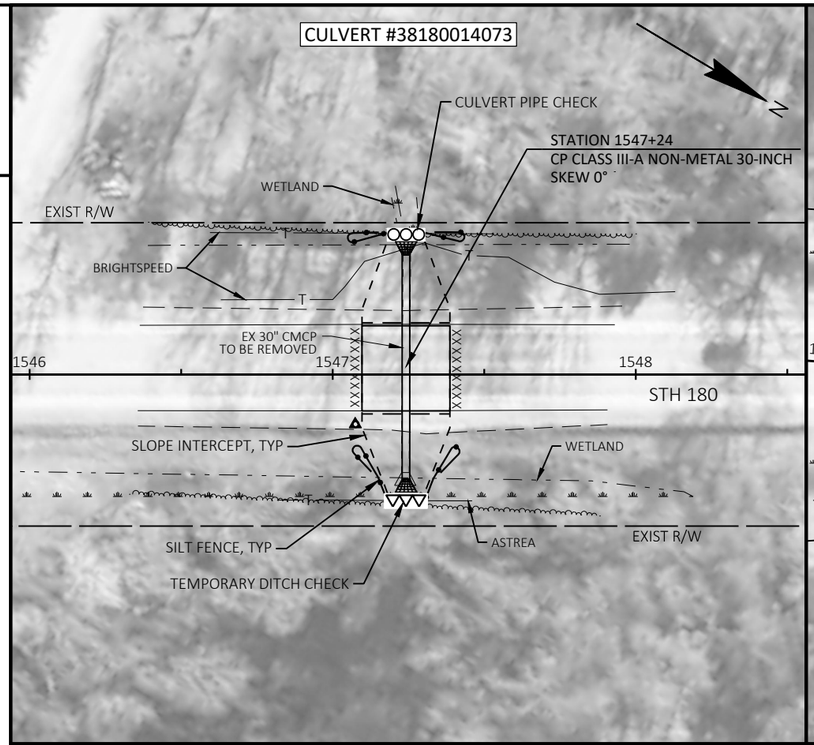


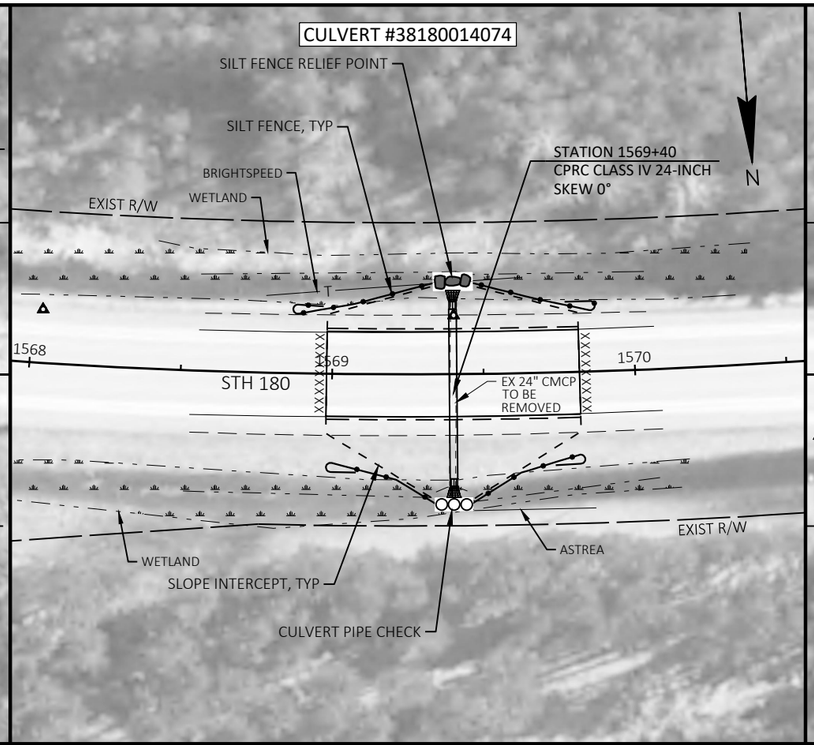
PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	EROSION CONTROL PLAN	SHEET 24	E

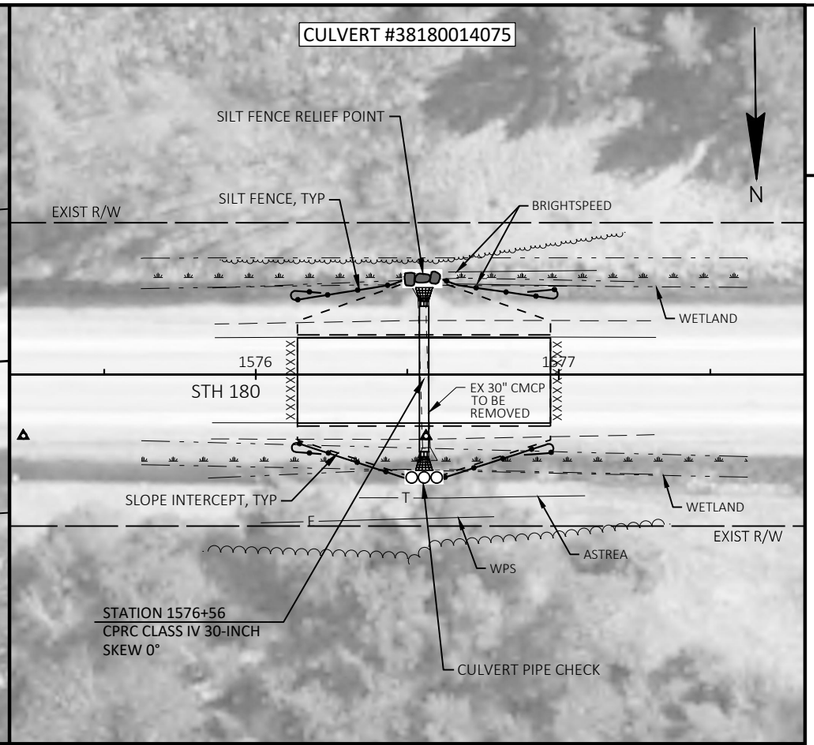
FILE NAME : S:\CURRPROJ\MARINETTE COUNTY\STH 180\CIVIL3D\96701600\SHEETSPLAN\96701671-022001-EC.DWG
LAYOUT NAME - Sheet-07

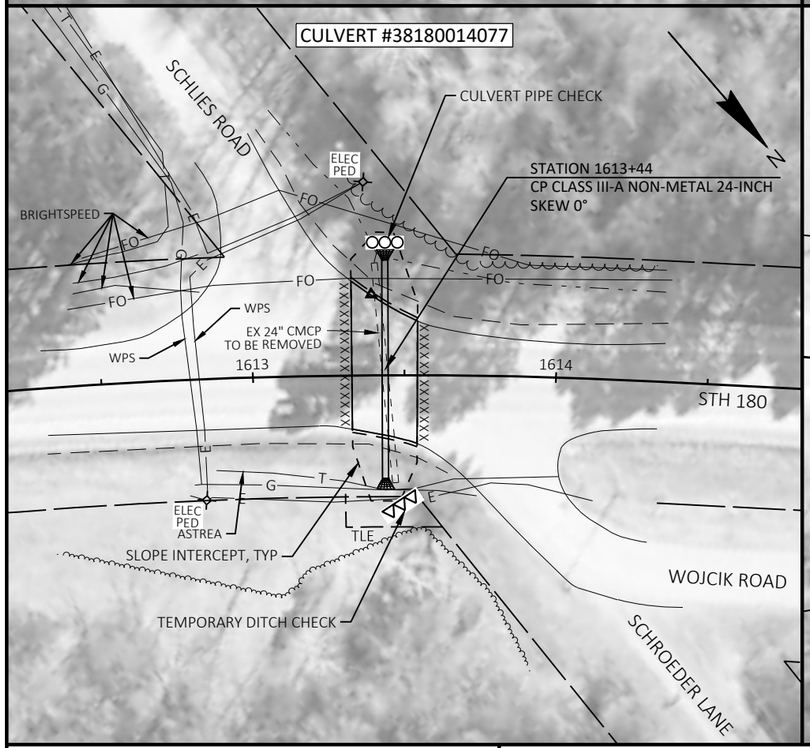
PLOT DATE : 7/31/2025 7:27 AM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:50 FT

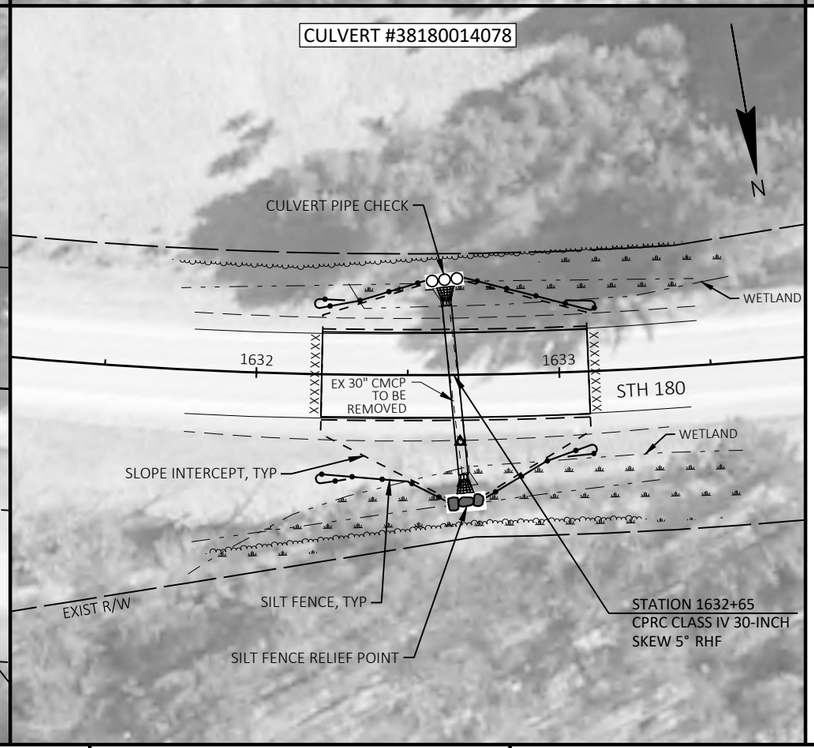
WISDOT/CADDS SHEET 44











PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	EROSION CONTROL PLAN	SHEET 25	E

2

LEGEND

- ⊗ WORK ZONE
- C/D — PLACE TRAFFIC CONTROL SIGNS PER "DETAIL C" & "DETAIL D" IN SDD "BARRICADES AND SIGNS FOR MAINLINE CLOSURES"
- 3 — PLACE TRAFFIC CONTROL SIGNS PER "DETAIL 3" IN SDD "BARRICADES AND SIGNS FOR SIDEROAD CLOSURES"

GENERAL NOTES

SEE S.D.D. "BARRICADES AND SIGNS FOR MAINLINE CLOSURES", "BARRICADES AND SIGNS FOR VARIOUS CLOSURES", "DETOUR SIGNING FOR MAINLINE CLOSURES", AND "BARRICADES AND SIGNS FOR SIDEROAD CLOSURES" FOR GENERAL NOTES AND SIGN SPACING REQUIREMENTS.

DRAWINGS SHOW TRAFFIC CONTROL FOR A TYPICAL SITUATION. ADDITIONAL TRAFFIC CONTROL DEVICES MAY BE REQUIRED AND/OR LAYOUT DETAILS MODIFIED DEPENDING ON FIELD CONDITIONS AND THE CONTRACTOR'S METHODS OR SEQUENCE OF OPERATION.

MAP SHOWN IS NOT TO SCALE.

N

Marinette

PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	TRAFFIC CONTROL OVERVIEW - SOUTH OF CTH X	SHEET 26	E

FILE NAME : S:\CURRPROJ\MARINETTE COUNTY\STH 180\CIVIL3D\96701600\SHEETSPLAN\96701671-025101-TC.DWG
LAYOUT NAME - Sheet-01

PLOT DATE : 7/31/2025 7:30 AM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:7000 FT

WISDOT/CADDS SHEET 42

2

LEGEND

- ⊗ WORK ZONE
- C/D — PLACE TRAFFIC CONTROL SIGNS PER "DETAIL C" & "DETAIL D" IN SDD "BARRICADES AND SIGNS FOR MAINLINE CLOSURES"
- 3 — PLACE TRAFFIC CONTROL SIGNS PER "DETAIL 3" IN SDD "BARRICADES AND SIGNS FOR SIDEROAD CLOSURES"

N

GENERAL NOTES

SEE S.D.D. "BARRICADES AND SIGNS FOR MAINLINE CLOSURES", "BARRICADES AND SIGNS FOR VARIOUS CLOSURES", "DETOUR SIGNING FOR MAINLINE CLOSURES", AND "BARRICADES AND SIGNS FOR SIDEROAD CLOSURES" FOR GENERAL NOTES AND SIGN SPACING REQUIREMENTS.

DRAWINGS SHOW TRAFFIC CONTROL FOR A TYPICAL SITUATION. ADDITIONAL TRAFFIC CONTROL DEVICES MAY BE REQUIRED AND/OR LAYOUT DETAILS MODIFIED DEPENDING ON FIELD CONDITIONS AND THE CONTRACTOR'S METHODS OR SEQUENCE OF OPERATION.

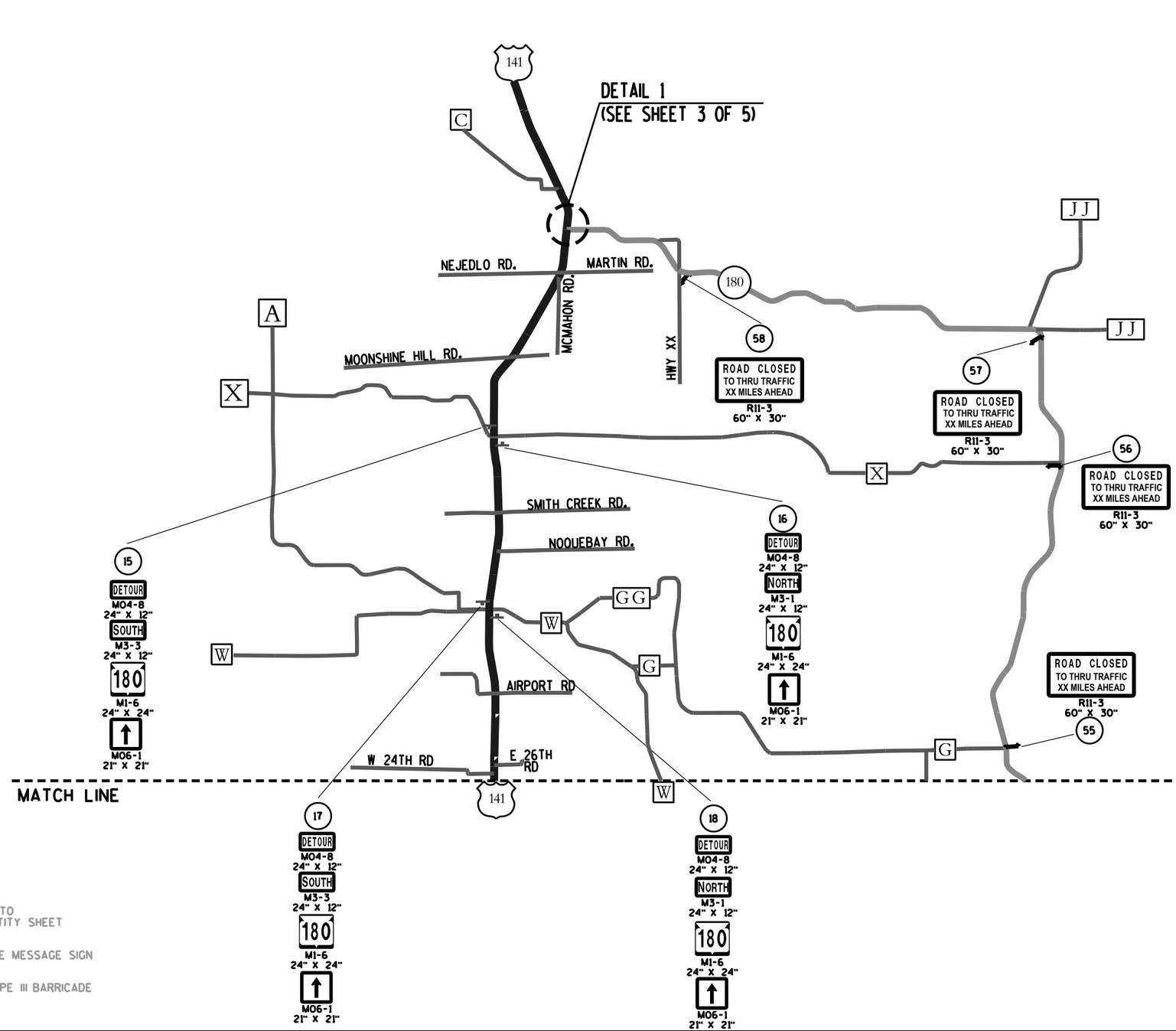
MAP SHOWN IS NOT TO SCALE.

PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	TRAFFIC CONTROL OVERVIEW - NORTH OF CTH X	SHEET 27	E

FILE NAME : S:\CURRPROJ\MARINETTE COUNTY\STH 180\CIVIL3D\96701600\SHEETSPLAN\96701671-025101-TC.DWG
LAYOUT NAME - Sheet-02

PLOT DATE : 7/31/2025 7:30 AM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:7000 FT

2



LEGEND

- (X) SIGN NUMBER, REFER TO MISCELLANEOUS QUANTITY SHEET
- ▲ PCMS (X) PORTABLE CHANGEABLE MESSAGE SIGN
- SIGN MOUNTED ON TYPE III BARRICADE
- POST MOUNTED SIGN

SHEET 1 OF 5

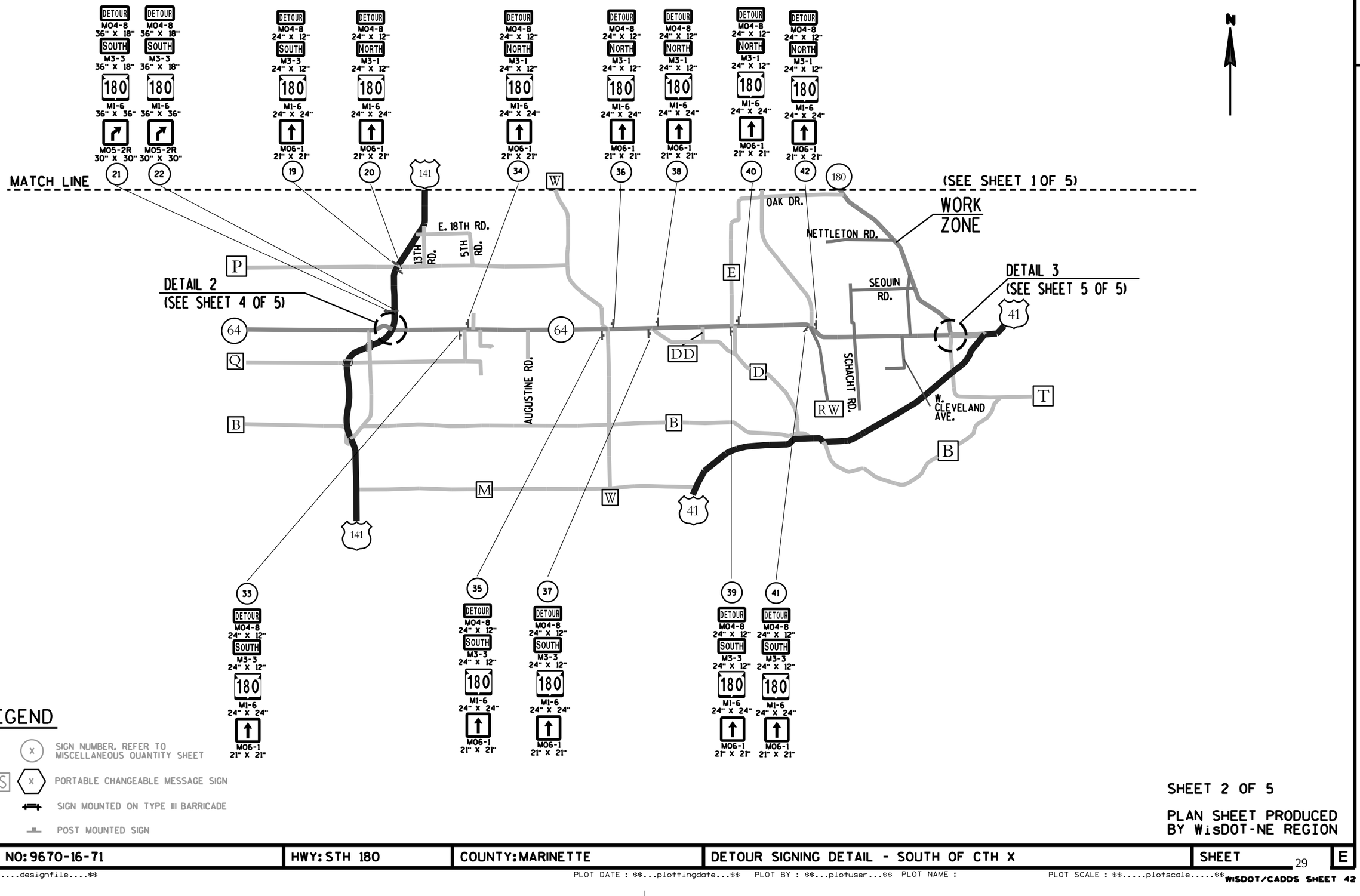
PLAN SHEET PRODUCED BY WisDOT-NE REGION

PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	DETOUR SIGNING DETAIL - SOUTH OF CTH X	SHEET	E

FILE NAME : $$....designfile....$$ PLOT DATE : $$...plottingdate...$$ PLOT BY : $$...plotuser...$$ PLOT NAME : PLOT SCALE : $$.....plotscale.....$$

WISDOT/CADDS SHEET 42

2



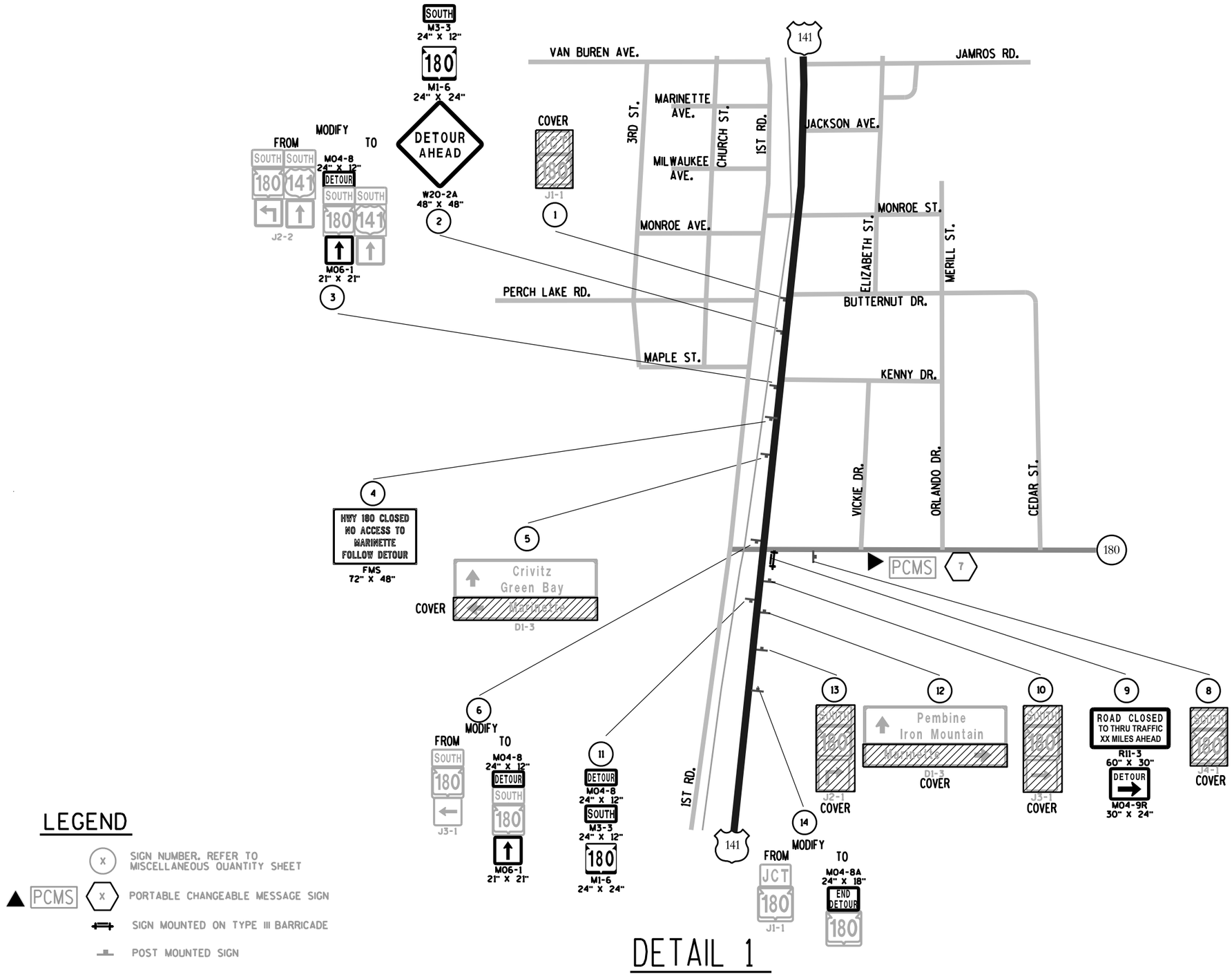
SHEET 2 OF 5

PLAN SHEET PRODUCED BY WisDOT-NE REGION

PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	DETOUR SIGNING DETAIL - SOUTH OF CTH X	SHEET	E

FILE NAME : $$....designfile....$$ PLOT DATE : $$...plottingdate...$$ PLOT BY : $$...plotuser...$$ PLOT NAME : PLOT SCALE : $$.....plotscale.....$$

WISDOT/CADDS SHEET 42



LEGEND

- (X) SIGN NUMBER, REFER TO MISCELLANEOUS QUANTITY SHEET
- ▲ PCMS (X) PORTABLE CHANGEABLE MESSAGE SIGN
- SIGN MOUNTED ON TYPE III BARRICADE
- POST MOUNTED SIGN

DETAIL 1

SHEET 3 OF 5

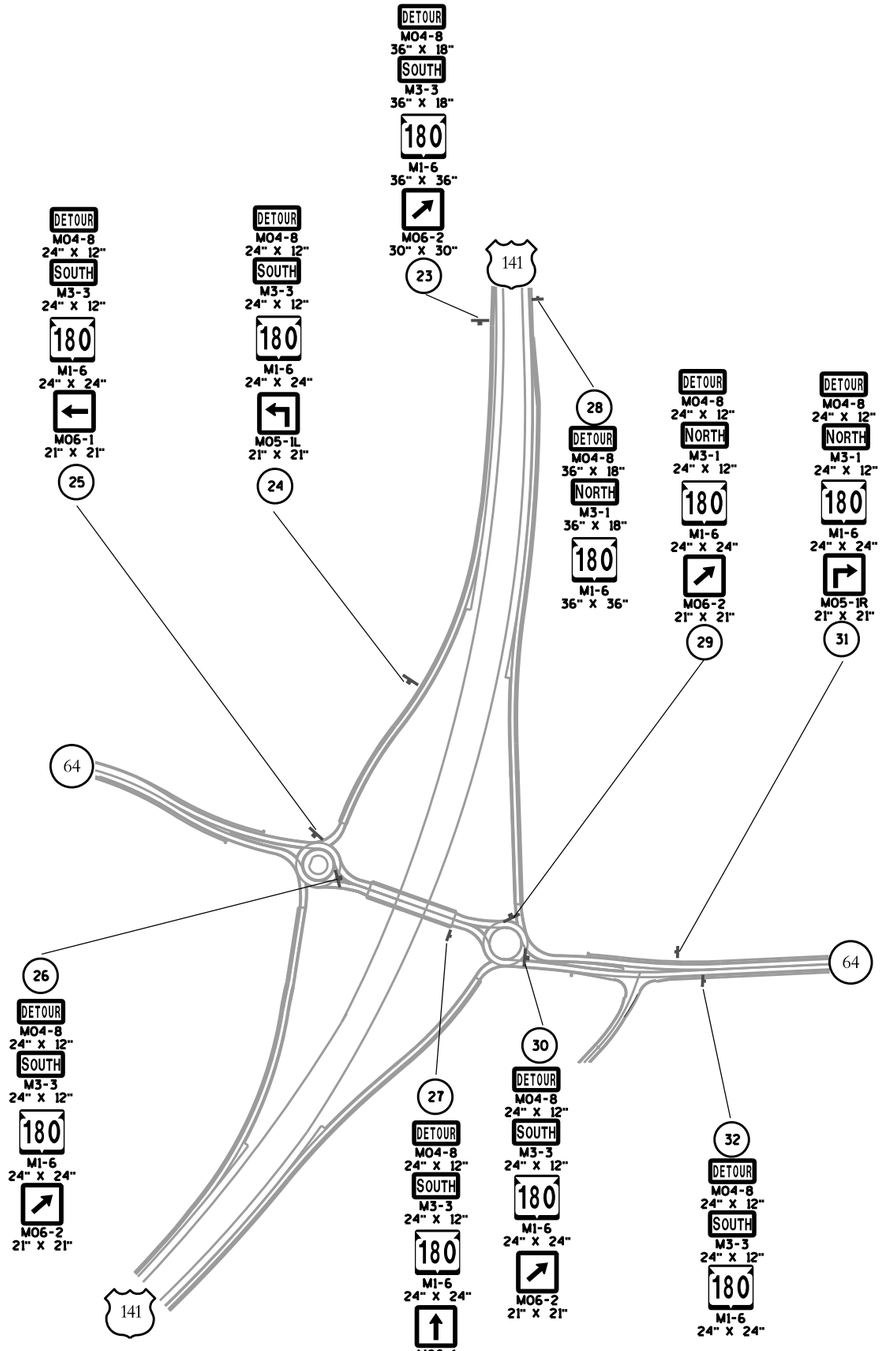
PLAN SHEET PRODUCED BY WisDOT-NE REGION

PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	DETOUR SIGNING DETAIL - SOUTH OF CTH X	SHEET 30	E

FILE NAME : $$....designfile....$$ PLOT DATE : $$...plottingdate...$$ PLOT BY : $$...plotuser...$$ PLOT NAME : PLOT SCALE : $$.....plotscale.....$$

2

N



DETAIL 2

LEGEND

- (X) SIGN NUMBER, REFER TO MISCELLANEOUS QUANTITY SHEET
- ▲ PCMS (X) PORTABLE CHANGEABLE MESSAGE SIGN
- SIGN MOUNTED ON TYPE III BARRICADE
- POST MOUNTED SIGN

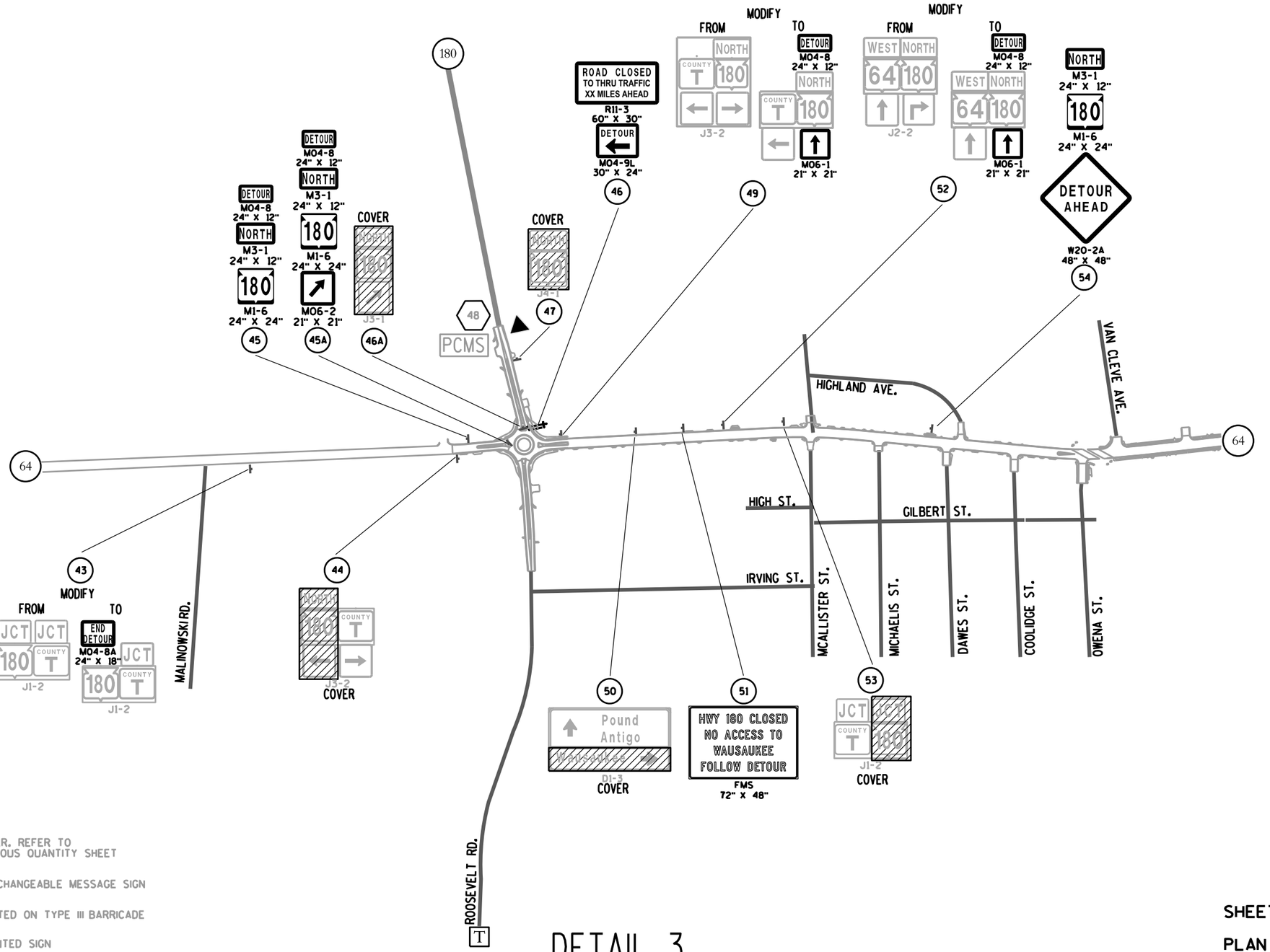
SHEET 4 OF 5

PLAN SHEET PRODUCED BY WisDOT-NE REGION

PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	DETOUR SIGNING DETAIL - SOUTH OF CTH X	SHEET	E

FILE NAME : $$....designfile....$$ PLOT DATE : $$...plottingdate...$$ PLOT BY : $$...plotuser...$$ PLOT NAME : PLOT SCALE : $$.....plotscale.....$$
WISDOT/CADDS SHEET 42

2



LEGEND

- (X) SIGN NUMBER. REFER TO MISCELLANEOUS QUANTITY SHEET
- ▲ PCMS (X) PORTABLE CHANGEABLE MESSAGE SIGN
- SIGN MOUNTED ON TYPE III BARRICADE
- POST MOUNTED SIGN

DETAIL 3

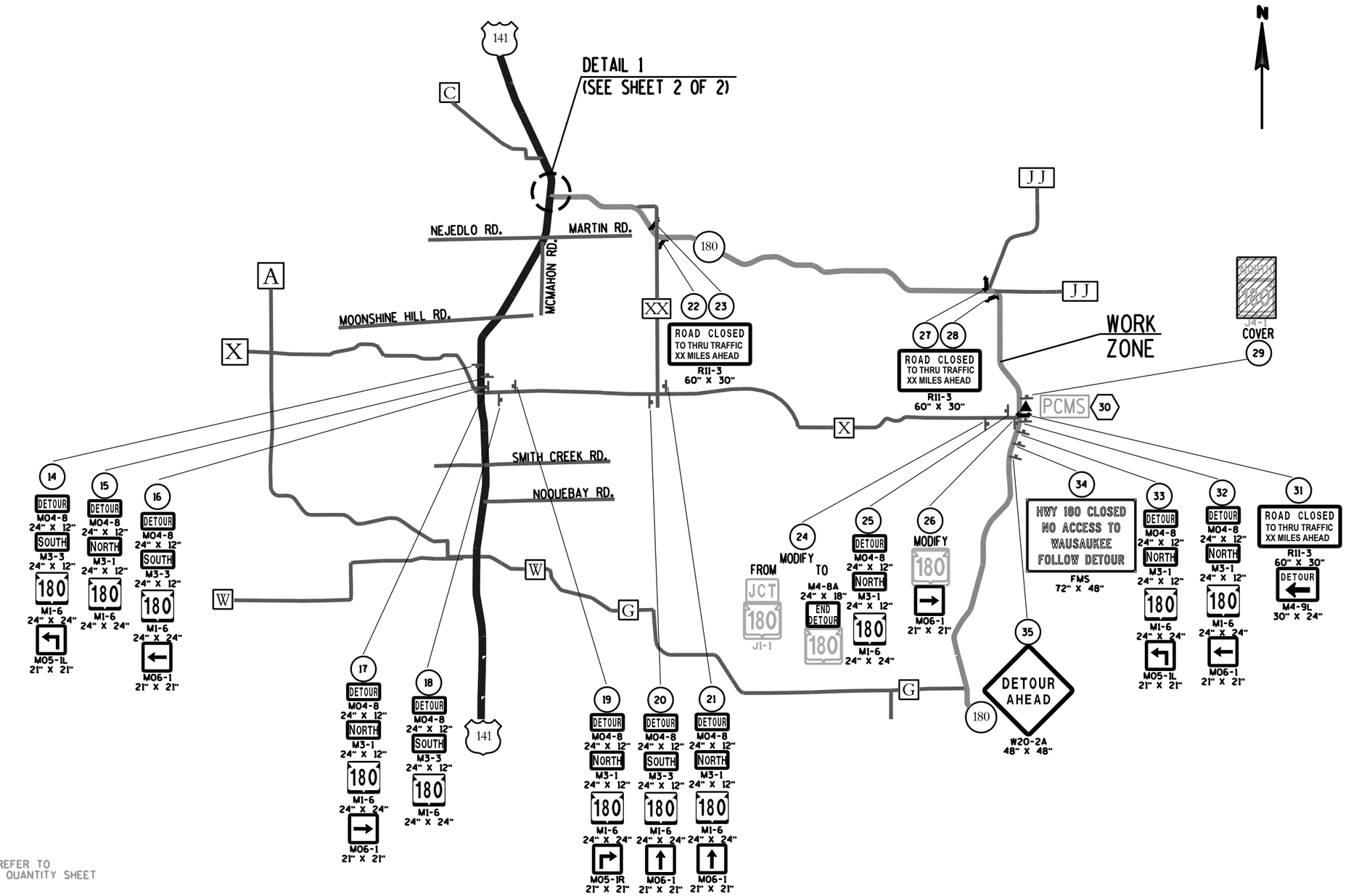
SHEET 5 OF 5

PLAN SHEET PRODUCED BY WisDOT-NE REGION

PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	DETOUR SIGNING DETAIL - SOUTH OF CTH X	SHEET	E

FILE NAME : $$....designfile....$$ PLOT DATE : $$...plottingdate...$$ PLOT BY : $$...plotuser...$$ PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42

2



LEGEND

- (X) SIGN NUMBER. REFER TO MISCELLANEOUS QUANTITY SHEET
- ▲ PCMS (X) PORTABLE CHANGEABLE MESSAGE SIGN
- SIGN MOUNTED ON TYPE III BARRICADE
- POST MOUNTED SIGN

SHEET 1 OF 2
PLAN SHEET PRODUCED
BY WisDOT-NE REGION

PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	DETOUR SIGNING DETAIL - NORTH OF CTH X	SHEET 33	E

2

N

VAN BUREN AVE.
JAMROS RD.
141
3RD ST.
MARINETTE AVE.
CHURCH ST.
1ST RD.
JACKSON AVE.
MILWAUKEE AVE.
MONROE AVE.
MONROE ST.
ELIZABETH ST.
MERILL ST.
PERCH LAKE RD.
BUTTERNUT DR.
MAPLE ST.
KENNY DR.
VICKIE DR.
ORLANDO DR.
CEDAR ST.
180
PCMS 7A

1 COVER — JCT 180 — J1-1

2 W20-2A 48" X 48" DETOUR AHEAD — SOUTH M3-3 24" X 12" — 180 M1-6 24" X 24"

3 MODIFY FROM SOUTH 180 SOUTH 141 TO SOUTH 180 SOUTH 141 — M04-8 24" X 12" DETOUR — M06-1 21" X 21" — J2-2

4 HWY 180 CLOSED NO ACCESS TO MARINETTE FOLLOW DETOUR — FMS 72" X 48"

5 Crivitz Green Bay Marinette — COVER — D1-3

6 MODIFY FROM SOUTH 180 TO M04-8 24" X 12" DETOUR SOUTH 180 M06-1 21" X 21" — J3-1

7 SOUTH 180 — COVER — J4-1

8 ROAD CLOSED TO THRU TRAFFIC XX MILES AHEAD — R11-3 60" X 30" — DETOUR M04-9R 30" X 24"

9 SOUTH 180 — COVER — J5-1

10 DETOUR M04-8 24" X 12" — SOUTH M3-3 24" X 12" — 180 M1-6 24" X 24"

11 Pembine Iron Mountain — Marinette — COVER — D1-3

12 SOUTH 180 — COVER — J2-1

13 MODIFY FROM JCT 180 TO M4-8A 24" X 18" END DETOUR 180 — J1-1

LEGEND

- (X) SIGN NUMBER. REFER TO MISCELLANEOUS QUANTITY SHEET
- ▲ PCMS (X) PORTABLE CHANGEABLE MESSAGE SIGN
- SIGN MOUNTED ON TYPE III BARRICADE
- POST MOUNTED SIGN

DETAIL 1

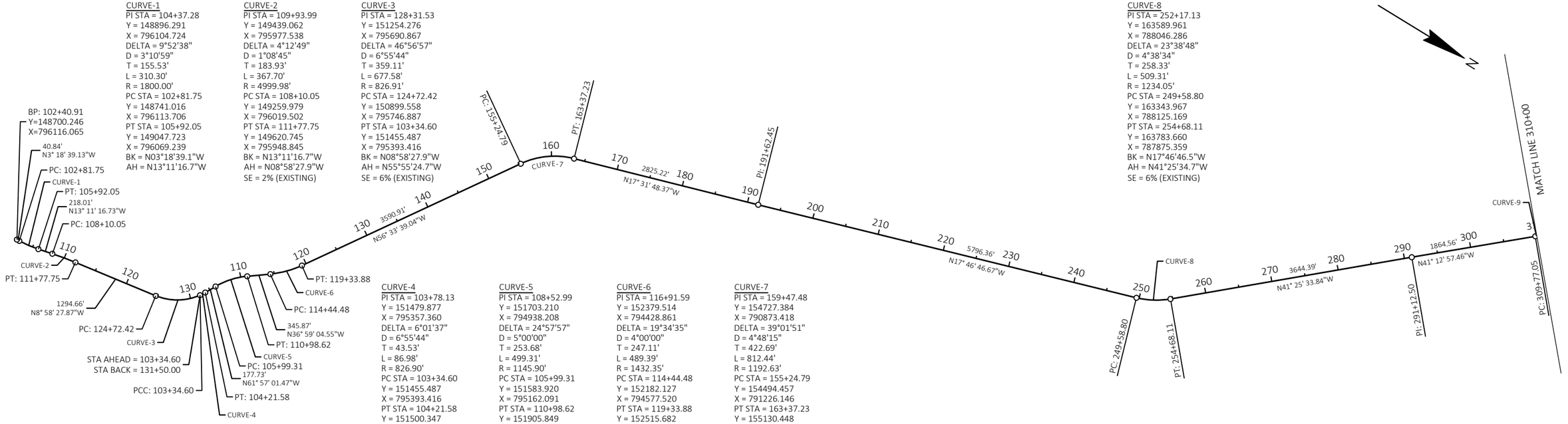
SHEET 2 OF 2

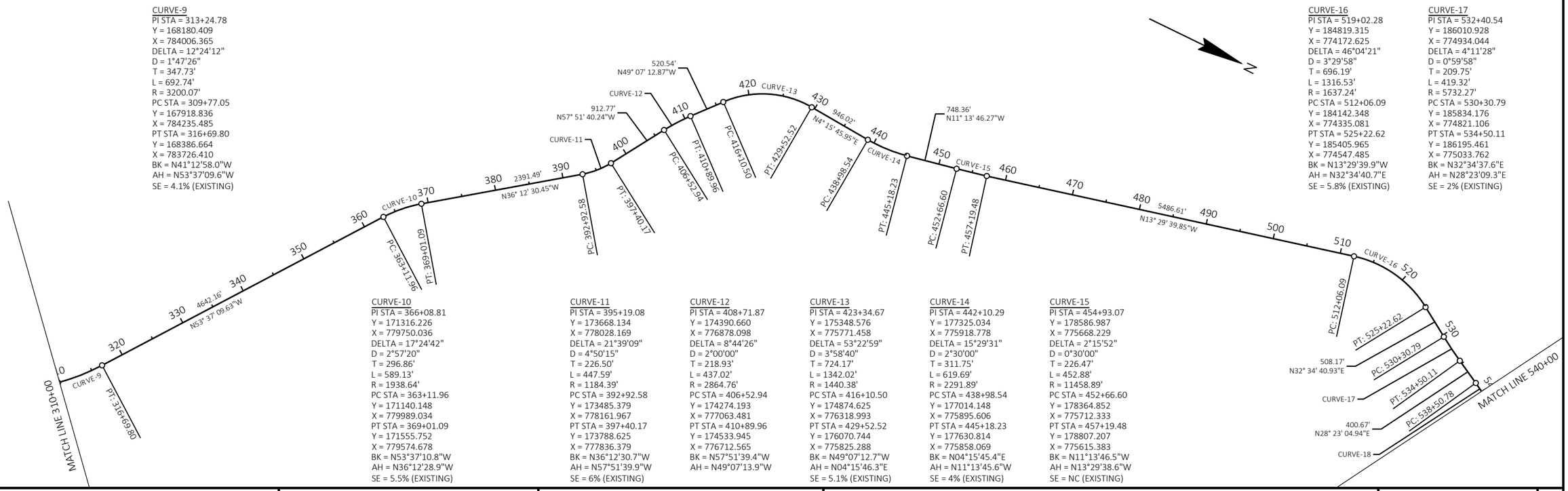
PLAN SHEET PRODUCED BY WisDOT-NE REGION

PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	DETOUR SIGNING DETAIL - NORTH OF CTH X	SHEET	E

FILE NAME : $$....designfile....$$ PLOT DATE : $$...plottingdate...$$ PLOT BY : $$...plotuser...$$ PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42

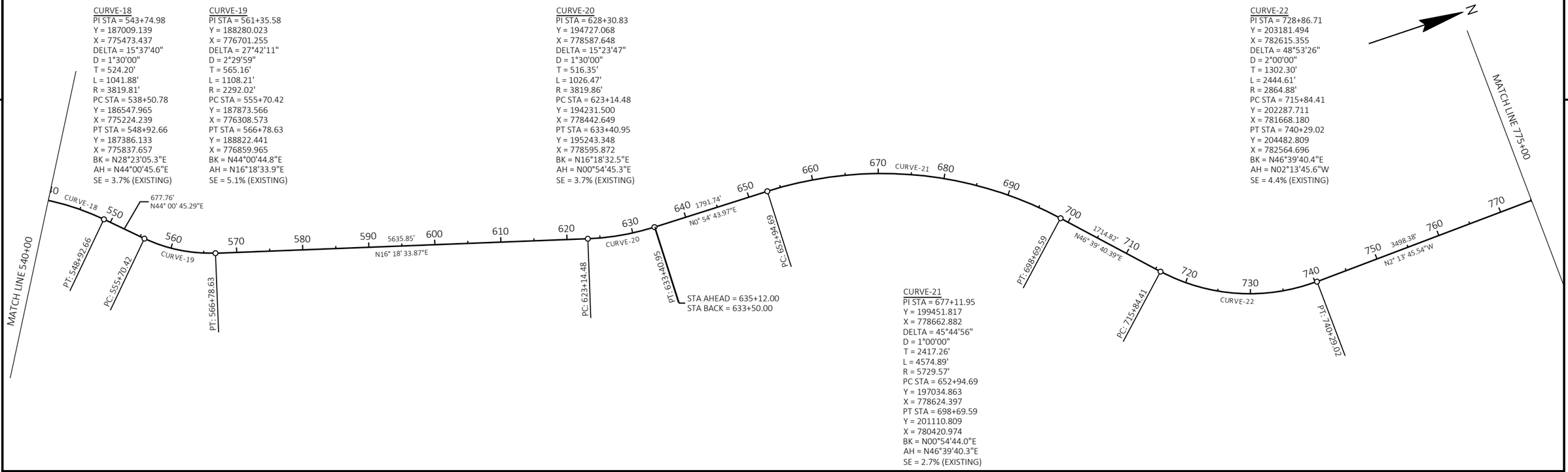
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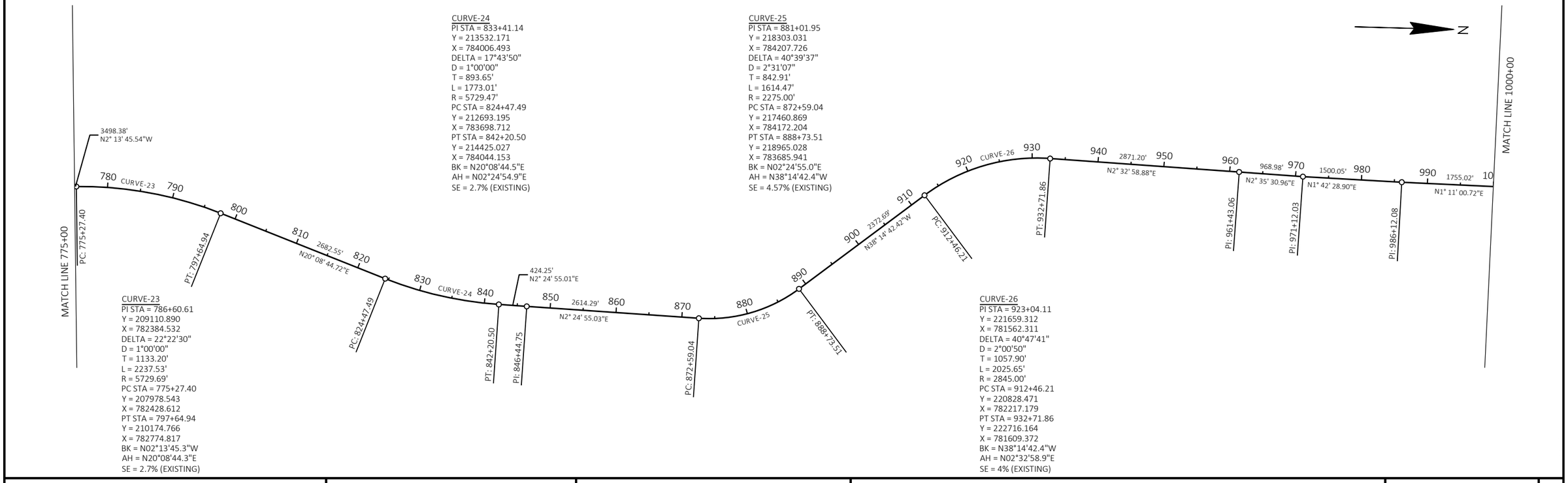




PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	ALIGNMENT DIAGRAM	SHEET 35	E

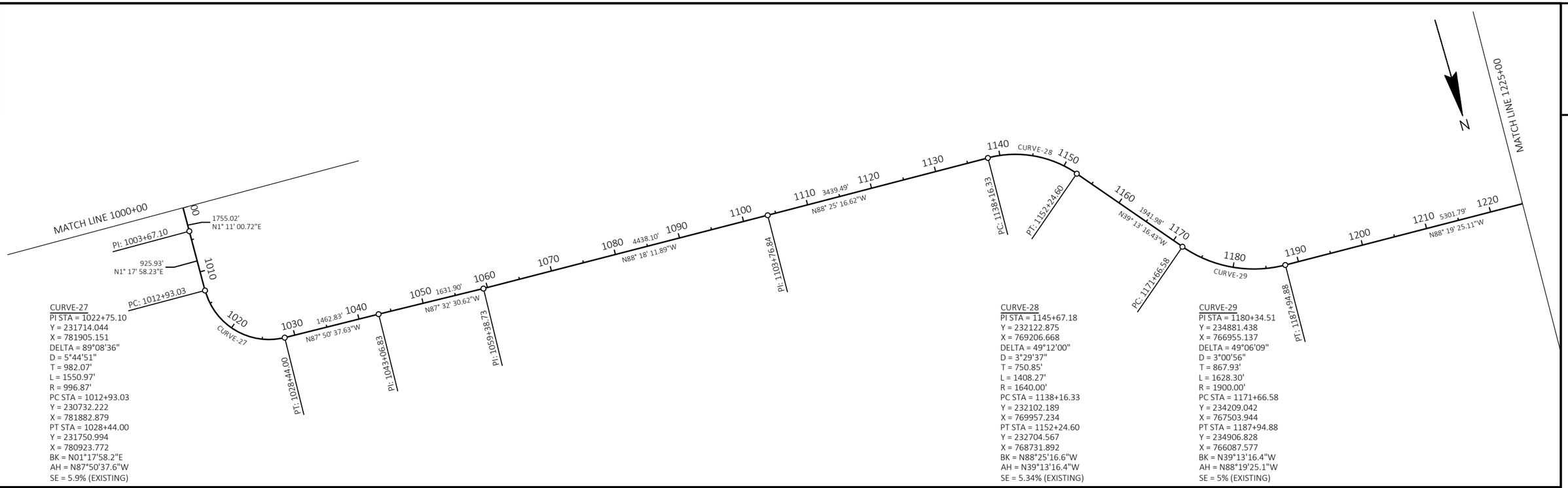
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LAYOUT NAME - Sheet-01
PLOT DATE : 7/31/2025 7:30 AM
PLOT BY : AARON SARAUER
PLOT NAME :
PLOT SCALE : 1 IN:1500 FT
WISDOT/CADDS SHEET 44





PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	ALIGNMENT DIAGRAM	SHEET 36	E

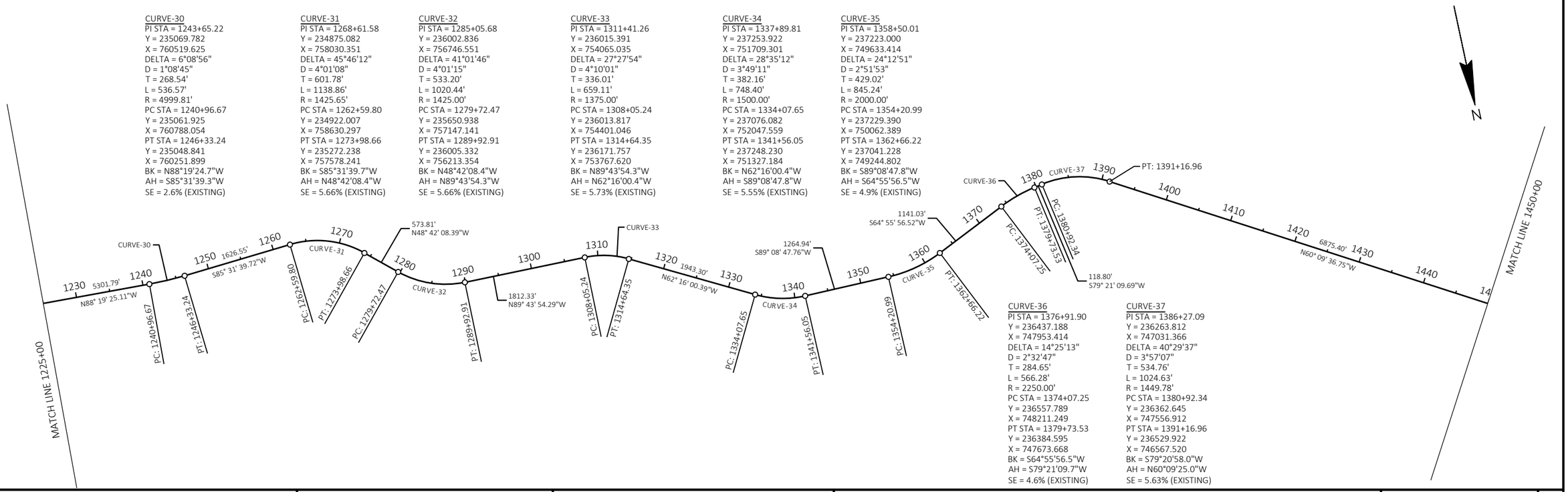
FILE NAME : S:\CURRPROJ\MARINETTE COUNTY\STH 180\CIVIL3D\96701600\SHEETSPLAN\96701671-027201-AD.DWG
LAYOUT NAME - Sheet-02
PLOT DATE : 7/31/2025 7:30 AM
PLOT BY : AARON SARAUER
PLOT NAME :
PLOT SCALE : 1 IN:1500 FT



CURVE-27
PI STA = 1022+75.10
Y = 231714.044
X = 781905.151
DELTA = 89°08'36"
D = 5°44'51"
T = 982.07'
L = 1550.97'
R = 996.87'
PC STA = 1012+93.03
Y = 230732.222
X = 781882.879
PT STA = 1028+44.00
Y = 231750.994
X = 780923.772
BK = N01°17'58.2"E
AH = N87°50'37.6"W
SE = 5.9% (EXISTING)

CURVE-28
PI STA = 1145+67.18
Y = 232122.875
X = 769206.668
DELTA = 49°12'00"
D = 3°29'37"
T = 750.85'
L = 1408.27'
R = 1640.00'
PC STA = 1138+16.33
Y = 232102.189
X = 769957.234
PT STA = 1152+24.60
Y = 232704.567
X = 768731.892
BK = N88°25'16.6"W
AH = N39°13'16.4"W
SE = 5.34% (EXISTING)

CURVE-29
PI STA = 1180+34.51
Y = 234881.438
X = 766955.137
DELTA = 49°06'09"
D = 3°00'56"
T = 867.93'
L = 1628.30'
R = 1900.00'
PC STA = 1171+66.58
Y = 234209.042
X = 767503.944
PT STA = 1187+94.88
Y = 234906.828
X = 766087.577
BK = N39°13'16.4"W
AH = N88°19'25.1"W
SE = 5% (EXISTING)



CURVE-30
PI STA = 1243+65.22
Y = 235069.782
X = 760519.625
DELTA = 6°08'56"
D = 1°08'45"
T = 268.54'
L = 536.57'
R = 4999.81'
PC STA = 1240+96.67
Y = 235061.925
X = 760788.054
PT STA = 1246+33.24
Y = 235048.841
X = 760251.899
BK = N88°19'24.7"W
AH = S85°31'39.3"W
SE = 2.6% (EXISTING)

CURVE-31
PI STA = 1268+61.58
Y = 234875.082
X = 758030.351
DELTA = 45°46'12"
D = 4°01'08"
T = 601.78'
L = 1138.86'
R = 1425.65'
PC STA = 1262+59.80
Y = 234922.007
X = 758630.297
PT STA = 1273+98.66
Y = 235272.238
X = 757578.241
BK = S85°31'39.7"W
AH = N48°42'08.4"W
SE = 5.66% (EXISTING)

CURVE-32
PI STA = 1285+05.68
Y = 236002.836
X = 756746.551
DELTA = 41°01'46"
D = 4°01'15"
T = 533.20'
L = 1020.44'
R = 1425.00'
PC STA = 1279+72.47
Y = 235650.938
X = 757147.141
PT STA = 1289+92.91
Y = 236005.332
X = 756213.354
BK = N48°42'08.4"W
AH = N89°43'54.3"W
SE = 5.66% (EXISTING)

CURVE-33
PI STA = 1311+41.26
Y = 236015.391
X = 754065.035
DELTA = 27°27'54"
D = 4°10'01"
T = 336.01'
L = 659.11'
R = 1375.00'
PC STA = 1308+05.24
Y = 236013.817
X = 754401.046
PT STA = 1314+64.35
Y = 236171.757
X = 753767.620
BK = N89°43'54.3"W
AH = N62°16'00.4"W
SE = 5.73% (EXISTING)

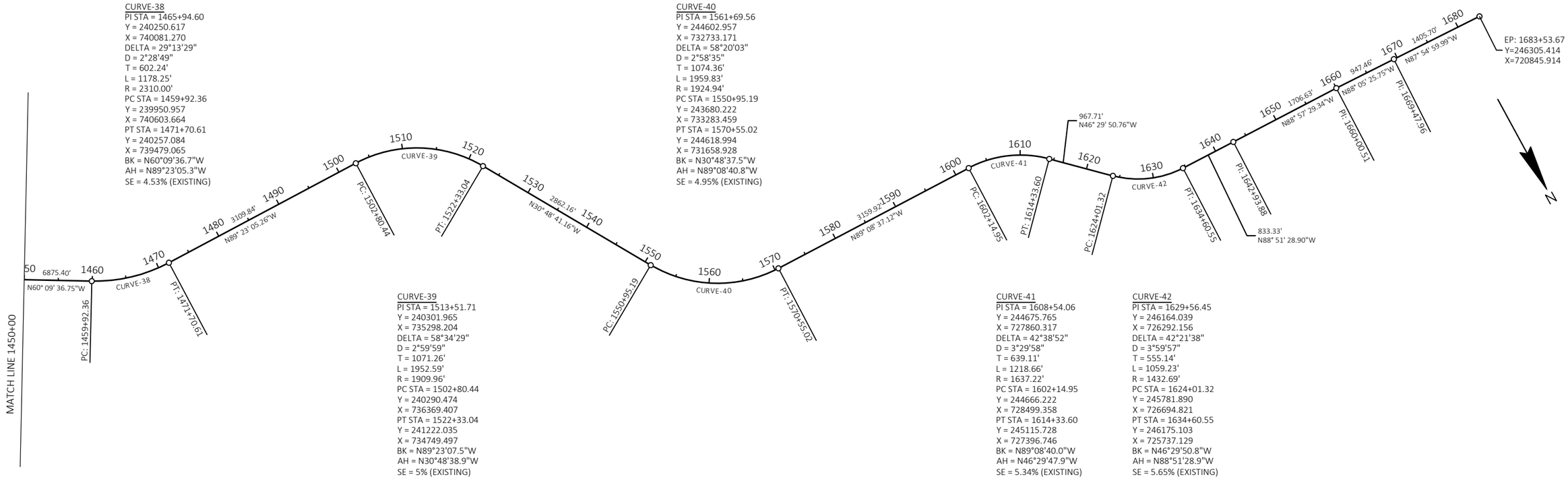
CURVE-34
PI STA = 1337+89.81
Y = 237253.922
X = 751709.301
DELTA = 28°35'12"
D = 3°49'11"
T = 382.16'
L = 748.40'
R = 1500.00'
PC STA = 1334+07.65
Y = 237076.082
X = 752047.559
PT STA = 1341+56.05
Y = 237248.230
X = 751327.184
BK = N62°16'00.4"W
AH = S89°08'47.8"W
SE = 5.55% (EXISTING)

CURVE-35
PI STA = 1358+50.01
Y = 237223.000
X = 749633.414
DELTA = 24°12'51"
D = 2°51'53"
T = 429.02'
L = 845.24'
R = 2000.00'
PC STA = 1354+20.99
Y = 237229.390
X = 750062.389
PT STA = 1362+66.22
Y = 237041.228
X = 749244.802
BK = S89°08'47.8"W
AH = S64°55'56.5"W
SE = 4.9% (EXISTING)

CURVE-36
PI STA = 1376+91.90
Y = 236437.188
X = 747953.414
DELTA = 14°25'13"
D = 2°32'47"
T = 284.65'
L = 566.28'
R = 2250.00'
PC STA = 1374+07.25
Y = 236557.789
X = 748211.249
PT STA = 1379+73.53
Y = 236384.595
X = 747673.668
BK = S64°55'56.5"W
AH = S79°21'09.7"W
SE = 4.6% (EXISTING)

CURVE-37
PI STA = 1386+27.09
Y = 236263.812
X = 747031.366
DELTA = 40°29'37"
D = 3°57'07"
T = 534.76'
L = 1024.63'
R = 1449.78'
PC STA = 1380+92.34
Y = 236362.645
X = 747556.912
PT STA = 1391+16.96
Y = 236529.922
X = 746567.520
BK = S79°20'58.0"W
AH = N60°09'25.0"W
SE = 5.63% (EXISTING)

PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	ALIGNMENT DIAGRAM	SHEET 37	E



CURVE-38
PI STA = 1465+94.60
Y = 240250.617
X = 740081.270
DELTA = 29°13'29"
D = 2°28'49"
T = 602.24'
L = 1178.25'
R = 2310.00'
PC STA = 1459+92.36
Y = 239950.957
X = 740603.664
PT STA = 1471+70.61
Y = 240257.084
X = 739479.065
BK = N60°09'36.7"W
AH = N89°23'05.3"W
SE = 4.53% (EXISTING)

CURVE-39
PI STA = 1513+51.71
Y = 240301.965
X = 735298.204
DELTA = 58°34'29"
D = 2°59'59"
T = 1071.26'
L = 1952.59'
R = 1909.96'
PC STA = 1502+80.44
Y = 240290.474
X = 736369.407
PT STA = 1522+33.04
Y = 241222.035
X = 734749.497
BK = N89°23'07.5"W
AH = N30°48'38.9"W
SE = 5% (EXISTING)

CURVE-40
PI STA = 1561+69.56
Y = 244602.957
X = 732733.171
DELTA = 58°20'03"
D = 2°58'35"
T = 1074.36'
L = 1959.83'
R = 1924.94'
PC STA = 1550+95.19
Y = 243680.222
X = 733283.459
PT STA = 1570+55.02
Y = 244618.994
X = 731658.928
BK = N30°48'37.5"W
AH = N89°08'40.8"W
SE = 4.95% (EXISTING)

CURVE-41
PI STA = 1608+54.06
Y = 244675.765
X = 727860.317
DELTA = 42°38'52"
D = 3°29'58"
T = 639.11'
L = 1218.66'
R = 1637.22'
PC STA = 1602+14.95
Y = 244666.222
X = 728499.358
PT STA = 1614+33.60
Y = 245115.728
X = 727396.746
BK = N89°08'40.0"W
AH = N46°29'47.9"W
SE = 5.34% (EXISTING)

CURVE-42
PI STA = 1629+56.45
Y = 246164.039
X = 726292.156
DELTA = 42°21'38"
D = 3°59'57"
T = 555.14'
L = 1059.23'
R = 1432.69'
PC STA = 1624+01.32
Y = 245781.890
X = 726694.821
PT STA = 1634+60.55
Y = 246175.103
X = 725737.129
BK = N46°29'50.8"W
AH = N88°51'28.9"W
SE = 5.65% (EXISTING)

PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	ALIGNMENT DIAGRAM	SHEET 38	E

Estimate Of Quantities

9670-16-71

Line	Item	Item Description	Unit	Total	Qty
0002	201.0105	Clearing	STA	19.000	19.000
0004	201.0205	Grubbing	STA	19.000	19.000
0006	203.0100	Removing Small Pipe Culverts	EACH	32.000	32.000
0008	203.0220	Removing Structure (structure) 01. C-38-117	EACH	1.000	1.000
0010	203.0220	Removing Structure (structure) 02. C-38-639	EACH	1.000	1.000
0012	203.0220	Removing Structure (structure) 03. C-38-111	EACH	1.000	1.000
0014	203.0220	Removing Structure (structure) 04. C-38-121	EACH	1.000	1.000
0016	203.0220	Removing Structure (structure) 05. Station 804+94, CPRC 66-Inch	EACH	1.000	1.000
0018	203.0220	Removing Structure (structure) 06. C-38-113	EACH	1.000	1.000
0020	203.0220	Removing Structure (structure) 07. C-38-115	EACH	1.000	1.000
0022	203.0220	Removing Structure (structure) 08. C-38-116	EACH	1.000	1.000
0024	203.0220	Removing Structure (structure) 09. C-38-124	EACH	1.000	1.000
0026	204.0165	Removing Guardrail	LF	448.000	448.000
0028	204.0180	Removing Delineators and Markers	EACH	46.000	46.000
0030	205.0100	Excavation Common	CY	10,814.000	10,814.000
0032	206.2001	Excavation for Structures Culverts (structure) 01. C-38-128	EACH	1.000	1.000
0034	206.5001	Cofferdams (structure) 01. Station 551+02, CPRC 78-Inch	EACH	1.000	1.000
0036	206.5001	Cofferdams (structure) 02. Station 668+12, CPRC 108-Inch	EACH	1.000	1.000
0038	206.5001	Cofferdams (structure) 03. Station 903+83, CPRC 66-Inch	EACH	1.000	1.000
0040	206.5001	Cofferdams (structure) 04. Station 1010+52, CPRCHE 58x91-Inch	EACH	1.000	1.000
0042	206.5001	Cofferdams (structure) 05. Station 1176+47, CPRCHE 63x98-Inch	EACH	1.000	1.000
0044	206.5001	Cofferdams (structure) 06. Station 1524+58, CPRC 96-Inch	EACH	1.000	1.000
0046	208.0100	Borrow	CY	504.000	504.000
0048	210.2500	Backfill Structure Type B	TON	1,260.000	1,260.000
0050	213.0100	Finishing Roadway (project) 01. 9670-16-71	EACH	1.000	1.000
0052	305.0110	Base Aggregate Dense 3/4-Inch	TON	1,100.000	1,100.000
0054	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	5,210.000	5,210.000
0056	305.0130	Base Aggregate Dense 3-Inch	TON	989.000	989.000
0058	450.4000	HMA Cold Weather Paving	TON	3,441.000	3,441.000
0060	455.0605	Tack Coat	GAL	1,264.000	1,264.000
0062	460.2000	Incentive Density HMA Pavement	DOL	3,160.000	3,160.000
0064	460.5224	HMA Pavement 4 LT 58-28 S	TON	4,935.000	4,935.000
0066	465.0520	Asphaltic Rumble Strips, Shoulder	LF	1,654.000	1,654.000
0068	465.0560	Asphaltic Rumble Strips, Centerline	LF	883.000	883.000
0070	504.0100	Concrete Masonry Culverts	CY	171.000	171.000
0072	504.0900	Concrete Masonry Endwalls	CY	60.000	60.000
0074	505.0400	Bar Steel Reinforcement HS Structures	LB	25,440.000	25,440.000
0076	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	2,200.000	2,200.000
0078	516.0500	Rubberized Membrane Waterproofing	SY	29.000	29.000
0080	520.1024	Apron Endwalls for Culvert Pipe 24-Inch	EACH	26.000	26.000
0082	520.1030	Apron Endwalls for Culvert Pipe 30-Inch	EACH	8.000	8.000
0084	520.1036	Apron Endwalls for Culvert Pipe 36-Inch	EACH	5.000	5.000
0086	520.3424	Culvert Pipe Class III-A Non-metal 24-Inch	LF	838.000	838.000
0088	520.3430	Culvert Pipe Class III-A Non-metal 30-Inch	LF	270.000	270.000
0090	520.3436	Culvert Pipe Class III-A Non-metal 36-Inch	LF	286.000	286.000
0092	521.0336	Apron Endwalls for Culvert Pipe Sloped Cross Drains Steel 36-Inch 4 to 1	EACH	5.000	5.000
0094	522.0148	Culvert Pipe Reinforced Concrete Class III 48-Inch	LF	128.000	128.000
0096	522.0166	Culvert Pipe Reinforced Concrete Class III 66-Inch	LF	96.000	96.000
0098	522.0172	Culvert Pipe Reinforced Concrete Class III 72-Inch	LF	120.000	120.000

9670-16-71

Line	Item	Item Description	Unit	Total	Qty
0100	522.0178	Culvert Pipe Reinforced Concrete Class III 78-Inch	LF	120.000	120.000
0102	522.0196	Culvert Pipe Reinforced Concrete Class III 96-Inch	LF	96.000	96.000
0104	522.0208	Culvert Pipe Reinforced Concrete Class III 108-Inch	LF	108.000	108.000
0106	522.0424	Culvert Pipe Reinforced Concrete Class IV 24-Inch	LF	266.000	266.000
0108	522.0430	Culvert Pipe Reinforced Concrete Class IV 30-Inch	LF	288.000	288.000
0110	522.0436	Culvert Pipe Reinforced Concrete Class IV 36-Inch	LF	104.000	104.000
0112	522.1024	Apron Endwalls for Culvert Pipe Reinforced Concrete 24-Inch	EACH	10.000	10.000
0114	522.1030	Apron Endwalls for Culvert Pipe Reinforced Concrete 30-Inch	EACH	10.000	10.000
0116	522.1048	Apron Endwalls for Culvert Pipe Reinforced Concrete 48-Inch	EACH	4.000	4.000
0118	522.1066	Apron Endwalls for Culvert Pipe Reinforced Concrete 66-Inch	EACH	2.000	2.000
0120	522.1072	Apron Endwalls for Culvert Pipe Reinforced Concrete 72-Inch	EACH	2.000	2.000
0122	522.2363	Culvert Pipe Reinforced Concrete Horizontal Elliptical Class HE-III 63x98-Inch	LF	66.000	66.000
0124	522.2658	Apron Endwalls for Culvert Pipe Reinforced Concrete Horizontal Elliptical 58x91-Inch	EACH	2.000	2.000
0126	522.2663	Apron Endwalls for Culvert Pipe Reinforced Concrete Horizontal Elliptical 63x98-Inch	EACH	2.000	2.000
0128	606.0200	Riprap Medium	CY	150.000	150.000
0130	606.0300	Riprap Heavy	CY	61.000	61.000
0132	614.2300	MGS Guardrail 3	LF	325.000	325.000
0134	614.2610	MGS Guardrail Terminal EAT	EACH	4.000	4.000
0136	618.0100	Maintenance and Repair of Haul Roads (project) 01. 9670-16-71	EACH	1.000	1.000
0138	619.1000	Mobilization	EACH	1.000	1.000
0140	624.0100	Water	MGAL	88.000	88.000
0142	625.0500	Salvaged Topsoil	SY	12,800.000	12,800.000
0144	627.0200	Mulching	SY	2,550.000	2,550.000
0146	628.1504	Silt Fence	LF	9,930.000	9,930.000
0148	628.1520	Silt Fence Maintenance	LF	9,930.000	9,930.000
0150	628.1905	Mobilizations Erosion Control	EACH	32.000	32.000
0152	628.1910	Mobilizations Emergency Erosion Control	EACH	9.000	9.000
0154	628.2006	Erosion Mat Urban Class I Type A	SY	12,800.000	12,800.000
0156	628.6005	Turbidity Barriers	SY	50.000	50.000
0158	628.7504	Temporary Ditch Checks	LF	350.000	350.000
0160	628.7555	Culvert Pipe Checks	EACH	210.000	210.000
0162	628.7570	Rock Bags	EACH	320.000	320.000
0164	629.0210	Fertilizer Type B	CWT	5.000	5.000
0166	630.0130	Seeding Mixture No. 30	LB	760.000	760.000
0168	630.0200	Seeding Temporary	LB	70.000	70.000
0170	630.0500	Seed Water	MGAL	380.000	380.000
0172	633.5200	Markers Culvert End	EACH	80.000	80.000
0174	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	7.000	7.000
0176	634.0618	Posts Wood 4x6-Inch X 18-FT	EACH	2.000	2.000
0178	638.2102	Moving Signs Type II	EACH	8.000	8.000
0180	638.3000	Removing Small Sign Supports	EACH	9.000	9.000
0182	642.5001	Field Office Type B	EACH	1.000	1.000
0184	643.0300	Traffic Control Drums	DAY	210.000	210.000
0186	643.0420	Traffic Control Barricades Type III	DAY	14,330.000	14,330.000
0188	643.0705	Traffic Control Warning Lights Type A	DAY	27,436.000	27,436.000
0190	643.0900	Traffic Control Signs	DAY	28,375.000	28,375.000
0192	643.0920	Traffic Control Covering Signs Type II	EACH	18.000	18.000
0194	643.1000	Traffic Control Signs Fixed Message	SF	96.000	96.000
0196	643.1050	Traffic Control Signs PCMS	DAY	28.000	28.000

Estimate Of Quantities

9670-16-71

Line	Item	Item Description	Unit	Total	Qty
0198	643.5000	Traffic Control	EACH	1.000	1.000
0200	645.0105	Geotextile Type C	SY	444.000	444.000
0202	645.0120	Geotextile Type HR	SY	604.000	604.000
0204	646.2020	Marking Line Epoxy 6-Inch	LF	10,140.000	10,140.000
0206	646.6466	Cold Weather Marking Epoxy 6-Inch	LF	6,837.000	6,837.000
0208	650.4500	Construction Staking Subgrade	LF	3,579.000	3,579.000
0210	650.5000	Construction Staking Base	LF	3,579.000	3,579.000
0212	650.6000	Construction Staking Pipe Culverts	EACH	41.000	41.000
0214	650.6501	Construction Staking Structure Layout (structure) 01. C-38-128	EACH	1.000	1.000
0216	650.9911	Construction Staking Supplemental Control (project) 01. 9670-16-71	EACH	1.000	1.000
0218	650.9920	Construction Staking Slope Stakes	LF	4,074.000	4,074.000
0220	690.0150	Sawing Asphalt	LF	3,161.000	3,161.000
0222	715.0502	Incentive Strength Concrete Structures	DOL	1,026.000	1,026.000
0224	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	2,400.000	2,400.000
0226	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	2,100.000	2,100.000
0228	SPV.0035	Special 01. Foundation Backfill	CY	7,120.000	7,120.000
0230	SPV.0060	Special 01. Apron Endwalls for Culvert Pipe Reinforced Concrete 78-Inch	EACH	2.000	2.000
0232	SPV.0090	Special 01. Culvert Pipe Reinforced Concrete Horizontal Elliptical Class HE-IV 58x91-In	LF	64.000	64.000

3

CLEARING AND GRUBBING ITEMS

STATION - STATION	LOCATION	201.0105 CLEARING STA	201.0205 GRUBBING STA
CATEGORY CODE 0010			
236+00 - 237+00	RT	1	1
341+00 - 342+00	LT	1	1
416+00 - 417+00	LT	1	1
440+00 - 441+00	RT	1	1
514+00 - 516+00	LT & RT	2	2
667+00 - 669+00	LT & RT	2	2
790+00 - 791+00	RT	1	1
903+00 - 904+00	LT & RT	1	1
1010+00 - 1011+00	RT	1	1
1155+00 - 1156+00	LT & RT	1	1
1176+00 - 1177+00	LT & RT	1	1
1386+00 - 1387+00	LT	1	1
1436+00 -1437+00	LT & RT	2	2
1523+00 - 1526+00	LT & RT	3	3
	TOTALS	**19**	**19**

REMOVING STRUCTURE ITEMS

DESCRIPTION	STATION	203.0220* REMOVING STRUCTURE EACH	204.0180* REMOVING DELINEATORS AND MARKERS EACH	COMMENTS
CATEGORY CODE 0010				
02. C-38-639	416+38	1	2	112 LF OF 5'X5' RCB
03. C-38-111	515+01	1	2	115 LF OF 86"X63" CMCE
04. C-38-121	668+15	1	2	99 LF OF 131"X85" CMCE
05. STATION 804+94 CPRC 66-INCH	804+94	1	2	65 LF OF 66" CPRC
06. C-38-113	903+81	1	--	90 LF OF 60" CPCM
07. C-38-115	1010+52	1	1	61 LF OF 83"X57" CMCE
08. C-38-116	1176+47	1	--	67 LF OF 95"X67" CMCE
09. C-38-124	1524+58	1	1	87 LF OF 96" CPCM
	TOTAL	**8**	**10**	

*ADDITIONAL QUANTITIES SHOWN ELSEWHWERE IN PLANS

REMOVING GUARDRAIL

STATION - STATION	LOCATION	204.0165 LF
CATEGORY CODE 0010		
1174+12 - 1178+41	LT & RT	205
1522+11 - 1527+53	LT & RT	243
	TOTAL	**448**

REMOVING SMALL PIPE CULVERT ITEMS

STATION	LOCATION	203.0100 REMOVING SMALL PIPE CULVERTS EACH	204.0180* REMOVING DELINEATORS AND MARKERS EACH	COMMENTS
CATEGORY CODE 0010				
236+26	LT & RT	1	2	66 LF OF CPCS 30-INCH
341+66	LT & RT	1	2	65 LF OF CPCS 24-INCH
357+98	LT & RT	1	2	63 LF OF CPRC 30-INCH
364+85	LT & RT	1	2	89 LF OF CPCS 36-INCH
373+97	LT & RT	1	2	67 LF OF CPCS 24-INCH
440+59	LT & RT	1	2	56 LF OF CPCS 24-INCH
609+04	LT & RT	1	2	71 LF OF CPCS 30-INCH
619+72	LT & RT	1	2	56 LF OF CPRC 24-INCH
798+93	LT & RT	1	2	59 LF OF CPCS 30-INCH
868+00	LT & RT	1	2	82 LF OF CPRC 24-INCH
987+08	LT & RT	1	1	64 LF OF CPCS 24-INCH
1027+78	LT & RT	1	--	65 LF OF CPCS 24-INCH
1039+92	LT & RT	1	1	61 LF OF CPCS 24-INCH
1071+79	LT & RT	1	1	59 LF OF CPCS 24-INCH
1078+14	LT & RT	1	--	51 LF OF CPCS 24-INCH
1085+82	LT & RT	1	1	56 LF OF CPCS 24-INCH
1093+19	LT & RT	1	1	77 LF OF CPCS 24-INCH
1135+20	LT & RT	1	--	61 LF OF CPCS 36-INCH
1155+82	LT & RT	1	2	102 LF OF CPCS 24-INCH
1170+22	LT & RT	1	1	57 LF OF CPCS 24-INCH
1290+55	LT & RT	1	1	57 LF OF CPRC 24-INCH
1336+25	LT & RT	1	1	62 LF OF CPRC 36-INCH
1386+74	LT & RT	1	--	153 LF OF CPCS 36-INCH
1397+77	LT & RT	1	--	59 LF OF CPCS 30-INCH
1409+96	LT & RT	1	--	56 LF OF CPCS 36-INCH
1481+59	LT & RT	1	1	60 LF OF CPCS 24-INCH
1502+80	LT & RT	1	2	73 LF OF CPCS 30-INCH
1547+24	LT & RT	1	--	72 LF OF CPCS 30-INCH
1569+40	LT & RT	1	--	61 LF OF CPCS 24-INCH
1576+55	LT & RT	1	--	53 LF OF CPCS 30-INCH
1613+43	LT & RT	1	1	73 LF OF CPCS 24-INCH
1632+66	LT & RT	1	2	62 LF OF CPCS 30-INCH
	TOTAL	**32**	**36**	

*ADDITIONAL QUANTITIES SHOWN ELSEWHWERE IN PLANS

EXCAVATION BELOW CULVERT ITEMS

STATION	LOCATION	205.0100* EXCAVATION COMMON CY	305.0130* BASE AGGREGATE DENSE 3-INCH TON	645.0105* GEOTEXTILE TYPE C SY
CATEGORY CODE 0010				
1524-57	LT & RT	72	160	96
	TOTAL	**72**	**160**	**96**

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE IN PLANS

EARTHWORK AND BACKFILL ITEMS

LOCATION	205.0100* EXCAVATION COMMON CY	SPV.0035.01 FOUNDATION BACKFILL CY	COMMENTS
CATEGORY CODE 0010			
235+73 - 236+79	538	381	CULVERT REPLACEMENT
357+54 - 358+37	423	296	CULVERT REPLACEMENT
440+18 - 441+01	423	298	CULVERT REPLACEMENT
608+62 - 609+46	441	309	CULVERT REPLACEMENT
619+31 - 620+14	422	287	CULVERT REPLACEMENT
798+27 - 799+51	634	423	CULVERT REPLACEMENT
804+40 - 805+45	494	414	CULVERT REPLACEMENT
986+66 - 987+49	365	257	CULVERT REPLACEMENT
1010+05 - 1010+98	384	284	CULVERT REPLACEMENT
1027+36 - 1028+20	365	261	CULVERT REPLACEMENT
1039+50 - 1040+33	365	257	CULVERT REPLACEMENT
1071+37 - 1072+20	364	258	CULVERT REPLACEMENT
1077+73 - 1078+56	364	253	CULVERT REPLACEMENT
1085+40 - 1086+23	365	261	CULVERT REPLACEMENT
1134+79 - 1135+63	365	271	CULVERT REPLACEMENT
1169+81 - 1170+64	365	258	CULVERT REPLACEMENT
1175+99 - 1176+96	463	368	CULVERT REPLACEMENT
1290+11 - 1290+97	382	269	CULVERT REPLACEMENT
1335+83 - 1336+68	365	261	CULVERT REPLACEMENT
1397+35 - 1398+18	365	262	CULVERT REPLACEMENT
1409+52 - 1410+36	365	251	CULVERT REPLACEMENT
1481+17 - 1482+00	365	256	CULVERT REPLACEMENT
1568+98 - 1569+82	319	214	CULVERT REPLACEMENT
1576+14 - 1576+97	317	208	CULVERT REPLACEMENT
1632+22 - 1633+10	382	263	CULVERT REPLACEMENT
TOTALS	**10,000**	**7,120**	

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE IN PLANS

COFFERDAMS

LOCATION	206.5001 EACH
CATEGORY CODE 0010	
01. STATION 551+02 CPRC 78-INCH	1
02. STATION 668+12 CPRC 108-INCH	1
03. STATION 903+83 CPRC 66-INCH	1
04. STATION 1010+52 CPRCHE 58X91-INCH	1
05. STATION 1176+47 CPRCHE 63X98-INCH	1
06. STATION 1524+58 CPRC 96-INCH	1
TOTAL	**6**

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DIVISION	FROM/TO STATION	LOCATION	205.0100* COMMON EXCAVATION (1) CUT (1,2)	SALVAGED/UNUSABLE PAVEMENT MATERIAL (3)	AVAILABLE MATERIAL (4)	UNEXPANDED FILL	EXPANDED FILL (5) FACTOR 1.25	MASS ORDINATE +/- (6)	208.0100 BORROW
DIVISION 1									
STATION 1176+47 BEAM GUARD	1173+25.272/1179+16.63	STH 180	159	33	126	188	235	-109	109
DIVISION 1 SUBTOTAL			159	33	126	188	235	-109	109
DIVISION 2									
STATION 1437+00 BOX CULVERT	1435+74.538/1438+24.462	STH 180	392	75	317	526	658	-341	341
DIVISION 2 SUBTOTAL			392	75	317	526	658	-341	341
DIVISION 3									
STATION 1524+57 BEAM GUARD	1521+56.064/1528+05.746	STH 180	191	40	151	164	205	-54	54
DIVISION 3 SUBTOTAL			191	40	151	164	205	-54	54
GRAND TOTAL			742	148	594	878	1,098	-504	504
TOTAL COMMON EXC			742						

NOTES:

(1) COMMON EXCAVATION IS THE SUM OF THE CUT. ITEM NUMBER 205.0100

(2) SALVAGED/UNUSABLE PAVEMENT MATERIAL IS INCLUDED IN CUT

(3) SALVAGED/UNUSABLE PAVEMENT MATERIAL = LENGTH * TYPICAL WIDTH * TYPICAL DEPTH

(4) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSABLE PAVEMENT MATERIAL

(5) EXPANDED FILL. FACTOR = 1.25; EXPANDED FILL = UNEXPANDED FILL * FILL FACTOR.

(6) THE MASS ORDINATE + OR - QTY CALCULATED FOR THE DIVISION. NEGATIVE INDICATES A SHORTAGE OF MATERIAL.

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE IN PLANS

BASE AGGREGATE DENSE AND WATER ITEMS

STATION - STATION	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	624.0100 WATER MGAL	COMMENTS
CATEGORY CODE 0010					
235+73 - 236+79	LT & RT	28	132	2	CULVERT REPLACEMENT WITH TRANSITION
341+54 - 341+77	LT & RT	6	36	1	CULVERT REPLACEMENT
357+54 - 358+37	LT & RT	22	135	2	CULVERT REPLACEMENT WITH TRANSITION
364+68 - 365+05	LT & RT	9	60	1	CULVERT REPLACEMENT
373+86 - 374+08	LT & RT	5	36	1	CULVERT REPLACEMENT
416+08 - 416+68	LT & RT	16	96	2	CULVERT REPLACEMENT
440+18 - 441+01	LT & RT	22	135	2	CULVERT REPLACEMENT WITH TRANSITION
514+51 - 515+56	LT & RT	45	168	3	CULVERT REPLACEMENT
608+62 - 609+46	LT & RT	22	135	2	CULVERT REPLACEMENT WITH TRANSITION
619+31 - 620+14	LT & RT	22	135	2	CULVERT REPLACEMENT WITH TRANSITION
667+75 - 668+50	LT & RT	20	120	2	CULVERT REPLACEMENT
798+27 - 799+51	LT & RT	53	200	4	CULVERT REPLACEMENT WITH TRANSITION
804+40 - 805+45	LT & RT	28	168	3	CULVERT REPLACEMENT WITH TRANSITION
867+83 - 868+18	LT & RT	9	48	1	CULVERT REPLACEMENT
903+52 - 904+10	LT & RT	16	648	9	CULVERT REPLACEMENT
986+66 - 987+49	LT & RT	22	114	2	CULVERT REPLACEMENT WITH TRANSITION
1010+05 - 1010+98	LT & RT	25	129	2	CULVERT REPLACEMENT WITH TRANSITION
1027+36 - 1028+20	LT & RT	22	117	2	CULVERT REPLACEMENT WITH TRANSITION
1039+50 - 1040+33	LT & RT	22	114	2	CULVERT REPLACEMENT WITH TRANSITION
1071+37 - 1072+20	LT & RT	22	114	2	CULVERT REPLACEMENT WITH TRANSITION
1077+73 - 1078+56	LT & RT	22	114	2	CULVERT REPLACEMENT WITH TRANSITION
1085+40 - 1086+23	LT & RT	22	114	2	CULVERT REPLACEMENT WITH TRANSITION
1093+06 - 1093+32	LT & RT	7	36	1	CULVERT REPLACEMENT
1134+79 - 1135+63	LT & RT	22	117	2	CULVERT REPLACEMENT WITH TRANSITION
1155+67 - 1155+97	LT & RT	8	42	1	CULVERT REPLACEMENT
1169+81 - 1170+64	LT & RT	22	114	2	CULVERT REPLACEMENT WITH TRANSITION
1173+25 - 1179+17	LT & RT	153	279	6	CULVERT REPLACEMENT WITH TRANSITION / GUARDRAIL REPLACEMENT
1290+11 - 1290+97	LT & RT	23	120	2	CULVERT REPLACEMENT WITH TRANSITION
1335+83 - 1336+68	LT & RT	23	117	2	CULVERT REPLACEMENT WITH TRANSITION
1386+48 - 1386+99	LT & RT	14	69	1	CULVERT REPLACEMENT
1397+35 - 1398+18	LT & RT	22	117	2	CULVERT REPLACEMENT WITH TRANSITION
1409+52 - 1410+36	LT & RT	22	117	2	CULVERT REPLACEMENT WITH TRANSITION
1436+25 - 1437+50	LT & RT	34	174	3	BOX CULVERT REPLACEMENT
1481+17 - 1482+00	LT & RT	22	114	2	CULVERT REPLACEMENT WITH TRANSITION
1502+65 - 1502+97	LT & RT	8	45	1	CULVERT REPLACEMENT
1521+56 - 1528+06	LT & RT	160	240	6	CULVERT REPLACEMENT / GUARDRAIL REPLACEMENT
1547+10 - 1547+39	LT & RT	7	39	1	CULVERT REPLACEMENT
1568+98 - 1569+82	LT & RT	22	117	2	CULVERT REPLACEMENT WITH TRANSITION
1576+14 - 1576+97	LT & RT	22	117	2	CULVERT REPLACEMENT WITH TRANSITION
1613+33 - 1613+54	LT & RT	6	45	1	CULVERT REPLACEMENT
1632+22 - 1633+10	LT & RT	23	123	2	CULVERT REPLACEMENT WITH TRANSITION
	TOTALS	**1,100**	**5,210**	**88**	

ASPHALTIC ITEMS

STATION - STATION	LOCATION	450.4000 HMA COLD WEATHER PAVING TON	455.0605 TACK COAT GAL	460.5224 HMA PAVEMENT 4 LT 58-28 S TON	COMMENTS
CATEGORY CODE 0010					
235+73 - 236+79	LT & RT	--	30	119	CULVERT REPLACEMENT WITH TRANSITION
341+54 - 341+77	LT & RT	--	9	36	CULVERT REPLACEMENT
357+54 - 358+37	LT & RT	--	33	130	CULVERT REPLACEMENT WITH TRANSITION
364+68 - 365+05	LT & RT	--	15	58	CULVERT REPLACEMENT
373+86 - 374+08	LT & RT	--	8	33	CULVERT REPLACEMENT
416+08 - 416+68	LT & RT	--	24	93	CULVERT REPLACEMENT
440+18 - 441+01	LT & RT	--	33	130	CULVERT REPLACEMENT WITH TRANSITION
514+51 - 515+56	LT & RT	--	42	163	CULVERT REPLACEMENT
608+62 - 609+46	LT & RT	--	33	130	CULVERT REPLACEMENT WITH TRANSITION
619+31 - 620+14	LT & RT	--	33	131	CULVERT REPLACEMENT WITH TRANSITION
667+75 - 668+50	LT & RT	--	30	116	CULVERT REPLACEMENT
798+27 - 799+51	LT & RT	--	49	192	CULVERT REPLACEMENT WITH TRANSITION
804+40 - 805+45	LT & RT	--	42	163	CULVERT REPLACEMENT WITH TRANSITION
867+83 - 868+18	LT & RT	44	11	44	CULVERT REPLACEMENT
903+52 - 904+10	LT & RT	741	189	741	CULVERT REPLACEMENT
986+66 - 987+49	LT & RT	106	27	106	CULVERT REPLACEMENT WITH TRANSITION
1010+05 - 1010+98	LT & RT	120	31	120	CULVERT REPLACEMENT WITH TRANSITION
1027+36 - 1028+20	LT & RT	108	28	108	CULVERT REPLACEMENT WITH TRANSITION
1039+50 - 1040+33	LT & RT	106	27	106	CULVERT REPLACEMENT WITH TRANSITION
1071+37 - 1072+20	LT & RT	106	27	106	CULVERT REPLACEMENT WITH TRANSITION
1077+73 - 1078+56	LT & RT	106	27	106	CULVERT REPLACEMENT WITH TRANSITION
1085+40 - 1086+23	LT & RT	106	27	106	CULVERT REPLACEMENT WITH TRANSITION
1093+06 - 1093+32	LT & RT	33	8	33	CULVERT REPLACEMENT
1134+79 - 1135+63	LT & RT	108	28	108	CULVERT REPLACEMENT WITH TRANSITION
1155+67 - 1155+97	LT & RT	39	10	39	CULVERT REPLACEMENT
1169+81 - 1170+64	LT & RT	106	27	106	CULVERT REPLACEMENT WITH TRANSITION
1174+19 - 1178+23	LT & RT	214	55	214	CULVERT REPLACEMENT WITH TRANSITION / GUARDRAIL REPLACEMENT
1290+11 - 1290+97	LT & RT	111	29	111	CULVERT REPLACEMENT WITH TRANSITION
1335+83 - 1336+68	LT & RT	109	28	109	CULVERT REPLACEMENT WITH TRANSITION
1386+48 - 1386+99	LT & RT	65	17	65	CULVERT REPLACEMENT
1397+35 - 1398+18	LT & RT	107	28	107	CULVERT REPLACEMENT WITH TRANSITION
1409+52 - 1410+36	LT & RT	108	28	108	CULVERT REPLACEMENT WITH TRANSITION
1436+25 - 1437+50	LT & RT	160	41	160	BOX CULVERT REPLACEMENT
1481+17 - 1482+00	LT & RT	106	27	106	CULVERT REPLACEMENT WITH TRANSITION
1502+65 - 1502+97	LT & RT	41	10	41	CULVERT REPLACEMENT
1521+56 - 1528+06	LT & RT	184	47	184	CULVERT REPLACEMENT / GUARDRAIL REPLACEMENT
1547+10 - 1547+39	LT & RT	37	10	37	CULVERT REPLACEMENT
1568+98 - 1569+82	LT & RT	107	28	107	CULVERT REPLACEMENT WITH TRANSITION
1576+14 - 1576+97	LT & RT	107	28	107	CULVERT REPLACEMENT WITH TRANSITION
1613+33 - 1613+54	LT & RT	43	11	43	CULVERT REPLACEMENT
1632+22 - 1633+10	LT & RT	113	29	113	CULVERT REPLACEMENT WITH TRANSITION
	TOTALS	**3,441**	**1,264**	**4,935**	

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CULVERT PIPE SUMMARY

STATION	LOCATION	520.1024 APRON ENDWALLS FOR CULVERT PIPE 24-INCH EACH	520.1030 APRON ENDWALLS FOR CULVERT PIPE 30-INCH EACH	520.1036 APRON ENDWALLS FOR CULVERT PIPE 36-INCH EACH	521.0336 APRON ENDWALLS FOR CULVERT PIPE SLOPED CROSS DRAINS STEEL 36-INCH 4 TO 1 EACH	522.1024 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH EACH	522.1030 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 30-INCH EACH	522.1048 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 48-INCH EACH	522.1066 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 66-INCH EACH	522.1072 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 72-INCH EACH	522.2658 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL 58X91-INCH EACH	522.2663 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL 63X98-INCH EACH	633.5200 MARKERS CULVERT END EACH	650.6000 CONSTRUCTION STAKING PIPE CULVERTS EACH	SPV.0060.01 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 78-INCH EACH
CATEGORY CODE 0010															
236+26.23	STH 180	--	2	--	--	--	--	--	--	--	--	--	2	1	--
341+65.50	STH 180	2	--	--	--	--	--	--	--	--	--	--	2	1	--
357+95.50	STH 180	--	--	--	--	--	2	--	--	--	--	--	2	1	--
364+86.50	STH 180	--	--	2	--	--	--	--	--	--	--	--	2	1	--
373+97.00	STH 180	2	--	--	--	--	--	--	--	--	--	--	2	1	--
416+38.00	STH 180	--	--	--	--	--	--	--	--	2	--	--	2	1	--
440+59.30	STH 180	2	--	--	--	--	--	--	--	--	--	--	2	1	--
515+02.14	STH 180	--	--	--	--	--	--	--	--	--	--	--	2	1	2
609+04.00	STH 180	--	--	--	--	--	2	--	--	--	--	--	2	1	--
619+72.50	STH 180	--	--	--	--	2	--	--	--	--	--	--	2	1	--
668+12.42	STH 180	--	--	--	--	--	--	--	--	--	--	--	2	1	--
798+93.00	STH 180	--	--	--	--	--	2	--	--	--	--	--	2	1	--
804+88.74	STH 180	--	--	--	--	--	--	2	--	--	--	--	1	1	--
804+98.72	STH 180	--	--	--	--	--	--	2	--	--	--	--	1	1	--
868+00.11	STH 180	2	--	--	--	--	--	--	--	--	--	--	2	1	--
903+82.83	STH 180	--	--	--	--	--	--	--	2	--	--	--	2	1	--
987+07.90	STH 180	2	--	--	--	--	--	--	--	--	--	--	2	1	--
1010+51.65	STH 180	--	--	--	--	--	--	--	--	--	2	--	2	1	--
1027+78.20	STH 180	--	--	--	--	2	--	--	--	--	--	--	2	1	--
1039+91.90	STH 180	2	--	--	--	--	--	--	--	--	--	--	2	1	--
1071+78.50	STH 180	2	--	--	--	--	--	--	--	--	--	--	2	1	--
1078+14.40	STH 180	--	--	--	--	2	--	--	--	--	--	--	2	1	--
1085+81.80	STH 180	2	--	--	--	--	--	--	--	--	--	--	2	1	--
1093+19.00	STH 180	2	--	--	--	--	--	--	--	--	--	--	2	1	--
1135+20.70	STH 180	--	--	1	1	--	--	--	--	--	--	--	2	1	--
1155+82.20	STH 180	2	--	--	--	--	--	--	--	--	--	--	2	1	--
1170+22.10	STH 180	2	--	--	--	--	--	--	--	--	--	--	2	1	--
1176+47.06	STH 180	--	--	--	--	--	--	--	--	--	--	2	2	1	--
1290+54.47	STH 180	2	--	--	--	--	--	--	--	--	--	--	2	1	--
1336+25.30	STH 180	--	--	--	2	--	--	--	--	--	--	--	2	1	--
1386+66.97	STH 180	--	--	2	--	--	--	--	--	--	--	--	2	1	--
1397+76.60	STH 180	--	2	--	--	--	--	--	--	--	--	--	2	1	--
1409+94.00	STH 180	--	--	--	2	--	--	--	--	--	--	--	2	1	--
1481+58.80	STH 180	--	--	--	--	2	--	--	--	--	--	--	2	1	--
1502+80.41	STH 180	--	2	--	--	--	--	--	--	--	--	--	2	1	--
1524+57.49	STH 180	--	--	--	--	--	--	--	--	--	--	--	2	1	--
1547+24.20	STH 180	--	2	--	--	--	--	--	--	--	--	--	2	1	--
1569+39.90	STH 180	--	--	--	--	2	--	--	--	--	--	--	2	1	--
1576+55.50	STH 180	--	--	--	--	--	2	--	--	--	--	--	2	1	--
1613+43.65	STH 180	2	--	--	--	--	--	--	--	--	--	--	2	1	--
1632+65.51	STH 180	--	--	--	--	--	2	--	--	--	--	--	2	1	--
	TOTALS	**26**	**8**	**5**	**5**	**10**	**10**	**4**	**2**	**2**	**2**	**2**	**80**	**41**	**2**

CULVERT PIPE SUMMARY

STATION	LOCATION	520.3424 CULVERT PIPE CLASS III-A NON-METAL 24-INCH LF*	520.3430 CULVERT PIPE CLASS III-A NON-METAL 30-INCH LF*	520.3436 CULVERT PIPE CLASS III-A NON-METAL 36-INCH LF*	522.0148 CULVERT PIPE REINFORCED CONCRETE CLASS III 48-INCH LF	522.0166 CULVERT PIPE REINFORCED CONCRETE CLASS III 66-INCH LF	522.0172 CULVERT PIPE REINFORCED CONCRETE CLASS III 72-INCH LF	522.0178 CULVERT PIPE REINFORCED CONCRETE CLASS III 78-INCH LF	522.0196 CULVERT PIPE REINFORCED CONCRETE CLASS III 96-INCH LF	522.0208 CULVERT PIPE REINFORCED CONCRETE CLASS III 108-INCH LF	522.0424 CULVERT PIPE REINFORCED CONCRETE CLASS IV 24-INCH LF	522.0430 CULVERT PIPE REINFORCED CONCRETE CLASS IV 30-INCH LF	522.0436 CULVERT PIPE REINFORCED CONCRETE CLASS IV 36-INCH LF	522.2363 CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-III 63X98-INCH LF	SPV.0090.01 CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-IV 58X91-IN LF
CATEGORY CODE 0010															
236+26.23	STH 180	--	66	--	--	--	--	--	--	--	--	--	--	--	--
341+65.50	STH 180	64	--	--	--	--	--	--	--	--	--	--	--	--	--
357+95.50	STH 180	--	--	--	--	--	--	--	--	--	--	64	--	--	--
364+86.50	STH 180	--	--	88	--	--	--	--	--	--	--	--	--	--	--
373+97.00	STH 180	66	--	--	--	--	--	--	--	--	--	--	--	--	--
416+38.00	STH 180	--	--	--	--	--	120	--	--	--	--	--	--	--	--
440+59.30	STH 180	60	--	--	--	--	--	--	--	--	--	--	--	--	--
515+02.14	STH 180	--	--	--	--	--	--	120	--	--	--	--	--	--	--
609+04.00	STH 180	--	--	--	--	--	--	--	--	--	--	64	--	--	--
619+72.50	STH 180	--	--	--	--	--	--	--	--	--	50	--	--	--	--
668+12.42	STH 180	--	--	--	--	--	--	--	--	108	--	--	--	--	--
798+93.00	STH 180	--	--	--	--	--	--	--	--	--	--	56	--	--	--
804+88.74	STH 180	--	--	--	64	--	--	--	--	--	--	--	--	--	--
804+98.72	STH 180	--	--	--	64	--	--	--	--	--	--	--	--	--	--
868+00.11	STH 180	78	--	--	--	--	--	--	--	--	--	--	--	--	--
903+82.83	STH 180	--	--	--	--	96	--	--	--	--	--	--	--	--	--
987+07.90	STH 180	58	--	--	--	--	--	--	--	--	--	--	--	--	--
1010+51.65	STH 180	--	--	--	--	--	--	--	--	--	--	--	--	--	64
1027+78.20	STH 180	--	--	--	--	--	--	--	--	--	56	--	--	--	--
1039+91.90	STH 180	58	--	--	--	--	--	--	--	--	--	--	--	--	--
1071+78.50	STH 180	56	--	--	--	--	--	--	--	--	--	--	--	--	--
1078+14.40	STH 180	--	--	--	--	--	--	--	--	--	48	--	--	--	--
1085+81.80	STH 180	56	--	--	--	--	--	--	--	--	--	--	--	--	--
1093+19.00	STH 180	72	--	--	--	--	--	--	--	--	--	--	--	--	--
1135+20.70	STH 180	--	--	58	--	--	--	--	--	--	--	--	--	--	--
1155+82.20	STH 180	88	--	--	--	--	--	--	--	--	--	--	--	--	--
1170+22.10	STH 180	56	--	--	--	--	--	--	--	--	--	--	--	--	--
1176+47.06	STH 180	--	--	--	--	--	--	--	--	--	--	--	--	66	--
1290+54.47	STH 180	54	--	--	--	--	--	--	--	--	--	--	--	--	--
1336+25.30	STH 180	--	--	--	--	--	--	--	--	--	--	--	56	--	--
1386+66.97	STH 180	--	--	140	--	--	--	--	--	--	--	--	--	--	--
1397+76.60	STH 180	--	58	--	--	--	--	--	--	--	--	--	--	--	--
1409+94.00	STH 180	--	--	--	--	--	--	--	--	--	--	--	48	--	--
1481+58.80	STH 180	--	--	--	--	--	--	--	--	--	56	--	--	--	--
1502+80.41	STH 180	--	72	--	--	--	--	--	--	--	--	--	--	--	--
1524+57.49	STH 180	--	--	--	--	--	--	--	96	--	--	--	--	--	--
1547+24.20	STH 180	--	74	--	--	--	--	--	--	--	--	--	--	--	--
1569+39.90	STH 180	--	--	--	--	--	--	--	--	--	56	--	--	--	--
1576+55.50	STH 180	--	--	--	--	--	--	--	--	--	--	48	--	--	--
1613+43.65	STH 180	72	--	--	--	--	--	--	--	--	--	--	--	--	--
1632+65.51	STH 180	--	--	--	--	--	--	--	--	--	--	56	--	--	--
	TOTALS	**838**	**270**	**286**	**128**	**96**	**120**	**120**	**96**	**108**	**266**	**288**	**104**	**66**	**64**

*LENGTH BASED ON THE USE OF POLY PIPE WITH STEEL ENDWALLS. ADJUST PIPE LENGTH FOR OTHER MATERIAL TYPES.

3

RUMBLE STRIP ITEMS

STATION - STATION	LOCATION	465.0520 ASPHALTIC RUMBLE STRIPS SHOULDER LF	465.0560 ASPHALTIC RUMBLE STRIPS CENTERLINE LF
CATEGORY CODE 0010			
235+73 - 236+79	LT & RT	212	106
341+54 - 341+77	LT & RT	23	23
357+54 - 358+37	LT & RT	166	83
364+68 - 365+05	LT & RT	74	37
373+86 - 374+08	LT & RT	42	21
416+08 - 416+68	LT & RT	120	60
440+18 - 441+01	LT & RT	151	83
514+51 - 515+56	LT & RT	153	105
608+62 - 609+46	LT & RT	166	83
619+31 - 620+14	LT & RT	166	83
667+75 - 668+50	LT & RT	150	75
798+27 - 799+51	LT & RT	162	124
804+40 - 805+45	LT & RT	69	--
	TOTALS	**1,654**	**883**

CONCRETE MASONRY ENDWALLS

STATION - STATION	LOCATION	504.0900 CY
CATEGORY CODE 0010		
668+05	RT	20.6
668+19	LT	23.6
1524+51	RT	15.8
	TOTAL	**60.0**

3

RIPRAP AND GEOTEXTILE ITEMS

STATION	LOCATION	606.0200 RIPRAP MEDIUM CY	645.0120* GEOTEXTILE TYPE HR SY
CATEGORY CODE 0010			
416+38	LT	7	23
416+38	RT	19	55
514+58	LT	7	24
515+47	RT	7	24
668+03	RT	14	41
668+23	LT	22	66
790+18	RT	5	18
903+98	RT	5	19
1010+55	RT	5	18
1176+41	RT	7	22
1386+46	RT	5	18
1524+48	RT	17	46
UNDISTRIBUTED		30	96
	TOTALS	**150**	**470**

*ADDITIONAL QUANTITES SHOWN ELSEWHERE IN PLANS

MGS GUARDRAIL ITEMS

STATION - STATION	LOCATION	614.2300 MGS GUARDRAIL 3 LF	614.2610 MGS GUARDRAIL TERMINAL EAT EACH
CATEGORY CODE 0010			
1174+88 - 1177+54	RT	162.5	2.0
1523+58 - 1526+27	LT	162.5	2.0
	TOTALS	**325.0**	**4.0**

RESTORATION ITEMS

STATION - STATION	LOCATION	625.0500 SALVAGED TOPSOIL SY	627.0200 MULCHING SY	628.2006 EROSION MAT URBAN CLASS I TYPE A SY	629.0210 FERTILIZER TYPE B CWT	630.0130 SEEDING MIXTURE NO. 30 LB	630.0200 SEEDING TEMPORARY LB	630.0500 SEED WATER MGAL
CATEGORY CODE 0010								
235+73 - 236+79	LT & RT	198	--	198	--	14	--	7
341+54 - 341+77	LT & RT	60	--	60	0.1	4	--	2
357+54 - 358+37	LT & RT	188	--	188	0.1	12	--	6
364+68 - 365+05	LT & RT	146	--	146	0.1	8	--	4
373+86 - 374+08	LT & RT	58	--	58	0.1	4	--	2
416+08 - 416+68	LT & RT	407	--	407	0.2	21	--	11
440+18 - 441+01	LT & RT	145	--	145	0.1	10	--	5
514+51 - 515+56	LT & RT	416	--	416	0.1	23	--	11
608+62 - 609+46	LT & RT	172	--	172	--	12	--	6
619+31 - 620+14	LT & RT	96	--	96	0.1	8	--	4
667+75 - 668+50	LT & RT	640	--	640	0.2	32	--	16
790+18	RT	4	--	4	--	1	--	1
798+27 - 799+51	LT & RT	134	--	134	--	11	--	5
804+40 - 805+45	LT & RT	275	--	275	--	17	--	9
867+83 - 868+18	LT & RT	115	--	115	0.1	7	--	3
903+52 - 904+10	LT & RT	303	--	303	0.1	16	--	8
986+66 - 987+49	LT & RT	167	--	167	--	11	--	6
1010+05 - 1010+98	LT & RT	257	--	257	--	16	--	8
1027+36 - 1028+20	LT & RT	176	--	176	--	11	--	6
1039+50 - 1040+33	LT & RT	168	--	168	0.1	11	--	6
1071+37 - 1072+20	LT & RT	167	--	167	--	11	--	6
1077+73 - 1078+56	LT & RT	127	--	127	--	10	--	5
1085+40 - 1086+23	LT & RT	167	--	167	--	11	--	6
1093+06 - 1093+32	LT & RT	92	--	92	--	5	--	3
1134+79 - 1135+63	LT & RT	200	--	200	--	13	--	6
1155+67 - 1155+97	LT & RT	141	--	141	--	8	--	4
1169+81 - 1170+64	LT & RT	168	--	168	--	11	--	6
1173+25 - 1179+17	LT & RT	710	--	710	0.3	42	--	21
1290+11 - 1290+97	LT & RT	131	--	131	--	10	--	5
1335+83 - 1336+68	LT & RT	200	--	200	0.2	13	--	6
1386+48 - 1386+99	LT & RT	373	--	373	0.2	19	--	10
1397+35 - 1398+18	LT & RT	171	--	171	--	12	--	6
1409+52 - 1410+36	LT & RT	158	--	158	--	11	--	6
1436+25 - 1437+50	LT & RT	1,108	--	1,108	0.2	59	--	30
1481+17 - 1482+00	LT & RT	168	--	168	0.2	11	--	6
1502+65 - 1502+97	LT & RT	112	--	112	0.1	6	--	3
1521+56 - 1528+06	LT & RT	1,250	--	1,250	0.6	66	--	33
1547+10 - 1547+39	LT & RT	105	--	105	--	6	--	3
1568+98 - 1569+82	LT & RT	169	--	169	--	12	--	6
1576+14 - 1576+97	LT & RT	129	--	129	--	10	--	5
1613+33 - 1613+54	LT & RT	53	--	53	0.1	4	--	2
1632+22 - 1633+10	LT & RT	179	--	179	--	12	--	6
UNDISTRIBUTED		2,597	2,550	2,597	1.7	149	70	70
	TOTALS	**12,800**	**2,550**	**12,800**	**5.0**	**760**	**70**	**380**

EROSION CONTROL ITEMS

STATION	LOCATION	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH	628.6005 TURBIDITY BARRIERS SY	628.7504 TEMPORARY DITCH CHECKS LF	628.7555 CULVERT PIPE CHECKS EACH	628.7570 ROCK BAGS EACH
CATEGORY CODE 0010									
235+73 - 236+79	LT & RT	268	268	--	--	--	12	5	--
341+54 - 341+77	LT & RT	--	--	--	--	--	12	3	--
357+54 - 358+37	LT & RT	115	115	--	--	--	12	5	--
364+68 - 365+05	LT & RT	--	--	--	--	--	12	7	--
373+86 - 374+08	LT & RT	--	--	--	--	--	12	3	--
416+08 - 416+68	LT & RT	122	122	--	--	--	12	16	--
440+18 - 441+01	LT & RT	224	224	--	--	--	12	3	--
514+51 - 515+56	LT & RT	260	260	--	--	--	--	--	--
608+62 - 609+46	LT & RT	236	236	--	--	--	--	5	17
619+31 - 620+14	LT & RT	--	--	--	--	--	12	3	--
667+75 - 668+50	LT & RT	144	144	--	--	--	--	--	--
798+27 - 799+51	LT & RT	263	263	--	--	--	12	5	--
804+40 - 805+45	LT & RT	274	274	--	--	--	--	20	17
867+83 - 868+18	LT & RT	75	75	--	--	--	12	3	--
903+52 - 904+10	LT & RT	193	193	--	--	--	--	--	--
986+66 - 987+49	LT & RT	225	225	--	--	--	--	3	17
1010+05 - 1010+98	LT & RT	236	236	--	--	--	--	--	--
1027+36 - 1028+20	LT & RT	229	229	--	--	--	12	3	--
1039+50 - 1040+33	LT & RT	223	223	--	--	--	12	3	--
1071+37 - 1072+20	LT & RT	220	220	--	--	--	--	3	17
1077+73 - 1078+56	LT & RT	224	224	--	--	--	--	3	17
1085+40 - 1086+23	LT & RT	224	224	--	--	--	--	3	17
1093+06 - 1093+32	LT & RT	145	145	--	--	--	12	3	--
1134+79 - 1135+63	LT & RT	238	238	--	--	--	12	7	--
1155+67 - 1155+97	LT & RT	188	188	--	--	--	--	3	17
1169+81 - 1170+64	LT & RT	222	222	--	--	--	--	3	17
1173+25 - 1179+17	LT & RT	765	765	--	--	--	--	--	34
1290+11 - 1290+97	LT & RT	234	234	--	--	--	12	3	--
1335+83 - 1336+68	LT & RT	--	--	--	--	--	12	7	--
1386+48 - 1386+99	LT & RT	153	153	--	--	38	--	7	--
1397+35 - 1398+18	LT & RT	221	221	--	--	--	12	5	--
1409+52 - 1410+36	LT & RT	230	230	--	--	--	12	7	--
1436+25 - 1437+50	LT & RT	242	242	--	--	--	--	--	--
1481+17 - 1482+00	LT & RT	--	--	--	--	--	12	3	--
1502+65 - 1502+97	LT & RT	140	140	--	--	--	12	5	--
1521+56 - 1528+06	LT & RT	567	567	--	--	--	12	--	34
1547+10 - 1547+39	LT & RT	141	141	--	--	--	12	5	--
1568+98 - 1569+82	LT & RT	241	241	--	--	--	--	3	17
1576+14 - 1576+97	LT & RT	226	226	--	--	--	--	5	17
1613+33 - 1613+54	LT & RT	--	--	--	--	--	12	3	--
1632+22 - 1633+10	LT & RT	241	241	--	--	--	--	5	17
UNDISTRIBUTED		1,981	1,981	32	9	12	74	40	65
	TOTALS	**9,930**	**9,930**	**32**	**9**	**50**	**350**	**210**	**320**

SIGNING ITEMS

STATION	LOCATION	ROADWAY	634.0616 POSTS WOOD 4X6X16 EACH	634.0618 POSTS WOOD 4X6X18 EACH	638.2102 MOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	COMMENTS
CATEGORY CODE 0010							
341+58	RT	STH 180	--	1	1	1	SCHOOL BUS STOP AHEAD SIGN
358+13	LT	STH 180	--	1	1	1	SCHOOL BUS STOP AHEAD SIGN
440+78	RT	STH 180	1	--	1	1	SPEED LIMIT SIGN (45 MPH)
440+86	LT	STH 180	1	--	1	1	SPEED LIMIT SIGN (45 MPH)
515+34	LT	STH 180	1	--	1	1	SINGLE NIGHT ARROW SIGN
1027+62	LT	STH 180	2	--	1	2	DESTINATION/DIRECTION SIGN (LEFT ARROW/WALLACE)
1040+12	RT	STH 180	1	--	1	1	SPEED LIMIT SIGN (55 MPH)
1397+63	LT	STH 180	1	--	1	1	BOAT LANDING 1/2 MILE SIGN
		TOTALS	**7**	**2**	**8**	**9**	

TRAFFIC CONTROL ITEMS

LOCATION	NUMBER OF DAYS IN SERVICE	643.0300 TRAFFIC CONTROL DRUMS *NO. REQ'D*	643.0300 TRAFFIC CONTROL DRUMS TOTAL DAY	643.0420* TRAFFIC CONTROL BARRICADES TYPE III *NO. REQ'D*	643.0420* TRAFFIC CONTROL BARRICADES TYPE III TOTAL DAY	643.0705* TRAFFIC CONTROL WARNING LIGHTS TYPE A *NO. REQ'D*	643.0705* TRAFFIC CONTROL WARNING LIGHTS TYPE A TOTAL DAY	643.0900* TRAFFIC CONTROL SIGNS *NO. REQ'D*	643.0900* TRAFFIC CONTROL SIGNS TOTAL DAY
CATEGORY CODE 0010									
SHOULDER CLOSURES FOR CLEARING	10	*14*	140	--	--	--	--	*5*	50
STAGE 1 SIDEROADS	44	--	--	*76*	3,344	*152*	6,688	*103*	4,532
STA 236+26 - CULVERT REPLACEMENT	2	--	--	*14*	28	*20*	40	*10*	20
STA 341+66 - CULVERT REPLACEMENT	2	--	--	*14*	28	*20*	40	*10*	20
STA 357+96 - CULVERT REPLACEMENT	2	--	--	*14*	28	*20*	40	*10*	20
STA 364+85 - CULVERT REPLACEMENT	3	--	--	*14*	42	*20*	60	*10*	30
STA 373+97 - CULVERT REPLACEMENT	2	--	--	*14*	28	*20*	40	*10*	20
STA 416+38 - CULVERT REPLACEMENT	5	--	--	*14*	70	*20*	100	*10*	50
STA 440+59 - CULVERT REPLACEMENT	2	--	--	*14*	28	*20*	40	*10*	20
STA 515+01 - CULVERT REPLACEMENT	5	--	--	*14*	70	*20*	100	*10*	50
STA 609+04 - CULVERT REPLACEMENT	2	--	--	*14*	28	*20*	40	*10*	20
STA 619+72 - CULVERT REPLACEMENT	2	--	--	*14*	28	*20*	40	*10*	20
STA 668+15 - CULVERT REPLACEMENT	5	--	--	*14*	70	*20*	100	*10*	50
STA 790+18 - RIPRAP PLACEMENT	1	*10*	10	--	--	--	--	*3*	3
STA 798+93 - CULVERT REPLACEMENT	2	--	--	*14*	28	*20*	40	*10*	20
STA 804+94 - CULVERT REPLACEMENT	3	--	--	*14*	42	*20*	60	*10*	30
STAGE 2 SIDEROADS	78	--	--	*104*	8,112	*208*	16,224	*141*	10,998
STA 868+00 - CULVERT REPLACEMENT	2	--	--	*14*	28	*20*	40	*10*	20
STA 903+81 - CULVERT REPLACEMENT	5	--	--	*14*	70	*20*	100	*10*	50
STA 987+08 - CULVERT REPLACEMENT	2	--	--	*14*	28	*20*	40	*10*	20
STA 1010+52 - CULVERT REPLACEMENT	3	--	--	*14*	42	*20*	60	*10*	30
STA 1027+78 - CULVERT REPLACEMENT	2	--	--	*14*	28	*20*	40	*10*	20
STA 1039+92 - CULVERT REPLACEMENT	2	--	--	*14*	28	*20*	40	*10*	20
STA 1071+79 - CULVERT REPLACEMENT	2	--	--	*14*	28	*20*	40	*10*	20
STA 1078+14 - CULVERT REPLACEMENT	2	--	--	*14*	28	*20*	40	*10*	20
STA 1085+82 - CULVERT REPLACEMENT	2	--	--	*14*	28	*20*	40	*10*	20
STA 1093+19 - CULVERT REPLACEMENT	2	--	--	*14*	28	*20*	40	*10*	20
STA 1135+20 - CULVERT REPLACEMENT	3	--	--	*14*	42	*20*	60	*10*	30
STA 1155+82 - CULVERT REPLACEMENT	2	--	--	*14*	28	*20*	40	*10*	20
STA 1170+22 - CULVERT REPLACEMENT	2	--	--	*14*	28	*20*	40	*10*	20
STA 1176+47 - CULVERT REPLACEMENT	3	--	--	*14*	42	*20*	60	*10*	30
STA 1176+47 - GUARDRAIL REPLACEMENT	2	*15*	30	--	--	--	--	*3*	6
STA 1290+55 - CULVERT REPLACEMENT	2	--	--	*14*	28	*20*	40	*10*	20
STA 1336+25 - CULVERT REPLACEMENT	3	--	--	*14*	42	*20*	60	*10*	30
STA 1386+74 - CULVERT REPLACEMENT	3	--	--	*14*	42	*20*	60	*10*	30
STA 1397+77 - CULVERT REPLACEMENT	2	--	--	*14*	28	*20*	40	*10*	20
STA 1409+96 - CULVERT REPLACEMENT	3	--	--	*14*	42	*20*	60	*10*	30
STA 1437+00 - BOX CULVERT REPLACEMENT	39	--	--	*14*	546	*20*	780	*10*	390
STA 1481+59 - CULVERT REPLACEMENT	2	--	--	*14*	28	*20*	40	*10*	20
STA 1502+80 - CULVERT REPLACEMENT	2	--	--	*14*	28	*20*	40	*10*	20
STA 1524+57 - CULVERT REPLACEMENT	16	--	--	*14*	224	*20*	320	*10*	160
STA 1524+57 - GUARDRAIL REPLACEMENT	2	*15*	30	--	--	--	--	*3*	6
STA 1547+24 - CULVERT REPLACEMENT	2	--	--	*14*	28	*20*	40	*10*	20
STA 1569+40 - CULVERT REPLACEMENT	2	--	--	*14*	28	*20*	40	*10*	20
STA 1576+55 - CULVERT REPLACEMENT	2	--	--	*14*	28	*20*	40	*10*	20
STA 1613+43 - CULVERT REPLACEMENT	2	--	--	*14*	28	*20*	40	*10*	20
STA 1632+66 - CULVERT REPLACEMENT	2	--	--	*14*	28	*20*	40	*10*	20
	TOTALS	**210**		**13,598**		**25,972**		**17,125**	

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE IN PLANS

3

PAVEMENT MARKING ITEMS

STATION - STATION	LOCATION	646.2020 MARKING LINE EPOXY 6-INCH WHITE LF	646.2020 MARKING LINE EPOXY 6-INCH YELLOW LF	646.6466 COLD WEATHER MARKING EPOXY 6-INCH WHITE LF	646.6466 COLD WEATHER MARKING EPOXY 6-INCH YELLOW LF
CATEGORY CODE 0010					
235+73 - 236+79	LT & RT	212	38	--	--
341+54 - 341+77	LT & RT	46	36	--	--
357+54 - 358+37	LT & RT	166	166	--	--
364+68 - 365+05	LT & RT	74	74	--	--
373+86 - 374+08	LT & RT	42	34	--	--
416+08 - 416+68	LT & RT	120	120	--	--
440+18 - 441+01	LT & RT	166	166	--	--
514+51 - 515+56	LT & RT	210	210	--	--
608+62 - 609+46	LT & RT	166	25	--	--
619+31 - 620+14	LT & RT	166	108	--	--
667+75 - 668+50	LT & RT	150	150	--	--
798+27 - 799+51	LT & RT	248	162	--	--
804+40 - 805+45	LT & RT	210	38	--	--
867+83 - 868+18	LT & RT	68	68	68	68
903+52 - 904+10	LT & RT	116	13	116	13
986+66 - 987+49	LT & RT	166	25	166	25
1010+05 - 1010+98	LT & RT	186	186	186	186
1027+36 - 1028+20	LT & RT	168	109	168	109
1039+50 - 1040+33	LT & RT	166	25	166	25
1071+37 - 1072+20	LT & RT	166	25	166	25
1077+73 - 1078+56	LT & RT	166	25	166	25
1085+40 - 1086+23	LT & RT	166	25	166	25
1093+06 - 1093+32	LT & RT	52	39	52	39
1134+79 - 1135+63	LT & RT	168	168	168	168
1155+67 - 1155+97	LT & RT	60	43	60	43
1169+81 - 1170+64	LT & RT	166	108	166	108
1174+19 - 1178+23	LT & RT	504	196	504	196
1290+11 - 1290+97	LT & RT	174	174	174	174
1335+83 - 1336+68	LT & RT	170	110	170	110
1386+48 - 1386+99	LT & RT	102	102	102	102
1397+35 - 1398+18	LT & RT	166	108	166	108
1409+52 - 1410+36	LT & RT	168	25	168	25
1436+25 - 1437+50	LT & RT	250	38	250	38
1481+17 - 1482+00	LT & RT	166	25	166	25
1502+65 - 1502+97	LT & RT	64	45	64	45
1521+56 - 1528+06	LT & RT	489	85	489	85
1547+10 - 1547+39	LT & RT	58	42	58	42
1568+98 - 1569+82	LT & RT	166	108	166	108
1576+14 - 1576+97	LT & RT	166	108	166	108
1613+33 - 1613+54	LT & RT	22	44	22	44
1632+22 - 1633+10	LT & RT	176	113	176	113
		6,631	3,509	4,655	2,182
	TOTALS	**10,140**		**6,837**	

CONSTRUCTION STAKING ITEMS

STATION - STATION	LOCATION	650.4500 CONSTRUCTION STAKING SUBGRADE LF	650.5000 CONSTRUCTION STAKING BASE LF	650.9920 CONSTRUCTION STAKING SLOPE STAKES LF
CATEGORY CODE 0010				
235+73 - 236+79	LT & RT	106	106	106
341+54 - 341+77	LT & RT	23	23	23
357+54 - 358+37	LT & RT	83	83	83
364+68 - 365+05	LT & RT	37	37	37
373+86 - 374+08	LT & RT	22	22	22
416+08 - 416+68	LT & RT	60	60	60
440+18 - 441+01	LT & RT	83	83	83
514+51 - 515+56	LT & RT	105	105	105
608+62 - 609+46	LT & RT	84	84	84
619+31 - 620+14	LT & RT	83	83	83
667+75 - 668+50	LT & RT	75	75	75
798+27 - 799+51	LT & RT	124	124	124
804+40 - 805+45	LT & RT	105	105	105
867+83 - 868+18	LT & RT	35	35	35
903+52 - 904+10	LT & RT	58	58	58
986+66 - 987+49	LT & RT	83	83	83
1010+05 - 1010+98	LT & RT	93	93	93
1027+36 - 1028+20	LT & RT	84	84	84
1039+50 - 1040+33	LT & RT	83	83	83
1071+37 - 1072+20	LT & RT	83	83	83
1077+73 - 1078+56	LT & RT	83	83	83
1085+40 - 1086+23	LT & RT	83	83	83
1093+06 - 1093+32	LT & RT	26	26	26
1134+79 - 1135+63	LT & RT	84	84	84
1155+67 - 1155+97	LT & RT	30	30	30
1169+81 - 1170+64	LT & RT	83	83	83
1173+25 - 1179+17	LT & RT	97	97	592
1290+11 - 1290+97	LT & RT	86	86	86
1335+83 - 1336+68	LT & RT	85	85	85
1386+48 - 1386+99	LT & RT	51	51	51
1397+35 - 1398+18	LT & RT	83	83	83
1409+52 - 1410+36	LT & RT	84	84	84
1436+25 - 1437+50	LT & RT	125	125	125
1481+17 - 1482+00	LT & RT	83	83	83
1502+65 - 1502+97	LT & RT	32	32	32
1521+56 - 1528+06	LT & RT	650	650	650
1547+10 - 1547+39	LT & RT	29	29	29
1568+98 - 1569+82	LT & RT	84	84	84
1576+14 - 1576+97	LT & RT	83	83	83
1613+33 - 1613+54	LT & RT	21	21	21
1632+22 - 1633+10	LT & RT	88	88	88
	TOTALS	**3,579**	**3,579**	**4,074**

STAKING ITEMS FOR PIPE CULVERTS SHOWN ELSEWHERE

SAWING ASPHALT

STATION - STATION	LOCATION	690.0150 LF
CATEGORY CODE 0010		
235+73 - 236+79	LT & RT	68
341+54 - 341+77	LT & RT	68
357+54 - 358+37	LT & RT	68
364+68 - 365+05	LT & RT	68
373+86 - 374+08	LT & RT	68
416+08 - 416+68	LT & RT	68
440+18 - 441+01	LT & RT	68
514+51 - 515+56	LT & RT	68
608+62 - 609+46	LT & RT	68
619+31 - 620+14	LT & RT	68
667+75 - 668+50	LT & RT	68
798+27 - 799+51	LT & RT	68
804+40 - 805+45	LT & RT	68
867+83 - 868+18	LT & RT	56
903+52 - 904+10	LT & RT	56
986+66 - 987+49	LT & RT	56
1010+05 - 1010+98	LT & RT	56
1027+36 - 1028+20	LT & RT	56
1039+50 - 1040+33	LT & RT	56
1071+37 - 1072+20	LT & RT	56
1077+73 - 1078+56	LT & RT	56
1085+40 - 1086+23	LT & RT	56
1093+06 - 1093+32	LT & RT	56
1134+79 - 1135+63	LT & RT	56
1155+67 - 1155+97	LT & RT	56
1169+81 - 1170+64	LT & RT	56
1174+19 - 1178+23	LT & RT	365
1290+11 - 1290+97	LT & RT	56
1335+83 - 1336+68	LT & RT	56
1386+48 - 1386+99	LT & RT	56
1397+35 - 1398+18	LT & RT	56
1409+52 - 1410+36	LT & RT	56
1436+25 - 1437+50	LT & RT	56
1481+17 - 1482+00	LT & RT	56
1502+65 - 1502+97	LT & RT	56
1521+56 - 1528+06	LT & RT	423
1547+10 - 1547+39	LT & RT	56
1568+98 - 1569+82	LT & RT	56
1576+14 - 1576+97	LT & RT	56
1613+33 - 1613+54	LT & RT	89
1632+22 - 1633+10	LT & RT	56
	TOTAL	**3,161**

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TRAFFIC CONTROL DETOUR SIGN SUMMARY

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 44 DAYS	643.0900* SIGNS DAYS	643.0420* BARRICADES TYPE III DAY	643.0705* WARNING LIGHTS TYPE A DAY	643.1000* SIGNS FIXED MESSAGE SF	643.1050* SIGNS PORTABLE CHANGEABLE MESSAGE DAYS	NO. OF CYCLES	643.0920* COVERING TYPE II SIGNS EACH	REMARKS
1	US 141, N. OF STH 180, COVER EXISTING J1-1 SIGN AS SHOWN										1	1	COVER ENTIRE SIGN
2	US 141, N. OF STH 180, PLACE 1500' N. OF STH 180 INTERSECTION	M 3-3	24"X12"	1	44	44							
	"	M 1-6	24"X24"	1	44	44							180
	"	W 20-2A	48"X48"	1	44	44							
3	US 141, N. OF STH 180, MODIFY EXISTING J2-2 SIGN AS SHOWN	MO 4-8	24"X12"	1	44	44							
	"	MO 6-1	21"X21"	1	44	44							AHEAD
4	US 141, N. OF STH 180, PLACE 1000' N. OF STH 180 INTERSECTION	FMS	72"X48"	1					24				SEE SIGN DETAIL SHEET
5	US 141, N. OF STH 180, COVER EXISTING D1-3 SIGN AS SHOWN										1	1	COVER "LEFT MARINETTE"
6	US 141, AT STH 180, MODIFY EXISTING J3-1 SIGN AS SHOWN	MO 4-8	24"X12"	1	44	44							
	"	MO 6-1	21"X21"	1	44	44							AHEAD
7	STH 180, E. OF US 141, PLACE ON RIGHT SHOULDER, FIELD DETERMINE LOCATION	PCMS		1						7			PLACE IN ADVANCE OF CLOSURE
8	STH 180, E. OF US 141, COVER EXISTING J4-1 SIGN AS SHOWN										1	1	COVER ENTIRE SIGN
9	STH 180, AT US 141, PLACE ON RIGHT SHOULDER IN SE QUADRANT OF INTERSECTION	R 11-3	60"X30"	1	44	44	44	88					XX MILES AHEAD, NUMBER TO CHANGE BASED ON CLOSURE LOCATION
	"	M 4-9R	30"X24"	1	44	44							
10	US 141, S. OF STH 180, COVER EXISTING J3-1 SIGN AS SHOWN										1	1	COVER ENTIRE SIGN
11	US 141, S. OF STH 180, PLACE RIGHT OF EXISTING J4-1 SIGN	MO 4-8	24"X12"	1	44	44							
	"	M 3-3	24"X12"	1	44	44							
	"	M 1-6	24"X24"	1	44	44							180
12	US 141, S. OF STH 180, COVER EXISTING D1-3 SIGN AS SHOWN										1	1	COVER "MARINETTE RIGHT"
13	US 141, S. OF STH 180, COVER EXISTING J2-1 SIGN AS SHOWN										1	1	COVER ENTIRE SIGN
14	US 141, S. OF STH 180, MODIFY EXISTING J1-1 SIGN AS SHOWN	MO 4-8A		1	44	44							
15	US 141, N. OF CTH X, PLACE 150' N. OF CTH X INTERSECTION	MO 4-8	24"X12"	1	44	44							
	"	M 3-3	24"X12"	1	44	44							
	"	M 1-6	24"X24"	1	44	44							180
	"	MO 6-1	21"X21"	1	44	44							AHEAD
16	US 141, S. OF CTH X, PLACE 150' S. OF CTH X INTERSECTION	MO 4-8	24"X12"	1	44	44							
	"	M 3-1	24"X12"	1	44	44							
	"	M 1-6	24"X24"	1	44	44							180
	"	MO 6-1	21"X21"	1	44	44							AHEAD
17	US 141, N. OF CTH W, PLACE 150' N. OF CTH W INTERSECTION	MO 4-8	24"X12"	1	44	44							
	"	M 3-3	24"X12"	1	44	44							
	"	M 1-6	24"X24"	1	44	44							180
	"	MO 6-1	21"X21"	1	44	44							AHEAD
18	US 141, S. OF CTH W, PLACE 150' S. OF CTH W INTERSECTION	MO 4-8	24"X12"	1	44	44							
	"	M 3-1	24"X12"	1	44	44							
	"	M 1-6	24"X24"	1	44	44							180
	"	MO 6-1	21"X21"	1	44	44							AHEAD
19	US 141, N. OF CTH P, PLACE 150' N. OF CTH P INTERSECTION	MO 4-8	24"X12"	1	44	44							
	"	M 3-3	24"X12"	1	44	44							
	"	M 1-6	24"X24"	1	44	44							180
	"	MO 6-1	21"X21"	1	44	44							AHEAD
20	US 141, S. OF CTH P, PLACE 150' S. OF CTH P INTERSECTION	MO 4-8	24"X12"	1	44	44							
	"	M 3-1	24"X12"	1	44	44							
	"	M 1-6	24"X24"	1	44	44							180
	"	MO 6-1	21"X21"	1	44	44							AHEAD
21	US 141, N. OF STH 64, PLACE 750' N. OF STH 64 ON RIGHT SHOULDER	MO 4-8	36"X18"	1	44	44							
	"	M 3-3	36"X18"	1	44	44							
	"	M 1-6	36"X36"	1	44	44							180
	"	MO 5-2R	30"X30"	1	44	44							
	PAGE SUBTOTALS			43		1,804	44	88	24.0	7		6	

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE IN PLANS

PLAN SHEET PRODUCED

BY WisDOT - NE REGION

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TRAFFIC CONTROL DETOUR SIGN SUMMARY

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 44 DAYS	643.0900* SIGNS DAYS	643.0420* BARRICADES TYPE III DAY	643.0705* WARNING LIGHTS TYPE A DAY	643.1000* SIGNS FIXED MESSAGE SF	643.1050* SIGNS PORTABLE CHANGEABLE MESSAGE DAYS	NO. OF CYCLES	643.0920* COVERING TYPE II SIGNS EACH	REMARKS
22	US 141, N. OF STH 64, PLACE 750' N. OF STH 64 IN MEDIAN	MO 4-8	36"X18"	1	44	44							
	"	M 3-3	36"X18"	1	44	44							
	"	M 1-6	36"X36"	1	44	44							180
	"	MO 5-2R	30"X30"	1	44	44							
23	US 141, AT STH 64 EXIT, PLACE IN FRONT OF SIGN CANTILEVER COLUMN	MO 4-8	36"X18"	1	44	44							
	"	M 3-3	36"X18"	1	44	44							
	"	M 1-6	36"X36"	1	44	44							180
	"	MO 6-2	30"X30"	1	44	44							TILT RIGHT
24	US 141 OFF-RAMP TO STH 64, PLACE 500' PRIOR TO STH 64 RAB INTERSECTION	MO 4-8	24"X12"	1	44	44							
	"	M 3-3	24"X12"	1	44	44							
	"	M 1-6	24"X24"	1	44	44							180
	"	MO 5-1L	21"X21"	1	44	44							
25	US 141 OFF-RAMP TO STH 64, PLACE RIGHT OF EXISTING R1-2 SIGN AT RAB INTERSECTION	MO 4-8	24"X12"	1	44	44							
	"	M 3-3	24"X12"	1	44	44							
	"	M 1-6	24"X24"	1	44	44							180
	"	MO 6-1	21"X21"	1	44	44							LEFT
26	STH 64, AT US 141 SB RAMP, PLACE ABOVE EXISTING SPLITTER ISLAND SIGN AT EAST LEG	MO 4-8	24"X12"	1	44	44							
	"	M 3-3	24"X12"	1	44	44							
	"	M 1-6	24"X24"	1	44	44							180
	"	MO 6-2	21"X21"	1	44	44							TILT RIGHT
27	STH 64, BETWEEN US 141 RAMPS, PLACE 100' PRIOR TO US 141 NB RAMP INTERSECTION	MO 4-8	24"X12"	1	44	44							
	"	M 3-3	24"X12"	1	44	44							
	"	M 1-6	24"X24"	1	44	44							180
	"	MO 6-1	21"X21"	1	44	44							AHEAD
28	US 141, N. OF STH 64, PLACE RIGHT OF EXISTING J4-1 SIGN	MO 4-8	36"X18"	1	44	44							
	"	M 3-1	36"X18"	1	44	44							
	"	M 1-6	36"X36"	1	44	44							180
29	STH 64, AT US 141 NB RAMP, PLACE ABOVE EXISTING SPLITTER ISLAND SIGN AT NORTH LEG	MO 4-8	24"X12"	1	44	44							
	"	M 3-1	24"X12"	1	44	44							
	"	M 1-6	24"X24"	1	44	44							180
	"	MO 6-2	21"X21"	1	44	44							TILT RIGHT
30	STH 64, AT US 141 NB RAMP, PLACE ABOVE EXISTING SPLITTER ISLAND SIGN AT EAST LEG	MO 4-8	24"X12"	1	44	44							
	"	M 3-3	24"X12"	1	44	44							
	"	M 1-6	24"X24"	1	44	44							180
	"	MO 6-2	21"X21"	1	44	44							TILT RIGHT
31	STH 64, E. OF US 141 NB RAMP, PLACE 500' E. OF US 141 RAB INTERSECTION	MO 4-8	24"X12"	1	44	44							
	"	M 3-1	24"X12"	1	44	44							
	"	M 1-6	24"X24"	1	44	44							180
	"	MO 5-1R	21"X21"	1	44	44							
32	STH 64, E. OF US 141, PLACE RIGHT OF EXISTING J4-1 SIGN	MO 4-8	24"X12"	1	44	44							
	"	M 3-3	24"X12"	1	44	44							
	"	M 1-6	24"X24"	1	44	44							180
33	STH 64, W. OF CTH Q, PLACE 150' W. OF CTH Q INTERSECTION	MO 4-8	24"X12"	1	44	44							
	"	M 3-3	24"X12"	1	44	44							
	"	M 1-6	24"X24"	1	44	44							180
	"	MO 6-1	21"X21"	1	44	44							AHEAD
	PAGE SUBTOTALS			46		2,024	0	0	0.0	0		0	

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE IN PLANS

PLAN SHEET PRODUCED

BY WisDOT - NE REGION

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TRAFFIC CONTROL DETOUR SIGN SUMMARY

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 44 DAYS	643.0900* SIGNS DAYS	643.0420* BARRICADES TYPE III DAY	643.0705* WARNING LIGHTS TYPE A DAY	643.1000* SIGNS FIXED MESSAGE SF	643.1050* SIGNS PORTABLE CHANGEABLE MESSAGE DAYS	NO. OF CYCLES	643.0920* COVERING TYPE II SIGNS EACH	REMARKS
34	STH 64, E. OF CTH Q, PLACE 150' E. OF CTH Q INTERSECTION	MO 4-8	24"X12"	1	44	44							
	"	M 3-1	24"X12"	1	44	44							
	"	M 1-6	24"X24"	1	44	44							180
	"	MO 6-1	21"X21"	1	44	44							AHEAD
35	STH 64, W. OF CTH W, PLACE 150' W. OF CTH W INTERSECTION	MO 4-8	24"X12"	1	44	44							
	"	M 3-3	24"X12"	1	44	44							
	"	M 1-6	24"X24"	1	44	44							180
	"	MO 6-1	21"X21"	1	44	44							AHEAD
36	STH 64, E. OF CTH W, PLACE 150' E. OF CTH W INTERSECTION	MO 4-8	24"X12"	1	44	44							
	"	M 3-1	24"X12"	1	44	44							
	"	M 1-6	24"X24"	1	44	44							180
	"	MO 6-1	21"X21"	1	44	44							AHEAD
37	STH 64, W. OF CTH D, PLACE 150' W. OF CTH D INTERSECTION	MO 4-8	24"X12"	1	44	44							
	"	M 3-3	24"X12"	1	44	44							
	"	M 1-6	24"X24"	1	44	44							180
	"	MO 6-1	21"X21"	1	44	44							AHEAD
38	STH 64, E. OF CTH D, PLACE 150' E. OF CTH D INTERSECTION	MO 4-8	24"X12"	1	44	44							
	"	M 3-1	24"X12"	1	44	44							
	"	M 1-6	24"X24"	1	44	44							180
	"	MO 6-1	21"X21"	1	44	44							AHEAD
39	STH 64, W. OF CTH E, PLACE 150' W. OF CTH E INTERSECTION	MO 4-8	24"X12"	1	44	44							
	"	M 3-3	24"X12"	1	44	44							
	"	M 1-6	24"X24"	1	44	44							180
	"	MO 6-1	21"X21"	1	44	44							AHEAD
40	STH 64, E. OF CTH E, PLACE 150' E. OF CTH E INTERSECTION	MO 4-8	24"X12"	1	44	44							
	"	M 3-1	24"X12"	1	44	44							
	"	M 1-6	24"X24"	1	44	44							180
	"	MO 6-1	21"X21"	1	44	44							AHEAD
41	STH 64, W. OF CTH RW, PLACE 150' W. OF CTH RW INTERSECTION	MO 4-8	24"X12"	1	44	44							
	"	M 3-3	24"X12"	1	44	44							
	"	M 1-6	24"X24"	1	44	44							180
	"	MO 6-1	21"X21"	1	44	44							AHEAD
42	STH 64, E. OF CTH RW, PLACE 150' E. OF CTH RW INTERSECTION	MO 4-8	24"X12"	1	44	44							
	"	M 3-1	24"X12"	1	44	44							
	"	M 1-6	24"X24"	1	44	44							180
	"	MO 6-1	21"X21"	1	44	44							AHEAD
43	STH 64, W. OF STH 180, MODIFY EXISTING J1-2 SIGN AS SHOWN	MO 4-8A	24"X18"	1	44	44							
44	STH 64, W. OF STH 180, COVER EXISTING J3-2 SIGN AS SHOWN										1	1	COVER "NORTH 180 LEFT"
45	STH 64, W. OF STH 180, PLACE RIGHT OF EXISTING J4-1 SIGN	MO 4-8	24"X12"	1	44	44							
	"	M 3-1	24"X12"	1	44	44							
	"	M 1-6	24"X24"	1	44	44							180
	PAGE SUBTOTALS			40		1,760	0	0	0.0	0		1	

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE IN PLANS

PLAN SHEET PRODUCED

BY WisDOT - NE REGION

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TRAFFIC CONTROL DETOUR SIGN SUMMARY

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 44 DAYS	643.0900* SIGNS DAYS	643.0420* BARRICADES TYPE III DAY	643.0705* WARNING LIGHTS TYPE A DAY	643.1000* SIGNS FIXED MESSAGE SF	643.1050* SIGNS PORTABLE CHANGEABLE MESSAGE DAYS	NO. OF CYCLES	643.0920* COVERING TYPE II SIGNS EACH	REMARKS
45A	STH 64, AT STH 180, PLACE ABOVE EXISTING SPLITTER ISLAND SIGN ON WEST LEG	MO 4-8	24"X12"	1	44	44							
	"	M 3-1	24"X12"	1	44	44							
	"	M 1-6	24"X24"	1	44	44							180
	"	MO 6-2	21"X21"	1	44	44							TILT RIGHT
46	STH 180, AT STH 64, PLACE ON RIGHT SHOULDER IN NE QUADRANT OF INTERSECTION	R 11-3	60"X30"	1	44	44	44	88					XX MILES AHEAD, NUMBER TO CHANGE BASED ON CLOSURE LOCATION
	"	MO 4-9L	30"X24"	1	44	44							
46A	STH 180, AT STH 64, COVER EXISTING J3-1 SIGN IN SPLITTER ISLAND ON NORTH LEG										1	1	COVER ENTIRE SIGN
47	STH 180, N. OF STH 64, COVER EXISTING J4-1 SIGN AS SHOWN										1	1	COVER ENTIRE SIGN
48	STH 180, N. OF STH 64, PLACE ON RIGHT SHOULDER, FIELD DETERMINE LOCATION	PCMS								7			PLACE IN ADVANCE OF CLOSURE
49	STH 64, E. OF STH 180 RAB, MODIFY EXISTING J3-2 SIGN AS SHOWN	MO 4-8	24"X12"	1	44	44							
	"	MO 6-1	21"X21"	1	44	44							AHEAD
50	STH 64, E. OF STH 180 RAB, COVER EXISTING D1-3 SIGN AS SHOWN										1	1	COVER "WAUSAUKEE RIGHT"
51	STH 64, E. OF STH 180 RAB, PLACE 500' E. OF STH 180 INTERSECTION	FMS	72"X48"	1					24				SEE SIGN DETAIL SHEET
52	STH 64, E. OF STH 180 RAB, MODIFY EXISTING J2-2 SIGN AS SHOWN	MO 4-8	24"X12"	1	44	44							
	"	MO 6-1	21"X21"	1	44	44							AHEAD
53	STH 64, E. OF STH 180 RAB, COVER EXISTING J1-2 SIGN AS SHOWN										1	1	COVER "JCT 180"
54	STH 64, E. OF STH 180 RAB, PLACE 1500' E. OF STH 180 INTERSECTION	M 3-1	24"X12"	1	44	44							
	"	M 1-6	24"X24"	1	44	44							180
	"	W 20-2A	48"X48"	1	44	44							
55	STH 180, AT CTH G, PLACE ON RIGHT SHOULDER IN NE QUADRANT OF INTERSECTION	R 11-3	60"X30"	1	44	44	44	88					XX MILES AHEAD, NUMBER TO CHANGE BASED ON CLOSURE LOCATION
56	STH 180, AT CTH X, PLACE ON RIGHT SHOULDER IN SW QUADRANT OF INTERSECTION	R 11-3	60"X30"	1	44	44	44	88					XX MILES AHEAD, NUMBER TO CHANGE BASED ON CLOSURE LOCATION
57	STH 180, AT CTH JJ, PLACE ON RIGHT SHOULDER IN SW QUADRANT OF INTERSECTION	R 11-3	60"X30"	1	44	44	44	88					XX MILES AHEAD, NUMBER TO CHANGE BASED ON CLOSURE LOCATION
58	STH 180, AT CTH XX, PLACE ON RIGHT SHOULDER IN SE QUADRANT OF INTERSECTION	R 11-3	60"X30"	1	44	44	44	88					XX MILES AHEAD, NUMBER TO CHANGE BASED ON CLOSURE LOCATION
	PAGE SUBTOTALS			18		748	220	440	24	7		4	
	DETOUR TOTALS			**147**		**6,336**	**264**	**528**	**48**	**14**		**11**	

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE IN PLANS

PLAN SHEET PRODUCED

BY WisDOT - NE REGION

TRAFFIC CONTROL DETOUR SIGN SUMMARY

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 78 DAYS	643.0900* SIGNS DAYS	643.0420* BARRICADES TYPE III DAY	643.0705* WARNING LIGHTS TYPE A DAY	643.1000* SIGNS FIXED MESSAGE SF	643.1050* SIGNS PORTABLE CHANGEABLE MESSAGE DAYS	NO. OF CYCLES	643.0920* COVERING TYPE II SIGNS EACH	REMARKS
1	US 141, N. OF STH 180, COVER EXISTING J1-1 SIGN AS SHOWN			1							1	1	COVER ENTIRE SIGN
2	US 141, N. OF STH 180, PLACE 1500' N. OF STH 180 INTERSECTION	M 3-3	24"X12"	1	78	78							
	"	M 1-6	24"X24"	1	78	78							180
	"	W 20-2A	48"X48"	1	78	78							
3	US 141, N. OF STH 180, MODIFY EXISTING J2-2 SIGN AS SHOWN	MO 4-8	24"X12"	1	78	78							
	"	MO 6-1	21"X21"	1	78	78							AHEAD
4	US 141, N. OF STH 180, PLACE 500' N. OF STH 180 INTERSECTION	FMS	72"X48"	1					24				SEE SIGN DETAIL SHEET
5	US 141, N. OF STH 180, COVER EXISTING D1-3 SIGN AS SHOWN			1							1	1	COVER "LEFT MARINETTE"
6	US 141, AT STH 180, MODIFY EXISTING J3-1 AS SHOWN	MO 4-8	24"X12"	1	78	78							
	"	MO 6-1	21"X21"	1	78	78							AHEAD
7	STH 180, E. OF US 141, COVER EXISTING J4-1 SIGN AS SHOWN										1	1	COVER ENTIRE SIGN
7A	STH 180, E. OF US 141, PLACE ON RIGHT SHOULDER, FIELD DETERMINE LOCATION	PCMS								7			PLACE IN ADVANCE OF CLOSURE
8	STH 180, AT US 141, PLACE ON RIGHT SHOULDER IN SE QUADRANT OF INTERSECTION	R 11-3	60"X30"	1	78	78	78	156					XX MILES AHEAD, DISTANCE TO CHANGE AS CLOSURE LOCATION CHANGES
	"	MO 4-9R	30"X24"	1	78	78							
9	US 141, AT STH 180, COVER EXISTING J3-1 SIGN AS SHOWN										1	1	COVER ENTIRE SIGN
10	US 141, S. OF STH 180, PLACE RIGHT OF EXISTING J4-1 SIGN	MO 4-8	24"X12"	1	78	78							
	"	M 3-3	24"X12"	1	78	78							
	"	M 1-6	24"X24"	1	78	78							180
11	US 141, S. OF STH 180, COVER EXISTING D1-3 SIGN AS SHOWN										1	1	COVER "MARINETTE RIGHT"
12	US 141, S. OF STH 180, COVER EXISTING J2-1 SIGN AS SHOWN										1	1	COVER ENTIRE SIGN
13	US 141, S. OF STH 180, MODIFY EXISTING J1-1 SIGN AS SHOWN	M 4-8A	24"X18"	1	78	78							
14	US 141, N. OF CTH X, PLACE 500' N. OF CTH X INTERSECTION	MO 4-8	24"X12"	1	78	78							
	"	M 3-3	24"X12"	1	78	78							
	"	M 1-6	24"X24"	1	78	78							180
15	US 141, N. OF CTH X, PLACE RIGHT OF EXISTING J4-1 SIGN	MO 4-8	24"X12"	1	78	78							
	"	M 3-1	24"X12"	1	78	78							
	"	M 1-6	24"X24"	1	78	78							180
16	US 141, AT CTH X, PLACE RIGHT OF EXISTING J13-1 SIGN AT CTH X INTERSECTION	MO 4-8	24"X12"	1	78	78							
	"	M 3-3	24"X12"	1	78	78							
	"	M 1-6	24"X24"	1	78	78							180
	"	MO 6-1	21"X21"	1	78	78							LEFT
17	CTH X, AT US 141, PLACE RIGHT OF R1-1 SIGN AT US 141 INTERSECTION	MO 4-8	24"X12"	1	78	78							
	"	M 3-1	24"X12"	1	78	78							
	"	M 1-6	24"X24"	1	78	78							180
	"	MO 6-1	21"X21"	1	78	78							RIGHT
18	CTH X, E. OF US 141, PLACE 250' E. OF US 141 INTERSECTION	MO 4-8	24"X12"	1	78	78							
	"	M 3-3	24"X12"	1	78	78							
	"	M 1-6	24"X24"	1	78	78							180
19	CTH X, E. OF US 141, PLACE 500' E. OF US 141 INTERSECTION	MO 4-8	24"X12"	1	78	78							
	"	M 3-1	24"X12"	1	78	78							
	"	M 1-6	24"X24"	1	78	78							180
	"	MO 5-1R	21"X21"	1	78	78							
20	CTH X, W. OF CTH XX, PLACE 150' W. OF CTH XX INTERSECTION	MO 4-8	24"X12"	1	78	78							
	"	M 3-3	24"X12"	1	78	78							
	"	M 1-6	24"X24"	1	78	78							180
	"	MO 6-1	21"X21"	1	78	78							AHEAD
	PAGE SUBTOTALS			42		3,042	78	156	24.0	7		6	

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE IN PLANS

PLAN SHEET PRODUCED

BY WisDOT - NE REGION

3

TRAFFIC CONTROL DETOUR SIGN SUMMARY

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 78 DAYS	643.0900* SIGNS DAYS	643.0420* BARRICADES TYPE III DAY	643.0705* WARNING LIGHTS TYPE A DAY	643.1000* SIGNS FIXED MESSAGE SF	643.1050* SIGNS PORTABLE CHANGEABLE MESSAGE DAYS	NO. OF CYCLES	643.0920* COVERING TYPE II SIGNS EACH	REMARKS
21	CTH X, W. OF CTH XX, PLACE 150' E. OF CTH XX INTERSECTION	MO 4-8	24"X12"	1	78	78							
	"	M 3-3	24"X12"	1	78	78							
	"	M 1-6	24"X24"	1	78	78							180
	"	MO 6-1	21"X21"	1	78	78							AHEAD
22	STH 180, AT CTH XX, PLACE ON RIGHT SHOULDER IN SE QUADRANT OF INTERSECTION	R 11-3	60"X30"	1	78	78	78	156					XX MILES AHEAD, DISTANCE TO CHANGE AS CLOSURE LOCATION CHANGES
23	STH 180, AT CTH XX, PLACE ON RIGHT SHOULDER IN NW QUADRANT OF INTERSECTION	R 11-3	60"X30"	1	78	78	78	156					XX MILES AHEAD, DISTANCE TO CHANGE AS CLOSURE LOCATION CHANGES
24	CTH X, W. OF STH 180, MODIFY EXISTING J1-1 SIGN AS SHOWN	M 4-8A	24"X18"	1	78	78							
25	CTH X, W. OF STH 180, PLACE 250' W. OF STH 180 INTERSECTION	MO 4-8	24"X12"	1	78	78							
	"	M 3-1	24"X12"	1	78	78							
	"	M 1-6	24"X24"	1	78	78							180
26	CTH X, AT STH 180, MODIFY EXISTING J13-1 SIGN AS SHOWN	MO 6-1	21"X21"	1	78	78							RIGHT
27	STH 180, AT CTH JJ, PLACE IN NW QUADRANT OF INTERSECTION ON RIGHT SHOULDER	R 11-3	60"X30"	1	78	78	78	156					XX MILES AHEAD, DISTANCE TO CHANGE AS CLOSURE LOCATION CHANGES
28	STH 180, AT CTH JJ, PLACE IN SW QUADRANT OF INTERSECTION ON RIGHT SHOULDER	R 11-3	60"X30"	1	78	78	78	156					XX MILES AHEAD, DISTANCE TO CHANGE AS CLOSURE LOCATION CHANGES
29	STH 180, N. OF CTH X, COVER EXISTING J4-1 SIGN AS SHOWN										1	1	COVER ENTIRE SIGN
30	STH 180, N. OF CTH X, PLACE ON RIGHT SHOULDER, FIELD DETERMINE LOCATION	PCMS		1						7			PLACE IN ADVANCE OF CLOSURE
31	STH 180, AT CTH X, PLACE ON RIGHT SHOULDER IN NE QUADRANT OF INTERSECTION	R 11-3	60"X30"	1	78	78	78	156					XX MILES AHEAD, DISTANCE TO CHANGE AS CLOSURE LOCATION CHANGES
	"	M 4-9L	30"X24"	1	78	78							
32	STH 180, AT CTH X, PLACE RIGHT OF EXISTING J13-1 SIGN AT CTH X INTERSECTION	MO 4-8	24"X12"	1	78	78							
	"	M 3-1	24"X12"	1	78	78							
	"	M 1-6	24"X24"	1	78	78							180
	"	MO 6-1	21"X21"	1	78	78							LEFT
33	STH 180, S. OF CTH X, PLACE 500' S. OF CTH X INTERSECTION	MO 4-8	24"X12"	1	78	78							
	"	M 3-1	24"X12"	1	78	78							
	"	M 1-6	24"X24"	1	78	78							180
	"	MO 5-1L	21"X21"	1	78	78							
34	STH 180, S. OF CTH X, PLACE 1000' S. OF CTH X INTERSECTION	FMS	72"X48"	1					24				SEE SIGN DETAIL SHEET
35	STH 180, S. OF CTH X, PLACE 1500' S. OF CTH X INTERSECTION	W 20-2A	48"X48"	1	78	78							
	PAGE SUBTOTALS			26		1,872	390	780	24.0	7		1	
	DETOUR TOTALS			**68**		**4,914**	**468**	**936**	**48**	**14**		**7**	

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE IN PLANS

PLAN SHEET PRODUCED

BY WisDOT - NE REGION

CONVENTIONAL SYMBOLS

SECTION LINE
QUARTER LINE
SIXTEENTH LINE
NEW REFERENCE LINE
NEW R/W LINE
EXISTING R/W LINE
PROPERTY LINE
LOT, TIE, AND OTHER MINOR LINES
SLOPE INTERCEPT
CORPORATE LIMITS
UNDERGROUND FACILITY (COMMUNICATIONS, ELECTRIC, ETC)
FEE ACQUISITION AREA (HATCHING VARIES BY OWNER)
TEMP. LIMITED EASEMENT AREA
EASEMENT AREA (HIGHWAY, PERMANENT LIMITED, OR RESTRICTED DEVELOPMENT)
TRANSMISSION STRUCTURES
BUILDING
BUILDING (TO BE REMOVED)
BRIDGE

PARCEL NUMBER
SECTION CORNER
NOTATION FOR COMBUSTABLE FLUIDS
NOTATION FOR HIGH VOLTAGE TRANSMISSION LINES

UTILITY NUMBER
R/W MONUMENT
NON-MONUMENTED R/W POINT
FOUND IRON PIN
VALVE (GAS, WATER, ETC.)
SIGN
OFF-PREMISE SIGN

ACCESS CONTROLLED BY ACQUISITION
NO ACCESS (BY STATUTORY AUTHORITY)
ACCESS RESTRICTED (BY PREVIOUS PROJECT OR CONTROL)
NO ACCESS (NEW HIGHWAY)
NATIONAL GEODETIC SURVEY MONUMENT
SIXTEENTH CORNER MONUMENT
PARALLEL OFFSETS

CONVENTIONAL UTILITY SYMBOLS

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

	NON-COMPENSABLE	COMPENSABLE
POWER POLE		
TELEPHONE POLE		
TELEPHONE PEDESTAL		

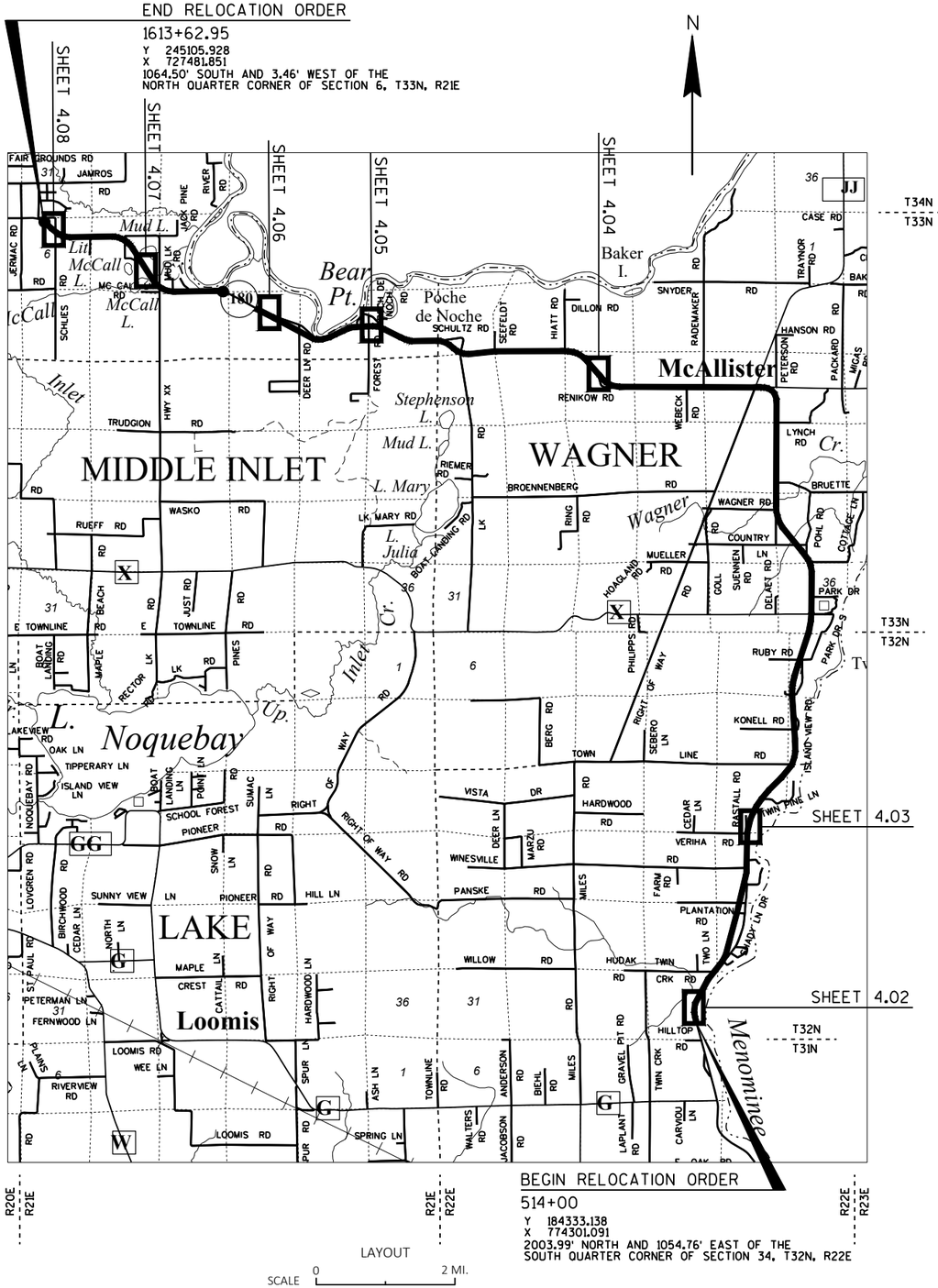
CURVE DATA ABBREVIATIONS

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

CONVENTIONAL ABBREVIATIONS

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

END RELOCATION ORDER
1613+62.95
Y 245105.928
X 727481.851
1064.50' SOUTH AND 3.46' WEST OF THE NORTH QUARTER CORNER OF SECTION 6, T33N, R21E



BEGIN RELOCATION ORDER
514+00
Y 184333.138
X 774301.091
2003.99' NORTH AND 1054.76' EAST OF THE SOUTH QUARTER CORNER OF SECTION 34, T32N, R22E

LAYOUT
SCALE 0 2 MI.

TOTAL NET LENGTH OF CENTERLINE = 20.826 MI.

CAUTION:
THIS PLAT IS A GRAPHIC REPRESENTATION AND IS FOR REFERENCE PURPOSES ONLY. DEEDS MUST BE CHECKED TO DETERMINE PROPERTY BOUNDARIES AND ACCESS RIGHTS.

R/W PROJECT NUMBER	SHEET NUMBER	TOTAL SHEETS
9670-16-21	4.01	8
PROJECT NUMBER 9670-16-21		

PLAT OF RIGHT OF WAY REQUIRED FOR

MARINETTE - WAUSAUKEE
STH 64 - USH 141

STH 180	MARINETTE COUNTY

NOTES:

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COORDINATE REFERENCE SYSTEM COORDINATES (WISCRS), MARINETTE COUNTY, NAD83 (2011) IN US SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

ALL NEW RIGHT-OF-WAY MONUMENTS WILL BE TYPE 2 MONUMENTS (TYPICALLY 1" X 24" IRON PIPES), UNLESS OTHERWISE NOTED, AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

RIGHT-OF-WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY LANDS REFERENCED TO THE U.S. PUBLIC LAND SURVEY SYSTEM OR OTHER "SURVEYS OF PUBLIC RECORD".

DIMENSIONING FOR THE NEW RIGHT-OF-WAY IS MEASURED ALONG AND PERPENDICULAR TO THE NEW REFERENCE LINES.

ALL RIGHT-OF-WAY LINES DEPICTED IN THE NON-ACQUISITION AREAS ARE INTENDED TO RE-ESTABLISH EXISTING RIGHT-OF-WAY LINES AS DETERMINED FROM PREVIOUS PROJECTS, OTHER RECORDED DOCUMENTS, CENTERLINE OF EXISTING PAVEMENTS AND/OR EXISTING OCCUPATIONAL LINES.

A TEMPORARY LIMITED EASEMENT (TLE) IS A RIGHT FOR CONSTRUCTION PURPOSES, AS DEFINED HEREIN, INCLUDING THE RIGHT TO OPERATE NECESSARY EQUIPMENT THEREON, THE RIGHT OF INGRESS AND EGRESS, AS LONG AS REQUIRED FOR SUCH PUBLIC PURPOSE, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE, OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM DESIRABLE. ALL (TLEs) ON THIS PLAT EXPIRE AT THE COMPLETION OF THE CONSTRUCTION PROJECT FOR WHICH THIS INSTRUMENT IS GIVEN.

PROPERTY LINES SHOWN ON THIS PLAT FOR PROPERTIES BEING IMPACTED ARE DRAWN FROM DATA DERIVED FROM FILED/RECORDED MAPS AND DOCUMENTS OF PUBLIC RECORD. THIS PLAT MAY NOT BE A TRUE REPRESENTATION OF EXISTING PROPERTY LINES, EXCLUDING RIGHT-OF-WAY, AND SHOULD NOT BE USED AS A SUBSTITUTE FOR AN ACCURATE FIELD SURVEY.

FOR THE CURRENT ACCESS/DRIVEWAY INFORMATION, CONTACT THE PLANNING UNIT OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION OFFICE IN GREEN BAY.

PARCEL AND UTILITY IDENTIFICATION NUMBERS MAY NOT POINT TO ALL AREAS OF ACQUISITION, AS NOTED ON THE DETAIL PAGES.

INFORMATION FOR THE BASIS OF EXISTING HIGHWAY RIGHT-OF-WAY POINTS OF REFERENCE AND ACCESS CONTROL ARE LISTED ON THE DETAIL PAGES.

ORIGINAL PLAT PREPARED BY

GREMMER & ASSOCIATES, INC.
CONSULTING ENGINEERS
Stevens Point • Fond du Lac
120 Wilshire Boulevard North • Stevens Point, WI 54481
(715) 341-4363 • fax (715) 341-1256

10/19/2023 DATE
AARON PARKS, PLS

WISCONSIN
AARON PARKS S-2861 STEVENS POINT WIS
LAND SURVEYOR

REVISION DATE
1/12/2024 NC
2/19/2025 NC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED FOR THE DEPARTMENT
DATE: 10/19/2023
Cormac A. McInnis (Signatur

APPRAISAL DATE: 7/25/2023

S00°53'05"W 5214.50'

GN

COURSE TABLE

FROM POINT	TO POINT	BEARING	DISTANCE
200	100	S83°17'24"W	50.00'
100	101	N38°55'37"W	36.98'
101	102	N04°52'17"W	46.92'
102	103	N29°10'57"E	36.98'
103	201	N86°57'58"E	50.00'
201	200	SEE CURVE TABLE	

CURVE TABLE

FROM POINT	TO POINT	RADIUS	ARC LENGTH	CHORD BEARING	CHORD LENGTH
PC	200	1637.24'	193.91'	N10°06'05"W	193.79'
201	200	1637.24'	105.00'	S04°52'16"E	104.99'
201	PT	1637.24'	1017.62'	N14°46'19"E	1001.32'

Y 182329.144
X 773246.326
FD. IRON PIPE
WITH BRASS CAP

Y 187543.023
X 773326.846
FROM TIES

4

4

1538.44'
S87°54'00"E 1588.03'

S29°44'02"E 2461.09'

P.L.

TAX ID:
026-01444.000

PORTERFIELD

GOV. LOT 3

OF

1

100 514+00 -50'

101 514+30 -70'

102 514+75 -70'

103 515+05 -50'

50'

P.L.

POST

IP

200

201

515

CURVE 1

PC 512+06.09

STH 180

PT 525+22.62

R/L N13°29'40"W
N13°29'40"W 1922.66'

IP

VARIES

49.59'

P.L.

POST

TOWN

MEANDER CORNER
Y 182270.950
X 774833.286
FD. 3/4" REBAR

RL CURVE DATA

CURVE 1

PI	519+02.278
Y	184819.315
X	774172.625
DELTA	46°04'21" RT
D	03°29'58"
T	696.188
L	1316.529'
R	1637.239'
LCH	1281.345'
LCB	N09°32'30"E
DA	N32°34'41"E

BASIS FOR EXISTING R/W

ROUTE	SOURCE
STH 180	R/W PROJECT S 0102 (7)

SCHEDULE OF LANDS & INTERESTS REQUIRED

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

PARCEL NUMBER	OWNER	INTEREST REQUIRED	FEE R/W SQ. FT. NEW	EXISTING	REQUIRED TOTAL	T.L.E. SQ. FT. TEMP.
1	BRAD L. ENDERBY & PAMELA S. RATZ	FEE	1543	0	1543	0

AREA FIGURES ARE REFERENCED TO THIS SHEET ONLY.

CAUTION:
THIS PLAT IS A GRAPHIC REPRESENTATION AND IS FOR REFERENCE PURPOSES ONLY. DEEDS MUST BE CHECKED TO DETERMINE PROPERTY BOUNDARIES AND ACCESS RIGHTS.

REVISION DATE
1/12/2024 NC
2/19/2025 NC

DATE 10/19/2023

GRID FACTOR

SCALE, FEET
0 25 50

HWY: STH 180

COUNTY: MARINETTE

STATE R/W PROJECT NUMBER 9670-16-21

CONSTRUCTION PROJECT NUMBER 9670-16-21

PLAT SHEET 4.02

PS&E SHEET 58

E

FILE NAME : 040102-RP.DWG
LAYOUT NAME - 4.02

PLOT DATE : 2/19/2025 8:34 AM PLOT BY : AARON PARKS PLOT NAME : PLOT SCALE :

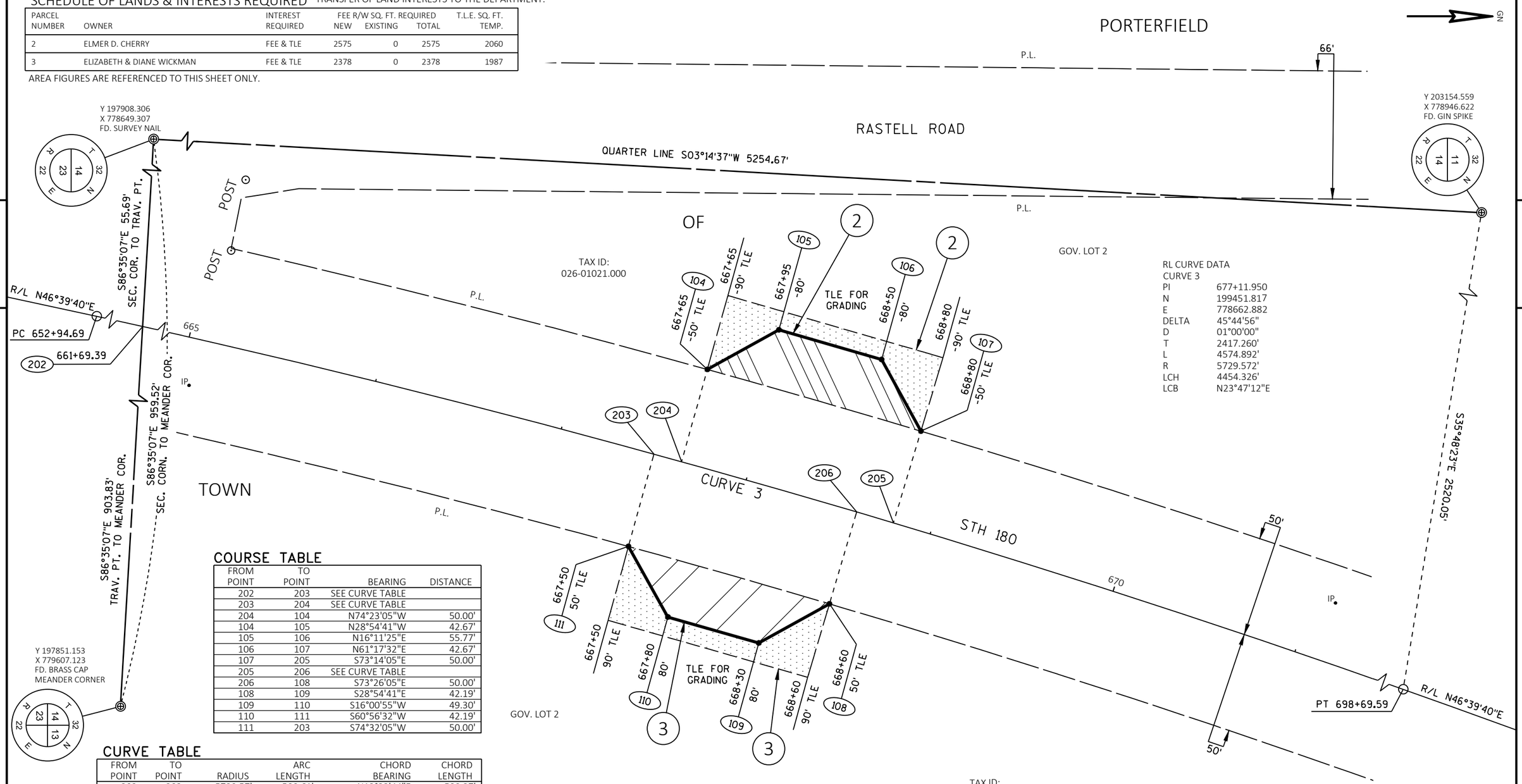
WISDOT/CADDS SHEET 75

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

SCHEDULE OF LANDS & INTERESTS REQUIRED

PARCEL NUMBER	OWNER	INTEREST REQUIRED	FEE R/W SQ. FT. REQUIRED NEW	EXISTING	TOTAL	T.L.E. SQ. FT. TEMP.
2	ELMER D. CHERRY	FEE & TLE	2575	0	2575	2060
3	ELIZABETH & DIANE WICKMAN	FEE & TLE	2378	0	2378	1987

AREA FIGURES ARE REFERENCED TO THIS SHEET ONLY.



RL CURVE DATA
CURVE 3

PI	677+11.950
N	199451.817
E	778662.882
DELTA	45°44'56"
D	01°00'00"
T	2417.260'
L	4574.892'
R	5729.572'
LCH	4454.326'
LCB	N23°47'12"E

COURSE TABLE

FROM POINT	TO POINT	BEARING	DISTANCE
202	203	SEE CURVE TABLE	
203	204	SEE CURVE TABLE	
204	104	N74°23'05"W	50.00'
104	105	N28°54'41"W	42.67'
105	106	N16°11'25"E	55.77'
106	107	N61°17'32"E	42.67'
107	205	S73°14'05"E	50.00'
205	206	SEE CURVE TABLE	
206	108	S73°26'05"E	50.00'
108	109	S28°54'41"E	42.19'
109	110	S16°00'55"W	49.30'
110	111	S60°56'32"W	42.19'
111	203	S74°32'05"W	50.00'

CURVE TABLE

FROM POINT	TO POINT	RADIUS	ARC LENGTH	CHORD BEARING	CHORD LENGTH
202	203	5729.57'	580.61'	N12°33'44"E	580.37'
203	204	5729.57'	15.00'	N15°32'25"E	15.00'
205	206	5729.57'	20.00'	S16°39'55"W	20.00'
205	PT	5729.57'	2989.59'	N31°42'48"E	2955.79'
204	206	5729.57'	95.00'	N16°05'25"E	95.00'

BASIS FOR EXISTING R/W

ROUTE	SOURCE
STH 180	R/W PROJECT S 0102 (7)

CAUTION:
THIS PLAT IS A GRAPHIC REPRESENTATION AND IS FOR REFERENCE PURPOSES ONLY. DEEDS MUST BE CHECKED TO DETERMINE PROPERTY BOUNDARIES AND ACCESS RIGHTS.

REVISION DATE
1/12/2024 NC
2/19/2025 DEL. UTIL.

DATE 10/19/2023
GRID FACTOR

SCALE, FEET 0 25 50

HWY: STH 180
COUNTY: MARINETTE

STATE R/W PROJECT NUMBER 9670-16-21
CONSTRUCTION PROJECT NUMBER 9670-16-21

PLAT SHEET 4.03
PS&E SHEET 59

E

FILE NAME : 040103-RP.DWG
LAYOUT NAME - 4.03
PLOT DATE : 2/19/2025 8:34 AM
PLOT BY : AARON PARKS
PLOT NAME :
PLOT SCALE :

WISDOT/CADDS SHEET 75

Y 232162.941
X 766103.370
FD. IRON PIPE
WITH 4" BRASS CAP

T 33 N
R 22 E
17 16

COURSE TABLE

FROM POINT	TO POINT	BEARING	DISTANCE
207	112	N50°46'44"E	50.00'
112	115	N39°13'16"W	20.00'
115	114	N50°46'44"E	10.00'
114	113	S39°13'16"E	20.00'
113	112	S50°46'44"W	10.00'

SCHEDULE OF LANDS & INTERESTS REQUIRED

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

PARCEL NUMBER	OWNER	INTEREST REQUIRED	FEE R/W SQ. FT. REQUIRED NEW	EXISTING	TOTAL	T.L.E. SQ. FT. TEMP.
4	BRUCE G. RODEGHIER AND DONNA G. RODEGHIER LE ETAL	FEE	200	0	200	0

AREA FIGURES ARE REFERENCED TO THIS SHEET ONLY.

S89°03'40"E 5034.22'

S89°03'40"E 2639.10'
TRAV. PT. TO SEC. CORN.

S89°03'40"E 2395.12'
SEC. CORN. TO TRAV. PT.

S66°26'35"W 2470.58'
SEC. CORN. TO R/L

P.L.

SE-NW

75'

RENIKOW ROAD

P.L.

N00°56'20"E 850.27'
TRAV. PT. TO R/L

P.L.

POST

VP

207

N39°13'16"W 227.80'

STH 180

50'

POST

P.L.

POST

GN

TAX ID:
034-00470.001

WISCONSIN PUBLIC SERVICE
ELECTRIC
EASEMENT #295738
EASEMENT #251831
PARCEL 4

80

1155

R/L N39°13'16"W

1155+92.20
50'
115

1155+92.20
60'

1155+72.20
60'
114

1155+72.20
50'
113

P.L.

QUARTER LINE

60'

P.L. POST

112

SW-NE

4

75'

TOWN OF WAGNER

Y 232080.459
X 771136.910
FD. GIN SPIKE

T 33 N
R 22 E
16 15

BASIS FOR EXISTING R/W

ROUTE	SOURCE
STH 180	R/W PROJECT T 0102 (5)

CAUTION:
THIS PLAT IS A GRAPHIC REPRESENTATION AND IS FOR REFERENCE PURPOSES ONLY. DEEDS MUST BE CHECKED TO DETERMINE PROPERTY BOUNDARIES AND ACCESS RIGHTS.

REVISION DATE
1/12/2024 NC
2/19/2025 NC

DATE 10/19/2023

GRID FACTOR

SCALE, FEET
0 25 50

HWY: STH 180

COUNTY: MARINETTE

STATE R/W PROJECT NUMBER 9670-16-21

CONSTRUCTION PROJECT NUMBER 9670-16-21

PLAT SHEET 4.04

PS&E SHEET 60

E

FILE NAME : 040104-RP.DWG
LAYOUT NAME - 4.04

PLOT DATE : 2/19/2025 8:35 AM PLOT BY : AARON PARKS PLOT NAME : PLOT SCALE :

WISDOT/CADDS SHEET 75

Y 237399.318
X 751044.898
FD. 1" IRON PIPE

N88°55'21"W 5321.59'

SW-NW

P.L.

Y 237299.243
X 756365.547
FD. BRASS CAP

T 33 N R 21 E — 11 | 12 | 14 | 13

T 33 N R 22 E — 12 | 7

BRIGHTSPEED OF WESTERN WISCONSIN, LLC
NO EASEMENT OF RECORD
PARCEL 5
81

NW-SW

TAX ID:
036-00501.000

POCH DE NOCH ROAD

P.L.

S00°57'30"W 155.35'

POST

208

PT: 1341+56.05

209

POST

1340

40'

FO

P.L.

81

119 — 1336+60 — 40'

118 — 1336+35 — 50'

117 — 1336+15 — 50'

5

116 — 1335+90 — 40'

66'

P.L.

N87°02'29"E 4323.75'

STH 180

210

CURVE 6

40'

P.L.

POST

1335

PC: 1334+07.65

POST

GN

TOWN OF WAUSAUKEE

S00°57'30"W 2634.10'

S00°57'30"W 2478.75'

4

4

UTILITY INTERESTS REQUIRED

UTILITY NUMBER	UTILITY OWNER	INTEREST REQUIRED
81	BRIGHTSPEED OF WESTERN WISCONSIN, LLC	RELEASE OF RIGHTS

COURSE TABLE

FROM POINT	TO POINT	BEARING	DISTANCE
208	209	N89°08'48"E	284.92'
209	210	SEE CURVE TABLE	
210	119	N18°05'39"E	40.00'
119	118	N87°21'05"E	27.63'
118	117	S70°34'08"E	20.67'
117	116	S48°29'10"E	27.62'
116	119	SEE CURVE TABLE	

CURVE TABLE

FROM POINT	TO POINT	RADIUS	ARC LENGTH	CHORD BEARING	CHORD LENGTH
209	210	1500.00'	496.04'	S81°22'47"E	493.79'
116	119	1540.00'	71.87'	N70°34'08"W	71.87'
210	PC	1500.00'	252.35'	S67°05'11"E	252.05'

CL CURVE DATA
CURVE 6

PI	1337+89.809
N	237253.922
E	751709.301
DELTA	28°35'12"
D	03°49'11"
T	382.159'
L	748.396'
R	1500.000'
LC	740.658'
LCB	N76°33'36"W

Y 234765.582
X 751000.839
FD. 3/4" IRON PIPE

T 33 N R 21 E — 11 | 12 | 14 | 13

SCHEDULE OF LANDS & INTERESTS REQUIRED

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

PARCEL NUMBER	OWNER	INTEREST REQUIRED	FEE R/W SQ. FT. REQUIRED NEW	EXISTING	TOTAL	T.L.E. SQ. FT. TEMP.
5	KEVEN F. & KANNIKA LOR	FEE	460	0	460	0

AREA FIGURES ARE REFERENCED TO THIS SHEET ONLY.

BASIS FOR EXISTING R/W

ROUTE	SOURCE
STH 180	R/W PROJECTS T 0102(1) & T0102(2)

CAUTION:
THIS PLAT IS A GRAPHIC REPRESENTATION AND IS FOR REFERENCE PURPOSES ONLY. DEEDS MUST BE CHECKED TO DETERMINE PROPERTY BOUNDARIES AND ACCESS RIGHTS.

REVISION DATE
1/12/2024 NC
2/19/2025 NC

DATE 10/19/2023

GRID FACTOR

SCALE, FEET
0 25 50

HWY: STH 180

COUNTY: MARINETTE

STATE R/W PROJECT NUMBER 9670-16-21

CONSTRUCTION PROJECT NUMBER 9670-16-21

PLAT SHEET 4.05

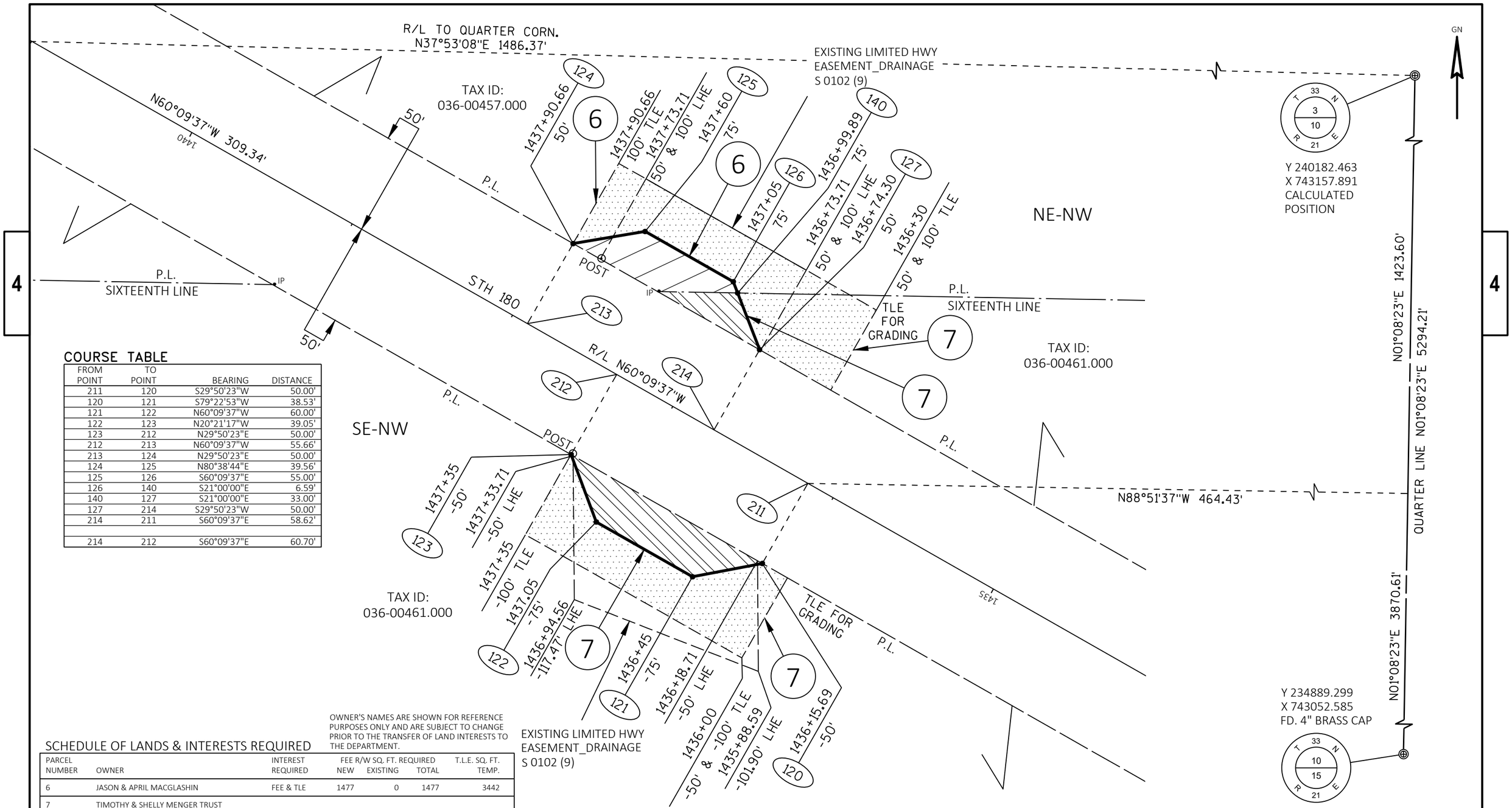
PS&E SHEET 61

E

FILE NAME : 040105-RP.DWG
LAYOUT NAME - 4.05

PLOT DATE : 2/19/2025 8:36 AM PLOT BY : AARON PARKS PLOT NAME : PLOT SCALE :

WISDOT/CADDS SHEET 75



COURSE TABLE

FROM POINT	TO POINT	BEARING	DISTANCE
211	120	S29°50'23"W	50.00'
120	121	S79°22'53"W	38.53'
121	122	N60°09'37"W	60.00'
122	123	N20°21'17"W	39.05'
123	212	N29°50'23"E	50.00'
212	213	N60°09'37"W	55.66'
213	124	N29°50'23"E	50.00'
124	125	N80°38'44"E	39.56'
125	126	S60°09'37"E	55.00'
126	140	S21°00'00"E	6.59'
140	127	S21°00'00"E	33.00'
127	214	S29°50'23"W	50.00'
214	211	S60°09'37"E	58.62'
214	212	S60°09'37"E	60.70'

SCHEDULE OF LANDS & INTERESTS REQUIRED

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

PARCEL NUMBER	OWNER	INTEREST REQUIRED	FEE R/W SQ. FT. REQUIRED NEW	EXISTING	TOTAL	T.L.E. SQ. FT. TEMP.
6	JASON & APRIL MACGLASHIN	FEE & TLE	1477	0	1477	3442
7	TIMOTHY & SHELLY MENGER TRUST					
	SOUTH OF STH 180	FEE & TLE	2241	0	2241	4509
	NORTH OF STH 180	FEE & TLE	664	0	664	2449
	TOTALS	FEE & TLE	2905	0	2905	6958

AREA FIGURES ARE REFERENCED TO THIS SHEET ONLY.

BASIS FOR EXISTING R/W

ROUTE	SOURCE
STH 180	R/W PROJECT S 0102(9)

CAUTION:
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REVISION DATE
1/12/2024 ADD. RW
2/19/2025 NC

DATE 10/19/2023

GRID FACTOR

SCALE, FEET
0 25 50

HWY: STH 180

COUNTY: MARINETTE

STATE R/W PROJECT NUMBER 9670-16-21

CONSTRUCTION PROJECT NUMBER 9670-16-21

PLAT SHEET 4.06

PS&E SHEET 62

E

FILE NAME : 040106-RP.DWG
LAYOUT NAME - 4.06

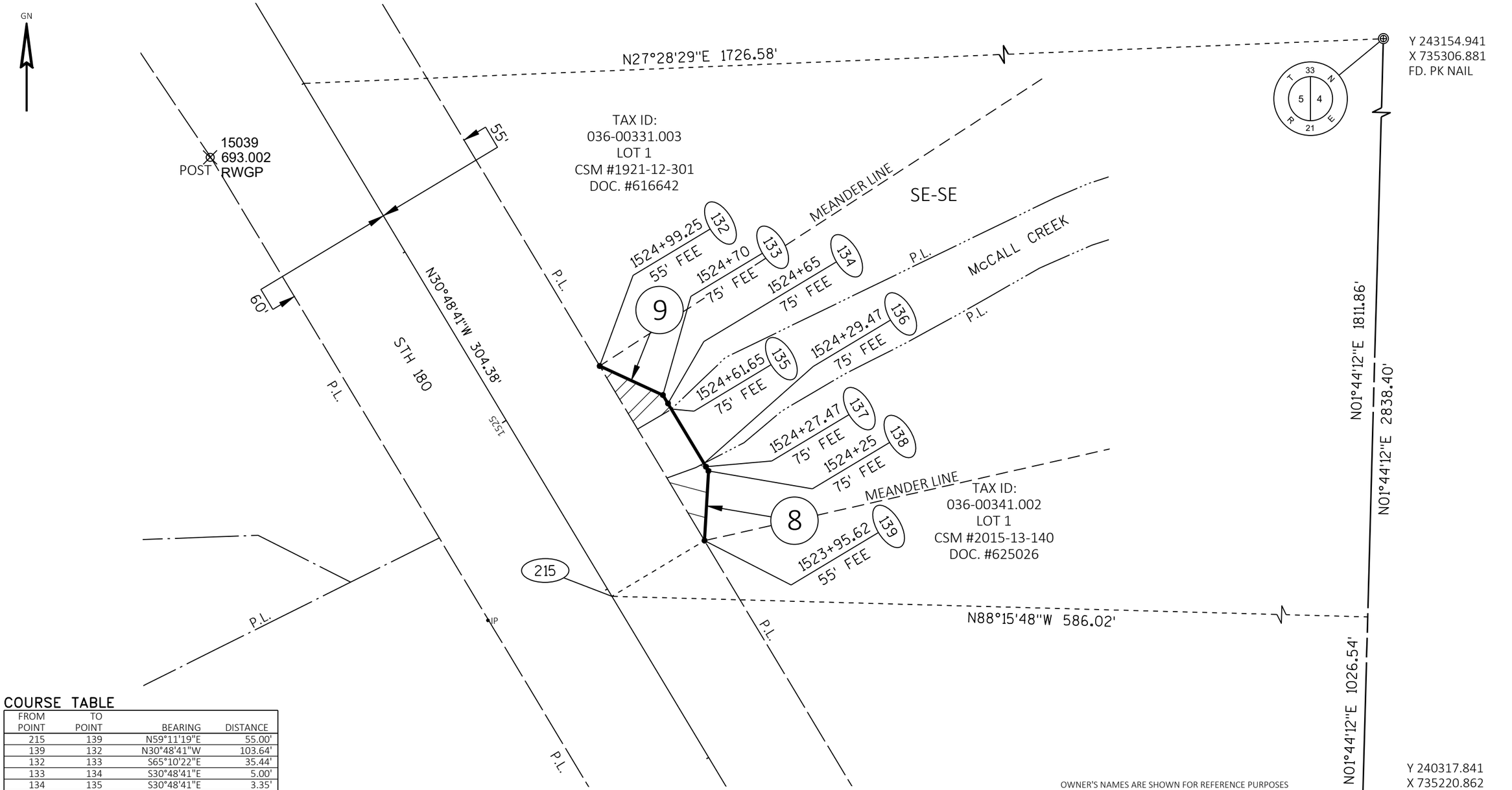
PLOT DATE : 2/19/2025 8:36 AM

PLOT BY : AARON PARKS

PLOT NAME :

PLOT SCALE :

WISDOT/CADDS SHEET 75



COURSE TABLE

FROM POINT	TO POINT	BEARING	DISTANCE
215	139	N59°11'19"E	55.00'
139	132	N30°48'41"W	103.64'
132	133	S65°10'22"E	35.44'
133	134	S30°48'41"E	5.00'
134	135	S30°48'41"E	3.35'
135	136	S30°48'41"E	32.18'
136	137	S30°48'41"E	2.00'
137	138	S30°48'41"E	2.47'
138	139	S03°25'45"W	35.55'

CAUTION:
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BASIS FOR EXISTING R/W

ROUTE	SOURCE
STH 180	R/W PROJECT S 0102 (9)

SCHEDULE OF LANDS & INTERESTS REQUIRED

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

PARCEL NUMBER	OWNER	INTEREST REQUIRED	FEE R/W SQ. FT. REQUIRED NEW	EXISTING	TOTAL	T.L.E. SQ. FT. TEMP.
8	TYLER M. OSMANSKI	FEE	412	0	412	0
9	JULIA A. CATHLINA	FEE	459	0	459	0

AREA FIGURES ARE REFERENCED TO THIS SHEET ONLY.

REVISION DATE 1/12/2024 ADD. RW 2/19/2025 NC	DATE 10/19/2023 GRID FACTOR	SCALE, FEET 0 25 50	HWY: STH 180 COUNTY: MARINETTE	STATE R/W PROJECT NUMBER 9670-16-21 CONSTRUCTION PROJECT NUMBER 9670-16-21	PLAT SHEET 4.07 PS&E SHEET 63	E

FILE NAME : 040107-RP.DWG
LAYOUT NAME - 4.07
PLOT DATE : 2/19/2025 8:37 AM PLOT BY : AARON PARKS PLOT NAME : PLOT SCALE :
WISDOT/CADDS SHEET 75

SCHEDULE OF LANDS & INTERESTS REQUIRED

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

PARCEL NUMBER	OWNER	INTEREST REQUIRED	FEE R/W SQ. FT. REQUIRED NEW	EXISTING	TOTAL	T.L.E. SQ. FT. TEMP.
10	ELIAS REALTY LLC	TLE	0	0	0	280

AREA FIGURES ARE REFERENCED TO THIS SHEET ONLY.

COURSE TABLE PARCEL 12–TLE

FROM POINT	TO POINT	BEARING	DISTANCE
216	217	S88°15'50"E	28.79'
217	218	N01°44'10"E	12.89'
218	219	S49°32'38"E	31.84'
219	220	S39°52'53"W	10.00'
220	217	SEE CURVE TABLE	

CURVE TABLE

FROM POINT	TO POINT	RADIUS	ARC LENGTH	CHORD BEARING	CHORD LENGTH
220	217	1597.22'	23.87'	N49°41'25"W	23.87'

TOWN

FRAC. NE-NW

OF

FRAC. NW-NE

WAUSAUKEE

Y 246170.428
X 727485.309
FD. 1 1/4" IRON PIPE

T 33 N R 21 E 6

GN

WOJCIK ROAD

P.L.

50'

60.09'

SCHLIES ROAD

SO1°44'10"W 1077.01'
QUARTER CORNER TO TRAV. PT.

N04°47'59"E 1058.41'

POST

SECTION LINE
1613+59.24

PT: 1614+33.60

1615

1613+54.58
40' EX RW

217

218

10

TLE FOR GRADING

1613+62.95
50' TLE

219

1613+30.11
50' TLE

220

1613+30.11
40' TLE

TAX ID:
036-00348.001

IP

216

CURVE 7

STH 180

40'

RL CURVE DATA
CURVE 7

PI	1608+54.063
Y	244675.765
X	727860.317
DELTA	42°38'52"
D	03°29'58"
T	639.113'
L	1218.657'
R	1637.222'
LC	1190.718'
LCB	N67°49'14"W

SO1°44'10"W 4331.83'
TRAV. PT. TO QUARTER CORNER

QUARTER LINE SO1°44'10"W 5408.84'

T 33 N R 21 E 6 7

Y 240764.075
X 727321.446
FD. RAILROAD SPIKE

PC: 1602+14.95

N16°47'50"E 4076.06'

BASIS FOR EXISTING R/W

ROUTE	SOURCE
STH 180	R/W PROJECTS T 0102 (3) & S 0102 (9)
SCHLIES ROAD	R/W PROJECTS T 0102 (3) & S 0102 (9)

CAUTION:
THIS PLAT IS A GRAPHIC REPRESENTATION AND IS FOR REFERENCE PURPOSES ONLY. DEEDS MUST BE CHECKED TO DETERMINE PROPERTY BOUNDARIES AND ACCESS RIGHTS.

REVISION DATE
1/12/2024 NC
2/19/2025 NC

DATE 10/19/2023

GRID FACTOR

SCALE, FEET 0 25 50

HWY: STH 180

COUNTY: MARINETTE

STATE R/W PROJECT NUMBER 9670-16-21

CONSTRUCTION PROJECT NUMBER 9670-16-21

PLAT SHEET 4.08

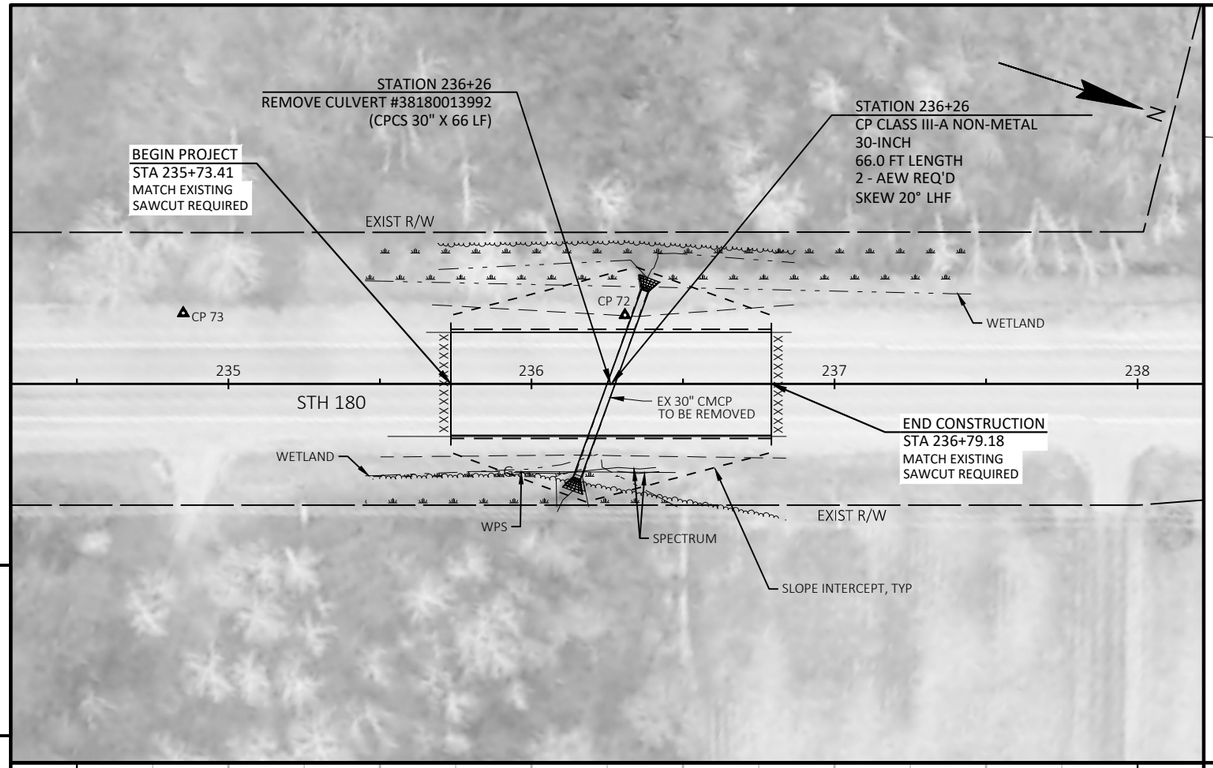
PS&E SHEET 64

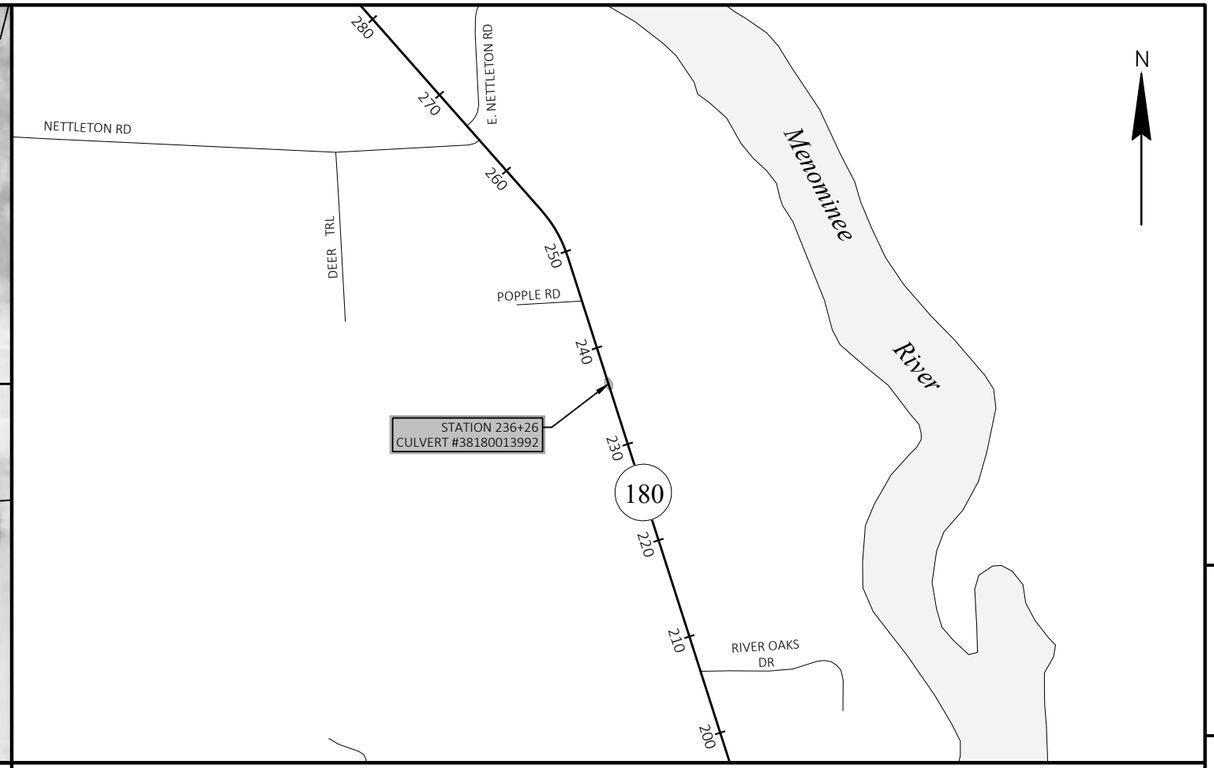
E

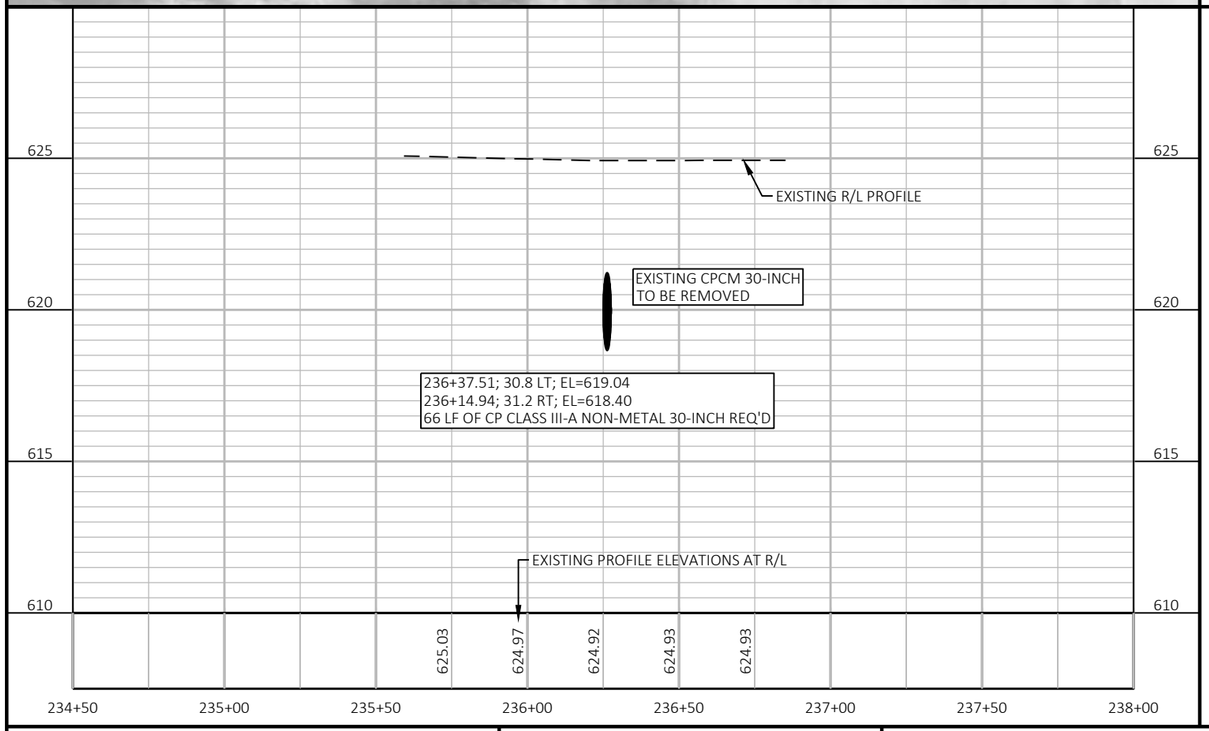
FILE NAME : 040108-RP.DWG
LAYOUT NAME - 4.08

PLOT DATE : 2/19/2025 8:37 AM PLOT BY : AARON PARKS PLOT NAME : PLOT SCALE :

WISDOT/CADDS SHEET 75

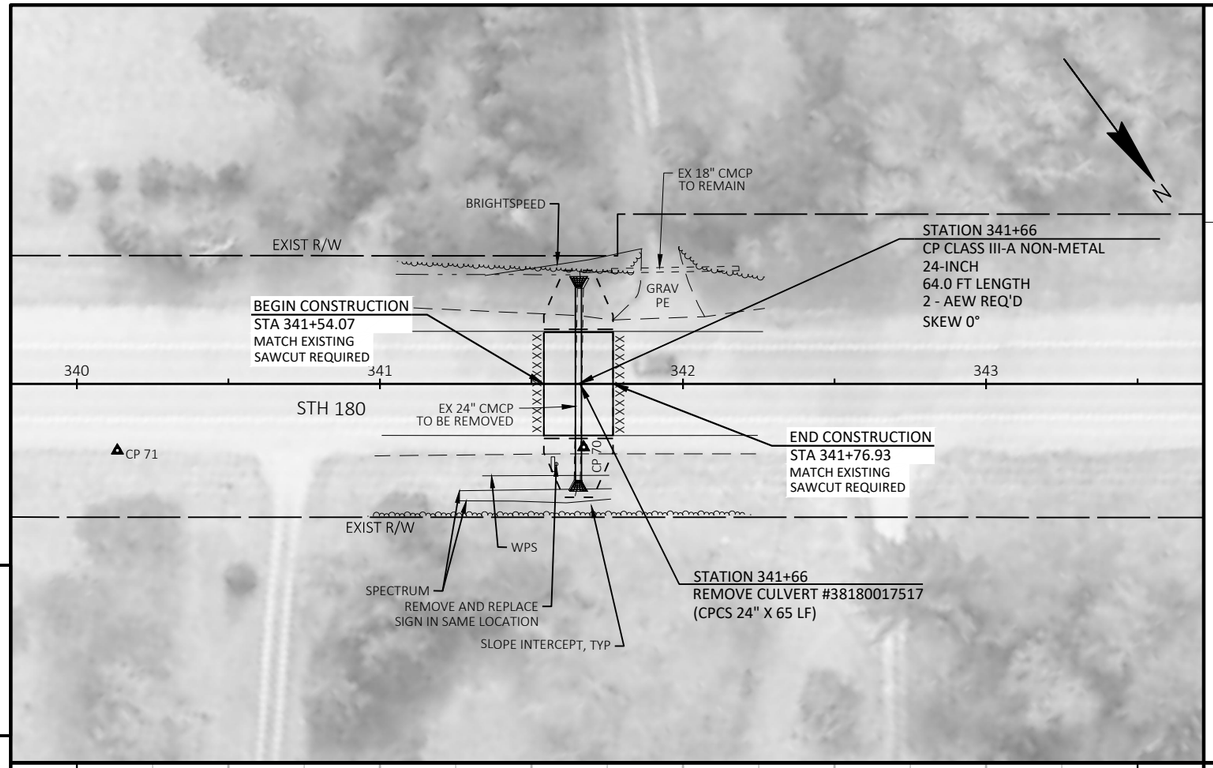


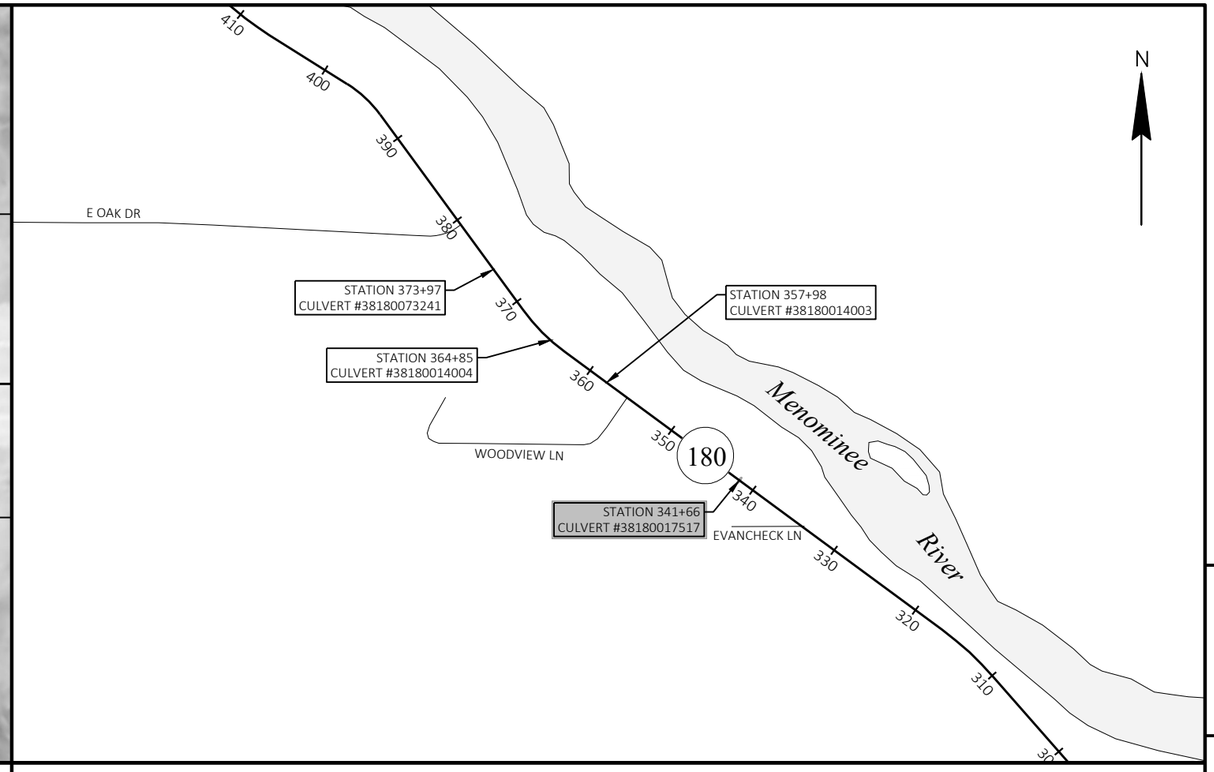


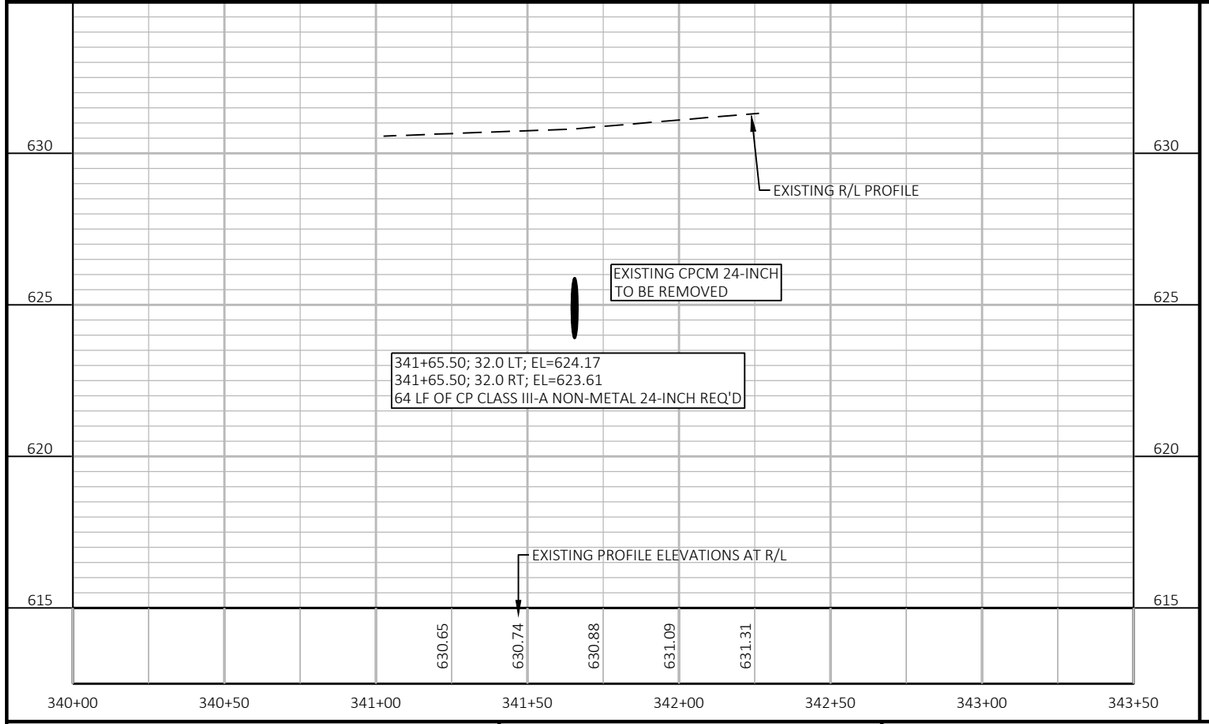


CONTROL POINT TABLE			
POINT NUMBER	Y	X	ELEVATION
72	162072.489	788509.071	623.62
73	161933.527	788552.937	623.84

PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	PLAN AND PROFILE: CULVERT #38180013992	SHEET 65	E

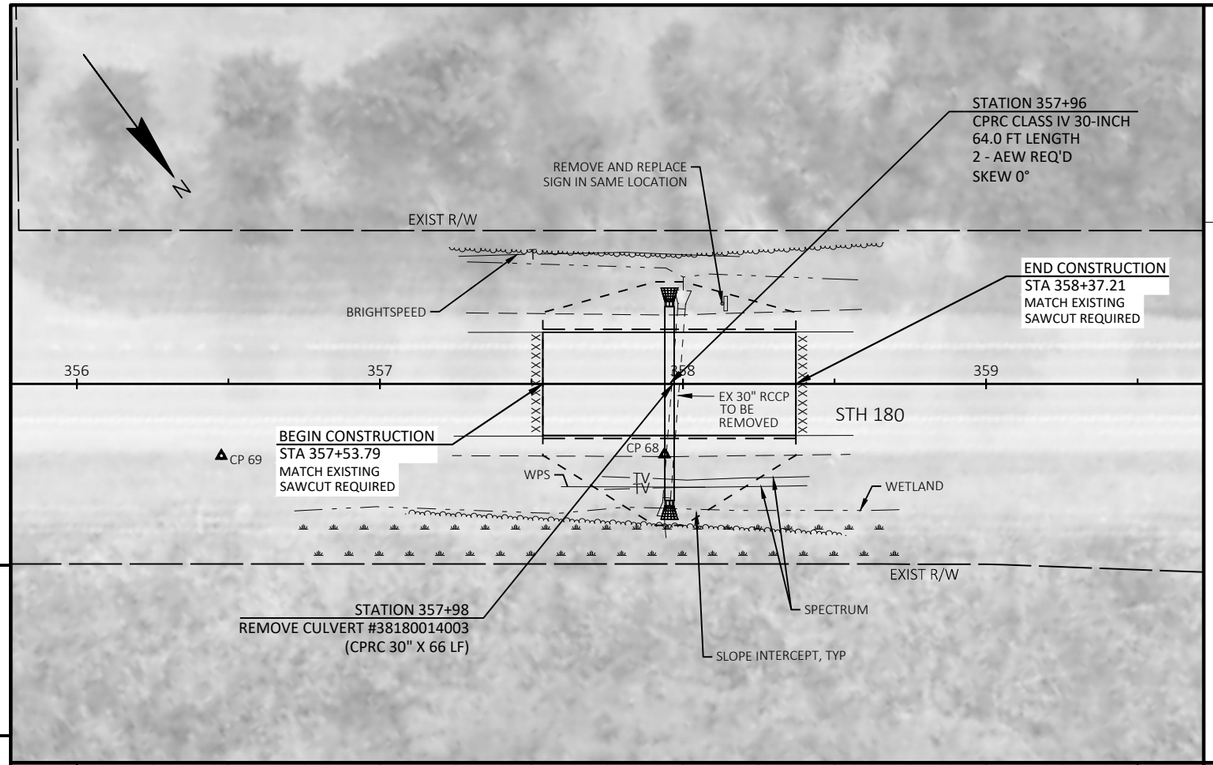


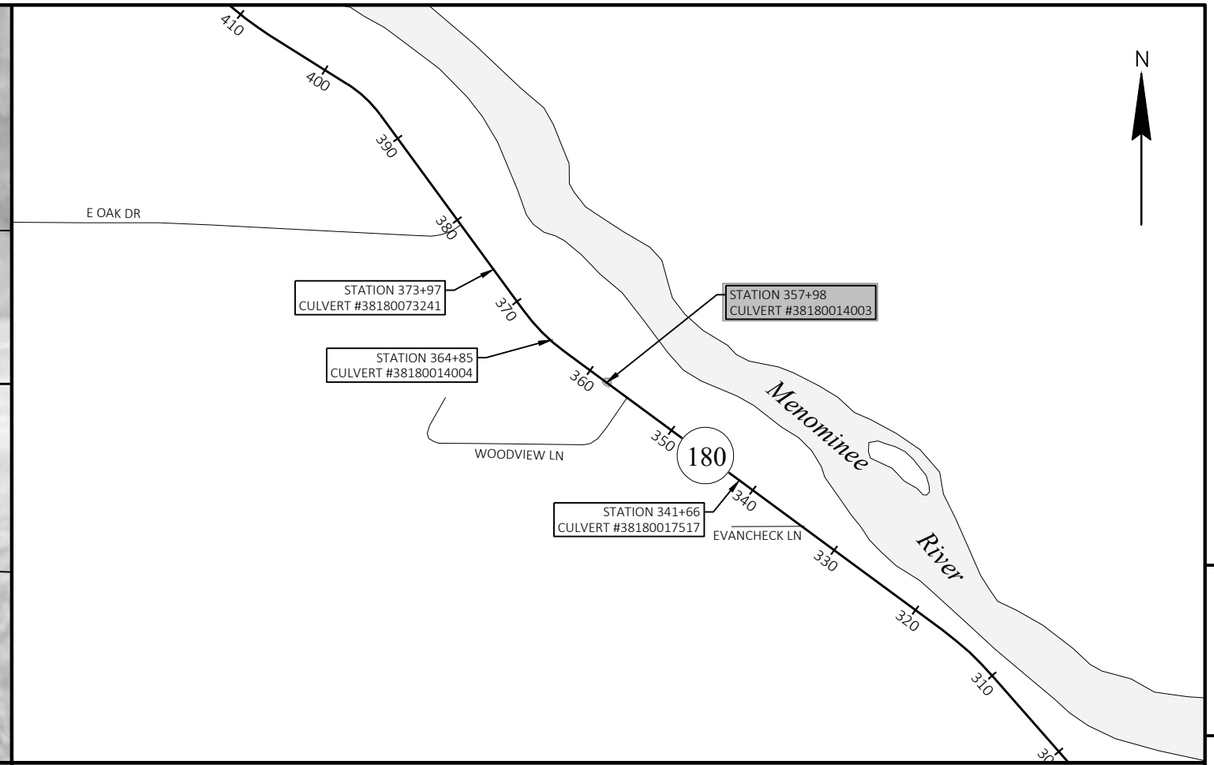


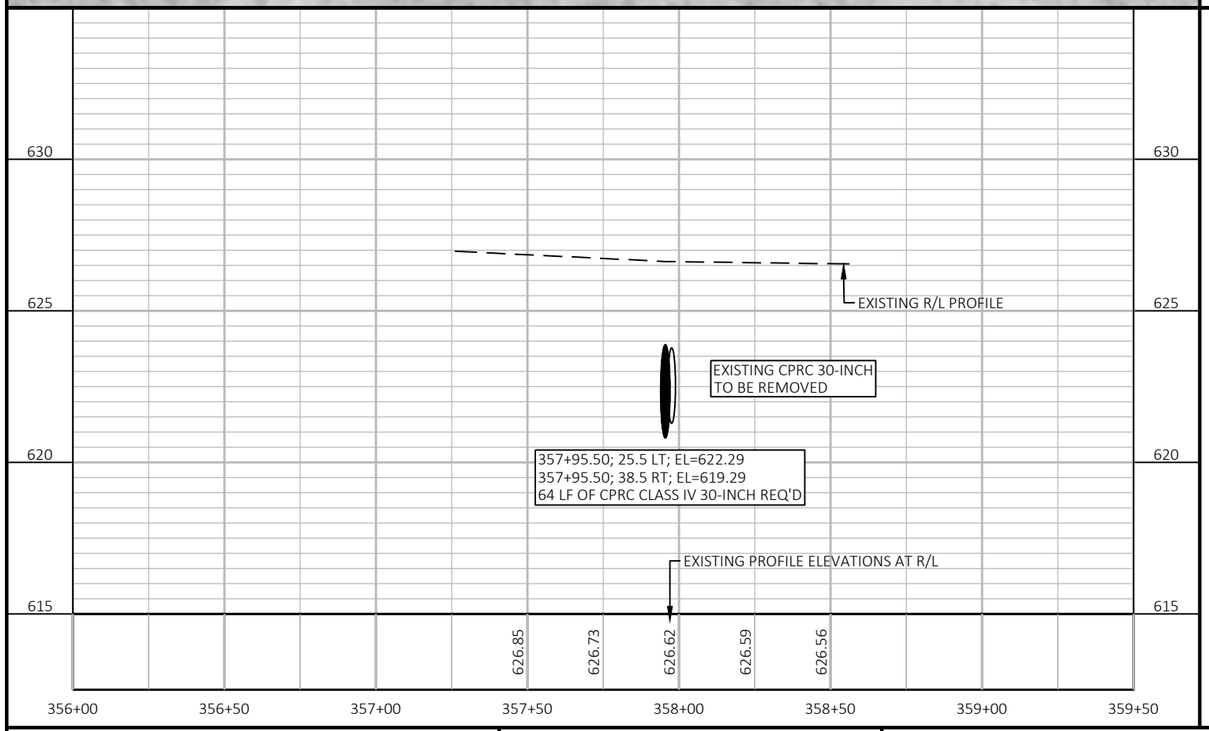


CONTROL POINT TABLE			
POINT NUMBER	Y	X	ELEVATION
70	169884.812	781728.132	629.55
71	169794.439	781852.659	629.56

PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	PLAN AND PROFILE: CULVERT #38180017517	SHEET 66	E





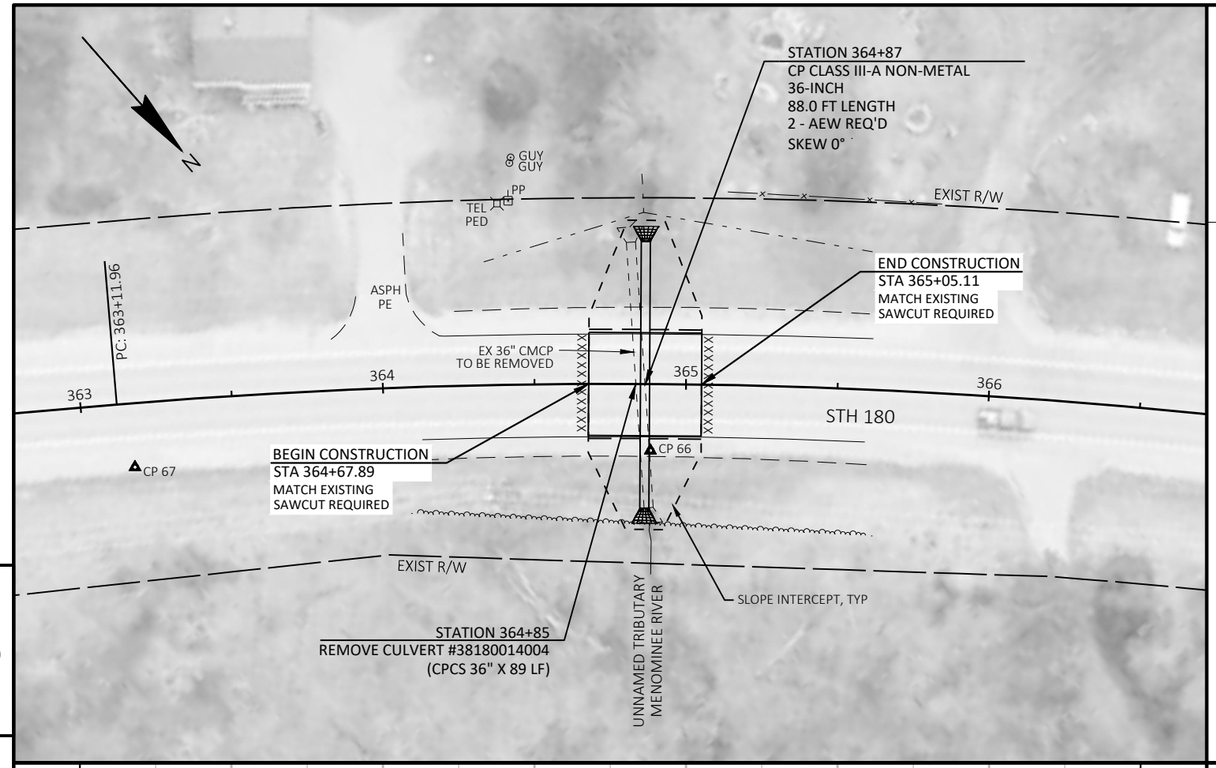


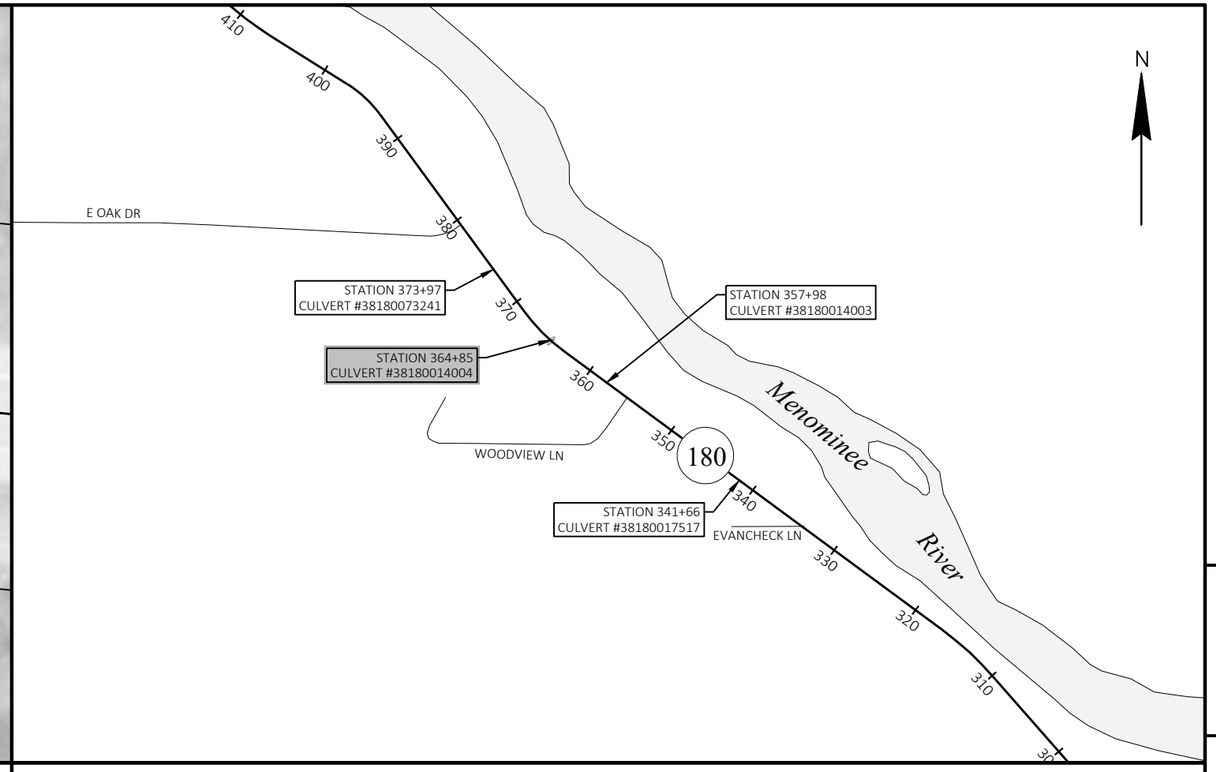
CONTROL POINT TABLE			
POINT NUMBER	Y	X	ELEVATION
68	170851.604	780419.920	625.06
69	170765.246	780537.945	626.17

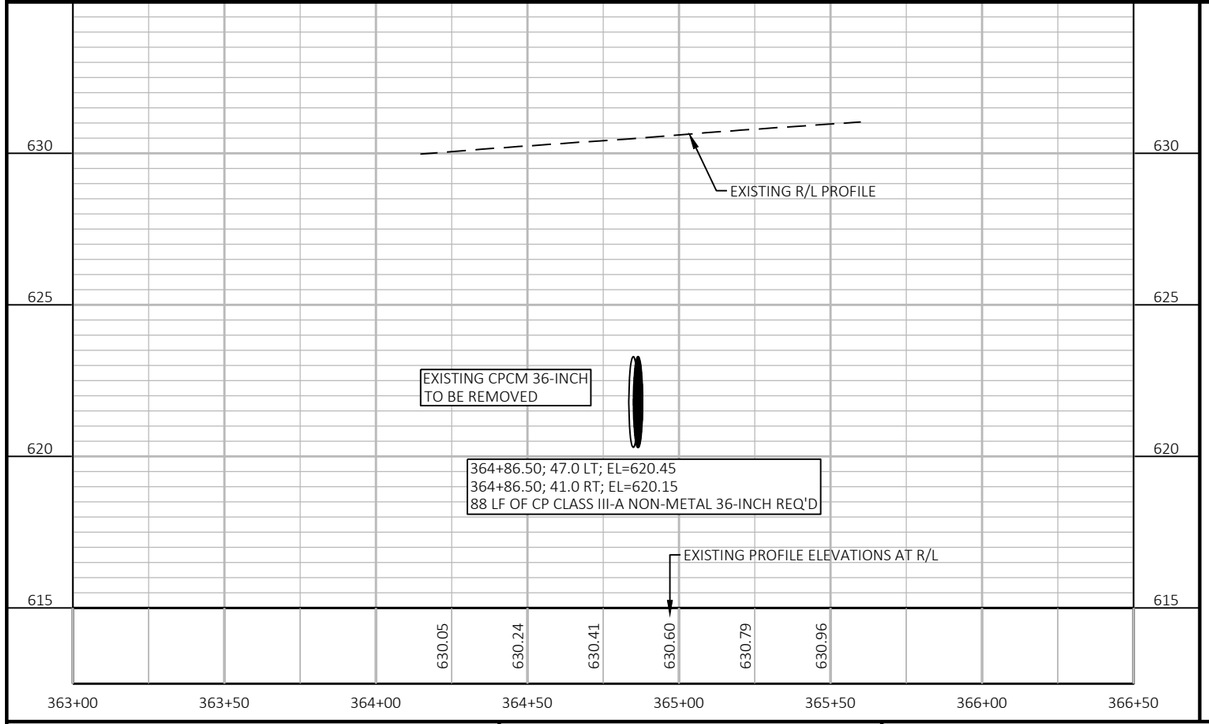
PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	PLAN AND PROFILE: CULVERT #38180014003	SHEET 67	E

FILE NAME : S:\CURRPROJ\MARINETTE COUNTY\STH 180\CIVIL3D\96701600\SHEETSPLAN\96701671-050101-PP.DWG
LAYOUT NAME - Sheet-02a

PLOT DATE : 9/10/2025 4:38 PM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:50 FT

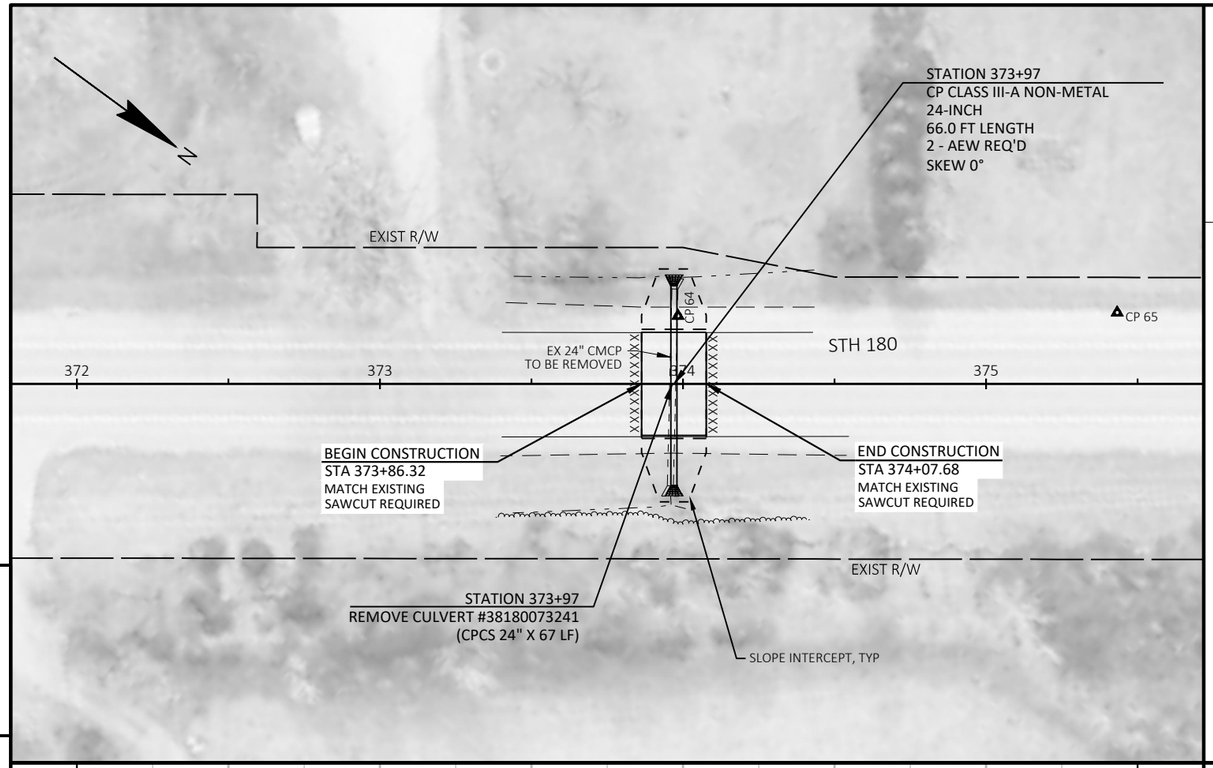


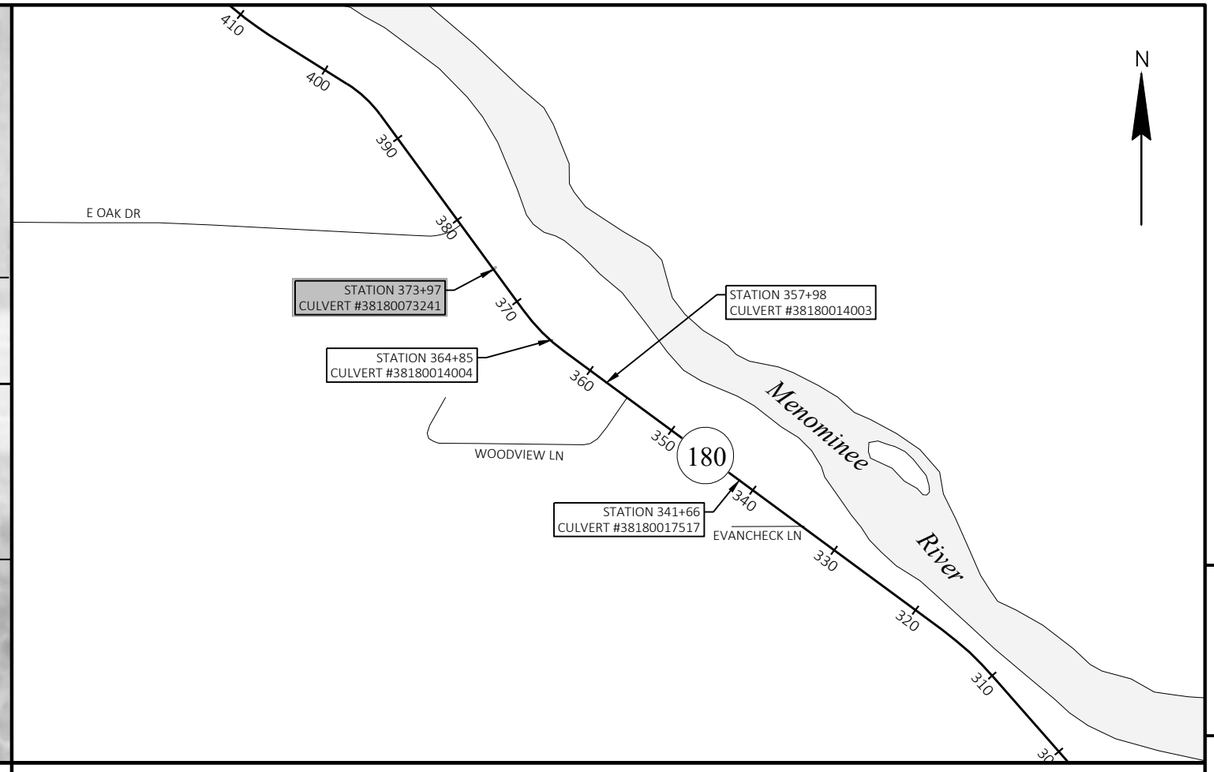


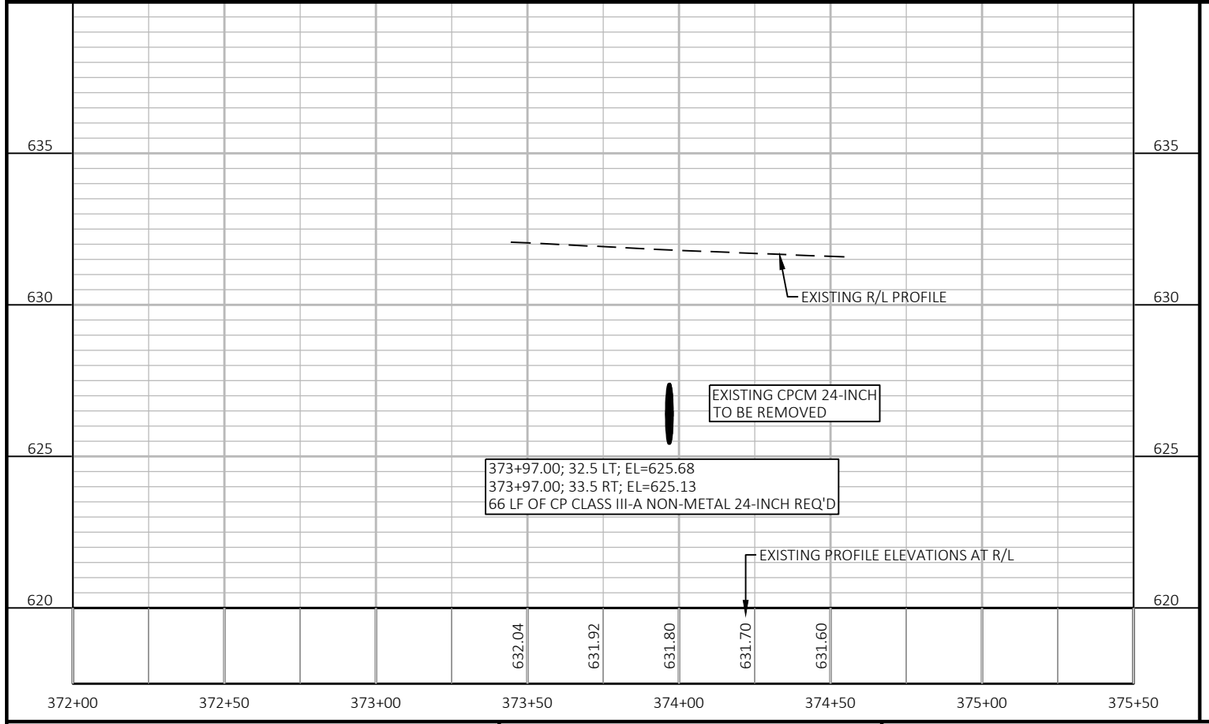


CONTROL POINT TABLE			
POINT NUMBER	Y	X	ELEVATION
66	171267.531	779866.512	628.51
67	171159.673	779998.111	627.86

PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	PLAN AND PROFILE: CULVERT #38180014004	SHEET 68	E

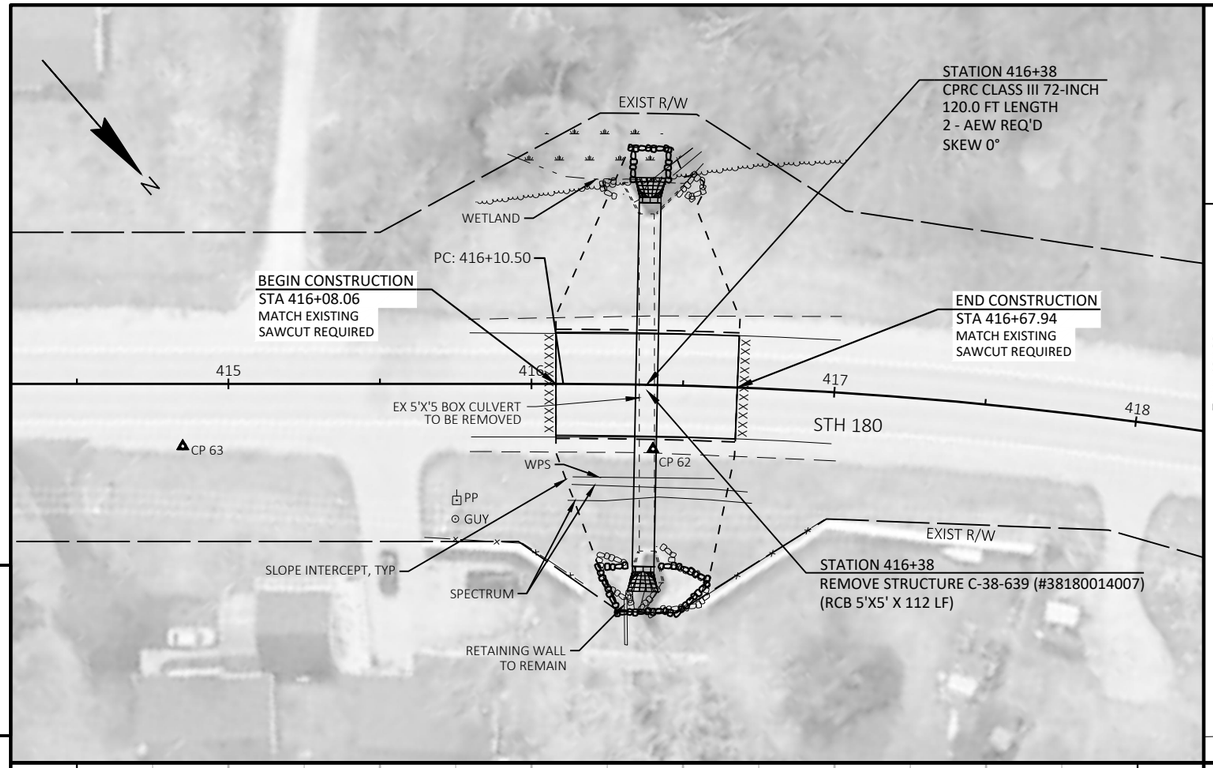


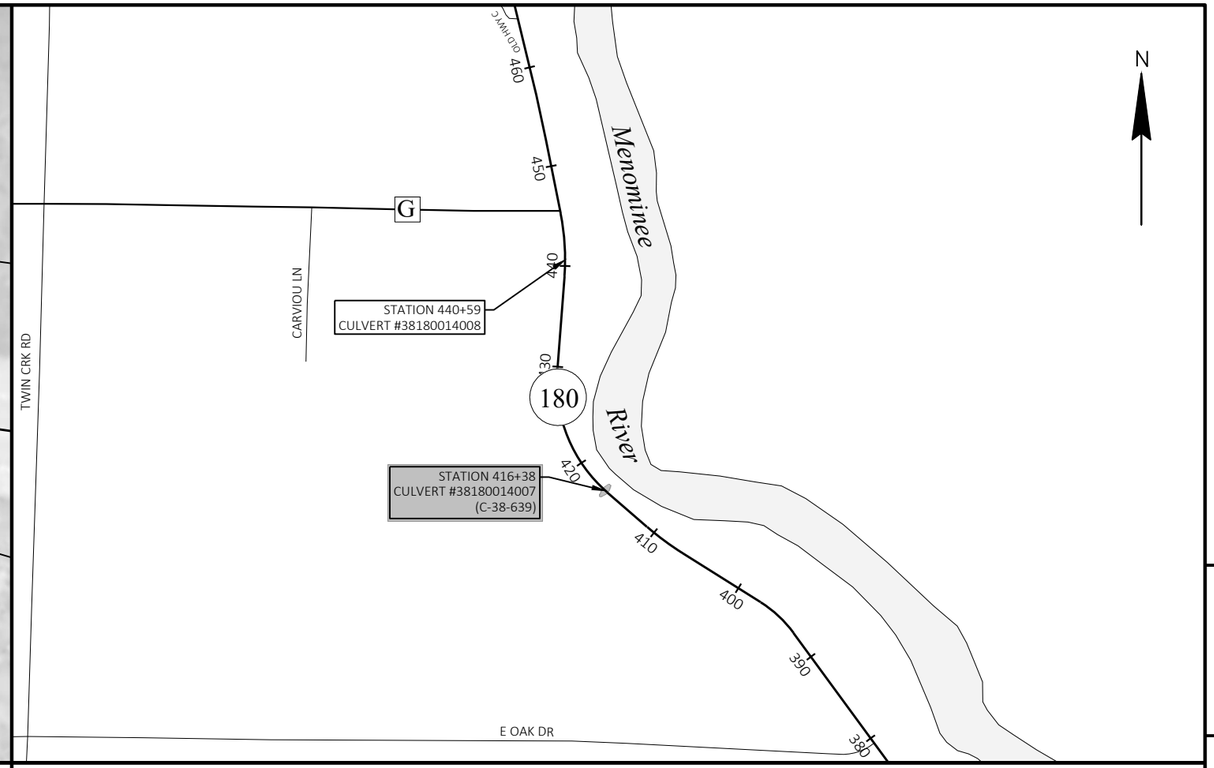


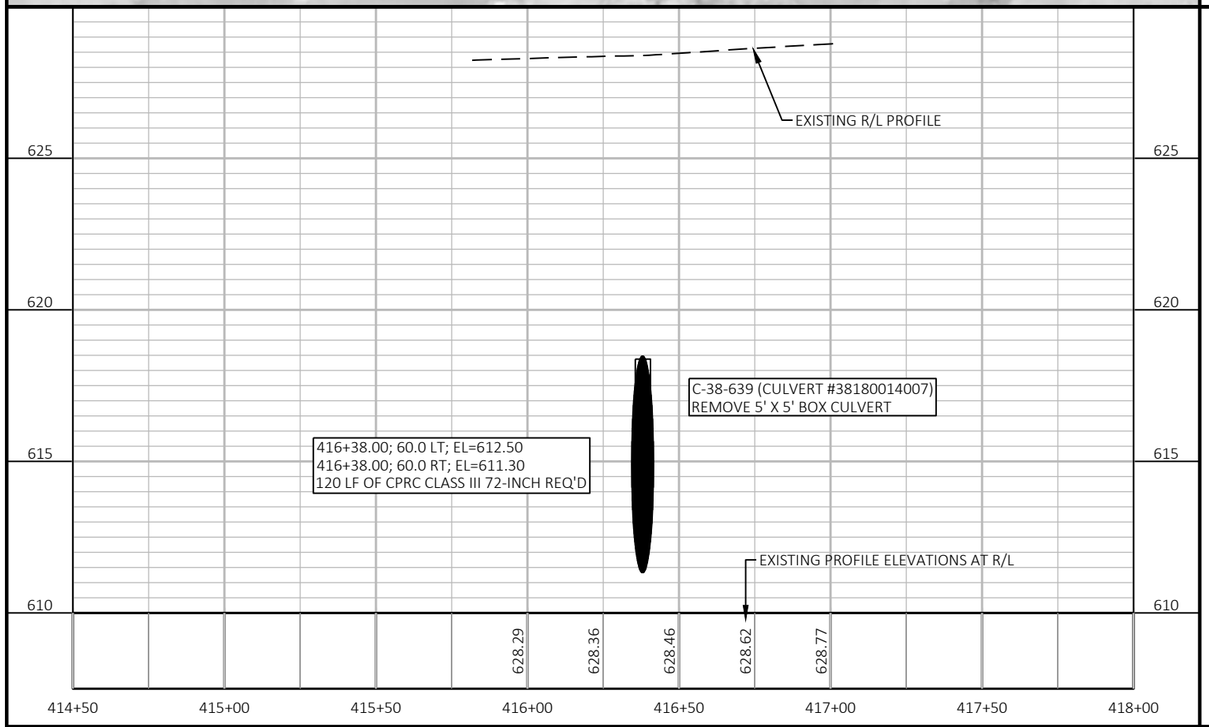


CONTROL POINT TABLE			
POINT NUMBER	Y	X	ELEVATION
64	171943.744	779262.893	630.45
65	172060.010	779176.361	630.13

PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	PLAN AND PROFILE: CULVERT #38180073241	SHEET 69	E







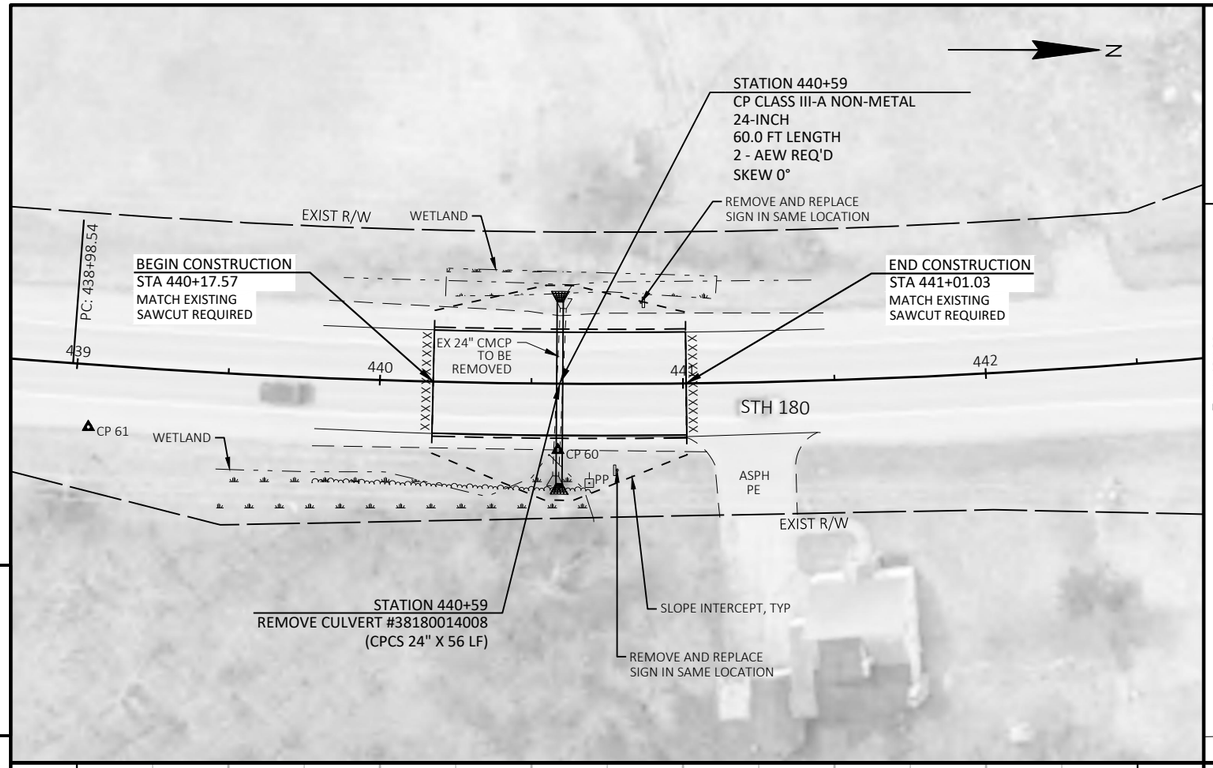
CONTROL POINT TABLE			
POINT NUMBER	Y	X	ELEVATION
62	174910.237	776310.707	626.87
63	174808.019	776427.433	627.13

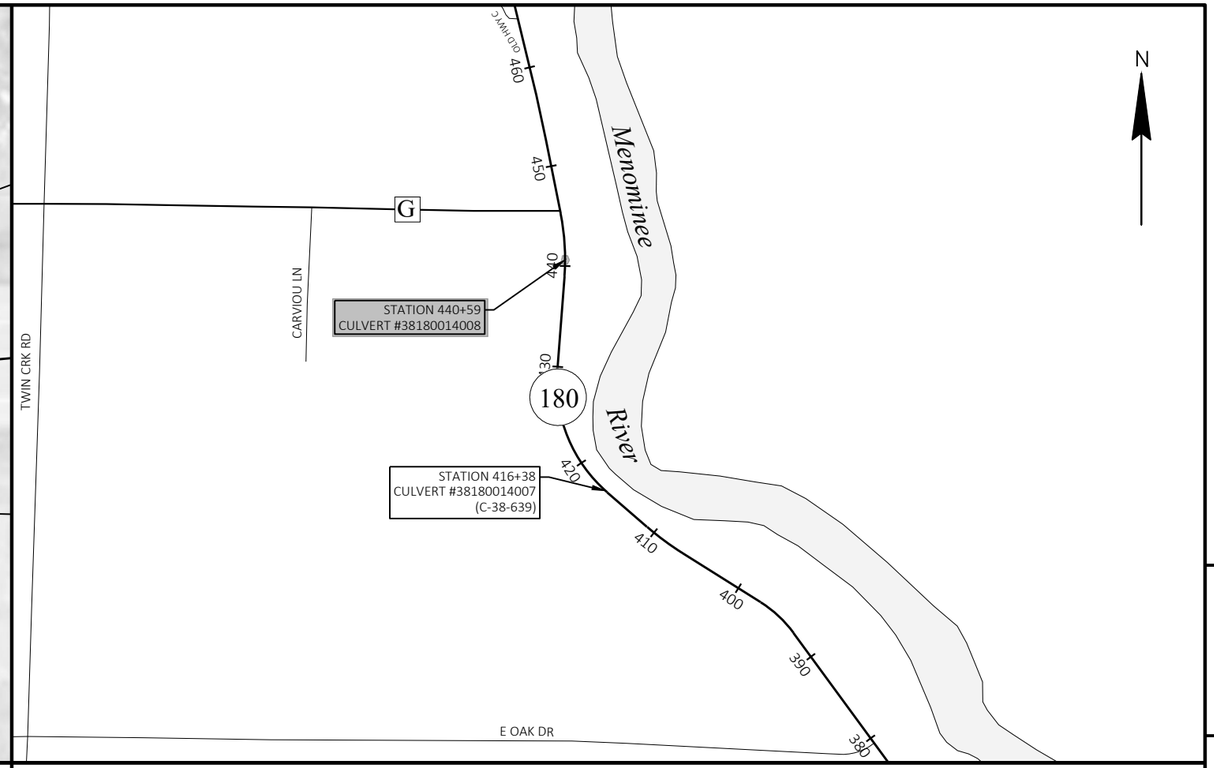
PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	PLAN AND PROFILE: C-38-639 (CULVERT #38180014007)	SHEET 70	E

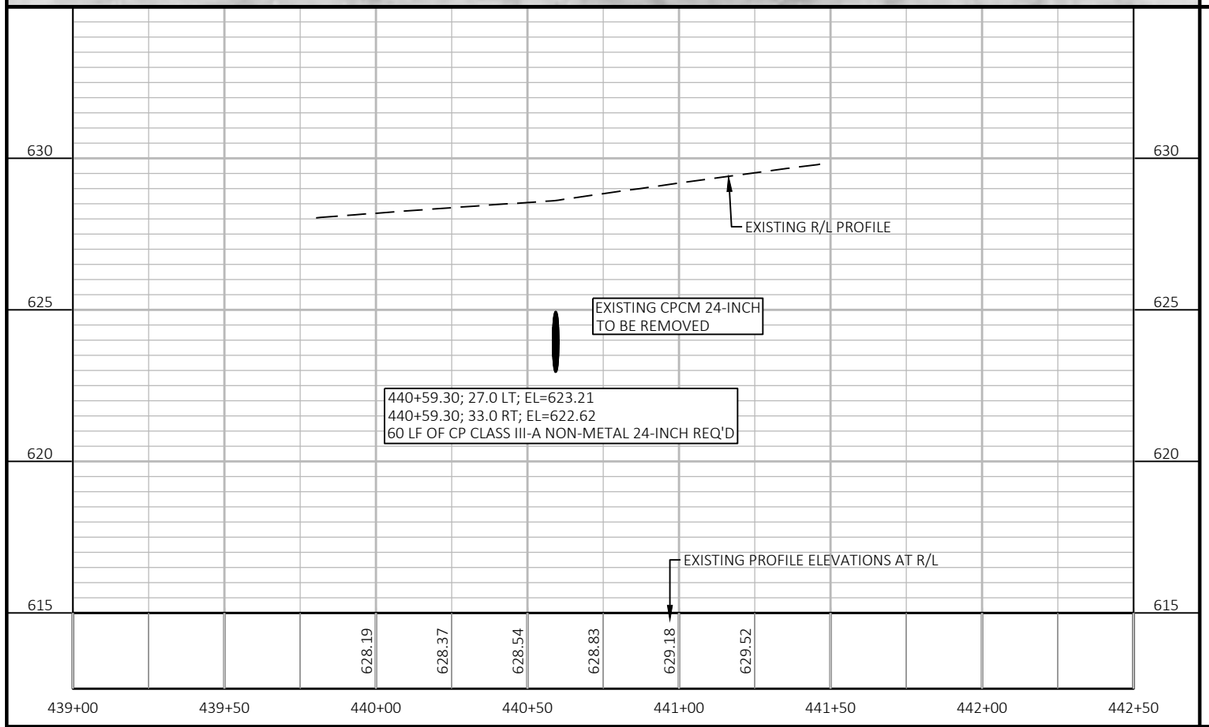
FILE NAME : S:\CURRPROJ\MARINETTE COUNTY\STH 180\CIVIL3D\96701600\SHEETSPLAN\96701671-050101-PP.DWG
LAYOUT NAME - Sheet-03b

PLOT DATE : 7/31/2025 11:21 AM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 44

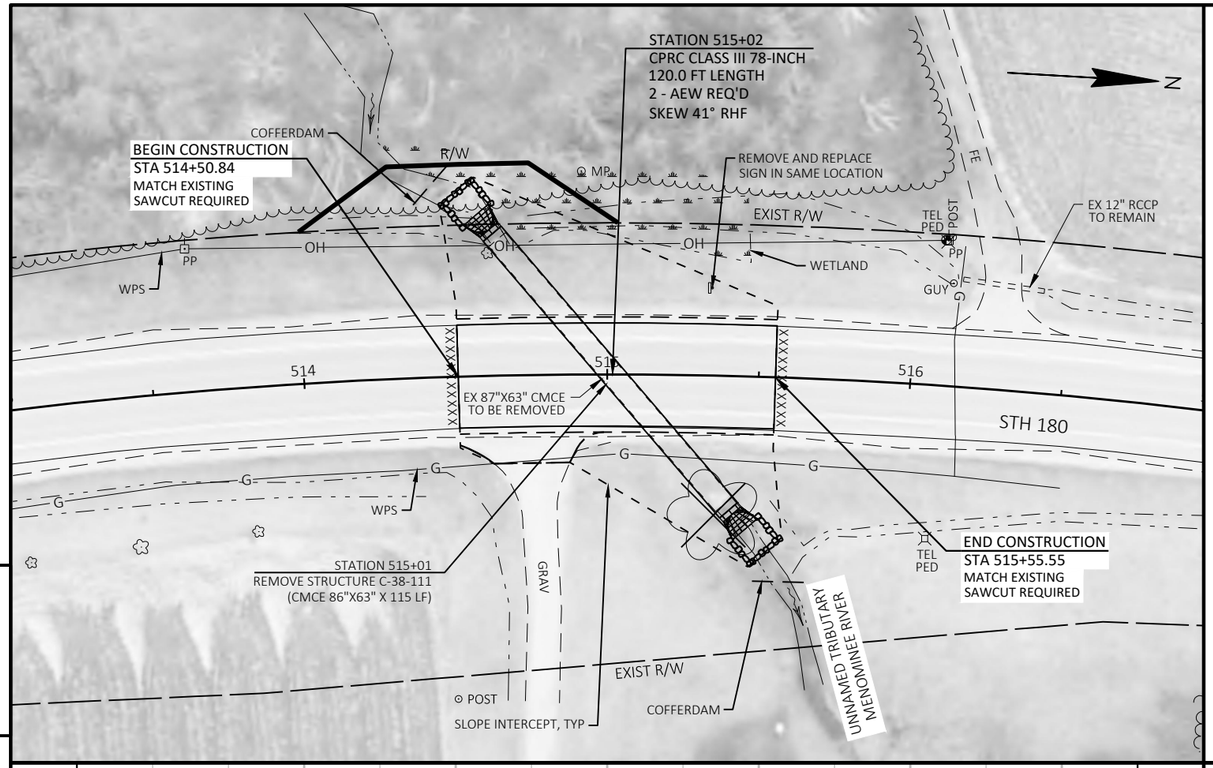


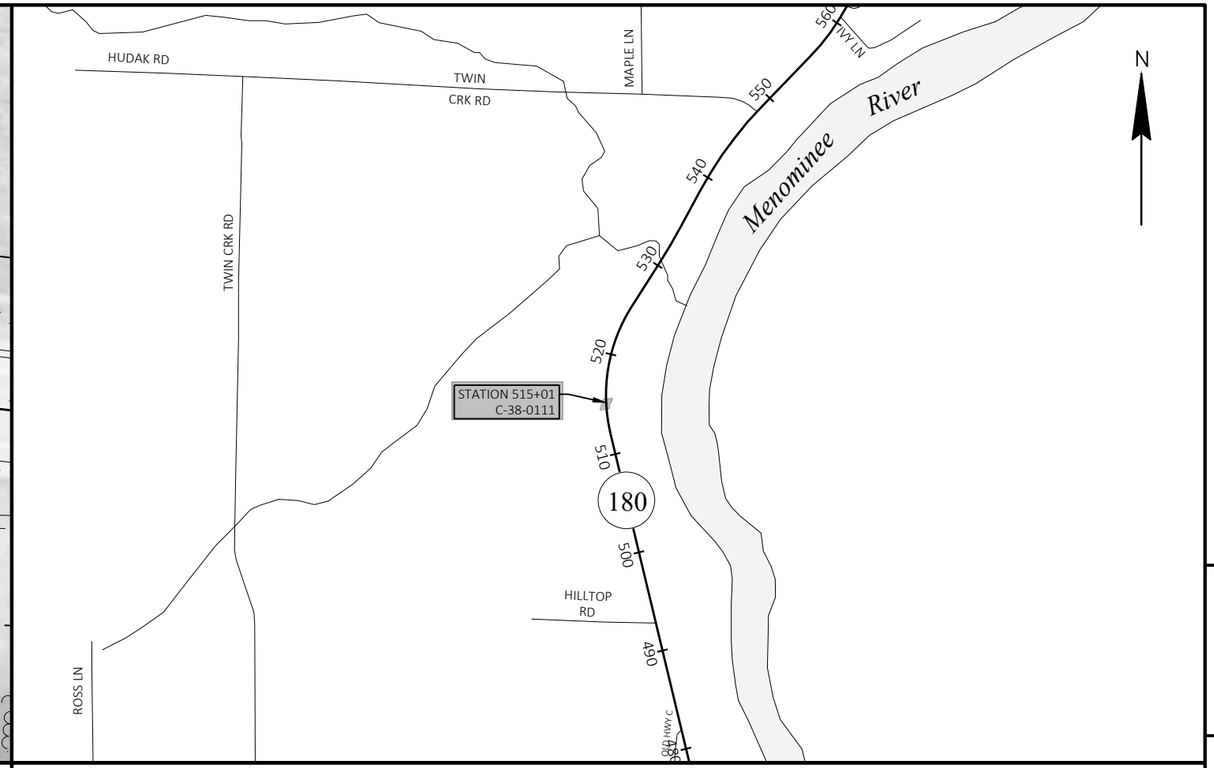


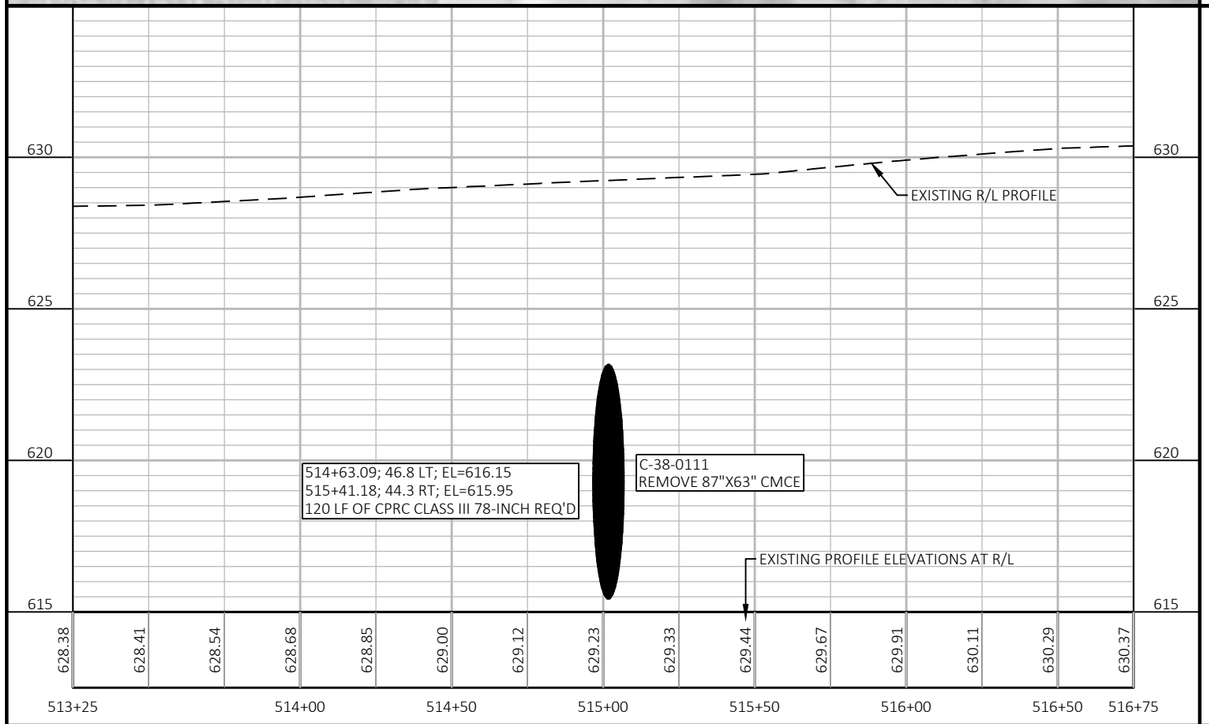


CONTROL POINT TABLE			
POINT NUMBER	Y	X	ELEVATION
60	177174.204	775923.817	628.36
61	177019.254	775916.610	627.23

PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	PLAN AND PROFILE: CULVERT #38180014008	SHEET 71	E



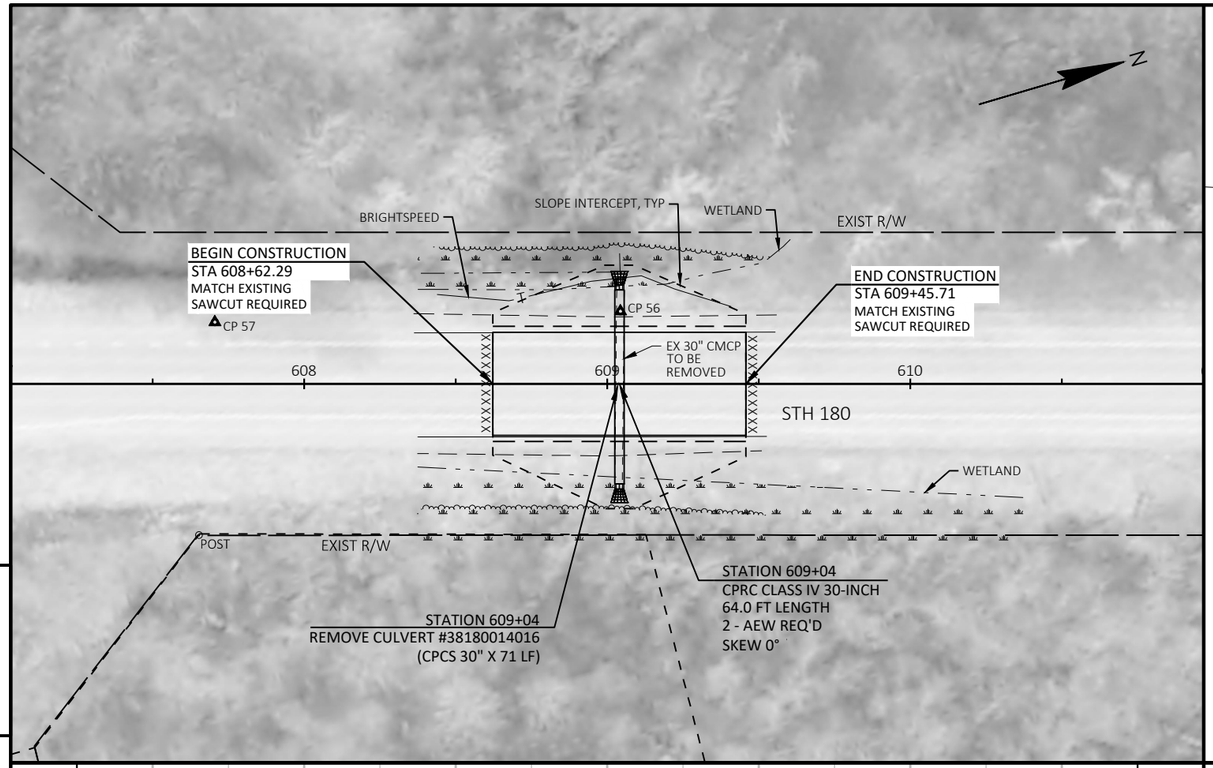


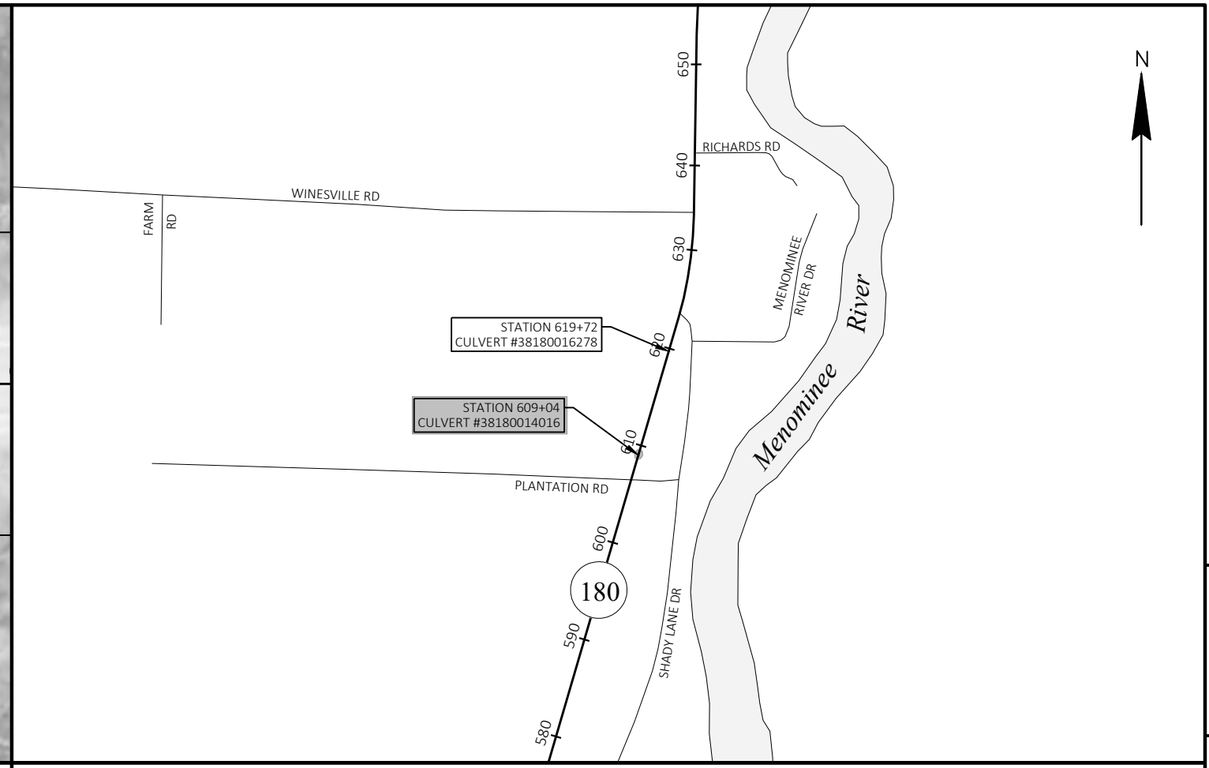


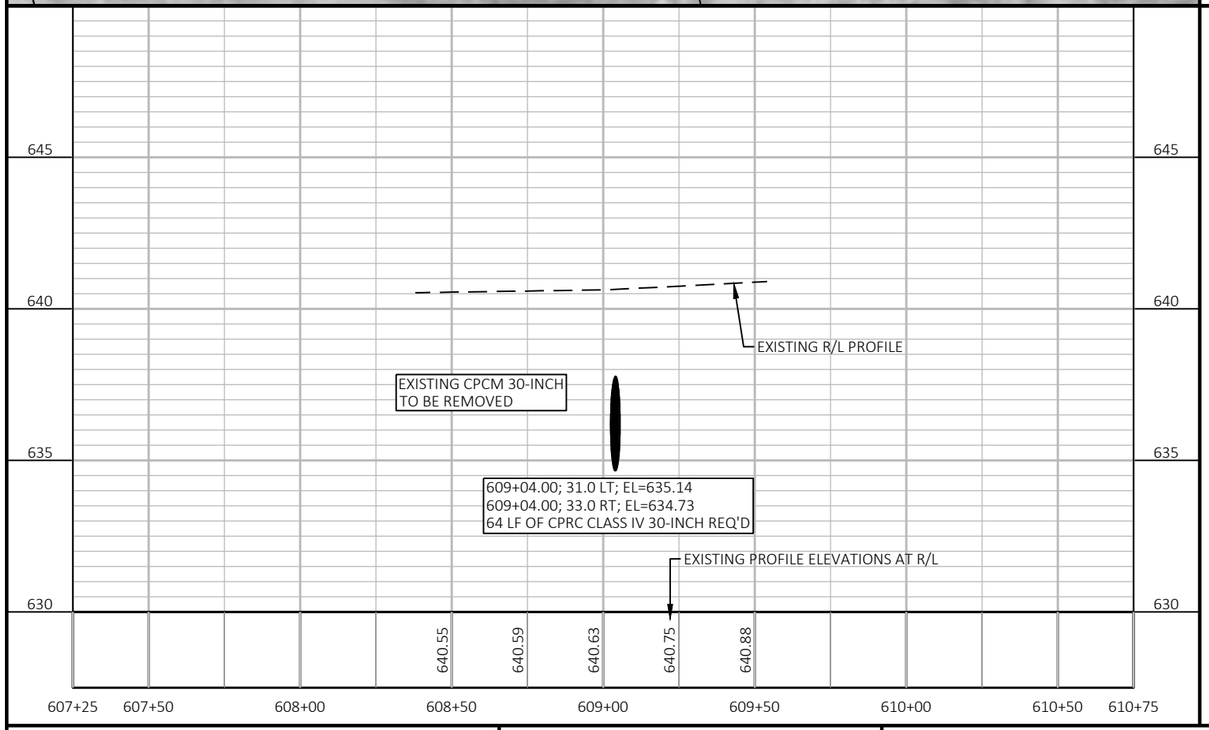
CONTROL POINT TABLE			
POINT NUMBER	Y	X	ELEVATION
907	184150.795	774362.692	624.68
908	184736.620	774276.810	630.69

BENCH MARK TABLE				
POINT NUMBER	Y	X	ELEVATION	DESCRIPTION
2028	184129.231	774294.741	626.12	60D SPIKE IN POWER POLE
2463	184541.895	774242.007	627.04	60D SPIKE IN POWER POLE

PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	PLAN AND PROFILE: C-38-111	SHEET 72	E



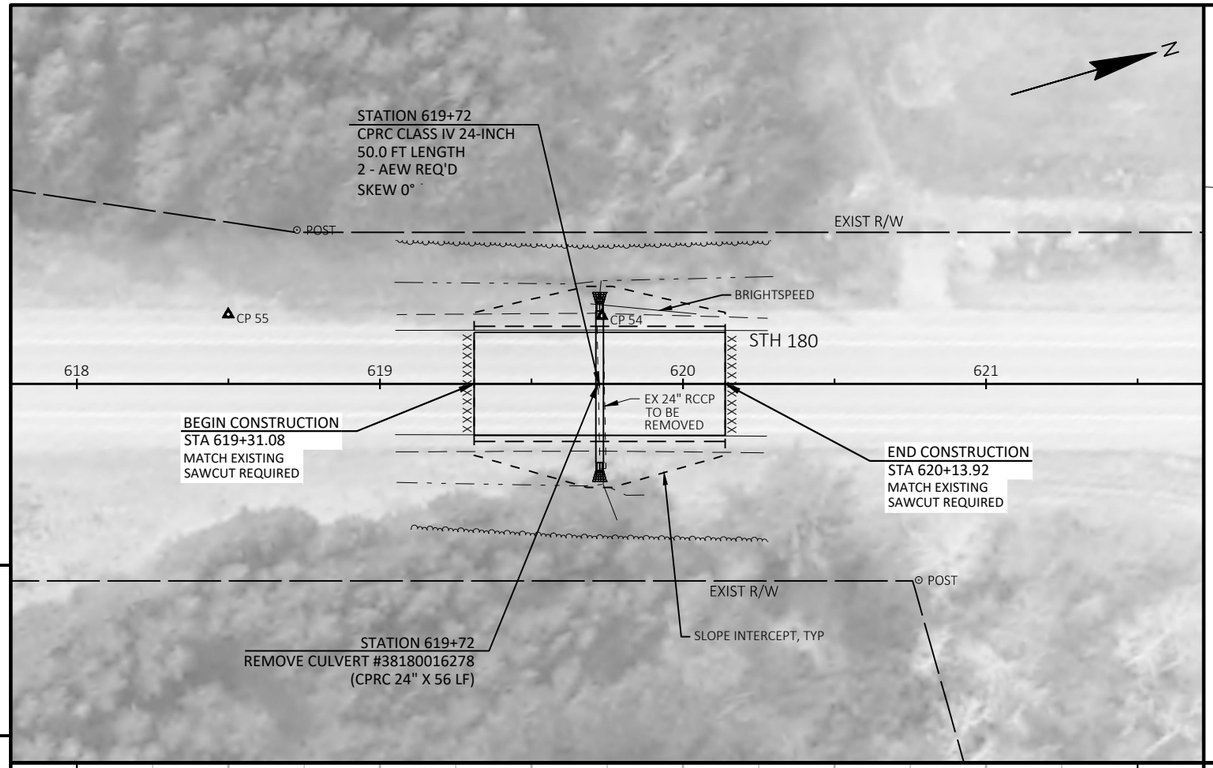


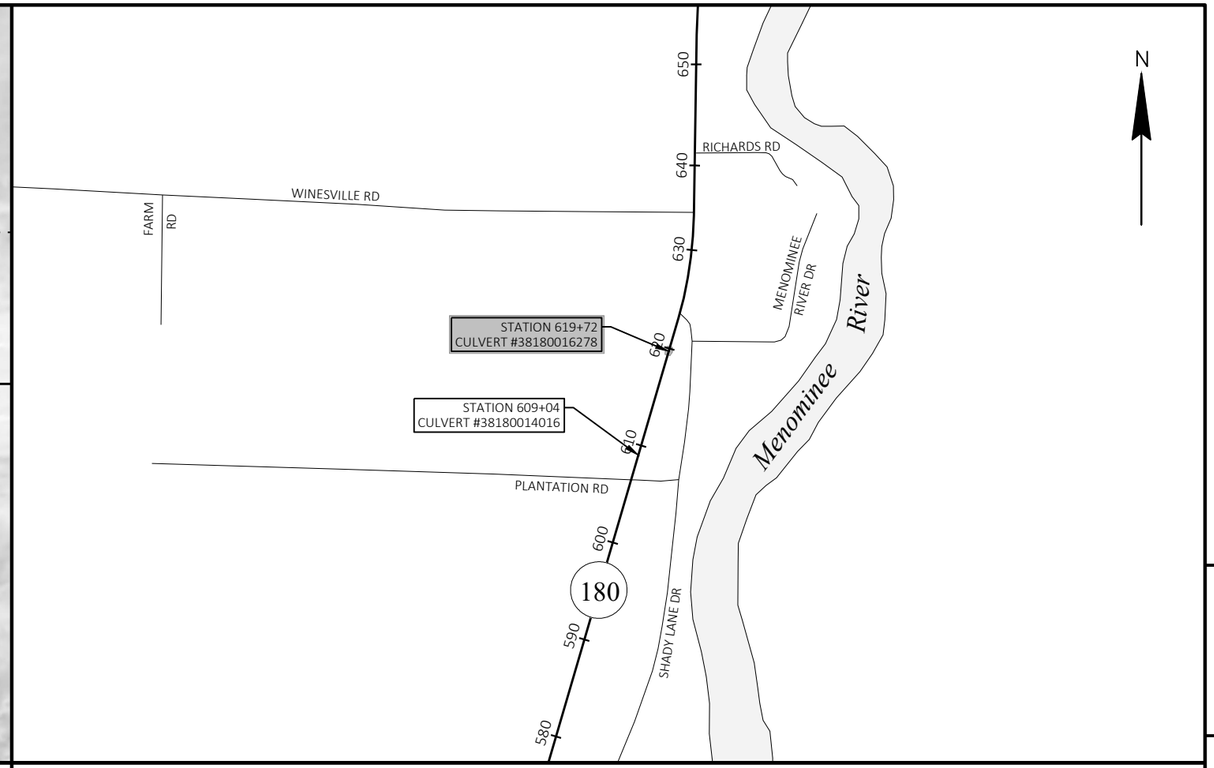


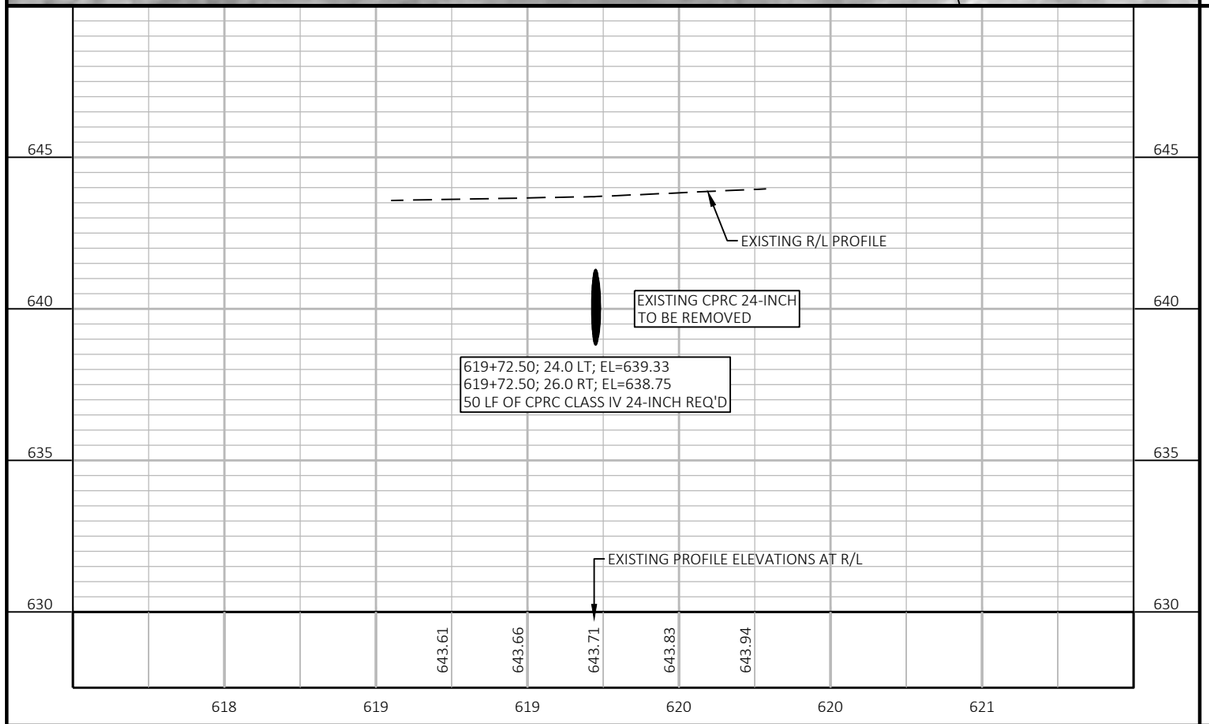
CONTROL POINT TABLE			
POINT NUMBER	Y	X	ELEVATION
56	192884.828	778023.686	639.30
57	192755.376	777989.551	639.85

PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	PLAN AND PROFILE: CULVERT #38180014016	SHEET 73 E

FILE NAME : S:\CURRPROJ\MARINETTE COUNTY\STH 180\CIVIL3D\96701600\SHEETSPLAN\96701671-050101-PP.DWG
LAYOUT NAME - Sheet-05a
PLOT DATE : 7/31/2025 11:24 AM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:50 FT

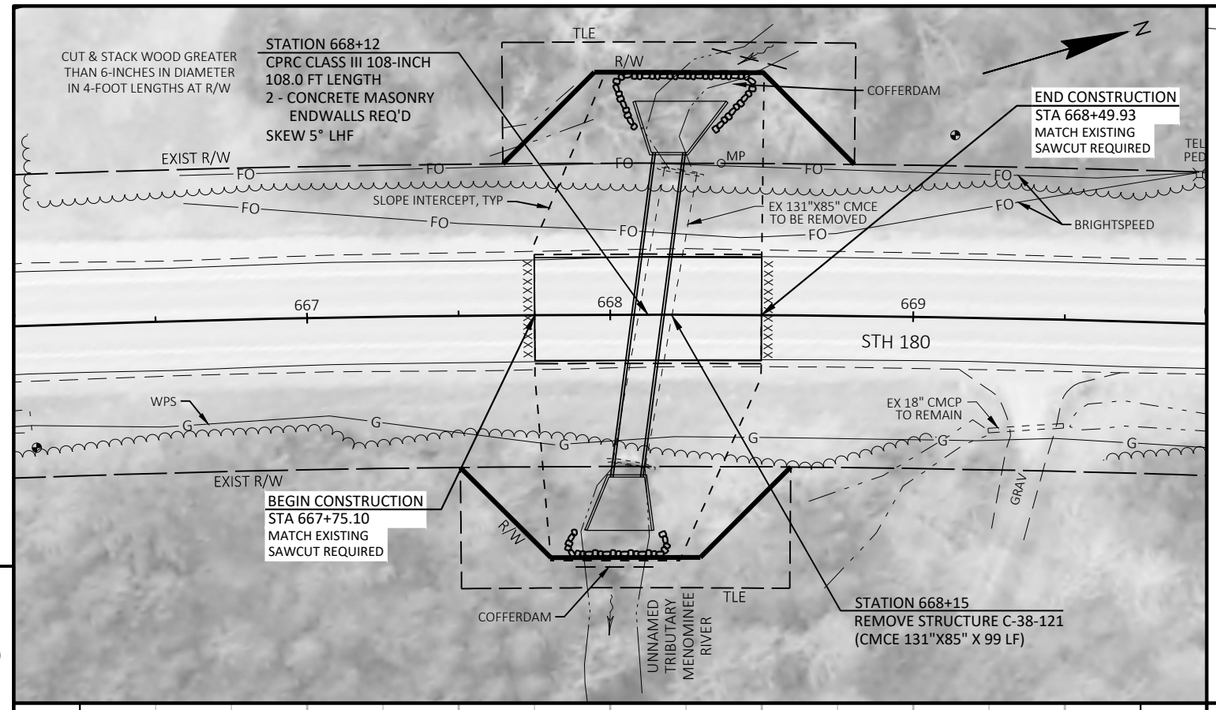


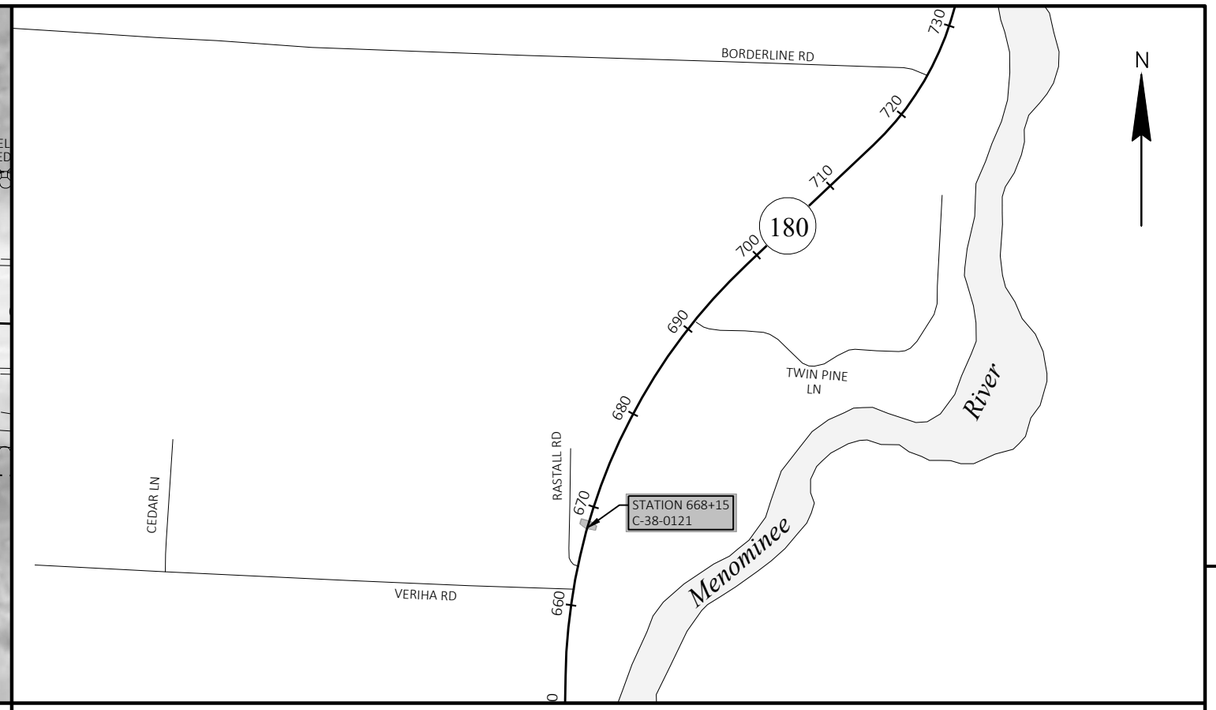


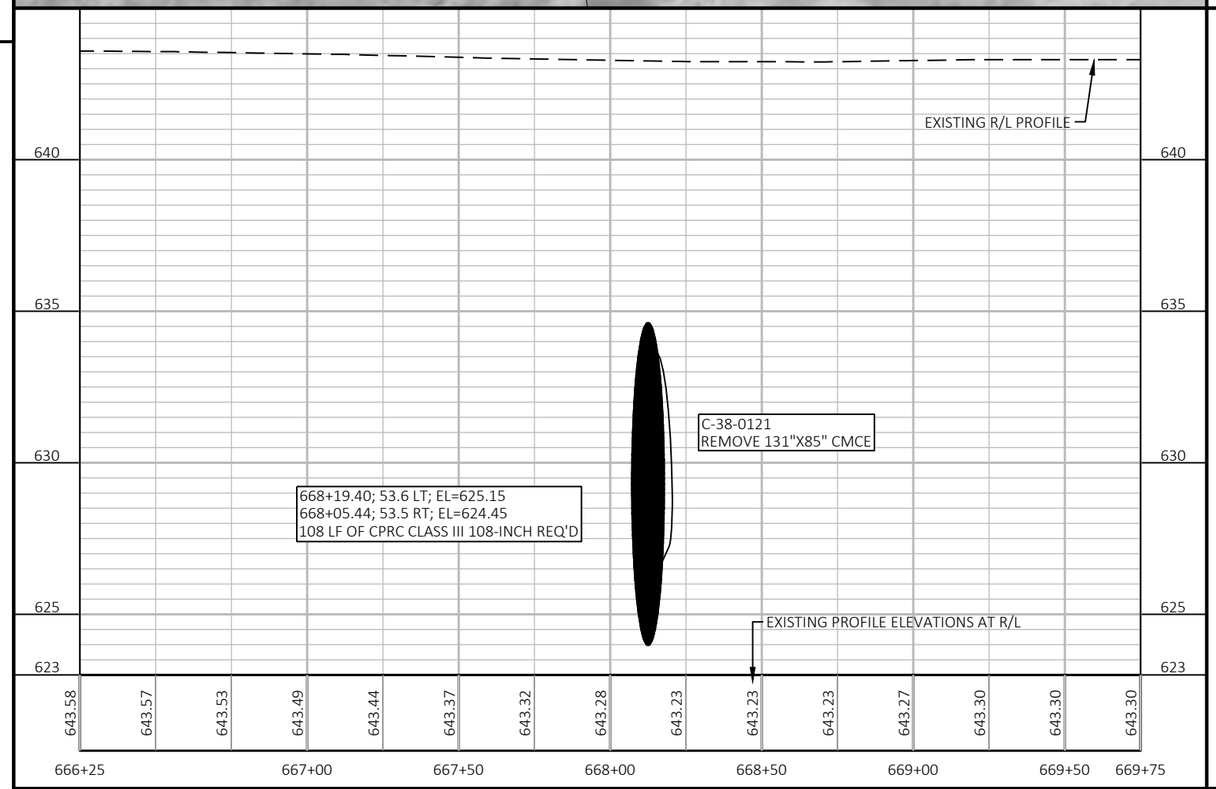


CONTROL POINT TABLE			
POINT NUMBER	Y	X	ELEVATION
54	193910.258	778325.320	642.80
55	193792.069	778290.218	642.52

PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	PLAN AND PROFILE: CULVERT #38180016278	SHEET 74	E



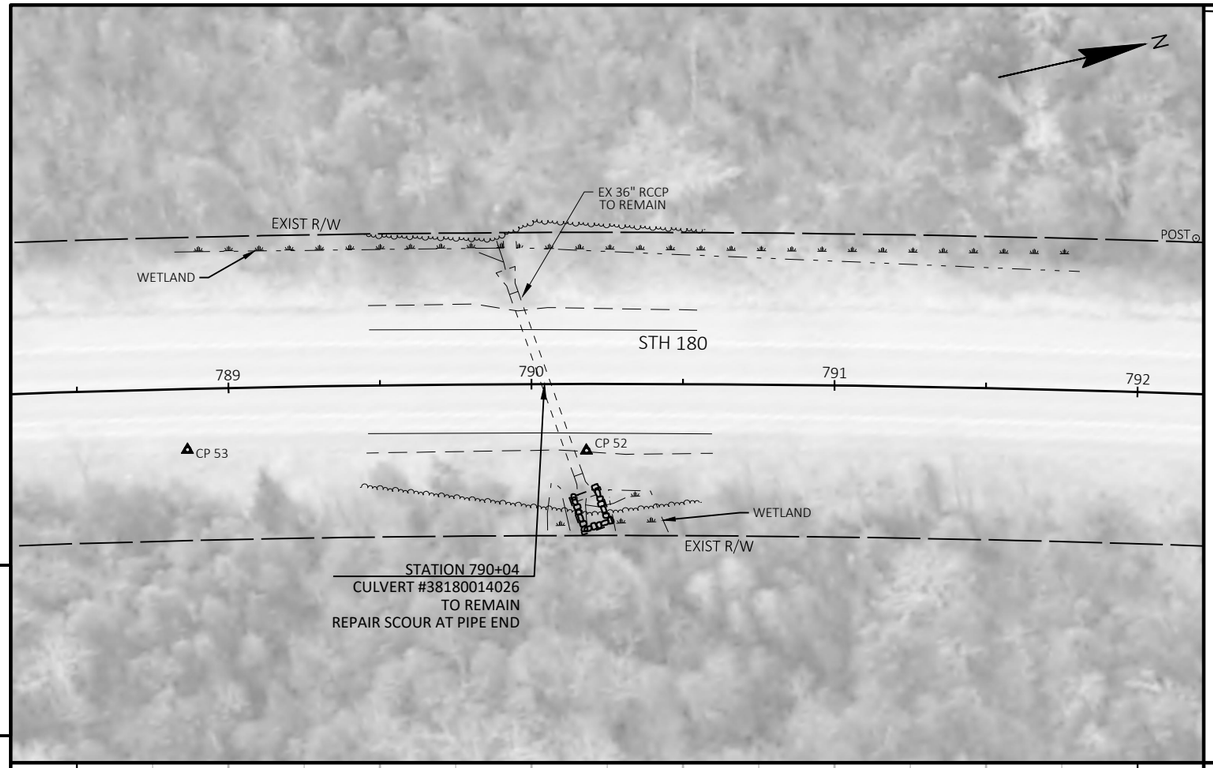


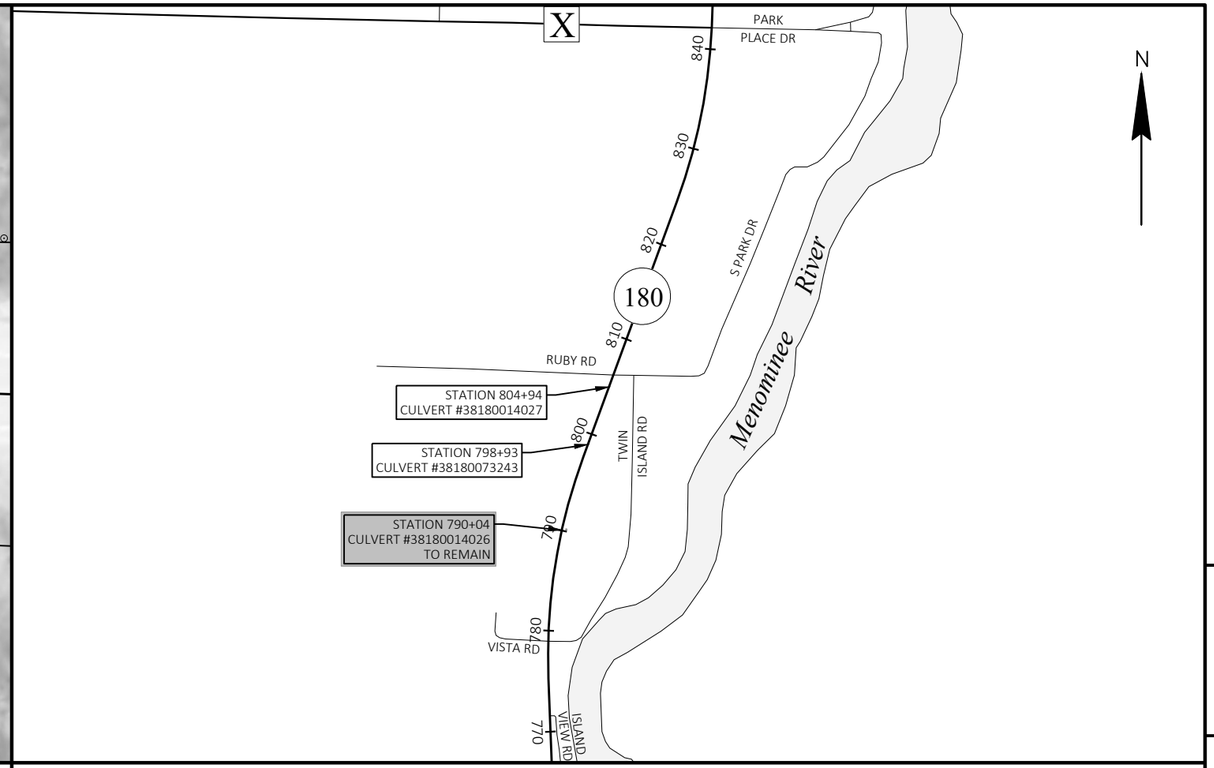


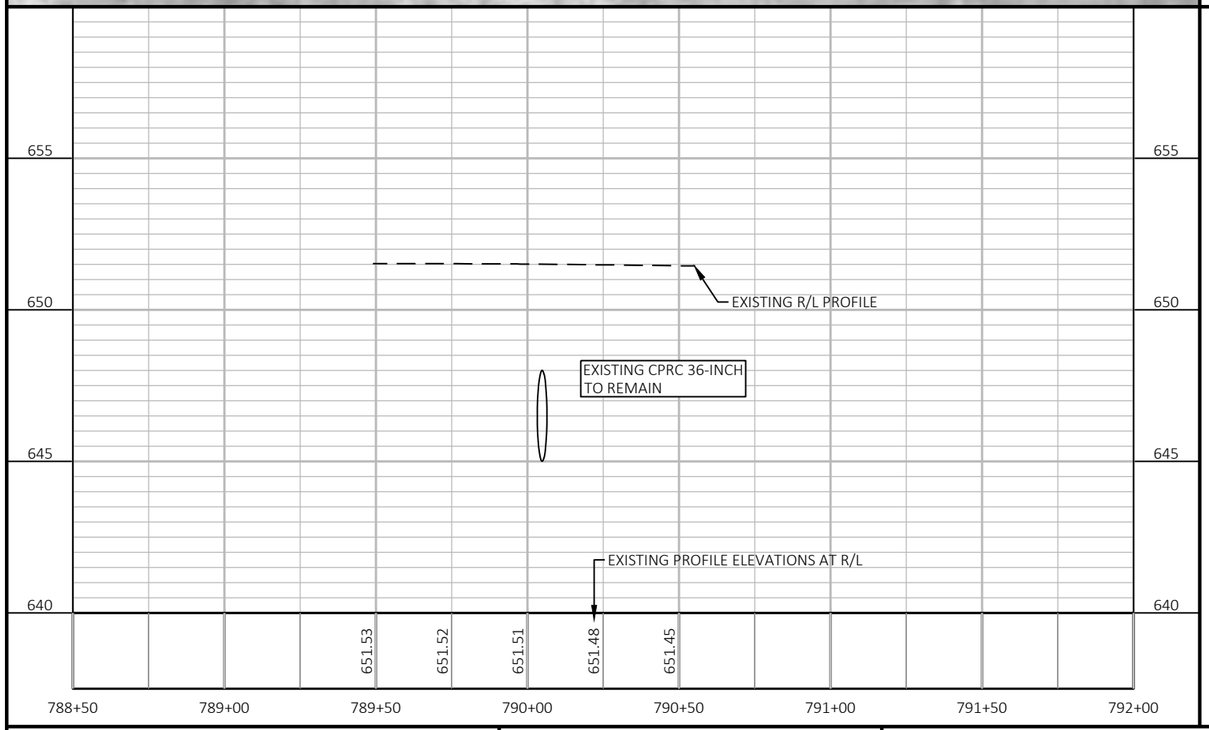
CONTROL POINT TABLE			
POINT NUMBER	Y	X	ELEVATION
909	198229.001	778794.982	641.45
910	198826.921	778909.308	641.45

BENCH MARK TABLE				
POINT NUMBER	Y	X	ELEVATION	DESCRIPTION
5239	198325.643	778834.327	641.74	60D SPIKE IN 15" TREE
5286	198645.420	778819.349	633.24	60D SPIKE IN 20" TREE

PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	PLAN AND PROFILE: C-38-121	SHEET 75	E







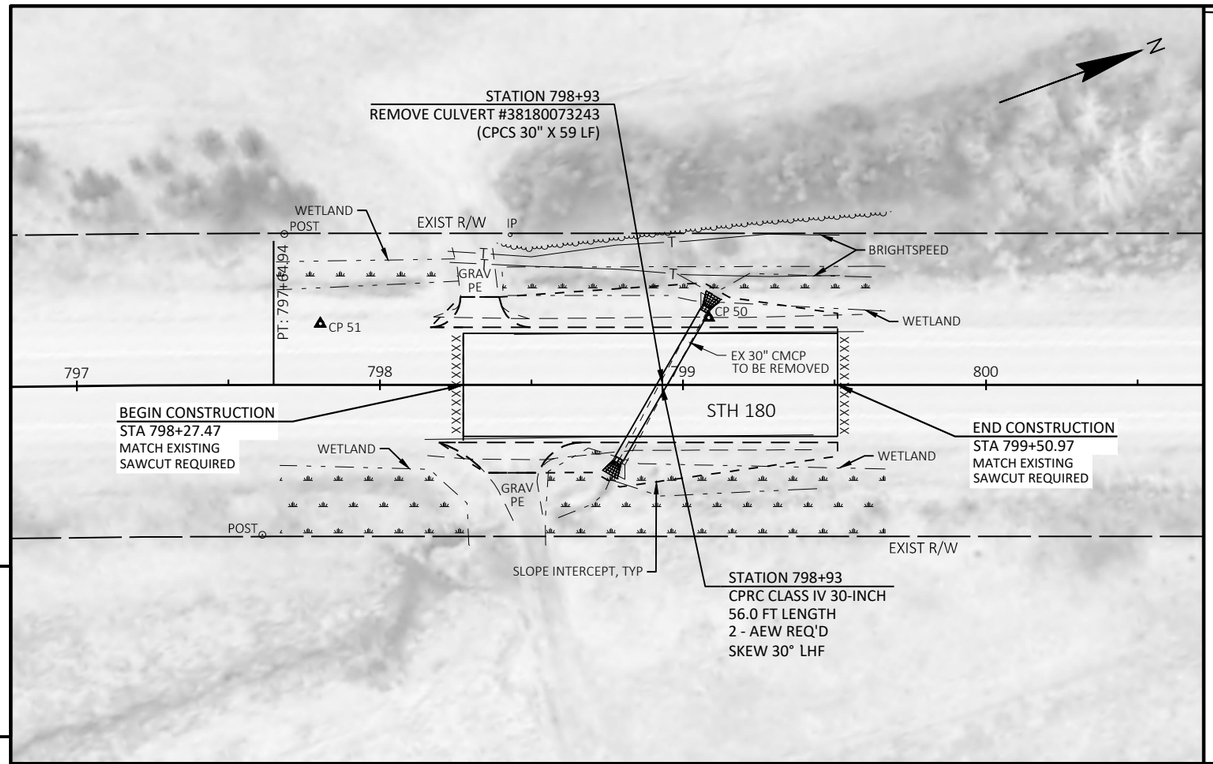
CONTROL POINT TABLE			
POINT NUMBER	Y	X	ELEVATION
52	209454.040	782585.428	649.68
53	209325.703	782556.114	650.24

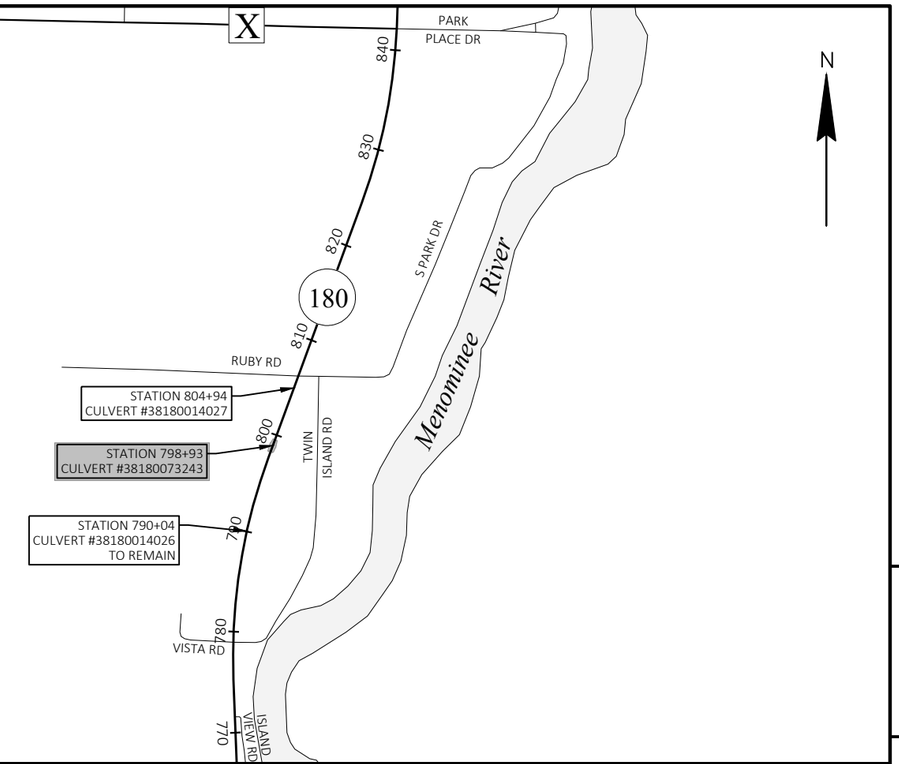
PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	PLAN AND PROFILE: CULVERT #38180014026	SHEET 76 E

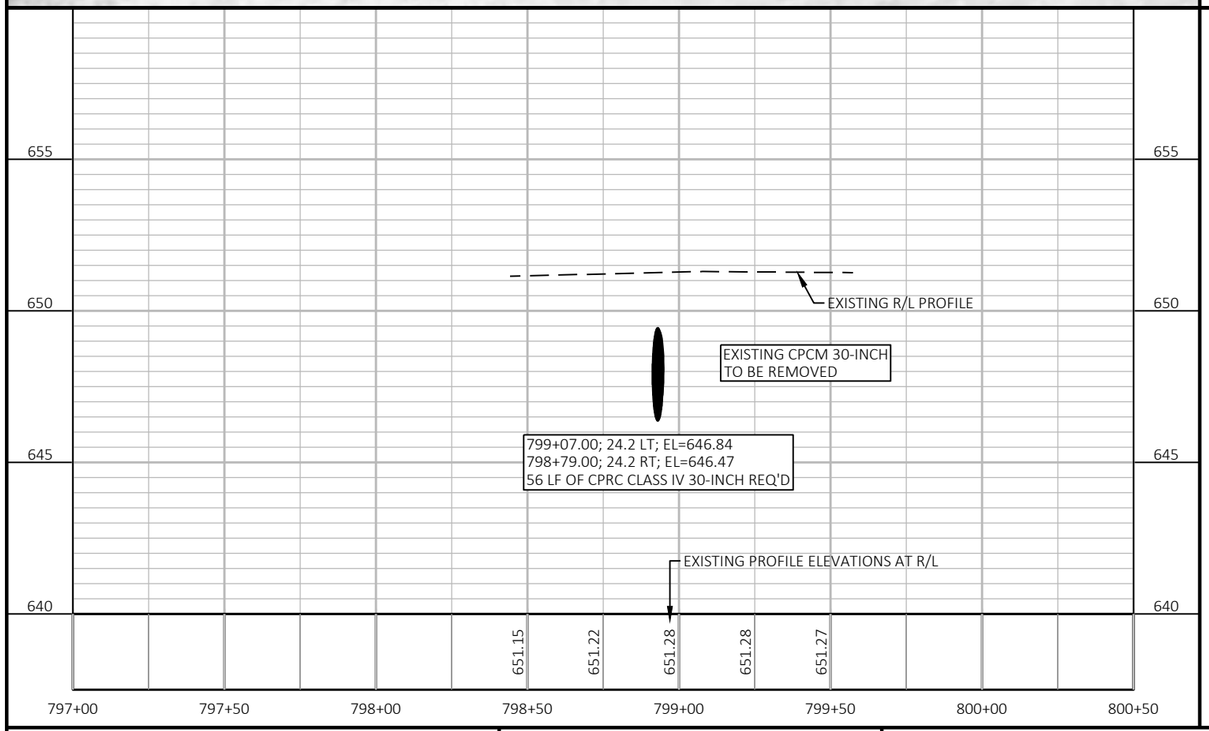
FILE NAME : S:\CURRPROJ\MARINETTE COUNTY\STH 180\CIVIL3D\96701600\SHEETSPLAN\96701671-050101-PP.DWG
LAYOUT NAME - Sheet-06b

PLOT DATE : 7/31/2025 11:27 AM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 44





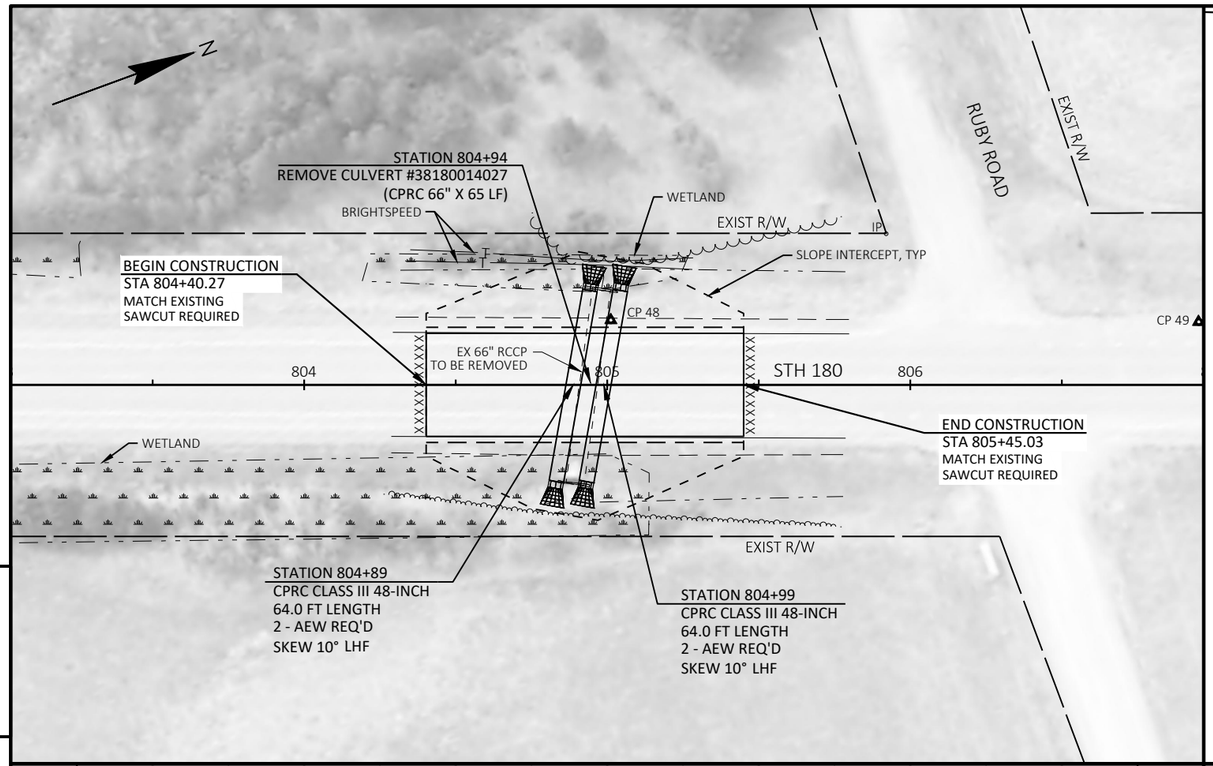


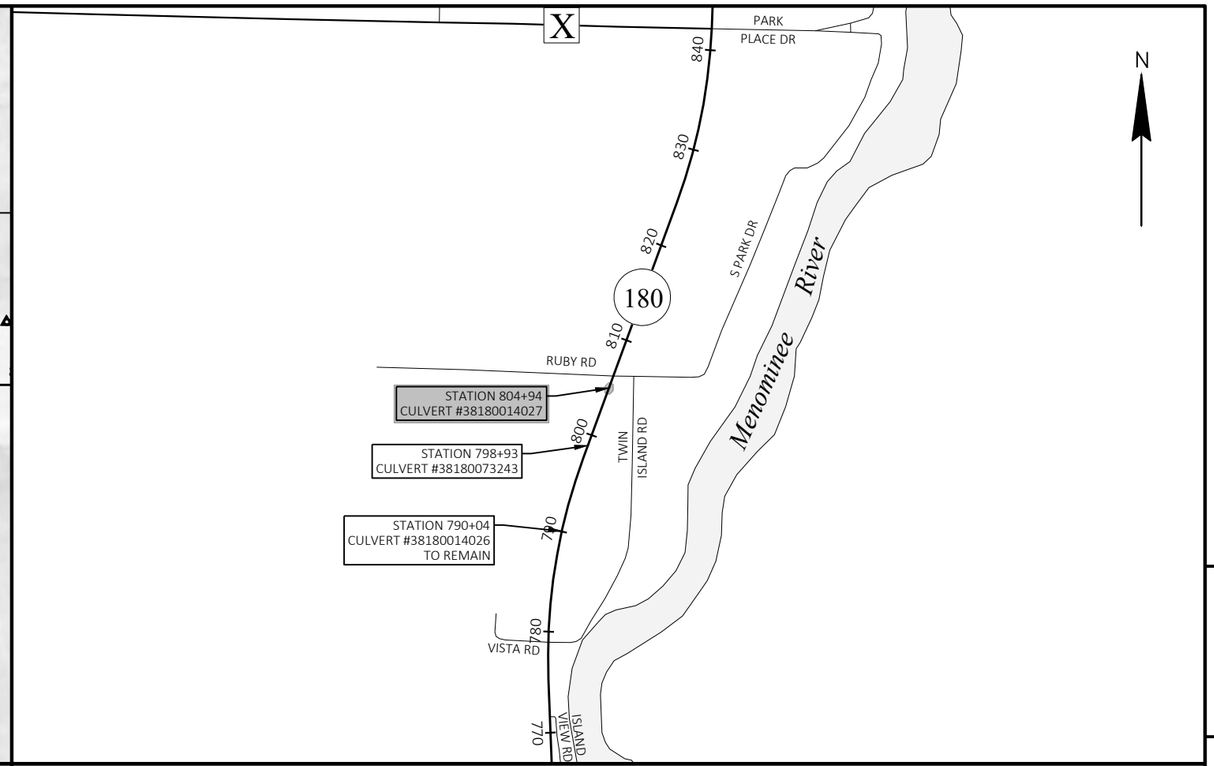
CONTROL POINT TABLE			
POINT NUMBER	Y	X	ELEVATION
50	210317.169	782803.418	650.55
51	210196.148	782761.177	650.66

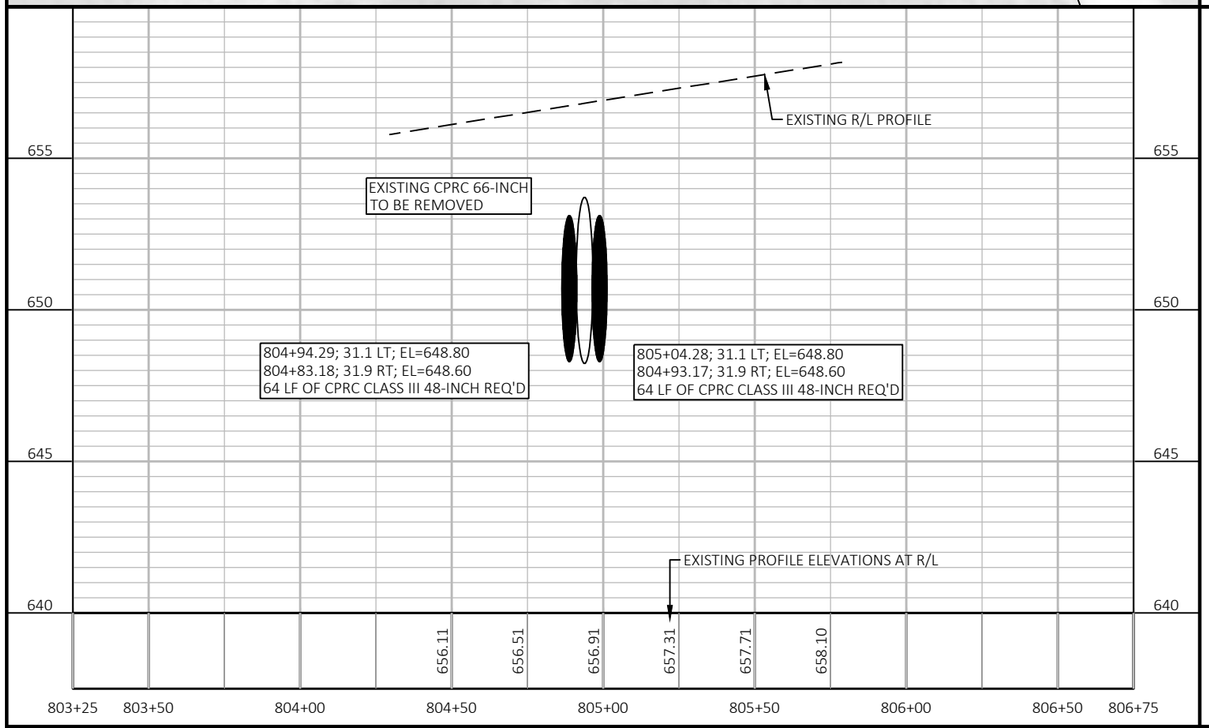
PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	PLAN AND PROFILE: CULVERT #38180073243	SHEET 77	E

FILE NAME : S:\CURRPROJ\MARINETTE COUNTY\STH 180\CIVIL3D\96701600\SHEETSPLAN\96701671-050101-PP.DWG
LAYOUT NAME - Sheet-07a

PLOT DATE : 7/31/2025 11:28 AM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:50 FT



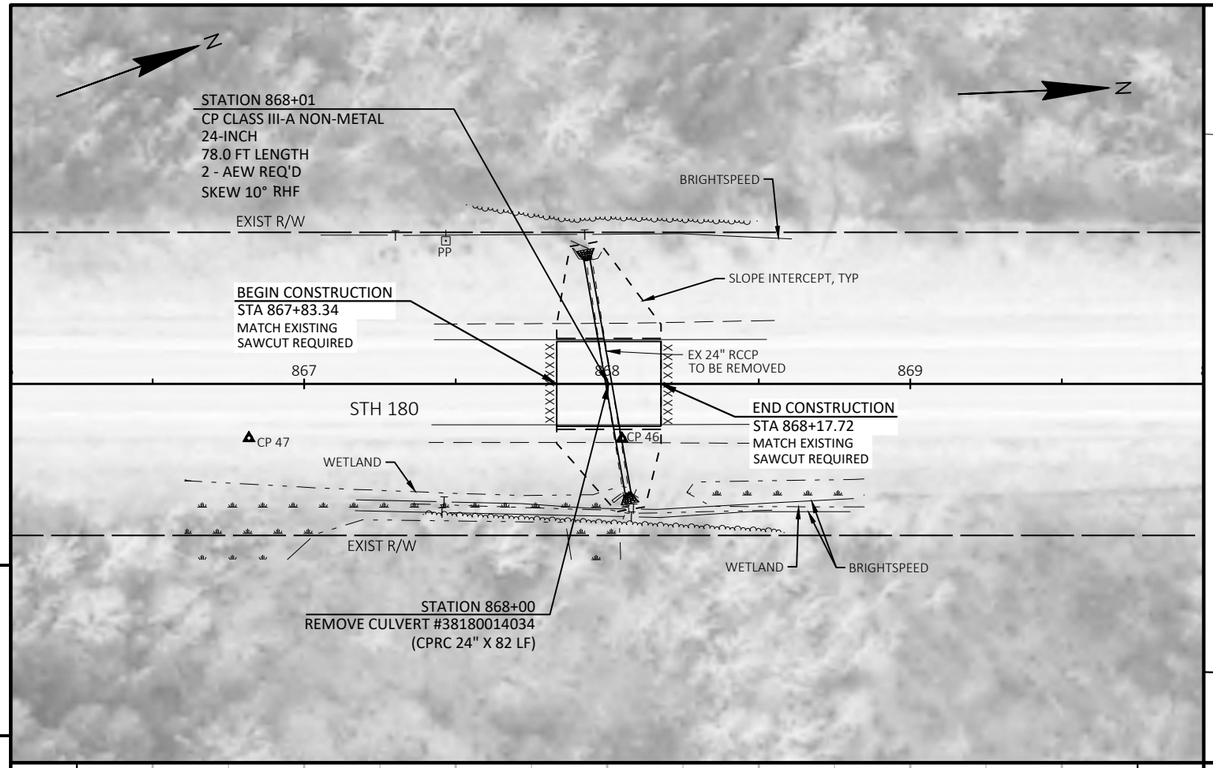


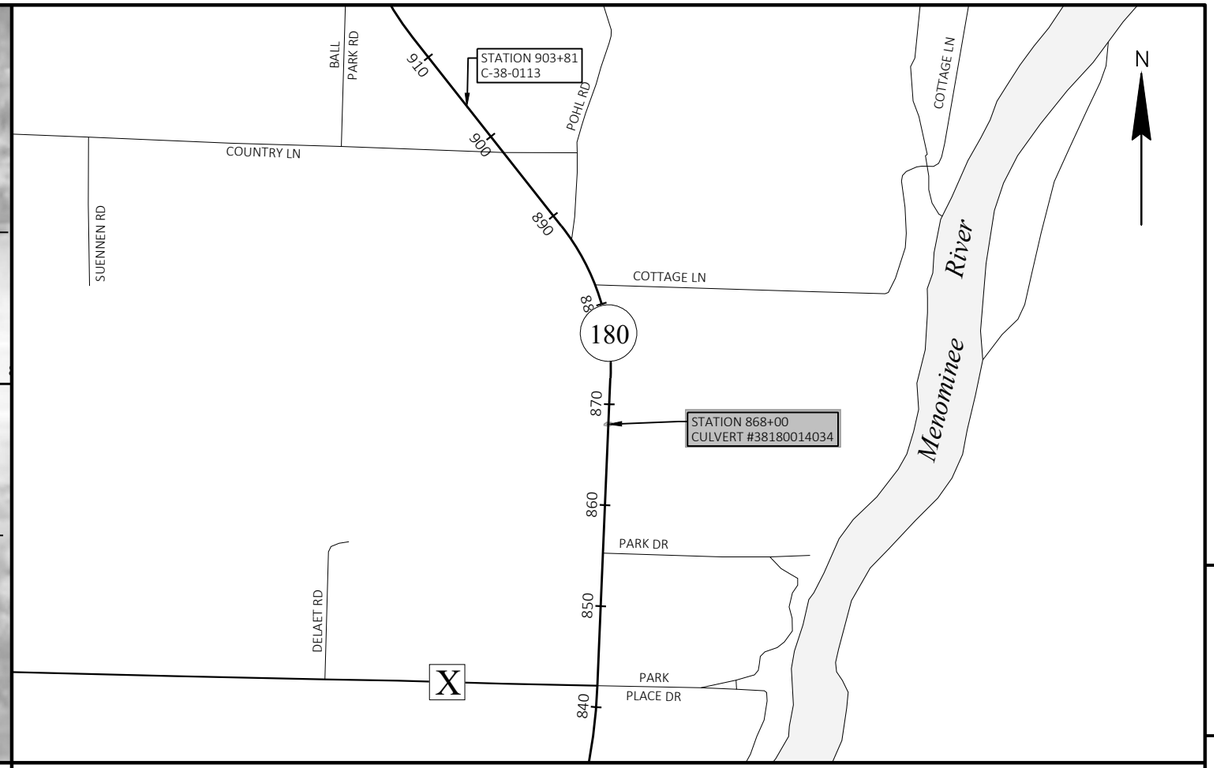


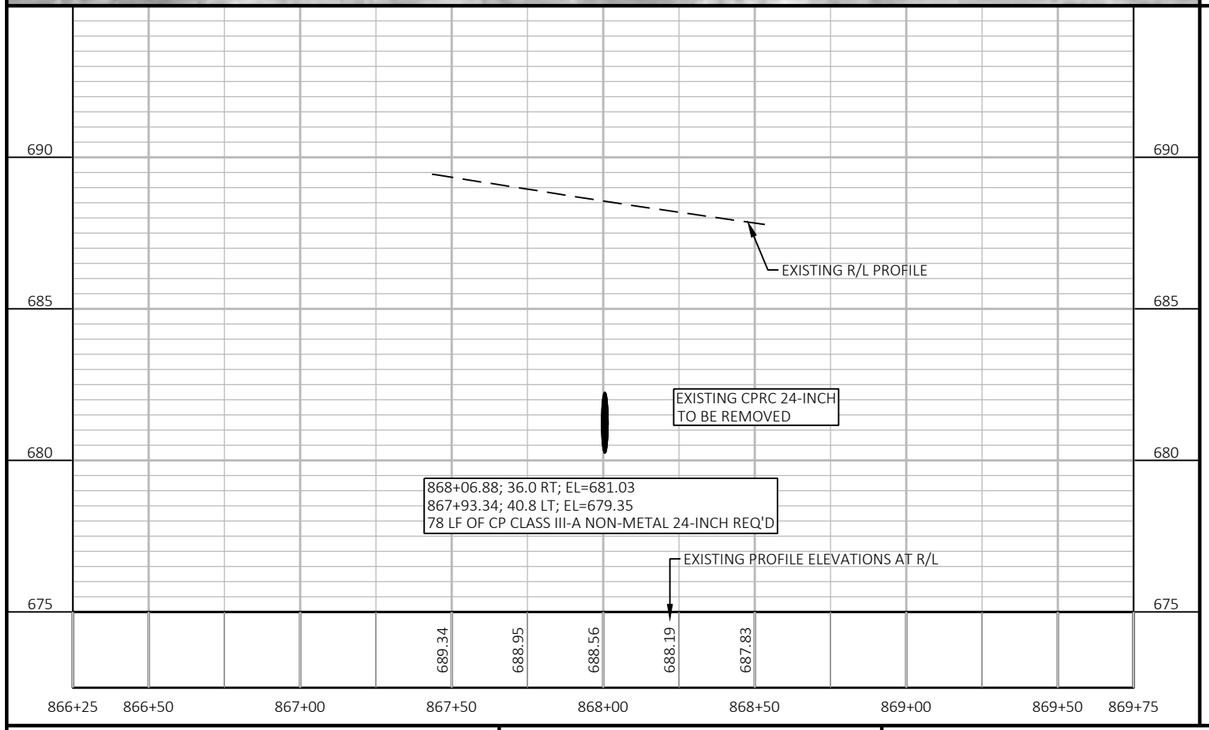
CONTROL POINT TABLE			
POINT NUMBER	Y	X	ELEVATION
48	210873.300	783008.365	655.88
49	211055.209	783075.675	658.90

PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	PLAN AND PROFILE: CULVERT #38180014027	SHEET 78	E

FILE NAME : S:\CURRPROJ\MARINETTE COUNTY\STH 180\CIVIL3D\96701600\SHEETSPLAN\96701671-050101-PP.DWG
LAYOUT NAME - Sheet-07b
PLOT DATE : 7/31/2025 11:29 AM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:50 FT

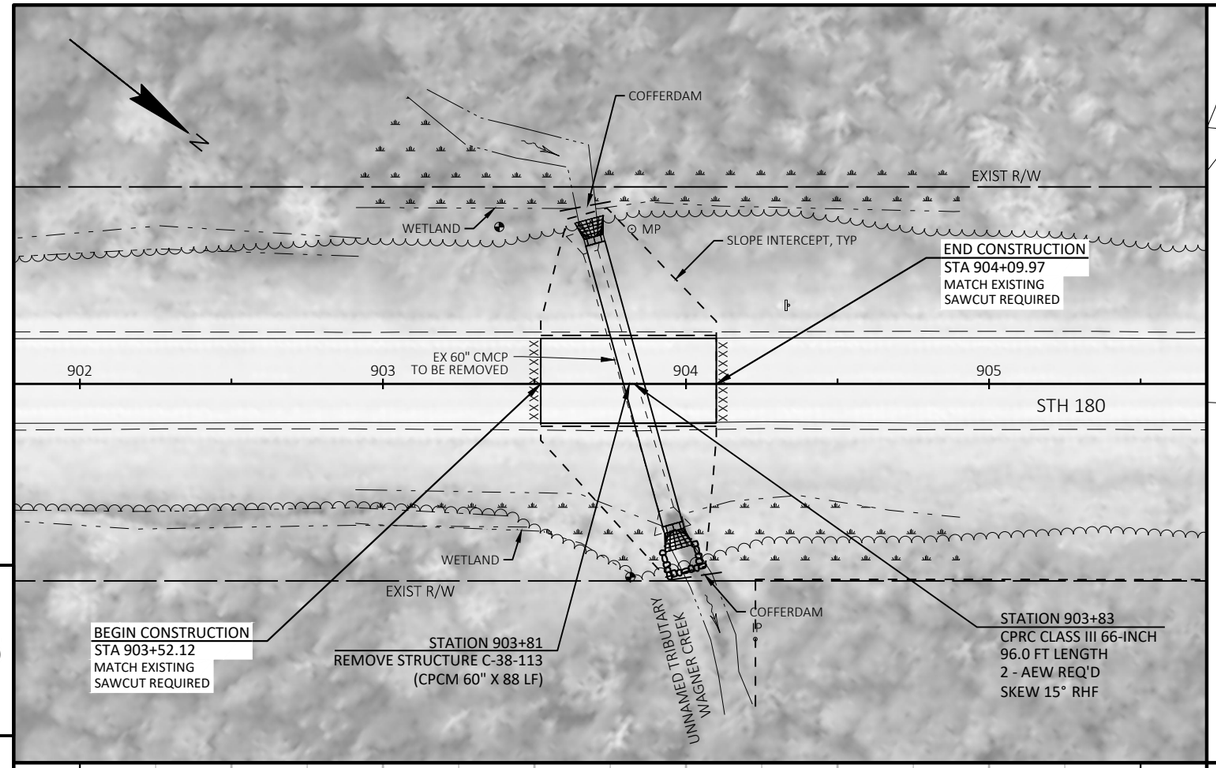


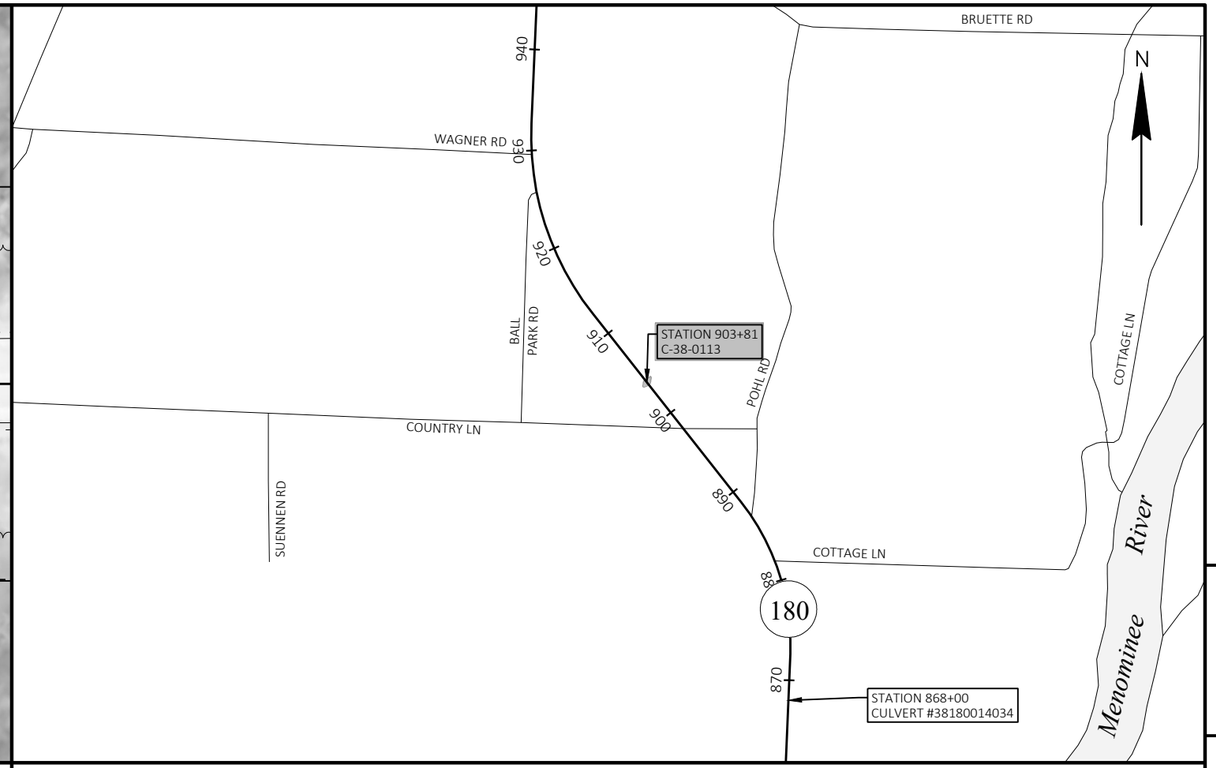


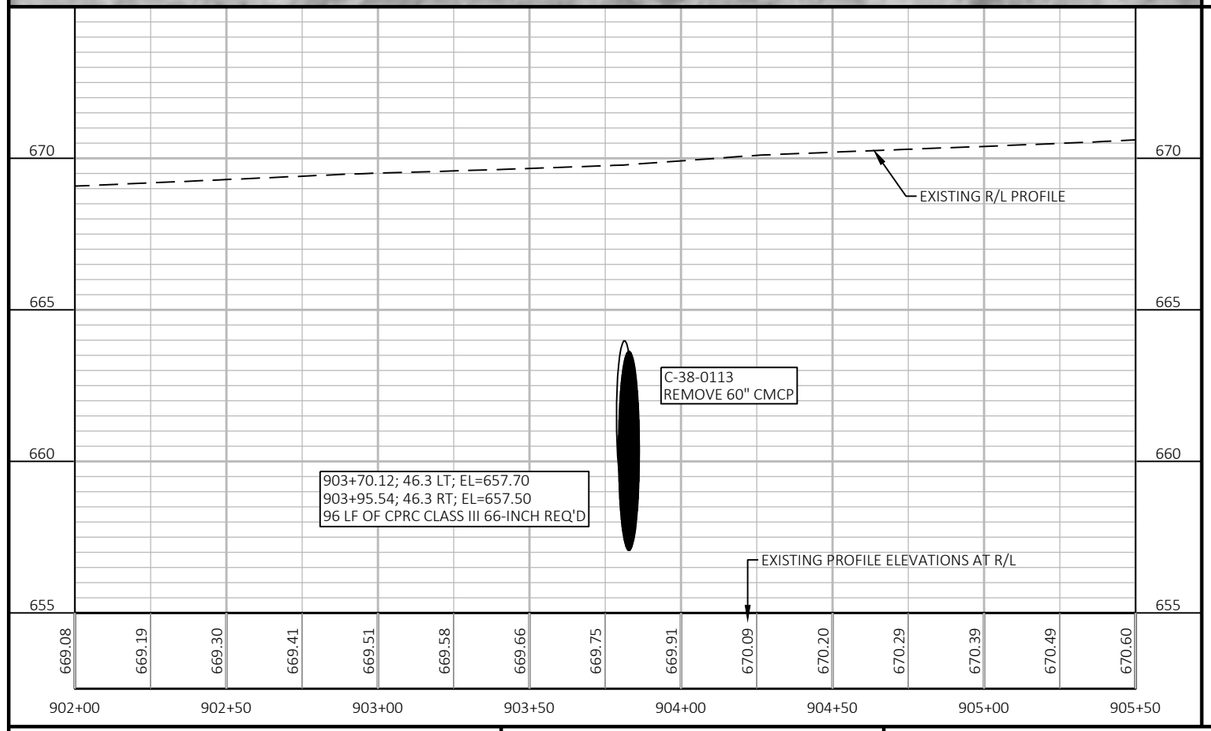


CONTROL POINT TABLE			
POINT NUMBER	Y	X	ELEVATION
46	217006.354	784171.128	687.85
47	216883.346	784165.751	689.58

PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	PLAN AND PROFILE: CULVERT #38180014034	SHEET 79	E





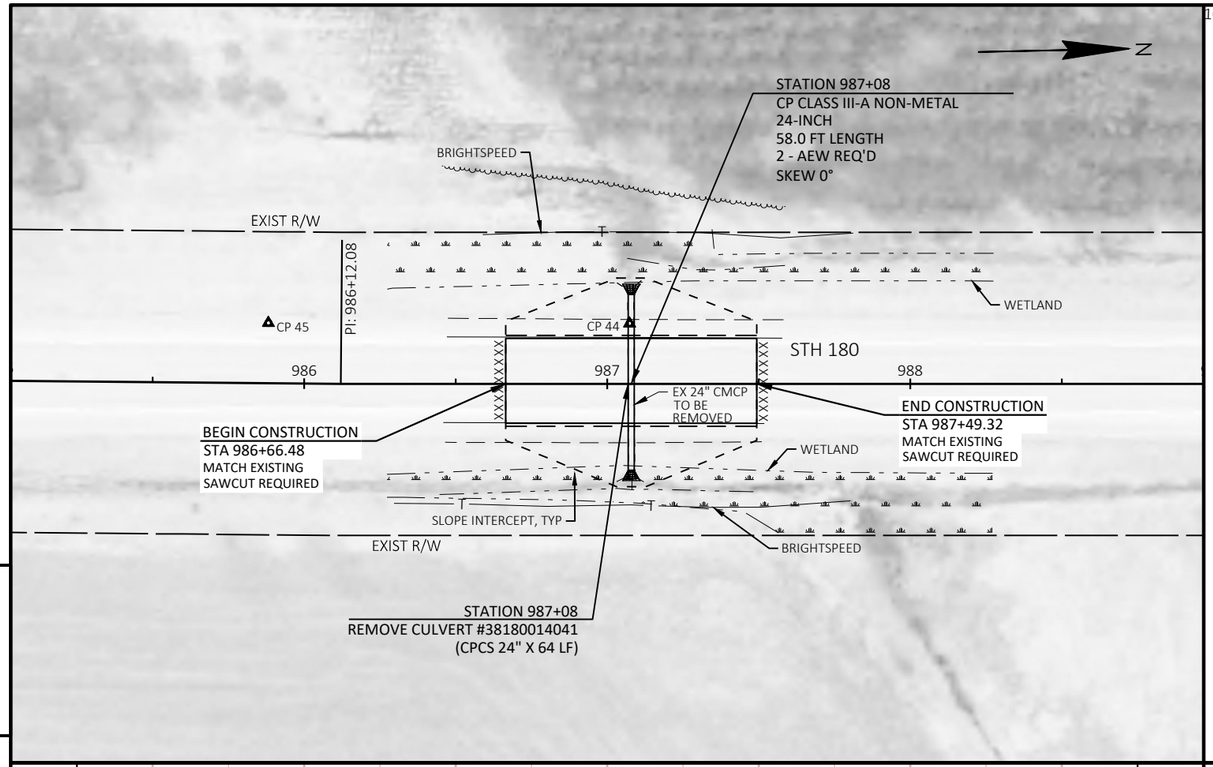


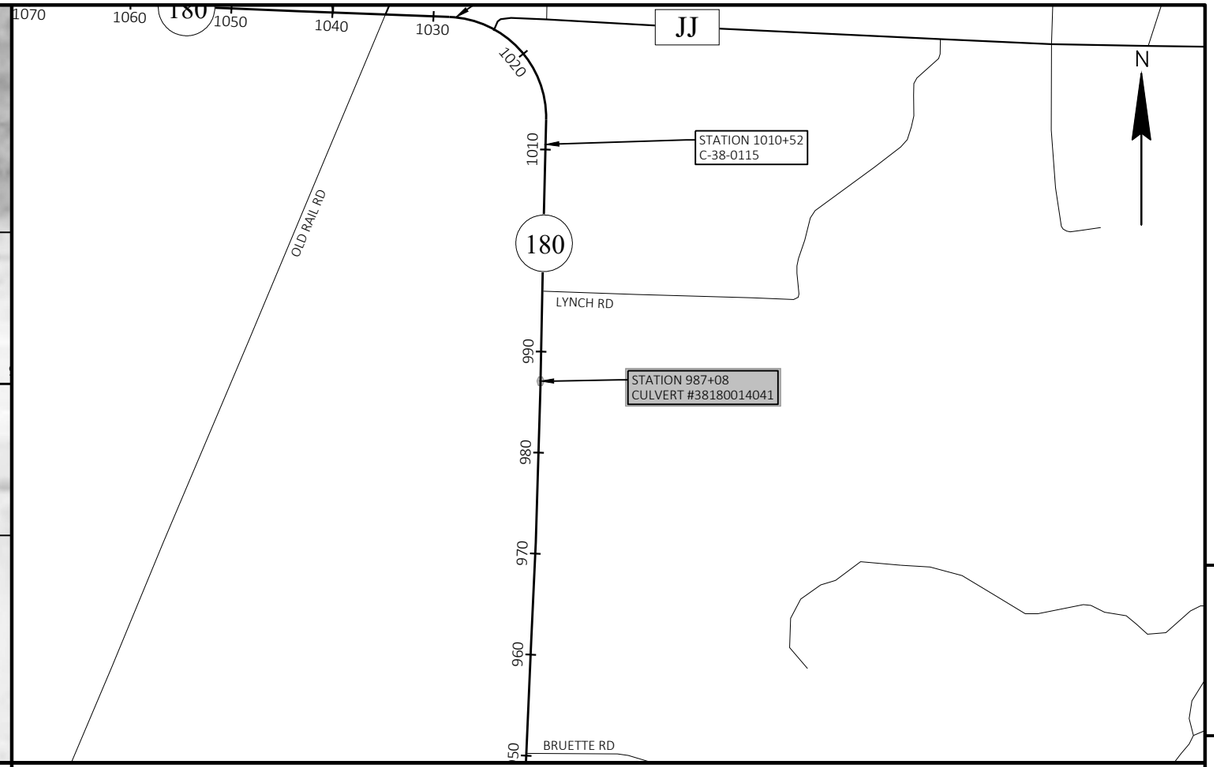
CONTROL POINT TABLE			
POINT NUMBER	Y	X	ELEVATION
911	219920.944	782961.141	666.95
912	220367.741	782550.563	669.62

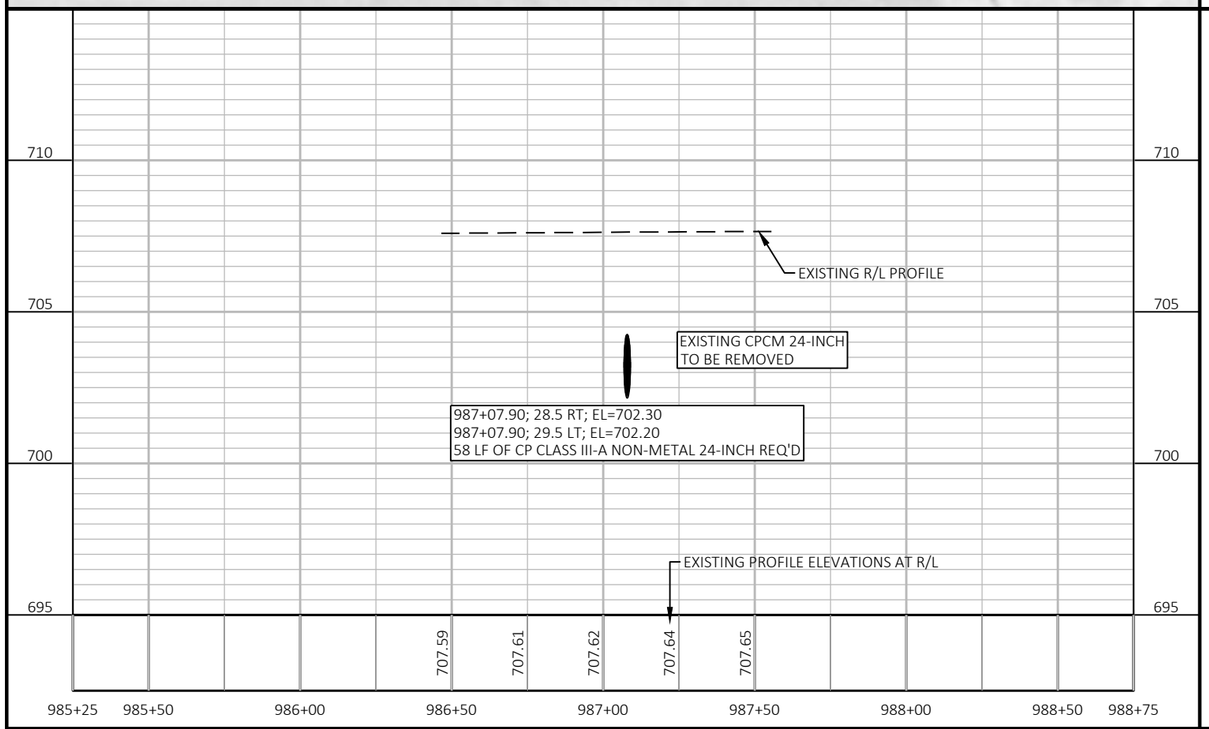
BENCH MARK TABLE				
POINT NUMBER	Y	X	ELEVATION	DESCRIPTION
4609	220083.407	782738.542	662.38	60D SPIKE IN 24" TREE
4641	220188.857	782802.444	661.73	60D SPIKE IN 15" TREE

PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	PLAN AND PROFILE: C-38-113	SHEET 80	E

FILE NAME : S:\CURRPROJ\MARINETTE COUNTY\STH 180\CIVIL3D\96701600\SHEETSPLAN\96701671-050101-PP.DWG
LAYOUT NAME - Sheet-08b
PLOT DATE : 7/31/2025 11:30 AM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:50 FT







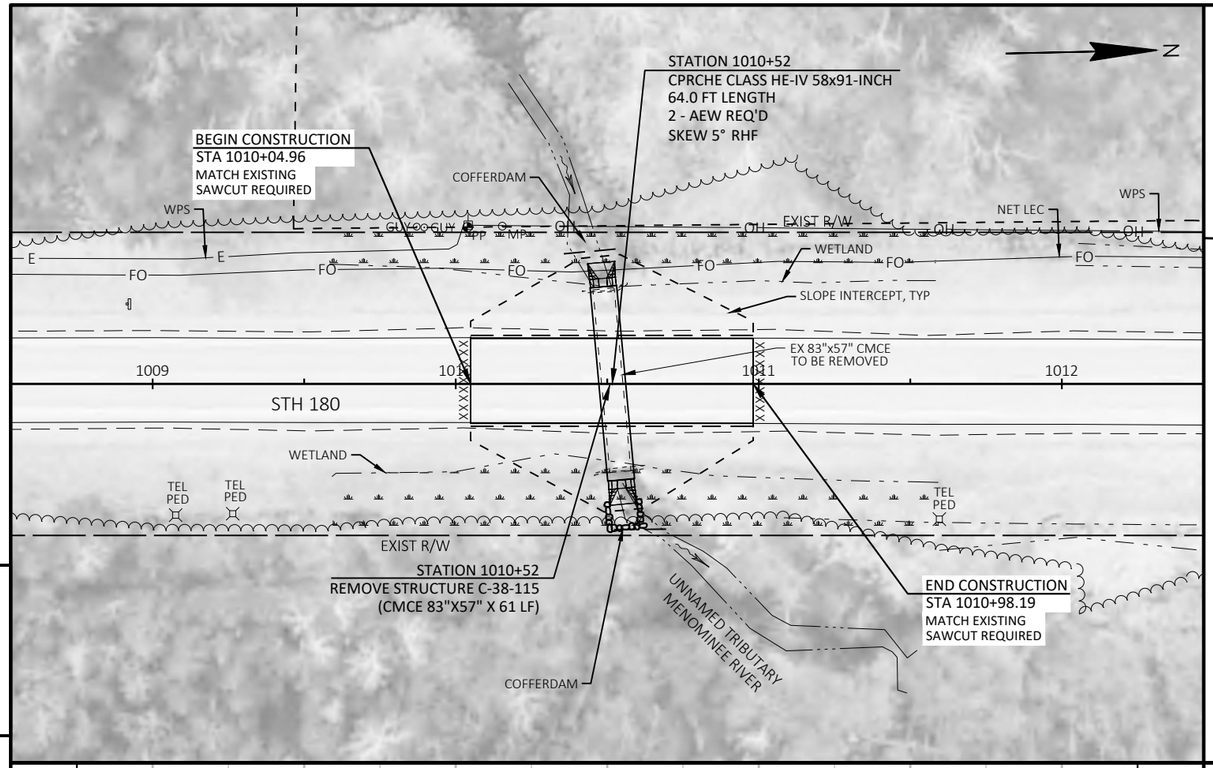
CONTROL POINT TABLE			
POINT NUMBER	Y	X	ELEVATION
44	228147.556	781807.704	707.04
45	228028.395	781805.083	706.83

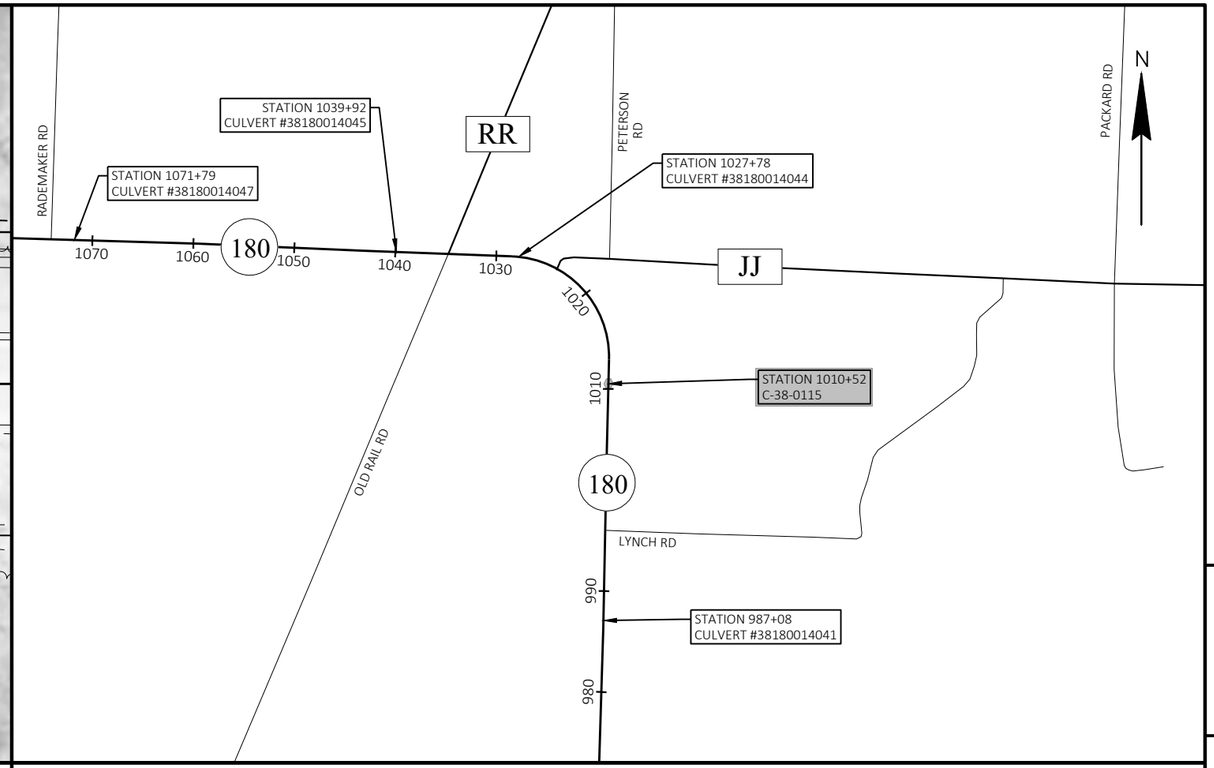
PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	PLAN AND PROFILE: CULVERT #38180014041	SHEET 81	E

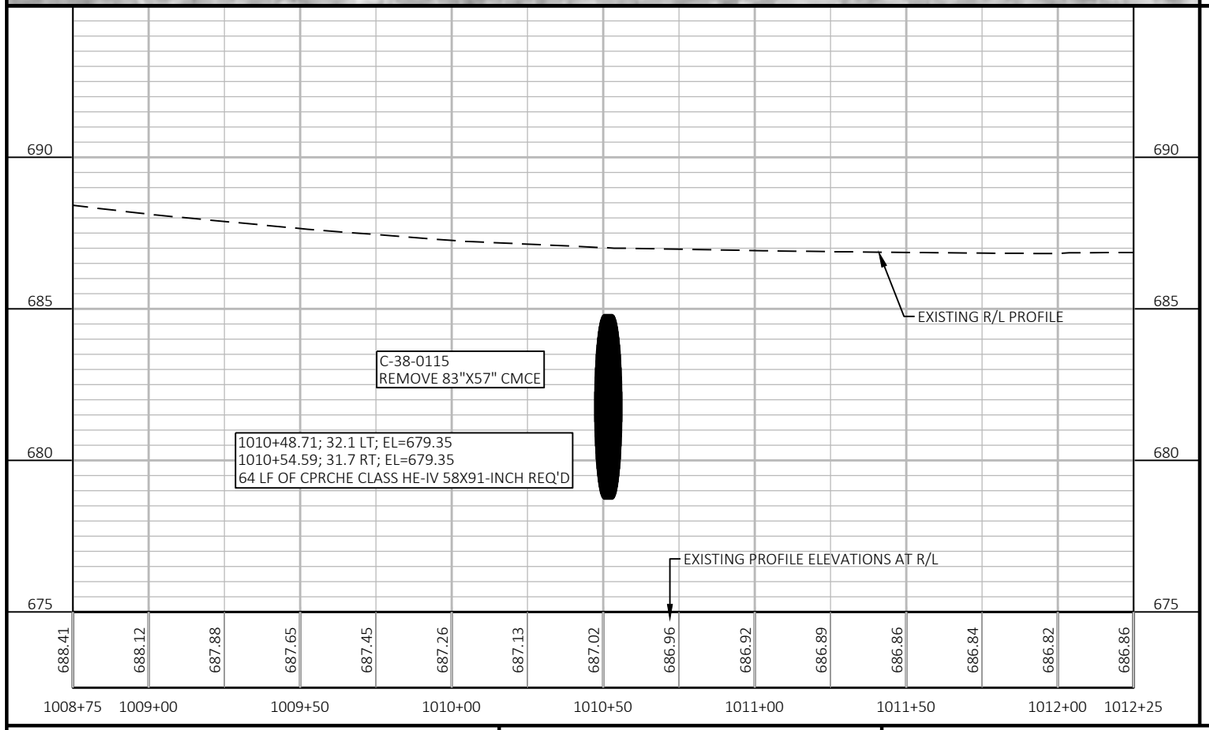
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LAYOUT NAME - Sheet-09a

PLOT DATE : 7/31/2025 11:31 AM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 44



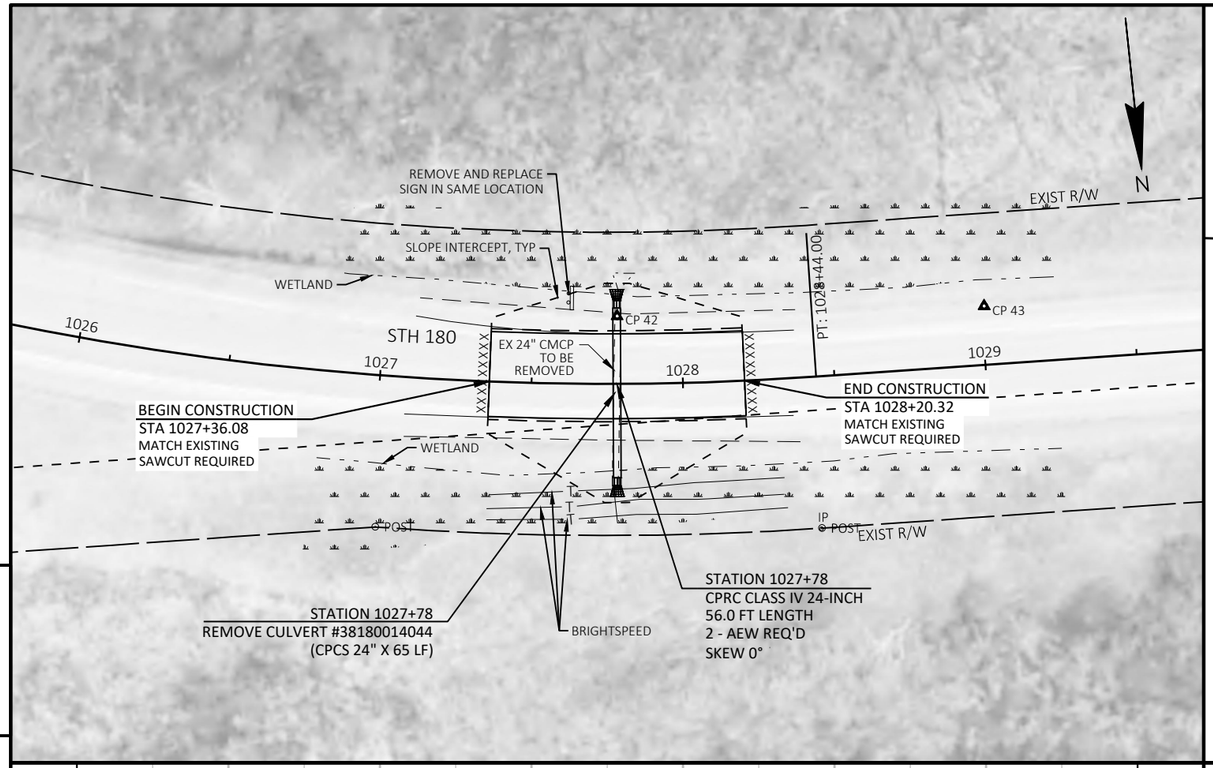


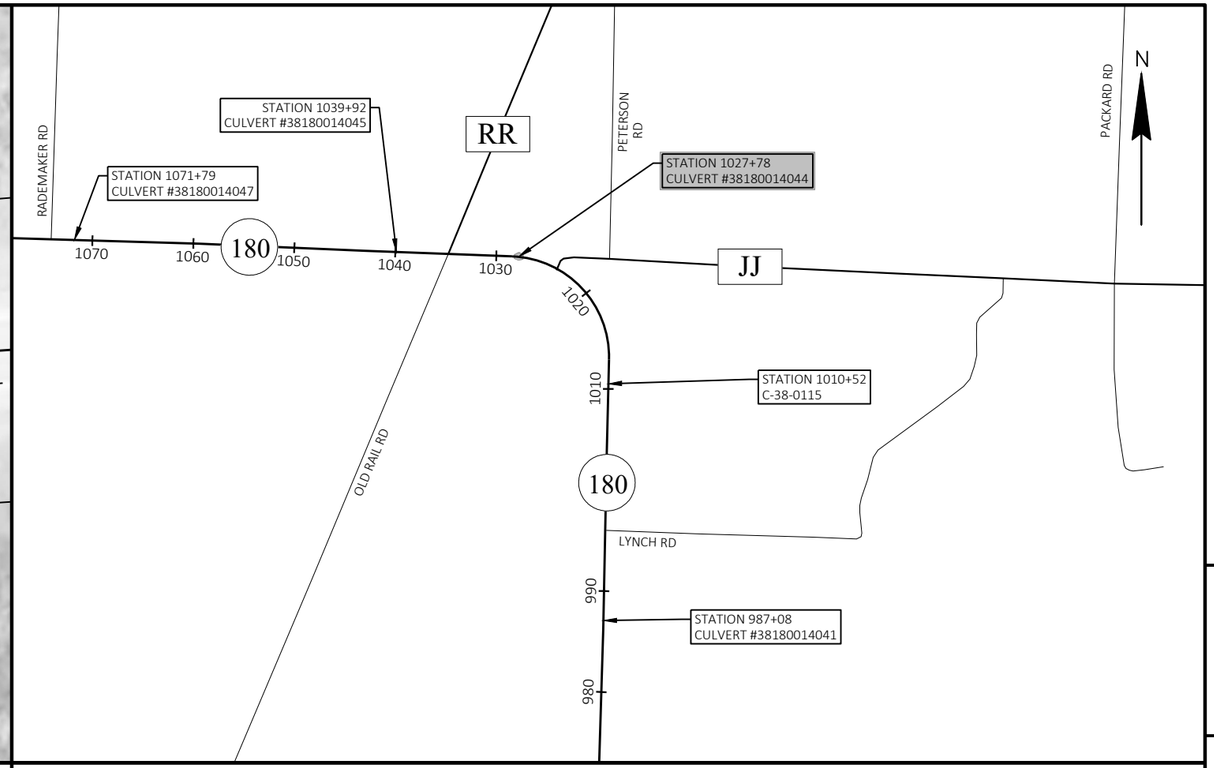


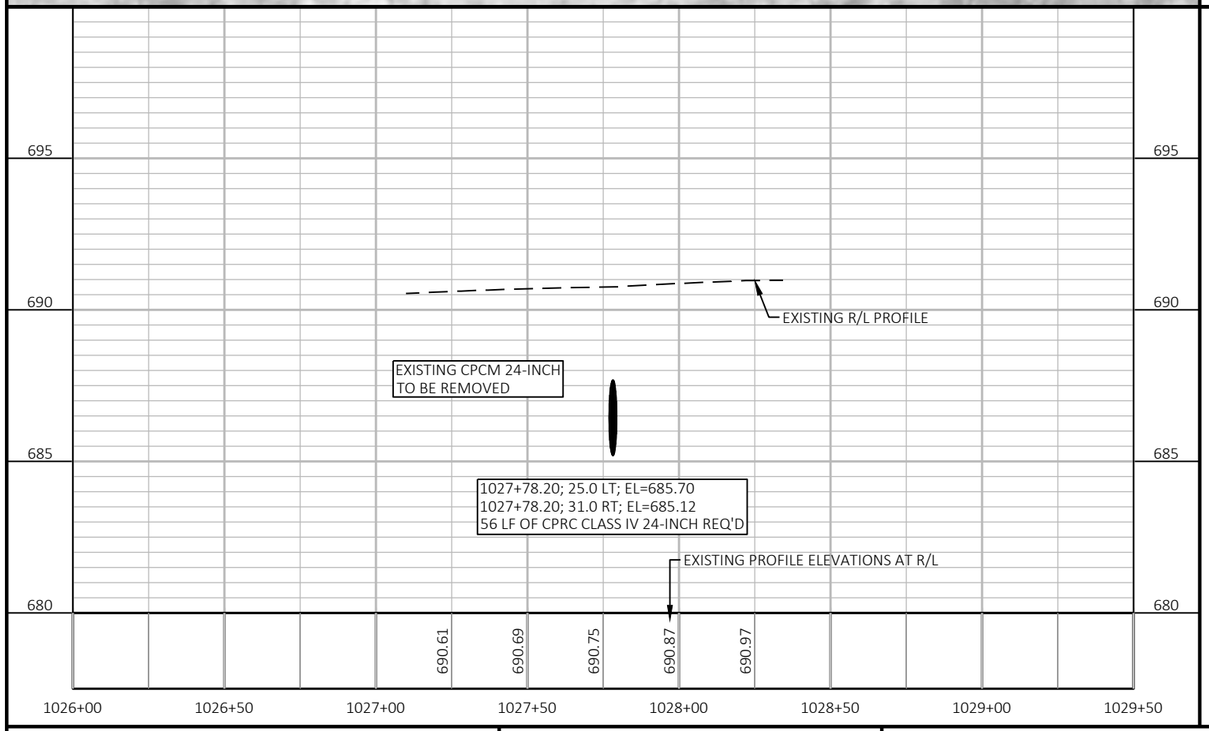
CONTROL POINT TABLE			
POINT NUMBER	Y	X	ELEVATION
913	230191.487	781846.477	688.60
914	230790.014	781903.779	686.49

BENCH MARK TABLE				
POINT NUMBER	Y	X	ELEVATION	DESCRIPTION
2644	230736.287	781833.062	682.60	60D SPIKE IN POWER POLE
2948	230444.315	781824.666	681.77	60D SPIKE IN POWER POLE

PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	PLAN AND PROFILE: C-38-115	SHEET 82	E

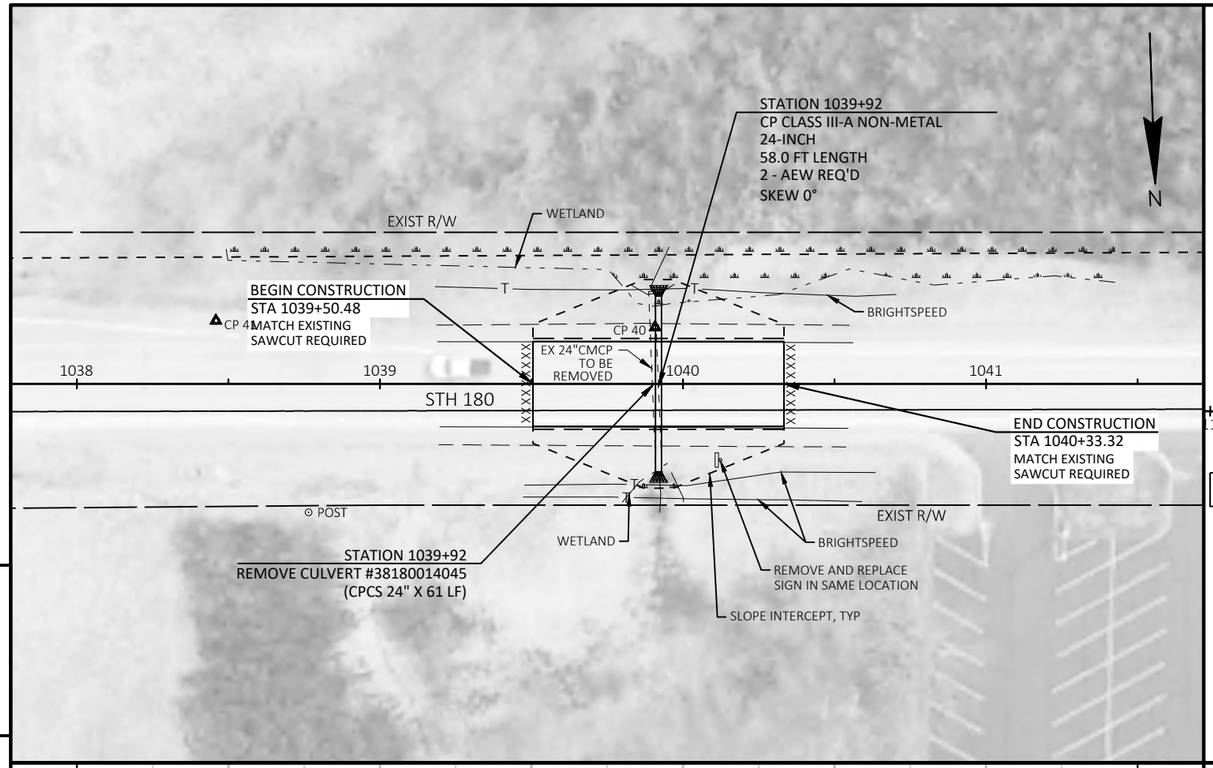


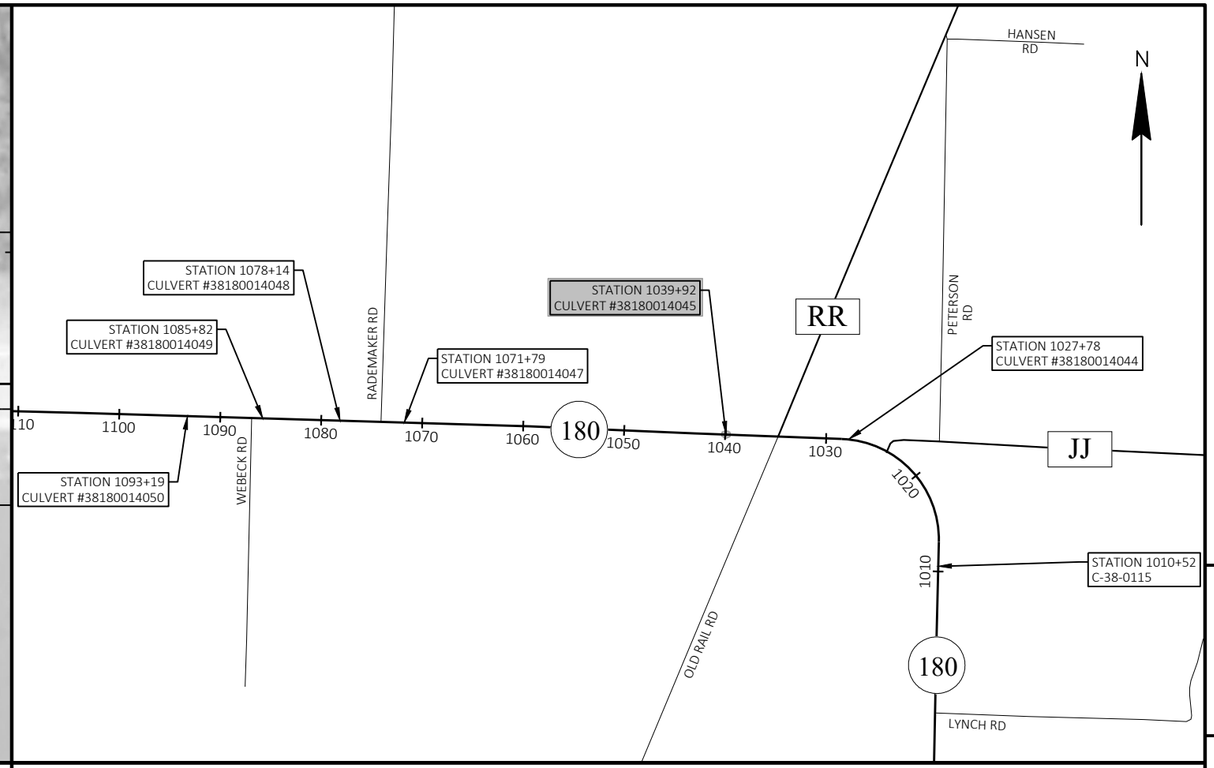


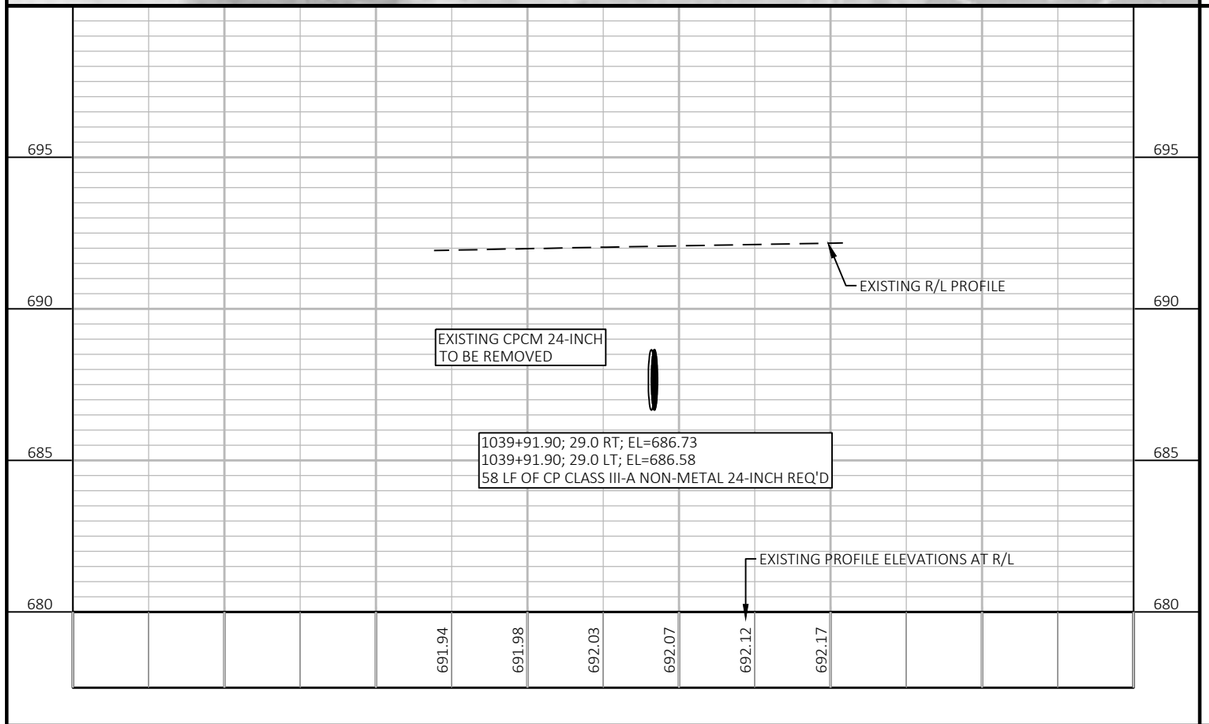


CONTROL POINT TABLE			
POINT NUMBER	Y	X	ELEVATION
42	231724.128	780986.971	688.91
43	231733.794	780866.203	690.28

PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	PLAN AND PROFILE: CULVERT #38180014044	SHEET 83 E



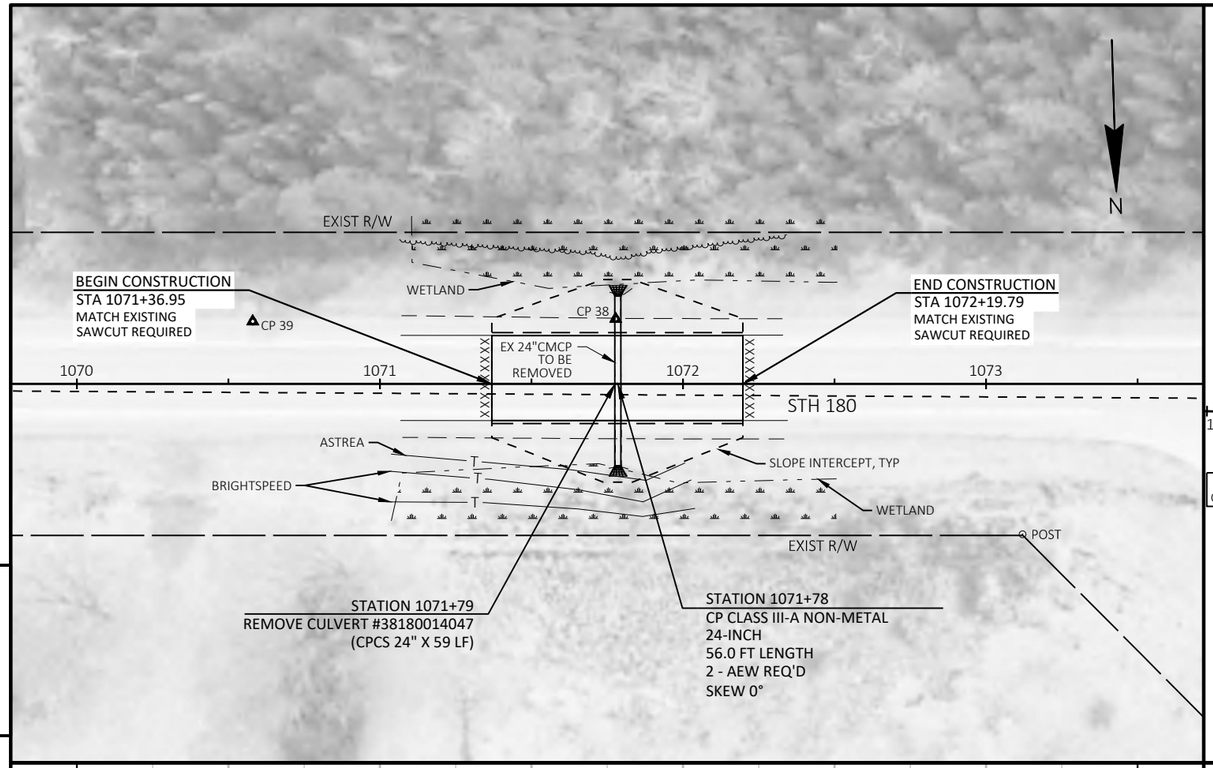


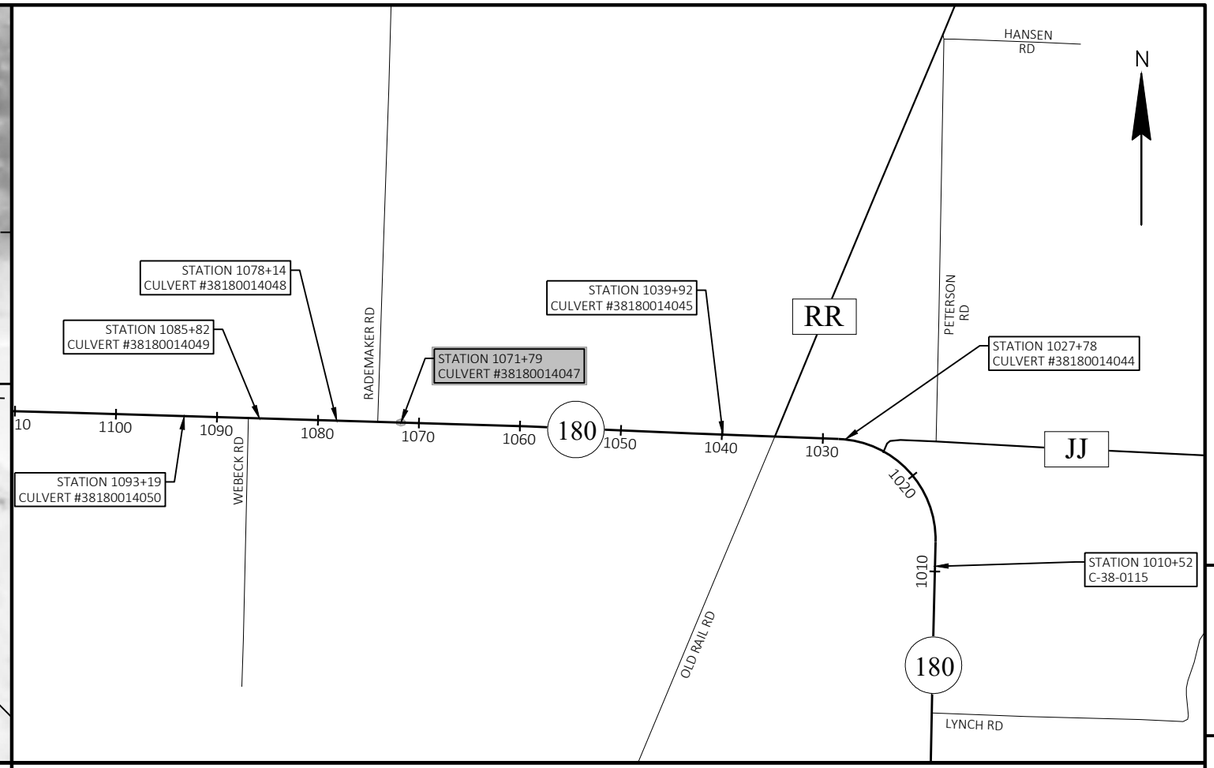


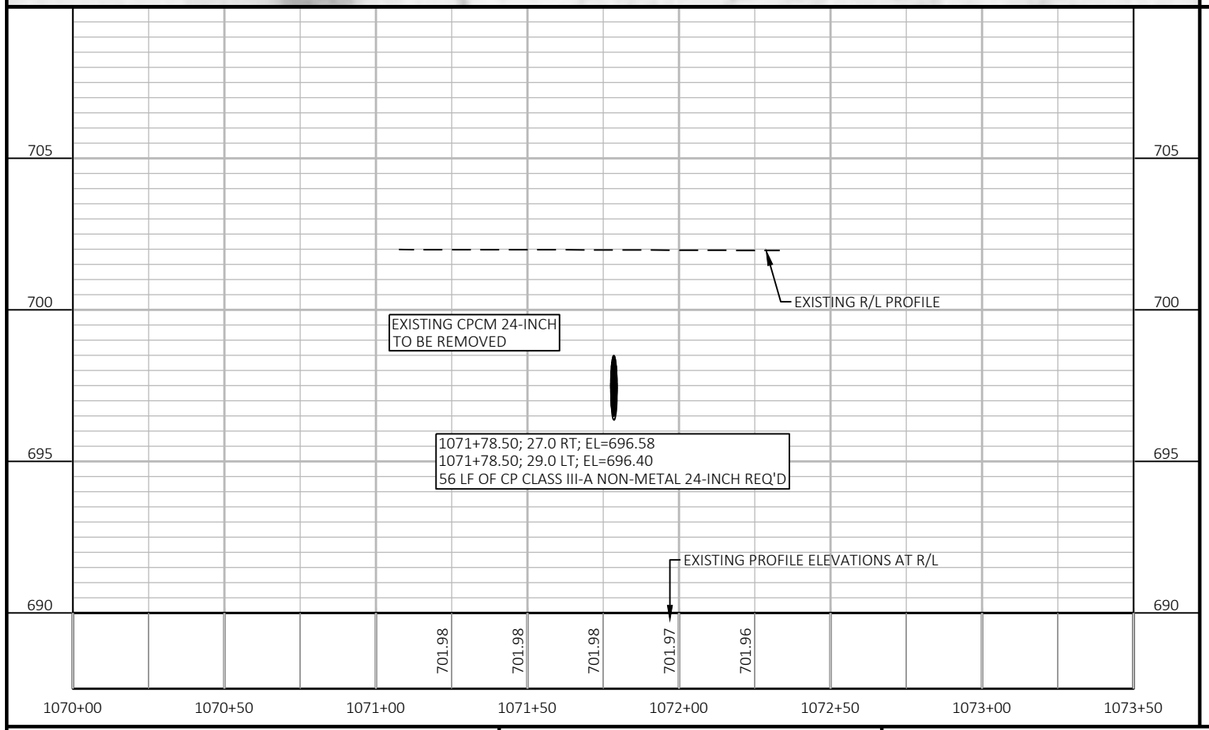
CONTROL POINT TABLE			
POINT NUMBER	Y	X	ELEVATION
40	231775.505	779777.084	691.10
41	231767.913	779921.814	691.14

PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	PLAN AND PROFILE: CULVERT #38180014045	SHEET 84	E

FILE NAME : S:\CURRPROJ\MARINETTE COUNTY\STH 180\CIVIL3D\96701600\SHEETSPLAN\96701671-050101-PP.DWG
LAYOUT NAME - Sheet-10b
PLOT DATE : 9/10/2025 4:42 PM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:50 FT

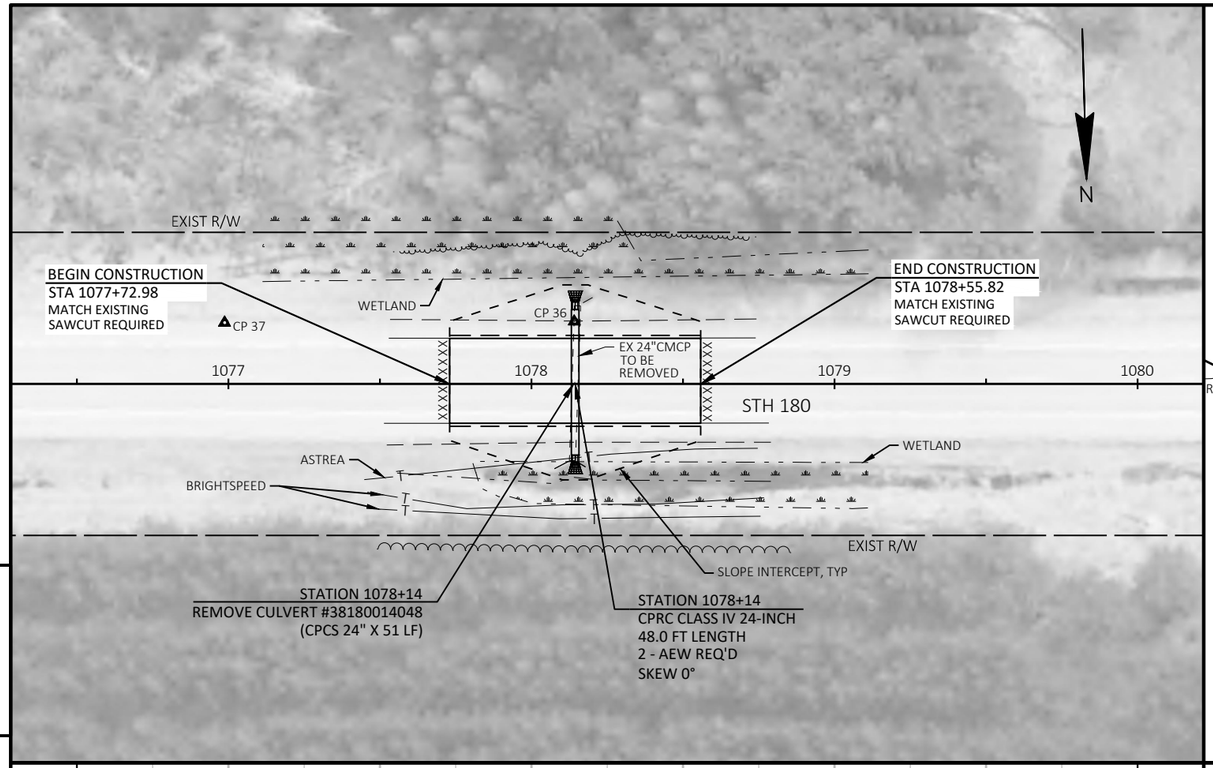


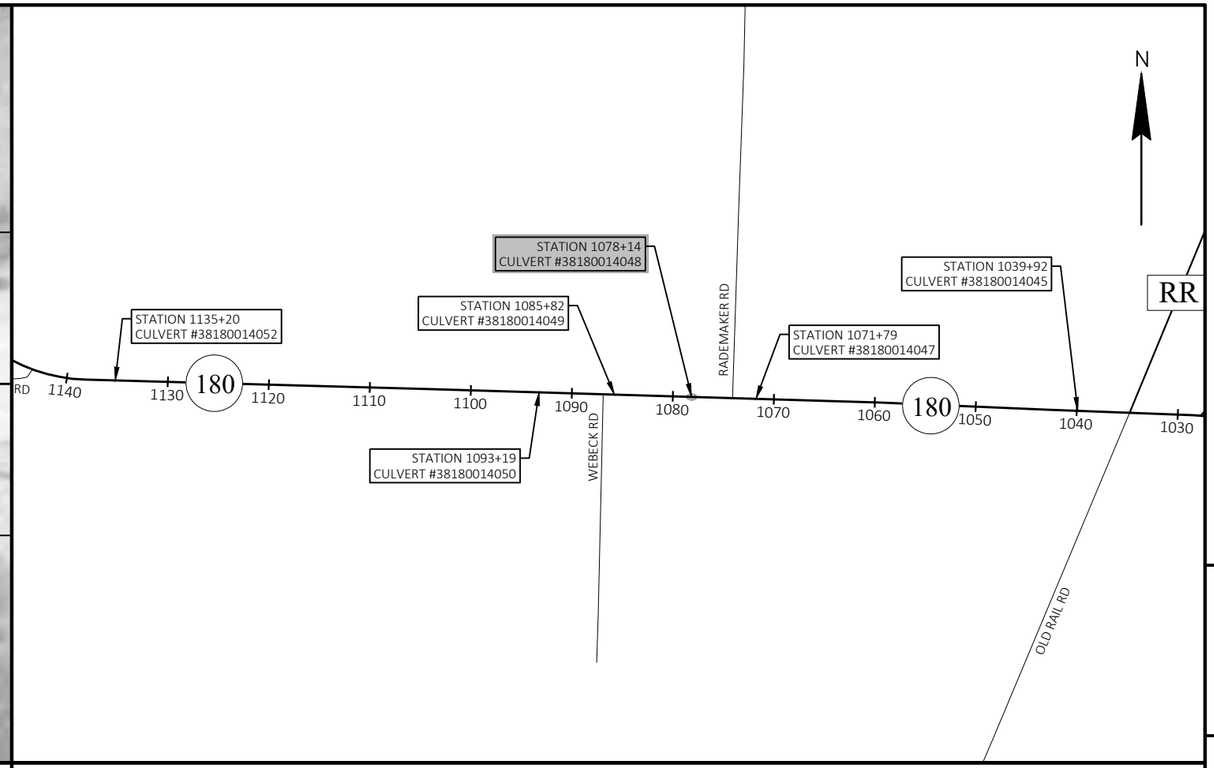


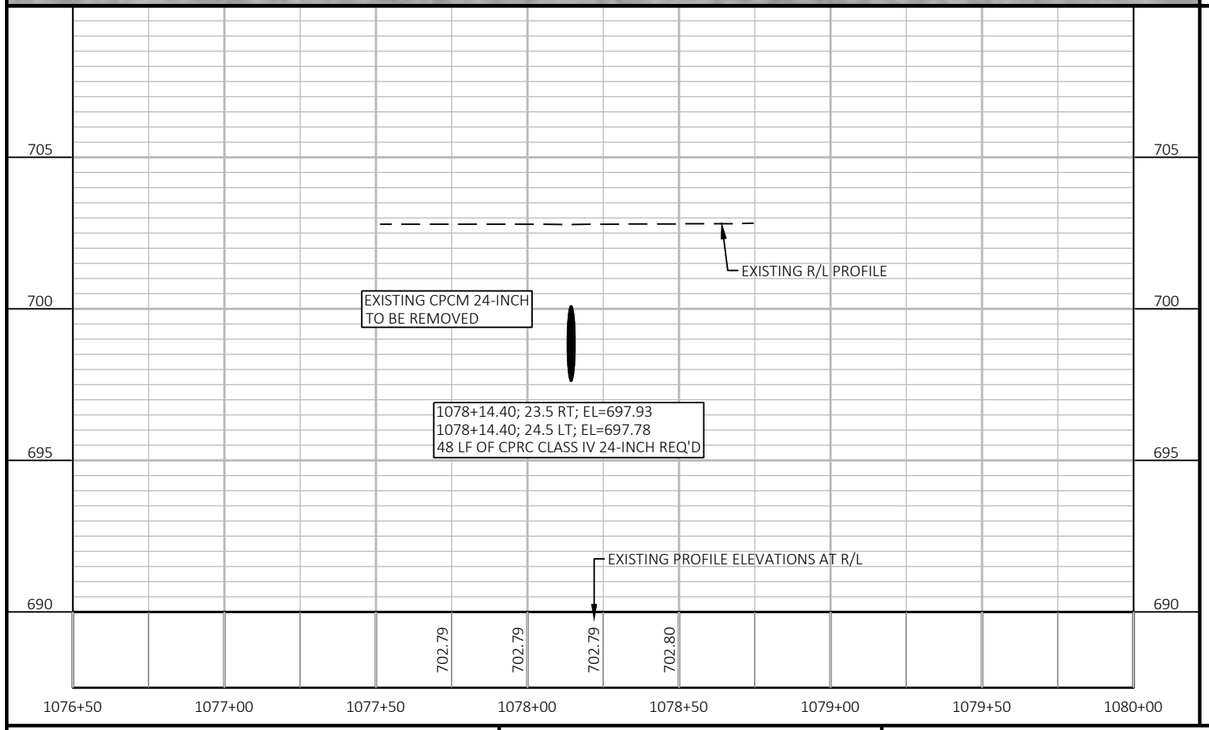


CONTROL POINT TABLE			
POINT NUMBER	Y	X	ELEVATION
38	231891.307	776592.439	700.78
39	231888.603	776712.164	701.03

PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	PLAN AND PROFILE: CULVERT #38180014047	SHEET 85 E



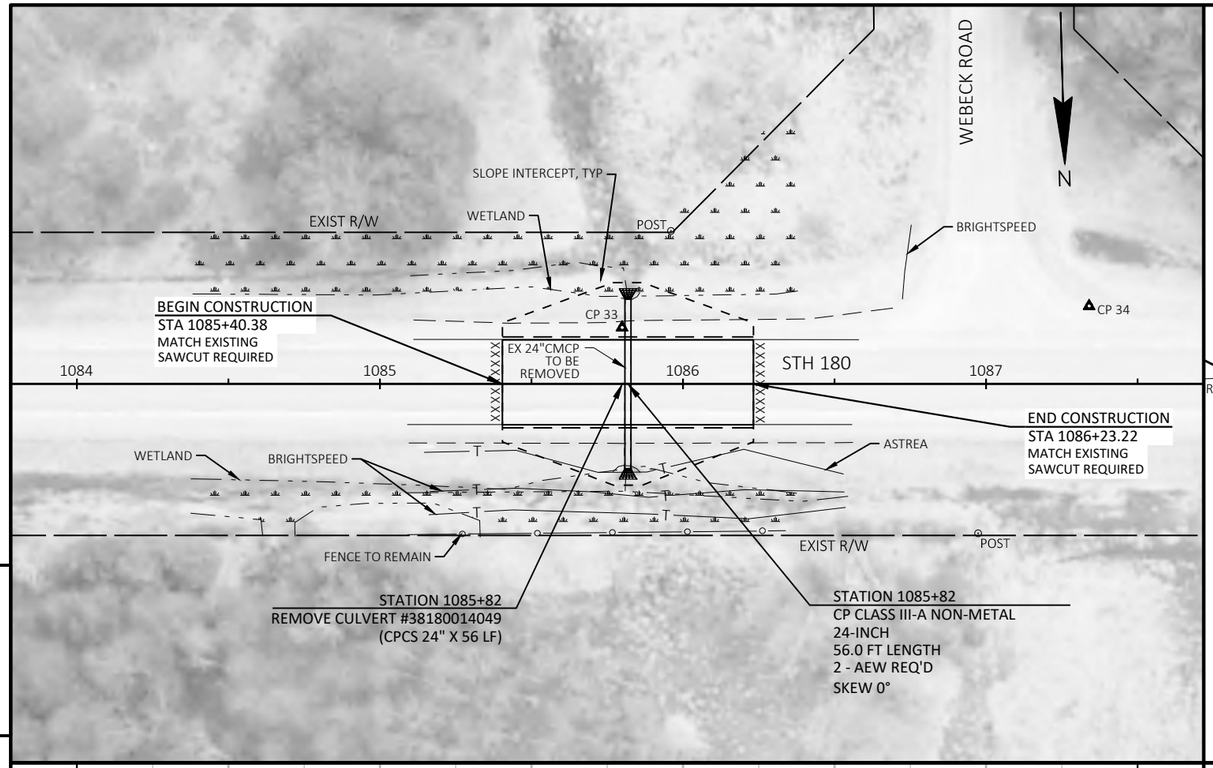


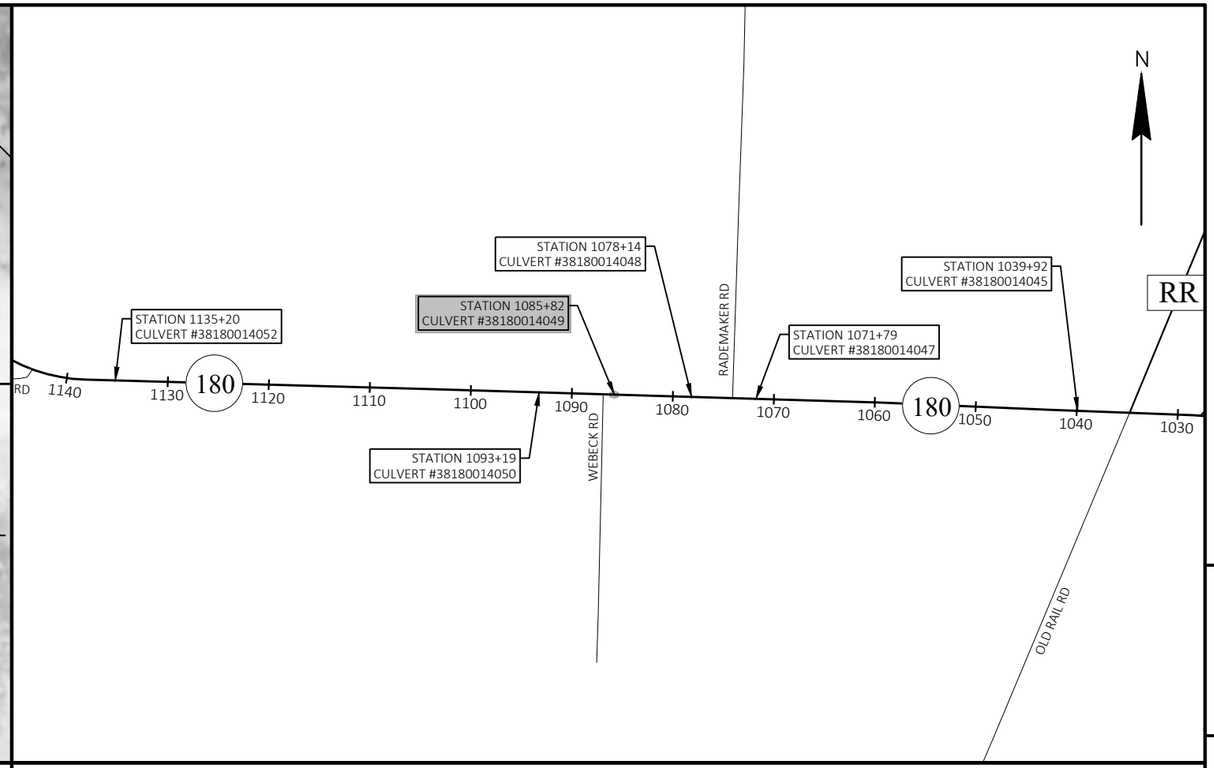


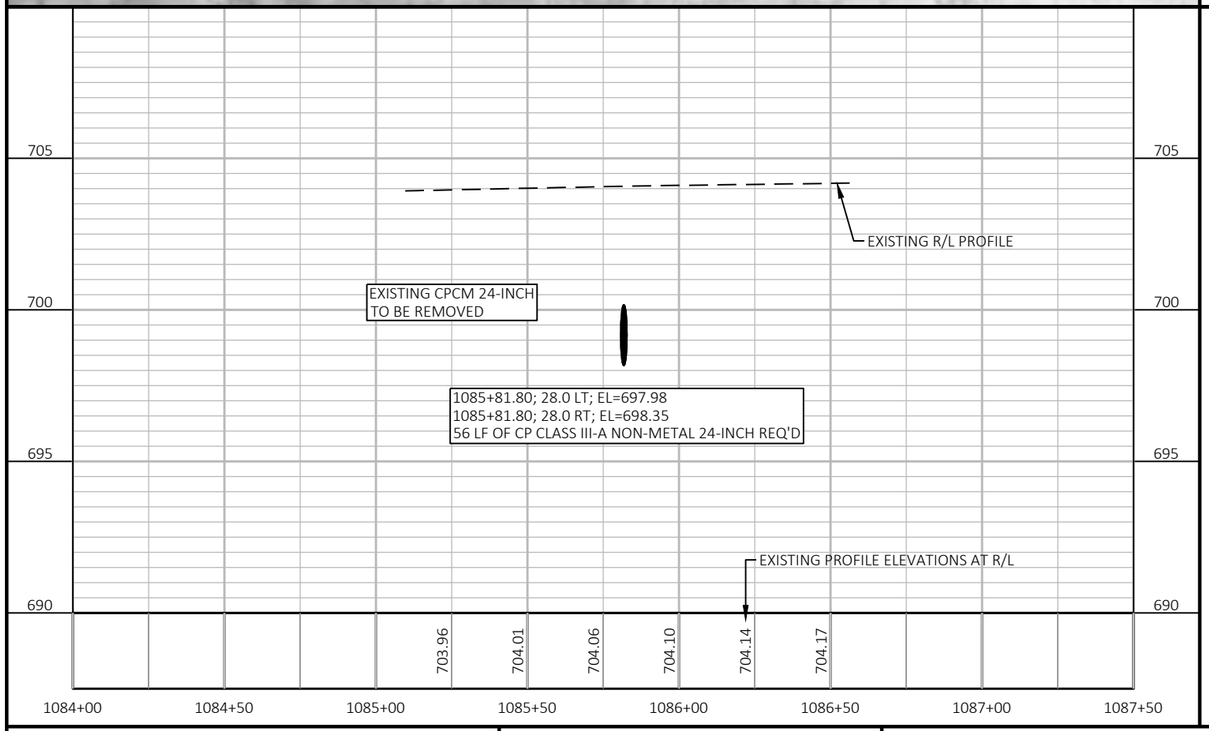
CONTROL POINT TABLE			
POINT NUMBER	Y	X	ELEVATION
36	231911.023	775956.390	701.86
37	231907.954	776071.758	701.85

PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	PLAN AND PROFILE: CULVERT #38180014048	SHEET 86 E

FILE NAME : S:\CURRPROJ\MARINETTE COUNTY\STH 180\CIVIL3D\96701600\SHEETSPLAN\96701671-050101-PP.DWG
LAYOUT NAME - Sheet-11b
PLOT DATE : 7/31/2025 11:36 AM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:50 FT

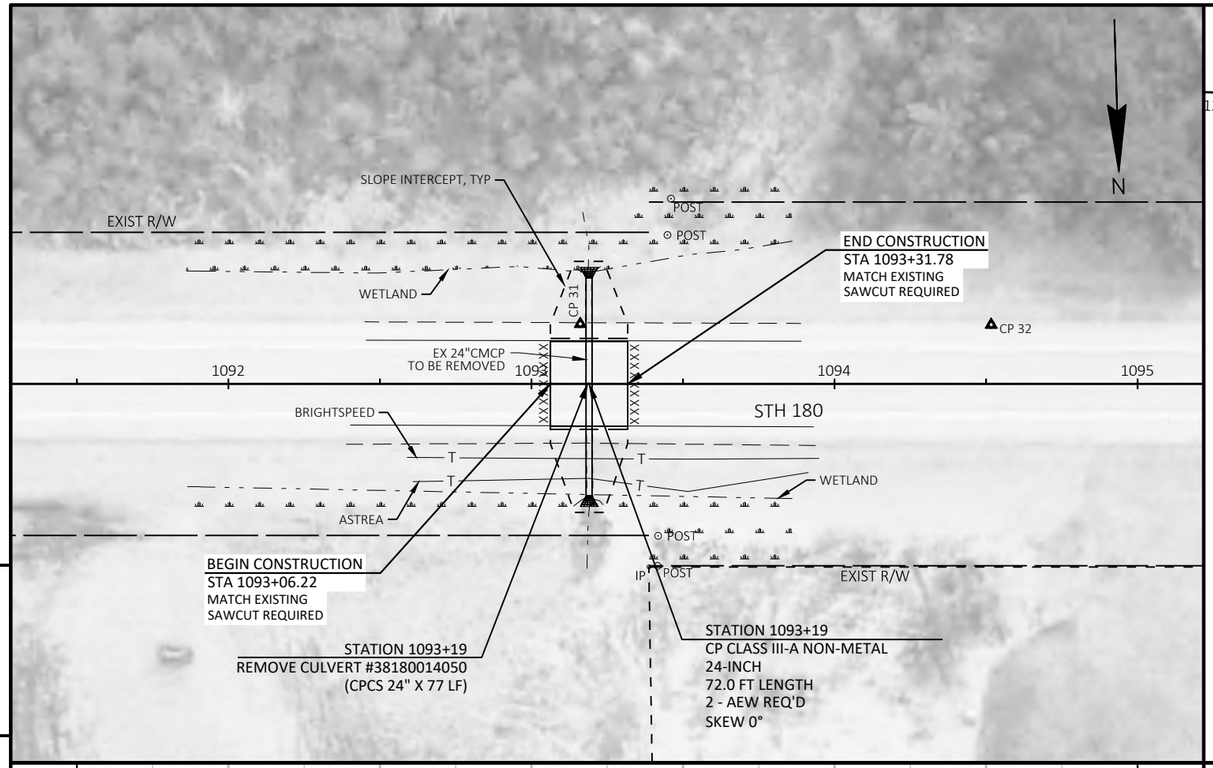


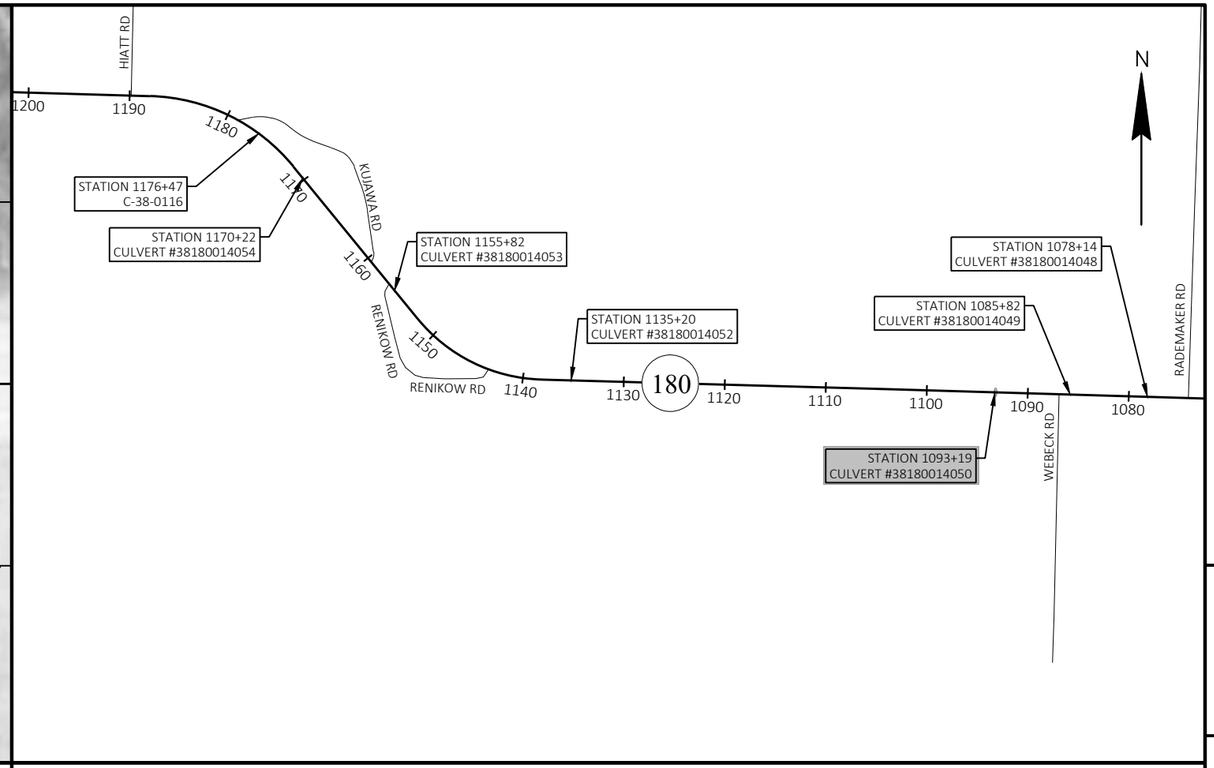


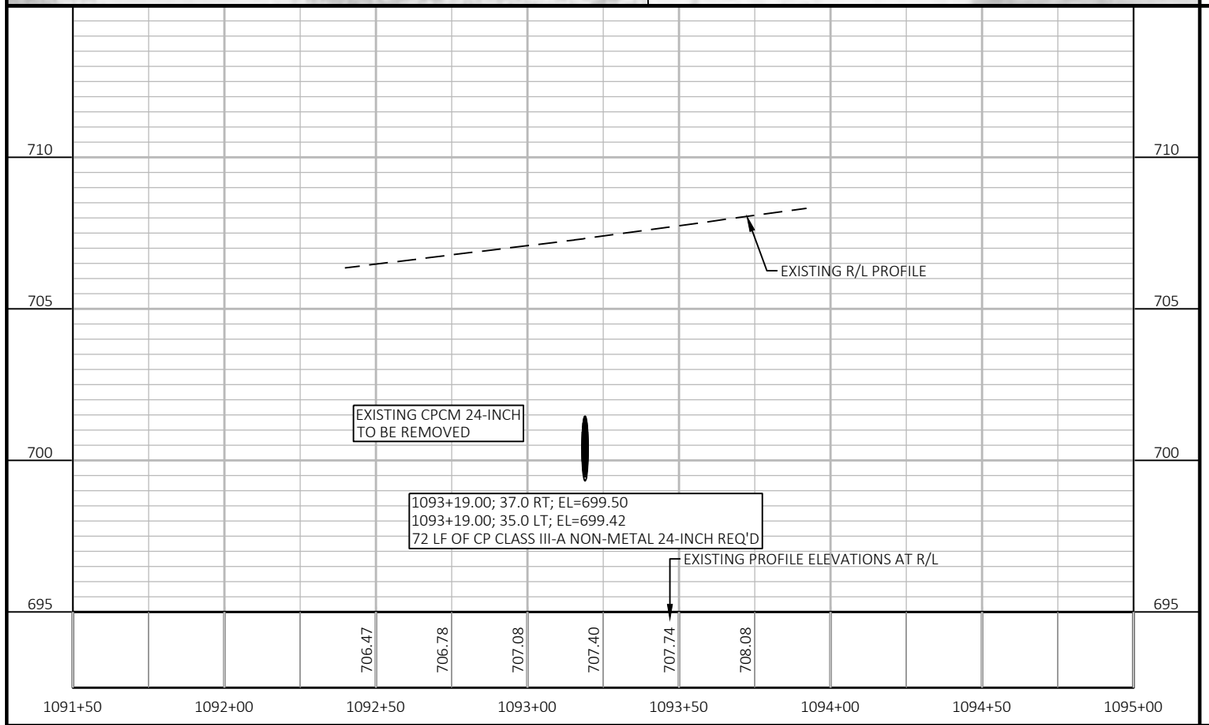


CONTROL POINT TABLE			
POINT NUMBER	Y	X	ELEVATION
33	231935.617	775191.018	703.35
34	231933.130	775036.784	702.69

PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	PLAN AND PROFILE: CULVERT #38180014049	SHEET 87	E

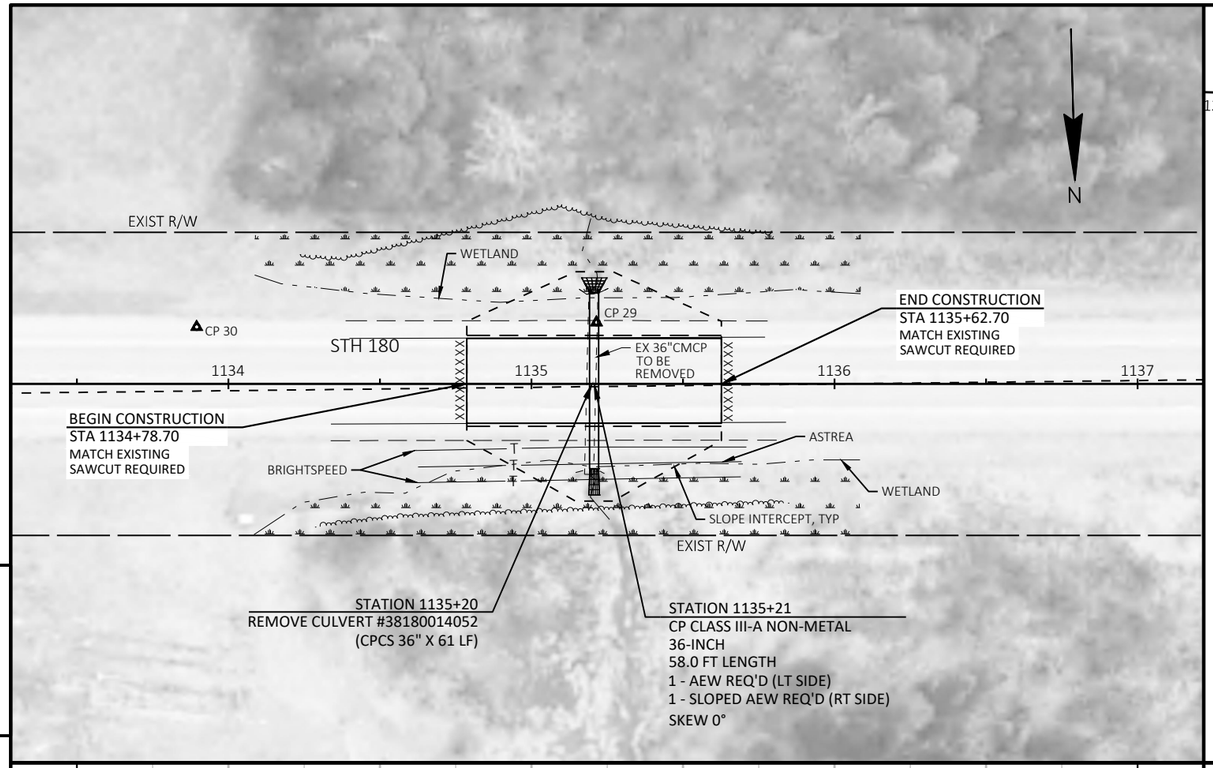


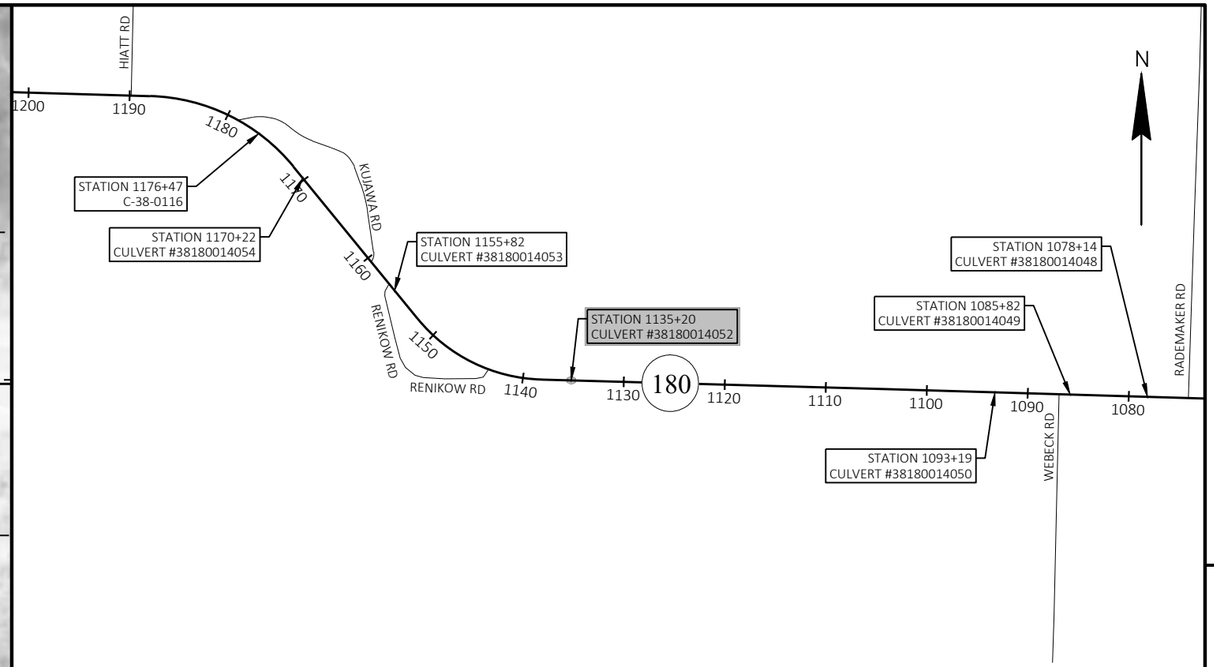


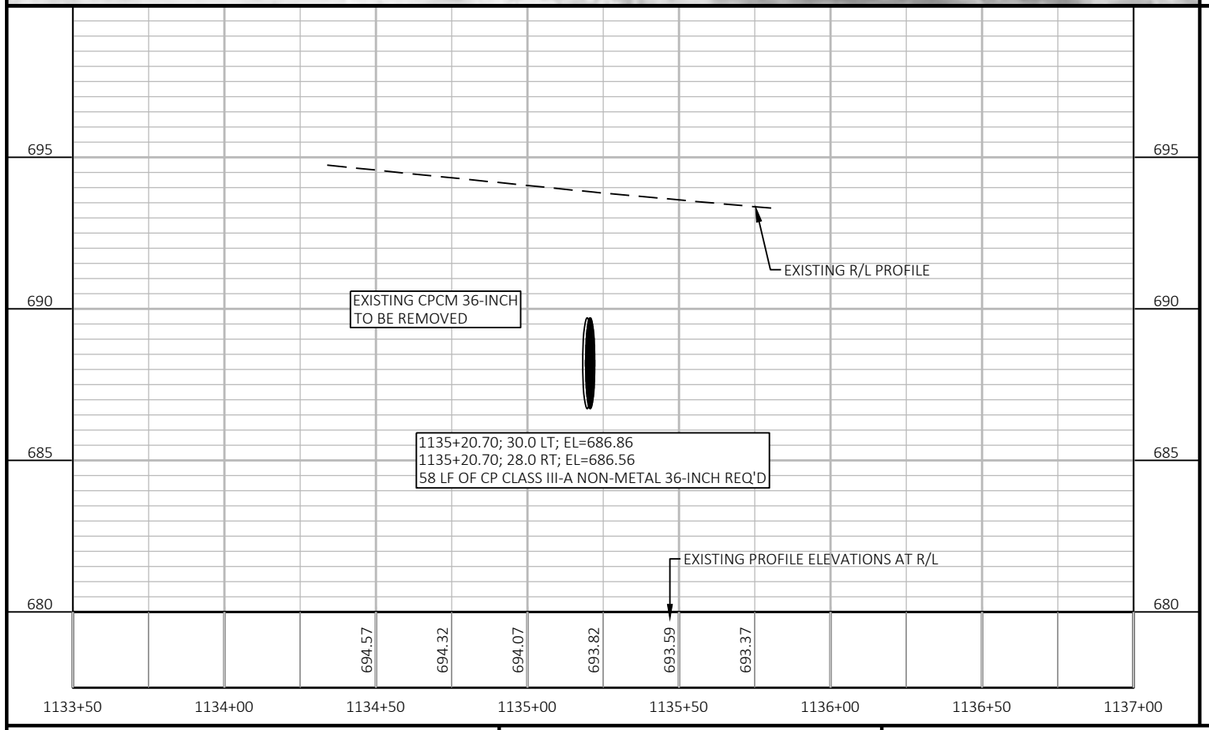


CONTROL POINT TABLE			
POINT NUMBER	Y	X	ELEVATION
31	231956.273	774455.088	706.19
32	231960.587	774319.597	708.20

PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	PLAN AND PROFILE: CULVERT #38180014050	SHEET 88	E



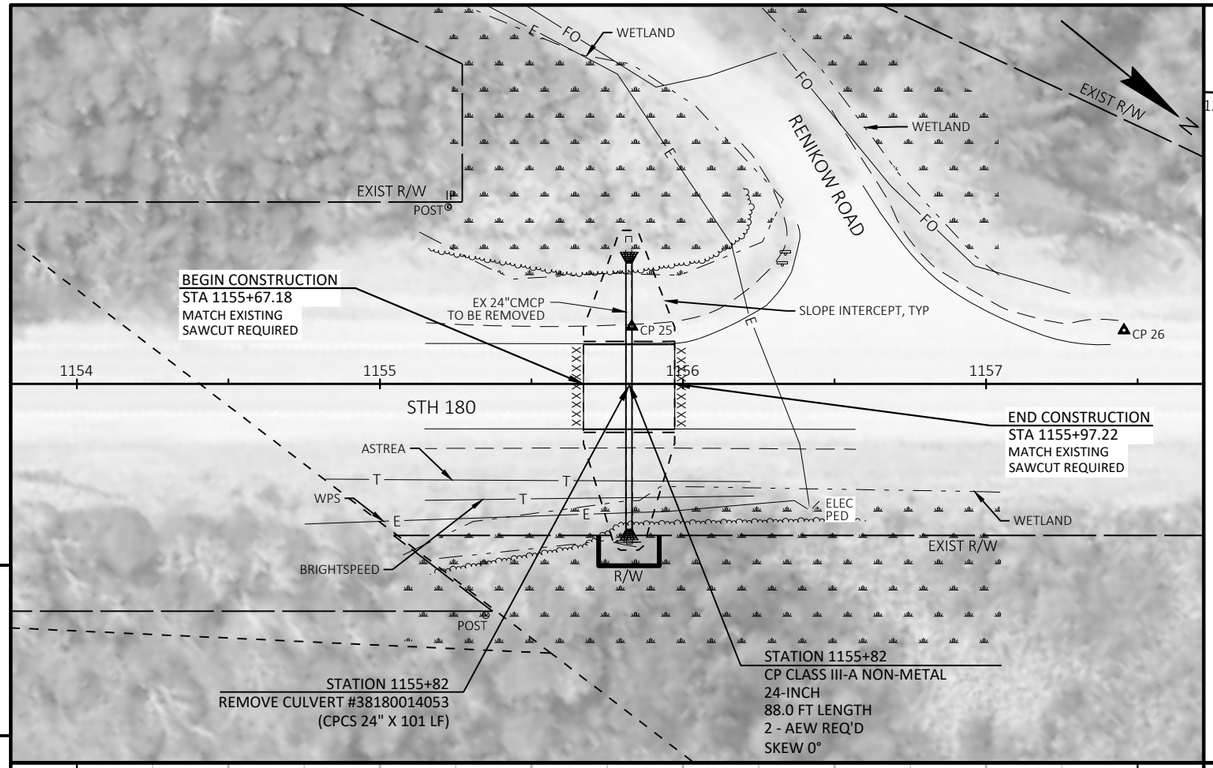


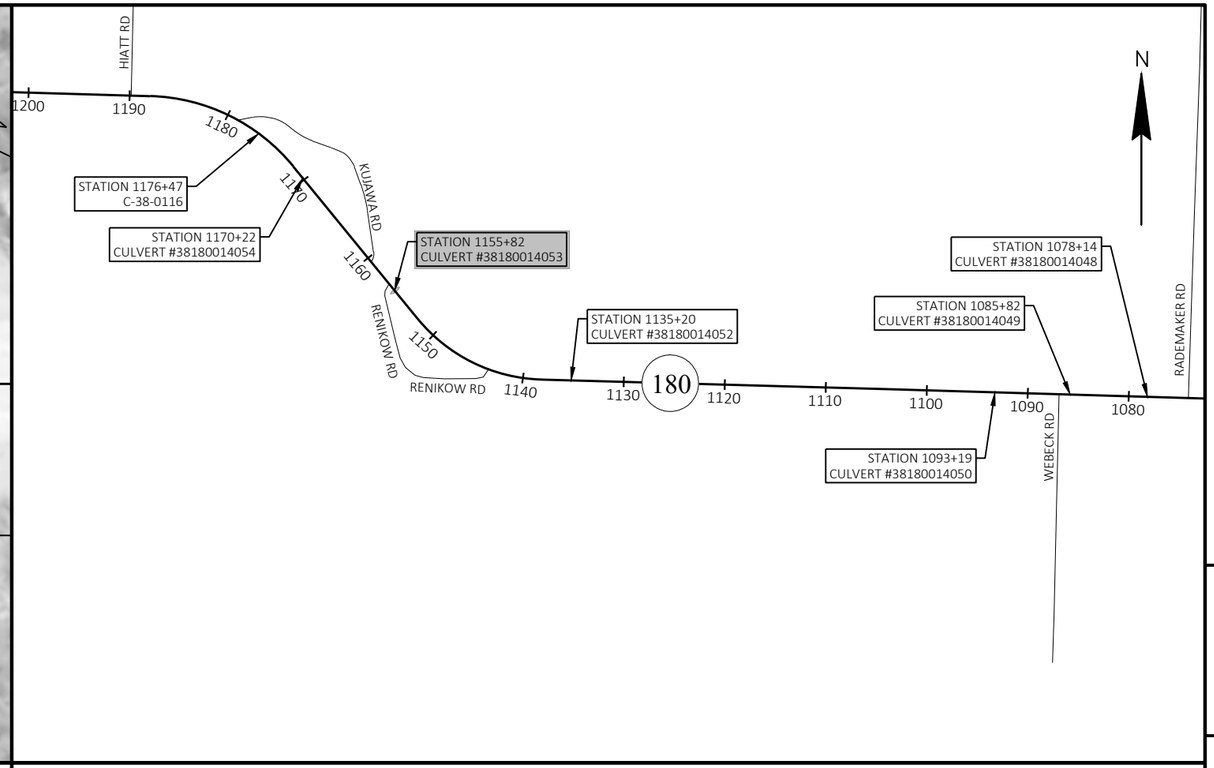


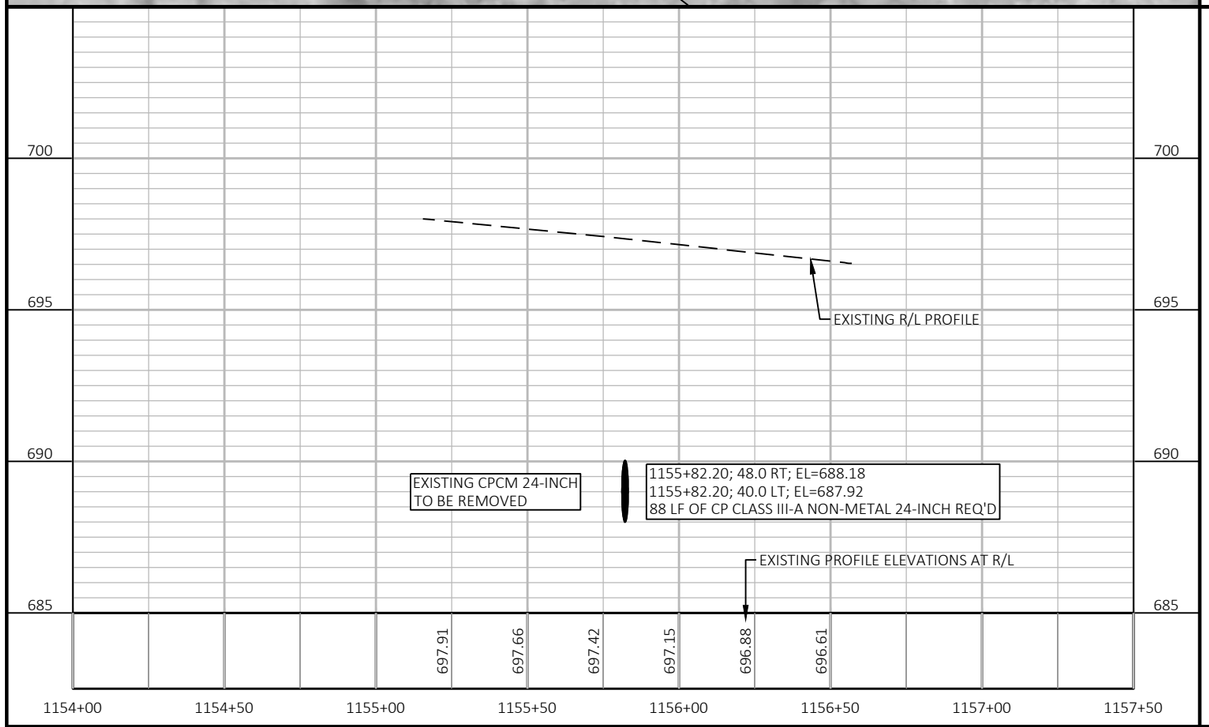
CONTROL POINT TABLE			
POINT NUMBER	Y	X	ELEVATION
29	232073.858	770251.419	692.93
30	232071.706	770383.367	694.31

PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	PLAN AND PROFILE: CULVERT #38180014052	SHEET 89 E

FILE NAME : S:\CURRPROJ\MARINETTE COUNTY\STH 180\CIVIL3D\96701600\SHEETSPLAN\96701671-050101-PP.DWG
LAYOUT NAME - Sheet-13a
PLOT DATE : 7/31/2025 11:38 AM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:50 FT

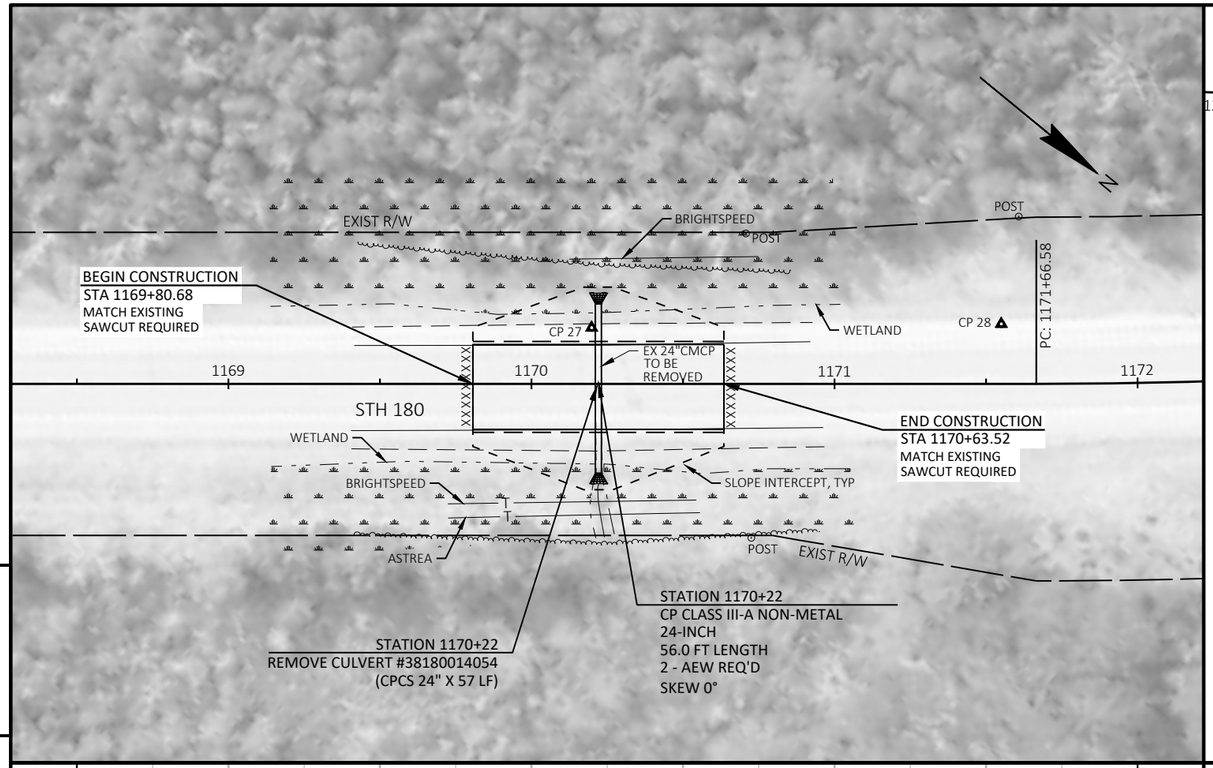


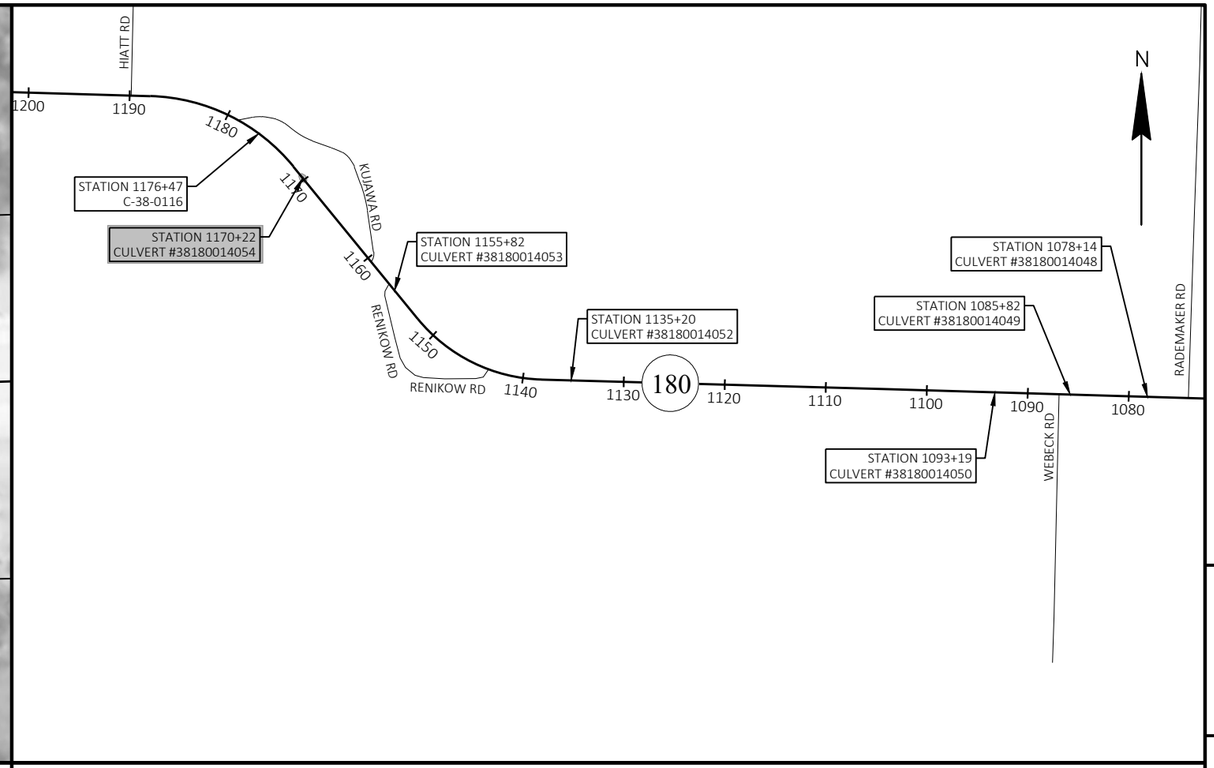


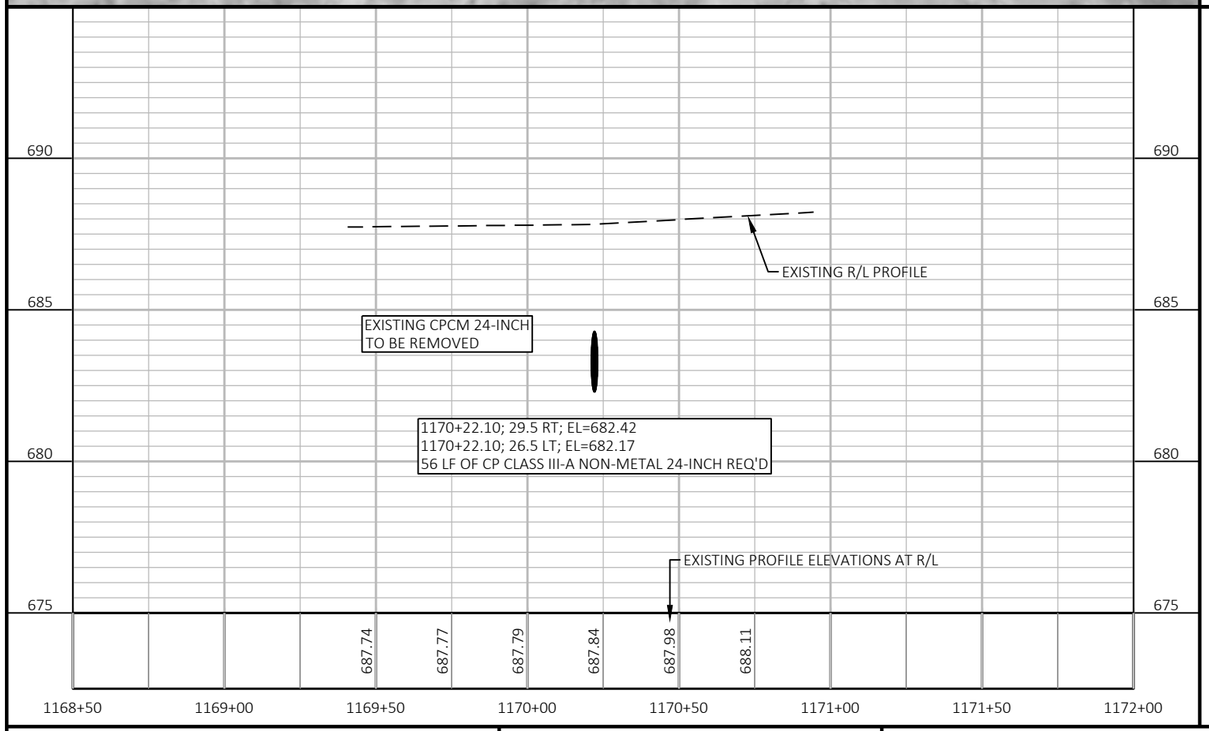


CONTROL POINT TABLE			
POINT NUMBER	Y	X	ELEVATION
25	232970.345	768490.547	696.04
26	233096.954	768388.838	695.30

PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	PLAN AND PROFILE: CULVERT #38180014053	SHEET 90	E







CONTROL POINT TABLE			
POINT NUMBER	Y	X	ELEVATION
27	234083.663	767582.356	687.00
28	234187.622	767495.978	687.34

PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	PLAN AND PROFILE: CULVERT #38180014054	SHEET 91	E

BEGIN CONSTRUCTION
STA 1173+25.27

BEGIN CONSTRUCTION
STA 1175+98.75
MATCH EXISTING
SAWCUT REQUIRED

END CONSTRUCTION
STA 1176+96.47
MATCH EXISTING
SAWCUT REQUIRED

END CONSTRUCTION
STA 1179+16.63

SEPV
TEL PED
CP 915
CP 916
POST
EXIST R/W
COFFERDAM
WETLAND
EX 95"X67" CMCE TO BE REMOVED
WPS
SLOPE INTERCEPT, TYP
REMOVE & REPLACE GUARDRAIL
STH 180
MP
ELEC PED
STATION 1176+47
REMOVE STRUCTURE C-38-116
(CMCE 95"X67" X 67 LF)
UNNAMED TRIBUTARY
MENOMINEE RIVER
STATION 1176+47
CPRCHE CLASS HE-III 63x98-INCH
66.0 FT LENGTH
2 - AEW REQ'D
SKEW 9° LHF
KUJAWA ROAD

HIATT RD
KUJAWA RD
RENIKOW RD
STATION 1176+47
C-38-0116
STATION 1170+22
CULVERT #38180014054
STATION 1155+82
CULVERT #38180014053

CONTROL POINT TABLE			
POINT NUMBER	Y	X	ELEVATION
915	234277.737	767425.116	687.70
916	234758.017	766826.762	688.01

BENCH MARK TABLE				
POINT NUMBER	Y	X	ELEVATION	DESCRIPTION
4142	234421.159	767377.876	684.26	60D SPIKE IN 30" TREE
4420	234593.921	766973.128	685.21	60D SPIKE IN 18" TREE

EXISTING R/L PROFILE
EXISTING PROFILE ELEVATIONS AT R/L

C-38-0116
REMOVE 68"X52" CMCE

1176+52.02; 30.9 LT; EL=680.05
1176+42.11; 34.3 RT; EL=679.50
66 LF OF CPRCHE CLASS HE-III 63X98-INCH REQ'D

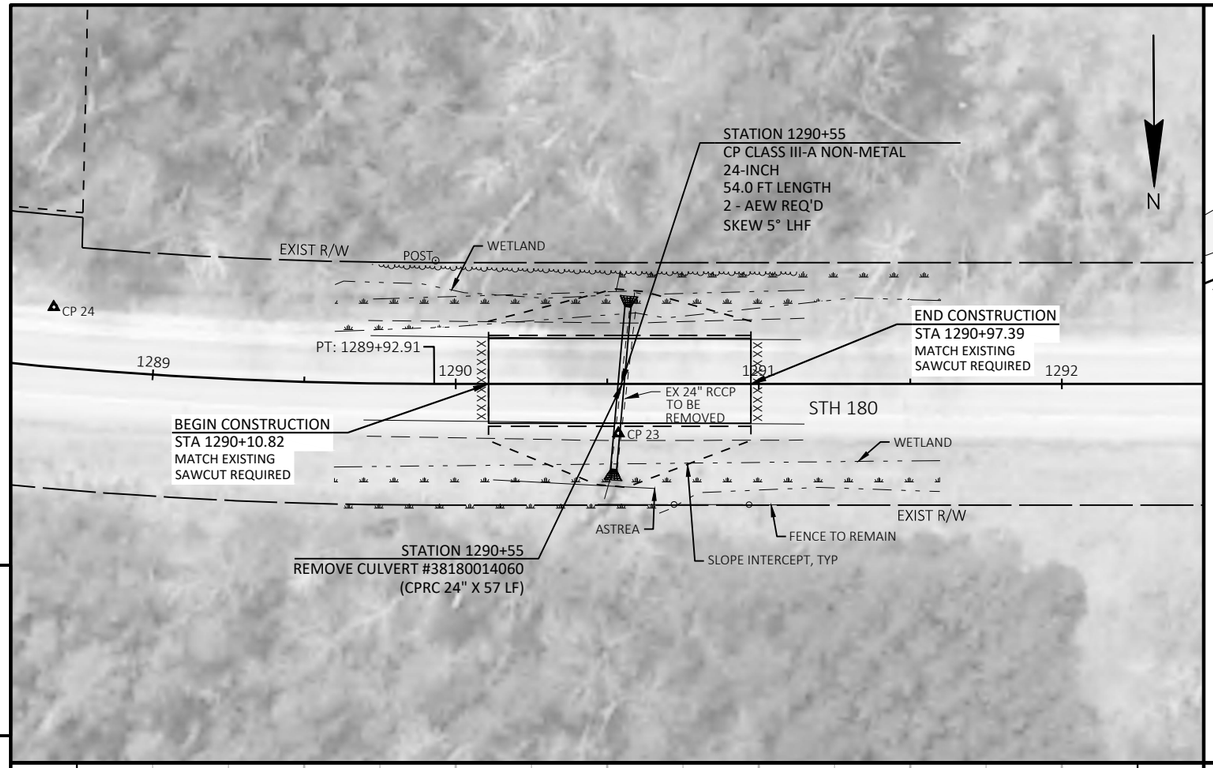
690
685
680
675

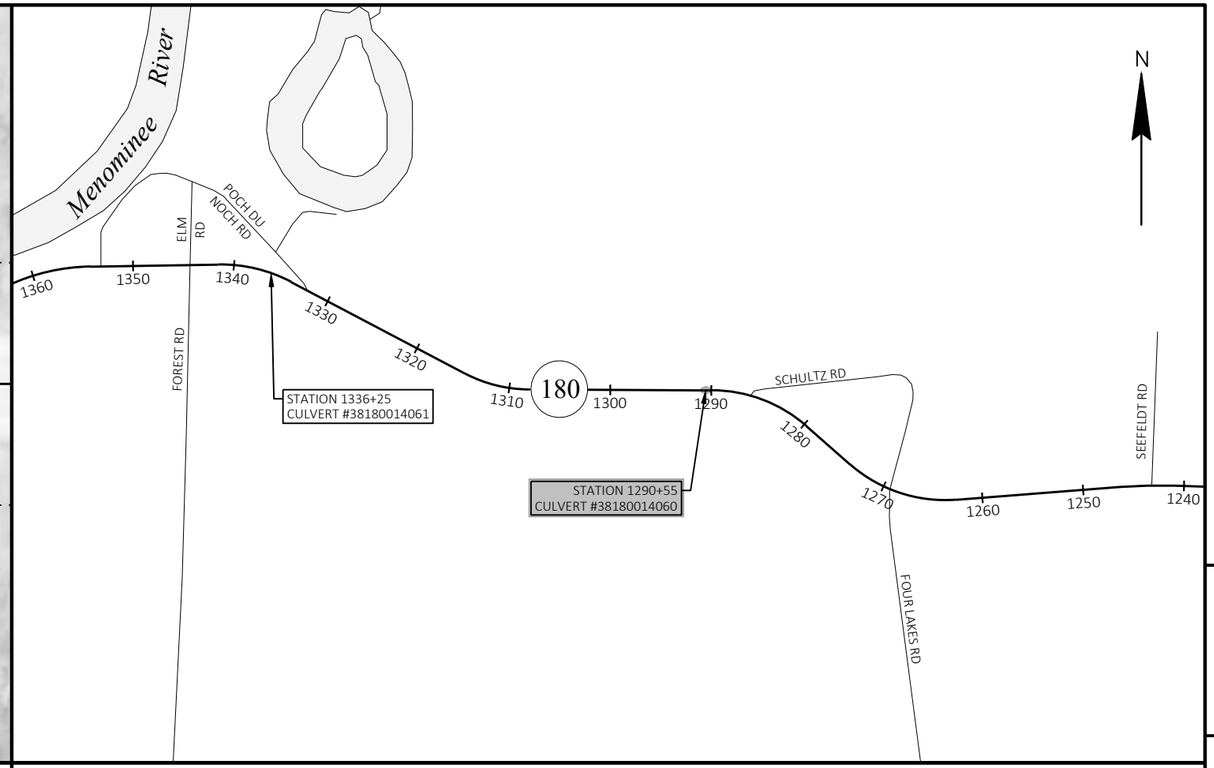
688.51 688.51 688.56 688.61 688.68 688.74 688.83 688.91 688.96 689.00 689.00 688.98 689.02 689.05 689.11 689.15 689.24 689.32 689.38 689.43 689.43 689.40 689.45 689.51 689.58 689.64 689.67 689.69 689.67 689.63 689.72

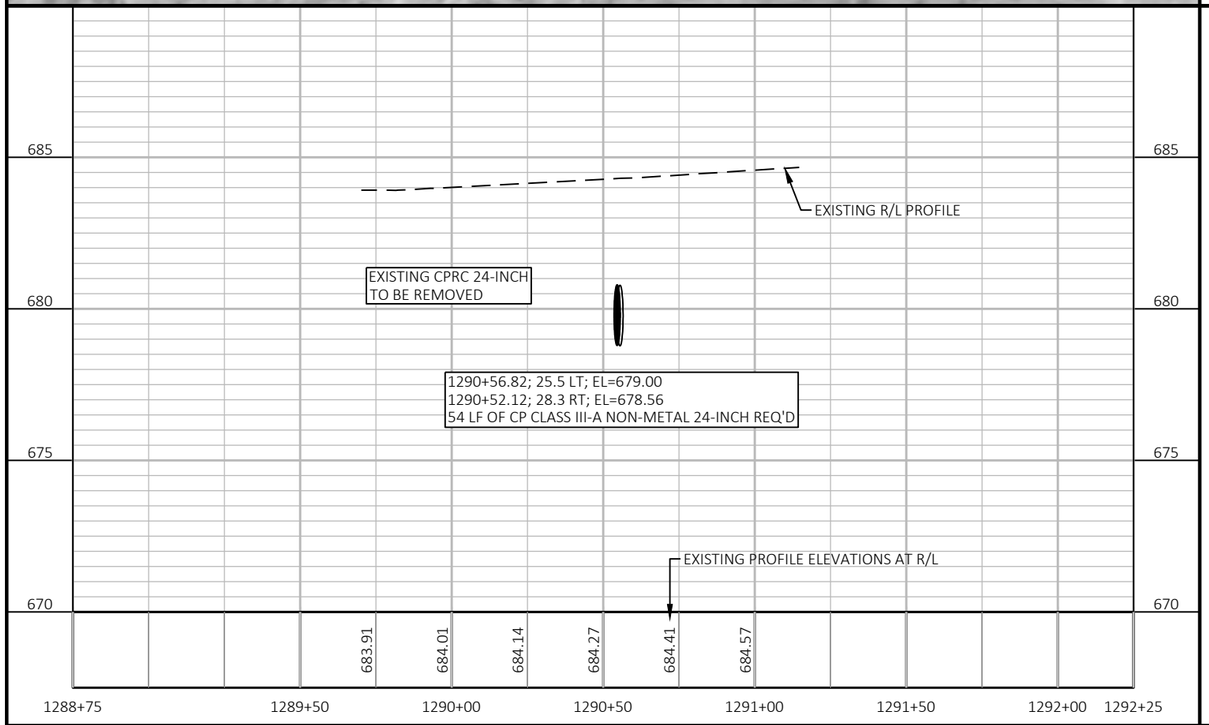
1173+50 1174+00 1174+50 1175+00 1175+50 1176+00 1176+50 1177+00 1177+50 1178+00 1178+50 1179+00 1179+50 1180+00

PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	PLAN AND PROFILE: C-38-116	SHEET 92	E

FILE NAME : S:\CURRPROJ\MARINETTE COUNTY\STH 180\CIVIL3D\96701600\SHEETSPLAN\96701671-050101-PP.DWG
LAYOUT NAME - Sheet-15a
PLOT DATE : 7/31/2025 12:00 PM
PLOT BY : AARON SARAUER
PLOT NAME :
PLOT SCALE : 1 IN:50 FT

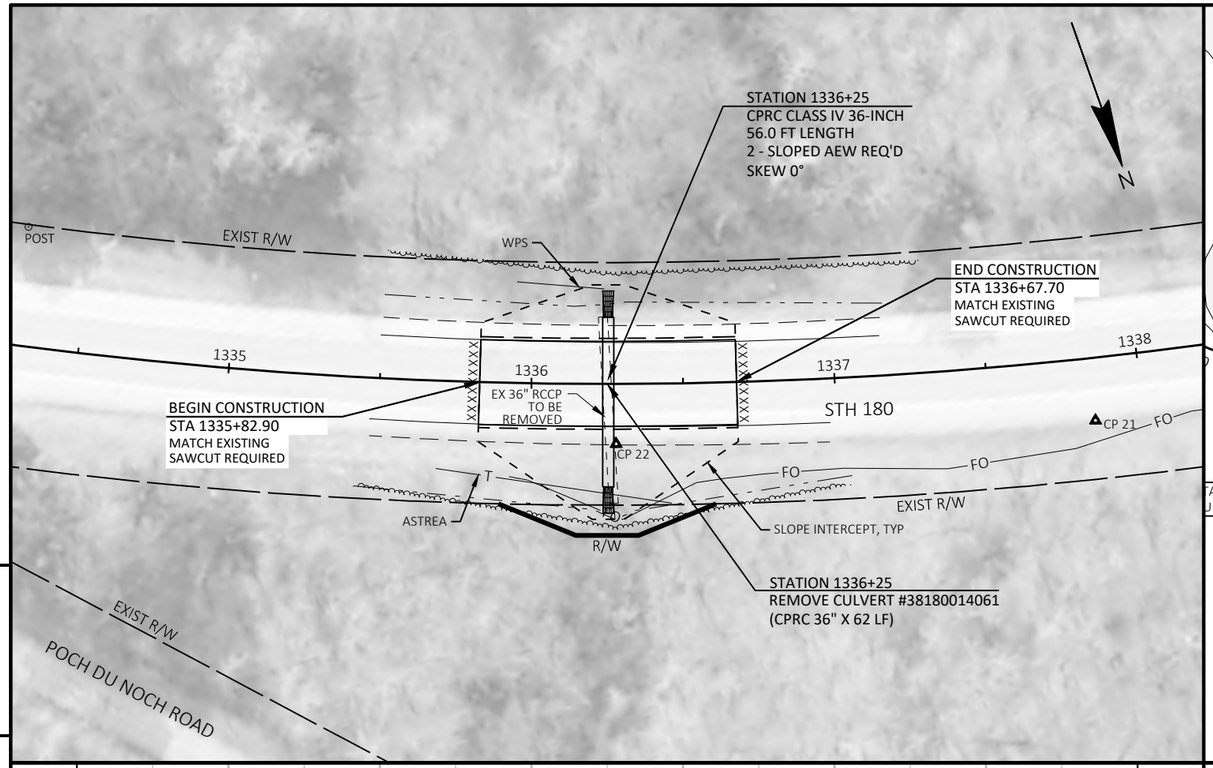


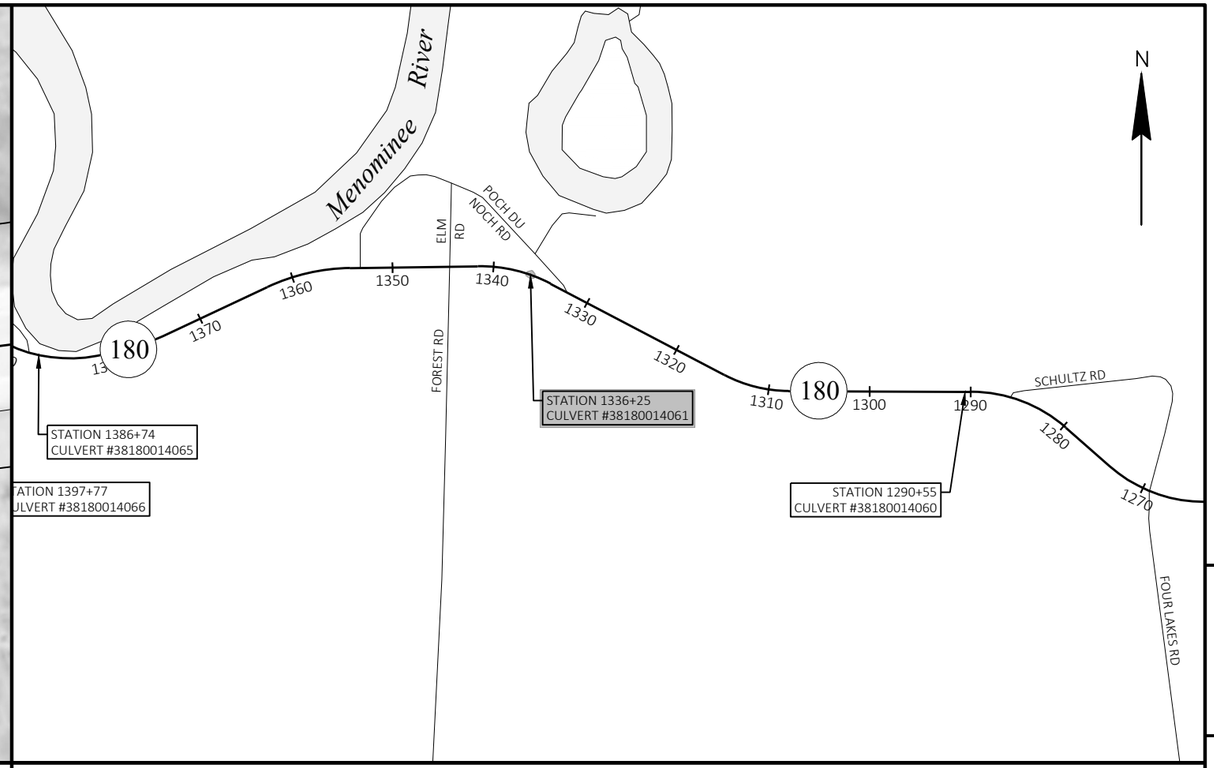


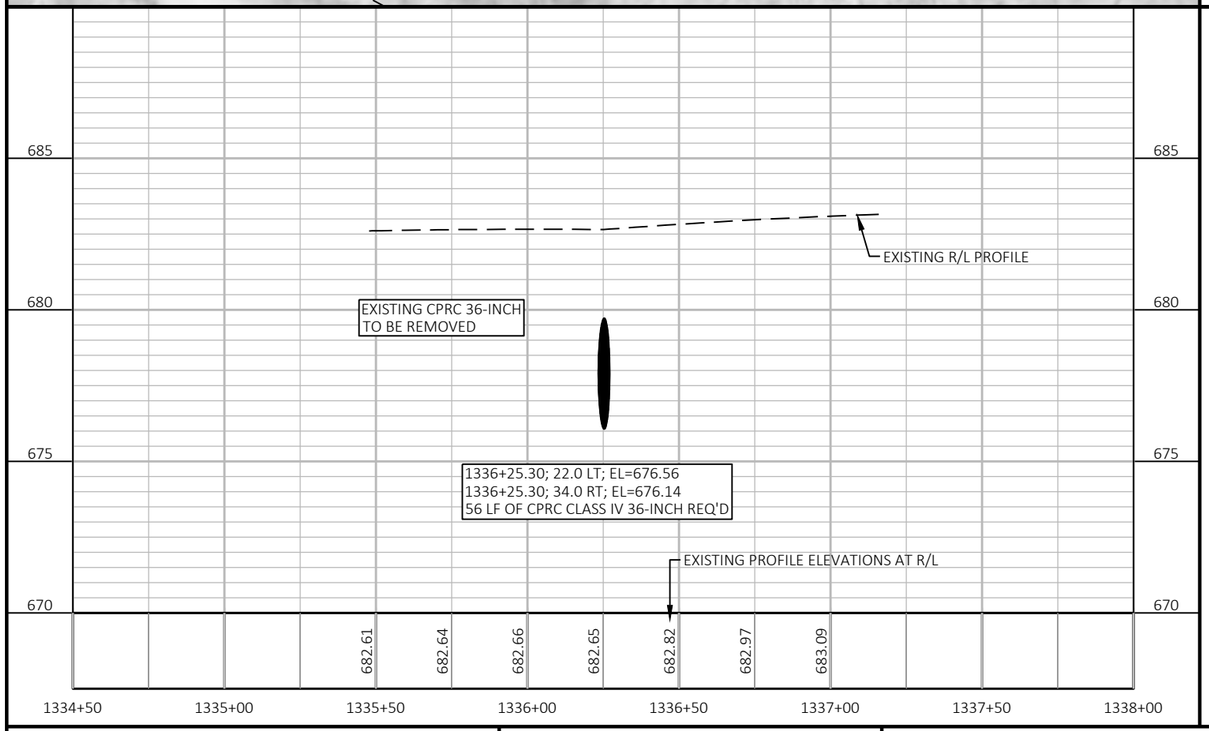


CONTROL POINT TABLE			
POINT NUMBER	Y	X	ELEVATION
23	236021.914	756152.654	684.23
24	235979.449	756338.772	682.75

PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	PLAN AND PROFILE: CULVERT #38180014060	SHEET 93	E



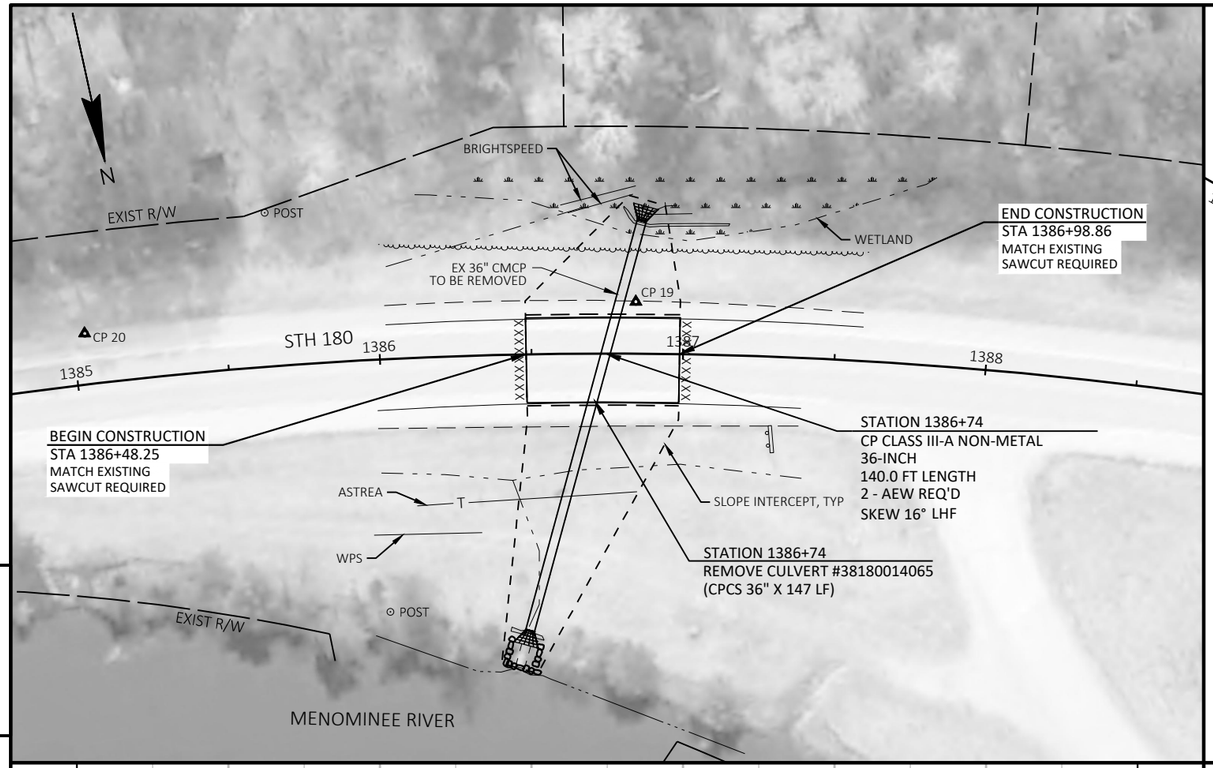


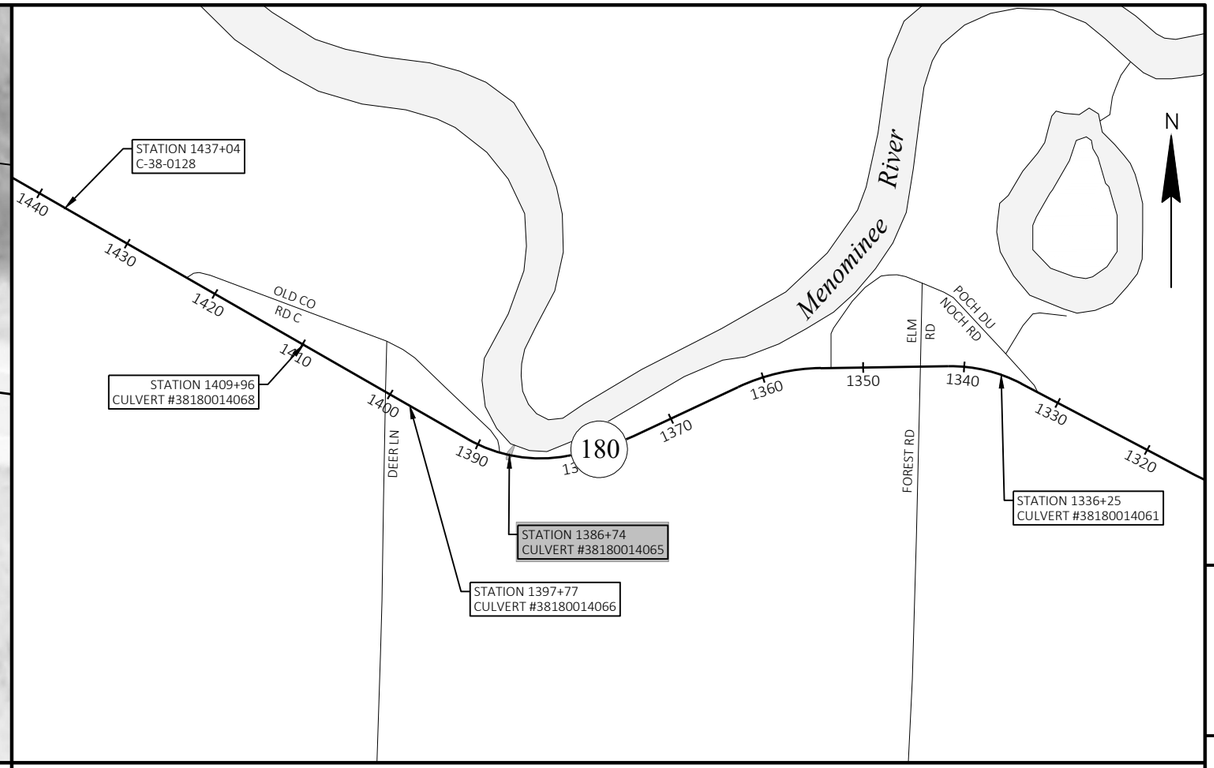


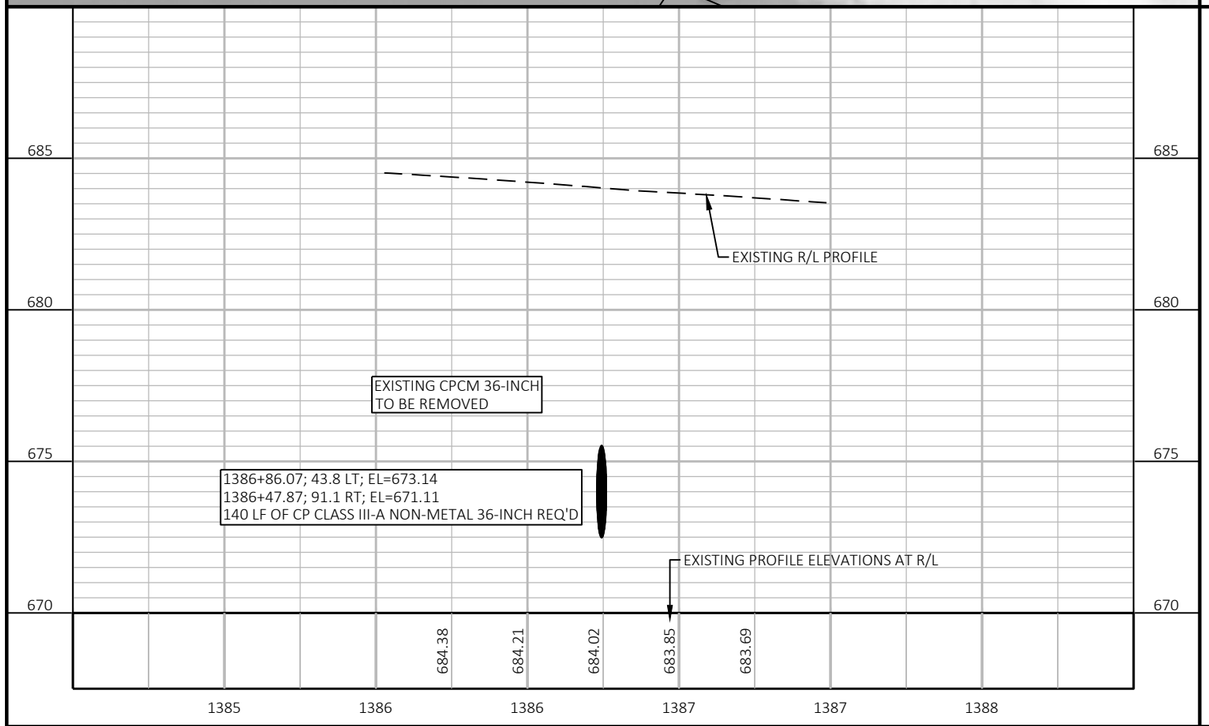
CONTROL POINT TABLE			
POINT NUMBER	Y	X	ELEVATION
21	237227.961	751700.624	683.80
22	237182.635	751852.363	683.25

PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	PLAN AND PROFILE: CULVERT #38180014061	SHEET 94	E

FILE NAME : S:\CURRPROJ\MARINETTE COUNTY\STH 180\CIVIL3D\96701600\SHEETSPLAN\96701671-050101-PP.DWG
LAYOUT NAME - Sheet-16b
PLOT DATE : 7/31/2025 11:42 AM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 44

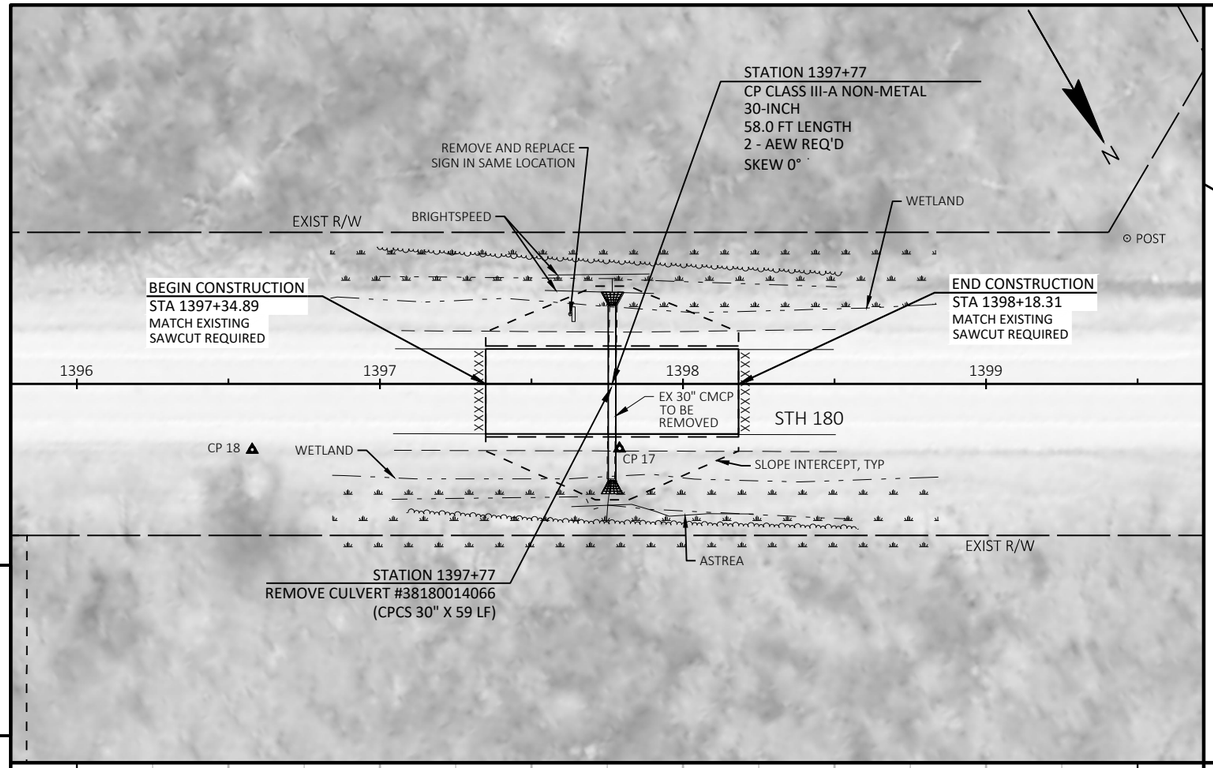


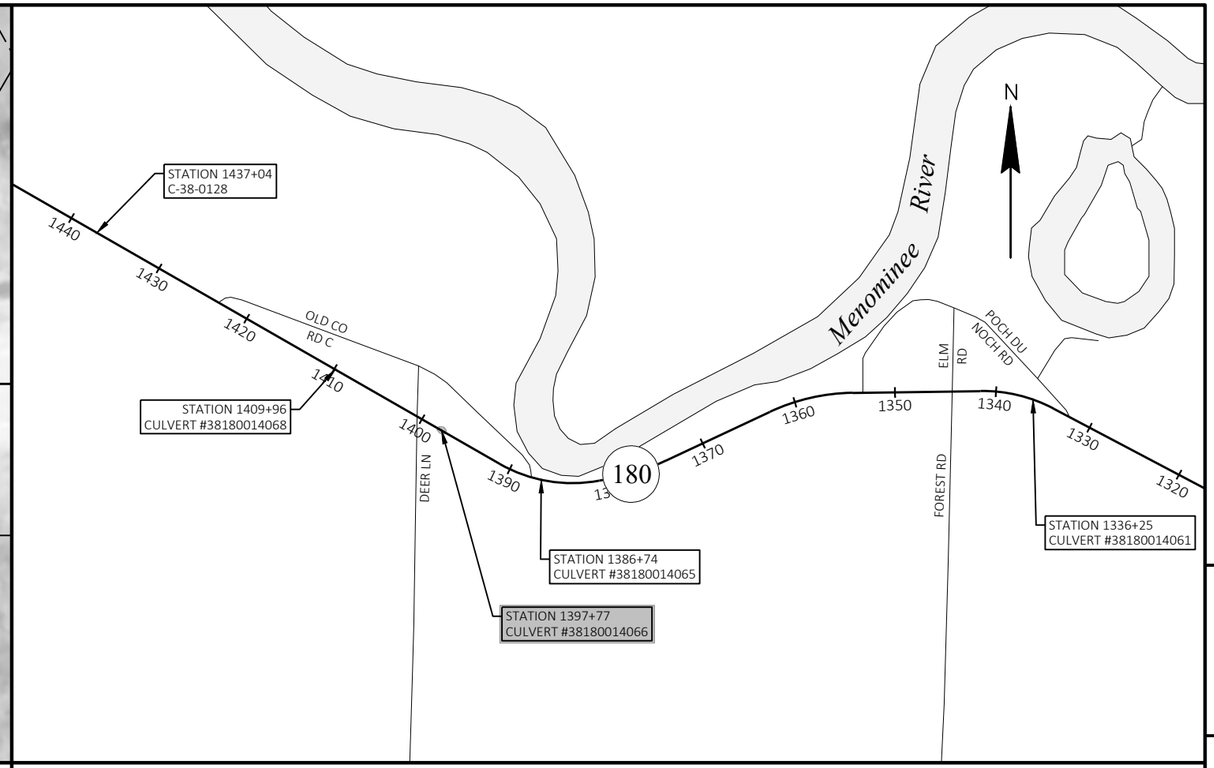


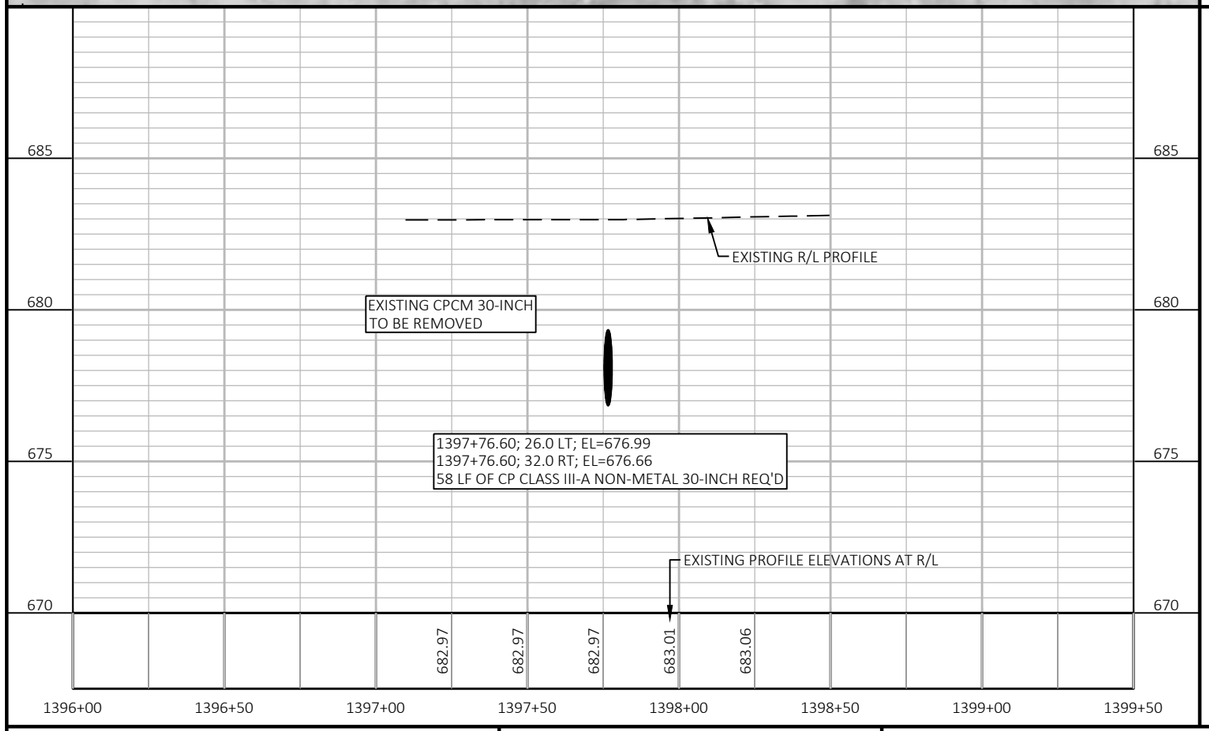


CONTROL POINT TABLE			
POINT NUMBER	Y	X	ELEVATION
19	236356.723	746965.352	684.20
20	236327.935	747145.254	685.71

PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	PLAN AND PROFILE: CULVERT #38180014065	SHEET 95	E

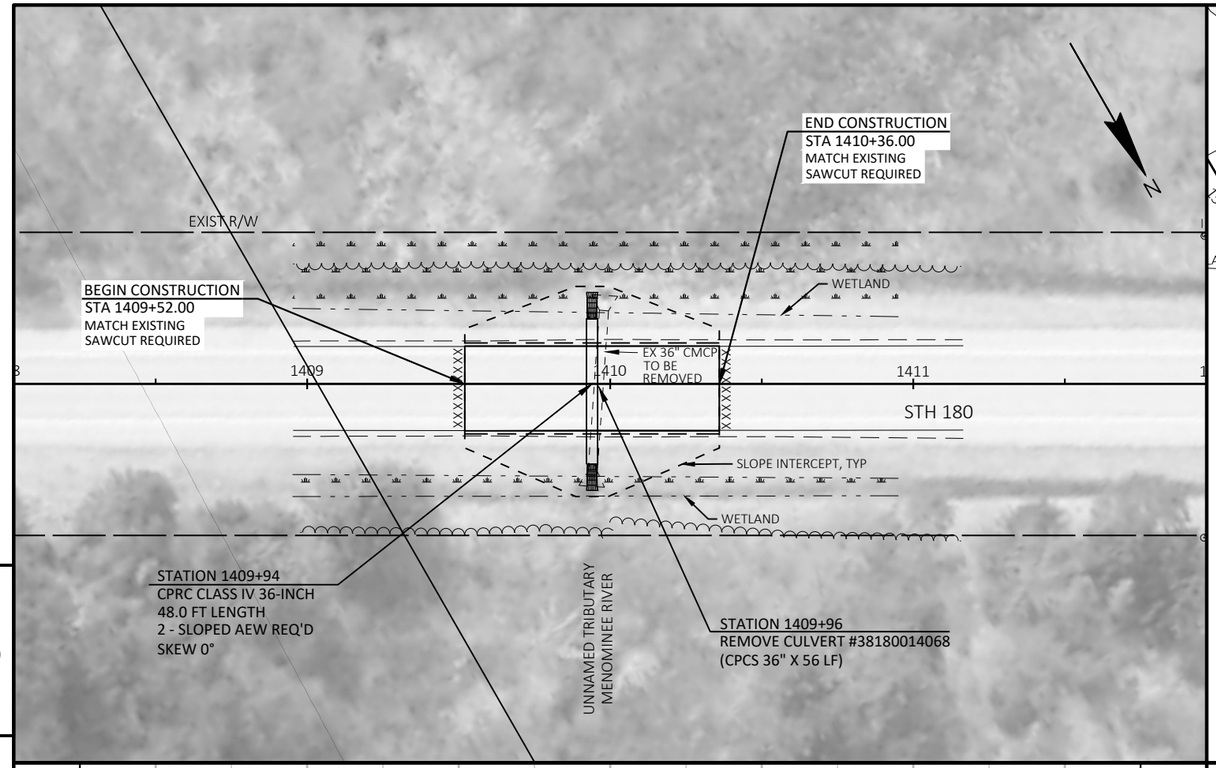


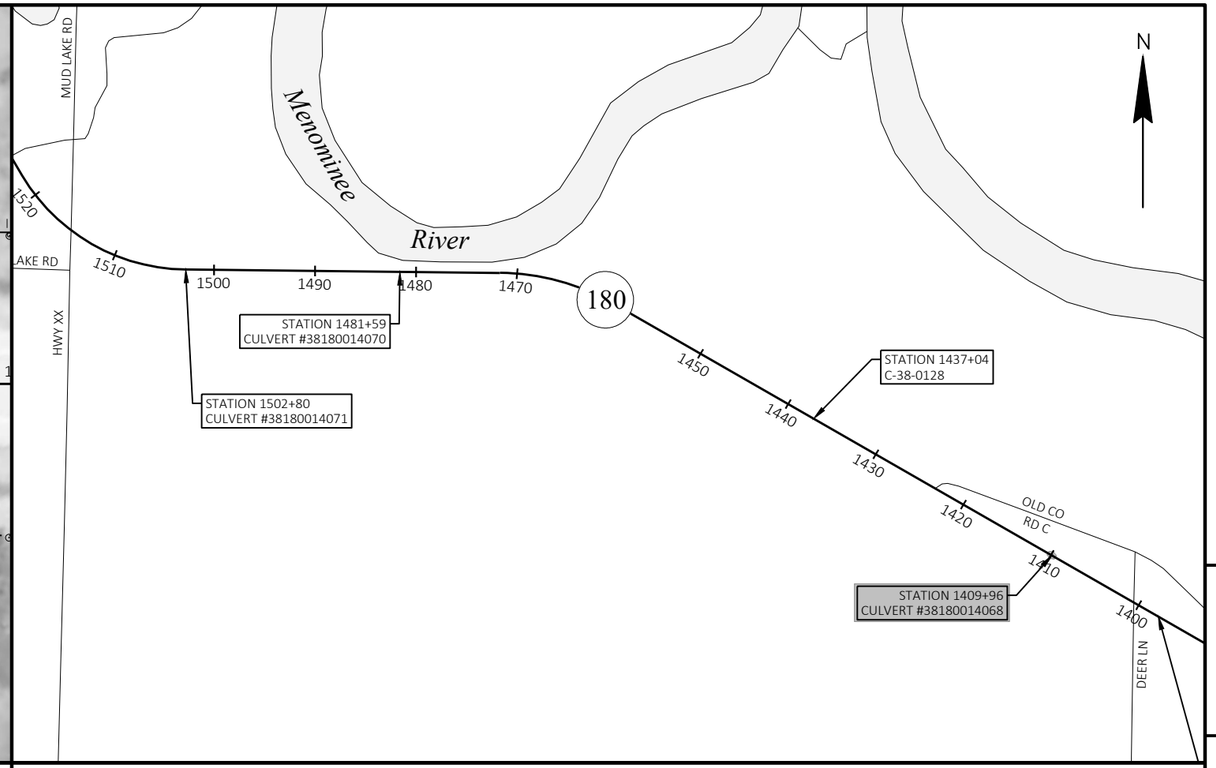


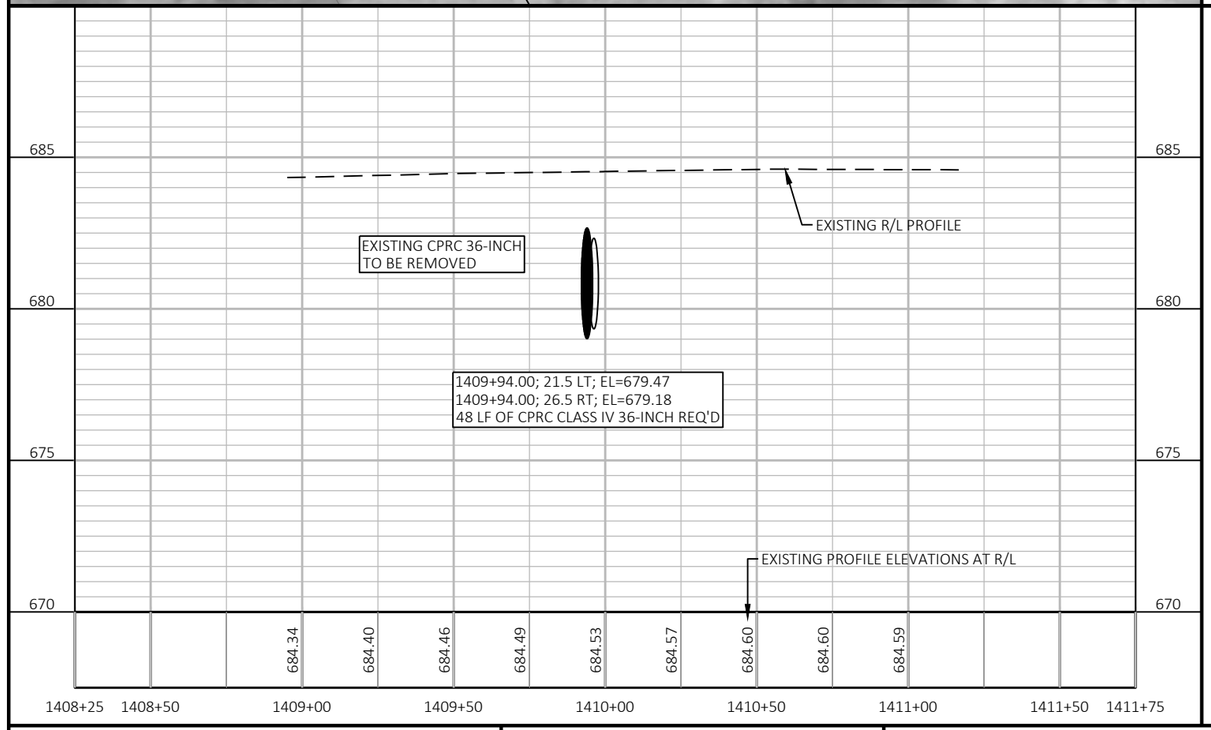


CONTROL POINT TABLE			
POINT NUMBER	Y	X	ELEVATION
17	236877.871	746003.824	682.19
18	236817.919	746109.147	682.25

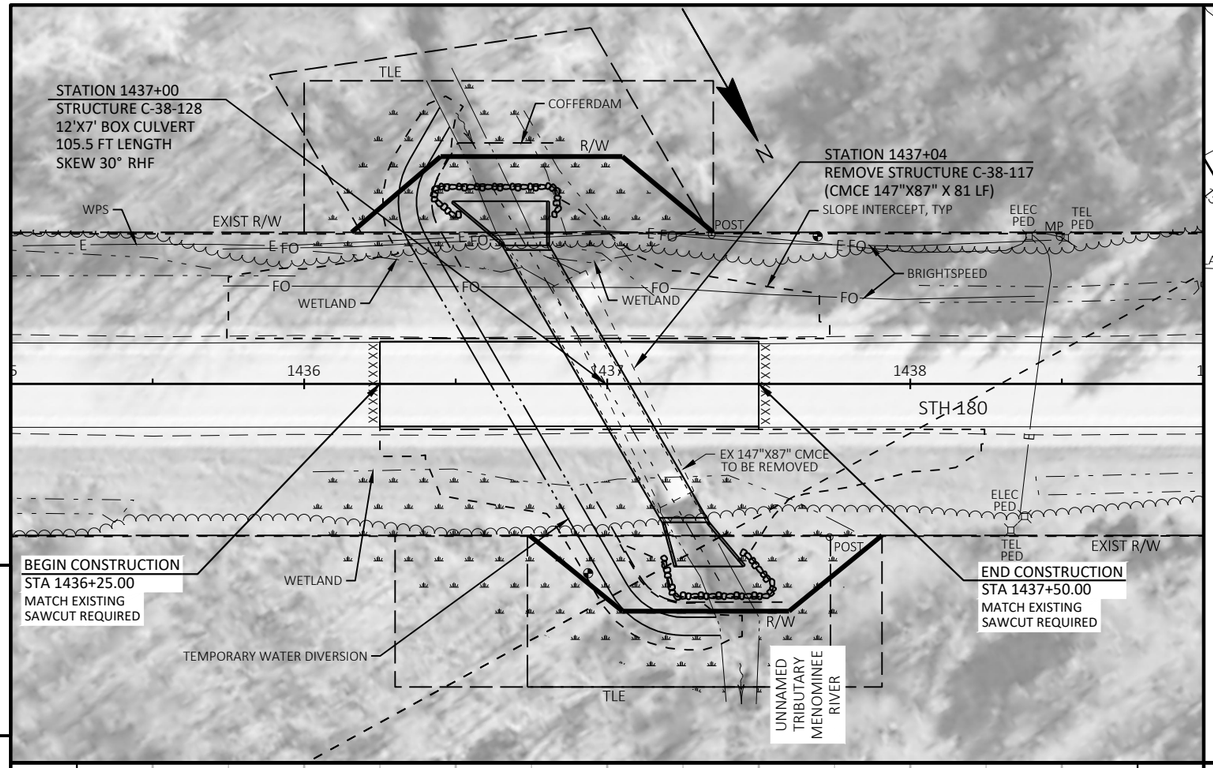
PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	PLAN AND PROFILE: CULVERT #38180014066	SHEET 96	E

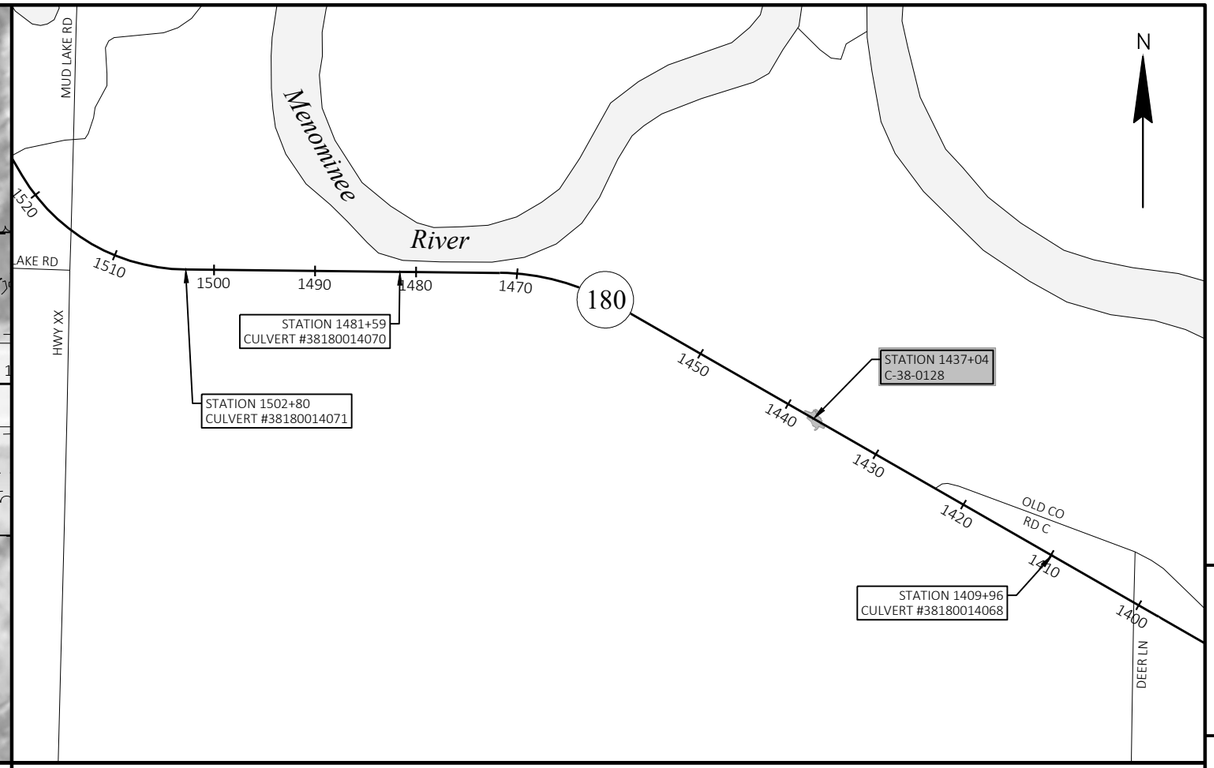


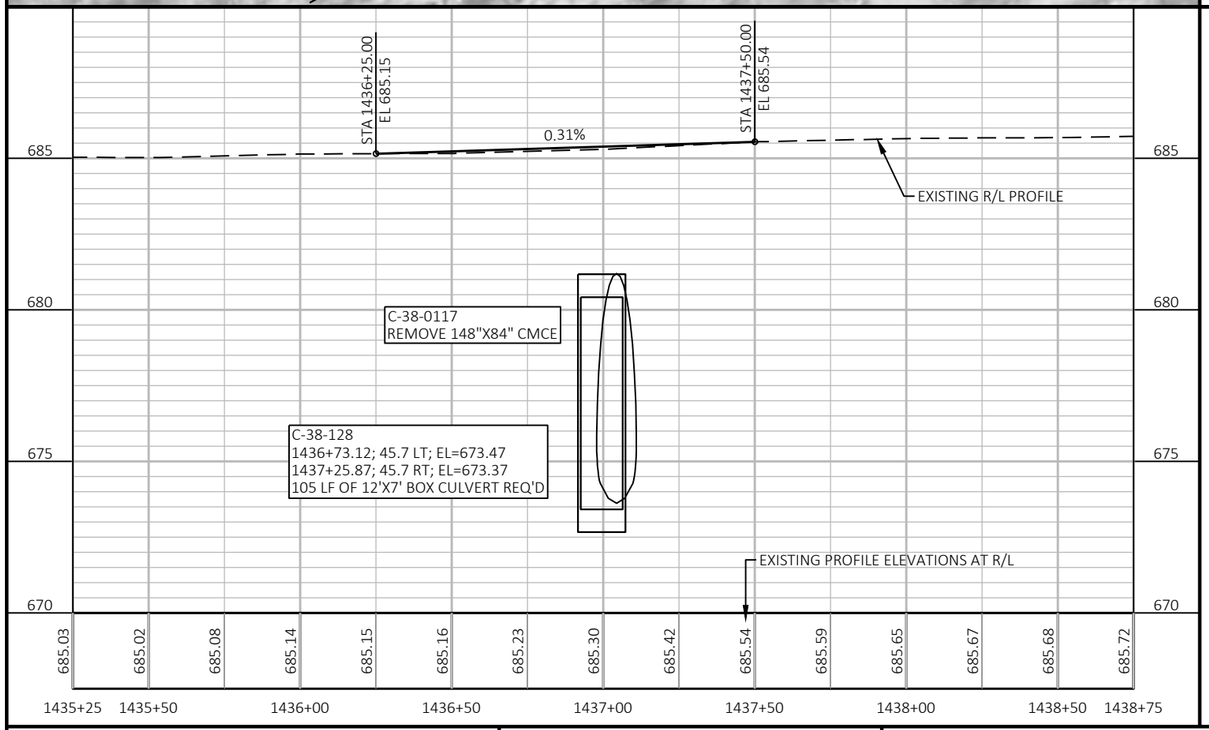




PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	PLAN AND PROFILE: CULVERT #38180014068	SHEET 97	E







CONTROL POINT TABLE			
POINT NUMBER	Y	X	ELEVATION
917	238597.418	742921.280	683.22
918	238985.600	742327.903	684.52

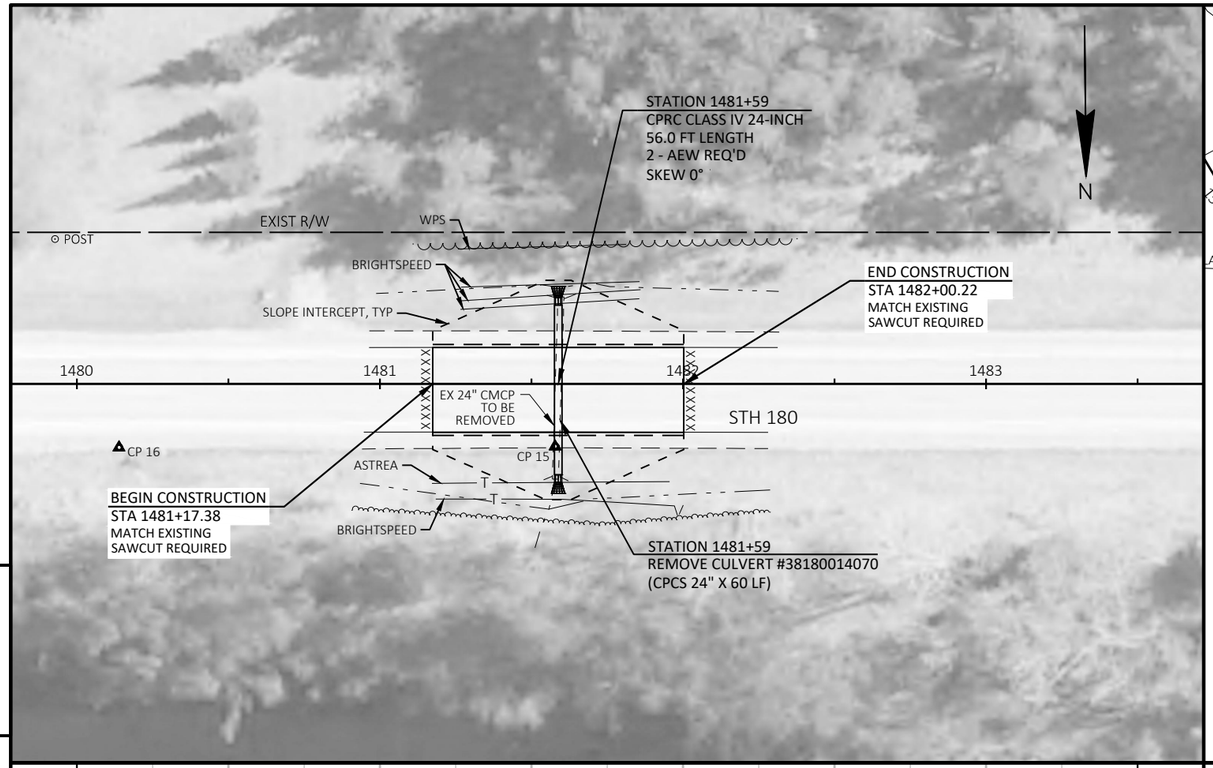
BENCH MARK TABLE				
POINT NUMBER	Y	X	ELEVATION	DESCRIPTION
3750	238861.402	742628.673	677.54	60D SPIKE IN 40" TREE
3829	238802.712	742507.653	683.01	60D SPIKE IN 15" TREE

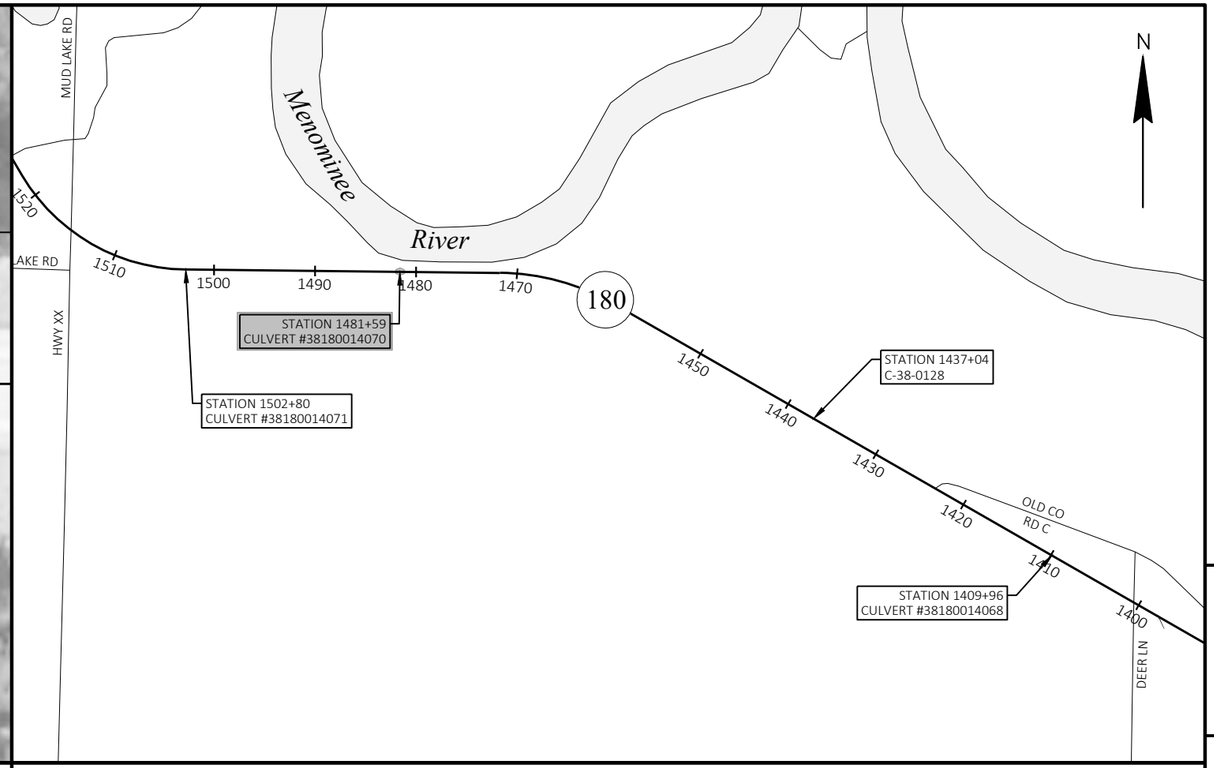
PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	PLAN AND PROFILE: C-38-128	SHEET 98	E

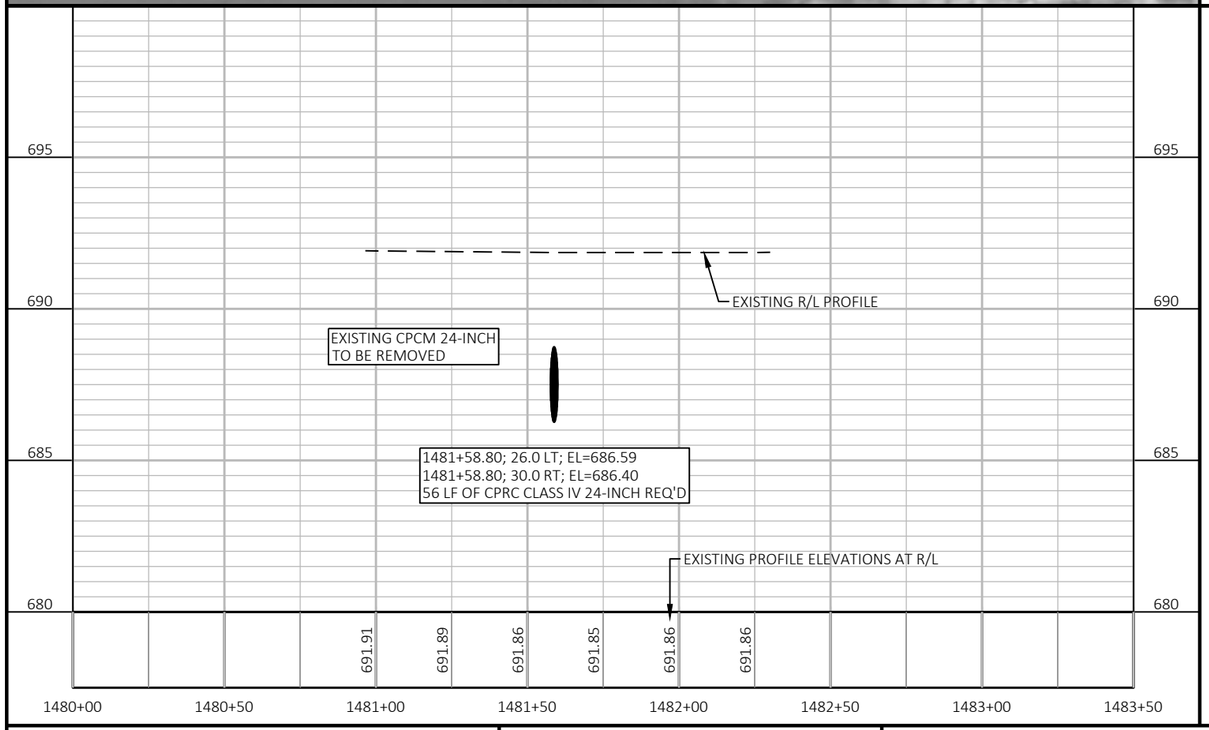
FILE NAME : S:\CURRPROJ\MARINETTE COUNTY\STH 180\CIVIL3D\96701600\SHEETSPLAN\96701671-050101-PP.DWG
LAYOUT NAME - Sheet-18b

PLOT DATE : 7/31/2025 11:45 AM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 44



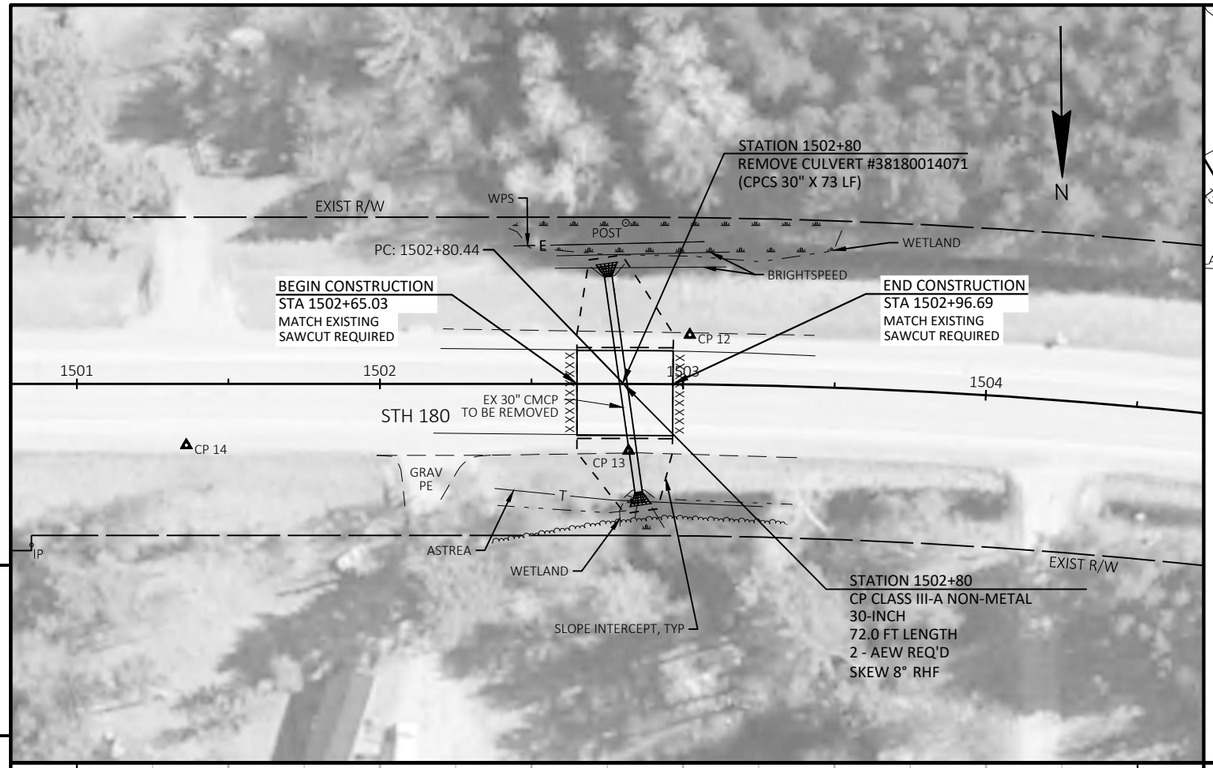


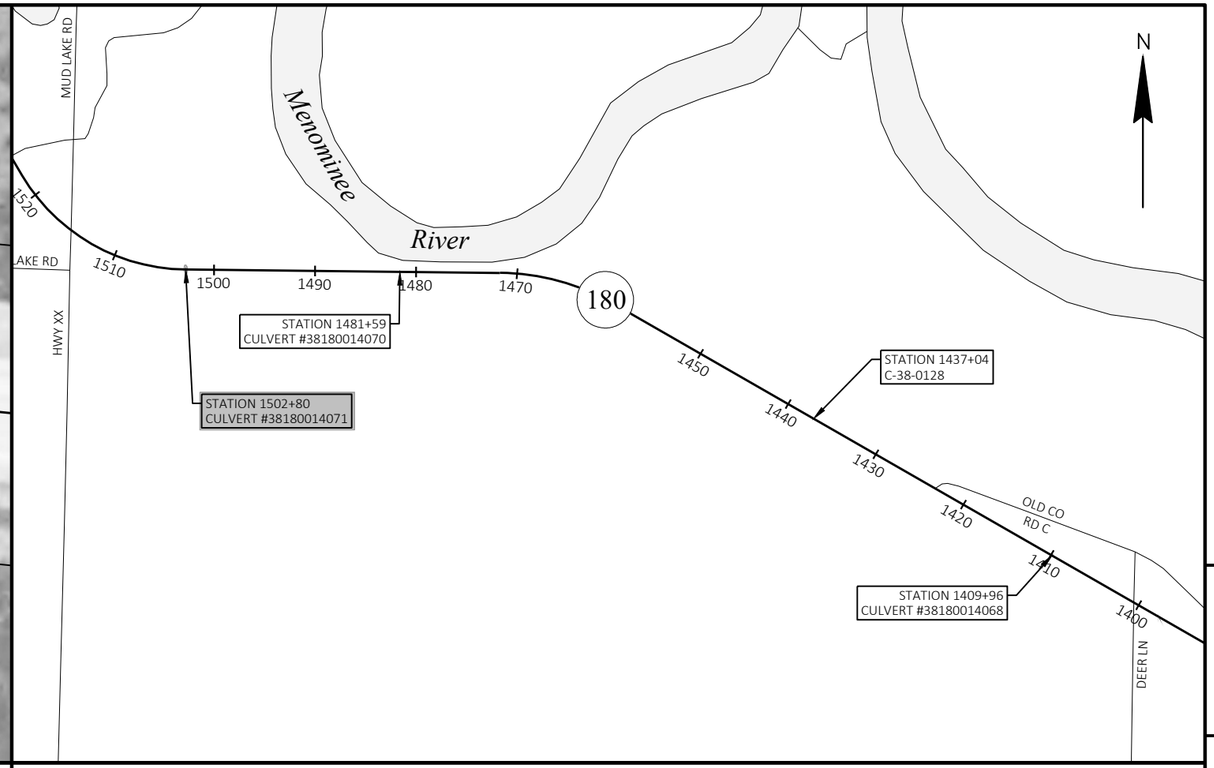


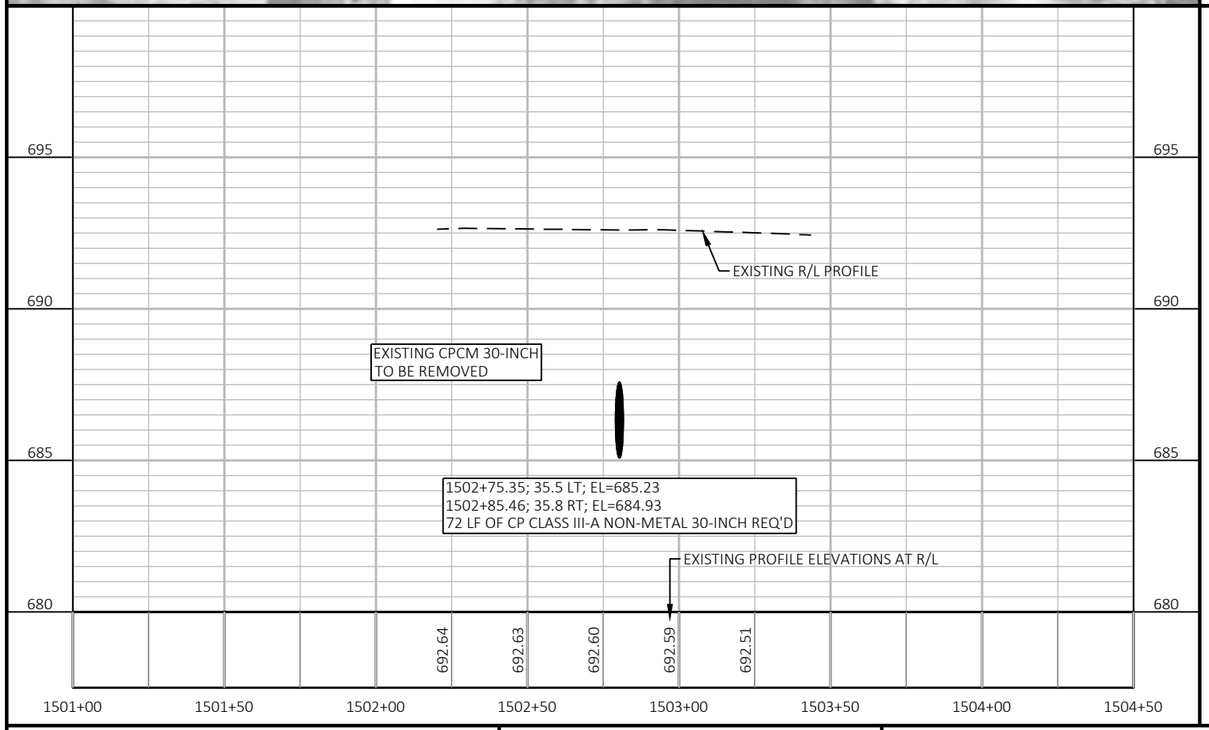
CONTROL POINT TABLE			
POINT NUMBER	Y	X	ELEVATION
15	240288.322	738492.146	691.03
16	240287.133	738636.042	691.41

PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	PLAN AND PROFILE: CULVERT #38180014070	SHEET 99 E

FILE NAME : S:\CURRPROJ\MARINETTE COUNTY\STH 180\CIVIL3D\96701600\SHEETSPLAN\96701671-050101-PP.DWG
LAYOUT NAME - Sheet-19a
PLOT DATE : 7/31/2025 11:46 AM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:50 FT





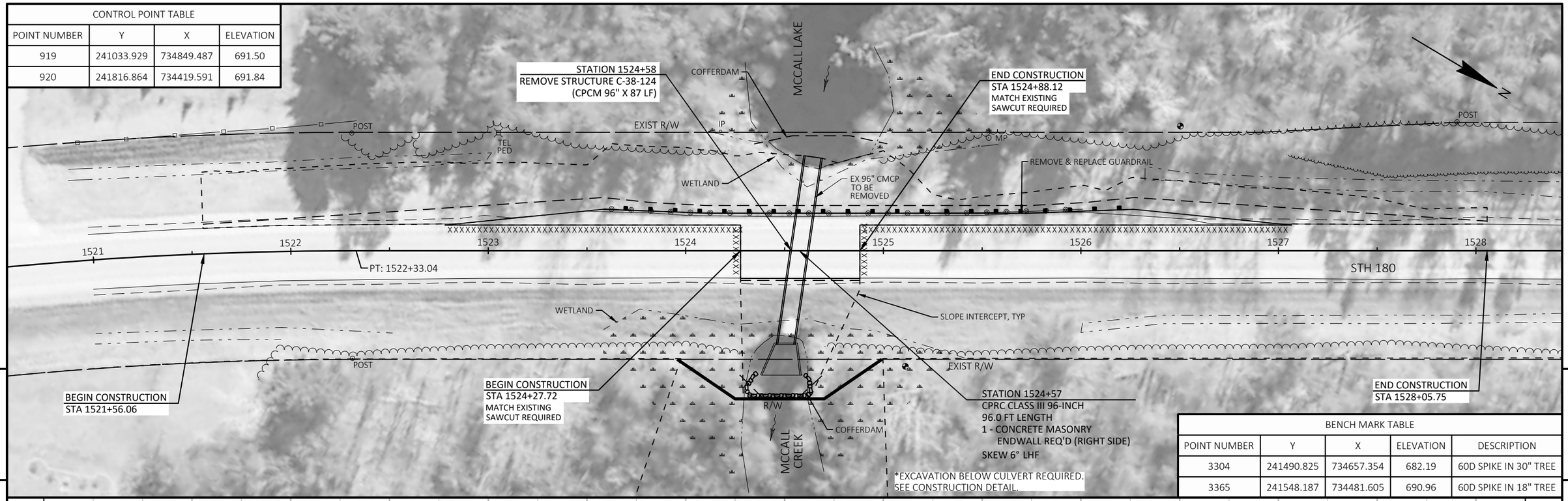


CONTROL POINT TABLE			
POINT NUMBER	Y	X	ELEVATION
12	240274.523	736347.436	692.68
13	240312.550	736368.040	691.22
14	240309.147	736513.953	691.48

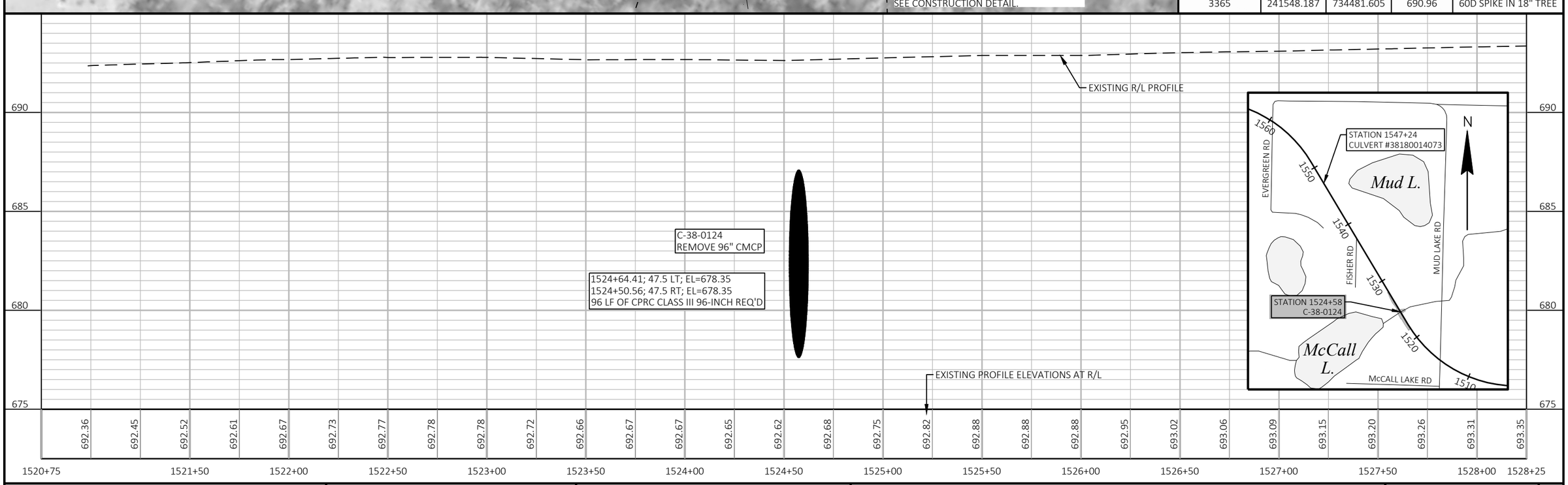
PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	PLAN AND PROFILE: CULVERT #38180014071	SHEET 100	E

FILE NAME : S:\CURRPROJ\MARINETTE COUNTY\STH 180\CIVIL3D\96701600\SHEETSPLAN\96701671-050101-PP.DWG
LAYOUT NAME - Sheet-19b
PLOT DATE : 7/31/2025 11:47 AM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 44

CONTROL POINT TABLE			
POINT NUMBER	Y	X	ELEVATION
919	241033.929	734849.487	691.50
920	241816.864	734419.591	691.84

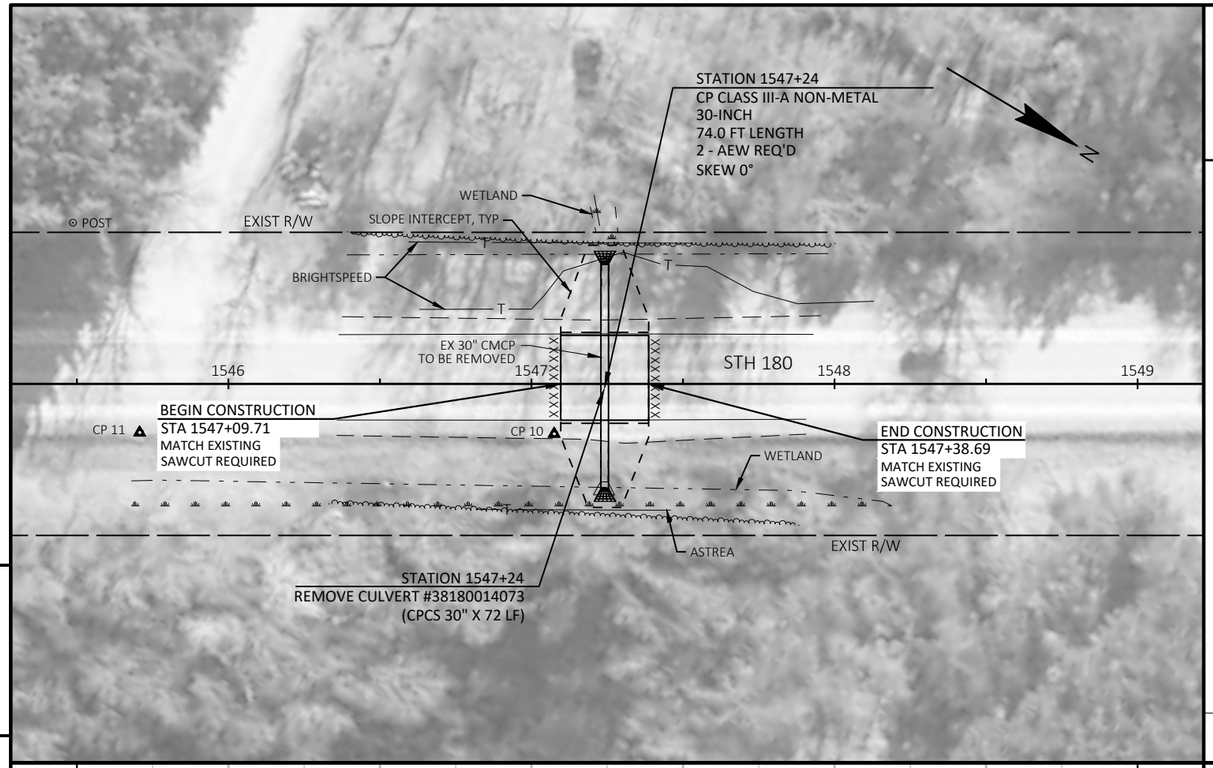


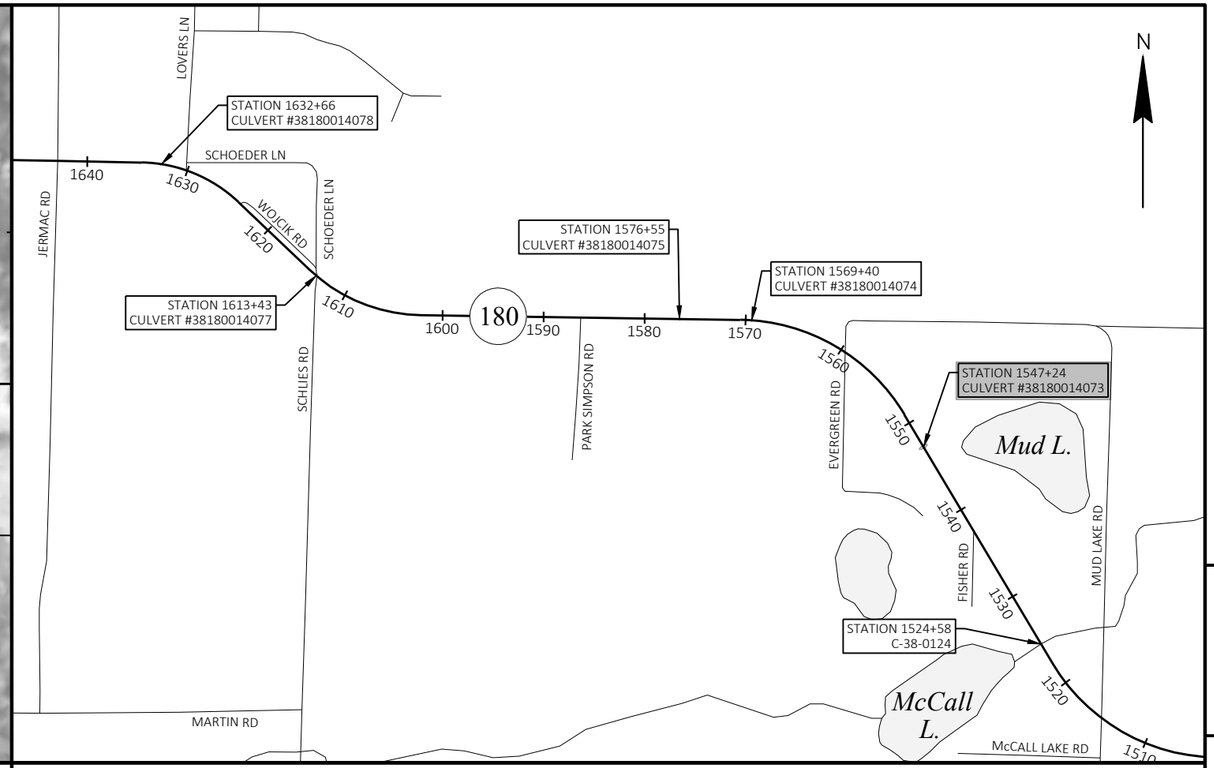
BENCH MARK TABLE				
POINT NUMBER	Y	X	ELEVATION	DESCRIPTION
3304	241490.825	734657.354	682.19	60D SPIKE IN 30" TREE
3365	241548.187	734481.605	690.96	60D SPIKE IN 18" TREE

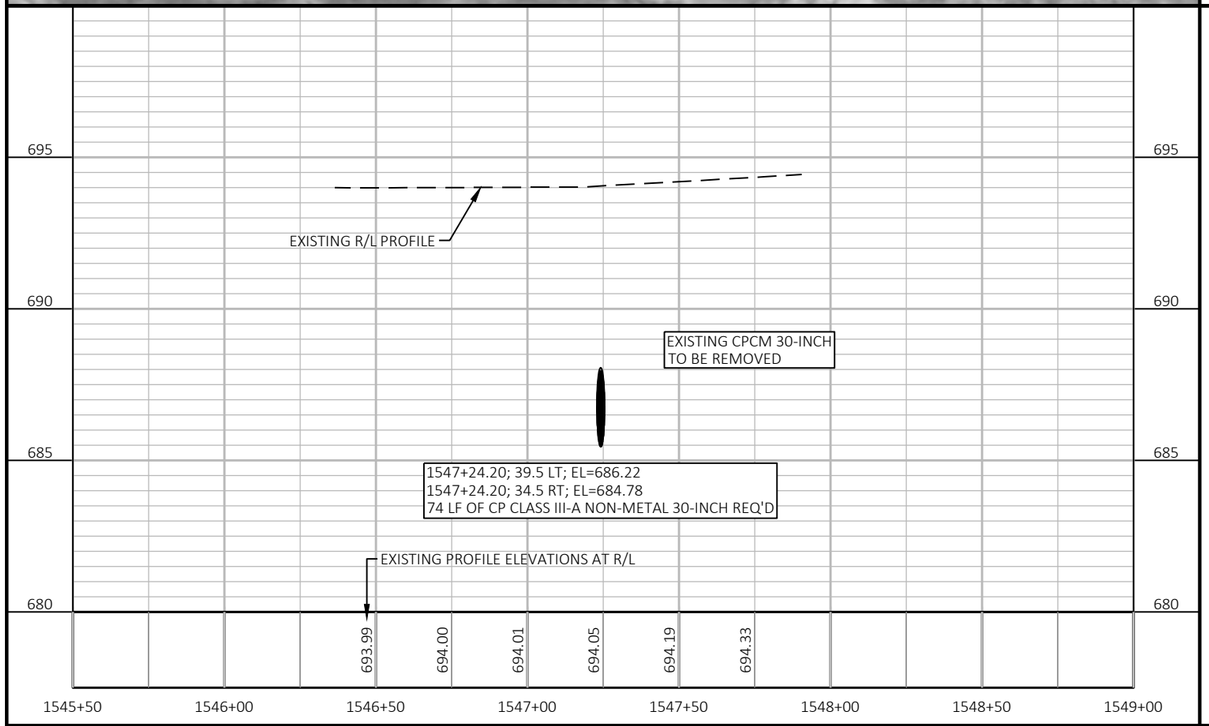


PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	PLAN AND PROFILE: C-38-124	SHEET 101	E

FILE NAME : S:\CURRPROJ\MARINETTE COUNTY\STH 180\CIVIL3D\96701600\SHEETSPLAN\96701671-050101-PP.DWG
LAYOUT NAME - Sheet-20a
PLOT DATE : 7/31/2025 11:47 AM
PLOT BY : AARON SARAUER
PLOT NAME :
PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 44

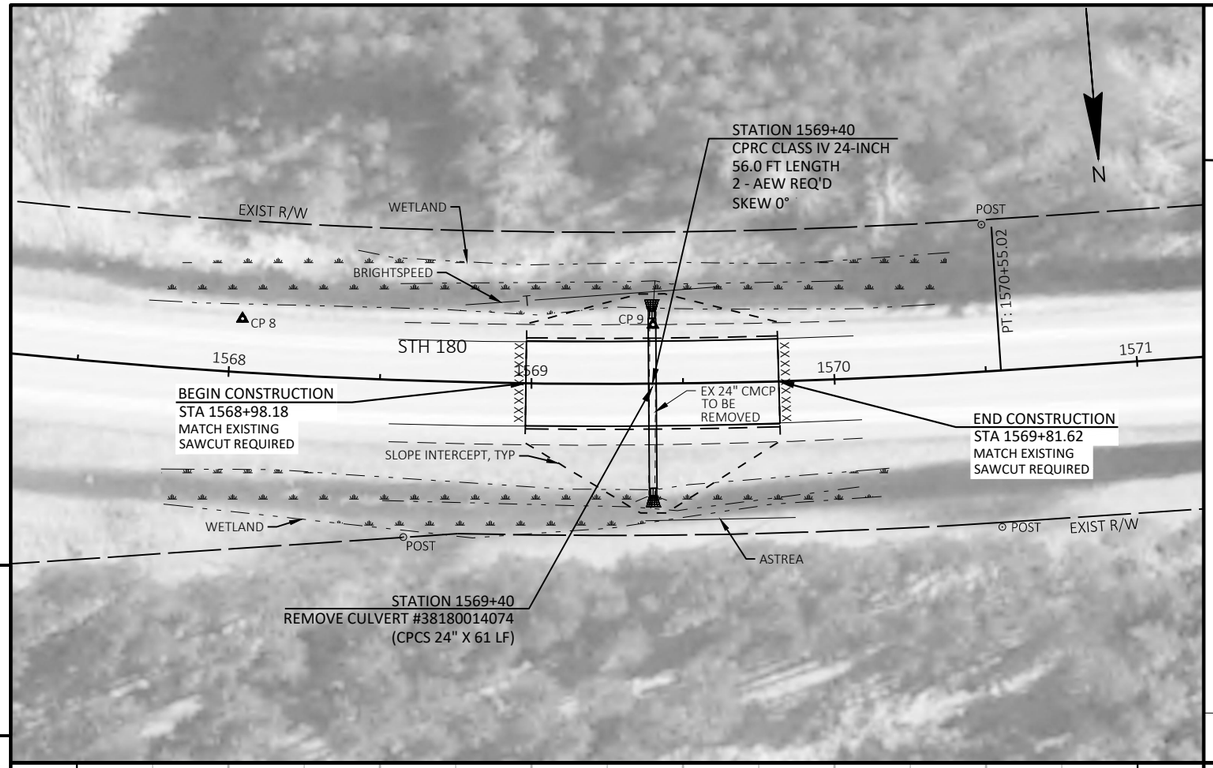


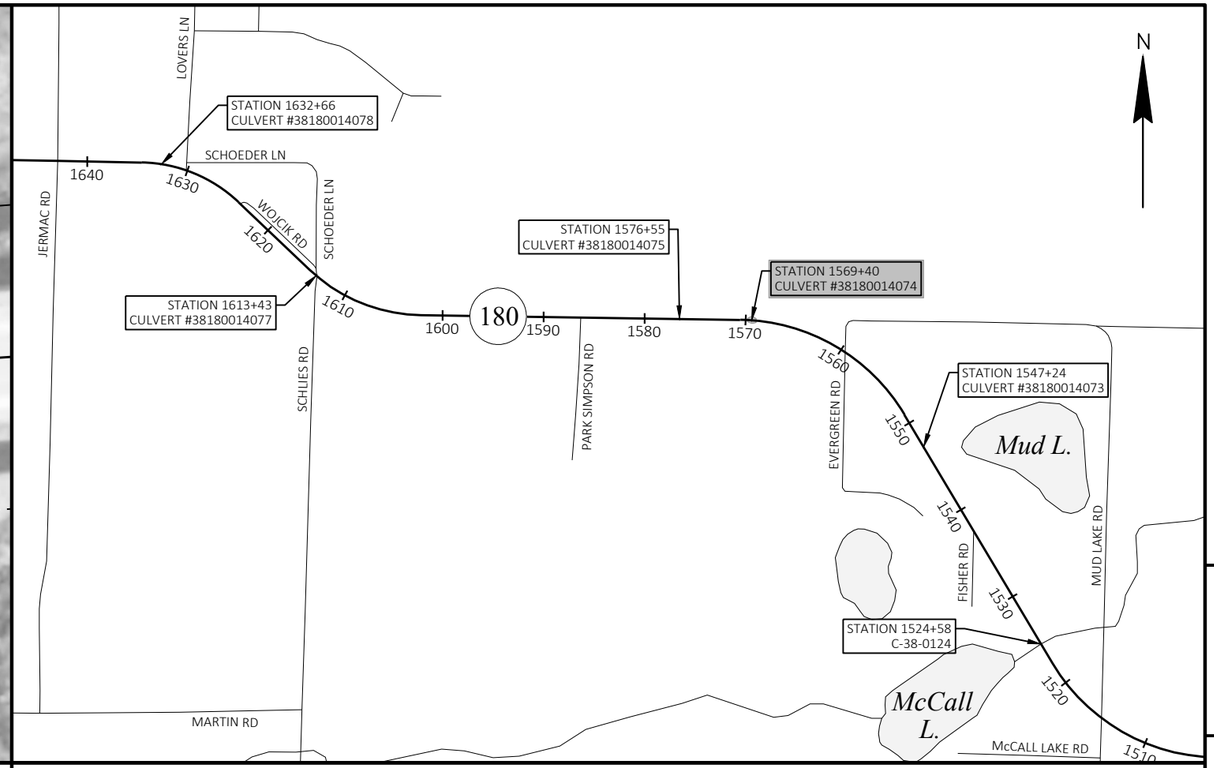


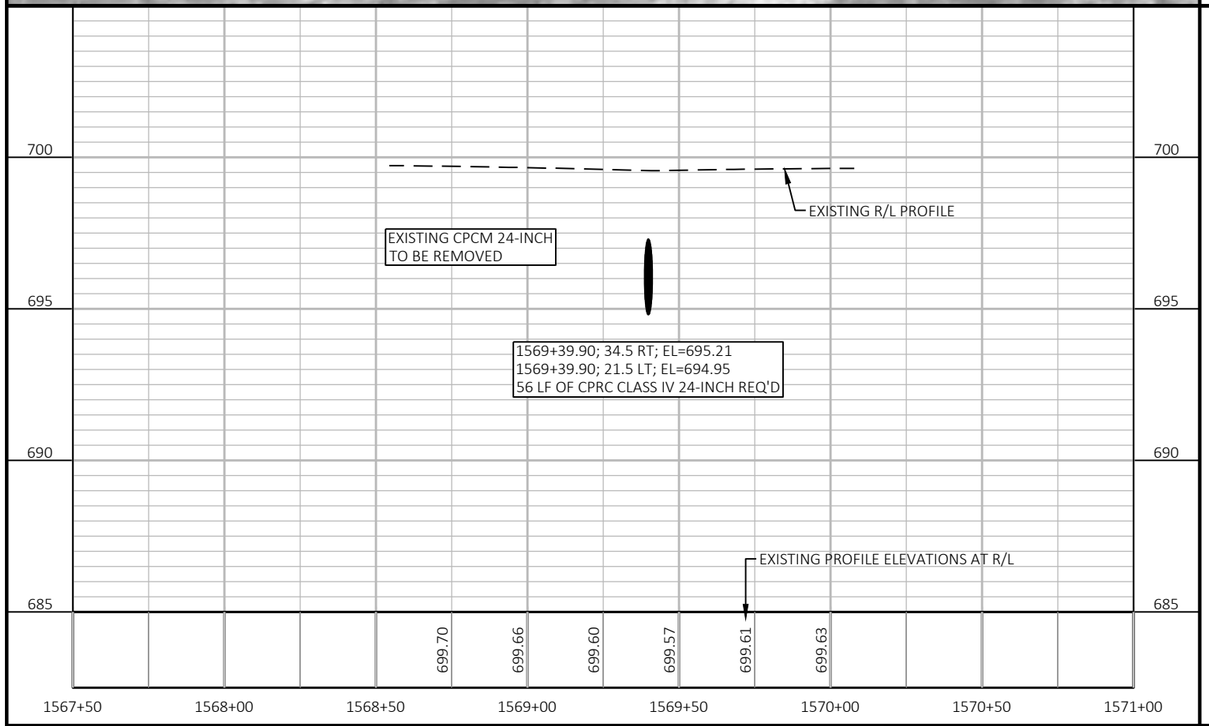


CONTROL POINT TABLE			
POINT NUMBER	Y	X	ELEVATION
10	243355.665	733496.198	693.34
11	243237.983	733565.887	693.26

PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	PLAN AND PROFILE: CULVERT #38180014073	SHEET 102	E



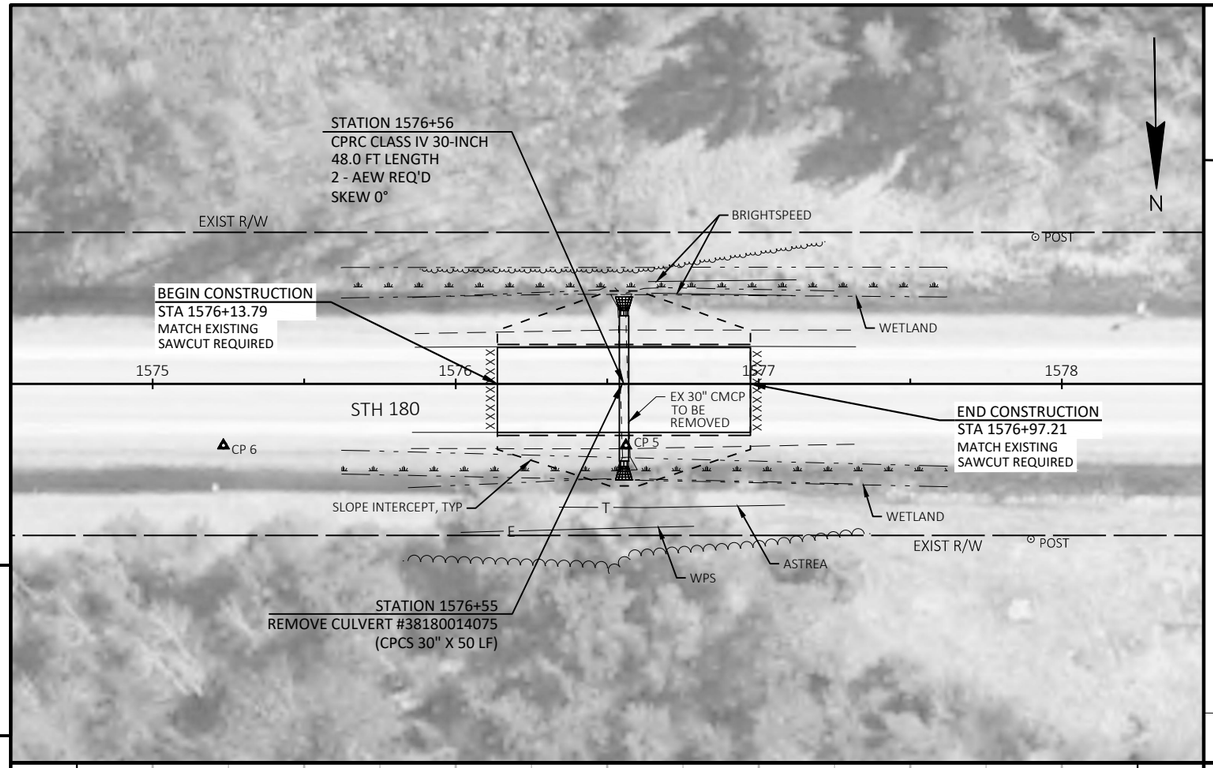


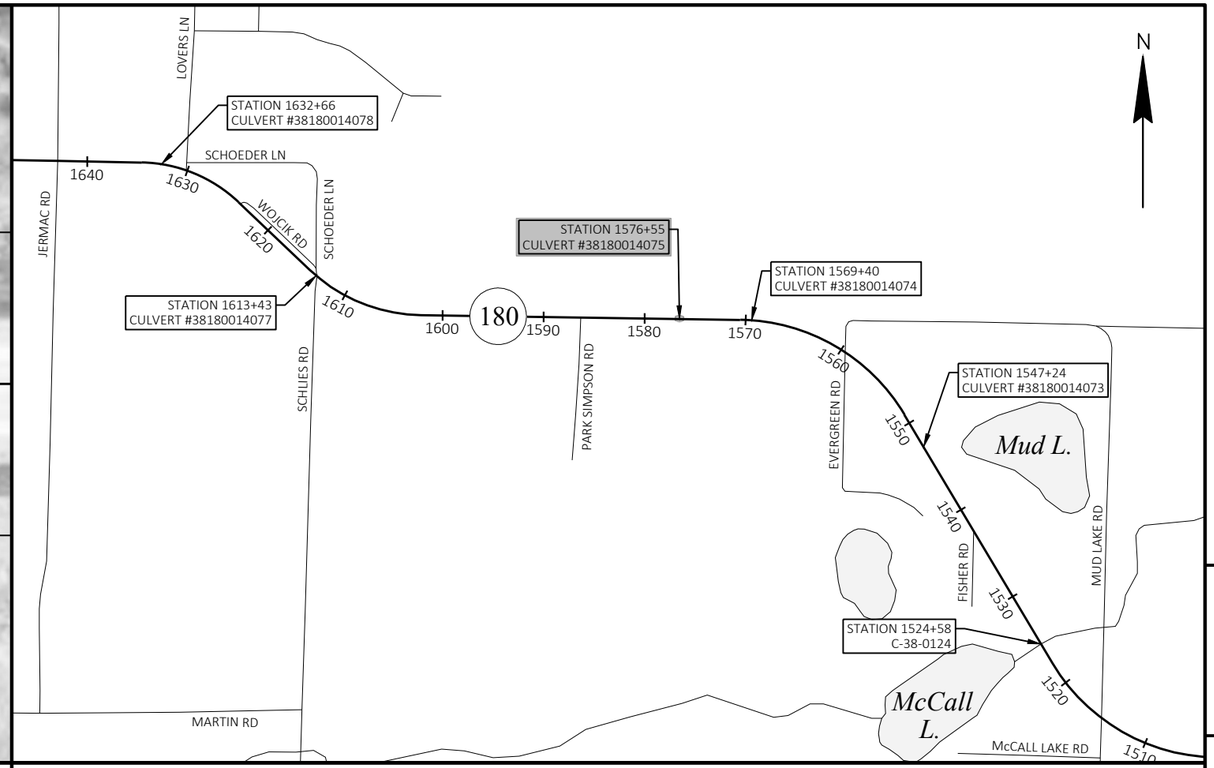


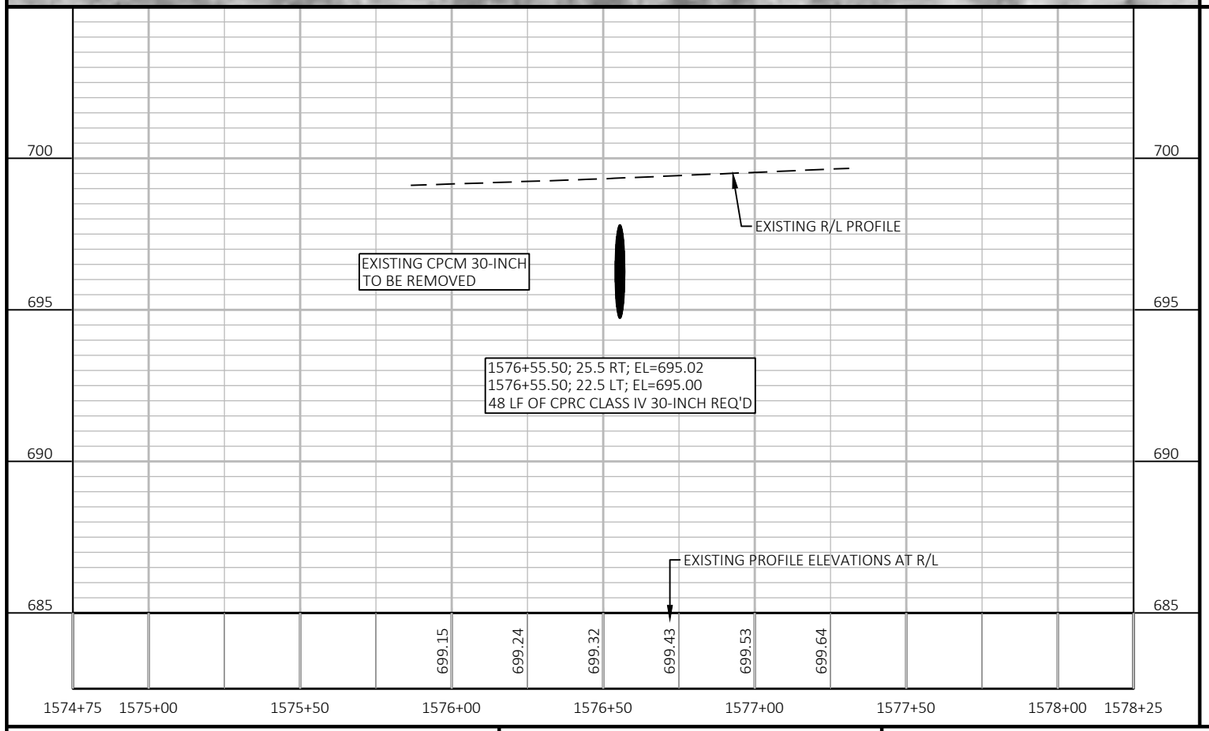
CONTROL POINT TABLE			
POINT NUMBER	Y	X	ELEVATION
8	244581.354	731906.949	698.36
9	244594.484	731772.145	697.90

PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	PLAN AND PROFILE: CULVERT #38180014074	SHEET 103 E

FILE NAME : S:\CURRPROJ\MARINETTE COUNTY\STH 180\CIVIL3D\96701600\SHEETSPLAN\96701671-050101-PP.DWG
LAYOUT NAME - Sheet-21b
PLOT DATE : 7/31/2025 11:49 AM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:50 FT







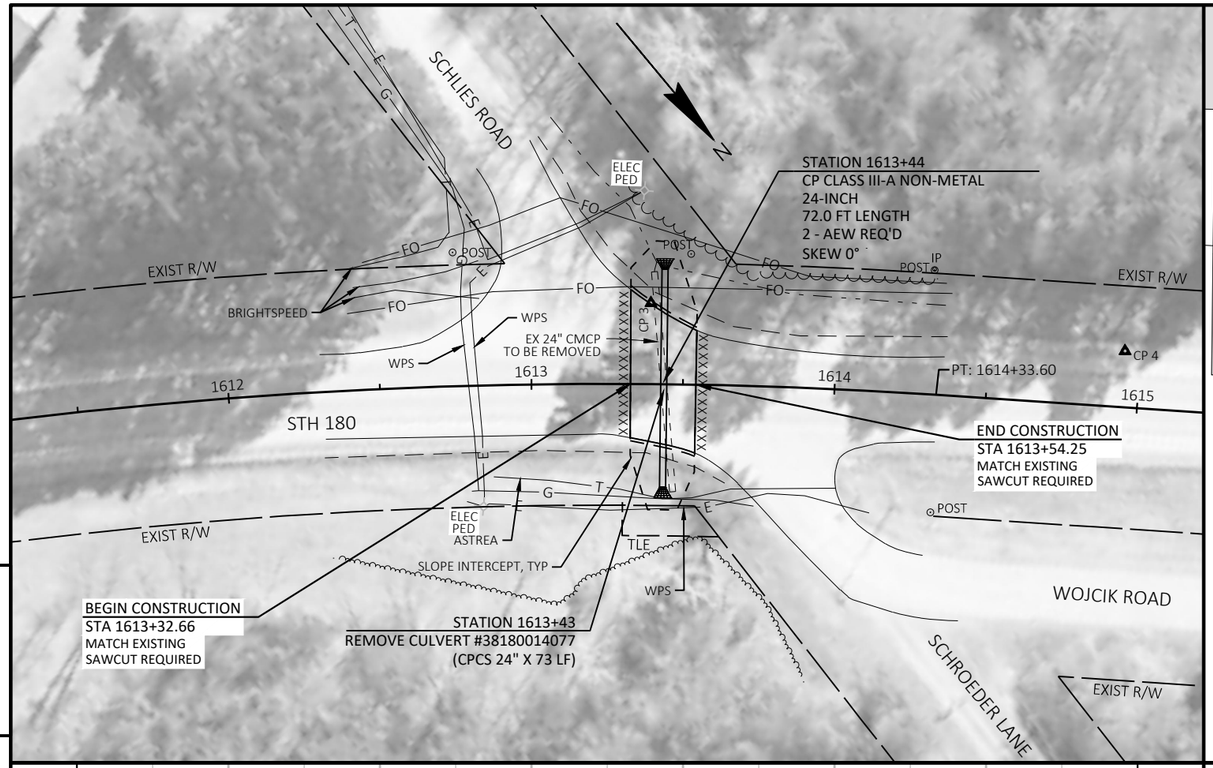
CONTROL POINT TABLE			
POINT NUMBER	Y	X	ELEVATION
5	244648.316	731058.163	698.73
6	244646.302	731190.960	698.22

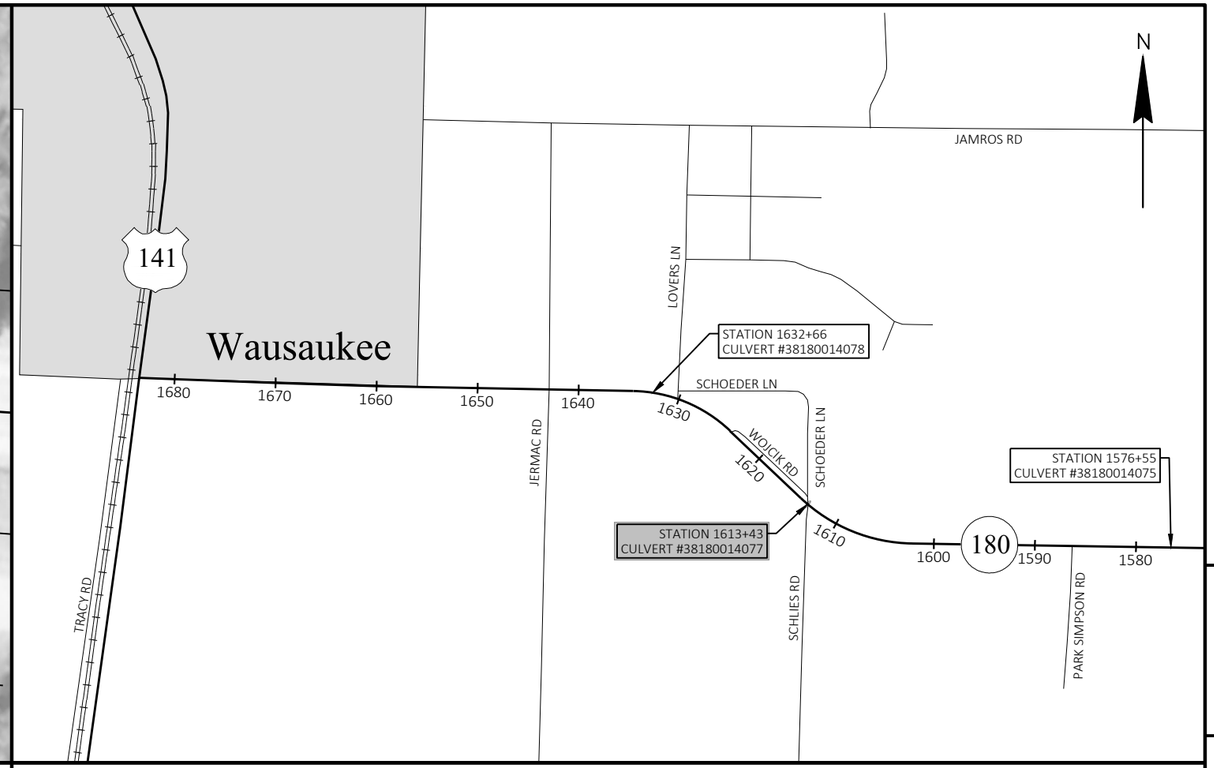
PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	PLAN AND PROFILE: CULVERT #38180014075	SHEET 104	E

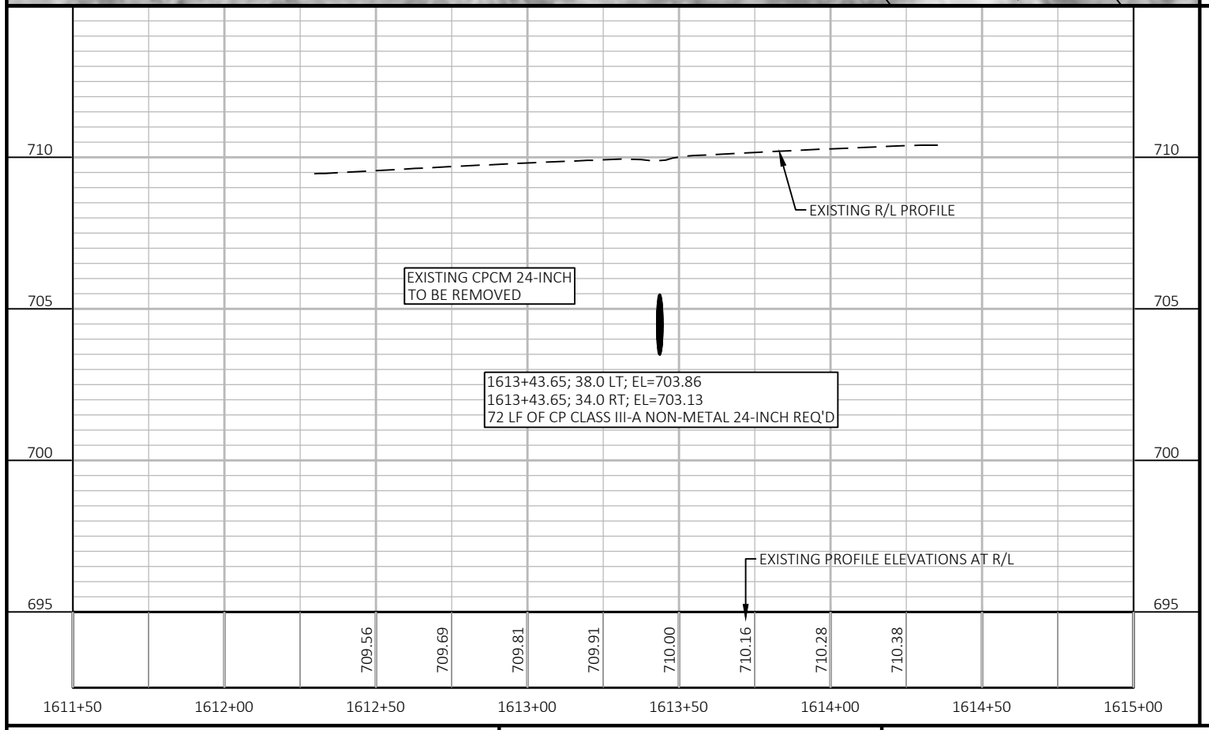
FILE NAME : S:\CURRPROJ\MARINETTE COUNTY\STH 180\CIVIL3D\96701600\SHEETSPLAN\96701671-050101-PP.DWG
LAYOUT NAME - Sheet-22a

PLOT DATE : 7/31/2025 11:50 AM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 44



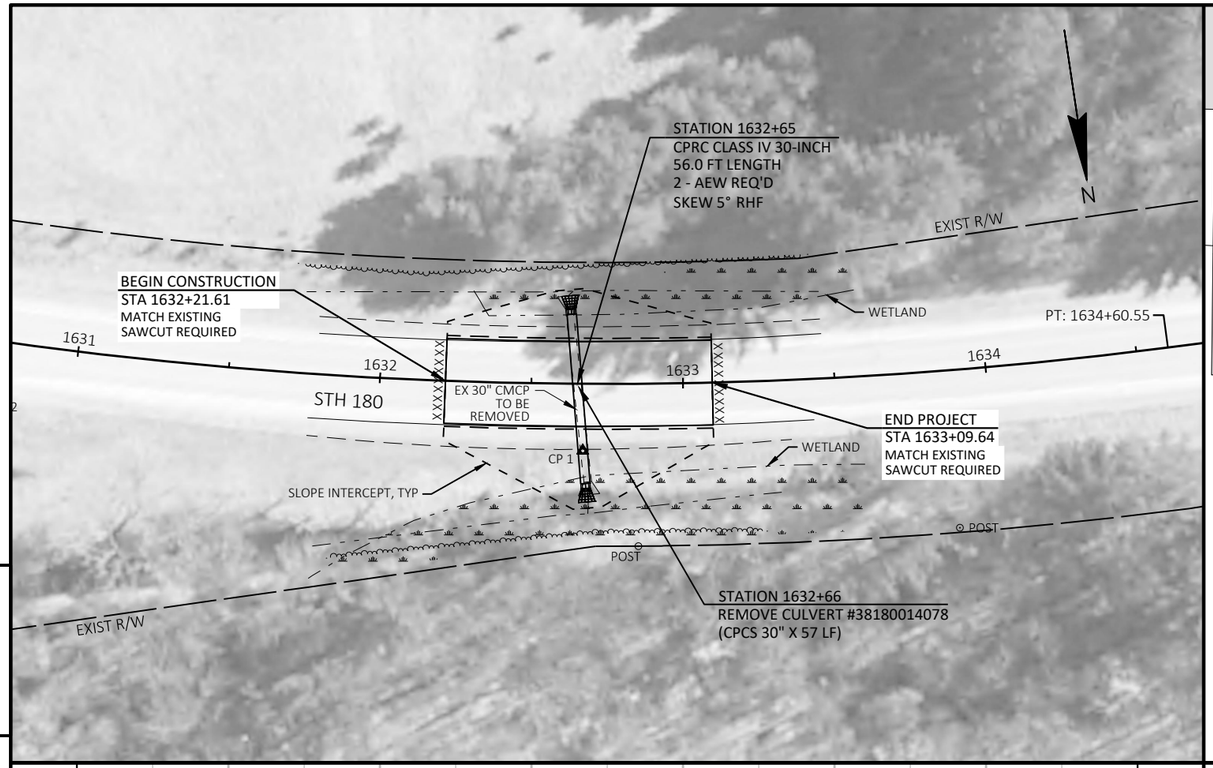


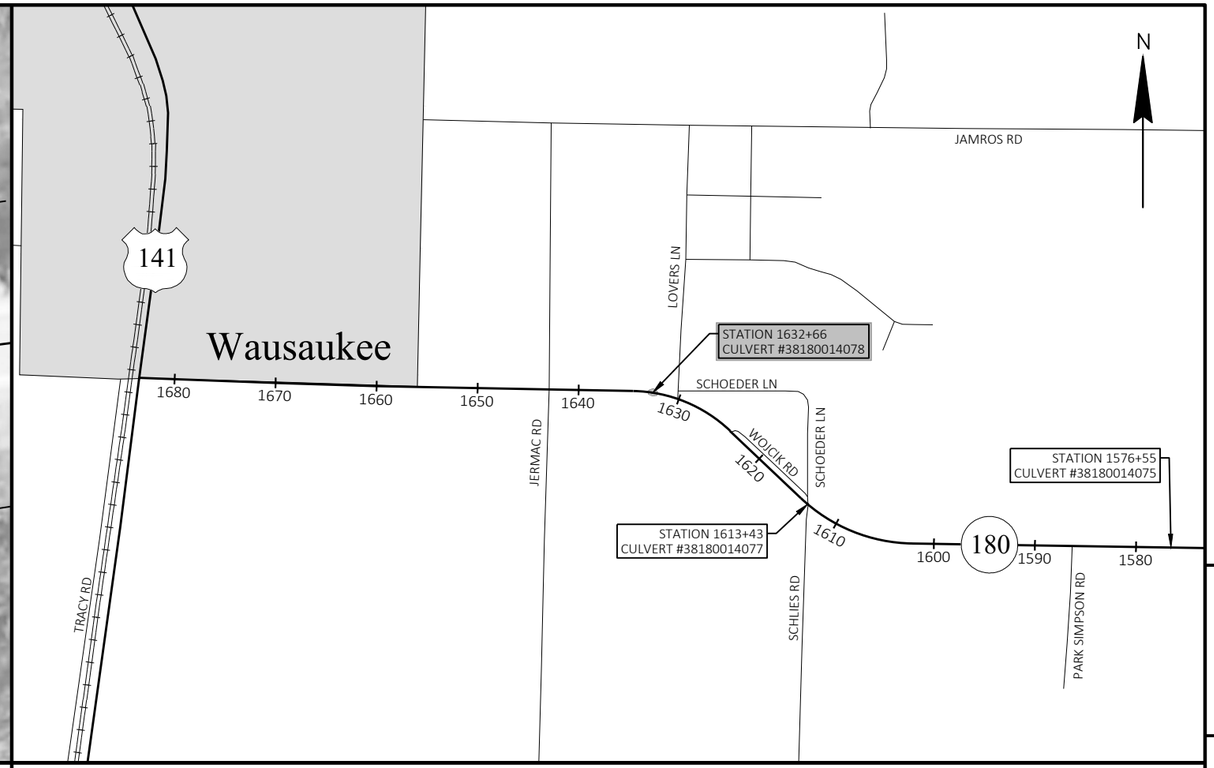


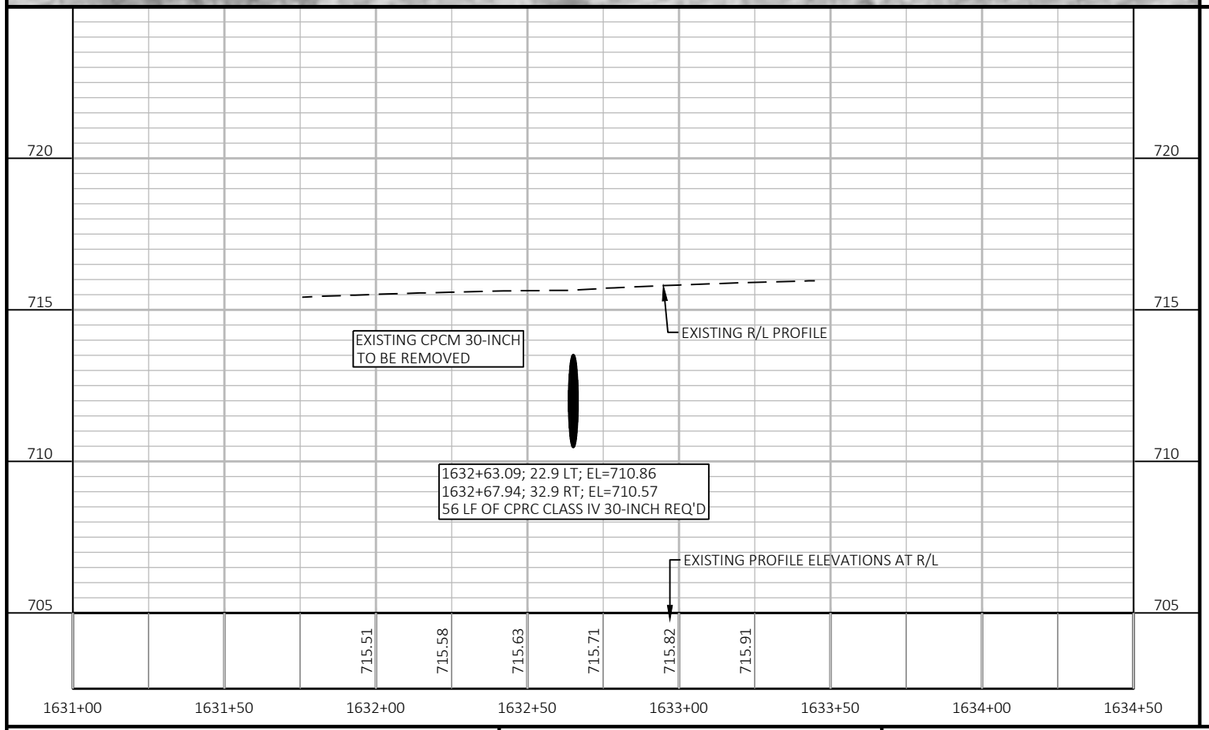
CONTROL POINT TABLE			
POINT NUMBER	Y	X	ELEVATION
3	245032.357	727449.848	709.82
4	245144.481	727339.585	710.40

PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	PLAN AND PROFILE: CULVERT #38180014077	SHEET 105	E

FILE NAME : S:\CURRPROJ\MARINETTE COUNTY\STH 180\CIVIL3D\96701600\SHEETSPLAN\96701671-050101-PP.DWG
LAYOUT NAME - Sheet-22b
PLOT DATE : 7/31/2025 11:51 AM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 44







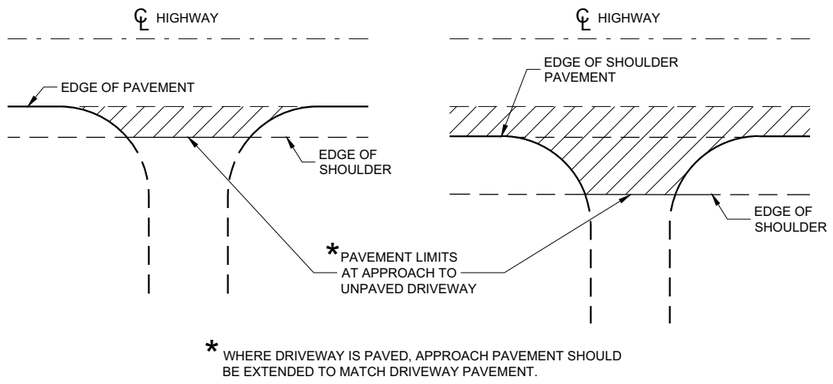
CONTROL POINT TABLE			
POINT NUMBER	Y	X	ELEVATION
1	246180.004	725933.166	715.90
2	246134.949	726126.095	715.16

PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	PLAN AND PROFILE: CULVERT #38180014078	SHEET 106	E

Standard Detail Drawing List

08D21-01	DRIVEWAYS WITHOUT CURB & GUTTER
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E11-02	TURBIDITY BARRIER
08E15-01	CULVERT PIPE CHECK
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F02-01	APRON ENDWALLS FOR PIPE ARCH AND ELLIPTICAL PIPE
08F04-08	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
08F08-02	STEEL APRON ENDWALLS FOR CULVERT PIPE AND PIPE ARCH SLOPED CROSS DRAINS
08F10-02	CONCRETE MASONRY ENDWALLS FOR CULVERT PIPE AND PIPE ARCH
12A03-10	NAME PLATE (STRUCTURES)
13A10-03A	SHOULDER RUMBLE STRIPS - ASPHALT
13A10-03G	SHOULDER AND EDGE LINE RUMBLE STRIPS - CROSSINGS, INTERSECTIONS, BRIDGES, DRIVEWAYS
13A10-03H	SHOULDER AND EDGE LINE RUMBLE STRIPS - RAILROAD, PASSING, CLIMBING AND BYPASS LANES
13A11-04A	CENTERLINE RUMBLE STRIPS - ASPHALT
13A11-04D	CENTERLINE RUMBLE STRIPS - INTERSECTIONS, DRIVEWAYS, BRIDGES, RAILROADS
13C19-03	HMA LONGITUDINAL JOINTS
14B29-01	SAFETY EDGE
14B42-07A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07D	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-04A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15C02-09A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-09B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C02-09C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C02-09H	MODIFIED ROUTE ASSEMBLY FOR DETOUR SIGNING
15C03-05	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C08-24A	PERMANENT LONGITUDINAL PAVEMENT MARKINGS
15C11-10B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C12-09A	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15C19-10A	MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY
15C35-06A	PAVEMENT MARKING (INTERSECTIONS)
15D28-04	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY

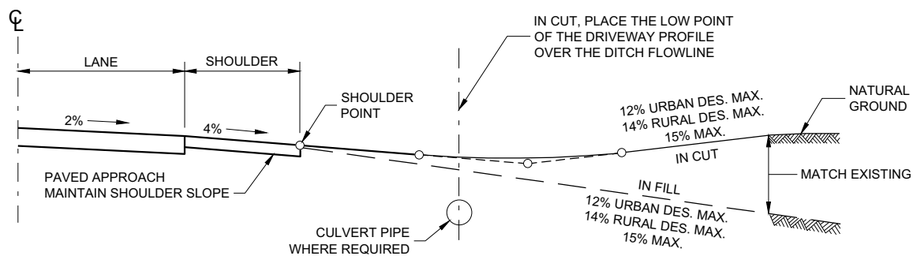
6



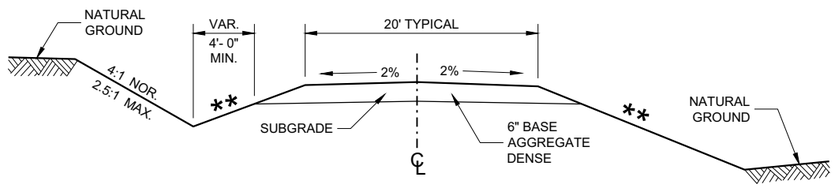
PLAN VIEW
(UNPAVED SHOULDER ON HIGHWAY)

PLAN VIEW
(PAVED SHOULDER ON HIGHWAY)

RURAL DRIVEWAY INTERSECTION DETAIL
(NO CURB AND GUTTER OR SIDEWALK)



TYPICAL DRIVEWAY PROFILES

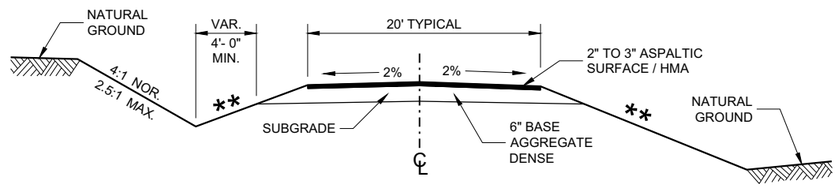


IN CUT **IN FILL**

TYPICAL CROSS SECTION FOR PRIVATE DRIVE OR FIELD ENTRANCE AGGREGATE SURFACE

** SLOPE CAN VARY WITH SPEED. SEE 11-45-30.6.2

POSTED SPEED MPH	MAX. SLOPE
<35	4:1
≥ 35 TO < 60	6:1
≥60	10:1



IN CUT **IN FILL**

TYPICAL CROSS SECTION FOR PRIVATE DRIVE OR FIELD ENTRANCE ASPHALTIC SURFACE

6

6

SDD 08D21 - 01

SDD 08D21 - 01

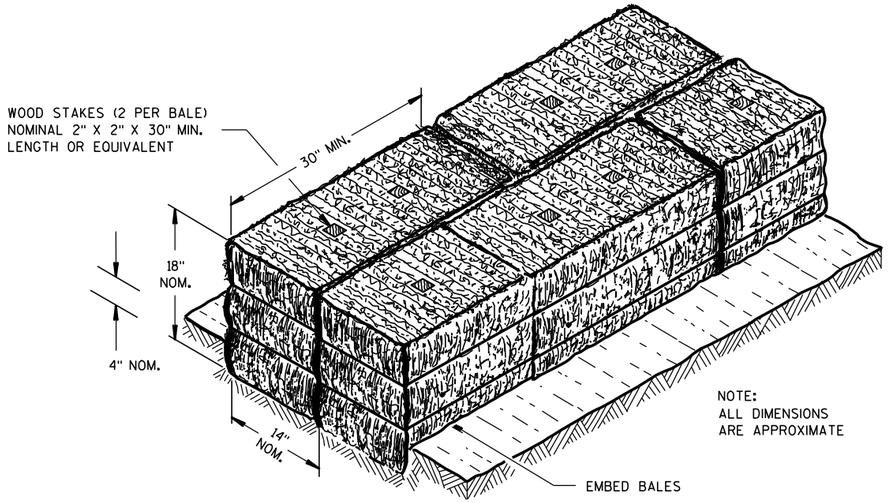
DRIVEWAYS WITHOUT CURB AND GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

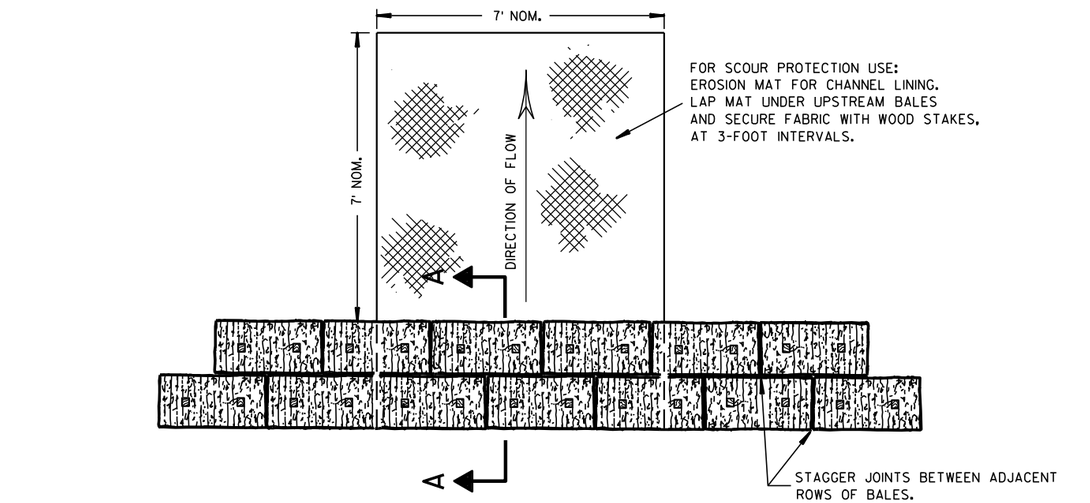
APPROVED
December 2017
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS DEVE
UNIT SUPERVISOR

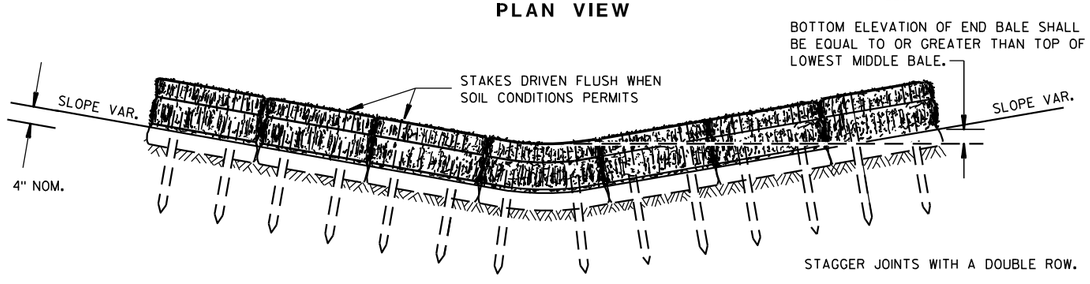
FHWA



SECTION A-A



PLAN VIEW



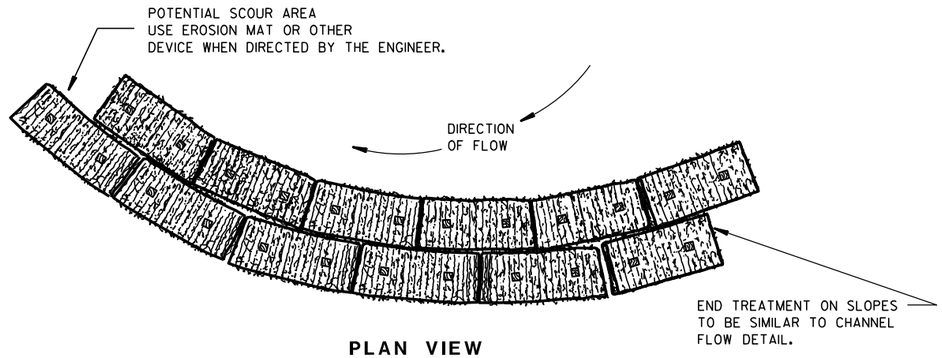
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES (1)

GENERAL NOTES

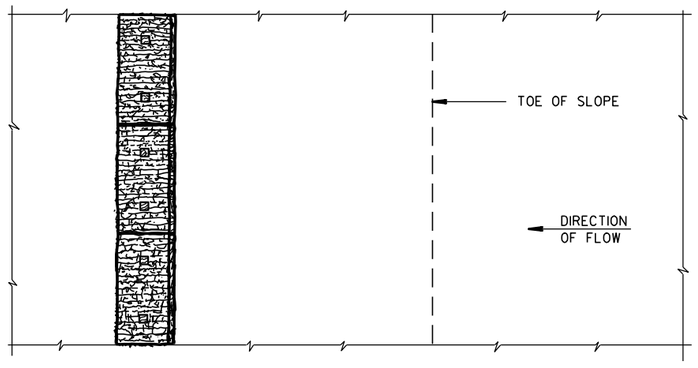
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

(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.

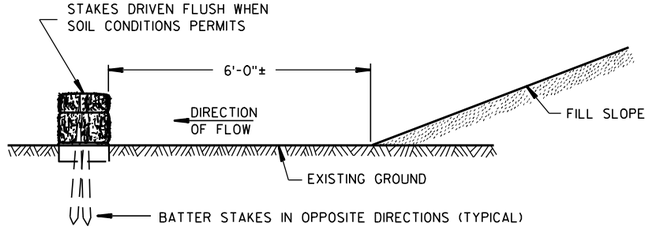


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

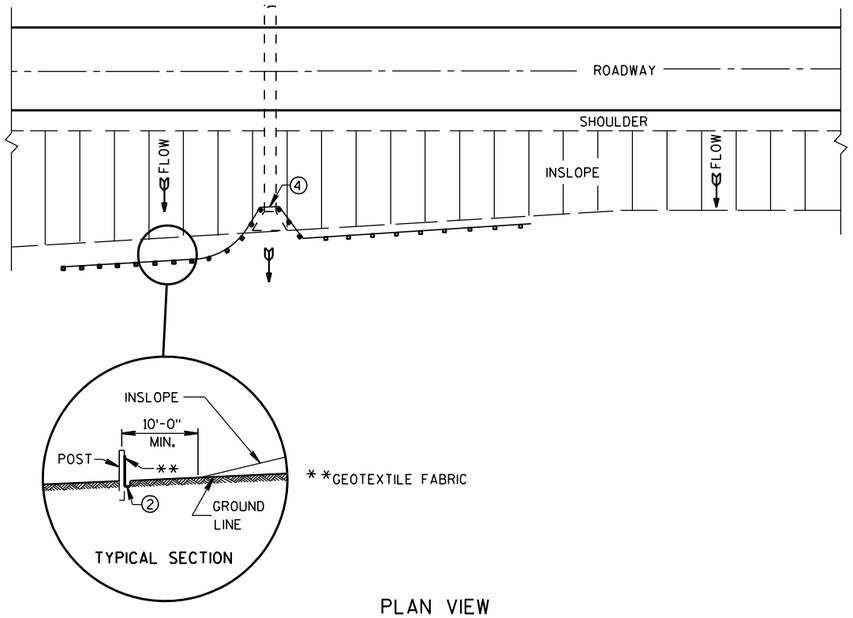
EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

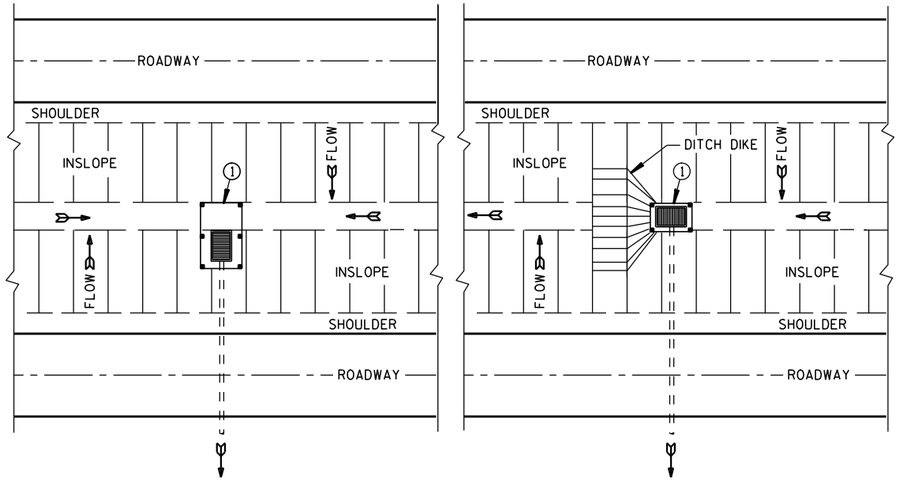
APPROVED
6/04/02 DATE
/S/ Beth Cannestra CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6
S.D.D. 8 E 8-3



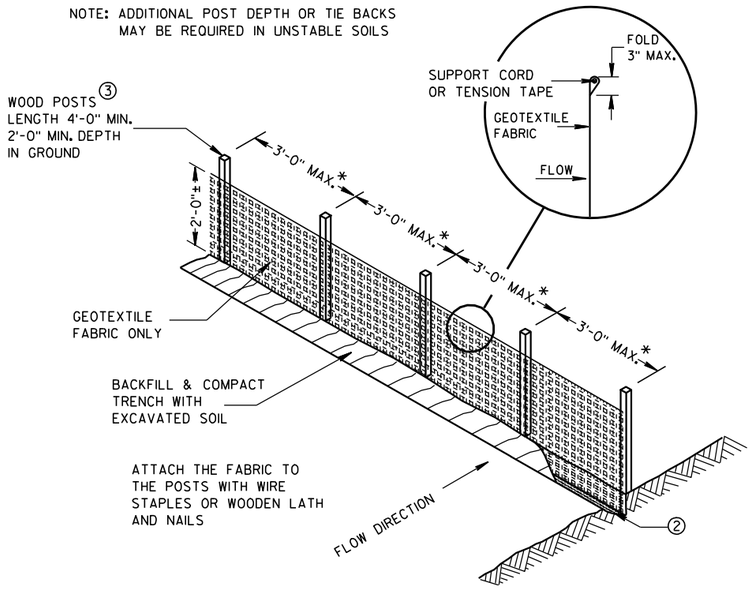
PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



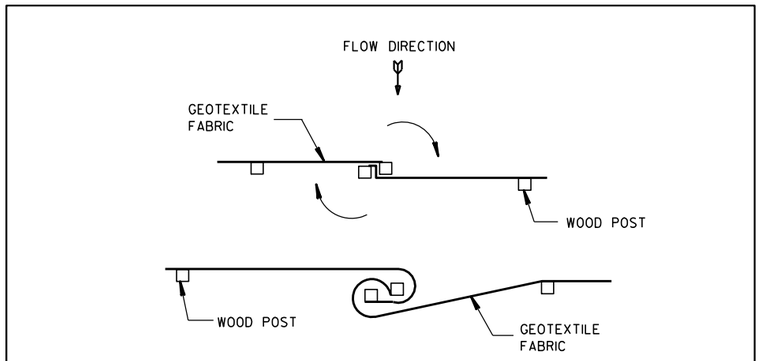
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS



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

SILT FENCE

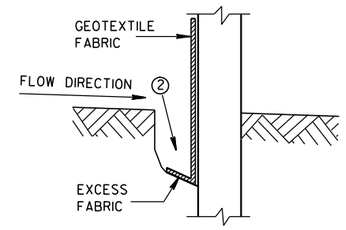


JOINING TWO LENGTHS OF SILT FENCE 5

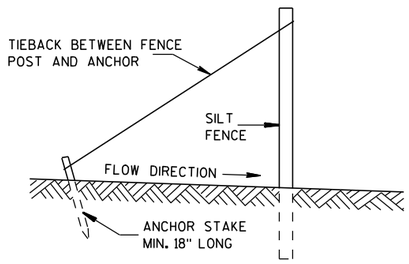
GENERAL NOTES

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 TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

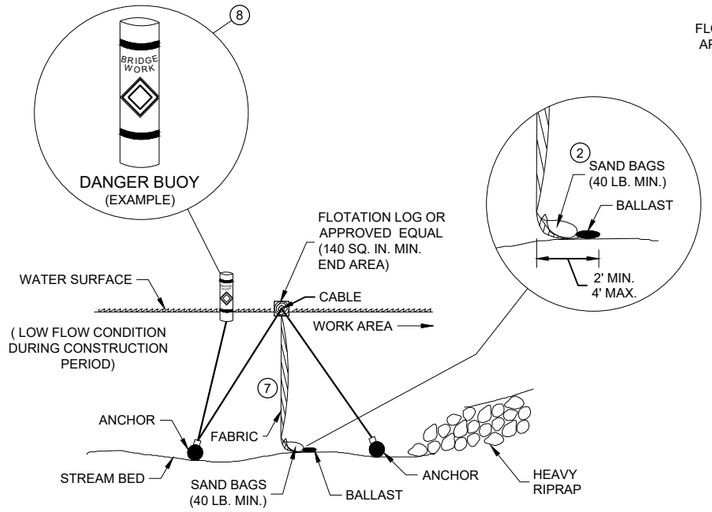
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

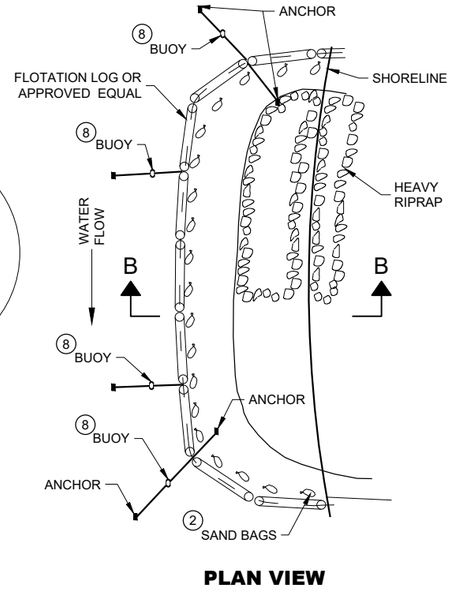
S.D.D. 8 E 9-6

6

S.D.D. 8 E 9-6

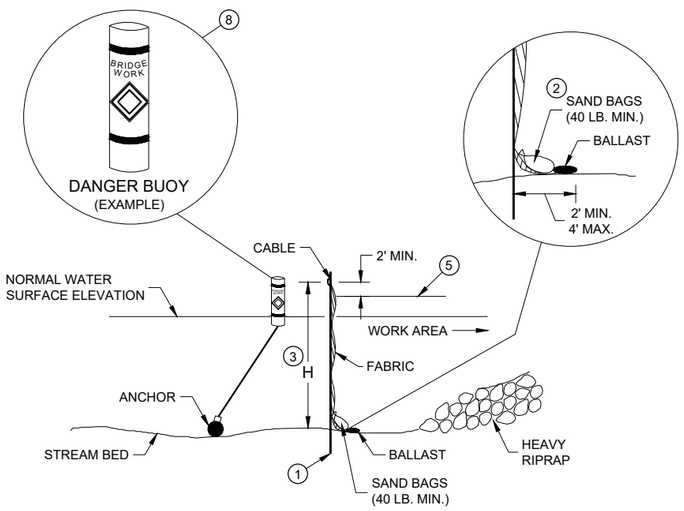


SECTION B - B

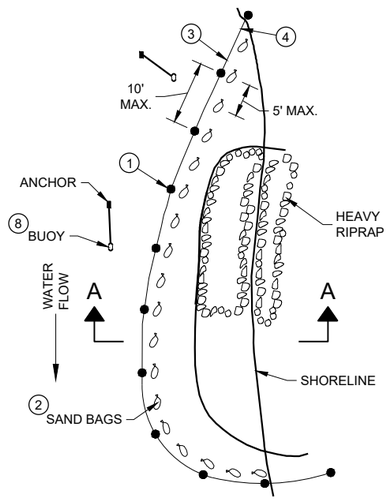


PLAN VIEW

TURBIDITY BARRIER - FLOAT ALTERNATIVE
CAUTION - SEE NOTE 6



SECTION A - A



PLAN VIEW

TURBIDITY BARRIER - STANDARD POST INSTALLATION

TURBIDITY BARRIER PLACEMENT DETAILS

GENERAL NOTES

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

TURBIDITY BARRIER MAY BE REMOVED AT THE ENGINEERS DISCRETION, WHEN PERMANENT EROSION CONTROL MEASURES HAVE BEEN ESTABLISHED.

(1) DRIVEN STEEL POSTS, PIPES, OR CHANNELS. LENGTH SHALL BE SUFFICIENT TO SECURELY SUPPORT BARRIER AT HIGH WATER ELEVATIONS.

(2) SAND BAGS TO BE USED AS ADDITIONAL BALLAST WHEN ORDERED BY THE ENGINEER TO MEET ADVERSE FIELD CONDITIONS. SPACE AS APPROPRIATE FOR SITE CONDITIONS.

(3) WHEN BARRIER HEIGHT "H" EXCEEDS 8 FEET, POST SPACING MAY NEED TO BE DECREASED.

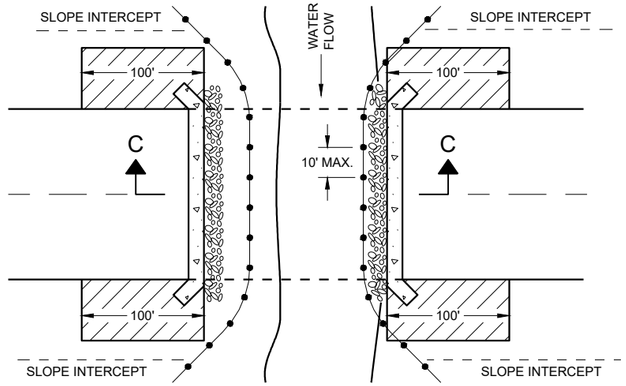
(4) IN WATERWAYS SUBJECT TO FLUCTUATING WATER ELEVATIONS, PROVISIONS SHOULD BE MADE TO ALLOW THE WATER TO EQUALIZE ON EACH SIDE OF THE BARRIER. THIS MAY BE ACCOMPLISHED BY LEAVING A PORTION OF THE BARRIER OPEN ON THE UPSTREAM END.

(5) ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION PERIOD. MINIMUM BARRIER HEIGHT SHALL BE 2' GREATER THAN EITHER THE Q2 ELEVATION OR THE ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION, WHICHEVER IS GREATER.

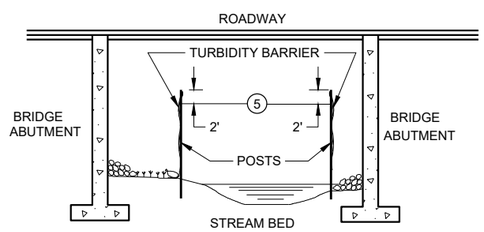
(6) FLOAT ALTERNATIVE WILL ONLY BE ALLOWED WITH WRITTEN APPROVAL OF THE ENGINEER, AND IS MEANT FOR LOCATIONS WHERE BEDROCK PREVENTS THE INSTALLATION OF POSTS.

(7) ALLOW SUFFICIENT SLACK VERTICALLY AND HORIZONTALLY SO THAT SEDIMENT BUILD UP WILL NOT SEPARATE OR LOWER THE TURBIDITY BARRIER.

(8) USE AS DIRECTED BY COAST GUARD OR DNR PERMIT WHEN WORKING IN NAVIGABLE WATERWAYS.



PLAN VIEW



SECTION C - C

TURBIDITY BARRIER DETAIL SHOWING TYPICAL PLACEMENT AT STRUCTURES

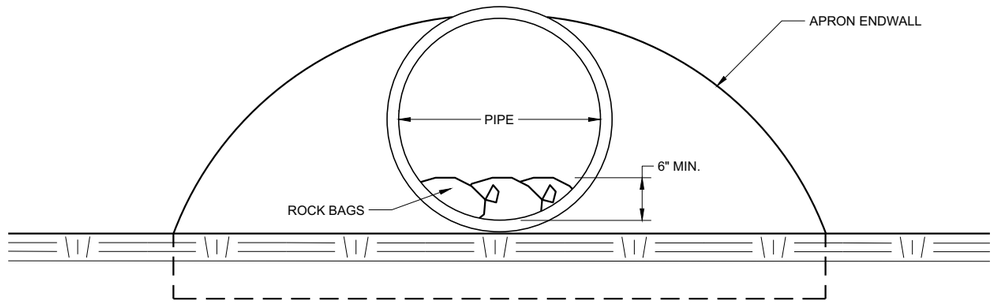
TURBIDITY BARRIER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

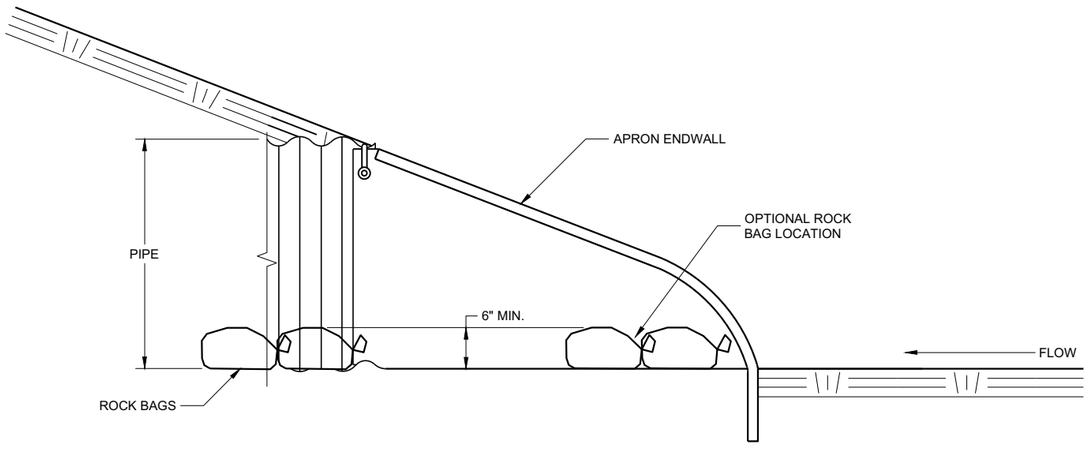
APPROVED
6/4/02
DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOI
ENGINEER

FHWA

6
SDD 08E11 - 02



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

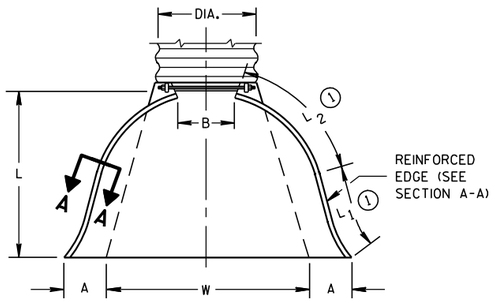
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4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

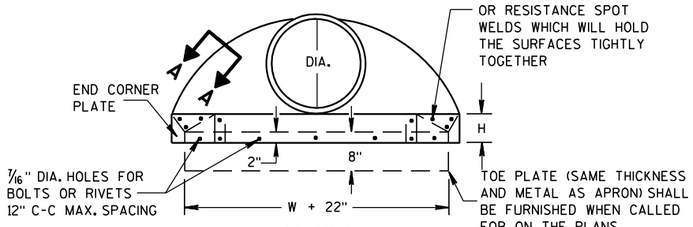
REINFORCED CONCRETE APRON ENDWALLS

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

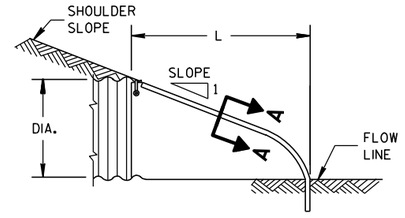
*MINIMUM
**MAXIMUM



PLAN VIEW

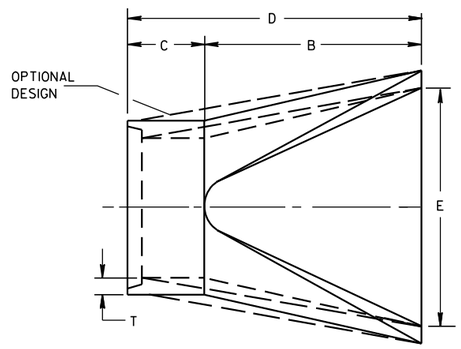


END VIEW

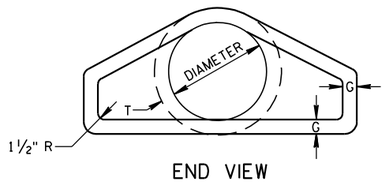


SIDE ELEVATION

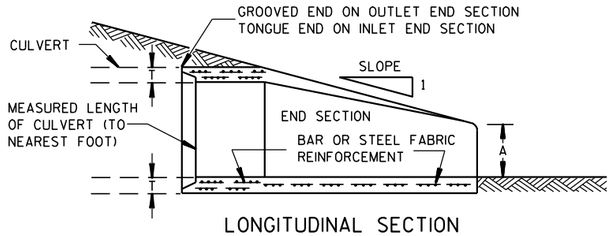
METAL ENDWALLS



PLAN

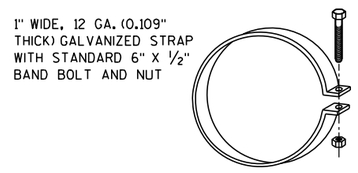


END VIEW



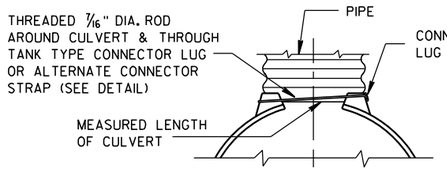
LONGITUDINAL SECTION

CONCRETE ENDWALLS

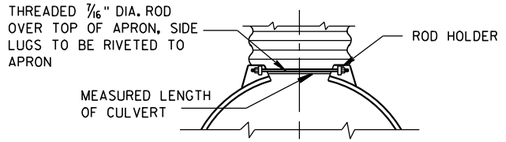


ALTERNATE FOR TYPE 1 CONNECTION

END SECTION CONNECTOR STRAP

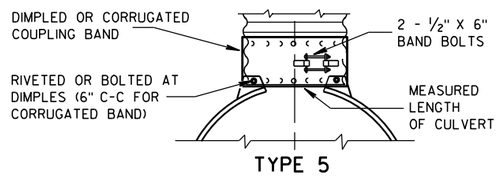


TYPE 1
FOR 12" THRU 24" CORR. PIPE



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

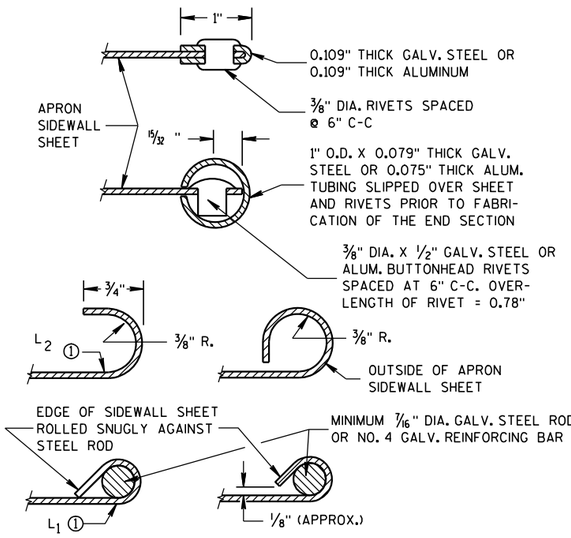
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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

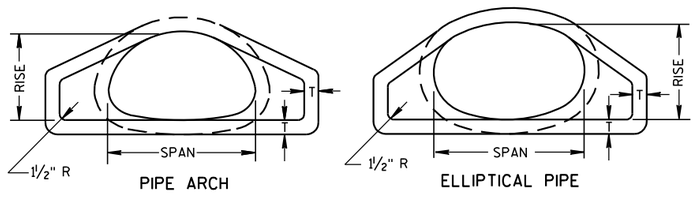
APPROVED
11/30/94 DATE
/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

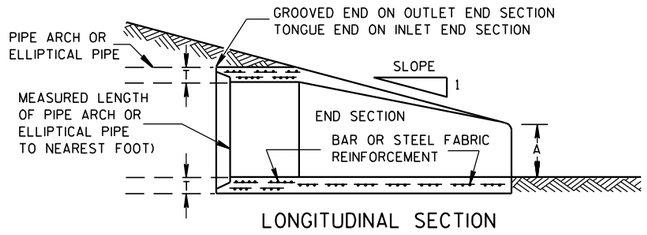
S.D.D. 8 F 1-11

6

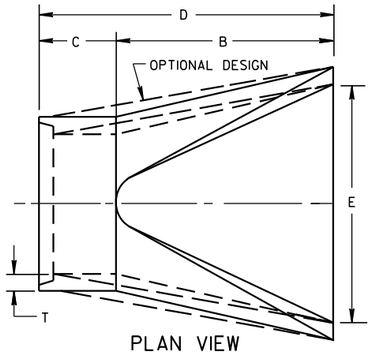
S.D.D. 8 F 1-11



END VIEW

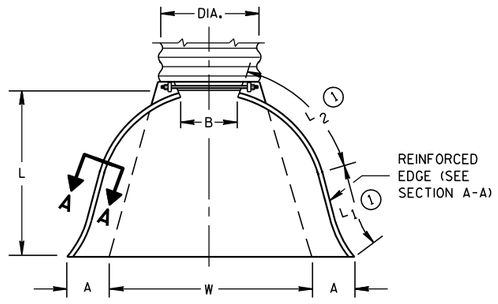


LONGITUDINAL SECTION

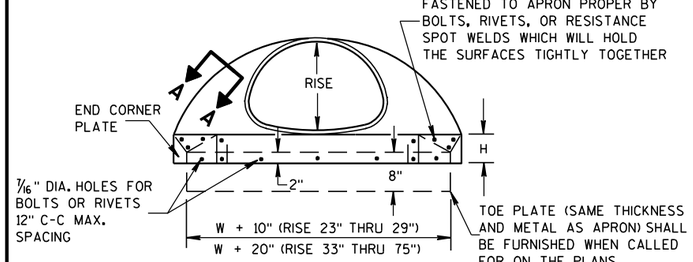


PLAN VIEW

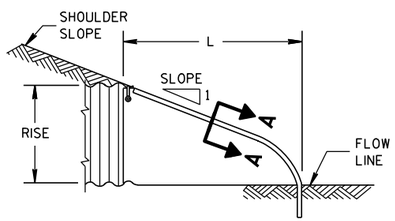
CONCRETE ENDWALLS



PLAN VIEW

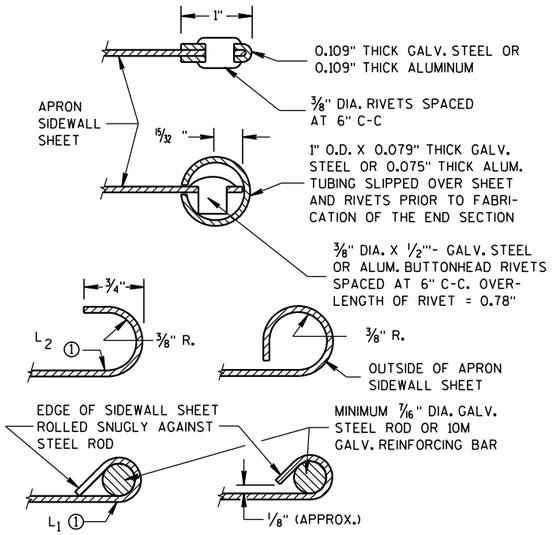


END VIEW



SIDE ELEVATION

METAL ENDWALLS



SECTION A-A

2- 2/3" X 1/2" CORRUGATIONS

EQUIV. DIA. (Inches)	(Inches) SPAN	(Inches) RISE	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
15	17	13	.064	.060	7	9	6	19	14	16	30	2½ to 1	1 Pc.
18	21	15	.064	.060	7	10	6	23	14	19⅜	36	2½ to 1	1 Pc.
21	24	18	.064	.060	8	12	6	28	18	21¾	42	2½ to 1	1 Pc.
24	28	20	.064	.060	9	14	6	32	18	27½	48	2½ to 1	1 Pc.
30	35	24	.079	.075	10	16	6	39	18	37⅝	60	2½ to 1	1 Pc.
36	42	29	.079	.075	12	18	8	46	24	45⅜	75	2½ to 1	1 Pc.
42	49	33	.109	.105	13	21	9	53	24	54¾	85	2½ to 1	2 Pc.
48	57	38	.109	.105	18	26	12	63	24	68	90	2½ to 1	3 Pc.
54	64	43	.109	.105	18	30	12	70	24	72¾	102	2¼ to 1	3 Pc.
60	71	47	.109*	.105*	18	33	12	77	30	82¼	114	2¼ to 1	3 Pc.
66	77	52	.109*	.105*	18	36	12	77	—	—	126	2 to 1	3 Pc.
72	83	57	.109*	.105*	18	39	12	77	—	—	138	2 to 1	3 Pc.

3" X 1" CORRUGATIONS

EQUIV. DIA. (Inches)	(Inches) SPAN	(Inches) RISE	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
48	53	41	.109	.105	18	26	12	63	24	72¾	90	2½ to 1	2 Pc.
54	60	46	.109	.105	18	30	12	70	30	82¼	102	2 to 1	2 Pc.
60	66	51	.109*	.105*	18	33	12	77	—	—	114	1½ to 1	3 Pc.
66	73	55	.109*	.105*	18	36	12	77	—	—	126	1½ to 1	3 Pc.
72	81	59	.109*	.105*	18	39	12	77	—	—	138	2 to 1	3 Pc.
78	87	63	.109*	.105*	22	38	12	77	—	—	148	1½ to 1	3 Pc.
84	95	67	.109*	.105*	22	34	12	77	—	—	162	1½ to 1	3 Pc.
90	103	71	.109*	.105*	22	38	12	77	—	—	174	1½ to 1	3 Pc.
96	112	75	.109*	.105*	24	40	12	77	—	—	174	1½ to 1	3 Pc.

NOTE: ALL SPLICES TO BE LAP RIVETED OR BOLTED.

* EXCEPT CENTER PANEL SEE GENERAL NOTES

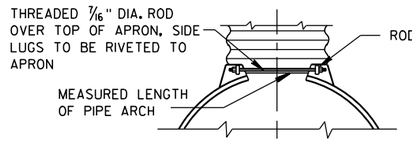
REINFORCED CONCRETE PIPE ARCH

EQUIV. DIA. (Inches)	DIMENSIONS (Inches) ** SPAN	** RISE	T	A	B	C	D	E	APPROX. SLOPE
24	29	18	3	8½	39	33	72	48	3 to 1
30	36	22	3½	9½	50	46	96	60	3 to 1
36	44	27	4	11⅛	60	36	96	72	3 to 1
42	51	31	4½	15 13/16	60	36	96	78	3 to 1
48	58	36	5	21	60	36	96	84	3 to 1
54	65	40	5½	25½	60	36	96	90	3 to 1
60	73	45	6	31	60	36	96	96	3 to 1
72	88	54	7	31	60	39	99	120	2 to 1
84	102	62	8	28½	83	19	102	144	2 to 1

REINFORCED CONCRETE ELLIPTICAL PIPE

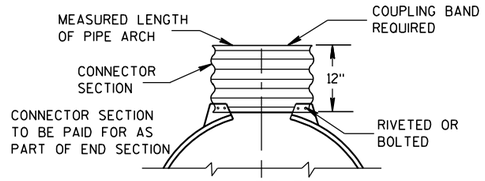
EQUIV. DIA. (Inches)	DIMENSIONS (Inches) ** SPAN	** RISE	T	A	B	C	D	E	APPROX. SLOPE
24	30	19	3¼	8½	39	33	72	48	3 to 1
30	38	24	3¾	9½	54	18	72	60	3 to 1
36	45	29	4½	11⅛	60	24	84	72	2½ to 1
42	53	34	5	15¾	60	36	96	78	2½ to 1
48	60	38	5½	21	60	36	96	84	2½ to 1
54	68	43	6	25½	60	36	96	90	2½ to 1
60	76	48	6½	30	60	36	96	96	2½ to 1

**NOMINAL SIZE



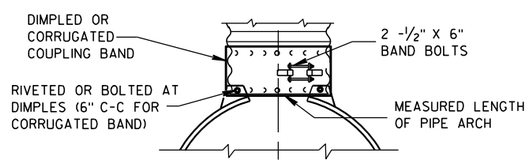
TYPE 2

FOR 17" X 13" THRU 112" X 75" PIPE ARCH



TYPE 3

FOR 64" X 43" THRU 112" X 75" PIPE ARCH



TYPE 5

ALTERNATE FOR:

ALL SIZES CORRUGATED PIPE ARCHES

NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL.

CONNECTION DETAILS

GENERAL NOTES

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

CONCRETE APRON ENDWALLS MAY NOT BE USED WITH GALVANIZED STEEL OR ALUMINUM CULVERT PIPE OR VISE VERSA. GALVANIZED STEEL OR ALUMINUM APRON ENDWALLS SHALL NORMALLY BE INSTALLED ON CULVERT PIPE OF THE SAME METAL.

ALL THREE PIECE STEEL APRON ENDWALLS FOR 66" X 51" PIPE ARCH AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 66" X 51" PIPE ARCH AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT OF THE PIPE ARCH PERIMETER.

LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS. FOR THE 77" X 52" THROUGH 112" X 75" APRON ENDWALL SIZES, THE REINFORCED EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES. THE ANGLES SHALL BE ATTACHED BY GALVANIZED NUTS AND BOLTS FOR STEEL UNITS AND ALUMINUM NUTS AND BOLTS FOR ALUMINUM UNITS.

WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

① FOR PIPE ARCH SIZES UP TO 73" X 55" A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR PIPE ARCH AND ELLIPTICAL PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

11/30/94 — DATE

/S/ Rory L. Rhinesmith — CHIEF ROADWAY DEVELOPMENT ENGINEER

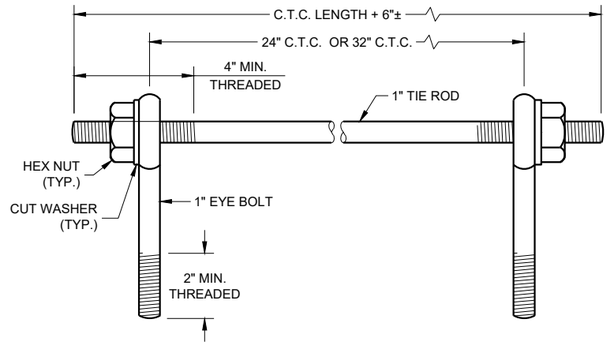
FHWA

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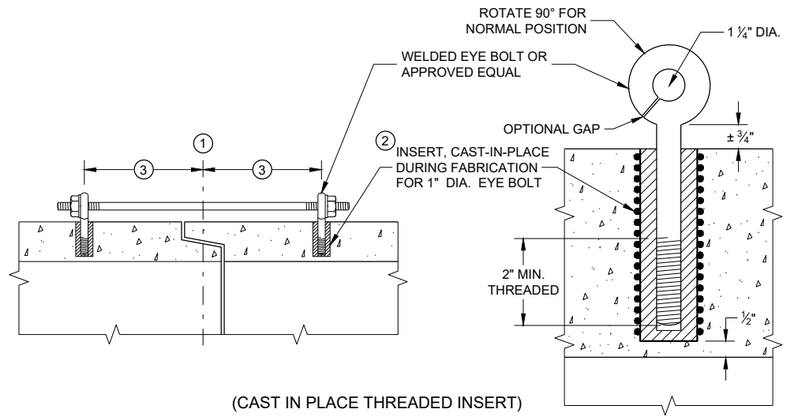
S.D.D. 8 F 2-1

6

S.D.D. 8 F 2-1



EYE BOLTS AND TIE ROD



(CAST IN PLACE THREADED INSERT)

LONGITUDINAL SECTIONS

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

GENERAL NOTES

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

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

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

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

(1) 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.

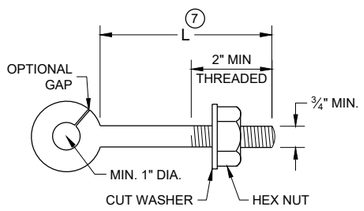
(3) HOLES SHALL BE CAST-IN-PLACE OR DRILLED PER THE APPLICABLE DETAIL, AND EQUAL DISTANCE FROM THE CENTERLINE OF THE JOINT.

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

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

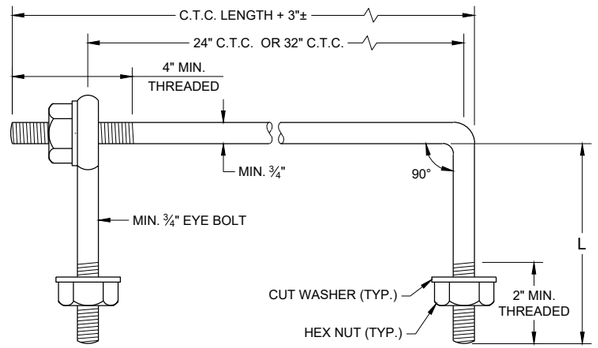
(6) LENGTH ADEQUATE TO EXTEND TO WITHIN ½ INCH OF THE INNER SURFACE OF THE PIPE.

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

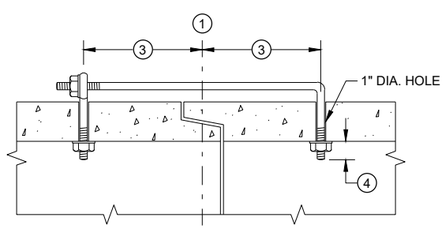


EYE BOLT (7)

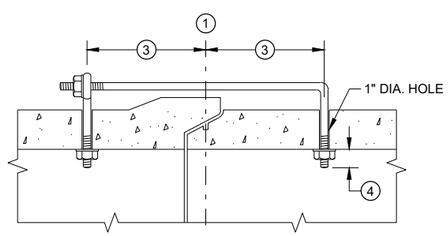
NOTE: TWO EYE BOLTS MAY BE USED WITH A 30" OR 38" LONG THREADED ROD IN LIEU OF THE 90° BENT TIE ROD.



EYE BOLT AND TIE ROD



(TONGUE AND GROOVE PIPE)



(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

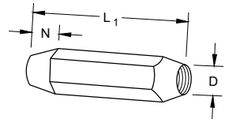
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

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

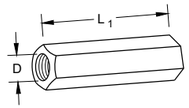
ADJUSTABLE TIE ROD TABLE

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



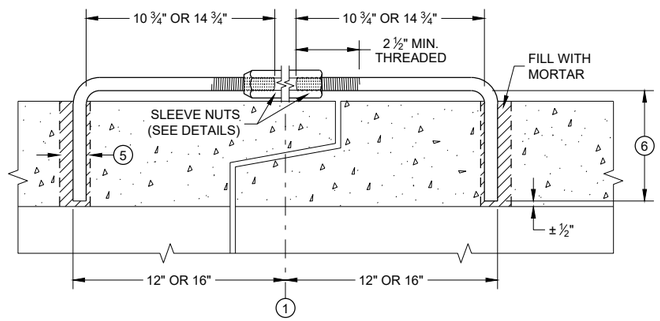
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PLAIN

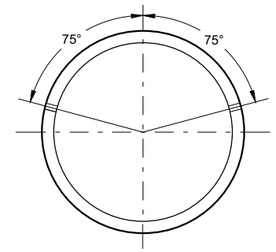
RIGHT AND LEFT THREADS

SLEEVE NUTS



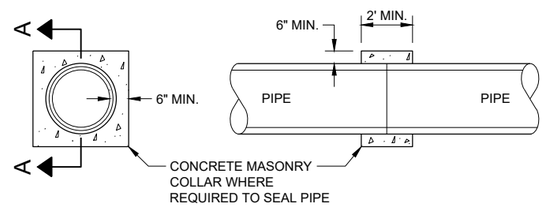
LONGITUDINAL SECTION

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

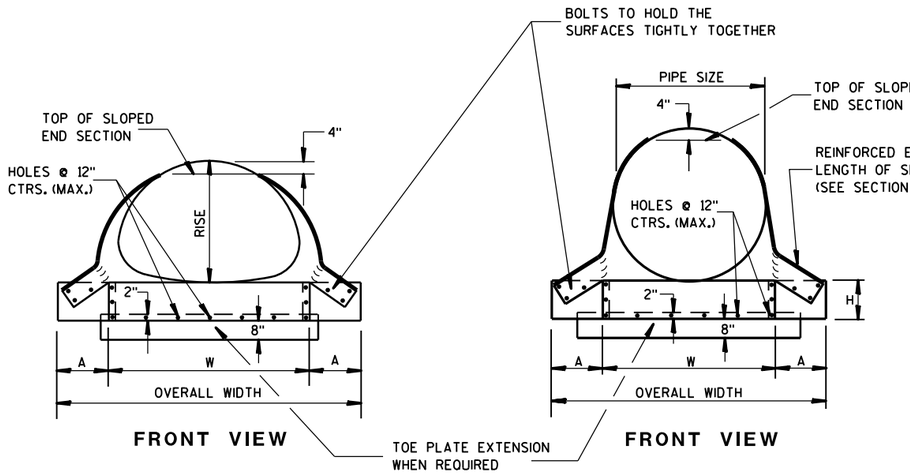
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

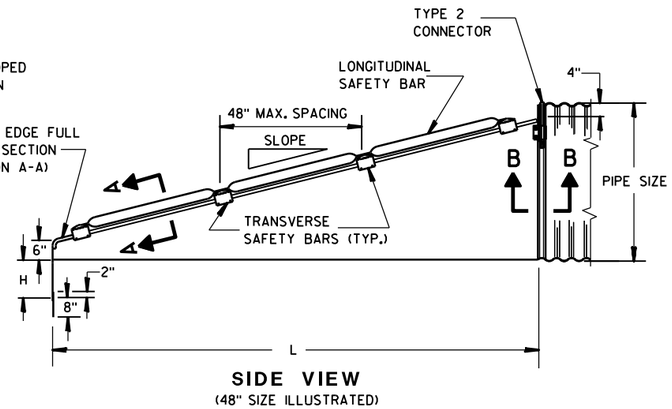
SDD 08F04 - 08

SDD 08F04 - 08



FRONT VIEW

FRONT VIEW



SIDE VIEW
(48" SIZE ILLUSTRATED)

GENERAL NOTES

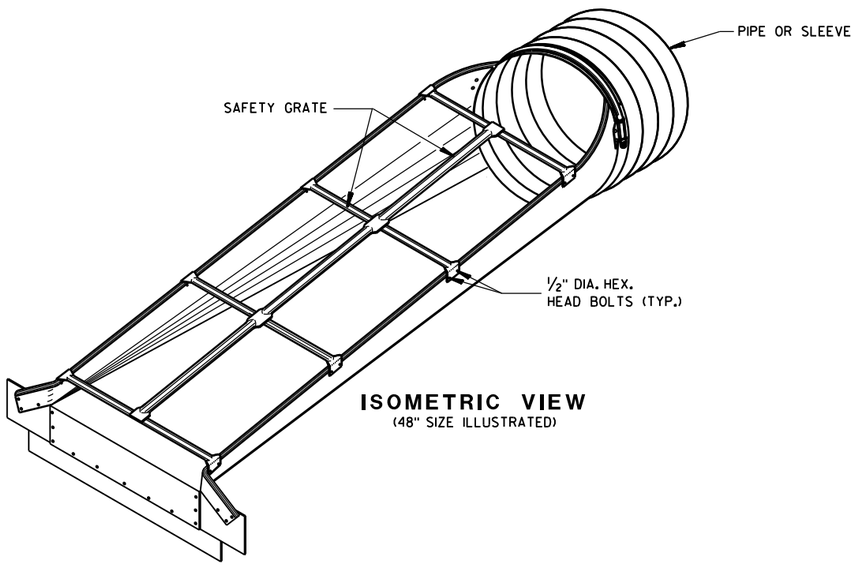
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

SAFETY GRATES SHALL BE FABRICATED FROM 3-INCH DIAMETER GALVANIZED PIPE MEETING THE REQUIREMENTS OF ASTM A-53, GRADE B, SCHEDULE 40 OR APPROVED EQUAL. THE LONGITUDINAL BAR SHALL BE WELDED TO THE TRANSVERSE BARS WHERE THE BARS CROSS. THE NUMBER OF TRANSVERSE BARS REQUIRED WILL VARY DEPENDING ON THE LENGTH OF THE END SECTION.

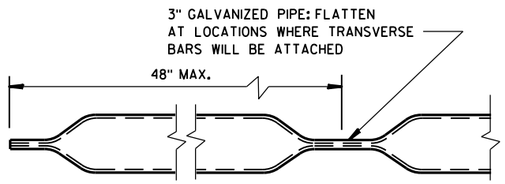
SLOPED STEEL ENDWALLS LOCATED AT THE ENDS OF CONCRETE CULVERT PIPE SHALL BE FURNISHED WITH STEEL ADAPTER SLEEVES.

STEEL APRON ENDWALLS FOR CULVERT PIPE CROSS DRAINS

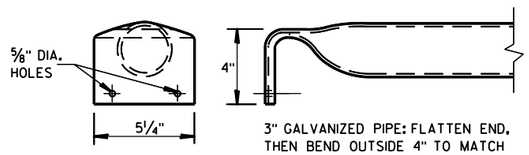
PIPE DIA. (IN.)	MIN. THICK.		DIMENSIONS (Inches)				L DIMENSIONS			
	IN.	GAGE	A	H	W	OVERALL WIDTH	SLOPE	LENGTH INCHES	SLOPE	LENGTH INCHES
36	.109	12	12	9	42	66	4:1	104	6:1	156
42	.109	12	16	12	48	80	4:1	128	6:1	192
48	.109	12	16	12	54	86	4:1	152	6:1	228
54	.109	12	16	12	60	92	4:1	176	6:1	264
60	.109	12	16	12	66	98	4:1	200	6:1	300



ISOMETRIC VIEW
(48" SIZE ILLUSTRATED)



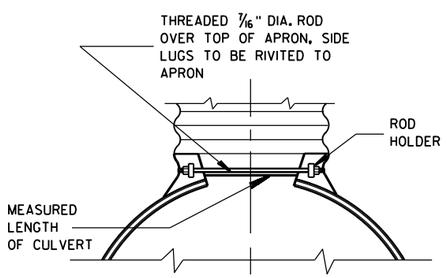
LONGITUDINAL SAFETY BAR



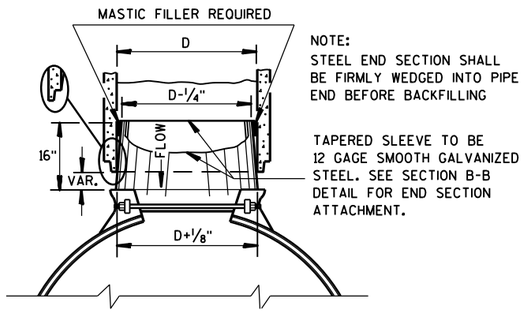
TRANSVERSE SAFETY BAR

STEEL APRON ENDWALLS FOR PIPE ARCH SLOPED CROSS DRAINS

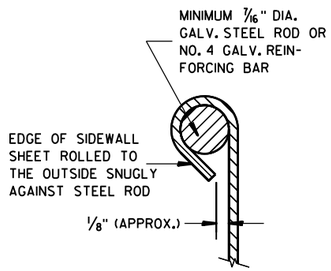
EQUIV. DIA. (IN.)	INCHES		MIN. THICK.		DIMENSIONS (Inches)				L DIMENSIONS			
	SPAN	RISE	IN.	GAGE	A	H	W	OVERALL WIDTH	SLOPE	LENGTH INCHES	SLOPE	LENGTH INCHES
30	35	24	.079	14	12	9	41	65	4:1	56	6:1	84
36	42	29	.109	12	12	9	48	72	4:1	76	6:1	114
42	49	33	.109	12	16	12	55	87	4:1	92	6:1	138
48	57	38	.109	12	16	12	63	95	4:1	112	6:1	168
54	64	43	.109	12	16	12	70	102	4:1	132	6:1	198
60	71	47	.109	12	16	12	77	109	4:1	148	6:1	222



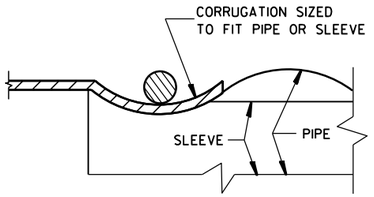
TYPE 2 CONNECTOR DETAIL



STEEL ADAPTER SLEEVE FOR CONCRETE PIPE



SECTION A-A



SECTION B-B

STEEL APRON ENDWALLS FOR CULVERT PIPE AND PIPE ARCH SLOPED CROSS DRAINS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/5/2012
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

FHWA

6

S.D.D. 8 F 8-2

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

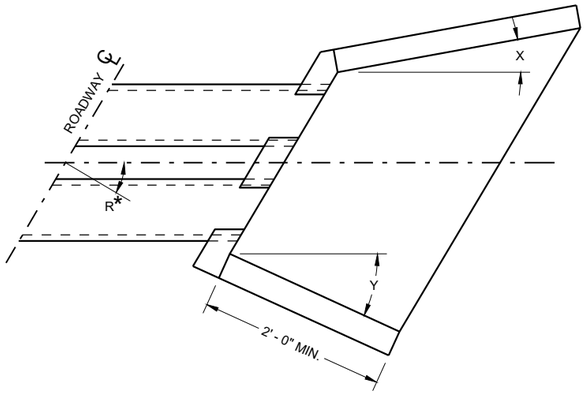
(5) FOUNDATION AND TRENCH BACKFILL ARE MATERIALS INCLUDED IN PAYMENT FOR CULVERT PIPE, PIPE ARCH, CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPSE OR CONCRETE MASONRY ENDWALLS.

(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

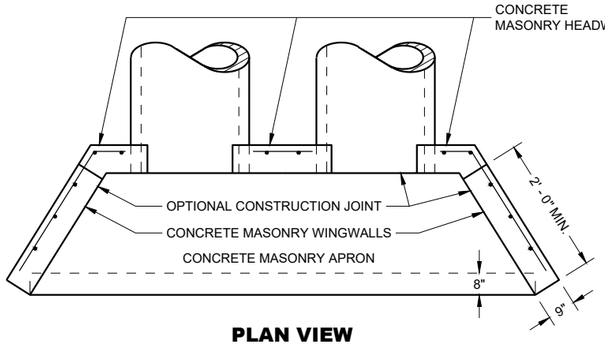
FOUNDATION BACKFILL



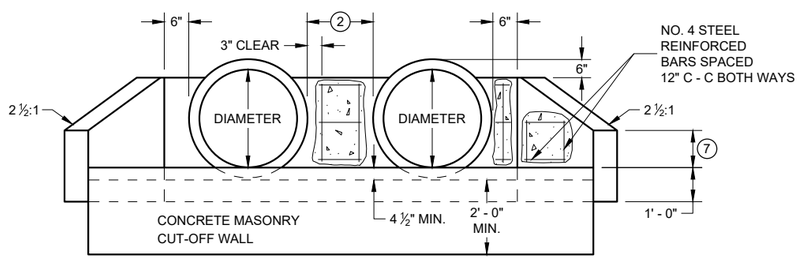
WINGWALL ANGLE DETAILS

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

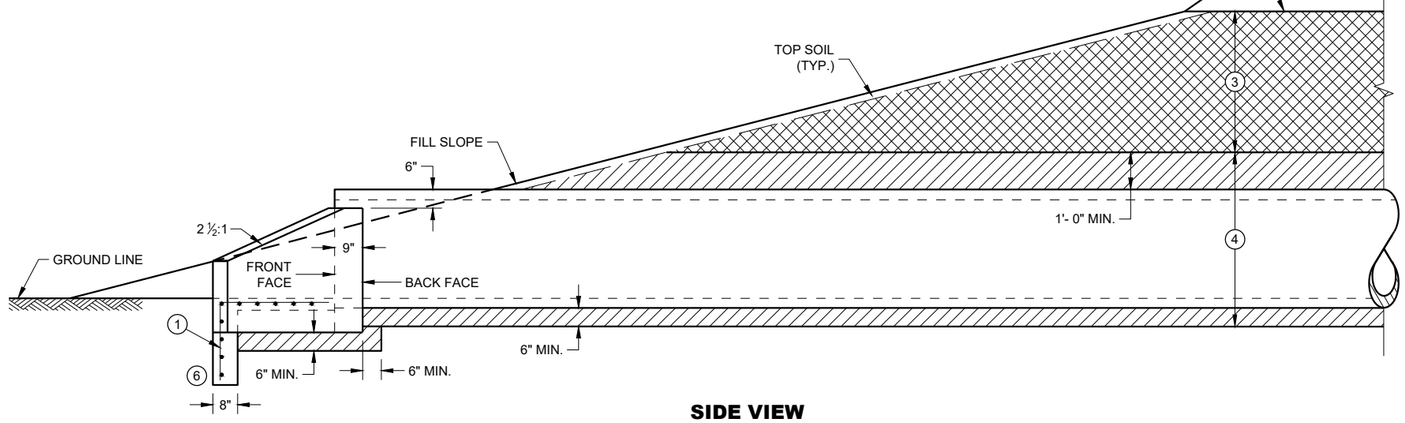


PLAN VIEW



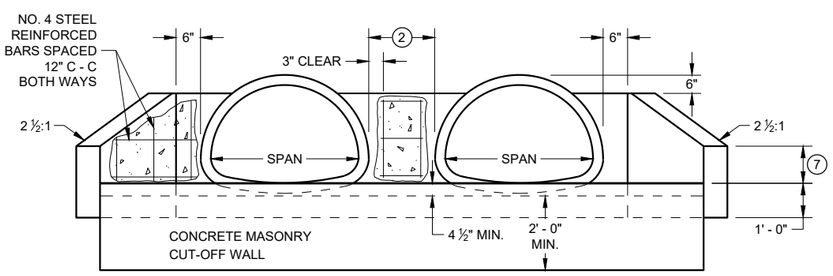
END VIEW

CIRCULAR PIPE



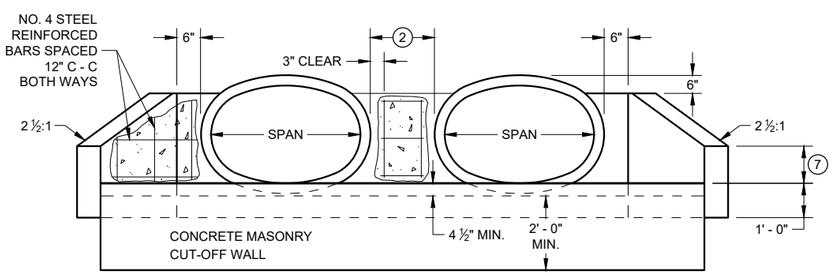
SIDE VIEW

CIRCULAR PIPE, PIPE ARCH OR HORIZONTAL ELLIPSE



END VIEW

PIPE ARCH



END VIEW

HORIZONTAL ELLIPSE

CONCRETE MASONRY ENDWALLS FOR CULVERT PIPE AND PIPE ARCH

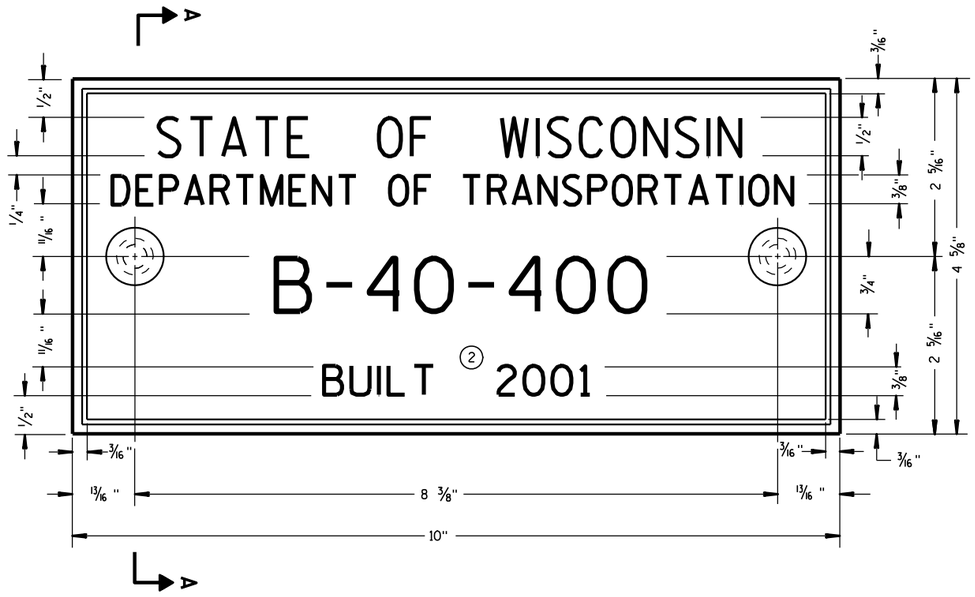
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2022 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE ENGINEER

FHWA

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SDD 08F10 - 02



TYPICAL NAME PLATE

(BRIDGES, CULVERTS, AND RETAINING WALLS)

FOR MULTI-UNIT STRUCTURES
LINE 3 ABOVE SHALL READ

B = BRIDGE
C = CULVERT
R = RETAINING WALL

COUNTY NO.

BRIDGE NO.

UNIT NO. FOR MULTIPLE UNIT BRIDGE

B-40-400-1A

NUMBERING DESIGNATION MULTI-UNIT STRUCTURES

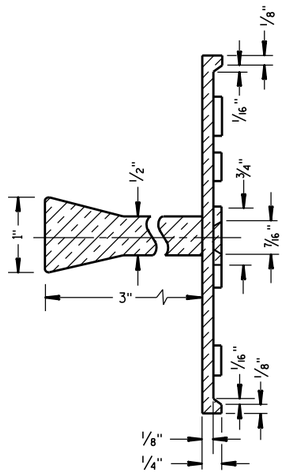
GENERAL NOTES

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

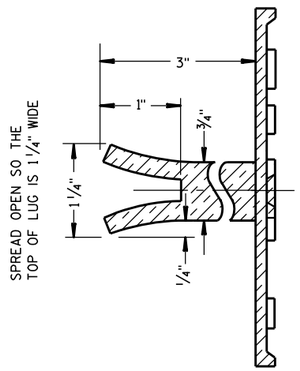
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

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

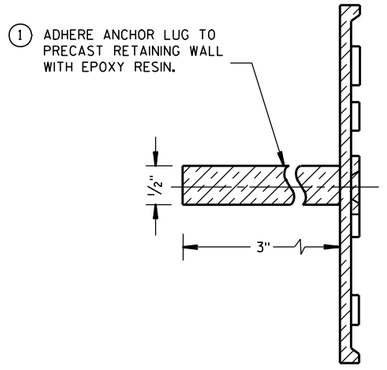
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A



ALTERNATE LUG



ALTERNATE LUG

(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

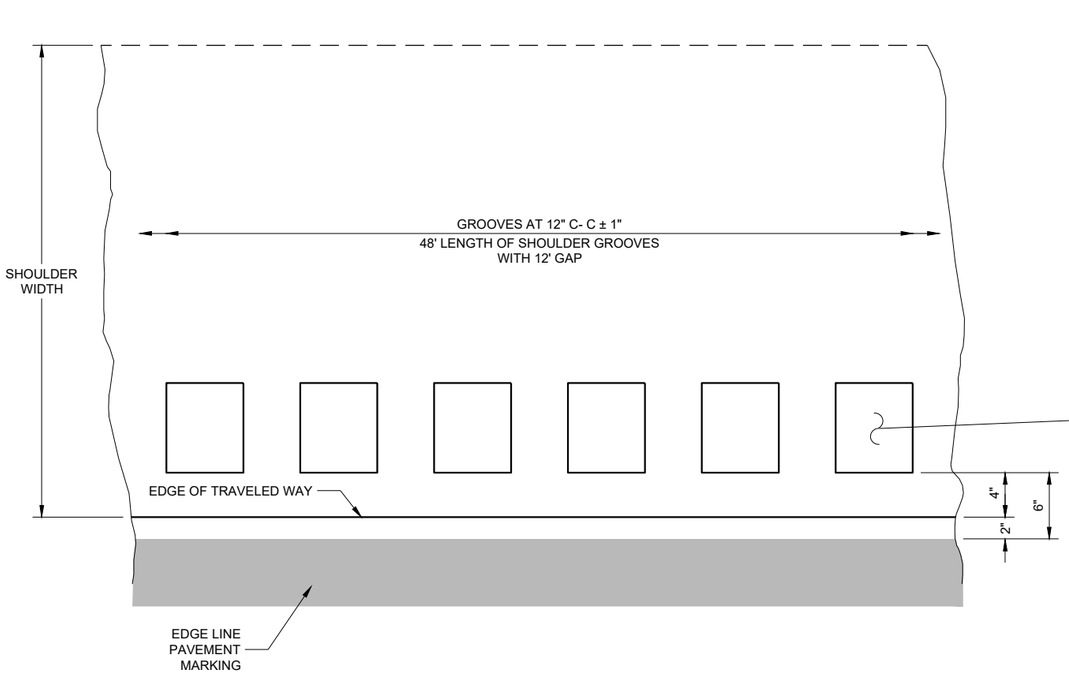
3/26/10 DATE

/S/ Scot Beck CHIEF STRUCTURAL DEVELOPMENT ENGINEER

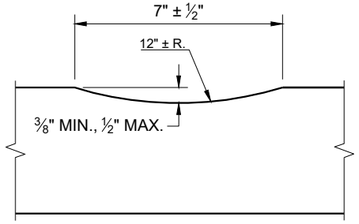
FHWA

6

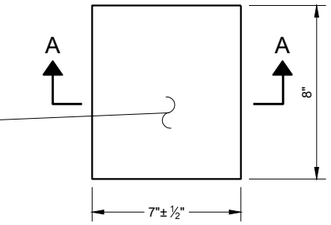
S.D.D. 12 A 3-10



PLAN DETAIL VIEW
SHOULDER WITH GROOVES



SECTION A - A

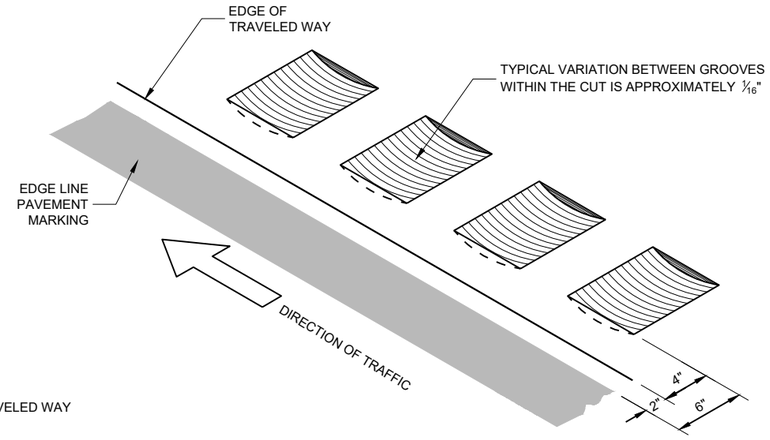


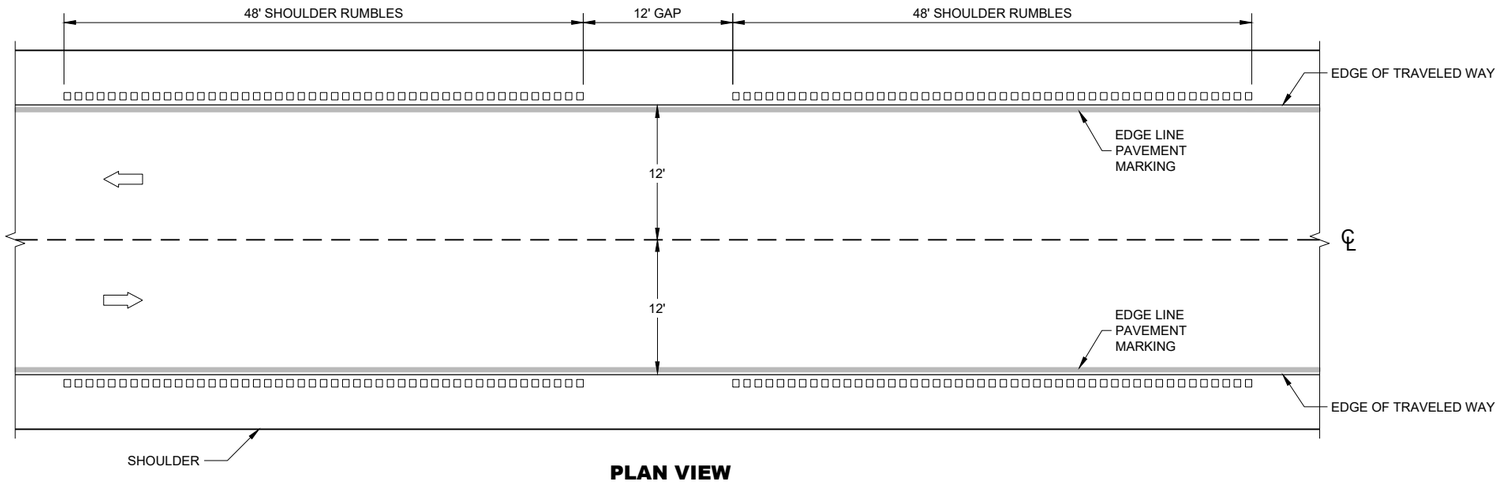
PLAN VIEW
(SINGLE GROOVE)

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

6

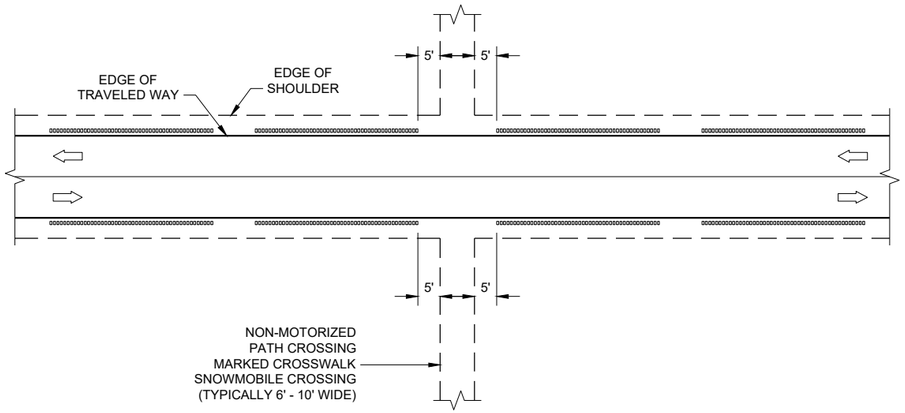
SDD 13A10 - 03a

SHOULDER RUMBLE STRIPS ASPHALT

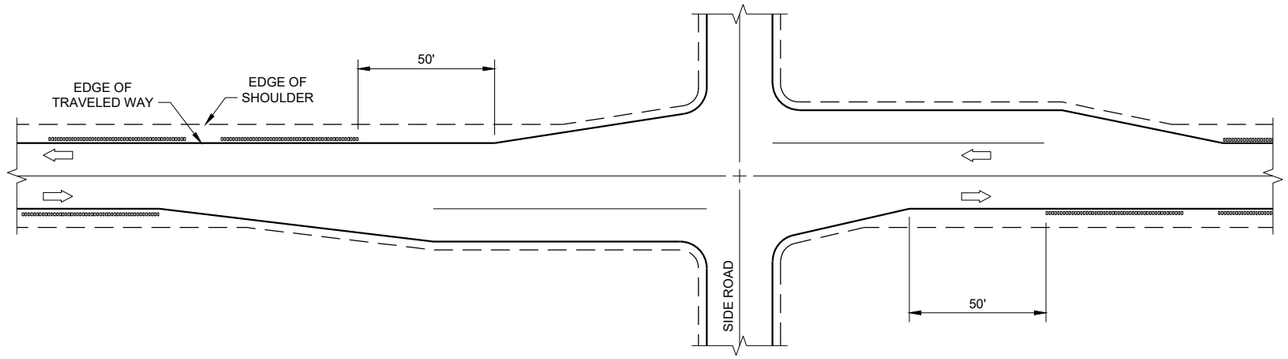
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTA

6

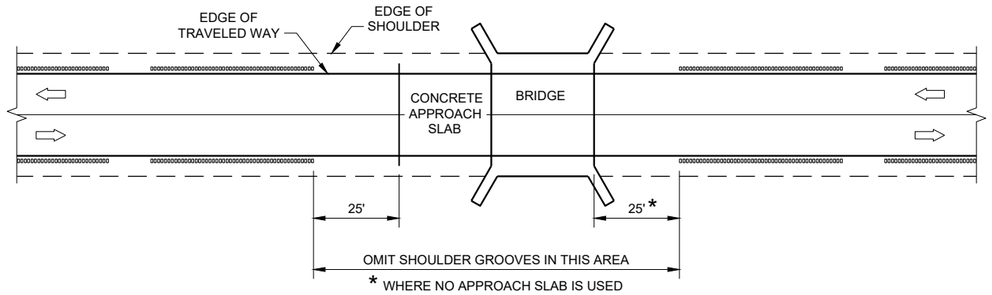
SDD 13A10 - 03a



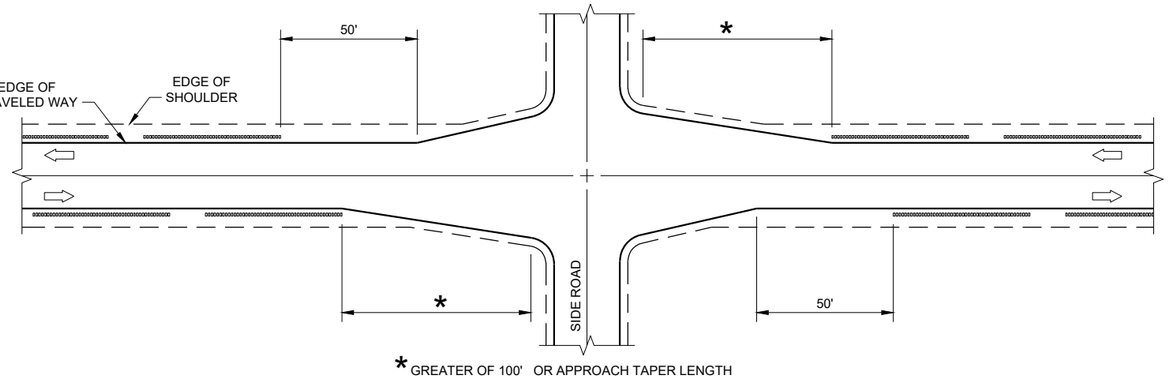
GROOVES AT MISCELLANEOUS CROSSINGS



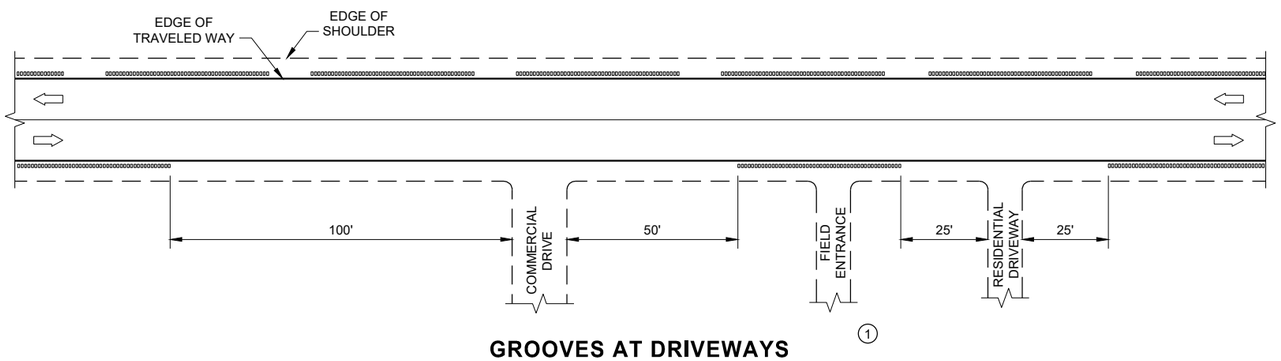
GROOVES AT RIGHT TURN LANE



GROOVES AT BRIDGES



GROOVES AT INTERSECTIONS WITH APPROACH TAPER



GROOVES AT DRIVEWAYS ①

GENERAL NOTES

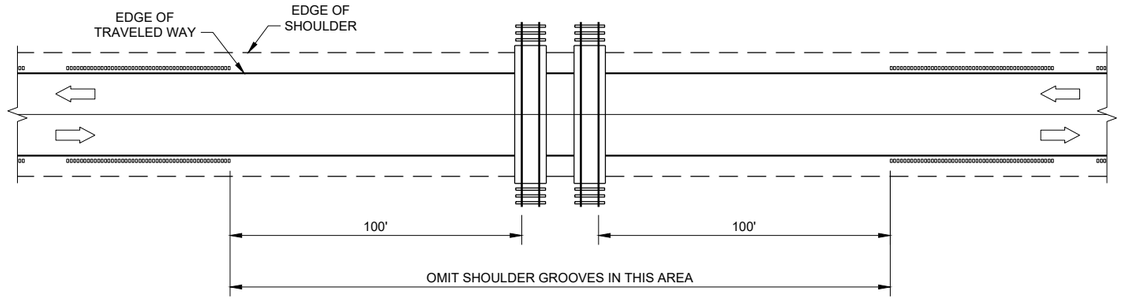
① SHOULDER GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS. WHEN DIRECTED BY THE ENGINEER.

SHOULDER AND EDGE LINE RUMBLE STRIPS CROSSINGS, INTERSECTIONS, BRIDGES, DRIVEWAYS

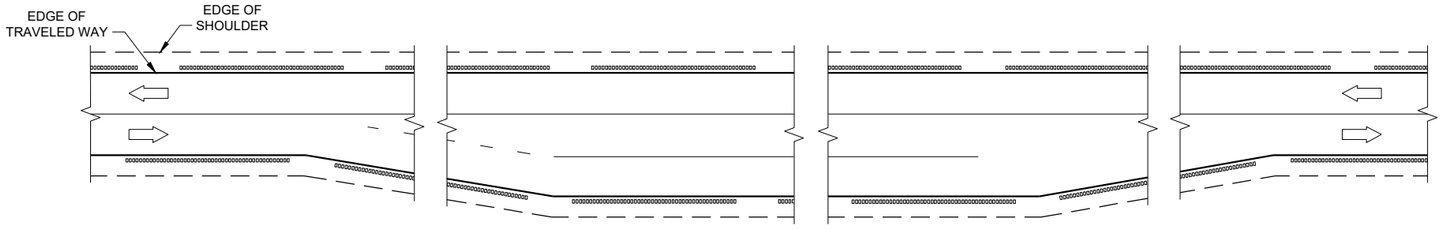
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

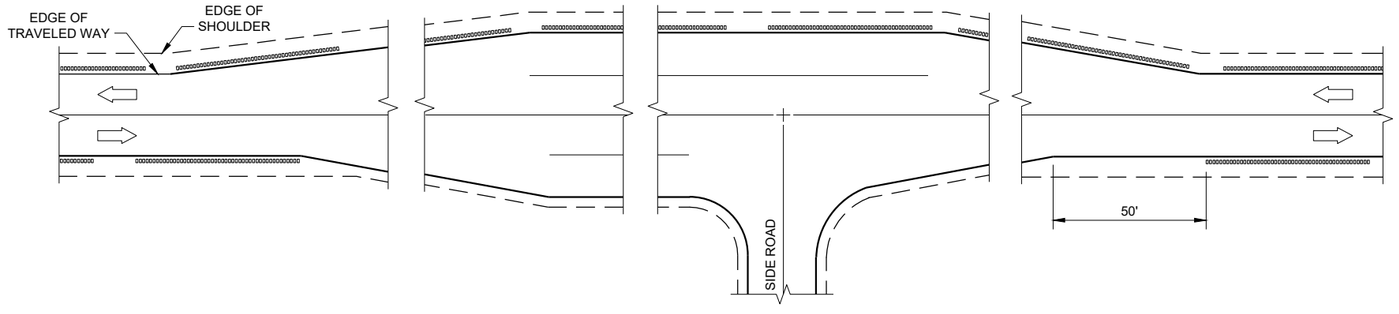
SDD 13A10 - 03g



GROOVES AT RAILROADS



GROOVES AT PASSING AND CLIMBING LANES



GROOVES AT BYPASS LANES

6

SDD 13A10 - 03h

6

SDD13A10 - 03h

SHOULDER AND EDGE LINE RUMBLE STRIPS - RAILROAD, PASSING, CLIMBING AND BYPASS LANES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

May 2023
DATE

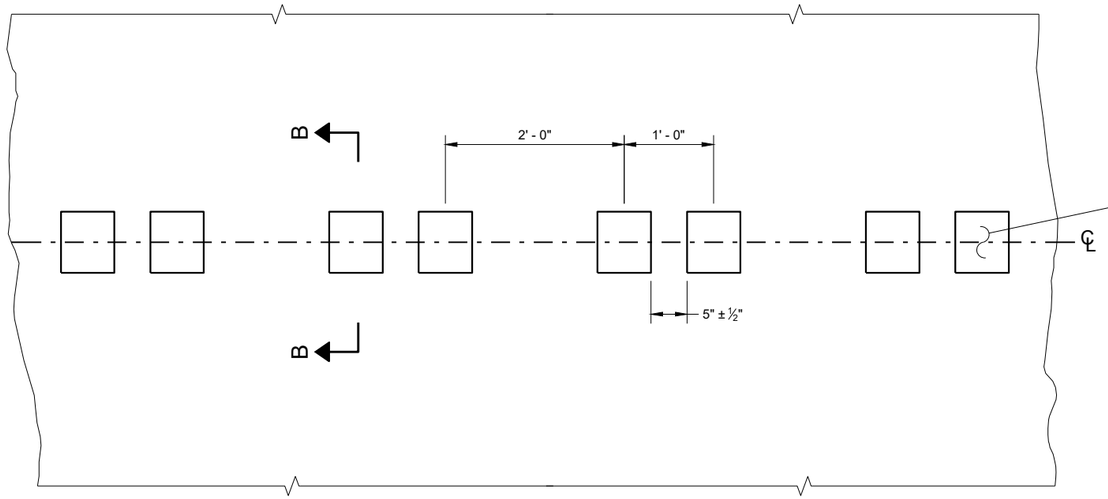
/S/ John Jenkins
ROADWAY STANDARDS DEVE ENGINEER

FHWA

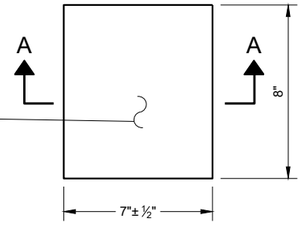
GENERAL NOTES

DO NOT MILL SHOULDER GROOVES THROUGH INTERSECTIONS, MARKED CROSSWALKS, NON-MOTORIZED PATH CROSSINGS, ETC. REFER TO SDD 13A11 SHEETS "d" AND "e".

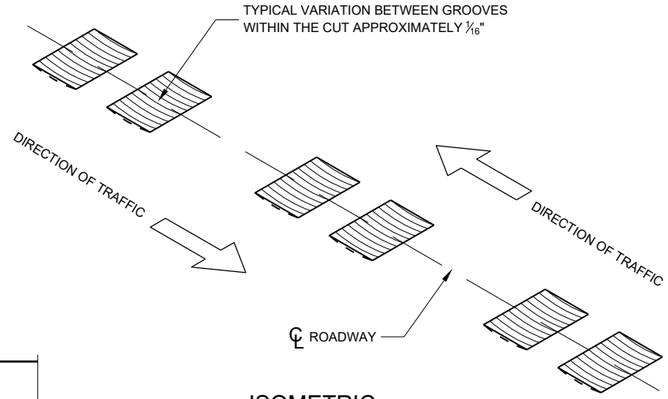
CENTERLINE GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS WHEN DIRECTED BY THE ENGINEER.



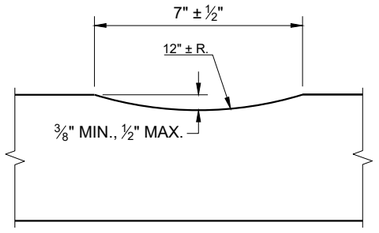
PLAN DETAIL VIEW



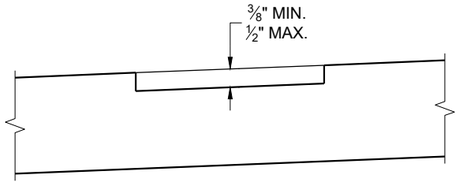
PLAN VIEW
(SINGLE GROOVE)



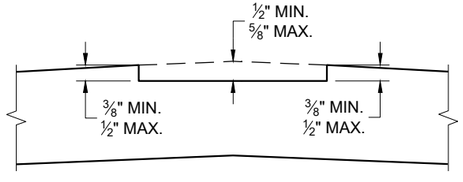
ISOMETRIC



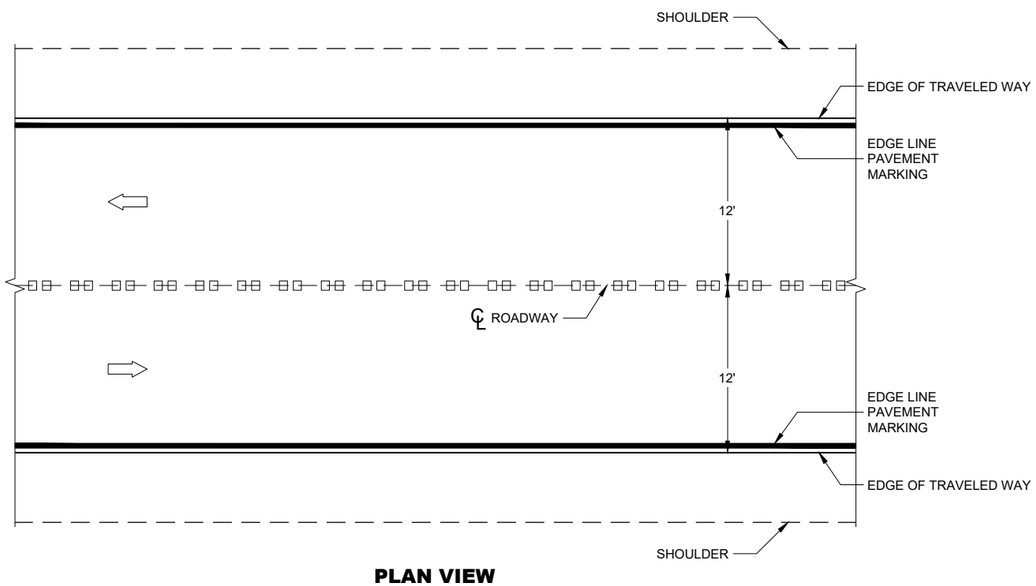
SECTION A - A



SECTION B - B
SUPERELEVATED ROADWAY



SECTION B - B
CROWNED ROADWAY



PLAN VIEW

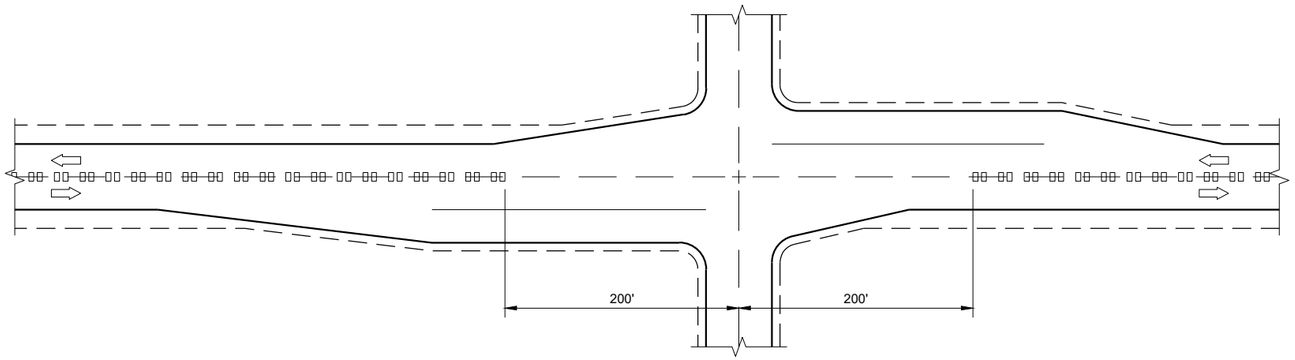
CENTERLINE RUMBLE STRIPS - ASPHALT

6

CENTERLINE RUMBLE STRIPS - ASPHALT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTA 122

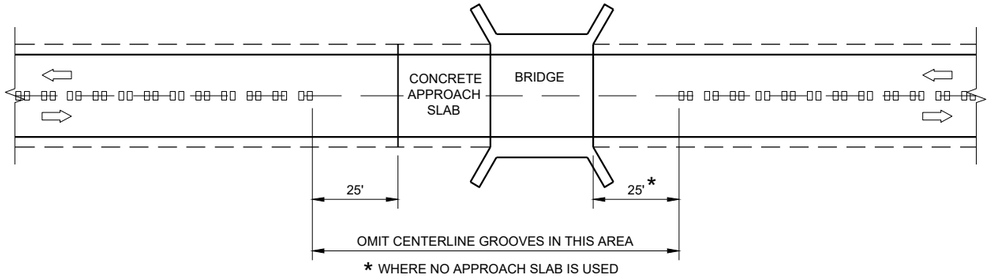
SDD 13A11 - 04a



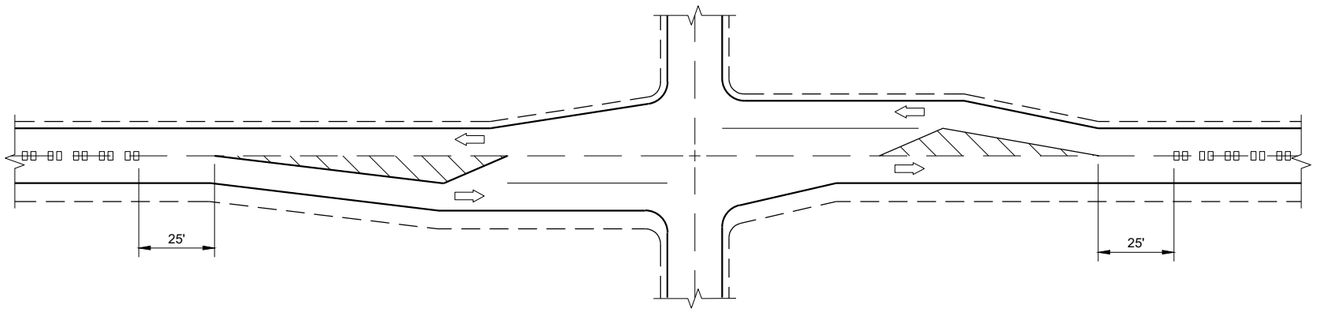
CENTERLINE GROOVES AT INTERSECTIONS

GENERAL NOTES

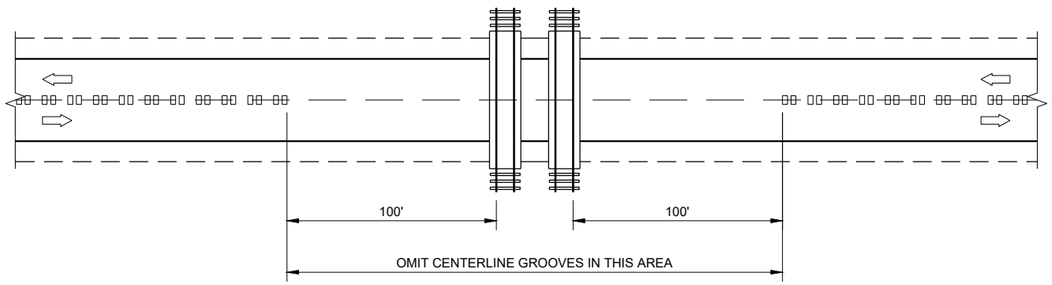
1. CENTERLINE GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS WHEN DIRECTED BY THE ENGINEER.



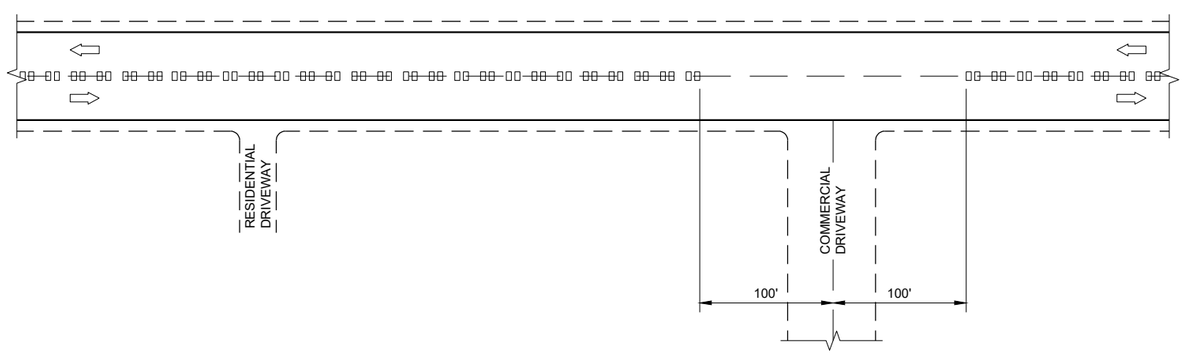
CENTERLINE GROOVES AT BRIDGES



CENTERLINE GROOVES AT INTERSECTIONS (WITH LEFT TURN LANES)



CENTERLINE GROOVES AT RAILROADS



CENTERLINE GROOVES AT DRIVEWAYS (1)

CENTER LINE RUMBLE STRIPS - INTERSECTIONS, DRIVEWAYS, BRIDGES, RAIL ROADS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

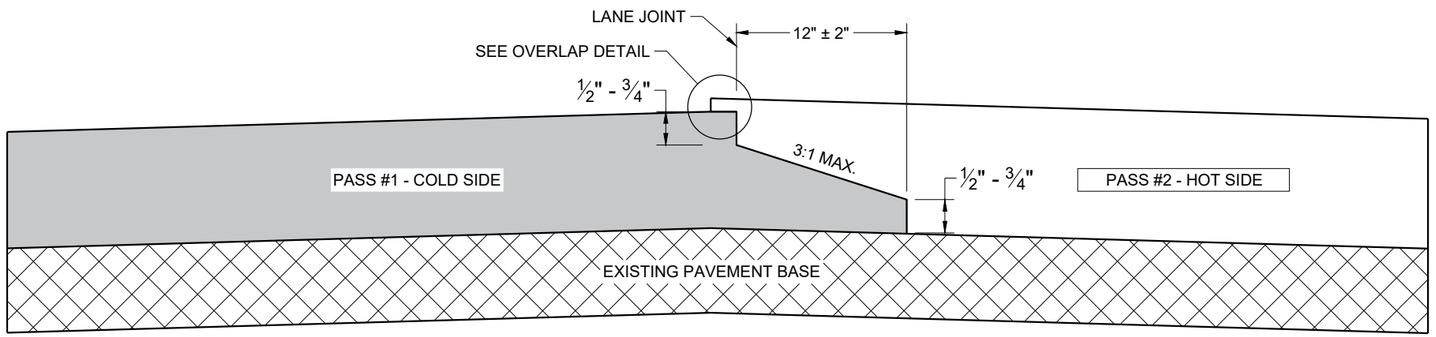
APPROVED
May 2023 — DATE
/S/ John Jenkins — ROADWAY STANDARDS DEVE ENGINEER

FHWA

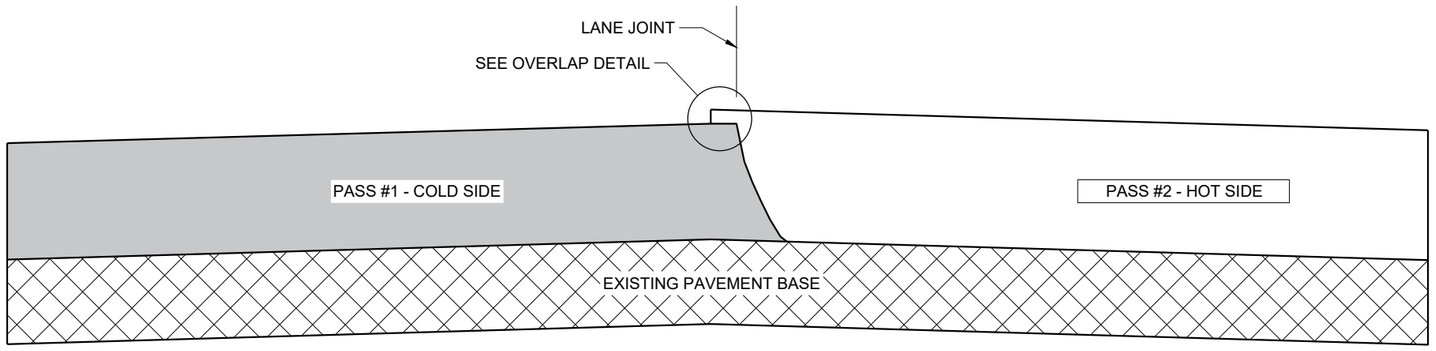
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SDD 13A11 - 04d

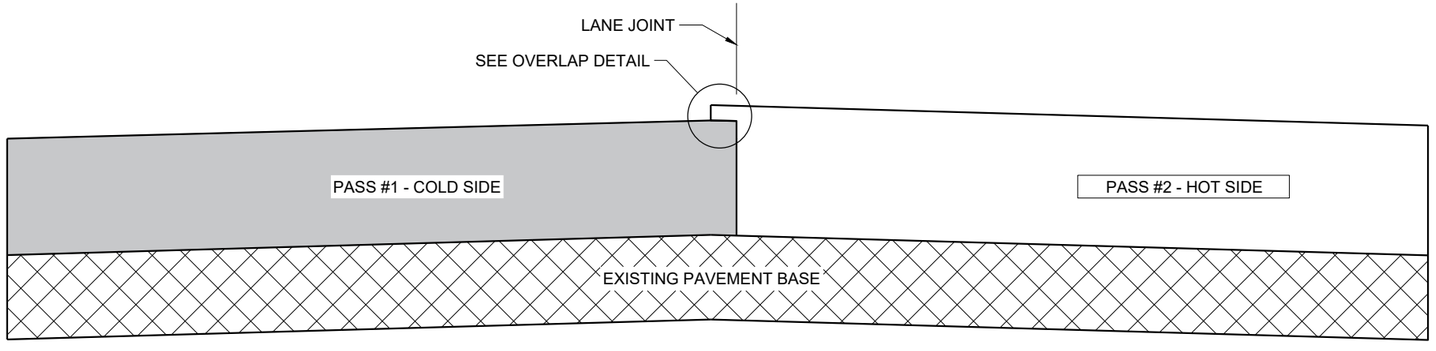
SDD 13A11 - 04d



TYPICAL PAVEMENT CROSS SECTION
NOTCHED WEDGE JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT (MILLED)

GENERAL NOTES

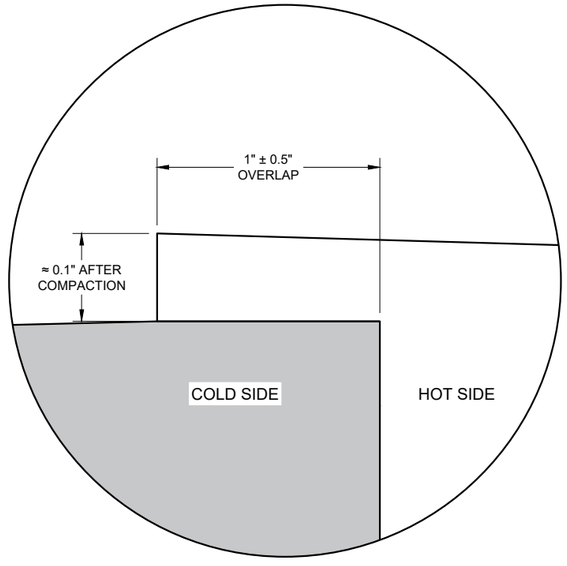
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

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

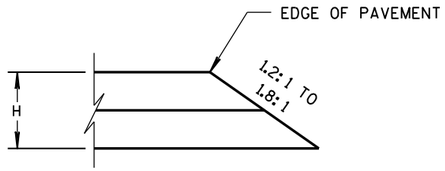
HMA LONGITUDINAL JOINTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2020
DATE

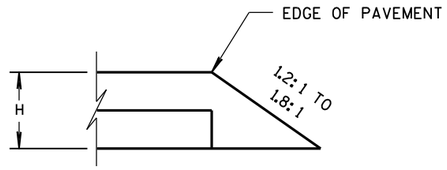
/S/ Steven Hefel
HMA PAVEMENT ENGIN

FHWA



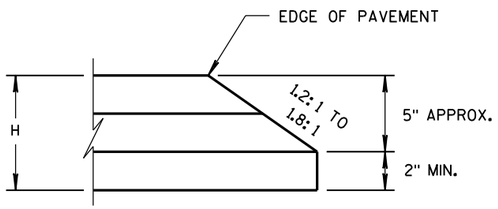
CONSTRUCTED WITH FINAL TWO LAYERS

FOR H 5" OR LESS



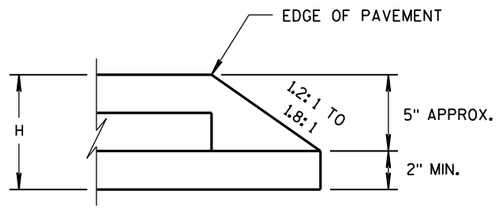
CONSTRUCTED WITH FINAL LAYER

FOR H 5" OR LESS



CONSTRUCTED WITH FINAL TWO LAYERS

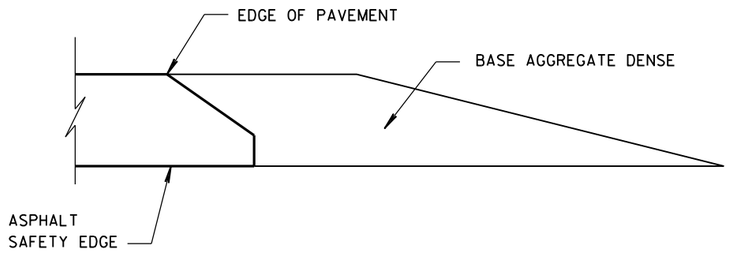
FOR H GREATER THAN 5"



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.

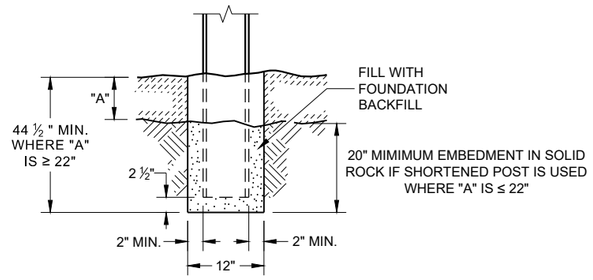
(3) IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL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

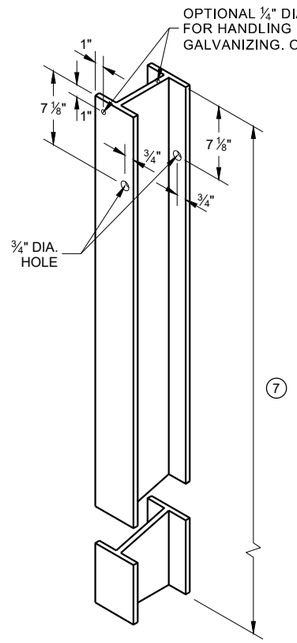
(5) FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ±1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 ¾" TO 32".

(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.

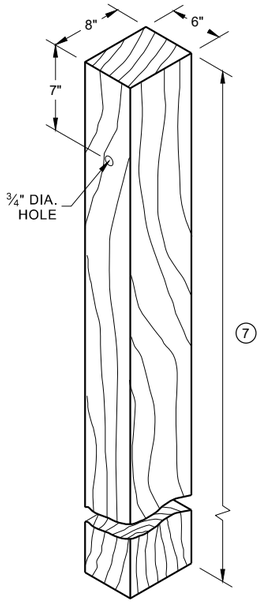
(7) TOTAL POST LENGTH FOR TYPE K IS 7' - 0".
TOTAL POST LENGTH FOR OTHER MGS TYPES IS 6' - 0".



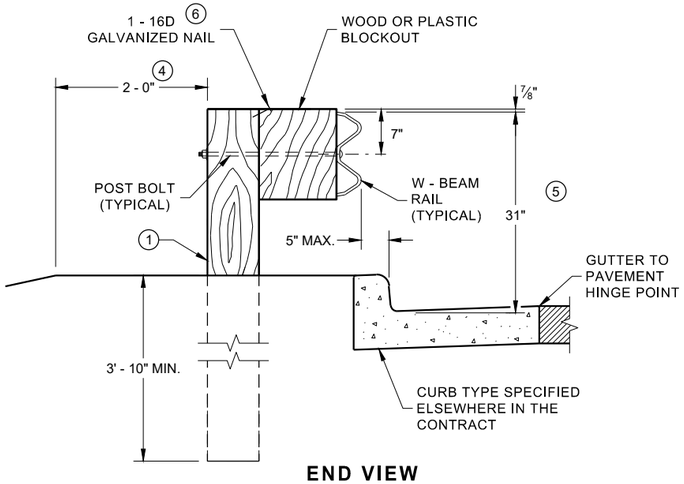
END VIEW
SETTING STEEL OR WOOD POST IN ROCK (3)



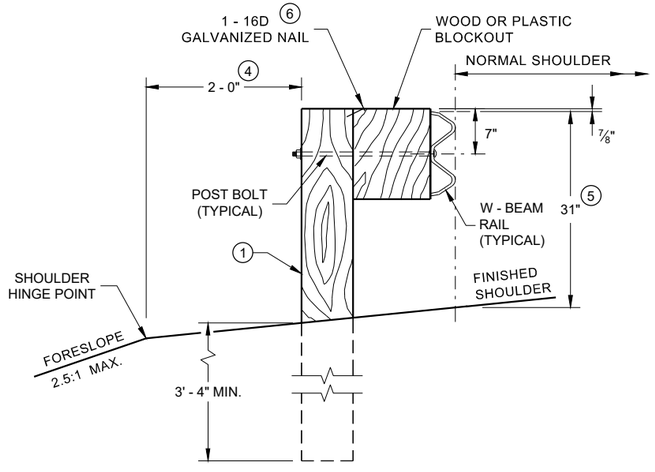
STEEL POST & HOLE PUNCHING DETAIL (W 6 X 9) (1)



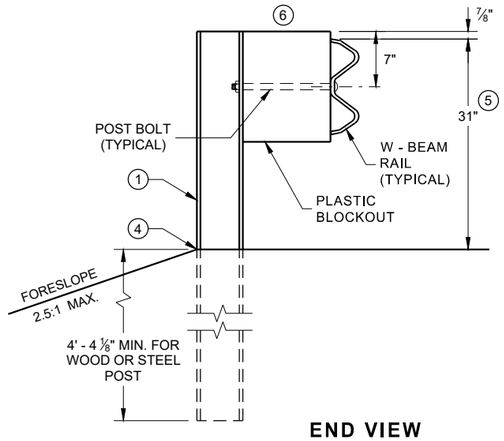
WOOD POST (6" X 8") NOMINAL (1)



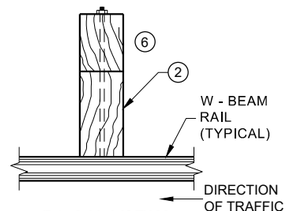
END VIEW
LOCATED ALONG A CURBED ROADWAY



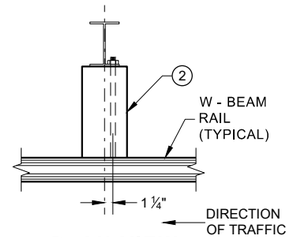
END VIEW
LOCATED ALONG A ROADWAY SHOULDER STANDARD INSTALLATION



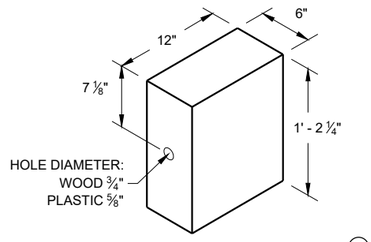
END VIEW
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



PLAN VIEW
WOOD POST, BLOCKOUT & BEAM



PLAN VIEW
STEEL POST, PLASTIC BLOCKOUT & BEAM



WOOD OR PLASTIC BLOCKOUT (2)

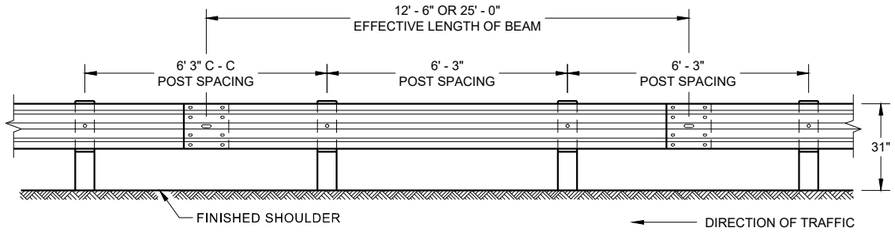
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

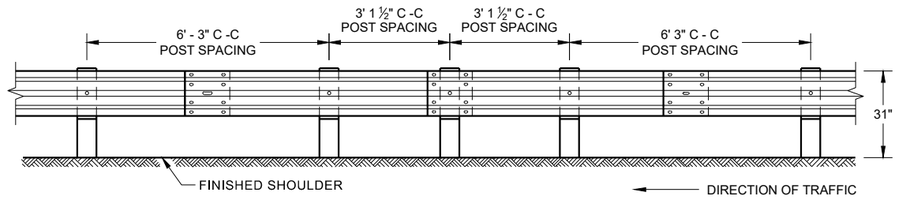
SDD 14B42 - 07a

6

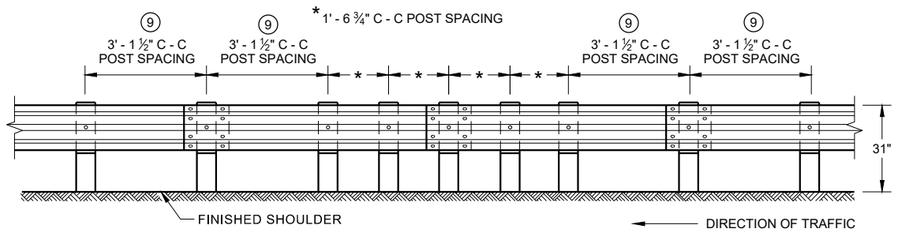
SDD 14B42 - 07a



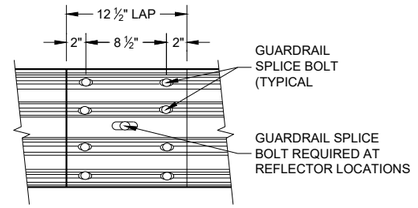
FRONT VIEW
POST SPACING STANDARD INSTALLATION



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

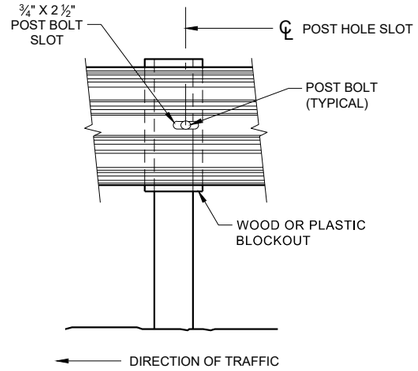
GENERAL NOTES

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

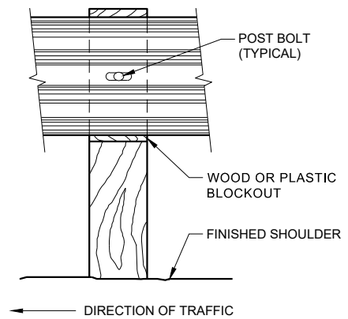
⑨ 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

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.

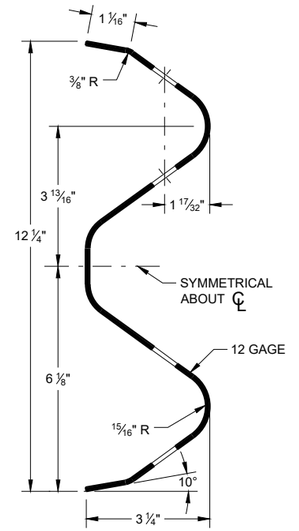
GUARD RAIL SPLICE BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.



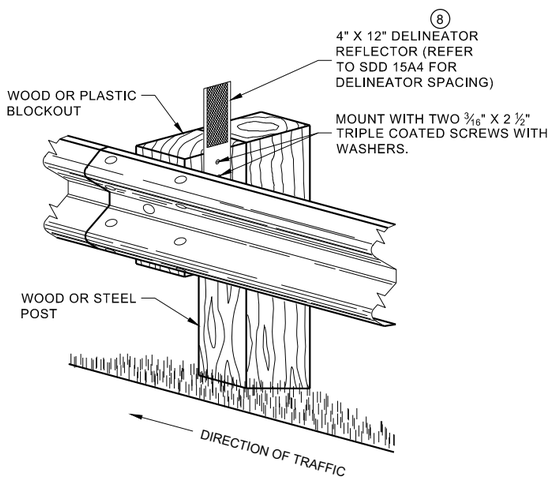
FRONT VIEW AT STEEL POST



FRONT VIEW AT WOOD POST



SECTION THRU W-BEAM RAIL



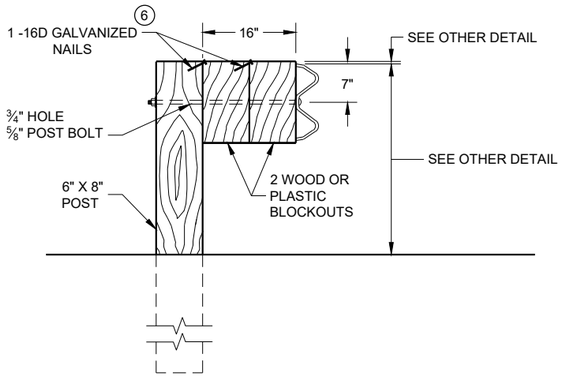
ONE SIDED REFLECTOR DETAIL
AND TYPICAL INSTALLATION

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 14B42 - 07b

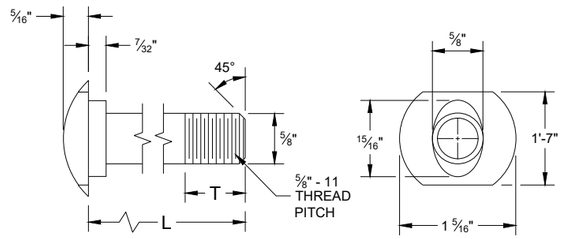


DETAIL FOR 16" BLOCKOUT DEPTH

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.

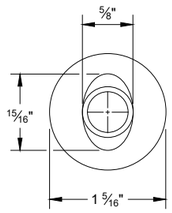
NOTE:

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.

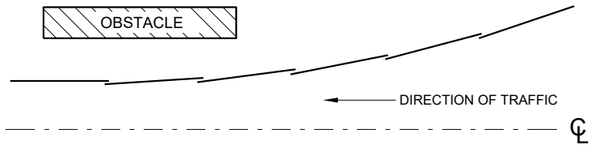


POST BOLT TABLE

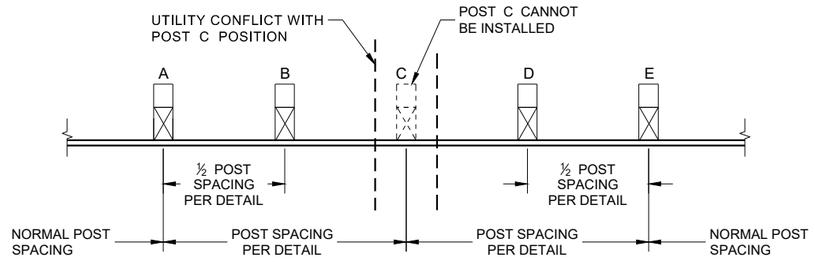
L	T (MIN.)
1 ¼"	1 ⅛"
2"	1 ¾"
10"	4"
14"	4 1⁄16"
18"	4"
21"	4 1⁄16"
25"	4"



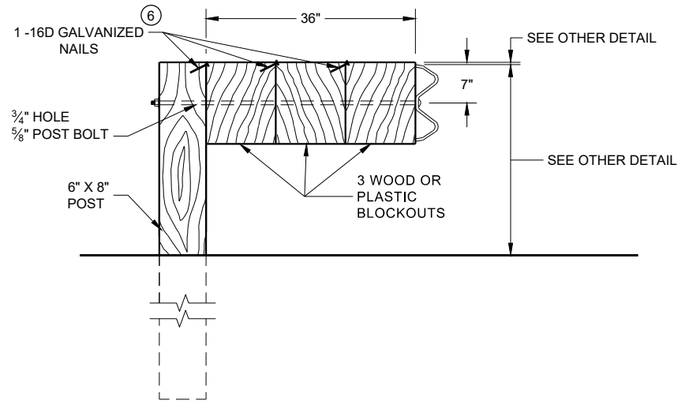
ALTERNATE BOLT HEAD



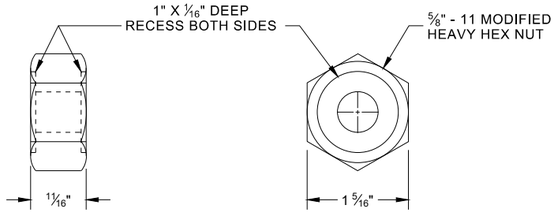
PLAN VIEW
BEAM LAPPING DETAIL



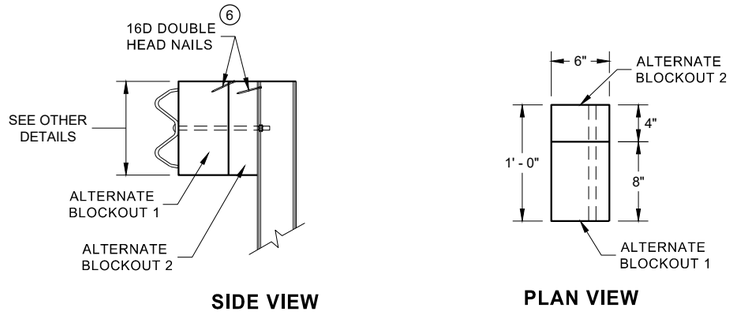
POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



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.

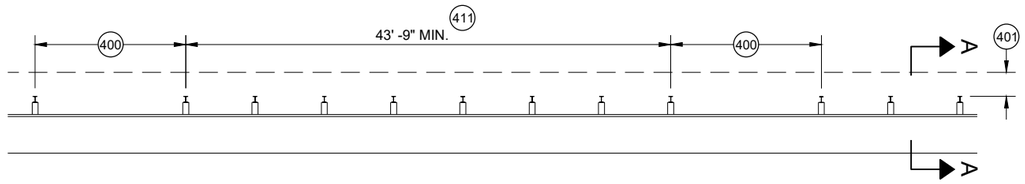
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

(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.

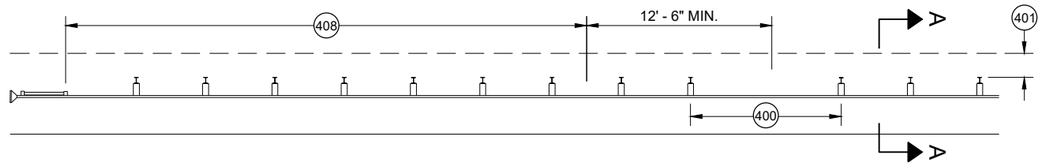
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

6

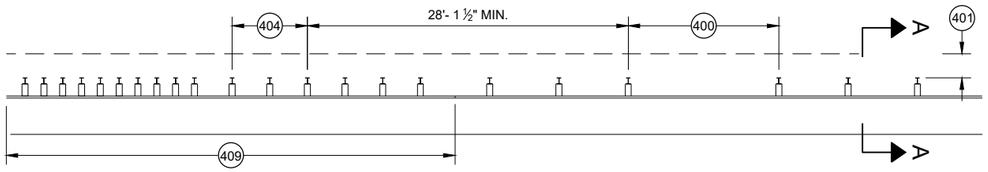
SDD 14B42 - 07c



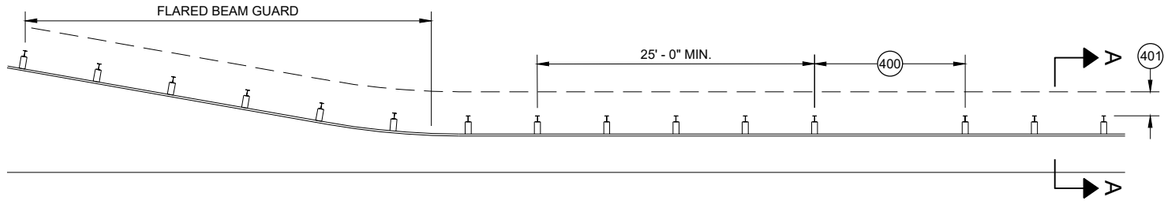
MISSING POST IN MGS GUARDRAIL



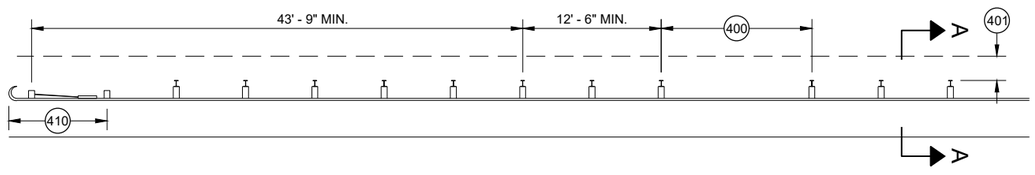
MISSING POST IN MGS GUARDRAIL NEAR EAT



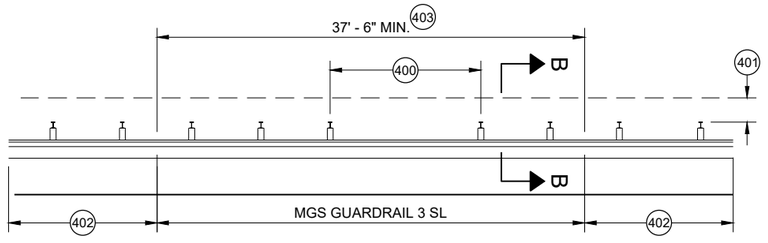
MISSING POST IN MGS GUARDRAIL NEAR AN APPROACH TRANSITION



MISSING POST IN MGS GUARDRAIL NEAR FLARED BEAM GUARD

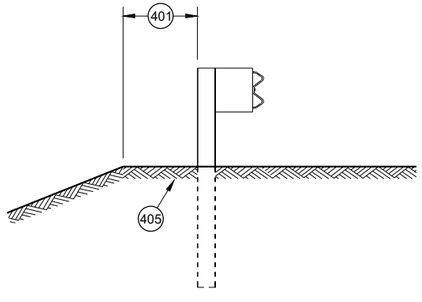


MISSING POST IN MGS GUARDRAIL NEAR A TYPE 2 END TERMINAL

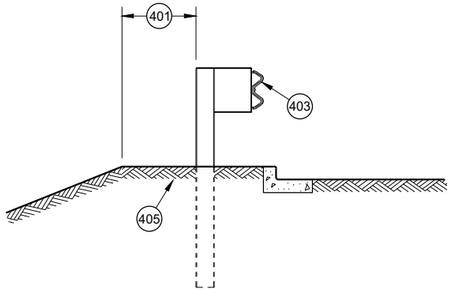


MISSING POST IN SHORT SPAN MGS GUARDRAIL NEAR CURB (SL) 407

(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.

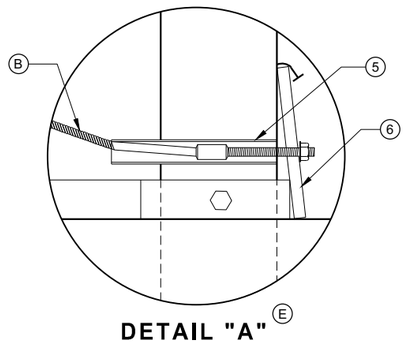
SEE SDD 14B42 FOR MORE INFORMATION.

* DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.

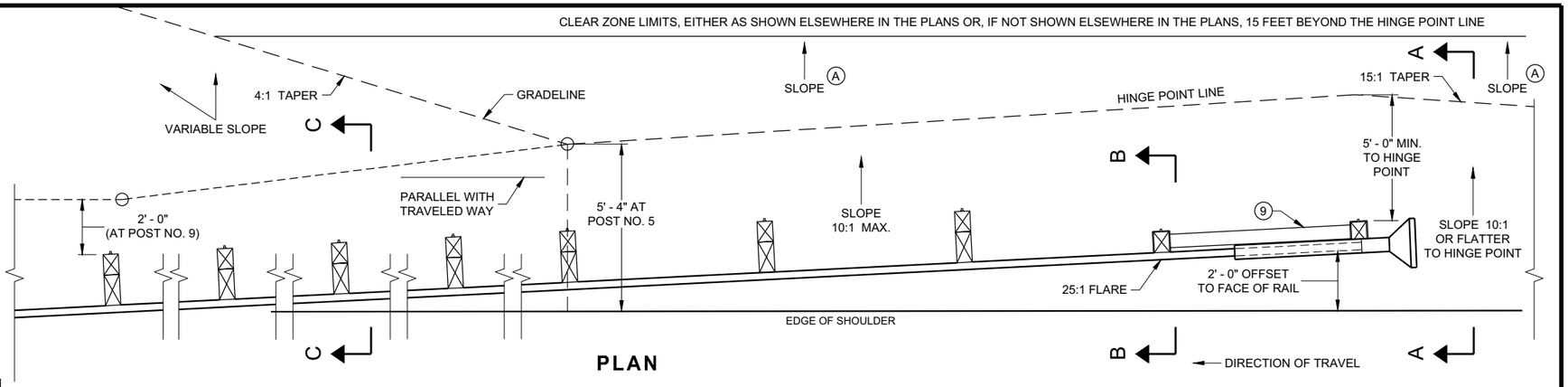
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

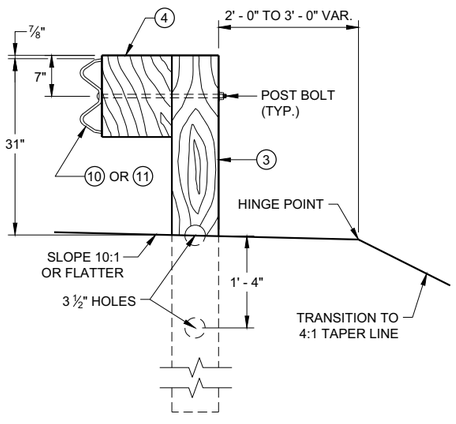
SEE MANUFACTURER'S DRAWING FOR SPLICE LOCATION, HARDWARE DIMENSIONS AND INSTALLATION INSTRUCTIONS.

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.

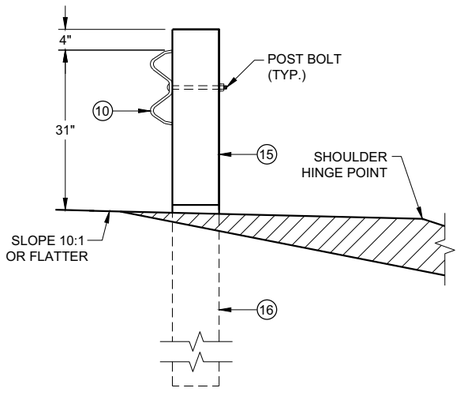


DETAIL "A" (E)

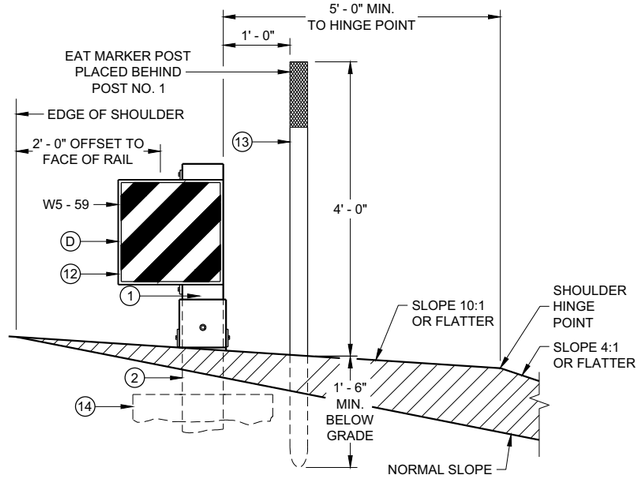




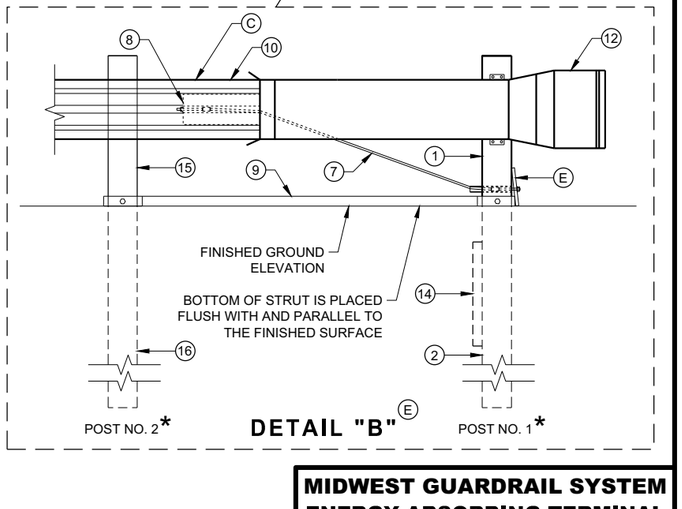
SECTION C - C
TYPICAL AT POST NOS. 3 - 9



SECTION B - B
TYPICAL AT POST NO. 2*



SECTION A - A
TYPICAL AT POST NO. 1*



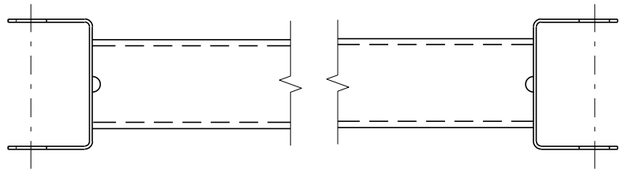
DETAIL "B" (E)

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B44 - 04a

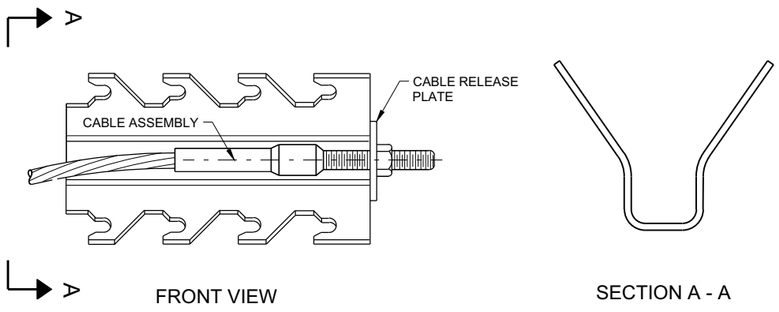
SDD 14B44 - 04a



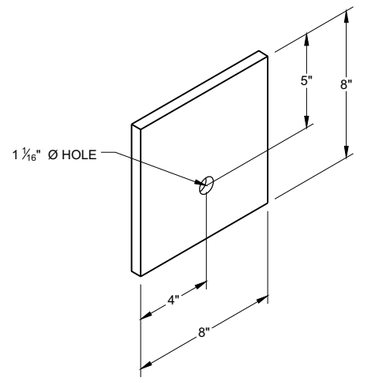
GENERIC GROUND STRUT ⑨ Ⓔ

BILL OF MATERIALS

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



GENERIC ANCHOR CABLE BOX ⑨ Ⓔ



BEARING PLATE ⑥ Ⓔ

6

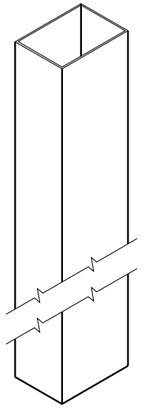
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SDD 14B44 - 04b

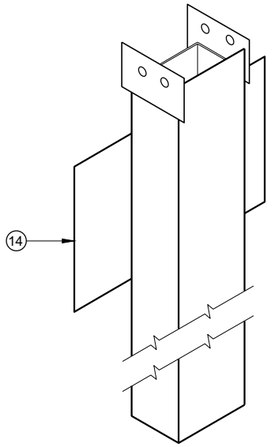
SDD 14B44 - 04b

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

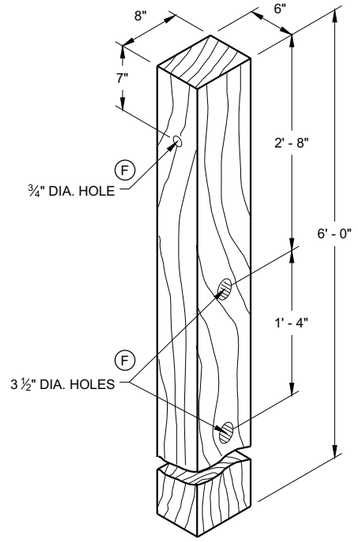
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



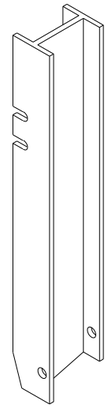
UPPER POST NO. 1 (1) (E)



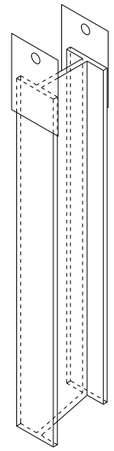
LOWER POST NO. 1 (2) (E)



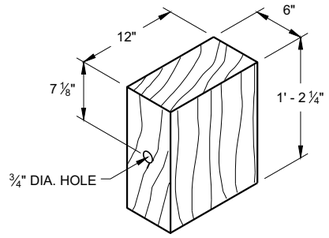
WOOD CRT POST (3) (E)
POSTS NUMBER 3-9



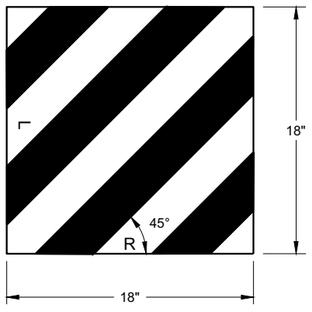
UPPER POST NO. 2 (15) (E)



LOWER POST NO. 2 (16) (E)

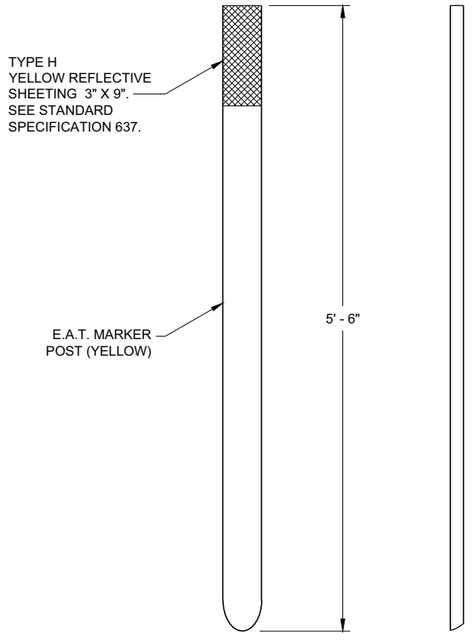


WOOD BLOCKOUT (4)
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



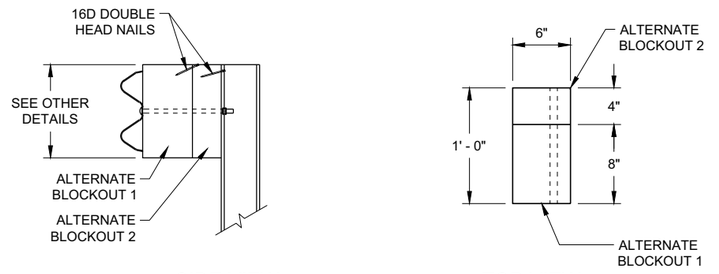
W5 - 59

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)

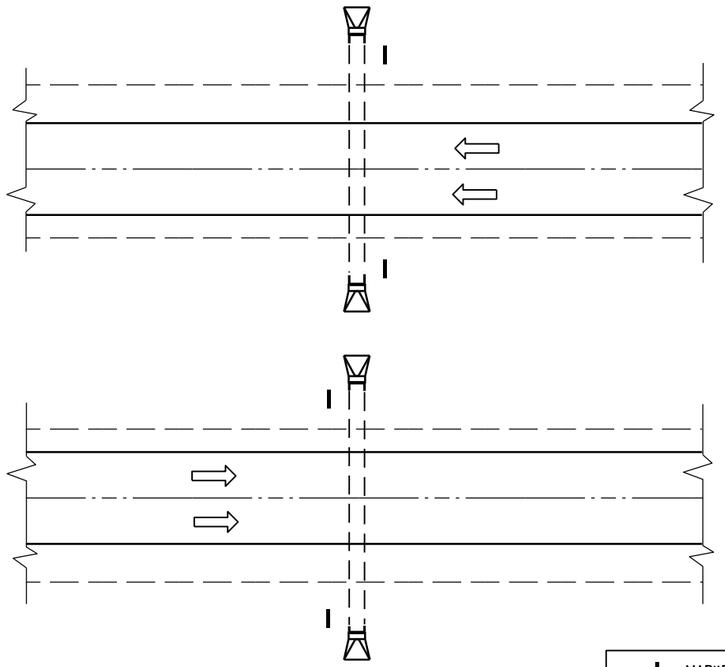
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

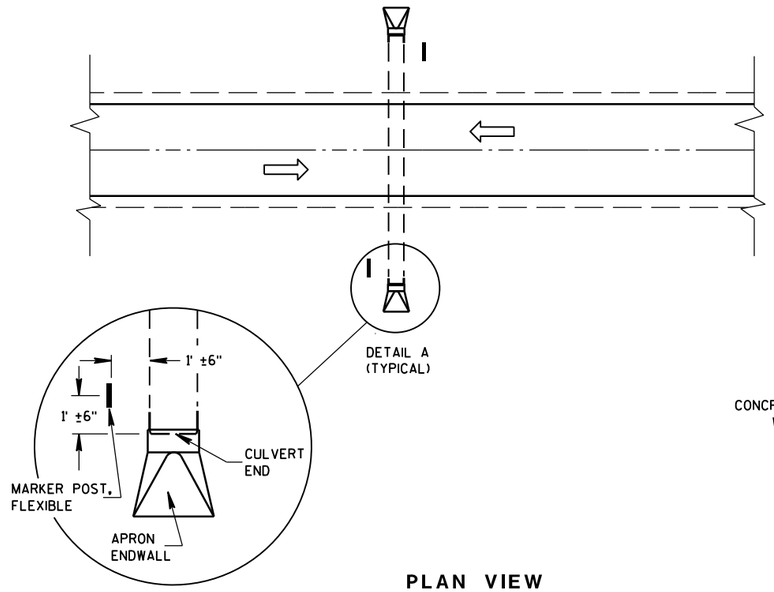
6

SDD 14B44 - 04c



PLAN VIEW

DIVIDED HIGHWAY



DETAIL A
(TYPICAL)

PLAN VIEW

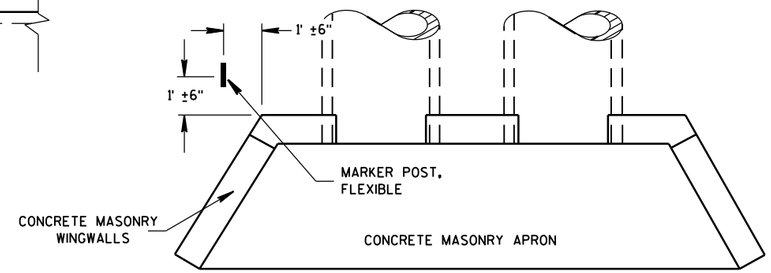
UNDIVIDED HIGHWAY

MARKER POST, FLEXIBLE

DIRECTION OF TRAFFIC FLOW

GENERAL NOTES

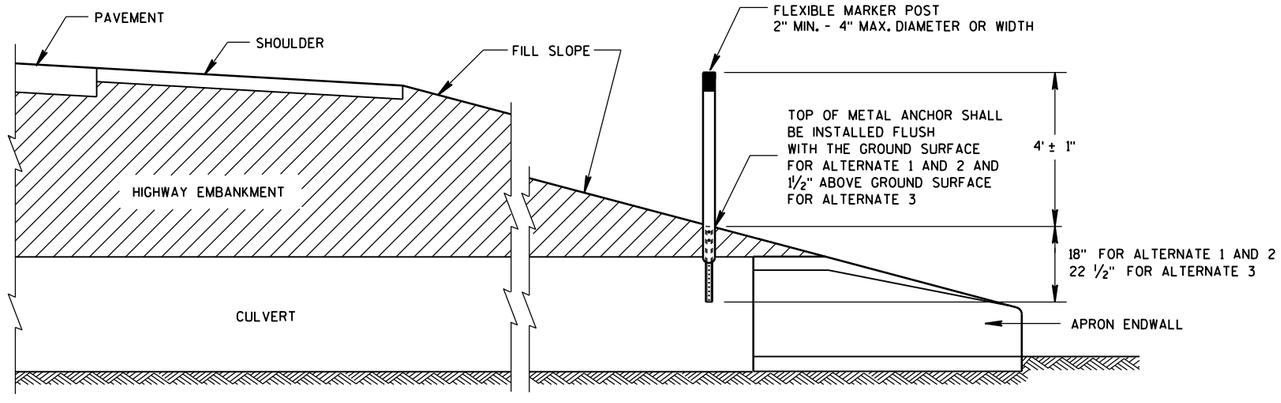
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



PLAN VIEW

CONCRETE MASONRY ENDWALLS FOR CULVERT PIPE AND PIPE ARCH

FLEXIBLE MARKER POST LOCATION



CROSS SECTION

FLEXIBLE MARKER POST

FLEXIBLE MARKER POST FOR CULVERT END

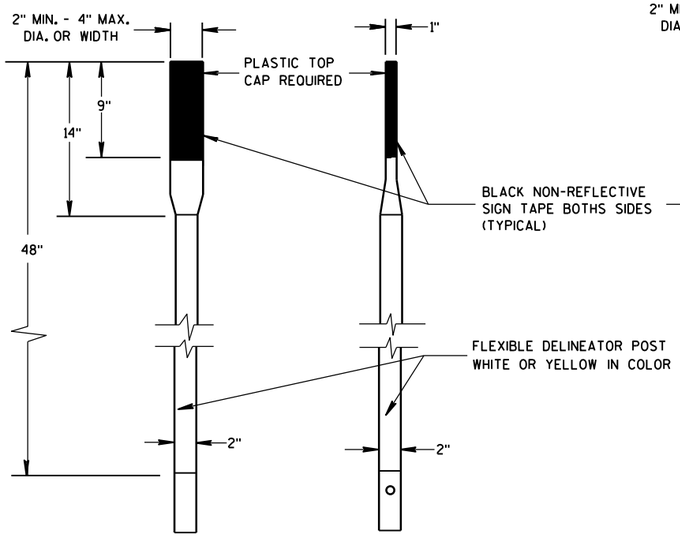
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

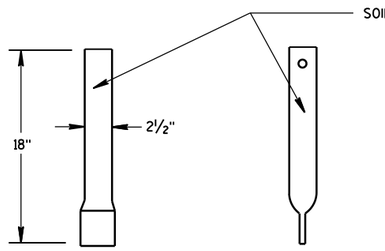
6

S.D.D. 15 A 3-2a

6

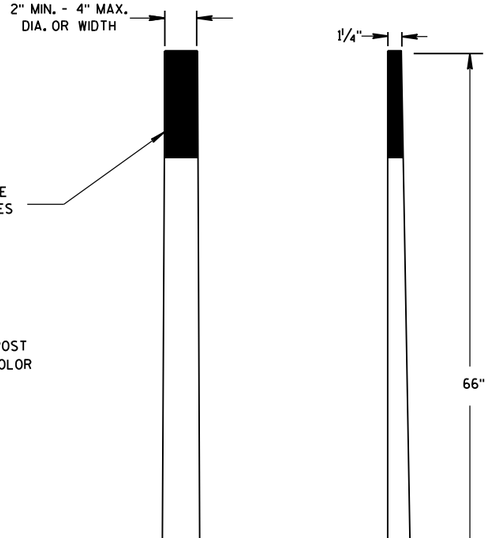
S.D.D. 15 A 3-2a





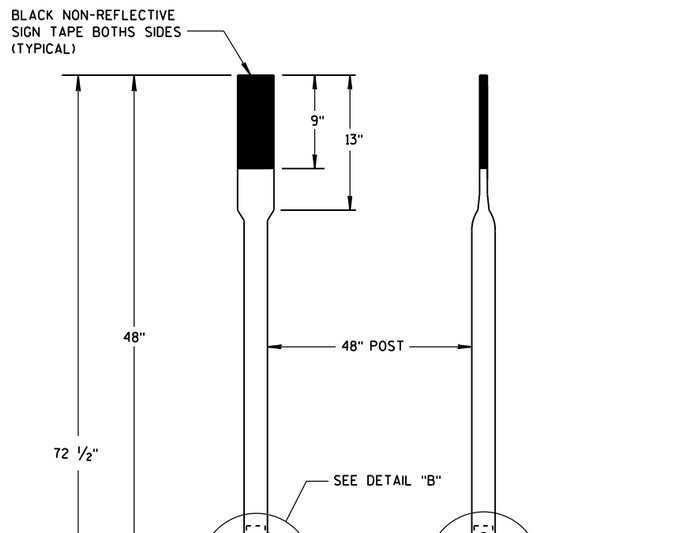
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

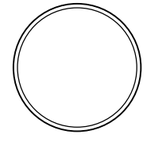
ALTERNATE 2



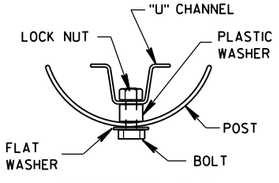
FRONT VIEW SIDE VIEW

ALTERNATE 3

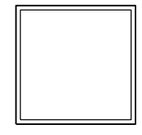
FLEXIBLE MARKER POSTS



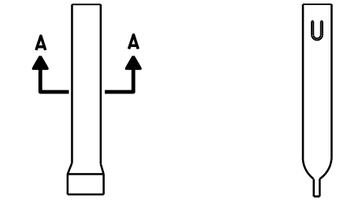
SECTION A-A



SECTION B-B

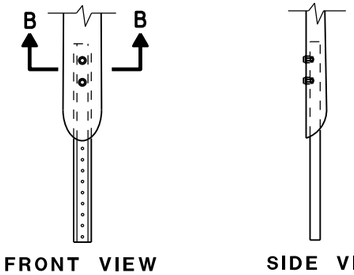


SECTION C-C



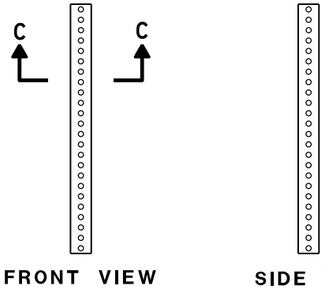
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

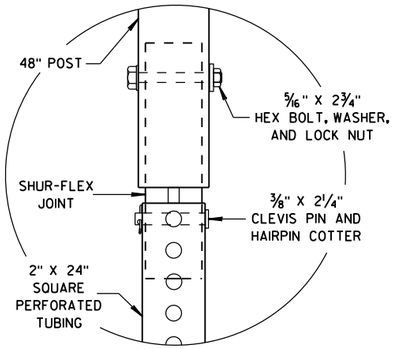
ALTERNATE 2



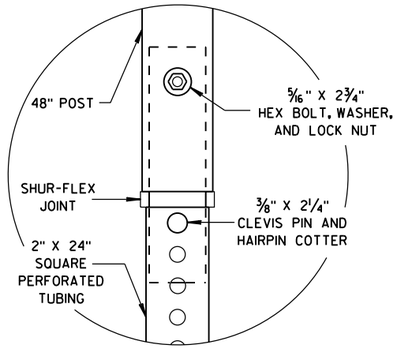
FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POST ANCHORS



DETAIL B



DETAIL C

FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

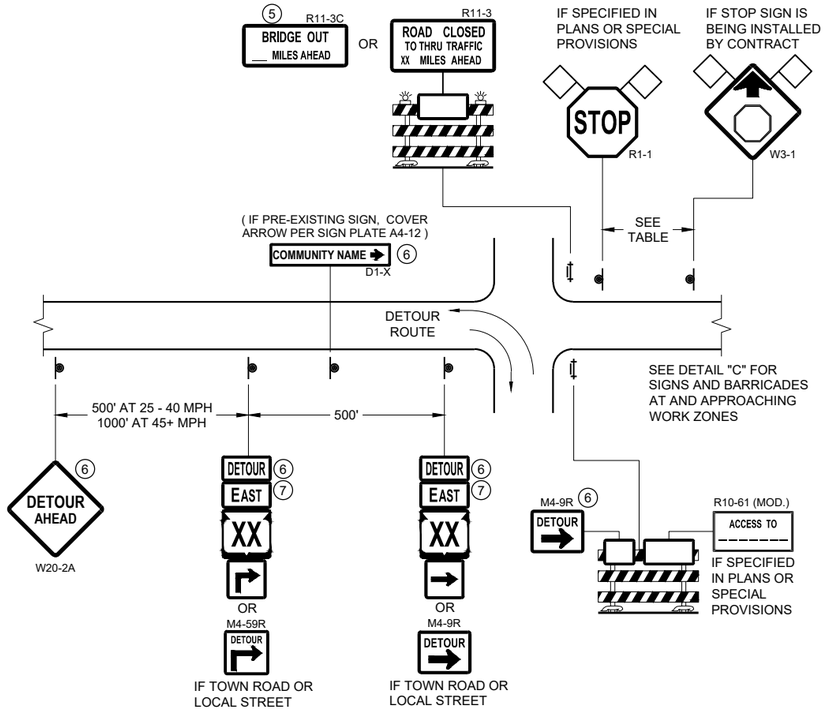
APPROVED
10/1/2012 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

6

S.D.D. 15 A 3-2b

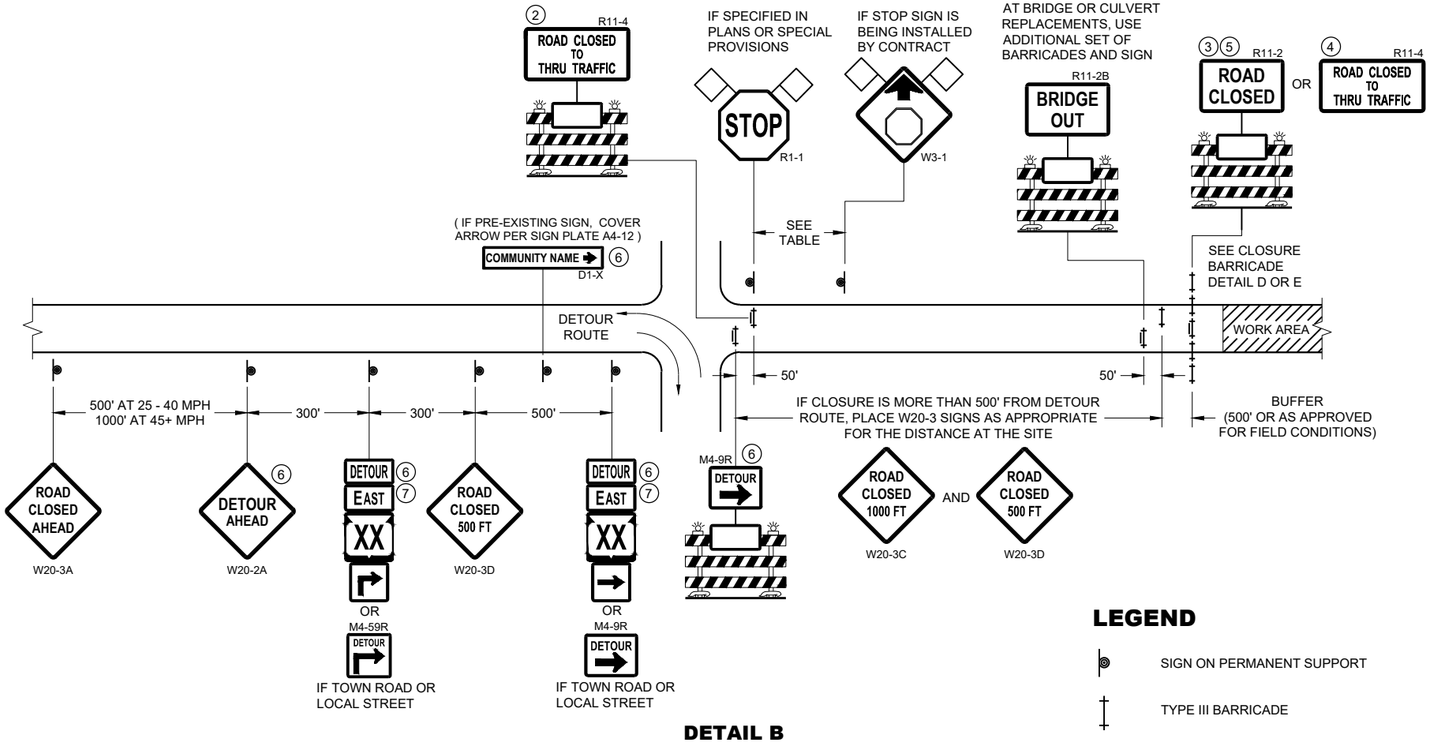
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S.D.D. 15 A 3-2b



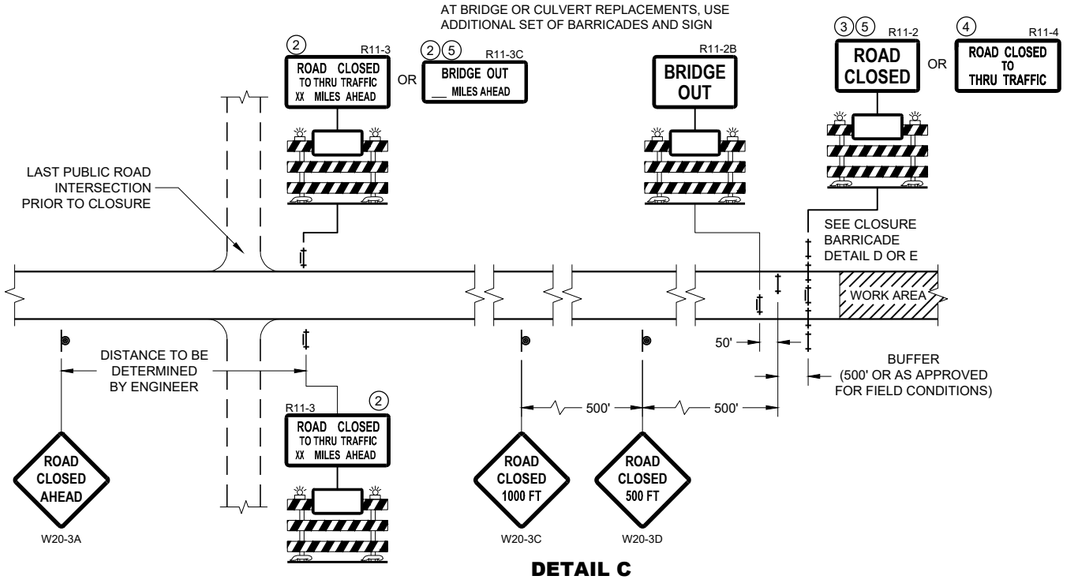
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE GREATER THAN OR EQUAL TO ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE LESS THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

SPEED LIMIT (MPH)	"STOP AHEAD" ADVANCE WARNING DISTANCE (FT)
25	200
30	200
35	350
40	350
45	500
50	550
55	750

SEE SDD 15C2-SHEET "b"
FOR GENERAL NOTES
AND FOOTNOTES ① THROUGH ⑦

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA
- FLAGS, 16" X 16" MIN. (ORANGE)
- DETOUR — M4 - 8
- EAST — M3 - X
- XX — M1 - 4 OR XX — M1 - 6 OR COUNTY X — M1 - 5A
- M05 - 1 OR M06 - 1

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

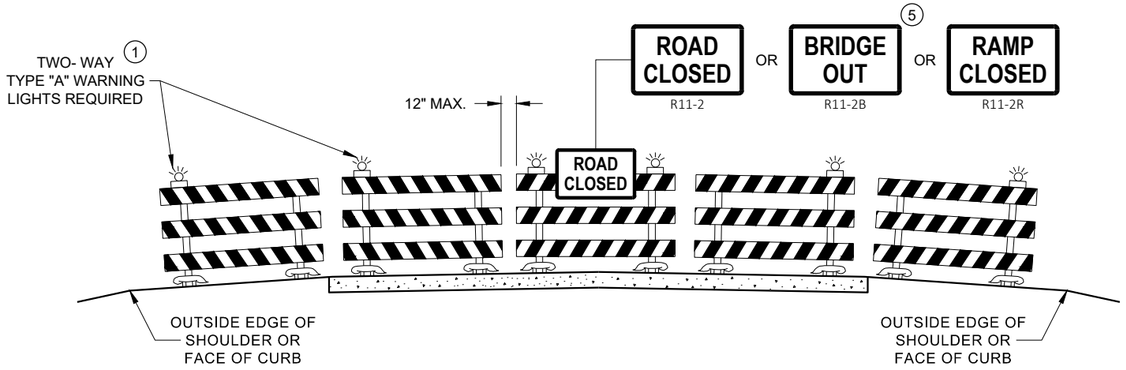
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEER

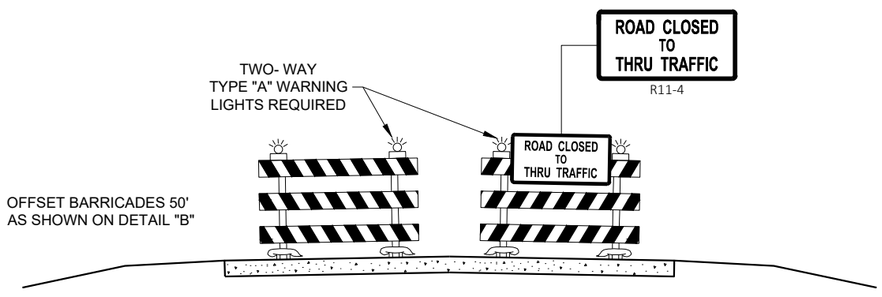
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SDD 15C02 - 09a

SDD 15C02 - 09a



DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW



DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW

SEE SDD 15C2 - SHEET "a" FOR LEGEND

GENERAL NOTES

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

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

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

BARRICADES THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

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

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL "D" FOR FULL ROAD CLOSURES.

TYPE "A" LOW - INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE R11 - 2, R11 - 3, M4 - 9, R11 - 4, AND R10 - 61 SIGNS PLACED ON THE BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE RAIL OR BOTTOM RAILS.

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

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
- R11 - 2 SHALL BE 48" X 30"
- R11 - 3 SHALL, R11 - 4 AND R10 - 61 SHALL BE 60 " X 30"
- M4 - 9 SHALL BE 30" X 24"
- M3 - X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4 - 8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1 - 4, M1 - 5A AND M1 - 6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS)
- MO5 - 1 AND MO6 - 1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
- D1 - X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.
- R1 - 1 SHALL BE 36" X 36"

(1) TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8 FOOT LIGHT SPACING.

(2) THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT AN INTERSECTION.

(3) FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "D".

(4) FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "E".

(5) FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11 - 2 AND R11 - 3 SIGNS.

(6) INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.

(7) "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

BARRICADES AND SIGNS FOR VARIOUS CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEE
FHWA

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SDD 15C02 - 09b

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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 / EAST — M4 - 8, M3 - X
- XX — M1 - 4; XX — M1 - 6; COUNTY X — M1 - 5A
- M05 - 1; M06 - 1; 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.

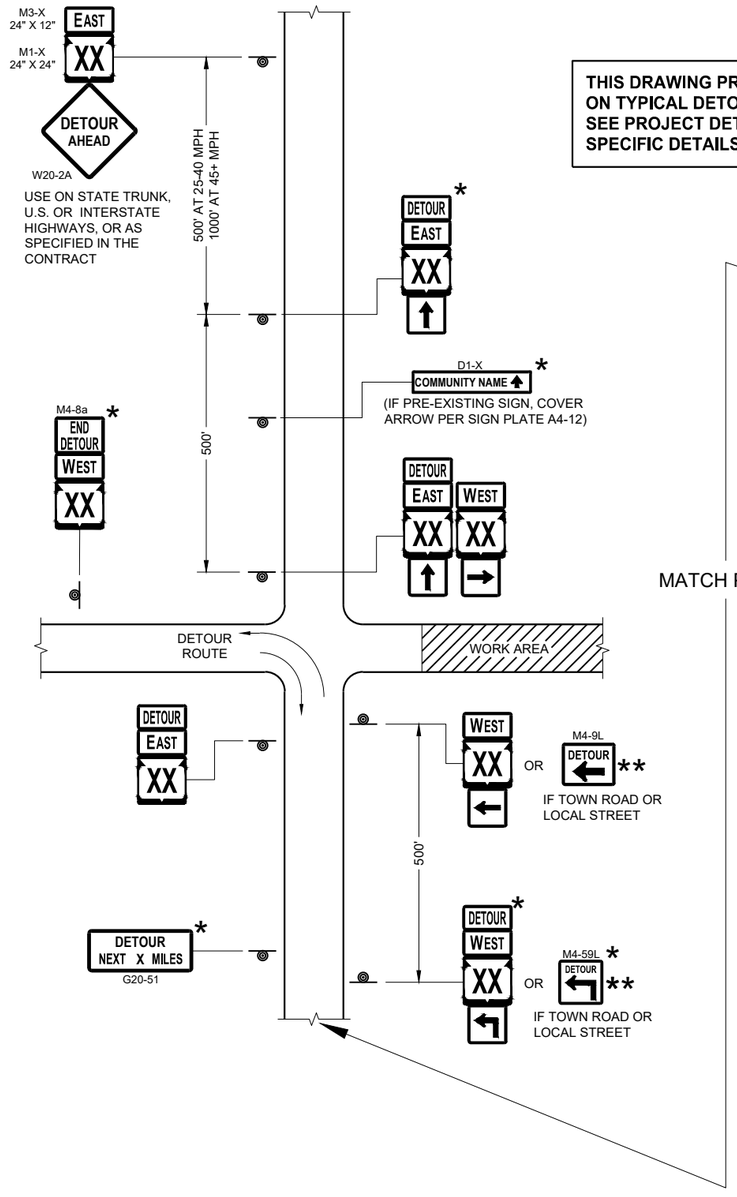
"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

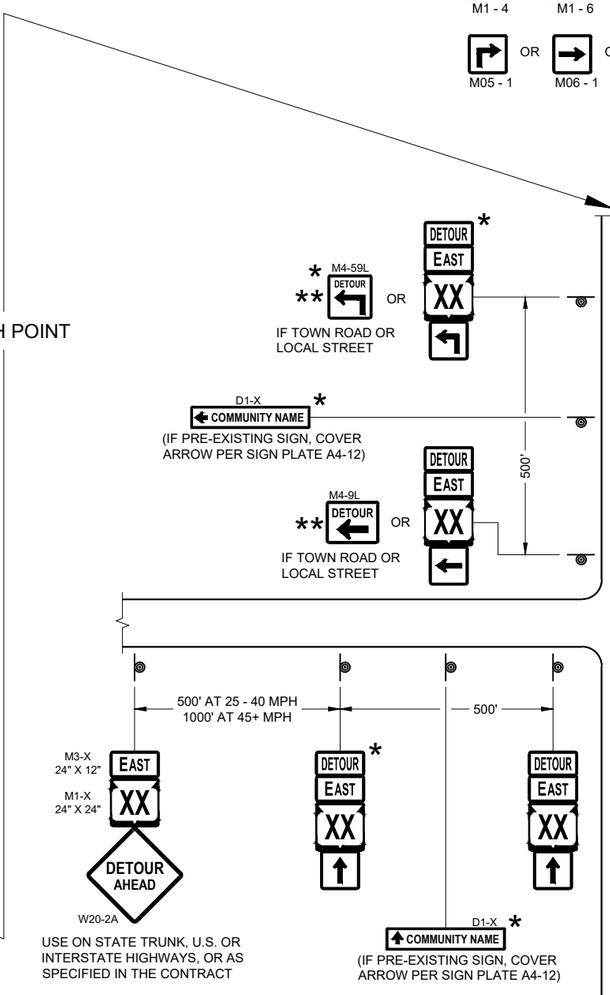
SIGN SIZES SHALL BE AS FOLLOWS:

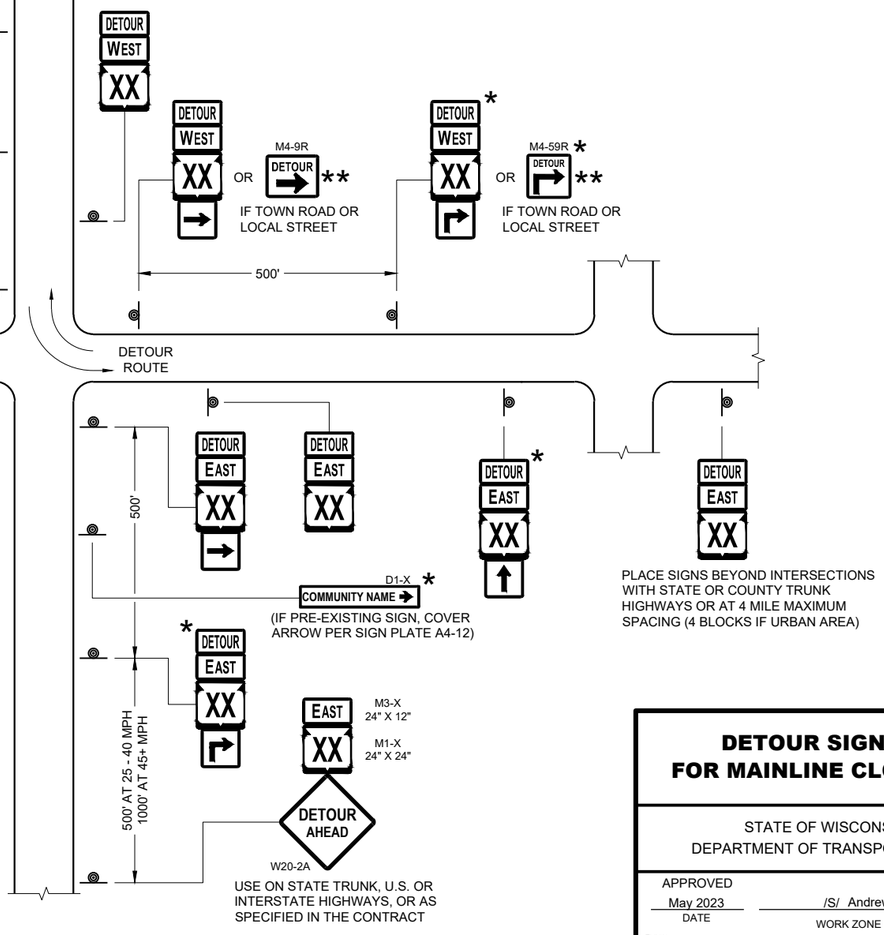
- M3-X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4-8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1-4, M1-5A AND M1-6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS)
- M05-1 AND M06-1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING 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

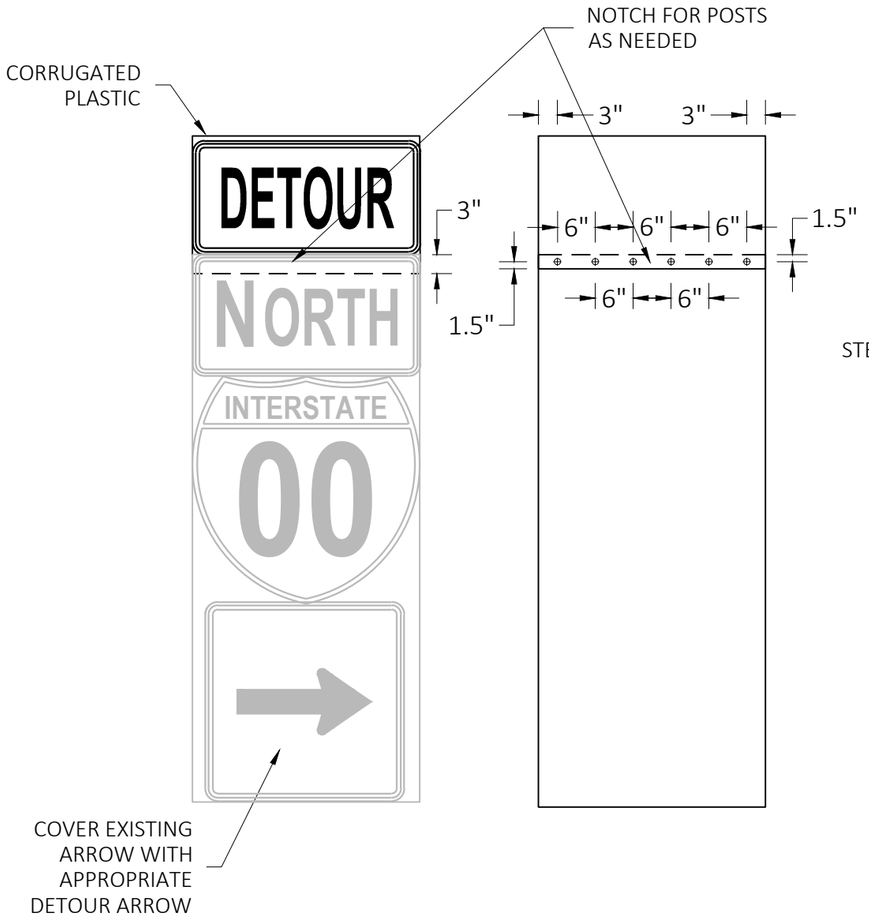
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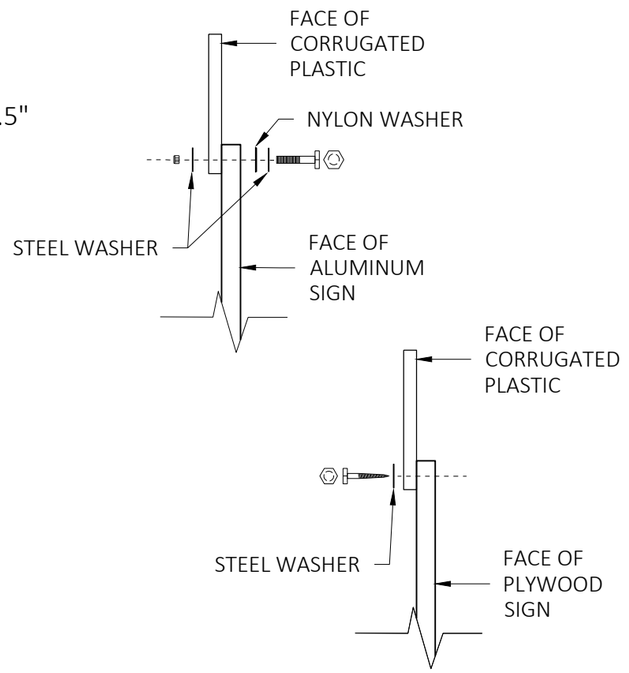
SDD 15C02 - 09c

FRONT SIDE

BACK SIDE

SIDE VIEW





GENERAL NOTES

CELLS OF CORRUGATED PLASTIC SHALL BE VERTICALLY ORIENTED.

PROVIDE A 0.4-INCH THICK BASE CORRUGATED PLASTIC WITH A 0.035-INCH WALL THICKNESS AND 0.4-INCH CELL SIZE.

FOR 36" WIDE SIGNS: USE 6 FASTENERS AS SHOWN.

FOR 24" WIDE SIGNS: USE 4 FASTENERS WITH EDGE SPACING AS SHOWN AND 6" SPACING BETWEEN FASTENERS.

METAL WASHERS, NUTS, BOLTS AND LAGS SHALL HAVE HEXAGONAL HEADS AND SHALL BE EITHER:

A. HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: A 153, CLASS D, OR SC 3.

B. ELECTRO-GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: B 633, TYPE III, SC3

THREADS ON BOLTS AND NUTS SHALL BE MANUFACTURED WITH SUFFICIENT ALLOWANCE FOR THE CADMIUM PLATE OR GALVANIZED COATING TO PERMIT THE NUTS TO RUN FREELY ON THE BOLTS.

PLYWOOD SIGNS:
LAG SCREWS - 5/16" x 1"
ALUMINUM SIGNS:
MACHINE BOLTS - 5/16" x 1-1/4" LENGTH W/NUTS
WASHERS:
1-1/4" O.D. x 3/8" I.D. x 1/16" STEEL
1-1/4" O.D. x 3/8" I.D. x .080 NYLON

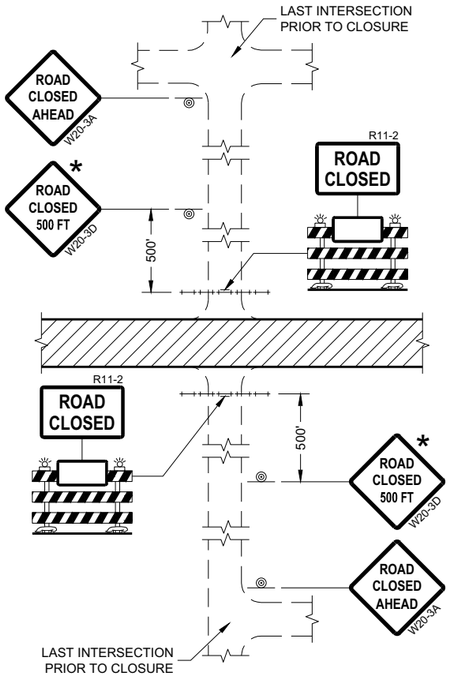
MODIFIED ROUTE ASSEMBLY FOR DETOUR SIGNING

MODIFIED ROUTE ASSEMBLY FOR DETOUR SIGNING

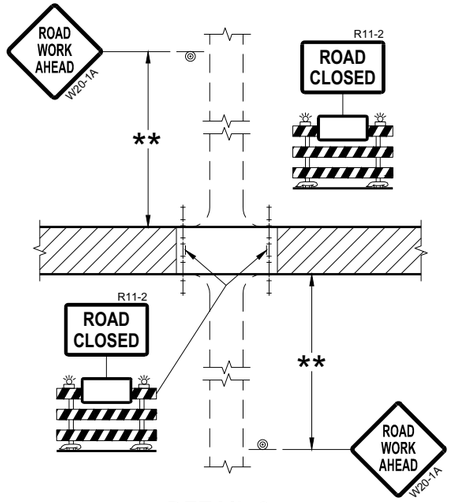
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 — DATE
/S/ Andrew Heidtke — ROADWAY STANDARDS DEVEL ENGINEER
FHWA

6
SDD 15C02-09h



DETAIL 1
(NO ACCESS TO PROJECT)



DETAIL 2
(PUBLIC CROSS-TRAFFIC MAINTAINED.
NO ACCESS TO PROJECT)

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 (500 FEET DESIRABLE) TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS REESTABLISHED.

BARRICADES THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY REESTABLISHED UPON COMPLETION OF THE OPERATION OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN 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.

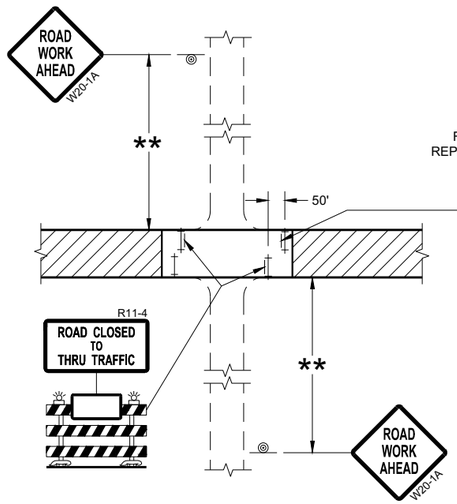
TYPE "A" LOW-INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE R11-2, R11-3, AND R11-4 SIGNS PLACED ON BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE OR BOTTOM RAILS.

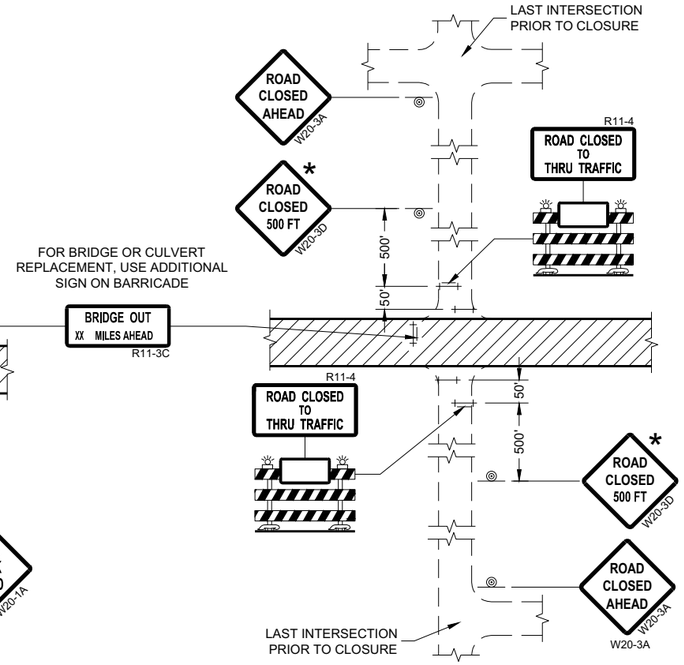
ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
R11-2 SHALL BE 48" X 30".
R11-4 AND R11-3 SHALL BE 60" X 30".

* OMIT THE "ROAD CLOSED 500 FT." SIGN IF THE LAST INTERSECTION IS 500 FEET OR LESS FROM THE WORK ZONE.

** 500' MAX. OR AT LAST INTERSECTION, WHICHEVER IS CLOSEST.



DETAIL 3
(PUBLIC CROSS-TRAFFIC MAINTAINED.
CONTRACTOR, LOCAL BUSINESS AND
RESIDENT ACCESS TO PROJECT)



DETAIL 4
(CONTRACTOR, LOCAL BUSINESS AND
RESIDENT ACCESS TO PROJECT)

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA

BARRICADES AND SIGNS FOR SIDEROAD CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

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SDD 15C03 - 05

SDD 15C03 - 05

GENERAL NOTES

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

(1) LOCATE THE NO PASSING ZONE W14-3 SIGN WITHIN 50 FEET OF THE "T" MARKING

(2) MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

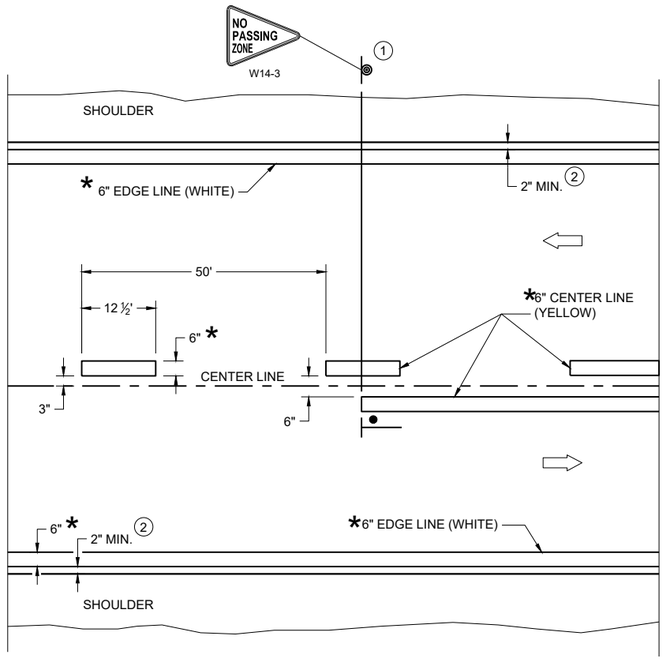
*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

LEGEND

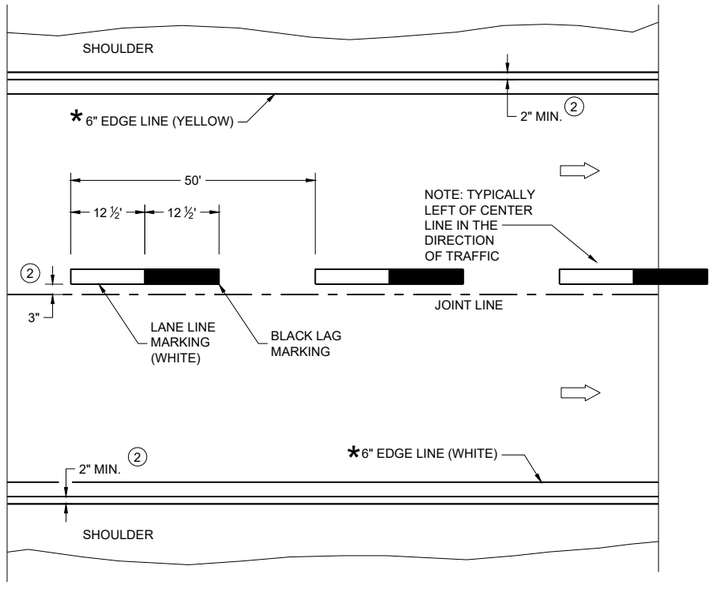
"T" MARKING

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

PERMANENT LONGITUDINAL PAVEMENT MARKINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
December 2024
DATE

/S/ Jeannie Silver
Statewide Pavement Marking Engineer

FHWA

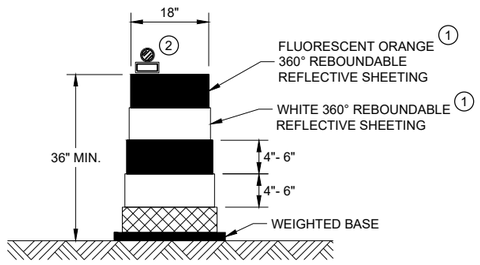
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SDD 15C08-24a

SDD 15C08-24a

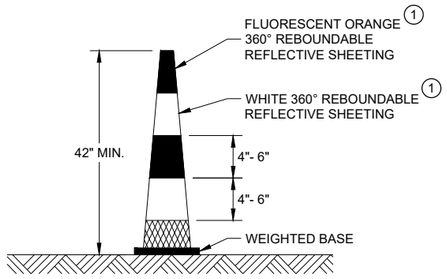
GENERAL NOTES

1. REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.
2. LOCATION OF WARNING LIGHTS WHEN SHOWN ON THE PLAN.



DRUM

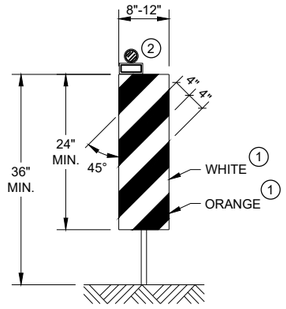
BALLAST WIDTHS
RANGE FROM 24"-36"



42" CONE

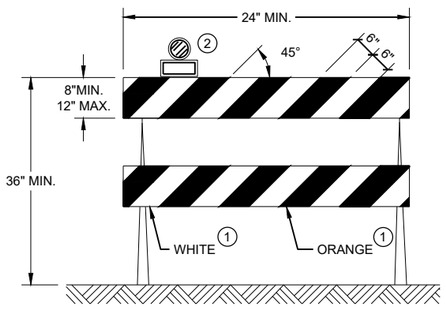
DO NOT USE IN TAPERS
½ SPACING OF DRUMS

BALLAST WIDTHS
RANGE FROM 14"-20"



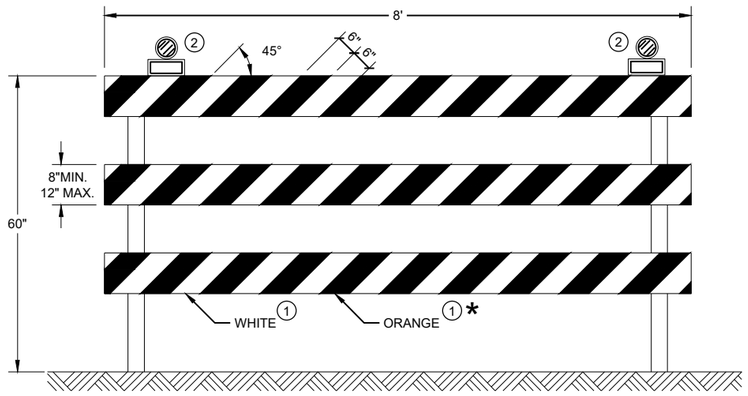
VERTICAL PANEL

THE STRIPES SHALL SLOPE DOWNWARD TO
THE TRAFFIC SIDE FOR CHANNELIZATION.



TYPE II BARRICADE

FOR RAILS LESS THAN 36" LONG, 4" WIDE STRIPES
MAY BE USED. ALL STRIPES SHALL SLOPE DOWNWARD
TO THE TRAFFIC SIDE FOR CHANNELIZATION.



TYPE III BARRICADE

IF SIGN MOUNTED, DO NOT COVER MORE THAN 50% OF THE TOP
TWO RAILS OR 33% OF THE TOTAL AREA OF THE THREE RAILS.

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2022
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

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SDD 15C11 - 10b

6

SDD 15C11 - 10b

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.

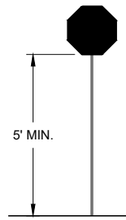
(3) EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS PLACED TRANSVERSE ACROSS THE LANE AT THE LOCATIONS SHOWN. WITHIN EACH ARRAY, SPACING BETWEEN RUMBLE STRIPS SHALL BE 15 FEET ON CENTER

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

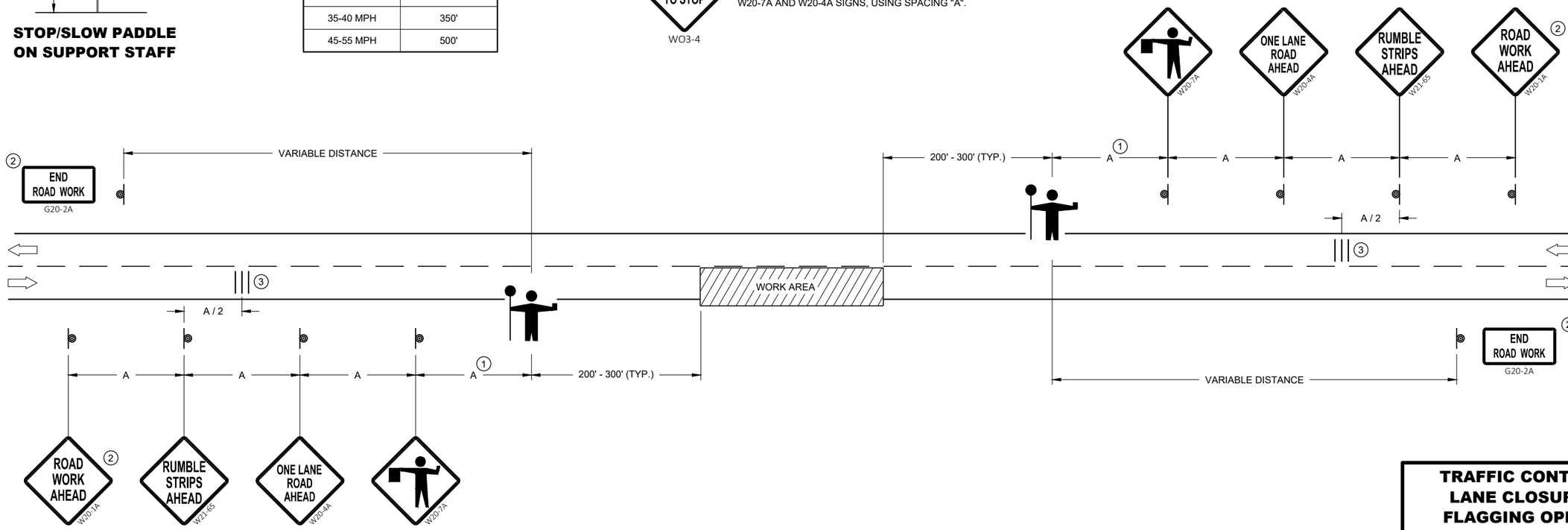
SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

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

6

SDD 15C12 - 09a

6

SDD 15C12 - 09a

LEGEND

V1 LEAD VEHICLE

V2 MARKING VEHICLE

V3 SHADOW VEHICLE

TRUCK MOUNTED ATTENUATOR (TMA)

SIGN ON TEMPORARY SUPPORT

DIRECTION OF TRAFFIC

GENERAL NOTES

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

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

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

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

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

WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR LAY STATIONARY SIGNS AND SUPPORTS FLAT ON THE GRADE WITH UPRIGHTS ORIENTED PARALLEL TO AND DOWNSTREAM FROM TRAFFIC.

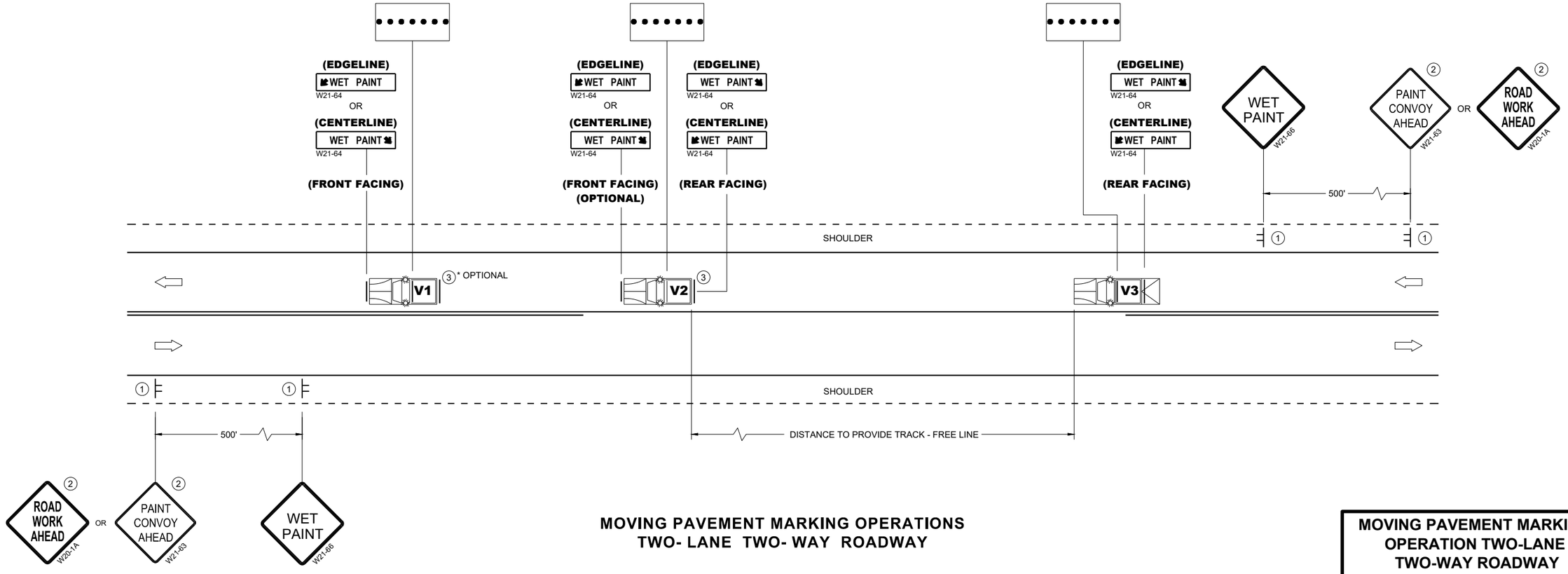
CONES SHOULD BE USED BETWEEN THE MARKING AND SHADOW VEHICLE AT 100 FOOT SPACING. CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.

CONES SHALL BE A MINIMUM OF 28" FOR WET PAVEMENT MARKING .

(1) SIGNS SHALL BE REPEATED APPROXIMATELY EVERY THREE MILES AND AFTER EVERY MAJOR INTERSECTION.

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

(3) V1 AND V2 CAN BE SWITCHED SO THAT THE MARKER IS THE LEAD VEHICLE.



MOVING PAVEMENT MARKING OPERATIONS TWO- LANE TWO- WAY ROADWAY

MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY

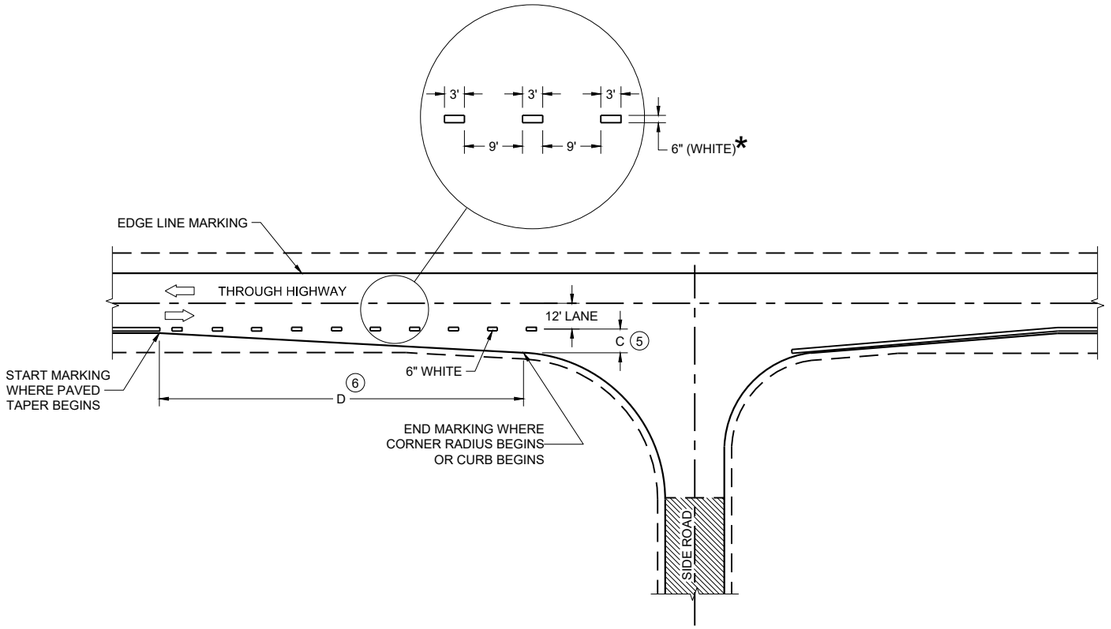
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
FEBRUARY 2025 — DATE
/S/ Andrew Heidtke — STATE ELECTRICAL ENGINEER

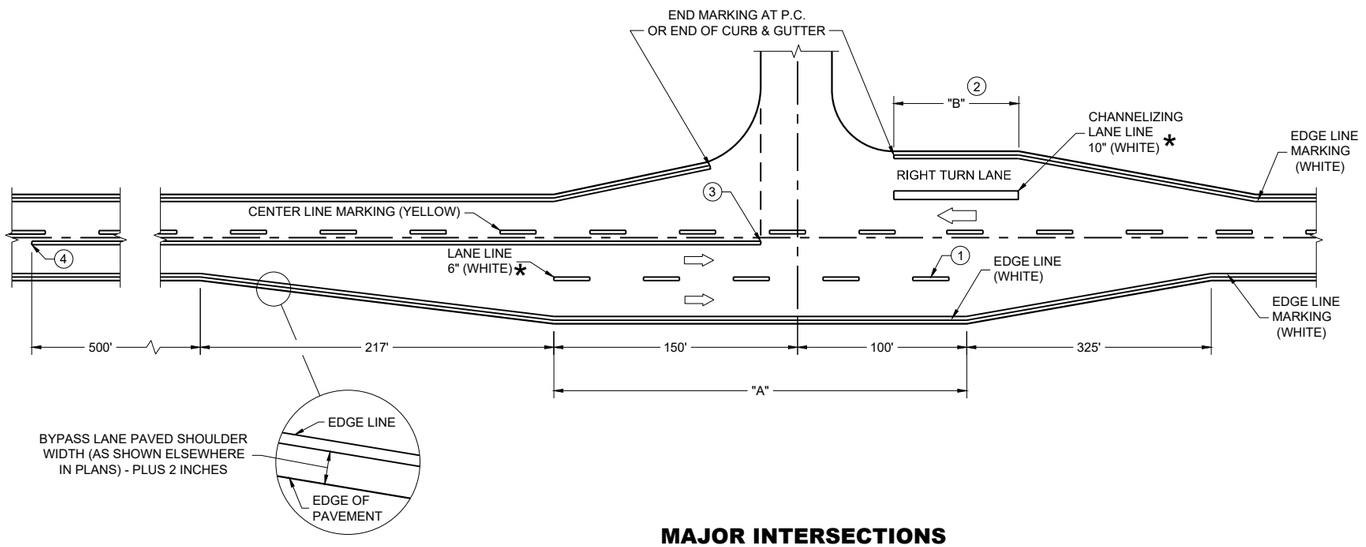
FHWA

6

SDD 15C19-10a



MINOR INTERSECTION



MAJOR INTERSECTIONS

(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANE)

*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

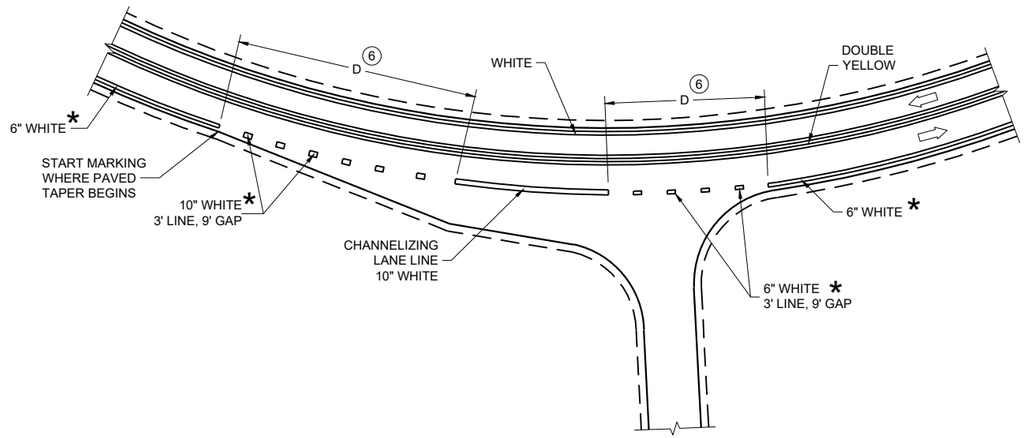
GENERAL NOTES

OMIT EDGE LINES THROUGH INTERSECTIONS. CONTINUE EDGE LINES THROUGH DRIVEWAYS.

1. WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.
2. WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.
3. BARRIER LINE ENDS AT SIDE ROAD PAVEMENT / SURFACE EDGE EXTENSION.
4. BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.
5. WHEN DISTANCE "C" IS LESS THAN 4 FEET, OMIT DOTTED EXTENSION.
6. WHEN DISTANCE "D" IS LESS THAN 50 FEET, OMIT DOTTED EXTENSION.

LEGEND

DIRECTION OF TRAVEL



INTERSECTION ON OUTSIDE OF CURVE

PAVEMENT MARKING (INTERSECTIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

LEGEND

SIGN ON PERMANENT SUPPORT

TRAFFIC CONTROL DRUM

DIRECTION OF TRAFFIC

WORK ZONE

GENERAL NOTES

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY THE REGIONAL TRAFFIC UNIT.

"WO" SIGN IS THE SAME AS "W" SIGN EXCEPT THE BACKGROUND IS ORANGE.

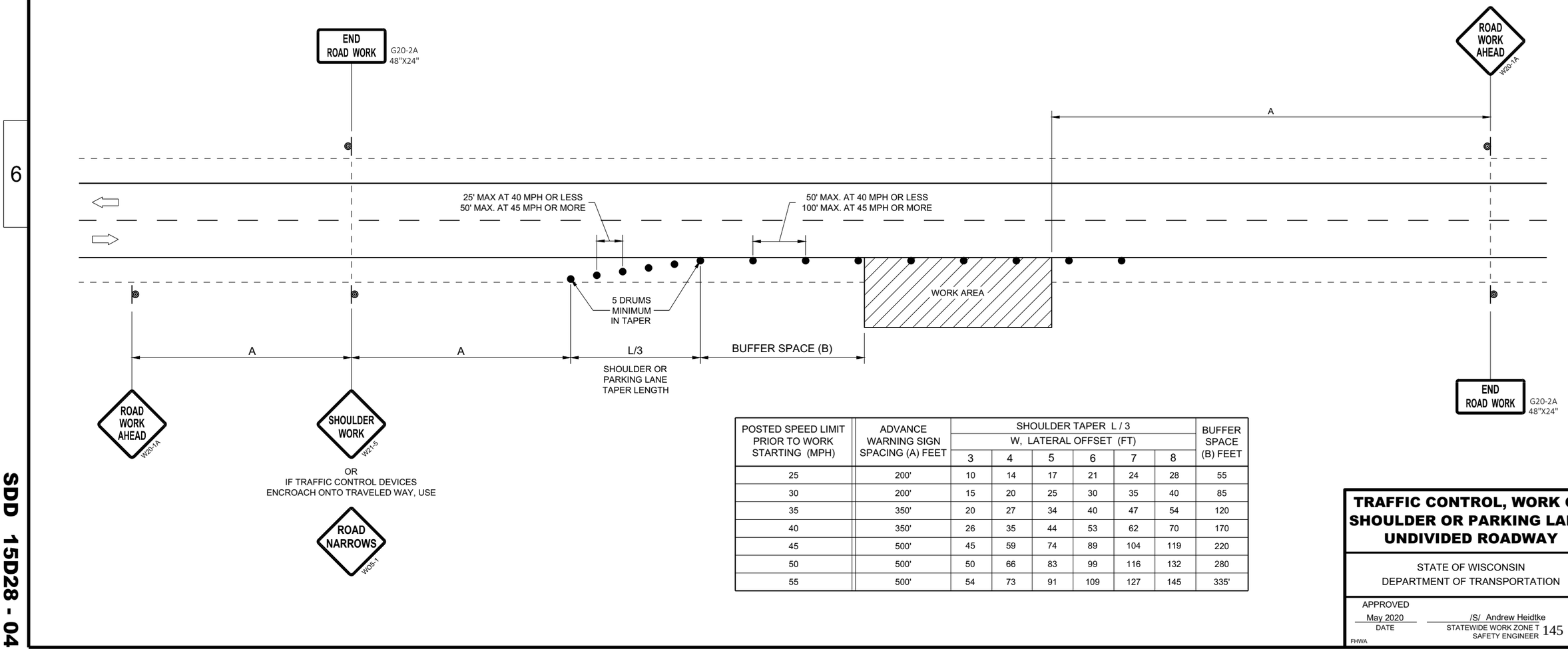
ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

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

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

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

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



POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	SHOULDER TAPER L / 3 W, LATERAL OFFSET (FT)						BUFFER SPACE (B) FEET
		3	4	5	6	7	8	
25	200'	10	14	17	21	24	28	55
30	200'	15	20	25	30	35	40	85
35	350'	20	27	34	40	47	54	120
40	350'	26	35	44	53	62	70	170
45	500'	45	59	74	89	104	119	220
50	500'	50	66	83	99	116	132	280
55	500'	54	73	91	109	127	145	335'

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2020
DATE

/S/ Andrew Heidtke
STATEWIDE WORK ZONE T SAFETY ENGINEER

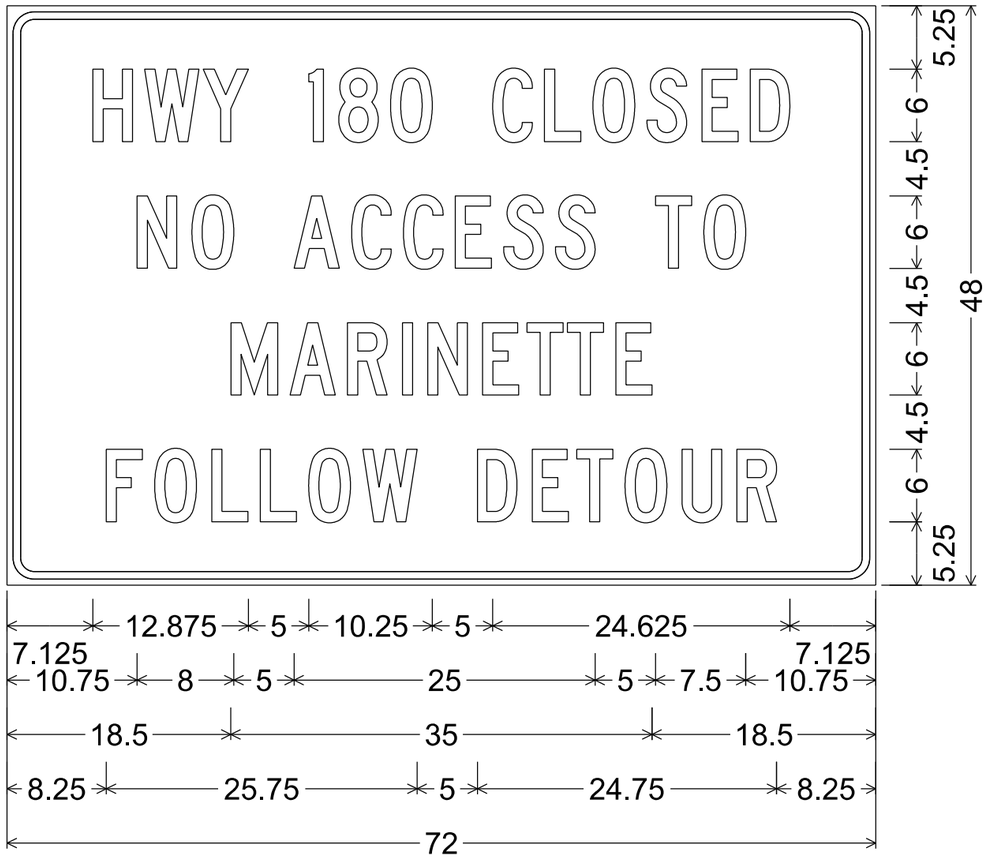
FHWA

SDD 15D28 - 04

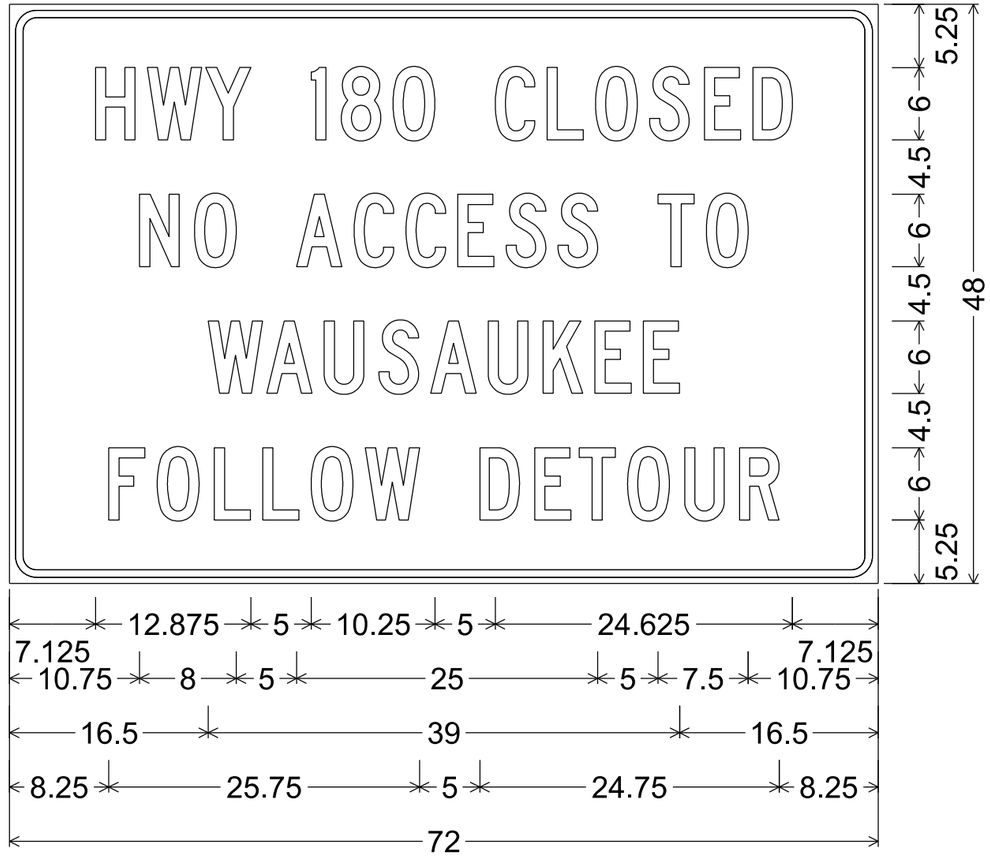
SDD 15D28 - 04

NOTES

1. Fixed Message Signs - Type II Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C



2.250" Radius, 0.625" Border, 0.500" Indent



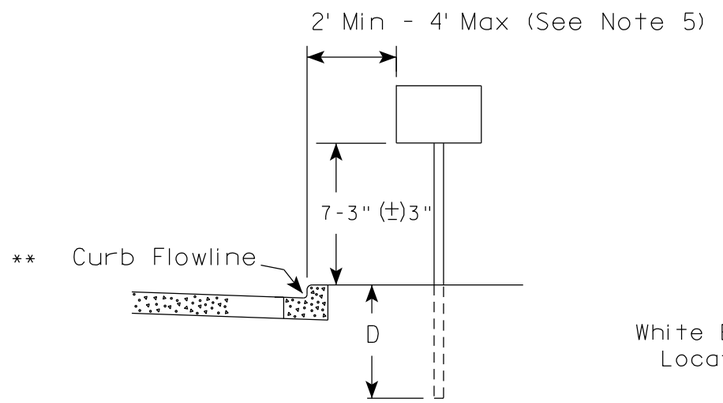
2.250" Radius, 0.625" Border, 0.500" Indent

7

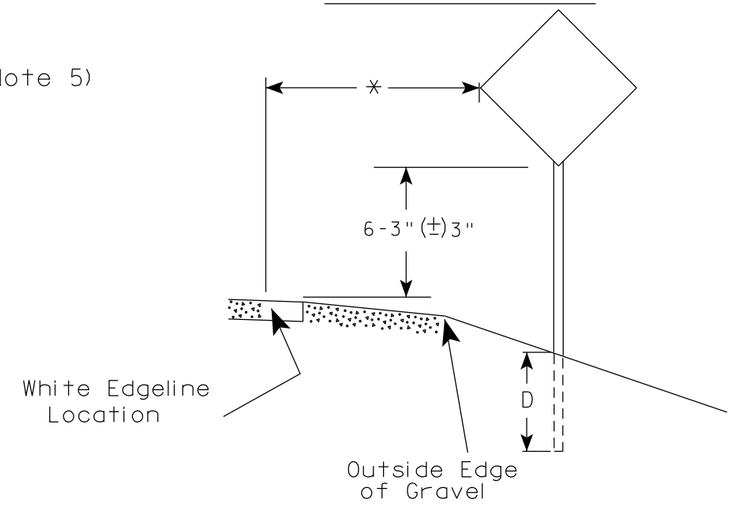
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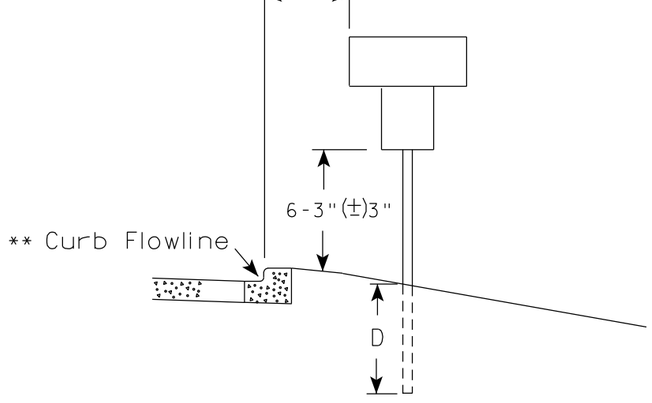
PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	TEMPORARY SIGNING	SHEET NO: 146	E

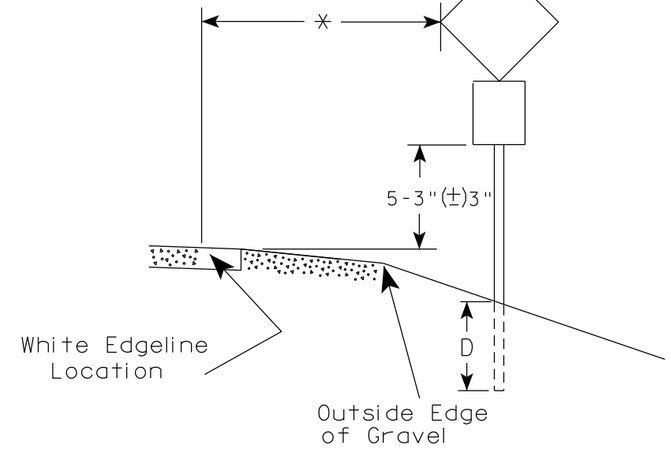
URBAN AREA



RURAL AREA (See Note 2)







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

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

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.

POST EMBEDMENT DEPTH

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

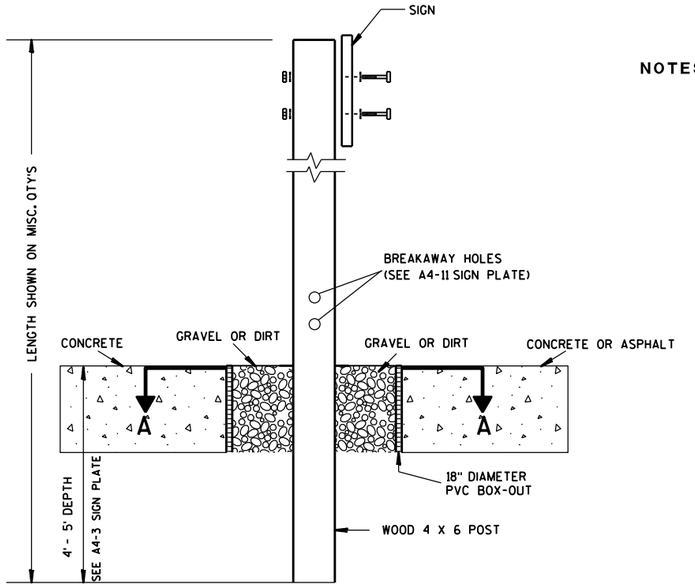
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/6/23 PLATE NO. A4-3.23

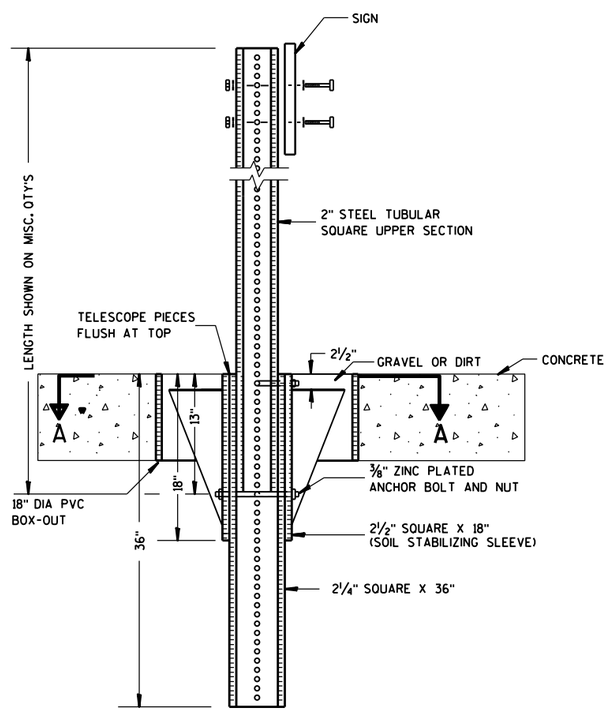
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 147	E



ELEVATION VIEW

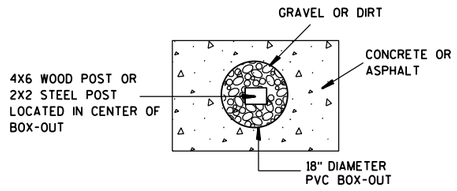
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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



ELEVATION VIEW

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



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B

WISCONSIN DEPT OF TRANSPORTATION

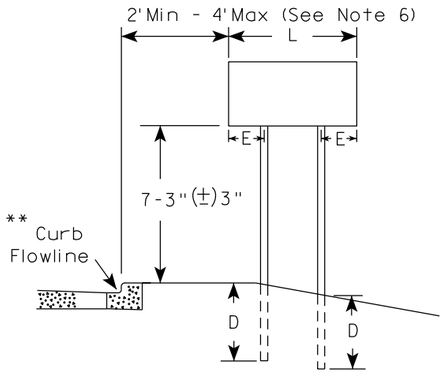
APPROVED Matthew R Rauch
for State Traffic Engineer

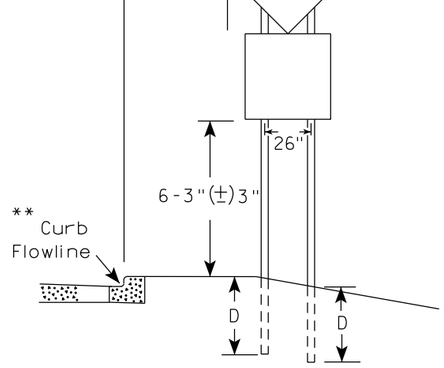
DATE 1/27/14 PLATE NO. A4-3B.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

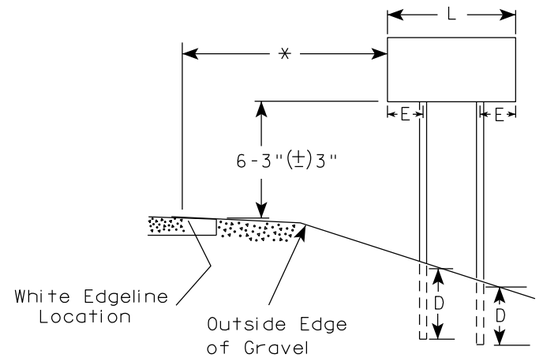
URBAN AREA

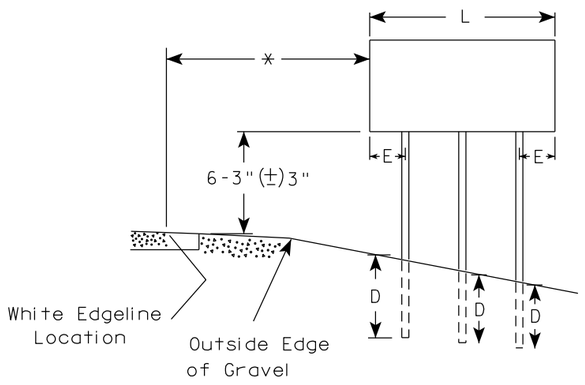


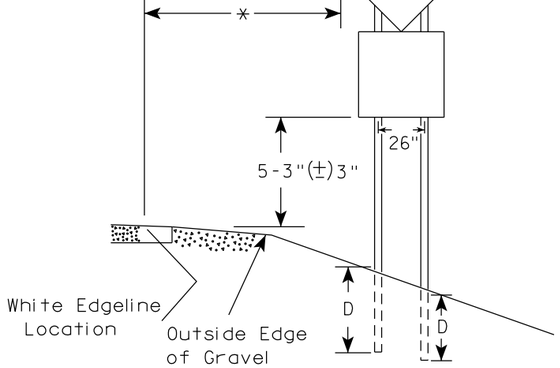


48" DIAMOND WARNING SIGN

RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN

SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED)		
	L	E
***	Greater than 48" Less than 60"	12"
	60" to 108"	L/5

SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 108" to 144"	12"

GENERAL NOTES

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

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

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

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

POST EMBEDMENT DEPTH

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

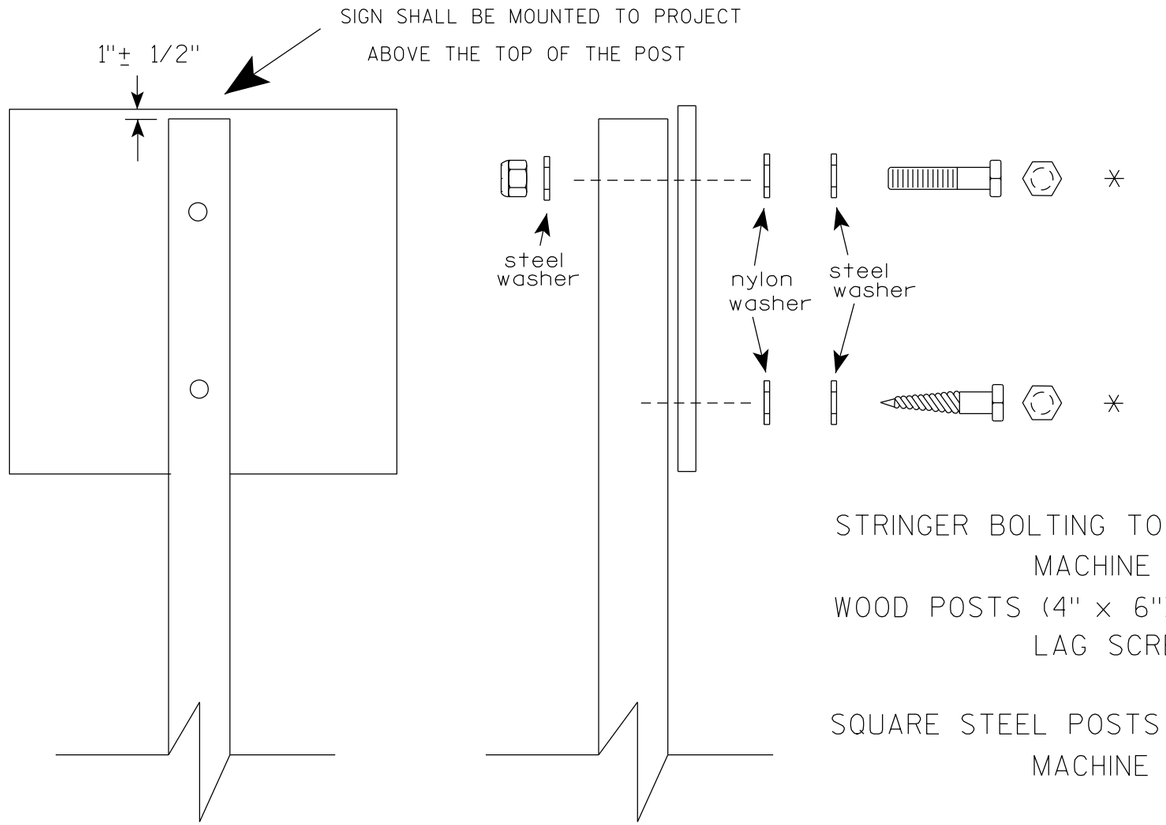
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/6/23 PLATE NO. A4-4.16

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 149	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

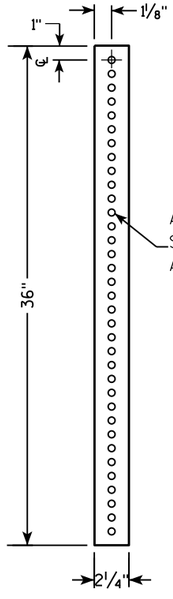
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

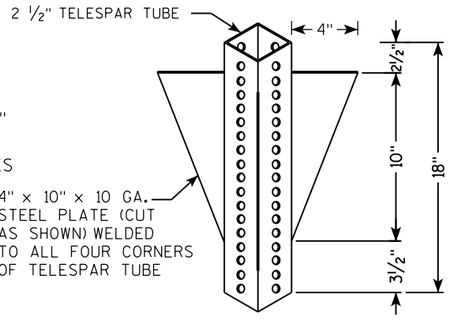
DATE 4/1/2020 PLATE NO. A4-8.9

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

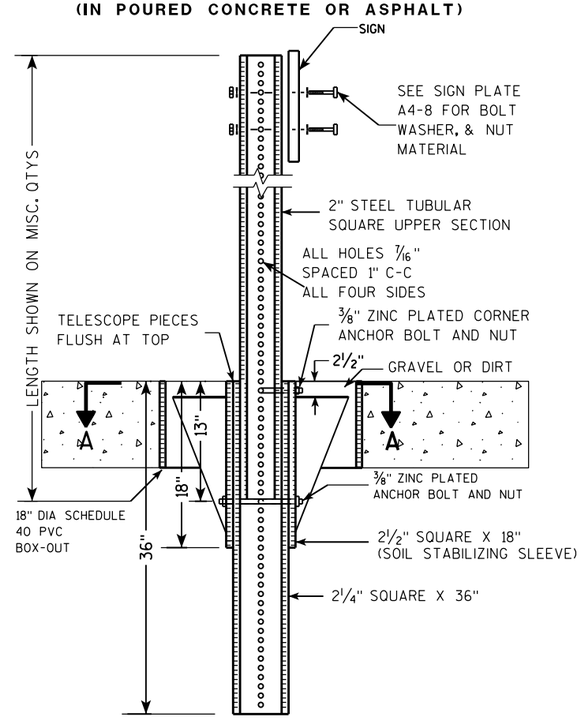
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



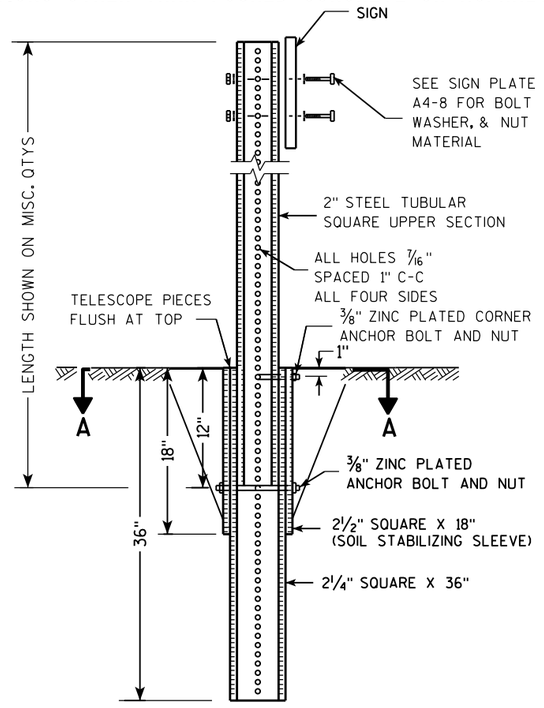
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

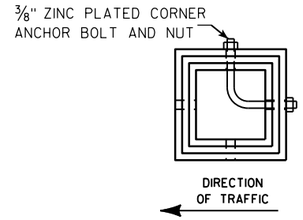


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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





SECTION A-A

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

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

TUBULAR STEEL
SIGN POST
A4-9

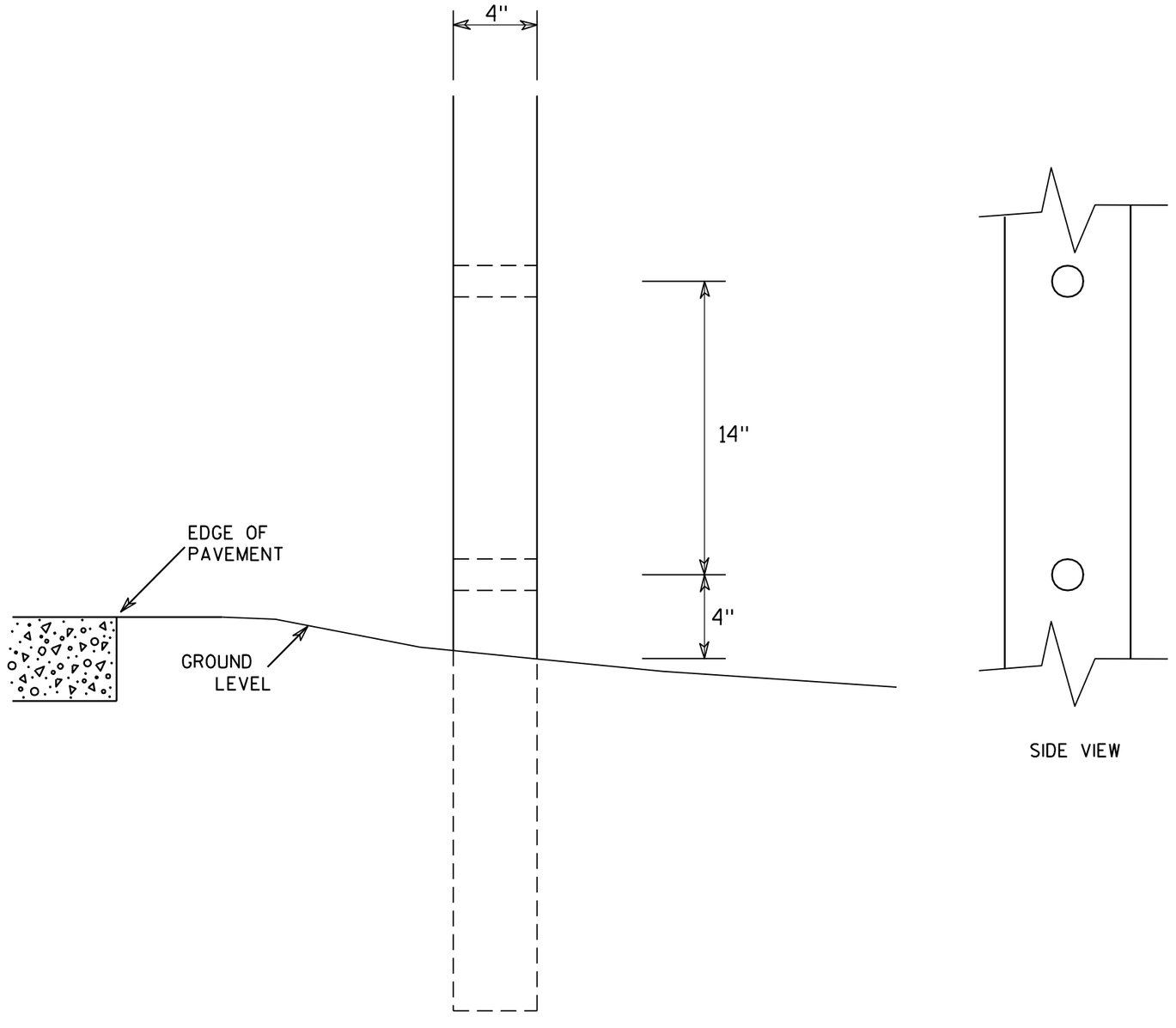
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE A4-9.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A49.DGN PLOT DATE : 05-FEB-2015 17:09 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000
WISDOT/CADDS SHEET 42



SIDE VIEW

GENERAL NOTES

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

7

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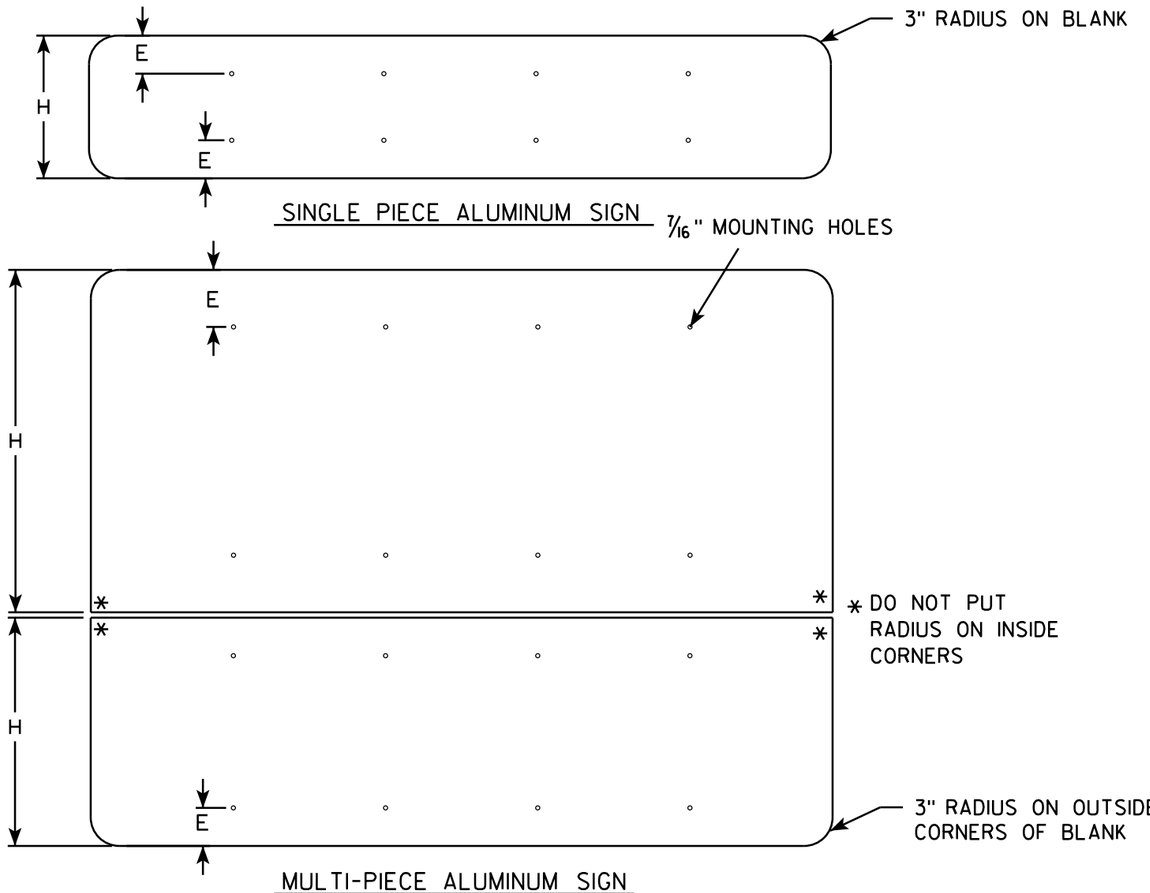
4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang for State Traffic Engineer

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

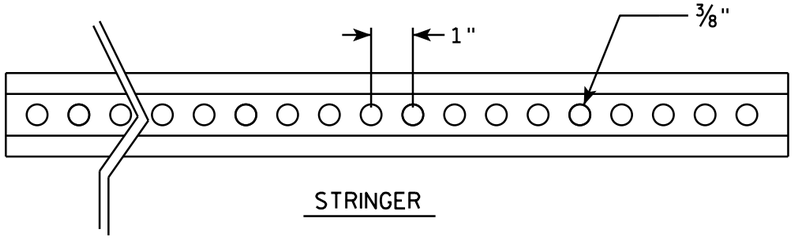
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 152	E

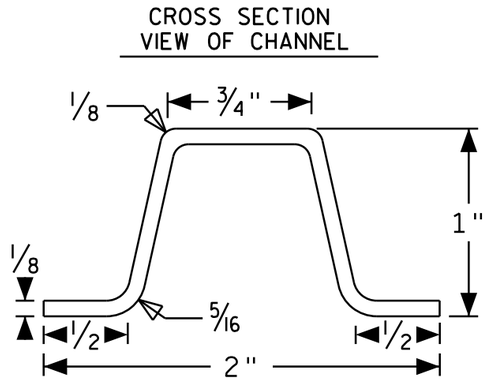


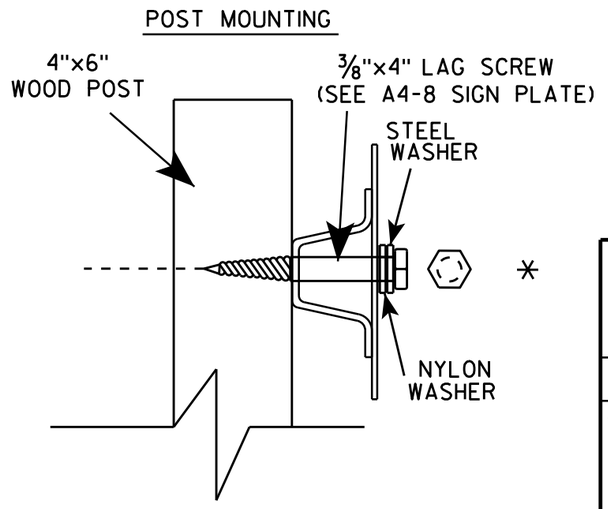
GENERAL NOTES

- ALL SIGNS OVER 60" IN WIDTH SHALL HAVE A 3" RADIUS ON THE OUTSIDE CORNERS OF THE ALUMINUM BLANK.
- MOUNTING HOLES SHALL BE 7/16" DIAMETER.
- SEE CHART FOR HOLE SPACING REQUIREMENTS
- FOR SIGN PANELS WITH DIMENSION (H) 36" AND OVER, DIMENSION E SHALL BE 6"
- FOR SIGN PANELS WITH DIMENSION (H) UNDER 36", DIMENSION E SHALL BE 4"
- SIGN STRINGER MATERIAL SHALL CONSIST OF STEEL CHANNEL POST SECTIONS, WEIGHING 1.12 LBS/FT IN ACCORDANCE WITH SECTION 633.2.1 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION.
- SEE SIGN PLATE A4-8 FOR SIGN STRINGER BOLTING REQUIREMENTS.

SIGN WIDTH	STRINGER WIDTH	POSTS	HOLE SPACING	MOUNTING HOLES
78"	72"	2	16"	15" 31" 47" 63"
84"	72"	2	17"	16½" 33½" 50½" 67½"
90"	72"	2	18"	18" 36" 54" 72"
96"	90"	2	19"	19½" 38½" 57½" 76½"
102"	90"	2	20"	21" 41" 61" 81"
108"	90"	2	21"	22½" 43½" 64½" 85½"
114"	108"	3	15"	12" 27" 42" 57" 72" 87" 102"
120"	108"	3	16"	12" 28" 44" 60" 76" 92" 108"
126"	108"	3	17"	12" 29" 46" 63" 80" 97" 114"
132"	126"	3	18"	12" 30" 48" 66" 84" 102" 120"
138"	126"	3	19"	12" 31" 50" 69" 88" 107" 126"
144"	126"	3	20"	12" 32" 52" 72" 92" 112" 132"







SIGN STRINGER MOUNTING REQUIREMENTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch

for State Traffic Engineer

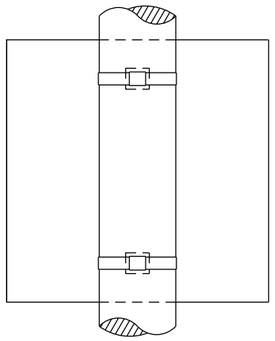
DATE 4/26/16 PLATE NO A4-18.1

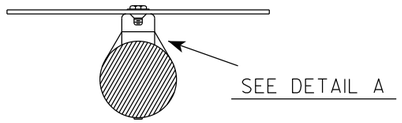
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

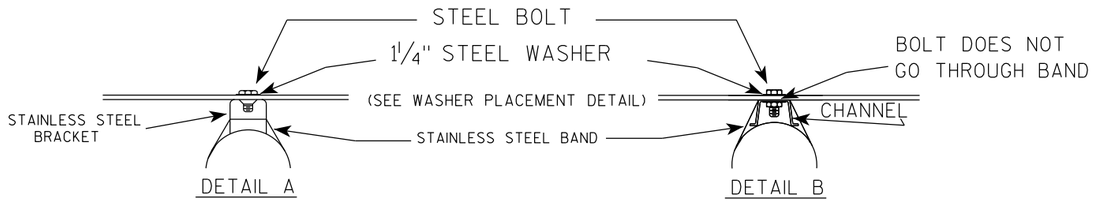
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A418.dgn PLOT DATE : 27-APR-2016 13:56 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 41.805205:1.000000 WISDOT/CADDS SHEET 42

BANDING

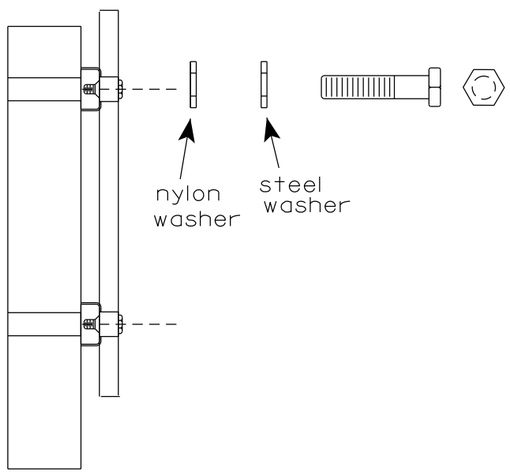
SINGLE SIGN







WASHER PLACEMENT

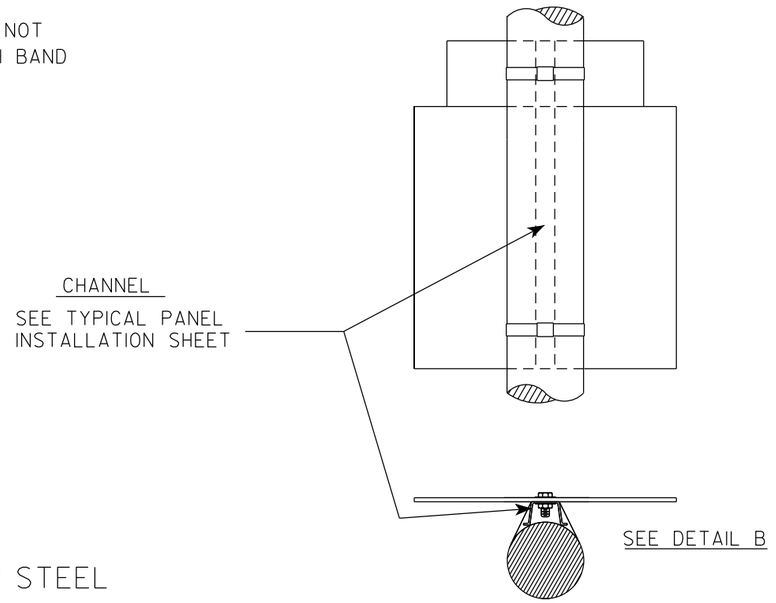


WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

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



STANDARD SIGN
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

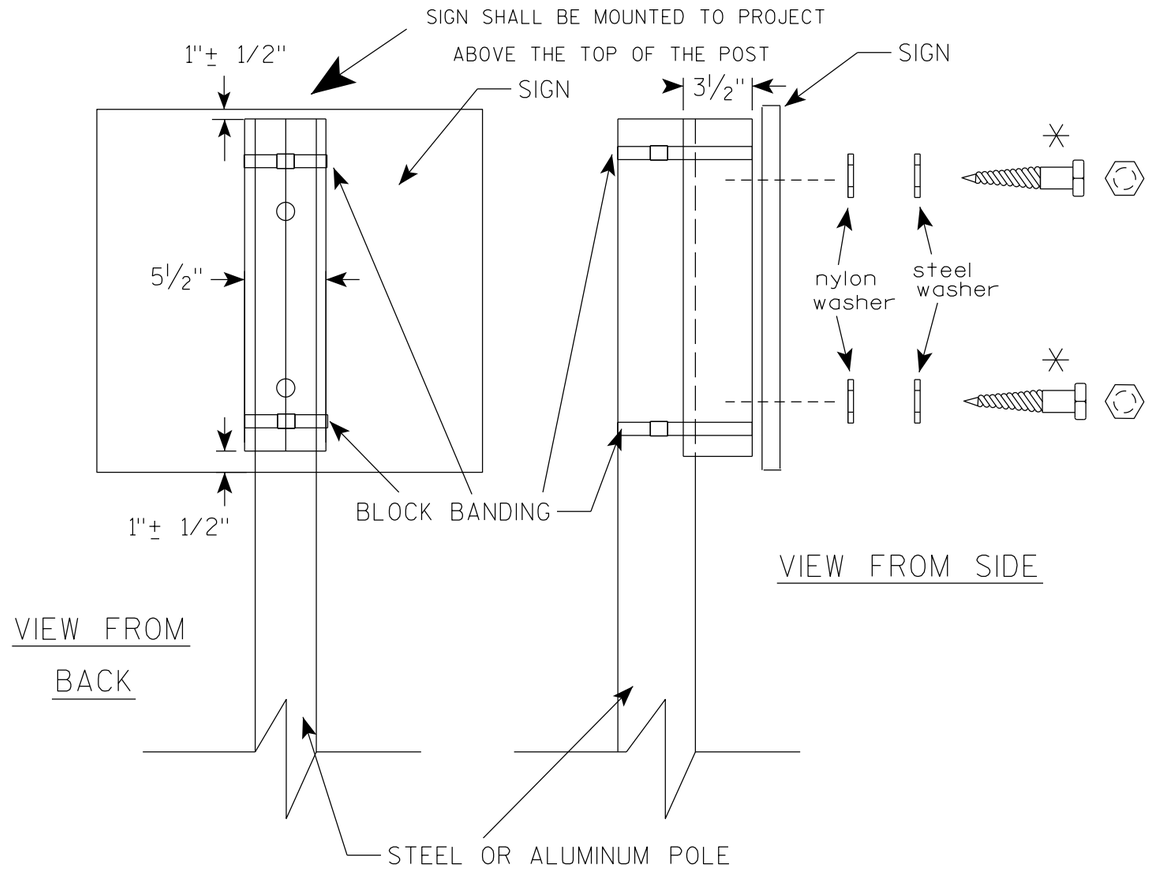
DATE 6/10/19 PLATE NO. A5-9.4

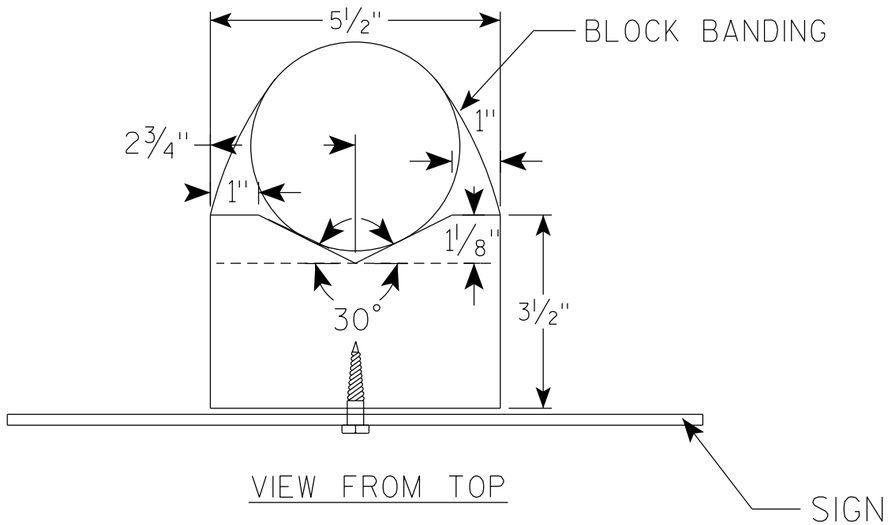
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 154	E

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

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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)

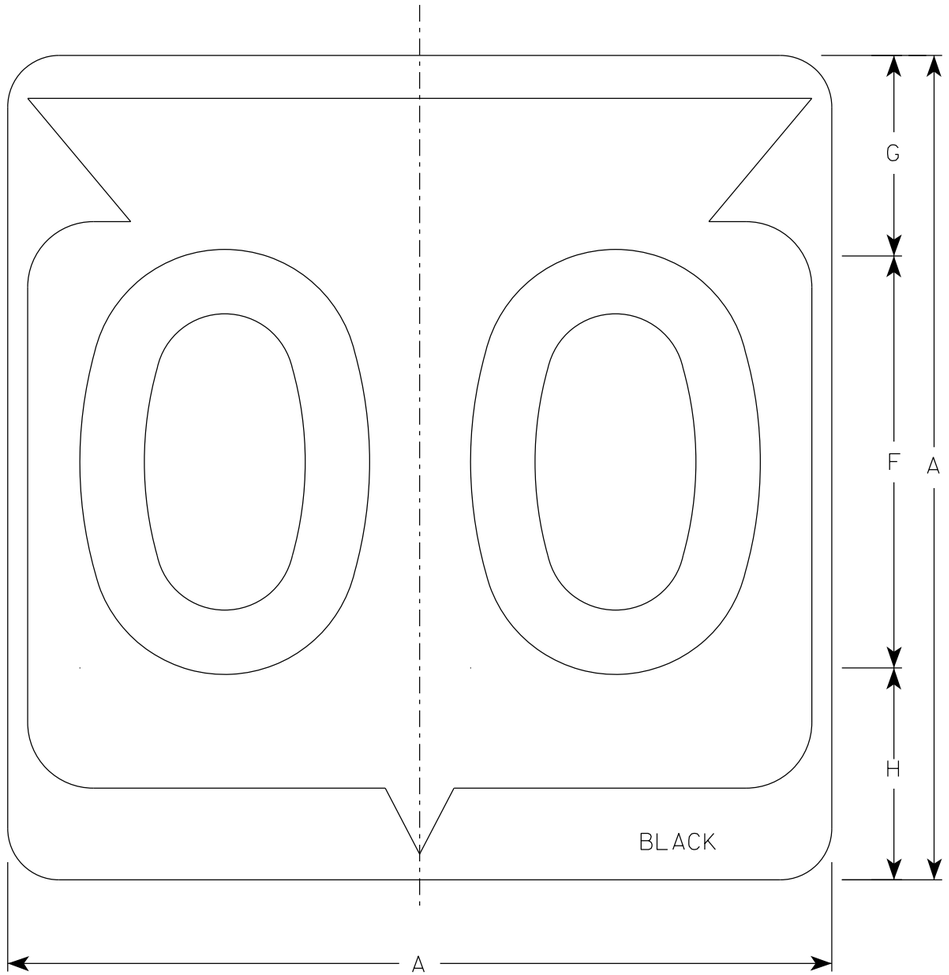
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/19/2022 PLATE NO. A5-10.3

PROJECT NO:

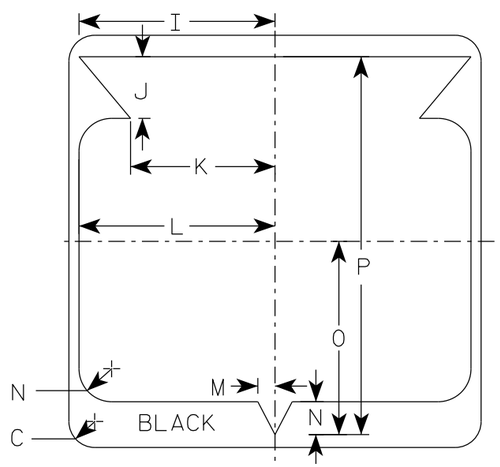
SHEET NO: 155 E



M1-6

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D except 3 number signs Series C



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24		1 1/2			12	5 1/2	6 1/2	10 1/4	2 1/2	8 7/8	11 1/2	1	1 7/8	11 1/4	21 7/8											4.0
2M	24		1 1/2			12	5 1/2	6 1/2	10 1/4	2 1/2	8 7/8	11 1/2	1	1 7/8	11 1/4	21 7/8											4.0
3	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0
4	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0
5	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0

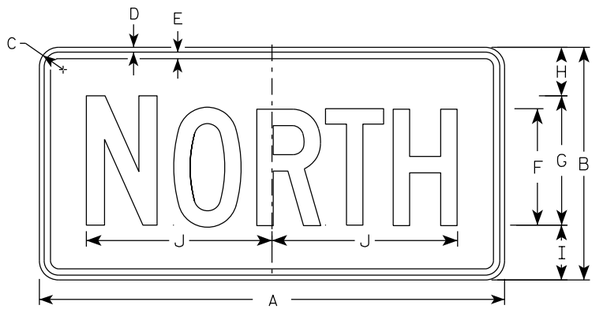
STATE ROUTE MARKER
M1-6 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

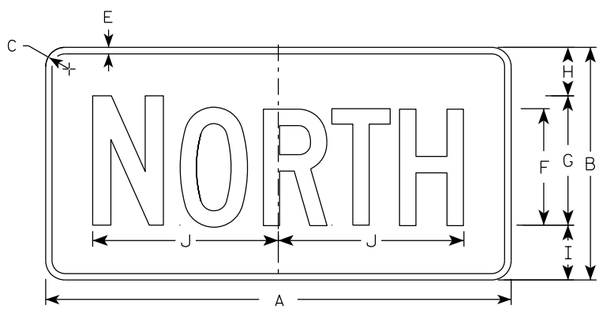
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/8/2022 PLATE NO. M1-6.11

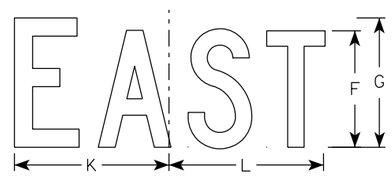
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 156	E



M3-1
MM3-1
MP3-1



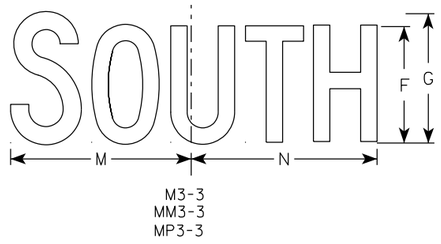
MB3-1
MK3-1
MN3-1



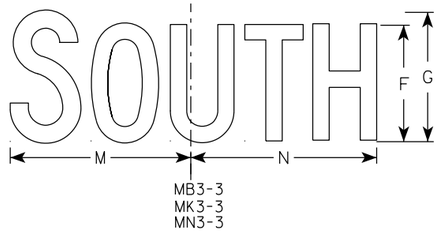
M3-2
MM3-2
MP3-2



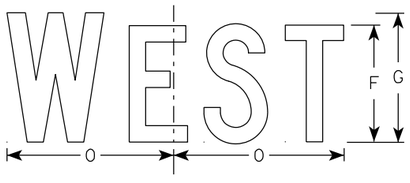
MB3-2
MK3-2
MN3-2



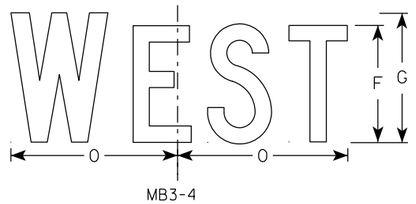
M3-3
MM3-3
MP3-3



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

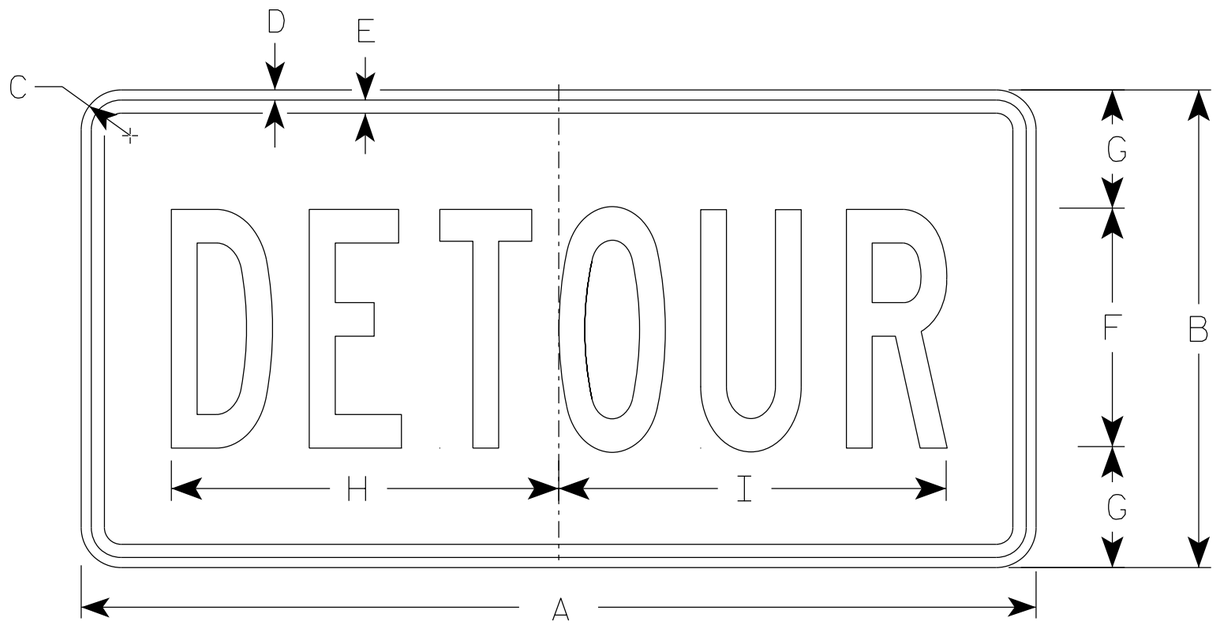
STANDARD SIGNS
M3-1 THRU M3-4
SERIES

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: 157	E



M4-8

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - B
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/2	3/8	3/8	6	3	10	10 1/4																		2.0
2M	24	12	1 1/2	3/8	3/8	6	3	10	10 1/4																		2.0
3	36	18	1 1/2	3/8	1/2	9	4 1/2	14 5/8	14 1/2																		4.5
4	36	18	1 1/2	3/8	1/2	9	4 1/2	14 5/8	14 1/2																		4.5
5	36	18	1 1/2	3/8	1/2	9	4 1/2	14 5/8	14 1/2																		4.5

STANDARD SIGN
M4-8

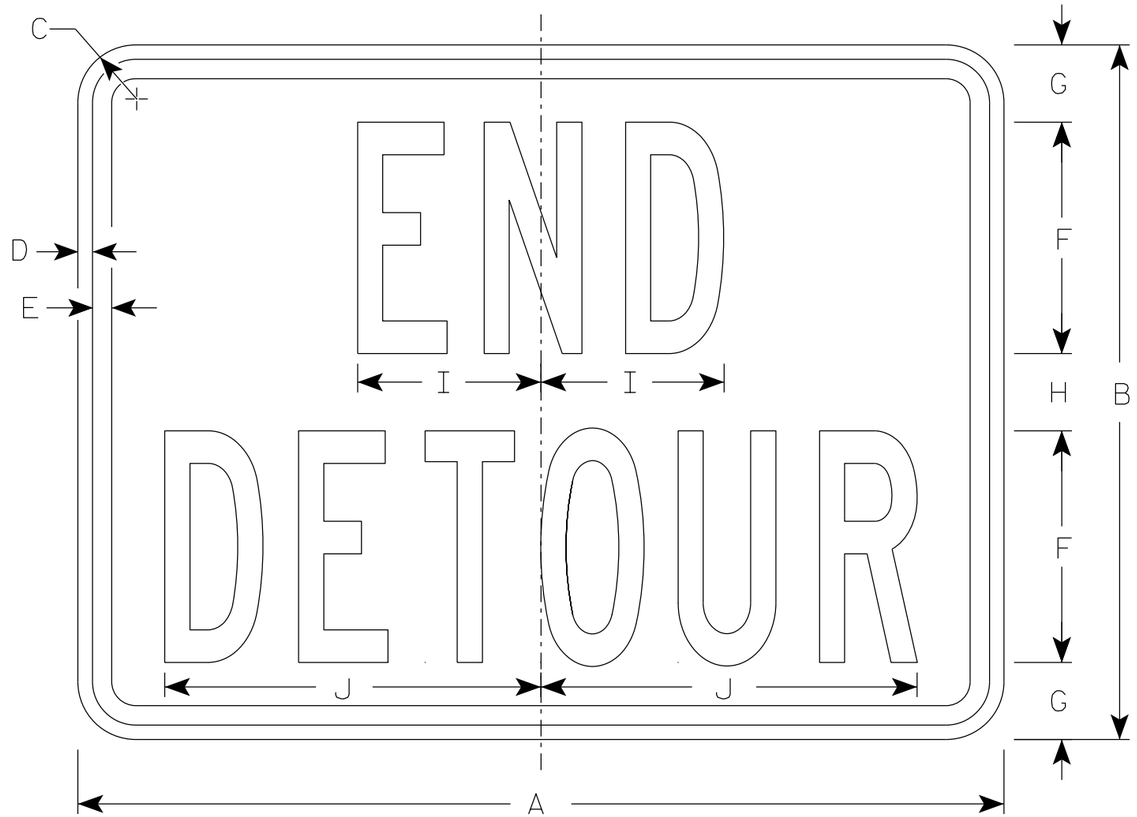
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/9/2023 PLATE NO. M4-8.4

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M48.dgn PLOT DATE : 9-FEB 2023 7:38 PLOT BY : dotc4c PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42



M4-8A

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - B
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

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	18	1 ½	⅜	½	6	2	2	4 ¾	9 ¾																	3.0
2M	24	18	1 ½	⅜	½	6	2	2	4 ¾	9 ¾																	3.0
3	30	24	1 ½	⅜	½	8	2 ½	3	6 ¾	13																	5.0
4	30	24	1 ½	⅜	½	8	2 ½	3	6 ¾	13																	5.0
5	30	24	1 ½	⅜	½	8	2 ½	3	6 ¾	13																	5.0

STANDARD SIGN
M4-8A

WISCONSIN DEPT OF TRANSPORTATION

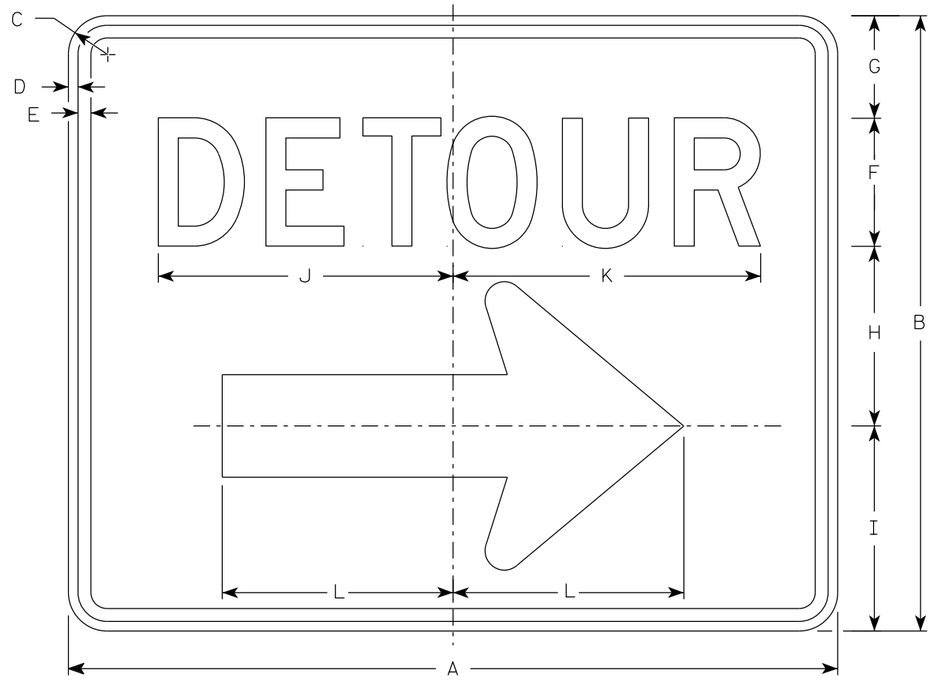
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/9/2023 PLATE NO. M4-8A.4

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 159 | E

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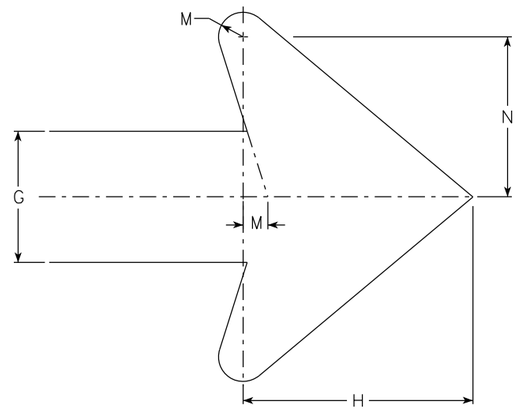
7



M4-9R

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   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.
4. M4-9L is the same as M4-9R except the arrow is reversed.



Arrow Detail

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	30	24	1 1/2	3/8	1/2	5	4	7	8	11 1/2	12	9	3/4	4 7/8													5.00
2M	30	24	1 1/2	3/8	1/2	5	4	7	8	11 1/2	12	9	3/4	4 7/8													5.00
3	30	24	1 1/2	3/8	1/2	5	4	7	8	11 1/2	12	9	3/4	4 7/8													5.00
4	48	36	1 7/8	1/2	5/8	8	6	10 1/2	11 5/8	20 5/8	20 1/2	13 1/4	1 1/8	6 7/8													12.0
5	48	36	1 7/8	1/2	5/8	8	6	10 1/2	11 5/8	20 5/8	20 1/2	13 1/4	1 1/8	6 7/8													12.0

STANDARD SIGN
M4-9 R & L

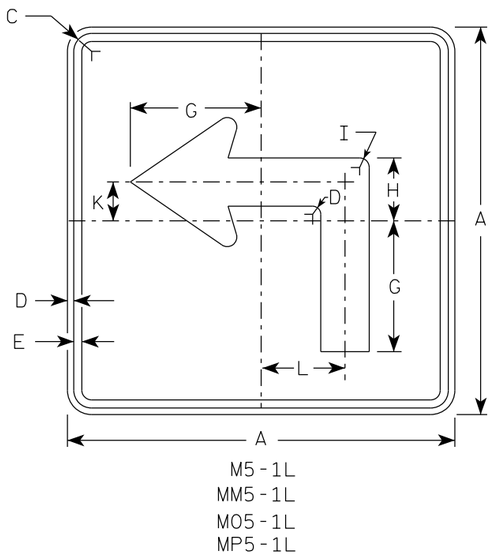
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

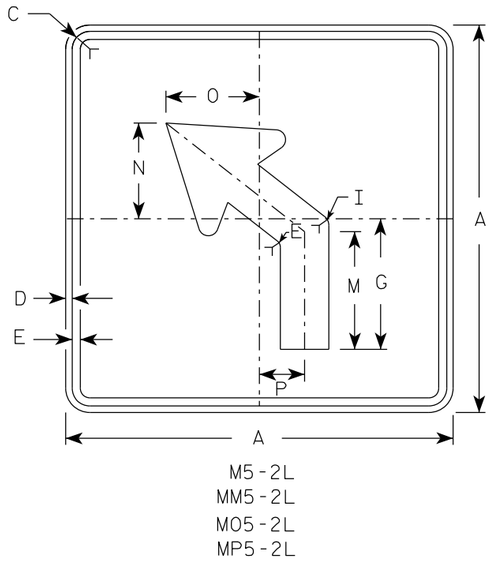
DATE 2/9/2023 PLATE NO. M4-9R.6

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

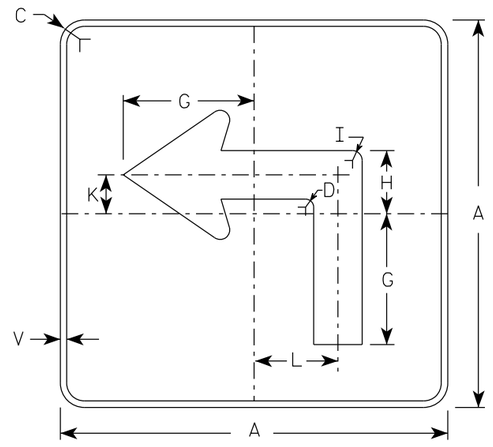
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M49R.dgn PLOT DATE : 21-MARCH 2023 1:40 PLOT BY : dotc4c PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42



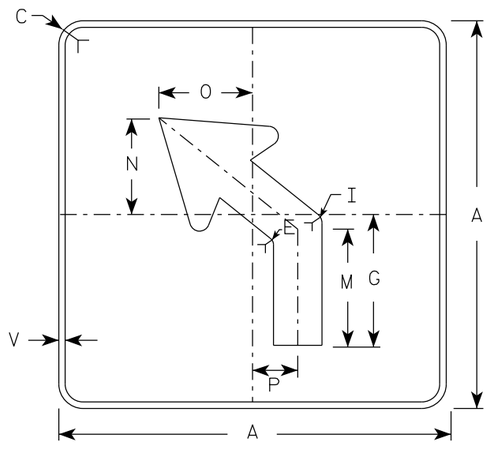
M5-1L
MM5-1L
MO5-1L
MP5-1L



M5-2L
MM5-2L
MO5-2L
MP5-2L



MB5-1L
MK5-1L
MN5-1L
MR5-1L

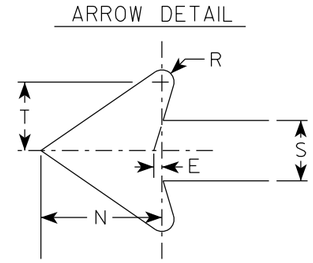


MB5-2L
MK5-2L
MN5-2L
MR5-2L

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

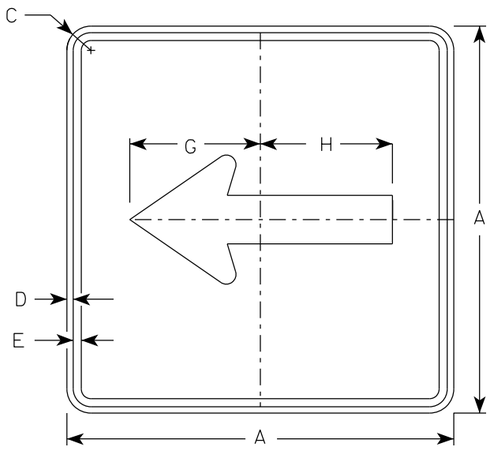
STANDARD SIGN
M5-1 & M5-2

WISCONSIN DEPT OF TRANSPORTATION

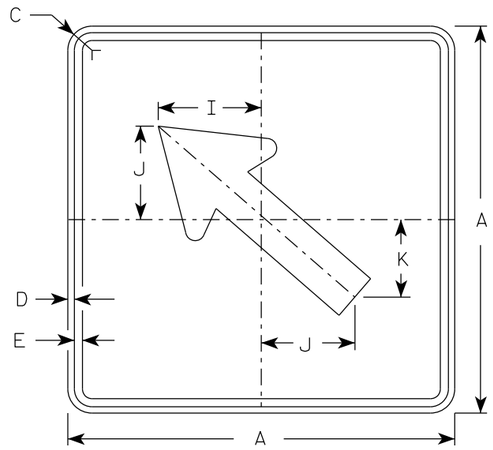
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/13/2023 PLATE NO. M5-1.15

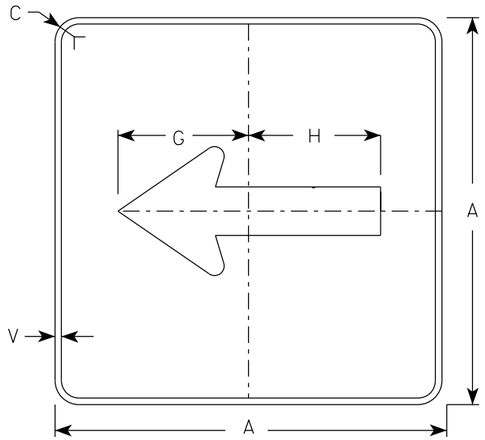
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 161 | E



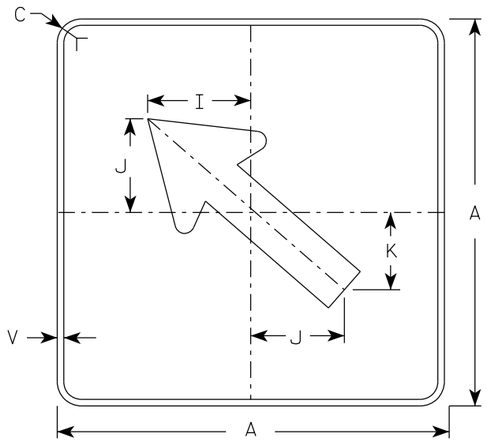
M6-1
MM6-1
MO6-1
MP6-1



M6-2
MM6-2
MO6-2
MP6-2



MB6-1
MK6-1
MN6-1
MR6-1

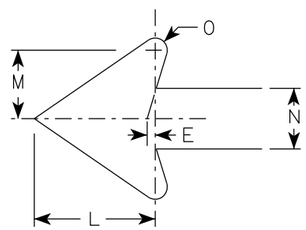


MB6-2
MK6-2
MN6-2
MR6-2

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

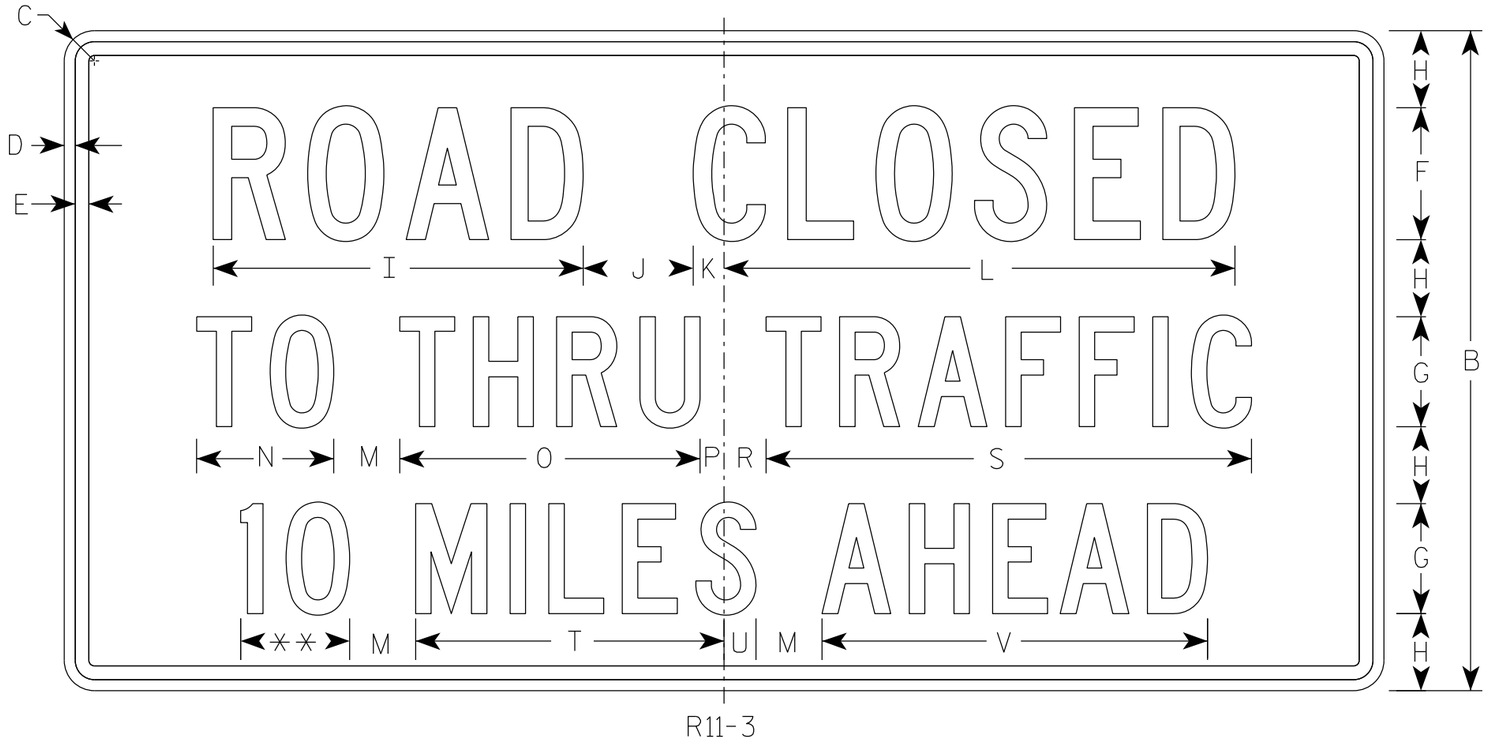
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/13/2023 PLATE NO. M6-1.16

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 162 | E

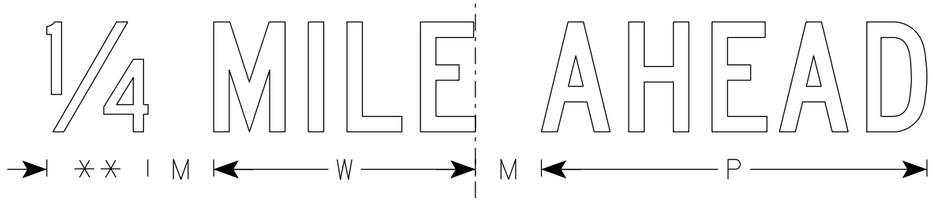
NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   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 nearest quarter mile and optically adjust spacing to achieve proper balance.



R11-3

** 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	18	1 1/2	3/8	3/8	4	3	2	11 1/4	3	1 1/8	15 3/8	2	3 3/4	8 1/4	5/8		1 3/8	13 1/4	8 3/8	7/8	10 1/2	7 1/8				4.5
2S	60	30	1 7/8	1/2	5/8	6	5	3 1/2	16 7/8	5	1 3/8	23 1/4	3	6 1/4	13 5/8	1 1/8		1 7/8	22 1/8	14	1 1/2	17 1/2	11 7/8				12.5
2M	60	30	1 7/8	1/2	5/8	6	5	3 1/2	16 7/8	5	1 3/8	23 1/4	3	6 1/4	13 5/8	1 1/8		1 7/8	22 1/8	14	1 1/2	17 1/2	11 7/8				12.5
3																											
4																											
5																											

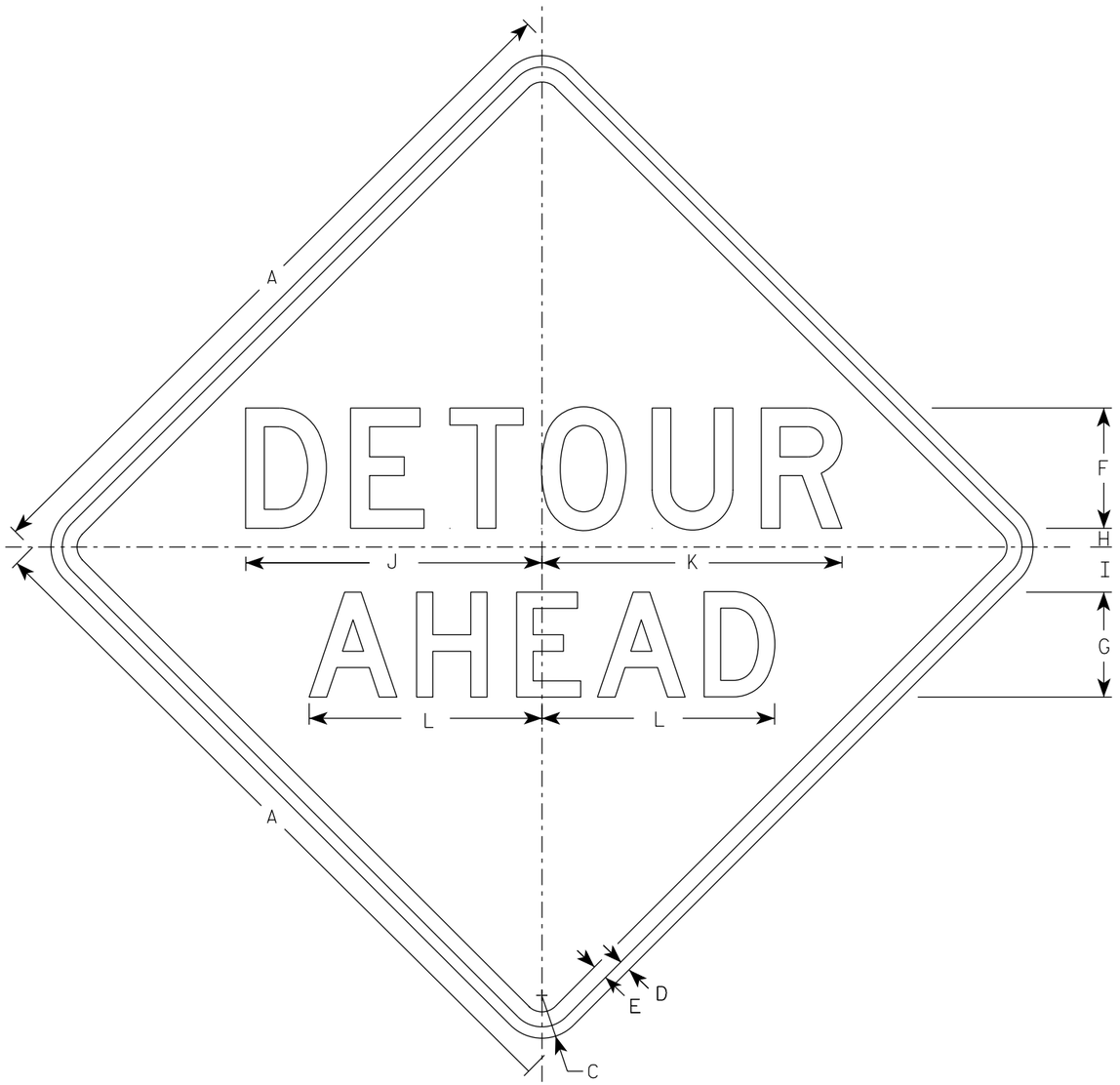
STANDARD SIGN
R11-3

WISCONSIN DEPT OF TRANSPORTATION

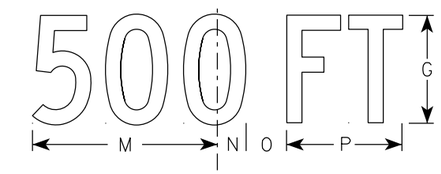
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/5/24 PLATE NO. R11-3.10

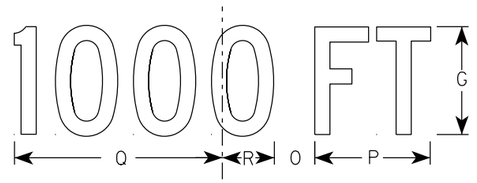
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 163 E



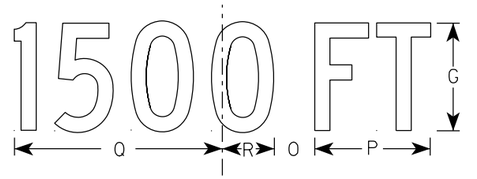
W20-2A



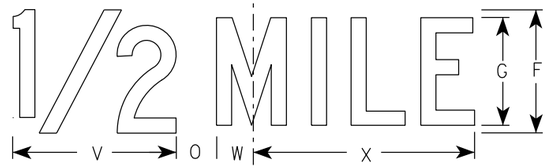
W20-2D



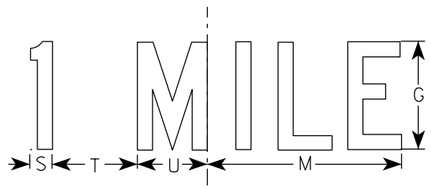
W20-2C



W20-2B



W20-2G



W20-2F

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. Line 1 is Series D.
   Line 2 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	6	5	1	2 1/4	14 3/4	15	11 5/8	9	1 3/8	1 7/8	5 5/8	10 1/8	2 1/2	1 1/8	4 1/2	3 1/2	8	1 3/4	10 3/4			9.0
2S	48		3	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
2M	48		3	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
3	48		3	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
4	48		3	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
5	48		3	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0

STANDARD SIGN
W20-2A,B,C,D,F & G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

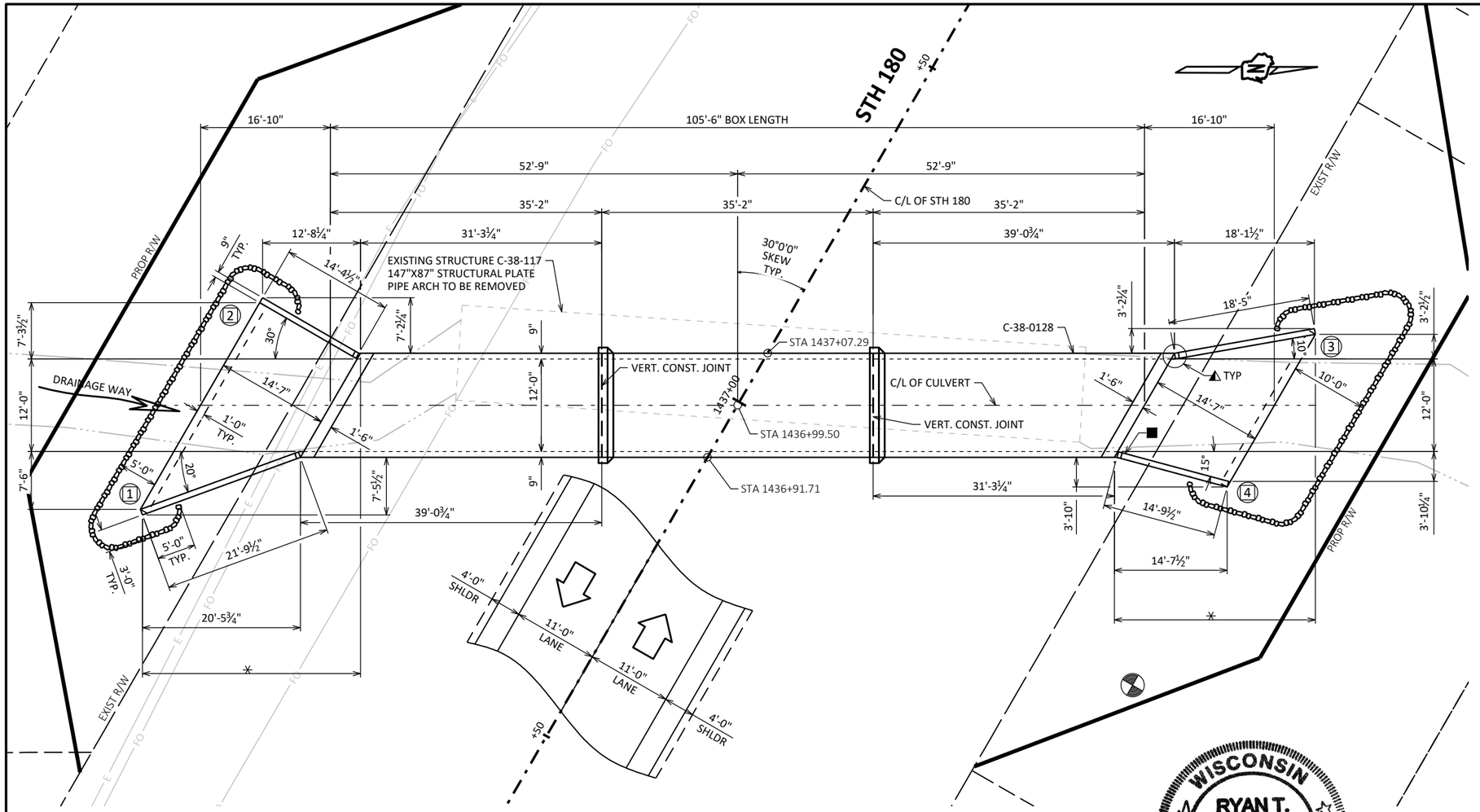
DATE 1/10/2024 PLATE NO. W20-2.7

PROJECT NO:	HWY:	COUNTY:		SHEET NO: E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W202.DGN PLOT DATE : 10-JAN 2024 11:36 PLOT BY : dotc4c PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42

STATE PROJECT NUMBER

9670-16-71



PLAN

SINGLE CELL CONCRETE BOX CULVERT

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING: RF = 1.35
OPERATING RATING: RF = 1.75
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV): 250 (KIPS)

EARTHLOAD:

DESIGNED FOR 4 TO 5 FT. OF FILL.

MATERIAL PROPERTIES:

CONCRETE MASONRY — f'_c = 3,500 PSI
BAR STEEL REINFORCEMENT — f_y = 60,000 PSI

HYDRAULIC DATA

100-YEAR FREQUENCY:

Q_{100}= 230 C.F.S.
V_{100}= 5.7 F.P.S.
HW_{100}= EL. 678.60
WATERWAY AREA = 72 SQ. FT.
DRAINAGE AREA = 5.5 SQ. MI.
ROADWAY OVERTOPPING = N/A
SCOUR CRITICAL CODE = 8

2-YEAR FREQUENCY:

Q_2= 80 C.F.S.
V_2= 2.9 F.P.S.
HW_2= EL. 676.87

TRAFFIC DATA

STH 180:

ADT = 5,000 (2047)
R.D.S. = 55 MPH

LIST OF DRAWINGS:

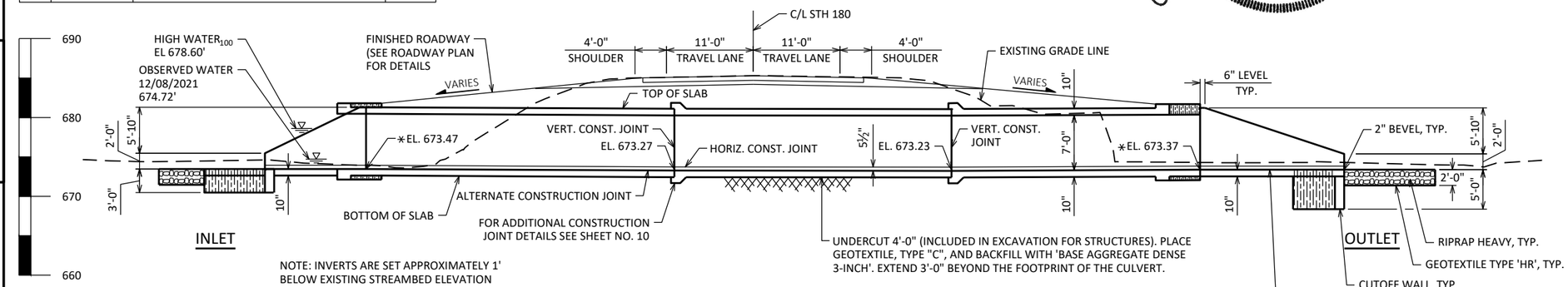
1. GENERAL PLAN
2. QUANTITIES AND CROSS SECTION
3. SUBSURFACE EXPLORATION
4. BOX CULVERT DETAILS
5. TOP SLAB REINFORCEMENT DETAILS
6. BOTTOM SLAB REINFORCEMENT DETAILS
7. APRON DETAILS
8. INLET WINGWALL DETAILS
9. OUTLET WINGWALL DETAILS
10. BAR REINFORCEMENT DETAILS

LEGEND

- ⓝ INDICATES WING NUMBER
- ✳ BUILD APRON AND END OF BOX LEVEL. APRON AND WING DIMENSIONS SHOWN ON "APRON SECTIONS" SHEET.
- ▲ VERT. CONST. JOINT (TYP.)
- ☆ OPTIONAL. LONGIT. CONST. JOINT
- ◭ SEE CORNER DETAILS ON "APRON DETAILS" SHEET
- ■ NAME PLATE LOCATION (SEE "DETAILS" SHEET)

BENCH MARKS

BM	STA	DESCRIPTION	ELEV
A	1436+92	SPIKE IN TREE	677.54



INLET

OUTLET

NOTE: INVERTS ARE SET APPROXIMATELY 1' BELOW EXISTING STREAMBED ELEVATION

EXTERIOR BARREL SECTIONS ARE CAMBERED 2" DUE TO ANTICIPATED SETTLEMENT

ELEVATION

NORMAL TO WATERWAY, ALONG EAST FACE

WISCONSIN
RYAN T. ARNDT
E-41765
FOND DU LAC, WI
8-4-25
PROFESSIONAL ENGINEER

STRUCTURE DESIGN CONTACTS:

CONSULTANT CONTACT: ANDREW KLEMP 920-924-5720
BRIDGE OFFICE CONTACT: AARON BONK 608-261-0261

NO.	DATE	REVISION	BY

GREMMER & ASSOCIATES, INC.
CONSULTING ENGINEERS
Stevens Point • Fond du Lac

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED JLR 08/05/25
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE C-38-128

STH 180 OVER DRAINAGE WAY

COUNTY	TOWN
MARINETTE	WAUSAUKEE

DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPECIFICATION

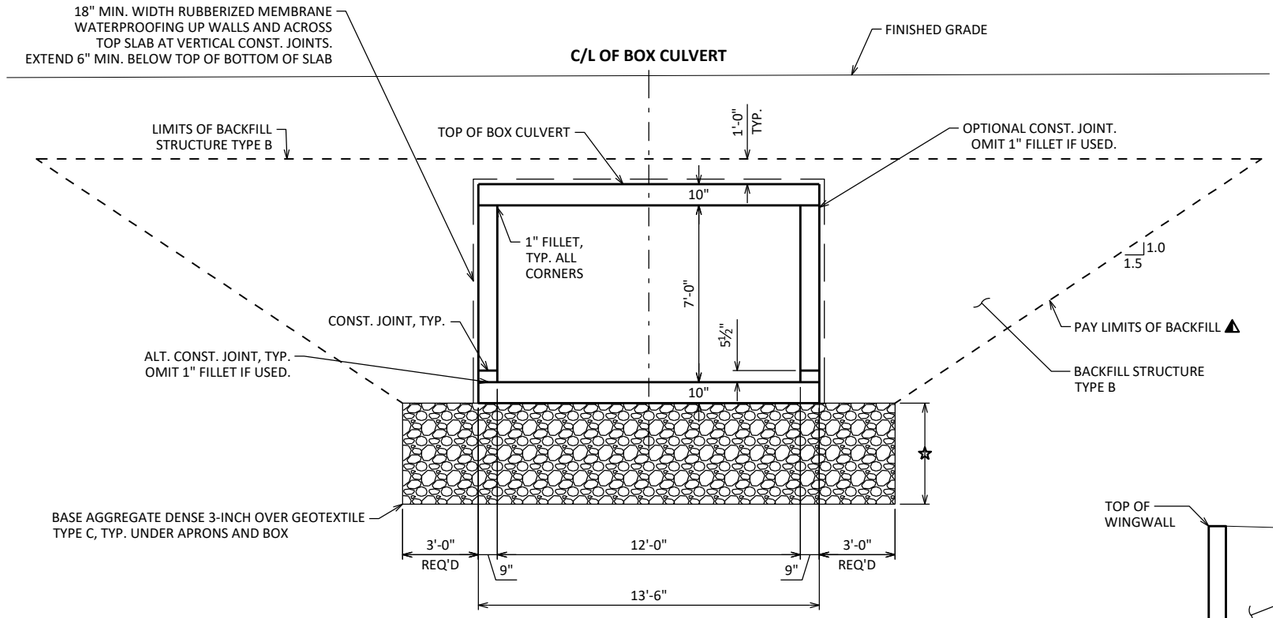
DESIGNED BY	DESIGNED CK'D	DRAWN BY	PLANS CK'D
RTA	ALK	BDK	ALK

GENERAL PLAN

SHEET 1 OF 10
165

SCALE = 16.0

NOTE: STRUCTURE BACKFILL REQUIRED BEHIND ALL WING WALLS.

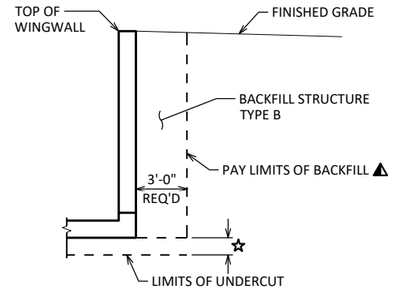


TYPICAL SECTION THRU BOX CULVERT

LOOKING NORTH

⚠ BACKFILL PAY LIMITS. BACKFILL BEYOND PAY LIMITS SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES. LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.

☆ UNDERCUT 4'-0". EXCAVATION FOR UNDER CUT IS TO BE INCLUDED IN EXCAVATION FOR STRUCTURES. PLACE "GEOTEXTILE TYPE C" AND BACKFILL WITH "BASE AGGREGATE DENSE 3-INCH".



TYPICAL SECTION THRU BOX CULVERT WINGWALL

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BEVEL EXPOSED EDGES OF CONCRETE 3/4" UNLESS OTHERWISE NOTED.

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES CULVERTS C-38-128" SHALL BE THE EXISTING GROUNDLINE.

ALL VOLUME WHICH CANNOT BE PLACED BEFORE CULVERT CONSTRUCTION AND NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL WITHIN THE LENGTH OF THE CULVERT INCLUDING THE APRON WING WALLS.

THE QUANTITY FOR BACKFILL STRUCTURE IS CALCULATED BASED ON THE DETAIL SHOWN IN THE PLANS.

THE CONCRETE IN THE CUTOFF WALLS MAY BE PLACED UNDERWATER IF THE EXCAVATION CANNOT BE DEWATERED.

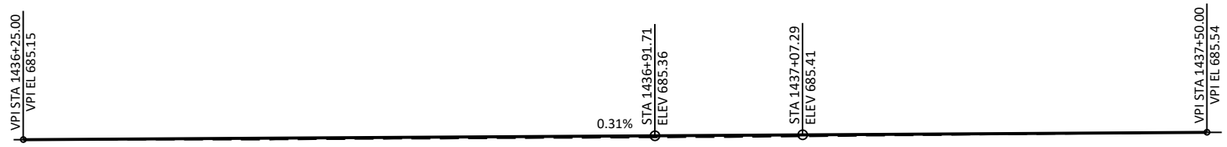
PLACE 18" (MIN.) WIDE SHEET OF "RUBBERIZED MEMBRANE WATERPROOFING" ON TOP SLAB OVER ALL CONSTRUCTION JOINTS AND EXTEND DOWN TO BOTTOM OF OUTSIDE WALLS.

THE CONTRACTOR MAY FURNISH A PRECAST CONCRETE BOX CULVERT IN LIEU OF THE CAST-IN-PLACE BOX CULVERT WITH THE ACCEPTANCE OF THE SHOP DRAWINGS BY THE STRUCTURES DESIGN SECTION. THE PRECAST CONCRETE BOX CULVERT SHALL CONFORM TO PRECAST DETAILS ON CHAPTER 36 STANDARDS OF THE CURRENT WISC. DOT BRIDGE MANUAL. PAYMENT FOR THE PRECAST CULVERT SHALL BE BASED ON THE QUANTITIES AND PRICES BID FOR THE ITEMS LISTED IN THE "TOTAL ESTIMATED QUANTITIES".

THE PROPOSED STRUCTURE WILL REPLACE THE EXISTING STRUCTURE C-38-117. THE EXISTING STRUCTURE IS A 147" X 87" STRUCTURAL PLATE PIPE ARCH APPROXIMATELY 80' LONG.

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	TOTAL
203.0220	REMOVING STRUCTURE C-38-117	EACH	1
206.2001	EXCAVATION FOR STRUCTURES CULVERTS C-38-128	EACH	1
210.2500	BACKFILL STRUCTURE TYPE B	TON	1,260
305.0130	BASE AGGREGATE DENSE 3-INCH	TON	829
504.0100	CONCRETE MASONRY CULVERTS	CY	171
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	25,440
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	2,200
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	29
606.0300	RIPRAP HEAVY	CY	61
645.0105	GEOTEXTILE TYPE C	SY	348
645.0120	GEOTEXTILE TYPE HR	SY	134
	NON-BID ITEMS		
-----	JOINT FILLER	SIZE	1/2", 3/4", & 1"



PROFILE GRADE LINE

STH 180

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

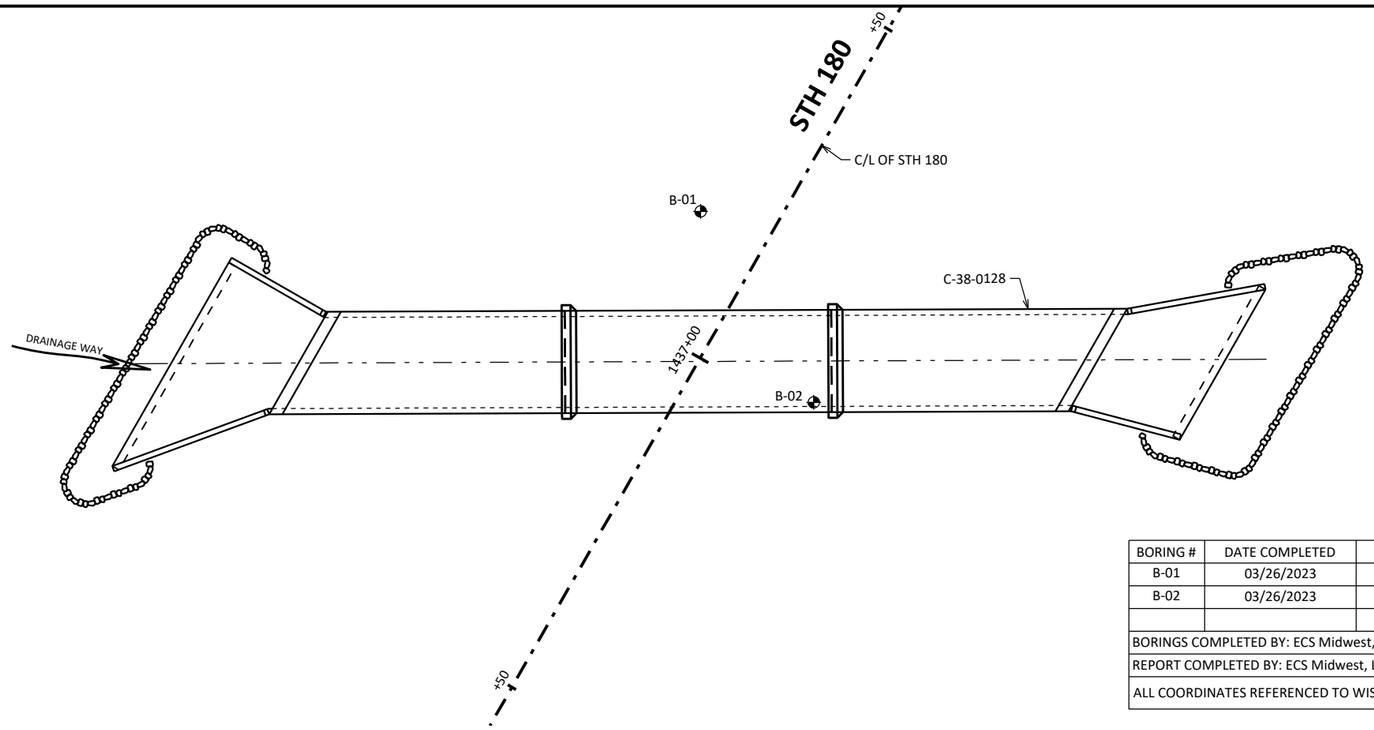
STRUCTURE C-38-128

DRAWN BY BDK | PLANS CK'D ALK

QUANTITIES AND CROSS SECTION

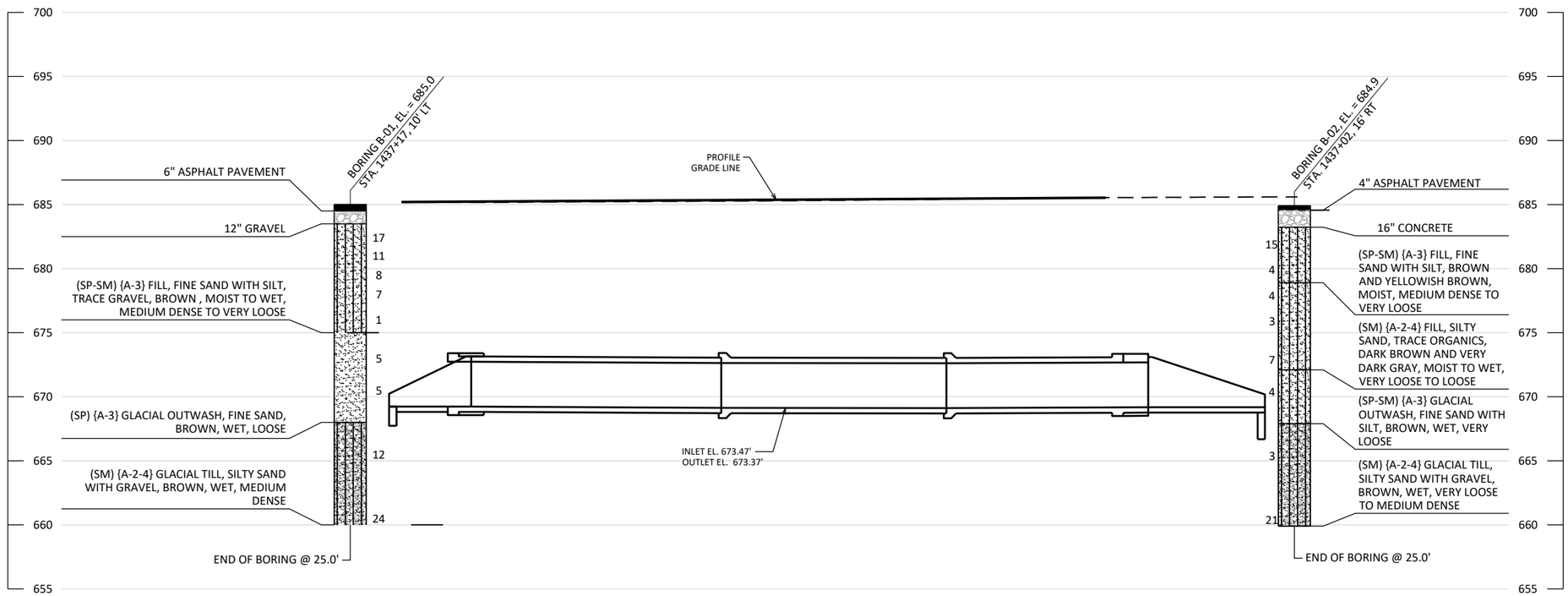
SHEET 2
166

SCALE = 6.00



BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
B-01	03/26/2023	742572.7	238810.4
B-02	03/26/2023	742597.9	238825.3
BORINGS COMPLETED BY: ECS Midwest, LLC			
REPORT COMPLETED BY: ECS Midwest, LLC			
ALL COORDINATES REFERENCED TO WISCRS NAD 83 (2011) MARINETTE COUNTY			

* FOR DETAILED FIELD CLASSIFICATIONS AND REMARKS SEE GEOTECHNICAL REPORT.



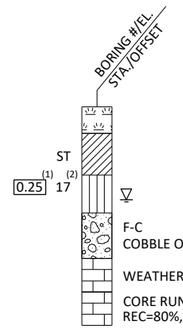
STATE PROJECT NUMBER

9670-16-71

MATERIAL SYMBOLS

ASPHALT	TOPSOIL	PEAT
CONCRETE	FILL	GRAVEL
SAND	CLAY	SILT
BOULDERS OR COBBLES	LIMESTONE	BEDROCK (UNKNOWN)
SHALE	SANDSTONE	IGNEOUS/ META

LEGEND OF BORING



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

- AT TIME OF DRILLING
- END OF DRILLING
- AFTER DRILLING

ABBREVIATIONS

F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE C-38-128

DRAWN BY BDK | PLANS CK'D ALK

SUBSURFACE EXPLORATION

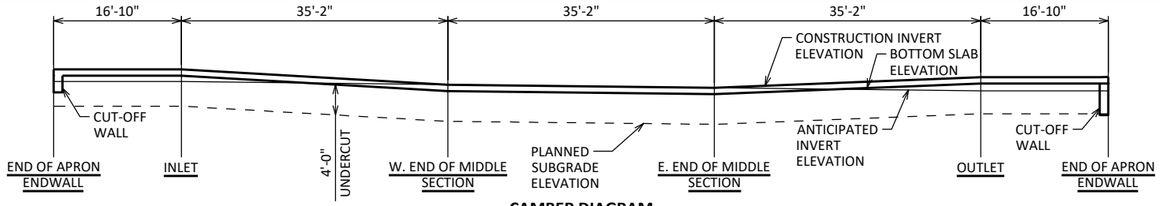
SHEET 3
167

SCALE = 20.0

8

8

STATE PROJECT NUMBER
9670-16-71



CAMBER DIAGRAM

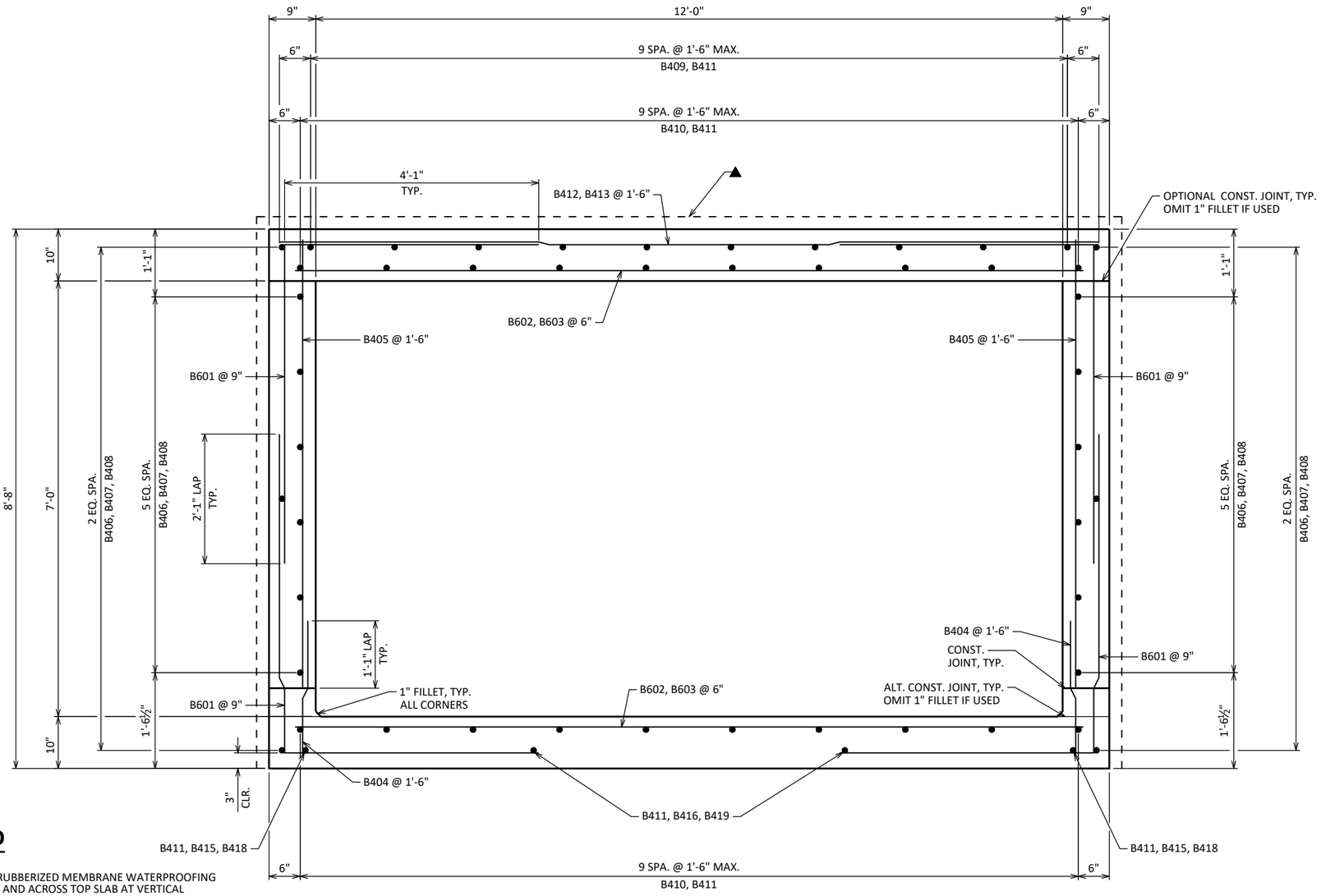
INVERT ELEVATION TABLE

DISTANCE ALONG C/L OF CULVERT (FT)	INLET	W. END OF MIDDLE SECTION	E. END OF MIDDLE SECTION	OUTLET
CONSTRUCTION INV. ELEV.	673.47	673.27	673.23	673.37
ANTICIPATED SETTLEMENT (IN)	2.0	0.0	0.0	2.0
ANTICIPATED FINAL INVERT ELEVATION	673.30	673.27	673.23	673.20

CAMBER SHOWN ACCOUNTS FOR ANTICIPATED TOTAL SETTLEMENT OF THE STRUCTURE AFTER PROPOSED BACKFILL AND FILL IS PLACED OVER THE STRUCTURE

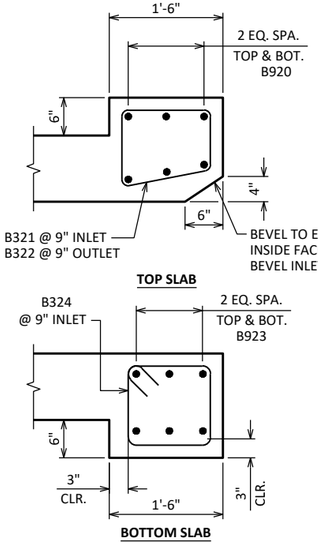
TO ACCOUNT FOR ANTICIPATED SETTLEMENT, THE STRUCTURE SHALL BE CONSTRUCTED USING THE CONSTRUCTION INVERT ELEVATIONS SHOWN IN THE TABLE ABOVE

DETERMINE THE PLANNED SUBGRADE ELEVATION ALONG THE STRUCTURE AS FOLLOWS:
CONSTRUCTION INVERT ELEVATION - BASE SLAB THICKNESS - UNDERCUT THICKNESS = PLANNED SUBGRADE ELEVATION



SECTION THRU BOX CULVERT

LOOKING NORTH



SECTION THRU HEADER

LEGEND

▲ 18" MIN. RUBBERIZED MEMBRANE WATERPROOFING UP WALLS AND ACROSS TOP SLAB AT VERTICAL CONSTRUCTION JOINTS. EXTEND 6" MIN. BELOW TOP OF BOTTOM SLAB.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE C-38-128

DRAWN BY BDK | PLANS CK'D ALK

BOX CULVERT DETAILS

SHEET 4
168

SCALE = 2.00

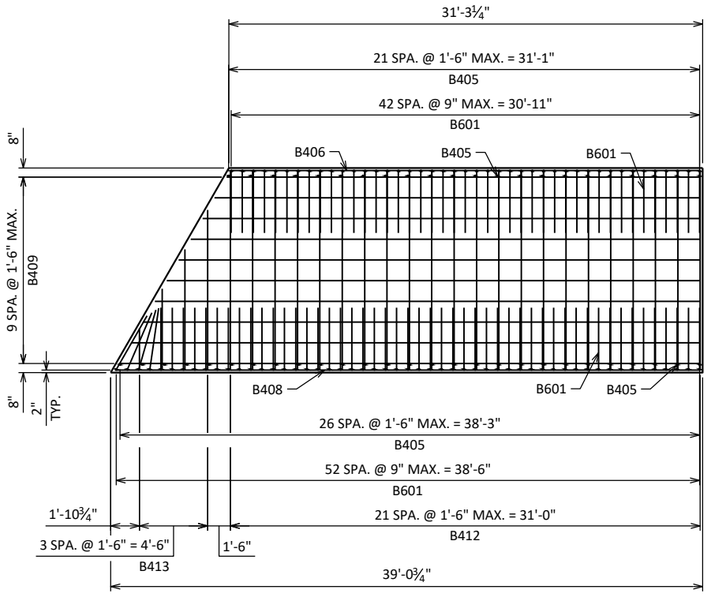
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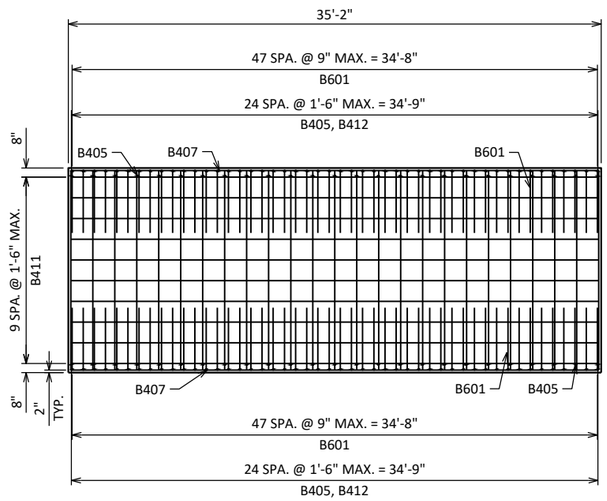
FILE NAME: S:\CURRPROJ\MARINETTE COUNTY\STH 180\CIVIL3D\96701600\SHEETSPLAN\96701671-080201-BR.DWG | LAYOUT NAME: SHT4 | PLOT DATE : ---- | PLOT BY : MATTHEW KROFTA | I.D. 9670-16-00 | DATE: JUNE 2025

STATE PROJECT NUMBER

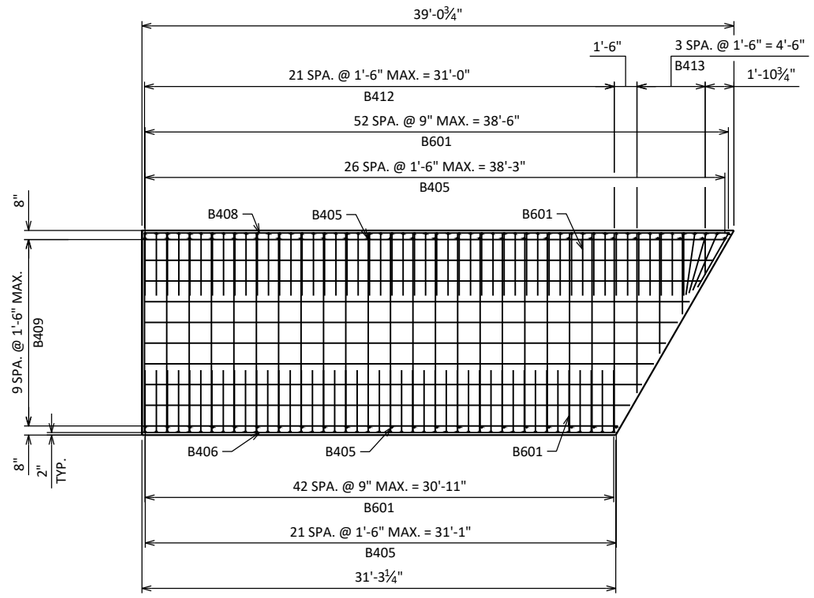
9670-16-71



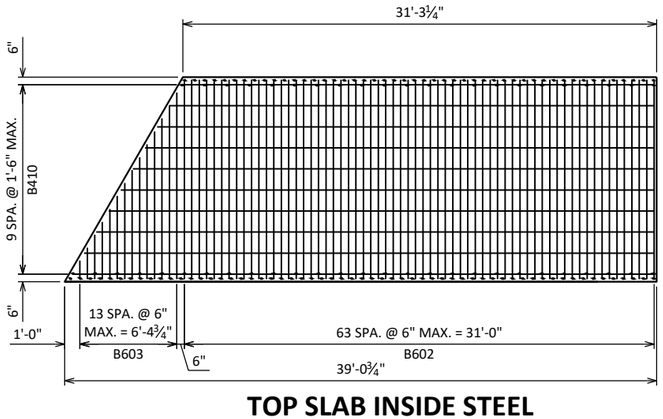
TOP SLAB OUTSIDE STEEL EXTERIOR PANEL



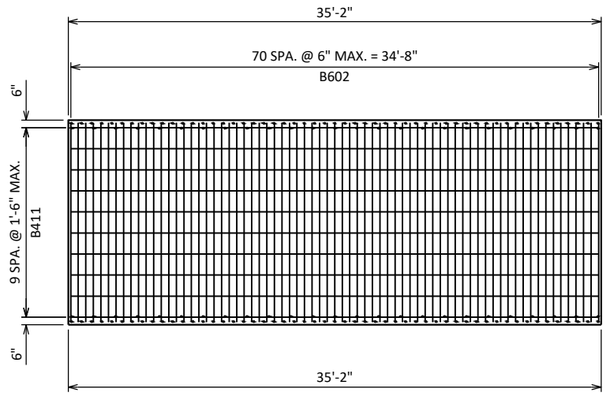
TOP SLAB OUTSIDE STEEL INTERIOR PANEL



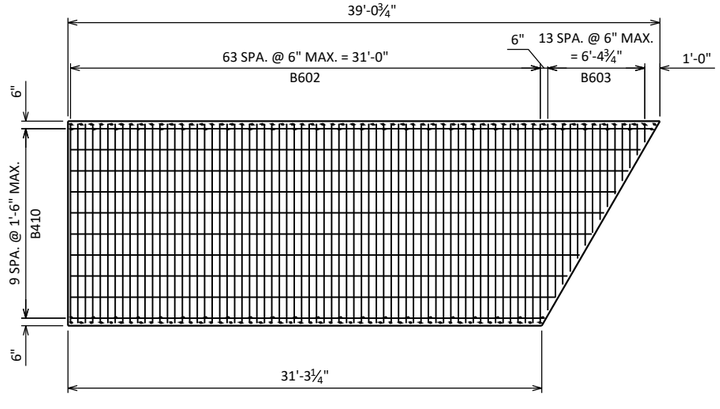
TOP SLAB OUTSIDE STEEL EXTERIOR PANEL



TOP SLAB INSIDE STEEL EXTERIOR PANEL



TOP SLAB INSIDE STEEL INTERIOR PANEL



TOP SLAB INSIDE STEEL EXTERIOR PANEL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE C-38-128

DRAWN BY BDK | PLANS CK'D ALK

TOP SLAB REINFORCEMENT DETAILS

SHEET 5
169

SCALE = 10.0

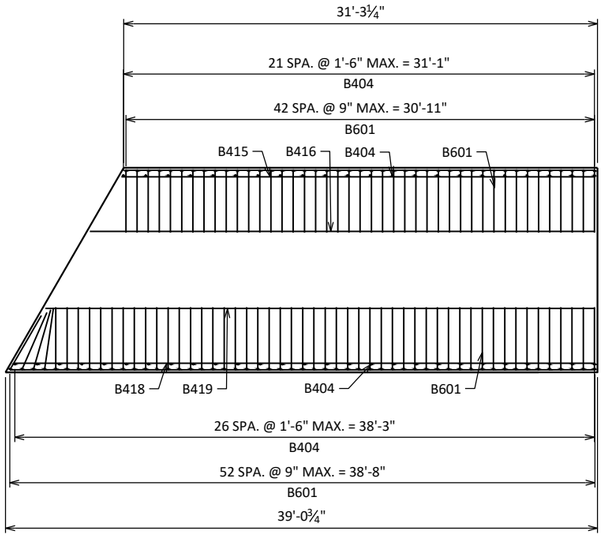
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LAYOUT NAME: SHT5
PLOT DATE : ----
PLOT BY : MATTHEW KROFTA
I.D. 9670-16-00
DATE: JUNE 2025

8

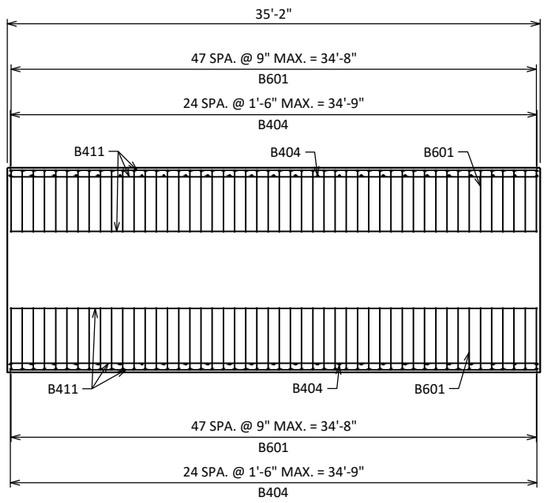
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STATE PROJECT NUMBER

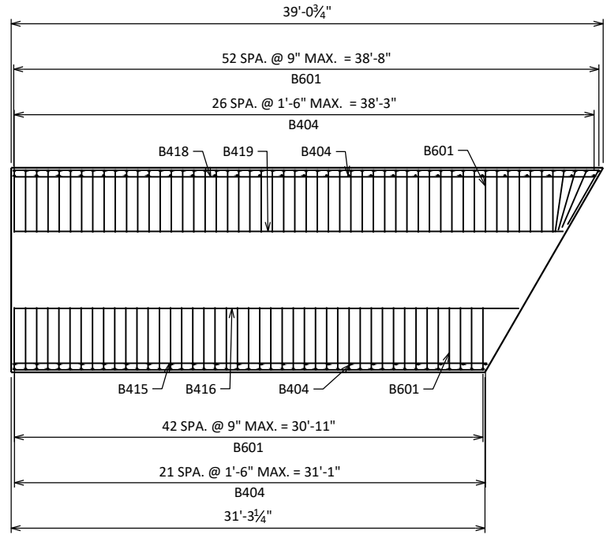
9670-16-71



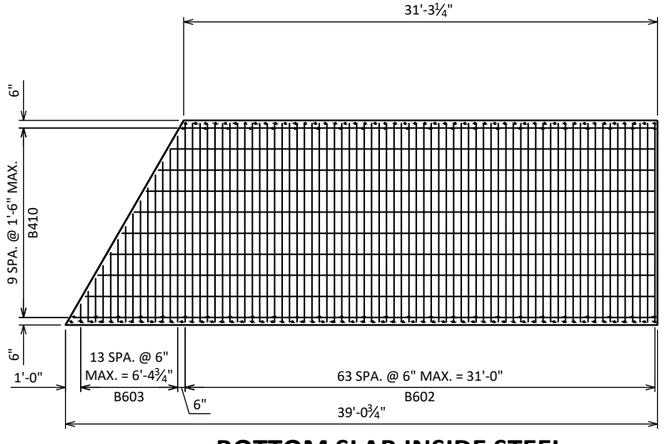
BOTTOM SLAB OUTSIDE STEEL
EXTERIOR PANEL



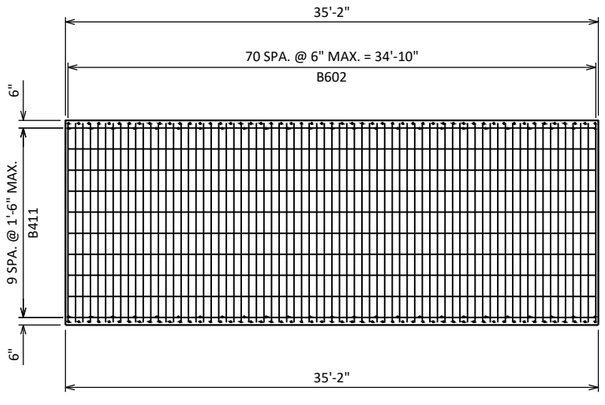
BOTTOM SLAB OUTSIDE STEEL
INTERIOR PANEL



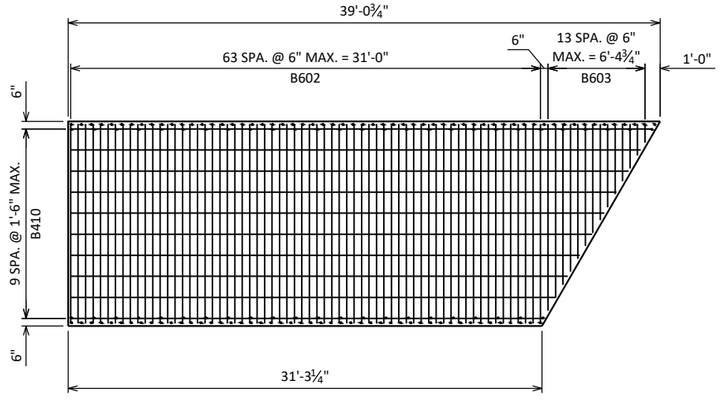
BOTTOM SLAB OUTSIDE STEEL
EXTERIOR PANEL



BOTTOM SLAB INSIDE STEEL
EXTERIOR PANEL



BOTTOM SLAB INSIDE STEEL
INTERIOR PANEL



BOTTOM SLAB INSIDE STEEL
EXTERIOR PANEL

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE C-38-128

DRAWN BY BDK | PLANS CK'D ALK

BOTTOM SLAB REINFORCEMENT DETAILS

SHEET 6
170

SCALE = 10.0

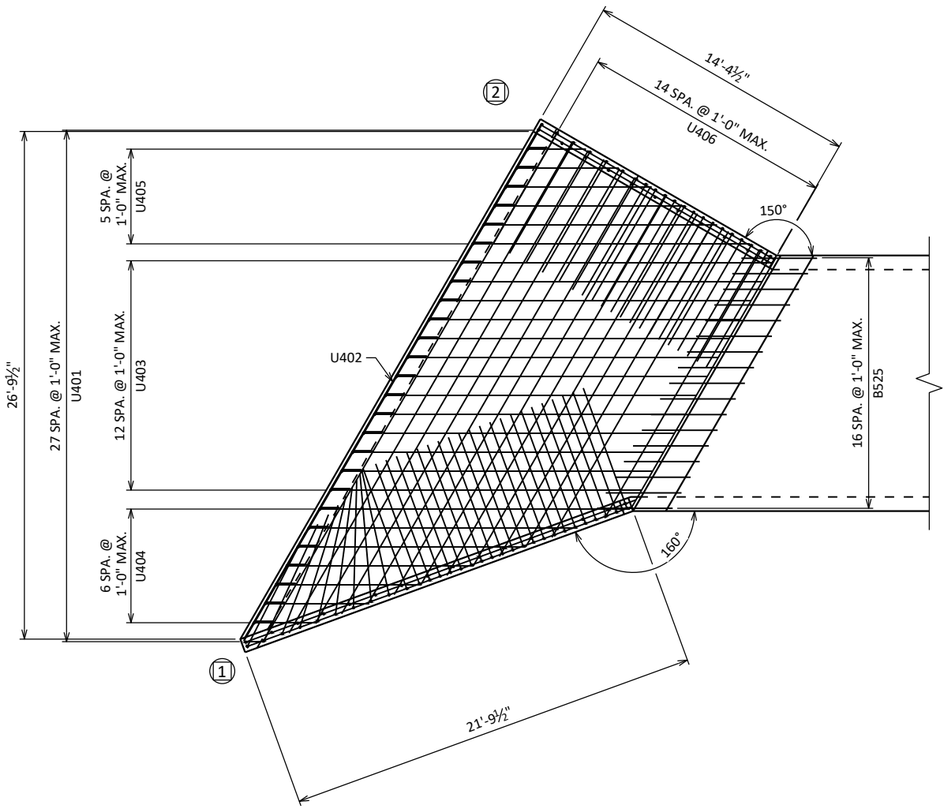
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LAYOUT NAME: SHT6
PLOT DATE : ----
PLOT BY : MATTHEW KROFTA
I.D. 9670-16-00
DATE: JUNE 2025

STATE PROJECT NUMBER

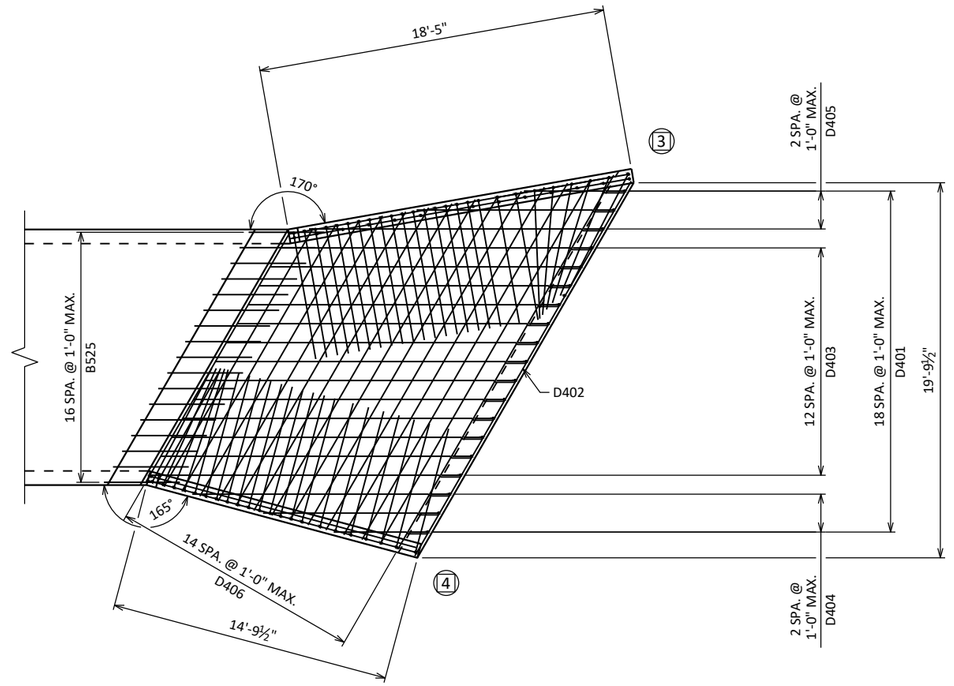
9670-16-71

LEGEND

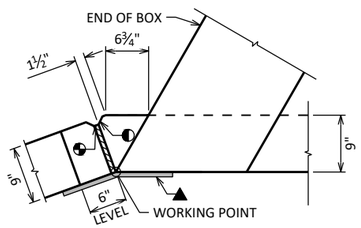
- 1" BEVEL TYPICAL
- ¾" FILLER TYPICAL. EXTEND FILLER FROM HORIZ. CONST. JT. TO TOP OF WING.
- 18" MIN. RUBBERIZED MEMBRANE WATERPROOFING EXTEND FROM HORIZ. CONST. JT. TO TOP OF WALL. (FLUSH WITH FACE OF CONCRETE)



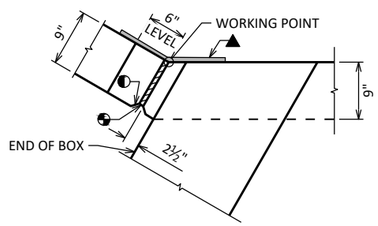
INLET



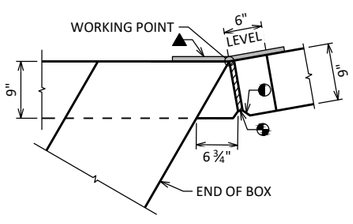
OUTLET



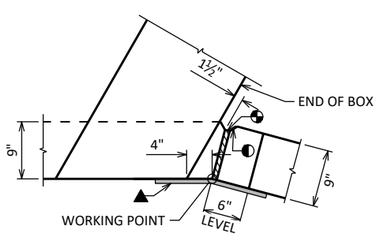
WING 1 CORNER



WING 2 CORNER



WING 3 CORNER



WING 4 CORNER

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE C-38-128

DRAWN BY	BDK	PLANS CK'D	ALK

APRON DETAILS

SHEET 7
171

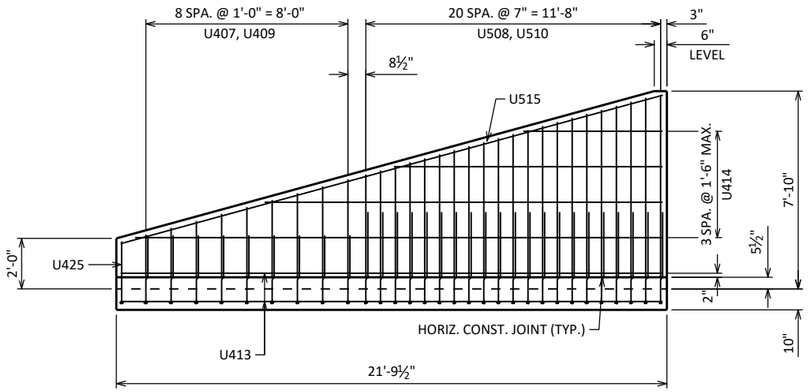
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8

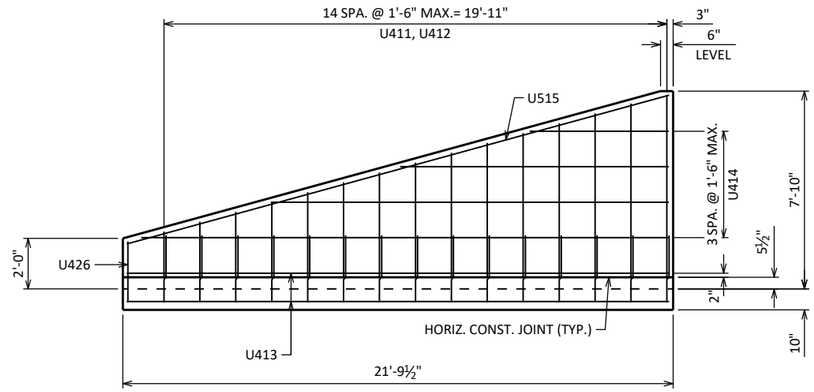
STATE PROJECT NUMBER

9670-16-71



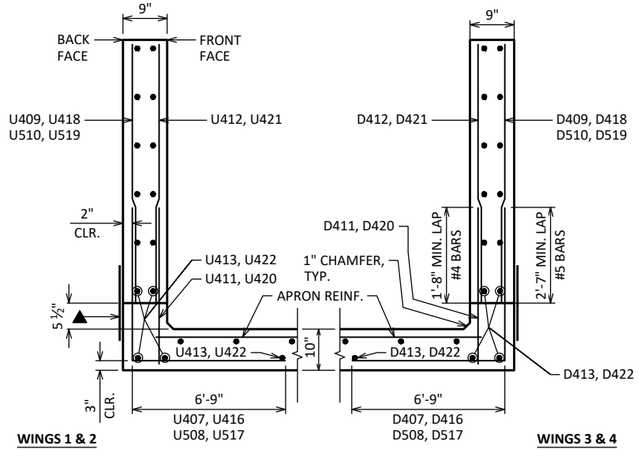
SECTION THRU WING 1

SHOWING B.F. REINFORCEMENT

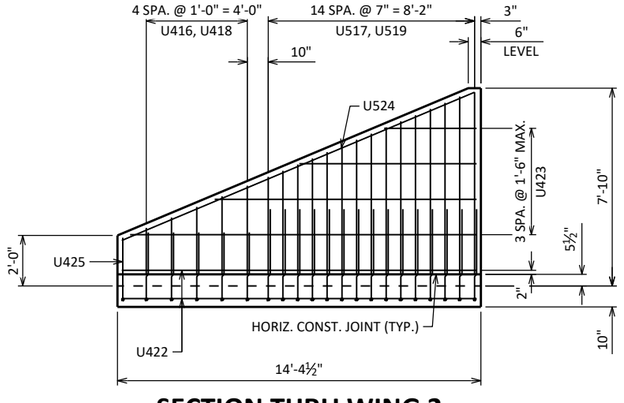


SECTION THRU WING 1

SHOWING F.F. REINFORCEMENT

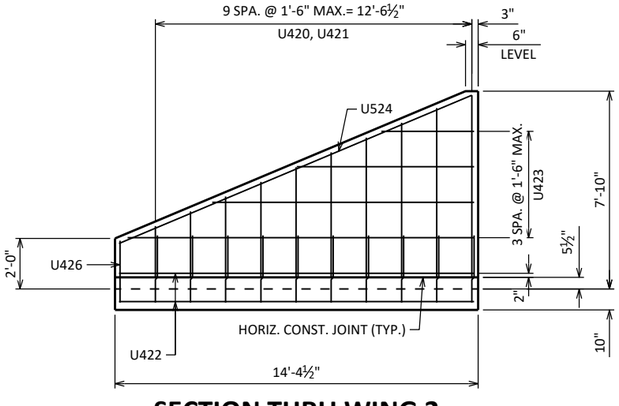


SECTION THRU WINGS



SECTION THRU WING 2

SHOWING B.F. REINFORCEMENT



SECTION THRU WING 2

SHOWING F.F. REINFORCEMENT

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE C-38-128

DRAWN BY BDK | PLANS CK'D ALK

INLET WINGWALL DETAILS

SHEET 8
172

SCALE = 6.00

FILE NAME: S:\CURRPROJ\MARINETTE COUNTY\STH 180\CIVIL3D\96701600\SHEETSPLAN\96701671-080201-BR.DWG

LAYOUT NAME: SHT8

PLOT DATE : ----

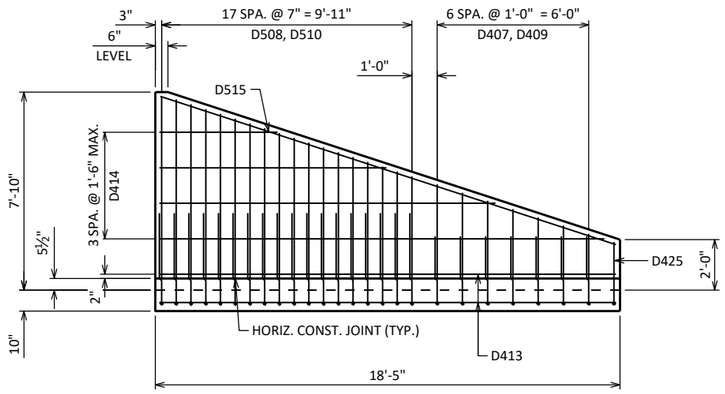
PLOT BY : MATTHEW KROFTA

I.D. 9670-16-00

DATE: JUNE 2025

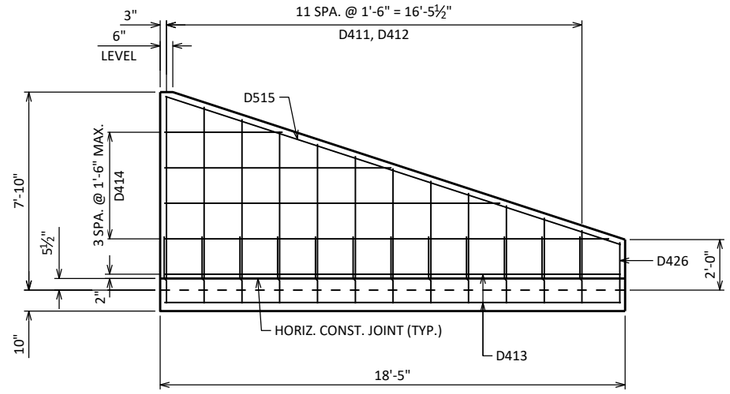
STATE PROJECT NUMBER

9670-16-71



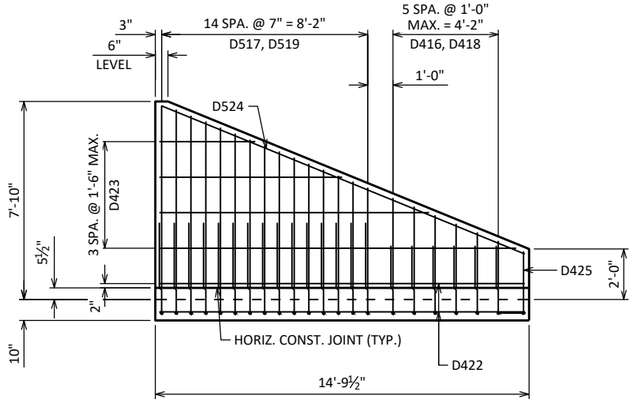
SECTION THRU WING 3

SHOWING B.F. REINFORCEMENT



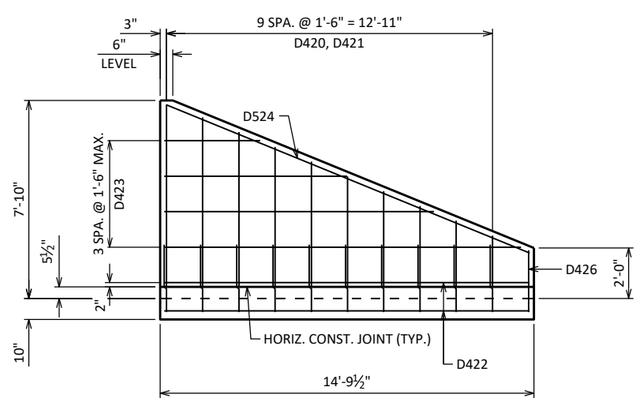
SECTION THRU WING 3

SHOWING F.F. REINFORCEMENT



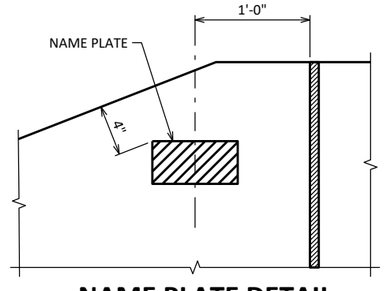
SECTION THRU WING 4

SHOWING B.F. REINFORCEMENT



SECTION THRU WING 4

SHOWING F.F. REINFORCEMENT



NAME PLATE DETAIL

WING 4

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE C-38-128

DRAWN BY BDK | PLANS CK'D ALK

OUTLET WINGWALL DETAILS

SHEET 9
173

SCALE = 6.00

FILE NAME: S:\CURRPROJ\MARINETTE COUNTY\STH 180\CIVIL3D\96701600\SHEETSPLAN\96701671-080201-BR.DWG

LAYOUT NAME: SHT9 PLOT DATE : ---- PLOT BY : MATTHEW KROFTA I.D. 9670-16-00 DATE: JUNE 2025

BILL OF BARS - BOX

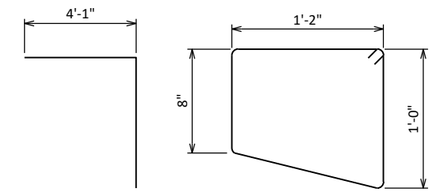
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
B601		576	9'-1"	X		CORNERS - TOP & BOTTOM - VERT.
B602		398	13'-2"			TOP & BOTTOM SLAB - INTERIOR - TRANS.
B603		56	6'-9"		△	TOP & BOTTOM SLAB - INTERIOR - TRANS.
B404		148	2'-2"			DOWELS - BOTTOM SLAB - INTERIOR - VERT.
B405		148	7'-2"			WALLS - INTERIOR - VERT.
B406		18	30'-11"			WALLS - LONGITUDINAL
B407		18	34'-10"			WALLS - LONGITUDINAL
B408		18	38'-8"			WALLS - LONGITUDINAL
B409		20	34'-10"		△	TOP SLAB - EXTERIOR -LONG.
B410		40	34'-9"		△	TOP & BOTTOM SLAB - INTERIOR - LONG.
B411		34	34'-10"			TOP & BOTTOM SLAB -INTERIOR - LONG.
B412		69	13'-2"			TOP SLAB - EXTERIOR - TRANS.
B413		8	6'-8"		△	TOP SLAB - EXTERIOR - TRANS.
						NOT USED
B415		2	31'-2"			BOTTOM SLAB - EXTERIOR - LONG.
B416		2	33'-4"			BOTTOM SLAB - EXTERIOR - LONG.
						NOT USED
B418		2	38'-4"			BOTTOM SLAB - EXTERIOR - LONG.
B419		2	36'-2"			BOTTOM SLAB - EXTERIOR - LONG.
B920		12	13'-2"			TOP HEADER - INLET & OUTLET - TRANS.
B321		18	4'-9"	X		TOP HEADER - INLET - STIRRUP
B322		18	5'-0"	X		TOP HEADER - OUTLET - STIRRUP
B923		12	13'-2"			BOTTOM HEADER - INLET & OUTLET - TRANS.
B324		36	4'-3"	X		BOTTOM HEADER - INLET & OUTLET - STIRRUP
B525		34	4'-0"			APRON JOINT DOWEL - LONG.
B326		104	2'-1"	X		VERTICAL CONSTRUCTION JOINT - BELL
B427		104	6'-0"	X		VERTICAL CONSTRUCTION JOINT - BELL
B328		92	2'-5"	X		VERTICAL CONSTRUCTION JOINT - SPIGOT

BAR SERIES TABLE

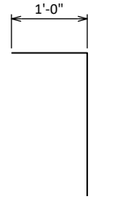
BUNDLE AND TAG EACH SERIES SEPARATELY.

BAR MARK	NO. REQ'D.	LENGTH
B603	4 SERIES OF 14	1'-2" TO 12'-3"
B409	2 SERIES OF 10	31'-4" TO 38'-3"
B410	4 SERIES OF 10	31'-2" TO 38'-4"
B413	2 SERIES OF 4	2'-9" TO 10'-6"

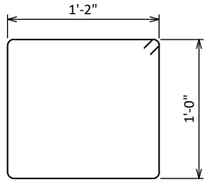


B601

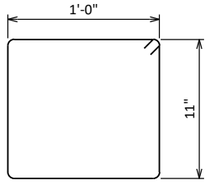
B321



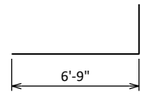
U401, D401



B322



B324

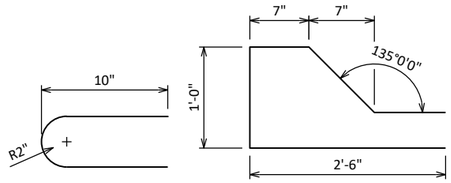


U407, D407

U508, D508

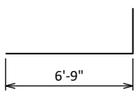
U416, D416

U517, D517

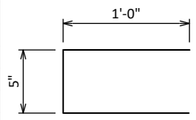


B326

B427



U425, D425

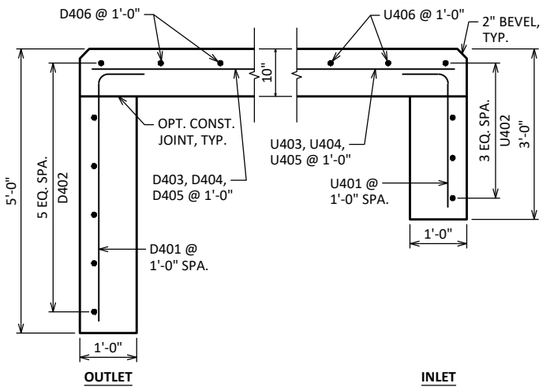


B328

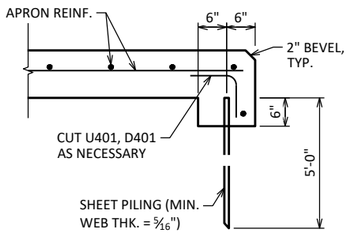
BAR SERIES TABLE

BUNDLE AND TAG EACH SERIES SEPARATELY.

BAR MARK	NO. REQ'D.	LENGTH
U404	1 SERIES OF 7	3'-4" TO 16'-4"
U405	1 SERIES OF 6	3'-1" TO 14'-8"
U406	1 SERIES OF 15	15'-3" TO 31'-1"
U409	1 SERIES OF 9	1'-8" TO 3'-10"
U510	1 SERIES OF 21	4'-0" TO 7'-2"
U412	1 SERIES OF 15	1'-9" TO 7'-2"
U414	2 SERIES OF 4	5'-6" TO 20'-10"
U418	1 SERIES OF 5	1'-10" TO 3'-6"
U519	1 SERIES OF 15	3'-10" TO 7'-2"
U421	1 SERIES OF 10	2'-0" TO 7'-2"
U423	2 SERIES OF 4	3'-8" TO 13'-8"

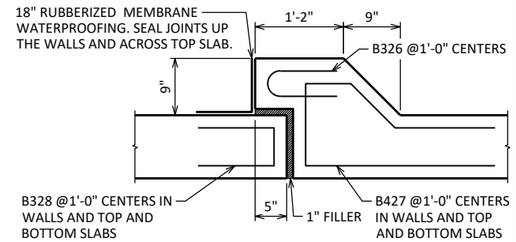


CUT-OFF WALLS

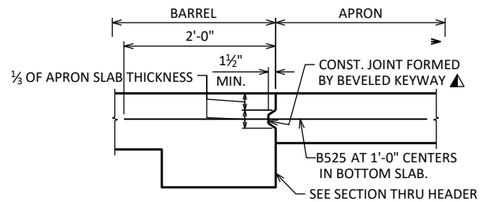


ALTERNATE CUT-OFF WALLS

THE ABOVE ALTERNATIVE MAY BE USED IN LIEU OF CAST-IN-PLACE CONCRETE CUT-OFF WALLS. PAYMENT WILL BE BASED ON THE CONCRETE CUT-OFF WALLS.



VERTICAL CONST. JOINT DETAIL



APRON CONNECTION DETAIL

⚠ IN LIEU OF CONSTRUCTION JOINTS IN THE BOTTOM SLAB, THE CONTRACTOR MAY USE 2" DEEP SAW CUTS WITHIN 12 HOURS AFTER POURING. #5 BARS 4'-0" AT 1'-0" CENTERS REQUIRED.

BILL OF BARS - INLET APRON & WINGS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
U401		28	3'-6"	X		INLET APRON CUT-OFF WALL - VERT.
U402		4	31'-5"			INLET APRON CUT-OFF WALL - TRANS.
U403		13	16'-5"			INLET APRON - LONG.
U404		7	9'-10"		△	INLET APRON - @ WING 1 - LONG.
U405		6	8'-11"		△	INLET APRON - @ WING 2 - LONG.
U406		15	23'-2"		△	INLET APRON - TRANS.
U407	X	9	9'-4"	X		WING 1 - B.F. DOWELS - VERT.
U508	X	21	10'-4"	X		WING 1 - B.F. DOWELS - VERT.
U409	X	9	2'-9"		△	WING 1 - B.F. VERT.
U510	X	21	5'-7"		△	WING 1 - B.F. VERT.
U411	X	15	2'-8"			WING 1 - F.F. DOWELS - VERT.
U412	X	15	4'-6"		△	WING 1 - F.F. VERT.
U413	X	5	21'-5"			WING 1 - F.F. & B.F. & APRON - LONG.
U414	X	8	13'-2"		△	WING 1 - F.F. & B.F. - LONG.
U515	X	2	22'-3"			WING 1 - F.F. & B.F. - TOP LONG.
U416	X	5	9'-4"	X		WING 2 - B.F. DOWELS - VERT.
U517	X	15	10'-4"	X		WING 2 - B.F. DOWELS - VERT.
U418	X	5	2'-8"		△	WING 2 - B.F. VERT.
U519	X	15	5'-6"		△	WING 2 - B.F. VERT.
U420	X	10	2'-8"			WING 2 - F.F. DOWELS - VERT.
U421	X	10	4'-7"		△	WING 2 - F.F. VERT.
U422	X	5	14'-0"			WING 2 - F.F. & B.F. & APRON - LONG.
U423	X	8	8'-8"		△	WING 2 - F.F. & B.F. - LONG.
U524	X	2	15'-1"			WING 2 - F.F. & B.F. - TOP LONG.
U425	X	2	9'-1"	X		WINGS 1 & 2 - B.F. DOWELS - VERT.
U426	X	2	2'-5"			WINGS 1 & 2 - F.F. DOWELS - VERT.

△ LENGTH SHOWN FOR BAR IS AN AVERAGE AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

BILL OF BARS - OUTLET APRON & WINGS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
D401		21	5'-6"	X		OUTLET APRON CUT-OFF WALL - VERT.
D402		6	22'-7"			OUTLET APRON CUT-OFF WALL - TRANS.
D403		13	16'-5"			OUTLET APRON - LONG.
D404		3	9'-3"		△	OUTLET APRON - @ WING 1 - LONG.
D405		3	10'-5"		△	OUTLET APRON - @ WING 2 - LONG.
D406		15	19'-0"		△	OUTLET APRON - TRANS.
D407	X	7	9'-4"	X		WING 3 - B.F. DOWELS - VERT.
D508	X	18	10'-4"	X		WING 3 - B.F. DOWELS - VERT.
D409	X	7	2'-9"		△	WING 3 - B.F. VERT.
D510	X	18	5'-7"		△	WING 3 - B.F. VERT.
D411	X	12	2'-8"			WING 3 - F.F. DOWELS - VERT.
D412	X	12	4'-7"			WING 3 - F.F. VERT.
D413	X	5	18'-0"			WING 3 - F.F. & B.F. & APRON - LONG.
D414	X	8	11'-4"			WING 3 - F.F. & B.F. - LONG.
D515	X	2	18'-11"			WING 3 - F.F. & B.F. - TOP LONG.
D416	X	6	9'-4"	X		WING 4 - B.F. DOWELS - VERT.
D517	X	15	10'-4"	X		WING 4 - B.F. DOWELS - VERT.
D418	X	6	2'-8"		△	WING 4 - B.F. VERT.
D519	X	15	5'-7"		△	WING 4 - B.F. VERT.
D420	X	10	2'-8"			WING 4 - F.F. DOWELS - VERT.
D421	X	10	4'-7"		△	WING 4 - F.F. VERT.
D422	X	5	14'-0"			WING 4 - F.F. & B.F. & APRON - LONG.
D423	X	8	8'-11"		△	WING 4 - F.F. & B.F. - LONG.
D524	X	2	15'-6"			WING 4 - F.F. & B.F. - TOP LONG.
D425	X	2	9'-1"	X		WINGS 3 & 4 - B.F. DOWELS - VERT.
D426	X	2	2'-5"			WINGS 3 & 4 - F.F. DOWELS - VERT.

△ LENGTH SHOWN FOR BAR IS AN AVERAGE AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

BAR SERIES TABLE

BUNDLE AND TAG EACH SERIES SEPARATELY.

BAR MARK	NO. REQ'D.	LENGTH
D404	1 SERIES OF 3	4'-11" TO 13'-7"
D405	1 SERIES OF 3	5'-4" TO 15'-6"
D406	1 SERIES OF 15	15'-2" TO 22'-9"
D409	1 SERIES OF 7	1'-9" TO 3'-8"
D510	1 SERIES OF 18	4'-0" TO 7'-2"
D412	1 SERIES OF 12	1'-11" TO 7'-2"
D414	2 SERIES OF 4	4'-8" TO 18'-0"
D418	1 SERIES OF 6	1'-10" TO 3'-6"
D519	1 SERIES OF 15	3'-11" TO 7'-2"
D421	1 SERIES OF 10	2'-0" TO 7'-2"
D423	2 SERIES OF 4	3'-9" TO 14'-1"

STATE PROJECT NUMBER

9670-16-71

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE C-38-128

DRAWN BY BDK | PLANS CK'D ALK

BAR REINFORCEMENT DETAILS

SHEET 10
174

SCALE = 12.0

8

8

FILE NAME: S:\CURRPROJ\MARINETTE COUNTY\STH 180\CIVIL3D\96701600\SHEETSPLAN\96701671-080201-BR.DWG

LAYOUT NAME: SHT10

PLOT DATE : ----

PLOT BY : MATTHEW KROFTA

I.D. 9670-16-00

DATE: JUNE 2025

DIVISION 1 - STATION 1176+47 BEAM GUARD

STATION	DISTANCE	AREA (SF)		INCREMENTAL VOL (CY) (UNADJUSTED)		CUMULATIVE VOL (CY)		
		CUT	FILL	CUT	FILL	CUT	EXPANDED FILL	MASS ORDINATE
						1.00	1.25	
				NOTE 1	NOTE 2	NOTE 1		NOTE 3
1173+25.272	0.00	6.32	0.00	0	0	0	0	0
1173+50	24.73	6.02	0.00	6	0	6	0	6
1174+00	50.00	5.30	9.70	10	9	16	11	5
1174+50	50.00	4.22	27.81	9	35	25	55	-30
1174+87.902	37.90	5.63	22.15	7	35	32	99	-67
1175+00	12.10	8.04	5.25	3	6	35	106	-71
1175+12.64	12.64	7.53	0.00	4	1	39	108	-69
1175+37.38	24.74	8.85	0.00	8	0	47	108	-61
1175+50	12.62	9.39	0.00	4	0	51	108	-57
1176+00	50.00	9.26	12.46	17	12	68	123	-55
1176+50	50.00	8.52	42.46	16	51	84	186	-102
1177+00	50.00	6.81	0.00	14	39	98	235	-137
1177+04.522	4.52	6.90	0.00	1	0	99	235	-136
1177+29.262	24.74	8.07	0.00	7	0	106	235	-129
1177+50	20.74	8.77	0.00	6	0	112	235	-123
1177+54	4.00	8.60	0.00	1	0	113	235	-122
1178+00	46.00	8.72	0.00	15	0	128	235	-107
1178+50	50.00	8.40	0.00	16	0	144	235	-91
1179+00	50.00	4.55	0.00	12	0	156	235	-79
1179+16.63	16.63	3.94	0.00	3	0	159	235	-76
				159	**188**			

DIVISION 2 - STATION 1437+00 BOX CULVERT

STATION	DISTANCE	AREA (SF)		INCREMENTAL VOL (CY) (UNADJUSTED)		CUMULATIVE VOL (CY)		
		CUT	FILL	CUT	FILL	CUT	EXPANDED FILL	MASS ORDINATE
						1.00	1.25	
				NOTE 1	NOTE 2	NOTE 1		NOTE 3
1435+74.538	0.00	0.49	0.00	0	0	0	0	0
1436+00	25.46	0.66	14.28	1	7	1	9	-8
1436+25	25.00	41.14	27.95	19	20	20	34	-14
1436+50	25.00	69.63	97.31	51	58	71	106	-35
1436+75	25.00	95.49	146.03	76	113	147	248	-101
1437+00	25.00	37.67	110.33	62	119	209	396	-187
1437+25	25.00	103.46	117.26	65	105	274	528	-254
1437+50	25.00	74.08	49.30	82	77	356	624	-268
1437+73.444	23.44	2.51	5.18	33	24	389	654	-265
1438+00	26.56	1.70	1.09	2	3	391	658	-267
1438+24.462	24.46	0.59	0.00	1	0	392	658	-266
				392	**526**			

Notes:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - FILL	VOLUME NEEDED TO BE FILLED
3 - MASS ORDINATE	CUT-(FILL*1.25)

DIVISION 3 - STATION 1524+57 BEAM GUARD

STATION	DISTANCE	AREA (SF)		INCREMENTAL VOL (CY) (UNADJUSTED)		CUMULATIVE VOL (CY)		
		CUT	FILL	CUT	FILL	CUT	EXPANDED FILL	MASS ORDINATE
						1.00	1.25	
				NOTE 1	NOTE 2	NOTE 1		NOTE 3
1521+56.064	0.00	4.79	6.85	0	0	0	0	0
1522+00	43.94	4.09	11.38	7	15	7	19	-12
1522+50	50.00	4.73	20.82	8	30	15	56	-41
1523+00	50.00	7.44	1.65	11	21	26	83	-57
1523+50	50.00	14.69	0.00	20	2	46	85	-39
1523+58.013	8.01	11.08	0.79	4	0	50	85	-35
1523+82.982	24.97	10.34	2.95	10	2	60	88	-28
1524+00	17.02	9.66	6.83	6	3	66	91	-25
1524+07.965	7.96	8.56	7.16	3	2	69	94	-25
1524+50	42.04	10.86	10.04	15	13	84	110	-26
1525+00	50.00	6.71	25.35	16	33	100	151	-51
1525+50	50.00	9.85	0.00	15	23	115	180	-65
1525+76.71	26.71	10.97	0.00	10	0	125	180	-55
1526+00	23.29	14.52	0.00	11	0	136	180	-44
1526+01.693	1.69	14.42	0.00	1	0	137	180	-43
1526+26.675	24.98	9.24	2.46	11	1	148	181	-33
1526+50	23.32	7.73	4.04	7	3	155	185	-30
1527+00	50.00	5.96	5.27	13	9	168	196	-28
1527+50	50.00	6.20	0.88	11	6	179	204	-25
1528+00	50.00	5.92	0.00	11	1	190	205	-15
1528+05.746	5.75	5.92	0.00	1	0	191	205	-14
				191	**164**			

Notes:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - FILL	VOLUME NEEDED TO BE FILLED
3 - MASS ORDINATE	CUT-(FILL*1.25)

9

9

PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	EARTHWORK DATA	SHEET 176	E

FILE NAME : 96701671-090101-ew.pptx PLOT DATE: 7/31/2025 7:39 AM PLOT BY : PLOT SCALE : 1:1

DIVISION 1 - STATION 1437+00 TEMPORARY DIVERSION (FOR INFORMATIONAL PURPOSES ONLY)

STATION	DISTANCE	AREA (SF)		INCREMENTAL VOL (CY) (UNADJUSTED)		CUMULATIVE VOL (CY)		
		CUT	FILL	CUT	FILL	CUT	EXPANDED FILL	MASS ORDINATE
						1.00	1.25	
				NOTE 1	NOTE 2	NOTE 1		NOTE 3
10+00	0.00	0.64	0.00	0	0	0	0	0
10+25	25.00	36.79	0.00	17	0	17	0	17
10+50	25.00	32.67	0.00	32	0	49	0	49
10+75	25.00	117.00	0.00	69	0	118	0	118
11+00	25.00	266.32	0.00	177	0	295	0	295
11+25	25.00	240.76	0.00	235	0	530	0	530
11+50	25.00	61.31	0.00	140	0	670	0	670
11+75	25.00	30.75	0.00	43	0	713	0	713
12+00	25.00	32.32	0.00	29	0	742	0	742
12+25	25.00	3.17	0.00	16	0	758	0	758
12+28.178	3.18	0.71	0.41	0	0	758	0	758
				758	**0**			

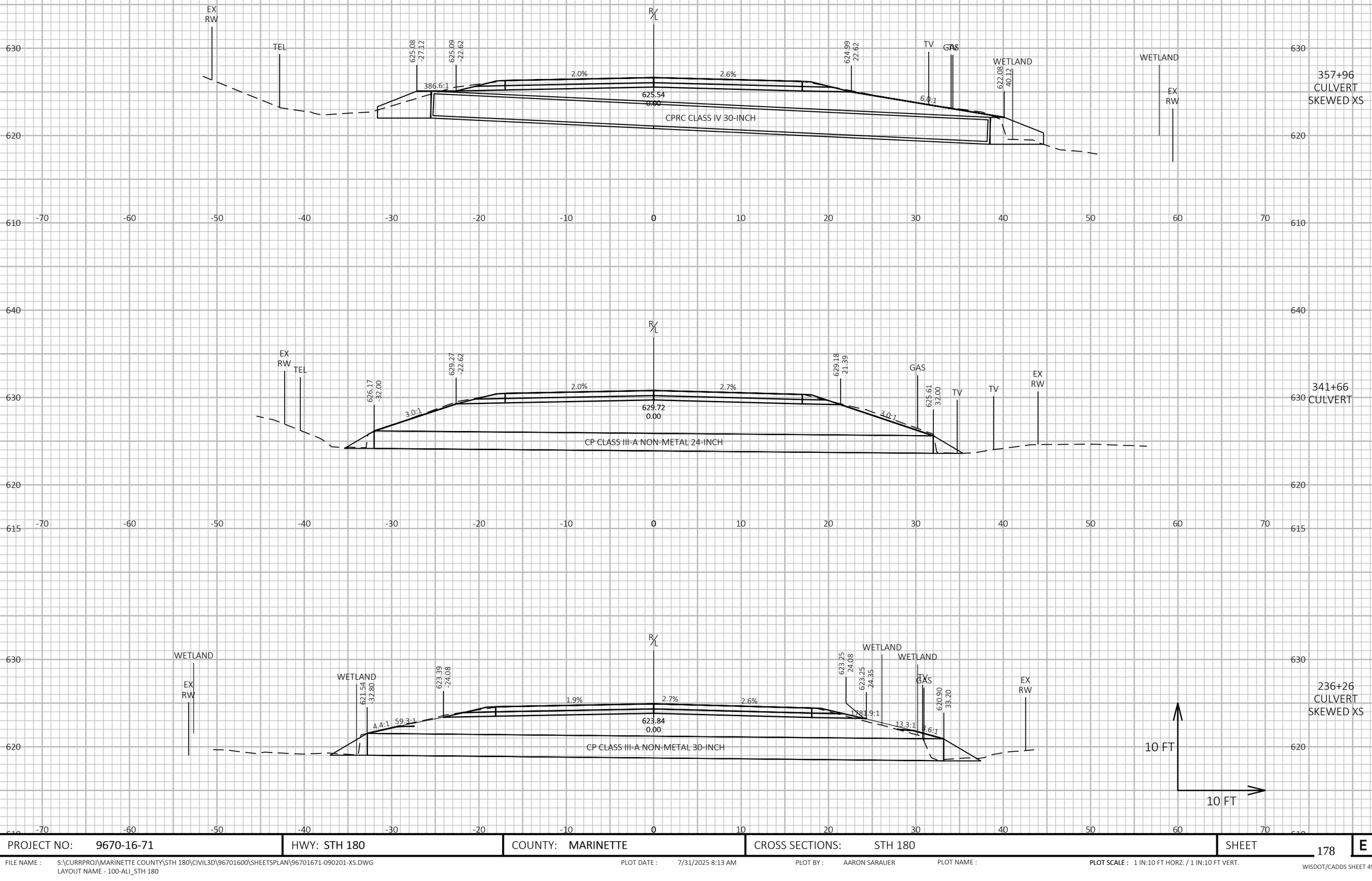
Notes:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - FILL	VOLUME NEEDED TO BE FILLED
3 - MASS ORDINATE	CUT-(FILL*1.25)

9

9

PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	EARTHWORK DATA	SHEET 177	E

FILE NAME : 96701671-090101-ew.pptx PLOT DATE: 7/31/2025 7:39 AM PLOT BY : PLOT SCALE : 1:1



9

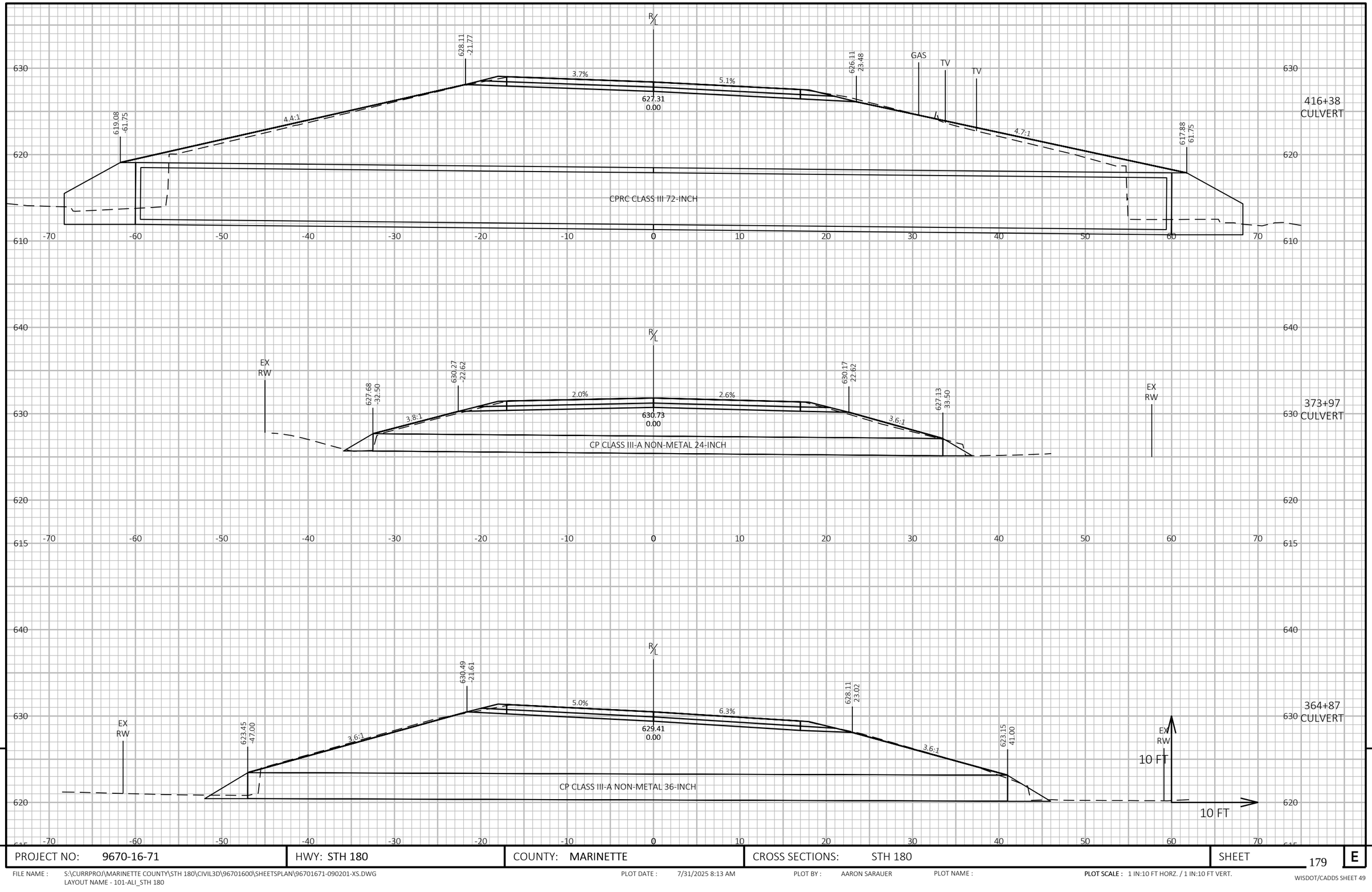
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PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	CROSS SECTIONS: STH 180	SHEET 178	E

FILE NAME : S:\CURRPROJ\MARINETTE COUNTY\STH 180\CIVIL3D\96701600\SHEETSPLAN\96701671-090201-XS.DWG
LAYOUT NAME - 100-ALI_STH 180

PLOT DATE : 7/31/2025 8:13 AM PLOT BY : AARON SARAUER PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

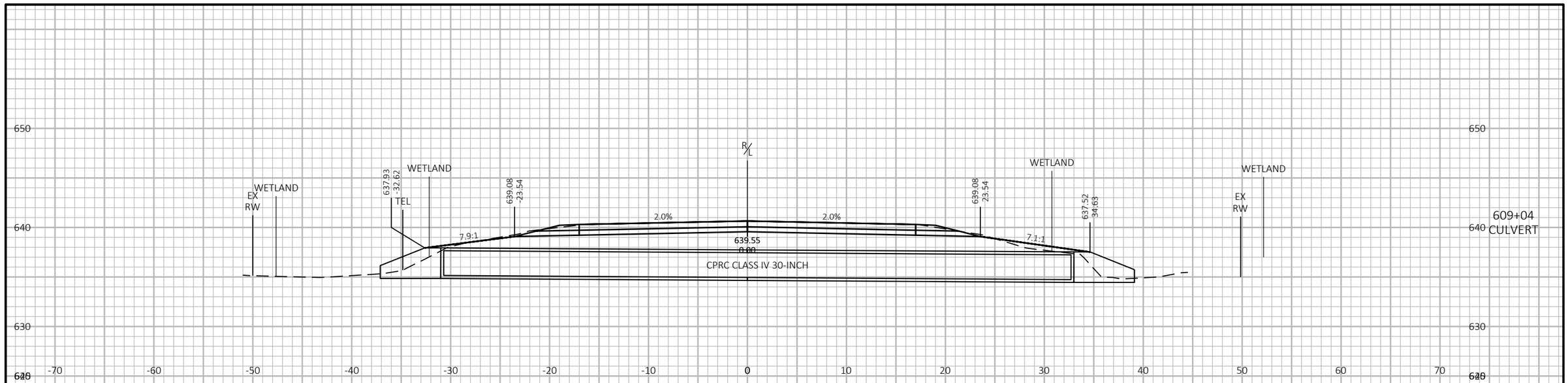


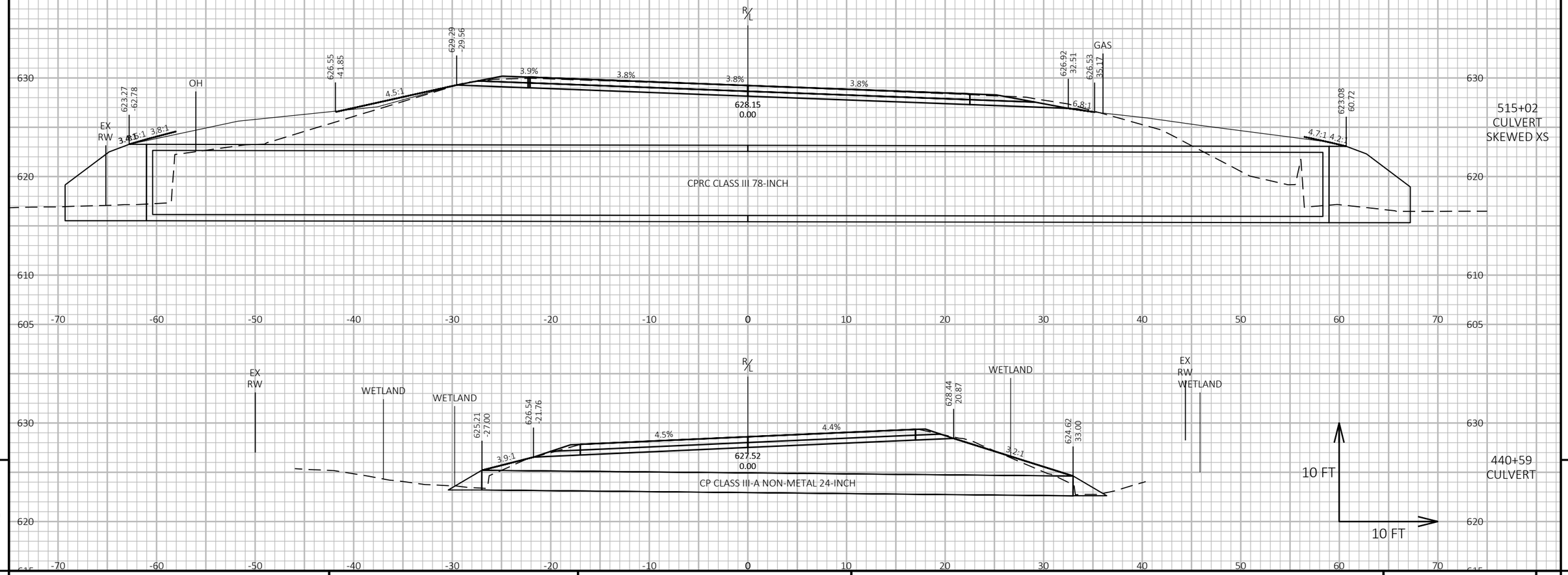
9 9

PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	CROSS SECTIONS: STH 180	SHEET 179	E

FILE NAME : S:\CURRPROJ\MARINETTE COUNTY\STH 180\CIVIL3D\96701600\SHEETSPLAN\96701671-090201-XS.DWG
LAYOUT NAME - 101-ALI_STH 180

PLOT DATE : 7/31/2025 8:13 AM PLOT BY : AARON SARAUER PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.





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PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	CROSS SECTIONS: STH 180	SHEET 180	E

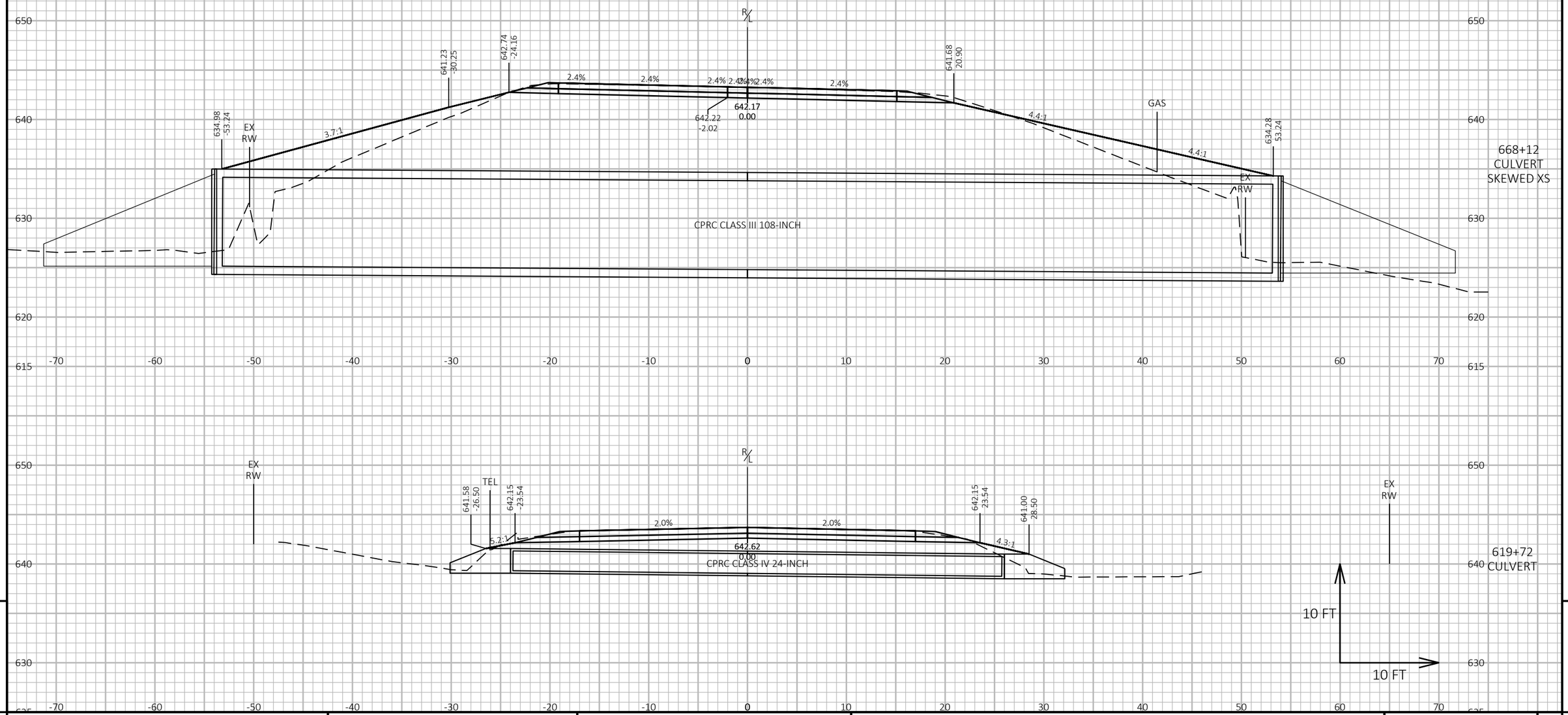
FILE NAME : S:\CURRPROJ\MARINETTE COUNTY\STH 180\CIVIL3D\96701600\SHEETSPLAN\96701671-090201-XS.DWG
LAYOUT NAME - 102-ALI_STH 180

PLOT DATE : 7/31/2025 8:13 AM

PLOT BY : AARON SARAUER

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



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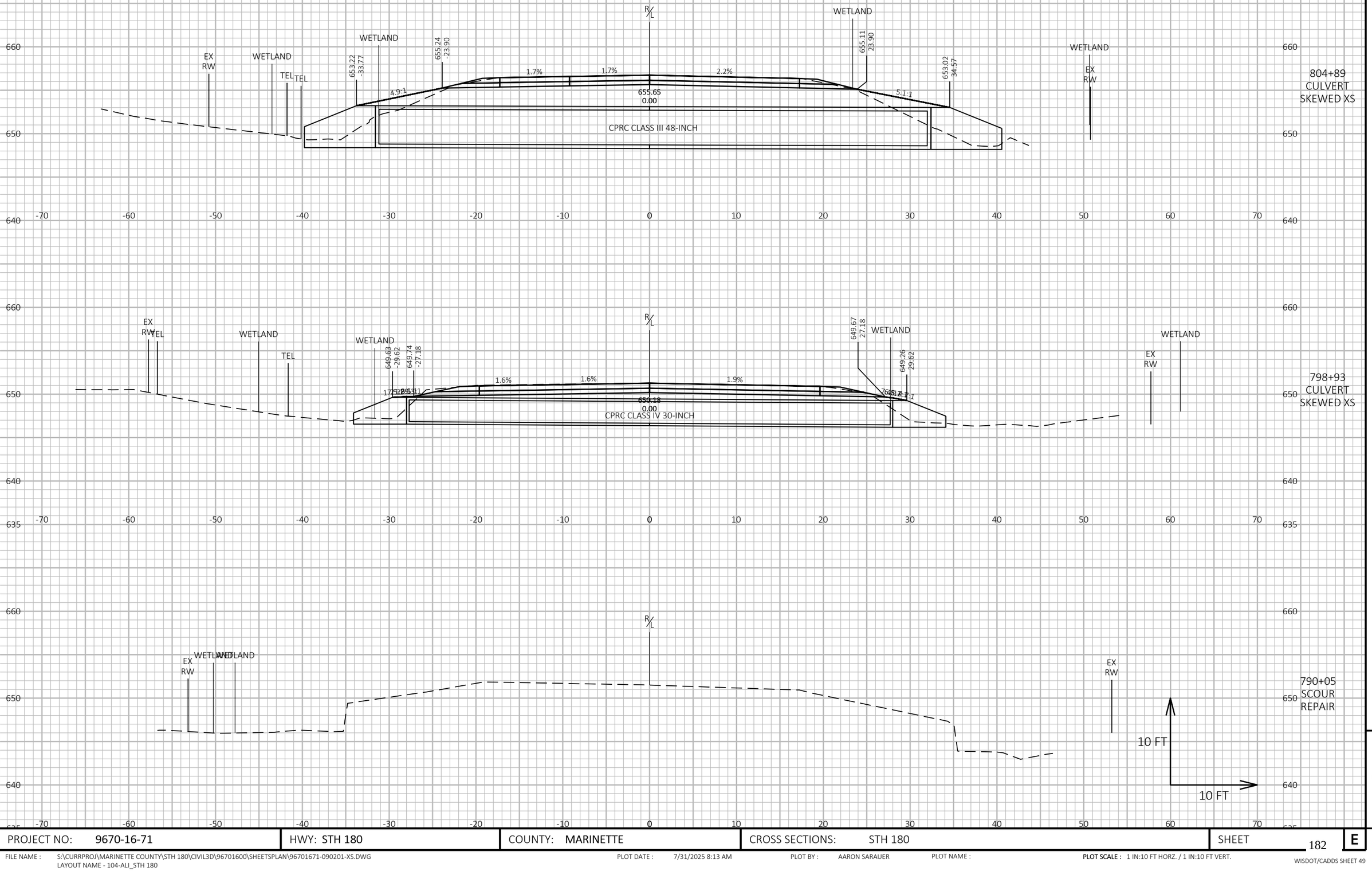
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PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	CROSS SECTIONS: STH 180	SHEET 181	E

FILE NAME : S:\CURRPROJ\MARINETTE COUNTY\STH 180\CIVIL3D\96701600\SHEETSPLAN\96701671-090201-XS.DWG
LAYOUT NAME - 103-ALI_STH 180

PLOT DATE : 7/31/2025 8:13 AM PLOT BY : AARON SARAUER PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

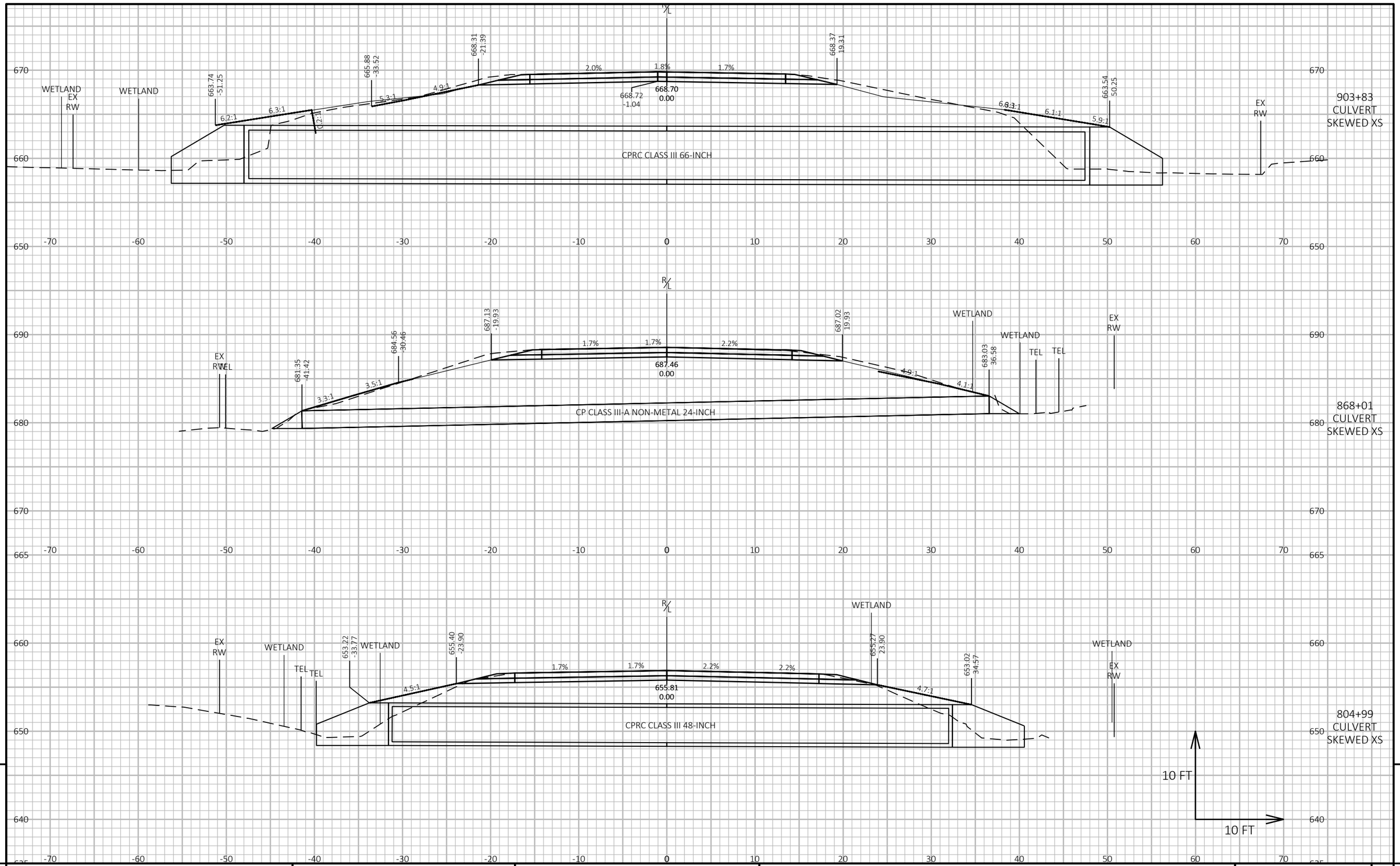
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PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	CROSS SECTIONS: STH 180	SHEET 182	E

FILE NAME : S:\CURRPROJ\MARINETTE COUNTY\STH 180\CIVIL3D\96701600\SHEETSPLAN\96701671-090201-XS.DWG
LAYOUT NAME - 104-ALI_STH 180

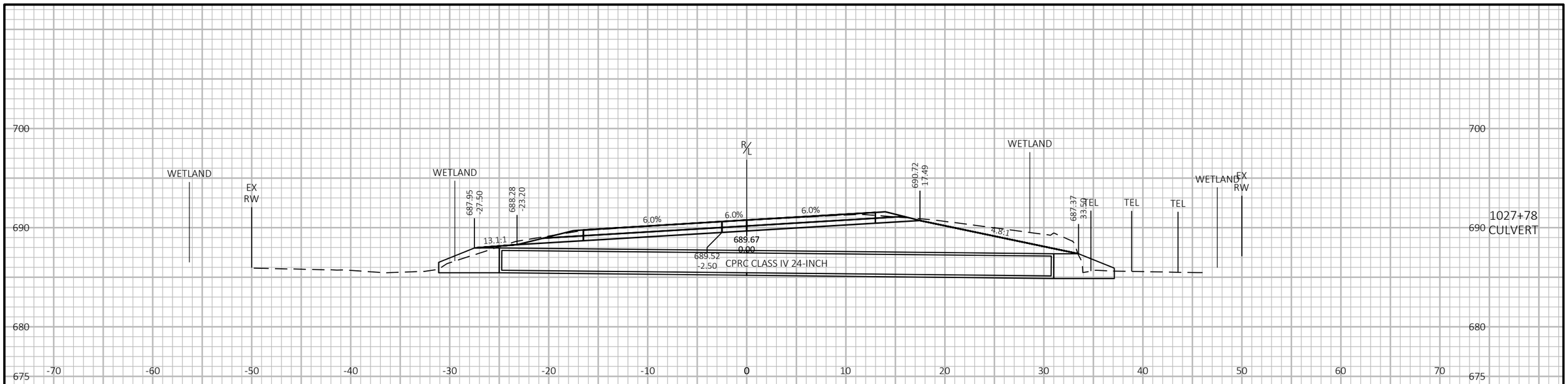
PLOT DATE : 7/31/2025 8:13 AM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

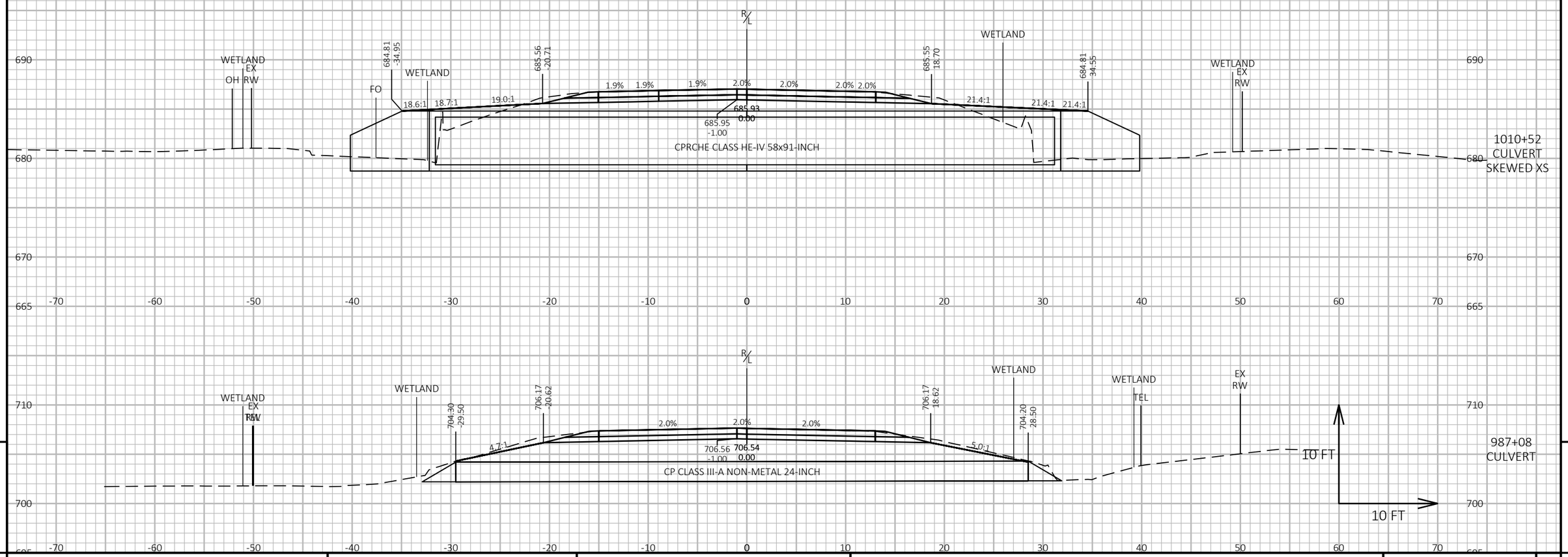
WISDOT/CADDS SHEET 49



PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	CROSS SECTIONS: STH 180	SHEET 183	E

FILE NAME : S:\CURRPROJ\MARINETTE COUNTY\STH 180\CIVIL3D\96701600\SHEETSPLAN\96701671-090201-XS.DWG
LAYOUT NAME - 105-ALI_STH 180
PLOT DATE : 7/31/2025 8:13 AM
PLOT BY : AARON SARAUER
PLOT NAME :
PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.
WISDOT/CADDS SHEET 49





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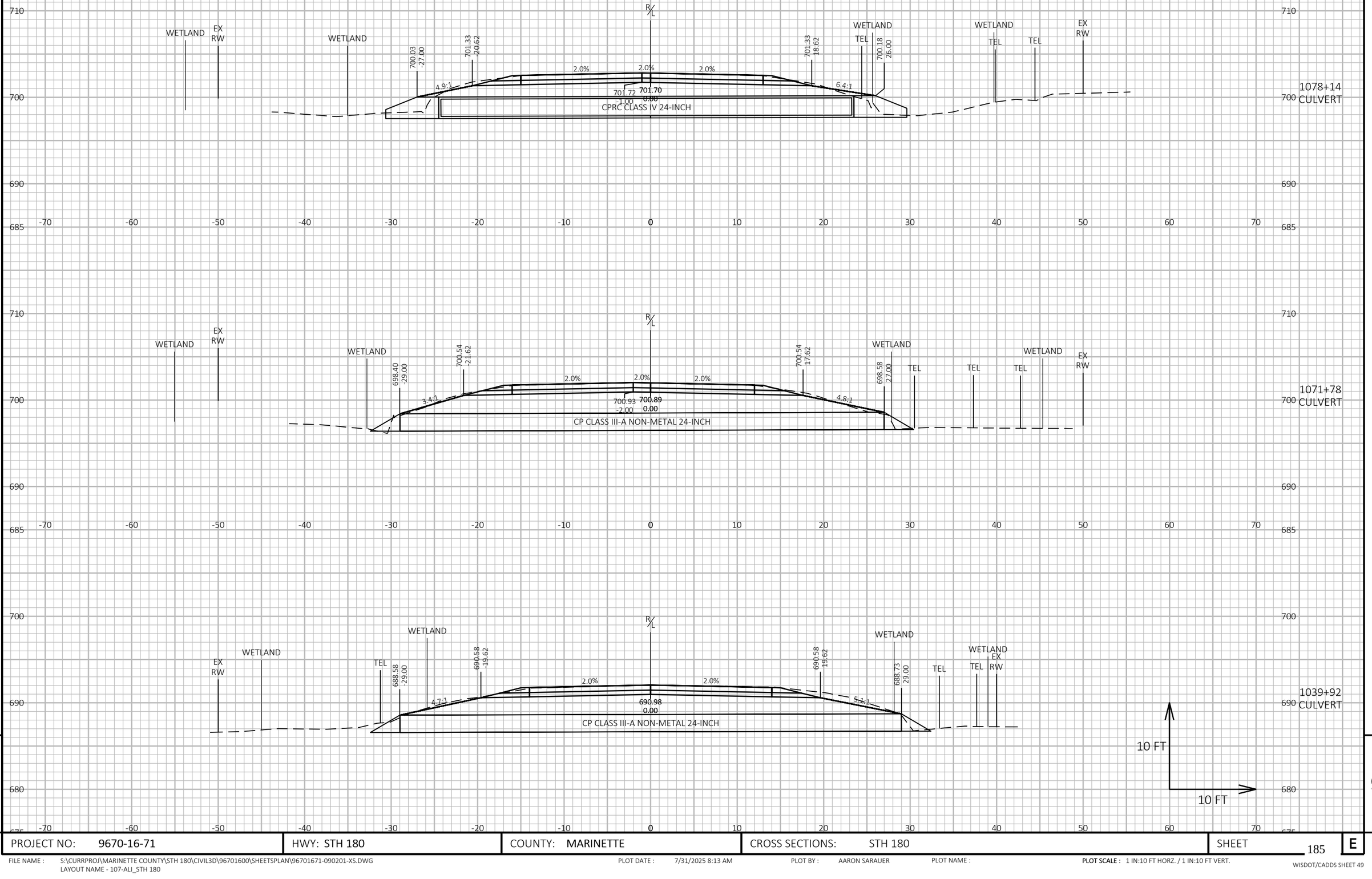
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PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	CROSS SECTIONS: STH 180	SHEET 184	E

FILE NAME : S:\CURRPROJ\MARINETTE COUNTY\STH 180\CIVIL3D\96701600\SHEETSPLAN\96701671-090201-XS.DWG
LAYOUT NAME - 106-ALI_STH 180

PLOT DATE : 7/31/2025 8:13 AM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

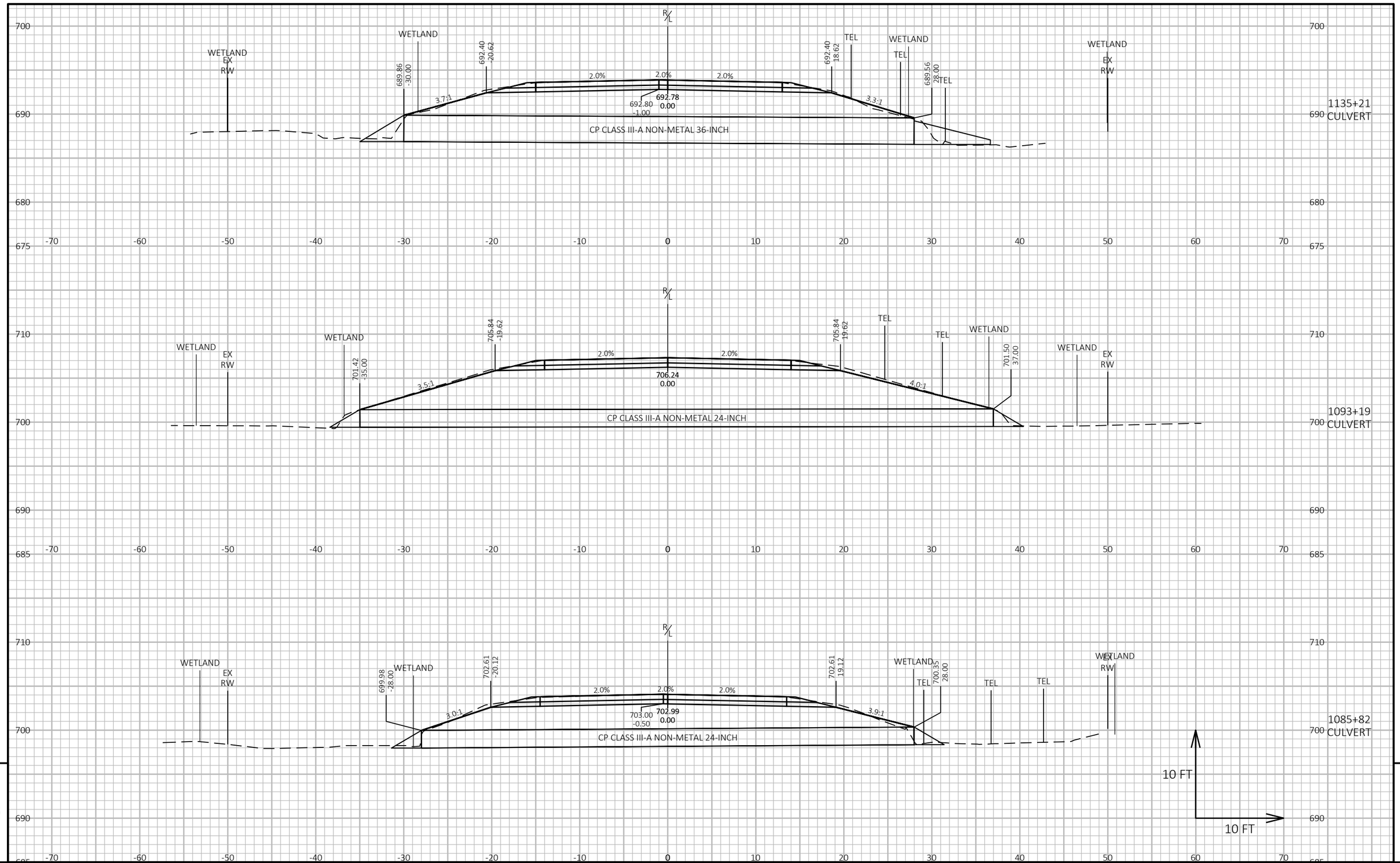


PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	CROSS SECTIONS: STH 180	SHEET 185 E

FILE NAME : S:\CURRPROJ\MARINETTE COUNTY\STH 180\CIVIL3D\96701600\SHEETSPLAN\96701671-090201-XS.DWG
LAYOUT NAME - 107-ALI_STH 180

PLOT DATE : 7/31/2025 8:13 AM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

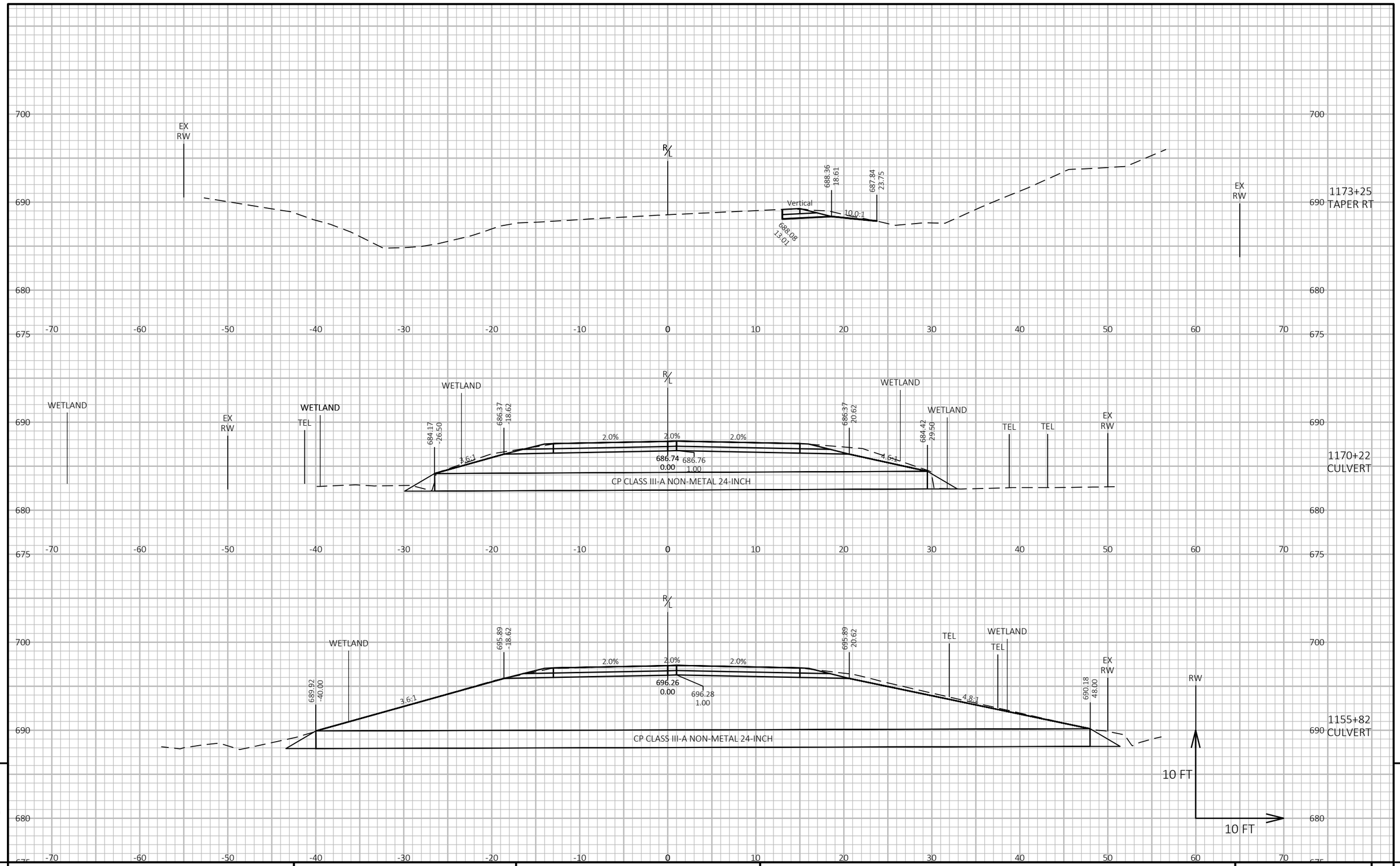


PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	CROSS SECTIONS: STH 180	SHEET 186	E

FILE NAME : S:\CURRPROJ\MARINETTE COUNTY\STH 180\CIVIL3D\96701600\SHEETSPLAN\96701671-090201-XS.DWG
LAYOUT NAME - 108-ALI_STH 180

PLOT DATE : 7/31/2025 8:13 AM PLOT BY : AARON SARAUER PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

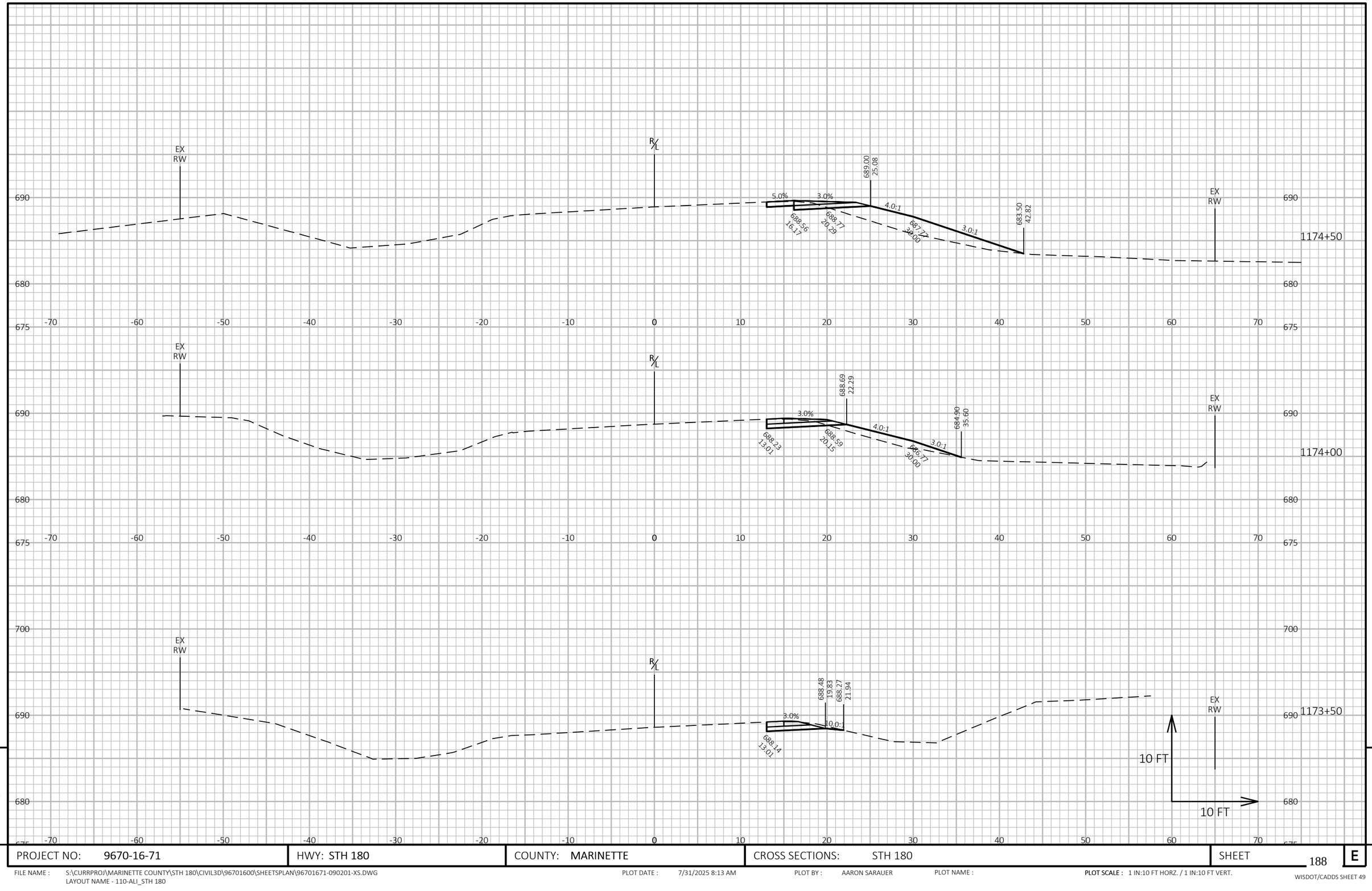


PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	CROSS SECTIONS: STH 180	SHEET 187	E

FILE NAME : S:\CURRPROJ\MARINETTE COUNTY\STH 180\CIVIL3D\96701600\SHEETSPLAN\96701671-090201-XS.DWG
LAYOUT NAME - 109-ALI_STH 180

PLOT DATE : 7/31/2025 8:13 AM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

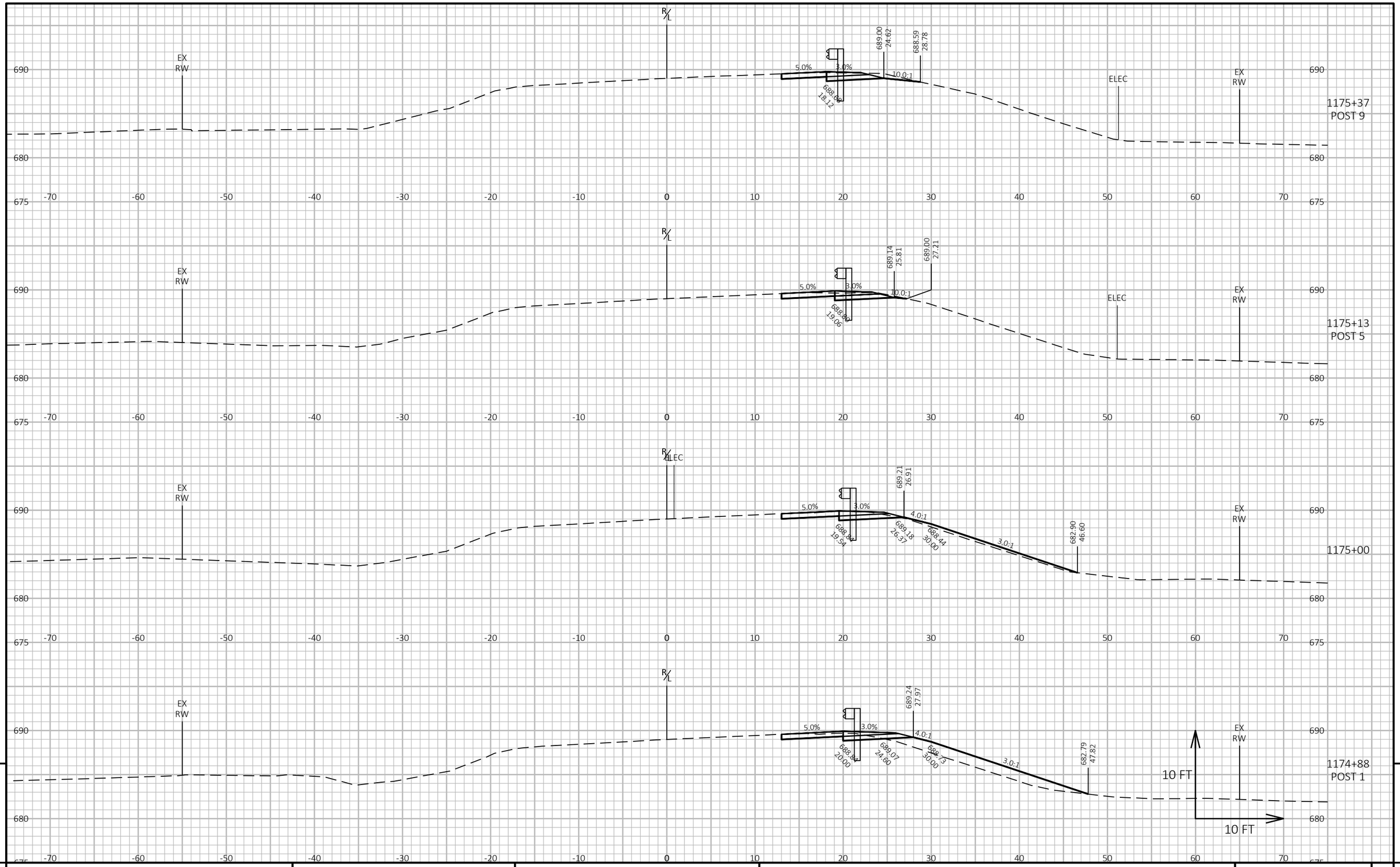
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PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	CROSS SECTIONS: STH 180	SHEET 188	E

FILE NAME : S:\CURRPROJ\MARINETTE COUNTY\STH 180\CIVIL3D\96701600\SHEETSPLAN\96701671-090201-XS.DWG
LAYOUT NAME - 110-ALI_STH 180

PLOT DATE : 7/31/2025 8:13 AM PLOT BY : AARON SARAUER PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

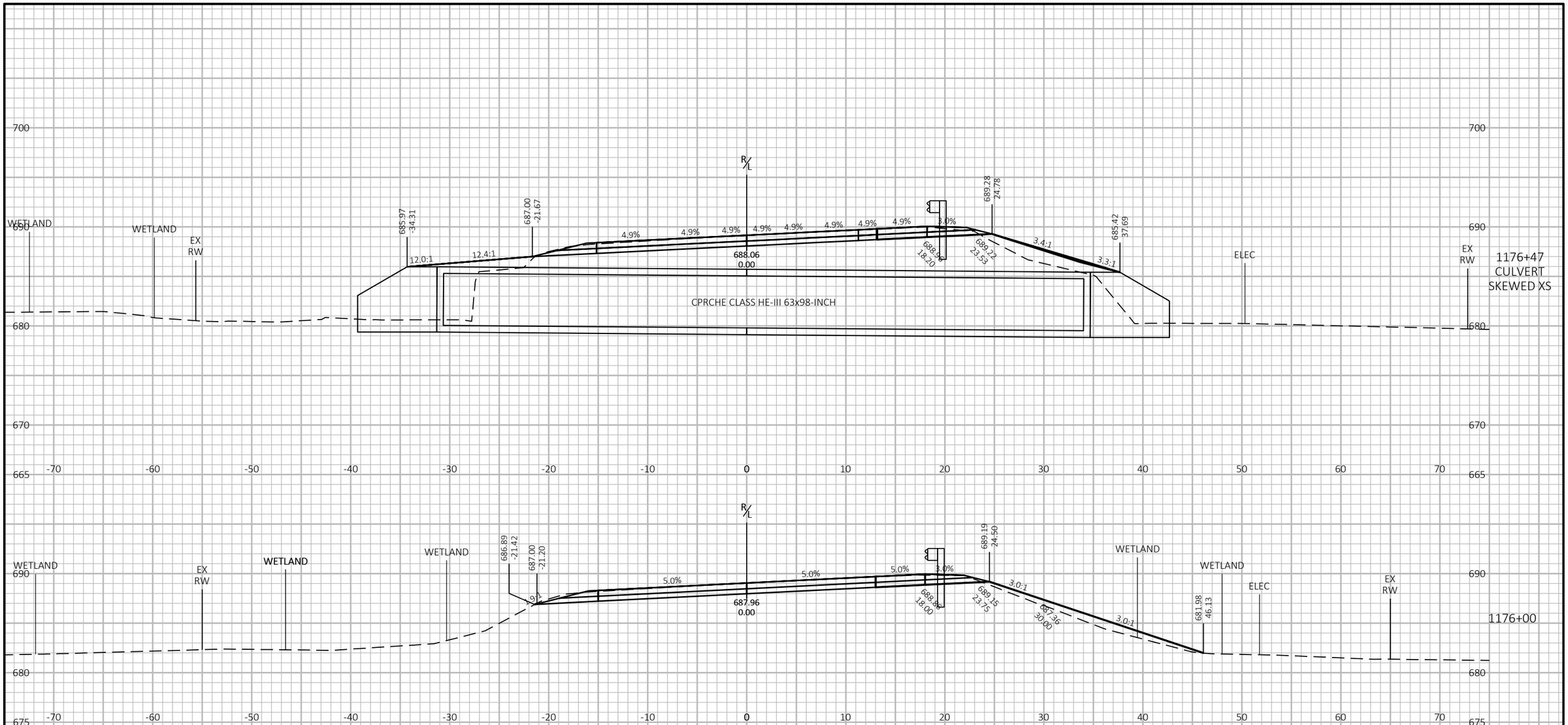


PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	CROSS SECTIONS: STH 180	SHEET 189 E

FILE NAME : S:\CURRPROJ\MARINETTE COUNTY\STH 180\CIVIL3D\96701600\SHEETSPLAN\96701671-090201-XS.DWG
LAYOUT NAME - 111-ALI_STH 180

PLOT DATE : 7/31/2025 8:13 AM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

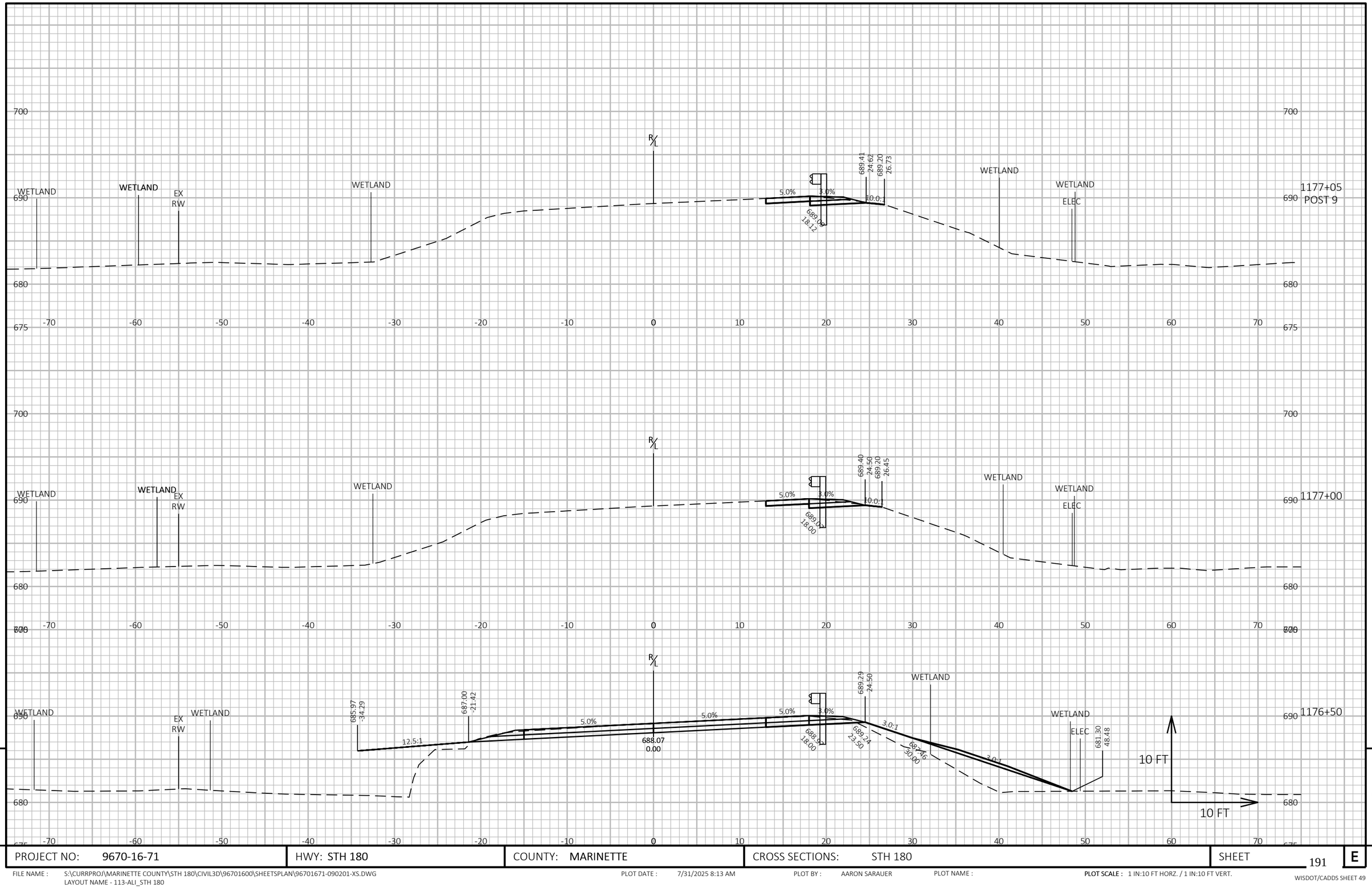


PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	CROSS SECTIONS: STH 180	SHEET 190	E

FILE NAME : S:\CURRPROJ\MARINETTE COUNTY\STH 180\CIVIL3D\96701600\SHEETSPLAN\96701671-090201-XS.DWG
LAYOUT NAME - 112-ALI_STH 180

PLOT DATE : 7/31/2025 8:13 AM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

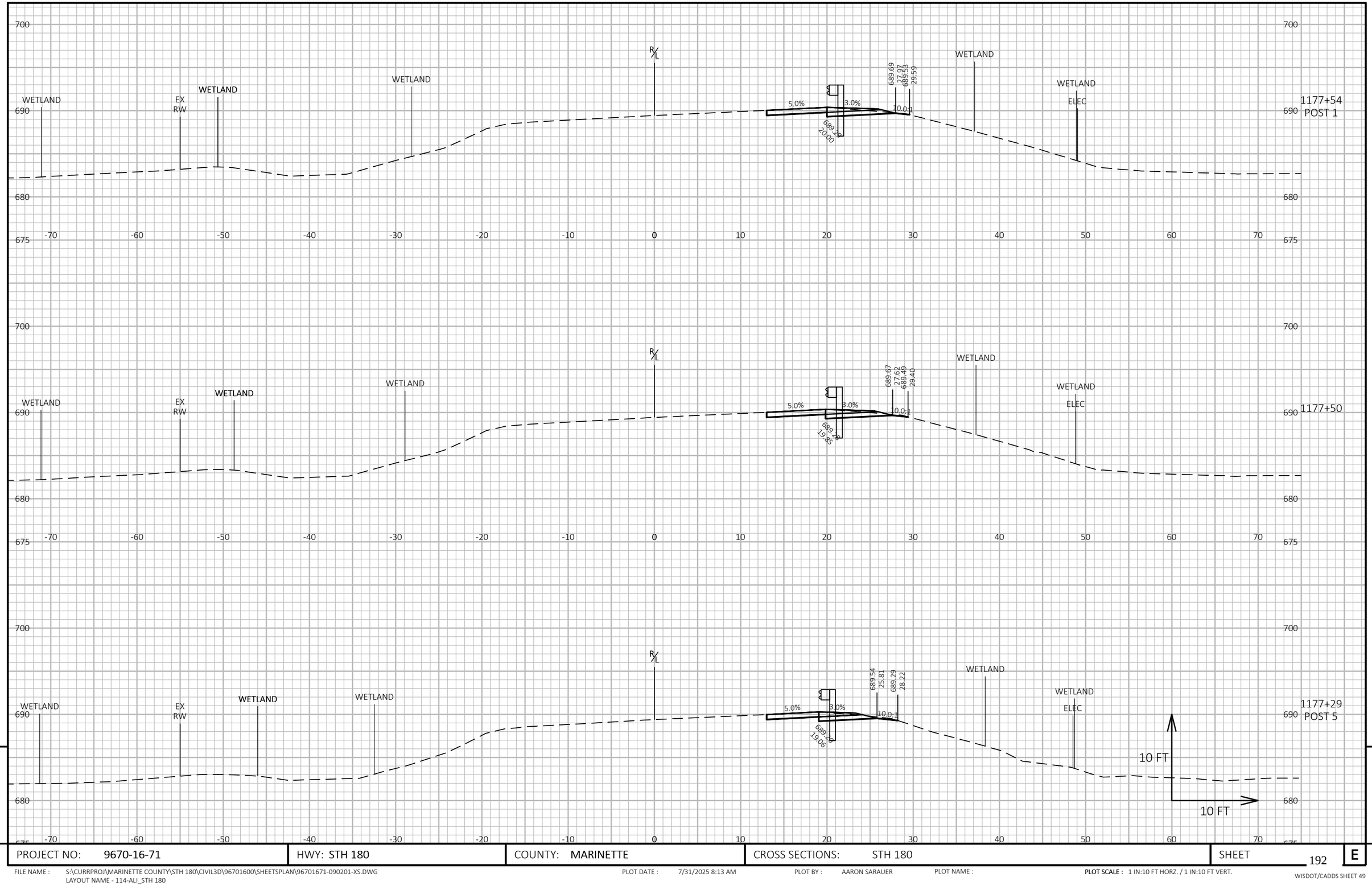
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PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	CROSS SECTIONS: STH 180	SHEET 191	E

FILE NAME : S:\CURRPROJ\MARINETTE COUNTY\STH 180\CIVIL3D\96701600\SHEETSPLAN\96701671-090201-XS.DWG
LAYOUT NAME - 113-ALI_STH 180

PLOT DATE : 7/31/2025 8:13 AM PLOT BY : AARON SARAUER PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

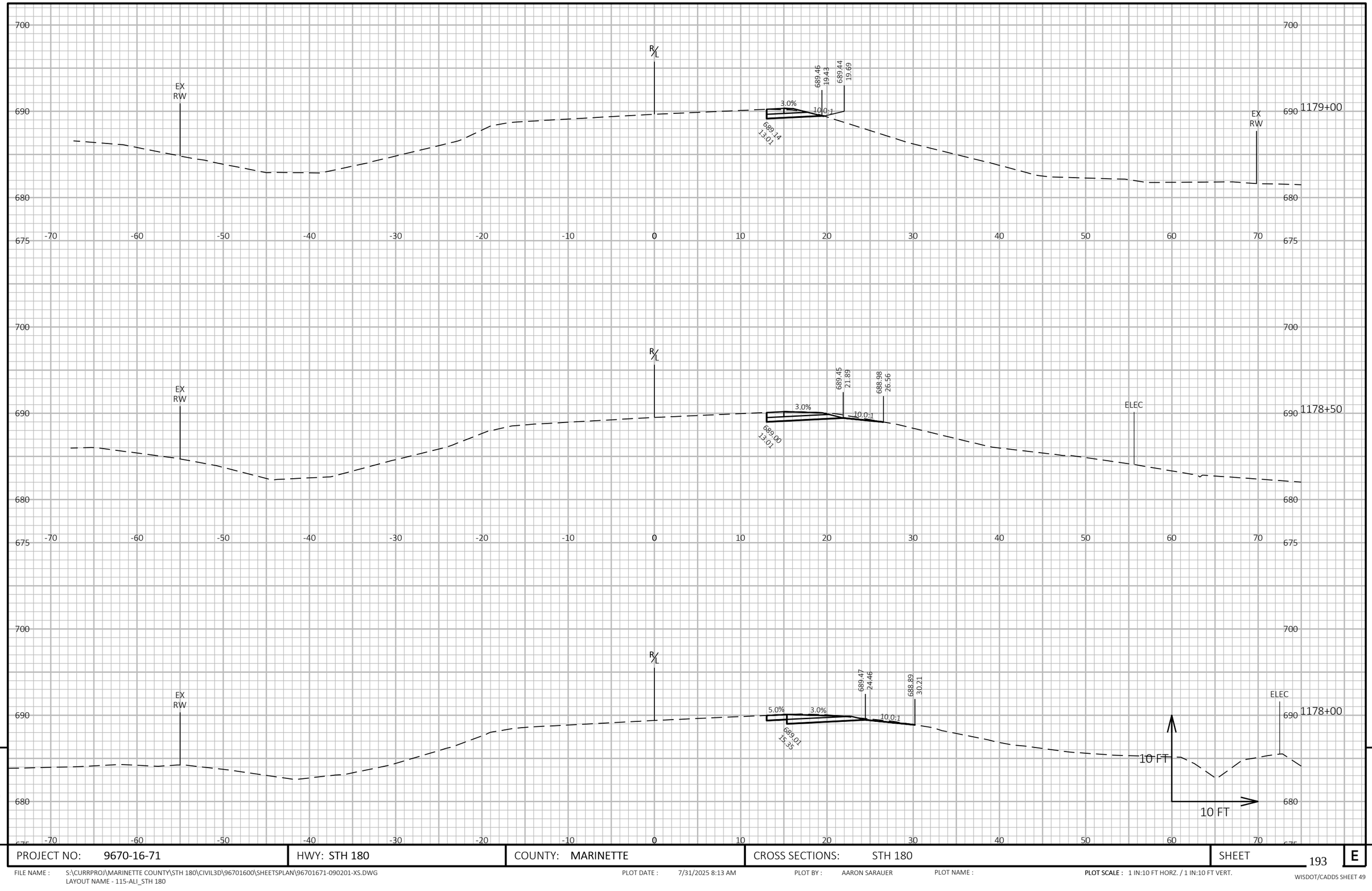
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PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	CROSS SECTIONS: STH 180	SHEET 192	E

FILE NAME : S:\CURRPROJ\MARINETTE COUNTY\STH 180\CIVIL3D\96701600\SHEETSPLAN\96701671-090201-XS.DWG
LAYOUT NAME - 114-ALI_STH 180

PLOT DATE : 7/31/2025 8:13 AM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

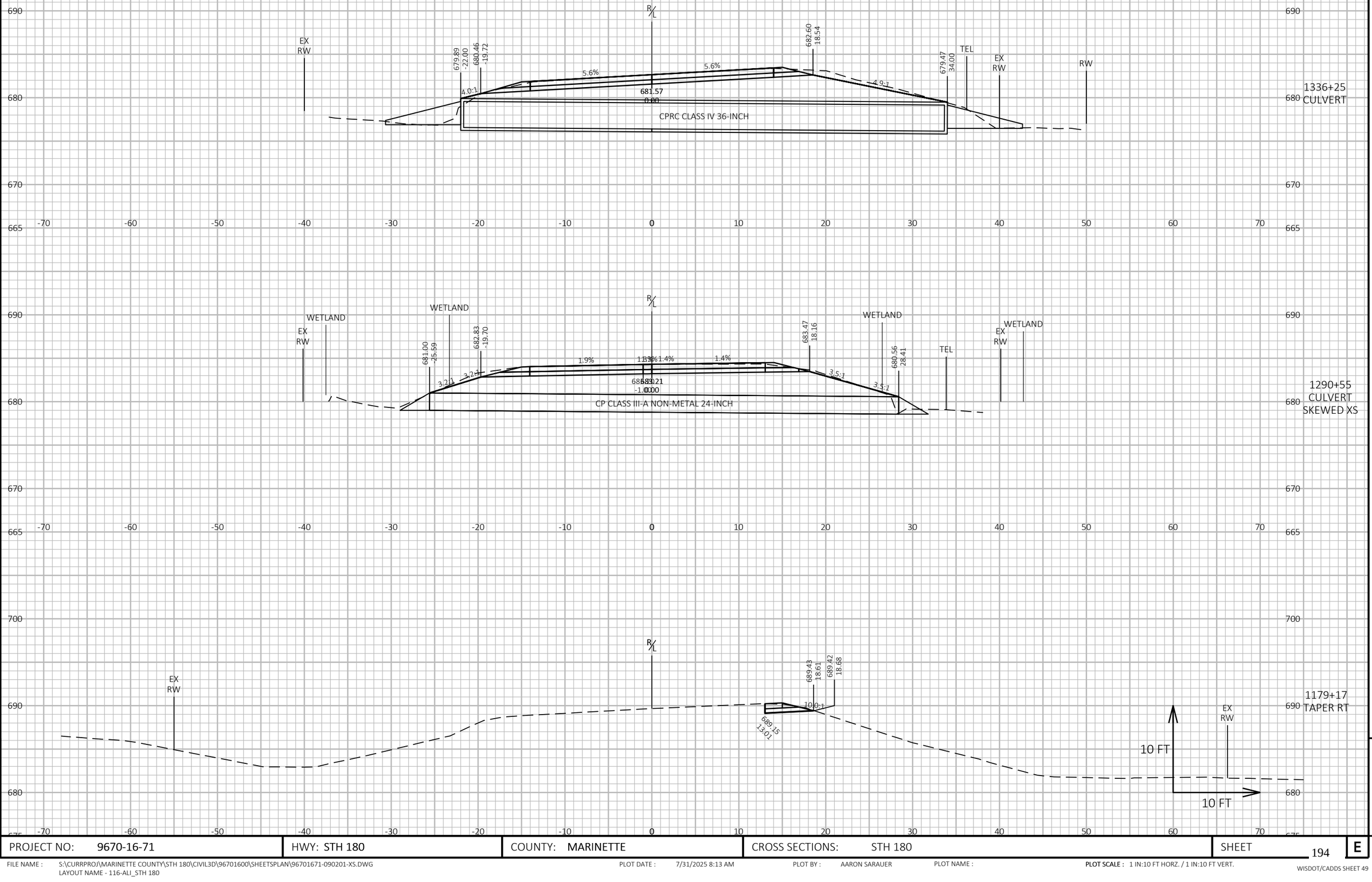


PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	CROSS SECTIONS: STH 180	SHEET 193	E

FILE NAME : S:\CURRPROJ\MARINETTE COUNTY\STH 180\CIVIL3D\96701600\SHEETSPLAN\96701671-090201-XS.DWG
LAYOUT NAME - 115-ALI_STH 180

PLOT DATE : 7/31/2025 8:13 AM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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9

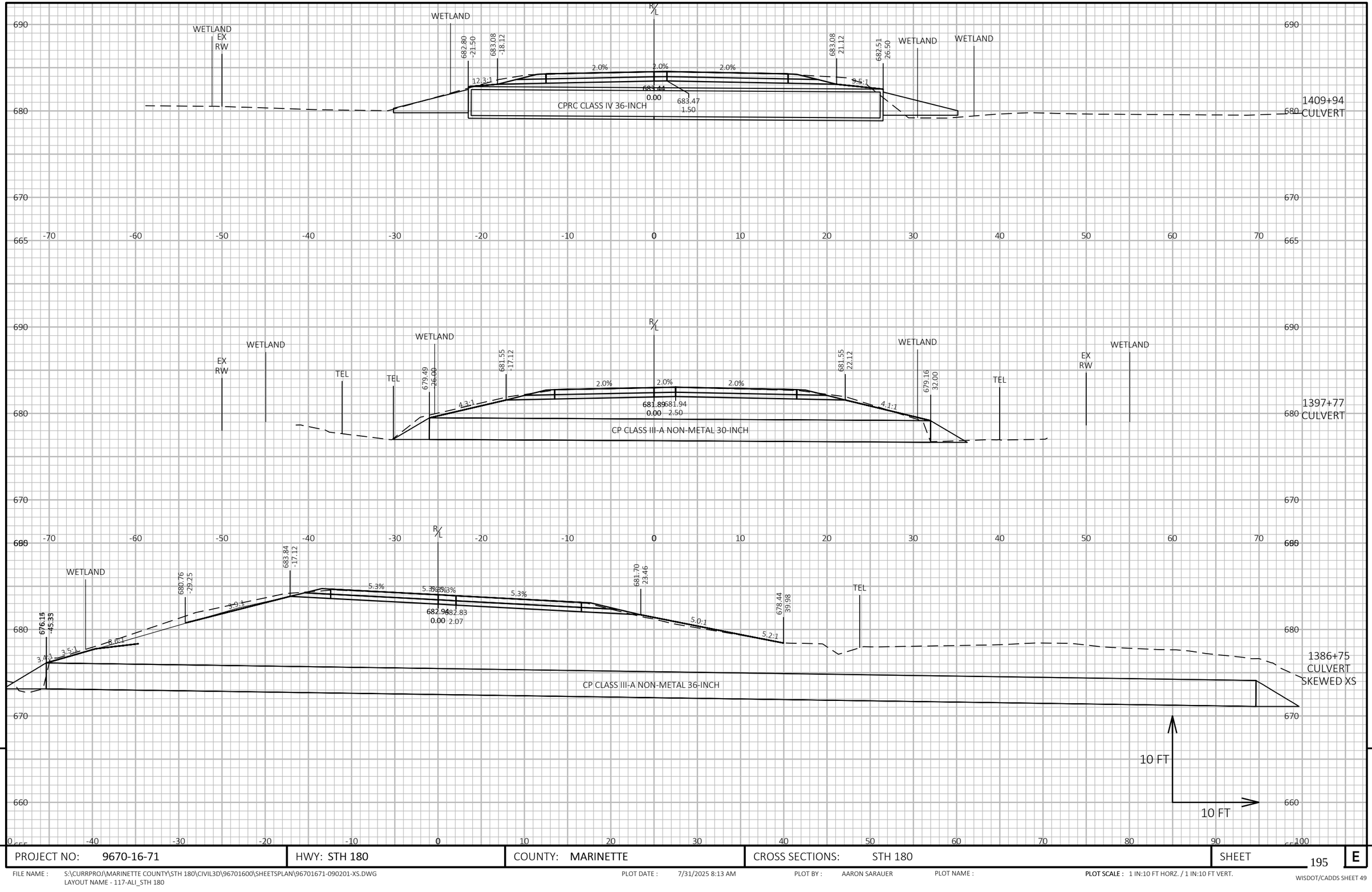
PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	CROSS SECTIONS: STH 180	SHEET 194	E

FILE NAME : S:\CURRPROJ\MARINETTE COUNTY\STH 180\CIVIL3D\96701600\SHEETSPLAN\96701671-090201-XS.DWG
LAYOUT NAME - 116-ALI_STH 180

PLOT DATE : 7/31/2025 8:13 AM PLOT BY : AARON SARAUER PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

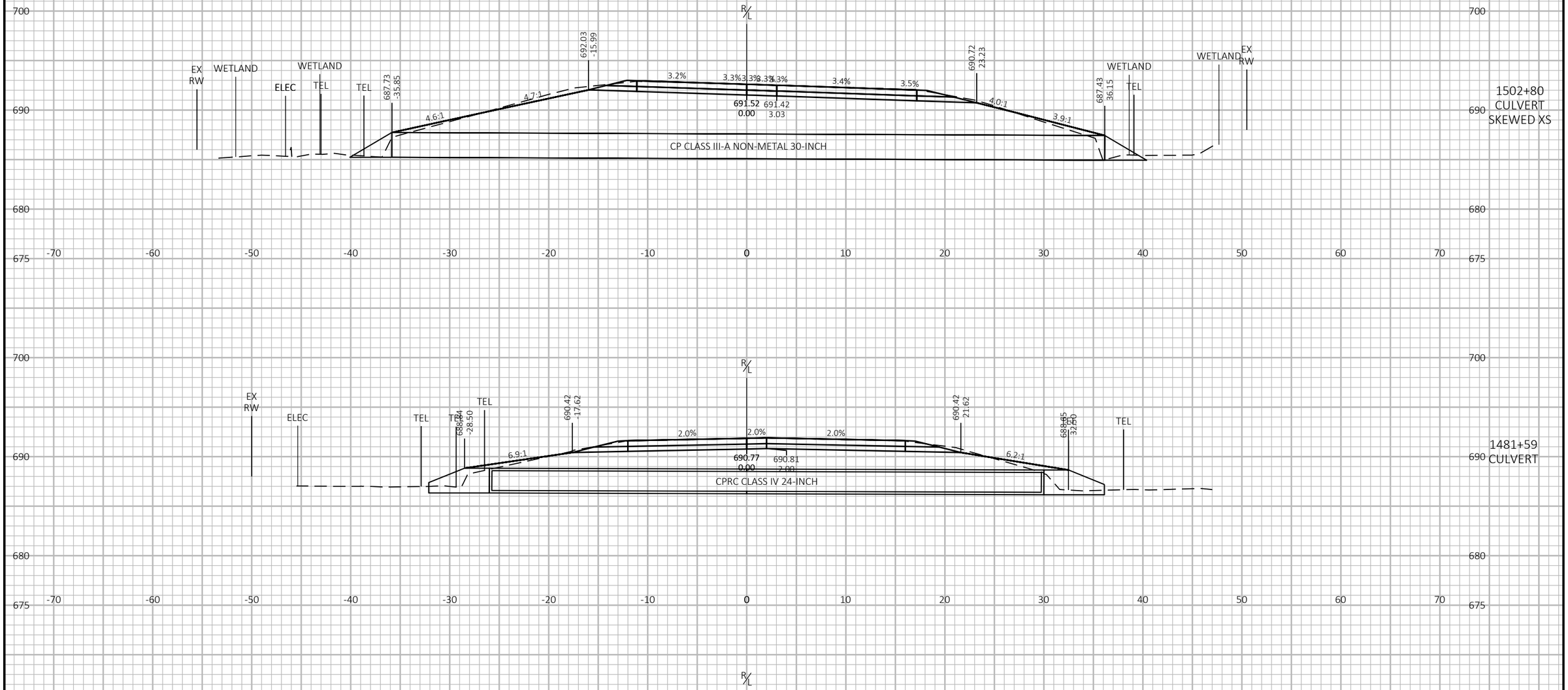
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PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	CROSS SECTIONS: STH 180	SHEET 195	E

FILE NAME : S:\CURRPROJ\MARINETTE COUNTY\STH 180\CIVIL3D\96701600\SHEETSPLAN\96701671-090201-XS.DWG
LAYOUT NAME - 117-ALI_STH 180

PLOT DATE : 7/31/2025 8:13 AM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

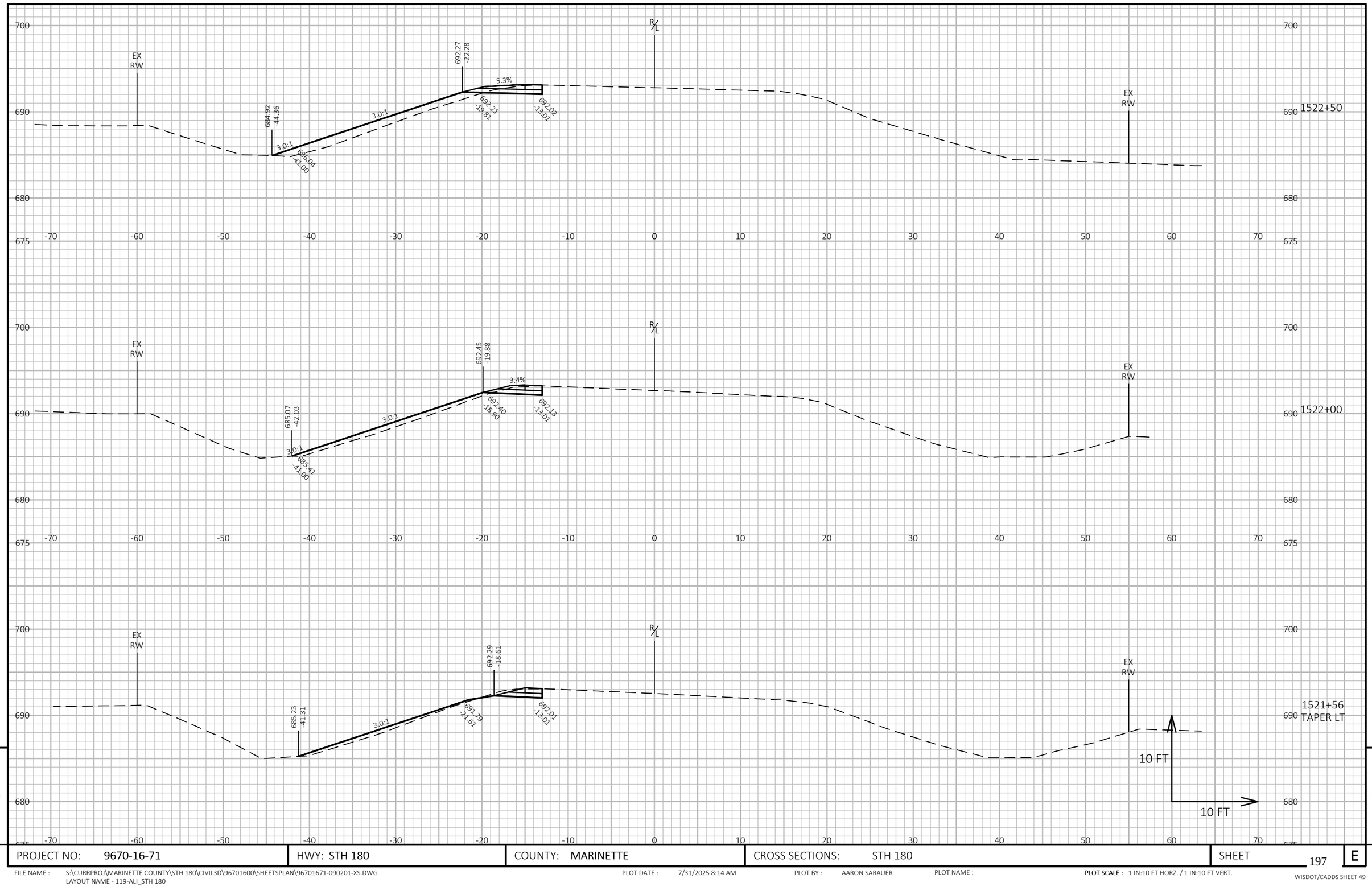


PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	CROSS SECTIONS: STH 180	SHEET 196	E

FILE NAME : S:\CURRPROJ\MARINETTE COUNTY\STH 180\CIVIL3D\96701600\SHEETSPLAN\96701671-090201-XS.DWG
LAYOUT NAME - 118-ALI_STH 180

PLOT DATE : 7/31/2025 8:14 AM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

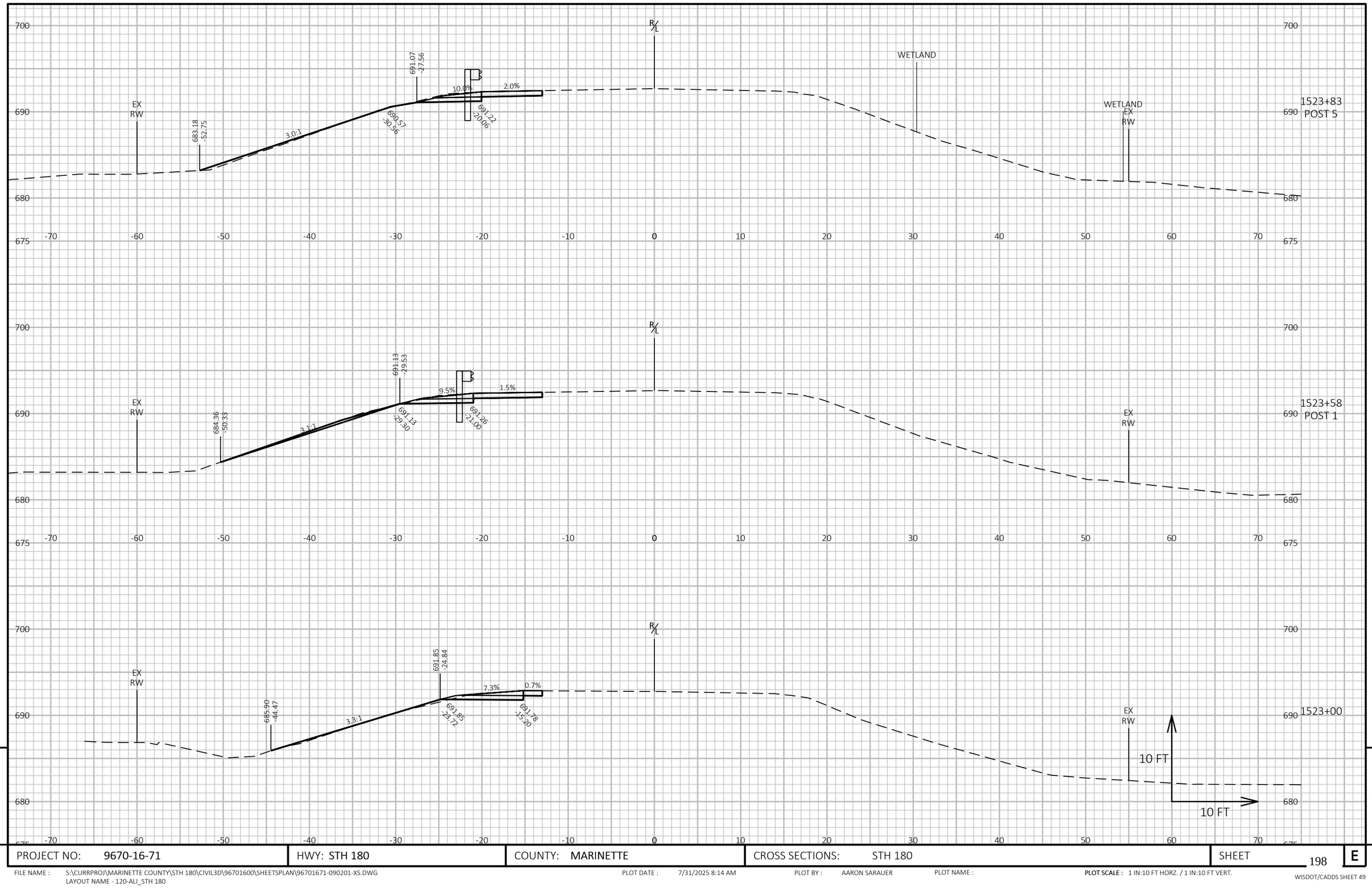
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PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	CROSS SECTIONS: STH 180	SHEET 197	E

FILE NAME : S:\CURRPROJ\MARINETTE COUNTY\STH 180\CIVIL3D\96701600\SHEETSPLAN\96701671-090201-XS.DWG
LAYOUT NAME - 119-ALI_STH 180

PLOT DATE : 7/31/2025 8:14 AM PLOT BY : AARON SARAUER PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

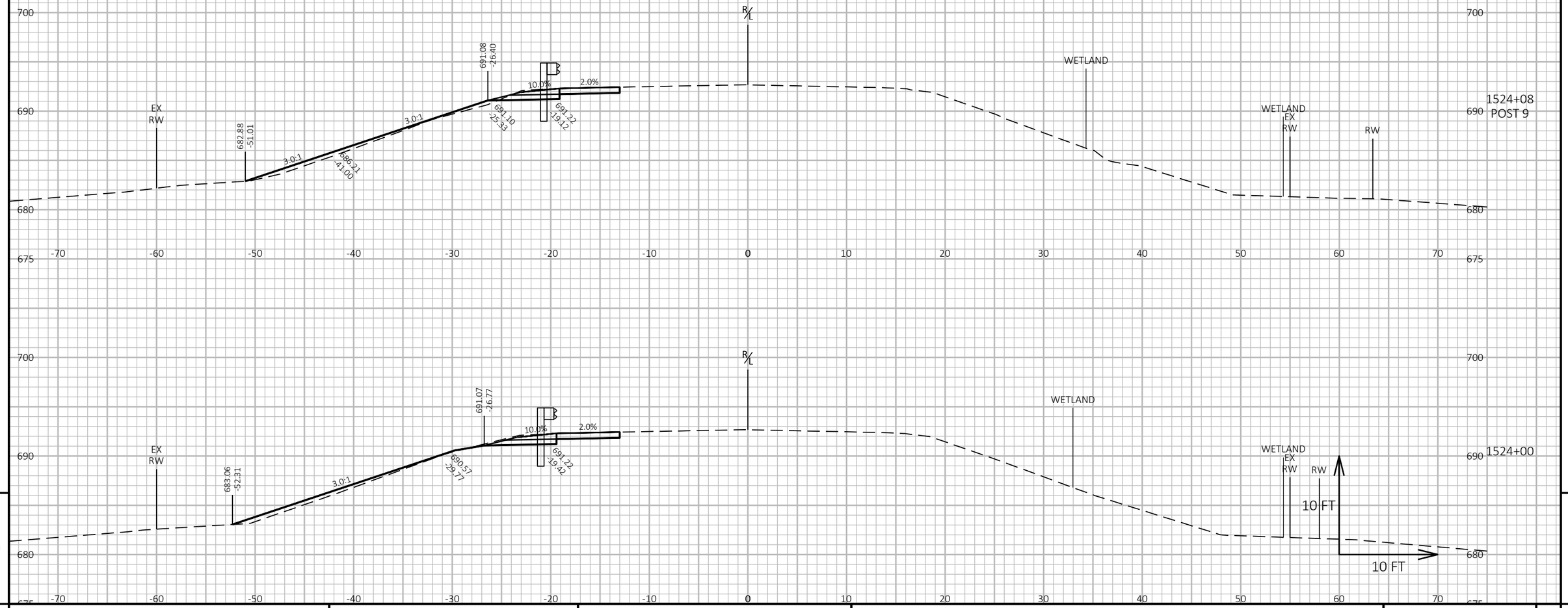
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PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	CROSS SECTIONS: STH 180	SHEET 198	E

FILE NAME : S:\CURRPROJ\MARINETTE COUNTY\STH 180\CIVIL3D\96701600\SHEETSPLAN\96701671-090201-XS.DWG
LAYOUT NAME - 120-ALI_STH 180

PLOT DATE : 7/31/2025 8:14 AM PLOT BY : AARON SARAUER PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

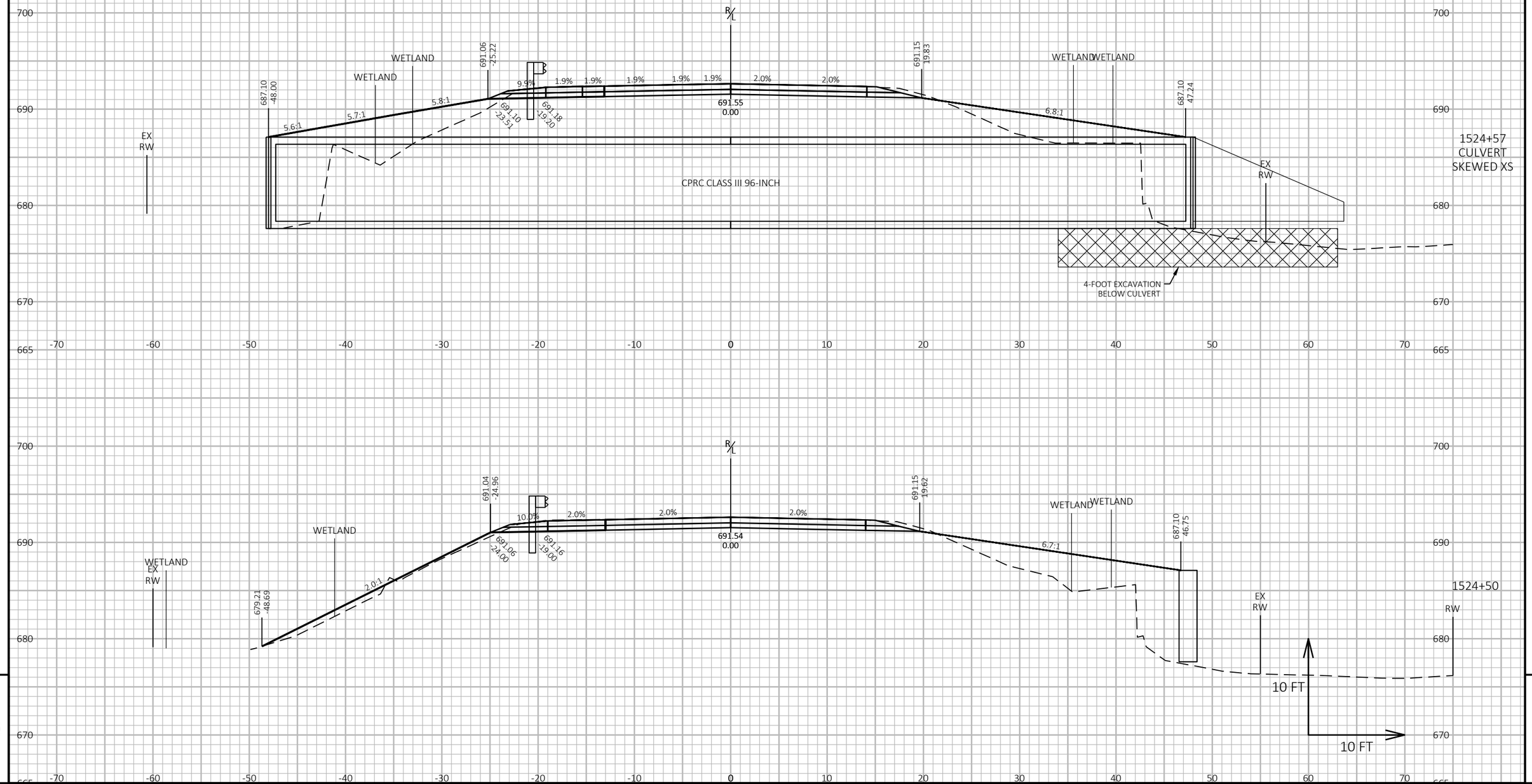
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PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	CROSS SECTIONS: STH 180	SHEET 199	E

FILE NAME : S:\CURRPROJ\MARINETTE COUNTY\STH 180\CIVIL3D\96701600\SHEETSPLAN\96701671-090201-XS.DWG
LAYOUT NAME - 121-ALI_STH 180

PLOT DATE : 7/31/2025 8:14 AM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

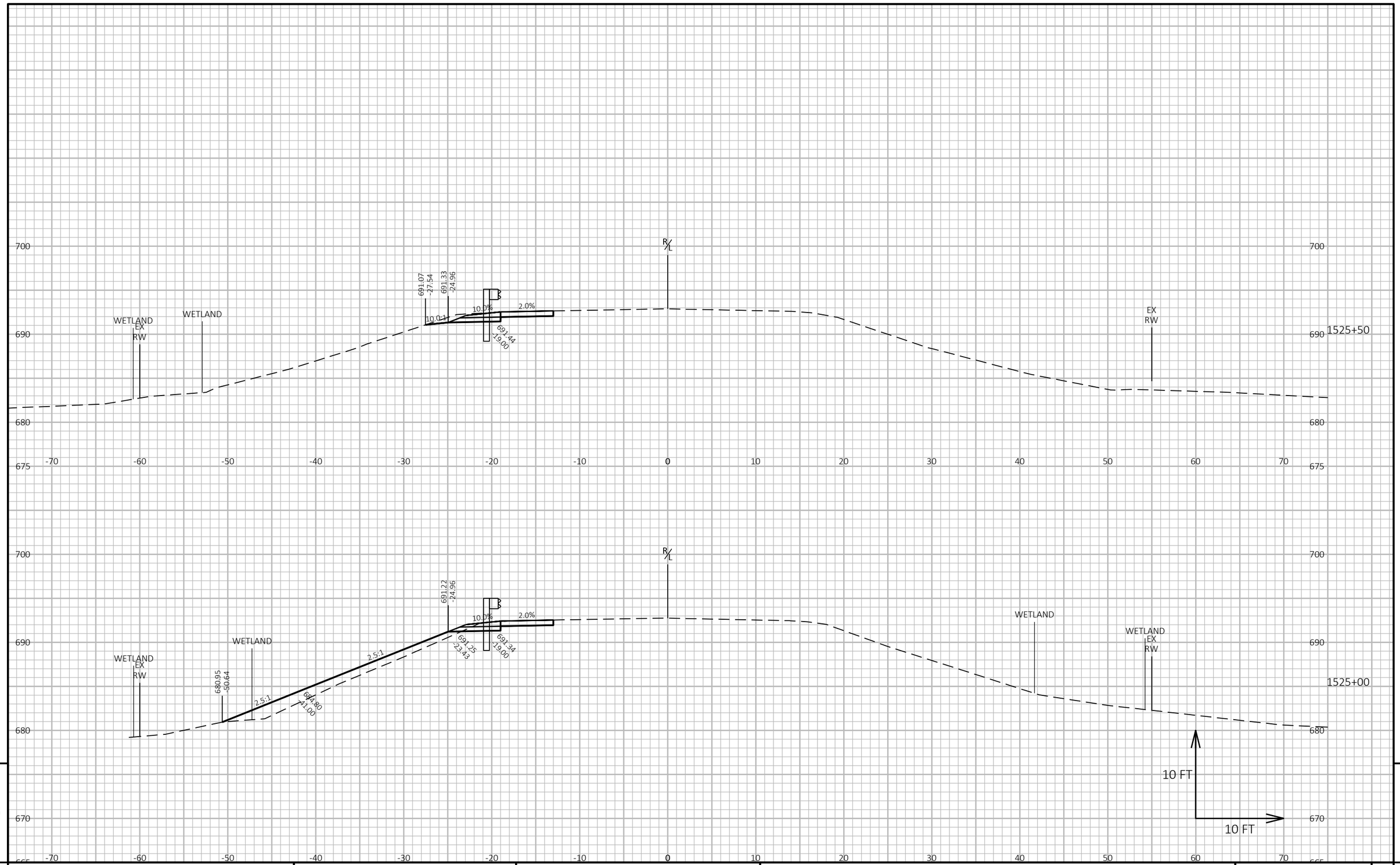


PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	CROSS SECTIONS: STH 180	SHEET 200 E

FILE NAME : S:\CURRPROJ\MARINETTE COUNTY\STH 180\CIVIL3D\96701600\SHEETSPLAN\96701671-090201-XS.DWG
LAYOUT NAME - 122-ALI_STH 180

PLOT DATE : 7/31/2025 8:14 AM PLOT BY : AARON SARAUER PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

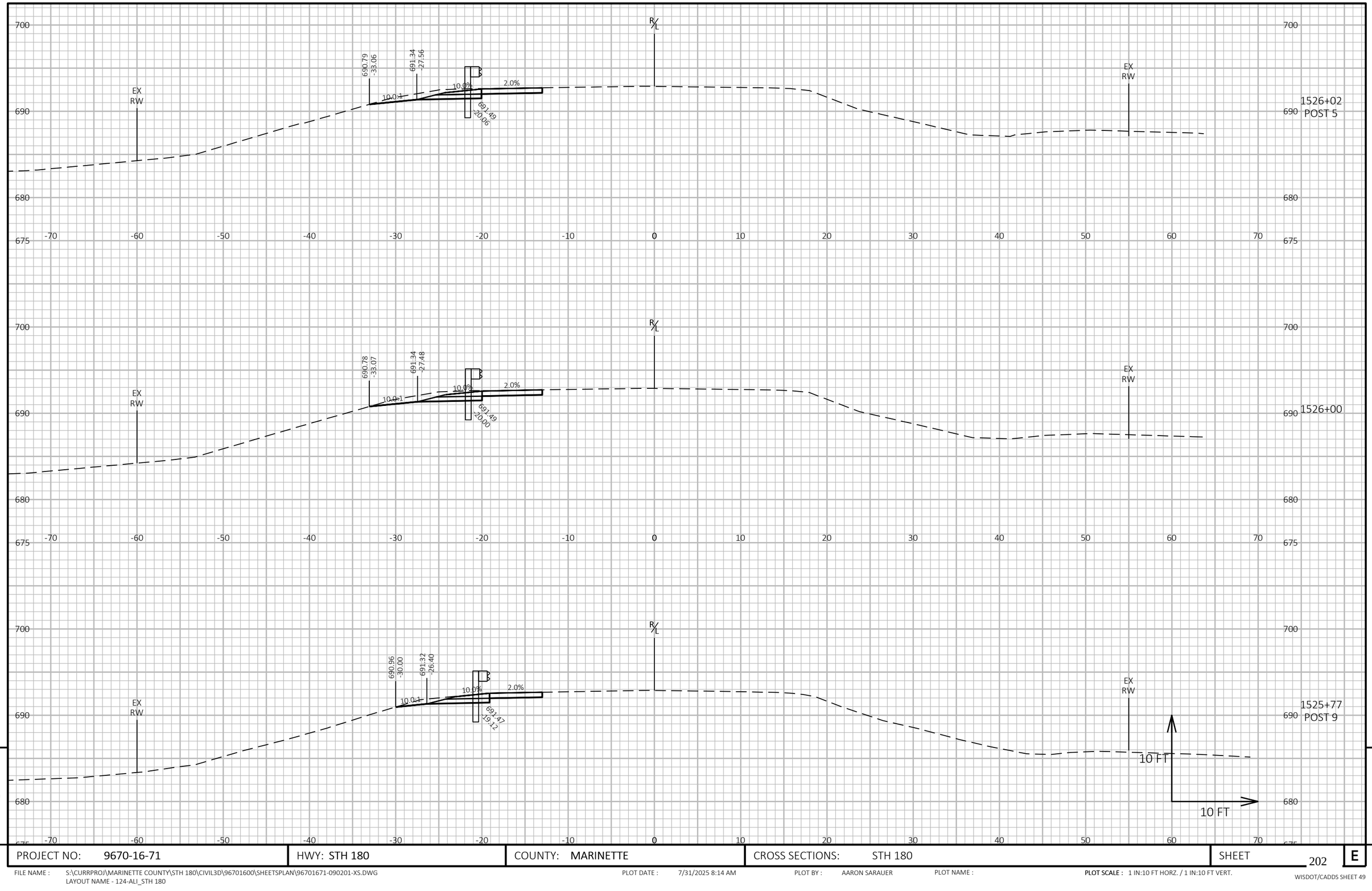
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PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	CROSS SECTIONS: STH 180	SHEET 201	E

FILE NAME : S:\CURRPROJ\MARINETTE COUNTY\STH 180\CIVIL3D\96701600\SHEETSPLAN\96701671-090201-XS.DWG
LAYOUT NAME - 123-ALI_STH 180

PLOT DATE : 7/31/2025 8:14 AM PLOT BY : AARON SARAUER PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	CROSS SECTIONS: STH 180	SHEET 202	E

FILE NAME : S:\CURRPROJ\MARINETTE COUNTY\STH 180\CIVIL3D\96701600\SHEETSPLAN\96701671-090201-XS.DWG
LAYOUT NAME - 124-ALI_STH 180

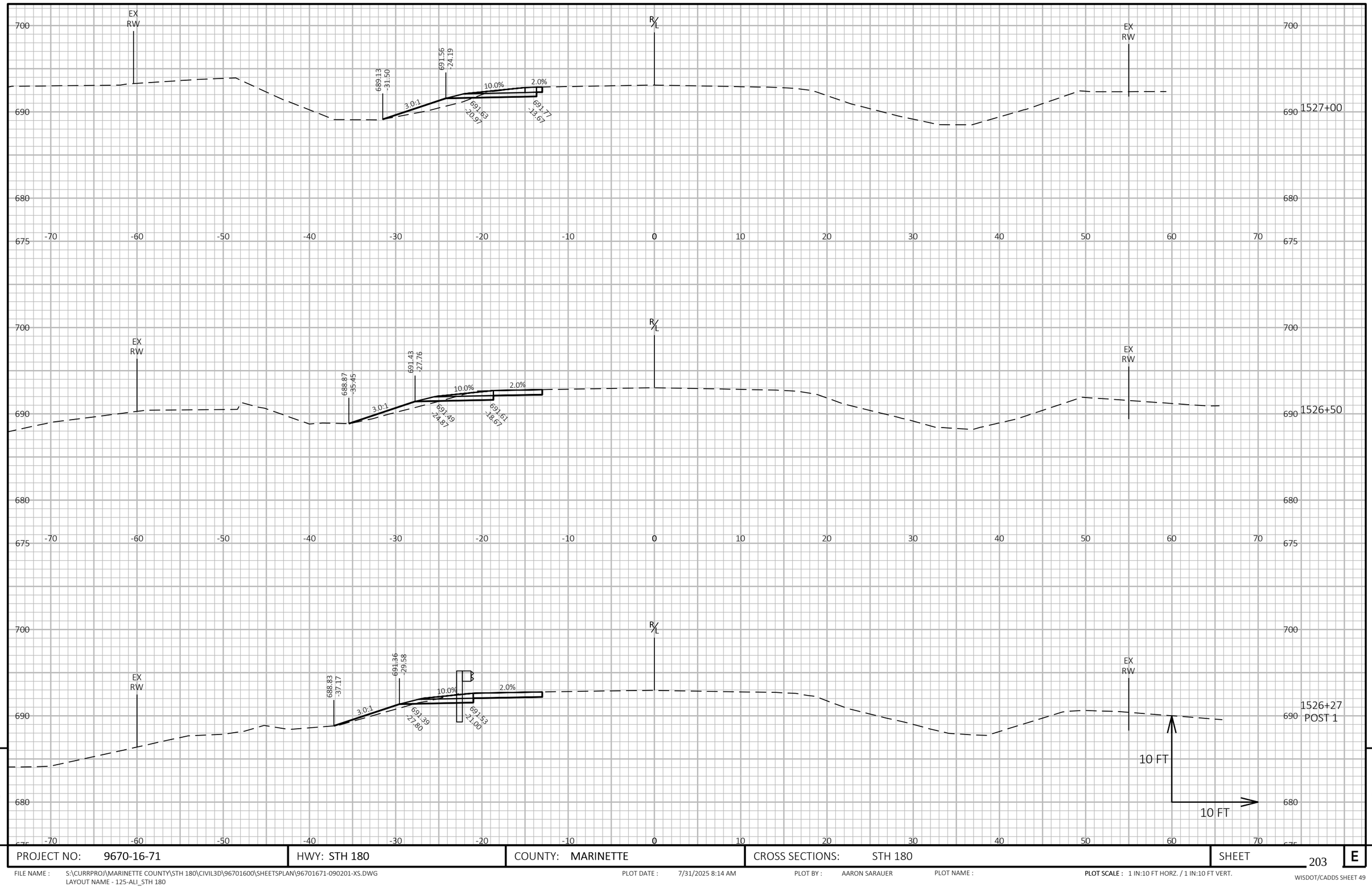
PLOT DATE : 7/31/2025 8:14 AM

PLOT BY : AARON SARAUER

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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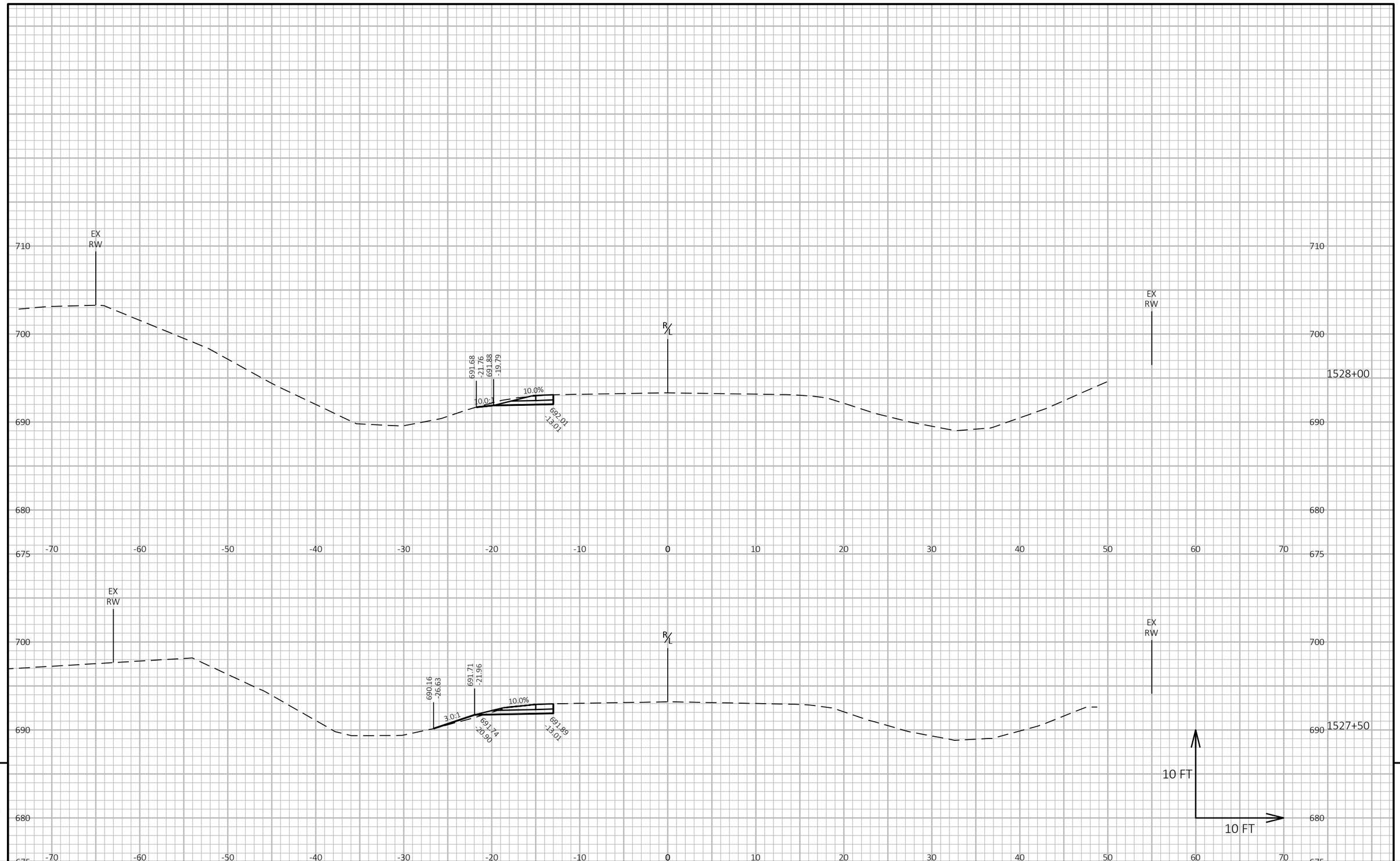
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PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	CROSS SECTIONS: STH 180	SHEET 203	E

FILE NAME : S:\CURRPROJ\MARINETTE COUNTY\STH 180\CIVIL3D\96701600\SHEETSPLAN\96701671-090201-XS.DWG
LAYOUT NAME - 125-ALI_STH 180

PLOT DATE : 7/31/2025 8:14 AM PLOT BY : AARON SARAUER PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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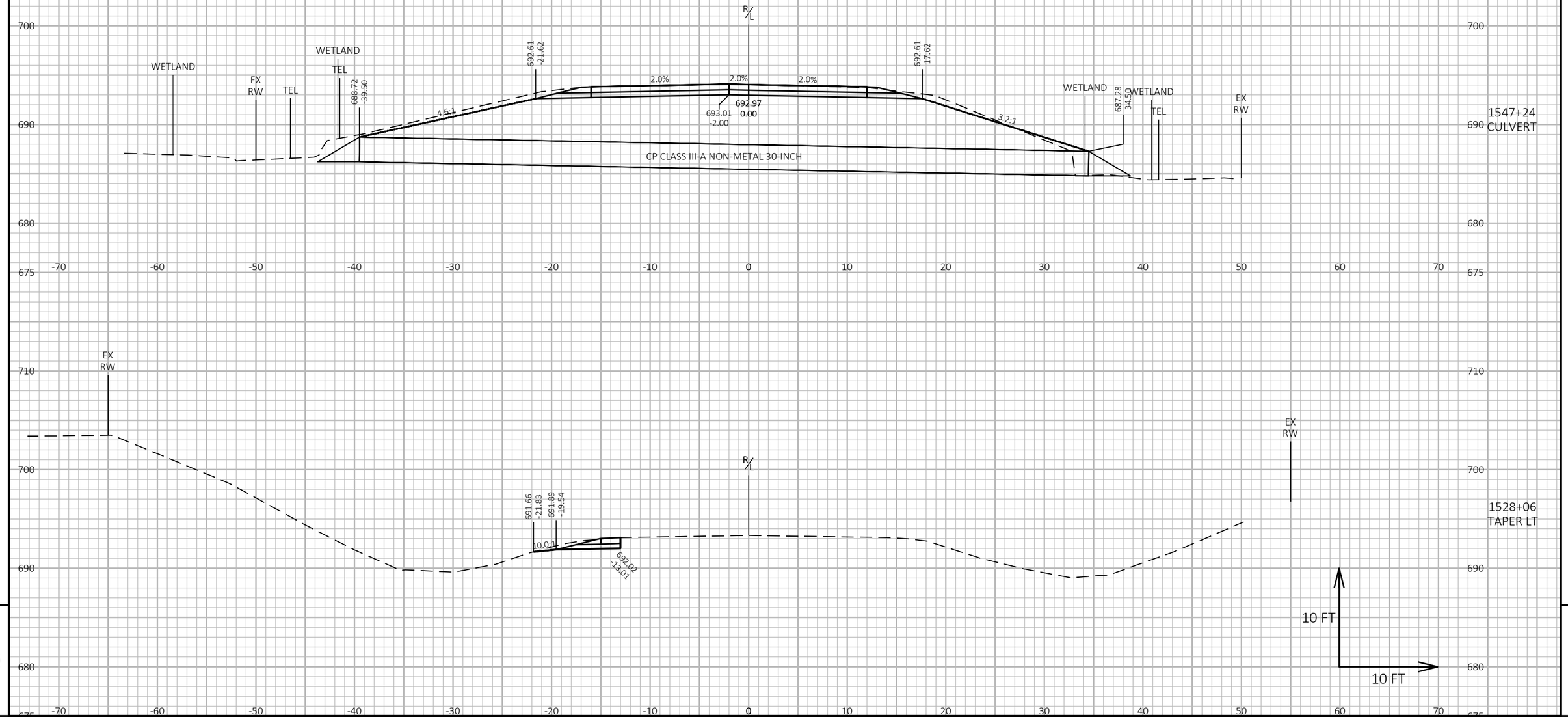
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PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	CROSS SECTIONS: STH 180	SHEET 204	E

FILE NAME : S:\CURRPROJ\MARINETTE COUNTY\STH 180\CIVIL3D\96701600\SHEETSPLAN\96701671-090201-XS.DWG
LAYOUT NAME - 126-ALI_STH 180

PLOT DATE : 7/31/2025 8:14 AM PLOT BY : AARON SARAUER PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

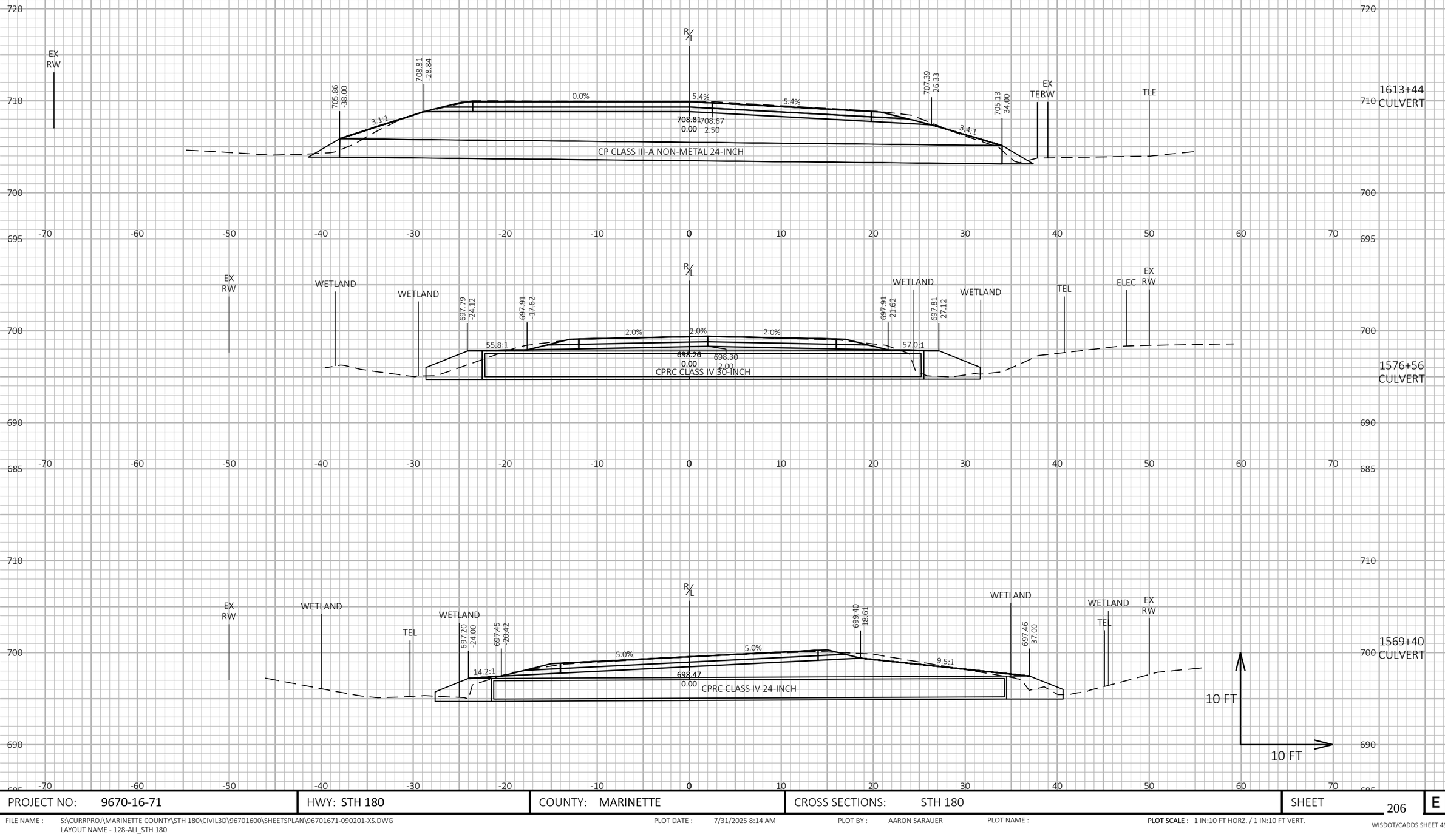


PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	CROSS SECTIONS: STH 180	SHEET 205	E

FILE NAME : S:\CURRPROJ\MARINETTE COUNTY\STH 180\CIVIL3D\96701600\SHEETSPLAN\96701671-090201-XS.DWG
LAYOUT NAME - 127-ALI_STH 180

PLOT DATE : 7/31/2025 8:14 AM PLOT BY : AARON SARAUER PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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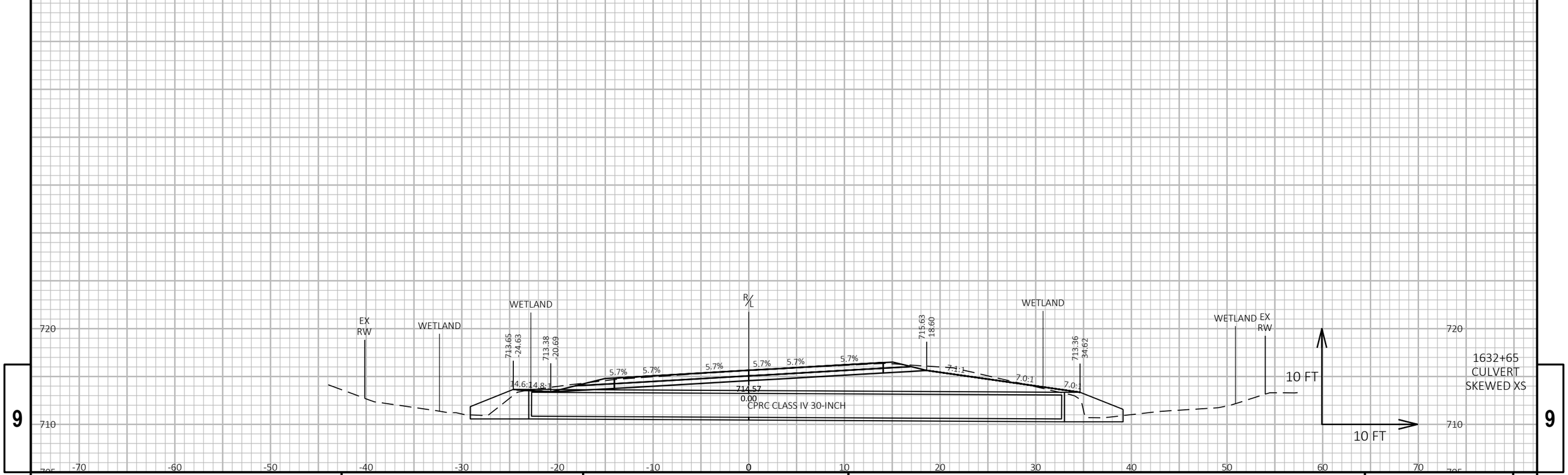
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PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	CROSS SECTIONS: STH 180	SHEET 206	E

FILE NAME : S:\CURRPROJ\MARINETTE COUNTY\STH 180\CIVIL3D\96701600\SHEETSPLAN\96701671-090201-XS.DWG
LAYOUT NAME - 128-ALI_STH 180

PLOT DATE : 7/31/2025 8:14 AM PLOT BY : AARON SARAUER PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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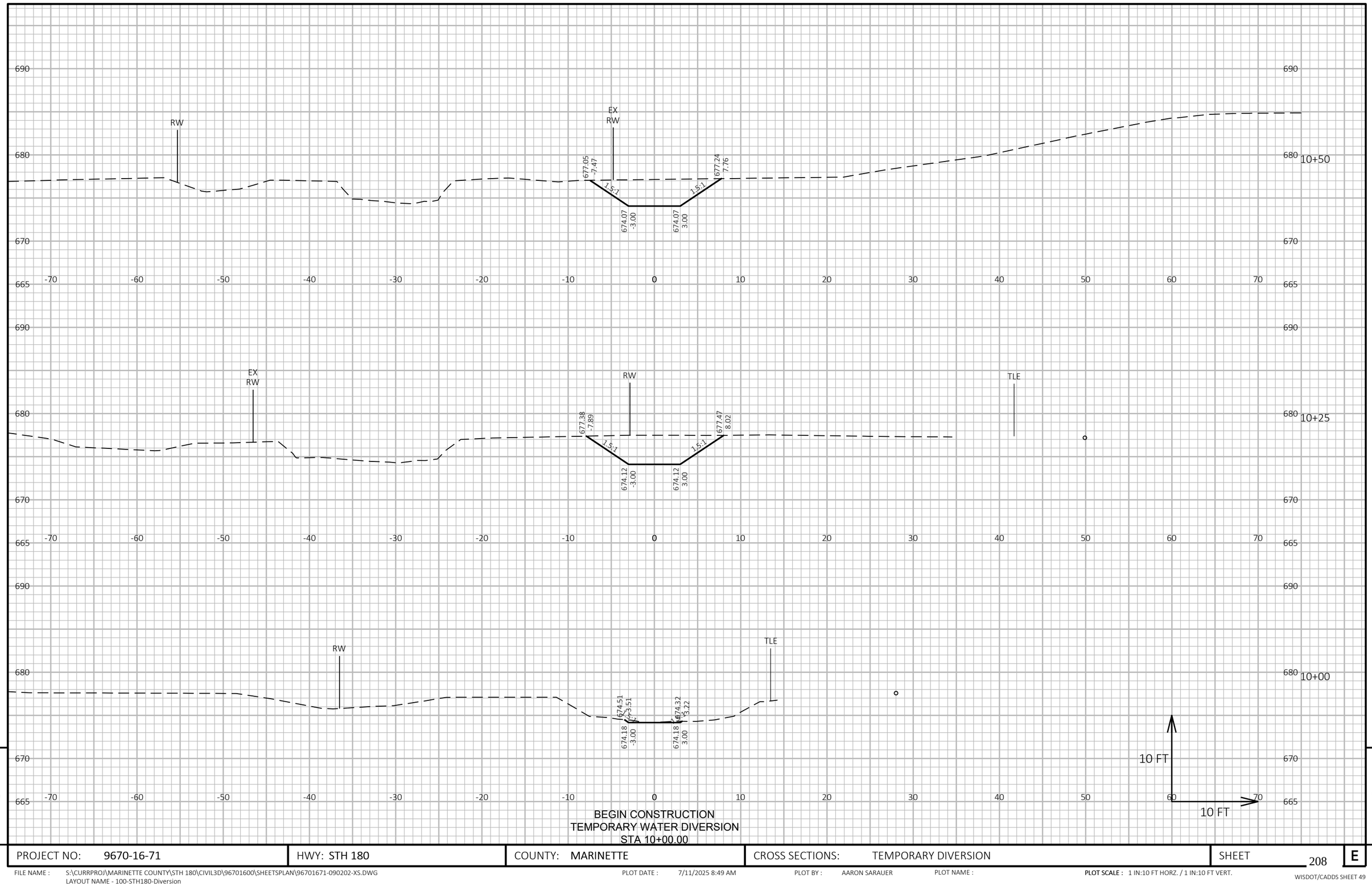
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PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	CROSS SECTIONS: STH 180	SHEET 207	E

FILE NAME : S:\CURRPROJ\MARINETTE COUNTY\STH 180\CIVIL3D\96701600\SHEETSPLAN\96701671-090201-XS.DWG
LAYOUT NAME - 129-ALI_STH 180

PLOT DATE : 7/31/2025 8:14 AM PLOT BY : AARON SARAUER PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



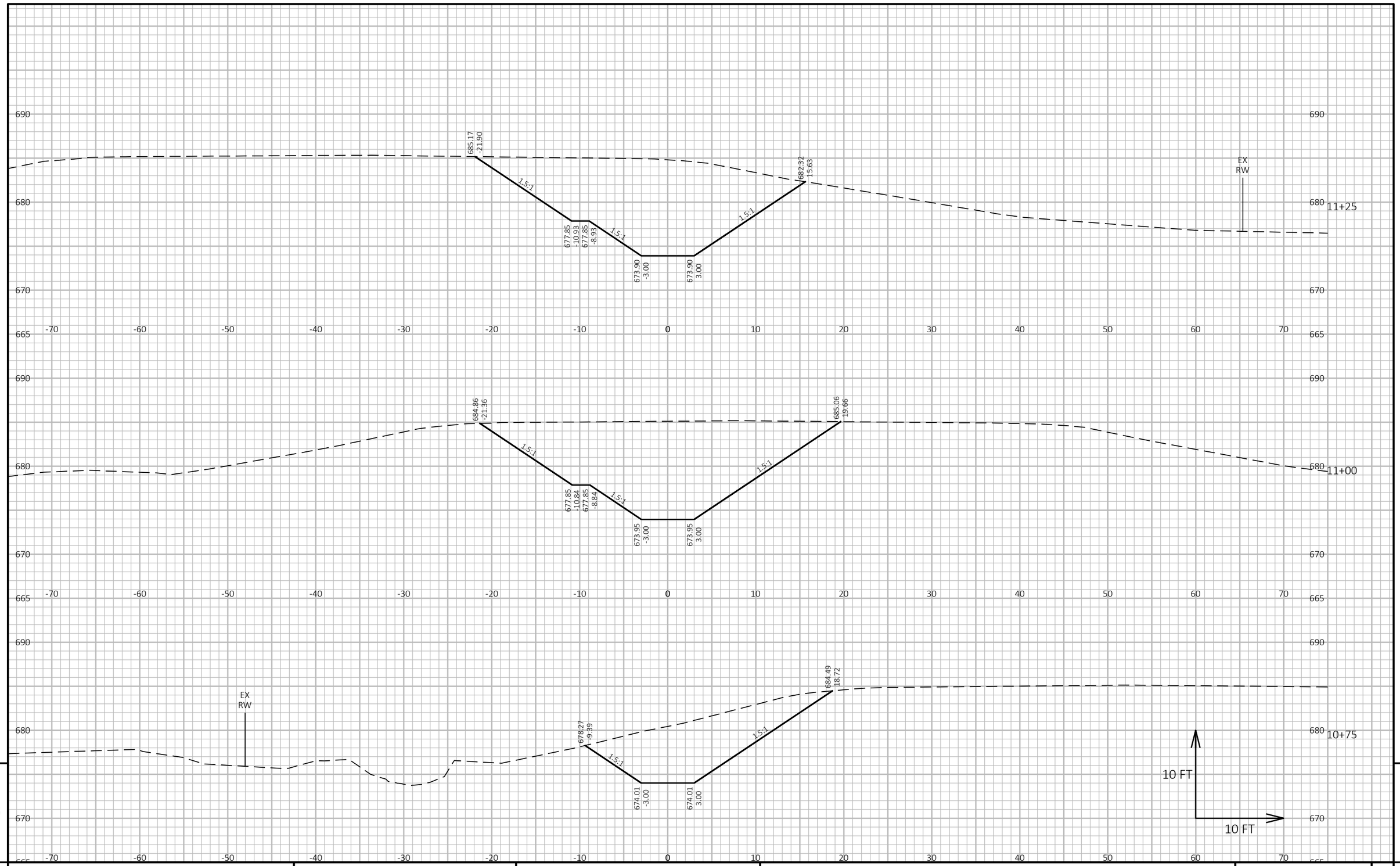
BEGIN CONSTRUCTION
TEMPORARY WATER DIVERSION
STA 10+00.00

PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	CROSS SECTIONS: TEMPORARY DIVERSION	SHEET 208	E

FILE NAME : S:\CURRPROJ\MARINETTE COUNTY\STH 180\CIVIL3D\96701600\SHEETSPLAN\96701671-090202-XS.DWG
LAYOUT NAME - 100-STH180-Diversion

PLOT DATE : 7/11/2025 8:49 AM PLOT BY : AARON SARAUER PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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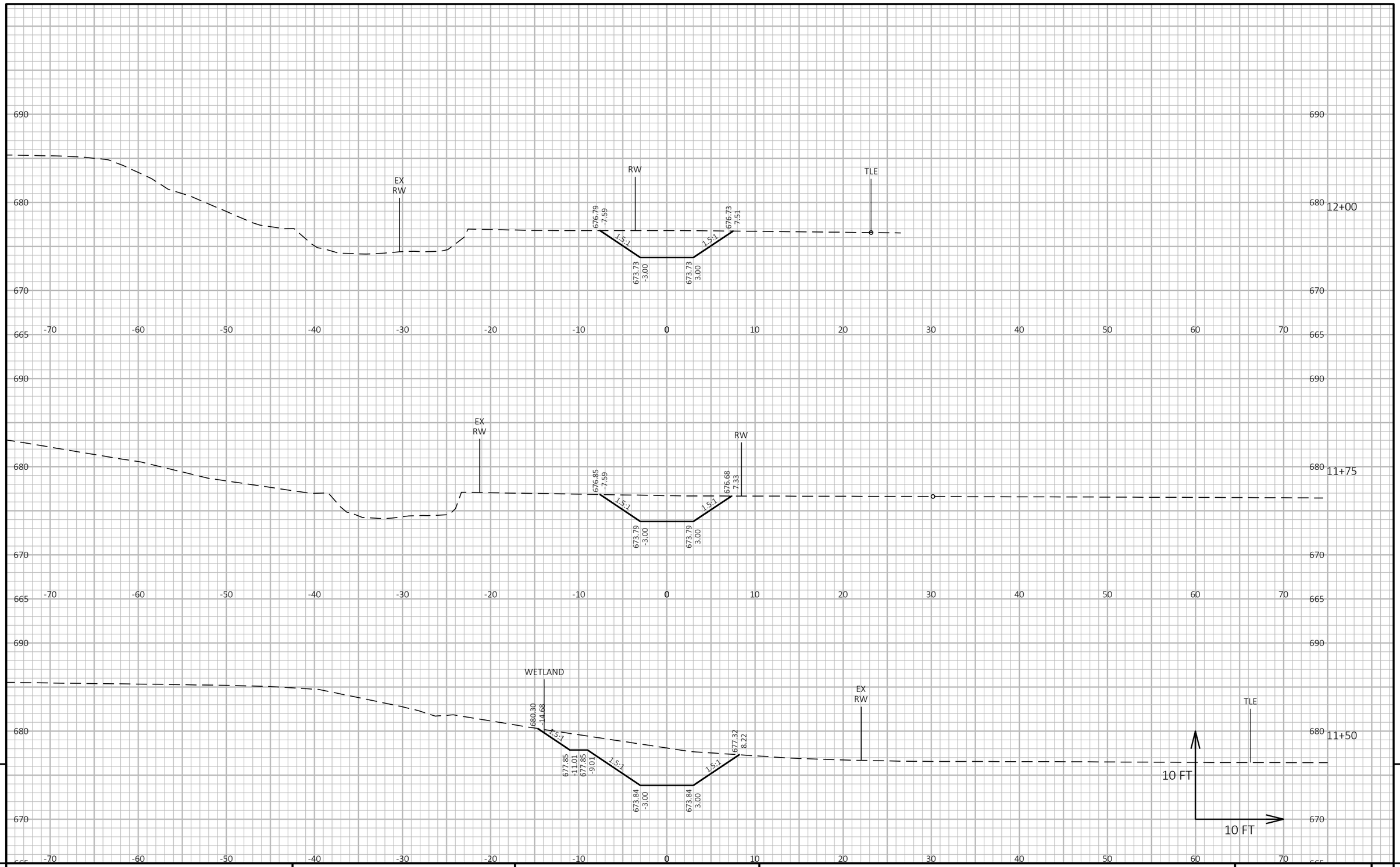
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PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	CROSS SECTIONS: TEMPORARY DIVERSION	SHEET 209	E

FILE NAME : S:\CURRPROJ\MARINETTE COUNTY\STH 180\CIVIL3D\96701600\SHEETSPLAN\96701671-090202-XS.DWG
LAYOUT NAME - 101-STH180-Diversion

PLOT DATE : 7/11/2025 8:49 AM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	CROSS SECTIONS: TEMPORARY DIVERSION	SHEET 210	E

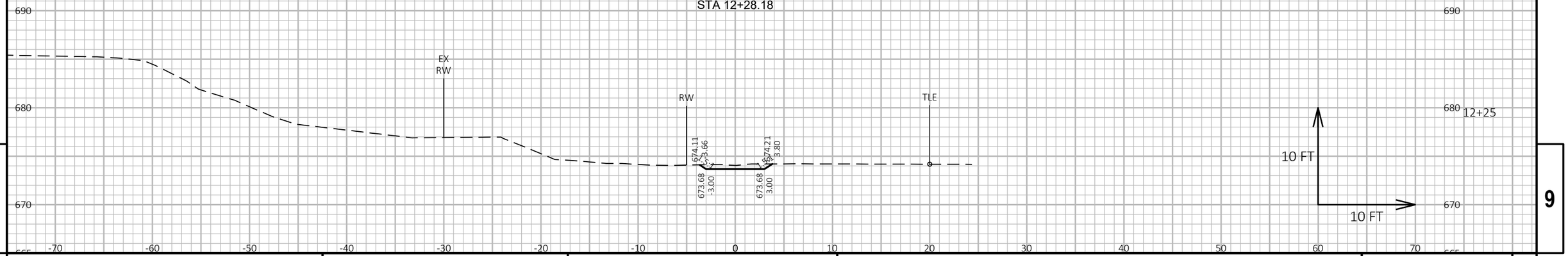
FILE NAME : S:\CURRPROJ\MARINETTE COUNTY\STH 180\CIVIL3D\96701600\SHEETSPLAN\96701671-090202-XS.DWG
LAYOUT NAME - 102-STH180-Diversion

PLOT DATE : 7/11/2025 8:49 AM PLOT BY : AARON SARAUER PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

END CONSTRUCTION
TEMPORARY WATER DIVERSION
STA 12+28.18



PROJECT NO: 9670-16-71	HWY: STH 180	COUNTY: MARINETTE	CROSS SECTIONS: TEMPORARY DIVERSION	SHEET 211 E

FILE NAME : S:\CURRPROJ\MARINETTE COUNTY\STH 180\CIVIL3D\96701600\SHEETSPLAN\96701671-090202-XS.DWG
LAYOUT NAME - 103-STH180-Diversion

PLOT DATE : 7/11/2025 8:49 AM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

http://www.dot.wisconsin.gov