GRE

NOVEMBER 2026

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 = 648

PROJECT ID: 1440-41-71 / 1440-41-72

WITH: N/A

COUNTY: SHEBOYGAN

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1440-41-71	WISC 2027033	1
1440-41-72	WISC 2027061	1

FOND DU LAC - SHEBOYGAN
CTH P - STH 32

STH 23

SHEBOYGAN COUNTY

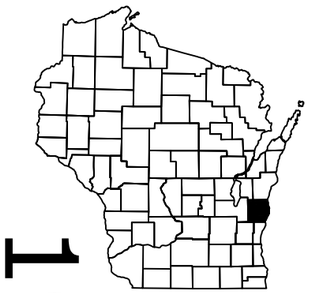
STATE PROJECT NUMBER
1440-41-71

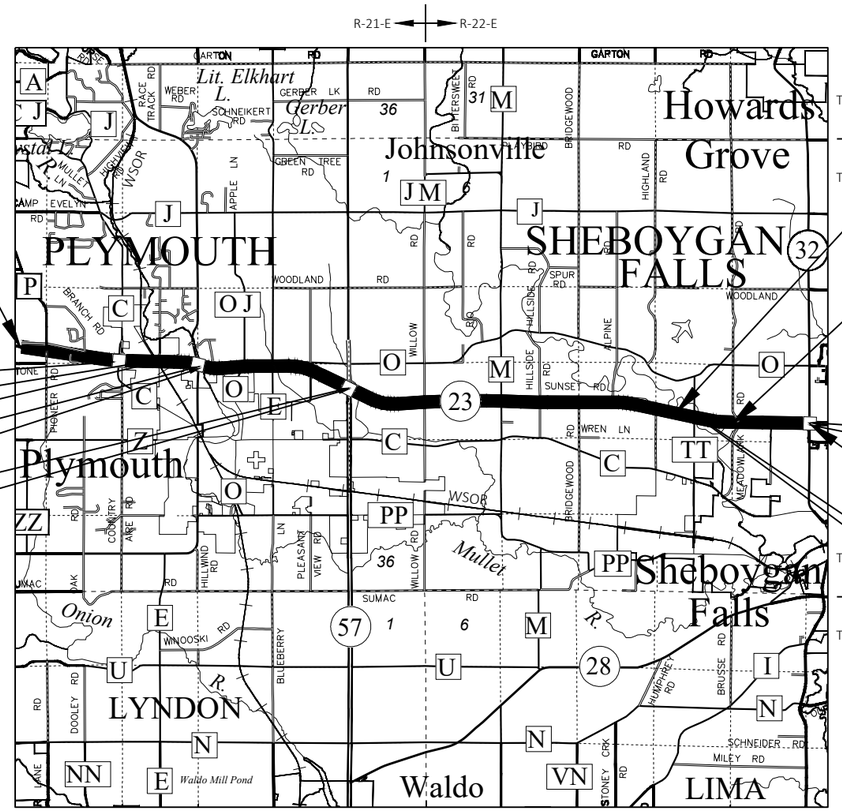
FOND DU LAC - SHEBOYGAN
CTH TT INTERSECTION

STH 23

SHEBOYGAN COUNTY

STATE PROJECT NUMBER
1440-41-72





LAYOUT

SCALE 0 2 MI

1440-41-71 NET LENGTH OF CENTERLINE = 10.665 MILES
1440-41-72 NET LENGTH OF CENTERLINE = 0.814 MILES

EXCEPTION TO NET CENTERLINE LENGTH

STH 23 WB
B-59-0180 STA 1218+96.92 TO STA 1221+78.28
B-59-0309 STA 1248+17.93 TO STA 1252+15.41
B-59-0123 STA 1606+37.67 TO STA 1608+30.33
B-59-0084 STA 1681+68.37 TO STA 1683+37.03

STH 23 EB
B-59-0097 STA 1219+39.01 TO STA 1222+15.99
B-59-0092 STA 1356+65.22 TO STA 1359+82.85
B-59-0088 STA 1606+37.67 TO STA 1608+30.33
B-59-0083 STA 1681+68.37 TO STA 1683+37.03

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), SHEBOYGAN COUNTY, NAD83 (2011), IN U.S. SURVEY FEET. POSITIONS SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES ARE THE SAME AS GROUND DISTANCES. ELEVATIONS ARE REFERENCED TO NAVD 88 (2012). GPS DERIVED ELEVATIONS ARE BASED ON GEOID 12A.

DESIGN DESIGNATION

A.A.D.T.	2027	=	15,230
A.A.D.T.	2047	=	16,280
D.H.V.		=	1,921
D.D.		=	60/40
T.		=	14.6%
DESIGN SPEED		=	70 MPH
ESALS		=	4,300,000

CONVENTIONAL SYMBOLS

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

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

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

ORIGINAL PLANS PREPARED BY

AYRES

WISCONSIN
RYAN D. SCHAITEL
44367
GREEN BAY, WI
PROFESSIONAL ENGINEER

7-29-2026
(Date)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	NE REGION
Designer	AYRES
Project Manager	SARAH ERICSON
Regional Supervisor	SCOTT EBEL

APPROVED FOR THE DEPARTMENT

DATE: 7/29/2026 (Signature)

E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\010101-TI.DWG PLOT DATE : 9/23/2026 2:33 PM PLOT BY : HOSPER, JAN PLOT NAME :

2

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.

RIGHT OF WAY INFORMATION SHOWN ON THE PLANS OUTSIDE OF PLAT AREA IS APPROXIMATE.

BEARINGS SHOWN ARE BASED ON THE TRUE BEARINGS.

CURVE DATA IS BASED ON THE ARC DEFINITION.

RADIUS DIMENSIONS FOR THE CURB AND GUTTER ARE TO THE FLANGE LINE UNLESS OTHERWISE NOTED.

CURB AND GUTTER PLAN GRADES ARE AT THE FLANGE LINE UNLESS OTHERWISE NOTED.

WHEN THE QUANTITY OF THE ITEMS OF BASE AGGREGATE, SUBBASE OR HMA PAVEMENT IS MEASURED FOR PAYMENT BY THE TON OR CUBIC YARD, THE DEPTH OR THICKNESS OF THE LAYERS SHOWN ON THE PLAN IS APPROXIMATE AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER.

THE PROPOSED SHOULDER WIDTH SHOWN IN THE TYPICAL SECTIONS ARE MINIMUM WIDTH. PERPETUATE EXISTING SHOULDERS THAT ARE WIDER THAN WHAT IS SHOWN IN THE TYPICAL SECTIONS.

EROSION CONTROL FEATURES AS SHOWN IN THE PLANS ARE AT APPROXIMATE LOCATIONS. EXACT LOCATIONS WILL BE DETERMINED BY THE CONTRACTOR'S EROSION CONTROL IMPLEMENTATION PLAN (ECIP) AND APPROVED BY THE ENGINEER. MAINTAIN EROSION CONTROL MEASURES UNTIL SUCH A TIME AS THE ENGINEER DETERMINES THE MEASURES ARE NO LONGER NECESSARY.

REMOVAL OF ANY MESH OR REINFORCEMENT FOUND IN CONCRETE PAVEMENT SHALL BE INCIDENTAL TO THE REMOVING CONCRETE PAVEMENT ITEM.

EXCAVATION BELOW SUBGRADE (EBS) WILL BE MEASURED AND PAID FOR AS EXCAVATION COMMON. THE LOCATION FOR EBS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.

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

STATIONING, DISTANCES, AND OFFSETS FOR SIGNS AND TRAFFIC CONTROL DEVICES SHOWN IN THE PLANS ARE APPROXIMATE. EXACT LOCATIONS ARE DETERMINED BY THE ENGINEER.

CONTACTS

WISCONSIN DNR LIAISON

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SHEBOYGAN COUNTY HIGHWAY COMMISSIONER

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PLYMOUTH, WI 53073
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NE REGION DESIGN PROJECT MANAGER

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DESIGN PROJECT LEADER

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UTILITY CONTACTS

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cb1461@att.com

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SHEBOYGAN, WI 53081
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john.balde@spectrum.com

MIKE KITZEROW
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319 HIGHLAND DR
KOHLER, WI 53044
(920) 459-3881
mkitzerow@kohlervillage.org

WISCONSIN PUBLIC SERVICE UTILITY COORDINATOR
WISCONSIN PUBLIC SERVICE CORPORATION - GAS/PETROLEUM
P.O. BOX 19001
GREEN BAY, WI 54307-9001
(920) 433-1513
utilitiesrelocation@wisconsinpublicservice.com

RUNOFF COEFFICIENT TABLE

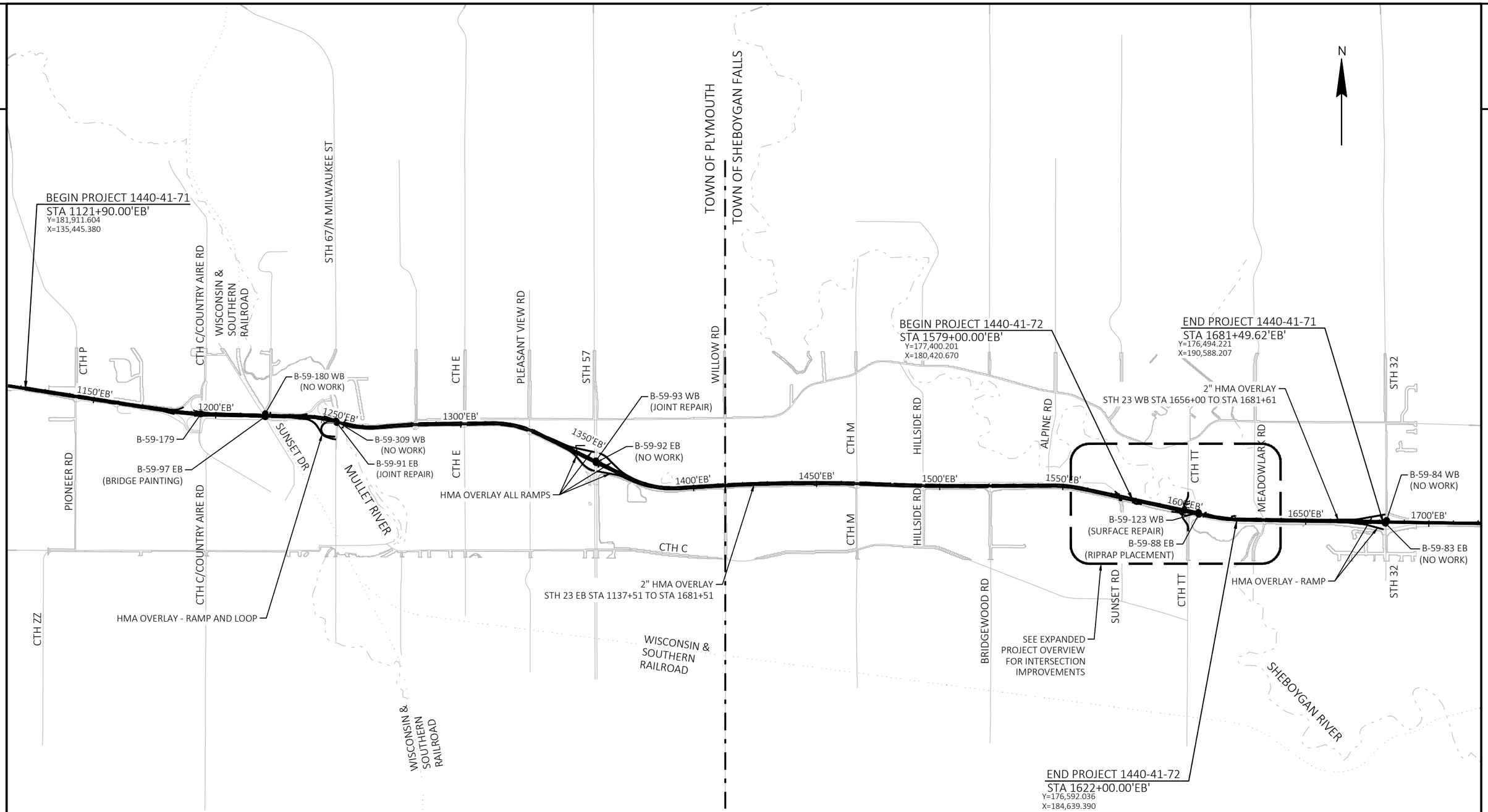
	HYDROLOGIC SOIL GROUP											
	A			B			C			D		
	SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)		
LAND USE:	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER
ROW CROPS:	.08 .22	.16 .30	.22 .38	.12 .26	.20 .34	.27 .44	.15 .30	.24 .37	.33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

TOTAL PROJECT AREA = 478 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 17.20 ACRES

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

ORDER OF SECTION 2 DETAIL SHEETS

GENERAL NOTES
PROJECT OVERVIEW
TYPICAL SECTIONS
CONSTRUCTION DETAILS
REMOVAL DETAILS
PLAN DETAILS
PLAN GRADES
PLAN OFFSETS
TRAIL RAMP DETAILS
EROSION CONTROL
STORM SEWER
LIGHTING PLAN
PAVEMENT MARKING
TRAFFIC CONTROL
DETOUR SIGNING DETAILS
ALIGNMENT DIAGRAM



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PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	PROJECT OVERVIEW	SHEET 3	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\020201-PO.DWG
LAYOUT NAME - 020201-po
PLOT DATE : 9/23/2026 2:34 PM
PLOT BY : HOSPER, JAN
PLOT NAME :
PLOT SCALE : 1 IN:3800 FT
WISDOT/CADDS SHEET 42

2

CTH O

N

CTH TT

MEADOWLARK RD

SUNSET RD

BEGIN PROJECT 1440-41-72
STA 1579+00.00'EB'
Y=177,400.201
X=180,420.670

1560WB
1560EB
1570WB
1570EB
1580WB
1580EB
1590WB
1590EB
1600WB
1600EB
1610WB
1610EB
1620WB
1620EB
1630WB
1630EB

2" HMA OVERLAY
STH 23 EB STA 1137+51 TO STA 1681+51

SEE PLAN DETAILS
FOR SUNSET ROAD
INTERSECTION
IMPROVEMENTS

SEE PLAN DETAILS FOR
CTH TT WEST U-TURN

SEE PLAN DETAILS FOR
CTH TT INTERSECTION
IMPROVEMENTS

B-59-123 WB
(SURFACE REPAIR)

B-59-88 EB
(RIPRAP PLACEMENT)

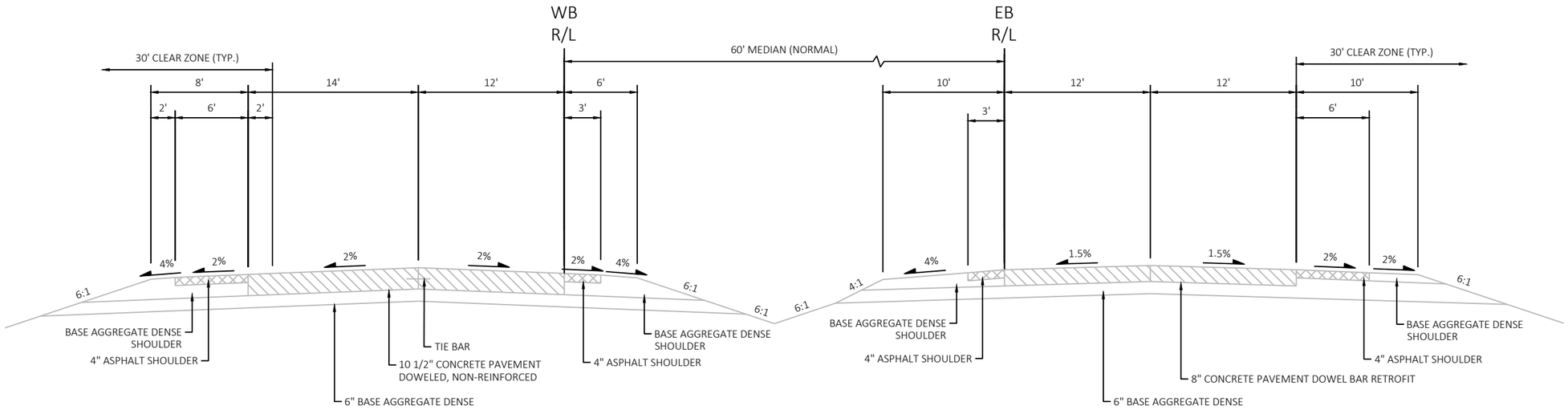
SEE PLAN DETAILS FOR
CTH TT EAST U-TURN

END PROJECT 1440-41-71
STA 1622+00.00'EB'
Y=176,592.036
X=184,639.390

SHEBOYGAN RIVER

PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	PROJECT OVERVIEW	SHEET 4	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\020202-PO.DWG
LAYOUT NAME - 020202-po
PLOT DATE : 9/23/2026 2:34 PM
PLOT BY : HOSPER, JAN
PLOT NAME :
PLOT SCALE : 1 IN:500 FT
WISDOT/CADDS SHEET 42

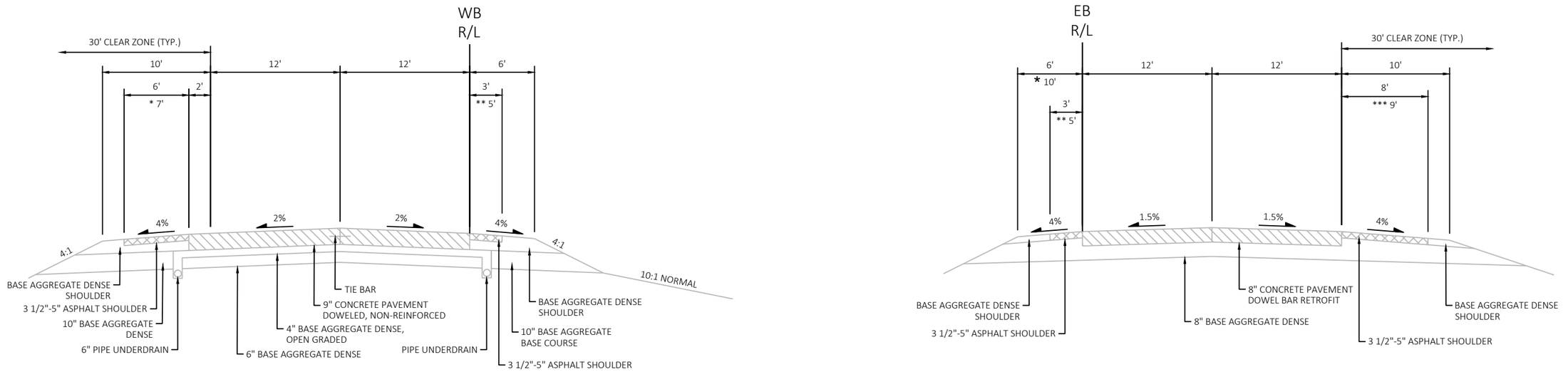


WESTBOUND LANES

EASTBOUND LANES

EXISTING TYPICAL SECTION STH 23

STA 1121+90 TO STA 1279+53.32



EXISTING TYPICAL SECTION STH 23 - WESTBOUND

STA 1279+53.32 TO STA 1320+50
* STA 1307+47 TO STA 1320+50
** STA 1307+37 TO STA 1320+50

EXISTING TYPICAL SECTION STH 23 - EASTBOUND

* STA 1279+53.32 TO STA 1356+00
STA 1361+00 TO STA 1653+26
** STA 1304+52 TO STA 1322+81
*** STA 1303+01 TO STA 1323+16

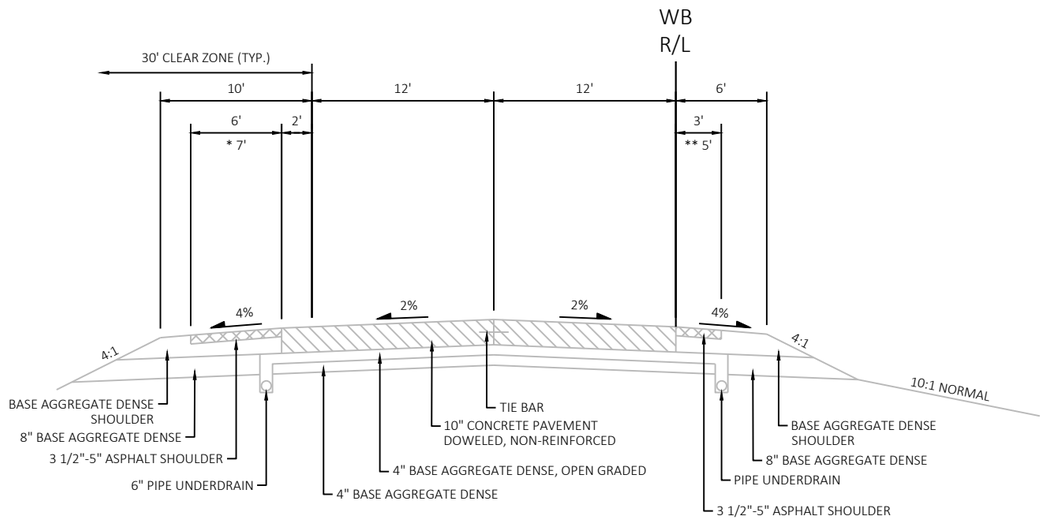
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	TYPICAL SECTIONS	SHEET 5	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\020301-TS.DWG
LAYOUT NAME - 020301-ts

PLOT DATE : 9/23/2026 2:34 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1IN:10 FT

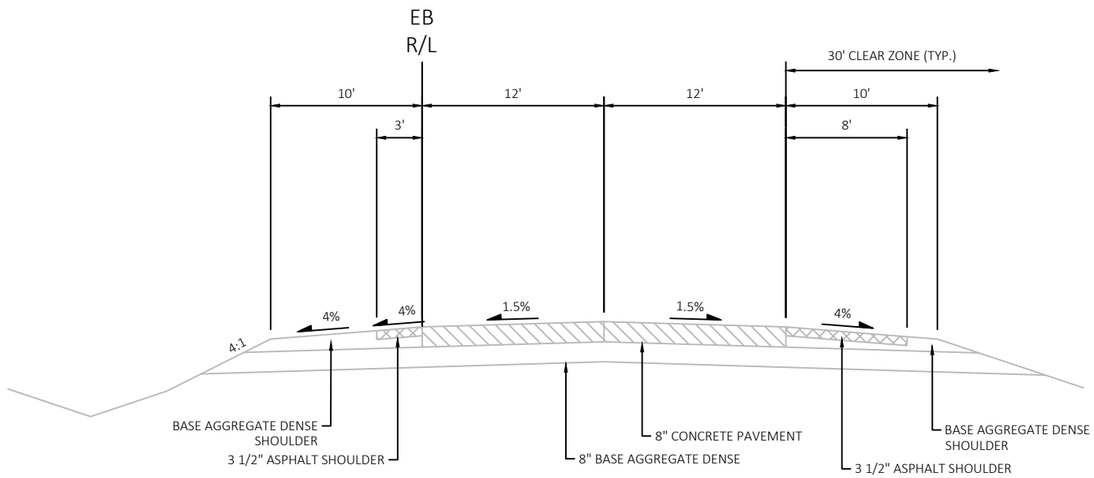
WISDOT/CADDS SHEET 42

2



EXISTING TYPICAL SECTION STH 23 - WESTBOUND

STA 1320+50 TO STA 1656+00
* STA 1320+50 TO STA 1326+89
** STA 1320+50 TO STA 1326+08

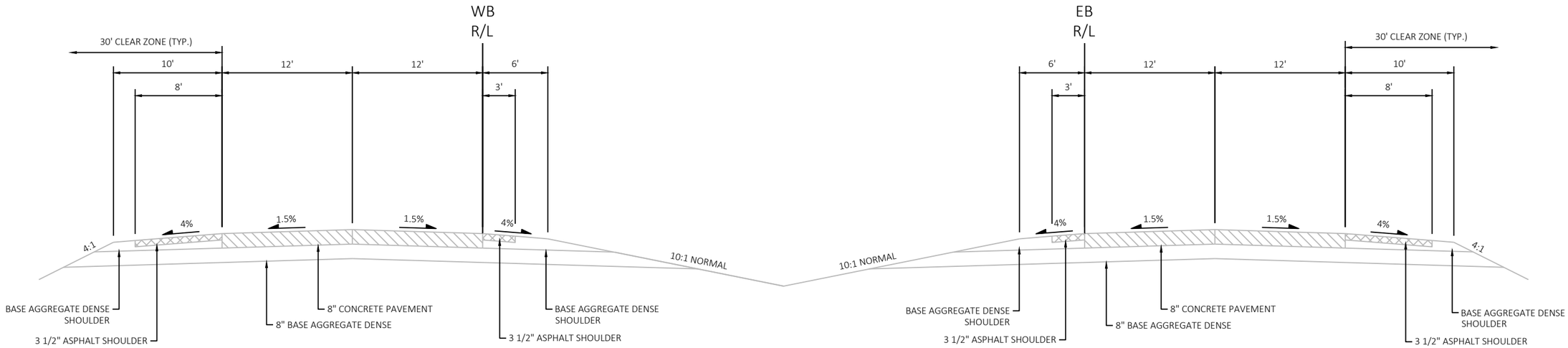


EXISTING TYPICAL SECTION STH 23 - EASTBOUND

STA 1356+00 TO STA 1361+00

PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	TYPICAL SECTIONS	SHEET 6	E

2



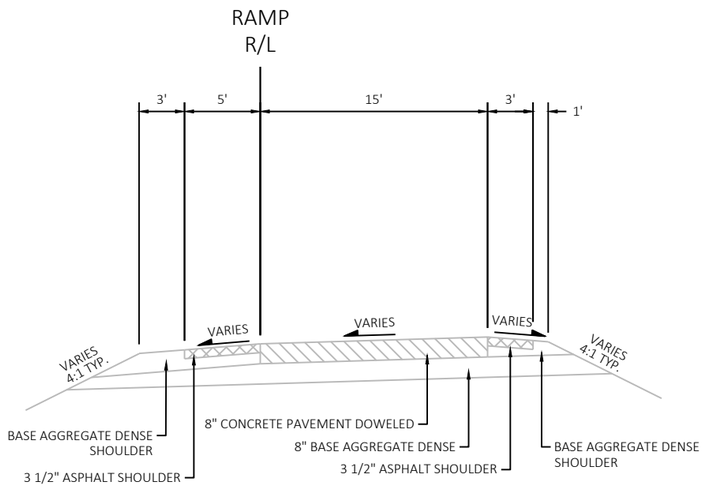
WESTBOUND LANES

EASTBOUND LANES

EXISTING TYPICAL SECTION STH 23

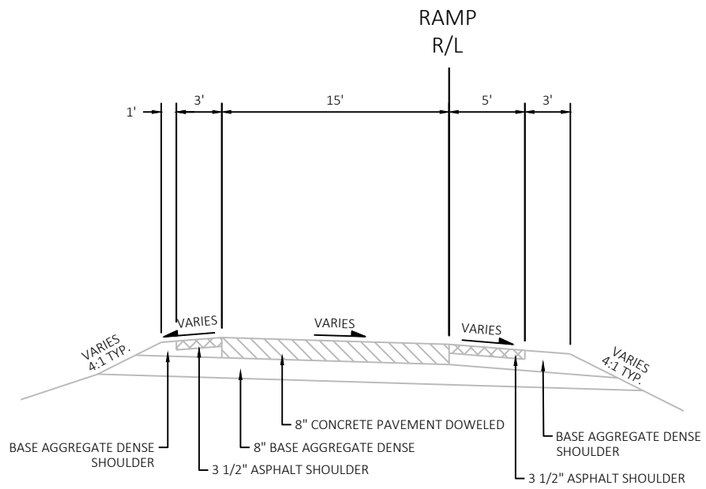
STA 1653+26 TO STA 1681+49.6 EB
STA 1656+00 TO STA 1681+46.7 WB

PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	TYPICAL SECTIONS	SHEET 7	E



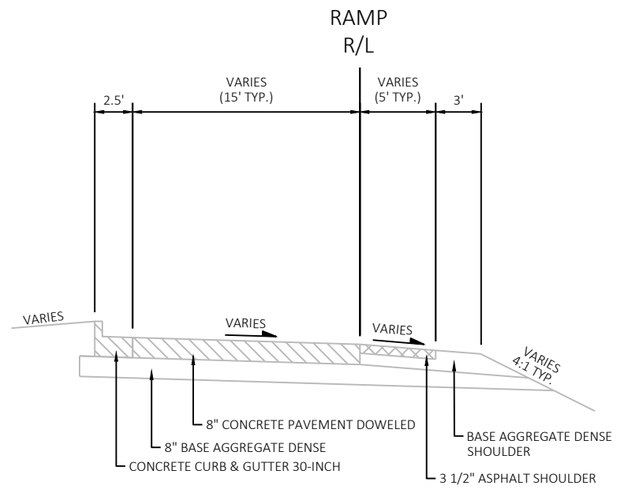
EXISTING TYPICAL SECTION STH 67 RAMP

NORTHWEST RAMP STA 1230+07.93 TO STA 1237+31.82
NORTHWEST LOOP STA 1242+31.71 TO STA 1245+75.30



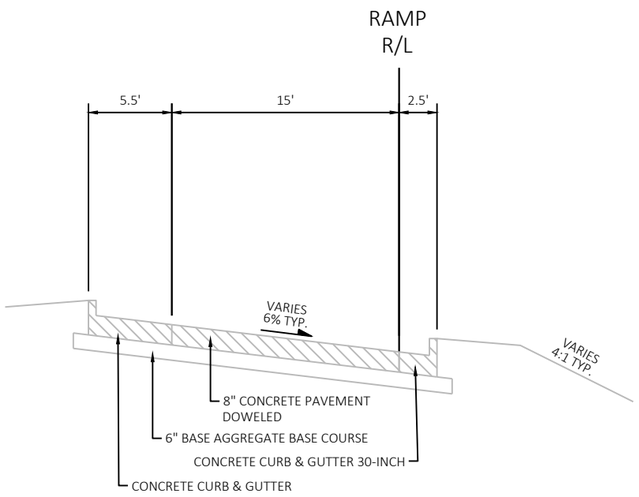
EXISTING TYPICAL SECTION STH 67 RAMP

SOUTHWEST RAMP STA 1236+30 TO STA 1244+50



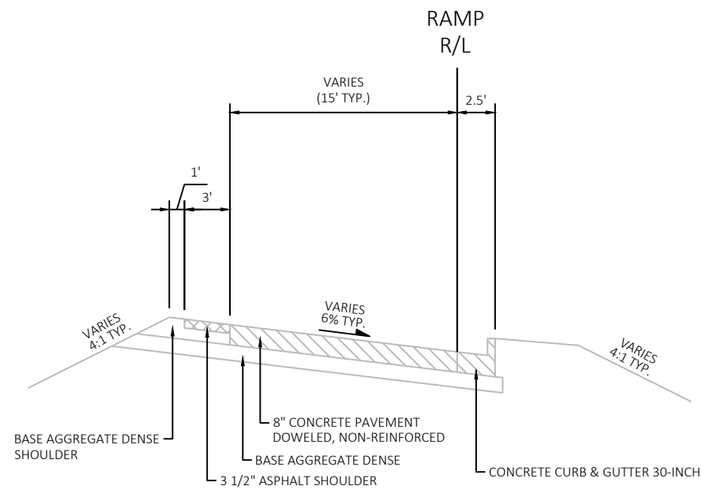
EXISTING TYPICAL SECTION STH 67 RAMP

SOUTHWEST RAMP STA 1244+50 TO STA 1251+11.67
SOUTHWEST LOOP STA 1234+80.09 TO STA 1237+20



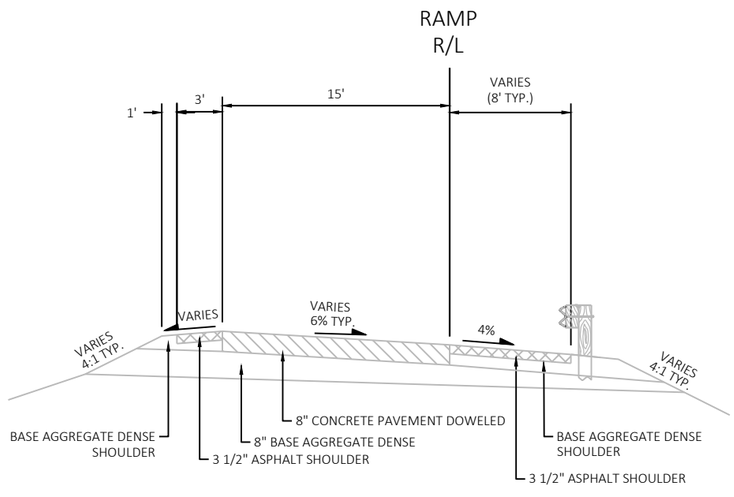
EXISTING TYPICAL SECTION STH 67 RAMP

SOUTHWEST LOOP STA 1237+20 TO STA 1241+50



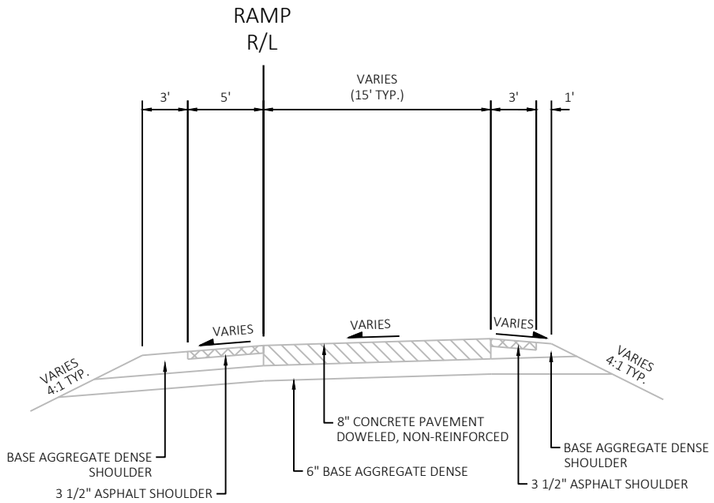
EXISTING TYPICAL SECTION STH 67 RAMP

SOUTHWEST LOOP STA 1241+50 TO STA 1245+40



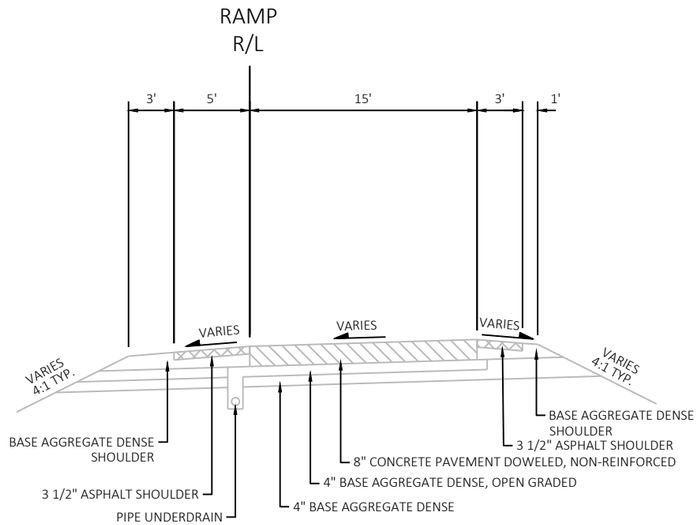
EXISTING TYPICAL SECTION STH 67 RAMP

SOUTHWEST LOOP STA 1245+40 TO STA 1248+24.37



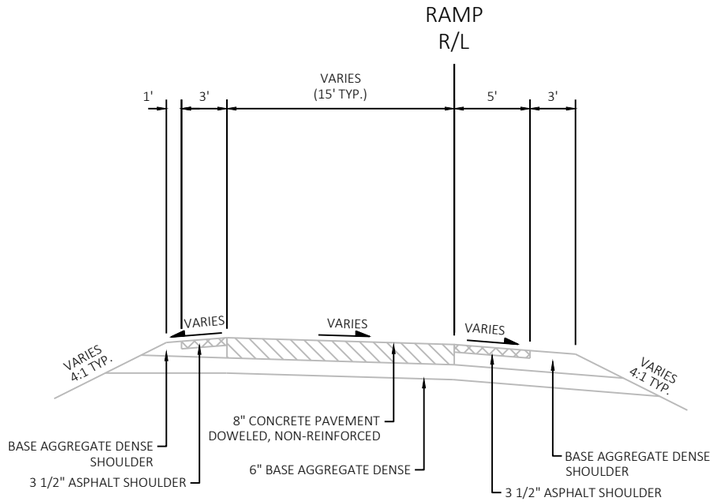
EXISTING TYPICAL SECTION STH 57 RAMP

NORTHWEST RAMP STA 1345+15.05 TO STA 1355+30.71



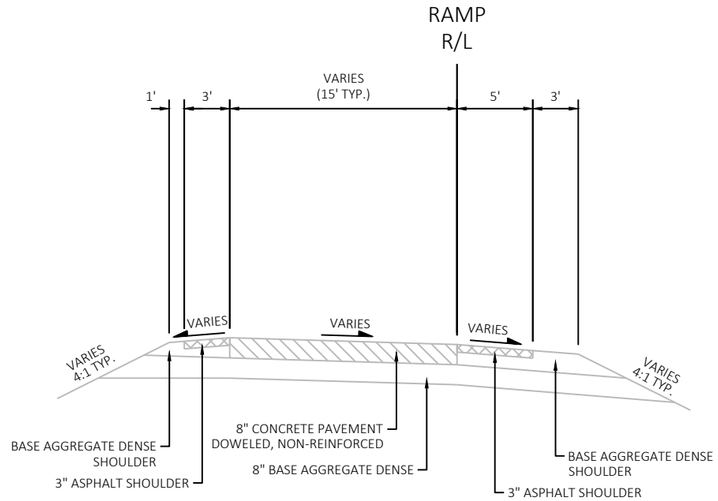
EXISTING TYPICAL SECTION STH 57 RAMP

NORTHEAST RAMP STA 1361+31.30 TO STA 1371+00



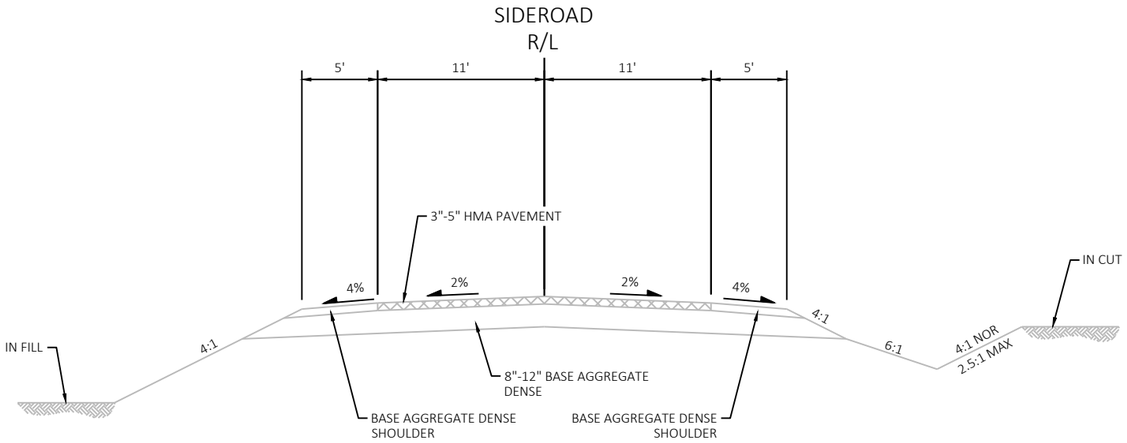
EXISTING TYPICAL SECTION STH 57 RAMP

SOUTHWEST RAMP STA 1345+50 TO STA 1359+08.50
SOUTHEAST RAMP STA 1361+31.30 TO STA 1371+00



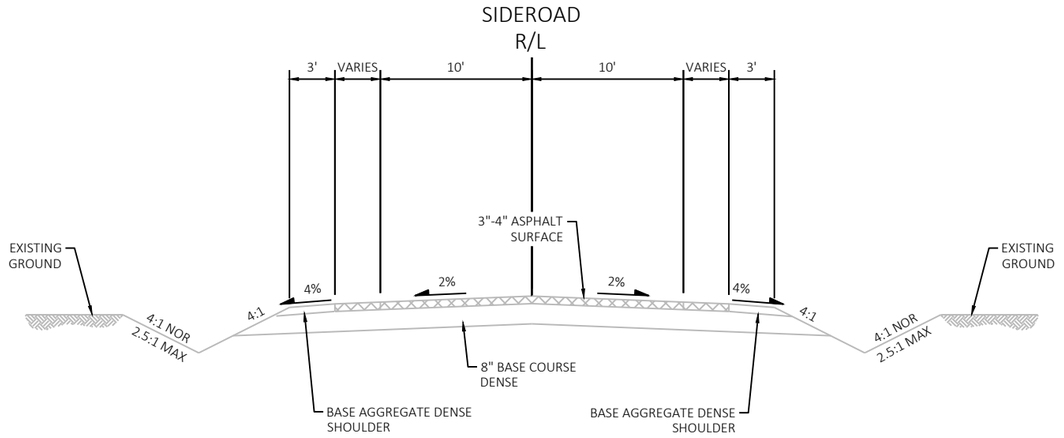
EXISTING TYPICAL SECTION STH 32 RAMP

NORTHWEST RAMP STA 1669+00 TO STA 1680+76.33
SOUTHWEST RAMP STA 1668+00 TO STA 1380+88.83



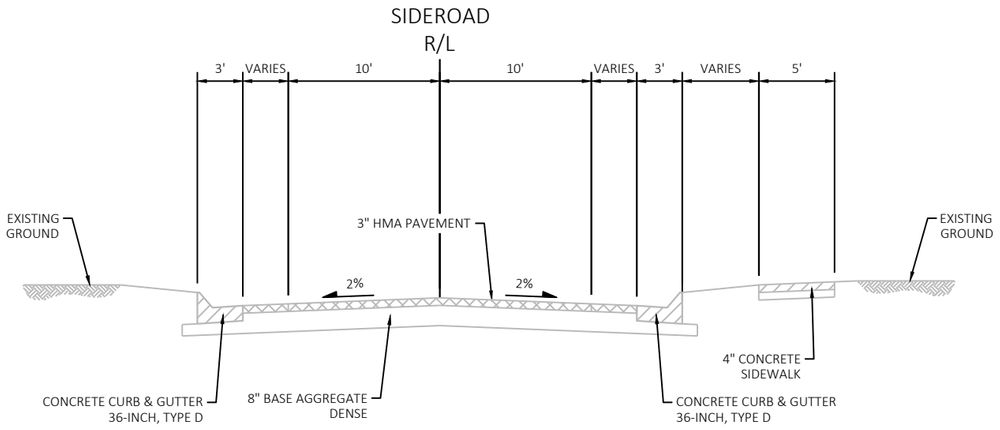
EXISTING TYPICAL SECTION COUNTY TRUNK HIGHWAYS

CTH TT
CTH M
CTH E
CTH OJ



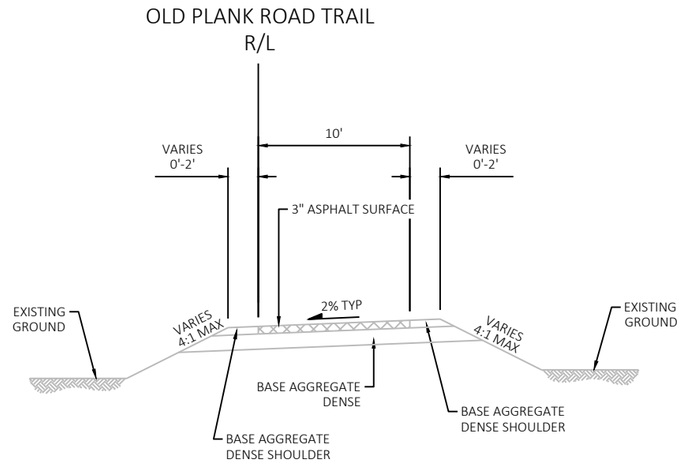
EXISTING TYPICAL SECTION SIDEROAD

SUNSET RD
PLEASANT VIEW RD, NORTH OF STH23
HILLSIDE RD
BRIDGEWOOD RD
MEADOWLARK RD
WILLOW RD



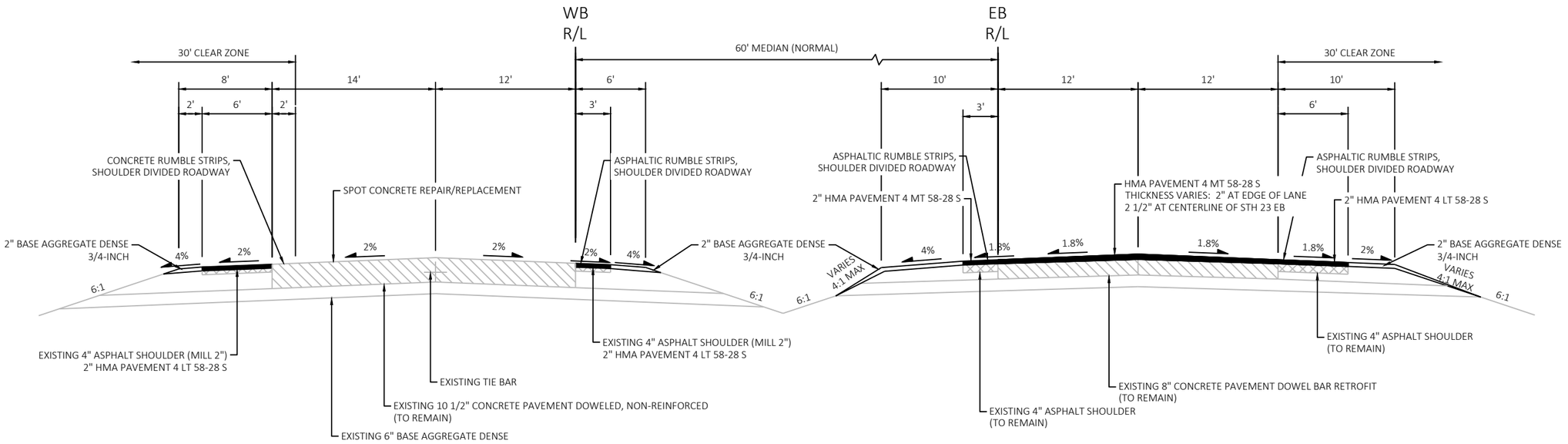
EXISTING TYPICAL SECTION SIDEROAD

PLEASANT VIEW RD, SOUTH OF STH23



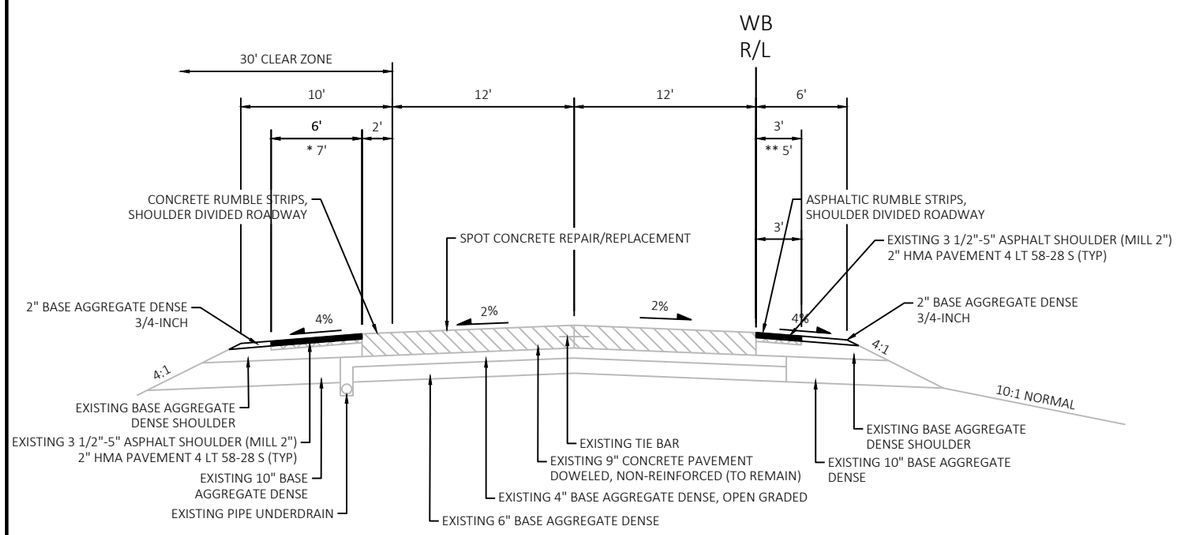
EXISTING TYPICAL SECTION OLD PLANK ROAD TRAIL

STA 1595+27 TO STA 1603+65



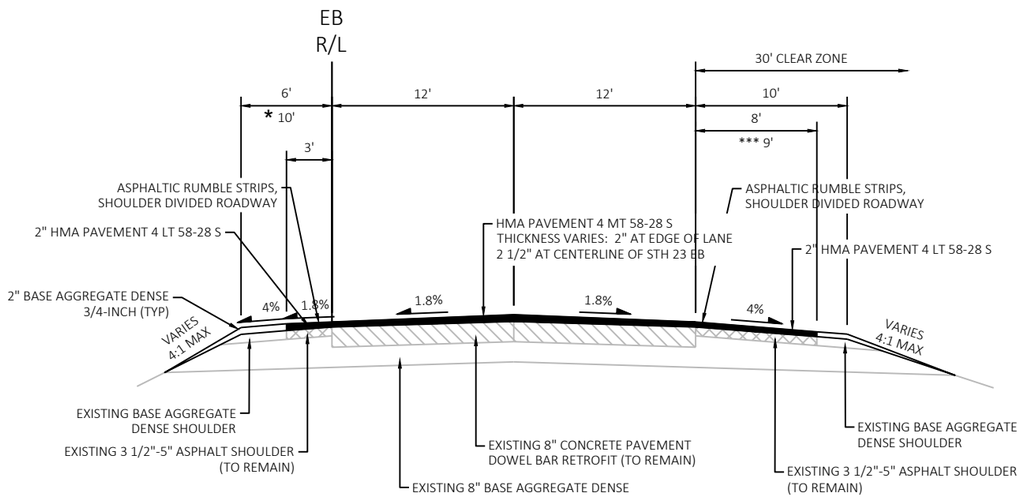
FINISHED TYPICAL SECTION STH 23

STA 1121+90 TO STA 1279+53.32



FINISHED TYPICAL SECTION STH 23 - WESTBOUND

STA 1279+53.32 TO STA 1320+50
* STA 1307+47 TO STA 1320+50
** STA 1307+37 TO STA 1320+50

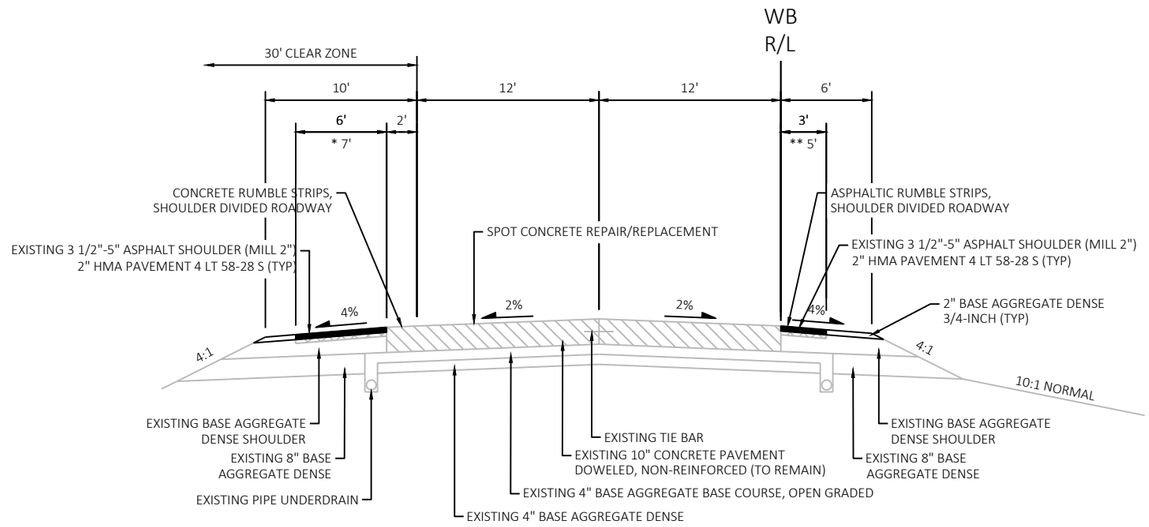


FINISHED TYPICAL SECTION STH 23 - EASTBOUND

* STA 1279+53.32 TO STA 1356+00
STA 1361+00 TO STA 1653+26
** STA 1304+52 TO STA 1322+81
*** STA 1303+01 TO STA 1323+16

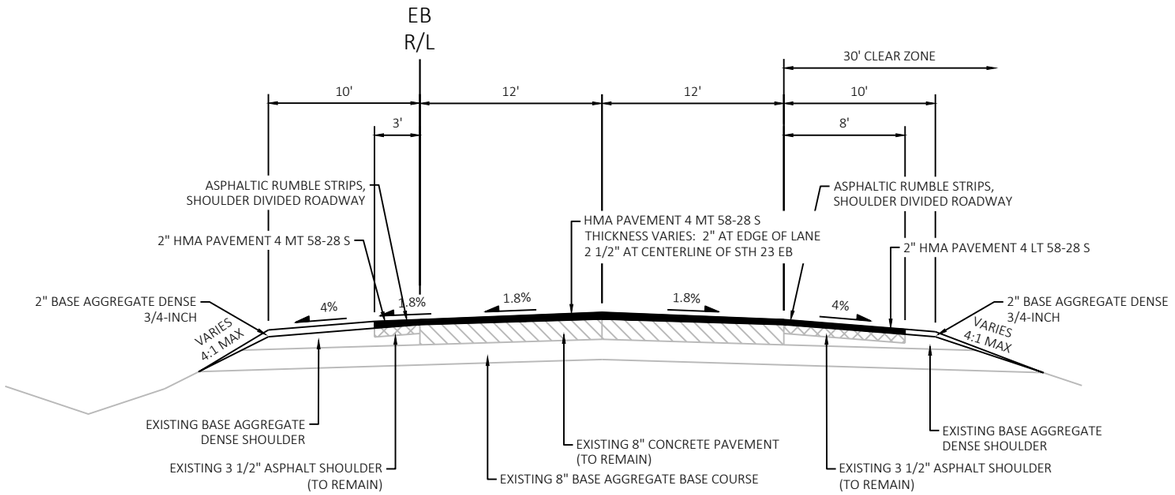
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	TYPICAL SECTIONS	SHEET 11	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\020301-TS.DWG
LAYOUT NAME - 020308-ts
PLOT DATE : 9/23/2026 2:34 PM
PLOT BY : HOSPER, JAN
PLOT NAME :
PLOT SCALE : 1IN:10 FT



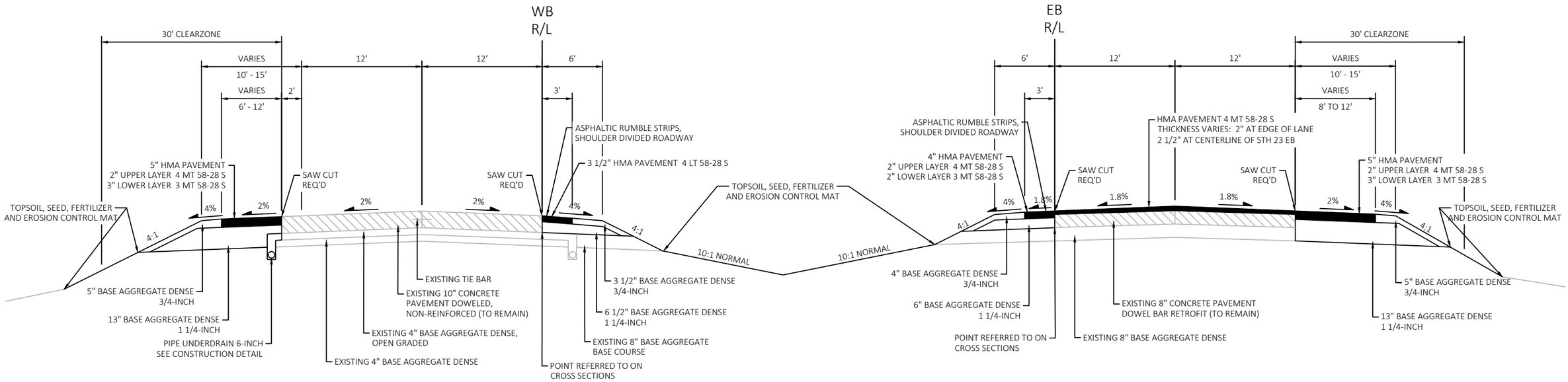
FINISHED TYPICAL SECTION STH 23 - WESTBOUND

STA 1320+50 TO STA 1656+00
* STA 1320+50 TO STA 1326+89
** STA 1320+50 TO STA 1326+08



FINISHED TYPICAL SECTION STH 23 - EASTBOUND

STA 1356+00 TO STA 1361+00

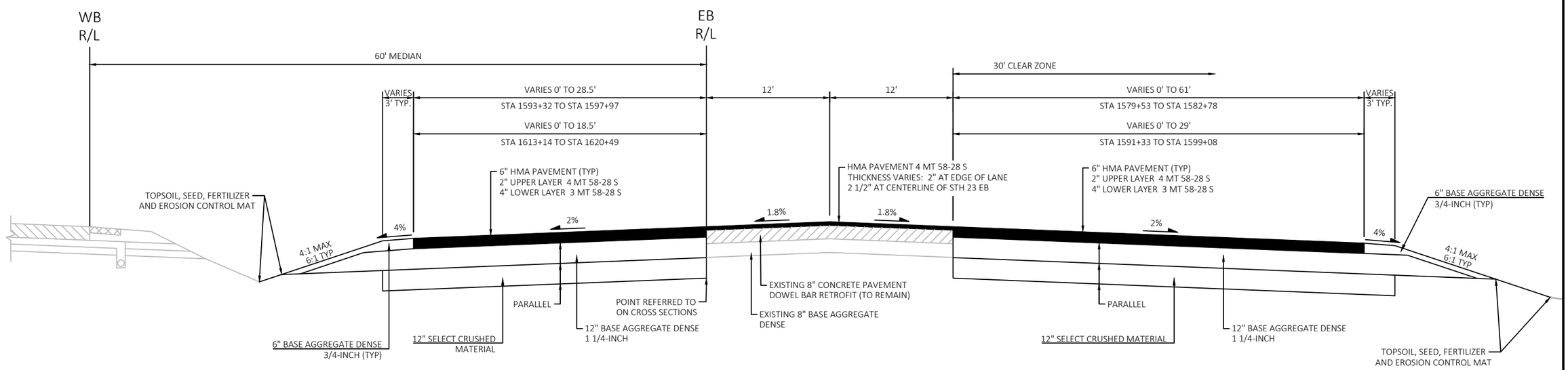


WESTBOUND LANES

EASTBOUND LANES

FINISHED TYPICAL SECTION STH 23 RIGHT TURN LANES AT SUNSET RD

STA 1568+54.2 EB TO STA 1575+39.9 EB
STA 1570+66.9 WB TO STA 1577+82.2 WB

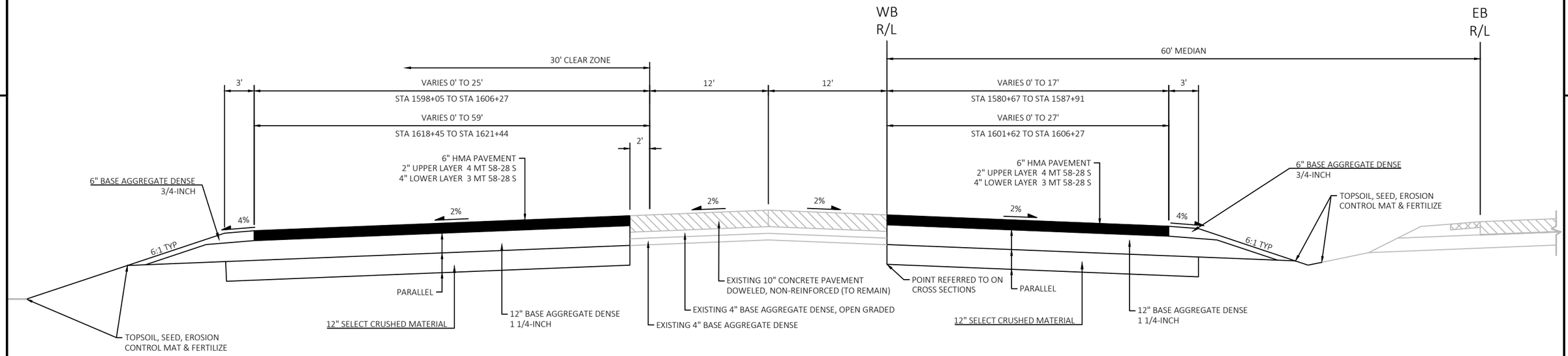


EASTBOUND LANES

FINISHED TYPICAL SECTION STH 23 EB R-CUTS

STA 1579+53 TO STA 1620+49

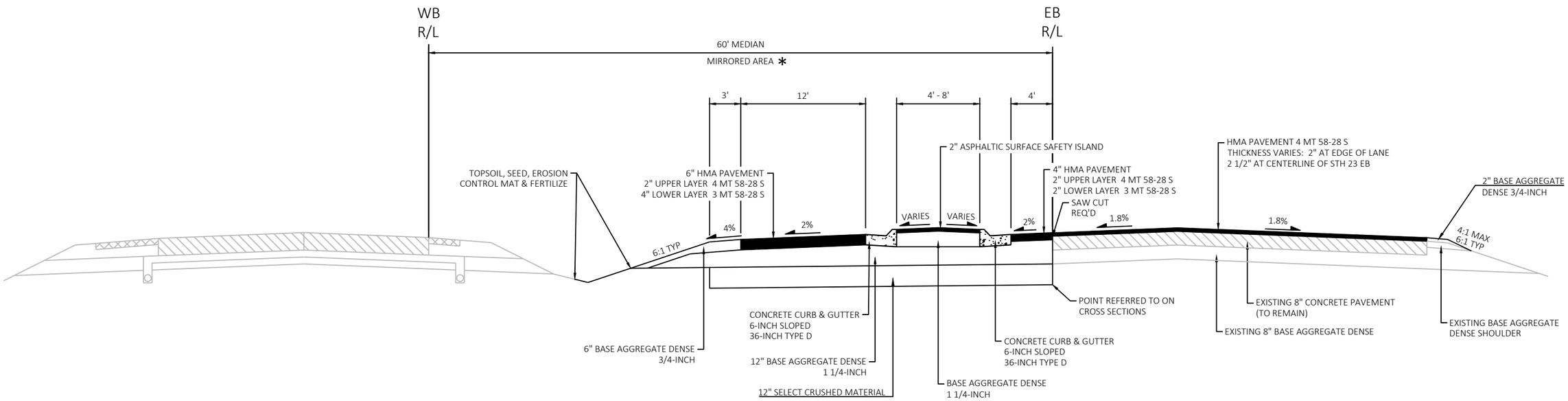
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	TYPICAL SECTIONS	SHEET 13	E



WESTBOUND LANES

FINISHED TYPICAL SECTION STH 23 WB R-CUTS

STA 1580+77 TO STA 1621+58



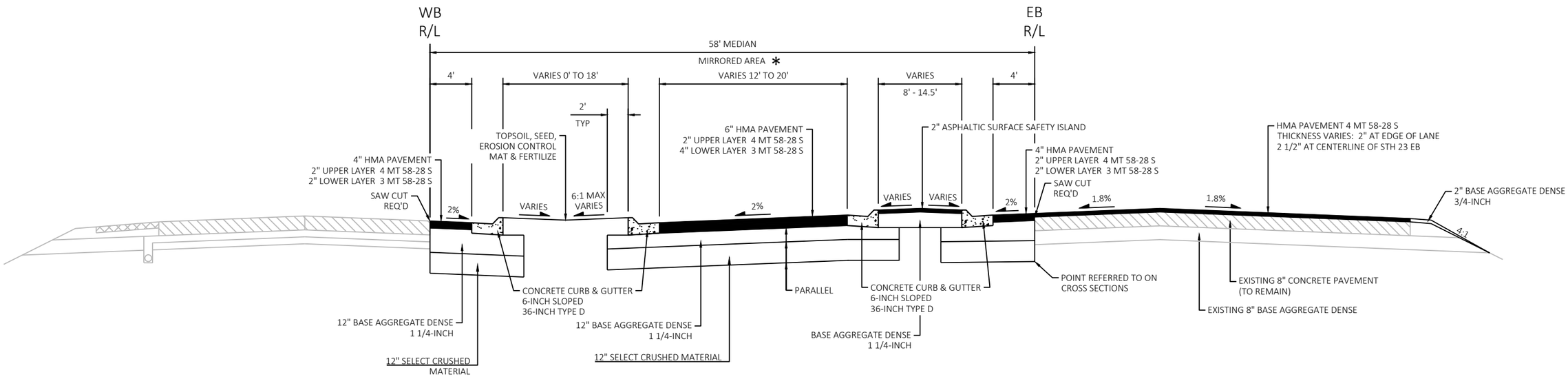
FINISHED TYPICAL SECTION STH 23

STA 1598+08 TO STA 1598+68 EASTBOUND

STA 1601+01 TO STA 1601+63 WESTBOUND *

* EB LEFT TURN LANE SHOWN. WB TURN LANE IMPROVEMENTS MIRROR EB IMPROVEMENTS

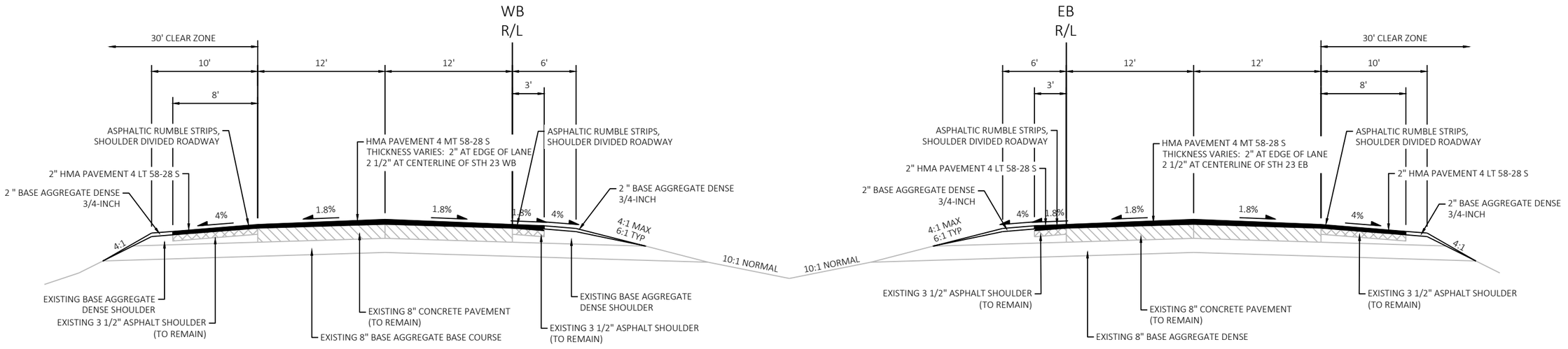
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	TYPICAL SECTIONS	SHEET 14	E



FINISHED TYPICAL SECTION STH 23

STA 1598+68 TO STA 1599+69 EASTBOUND
STA 1600+09 TO STA 1601+01 WESTBOUND *

* EB LEFT TURN LANE SHOWN. WB TURN LANE IMPROVEMENTS MIRROR EB IMPROVEMENTS



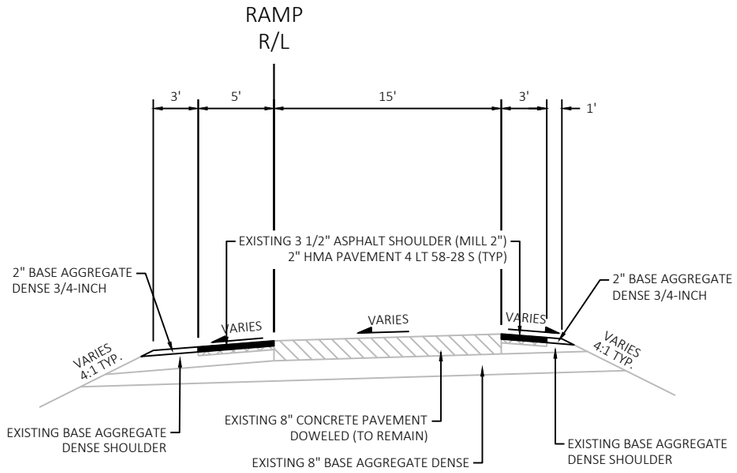
WESTBOUND LANES

EASTBOUND LANES

FINISHED TYPICAL SECTION STH 23

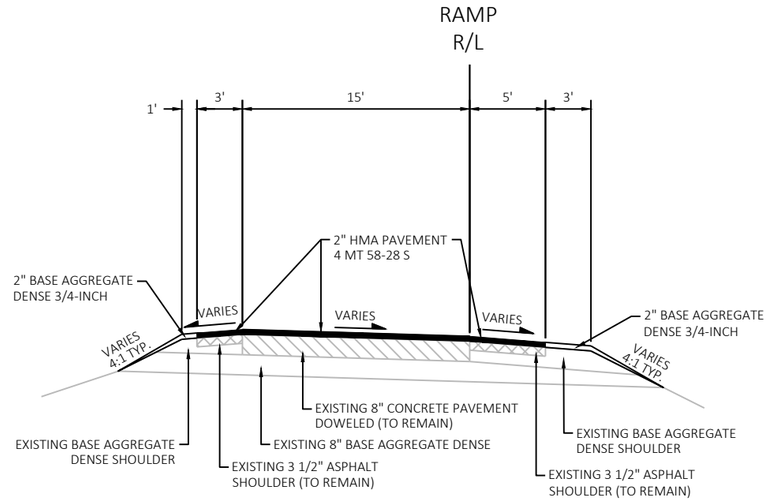
STA 1653+26 TO STA 1681+49.6 EB
STA 1656+00 TO STA 1681+46.7 WB

PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	TYPICAL SECTIONS	SHEET 15	E



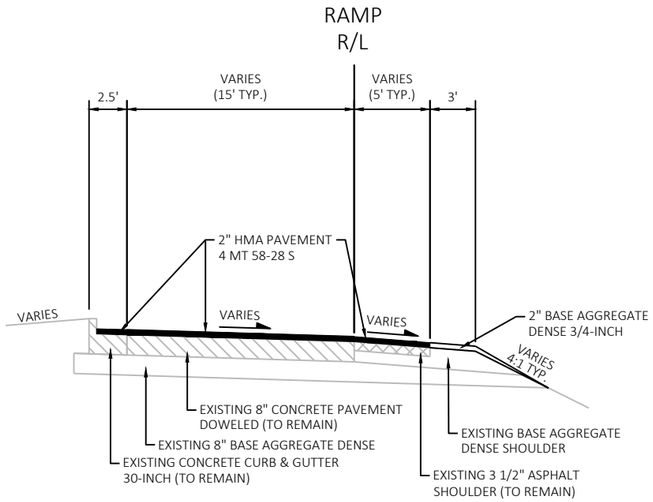
FINISHED TYPICAL SECTION STH 67 RAMP

NORTHWEST RAMP STA 1230+07.93 TO STA 1237+31.82
NORTHWEST LOOP STA 1242+31.71 TO STA 1245+75.30



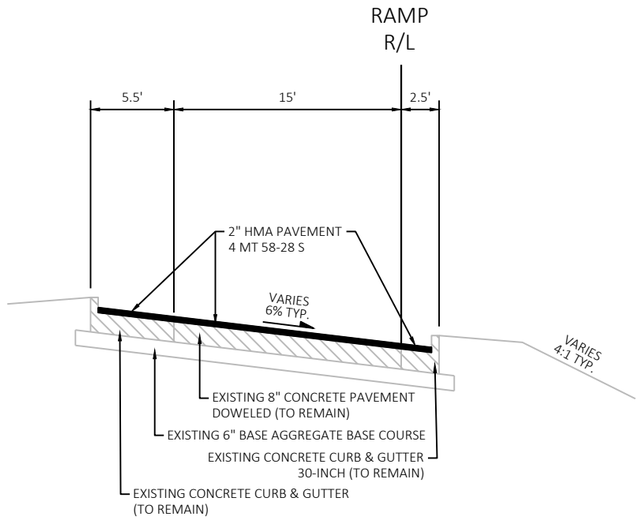
FINISHED TYPICAL SECTION STH 67 RAMP

SOUTHWEST RAMP STA 1236+30 TO STA 1244+50



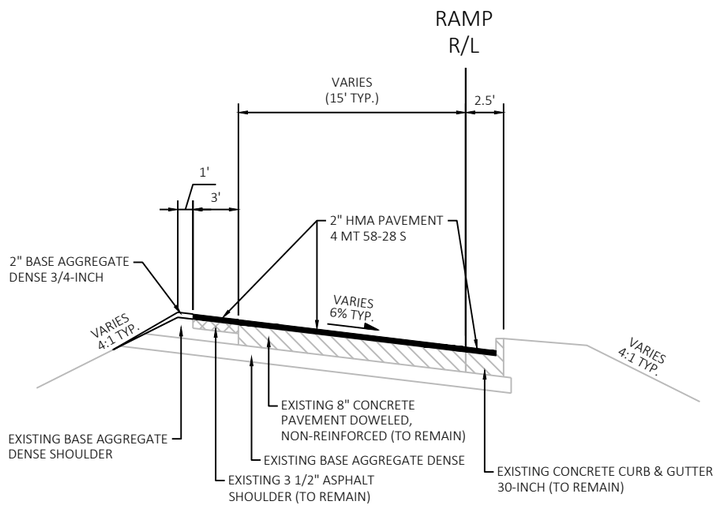
FINISHED TYPICAL SECTION STH 67 RAMP

SOUTHWEST RAMP STA 1244+50 TO STA 1251+11.67
SOUTHWEST LOOP STA 1234+80.09 TO STA 1237+20



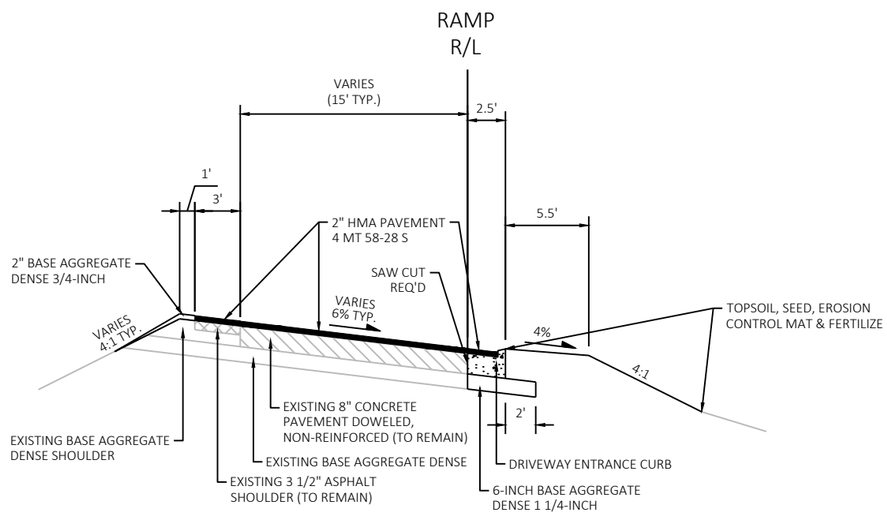
FINISHED TYPICAL SECTION STH 67 RAMP

SOUTHWEST LOOP STA 1237+20 TO STA 1241+50



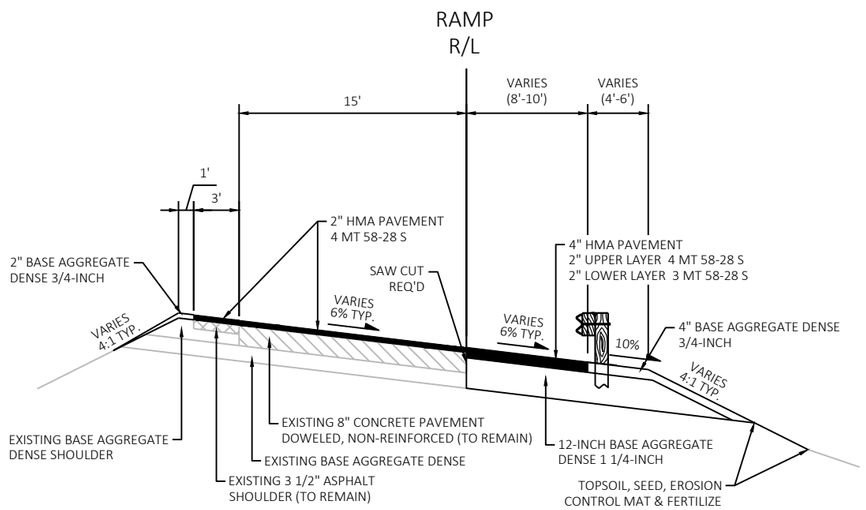
FINISHED TYPICAL SECTION STH 67 RAMP

SOUTHWEST LOOP STA 1241+50 TO STA 1242+23.60



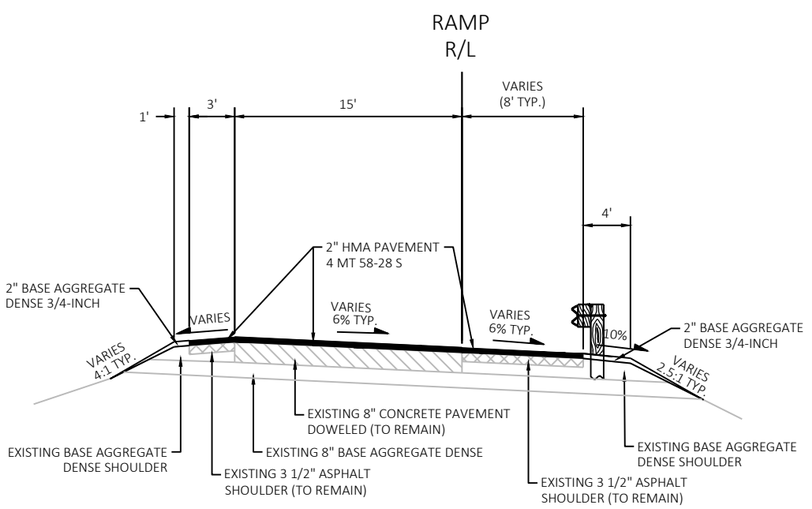
FINISHED TYPICAL SECTION STH 67 RAMP

SOUTHWEST LOOP STA 1242+23.60 TO STA 1243+43.50



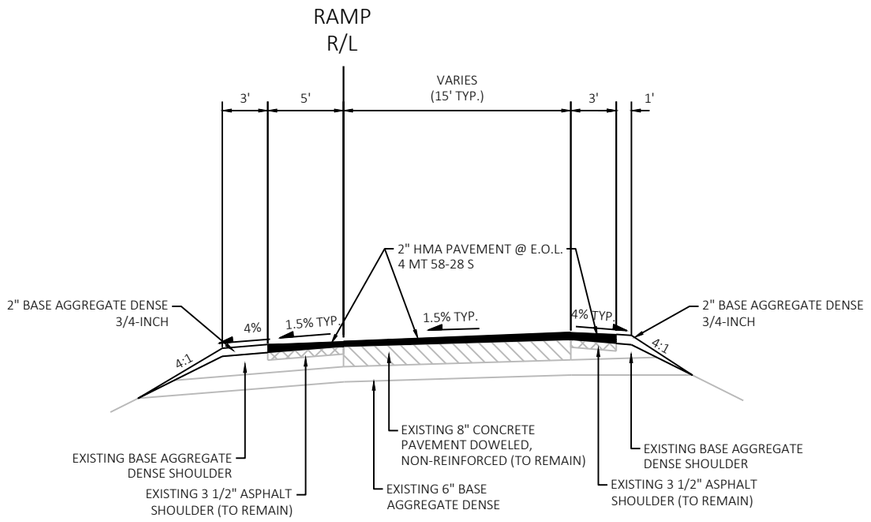
FINISHED TYPICAL SECTION STH 67 RAMP

SOUTHWEST LOOP STA 1243+43.50 TO STA 1245+40



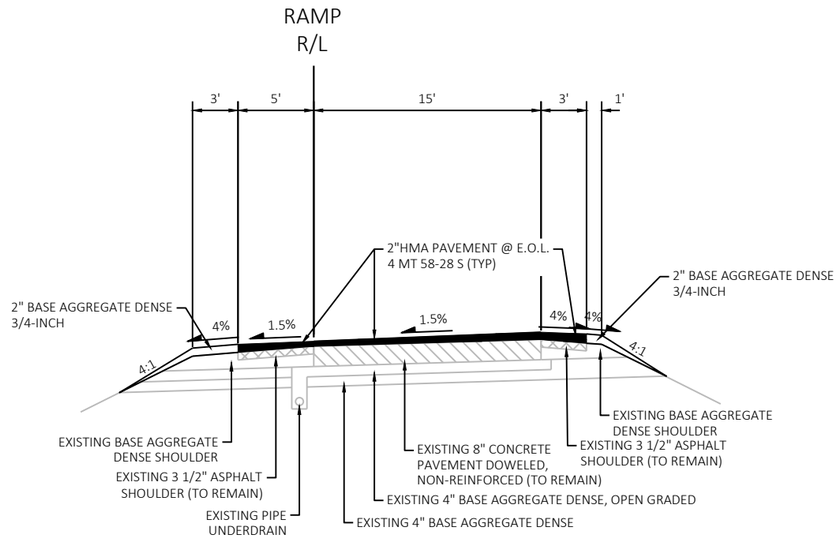
FINISHED TYPICAL SECTION STH 67 RAMP

SOUTHWEST LOOP STA 1245+40 TO STA 1248+24.37



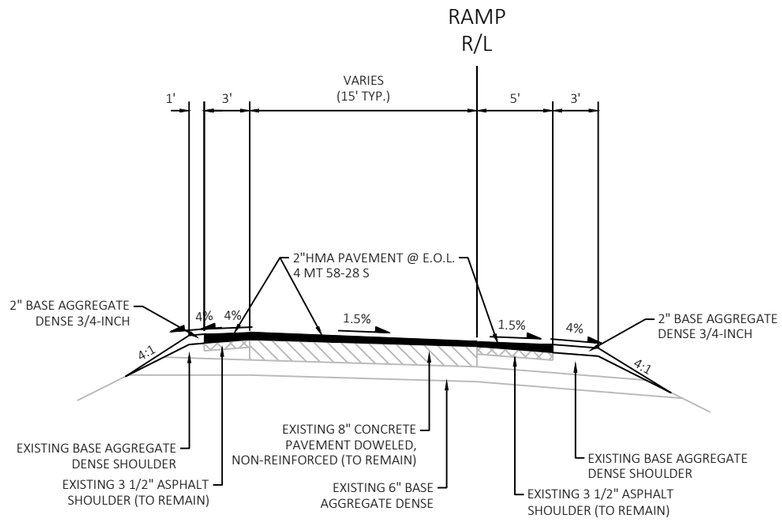
FINISHED TYPICAL SECTION STH 57 RAMP

NORTHWEST RAMP STA 1345+15.05 TO STA 1355+30.71



FINISHED TYPICAL SECTION STH 57 RAMP

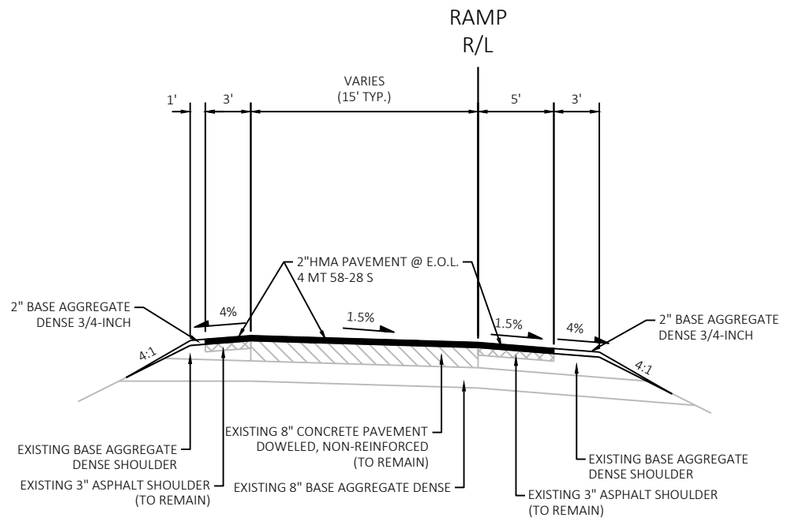
NORTHEAST RAMP STA 1361+31.30 TO STA 1371+00



FINISHED TYPICAL SECTION STH 57 RAMP

SOUTHWEST RAMP STA 1345+50 TO STA 1359+08.50

SOUTHEAST RAMP STA 1361+31.30 TO STA 1371+00

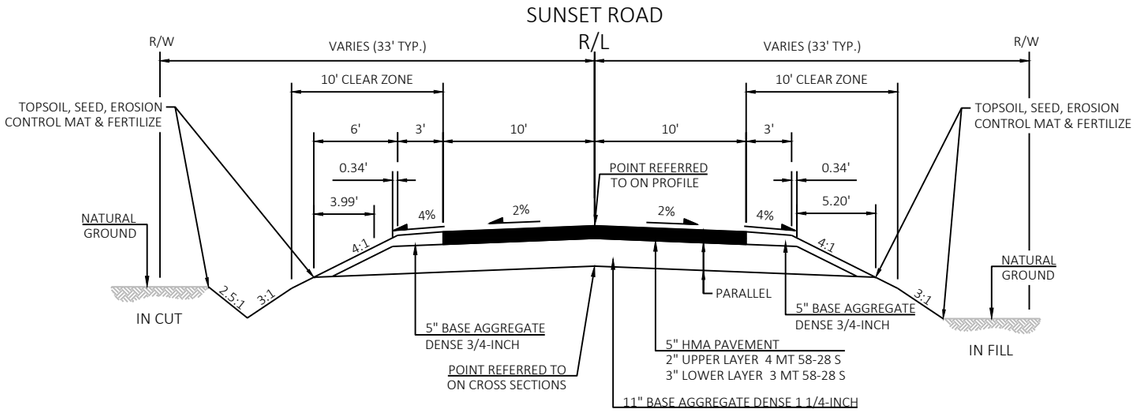


FINISHED TYPICAL SECTION STH 32 RAMP

NORTHWEST RAMP STA 1669+00 TO STA 1680+76.33

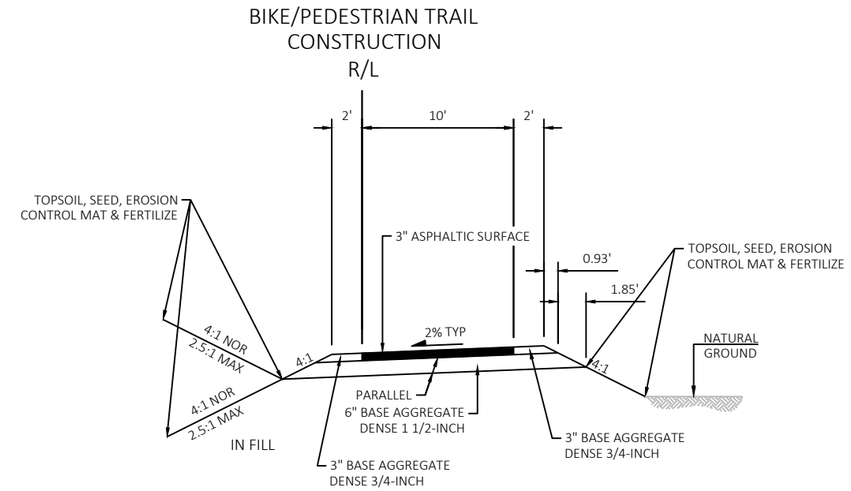
SOUTHWEST RAMP STA 1668+00 TO STA 1380+88.83

PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	TYPICAL SECTIONS	SHEET 18	E



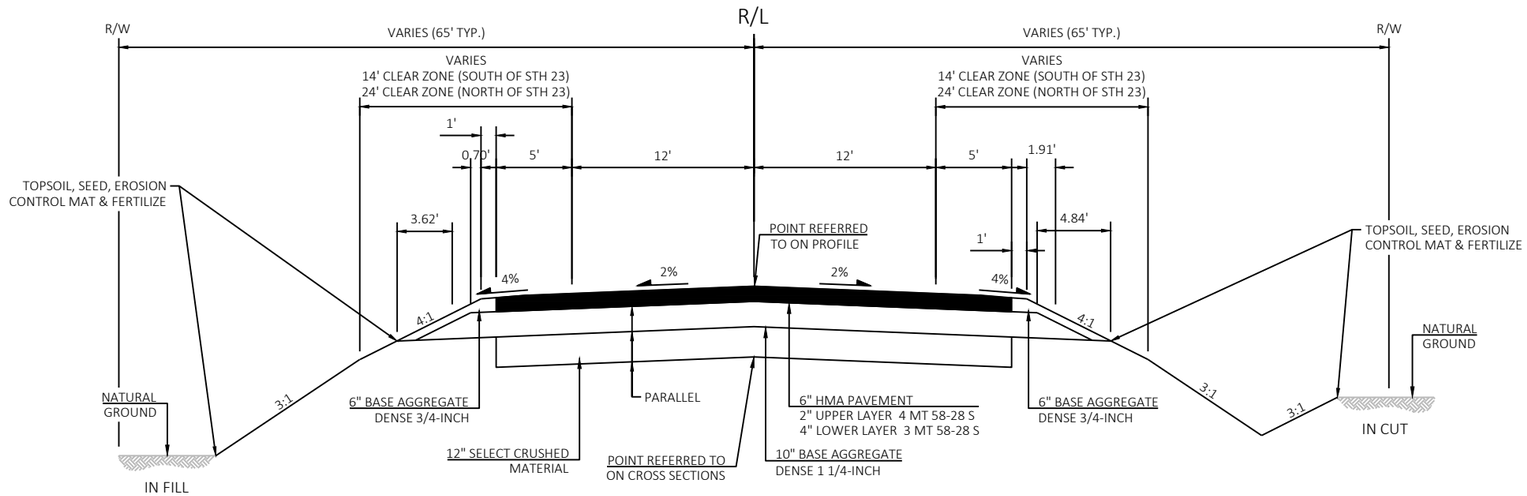
FINISHED TYPICAL SECTION SUNSET ROAD

STA 17+40 TO STA 21+96.4



FINISHED TYPICAL SECTION OLD PLANK ROAD TRAIL

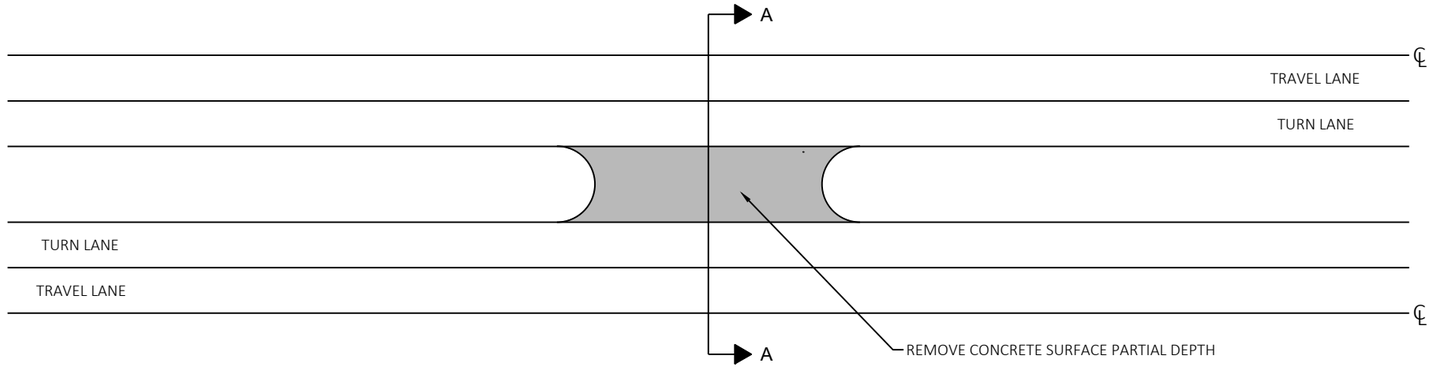
STA 1595+27 TO STA 1603+65

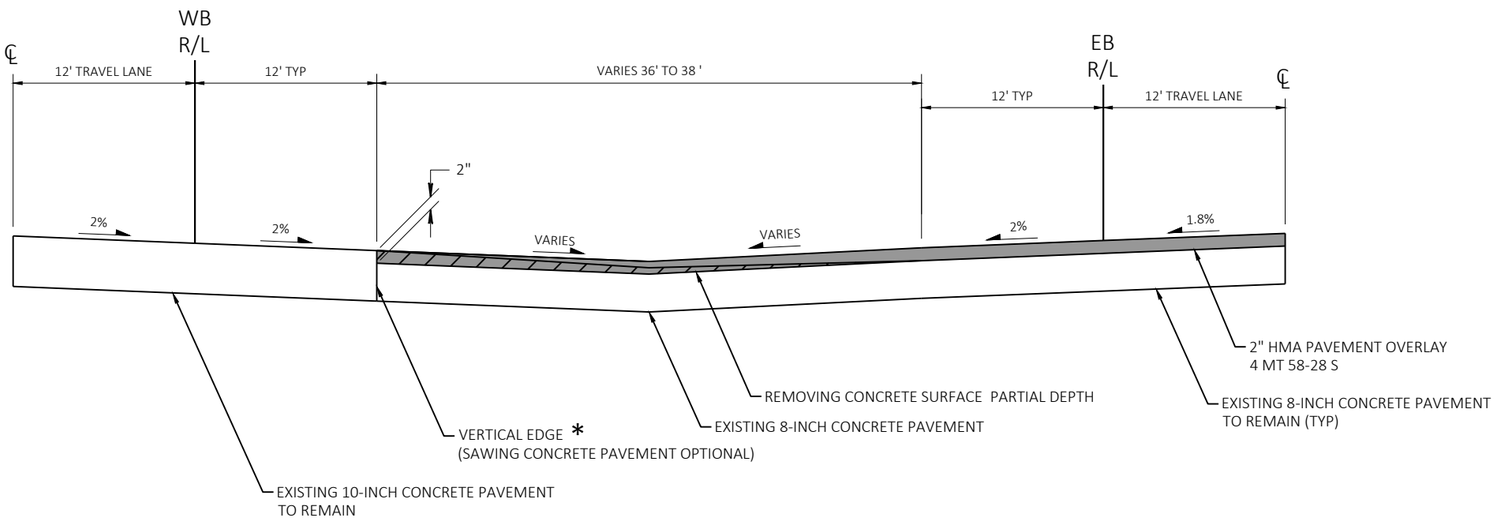


FINISHED TYPICAL SECTION CTH TT

STA 42+26 TO STA 59+00

PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	TYPICAL SECTIONS	SHEET 19	E





SECTION A-A

2" HMA PAVEMENT OVERLAY
4 MT 58-28 S

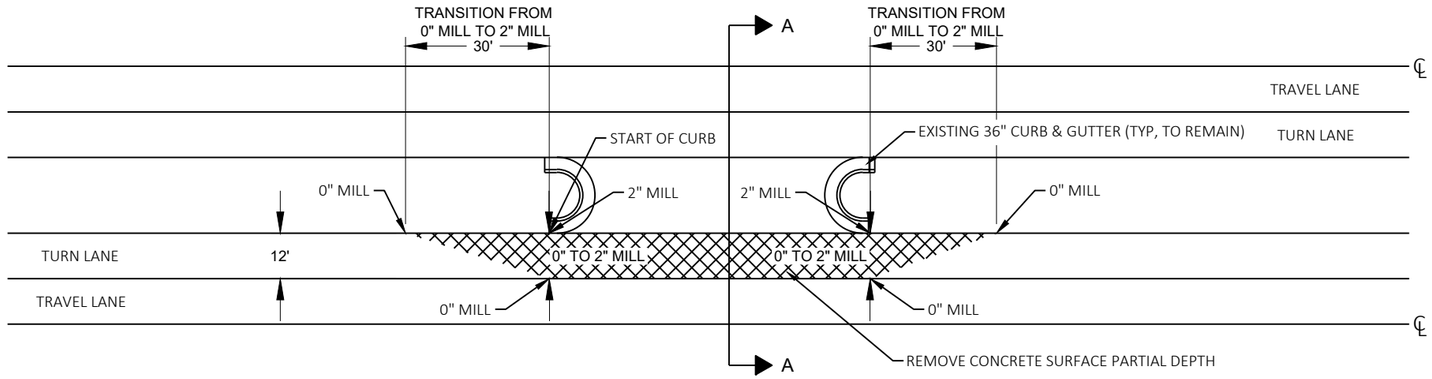
0-INCH TO 2 INCH MILLING

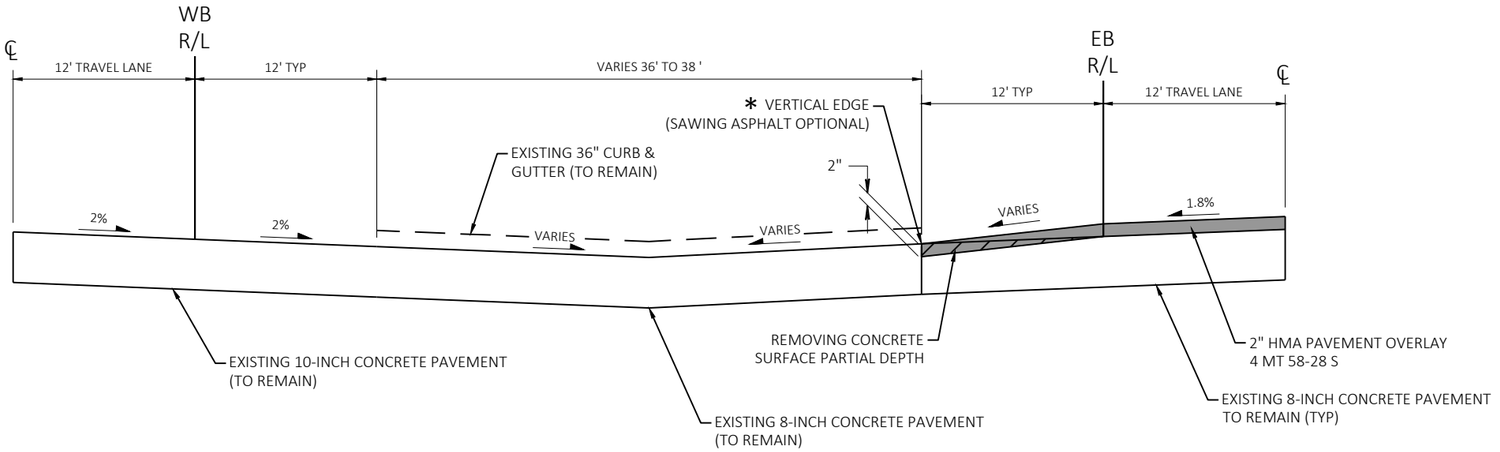
* NOT PAID FOR SEPARATELY

MEDIAN PAVING AT SIDEROADS TO STH 23

PIONEER RD
INEZ CT

2





SECTION A-A

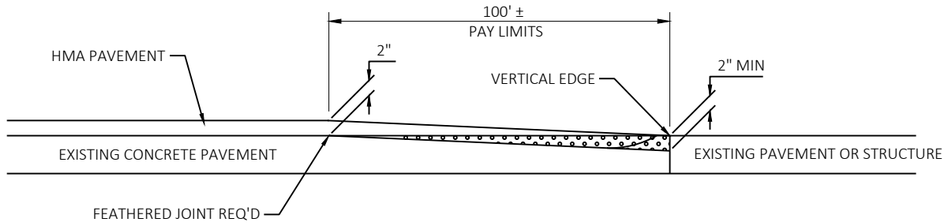
2" HMA PAVEMENT OVERLAY
4 MT 58-28 S

0-INCH TO 2 INCH MILLING

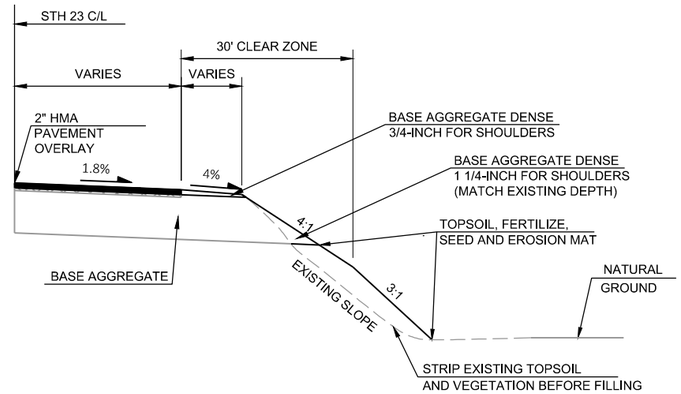
* NOT PAID FOR SEPARATELY

MEDIAN PAVING AT SIDEROADS TO STH 23

WILLOW RD
HILLSIDE RD
BRIDGEWOOD RD
MEADOWLARK RD

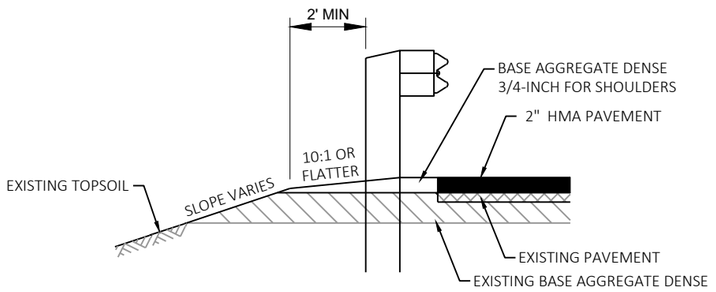


BUTT JOINT DETAIL FOR CONCRETE PAVEMENTS (PROFILE CHANGE)

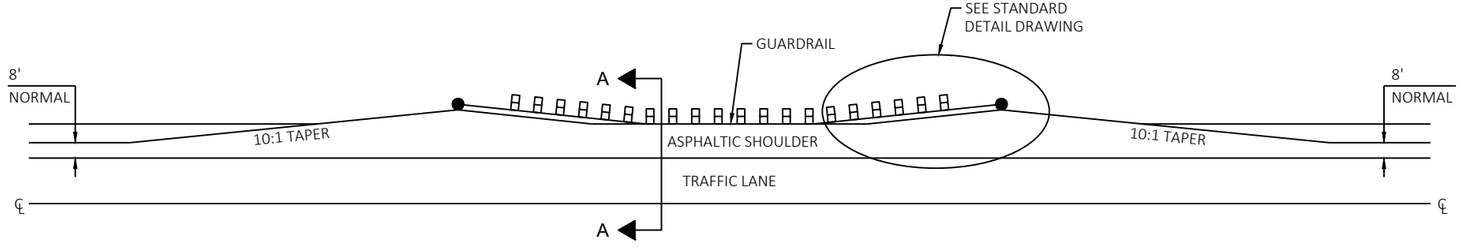


SLOPE FILLING DETAIL FOR EAT GRADING

SEE CROSS SECTIONS FOR LOCATIONS

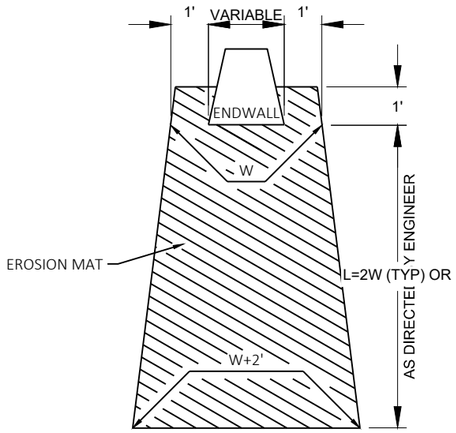


SECTION A-A

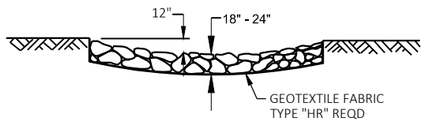


DETAIL FOR ASPHALTIC SHOULDER AT GUARDRAIL

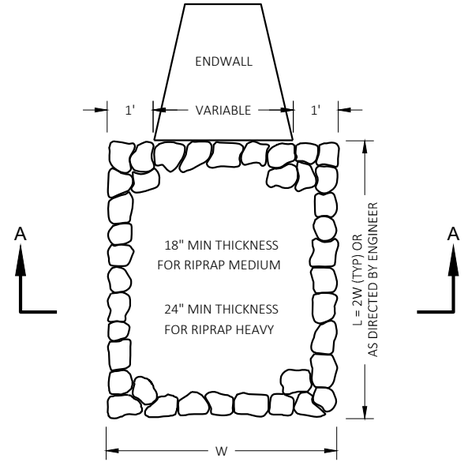
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CONSTRUCTION DETAILS	SHEET 22	E



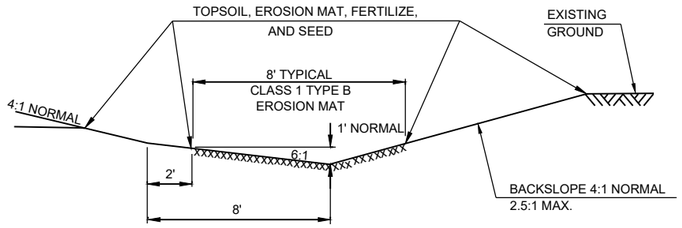
EROSION MAT TREATMENT AT CULVERTS



SECTION A-A

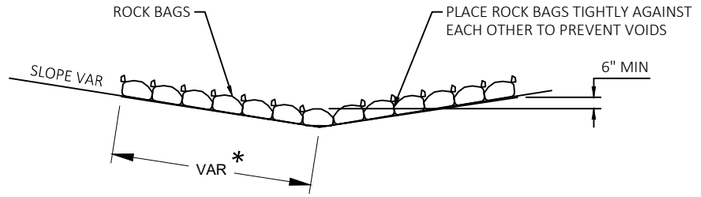


RIPRAP TREATMENT AT CULVERTS

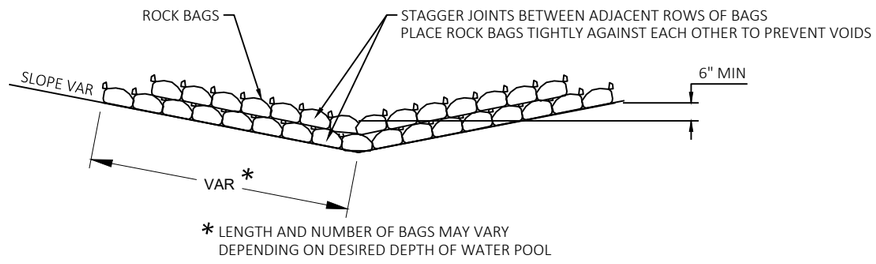


TYPICAL INSTALLATION FOR EROSION MAT
DITCH LINING

(SEE MISCELLANEOUS QUANTITIES FOR LOCATIONS)



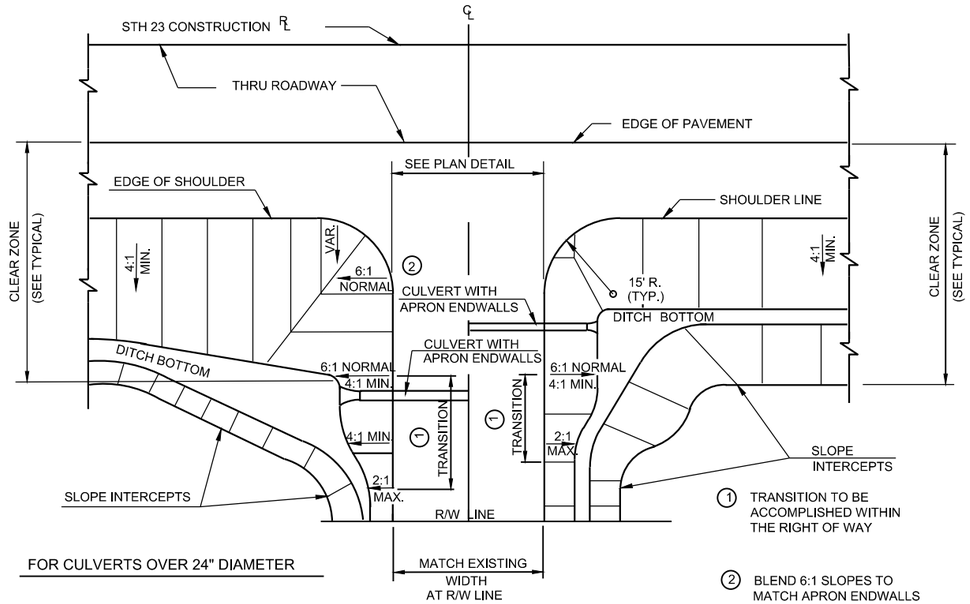
SIDE VIEW (SINGLE LAYER)



SIDE VIEW (MULTIPLE LAYER)

ROCK BAGS DITCH CHECK

PAID AS ROCK BAGS



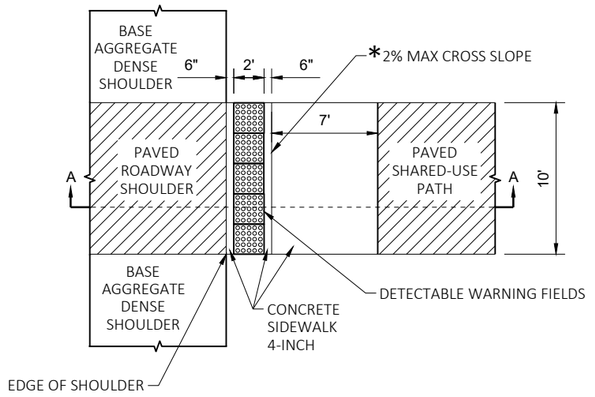
PLAN VIEW

ENTRANCE GRADING DETAIL

1 TRANSITION TO BE ACCOMPLISHED WITHIN THE RIGHT OF WAY

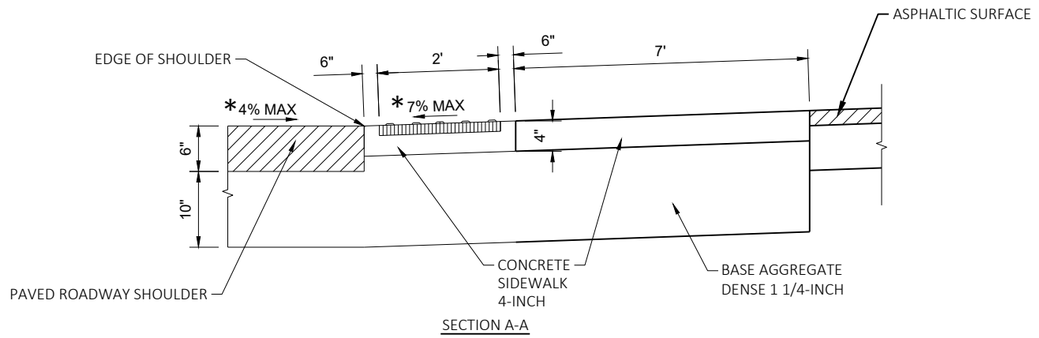
2 BLEND 6:1 SLOPES TO MATCH APRON ENDWALLS

FOR CULVERTS 24" DIAMETER OR LESS



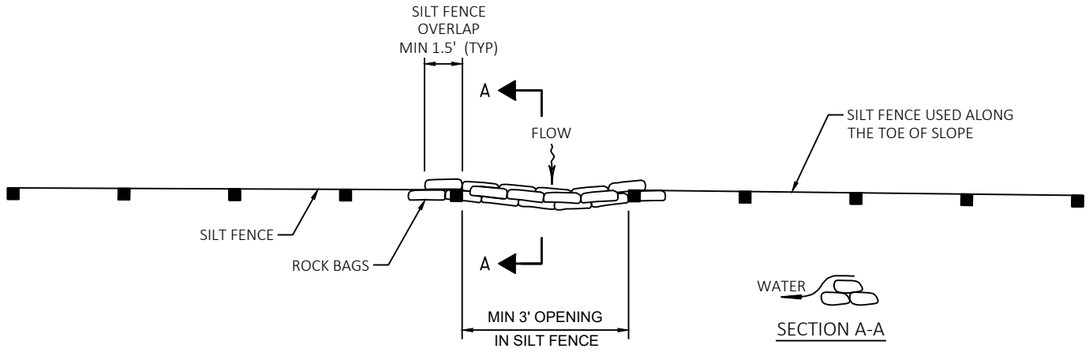
PLAN VIEW

* SEE TRAIL RAMP DETAILS FOR MORE INFORMATION ON CROSS SLOPES



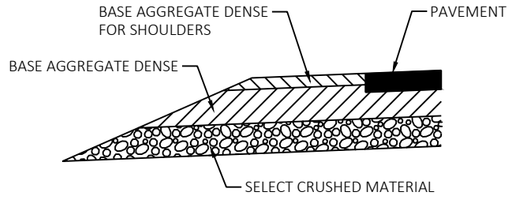
SECTION A-A

DETECTABLE WARNING FIELD INSTALLATION FOR SHARED-USE PATH CROSSING A NON-CURBED ROADWAY

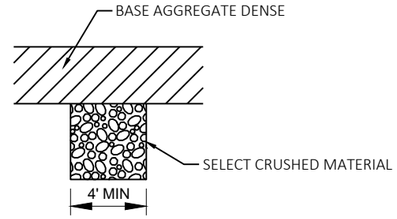


TOP VIEW

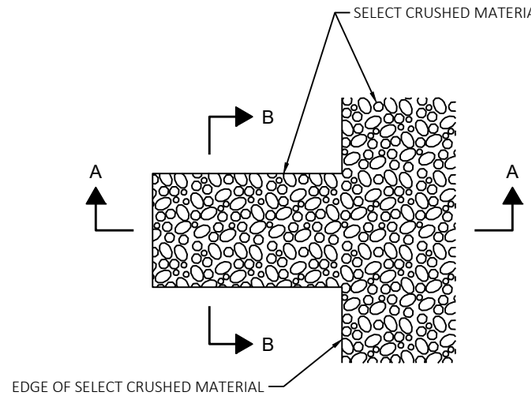
ROCK BAGS USED FOR SILT FENCE RELIEF DETAIL



SECTION A-A



SECTION B-B

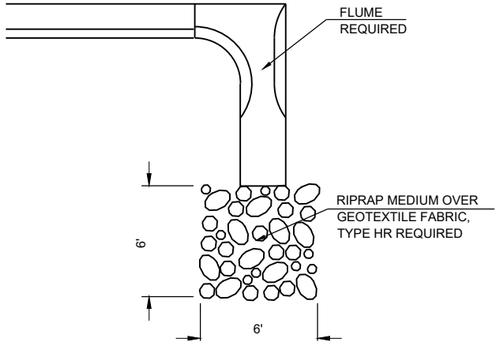


DETAIL FOR FRENCH DRAINS

DRAINS ARE TO BE CONSTRUCTED AT LEAST EVERY 250'
AND AT EACH SAG VERTICAL CURVE IN THE PROFILE.

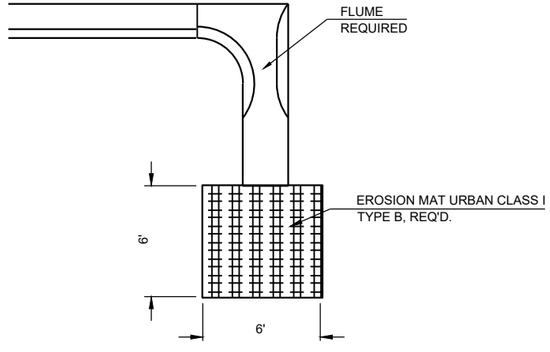
LOCATIONS TO BE DETERMINED IN THE FIELD BY THE ENGINEER.

EXCAVATION REQUIRED TO CONSTRUCT FRENCH DRAINS SHALL BE CONSIDERED INCIDENTAL TO THE ITEM SELECT CRUSHED MATERIAL.



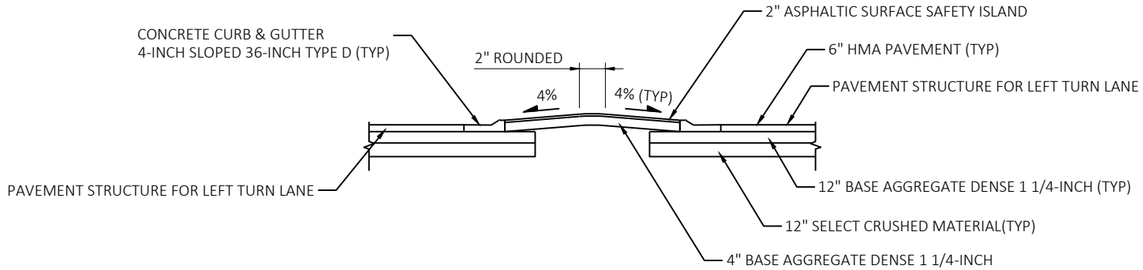
RIPRAP MEDIUM AT ASPHALT FLUME

(SEE MISCELLANEOUS QUANTITIES FOR LOCATION)

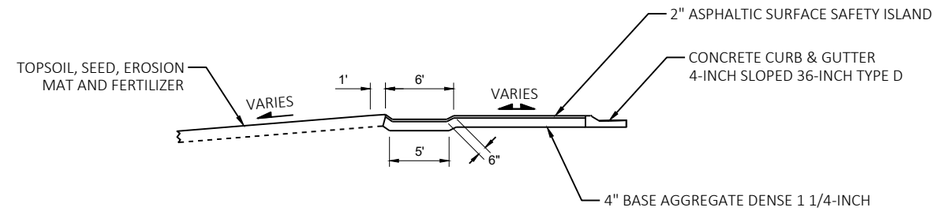


EROSION MAT AT ASPHALT FLUME

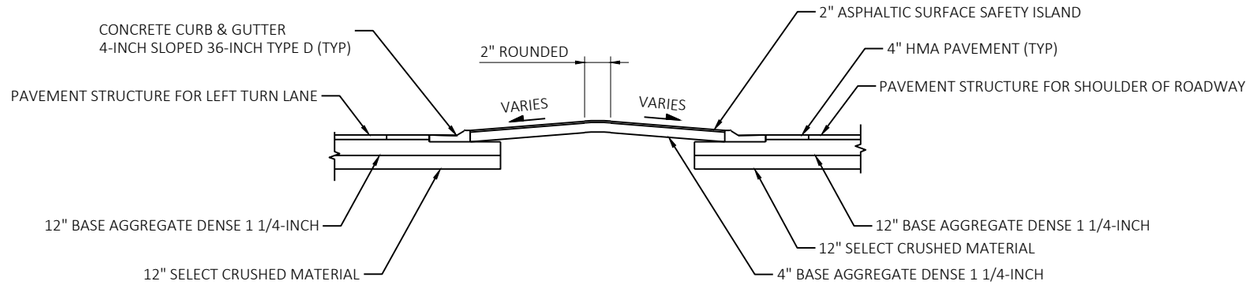
(SEE MISCELLANEOUS QUANTITIES FOR LOCATION)



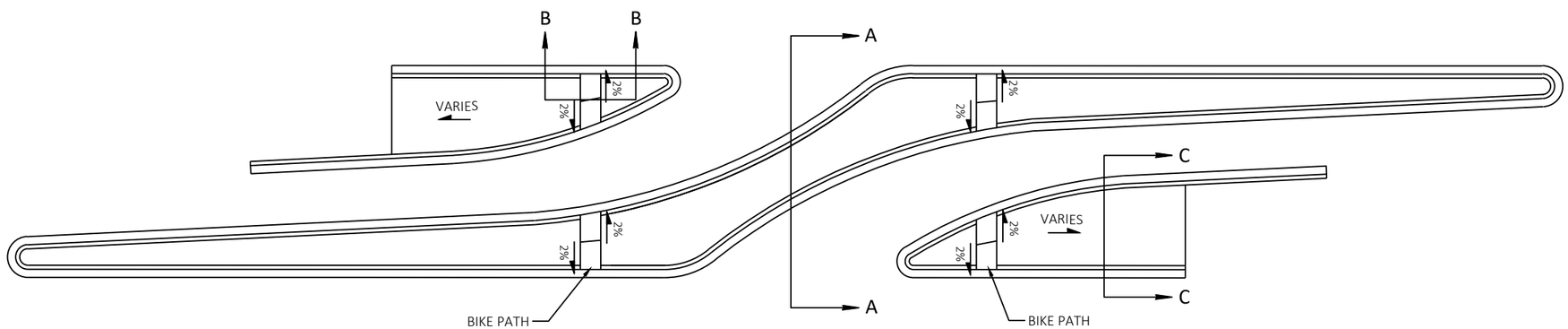
SECTION A-A



SECTION B-B



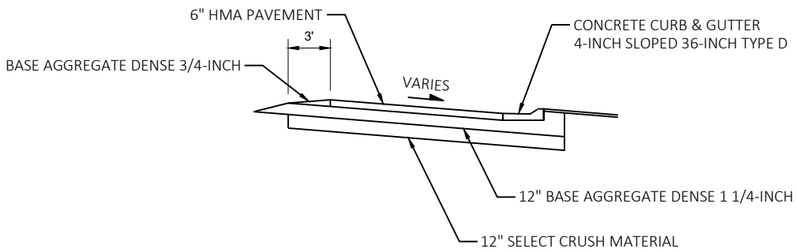
SECTION C-C



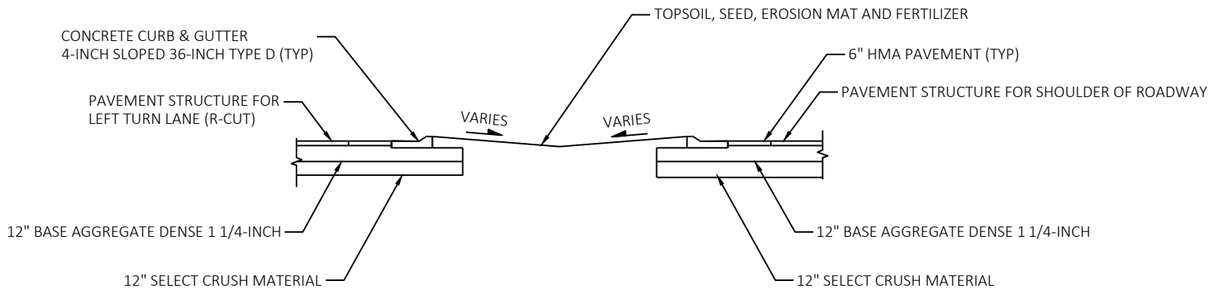
PLAN VIEW

RESTRICTED CROSSING INTERSECTION DETAIL WITH BIKE PATH

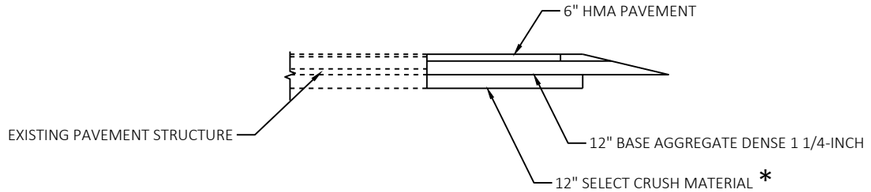
CTH TT
STA 1598+00 TO STA 1602+41



SECTION A-A

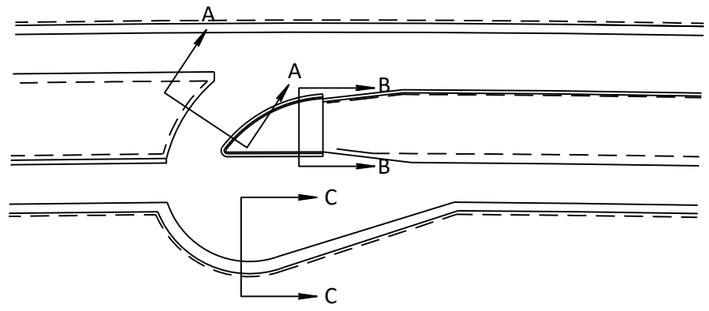


SECTION B-B



* USE AT STA 1619+00 WB TO STA 1622+00 WB

SECTION C-C

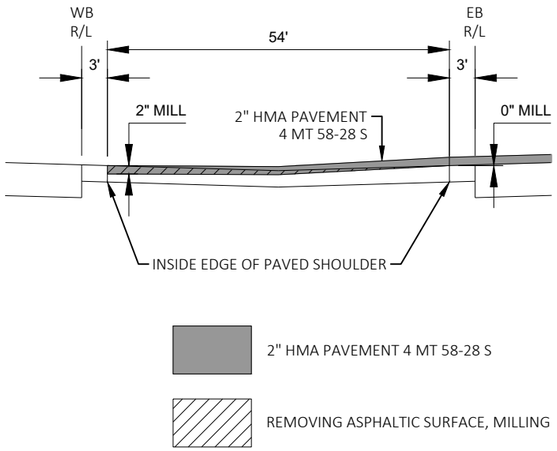


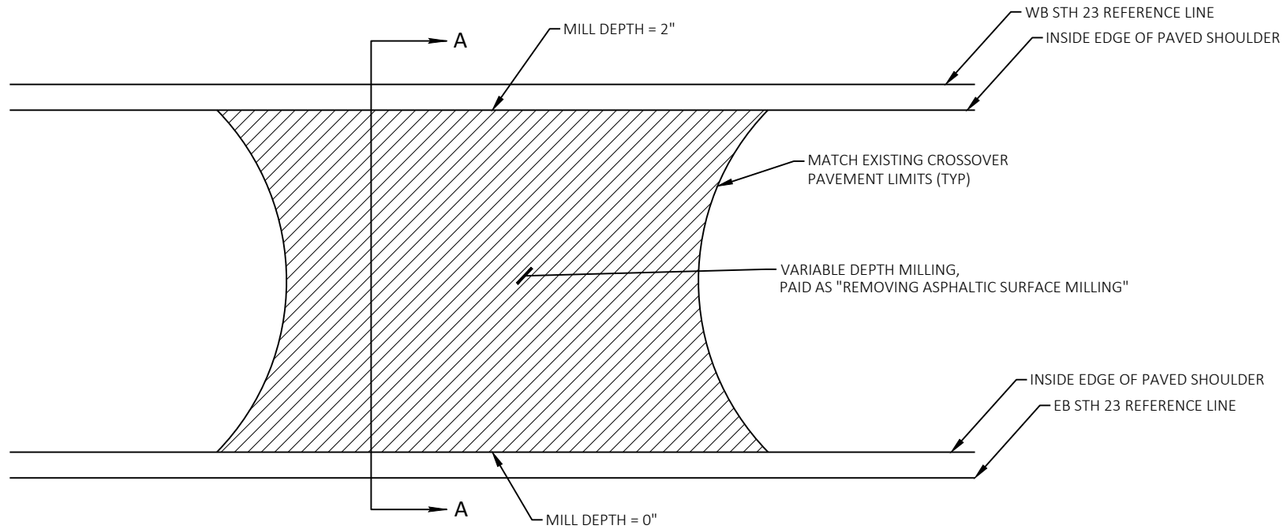
PLAN VIEW

R-CUT INTERSECTION DETAIL

CTH TT
STA 1579+60 TO STA 1582+00
STA 1619+00 TO STA 1621+59

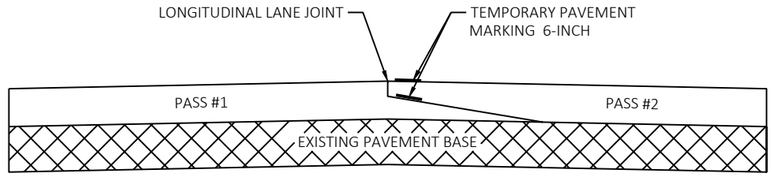
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CONSTRUCTION DETAILS	SHEET 27	E





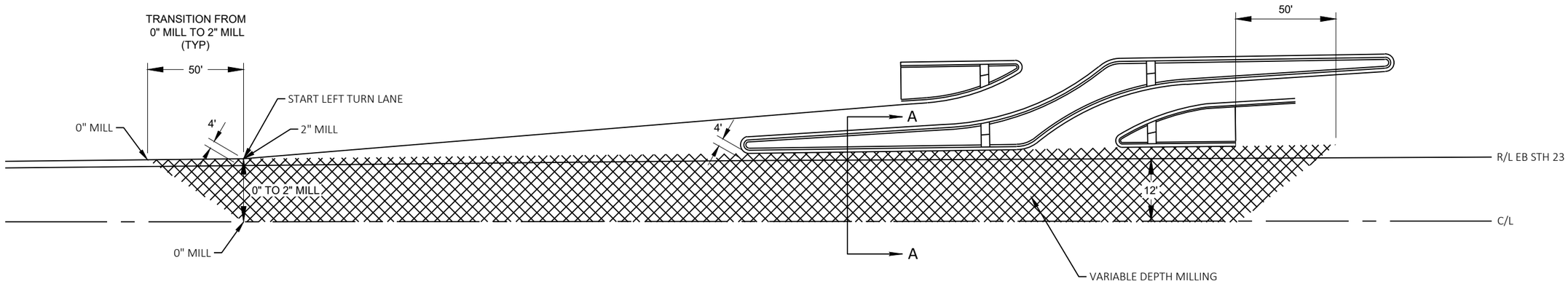
DETAIL OF EXISTING MAINTENANCE CROSSOVER RESURFACING

STA 1205+80
STA 1393+17
STA 1558+33
STA 1649+57

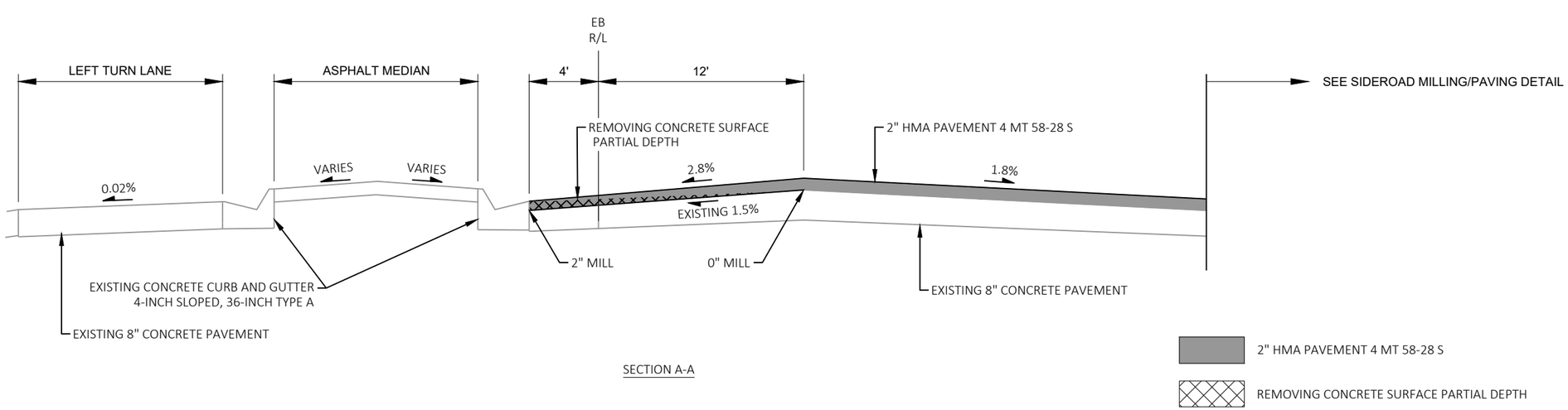


PAVEMENT MARKING DETAIL FOR TAPERED OVERLAPPING JOINTS IN HMA PAVEMENTS

2



PLAN VIEW

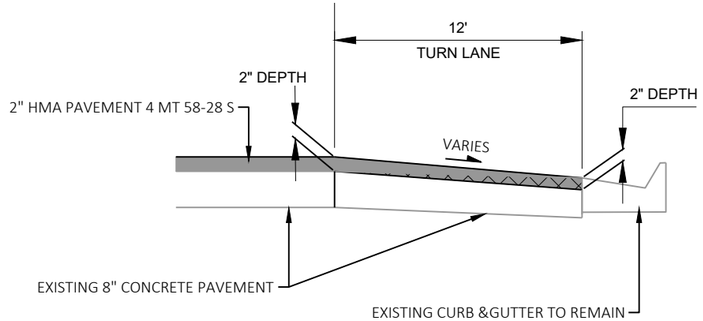


SECTION A-A

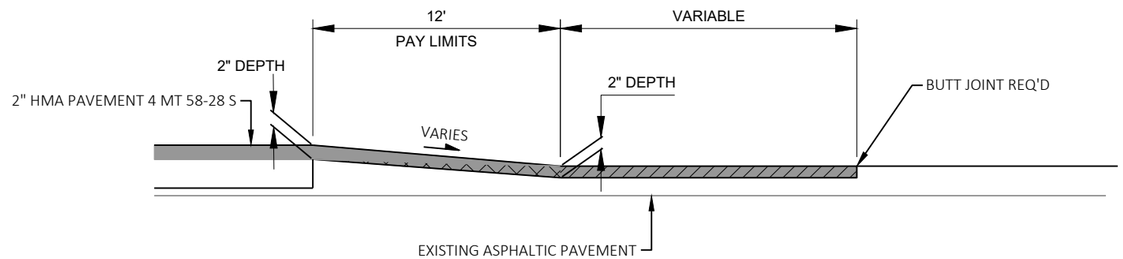
MILLING/PAVING DETAIL FOR RESTRICTED MEDIAN CROSSINGS

STA 1275+60 TO 1283+12 EB (AT FAIRVIEW DR.)
STA 1295+24 TO 1303+12 EB (AT CTH E)
STA 1322+02 AT 1329+63 EB (AT PLEASANT VIEW RD.)
STA 1459+92 TO 1467+74 EB (AT CTH M)

2



SECTION A-A

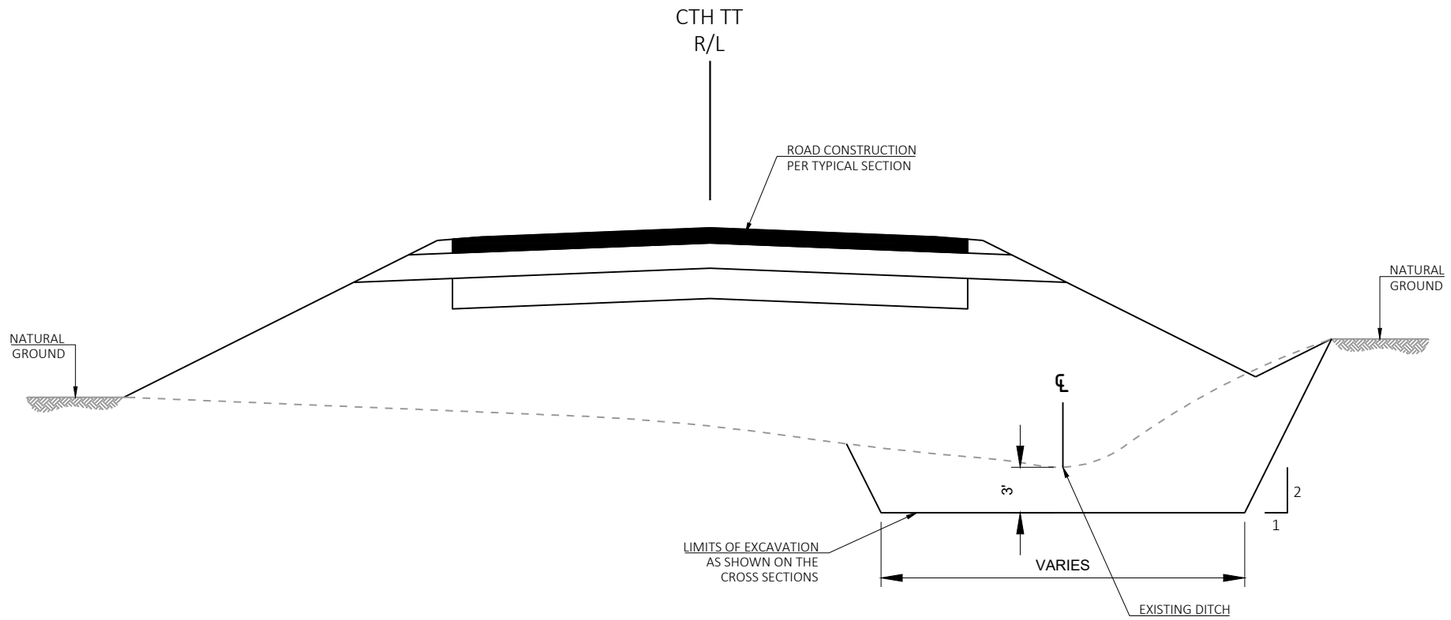


SECTION B-B

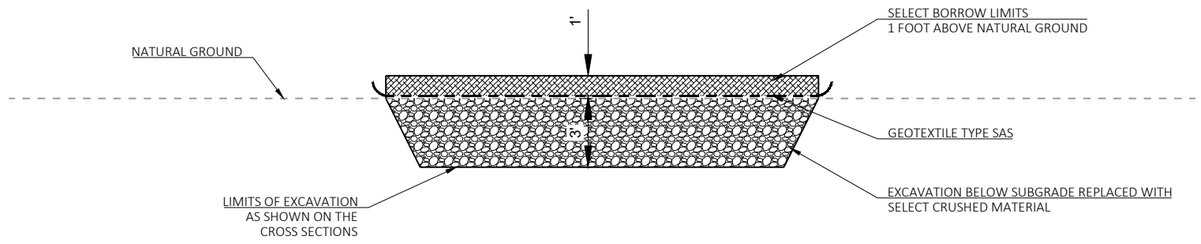
INTERSECTION TRANSITION DETAIL

PIONEER RD.
INEX CT.
FAIRVIEW DR.
CTH E
PLEASANT VIEW RD
WILLOW RD
CTH M
HILLSIDE RD.
BRIDGEWOOD RD.
MEADOWLARK RD.

2

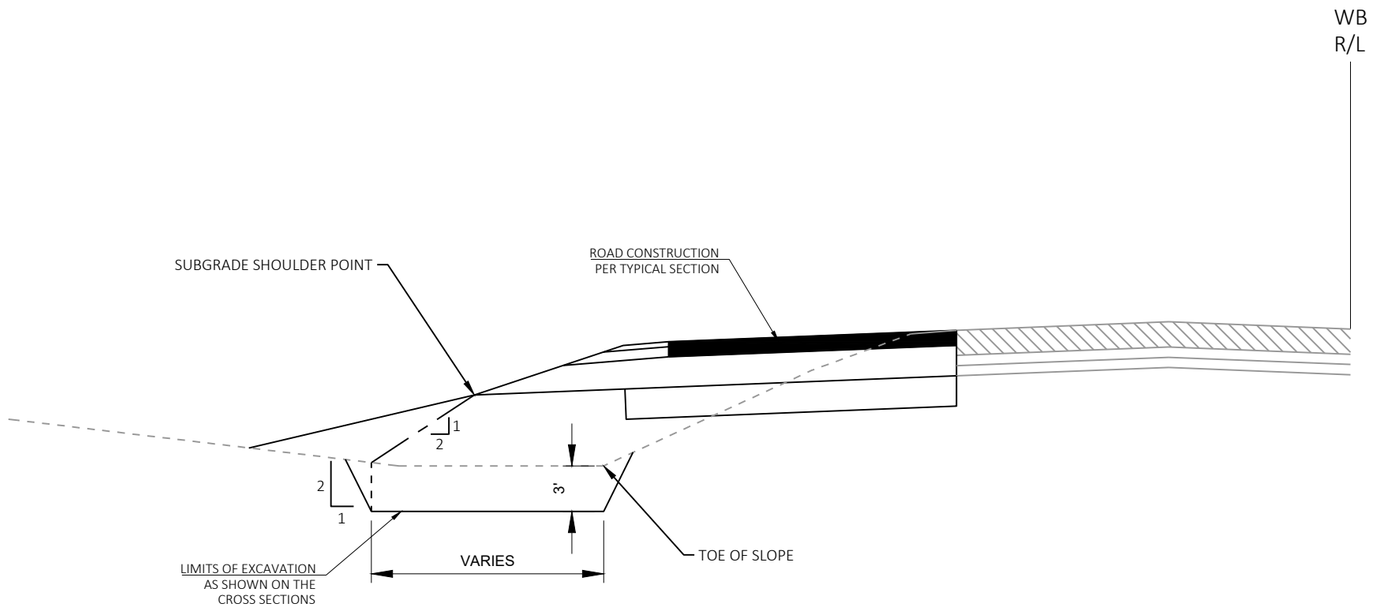


EXCAVATION LIMITS

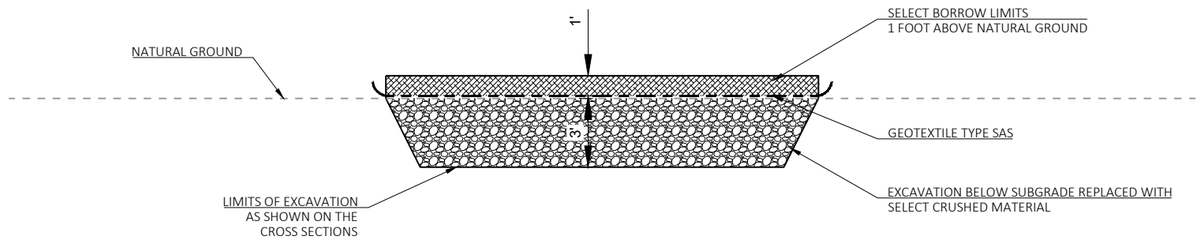


FILL REQUIREMENTS

SOIL MITIGATION FOR CTH TT

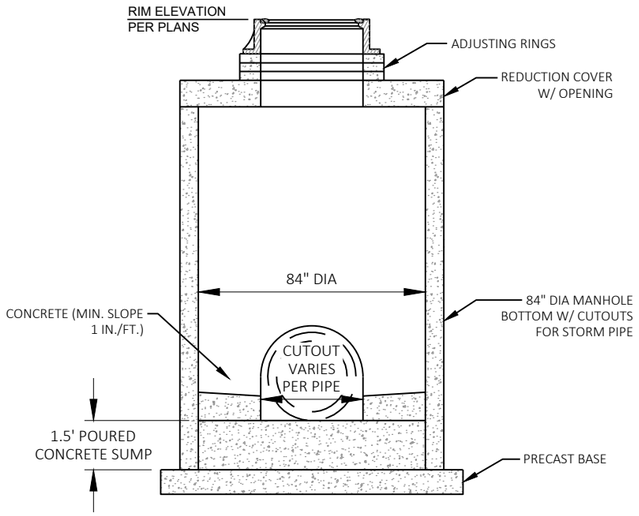


EXCAVATION LIMITS

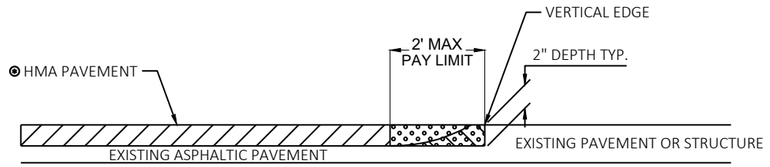


FILL REQUIREMENTS

SOIL MITIGATION FOR STH 23 AT WESTBOUND RCUT BULB



STRUCTURE #29 - 7FT DIA



REMOVING ASPHALTIC SURFACE, MILLING

REMOVING ASPHALTIC SURFACE, BUTT JOINTS

REMOVE ASPHALTIC SURFACE WEDGE AT BUTT JOINT TO CREATE VERTICAL EDGE

SEE TYPICAL CROSS SECTION FOR PAVEMENT TYPE AND THICKNESS OF INDIVIDUAL LAYERS

BUTT JOINT DETAIL FOR ASPHALTIC PAVEMENTS AT SIDE ROADS (NO PROFILE CHANGE)

2

2

N

STH 23 (WESTBOUND)

1191WB+00 1192WB+00 1193WB+00 1194WB+00 1195WB+00 1196WB+00 1197WB+00 1198WB+00

(TO REMAIN)

REMOVING GUARDRAIL

(TO REMAIN)

1191EB+00 1192EB+00 1193EB+00 1194EB+00 1195EB+00 1196EB+00 1197EB+00 1198EB+00

STH 23 (EASTBOUND)

STRUCTURE B-59-0179

LEGEND

- REMOVING CONCRETE PAVEMENT
- REMOVING ASPHALT SURFACE (PAID FOR UNDER COMMON EXCAVATION)
- REMOVING CURB & GUTTER
- REMOVING ASPHALTIC FLUME (PAID FOR UNDER COMMON EXCAVATION)
- OBLITERATE ROAD
- XXXXXXXX SAWING ASPHALT
- YYYYYYYY SAWING CONCRETE
- SLOPE INTERCEPT

PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	REMOVAL DETAILS	SHEET 34	E

2

2

N

WSOR

SUNSET DR

STH 23 (WESTBOUND)

1213WB+00 1214WB+00 1215WB+00 1216WB+00 1217WB+00 1218WB+00 1219WB+00 12

(TO REMAIN)

REMOVING GUARDRAIL

(TO REMAIN)

MATCH LINE STA 1220+00EB

1213EB+00 1214EB+00 1215EB+00 1216EB+00 1217EB+00 1218EB+00 1219EB+00 1220E

STH 23 (EASTBOUND)

POST

SIGN

SIGN

REMOVING GUARDRAIL

LEGEND

- REMOVING CONCRETE PAVEMENT
- REMOVING ASPHALT SURFACE (PAID FOR UNDER COMMON EXCAVATION)
- REMOVING CURB & GUTTER
- REMOVING ASPHALTIC FLUME (PAID FOR UNDER COMMON EXCAVATION)
- OBLITERATE ROAD
- XXXXXXXX SAWING ASPHALT
- YYYYYYYY SAWING CONCRETE
- SLOPE INTERCEPT

PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	REMOVAL DETAILS	SHEET 35	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\021101-RM.DWG
LAYOUT NAME - 021102-rm

PLOT DATE : 9/23/2026 2:35 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

2

N

WSOR

REMOVING STORM SEWER (12-INCH)

REMOVING INLETS

STA 1221WB+47.44
-25.82' L

ABANDONING SEWER

STH 23 (WESTBOUND)

STA 1222WB+01.23
-25.82' L

REMOVING GUARDRAIL

20WB+00 | 1221WB+00 | 1222WB+00 | 1223WB+00 | 1224WB+00 | 1225WB+00 | 1226WB+00 | 1227WB+00

STA 1221WB+77.40
0.21' R

REMOVING INLETS

STA 1222WB+31.18
0.19' R

REMOVING GUARDRAIL

MATCH LINE STA 1220+00EB

EB+00 | 1221EB+00 | 1222EB+00 | 1223EB+00 | 1224EB+00 | 1225EB+00 | 1226EB+00 | 1227EB+00

STH 23 (EASTBOUND)

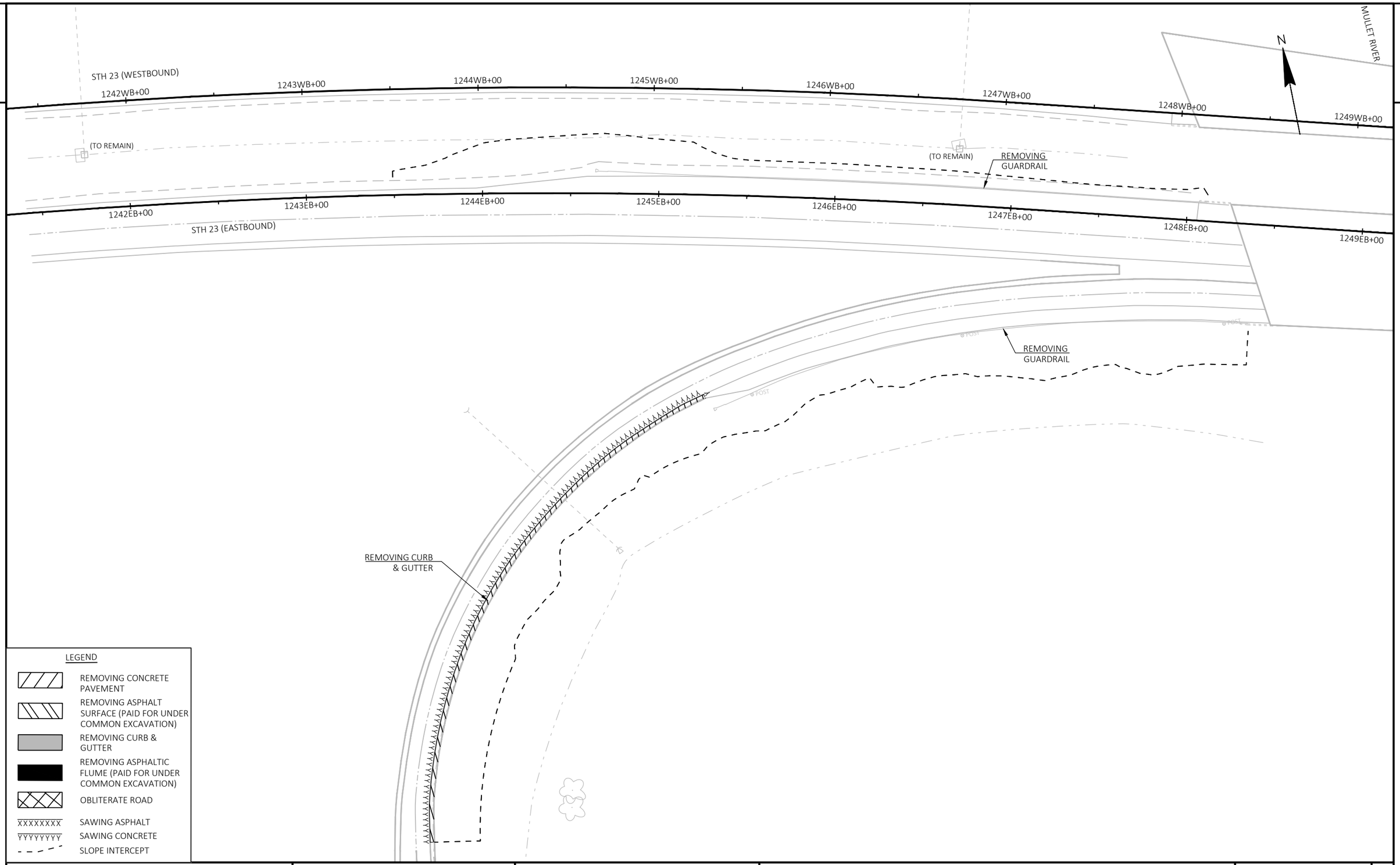
SUNSET DR

WSOR

LEGEND

- REMOVING CONCRETE PAVEMENT
- REMOVING ASPHALT SURFACE (PAID FOR UNDER COMMON EXCAVATION)
- REMOVING CURB & GUTTER
- REMOVING ASPHALTIC FLUME (PAID FOR UNDER COMMON EXCAVATION)
- OBLITERATE ROAD
- XXXXXXXX SAWING ASPHALT
- YYYYYYYY SAWING CONCRETE
- SLOPE INTERCEPT

PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	REMOVAL DETAILS	SHEET 36	E



LEGEND

- REMOVING CONCRETE PAVEMENT
- REMOVING ASPHALT SURFACE (PAID FOR UNDER COMMON EXCAVATION)
- REMOVING CURB & GUTTER
- REMOVING ASPHALTIC FLUME (PAID FOR UNDER COMMON EXCAVATION)
- OBLITERATE ROAD
- XXXXXXXX SAWING ASPHALT
- YYYYYYYY SAWING CONCRETE
- SLOPE INTERCEPT

PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	REMOVAL DETAILS	SHEET 37	E

2

2

N

MULLET RIVER

REMOVING STORM SEWER (12-INCH)

REMOVING INLETS

REMOVING GUARDRAIL

STA 1252WB+01.65
-26.46' L

STA 1252WB+69.98
-26.00' L

STA 1252WB+20.92
0.00'

STA 1252WB+74.98
0.01' R

1251WB+00 1252WB+00 1253WB+00 1254WB+00 1255WB+00 1256WB+00 1257WB+00 1258WB+00

STH 23 (WESTBOUND)

REMOVING GUARDRAIL

REMOVING INLETS

1251EB+00 1252EB+00 1253EB+00 1254EB+00 1255EB+00 1256EB+00 1257EB+00 1258EB+00

STH 23 (EASTBOUND)

ABANDONING SEWER

STA 1252EB+36.39
-0.31' L

STA 1252EB+26.23
0.00'

STA 1252EB+48.79
39.37' R

STA 1252EB+64.34
39.23' R

REMOVING STORM SEWER (12-INCH)

REMOVING FENCE

REMOVING GUARDRAIL

STA 1252EB+59.86
78.65' R

MULLET RIVER

OLD PLANK TRAIL

LEGEND

- REMOVING CONCRETE PAVEMENT
- REMOVING ASPHALT SURFACE (PAID FOR UNDER COMMON EXCAVATION)
- REMOVING CURB & GUTTER
- REMOVING ASPHALTIC FLUME (PAID FOR UNDER COMMON EXCAVATION)
- OBLITERATE ROAD
- XXXXXXXX SAWING ASPHALT
- YYYYYYYY SAWING CONCRETE
- SLOPE INTERCEPT

PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	REMOVAL DETAILS	SHEET 38	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\021101-RM.DWG
LAYOUT NAME - 021105-rm

PLOT DATE : 9/23/2026 2:35 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

2

N

STH 57

SIGN

STH 23 (WESTBOUND)

1351WB+00 1352WB+00 1353WB+00 1354WB+00 1355WB+00 1356WB+00 1357WB+00 1358WB+00

SIGN

(TO REMAIN)

REMOVING GUARDRAIL

MATCH LINE STA 1358+00EB

1351EB+00 1352EB+00 1353EB+00 1354EB+00 1355EB+00 1356EB+00 1357EB+00 1358

STH 23 (EASTBOUND)

REMOVING GUARDRAIL

STH 57

LEGEND

- REMOVING CONCRETE PAVEMENT
- REMOVING ASPHALT SURFACE (PAID FOR UNDER COMMON EXCAVATION)
- REMOVING CURB & GUTTER
- REMOVING ASPHALTIC FLUME (PAID FOR UNDER COMMON EXCAVATION)
- OBLITERATE ROAD
- XXXXXXXX SAWING ASPHALT
- YYYYYYYY SAWING CONCRETE
- SLOPE INTERCEPT

PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	REMOVAL DETAILS	SHEET 39	E

2

N

STH 57

REMOVING STORM SEWER (12-INCH)

REMOVING INLETS

STA 1359WB+15.57
-26.00' L

STA 1359WB+67.11
-26.00' L

REMOVING GUARDRAIL

ABANDONING SEWER

STA 1359WB+88.51
0.00'

STH 23 (WESTBOUND)

1359WB+00 1360WB+00 1361WB+00 1362WB+00 1363WB+00 1364WB+00 1365WB+00

STA 1359WB+37.07
0.00'

REMOVING INLETS

STA 1359EB+41.37
0.00'

STA 1359EB+51.45
0.00' R

REMOVING GUARDRAIL

MATCH LINE STA 1358+00EB

B+00 1359EB+00 1360EB+00 1361EB+00 1362EB+00 1363EB+00 1364EB+00 1365EB+00

ABANDONING SEWER

STA 1359EB+62.57
24.00' R

STA 1359EB+78.07
24.00' R

STH 23 (EASTBOUND)

REMOVING INLETS

REMOVING GUARDRAIL

STH 57

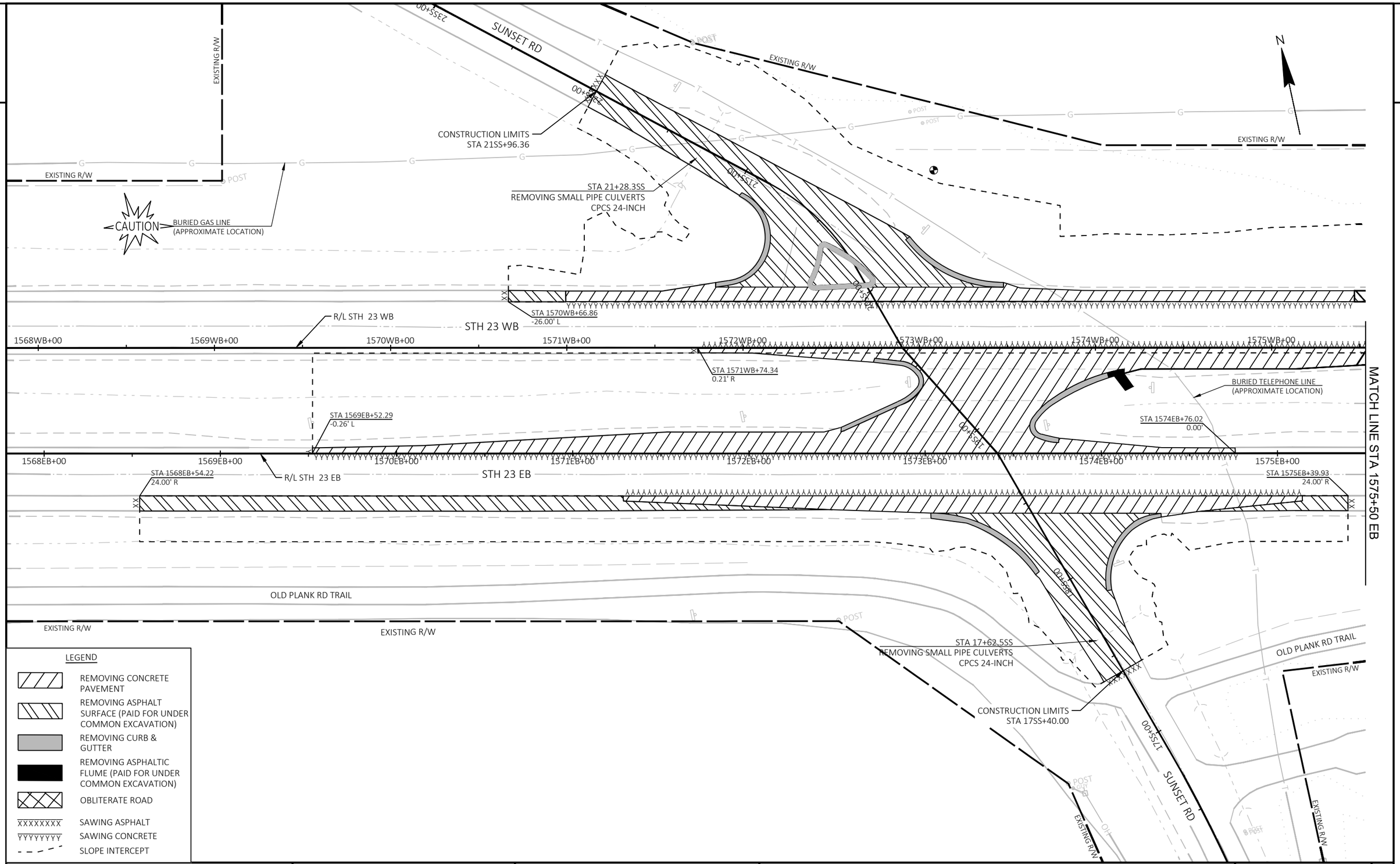
REMOVING STORM SEWER (12-INCH)

OLD PLANK RD TRAIL

LEGEND

- REMOVING CONCRETE PAVEMENT
- REMOVING ASPHALT SURFACE (PAID FOR UNDER COMMON EXCAVATION)
- REMOVING CURB & GUTTER
- REMOVING ASPHALTIC FLUME (PAID FOR UNDER COMMON EXCAVATION)
- OBLITERATE ROAD
- XXXXXXXX SAWING ASPHALT
- YYYYYYYY SAWING CONCRETE
- SLOPE INTERCEPT

PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	REMOVAL DETAILS	SHEET 40	E



PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	REMOVAL DETAILS	SHEET 41	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\021101-RM.DWG
LAYOUT NAME - 021108-rm
PLOT DATE : 9/23/2026 2:35 PM
PLOT BY : HOSPER, JAN
PLOT NAME :
PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 42

2

CAUTION
BURIED GAS LINE
(APPROXIMATE LOCATION)

N

EXISTING R/W

EXISTING R/W

STA 1577WB+82.24
-26.03' L

R/L STH 23 WB

STH 23 WB

1576WB+00 1577WB+00 1578WB+00 1579WB+00 1580WB+00 1581WB+00 1582WB+00 1583WB+

STA 1577WB+21.13
0.00'

STA 1579WB+98.69
0.00'

MATCH LINE STA 1575+50 EB

MATCH LINE STA 1583+00 EB

STA 1579EB+63.24
0.00'

STA 1580EB+64.01
-0.04' L

1576EB+00 1577EB+00 1578EB+00 1579EB+00 1580EB+00 1581EB+00 1582EB+00 1583E

R/L STH 23 EB

STH 23 EB

STA 1579EB+67.63
24.00' R

STA 1582EB+77.62
24.00' R

STA 1578TR+56.27
-13.06' L

REMOVING
FENCE

STA 1581TR+99.15
-4.42' L

1577TR+00 1578TR+00 1579TR+00 1580TR+00 1581TR+00 1582TR+00

OLD PLANK RD TRAIL

EXISTING R/W

EXISTING R/W

CONSTRUCTION LIMITS
STA 1578TR+00.00

CONSTRUCTION LIMITS
STA 1582TR+00.00

R/W

R/W

BLDG

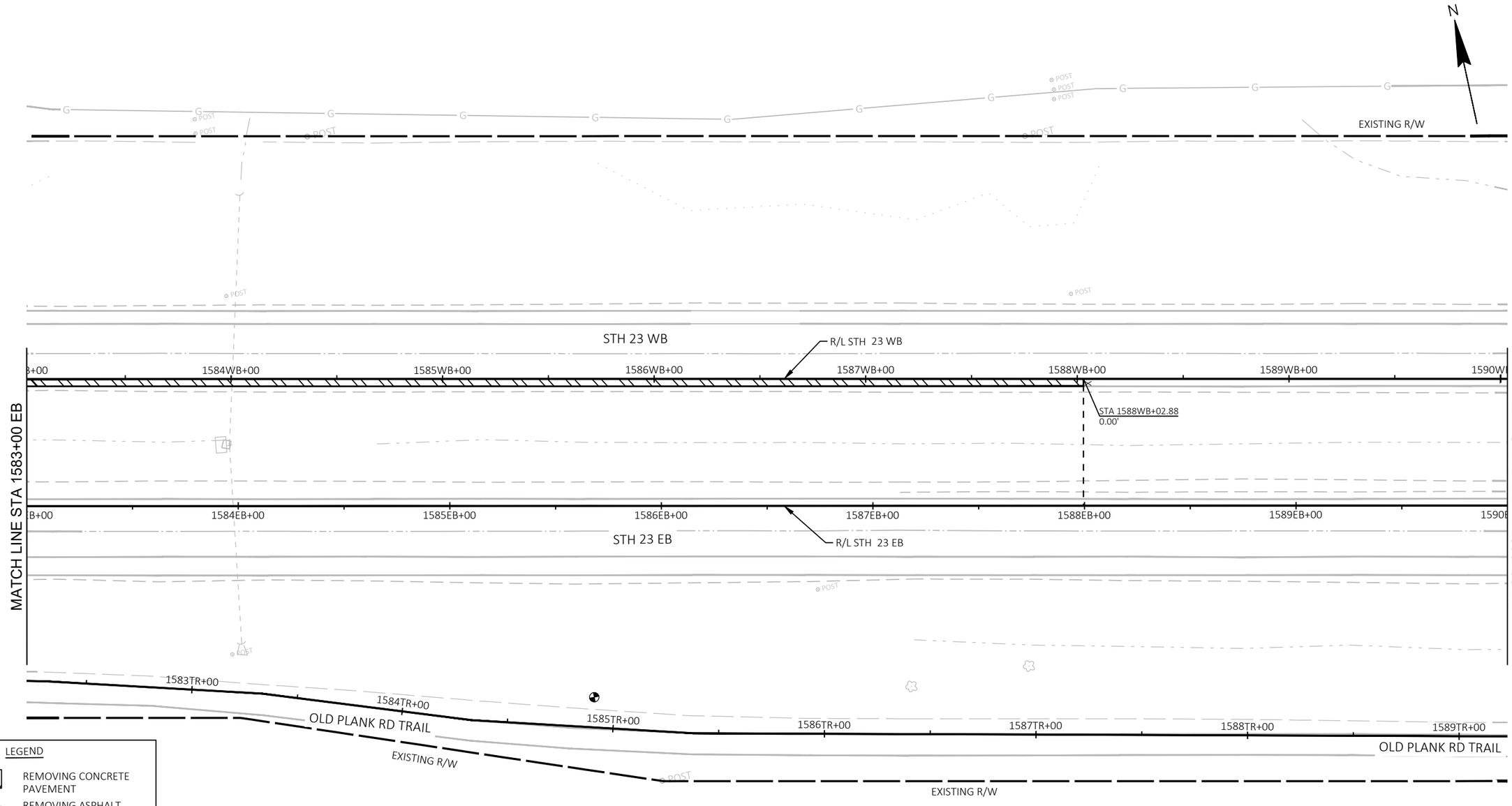
LEGEND

- REMOVING CONCRETE PAVEMENT
- REMOVING ASPHALT SURFACE (PAID FOR UNDER COMMON EXCAVATION)
- REMOVING CURB & GUTTER
- REMOVING ASPHALTIC FLUME (PAID FOR UNDER COMMON EXCAVATION)
- OBLITERATE ROAD
- XXXXXXXX SAWING ASPHALT
- YYYYYYYY SAWING CONCRETE
- SLOPE INTERCEPT

PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	REMOVAL DETAILS	SHEET 42	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\021101-RM.DWG
LAYOUT NAME - 021109-rm
PLOT DATE : 9/23/2026 2:35 PM
PLOT BY : HOSPER, JAN
PLOT NAME :
PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 42

2



LEGEND

- REMOVING CONCRETE PAVEMENT
- REMOVING ASPHALT SURFACE (PAID FOR UNDER COMMON EXCAVATION)
- REMOVING CURB & GUTTER
- REMOVING ASPHALTIC FLUME (PAID FOR UNDER COMMON EXCAVATION)
- OBLITERATE ROAD
- XXXXXXXX SAWING ASPHALT
- YYYYYYYY SAWING CONCRETE
- SLOPE INTERCEPT

PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	REMOVAL DETAILS	SHEET 43	E

2

2

LEGEND

- REMOVING CONCRETE PAVEMENT
- REMOVING ASPHALT SURFACE (PAID FOR UNDER COMMON EXCAVATION)
- REMOVING CURB & GUTTER
- REMOVING ASPHALTIC FLUME (PAID FOR UNDER COMMON EXCAVATION)
- OBLITERATE ROAD
- XXXXXXXX SAWING ASPHALT
- YYYYYYYY SAWING CONCRETE
- SLOPE INTERCEPT

N

EXISTING R/W

R/L STH 23 WB

STH 23 WB

1591WB+00 1592WB+00 1593WB+00 1594WB+00 1595WB+00 1596WB+00

MATCH LINE STA 1590+00 EB

MATCH LINE STA 1597+00 EB

STA 1593EB+32.39
0.00'

1591EB+00 1592EB+00 1593EB+00 1594EB+00 1595EB+00 1596EB+00

STH 23 EB

STA 1591EB+33.50
24.08' R

R/L STH 23 EB

REMOVING FENCE

STA 1594TR+49.89
-7.07' L

1590TR+00 1591TR+00 1592TR+00 1593TR+00 1594TR+00 1595TR+00 1596TR+00

OLD PLANK RD TRAIL

EXISTING R/W

TLE

CONSTRUCTION LIMITS
STA 1594TR+50.00

PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	REMOVAL DETAILS	SHEET 44	E

2

LEGEND

- REMOVING CONCRETE PAVEMENT
- REMOVING ASPHALT SURFACE (PAID FOR UNDER COMMON EXCAVATION)
- REMOVING CURB & GUTTER
- REMOVING ASPHALTIC FLUME (PAID FOR UNDER COMMON EXCAVATION)
- OBLITERATE ROAD
- XXXXXXXX SAWING ASPHALT
- YYYYYYYY SAWING CONCRETE
- SLOPE INTERCEPT

MATCH LINE STA 53+50 TT

MATCH LINE STA 49+00 TT

MATCH LINE STA 1597+00 EB

MATCH LINE STA 1604+00 EB

R/W

EXISTING R/W

STA 1599WB+29.04
-110.58' L

BURIED TELEVISION CABLE
(APPROXIMATE LOCATION)

REMOVE
EXISTING FENCE

CLEARING AND
GRUBBING
(TYP.)

BURIED GAS LINE
(APPROXIMATE LOCATION)

CAUTION

BURIED FIBER OPTIC CABLE
(APPROXIMATE LOCATION)

REMOVING
APRON
ENDWALLS

STA 1598WB+08.95
-26.00' L

STA 1598WB+72.84
0.07' R

REMOVING STORM
SEWER (18-INCH)

REMOVING
INLETS

STA 1600EB+54.36
-53.65' L

REMOVING
GUARDRAIL

STA 1603EB+50.95
0.00'

STA 1603EB+66.72
24.08' R

STA 1603TR+25.85
-9.26' L

REMOVING
FENCE

REMOVING
DELINEATORS
AND MARKERS

STA 1602+19.6TR
REMOVING SMALL PIPE CULVERTS
CPCS 30-INCH

CONSTRUCTION LIMITS
STA 1603TR+25.00

STA 1602+49.3TR
REMOVING SMALL PIPE CULVERTS
CPCP 30-INCH

REMOVING
FENCE

STA 1602EB+22.54
143.01' R

CLEARING AND
GRUBBING
(TYP.)

STA 1601+24.2TR
REMOVING SMALL PIPE CULVERTS
CPCS 18-INCH

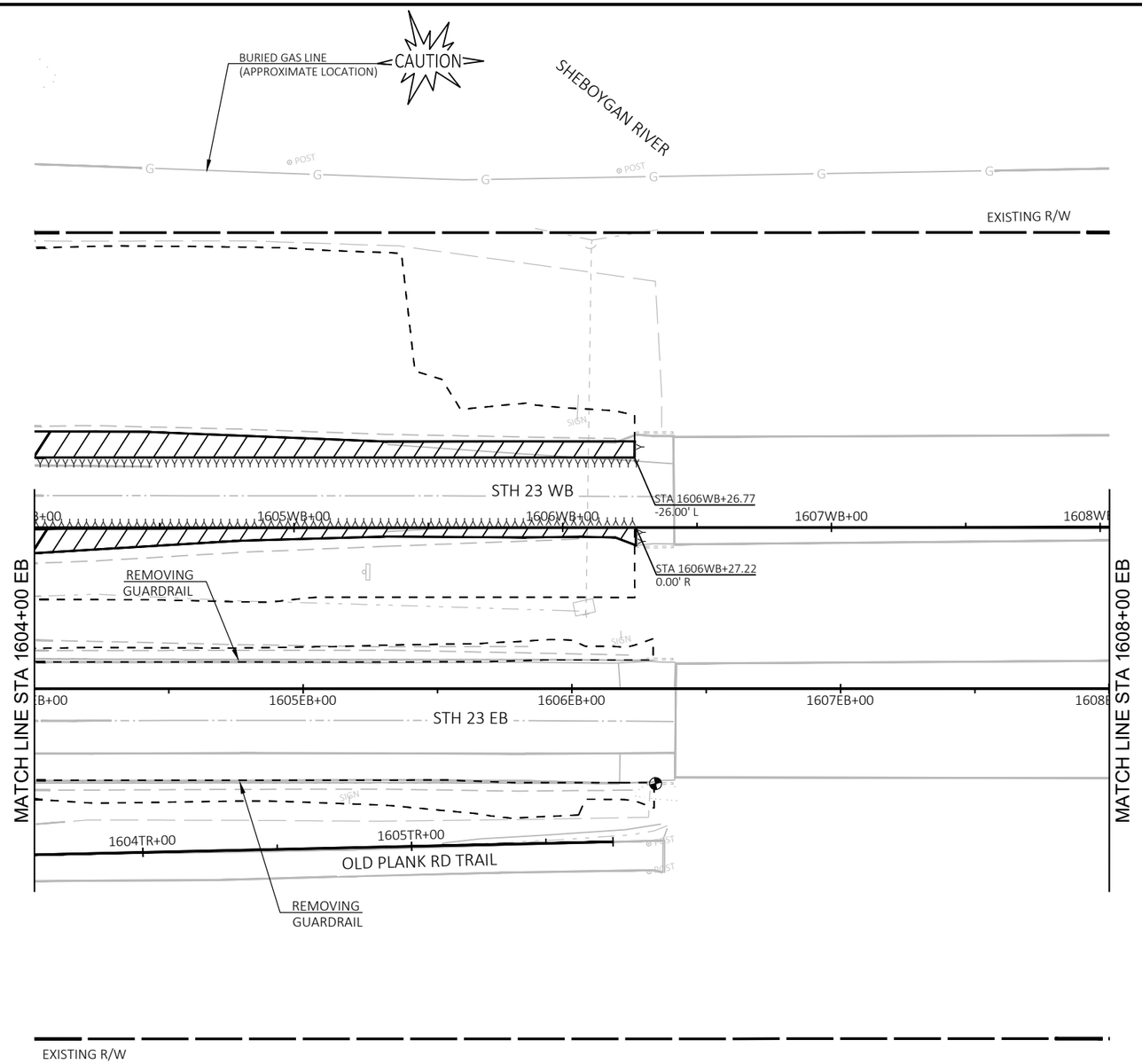
STA 1601+72.2TR
REMOVING SMALL PIPE CULVERTS
CPCS 18-INCH

CTH TT

TLE

PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	REMOVAL DETAILS	SHEET 45	E

2

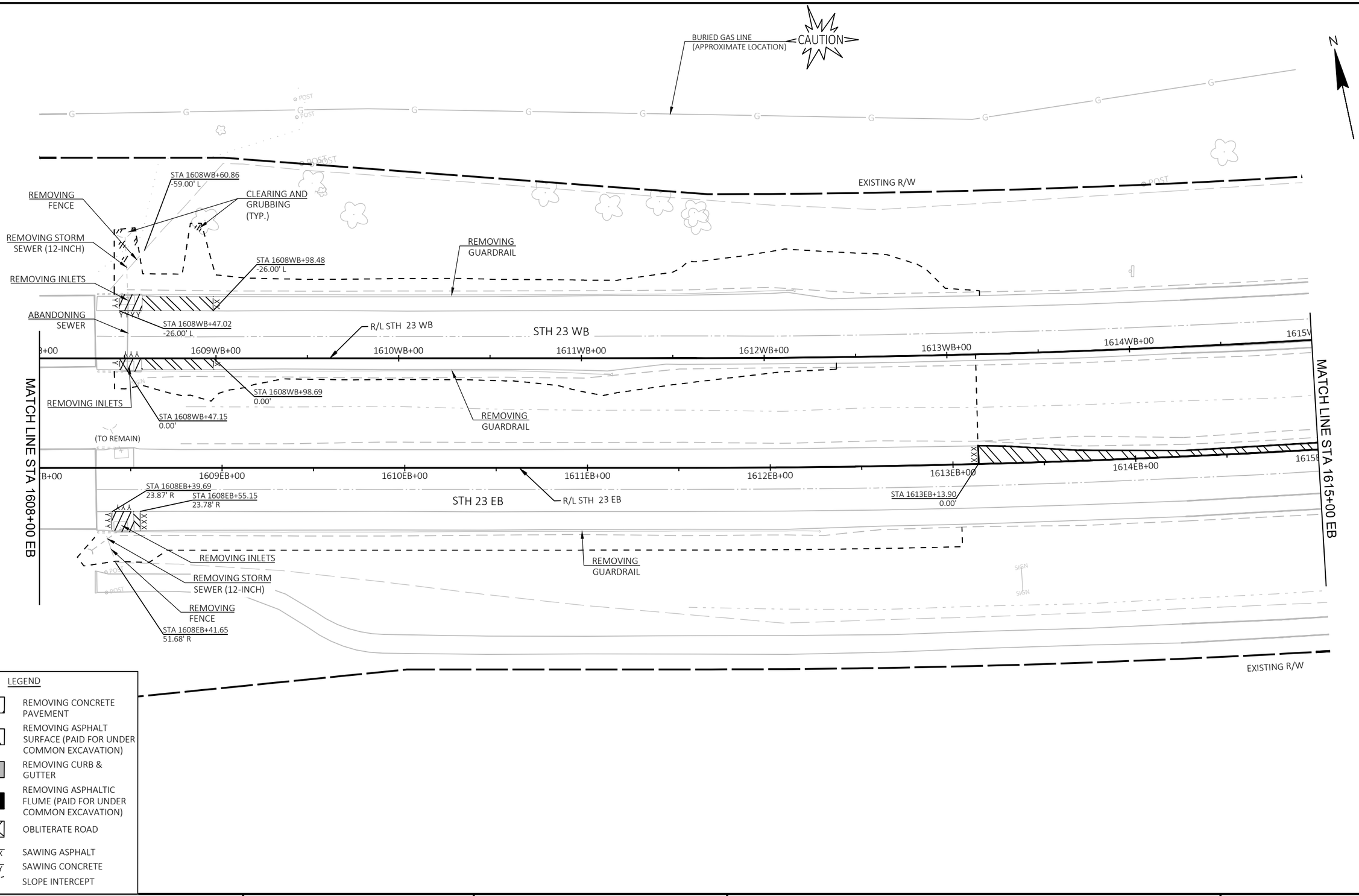


LEGEND

- REMOVING CONCRETE PAVEMENT
- REMOVING ASPHALT SURFACE (PAID FOR UNDER COMMON EXCAVATION)
- REMOVING CURB & GUTTER
- REMOVING ASPHALTIC FLUME (PAID FOR UNDER COMMON EXCAVATION)
- OBLITERATE ROAD
- XXXXXXXX SAWING ASPHALT
- YYYYYYYY SAWING CONCRETE
- SLOPE INTERCEPT

PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	REMOVAL DETAILS	SHEET 46	E

2



LEGEND

- REMOVING CONCRETE PAVEMENT
- REMOVING ASPHALT SURFACE (PAID FOR UNDER COMMON EXCAVATION)
- REMOVING CURB & GUTTER
- REMOVING ASPHALTIC FLUME (PAID FOR UNDER COMMON EXCAVATION)
- OBLITERATE ROAD
- XXXXXXXX SAWING ASPHALT
- YYYYYYYY SAWING CONCRETE
- SLOPE INTERCEPT

PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	REMOVAL DETAILS	SHEET 47	E

2

2

N

BURIED GAS LINE
(APPROXIMATE LOCATION)

CAUTION

EXISTING R/W

R/W

STA 1621WB+69.64
-107.13' L

REMOVING
FENCE

STA 1619WB+51.81
-92.04' L

REMOVING
APRON
ENDWALLS

STH 23 WB

R/L STH 23 WB

STA 1618WB+45.22
-26.11' L

STA 1621WB+44.19
-26.25' L

STA 1620WB+30.81
0.34' R

STA 1621WB+48.58
0.00' R

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

MATCH LINE STA 1615+00 EB

STH 23 EB

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

R/L STH 23 EB

STA 1621EB+19.01
-0.02' L

OLD PLANK RD TRAIL

EXISTING R/W

LEGEND

- REMOVING CONCRETE PAVEMENT
- REMOVING ASPHALT SURFACE (PAID FOR UNDER COMMON EXCAVATION)
- REMOVING CURB & GUTTER
- REMOVING ASPHALTIC FLUME (PAID FOR UNDER COMMON EXCAVATION)
- OBLITERATE ROAD
- XXXXXXXX SAWING ASPHALT
- YYYYYYYY SAWING CONCRETE
- SLOPE INTERCEPT

PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	REMOVAL DETAILS	SHEET 48	E

2

2

N

STH 32

STH 23 (WESTBOUND)

1675WB+00 1676WB+00 1677WB+00 1678WB+00 1679WB+00 1680WB+00 1681WB+00 1682W

REMOVING GUARDRAIL

1675EB+00 1676EB+00 1677EB+00 1678EB+00 1679EB+00 1680EB+00 1681EB+00 1682EB+0

STH 23 (EASTBOUND)

REMOVING GUARDRAIL

STH 32

(TO REMAIN)

LEGEND

- REMOVING CONCRETE PAVEMENT
- REMOVING ASPHALT SURFACE (PAID FOR UNDER COMMON EXCAVATION)
- REMOVING CURB & GUTTER
- REMOVING ASPHALTIC FLUME (PAID FOR UNDER COMMON EXCAVATION)
- OBLITERATE ROAD
- XXXXXXXX SAWING ASPHALT
- YYYYYYYY SAWING CONCRETE
- SLOPE INTERCEPT

PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	REMOVAL DETAILS	SHEET 49	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\021101-RM.DWG
LAYOUT NAME - 021116-rm

PLOT DATE : 9/23/2026 2:35 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

2

N

EXISTING R/W

CONSTRUCTION LIMITS
STA 42TT+26.00

42TT+00

CTH TT

43TT+00

44TT+00

45TT+00

46TT+00

47TT+00

48TT+00

49TT+00

MATCH LINE STA 49+00 TT

TLE

R/W

BURIED TELEVISION CABLE
(APPROXIMATE LOCATION)

STA 45TT+26.07
56.36' R

STA 43+07.4TT
REMOVING SMALL PIPE
CULVERTS
CPCS 18-INCH

CLEARING AND
GRUBBING

BURIED FIBER OPTIC CABLE
(APPROXIMATE LOCATION)

EXISTING R/W

EXISTING R/W

WELL

SEPV

HW

LEGEND

- REMOVING CONCRETE PAVEMENT
- REMOVING ASPHALT SURFACE (PAID FOR UNDER COMMON EXCAVATION)
- REMOVING CURB & GUTTER
- REMOVING ASPHALTIC FLUME (PAID FOR UNDER COMMON EXCAVATION)
- OBLITERATE ROAD
- XXXXXXXX SAWING ASPHALT
- YYYYYYYY SAWING CONCRETE
- SLOPE INTERCEPT

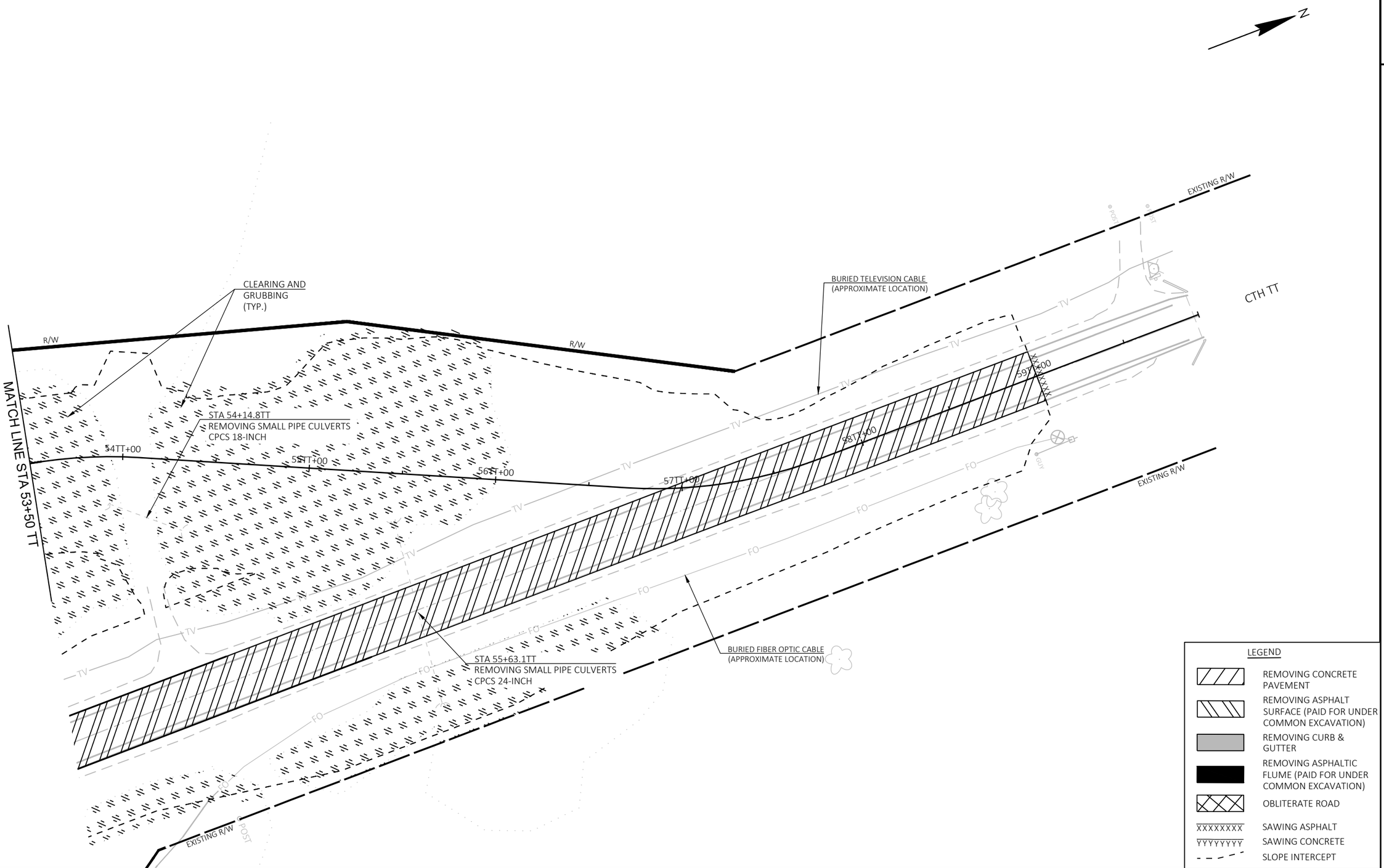
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	REMOVAL DETAILS	SHEET 50	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\021101-RM.DWG
LAYOUT NAME - 021117-rm

PLOT DATE : 9/23/2026 2:35 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:50 FT

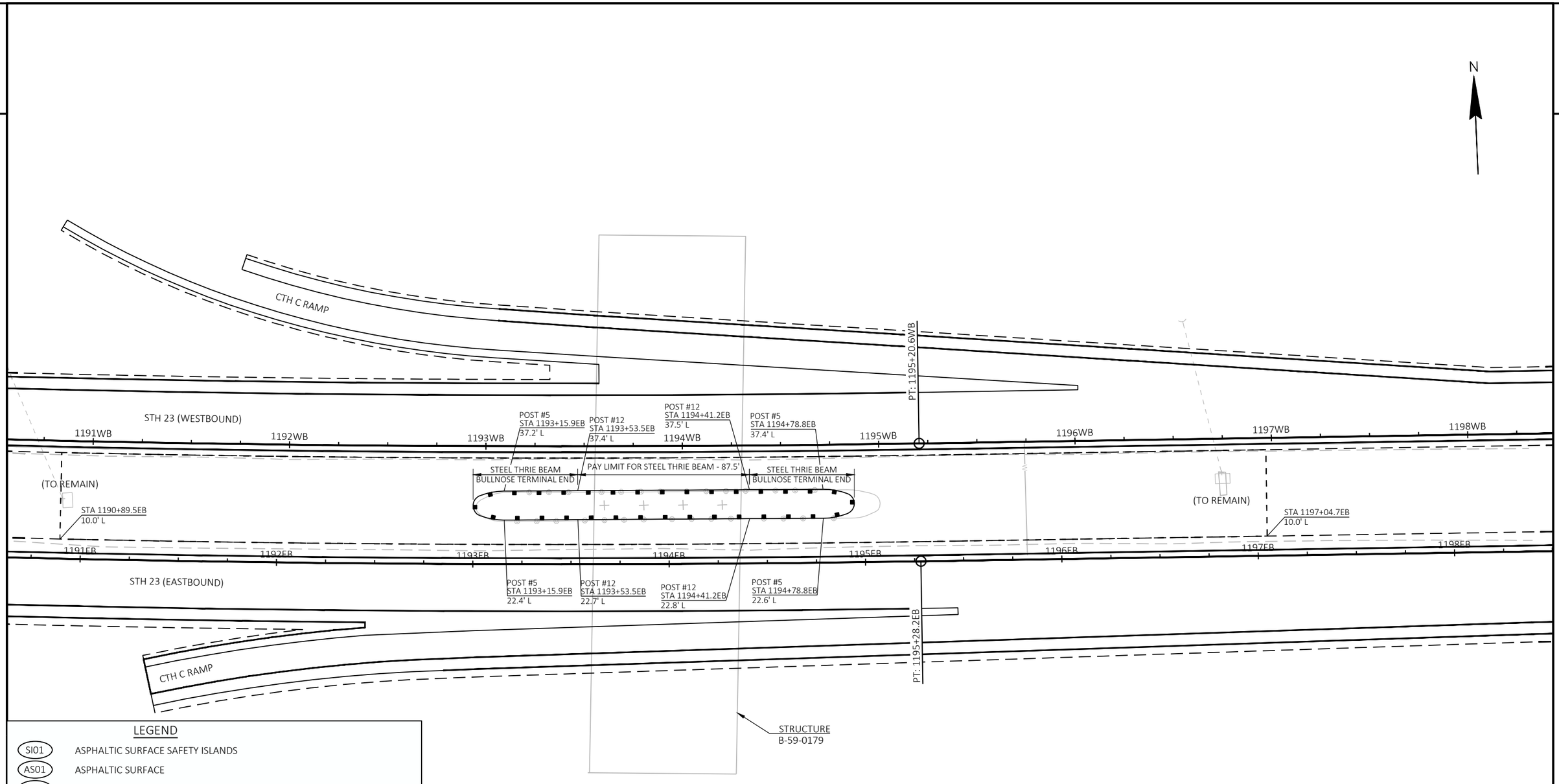
WISDOT/CADDS SHEET 42

2



PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	REMOVAL DETAILS	SHEET 51	E

2



LEGEND

SI01	ASPHALTIC SURFACE SAFETY ISLANDS
AS01	ASPHALTIC SURFACE
CG01	CONCRETE CURB & GUTTER 30-INCH TYPE D
CG02	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE D
CG03	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE D, REVERSE SLOPED
CG04	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBTT
CS04	CONCRETE SIDEWALK 4-INCH
	CONCRETE PAVEMENT 8-INCH
XXXXX	SAW CUT ASPHALT
ΔΔΔΔΔ	SAW CUT CONCRETE
	SLOPE INTERCEPT

GUARDRAIL DETAIL
STH 23
STA 1193+00.0EB - STA 1194+94.6EB

2

N

STH 23 (WESTBOUND)

1213WB 1214WB 1215WB 1216WB 1217WB 1218WB 1219WB

(TO REMAIN)

STA 1214+05.5EB
10.0' L

15:1

10:1

MGS GUARDRAIL
TERMINAL EAT - 53.125

STA 1215+78.6EB
10.0' L

4'

MGS GUARDRAIL 3
275'

(TO REMAIN)

STA 1218+53.6EB
10.0' L

MGS THRIE BEAM
TRANSITION - 39.4'

STA 1218+93.0EB
10.0' L

1213EB 1214EB 1215EB 1216EB 1217EB 1218EB 1219EB

MATCH LINE STA 1220+00EB

STH 23 (EASTBOUND)

STA 1213+13.3EB
30.0' R

POST #1
STA 1213+73.3EB
36.0' R

POST #5
STA 1213+98.3EB
35.0' R

STA 1214+35.5EB
3.0' L

POST #9
STA 1214+23.2EB
34.0' R

POST #1
STA 1215+25.5EB
12.0' L

POST #5
STA 1215+50.5EB
11.0' L

POST #9
STA 1215+75.5EB
10.0' L

10:1

15:1

STA 1212+53.3EB
34.0' R

STA 1214+26.4EB
34.0' R

MGS GUARDRAIL
TERMINAL EAT - 53.125

MGS GUARDRAIL 3
462.5'

STA 1218+88.9EB
34.0' R

STA 1219+28.3EB
34.0' R

MGS THRIE BEAM
TRANSITION - 39.4'

LEGEND

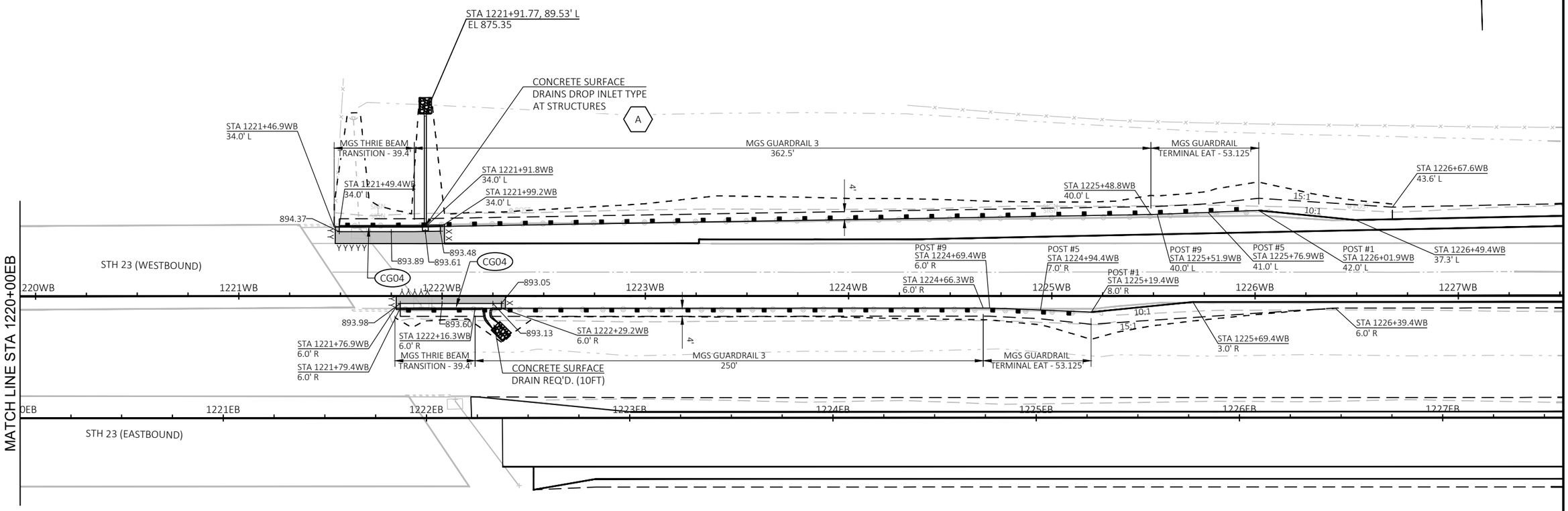
SI01	ASPHALTIC SURFACE SAFETY ISLANDS
AS01	ASPHALTIC SURFACE
CG01	CONCRETE CURB & GUTTER 30-INCH TYPE D
CG02	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE D
CG03	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE D, REVERSE SLOPED
CG04	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBTT
CS04	CONCRETE SIDEWALK 4-INCH
	CONCRETE PAVEMENT 8-INCH
XXXXX	SAW CUT ASPHALT
XXXXX	SAW CUT CONCRETE
	SLOPE INTERCEPT

GUARDRAIL DETAIL
STH 23 EASTBOUND
STA 1213+133.3EB - STA 1219+28.3EB

PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	PLAN DETAILS - STH 23 GUARDRAIL	SHEET 53 E

2

N



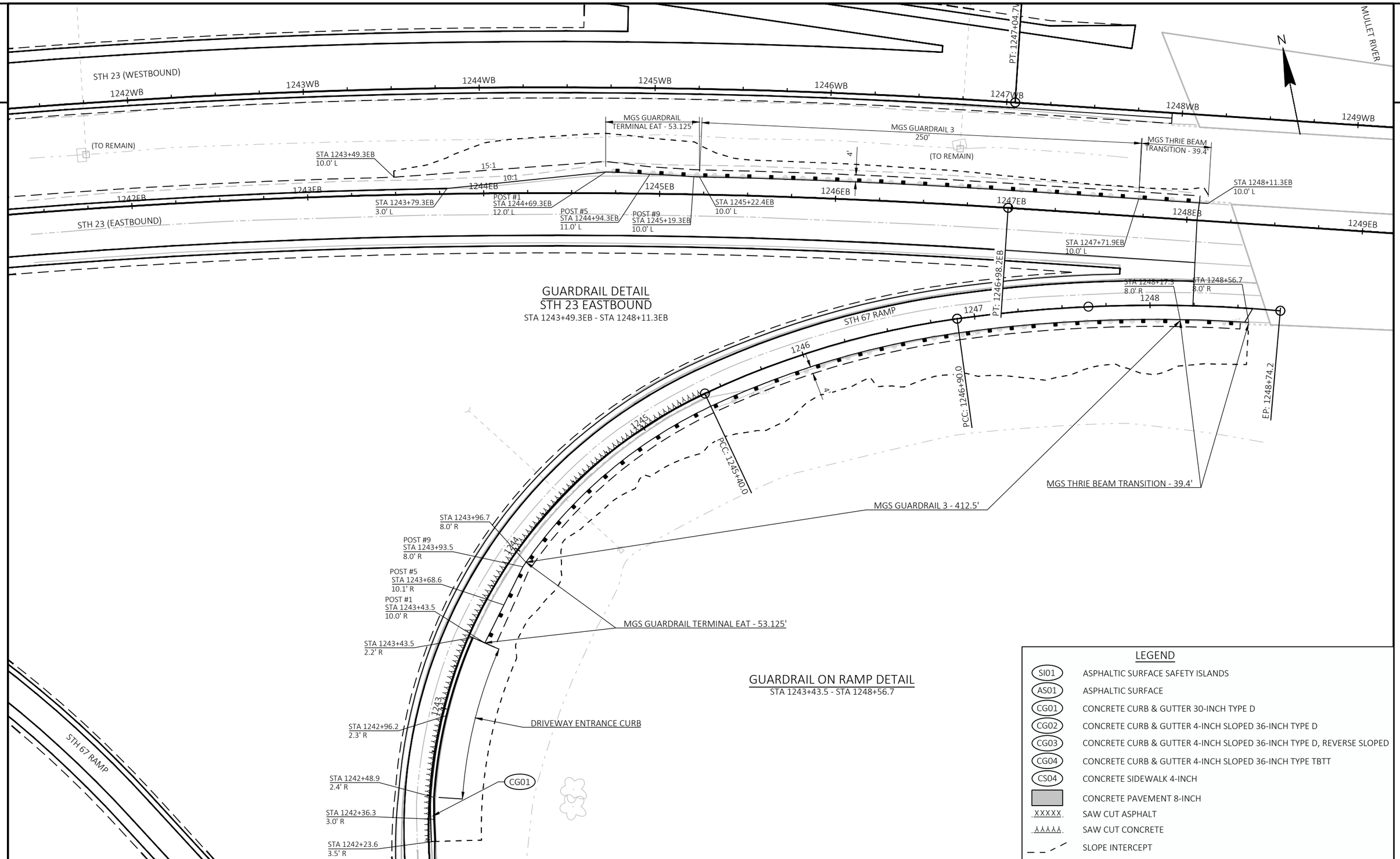
LEGEND

SI01	ASPHALTIC SURFACE SAFETY ISLANDS
AS01	ASPHALTIC SURFACE
CG01	CONCRETE CURB & GUTTER 30-INCH TYPE D
CG02	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE D
CG03	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE D, REVERSE SLOPED
CG04	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBTT
CS04	CONCRETE SIDEWALK 4-INCH
	CONCRETE PAVEMENT 8-INCH
XXXXX	SAW CUT ASPHALT
XXXXX	SAW CUT CONCRETE
	SLOPE INTERCEPT

NOTE:
A SYMBOL REFERS TO DROP INLET STRUCTURE. SEE MQ'S FOR FLOWLINE AND PIPE INLET ELEVATIONS.

GUARDRAIL DETAIL
STH 23 WESTBOUND
STA 1221+46.9WB - STA 1226+67.6WB

PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	PLAN DETAILS - STH 23 GUARDRAIL	SHEET 54 E

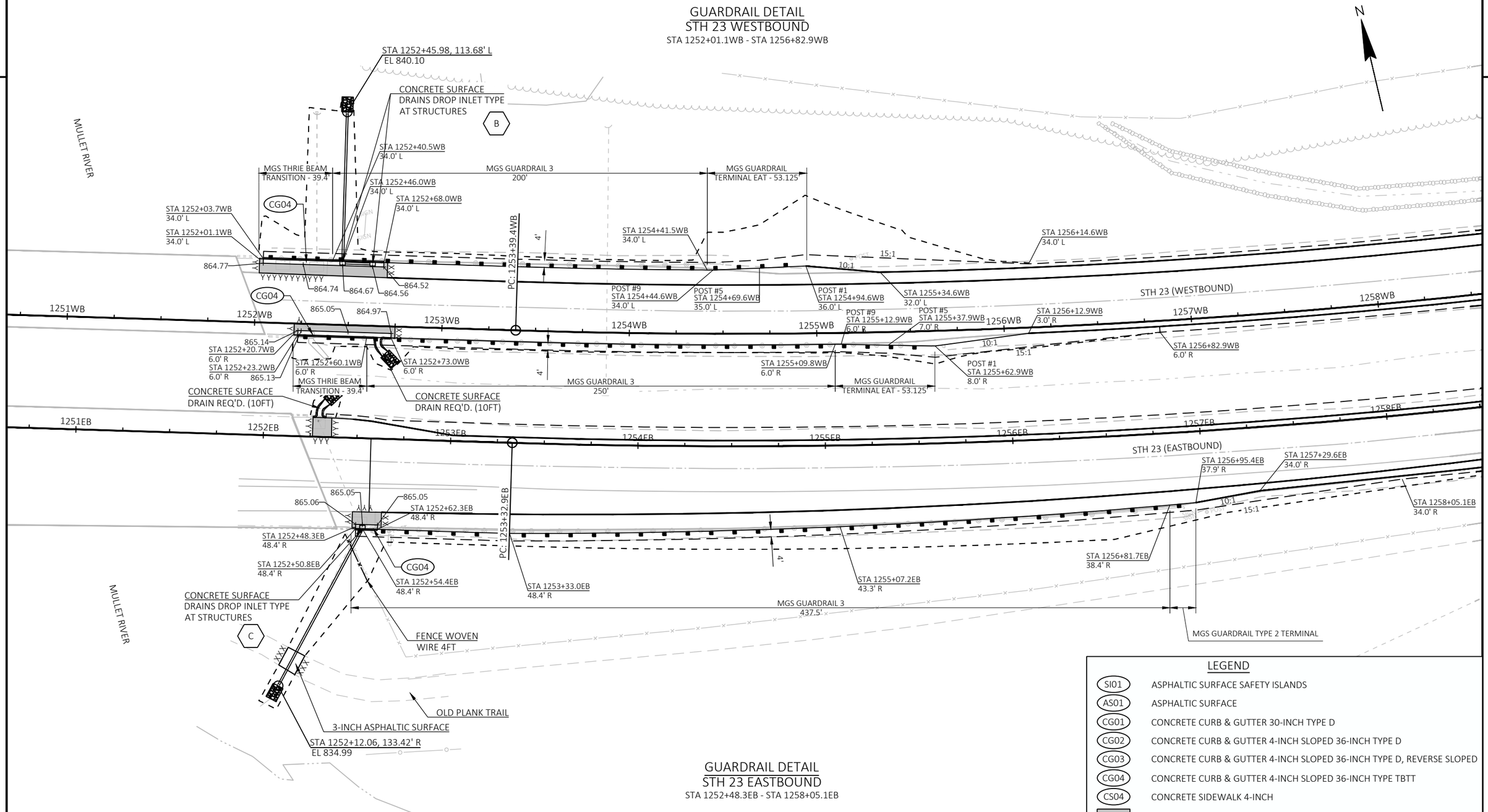


PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	PLAN DETAILS - STH 23 GUARDRAIL	SHEET 55	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\021201-PD.DWG
LAYOUT NAME - 021204-pd
PLOT DATE : 9/29/2026 1:03 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 42

2

GUARDRAIL DETAIL
STH 23 WESTBOUND
STA 1252+01.1WB - STA 1256+82.9WB



GUARDRAIL DETAIL
STH 23 EASTBOUND
STA 1252+48.3EB - STA 1258+05.1EB

NOTE:
A SYMBOL REFERS TO DROP INLET STRUCTURE. SEE MQ'S FOR FLOWLINE AND PIPE INLET ELEVATIONS.

LEGEND

SI01	ASPHALTIC SURFACE SAFETY ISLANDS
AS01	ASPHALTIC SURFACE
CG01	CONCRETE CURB & GUTTER 30-INCH TYPE D
CG02	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE D
CG03	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE D, REVERSE SLOPED
CG04	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBTT
CS04	CONCRETE SIDEWALK 4-INCH
	CONCRETE PAVEMENT 8-INCH
XXXXX	SAW CUT ASPHALT
ΛΛΛΛΛ	SAW CUT CONCRETE
	SLOPE INTERCEPT

PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	PLAN DETAILS - STH 23 GUARDRAIL	SHEET 56	E

2

2

STH 57 RAMP

N

SIGN

STH 23 (WESTBOUND)

1351WB 1352WB 1353WB 1354WB 1355WB 1356WB 1357WB 1358WB

MATCH LINE STA 1358+00EB

MGS GUARDRAIL TERMINAL EAT - 53.125

POST #9 STA 1354+45.3EB 10.0' L

MGS GUARDRAIL 3 175' (TO REMAIN)

MGS THRIE BEAM TRANSITION - 39.4'

STA 1352+15.3EB 6.0' L

STA 1356+23.4EB 10.0' L

STA 1356+62.8EB 10.0' L

15:1

10:1

4:1

1351EB 1352EB 1353EB 1354EB 1355EB 1356EB 1357EB 135

STA 1354+48.4EB 10.0' L

STA 1353+05.3EB 3.0' L

POST #1 STA 1353+95.3EB 12.0' L

POST #5 STA 1354+20.3EB 11.0' L

STH 23 (EASTBOUND)

STA 1352+41.0EB 32.0' R

POST #5 STA 1353+06.0EB 35.0' R

STA 1353+34.1EB 34.0' R

10:1

15:1

STA 1351+61.0EB 34.0' R

POST #1 STA 1352+81.0EB 36.0' R

POST #9 STA 1353+31.0EB 34.0' R

4:1

STA 1356+46.6EB 34.0' R

STA 1356+86.0EB 34.0' R

MGS GUARDRAIL TERMINAL EAT - 53.125

MGS GUARDRAIL 3 312.5'

MGS THRIE BEAM TRANSITION - 39.4'

GUARDRAIL DETAIL
STH 23 EASTBOUND
STA 1351+61.0B - STA 1356+86.0EB

STH 57 RAMP

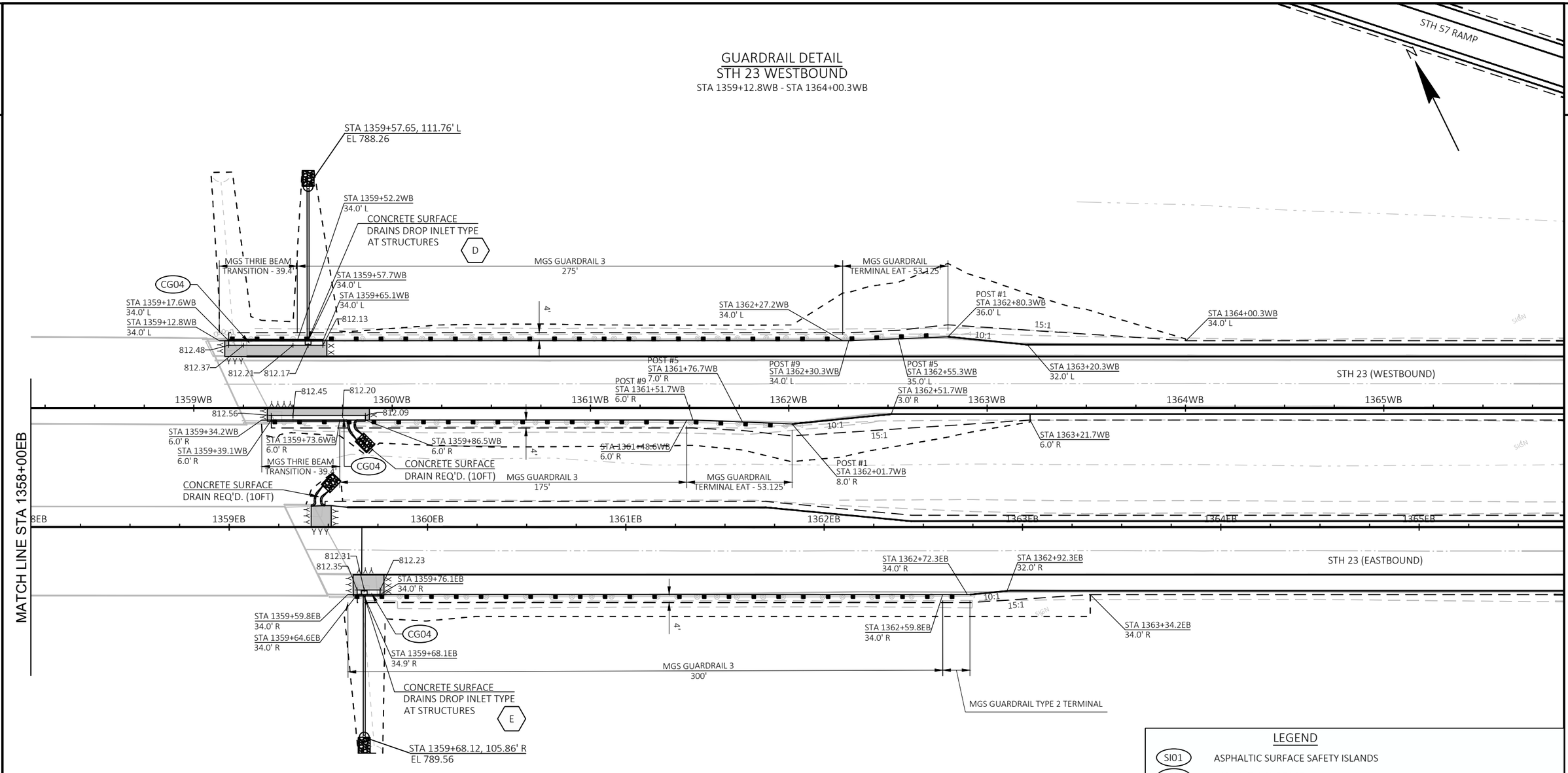
LEGEND

SI01	ASPHALTIC SURFACE SAFETY ISLANDS
AS01	ASPHALTIC SURFACE
CG01	CONCRETE CURB & GUTTER 30-INCH TYPE D
CG02	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE D
CG03	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE D, REVERSE SLOPED
CG04	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBTT
CS04	CONCRETE SIDEWALK 4-INCH
	CONCRETE PAVEMENT 8-INCH
XXXXX	SAW CUT ASPHALT
XXXXX	SAW CUT CONCRETE
	SLOPE INTERCEPT

PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	PLAN DETAILS - STH 23 GUARDRAIL	SHEET 57	E

2

GUARDRAIL DETAIL
STH 23 WESTBOUND
STA 1359+12.8WB - STA 1364+00.3WB



GUARDRAIL DETAIL
STH 23 EASTBOUND
STA 1359+59.8EB - STA 1363+32.3EB

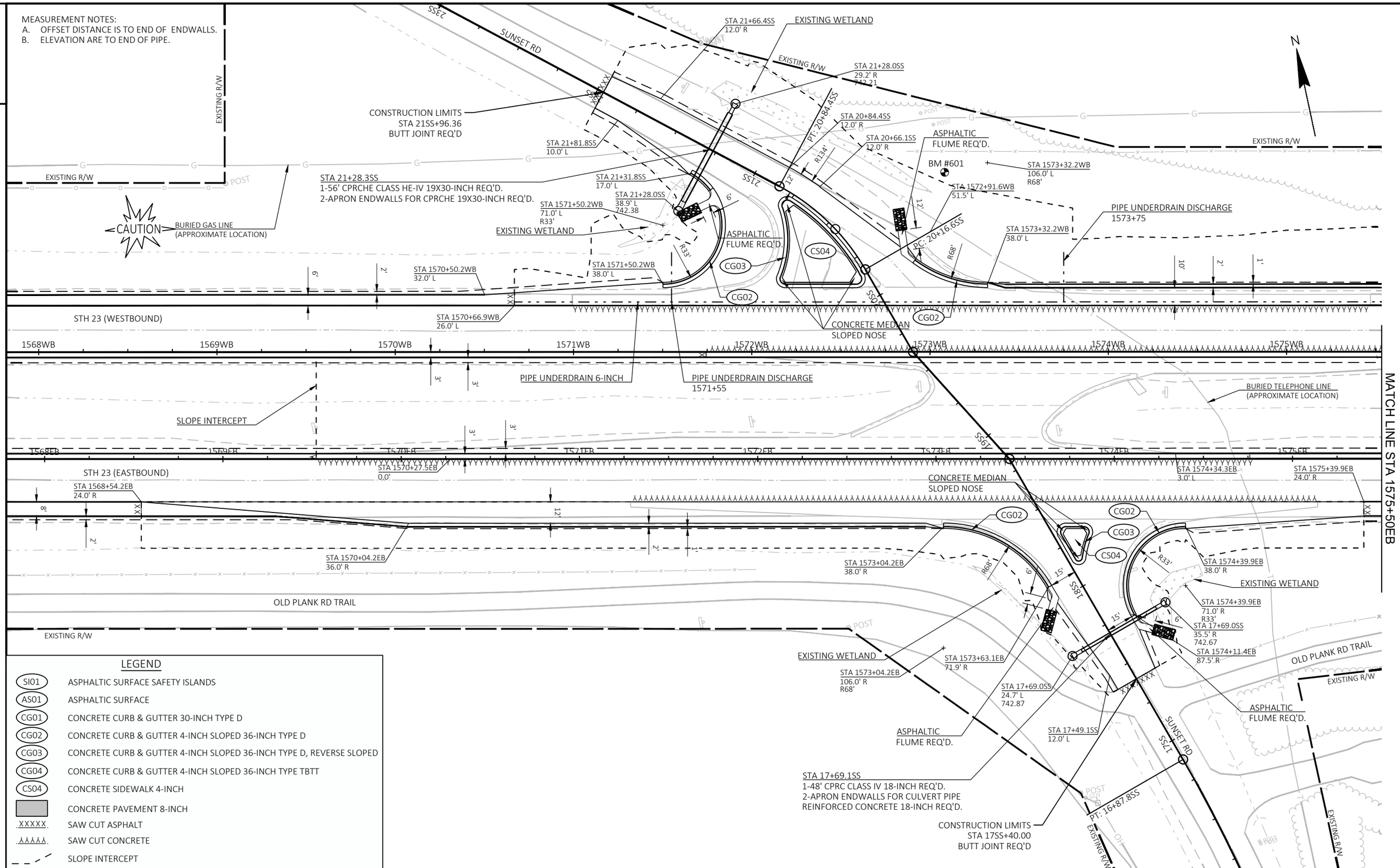
NOTE:
A SYMBOL REFERS TO DROP INLET STRUCTURE. SEE MQ'S FOR FLOWLINE AND PIPE INLET ELEVATIONS.

LEGEND

SI01	ASPHALTIC SURFACE SAFETY ISLANDS
AS01	ASPHALTIC SURFACE
CG01	CONCRETE CURB & GUTTER 30-INCH TYPE D
CG02	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE D
CG03	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE D, REVERSE SLOPED
CG04	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBTT
CS04	CONCRETE SIDEWALK 4-INCH
	CONCRETE PAVEMENT 8-INCH
XXXXX	SAW CUT ASPHALT
AAAAA	SAW CUT CONCRETE
	SLOPE INTERCEPT

STH 57 RAMP

PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	PLAN DETAILS - STH 23 GUARDRAIL	SHEET 58	E



LEGEND

SI01	ASPHALTIC SURFACE SAFETY ISLANDS
AS01	ASPHALTIC SURFACE
CG01	CONCRETE CURB & GUTTER 30-INCH TYPE D
CG02	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE D
CG03	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE D, REVERSE SLOPED
CG04	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBTT
CS04	CONCRETE SIDEWALK 4-INCH
	CONCRETE PAVEMENT 8-INCH
XXXXX	SAW CUT ASPHALT
ΛΛΛΛΛ	SAW CUT CONCRETE
	SLOPE INTERCEPT

PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	PLAN DETAILS - STH 23 & SUNSET RD INTERSECTION	SHEET 59	E

2

MEASUREMENT NOTES:
A. OFFSET DISTANCE IS TO END OF ENDWALLS.
B. ELEVATION ARE TO END OF PIPE.

CAUTION — BURIED GAS LINE (APPROXIMATE LOCATION)

N

EXISTING R/W

EXISTING R/W

PIPE UNDERDRAIN DISCHARGE
1575+75

PIPE UNDERDRAIN 6-INCH

PIPE UNDERDRAIN DISCHARGE
1577+75

STA 1576+32.2WB
36.0' L

STA 1577+82.2WB
26.0' L

STA 1580+12.7EB, 29.5' LT
1-112' CPRCHE CLASS HE-IV 19X30-INCH REQ'D.
2-APRON ENDWALLS FOR CPRCHE 19X30-INCH REQ'D.

STH 23 (WESTBOUND)

CG02

STA 1577+21.1WB
0.0'

STA 1579+98.7WB
0.0' R

STA 1580+52.9WB
14.0' R

STA 1579+98.7WB
5.0' R

STA 1579+50.7EB
30.4' L
739.96

STA 1580+67.4WB
14.0' R

STA 1580+75.0EB
28.0' L
739.44

STA 1580+05.2EB
23.5' L

STA 1580+14.0EB
17.[illegible] L
R11'

ASPHALTIC
FLUME REQ'D.

STA 1579+63.2EB
5.0' L

MATCH LINE STA 1575+50EB

MATCH LINE STA 1583+00EB

STA 1579+63.4EB
0.0' L

STA 1580+64.0EB
6.0' L

STA 1580+63.9EB
0.0' L

STA 1582+77.6EB
24.0' R

STA 1579+67.6EB
24.0' R

STA 1580+14.0EB
6.0' L

STA 1580+49.5EB
9.0' R
R55'

STH 23 (EASTBOUND)

STA 1579+67.6EB
32.0' R

STA 1580+18.2EB
5.0' L
R55'

STA 1580+39.7EB
0.3' L
R79'

STA 1582+05.9EB
32.0' R

CONSTRUCTION LIMITS
STA 1578TR+00.00
BUTT JOINT REQ'D

STA 1578+56.3TR
13.1' L

STA 1578+70.4TR
24.3' L

736.12

STA 1580+63.0EB
75.2' R

STA 1581+99.1TR
4.8' L

STA 1581+99.1TR
11.0' L

731.42

OLD PLANK RD TRAIL

1577TR

1578TR

1579TR

1580TR

1581TR

1582TR

DITCHING
REQ'D.

EXISTING R/W

EXISTING R/W

R/W

R/W

AS01

FENCE WOVEN
WIRE 4FT

STA 1580+74.8TR
9.0' L
733.27

CONSTRUCTION LIMITS
STA 1582TR+00.00
BUTT JOINT REQ'D

STA 1580+68.6TR
SKEW 35° LHF
1-24' CP CLASS III-A 18-INCH REQ'D.
2-APRON ENDWALLS FOR CULVERT
PIPE 18-INCH REQ'D.

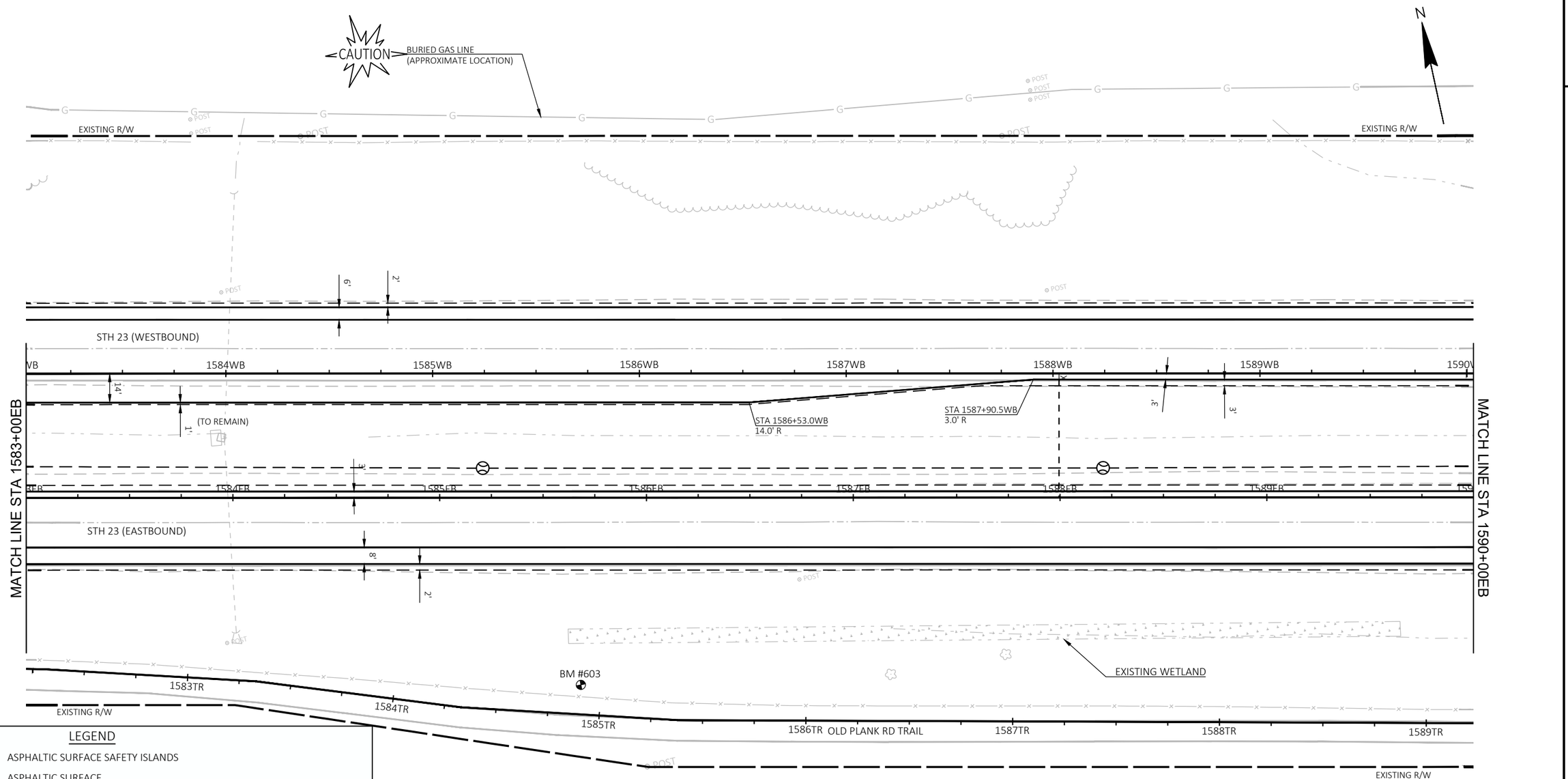
STA 1580+54.3TR
20.8' R
733.32

LEGEND

SI01	ASPHALTIC SURFACE SAFETY ISLANDS
AS01	ASPHALTIC SURFACE
CG01	CONCRETE CURB & GUTTER 30-INCH TYPE D
CG02	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE D
CG03	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE D, REVERSE SLOPED
CG04	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBTT
CS04	CONCRETE SIDEWALK 4-INCH
	CONCRETE PAVEMENT 8-INCH
XXXXX	SAW CUT ASPHALT
ΔΔΔΔΔ	SAW CUT CONCRETE
	SLOPE INTERCEPT

PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	PLAN DETAILS - STH 23 & CTH TT RCUT	SHEET 60	E

2

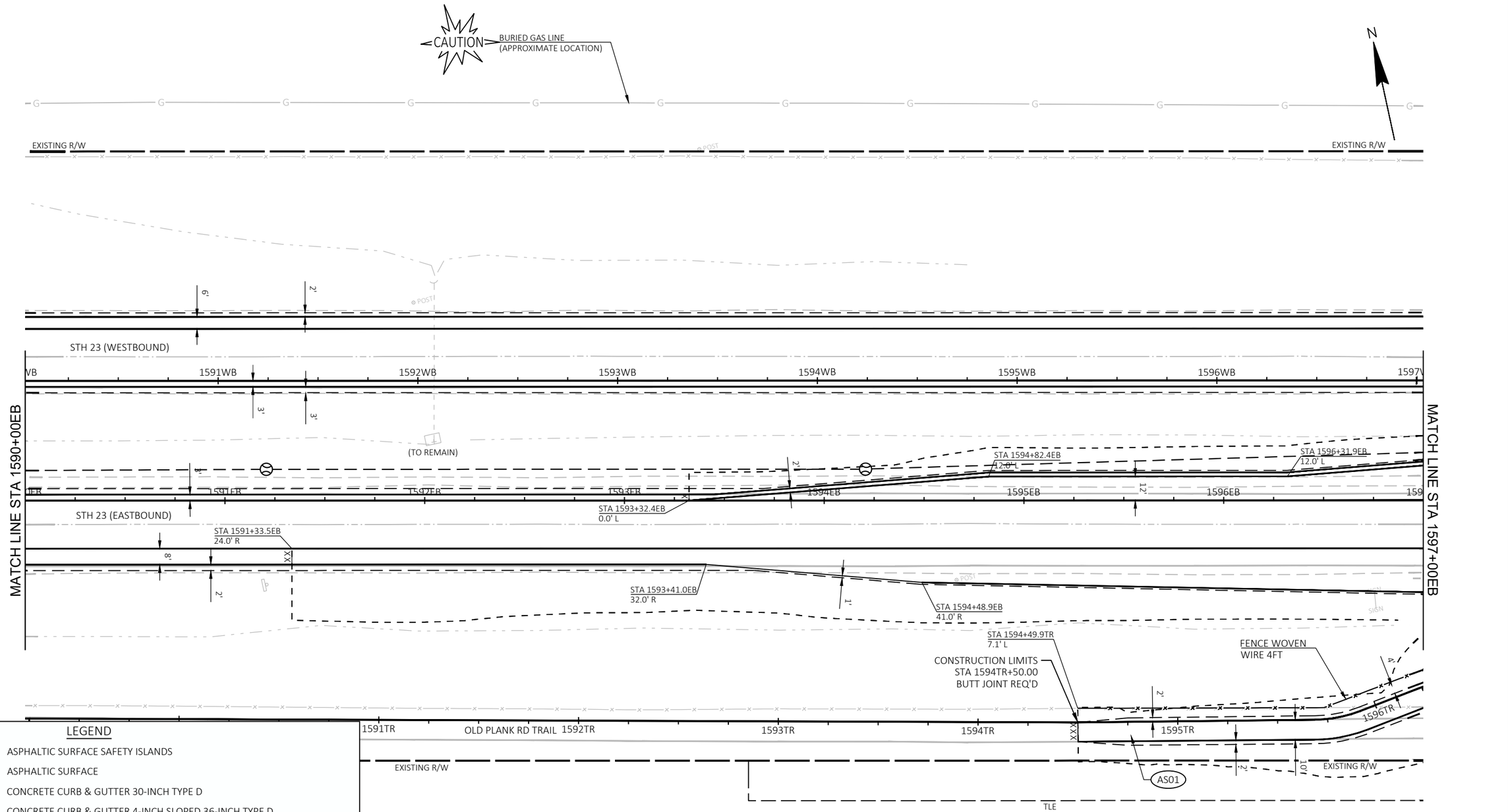


LEGEND

SI01	ASPHALTIC SURFACE SAFETY ISLANDS
AS01	ASPHALTIC SURFACE
CG01	CONCRETE CURB & GUTTER 30-INCH TYPE D
CG02	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE D
CG03	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE D, REVERSE SLOPED
CG04	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBTT
CS04	CONCRETE SIDEWALK 4-INCH
	CONCRETE PAVEMENT 8-INCH
XXXXX	SAW CUT ASPHALT
ΔΔΔΔΔ	SAW CUT CONCRETE
	SLOPE INTERCEPT

PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	PLAN DETAILS - STH 23 & CTH TT RCUT	SHEET 61	E

2



LEGEND

SI01	ASPHALTIC SURFACE SAFETY ISLANDS
AS01	ASPHALTIC SURFACE
CG01	CONCRETE CURB & GUTTER 30-INCH TYPE D
CG02	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE D
CG03	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE D, REVERSE SLOPED
CG04	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBTT
CS04	CONCRETE SIDEWALK 4-INCH
	CONCRETE PAVEMENT 8-INCH
XXXXX	SAW CUT ASPHALT
XXXXX	SAW CUT CONCRETE
	SLOPE INTERCEPT

PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	PLAN DETAILS - STH 23 & CTH TT RCUT	SHEET 62	E

LEGEND

SI01	ASPHALTIC SURFACE SAFETY ISLANDS
AS01	ASPHALTIC SURFACE
CG01	CONCRETE CURB & GUTTER 30-INCH TYPE D
CG02	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE D
CG03	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE D, REVERSE SLOPED
CG04	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBTT
CS04	CONCRETE SIDEWALK 4-INCH
	CONCRETE PAVEMENT 8-INCH
XXXXX	SAW CUT ASPHALT
ΔΔΔΔΔ	SAW CUT CONCRETE
	SLOPE INTERCEPT

MEASUREMENT NOTES:
A. OFFSET DISTANCE IS TO END OF ENDWALLS.
B. ELEVATION ARE TO END OF PIPE.
C. SEE STORM SEWER PLANS FOR ADDITIONAL DETAILS.

MATCH LINE STA 53+50TT

STA 52+75.0TT
1-88' CP CLASS IV 24-INCH REQ'D.
2-APRON ENDWALLS FOR CULVERT PIPE
REINFORCED CONCRETE 24-INCH REQ'D.

STA 52+82.2TT
17.0' L

STA 52+75.0TT
47.2' L
710.47

ASPHALTIC
FLUME REQ'D.
EXISTING R/W

ASPHALTIC
FLUME REQ'D.

BURIED TELEVISION CABLE
(APPROXIMATE LOCATION)

STA 52+75.0TT
53.1' R
710.03

STA 1600WB+86.58
-114.18' L
EL 709.74

STA 1602WB+19.94
-126.46' L
EL 708.92

BURIED GAS LINE
(APPROXIMATE LOCATION)

CAUTION

EXISTING R/W

BURIED FIBER OPTIC CABLE
(APPROXIMATE LOCATION)

EXISTING R/W

BM #605

STA 1599+56.7WB
73.6' L

STA 1599+10.3WB
86.0' L
R48'

STA 52+77.5TT
146.0' L
R128'

STA 1600+14.7WB
108.5' L

STA 1600+72.7WB
108.0' L
R58'

DITCHING
REQ'D.

STA 1598+53.1WB
32.0' L

STA 1599+15.9WB
38.3' L

STA 1600+71.5WB
50.0' L

CONCRETE MEDIAN
SLOPED NOSE

ASPHALTIC
FLUME REQ'D.

STH 23 (WESTBOUND)

STA 1598+09.0WB
26.0' L

STA 1598+72.8WB
6.0' R

STA 1603+39.4WB
12.0' R

MGS GUARDRAIL 3 - 212.5'

MGS GUARDRAIL
TERMINAL EAT - 53.125'

STA 1598+72.9WB
27.1' R

STA 1600+98.4EB
27.1' L

STA 1602+35.3EB
12.0' L

POST #1
STA 1603+25.3EB
12.0' L

POST #9
STA 1603+75.3EB
10.0' L

MATCH LINE STA 1597+00EB

MATCH LINE STA 1604+00EB

STA 50+02.5TT
1-80' CPRCHE CLASS HE-IV 19X30-INCH REQ'D.
2-APRON ENDWALLS FOR CPRCHE 19X30-INCH REQ'D.

STH 23 (EASTBOUND)

STA 1600+98.4EB
6.0' L

STA 1600+98.4EB
24.5' R

STA 1600+98.4EB
0.0'

STA 1602+45.3EB
4.0' L

POST #1
STA 1602+88.1EB
36.0' R

POST #5
STA 1603+13.1EB
35.0' R

POST #5
STA 1603+50.3EB
11.0' L

STA 1603+78.4EB
10.0' L

STA 1603+41.2EB
34.0' R

CONCRETE MEDIAN
SLOPED NOSE

STA 1598+99.0EB
50.0' R

STA 1600+55.9EB
38.3' R

STA 1602+70.3EB
34.2' R

POST #9
STA 1603+38.1EB
34.0' R

MGS GUARDRAIL
TERMINAL EAT - 53.125'

MGS
GUARDRAIL 3
250'

STA 1603+25.9TR
9.3' L

FENCE WOVEN
WIRE 4FT

STA 1598+99.0EB
108.0' R
R58'

STA 1600+15.1EB
73.6' R

STA 1600+61.4EB
86.0' R
R48'

STA 1601+01.6EB
34.0' R

STA 1602+16.0EB
37.2' R

FENCE WOVEN
WIRE 4FT

STA 50+02.5TT
47.5' L
714.97

STA 50+03.2TT
44.5' R
714.60

STA 49+96.5TT
47.5' L
714.97

STA 49+97.2TT
44.5' R
714.60

1597TR

OLD PLANK RD TRAIL

STA 49+81.7TT
18.0' R

BM #604

STA 1599+56.5EB
100.2' R

STA 49+96.5TT
1-80' CPRCHE CLASS HE-IV 19X30-INCH REQ'D.
2-APRON ENDWALLS FOR CPRCHE 19X30-INCH REQ'D.

ASPHALTIC
FLUME REQ'D.

STA 49+73.6TT
39.6' R
715.48

STA 49+71.5TT
42.1' L
716.40

1595TR

1600TR

1601TR

1602TR

CONSTRUCTION LIMITS
STA 1603TR+25.00
BUTT JOINT REQ'D

EXISTING R/W

PT: 49+38.7TT

STA 1598+87.0TR
SKEW 11° RHF
1-32' CPRCHE CLASS HE-IV 19X30-INCH REQ'D.
2-APRON ENDWALLS FOR CPRCHE 19X30-INCH REQ'D.

STA 49+30.0TT
35.4' L
717.10

STA 49+27.5TT
33.6' R
716.42

STA 49+18.9TT
17.0' R

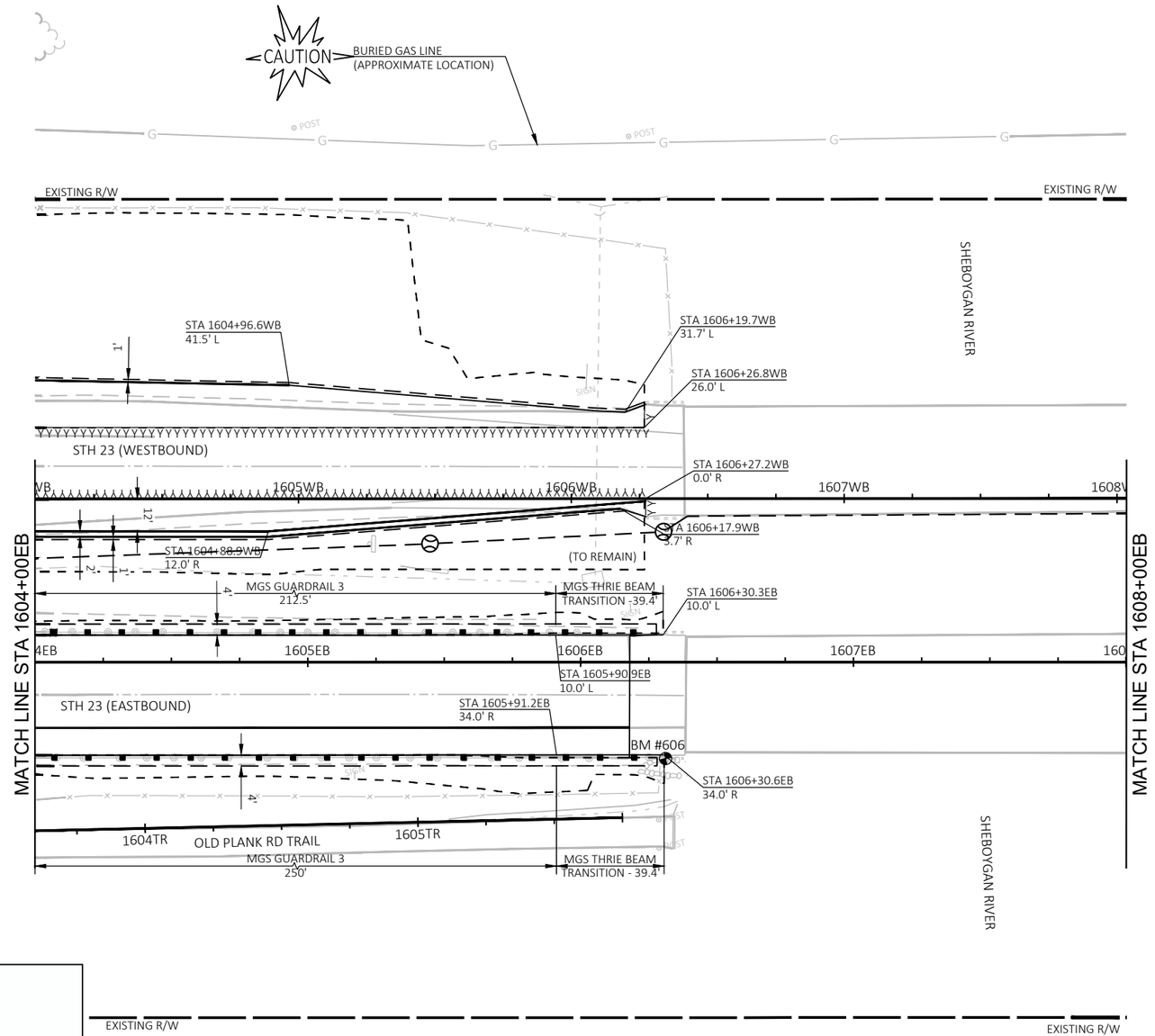
STA 1599+62.5TR
SKEW 5° LHF
1-32' CPRCHE CLASS HE-IV 19X30-INCH REQ'D.
2-APRON ENDWALLS FOR CPRCHE 19X30-INCH REQ'D.

MATCH LINE STA 49+00TT

PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	PLAN DETAILS - STH 23 & CTH TT RCUT	SHEET 63	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\021201-PD.DWG
LAYOUT NAME - 021212-pd
PLOT DATE : 9/29/2026 1:04 PM
PLOT BY : HOSPER, JAN
PLOT NAME :
PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42



LEGEND

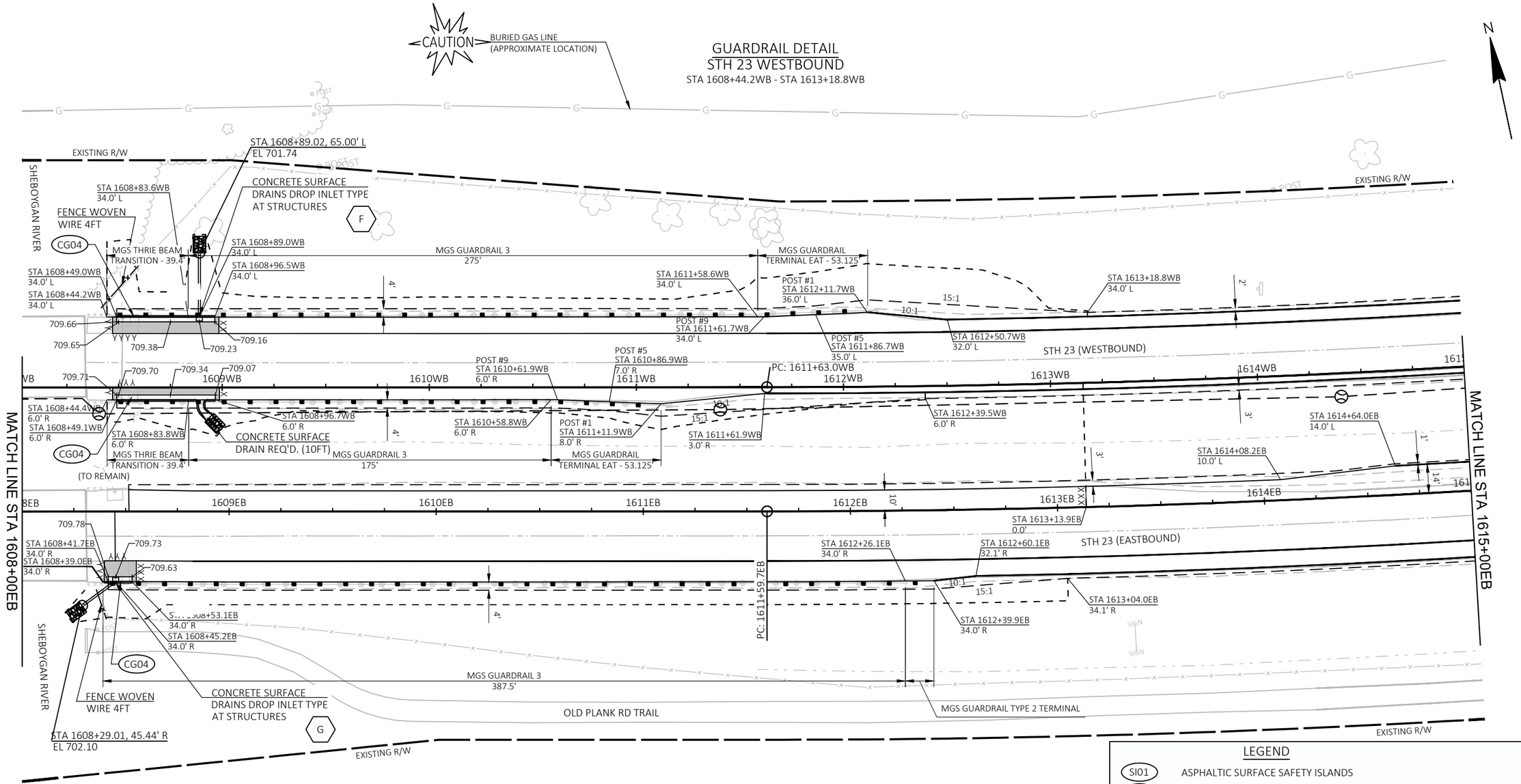
SI01	ASPHALTIC SURFACE SAFETY ISLANDS
AS01	ASPHALTIC SURFACE
CG01	CONCRETE CURB & GUTTER 30-INCH TYPE D
CG02	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE D
CG03	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE D, REVERSE SLOPED
CG04	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBTT
CS04	CONCRETE SIDEWALK 4-INCH
	CONCRETE PAVEMENT 8-INCH
XXXXX	SAW CUT ASPHALT
AAAAA	SAW CUT CONCRETE
	SLOPE INTERCEPT

PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	PLAN DETAILS - STH 23 GUARDRAIL	SHEET 64	E

2

CAUTION — BURIED GAS LINE (APPROXIMATE LOCATION)

GUARDRAIL DETAIL
STH 23 WESTBOUND
STA 1608+44.2WB - STA 1613+18.8WB



GUARDRAIL DETAIL
STH 23 EASTBOUND
STA 1608+39.0EB - STA 1613+04.0EB

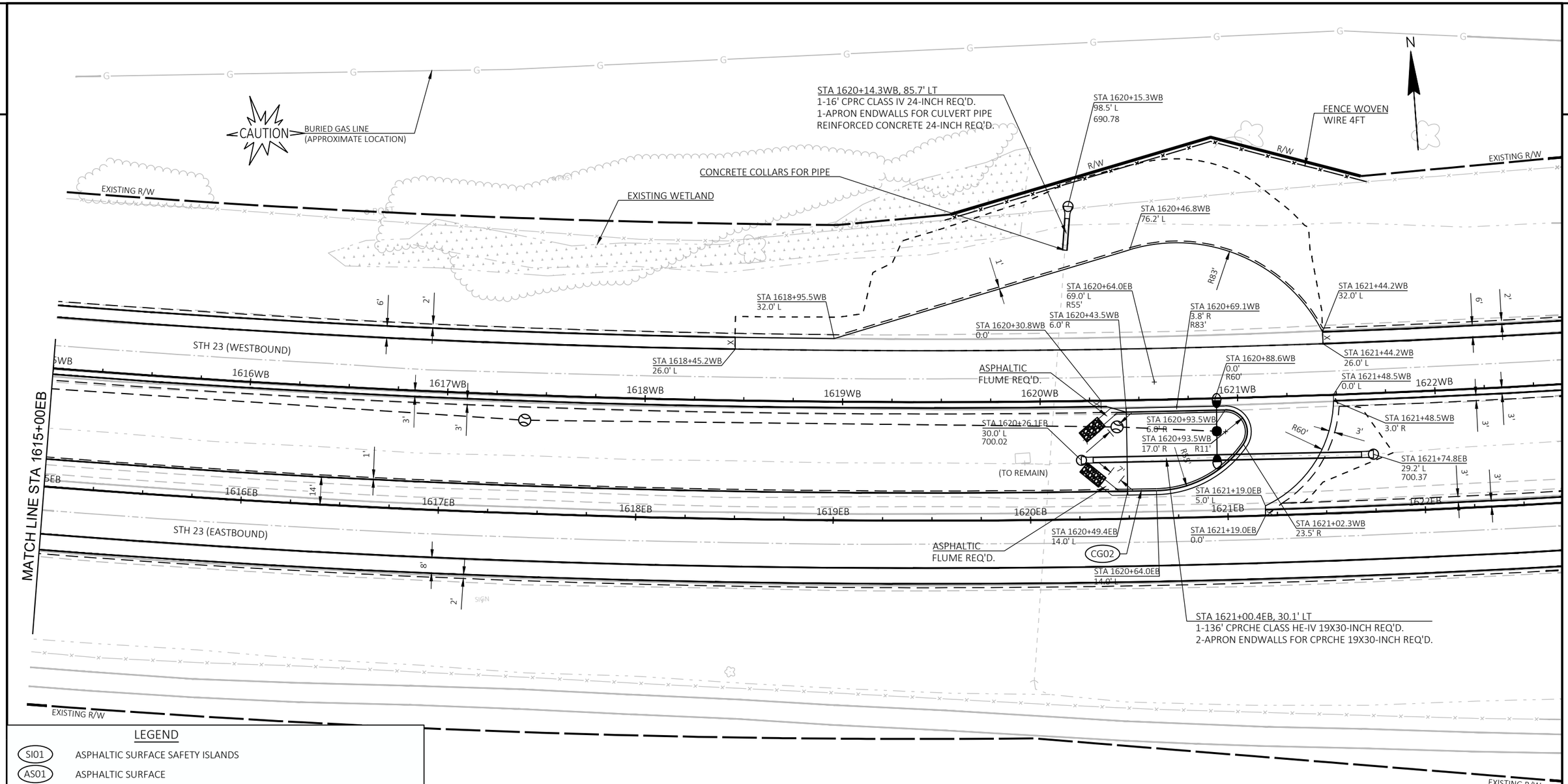
NOTE:
A — SYMBOL REFERS TO DROP INLET STRUCTURE. SEE MQ'S FOR FLOWLINE AND PIPE INLET ELEVATIONS.

LEGEND

SI01	ASPHALTIC SURFACE SAFETY ISLANDS
AS01	ASPHALTIC SURFACE
CG01	CONCRETE CURB & GUTTER 30-INCH TYPE D
CG02	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE D
CG03	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE D, REVERSE SLOPED
CG04	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBTT
CS04	CONCRETE SIDEWALK 4-INCH
	CONCRETE PAVEMENT 8-INCH
XXXXX	SAW CUT ASPHALT
XXXXX	SAW CUT CONCRETE
	SLOPE INTERCEPT

PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	PLAN DETAILS - STH 23 GUARDRAIL	SHEET 65	E

2



LEGEND

SI01	ASPHALTIC SURFACE SAFETY ISLANDS
AS01	ASPHALTIC SURFACE
CG01	CONCRETE CURB & GUTTER 30-INCH TYPE D
CG02	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE D
CG03	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE D, REVERSE SLOPED
CG04	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBTT
CS04	CONCRETE SIDEWALK 4-INCH
	CONCRETE PAVEMENT 8-INCH
XXXXX	SAW CUT ASPHALT
XXXXX	SAW CUT CONCRETE
	SLOPE INTERCEPT

MEASUREMENT NOTES:
A. OFFSET DISTANCE IS TO END OF ENDWALLS.
B. ELEVATION ARE TO END OF PIPE.

2

2

N

STH 32

STH 23 (WESTBOUND)

1675WB 1676WB 1677WB 1678WB 1679WB 1680WB 1681WB

POST #1
STA 1677+82.9EB
8.0' L

MGS GUARDRAIL
TERMINAL EAT - 53.125'

MGS GUARDRAIL 3
287.5'

MGS THRIE BEAM
TRANSITION - 39.4'

STA 1676+62.9EB
6.0' L

STA 1681+62.9EB
6.0' L

15:1

10:1

4'

1675EB 1676EB 1677EB 1678EB 1679EB 1680EB 1681EB

STA 1677+32.9EB
3.0' L

STA 1678+36.1EB
6.0' L

STA 1681+23.6EB
6.0' L

STH 23 (EASTBOUND)

POST #5
STA 1678+07.9EB
7.0' L

POST #9
STA 1678+32.9EB
6.0' L

STA 1674+30.6EB
32.0' R

POST #1
STA 1674+70.6EB
36.0' R

POST #5
STA 1674+95.6EB
35.0' R

10:1

15:1

STA 1673+50.6EB
34.0' R

POST #9
STA 1675+20.6EB
34.0' R

STA 1675+23.7EB
34.0' R

STA 1681+63.1EB
34.0' R

STA 1681+23.7EB
34.0' R

MGS GUARDRAIL
TERMINAL EAT - 53.125'

MGS GUARDRAIL 3
600'

MGS THRIE BEAM
TRANSITION - 39.4'

STH 32

MATCH LINE STA 1682+00EB

(TO REMAIN)

LEGEND

SI01	ASPHALTIC SURFACE SAFETY ISLANDS
AS01	ASPHALTIC SURFACE
CG01	CONCRETE CURB & GUTTER 30-INCH TYPE D
CG02	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE D
CG03	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE D, REVERSE SLOPED
CG04	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBTT
CS04	CONCRETE SIDEWALK 4-INCH
	CONCRETE PAVEMENT 8-INCH
XXXXX	SAW CUT ASPHALT
XXXXX	SAW CUT CONCRETE
	SLOPE INTERCEPT

GUARDRAIL DETAIL
STH 23 EASTBOUND
STA 1673+50.6EB - STA 1681+62.9EB

PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	PLAN DETAILS - STH 23 GUARDRAIL	SHEET 67	E

2

N

CONSTRUCTION LIMITS
STA 42TT+25.98

EXISTING R/W

STA 42+38.5TT
17.0' L

STA 42+38.5TT
17.0' R

STA 42+84.4TT
27.0' R
732.44

STA 43+28.5TT
29.1' R
731.98

ASPHALTIC SURFACE DRIVEWAYS
AND FIELD ENTRANCES

STA 43+06.4TT
1-32' CP CLASS III-A 18-INCH REQ'D.
2-APRON ENDWALLS FOR CULVER PIPE 18-INCH REQ'D.

BURIED TELEVISION CABLE
(APPROXIMATE LOCATION)

BURIED FIBER OPTIC CABLE
(APPROXIMATE LOCATION)

TLE

R/W

EXISTING R/W

PC: 43+33.4TT

PT: 45+62.2TT

PC: 48+10.2TT

MATCH LINE STA 49+00TT

42TT

43TT

44TT

45TT

46TT

47TT

48TT

CTH TT

17'

1'

14'

LEGEND

SI01	ASPHALTIC SURFACE SAFETY ISLANDS
AS01	ASPHALTIC SURFACE
CG01	CONCRETE CURB & GUTTER 30-INCH TYPE D
CG02	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE D
CG03	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE D, REVERSE SLOPED
CG04	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBTT
CS04	CONCRETE SIDEWALK 4-INCH
	CONCRETE PAVEMENT 8-INCH
XXXXX	SAW CUT ASPHALT
XXXXX	SAW CUT CONCRETE
	SLOPE INTERCEPT

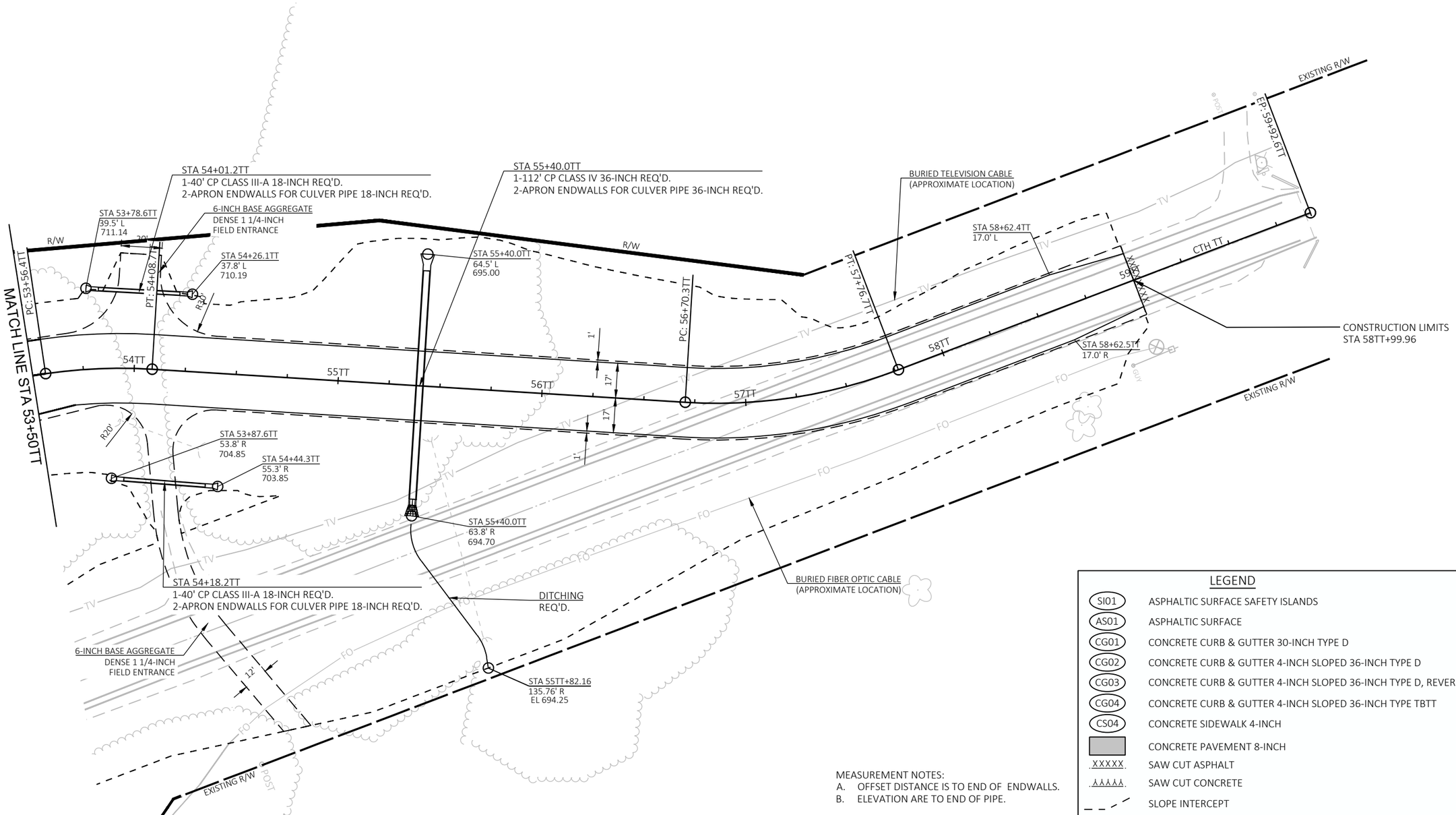
MEASUREMENT NOTES:
A. OFFSET DISTANCE IS TO END OF ENDWALLS.
B. ELEVATION ARE TO END OF PIPE.

PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	PLAN DETAILS - CTH TT	SHEET 68	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\021201-PD.DWG
LAYOUT NAME - 021218-pd

PLOT DATE : 9/29/2026 1:04 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:50 FT

2



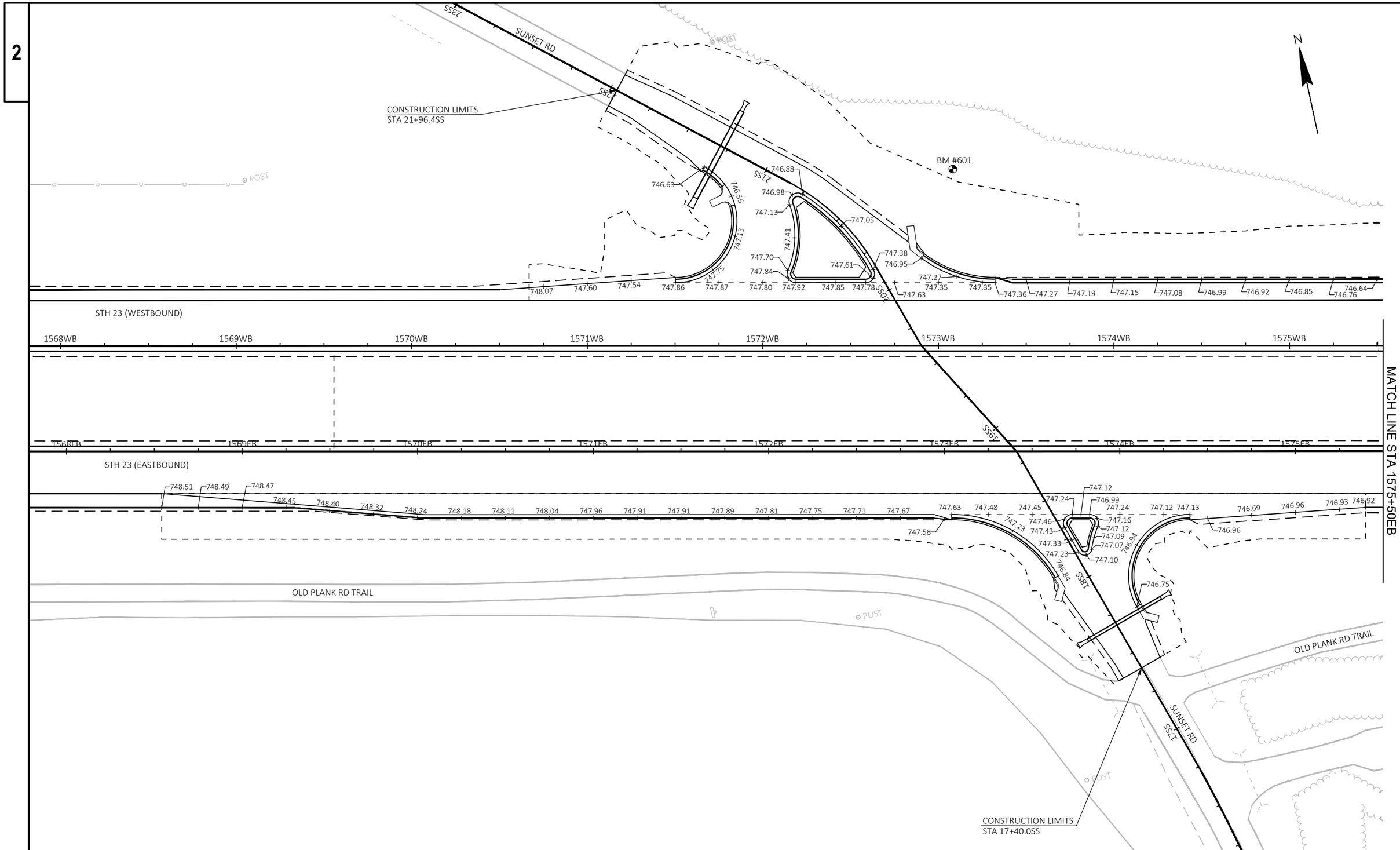
MEASUREMENT NOTES:
A. OFFSET DISTANCE IS TO END OF ENDWALLS.
B. ELEVATION ARE TO END OF PIPE.

LEGEND

SI01	ASPHALTIC SURFACE SAFETY ISLANDS
AS01	ASPHALTIC SURFACE
CG01	CONCRETE CURB & GUTTER 30-INCH TYPE D
CG02	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE D
CG03	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE D, REVERSE SLOPED
CG04	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBTT
CS04	CONCRETE SIDEWALK 4-INCH
	CONCRETE PAVEMENT 8-INCH
XXXXX	SAW CUT ASPHALT
AAAAA	SAW CUT CONCRETE
	SLOPE INTERCEPT

PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	PLAN DETAILS - CTH TT	SHEET 69	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\021201-PD.DWG
LAYOUT NAME - 021219-pd
PLOT DATE : 9/29/2026 1:04 PM
PLOT BY : HOSPER, JAN
PLOT NAME :
PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 42



PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	PLAN GRADES	SHEET 70	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\021220-GR.DWG
LAYOUT NAME - 021220-gr
PLOT DATE : 9/29/2026 1:14 PM
PLOT BY : HOSPER, JAN
PLOT NAME :
PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 42

2

N

POST

746.48 746.38 746.26 746.15 746.05 745.99 745.91 745.72 745.55 745.51

STH 23 (WESTBOUND)

1576WB 1577WB 1578WB 1579WB 1580WB 1581WB 1582WB 1583WB

744.18 744.39 744.56 743.97 744.05 743.75 743.53 743.42 743.32 743.13 742.94 742.78 742.59 742.37 742.15 741.95 741.74 741.53

1576EB 1577EB 1578EB 1579EB 1580EB 1581EB 1582EB 1583EB

744.07 743.95 743.77

MATCH LINE STA 1575+50EB

MATCH LINE STA 1583+00EB

STH 23 (EASTBOUND)

744.33 744.38 744.14 743.96 743.79 743.61 743.45 743.25 743.06 742.86 742.67 742.63 744.07 743.42 743.06 742.87 742.82 742.81 742.76 742.72 742.68 742.64

CONSTRUCTION LIMITS
STA 1578+00.0TR

1577TR 1578TR 1579TR 1580TR 1581TR 1582TR

743.33 742.33 741.33 740.33 739.40 738.64 738.06 737.64 737.32 737.00 736.65 736.22 735.71 735.13 734.51 733.88 733.26

OLD PLANK RD TRAIL

POST POST

BLDG

CONSTRUCTION LIMITS
STA 1582+00.0TR

HYE HYE HYE

PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	PLAN GRADES	SHEET 71	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\021220-GR.DWG
LAYOUT NAME - 021221-gr

PLOT DATE : 9/29/2026 1:14 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

2

N

POST

POST

STH 23 (WESTBOUND)

1584WB 1585WB 1586WB 1587WB 1588WB 1589WB

741.31 741.09 740.87 740.62 740.37 740.14 739.90 739.66 739.41 739.16 738.91 738.66 738.41 738.17 737.95 737.72 737.49 737.25 737.00 736.84

MATCH LINE STA 1583+00EB

MATCH LINE STA 1590+00EB

1584EB 1585EB 1586EB 1587EB 1588EB 1589EB

STH 23 (EASTBOUND)

1583TR 1584TR 1585TR 1586TR 1587TR 1588TR 1589TR

BM #603

OLD PLANK RD TRAIL

POST

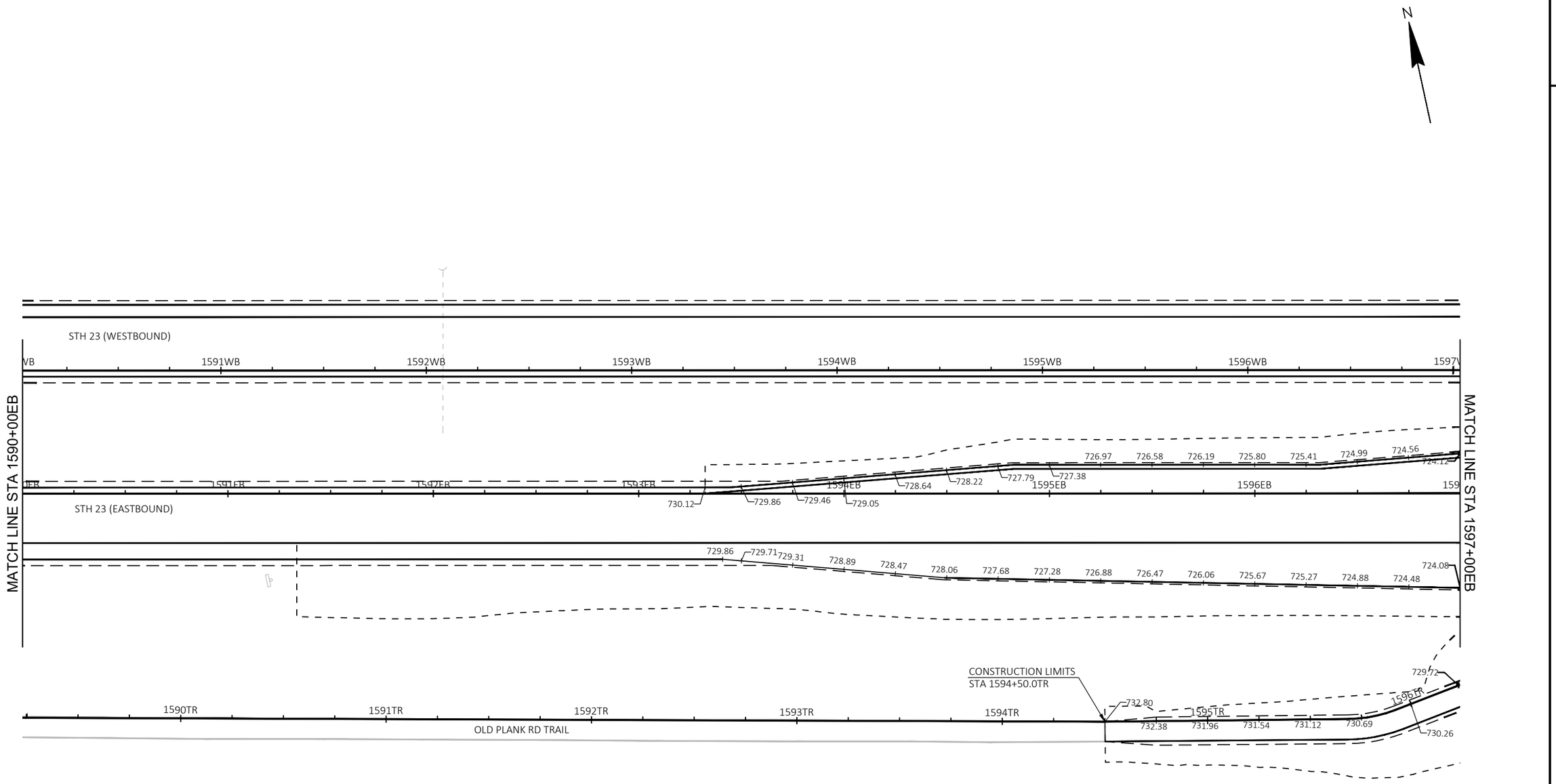
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	PLAN GRADES	SHEET 72	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\021220-GR.DWG
LAYOUT NAME - 021222-gr

PLOT DATE : 9/29/2026 1:14 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:50 FT

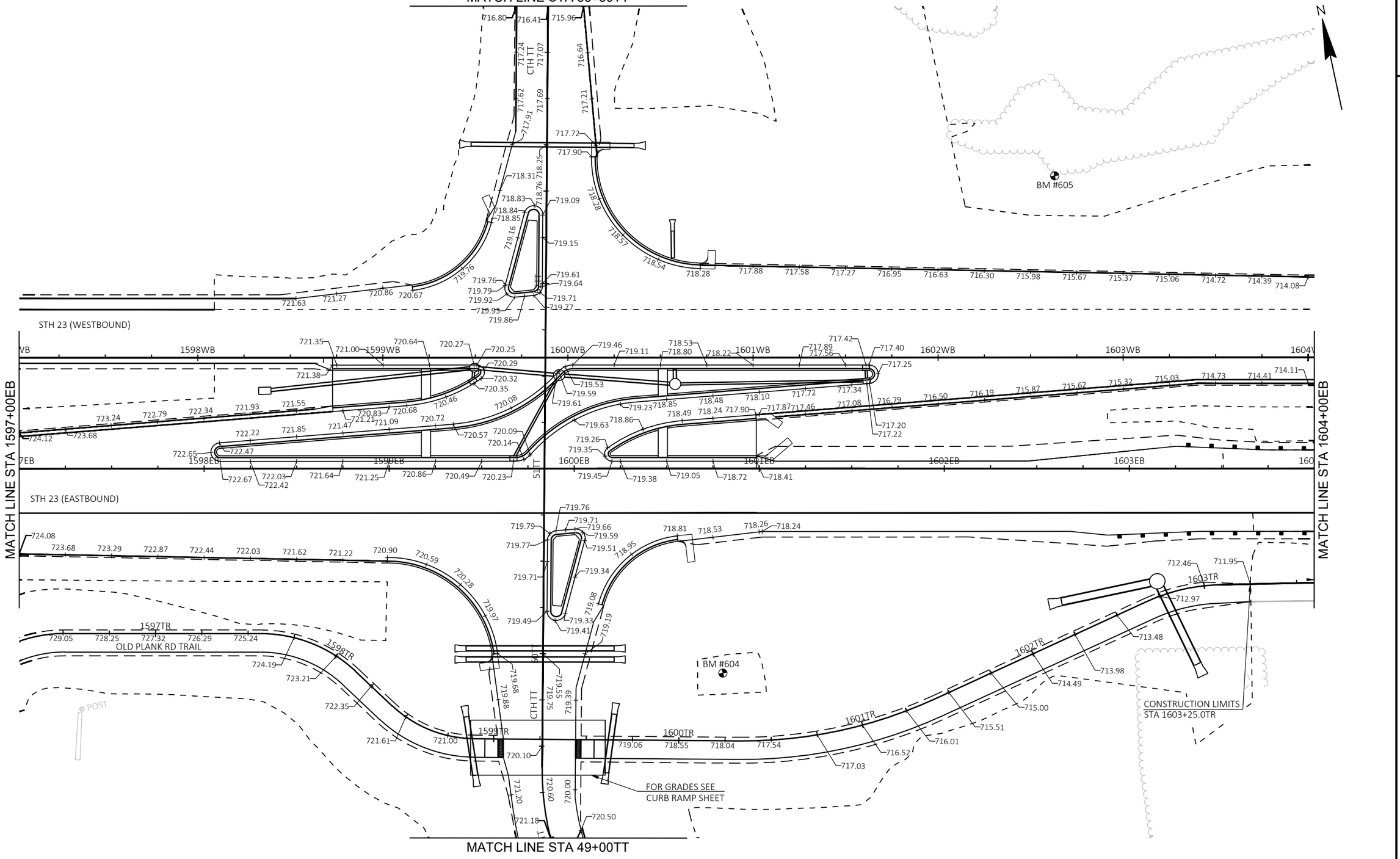
WISDOT/CADDS SHEET 42

2



PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	PLAN GRADES	SHEET 73	E

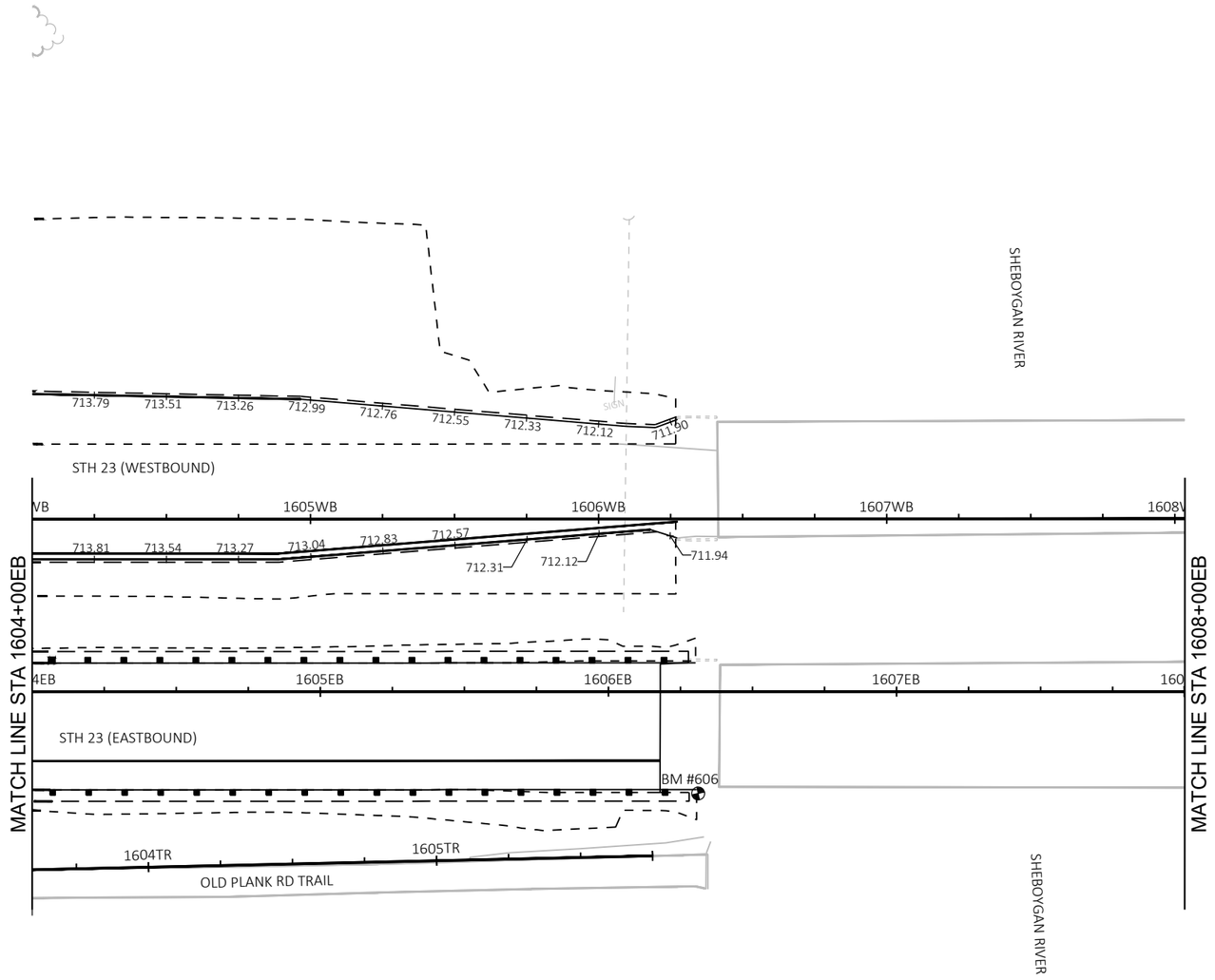
2



PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	PLAN GRADES	SHEET 74	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\021220-GR.DWG
LAYOUT NAME - 021224-gr
PLOT DATE : 9/29/2026 1:14 PM
PLOT BY : HOSPER, JAN
PLOT NAME :
PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 42

2

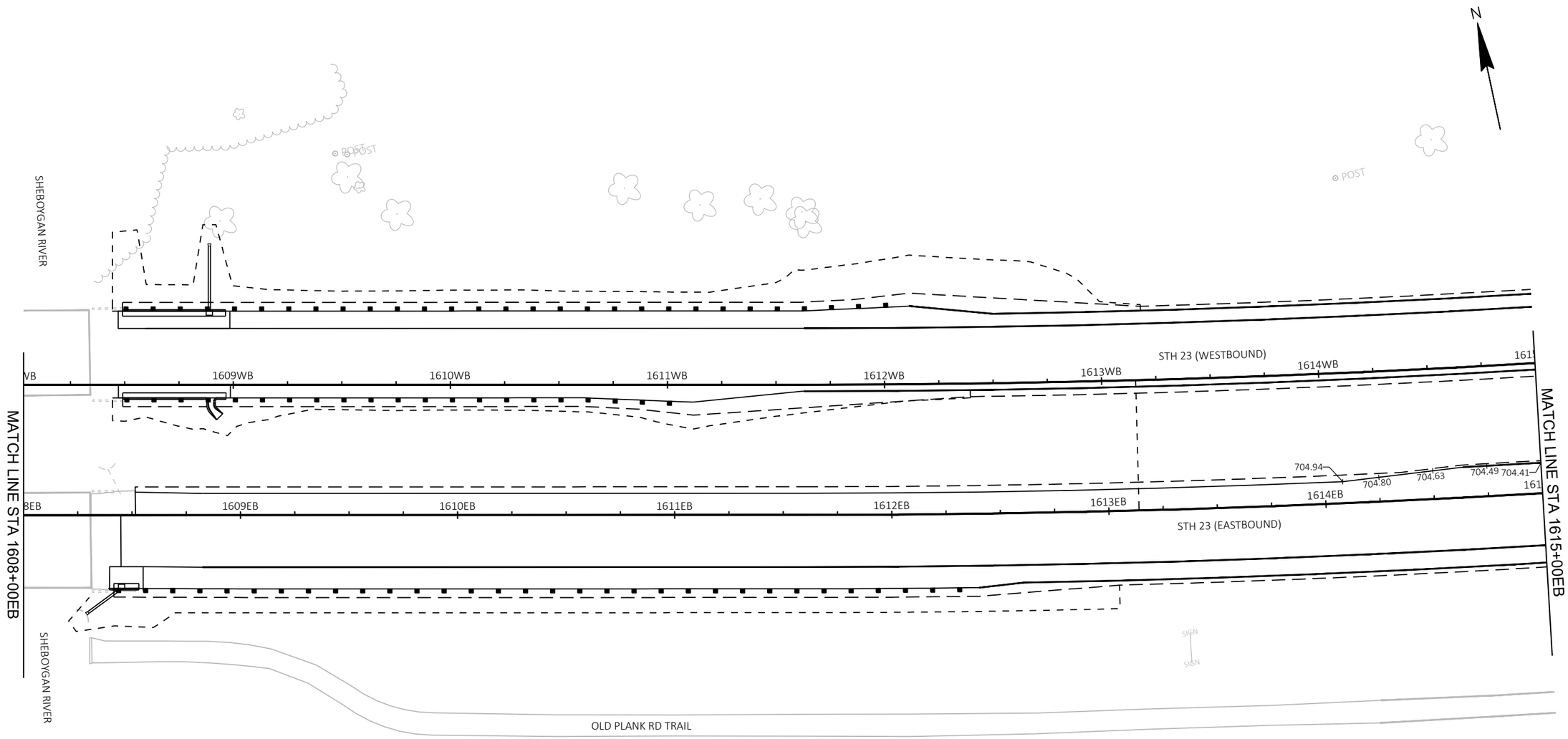


PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	PLAN GRADES	SHEET 75	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\021220-GR.DWG
LAYOUT NAME - 021225-gr

PLOT DATE : 9/29/2026 1:14 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : ##########

2



PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	PLAN GRADES	SHEET 76	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\021220-GR.DWG
LAYOUT NAME - 021226-gr
PLOT DATE : 9/29/2026 1:14 PM
PLOT BY : HOSPER, JAN
PLOT NAME :
PLOT SCALE : ##########

2

N

POST

POST

SIGN

STH 23 (WESTBOUND)

STH 23 (EASTBOUND)

MATCH LINE STA 1615+00EB

1616WB 1617WB 1618WB 1619WB 1620WB 1621WB 1622WB

1616EB 1617EB 1618EB 1619EB 1620EB 1621EB 1622EB

704.41 704.31 704.22 704.12 704.04 703.96 703.88 703.79 703.73 703.70 703.67 703.63 703.60 703.57 703.54 703.53 703.52 703.53 703.54 703.56 703.58 703.63 703.91 703.78 703.75

702.73 702.96 703.00 703.00 702.51 702.26 702.02 701.87 701.73 701.70 701.90 702.41 703.22

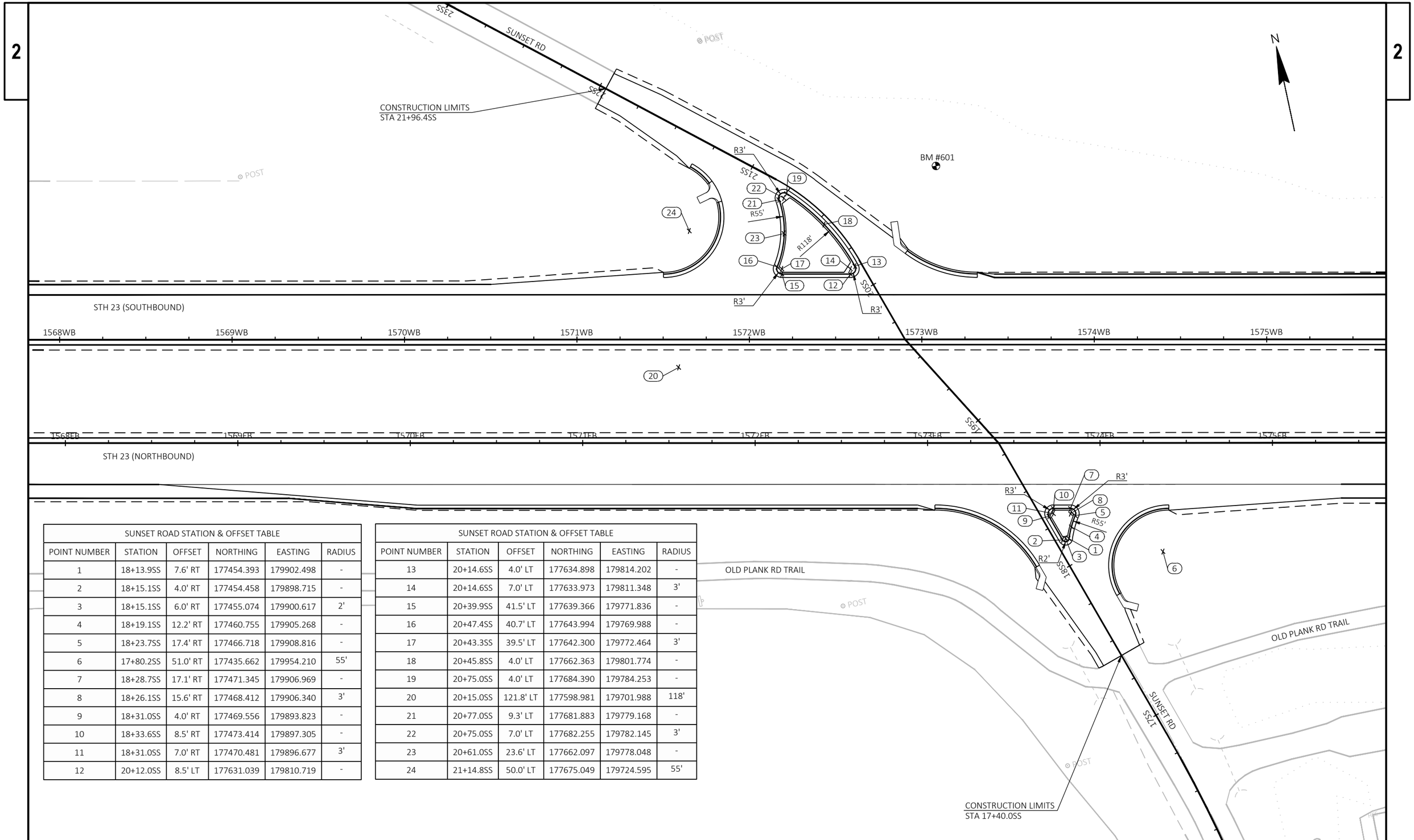
703.00 703.00 702.98 702.95 703.01 703.08 703.11 703.14 703.18

704.08 704.14 704.18 704.12 704.05 704.07 704.16 704.24 704.26

PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	PLAN GRADES	SHEET 77	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\021220-GR.DWG
LAYOUT NAME - 021227-gr

PLOT DATE : 9/29/2026 1:14 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:50 FT



SUNSET ROAD STATION & OFFSET TABLE					
POINT NUMBER	STATION	OFFSET	NORTHING	EASTING	RADIUS
1	18+13.9SS	7.6' RT	177454.393	179902.498	-
2	18+15.1SS	4.0' RT	177454.458	179898.715	-
3	18+15.1SS	6.0' RT	177455.074	179900.617	2'
4	18+19.1SS	12.2' RT	177460.755	179905.268	-
5	18+23.7SS	17.4' RT	177466.718	179908.816	-
6	17+80.2SS	51.0' RT	177435.662	179954.210	55'
7	18+28.7SS	17.1' RT	177471.345	179906.969	-
8	18+26.1SS	15.6' RT	177468.412	179906.340	3'
9	18+31.0SS	4.0' RT	177469.556	179893.823	-
10	18+33.6SS	8.5' RT	177473.414	179897.305	-
11	18+31.0SS	7.0' RT	177470.481	179896.677	3'
12	20+12.0SS	8.5' LT	177631.039	179810.719	-

SUNSET ROAD STATION & OFFSET TABLE					
POINT NUMBER	STATION	OFFSET	NORTHING	EASTING	RADIUS
13	20+14.6SS	4.0' LT	177634.898	179814.202	-
14	20+14.6SS	7.0' LT	177633.973	179811.348	3'
15	20+39.9SS	41.5' LT	177639.366	179771.836	-
16	20+47.4SS	40.7' LT	177643.994	179769.988	-
17	20+43.3SS	39.5' LT	177642.300	179772.464	3'
18	20+45.8SS	4.0' LT	177662.363	179801.774	-
19	20+75.0SS	4.0' LT	177684.390	179784.253	-
20	20+15.0SS	121.8' LT	177598.981	179701.988	118'
21	20+77.0SS	9.3' LT	177681.883	179779.168	-
22	20+75.0SS	7.0' LT	177682.255	179782.145	3'
23	20+61.0SS	23.6' LT	177662.097	179778.048	-
24	21+14.8SS	50.0' LT	177675.049	179724.595	55'

PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	PLAN OFFSETS	SHEET 78	E

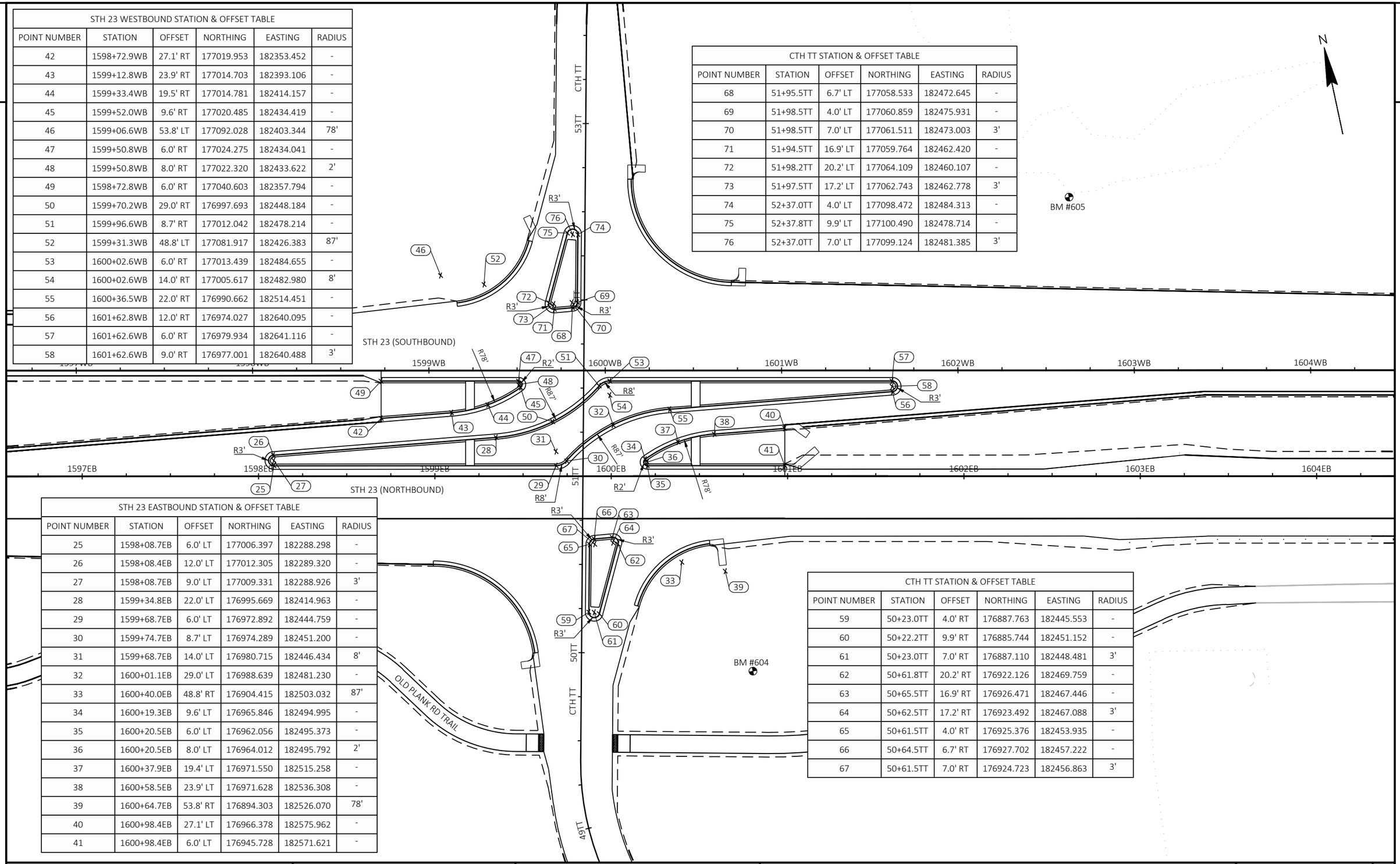
2

STH 23 WESTBOUND STATION & OFFSET TABLE					
POINT NUMBER	STATION	OFFSET	NORTHING	EASTING	RADIUS
42	1598+72.9WB	27.1' RT	177019.953	182353.452	-
43	1599+12.8WB	23.9' RT	177014.703	182393.106	-
44	1599+33.4WB	19.5' RT	177014.781	182414.157	-
45	1599+52.0WB	9.6' RT	177020.485	182434.419	-
46	1599+06.6WB	53.8' LT	177092.028	182403.344	78'
47	1599+50.8WB	6.0' RT	177024.275	182434.041	-
48	1599+50.8WB	8.0' RT	177022.320	182433.622	2'
49	1598+72.8WB	6.0' RT	177040.603	182357.794	-
50	1599+70.2WB	29.0' RT	176997.693	182448.184	-
51	1599+96.6WB	8.7' RT	177012.042	182478.214	-
52	1599+31.3WB	48.8' LT	177081.917	182426.383	87'
53	1600+02.6WB	6.0' RT	177013.439	182484.655	-
54	1600+02.6WB	14.0' RT	177005.617	182482.980	8'
55	1600+36.5WB	22.0' RT	176990.662	182514.451	-
56	1601+62.8WB	12.0' RT	176974.027	182640.095	-
57	1601+62.6WB	6.0' RT	176979.934	182641.116	-
58	1601+62.6WB	9.0' RT	176977.001	182640.488	3'

CTH TT STATION & OFFSET TABLE					
POINT NUMBER	STATION	OFFSET	NORTHING	EASTING	RADIUS
68	51+95.5TT	6.7' LT	177058.533	182472.645	-
69	51+98.5TT	4.0' LT	177060.859	182475.931	-
70	51+98.5TT	7.0' LT	177061.511	182473.003	3'
71	51+94.5TT	16.9' LT	177059.764	182462.420	-
72	51+98.2TT	20.2' LT	177064.109	182460.107	-
73	51+97.5TT	17.2' LT	177062.743	182462.778	3'
74	52+37.0TT	4.0' LT	177098.472	182484.313	-
75	52+37.8TT	9.9' LT	177100.490	182478.714	-
76	52+37.0TT	7.0' LT	177099.124	182481.385	3'

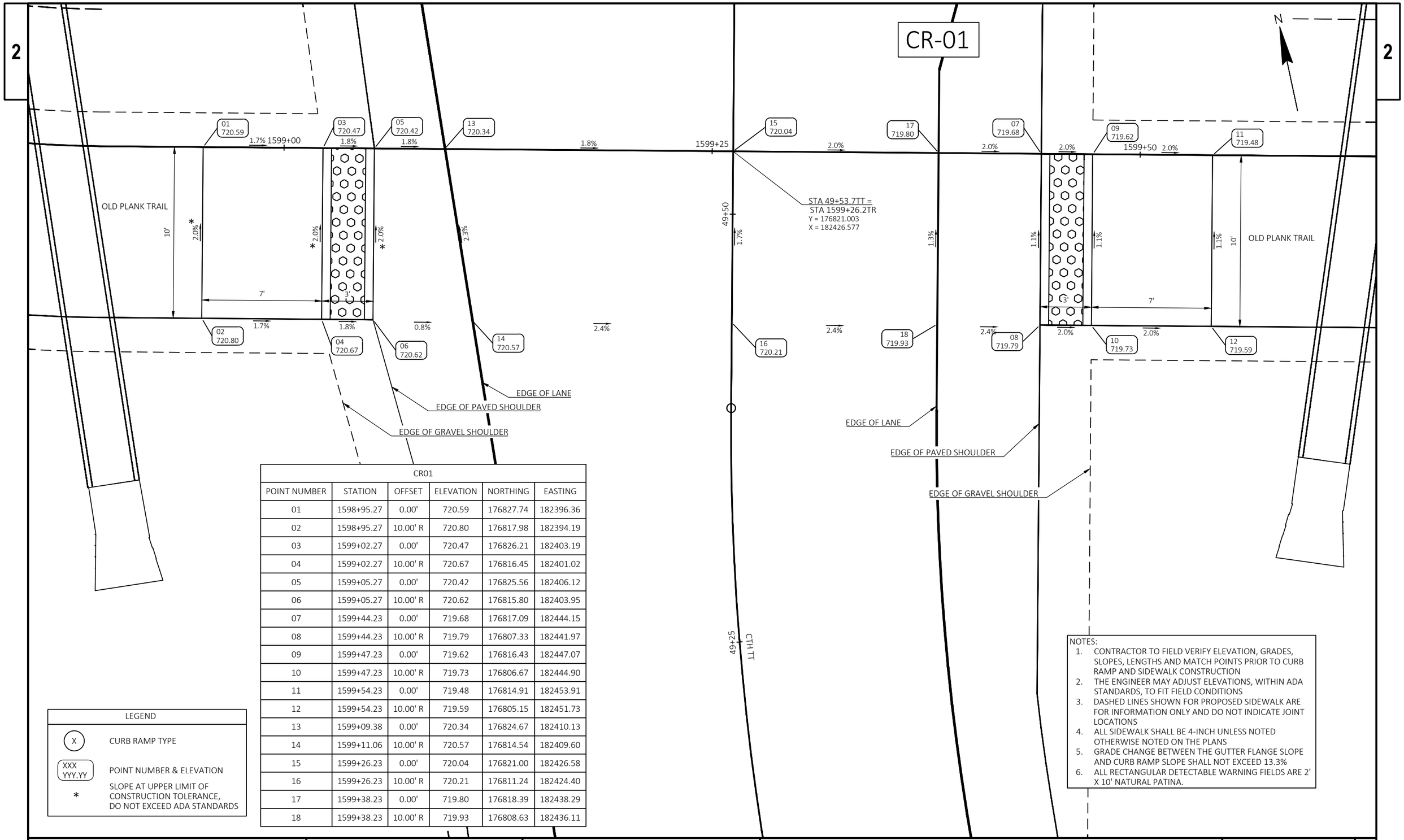
STH 23 EASTBOUND STATION & OFFSET TABLE					
POINT NUMBER	STATION	OFFSET	NORTHING	EASTING	RADIUS
25	1598+08.7EB	6.0' LT	177006.397	182288.298	-
26	1598+08.4EB	12.0' LT	177012.305	182289.320	-
27	1598+08.7EB	9.0' LT	177009.331	182288.926	3'
28	1599+34.8EB	22.0' LT	176995.669	182414.963	-
29	1599+68.7EB	6.0' LT	176972.892	182444.759	-
30	1599+74.7EB	8.7' LT	176974.289	182451.200	-
31	1599+68.7EB	14.0' LT	176980.715	182446.434	8'
32	1600+01.1EB	29.0' LT	176988.639	182481.230	-
33	1600+40.0EB	48.8' RT	176904.415	182503.032	87'
34	1600+19.3EB	9.6' LT	176965.846	182494.995	-
35	1600+20.5EB	6.0' LT	176962.056	182495.373	-
36	1600+20.5EB	8.0' LT	176964.012	182495.792	2'
37	1600+37.9EB	19.4' LT	176971.550	182515.258	-
38	1600+58.5EB	23.9' LT	176971.628	182536.308	-
39	1600+64.7EB	53.8' RT	176894.303	182526.070	78'
40	1600+98.4EB	27.1' LT	176966.378	182575.962	-
41	1600+98.4EB	6.0' LT	176945.728	182571.621	-

CTH TT STATION & OFFSET TABLE					
POINT NUMBER	STATION	OFFSET	NORTHING	EASTING	RADIUS
59	50+23.0TT	4.0' RT	176887.763	182445.553	-
60	50+22.2TT	9.9' RT	176885.744	182451.152	-
61	50+23.0TT	7.0' RT	176887.110	182448.481	3'
62	50+61.8TT	20.2' RT	176922.126	182469.759	-
63	50+65.5TT	16.9' RT	176926.471	182467.446	-
64	50+62.5TT	17.2' RT	176923.492	182467.088	3'
65	50+61.5TT	4.0' RT	176925.376	182453.935	-
66	50+64.5TT	6.7' RT	176927.702	182457.222	-
67	50+61.5TT	7.0' RT	176924.723	182456.863	3'



PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	PLAN OFFSETS	SHEET 79	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\021230-OF.DWG
LAYOUT NAME - 021231-of
PLOT DATE : 9/23/2026 2:38 PM
PLOT BY : HOSPER, JAN
PLOT NAME :
PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 42



CR01

POINT NUMBER	STATION	OFFSET	ELEVATION	NORTHING	EASTING
01	1598+95.27	0.00'	720.59	176827.74	182396.36
02	1598+95.27	10.00' R	720.80	176817.98	182394.19
03	1599+02.27	0.00'	720.47	176826.21	182403.19
04	1599+02.27	10.00' R	720.67	176816.45	182401.02
05	1599+05.27	0.00'	720.42	176825.56	182406.12
06	1599+05.27	10.00' R	720.62	176815.80	182403.95
07	1599+44.23	0.00'	719.68	176817.09	182444.15
08	1599+44.23	10.00' R	719.79	176807.33	182441.97
09	1599+47.23	0.00'	719.62	176816.43	182447.07
10	1599+47.23	10.00' R	719.73	176806.67	182444.90
11	1599+54.23	0.00'	719.48	176814.91	182453.91
12	1599+54.23	10.00' R	719.59	176805.15	182451.73
13	1599+09.38	0.00'	720.34	176824.67	182410.13
14	1599+11.06	10.00' R	720.57	176814.54	182409.60
15	1599+26.23	0.00'	720.04	176821.00	182426.58
16	1599+26.23	10.00' R	720.21	176811.24	182424.40
17	1599+38.23	0.00'	719.80	176818.39	182438.29
18	1599+38.23	10.00' R	719.93	176808.63	182436.11

LEGEND

X	CURB RAMP TYPE
XXX YYY.YY	POINT NUMBER & ELEVATION
*	SLOPE AT UPPER LIMIT OF CONSTRUCTION TOLERANCE, DO NOT EXCEED ADA STANDARDS

NOTES:
1. CONTRACTOR TO FIELD VERIFY ELEVATION, GRADES, SLOPES, LENGTHS AND MATCH POINTS PRIOR TO CURB RAMP AND SIDEWALK CONSTRUCTION
2. THE ENGINEER MAY ADJUST ELEVATIONS, WITHIN ADA STANDARDS, TO FIT FIELD CONDITIONS
3. DASHED LINES SHOWN FOR PROPOSED SIDEWALK ARE FOR INFORMATION ONLY AND DO NOT INDICATE JOINT LOCATIONS
4. ALL SIDEWALK SHALL BE 4-INCH UNLESS NOTED OTHERWISE NOTED ON THE PLANS
5. GRADE CHANGE BETWEEN THE GUTTER FLANGE SLOPE AND CURB RAMP SLOPE SHALL NOT EXCEED 13.3%
6. ALL RECTANGULAR DETECTABLE WARNING FIELDS ARE 2' X 10' NATURAL PATINA.

PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	TRAIL RAMP DETAILS	SHEET 80	E

2

2

LEGEND

EROSION MAT CLASS I TYPE B

EROSION MAT URBAN CLASS I TYPE B

SILT FENCE

RIP RAP OR STONE DITCH CHECK

SLOPE INTERCEPT

ASPH — ASPHALTIC FLUME

CONC — CONCRETE SURFACE DRAIN

INLET PROTECTION

TEMPORARY DITCH CHECK

CULVERT PIPE CHECK

SURFACE WATER FLOW

R — ROCK BAGS

N

CTH C NW LOOP

CTH C

STRUCTURE B-59-0179

23 WB

R/L STH 23 WB

1191+00 1192+00 1193+00 1194+00 1195+00 1196+00 1197+00 1198+00

1191+00 1192+00 1193+00 1194+00 1195+00 1196+00 1197+00 1198+00

EB

R/L STH 23 EB

CTH C SW LOOP

CTH C

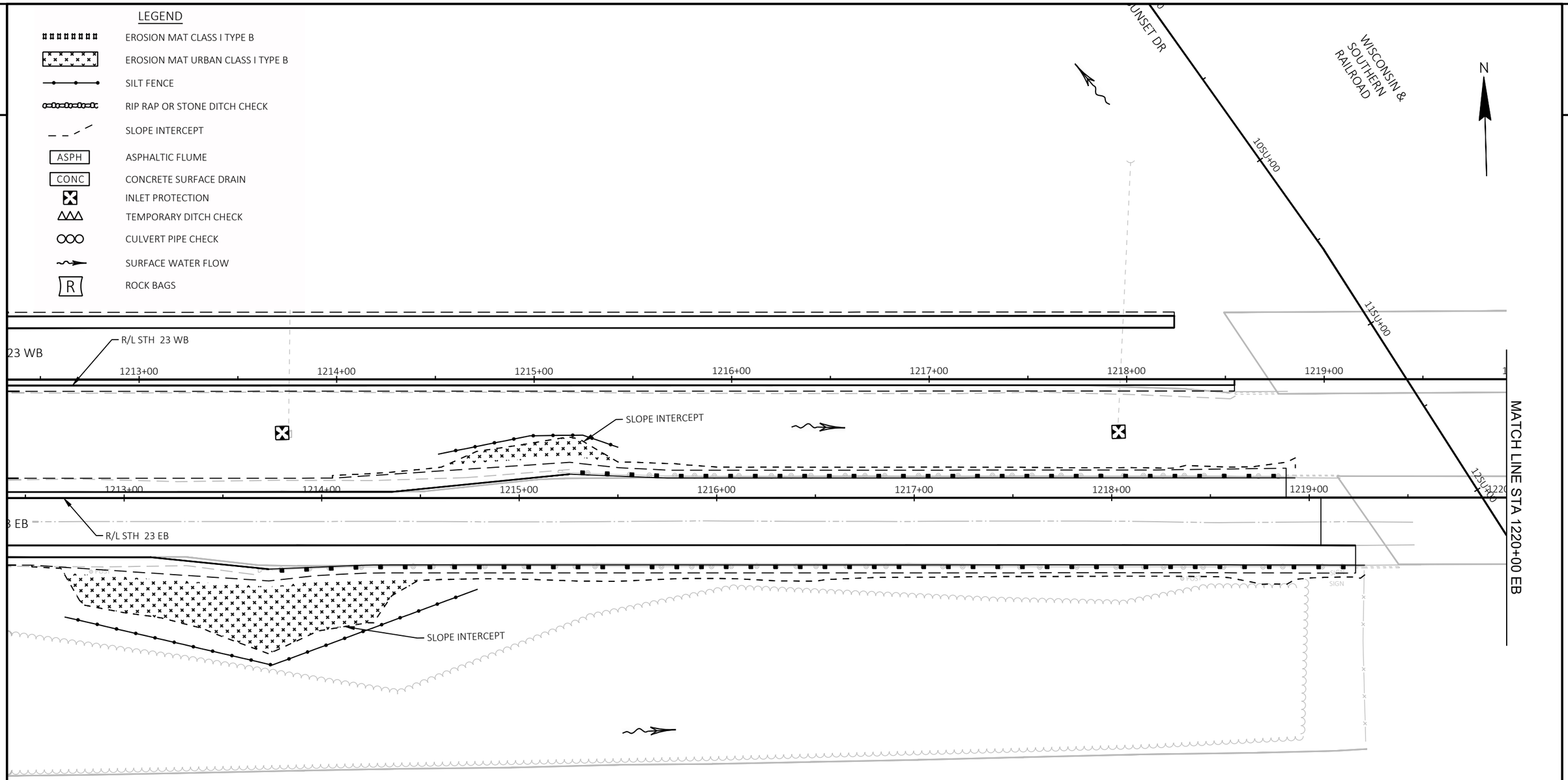
NOTE:
TYPE A INLET PROTECTION IS REQUIRED FOR ALL INLETS AFTER INSTALLATION AND BEFORE CURB PLACEMENT. AFTER CURB PLACEMENT INSTALL TYPE B, C, OR D INLET PROTECTION. (SEE MISCELLANEOUS QUANTITIES)

PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	EROSION CONTROL	SHEET 81	E

2

LEGEND

- EROSION MAT CLASS I TYPE B
- EROSION MAT URBAN CLASS I TYPE B
- SILT FENCE
- RIP RAP OR STONE DITCH CHECK
- SLOPE INTERCEPT
- ASPH — ASPHALTIC FLUME
- CONC — CONCRETE SURFACE DRAIN
- INLET PROTECTION
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW
- R — ROCK BAGS



NOTE:
TYPE A INLET PROTECTION IS REQUIRED FOR ALL INLETS AFTER INSTALLATION AND BEFORE CURB PLACEMENT. AFTER CURB PLACEMENT INSTALL TYPE B, C, OR D INLET PROTECTION. (SEE MISCELLANEOUS QUANTITIES)

PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	EROSION CONTROL	SHEET 82	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\022001-EC.DWG
LAYOUT NAME - 022002-ec
PLOT DATE : 9/29/2026 1:15 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

2

N

R/L STH 23 WB

STH 23 WB

220+00 1221+00 1222+00 1223+00 1224+00 1225+00 1226+00 1227+00

SLOPE INTERCEPT

MATCH LINE STA 1220+00 EB

220+00 1221+00 1222+00 1223+00 1224+00 1225+00 1226+00 1227+00

R/L STH 23 EB

STH 23 EB

135U+00

145U+00

SUNSET DR

LEGEND

- EROSION MAT CLASS I TYPE B
- EROSION MAT URBAN CLASS I TYPE B
- SILT FENCE
- RIP RAP OR STONE DITCH CHECK
- SLOPE INTERCEPT
- ASPH — ASPHALTIC FLUME
- CONC — CONCRETE SURFACE DRAIN
- INLET PROTECTION
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW
- R — ROCK BAGS

NOTE:
TYPE A INLET PROTECTION IS REQUIRED FOR ALL INLETS AFTER INSTALLATION AND BEFORE CURB PLACEMENT. AFTER CURB PLACEMENT INSTALL TYPE B, C, OR D INLET PROTECTION. (SEE MISCELLANEOUS QUANTITIES)

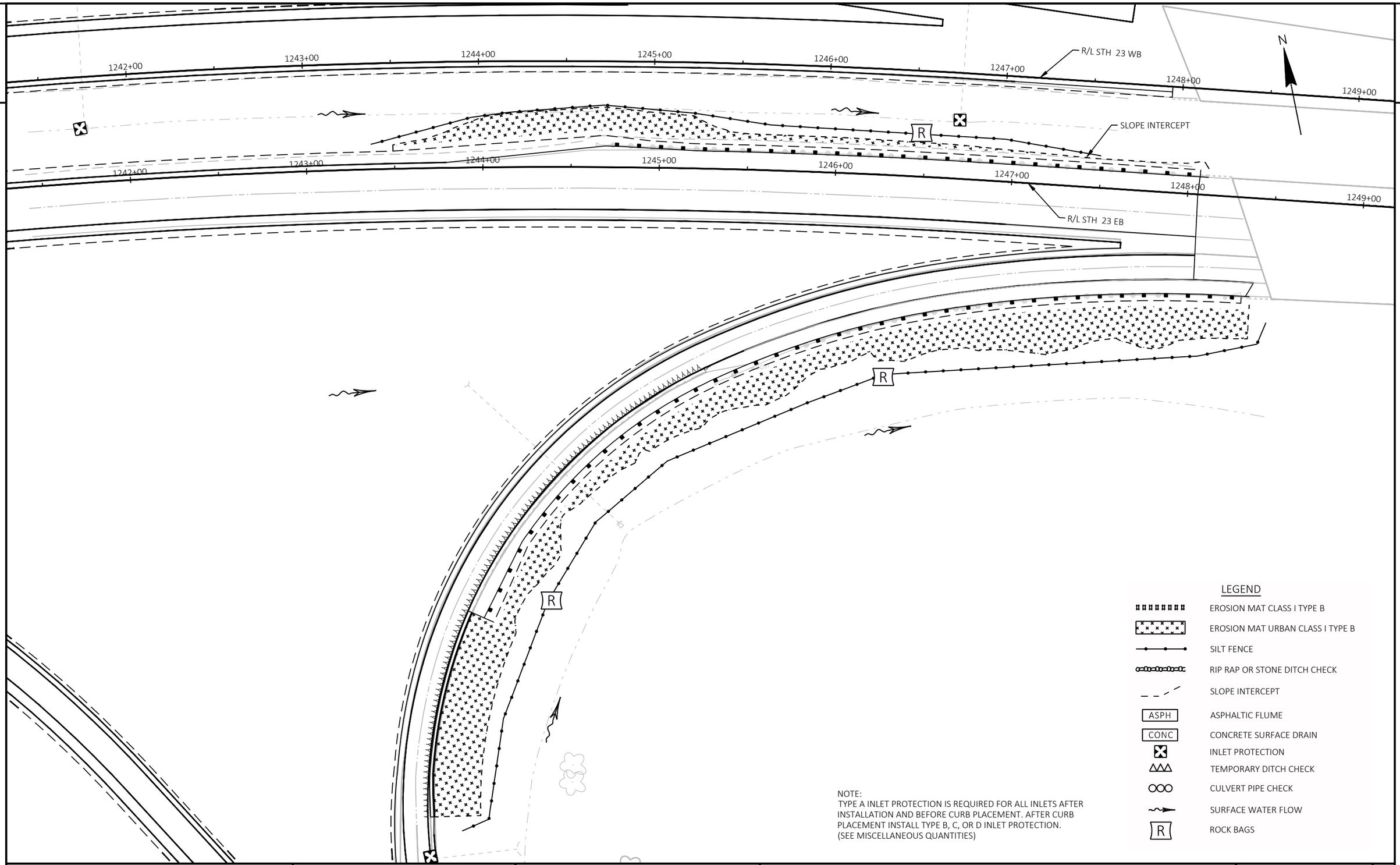
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	EROSION CONTROL	SHEET 83	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\022001-EC.DWG
LAYOUT NAME - 022003-ec

PLOT DATE : 9/29/2026 1:15 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

2



LEGEND

- EROSION MAT CLASS I TYPE B
- EROSION MAT URBAN CLASS I TYPE B
- SILT FENCE
- RIP RAP OR STONE DITCH CHECK
- SLOPE INTERCEPT
- ASPH — ASPHALTIC FLUME
- CONC — CONCRETE SURFACE DRAIN
- INLET PROTECTION
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW
- R — ROCK BAGS

NOTE:
TYPE A INLET PROTECTION IS REQUIRED FOR ALL INLETS AFTER INSTALLATION AND BEFORE CURB PLACEMENT. AFTER CURB PLACEMENT INSTALL TYPE B, C, OR D INLET PROTECTION. (SEE MISCELLANEOUS QUANTITIES)

PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	EROSION CONTROL	SHEET 84	E

2

2

N

SLOPE INTERCEPT

STH 23 WB

R/L STH 23 WB

1251+00 1252+00 1253+00 1254+00 1255+00 1256+00 1257+00 1258+00

STH 23 EB

R/L STH 23 EB

1251+00 1252+00 1253+00 1254+00 1255+00 1256+00 1257+00 1258+00

R

SLOPE INTERCEPT

OLD PLANK RD TRAIL

LEGEND

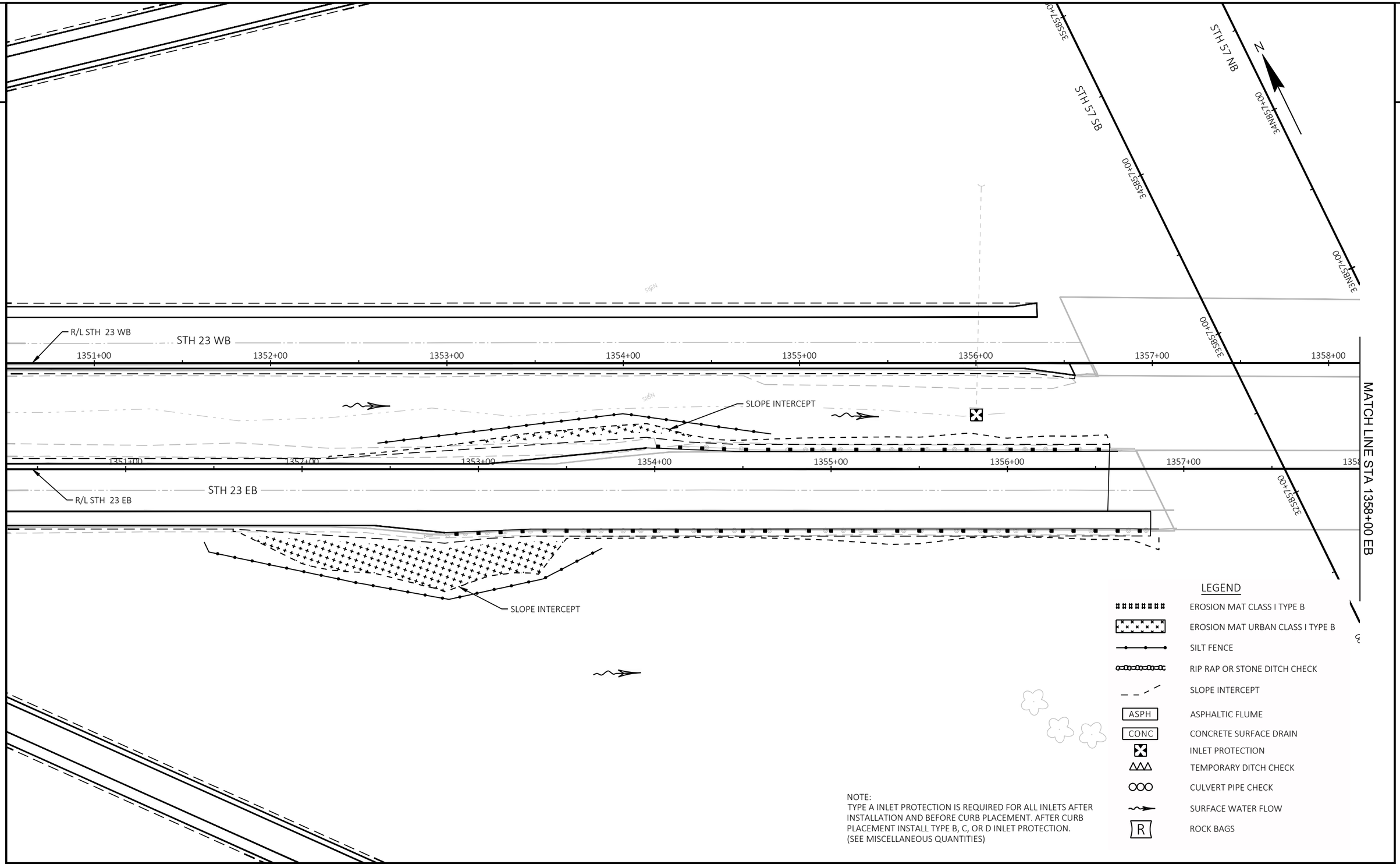
- EROSION MAT CLASS I TYPE B
- EROSION MAT URBAN CLASS I TYPE B
- SILT FENCE
- RIP RAP OR STONE DITCH CHECK
- SLOPE INTERCEPT
- ASPH — ASPHALTIC FLUME
- CONC — CONCRETE SURFACE DRAIN
- INLET PROTECTION
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW
- R — ROCK BAGS

NOTE:
TYPE A INLET PROTECTION IS REQUIRED FOR ALL INLETS AFTER INSTALLATION AND BEFORE CURB PLACEMENT. AFTER CURB PLACEMENT INSTALL TYPE B, C, OR D INLET PROTECTION.
(SEE MISCELLANEOUS QUANTITIES)

PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	EROSION CONTROL	SHEET 85	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\022001-EC.DWG
LAYOUT NAME - 022005-ec
PLOT DATE : 9/29/2026 1:15 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:50 FT

2



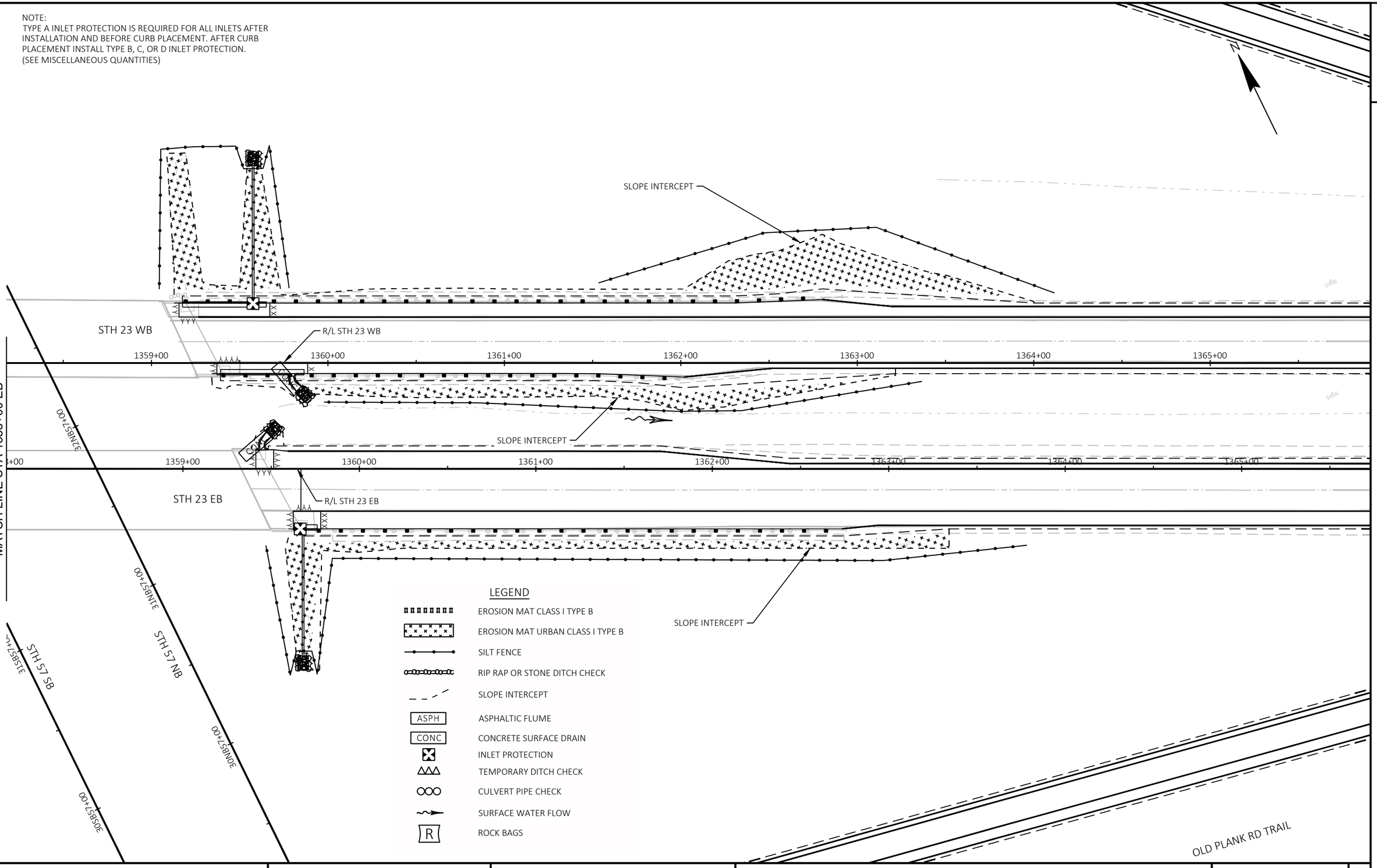
LEGEND

- EROSION MAT CLASS I TYPE B
- EROSION MAT URBAN CLASS I TYPE B
- SILT FENCE
- RIP RAP OR STONE DITCH CHECK
- SLOPE INTERCEPT
- ASPH — ASPHALTIC FLUME
- CONC — CONCRETE SURFACE DRAIN
- INLET PROTECTION
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW
- R — ROCK BAGS

NOTE:
TYPE A INLET PROTECTION IS REQUIRED FOR ALL INLETS AFTER INSTALLATION AND BEFORE CURB PLACEMENT. AFTER CURB PLACEMENT INSTALL TYPE B, C, OR D INLET PROTECTION.
(SEE MISCELLANEOUS QUANTITIES)

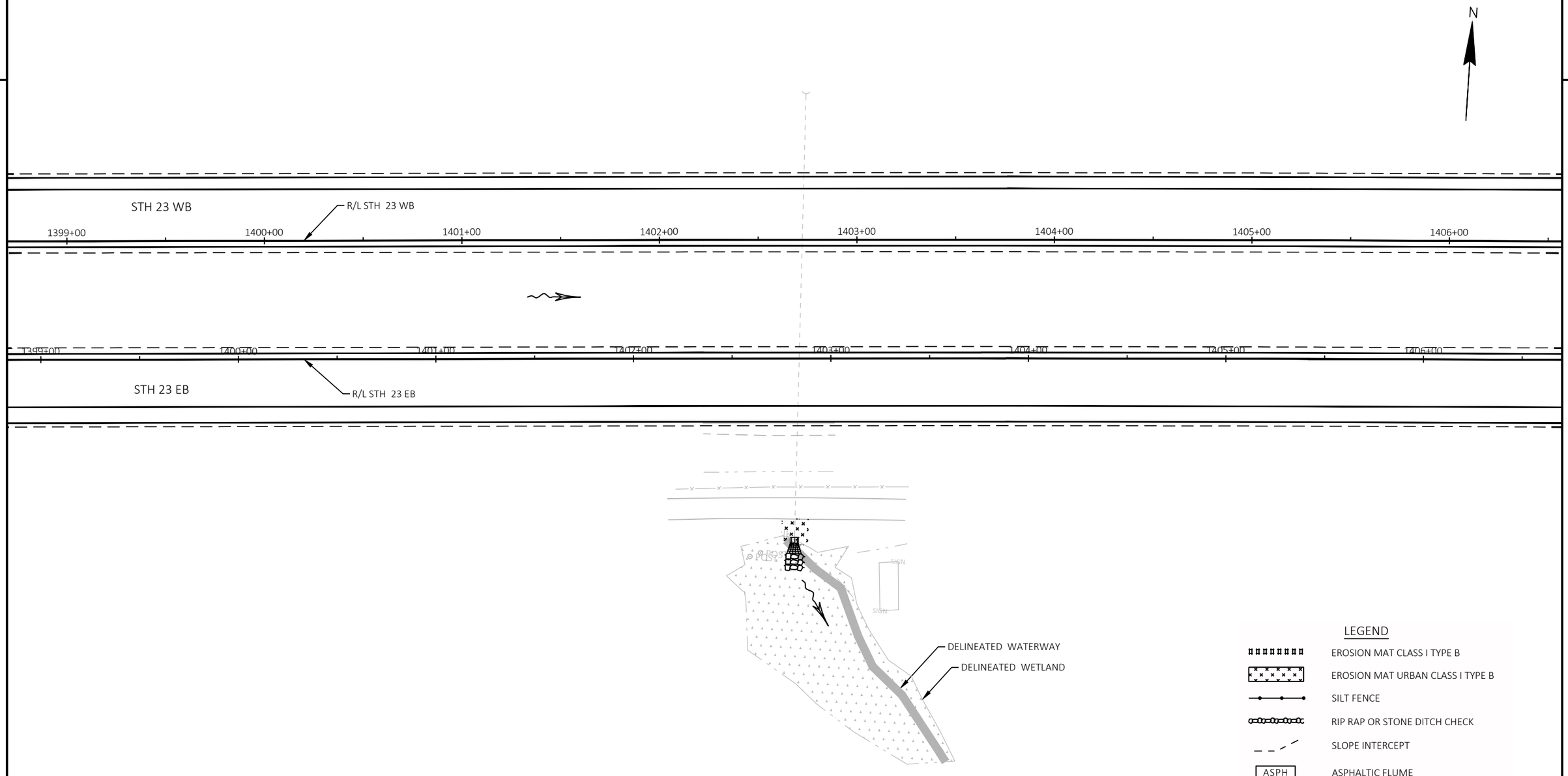
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	EROSION CONTROL	SHEET 86	E

NOTE:
TYPE A INLET PROTECTION IS REQUIRED FOR ALL INLETS AFTER INSTALLATION AND BEFORE CURB PLACEMENT. AFTER CURB PLACEMENT INSTALL TYPE B, C, OR D INLET PROTECTION.
(SEE MISCELLANEOUS QUANTITIES)



PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	EROSION CONTROL	SHEET 87	E

2



LEGEND

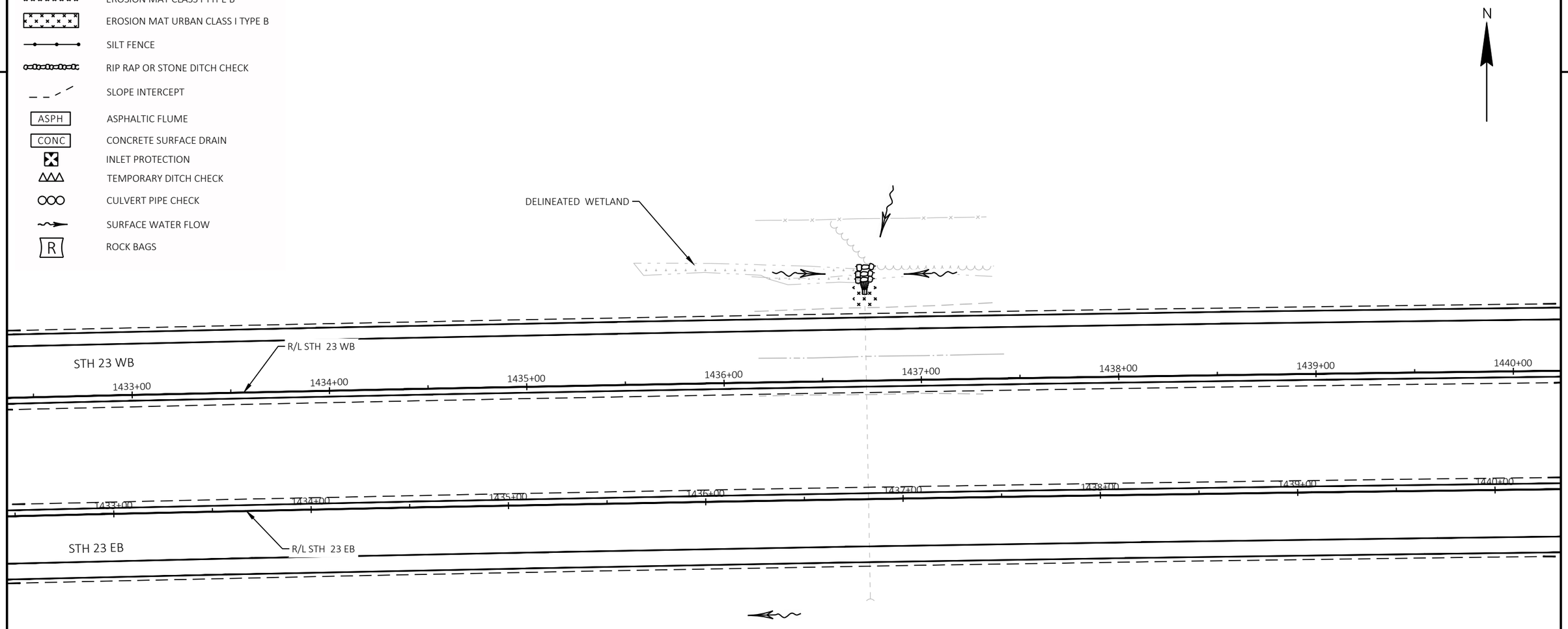
- EROSION MAT CLASS I TYPE B
- EROSION MAT URBAN CLASS I TYPE B
- SILT FENCE
- RIP RAP OR STONE DITCH CHECK
- SLOPE INTERCEPT
- ASPH — ASPHALTIC FLUME
- CONC — CONCRETE SURFACE DRAIN
- INLET PROTECTION
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW
- R — ROCK BAGS

NOTE:
TYPE A INLET PROTECTION IS REQUIRED FOR ALL INLETS AFTER INSTALLATION AND BEFORE CURB PLACEMENT. AFTER CURB PLACEMENT INSTALL TYPE B, C, OR D INLET PROTECTION. (SEE MISCELLANEOUS QUANTITIES)

2

LEGEND

- EROSION MAT CLASS I TYPE B
- EROSION MAT URBAN CLASS I TYPE B
- SILT FENCE
- RIP RAP OR STONE DITCH CHECK
- SLOPE INTERCEPT
- ASPH — ASPHALTIC FLUME
- CONC — CONCRETE SURFACE DRAIN
- INLET PROTECTION
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW
- R — ROCK BAGS



NOTE:
TYPE A INLET PROTECTION IS REQUIRED FOR ALL INLETS AFTER INSTALLATION AND BEFORE CURB PLACEMENT. AFTER CURB PLACEMENT INSTALL TYPE B, C, OR D INLET PROTECTION.
(SEE MISCELLANEOUS QUANTITIES)

PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	EROSION CONTROL	SHEET 89	E

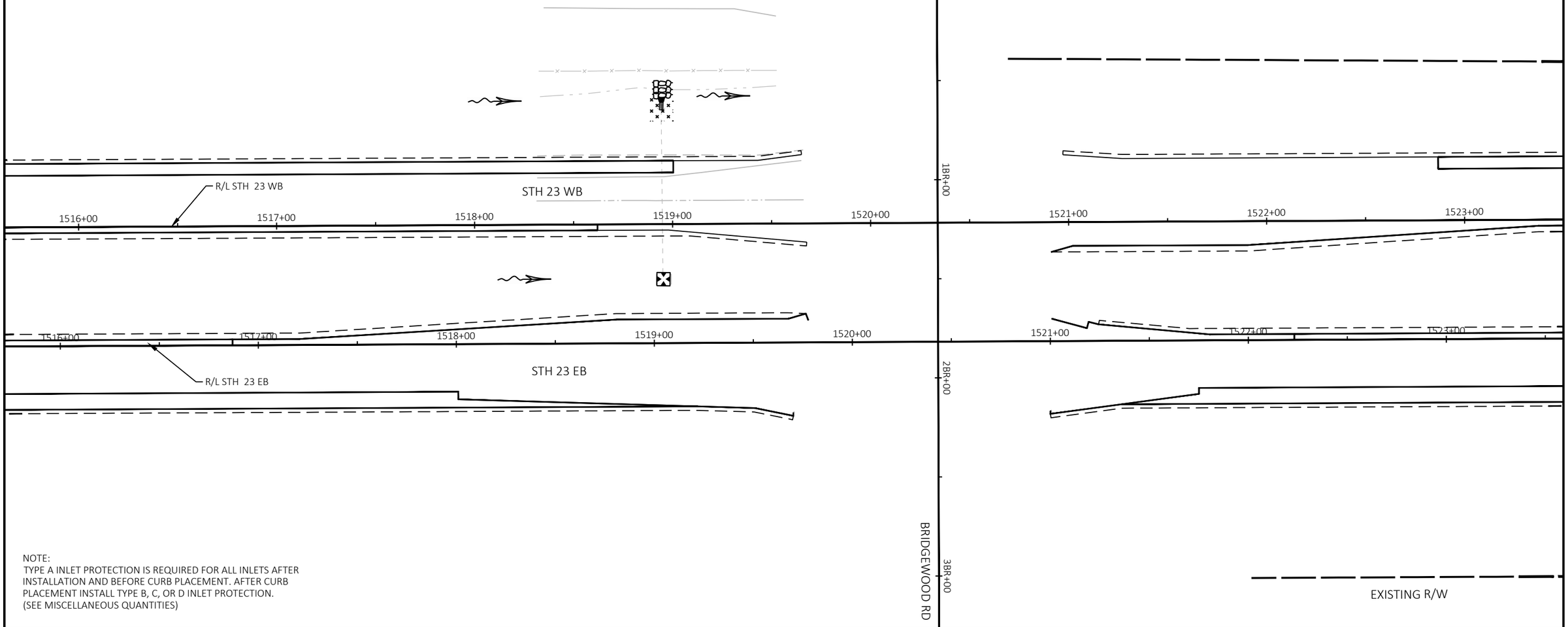
2

2

LEGEND

- EROSION MAT CLASS I TYPE B
- EROSION MAT URBAN CLASS I TYPE B
- SILT FENCE
- RIP RAP OR STONE DITCH CHECK
- SLOPE INTERCEPT
- ASPH — ASPHALTIC FLUME
- CONC — CONCRETE SURFACE DRAIN
- INLET PROTECTION
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW
- R — ROCK BAGS

N



NOTE:
TYPE A INLET PROTECTION IS REQUIRED FOR ALL INLETS AFTER INSTALLATION AND BEFORE CURB PLACEMENT. AFTER CURB PLACEMENT INSTALL TYPE B, C, OR D INLET PROTECTION.
(SEE MISCELLANEOUS QUANTITIES)

PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	EROSION CONTROL	SHEET 90	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\022001-EC.DWG
LAYOUT NAME - 022010-ec
PLOT DATE : 9/29/2026 1:16 PM
PLOT BY : HOSPER, JAN
PLOT NAME :
PLOT SCALE : 1 IN:50 FT

2

2

SUNSET RD

SLOPE INTERCEPT

WETLAND LIMITS

WETLAND LIMITS

SLOPE INTERCEPT

N

R/L STH 23 WB

STH 23 WB

1568+00 1569+00 1570+00 1571+00 1572+00 1573+00 1574+00 1575+00

MATCH LINE STA 1575+50 EB

R/L STH 23 EB

STH 23 EB

OLD PLANK RD TRAIL

EXISTING R/W

SLOPE INTERCEPT

WETLAND LIMITS

SLOPE INTERCEPT

WETLAND LIMITS

SUNSET RD

LEGEND

- EROSION MAT CLASS I TYPE B
- EROSION MAT URBAN CLASS I TYPE B
- SILT FENCE
- RIP RAP OR STONE DITCH CHECK
- SLOPE INTERCEPT
- ASPH — ASPHALTIC FLUME
- CONC — CONCRETE SURFACE DRAIN
- INLET PROTECTION
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW
- R — ROCK BAGS

NOTE:
TYPE A INLET PROTECTION IS REQUIRED FOR ALL INLETS AFTER INSTALLATION AND BEFORE CURB PLACEMENT. AFTER CURB PLACEMENT INSTALL TYPE B, C, OR D INLET PROTECTION.
(SEE MISCELLANEOUS QUANTITIES)

PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	EROSION CONTROL	SHEET 91	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\022001-EC.DWG
LAYOUT NAME - 022011-ec

PLOT DATE : 9/29/2026 1:16 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

2

LEGEND

- EROSION MAT CLASS I TYPE B
- EROSION MAT URBAN CLASS I TYPE B
- SILT FENCE
- RIP RAP OR STONE DITCH CHECK
- SLOPE INTERCEPT
- ASPH — ASPHALTIC FLUME
- CONC — CONCRETE SURFACE DRAIN
- INLET PROTECTION
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW
- R — ROCK BAGS

N

EXISTING R/W

EXISTING R/W

POST

R/L STH 23 WB

STH 23 WB

1576+00 1577+00 1578+00 1579+00 1580+00 1581+00 1582+00 1583+

MATCH LINE STA 1575+50 EB

ASPH

ASPH

1576+00 1577+00 1578+00 1579+00 1580+00 1581+00 1582+00 158

MATCH LINE STA 1583+00 EB

STH 23 EB

R/L STH 23 EB

1577TR+00

1578TR+00

1579TR+00

1580TR+00

1581TR+00

1582TR+00

OLD PLANK RD TRAIL

EXISTING R/W

EXISTING R/W

POST

PROPOSED R/W

BLDG

R/L TRAIL

NOTE:
TYPE A INLET PROTECTION IS REQUIRED FOR ALL INLETS AFTER INSTALLATION AND BEFORE CURB PLACEMENT. AFTER CURB PLACEMENT INSTALL TYPE B, C, OR D INLET PROTECTION. (SEE MISCELLANEOUS QUANTITIES)

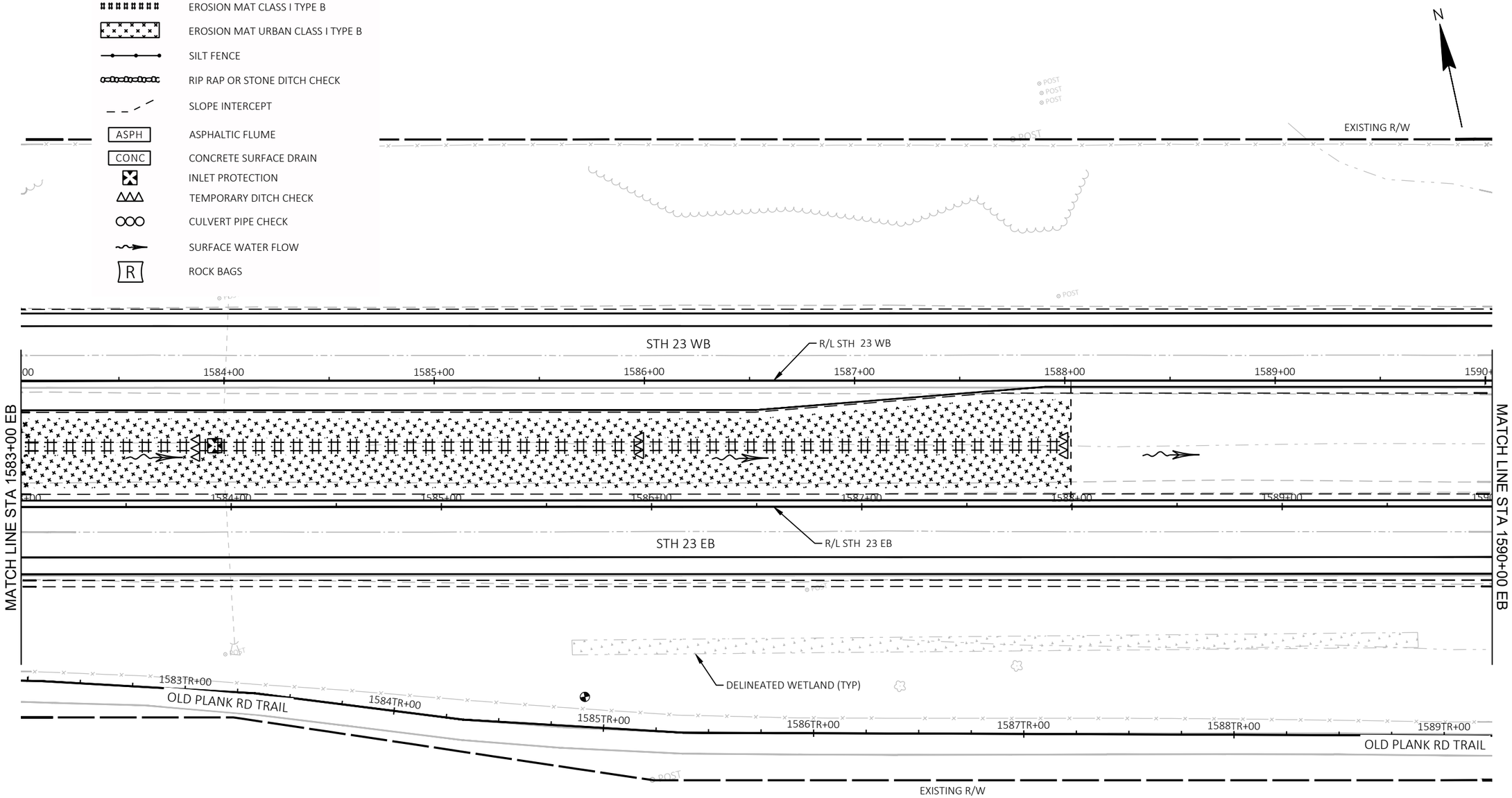
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	EROSION CONTROL	SHEET 92	E

2

2

LEGEND

- EROSION MAT CLASS I TYPE B
- EROSION MAT URBAN CLASS I TYPE B
- SILT FENCE
- RIP RAP OR STONE DITCH CHECK
- SLOPE INTERCEPT
- ASPH — ASPHALTIC FLUME
- CONC — CONCRETE SURFACE DRAIN
- INLET PROTECTION
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW
- R — ROCK BAGS



NOTE:
TYPE A INLET PROTECTION IS REQUIRED FOR ALL INLETS AFTER INSTALLATION AND BEFORE CURB PLACEMENT. AFTER CURB PLACEMENT INSTALL TYPE B, C, OR D INLET PROTECTION. (SEE MISCELLANEOUS QUANTITIES)

PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	EROSION CONTROL	SHEET 93	E

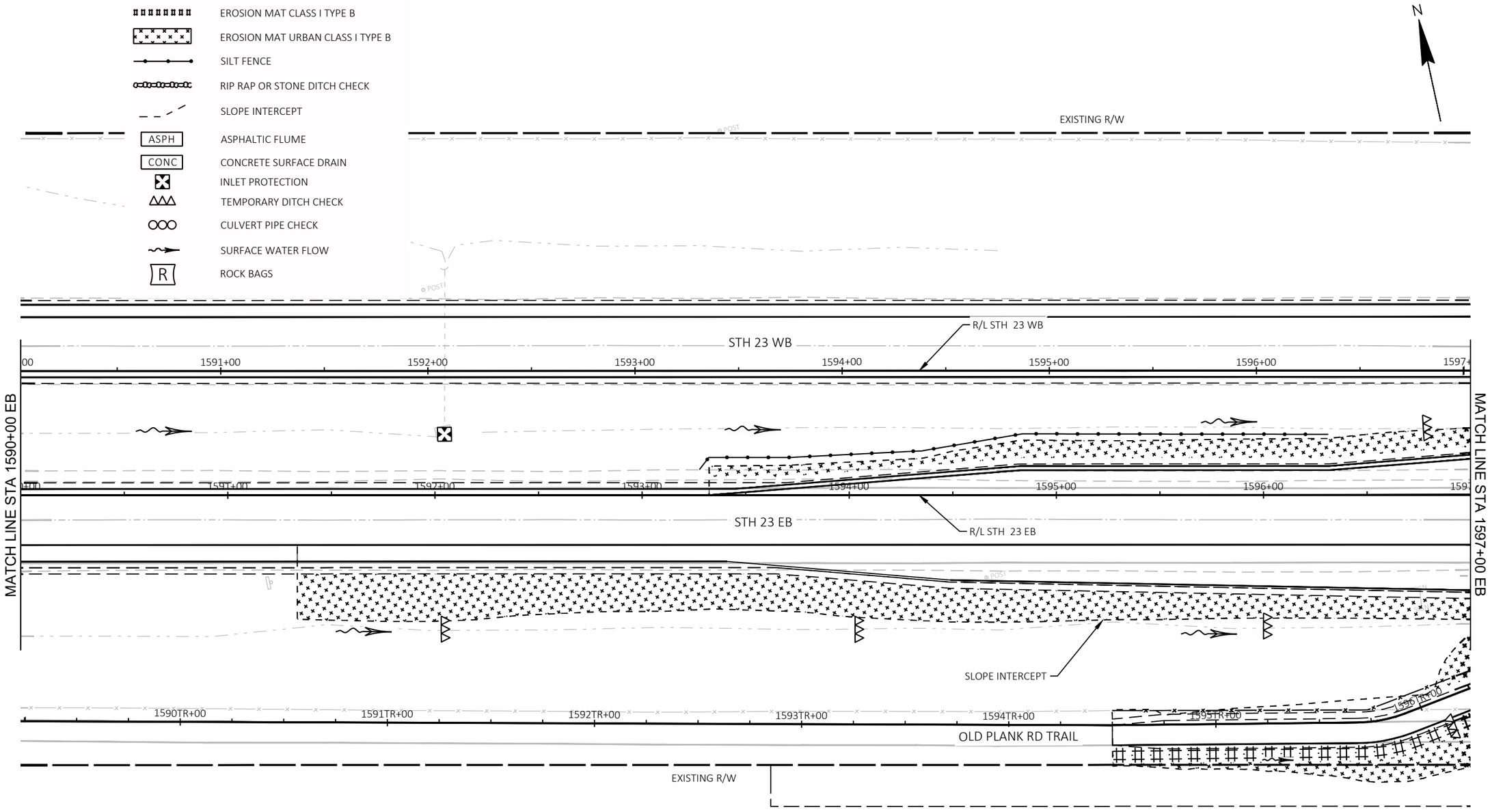
FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\022001-EC.DWG
LAYOUT NAME - 022013-ec
PLOT DATE : 9/29/2026 1:16 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

2

LEGEND

- EROSION MAT CLASS I TYPE B
- EROSION MAT URBAN CLASS I TYPE B
- SILT FENCE
- RIP RAP OR STONE DITCH CHECK
- SLOPE INTERCEPT
- ASPH — ASPHALTIC FLUME
- CONC — CONCRETE SURFACE DRAIN
- INLET PROTECTION
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW
- R — ROCK BAGS



NOTE:
TYPE A INLET PROTECTION IS REQUIRED FOR ALL INLETS AFTER INSTALLATION AND BEFORE CURB PLACEMENT. AFTER CURB PLACEMENT INSTALL TYPE B, C, OR D INLET PROTECTION. (SEE MISCELLANEOUS QUANTITIES)

PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	EROSION CONTROL	SHEET 94	E

2

LEGEND

- EROSION MAT CLASS I TYPE B
- EROSION MAT URBAN CLASS I TYPE B
- SILT FENCE
- RIP RAP OR STONE DITCH CHECK
- SLOPE INTERCEPT
- ASPH — ASPHALTIC FLUME
- CONC — CONCRETE SURFACE DRAIN
- INLET PROTECTION
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW
- R — ROCK BAGS

MATCH LINE STA 53+50 TT

PROPOSED R/W

53TT+00

SLOPE INTERCEPT

ASPH

52TT+00

SLOPE INTERCEPT

N

R/L STH 23 WB

1598+00 1599+00 1600+00 1601+00 1602+00 1603+00 1604+

MATCH LINE STA 1597+00 EB

1598+00 1599+00 1600+00 1602+00 1603+00 160

51TT+00

R/L STH 23 EB

MATCH LINE STA 1604+00 EB

1597TR+00

1598TR+00

1599TR+00

50TT+00

1600TR+00

1601TR+00

1603TR+00

POST

PROPOSED R/W

CTH TT

SLOPE INTERCEPT

RIPRAP HEAVY

SLOPE INTERCEPT

30

14

NOTE:
TYPE A INLET PROTECTION IS REQUIRED FOR ALL INLETS AFTER INSTALLATION AND BEFORE CURB PLACEMENT. AFTER CURB PLACEMENT INSTALL TYPE B, C, OR D INLET PROTECTION.
(SEE MISCELLANEOUS QUANTITIES)

MATCH LINE STA 49+00 TT

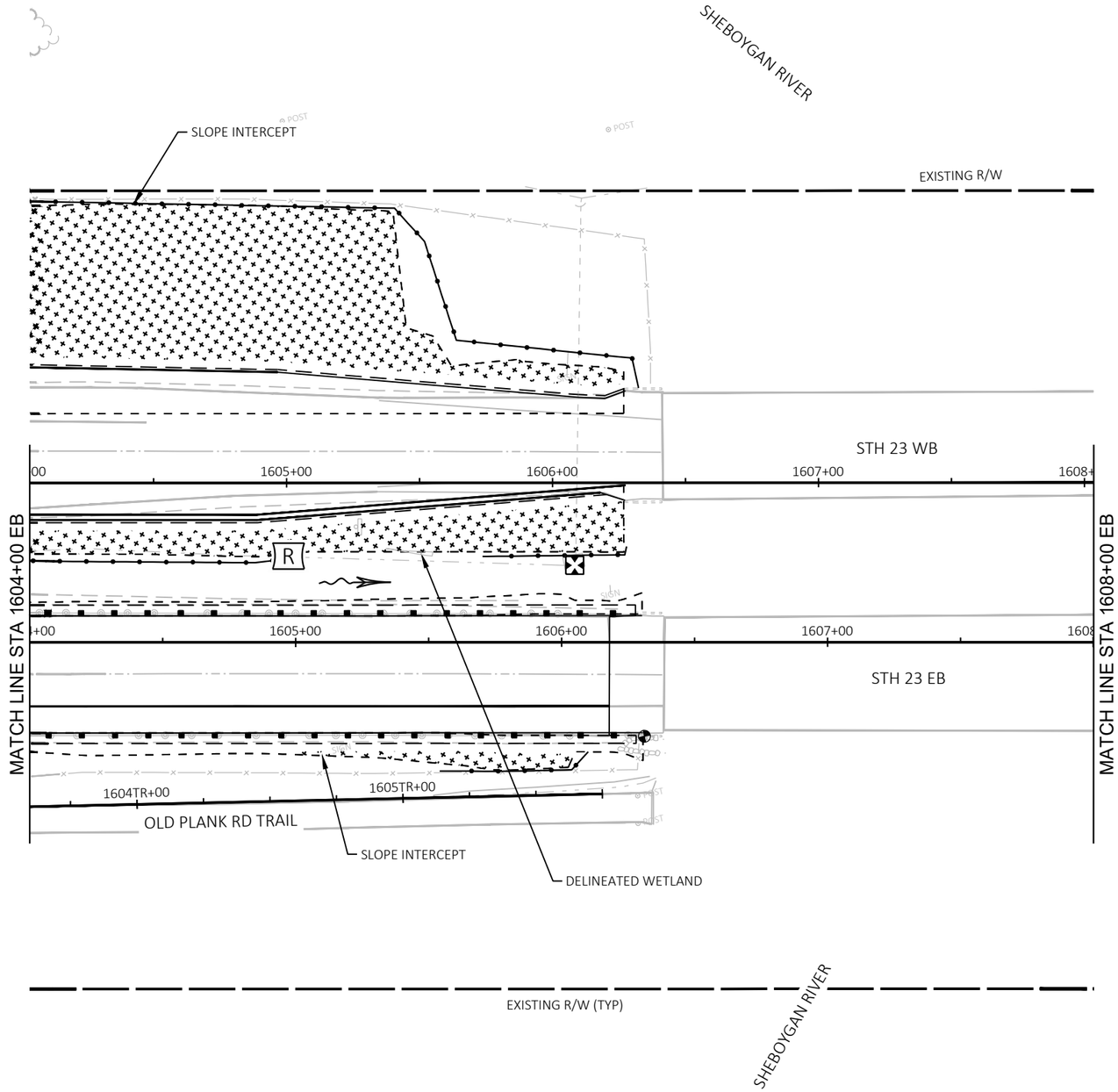
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	EROSION CONTROL	SHEET 95	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\022001-EC.DWG
LAYOUT NAME - 022015-ec

PLOT DATE : 9/29/2026 1:16 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

NOTE:
TYPE A INLET PROTECTION IS REQUIRED FOR ALL INLETS AFTER INSTALLATION AND BEFORE CURB PLACEMENT. AFTER CURB PLACEMENT INSTALL TYPE B, C, OR D INLET PROTECTION.
(SEE MISCELLANEOUS QUANTITIES)



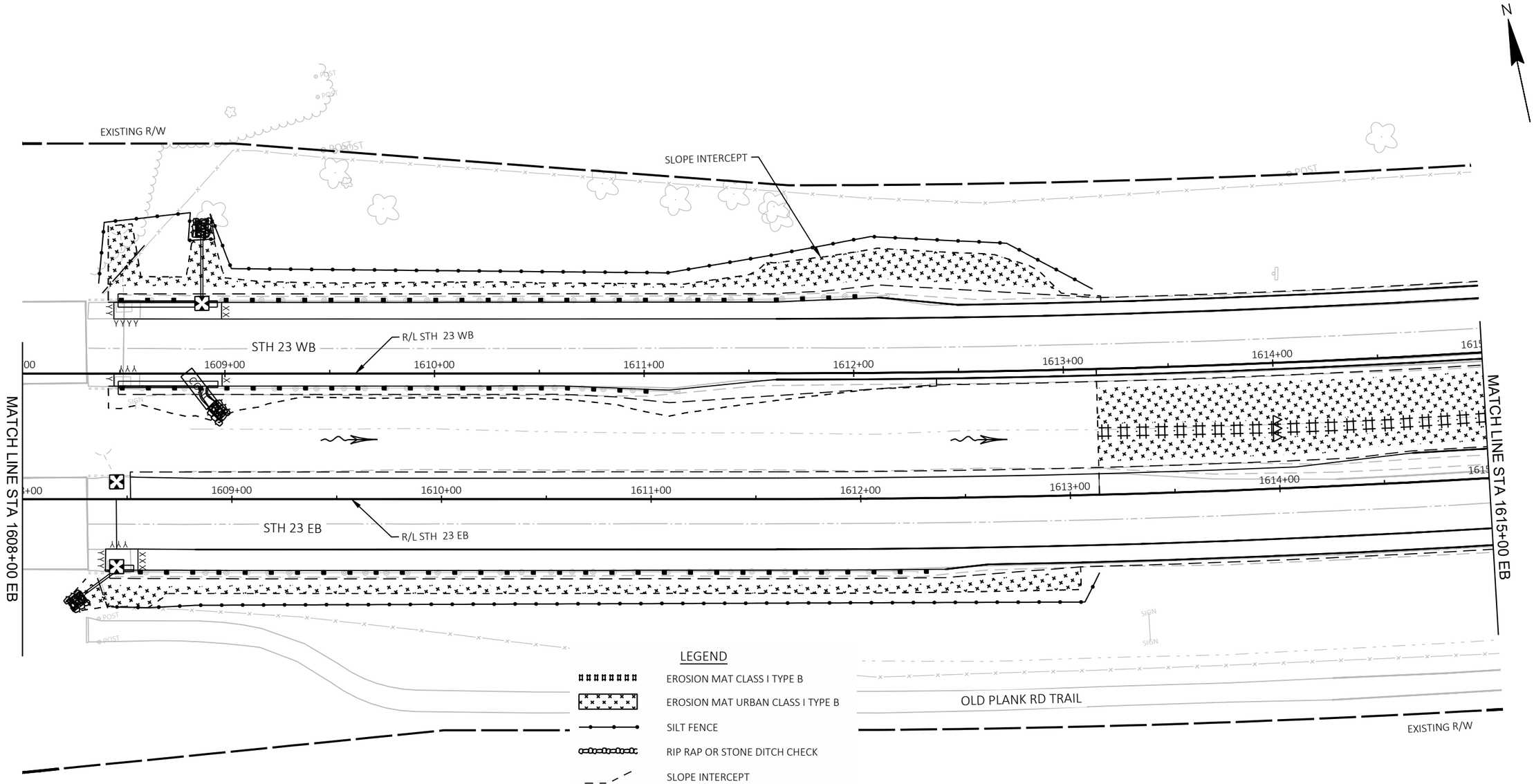
LEGEND

- EROSION MAT CLASS I TYPE B
- EROSION MAT URBAN CLASS I TYPE B
- SILT FENCE
- RIP RAP OR STONE DITCH CHECK
- SLOPE INTERCEPT
- ASPH — ASPHALTIC FLUME
- CONC — CONCRETE SURFACE DRAIN
- INLET PROTECTION
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW
- R — ROCK BAGS

PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	EROSION CONTROL	SHEET 96	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\022001-EC.DWG
LAYOUT NAME - 022016-ec
PLOT DATE : 9/29/2026 1:16 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:50 FT

2



LEGEND

- EROSION MAT CLASS I TYPE B
- EROSION MAT URBAN CLASS I TYPE B
- SILT FENCE
- RIP RAP OR STONE DITCH CHECK
- SLOPE INTERCEPT
- ASPH — ASPHALTIC FLUME
- CONC — CONCRETE SURFACE DRAIN
- INLET PROTECTION
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW
- R — ROCK BAGS

NOTE:
TYPE A INLET PROTECTION IS REQUIRED FOR ALL INLETS AFTER INSTALLATION AND BEFORE CURB PLACEMENT. AFTER CURB PLACEMENT INSTALL TYPE B, C, OR D INLET PROTECTION. (SEE MISCELLANEOUS QUANTITIES)

PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	EROSION CONTROL	SHEET 97	E

2

2

N

EXISTING R/W

WETLAND LIMITS

SLOPE INTERECEPT

R/W

EXISTING R/W

R

R

MATCH LINE STA 1615+00 EB

1616+00

1617+00

1618+00

1619+00

1620+00

1621+00

1622+00

R/L STH 23 WB

STH 23 WB

ASPH

ASPH

1616+00

1617+00

1618+00

1619+00

1620+00

1621+00

1622+00

R/L STH 23 EB

STH 23 EB

SIGN

OLD PLANK RD TRAIL

EXISTING R/W

LEGEND

- EROSION MAT CLASS I TYPE B
- EROSION MAT URBAN CLASS I TYPE B
- SILT FENCE
- RIP RAP OR STONE DITCH CHECK
- SLOPE INTERCEPT
- ASPH — ASPHALTIC FLUME
- CONC — CONCRETE SURFACE DRAIN
- INLET PROTECTION
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW
- R — ROCK BAGS

NOTE:
TYPE A INLET PROTECTION IS REQUIRED FOR ALL INLETS AFTER INSTALLATION AND BEFORE CURB PLACEMENT. AFTER CURB PLACEMENT INSTALL TYPE B, C, OR D INLET PROTECTION. (SEE MISCELLANEOUS QUANTITIES)

PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	EROSION CONTROL	SHEET 98	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\022001-EC.DWG
LAYOUT NAME - 022018-ec

PLOT DATE : 9/29/2026 1:17 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

2

2

LEGEND

- EROSION MAT CLASS I TYPE B
- EROSION MAT URBAN CLASS I TYPE B
- SILT FENCE
- RIP RAP OR STONE DITCH CHECK
- SLOPE INTERCEPT
- ASPH — ASPHALTIC FLUME
- CONC — CONCRETE SURFACE DRAIN
- INLET PROTECTION
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW
- R — ROCK BAGS

N

STH 23 WB

1674+00 1675+00 1676+00 1677+00 1678+00 1679+00 1680+00 1681+00

R/L STH 23 WB

SLOPE INTERCEPT

1674+00 1675+00 1676+00 1677+00 1678+00 1679+00 1680+00 1681+00

R/L STH 23 EB

STH 23 EB

CONC DCH

R

SLOPE INTERCEPT

NOTE:
TYPE A INLET PROTECTION IS REQUIRED FOR ALL INLETS AFTER INSTALLATION AND BEFORE CURB PLACEMENT. AFTER CURB PLACEMENT INSTALL TYPE B, C, OR D INLET PROTECTION.
(SEE MISCELLANEOUS QUANTITIES)

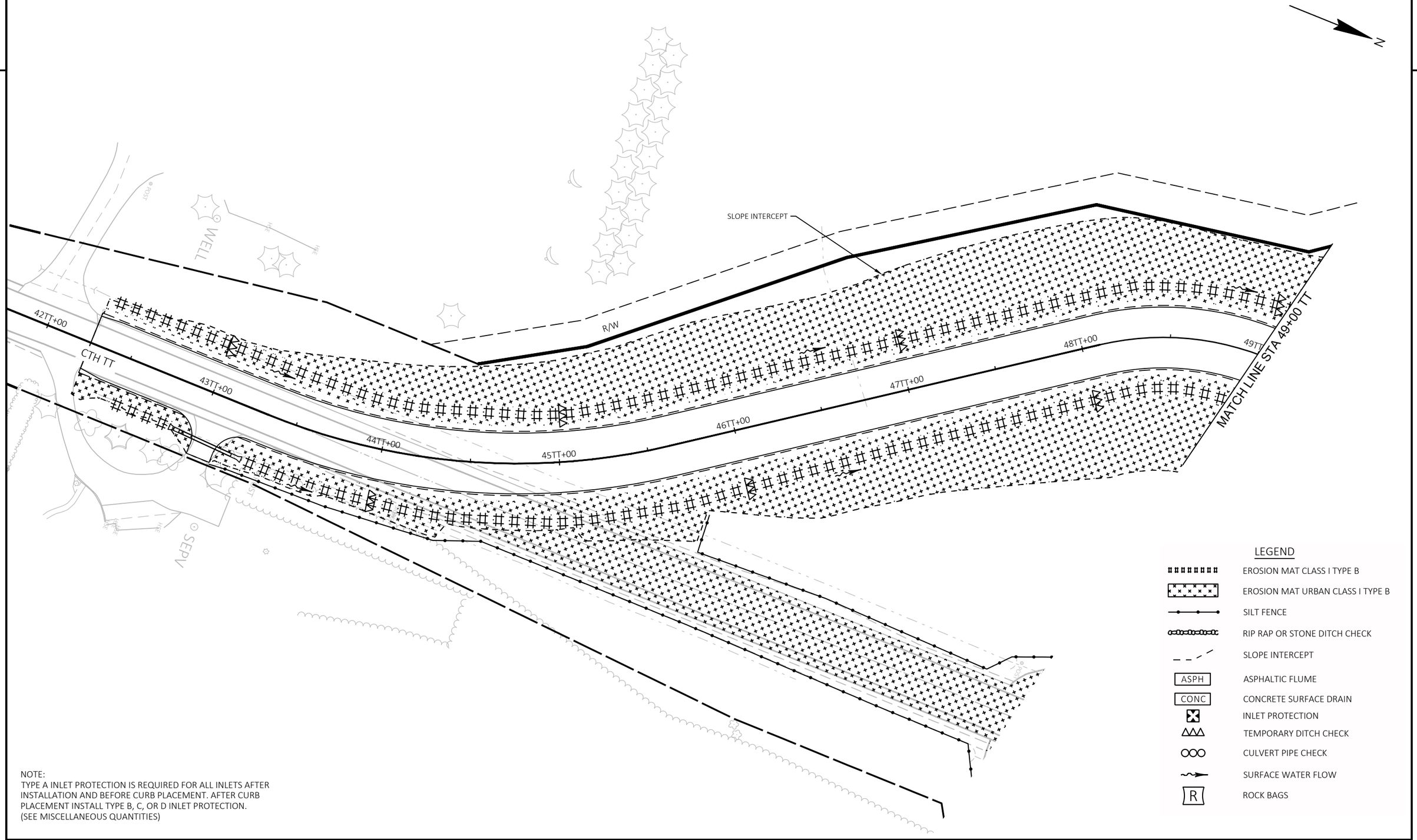
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	EROSION CONTROL	SHEET 99	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\022001-EC.DWG
LAYOUT NAME - 022019-ec

PLOT DATE : 9/29/2026 1:17 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

2



NOTE:
TYPE A INLET PROTECTION IS REQUIRED FOR ALL INLETS AFTER INSTALLATION AND BEFORE CURB PLACEMENT. AFTER CURB PLACEMENT INSTALL TYPE B, C, OR D INLET PROTECTION. (SEE MISCELLANEOUS QUANTITIES)

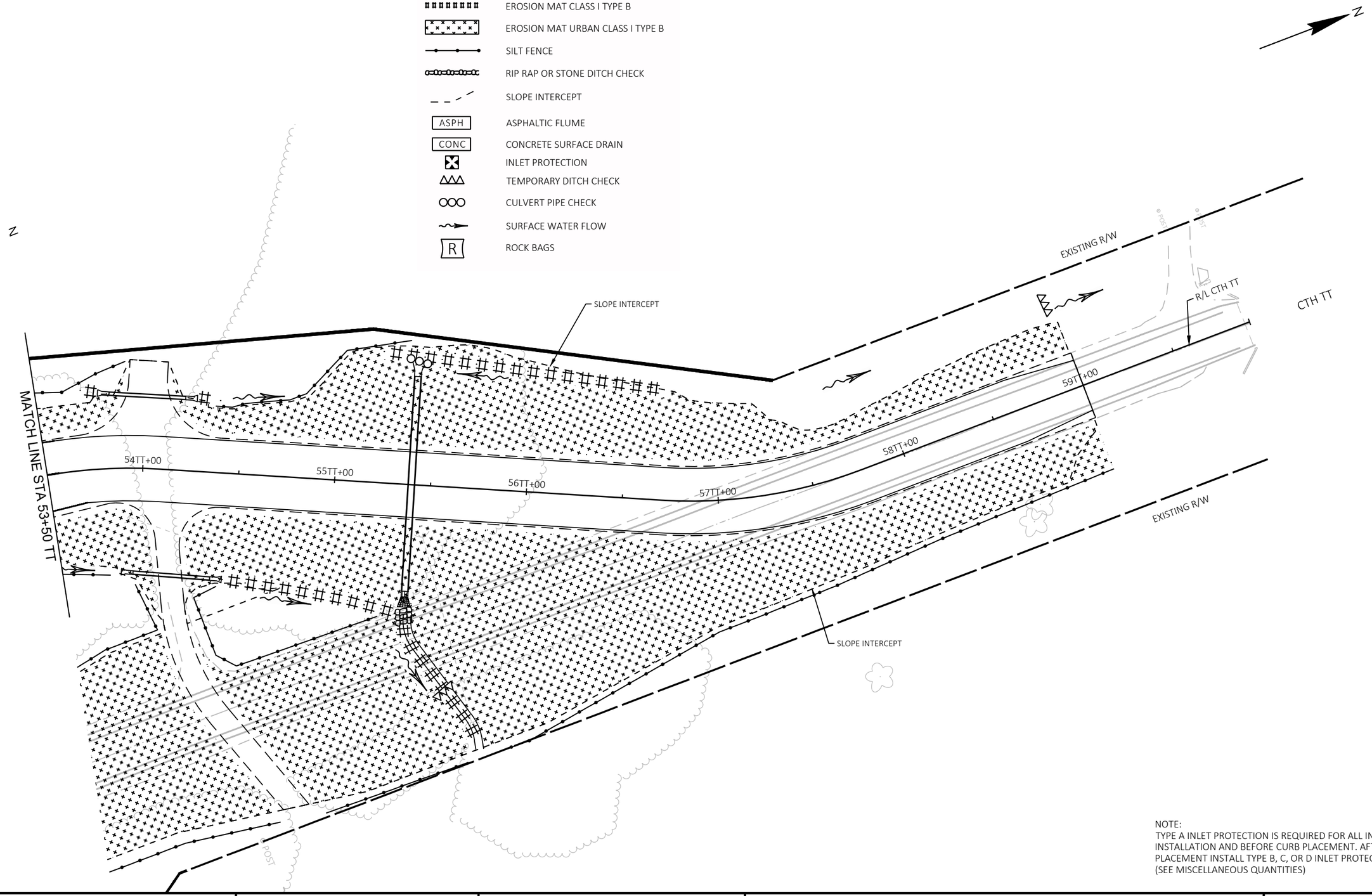
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	EROSION CONTROL	SHEET 100	E

2

2

LEGEND

- EROSION MAT CLASS I TYPE B
- EROSION MAT URBAN CLASS I TYPE B
- SILT FENCE
- RIP RAP OR STONE DITCH CHECK
- SLOPE INTERCEPT
- ASPH — ASPHALTIC FLUME
- CONC — CONCRETE SURFACE DRAIN
- INLET PROTECTION
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW
- R — ROCK BAGS



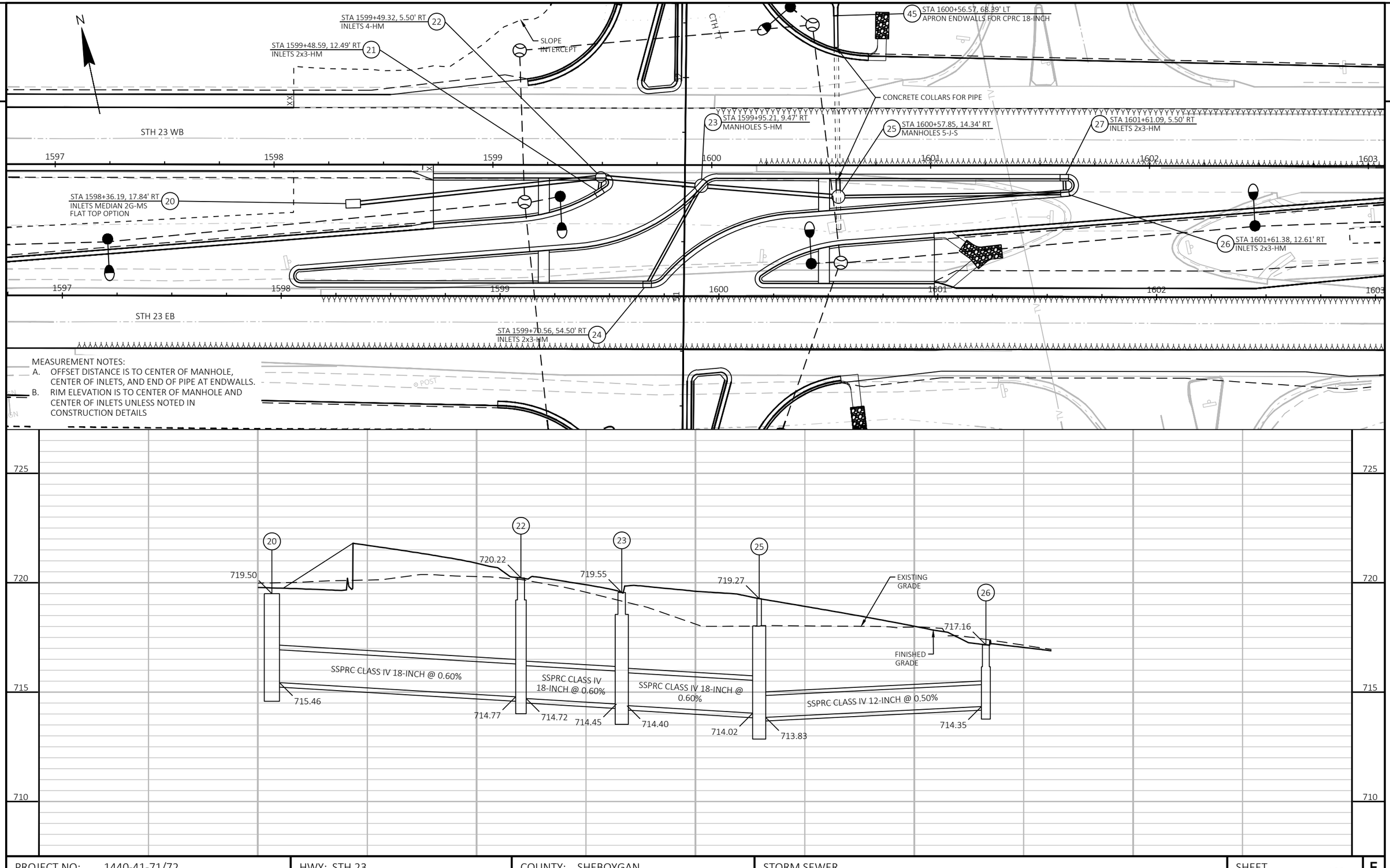
NOTE:
TYPE A INLET PROTECTION IS REQUIRED FOR ALL INLETS AFTER INSTALLATION AND BEFORE CURB PLACEMENT. AFTER CURB PLACEMENT INSTALL TYPE B, C, OR D INLET PROTECTION. (SEE MISCELLANEOUS QUANTITIES)

PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	EROSION CONTROL	SHEET 101	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\022001-EC.DWG
LAYOUT NAME - 022022-ec

PLOT DATE : 9/29/2026 1:17 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

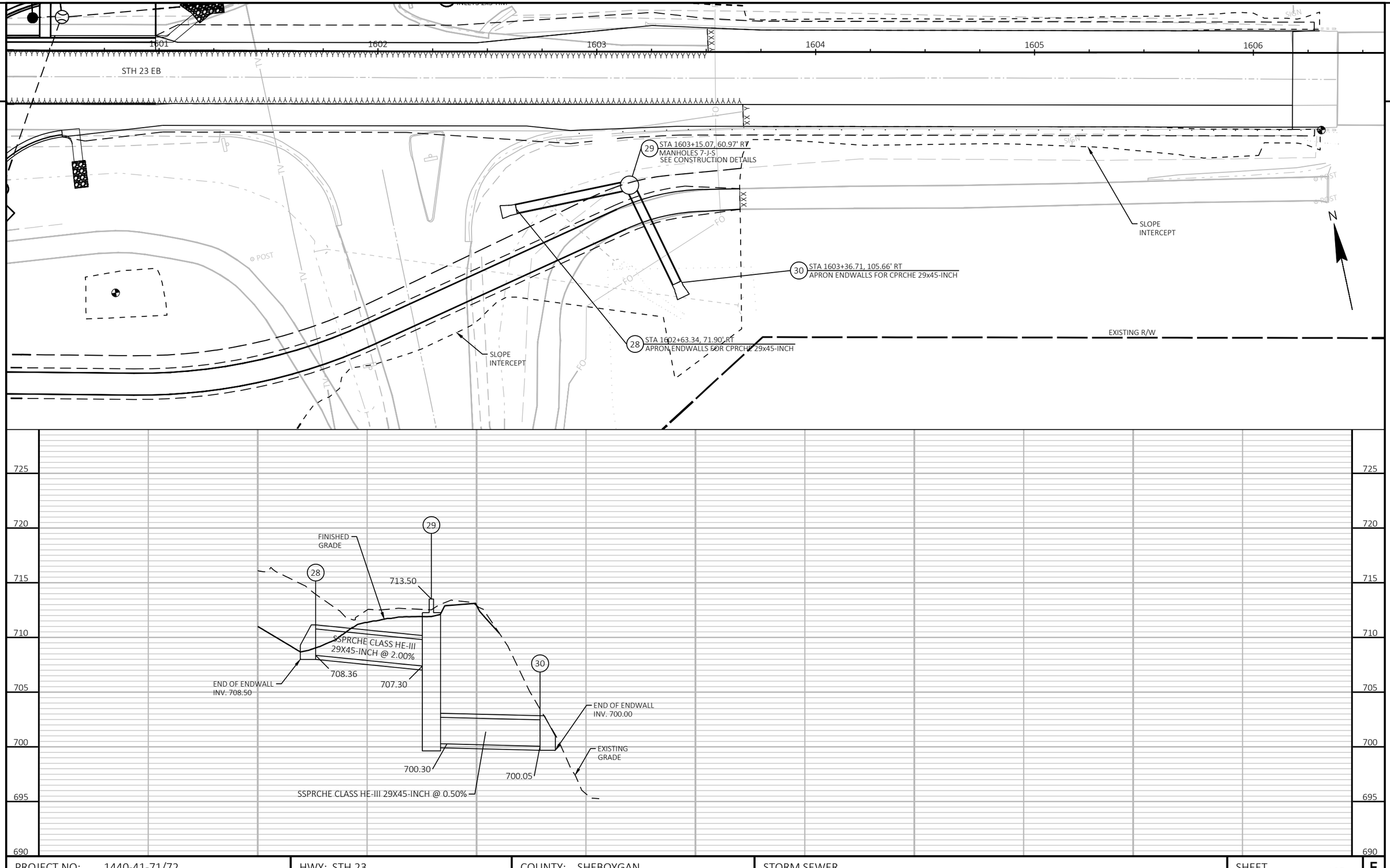


MEASUREMENT NOTES:

A. OFFSET DISTANCE IS TO CENTER OF MANHOLE, CENTER OF INLETS, AND END OF PIPE AT ENDWALLS.

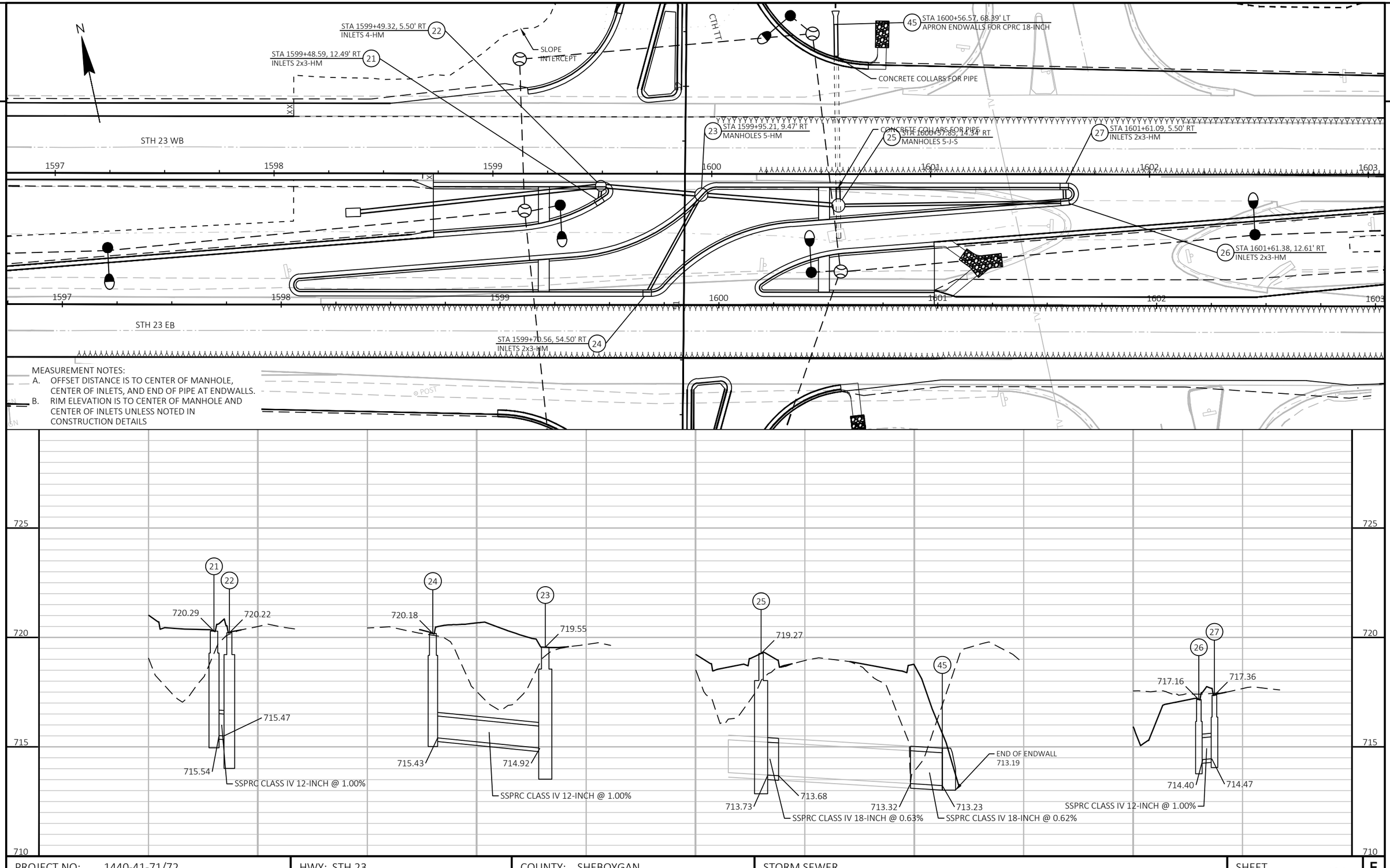
B. RIM ELEVATION IS TO CENTER OF MANHOLE AND CENTER OF INLETS UNLESS NOTED IN CONSTRUCTION DETAILS

PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	STORM SEWER	SHEET 102	E

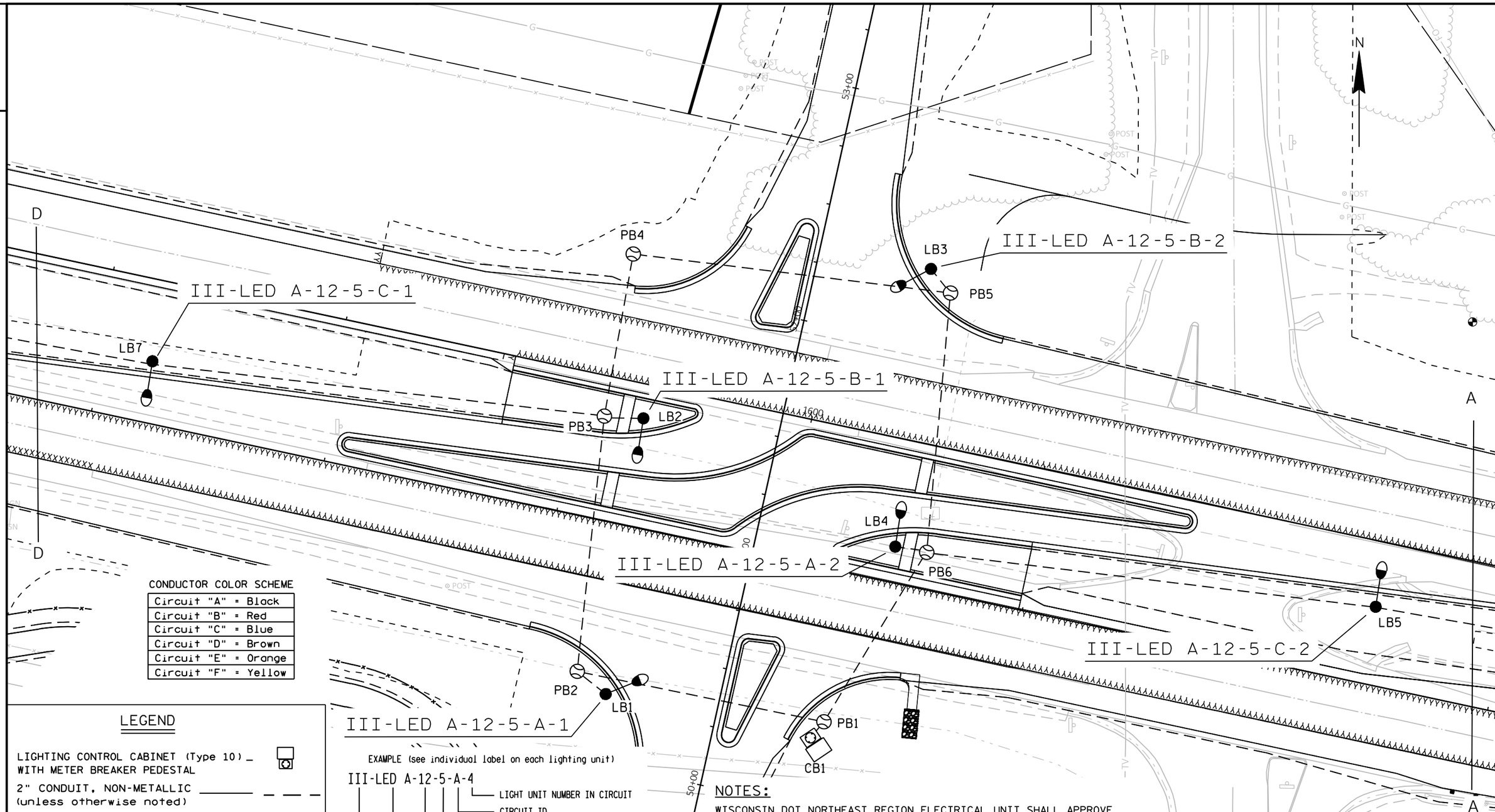


PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	STORM SEWER	SHEET 103	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\022501-SS.DWG
LAYOUT NAME - 022502-ss
PLOT DATE : 9/23/2026 2:43 PM
PLOT BY : HOSPER, JAN
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 41



PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	STORM SEWER	SHEET 104 E



CONDUCTOR COLOR SCHEME

Circuit "A" = Black
Circuit "B" = Red
Circuit "C" = Blue
Circuit "D" = Brown
Circuit "E" = Orange
Circuit "F" = Yellow

LEGEND

- LIGHTING CONTROL CABINET (Type 10) WITH METER BREAKER PEDESTAL
- 2" CONDUIT, NON-METALLIC (unless otherwise noted)
- LIGHTING UNIT
- PULL BOX 24" X 42"
- UTILITY POLE
- ELECTRIC, UNDERGROUND — E —
- ELECTRIC, OVERHEAD — OH —

EXAMPLE (see individual label on each lighting unit)

III-LED A-12-5-A-4

- LIGHT UNIT NUMBER IN CIRCUIT
- CIRCUIT ID
- BASE TYPE
- MAST ARM LENGTH (in feet)
- LAMP WATTAGE
- DISTRIBUTION TYPE

240 VOLT SYSTEM

120/240 VOLT ELECTRIC SERVICE

NOTES:

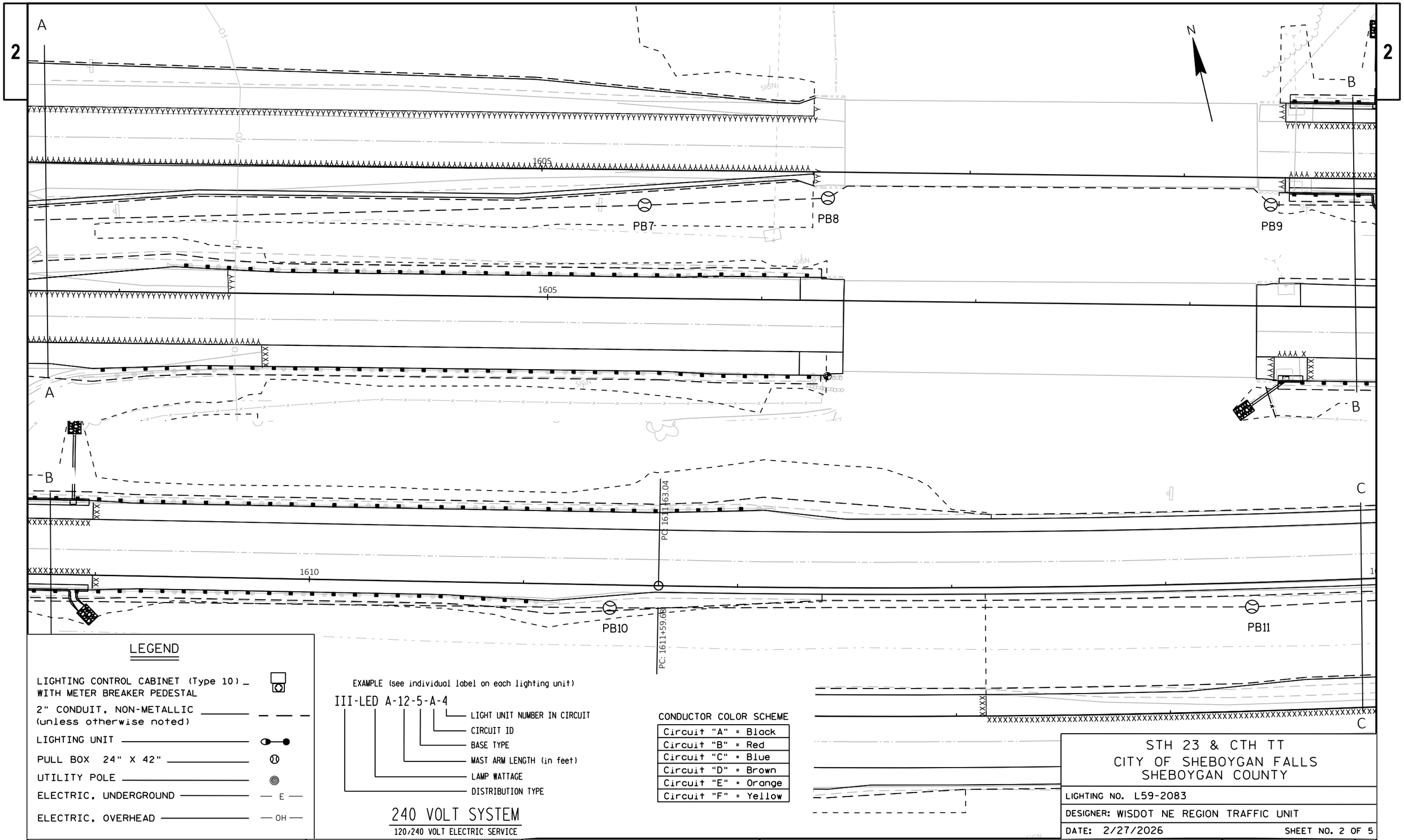
WISCONSIN DOT NORTHEAST REGION ELECTRICAL UNIT SHALL APPROVE FINAL LOCATIONS FOR ALL CONCRETE BASES IN THE FIELD PRIOR TO CONSTRUCTION.
CONTACT MATT TALCOTT 3 DAYS IN ADVANCE AT (920) 360-4749.

THE LOCATION OF EXISTING AND PROPOSED UTILITIES AS SHOWN ON THE PLANS ARE APPROXIMATE. IN ADDITION, THERE MAY BE OTHER UTILITIES WITHIN THE PROJECT AREA WHICH ARE NOT SHOWN. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL UTILITIES PRIOR TO CONSTRUCTION.

STH 23 & CTH TT
CITY OF SHEBOYGAN FALLS
SHEBOYGAN COUNTY

LIGHTING NO. L59-2083
DESIGNER: WISDOT NE REGION TRAFFIC UNIT
DATE: 2/27/2026 SHEET NO. 1 OF 6

PROJECT NO: 1440-41-71	HWY: STH 23	COUNTY: SHEBOYGAN	CONSTRUCTION DETAIL - RCUT LIGHTING	SHEET 105	E



LEGEND

- LIGHTING CONTROL CABINET (Type 10) WITH METER BREAKER PEDESTAL
- 2" CONDUIT, NON-METALLIC (unless otherwise noted)
- LIGHTING UNIT
- PULL BOX 24" X 42"
- UTILITY POLE
- ELECTRIC, UNDERGROUND — E —
- ELECTRIC, OVERHEAD — OH —

EXAMPLE (see individual label on each lighting unit)

III-LED A-12-5-A-4

- III — DISTRIBUTION TYPE
- LED — LAMP WATTAGE
- A — MAST ARM LENGTH (in feet)
- 12 — BASE TYPE
- 5 — CIRCUIT ID
- A — LIGHT UNIT NUMBER IN CIRCUIT

240 VOLT SYSTEM

120/240 VOLT ELECTRIC SERVICE

CONDUCTOR COLOR SCHEME

Circuit "A"	= Black
Circuit "B"	= Red
Circuit "C"	= Blue
Circuit "D"	= Brown
Circuit "E"	= Orange
Circuit "F"	= Yellow

STH 23 & CTH TT
CITY OF SHEBOYGAN FALLS
SHEBOYGAN COUNTY

LIGHTING NO. L59-2083

DESIGNER: WISDOT NE REGION TRAFFIC UNIT

DATE: 2/27/2026 SHEET NO. 2 OF 5

PROJECT NO: 1440-41-71	HWY: STH 23	COUNTY: SHEBOYGAN	CONSTRUTION DETAIL - RCUT LIGHTING	SHEET 106 E

2

2

III-LED A-12-5-D-1

LB6

PB13

PB12

1620

1620

1615

1615

C

C

SIGN

N

CONDUCTOR COLOR SCHEME

Circuit "A" = Black
Circuit "B" = Red
Circuit "C" = Blue
Circuit "D" = Brown
Circuit "E" = Orange
Circuit "F" = Yellow

LEGEND

- LIGHTING CONTROL CABINET (Type 10) WITH METER BREAKER PEDESTAL
- 2" CONDUIT, NON-METALLIC (unless otherwise noted)
- LIGHTING UNIT
- PULL BOX 24" X 42"
- UTILITY POLE
- ELECTRIC, UNDERGROUND — E —
- ELECTRIC, OVERHEAD — OH —

EXAMPLE (see individual label on each lighting unit)

III-LED A-12-5-A-4

- III — DISTRIBUTION TYPE
- LED — LAMP WATTAGE
- A — MAST ARM LENGTH (in feet)
- 12 — BASE TYPE
- 5 — CIRCUIT ID
- A — LIGHT UNIT NUMBER IN CIRCUIT

240 VOLT SYSTEM

120/240 VOLT ELECTRIC SERVICE

STH 23 & CTH TT
CITY OF SHEBOYGAN FALLS
SHEBOYGAN COUNTY

LIGHTING NO. L59-2083

DESIGNER: WISDOT NE REGION TRAFFIC UNIT

DATE: 2/27/2026 SHEET NO. 3 OF 5

PROJECT NO: 1440-41-71	HWY: STH 23	COUNTY: SHEBOYGAN	CONSTRUCTION DETAIL - RCUT LIGHTING	SHEET 107 E

FILE NAME : C:\BOXDRV\BOX\DTSD\DTSD-NER\OPS\TRAFFIC\FACILITIES\LIGHTING\J TURN\L59-2083 (23 & TT)\CAD\L59-2083 (23 & TT).DWG
LAYOUT NAME - East 2 of 2

PLOT DATE : 3/4/2026 6:49 AM PLOT BY : TALCOTT, MATTHEW J PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

E

D

1595

PB15

PB14

1595

E

N

POST

SIGN

SIGN

D

F

1585

1590

E

PB17

PB16

1585

1590

F

POST

LEGEND

LIGHTING CONTROL CABINET (Type 10) WITH METER BREAKER PEDESTAL

2" CONDUIT, NON-METALLIC (unless otherwise noted)

LIGHTING UNIT

PULL BOX 24" X 42"

UTILITY POLE

ELECTRIC, UNDERGROUND — E —

ELECTRIC, OVERHEAD — OH —

EXAMPLE (see individual label on each lighting unit)

III-LED A-12-5-A-4

- LIGHT UNIT NUMBER IN CIRCUIT
- CIRCUIT ID
- BASE TYPE
- MAST ARM LENGTH (in feet)
- LAMP WATTAGE
- DISTRIBUTION TYPE

CONDUCTOR COLOR SCHEME

Circuit "A" = Black
Circuit "B" = Red
Circuit "C" = Blue
Circuit "D" = Brown
Circuit "E" = Orange
Circuit "F" = Yellow

240 VOLT SYSTEM

120/240 VOLT ELECTRIC SERVICE

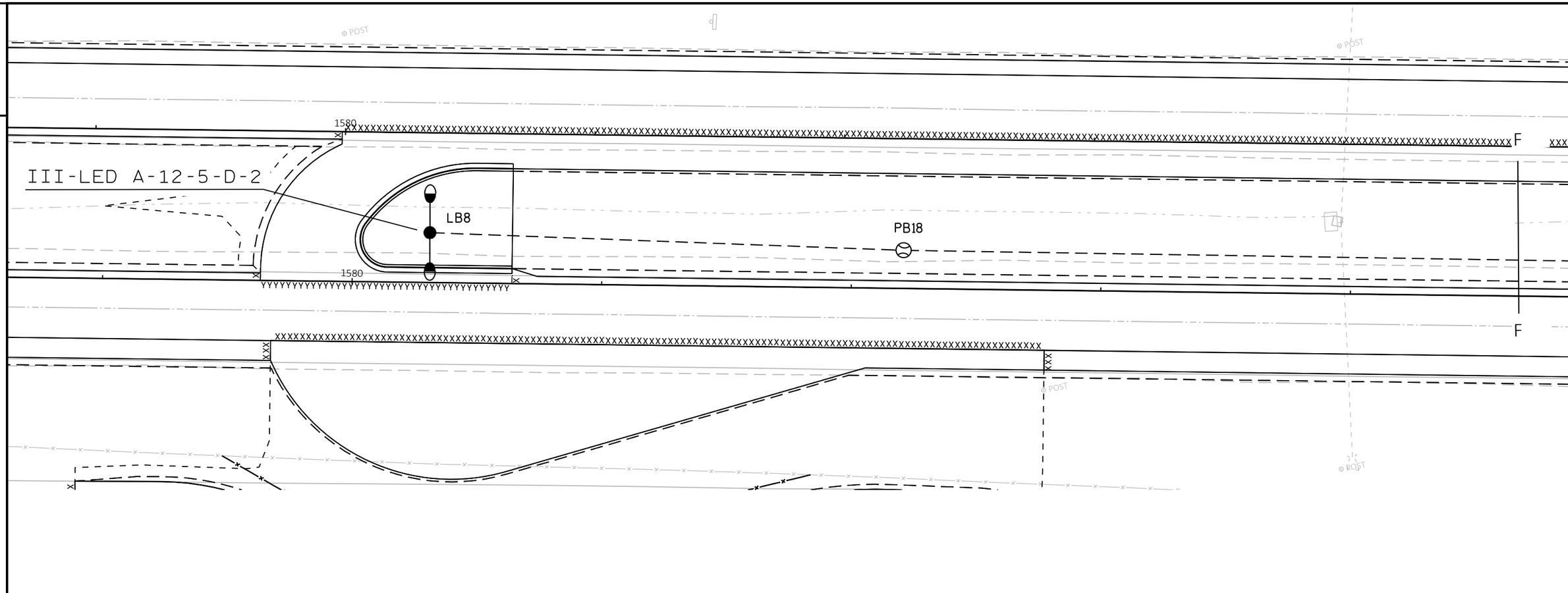
STH 23 & CTH TT
CITY OF SHEBOYGAN FALLS
SHEBOYGAN COUNTY

LIGHTING NO. L59-2083

DESIGNER: WISDOT NE REGION TRAFFIC UNIT

DATE: 2/27/2026 SHEET NO. 4 OF 5

PROJECT NO: 1440-41-71	HWY: STH 23	COUNTY: SHEBOYGAN	CONSTRUTCTION DETAIL - RCUT LIGHTING	SHEET 108	E



CONDUCTOR COLOR SCHEME

Circuit "A" = Black
Circuit "B" = Red
Circuit "C" = Blue
Circuit "D" = Brown
Circuit "E" = Orange
Circuit "F" = Yellow

LEGEND

- LIGHTING CONTROL CABINET (Type 10) WITH METER BREAKER PEDESTAL
- 2" CONDUIT, NON-METALLIC (unless otherwise noted)
- LIGHTING UNIT
- PULL BOX 24" X 42"
- UTILITY POLE
- ELECTRIC, UNDERGROUND — E —
- ELECTRIC, OVERHEAD — OH —

EXAMPLE (see individual label on each lighting unit)

III-LED A-12-5-A-4

- LIGHT UNIT NUMBER IN CIRCUIT
- CIRCUIT ID
- BASE TYPE
- MAST ARM LENGTH (in feet)
- LAMP WATTAGE
- DISTRIBUTION TYPE

240 VOLT SYSTEM

120/240 VOLT ELECTRIC SERVICE

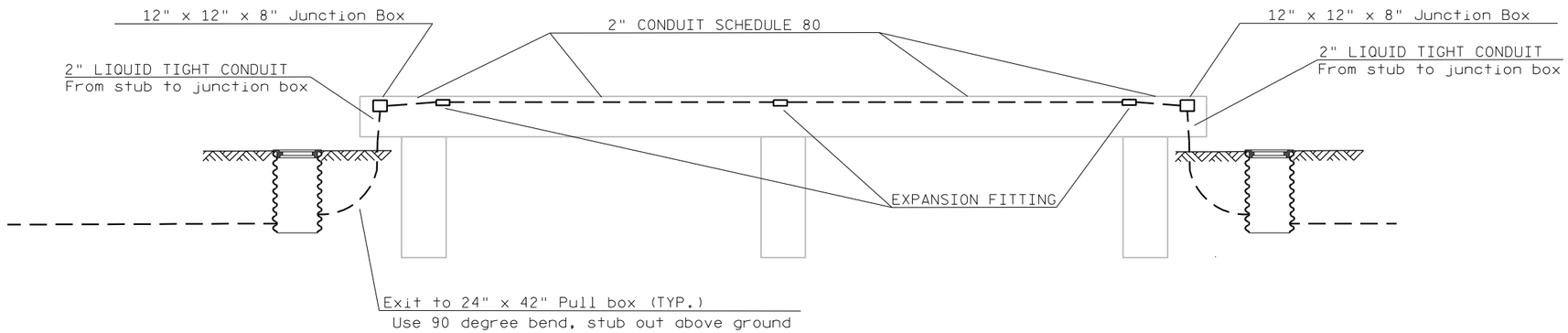
STH 23 & CTH TT
CITY OF SHEBOYGAN FALLS
SHEBOYGAN COUNTY

LIGHTING NO. L59-2083

DESIGNER: WISDOT NE REGION TRAFFIC UNIT

DATE: 2/27/2026 SHEET NO. 5 OF 6

PROJECT NO: 1440-41-71	HWY: STH 23	COUNTY: SHEBOYGAN	CONSTRUCTION DETAIL - RCUT LIGHITNG	SHEET 109	E



CONDUCTOR COLOR SCHEME

Circuit "A" = Black
Circuit "B" = Red
Circuit "C" = Blue
Circuit "D" = Brown
Circuit "E" = Orange
Circuit "F" = Yellow

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- LIGHTING UNIT
- PULL BOX 24" X 42"
- UTILITY POLE
- ELECTRIC, UNDERGROUND — E —
- ELECTRIC, OVERHEAD — OH —

EXAMPLE (see individual label on each lighting unit)

III-LED A-12-5-A-4

- LIGHT UNIT NUMBER IN CIRCUIT
- CIRCUIT ID
- BASE TYPE
- MAST ARM LENGTH (in feet)
- LAMP WATTAGE
- DISTRIBUTION TYPE

240 VOLT SYSTEM

120/240 VOLT ELECTRIC SERVICE

N

STH 23 & CTH TT
CITY OF SHEBOYGAN FALLS
SHEBOYGAN COUNTY

LIGHTING NO. L59-2083

DESIGNER: WISDOT NE REGION TRAFFIC UNIT

DATE: 2/27/2026 SHEET NO. 6 OF 6

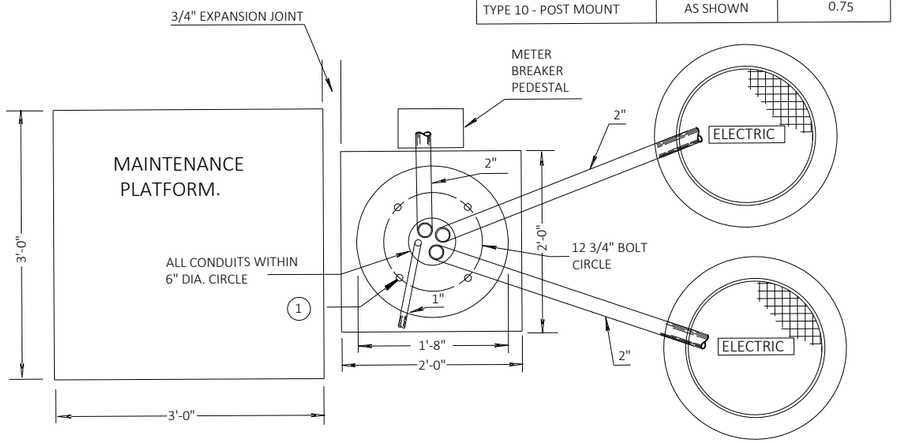
PROJECT NO: 1440-41-71	HWY: STH 23	COUNTY: SHEBOYGAN	CONSTRUCTION DETAIL - RCUT LIGHITNG	SHEET 110 E

FILE NAME : C:\BOXDRV\BOX\DTSD\DTSD-NER\OPS\TRAFFIC\FACILITIES\LIGHTING\J TURN\L59-2083 (23 & TT)\CAD\L59-2083 (23 & TT).DWG
LAYOUT NAME - Stru

PLOT DATE : 3/4/2026 7:03 AM PLOT BY : TALCOTT, MATTHEW J PLOT NAME : PLOT SCALE : ##########

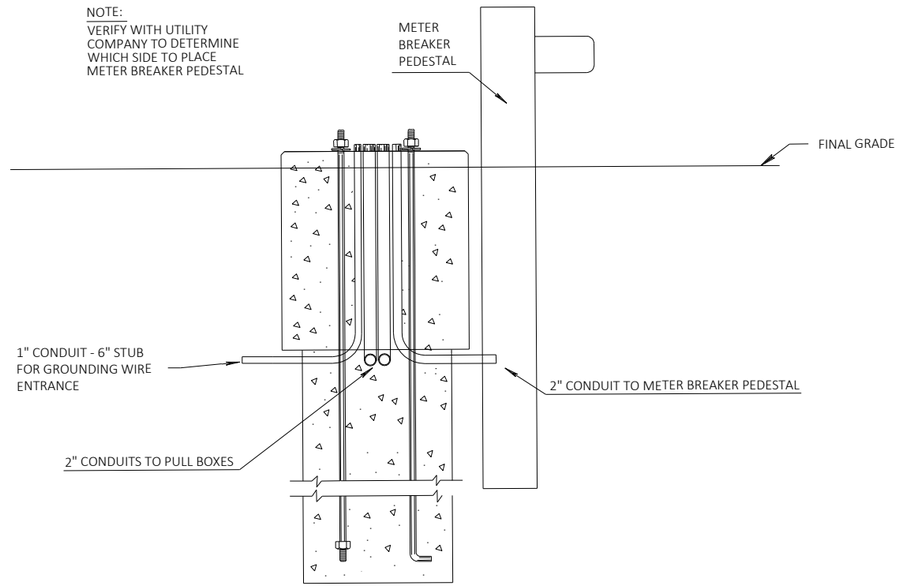
WISDOT/CADDS SHEET 42

CONTROL CABINET BASE TYPE	DIMENSIONS	C.Y. CONCRETE (APPROX.)
TYPE 10 - POST MOUNT	AS SHOWN	0.75

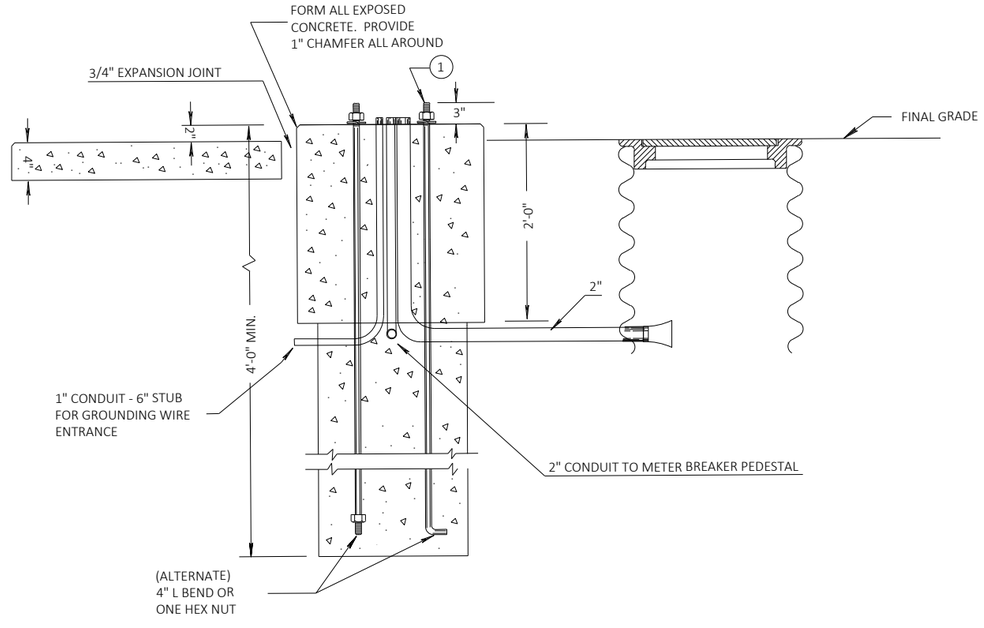


PLAN VIEW

NOTE:
VERIFY WITH UTILITY COMPANY TO DETERMINE WHICH SIDE TO PLACE METER BREAKER PEDESTAL



FRONT VIEW



PROFILE VIEW

GENERAL NOTES

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

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U.L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

CONDUIT HEIGHT ABOVE THE CONCRETE BASE SHALL BE 1 INCH.

CONTROL CABINET BASE TOP SURFACES SHALL BE TROWEL FINISHED AND LEVEL.

WHEN A TYPE 10 CONTROL CABINET BASE IS USED TO POST MOUNT A CONTROL CABINET, A 36" SQUARE 4" THICK CONCRETE MAINTENANCE PLATFORM SHALL BE REQUIRED ON THE DOOR SIDE OF THE CABINET. THE TOP 1 INCH SHALL BE ABOVE FINISHED GRADE AND BE BROOM FINISHED AND LEVEL.

MAINTENANCE PLATFORMS ARE NOT REQUIRED WHEN THE SURROUNDING AREA IS PAVED.

ALL CONDUIT ENDS AT THE TOP OF THE CONCRETE BASE SHALL PLUGGED IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

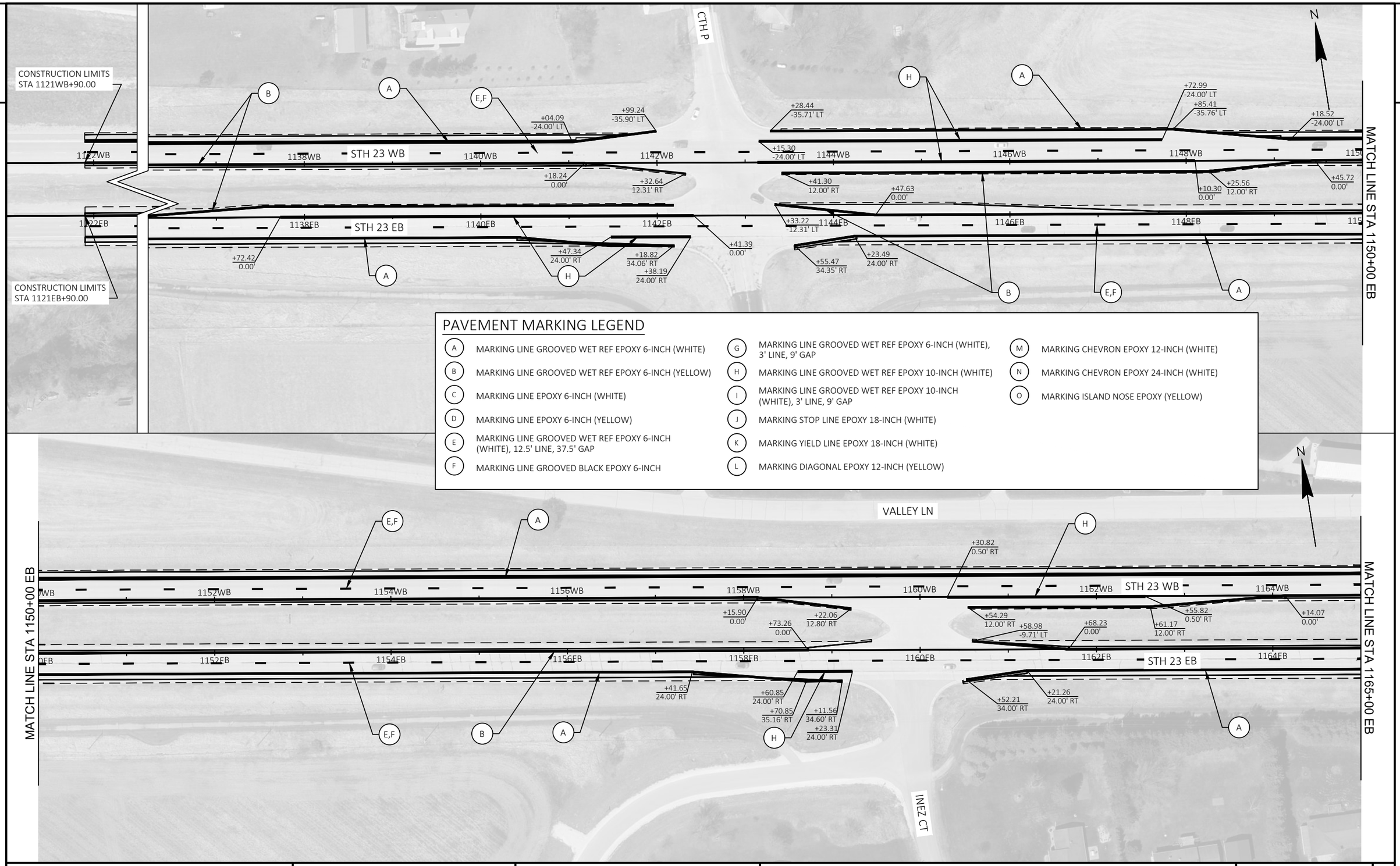
BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF THE CONCRETE BASE BEFORE INSTALLATION OF CABLE OR WIRE.

WHEN ANCHOR RODS USING THE ALTERNATE L BEND ARE FURNISHED FOR THE TYPE 10 BASE, THE 4" L BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR ROD BAR LENGTH.

THE "L" BEND SHALL NOT BE THREADED.

STRAIGHT ANCHOR RODS SHALL BE THREADED 12" IN LENGTH ON EACH END OF THE ROD.

FOUR (4) ANCHOR RODS, 1" DIA. X 3'-6"
ANCHOR RODS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 654.2.1 AND 641.2.2 OF THE STANDARD SPECIFICATIONS AND IN ACCORDANCE WITH A-449, OR ASTM.



PAVEMENT MARKING LEGEND

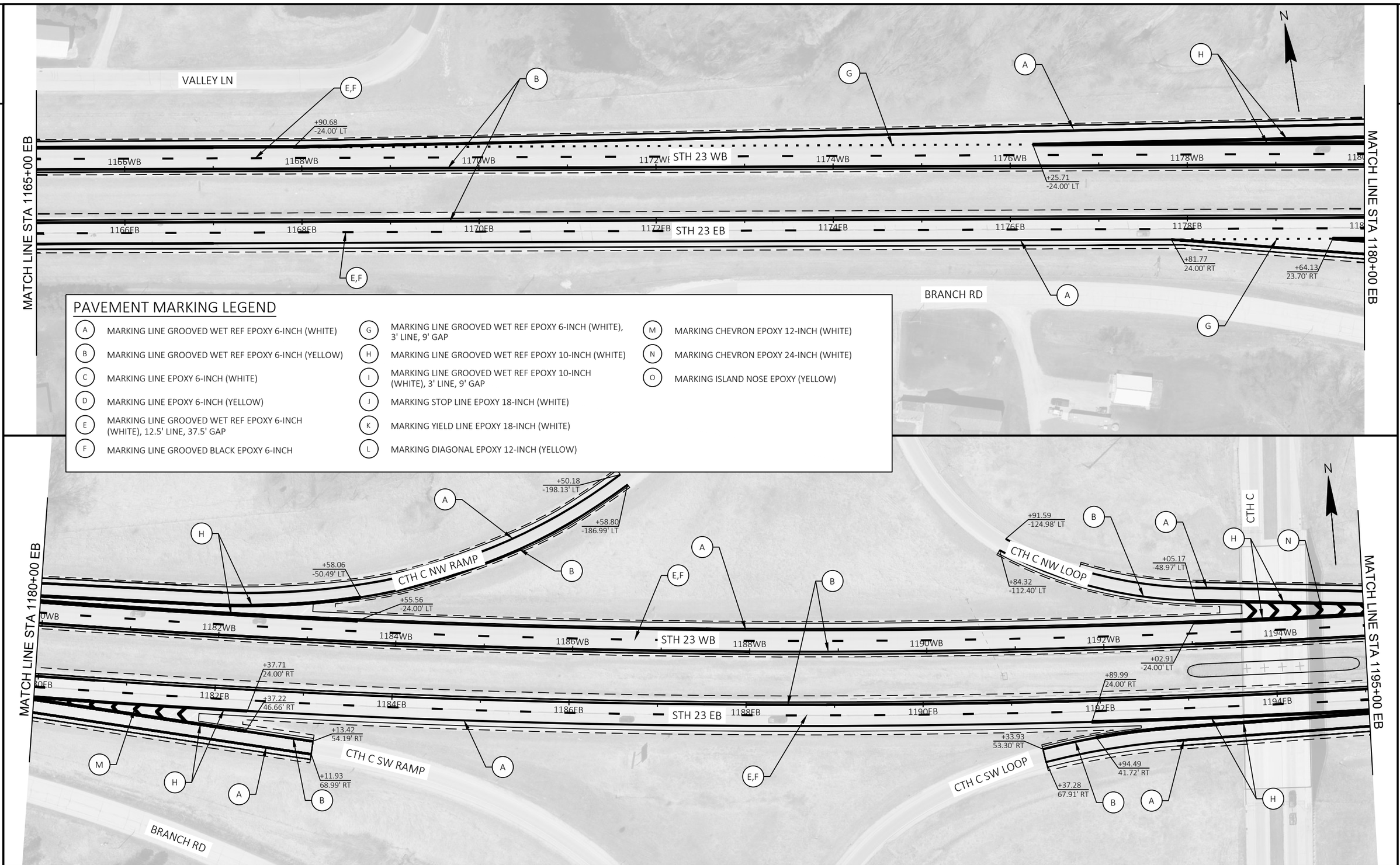
- (A) MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
- (B) MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
- (C) MARKING LINE EPOXY 6-INCH (WHITE)
- (D) MARKING LINE EPOXY 6-INCH (YELLOW)
- (E) MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE), 12.5' LINE, 37.5' GAP
- (F) MARKING LINE GROOVED BLACK EPOXY 6-INCH
- (G) MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE), 3' LINE, 9' GAP
- (H) MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
- (I) MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE), 3' LINE, 9' GAP
- (J) MARKING STOP LINE EPOXY 18-INCH (WHITE)
- (K) MARKING YIELD LINE EPOXY 18-INCH (WHITE)
- (L) MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
- (M) MARKING CHEVRON EPOXY 12-INCH (WHITE)
- (N) MARKING CHEVRON EPOXY 24-INCH (WHITE)
- (O) MARKING ISLAND NOSE EPOXY (YELLOW)

PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	PAVEMENT MARKING	SHEET 112	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\024502-PM.DWG
LAYOUT NAME - 024501-pm

PLOT DATE : 9/23/2026 2:44 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42



PAVEMENT MARKING LEGEND

- (A) MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
- (B) MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
- (C) MARKING LINE EPOXY 6-INCH (WHITE)
- (D) MARKING LINE EPOXY 6-INCH (YELLOW)
- (E) MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE), 12.5' LINE, 37.5' GAP
- (F) MARKING LINE GROOVED BLACK EPOXY 6-INCH
- (G) MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE), 3' LINE, 9' GAP
- (H) MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
- (I) MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE), 3' LINE, 9' GAP
- (J) MARKING STOP LINE EPOXY 18-INCH (WHITE)
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- (L) MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
- (M) MARKING CHEVRON EPOXY 12-INCH (WHITE)
- (N) MARKING CHEVRON EPOXY 24-INCH (WHITE)
- (O) MARKING ISLAND NOSE EPOXY (YELLOW)

PROJECT NO: 1440-41-71/72 | HWY: STH 23 | COUNTY: SHEBOYGAN | PAVEMENT MARKING | SHEET 113 | E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\024502-PM.DWG
LAYOUT NAME - 024502-pm
PLOT DATE : 9/23/2026 2:44 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44

PAVEMENT MARKING LEGEND

- (A) MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
- (B) MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
- (C) MARKING LINE EPOXY 6-INCH (WHITE)
- (D) MARKING LINE EPOXY 6-INCH (YELLOW)
- (E) MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE), 12.5' LINE, 37.5' GAP
- (F) MARKING LINE GROOVED BLACK EPOXY 6-INCH
- (G) MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE), 3' LINE, 9' GAP
- (H) MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
- (I) MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE), 3' LINE, 9' GAP
- (J) MARKING STOP LINE EPOXY 18-INCH (WHITE)
- (K) MARKING YIELD LINE EPOXY 18-INCH (WHITE)
- (L) MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
- (M) MARKING CHEVRON EPOXY 12-INCH (WHITE)
- (N) MARKING CHEVRON EPOXY 24-INCH (WHITE)
- (O) MARKING ISLAND NOSE EPOXY (YELLOW)

PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	PAVEMENT MARKING	SHEET 114	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\024502-PM.DWG
LAYOUT NAME - 024503-pm
PLOT DATE : 9/23/2026 2:44 PM
PLOT BY : HOSPER, JAN
PLOT NAME :
PLOT SCALE : 1 IN:100 FT

2

2

MATCH LINE STA 1225+00 EB

MATCH LINE STA 1240+00 EB

STH 23 WB

STH 23 EB

STH 67 NW RAMP

STH 67 SW RAMP

SUPERIOR AVE

PAVEMENT MARKING LEGEND

- (A) MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
- (B) MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
- (C) MARKING LINE EPOXY 6-INCH (WHITE)
- (D) MARKING LINE EPOXY 6-INCH (YELLOW)
- (E) MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE), 12.5' LINE, 37.5' GAP
- (F) MARKING LINE GROOVED BLACK EPOXY 6-INCH
- (G) MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE), 3' LINE, 9' GAP
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- (L) MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
- (M) MARKING CHEVRON EPOXY 12-INCH (WHITE)
- (N) MARKING CHEVRON EPOXY 24-INCH (WHITE)
- (O) MARKING ISLAND NOSE EPOXY (YELLOW)

MATCH LINE STA 1240+00 EB

MATCH LINE STA 1255+00 EB

STH 67 NW LOOP

STH 67 NB

STH 67 SB

STH 67 SW LOOP

MULLET RIVER

STH 23 WB

STH 23 EB

PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	PAVEMENT MARKING	SHEET 115	E

PAVEMENT MARKING LEGEND

- (A) MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
- (B) MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
- (C) MARKING LINE EPOXY 6-INCH (WHITE)
- (D) MARKING LINE EPOXY 6-INCH (YELLOW)
- (E) MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE), 12.5' LINE, 37.5' GAP
- (F) MARKING LINE GROOVED BLACK EPOXY 6-INCH
- (G) MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE), 3' LINE, 9' GAP
- (H) MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
- (I) MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE), 3' LINE, 9' GAP
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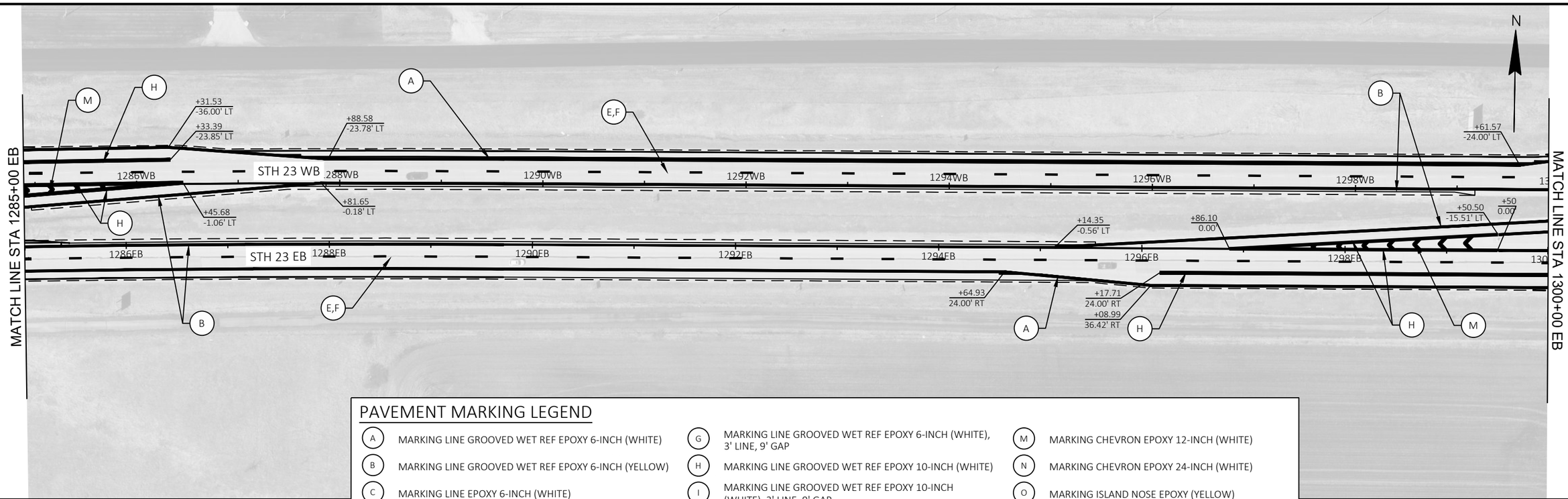
- (K) MARKING YIELD LINE EPOXY 18-INCH (WHITE)
- (L) MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
- (M) MARKING CHEVRON EPOXY 12-INCH (WHITE)
- (N) MARKING CHEVRON EPOXY 24-INCH (WHITE)
- (O) MARKING ISLAND NOSE EPOXY (YELLOW)

PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	PAVEMENT MARKING	SHEET 116	E



PAVEMENT MARKING LEGEND

- (A) MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
- (B) MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
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- (E) MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE), 12.5' LINE, 37.5' GAP
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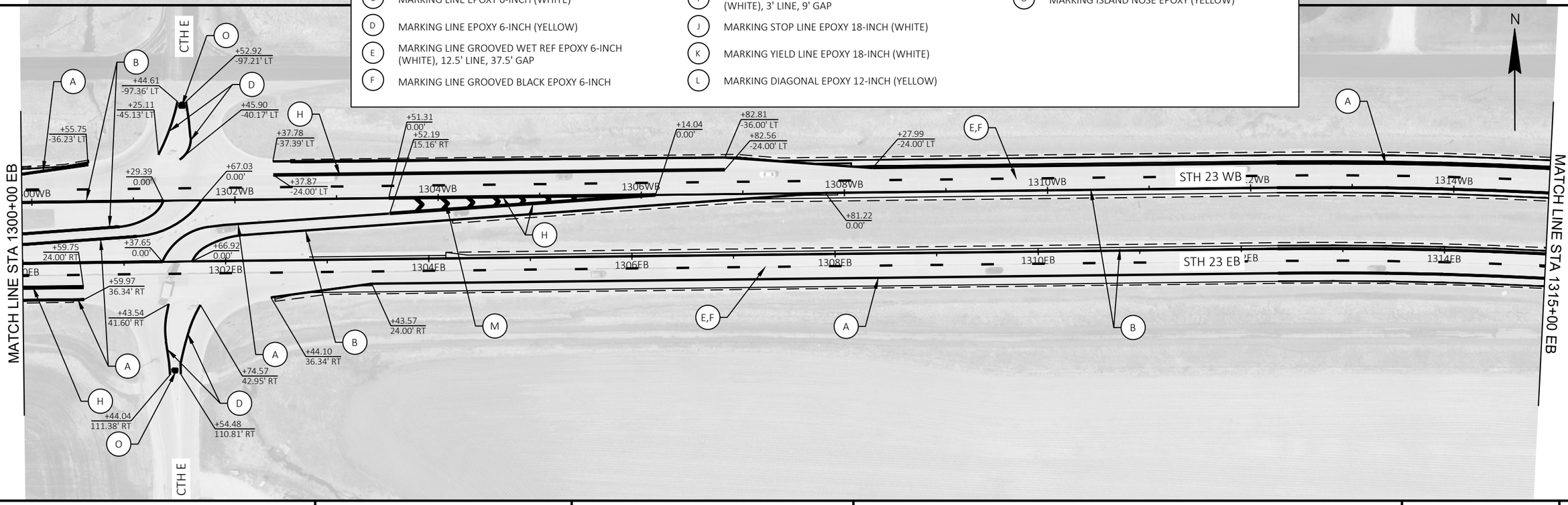
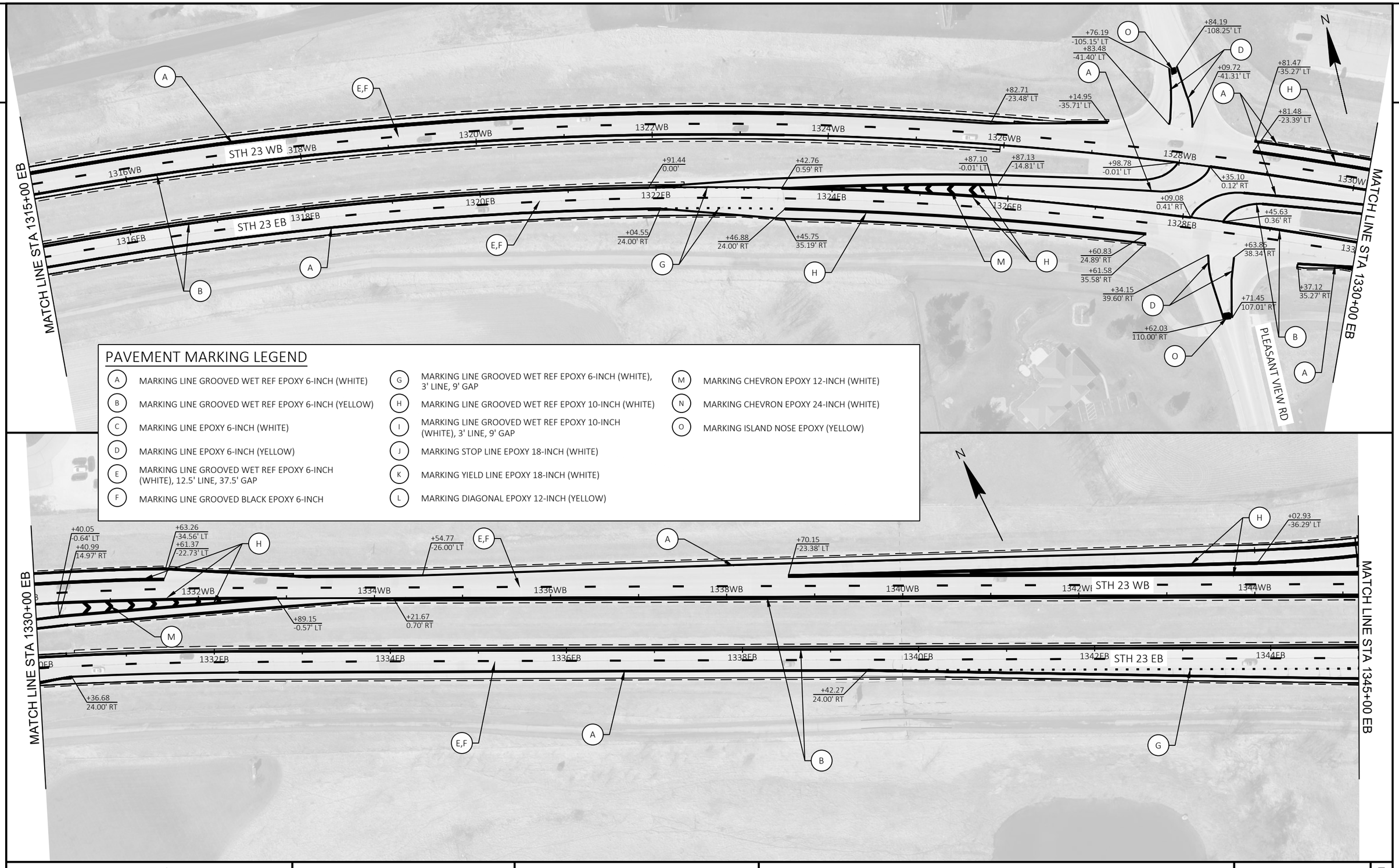
- (N) MARKING CHEVRON EPOXY 24-INCH (WHITE)
- (O) MARKING ISLAND NOSE EPOXY (YELLOW)



PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	PAVEMENT MARKING	SHEET 117	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\024502-PM.DWG
LAYOUT NAME - 024506-pm
PLOT DATE : 9/23/2026 2:45 PM
PLOT BY : HOSPER, JAN
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44

2



PAVEMENT MARKING LEGEND

- (A) MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
- (B) MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
- (C) MARKING LINE EPOXY 6-INCH (WHITE)
- (D) MARKING LINE EPOXY 6-INCH (YELLOW)
- (E) MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE), 12.5' LINE, 37.5' GAP
- (F) MARKING LINE GROOVED BLACK EPOXY 6-INCH
- (G) MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE), 3' LINE, 9' GAP
- (H) MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
- (I) MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE), 3' LINE, 9' GAP
- (J) MARKING STOP LINE EPOXY 18-INCH (WHITE)
- (K) MARKING YIELD LINE EPOXY 18-INCH (WHITE)
- (L) MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
- (M) MARKING CHEVRON EPOXY 12-INCH (WHITE)
- (N) MARKING CHEVRON EPOXY 24-INCH (WHITE)
- (O) MARKING ISLAND NOSE EPOXY (YELLOW)

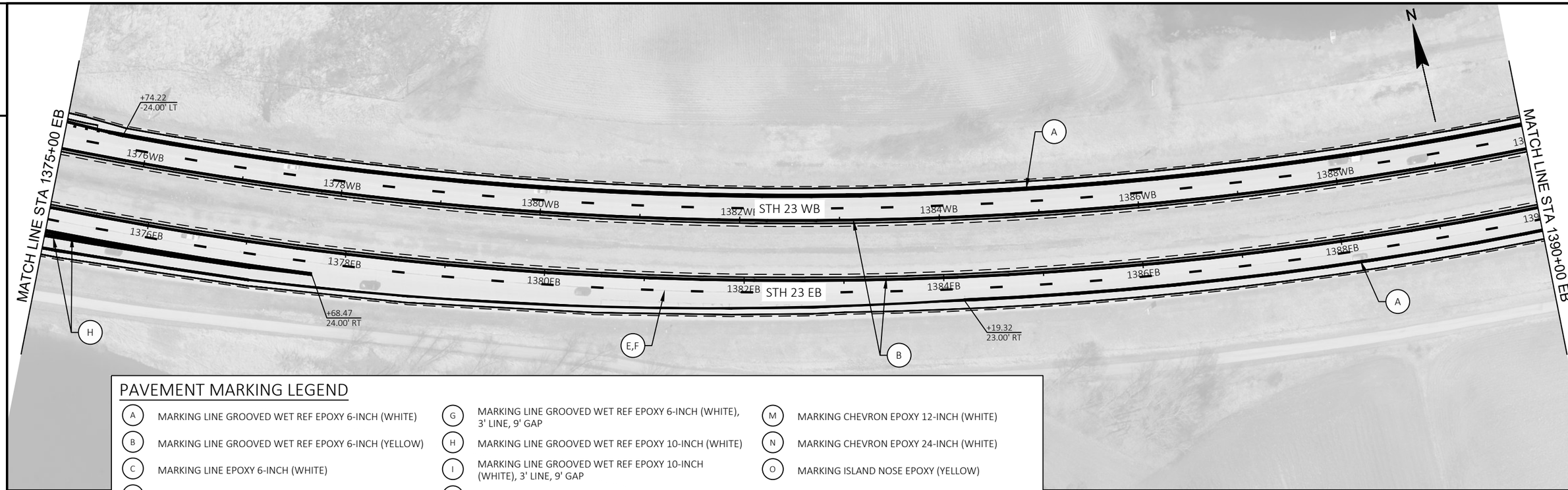
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	PAVEMENT MARKING	SHEET 118	E

PAVEMENT MARKING LEGEND

- (A) MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
- (B) MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
- (C) MARKING LINE EPOXY 6-INCH (WHITE)
- (D) MARKING LINE EPOXY 6-INCH (YELLOW)
- (E) MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE), 12.5' LINE, 37.5' GAP
- (F) MARKING LINE GROOVED BLACK EPOXY 6-INCH
- (G) MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE), 3' LINE, 9' GAP
- (H) MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
- (I) MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE), 3' LINE, 9' GAP
- (J) MARKING STOP LINE EPOXY 18-INCH (WHITE)
- (K) MARKING YIELD LINE EPOXY 18-INCH (WHITE)
- (L) MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
- (M) MARKING CHEVRON EPOXY 12-INCH (WHITE)
- (N) MARKING CHEVRON EPOXY 24-INCH (WHITE)
- (O) MARKING ISLAND NOSE EPOXY (YELLOW)

PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	PAVEMENT MARKING	SHEET 119	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\024502-PM.DWG
LAYOUT NAME - 024508-pm
PLOT DATE : 9/23/2026 2:45 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44



PAVEMENT MARKING LEGEND

- (A) MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
- (B) MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
- (C) MARKING LINE EPOXY 6-INCH (WHITE)
- (D) MARKING LINE EPOXY 6-INCH (YELLOW)
- (E) MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE), 12.5' LINE, 37.5' GAP
- (F) MARKING LINE GROOVED BLACK EPOXY 6-INCH
- (G) MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE), 3' LINE, 9' GAP
- (H) MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
- (I) MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE), 3' LINE, 9' GAP
- (J) MARKING STOP LINE EPOXY 18-INCH (WHITE)
- (K) MARKING YIELD LINE EPOXY 18-INCH (WHITE)
- (L) MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
- (M) MARKING CHEVRON EPOXY 12-INCH (WHITE)
- (N) MARKING CHEVRON EPOXY 24-INCH (WHITE)
- (O) MARKING ISLAND NOSE EPOXY (YELLOW)

PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	PAVEMENT MARKING	SHEET 120	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\024502-PM.DWG
LAYOUT NAME - 024509-pm
PLOT DATE : 9/23/2026 2:45 PM
PLOT BY : HOSPER, JAN
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44

PAVEMENT MARKING LEGEND

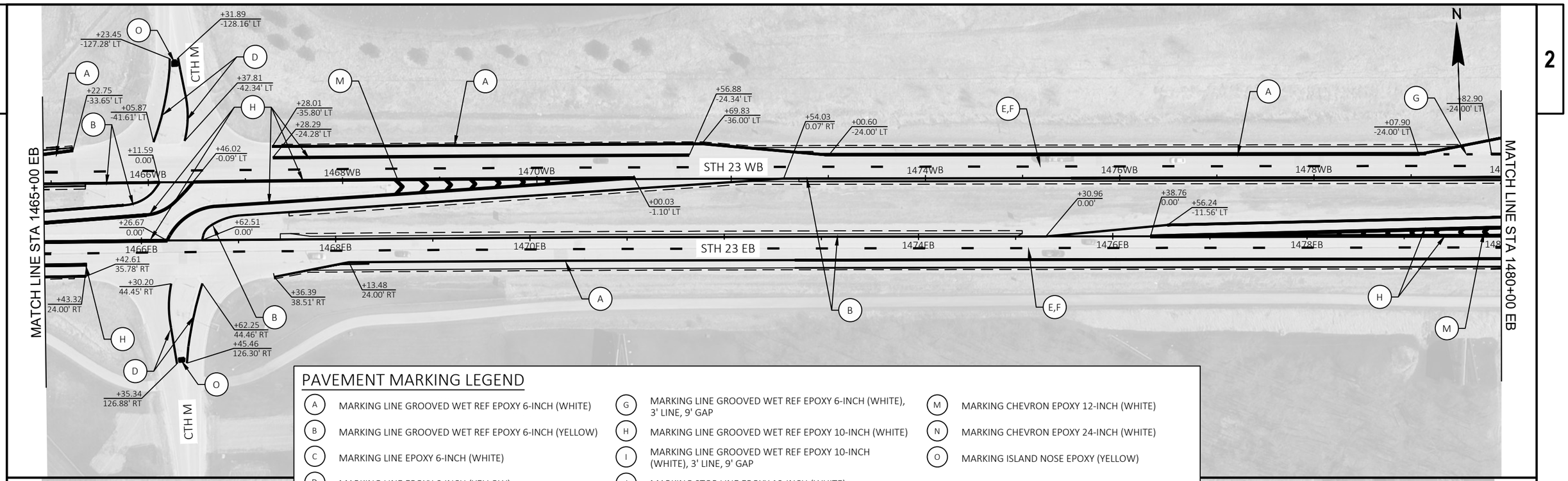
- (A) MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
- (B) MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
- (C) MARKING LINE EPOXY 6-INCH (WHITE)
- (D) MARKING LINE EPOXY 6-INCH (YELLOW)
- (E) MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE), 12.5' LINE, 37.5' GAP
- (F) MARKING LINE GROOVED BLACK EPOXY 6-INCH
- (G) MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE), 3' LINE, 9' GAP
- (H) MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
- (I) MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE), 3' LINE, 9' GAP
- (J) MARKING STOP LINE EPOXY 18-INCH (WHITE)
- (K) MARKING YIELD LINE EPOXY 18-INCH (WHITE)
- (L) MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
- (M) MARKING CHEVRON EPOXY 12-INCH (WHITE)
- (N) MARKING CHEVRON EPOXY 24-INCH (WHITE)
- (O) MARKING ISLAND NOSE EPOXY (YELLOW)

PAVEMENT MARKING LEGEND

- (A) MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
- (B) MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
- (C) MARKING LINE EPOXY 6-INCH (WHITE)
- (D) MARKING LINE EPOXY 6-INCH (YELLOW)
- (E) MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE), 12.5' LINE, 37.5' GAP
- (F) MARKING LINE GROOVED BLACK EPOXY 6-INCH
- (G) MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE), 3' LINE, 9' GAP
- (H) MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
- (I) MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE), 3' LINE, 9' GAP
- (J) MARKING STOP LINE EPOXY 18-INCH (WHITE)
- (K) MARKING YIELD LINE EPOXY 18-INCH (WHITE)
- (L) MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
- (M) MARKING CHEVRON EPOXY 12-INCH (WHITE)
- (N) MARKING CHEVRON EPOXY 24-INCH (WHITE)
- (O) MARKING ISLAND NOSE EPOXY (YELLOW)

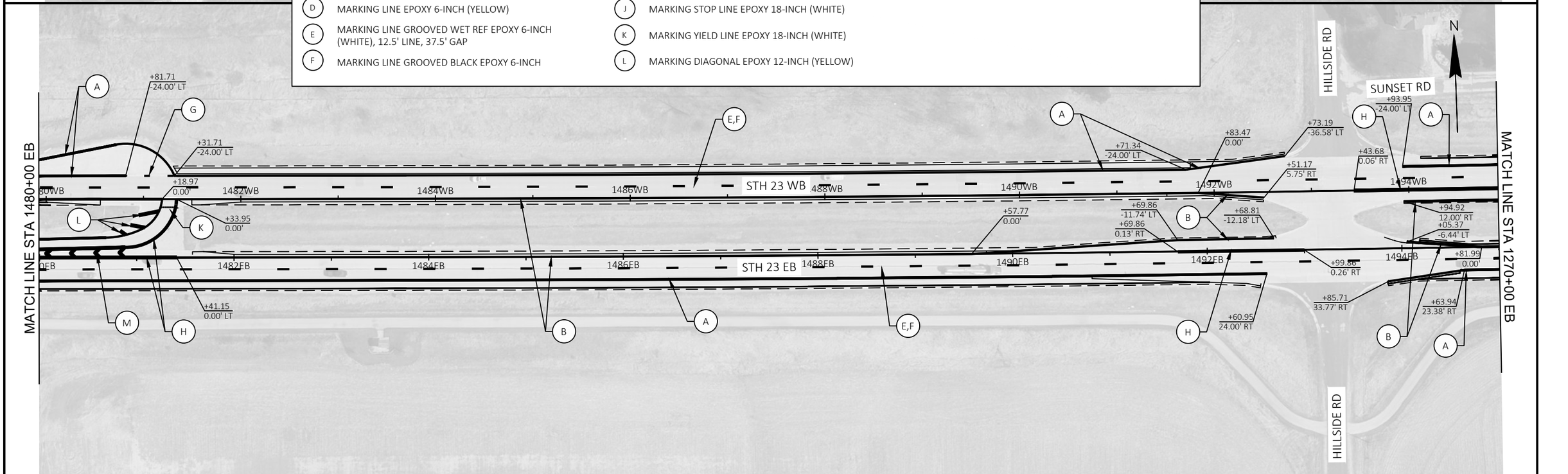
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	PAVEMENT MARKING	SHEET 122	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\024502-PM.DWG
LAYOUT NAME - 024511-pm
PLOT DATE : 9/23/2026 2:45 PM
PLOT BY : HOSPER, JAN
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44



PAVEMENT MARKING LEGEND

- (A) MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
- (B) MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
- (C) MARKING LINE EPOXY 6-INCH (WHITE)
- (D) MARKING LINE EPOXY 6-INCH (YELLOW)
- (E) MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE), 12.5' LINE, 37.5' GAP
- (F) MARKING LINE GROOVED BLACK EPOXY 6-INCH
- (G) MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE), 3' LINE, 9' GAP
- (H) MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
- (I) MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE), 3' LINE, 9' GAP
- (J) MARKING STOP LINE EPOXY 18-INCH (WHITE)
- (K) MARKING YIELD LINE EPOXY 18-INCH (WHITE)
- (L) MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
- (M) MARKING CHEVRON EPOXY 12-INCH (WHITE)
- (N) MARKING CHEVRON EPOXY 24-INCH (WHITE)
- (O) MARKING ISLAND NOSE EPOXY (YELLOW)



PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	PAVEMENT MARKING	SHEET 123	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\024502-PM.DWG
LAYOUT NAME - 024512-pm

PLOT DATE : 9/23/2026 2:45 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

2

SUNSET RD

MATCH LINE STA 1495+00 EB

MATCH LINE STA 1510+00 EB

STH 23 WB

STH 23 EB

1496WB 1498WB 1500WB 1502WB 1504WB 1506WB 1508WB

1496EB 1498EB 1500EB 1502EB 1504EB 1506EB 1508EB

+93.68 0.00'

+93.68 12.00' RT

+93.16 0.00'

E,F A B

PAVEMENT MARKING LEGEND

- A MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
- B MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
- C MARKING LINE EPOXY 6-INCH (WHITE)
- D MARKING LINE EPOXY 6-INCH (YELLOW)
- E MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE), 12.5' LINE, 37.5' GAP
- F MARKING LINE GROOVED BLACK EPOXY 6-INCH
- G MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE), 3' LINE, 9' GAP
- H MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
- I MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE), 3' LINE, 9' GAP
- J MARKING STOP LINE EPOXY 18-INCH (WHITE)
- K MARKING YIELD LINE EPOXY 18-INCH (WHITE)
- L MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
- M MARKING CHEVRON EPOXY 12-INCH (WHITE)
- N MARKING CHEVRON EPOXY 24-INCH (WHITE)
- O MARKING ISLAND NOSE EPOXY (YELLOW)

EXISTING R/W

MATCH LINE STA 1510+00 EB

MATCH LINE STA 1525+00 EB

STH 23 WB

STH 23 EB

10WB 1512WB 1514WB 1516WB 1518WB 1520WB 1522WB 1524WB

EB 1512EB 1514EB 1516EB 1518EB 1520EB 1522EB 1524EB

+87.01 0.00' +95.75 -23.93' LT +81.53 -34.76' LT

+77.47 0.00' +77.05 -12.09' LT +77.05 -0.04' LT +67.88 7.37' RT +76.80 -11.68' LT

+70.45 24.00' RT +17.05 0.51' RT

+60.55 0.00' +01.93 -24.00' LT +90.55 0.00' +86.25 0.00'

+01.93 12.00' RT +24.23 -5.98' LT +90.55 12.00' RT +91.80 0.00'

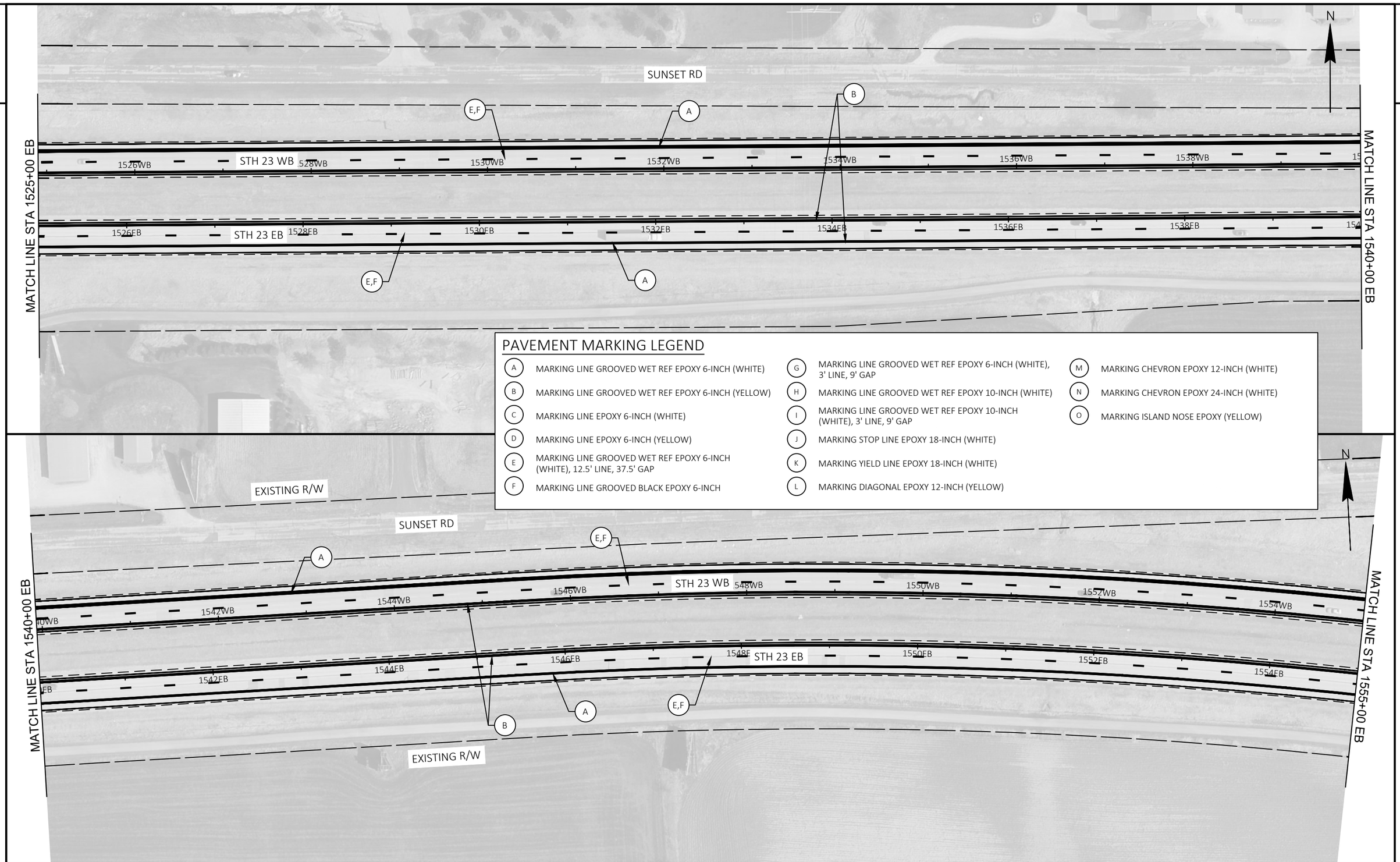
+02.21 34.38' RT +82.19 24.00' RT

A E,F B H

BRIDGEWOOD RD

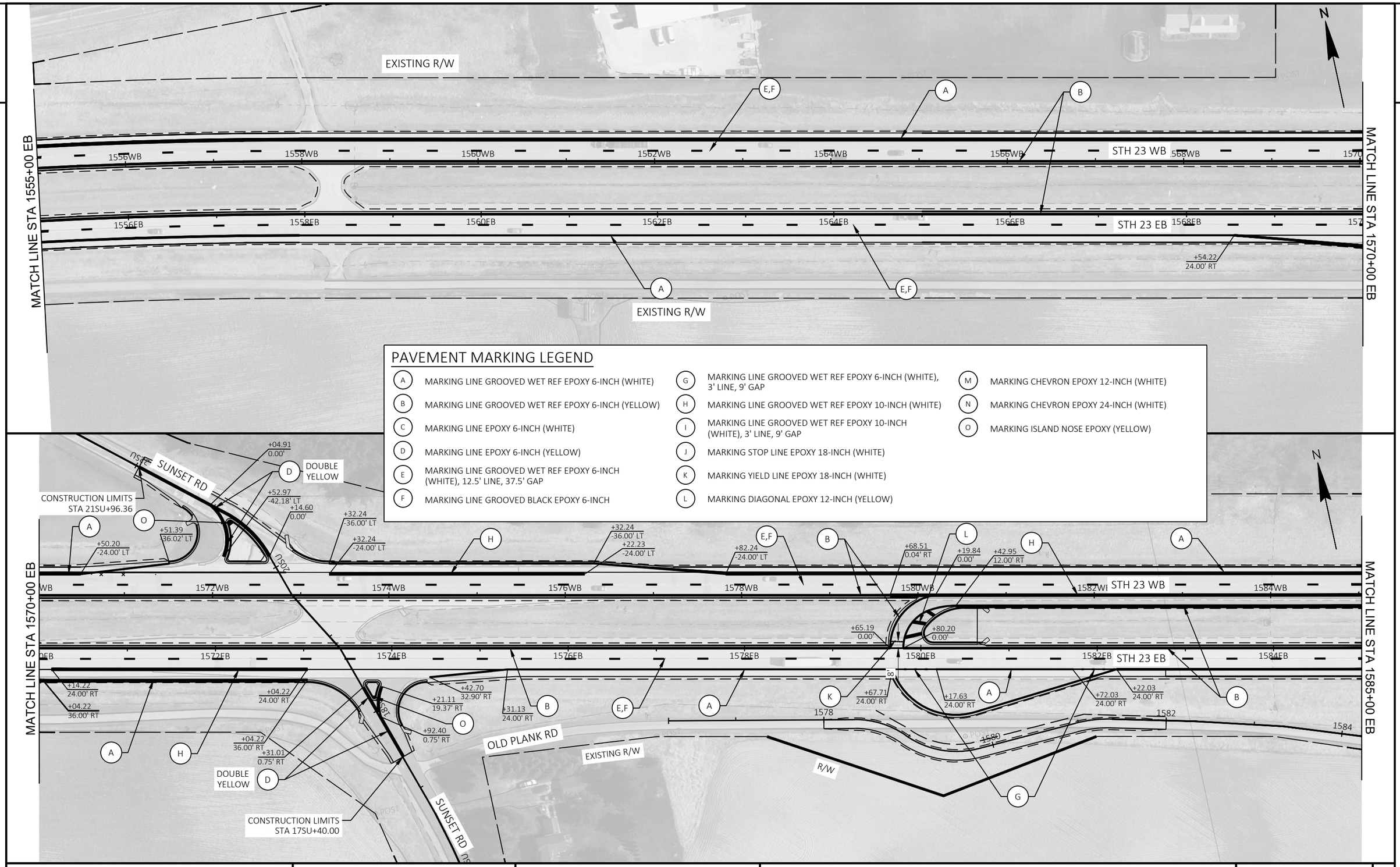
EXISTING R/W

PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	PAVEMENT MARKING	SHEET 124	E



PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	PAVEMENT MARKING	SHEET 125	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\024502-PM.DWG
LAYOUT NAME - 024514-pm
PLOT DATE : 9/23/2026 2:46 PM
PLOT BY : HOSPER, JAN
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44



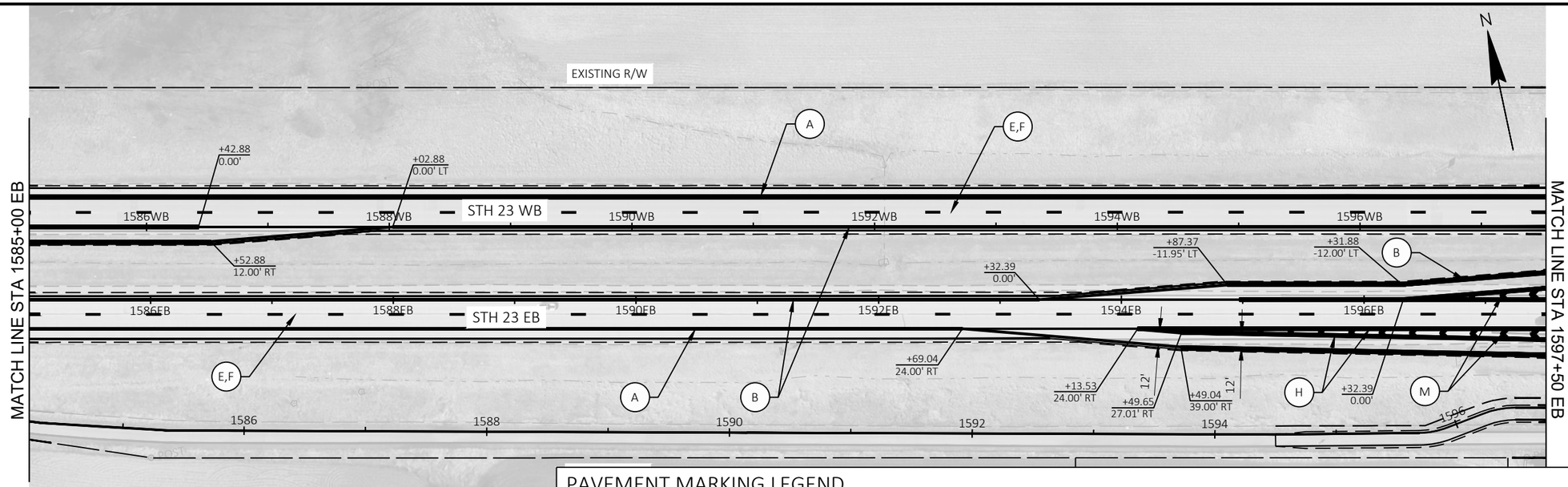
PROJECT NO: 1440-41-71/72 / 1440-41-72	HWY: STH 23	COUNTY: SHEBOYGAN	PAVEMENT MARKING	SHEET 126	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\024502-PM.DWG
LAYOUT NAME - 024515-pm

PLOT DATE : 9/23/2026 2:46 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:100 FT

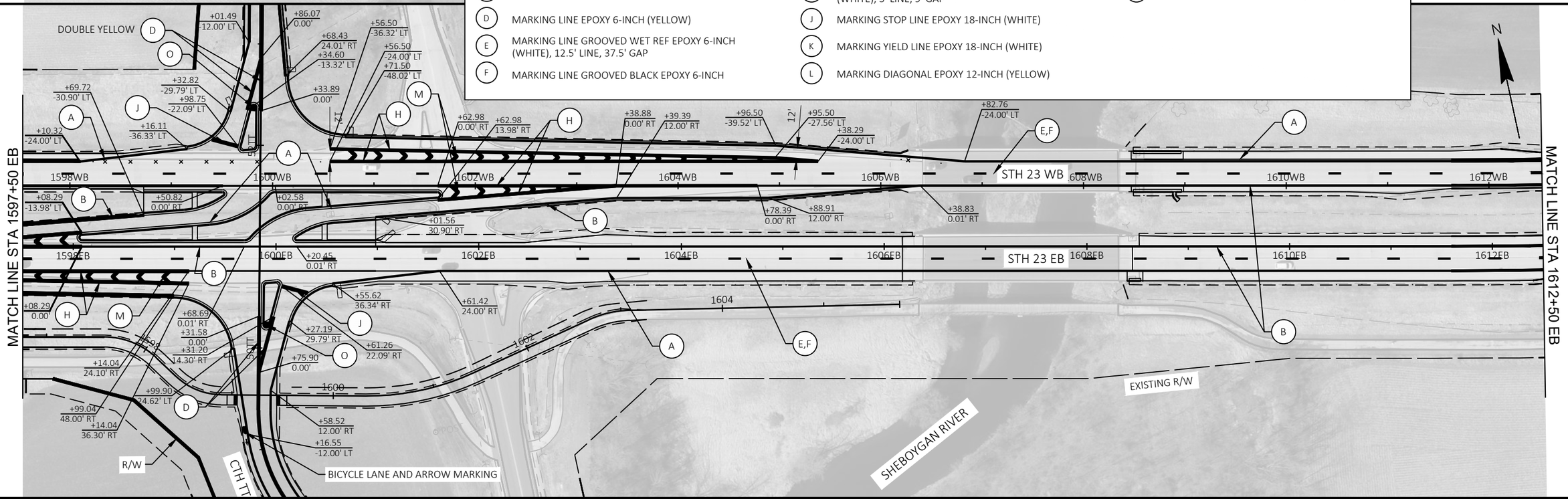
WISDOT/CADDS SHEET 44

2



PAVEMENT MARKING LEGEND

- (A) MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
- (B) MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
- (C) MARKING LINE EPOXY 6-INCH (WHITE)
- (D) MARKING LINE EPOXY 6-INCH (YELLOW)
- (E) MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE), 12.5' LINE, 37.5' GAP
- (F) MARKING LINE GROOVED BLACK EPOXY 6-INCH
- (G) MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE), 3' LINE, 9' GAP
- (H) MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
- (I) MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE), 3' LINE, 9' GAP
- (J) MARKING STOP LINE EPOXY 18-INCH (WHITE)
- (K) MARKING YIELD LINE EPOXY 18-INCH (WHITE)
- (L) MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
- (M) MARKING CHEVRON EPOXY 12-INCH (WHITE)
- (N) MARKING CHEVRON EPOXY 24-INCH (WHITE)
- (O) MARKING ISLAND NOSE EPOXY (YELLOW)



PROJECT NO: 1440-41-72	HWY: STH 23	COUNTY: SHEBOYGAN	PAVEMENT MARKING	SHEET 127	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\024502-PM.DWG
LAYOUT NAME - 024516-pm
PLOT DATE : 9/23/2026 2:46 PM
PLOT BY : HOSPER, JAN
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44

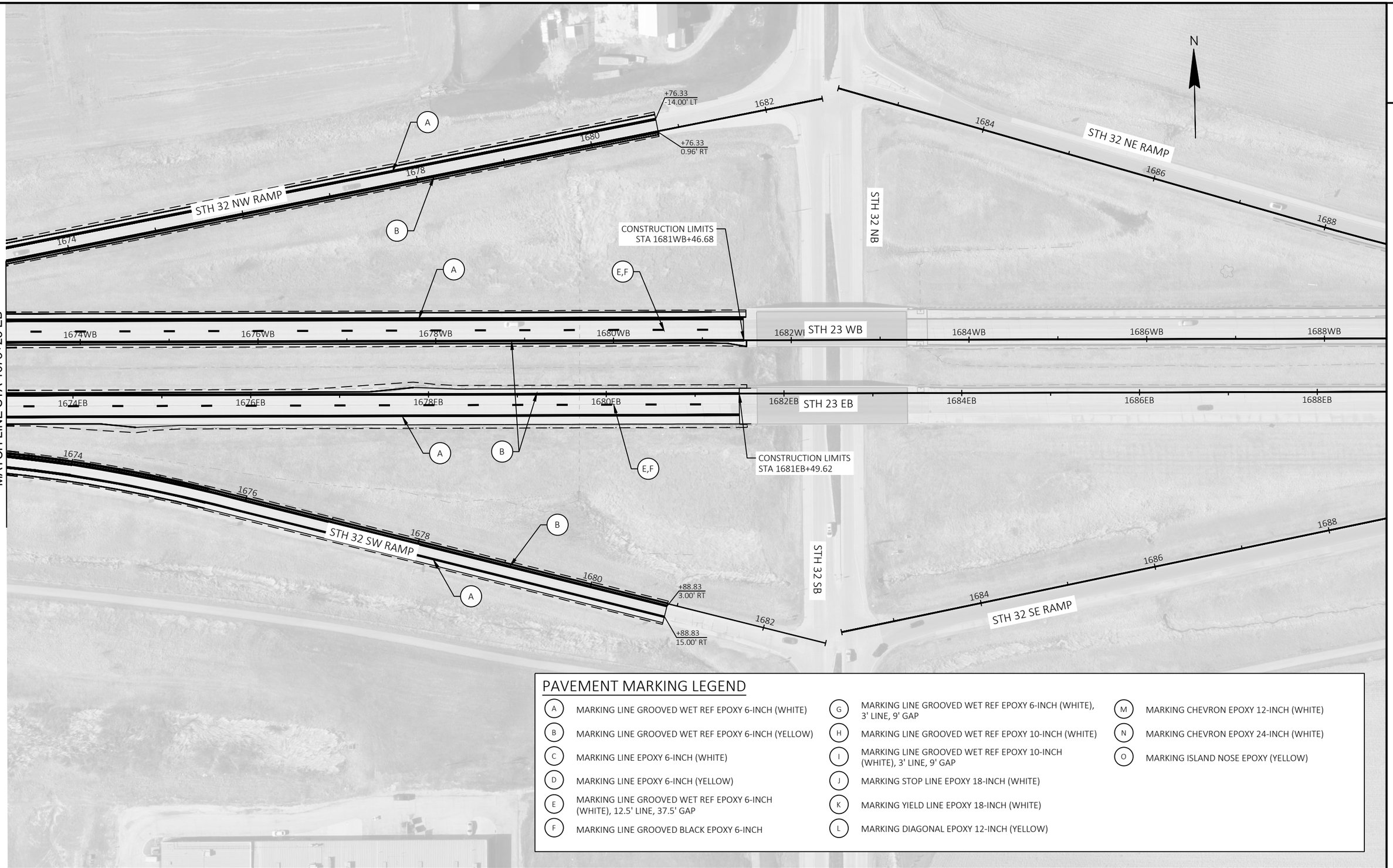
PAVEMENT MARKING LEGEND

- (A) MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
- (B) MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
- (C) MARKING LINE EPOXY 6-INCH (WHITE)
- (D) MARKING LINE EPOXY 6-INCH (YELLOW)
- (E) MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE), 12.5' LINE, 37.5' GAP
- (F) MARKING LINE GROOVED BLACK EPOXY 6-INCH
- (G) MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE), 3' LINE, 9' GAP
- (H) MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
- (I) MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE), 3' LINE, 9' GAP
- (J) MARKING STOP LINE EPOXY 18-INCH (WHITE)
- (K) MARKING YIELD LINE EPOXY 18-INCH (WHITE)
- (L) MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
- (M) MARKING CHEVRON EPOXY 12-INCH (WHITE)
- (N) MARKING CHEVRON EPOXY 24-INCH (WHITE)
- (O) MARKING ISLAND NOSE EPOXY (YELLOW)

PAVEMENT MARKING LEGEND

- (A) MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
- (B) MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
- (C) MARKING LINE EPOXY 6-INCH (WHITE)
- (D) MARKING LINE EPOXY 6-INCH (YELLOW)
- (E) MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE), 12.5' LINE, 37.5' GAP
- (F) MARKING LINE GROOVED BLACK EPOXY 6-INCH
- (G) MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE), 3' LINE, 9' GAP
- (H) MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
- (I) MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE), 3' LINE, 9' GAP
- (J) MARKING STOP LINE EPOXY 18-INCH (WHITE)
- (K) MARKING YIELD LINE EPOXY 18-INCH (WHITE)
- (L) MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
- (M) MARKING CHEVRON EPOXY 12-INCH (WHITE)
- (N) MARKING CHEVRON EPOXY 24-INCH (WHITE)
- (O) MARKING ISLAND NOSE EPOXY (YELLOW)

2



PAVEMENT MARKING LEGEND

- (A) MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
- (B) MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
- (C) MARKING LINE EPOXY 6-INCH (WHITE)
- (D) MARKING LINE EPOXY 6-INCH (YELLOW)
- (E) MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE), 12.5' LINE, 37.5' GAP
- (F) MARKING LINE GROOVED BLACK EPOXY 6-INCH
- (G) MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE), 3' LINE, 9' GAP
- (H) MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
- (I) MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE), 3' LINE, 9' GAP
- (J) MARKING STOP LINE EPOXY 18-INCH (WHITE)
- (K) MARKING YIELD LINE EPOXY 18-INCH (WHITE)
- (L) MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
- (M) MARKING CHEVRON EPOXY 12-INCH (WHITE)
- (N) MARKING CHEVRON EPOXY 24-INCH (WHITE)
- (O) MARKING ISLAND NOSE EPOXY (YELLOW)

PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	PAVEMENT MARKING	SHEET 130	E

PAVEMENT MARKING LEGEND

A	MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)	G	MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE), 3' LINE, 9' GAP	M	MARKING CHEVRON EPOXY 12-INCH (WHITE)
B	MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)	H	MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)	N	MARKING CHEVRON EPOXY 24-INCH (WHITE)
C	MARKING LINE EPOXY 6-INCH (WHITE)	I	MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE), 3' LINE, 9' GAP	O	MARKING ISLAND NOSE EPOXY (YELLOW)
D	MARKING LINE EPOXY 6-INCH (YELLOW)	J	MARKING STOP LINE EPOXY 18-INCH (WHITE)		
E	MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE), 12.5' LINE, 37.5' GAP	K	MARKING YIELD LINE EPOXY 18-INCH (WHITE)		
F	MARKING LINE GROOVED BLACK EPOXY 6-INCH	L	MARKING DIAGONAL EPOXY 12-INCH (YELLOW)		

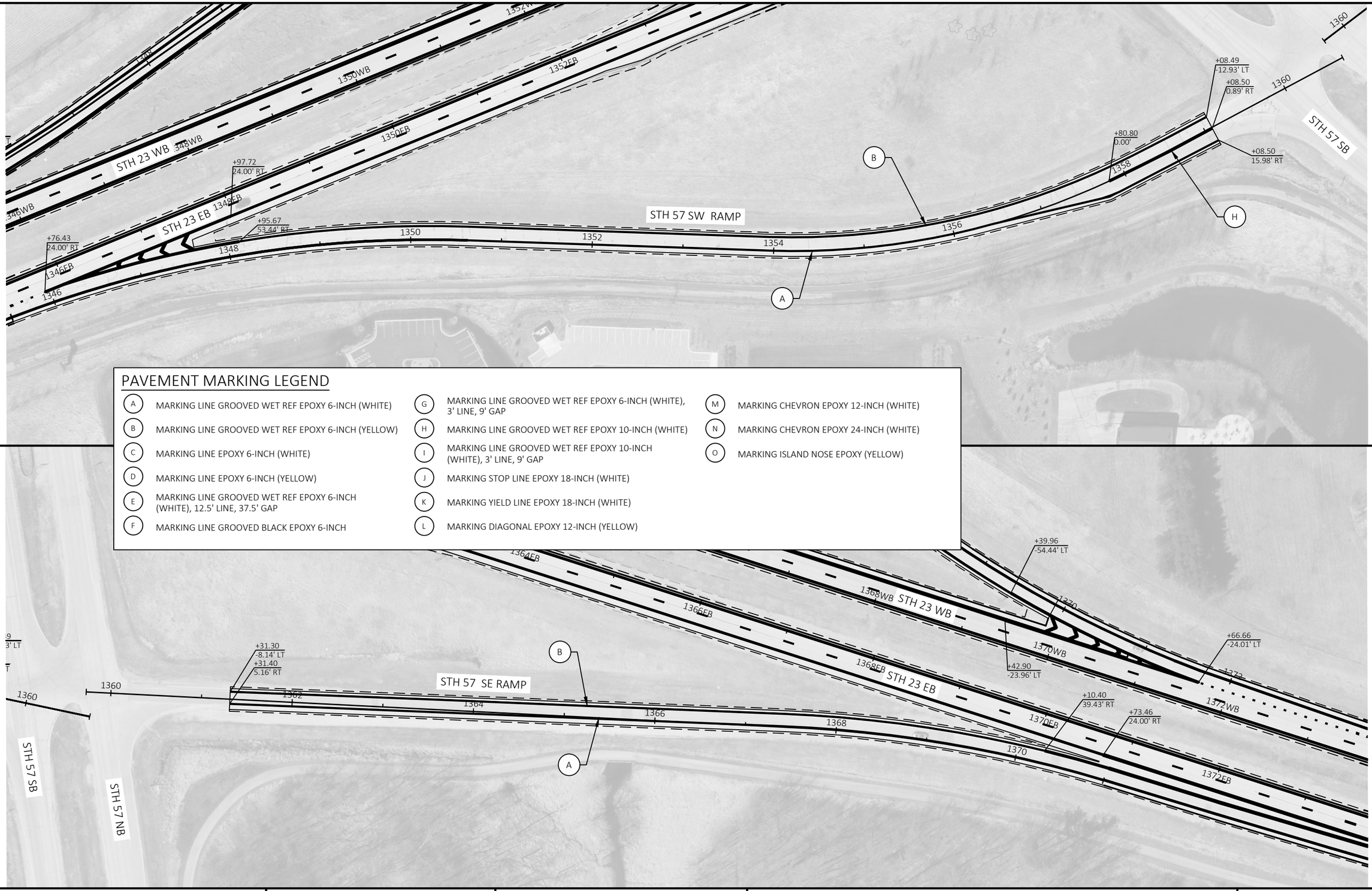
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	PAVEMENT MARKING	SHEET 131	E

PAVEMENT MARKING LEGEND

- (A) MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
- (B) MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
- (C) MARKING LINE EPOXY 6-INCH (WHITE)
- (D) MARKING LINE EPOXY 6-INCH (YELLOW)
- (E) MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE), 12.5' LINE, 37.5' GAP
- (F) MARKING LINE GROOVED BLACK EPOXY 6-INCH
- (G) MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE), 3' LINE, 9' GAP
- (H) MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
- (I) MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE), 3' LINE, 9' GAP
- (J) MARKING STOP LINE EPOXY 18-INCH (WHITE)
- (K) MARKING YIELD LINE EPOXY 18-INCH (WHITE)
- (L) MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
- (M) MARKING CHEVRON EPOXY 12-INCH (WHITE)
- (N) MARKING CHEVRON EPOXY 24-INCH (WHITE)
- (O) MARKING ISLAND NOSE EPOXY (YELLOW)

PROJECT NO: 1440-41-71/72 | HWY: STH 23 | COUNTY: SHEBOYGAN | PAVEMENT MARKING | SHEET 132 | E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\024502-PM.DWG
LAYOUT NAME - 024521-pm
PLOT DATE : 9/23/2026 2:47 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44



PAVEMENT MARKING LEGEND

- (A) MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
- (B) MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
- (C) MARKING LINE EPOXY 6-INCH (WHITE)
- (D) MARKING LINE EPOXY 6-INCH (YELLOW)
- (E) MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE), 12.5' LINE, 37.5' GAP
- (F) MARKING LINE GROOVED BLACK EPOXY 6-INCH
- (G) MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE), 3' LINE, 9' GAP
- (H) MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
- (I) MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE), 3' LINE, 9' GAP
- (J) MARKING STOP LINE EPOXY 18-INCH (WHITE)
- (K) MARKING YIELD LINE EPOXY 18-INCH (WHITE)
- (L) MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
- (M) MARKING CHEVRON EPOXY 12-INCH (WHITE)
- (N) MARKING CHEVRON EPOXY 24-INCH (WHITE)
- (O) MARKING ISLAND NOSE EPOXY (YELLOW)

PAVEMENT MARKING LEGEND

- (A) MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
- (B) MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
- (C) MARKING LINE EPOXY 6-INCH (WHITE)
- (D) MARKING LINE EPOXY 6-INCH (YELLOW)
- (E) MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE), 12.5' LINE, 37.5' GAP
- (F) MARKING LINE GROOVED BLACK EPOXY 6-INCH
- (G) MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE), 3' LINE, 9' GAP
- (H) MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
- (I) MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE), 3' LINE, 9' GAP
- (J) MARKING STOP LINE EPOXY 18-INCH (WHITE)
- (K) MARKING YIELD LINE EPOXY 18-INCH (WHITE)
- (L) MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
- (M) MARKING CHEVRON EPOXY 12-INCH (WHITE)
- (N) MARKING CHEVRON EPOXY 24-INCH (WHITE)
- (O) MARKING ISLAND NOSE EPOXY (YELLOW)

BICYCLE LANE AND ARROW MARKING

START PASSING ZONE SOUTHBOUND. MATCH EXISTING CYCLE SPACING.

LOCATING NO-PASSING ZONES

CONSTRUCTION LIMITS STA 42TT+25.98

DOUBLE YELLOW

LOCATING NO-PASSING ZONES

CONSTRUCTION LIMITS STA 59TT+00.00

DOUBLE YELLOW

PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	PAVEMENT MARKING	SHEET 134	E

2

TRAFFIC CONTROL GENERAL NOTES

1. THE TRAFFIC CONTROL AND STAGING DESCRIBED IS USED AS A BASIS FOR MISCELLANEOUS QUANTITIES. STAGING SHALL BE APPROVED BY THE FIELD ENGINEER.
2. FOR CLOSURES ALONG MAINLINE AND SIDE ROADS, REFER TO STANDARD DETAIL DRAWINGS FOR APPROPRIATE SIGNING AND TRAFFIC CONTROL DEVICES.
3. REFER TO SDD 15C4-5 FOR ALL SIDE ROAD AND MAINLINE ADVANCED WARNINGS.
4. THE TRAFFIC CONTROL AND STAGING IS FOR BOTH PROJECT 1440-41-71 AND PROJECT 1440-41-72
5. PLACE PORTABLE CHANGEABLE MESSAGE SIGNS AT THE BEGINNING AND END OF EACH PROJECT 7 DAYS PRIOR TO OVERALL CONSTRUCTION AND PRIOR TO ANY SIGNIFICANT CHANGE IN TRAFFIC PATTERNS AS PROVIDED IN THE STAGING DETAILS
6. A DETOUR ROUTE FOR PROJECT 1440-41-71 IS PROVIDED IN THE PLANS.
7. A DETOUR ROUTE FOR PROJECT 1440-41-72 (CTH TT) WILL BE PROVIDED AND INSTALLED BY SHEBOYGAN COUNTY.
8. STAGE 1A AND 1B SHALL BE COMPLETED BY MEMORIAL DAY 5/27/27.
9. STAGE 1 AND 2 MAY BE COMPLETED CONCURRENTLY.

STAGE 1A

TRAFFIC:
* CONTINUOUS LANE CLOSURE OUTSIDE LANE USING TEMPORARY BARRIER FOR STRUCTURE B-59-0093. SEE TRAFFIC CONTROL CONTINUOUS LANE CLOSURE DETAIL PLAN SHEETS
* ADDITIONAL SIGNING WILL BE REQUIRED FOR OVERSIZED/OVERWEIGHT LOAD ACCOMMODATION UTILIZING STH 57 OFF AND ON RAMPS

CONSTRUCTION
* START WORK ON JOINT REPLACEMENT (OUTSIDE LANE/SHOULDER) FOR STRUCTURE B-59-0093.

STAGE 1B

TRAFFIC:
* CONTINUOUS LANE CLOSURE INSIDE LANE USING TEMPORARY BARRIER FOR STRUCTURE B-59-0093. SEE TRAFFIC CONTROL CONTINUOUS LANE CLOSURE DETAIL PLAN SHEETS
* ADDITIONAL SIGNING WILL BE REQUIRED FOR OVERSIZED/OVERWEIGHT LOAD ACCOMMODATION UTILIZING STH 57 OFF AND ON RAMPS

CONSTRUCTION
* COMPLETE WORK ON JOINT REPLACEMENT (INSIDE LANE/SHOULDER) FOR STRUCTURE B-59-0093.

STAGE 2A

TRAFFIC:
* STH 23 WB AND STH 23 EB SHALL BE REDUCED TO 1-LANE OF TRAFFIC CLOSING THE OUTSIDE LANES. FOLLOW WISDOT STANDARD DETAIL DRAWING "TRAFFIC CONTROL, LANE CLOSURE, BASIC TRAFFIC QUEUE WARNING SYSTEM" WITH SPEED REDUCTION.
* CONTINUOUS LANE CLOSURE OUTSIDE LANE USING TEMPORARY BARRIER FOR STRUCTURE WORK ON B-59-0091. SEE TRAFFIC CONTROL CONTINUOUS LANE CLOSURE DETAIL PLAN SHEETS
* CLOSE THE STH 67 ON RAMP TO STH 23 EB FOR JOINT REPLACEMENT ON STRUCTURE B-59-0091 FOLLOWING WISDOT STANDARD DETAIL DRAWING "TRAFFIC CONTROL SYSTEM RAMP CLOSURE". A DETOUR IS PROVIDED AND SHOWN IN THE PLAN SET
* CLOSE SUNSET ROAD (NORTH AND SOUTH APPROACHES). FOLLOWING WISDOT STANDARD DETAIL DRAWING "BARRICADES AND SIGNS FOR SIDEROAD CLOSURES". NO DETOUR IN PLACE.
* CLOSE OLD PLANK ROAD TRAIL AT SUNSET ROAD TO CTH TT. DETOUR PEDESTRIAN TRAFFIC USING THE OUTSIDE LANE OF EB STH 23, SEE TRAFFIC CONTROL DETAIL PLAN SHEETS.
* OLD PLANK ROAD TRAIL CAN BE CLOSED FROM SUNSET ROAD TO MEADOWLARK ROAD (WITH DETOUR REMOVED) FOR A MAXIMUM OF 14 CALENDAR DAYS TO COMPLETE TRAIL CONNECTIONS
* CLOSE CTH TT (NORTH AND SOUTH APPROACHES). FOLLOW WISDOT STANDARD DRAWINGS "BARRICADES AND SIGNS FOR SIDEROAD CLOSURES". A DETOUR ROUTE WILL BE PROVIDED UNDER SEPARATE CONTACT BY SHEBOYGAN COUNTY.

CONSTRUCTION
* START WORK ON STH 23 WB AND EB PAVEMENT REPAIRS (EXCEPT EB STH 23 FROM SUNSET ROAD TO CTH TT), PAVEMENT REPLACEMENT AND BASE PATCHING FOR BOTH PROJECTS 1440-41-71 AND 1440-41-72
* START CONSTRUCTION OF SUNSET ROAD CONNECTIONS TO STH 23 (NORTH AND SOUTH APPROACHES) TO STH 23 AS SHOWN ON THE TRAFFIC CONTROL DETAIL PLAN SHEETS
* START WORK ON CONSTRUCTION OF NEW ALIGNMENT FOR CTH TT (NORTH AND SOUTH APPROACHES) TO STH 23 AS SHOWN ON THE TRAFFIC CONTROL DETAIL PLAN SHEETS
* START WORK ON R-CUT BULB OUT FOR STH 23 WB AS SHOWN ON THE TRAFFIC CONTROL DETAIL PLAN SHEET
* START WORK ON JOINT REPLACEMENT (OUTSIDE LANE/SHOULDER) FOR STRUCTURE B-59-0091
* COMPLETE RE-ALIGNMENT OF OLD PLANK ROAD TRAIL INCLUDING R-CUT BULB OUT AND NEW ALIGNMENT AT CTH TT. OPEN REALIGNED TRAIL TO USERS. SEE TRAFFIC CONTROL DETAIL PLAN SHEETS.
* START WORK ON ANY NECESSARY GRADING FOR BEAM GUARD REPLACEMENT LOCATIONS ALONG OUTSIDE SHOULDER OF STH 23 EB AND STH 23 WB

STAGE 2B

TRAFFIC:
* STH 23 WB AND STH 23 EB SHALL BE REDUCED TO 1-LANE OF TRAFFIC CONTINUE THE CLOSING OF THE OUTSIDE LANES. SEE SDD PROVIDED IN STAGE 2A FOR TRAFFIC CONTROL
* CONTINUOUS LANE CLOSURE OUTSIDE LANE USING TEMPORARY BARRIER FOR STRUCTURE WORK ON B-59-0091. SEE TRAFFIC CONTROL DETAIL PLAN SHEETS
* CONTINUE TO CLOSE THE STH 67 ON RAMP TO EB STH 23 FOR JOINT REPLACEMENT ON STRUCTURE B-59-0091. SEE SDD PROVIDED IN STAGE 2A FOR TRAFFIC CONTROL. A DETOUR IS PROVIDED AND SHOWN IN THE PLAN SET.
* CONTINUE CLOSURE OF CTH TT AND SUNSET RD (NORTH AND SOUTH APPROACHES). FOLLOW TRAFFIC CONTROL AS PROVIDED IN STAGE 2A.

CONSTRUCTION
* COMPLETE WORK ON STH 23 WB AND EB PAVEMENT REPAIRS, PAVEMENT REPLACEMENT AND BASE PATCHING FOR BOTH PROJECTS 1440-14-71 AND 1440-14-72
* COMPLETE CONSTRUCTION OF SUNSET ROAD CONNECTIONS TO STH 23 AS DESCRIBED IN STAGE 2A.
* COMPLETE CONSTRUCTION OF NEW ALIGNMENT FOR CTH TT (NORTH AND SOUTH APPROACHES) TO STH 23 INCLUDING TIE-INS TO EXISTING CTH TT AS SHOWN ON THE TRAFFIC CONTROL DETAIL PLAN SHEETS
* COMPLETE REMOVAL/RESTORATION OF EXISTING CTH TT TO STH 23 (NORTH AND SOUTH APPROACHES) AS SHOWN ON THE TRAFFIC CONTROL DETAIL PLAN SHEETS
* COMPLETE WORK ON R-CUT BULB OUTS FOR STH 23 EB AND WB AS SHOWN ON THE TRAFFIC CONTROL DETAIL PLAN SHEETS
* COMPLETE WORK ON JOINT REPLACEMENT (OUTSIDE LANE/SHOULDER) FOR STRUCTURE B-59-0091
* COMPLETE ANY NECESSARY GRADING FOR BEAM GUARD REPLACEMENT LOCATIONS ALONG STH 23 EB AND STH 23 WB

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2

STAGE 3

TRAFFIC:

* STH 23 WB AND STH 23 EB SHALL BE REDUCED TO 1-LANE OF TRAFFIC CLOSING THE INSIDE LANES. FOLLOW WISDOT STANDARD DETAIL DRAWING "TRAFFIC CONTROL, LANE CLOSURE, BASIC TRAFFIC QUEUE WARNING SYSTEM," WITH SPEED REDUCTION
* RESTRICT ACCESS FROM CTH TT (NORTH AND SOUTH APPROACHES TO RIGHT-IN/RIGHT OUT ONLY.
* RESTRICT ACCESS FROM SUNSET ROAD (NORTH AND SOUTH APPROACHES TO RIGHT-IN/RIGHT OUT ONLY.
* NO DETOUR IS NEEDED FOR THIS STAGE

CONSTRUCTION

* COMPLETE WORK ON STH 23 WB AND EB PAVEMENT REPAIRS, PAVEMENT REPLACEMENT AND BASE PATCHING FOR BOTH PROJECTS 1440-41-71 AND 1440-41-72
* COMPLETE WORK IN THE MEDIAN OF STH 23 FOR SUNSET ROAD INCLUDING REMOVAL OF EXISTING CROSSING AND GRADING/RESTORATION OF NEW DITCH. SEE TRAFFIC CONTROL DETAIL PLAN SHEETS
* COMPLETE WORK IN THE MEDIAN OF STH 23 FOR CTH TT INCLUDING REMOVAL OF EXISTING CROSSING, GRADING/PAVING AND LIGHTING OF RESTRICTED ACCESS ROADWAYS (LEFT TURN LANES FROM STH 23 TO CTH TT). SEE TRAFFIC CONTROL DETAIL PLAN SHEETS
* COMPLETE MEDIAN WORK FOR R-CUTS LOCATED EAST AND WEST OF THE CTH TT INTERSECTION. SEE TRAFFIC CONTROL DETAIL PLAN SHEETS.
* COMPLETE WORK ON JOINT REPLACEMENT (INSIDE LANE/SHOULDER) FOR STRUCTURE B-59-0091
* COMPLETE ANY NECESSARY GRADING FOR BEAM GUARD REPLACEMENT LOCATIONS ALONG INSIDE SHOULDERS OF STH 23 EB AND STH 23 WB

STAGE 4A

TRAFFIC:

* STH 23 WB AND STH 23 EB SHALL BE REDUCED TO 1-LANE OF TRAFFIC CLOSING THE INSIDE LANES. SEE SDD PROVIDED IN STAGE 3 FOR TRAFFIC CONTROL
* NO DETOUR IS NEEDED FOR THIS STAGE

CONSTRUCTION

* COMPLETE HMA OVERLAY WORK FOR STH 23 WB AND STH 23 EB. SEE TRAFFIC CONTROL DETAIL PLAN SHEETS
* COMPLETE CONCRETE SURFACE DRAINS AND GUARD RAIL REMOVAL/NEW INSTALL FOR STH 23 EB AND STH 23 WB BOTH PROJECT IDS
* COMPLETE SHOULDERING FOR STH 23 WB AND STH 23 EB FOR BOTH PROJECT IDS
* COMPLETE PAVEMENT MARKING (TEMPORARY AND PERMANENT) FOR STH 23 WB AND STH 23 EB.
* START BRIDGE PAINTING WORK ON STRUCTURE B-59-0097. STAGE WORK TO MAINTAIN TRAFFIC ON EITHER SUNSET DR OR RIVERVIEW RD/SUPERIOR AVE. CLOSE EITHER ROADWAY WHEN OPERATIONS ARE TAKING PLACE ABOVE THE ROADWAY. MAINTAIN PEDESTRIAN TRAFFIC ALONG BOTH SEGMENTS OF THE OLD PLANK ROAD TRAIL AT ALL TIMES. UTILIZE OVERHEAD PROTECTION FOR TRAIL USERS DURING OVERHEAD WORK AS SHOWN IN THE PLANS.

STAGE 4B

TRAFFIC:

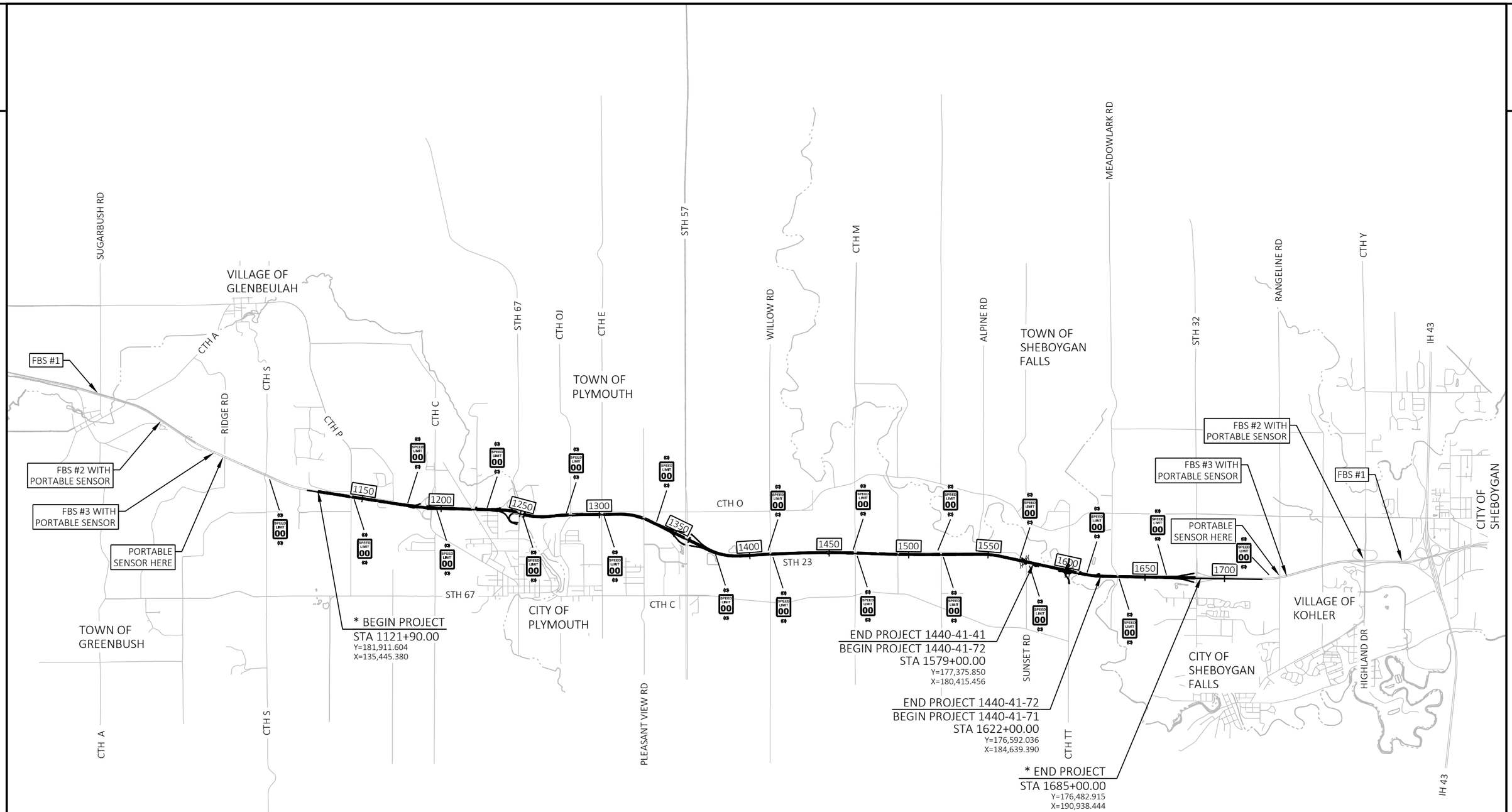
* STH 23 WB AND STH 23 EB SHALL BE REDUCED TO 1-LANE OF TRAFFIC CLOSING THE OUTSIDE LANES. SEE SDD PROVIDED IN STAGE 2 FOR TRAFFIC CONTROL
* TEMPORARILY CLOSE (1 DAY MAX) STH 23 OFF/ON RAMPS AT STH 57, STH 67 AND STH 32. CONSECUTIVE RAMPS CANNOT BE CLOSED AT THE SAME TIME. FOLLOW SDD "TRAFFIC CONTROL SYSTEM RAMP CLOSURE" AND "TRAFFIC CONTROL EXIT RAMP CLOSURE"
* NO DETOUR IS NEEDED FOR THIS STAGE

CONSTRUCTION

* COMPLETE HMA OVERLAY WORK FOR STH 23 WB AND STH 23 EB. SEE TRAFFIC CONTROL DETAIL PLAN SHEETS
* COMPLETE CONCRETE SURFACE DRAINS AND GUARD RAIL REMOVAL/NEW INSTALL FOR STH 23 EB AND STH 23 WB BOTH PROJECT IDS
* COMPLETE SHOULDERING FOR STH 23 WB AND STH 23 EB FOR BOTH PROJECT IDS
* COMPLETE PAVEMENT MARKING (TEMPORARY AND PERMANENT) FOR STH 23 WB AND STH 23 EB
* COMPLETE BRIDGE PAINTING WORK ON STRUCTURE B-59-0097

2

2



LEGEND

DIGITAL SPEED LIMIT TRAILER (DSLT)

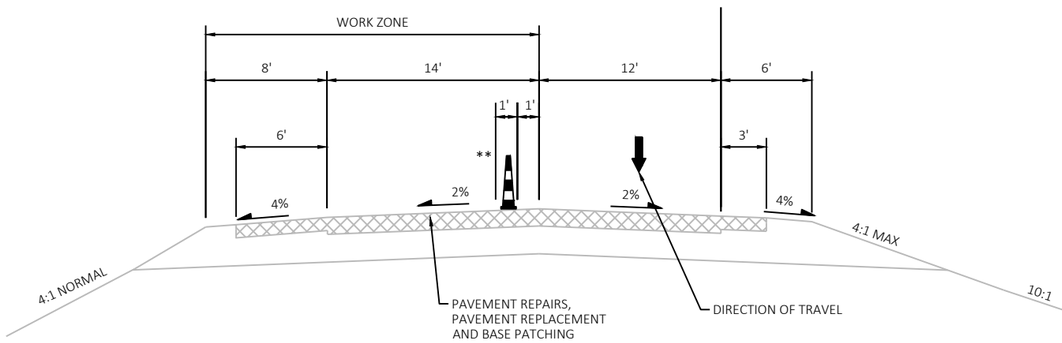
THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AND CURRENT WORK ZONE AS APPROVED BY THE ENGINEER.

* THE BASIC QUEUE WARNING SYSTEM FOR BOTH EB STH 23 AND WB STH 23 NEED TO MOVE WITH THE LANE CLOSURE START POINT THROUGHOUT THE PROJECT DURATION

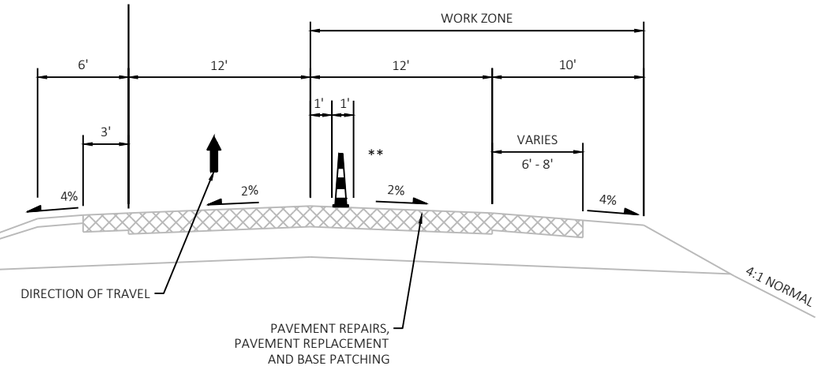
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	TRAFFIC CONTROL STAGING - SMART WORK ZONE SYSTEMS	SHEET 137	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\025101-TC.DWG
LAYOUT NAME - 025103-tc
PLOT DATE : 9/23/2026 2:48 PM
PLOT BY : HOSPER, JAN
PLOT NAME :
PLOT SCALE : 1 IN:6000 FT
WISDOT/CADDS SHEET 42

STH 23 WB
CONSTRUCTION R/L



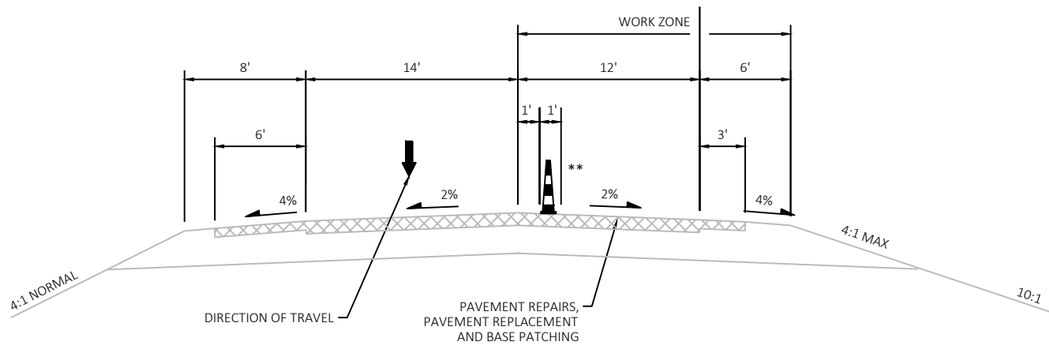
STH 23 EB
CONSTRUCTION R/L



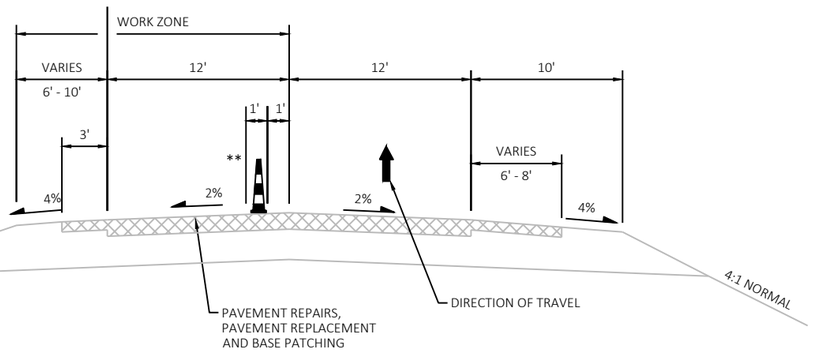
STAGE 2A &2B - CLOSING OUTSIDE LANES - STH 23 WB AND EB PAVEMENT REPAIRS, PAVEMENT REPLACEMENT AND BASE PATCHING

**CONES MAY BE SHIFTED TO THE LANE LINE WHEN THERE IS ACTIVE PAVEMENT REPAIRS, REPLACEMENT OR BASE PATCHING.

STH 23 WB
CONSTRUCTION R/L



STH 23 EB
CONSTRUCTION R/L



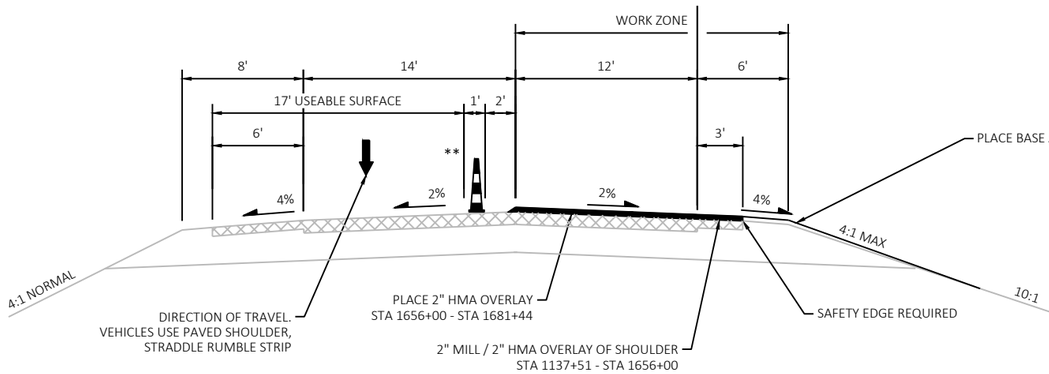
STAGE 3 - CLOSING INSIDE LANES - STH 23 WB AND EB PAVEMENT REPAIRS, PAVEMENT REPLACEMENT AND BASE PATCHING

**CONES MAY BE SHIFTED TO THE LANE LINE WHEN THERE IS ACTIVE PAVEMENT REPAIRS, REPLACEMENT OR BASE PATCHING.

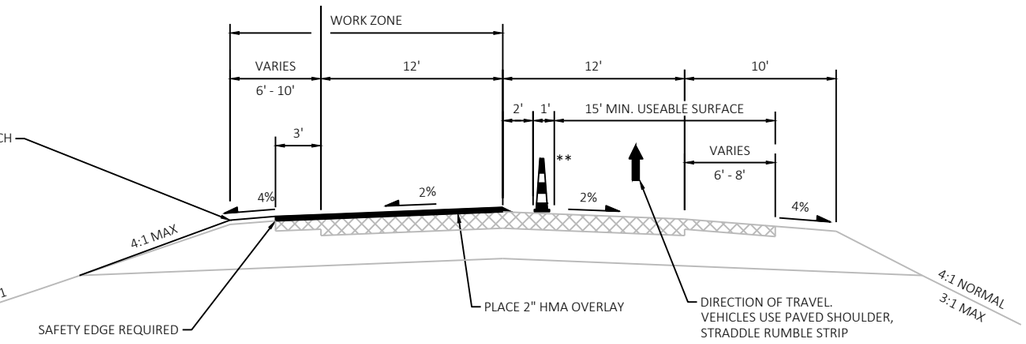
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	TRAFFIC CONTROL STAGING - PAVEMENT REPAIR, REPLACEMENT AND BASE PATCHING	SHEET 138	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\025100-TC.DWG
LAYOUT NAME - 025105-tc
PLOT DATE : 9/23/2026 2:48 PM
PLOT BY : HOSPER, JAN
PLOT NAME :
PLOT SCALE : 1IN:10 FT
WISDOT/CADDS SHEET 42

STH 23 WB
CONSTRUCTION R/L

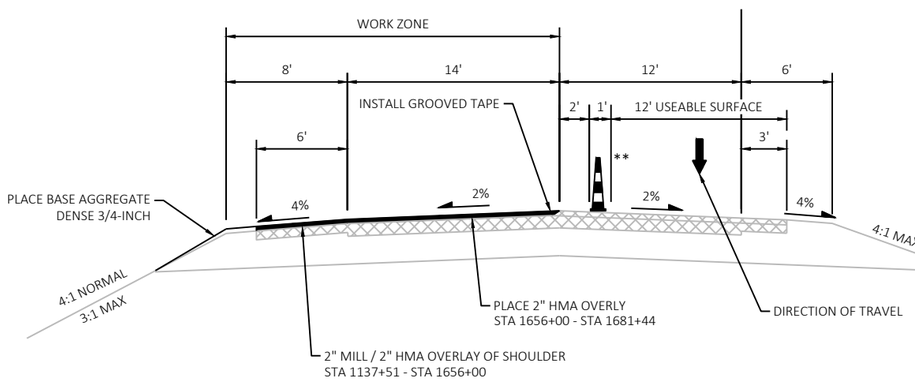


STH 23 EB
CONSTRUCTION R/L

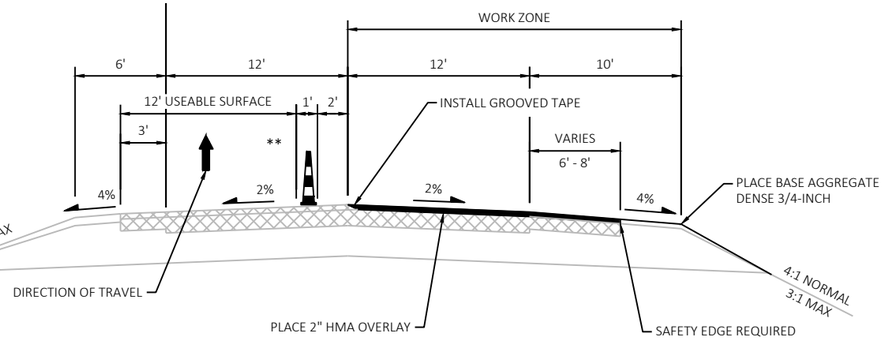


STAGE 4A FOR STH 23
MAINLINE
**CONES TO BE MOVED TO THE LANE LINE AT END OF EACH DAY TO PROVIDE 12-FT DRIVING LANE.

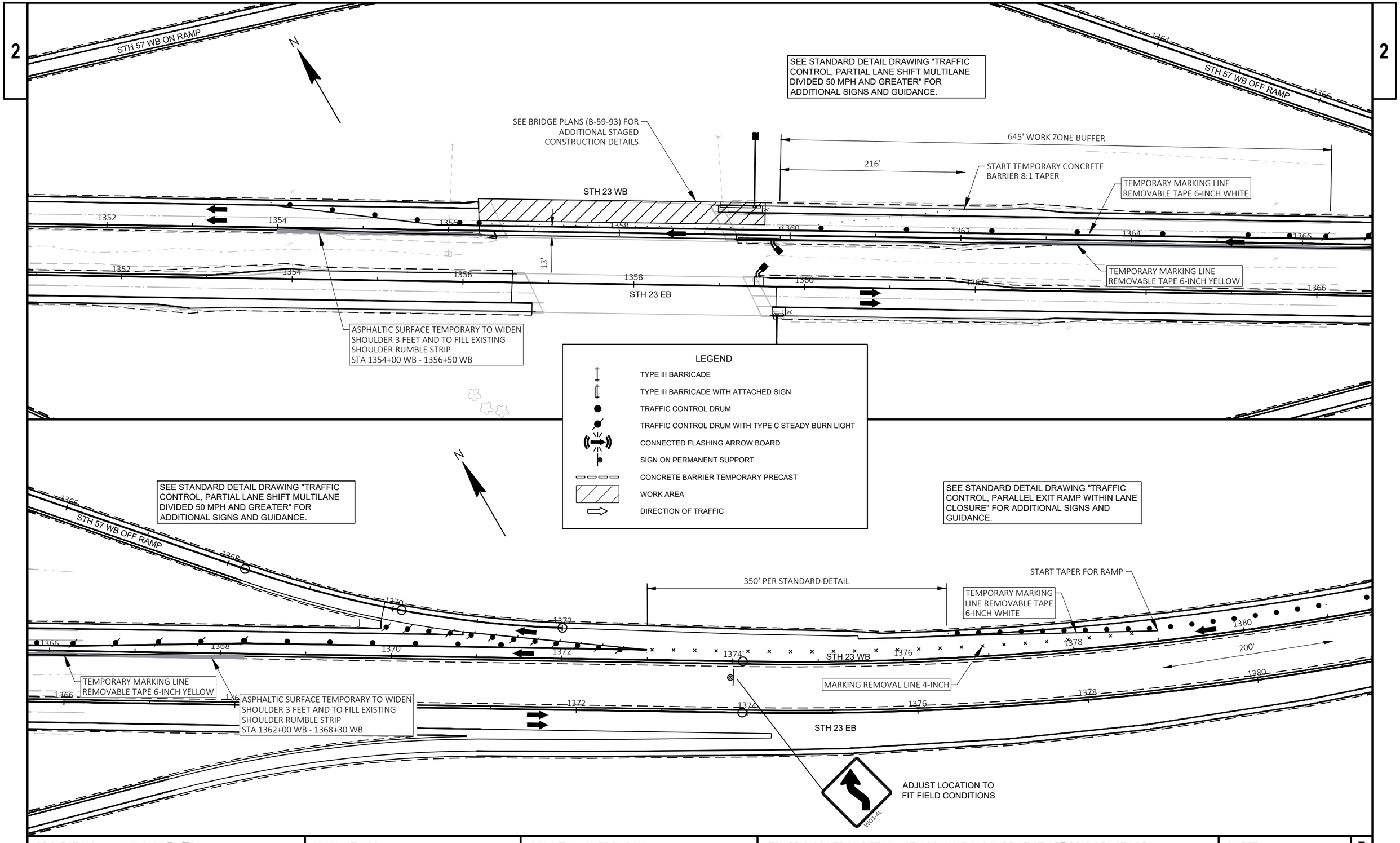
STH 23 WB
CONSTRUCTION R/L



STH 23 EB
CONSTRUCTION R/L



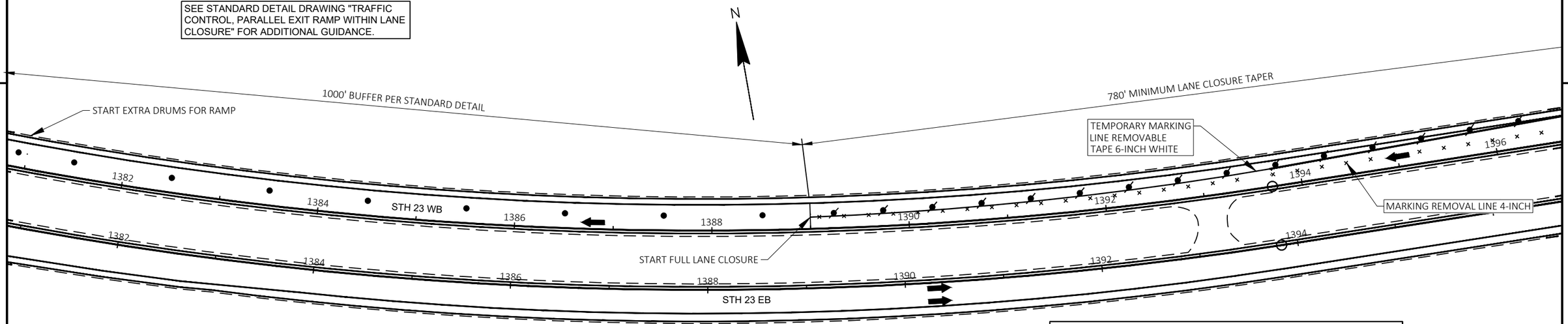
STAGE 4B FOR STH 23
MAINLINE
**CONES TO BE MOVED TO THE LANE LINE AT END OF EACH DAY TO PROVIDE 12-FT DRIVING LANE.



PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	TRAFFIC CONTROL DETAIL - STH 23 LANE CLOSURE AT STH 57 BRIDGE - STAGE 1A	SHEET 140	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\025102-TC.DWG
LAYOUT NAME - 025111-tc
PLOT DATE : 9/23/2026 2:48 PM
PLOT BY : HOSPER, JAN
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44

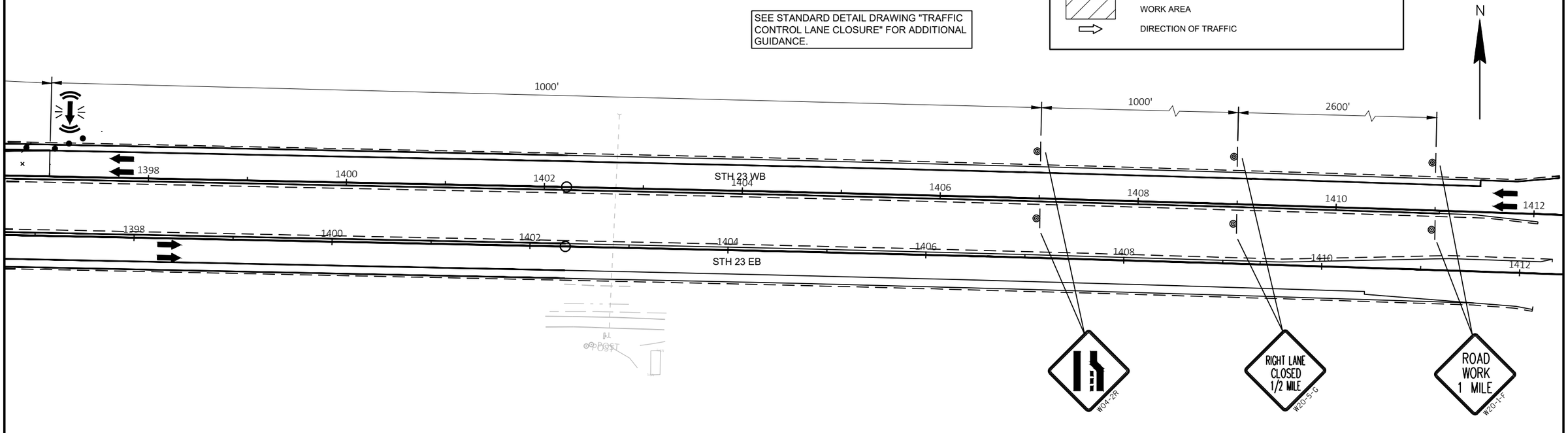
SEE STANDARD DETAIL DRAWING "TRAFFIC CONTROL, PARALLEL EXIT RAMP WITHIN LANE CLOSURE" FOR ADDITIONAL GUIDANCE.



LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- CONNECTED FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC

SEE STANDARD DETAIL DRAWING "TRAFFIC CONTROL LANE CLOSURE" FOR ADDITIONAL GUIDANCE.

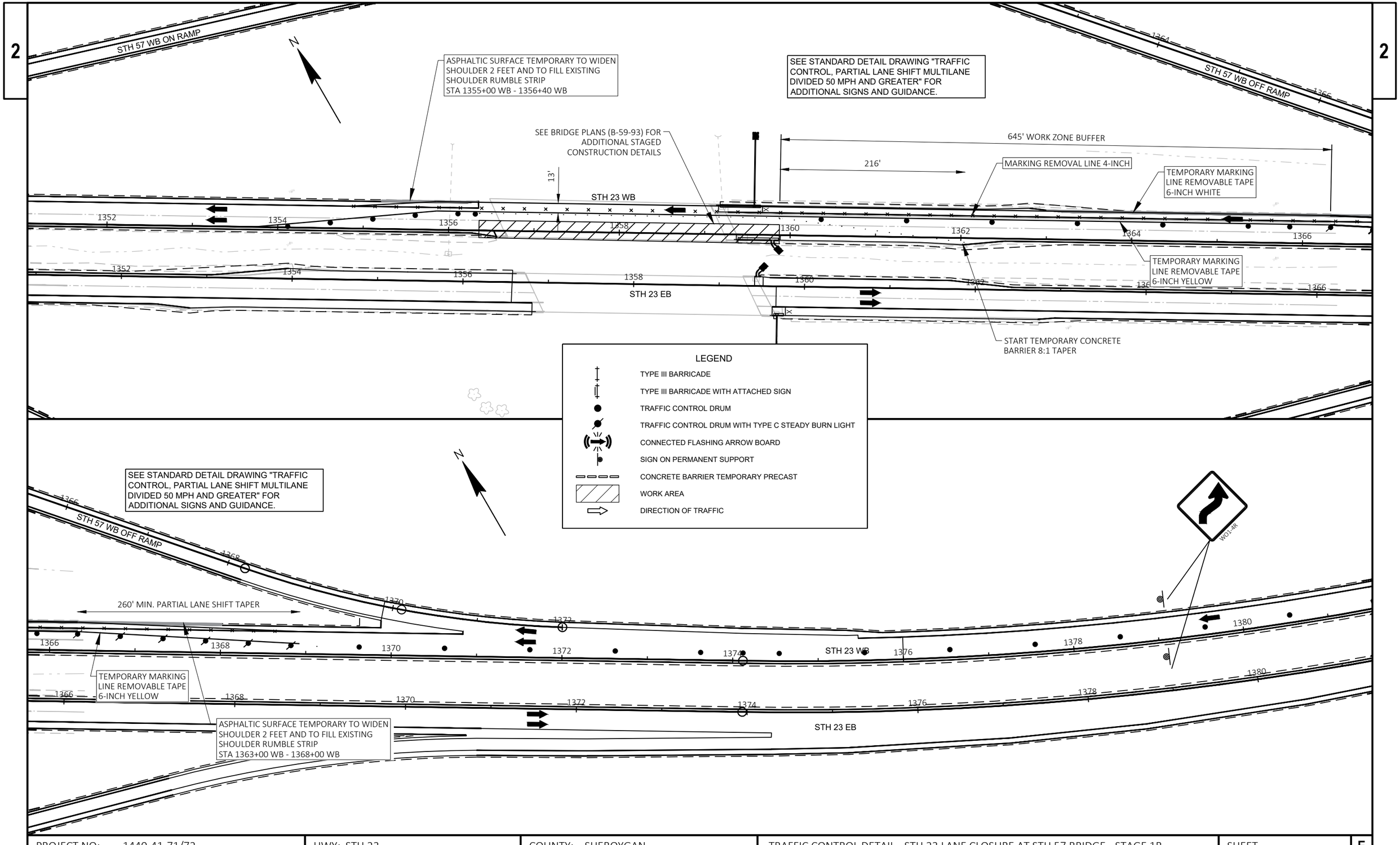


PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	TRAFFIC CONTROL DETAIL - STH 23 LANE CLOSURE AT STH 57 BRIDGE - STAGE 1A	SHEET 141	E

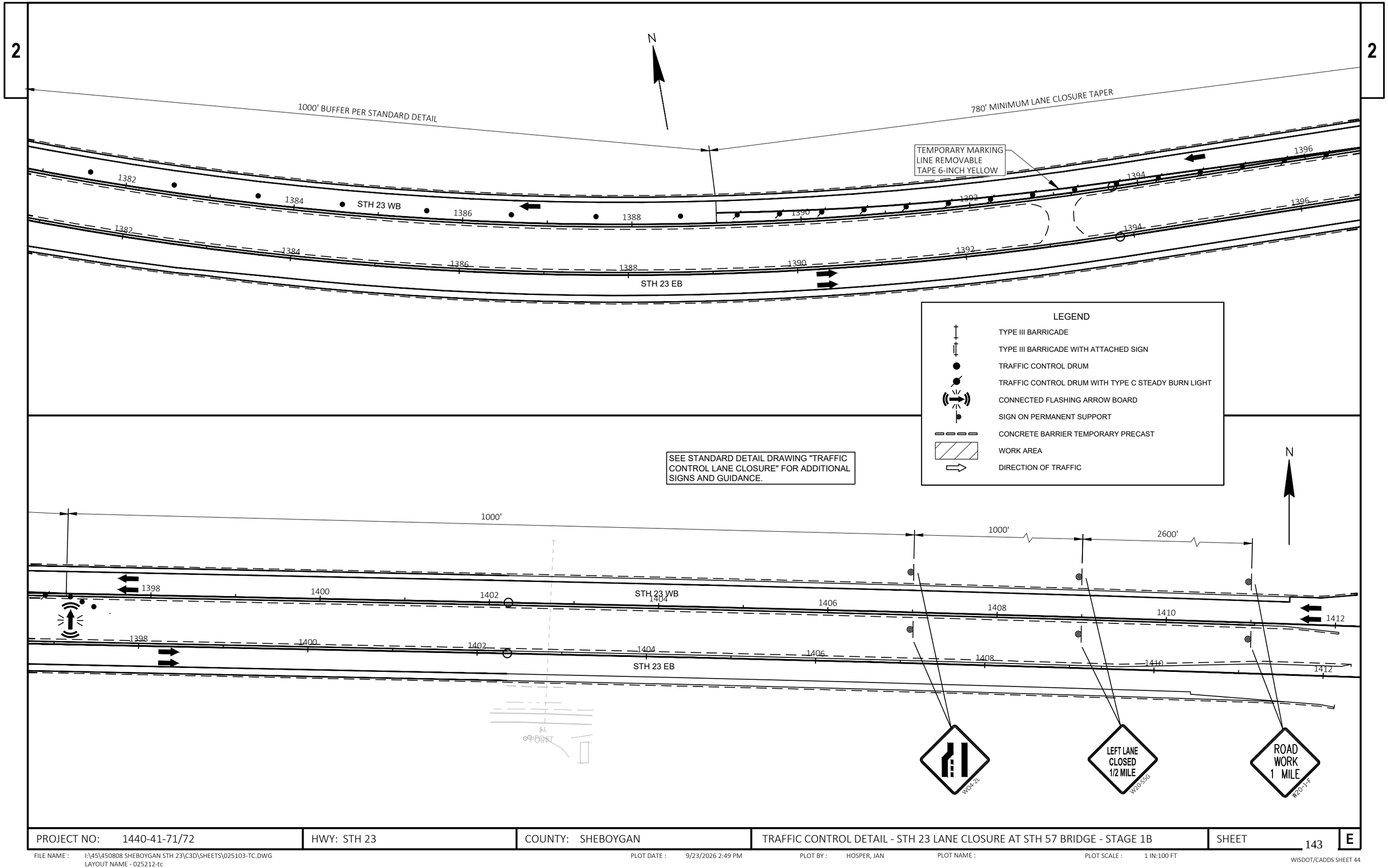
FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\025102-TC.DWG
LAYOUT NAME - 025112-tc

PLOT DATE : 9/23/2026 2:48 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44



PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	TRAFFIC CONTROL DETAIL - STH 23 LANE CLOSURE AT STH 57 BRIDGE - STAGE 1B	SHEET 142	E



PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	TRAFFIC CONTROL DETAIL - STH 23 LANE CLOSURE AT STH 57 BRIDGE - STAGE 1B	SHEET 143	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\025103-TC.DWG
LAYOUT NAME - 025212-tc
PLOT DATE : 9/23/2026 2:49 PM
PLOT BY : HOSPER, JAN
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44

2

2

STH 67 WB ON RAMP

INSIDE LANE CLOSURE ALREADY IN PLACE FOR STAGE 3 WORK

ASPHALTIC SURFACE TEMPORARY TO WIDEN SHOULDER UP TO 4 FEET AND TO FILL EXISTING SHOULDER RUMBLE STRIP STA 1239+00 EB - 1247+70 EB

STH 67 WB OFF RAMP

SEE BRIDGE PLANS (B-59-91) FOR ADDITIONAL STAGED CONSTRUCTION DETAILS

MARKING REMOVAL LINE WIDE FOR GORE DIAGONAL MARKINGS

STH 23 WB

260' MINIMUM PARTIAL LANE SHIFT

645' WORK ZONE BUFFER

216'

STH 23 EB

TEMPORARY MARKING LINE REMOVABLE TAPE 6-INCH WHITE

TEMPORARY MARKING LINE REMOVABLE TAPE 6-INCH YELLOW

MARKING REMOVAL LINE 4-INCH

START TEMPORARY CONCRETE BARRIER 8:1 TAPER

STH 67 EB ON RAMP

STH 67 EB OFF RAMP

SEE STANDARD DETAIL DRAWING "TRAFFIC CONTROL, PARALLEL EXIT RAMP WITHIN LANE CLOSURE" FOR ADDITIONAL GUIDANCE.

SEE STANDARD DETAIL DRAWING "TRAFFIC CONTROL, PARTIAL LANE SHIFT MULTILANE DIVIDED 50 MPH AND GREATER" FOR ADDITIONAL SIGNS AND GUIDANCE.

MARKING REMOVAL LINE GROOVED CONTRAST PERMANENT TAPE 10-INCH

USE EXISTING EDGELINE MARKINGS FOR RAMP TAPER

SEE STANDARD DETAIL DRAWING "TAPERED ENTRANCE RAMP WITHIN LANE CLOSURE" FOR ADDITIONAL SIGNS AND GUIDANCE.

RAMP OPEN DURING THIS STAGE

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- CONNECTED FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC

USE EXISTING EDGELINE MARKINGS FOR RAMP TAPER

SEE BRIDGE PLANS (B-59-91) FOR ADDITIONAL STAGED CONSTRUCTION DETAILS

TEMPORARY MARKING LINE REMOVABLE TAPE 6-INCH YELLOW

INSIDE LANE CLOSURE IN PLACE FOR STAGE 3 WORK

PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	TRAFFIC CONTROL DETAIL - STH 23 LANE CLOSURE AT STH 67 BRIDGE - STAGE 3	SHEET 144	E

2

2

STH 67 WB ON RAMP

STH 67 WB OFF RAMP

STH 23 WB

STH 23 EB

ASPHALTIC SURFACE TEMPORARY TO WIDEN SHOULDER UP TO 6 FEET AND TO FILL EXISTING SHOULDER RUMBLE STRIP STA 1239+00 EB - 1244+60 EB

260' MINIMUM PARTIAL LANE SHIFT

645' WORK ZONE BUFFER

1236 1238 1240 1242 1244 1246 1248 1250

MARKING REMOVAL LINE 4-INCH

OUTSIDE LANE CLOSURE ALREADY IN PLACE FOR STAGE 2 WORK

TEMPORARY MARKING LINE REMOVABLE TAPE 6-INCH WHITE

TEMPORARY MARKING LINE REMOVABLE TAPE 6-INCH YELLOW

START TEMPORARY CONCRETE BARRIER 8:1 TAPER

216'

STH 67 EB ON RAMP

STH 67 EB OFF RAMP

SEE STANDARD DETAIL DRAWING "TRAFFIC CONTROL, PARALLEL EXIT RAMP WITHIN LANE CLOSURE" FOR ADDITIONAL GUIDANCE.

SEE STANDARD DETAIL DRAWING "TRAFFIC CONTROL, PARTIAL LANE SHIFT MULTILANE DIVIDED 50 MPH AND GREATER" FOR ADDITIONAL SIGNS AND GUIDANCE.

SEE BRIDGE PLANS (B-59-91) FOR ADDITIONAL STAGED CONSTRUCTION DETAILS

RAMP CLOSED DURING THIS STAGE

N

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- CONNECTED FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC

ASPHALTIC SURFACE TEMPORARY TO WIDEN SHOULDER UP TO 6 FEET AND TO FILL EXISTING SHOULDER RUMBLE STRIP STA 1252+40 EB - 1255+60 EB

1250 1252 1254 1256 1258 1260 1262 1264

OUTSIDE LANE CLOSURE IN PLACE FOR STAGE 2 WORK

SEE BRIDGE PLANS (B-59-91) FOR ADDITIONAL STAGED CONSTRUCTION DETAILS

TEMPORARY MARKING LINE REMOVABLE TAPE 6-INCH WHITE

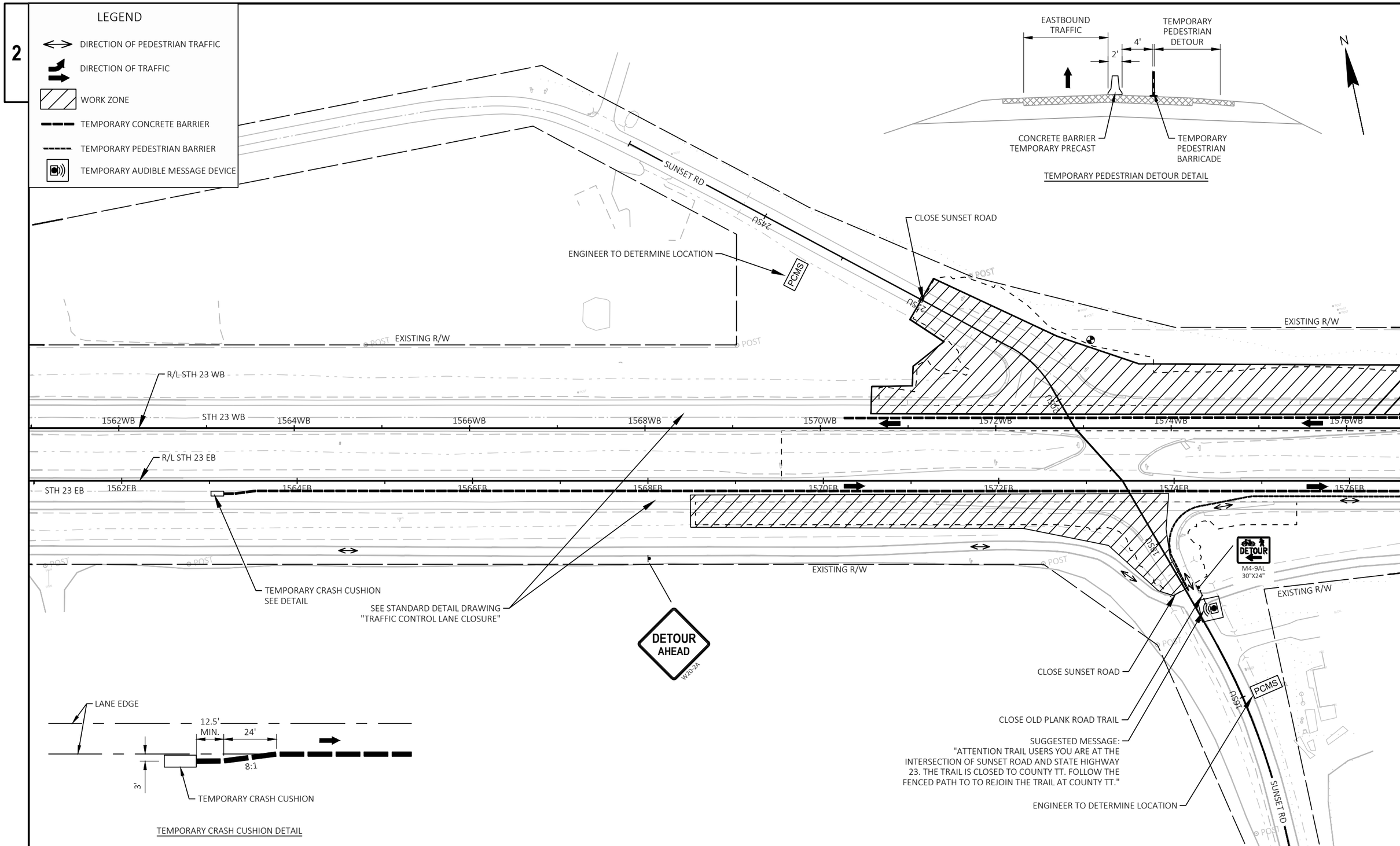
TEMPORARY MARKING LINE REMOVABLE TAPE 6-INCH YELLOW

N

PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	TRAFFIC CONTROL DETAIL - STH 23 LANE CLOSURE AT STH 67 BRIDGE - STAGE 2B	SHEET 145	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\025103-TC.DWG
LAYOUT NAME - 025221-tc

PLOT DATE : 9/23/2026 2:49 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:100 FT



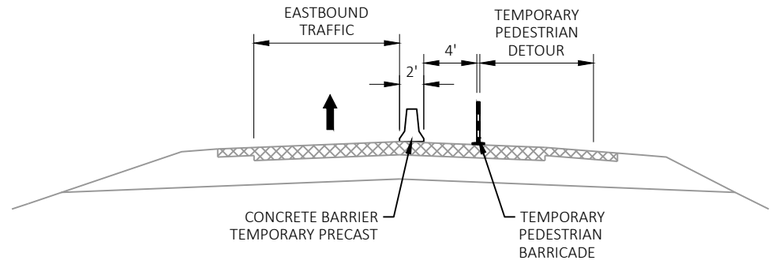
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	TRAFFIC CONTROL DETAIL - STAGE 2A	SHEET 146	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\026001-S1.DWG
LAYOUT NAME - 026001-s1
PLOT DATE : 9/23/2026 2:49 PM
PLOT BY : HOSPER, JAN
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

2

LEGEND

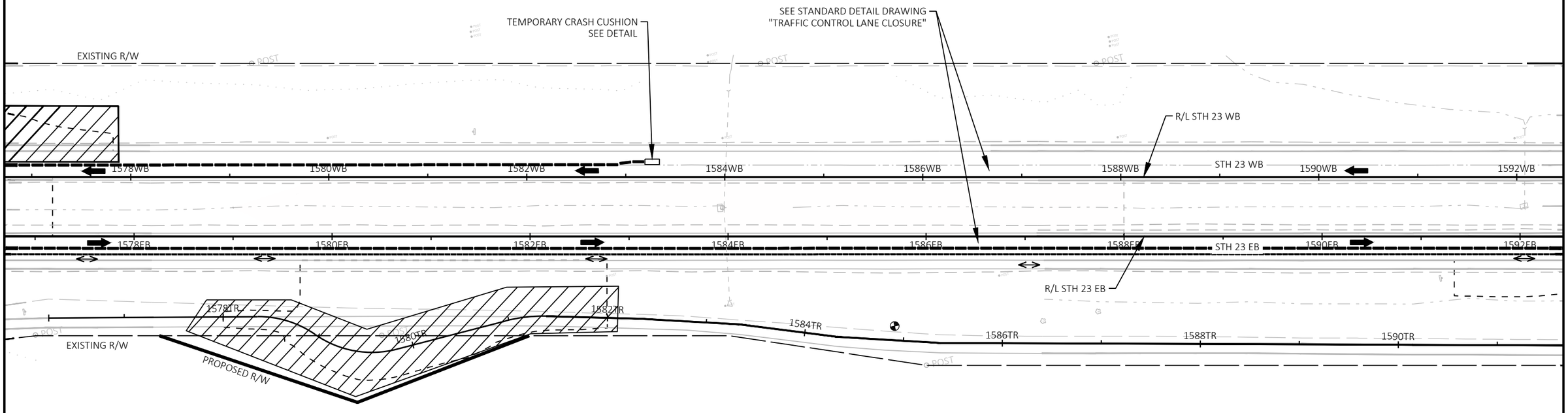
- DIRECTION OF PEDESTRIAN TRAFFIC
- DIRECTION OF TRAFFIC
- WORK ZONE
- TEMPORARY CONCRETE BARRIER
- TEMPORARY PEDESTRIAN BARRIER
- TEMPORARY AUDIBLE MESSAGE DEVICE

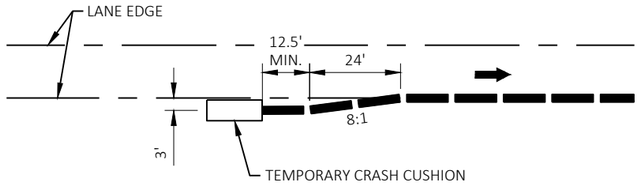


TEMPORARY PEDESTRIAN DETOUR DETAIL

N

2



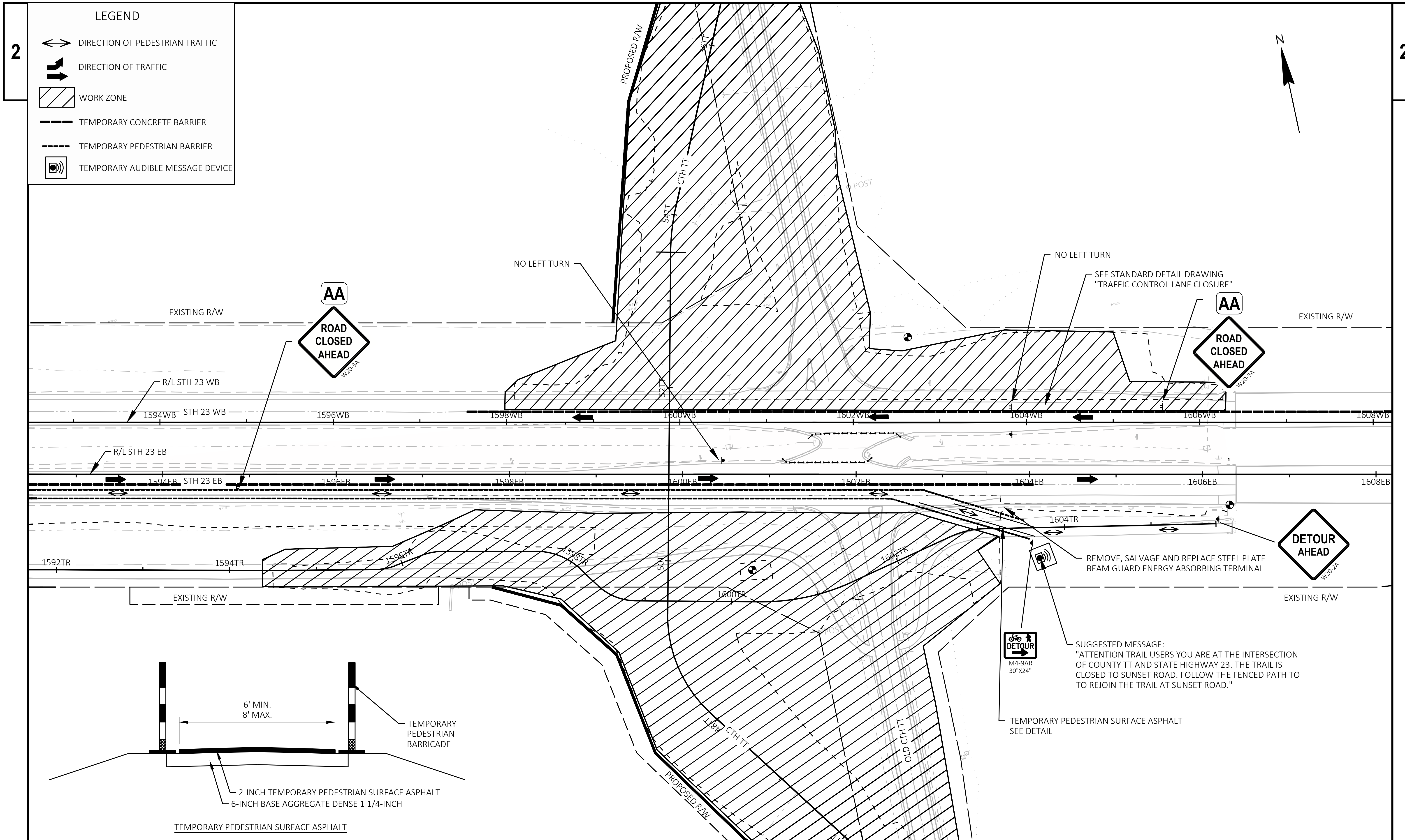


TEMPORARY CRASH CUSHION DETAIL

PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	TRAFFIC CONTROL DETAIL - STAGE 2A	SHEET 147	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\026001-S1.DWG
LAYOUT NAME - 026002-s1

PLOT DATE : 9/23/2026 2:49 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:100 FT

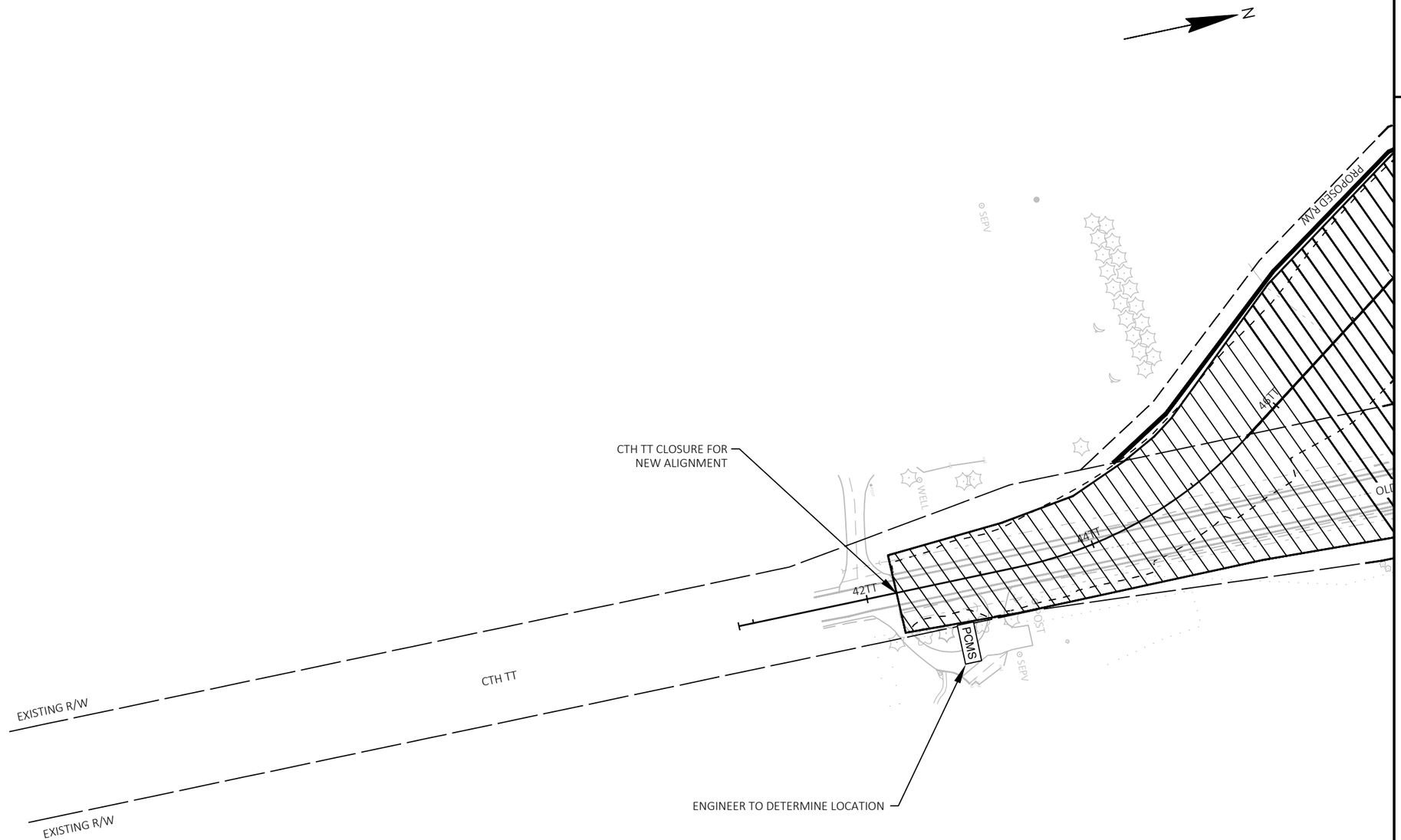


PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	TRAFFIC CONTROL DETAIL - STAGE 2A	SHEET 148	E

2

LEGEND

- DIRECTION OF PEDESTRIAN TRAFFIC
- DIRECTION OF TRAFFIC
- WORK ZONE
- TEMPORARY CONCRETE BARRIER
- TEMPORARY PEDESTRIAN BARRIER
- TEMPORARY AUDIBLE MESSAGE DEVICE



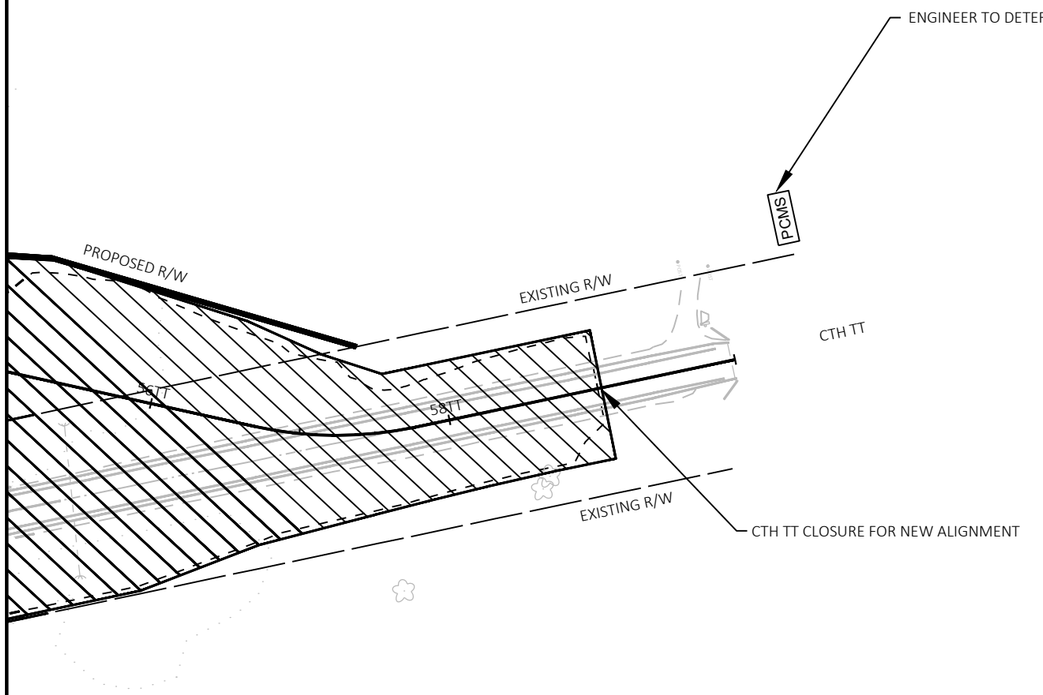
2

PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	TRAFFIC CONTROL DETAIL - STAGE 2A	SHEET 149	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\026001-S1.DWG
LAYOUT NAME - 026004-s1
PLOT DATE : 9/23/2026 2:49 PM
PLOT BY : HOSPER, JAN
PLOT NAME :
PLOT SCALE : 1 IN:100 FT

2

N



LEGEND

- DIRECTION OF PEDESTRIAN TRAFFIC
- DIRECTION OF TRAFFIC
- WORK ZONE
- TEMPORARY CONCRETE BARRIER
- TEMPORARY PEDESTRIAN BARRIER
- TEMPORARY AUDIBLE MESSAGE DEVICE

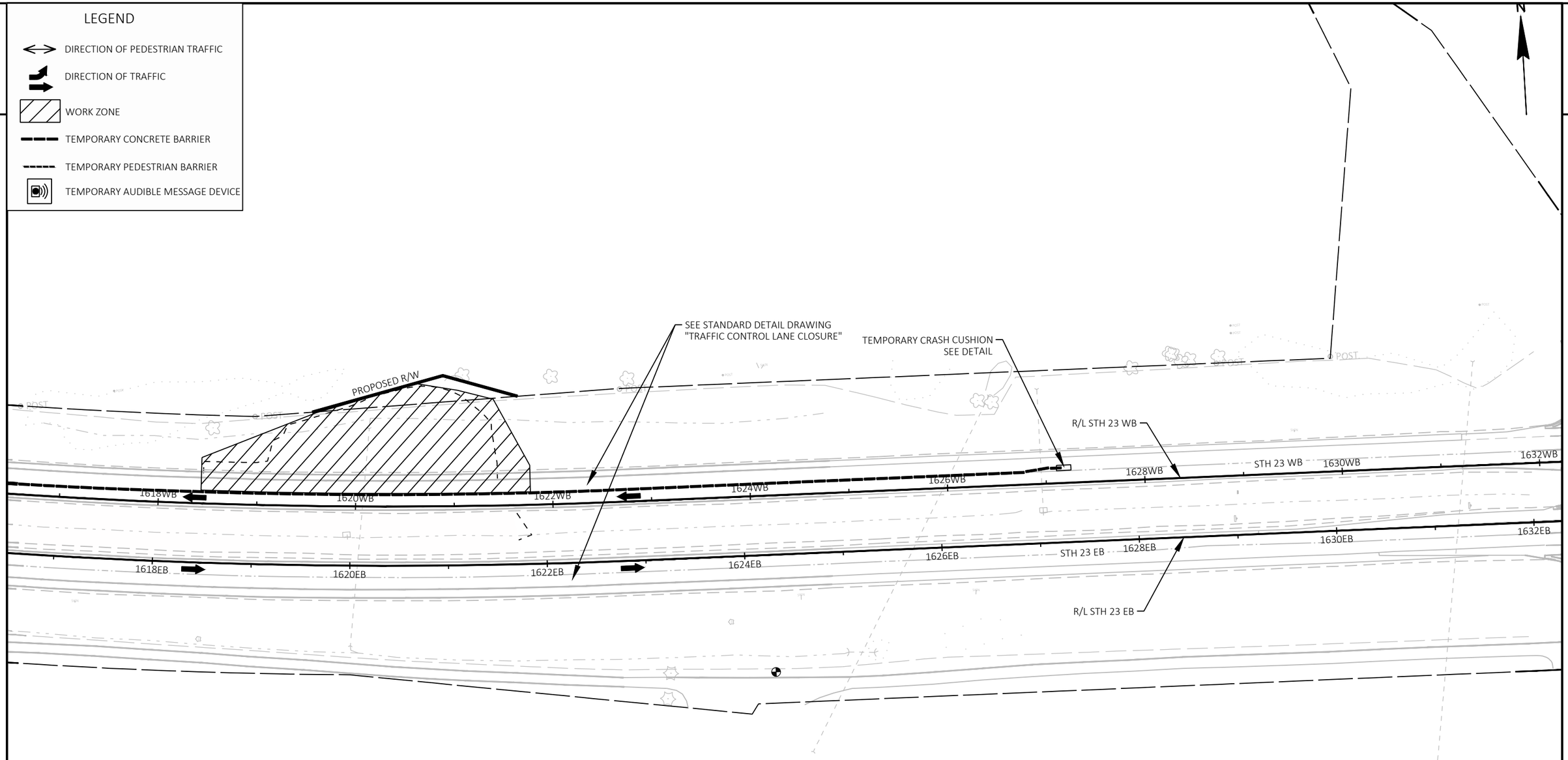
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	TRAFFIC CONTROL DETAIL - STAGE 2A	SHEET 150	E

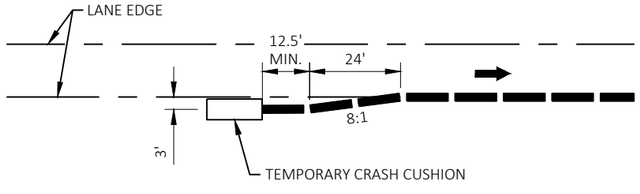
FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\026001-S1.DWG
LAYOUT NAME - 026005-s1
PLOT DATE : 9/23/2026 2:49 PM
PLOT BY : HOSPER, JAN
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

2

LEGEND

- DIRECTION OF PEDESTRIAN TRAFFIC
- DIRECTION OF TRAFFIC
- WORK ZONE
- TEMPORARY CONCRETE BARRIER
- TEMPORARY PEDESTRIAN BARRIER
- TEMPORARY AUDIBLE MESSAGE DEVICE





TEMPORARY CRASH CUSHION DETAIL

PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	TRAFFIC CONTROL DETAIL - STAGE 2A, 2B	SHEET 151	E

2

2

LEGEND

- DIRECTION OF PEDESTRIAN TRAFFIC
- DIRECTION OF TRAFFIC
- WORK ZONE
- TEMPORARY CONCRETE BARRIER
- TEMPORARY PEDESTRIAN BARRIER
- TEMPORARY AUDIBLE MESSAGE DEVICE

N

1244
1244WB
1246WB
1248WB
1250WB
1252WB
1254WB
1256WB
1242EB
1244EB
1246EB
1248EB
1250EB
1252EB
1254EB
1256EB
1248
1246
1244
1242
1240
1238
1236

STH 23 WESTBOUND

STH 23 EASTBOUND

STRUCTURE B-59-0091

PEDESTRIAN OVERHEAD PROTECTION (SEE DETAIL)

SEE "TRAFFIC CONTROL DETAIL - STH 23 LANE CLOSURE AT STH 67 BRIDGE - STAGE 2B" FOR MORE DETAILS

OLD PLANK ROAD TRAIL

STH 67 RAMP TO STH23 EB

STH 67

CLOSE STH 67 RAMP TO STH 23 EB

ENGINEER TO DETERMINE LOCATION

PCMS

PEDESTRIAN OVERHEAD PROTECTION

$\frac{3}{4}$" PLYWOOD CEILING

$\frac{3}{4}$" PLYWOOD BRACING AT CORNERS

2X4 FRAMING

8'

10' MIN

4' C-C

48"

SIDEWALK

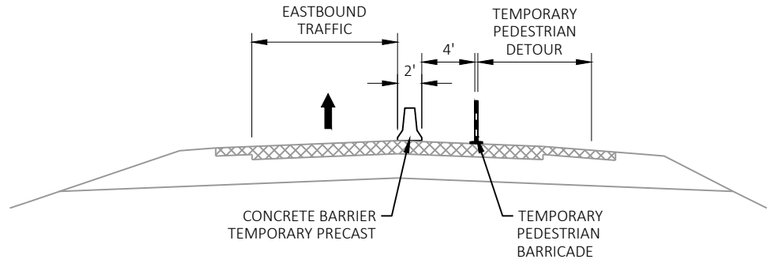
$\frac{1}{2}$" PLYWOOD FOR WALLS

PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	TRAFFIC CONTROL DETAIL - STAGE 2A, 2B	SHEET 152	E

2

LEGEND

- DIRECTION OF PEDESTRIAN TRAFFIC
- DIRECTION OF TRAFFIC
- WORK ZONE
- TEMPORARY CONCRETE BARRIER
- TEMPORARY PEDESTRIAN BARRIER
- TEMPORARY AUDIBLE MESSAGE DEVICE



TEMPORARY PEDESTRIAN DETOUR DETAIL

N

SUNSET RD

ENGINEER TO DETERMINE LOCATION

PCMS

CLOSE SUNSET ROAD

EXISTING R/W

R/L STH 23 WB

STH 23 WB

1562WB 1564WB 1566WB 1568WB 1570WB 1572WB 1574WB 1576WB

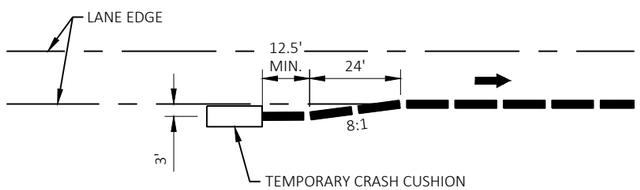
R/L STH 23 EB

STH 23 EB

1562EB 1564EB 1566EB 1568EB 1570EB 1572EB 1574EB 1576EB

TEMPORARY CRASH CUSHION
SEE DETAIL

SEE STANDARD DETAIL DRAWING
"TRAFFIC CONTROL LANE CLOSURE"



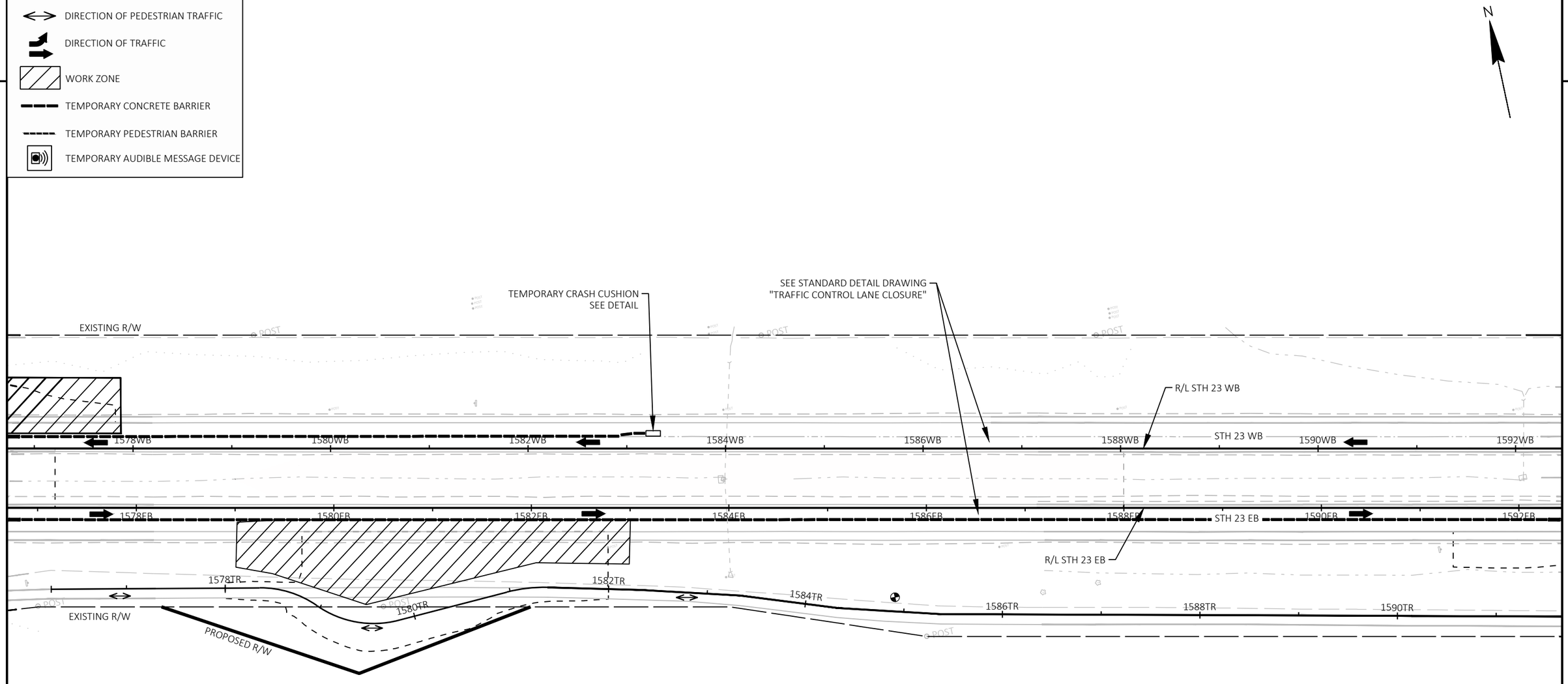
TEMPORARY CRASH CUSHION DETAIL

PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	TRAFFIC CONTROL DETAIL - STAGE 2B	SHEET 153	E

2

LEGEND

- DIRECTION OF PEDESTRIAN TRAFFIC
- DIRECTION OF TRAFFIC
- WORK ZONE
- TEMPORARY CONCRETE BARRIER
- TEMPORARY PEDESTRIAN BARRIER
- TEMPORARY AUDIBLE MESSAGE DEVICE



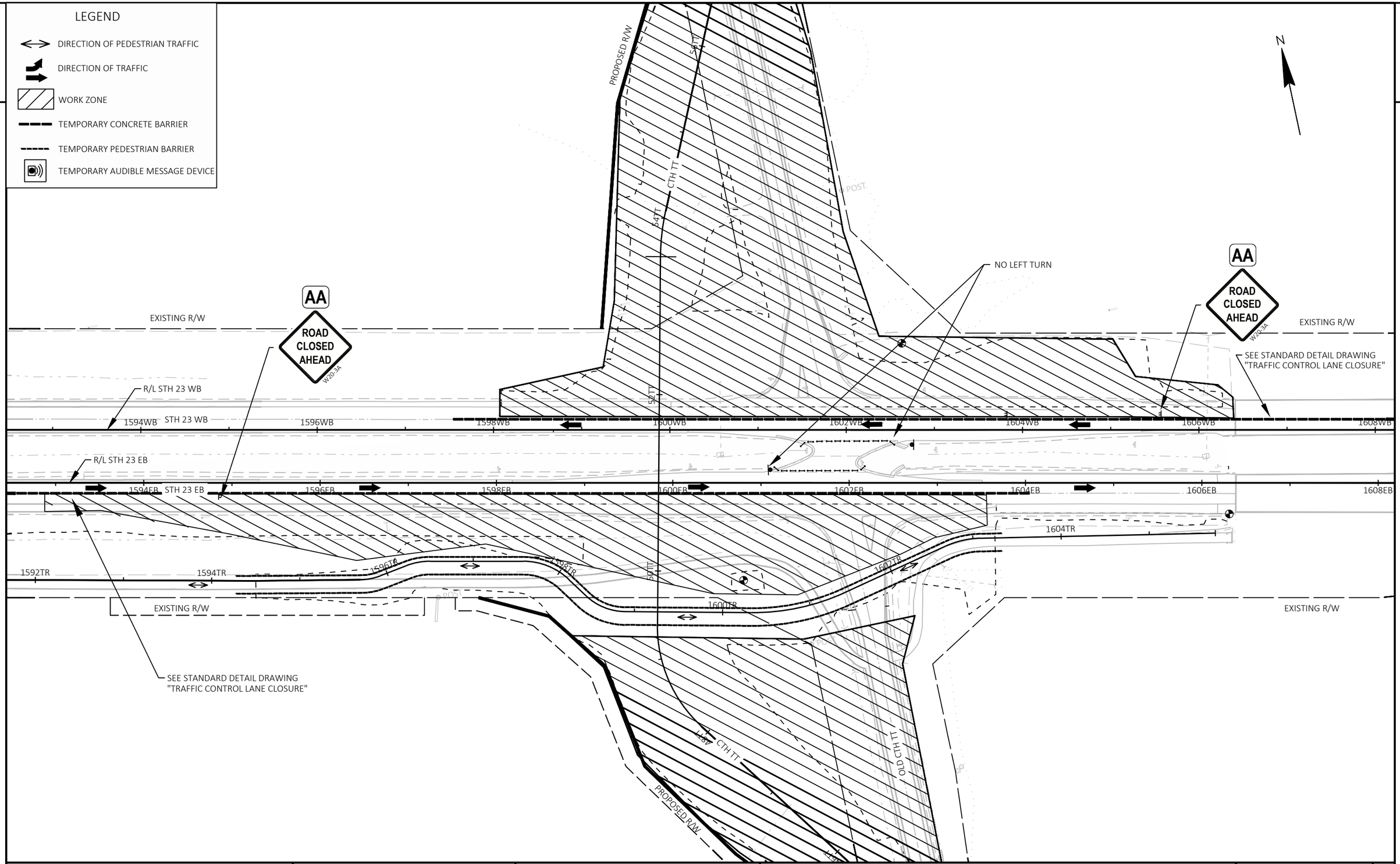
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	TRAFFIC CONTROL DETAIL - STAGE 2B	SHEET 154	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\026001-S1.DWG
LAYOUT NAME - 026007-s1
PLOT DATE : 9/23/2026 2:50 PM
PLOT BY : HOSPER, JAN
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

2

LEGEND

- DIRECTION OF PEDESTRIAN TRAFFIC
- DIRECTION OF TRAFFIC
- WORK ZONE
- TEMPORARY CONCRETE BARRIER
- TEMPORARY PEDESTRIAN BARRIER
- TEMPORARY AUDIBLE MESSAGE DEVICE



PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	TRAFFIC CONTROL DETAIL - STAGE 2B	SHEET 155	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\026001-S1.DWG
LAYOUT NAME - 026008-s1

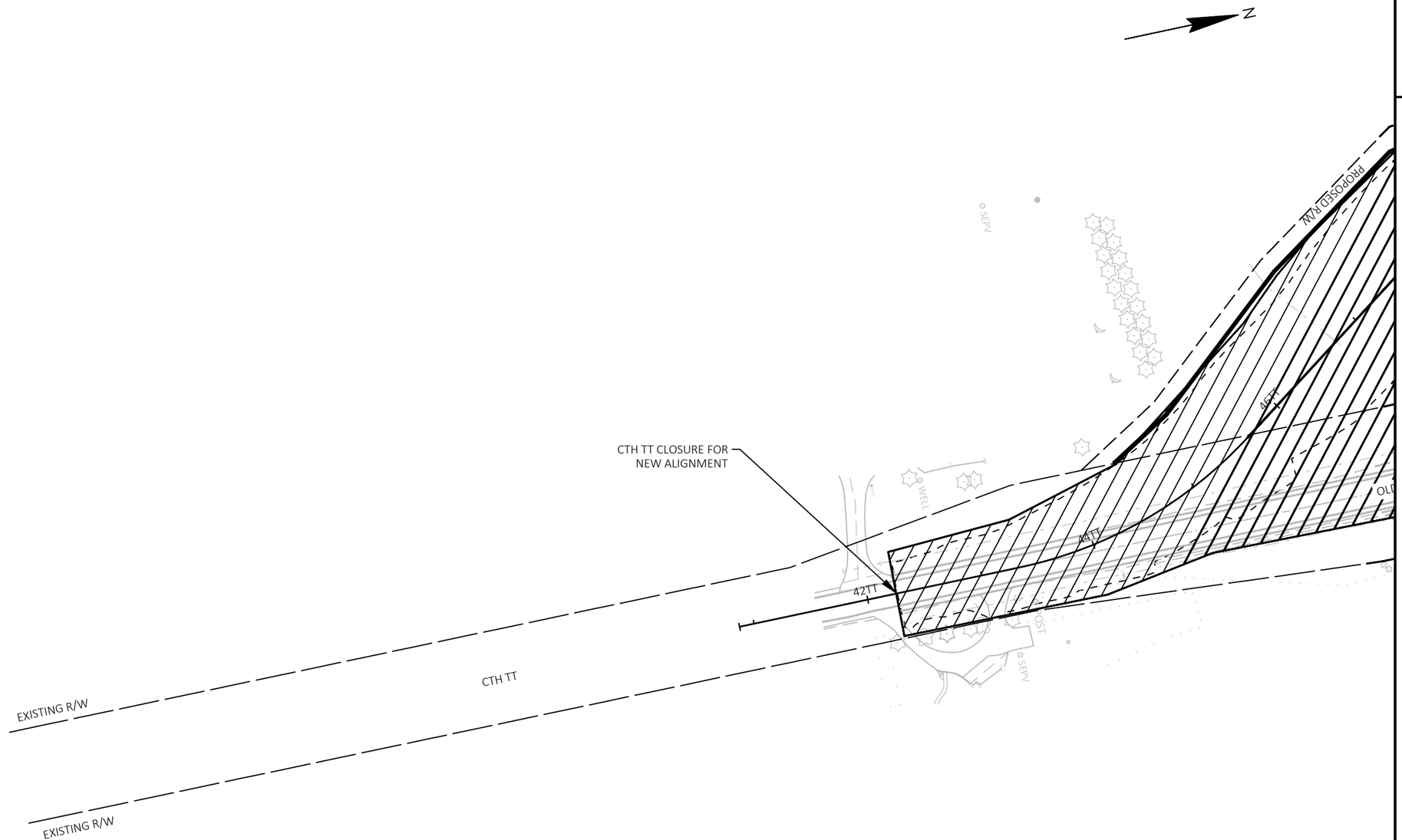
PLOT DATE : 9/23/2026 2:50 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2

LEGEND

- DIRECTION OF PEDESTRIAN TRAFFIC
- DIRECTION OF TRAFFIC
- WORK ZONE
- TEMPORARY CONCRETE BARRIER
- TEMPORARY PEDESTRIAN BARRIER
- TEMPORARY AUDIBLE MESSAGE DEVICE



2

PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	TRAFFIC CONTROL DETAIL - STAGE 2B	SHEET 156	E

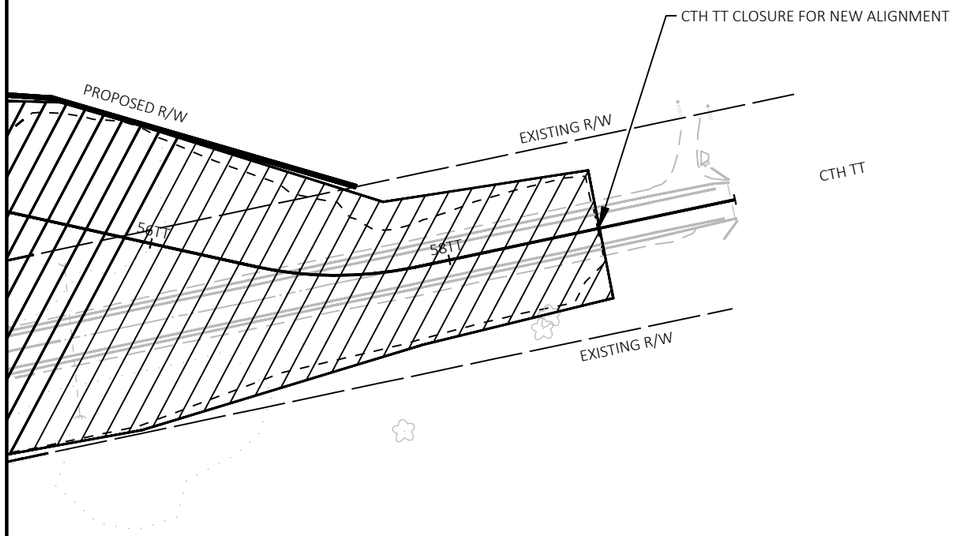
FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\026001-S1.DWG
LAYOUT NAME - 026009-s1

PLOT DATE : 9/23/2026 2:50 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2

N



LEGEND

- DIRECTION OF PEDESTRIAN TRAFFIC
- DIRECTION OF TRAFFIC
- WORK ZONE
- TEMPORARY CONCRETE BARRIER
- TEMPORARY PEDESTRIAN BARRIER
- TEMPORARY AUDIBLE MESSAGE DEVICE

PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	TRAFFIC CONTROL DETAIL - STAGE 2B	SHEET 157	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\026001-S1.DWG
LAYOUT NAME - 026010-s1
PLOT DATE : 9/23/2026 2:50 PM
PLOT BY : HOSPER, JAN
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

2

2

LEGEND

- DIRECTION OF PEDESTRIAN TRAFFIC
- DIRECTION OF TRAFFIC
- WORK ZONE
- TEMPORARY CONCRETE BARRIER
- TEMPORARY PEDESTRIAN BARRIER

N

SUNSET RD

24SU

RESTRICTED ACCESS,
RIGHT-IN/RIGHT -OUT

EXISTING R/W

R/L STH 23 WB

STH 23 WB

1562WB 1564WB 1566WB 1568WB 1570WB 1572WB 1574WB 1576WB

1562EB 1564EB 1566EB 1568EB 1570EB 1572EB 1574EB 1576EB

STH 23 EB

R/L STH 23 EB

TEMPORARY CRASH CUSHION
SEE DETAIL

INSIDE LANE CLOSURE
SEE SDD 15 D 12

16SU

SUNSET RD

LANE EDGE

12.5'
MIN.

24'

8:1

3'

TEMPORARY CRASH CUSHION

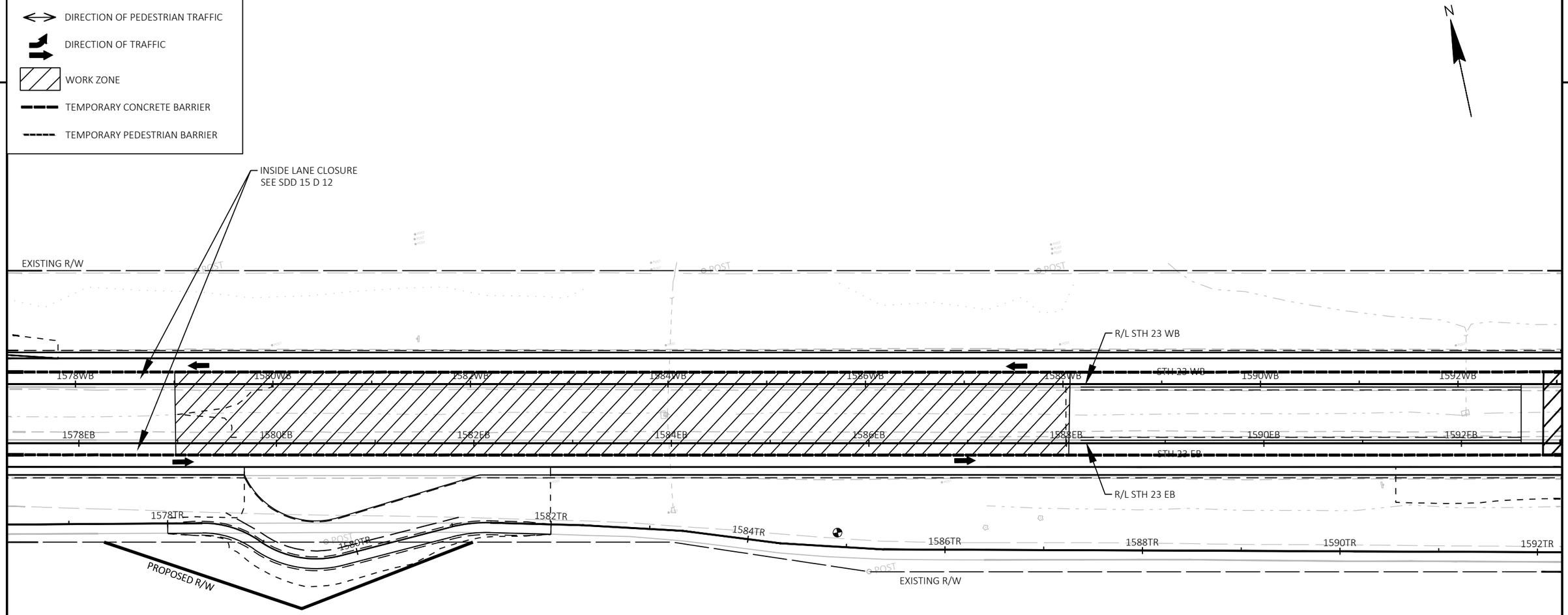
TEMPORARY CRASH CUSHION DETAIL

PROJECT NO: 1440-41-71	HWY: STH 23	COUNTY: SHEBOYGAN	TRAFFIC CONTROL DETAIL - STAGE 3	SHEET 158	E

2

LEGEND

- DIRECTION OF PEDESTRIAN TRAFFIC
- DIRECTION OF TRAFFIC
- WORK ZONE
- TEMPORARY CONCRETE BARRIER
- TEMPORARY PEDESTRIAN BARRIER



PROJECT NO: 1440-41-72	HWY: STH 23	COUNTY: SHEBOYGAN	TRAFFIC CONTROL DETAIL - STAGE 3	SHEET 159	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\026001-S2.DWG
LAYOUT NAME - 026012-s2
PLOT DATE : 9/23/2026 2:50 PM
PLOT BY : HOSPER, JAN
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

2

2

LEGEND

- DIRECTION OF PEDESTRIAN TRAFFIC
- DIRECTION OF TRAFFIC
- WORK ZONE
- TEMPORARY CONCRETE BARRIER
- TEMPORARY PEDESTRIAN BARRIER

N

PROPOSED R/W

54TT

CTH TT

50TT

EXISTING R/W

PLACE SIGN - "NO THRU MOVEMENT"

EXISTING R/W

R/L STH 23 WB

STH 23 WB

1594WB 1596WB 1598WB 1600WB 1602WB 1604WB 1606WB 1608W

1594EB 1596EB 1598EB 1600EB 1602EB 1604EB 1606EB 1608E

STH 23 EB

R/L STH 23 EB

1604TR

1592TR 1594TR 1596TR 1598TR 1600TR 1602TR

EXISTING R/W

EXISTING R/W

INSIDE LANE CLOSURE
SEE SDD 15 D 12

48TT

CTH TT

46TT

PROPOSED R/W

PROJECT NO: 1440-41-72	HWY: STH 23	COUNTY: SHEBOYGAN	TRAFFIC CONTROL DETAIL - STAGE 3	SHEET 160	E

2

LEGEND

- DIRECTION OF PEDESTRIAN TRAFFIC
- DIRECTION OF TRAFFIC
- WORK ZONE
- TEMPORARY CONCRETE BARRIER
- TEMPORARY PEDESTRIAN BARRIER

N

INSIDE LANE CLOSURE
SEE SDD 15 D 12

TEMPORARY CRASH CUSHION
1627+30 WB
SEE DETAIL

PROPOSED R/W

EXISTING R/W

R/L STH 23 WB

STH 23 WB

1612WB 1614WB 1616WB 1618WB 1620WB 1622WB 1624WB 1626WB

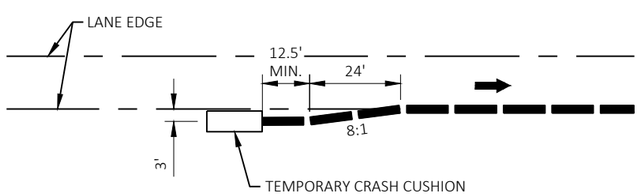
1612EB 1614EB 1616EB 1618EB 1620EB 1622EB 1624EB 1626EB

STH 23 EB

R/L STH 23 EB

EXISTING R/W

INSIDE LANE CLOSURE
SEE SDD 15 D 12



TEMPORARY CRASH CUSHION DETAIL

PROJECT NO: 1440-41-72	HWY: STH 23	COUNTY: SHEBOYGAN	TRAFFIC CONTROL DETAIL - STAGE 3	SHEET 161	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\026001-S2.DWG
LAYOUT NAME - 026014-s2

PLOT DATE : 9/23/2026 2:50 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:100 FT

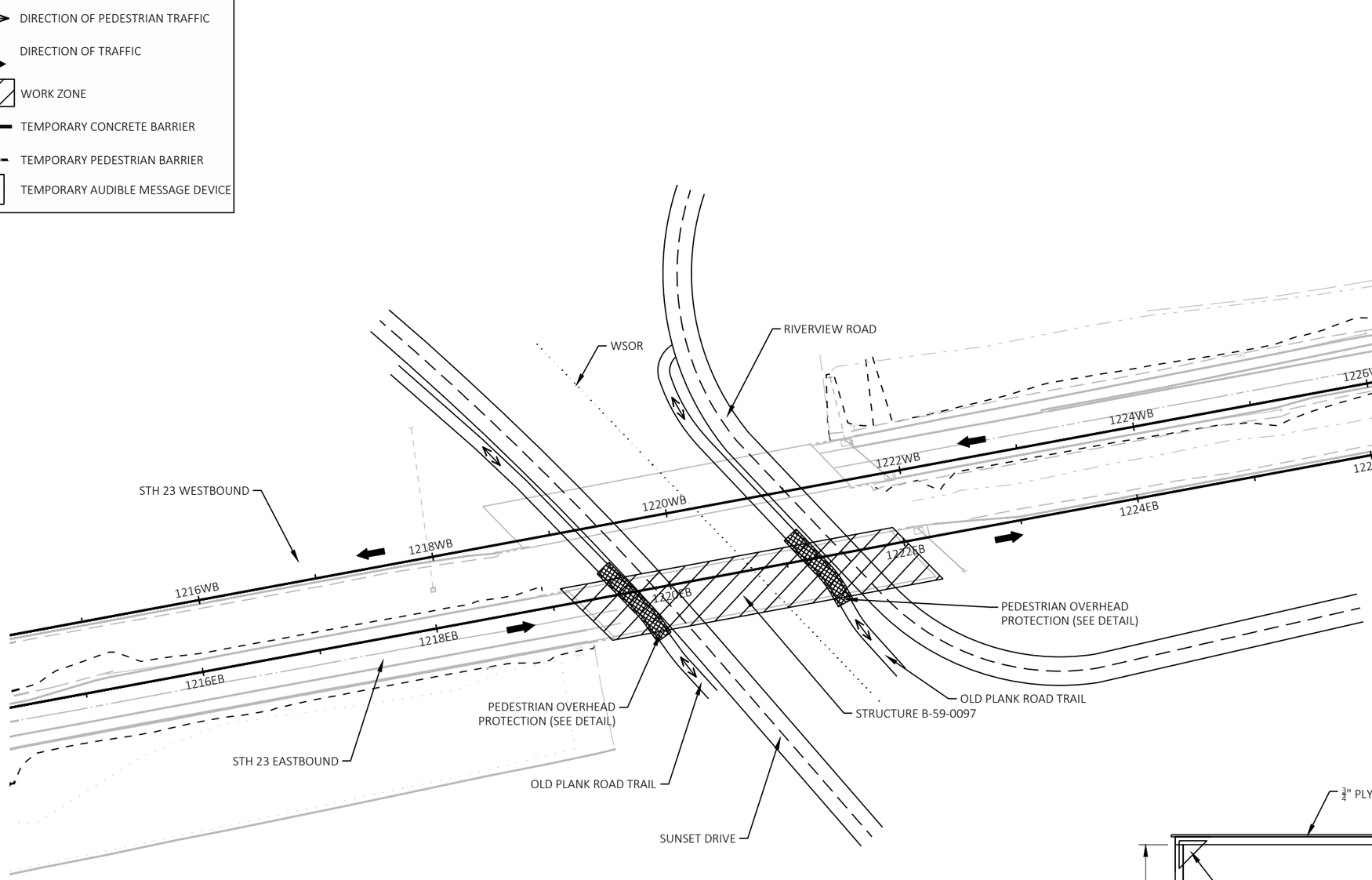
WISDOT/CADDS SHEET 42

2

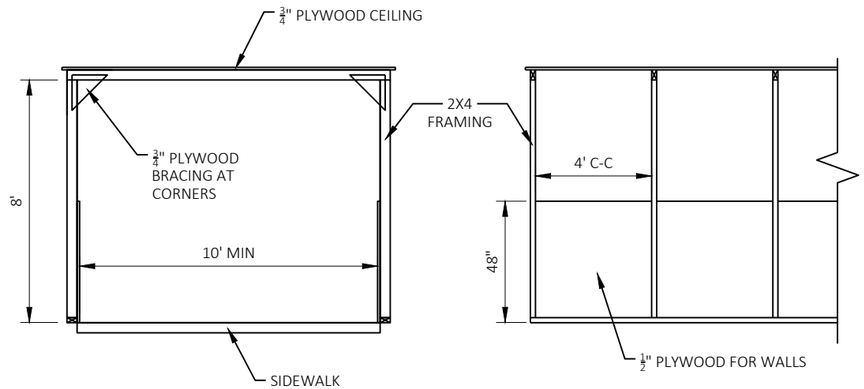
2

LEGEND

- DIRECTION OF PEDESTRIAN TRAFFIC
- DIRECTION OF TRAFFIC
- WORK ZONE
- TEMPORARY CONCRETE BARRIER
- TEMPORARY PEDESTRIAN BARRIER
- TEMPORARY AUDIBLE MESSAGE DEVICE



PEDESTRIAN OVERHEAD PROTECTION

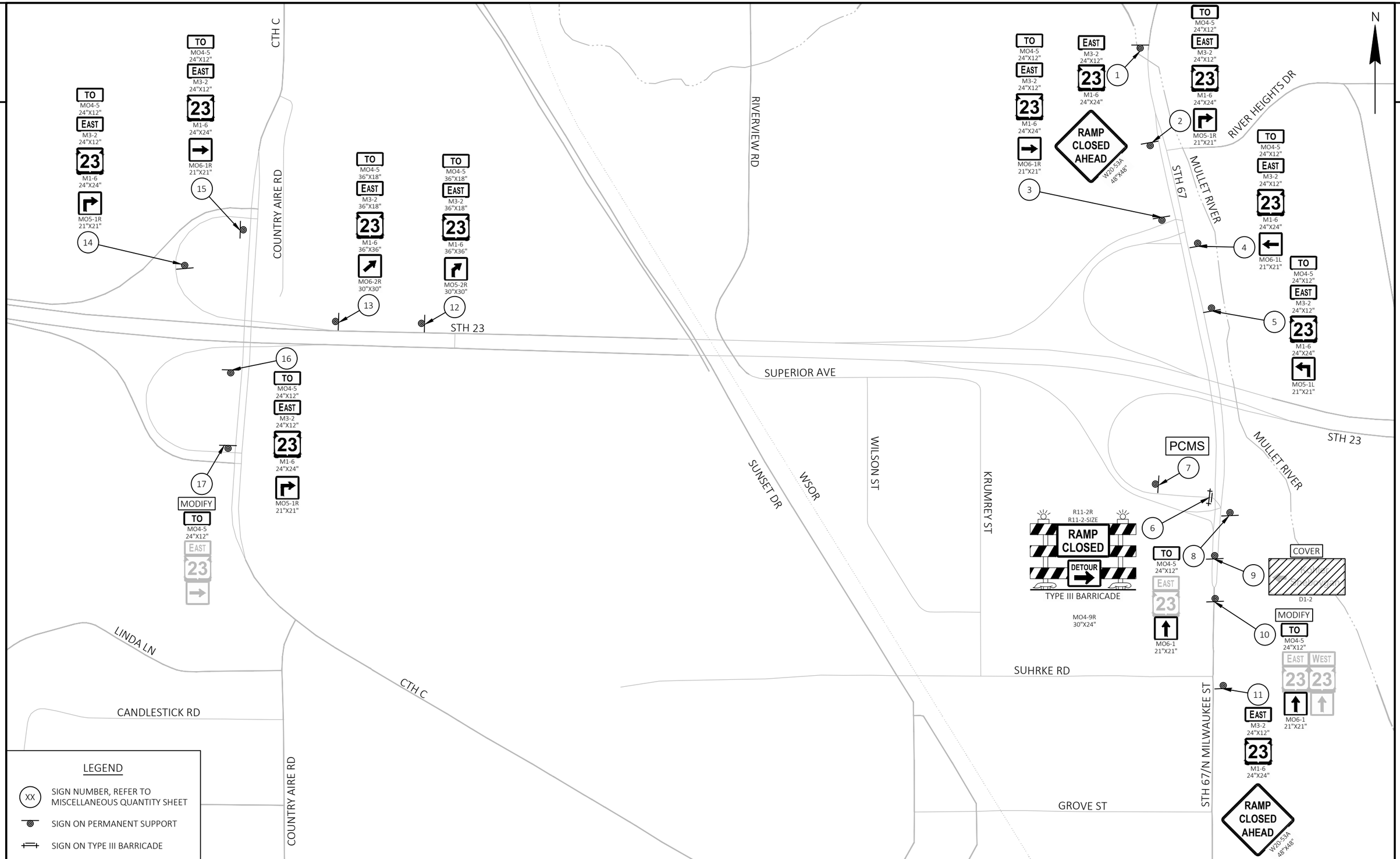


PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	TRAFFIC CONTROL DETAIL - STAGE 4	SHEET 162	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\026001-S1.DWG
LAYOUT NAME - 026016-s1

PLOT DATE : 9/23/2026 2:51 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42



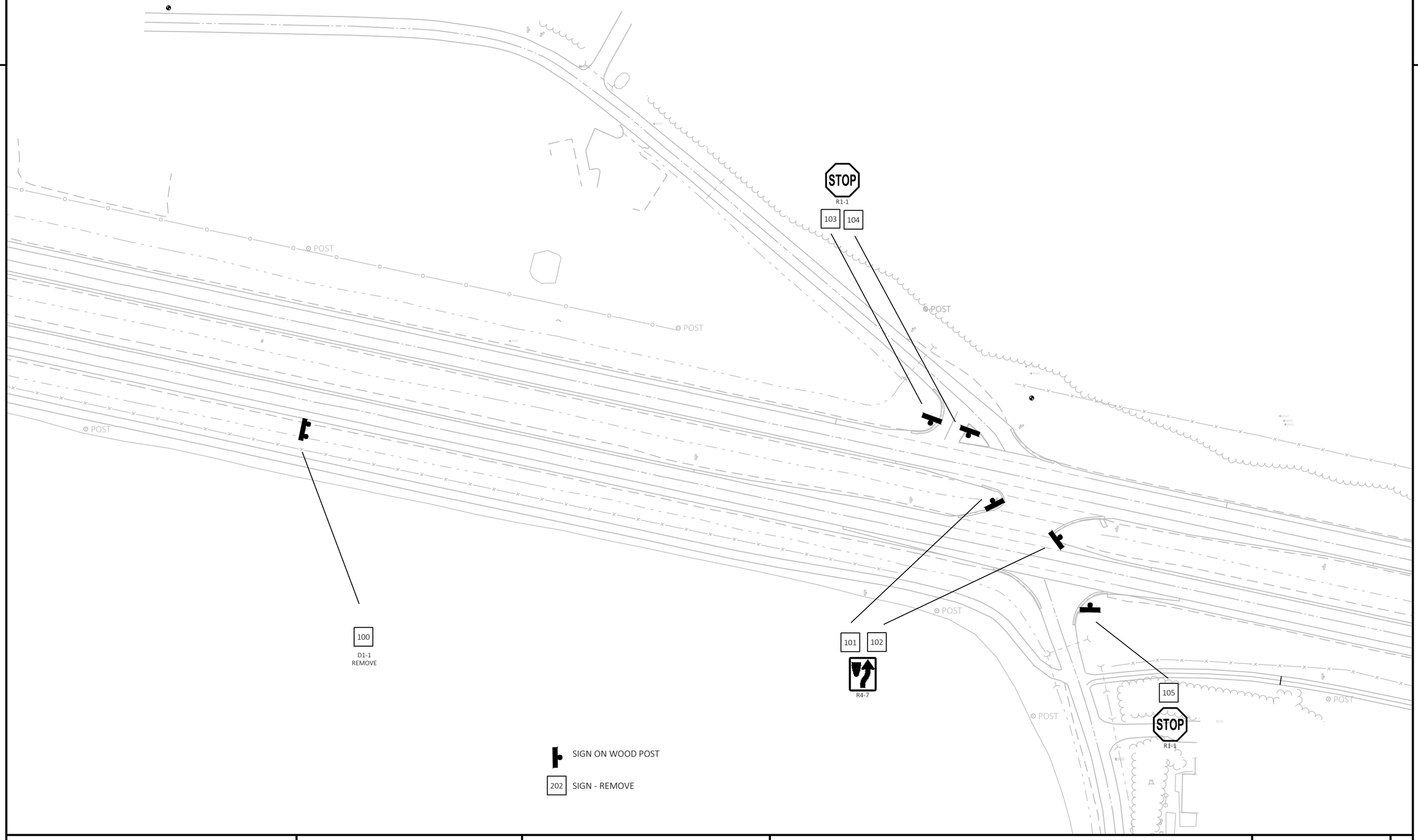
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	DETOUR SIGNING DETAILS	SHEET 163	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\027001-DT.DWG
LAYOUT NAME - 027001-dt

PLOT DATE : 9/23/2026 2:51 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:500 FT

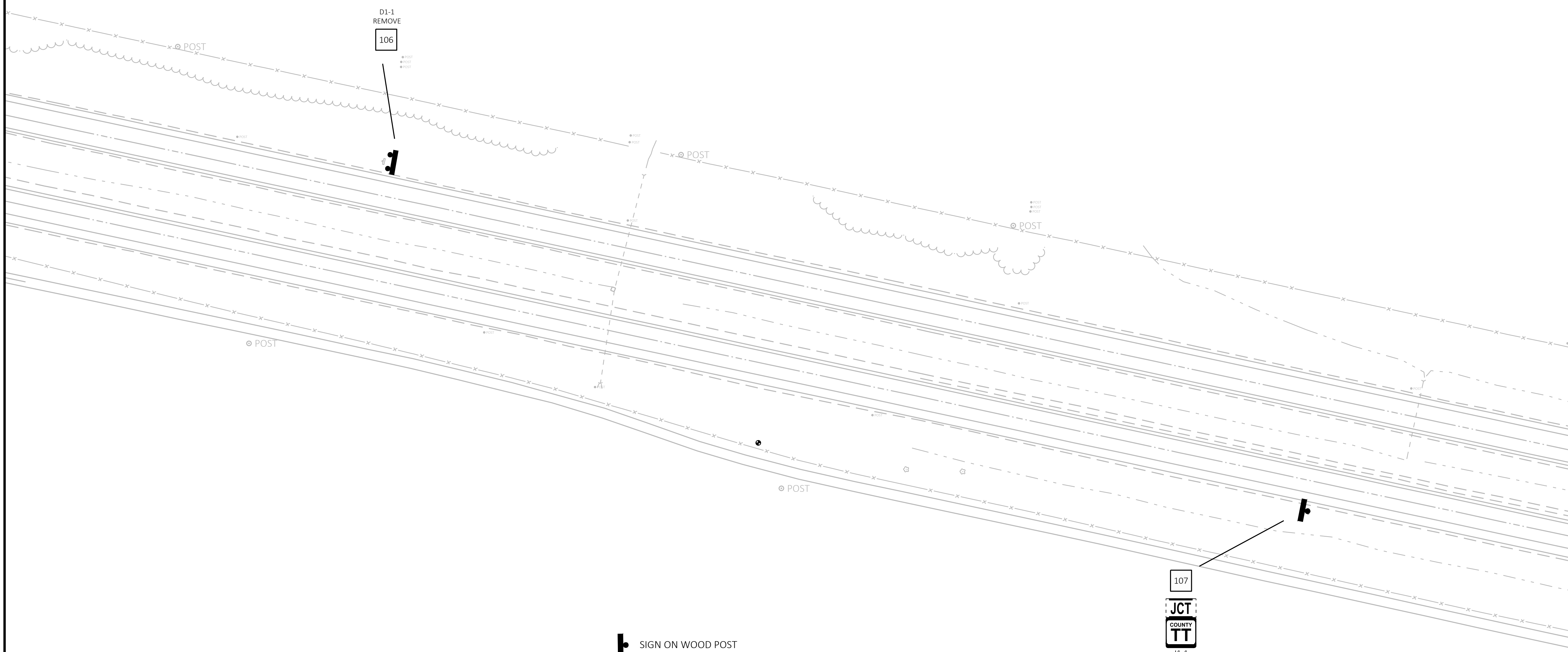
WISDOT/CADDS SHEET 42

2



PROJECT NO: 1440-41-72	HWY: STH 23	COUNTY: SHEBOYGAN	SIGN REMOVALS	SHEET 164	E

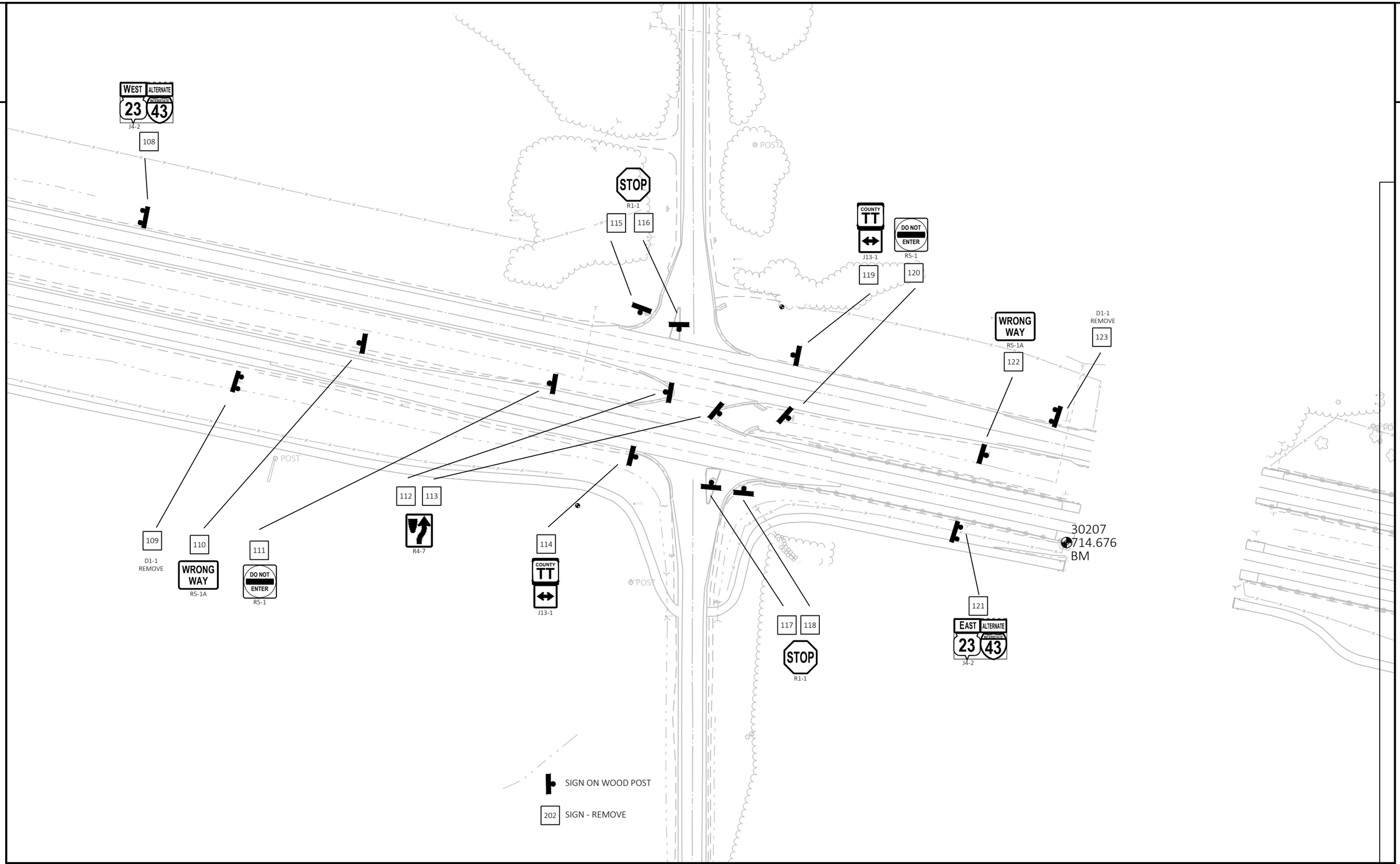
FILE NAME : C:\BOXDRV\BOX\DTSD\DTSD-NER\OPS\TRAFFIC\SIGNING\SIGNING - ERIC\PROJECTS\1440-41-71 STH 23 RCUT\14404171_SIGNREMOVALS.DWG
LAYOUT NAME - 14404172_1 (2)
PLOT DATE : 5/21/2026 2:00 PM
PLOT BY : SIKORSKI, ERIC T
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42



SIGN ON WOOD POST

202 SIGN - REMOVE

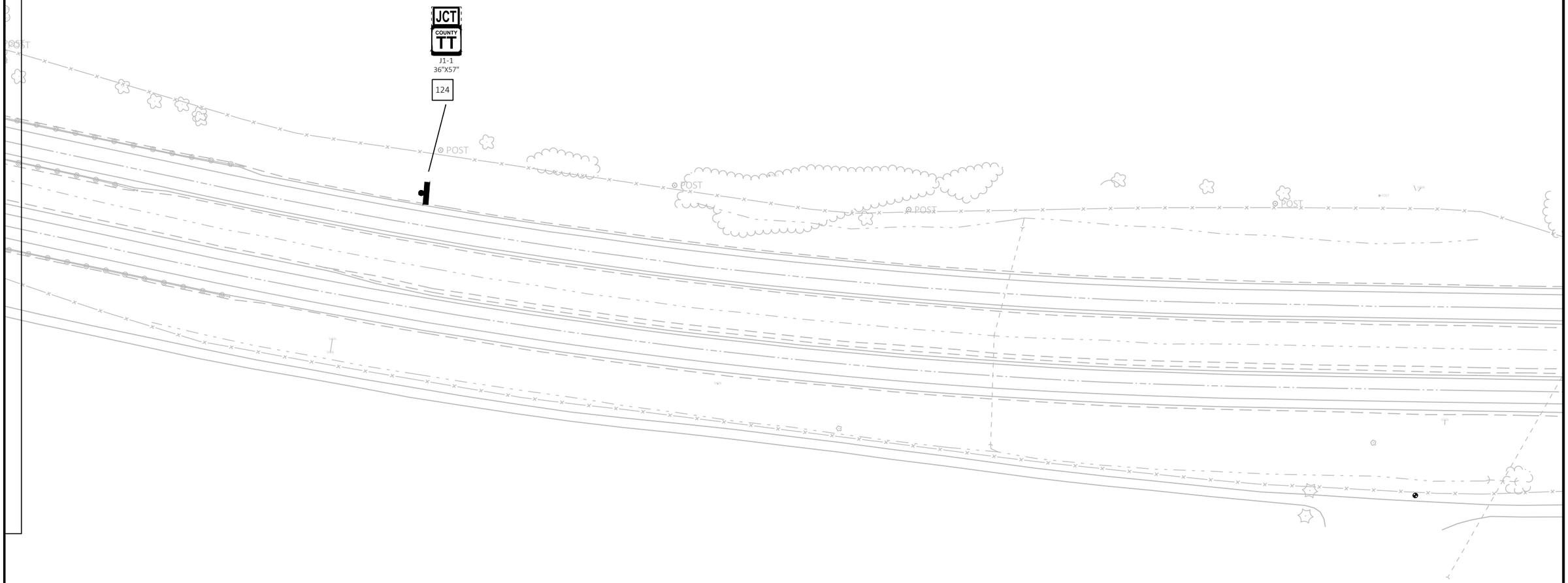
PROJECT NO: 1440-41-72	HWY: STH 23	COUNTY: SHEBOYGAN	SIGN REMOVALS	SHEET 165	E



PROJECT NO: 1440-41-72	HWY: STH 23	COUNTY: SHEBOYGAN	SIGN REMOVALS	SHEET 166	E

FILE NAME : C:\BOXDRV\BOX\DTSD\DTSD-NER\OPS\TRAFFIC\SIGNING\SIGNING - ERIC\PROJECTS\1440-41-71 STH 23 RCUT\14404171_SIGNREMOVALS.DWG
LAYOUT NAME - 14404172_1 (4)
PLOT DATE : 5/21/2026 2:00 PM
PLOT BY : SIKORSKI, ERIC T
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

2



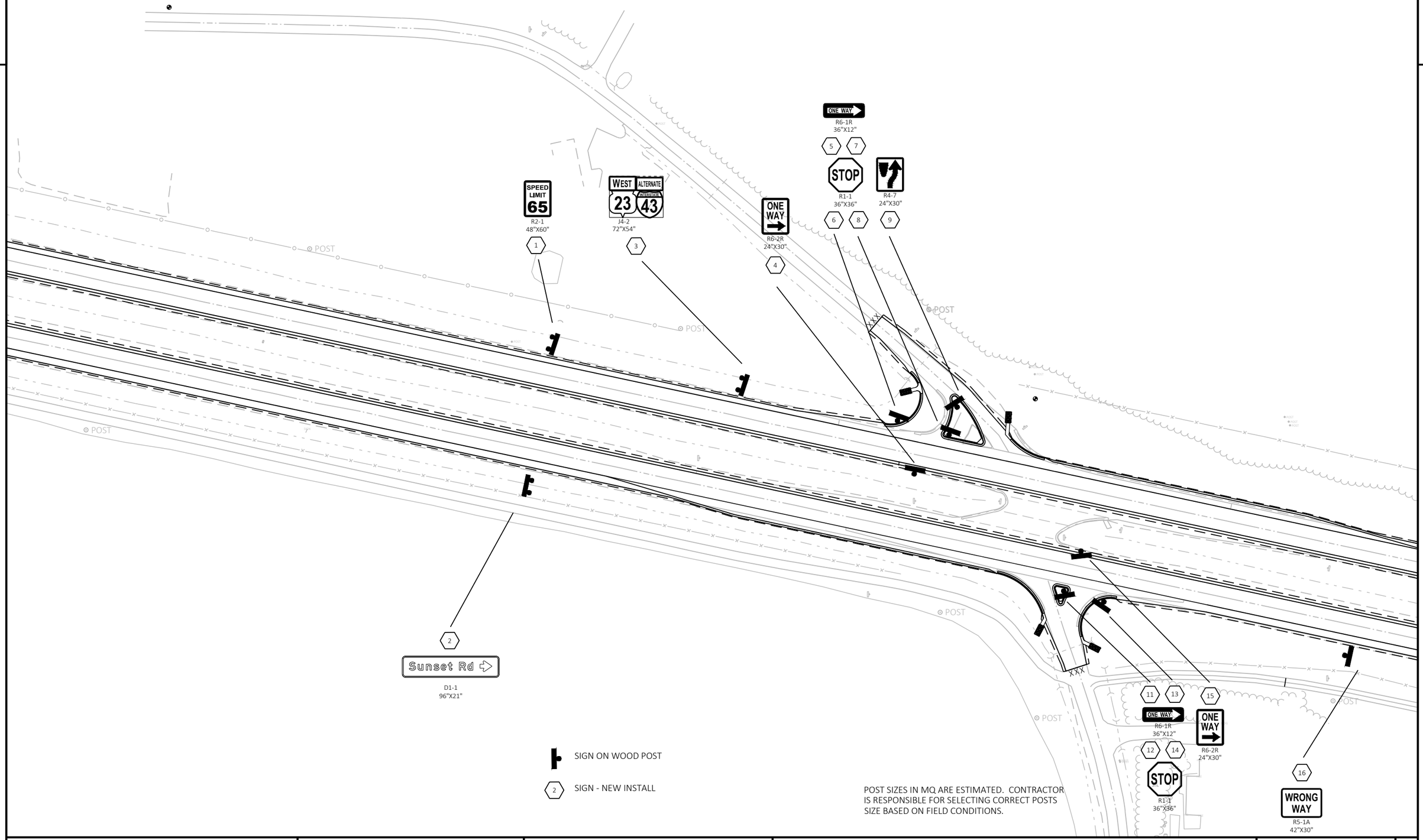
SIGN ON WOOD POST

202 SIGN - REMOVE

PROJECT NO: 1440-41-72	HWY: STH 23	COUNTY: SHEBOYGAN	SIGN REMOVALS	SHEET 167	E

FILE NAME : C:\BOXDRV\BOX\DTSD\DTSD-NER\OPS\TRAFFIC\SIGNING\SIGNING - ERIC\PROJECTS\1440-41-71 STH 23 RCUT\14404171_SIGNREMOVALS.DWG
LAYOUT NAME - 14404172_1 (5)
PLOT DATE : 5/21/2026 2:00 PM
PLOT BY : SIKORSKI, ERIC T
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

2



SIGN ON WOOD POST

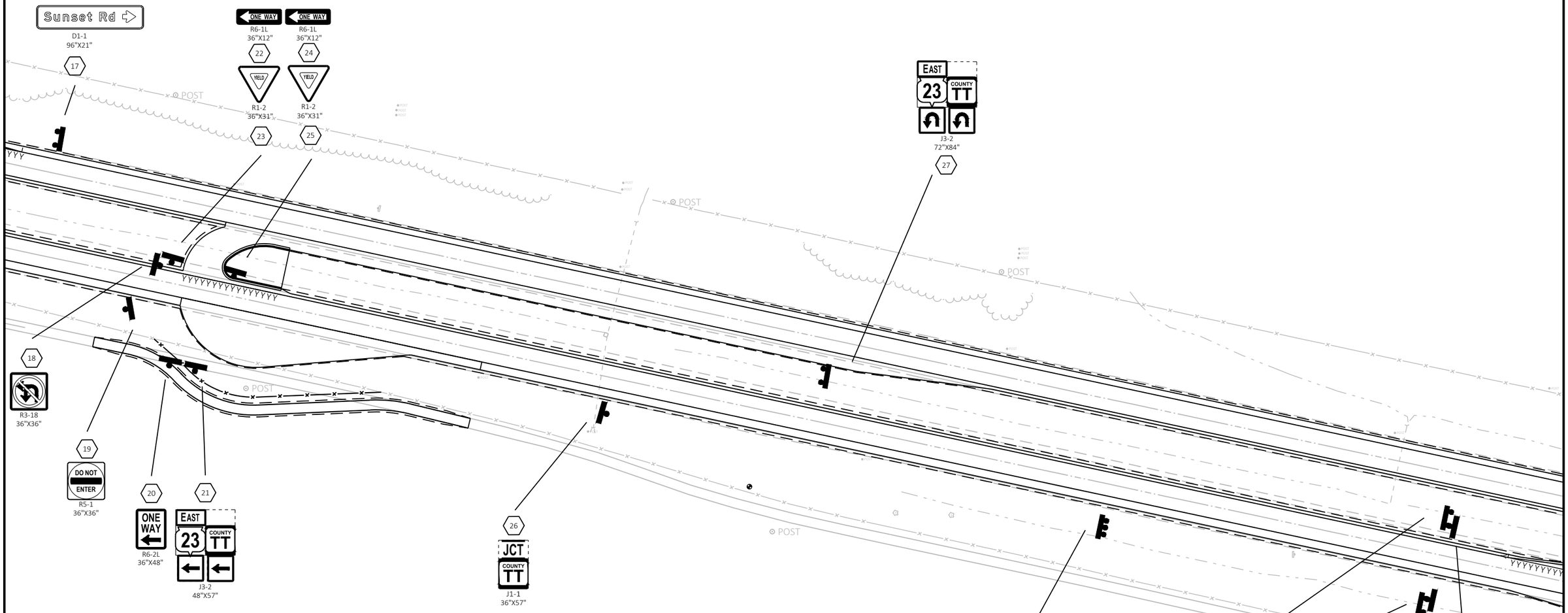
2 SIGN - NEW INSTALL

POST SIZES IN MQ ARE ESTIMATED. CONTRACTOR IS RESPONSIBLE FOR SELECTING CORRECT POSTS SIZE BASED ON FIELD CONDITIONS.

PROJECT NO: 1440-41-72	HWY: STH 23	COUNTY: SHEBOYGAN	PERMANENT SIGNING - CTH TT INTERSECTION	SHEET 168	E

FILE NAME : C:\BOXDRV\BOX\DTSD\DTSD-NER\OPS\TRAFFIC\SIGNING\SIGNING - ERIC\PROJECTS\1440-41-71 STH 23 RCUT\14404171_SIGNPLANS CTH TT APPROACHES.DWG
LAYOUT NAME - 14404172_1 (2)
PLOT DATE : 7/30/2026 1:34 PM
PLOT BY : SIKORSKI, ERIC T
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

2



POST SIZES IN MQ ARE ESTIMATED. CONTRACTOR IS RESPONSIBLE FOR SELECTING CORRECT POSTS SIZE BASED ON FIELD CONDITIONS.

PROJECT NO: 1440-41-72	HWY: STH 23	COUNTY: SHEBOYGAN	PERMANENT SIGNING - CTH TT INTERSECTION	SHEET 169	E

2

EAST 23 COUNTY TT WEST 23 — USE LEFT LANE — USE LEFT LANE
J2-3
108"X84"
32 33

ONE WAY
R6-1R
36"X12"
40

DO NOT ENTER
R5-1
36"X36"
41

23 COUNTY TT
J13-2
48"X45"
42

ONE WAY
R6-1R
36"X12"
43 45

STOP
R1-1
36"X36"
44 46

ONE WAY
R6-1L
36"X12"
54

R4-7
24"X30"
53

YIELD
R1-2
36"X31"
55

DO NOT ENTER
R5-1
36"X36"
57

ONE WAY
R6-1L
36"X12"
59

YIELD
R1-2
36"X31"
60

W12-1D
24"X24"
61

WRONG WAY
R5-1A
42"X30"
64A 64

23 COUNTY TT
J13-2
72"X66"
65

COUNTY TT 23
J13-2
72"X66"
66

POST

W12-1D
24"X24"
34

DO NOT ENTER
R5-1
36"X36"
35

ONE WAY
R6-1L
36"X12"
36 38

YIELD
R1-2
36"X31"
37 39

R4-7
24"X30"
47

ONE WAY
R6-1R
36"X12"
48 50

STOP
R1-1
36"X36"
49 51

23 COUNTY TT
J13-2
48"X45"
52

DO NOT ENTER
R5-1
36"X36"
56

ONE WAY
R6-1R
36"X12"
58

30207
714.676
BM

WEST 23 COUNTY TT EAST 23 — USE LEFT LANE — USE LEFT LANE
J2-3
108"X84"
62 63

SIGN ON WOOD POST

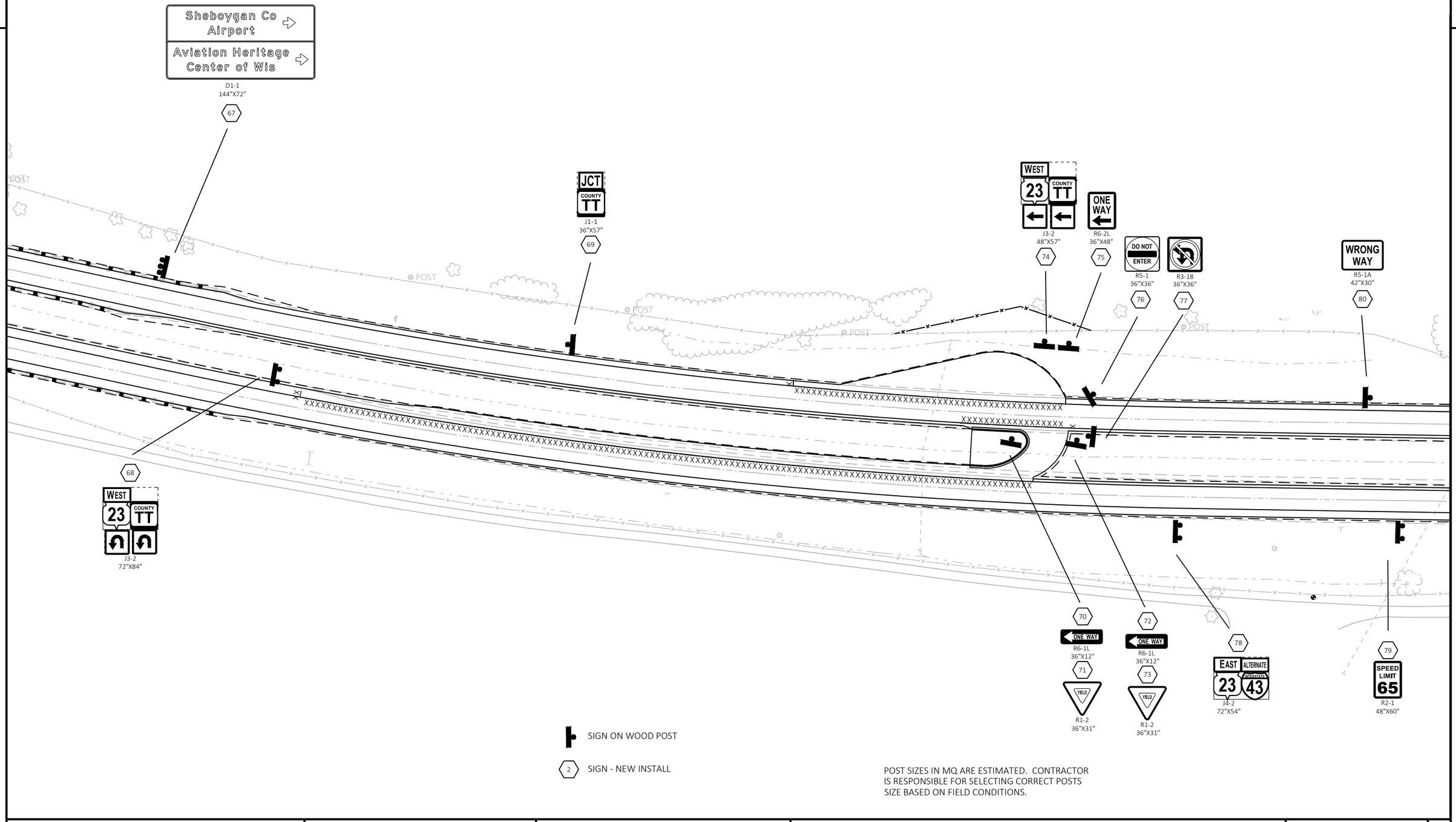
2 SIGN - NEW INSTALL

POST SIZES IN MQ ARE ESTIMATED. CONTRACTOR IS RESPONSIBLE FOR SELECTING CORRECT POSTS SIZE BASED ON FIELD CONDITIONS.

PROJECT NO: 1440-41-72	HWY: STH 23	COUNTY: SHEBOYGAN	PERMANENT SIGNING - CTH TT INTERSECTION	SHEET 170	E

FILE NAME : C:\BOXDRV\BOX\DTSD\DTSD-NER\OPS\TRAFFIC\SIGNING\SIGNING - ERIC\PROJECTS\1440-41-71 STH 23 RCUT\14404171_SIGNPLANS.DWG
LAYOUT NAME - 14404172_1 (4)
PLOT DATE : 5/21/2026 2:36 PM PLOT BY : SIKORSKI, ERIC T PLOT NAME : PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

2



SIGN ON WOOD POST

2 SIGN - NEW INSTALL

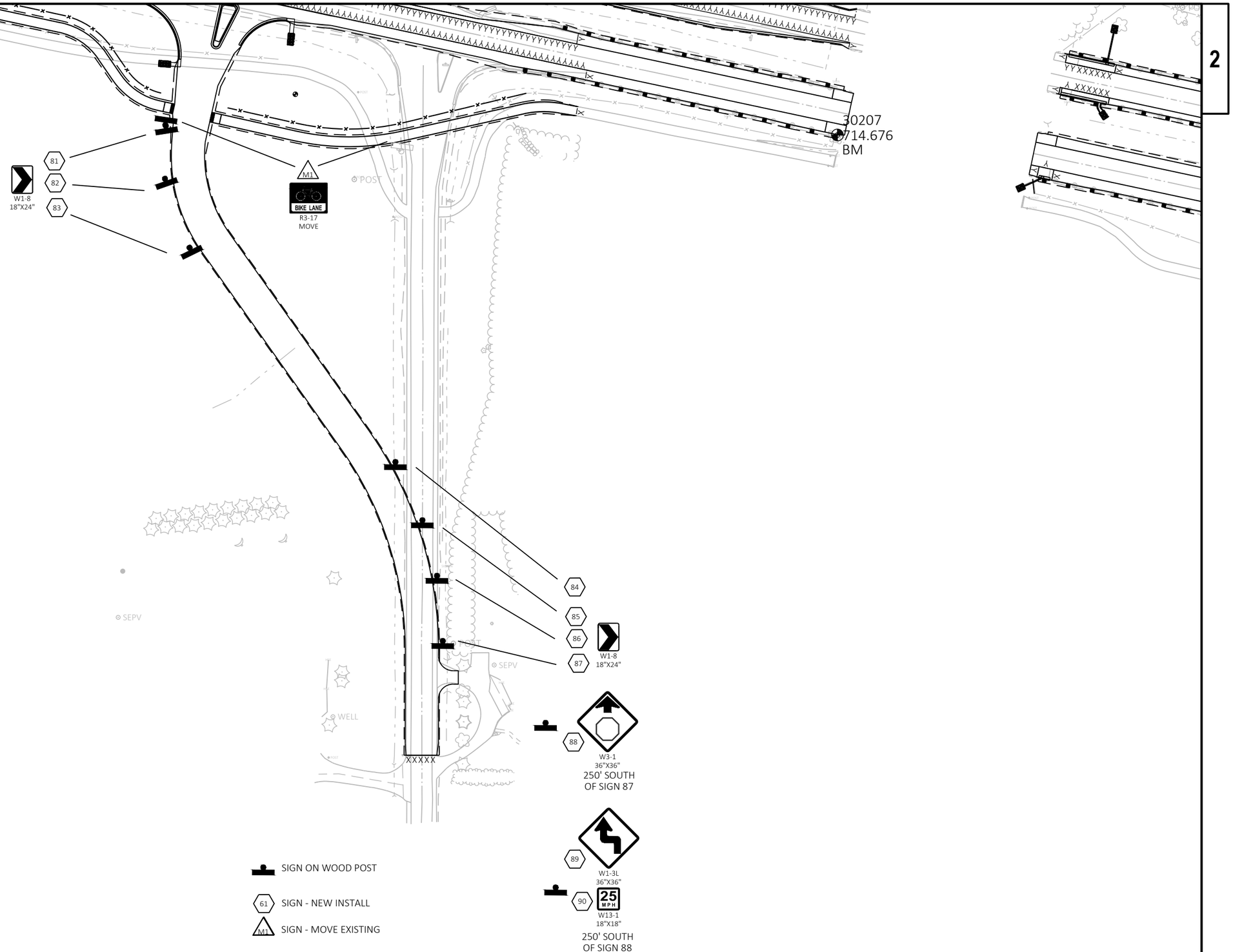
POST SIZES IN MQ ARE ESTIMATED. CONTRACTOR IS RESPONSIBLE FOR SELECTING CORRECT POSTS SIZE BASED ON FIELD CONDITIONS.

PROJECT NO: 1440-41-72	HWY: STH 23	COUNTY: SHEBOYGAN	PERMANENT SIGNING - CTH TT INTERSECTION	SHEET 171	E

FILE NAME : C:\BOXDRV\BOX\DTSD\DTSD-NER\OPS\TRAFFIC\SIGNING\SIGNING - ERIC\PROJECTS\1440-41-71 STH 23 RCUT\14404171_SIGNPLANS CTH TT APPROACHES.DWG
LAYOUT NAME - 14404172_1 (5)

PLOT DATE : 7/30/2026 1:37 PM PLOT BY : SIKORSKI, ERIC T PLOT NAME : PLOT SCALE : 1 IN:100 FT

2



POST SIZES IN MQ ARE ESTIMATED. CONTRACTOR IS RESPONSIBLE FOR SELECTING CORRECT POSTS SIZE BASED ON FIELD CONDITIONS.

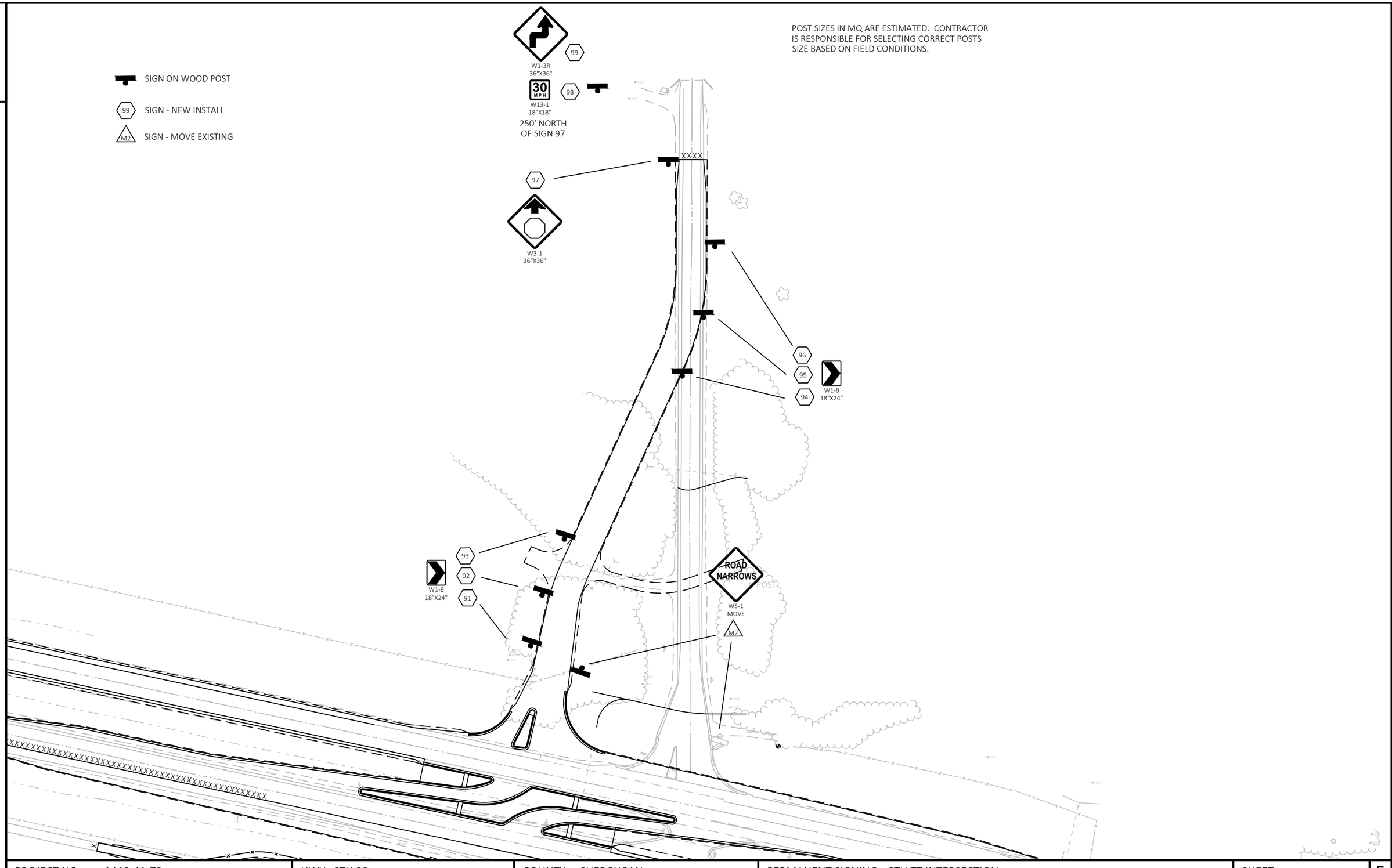
PROJECT NO: 1440-41-72	HWY: STH 23	COUNTY: SHEBOYGAN	PERMANENT SIGNING - CTH TT INTERSECTION	SHEET 172	E

SIGN ON WOOD POST

99 SIGN - NEW INSTALL

M2 SIGN - MOVE EXISTING

POST SIZES IN MQ ARE ESTIMATED. CONTRACTOR IS RESPONSIBLE FOR SELECTING CORRECT POSTS SIZE BASED ON FIELD CONDITIONS.



2

PROJECT NO: 1440-41-72	HWY: STH 23	COUNTY: SHEBOYGAN	PERMANENT SIGNING - CTH TT INTERSECTION	SHEET 173	E

2

BP: 1114+83.37
Y = 182079.891
X = 134756.461

STH 23 WESTBOUND
CONSTRUCTION R/L

1120WB
1120EB

1130WB
1130EB

1140WB
1140EB

S81°07'34"E

1150WB
1150EB

1160WB
1160EB

1170WB
1170EB

1180WB
1180EB

S81°07'34"E

STH 23 EASTBOUND
CONSTRUCTION R/L

BP: 1114+83.37
Y = 182020.609
X = 134747.205

PI STA = 1187+93.29 WB
Y = 180952.267
X = 141978.885
DELTA = 7°17'18" LT
D = 0°30'01"
T = 729.23'
L = 1456.49'
R = 11450.00'
PC STA = 1180+64.06 WB
Y = 181064.758
X = 141258.386
PT STA = 1195+20.55 WB
Y = 180932.090
X = 142707.834
DB = S81°07'34"E
DA = S88°24'52"E

PC: 1180+64.06

PI STA = 1187+97.11 EB
Y = 180892.396
X = 141973.405
DELTA = 7°17'18" LT
D = 0°29'52"
T = 733.05'
L = 1464.12'
R = 11510.00'
PC STA = 1180+64.06 EB
Y = 181005.476
X = 141249.130
PT STA = 1195+28.18 EB
Y = 180872.113
X = 142706.174
DB = S81°07'34"E
DA = S88°24'52"E

PC: 1180+64.06

MATCH LINE STA 1190+00EB

N

PI STA = 1242+38.99 WB
Y = 180801.531
X = 147424.469
DELTA = 13°29'20" RT
D = 1°26'29"
T = 470.08'
L = 935.81'
R = 3975.00'
PC STA = 1237+68.92 WB
Y = 180814.538
X = 146954.571
PT STA = 1247+04.73 WB
Y = 180679.276
X = 147878.371
DB = S88°24'52"E
DA = S74°55'32"E

PC: 1237+68.92

PT: 1247+04.73

PC: 1253+39.37

MATCH LINE STA 1190+00EB

PT: 1195+20.55

PT: 1195+28.18

STH 23 WESTBOUND
CONSTRUCTION R/L

STH 23 EASTBOUND
CONSTRUCTION R/L

1200WB
1200EB

1210WB
1210EB

1220WB
1220EB

1230WB
1230EB

1240WB
1240EB

1250WB
1250EB

S88°24'52"E

S88°24'52"E

S74°55'32"E

S74°55'32"E

BP: 0+00.00
Y = 181818.351
X = 144515.574

PI: 2+12.45
Y = 181638.389
X = 144628.478

PI: 4+58.19
Y = 181427.373
X = 144754.427

PI: 6+04.13
Y = 181303.741
X = 144831.969

PI: 8+46.31
Y = 181105.777
X = 144971.466

PI: 10+55.91
Y = 180931.631
X = 145088.107

S32°06'12"E

S30°49'54"E

S32°05'46"E

S35°10'15"E

S33°48'49"E

105U

S31°00'32"E

S28°50'39"E

PI: 12+79.07
Y = 180740.361
X = 145203.074

PI: 14+98.20
Y = 180548.411
X = 145308.791

PI: 17+62.12
Y = 180318.785
X = 145438.882

PI: 19+15.89
Y = 180184.959
X = 145514.528

S29°31'59"E

S29°28'39"E

205U

SUNSET DR
CONSTRUCTION R/L

S31°47'32"E

EP: 30+53.58
Y = 179217.925
X = 146113.936

PC: 1237+76.55

PT: 1246+98.23

PC: 1253+32.87

MATCH LINE STA 1260+00EB

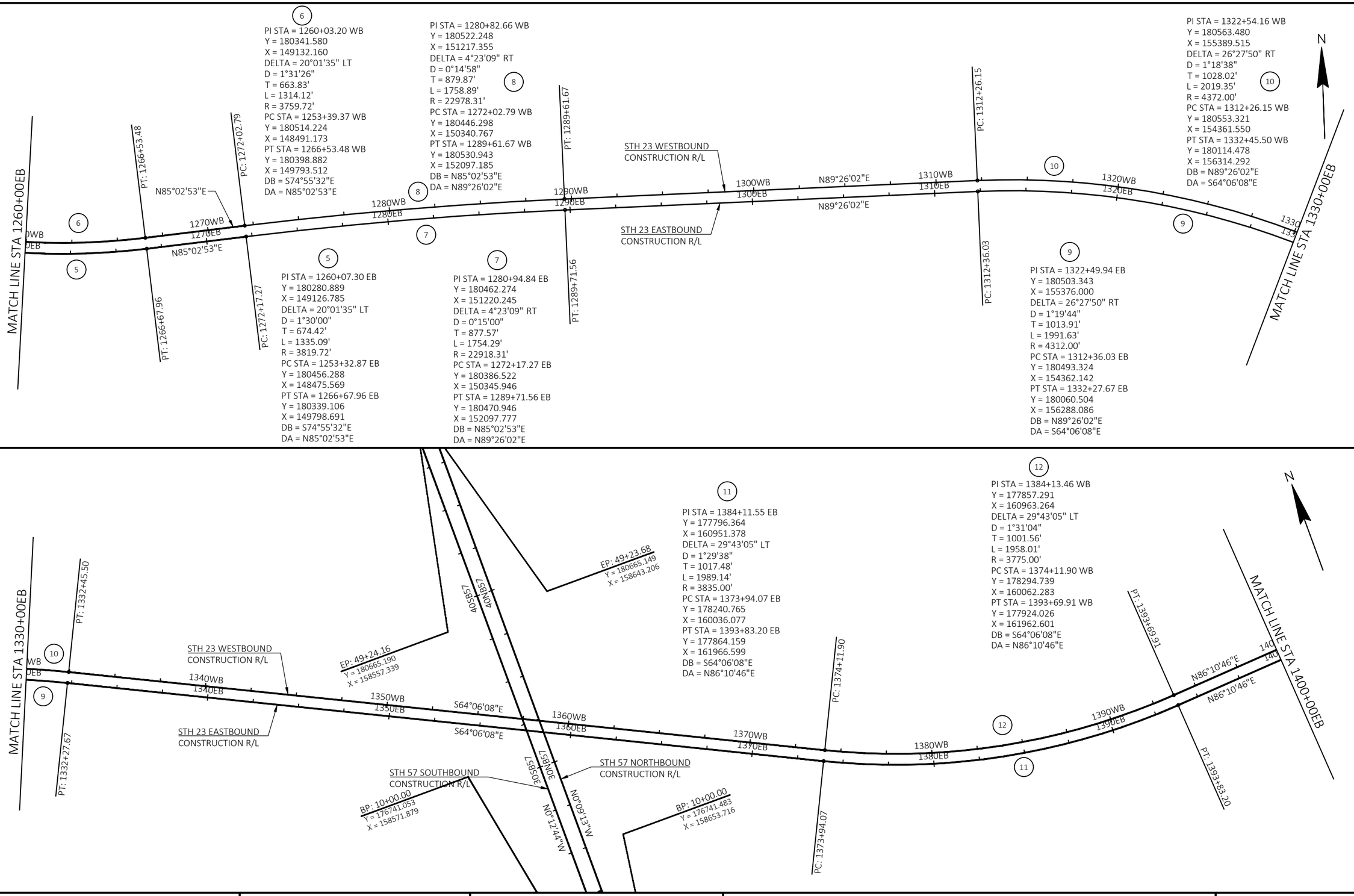
PI STA = 1242+39.53 EB
Y = 180741.750
X = 147415.716
DELTA = 13°29'20" RT
D = 1°27'49"
T = 462.98'
L = 921.68'
R = 3915.00'
PC STA = 1237+76.55 EB
Y = 180754.561
X = 146952.911
PT STA = 1246+98.23 EB
Y = 180621.341
X = 147862.767
DB = S88°24'52"E
DA = S74°55'32"E

PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	ALIGNMENT DIAGRAM	SHEET 174	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\027201-AD.DWG
LAYOUT NAME - 027201-ad

PLOT DATE : 9/23/2026 2:51 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:500 FT

2



6
PI STA = 1260+03.20 WB
Y = 180341.580
X = 149132.160
DELTA = 20°01'35" LT
D = 1°31'26"
T = 663.83'
L = 1314.12'
R = 3759.72'
PC STA = 1253+39.37 WB
Y = 180514.224
X = 148491.173
PT STA = 1266+53.48 WB
Y = 180398.882
X = 149793.512
DB = S74°55'32"E
DA = N85°02'53"E

5
PI STA = 1260+07.30 EB
Y = 180280.889
X = 149126.785
DELTA = 20°01'35" LT
D = 1°30'00"
T = 674.42'
L = 1335.09'
R = 3819.72'
PC STA = 1253+32.87 EB
Y = 180456.288
X = 148475.569
PT STA = 1266+67.96 EB
Y = 180339.106
X = 149798.691
DB = S74°55'32"E
DA = N85°02'53"E

8
PI STA = 1280+82.66 WB
Y = 180522.248
X = 151217.355
DELTA = 4°23'09" RT
D = 0°14'58"
T = 879.87'
L = 1758.89'
R = 22978.31'
PC STA = 1272+02.79 WB
Y = 180446.298
X = 150340.767
PT STA = 1289+61.67 WB
Y = 180530.943
X = 152097.185
DB = N85°02'53"E
DA = N89°26'02"E

7
PI STA = 1280+94.84 EB
Y = 180462.274
X = 151220.245
DELTA = 4°23'09" RT
D = 0°15'00"
T = 877.57'
L = 1754.29'
R = 22918.31'
PC STA = 1272+17.27 EB
Y = 180386.522
X = 150345.946
PT STA = 1289+71.56 EB
Y = 180470.946
X = 152097.777
DB = N85°02'53"E
DA = N89°26'02"E

10
PI STA = 1322+54.16 WB
Y = 180563.480
X = 155389.515
DELTA = 26°27'50" RT
D = 1°18'38"
T = 1028.02'
L = 2019.35'
R = 4372.00'
PC STA = 1312+26.15 WB
Y = 180553.321
X = 154361.550
PT STA = 1332+45.50 WB
Y = 180114.478
X = 156314.292
DB = N89°26'02"E
DA = S64°06'08"E

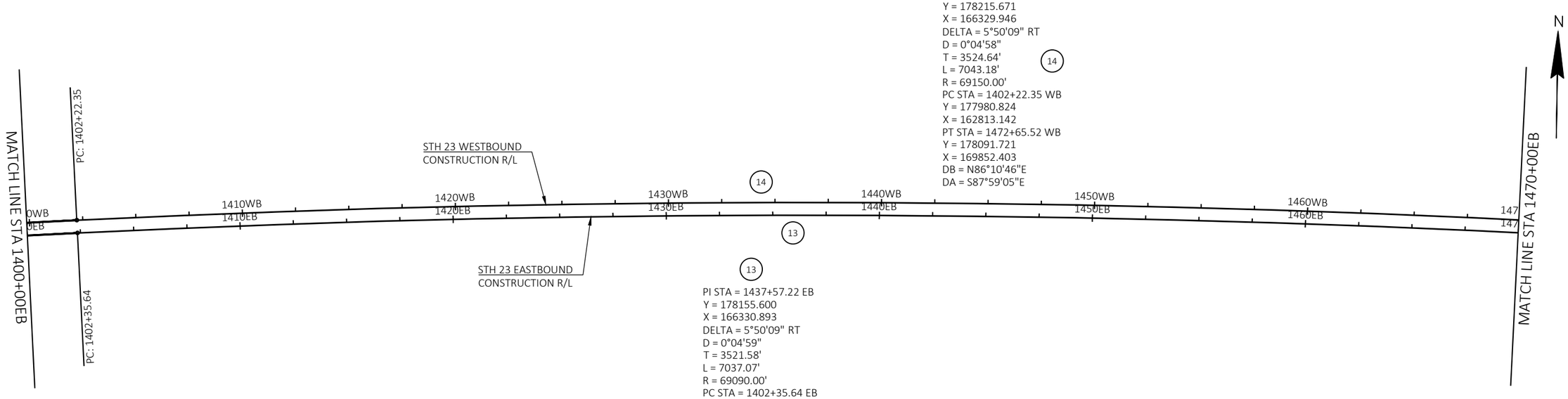
9
PI STA = 1322+49.94 EB
Y = 180503.343
X = 155376.000
DELTA = 26°27'50" RT
D = 1°19'44"
T = 1013.91'
L = 1991.63'
R = 4312.00'
PC STA = 1312+36.03 EB
Y = 180493.324
X = 154362.142
PT STA = 1332+27.67 EB
Y = 180060.504
X = 156288.086
DB = N89°26'02"E
DA = S64°06'08"E

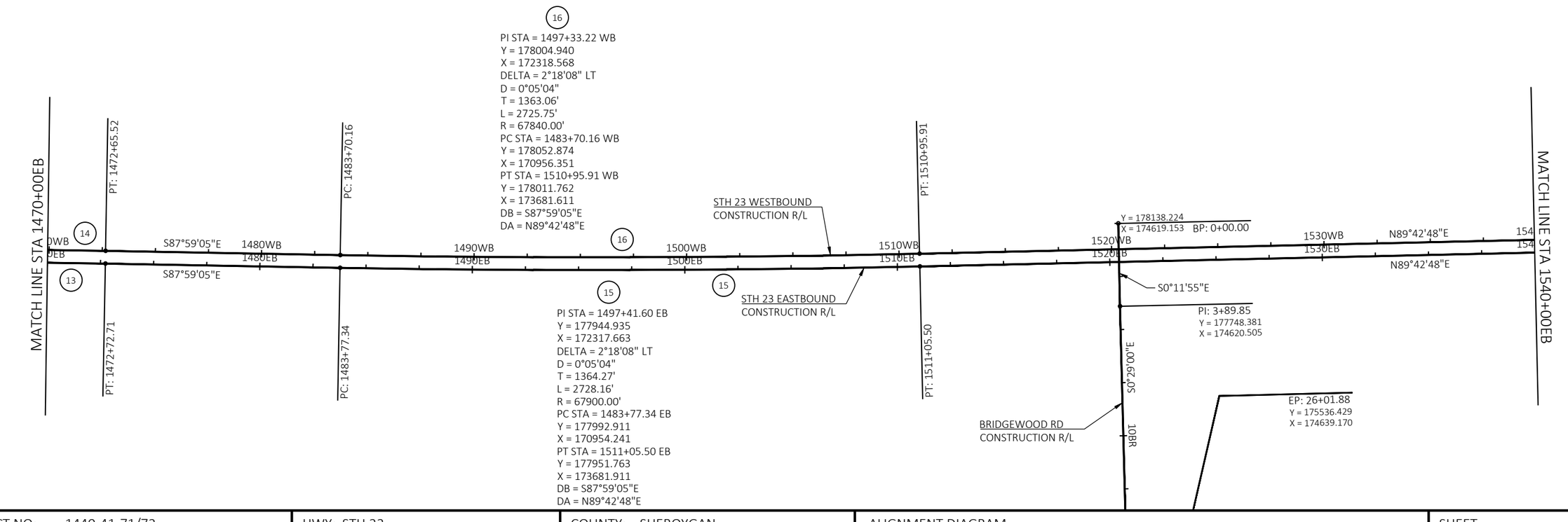
11
PI STA = 1384+11.55 EB
Y = 177796.364
X = 160951.378
DELTA = 29°43'05" LT
D = 1°29'38"
T = 1017.48'
L = 1989.14'
R = 3835.00'
PC STA = 1373+94.07 EB
Y = 178240.765
X = 160036.077
PT STA = 1393+83.20 EB
Y = 177864.159
X = 161966.599
DB = S64°06'08"E
DA = N86°10'46"E

12
PI STA = 1384+13.46 WB
Y = 177857.291
X = 160963.264
DELTA = 29°43'05" LT
D = 1°31'04"
T = 1001.56'
L = 1958.01'
R = 3775.00'
PC STA = 1374+11.90 WB
Y = 178294.739
X = 160062.283
PT STA = 1393+69.91 WB
Y = 177924.026
X = 161962.601
DB = S64°06'08"E
DA = N86°10'46"E

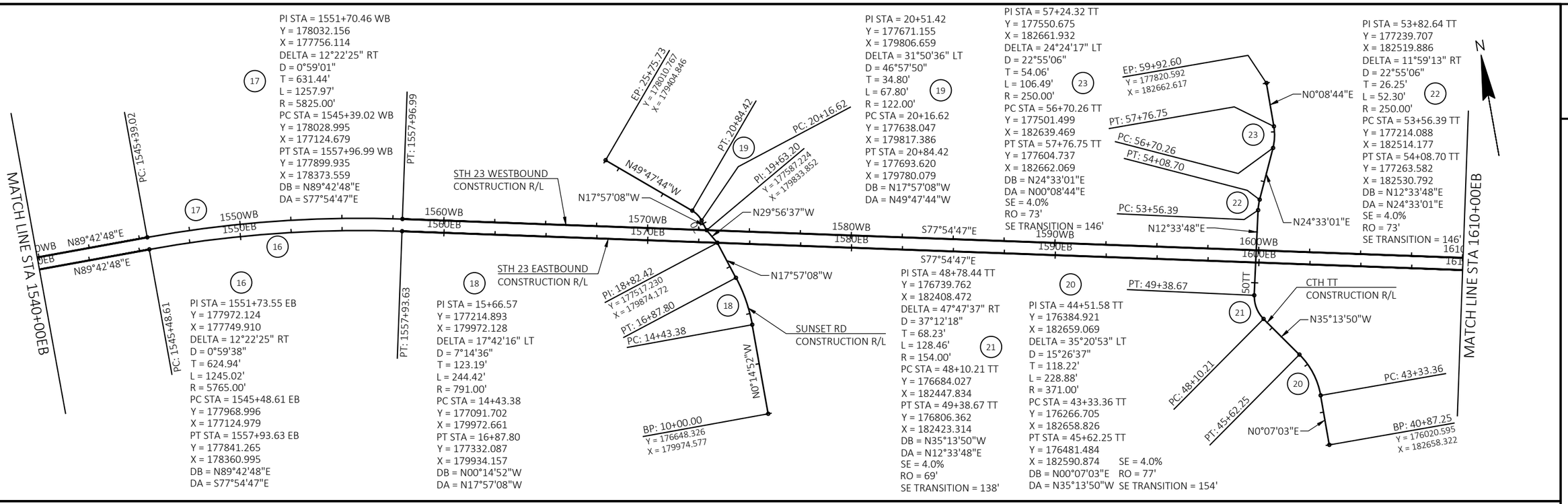
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	ALIGNMENT DIAGRAM	SHEET 175	E

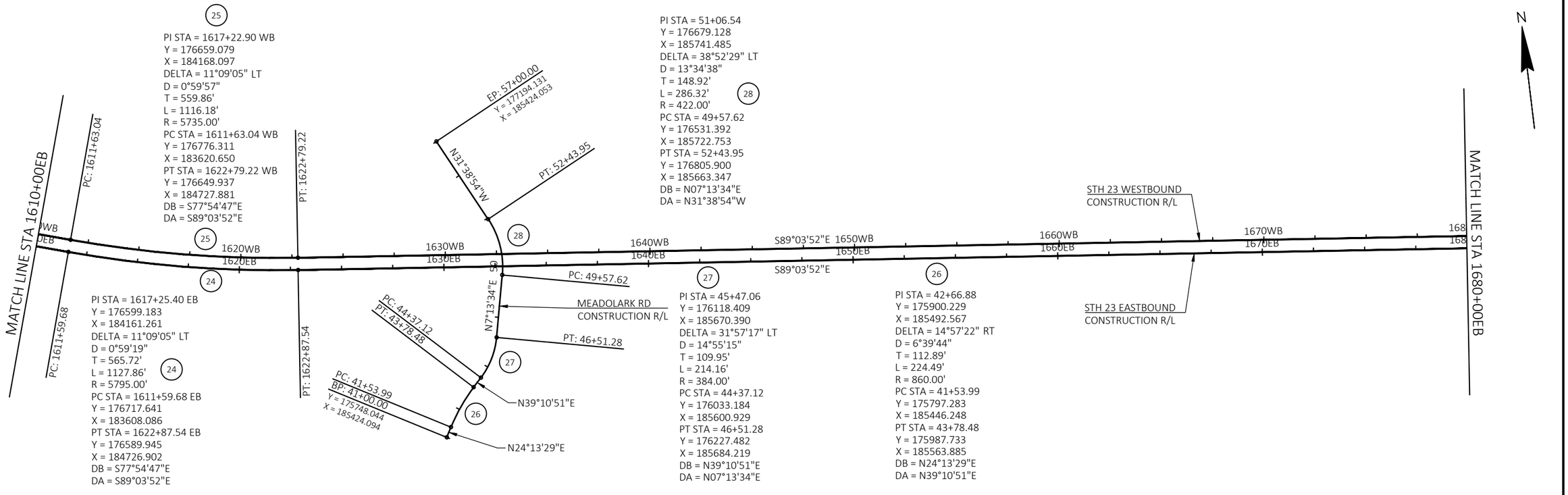
2





PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	ALIGNMENT DIAGRAM	SHEET 176	E

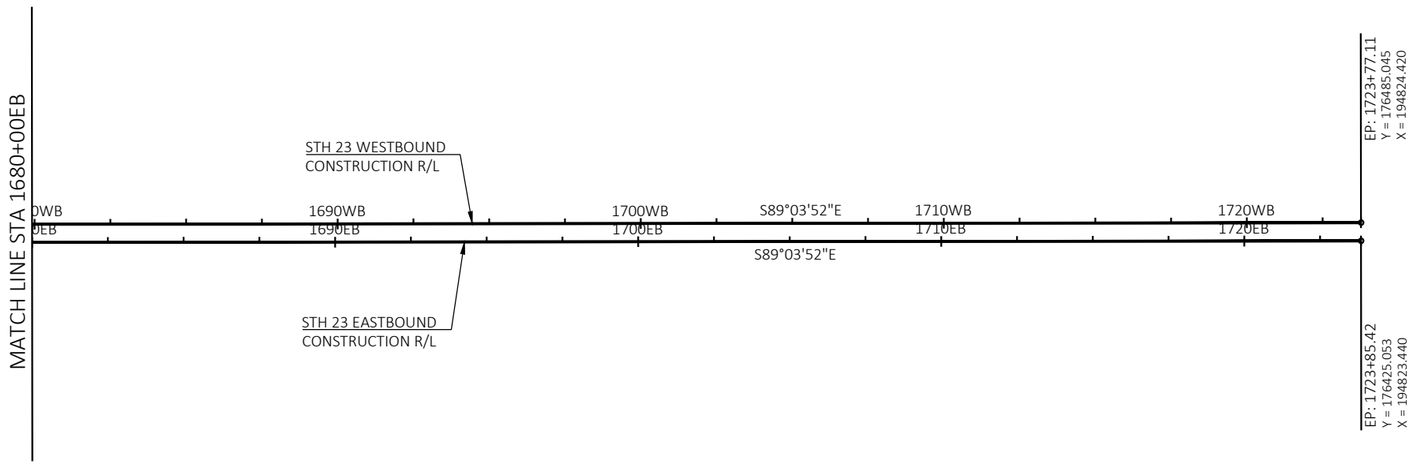




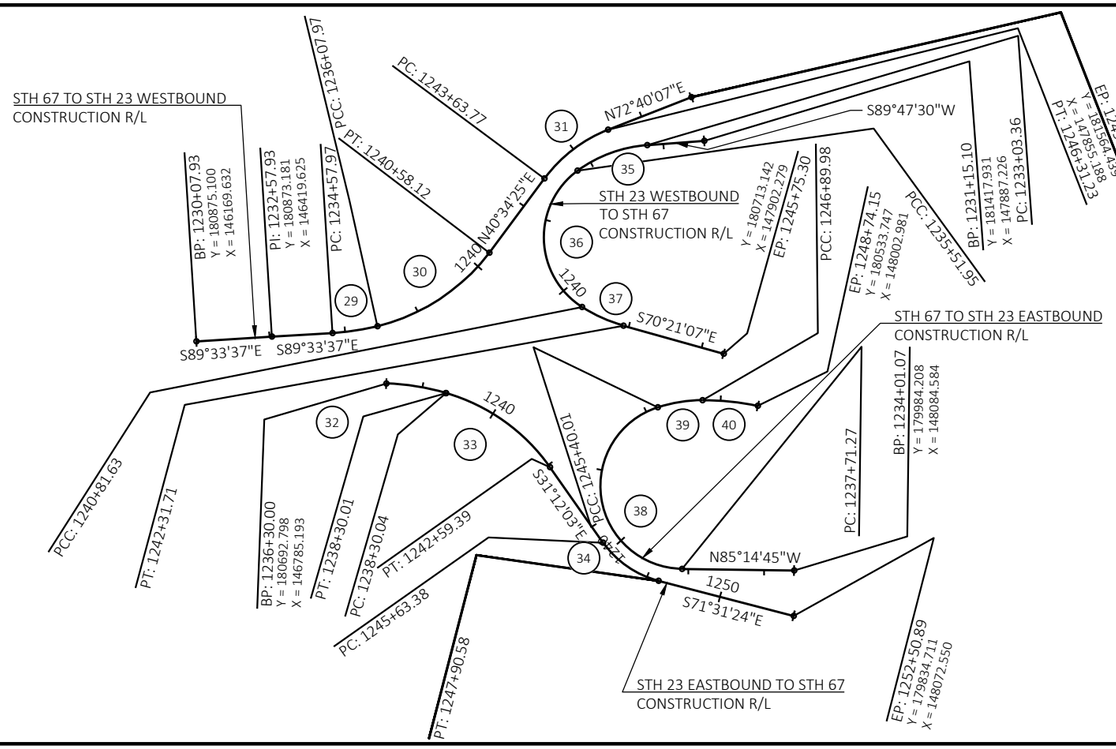
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	ALIGNMENT DIAGRAM	SHEET 177	E

2

N



PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	ALIGNMENT DIAGRAM	SHEET 178	E



29

PI STA = 1235+33.16
Y = 180871.104
X = 146694.849
DELTA = 10°03'30" LT
D = 6°42'20"
T = 75.19'
L = 150.00'
R = 854.44'
PC STA = 1234+57.97
Y = 180871.646
X = 146619.659
PT STA = 1236+07.97
Y = 180883.702
X = 146768.978
DB = S89°35'12"E
DA = N80°21'18"E

30

PI STA = 1238+42.19
Y = 180923.050
X = 146999.875
DELTA = 39°04'42" LT
D = 8°40'52"
T = 234.23'
L = 450.15'
R = 660.00'
PC STA = 1236+07.97
Y = 180883.702
X = 146768.978
PT STA = 1240+58.12
Y = 181099.150
X = 147154.313
DB = N80°19'44"E
DA = N41°15'01"E

31

PI STA = 1245+01.11
Y = 181435.635
X = 147442.445
DELTA = 32°05'42" RT
D = 12°00'00"
T = 137.34'
L = 267.46'
R = 477.46'
PC STA = 1243+63.77
Y = 181331.317
X = 147353.118
PT STA = 1246+31.23
Y = 181476.548
X = 147573.548
DB = N40°34'25"E
DA = N72°40'07"E

35

PI STA = 1234+30.95
Y = 181416.781
X = 147571.382
DELTA = 31°48'36" LT
D = 12°47'45"
T = 127.59'
L = 248.59'
R = 447.77'
PC STA = 1233+03.36
Y = 181417.246
X = 147698.972
PT STA = 1235+51.95
Y = 181349.133
X = 147463.200
DB = S89°47'29"W
DA = S57°58'53"W

36

PI STA = 1239+50.40
Y = 181136.020
X = 147126.526
DELTA = 111°09'57" LT
D = 20°59'14"
T = 398.46'
L = 529.68'
R = 273.00'
PC STA = 1235+51.95
Y = 181349.133
X = 147463.200
PT STA = 1240+81.63
Y = 180899.006
X = 147446.825
DB = S57°39'59"W
DA = S53°29'58"E

37

PI STA = 1241+57.30
Y = 180853.367
X = 147507.177
DELTA = 18°02'46" LT
D = 12°01'28"
T = 75.67'
L = 150.08'
R = 476.50'
PC STA = 1240+81.63
Y = 180899.006
X = 147446.825
PT STA = 1242+31.71
Y = 180828.669
X = 147578.699
DB = S52°54'11"E
DA = S70°56'57"E

32

PI STA = 1237+30.51
Y = 180682.030
X = 146885.120
DELTA = 14°00'12" RT
D = 7°00'05"
T = 100.51'
L = 200.01'
R = 818.35'
PC STA = 1236+30.00
Y = 180692.798
X = 146785.193
PT STA = 1238+30.01
Y = 180647.402
X = 146979.471
DB = S83°50'59"E
DA = S69°50'47"E

33

PI STA = 1240+53.24
Y = 180570.484
X = 147189.032
DELTA = 38°38'38" RT
D = 9°00'02"
T = 223.20'
L = 429.35'
R = 636.59'
PC STA = 1238+30.04
Y = 180647.393
X = 146979.497
PT STA = 1242+59.39
Y = 180379.566
X = 147304.661
DB = S69°50'41"E
DA = S31°12'03"E

34

PI STA = 1246+81.91
Y = 180018.158
X = 147523.544
DELTA = 40°19'20" LT
D = 17°44'51"
T = 118.53'
L = 227.20'
R = 322.84'
PC STA = 1245+63.38
Y = 180119.547
X = 147462.139
PT STA = 1247+90.58
Y = 179980.593
X = 147635.968
DB = S31°12'03"E
DA = S71°31'24"E

38

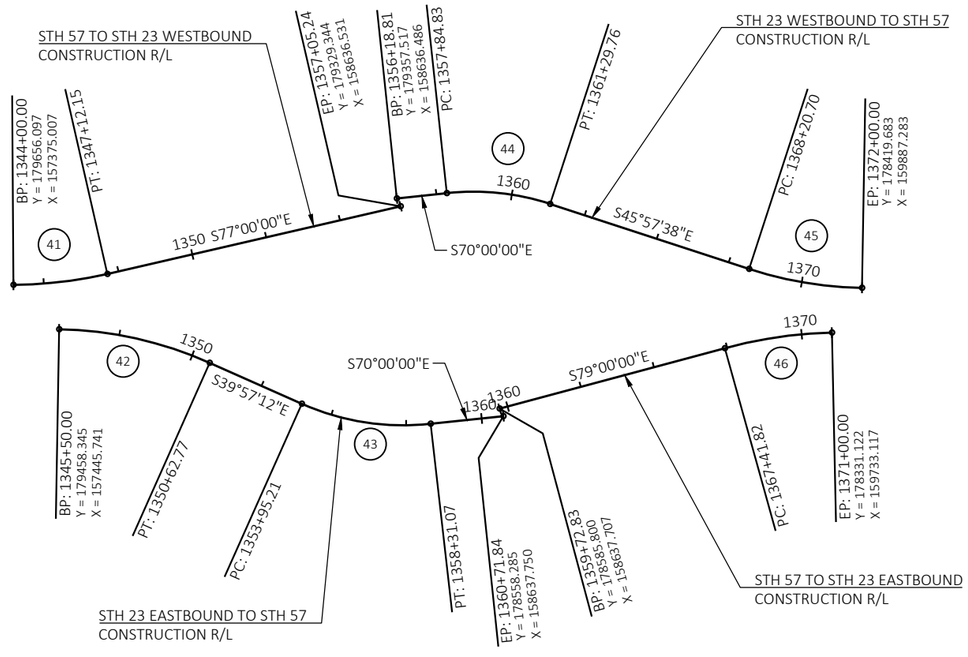
PI STA = 1254+40.49
Y = 180153.238
X = 146052.185
DELTA = 161°26'01" RT
D = 20°59'59"
T = 1669.21'
L = 768.74'
R = 272.84'
PC STA = 1237+71.27
Y = 180014.891
X = 147715.656
PT STA = 1245+40.01
Y = 180551.743
X = 147673.132
DB = N85°14'45"W
DA = N76°11'17"E

39

PI STA = 1246+15.57
Y = 180569.780
X = 147746.500
DELTA = 17°14'13" RT
D = 11°29'38"
T = 75.55'
L = 149.97'
R = 498.48'
PC STA = 1245+40.01
Y = 180551.743
X = 147673.132
PT STA = 1246+89.98
Y = 180565.267
X = 147821.919
DB = N76°11'17"E
DA = S86°34'30"E

40

PI STA = 1247+82.46
Y = 180559.742
X = 147914.232
DELTA = 12°54'04" RT
D = 7°00'17"
T = 92.48'
L = 184.17'
R = 817.96'
PC STA = 1246+89.98
Y = 180565.267
X = 147821.919
PT STA = 1248+74.15
Y = 180533.747
X = 148002.981
DB = S86°34'30"E
DA = S73°40'27"E



41

PI STA = 1345+56.70
Y = 179588.343
X = 157516.300
DELTA = 12°29'11" LT
D = 4°00'00"
T = 156.70'
L = 312.15'
R = 1432.36'
PC STA = 1344+00.00
Y = 179656.097
X = 157375.007
PT STA = 1347+12.15
Y = 179552.739
X = 157668.899
DB = S64°22'51"E
DA = S76°52'02"E

42

PI STA = 1348+09.91
Y = 179340.469
X = 157677.379
DELTA = 23°04'28" RT
D = 4°30'00"
T = 259.91'
L = 512.77'
R = 1273.24'
PC STA = 1345+50.00
Y = 179458.345
X = 157445.741
PT STA = 1350+62.77
Y = 179141.238
X = 157844.286
DB = S63°01'45"E
DA = S39°57'17"E

43

PI STA = 1356+18.44
Y = 178715.281
X = 158201.118
DELTA = 30°30'36" LT
D = 7°00'00"
T = 223.23'
L = 435.86'
R = 818.52'
PC STA = 1353+95.21
Y = 178886.401
X = 158057.765
PT STA = 1358+31.07
Y = 178640.633
X = 158411.498
DB = S39°57'14"E
DA = S70°27'51"E

44

PI STA = 1359+59.90
Y = 179241.162
X = 158957.113
DELTA = 24°08'42" RT
D = 7°00'00"
T = 175.06'
L = 344.93'
R = 818.51'
PC STA = 1357+84.83
Y = 179300.734
X = 158792.498
PT STA = 1361+29.76
Y = 179119.466
X = 159082.959
DB = S70°06'20"E
DA = S45°57'37"E

45

PI STA = 1370+11.77
Y = 178506.338
X = 159716.995
DELTA = 17°04'08" LT
D = 4°30'00"
T = 191.07'
L = 379.31'
R = 1273.22'
PC STA = 1368+20.70
Y = 178639.160
X = 159579.644
PT STA = 1372+00.00
Y = 178419.683
X = 159887.283
DB = S45°57'38"E
DA = S63°01'46"E

46

PI STA = 1369+21.85
Y = 178406.497
X = 159569.627
DELTA = 14°19'39" RT
D = 4°00'00"
T = 180.03'
L = 358.18'
R = 1432.37'
PC STA = 1367+41.82
Y = 178439.070
X = 159392.570
PT STA = 1371+00.00
Y = 178331.122
X = 159733.117
DB = S79°34'33"E
DA = S65°14'55"E

PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	ALIGNMENT DIAGRAM	SHEET 179	E

2

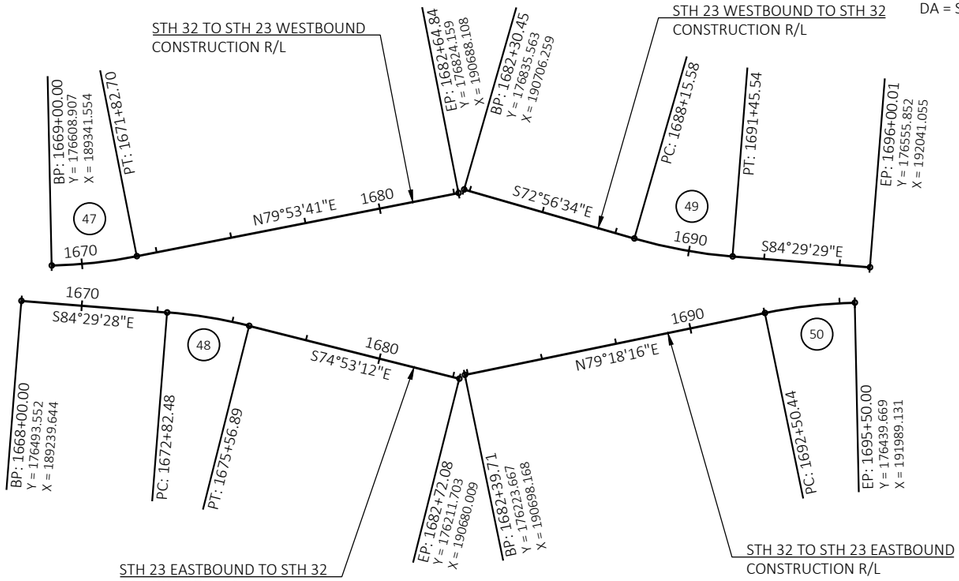
N

(47)

PI STA = 1670+41.70
Y = 176609.429
X = 189483.253
DELTA = 9°53'40" LT
D = 3°30'00"
T = 141.70'
L = 282.70'
R = 1637.02'
PC STA = 1669+00.00
Y = 176608.907
X = 189341.554
PT STA = 1671+82.70
Y = 176634.291
X = 189622.755
DB = N89°47'21"E
DA = N79°53'41"E

(49)

PI STA = 1689+81.12
Y = 176615.371
X = 191423.908
DELTA = 11°32'55" LT
D = 3°30'00"
T = 165.54'
L = 329.96'
R = 1637.02'
PC STA = 1688+15.58
Y = 176663.928
X = 191265.650
PT STA = 1691+45.54
Y = 176599.480
X = 191588.683
DB = S72°56'34"E
DA = S84°29'29"E



(48)

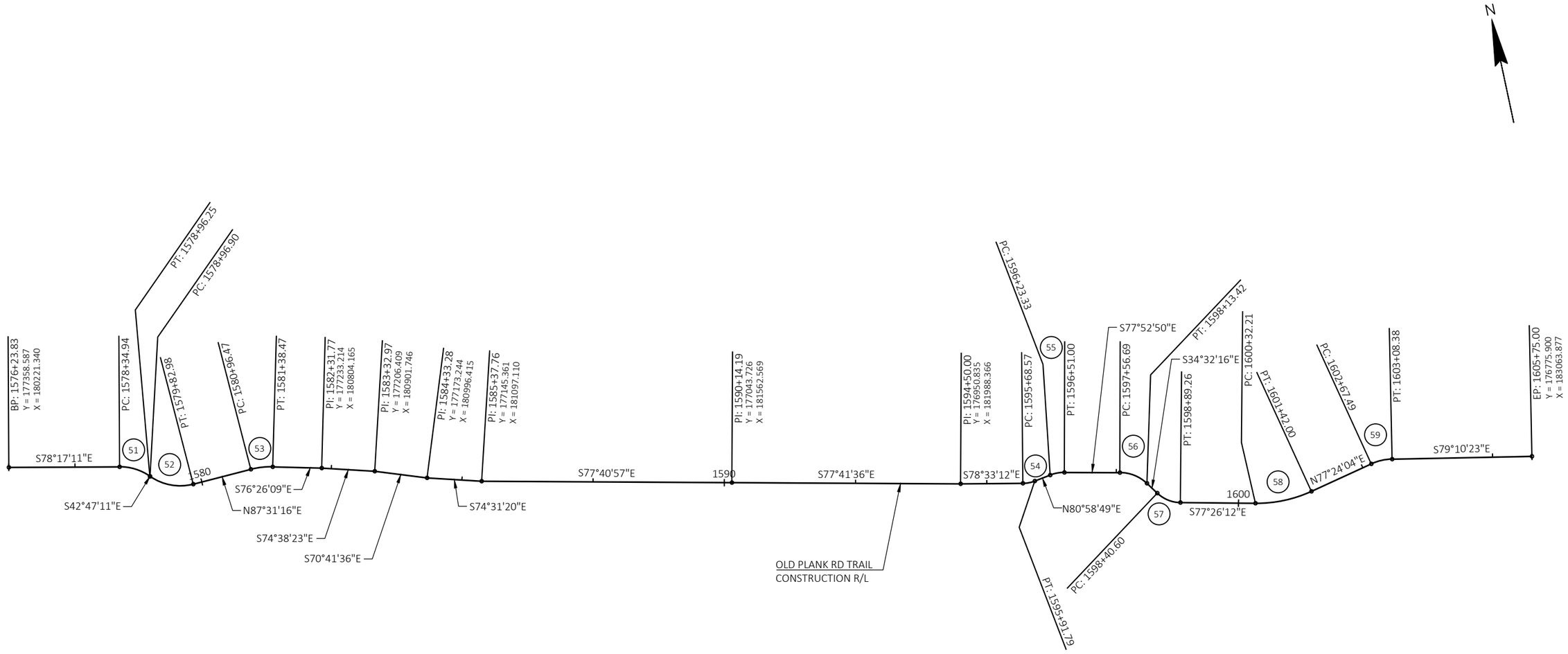
PI STA = 1674+20.00
Y = 176434.031
X = 189856.785
DELTA = 9°36'16" RT
D = 3°30'00"
T = 137.53'
L = 274.41'
R = 1637.02'
PC STA = 1672+82.48
Y = 176447.234
X = 189719.892
PT STA = 1675+56.89
Y = 176398.174
X = 189989.556
DB = S84°29'28"E
DA = S74°53'12"E

(50)

PI STA = 1694+00.64
Y = 176439.120
X = 191838.932
DELTA = 10°29'05" RT
D = 3°30'00"
T = 150.20'
L = 299.56'
R = 1637.02'
PC STA = 1692+50.44
Y = 176411.249
X = 191691.341
PT STA = 1695+50.00
Y = 176439.669
X = 191989.131
DB = N79°18'22"E
DA = N89°47'27"E

PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	ALIGNMENT DIAGRAM	SHEET 180	E

2



51

PI STA = 1578+66.59
Y = 177309.300
X = 180459.047
DELTA = 35°07'19" RT
D = 57°16'58"
T = 31.65'
L = 61.31'
R = 100.02'
PC STA = 1578+34.94
Y = 177315.728
X = 180428.053
PT STA = 1578+96.25
Y = 177286.211
X = 180480.701
DB = S78°17'04"E
DA = S43°09'44"E

52

PI STA = 1579+42.81
Y = 177252.247
X = 180512.546
DELTA = 49°19'01" LT
D = 57°17'21"
T = 45.91'
L = 86.08'
R = 100.01'
PC STA = 1578+96.90
Y = 177285.737
X = 180481.139
PT STA = 1579+82.98
Y = 177254.231
X = 180558.415
DB = S43°09'38"E
DA = N87°31'21"E

53

PI STA = 1581+17.61
Y = 177260.054
X = 180692.918
DELTA = 16°02'35" RT
D = 38°11'50"
T = 21.14'
L = 42.00'
R = 150.00'
PC STA = 1580+96.47
Y = 177259.140
X = 180671.799
PT STA = 1581+38.47
Y = 177255.097
X = 180713.466
DB = N87°31'16"E
DA = S76°26'09"E

54

PI STA = 1595+80.30
Y = 176924.976
X = 182116.078
DELTA = 20°27'59" LT
D = 88°08'50"
T = 11.73'
L = 23.22'
R = 65.00'
PC STA = 1595+68.57
Y = 176927.304
X = 182104.577
PT STA = 1595+91.79
Y = 176926.815
X = 182127.667
DB = S78°33'12"E
DA = N80°58'49"E

55

PI STA = 1596+37.32
Y = 176933.954
X = 182172.640
DELTA = 21°08'22" RT
D = 76°23'40"
T = 13.99'
L = 27.67'
R = 75.00'
PC STA = 1596+23.33
Y = 176931.760
X = 182158.818
PT STA = 1596+51.00
Y = 176931.016
X = 182186.323
DB = N80°58'49"E
DA = S77°52'50"E

56

PI STA = 1597+86.49
Y = 176902.570
X = 182318.791
DELTA = 43°20'34" RT
D = 76°23'40"
T = 29.80'
L = 56.74'
R = 75.00'
PC STA = 1597+56.69
Y = 176908.827
X = 182289.653
PT STA = 1598+13.42
Y = 176878.020
X = 182335.688
DB = S77°52'50"E
DA = S34°32'16"E

57

PI STA = 1598+66.13
Y = 176834.597
X = 182365.573
DELTA = 42°53'57" LT
D = 88°08'50"
T = 25.54'
L = 48.67'
R = 65.00'
PC STA = 1598+40.60
Y = 176855.635
X = 182351.095
PT STA = 1598+89.26
Y = 176829.042
X = 182390.500
DB = S34°32'16"E
DA = S77°26'12"E

58

PI STA = 1600+88.01
Y = 176785.812
X = 182584.487
DELTA = 25°09'43" LT
D = 22°55'06"
T = 55.79'
L = 109.79'
R = 250.00'
PC STA = 1600+32.21
Y = 176797.948
X = 182530.028
PT STA = 1601+42.00
Y = 176797.982
X = 182638.938
DB = S77°26'12"E
DA = N77°24'04"E

59

PI STA = 1602+88.23
Y = 176829.877
X = 182781.639
DELTA = 23°25'33" RT
D = 57°17'45"
T = 20.73'
L = 40.89'
R = 100.00'
PC STA = 1602+67.49
Y = 176825.355
X = 182761.406
PT STA = 1603+08.38
Y = 176825.982
X = 182802.003
DB = N77°24'04"E
DA = S79°10'23"E

PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	ALIGNMENT DIAGRAM	SHEET 181	E

Estimate Of Quantities

Line	Item	Item Description	Unit	Total	1440-41-71 Qty	1440-41-72 Qty
0002	201.0110	Clearing	SY	5,800.000	30.000	5,770.000
0004	201.0210	Grubbing	SY	5,800.000	30.000	5,770.000
0006	203.0100	Removing Small Pipe Culverts	EACH	10.000	2.000	8.000
0008	203.0220	Removing Structure (structure) 01. B-59-0093	EACH	1.000	1.000	
0010	204.0100	Removing Concrete Pavement	SY	4,981.000	2,231.000	2,750.000
0012	204.0105	Removing Concrete Pavement Butt Joints	SY	5,841.000	5,841.000	
0014	204.0109.S	Removing Concrete Surface Partial Depth	SF	80,300.000	80,300.000	
0016	204.0110	Removing Asphaltic Surface	SY	5,625.000	850.000	4,775.000
0018	204.0115	Removing Asphaltic Surface Butt Joints	SY	3,644.000	3,644.000	
0020	204.0120	Removing Asphaltic Surface Milling	SY	54,000.000	54,000.000	
0022	204.0150	Removing Curb & Gutter	LF	840.000	380.000	460.000
0024	204.0165	Removing Guardrail	LF	7,936.000	7,936.000	
0026	204.0170	Removing Fence	LF	1,540.000	85.000	1,455.000
0028	204.0180	Removing Delineators and Markers	EACH	1.000		1.000
0030	204.0190	Removing Surface Drains	EACH	9.000	5.000	4.000
0032	204.0220	Removing Inlets	EACH	14.000	13.000	1.000
0034	204.0245	Removing Storm Sewer (size) 01. 12-Inch	LF	436.000	436.000	
0036	204.0245	Removing Storm Sewer (size) 02. 18-Inch	LF	24.000		24.000
0038	204.0291.S	Abandoning Sewer	CY	8.000	8.000	
0040	204.9060.S	Removing (item description) 01. Apron Endwalls	EACH	7.000	5.000	2.000
0042	204.9090.S	Removing (item description) 01. Underdrain 6-Inch	LF	715.000	715.000	
0044	205.0100	Excavation Common	CY	50,669.000	3,737.000	46,932.000
0046	206.1001	Excavation for Structures Bridges (structure) 01. B-59-0093	EACH	1.000	1.000	
0048	208.0100	Borrow	CY	5,282.000	2,699.000	2,583.000
0050	208.1100	Select Borrow	CY	650.000		650.000
0052	210.1500	Backfill Structure Type A	TON	16.000	16.000	
0054	211.0101	Prepare Foundation for Asphaltic Paving (project) 01. 1440-41-71	EACH	1.000	1.000	
0056	211.0400	Prepare Foundation for Asphaltic Shoulders	STA	36.000	36.000	
0058	213.0100	Finishing Roadway (project) 01. 1440-41-71	EACH	1.000	1.000	
0060	213.0100	Finishing Roadway (project) 02. 1440-41-72	EACH	1.000		1.000
0062	214.0100	Obliterating Old Road	STA	3.000		3.000
0064	305.0110	Base Aggregate Dense 3/4-Inch	TON	13,700.000	11,700.000	2,000.000
0066	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	20,560.000	3,610.000	16,950.000
0068	310.0110	Base Aggregate Open-Graded	TON	100.000	100.000	
0070	312.0110	Select Crushed Material	TON	16,750.000		16,750.000
0072	390.0100	Removing Pavement for Base Patching	CY	369.000	369.000	
0074	390.0305	Base Patching Concrete HES	CY	369.000	369.000	
0076	415.0080	Concrete Pavement 8-Inch	SY	347.000	347.000	
0078	416.0610	Drilled Tie Bars	EACH	723.000	723.000	
0080	416.0620	Drilled Dowel Bars	EACH	2,949.000	2,949.000	
0082	416.1710	Concrete Pavement Repair	SY	200.000	200.000	
0084	416.1715	Concrete Pavement Repair SHES	SY	13.000	13.000	
0086	416.1720	Concrete Pavement Replacement	SY	250.000	250.000	
0088	416.1725	Concrete Pavement Replacement SHES	SY	27.000	27.000	
0090	450.4000	HMA Cold Weather Paving	TON	11,330.000	9,830.000	1,500.000
0092	450.5224	HMA Pavement 4 LT 58-28 S	TON	9,990.000	9,990.000	
0094	450.6223	HMA Pavement 3 MT 58-28 S	TON	4,430.000	520.000	3,910.000
0096	450.6224	HMA Pavement 4 MT 58-28 S	TON	29,835.000	27,855.000	1,980.000
0098	455.0605	Tack Coat	GAL	22,970.000	21,760.000	1,210.000

					1440-41-71	1440-41-72
Line	**Item**	**Item Description**	**Unit**	**Total**	**Qty**	**Qty**
0100	465.0105	Asphaltic Surface	TON	293.000	123.000	170.000
0102	465.0125	Asphaltic Surface Temporary	TON	377.000	377.000	
0104	465.0305	Asphaltic Surface Safety Islands	TON	90.000		90.000
0106	465.0315	Asphaltic Flumes	SY	104.000	31.000	73.000
0108	465.0510	Asphaltic Rumble Strips, Shoulder Divided Roadway	LF	176,200.000	176,200.000	
0110	502.0100	Concrete Masonry Bridges	CY	5.000	5.000	
0112	502.3101	Expansion Device	LF	224.000	224.000	
0114	502.3200	Protective Surface Treatment	SY	139.000	139.000	
0116	502.3205	Pigmented Surface Sealer Reseal	SY	799.000	799.000	
0118	502.3210	Pigmented Surface Sealer	SY	22.000	22.000	
0120	502.3215	Protective Surface Treatment Reseal	SY	3,729.000	3,729.000	
0122	502.4204	Adhesive Anchors No. 4 Bar	EACH	10.000	10.000	
0124	502.4205	Adhesive Anchors No. 5 Bar	EACH	244.000	244.000	
0126	505.0400	Bar Steel Reinforcement HS Structures	LB	670.000	670.000	
0128	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	8,010.000	8,010.000	
0130	505.0905	Bar Couplers No. 5	EACH	10.000	10.000	
0132	505.0906	Bar Couplers No. 6	EACH	28.000	28.000	
0134	509.0301	Preparation Decks Type 1	SY	4.000	4.000	
0136	509.0310.S	Sawing Pavement Deck Preparation Areas	LF	40.000	40.000	
0138	509.1000	Joint Repair	SY	105.000	105.000	
0140	509.1500	Concrete Surface Repair	SF	161.000	161.000	
0142	509.2100.S	Concrete Masonry Deck Repair	CY	36.000	36.000	
0144	509.9025.S	Epoxy Injection Crack Repair	LF	15.000	15.000	
0146	509.9026.S	Cored Holes 2-Inch Diameter	EACH	4.000	4.000	
0148	511.1200	Temporary Shoring (structure) 01. B-59-0093	SF	102.000	102.000	
0150	516.0500	Rubberized Membrane Waterproofing	SY	2.000	2.000	
0152	517.0901.S	Preparation and Coating of Top Flanges (structure) 01. B-59-0091	EACH	1.000	1.000	
0154	517.0901.S	Preparation and Coating of Top Flanges (structure) 02. B-59-0093	EACH	1.000	1.000	
0156	517.1801.S	Structure Repainting Recycled Abrasive (structure) 01. B-59-0097	EACH	1.000	1.000	
0158	517.3001.S	Structure Overcoating Cleaning and Priming (structure) 01. B-59-0091	EACH	1.000	1.000	
0160	517.4001.S	Containment and Collection of Waste Materials (structure) 01. B-59-0091	EACH	1.000	1.000	
0162	517.4501.S	Negative Pressure Containment and Collection of Waste Materials (structure) 01. B-59-0097	EACH	1.000	1.000	
0164	517.6001.S	Portable Decontamination Facility	EACH	2.000	2.000	
0166	520.1018	Apron Endwalls for Culvert Pipe 18-Inch	EACH	8.000		8.000
0168	520.3318	Culvert Pipe Class III-A 18-Inch	LF	136.000		136.000
0170	520.8000	Concrete Collars for Pipe	EACH	8.000	5.000	3.000
0172	521.1012	Apron Endwalls for Culvert Pipe Steel 12-Inch	EACH	7.000	7.000	
0174	522.0418	Culvert Pipe Reinforced Concrete Class IV 18-Inch	LF	48.000	48.000	
0176	522.0424	Culvert Pipe Reinforced Concrete Class IV 24-Inch	LF	101.000		101.000
0178	522.0436	Culvert Pipe Reinforced Concrete Class IV 36-Inch	LF	108.000		108.000
0180	522.1018	Apron Endwalls for Culvert Pipe Reinforced Concrete 18-Inch	EACH	4.000	3.000	1.000
0182	522.1024	Apron Endwalls for Culvert Pipe Reinforced Concrete 24-Inch	EACH	5.000	2.000	3.000
0184	522.1030	Apron Endwalls for Culvert Pipe Reinforced Concrete 30-Inch	EACH	1.000	1.000	
0186	522.1036	Apron Endwalls for Culvert Pipe Reinforced Concrete 36-Inch	EACH	2.000		2.000
0188	522.1042	Apron Endwalls for Culvert Pipe Reinforced Concrete 42-Inch	EACH	2.000	1.000	1.000
0190	522.2419	Culvert Pipe Reinforced Concrete Horizontal Elliptical Class HE-IV 19x30-Inch	LF	528.000	56.000	472.000
0192	522.2619	Apron Endwalls for Culvert Pipe Reinforced Concrete Horizontal Elliptical 19x30-Inch	EACH	14.000	2.000	12.000
0194	522.2629	Apron Endwalls for Culvert Pipe Reinforced Concrete Horizontal Elliptical 29x45-Inch	EACH	2.000		2.000

					1440-41-71	1440-41-72
Line	**Item**	**Item Description**	**Unit**	**Total**	**Qty**	**Qty**
0196	530.0112	Culvert Pipe Corrugated Polyethylene 12-Inch	LF	435.000	435.000	
0198	601.0411	Concrete Curb & Gutter 30-Inch Type D	LF	120.000	120.000	
0200	601.0553	Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type D	LF	2,340.000	485.000	1,855.000
0202	601.0590	Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type TBTT	LF	574.000	574.000	
0204	602.0405	Concrete Sidewalk 4-Inch	SF	2,180.000	1,240.000	940.000
0206	602.0515	Curb Ramp Detectable Warning Field Natural Patina	SF	40.000		40.000
0208	602.3010	Concrete Surface Drains	CY	5.000	5.000	
0210	603.8000	Concrete Barrier Temporary Precast Delivered	LF	21,314.000	1,300.000	20,014.000
0212	603.8125	Concrete Barrier Temporary Precast Installed	LF	22,614.000	2,600.000	20,014.000
0214	606.0200	Riprap Medium	CY	199.000	91.000	108.000
0216	606.0300	Riprap Heavy	CY	498.000	443.000	55.000
0218	608.0412	Storm Sewer Pipe Reinforced Concrete Class IV 12-Inch	LF	169.000		169.000
0220	608.0418	Storm Sewer Pipe Reinforced Concrete Class IV 18-Inch	LF	247.000		247.000
0222	608.2329	Storm Sewer Pipe Reinforced Concrete Horizontal Elliptical Class HE-III 29x45-Inch	LF	103.000		103.000
0224	611.0535	Manhole Covers Type J-Special	EACH	2.000		2.000
0226	611.0627	Inlet Covers Type HM	EACH	6.000		6.000
0228	611.0642	Inlet Covers Type MS	EACH	2.000		2.000
0230	611.0654	Inlet Covers Type V	EACH	8.000	8.000	
0232	611.2005	Manholes 5-FT Diameter	EACH	2.000		2.000
0234	611.3004	Inlets 4-FT Diameter	EACH	1.000		1.000
0236	611.3220	Inlets 2x2-FT	EACH	8.000	8.000	
0238	611.3230	Inlets 2x3-FT	EACH	4.000		4.000
0240	611.3902	Inlets Median 2 Grate	EACH	2.000		2.000
0242	611.8115	Adjusting Inlet Covers	EACH	4.000	4.000	
0244	612.0106	Pipe Underdrain 6-Inch	LF	715.000	715.000	
0246	612.0206	Pipe Underdrain Unperforated 6-Inch	LF	100.000	100.000	
0248	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	15.000	15.000	
0250	612.0806	Apron Endwalls for Underdrain Reinforced Concrete 6-Inch	EACH	4.000	4.000	
0252	614.0150	Anchor Assemblies for Steel Plate Beam Guard	EACH	1.000	1.000	
0254	614.0220	Steel Thrie Beam Bullnose Terminal	EACH	2.000	2.000	
0256	614.0230	Steel Thrie Beam	LF	175.000	175.000	
0258	614.0905	Crash Cushions Temporary	EACH	5.000		5.000
0260	614.2300	MGS Guardrail 3	LF	6,938.500	6,938.500	
0262	614.2500	MGS Thrie Beam Transition	LF	788.000	788.000	
0264	614.2610	MGS Guardrail Terminal EAT	EACH	20.000	20.000	
0266	614.2620	MGS Guardrail Terminal Type 2	EACH	2.000	2.000	
0268	616.0100	Fence Woven Wire (height) 01. 4-FT	LF	1,455.000	85.000	1,370.000
0270	618.0100	Maintenance and Repair of Haul Roads (project) 01. 1440-41-71	EACH	1.000	1.000	
0272	618.0100	Maintenance and Repair of Haul Roads (project) 02. 1440-41-72	EACH	1.000		1.000
0274	619.1000	Mobilization	EACH	1.000	0.700	0.300
0276	620.0300	Concrete Median Sloped Nose	SF	430.000	215.000	215.000
0278	623.0200	Dust Control Surface Treatment	SY	20,000.000	3,000.000	17,000.000
0280	624.0100	Water	MGAL	731.000	251.000	480.000
0282	625.0100	Topsoil	SY	65,800.000	24,800.000	41,000.000
0284	628.1504	Silt Fence	LF	12,500.000	7,200.000	5,300.000
0286	628.1520	Silt Fence Maintenance	LF	25,000.000	14,400.000	10,600.000
0288	628.1905	Mobilizations Erosion Control	EACH	14.000	9.000	5.000
0290	628.1910	Mobilizations Emergency Erosion Control	EACH	10.000	7.000	3.000
0292	628.2004	Erosion Mat Class I Type B	SY	7,700.000	2,000.000	5,700.000

					1440-41-71	1440-41-72
Line	**Item**	**Item Description**	**Unit**	**Total**	**Qty**	**Qty**
0294	628.2008	Erosion Mat Urban Class I Type B	SY	59,000.000	23,000.000	36,000.000
0296	628.7005	Inlet Protection Type A	EACH	27.000	17.000	10.000
0298	628.7015	Inlet Protection Type C	EACH	13.000	10.000	3.000
0300	628.7020	Inlet Protection Type D	EACH	4.000		4.000
0302	628.7504	Temporary Ditch Checks	LF	1,000.000	350.000	650.000
0304	628.7555	Culvert Pipe Checks	EACH	43.000	10.000	33.000
0306	628.7570	Rock Bags	EACH	135.000	90.000	45.000
0308	629.0210	Fertilizer Type B	CWT	43.000	17.000	26.000
0310	630.0130	Seeding Mixture No. 30	LB	3,000.000	1,100.000	1,900.000
0312	630.0200	Seeding Temporary	LB	470.000	100.000	370.000
0314	630.0500	Seed Water	MGAL	1,500.000	550.000	950.000
0316	633.5200	Markers Culvert End	EACH	20.000	9.000	11.000
0318	634.0614	Posts Wood 4x6-Inch x 14-FT	EACH	23.000		23.000
0320	634.0616	Posts Wood 4x6-Inch x 16-FT	EACH	27.000		27.000
0322	634.0618	Posts Wood 4x6-Inch x 18-FT	EACH	42.000		42.000
0324	637.2210	Signs Type II Reflective H	SF	1,135.600		1,135.600
0326	637.2230	Signs Type II Reflective F	SF	87.500		87.500
0328	638.2602	Removing Signs Type II	EACH	27.000		27.000
0330	638.3000	Removing Small Sign Supports	EACH	31.000		31.000
0332	642.5201	Field Office Type C	EACH	1.000	0.750	0.250
0334	643.0300	Traffic Control Drums	DAY	155,809.000	151,173.000	4,636.000
0336	643.0320.S	Temporary Tape Rumble Strip Orange	LF	4,536.000	4,536.000	
0338	643.0370.S	Digital Speed Reduction System (DSRS)	DAY	446.000	446.000	
0340	643.0420	Traffic Control Barricades Type III	DAY	7,312.000	5,518.000	1,794.000
0342	643.0705	Traffic Control Warning Lights Type A	DAY	8,814.000	5,666.000	3,148.000
0344	643.0715	Traffic Control Warning Lights Type C	DAY	15,567.000	15,567.000	
0346	643.0810	Traffic Control Connected Arrow Boards	DAY	532.000	532.000	
0348	643.0900	Traffic Control Signs	DAY	23,538.000	21,779.000	1,759.000
0350	643.0920	Traffic Control Covering Signs Type II	EACH	1.000	1.000	
0352	643.1000	Traffic Control Signs Fixed Message	SF	68.000	68.000	
0354	643.1050	Traffic Control Signs PCMS	DAY	196.000	182.000	14.000
0356	643.1070	Traffic Control Cones 42-Inch	DAY	472,100.000	472,100.000	
0358	643.1205.S	Basic Traffic Queue Warning System	DAY	1,218.000	1,218.000	
0360	643.1220	Traffic Control Connected Work Zone Start and End Location Markers	DAY	486.000	486.000	
0362	643.3170	Temporary Marking Line Epoxy 6-Inch	LF	281,500.000	281,500.000	
0364	643.3180	Temporary Marking Line Removable Tape 6-Inch	LF	23,640.000	23,640.000	
0366	643.3280	Temporary Marking Line Removable Tape 10-Inch	LF	2,600.000	2,600.000	
0368	643.5000	Traffic Control	EACH	1.000	0.750	0.250
0370	644.1410	Temporary Pedestrian Surface Asphalt	SF	1,900.000		1,900.000
0372	644.1810	Temporary Pedestrian Barricade	LF	6,060.000		6,060.000
0374	644.1900.S	Temporary Audible Message Devices	DAY	110.000		110.000
0376	645.0111	Geotextile Type DF Schedule A	SY	400.000	400.000	
0378	645.0120	Geotextile Type HR	SY	1,237.000	919.000	318.000
0380	645.0140	Geotextile Type SAS	SY	1,680.000		1,680.000
0382	646.2020	Marking Line Epoxy 6-Inch	LF	9,150.000	2,060.000	7,090.000
0384	646.2025	Marking Line Grooved Black Epoxy 6-Inch	LF	110,280.000	110,280.000	
0386	646.2040	Marking Line Grooved Wet Ref Epoxy 6-Inch	LF	355,470.000	352,930.000	2,540.000
0388	646.4040	Marking Line Grooved Wet Ref Epoxy 10-Inch	LF	29,250.000	26,300.000	2,950.000
0390	646.5020	Marking Arrow Epoxy	EACH	1.000	1.000	

					1440-41-71	1440-41-72
Line	**Item**	**Item Description**	**Unit**	**Total**	**Qty**	**Qty**
0392	646.5220	Marking Symbol Epoxy	EACH	1.000	1.000	
0394	646.5520	Marking Outfall Epoxy	EACH	4.000	4.000	
0396	646.6120	Marking Stop Line Epoxy 18-Inch	LF	55.000		55.000
0398	646.6220	Marking Yield Line Epoxy 18-Inch	EACH	60.000	60.000	
0400	646.6466	Cold Weather Marking Epoxy 6-Inch	LF	89,260.000	88,620.000	640.000
0402	646.6470	Cold Weather Marking Epoxy 10-Inch	LF	7,520.000	6,770.000	750.000
0404	646.7120	Marking Diagonal Epoxy 12-Inch	LF	185.000	185.000	
0406	646.7220	Marking Chevron Epoxy 24-Inch	LF	740.000	740.000	
0408	646.7320	Marking Chevron Epoxy 12-Inch	LF	1,630.000	1,120.000	510.000
0410	646.8220	Marking Island Nose Epoxy	EACH	12.000	10.000	2.000
0412	646.9000	Marking Removal Line 4-Inch	LF	5,350.000	5,350.000	
0414	646.9012	Marking Removal Line Water Blasting 6-Inch	LF	12,810.000	12,810.000	
0416	646.9165	Marking Removal Line Grooved Contrast Permanent Tape 10-Inch	LF	1,120.000	1,120.000	
0418	646.9200	Marking Removal Line Wide	LF	130.000	130.000	
0420	648.0100	Locating No-Passing Zones	MI	0.345		0.345
0422	650.4000	Construction Staking Storm Sewer	EACH	27.000	15.000	12.000
0424	650.4500	Construction Staking Subgrade	LF	8,100.000		8,100.000
0426	650.5000	Construction Staking Base	LF	8,100.000		8,100.000
0428	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	2,460.000	605.000	1,855.000
0430	650.6000	Construction Staking Pipe Culverts	EACH	12.000	2.000	10.000
0432	650.7000	Construction Staking Concrete Pavement	LF	574.000	574.000	
0434	650.8000	Construction Staking Resurfacing Reference	LF	114,720.000	113,510.000	1,210.000
0436	650.8501	Construction Staking Electrical Installations (project) 01. 1440-41-72	EACH	1.000		1.000
0438	650.9000	Construction Staking Curb Ramps	EACH	2.000		2.000
0440	650.9500	Construction Staking Sidewalk (project) 01. 1440-41-72	EACH	1.000		1.000
0442	650.9911	Construction Staking Supplemental Control (project) 01. 1440-41-71	EACH	1.000	1.000	
0444	650.9911	Construction Staking Supplemental Control (project) 02. 1440-41-72	EACH	1.000		1.000
0446	650.9920	Construction Staking Slope Stakes	LF	19,460.000	11,360.000	8,100.000
0448	652.0225	Conduit Rigid Nonmetallic Schedule 40 2-Inch	LF	4,280.000		4,280.000
0450	652.0235	Conduit Rigid Nonmetallic Schedule 40 3-Inch	LF	10.000		10.000
0452	652.0325	Conduit Rigid Nonmetallic Schedule 80 2-Inch	LF	210.000		210.000
0454	653.0140	Pull Boxes Steel 24x42-Inch	EACH	18.000		18.000
0456	654.0105	Concrete Bases Type 5	EACH	8.000		8.000
0458	655.0610	Electrical Wire Lighting 12 AWG	LF	1,500.000		1,500.000
0460	655.0615	Electrical Wire Lighting 10 AWG	LF	16,832.000		16,832.000
0462	656.0201	Electrical Service Meter Breaker Pedestal (location) 01. STH 23 & CTH TT	EACH	1.000		1.000
0464	657.0255	Transformer Bases Breakaway 11 1/2-Inch Bolt Circle	EACH	8.000		8.000
0466	657.0322	Poles Type 5-Aluminum	EACH	8.000		8.000
0468	657.0710	Luminaire Arms Truss Type 4 1/2-Inch Clamp 12-FT	EACH	10.000		10.000
0470	659.1115	Luminaires Utility LED A	EACH	10.000		10.000
0472	690.0150	Sawing Asphalt	LF	2,052.000	1,842.000	210.000
0474	690.0250	Sawing Concrete	LF	9,800.000	7,300.000	2,500.000
0476	706.0105	HMA Percent Within Limits (PWL) Test Strip Volumetrics	EACH	1.000	1.000	
0478	706.0110	Nuclear Gauge Correlation Strip - HMA, SMA	EACH	1.000	1.000	
0480	706.2005	Incentive Density PWL HMA Pavement	DOL	21,770.000	21,770.000	
0482	706.2007	Incentive Density HMA Pavement Longitudinal Joints	DOL	11,740.000	11,540.000	200.000
0484	706.2010	Incentive Air Voids HMA Pavement	DOL	27,860.000	27,860.000	
0486	707.0020	Incentive Compressive Strength Concrete Pavement	DOL	500.000	500.000	
0488	707.0025	Incentive Strength Concrete Structures	DOL	500.000	500.000	

					1440-41-71	1440-41-72
Line	**Item**	**Item Description**	**Unit**	**Total**	**Qty**	**Qty**
0490	740.0440	Incentive IRI Ride	DOL	22,540.000	22,170.000	370.000
0492	999.2000.S	Installing and Maintaining Bird Deterrent System (station) 01. 1250+00EB	EACH	1.000	1.000	
0494	999.2000.S	Installing and Maintaining Bird Deterrent System (station) 02. 1357+94WB	EACH	1.000	1.000	
0496	999.2000.S	Installing and Maintaining Bird Deterrent System (station) 03. 1607+50WB	EACH	1.000	1.000	
0498	999.2000.S	Installing and Maintaining Bird Deterrent System (station) 04. 1607+50EB	EACH	1.000	1.000	
0500	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	2,100.000	2,100.000	
0502	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	5,760.000	5,760.000	
0504	SPV.0060	Special 01. Embedded Galvanic Anodes	EACH	60.000	60.000	
0506	SPV.0060	Special 02. Concrete Control Cabinet Bases Type 10 NE Region Special	EACH	1.000		1.000
0508	SPV.0060	Special 03. Manholes 7-FT Diameter	EACH	1.000		1.000
0510	SPV.0060	Special 04. Remove, Salvage and Replace Steel Plate Beam Guard Energy Absorbing Terminal	EACH	1.000		1.000
0512	SPV.0060	Special 05. Mounting Conduit to Exterior of Structure	EACH	1.000		1.000
0514	SPV.0090	Special 01. Concrete Joint and Crack Cleaning and Repair	LF	120.000	120.000	
0516	SPV.0090	Special 02. Removing Rumble Strips	LF	6,300.000	6,300.000	
0518	SPV.0090	Special 03. Pedestrian Overhead Protection	LF	240.000	240.000	
0520	SPV.0165	Special 01. Removing Loose Concrete	SF	50.000	50.000	
0522	SPV.0195	Special 01. Select Crushed Material for Travel Corridor	TON	8.000	8.000	

3

EARTHWORK SUMMARY

CONSTRUCTION STAGE	FROM/TO STATION	LOCATION	205.0100 EXCAVATION COMMON CUT (1)	205.0100 EXCAVATION COMMON EBS EXCAVATION (2)	REDUCED EBS IN FILL (3) FACTOR 0.70	EBS BACKFILL (4) FACTOR 1.00	UNEXPANDED FILL	EXPANDED FILL (5) FACTOR 1.33	MASS ORDINATE +/- (6)	WASTE	208.0100 BORROW	COMMENT
1440-41-71												
2	1190+89.48 / 1197+04.65	GUARDRAIL STH 23 EB AT CTH C MEDIAN (STRUCTURE B-59-179)	120	0	0	0	251	334	-214		214	
2	1212+53.25 / 1219+26.37	GUARDRAIL STH 23 EB AT SUNSET DRIVE RIGHT (STRUCTURE B-59-97)	0	0	0	0	195	259	-259		259	
2	1214+05.51 / 1218+91.12	GUARDRAIL STH 23 EB AT SUNSET DRIVE LEFT (STRUCTURE B-59-97)	0	0	0	0	81	108	-108		108	
2	1221+48.84 / 1226+67.63	GUARDRAIL STH 23 WB AT SUNSET DRIVE LEFT (STRUCTURE B-59-180)	33	0	0	0	85	113	-80		80	
2	1221+78.79 / 1226+39.41	GUARDRAIL STH 23 WB AT SUNSET DRIVE RIGHT (STRUCTURE B-59-180)	19	0	0	0	16	21	-2		2	
2	1243+49.26 / 1248+09.44	GUARDRAIL STH 23 EB AT STH 67 LEFT (STRUCTURE B-59-91)	0	0	0	0	237	315	-315		315	
2	1252+03.04 / 1256+14.58	GUARDRAIL STH 23 WB AT STH 67 LEFT (STRUCTURE B-59-309)	36	0	0	0	81	108	-72		72	
2	1252+22.59 / 1256+82.94	GUARDRAIL STH 23 WB AT STH 67 RIGHT (STRUCTURE B-59-309)	22	0	0	0	17	23	-1		1	
2	1252+50.22 / 1258+73.71	GUARDRAIL STH 23 EB AT STH 67 RIGHT (STRUCTURE B-59-91)	9	0	0	0	91	121	-112		112	
2	1351+60.98 / 1356+84.10	GUARDRAIL STH 23 EB AT STH 57 RIGHT (STRUCTURE B-59-92)	0	0	0	0	105	140	-140		140	
2	1352+15.31 / 1356+60.92	GUARDRAIL STH 23 EB AT STH 57 LEFT (STRUCTURE B-59-92)	0	0	0	0	85	113	-113		113	
2	1359+14.71 / 1364+00.32	GUARDRAIL STH 23 WB AT STH 57 LEFT (STRUCTURE B-59-93)	27	0	0	0	97	129	-102		102	
2	1359+36.11 / 1363+21.72	GUARDRAIL STH 23 WB AT STH 57 RIGHT (STRUCTURE B-59-93)	15	0	0	0	87	116	-101		101	
2	1359+61.70 / 1363+34.19	GUARDRAIL STH 23 EB AT STH 57 RIGHT (STRUCTURE B-59-92)	13	0	0	0	72	96	-83		83	
2	1568+54.22 / 1575+39.93	INTERSECTION STH 23 EB AT SUNSET ROAD RIGHT	693	0	0	0	21	28	665	665		
2	1570+66.86 / 1577+82.24	INTERSECTION STH 23 WB AT SUNSET ROAD LEFT	912	0	0	0	237	315	597	597		
2	1608+40.93 / 1613+04.02	GUARDRAIL STH 23 EB AT CTH TT RIGHT (STRUCTURE B-59-88)	18	0	0	0	63	84	-66		66	
2	1608+46.08 / 1613+18.76	GUARDRAIL STH 23 WB AT CTH TT LEFT (STRUCTURE B-59-123)	14	0	0	0	145	193	-179		179	
2	1608+46.08 / 1612+39.48	GUARDRAIL STH 23 WB AT CTH TT RIGHT (STRUCTURE B-59-123)	10	0	0	0	31	41	-31		31	
2	1676+62.93 / 1681+61.18	GUARDRAIL STH 23 EB AT STH 32 LEFT (STRUCTURE B-59-83)	0	0	0	0	80	106	-106		106	
2	1673+50.57 / 1681+61.18	GUARDRAIL STH 23 EB AT STH 32 RIGHT (STRUCTURE B-59-83)	18	0	0	0	315	419	-401		401	
2	1242+23.53 / 1248+39.97	GUARDRAIL STH 67 RAMP TO STH 32 EB RIGHT (STRUCTURE B-59-91)	46	0	0	0	196	261	-215		215	
2	17+40.00 / 21+96.36	INTERSECTION SUNSET ROAD AT STH 23	537	0	0	0	52	69	468	468		
3	1569+52.32 / 1577+17.75	INTERSECTION STH 23 AT SUNSET ROAD MEDIAN	1,195	0	0	0	44	59	1,136	1,136		
1440-41-71 SUBTOTAL			**3,737**	**0**	**0**	**0**	**2,684**	**3,570**	**167**	**2,866**	**2,699**	
1440-41-72												
2	1578+90.40 / 1582+77.62	STH 23 EB WEST U-TURN	484	0	0	0	1,593	2,119	-1,635		1,635	
2	1591+33.50 / 1606+28.70	INTERSECTION STH 23 EB AT CTH TT	6,978	0	0	0	535	712	6,266	6,266		
2	1598+08.95 / 1606+26.77	INTERSECTION STH 23 WB AT CTH TT	3,329	0	0	0	1,594	2,120	1,209	1,209		
2	1618+50.00 / 1621+50.00	STH 23 EB EAST U-TURN	465	447	313	447	1,298	1,726	-948	447	948	
2	42+25.98 / 58+99.96	INTERSECTION CTH TT AT STH 23	30,602	1,732	1,212	1,732	8,543	11,362	20,452	22,184		
3	1579+00.40 / 1587+99.52	STH 23 EB WEST U-TURN MEDIAN	1,292	0	0	0	346	460	832	832		
3	1593+32.43 / 1606+28.70	INTERSECTION STH 23 AT CTH TT MEDIAN	2,623	0	0	0	306	407	2,216	2,216		
3	1613+13.90 / 1621+50.00	STH 23 EB EAST U-TURN MEDIAN	1,159	0	0	0	322	428	731	731		
1440-41-72 SUBTOTAL			**46,932**	**2,179**	**1,525**	**2,179**	**14,537**	**19,334**	**29,123**	**33,885**	**2,583**	
GRAND TOTAL			**50,669**	**2,179**	**1,525**	**2,179**	**17,221**	**22,904**	**29,290**	**36,751**	**5,282**	

NOTES:

(1) SALVAGED/UNSUABLE PAVEMENT MATERIAL IS INCLUDED IN CUT.

(2) EBS TO BE BACKFILLED WITH SELECT CRUSHED MATERIAL ITEM NUMBER 312.0110.

(3) REDUCED EBS IN FILL - EXCAVATED EBS MATERIAL IS USUABLE IN FILLS OUTSIDE THE 1:1 SLOPE. EBS IN FILL REDUCTION FACTOR = .70 - EBS MATERIAL TO BE WASTE

(4) EBS BACKFILL - THIS IS TO BE FILLED WITH SELECT CRUSHED MATERIAL. FILL FACTOR = 1.00. ITEM NUMBER 312.0110.

(5) EXPANDED FILL FACTOR = 1.33. EXPANDED FILL = UNEXPANDED FILL * FILL FACTOR

(6) THE MASS ORDINATE + OR - QTY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION. MINUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION.

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

3

SOIL MITIGATION

STATION	TO	STATION	LOCATION	(1) 208.1100 SELECT BORROW CY	* 312.0110 SELECT CRUSHED MATERIAL TON	645.0140 GEOTEXTILE TYPE SAS SY	REMARKS
1618+45	-	1621+55	STH 23, WB	169	854	434	EAST U-TURN - WB LEFT
52+34	-	59+00	CTH TT	481	3,296	1,246	NORTH CTH TT
PROJECT 1440-41-72 CATEGORY 0010 TOTAL				650	4,150	1,680	

(1) SELECT BORROW MATERIAL HAS A FILL FACTOR OF 1.15 APPLIED

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

REMOVING SMALL PIPE CULVERTS

STATION	LOCATION	203.0100 REMOVING SMALL PIPE CULVERTS EACH	REMARKS
17+63	SUNSET RD	1	24" CMP, 47' LONG, CROSS CULVERT
21+28	SUNSET RD	1	24" CMP, 46' LONG, CROSS CULVERT
PROJECT 1440-41-71 TOTAL 0010		**2**	
43+05	CTH TT, RT	1	18" CMP, 32' LONG, DWY CULVERT
43+28	CTH TT, RT	1	6" CMP, REMOVE 3' FOR NEW DWY CULVERT
54+17	CTH TT, RT	1	18" CMP, 40' LONG, DWY CULVERT
55+65	CTH TT, CROSS	1	24" CMP, 100' LONG, CROSS CULVERT
1601+24	OLD PLANK TRAIL	1	18" CMP, 51' LONG, CROSS CULVERT
1601+72	OLD PLANK TRAIL	1	18" CMP, 20' LONG, CROSS CULVERT
1602+20	OLD PLANK TRAIL	1	30" CMP, 190' LONG, OLD CTH TT CULVERT
1602+46	OLD PLANK TRAIL	1	30" HDPE, 36' LONG, CROSS CULVERT
PROJECT 1440-41- 72 TOTAL 0010		**8**	
PROJECT TOTAL CATEGORY 0010		**10**	

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

CLEARING AND GRUBBING

STATION	TO	STATION	LOCATION	201.0110 CLEARING SY	201.0210 GRUBBING SY	REMARKS
1608+00	-	1609+00	STH 32 WB, LT	30	30	SURFACE DRAIN OUTFALLS
1440-41-71 TOTAL 0010				**30**	**30**	
1602+00	-	1603+00	OLD PLANK TRAIL, RT	130	130	STORM SEWER OUTFALL
43+00	-	45+00	CTH TT, RT	80	80	RIGHT SHOULDER SOUTH CTH TT
52+00	-	57+00	CTH TT, RT & LT	5,560	5,560	NEW ALIGNMENT FOR NORTH CTH TT
1440-41-72 TOTAL 0010				**5,770**	**5,770**	
PROJECT TOTAL CATEGORY 0010				5,800	5,800	

PAVEMENT REMOVAL

STATION	TO	STATION	LOCATION	* 204.0100 REMOVING CONCRETE PAVEMENT SY	* 204.0110 REMOVING ASPHALTIC SURFACE SY	214.0100 OBLITERATING OLD ROAD STA	REMARKS
1568+54	-	1575+40	STH 23, EB RT	333	340	-	SUNSET ROAD, SOUTH
1570+27	-	1577+18	STH 23, MEDIAN	1,366	-	-	SUNSET ROAD, MEDIAN
1570+67	-	1577+82	STH 23, WB LT	351	185	-	SUNSET ROAD, NORTH
PROJECT 1440-41-71 CATEGORY 0010				**2,050**	**525**	**0**	
1579+68	-	1582+78	STH 23, EB RT	-	276	-	WEST U-TURN BULB OUT
1579+63	-	1588+00	STH 23, MEDIAN	-	343	-	WEST U-TURN MEDIAN
1591+34	-	1603+67	STH 23, EB RT	731	1,361	-	CTH TT, SOUTH
1593+32	-	1606+24	STH 23, MEDIAN	1,418	233	-	CTH TT, MEDIAN
1598+06	-	1606+23	STH 23, WB LT	601	1,974	-	CTH TT, NORTH
1613+14	-	1621+19	STH 23, MEDIAN	-	388	-	EAST U-TURN MEDIAN
1618+45	-	1621+44	STH 23, WB LT	-	200	-	EAST U-TURN BULB OUT
45+00	-	47+77	CTH TT	-	-	3	OBLITERATE OLD CTH TT
PROJECT 1440-41-72 CATEGORY 0010				**2,750**	**4,775**	**3**	
PROJECT TOTAL CATEGORY 0010				**4,800**	**5,300**	**3**	

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

3

REMOVING SURFACE DRAINS

STATION	TO	STATION	LOCATION	* 204.0100 REMOVING CONCRETE PAVEMENT SY	204.0190 REMOVING SURFACE DRAINS EACH	204.0220 REMOVING INLETS EACH	204.0245.01 REMOVING STORM SEWER (01. 12-INCH) LF	204.0245.02 REMOVING STORM SEWER (02. 18-INCH) LF	204.0291.S ABANDONING SEWER CY	* 690.0150 SAWING ASPHALT LF	* 690.0250 SAWING CONCRETE LF	REMARKS
1221+47	-	1222+01	STH 23, WB LT	17	-	1	53	-	1.6	10	27	EAST OF B-59-180
1221+77	-	1222+31	STH 23, WB RT	13	-	1	-	-	-	8	25	EAST OF B-59-180
1252+02	-	1252+70	STH 23, WB LT	34	-	2	78	-	0.4	9	46	EAST OF B-59-309
1252+21	-	1252+75	STH 23, WB RT	7	1	-	-	-	-	8	12	EAST OF B-59-309
1252+26	-	1252+36	STH 23, EB LT	12	-	1	-	-	-	-	32	EAST OF B-59-91
1252+49	-	1252+64	STH 23, EB RT	12	-	1	94	-	1.9	9	21	EAST OF B-59-91
1359+16	-	1359+67	STH 23, WB LT	11	-	1	81	-	1.3	9	20	EAST OF B-59-93
1359+37	-	1359+89	STH 23, WB RT	11	-	1	-	-	-	7	21	EAST OF B-59-93
1359+41	-	1359+51	STH 23, EB LT	13	-	1	-	-	-	-	32	EAST OF B-59-92
1359+63	-	1359+78	STH 23, EB RT	14	-	1	77	-	1.6	11	23	EAST OF B-59-92
1608+47	-	1608+98	STH 23, WB LT	12	-	1	33	-	1.2	8	22	EAST OF B-59-123
1608+47	-	1608+99	STH 23, WB RT	10	-	1	-	-	-	7	20	EAST OF B-59-123
1608+40	-	1608+55	STH 23, EB RT	15	-	1	20	-	-	11	23	EAST OF B-59-88
17+83	-	17+89	SUNSET ROAD	-	1	-	-	-	-	-	-	SE QUADRANT
18+12	-	18+18	SUNSET ROAD	-	1	-	-	-	-	-	-	SW QUADRANT
20+16	-	20+22	SUNSET ROAD	-	1	-	-	-	-	-	-	NE QUADRANT
20+96	-	21+02	SUNSET ROAD	-	1	-	-	-	-	-	-	NW QUADRANT
PROJECT 1440-41-71 CATEGORY 0010 TOTAL				181	5	13	436	0	8	97	324	
1601+76	-	1601+82	STH 23 EB	-	1	-	-	-	-	-	-	SW QUADRANT
1602+40	-	1602+46	STH 23 EB	-	1	-	-	-	-	-	-	SE QUADRANT
1601+24	-	1601+30	STH 23 WB	-	1	-	-	-	-	-	-	NW QUADRANT
1601+88	-	1601+94	STH 23 WB	-	1	-	-	-	-	-	-	NE QUADRANT
1600+54	-	1600+54	STH 23 WB	-	-	1	-	24	-	-	-	MEDIAN INLET
PROJECT 1440-41-72 CATEGORY 0010 TOTAL				0	4	1	0	24	0	0	0	
PROJECT TOTAL CATEGORY 0010				**181**	**9**	**14**	**436**	**24**	**8**	**97**	**324**	

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

3

BUTT JOINTS

STATION	TO	STATION	LOCATION	204.0105 REMOVING CONCRETE PAVEMENT BUTT JOINTS SY	204.0115 REMOVING ASPHALTIC SURFACE BUTT JOINTS SY	REMARKS
1121+90	-	1122+90	STH 23, EB	267	100	START OF PROJECT, EB LANE
1142+05	-	1143+69	STH 23, EB	-	8	PIONEER RD INT.
1182+13	-	1183+13	STH 23, EB	155	112	EB OFF RAMP TO CTH C
1191+36	-	1192+33	STH 23, EB	153	112	EB ON RAMP FROM CTH C
1205+46	-	1206+18	STH 23, EB	-	16	MAINTENANCE CROSS OVER
1218+06	-	1219+06	STH 23, EB	246	249	WEST APPROACH TO B-59-0097, SUNSET DR
1222+37	-	1223+37	STH 23, EB	268	137	EAST APPROACH TO B-59-0097, SUNSET DR
1247+06	-	1248+06	STH 23, EB	411	349	WEST APPROACH TO B-59-0091, STH 67
1252+58	-	1253+58	STH 23, EB	421	166	EAST APPROACH TO B-59-0091, STH 67
1275+66	-	1283+12	STH 23, EB	-	11	S. CTH OJ INT.
1355+58	-	1356+58	STH 23, EB	260	254	WEST APPROACH TO B-59-0092, STH 57
1359+67	-	1360+67	STH 23, EB	263	238	EAST APPROACH TO B-59-0092, STH 57
1392+90	-	1393+44	STH 23, EB	-	12	MAINTENANCE CROSS OVER
1411+85	-	1413+74	STH 23, EB	-	6	WILLOW RD. INT.
1412+40	-	1413+48	STH 23, WB	-	5	WILLOW RD. INT.
1465+30	-	1467+22	STH 23, EB	-	9	CTH M INT.
1492+25	-	1494+15	STH 23, EB	-	7	HILLSIDE RD. INT.
1492+73	-	1493+95	STH 23, WB	-	9	HILLSIDE RD. INT.
1519+40	-	1521+30	STH 23, EB	-	7	BRIDGEWOOD RD INT.
1519+84	-	1520+84	STH 23, WB	-	23	BRIDGEWOOD RD INT.
1557+91	-	1558+68	STH 23, EB	-	18	MAINTENANCE CROSS OVER
1605+18	-	1606+18	STH 23, EB	264	226	WEST APPROACH TO B-59-0088, SHEBOYGAN RIVER
1608+45	-	1609+45	STH 23, EB	265	212	EAST APPROACH TO B-59-0088, SHEBOYGAN RIVER
1649+24	-	1650+02	STH 23, EB	-	18	MAINTENANCE CROSS OVER
1656+00	-	1657+00	STH 23, WB	289	100	START OVERLAY ON STH 23 WB
1680+47	-	1681+47	STH 23, WB	289	113	END OVERLAY ON STH 23 WB
1680+50	-	1681+50	STH 23, EB	267	184	END OVERLAY ON STH 23 EB
1250+09	-	1251+09	23E TO 67 RAMP	233	111	23E TO 67 RAMP
1234+80	-	1235+30	67 TO 23E RAMP	197	72	67 TO 23E RAMP
1345+15	-	1346+15	57 TO 23W RAMP	154	100	57 TO 23W RAMP
1354+29	-	1355+31	57 TO 23W RAMP	195	87	57 TO 23W RAMP
1359+00	-	1360+00	23W TO 57 RAMP	288	106	23W TO 57 RAMP
1368+89	-	1369+89	23W TO 57 RAMP	159	100	23W TO 57 RAMP
1358+09	-	1359+09	23E TO 57 RAMP	329	67	23E TO 57 RAMP
1361+31	-	1362+31	57 TO 23E RAMP	156	100	57 TO 23E RAMP
1679+76	-	1680+76	32 TO 23W RAMP	156	100	32 TO 23W RAMP
1679+89	-	1680+89	23E TO 32 RAMP	156	100	23E TO 32 RAMP
PROJECT 1440-41-71 TOTAL CATEGORY 0010				**5,841**	**3,644**	

MILLING

STATION	TO	STATION	LOCATION	204.0109.S REMOVING CONCRETE SURFACE PARTIAL DEPTH SF	204.0120 REMOVING ASPHALTIC SURFACE MILLING SY	REMARKS
1121+90	-	1220+00	STH 23, WB	-	9,545	LEFT & RIGHT SHOULDER
1220+00	-	1250+00	STH 23, WB	-	3,707	LEFT & RIGHT SHOULDER
1250+00	-	1358+00	STH 23, WB	-	9,176	LEFT & RIGHT SHOULDER
1358+00	-	1565+00	STH 23, WB	-	19,494	LEFT & RIGHT SHOULDER
1565+00	-	1579+00	STH 23, WB	-	737	LEFT & RIGHT SHOULDER
1579+00	-	1622+00	STH 23, WB	-	2,891	LEFT & RIGHT SHOULDER
1622+00	-	1656+00	STH 23, WB	-	2,960	LEFT & RIGHT SHOULDER
1142+05	-	1143+69	PIONEER RD INT.	4,710	323	LEFT & RIGHT PARTIAL DEPTH & ASPHALT CONNECTION
1158+82	-	1160+82	INEZ CT INT.	5,156	-	LEFT & RIGHT PARTIAL DEPTH
1275+66	-	1283+12	S. CTH OJ INT.	13,863	789	LEFT & RIGHT PARTIAL DEPTH & ASPHALT CONNECTION
1295+24	-	1303+12	S. CTH E INT.	14,121	-	LEFT & RIGHT PARTIAL DEPTH
1322+02	-	1329+67	PLEASANT VIEW RD	13,470	-	LEFT & RIGHT PARTIAL DEPTH
1411+85	-	1413+74	WILLOW RD. INT.	3,673	899	LEFT & RIGHT PARTIAL DEPTH & ASPHALT CONNECTION
1448+40	-	1481+87	CTH M INT.	14,290	370	LEFT & RIGHT PARTIAL DEPTH & ASPHALT CONNECTION
1492+25	-	1494+15	HILLSIDE RD. INT.	3,570	593	LEFT & RIGHT PARTIAL DEPTH & ASPHALT CONNECTION
1519+40	-	1521+30	BRIDGEWOOD RD INT.	3,947	688	LEFT & RIGHT PARTIAL DEPTH & ASPHALT BUTT JOINT
1631+80	-	1633+74	MEADOWLARK RD INT.	3,500	930	LEFT & RIGHT PARTIAL DEPTH & ASPHALT BUTT JOINT
1205+46	-	1206+18	STH 23 CROSS OVER	-	209	MAINTENANCE CROSS OVER
1392+90	-	1393+44	STH 23 CROSS OVER	-	201	MAINTENANCE CROSS OVER
1557+91	-	1558+68	STH 23 CROSS OVER	-	243	MAINTENANCE CROSS OVER
1649+24	-	1650+02	STH 23 CROSS OVER	-	245	MAINTENANCE CROSS OVER
PROJECT 1440-41-71 TOTAL CATEGORY 0010				**80,300**	**54,000**	

REMOVING UNDERDRAIN 6-INCH

STATION	TO	STATION	LOCATION	204.9090.S.01 REMOVING UNDERDRAIN 6-INCH LF
1570+67	-	1577+82	SUNSET DR, WB - LEFT	715
PROJECT 1440-41-71 CATEGORY 0010 TOTAL				**715**

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

BASE PATCHING

STATION	TO	STATION	LOCATION	* 204.0110 REMOVING ASPHALTIC SURFACE SY	390.0100 REMOVING PAVEMENT FOR BASE PATCHING CY	390.0305 BASE PATCHING CONCRETE HES CY	* 416.0610 DRILLED TIE BARS EACH	* 416.0620 DRILLED DOWEL BARS EACH	* 465.0105 ASPHALTIC SURFACE TON	* 690.0150 SAWING ASPHALT LF	* 690.0250 SAWING CONCRETE LF
1141+25	-	1142+82	STH 23, EB	35	34	34	62	12	8	167	175
1143+34	-	1143+50	STH 23, EB	-	8	8	10	30	-	-	68
1146+39	-	1146+45	STH 23, EB	2	2	2	2	20	1	10	32
1146+59	-	1146+66	STH 23, EB	2	2	2	2	20	1	10	32
1149+45	-	1149+60	STH 23, EB	4	5	5	5	20	1	19	41
1150+14	-	1150+21	STH 23, EB	2	2	2	2	20	1	10	32
1150+68	-	1150+75	STH 23, EB	2	2	2	2	20	1	10	32
1154+18	-	1154+25	STH 23, EB	2	2	2	2	20	1	10	32
1155+80	-	1156+40	STH 23, EB	14	20	20	23	20	3	64	86
1156+90	-	1156+97	STH 23, EB	2	2	2	2	20	1	10	32
1157+48	-	1157+55	STH 23, EB	2	4	4	2	40	1	10	58
1157+93	-	1158+00	STH 23, EB	2	2	2	2	20	1	10	32
1158+16	-	1158+23	STH 23, EB	2	2	2	2	20	1	10	32
1158+60	-	1158+67	STH 23, EB	2	4	4	2	40	1	10	58
1158+93	-	1159+05	STH 23, EB	3	4	4	4	20	1	16	38
1159+17	-	1159+23	STH 23, EB	2	2	2	2	20	1	10	32
1160+76	-	1160+83	STH 23, EB	-	2	2	3	20	-	-	38
1161+32	-	1161+38	STH 23, EB	-	2	2	3	20	-	-	38
1162+23	-	1162+29	STH 23, EB	2	2	2	2	20	1	10	32
1164+27	-	1164+33	STH 23, EB	2	4	4	2	40	1	10	58
1171+11	-	1171+17	STH 23, EB	2	2	2	2	20	1	10	32
1177+28	-	1177+35	STH 23, EB	2	2	2	2	20	1	10	32
1194+14	-	1194+23	STH 23, EB	2	3	3	3	20	1	12	34
1206+48	-	1206+61	STH 23, EB	-	4	4	8	20	-	-	50
1208+47	-	1208+67	STH 23, EB	5	7	7	7	20	2	24	46
1212+12	-	1212+18	STH 23, EB	2	2	2	2	20	1	10	32
1215+08	-	1215+14	STH 23, EB	2	2	2	2	20	1	10	32
1216+24	-	1216+31	STH 23, EB	2	2	2	2	20	1	10	32
1224+07	-	1224+14	STH 23, EB	2	2	2	2	20	1	10	32
1226+95	-	1227+02	STH 23, EB	2	2	2	2	20	1	10	32
1227+99	-	1228+20	STH 23, EB	5	7	7	7	20	2	24	46
1230+80	-	1230+95	STH 23, EB	4	5	5	5	20	1	19	41
1231+53	-	1231+65	STH 23, EB	3	8	8	4	40	1	16	64
1235+00	-	1235+07	STH 23, EB	2	2	2	2	20	1	10	32
1235+83	-	1235+90	STH 23, EB	2	2	2	2	20	1	10	32
1236+31	-	1236+43	STH 23, EB	3	4	4	4	20	1	16	38
1236+41	-	1236+48	STH 23, EB	2	2	2	2	20	1	10	32

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

CONTINUED ON NEXT PAGE

3

BASE PATCHING (CONTINUED)

STATION	TO	STATION	LOCATION	* 204.0110 REMOVING ASPHALTIC SURFACE SY	390.0100 REMOVING PAVEMENT FOR BASE PATCHING CY	390.0305 BASE PATCHING CONCRETE HES CY	* 416.0610 DRILLED TIE BARS EACH	* 416.0620 DRILLED DOWEL BARS EACH	* 465.0105 ASPHALTIC SURFACE TON	* 690.0150 SAWING ASPHALT LF	* 690.0250 SAWING CONCRETE LF
1237+60	-	1237+67	STH 23, EB	2	2	2	2	20	1	10	32
1238+83	-	1238+96	STH 23, EB	3	4	4	4	20	1	16	38
1241+10	-	1241+38	STH 23, EB	6	9	9	10	20	2	31	53
1241+32	-	1241+38	STH 23, EB	2	2	2	2	20	1	10	32
1253+19	-	1253+25	STH 23, EB	2	2	2	2	20	1	10	32
1323+33	-	1323+49	STH 23, EB	4	10	10	5	40	1	19	67
1334+99	-	1335+06	STH 23, EB	2	3	3	2	22	1	11	36
1344+41	-	1344+57	STH 23, EB	2	2	2	1	18	1	9	29
1345+09	-	1345+16	STH 23, EB	2	2	2	2	20	1	10	33
1367+71	-	1367+78	STH 23, EB	2	4	4	2	38	1	10	54
1371+71	-	1371+78	STH 23, EB	2	3	3	2	22	1	10	35
1372+12	-	1372+20	STH 23, EB	2	3	3	3	22	1	12	36
1402+34	-	1402+41	STH 23, EB	2	2	2	2	20	1	10	32
1414+97	-	1415+04	STH 23, EB	2	2	2	2	20	1	10	32
1425+49	-	1425+55	STH 23, EB	2	2	2	2	20	1	10	32
1468+21	-	1468+27	STH 23, EB	2	2	2	2	20	1	10	32
1469+00	-	1469+07	STH 23, EB	2	2	2	2	20	1	10	32
1510+94	-	1511+00	STH 23, EB	2	2	2	2	20	1	10	32
1547+13	-	1547+19	STH 23, EB	2	2	2	2	20	1	10	32
1572+04	-	1572+12	STH 23, EB	2	3	3	2	20	1	11	34
1586+28	-	1586+35	STH 23, EB	2	2	2	2	20	1	10	32
1609+27	-	1609+46	STH 23, EB	4	6	6	7	20	1	22	44
1610+01	-	1610+08	STH 23, EB	2	2	2	2	20	1	10	32
1632+13	-	1632+85	STH 23, EB	-	22	22	56	18	-	-	169
1633+49	-	1633+56	STH 23, EB	-	2	2	3	20	-	-	38
1643+30	-	1643+36	STH 23, EB	2	4	4	2	40	1	10	58
1643+92	-	1643+98	STH 23, EB	2	2	2	2	20	1	10	32
1645+87	-	1645+94	STH 23, EB	2	2	2	2	20	1	10	32
1646+87	-	1647+02	STH 23, EB	4	9	9	5	40	1	18	66
1647+37	-	1647+51	STH 23, EB	4	5	5	5	20	1	18	40
1652+95	-	1653+01	STH 23, EB	2	2	2	2	20	1	10	32
1676+74	-	1676+80	STH 23, EB	2	2	2	2	20	1	10	32
1681+20	-	1681+32	STH 23, EB	3	8	8	4	40	1	16	64

CONTINUED ON NEXT PAGE

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

3

BASE PATCHING (CONTINUED)

STATION	TO	STATION	LOCATION	* 204.0110 REMOVING ASPHALTIC SURFACE SY	390.0100 REMOVING PAVEMENT FOR BASE PATCHING CY	390.0305 BASE PATCHING CONCRETE HES CY	* 416.0610 DRILLED TIE BARS EACH	* 416.0620 DRILLED DOWEL BARS EACH	* 465.0105 ASPHALTIC SURFACE TON	* 690.0150 SAWING ASPHALT LF	* 690.0250 SAWING CONCRETE LF
1235+01	-	1235+30	67 RAMP TO STH 23E	-	11	11	22	22	-	-	88
1346+56	-	1346+65	STH 23E TO 57 RAMP	2	3	3	2	28	1	11	42
1348+61	-	1348+70	STH 23E TO 57 RAMP	3	4	4	3	24	1	14	41
1349+22	-	1349+35	STH 23E TO 57 RAMP	3	5	5	4	26	1	16	46
1352+55	-	1352+61	STH 23E TO 57 RAMP	2	3	3	2	24	1	10	37
1353+33	-	1353+42	STH 23E TO 57 RAMP	2	4	4	3	22	1	13	39
1357+35	-	1357+44	STH 23E TO 57 RAMP	2	4	4	3	26	1	12	42
1362+85	-	1362+94	57 RAMP TO STH 23E	2	4	4	3	26	1	12	41
1348+78	-	1348+85	57 RAMP TO STH 23W	2	3	3	2	26	1	11	40
1353+00	-	1353+07	57 RAMP TO STH 23W	2	3	3	2	26	1	11	41
1353+28	-	1353+36	57 RAMP TO STH 23W	2	4	4	2	28	1	12	43
1354+05	-	1354+15	57 RAMP TO STH 23W	2	4	4	3	28	1	13	45
1363+98	-	1364+05	STH 23W TO 57 RAMP	2	3	3	2	24	1	10	36
1675+95	-	1676+04	STH 23E TO 32 RAMP	4	4	4	7	12	1	22	34
1676+31	-	1676+41	32 RAMP TO STH 23W	3	4	4	3	24	1	14	40
1679+50	-	1679+57	32 RAMP TO STH 23W	2	3	3	2	24	1	11	39
1679+63	-	1679+70	32 RAMP TO STH 23W	2	3	3	2	24	1	11	39
1679+78	-	1679+86	32 RAMP TO STH 23W	2	4	4	3	24	1	12	40
ROJECT 1440-41-71 CATEGORY 0010 TOTAL				**239**	**369**	**369**	**411**	**2,020**	**93**	**1,205**	**3,796**

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

PAVEMENT REPAIR

STATION	TO	STATION	LOCATION	* 204.0110 REMOVING ASPHALTIC SURFACE SY	* 416.0610 DRILLED TIE BARS EACH	* 416.0620 DRILLED DOWEL BARS EACH	416.1710 CONCRETE PAVEMENT REPAIR SY	416.1715 CONCRETE PAVEMENT REPAIR SHES SY	416.1720 CONCRETE PAVEMENT REPLACEMENT SY	416.1725 CONCRETE PAVEMENT REPLACEMENT SHES SY	* 465.0105 ASPHALTIC SURFACE TON	* 690.0150 SAWING ASPHALT LF	* 690.0250 SAWING CONCRETE LF
1169+23	-	1169+29	STH 23 WB	2	3	21	8	-	-	-	1	10	32
1175+80	-	1175+91	STH 23 WB	3	5	44	-	-	31	-	1	15	64
1251+23	-	1251+34	STH 23 EB TO STH 67 OFF RAMP	-	3	37	-	4	-	-	-	-	59
1252+36	-	1252+63	STH 23 WB	7	-	42	-	-	81	-	2	32	52
1308+60	-	1308+73	STH 23 WB	3	5	21	17	-	-	-	1	16	38
1323+91	-	1323+98	STH 23 WB	2	3	23	10	-	-	-	1	11	34
1340+74	-	1340+80	STH 23 WB	2	3	24	11	-	-	-	1	11	37
1344+28	-	1344+35	STH 57 TO STH 23 WB ON RAMP	3	-	28	-	3	-	-	1	22	34
1369+60	-	1369+66	STH 23 WB	3	-	43	-	-	18	-	1	20	52
1370+36	-	1370+43	STH 23 WB TO STH 57 OFF RAMP	3	-	26	-	3	-	-	1	19	32
1371+03	-	1371+10	STH 23 WB TO STH 57 OFF RAMP	2	3	27	-	3	-	-	1	10	39
1409+98	-	1410+11	STH 23 WB	3	5	32	-	-	27	-	1	16	52
1411+81	-	1411+94	STH 23 WB	-	11	21	17	-	-	-	-	-	50
1436+75	-	1436+81	STH 23 WB	2	3	21	9	-	-	-	1	10	32
1440+03	-	1440+09	STH 23 WB	3	-	42	-	-	18	-	1	20	52
1449+88	-	1450+00	STH 23 WB	3	5	34	-	-	30	-	1	16	55
1451+72	-	1451+84	STH 23 WB	3	5	21	17	-	-	-	1	16	38
1515+76	-	1515+82	STH 23 WB	2	3	21	9	-	-	-	1	10	32
1520+99	-	1521+05	STH 23 WB	-	5	21	9	-	-	-	-	-	38
1526+55	-	1526+61	STH 23 WB	2	3	21	9	-	-	-	1	10	32
1544+70	-	1544+76	STH 23 WB	2	3	21	9	-	-	-	1	10	32
1559+35	-	1559+41	STH 23 WB	2	3	21	9	-	-	-	1	10	32
1563+48	-	1563+63	STH 23 WB	4	6	21	-	-	22	-	1	19	41
1571+35	-	1571+41	STH 23 WB	2	3	21	9	-	-	-	1	10	32
1593+18	-	1593+24	STH 23 WB	2	3	21	9	-	-	-	1	10	32
1601+76	-	1601+91	STH 23 WB	-	13	21	-	-	23	-	-	-	56
1631+72	-	1631+82	STH 23 WB	-	8	21	15	-	-	-	-	-	46
1644+35	-	1644+41	STH 23 WB	2	3	21	9	-	-	-	1	10	32
1645+14	-	1645+24	STH 23 WB	3	4	21	15	-	-	-	1	14	36
1651+50	-	1651+56	STH 23 WB	2	3	21	9	-	-	-	1	10	32
1681+26	-	1681+57	STH 32 TO STH 23 WB ON RAMP	-	26	27	-	-	-	13	-	-	95
1681+18	-	1681+76	STH 23 EB TO STH 32 OFF RAMP	19	-	23	-	-	-	14	4	93	60
PROJECT 1440-41-71 CATEGORY 0010				**86**	**140**	**830**	**200**	**13**	**250**	**27**	**30**	**450**	**1,380**

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

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REMOVING CURB AND GUTTER

STATION	TO	STATION	LOCATION	204.0150 REMOVING CURB & GUTTER LF	REMARKS
18+13	-	18+72	SUNSET RD, LT	75	SUNSET RD, SW QUAD
17+84	-	18+09	SUNSET RD, RT	60	SUNSET RD, SE QUAD
1571+81	-	20+96	SUNSET RD, LT	80	SUNSET RD, NW QUAD
1572+71	-	20+38	SUNSET RD, CL	100	SUNSET RD, ISLAND
1573+44	-	20+15	SUNSET RD, RT	65	SUNSET RD, NE QUAD
PROJECT 1440-41-71 TOTAL 0010				**380**	
1601+28	-	1601+84	STH 23, RT	77	CTH TT, SW QUAD
1602+15	-	1602+31	STH 23, RT	96	CTH TT, S ISLAND
1602+40	-	1602+84	STH 23, RT	71	CTH TT, SE QUAD
1600+87	-	1601+28	STH 23, LT	65	CTH TT, NW QUAD
1601+45	-	1601+58	STH 23, LT	79	CTH TT, N ISLAND
1601+88	-	1602+39	STH 23, LT	72	CTH TT, NE QUAD
PROJECT 1440-41- 72 TOTAL 0010				**460**	
PROJECT TOTAL CATEGORY 0010				**840**	

FENCING

STATION	TO	STATION	LOCATION	204.0170 REMOVING FENCE LF	616.0100.01 FENCE WOVEN WIRE (HEIGHT) (01. 4FT) LF	REMARKS
1252+45	-	1252+64	STH 23, RT	40	40	SE QUAD AT STH 67
1608+37	-	1608+42	STH 23, RT	15	15	SHEBOYGAN RIVER BRIDGE SE QUAD
1608+41	-	1608+62	STH 23, LT	30	30	SHEBOYGAN RIVER BRIDGE NE QUAD
PROJECT 1440-41-71 CATEGORY 0010 TOTAL				**85**	**85**	
1579+49	-	1581+85	STH 23, RT	330	342	WEST U-TURN
1596+50	-	1600+56	STH 23, RT	530	440	SW QUAD AT CTH TT
1600+15	-	1603+11	STH 23, RT	185	366	SE QUAD AT CTH TT
1619+52	-	1621+70	STH 23, LT	215	222	EAST U-TURN
52+70	-	53+33	CTH TT	195	-	NORTH CTH TT
PROJECT 1440-41-72 CATEGORY 0010 TOTAL				**1,455**	**1,370**	
PROJECT TOTAL CATEGORY 0010				**1,540**	**1,455**	

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

REMOVING GUARDRAIL

STATION	TO	STATION	LOCATION	204.0165 REMOVING GUARDRAIL LF	REMARKS
1193+02	-	1195+08	STH 32, EB	420	MEDIAN BULLNOSE AT CTH C
1213+68	-	1219+28	STH 32, EB RT	566	AT SUNSET DRIVE
1215+20	-	1218+93	STH 32, EB LT	378	AT SUNSET DRIVE
1221+47	-	1226+07	STH 32, WB LT	465	AT SUNSET DRIVE
1221+77	-	1225+25	STH 32, WB RT	352	AT SUNSET DRIVE
1244+64	-	1248+11	STH 32, EB LT	351	AT STH 67
1252+01	-	1254+50	STH 32, WB LT	251	AT STH 67
1252+21	-	1255+68	STH 32, WB RT	352	AT STH 67
1252+47	-	1256+89	STH 32, EB RT	448	AT STH 67
1352+69	-	1356+85	STH 32, EB RT	242	AT STH 57
1354+15	-	1356+62	STH 32, EB LT	411	AT STH 57
1359+13	-	1362+92	STH 32, WB LT	366	AT STH 57
1359+35	-	1362+07	STH 32, WB RT	267	AT STH 57
1359+60	-	1362+76	STH 32, EB RT	317	AT STH 57
1602+82	-	1606+30	STH 32, EB RT	342	AT SHEBOYGAN RIVER
1603+22	-	1606+30	STH 32, EB LT	303	AT SHEBOYGAN RIVER
1608+39	-	1612+27	STH 32, EB RT	390	AT SHEBOYGAN RIVER
1608+45	-	1611+17	STH 32, WB RT	267	AT SHEBOYGAN RIVER
1608+45	-	1612+17	STH 32, WB LT	368	AT SHEBOYGAN RIVER
1677+72	-	1681+63	STH 32, EB RT	386	AT STH 32
1667+78	-	1681+63	STH 32, EB LT	380	AT STH 32
1245+41	-	1248+56	STH 67 RAMP TO 23E, RT	314	RAMP FROM 67 TO 23E
PROJECT 1440-41-71 CATEGORY 0010 TOTAL				**7,936**	

REMOVING DELINEATORS & MARKERS

STATION	LOCATION	204.0180 REMOVING DELINEATORS AND MARKERS EACH
1598+60	STH 23, EB RT	1
PROJECT 1440-41-72 TOTAL 0010		**1**

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BASE AGGREGATE

STATION	TO	STATION	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	* 305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	* 312.0110 SELECT CRUSHED MATERIAL TON	* 624.0100 WATER MGAL	REMARKS
1121+90	-	1220+00	STH 23, EB	1,944	75	-	31	BOTH SHOULDERS
1121+90	-	1220+00	STH 23, WB	951	-	-	15	BOTH SHOULDERS
1220+00	-	1250+00	STH 23, EB	528	69	-	9	BOTH SHOULDERS
1220+00	-	1250+00	STH 23, WB	285	64	-	6	BOTH SHOULDERS
1250+00	-	1358+00	STH 23, EB	1,091	94	-	18	BOTH SHOULDERS
1250+00	-	1358+00	STH 23, WB	973	49	-	16	BOTH SHOULDERS
1358+00	-	1565+00	STH 23, EB	1,860	29	-	30	BOTH SHOULDERS
1358+00	-	1565+00	STH 23, WB	1,929	49	-	31	BOTH SHOULDERS
1565+00	-	1579+00	STH 23, EB	91	181	-	5	LEFT SHOULDER
1565+00	-	1579+00	STH 23, EB	62	1,199	-	19	RIGHT SHOULDER
1565+00	-	1579+00	STH 23, WB	54	1,094	-	18	LEFT SHOULDER
1565+00	-	1579+00	STH 23, WB	88	261	-	6	RIGHT SHOULDER
1579+00	-	1622+00	STH 23, EB	276	86	-	6	BOTH SHOULDERS
1579+00	-	1622+00	STH 23, WB	287	49	-	6	BOTH SHOULDERS
1622+00	-	1688+28	STH 23, EB	612	89	-	11	BOTH SHOULDERS & DWY
1622+00	-	1688+28	STH 23, WB	669	62	-	11	BOTH SHOULDERS & DWY
PROJECT 1440-41-71 CAT. 0010 TOTAL				**11,700**	**3,450**	**0**	**238**	
1579+60	-	1582+78	STH 23, EB	84	857	670	25	WEST U-TURN - EB RIGHT
1579+60	-	1588+00	STH 23, EB	143	1,408	994	39	WEST U-TURN - MEDIAN
1591+34	-	1603+67	STH 23, EB	316	2,385	1,808	68	CTH TT INTERSECTION - EB RIGHT
1593+32	-	1606+27	STH 23, EB	268	3,291	2,535	92	CTH TT INTERSECTION - MEDIAN
1613+14	-	1621+55	STH 23, EB	151	1,506	1,088	42	EAST U-TURN - MEDIAN
1598+09	-	1606+27	STH 23, WB	174	1,680	1,315	48	CTH TT INTERSECTION - WB LEFT
1618+45	-	1621+55	STH 23, WB	76	814	639	23	EAST U-TURN - WB LEFT
1578+00	-	1582+00	OLD PLANK TRAIL	25	258	-	5	WEST OLD PLANK TRAIL
1594+50	-	1603+25	OLD PLANK TRAIL	50	531	-	9	EAST OLD PLANK TRAIL
42+26	-	50+26	CTH TT	317	2,314	1,930	69	SOUTH CTH TT
52+34	-	59+00	CTH TT	262	1,906	1,595	57	NORTH CTH TT
53+69	-	54+41	CTH TT DWY	134	-	-	3	DRIVEWAYS ON LT & RT OF CTH TT
		1591+50	STH 23, EB	-	-	2	-	FRENCH DRAIN, RT
		1594+00	STH 23, EB	-	-	4	-	FRENCH DRAIN, RT & LT
		1596+50	STH 23, EB	-	-	4	-	FRENCH DRAIN, RT & LT

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

CONTINUED ON NEXT PAGE

BASE AGGREGATE (CONTINUED)

STATION	TO	STATION	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	* 305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	* 312.0110 SELECT CRUSHED MATERIAL TON	* 624.0100 WATER MGAL	REMARKS
		1599+00	STH 23, EB	-	-	2	-	FRENCH DRAIN, RT
		1601+00	STH 23, EB	-	-	2	-	FRENCH DRAIN, RT
		1603+50	STH 23, EB	-	-	4	-	FRENCH DRAIN, RT & LT
		1596+50	STH 23, WB	-	-	2	-	FRENCH DRAIN, LT
		1599+00	STH 23, WB	-	-	2	-	FRENCH DRAIN, LT
		1601+00	STH 23, WB	-	-	2	-	FRENCH DRAIN, RT & LT
		1603+50	STH 23, WB	-	-	2	-	FRENCH DRAIN, RT & LT
PROJECT 1440-41-72 CAT. 0010 TOTAL				**2,000**	**16,950**	**12,600**	**480**	
PROJECT TOTAL CATEGORY 0010				**13,700**	**20,400**	**12,600**	**718**	

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

SURFACE DRAINS

STATION	TO	STATION	LOCATION	* 305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	415.0080 CONCRETE PAVEMENT 8-INCH SY	* 416.0610 DRILLED TIE BARS EACH	* 416.0620 DRILLED DOWEL BARS EACH	521.1012 APRON ENDWALLS FOR CULVERT PIPE STEEL 12-INCH EACH	530.0112 CULVERT PIPE CORRUGATED POLYETHYLENE 12-INCH LF	601.0590 CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBTT LF	602.3010 CONCRETE SURFACE DRAINS CY	* 606.0200 RIPRAP MEDIUM CY	611.0654 INLET COVERS TYPE V EACH	611.3220 INLETS 2X2-FT EACH	* 624.0100 WATER MGAL	* 645.0120 GEOTEXTILE TYPE HR SY	INLET STRUCTURE #	RIM ELEVATION	PIPE OUTLET INV. ELEV.	ENDWALL INV. ELEV.
1221+47	-	1222+01	STH 23, WB LT	18	40	18	7	1	54	50	-	3	1	1	1	6	A	893.53	889.03	875.35
1221+77	-	1222+31	STH 23, WB RT	12	27	18	5	-	-	67	0.8	3	-	-	1	6				
1252+02	-	1252+70	STH 23, WB LT	22	48	23	7	1	91	64	-	3	2	2	1	6	B	864.59/864.48	860.09/859.98	840.10
1252+21	-	1252+75	STH 23, WB RT	13	28	18	5	-	-	67	0.8	3	-	-	1	6				
1252+26	-	1252+36	STH 23, EB LT	6	12	4	8	-	-	24	0.9	3	-	-	1	6				
1252+49	-	1252+64	STH 23, EB RT	6	13	5	7	1	94	12	-	3	1	1	1	6	C	864.97	860.47	834.99
1359+16	-	1359+67	STH 23, WB LT	17	38	18	7	1	76	48	-	3	1	1	1	6	D	812.09	807.59	788.26
1359+37	-	1359+89	STH 23, WB RT	14	30	17	6	-	-	70	0.9	3	-	-	1	6				
1359+41	-	1359+51	STH 23, EB LT	6	13	4	16	-	-	23	0.8	3	-	-	1	6				
1359+63	-	1359+78	STH 23, EB RT	8	16	5	8	1	70	10	-	3	1	1	1	6	E	812.23	807.73	789.56
1608+47	-	1608+98	STH 23, WB LT	17	38	18	8	1	30	48	-	3	1	1	1	6	F	709.15	704.65	701.74
1608+47	-	1608+99	STH 23, WB RT	13	28	18	6	-	-	79	0.8	3	-	-	1	6				
1608+40	-	1608+55	STH 23, EB RT	8	16	6	9	1	20	12	-	3	1	1	1	6	G	709.65	705.15	702.10
OJECT 1440-41-71 CAT. 0010 TOTAL				**160**	**347**	**172**	**99**	**7**	**435**	**574**	**5**	**39**	**8**	**8**	**13**	**78**				

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

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				HMA					*		
				450.4000 HMA COLD WEATHER PAVING	455.0605	450.5224 HMA PAVEMENT 4 LT 58-28 S	450.6223 HMA PAVEMENT 3 MT 58-28 S	450.6224 HMA PAVEMENT 4 MT 58-28 S	465.0105 ASPHALTIC SURFACE	465.0305 ASPHALTIC SURFACE SAFETY ISLANDS	
STATION	TO	STATION	LOCATION	TON	TACK COAT GAL	TON	TON	TON	TON	TON	REMARKS
1121+90	-	1220+00	STH 23, EB	1,100	2,391	-	-	4,373	-	-	MAINLINE & LEFT SHOULDER
1121+90	-	1220+00	STH 23, EB	210	494	810	-	-	-	-	RIGHT SHOULDER
1121+90	-	1220+00	STH 23, WB	290	693	1,139	-	-	-	-	LEFT & RIGHT SHOULDER
1220+00	-	1250+00	STH 23, EB	290	628	-	-	1,142	-	-	MAINLINE & LEFT SHOULDER
1220+00	-	1250+00	STH 23, EB	70	148	244	-	-	-	-	RIGHT SHOULDER
1220+00	-	1250+00	STH 23, WB	80	186	306	-	-	-	-	LEFT & RIGHT SHOULDER
1250+00	-	1358+00	STH 23, EB	1,000	2,184	-	-	3,993	-	-	MAINLINE & LEFT SHOULDER
1250+00	-	1358+00	STH 23, EB	210	495	813	-	-	-	-	RIGHT SHOULDER
1250+00	-	1358+00	STH 23, WB	260	631	1,035	-	-	-	-	LEFT & RIGHT SHOULDER
1358+00	-	1565+00	STH 23, EB	2,030	4,440	-	-	8,115	-	-	MAINLINE & LEFT SHOULDER
1358+00	-	1565+00	STH 23, EB	480	1,165	1,914	-	-	-	-	RIGHT SHOULDER
1358+00	-	1565+00	STH 23, WB	530	1,274	2,096	-	-	-	-	LEFT & RIGHT SHOULDER
1565+00	-	1579+00	STH 23, EB	130	262	-	-	483	-	-	MAINLINE
1565+00	-	1579+00	STH 23, EB	30	43	-	17	71	-	-	LEFT SHOULDER
1565+00	-	1579+00	STH 23, EB	100	122	74	190	127	-	-	RIGHT SHOULDER & TURN LANE
1565+00	-	1579+00	STH 23, WB	90	101	53	166	111	-	-	LEFT SHOULDER & TURN LANE
1565+00	-	1579+00	STH 23, WB	20	20	69	-	-	-	-	RIGHT SHOULDER
1579+00	-	1622+00	STH 23, EB	400	861	-	-	1,571	-	-	MAINLINE & LEFT SHOULDER
1579+00	-	1622+00	STH 23, EB	70	171	280	-	-	-	-	RIGHT SHOULDER
1579+00	-	1622+00	STH 23, WB	90	204	333	-	-	-	-	LEFT & RIGHT SHOULDER
1622+00	-	1688+28	STH 23, EB	600	1,313	-	-	2,398	-	-	MAINLINE & LEFT SHOULDER
1622+00	-	1688+28	STH 23, EB	150	353	579	-	-	-	-	RIGHT SHOULDER
1622+00	-	1688+28	STH 23, WB	410	907	-	-	1,614	-	-	MAINLINE & LEFT SHOULDER
1622+00	-	1688+28	STH 23, WB	70	149	245	-	-	-	-	RIGHT SHOULDER
1236+30	-	1251+12	23E TO 67 RAMP	120	270	-	-	443	-	-	RAMP & BOTH SHOULDERS
1230+08	-	1237+32	67 TO 23W RAMP	20	43	-	-	70	-	-	BOTH SHOULDERS
1242+32	-	1245+75	23W TO 67 RAMP	20	32	-	-	53	-	-	BOTH SHOULDERS
1234+80	-	1248+66	67 TO 23E RAMP	110	262	-	-	431	-	-	RAMP & BOTH SHOULDERS
1345+50	-	1359+09	23E TO 57 RAMP	110	261	-	-	428	-	-	RAMP & BOTH SHOULDERS
1344+00	-	1355+31	57 TO 23W RAMP	80	191	-	-	314	-	-	RAMP & BOTH SHOULDERS
17+40	-	18+13	SUNSET ROAD	20	18	-	44	29	-	-	SOUTH SUNSET RD, PAVED SHOULDERS & ISLAND
20+21	-	21+96	SUNSET ROAD	50	42	-	103	69	-	-	NORTH SUNSET RD, PAVED SHOULDERS & ISLAND
1669+00	-	1680+76	32 TO 23W RAMP	90	211	-	-	346	-	-	RAMP & BOTH SHOULDERS
1668+00	-	1680+89	23E TO 32 RAMP	100	228	-	-	375	-	-	RAMP & BOTH SHOULDERS

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

CONTINUED ON NEXT PAGE

HMA (CONTINUED)

STATION	TO	STATION	LOCATION	450.4000 HMA COLD WEATHER PAVING TON	455.0605 TACK COAT GAL	450.5224 HMA PAVEMENT 4 LT 58-28 S TON	450.6223 HMA PAVEMENT 3 MT 58-28 S TON	450.6224 HMA PAVEMENT 4 MT 58-28 S TON	* 465.0105 ASPHALTIC SURFACE TON	465.0305 ASPHALTIC SURFACE SAFETY ISLANDS TON	REMARKS
1142+05	-	1143+69	PIONEER RD INT.	20	48	-	-	59	-	-	TURN LANE MILLED AREA & SIDE ROAD REPAVEMENT
1158+82	-	1160+82	INEZ CT INT.	10	26	-	-	22	-	-	TURN LANE MILLED AREA
1275+66	-	1283+12	S. CTH OJ INT.	50	164	-	-	180	-	-	TURN LANE MILLED AREA & SIDE ROAD REPAVEMENT
1295+24	-	1303+12	S. CTH E INT.	30	110	-	-	91	-	-	TURN LANE MILLED AREA
1322+02	-	1329+67	PLEASANT VIEW RD	30	105	-	-	87	-	-	TURN LANE MILLED AREA
1411+85	-	1413+74	WILLOW RD. INT.	50	85	-	-	177	-	-	TURN LANE MILLED AREA & SIDE ROAD REPAVEMENT
1448+40	-	1481+87	CTH M INT.	40	138	-	-	135	-	-	TURN LANE MILLED AREA & SIDE ROAD REPAVEMENT
1492+25	-	1494+15	HILLSIDE RD. INT.	40	70	-	-	125	-	-	TURN LANE MILLED AREA & SIDE ROAD REPAVEMENT
1519+40	-	1521+30	BRIDGEWOOD RD INT.	40	80	-	-	148	-	-	TURN LANE MILLED AREA & SIDE ROAD REPAVEMENT
1631+80	-	1633+74	MEADOWLARK RD INT.	60	94	-	-	237	-	-	TURN LANE MILLED AREA & SIDE ROAD REPAVEMENT
1205+46	-	1206+18	STH 23 CROSS OVER	10	15	-	-	12	-	-	MAINTENANCE CROSS OVER
1392+90	-	1393+44	STH 23 CROSS OVER	10	15	-	-	12	-	-	MAINTENANCE CROSS OVER
1557+91	-	1558+68	STH 23 CROSS OVER	10	17	-	-	14	-	-	MAINTENANCE CROSS OVER
PROJECT 1440-41-71 CATEGORY 0010 TOTAL				**9,830**	**21,760**	**9,990**	**520**	**27,855**	**0**	**0**	
1579+00	-	1622+00	STH 23, EB	460	380	-	1,200	622	-	90	MEDIAN & ISLANDS
1579+00	-	1622+00	STH 23, EB	310	244	-	806	405	-	-	EB TURN LANES
1579+00	-	1622+00	STH 23, WB	250	200	-	649	325	-	-	WB TURN LANES
44+26	-	50+00	CTH TT, SOUTH	260	210	-	685	343	-	-	CTH TT MAINLINE, SHOULDERS & ISLAND
52+60	-	59+00	CTH TT, NORTH	220	176	-	570	285	-	-	CTH TT MAINLINE, SHOULDERS & ISLAND
42+84	-	43+28	CTH TT, RT DWY	0	-	-	-	-	10	-	DRIVEWAY
1578+00	-	1585+00	OLD PLANK RD	0	-	-	-	-	55	-	WEST TRAIL SEGMENT
1594+50	-	1603+25	OLD PLANK RD	0	-	-	-	-	105	-	EAST TRAIL SEGMENT
PROJECT 1440-41-72 CATEGORY 0010 TOTAL				**1,500**	**1,210**	**0**	**3,910**	**1,980**	**170**	**90**	
PROJECT TOTAL CATEGORY 0010				**11,330**	**22,970**	**9,990**	**4,430**	**29,835**	**170**	**90**	

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

PWL MIXTURE USE TABLE

THE FOLLOWING ACCEPTANCE CRITERIA ARE APPLICABLE FOR THIS PROJECT

LOCATION	STATION	ROADWAY	BID ITEM	MIXTURE USE	UNDERLYING SURFACE	TONS	THICKNESS (IN)	QUALITY MANAGEMENT PROGRAM TO BE USED FOR:	
								MIXTURE ACCEPTANCE	DENSITY ACCEPTANCE
DRIVING LANES	1137+51 - 1681+71	STH 23, EB	4 MT 58-28-S	UPPER LAYER	OVERLAY, EXISTING CONCRETE SURFACE	20152	2	PWL Incentive Air Voids HMA Pavement 706.2010	Incentive Density PWL HMA Pavement 705.6005
INSIDE SHOULDER	1137+51 - 1681+71	STH 23, EB	4 MT 58-28-S	UPPER LAYER	OVERLAY, EXISTING ASPHALT SURFACE	1977	2	PWL Incentive Air Voids HMA Pavement 706.2010	Department Acceptance (SS 706.1.5.3) *Not eligible for incentive
OUTSIDE SHOULDER	1137+51 - 1681+71	STH 23, EB	4 LT 58-28 S	UPPER LAYER	OVERLAY, EXISTING ASPHALT SURFACE	4714	2	QMP (SS 706.1.3)	N/A
DRIVING LANES	1622+00 - 1688+28	STH 23, WB	4 MT 58-28-S	UPPER LAYER	OVERLAY, EXISTING CONCRETE SURFACE	1614	2	PWL Incentive Air Voids HMA Pavement 706.2010	Incentive Density PWL HMA Pavement 706.2005
INSIDE SHOULDER	1137+51 - 1681+71	STH 23, WB	4 LT 58-28 S	UPPER LAYER	OVERLAY, EXISTING ASPHALT SURFACE	1892	2	QMP (SS 706.1.3)	N/A
OUTSIDE SHOULDER	1137+51 - 1681+71	STH 23, WB	4 LT 58-28 S	UPPER LAYER	OVERLAY, EXISTING ASPHALT SURFACE	3384	2	QMP (SS 706.1.3)	N/A
DRIVING LANE & SHOULDERS	17+40 - 21+96	SUNSET ROAD	3 MT 58-28 S	LOWER LAYER	1 1/4" BAD	520	3	QMP (SS 706.1.3)	N/A
DRIVING LANE & SHOULDERS	17+40 - 21+96	SUNSET ROAD	4 MT 58-28-S	UPPER LAYER	3 MT 58-28 S	353	2	PWL Incentive Air Voids HMA Pavement 706.2010	Department Acceptance (SS 706.1.5.3) *Not eligible for incentive
DRIVING LANE & SHOULDERS	STH 67, STH 57 & STH 23 RAMPS	RAMPS	4 MT 58-28-S	UPPER LAYER	OVERLAY, EXISTING SURFACE	2460	2	PWL Incentive Air Voids HMA Pavement 706.2010	Department Acceptance (SS 706.1.5.3) *Not eligible for incentive
INTERSECTION, TURN, BYPASS LANES & CROSS OVERS	VAR.	VAR.	4 MT 58-28-S	UPPER LAYER	MILLED EXISTING SURFACE	1299	2	PWL Incentive Air Voids HMA Pavement 706.2010	Department Acceptance (SS 706.1.5.3) *Not eligible for incentive
	PROJECT 1440-41-71		CATEGORY 0010 TOTAL			38,365			

THE FOLLOWING ACCEPTANCE CRITERIA ARE APPLICABLE FOR THIS PROJECT

LOCATION	STATION	ROADWAY	BID ITEM	MIXTURE USE	UNDERLYING SURFACE	TONS	THICKNESS (IN)	QUALITY MANAGEMENT PROGRAM TO BE USED FOR:	
								MIXTURE ACCEPTANCE	DENSITY ACCEPTANCE
MEDIAN & TURN LANES	1579+00 - 1622+00	STH 23	3 MT 58-28 S	LOWER LAYER	1 1/4" BAD	2655	4	QMP (SS 706.1.3)	N/A
MEDIAN & TURN LANES	1579+00 - 1622+00	STH 23	4 MT 58-28 S	UPPER LAYER	3 MT 58-28 S	1352	2	QMP (SS 706.1.3)	N/A
DRIVING LANE & SHOULDERS	44+26 - 59+00	CTH TT	3 MT 58-28 S	LOWER LAYER	1 1/4" BAD	1255	4	QMP (SS 706.1.3)	N/A
DRIVING LANE & SHOULDERS	44+26 - 59+00	CTH TT	4 MT 58-28 S	UPPER LAYER	3 MT 58-28 S	628	2	QMP (SS 706.1.3)	N/A
	PROJECT 1440-41-72		CATEGORY 0010 TOTAL			5,890			
	PROJECT TOTAL		CATEGORY 0010			44,255			

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

TEMPORARY ASPHALT

STAGE	LOCATION	211.0400 PREPARE FOUNDATION STA	465.0125 ASPHALTIC SURFACE TEMPORARY TON	REMARKS
STAGE 1A	STH 23 WB	10	72	STH 57 BRIDGE OUTSIDE LANE CLOSURE
STAGE 1B	STH 23 WB	8	35	STH 57 BRIDGE INSIDE LANE CLOSURE
STAGE 2B	STH 23 EB	9	133	STH 67 BRIDGE OUTSIDE LANE CLOSURE
STAGE 3	STH 23 EB	9	137	STH 67 BRIDGE INSIDE LANE CLOSURE
PROJECT 1440-41-71 TOTAL CAT. 0010		**36**	**377**	

ASPHALTIC FLUMES

STATION	TO	STATION	LOCATION	465.0315 ASPHALTIC FLUMES SY	* 606.0200 RIPRAP MEDIUM CY	* 645.0120 GEOTEXTILE TYPE HR SY	REMARKS
17+49	-	17+71	SUNSET ROAD, RT	6	4	8	SE QUADRANT
17+86	-	18+09	SUNSET ROAD, LT	6	4	8	SW QUADRANT
20+06	-	20+33	SUNSET ROAD, RT	9	4	8	NE QUADRANT
21+07	-	21+28	SUNSET ROAD, LT	10	4	8	NW QUADRANT
PROJECT 1440-41-71 CATEGORY 0010 TOTAL				**31**	**16**	**32**	
1580+67	-	1580+91	STH 23 WB, RT	6	4	8	WEST R-CUT
1580+64	-	1580+88	STH 23 EB, LT	6	4	8	WEST R-CUT
49+88	-	50+00	CTH TT	7	4	8	SW QUADRANT
50+38	-	50+65	CTH TT	9	4	8	SE QUADRANT
52+08	-	52+29	CTH TT	6	4	8	NE QUADRANT
52+33	-	52+59	CTH TT	6	4	8	NW QUADRANT
52+68	-	52+77	CTH TT	6	4	8	NE QUADRANT
1600+98	-	1601+20	STH 23 EB	9	4	8	MEDIAN, NORTH
1600+98	-	1601+20	STH 23 EB	6	4	8	MEDIAN, SOUTH
1620+20	-	1620+44	STH 23 WB	6	4	8	EAST R-CUT
1620+25	-	1620+49	STH 23 EB	6	4	8	EAST R-CUT
PROJECT 1440-41-72 CATEGORY 0010 TOTAL				**73**	**44**	**88**	
PROJECT TOTAL CATEGORY 0010				**104**	**60**	**120**	

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

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RUMBLE STRIPS

STATION	TO	STATION	LOCATION	465.0510 ASPHALTIC RUMBLE STRIPS, SHOULDER DIVIDED ROADWAY LF	REMARKS
1137+51	-	1220+00	STH 23, EB	16,004	START TO SUNSET DR
1137+51	-	1220+00	STH 23, WB	15,543	START TO SUNSET DR
1220+00	-	1250+00	STH 23, EB	4,594	SUNSET DR TO STH 67
1220+00	-	1250+00	STH 23, WB	4,347	SUNSET DR TO STH 67
1250+00	-	1358+00	STH 23, EB	14,594	STH 67 TO STH 57
1250+00	-	1358+00	STH 23, WB	15,404	STH 67 TO STH 57
1358+00	-	1565+00	STH 23, EB	34,585	STH 57 TO SUNSET RD
1358+00	-	1565+00	STH 23, WB	35,160	STH 57 TO SUNSET RD
1565+00	-	1579+00	STH 23, EB	2,067	SUNSET RD INTERSECTION
1565+00	-	1579+00	STH 23, WB	2,022	SUNSET RD INTERSECTION
1579+00	-	1622+00	STH 23, EB	5,291	CTH TT INTERSECTION
1579+00	-	1622+00	STH 23, WB	5,199	CTH TT INTERSECTION
1622+00	-	1688+28	STH 23, EB	10,509	CTH TT TO END
1622+00	-	1688+28	STH 23, WB	10,881	CTH TT TO END
ROJECT 1440-41-71 TOTAL CAT. 0010				**176,200**	

HMA TEST STRIPS AND INCENTIVES

STATION	TO	STATION	LOCATION	705.0105 HMA PERCENT WITHIN LIMITS (PWL) TEST STRIP VOLUMETRICS EACH	705.0110 HMA PERCENT WITHIN LIMITS (PWL) TEST STRIP DENSITY EACH
1137+51	-	1681+71	STH 23	1	1
PROJECT 1440-41-71 CATEGORY 0010				**1**	**1**
1579+00	-	1622+00	STH 23	-	-
PROJECT 1440-41-72 CATEGORY 0010				**0**	**0**
PROJECT TOTAL CATEGORY 0010				**1**	**1**

3

CULVERT PIPES

STATION	LOCATION	* 520.1018 APRON ENDWALLS FOR CULVERT PIPE 18-INCH EACH	520.3318 CULVERT PIPE CLASS III-A 18-INCH LF **	520.3318 THK	* 520.8000 CONCRETE COLLARS FOR PIPE EACH	522.0418 CULVERT PIPE REINFORCED CONCRETE CLASS IV 18-INCH LF	522.0424 CULVERT PIPE REINFORCED CONCRETE CLASS IV 24-INCH LF	522.0436 CULVERT PIPE REINFORCED CONCRETE CLASS IV 36-INCH LF	* 522.1018 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 18-INCH EACH	* 522.1024 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH EACH	522.1036 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 36-INCH EACH	522.2419 CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-IV 19X30-INCH LF	522.2619 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL 19X30-INCH EACH
17+69	SUNSET ROAD, CROSS	-	-	-	-	48	-	-	2	-	-	-	-
21+28	SUNSET ROAD, CROSS	-	-	-	-	-	-	-	-	-	-	56	2
1440-41-71 TOTAL 0010		**0**	**0**		**0**	**48**	**0**	**0**	**2**	**0**	**0**	**56**	**2**
1580+13	STH 23 EB, LT	-	-	-	-	-	-	-	-	-	-	112	2
1581+46	STH 23 EB, RT	2	24	0.064	-	-	-	-	-	-	-	-	-
1620+15	STH 23 WB, LT	-	-	-	1	-	13	-	-	1	-	-	-
1621+00	STH 23 EB, LT	-	-	-	-	-	-	-	-	-	-	136	2
43+06	CTH TT, RT	2	32	0.064	-	-	-	-	-	-	-	-	-
1599+63	CTH TT, TRAIL, RT	-	-	-	-	-	-	-	-	-	-	32	2
1598+87	CTH TT, TRAIL, LT	-	-	-	-	-	-	-	-	-	-	32	2
49+97	CTH TT, CROSS	-	-	-	-	-	-	-	-	-	-	80	2
50+03	CTH TT, CROSS	-	-	-	-	-	-	-	-	-	-	80	2
52+75	CTH TT, CROSS	-	-	-	-	-	88	-	-	2	-	-	-
54+02	CTH TT, LT	2	40	0.064	-	-	-	-	-	-	-	-	-
54+17	CTH TT, RT	2	40	0.064	-	-	-	-	-	-	-	-	-
55+40	CTH TT, CROSS	-	-	-	-	-	-	108	-	-	2	-	-
1440-41-72 TOTAL 0010		**8**	**136**		**1**	**0**	**101**	**108**	**0**	**3**	**2**	**472**	**12**
PROJECT TOTAL CAT. 0010		**8**	**136**		**1**	**48**	**101**	**108**	**2**	**3**	**2**	**528**	**14**

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

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

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

3

APRON REPLACEMENTS

STATION	OFFSET	LOCATION	204.9060.S.01 REMOVING APRON ENDWALLS EACH	* 520.8000 CONCRETE COLLARS FOR PIPE EACH	* 522.1018 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 18-INCH EACH	* 522.1024 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH EACH	522.1030 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 30-INCH EACH	522.1042 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 42-INCH EACH
1237+00	53' LT	STH 23 WB	1	1	-	1	-	-
1339+82	51' RT	STH 23 EB	1	1	-	-	1	-
1436+72	44' LT	STH 23 WB	1	1	-	1	-	-
1402+81	90' RT	STH 23 EB	1	1	-	-	-	1
1518+94	58' LT	STH 23 WB	1	1	1	-	-	-
PROJECT 1440-41-71 CATEGORY 0010 TOTAL			**5**	**5**	**1**	**2**	**1**	**1**
1600+57	54' LT	STH 23 WB	1	-	-	-	-	-
1620+14	79' LT	STH 23 WB	1	-	-	-	-	-
PROJECT 1440-41-72 CATEGORY 0010 TOTAL			**2**	**0**	**0**	**0**	**0**	**0**
PROJECT TOTAL CATEGORY 0010			**7**	**5**	**1**	**2**	**1**	**1**

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

CONCRETE SIDEWALK

STATION	LOCATION	602.0405 CONCRETE SIDEWALK 4-INCH SF	602.0515 CURB RAMP DETECTABLE WARNING FIELD NATURAL PATINA SF
18+25	SUNSET, LT - SOUTH ISLAND	140	-
20+50	SUNSET, LT - NORTH ISLAND	1100	-
	PROJECT 1440-41-71 TOTAL 0010	**1,240**	**0**
49+49	CTH TT, LT - WEST TRAIL CONNECTION	100	20
49+49	CTH TT, RT - EAST TRAIL CONNECTION	100	20
50+50	CTH TT, RT - SOUTH ISLAND	370	-
52+13	CTH TT, LT - NORTH ISLAND	370	-
	PROJECT 1440-41-72 TOTAL 0010	**940**	**40**
	PROJECT TOTAL CATEGORY 0010	**2,180**	**40**

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

TEMPORARY BARRIER

STAGE	STATION	TO	STATION	STRUCTURE	LOCATION	SPV.0060.04 REMOVE, SALVAGE AND REPLACE STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL EACH	603.8000 CONCRETE BARRIER TEMPORARY PRECAST DELIVERED LF	603.8125 CONCRETE BARRIER TEMPORARY PRECAST INSTALLED LF	614.0905 CRASH CUSHIONS TEMPORARY EACH	644.1410 TEMPORARY PEDESTRIAN SURFACE ASPHALT SF	644.1810 TEMPORARY PEDESTRIAN BARRICADE LF	644.1900.S TEMPORARY AUDIBLE MESSAGE DEVICES DAY	REMARKS
1A, 1B	1354+00	-	1364+20	B-59-0093	STH 23 WB OVER STH 57	-	720	1,440	-	-	-	-	BRIDGE JOINT REPLACEMENT
2,3	1243+29	-	1253+39	B-59-0091	STH 23 EB OVER STH 67	-	580	1,160	-	-	-	-	BRIDGE JOINT REPLACEMENT
					PROJECT 1440-41-71 CATEGORY 0010 TOTAL	**0**	**1,300**	**2,600**	**0**	**0**	**0**	**0**	
2A, 2B	1563+16	-	1604+05		STH 23 EB AT CTH TT	1	4,089	4,089	1	1,900	6,060	110	OUTSIDE LANE FOR REC. TRAIL DETOUR
2A, 2B	1570+26	-	1583+75		STH 23 WB AT SUNSET DR	-	1,349	1,349	1	-	-	-	OUTSIDE LANE CLOSURE
2A, 2B	1597+50	-	1627+10		STH 23 WB AT CTH TT	-	2,960	2,960	1	-	-	-	OUTSIDE LANE CLOSURE
3	1564+12	-	1622+25		STH 23 EB AT SUNSET DR & CTH TT	-	5,813	5,813	1	-	-	-	INSIDE LANE CLOSURE FOR MEDIAN WORK
3	1569+10		1627+13		STH 23 WB AT SUNSET DR & CTH TT	-	5,803	5,803	1	-	-	-	INSIDE LANE CLOSURE FOR MEDIAN WORK
					PROJECT 1440-41-72 CATEGORY 0010 TOTAL	**1**	**20,014**	**20,014**	**5**	**1,900**	**6,060**	**110**	
					PROJECT TOTAL CATEGORY 0010	**1**	**21,314**	**22,614**	**5**	**1,900**	**6,060**	**110**	

TEMPORARY CRASH CUSHION DETAILS

STATION	OFFSET	LOCATION	OFFSET FROM DIRECTION OF TRAVEL	CRASH CUSHIONS TEMPORARY REQUIRED EACH	BACK WIDTH FT	OBJECT MARKING PATTERN	CRASH TEST LEVEL	TRAFFIC DIRECTION	TRAFFIC LOCATION	REMARKS
1563+02	15	STH 23 EB SUNSET RD TO CTH TT	RT	1	3	OM-3C	TL-3	EB	LT	STAGE 2, TEMP. CONCRETE BARRIER ON CENTER LINE
1583+34	15	STH 23 WB CTH TT TO SUNSET RD	RT	1	3	OM-3C	TL-3	WB	LT	STAGE 2, TEMP. CONCRETE BARRIER ON CENTER LINE
1627+26	15	STH 23 WB CTH TT	RT	1	3	OM-3C	TL-3	WB	LT	STAGE 2, TEMP. CONCRETE BARRIER ON CENTER LINE
1563+97	9	STH 23 EB SUNSET RD TO CTH TT	LT	1	3	OM-3C	TL-3	EB	RT	STAGE 3, TEMP. CONCRETE BARRIER ON CENTER LINE
1627+30	9	STH 23 WB CTH TT	LT	1	3	OM-3C	TL-3	WB	RT	STAGE 3, TEMP. CONCRETE BARRIER ON CENTER LINE

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

CURB AND GUTTER

STATION	TO	STATION	LOCATION	601.0553 CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE D LF	601.0411 CONCRETE CURB & GUTTER 30-INCH TYPE D LF	620.0300 CONCRETE MEDIAN SLOPED NOSE SF	REMARKS
1571+50	-	21+38	STH 23, WB	87	-	-	STH 23 WB TO SUNSET RD, NW QUAD
1572+16	-	1572+61	STH 23, WB	157	-	141	STH 23 WB TO SUNSET RD, ISLAND
1572+92	-	1573+32	STH 23, WB	44	-	-	STH 23 WB TO SUNSET RD, NE QUAD
1573+04	-	18+09	STH 23, EB	71	-	-	STH 23 EB TO SUNSET RD, SW QUAD
1573+70	-	1573+86	STH 23, EB	57	-	74	STH 23 EB TO SUNSET RD, ISLAND
17+71	-	1574+40	STH 23, EB	69	-	-	STH 23 EB TO SUNSET RD, SE QUAD
1242+24	-	1243+44	67 TO 23E RAMP	-	120	-	RT OF STH 67 RAMP TO STH 23 EB
PROJECT 1440-41-71 TOTAL 0010				485	120	215	
1580+04	-	1580+64	STH 23, EB	140	-	-	STH 23 WB U-TURN
1599+16	-	52+33	STH 23, WB	57	-	-	STH 23 WB TO CTH TT, NW QUAD
1599+68	-	1599+84	STH 23, WB	109	-	108	STH 23 WB TO CTH TT, ISLAND
52+69	-	1600+72	STH 23, WB	90	-	-	STH 23 WB TO CTH TT, NE QUAD
1598+06	-	1601+62	STH 23, EB	1,069	-	-	STH 23 INTERSECTION WITH CTH TT, MEDIAN
1598+99	-	50+00	STH 23, EB	83	-	-	STH 23 EB TO CTH TT, SW QUAD
1599+88	-	1600+04	STH 23, EB	109	-	107	STH 23 EB TO CTH TT, ISLAND
50+27	-	1600+56	STH 23, EB	57	-	-	STH 23 EB TO CTH TT, SE QUAD
1620+49	-	1621+10	STH 23, EB	141	-	-	STH 23 EB U-TURN
PROJECT 1440-41-72 TOTAL 0010				1,855	0	215	
PROJECT TOTAL CATEGORY 0010				2,340	120	430	

RIPRAP CULVERT APRONS

STATION	LOCATION	* 606.0200 RIPRAP MEDIUM CY	* 606.0300 RIPRAP HEAVY CY	633.5200 MARKERS CULVERT END EACH	* 645.0120 GEOTEXTILE TYPE HR SY	REMARKS
1237+00	STH 23 WB, LT	4	-	1	8	APRON END REPLACEMENT
1339+82	STH 23 EB, RT	4	-	1	8	APRON END REPLACEMENT
1436+72	STH 23 WB, LT	4	-	1	8	APRON END REPLACEMENT
1402+81	STH 23 EB, RT	4	-	1	8	APRON END REPLACEMENT
1518+94	STH 23 WB, LT	4	-	1	8	APRON END REPLACEMENT
17+69	SUNSET ROAD, RT	4	-	2	8	SUNSET RD, SE QUADRANT CULVERT
21+28	SUNSET ROAD, RT	4	-	2	8	SUNSET RD, NE QUADRANT CULVERT
UNDISTRIBUTED		8	-	-	14	
1440-41-71 TOTAL 0010		**36**	**0**	**9**	**70**	
1580+13	STH 23 EB, LT	4	-	2	8	WEST R-CUT CULVERT
1581+46	STH 23 EB, RT	4	-	-	8	WEST TRAIL CROSSING CULVERT
1600+57	STH 23 WB, LT	6	-	1	12	STORM SEWER OUTFALL
1603+40	STH 23 EB, RT	-	55	1	98	STORM SEWER OUTFALL
1620+15	STH 23 WB, LT	4	-	1	8	EAST R-CUT CULVERT
43+06	CTH TT, RT	4	-	-	8	CTH TT, RT DWY
49+49	CTH TT, RT	4	-	-	8	TRAIL CROSSING CULVERT, EAST
49+50	CTH TT, LT	4	-	-	8	TRAIL CROSSING CULVERT, WEST
50+03	CTH TT, CROSS	4	-	1	8	DUAL CROSS CULVERT
50+09	CTH TT, CROSS	4	-	1	8	DUAL CROSS CULVERT
52+75	CTH TT, CROSS	4	-	2	8	CROSS CULVERT NORTH OF STH23
54+02	CTH TT, LT	4	-	-	8	CTH TT, LT DWY
54+17	CTH TT, RT	4	-	-	8	CTH TT, RT DWY
55+40	CTH TT, CROSS	4	-	2	8	CTH TT NORTH CROSS CULVERT
UNDISTRIBUTED		10	-	-	24	
1440-41-72 TOTAL 0010		**64**	**55**	**11**	**230**	
PROJECT TOTAL CATEGORY 0010		**100**	**55**	**20**	**300**	

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

STORM SEWER PIPES

STRUCTURE	TO	STRUCTURE	LOCATION	* 520.8000 CONCRETE COLLARS FOR PIPE EACH	608.2329 STORM SEWER PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-III 29X45-INCH LF	608.0412 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 12-INCH LF	608.0418 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 18-INCH LF
20	-	22	STH 23 WB	-	-	-	114
22	-	23	STH 23 WB	-	-	-	46
21	-	22	STH 23 WB	-	-	7	-
23	-	25	STH 23 WB	-	-	-	63
24	-	23	STH 23 WB	-	-	51	-
25	-	EX	STH 23 WB	1	-	-	8
25	-	26	STH 23 WB	-	-	104	-
26	-	27	STH 23 WB	-	-	7	-
28	-	29	STH 23 EB	-	53	-	-
29	-	30	STH 23 EB	-	50	-	-
EX	-	45	STH 23 WB	1	-	-	16
PROJECT 1440-41-72 CATEGORY 0010 TOTAL				**2**	**103**	**169**	**247**

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

STORM SEWER STRUCTURES

STRUCTURE	STATION ****	OFFSET ****	LOCATION	* 522.1018 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 18-INCH EACH	522.2629 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL 29X45-INCH EACH	611.0535 MANHOLE COVERS TYPE J-SPECIAL EACH	611.0627 INLET COVERS TYPE HM EACH	611.0642 INLET COVERS TYPE MS EACH	611.2005 MANHOLES 5-FT DIAMETER EACH	SPV.0060.03 MANHOLES 7-FT DIAMETER EACH	611.3004 INLETS 4-FT DIAMETER EACH	611.3230 INLETS 2X3-FT EACH	611.3902 INLETS MEDIAN 2 GRATE EACH
20	1598+36.19	17.84' RT	STH 23 WB	-	-	-	-	2	-	-	-	-	2
21	1599+48.59	12.49' RT	STH 23 WB	-	-	-	1	-	-	-	-	1	-
22	1599+49.32	5.50' RT	STH 23 WB	-	-	-	1	-	-	-	1	-	-
23	1599+95.21	9.47' RT	STH 23 WB	-	-	-	1	-	1	-	-	-	-
24	1599+70.56	54.50' RT	STH 23 WB	-	-	-	1	-	-	-	-	1	-
25	1600+57.85	14.34' RT	STH 23 WB	-	-	1	-	-	1	-	-	-	-
26	1601+61.38	12.61' RT	STH 23 WB	-	-	-	1	-	-	-	-	1	-
27	1601+61.09	5.50' RT	STH 23 WB	-	-	-	1	-	-	-	-	1	-
28	1602+63.34	71.90' RT	STH 23 EB	-	1	-	-	-	-	-	-	-	-
29	1603+15.07	60.97' RT	STH 23 EB	-	-	1	-	-	-	1	-	-	-
30	1603+36.71	105.66' RT	STH 23 EB	-	1	-	-	-	-	-	-	-	-
45	1600+56.57	68.39' LT	STH 23 WB	1	-	-	-	-	-	-	-	-	-
PROJECT 1440-41-72 CATEGORY 0010 TOTAL				**1**	**2**	**2**	**6**	**2**	**2**	**1**	**1**	**4**	**2**

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

**** STATIONS AND OFFSETS ARE TO CENTER OF STRUCTURE

GUARDRAIL

STATION	TO	STATION	LOCATION	614.0220 STEEL THRIE BEAM BULLNOSE TERMINAL EACH	614.0230 STEEL THRIE BEAM LF	614.2300 MGS GUARDRAIL 3 LF	614.2500 MGS THRIE BEAM TRANSITION LF	614.2610 MGS GUARDRAIL TERMINAL EAT EACH	614.2620 MGS GUARDRAIL TERMINAL TYPE 2 EACH	REMARKS
1193+00	-	1194+95	STH 23, EB LT	2	175	-	-	-	-	MEDIAN AT CTH C
1213+73	-	1219+28	STH 23, EB RT	-	-	462.5	39.4	1	-	SUNSET DRIVE, SW QUADRANT
1215+26	-	1218+93	STH 23, EB LT	-	-	275.0	39.4	1	-	SUNSET DRIVE, SW QUADRANT
1221+47	-	1226+02	STH 23, WB LT	-	-	362.5	39.4	1	-	SUNSET DRIVE, NE QUADRANT
1221+77	-	1225+19	STH 23, WB RT	-	-	250.0	39.4	1	-	SUNSET DRIVE, NE QUADRANT
1244+69	-	1248+11	STH 23, EB LT	-	-	250.0	39.4	1	-	STH 67, SW QUADRANT
1252+01	-	1254+95	STH 23, WB LT	-	-	200.0	39.4	1	-	STH 67, NE QUADRANT
1252+21	-	1255+63	STH 23, WB RT	-	-	250.0	39.4	1	-	STH 67, NE QUADRANT
1252+48	-	1256+95	STH 23, EB RT	-	-	438.5	-	-	1	STH 67, SE QUADRANT
1352+81	-	1356+86	STH 23, EB RT	-	-	312.5	39.4	1	-	STH 57, SW QUADRANT
1353+95	-	1356+63	STH 23, EB LT	-	-	175.0	39.4	1	-	STH 57, SW QUADRANT
1359+11	-	1362+80	STH 23, WB LT	-	-	275.0	39.4	1	-	STH 57, NE QUADRANT
1359+34	-	1362+02	STH 23, WB RT	-	-	175.0	39.4	1	-	STH 57, NE QUADRANT
1359+60	-	1362+72	STH 23, EB RT	-	-	312.5	-	-	-	STH 57, SE QUADRANT
1603+25	-	1606+30	STH 23, EB LT	-	-	212.5	39.4	1	-	SHEBOYGAN RIVER, SW QUADRANT
1602+88	-	1606+31	STH 23, EB RT	-	-	250.0	39.4	1	-	SHEBOYGAN RIVER, SW QUADRANT
1608+39	-	1612+38	STH 23, EB RT	-	-	387.5	-	-	1	SHEBOYGAN RIVER, SE QUADRANT
1608+42	-	1611+12	STH 23, WB RT	-	-	175.0	39.4	1	-	SHEBOYGAN RIVER, NE QUADRANT
1608+42	-	1612+12	STH 23, WB LT	-	-	275.0	39.4	1	-	SHEBOYGAN RIVER, NE QUADRANT
1674+71	-	1681+63	STH 23, EB RT	-	-	600.0	39.4	1	-	STH 32, SW QUADRANT
1677+83	-	1681+63	STH 23, EB LT	-	-	287.5	39.4	1	-	STH 32, SW QUADRANT
1683+38	-	1687+30	STH 23, WB RT	-	-	300.0	39.4	1	-	STH 32, NE QUADRANT
1683+38	-	1687+30	STH 23, WB LT	-	-	300.0	39.4	1	-	STH 32, NE QUADRANT
1243+44	-	1248+57	67 RAMP TO 23E	-	-	412.5	39.4	1	-	STH 67 RAMP TO 23 E, RT
PROJECT 1440-41-71 TOTAL CAT. 0010				**2**	**175**	**6,938.5**	**788**	**20**	**2**	

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

EROSION CONTROL

STATION	TO	STATION	LOCATION	623.0200 DUST CONTROL SURFACE TREATMENT SY	625.0100 TOPSOIL SY	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.2004 EROSION MAT CLASS I TYPE B SY	628.2008 EROSION MAT URBAN CLASS I TYPE B SY	628.7005 INLET PROTECTION TYPE A EACH	628.7015 INLET PROTECTION TYPE C EACH	628.7020 INLET PROTECTION TYPE D EACH	628.7504 TEMPORARY DITCH CHECKS LF	628.7555 CULVERT PIPE CHECKS EACH	628.7570 ROCK BAGS EACH	629.0210 FERTILIZER TYPE B CWT	630.0130 SEEDING MIXTURE NO. 30 LB	630.0200 SEEDING TEMPORARY LB	630.0500 SEED WATER MGAL	REMARKS
1190+89	-	1197+05	STH 23, MEDIAN	-	2,596	-	-	522	2,074	2	-	-	-	-	-	1.7	117	-	59	BULLNOSE AT CTH C
1212+53	-	1219+28	STH 23, EB	-	482	314	628	-	482	2	-	-	-	-	-	0.4	22	-	11	GUARDRAIL WEST OF SUNSET DRIVE
1221+47	-	1226+68	STH 23, WB	-	170	320	640	-	170	1	1	-	-	-	-	0.2	8	-	4	GUARDRAIL EAST OF SUNSET DRIVE
1243+49	-	1248+11	STH 23, EB	-	275	396	792	-	275	2	-	-	-	-	15	0.2	13	-	7	GUARDRAIL WEST OF STH 67
1252+01	-	1256+83	STH 23, WB	-	516	465	930	-	516	2	2	-	-	-	-	0.4	24	-	12	GUARDRAIL EAST OF STH 67
1252+48	-	1257+32	STH 23, EB	-	357	541	1,082	-	357	2	1	-	-	-	15	0.3	17	-	9	GUARDRAIL EAST OF STH 67
1351+61	-	1356+86	STH 23, EB	-	3,336	363	726	-	3,336	1	-	-	-	-	-	2.2	151	-	75	GUARDRAIL WEST OF STH 57
1359+13	-	1364+00	STH 23, WB	-	1,512	463	926	-	1,512	1	1	-	-	-	-	1.0	69	-	34	GUARDRAIL EAST OF STH 57
1359+58	-	1363+34	STH 23, EB	-	2,530	516	1,032	-	2,530	1	1	-	-	-	-	1.6	114	-	57	GUARDRAIL EAST OF STH 57
1402+75	-	1402+89	STH 23, EB	-	20	-	-	-	20	-	-	-	-	-	-	0.1	1	-	1	APRON REPLACEMENT
1436+66	-	1436+78	STH 23, WB	-	16	-	-	-	16	-	-	-	-	-	-	0.1	1	-	1	APRON REPLACEMENT
1518+98	-	1519+10	STH 23, WB	-	16	-	-	-	16	1	-	-	-	-	-	0.1	1	-	1	APRON REPLACEMENT
1568+54	-	1575+40	STH 23, EB	-	833	-	-	-	833	-	-	-	100	3	-	0.6	38	-	19	SUNSET RD SOUTH
1569+52	-	1577+18	STH 23, EB	-	3,568	-	-	680	2,888	-	-	-	80	-	-	2.3	161	-	81	SUNSET RD MEDIAN
1570+67	-	1577+82	STH 23, WB	-	2,539	100	200	537	2,002	-	-	-	120	4	-	1.6	115	-	58	SUNSET RD NORTH
1608+30	-	1613+04	STH 23, EB	-	238	464	928	-	238	1	2	-	-	-	-	0.2	11	-	6	GUARDRAIL EAST OF CTH TT
1608+44	-	1613+19	STH 23, WB	-	373	525	1,050	-	373	1	1	-	-	-	-	0.3	17	-	9	GUARDRAIL EAST OF CTH TT
1673+51	-	1681+63	STH 23, EB	-	637	805	1,610	-	637	-	-	-	-	-	15	0.5	29	-	15	GUARDRAIL WEST OF STH 32
1242+24	-	1248+57	STH 67 TO 23E RAMP	-	1,114	609	1,218	-	1,114	-	1	-	-	-	30	0.8	51	-	26	RT GUARDRAIL ON RAMP
			UNDISTRIBUTED	3,000	3,672	1,319	2,638	261	3,611	-	-	-	50	3	15	2.3	140	100	65	
PROJECT 1440-41-71 CAT. 0010 TOTAL				**3,000**	**24,800**	**7,200**	**14,400**	**2,000**	**23,000**	**17**	**10**	**0**	**350**	**10**	**90**	**17**	**1,100**	**100**	**550**	
1578+90	-	1582+78	STH 23, EB	-	1,487	354	708	483	1,004	-	-	-	80	3	-	1.0	67	-	34	CTH TT WEST U-TURN, RT
1579+00	-	1588+00	STH 23, EB	-	3,101	-	-	689	2,412	1	-	-	80	4	-	2.0	140	-	70	CTH TT WEST U-TURN, MEDIAN
1591+34	-	1606+31	STH 23, EB	-	3,190	60	120	279	2,911	1	-	-	120	8	-	2.1	144	-	72	CTH TT INTERSECTION, RT
1593+32	-	1606+30	STH 23, EB	-	1,270	815	1,630	171	1,099	7	3	4	60	-	15	0.9	58	-	29	CTH TT INTERSECTION, MEDIAN
1598+09	-	1606+27	STH 23, WB	-	2,578	594	1,188	-	2,578	-	-	-	-	4	-	1.7	117	-	58	CTH TT INTERSECTION, LT
1613+14	-	1621+56	STH 23, EB	-	2,958	-	-	680	2,278	1	-	-	60	3	-	1.9	134	-	67	CTH TT EAST U-TURN, MEDIAN
1618+45	-	1621+44	STH 23, WB	-	967	382	764	194	773	-	-	-	-	-	30	0.7	44	-	22	CTH TT EAST U-TURN, LT
44+26	-	49+31	CTH TT	7,800	11,961	914	1,828	2,072	9,889	-	-	-	140	-	-	7.6	539	-	269	CTH TT SOUTH OF STH 23
52+53	-	59+00	CTH TT	6,700	7,769	1,358	2,716	284	7,485	-	-	-	40	6	-	4.9	350	-	175	CTH TT NORTH OF STH 23
			UNDISTRIBUTED	2,500	5,719	823	1,646	848	5,571	-	-	-	70	5	-	2.9	307	370	154	
PROJECT 1440-41-72 CAT. 0010 TOTAL				**17,000**	**41,000**	**5,300**	**10,600**	**5,700**	**36,000**	**10**	**3**	**4**	**650**	**33**	**45**	**26**	**1,900**	**370**	**950**	
PROJECT TOTAL CATEGORY 0010				**20,000**	**65,800**	**12,500**	**25,000**	**7,700**	**59,000**	**27**	**13**	**4**	**1,000**	**43**	**135**	**43**	**3,000**	**470**	**1,500**	

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

3

ERECTION & REMOVAL OF PERMANENT SIGNING, TYPE II

SIGN NO.	LOCATION	SIGN CODE	W X H	637.2210 SIGNS TYPE II REFLECTIVE TYPE H S.F.	637.2230 SIGNS TYPE II REFLECTIVE TYPE F S.F.	634.0614 POSTS WOOD 4x6x14 EACH	634.0616 POSTS WOOD 4x6x16 EACH	634.0618 POSTS WOOD 4x6x18 EACH	* 638.2102 MOVING SIGNS TYPE II EACH	REMARKS
1	STH 23, WEST OF SUNSET RD	R2-1	48" X 60"	20.00	---	---	2	---	---	65 MPH
2	"	D1-1	96" X 21"	14.00	---	2	---	---	---	SEE SIGN DETAILS
3	"	J4-2	72" X 54"	27.00	---	---	---	2	---	
4	STH 23 AND SUNSET RD INTERSECTION	R6-2R	24" X 30"	5.00	---	1	---	---	---	
5	"	R6-1R	36" X 12"	3.00	---	---	---	---	---	MOUNT ABOVE SIGN 6
6	"	R1-1	36" X 36"	7.46	---	---	1	---	---	
7	"	R6-1R	36" X 12"	3.00	---	---	---	---	---	MOUNT ABOVE SIGN 8
8	"	R1-1	36" X 36"	7.46	---	---	1	---	---	
9	"	R4-7	24" X 30"	5.00	---	1	---	---	---	
10	VACANT	---	---	---	---	---	---	---	---	
11	"	R6-1R	36" X 12"	3.00	---	---	---	---	---	MOUNT ABOVE SIGN 12
12	"	R1-1	36" X 36"	7.46	---	---	1	---	---	
13	"	R6-1R	36" X 12"	3.00	---	---	---	---	---	MOUNT ABOVE SIGN 14
14	"	R1-1	36" X 36"	7.46	---	---	1	---	---	
15	"	R6-2R	24" X 30"	5.00	---	1	---	---	---	
16	STH 23, EAST OF SUNSET RD	R5-1A	42" X 30"	8.75	---	---	1	---	---	
17	"	D1-1	102" X 21"	14.88	---	---	2	---	---	SEE SIGN DETAILS
18	"	R3-18	36" X 36"	9.00	---	1	---	---	---	
19	"	R5-1	36" X 36"	9.00	---	1	---	---	---	
20	"	R6-2L	24" X 30"	5.00	---	1	---	---	---	
21	"	J3-2	48" X 57"	19.00	---	---	---	2	---	
22	"	R6-1L	36" X 12"	3.00	---	---	---	---	---	MOUNT ABOVE SIGN 23
23	"	R1-2	36" X 31"	3.88	---	---	---	1	---	
24	"	R6-1L	36" X 12"	3.00	---	---	---	---	---	MOUNT ABOVE SIGN 25
25	"	R1-2	36" X 31"	3.88	---	---	---	1	---	
26	"	J1-1	36" X 57"	14.25	---	---	1	---	---	
27	"	J3-2	72" X 84"	42.00	---	---	---	2	---	
28	"	D1-4	144" X 72"	72.00	---	---	---	3	---	SEE SIGN DETAILS
29	"	J13-2	72" X 66"	33.00	---	---	---	2	---	
30	"	J13-2	72" X 66"	33.00	---	---	---	2	---	
31	"	R5-1A	42" X 30"	8.75	---	---	---	---	---	MOUNT TO BACK OF SIGN 29
31A	"	R5-1A	42" X 30"	8.75	---	---	---	---	---	MOUNT TO BACK OF SIGNG 30
	PAGE SUBTOTALS			408.98	0.00	8	10	15	0	

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

CONTINUED ON NEXT PAGE

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

ERECTION & REMOVAL OF PERMANENT SIGNING, TYPE II

SIGN NO.	LOCATION	SIGN CODE	W X H	637.2210 SIGNS TYPE II REFLECTIVE TYPE H S.F.	637.2230 SIGNS TYPE II REFLECTIVE TYPE F S.F.	634.0614 POSTS WOOD 4x6x14 EACH	634.0616 POSTS WOOD 4x6x16 EACH	634.0618 POSTS WOOD 4x6x18 EACH	* 638.2602 REMOVING SIGNS TYPE II EACH	REMARKS
32	STH 23, WEST OF CTH TT	J2-3	108" X 84"	63.00	---	---	---	2	---	
33	"	J2-3	108" X 84"	63.00	---	---	---	2	---	
34	STH 23 AND CTH TT INTERSECTION	W12-1D	24" X 24"	---	4.00	1	---	---	---	
35	"	R5-1	36" X 36"	9.00	---	1	---	---	---	
36	"	R6-1L	36" X 12"	3.00	---	---	---	---	---	MOUNT ABOVE SIGN 37
37	"	R1-2	36" X 31"	3.88	---	---	---	1	---	
38	"	R6-1L	36" X 12"	3.00	---	---	---	---	---	MOUNT ABOVE SIGN 39
39	"	R1-2	36" X 31"	3.88	---	---	---	1	---	
40	"	R6-1R	36" X 12"	3.00	---	---	---	---	---	MOUNT TO BACK OF SIGN 36
41	"	R5-1	36" X 36"	9.00	---	---	1	---	---	
42	"	J13-2	48" X 45"	15.00	---	---	2	---	---	
43	"	R6-1R	36" X 12"	3.00	---	---	---	---	---	MOUNT ABOVE SIGN 44
44	"	R1-1	36" X 36"	7.46	---	---	1	---	---	
45	"	R6-1R	36" X 12"	3.00	---	---	---	---	---	MOUNT ABOVE SIGN 46
46	"	R1-1	36" X 36"	7.46	---	---	1	---	---	
47	"	R4-7	24" X 30"	5.00	---	1	---	---	---	
48	"	R6-1R	36" X 12"	3.00	---	---	---	---	---	MOUNT ABOVE SIGN 49
49	"	R1-1	36" X 36"	7.46	---	---	1	---	---	
50	"	R6-1R	36" X 12"	3.00	---	---	---	---	---	MOUNT ABOVE SIGN 51
51	"	R1-1	36" X 36"	7.46	---	---	1	---	---	
52	"	J13-2	48" X 45"	15.00	---	---	2	---	---	
53	"	R4-7	24" X 30"	5.00	---	1	---	---	---	
54	"	R6-1L	36" X 12"	3.00	---	---	---	---	---	MOUNT ABOVE SIGN 55
55	"	R1-2	36" X 31"	3.88	---	---	---	1	---	
56	"	R5-1	36" X 36"	9.00	---	---	---	---	---	MOUNT TO BACK OF SIGN 41
57	"	R5-1	36" X 36"	9.00	---	1	---	---	---	
58	"	R6-1R	36" X 12"	3.00	---	---	---	---	---	MOUNT TO BACK OF SIGN 59
59	"	R6-1L	36" X 12"	3.00	---	---	---	---	---	MOUNT ABOVE SIGN 60
60	"	R1-2	36" X 31"	3.88	---	---	---	1	---	
61	"	W12-1D	24" X 24"	---	4.00	1	---	---	---	
62	STH 23, EAST OF CTH TT	J2-3	108" X 84"	63.00	---	---	---	2	---	
63	"	J2-3	108" X 84"	63.00	---	---	---	2	---	
64	"	R5-1A	42" X 30"	8.75	---	---	---	---	---	MOUNT TO BACK OF SIGN 65
64A	"	R5-1A	42" X 30"	8.75	---	---	---	---	---	MOUNT TO BACK OF SIGN 66
65	"	J13-2	72" 66"	33.00	---	---	---	2	---	
66	"	J13-2	72" 66"	33.00	---	---	---	2	---	
	PAGE SUBTOTALS			486.86	8.00	6	9	16	0	

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

CONTINUED ON NEXT PAGE

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

ERECTION & REMOVAL OF PERMANENT SIGNING, TYPE II

SIGN NO.	LOCATION	SIGN CODE	W X H	637.2210 SIGNS TYPE II REFLECTIVE TYPE H S.F.	637.2230 SIGNS TYPE II REFLECTIVE TYPE F S.F.	634.0614 POSTS WOOD 4x6x14 EACH	634.0616 POSTS WOOD 4x6x16 EACH	634.0618 POSTS WOOD 4x6x18 EACH	* 638.2602 REMOVING SIGNS TYPE II EACH	REMARKS
67	STH 23, EAST OF CTH TT	D1-4	144" X 72"	72.00	---	---	---	3	---	SEE SIGN DETAILS
68	"	J3-2	72" X 84"	42.00	---	---	---	2	---	
69	"	J1-1	36" X 57"	14.25	---	---	1	---	---	
70	"	R6-1L	36" X 12"	3.00	---	---	---	---	---	MOUNT ABOVE SIGN 71
71	"	R1-2	36" X 31"	3.88	---	---	---	1	---	
72	"	R6-1L	36" X 12"	3.00	---	---	---	---	---	MOUNT ABOVE SIGN 73
73	"	R1-2	36" X 31"	3.88	---	---	---	1	---	
74	"	J3-2	48" X 57"	19.00	---	---	1	---	---	
75	"	R6-2L	24" X 30"	5.00	---	1	---	---	---	
76	"	R5-1	36" X 36"	9.00	---	---	1	---	---	
77	"	R3-18	36" X 36"	9.00	---	1	---	---	---	
78	"	J4-2	72" X 54"	27.00	---	---	---	2	---	
79	"	R2-1	48" X 60"	20.00	---	---	---	2	---	65 MPH
80	"	R5-1A	42" X 30"	8.75	---	---	1	---	---	
81	CTH TT SOUTH APPROACH	W1-8	18" X 24"	---	3.00	1	---	---	---	
82	"	W1-8	18" X 24"	---	3.00	1	---	---	---	
83	"	W1-8	18" X 24"	---	3.00	1	---	---	---	
84	"	W1-8	18" X 24"	---	3.00	1	---	---	---	
85	"	W1-8	18" X 24"	---	3.00	1	---	---	---	
86	"	W1-8	18" X 24"	---	3.00	1	---	---	---	
87	"	W1-8	18" X 24"	---	3.00	1	---	---	---	
88	"	W3-1	36" X 36"	---	9.00	---	1	---	---	
89	"	W1-3L	36" X 36"	---	9.00	---	1	---	---	
90	"	W13-1	18" X 18"	---	2.25	---	---	---	---	MOUNT BELOW SIGN 89, 25 MPH
M1	"	R3-17	---	---	---	---	---	---	1	
91	CTH TT NORTH APPROACH	W1-8	18" X 24"	---	3.00	---	---	---	---	
92	"	W1-8	18" X 24"	---	3.00	---	---	---	---	
93	"	W1-8	18" X 24"	---	3.00	---	---	---	---	
94	"	W1-8	18" X 24"	---	3.00	---	---	---	---	
95	"	W1-8	18" X 24"	---	3.00	---	---	---	---	
96	"	W1-8	18" X 24"	---	3.00	---	---	---	---	
97	"	W3-1	36" X 36"	---	9.00	---	1	---	---	
98	"	W13-1	18" X 18"	---	2.25	---	---	---	---	MOUNT BELOW SIGN 99, 30 MPH
99	"	W1-3L	36" X 36"	---	9.00	---	1	---	---	
M2	"	W5-1	---	---	---	---	---	---	1	
	PAGE SUBTOTALS			239.76	79.50	9	8	11	2	
	1440-14-72 PROJECT TOTALS			**1135.60**	**87.50**	**23**	**27**	**42**	**2**	

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

3

ERECTION & REMOVAL OF PERMANENT SIGNING, TYPE II

SIGN NO.	LOCATION	SIGN CODE	* 638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH
100	STH 23, WEST OF SUNSET RD	D1-1	1	2
101	STH 23 @ SUNSET RD INTERSECTION	R4-7	1	1
102	"	R4-7	1	1
103	"	R1-1	1	1
104	"	R1-1	1	1
105	"	R1-1	1	1
106	STH 23, EAST OF SUNSET RD	D1-1	1	2
107	"	J1-1	1	1
108	STH 23, WEST OF CTH TT	J4-2	1	2
109	"	D1-1	1	2
110	"	R5-1A	1	1
111	"	R5-1	1	1
112	STH 23 @ CTH TT INTERSECTION	R4-7	1	1
113	"	R4-7	1	1
114	"	J13-1	1	1
115	"	R1-1	1	1
116	"	R1-1	1	1
117	"	R1-1	1	1
118	"	R1-1	1	1
119	STH 23, EAST OF CTH TT	J13-1	1	1
120	"	R5-1	1	1
121	"	J4-2	1	2
122	"	R5-1A	1	1
123	"	D1-1	1	2
124	"	J1-1	1	1
PROJECT 1440-14-72 TOTALS			**25**	**31**

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

TRAFFIC CONTROL

STAGING DETAILS	STAGE DURATION (DAYS)	643.0300 * TRAFFIC CONTROL DRUMS EACH	643.0300 * TRAFFIC CONTROL DRUMS DAY	643.0420 * TRAFFIC CONTROL BARRICADES TYPE III EACH	643.0420 * TRAFFIC CONTROL BARRICADES TYPE III DAY	643.0705 * TRAFFIC CONTROL WARNING LIGHTS TYPE A EACH	643.0705 * TRAFFIC CONTROL WARNING LIGHTS TYPE A DAY	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C EACH	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C DAY	643.0810 TRAFFIC CONTROL CONNECTED ARROW BOARDS EACH	643.0810 TRAFFIC CONTROL CONNECTED ARROW BOARDS DAY	643.0900 * TRAFFIC CONTROL SIGNS EACH	643.0900 * TRAFFIC CONTROL SIGNS DAY	643.1050 * TRAFFIC CONTROL SIGNS PCMS EACH	643.1050 * TRAFFIC CONTROL SIGNS PCMS DAY	643.1070 TRAFFIC CONTROL CONES 42-INCH EACH	643.1070 TRAFFIC CONTROL CONES 42-INCH DAY	643.1220 CONNECTED WORK ZONE START AND END LOCATION MARKERS EACH	643.1220 CONNECTED WORK ZONE START AND END LOCATION MARKERS DAY
PROJECT 1440-41-71																			
STAGE 1A																			
B-59-0093, STH 23 WB - OUTSIDE (RIGHT) LANE CLOSURE	20	25	500	3	60	6	120	29	580	1	20	12	240	1	7	46	920	1	20
STAGE 1B																			
B-59-0093, STH 23 EB - INSIDE (LEFT) LANE CLOSURE	20	25	500	1	20	2	40	40	800	1	20	8	160	1	7	46	920	1	20
STAGE 2A																			
STH 23 WB - OUTSIDE (RIGHT) LANE CLOSURE	37	206	7,622	1	37	2	74	10	370	1	37	13	481	1	7	1,150	42,550	1	37
STH 23 EB - OUTSIDE (RIGHT) LANE CLOSURE	37	206	7,622	1	37	2	74	10	370	1	37	13	481	1	7	1,150	42,550	1	37
STH 23 - RIGHT LANE CLOSURES AT INTERSECTIONS	37	208	7,696	16	592	-	-	-	-	-	-	64	2,368	-	-	-	-	-	-
STH 23 - ENTRANCE RAMPS WITHIN LANE CLOSURES	37	132	4,884	12	444	-	-	78	2,886	-	-	36	1,332	-	-	-	-	-	-
STH 23 - EXIT RAMPS WITHIN LANE CLOSURES	37	63	2,331	7	259	-	-	35	1,295	-	-	28	1,036	-	-	-	-	-	-
SUNSET ROAD - FULL CLOSURE	37	10	370	10	370	20	740	-	-	-	-	6	222	2	14	-	-	-	-
STAGE 2B																			
STH 23 WB - OUTSIDE (RIGHT) LANE CLOSURE	38	206	7,828	1	38	2	76	10	380	1	38	13	494	-	-	1,150	43,700	1	38
STH 23 EB - OUTSIDE (RIGHT) - LANE CLOSURE	38	206	7,828	1	38	2	76	10	380	1	38	13	494	-	-	1,150	43,700	1	38
STH 23 - RIGHT LANE CLOSURES AT INTERSECTIONS	38	208	7,904	16	608	-	-	-	-	-	-	64	2,432	-	-	-	-	-	-
STH 23 WB - ENTRANCE RAMPS WITHIN LANE CLOSURES	38	132	5,016	12	456	-	-	78	2,964	-	-	36	1,368	-	-	-	-	-	-
STH 23 EB - EXIT RAMPS WITHIN LANE CLOSURES	38	63	2,394	7	266	-	-	35	1,330	-	-	28	1,064	-	-	-	-	-	-
B-59-0091, STH 23 WB -OUTSIDE (RIGHT) LANE CLOSURE	20	90	1,800	3	60	6	120	29	580	2	40	12	240	-	-	-	-	1	20
STH 67 TO 23 (EB) - ENTRANCE RAMP CLOSURE	20	17	340	5	100	10	200	4	80	-	-	13	260	1	7	-	-	-	-
SUNSET ROAD - FULL CLOSURE	38	10	380	10	380	20	760	-	-	-	-	6	228	-	-	-	-	-	-
STAGE 3																			
STH 23 WB - INSIDE (LEFT) LANE CLOSURE	56	206	11,536	1	56	2	112	10	560	1	56	13	728	1	7	1,150	64,400	1	56
STH 23 EB - INSIDE (LEFT) - LANE CLOSURE	56	206	11,536	1	56	2	112	10	560	1	56	13	728	1	7	1,150	64,400	1	56
STH 23 - LEFT TURNS AT INTERSECTIONS	56	352	19,712	16	896	32	1,792	-	-	-	-	32	1,792	-	-	-	-	-	-
STH 23 - AT RCUT INTERSECTIONS	56	174	9,744	6	336	12	672	-	-	-	-	12	672	-	-	60	3,360	-	-
B-59-0091, STH 23 WB - INSIDE (LEFT) LANE CLOSURE	20	81	1,620	1	20	2	40	40	800	2	40	8	160	-	-	-	-	1	20
SUNSET ROAD - MEDIAN CLOSURE	56	36	2,016	2	112	4	224	-	-	-	-	2	112	-	-	-	-	-	-

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

CONTINUED ON NEXT PAGE

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

TRAFFIC CONTROL (CONTINUED)

STAGING DETAILS	STAGE DURATION (DAYS)	643.0300 TRAFFIC CONTROL DRUMS EACH	643.0300 DAY	* 643.0420 TRAFFIC CONTROL BARRICADES TYPE III EACH	643.0420 DAY	* 643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A EACH	643.0705 DAY	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C EACH	643.0715 DAY	643.0810 TRAFFIC CONTROL CONNECTED ARROW BOARDS EACH	643.0810 DAY	* 643.0900 TRAFFIC CONTROL SIGNS EACH	643.0900 DAY	* 643.1050 TRAFFIC CONTROL SIGNS PCMS EACH	643.1050 DAY	643.1070 TRAFFIC CONTROL CONES 42-INCH EACH	643.1070 DAY	643.1220 CONNECTED WORK ZONE START AND END LOCATION MARKERS EACH	643.1220 DAY
STAGE 4A																			
STH 23 WB - INSIDE (LEFT) LANE CLOSURE	35	206	7,210	1	35	2	70	10	350	1	35	13	455	1	7	1,150	40,250	1	35
STH 23 EB - INSIDE (LEFT) - LANE CLOSURE	35	206	7,210	1	35	2	70	10	350	1	35	13	455	1	7	1,150	40,250	1	35
STAGE 4B																			
STH 23 WB - OUTSIDE (RIGHT) LANE CLOSURE	37	206	7,622	1	37	2	74	10	370	1	37	13	481	1	7	1,150	42,550	1	37
STH 23 EB - OUTSIDE (RIGHT) - LANE CLOSURE	37	206	7,622	1	37	2	74	10	370	1	37	13	481	1	7	1,150	42,550	1	37
1-DAY ENTRANCE RAMP CLOSURES	6	38	228	7	42	2	12	28	168	1	6	8	48	1	42	-	-	-	-
1-DAY EXIT RAMP CLOSURES	6	17	102	6	36	4	24	4	24	-	-	12	72	1	42	-	-	-	-
PROJECT 1440-41-71 TOTAL 0010			**151,173**		**5,463**		**5,556**		**15,567**		**532**		**19,084**		**175**		**472,100**		**486**
PROJECT 1440-41-72																			
STAGE 2A																			
CTH TT - FULL CLOSURE & DETOUR	37	20	740	18	666	36	1332	-	-	-	-	15	555	2	14	-	-	-	-
OLD PLANK ROAD TRAIL - CLOSURE	37	-	-	-	108	-	-	-	-	-	-	2	74	-	-	-	-	-	-
STAGE 2B																			
CTH TT - FULL CLOSURE & DETOUR	38	20	760	18	684	36	1368	-	-	-	-	15	570	-	-	-	-	-	-
STAGE 3																			
CTH TT- MEDIAN CLOSURE & DETOUR	56	56	3136	6	336	8	448	-	-	-	-	10	560	-	-	-	-	-	-
PROJECT 1440-41-72 TOTAL 0010			**4,636**		**1,794**		**3,148**		**0**		**0**		**1,759**		**14**		**0**		**0**
PROJECT TOTAL CATEGORY 0010			**155,809**		**7,257**		**8,704**		**15,567**		**532**		**20,843**		**189**		**472,100**		**486**

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

TRAFFIC CONTROL DETOUR SIGN SUMMARY

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 55 DAYS	* 643.0900 SIGNS DAYS	* 643.042 BARRICADES TYPE III DAYS	* 643.0705 WARNING LIGHTS TYPE A DAYS	* 643.1050 PORTABLE CHANGEABLE MESSAGE SIGN EACH	NO OF CYCLES	643.0920 COVERING SIGNS TYPE II EACH	REMARKS
1	STH 67, N. OF STH 23, PLACE 1000' N. OF STH 23 WB RAMP INTERECTION	M 3-2	24"X12"	1	55	55						
	"	M 1-6	24"X24"	1	55	55						23
	"	WO 20-53A	48"X48"	1	55	55						
2	STH 67, N. OF STH 23, PLACE 500' N. OF STH 23 WB RAMP INTERECTION	M 4-5	24"X12"	1	55	55						
	"	M 3-2	24"X12"	1	55	55						
	"	M 1-6	24"X24"	1	55	55						23
	"	MO 5-1R	21"X21"	1	55	55						
3	STH 67, AT STH 23 WB RAMP, PLACE RIGHT OF EXISTING J13-1 SIGN AT STH 23 WB RAMP	M 4-5	24"X12"	1	55	55						
	"	M 3-2	24"X12"	1	55	55						
	"	M 1-6	24"X24"	1	55	55						23
	"	MO 6-1R	21"X21"	1	55	55						
4	STH 67, AT STH 23 WB RAMP, PLACE RIGHT OF EXISTING R2-1 SIGN AT STH 23 WB RAMP	M 4-5	24"X12"	1	55	55						
	"	M 3-2	24"X12"	1	55	55						
	"	M 1-6	24"X24"	1	55	55						23
	"	MO 6-1L	21"X21"	1	55	55						
5	STH 67, S. OF STH 23, PLACE 500' S. OF STH 23 WB RAMP INTERECTION	M 4-5	24"X12"	1	55	55						
	"	M 3-2	24"X12"	1	55	55						
	"	M 1-6	24"X24"	1	55	55						23
	"	MO 5-1L	21"X21"	1	55	55						
6	STH 67, AT STH 23 EB RAMP, PLACE IN MIDDLE OF ROADWAY FOR RAMP OPENING	R 11-2R	48"X30"	1	55	55	55	110				
	"	R 4-9R	30"X24"	1	55	55						
7	STH 67 ON-RAMP TO STH 23 EB, PLACE ON RIGHT SHOULDER, FIELD LOCATION DETERMINED	PCMS		1					7			PLACE IN ADVANCE OF CLOSURE
8	STH 67, AT STH 23 EB RAMP, MODIFY EXISTING J3-1 SIGN AS SHOWN	M 4-5	24"X12"	1	55	55						
	"	MO 6-1	21"X21"	1	55	55						AHEAD
9	STH 67, S. OF STH 23 EB RAMP, COVER EXISTING D1-2 SIGN AS SHOWN									1	1	COVER ENTIRE SIGN
10	STH 67, S. OF STH 23 EB RAMP, MODIFY EXISTING J2-2 SIGN AS SHOWN	M 4-5	24"X12"	1	55	55						
	"	MO 6-1	21"X21"	1	55	55						AHEAD
11	STH 67, S. OF STH 23 EB RAMP, PLACE 1000' S. OF STH 23 EB RAMP INTERSECTION	M 3-2	24"X12"	1	55	55						
	"	M 1-6	24"X24"	1	55	55						23
	"	WO 20-53A	48"X48"	1	55	55						
12	STH 23 WB, E. OF CTH C, PLACE 500' PRIOR TO CTH C EXIT RAMP	M 4-5	36"X18"	1	55	55						
	"	M 3-2	36"X18"	1	55	55						
	"	M 1-6	36"X36"	1	55	55						23
	"	MO 5-2R	30"X30"	1	55	55						
13	STH 23 WB, AT CTH C EXIT, PLACE LEFT OF EXISTING TYPE I SIGN AT CTH C EXIT RAMP	M 4-5	36"X18"	1	55	55						
	"	M 3-2	36"X18"	1	55	55						
	"	M 1-6	36"X36"	1	55	55						23
	"	MO 6-2R	30"X30"	1	55	55						
14	STH 23 WB EXIT RAMP TO CTH C, PLACE 500' PRIOR TO CTH C RAMP INTERSECTION	M 4-5	24"X12"	1	55	55						
	"	M 3-2	24"X12"	1	55	55						
	"	M 1-6	24"X24"	1	55	55						23
	"	MO 5-1R	21"X21"	1	55	55						
15	STH 23 WB EXIT RAMP TO CTH C, PLACE RIGHT OF EXISTING R1-1 SIGN	M 4-5	24"X12"	1	55	55						
	"	M 3-2	24"X12"	1	55	55						
	"	M 1-6	24"X24"	1	55	55						23
	"	MO 6-1R	21"X21"	1	55	55						
16	CTH C, BETWEEN STH 23 RAMPS, PLACE 500' N. OF STH 23 EB RAMP INTERSECTION	M 4-5	24"X12"	1	55	55						
	"	M 3-2	24"X12"	1	55	55						
	"	M 1-6	24"X24"	1	55	55						
	"	MO 5-1R	21"X21"	1	55	55						
17	CTH C, AT STH 23 EB RAMP, MODIFY EXISTING J3-1 SIGN AT STH 23 EB RAMP INTERSECTION	M 4-5	24"X12"	1	55	55						

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

PROJECT 1440-14-71 DETOUR TOTALS 50 2,695 55 110 7 1

TEMPORARY PAVEMENT MARKING

STAGE	LOCATION	643.3170 TEMPORARY MARKING LINE EPOXY 6-INCH YELLOW LF	643.3170 TEMPORARY MARKING LINE EPOXY 6-INCH WHITE LF	643.3180 TEMPORARY MARKING LINE REMOVABLE TAPE 6-INCH YELLOW LF	643.3180 TEMPORARY MARKING LINE REMOVABLE TAPE 6-INCH WHITE LF	643.3280 TEMPORARY MARKING LINE REMOVABLE TAPE 10-INCH WHITE LF	646.9000 MARKING REMOVAL LINE 4-INCH LF	646.9200 MARKING REMOVAL LINE WIDE LF	646.9165 MARKING REMOVAL LINE GROOVED CONTRAST PERMANENT TAPE 10-INCH LF	REMARKS
1A	STH 23 (WB), B-59-0093	-	-	1,410	3,170	-	1400	-	-	STH 57 BRIDGE OUTSIDE LANE CLOSURE
1B	STH 23 (WB), B-59-0093	-	-	2,330	1,410	-	1400	-	-	STH 57 BRIDGE INSIDE LANE CLOSURE
2	STH 23 (WB & EB) PROJECT LIMITS	-	-	-	1,560	-	-	-	-	QUEUE WARNING SYSTEM
2	STH 23, RAMP EXITS THROUGH CLOSED LANE	-	-	-	1,400	1400	-	-	-	
2	STH 23, RAMP ENTRANCES THROUGH CLOSED LANE	-	-	-	4,800	1200	-	-	-	
2B	STH 23 (EB), B-59-0091	-	-	1,700	1,700	-	1700	-	-	STH 67 BRIDGE OUTSIDE LANE CLOSURE
3	STH 23 (WB & EB) PROJECT LIMITS	-	-	1,560	-	-	-	-	-	QUEUE WARNING SYSTEM
3	STH 23 (EB), B-59-0091	-	-	1,660	940	-	850	130	1120	STH 67 BRIDGE INSIDE LANE CLOSURE
4	STH 23, PROJECT WIDE	-	56,300	-	-	-	-	-	-	CENTERLINE SKIPS
4	STH 23, PROJECT WIDE	112,600	112,600	-	-	-	-	-	-	EDGELINES
	PROJECT 1440-41-71 TOTAL 0010	**112,600**	**168,900**	**8,660**	**14,980**	**2,600**	**5,350**	**130**	**1,120**	
	PROJECT TOTAL CATEGORY 0010	**281,500**		**23,640**		**2,600**	**5,350**	**130**	**1,120**	

TRAFFIC QUEUE WARNING SYSTEM

STAGE	LOCATION	FLASHING BEACON SIGNS (FBS)	PORTABLE TRAFFIC SENSORS (PTS)	643.1205.S BASIC TRAFFIC QUEUE WARNING SYSTEM DAY	REMARKS
2,3,4	STH 23 WB	3	2	609	SEE TRAFFIC CONTROL STAGING DETAIL
2,3,4	STH 23 EB	3	2	609	SEE TRAFFIC CONTROL STAGING DETAIL
PROJECT 1440-41-71 TOTAL CATEGORY 0010				**1,218**	

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

TEMPORARY TAPE RUMBLE STRIP ORANGE

STAGE	LOCATION	643.0320.S TEMPORARY TAPE RUMBLE STRIP ORANGE LF
1	STH 23 WB	648
2	STH 23 WB	648
2	STH 23 EB	648
3	STH 23 WB	648
3	STH 23 EB	648
4	STH 23 WB	648
4	STH 23 EB	648
PROJECT 1440-41-71 TOTAL CATEGORY 0010		**4,536**

DIGITAL SPEED REDUCTION SYSTEM (DSRS)

STAGE	STAGE DURATION	LOCATION	643.0370.S DIGITAL SPEED REDUCTION SYSTEM TRAILERS **	DAY
1	40	STH 23 WB	1	40
2	75	STH 23 WB	10	75
2	75	STH 23 EB	10	75
3	56	STH 23 WB	10	56
3	56	STH 23 EB	10	56
4	72	STH 23 WB	10	72
4	72	STH 23 EB	10	72
PROJECT 1440-41-71 TOTAL CATEGORY 0010				**446**

** NON BID ITEM, ITEMS AND QUANTITIES LISTED FOR BID INFORMATION ONLY.
ITEMS INCIDENTAL TO DIGITAL SPEED REDUCTION SYSTEM

PAVEMENT MARKING

STATION	TO	STATION	LOCATION	646.2020 MARKING LINE EPOXY 6-INCH (WHITE) LF	646.2020 MARKING LINE EPOXY 6-INCH (YELLOW) LF	646.2025 MARKING LINE GROOVED BLACK EPOXY 6-INCH LF	646.2040 MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE) LF	646.2040 (YELLOW) LF	646.2040 (WHITE) 3' LINE, 9' GAP LF	646.2040 (WHITE) 12.5' LINE, 37.5' GAP LF	646.4040 MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE) LF	646.6120 STOP LINE EPOXY 18-INCH (WHITE) LF	646.6220 YIELD LINE EPOXY 18-INCH (WHITE) EACH	646.6466 COLD WEATHER MARKING EPOXY 6-INCH (ALL) LF	646.6470 COLD WEATHER MARKING EPOXY 10-INCH (ALL) LF	646.7120 MARKING DIAGONAL EPOXY 12-INCH (YELLOW) LF	646.7220 MARKING CHEVRON EPOXY 24-INCH (WHITE) LF	646.7320 MARKING CHEVRON EPOXY 12-INCH (WHITE) LF	646.8220 MARKING ISLAND NOSE EPOXY (YELLOW) EACH
1121+90	-	1688+20	STH 23 WB	-	-	55,470	-	-	-	55,470	-	-	-	13,870	-	-	-	-	-
1121+90	-	1681+70	STH 23 EB	-	-	54,810	-	-	-	54,810	-	-	-	13,710	-	-	-	-	-
1121+90	-	1142+50	STH 23	-	-	-	4,042	4,075	-	-	582	-	-	2,030	150	-	-	-	-
1143+00	-	1150+00	STH 23 WB	-	-	-	673	660	-	-	955	-	-	340	240	-	-	-	-
1143+00	-	1150+00	STH 23 EB	-	-	-	646	668	-	-	-	-	-	330	-	-	-	-	-
1150+00	-	1159+50	STH 23 WB	-	-	-	950	923	-	-	-	-	-	470	-	-	-	-	-
1150+00	-	1159+50	STH 23 EB	-	-	-	913	874	-	-	63	-	-	450	20	-	-	-	-
1159+50	-	1167+00	STH 23 WB	-	-	-	750	647	-	-	225	-	-	350	60	-	-	-	-
1159+50	-	1167+00	STH 23 EB	-	-	-	649	642	-	-	-	-	-	330	-	-	-	-	-
1167+00	-	1188+00	STH 23 WB	-	-	-	535	2,100	841	-	730	-	-	870	190	-	-	-	-
1167+00	-	1188+00	CTH C NW RAMP	-	-	-	1,411	331	-	-	733	-	-	440	190	-	-	-	-
1167+00	-	1188+00	STH 23 EB	-	-	-	1,646	2,100	183	-	274	-	-	990	70	-	-	-	-
1167+00	-	1188+00	CTH C SW RAMP	-	-	-	534	77	-	-	275	-	-	160	70	-	100	-	-
1188+00	-	1211+00	STH 23 WB	-	-	-	1,766	2,300	184	-	349	-	-	1,070	90	-	-	-	-
1188+00	-	1211+00	CTH C NE RAMP	-	-	-	756	231	-	-	347	-	-	250	90	-	190	-	-
1188+00	-	1211+00	STH 23 EB	-	-	-	391	2,300	809	-	580	-	-	880	150	-	-	-	-
1188+00	-	1211+00	CTH C SE RAMP	-	-	-	1,967	62	-	-	518	-	-	510	130	-	-	-	-
1211+00	-	1259+00	STH 23 WB	-	-	-	3,028	4,800	878	-	902	-	-	2,180	230	-	-	-	-
1211+00	-	1259+00	STH 23 EB	-	-	-	3,162	4,800	651	-	991	-	-	2,160	250	-	-	-	-
1223+05	-	1237+05	STH 67 NW RAMP	-	-	-	1,402	123	-	-	592	-	-	390	150	-	-	-	-
1230+68	-	1249+66	STH 67 SW RAMP	-	-	-	2,027	1,548	-	-	286	-	-	900	80	-	123	-	-
1243+80	-	1249+24	STH 67 NE RAMP	-	-	-	549	58	-	-	300	-	-	160	80	-	165	-	-
1243+46	-	1258+72	STH 67 SE RAMP	-	-	-	2,415	1,302	-	-	619	-	-	930	160	-	-	-	-
1259+00	-	1275+00	STH 23 WB	-	-	-	1,596	1,600	-	-	-	-	-	800	-	-	-	-	-
1259+00	-	1275+00	STH 23 EB	-	-	-	1,605	1,600	-	-	-	-	-	810	-	-	-	-	-
1275+00	-	1288+00	CTH O INTERSECTION	90	358	-	357	2,563	-	-	-	-	-	730	-	-	-	200	2
1288+00	-	1294+50	STH 23 WB	-	-	-	651	650	-	-	-	-	-	330	-	-	-	-	-
1288+00	-	1294+50	STH 23 EB	-	-	-	650	650	-	-	-	-	-	330	-	-	-	-	-
1294+50	-	1308+50	CTH E INTERSECTION	-	261	-	2,912	3,135	-	-	1,949	-	-	1,520	490	-	-	100	2
1308+50	-	1321+50	STH 23 WB	-	-	-	1,306	1,300	-	-	-	-	-	660	-	-	-	-	-
1308+50	-	1321+50	STH 23 EB	-	-	-	1,295	1,300	-	-	-	-	-	650	-	-	-	-	-
1321+50	-	1334+50	STH 23/PLEASANTVIEW RD	-	283	-	2,744	2,930	296	-	1,671	-	-	1,500	420	-	-	181	2
1334+50	-	1378+00	STH 23 WB	-	-	-	2,603	4,350	410	-	919	-	-	1,850	230	-	-	-	-

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PAVEMENT MARKING (CONTINUED)

STATION	TO	STATION	LOCATION	646.2020 MARKING LINE EPOXY 6-INCH (WHITE) LF	646.2020 MARKING LINE EPOXY 6-INCH (YELLOW) LF	646.2025 MARKING LINE GROOVED BLACK EPOXY 6-INCH LF	646.2040 MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE) LF	646.2040 (YELLOW) LF	646.2040 (WHITE) 3' LINE, 9' GAP LF	646.2040 (WHITE) 12.5' LINE, 37.5' GAP LF	646.4040 MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE) LF	646.6120 MARKING STOP LINE EPOXY 18-INCH (WHITE) LF	646.6220 MARKING YIELD LINE EPOXY 18-INCH (WHITE) EACH	646.6466 COLD WEATHER MARKING EPOXY 6-INCH (ALL) LF	646.6470 COLD WEATHER MARKING EPOXY 10-INCH (ALL) LF	646.7120 MARKING DIAGONAL EPOXY 12-INCH (YELLOW) LF	646.7220 MARKING CHEVRON EPOXY 24-INCH (WHITE) LF	646.7320 MARKING CHEVRON EPOXY 12-INCH (WHITE) LF	646.8220 MARKING ISLAND NOSE EPOXY (YELLOW) EACH
1334+50	-	1378+00	STH 23 EB	-	-	-	2,769	4,350	639	-	919	-	-	1,940	230	-	-	-	-
1334+50	-	1378+00	STH 57 NW RAMP	-	-	-	2,077	970	-	-	695	-	-	770	180	-	-	-	-
1334+50	-	1378+00	STH 57 SW RAMP	-	-	-	1,952	1,091	-	-	328	-	-	770	90	-	76	-	-
1334+50	-	1378+00	STH 57 NE RAMP	-	-	-	1,677	1,039	-	-	230	-	-	680	60	-	86	-	-
1334+50	-	1378+00	STH 57 SE RAMP	-	-	-	1,692	901	-	-	761	-	-	650	200	-	-	-	-
1378+00	-	1409+00	STH 23 WB	-	-	-	3,091	3,100	-	-	-	-	-	1,550	-	-	-	-	-
1378+00	-	1409+00	STH 23 EB	-	-	-	3,110	3,100	-	-	-	-	-	1,560	-	-	-	-	-
1409+00	-	1416+50	STH 23 WB/WILLOW RD	-	-	-	722	606	-	-	-	-	-	340	-	-	-	-	-
1409+00	-	1416+50	STH 23 EB/WILLOW RD	-	-	-	742	606	-	-	-	-	-	340	-	-	-	-	-
1416+50	-	1448+50	STH 23 WB	-	-	-	3,202	3,200	-	-	-	-	-	1,610	-	-	-	-	-
1416+50	-	1448+50	STH 23 EB	-	-	-	3,199	3,200	-	-	-	-	-	1,600	-	-	-	-	-
1448+50	-	1455+00	STH 23 WB	-	-	-	651	13	-	-	981	-	-	170	250	-	-	127	-
1448+50	-	1455+00	STH 23 EB	-	-	-	770	1,277	125	-	-	-	15	550	-	44	-	-	-
1455+00	-	1459+50	STH 23 WB	-	-	-	451	451	-	-	-	-	-	230	-	-	-	-	-
1455+00	-	1459+50	STH 23 EB	-	-	-	450	450	-	-	-	-	-	230	-	-	-	-	-
1459+50	-	1473+50	STH 23 WB	-	175	-	1,197	758	-	-	883	-	-	490	230	-	-	-	1
1459+50	-	1473+50	STH 23 EB	-	167	-	1,208	646	-	-	891	-	-	470	230	-	-	-	1
1459+50	-	1473+50	STH 23/CTH M MEDIAN	-	-	-	-	1,256	-	-	998	-	-	320	250	-	-	232	-
1473+50	-	1481+50	STH 23 WB	-	-	-	916	1,401	125	-	530	-	15	620	140	45	-	137	-
1473+50	-	1481+50	STH 23 EB	-	-	-	800	190	-	-	503	-	-	250	130	-	-	-	-
1481+50	-	1489+50	STH 23 WB	-	-	-	800	800	-	-	-	-	-	400	-	-	-	-	-
1481+50	-	1489+50	STH 23 EB	-	-	-	801	800	-	-	-	-	-	410	-	-	-	-	-
1489+50	-	1497+00	STH 23 WB/HILLSIDE RD	-	-	-	630	607	-	-	150	-	-	310	40	-	-	-	-
1489+50	-	1497+00	STH 23 EB/HILLSIDE RD	-	-	-	627	614	-	-	130	-	-	320	40	-	-	-	-
1497+00	-	1516+50	STH 23 WB	-	-	-	1,950	1,950	-	-	-	-	-	980	-	-	-	-	-
1497+00	-	1516+50	STH 23 EB	-	-	-	1,951	1,950	-	-	-	-	-	980	-	-	-	-	-
1516+50	-	1524+00	STH 23 WB/BRIDGEWOOD RD	-	-	-	631	617	-	-	130	-	-	320	40	-	-	-	-
1516+50	-	1524+00	STH 23 EB/BRIDGEWOOD RD	-	-	-	619	604	-	-	140	-	-	310	40	-	-	-	-
1524+00	-	1568+50	STH 23 WB	-	-	-	4,442	4,434	-	-	-	-	-	2,220	-	-	-	-	-
1524+00	-	1568+50	STH 23 EB	-	-	-	4,431	4,434	-	-	-	-	-	2,220	-	-	-	-	-
1568+50	-	1578+50	STH 23 WB/SUNSET RD	-	483	-	821	1,000	-	-	290	-	-	460	80	-	-	-	1
1568+50	-	1578+50	STH 23 EB/SUNSET RD	-	243	-	863	1,000	-	-	290	-	-	470	80	-	-	-	1
1578+50	-	1592+50	STH 23 WB	-	-	-	1,400	566	-	-	-	-	-	500	-	-	-	-	-

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

CONTINUED ON NEXT PAGE

PAVEMENT MARKING (CONTINUED)

STATION	TO	STATION	LOCATION	646.2020 MARKING LINE EPOXY 6-INCH (WHITE) LF	646.2020 MARKING LINE EPOXY 6-INCH (YELLOW) LF	646.2025 MARKING LINE GROOVED BLACK EPOXY 6-INCH LF	646.2040 MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE) LF	646.2040 (YELLOW) LF	646.2040 (WHITE) 3' LINE, 9' GAP LF	646.2040 (WHITE) 12.5' LINE, 37.5' GAP LF	646.4040 MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE) LF	646.6120 STOP LINE EPOXY 18-INCH (WHITE) LF	646.6220 YIELD LINE EPOXY 18-INCH (WHITE) EACH	646.6466 COLD WEATHER MARKING EPOXY 6-INCH (ALL) LF	646.6470 COLD WEATHER MARKING EPOXY 10-INCH (ALL) LF	646.7120 MARKING DIAGONAL EPOXY 12-INCH (YELLOW) LF	646.7220 MARKING CHEVRON EPOXY 24-INCH (WHITE) LF	646.7320 MARKING CHEVRON EPOXY 12-INCH (WHITE) LF	646.8220 MARKING ISLAND NOSE EPOXY (YELLOW) EACH
1578+00	-	1592+50	STH 23 EB	-	-	-	1,146	1,385	-	-	-	-	-	640	-	-	-	-	-
1578+00	-	1592+50	STH 23 TURN LANE	-	-	-	525	847	100	-	675	-	15	370	170	45	-	-	-
1592+50	-	1613+00	STH 23 WB	-	-	-	1,177	1,523	-	-	-	-	-	680	-	-	-	-	-
1592+50	-	1613+00	STH 23 EB	-	-	-	1,159	1,523	-	-	-	-	-	680	-	-	-	-	-
1613+00	-	1629+00	STH 23 WB	-	-	-	1,333	1,585	-	-	-	-	-	730	-	-	-	-	-
1613+00	-	1629+00	STH 23 EB	-	-	-	1,605	758	-	-	-	-	-	600	-	-	-	-	-
1613+00	-	1621+50	STH 23 TURN LANE	-	-	-	543	848	108	-	683	-	15	380	180	51	-	-	-
1629+00	-	1636+50	STH 23 WB/MEADOWLARK RD	-	-	-	2,677	2,679	-	-	140	-	-	1,340	40	-	-	-	-
1636+50	-	1657+00	STH 23 EB/MEADOWLARK RD	-	-	-	2,669	2,675	-	-	140	-	-	1,340	40	-	-	-	-
1657+00	-	1688+20	STH 23 WB	-	-	-	1,775	3,121	-	-	-	-	-	1,230	-	-	-	-	-
1657+00	-	1680+51	STH 23 WB/CTH 32 RAMP	-	-	-	2,362	1,020	-	-	1,357	-	-	850	340	-	-	-	-
1657+00	-	1681+70	STH 23 EB	-	-	-	2,023	2,469	-	-	-	-	-	1,130	-	-	-	-	-
1657+00	-	1680+68	STH 23 EB/CTH 32 RAMP	-	-	-	1,458	1,012	151	-	596	-	-	660	150	-	-	143	-
PROJECT 1440-41-71 CATEGORY 0010				**2,060**		**110,280**			**352,930**		**26,300**	**0**	**60**	**88,620**	**6,770**	**185**	**740**	**1,120**	**10**
1592+50	-	1600+00	STH 23 WB/CTH TT TURN LANE	-	-	-	720	540	-	-	1,458	-	-	320	370	-	-	256	-
1592+50	-	1600+00	STH 23 EB/CTH TT TURN LANE	-	-	-	740	540	-	-	1,492	-	-	320	380	-	-	254	-
1599+00	-	1601+00	CTH TT NORTH	1302	2576	-	-	-	-	-	-	27	-	-	-	-	-	-	1
1599+00	-	1601+00	CTH TT SOUTH	1578	1634	-	-	-	-	-	-	28	-	-	-	-	-	-	1
PROJECT 1440-41-72 CATEGORY 0010				**7,090**		**0**			**2,540**		**2,950**	**55**	**0**	**640**	**750**	**0**	**0**	**510**	**2**
PROJECT TOTAL CATEGORY 0010				**9,150**		**110,280**			**355,470**		**29,250**	**55**	**60**	**89,260**	**7,520**	**185**	**740**	**1,630**	**12**

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

3

TRAFFIC CONTROL SIGNS FIXED MESSAGE

STATION	LOCATION	643.1000 TRAFFIC CONTROL SIGNS FIXED MESSAGE SF	REMARKS
1225+00	STH 23 EB, BEFORE STH 67 EXIT	34	WIDE LOAD EXCEEDING 13 FT - 114" X 42"
1390+00	STH 23 WB, BEFORE STH 57 EXIT	34	WIDE LOAD EXCEEDING 13 FT - 114" X 42"
PROJECT 1440-41-71 TOTAL CAT. 0010		**68**	

BIKE LANE MARKING

STATION	LOCATION	646.5020 MARKING ARROW EPOXY EACH	646.5220 MARKING SYMBOL EPOXY EACH	REMARKS
49+20	CTH TT, LT	-	1	BIKE SYMBOL
49+05	CTH TT, LT	1	-	ARROW
PROJECT 1440-41-71 CAT. 0010 TOTAL		**1**	**1**	

ADJUSTING INLET COVERS

STATION	LOCATION	611.8115 ADJUSTING INLET COVERS EACH
1235+50	STH 67 RAMP TO STH 23 EB	1
1238+00	STH 67 RAMP TO STH 23 EB	1
1242+00	STH 67 RAMP TO STH 23 EB	1
1248+00	STH 23 EB RAMP TO STH 67	1
PROJECT 1440-41-71 CAT. 0010 TOTAL		4

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PAVEMENT MARKING REMOVALS

STATION	TO	STATION	LOCATION	646.9012 MARKING REMOVAL LINE WATER BLASTING 6-INCH LF	REMARKS
1351+87	-	1366+00	STH 23 WB	1413	STAGE 1A
1375+00	-	1383+00	STH 23 WB	800	STAGE 1A
1351+87	-	1366+74	STH 23 WB	1487	STAGE 1B
1375+00	-	1383+00	STH 23 WB	800	STAGE 1B
WEST PROJECT LIMITS			STH 23 EB	780	FOR QUEUE WARNING SYSTEM
EAST PROJECT LIMITS			STH 23 WB	780	FOR QUEUE WARNING SYSTEM
EXIT RAMPS WITHIN CLOSURES			STH 23 EB	1800	STAGE 2
EXIT RAMPS WITHIN CLOSURES			STH 23 WB	1350	STAGE 2
ENTRANCE RAMPS WITHIN CLOSURES			STH 23 EB	2400	STAGE 2
ENTRANCE RAMPS WITHIN CLOSURES			STH 23 WB	1200	STAGE 2
PROJECT 1440-41-71 TOTAL CATEGORY 0010				**12,810**	

LOCATING NO-PASSING ZONES

STATION	TO	STATION	LOCATION	648.0100 LOCATING NO-PASSING ZONES MI
33+00	-	42+25	CTH TT	0.175
59+00	-	68+00	CTH TT	0.170
PROJECT 1440-41-72 TOTAL 0010				**0.345**

PIPE UNDERDRAIN

STATION	TO	STATION	LOCATION	310.0110 BASE AGGREGATE OPEN-GRADED TON	612.0106 PIPE UNDERDRAIN 6-INCH LF	612.0206 PIPE UNDERDRAIN UNPERFORATED 6-INCH LF	612.0806 APRON ENDWALLS FOR UNDERDRAIN REINFORCED CONCRETE 6-INCH EACH	645.0111 GEOTEXTILE TYPE DF SCHEDULE A SY	646.5520 MARKING OUTFALL EPOXY EACH
1570+67	-	1577+82	SUNSET DR, WB - LEFT	100	715	100	4	400	4
PROJECT 1440-41-71 CATEGORY 0010 TOTAL				**100**	**715**	**100**	**4**	**400**	**4**

CONSTRUCTION STAKING

STATION	TO	STATION	LOCATION	650.4000 CONSTRUCTION STAKING STORM SEWER EACH	650.4500 CONSTRUCTION STAKING SUBGRADE LF	650.5000 CONSTRUCTION STAKING BASE LF	650.5500 CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER LF	650.6000 CONSTRUCTION STAKING PIPE CULVERTS EACH	650.7000 CONSTRUCTION STAKING CONCRETE PAVEMENT LF	650.8000 CONSTRUCTION STAKING RESURFACING REFERENCE LF	650.8501.01 CONSTRUCTION STAKING ELECTRICAL INSTALLATIONS (01. 1440-41-72) EACH	650.9000 CONSTRUCTION STAKING CURB RAMPS EACH	650.9500.01 CONSTRUCTION STAKING SIDEWALK (01. 1440-41-72) EACH	650.9911.01 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (01. 1440-41-71) EACH	650.9911.02 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (02. 1440-41-72) EACH	650.9920 CONSTRUCTION STAKING SLOPE STAKES LF	REMARKS
1121+90	-	1579+00	STH 23, EB & WB	11	-	-	-	-	435	91,420	-	-	-	1	-	-	START TO CTH TT
1579+00	-	1622+00	STH 23 EB & WB	-	-	-	-	-	-	8,600	-	-	-	-	-	-	CTH TT AREA
1622+00	-	1688+20	STH 23, EB & WB	4	-	-	-	-	139	13,240	-	-	-	-	-	-	CTH TT TO END
17+40	-	18+13	SUNSET ROAD	-	-	-	197	1	-	75	-	-	-	-	-	-	SUNSET RD SOUTH
20+21	-	21+96	SUNSET ROAD	-	-	-	288	1	-	175	-	-	-	-	-	-	SUNSET RD NORTH
1137+51	-	1688+50	STH 23, EB	-	-	-	-	-	-	-	-	-	-	-	-	6,139	GUARDRAIL, ALL EB
1137+51	-	1688+50	STH 23, WB	-	-	-	-	-	-	-	-	-	-	-	-	4,588	GUARDRAIL, ALL WB
1242+24	-	1248+57	67 RAMP TO 23E	-	-	-	120	-	-	-	-	-	-	-	-	633	GUARDRAIL, 67 RAMP TO 23E
1440-41-71 TOTAL 0010				**15**	**0**	**0**	**605**	**2**	**574**	**113,510**	**0**	**0**	**0**	**1**	**0**	**11,360**	
1579+68	-	1582+06	STH 23 EB RT	-	238	238	-	-	-	-	-	-	-	-	1	238	
1579+63	-	1580+64	STH 23 EB LT R-CUT	-	101	101	140	1	-	-	-	-	-	-	-	101	
1579+99		1587+91	STH 23 WB LT R-CUT	-	793	793	-	-	-	-	-	-	-	-	-	793	
1578+00	-	1582+00	OLD PLANK RD. TRAIL	-	400	400	-	1	-	-	-	-	-	-	-	400	
1594+50	-	1602+25	OLD PLANK RD. TRAIL	-	775	775	-	1	-	-	-	-	-	-	-	775	
1593+41	-	1602+70	STH 23 EB RT	-	930	930	-	-	-	-	-	-	-	-	-	930	
1593+32	-	1602+45	STH 23 EB LT	-	913	913	-	-	-	-	1	-	-	-	-	913	
1598+73	-	1606+18	STH 23 WB RT	-	745	745	-	-	-	-	-	-	-	-	-	745	
1598+09	-	1606+27	STH 23 WB LT	-	819	819	-	-	-	-	-	-	-	-	-	819	
44+26	-	50+00	CTH TT, SOUTH	-	574	574	249	4	-	570	-	2	1	-	-	574	
52+60	-	59+00	CTH TT, NORTH	-	640	640	256	2	-	640	-	-	-	-	-	640	
1613+14	-	1621+19	STH 23 EB LT R-CUT	-	806	806	-	-	-	-	-	-	-	-	-	806	
1620+31	-	1621+49	STH 23 WB RT R-CUT	-	118	118	141	-	-	-	-	-	-	-	-	118	
1618+96	-	1621+44	STH 23 WB LT	-	248	248	-	1	-	-	-	-	-	-	-	248	
1598+36	-	1601+61	STH 23 MEDIAN	9	-	-	1,069	-	-	-	-	-	-	-	-	-	
1601+79	-	1603+62	STH 23 RT	3	-	-	-	-	-	-	-	-	-	-	-	-	
1440-41-72 TOTAL 0010				**12**	**8,100**	**8,100**	**1,855**	**10**	**0**	**1,210**	**1**	**2**	**1**	**0**	**1**	**8,100**	
PROJECT TOTAL CATEGORY 0010				**27**	**8,100**	**8,100**	**2,460**	**12**	**574**	**114,720**	**1**	**2**	**1**	**1**	**1**	**19,460**	

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

Conduit Rigid Nonmetallic

LOCATION		652.0225	652.0235	652.0325
STH 23 & CTH TT		2-Inch	3-Inch	2-Inch
		Schedule 40	Schedule 40	Schedule 80
FROM	TO	LF	LF	LF
CB1	PB1		10	
PB1	PB2	95		
PB2	LB1	10		
PB2	PB3	100		
PB3	LB2	10		
PB3	LB7	190		
LB7	PB14	300		
PB14	PB15	295		
PB15	PB16	295		
PB16	PB17	295		
PB17	PB18	295		
PB18	LB8	190		
PB3	PB4	65		
PB4	PB5	130		
PB5	LB3	10		
PB5	PB6	110		
PB6	LB4	10		
PB6	LB5	190		
LB5	PB7	300		
PB7	PB8	80		
PB8	PB9			210
PB9	PB10	295		
PB10	PB11	295		
PB11	PB12	295		
PB12	PB13	295		
PB13	LB6	50		
PB6	PB1	80		
PROJECT 1440-41-72 TOTAL		4,280	10	210

Electrical Wire Lighting

LOCATION			10AWG *	12AWG 655.0610
STH 23 & CTH TT			655.0615	655.0610	Equipment
			Ungrounded	Ungrounded	Grounding
(240 VOLT SYSTEM)			Conductor	Conductor	Conductor
			(see Circuit Color)	(Black)/(Red)	(Green)
Circuit	FROM	TO	LF	LF	LF
A	CB1	LB1	308		
(Black)	LB1	Luminaires		100	50
	CB1	LB4	262		
	LB4	Luminaires		100	50
B	CB1	LB2	524		
(Red)	LB2	Luminaires		100	50
	LB2	LB5	570		
	LB5	Luminaires		100	50
C	CB1	LB5	638		
(Blue)	LB5	Luminaires		100	50
	CB1	LB7	884		
	LB7	Luminaires		100	50
D	CB1	LB6	4406		
(Brown)	LB6	Luminaires		200	100
	CB1	LB8	4320		
	LB8	Luminaires		200	100
		SUB-TOTALS	11,912	1,000	500
PROJECT 1440-41-72 TOTAL			11,912	1,500	

Electrical Wire Lighting 10AWG

LOCATION		* 655.0615 Equipment Grounding Conductor (Green)
STH 23 & CTH TT		
(240 VOLT SYSTEM)		
FROM	TO	LF
CB1	LB1	154
LB1	LB2	152
LB2	LB7	224
LB7	LB8	1718
LB2	LB3	255
LB3	LB4	162
LB4	LB5	224
LB5	LB6	1892
LB4	CB1	139
PROJECT 1440-41-72 TOTAL		4,920

* ADDITIONAL QUANTIY SHOWN ELSEWHERE

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

3

Lighting Summary

LOCATION					657.0255	657.0322	657.0710	659.1115	SPV.0060.02
STH 23 & CTH TT				654.0105	Transformer Bases	Poles	Luminaire Arms	Luminaires	Concrete Control Cabinet Bases
				Concrete Bases	Breakaway	Type 5	Truss Type 4 1/2-Inch Clamp	Utility	Type 10 NE Region Special
				Type 5	11 1/2-Inch Bolt Circle	(Aluminum)	12-FT	LED-A	
				EACH	EACH	EACH	EACH	EACH	EACH
		Station	Offset						
	CB1	EB 1600+16.83	73.92	-	-	-	-	-	1
	LB1	EB 1599+36.18	70.97	1	1	1	1	1	-
	LB2	EB1599+20.00	-42.73	1	1	1	1	1	-
	LB3	EB1600+32.44	-132.35	1	1	1	1	1	-
	LB4	EB1600+45.50	-16.72	1	1	1	1	1	-
	LB5	EB1602+45.31	-25.48	1	1	1	1	1	-
	LB6	EB1620+95.39	-43.37	1	1	1	2	2	-
	LB7	EB1597+20.30	-31.74	1	1	1	1	1	-
	LB8	EB1580+30.93	-19.99	1	1	1	2	2	-
PROJECT 1440-41-72 TOTAL				8	8	8	10	10	1

Lighting Summary

LOCATION			
STH 23 & CTH TT	656.0201	653.0164	SPV.0060.05
	Electrical Service	Pull Boxes	Mounting Conduit
	Meter Breaker Pedestal	Non-Conductive	to Exterior
	STH 23 & CTH TT	24x42-Inch	of Structure
	EACH	EACH	LS
	1	18	1
PROJECT 1440-41-72 TOTAL	1	18	1

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

3

SAWING ASPHALT AND CONCRETE

STATION	TO	STATION	LOCATION	* 690.0150 SAWING ASPHALT LF	* 690.0250 SAWING CONCRETE LF	REMARKS
1568+54	-	1575+40	STH 23, EB RT	20	386	SUNSET ROAD, TURN LANE SOUTH
1570+27	-	1577+18	STH 23, MEDIAN	7	966	SUNSET ROAD, MEDIAN REMOVAL
1570+67	-	1577+82	STH 23 WB, LT	15	448	SUNSET ROAD, TURN LANE NORTH
17+40	-	17+40	SUNSET RD, SOUTH	25	-	SUNSET ROAD START
21+96	-	21+96	SUNSET RD, NORTH	23	-	SUNSET ROAD END
PROJECT 1440-41-71 SUBTOTAL 0010				**90**	**1,800**	
1579+68	-	1582+78	STH 23, EB RT	18	-	WEST U-TURN BULB OUT
1578+00	-	1582+00	WEST TRAIL	20	-	OLD PLANK TRAIL WEST BUMP OUT
1579+63	-	1588+00	STH 23, MEDIAN	17	-	WEST U-TURN MEDIAN
1591+34	-	1603+67	STH 23, EB RT	17	678	CTH TT, TURN LANE SOUTH
1594+50	-	1603+25	EAST TRAIL	20	-	OLD PLANK TRAIL EAST REALIGNMENT
1593+32	-	1606+24	STH 23, MEDIAN	16	1,170	CTH TT, MEDIAN REMOVAL
1598+06	-	1606+23	STH 23, WB LT	6	652	CTH TT, TURN LANE NORTH
42+26	-	42+26	CTH TT, SOUTH	33	-	CTH TT START
59+00	-	59+00	CTH TT, NORTH	28	-	CTH TT END
1613+14	-	1621+19	STH 23, MEDIAN	22	-	EAST U-TURN MEDIAN
1618+45	-	1621+44	STH 23, WB LT	13	-	EAST U-TURN BULB OUT
PROJECT 1440-41- 72 SUBTOTAL 0010				**210**	**2,500**	
PROJECT TOTAL CATEGORY 0010				**300**	**4,300**	

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

BIRD DETERRENT SYSTEM

STATION	LOCATION	999.2000.S.01 INSTALLING AND MAINTAINING BIRD DETERRENT SYSTEM (01. 1250+00EB) EACH	999.2000.S.02 INSTALLING AND MAINTAINING BIRD DETERRENT SYSTEM (02. 1357+94WB) EACH	999.2000.S.03 INSTALLING AND MAINTAINING BIRD DETERRENT SYSTEM (03. 1607+50WB) EACH	999.2000.S.04 INSTALLING AND MAINTAINING BIRD DETERRENT SYSTEM (04. 1607+50EB) EACH
1250+00'EB'	B-59-91	1	-	-	-
1357+94'WB'	B-59-93	-	1	-	-
1607+50'WB'	B-59-123	-	-	1	-
1607+50'EB'	B-59-88	-	-	-	1
PROJECT 1440-41-71 CAT. 0010 TOTAL		**1**	**1**	**1**	**1**

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

3

JOINT CLEANING AND REPAIRS

STATION	TO	STATION	LOCATION	SPV.0090.01 SPECIAL (01. CONCRETE JOINT AND CRACK CLEANING AND REPAIR) LF	REMARKS
1157+51	-	1194+00	STH 23 EB OUTSIDE	85	SPALLED/LOOSE CONCRETE AT JOINTS
1194+00	-	1249+00	STH 23 EB OUTSIDE	68	SPALLED/LOOSE CONCRETE AT JOINTS
1249+00	-	1301+50	STH 23 EB OUTSIDE	65	SPALLED/LOOSE CONCRETE AT JOINTS
1301+50	-	1358+00	STH 23 EB OUTSIDE	43	SPALLED/LOOSE CONCRETE AT JOINTS
1358+00	-	1493+25	STH 23 EB OUTSIDE	168	SPALLED/LOOSE CONCRETE AT JOINTS
1493+25	-	1579+00	STH 23 EB OUTSIDE	106	SPALLED/LOOSE CONCRETE AT JOINTS
1622+00	-	1681+50	STH 23 EB OUTSIDE	74	SPALLED/LOOSE CONCRETE AT JOINTS
1656+00	-	1681+44	STH 23 WB OUTSIDE	32	SPALLED/LOOSE CONCRETE AT JOINTS
1157+51	-	1194+00	STH 23 EB INSIDE	58	SPALLED/LOOSE CONCRETE AT JOINTS
1194+00	-	1249+00	STH 23 EB INSIDE	68	SPALLED/LOOSE CONCRETE AT JOINTS
1249+00	-	1301+50	STH 23 EB INSIDE	65	SPALLED/LOOSE CONCRETE AT JOINTS
1301+50	-	1358+00	STH 23 EB INSIDE	43	SPALLED/LOOSE CONCRETE AT JOINTS
1358+00	-	1493+25	STH 23 EB INSIDE	168	SPALLED/LOOSE CONCRETE AT JOINTS
1493+25	-	1579+00	STH 23 EB INSIDE	106	SPALLED/LOOSE CONCRETE AT JOINTS
1579+00	-	1622+00	STH 12 EB OUTSIDE	53	SPALLED/LOOSE CONCRETE AT JOINTS
1579+00	-	1622+00	STH 23 EB INSIDE	53	SPALLED/LOOSE CONCRETE AT JOINTS
1579+00	-	1622+00	UNDISTRIBUTED	11	SPALLED/LOOSE CONCRETE AT JOINTS
1622+00	-	1681+50	STH 23 EB INSIDE	74	SPALLED/LOOSE CONCRETE AT JOINTS
1656+00	-	1681+44	STH 23 WB INSIDE	32	SPALLED/LOOSE CONCRETE AT JOINTS
			UNDISTRIBUTED	14	
PROJECT 1440-41-71 TOTAL CATEGORY 0010				**120**	

REMOVING RUMBLE STRIPS

STAGE	LOCATION	SPV.0090.02 SPECIAL (02. REMOVING RUMBLE STRIPS) LF
STAGE 1A	B-59-93	2,600
STAGE 2	B-59-91	2,600
STAGE 3	B-59-91	1,100
PROJECT 1440-41-71 CATEGORY 0010 TOTAL		6,300

PEDESTRIAN OVERHEAD PROTECTION

STAGE	STATION	LOCATION	SPV.0090.03 SPECIAL (03. PEDESTRIAN OVERHEAD PROTECTION) LF
2A, 2B	1249+66	STH 67, B-59-0091	90
4	1219+63	SUNSET DR, B-59-0097 LT	75
4	1221+20	SUNSET DR, B-59-0097 RT	75
PROJECT 1440-41-71 CATEGORY 0010 TOTAL			**240**

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

R/W PROJECT NUMBER	SHEET NUMBER	TOTAL SHEETS
1440-41-21		
FEDERAL PROJECT NUMBER	4.01	3

PLAT OF RIGHT-OF-WAY REQUIRED FOR

FOND DU LAC - SHEBOYGAN
CTH P - STH 32

STH 23 — SHEBOYGAN COUNTY

CONSTRUCTION PROJECT NUMBER

CONVENTIONAL SYMBOLS

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

SECTION CORNER SYMBOL
SECTION CORNER MONUMENT
R/W MONUMENT (TO BE SET)
NON-MONUMENTED R/W POINT
FOUND IRON PIN (1-INCH UNLESS NOTED) IP
GEODETIC SURVEY MONUMENT
SIXTEENTH CORNER MONUMENT
SIGN
OFF-PREMISE SIGN

	COMPENSABLE	NON-COMPENSABLE
ELECTRIC POLE		
TELEPHONE POLE		
PEDESTAL (LABEL TYPE) (TV, TEL, ELEC, ETC.)		

ACCESS RESTRICTED BY ACQUISITION
NO ACCESS (BY STATUTORY AUTHORITY)
ACCESS RESTRICTED (BY PREVIOUS PROJECT OR CONTROL)
NO ACCESS (NEW HIGHWAY)

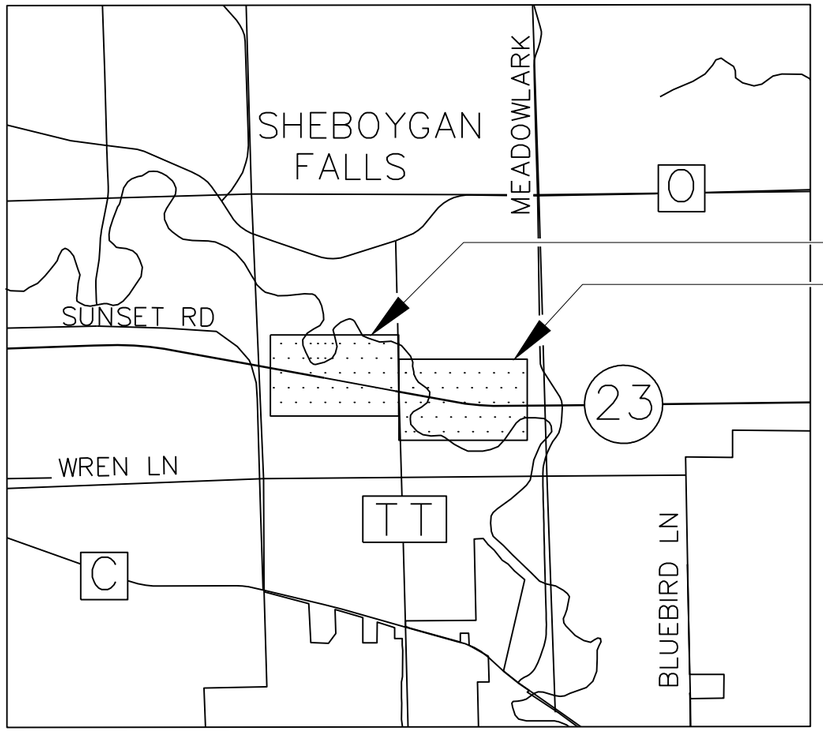
PARCEL NUMBER 25
UTILITY NUMBER 40
PARALLEL OFFSETS

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	

N

SECTION 22, T15N-R22E
TOWN OF SHEBOYGAN FALLS



LOCATION SKETCH
(NOT TO SCALE)

TOTAL NET LENGTH OF CENTERLINE = 1.00 MI.

NOTES:

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

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

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.

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.

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.

A PERMANENT LIMITED EASEMENT (PLE) IS A RIGHT FOR CONSTRUCTION AND MAINTENANCE PURPOSES, AS DEFINED HEREIN, INCLUDING THE RIGHT TO OPERATE NECESSARY EQUIPMENT THEREON AND 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, BUT WITHOUT PREJUDICE TO THE OWNER'S RIGHTS TO MAKE OR CONSTRUCT IMPROVEMENTS ON SAID LANDS OR TO FLATTEN THE SLOPES, PROVIDING SAID ACTIVITIES WILL NOT IMPAIR OR OTHERWISE ADVERSELY AFFECT THE HIGHWAY FACILITIES.

AN EASEMENT FOR HIGHWAY PURPOSES (HE), AS LONG AS SO USED, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE, OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM DESIRABLE.

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 THE NE REGION.

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.

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

CONVENTIONAL ABBREVIATIONS

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

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

REVISION	DATE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED FOR THE DEPARTMENT

DATE: 06-21-23 Mark Krause (Signature)

Mark Krause

E

FILE NAME : N:\PDS\C3D\14404100\RW\PLATS\SHEET 4.01.DWG

COMPUTED CORNER
Y = 178075.555
X = 179971.927

PK NAIL
Y = 178021.519
X = 182663.430

T O W N O F S H E B O Y G A N F A L L S

SIXTEENTH LINE

SUNSET RD

N00°06'59"W 2650.05'

579.51'

1574+42.29

1575

383.20'

1580

373.62'

1585

S77°54'47"E 2747.93'

1590

1580.82'

1595

1600

270.84'

1601+90.22

174.71'

100.21'

174.73'

130.24'

139.45'

443.76'

130'

657.13'

555.95'

977.45'

2634.29'

N00°10'20"E

2070.54'

SECTION LINE

PL

TV

G

CTH TT

QUARTER LINE

NW SW

NE SW

SW SW

SE SW

SIXTEENTH LINE

N

11 TO 12 S12°05'13"W 100.20'
12 TO 13 S59°20'01"E 211.21'
13 TO 14 N80°52'52"E 186.01'
14 TO 15 N12°05'13"E 100.21'

12 1578+25.49 100.20'
13 1580+25.69 167.49'
14 1581+99.11 100.21'

29 TO 28 N12°05'13"E 174.74'
28 TO 27 N16°06'16"E 255.47'
27 TO 25 N28°18'56"E 209.32'
25 TO 24 S89°49'40"E 60.07'

28 1599+19.38 -174.74'
27 1599+37.28 -429.59'
25 1599+95.78 -630.57'

16 TO 17 S12°05'13"W 130.25'
17 TO 18 S63°12'01"E 82.45'
18 TO 19 S36°12'31"E 85.55'
19 TO 20 S09°28'54"E 121.94'
20 TO 38 S33°57'27"E 143.22'
38 TO 40 S40°57'09"E 153.21'
40 TO 21 S31°04'24"E 62.24'
21 TO 22 S89°49'40"E 70.05'

17 1597+79.92 130.25'
18 1598+59.67 151.20'
19 1599+23.54 208.11'
20 1599+68.37 321.51'
38 1600+71.47 420.92'
40 1601+93.89 513.04'
21 1602+36.46 558.44'

0.655 AC
0.986 AC

1 2 3

101 50' GAS PIPELINE EASE. WPS CORP DOC.1845288

100 20' UTILITY EASE. NET-LEC, LLC DOC. 2075534

LOT 1 VOL. 3 PG 116 DOC. 998034

SCHEDULE OF LANDS & INTERESTS REQUIRED

PARCEL NUMBER	*OWNER (S)	INTEREST (S) REQUIRED	FEE R/W ACRES REQUIRED			T.L.E. ACRES	
			NEW	EXISTING	TOTAL		
1	QUINTIN L. ROETHEL	FEE	0.289		0.289		
2	JEFFREY M. SOHN & BONNIE M. SOHN	FEE	1.641		1.641		
3	EILEEN JUNE PAYNE REVOCABLE TRUST & KATHLEEN PASSINI	FEE	0.953		0.953		

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

AREA FIGURES ARE REFERENCED TO THIS SHEET ONLY.

SCHEDULE OF UTILITIES & INTERESTS REQUIRED

UTILITY NUMBER	*OWNER (S)	INTEREST REQUIRED
100	NET LEC LLC	RELEASE OF RIGHTS
101	WISCONSIN PUBLIC SERVICE CORP (GAS)	RELEASE OF RIGHTS

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

PK NAIL
Y = 175425.507
X = 179977.308

PK NAIL
Y = 175387.236
X = 182655.510

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

EXISTING ACCESS CONTROL FOR STH 23 ESTABLISHED FROM PREVIOUS PROJECT(S) 1445-1-24.

EXISTING RIGHT-OF-WAY FOR STH 23 REESTABLISHED FROM PREVIOUS PROJECT(S) 1440-29-00.

REVISION DATE	DATE 06-21-23	SCALE. FEET 0 100 200	HWY: STH 23	STATE R/W PROJECT NUMBER 1440-41-21	PLAT SHEET NO. 4.02
			COUNTY: SHEBOYGAN	CONSTRUCTION PROJECT NUMBER	PS&E SHEET NO. 228

4

SCHEDULE OF UTILITIES & INTERESTS REQUIRED

UTILITY NUMBER	*OWNER (S)	INTEREST REQUIRED
101	WISCONSIN PUBLIC SERVICE CORP (GAS)	RELEASE OF RIGHTS

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

SCHEDULE OF LANDS & INTERESTS REQUIRED

PARCEL NUMBER	*OWNER (S)	INTEREST (S) REQUIRED	FEE R/W ACRES REQUIRED			T.L.E. ACRES
			NEW	EXISTING	TOTAL	
4	MAJESTIC CROSSING DAIRY, LLC	FEE	0.064		0.064	

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

AREA FIGURES ARE REFERENCED TO THIS SHEET ONLY.

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

EXISTING ACCESS CONTROL FOR STH 23 ESTABLISHED FROM PREVIOUS PROJECT(S) 1445-1-24.

EXISTING RIGHT-OF-WAY FOR STH 23 REESTABLISHED FROM PREVIOUS PROJECT(S) 1440-29-00.

PK NAIL
Y = 178021.519
X = 182663.430

T 15 N R 22 E, 22

PK NAIL
Y = 177932.083
X = 185335.495

T 15 N R 22 E, 22 23

PK NAIL
Y = 175387.236
X = 182655.510

T 15 N R 22 E, 22 27

1" IRON PIPE
Y = 175295.878
X = 185317.496

T 15 N R 22 E, 22 23 27 26

N

CTH TT

130'

NOO°10'20"E 2634.29'

1100.89'

QUARTER LINE

SIXTEENTH LINE

SECTION LINE

NOO°23'28"E 2636.27'

1351.96'

TOWN

NW SE

SW SE

NE SE

SE SE

SHEBOYGAN FALLS

PL

1601+90.22

1605

S77°54'47"E 969.46'

STH 23 EB R

1610

PC 30

VARIES

OF

1615

CURVE 1

1620

37

CURVE 2

36

CURVE 3

PT 31

1625

S89°03'52"E 599.44'

1628+86.98

1630

174.75'

150.25'

1284.31'

1533.40'

(101) 50' GAS PIPELINE EASE. WPS CORP DOC.1848263

(4)

37 TO 33 N04°10'38"E 154.97'
33 TO 34 N77°47'46"E 137.42'
34 TO 35 S71°13'10"E 78.48'
35 TO 36 S02°03'37"W 170.10'

33 1619+59.67 -154.97'
34 1620+96.05 -192.18'
35 1621+73.79 -170.10'

CURVE NOTE
PT30 - PT31

PI X: 184161.261 Y: 176599.183
T: 565.72' LCH: 1126.08' LCB: S83°29'19"E
L: 1127.86' R: 5795.00' DELTA 11°09'05"

CURVE 1
LCH: 799.35'
LCB: S81°52'04"E
L: 799.99'
R: 5795.00'

CURVE 2
LCH: 214.11'
LCB S86°52'52"E
L: 214.13'
R: 5795.00'

CURVE 3
LCH: 113.74'
LCB: S88°30'07"E
L: 113.74'
R: 5795.00'

4 (left)

4 (right)

REVISION DATE	DATE 06-21-23	SCALE. FEET 0 100 200	HWY: STH 23	STATE R/W PROJECT NUMBER 1440-41-21	PLAT SHEET NO. 4.03
			COUNTY: SHEBOYGAN	CONSTRUCTION PROJECT NUMBER	PS&E SHEET NO. 229

4

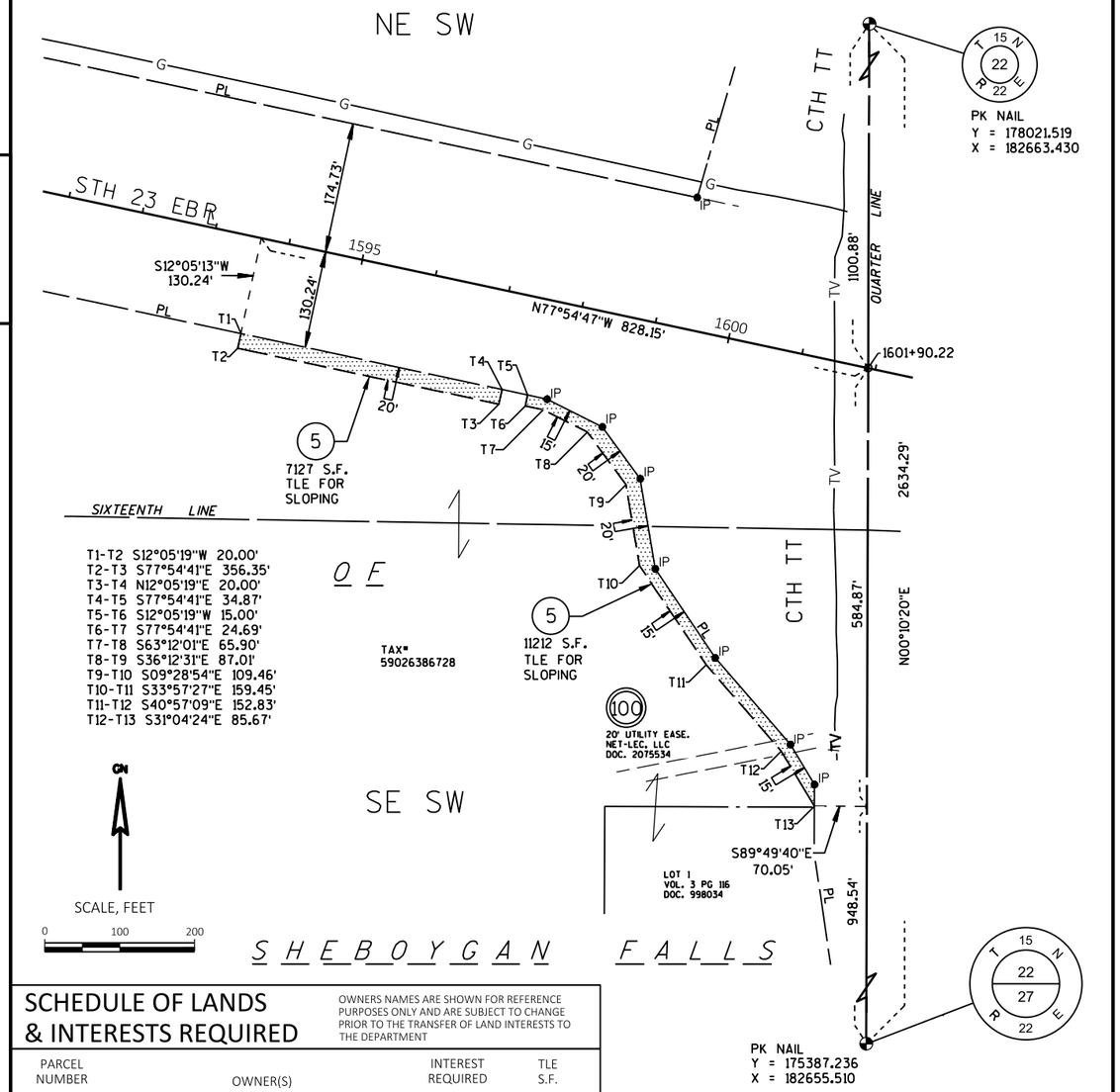
R/W PROJECT NUMBER: 1440-41-21	EXHIBIT NUMBER: 1

TLE ACQUISITION EXHIBIT
FOND DU LAC-SHEBOYGAN
CTH P - STH 32

STH 23 — SHEBOYGAN COUNTY

PART OF THE NE 1/4 OF THE SW 1/4 AND THE SE 1/4 OF THE SW 1/4 OF SECTION 22, T15N-R22E, TOWN OF SHEBOYGAN FALLS, SHEBOYGAN COUNTY, WISCONSIN

NOTES:
THIS EXHIBIT IS A GRAPHIC REPRESENTATION AND IS FOR REFERENCE PURPOSES ONLY.
REFER TO THE CONVEYANCE DOCUMENT FOR PARCEL RELATED DETAILS.



SCHEDULE OF LANDS & INTERESTS REQUIRED

OWNERS 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(S)	INTEREST REQUIRED	TLE S.F.
5	JEFFREY M. SOHN & BONNIE M. SOHN	TLE	18,339

UTILITY INTERESTS REQUIRED

UTILITY NUMBER	UTILITY OWNER(S)	INTEREST REQUIRED
100	NET LEC LLC	RELEASE OF RIGHTS

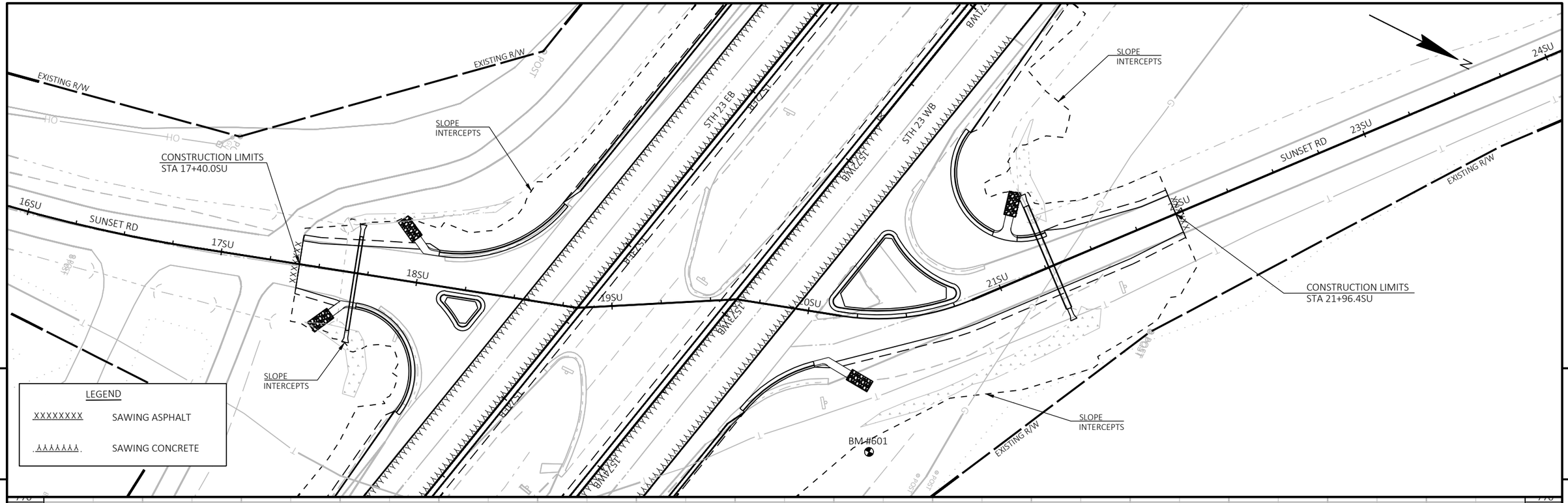
THIS MAP IS APPROVED FOR THE DEPARTMENT OF TRANSPORTATION
NORTHEAST REGION - GREEN BAY

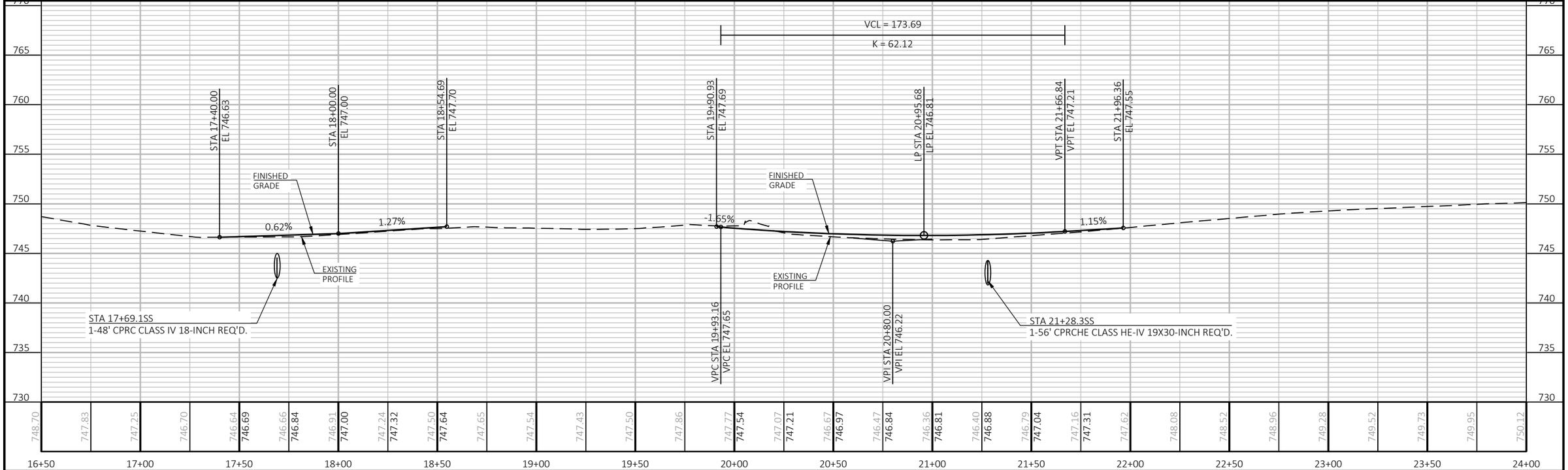
SIGNATURE: _____ DATE: 11-12-2025

PRINT NAME: TREVIN PETERS

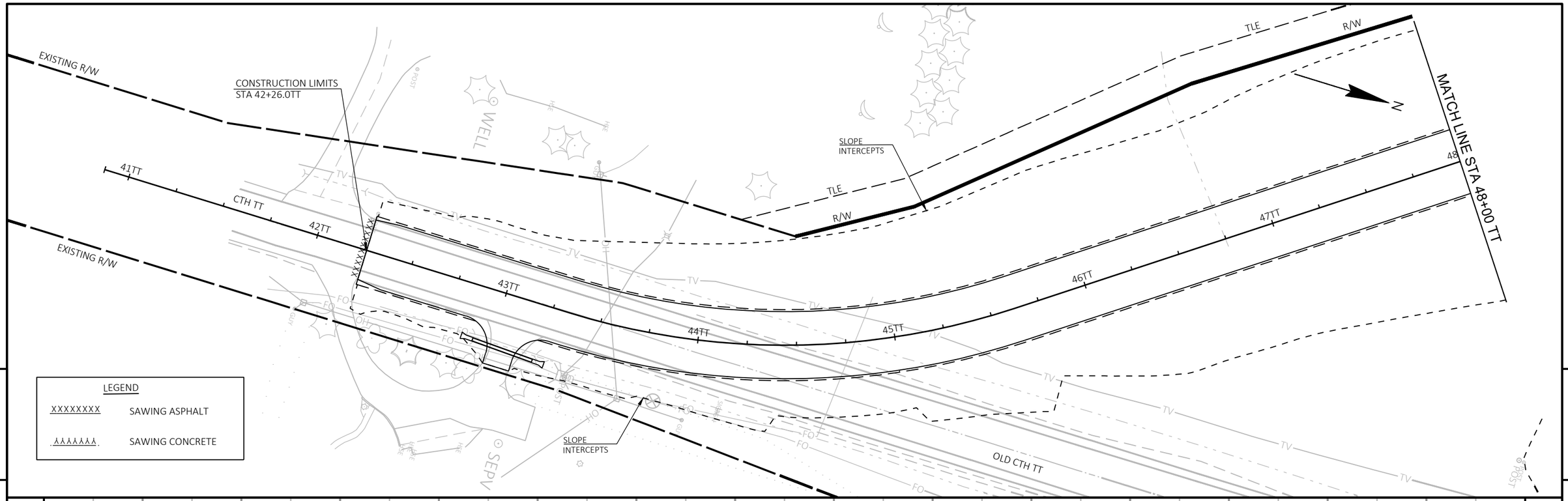
FILE NAME : TLE EXHIBIT 1.DWG PLOT DATE : 11/11/2025 9:19 AM R/W PROJECT: BDRPROJNOL

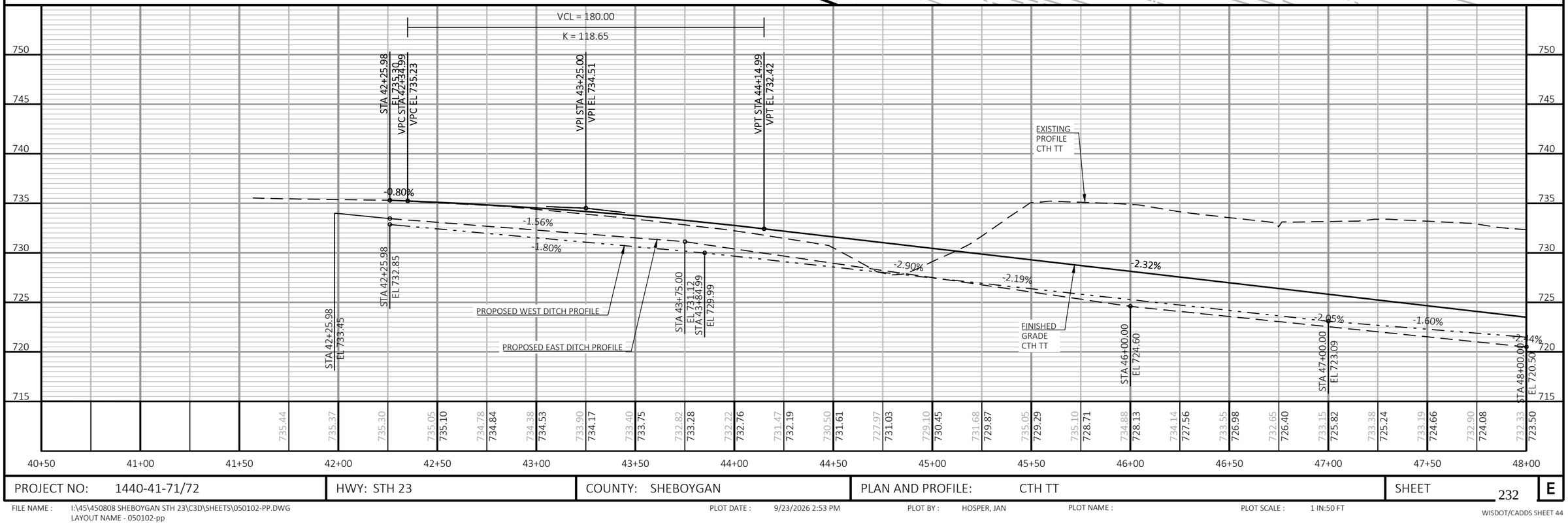
N:\pds\c3d\14404100\RW\Plats\New Plat_TLE Exhibit_Par 5\TLE Exhibit 1.dwg, 11/11/2025 9:19:38 AM, WisDOT PDF.pc3



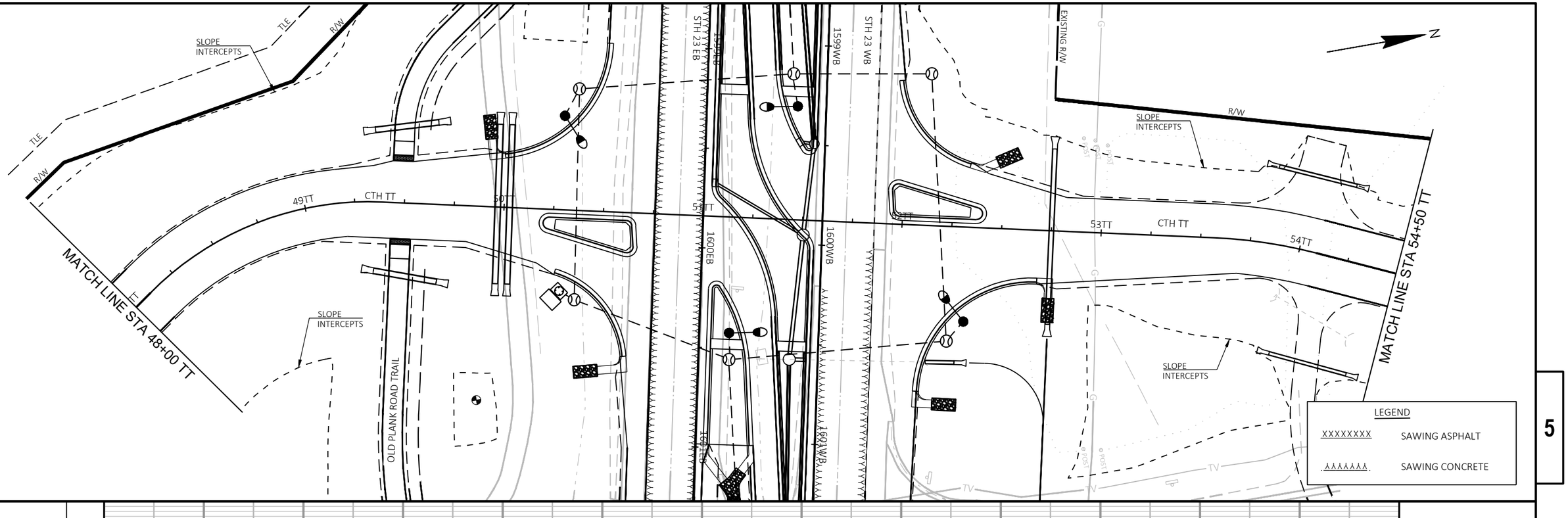


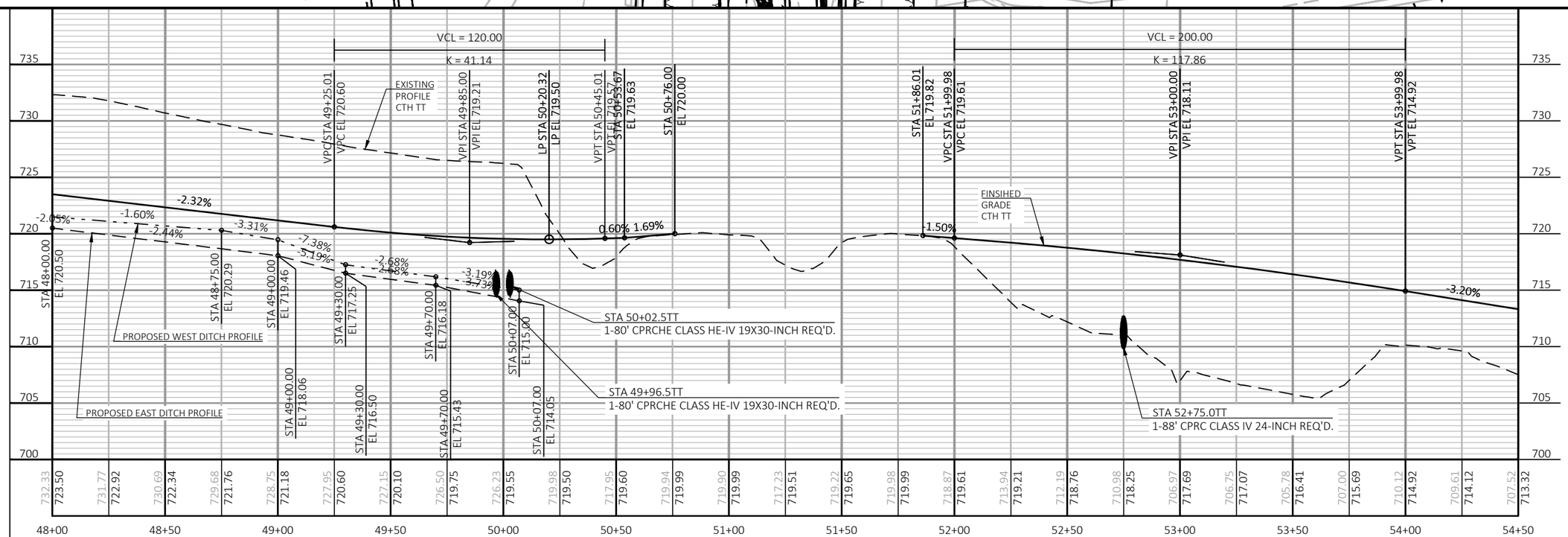
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	PLAN AND PROFILE: SUNSET RD	SHEET 231 E





PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	PLAN AND PROFILE: CTH TT	SHEET 232	E



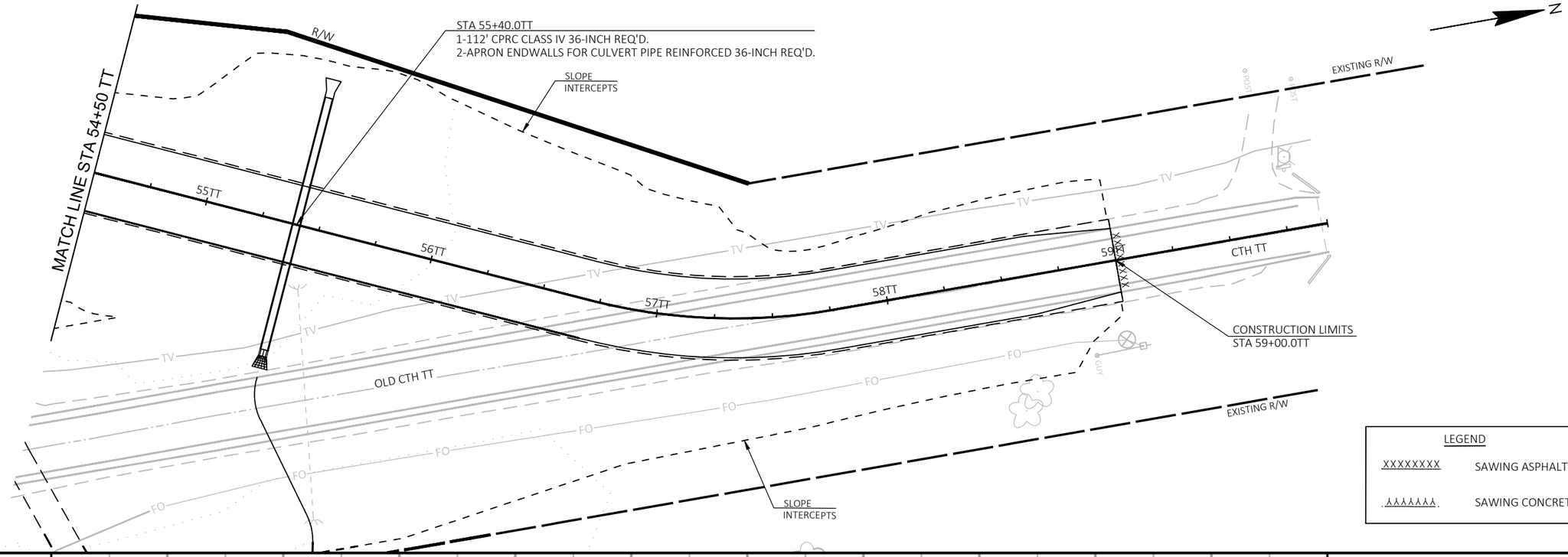


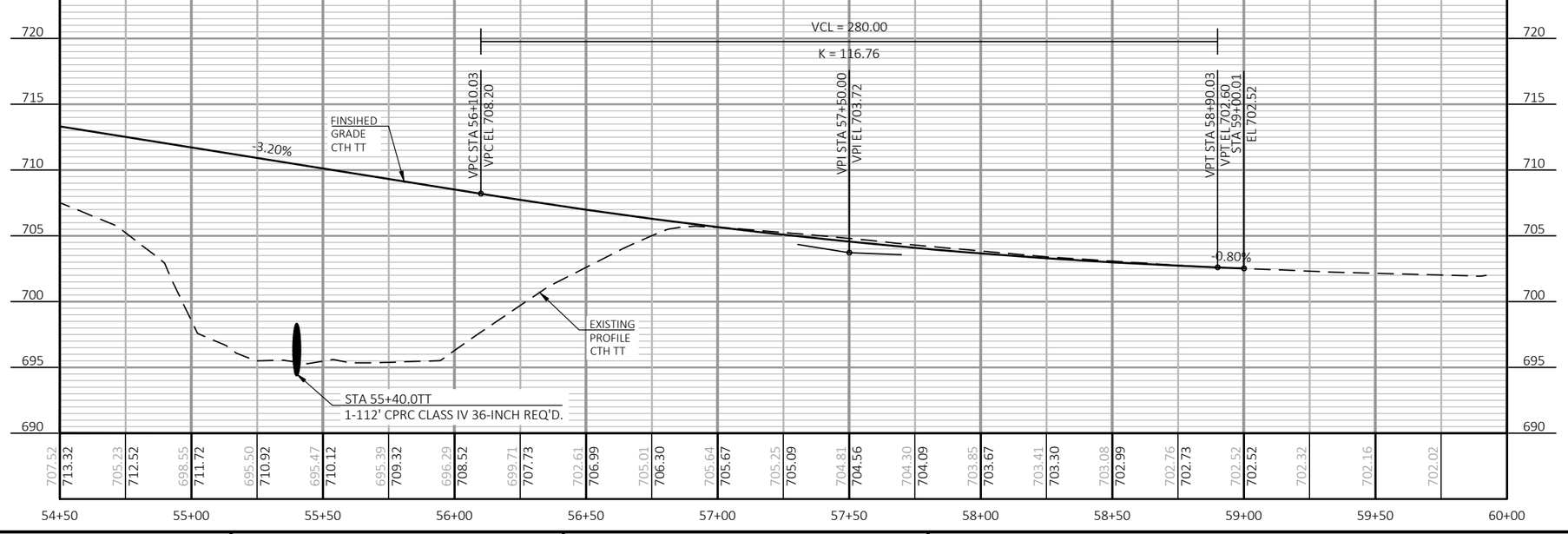
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	PLAN AND PROFILE: CTH TT	SHEET 233 E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\050102-PP.DWG
LAYOUT NAME - 050103-pp

PLOT DATE : 9/23/2026 2:53 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:50 FT

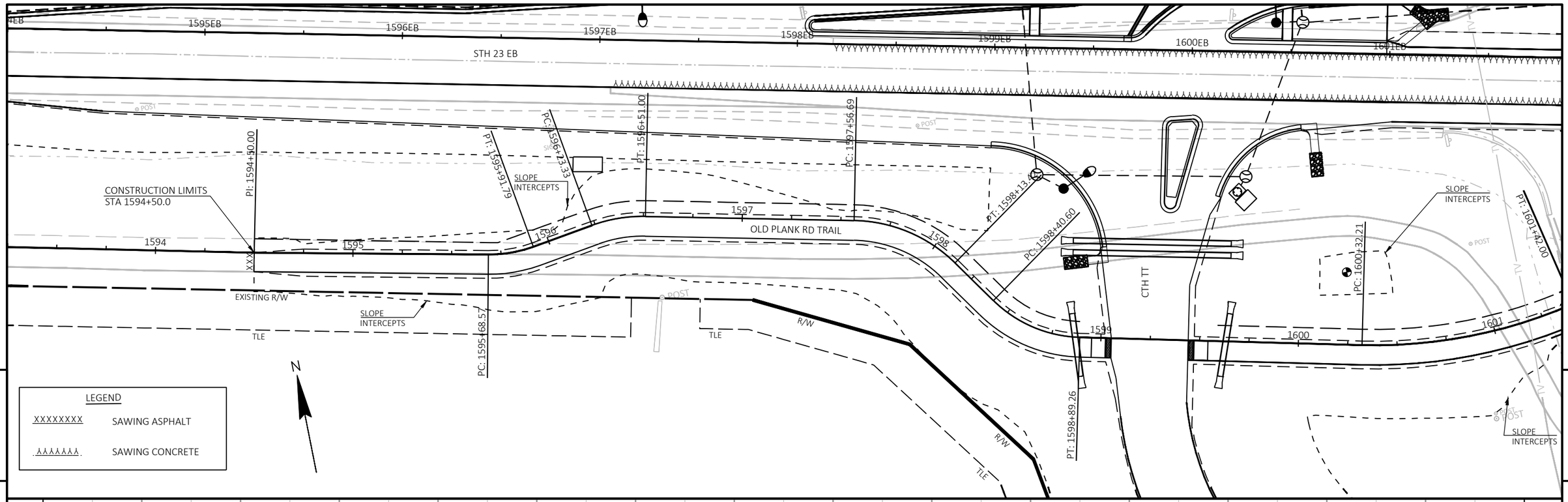
WISDOT/CADDS SHEET 44

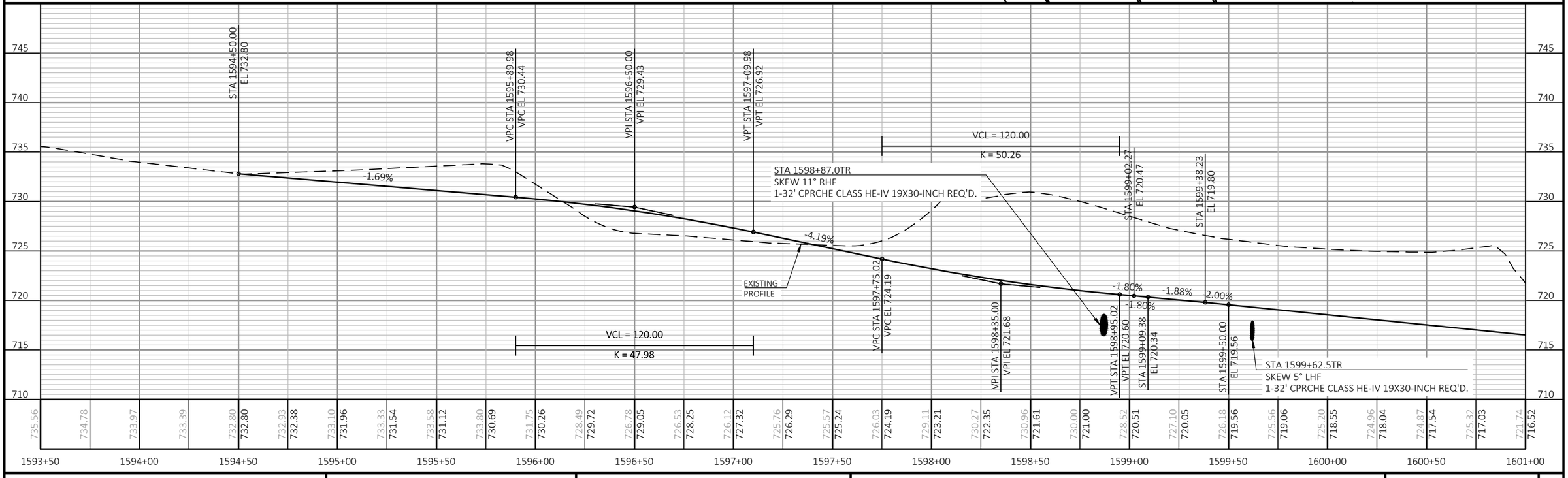




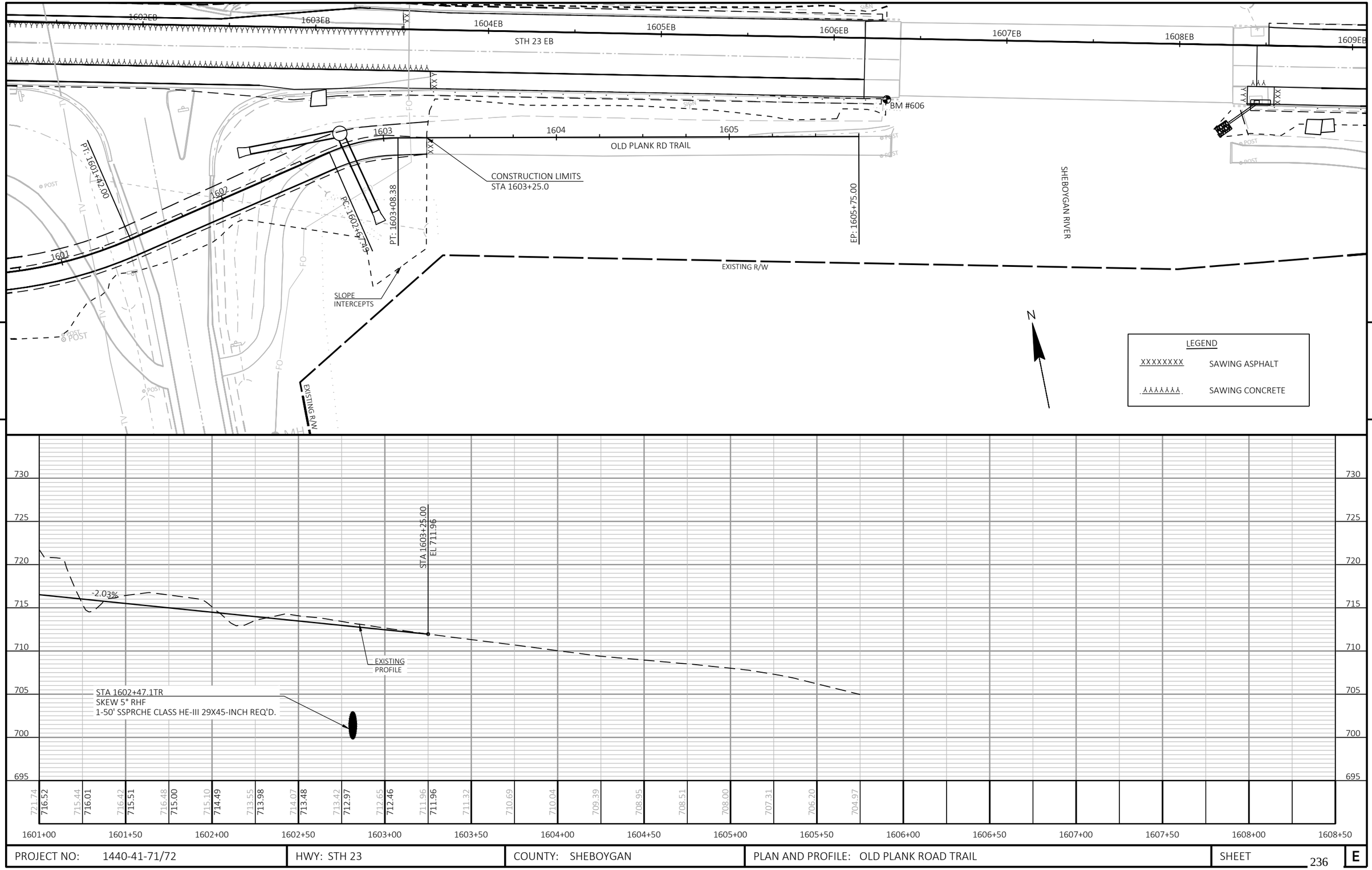
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	PLAN AND PROFILE: CTH TT	SHEET 234	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\050102-PP.DWG
LAYOUT NAME - 050104-pp
PLOT DATE : 9/23/2026 2:53 PM
PLOT BY : HOSPER, JAN
PLOT NAME :
PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 44





PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	PLAN AND PROFILE: OLD PLANK ROAD TRAIL	SHEET 235	E



PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	PLAN AND PROFILE: OLD PLANK ROAD TRAIL	SHEET 236	E

BEGIN PROJECT
STA 1121WB+90.00
Y=181,970.886
X=135,454.636

2" MILL/2" HMA
OVERLAY SHOULDERS

CONCRETE PAVEMENT
REPAIR/REPLACEMENT

1120WB 1122WB 1124WB 1126WB 1128WB 1130WB 1132WB 1134WB

STH 23 WB

1120EB 1122EB 1124EB 1126EB 1128EB 1130EB 1132EB 1134EB

STH 23 EB

BEGIN PROJECT
STA 1121EB+90.00
Y=181,911.604
X=135,445.380

CONCRETE BASE PATCH
& 2" HMA OVERLAY

OLD PLANK RD TRAIL

MATCH LINE STA 1135+00 EB

5

LEGEND

- REMOVING ASPHALTIC SURFACE MILLING (2" DEEP) (SEE INTERSECTION TRANSITION DETAIL)
- REMOVE CONCRETE SURFACE PARTIAL DEPTH (SEE INTERSECTION AND MEDIAN DETAILS)
- REMOVING ASPHALTIC SURFACE MILLING (4" DEEP) (SEE BUTT JOINT (NO PROFILE CHANGE) DETAIL)
- REMOVING ASPHALTIC SURFACE MILLING (VARIABLE) (SEE MAINTENANCE CROSSOVER RESURFACING DETAIL)
- REMOVE CONCRETE SURFACE PARTIAL DEPTH (SEE BUTT JOINT (PROFILE CHANGE) DETAIL)
- REMOVING PAVEMENT FOR BASE PATCHING AND BASE PATCHING CONCRETE HES
- CONCRETE PAVEMENT REPAIR/REPLACEMENT (SEE MISCELLANEOUS QUANTITIES)
- XXXXX SAWING ASPHALT
- YYYYY SAWING CONCRETE

CTH P

N

2" MILL/2" HMA
OVERLAY SHOULDERS

CONCRETE PAVEMENT
REPAIR/REPLACEMENT

STH 23 WB R/L

1136WB 1138WB 1140WB 1142WB 1144WB 1146WB 1148WB 1150

STH 23 WB

1136EB 1138EB 1140EB 1142EB 1144EB 1146EB 1148EB 1150

STH 23 EB

STH 23 EB R/L

CONCRETE BASE PATCH
& 2" HMA OVERLAY

OLD PLANK RD TRAIL

CONSTRUCTION LIMITS
STA 1143EB+00
86.16' RT

PIONEER RD

MATCH LINE STA 1135+00 EB

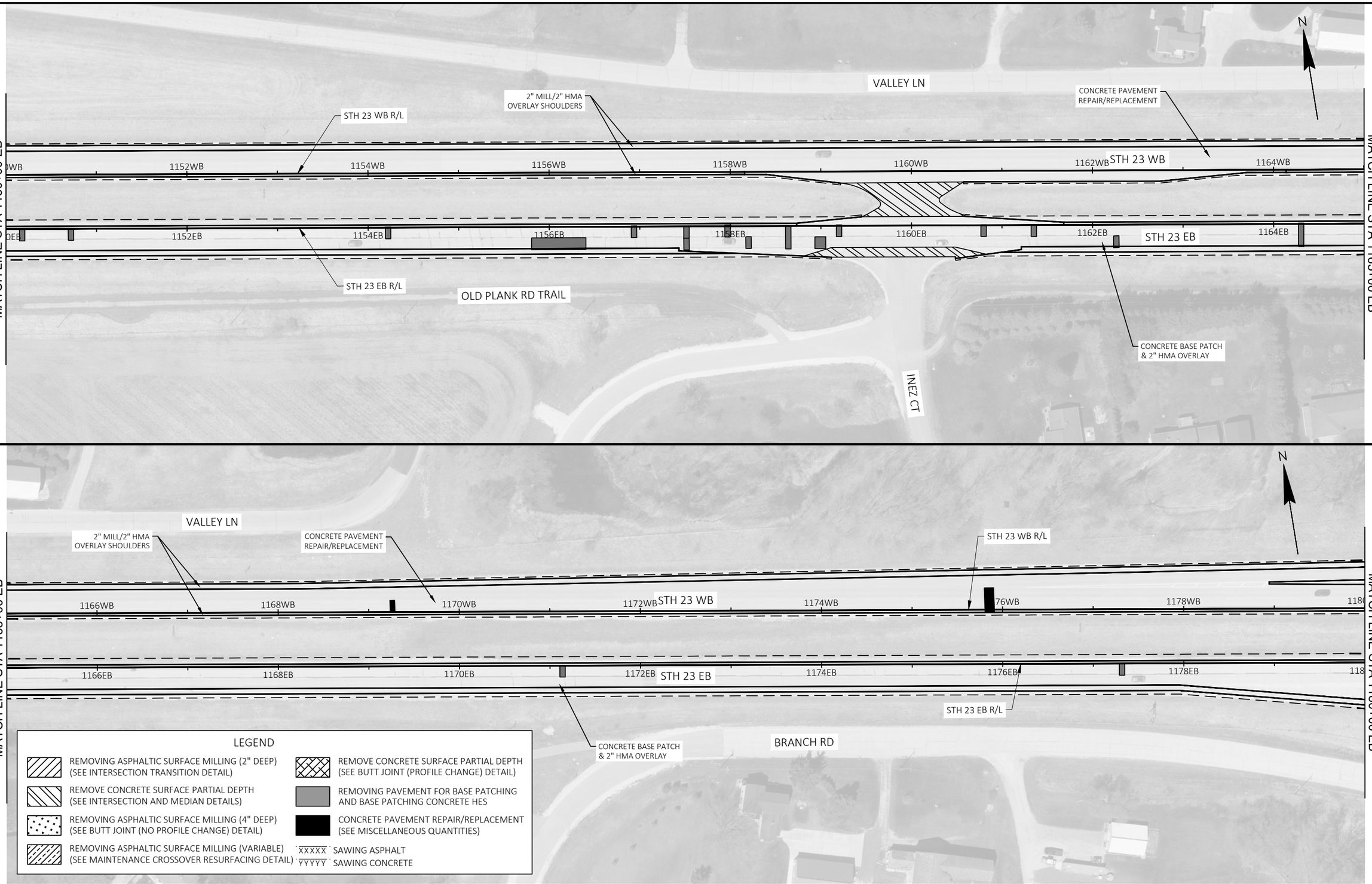
MATCH LINE STA 1150+00 EB

5

PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	STH 23	SHEET 237	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\050201-PN.DWG
LAYOUT NAME - 050201-pn

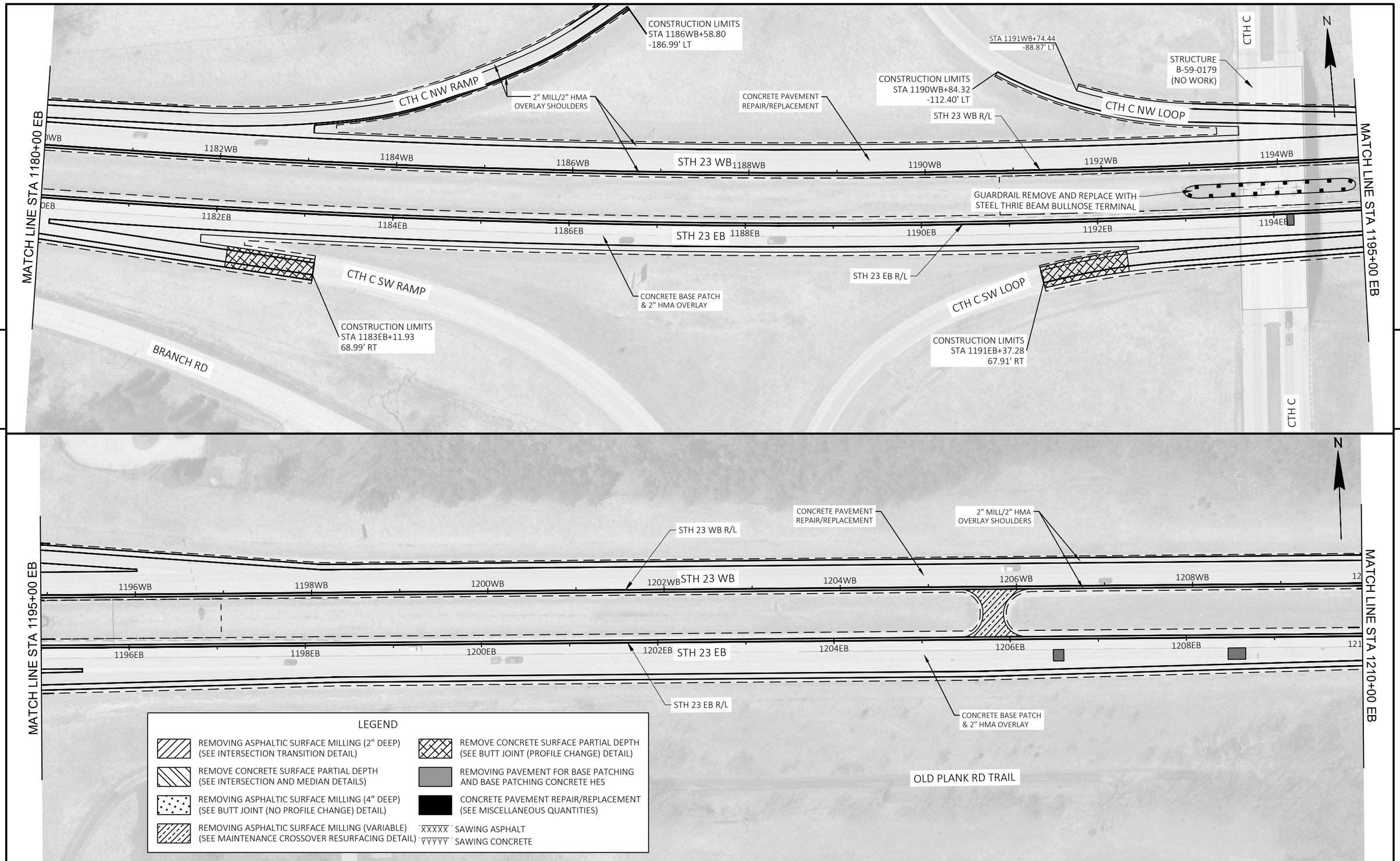
PLOT DATE : 9/29/2026 3:32 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:100 FT



5

5

PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	STH 23	SHEET 238	E

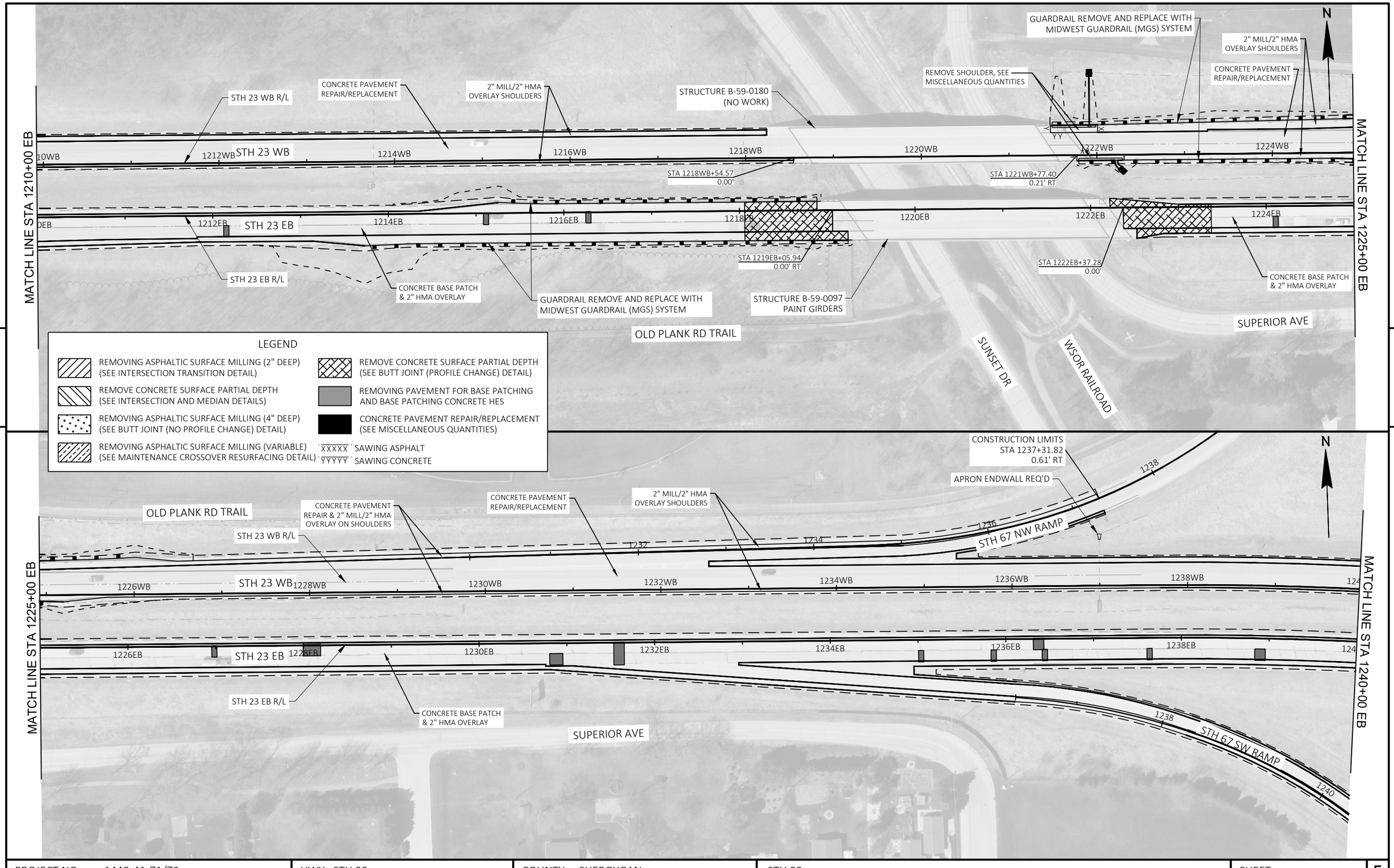


PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	STH 23	SHEET 239	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\050201-PN.DWG
LAYOUT NAME - 050203-pn

PLOT DATE : 9/29/2026 3:32 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

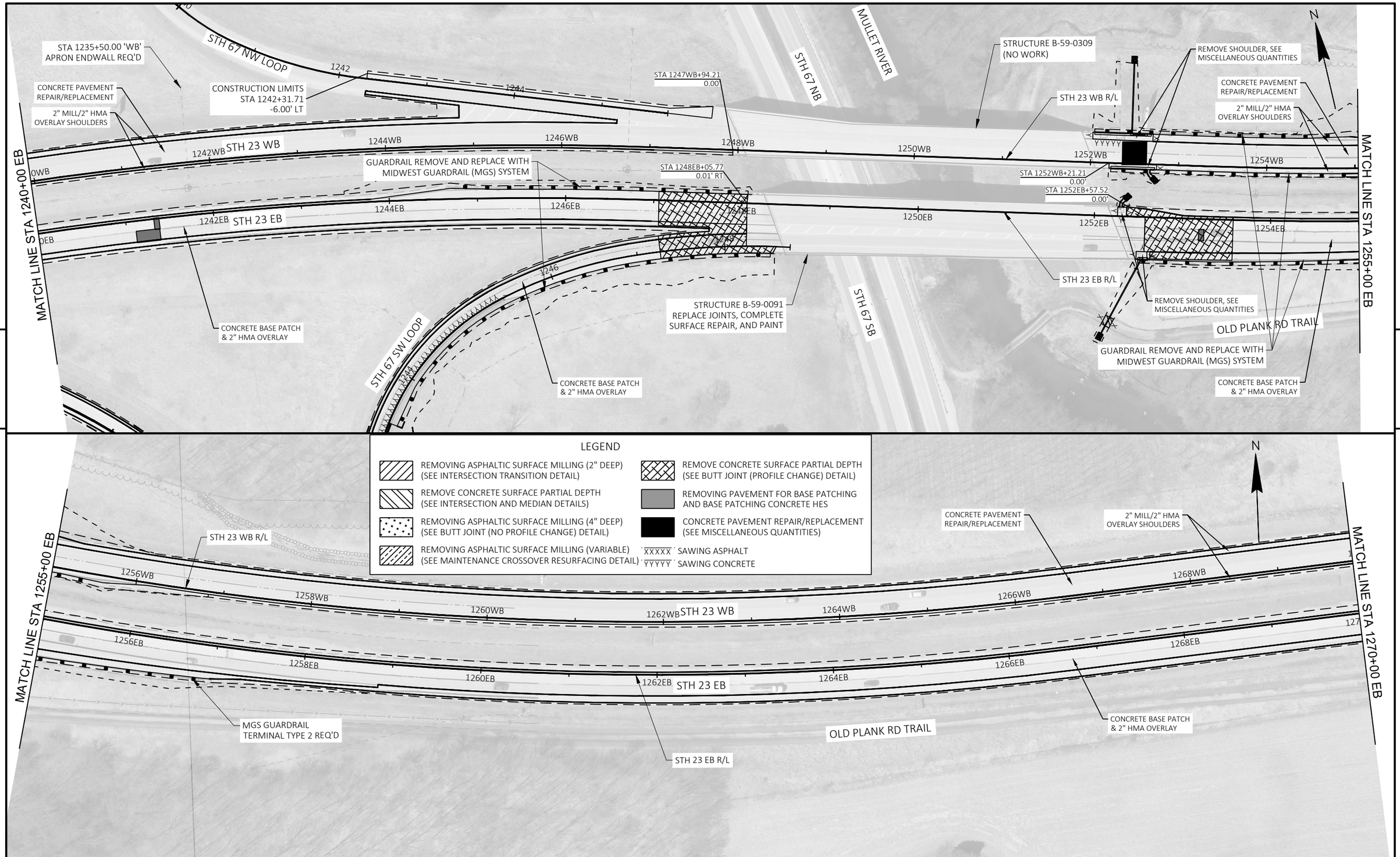


PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	STH 23	SHEET 240	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\050201-PN.DWG
LAYOUT NAME - 050204-pn

PLOT DATE : 9/29/2026 3:32 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

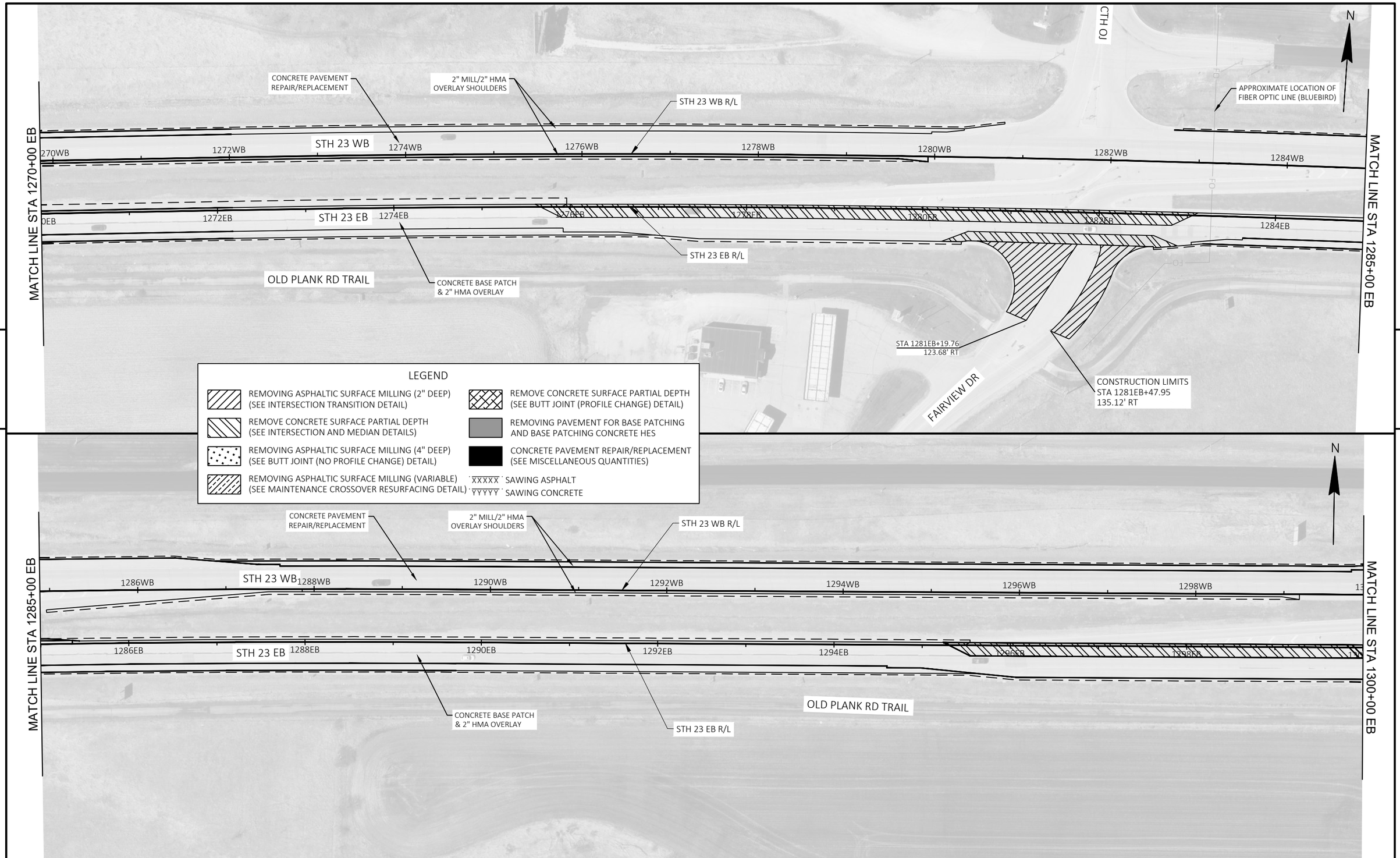


PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	STH 23	SHEET 241	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\050201-PN.DWG
LAYOUT NAME - 050205-pn

PLOT DATE : 9/29/2026 3:32 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

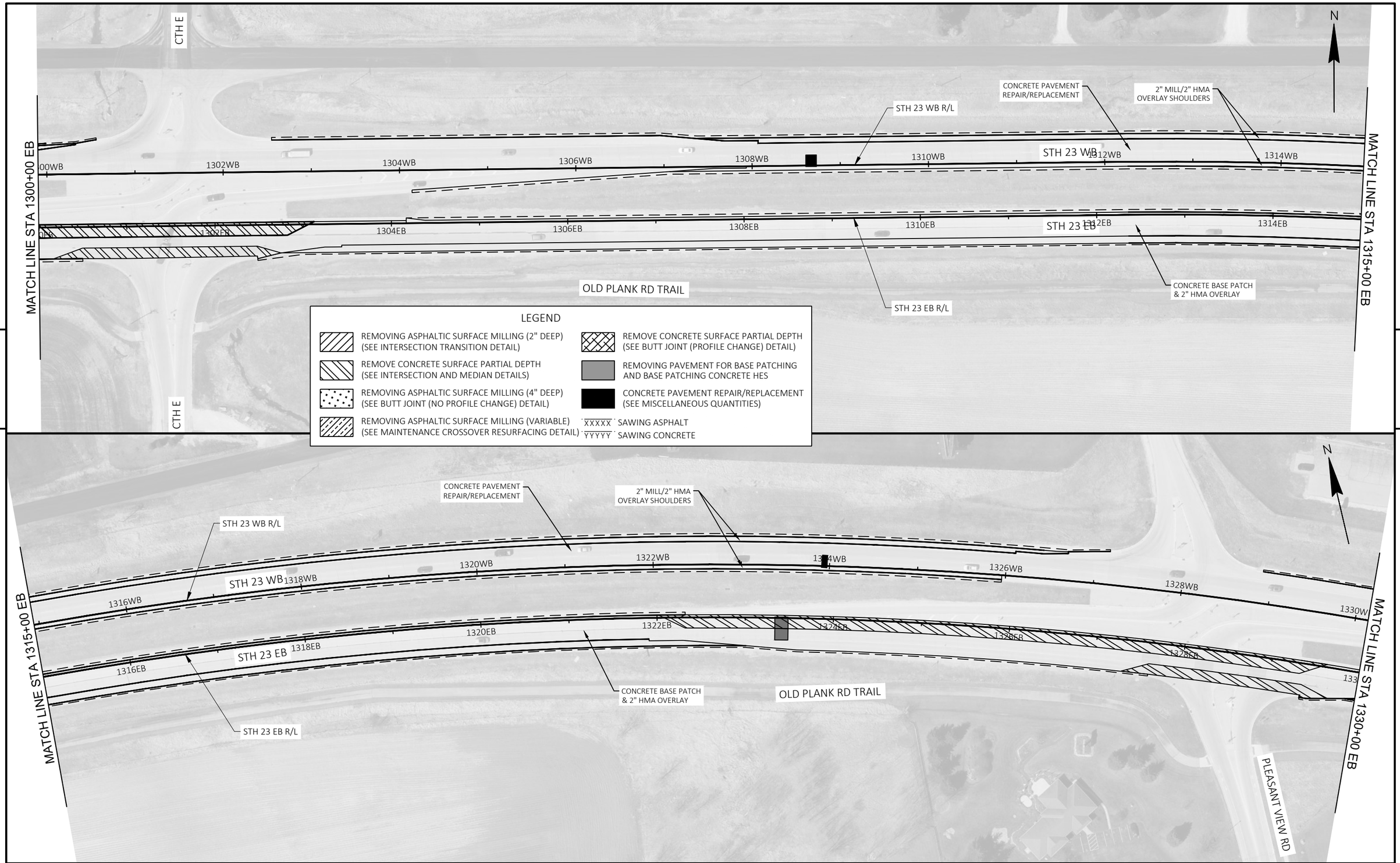


5

5

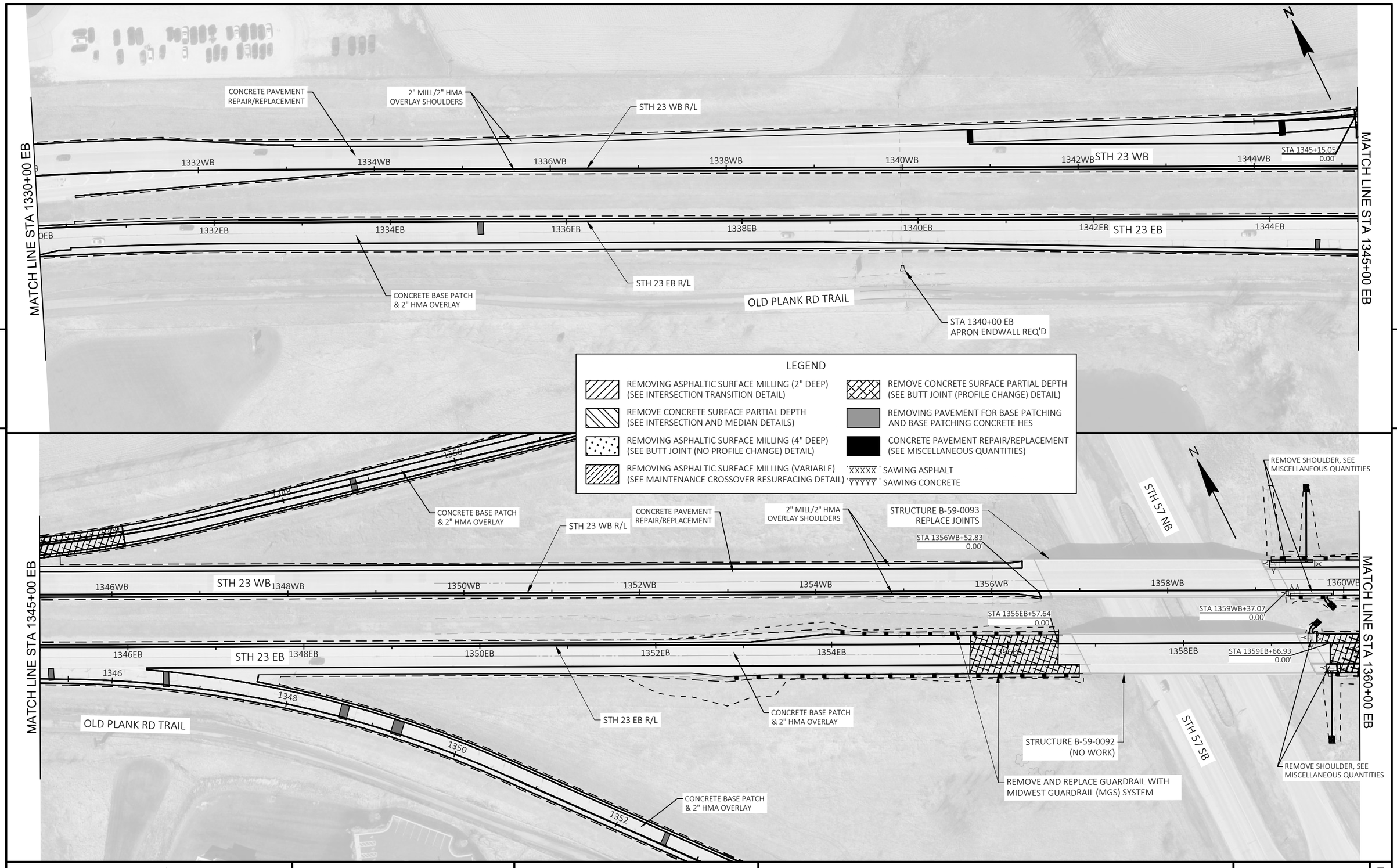
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	STH 23	SHEET 242	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\050201-PN.DWG
LAYOUT NAME - 050206-pn
PLOT DATE : 9/29/2026 3:32 PM
PLOT BY : HOSPER, JAN
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44



PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	STH 23	SHEET 243	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\050201-PN.DWG
LAYOUT NAME - 050207-pn
PLOT DATE : 9/29/2026 3:32 PM
PLOT BY : HOSPER, JAN
PLOT NAME :
PLOT SCALE : 1 IN:100 FT



5

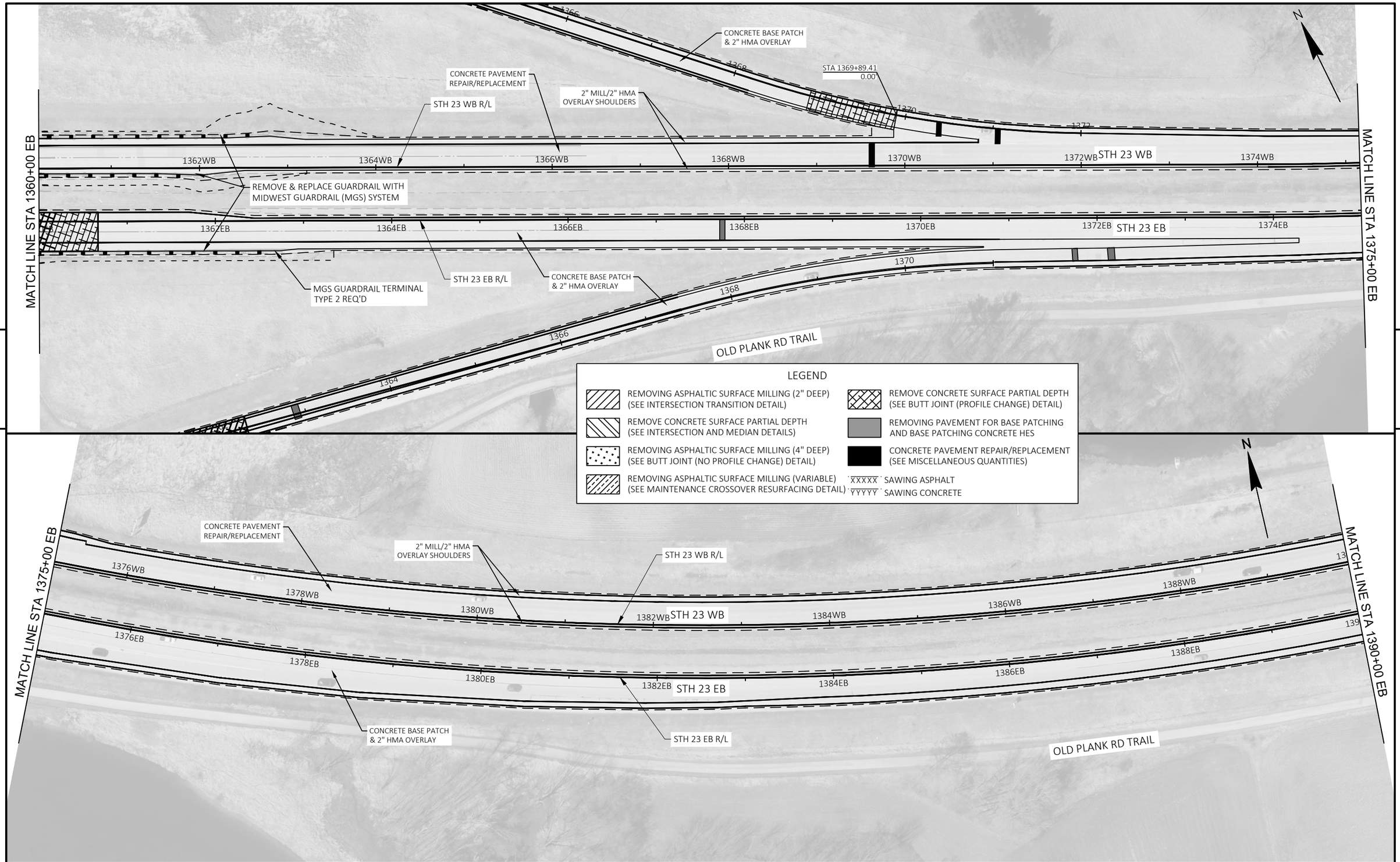
5

PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	STH 23	SHEET 244	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\050201-PN.DWG
LAYOUT NAME - 050208-pn

PLOT DATE : 9/29/2026 3:32 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

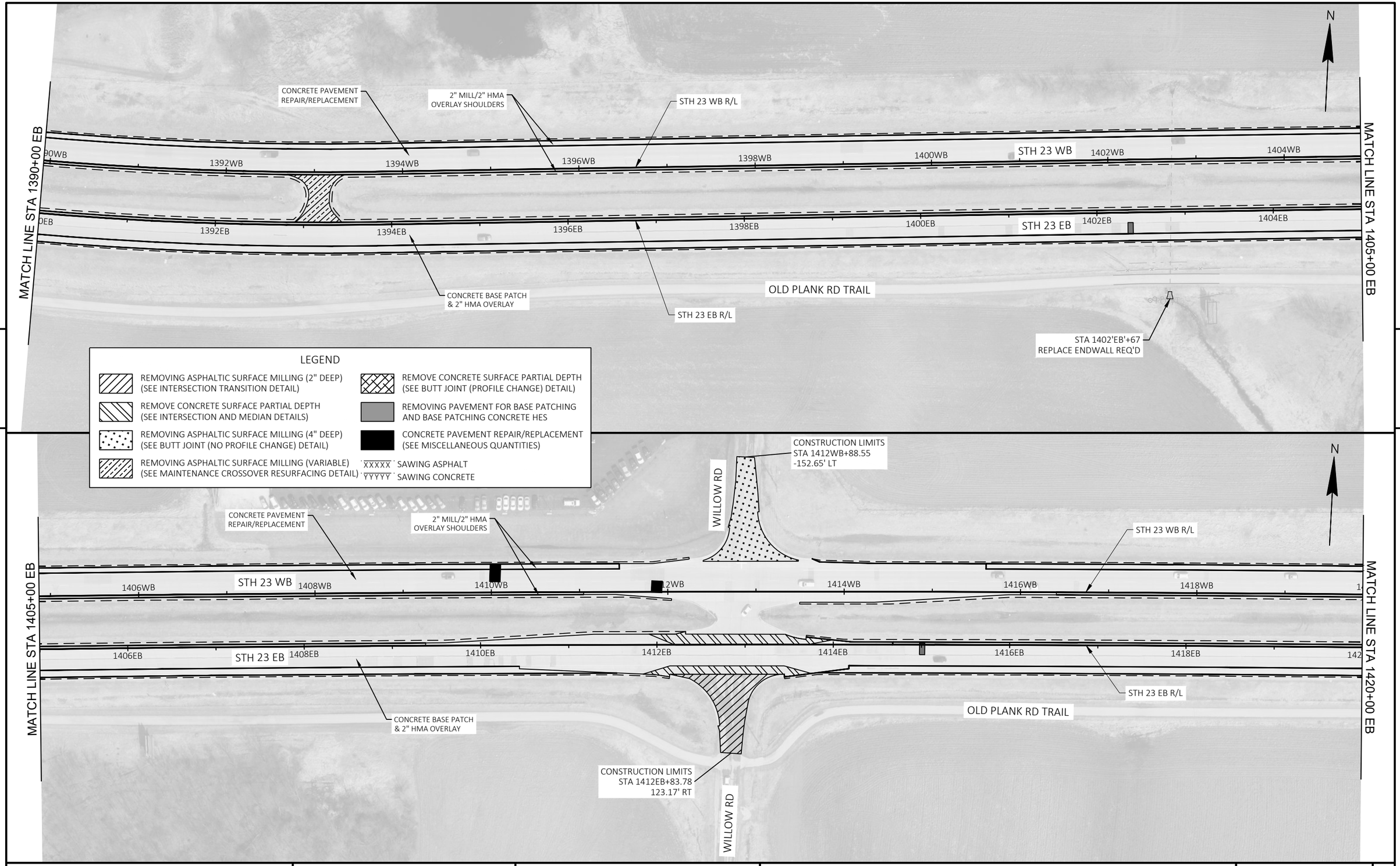


PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	STH 23	SHEET 245	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\050201-PN.DWG
LAYOUT NAME - 050209-pn

PLOT DATE : 9/29/2026 3:32 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44



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PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	STH 23	SHEET 246	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\050201-PN.DWG
LAYOUT NAME - 050210-pn

PLOT DATE : 9/29/2026 3:33 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:100 FT

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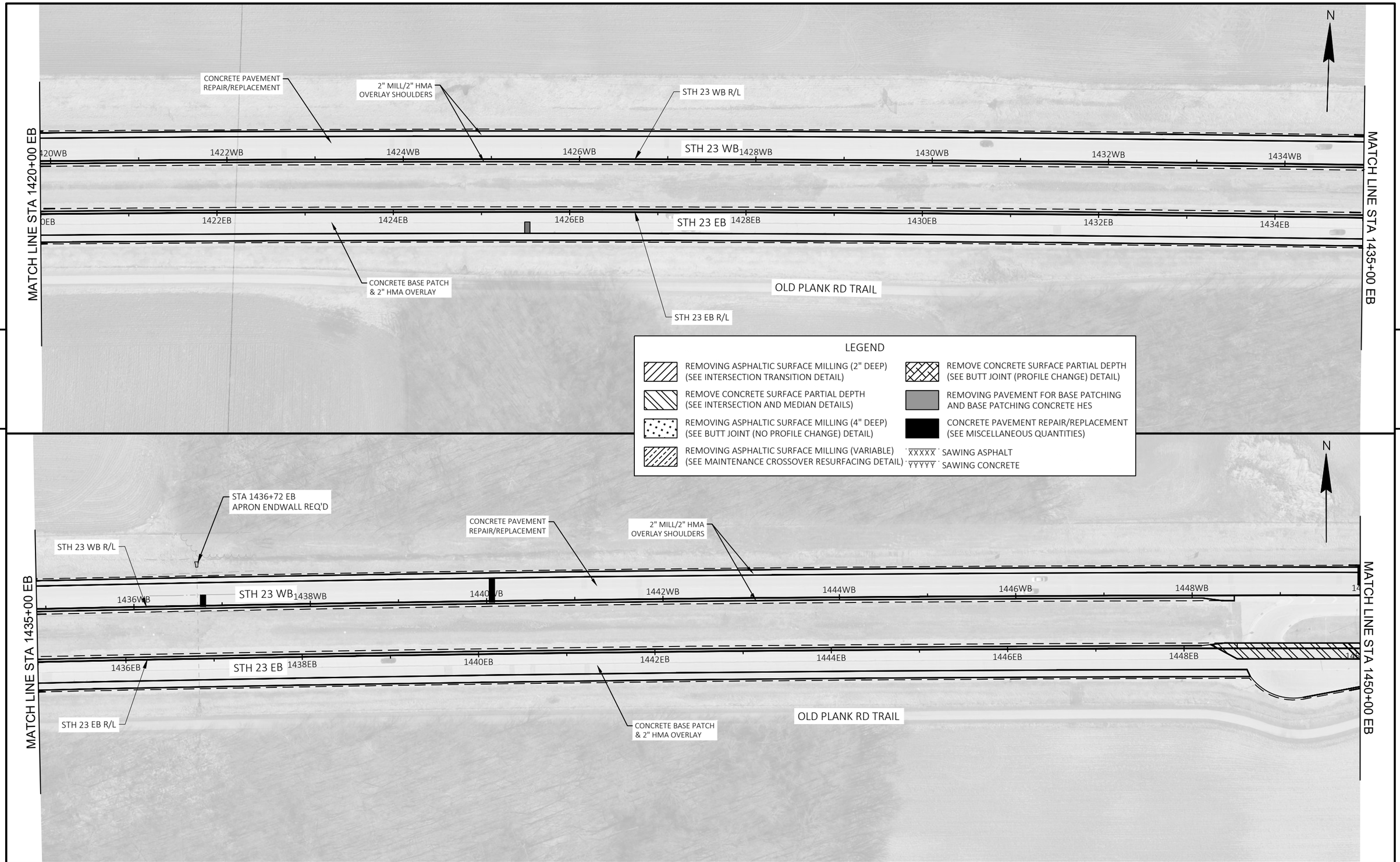
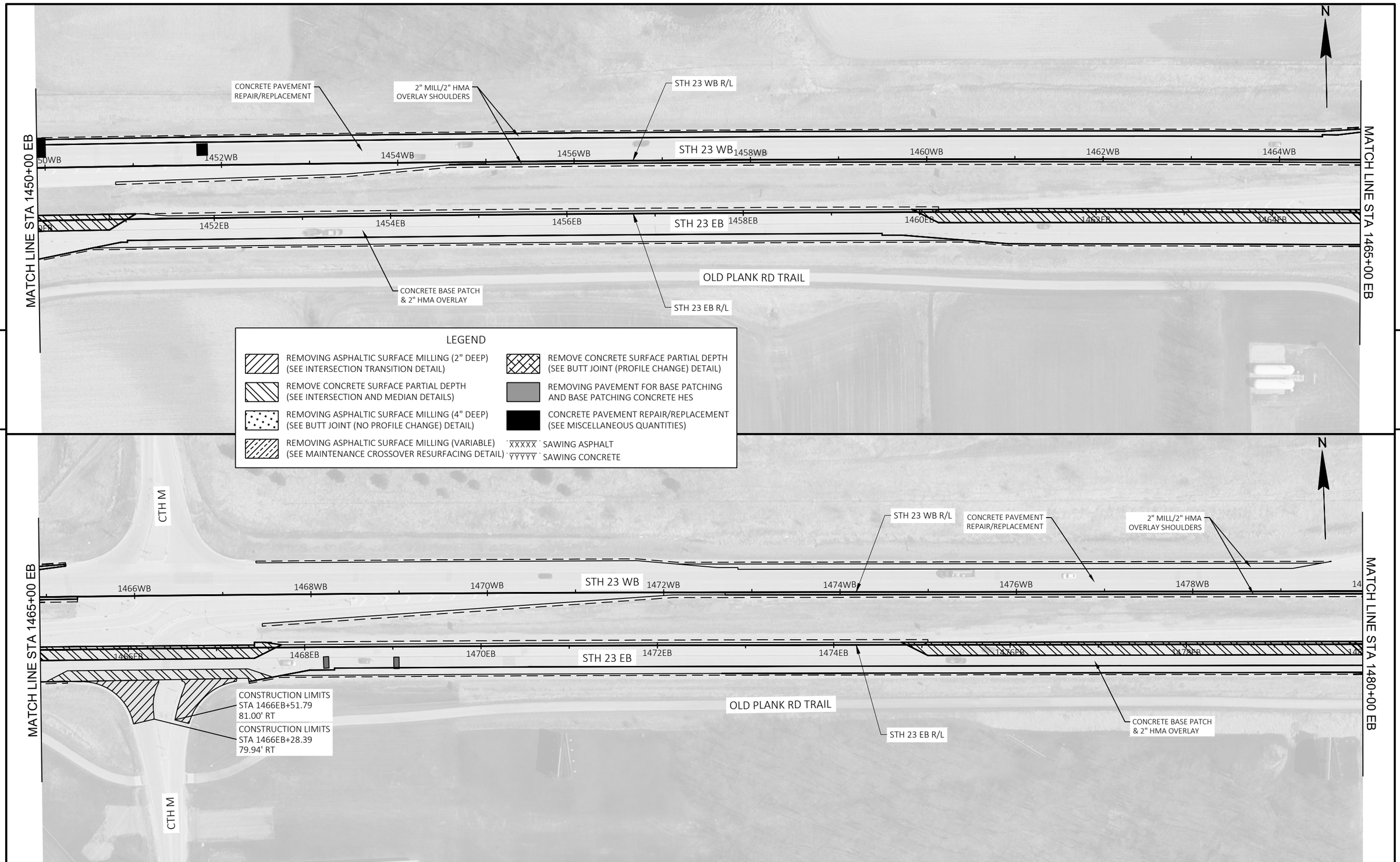


PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	STH 23	SHEET 247	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\050201-PN.DWG
LAYOUT NAME - 050211-pn

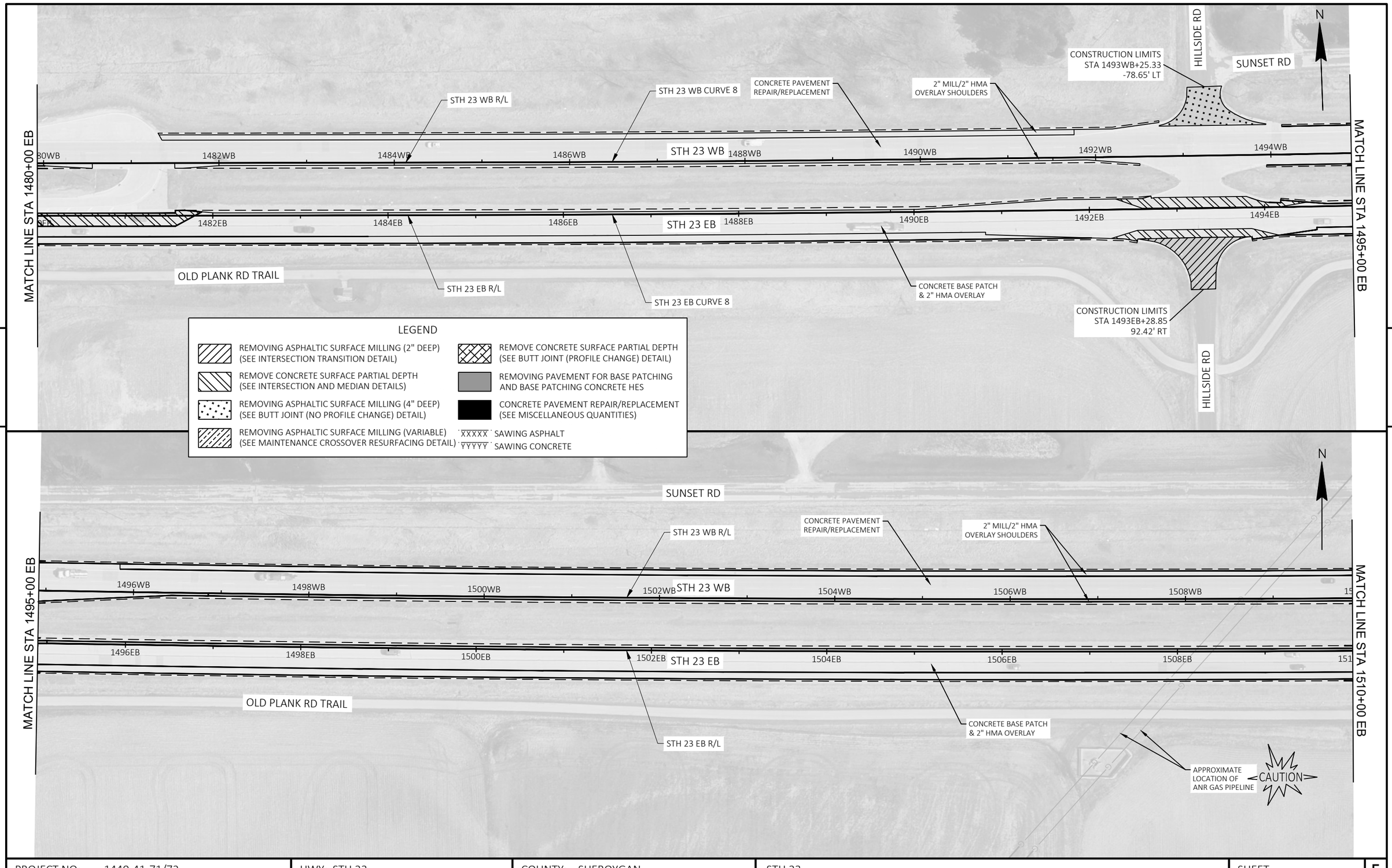
PLOT DATE : 9/29/2026 3:33 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44



PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	STH 23	SHEET 248	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\050201-PN.DWG
LAYOUT NAME - 050212-pn
PLOT DATE : 9/29/2026 3:33 PM
PLOT BY : HOSPER, JAN
PLOT NAME :
PLOT SCALE : 1 IN:100 FT



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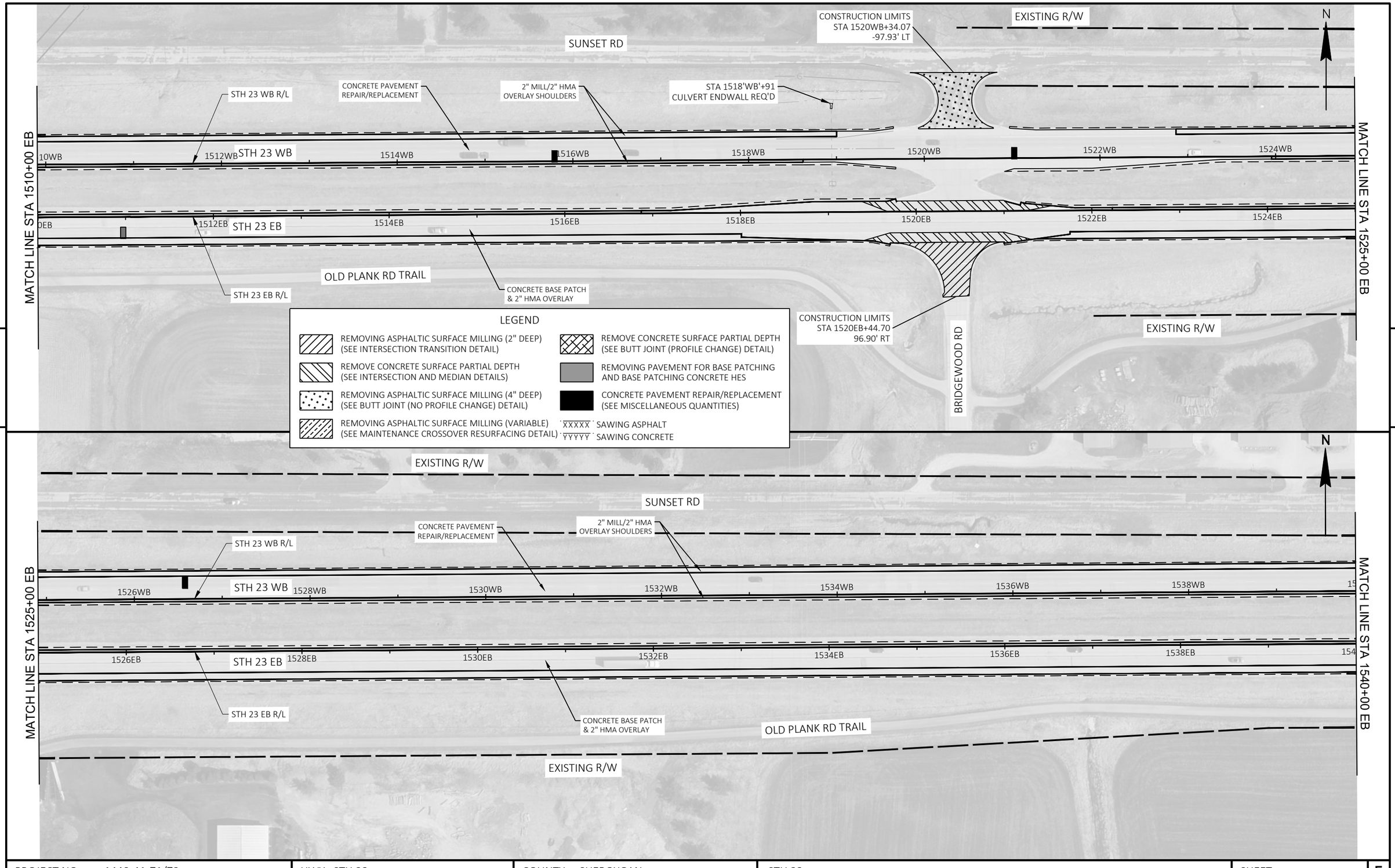
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	STH 23	SHEET 249	E

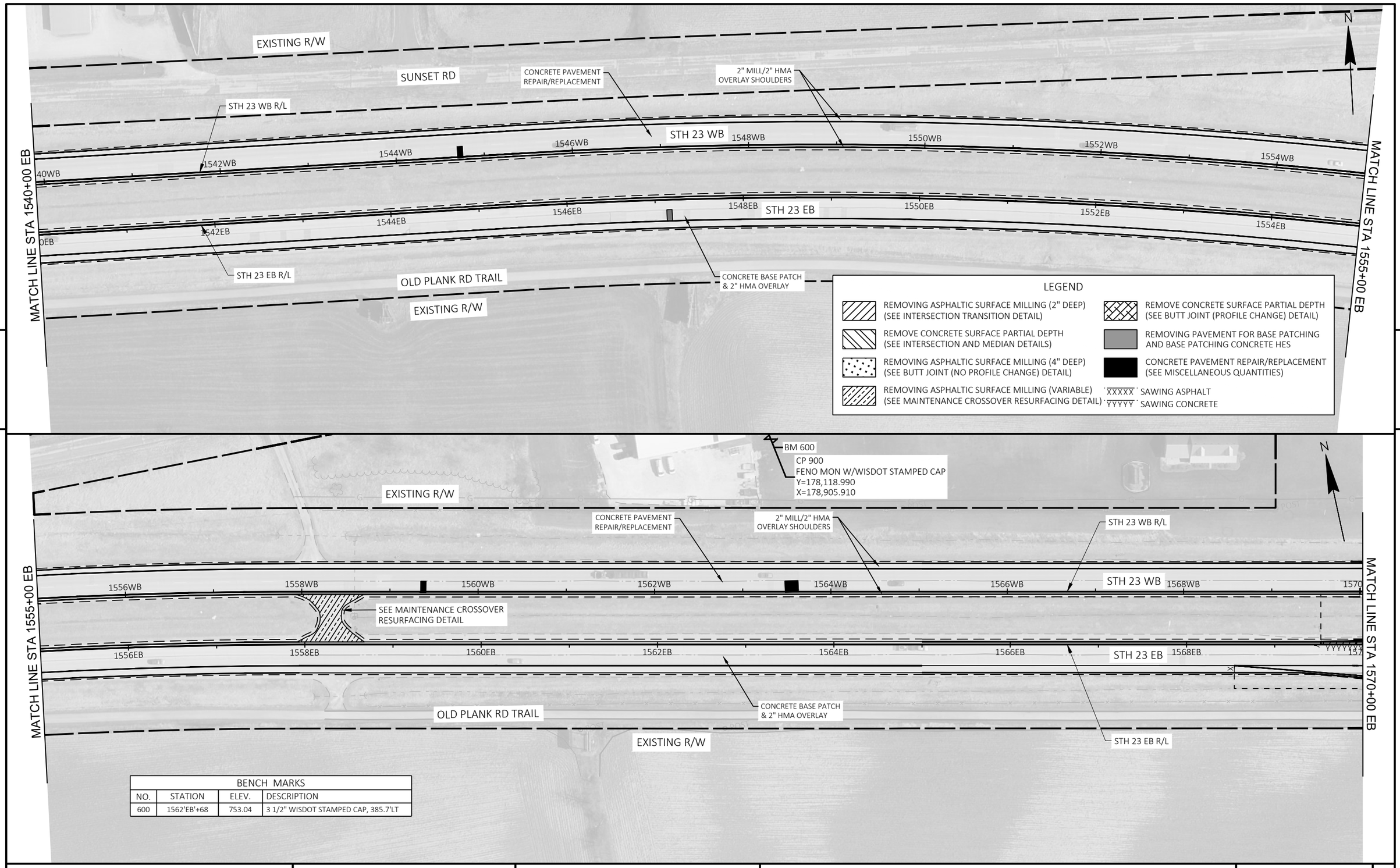
FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\050201-PN.DWG
LAYOUT NAME - 050213-pn
PLOT DATE : 9/29/2026 3:33 PM
PLOT BY : HOSPER, JAN
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44



PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	STH 23	SHEET 250	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\050201-PN.DWG
LAYOUT NAME - 050214-pn

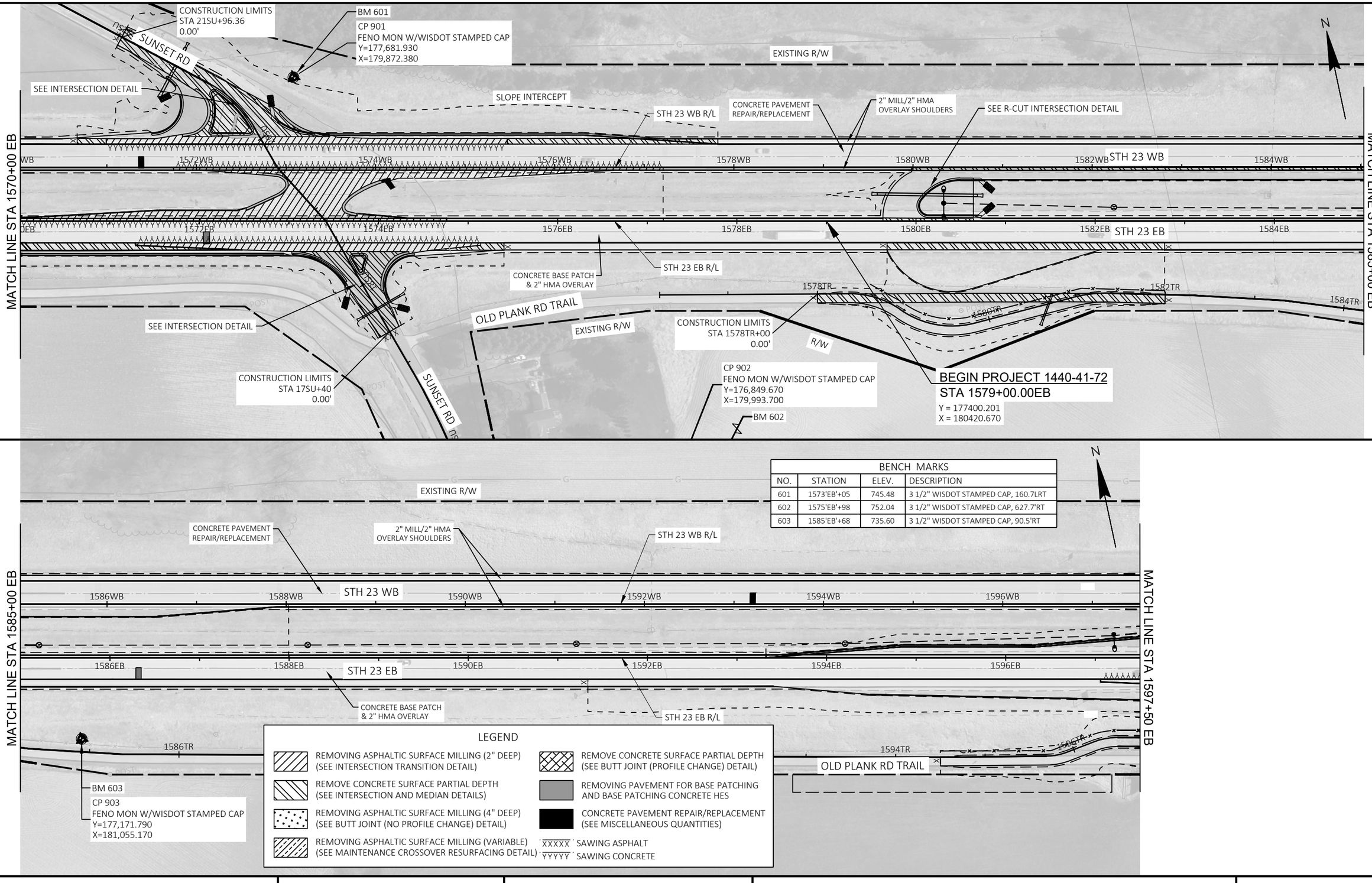
PLOT DATE : 9/29/2026 3:33 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:100 FT



BENCH MARKS			
NO.	STATION	ELEV.	DESCRIPTION
600	1562'EB'+68	753.04	3 1/2" WISDOT STAMPED CAP, 385.7'LT

PROJECT NO: 1440-41-71/72 / 1440-41-72	HWY: STH 23	COUNTY: SHEBOYGAN	STH 23	SHEET 251	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\050201-PN.DWG
LAYOUT NAME - 050215-pn
PLOT DATE : 9/29/2026 3:33 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:100 FT



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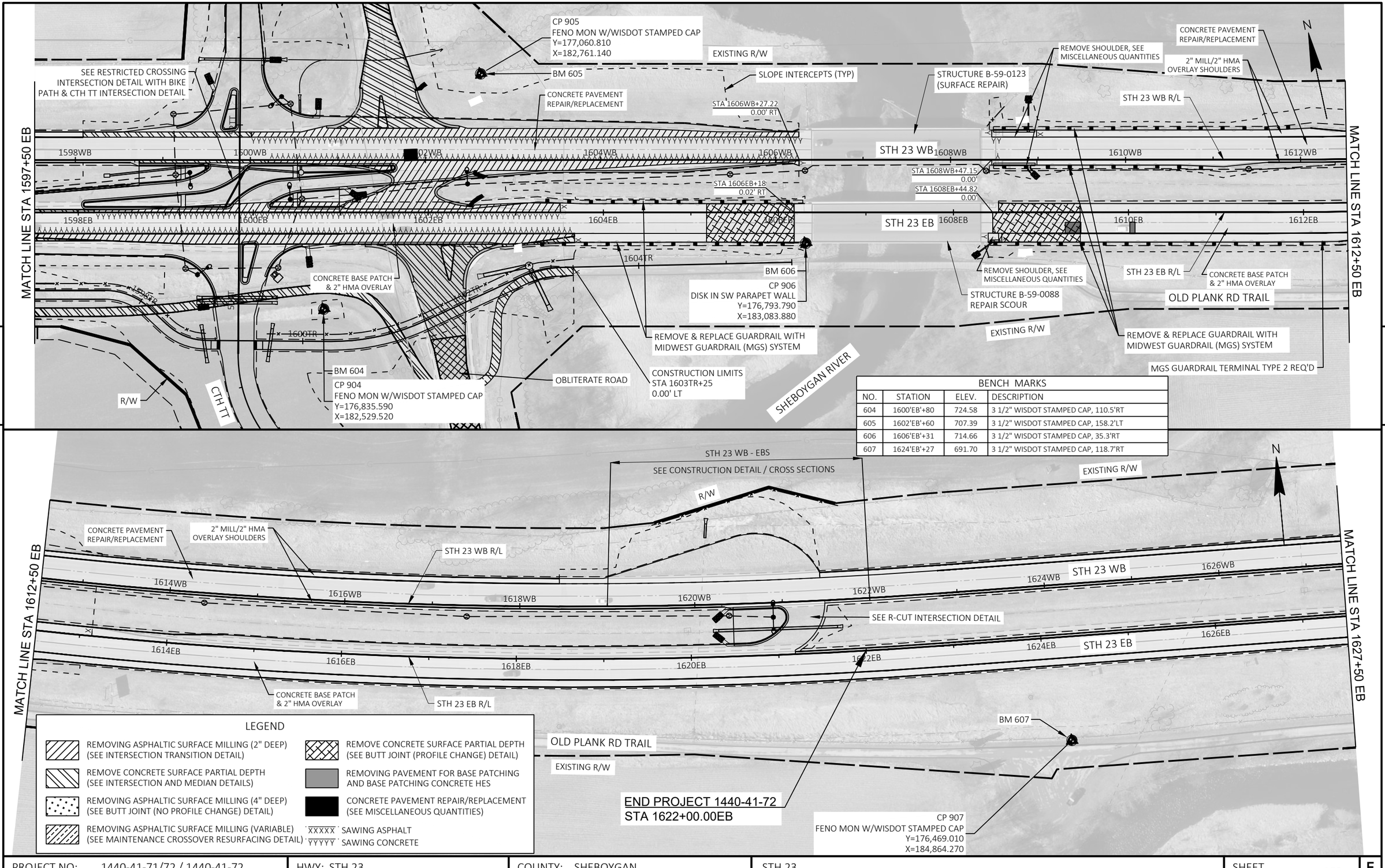
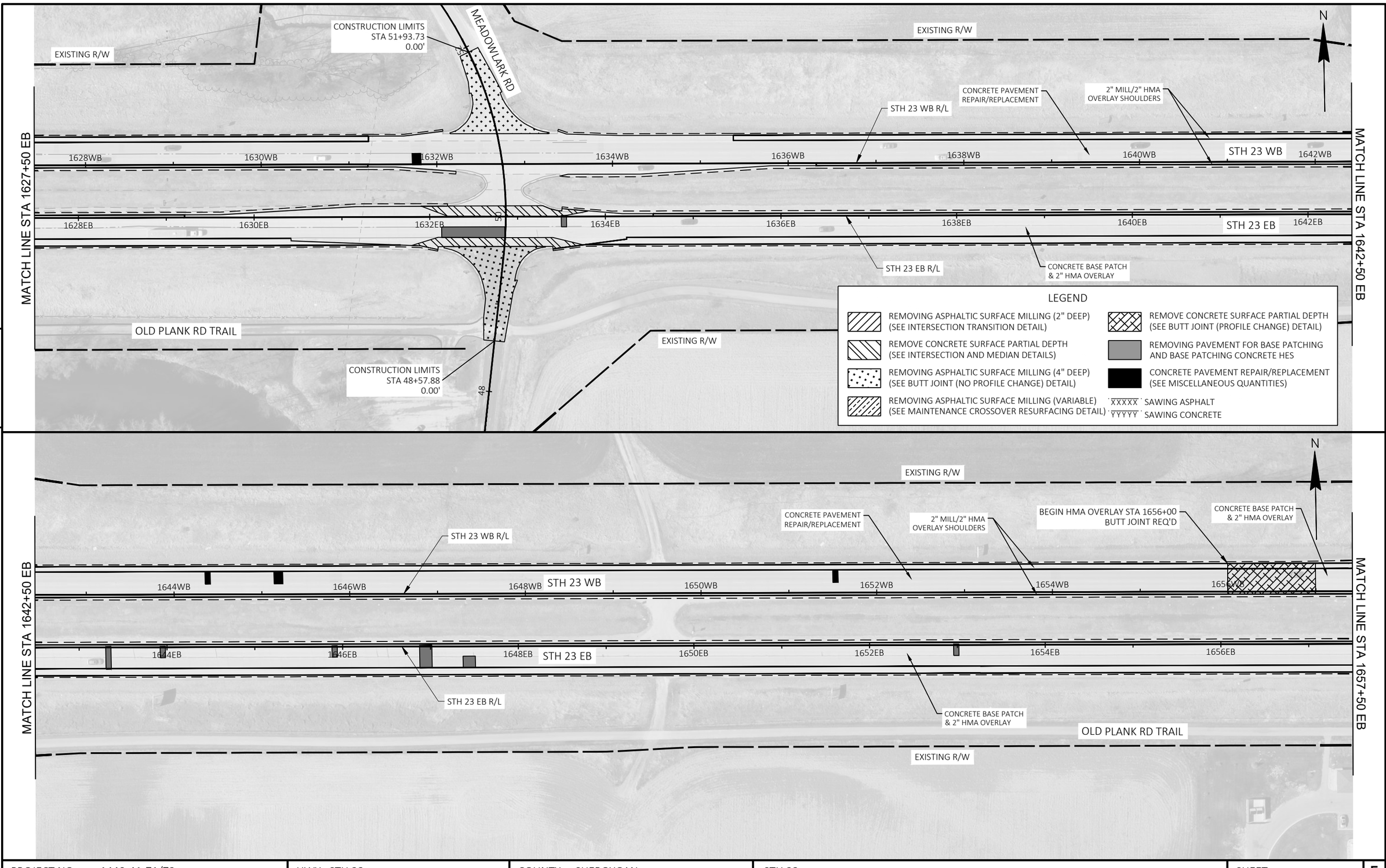
PROJECT NO: 1440-41-72	HWY: STH 23	COUNTY: SHEBOYGAN	STH 23	SHEET 252	E



BENCH MARKS			
NO.	STATION	ELEV.	DESCRIPTION
604	1600'EB'+80	724.58	3 1/2" WISDOT STAMPED CAP, 110.5'RT
605	1602'EB'+60	707.39	3 1/2" WISDOT STAMPED CAP, 158.2'LT
606	1606'EB'+31	714.66	3 1/2" WISDOT STAMPED CAP, 35.3'RT
607	1624'EB'+27	691.70	3 1/2" WISDOT STAMPED CAP, 118.7'RT

PROJECT NO: 1440-41-71/72 / 1440-41-72	HWY: STH 23	COUNTY: SHEBOYGAN	STH 23	SHEET 253	E

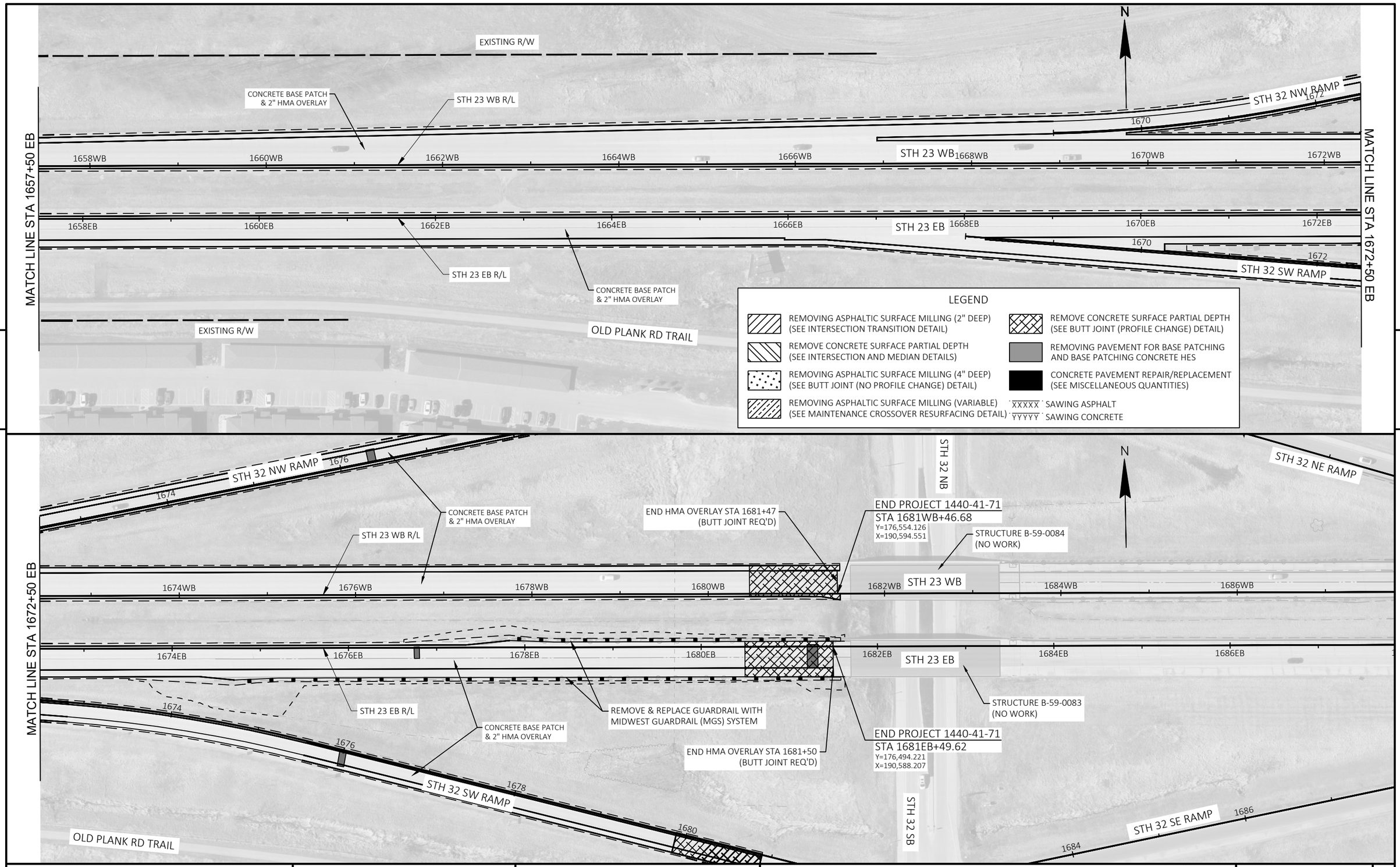


PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	STH 23	SHEET 254	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\050201-PN.DWG
LAYOUT NAME - 050218-pn

PLOT DATE : 9/29/2026 3:33 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44



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PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	STH 23	SHEET 255	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\050201-PN.DWG
LAYOUT NAME - 050219-pn

PLOT DATE : 9/29/2026 3:33 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

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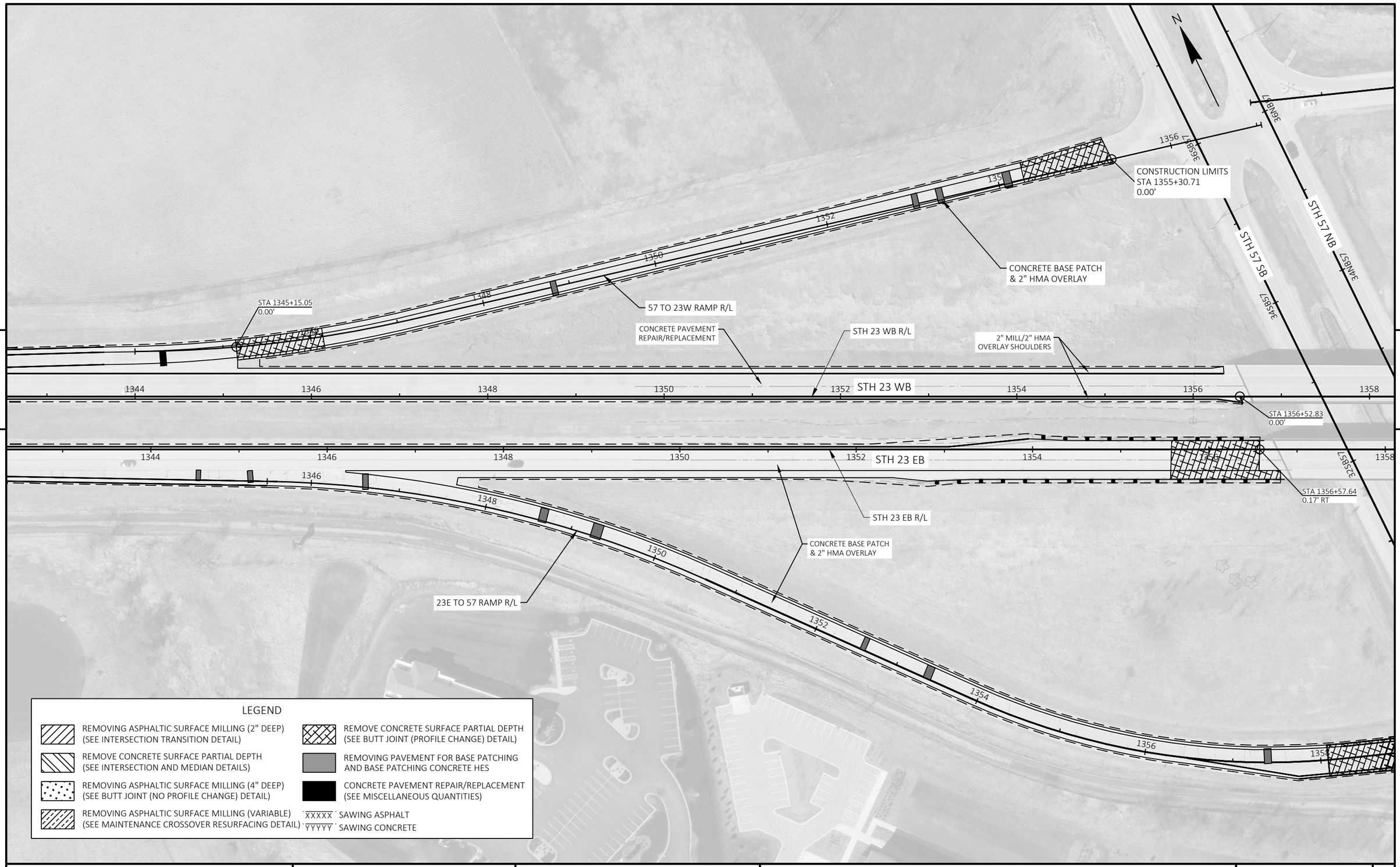
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	STH 67 RAMPS	SHEET 256	E

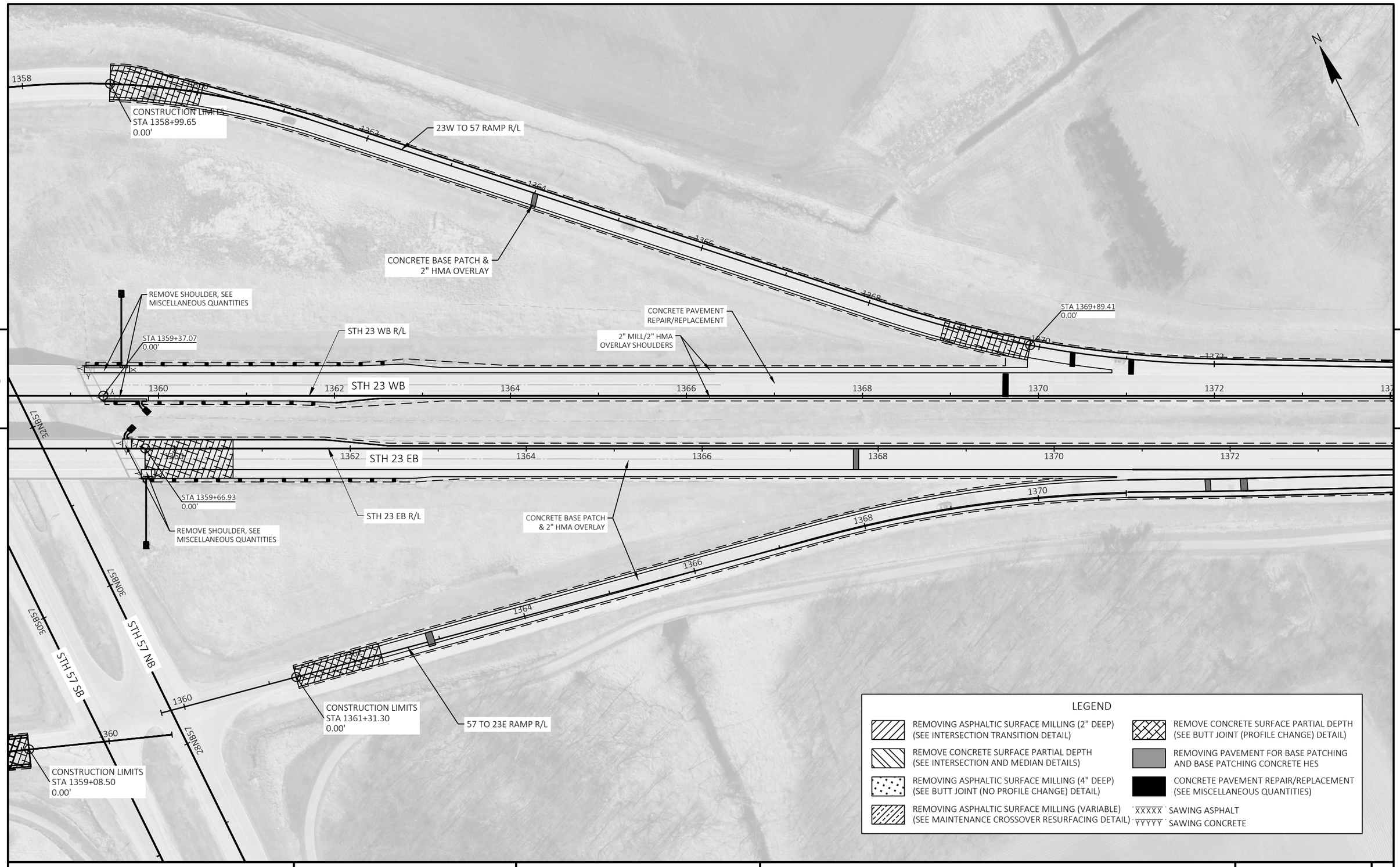
FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\050202-PN.DWG
LAYOUT NAME - 050220-pn

PLOT DATE : 9/29/2026 3:34 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44



PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	STH 57 RAMPS	SHEET 257	E

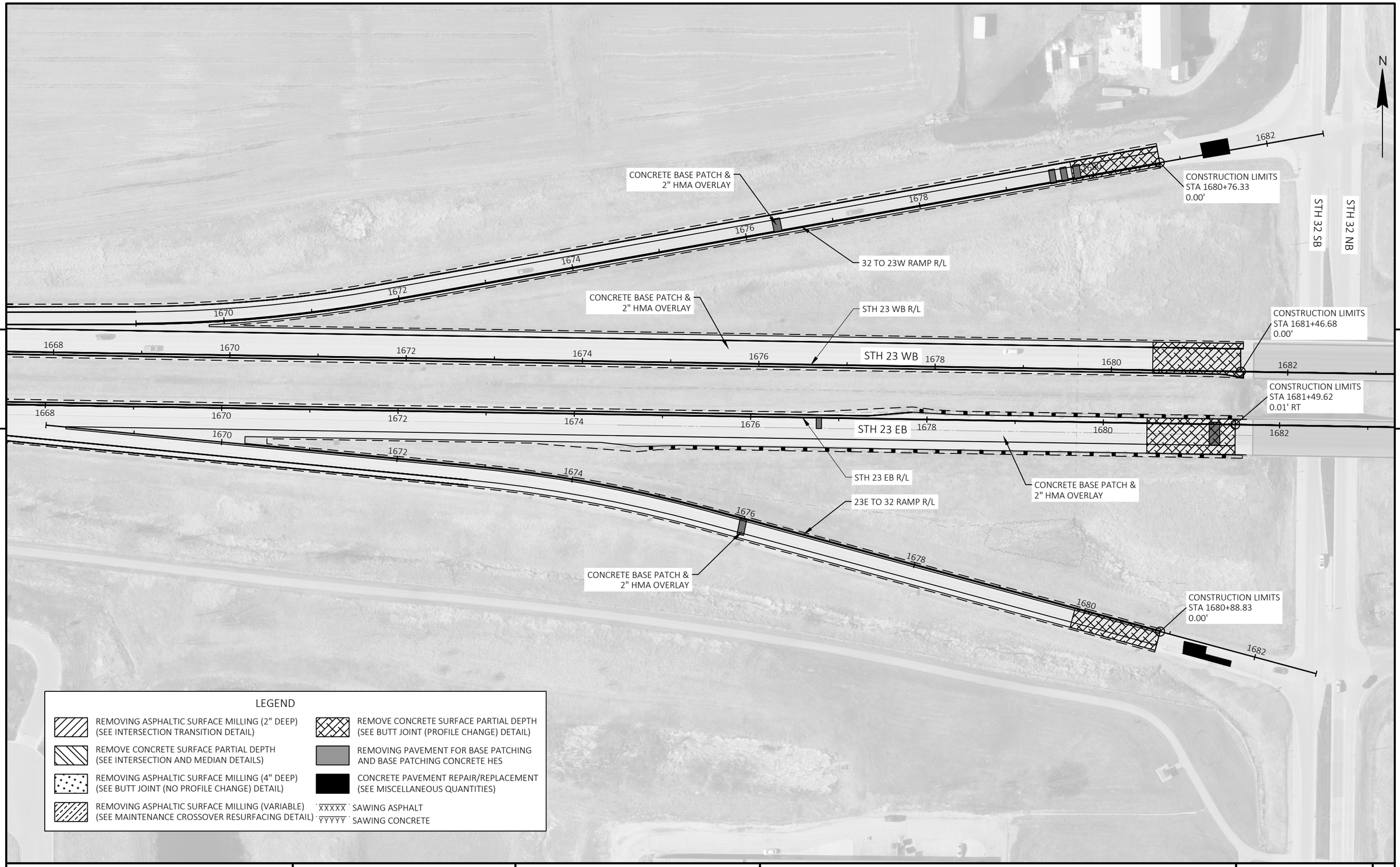


PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	STH 57 RAMPS	SHEET 258	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\050202-PN.DWG
LAYOUT NAME - 050222-pn

PLOT DATE : 9/29/2026 3:34 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44



PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	STH 32 RAMPS	SHEET 259	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\050202-PN.DWG
LAYOUT NAME - 050223-pn

PLOT DATE : 9/29/2026 3:34 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

Standard Detail Drawing List

08A05-22B	INLET COVERS TYPE B, B-A, C, MS, MS-A, DW AND WM
08A05-22C	INLET COVERS TYPE F, HM, HM-S, S, T, HM-GJ AND HM-GJ-S
08A05-22D	INLET COVERS TYPE V, V-B, AND VV-B
08A05-22E	INLET COVER TYPE BW, MANHOLE COVERS, TYPE K, J, J-S, L AND M
08B09-04	MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT, 8-FT, 9-FT AND 10-FT DIAMETER
08C06-03	INLETS 3-FT AND 4-FT DIAMETER
08C07-03	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT, 2.5X3-FT & 2X3.5-FT
08C08-03	INLETS MEDIAN 1 AND 2 GRATE
08D01-24A	CONCRETE CURB AND GUTTER
08D01-24B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D02-08A	CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES
08D02-08B	CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES
08D02-08C	CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES
08D03-09A	CONCRETE SURFACE DRAINS DROP INLET TYPE AT STRUCTURES
08D03-09B	CONCRETE SURFACE DRAINS DROP INLET TYPE AT STRUCTURES
08D04-07	CONCRETE SURFACE DRAINS AND ASPHALTIC FLUMES
08D05-23A	CURB RAMPS TYPES 1 AND 1-A
08D05-23B	CURB RAMPS TYPES 2 AND 3
08D05-23C	CURB RAMPS TYPES 4A AND 4A1
08D05-23D	CURB RAMPS TYPES 4B AND 4B1
08D05-23E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08D05-23F	CURB RAMPS RADIAL DETECTABLE WARNING FIELD
08D05-23G	CURB RAMPS RECTANGULAR AND RADIAL DETECTABLE WARNING PLATES
08D15-05A	EDGEDRAIN OUTLET AND OUTFALL MARKERS
08D15-05B	EDGEDRAIN AND BASE AGGREGATE OPEN GRADED
08D15-05C	EDGEDRAIN AND BASE AGGREGATE OPEN GRADED
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPES A, B, C AND D
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
08F06-04	REINFORCED CONCRETE APRON ENDWALL FOR PIPE UNDERDRAIN
09A01-14A	AT-GRADE SIDE ROAD INTERSECTION, TYPES "B1", "B2", "C", "D" AND TEE INTERSECTION BYPASS LANE
09A01-14B	AT-GRADE SIDE ROAD INTERSECTION, TYPES "A1" & "A2"
09A14-01	DRIVEWAYS WITHOUT CURB AND GUTTER
09B02-10	CONDUIT
09B16-04	PULL BOXES NON-CONDUCTIVE
09C02-09	CONCRETE BASES, TYPES 1, 2, 5, & 6
09C03-04	TRANSFORMER/PEDESTAL BASES
09C05-10	CONCRETE CONTROL CABINET BASES
09D01-05	CABINET SERVICE INSTALLATION (METER BREAKER PEDESTAL)
09E01-17D	POLE MOUNTINGS FOR LIGHTING UNITS, TYPE 5 (30 FEET)
09E01-17G	HARDWARE DETAILS FOR POLE MOUNTING
09E03-06	NON-FREEWAY LIGHTING UNIT POLE WIRING
11A01-06	MAINTENANCE CROSSOVER FOR FREEWAYS
11B02-02	CONCRETE MEDIAN NOSE
12A03-10	NAME PLATE (STRUCTURES)
13A03-07	CONCRETE PAVEMENT SHOULDERS
13A05-06A	SHOULDER RUMBLE STRIPS, DIVIDED ROADWAY
13A05-06B	SHOULDER RUMBLE STRIPS, DIVIDED ROADWAY
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
13C01-19	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
13C09-18A	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C09-18B	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C09-18C	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C09-18D	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C14-07A	BASE PATCHING CONCRETE
13C14-07B	BASE PATCHING CONCRETE
13C14-07C	BASE PATCHING CONCRETE
13C18-08A	CONCRETE PAVEMENT JOINTING
13C18-08B	CONCRETE PAVEMENT STEEL REINFORCEMENT
13C18-08C	CONCRETE PAVEMENT JOINT TYPES
13C18-08D	CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES

6

Standard Detail Drawing List

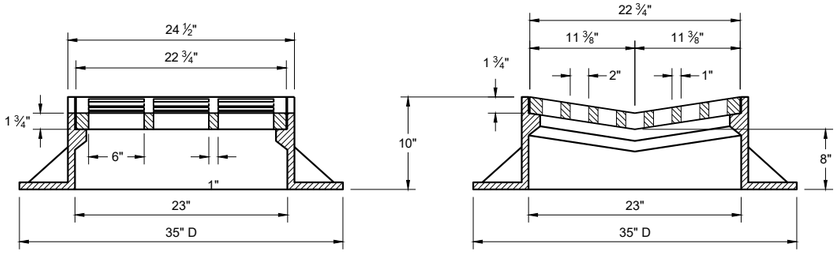
13C18-08F	CONCRETE PAVEMENT INTERSECTION BOXOUT FOR INTEGRAL CURB AND GUTTER
13C19-03	HMA LONGITUDINAL JOINTS
14B07-16A	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16B	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16C	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16D	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16E	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16F	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16G	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16H	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16I	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16J	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16K	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16L	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16M	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16N	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B08-02A	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02B	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02C	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02D	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02E	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B29-01	SAFETY EDGE
14B42-07A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07D	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-04A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B45-05A	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05B	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05C	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05D	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05F	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05G	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B47-06A	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-06B	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-06C	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-06D	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-06E	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-06F	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-06G	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15A04-08E	DELINEATOR POST WITH REFLECTIVE SHEETING
15B01-08A	FENCE WOVEN WIRE
15B01-08B	FENCE WOVEN WIRE
15C02-10A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-10B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C02-10C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C02-10D	ON RAMP LANE CLOSURE
15C02-10E	OFF RAMP LANE CLOSURE
15C02-10F	ADVANCED WIDTH RESTRICTION SIGNING
15C02-10G	TRAFFIC CONTROL FOR ENTRANCE RAMP CLOSURE
15C03-05	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C04-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C05-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C07-16A	PAVEMENT MARKING SYMBOLS
15C07-16B	PAVEMENT MARKING WORDS
15C07-16C	PAVEMENT MARKING ARROWS
15C07-16E	PAVEMENT MARKING FOR BIKE LANES
15C08-24A	PERMANENT LONGITUDINAL PAVEMENT MARKINGS
15C08-24B	TEMPORARY LONGITUDINAL PAVEMENT MARKING
15C11-11B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C18-09A	MEDIAN ISLAND PAVEMENT MARKINGS
15C18-09B	PAVEMENT MARKINGS, MEDIAN ISLAND NOSE

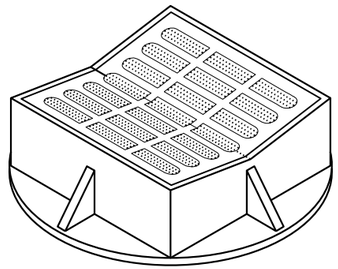
6

Standard Detail Drawing List

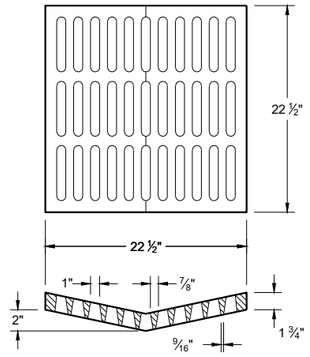
15C18-09C	MEDIAN PAVEMENT MARKINGS DOUBLE ARROW WARNING SIGN PLACEMENT
15C19-11A	MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY
15C19-11C	MOVING PAVEMENT MARKING OPERATION MULTI-LANE DIVIDED ROADWAY
15C20-02	YIELD MARKINGS
15C29-08A	BICYCLE LANE MARKING
15C31-08A	PAVEMENT MARKING EXIT RAMP AND PARALLEL EXIT RAMP
15C31-08C	PAVEMENT MARKING ENTRANCE RAMP AND PARALLEL ENTRANCE RAMP
15D12-17A	TRAFFIC CONTROL, LANE CLOSURE
15D12-17B	TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION
15D12-17D	TRAFFIC CONTROL, LANE CLOSURE, BASIC TRAFFIC QUEUE WARNING SYSTEM
15D12-17F	TRAFFIC CONTROL, LANE CLOSURE, WITH TEMPORARY TAPE RUMBLE STRIPS
15D12-17G	TRAFFIC CONTROL, LANE CLOSURE , DIGITAL SPEED REDUCTION SYSTEM
15D15-08A	TRAFFIC CONTROL, PARALLEL ENTRANCE RAMP WITHIN LANE CLOSURE
15D15-08B	TRAFFIC CONTROL, ENTRANCE RAMP WITHIN LANE CLOSURE
15D15-08C	TRAFFIC CONTROL, TAPERED ENTRANCE RAMP WITHIN LANE CLOSURE
15D15-08D	TRAFFIC CONTROL, TAPERED ENTRANCE RAMP WITHIN LANE CLOSURE
15D16-07	TRAFFIC CONTROL, EXIT RAMP CLOSURE
15D20-12A	TRAFFIC CONTROL, SINGLE LANE CLOSURE, DIVIDED NON-FREEWAY/EXPRESSWAY
15D21-07A	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE RIGHT LANE CLOSURE
15D21-07B	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LEFT LANE CLOSURE
15D27-06	TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH
15D30-12A	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-12B	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-12C	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-12F	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-12G	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D40-08D	TRAFFIC CONTROL, PARTIAL LANE SHIFT MULTILANE DIVIDED 50 MPH AND GREATER
15D49-05	TRAFFIC CONTROL, SYSTEM RAMP CLOSURE

6





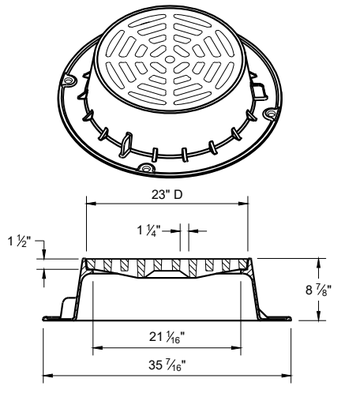
TYPE "B"



ALTERNATIVE GRATE FOR TYPE "B" COVER

USE WHERE PEDESTRIAN OF BICYCLE TRAFFIC IS POSSIBLE

NOTED AS TYPE B - A ON THE DRAINAGE TABLE



TYPE "C"

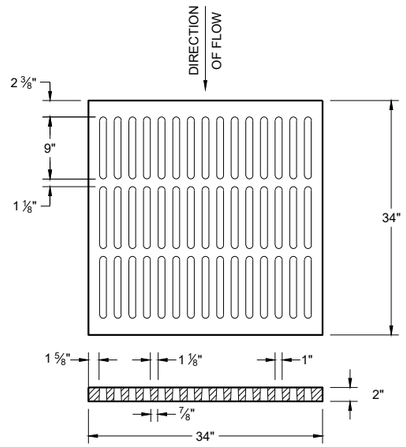
NOTE: EITHER CASTING IS ACCEPTABLE

GENERAL NOTES

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

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

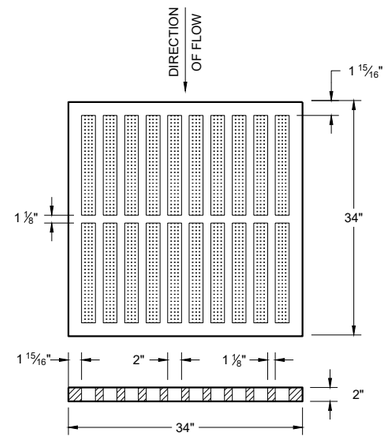
ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.



ALTERNATIVE TYPE "MS"

USE WHERE PEDESTRIAN OF BICYCLE TRAFFIC IS PERMITTED

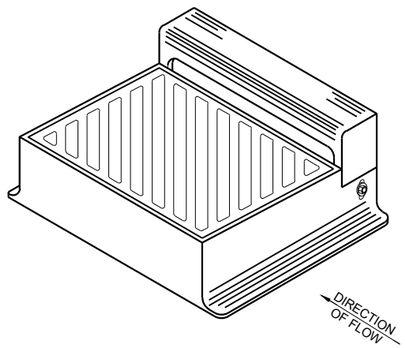
NOTED AS TYPE MS-A ON THE DRAINAGE TABLE



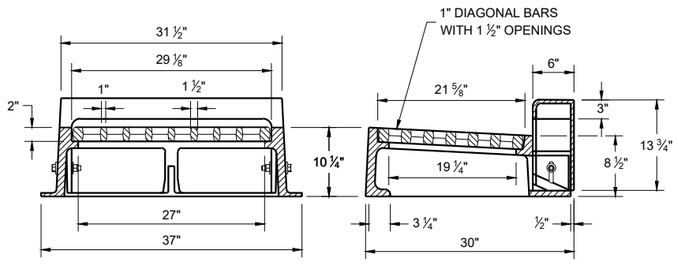
TYPE "MS"

USE ON FREEWAYS AND EXPRESSWAYS

NOTED AS TYPE MS ON THE DRAINAGE TABLE

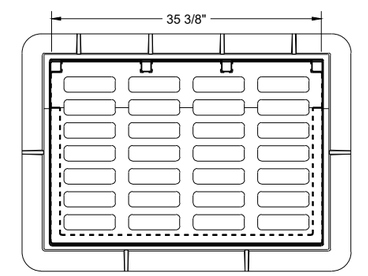


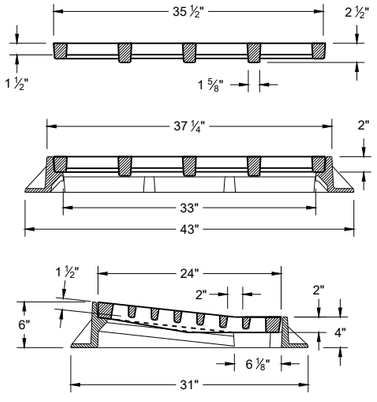
DIAGONAL SLOTS SHALL BE ORIENTEDTO THE DIRECTION OF FLOW AS ILLUSTRATED.
GRATES ARE MANUFACTURED TO BE REVERSIBLE.

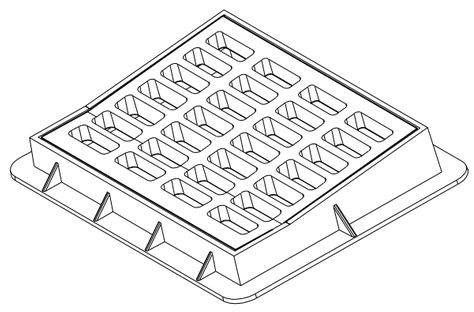


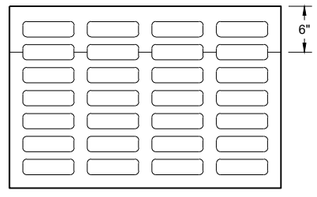
TYPE "WM"

NOTE: CURB BOX HEIGHT ADJUSTABLE 6" - 9"









TYPE "DW"

NOTES: FOR USE IN A SUMP CONDITION. THIS OPTION IS ONLY TO BE USED IF NO OTHER INLETS ARE APPLICABLE.

INLET COVERS
TYPES B, B-A, C,
MS, MS-A ,DW AND WM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

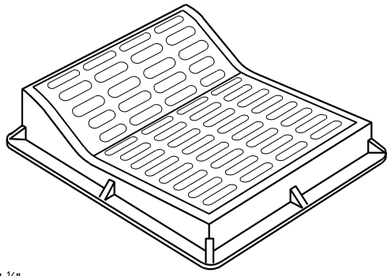
6

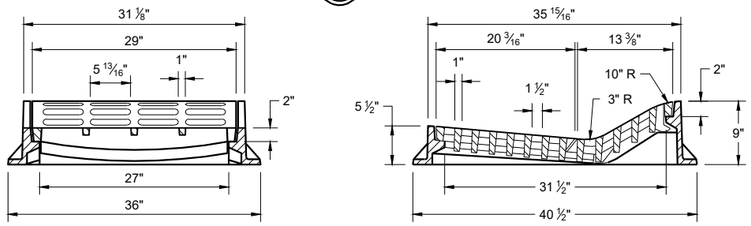
SDD 08A05-22b

GENERAL NOTES

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

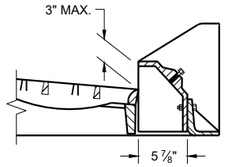
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.





TYPE "F"

USE WITH TYPES "A" AND "D" CONCRETE CURB AND GUTTER, 36"

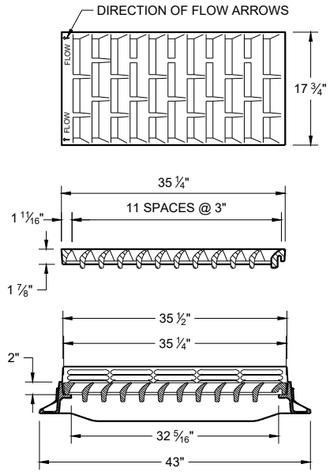


ALTERNATIVE CURB BOX FOR TYPE "HM" COVER

USE WITH TYPES "G" AND "J" CONCRETE CURB AND GUTTER, 30 INCH
NOTED AS TYP "HM-GJ" ON DRAINAGE TABLE

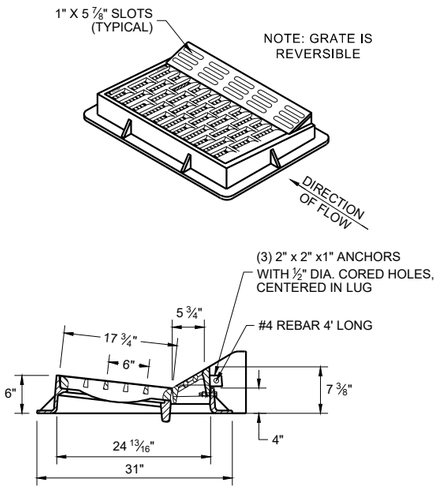
NOTE:
SPECIAL GRATE FOR THE TYPE "H" COVER MAY ALSO BE USED FOR THE TYPE "HM-GJ" COVER.

NOTED AS TYPE HM-GJ-S ON THE DRAINAGE TABLE.



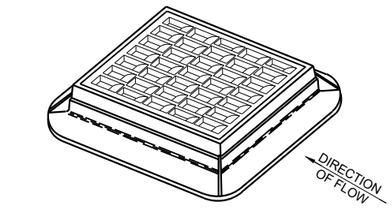
TYPE "HM"

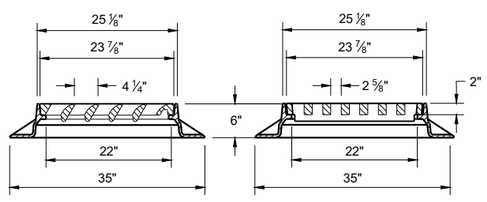
USE WITH TYPES "A" AND "D" CONCRETE CURB AND GUTTER, 36"



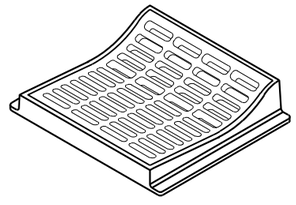
NOTE:
SPECIAL GRATE FOR THE TYPE "H" COVER MAY ALSO BE USED FOR THE TYPE "HM-GJ" COVER.

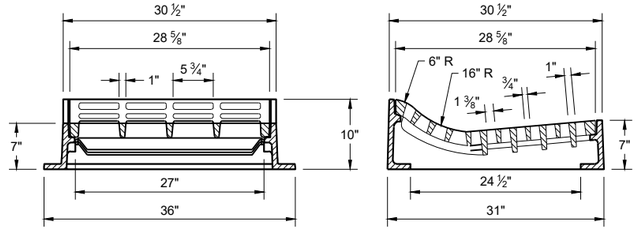
NOTED AS TYPE HM-GJ-S ON THE DRAINAGE TABLE.





TYPE "S"





TYPE "T"

USE WITH TYPES "R" AND "T" CONCRETE CURB AND GUTTER, 36"

INLET COVERS
TYPES F, HM, HM-S, S, T, HM-GJ AND HM-GJ-S

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
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/S/ Rodney Taylor — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

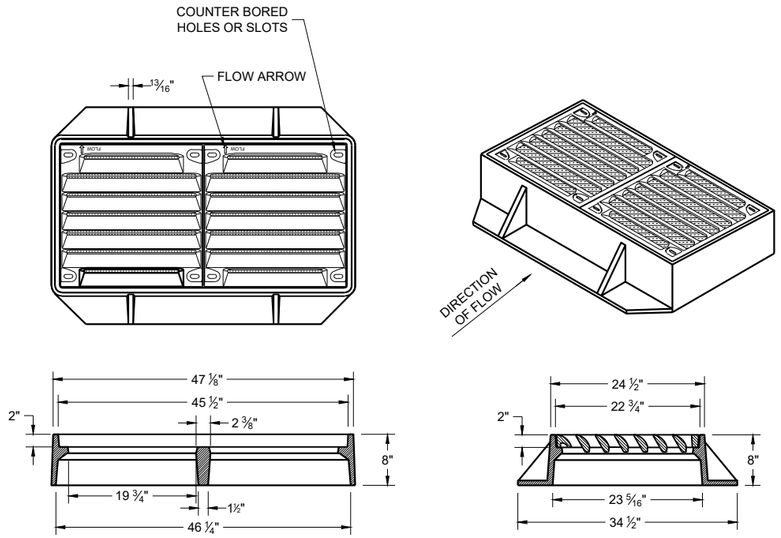
FHWA

6
SDD 08A05-22c

GENERAL NOTES

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

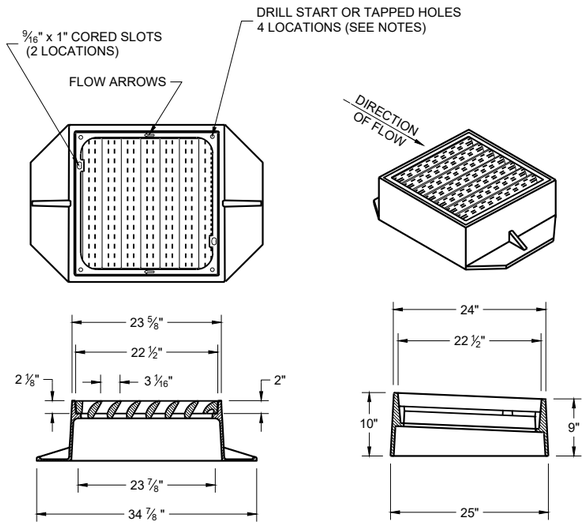
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.



TYPE "VV-B"

NOTES: ALL HARDWARE TO BE SUPPLIED BY CASTING MANUFACTURER
ALL DRILLING AND TAPPING GRATES AND FRAMES BY CASTING MANUFACTURER

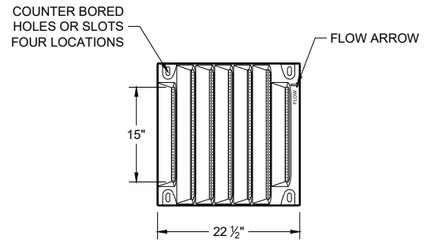
TYPE V
FRAME - CAST GRAY IRON ASTM A48 CLASS 35B
⅜" DIA. X 1/16" DRILL START IN 8 LOCATIONS
GRATE - CAST GRAY IRON ASTM A-48, CLASS 35B



TYPE "V"

NOTES: ALL HARDWARE TO BE SUPPLIED BY CASTING MANUFACTURER ALL DRILLING AND TAPPING GRATES AND FRAMES BY CASTING MANUFACTURER

TYPE V
FRAME - CAST GRAY IRON ASTM A48 CLASS 40A
⅜" DIA. X 1/16" DRILL START IN 4 LOCATIONS
GRATE - CAST GRAY IRON ASTM A-48, CLASS 35B



BOLT DOWN GRATE FOR TYPE "V" AND "VV-B" COVER

NOTES: ALL HARDWARE TO BE SUPPLIED BY CASTING MANUFACTURER NOTED AS TYPE "V-B" OR "VV-B" (FOR DOUBLE GRATE) ON DRAINAGE TABLE

TAP ½" -13 HOLES IN FOUR LOCATIONS PER GRATE IN FRAME TO BOLT GRATE(S).
FRAME - CAST GRAY IRON ASTM A48 CLASS 40A

GRATE - CAST DUCTILE IRON ASTM A536, 55+KSI YIELD
BOLTS - ½" -13 STAINLESS STEEL BOLTS WITH WASHERS
TORQUE BOLTS TO MANUFACTURER SPECIFICATION DO NOT OVERTIGHTEN.

INLET COVERS
TYPES V, V-B, AND VV-B

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FHWA

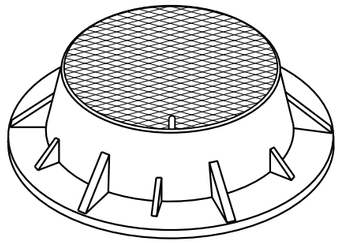
6
SDD 08A05-22d

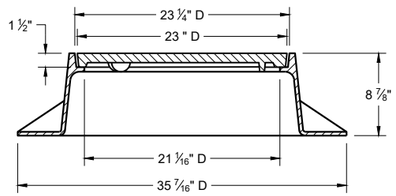
GENERAL NOTES

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

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

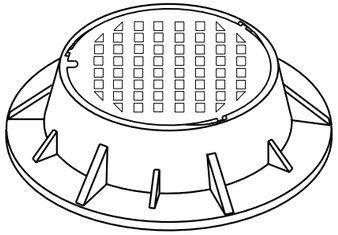
ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.

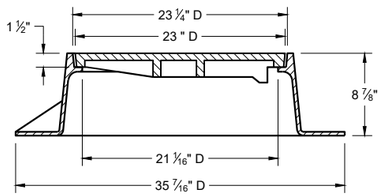




TYPE "J"

NOTE: EITHER CASTING IS ACCEPTABLE

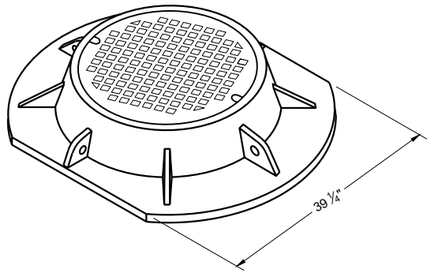


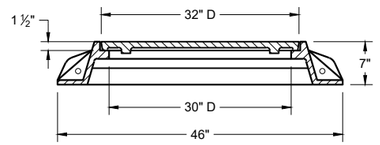


TYPE "J" SPECIAL

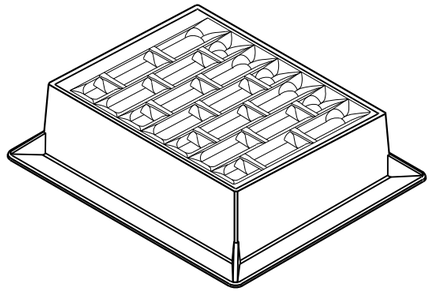
TYPE "B" NON-ROCKING SELF-SEAL LID
(NOTED AS TYPE J-S ON THE DRAINAGE TABLE)

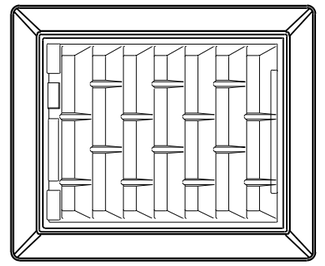
NOTE: EITHER CASTING IS ACCEPTABLE

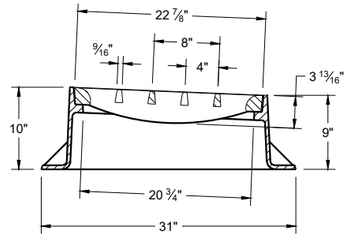


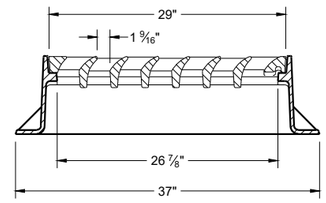


TYPE "K"

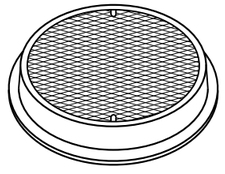


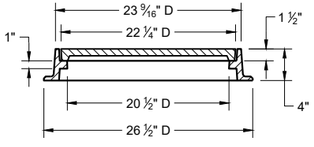




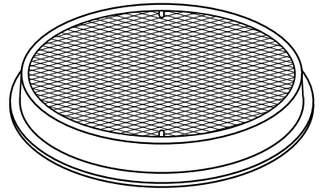


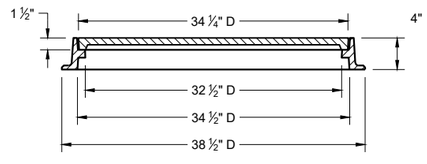
INLET COVER TYPE "BW"





TYPE "L"





TYPE "M"

INLET COVERS TYPES BW
MANHOLE COVERS TYPES K, J, J-S, L, AND M

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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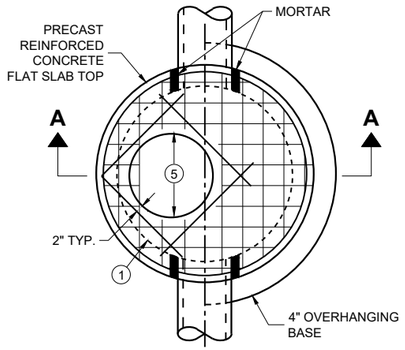
February 2025 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

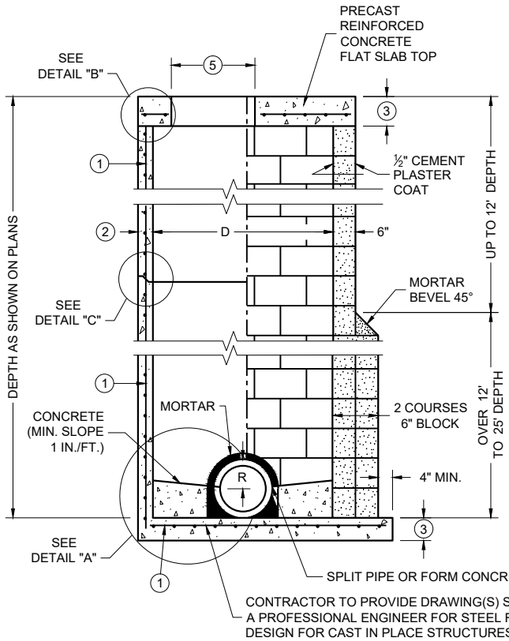
FHWA

6
SDD 08A05-22e



PLAN VIEW

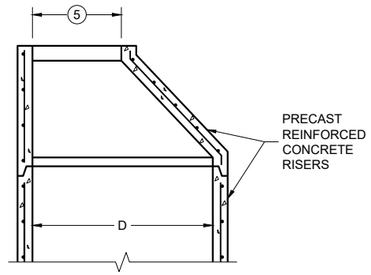
CIRCULAR OPENING



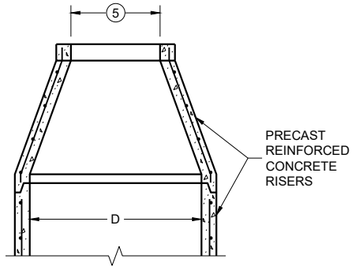
SECTION A - A

PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

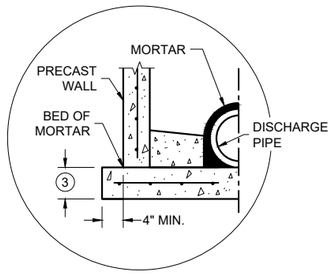
CONCRETE BLOCK WITH CAST IN PLACE OR PRECAST REINFORCED CONCRETE BASE (1)



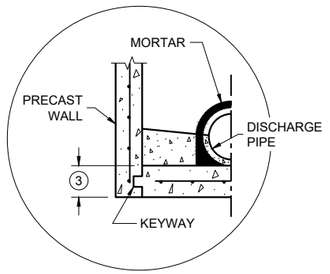
OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP



OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP

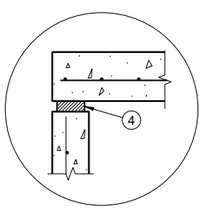


SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

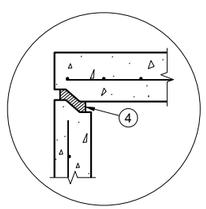


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION

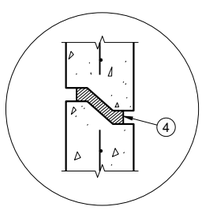
DETAIL "A"



TOP WITH PLAIN END JOINT



TOP WITH TONGUE AND GROOVE JOINT



RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"

DETAIL "C"

MANHOLE COVER OPENING MATRIX

OPENING SIZE (FT.) (5) \ MANHOLE COVER TYPE	C	ALL J'S	K	L	M
2 DIA.	X	X		X	
3 DIA.			X		X

PIPE MATRIX

MANHOLE SIZE (DIA.)	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES		MINIMUM WALL THICKNESS (IN)	MINIMUM PRECAST FLAT SLAB TOP AND BASE THICKNESS
	180° SEPARATION (IN)	90° SEPARATION (IN)		
3-FT	15	12	4	6
4-FT	24	18	4	6
5-FT	36	24	5	8
6-FT	42	36	6	8
7-FT	48	36/42 *	7	8
8-FT	60	42	8	8
9-FT	66	54	9	10
10-FT	72	60	10	10

*A 36" PIPE AND A 42" PIPE CAN BE PLACED WITHIN 90 DEGREES. SEE MINIMUM HORIZONTAL PIPE SEPARATION DETAIL.

GENERAL NOTES

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

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

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATE THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF FOUNDATION BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

PRECAST REINFORCED CONCRETE CONE TOPS (ECCENTRIC OR CONCENTRIC) OR PRECAST REINFORCED CONCRETE FLAT SLAB TOPS MAY BE USED ON CONCRETE BLOCK STRUCTURES.

ECCENTRIC CONE TOPS MAY BE USED ON ALL STRUCTURES. CONCENTRIC CONE TOPS SHALL BE USED ONLY ON STRUCTURES 5 FEET OR LESS IN DEPTH UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

STEPS MEETING AASHTO M199 AND THE FOLLOWING REQUIREMENTS SHALL BE INSTALLED IN ALL STRUCTURES OVER 5 FEET IN DEPTH: 16 INCH C-C MAXIMUM SPACING; PROJECT A MINIMUM CLEAR DISTANCE OF 4 INCHES FROM THE WALL AT THE POINT OF EMBEDMENT; MINIMUM LENGTH OF 10 INCHES; MINIMUM WALL EMBEDMENT OF 3 INCHES. FERROUS METAL STEPS NOT PAINTED OR TREATED TO RESIST CORROSION SHALL HAVE A MINIMUM CROSS SECTIONAL IMENSION OF 1 INCH.

STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCEMENT BAR ARE ACCEPTABLE. REINFORCING BAR MUST BE A MINIMUM OF ½ INCH AND MEET THE REQUIREMENTS OF ASTM A615.

CERTIFICATION SHALL BE PROVIDED THAT INSTALLED STEPS WHEN TESTED IN ACCORDANCE WITH SECTION 10 OF AASHTO T280 CAN WITHSTAND A VERTICAL LOAD OF 800 LBS. AND A HORIZONTAL LOAD OF 400 LBS.

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

ALL PRECAST MANHOLE UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M199.

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

CONCRETE BLOCK WILL NOT BE PERMITTED FOR STRUCTURES GREATER THAN 4 FEET IN DIAMETER.

4" OVERHANGING BASES ARE REQUIRED FOR ALL CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "D".

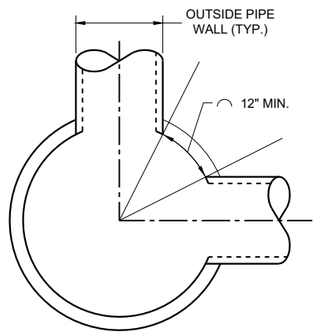
(1) FOR PRECAST MANHOLES AND REINFORCED CONCRETE BASES PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.

(2) SEE PIPE MATRIX TABLE FOR MINIMUM WALL THICKNESS FOR PRECAST MANHOLES

(3) SEE PIPE MATRIX TABLE FOR MINIMUM THICKNESS OF PRECAST FLAT SLAB TOPS AND BASES.

(4) JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 OR RUBBER GASKETS CONFORMING TO ASTM C443.

(5) SEE MANHOLE COVER OPENING MATRIX.



MINIMUM HORIZONTAL PIPE SEPARATION

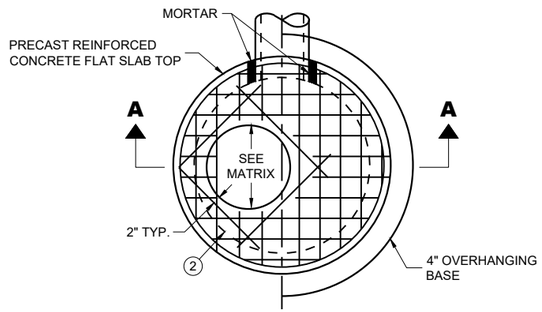
DETAIL "D"

MANHOLES, 3-FT, 4-FT 5-FT, 6-FT, 7-FT, 8-FT, 9-FT AND 10-FT DIAMETER

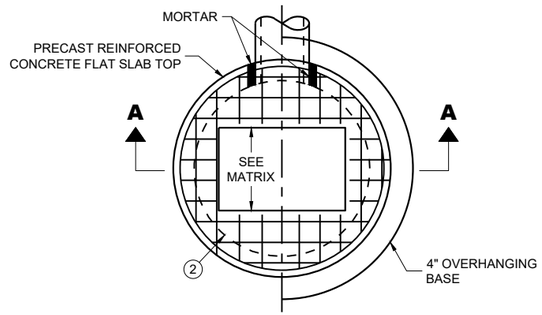
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
December 2023 — /S/ Rodney Taylor
DATE — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

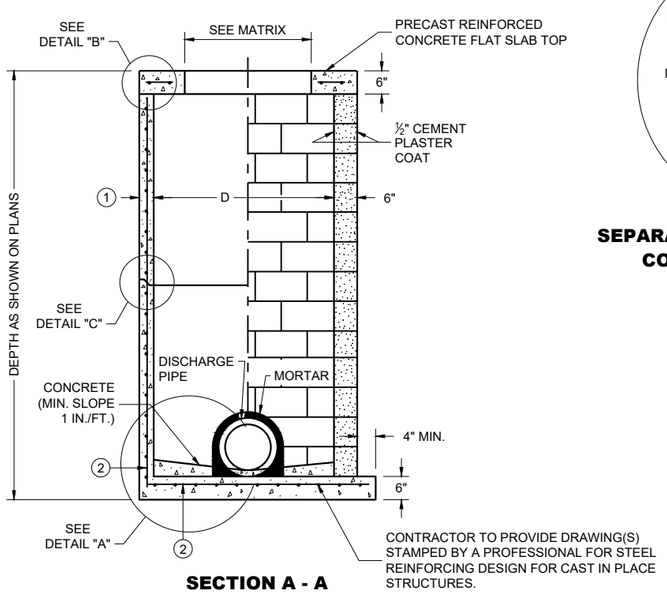
FHWA



PLAN VIEW CIRCULAR OPENING



PLAN VIEW RECTANGULAR OPENING



SECTION A - A

PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

CONCRETE BLOCK WITH CAST IN PLACE OR PRECAST REINFORCED CONCRETE BASE (2)

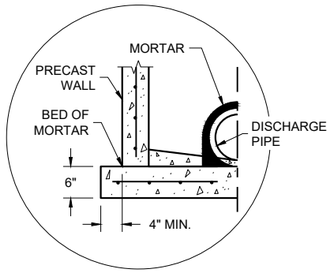
CIRCULAR INLETS WITH FLAT TOP

CATCH BASIN COVER OPENING MATRIX

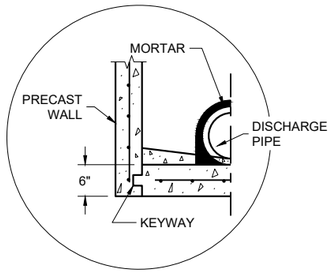
INLET SIZE	INLET COVER TYPE	ALL A'S	ALL B'S	BW	C	F	ALL H'S	S	T	V V-B	WM	Z
	OPENING SIZE (FT.)											
3-FT	2 DIA.				X							X
	2 X 2	X	X					X		X		
4-FT	2 DIA.				X							X
	2 X 2	X	X					X		X		
	2 X 2.5			X				X	X	X	X	
	2 X 3						X					
	2.5 X 3					X						

PIPE MATRIX

INLET SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	180° SEPARATION (IN)	90° SEPARATION (IN)
3-FT	15	12
4-FT	24	18

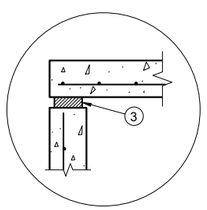


SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

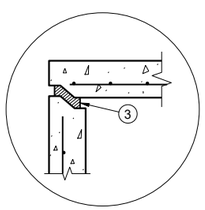


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION

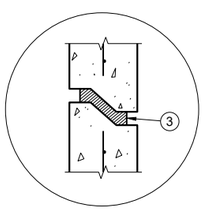
DETAIL "A"



TOP WITH PLAIN END JOINT



TOP WITH TONGUE AND GROOVE JOINT



RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B" **DETAIL "C"**

GENERAL NOTES

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ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATE THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF FOUNDATION BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

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

ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M199.

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

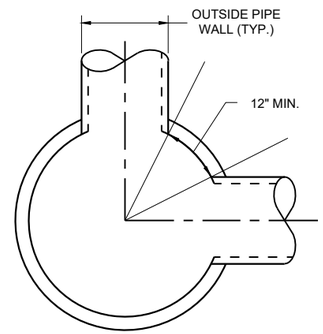
4" OVERHANGING BASES ARE REQUIRED FOR ALL CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "D".

(1) MINIMUM WALL THICKNESS SHALL BE 4 INCHES FOR 3-FT DIAMETER AND 5 INCHES FOR 4-FT DIAMTER PRECAST INLETS.

(2) FOR PRECAST INLETS AND REINFORCED CONCRETE BASES PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.

(3) JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 OR RUBBER GASKETS CONFORMING TO ASTM C443.



MINIMUM HORIZONTAL PIPE SEPARATION

DETAIL "D"

INLETS 3-FT AND 4-FT DIAMETER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
December 2023 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

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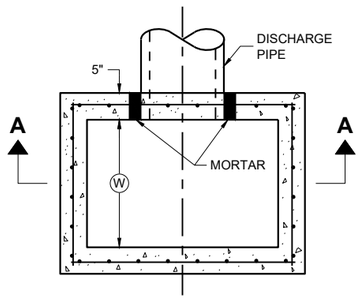
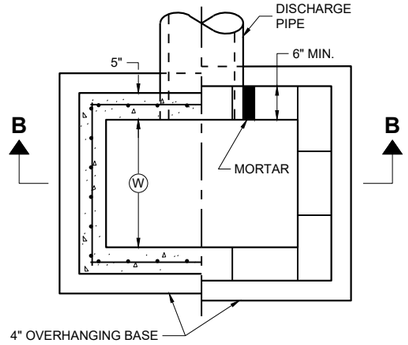
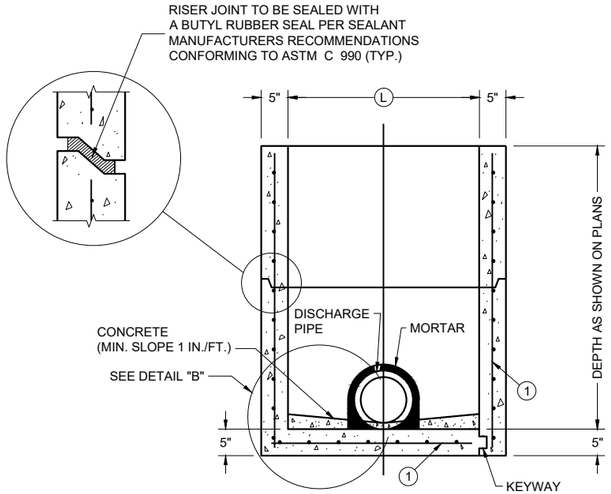
SDD 08C06-03



PLAN VIEW



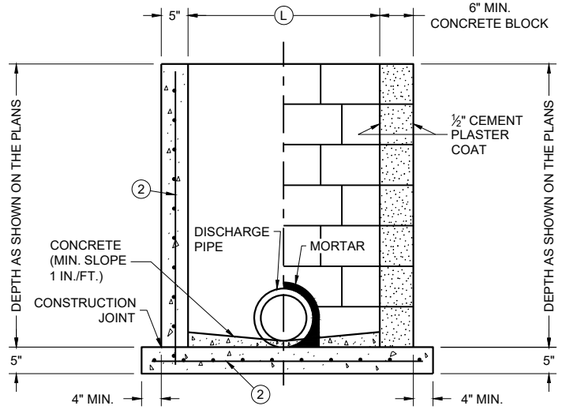
PLAN VIEW



PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE

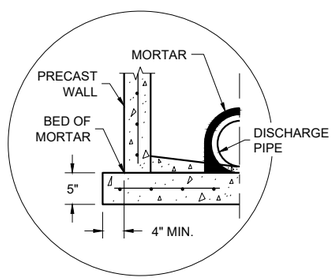
SECTION A - A



CAST IN PLACE REINFORCED CONCRETE

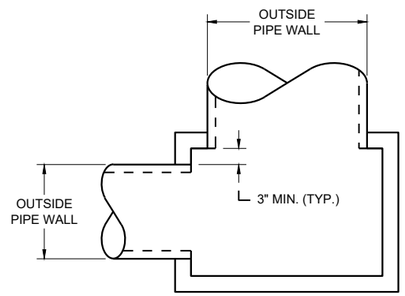
CONCRETE BLOCK WITH CAST IN PLACE OR PRECAST REINFORCED CONCRETE BASE (1)

SECTION B - B



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "B"



DETAIL "A"

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP N0T SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

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

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATES THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF FOUNDATION BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

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

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

4" OVERHANGING BASES ARE REQUIRED FOR CAST-IN-PLACE REINFORCED CONCRETE AND CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

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

(1) FOR PRECAST INLETS AND REINFORCED CONCRETE BASES PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913
(2) CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

CATCH BASIN COVER MATRIX

INLET SIZE	WIDTH (W) (FT.)	LENGTH (L) (FT.)	INLET COVER TYPE									
			ALL A'S	ALL B'S	BW	F	ALL H'S	S	T	V	WM	V V-B
2 X 2-FT	2	2	X	X				X				
2 X 2.5-FT	2	2.5			X			X	X	X	X	
2 X 3-FT	2	3					X					
2.5 X 3-FT	2.5	3				X						
2 X 3.5-FT	2	3.5										X

PIPE MATRIX

CATCH BASIN SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	WIDTH (IN)	LENGTH (IN)
2 X 2-FT	12	12
2 X 2.5-FT	12	18
2 X 3-FT	12	24
2.5 X 3-FT	18	24
2 X 3.5-FT	12	30

INLETS 2 X 2-FT, 2 X 2.5-FT, 2 X 3-FT, 2.5 X 3-FT AND 2X3.5-FT

INLETS 2 X 2-FT, 2 X 2.5-FT, 2 X 3-FT, 2.5 X 3-FT AND 2 X 3.5-FT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
December 2023
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

FHWA

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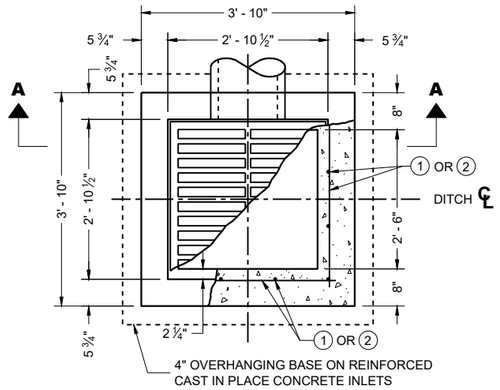
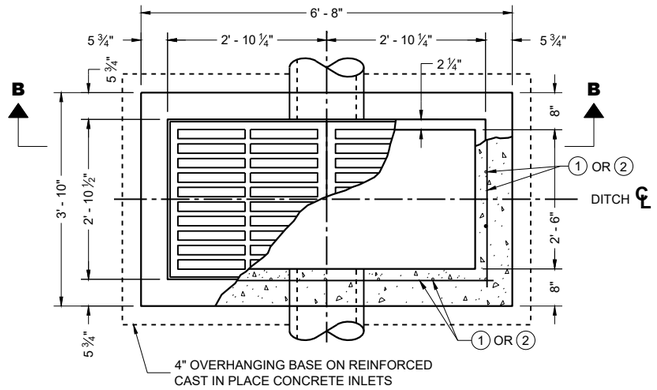
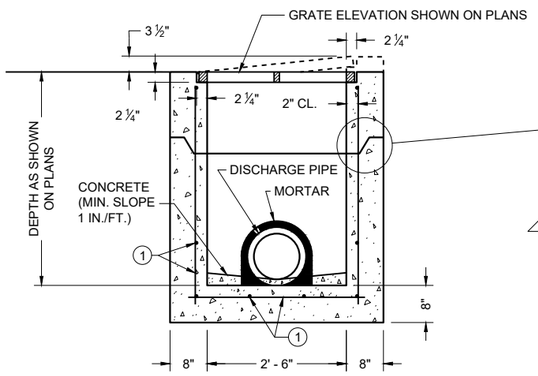


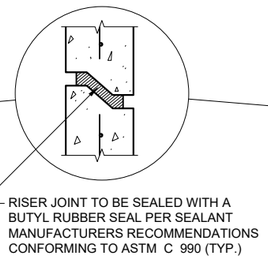
PLAN VIEW

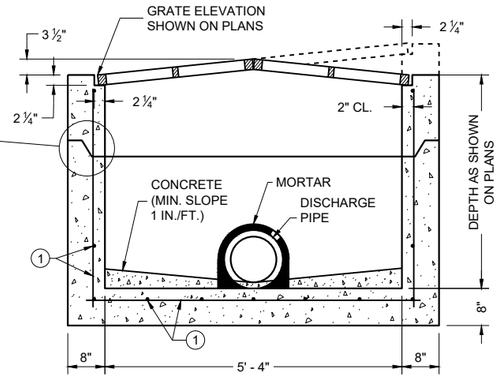


PLAN VIEW

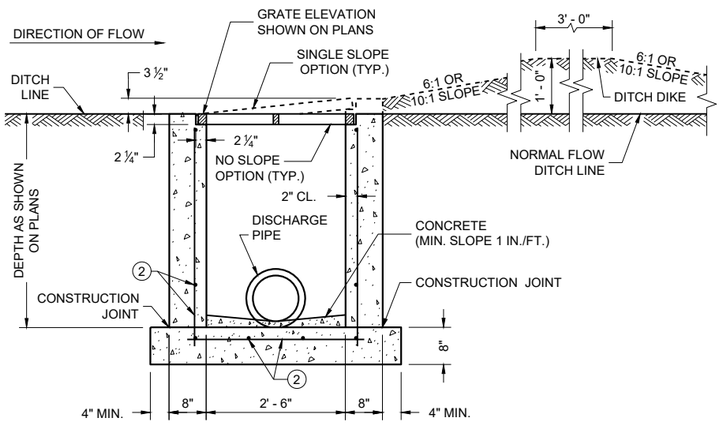


PRECAST REINFORCED CONCRETE SECTION A - A



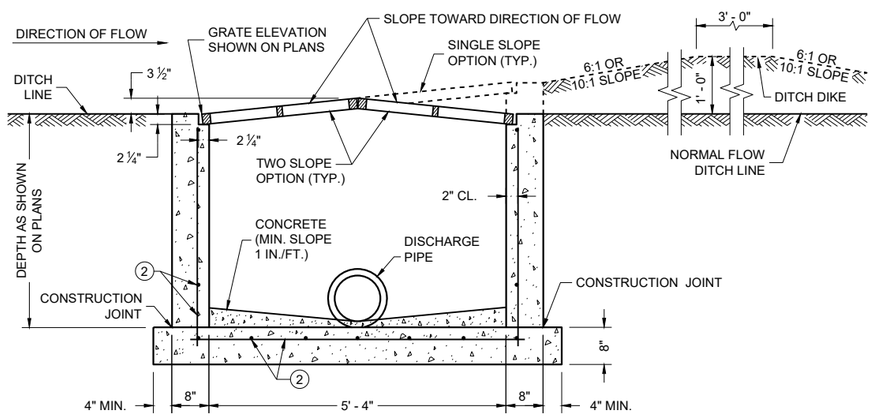


PRECAST REINFORCED CONCRETE SECTION B - B



REINFORCED CAST IN PLACE CONCRETE SECTION A - A

INLETS MEDIAN 1 GRATE



REINFORCED CAST IN PLACE CONCRETE SECTION B - B

INLETS MEDIAN 2 GRATE

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DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP N0T SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

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

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

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF FOUNDATION BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

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

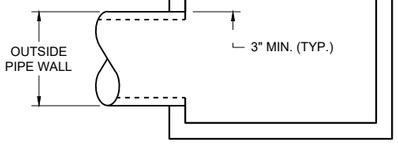
ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

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

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

(1) FOR PRECAST INLETS AND REINFORCED CONCRETE BASES PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.

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



DETAIL "A"

PIPE MATRIX

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

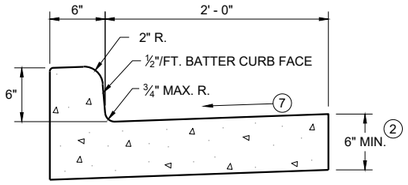
INLETS
MEDIAN 1 AND 2 GRATE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

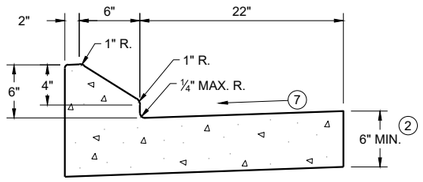
APPROVED
December 2023 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

FHWA

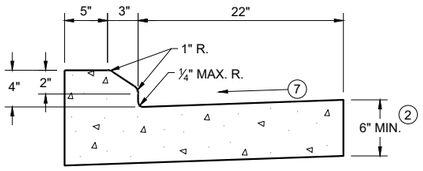
6
SDD 08C08-03



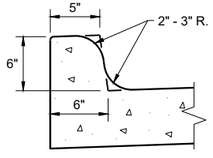
TYPES A (1) & D



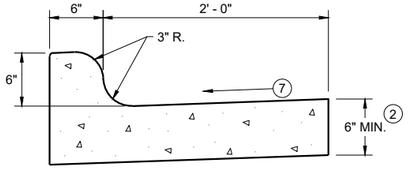
6" SLOPED CURB TYPES G (1) & J



4" SLOPED CURB TYPES G (1) & J

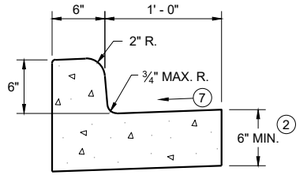


TYPES K (1) & L
(OPTIONAL CURB SHAPE)



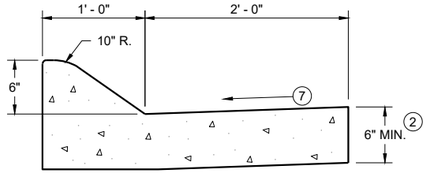
TYPES K (1) & L

CONCRETE CURB AND GUTTER 30"

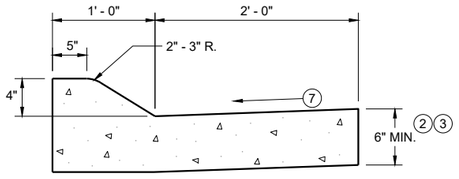


TYPES A (1) & D

CONCRETE CURB AND GUTTER 18"

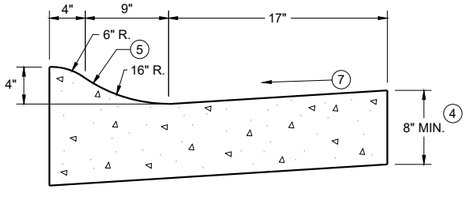


6" SLOPED CURB TYPES A (1) & D



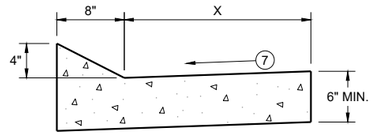
4" SLOPED CURB TYPES A (1) & D

CONCRETE CURB AND GUTTER 36"



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

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

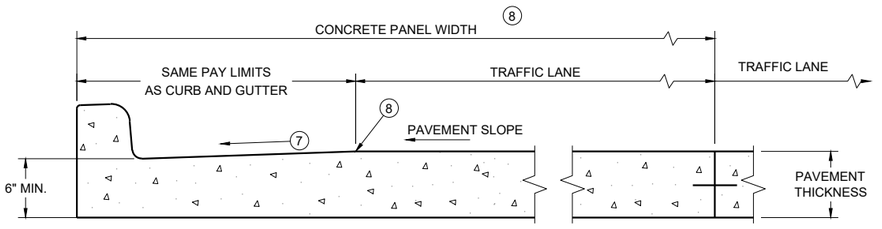


TYPES TBT & TBTT (1)

CONCRETE CURB AND GUTTER

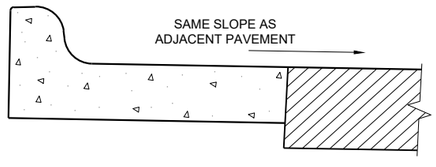
PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE

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



PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB AND GUTTER *

* BIKE LANE IS NOT SHOWN



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

GENERAL NOTES

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

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

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

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

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

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

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

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

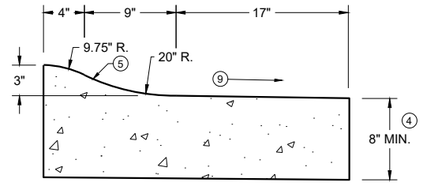
(5) UNLESS OTHERWISE NOTED, FOR STAKING PURPOSES THE FACE OF CURB IS 6" FROM THE BACK OF CURB.

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

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

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

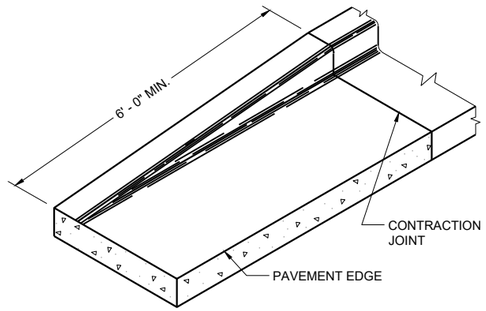
(9) SLOPE TO BE REVERSE SLOPE MATCHING THE SLOPE OF THE PAVEMENT AND THE CIRCULATORY ROADWAY



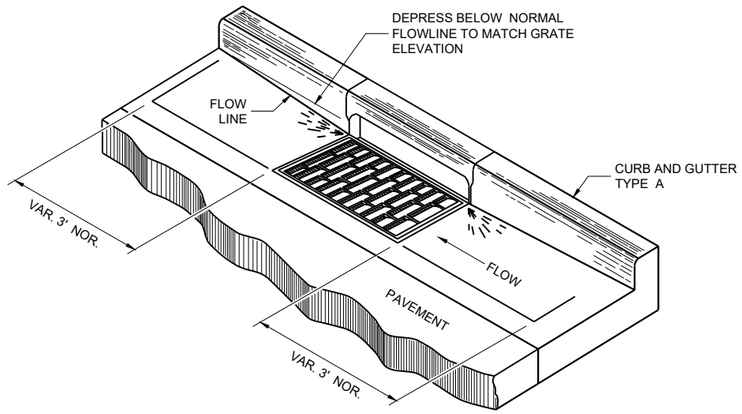
3" SLOPED CURB TYPES R (1) & T

CONCRETE CURB AND GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



END SECTION CURB AND GUTTER



DETAIL OF CURB AND GUTTER AT INLETS

(TYPICAL H INLET COVER SHOWN)

GENERAL NOTES

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

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

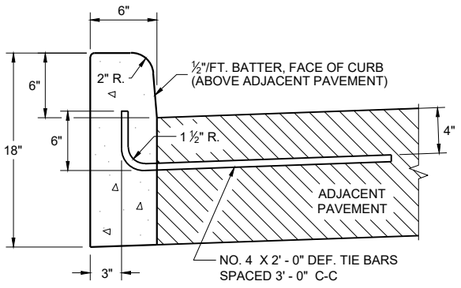
UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2' - 0" BEHIND THE BACK OF CURBS.

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

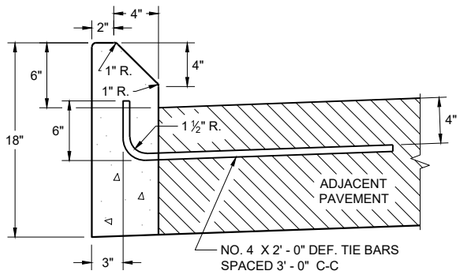
(2) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

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

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

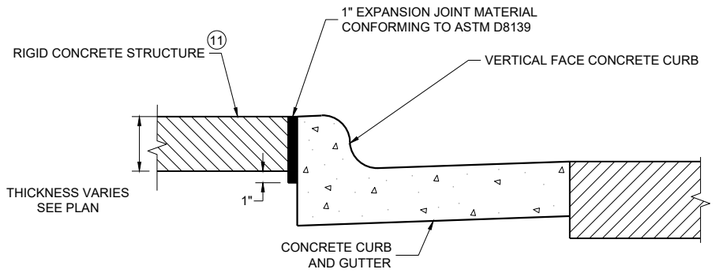


TYPES A (1) & D

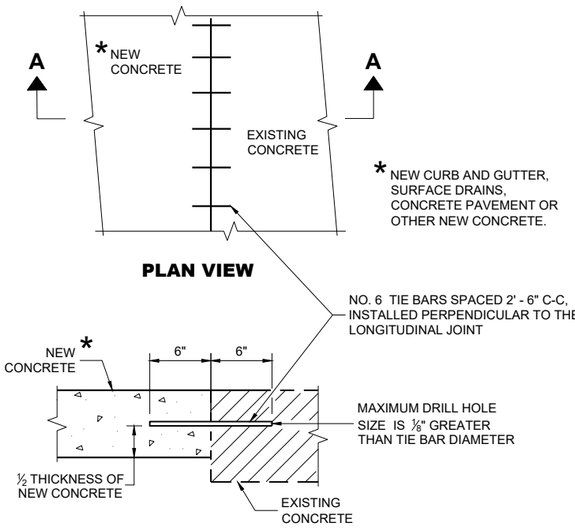


TYPES G (1) & J

CONCRETE CURB



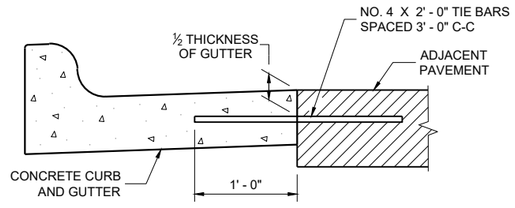
EXPANSION JOINT DETAIL FOR VERTICAL CURB ABUTTING A RIGID STRUCTURE (11)



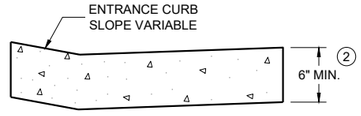
PLAN VIEW

SECTION A - A

TIE BARS DRILLED INTO EXISTING PAVEMENT



TYPICAL TIE BAR LOCATION (1)



DRIVEWAY ENTRANCE CURB (10)

(WHEN DIRECTED BY THE ENGINEER)

CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

6

SDD 08D01-24b

GENERAL NOTES

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

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

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

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

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

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

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

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

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

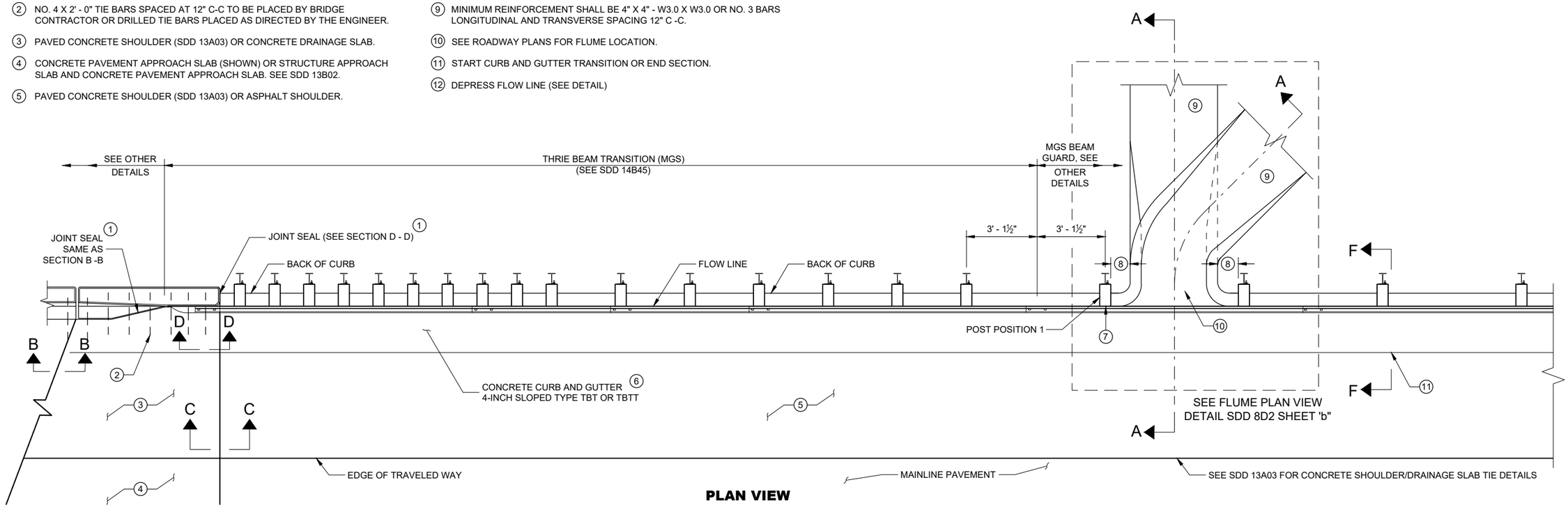
(8) CENTER FLUME BETWEEN POSTS. 6-INCH MINIMUM SEPARATION FROM OUTSIDE EDGE OF FLUME TO POSTS.

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

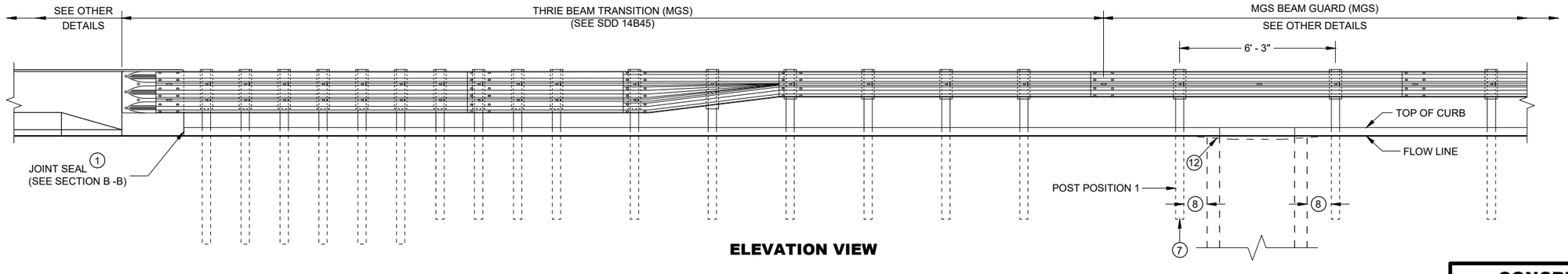
(10) SEE ROADWAY PLANS FOR FLUME LOCATION.

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

(12) DEPRESS FLOW LINE (SEE DETAIL)



PLAN VIEW



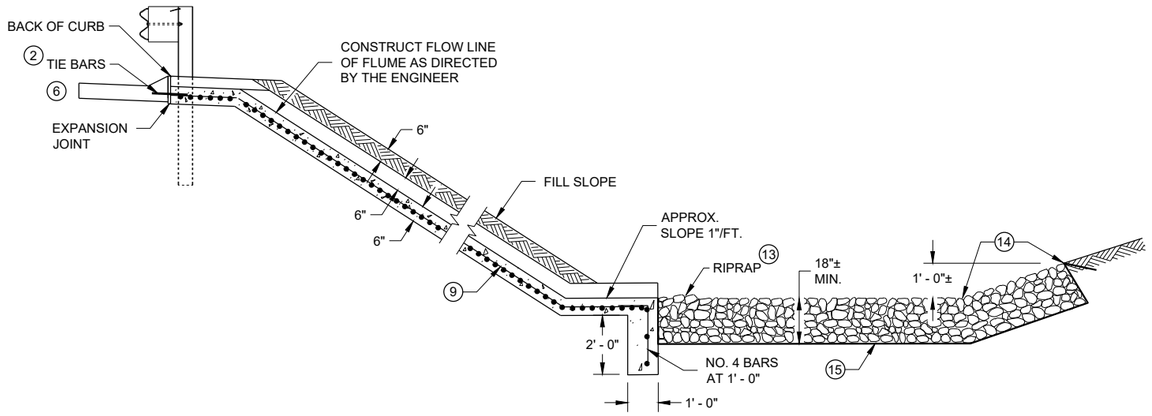
ELEVATION VIEW

CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES

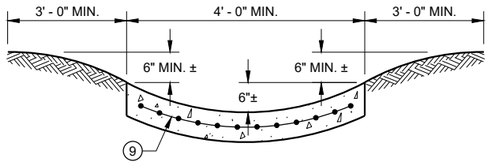
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 08D02 - 08a

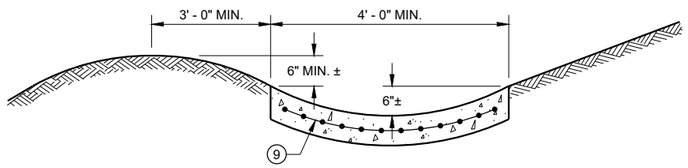
SDD 08D02 - 08a



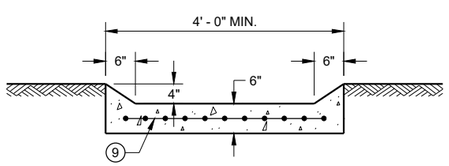
SECTION A - A



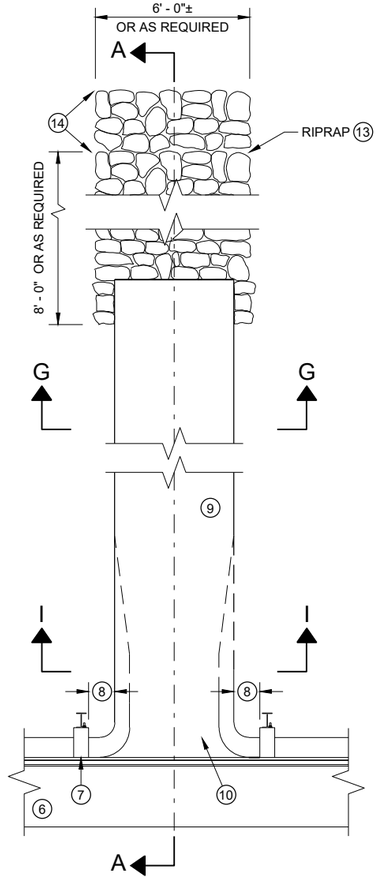
SECTION G - G



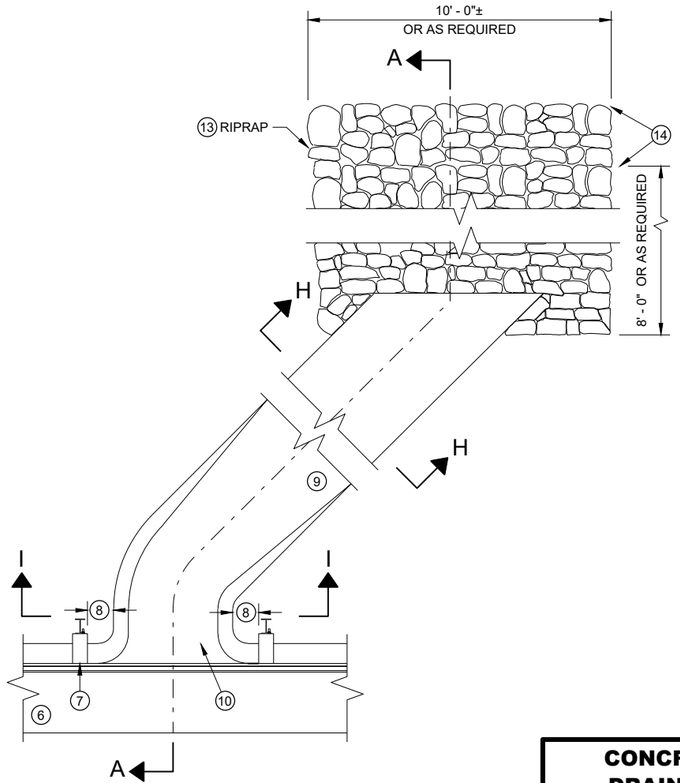
SECTION H - H



SECTION I - I



PLAN VIEW PERPENDICULAR FLUME



PLAN VIEW SKEWED FLUME

GENERAL NOTES

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

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

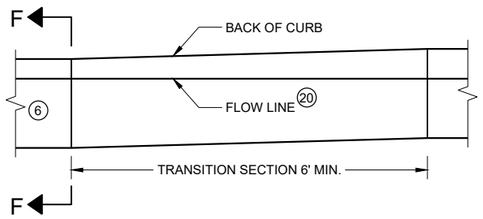
1. USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.
2. NO. 4 X 2' - 0" TIE BARS SPACED AT 12" C-C TO BE PLACED BY BRIDGE CONTRACTOR OR DRILLED TIE BARS PLACED AS DIRECTED BY THE ENGINEER.
3. PAVED CONCRETE SHOULDER (SDD 13A03) OR CONCRETE DRAINAGE SLAB.
4. CONCRETE PAVEMENT APPROACH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

CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES

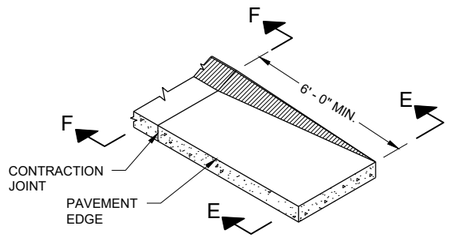
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

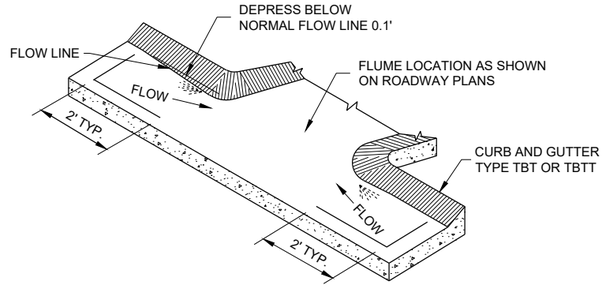
SDD 08D02 - 08b



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



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



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

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

(10) SEE ROADWAY PLANS FOR FLUME LOCATION.

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

(12) DEPRESS FLOW LINE (SEE DETAIL)

(13) MEDIUM RIPRAP UNLESS OTHERWISE SPECIFIED.

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

(15) GEOTEXTILE TYPE HR.

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

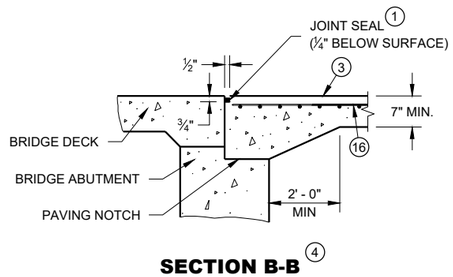
(17) MSG THRIE BEAM TRANSITION POST 1. SEE SDD 14B45 FOR ADDITIONAL CONSTRUCTION DETAILS AND ACCEPTABLE MATERIALS.

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

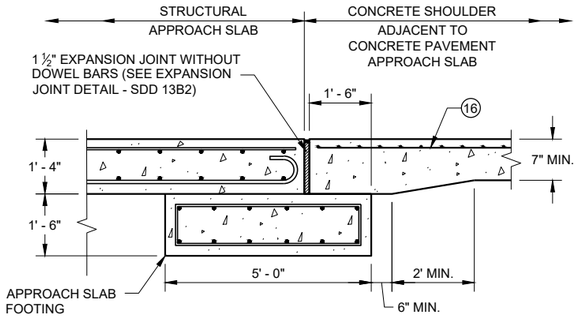
(19) ALIGN FACE OF POST BLOCK WITH FLOW LINE.

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

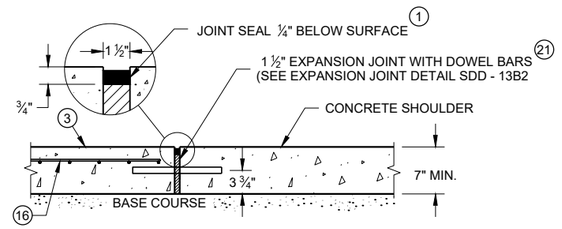
(21) DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING HMA PAVEMENTS.



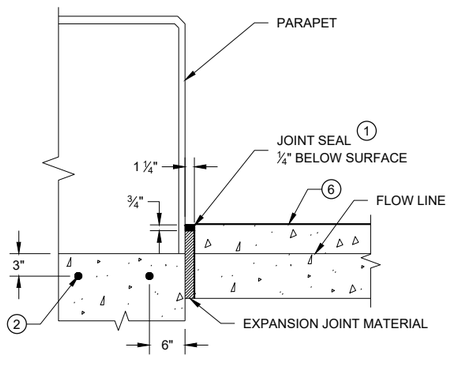
SECTION B-B (4)



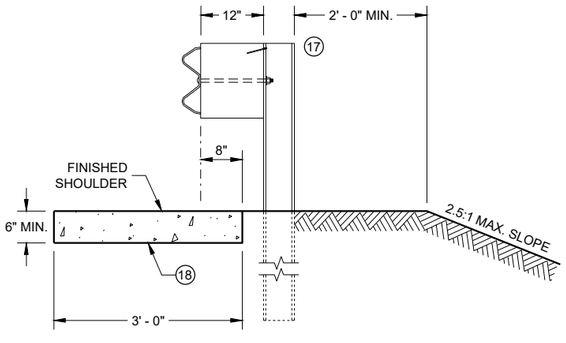
SECTION C - C
JOINT DETAIL FOR BRIDGE WITH STRUCTURAL APPROACH SLAB AND CONCRETE APPROACH SLAB



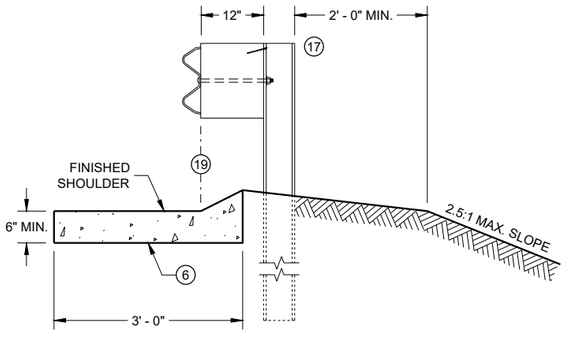
SECTION C - C
JOINT DETAIL FOR BRIDGE APPROACH WITH CONCRETE SHOULDERS



SECTION D - D



SECTION E - E



SECTION F - F

CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

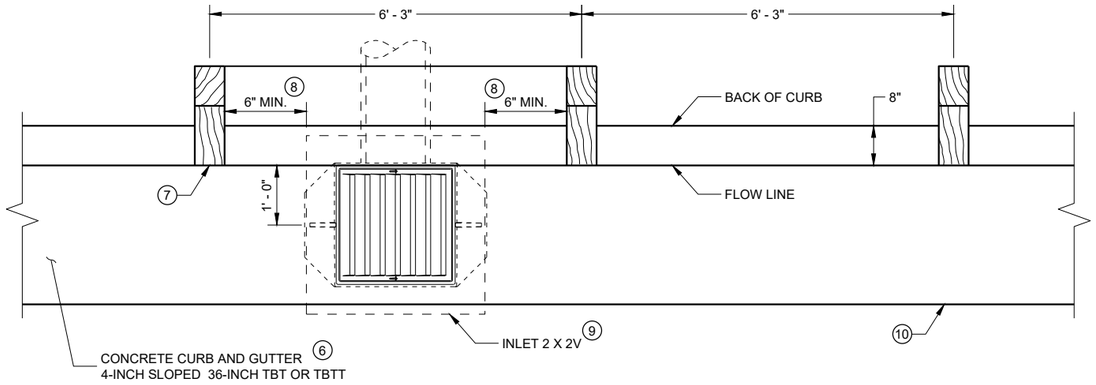
FHWA

6

SDD 08D02 - 08c

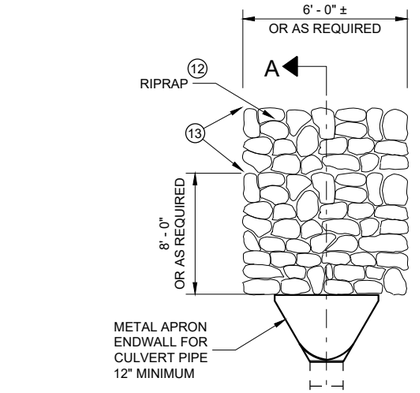
6

SDD 08D02 - 08c



INLET PLAN VIEW

(NOTE: RAIL NOT SHOWN FOR CLARITY)

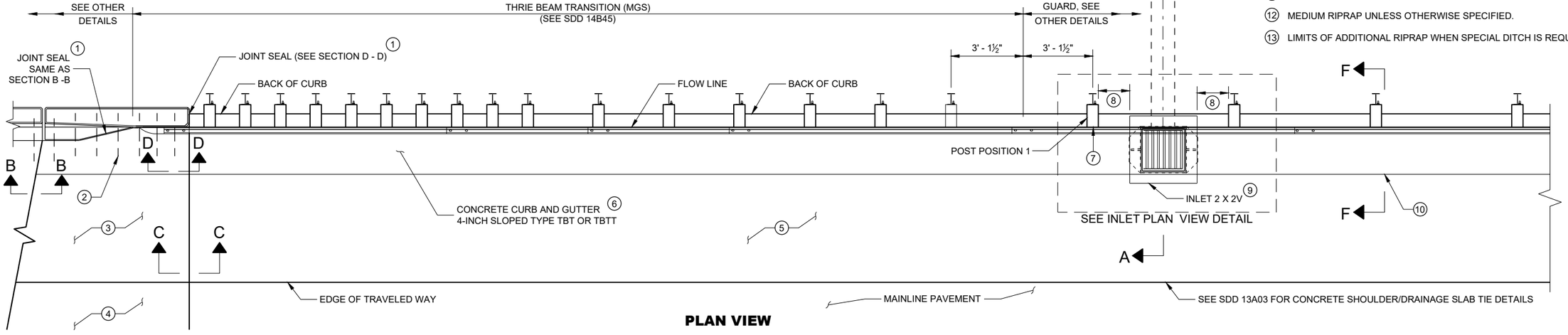


GENERAL NOTES

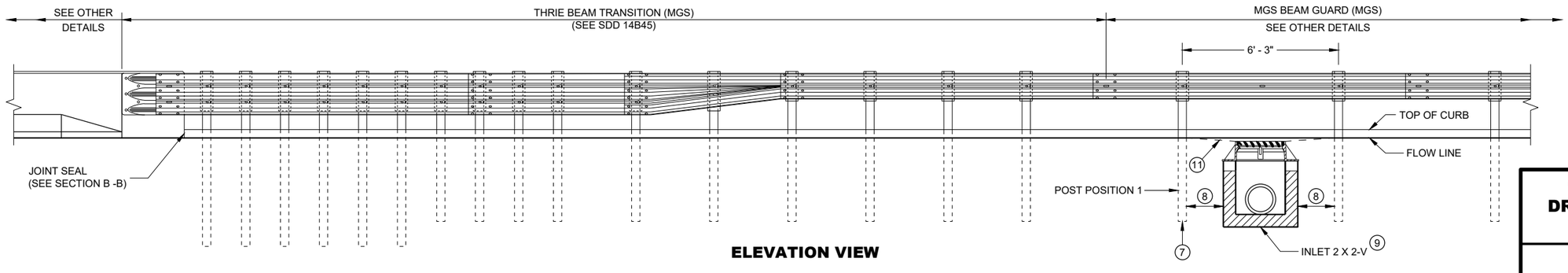
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

1. USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.
2. NO. 4 X 2' - 0" TIE BARS SPACED AT 12" C-C TO BE PLACED BY BRIDGE CONTRACTOR OR DRILLED TIE BARS PLACED AS DIRECTED BY THE ENGINEER.
3. PAVED CONCRETE SHOULDER (SDD 13A03) OR CONCRETE DRAINAGE SLAB.
4. CONCRETE PAVEMENT APPROACH SLAB (SHOWN) OR STRUCTURE APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB. SEE SDD 13B02.
5. PAVED CONCRETE SHOULDER (SDD 13A03) OR ASPHALT SHOULDER.
6. CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE TBT OR TBTT. USE TYPE TBTT CURB WITH NO. 4 X 2' -0" TIE BARS SPACED AT 3' - 0" C-C ONLY WHEN ADJACENT TO CONCRETE PAVEMENTS.
7. PLACE DRAINAGE STRUCTURE BEFORE MSG THRIE BEAM TRANSITION POST 1 (SEE SDD 14B45)
8. CENTER DRAINAGE STRUCTURE BETWEEN POSTS. 6-INCH MINIMUM SEPARATION FROM OUTSIDE WALL OF DRAINAGE STRUCTURE TO POSTS.
9. SEE SDD 08A05 AND 08C07 FOR DETAILS. SEE ROADWAY PLANS FOR LOCATION.
10. START CURB AND GUTTER TRANSITION OR END SECTION.
11. DEPRESS FLOW LINE (SEE DETAIL)
12. MEDIUM RIPRAP UNLESS OTHERWISE SPECIFIED.
13. LIMITS OF ADDITIONAL RIPRAP WHEN SPECIAL DITCH IS REQUIRED.



PLAN VIEW



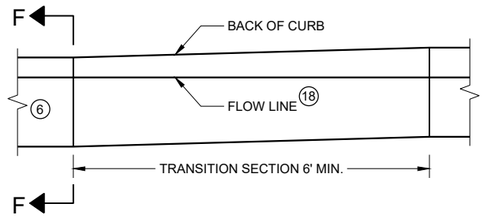
ELEVATION VIEW

CONCRETE SURFACE DRAINS DROP INLET TYPE AT STRUCTURES

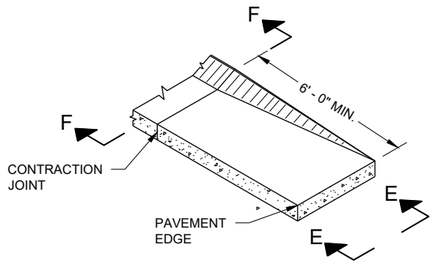
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 08D03 - 09a

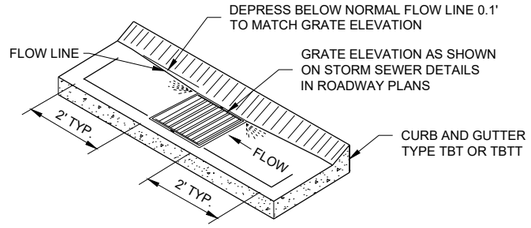
SDD 08D03 - 09a



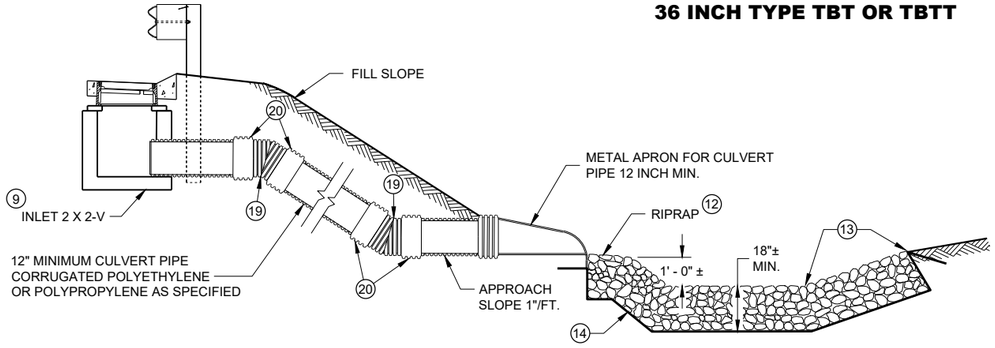
CURB AND GUTTER TRANSITION SECTION CONCRETE CURB AND GUTTER 4-INCH SLOPED 36 INCH TYPE TBT OR TBTT



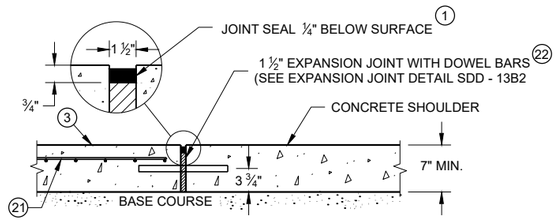
CURB AND GUTTER END SECTION CONCRETE CURB AND GUTTER 4-INCH SLOPED 36 INCH TYPE TBT OR TBTT



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

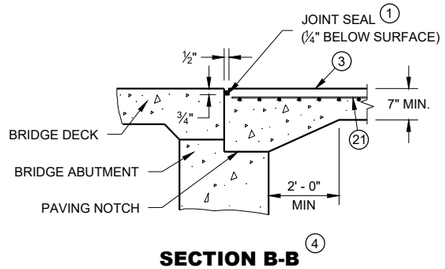


SECTION A - A

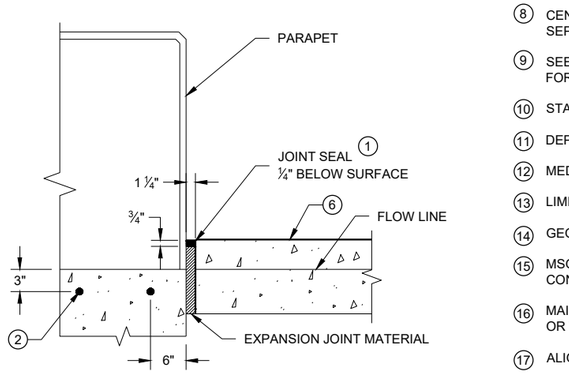


SECTION C - C

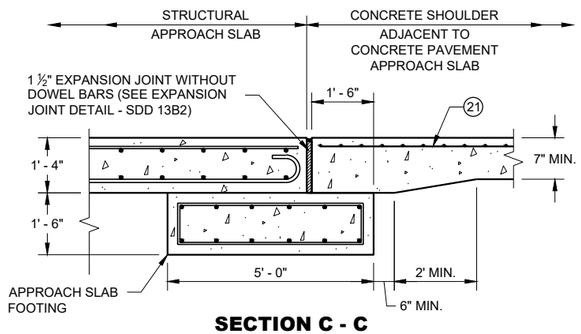
JOINT DETAIL FOR BRIDGE APPROACH WITH CONCRETE SHOULDERS



SECTION B-B 4

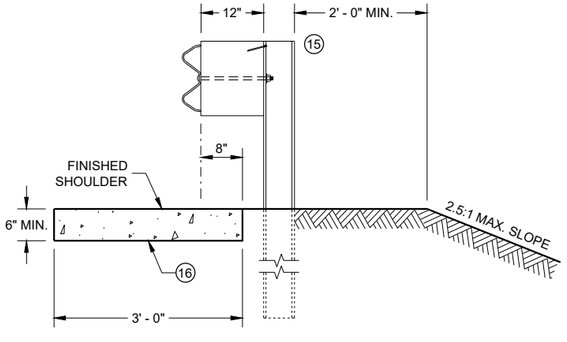


SECTION D - D

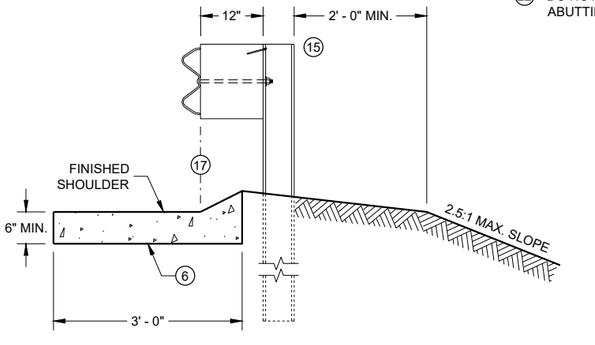


SECTION C - C

JOINT DETAIL FOR BRIDGE WITH STRUCTURAL APPROACH SLAB AND CONCRETE APPROACH SLAB



SECTION E - E



SECTION F - F

GENERAL NOTES

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

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

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

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

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

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

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

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

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

(8) CENTER DRAINAGE STRUCTURE BETWEEN POSTS. 6-INCH MINIMUM SEPARATION FROM OUTSIDE WALL OF DRAINAGE STRUCTURE TO POSTS.

(9) SEE SDD 08A05 AND 08C07 FOR DETAILS. SEE ROADWAY PLANS FOR LOCATION.

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

(11) DEPRESS FLOW LINE (SEE DETAIL)

(12) MEDIUM RIPRAP UNLESS OTHERWISE SPECIFIED.

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

(14) GEOTEXTILE TYPE HR.

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

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

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

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

(19) MANUFACTURER SUPPLIED BEND.

(20) MANUFACTURER SUPPLIED EXTERNAL MECHANICAL COUPLING OR A MANUFACTURER RECOMMENDED COUPLING WITH A MASTIC IMPREGNATED GEOTEXTILE WRAP AND MECHANICAL FASTENING BANDS.

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

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

CONCRETE SURFACE DRAINS DROP INLET TYPE AT STRUCTURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

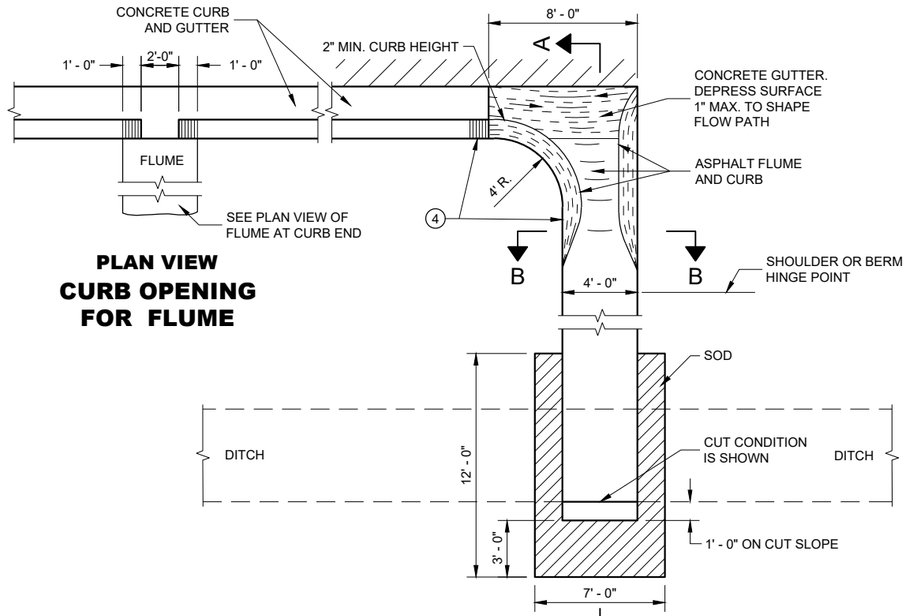
FHWA

6

SDD 08D03 - 09b

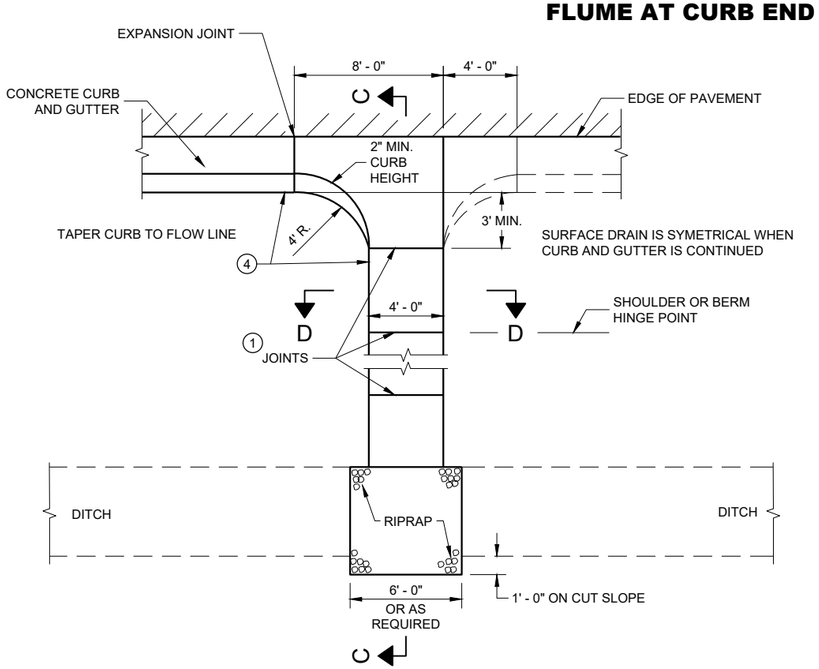
NOTE: TAPER CURB ENDS TO GUTTER IN 1' - 0"

ASPHALTIC FLUME



PLAN VIEW
CURB OPENING FOR FLUME

PLAN VIEW
FLUME AT CURB END



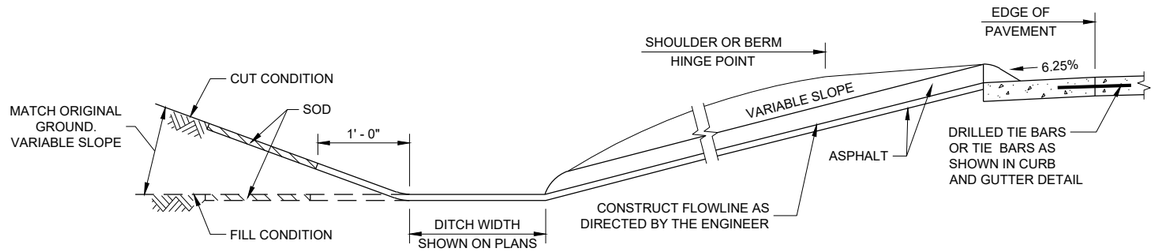
PLAN VIEW
CONCRETE SURFACE DRAIN

GENERAL NOTES

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

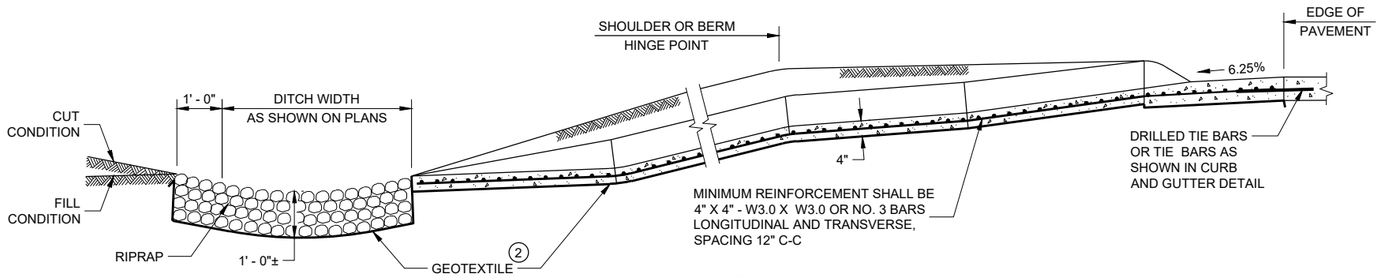
4" X 4" - W3.0 X W3.0 CONCRETE REINFORCEMENT SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

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

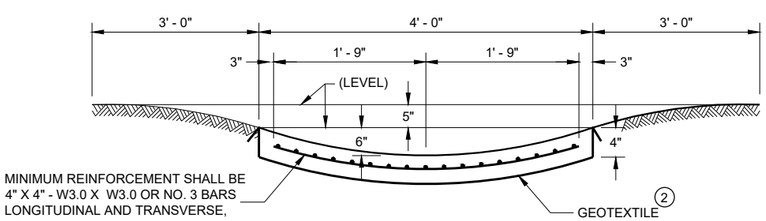


SECTION A - A

SECTION B - B



SECTION C - C



SECTION D - D

CONCRETE SURFACE DRAINS AND ASPHALTIC FLUMES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

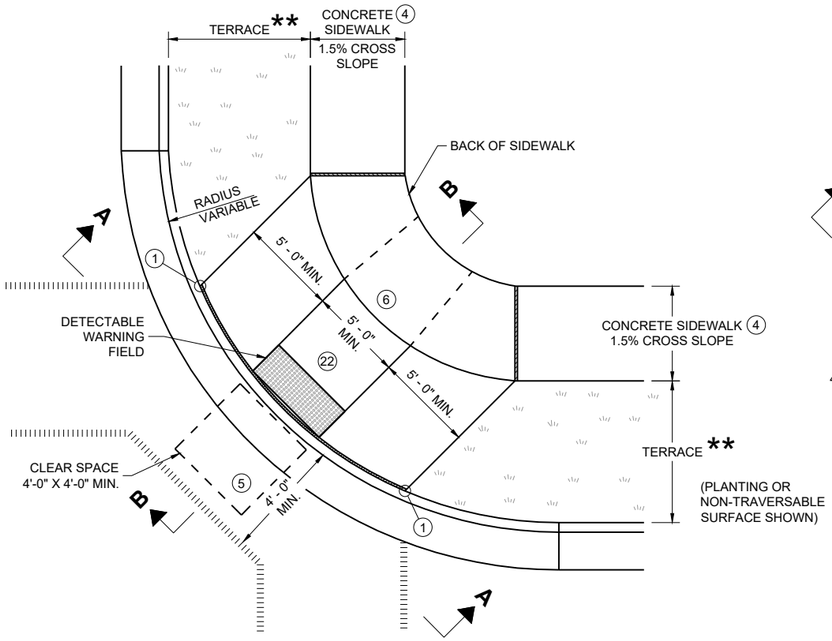
APPROVED
May 2023
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS DEVE ENGINEER

FHWA

6

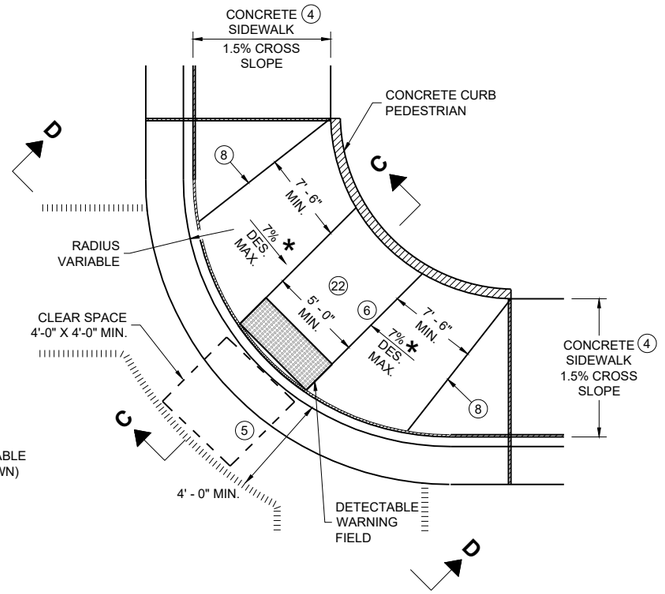
SDD 08D04 - 07



PLAN VIEW

CURB RAMP TYPE 1

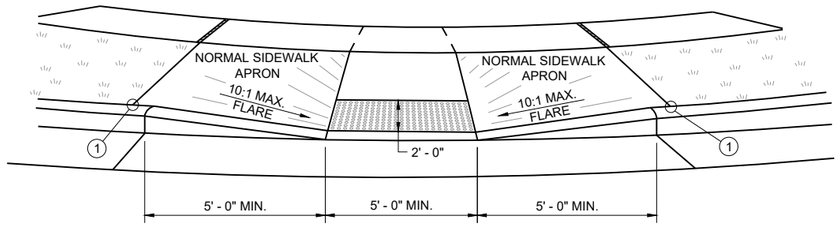
(CENTER OF CORNER RADIUS)



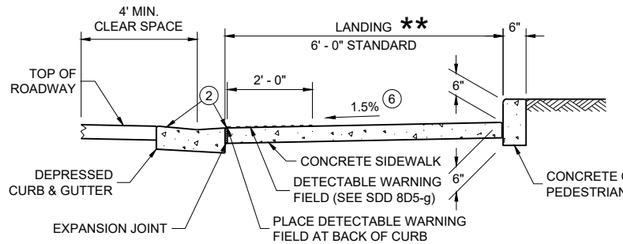
PLAN VIEW

CURB RAMP TYPE 1 - A

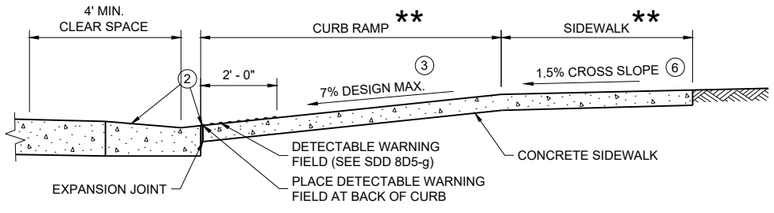
(NO TERRACE)



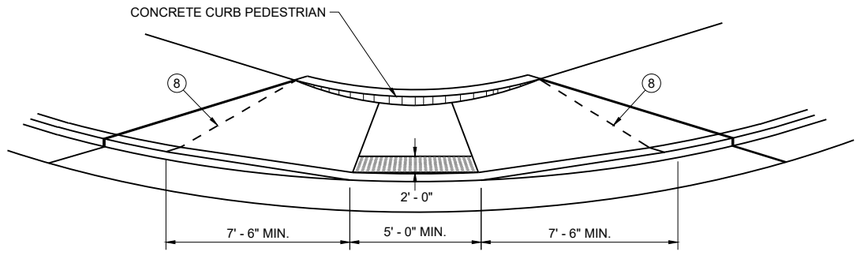
VIEW A - A FOR TYPE 1



SECTION C - C FOR TYPE 1 - A



SECTION B - B FOR TYPE 1



VIEW D - D FOR TYPE 1 - A

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF CURB RAMP ACCESS AREAS.

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.

WHEN NECESSARY, THE SIDEWALK ELEVATION MAY BE LOWERED TO MEET THE HIGH POINT ON THE CURB RAMP.

TYPE 1 CURB RAMPS SHALL HAVE A NORMAL SIDEWALK APRON AND CURB ON BOTH SIDES OF CURB RAMP.

DETECTABLE WARNING FILED SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS "CURB RAMP DETECTABLE WARNING FIELD". THE CONCRETE PEDESTRIAN CURB, IF NEEDED, SHALL BE MEASURED AND PAID BY THE LINEAR FOOT AS "CONCRETE CURB PEDESTRIAN". CONCRETE SIDEWALK IN THE CURB RAMP AREA SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS CONCRETE SIDEWALK, INCLUDING THE AREA UNDER THE DETECTABLE WARNING FIELD.

SELECT CURB RAMP DETECTABLE WARNING FIELD MATERIALS AND DEVICES FROM THE DEPARTMENT'S APPROVED MATERIALS LIST. THE COLOR OF THE DETECTABLE WARNING FIELD IS SPECIFIED ELSEWHERE AND IS INCIDENTAL TO THE BID ITEM OF "CURB RAMP DETECTABLE WARNING FIELD"

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

SURFACE TEXTURE OF THE RAMP SHALL BE OBTAINED BY COARSE BROOMING TRANSVERSE TO THE SLOPE OF THE CURB RAMP.

(1) THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB. POINT LOCATION MAY BE ADJUSTED TO ALIGN WITH BEGINNING OF FULL-HEIGHT CURB IF THIS DISTANCE IS SHORT.

(2) GRADE CHANGE BETWEEN GUTTER COUNTER SLOPE AND THE CURB RAMP SLOPE IS DESIRABLY 11% OR LESS AND SHALL NOT EXCEED 13.3%. TYPICAL GUTTER COUNTER SLOPE IS 4% BUT MAY BE MODIFIED TO FIT FIELD CONDITIONS. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5%, DESIRABLY 7% OR LESS, AND SHALL NOT EXCEED A MAXIMUM OF 8.3%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) MAXIMUM 8.3% CURB RAMP SLOPE IS ALLOWABLE WITH GUTTER COUNTER SLOPE OF 5% MAXIMUM AND A 13.3% MAXIMUM GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2.1% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(5) PROVIDE A CLEAR SPACE IN THE STREET AND GUTTER AREA. WHEN THE GUTTER CROSS SLOPE EXCEEDS 2.1%, CONSTRUCT THE CLEAR SPACE IN THE STREET AREA AND THE 4 FOOT WIDTH IS MEASURED FROM THE FLANGE LINE. FOR RECONSTRUCTION AND MODERNIZATION PROJECTS THE CLEAR SPACE SLOPE PARALLEL TO THE CURBLINE SHOULD BE 2.1% MAX FOR CROSSINGS THAT ARE STOP AND YIELD CONTROLLED, AND 5% MAX FOR THOSE THAT ARE SIGNAL CONTROLLED. FOR PERPETUATION AND REHABILITATION PROJECTS THE SLOPE OF THE CLEAR SPACE PARALLEL TO THE CURBLINE WILL MATCH THE ROADWAY LONGITUDINAL SLOPE. THE SLOPE OF THE CLEAR SPACE PERPENDICULAR TO THE CURBLINE WILL MATCH THE ROADWAY CROSS SLOPE BUT SHOULD NOT EXCEED 5% UNLESS THE ROADWAY IS SUPERELEVATED (WHEN SUPERELEVATED THE ROADWAY CROSS SLOPE SHOULD MATCH THE SUPERELEVATION).

(6) PROVIDE A 5 FOOT BY 5 FOOT LANDING. SLOPE PERPENDICULAR TO CURB SHALL BE 2.1% MAXIMUM. SLOPE PARALLEL TO CURB SHALL MATCH THE CURB AND GUTTER LONGITUDINAL SLOPE.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

(17) A MAXIMUM 2-INCH CONCRETE BORDER IS PERMITTED ALONG ALL SIDES OF THE DETECTABLE WARNING FIELD SURFACE.

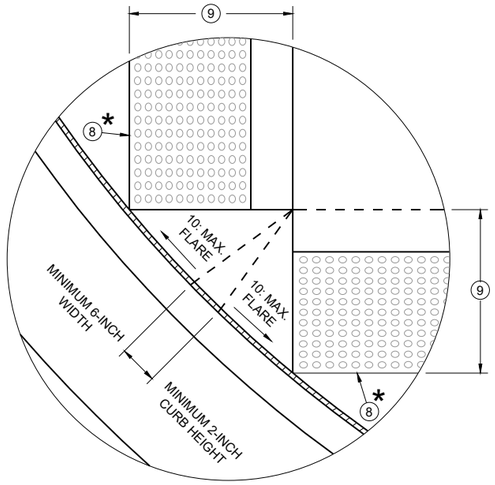
(22) THE ENTIRE RAMP SHALL BE A PLANAR SURFACE. DO NOT WARP THE RUNNING SLOPE OR CROSS SLOPE OF THE RAMP. WARPING OF THE SIDEWALK CROSS SLOPE SHALL TAKE PLACE BETWEEN THE LANDING AND MATCH POINT.

LEGEND

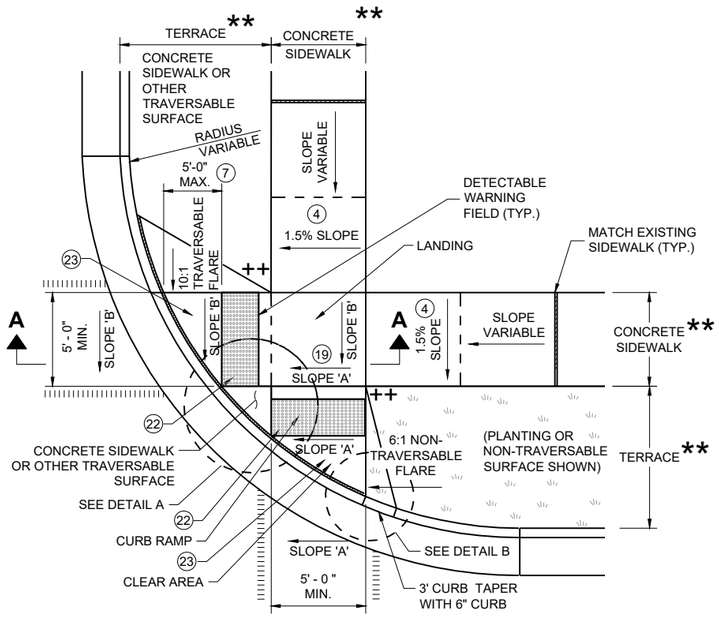
- ½" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)
- * MAXIMUM 8.3%
- ** WIDTH SHOWN ELSEWHERE IN THE PLANS

CURB RAMPS TYPE 1 AND 1-A

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



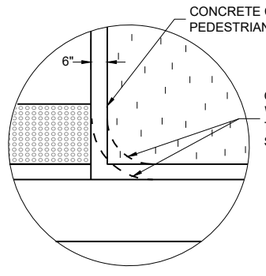
DETAIL A



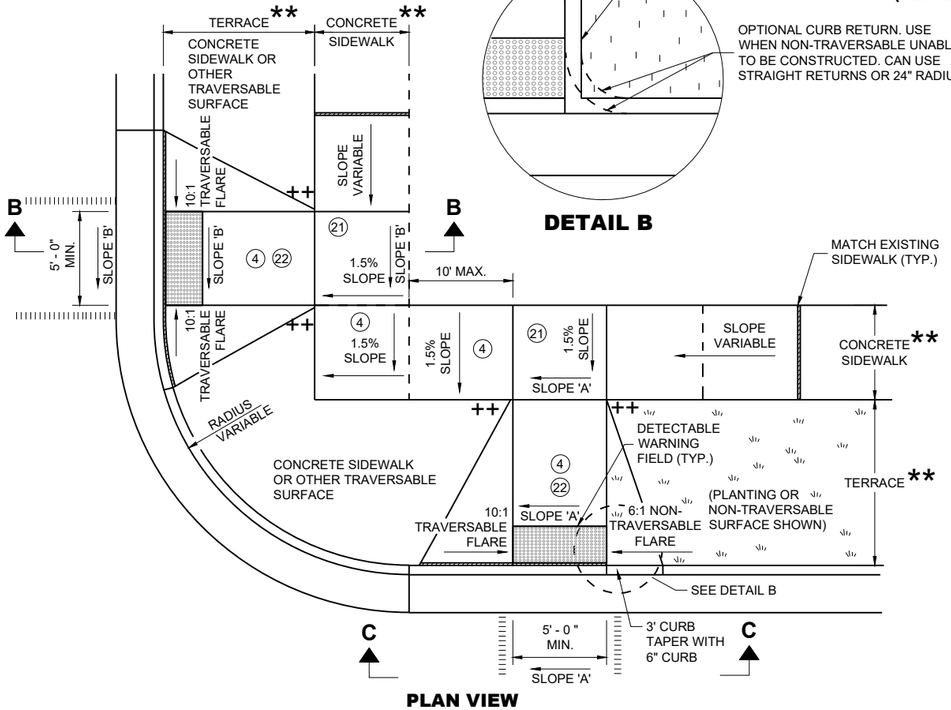
PLAN VIEW

CURB RAMP TYPE 2

(CENTER OF CORNER RADIUS)



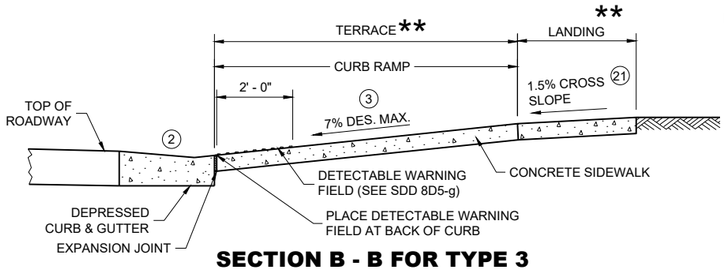
DETAIL B



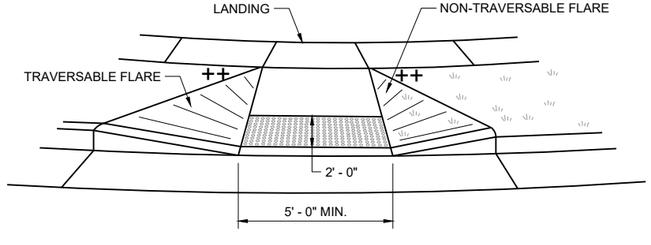
PLAN VIEW

CURB RAMP TYPE 3

(OUTSIDE OF CROSSWALK AREA)



SECTION B - B FOR TYPE 3



VIEW C - C FOR TYPE 3

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF CURB RAMP ACCESS AREAS.

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.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE SHALL BE FROM THE SAME MANUFACTURER.

(2) GRADE CHANGE BETWEEN GUTTER COUNTER SLOPE AND THE CURB RAMP SLOPE IS DESIRABLY 11% OR LESS AND SHALL NOT EXCEED 13.3%. TYPICAL GUTTER COUNTER SLOPE IS 4% BUT MAY BE MODIFIED TO FIT FIELD CONDITIONS. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5%, DESIRABLY 7% OR LESS, AND SHALL NOT EXCEED A MAXIMUM OF 8.3%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) MAXIMUM 8.3% CURB RAMP SLOPE IS ALLOWABLE WITH GUTTER COUNTER SLOPE OF 5% MAXIMUM AND A 13.3% MAXIMUM GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2.1% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(7) WHEN GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

(9) WHEN DISTANCE IS LESS THAN 6' - 0", IT MAY BE DIFFICULT TO ACHIEVE A 7% DESIGN MAXIMUM SLOPE OR FLATTER ALONG THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 7% DESIGN MAXIMUM SLOPE OR FLATTER ON RAMP. CONSTRUCT 2-INCH MINIMUM CURB HEIGHT BETWEEN 10:1 FLARES.

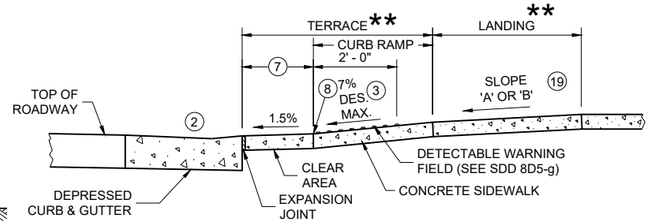
(17) A MAXIMUM 2-INCH CONCRETE BORDER IS PERMITTED ALONG ALL SIDES OF THE DETECTABLE WARNING FIELD SURFACE.

(19) WHERE A LANDING SERVES TWO CURB RAMPS, THE LANDING SLOPE SHALL NOT EXCEED THE CROSS SLOPE AT THE BOTTOM OF THE RAMP OR WITHIN THE CROSSWALK PARALLEL TO THE DIRECTION OF TRAVEL.

(21) PROVIDE A LANDING WITH A SLOPE PARALLEL TO ROADWAY THAT MATCHES SLOPE AT THE BOTTOM OF THE ADJACENT RAMP. SLOPE PERPENDICULAR TO ROADWAY SHALL BE 2.1% MAXIMUM. STANDARD LANDING SIZE IS 5 FEET BY 5 FEET.

(22) THE ENTIRE RAMP SHALL BE A PLANAR SURFACE. DO NOT WARP THE RUNNING SLOPE OR CROSS SLOPE OF THE RAMP. WARPING OF THE SIDEWALK CROSS SLOPE SHALL TAKE PLACE BETWEEN THE LANDING AND MATCH POINT.

(23) THE CLEAR AREA BETWEEN THE BOTTOM OF RAMP AND BACK OF CURB SHALL BE SLOPED SO THAT WATER DRAINS OUT OF ONE SIDE OR BOTH SIDES OF THE CURB OPENING.



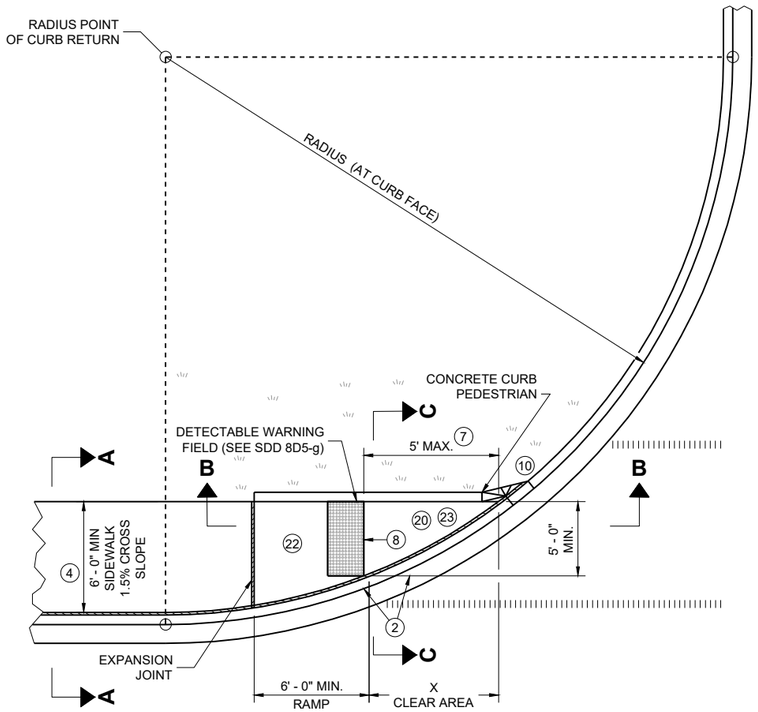
SECTION A - A FOR TYPE 2

LEGEND

- ½" EXPANSION JOINT SIDEWALK
- – – – – CONTRACTION JOINT SIDEWALK
- PAVEMENT MARKING CROSSWALK (WHITE)
- * MAXIMUM 2.1% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK
- ** WIDTH SHOWN ELSEWHERE IN THE PLANS
- ++ CONSTRUCT 6" WEDGE TO AVOID CONCRETE BREAKAGE

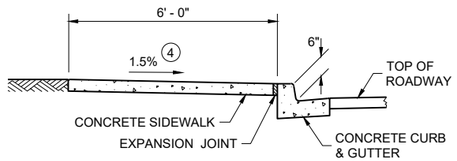
CURB RAMPS TYPE 2 AND 3

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

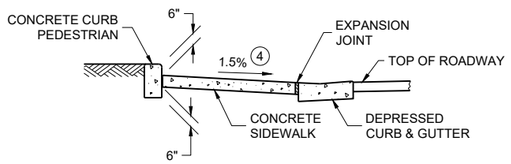


PLAN VIEW

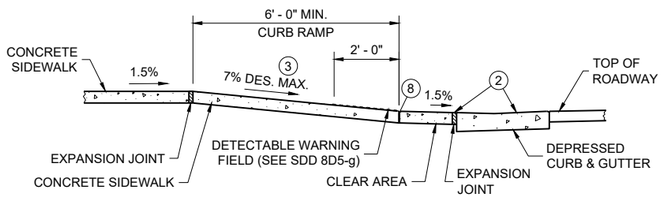
CURB RAMP TYPE 4A



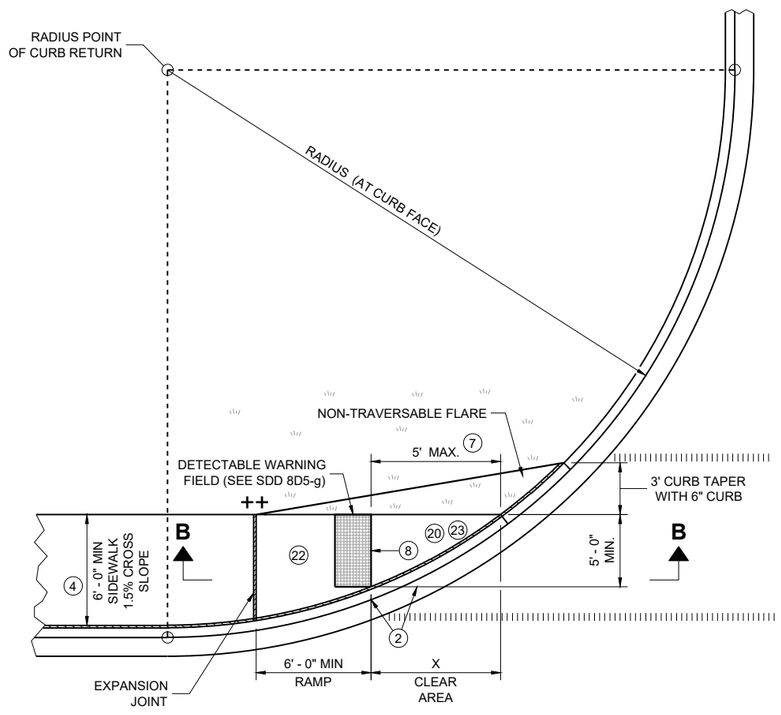
SECTION A - A FOR TYPE 4A



SECTION C - C FOR TYPE 4A



SECTION B - B FOR TYPE 4A AND TYPE 4A1



PLAN VIEW

CURB RAMP TYPE 4A1

LEGEND

- ½" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT SIDEWALK
- PAVEMENT MARKING CROSSWALK (WHITE)
- ++ CONSTRUCT 6" WEDGE TO AVOID CONCRETE BREAKAGE

RADIUS (AT CURB FACE)	X
10 FEET	4' - 7"

INTERMEDIATE RADII CAN BE INTERPOLATED

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF CURB RAMP ACCESS AREAS.

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.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

(2) GRADE CHANGE BETWEEN GUTTER COUNTER SLOPE AND THE CURB RAMP SLOPE IS DESIRABLY 11% OR LESS AND SHALL NOT EXCEED 13.3%. TYPICAL GUTTER COUNTER SLOPE IS 4% BUT MAY BE MODIFIED TO FIT FIELD CONDITIONS. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5%, DESIRABLY 7% OR LESS, AND SHALL NOT EXCEED A MAXIMUM OF 8.3%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) MAXIMUM 8.3% CURB RAMP SLOPE IS ALLOWABLE WITH GUTTER COUNTER SLOPE OF 5% MAXIMUM AND A 13.3% MAXIMUM GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2.1% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(7) WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

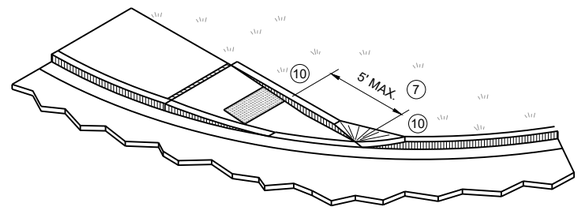
(10) INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.

(17) A MAXIMUM 2-INCH CONCRETE BORDER IS PERMITTED ALONG ALL SIDES OF THE DETECTABLE WARNING FIELD SURFACE.

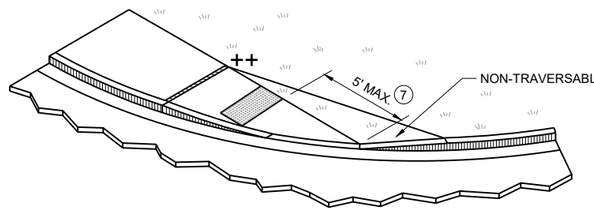
(20) MAXIMUM 1.5% DESIGN MAXIMUM AND 2.1% PROWAG MAXIMUM RUNNING SLOPE ON CLEAR AREA. CROSS SLOPE OF CLEAR AREA SHALL MATCH THE CROSS SLOPE OF THE ADJACENT CROSSWALK.

(22) THE ENTIRE RAMP SHALL BE A PLANAR SURFACE. DO NOT WARP THE RUNNING SLOPE OR CROSS SLOPE OF THE RAMP. WARPING OF THE SIDEWALK CROSS SLOPE SHALL TAKE PLACE BETWEEN THE LANDING AND MATCH POINT.

(23) THE CLEAR AREA BETWEEN THE BOTTOM OF RAMP AND BACK OF CURB SHALL BE SLOPED SO THAT WATER DRAINS OUT OF ONE SIDE OR BOTH SIDES OF THE CURB OPENING.



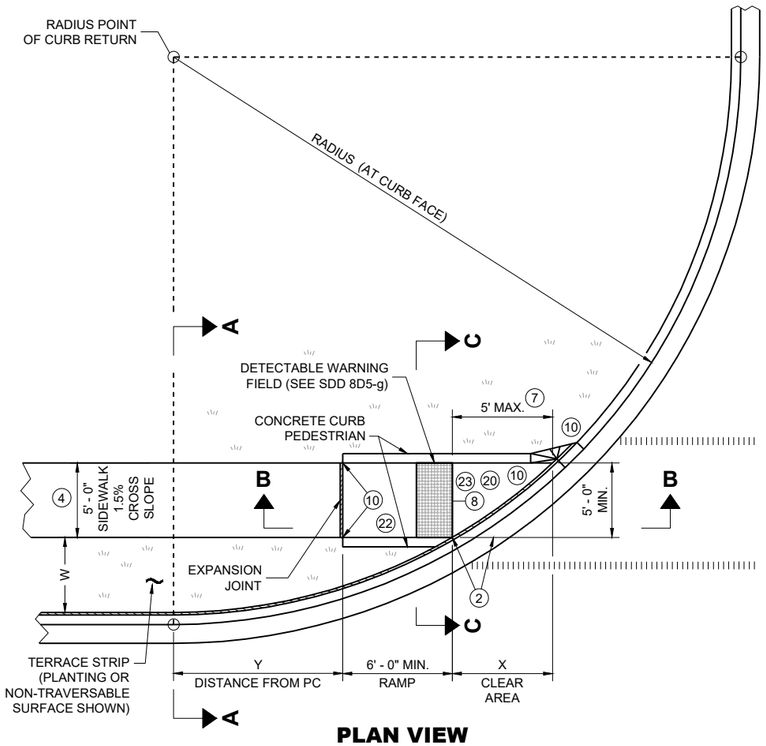
ISOMETRIC VIEW FOR TYPE 4A



ISOMETRIC VIEW FOR TYPE 4A1

CURB RAMPS
TYPE 4A AND 4A1

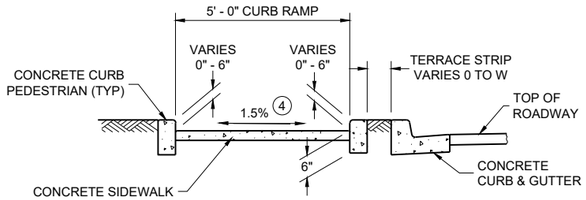
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



PLAN VIEW
CURB RAMP TYPE 4B

RADIUS (AT CURB FACE)	W = 3' - 0"		W = 4' - 0"		W = 5' - 0"		W = 6' - 0"		W = 7' - 0"		W = 8' - 0"		W = 9' - 0"		W = 10' - 0"	
	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
10 FEET	2' - 10 ¼"	0' - 5"	2' - 1"	1' - 4 ½"	1' - 5"	2' - 1"	0' - 10"	2' - 7 ½"	0' - 3 ¼"	3' - 0 ¼"						
15 FEET	4' - 6 ¾"	2' - 1 ¾"	3' - 9"	3' - 5 ¾"	3' - 1 ¼"	4' - 6"	2' - 6 ¾"	5' - 4 ½"	2' - 1"	6' - 1"	1' - 8"	6' - 8 ½"	1' - 3 ¼"	7' - 2 ½"	0' - 10 ¾"	7' - 7 ¼"
20 FEET			4' - 11 ½"	5' - 1 ¾"	4' - 3 ¼"	6' - 5 ½"	3' - 8 ¾"	7' - 7"	3' - 3"	8' - 6 ½"	2' - 10"	9' - 4 ½"	2' - 5 ½"	10' - 1 ¼"	2' - 1 ¼"	10' - 9"
30 FEET									4' - 10 ¾"	12' - 5 ¾"	4' - 5 ½"	13' - 7 ¾"	4' - 0 ¾"	14' - 8 ½"	3' - 8 ½"	15' - 8 ¼"
40 FEET															4' - 10 ¾"	19' - 8 ¼"

INTERMEDIATE RADII CAN BE INTERPOLATED
DIMENSION "Y" IS CALCULATED BASED ON 6'-0" RAMP LENGTH
DIMENSION "X" IS CALCULATED BASED ON 5'-0" SIDEWALK WIDTH



SECTION C - C FOR TYPE 4B

LEGEND

- ½" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT SIDEWALK
- PAVEMENT MARKING CROSSWALK (WHITE)
- * MAXIMUM 2.1% SLOPE IN ALL DIRECTIONS IF FRONT OF GRADE BREAK
- ++ CONSTRUCT 6" WEDGE TO AVOID CONCRETE BREAKAGE

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF CURB RAMP ACCESS AREAS.

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.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

(2) GRADE CHANGE BETWEEN GUTTER COUNTER SLOPE AND THE CURB RAMP SLOPE IS DESIRABLY 11% OR LESS AND SHALL NOT EXCEED 13.3%. TYPICAL GUTTER COUNTER SLOPE IS 4% BUT MAY BE MODIFIED TO FIT FIELD CONDITIONS. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5%, DESIRABLY 7% OR LESS, AND SHALL NOT EXCEED A MAXIMUM OF 8.3%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) MAXIMUM 8.3% CURB RAMP SLOPE IS ALLOWABLE WITH GUTTER COUNTER SLOPE OF 5% MAXIMUM AND A 13.3% MAXIMUM GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2.1% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(7) WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

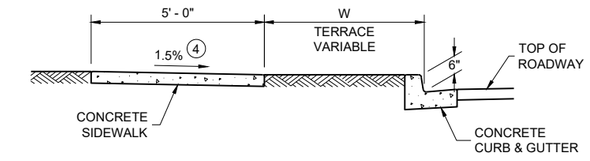
(10) INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.

(17) A MAXIMUM 2-INCH CONCRETE BORDER IS PERMITTED ALONG ALL SIDES OF THE DETECTABLE WARNING FIELD SURFACE.

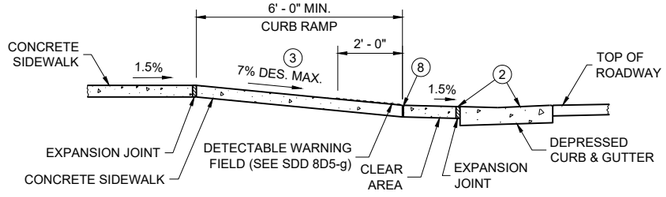
(20) MAXIMUM 1.5% DESIGN MAXIMUM AND 2.1% PROWAG MAXIMUM RUNNING SLOPE ON CLEAR AREA. CROSS SLOPE OF CLEAR AREA SHALL MATCH THE CROSS SLOPE OF THE ADJACENT CROSSWALK.

(22) THE ENTIRE RAMP SHALL BE A PLANAR SURFACE. DO NOT WARP THE RUNNING SLOPE OR CROSS SLOPE OF THE RAMP. WARPING OF THE SIDEWALK CROSS SLOPE SHALL TAKE PLACE BETWEEN THE LANDING AND MATCH POINT.

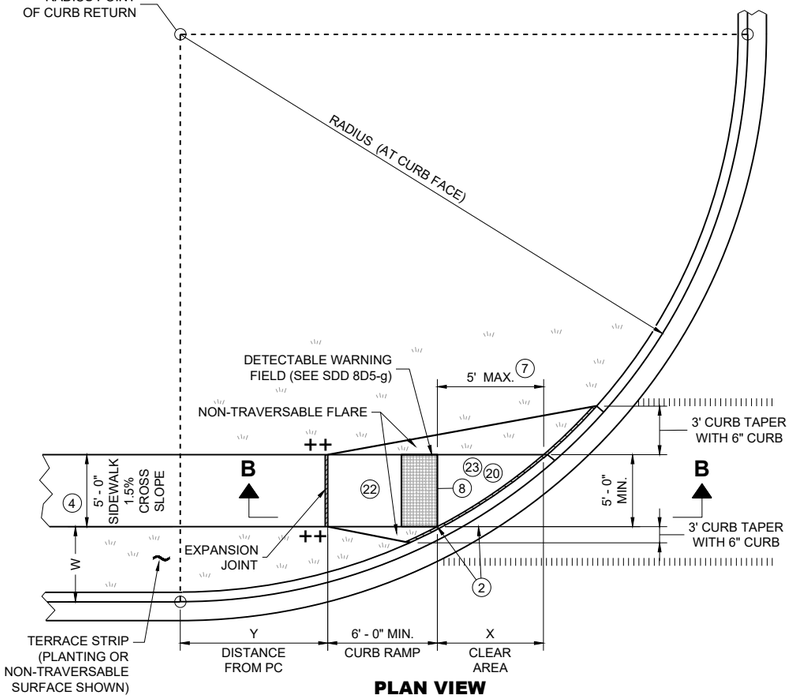
(23) THE CLEAR AREA BETWEEN THE BOTTOM OF RAMP AND BACK OF CURB SHALL BE SLOPED SO THAT WATER DRAINS OUT OF ONE SIDE OR BOTH SIDES OF THE CURB OPENING.



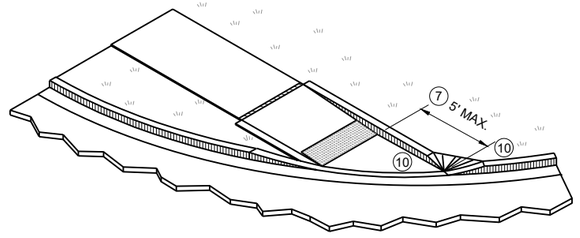
SECTION A - A FOR TYPE 4B



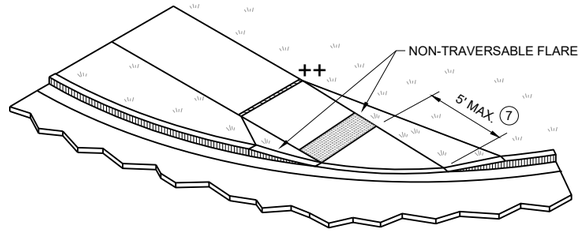
SECTION B - B FOR TYPE 4B AND TYPE 4B1



PLAN VIEW
CURB RAMP TYPE 4B1



ISOMETRIC VIEW FOR TYPE 4B



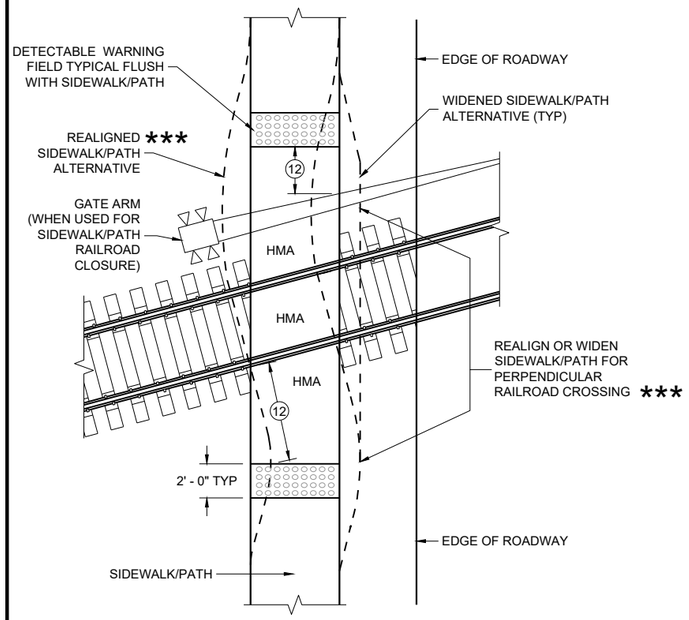
ISOMETRIC VIEW FOR TYPE 4B1

CURB RAMPS
TYPE 4B AND 4B1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

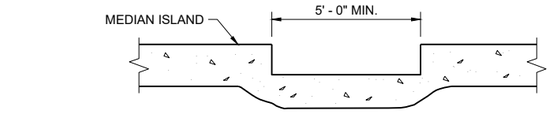
6

SDD 08D05-23d

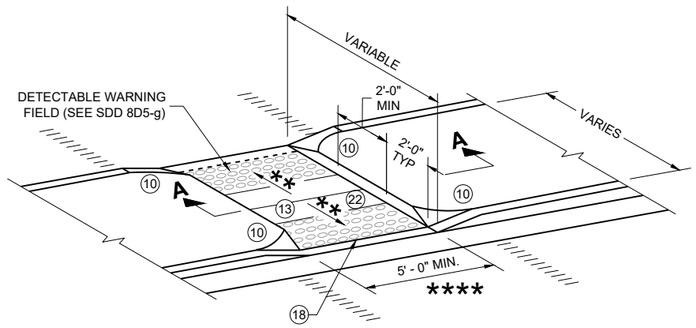


CURB RAMP TYPE 8

DETECTABLE WARNINGS FOR SIDEWALKS OR SHARED USE PATHS AT RAILROAD CROSSINGS



SECTION A - A FOR TYPE 5



CURB RAMP TYPE 5

MEDIAN ISLAND NON-ELEVATED PEDESTRIAN CROSSING

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF CURB RAMP ACCESS AREAS.

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.

SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2.1%.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

(2) GRADE CHANGE BETWEEN GUTTER COUNTER SLOPE AND THE CURB RAMP SLOPE IS DESIRABLY 11% OR LESS AND SHALL NOT EXCEED 13.3%. TYPICAL GUTTER COUNTER SLOPE IS 4% BUT MAY BE MODIFIED TO FIT FIELD CONDITIONS. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5%, DESIRABLY 7% OR LESS, AND SHALL NOT EXCEED A MAXIMUM OF 8.3%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) MAXIMUM 8.3% CURB RAMP SLOPE IS ALLOWABLE WITH GUTTER COUNTER SLOPE OF 5% MAXIMUM AND A 13.3% MAXIMUM GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2.1% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A 5 FOOT BY 5 FOOT LANDING. SLOPE PERPENDICULAR TO CURB SHALL BE 2.1% MAXIMUM. SLOPE PARALLEL TO CURB SHALL MATCH THE CURB AND GUTTER LONGITUDINAL SLOPE.

(10) INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.

(11) SLOPE SIDEWALK TOWARD LANDING AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.

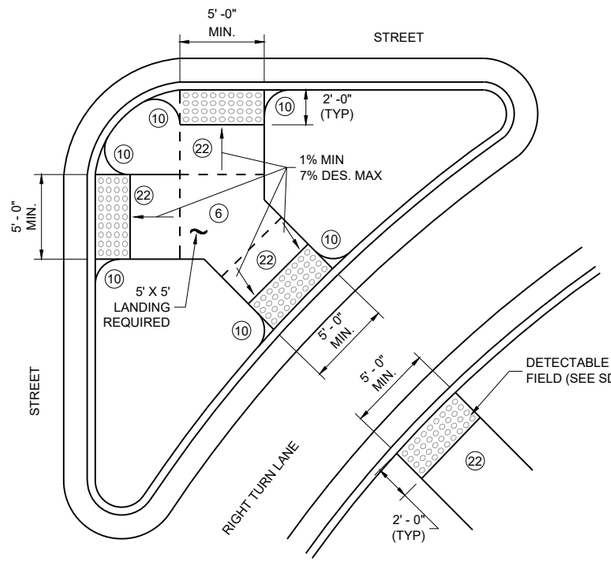
(12) THE DOWNSTREAM EDGE OF THE DETECTABLE WARNING SHOULD BE LOCATED AT LEAST 2 FEET UPSTREAM FROM THE AUTOMATIC GATE, COUNTERWEIGHT, FLASHING-LIGHT SIGNALS, OR CROSSBUCK ASSEMBLY SPECIFIC TO THE PATHWAY OR SIDEWALK (IF ANY ARE PRESENT) AND AT LEAST 12 FEET FROM THE NEAREST RAIL.

(13) DO NOT INSTALL DETECTABLE WARNING FIELDS AT THE EDGES OF STEET-LEVEL PEDESTRIAN REFUGE ISLANDS IF A MINIMUM 2 FOOT CONCRETE SURFACE WITHOUT DETECTABLE WARNINGS (MEASURED IN THE DIRECTION OF PEDESTRIAN TRAVEL) CANNOT BE ACHIEVED.

(17) A MAXIMUM 2-INCH CONCRETE BORDER IS PERMITTED ALONG ALL SIDES OF THE DETECTABLE WARNING FIELD SURFACE.

(18) WHEN THE DISTANCE BETWEEN THE BACK OF CURBS IS LESS THAN 6 FEET BUT THE FACE OF CURB TO FACE OF CURB DISTANCE IS 6 FEET OR GREATER THEN THE DETECTABLE WARNING FIELDS MAY BE MOVED SO THAT THE EDGE OF THE WARNING FIELD IS PLACED AT THE GUTTER FLOWLINE. MAINTAIN A MINIMUM OF TWO FEET BETWEEN DETECTABLE WARNING FIELD PANELS.

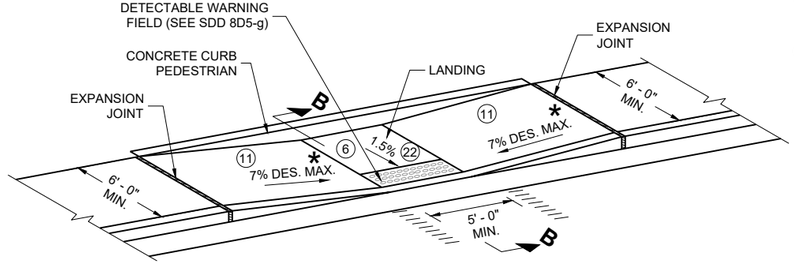
(22) THE ENTIRE RAMP SHALL BE A PLANAR SURFACE. DO NOT WARP THE RUNNING SLOPE OR CROSS SLOPE OF THE RAMP. WARPING OF THE SIDEWALK CROSS SLOPE SHALL TAKE PLACE BETWEEN THE LANDING AND MATCH POINT.



CURB RAMP TYPE 6

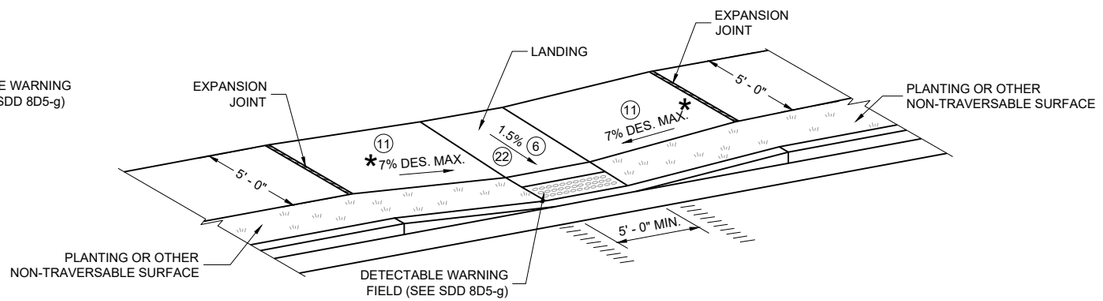
DETECTABLE WARNING AT ISLANDS

REFER TO GENERAL NOTES (2) AND (3) FOR ALL ISLAND CURB RAMPS



CURB RAMP TYPE 7A

FOR INTERSECTIONS AND MID BLOCK CROSSINGS

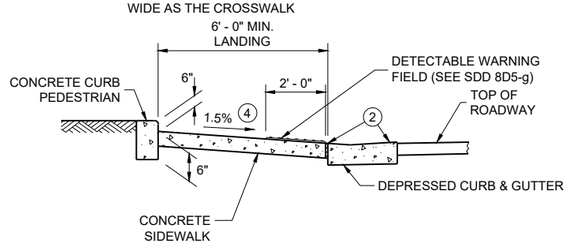


CURB RAMP TYPE 7B

FOR INTERSECTIONS AND MID BLOCK CROSSINGS

LEGEND

- ½" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)
- * MAXIMUM 8.3%
- ** 1% MINIMUM (PROVIDE DRAINAGE)
- *** DETAILS TO BE DETERMINED BY ENGINEER
- **** FOR SHARED USE PATHS, WIDTH MUST BE AS WIDE AS THE CROSSWALK

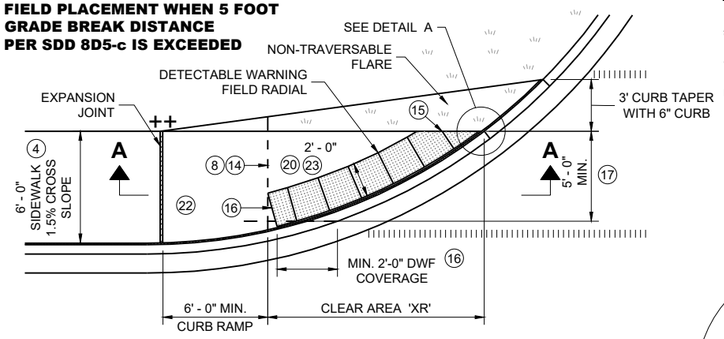


SECTION B - B FOR TYPE 7A

CURB RAMPS TYPE 5, 6, 7A, 7B & 8

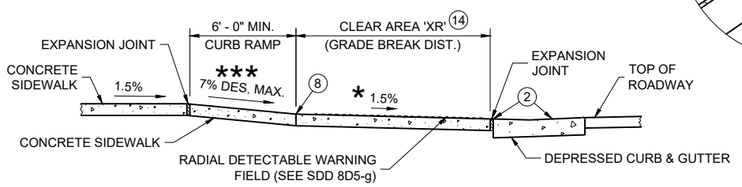
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

RADIAL DETECTABLE WARNING FIELD PLACEMENT WHEN 5 FOOT GRADE BREAK DISTANCE PER SDD 8D5-c IS EXCEEDED



PLAN VIEW

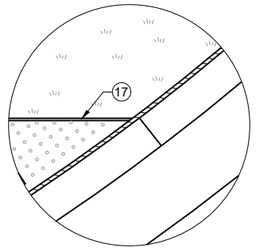
CURB RAMP TYPE 4A1
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)



SECTION A - A FOR TYPE 4A1

LEGEND

═══	½" EXPANSION JOINT SIDEWALK
– – – –	CONTRACTION JOINT SIDEWALK
ıı ıı ıı ıı	PAVEMENT MARKING CROSSWALK (WHITE)
**	WIDTH SHOWN ELSEWHERE IN THE PLANS
***	MAXIMUM 8.3%
++	CONSTRUCT 6" WEDGE TO AVOID CONCRETE BREAKAGE



DETAIL A

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF CURB RAMP ACCESS AREAS.

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.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

APPLY RADIAL DETECTABLE WARNING PLACEMENT SIMILARLY FOR TYPE 4A AND 4A1 CURB RAMPS AND SIMILARLY FOR TYPE 4B AND 4B1 CURB RAMPS. TYPE 4A AND 4B CURB RAMPS ARE NOT SHOWN.

REFER TO SDD 8D5-g FOR ADDITIONAL RADIAL PLATE REQUIREMENTS.

FIELD CUTS AT INTERMEDIATE JOINTS WITHIN THE RADIAL DETECTABLE WARNING FILED ARE PROHIBITED.

DETERMINE FINAL RADIAL WARNING FIELD CONFIGURATION AD ITS INDIVIDUAL PLATE LOCATIONS. PERFORM PRE-LAYOUT PRIOR TO PLACEMENT IN PLASTIC CONCRETE. FOLLOW MANUFACTURER'S PRODUCT LIST AND INSTALLATION RECOMMENDATIONS.

(2) GRADE CHANGE BETWEEN GUTTER COUNTER SLOPE AND THE CURB RAMP SLOPE IS DESIRABLY 11% OR LESS AND SHALL NOT EXCEED 13.3%. TYPICAL GUTTER COUNTER SLOPE IS 4% BUT MAY BE MODIFIED TO FIT FIELD CONDITIONS. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5%, DESIRABLY 7% OR LESS, AND SHALL NOT EXCEED A MAXIMUM OF 8.3%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) MAXIMUM 8.3% CURB RAMP SLOPE IS ALLOWABLE WITH GUTTER COUNTER SLOPE OF 5% MAXIMUM AND A 13.3% MAXIMUM GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2.1% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A 5 FOOT BY 5 FOOT LANDING. SLOPE PERPENDICULAR TO CURB SHALL BE 2.1% MAXIMUM. SLOPE PARALLEL TO CURB SHALL MATCH THE CURB AND GUTTER LONGITUDINAL SLOPE.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

(14) CONSULT ENGINEER IF GRADE BREAK LOCATION (END OF LANDING DIMENSION "XR") REQUIRES FIELD ADJUSTMENT WHEN ESTABLISHING FINAL RADIAL DETECTABLE WARNING FIELD LOCATION.

(15) FIELD SAW CUTS ALONG RADIAL DETECTABLE WARNING PLATES WILL BE NECESSARY TO MATCH EACH CURB RAMP EDGE. AVOID CUTTING THROUGH DOMES WHENEVER POSSIBLE. MAKE FIELD CUTS TRUE TO LINE AND WITHIN ⅛" DEVIATION. SMOOTH EDGES OF FIELD CUT PLATES.

(16) USE 1' X 2" RECTANGULAR END PLATE AT END OF TYPE 4A1 RAMP AND PROVIDE MINIMUM 2' - 0" DETECTABLE WARNING FIELD COVERAGE (IN DIRECTION OF PEDESTRIAN TRAVEL) ALONG THE ENTIRE CURB RAMP WIDTH.

(17) A MAXIMUM 2-INCH CONCRETE BORDER IS PERMITTED ALONG ALL SIDES OF THE DETECTABLE WARNING FIELD SURFACE.

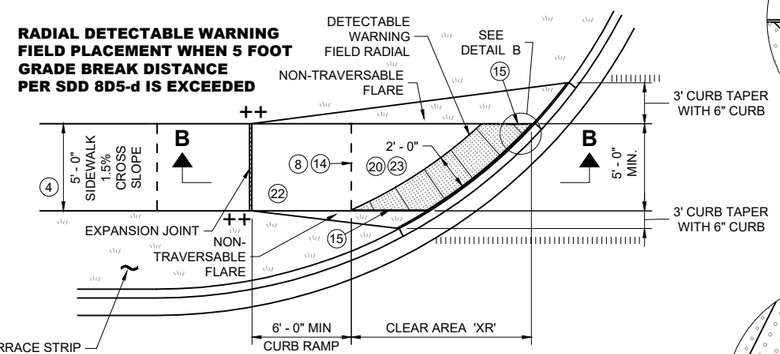
(19) WHERE A LANDING SERVES TWO CURB RAMPS, THE LANDING SLOPE SHALL NOT EXCEED THE CROSS SLOPE AT THE BOTTOM OF THE RAMP OR WITHIN THE CROSSWALK PARALLEL TO THE DIRECTION OF TRAVEL.

(20) MAXIMUM 1.5% DESIGN MAXIMUM AND 2.1% PROWAG MAXIMUM RUNNING SLOPE ON CLEAR AREA. CROSS SLOPE OF CLEAR AREA SHALL MATCH THE CROSS SLOPE OF THE ADJACENT CROSSWALK.

(22) THE ENTIRE RAMP SHALL BE A PLANAR SURFACE. DO NOT WARP THE RUNNING SLOPE OR CROSS SLOPE OF THE RAMP. WARPING OF THE SIDEWALK CROSS SLOPE SHALL TAKE PLACE BETWEEN THE LANDING AND MATCH POINT.

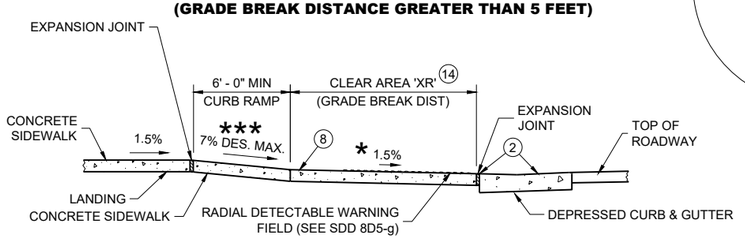
(23) THE CLEAR AREA BETWEEN THE BOTTOM OF RAMP AND BACK OF CURB SHALL BE SLOPED SO THAT WATER DRAINS OUT OF ONE SIDE OR BOTH SIDES OF THE CURB OPENING.

RADIAL DETECTABLE WARNING FIELD PLACEMENT WHEN 5 FOOT GRADE BREAK DISTANCE PER SDD 8D5-d IS EXCEEDED

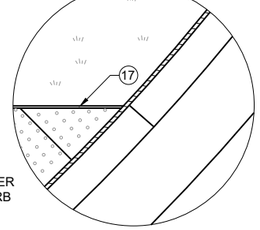


PLAN VIEW

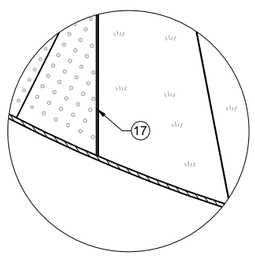
CURB RAMP TYPE 4B1
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)



SECTION B - B FOR TYPE 4B1

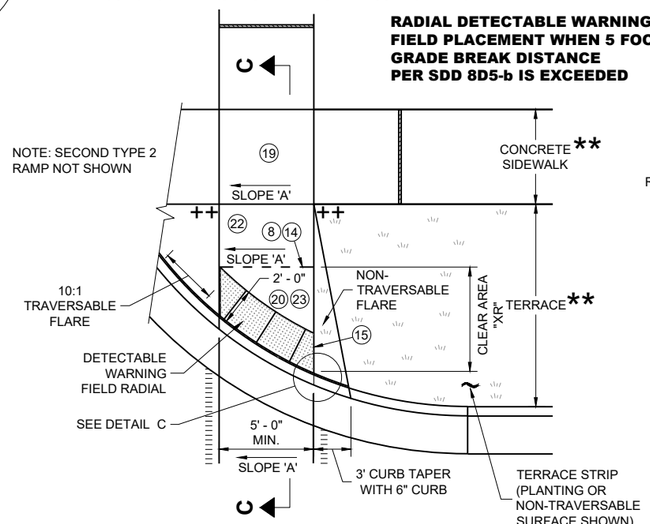


DETAIL B



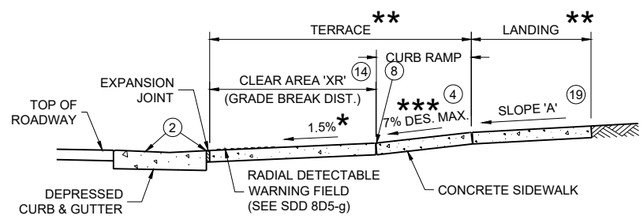
DETAIL C

RADIAL DETECTABLE WARNING FIELD PLACEMENT WHEN 5 FOOT GRADE BREAK DISTANCE PER SDD 8D5-b IS EXCEEDED



PLAN VIEW

CURB RAMP TYPE 2
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)
(ON LINE WITH SIDEWALK)



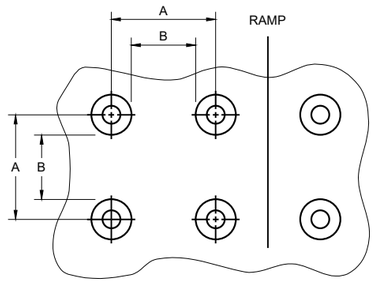
SECTION C - C FOR TYPE 2

CURB RAMPS
RADIAL DETECTABLE WARNING

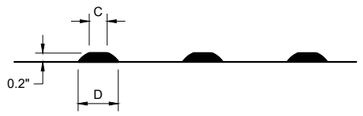
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

	MIN.	MAX.
A	1.6"	2.4"
B	0.65"	1.5"
C	*	*
D	0.9"	1.4"

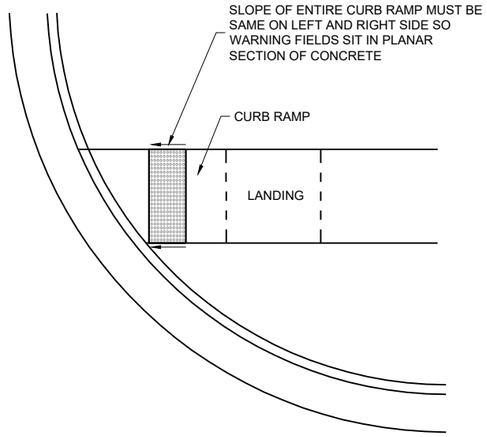
* THE C DIMENSION IS 50% TO 65% OF THE D DIMENSION.



PLAN VIEW



ELEVATION VIEW



DETECTABLE WARNING FIELD
PLANAR INSTALLATION

GENERAL NOTES

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AT A CURB RAMP SHALL BE FROM THE SAME MANUFACTURER.

PLACE ALL DETECTABLE WARNING FIELD SYSTEMS IN ACCORDANCE TO THE MANUFACTURER'S RECOMMENDATION.

FIELD CUTS AT INTERMEDIATE JOINTS WITHIN THE RADIAL DETECTABLE WARNING FILED ARE PROHIBITED.

DETERMINE FINAL RADIAL WARNING FIELD CONFIGURATION AND ITS INDIVIDUAL PLATE LOCATIONS. PERFORM PRE-LAYOUT PRIOR TO PLACEMENT IN PLASTIC CONCRETE. FOLLOW MANUFACTURER'S PRODUCT LIST AND INSTALLATION RECOMMENDATIONS.

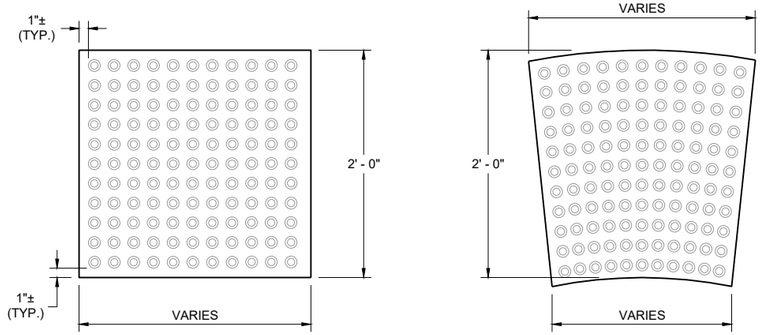
FOR RADIAL DETECTABLE WARNING FIELD APPLICATIONS WHERE STANDARD RADIAL PLATES ARE NOT AVAILABLE AT AN INTERSECTION CURB RADIUS, A COMBINATION OF SQUARE OR RECTANGULAR PLATES AND RADIAL PLATES MAY BE USED TO FORM RADIAL CONFIGURATION. RADIAL WEDGE PLATES IN COMBINATION WITH SQUARE PLATES ARE ALSO ACCEPTABLE. FOLLOW MANUFACTURER'S RECOMMENDATIONS.

REFER TO CONTRACT AND STANDARD SPECIFICATIONS FOR FIELD CUTTING REQUIREMENTS.

DO NOT EMBED IN CONCRETE ANY FIELD-CUT PLATES WITH CUT EDGES SHORTER THAN 6 INCHES. CONSULT WITH MANUFACTURER FOR RE-DRILLING AND ANCHORING REQUIREMENTS OF FIELD-CUT PLATES.

(15) FIELD SAW CUTS ALONG RADIAL DETECTABLE WARNING PLATES WILL BE NECESSARY TO MATCH EACH CURB RAMP EDGE. AVOID CUTTING THROUGH DOMES WHENEVER POSSIBLE. MAKE FIELD CUTS TRUE TO LINE AND WITHIN ⅛" DEVIATION. SMOOTH EDGES OF FIELD CUT PLATES.

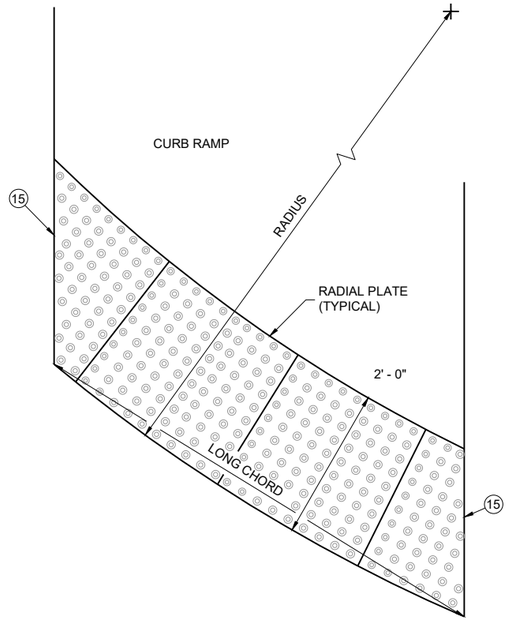
TRUNCATED DOMES
DETECTABLE WARNING PATTERN DETAIL



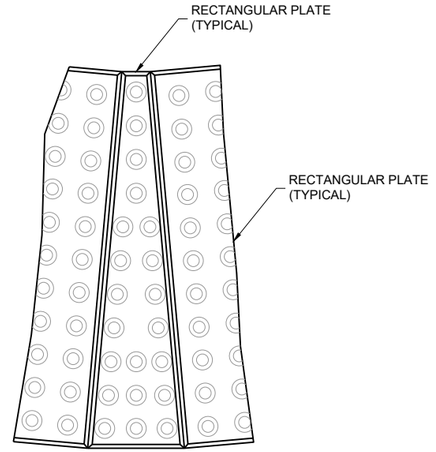
RECTANGULAR PLATES

RADIAL PLATES

PLAN VIEW
DETECTABLE WARNING FIELDS (TYPICAL)



PLAN VIEW
RADIAL DETECTABLE WARNING FIELD ATTRIBUTES



PLAN VIEW
RADIAL WEDGE PLATE CONNECTION DETAIL

CURB RAMPS
RECTANGULAR AND RADIAL
DETECTABLE WARNING PLATES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2026 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

FHWA

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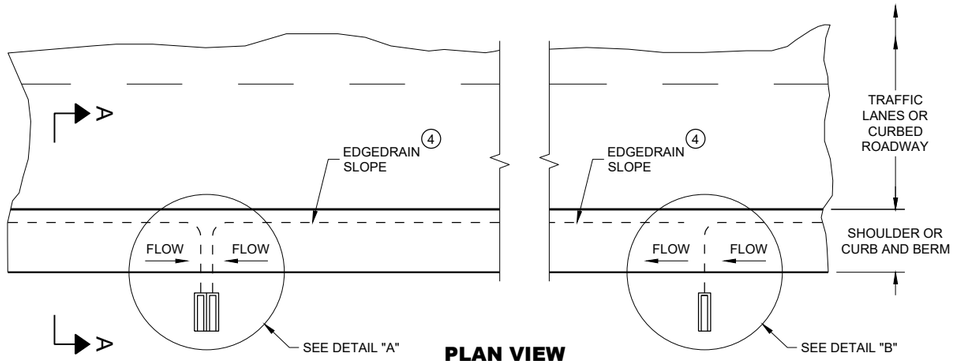
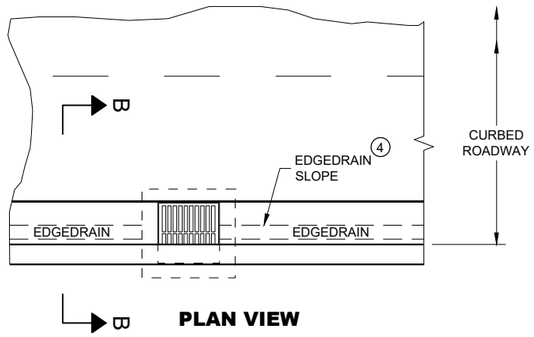


PLAN VIEW

ROADWAY WITH SHOULDERS OR CURBS
(EDGEDRAIN CONNECTS TO ROADSIDE) (2)



PLAN VIEW

ROADWAY WITH CURBS
(EDGEDRAIN CONNECTS INTO INLET STRUCTURE)

GENERAL NOTES

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

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

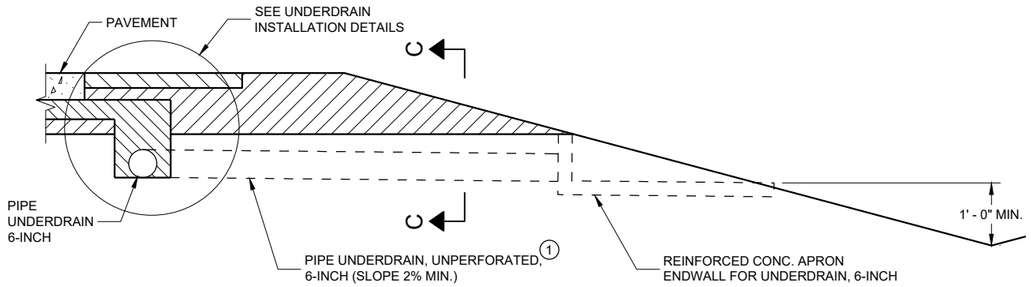
POLYVINYL CHLORIDE (PVC) PLASTIC DRAIN, WASTE, AND VENT PIPE AND FITTINGS, ASTM D 2665, SCHEDULE 40 PVC.

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

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

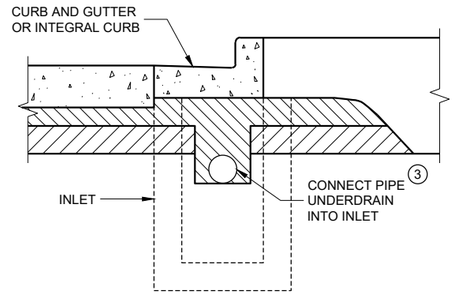
(3) EDGEDRAIN SHALL BE CONNECTED TO INLETS REGARDLESS OF FLOW DIRECTION FOR DRAINAGE AND MAINTENANCE ACCESS.

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



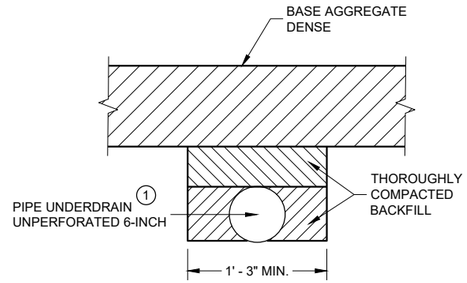
SECTION A - A

RURAL CROSS SECTION



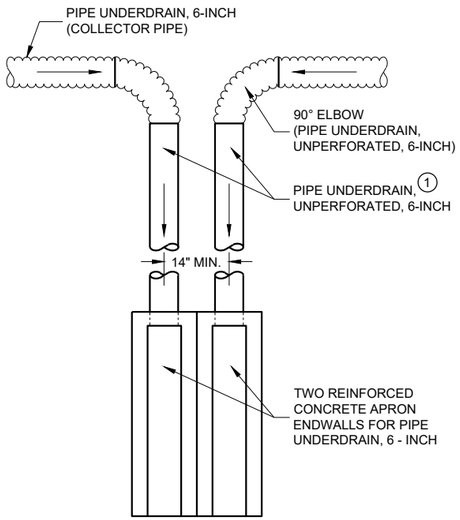
SECTION B - B

URBAN CROSS SECTION

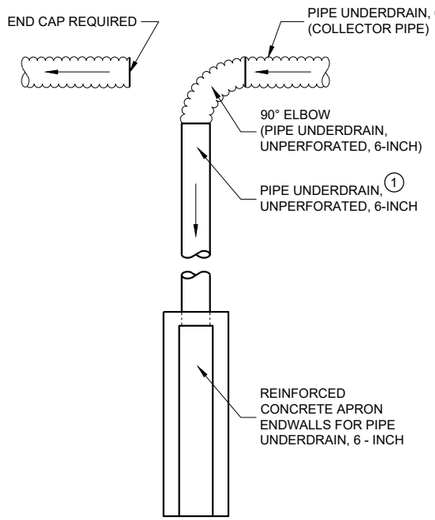


SECTION C - C

TRENCH FOR OUTFALL PIPE

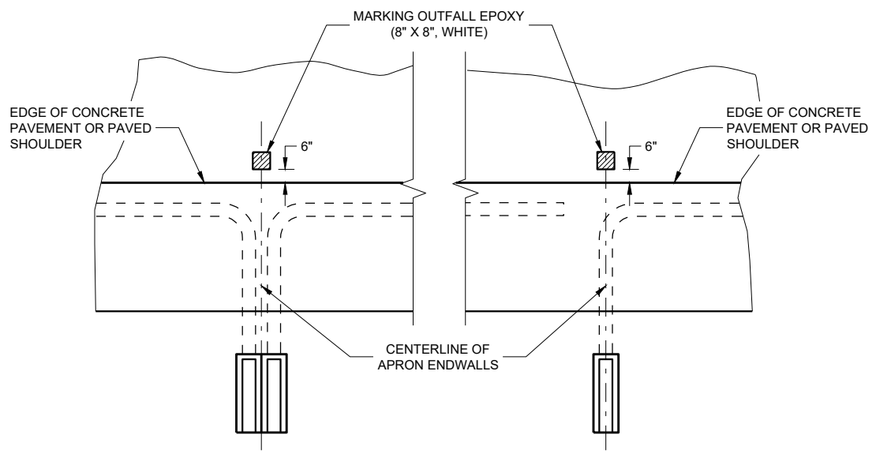


DETAIL "A"
TO BE USED AT LOW POINT LOCATIONS



DETAIL "B"
TO BE USED AT INTERMEDIATE LOCATIONS

TYPICAL DRAIN OUT DETAILS



LOW POINT LOCATIONS — INTERMEDIATE LOCATIONS

PAVEMENT MARKINGS FOR OUTFALL MARKERS

EDGEDRAIN OUTLET AND OUTFALL MARKERS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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SDD08D15 - 05a

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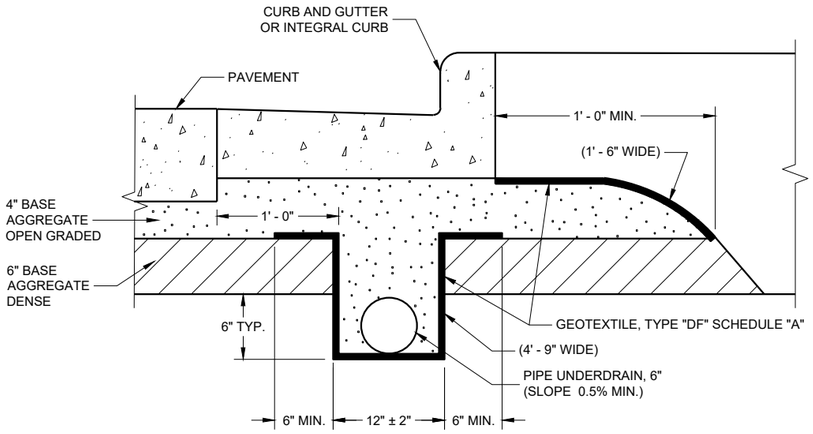
SDD08D15 - 05a



EDGEDRAIN IN URBAN ROADWAY

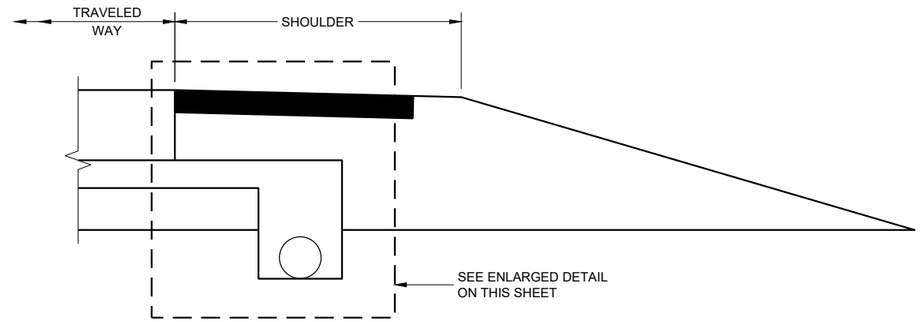
GENERAL NOTES

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

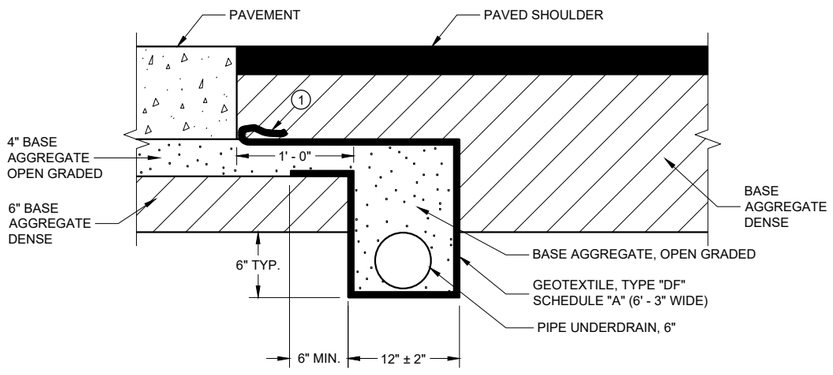
PIPE UNDERDRAIN SHALL BE LAID PARALLEL TO THE GRADE OF THE ROADWAY.

(1) FOLD OVER EXCESS GEOTEXTILE AT THIS LOCATION.

(2) TOTAL GEOTEXTILE WIDTH IS 6'-3" FOR PAYMENT.

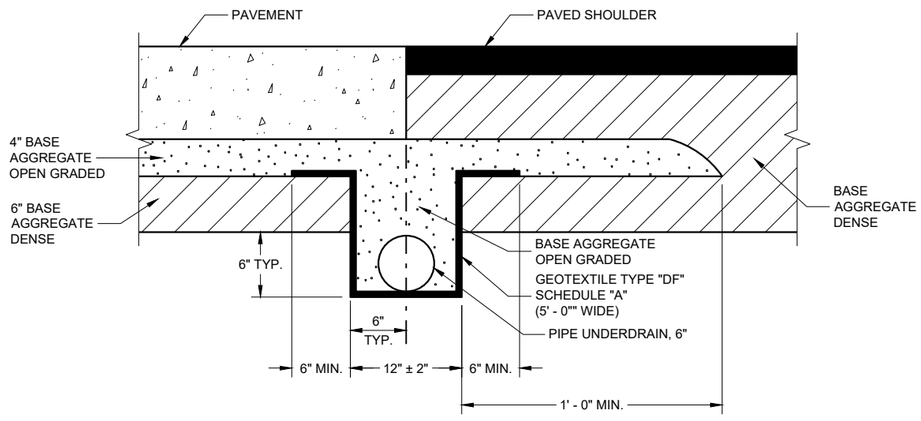


RURAL CROSS SECTION



POST PAVING INSTALLATION

(QUANTITIES ARE BASED ON THIS DETAIL)



PRE-PAVING INSTALLATION ALTERNATIVE

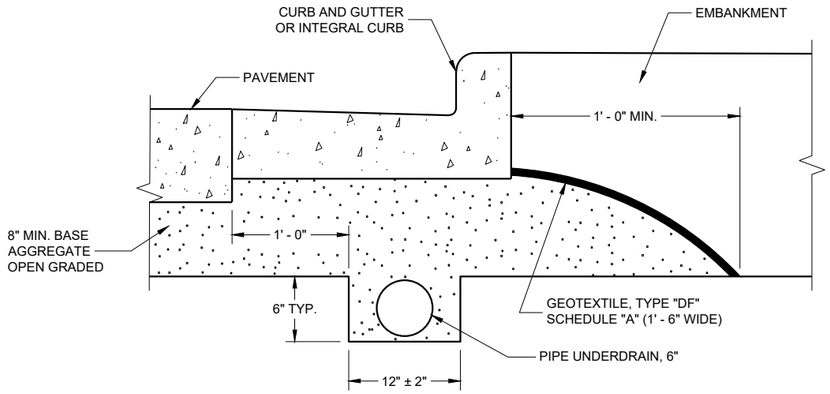
EDGEDRAIN IN RURAL ROADWAY

EGEDRAIN AND BASE AGGREGATE OPEN GRADED

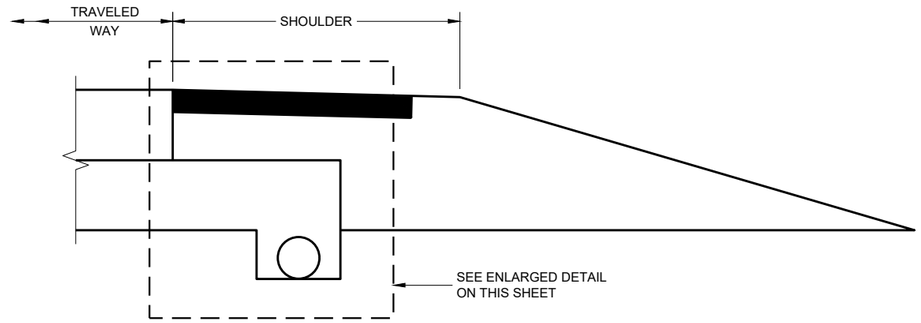
GENERAL NOTES

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

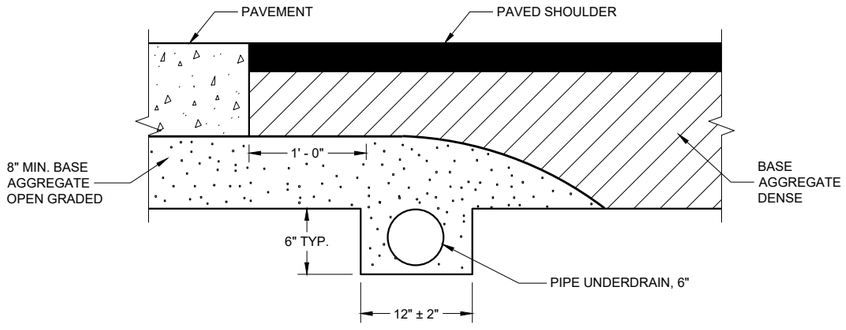
PIPE UNDERDRAIN SHALL BE LAID PARALLEL TO THE GRADE OF THE ROADWAY.



EDGEDRAIN IN URBAN ROADWAY

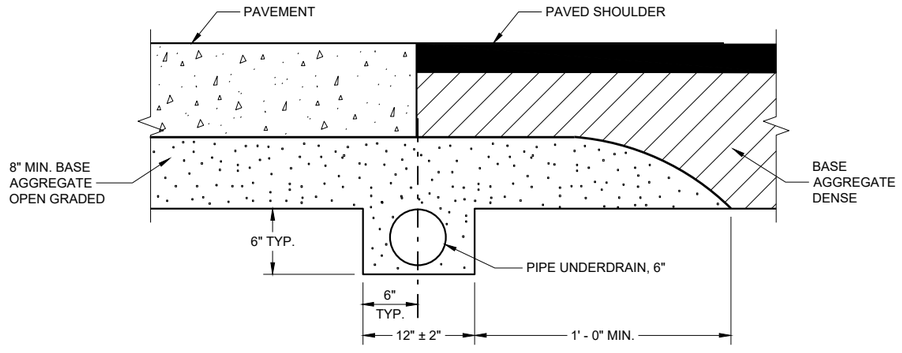


RURAL CROSS SECTION



POST PAVING INSTALLATION

(QUANTITIES ARE BASED ON THIS DETAIL)



PRE-PAVING INSTALLATION ALTERNATIVE

EDGEDRAIN IN RURAL ROADWAY

EDGEDRAIN AND BASE AGGREGATE OPEN GRADED

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
September 2015
DATE
/S/ Peter Kemp, P.E.
PAVEMENT SUPERVISOR

FHWA

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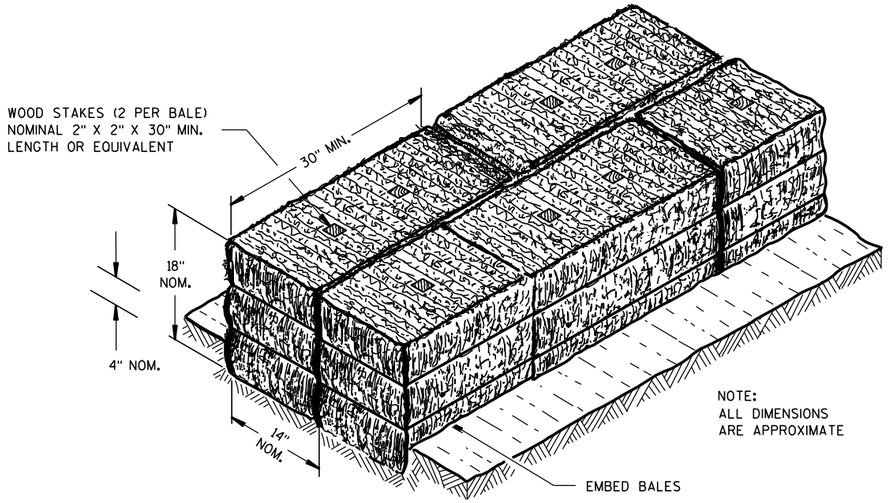
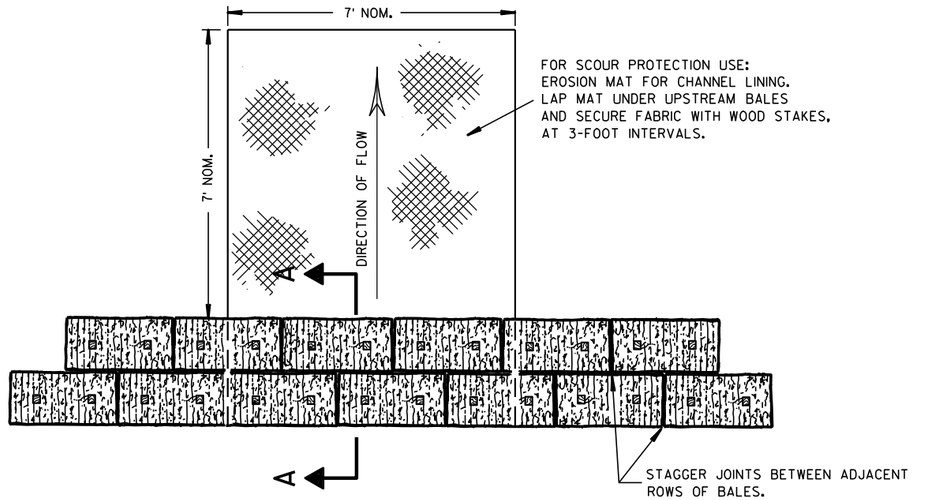
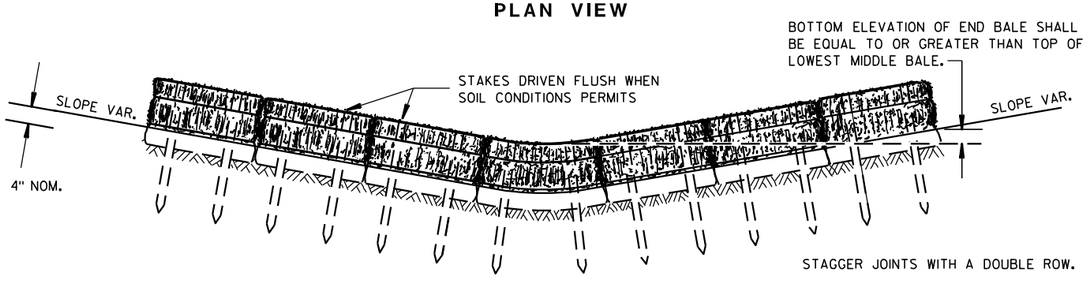
SDD 08D15 - 05c



SECTION A-A



PLAN VIEW



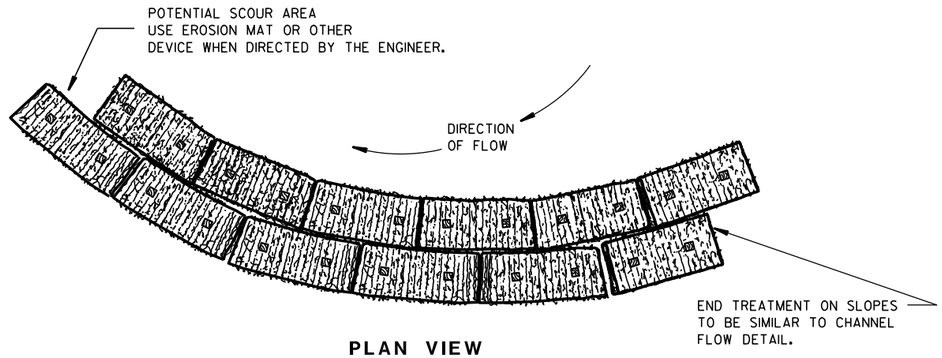
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES (1)

GENERAL NOTES

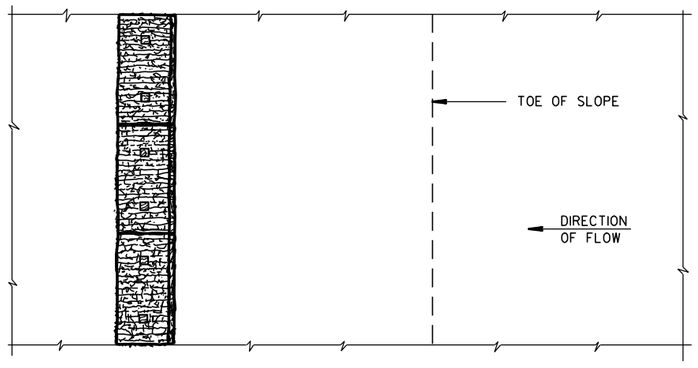
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

(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.

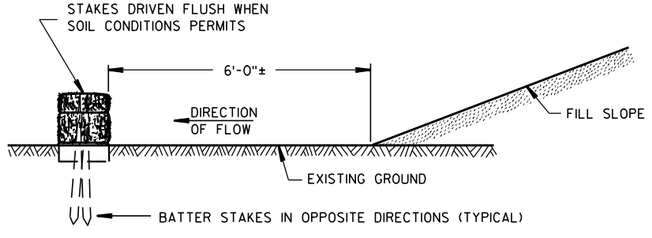


PLAN VIEW

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

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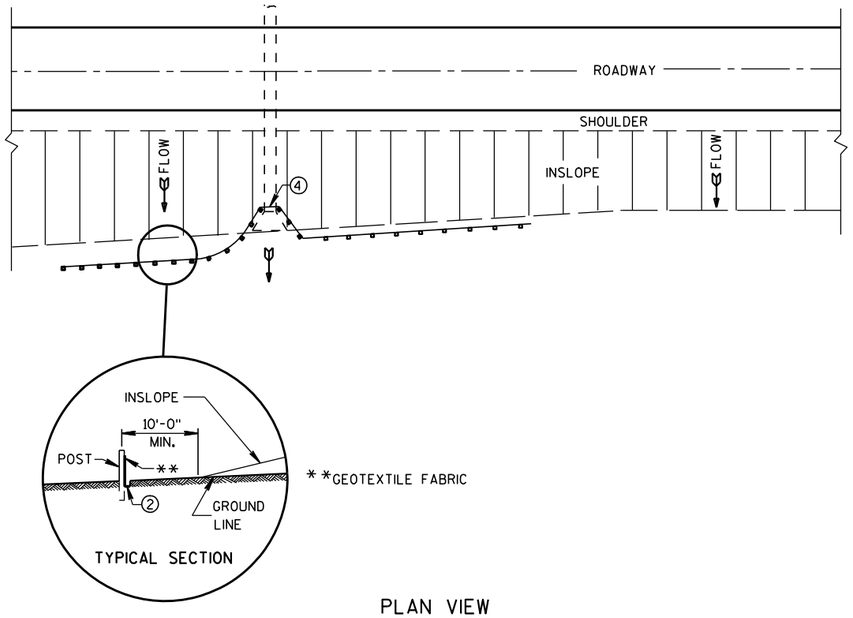
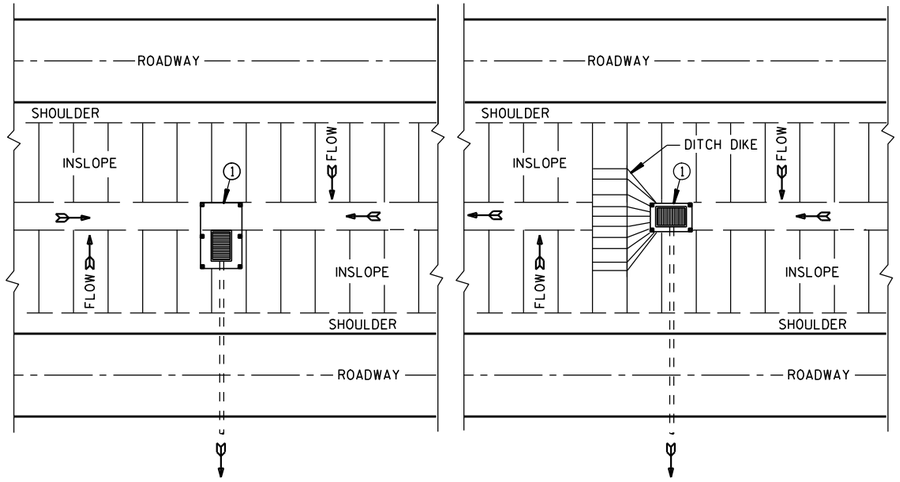
S.D.D. 8 E 8-3



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



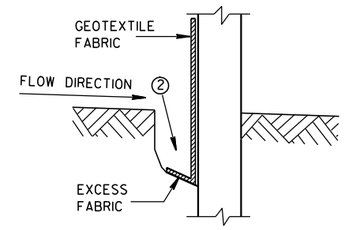
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

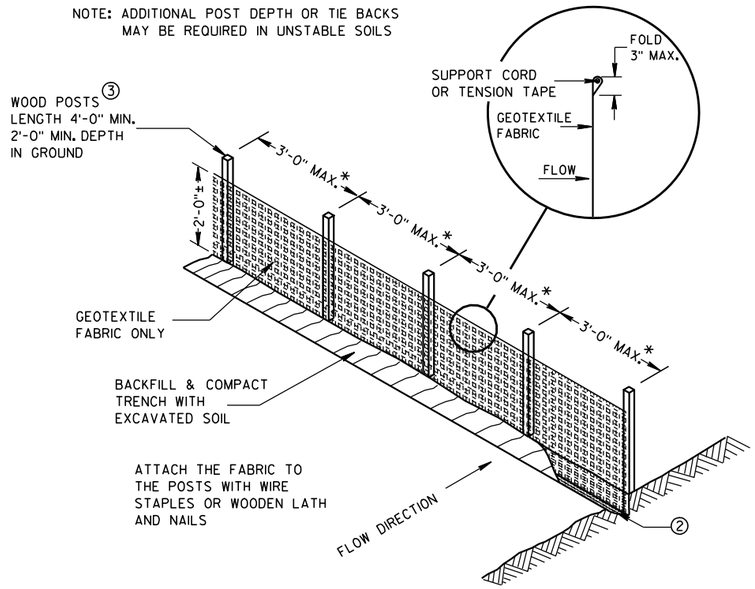
GENERAL NOTES

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

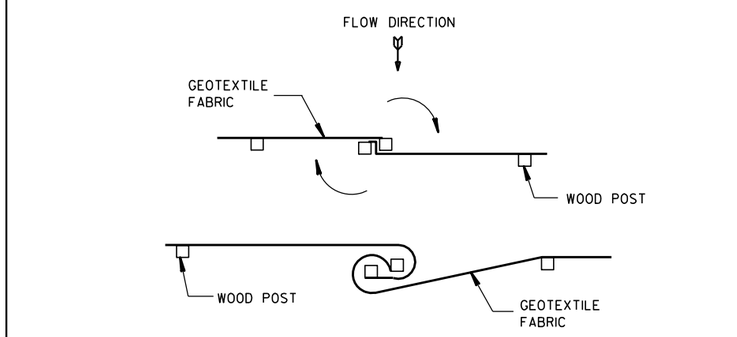
1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.
4. SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
5. CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



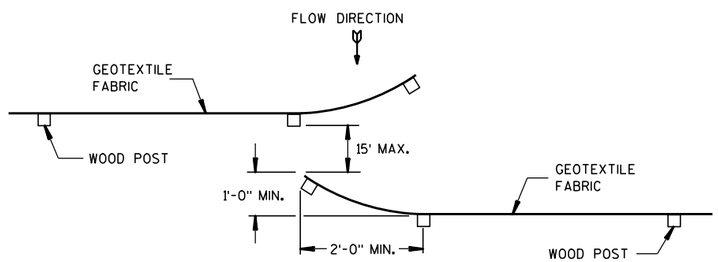
TRENCH DETAIL



SILT FENCE

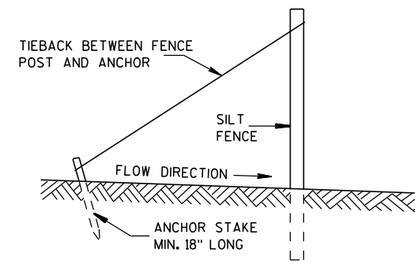


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE 5



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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S.D.D. 8 E 9-6

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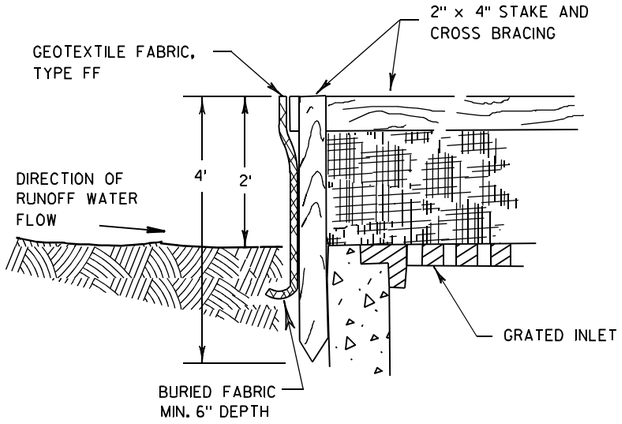
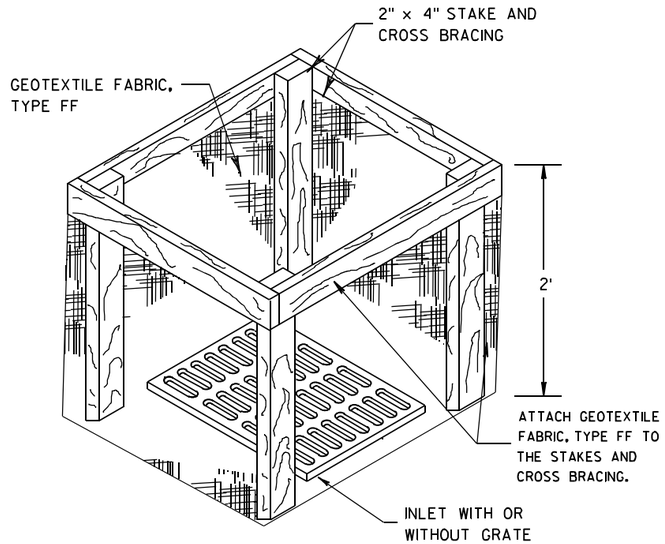
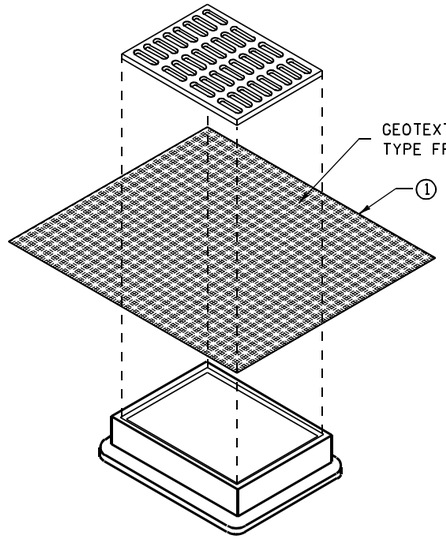
S.D.D. 8 E 9-6



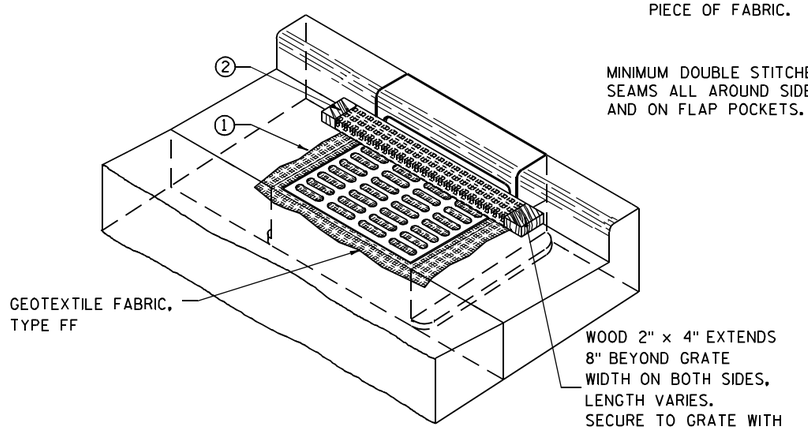


INLET PROTECTION, TYPE A

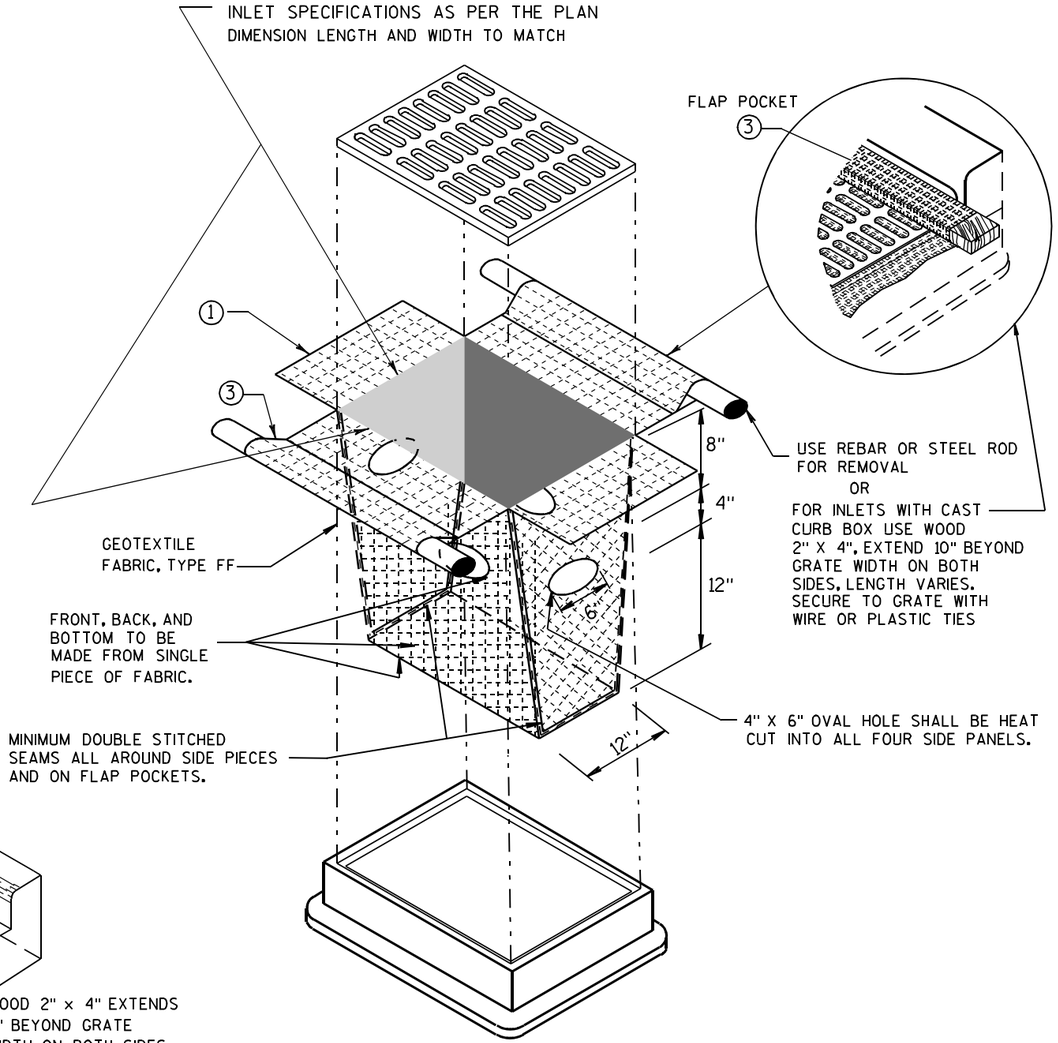


INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

(CAN BE INSTALLED IN ANY INLET WITHOUT A CURB BOX)



INLET PROTECTION, TYPE C (WITH CURB BOX)



INLET PROTECTION, TYPE D

(CAN BE INSTALLED IN ANY INLET TYPE WITH
OR WITHOUT A CURB BOX AS PER NOTE ②)

GENERAL NOTES

INLET PROTECTION DEVICES SHALL BE MAINTAINED OR REPLACED AT THE DIRECTION OF THE ENGINEER.

MANUFACTURED ALTERNATIVES APPROVED AND LISTED ON THE DEPARTMENT'S EROSION CONTROL PRODUCT ACCEPTABILITY LIST MAY BE SUBSTITUTED.

WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

① FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.

② FOR INLET PROTECTION, TYPE C (WITH CURB BOX), AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX OPENING.

③ FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2X4.

INSTALLATION NOTES

TYPE B & C

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

TYPE D

DO NOT INSTALL INLET PROTECTION TYPE D IN INLETS SHALLOWER THAN 30", MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE.

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE BOTTOM OF THE BAG.

INLET PROTECTION
TYPE A, B, C, AND D

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/16/02
DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

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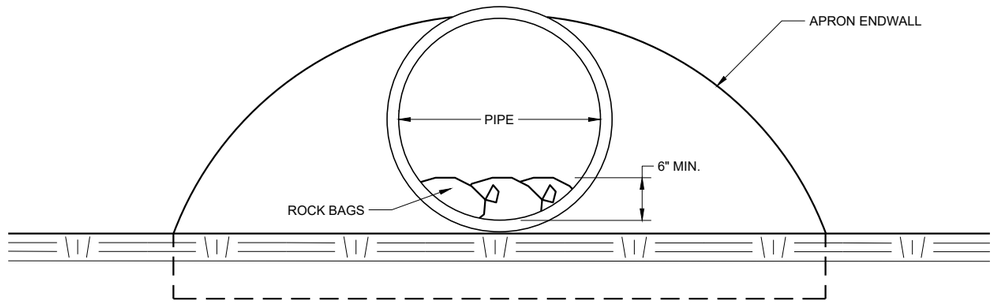
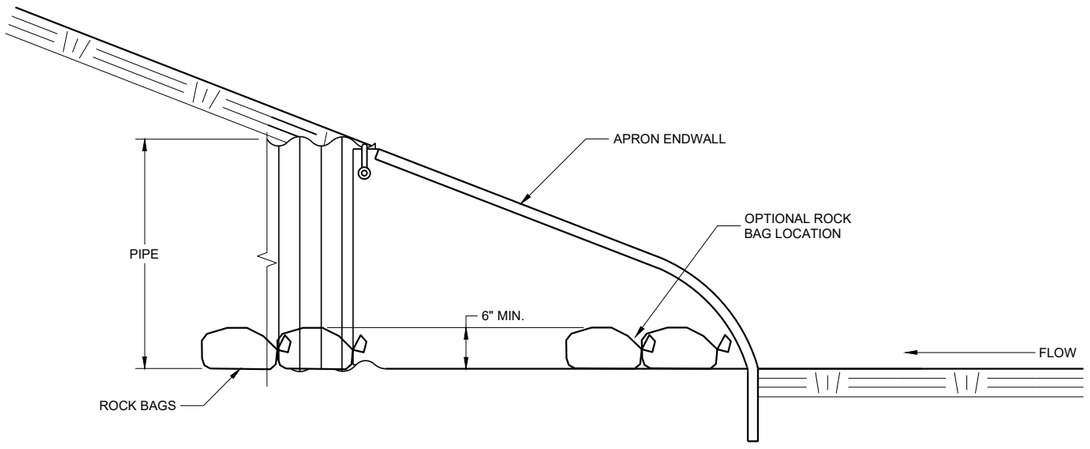
S.D.D. 8 E 10-2



END VIEW



SIDE VIEW

CULVERT PIPE CHECK

(INSTALL ON INLET END ONLY)

CULVERT PIPE CHECK

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2019 — DATE
/S/ Daniel Schave — EROSION CONTROL ENGI
FHWA

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SDD 08E15 - 01

METAL APRON ENDWALLS

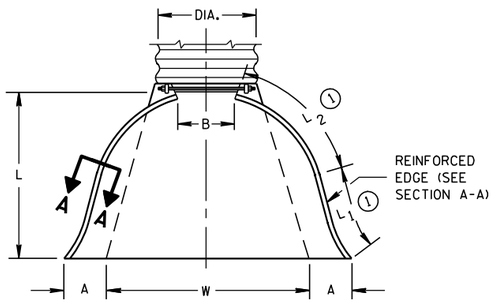
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4	36	2 1/2 to 1	1 Pc.
21	.064	.060	9	12	6	36	18	29 5/8	42	2 1/2 to 1	1 Pc.
24	.064	.075	10	13	6	41	18	37 1/4	48	2 1/2 to 1	1 Pc.
30	.079	.075	12	16	8	51	18	52 1/4	60	2 1/2 to 1	1 Pc.
36	.079	.105	14	19	9	60	24	59 3/4	72	2 1/2 to 1	2 Pc.
42	.109	.105	16	22	11	69	24	75 5/8	84	2 1/2 to 1	2 Pc.
48	.109	.105	18	27	12	78	24	81	90	2 1/4 to 1	3 Pc.
54	.109	.105	18	30	12	84	30	85 1/2	102	2 1/4 to 1	3 Pc.
60	.109×	.105×	18	33	12	87	—	—	114	2 to 1	3 Pc.
66	.109×	.105×	18	36	12	87	—	—	120	2 to 1	3 Pc.
72	.109×	.105×	18	39	12	87	—	—	126	2 to 1	3 Pc.
78	.109×	.105×	18	42	12	87	—	—	132	1 1/2 to 1	3 Pc.
84	.109×	.105×	18	45	12	87	—	—	138	1 1/2 to 1	3 Pc.
90	.109×	.105×	18	37	12	87	—	—	144	1 1/2 to 1	3 Pc.
96	.109×	.105×	18	35	12	87	—	—	150	1 1/2 to 1	3 Pc.

× EXCEPT CENTER PANEL SEE GENERAL NOTES

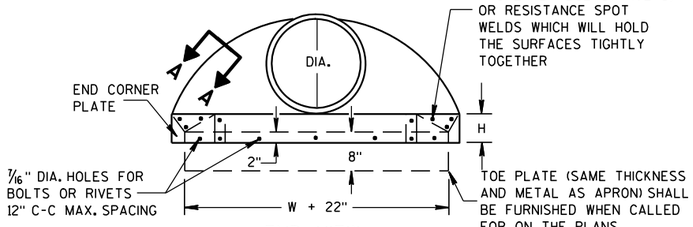
REINFORCED CONCRETE APRON ENDWALLS

PIPE DIA. (IN.)	DIMENSIONS (Inches) T	A	B	C	D	E	G	APPROX. SLOPE
12	2	4	24	48 7/8	72 1/8	24	2	3 to 1
15	2 1/4	6	27	46	73	30	2 1/4	3 to 1
18	2 1/2	9	27	46	73	36	2 1/2	3 to 1
21	2 3/4	9	36	37 1/2	73 1/2	42	2 3/4	3 to 1
24	3	9 1/2	43 1/2	30	73 1/2	48	3	3 to 1
27	3 1/4	10 1/2	49 1/2	24	73 1/2	54	3 1/4	3 to 1
30	3 1/2	12	54	19 3/4	73 1/2	60	3 1/2	3 to 1
36	4	15	63	34 3/4	97 3/4	72	4	3 to 1
42	4 1/2	21	63	35	98	78	4 1/2	3 to 1
48	5	24	72	26	98	84	5	3 to 1
54	5 1/2	27	65	* 33 1/4 - ** 35	* 98 1/4 - ** 100	90	5 1/2	2 2/5 to 1
60	6	* 30 - ** 35	60	39	99	96	5	2 to 1
66	6 1/2	* 24 - ** 30	* 72 - ** 78	* 21 - ** 27	99	102	5 1/2	2 to 1
72	7	* 24 - ** 36	78	21	99	108	6	2 to 1
78	7 1/2	* 24 - ** 36	78	21	99	114	6 1/2	2 to 1
84	8	36	90 1/2	21	111 1/2	120	6 1/2	1 1/2 to 1
90	8 1/2	41	87 1/2	24	111 1/2	132	6 1/2	1 1/2 to 1

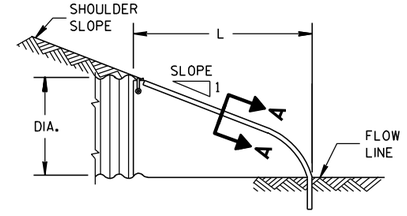
*MINIMUM
**MAXIMUM



PLAN VIEW

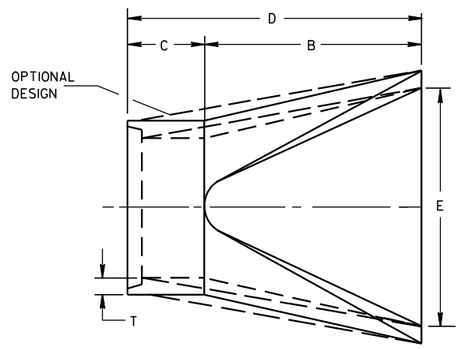


END VIEW

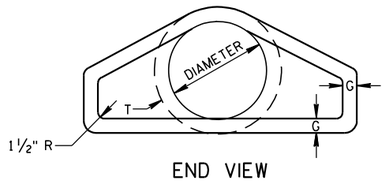


SIDE ELEVATION

METAL ENDWALLS



PLAN



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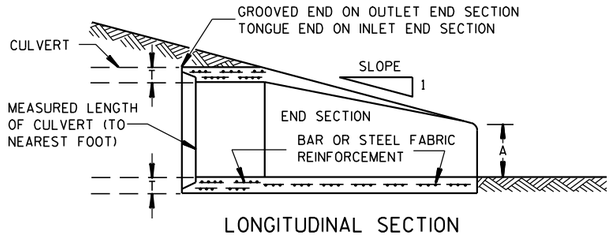
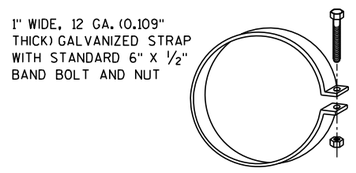


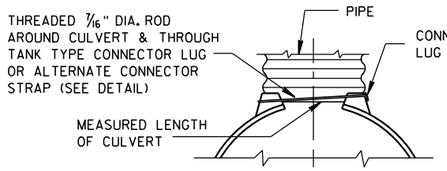
LONGITUDINAL SECTION

CONCRETE ENDWALLS

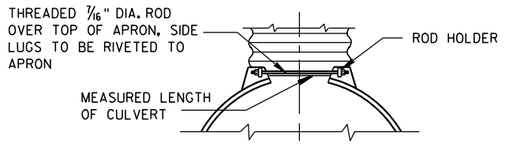


ALTERNATE FOR TYPE 1 CONNECTION

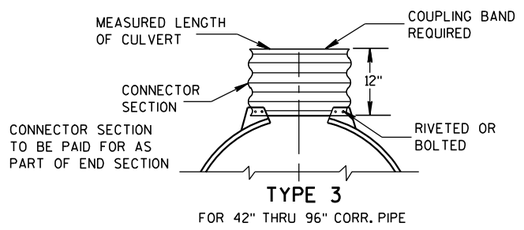
END SECTION CONNECTOR STRAP



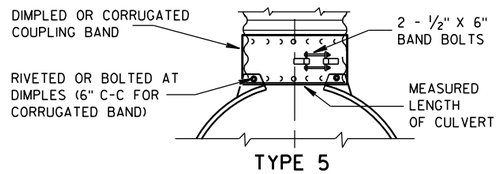
TYPE 1
FOR 12" THRU 24" CORR. PIPE



TYPE 2
FOR 30" THRU 96" CORR. PIPE



TYPE 3
FOR 42" THRU 96" CORR. PIPE



TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

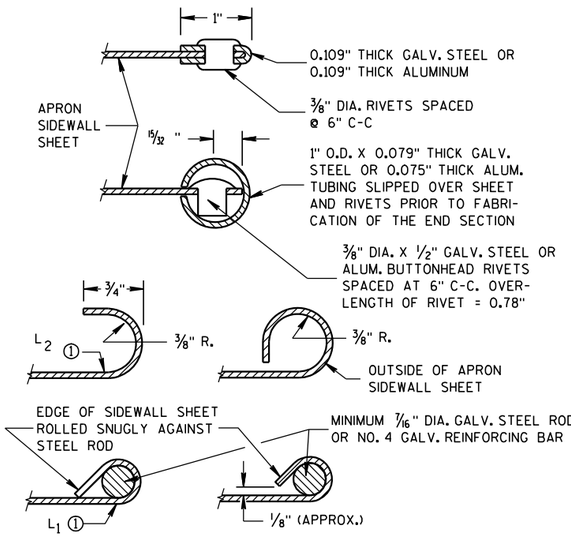
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

FOR CIRCUMFERENTIALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2, 3 OR 5 AS APPLICABLE.

FOR HELICALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2 OR 5.

FOR HELICALLY CORRUGATED PIPES WITH TWO CIRCUMFERENTIAL CORRUGATIONS AT EACH END USE ENDWALL CONNECTION DETAILS 1, 2 OR 3.

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

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

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

ALL THREE PIECE STEEL APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT OF THE PIPE PERIMETER.

LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS. FOR THE 60" THROUGH 96" DIAMETER APRON ENDWALL SIZES, THE REINFORCED EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES. THE ANGLES SHALL BE ATTACHED BY GALVANIZED NUTS AND BOLTS FOR STEEL UNITS AND ALUMINUM NUTS AND BOLTS FOR ALUMINUM UNITS.

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

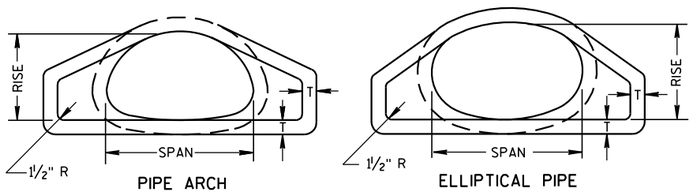
① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR CULVERT PIPE

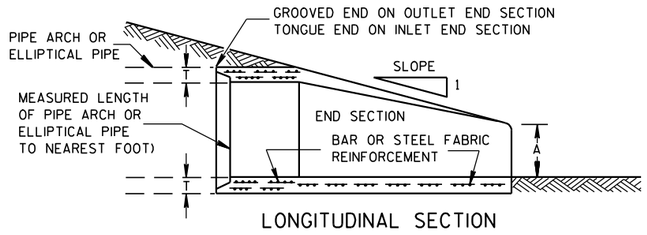
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6
S.D.D. 8 F 1-11



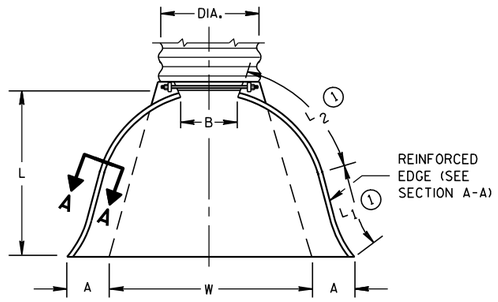
END VIEW



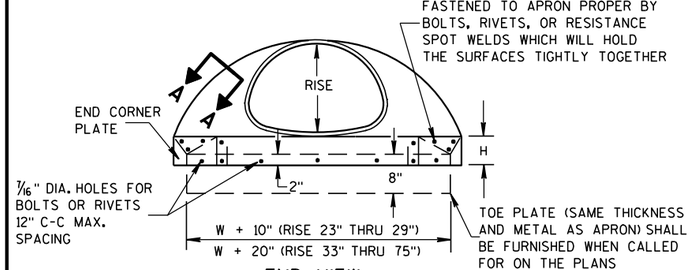
LONGITUDINAL SECTION

PLAN VIEW

CONCRETE ENDWALLS



PLAN VIEW



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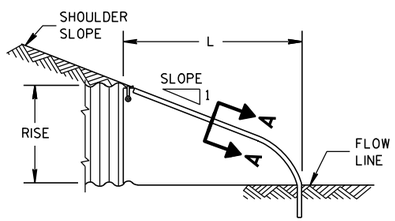
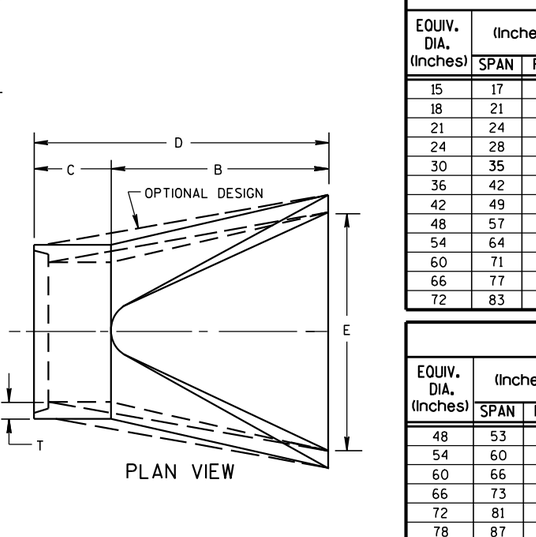


SIDE ELEVATION

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

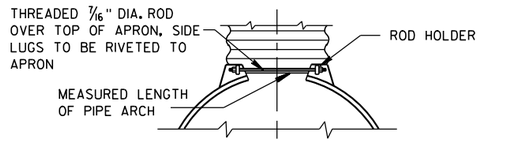
REINFORCED CONCRETE PIPE ARCH

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

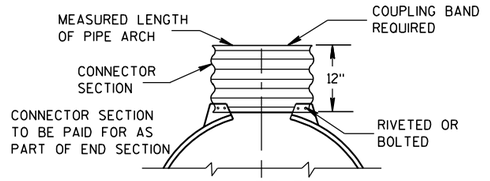
EQUIV. DIA. (Inches)	DIMENSIONS (Inches) ** SPAN	** RISE	T	A	B	C	D	E	APPROX. SLOPE
24	30	19	3¼	8½	39	33	72	48	3 to 1
30	38	24	3¾	9½	54	18	72	60	3 to 1
36	45	29	4½	11⅛	60	24	84	72	2½ to 1
42	53	34	5	15¾	60	36	96	78	2½ to 1
48	60	38	5½	21	60	36	96	84	2½ to 1
54	68	43	6	25½	60	36	96	90	2½ to 1
60	76	48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

**NOMINAL SIZE



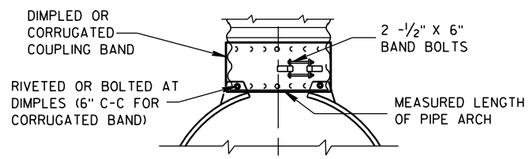
TYPE 2

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

6

S.D.D. 8 F 2-1

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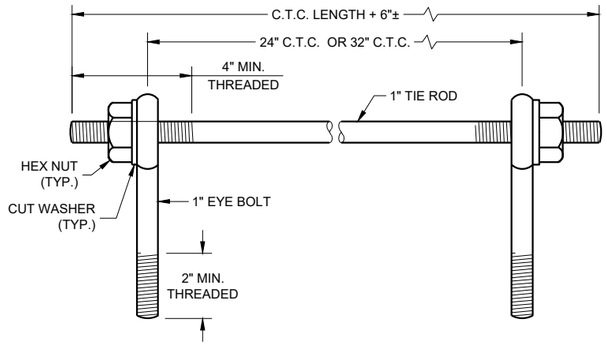
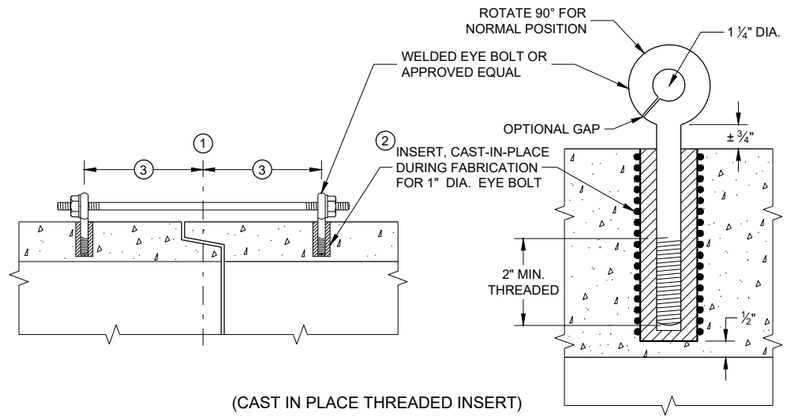
S.D.D. 8 F 2-1



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.

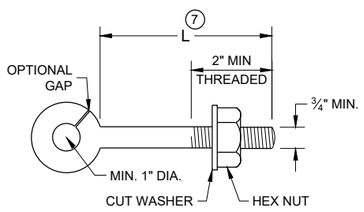
(3) HOLES SHALL BE CAST-IN-PLACE OR DRILLED PER THE APPLICABLE DETAIL, AND EQUAL DISTANCE FROM THE CENTERLINE OF THE JOINT.

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

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

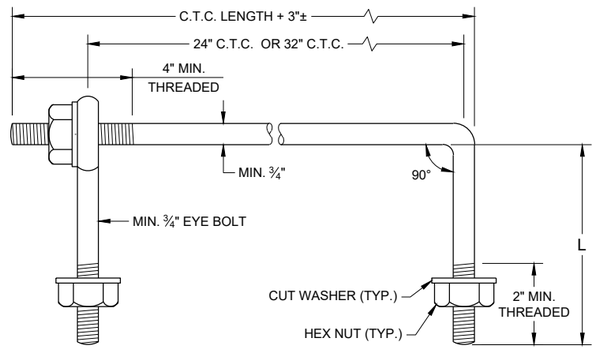
(6) LENGTH ADEQUATE TO EXTEND TO WITHIN ½ INCH OF THE INNER SURFACE OF THE PIPE.

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

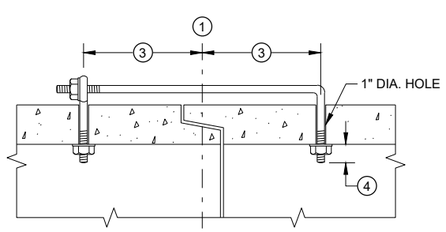


EYE BOLT (7)

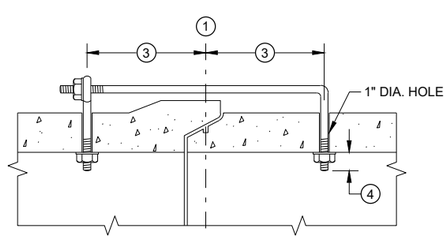
NOTE: TWO EYE BOLTS MAY BE USED WITH A 30" OR 38" LONG THREADED ROD IN LIEU OF THE 90° BENT TIE ROD.



EYE BOLT AND TIE ROD



(TONGUE AND GROOVE PIPE)



(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

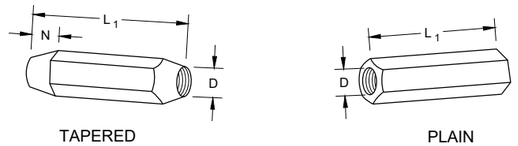
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

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

ADJUSTABLE TIE ROD TABLE

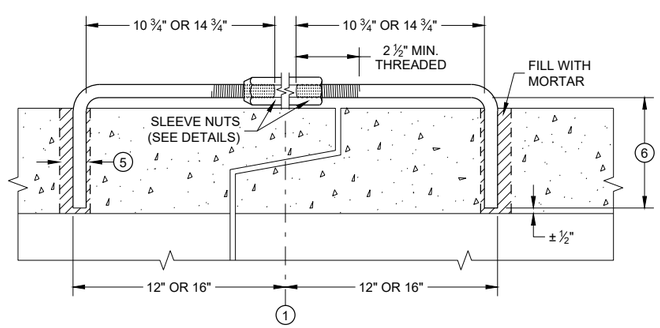
PIPE DIAMETER	TIE ROD DIAMETER	D	L_1	N
12 - 60	⅝	⅝	5	½
66 - 84	¾	¾	5	½
90 - 144	1	1	7	1 7/16

DIMENSIONS SHOWN ARE IN INCHES



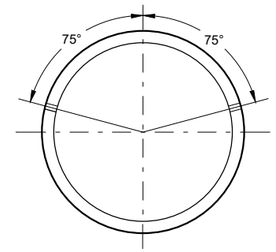
RIGHT AND LEFT THREADS

SLEEVE NUTS



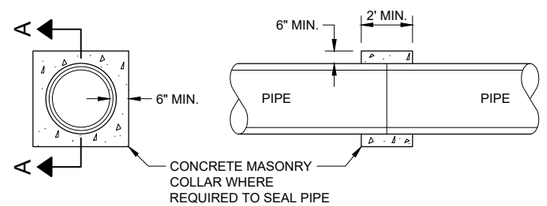
LONGITUDINAL SECTION

ADJUSTABLE TIE ROD (ALTERNATE NO. 3)



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

TRANSVERSE SECTION



SECTION A - A

CONCRETE COLLAR DETAIL

JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

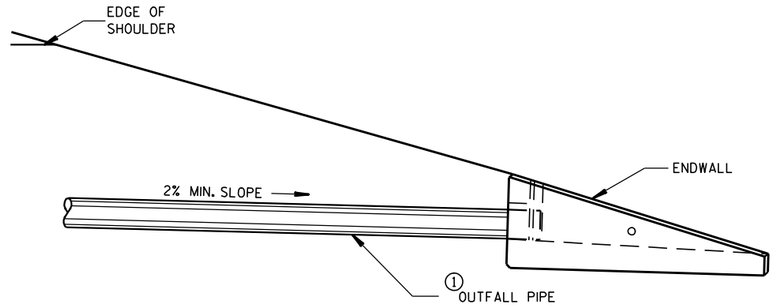
FHWA

SDD 08F04 - 08

SDD 08F04 - 08

DIMENSIONS IN INCHES											
PIPE DIA.	A	B	C	D	E	F	G	H	J	L	Z
**4	6	12	5 1/4	9	8	32	36	11	2 3/8	6 1/2	4
6	8	14	7 1/4	11	10	42	44	13	3 5/8	8 1/2	6

**APRON ENDWALL FOR 6 INCH DIAMETER PIPE MAY BE SUBSTITUTED FOR THIS SIZE PROVIDED THE HOLE IN THE HEADWALL IS SIZED AND LOCATED TO CONFORM TO THE 4 INCH DIAMETER PIPE DIMENSIONS (C & J)



INSTALLATION DETAIL

GENERAL NOTES

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

ALTERNATIVE DESIGNS WHICH PROVIDE EQUIVALENT CAPACITY AND STRENGTH MAY BE USED WHEN APPROVED BY THE ENGINEER. ENDWALL MAY BE EITHER PRECAST OR CAST-IN-PLACE CONCRETE.

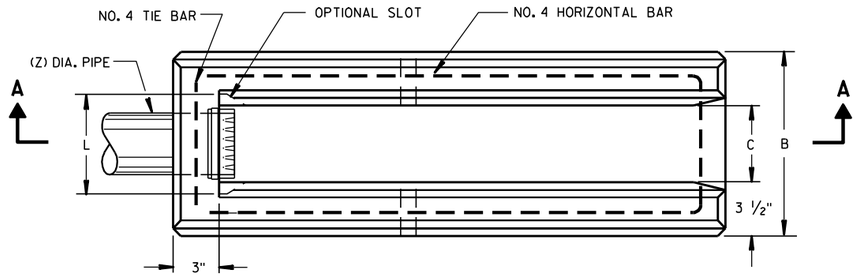
THE UNDERDRAIN PIPE SHALL BE FULLY INSERTED AND SEALED INTO THE ENDWALL WITH CEMENT MORTAR PRIOR TO BACKFILLING AROUND THE STRUCTURE.

THE UPPERMOST POINT OF THE ENDWALL SHALL BE PLACED FLUSH WITH THE ROADWAY SLOPE. ADJACENT EMBANKMENT SLOPES SHALL BE SHAPED TO FIT THE SIDES AND TOE OF THE ENDWALL. EXACT PLACEMENT OF THE OUTFALL PIPE AND ENDWALL SHALL BE DETERMINED BY THE ENGINEER TO MATCH THE ELEVATIONS AND FLOW DIRECTION OF THE ROADSIDE DITCH.

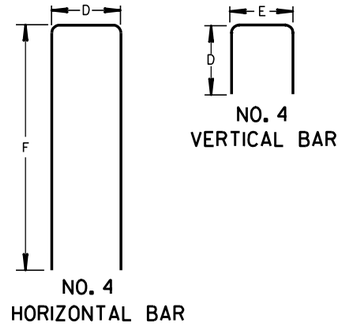
① THE OUTFALL PIPE UNDERDRAIN AND FITTINGS SHALL CONFORM TO THE REQUIREMENTS OF THE SPECIFICATION FOR POLY (VINYL CHORIDE) (PVC) PLASTIC DRAIN, WASTE AND VENT PIPE AND FITTINGS, ASTM DESIGNATION: D 2665, SCHEDULE 40 PVC OR THE STANDARD SPECIFICATION FOR TYPE PSM POLY (VINYL CHORIDE) (PVC) SEWER PIPE AND FITTINGS, ASTM DESIGNATION: D 3034, TYPE PSM SDR 23.5 PVC SEWER PIPE, ALL JOINTS SHALL BE SOLVENT WELDED.

THE OUTFALL PIPE INCLUDING ALL FITTINGS AND THE RODENT SHIELD SHALL BE MEASURED AND PAID FOR AS PIPE UNDERDRAIN UNPERFORATED.

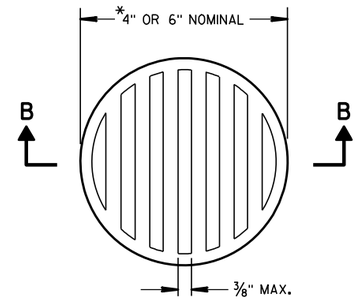
② THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE OUTFALL PIPE. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.



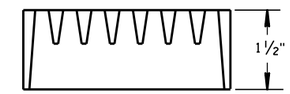
PLAN VIEW



BAR STEEL REINFORCEMENT DETAILS



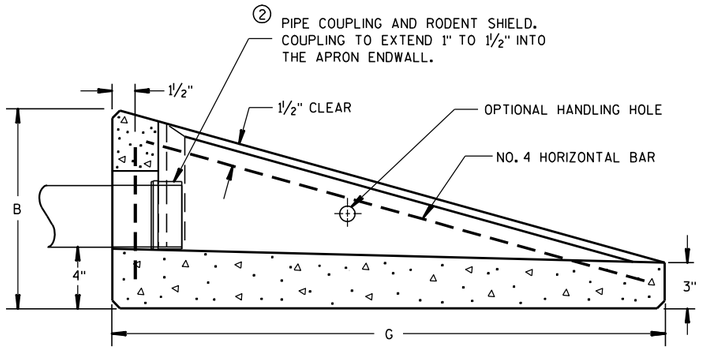
NOTE: ORIENT SHIELD SO SLOTS ARE VERTICAL.



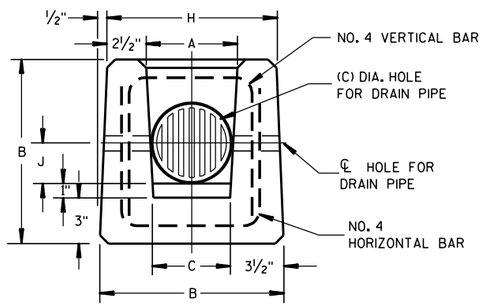
SECTION B-B

② RODENT SHIELD

*NOTE: DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING.



SECTION A-A



END VIEW

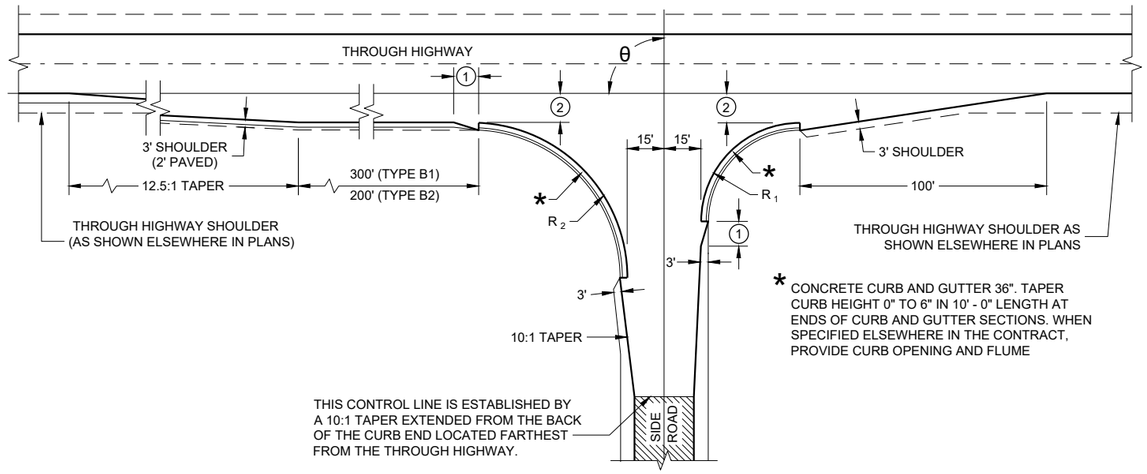
CONCRETE APRON ENDWALL FOR UNDERDRAIN

REINFORCED CONCRETE APRON ENDWALL FOR PIPE UNDERDRAIN

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
3/10/98 DATE
/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6
S.D.D. 8 F 6-4



TYPE "B1" AND "B2"

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

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

GENERAL NOTES

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

SIDE ROAD SURFACING NOTE

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

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

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

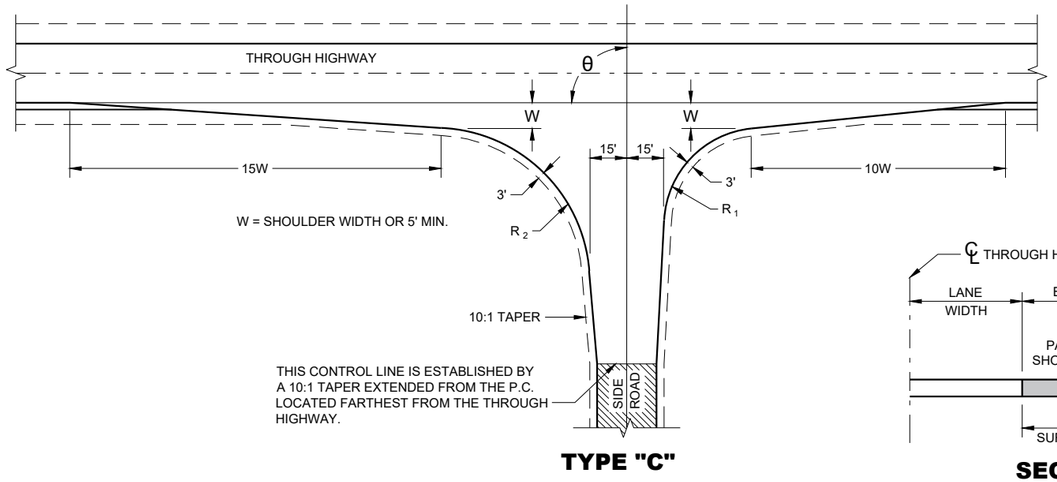
(1) 10-FT TYPICAL.

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

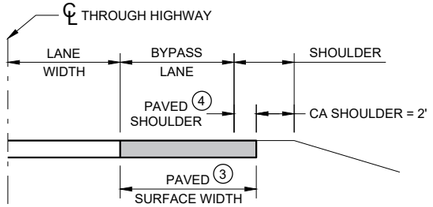
**10-FT MAY BE USED ON TYPE B2 ON RESURFACING PROJECTS IF SPECIFIED IN THE CONTRACT.

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

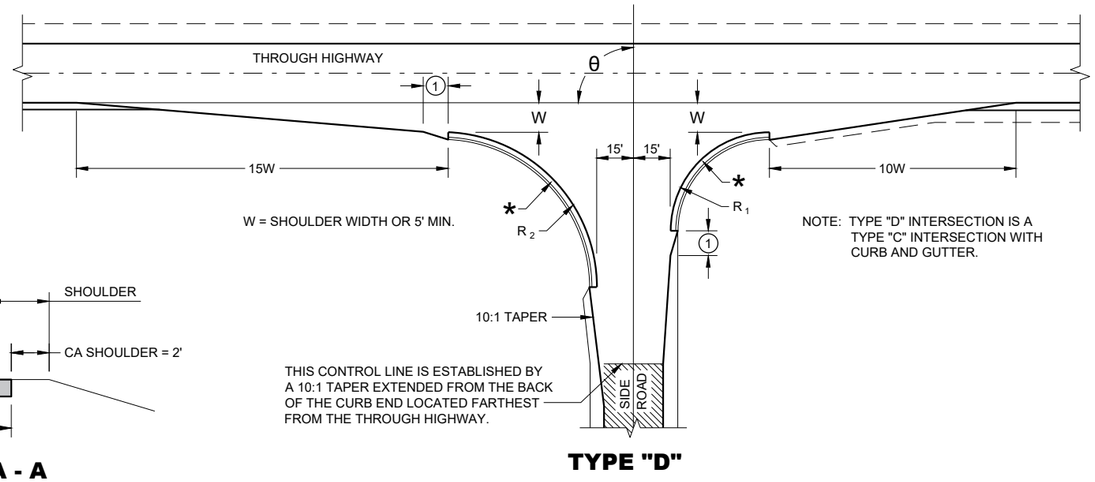
(4) BYPASS LANE PAVED SHOULDER WIDTH = THE GREATER OF 1-FT OR THE PAVED SHOULDER WIDTH OF THE THROUGH HIGHWAY.



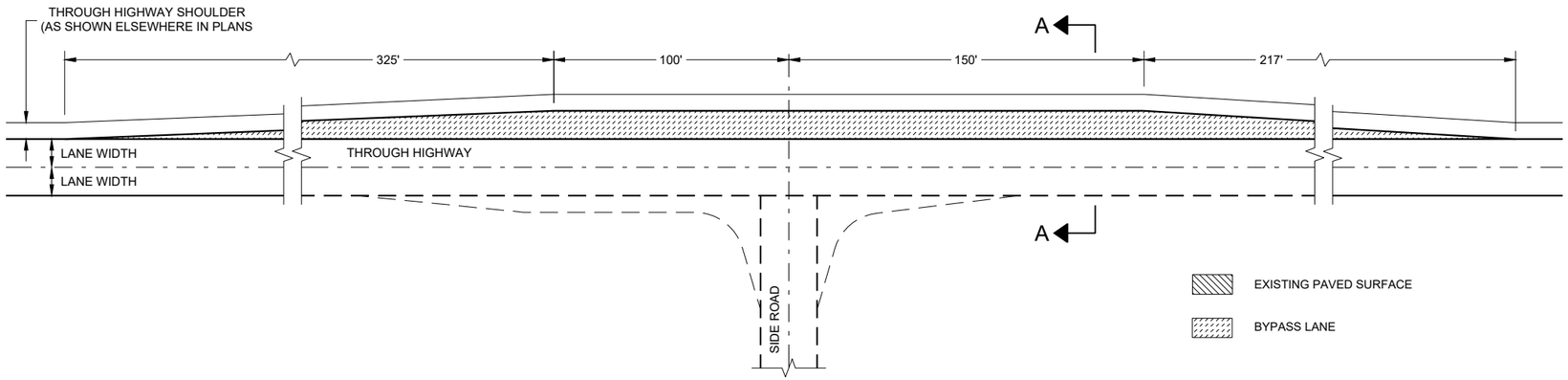
TYPE "C"



SECTION A - A
(SHOWING BYPASS LANE AND SHOULDER)



TYPE "D"



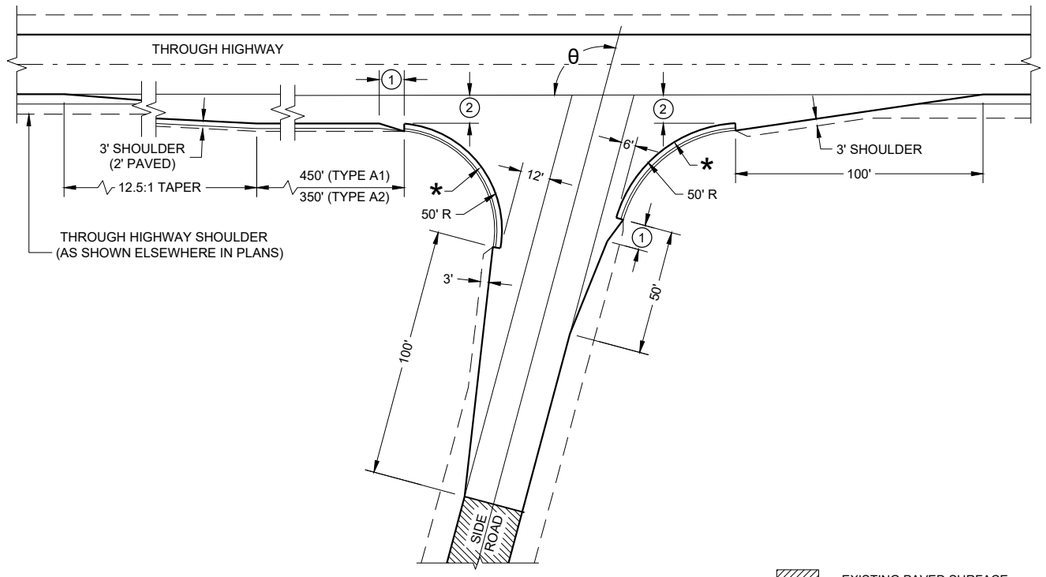
TEE INTERSECTION BYPASS LANE DETAIL

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

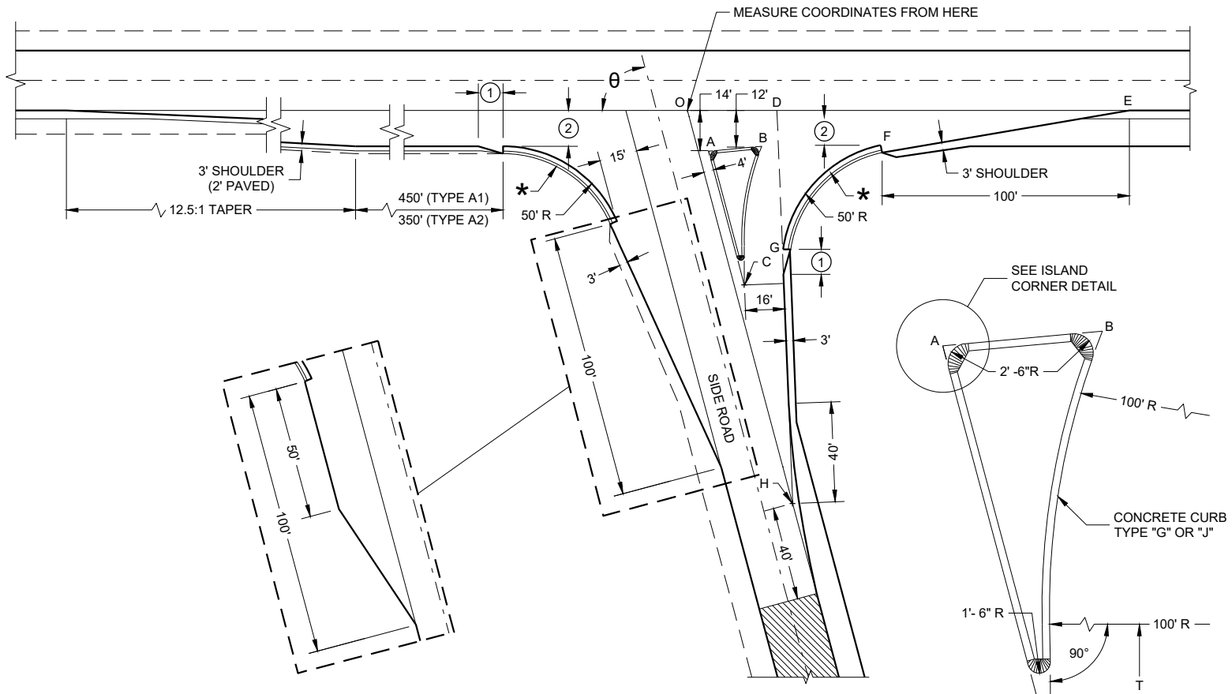
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 09A01 - 14a
SDD 09A01 - 14a

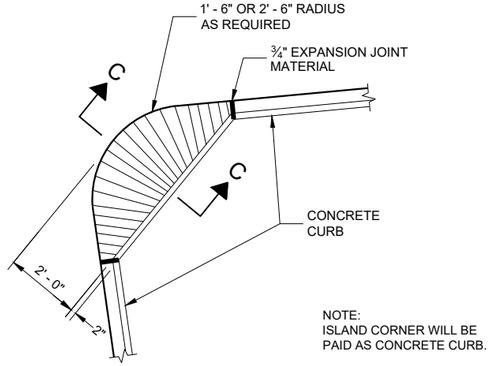


θ = MORE THAN 80°

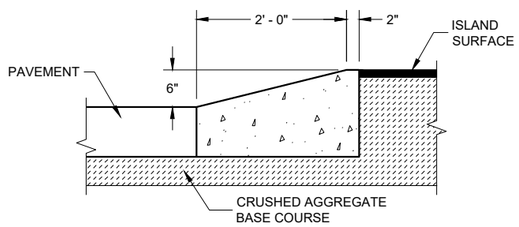


SIDE ROAD WIDENING AND TAPER REQUIRED WHERE
THE THROUGH HIGHWAY CARRIES TWO-WAY TRAFFIC
θ = ACUTE ANGLES 70° OR LESS

θ = ACUTE ANGLES 80° OR LESS



PLAN VIEW



SECTION C - C

ISLAND CORNER DETAIL

(TO BE CONSTUCTED AT ALL ISLAND CORNERS)

TABLE OF DIMENSIONS FOR VARIABLE SIDE ROAD INTERSECTION ANGLES

(INTERPOLATE VALUES FOR ANGLES NOT SHOWN)

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

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

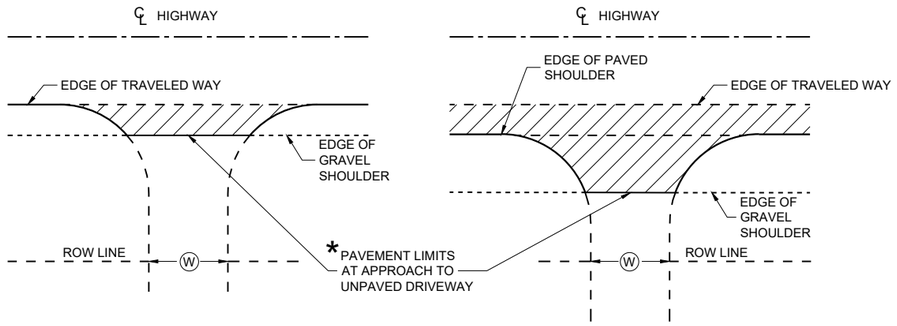
AT GRADE SIDE ROAD INTERSECTIONS
TYPES "A1" AND "A2"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

SDD 09A01 - 14b

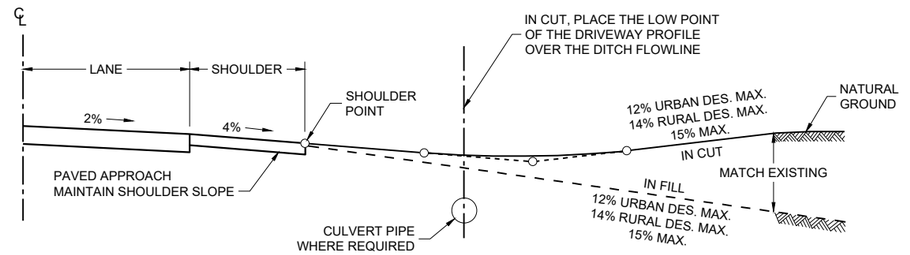


* WHERE DRIVEWAY IS PAVED, APPROACH PAVEMENT SHOULD BE EXTENDED TO MATCH DRIVEWAY PAVEMENT.

PLAN VIEW
(UNPAVED SHOULDER ON HIGHWAY)

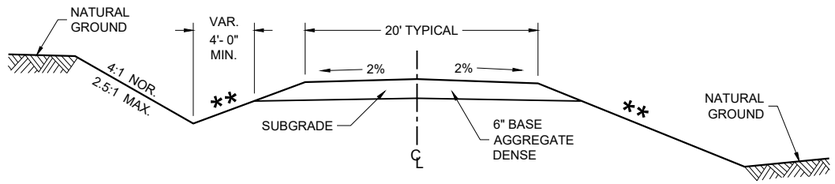
PLAN VIEW
(PAVED SHOULDER ON HIGHWAY)

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



TYPICAL DRIVEWAY PROFILES

Ⓦ : DRIVEWAY WIDTHS (MEASURED AT ROW LINE)
~ COMMERCIAL & INDUSTRIAL 16' MIN. - 35' MAX.
~ RESIDENTIAL & AGRICULTURAL (NONCOMMERCIAL) 16' MIN. - 24' MAX.

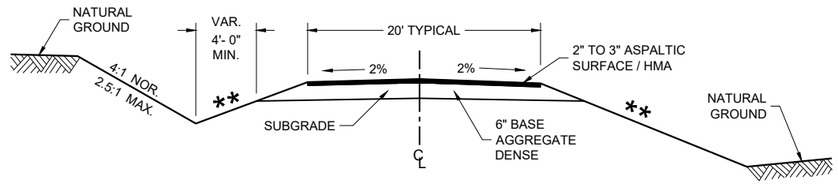


IN CUT **IN FILL**

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

DRIVEWAYS WITHOUT CURB AND GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2025 — DATE
/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
FHWA

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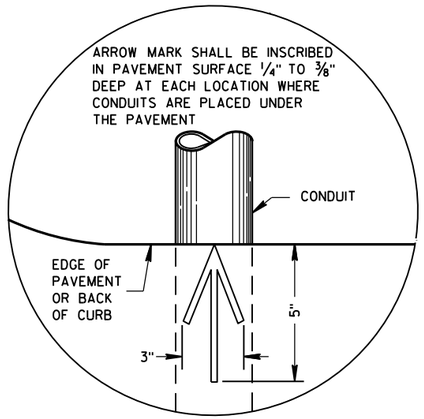
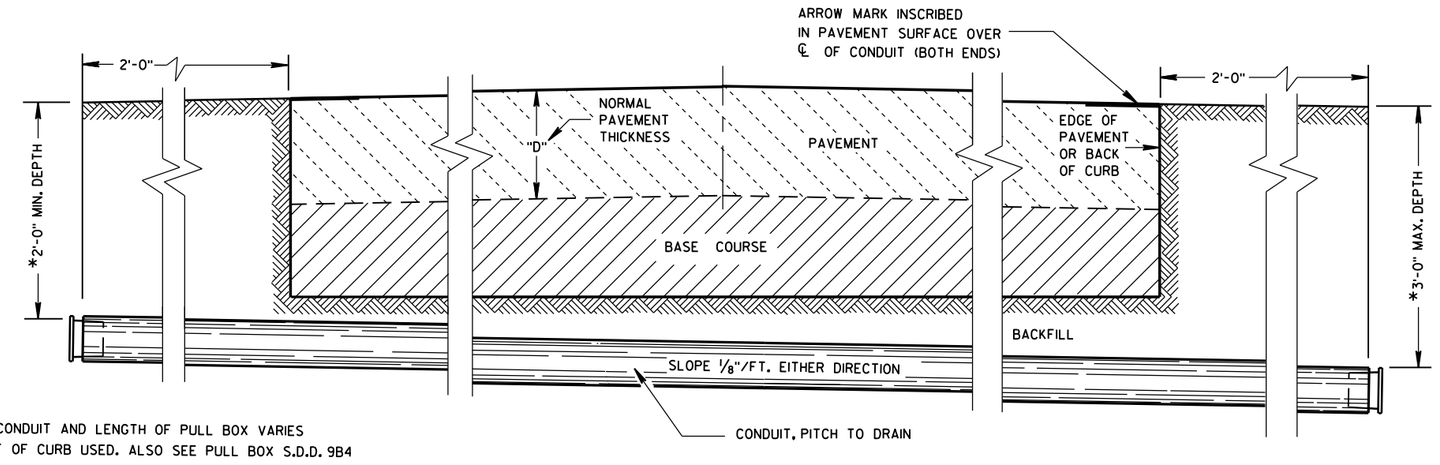
SDD 09A14-01



PLAN VIEW

ARROW MARK



*DEPTH OF CONDUIT AND LENGTH OF PULL BOX VARIES WITH HEIGHT OF CURB USED. ALSO SEE PULL BOX S.D.D. 9B4

SIDE ELEVATION

DETAIL FOR CONDUIT UNDER PAVED HIGHWAYS

GENERAL NOTES

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

METALLIC (STANDARD SPECIFICATION 652.2.2) OR NONMETALLIC (STANDARD SPECIFICATION 652.2.3) CONDUIT SHALL BE FURNISHED AND PLACED AS SHOWN.

DEPTH OF CONDUIT INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES MINIMUM AND 36 INCHES MAXIMUM.

DEPTH OF CONDUIT INSTALLED THAT IS NOT BELOW THE TRAVELED WAY SHALL BE 18 INCHES MINIMUM AND 36 INCHES MAXIMUM.

ANY EXCEPTION TO THE MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE ENGINEER.

THE TRENCH SHALL NOT BE BACKFILLED PRIOR TO INSPECTION OF THE CONDUIT.

ALL METALLIC CONDUIT RACEWAY ENDS SHALL BE REAMED AND THREADED.

ALL METALLIC CONDUIT IN WHICH WIRE OR CABLE IS TO BE INSTALLED SHALL BE BUSHED WITH APPROVED THREADED BUSHINGS BEFORE INSTALLATION OF THE WIRE OR CABLE.

ALL METALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT TO BE INSTALLED SHALL BE CAPPED WITH THREADED PROTECTIVE CAPS, AS APPROVED BY THE ENGINEER.

ALL NONMETALLIC CONDUIT SHALL BE CAPPED OR PLUGGED IMMEDIATELY AFTER INSTALLATION AND SHALL REMAIN CAPPED OR PLUGGED UNTIL WIRE/CABLES ARE INSTALLED.

NONMETALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

BENDING OF PVC ELECTRICAL CONDUIT SHALL BE ACCOMPLISHED BY USING A BLANKET OR EMERSION TYPE TANK DESIGNED FOR THE PURPOSE OF BENDING PVC ELECTRICAL CONDUIT.

ALL CUT ENDS SHALL BE TRIMMED INSIDE AND OUTSIDE TO REMOVE ALL ROUGH EDGES ON NONMETALLIC CONDUIT. (SEE NEC 347.5)

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY U.L. LISTED ADAPTER FITTINGS SHALL BE USED.

PRIOR TO CONDUIT ACCEPTANCE, CONDUIT CAPS OR PLUGS SHALL BE REMOVED, AND THE CAPS, PLUGS AND CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND THEN THE CAPS OR PLUGS REINSTALLED TO ENSURE THAT THE CAPS OR PLUGS CAN BE EASILY REMOVED IN THE FUTURE.

ALL CONDUIT BEING FURNISHED AND INSTALLED SHALL HAVE THE U.L. LABEL FIRMLY ATTACHED.

CONDUIT RUNS SHALL BE THE SAME SIZE OF CONDUIT FROM ONE END TO THE OTHER (FROM PULL BOX TO PULL BOX-OR-JUNCTION BOX TO JUNCTION BOX-OR-BASE TO BASE, ETC.).

TRACER WIRE SHALL BE INSTALLED AS STATED IN THE STANDARD SPECIFICATION, ITEM 652.3.1.1.

ALL CONDUIT RUNS SHALL BE STRAIGHT (WITHOUT BENDS) FROM PULL BOX TO PULL BOX, PULL BOX TO BASE AND BASE TO BASE AS SHOWN ON THE PLANS.

CONDUIT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March, 2017 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL 300
FHWA

6

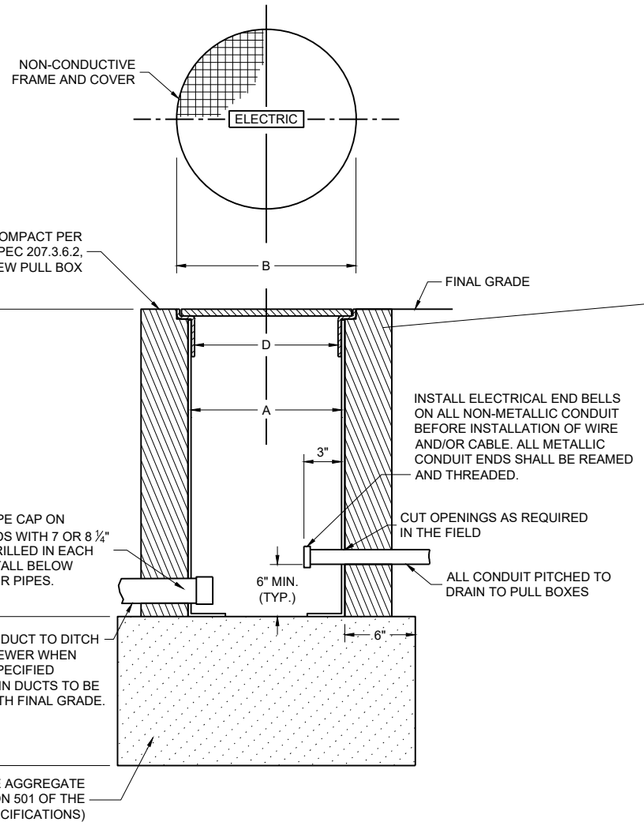
S.D.D. 9 B 2-10

TABLE OF NOMINAL DIMENSIONS
AND WEIGHTS

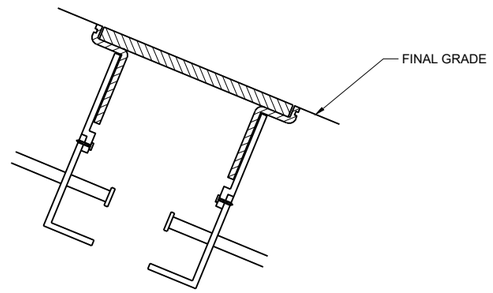
DIMENSION IN INCHES		NON- CONDUCTIVE PULL BOX	
BOX DIAMETER ** (INSIDE)	A	24	24
BOX OVERALL OUTSIDE DIAMETER	B	27	27
BOX LENGTH	C	36	42
FRAME OPENING	D	22 ½	22 ½
WEIGHT IN POUNDS *			
COVER		50	50
BOX ONLY		75	85

*THE ACTUAL WEIGHT OF THE COVER OR BOX ONLY MAY VARY NOT TO EXCEED 100 LBS INDIVIDUALLY.

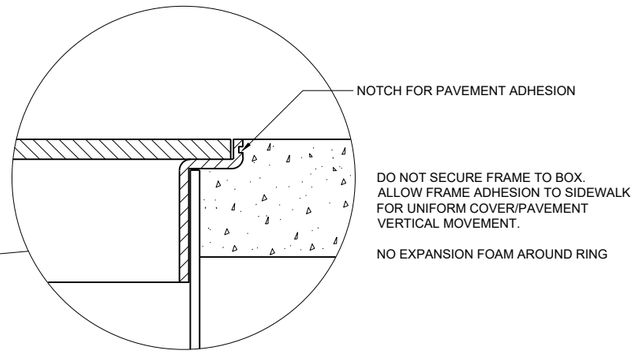
** DIAMETER VARIES FROM TOP TO BOTTOM WITH THE DIAMETER LARGER AT THE BOTTOM TO PREVENT FROST HEAVE.



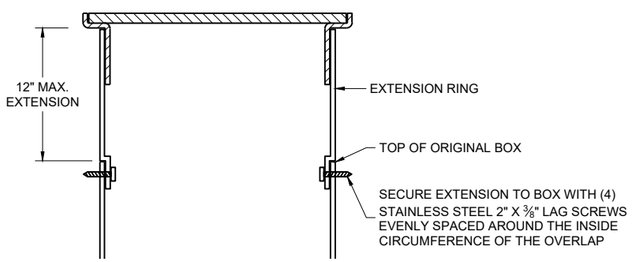
NON-CONDUCTIVE PULL BOX



INSTALLED IN SOD OR CRUSHED AGGREGATE



INSTALLED IN SIDEWALK



BOX EXTENSION

GENERAL NOTES

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

ALL BOXES, FRAMES AND COVERS SHALL BE SUITABLE FOR TIER 15 LOADING AS SPECIFIED IN ANSI/SCTE 77.

PROVIDE AN OPENING FOR TOOL ASSISTED COVER REMOVAL NOT LARGE ENOUGH TO PERMIT PASSAGE OF A SPHERE MORE THAN ½" DIAMETER

ENSURE COVER SURFACE IS SKID RESISTANT WITH A COEFFICIENT OF FRICTION OF AT LEAST 0.5 AND VERTICAL SURFACE DICONTINUITIES LESS THAN ¼".

COVER SHALL BE MAGNETICALLY LOCATABLE.

BOXES AND EXTENSIONS ARE TRIMMABLE FOR CUSTOM LENGTHS. TRIMMED PIECES SHALL MAINTAIN A UNIFORM LENGTH.

ENTRANCE HOLES INTO PULL BOXES SHALL BE CUT WITH A CIRCULAR HOLE SAW OR HYDRAULIC CONDUIT PUNCH. HOLE SIZE SHALL BE THE OUTSIDE DIAMETER OF THE CONDUIT THAT IS TO FIT IN THE OPENING PLUS NO MORE THAN ¼".

THE CONTRACTOR SHALL NOT INSTALL WIRE IN ANY PULL BOX UNTIL ITS INSTALLATION HAS BEEN INSPECTED AND ACCEPTED BY THE ENGINEER.

ALL METALLIC CONDUIT IN WHICH WIRE AND/OR CABLE IS TO BE INSTALLED, SHALL BE BUSHED BEFORE INSTALLATION OF THE WIRE AND/OR CABLE.

ENTIRE BOX MUST BE CONSTRUCTED OF NON-CONDUCTIVE MATERIALS WITH THE EXCEPTION OF STAINLESS STEEL FASTENERS AND MAGNETIC LOCATABLE DEVICE.

WHEN A PULL BOX IS INSTALLED IN CRUSHED AGGREGATE SHOULDERS, PLACE IT 2-3 INCHES BELOW GRADE AND COVER IT WITH 2-3 INCHES OF CRUSHED AGGREGATE.

LABEL ON COVER SHALL READ "ELECTRIC" FOR SIGNAL AND LIGHTING SYSTEMS, "WISDOT ITS" FOR COMMUNICATIONS AND ITS EQUIPMENT SYSTEMS.

INSTALL PULL BOX TO MATCH GRADE UP TO 3:1 MAX.

RING SHALL BE FLUSH WITH TOP OF PULL BOX.

COMPACT AROUND PULL BOX.

MEASUREMENT DETAIL FOR WIRE/CABLE IN THE PULL BOX

PULL BOXES NON-CONDUCTIVE

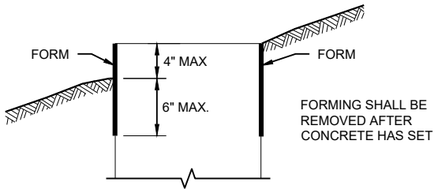
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2026 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL ENGINEER

FHWA

6
SDD 09B16-04

FORM DEPTH SHALL BE NO MORE THAN 6" BELOW GRADE ON THE LOWER SIDE OF BASE



FORMING DETAIL

QUANTITY REQUIREMENTS	CONCRETE BASE TYPE		
	1	2	5 & 6
APPROX. CUBIC YARDS OF CONCRETE	0.40	0.57	0.40
LBS. OF HOOP BAR STEEL	NONE	23	16
LBS. OF VERTICAL BAR STEEL	NONE	60	18

GENERAL NOTES

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

BASES SHALL BE EXCAVATED BY USE OF A CIRCULAR AUGER.

TOP SURFACES OF CONCRETE BASES SHALL BE TROWEL FINISHED SMOOTH AND LEVEL.

CONDUIT SIZES AND LOCATIONS SHALL BE SHOWN ON THE PLANS

THE FINAL OR TERMINATING CONCRETE BASE IN A CONDUIT RUN SHALL HAVE A 6" EXIT STUB INSTALLED FOR FUTURE CABLING USE. THE EXIT STUB SHALL BE SIZED AS USED THROUGHOUT THE CONDUIT RUN AS SHOWN A THE ENTRANCE OF THE BASE.

ENDS OF CONDUIT INSTALLED BELOW GRADE FRO FUTURE USE SHALL BE CAPPED IF METALLIC OR PLUGGED IF NON-METALLIC.

MINIMUM BENDING RADIUS OF CONDUIT IS EQUAL TO 6X THE DIAMETER.

CONDUIT HEIGHT ABOVE CONCRETE BASES SHALL BE 1 INCH. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NON-METALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF CONCRETE BASES BEFORE INSTALLATION.

WHEN REQUIRED TO CONNECT NON-METALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U.L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE DIRT OR FILL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING AROUND THE BASE. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BARE CONCRETE BASE IN LAYERS OF 1 FOOT OR LESS.

A NO. 4 AWG STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD) FOR TYPE 2, TYPE 5 AND TYPE 6 BASES.

THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE FURNISHED AND INSTALLED TO ENTER ALL BASE TYPES THROUGH A 1 INCH CONDUIT INSTALLED FOR GROUNDING PURPOSES, LEAVING A 4 FOOT COIL OF WIRE ABOVE THE CONCRETE BASE. THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE NEATLY COILED AND THE COILS TIED TOGETHER.

ANCHOR RODS SHALL BE THREADED 12" IN LENGTH ON EACH END OF THE ROD. ANCHOR RODS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 654.2.1 OF THE STANDARD SPECIFICATIONS.

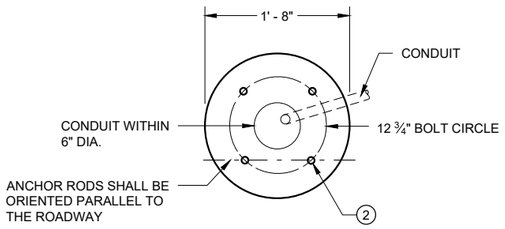
WASHERS AND LOCK WASHERS ARE REQUIRED ON ALL ANCHOR RODS.

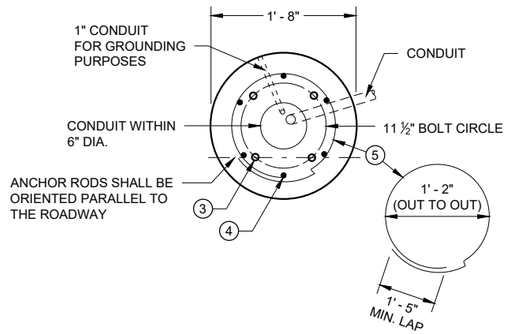
WHEN ANCHOR RODS USING THE ALTERNATE "L" BEND ARE FURNISHED, THE 4 INCH"L" BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR ROD BAR LENGTH. THE "L" BEND SHALL NOT BE THREADED.

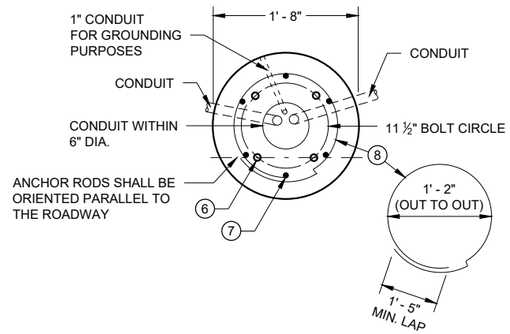
ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

WELDING OF THE ANCHOR RODS TO THE CAGE IS UNACCEPTABLE. TIE WIRES SHALL BE USED.

BAR STEEL REINFORCEMENT SHALL BE COATED WITH POWDERED EPOXY RESIN IN ACCORDANCE WITH SECTION 505 OF THE STANDARD SPECIFICATIONS (LATEST EDITION).







1 THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES EXCEPT WITH WRITTEN APPROVAL OF THE ENGINEER.

2 (4) 1" DIA. X 3' - 6" ANCHOR RODS.

3 (4) 1" DIA. X 5' - 0" ANCHOR RODS.

4 (6) NO. 6 X 6' - 8" BAR STEEL REINFORCEMENT.

5 (7) NO. 4 X 5' - 1" BAR STEEL REINFORCEMENT @ 1' - 0" C - C.

6 (4) 1" DIA. X 3' - 6" ANCHOR RODS.

7 (6) NO. 4 X 4' - 8" BAR STEEL REINFORCEMENT.

8 (5) NO. 4 X 5' - 1" BAR STELL REINFORCEMENT @ 1' - 0" C -C.

9 EXOTHERMIC CONNECTION TO EUIPMENT GROUNDING CONDUCTOR

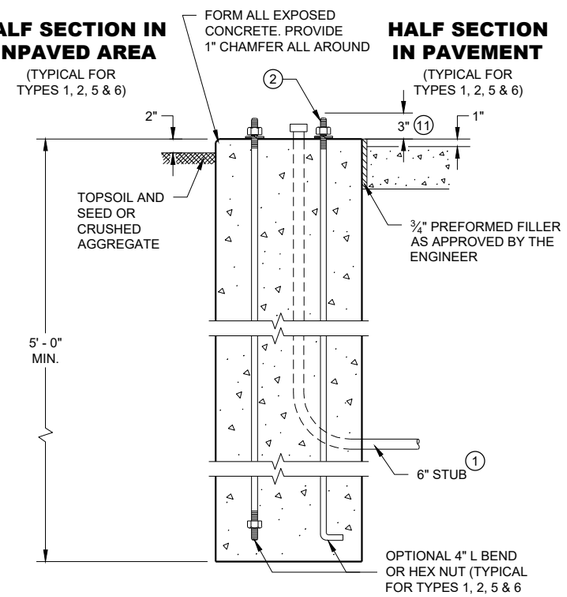
10 ⅝" DIA. X 8' -0" COPPERCLAD EQUIPMENT GROUNDING ELECTRODE REQUIRED

11 ANY ANCHOR ROD PROJECTION SHORTER THAN 2 ¾" OR LONGER THAN 3 ¼" SHALL REQUIRE THE BASE TO BE REMOVED AND REPLACED AT THE CONTRACTORS EXPENSE.

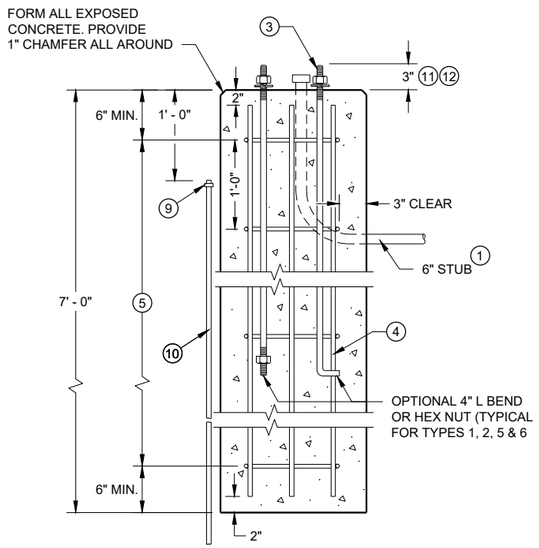
12 FOR NON - BREAKAWAY INSTALLATIONS, 4 ½" ± ANCHOR ROD PROJECTION WITH THE USE OF LEVELING NUTS. RODENT SCREEN REQUIRED.

HALF SECTION IN UNPAVED AREA
(TYPICAL FOR TYPES 1, 2, 5 & 6)

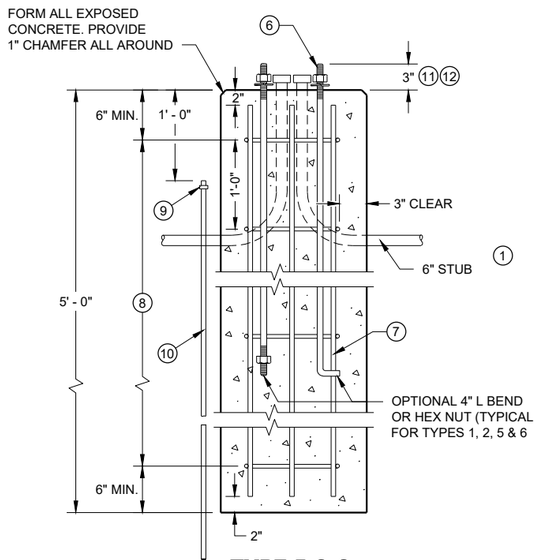
HALF SECTION IN PAVEMENT
(TYPICAL FOR TYPES 1, 2, 5 & 6)



TYPE 1



TYPE 2



TYPE 5 & 6

CONCRETE BASES

CONCRETE BASES TYPES 1, 2, 5, & 6

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2019 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL ENGI
302
FHWA

GENERAL NOTES

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

FOUR (4) BOLTS SHALL BE FURNISHED WITH EACH TRANSFORMER BASE. BOLTS SHALL BE 1" DIAMETER, 4" IN LENGTH, WITH WASHERS, LOCK WASHERS AND NUTS. BOLTS, NUTS AND WASHERS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 531.2.2 OF THE STANDARD SPECIFICATIONS.

LEVELING SHIMS, IF NEEDED, SHALL BE DESIGNED FOR THE PURPOSE AND USED UNDER CAST BASES WHEN PLUMBING POLES OR STANDARDS DURING INSTALLATION. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE.

SHIM LENGTH SHALL BE LONG ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.

DOUBLE NUTTING IS NOT ACCEPTABLE FOR LEVELING OR MOUNTING PURPOSES.

A NEMA APPROVED, U.L. LISTED, COPPER WITH BRASS OR STAINLESS STEEL SET SCREW, DIRECT BURY RATED, MECHANICAL CONNECTOR (LUG), SIZED TO ACCEPT AWG. #10 TO #4 COPPER STRANDED WIRE SHALL BE FURNISHED AND INSTALLED IN THE PEDESTAL AND TRANSFORMER BASES.

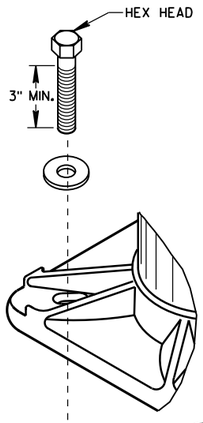
THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

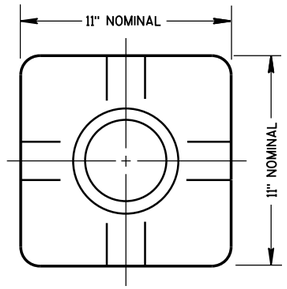
SHOULD THE MANNER OF ATTACHMENT OF THE LUG REQUIRE WASHERS, HEX NUTS, LOCK WASHER - THEY SHALL BE STAINLESS STEEL AS IS THE BOLT. THE MANNER OF ATTACHMENT SHALL NOT BLOCK ACCESSIBILITY TO WIRE PLACEMENT IN THE CONNECTOR.

PEDESTAL BASE COLLAR THREADING SHALL BE TAPERED AND IN ACCORDANCE WITH NATIONAL PIPE THREADING DIMENSIONS.

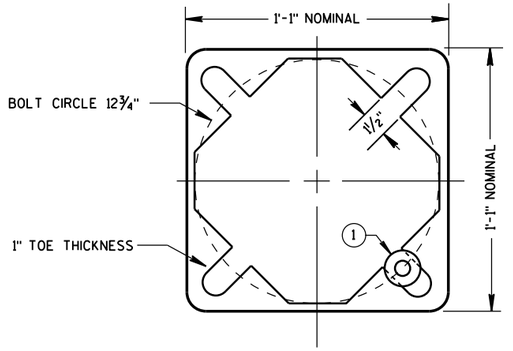
BASE COLLAR THREADING SHALL EXTEND INTO THE BASE COLLAR WITH SUFFICIENT DEPTH TO ACCEPT THE INSTALLATION OF TRAFFIC SIGNAL STANDARDS TO A DEPTH OF 1 1/2", THEN TIGHTENING TO A POINT OF BEING IMMOVABLE.

THE ACCESS DOOR SHALL BE OF THE SAME MATERIAL AS THE BASE.

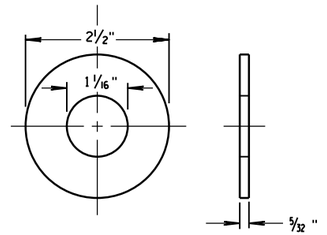




TOP VIEW
(PEDESTAL BASE)

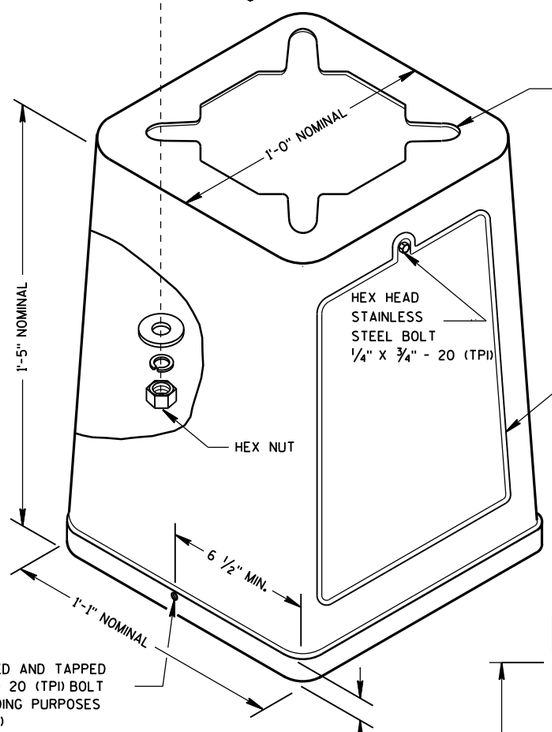


BOTTOM VIEW
(PEDESTAL BASE)

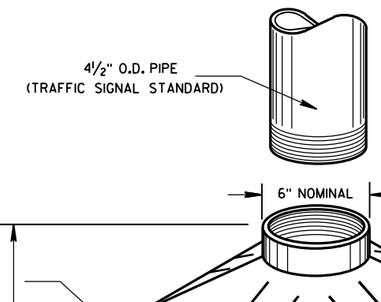


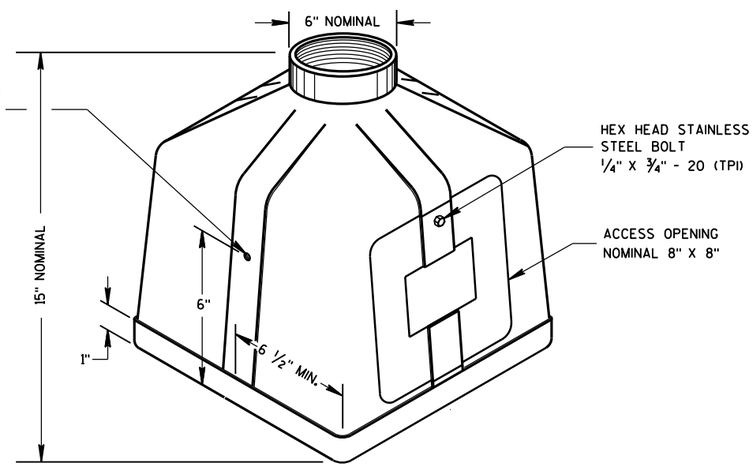
ZINC COATED STEEL WASHER
TO BE PROVIDED BY THE CONTRACTOR

PEDESTAL BASE WASHER (1)



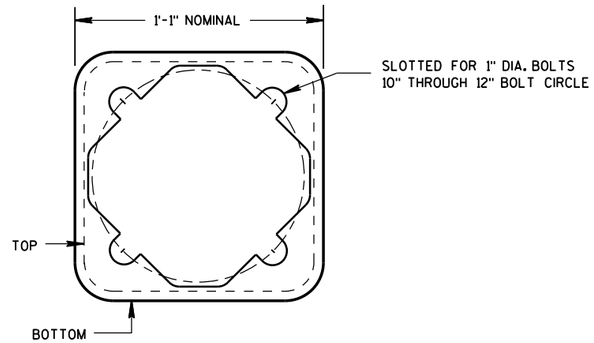
ISOMETRIC VIEW



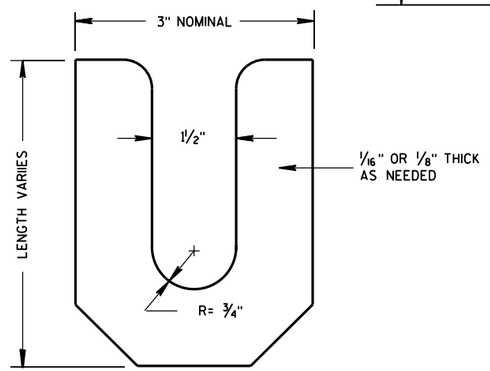


ISOMETRIC VIEW

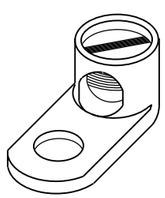
PEDESTAL BASE



BOTTOM VIEW
(TRANSFORMER BASE)



LEVELING SHIM



TYPICAL MECHANICAL CONNECTOR LUG

TO BE FURNISHED WITH EACH BASE

TRANSFORMER BASE

INTENDED FOR USE WITH TYPE 2, 3, 4, 5 & 6 POLES

TRANSFORMER/PEDESTAL BASES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

6

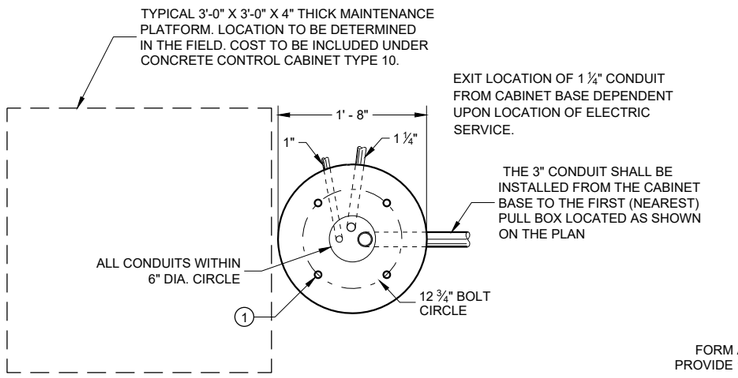
S.D.D. 9 C 3-4

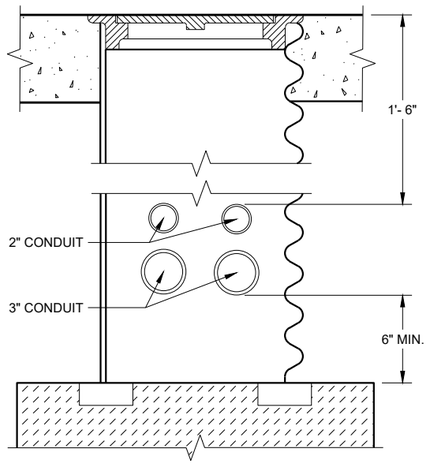
6

S.D.D. 9 C 3-4

CONTROL CABINET BASE TYPE	DIMENSIONS				CUBIC YARD CONCRETE (APPROX.)
	H	I	J	K	
TYPE 6 - 30" CABINET	34"	60"	10"	17"	.64
TYPE 7 - 38" CABINET	42"	60"	10"	21"	.93
TYPE 8 - 38" CABINET	42"	72"	12"	21"	1.29
TYPE 9 - VARIABLE	54"	72"	14"	27"	1.56
TYPE 10 - POST MOUNT	AS SHOWN				.65*

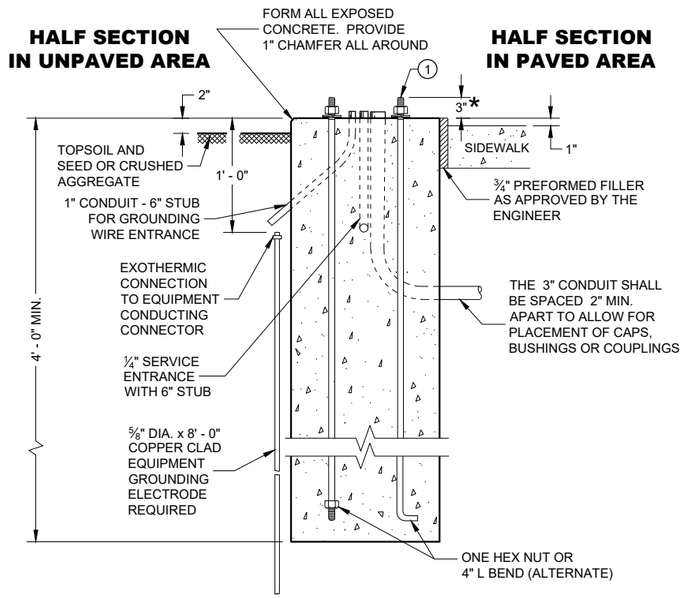
*INCLUDES MAINTENANCE PLATFORM.





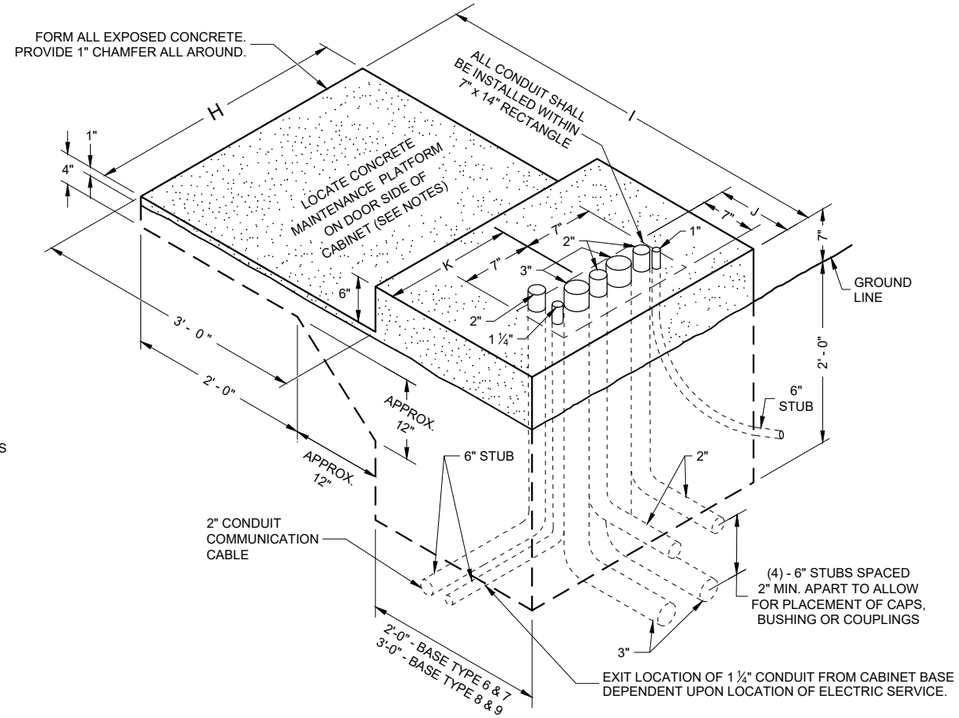
CONDUIT LOCATIONS IN 24" X 36" PULL BOX

(LEADING TO CONTROLLER CABINET BASE TYPE 6, 7, 8 AND 9)



TYPE 10

*ANY ANCHOR ROD PROJECTION SHORTER THAN 2 ¾" OR LONGER THAN 3 ¼" SHALL REQUIRE THE BASE TO BE REMOVED AND REPLACED AT THE CONTRACTORS EXPENSE.



ISOMETRIC VIEW
TYPE 6, 7, 8 AND 9

GENERAL NOTES

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

INSTALL FOUR (4) ½" INCH MINIMUM DIAMETER X 4 INCH MINIMUM LENGTH APPROVED CONCRETE MASONRY ANCHORS WITH A PULLOUT STRENGTH OF 9,000 LBS. TO ANCHOR THE CABINET TO TYPE 6, 7, 8, AND 9 BASES. THE ANCHOR STUDS SHALL BE LOCATED AS DIRECTED BY THE ENGINEER TO PROPERLY ANCHOR THE CONTROL CABINET TO THE BASE.

WHEN REQUIRED TO CONNECT NON - METALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U. L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

CONDUIT HEIGHT ABOVE THE CONCRETE BASE SHALL BE 1 INCH.

DEPTH OF CONDUIT INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES MINIMUM AND 36 INCHES MAXIMUM.

DEPTH OF CONDUIT INSTALLED THAT IS NOT BELOW THE TRAVELED WAY SHALL BE 18 INCHES MINIMUM AND 36 INCHES MAXIMUM.

ANY EXCEPTION TO THE MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE ENGINEER.

CONTROL CABINET BASE TOP SURFACE SHALL BE TROWEL FINISHED SMOOTH AND LEVEL.

WHEN A TYPE 10 CONTROL CABINET BASE IS USED TO POST MOUNT A CONTROL CABINET, A 36" SQUARE 4" THICK CONCRETE MAINTENANCE PLATFORM SHALL BE REQUIRED ON THE DOOR SIDE OF THE CABINET. THE TOP 1 INCH SHALL BE ABOVE FINISHED GRADE AND BE BROOM FINISHED AND LEVEL.

MAINTENANCE PLATFORMS ARE NOT REQUIRED WHEN THE SURROUNDING AREA IS PAVED.

MINIMUM BENDING RADIUS OF CONDUIT EQUALS 6 TIMES THE DIAMETER.

ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NON - METALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

ALL FOUR (TWO INCH AND THREE INCH) CONDUIT SHALL BE INSTALLED FROM THE CABINET BASE TO THE FIRST (NEAREST PULL BOX LOCATED AS SHOWN ON THE PLANS.

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF THE CONCRETE BASE BEFORE INSTALLATION OF CABLE OR WIRE.

CONCRETE FORM DEPTH BELOW FINISHED GRADE SHALL BE 6" MAXIMUM. CONCRETE FORMS SHALL BE REMOVED AFTER CONCRETE HAS SET.

WHEN ANCHOR RODS USING THE ALTERNATE L BEND ARE FURNISHED FOR THE TYPE 10 BASE, THE 4" L BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR ROD BAR LENGTH.

THE "L" BEND SHALL NOT BE THREADED.

STRAIGHT ANCHOR RODS SHALL BE THREADED 12" IN LENGTH ON EACH END OF THE ROD.

ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1 :40 FROM VERTICAL.

(1) FOUR (4) ANCHOR RODS, 1" DIA. X 3'-6". ANCHOR RODS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 654.2 OF THE STANDARD SPECIFICATIONS.

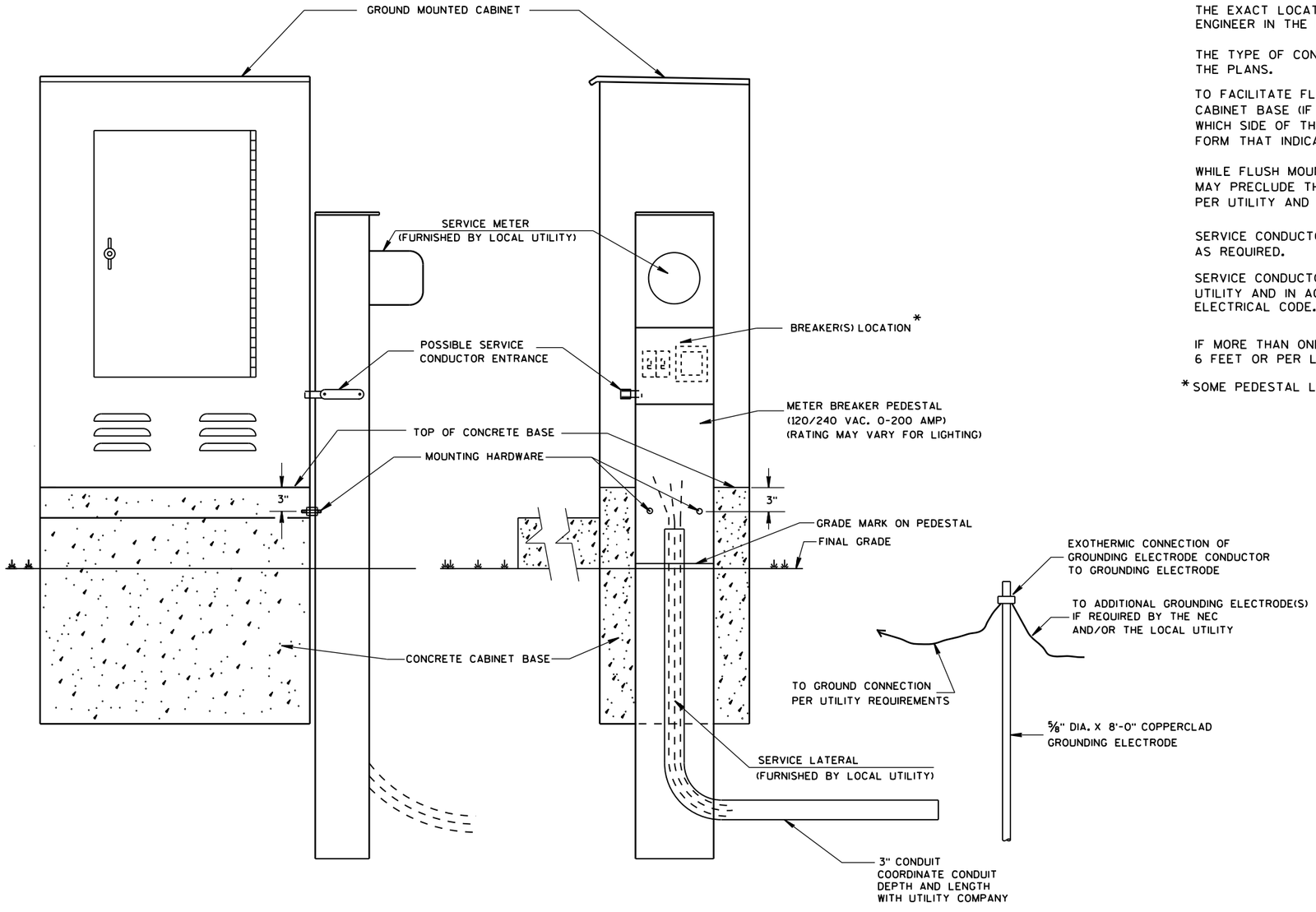
CONCRETE CABINET CONTROL BASES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
September 2016
DATE
/S/ Ahmet Demerbilek
STATE ELECTRICAL ENGI 304
FHWA

6

SDD 09C05 - 10



TYPICAL CABINET SERVICE INSTALLATION

GENERAL NOTES

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

THE EXACT LOCATION OF THE METER BREAKER PEDESTAL SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

THE TYPE OF CONCRETE CABINET BASE TO BE INSTALLED SHALL BE AS CALLED FOR IN THE PLANS.

TO FACILITATE FLUSH MOUNTING OF THE METER BREAKER PEDESTAL AGAINST THE SIDE OF THE CABINET BASE (IF FLUSH MOUNTING POSSIBLE. CONFER WITH THE LOCAL UTILITY TO DETERMINE WHICH SIDE OF THE CONCRETE BASE THE ELECTRICAL SERVICE LATERAL WILL APPROACH. THEN FORM THAT INDICATED SIDE FOR FULL SIDE DEPTH.

WHILE FLUSH MOUNTING IS THE MOST DESIRABLE MOUNTING CONFIGURATION UTILITY REQUIREMENTS MAY PRECLUDE THIS OPTION. CONTRACTOR MUST PROVIDE UTILITY APPROVED PEDESTAL AND INSTALL PER UTILITY AND MANUFACTURERS REQUIREMENTS.

SERVICE CONDUCTOR ENTRANCES SHALL BE RIGID METALLIC CONDUIT, NIPPLES AND/OR CONDULETS AS REQUIRED.

SERVICE CONDUCTOR ENTRANCES SHALL BE SIZED AND LOCATED AS REQUIRED BY THE LOCAL UTILITY AND IN ACCORDANCE WITH APPROPRIATE ARTICLES OF THE LATEST ACCEPTED NATIONAL ELECTRICAL CODE.

IF MORE THAN ONE GROUNDING ELECTRODE IS REQUIRED, THE DISTANCE APART SHALL BE 6 FEET OR PER LOCAL UTILITY REGULATIONS.

* SOME PEDESTAL LIGHTING PLANS SHOW MAIN LUGS ONLY.

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S.D.D. 9 D 1-5

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S.D.D. 9 D 1-5

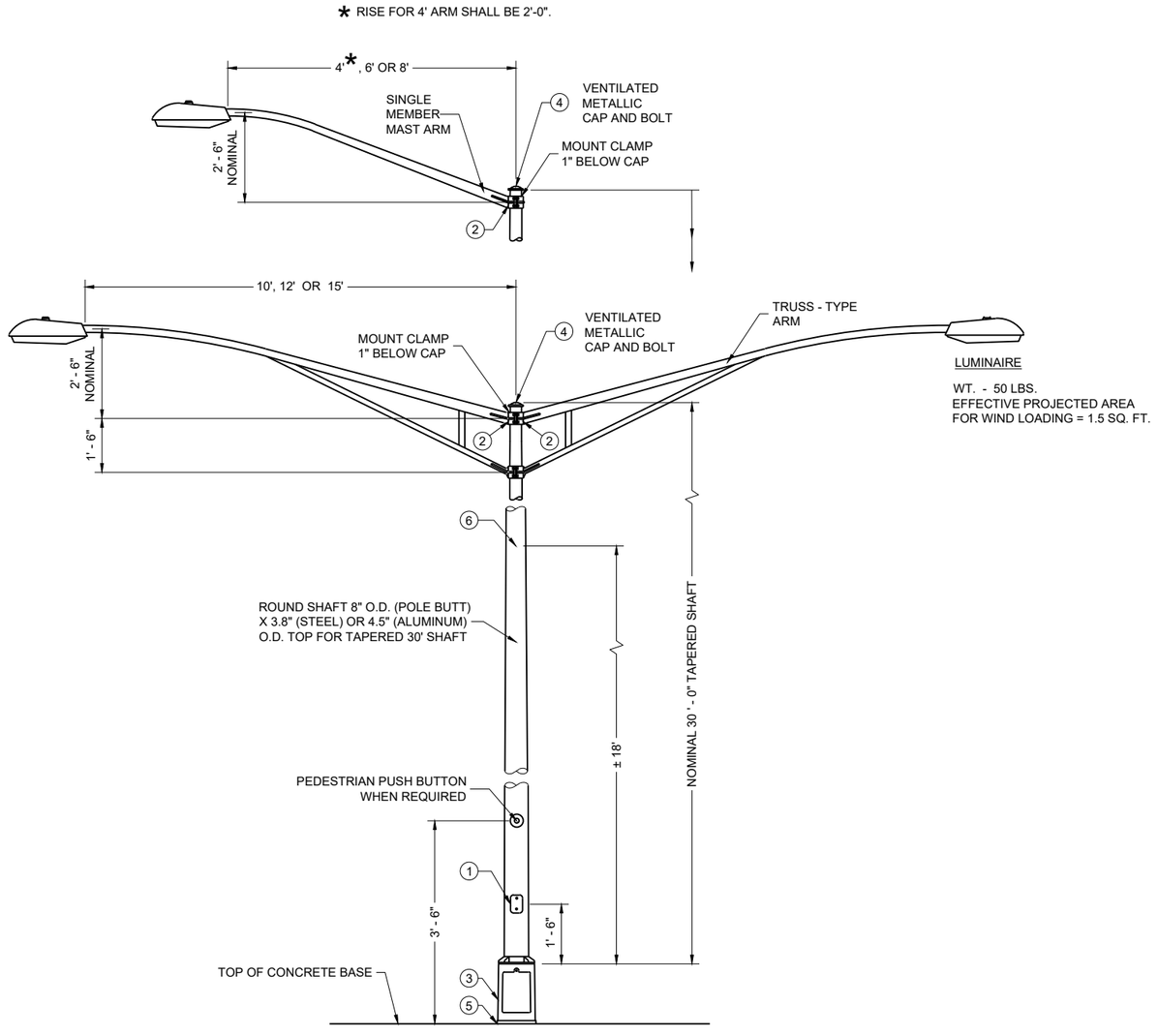
CABINET SERVICE INSTALLATION (METER BREAKER PEDESTAL)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014
DATE

/S/ Ahmet Demirbilek
STATE ELECTRICAL

FHWA



TYPE 5 POLE MOUNTING CONFIGURATION

(MAXIMUM LOAD)

LIGHTING ONLY

GENERAL NOTES

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

SECTION 657, POLES, OF THE STANDARD SPECIFICATIONS SHALL APPLY TO THIS DRAWING.

ALL TYPE 5 POLE MOUNTINGS SHALL BE DESIGNED TO INCLUDE TWIN 15' ARMS WITH LUMINAIRES.

POLES SHALL BE GALVANIZED STEEL OR ALUMINUM, AS CALLED FOR IN THE CONTRACT.

TYPE 5 ALUMINUM POLES SHALL BE CONSTRUCTED OF 6063 - T6 ALUMINUM ALLOY. SLEEVING INSIDE THE POLE IS NOT ACCEPTABLE.

TYPE 5 ALUMINUM POLES SHALL HAVE A MINIMUM WALL THICKNESS OF 0.1888".

TYPE 5 STEEL POLES SHALL HAVE A MINIMUM WALL THICKNESS OF U.S. STANDARD 11 GAGE (0.1196").

THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 2 ⅜" INCHES IN OUTSIDE DIAMETER. THE STRAIGHT PORTION OF THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 12 INCHES IN LENGTH.

WHEN TRANSFORMER BASES ARE USED, WIRE CONNECTIONS SHALL BE MADE IN THE TRANSFORMER BASE.

(1) 4" X 6" REINFORCED HANDHOLE AND COVER ASSEMBLY WITH TWO (2) ¼"X¾" - 20 TPI , STAINLESS STEEL, HEX HEAD BOLTS.

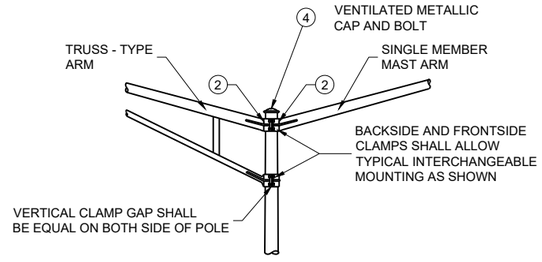
(2) GROMMETS. 1" CHASE NIPPLES OR 1" CLOSE CONDUIT NIPPLES WITH BUSHINGS SHALL BE PROVIDED FOR 1 ⅜" HOLE IN POLE SHAFT FOR WIRING.

(3) CAST ALUMINUM TRANSFORMER BASE.

(4) FURNISH AND INSTALL VENTILATED, CAST METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ¼"X¾" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT. ONE (1)

(5) SHIMMING, IF NEEDED, SHALL BE LOCATED BETWEEN THE CONCRETE FOUNDATION AND POLE.

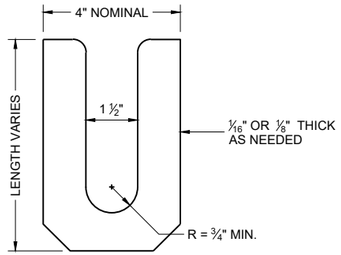
(6) INTERNAL DUMBBELL - TYPE VIBRATION DAMPER.



INTERCHANGEABLE MOUNTING DETAIL

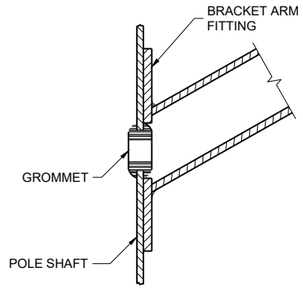
POLE MOUNTINGS FOR LIGHTING UNITS, TYPE 5 (30 FEET)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

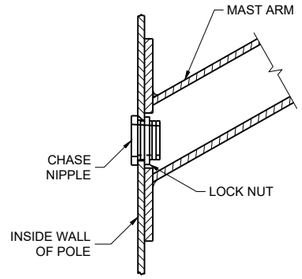


①

LEVELING SHIM
SHALL BE ALUMINUM



TYPICAL APPLICATION OF GROMMET IN POLE SHAFT



TYPICAL APPLICATION OF CHASE NIPPLE IN POLE SHAFT

GENERAL NOTES

CLAMP BOLT-NUT TIGHTENING TORQUE SHALL BE INDICATED BY INDENT STAMPING (1/2 INCH NUMERALS AND LETTERS) OR WEATHERPROOF PRINTING ON THE INSIDE OF THE CLAMP THAT IS WELDED TO THE ARM MEMBER.

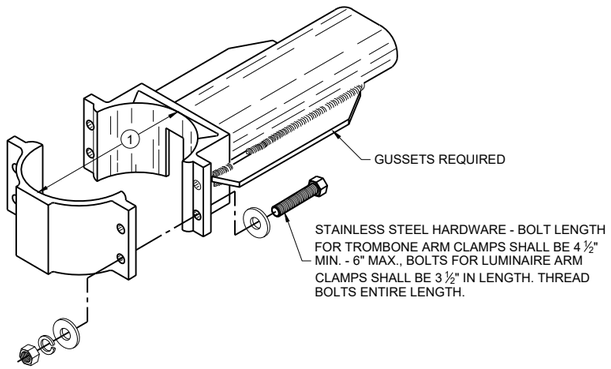
① 4.5" I.D. FOR LUMINAIRE MAST ARM CLAMP. 6.625" I.D. FOR TROMBONE MAST ARM CLAMP.

② INDIVIDUAL BASE PLATE ANCHOR ROD COVERS. (4 REQUIRED)

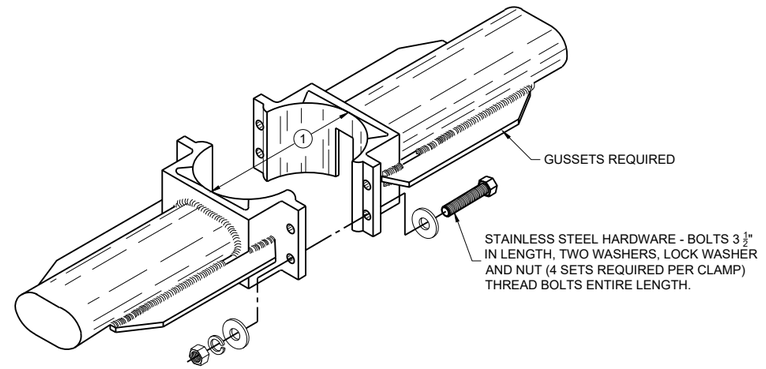
③ BASE PLATE SLOTTED TO ACCEPT 11" THROUGH 12" BOLT CIRCLE USING 1" DIAMETER ANCHOR RODS.

④ LEVELING SHIMS, DESIGNED FOR THE PURPOSE, SHALL BE USED WHEN PLUMBING POLES. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE. LEVELING SHIMS SHALL BE USED ONLY BETWEEN THE TOP OF THE CONCRETE BASE AND A METALLIC BASE PLATE.

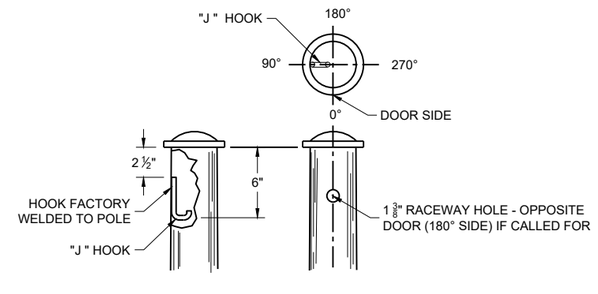
SHIMS SHALL BE LONG ENOUGH AND WIDE ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.



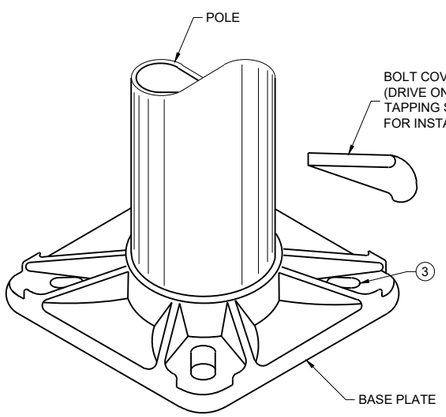
TYPICAL TROMBONE MAST ARM AND SINGLE LUMINAIRE MAST ARM MOUNTING CLAMP



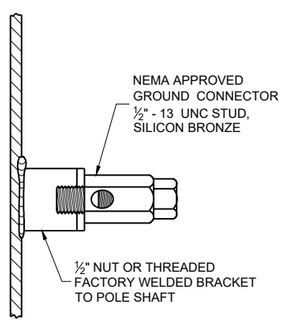
TYPICAL LUMINAIRE MAST ARM (DOUBLE) MOUNTING BRACKETS

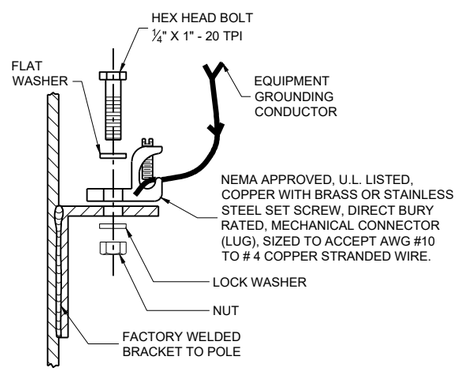


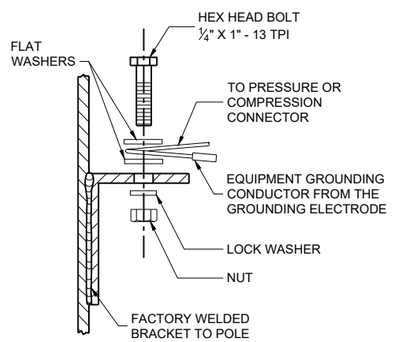
TYPICAL "J" HOOK LOCATION



BASE PLATE







TYPICAL GROUNDING CONNECTIONS
NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL

HARDWARE DETAILS FOR POLE MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2026 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL ENGINEER

FHWA

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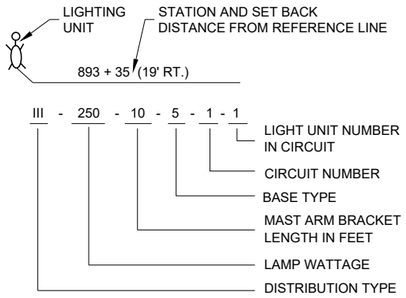
SDD 09E01-17g

GENERAL NOTES

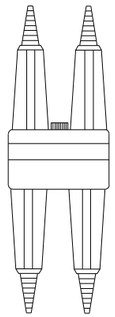
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

THE EQUIPMENT GROUND CONNECTOR SHALL BE TAPED WITH 3 WRAPS (MINIMUM) OF APPROVED RUBBER TAPE AND 3 WRAPS (MINIMUM) OF APPROVED VINYL TAPE TO COVER SHARP WIRE ENDS AFTER THE CONNECTION IS COMPLETED.

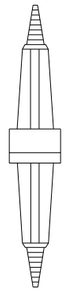
WHEN TRANSFORMER BASES ARE USED, ALL WIRING CONNECTIONS SHALL OCCUR WITHIN THE TRANSFORMER BASES.



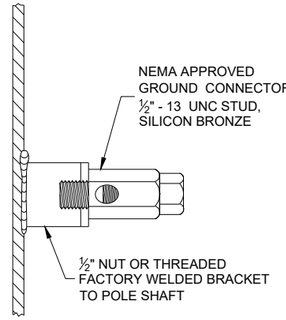
LIGHTING UNIT CODE
(TYPICAL)

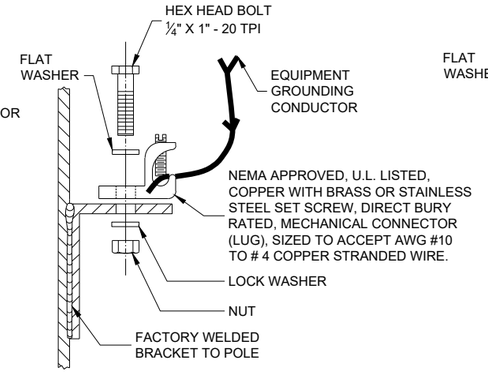


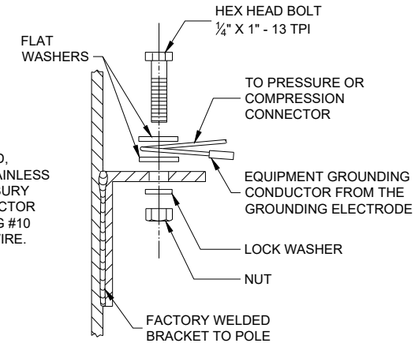
DETAIL "A"
BREAKAWAY DOUBLE POLE WITH WATERPROOF INSULATING BOOT



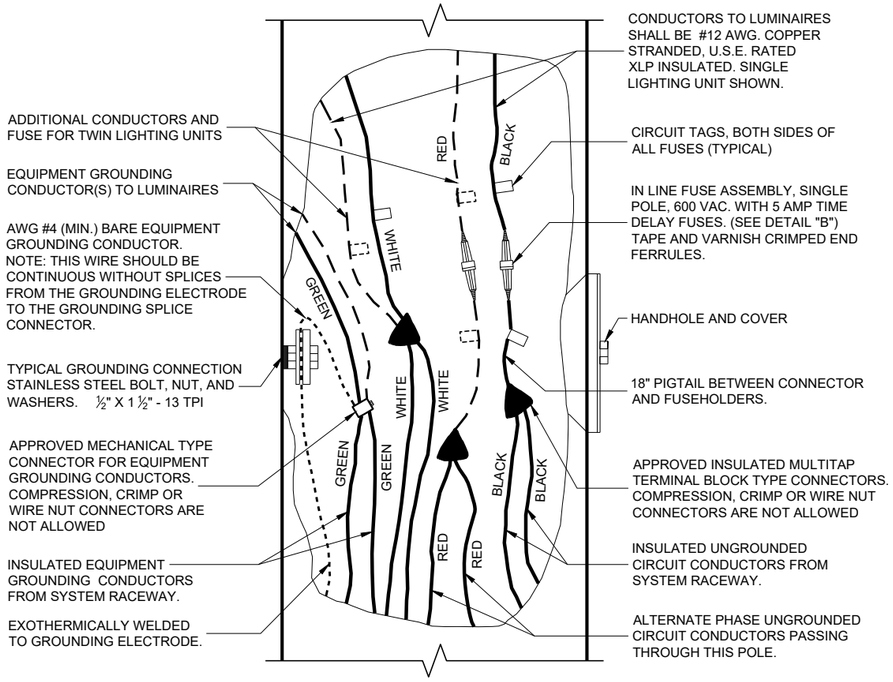
DETAIL "B"
BREAKAWAY SINGLE POLE WITH WATERPROOF INSULATING BOOT



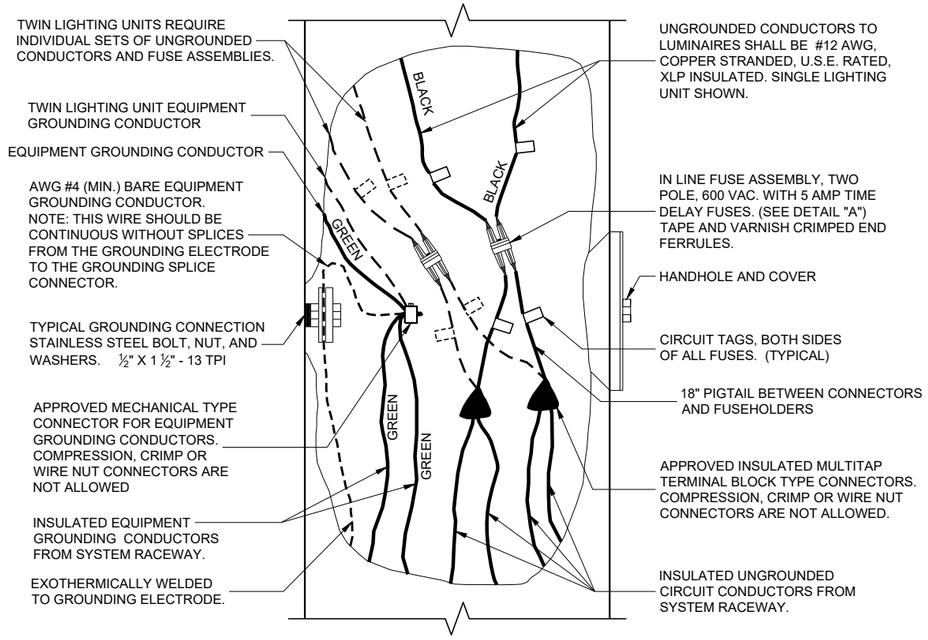




TYPICAL GROUNDING CONNECTIONS
NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL



3 WIRE - 120, 240 OR 480 VAC (UNGROUNDED CONDUCTORS) WITH GROUNDING CONDUCTOR AND EQUIPMENT GROUNDING CONDUCTOR



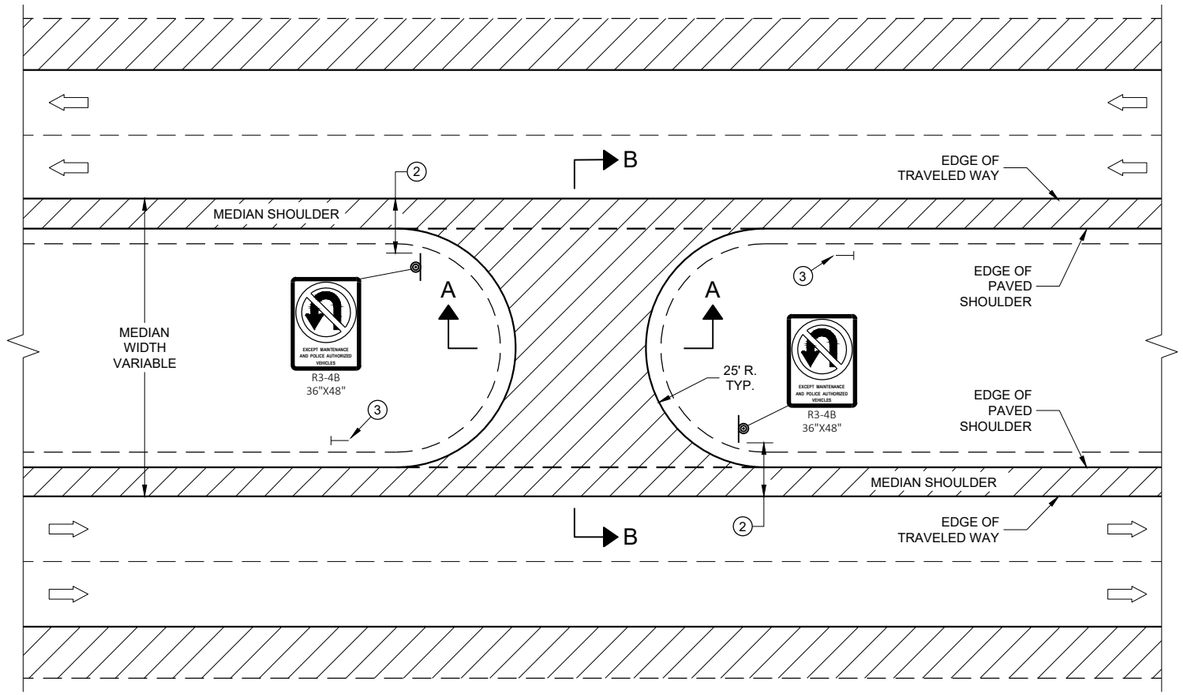
2 WIRE - 240 OR 480 VAC (UNGROUNDED CONDUCTORS) WITH EQUIPMENT GROUNDING CONDUCTOR

NON - FREEWAY LIGHTING UNIT POLE WIRING

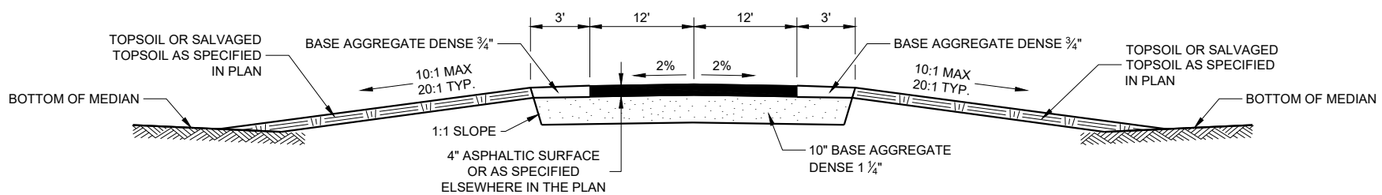
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE
/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGI 308

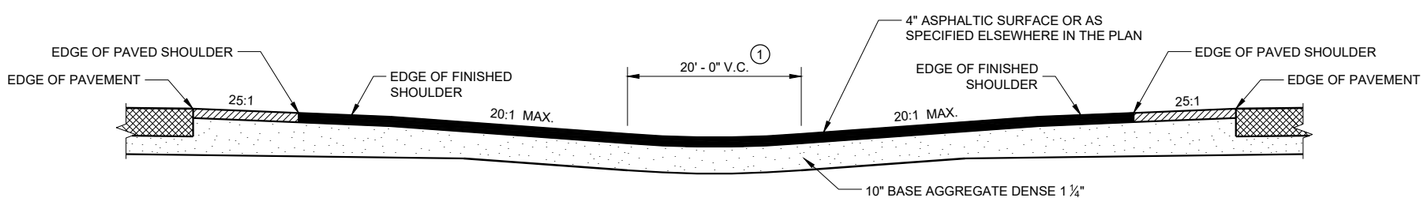
FHWA



PLAN VIEW



SECTION A-A



SECTION B-B

GENERAL NOTES

1. ADJUST VERTICAL CURVE LOCATION LATERALLY TO MAINTAIN 20:1 MAX.
2. SIGNING DETAILS AND SPECIFICATIONS ARE PROVIDED ELSEWHERE IN THE CONTRACT.
3. INSTALL DELINEATOR. SEE STANDARD DETAIL DRAWING 15A4.

LEGEND

- SIGN ON PERMANENT SUPPORT
- DELINEATOR
- DIRECTION OF TRAFFIC

MAINTENANCE CROSSOVER FOR FREEWAYS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2019
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS DEVE ENGINEER

FHWA

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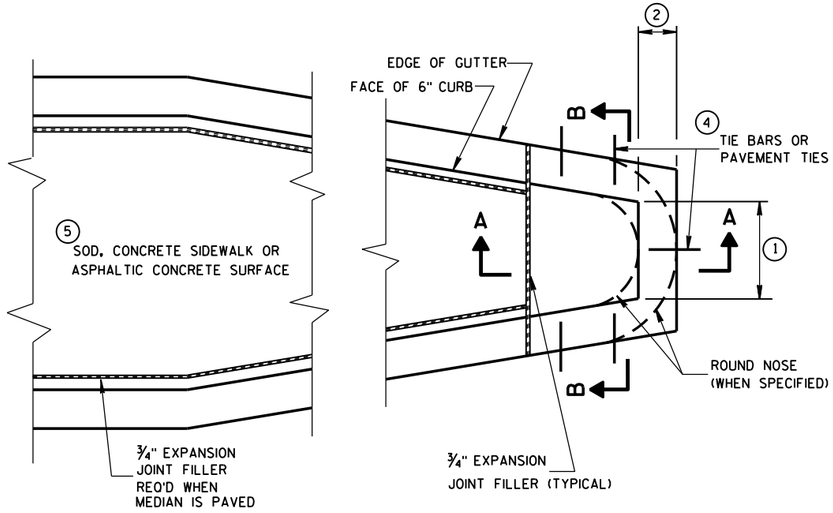
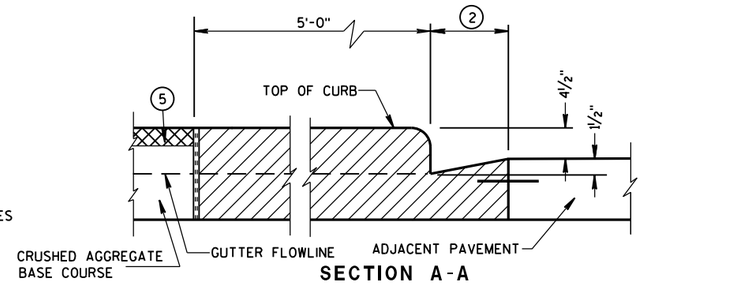
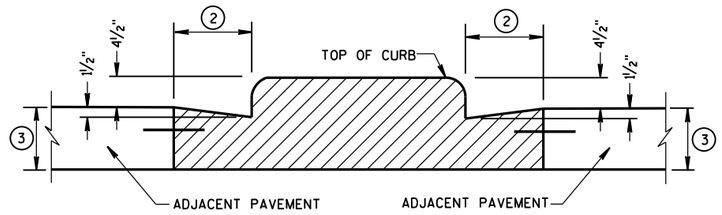
SDD 11A01 - 06





SECTION A-A



SECTION B-B

CONCRETE MEDIAN BLUNT NOSE DETAIL

GENERAL NOTES

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

(1) SEE PLAN FOR MEDIAN NOSE WIDTH AND RADIUS (FOR ROUND NOSE ALTERNATE).

(2) WIDTH OF GUTTER TO MATCH EXISTING ADJACENT GUTTER OR AS SPECIFIED ELSEWHERE IN THE PLAN.

(3) DEPTH EQUAL TO ADJACENT PAVEMENT. ADJACENT PAVEMENT STRUCTURE DETAILS ARE SHOWN ON THE PLAN. TYPICAL OPTIONS ARE:

(1) NEW OR EXISTING CONCRETE PAVEMENT.

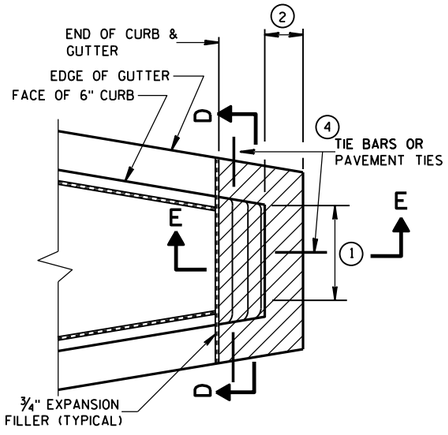
(2) ASPHALTIC CONCRETE PAVEMENT OVER NEW OR EXISTING CONCRETE BASE COURSE.

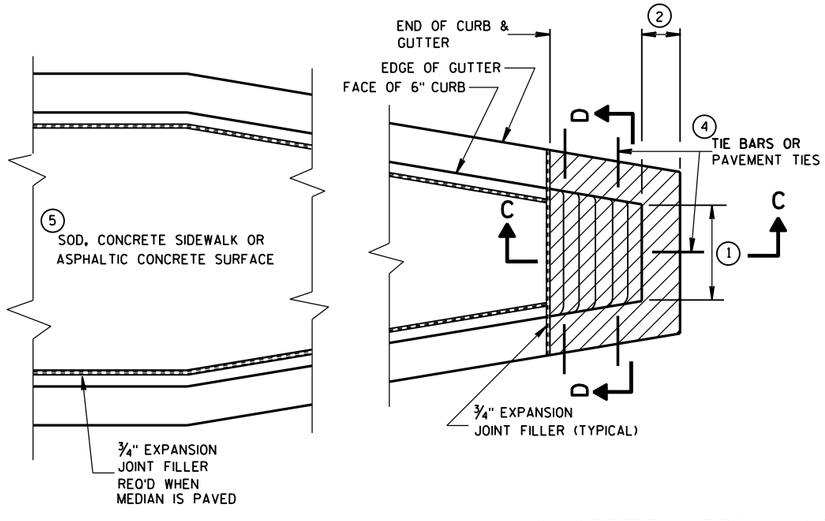
(3) ASPHALTIC CONCRETE PAVEMENT OVER CRUSHED AGGREGATE BASE COURSE.

(4) TIE BARS OR PAVEMENT TIES REQUIRED IN NEW CONCRETE PAVEMENT OR CONCRETE BASE COURSE. TIE BARS SHALL BE NO. 4 X 2'-0" SPACED AT 2'-0" C-C.

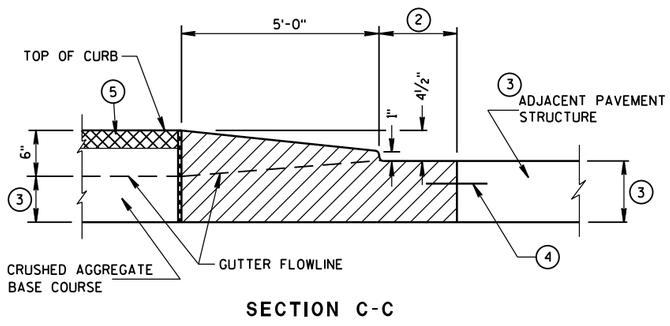
PAVEMENT TIES REQUIRED IN EXISTING CONCRETE BASE COURSE. PAVEMENT TIES SHALL BE NO. 6 X 1'-0" SPACED AT 3'-0" C-C INSTALLED ON A HORIZONTAL SKEW OF 6:1. THE DIRECTION OF SKEW SHALL ALTERNATE AFTER EVERY ONE OR TWO BARS.

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

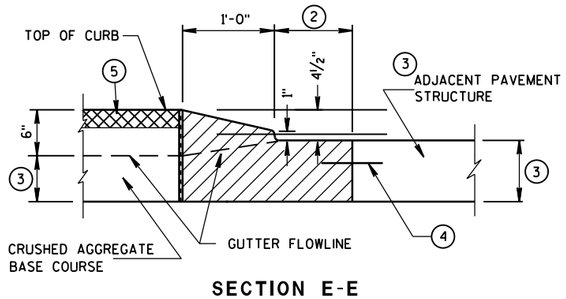




CONCRETE MEDIAN SLOPED NOSE TYPE 1

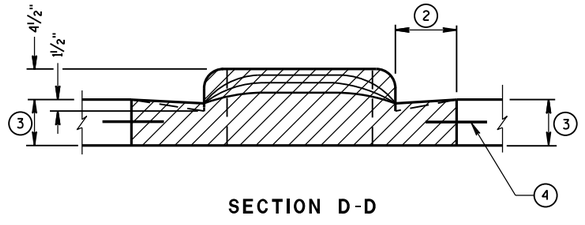


SECTION C-C



SECTION E-E

CONCRETE MEDIAN SLOPED NOSE TYPE 2



SECTION D-D

CONCRETE MEDIAN NOSE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/8/2006
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

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S.D.D. 11 B 2-2

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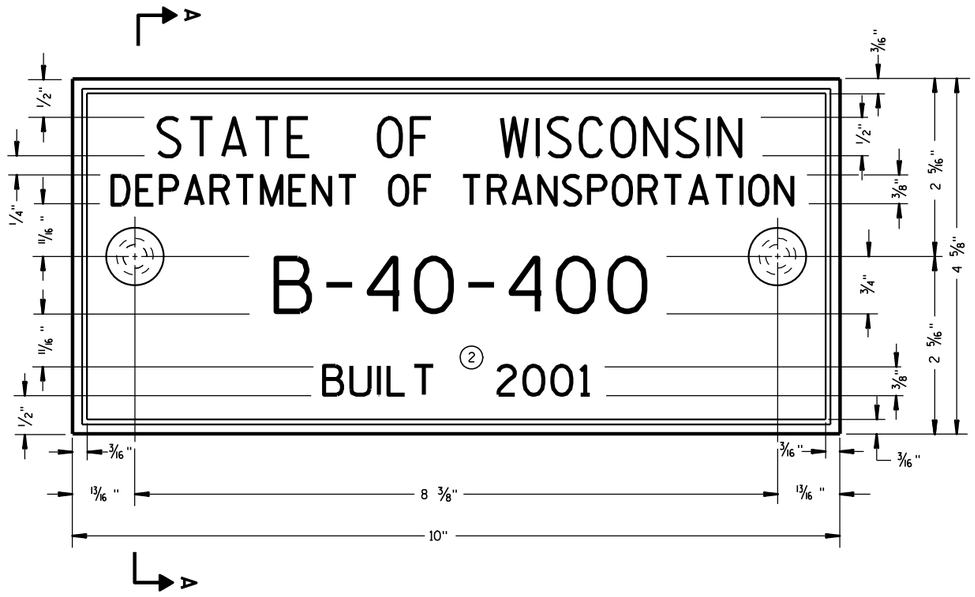
S.D.D. 11 B 2-2



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

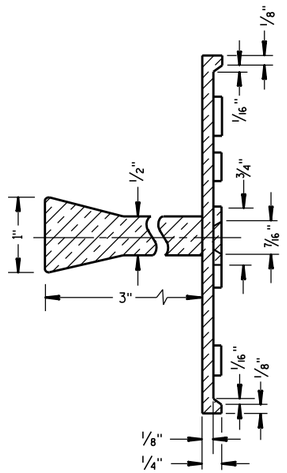
GENERAL NOTES

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

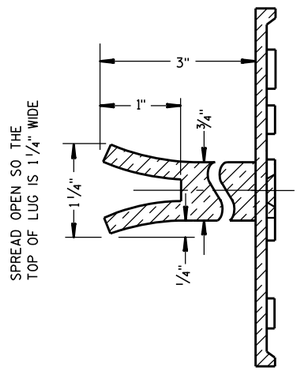
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

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

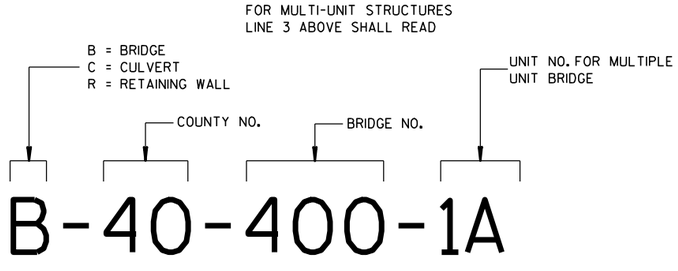
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



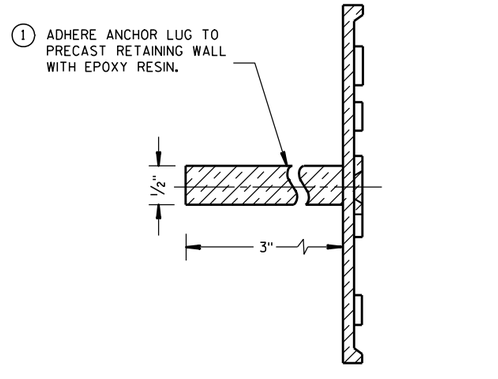
SECTION A-A



ALTERNATE LUG



NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES



ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/26/10 DATE

/S/ Scot Beck -- CHIEF STRUCTURAL DEVELOPMENT ENGINEER

FHWA

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S.D.D. 12 A 3-10

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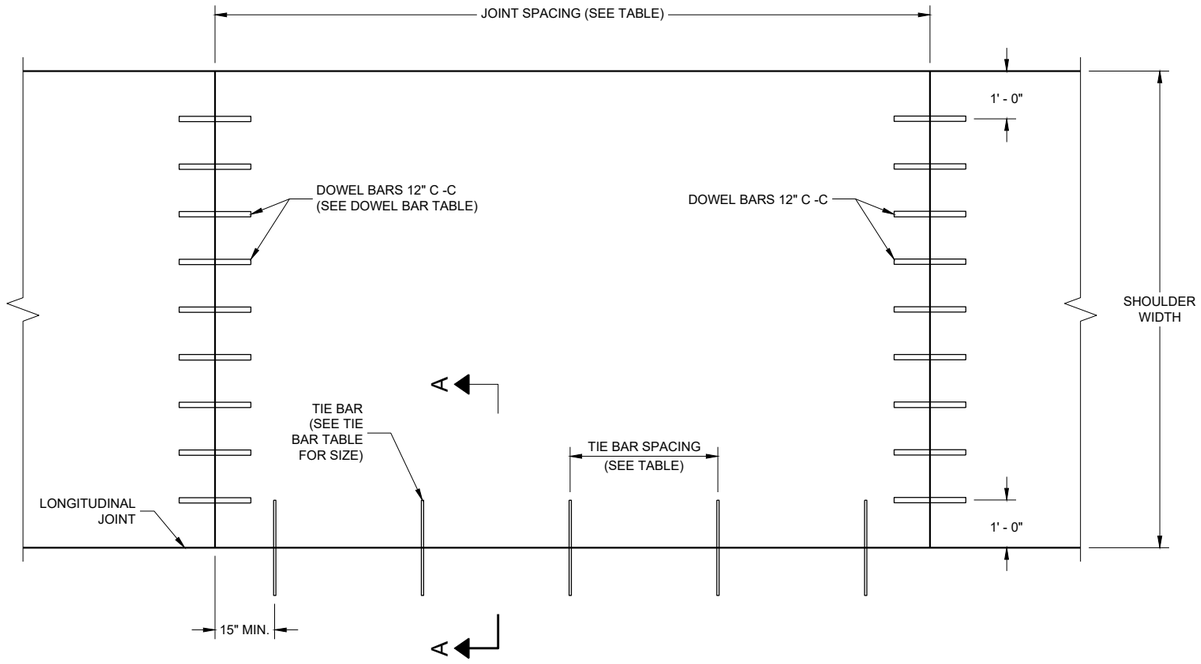
S.D.D. 12 A 3-10



PLAN VIEW

CONCRETE PAVEMENT SHOULDER

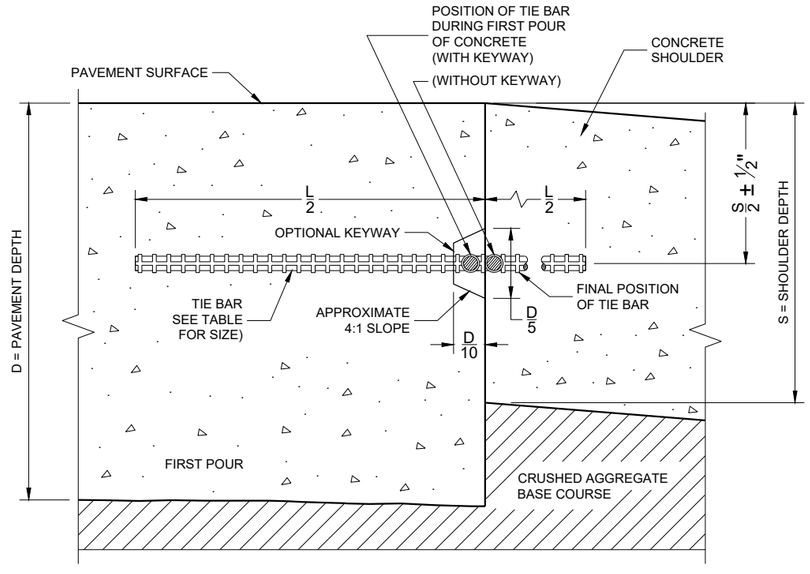
GENERAL NOTES

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

TRANSVERSE JOINT DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.

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

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



SECTION A - A

LONGITUDINAL CONSTRUCTION JOINT

TIE BAR TABLE

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

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

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

PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

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

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

CONCRETE PAVEMENT SHOULDERS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2022
DATE

/S/ Peter Kemp
PAVEMENT SUPERVIS

FHWA

6

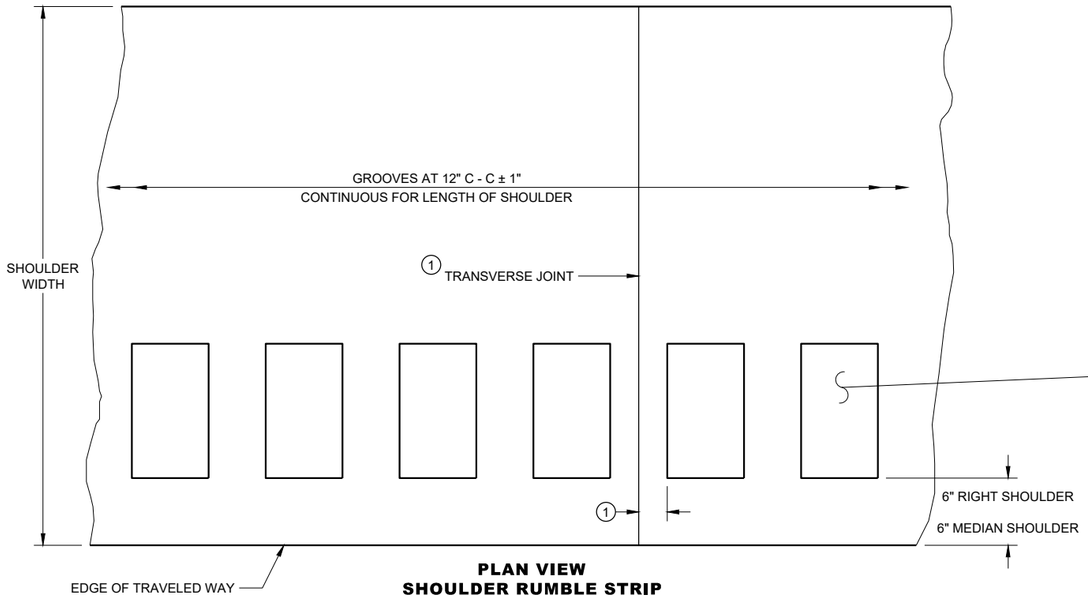
SDD 13A03 - 07

GENERAL NOTES

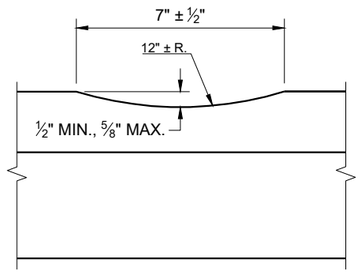
SDD 13A5, SHEET "b" SHOWS THE LOCATION OF THE RUMBLE STRIPS AT RAMP AND GORE LOCATIONS.

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

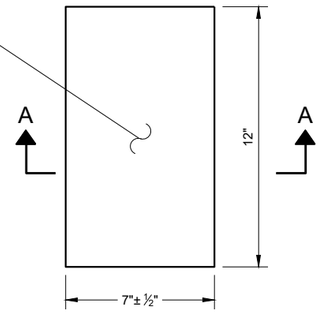
(1) CONCRETE PAVEMENT - RUMBLE STRIPS SHALL BE A MINIMUM OF 6 INCHES AWAY FROM TRANSVERSE JOINTS.



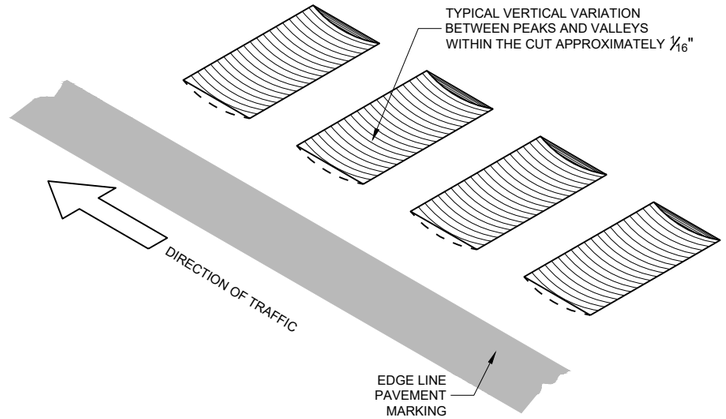
PLAN VIEW
SHOULDER RUMBLE STRIP



SECTION A - A

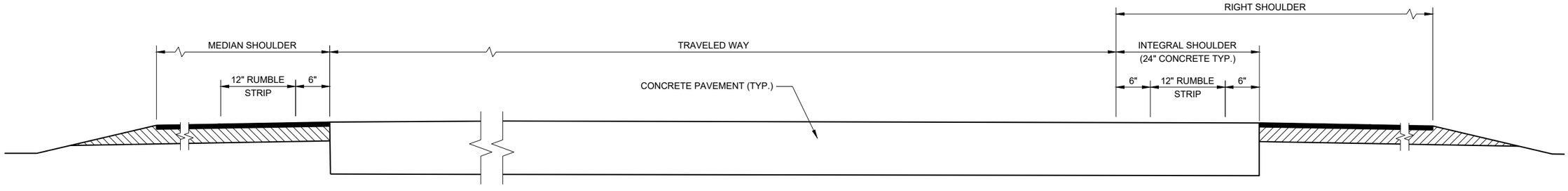


PLAN VIEW
(SINGLE GROOVE)



ISOMETRIC

PLACEMENT DETAIL FOR RUMBLE STRIP



SECTION VIEW

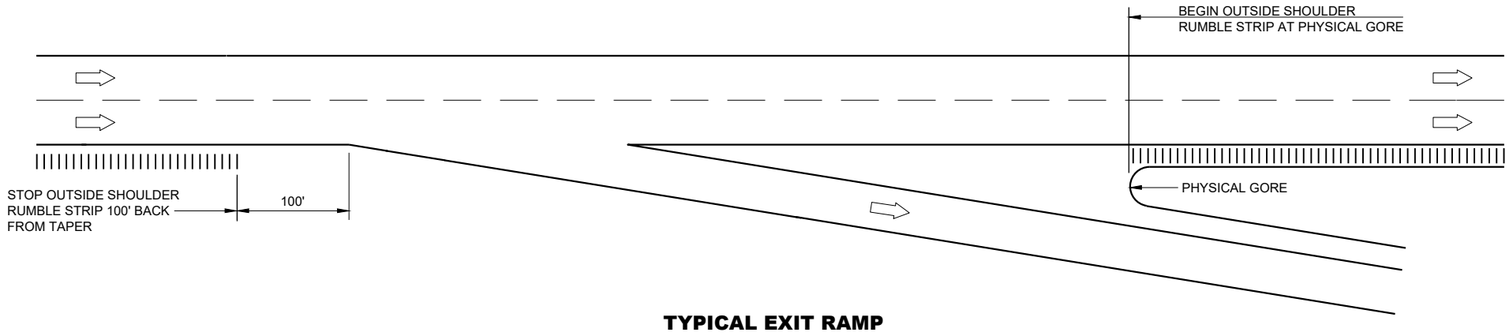
TYPICAL SHOULDER RUMBLE STRIPS
(ONE ROADWAY IS SHOWN)

SHOULDER RUMBLE STRIPS, DIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 13A05-06a



TYPICAL EXIT RAMP

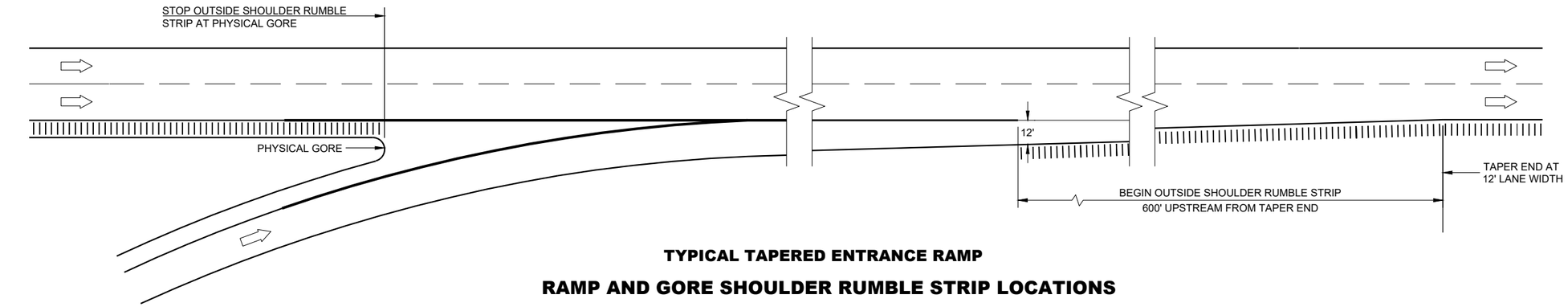
GENERAL NOTES

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

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

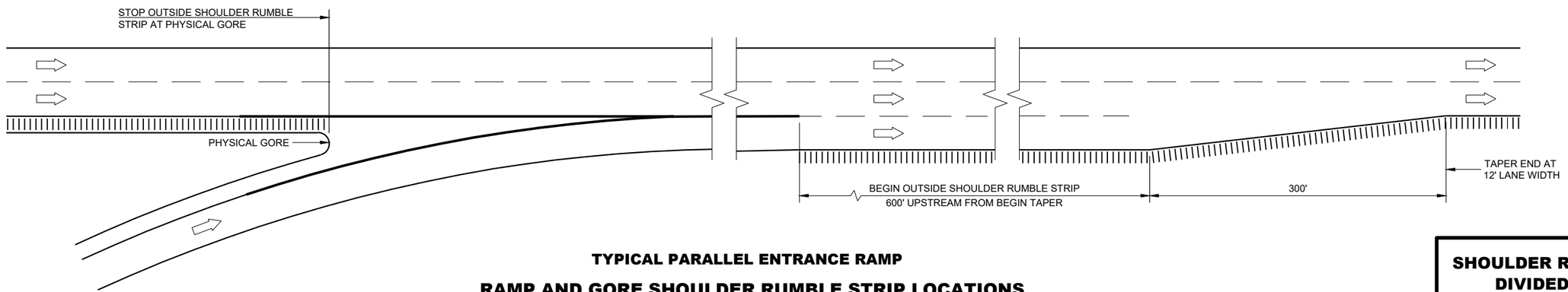
LEGEND

DIRECTION OF TRAFFIC



TYPICAL TAPERED ENTRANCE RAMP

RAMP AND GORE SHOULDER RUMBLE STRIP LOCATIONS



TYPICAL PARALLEL ENTRANCE RAMP

RAMP AND GORE SHOULDER RUMBLE STRIP LOCATIONS

SHOULDER RUMBLE STRIPS, DIVIDED ROADWAY

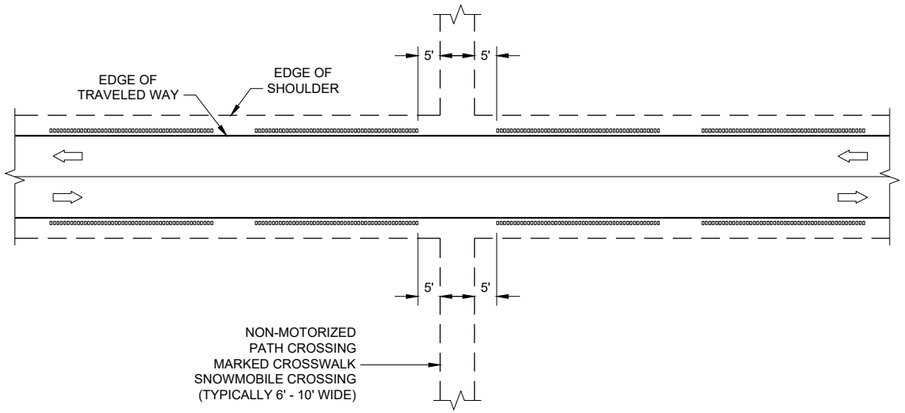
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE

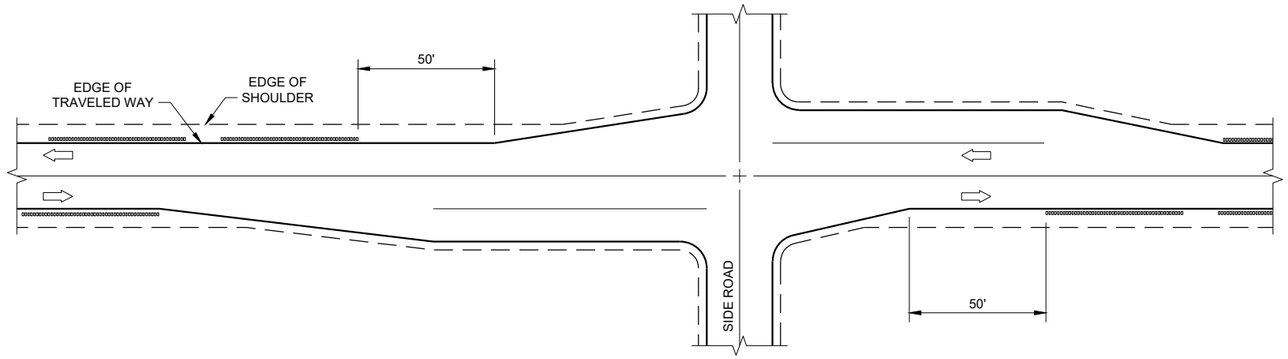
/S/ Rodney Taylor
ROADWAY DESIGN STANDARDS
UNIT SUPERVISOR

FHWA

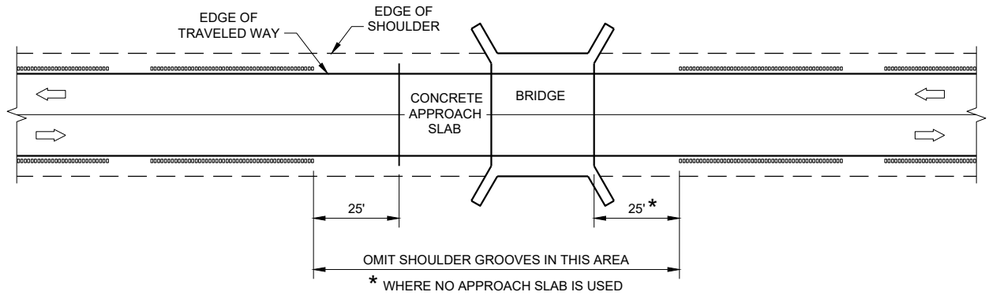
6
SDD 13A05-06b



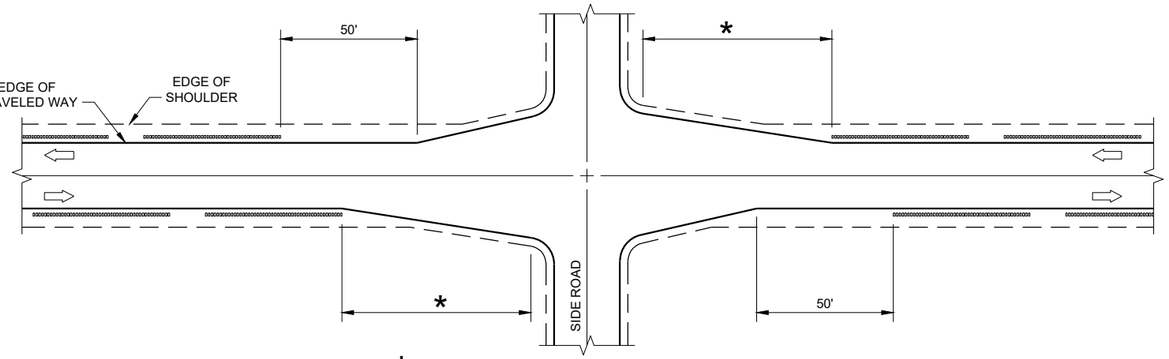
GROOVES AT MISCELLANEOUS CROSSINGS



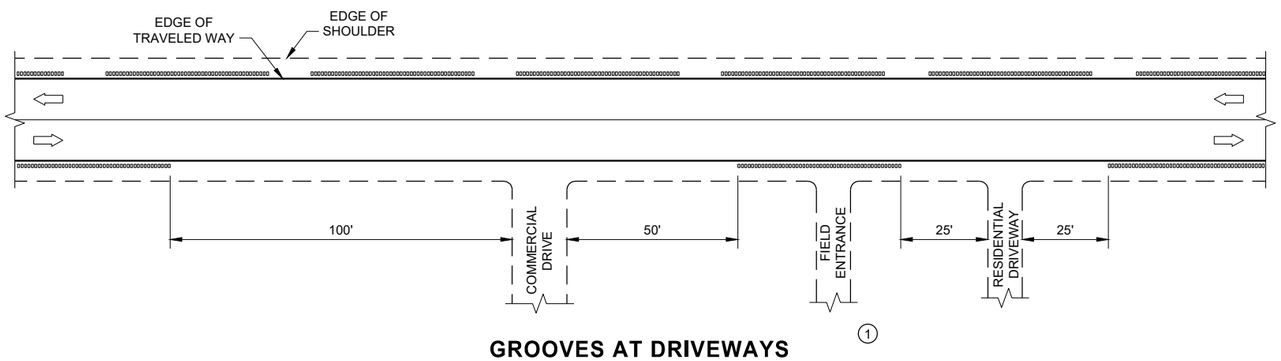
GROOVES AT RIGHT TURN LANE



GROOVES AT BRIDGES



GROOVES AT INTERSECTIONS WITH APPROACH TAPER



GROOVES AT DRIVEWAYS ①

GENERAL NOTES

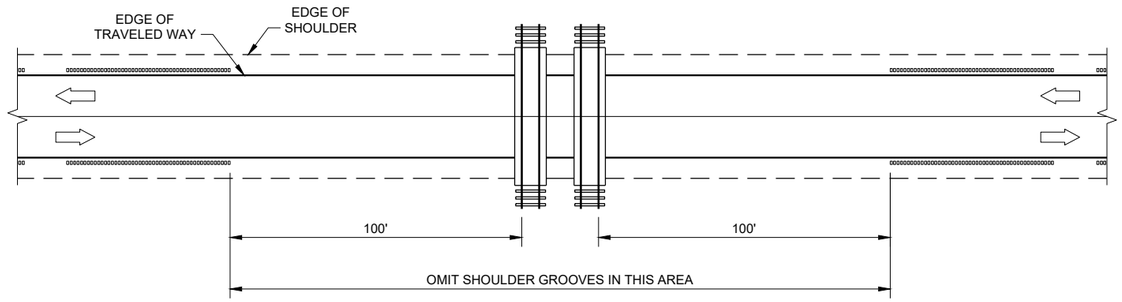
① SHOULDER GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS. WHEN DIRECTED BY THE ENGINEER.

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

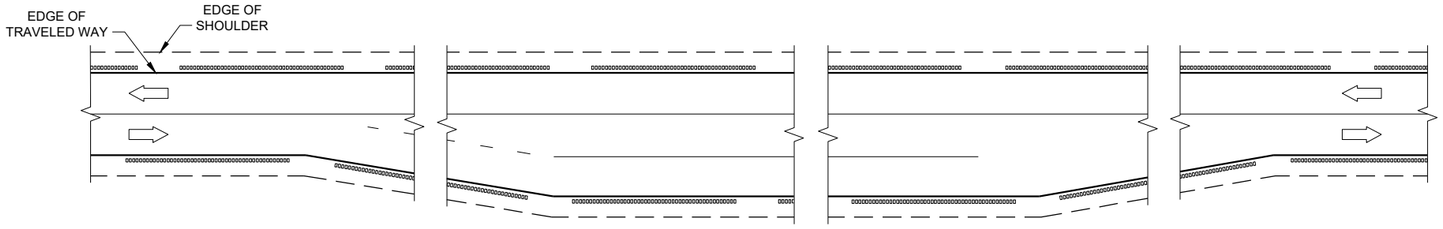
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

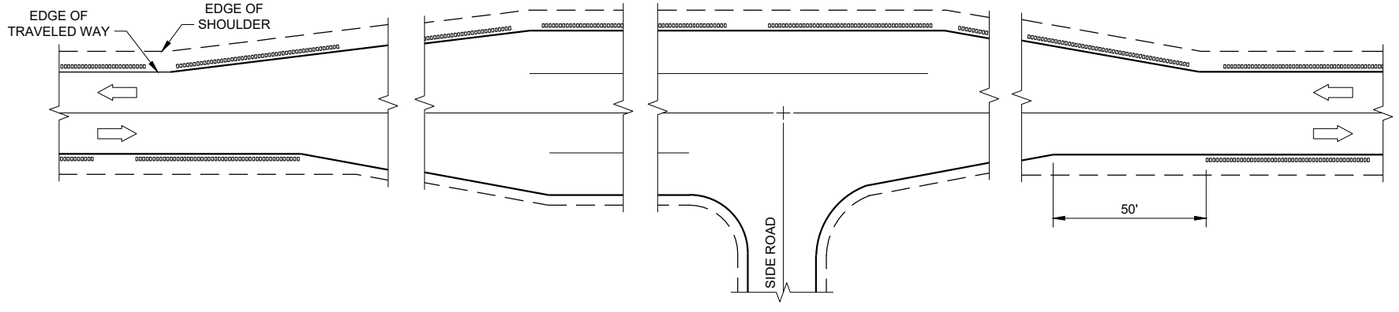
SDD 13A10 - 03g



GROOVES AT RAILROADS



GROOVES AT PASSING AND CLIMBING LANES



GROOVES AT BYPASS LANES

6

SDD 13A10 - 03h

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

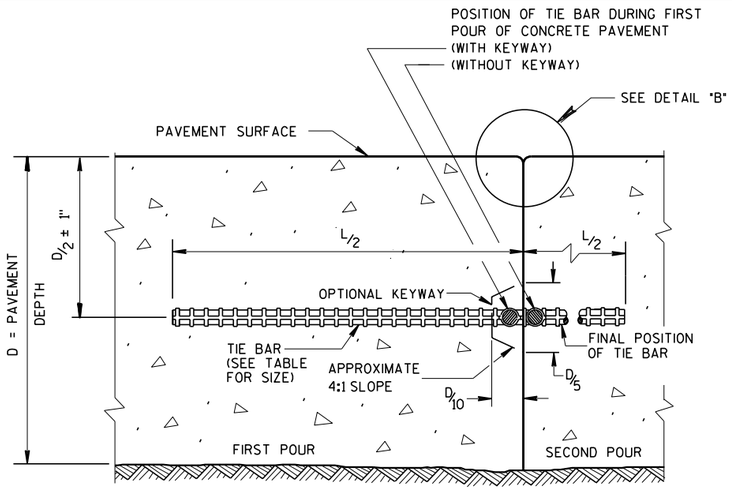
May 2023
DATE

/S/ John Jenkins
ROADWAY STANDARDS DEVE ENGINEER

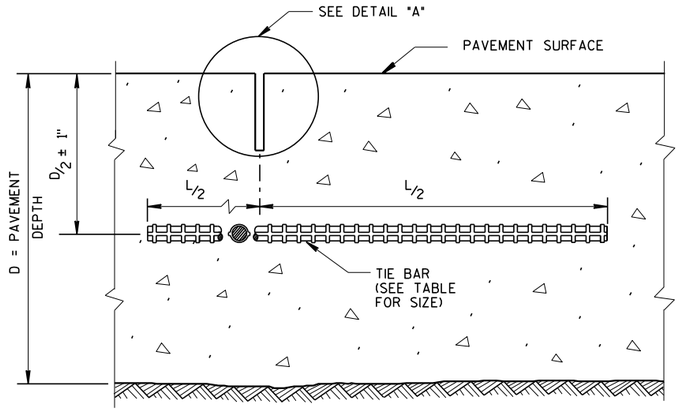
FHWA

6

SDD 13A10 - 03h



CONSTRUCTION JOINT



SAWED JOINT

GENERAL NOTES

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

CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

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

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

PLAN VIEW

SECTION A-A

LONGITUDINAL CONSTRUCTION JOINT TIE BARS ANCHORED INTO EXISTING PAVEMENT

DETAIL "A"

DETAIL "B"

DETAIL "C"

TIE BAR TABLE

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

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

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

PLAN VIEW
SHOWING LOCATION OF TIE BARS

CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6
S.D.D. 13 C 1-19

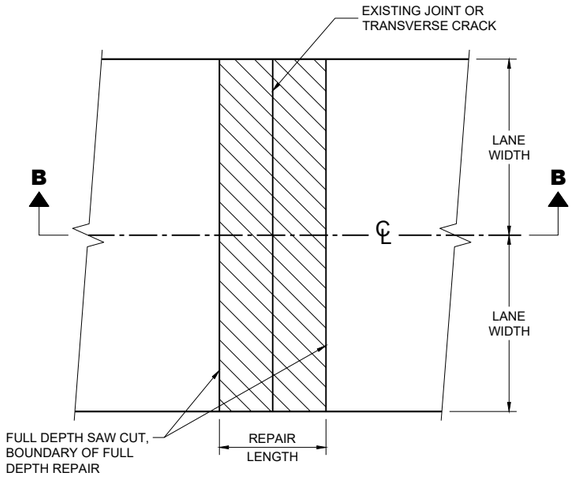
GENERAL NOTES

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

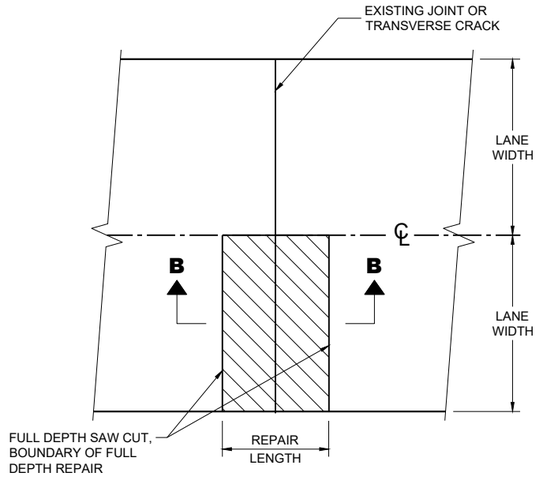
PROVIDE A 6 FOOT MINIMUM DISTANCE FROM BOUNDARIES OF CONCRETE REPAIR AREA TO ADJACENT TRANSVERSE JOINT OR CRACK.

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

(1) DOWEL BARS MAY NOT BE PRESENT.

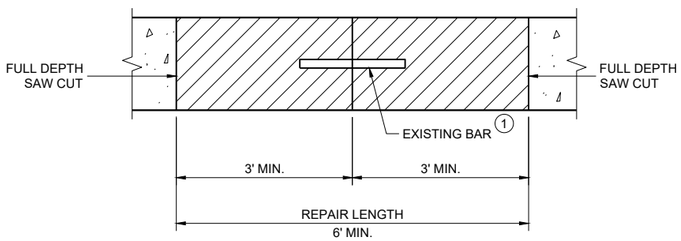


PLAN VIEW
(DOUBLE LANE REPAIR)



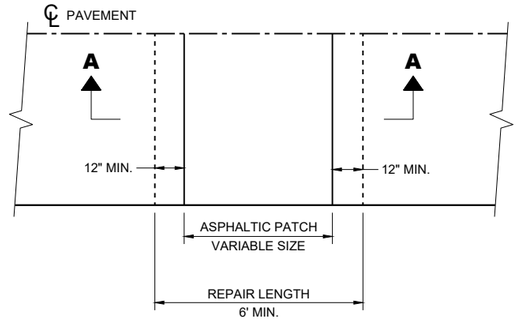
PLAN VIEW
(SINGLE LANE REPAIR)

FULL DEPTH CONCRETE PAVEMENT REMOVAL

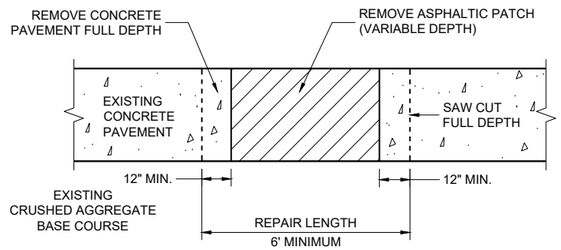


SECTION B - B

CONCRETE REMOVAL



PLAN VIEW

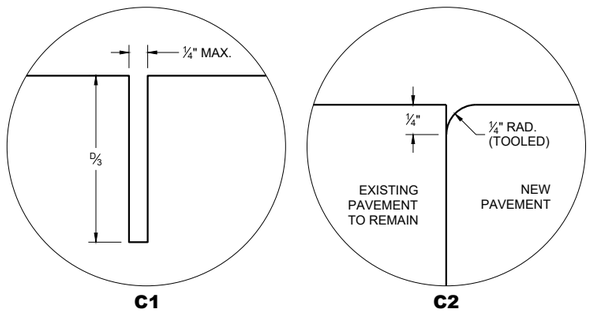


SECTION A - A

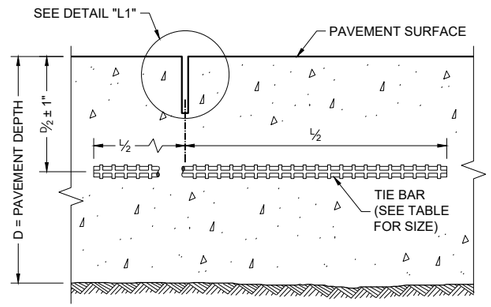
HMA PATCH REMOVAL

CONCRETE PAVEMENT REPAIR AND REPLACEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

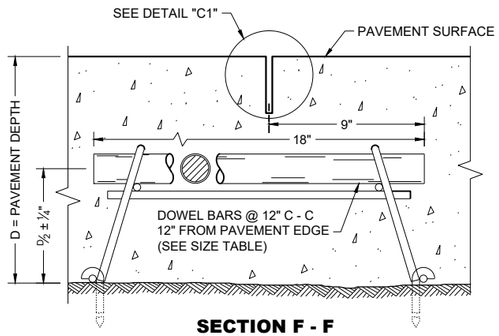


TRANSVERSE JOINTS



SECTION C - C

SAWED LONGITUDINAL JOINT



SECTION F - F

DOWELED CONTRACTION JOINT

GENERAL NOTES

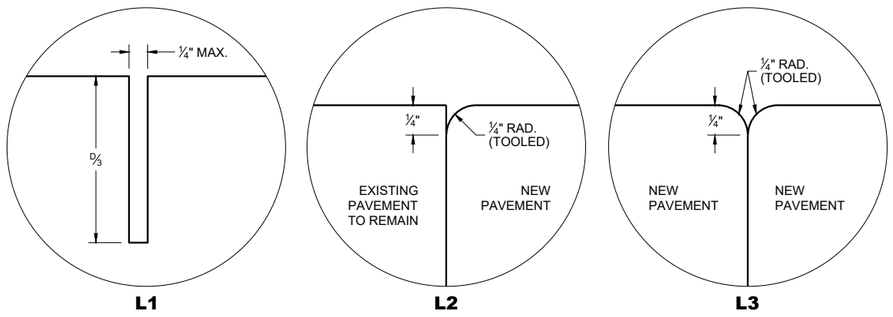
INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

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

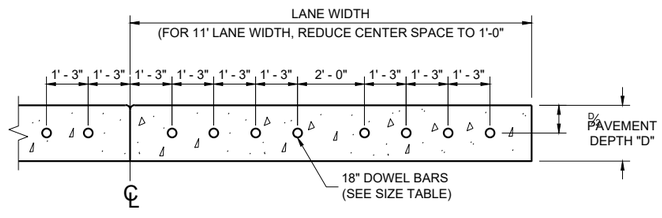
ANCHOR DOWEL BARS AND TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

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

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

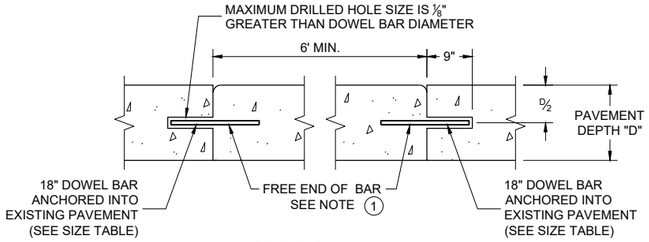


LONGITUDINAL JOINTS



SECTION E - E

DRILLED DOWEL BAR CONSTRUCTION JOINT



SECTION D - D

TIE BAR TABLE

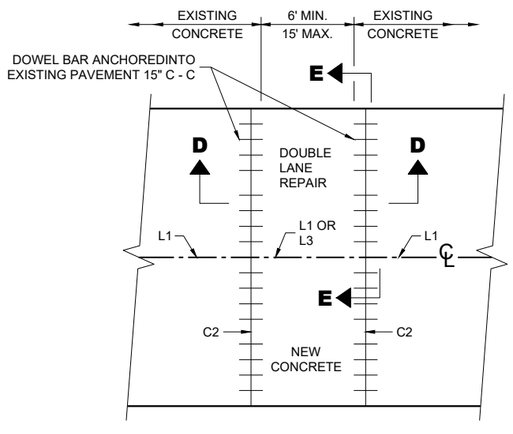
PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 ½"	NO. 4	30"	36"
≥ 10 ½"	NO. 5	36"	36"
	NO. 4*	30"	24" **

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

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

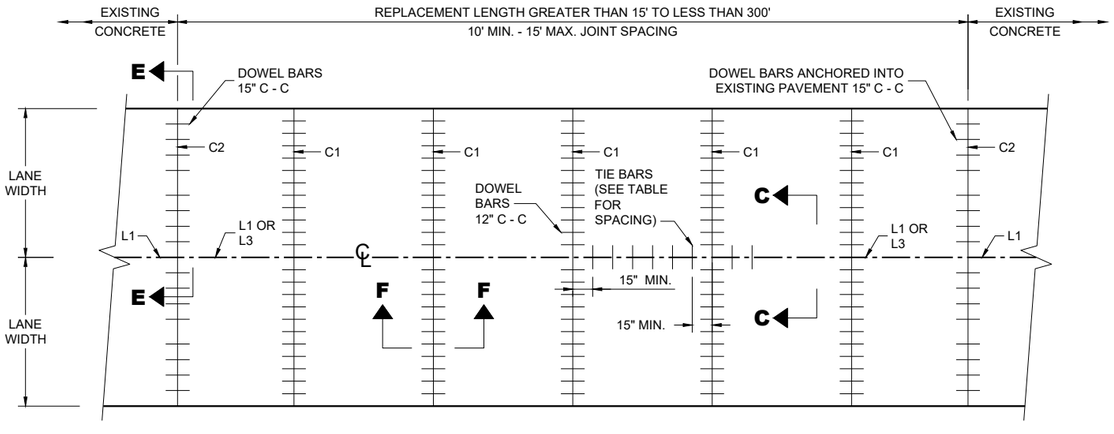
PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

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



PLAN VIEW

MULTILANE CONCRETE PAVEMENT REPAIR

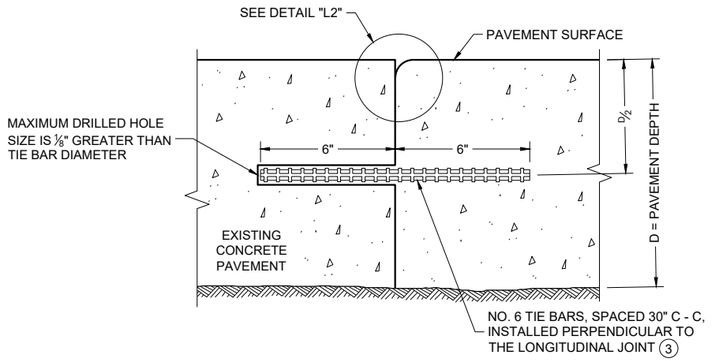


PLAN VIEW

MULTILANE CONCRETE PAVEMENT REPLACEMENT

CONCRETE PAVEMENT REPAIR AND REPLACEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

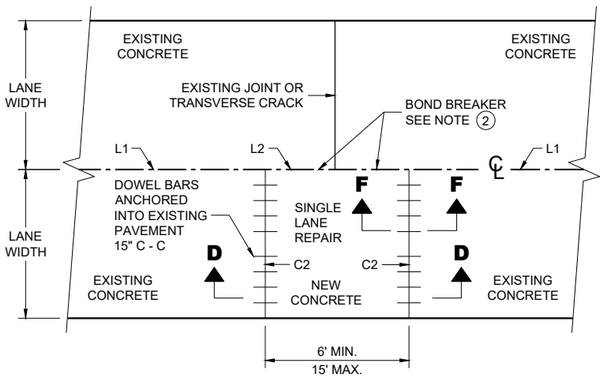


SECTION G - G

TIE BARS ANCHORED INTO EXISTING PAVEMENT

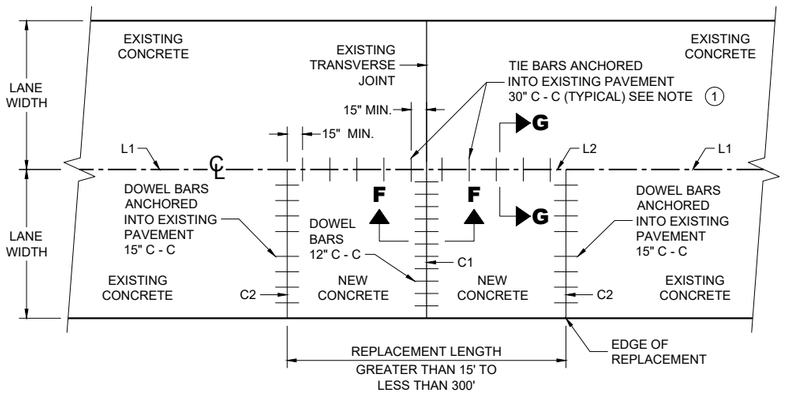
GENERAL NOTES

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



PLAN VIEW

SINGLE LANE CONCRETE PAVEMENT REPAIR



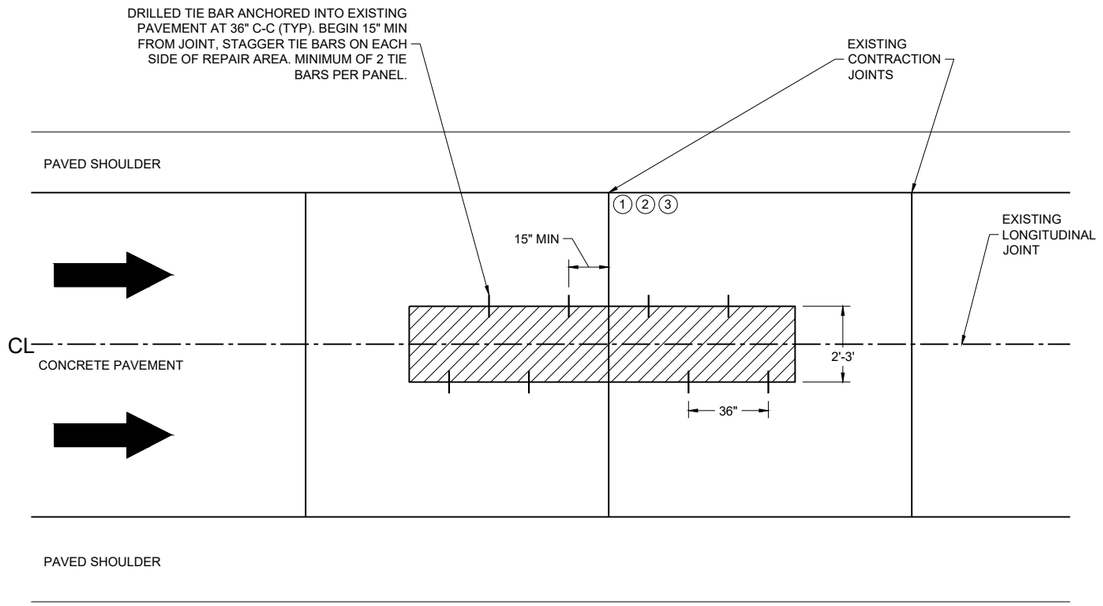
PLAN VIEW

SINGLE LANE CONCRETE PAVEMENT REPLACEMENT

6
SDD 13C09-18c

CONCRETE REPAIR AND REPLACEMENT

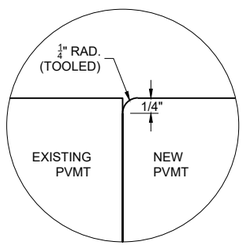
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



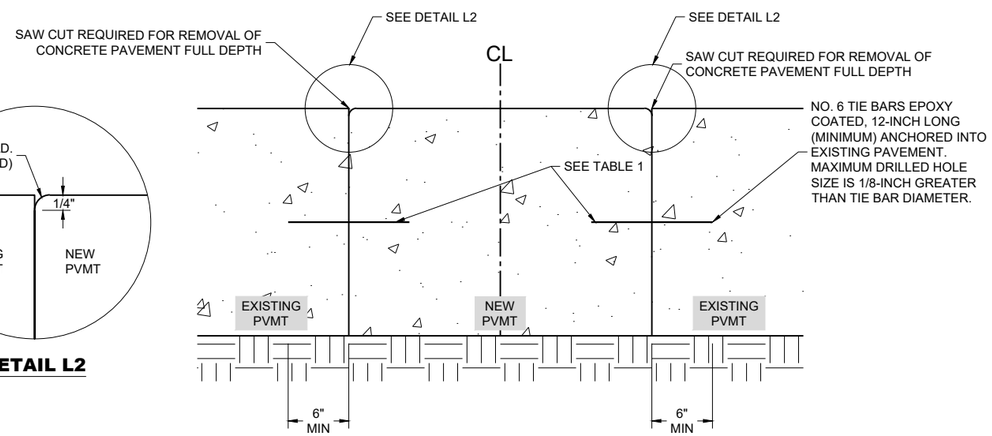
PLAN VIEW

GENERAL NOTES

1. TIE BARS MIN 15" FROM JOINT.
2. LOCATION AND WIDTH OF PATCH ARE VARIABLE DEPENDING ON FIELD CONDITION
3. PRESERVE OR REESTABLISH EXISTING CONTRACTION JOINTS, KEEPING PATCH MATERIALS OUT OF REMAINING CONTRACTION JOINT.



DETAIL L2



SECTION VIEW

TABLE 1	
PATCH WIDTH	TIE BAR LENGTH
24"	12"
36"	18"

CONCRETE PAVEMENT CENTERLINE JOINT REPAIR

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
NOVEMBER 2025 — DATE
/S/ Peter Kemp P.E. — PAVEMENT SUPERVISOR

FHWA

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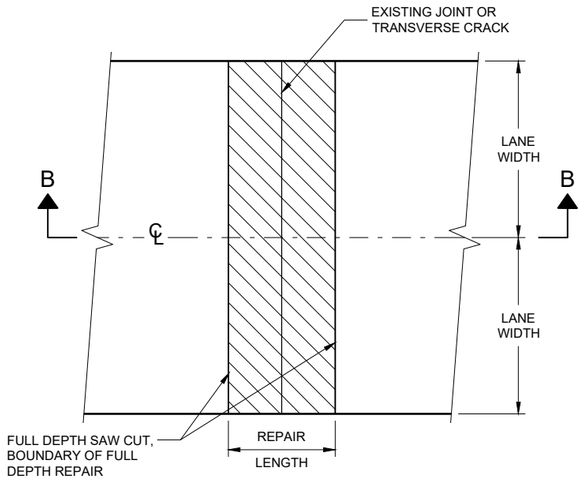
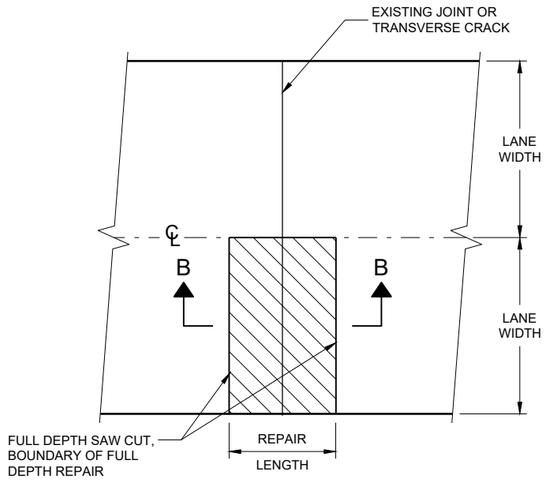
SDD 13C09-18d

SDD 13C09-18d

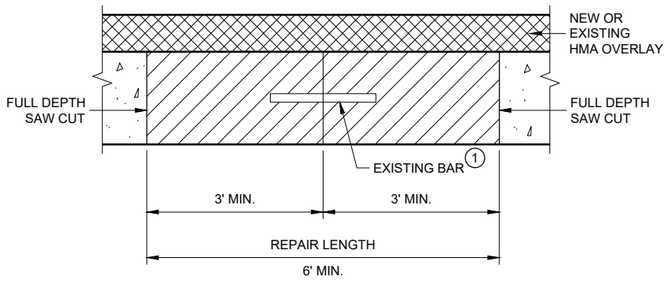


PLAN VIEW
DOUBLE LANE REPAIR



PLAN VIEW
SINGLE LANE REPAIR

FULL DEPTH CONCRETE PAVEMENT REMOVAL



SECTION B - B
CONCRETE REMOVAL

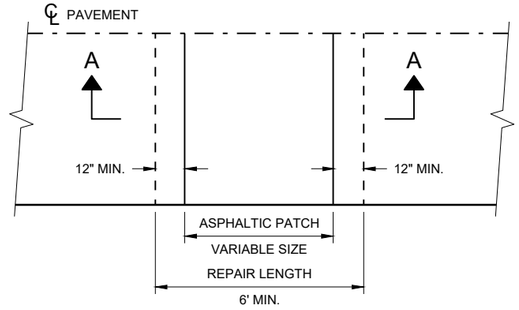
GENERAL NOTES

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

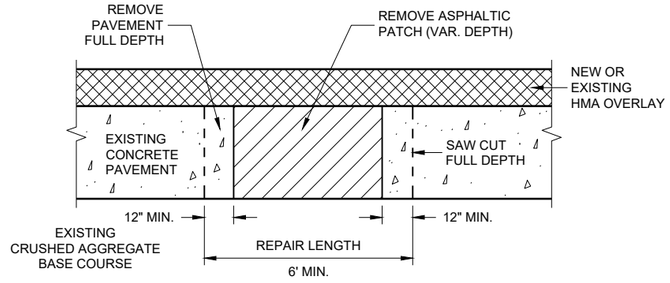
PROVIDE A 6 FOOT MINIMUM DISTANCE FROM BOUNDARIES OF CONCRETE REPAIR AREA TO ADJACENT TRANSVERSE JOINT OR CRACK.

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

(1) DOWEL BARS MAY NOT BE PRESENT.



PLAN VIEW



SECTION A - A

HMA PATCH REMOVAL

BASE PATCHING CONCRETE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTA

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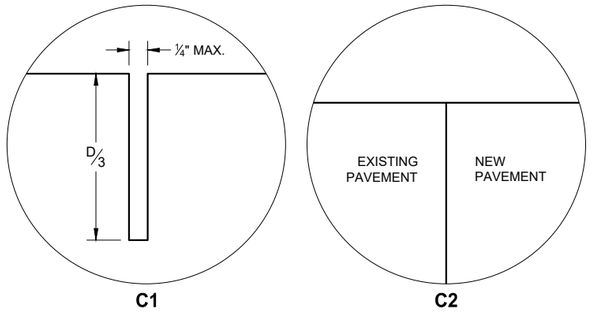
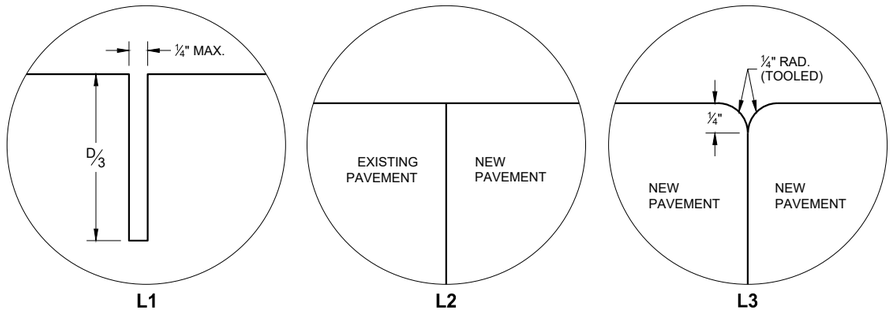
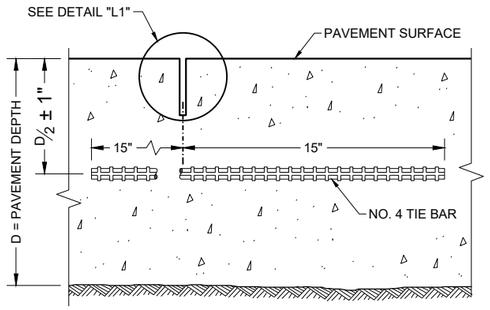
SDD 13C14 - 07a



TRANSVERSE JOINTS

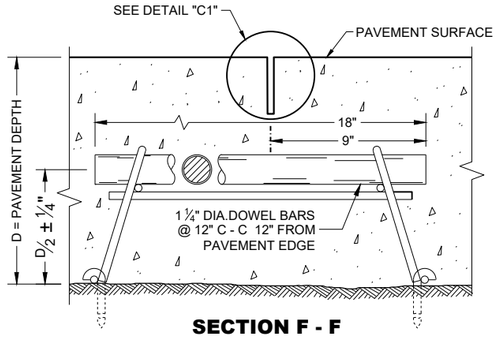


LONGITUDINAL JOINTS



SECTION C - C

SAWED LONGITUDINAL JOINT



SECTION F - F

CONTRACTION JOINT

GENERAL NOTES

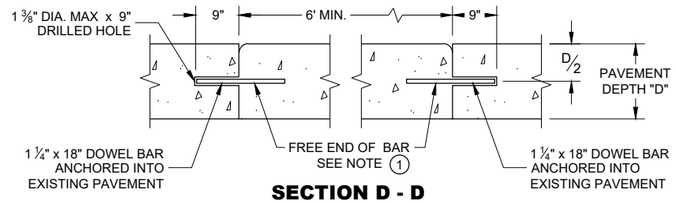
INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

CONCRETE BASE PATCHES OF EXISTING NON-DOWELED CONCRETE PAVEMENTS DO NOT NEED TO BE DOWELED.

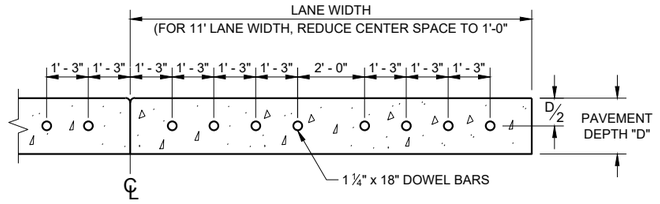
ANCHOR DOWEL BARS AND TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

PROVIDE A MINIMUM DISTANCE OF 15 INCHES FROM ALL TRANSVERSE JOINTS OR EDGES OF REPLACEMENT TO THE CENTER OF THE TIE BAR NEAREST THAT JOINT O EDGE.

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

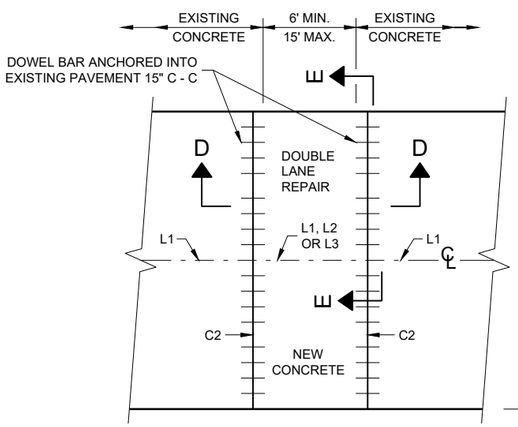


SECTION D - D



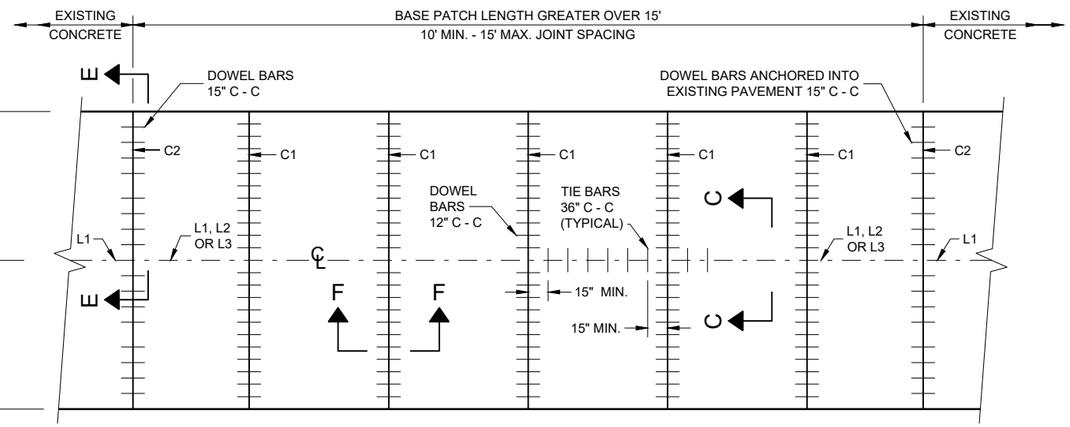
SECTION E - E

SPACING OF DOWEL BARS ANCHORED INTO EXISTING PAVEMENT



PLAN VIEW

MULTILANE CONCRETE BASE PATCH 15' MAXIMUM LENGTH



PLAN VIEW

MULTILANE CONCRETE BASE PATCH GREATER THAN 15' IN LENGTH

BASE PATCHING CONCRETE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTA 323

SDD 13C14 - 07b

SDD 13C14 - 07b

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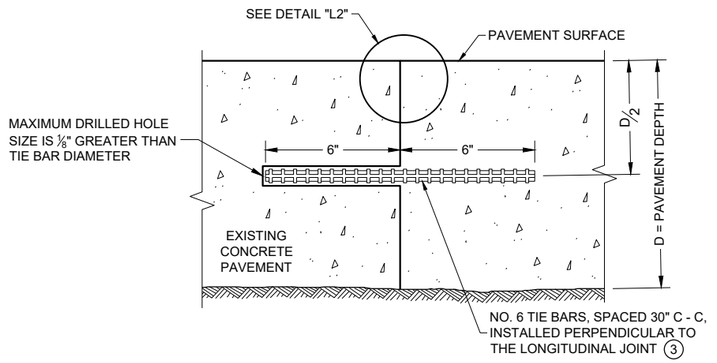
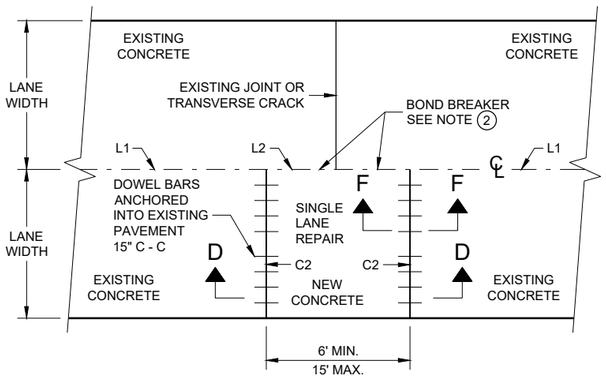


SECTION G - G

TIE BARS ANCHORED INTO EXISTING PAVEMENT

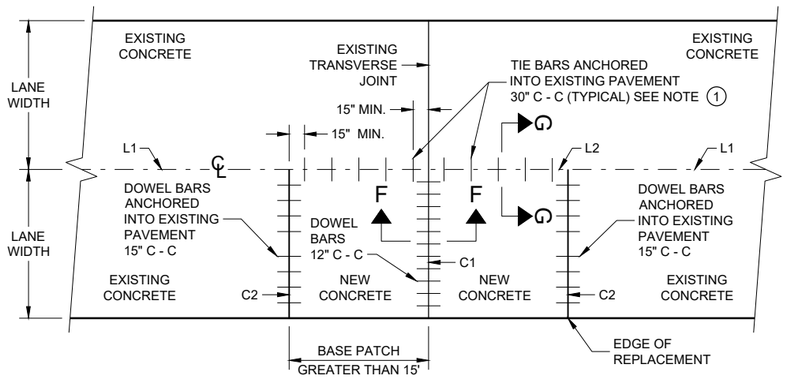
GENERAL NOTES

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



PLAN VIEW

SINGLE LANE CONCRETE BASE PATCH
15' MAXIMUM LENGTH



PLAN VIEW

SINGLE LANE CONCRETE BASE PATCH
GREATER THAN 15' LENGTH

BASE PATCHING CONCRETE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018
DATE

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

FHWA

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SDD 13C14 - 07c

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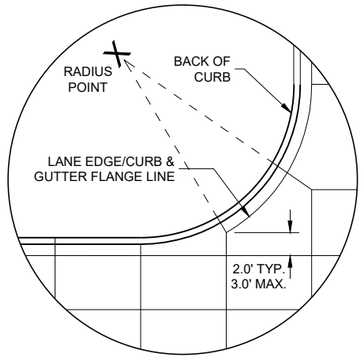
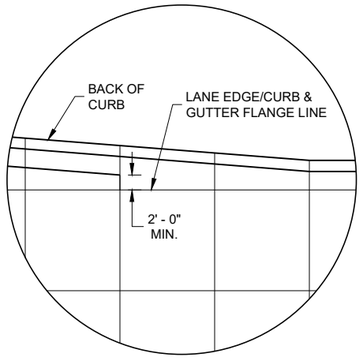
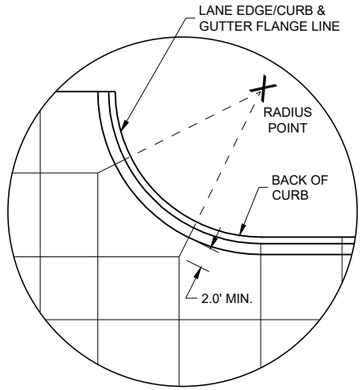
SDD 13C14 - 07c



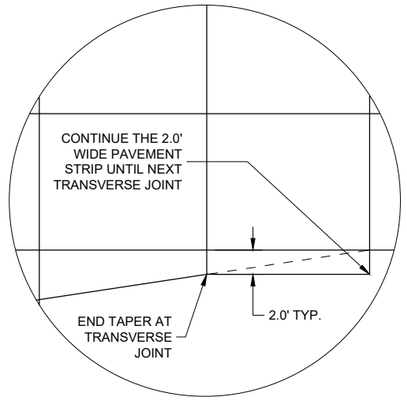
DETAIL "A"



DETAIL "B"



DETAIL "C"



DETAIL "D"

GENERAL NOTES

THE PRIMARY ROADWAY CONTROLS THE TRANSVERSE JOINT PATTERN.

ALIGN NEW JOINTS WITH EXISTING JOINTS OR CRACKS.

CONSTRUCT TRANSVERSE JOINTS PERPENDICULAR TO THE ROADWAY.

ADJUST TRANSVERSE JOINTS TO ALIGN WITH UTILITY FIXTURES (E.G MANHOLES AND INLETS) IN THE PAVEMENT STRUCTURE WHEN POSSIBLE. WATER VALVES DO NOT REQUIRE JOINT ADJUSTMENT.

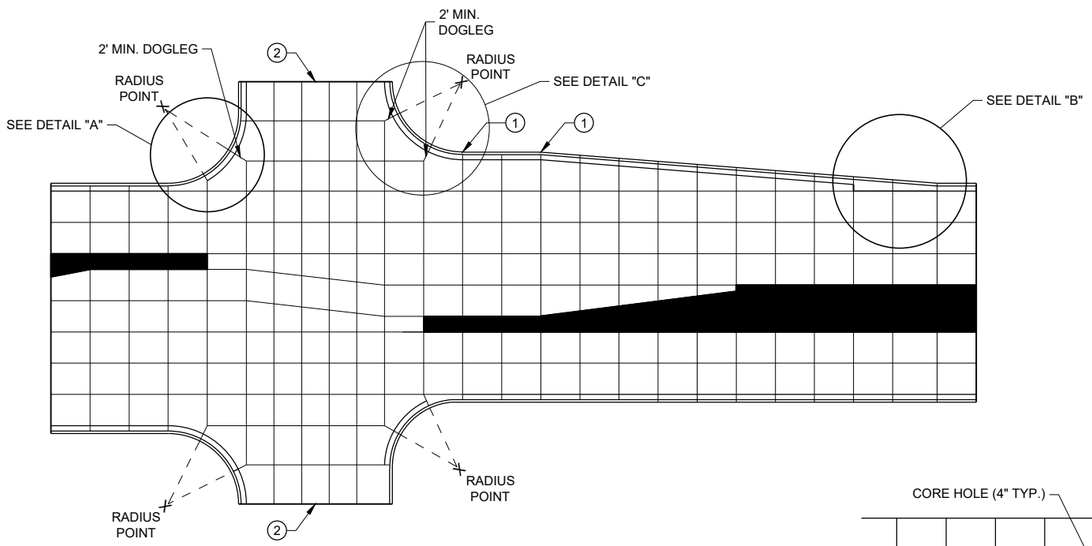
AVOID SLABS LESS THAN 2 FEET WIDE OR GREATER THAN 15 FEET WIDE.

SEE TABLE FOR TRANSVERSE JOINT SPACING. JOINT SPACING SPECIFIED IS MAXIMUM AND ACTUAL SPACING CAN BE ADJUSTED TO ACCOMMODATE INTERSECTIONS.

AVOID ANGLES LESS THAN 60° BY DOGLEGGING JOINTS THROUGH CURVE RADIUS POINTS. USE 90° ANGLES WHEN POSSIBLE.

CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

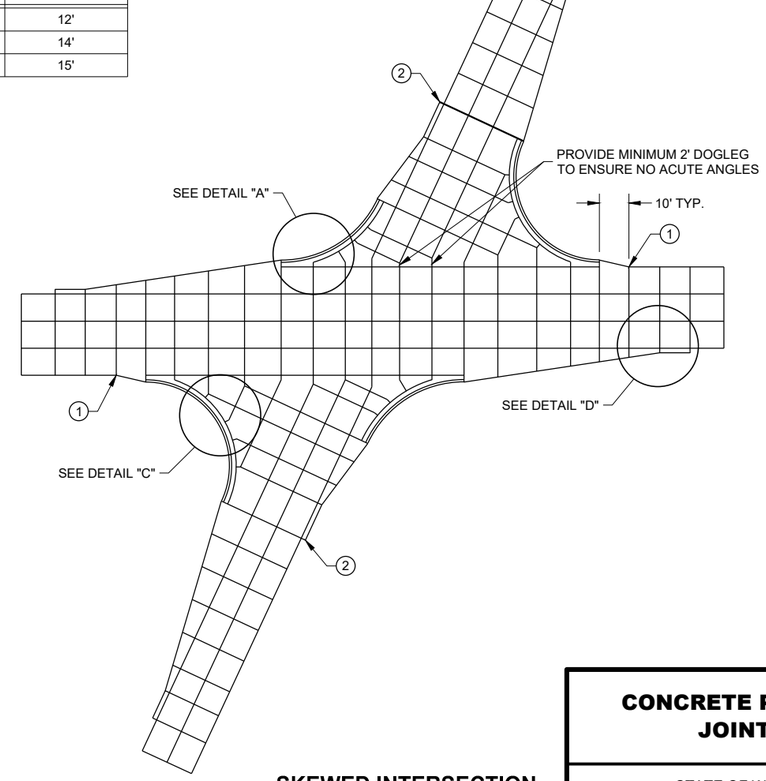
1. PROVIDE TRANSVERSE JOINTS AT ALL PAVEMENT WIDTH CHANGES.
2. CONSTRUCT DOWELED EXPANSION JOINT ON THE SIDE ROAD OF AN INTERSECTION IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH. ALIGN EXPANSION JOINT WITH EDGE OF RADIUS.
3. THE ENGINEER MAY APPROVE SLIGHT VARIATIONS FROM THESE JOINTING DETAILS.



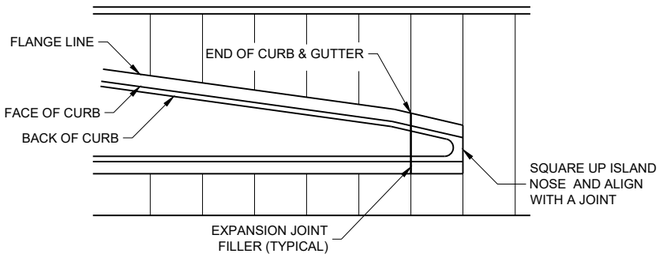
STANDARD INTERSECTION

PAVEMENT DEPTH AND JOINT SPACING TABLE

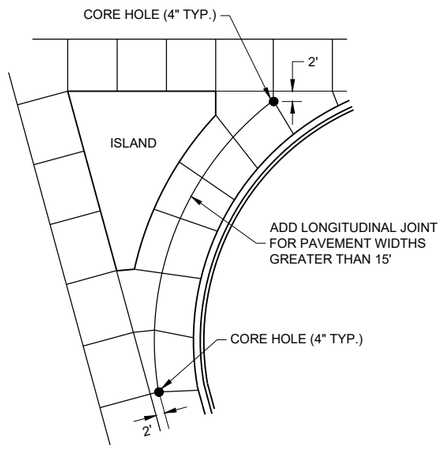
PAVEMENT DEPTH (D)	CONTRACTION JOINT SPACING
6", 6 ½"	12'
7", 7 ½"	14'
8" & ABOVE	15'



SKEWED INTERSECTION



APPROACH TO MEDIAN



LARGE RIGHT TURN

CONCRETE PAVEMENT JOINTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 13C18 - 08a

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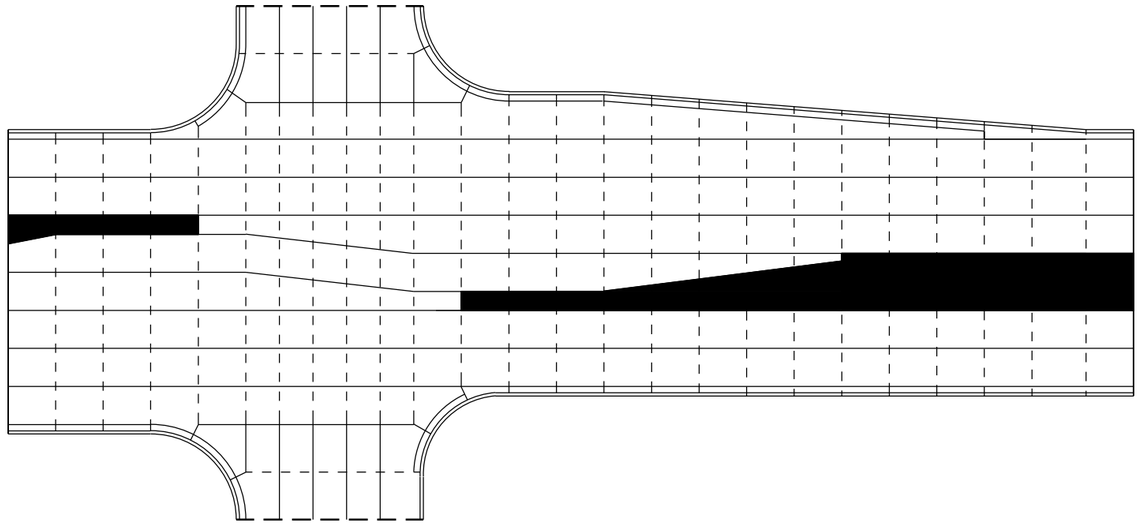
SDD 13C18 - 08a

LEGEND

POTENTIAL DOWELED EXPANSION JOINT

DOWELED JOINT

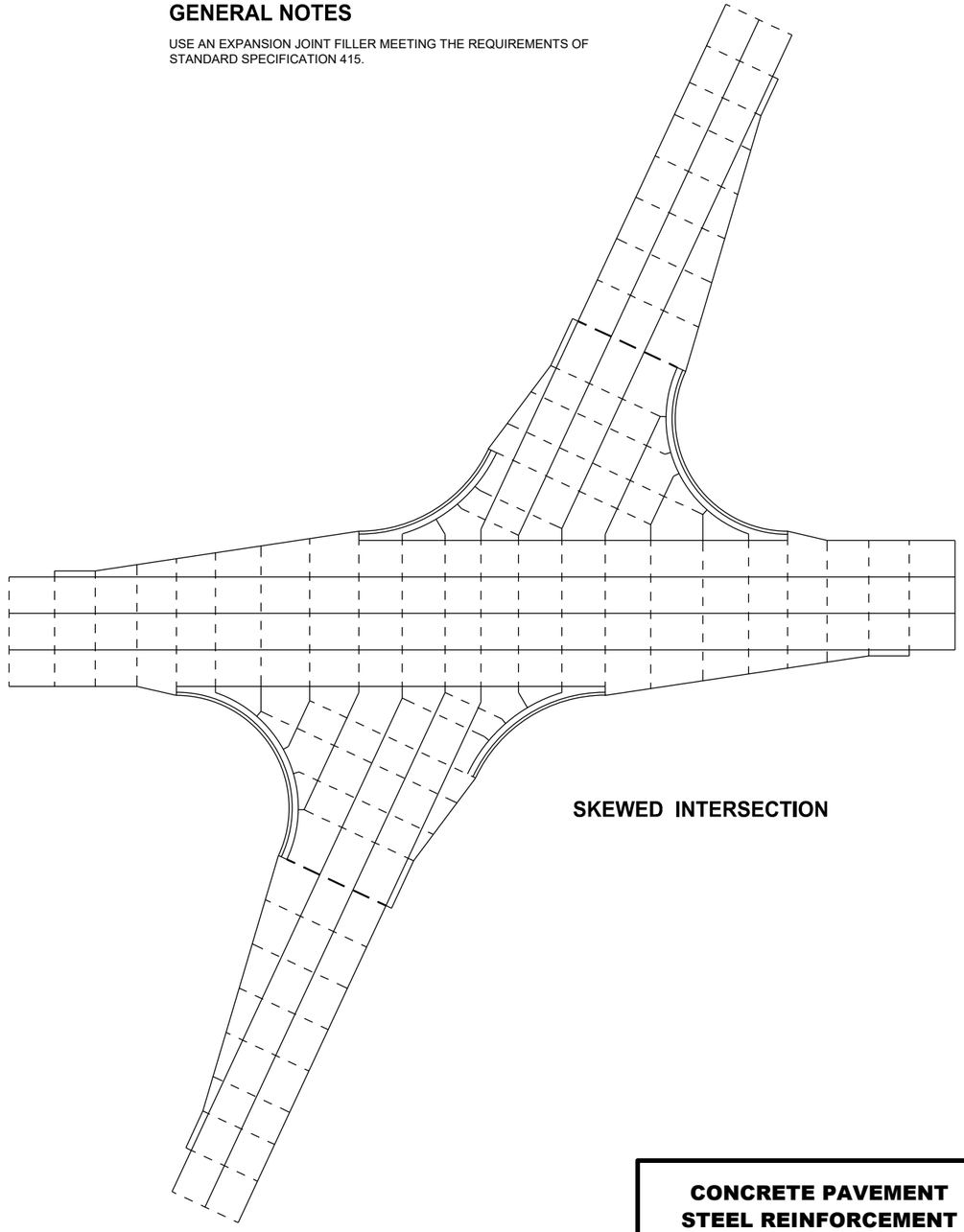
TIED JOINT



STANDARD INTERSECTION

GENERAL NOTES

USE AN EXPANSION JOINT FILLER MEETING THE REQUIREMENTS OF STANDARD SPECIFICATION 415.



SKEWED INTERSECTION

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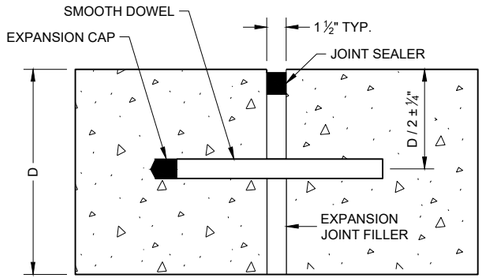
SDD 13C18 - 08b

CONCRETE PAVEMENT STEEL REINFORCEMENT

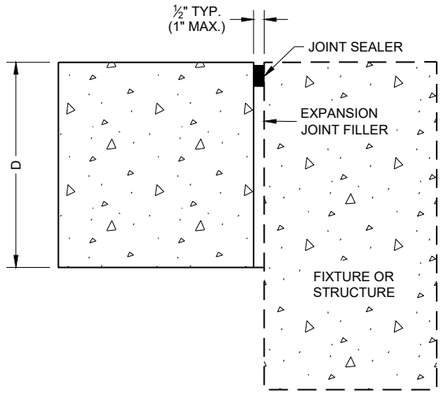
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 13C18 - 08b



DOWELED TRANSVERSE (1)



UNTIED - LONGITUDINAL

EXPANSION JOINTS

TIE BAR TABLE

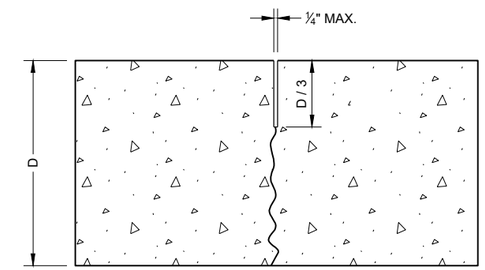
PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 ½"	NO. 4	30"	36"
≥ 10 ½"	NO. 5	36"	36"
	NO. 4 *	30"	24" **

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

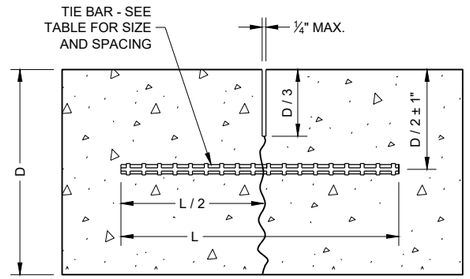
** CONFORM TO 15" MINIMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.

GENERAL NOTES

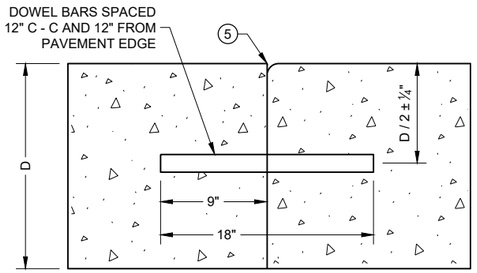
1. USE DOWELED EXPANSION JOINTS ON SIDE ROADS AT INTERSECTIONS (TO ISOLATETHE SIDE ROAD FROM THE THROUGH STREET) IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH.
2. SPACE CONTRACTION JOINTS IN ACCORDANCE WITH SDD 13C4, 13C11 OR 13C13.
3. LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO CONTRACTION JOINTS.
4. CONSTRUCTION JOINTS CAN BE FORMED OR SAWED.
5. IF JOINT IS FORMED, PROVIDE A ¼" RADIUS.
6. ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.



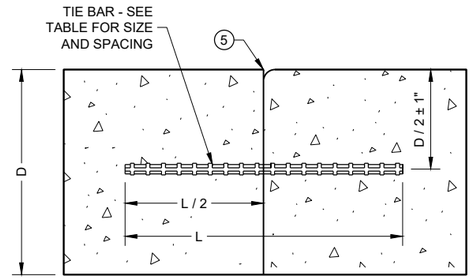
UNDOWELED TRANSVERSE



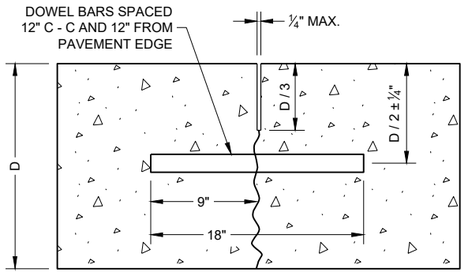
TIED LONGITUDINAL



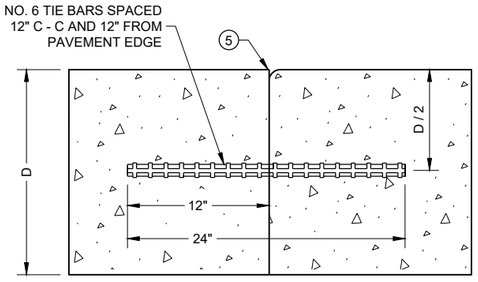
DOWELED TRANSVERSE (3)



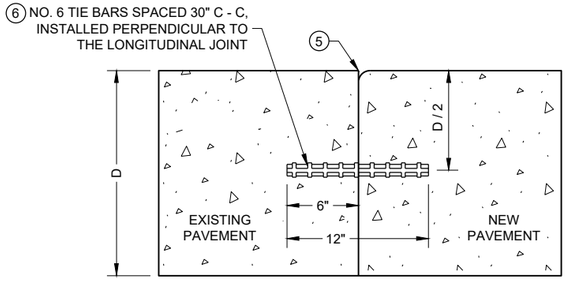
TIED LONGITUDINAL



DOWELED TRANSVERSE



TIED TRANSVERSE (3)
(FOR USE ON NON-DOWELED PAVEMENTS ONLY)



TIED LONGITUDINAL TO EXISTING

CONTRACTION JOINTS (2)

CONSTRUCTION JOINTS (4)

CONCRETE PAVEMENT JOINT TYPES

SDD 13C18 - 08c

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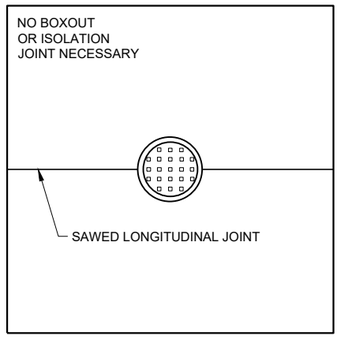
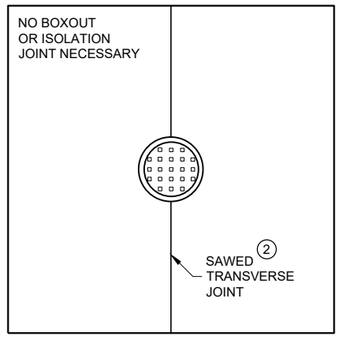
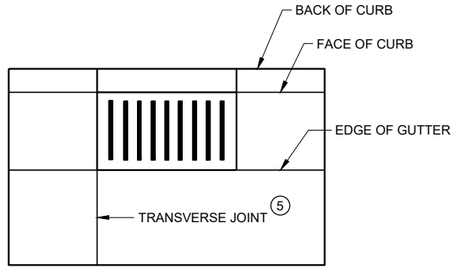


MANHOLE WITH LONGITUDINAL JOINT



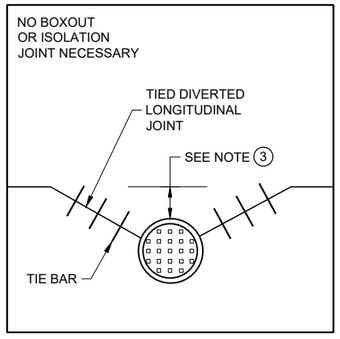
MANHOLE WITH TRANSVERSE JOINT



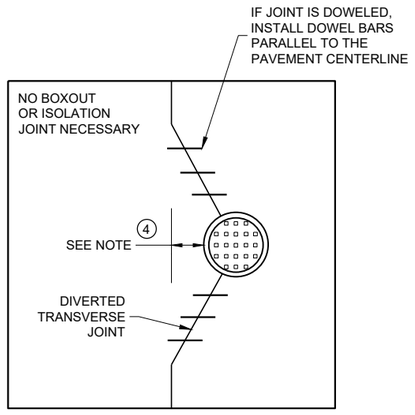
INLET WITH TRANSVERSE JOINT

GENERAL NOTES

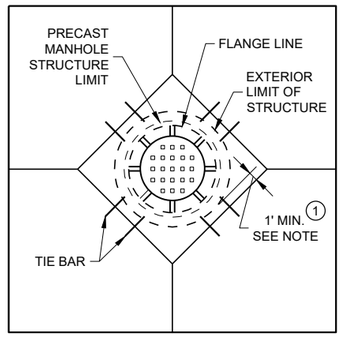
1. USE BOXOUTS WHEN UTILITY STRUCTURE IS IN THE PATH OF CONSTRUCTION JOINTS. PROVIDE A 1 FOOT MINIMUM CLEARANCE BETWEEN THE EXTERIOR LIMIT OF THE STRUCTURE TO THE DIAMOND BOXOUT.
2. ADJUST TRANSVERSE JOINT TO INTERSECT MANHOLE IF POSSIBLE.
3. IF DISTANCE BETWEEN THE LONGITUDINAL JOINT AND THE EDGE OF MANHOLE IS 2 FEET OR LESS, DIVERT THE LONGITUDINAL JOINT AT A 2:1 TAPER RATE TO THE CENTER OF THE MANHOLE. IF THE DISTANCE IS GREATER THAN 2 FEET, DO NOT DIVERT THE JOINT AND SAW AS NORMAL. PLACE REINFORCEMENT REBAR AROUND THE MANHOLE.
4. IF THE DISTANCE FROM THE EDGE OF THE MANHOLE TO THE NEAREST TRANSVERSE JOINT IS LESS 4 FEET OR LESS, REDIRECT JOINT TO INTERSECT THE CENTER OF THE MANHOLE. IF DISTANCE IS GREATER THAN 4 FEET, DO NOT DIVERT THE JOINT AND SAW AS NORMAL. PLACE REINFORCEMENT REBAR AROUND THE MANHOLE.
5. ALIGN TRANSVERSE JOINT WITH ONE EDGE OF INLET WHEN PRACTICAL.



MANHOLE WITH DIVERTED LONGITUDINAL CONTRACTION JOINT



MANHOLE WITH DIVERTED TRANSVERSE CONTRACTION JOINT



DIAGONAL MANHOLE BOXOUT FOR CONSTRUCTION JOINTS

CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE

/S/ Peter Kemp P.E.
PAVEMENT SUPERVIS

FHWA

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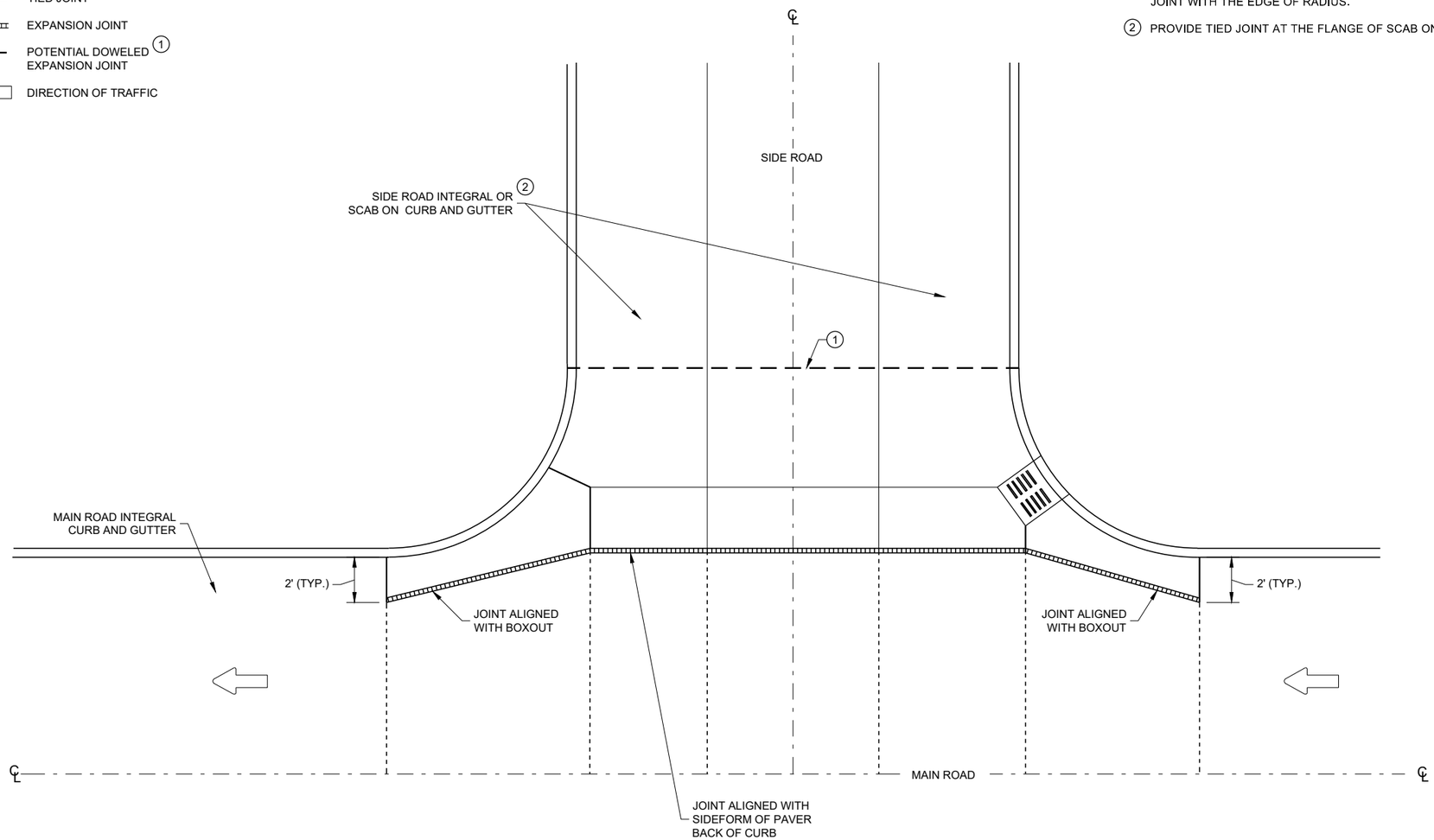
SDD13C18 - 08d

SDD13C18 - 08d

LEGEND

- DOWELED JOINT
- TIED JOINT
- EXPANSION JOINT
- POTENTIAL DOWELED EXPANSION JOINT (1)
- DIRECTION OF TRAFFIC



GENERAL NOTES

(1) CONSTRUCT DOWELED EXPANSION JOINT ON THE SIDE ROAD OF AN INTERSECTION IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH. ALIGN EXPANSION JOINT WITH THE EDGE OF RADIUS.

(2) PROVIDE TIED JOINT AT THE FLANGE OF SCAB ON CURB IF SCAB ON CURB AND GUTTER IS USE.

INTERSECTION BOXOUT FOR INTEGRAL CURB AND GUTTER

CONCRETE PAVEMENT INTERSECTION BOXOUT FOR INTEGRAL CURB AND GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE

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PAVEMENT SUPERVIS

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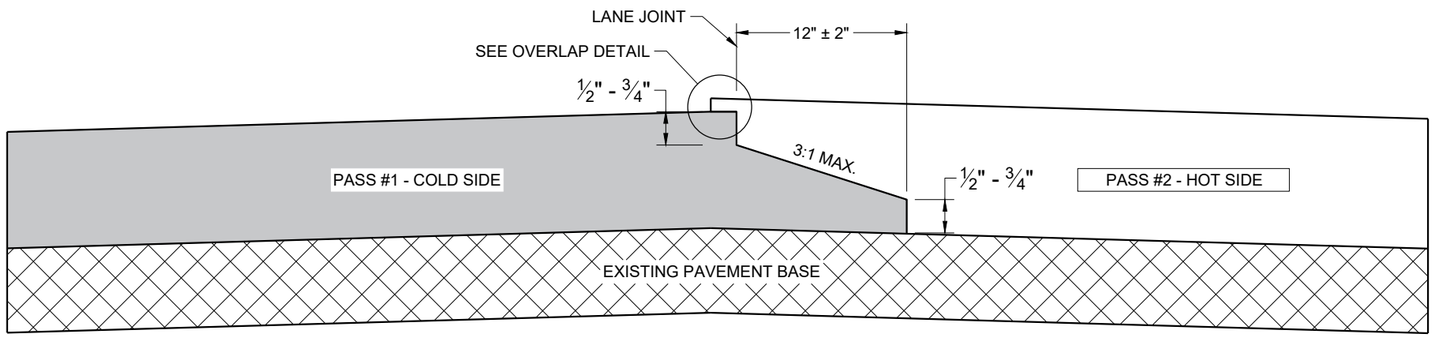
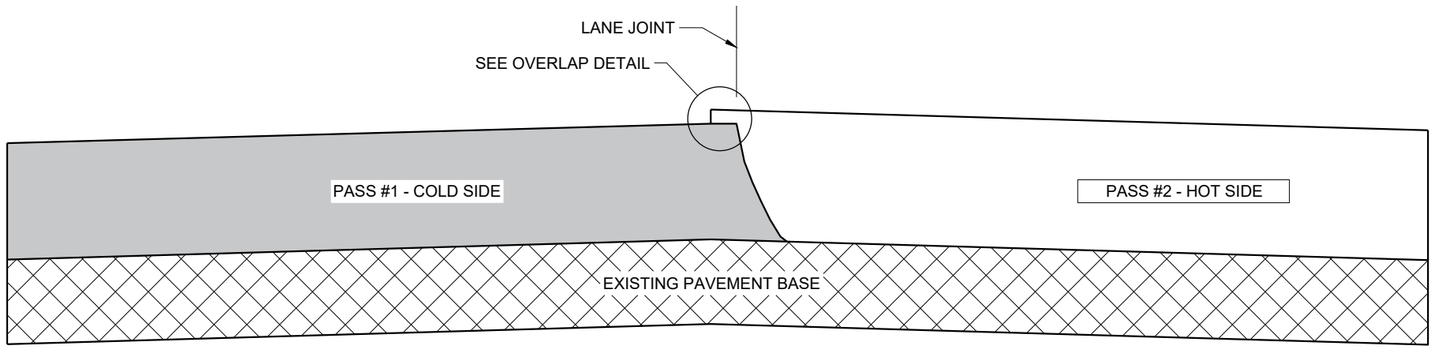
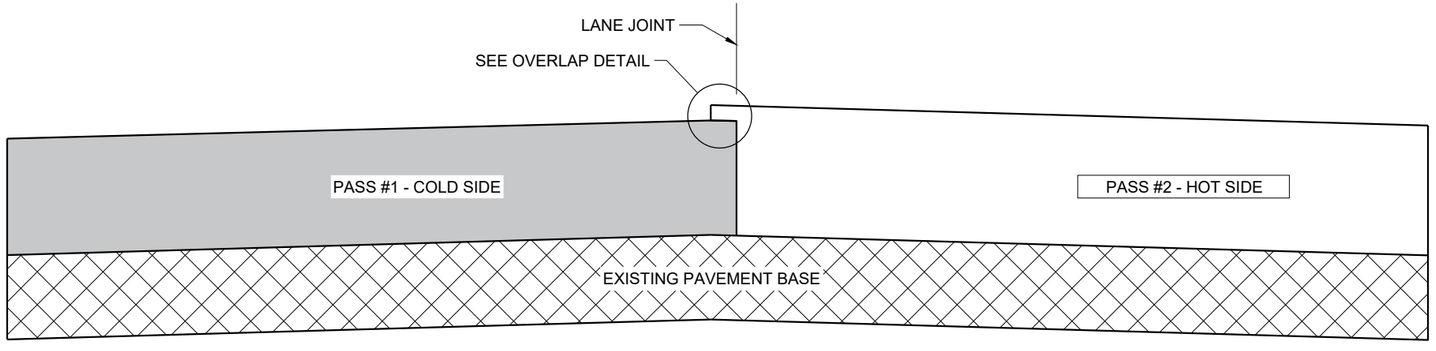


TYPICAL PAVEMENT CROSS SECTION
NOTCHED WEDGE JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT (MILLED)

GENERAL NOTES

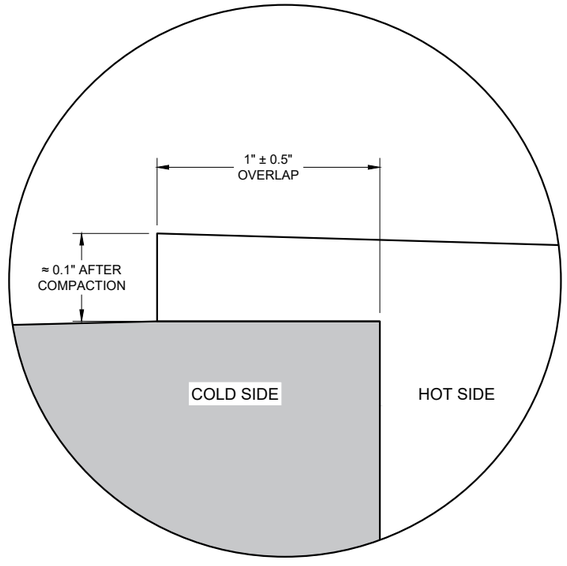
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

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

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SDD 13C19 - 03

SDD 13C19 - 03

HMA LONGITUDINAL JOINTS

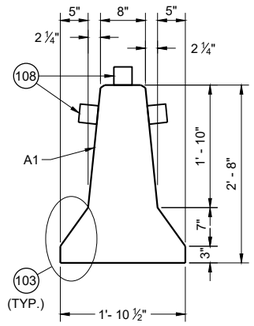
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2020
DATE

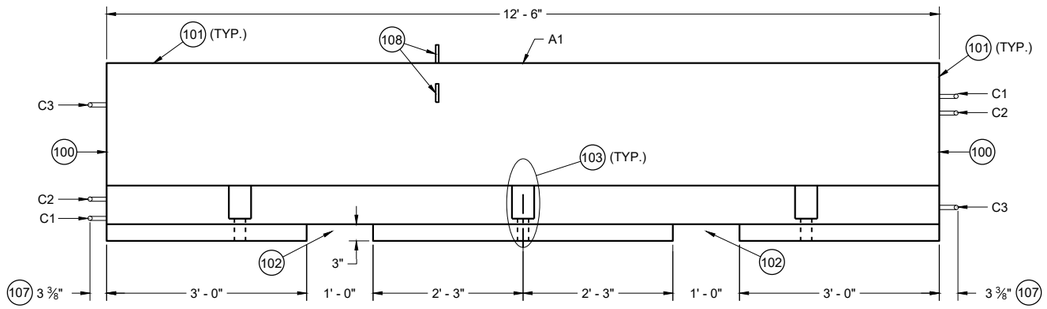
/S/ Steven Hefel
HMA PAVEMENT ENGIN

330

FHWA



CROSS SECTION



PROFILE VIEW

GENERAL NOTES

PLACE BARRIER ON PAVED SURFACE. BEFORE PLACEMENT OF TEMPORARY BARRIER, REMOVE ALL LOOSE MATERIAL FROM PAVED SURFACE.

LOOP BARS C1, C2 AND C3 ARE NOT FOR PLACEMENT OR MOVEMENT OF BARRIER.

(100) PERMANENTLY FORM INTO ONE END OF BARRIER THE FOLLOWING INFORMATION:
- A. TYPE OF BARRIER: WI-CBTP
- B. MANUFACTURER
- C. DATE OF MANUFACTURE (MONTH AND YEAR)

(101) 1" OPTIONAL CHAMFER

(102) SEE LIFTING SLOT DETAIL

(103) SEE ANCHOR BLOCK DETAIL

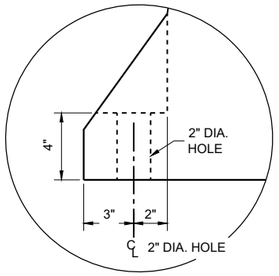
(104) 1 ¾" MIN. CLEAR COVER

(105) 2" MIN. CLEAR COVER

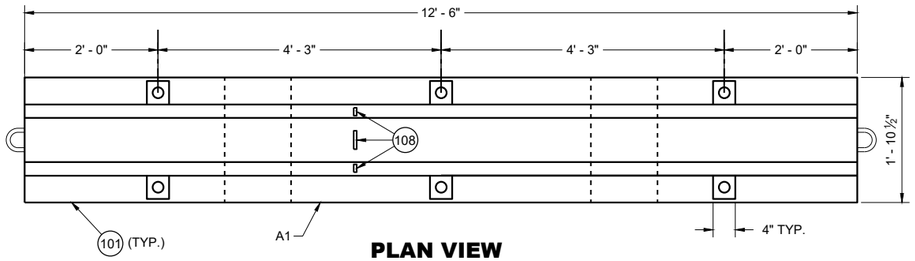
(106) 1" MIN. CLEAR COVER

(107) ± ⅛" MEASURED FROM FACE OF CONCRETE BARRIER TO OUTSIDE OF LOOP BAR (TYP.)

(108) USE DELINEATORS CONFORMING TO SECTION 633 OF THE STANDARD SPECIFICATIONS. CONTRACTOR MY USE ALTERNATE SHAPES AND HOUSING. INSTALL DELINEATORS ACCORDING TO MANUFACTURERS INSTRUCTION. INSTALL YELLOW REFLECTORS WHEN BARRIER IS LOCATED LEFT OF TRAFFIC AND WHITE WHEN BARRIER IS LOCATED RIGHT OF TRAFFIC. SPACE DELINEATORS A MAXIMUM OF 25 FEET APART, PROVIDE TOP MOUNTED DELINEATORS IN ADDITION TO SIDE MOUNTED DELINEATORS ON BARRIER INSTALLATIONS LOCATED ON A CURVED ALIGNMENT LONGER THAT 200 FEET AND ON BARRIERS USED TO SEPARATE OPPOSING TRAFFIC.

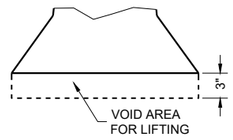


ANCHOR BLOCK DETAIL

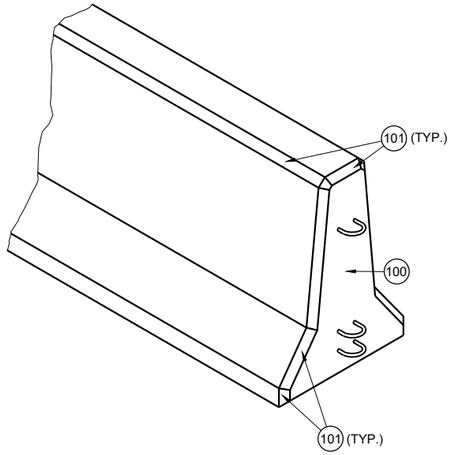


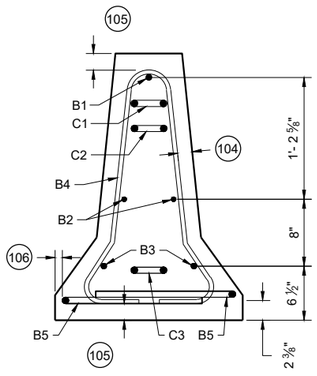
PLAN VIEW

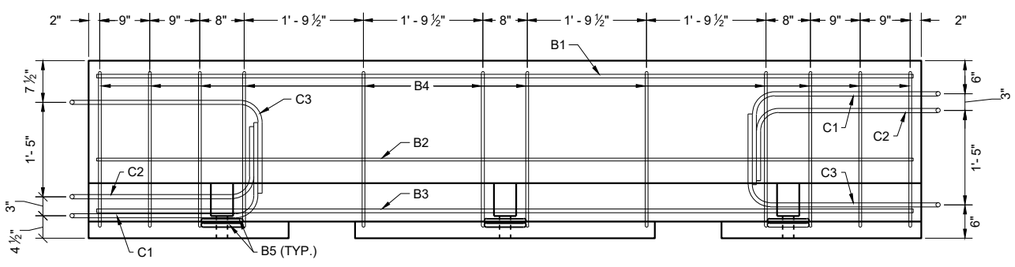
TEMPORARY BARRIER



LIFTING SLOT DETAIL (TYP.)







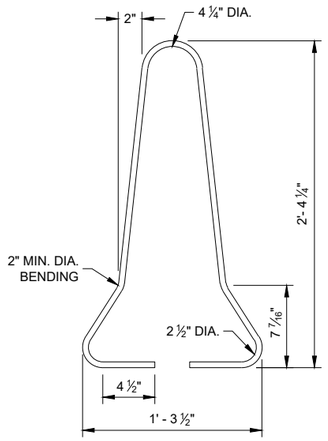
PROFILE VIEW

TEMPORARY BARRIER REINFORCEMENT

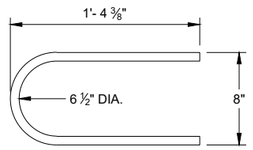
CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

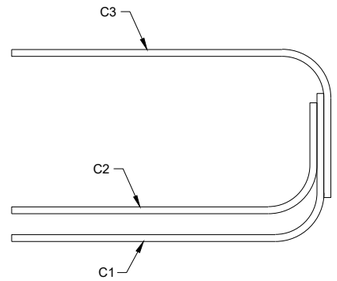
SDD 14B07-16a



B4 BAR DETAIL

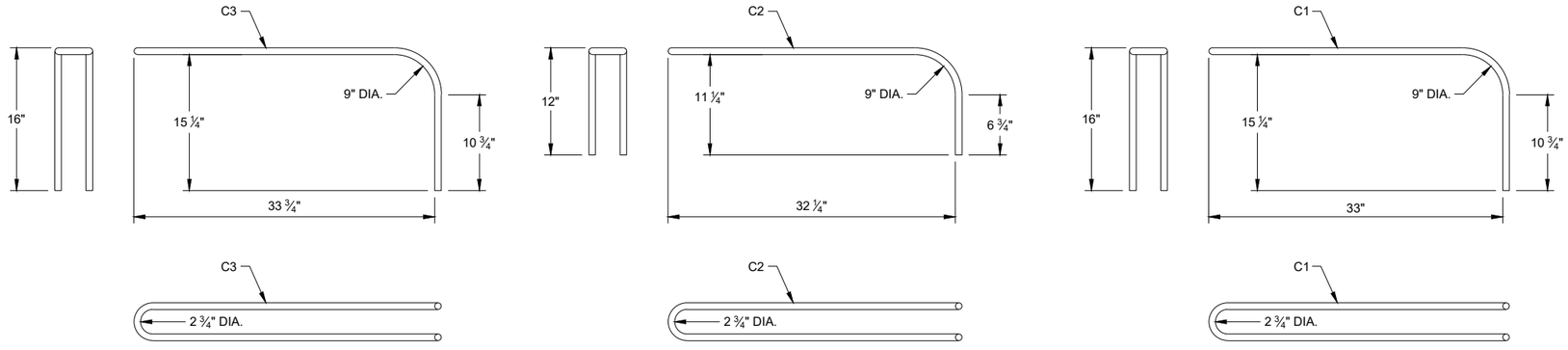


B5 BAR DETAIL



PROFILE VIEW

LOOP BAR ASSEMBLY



C BAR DETAILS

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SDD 14B07-16b

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTA

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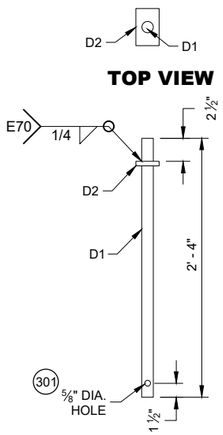
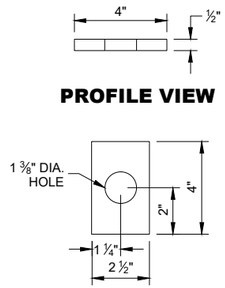
SDD 14B07-16b



TOP VIEW

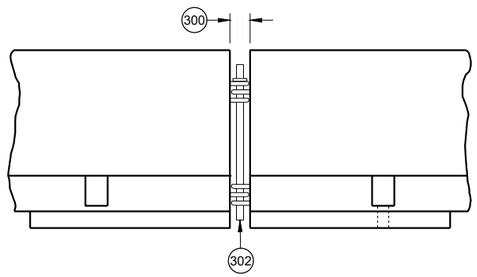
PROFILE VIEW

CONNECTOR PIN ASSEMBLY



PROFILE VIEW

TOP VIEW D2



CONNECTING TEMPORARY BARRIER SECTIONS

GENERAL NOTES

300 SET WITH 3 ⅝" WOOD BLOCK.

301 HOLE IS OPTIONAL.

302 CONNECTOR PIN ASSEMBLY.

303 CONCRETE PAVEMENT, APPROACH SLAB, OR DECK.

304 CONCRETE DECK.

305 DO NOT USE ON CONCRETE BRIDGE DECK WITH ASPHALT OVERLAY OR CONCRETE PAVEMENT WITH ASPHALT OVERLAY.

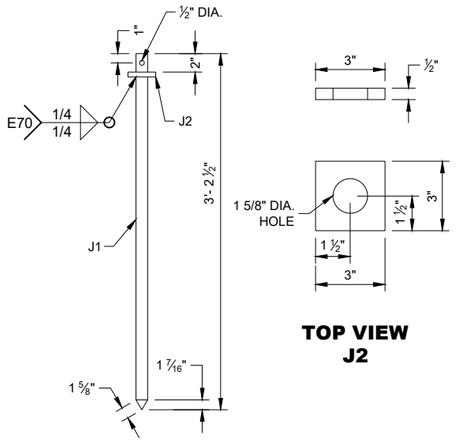
306 MINIMUM OF 2" OF ASPHALT.

307 ASPHALT ANCHOR PIN ASSEMBLY

308 IF DRILLING A PILOT HOLE, THE MAX, DIA. OF THE HOLE IS 3/4"

309 WHEN THERE IS ASPHALT OVERLAYING CONCRETE PAVEMENT, A 1 5/8" DIA. PILOT HOLE CAN BE DRILLED INTO THE OVERLAY AND CONCRETE. IF NEEDED DRILL A 3/4" PILOT HOLE IN BASE COURSE.

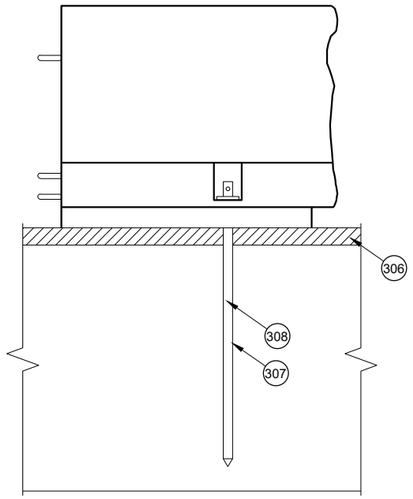
TOP VIEW



TOP VIEW J2

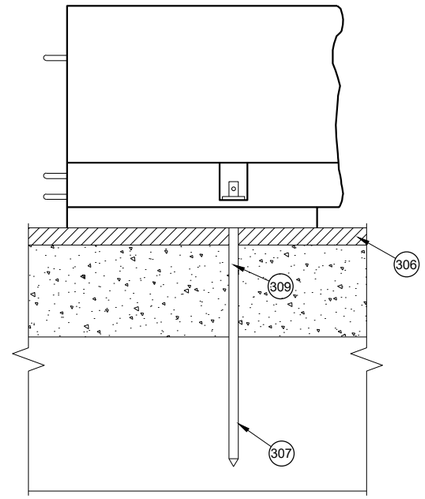
PROFILE VIEW

ASPHALT ANCHOR PIN ASSEMBLY



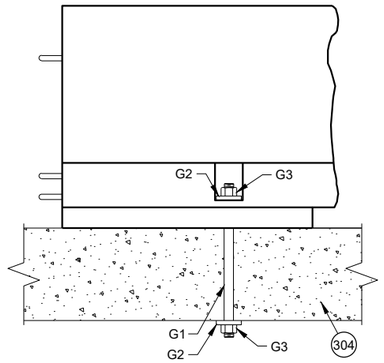
SIDE VIEW

ASPHALT ANCHOR INSTALLATION THROUGH ASPHALT PAVEMENT



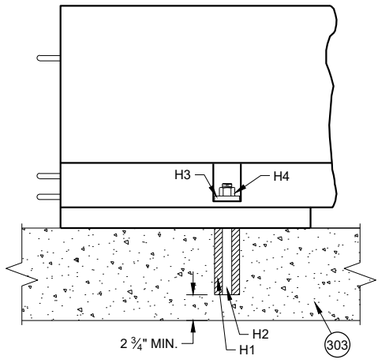
SIDE VIEW

ASPHALT ANCHOR INSTALLATION THROUGH ASPHALT OVERLAY ON TOP OF CONCRETE PAVEMENT



SIDE VIEW

THROUGH BOLT ANCHOR INSTALLATION (305)



SIDE VIEW

ADHESIVE ANCHOR INSTALLATION (305)

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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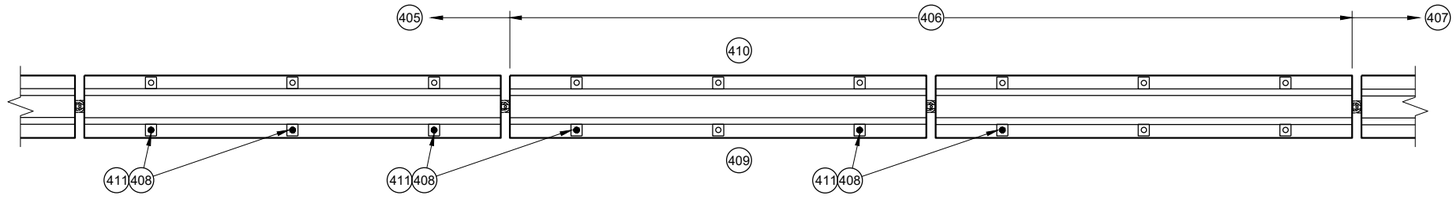
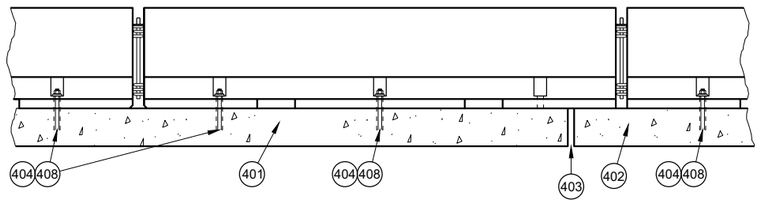
SDD 14B07-16c



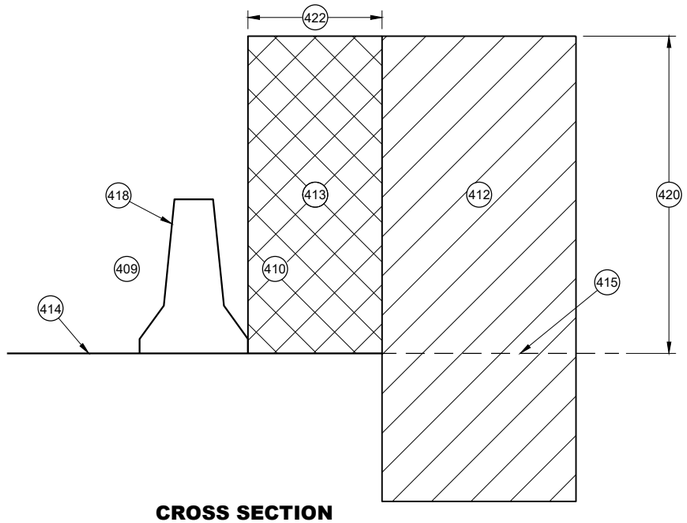
PLAN VIEW

TRANSITION FROM FREE STANDING TO ANCHORED BARRIER



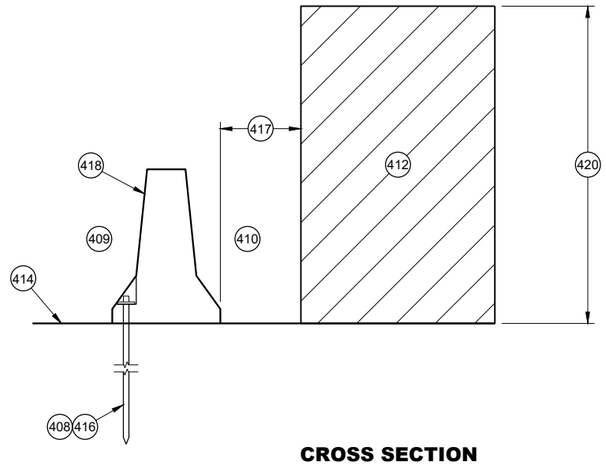
PROFILE VIEW

ANCHORED BARRIER NEAR EXPANSION JOINT (400)



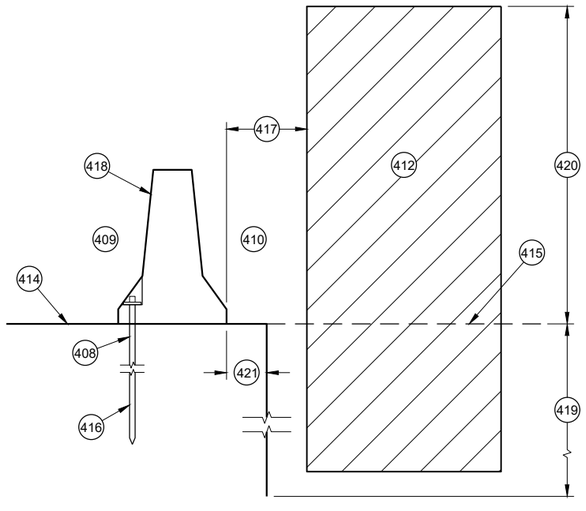
CROSS SECTION

FREE STANDING BARRIER



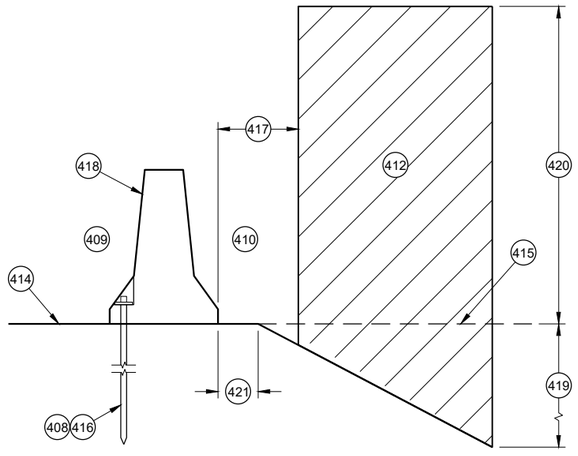
CROSS SECTION

ANCHORED BARRIER FOR OBJECTS ABOVE THE GRADE LINE AND NEAR THE BARRIER



CROSS SECTION

ANCHORED BARRIER NEAR VERTICAL DROP OFF



CROSS SECTION

ANCHORED BARRIER NEAR A SLOPE

GENERAL NOTES

(400) NO SINGLE CONCRETE BARRIER SECTION SHALL BE ANCHORED TO BOTH THE BRIDGE DECK AND THE APPROACH SLAB. ALL ANCHOR BOLT LOCATIONS SHALL BE ANCHORED TO THE DECK IN ACCORDANCE WITH THE DETAIL. NO MORE THAN ONE ANCHOR BOLT SHALL BE ELIMINATED FROM A BARRIER SECTION WHEN SPANNING AN EXPANSION JOINT.

(401) CONCRETE DECK

(402) CONCRETE DECK OR APPROACH SLAB.

(403) EXPANSION JOINT

(404) ADHESIVE ANCHOR SHOWN. SEE ANCHOR DETAILS.

(405) ANCHORED TEMPORARY BARRIER

(406) TRANSITION FROM ANCHORED TEMPORARY BARRIER TO FREE STANDING

(407) FREE STANDING BARRIER

(408) REMOVE ALL ANCHORS WHEN NO LONGER NEEDED. FILL CONCRETE PAVEMENTS, DECKS AND APPROACH SLABS WITH NON-SHRINK COMMERCIAL GROUT FROM THE APPROVED PRODUCT LIST. FILL ASPHALT PAVEMENTS WITH ASTM D6690 TYPE II RUBBERIZED CRACK FILLER.

(409) TRAFFIC SIDE

(410) NON-TRAFFIC SIDE

(411) ANCHOR LOCATION. SEE ANCHORING DETAILS.

(412) WORK AREA

(413) AREA FREE OF OBJECTS AND WORKERS

(414) GRADE LINE

(415) EXTENDED GRADE LINE

(416) ANCHORED TEMPORARY BARRIER. SEE BOLT THROUGH DECK, REMOVABLE ADHESIVE ANCHOR, OR AN ASPHALT ANCHOR ROD DETAILS FOR MORE INFORMATION. ASPHALT ANCHOR ROD SHOWN.

(417) WHEN OBJECTS EXTEND ABOVE THE GRADE. A MINIMUM OF 1 FOOT IS REQUIRED FROM BACK OF BARRIER TO OBJECT.

(418) OBJECTS ARE NOT TO BE PLACED ON, MOUNTED TO, OR ALLOWED TO LEAN AGAINST THE BARRIER WITHOUT WRITTEN PERMISSION OF THE PROJECT ENGINEER.

(419) DEPTHS OF 3 FEET OR MORE.

(420) Y = 6.5'

(421) OFFSET FROM BACK OF BARRIER EDGE:

CONCRETE PAVEMENT	0.5'
ASPHALT	0.5'

(422) POSTED SPEED (MPH):

45 OR GREATER	4.0'
40 OR LOWER	2.0'

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
SDD 14B07-16d

GENERAL NOTES

500 EXISTING RIGID BARRIERS (VARIES)

501 TEMPORARY BARRIER

502 SEE OTHER DETAIL ON HOW TO ANCHOR TEMPORARY BARRIER (BARRIER ASPHALT ANCHOR SHOWN).

503 ANCHORS ARE REQUIRED ON BOTH SIDE OF THE TEMPORARY BARRIER.

504 NESTED RAILS ARE REQUIRED ON BOTH SIDES OF THE TEMPORARY BARRIER FOR ALL INSTALLATIONS.

505 TRAFFIC TRAVELS FROM PERMANENT BARRIER TO TEMPORARY BARRIER.

506 TRAFFIC TRAVELS FROM TEMPORARY BARRIER TO PERMANENT BARRIER.

507 VERTICAL BARRIER

508 SAFETY SHAPE BARRIER

509 SINGLE SLOPE BARRIER

510 CAP END PLATE PLACED FLUSH WITH UPSTREAM END OF RIGID BARRIER.

511 BENT THRIE BEAM TO FIT.

512 THRIE BEAM PIECES ARE OFFSET 15 ¼" TO PREVENT INTERFERENCE FROM THE ANCHORS ON OPPOSING SIDES.

513 TWO (2) P1, P2 AND P3 ARE REQUIRED

514 FIVE (5) N1, N2 AND N3 ARE REQUIRED

515 TWO (2) R1, R2 AND R3 ARE REQUIRED

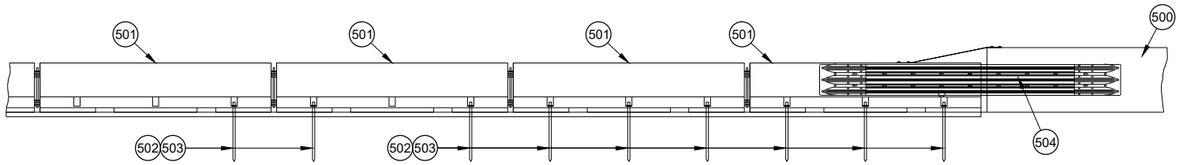
516 CUT WOOD BLOCK TO FIT.

517 SEE THRIE BEAM RAIL TERMINAL CONNECTOR DETAIL ASSEMBLY.

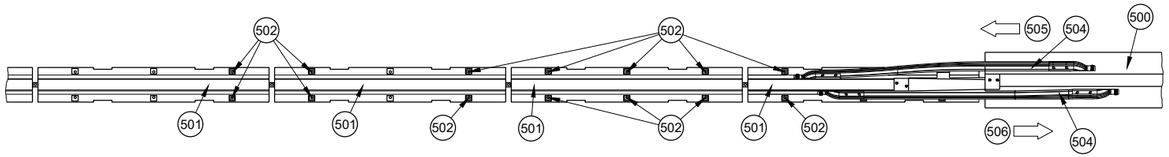
518 CAP ASSEMBLY

519 4" MAX. GAP BETWEEN TEMPORARY BARRIER AND RIGID BARRIER.

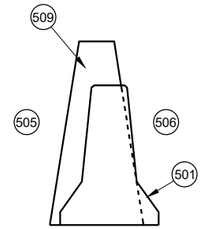
520 ALL TWELVE SPLICE HOLES REQUIRE M1 AND M2



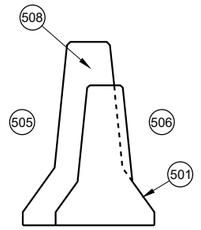
PROFILE VIEW



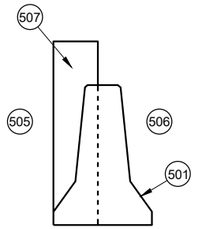
PLAN VIEW



CROSS SECTION TEMPORARY BARRIER PLACEMENT SINGLE SLOPE

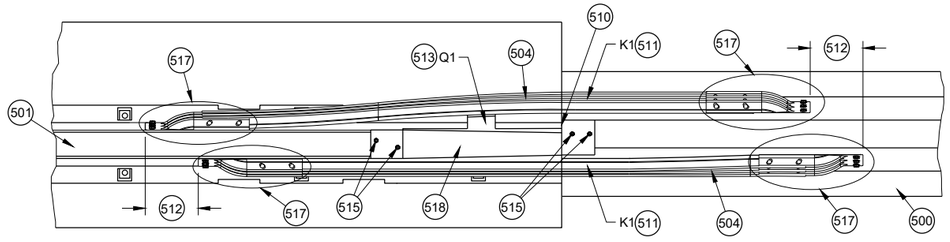


CROSS SECTION TEMPORARY BARRIER PLACEMENT SAFETY SHAPE

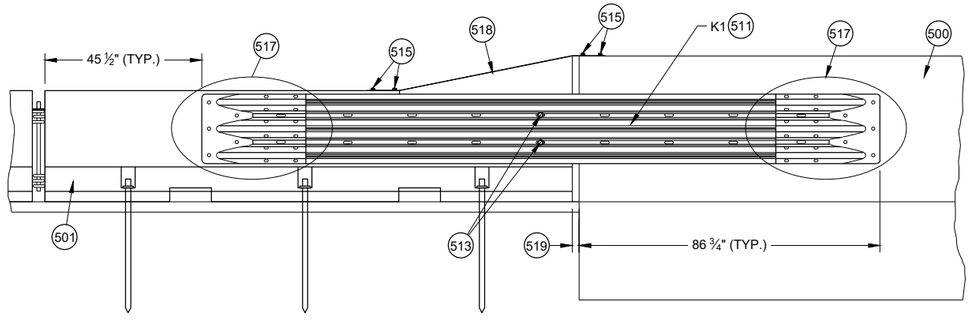


CROSS SECTION TEMPORARY BARRIER PLACEMENT VERTICAL

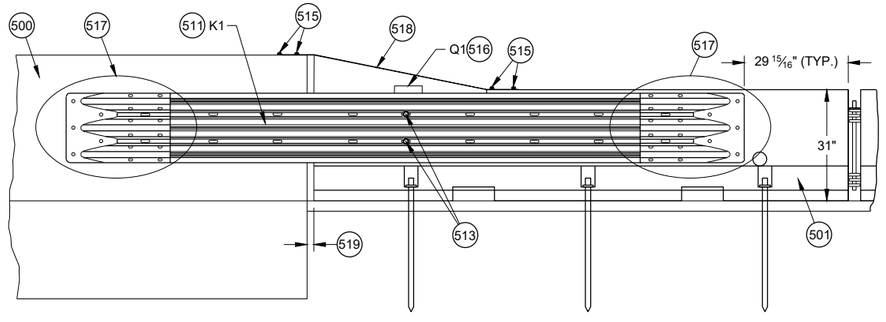
PLAN VIEW
TRANSITION TO RIGID BARRIER



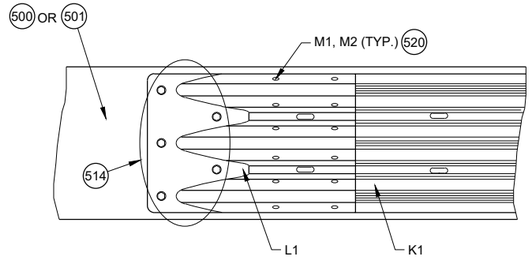
PLAN DETAIL VIEW
TRANSITION TO RIGID BARRIER



FRONT DETAIL VIEW
TRANSITION TO RIGID BARRIER



BACK DETAIL VIEW
TRANSITION TO RIGID BARRIER



517 DETAIL PLAN VIEW
THRIE BEAM RAIL TERMINAL CONNECTOR ASSEMBLY

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

6

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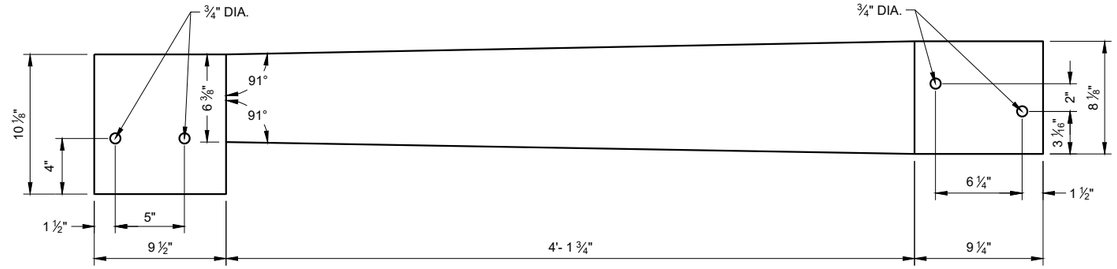
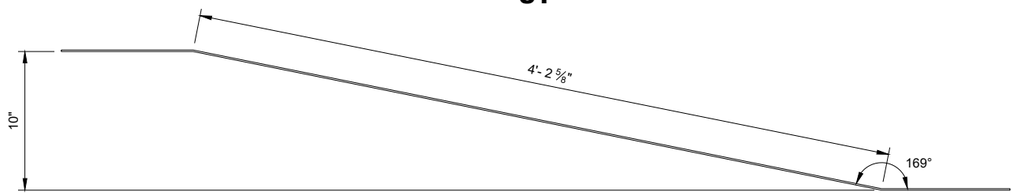


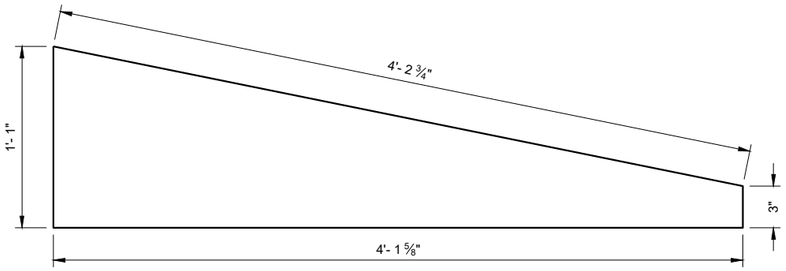
TOP VIEW

S1



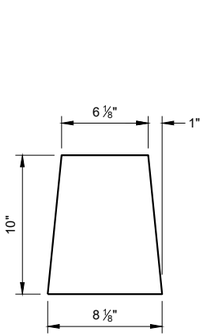
ELEVATION VIEW

S1



SIDE VIEW

S3



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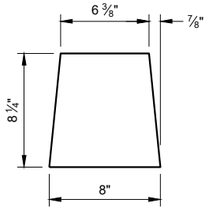

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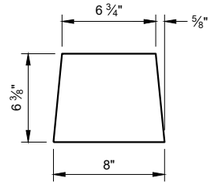

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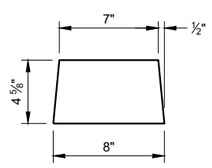
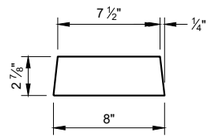
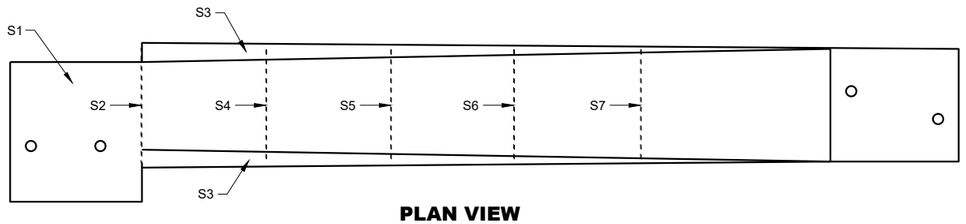


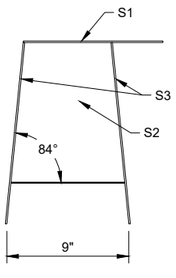
S6



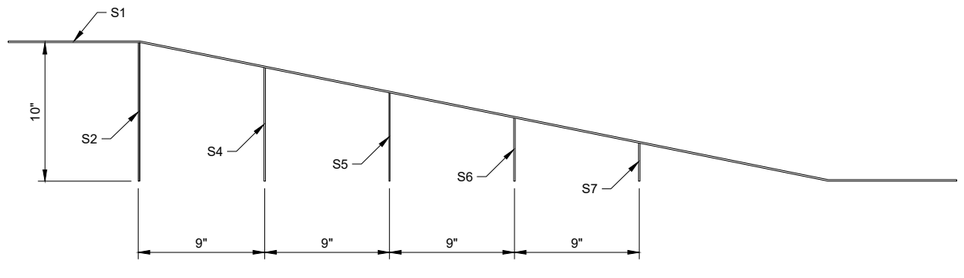
S7



PLAN VIEW



BACK VIEW



SIDE VIEW (600)

42" TOP CAP ASSEMBLY

GENERAL NOTES

STITCH WELD GUSSET PLATES AND END PLATES ON THREE SIDES

STITCH WELD TWO SIDE PLATES TO TOP PLATE, END PLATE AND GUSSETS.

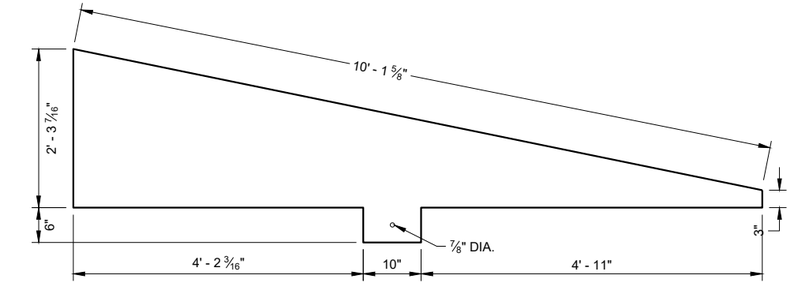
(600) SIDE PLATES (S3) NOT SHOWN FOR CLARITY.

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

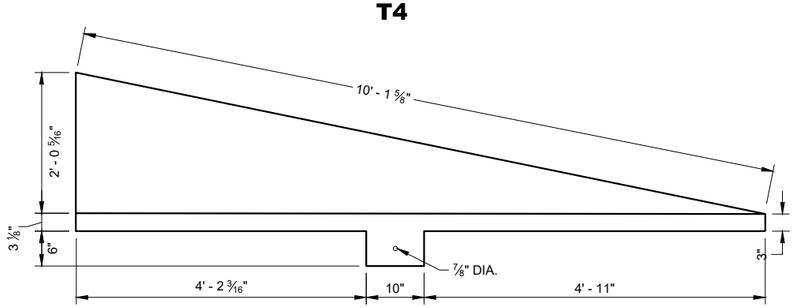
6

SDD 14B07-16f



SIDE VIEW
T4

END VIEW



SIDE VIEW
T3

END VIEW

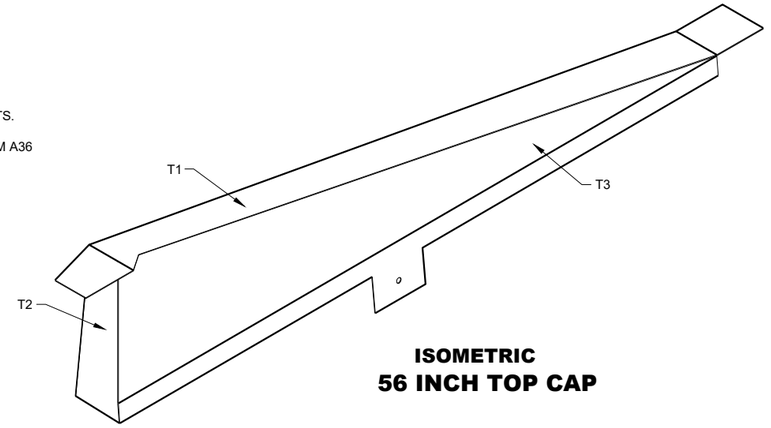
GENERAL NOTES

STITCH WELD GUSSET PLATES AND END PLATES ON THRIE SIDES

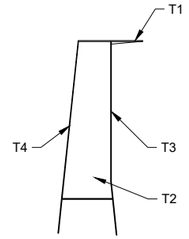
STITCH WELD TWO SIDE PLATES TO TOP PLATE, END PLATE AND GUSSETS.

SIDE PLATES, TOP PLATE, END PLATE AND GUSSETS ARE 12 GAUGE ASTM A36 GALVANIZED STEEL.

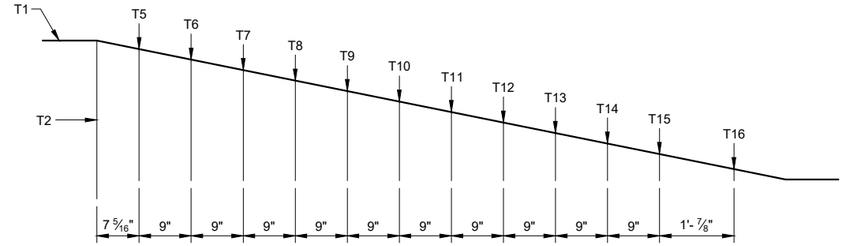
(700) SIDE PLATES (T3 AND T4) NOT SHOWN FOR CLARITY.



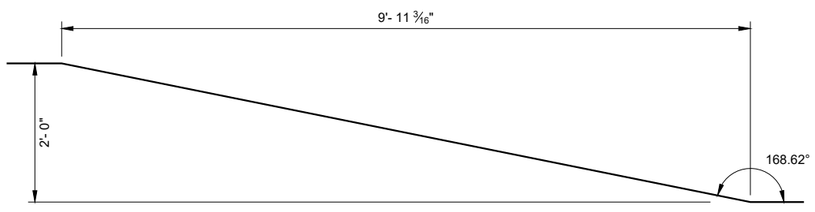
ISOMETRIC
56 INCH TOP CAP



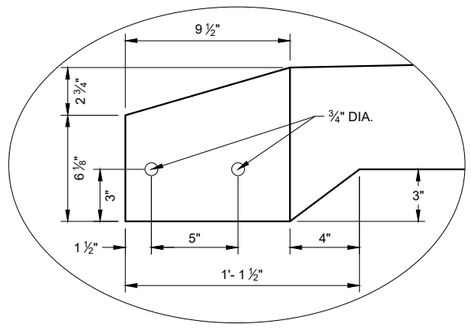
END VIEW
56 INCH TOP CAP



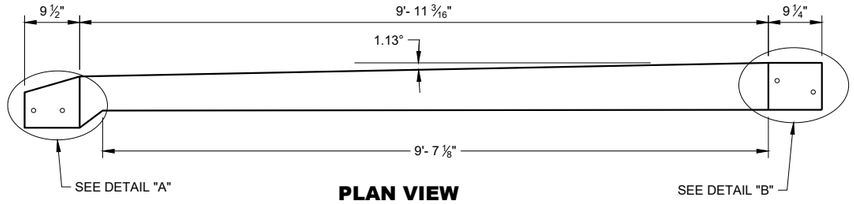
SIDE VIEW (700)
56 INCH TOP CAP



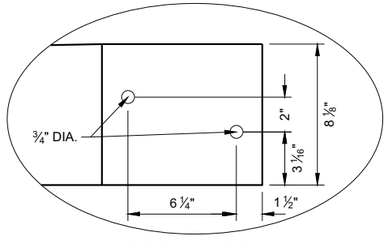
SIDE VIEW
TOP PLATE T1



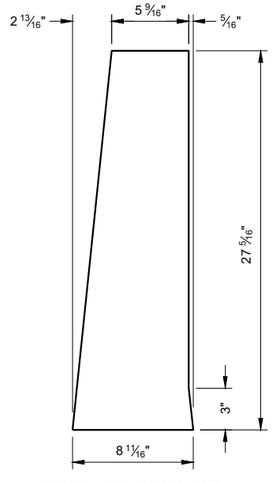
DETAIL "A"



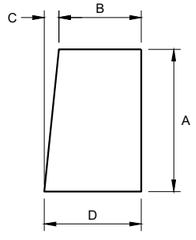
PLAN VIEW
TOP PLATE T1



DETAIL "B"



END PLATE T2



GUSSET PLATES
T5 - T16

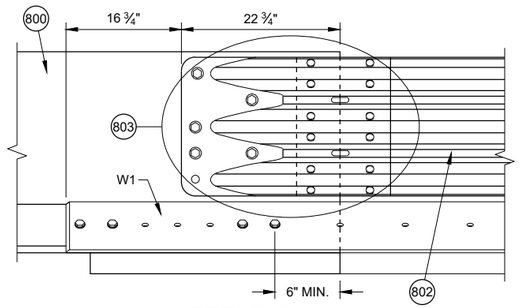
GUSSET DIMENSIONS				
GUSSET NO.	A	B	C	D
T5	22 13/16"	5 1/16"	2 5/16"	8 1/16"
T6	21"	5 7/8"	2 3/16"	8 1/16"
T7	19 3/16"	6 1/16"	1 15/16"	8 1/16"
T8	17 3/8"	6 1/4"	1 13/16"	8 1/16"
T9	15 5/16"	6 7/16"	1 9/16"	8 1/16"
T10	13 3/4"	6 5/8"	1 7/16"	8 1/16"
T11	11 15/16"	6 13/16"	1 1/4"	8 1/16"
T12	10 1/8"	7"	1 1/16"	8 1/16"
T13	8 5/16"	7 3/16"	7/8"	8 1/16"
T14	6 1/2"	7 3/8"	1 1/16"	8 1/16"
T15	4 1/16"	7 9/16"	1/2"	8"
T16	2 7/8"	7 3/4"	1/4"	8"

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

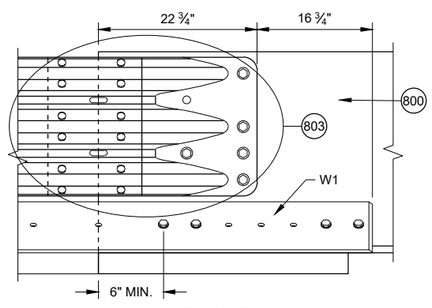
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

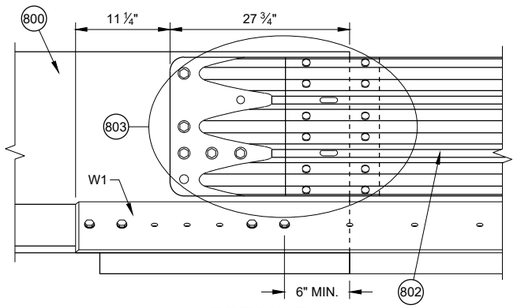
SDD 14B07-16g



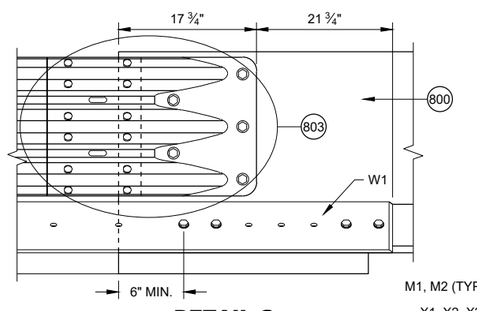
DETAIL D



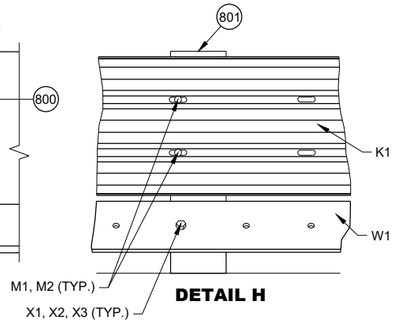
DETAIL E



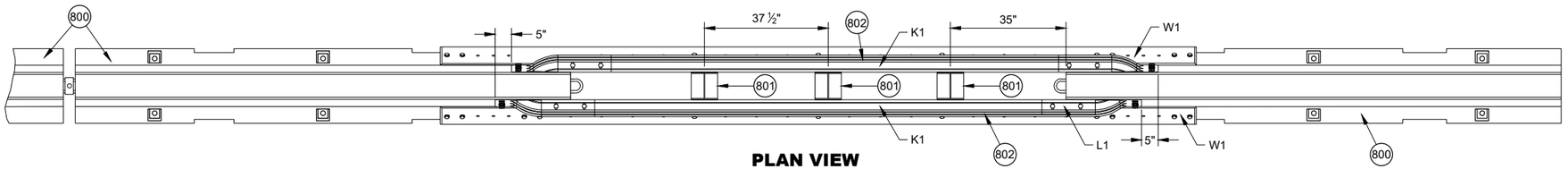
DETAIL F



DETAIL G



DETAIL H



PLAN VIEW

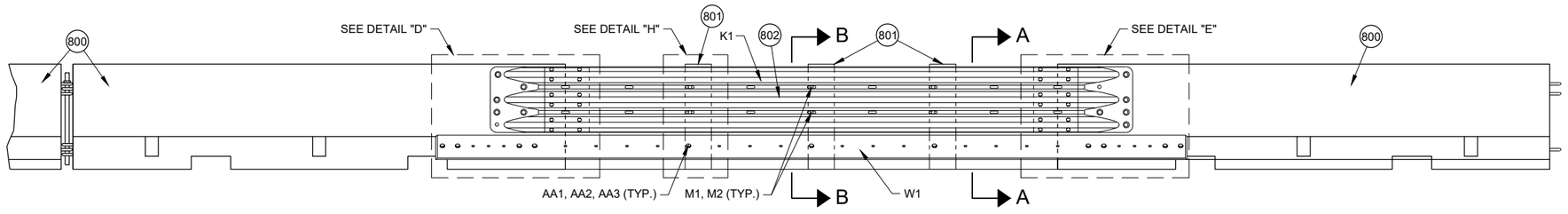
GENERAL NOTES

(800) FREE STANDING TEMPORARY BARRIER

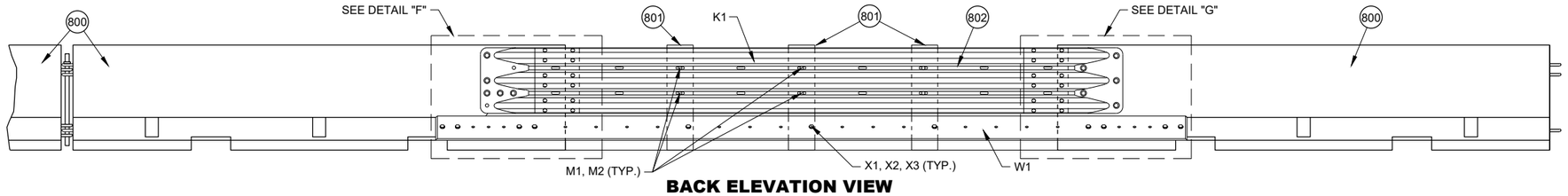
(801) GAP STIFFENER ASSEMBLY

(802) THRIE BEAMS ARE NESTED ON BOTH SIDES OF THE TEMPORARY BARRIER.

(803) SEE THRIE BEAM RAIL TERMINAL CONNECTOR DETAIL



FRONT ELEVATION VIEW



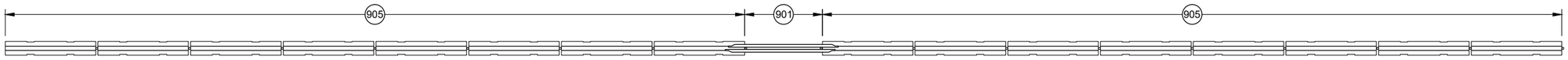
BACK ELEVATION VIEW

PORTABLE CONCRETE BARRIER GAP THRIE BEAM COVER

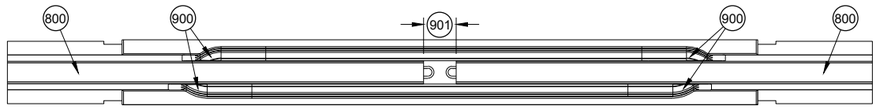
CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
SDD 14B07-16h



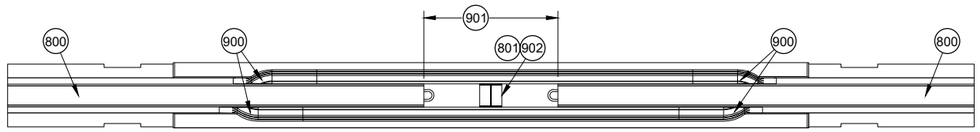
PLAN VIEW
GAP WITHIN SPACING



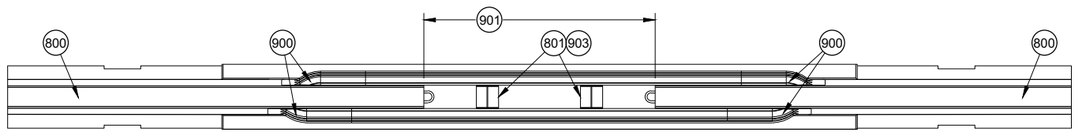
PLAN VIEW
TEMPORARY BARRIER GAP OVER 4" TO 1' MAX. (904)

GENERAL NOTES

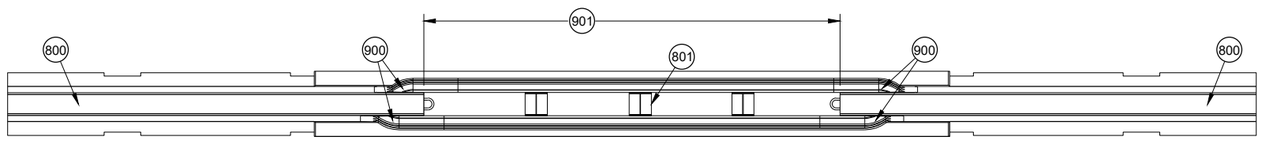
(900) SEE OTHER DETAILS FOR TEMPORARY GAP HARDWARE (TYP.)
(901) TEMPORARY BARRIER GAP
(902) GAP STIFFENER ASSEMBLY CENTERED IN THE GAP.
(903) GAP STIFFENER ASSEMBLY IS OFFSET 18 ¾" FROM CENTER
(904) MINIMUM NUMBER OF GAP STIFFENERS SHOWN FOR THE GAP RANGE SHOWN.
(905) MINIMUM OF 8 CONTINUOUS FREE STANDING TEMPORARY BARRIERS



PLAN VIEW
TEMPORARY BARRIER GAP OVER 1' TO 4' MAX. (904)



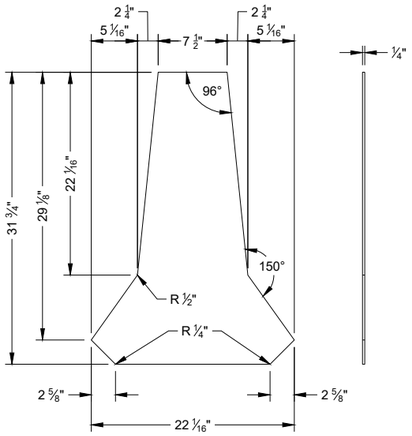
PLAN VIEW
TEMPORARY BARRIER GAP OVER 4' TO 7' MAX. (904)



PLAN VIEW
TEMPORARY BARRIER GAP OVER 7' TO 12.5' MAX. (904)

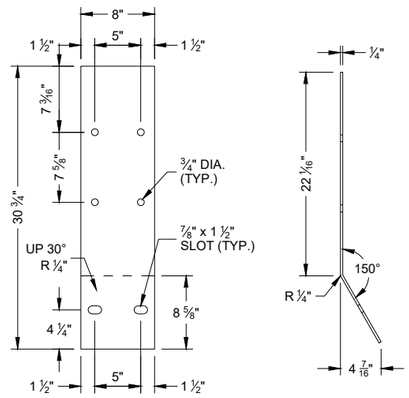
CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

6
SDD 14B07-16i



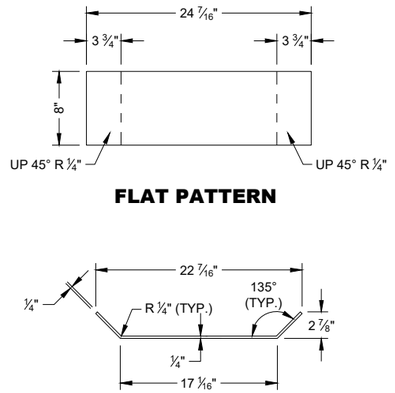
PROFILE VIEW SIDE VIEW

STIFFENER ASSEMBLY CENTER PANEL U1



FLAT PATTERN SIDE VIEW

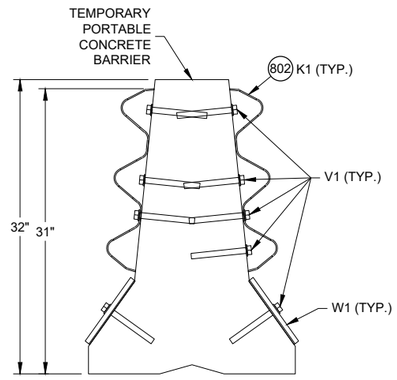
STIFFENER ASSEMBLY SIDE PANEL U2



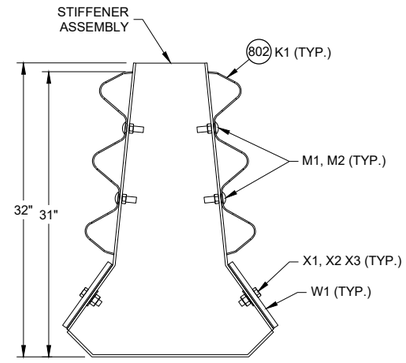
FLAT PATTERN

PROFILE VIEW

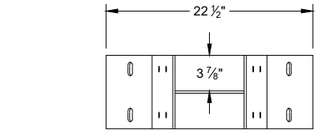
STIFFENER ASSEMBLY BOTTOM PANEL U3



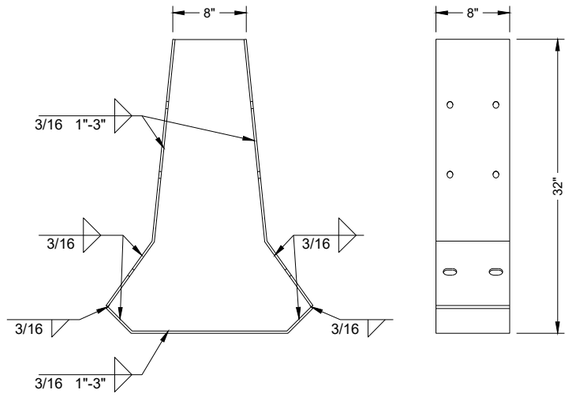
SECTION A - A



SECTION B - B

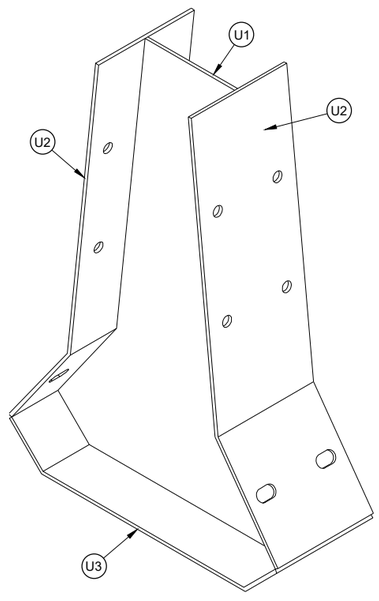


PLAN VIEW



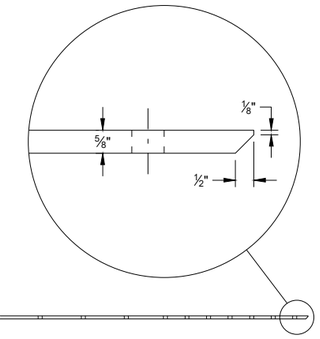
PROFILE VIEW

SIDE VIEW

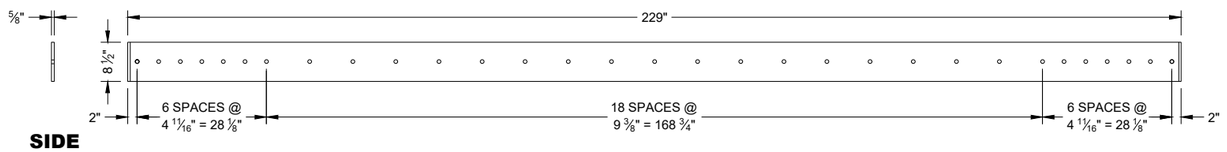


ISOMETRIC

GAP STIFFENER ASSEMBLY



PLAN VIEW



SIDE VIEW

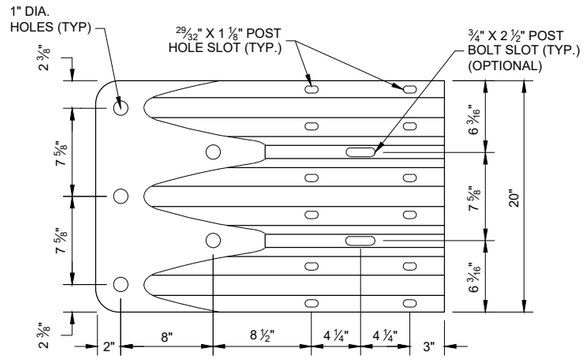
ELEVATION VIEW

W1 TOE PLATE

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

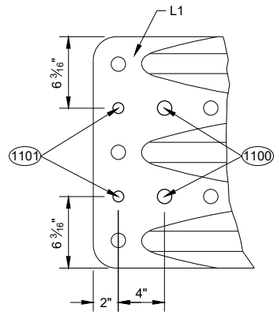
6

SDD 14B07-16j



ELEVATION VIEW

THRIE BEAM TERMINAL CONNECTOR



ELEVATION VIEW

ADDITIONAL THRIE BEAM (1102) TERMINAL CONNECTOR HOLE DETAIL

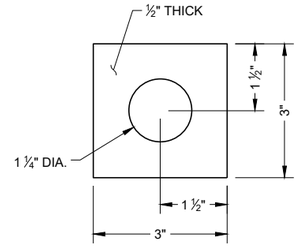


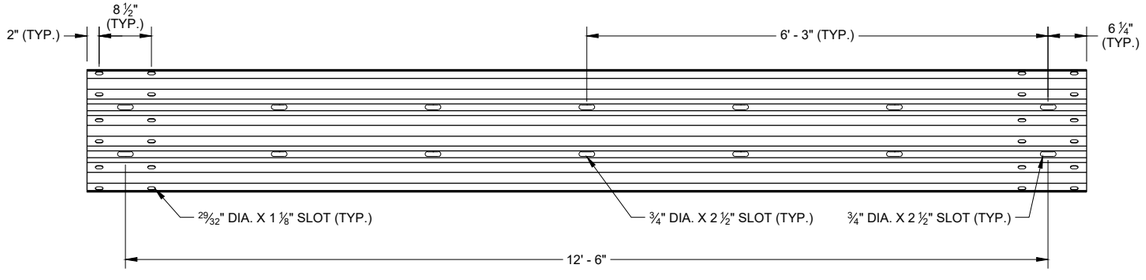
PLATE WASHER DETAIL G2, H3

GENERAL NOTES

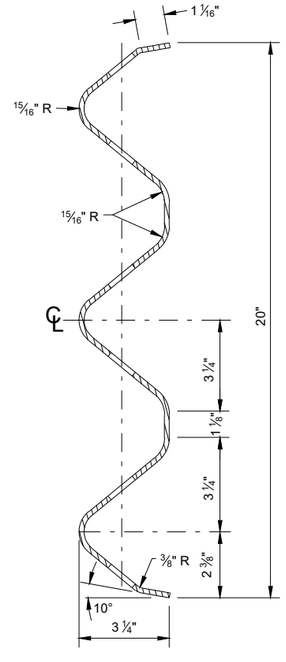
(1100) 1" DIA. HOLE

(1101) 3/4" DIA. HOLE

(1102) PROVIDE HOLES IN THRIE BEAM TERMINAL CONNECTOR TO LIMIT STEEL REINFORCEMENT OR LOOP BAR CONFLICT. CONTRACTOR MAY FIELD DRILL ADDITIONAL HOLE OR PROVIDE THRIE BEAM TERMINAL CONNECTOR WITH ADDITIONAL HOLES FROM SUPPLIER.



SLOTTED THRIE BEAM RAIL K1



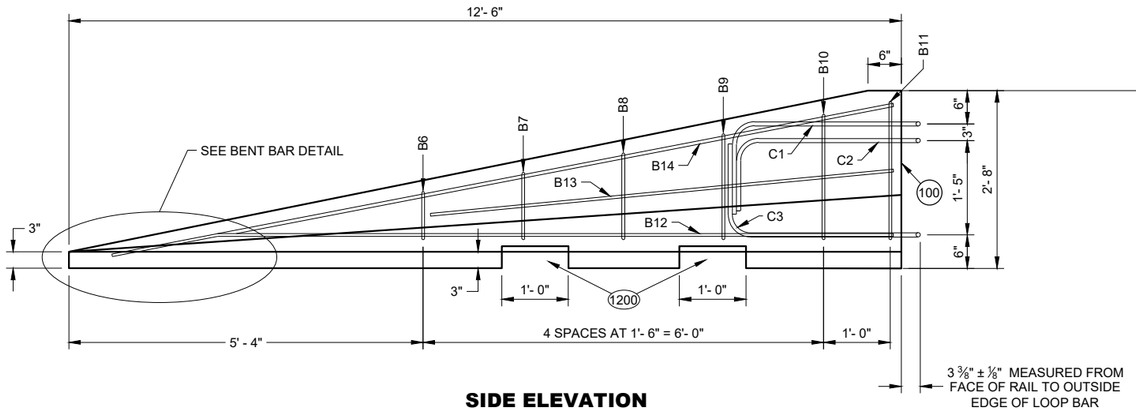
SECTION THROUGH BEAM K1

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

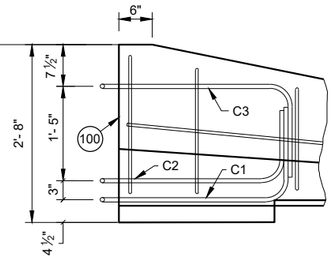
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 14B07-16k



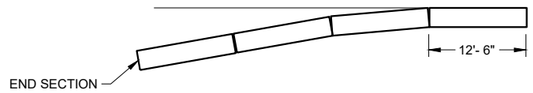
SIDE ELEVATION
(FOR CONNECTION TO LEFT END OF BARRIER)



SIDE ELEVATION
LOOP BAR ASSEMBLY INVERTED FOR OPPOSITE END
(FOR CONNECTION TO RIGHT END OF BARRIER)

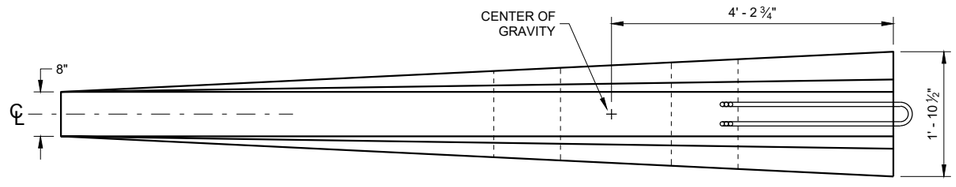
GENERAL NOTES

(1200) SEE LIFTING SLOT DETAIL. LOCATION OF LIFTING SLOTS DETERMINED BY CONTRACTOR.

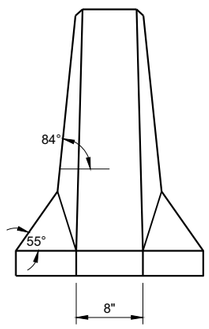


FLARE AT BARRIER END

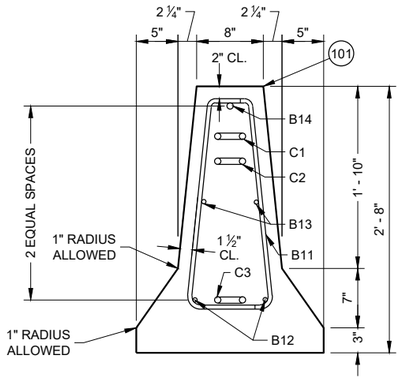
POSTED SPEED, (MPH)	FLARE RATE
40 OR LESS	6:1
45 OR GREATER	8:1



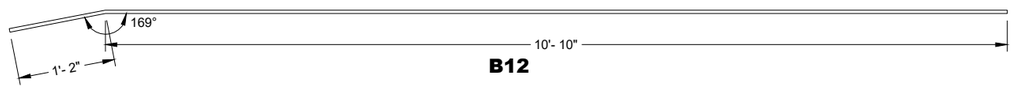
PLAN VIEW



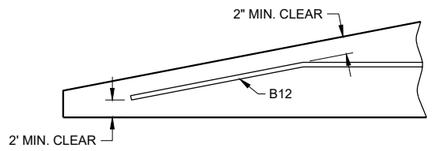
FRONT ELEVATION



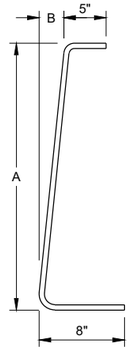
END SECTION



B12



BENT BAR DETAIL



BAR	A	B
B6	10"	1"
B7	1'- 1"	1 ¼"
B8	1'- 5"	1 ⅝"
B9	1'- 8"	1 ⅞"
B10	2'- 0 ½"	2 ⅜"
B11	2'- 3"	2 ¾"

B BARS
2 OF EACH SIZE REQUIRED FOR STIRRUP ASSEMBLY

DETAILS OF BARRIER TAPER SECTION

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
SDD 14B07-16I

BILL OF MATERIALS - CONCRETE BARRIER PRECAST

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
A1	PRECAST TEMPORARY BARRIER - CONCRETE	MIN. = f'c 5000 PSI	
B1	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#5 REBAR, LENGTH 12'-2"
B2	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 12'-2"
B3	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#5 REBAR, LENGTH 12'-2"
B4	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 6'-0"
B5	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#6 REBAR, LENGTH 2'-11"
B6	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 1'-11"
B7	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 2'-2"
B8	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 2'-6"
B9	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 2'-9"
B10	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 3'-2"
B11	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 3'-4"
B12	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 12'-0"
B13	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 7'-9"
B14	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#5 REBAR, LENGTH 11'-9"
C1	LOOP BAR	ASTM A709 GRADE 70 SMOOTH BAR OR ASTM A706 GRADE 60 REBAR UNCOATED	¾" DIA.
C2	LOOP BAR	ASTM A709 GRADE 70 SMOOTH BAR OR ASTM A706 GRADE 60 REBAR UNCOATED	¾" DIA.
C3	LOOP BAR	ASTM A709 GRADE 70 SMOOTH BAR OR ASTM A706 GRADE 60 REBAR UNCOATED	¾" DIA.
D1	CONNECTION PIN - ROD	ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI	1 ¼" DIA.
D2	CONNECTION PIN - TOP PLATE	ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI	
G1	BOLT THROUGH ANCHOR - THREADED ROD	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 A307 GRADE A OR SAE J429 GRADE 2 UNC	1 ⅛" DIA.
G2	BOLT THROUGH ANCHOR - WASHER, SQUARE	ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI	
G3	BOLT THROUGH ANCHOR - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	
H1	ADHESIVE ANCHOR - ADHESIVE	ICC-ES-AC308 5 ¼" EMBEDMENT WITH A MIN. BOND STRENGTH OF 1,650 PSI. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.	
H2	ADHESIVE ANCHOR - THREADED ROD	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 A307 GRADE A / SAE J429 GRADE 2 UNC	1 ⅛" DIA.
H3	ADHESIVE ANCHOR - WASHER, SQUARE	ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI	
H4	ADHESIVE ANCHOR - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	
J1	ASPHALT ANCHOR PIN - ROD	ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI	1 ½" DIA.
J2	ASPHALT ANCHOR PIN - STOP PLATE	ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI	
K1	THRIE BEAM RAIL	AASHTO M180 CLASS A TYPE 2 APPROVED PRODUCER	12 GAUGE
L1	THRIE BEAM RAIL - TERMINAL	AASHTO M180 CLASS A TYPE 2 APPROVED PRODUCER	12 GAUGE

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
M1	SPLICE BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 UNC AASHTO M180 HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36	⅝" DIA.
M2	SPLICE BOLT - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 AASHTO M180 RECESSED HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	
N1	THRIE BEAM RAIL TERMINAL - MECHANICAL ANCHOR	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 AASHTO M180 RECESSED HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	¾" DIA. LENGTH 6"
N2	THRIE BEAM RAIL TERMINAL - WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 F436 TYPE 1	
N3	THRIE BEAM RAIL TERMINAL MECHANICAL OR ADHESIVE ANCHOR	MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 17.9 KIPS AND ULTIMATE SHEAR LOAD 21.96 KIPS. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.	
P1	THRIE BEAM RAIL CONNECTION 1-BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 AASHTO M180 RECESSED HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	¾" DIA.
P2	THRIE BEAM RAIL CONNECTION 1-WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 F436 TYPE 1	
P3	THRIE BEAM RAIL CONNETION 1- MECHANICAL OR ADHESIVE ANCHOR	MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 9.48 KIPS AND ULTIMATE SHEAR LOAD 10.48 KIPS. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.	
Q1	BLOCK WOOD	SEE STANDARD SPEC. 614	
R1	CAP - BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 AASHTO M180 RECESSED HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	⅝" DIA.
R2	CAP- BOLT - WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 F436 TYPE 1	
R3	CAP - BOLT - MECHANICAL ANCHOR	MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS ULTIMATE TENSILE LOAD 12.14 KIPS AND ULTIMATE SHEAR LOAD 17.5 KIPS.SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.	12 GAUGE
S1	CAP 42-INCH TOP PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
S2	CAP 42-INCH END PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
S3	CAP 42-INCH SIDE PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
S4	CAP 42-INCH GUSSET 1	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
S5	CAP 42-INCH GUSSET 2	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
S6	CAP 42-INCH GUSSET 3	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
S7	CAP 42-INCH GUSSET 4	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

6

SDD 14B07-16m

BILL OF MATERIALS - CONCRETE BARRIER PRECAST

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
T1	CAP 56-INCH TOP PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T2	CAP 56-INCH END PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T3	CAP 56-INCH SIDE PLATE 1	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T4	CAP 56-INCH SIDE PLATE 2	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T5	CAP 56-INCH GUSSET 1	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T6	CAP 56-INCH GUSSET 2	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T7	CAP 56-INCH GUSSET 3	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T8	CAP 42-INCH GUSSET 4	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T9	CAP 42-INCH GUSSET 5	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T10	CAP 42-INCH GUSSET 6	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T11	CAP 42-INCH GUSSET 7	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T12	CAP 42-INCH GUSSET 8	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T13	CAP 42-INCH GUSSET 9	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T14	CAP 42-INCH GUSSET 10	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T15	CAP 42-INCH GUSSET 11	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T16	CAP 42-INCH GUSSET 12	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
U1	GAP STIFFENER	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	
U2	GAP STIFFENER - CONNECTOR PLATE 1	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	
U3	GAP STIFFENER - CONNECTOR PLATE 2	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
V1	THRIE BEAM RAIL TERMINAL MECHANICAL OR ADHESIVE ANCHOR	MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS ULTIMATE TENSILE LOAD 24.0 KIPS AND ULTIMATE SHEAR LOAD 21.5 KIPS. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.	¾" DIA.
V2	GAP STIFFENER - BOLT - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C O R MECHANICAL GALVANIZE TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291/ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	
W1	TOE PLATE	AASHTO M111/ASTM A123 ASTM A36 MIN STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	
X1	TOE PLATE - CONNECTION BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 UNC HEAVY HEX HEAD OR AASTHO M180 HEAD, ASTM F3125 GRADE A325 TYPE 1 HEAVY HEX HEAD OR SAE J429 GRADE 5 HEAVY HEX HEAD / ASTM A449 TYPE 1 HEAVY HEX HEAD. BOLTS MAY BE FULLY THREADED. PROVIDE ENOUGH THREADING FOR PROPER TIGHTENING OF BOLT.	¾" DIA.
X2	TOE PLATE - CONNECTION BOLT - WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 F436 TYPE 1 (HARDEN WASHER ONLY)	
X3	TOE PLATE - CONNECTION BOLT - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	

6

SDD 14B07-16n

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

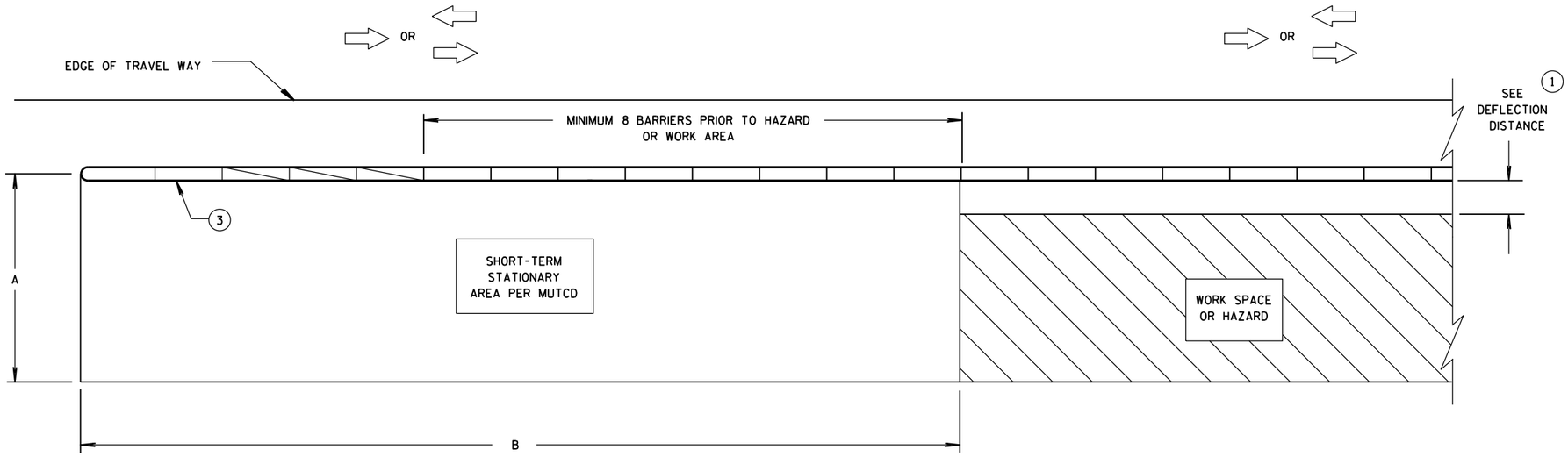
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2023
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS DEVE ENGINEER

FHWA

6

SDD 14B07-16n



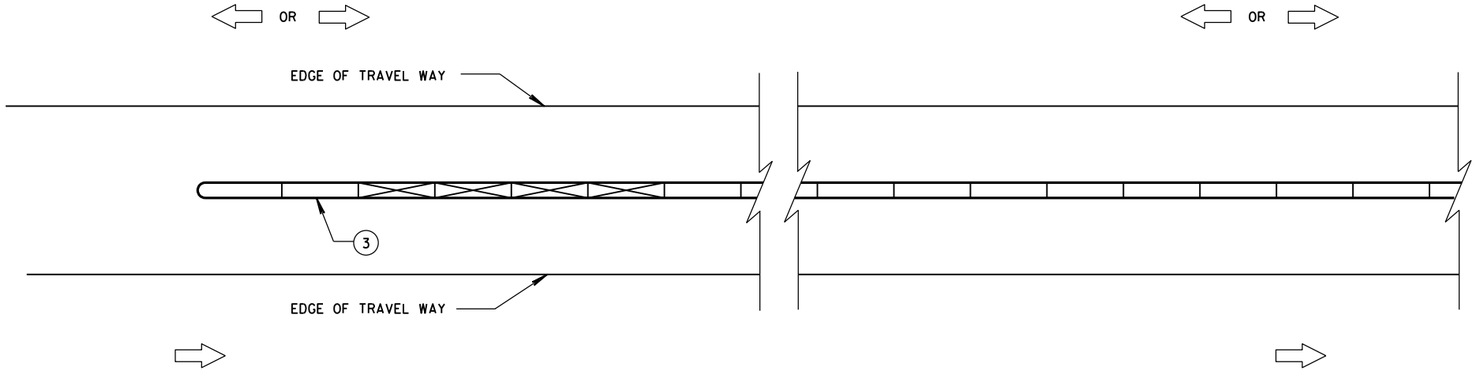
CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER INSTALLATION FOR TRAFFIC ON ONE SIDE OF BARRIER

DIMENSION A TABLE (2)

FACILITY	POSTED SPEED MPH	DIMENSION A	
		MIN. FT	MAX. FT
FREEWAY/EXPRESSWAY	ALL	15	20
NON-FREEWAY/EXPRESSWAY	GREATER THAN OR EQUAL TO 45	10	15
NON-FREEWAY/EXPRESSWAY	LESS THAN 45	8	10
AADT LESS THAN 1,500	ALL	8	10

DIMENSION B TABLE (2)

POSTED SPEEDS MPH	DIMENSION B FT
20	115
25	155
30	200
35	250
40	305
45	360
50	425
55	495
60	570
65	645



CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER INSTALLATION FOR TRAFFIC ON BOTH SIDES OF BARRIER

LEGEND

- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER

GENERAL NOTES

SEE STANDARD DETAIL DRAWING 14B7 FOR MORE INFORMATION.

DETAILS PROVIDE A GENERAL LAYOUT OF TEMPORARY CONCRETE BARRIER, CRASH CUSHIONS, SAND BARREL ARRAYS AND TIE DOWN TRANSITIONS. DETAILS PROVIDED MAY NOT FIT ALL POSSIBLE SITUATIONS OR SITE CONDITIONS. SEE OTHER SECTIONS OF THE CONTRACT OR PROJECT ENGINEER FOR MORE DETAILS.

ADDITIONAL TEMPORARY BARRIER MAY BE REQUIRED TO PROTECT TRAVELING PUBLIC FROM HAZARDS, CONTRACTOR'S OPERATIONS OR TO CONTROL TRAFFIC.

TEMPORARY BARRIER MAY BE REQUIRED TO BE ANCHORED TO PAVEMENT OR BRIDGE DECK.

FOR DETAILS ON CRASH CUSHION OR SAND BARREL ARRAYS SEE OTHER SECTIONS OF THE PLAN AND MANUFACTURE'S DETAILS.

SLOPES LEADING TO TEMPORARY BARRIER, CRASH CUSHION OR SAND BARREL ARRAY ARE 10:1 OR LESS.

(1) FOR DEFLECTION INFORMATION SEE STANDARD DETAIL DRAWING 14B7.

(2) VALUES PROVIDED MAY NOT FIT ALL POSSIBLE SITUATIONS OR SITE CONDITIONS. SEE OTHER SECTIONS OF THE CONTRACT OR PROJECT ENGINEER FOR MORE DETAILS.

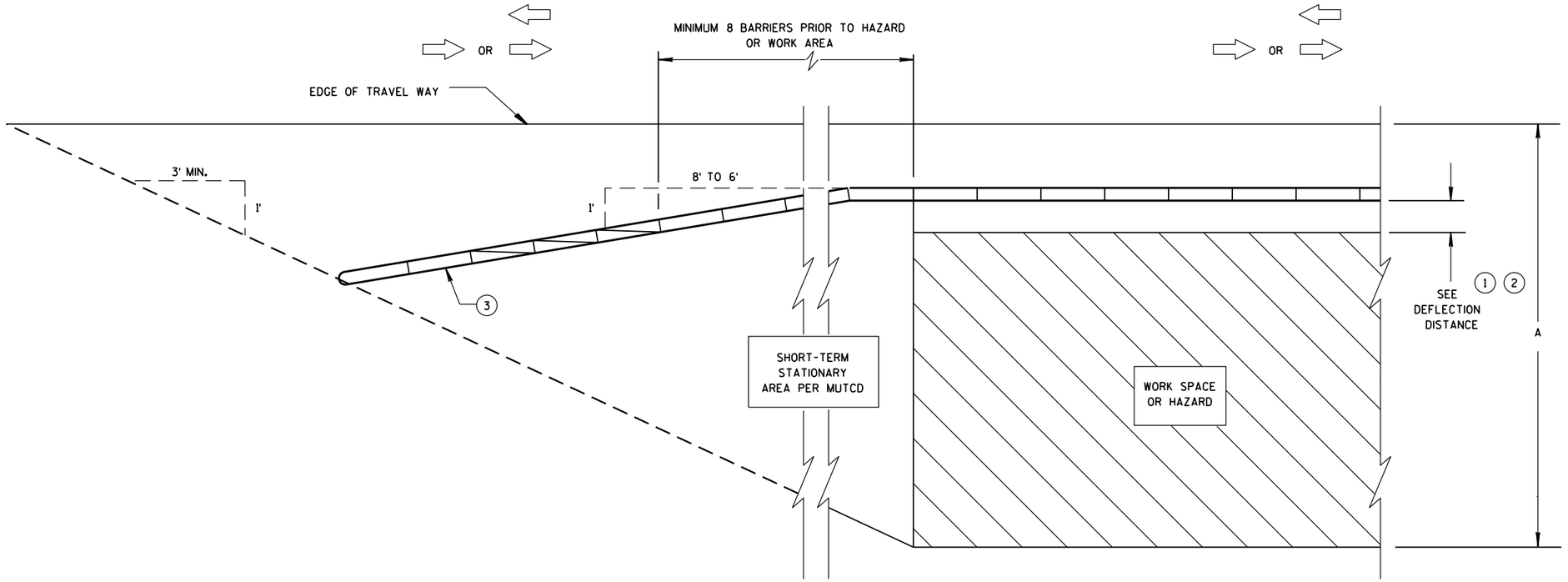
(3) ANCHOR TEMPORARY BARRIER ACCORDING TO CRASH CUSHION OR SAND BARREL MANUFACTURER'S RECOMMENDATIONS. IF MANUFACTURER'S RECOMMENDATIONS ARE NOT PROVIDED, ANCHOR 3 PINS ON TRAFFIC SIDE.

CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

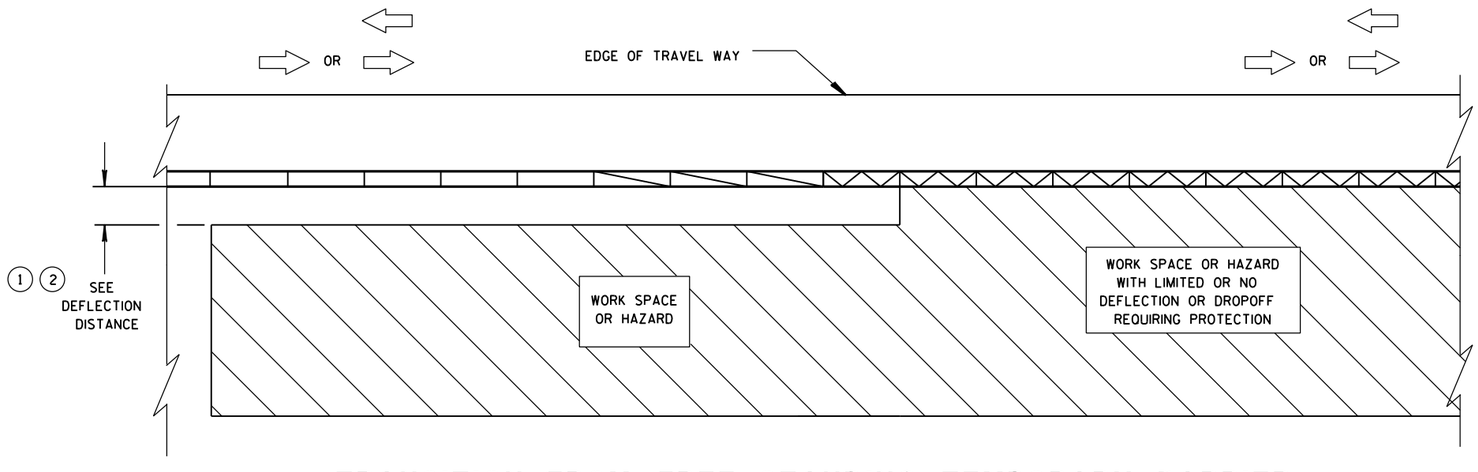
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 14 B 8-2a
S.D.D. 14 B 8-2a



CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER INSTALLATION FOR TRAFFIC ON ONE SIDE - FLARED INSTALLATION



TRANSITION FROM FREE STANDING TEMPORARY BARRIER TO ANCHORED BARRIER

LEGEND

- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER

CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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S.D.D. 14 B 8-2b

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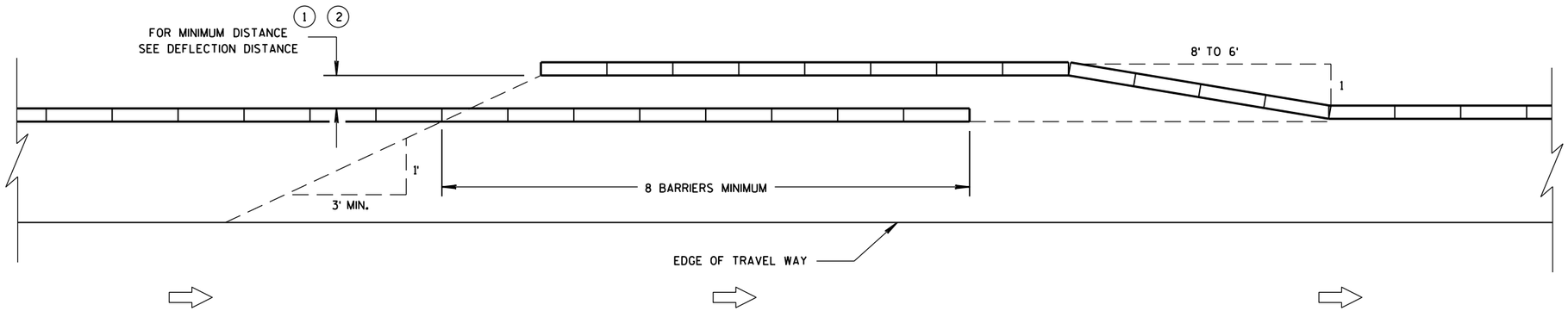
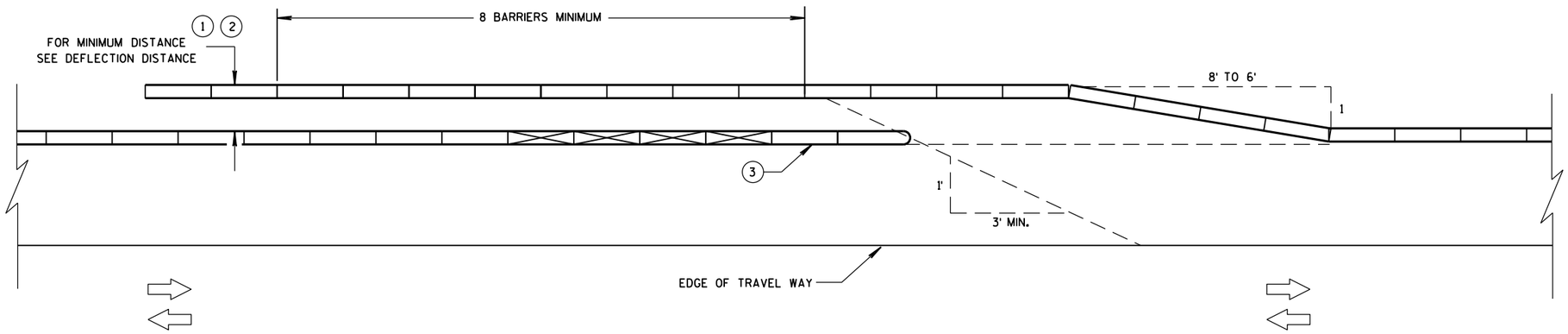
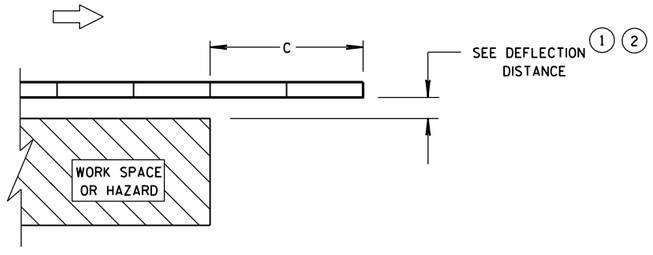
S.D.D. 14 B 8-2b



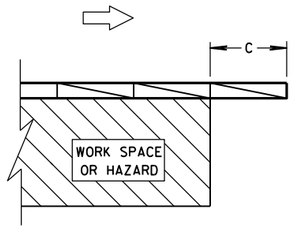
TEMPORARY BARRIER OVERLAP - ONE-WAY TRAFFIC



TEMPORARY BARRIER OVERLAP - TWO-WAY TRAFFIC



ENDING TEMPORARY BARRIER DOWNSTREAM - UNANCHORED



ENDING TEMPORARY BARRIER DOWNSTREAM - ANCHORED

LEGEND

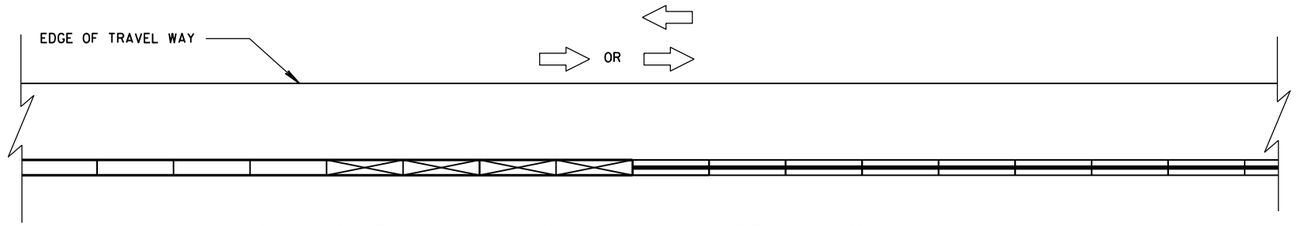
- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER

CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

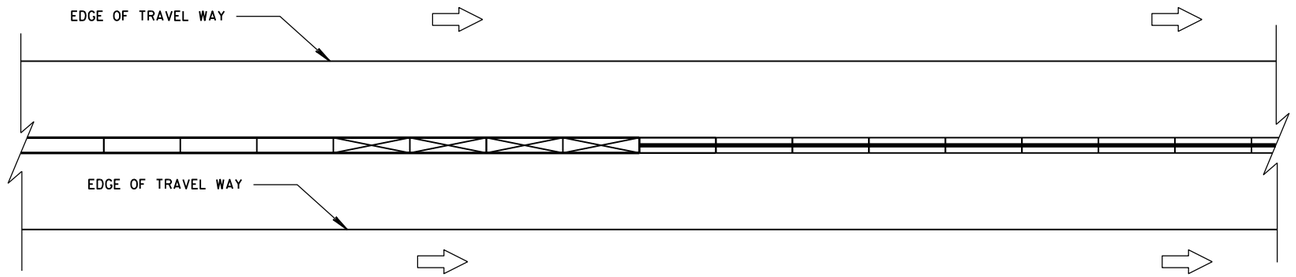
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 14 B 8-2c



CONNECTING TEMPORARY BARRIER TO PERMANENT
CONCRETE BARRIER-TRAFFIC ON ONE SIDE



CONNECTING TEMPORARY BARRIER TO PERMANENT
CONCRETE BARRIER-TRAFFIC ON BOTH SIDES

LEGEND

DIRECTION OF TRAVEL

CRASH CUSHION OR
SAND BARREL ARRAY

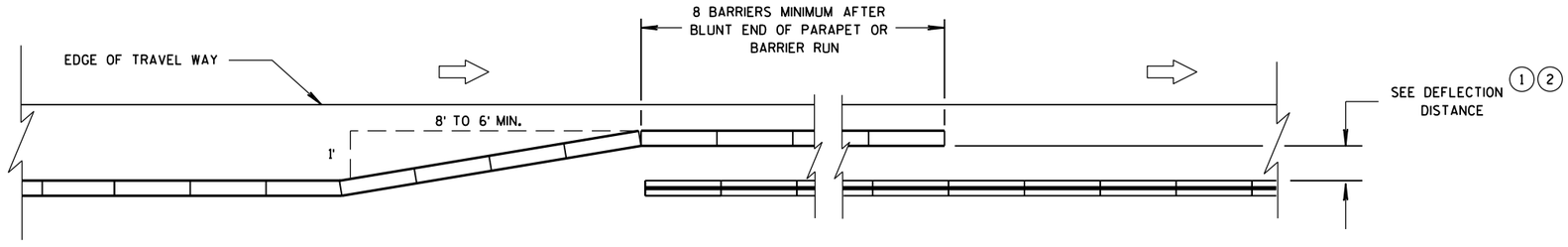
SEE FREE STANDING TRANSITION
TO TIED-DOWN SYSTEM DETAILS

SEE BI-DIRECTIONAL TRANSITION
TO TIED-DOWN SYSTEM DETAILS

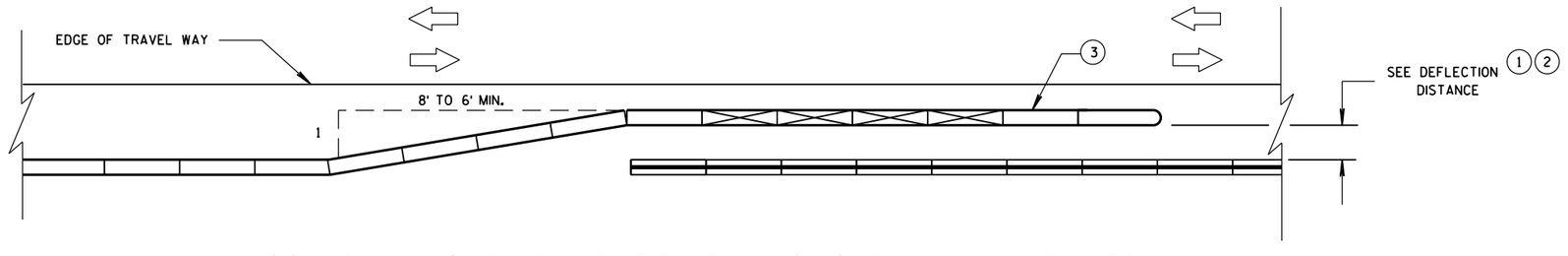
3 PINS PLACED ON
TRAFFIC SIDE OF BARRIER

PERMANENT CONCRETE BARRIER
OR CONCRETE PARAPET

FREE STANDING TEMPORARY
BARRIER



OVERLAPPING TEMPORARY BARRIER AND PERMANENT BARRIER -
ONE WAY TRAFFIC



OVERLAPPING TEMPORARY BARRIER AND PERMANENT BARRIER -
TWO WAY TRAFFIC

CRASH CUSHION/SAND BARREL
ARRAY AND OTHER TEMPORARY
BARRIER LAYOUT DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 14 B 8-2d

LEGEND

DIRECTION OF TRAVEL

CRASH CUSHION OR SAND BARREL ARRAY

SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS

SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS

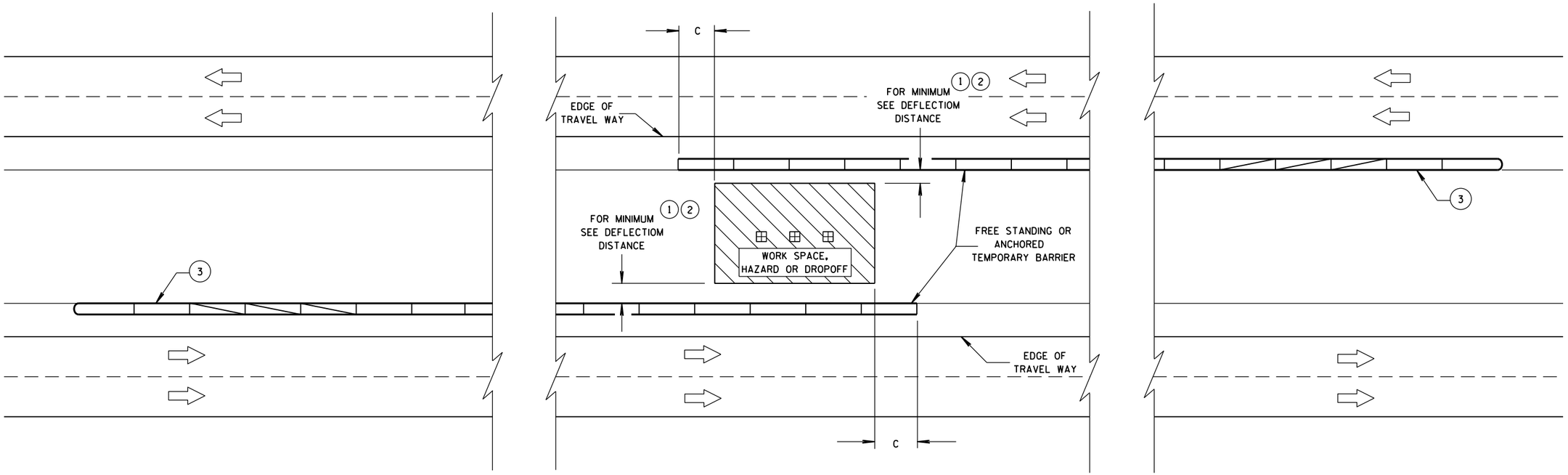
3 PINS PLACED ON TRAFFIC SIDE OF BARRIER

PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET

FREE STANDING TEMPORARY BARRIER

DIMENSION C TABLE (2)

AVAILABLE DEFLECTION DISTANCE	MINIMUM LENGTH OF BARRIER BEYOND HAZARD FT
GREATER THAN 8'	12.5
LESS THAN OR EQUAL TO 8' BUT GREATER THAN 4'	50
LESS THAN OR EQUAL TO 4'	100



CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINNER
FHWA

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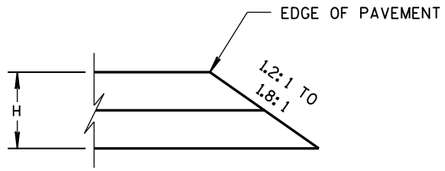
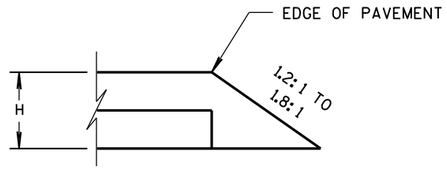
S.D.D. 14 B 8-2e



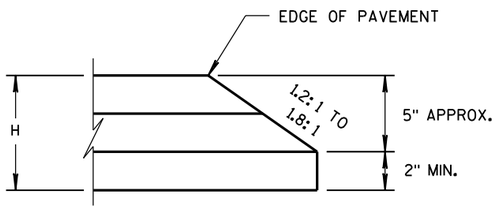
CONSTRUCTED WITH FINAL TWO LAYERS

FOR H 5" OR LESS



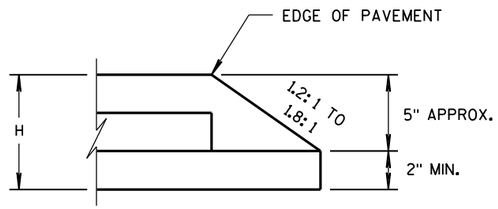
CONSTRUCTED WITH FINAL LAYER

FOR H 5" OR LESS



CONSTRUCTED WITH FINAL TWO LAYERS

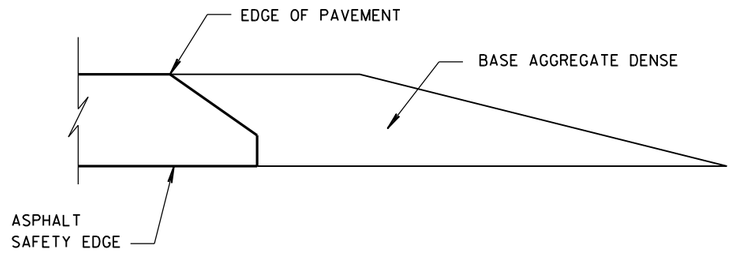
FOR H GREATER THAN 5"



CONSTRUCTED WITH FINAL LAYER

FOR H GREATER THAN 5"

HMA PAVEMENT AND HMA OVERLAYS



FINISHED SHOULDER AGGREGATE PLACEMENT

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S.D.D. 14 B 29-1

S.D.D. 14 B 29-1

SAFETY EDGE SM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

11/30/2012
DATE

/S/ Jerry H. Zoda
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

(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.

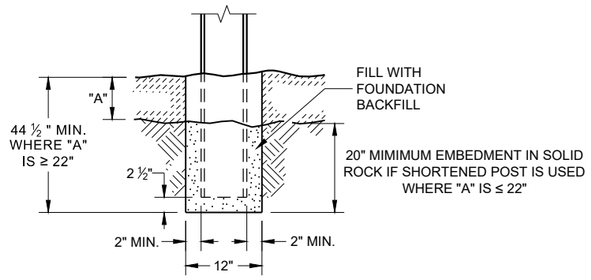
(3) IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL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

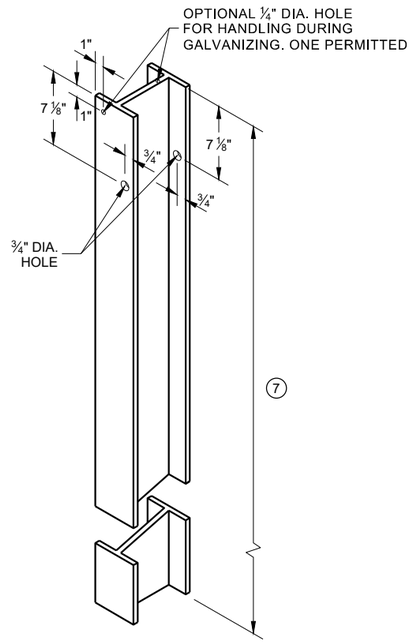
(5) FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ±1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 ¾" TO 32".

(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.

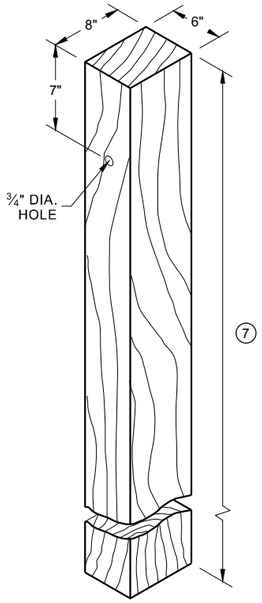
(7) TOTAL POST LENGTH FOR TYPE K IS 7' - 0".
TOTAL POST LENGTH FOR OTHER MGS TYPES IS 6' - 0".



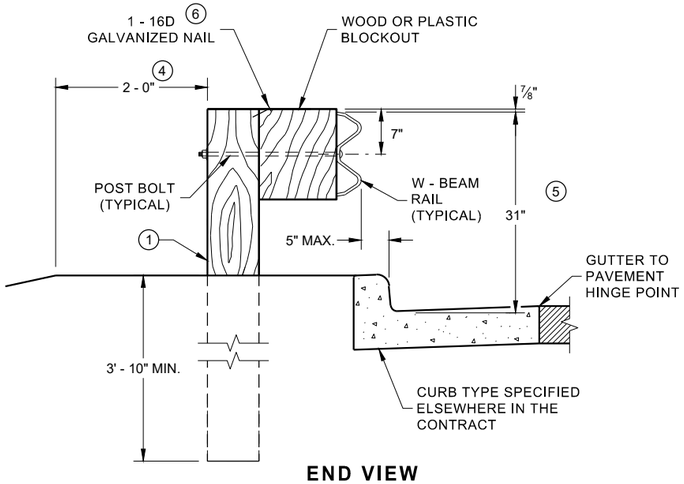
END VIEW
SETTING STEEL OR WOOD POST IN ROCK (3)



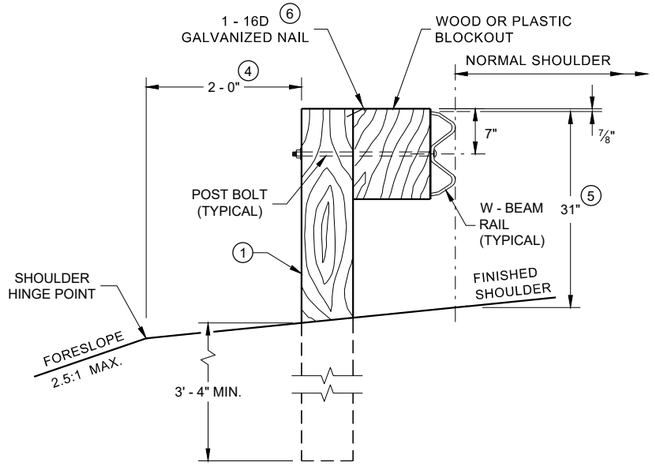
STEEL POST & HOLE PUNCHING DETAIL (W 6 X 9) (1)



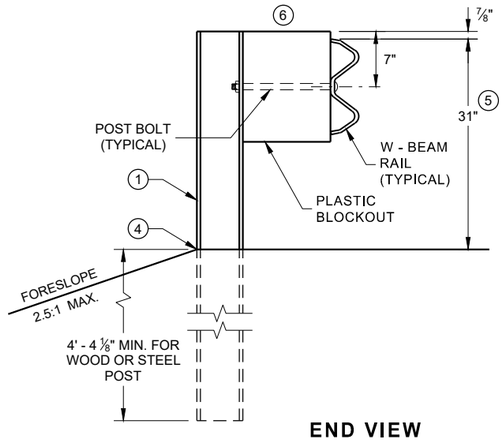
WOOD POST (6" X 8") NOMINAL (1)



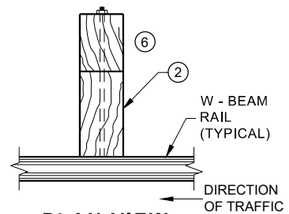
END VIEW
LOCATED ALONG A CURBED ROADWAY



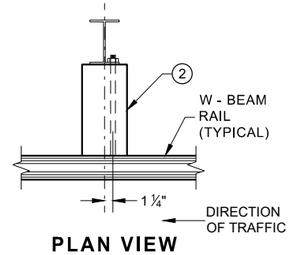
END VIEW
LOCATED ALONG A ROADWAY SHOULDER STANDARD INSTALLATION



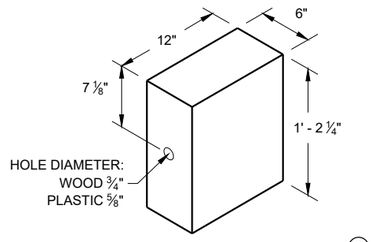
END VIEW
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



PLAN VIEW
WOOD POST, BLOCKOUT & BEAM



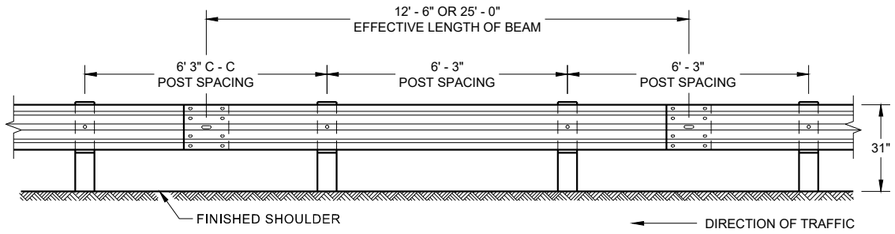
PLAN VIEW
STEEL POST, PLASTIC BLOCKOUT & BEAM



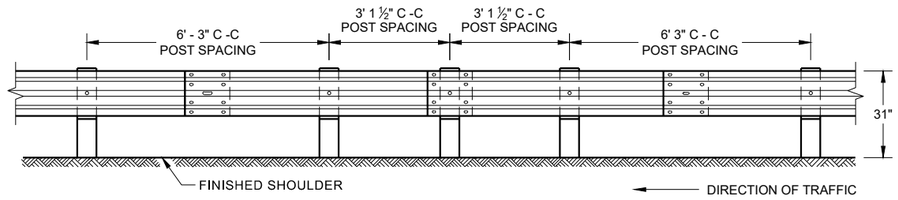
WOOD OR PLASTIC BLOCKOUT (2)

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

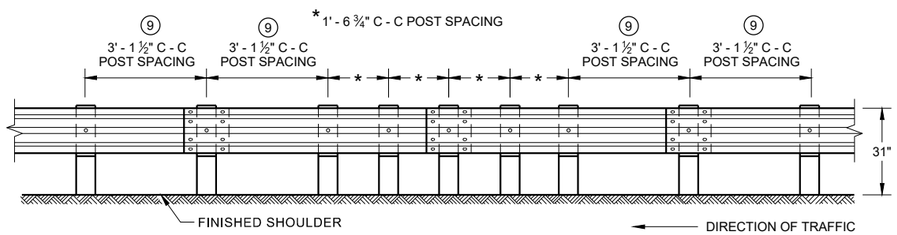
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



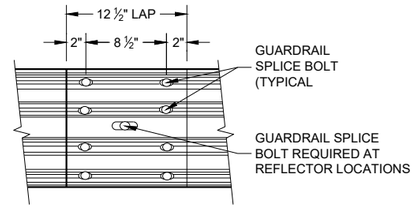
FRONT VIEW
POST SPACING STANDARD INSTALLATION



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

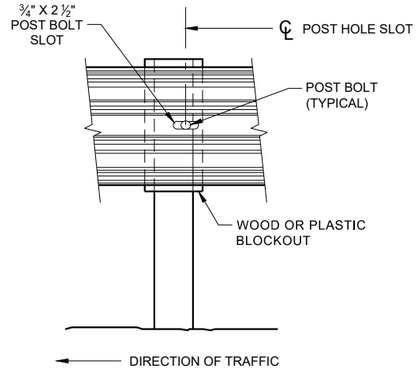
GENERAL NOTES

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

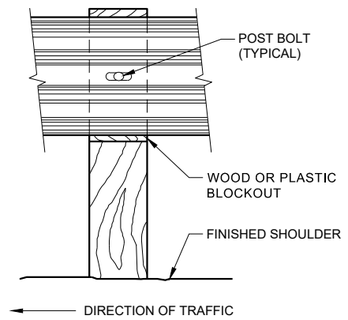
⑨ 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

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.

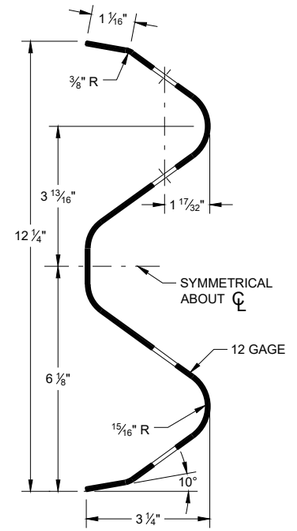
GUARD RAIL SPLICE BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.



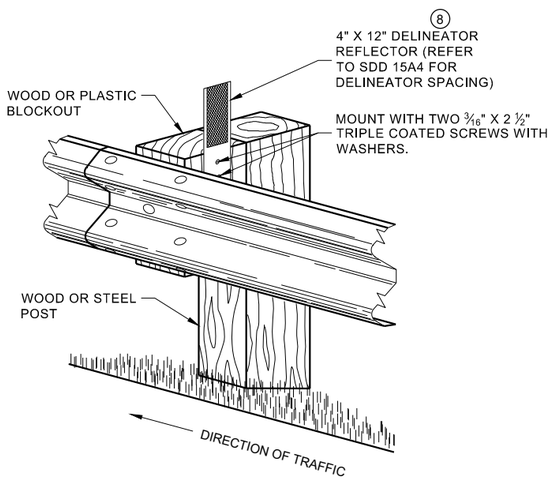
FRONT VIEW AT STEEL POST



FRONT VIEW AT WOOD POST



SECTION THRU W-BEAM RAIL



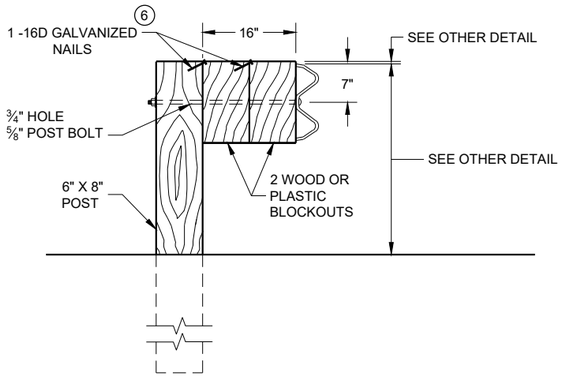
ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 14B42 - 07b

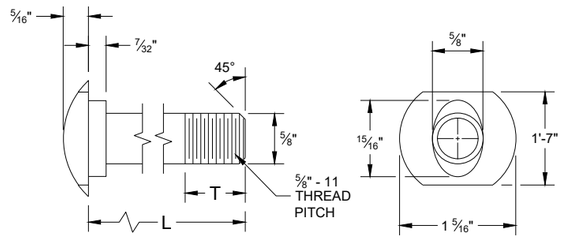


DETAIL FOR 16" BLOCKOUT DEPTH

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.

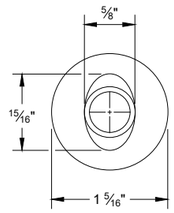
NOTE:

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.

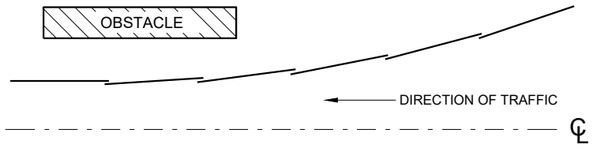


POST BOLT TABLE

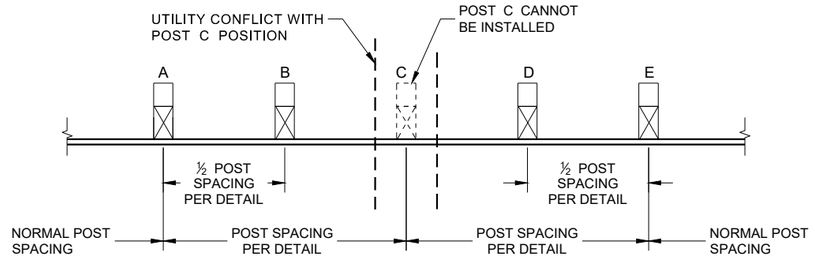
L	T (MIN.)
1 ¼"	1 ⅛"
2"	1 ¾"
10"	4"
14"	4 1⁄16"
18"	4"
21"	4 1⁄16"
25"	4"



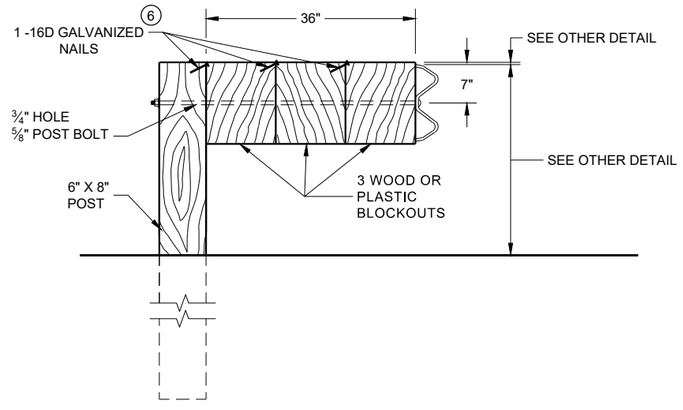
ALTERNATE BOLT HEAD



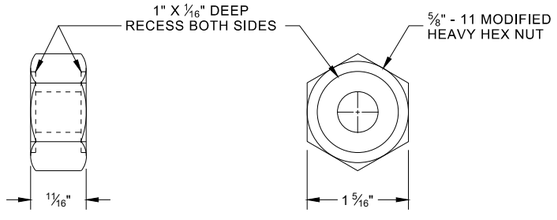
PLAN VIEW
BEAM LAPPING DETAIL



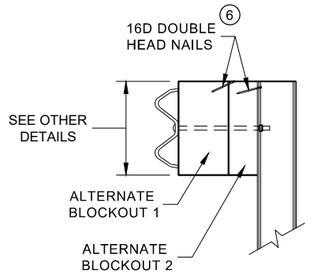
POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



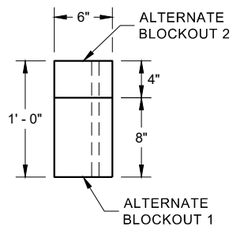
DETAIL FOR 36" BLOCKOUT DEPTH



POST BOLT, SPLICE BOLT AND RECESS NUT



SIDE VIEW



PLAN VIEW

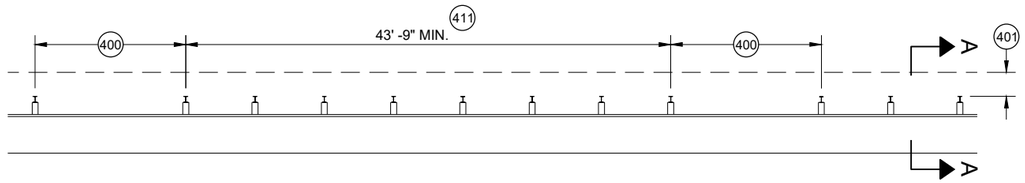
ALTERNATE WOOD BLOCKOUT DETAIL

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.

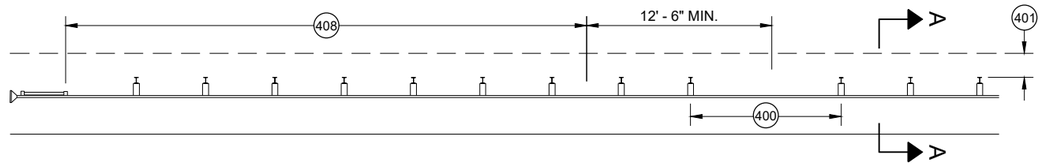
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

(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.

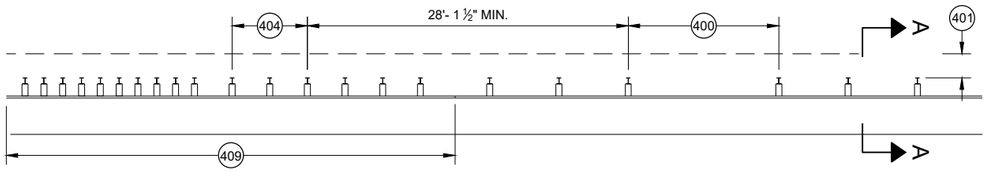
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL



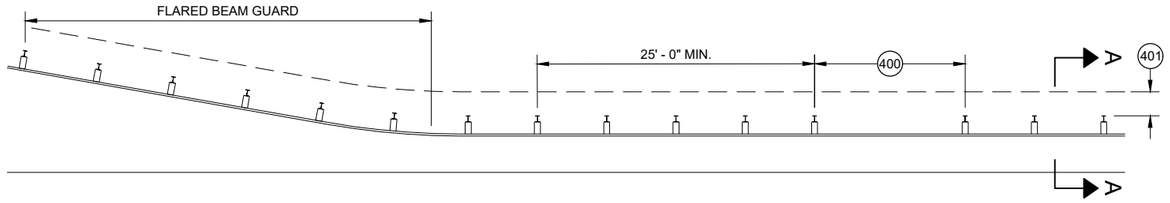
MISSING POST IN MGS GUARDRAIL



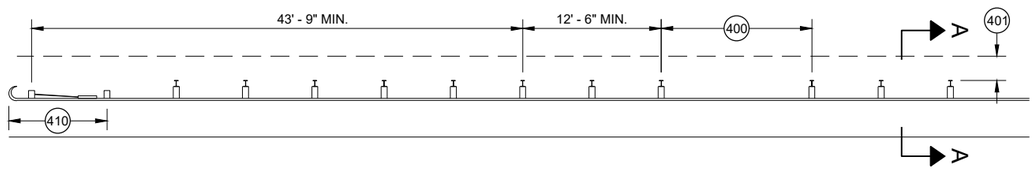
MISSING POST IN MGS GUARDRAIL NEAR EAT



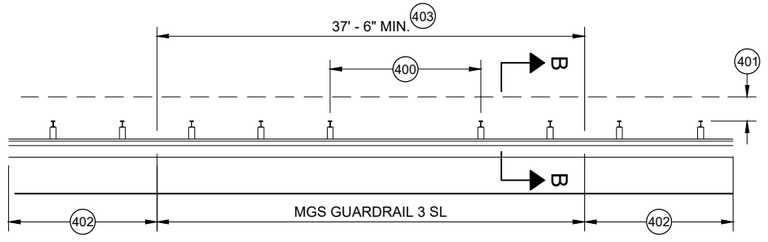
MISSING POST IN MGS GUARDRAIL NEAR AN APPROACH TRANSITION



MISSING POST IN MGS GUARDRAIL NEAR FLARED BEAM GUARD

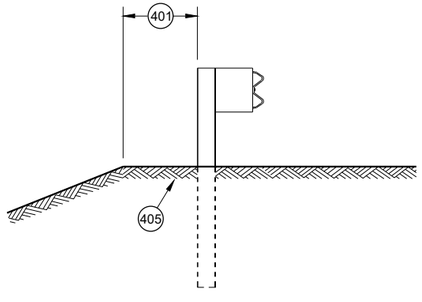


MISSING POST IN MGS GUARDRAIL NEAR A TYPE 2 END TERMINAL

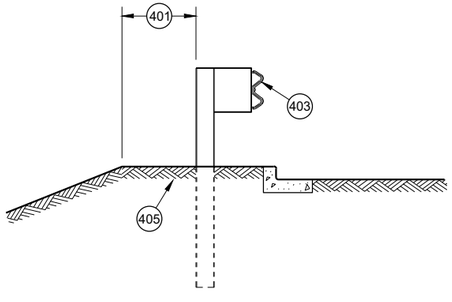


MISSING POST IN SHORT SPAN MGS GUARDRAIL NEAR CURB (SL) 407

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



SECTION A - A 406



SECTION B - B 406

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

SDD 14B42 - 07d

GENERAL NOTES

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

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

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

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

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

DIMENSIONS MAY VARY, MANUFACTURER'S INFORMATION.

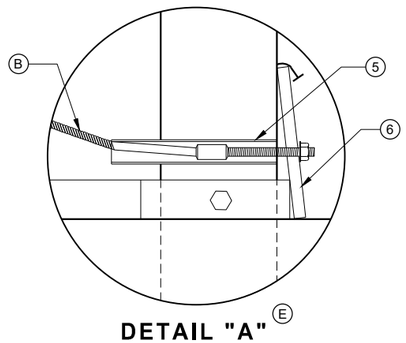
SEE SDD 14B42 FOR MORE INFORMATION.

* DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.

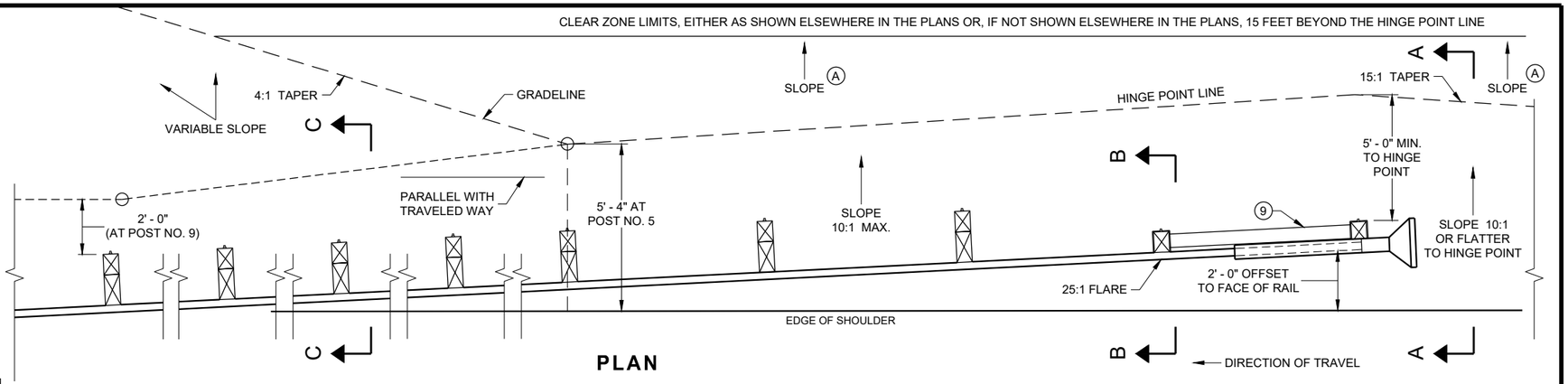
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

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

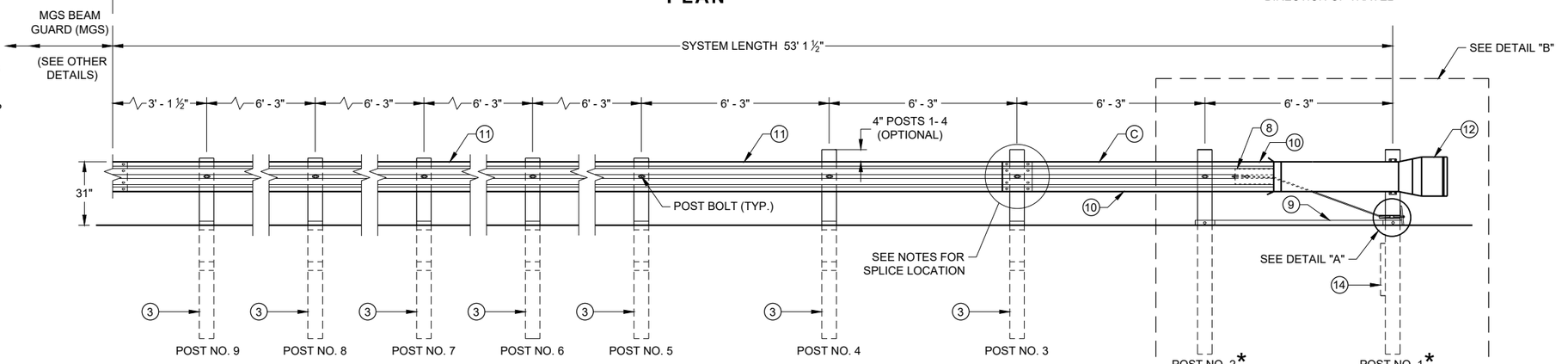
THE CENTER OF THE UPPER 3 ½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE. WOOD BLOCKS ON POSTS NUMBERED 3 THROUGH 9 MAY BE ADJUSTED UP TO 3" ABOVE THE TOP OF POST.



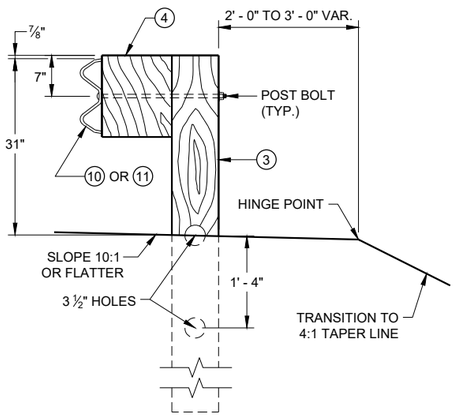
DETAIL "A" (E)



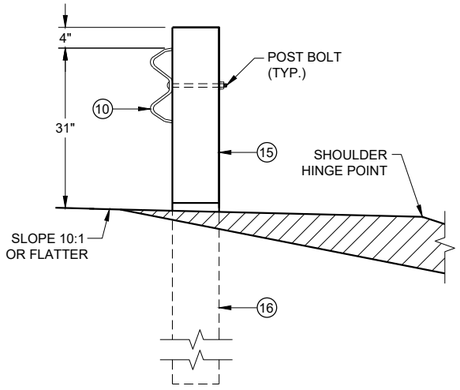
PLAN



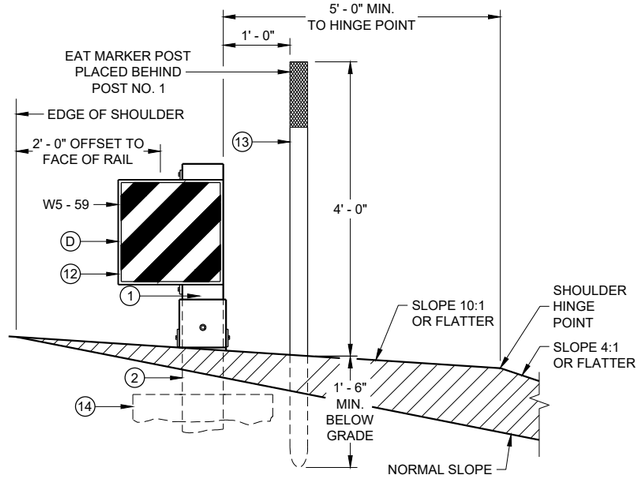
ELEVATION



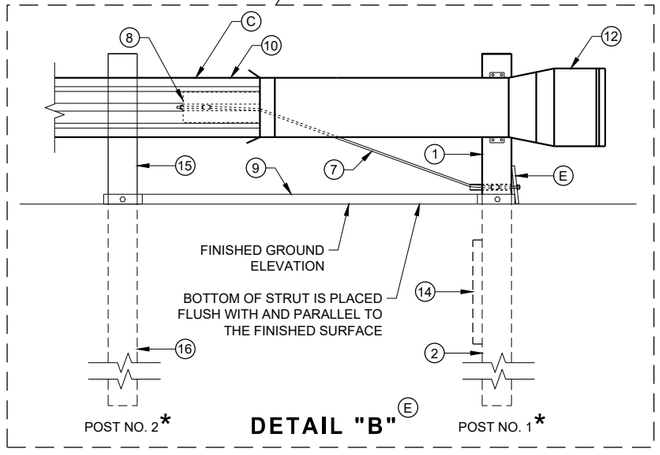
SECTION C - C
TYPICAL AT POST NOS. 3 - 9



SECTION B - B
TYPICAL AT POST NO. 2*



SECTION A - A
TYPICAL AT POST NO. 1*



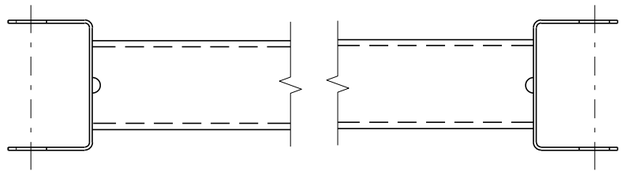
DETAIL "B" (E)

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B44 - 04a

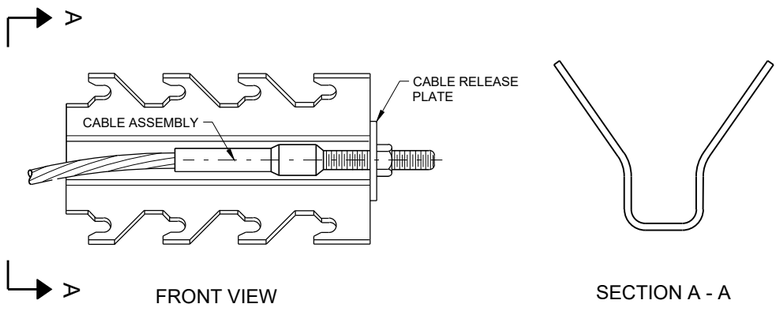
SDD 14B44 - 04a



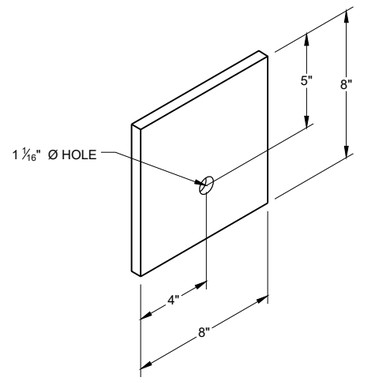
GENERIC GROUND STRUT ⑨ Ⓔ

BILL OF MATERIALS

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



GENERIC ANCHOR CABLE BOX ⑧ Ⓔ



BEARING PLATE ⑥ Ⓔ

6

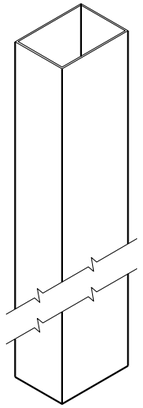
6

SDD 14B44 - 04b

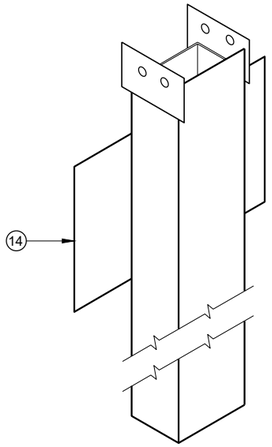
SDD 14B44 - 04b

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



UPPER POST NO. 1 (1) (E)



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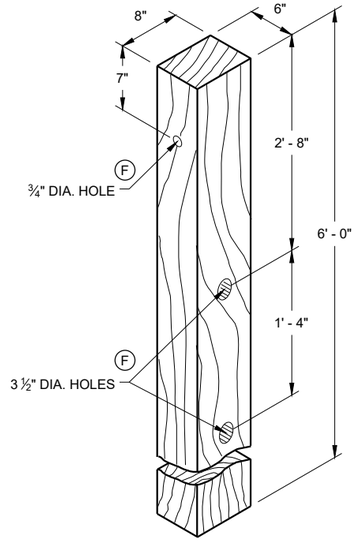
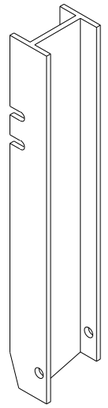


WOOD CRT POST (3) (E)
POSTS NUMBER 3-9



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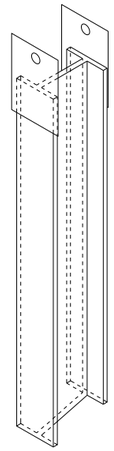

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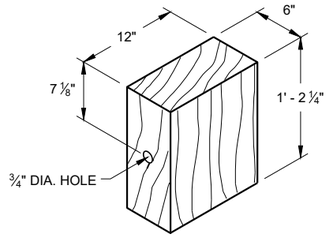
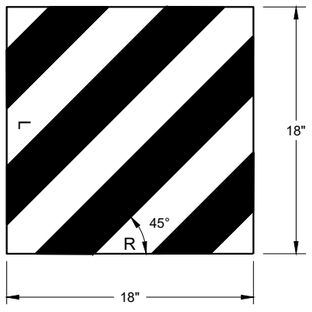
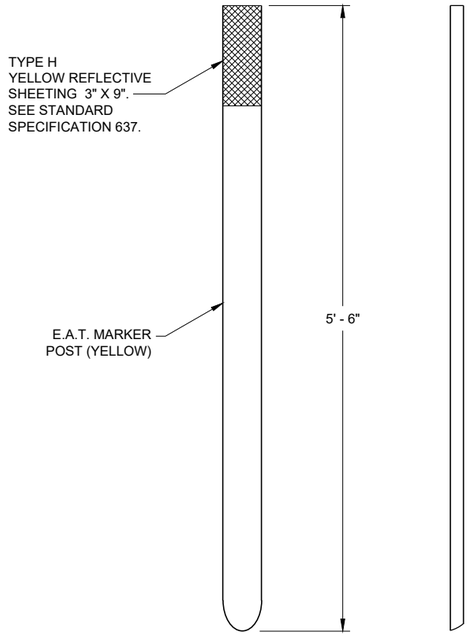


WOOD BLOCKOUT (4)
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



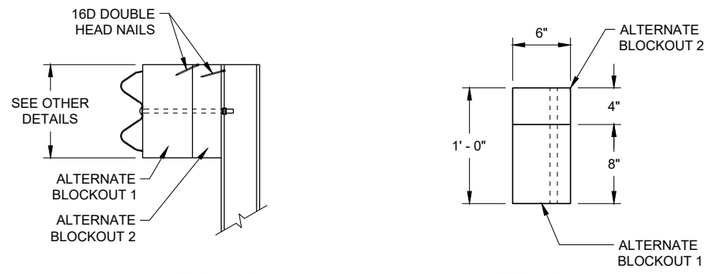
W5 - 59

REFLECTIVE SHEETING DETAIL (E)



FRONT VIEW SIDE VIEW

E.A.T. MARKER POST (13)



SIDE VIEW TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

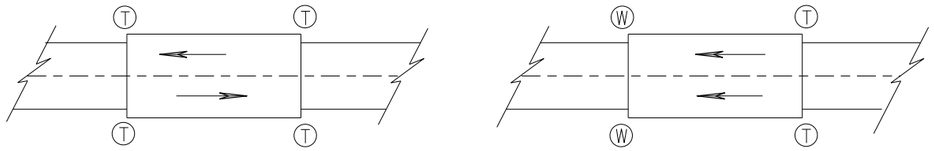
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

6

SDD 14B44 - 04c



TWO WAY TRAFFIC

ONE WAY TRAFFIC

(T) THRIE BEAM CONNECTION

(W) W-BEAM CONNECTION WHEN REQUIRED

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

GENERAL NOTES

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

TRANSITION USES STEEL POSTS ONLY.

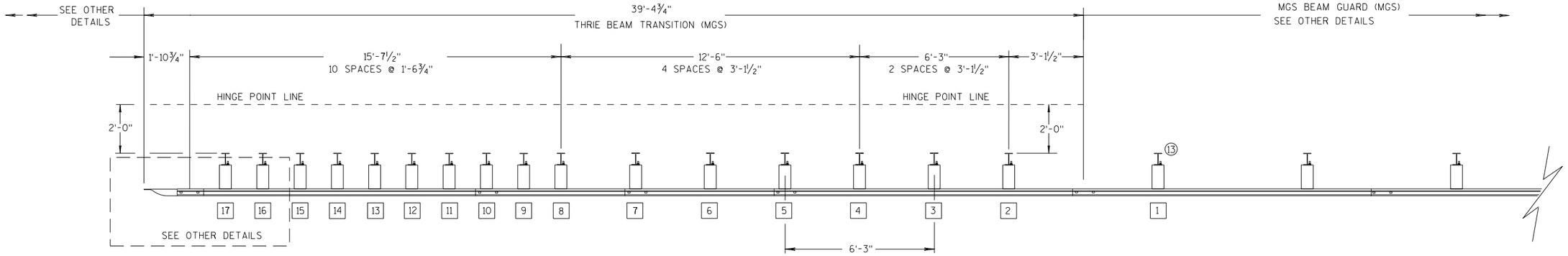
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

POST 2 THROUGH 17 USES STEEL POST ONLY

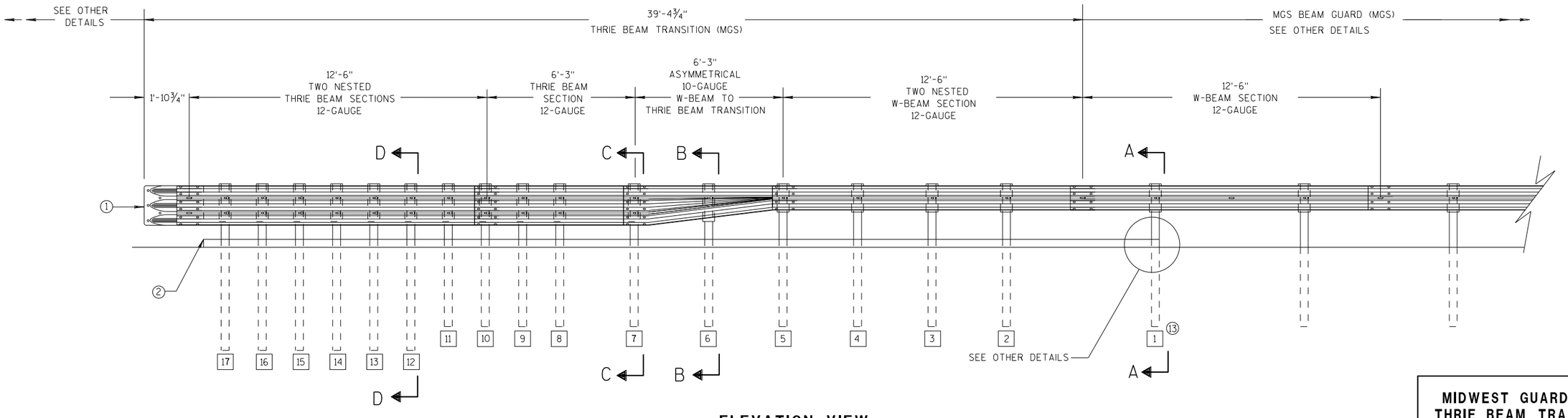
(1) BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.

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

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



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR 358

6

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

6

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

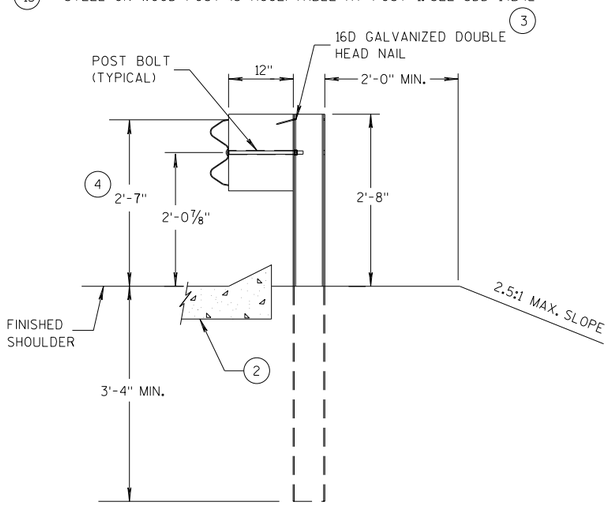
GENERAL NOTES

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

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

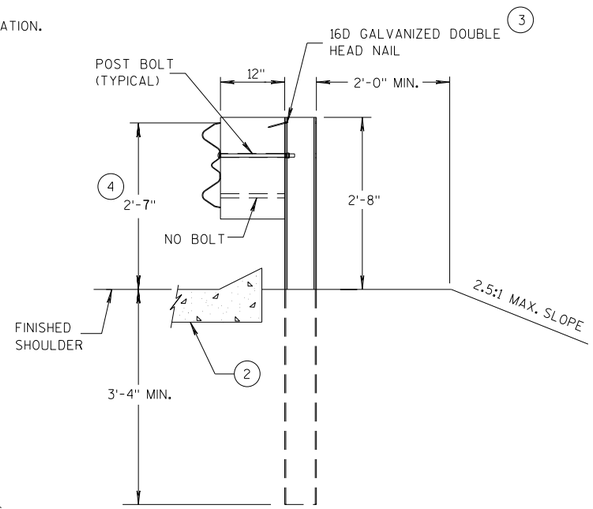
(4) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".

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



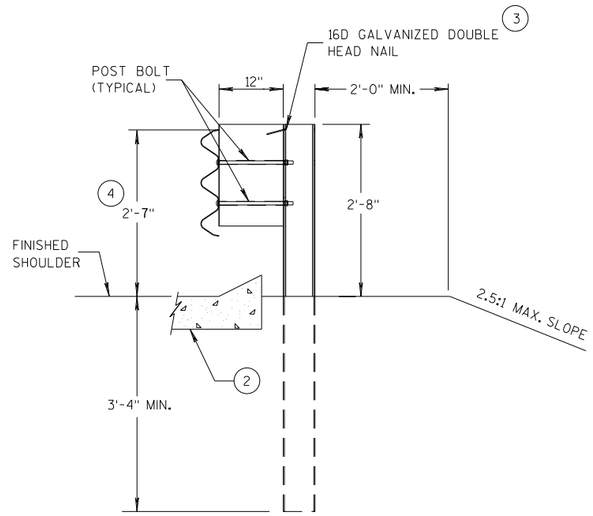
SECTION A-A (13)

POSTS 1-5



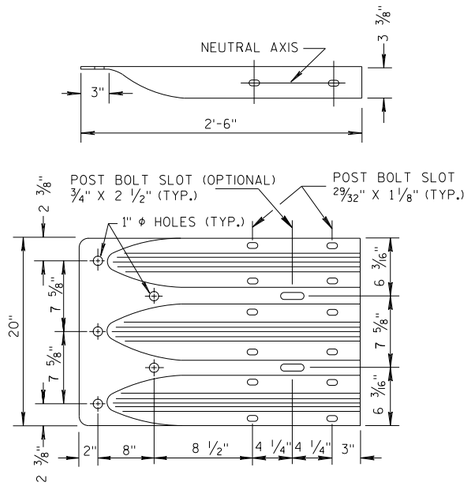
SECTION B-B

POST 6

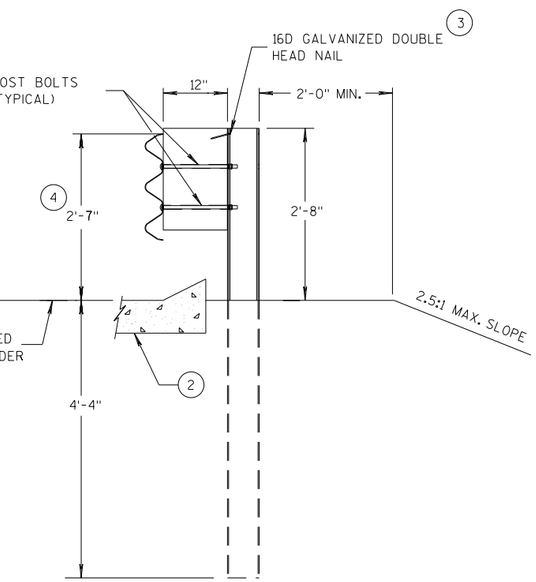


SECTION C-C

POSTS 7-11

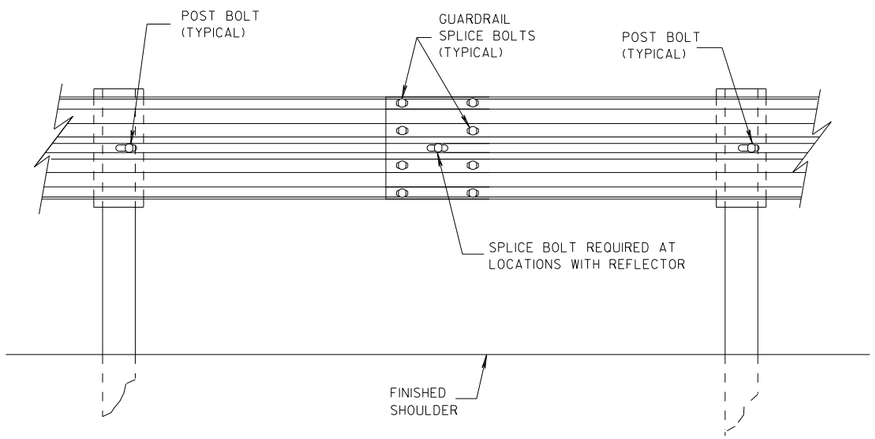


THRIE BEAM TERMINAL CONNECTOR



SECTION D-D

POSTS 12-17



SPLICE DETAIL

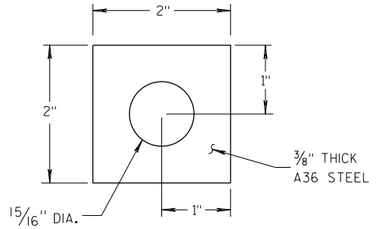
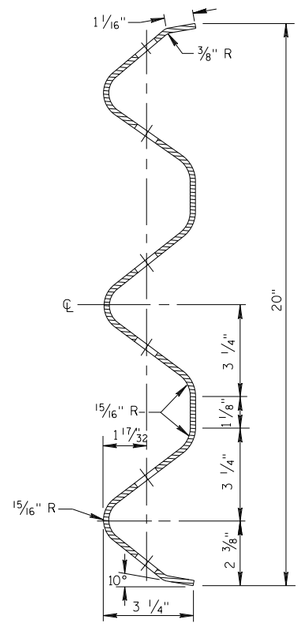


PLATE WASHER DETAIL



SECTION THRU THRIE BEAM RAIL ELEMENT

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

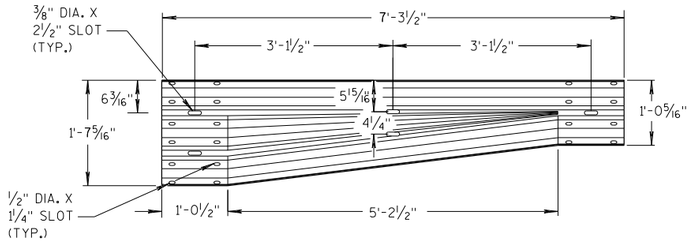
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOF 359

6

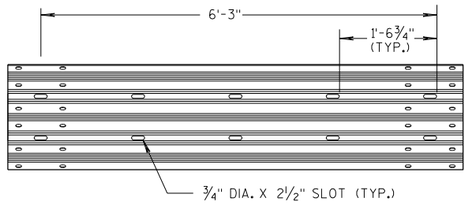
S.D.D. 14 B 45-5b

6

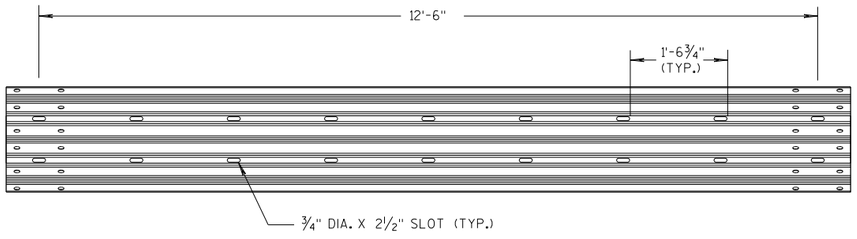
S.D.D. 14 B 45-5b



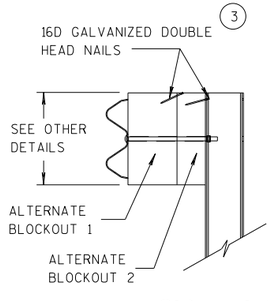
W-BEAM TO THRIE BEAM TRANSITION SECTION



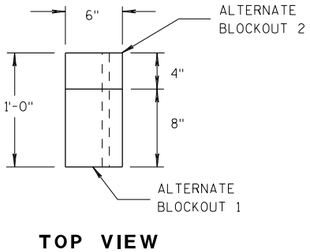
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

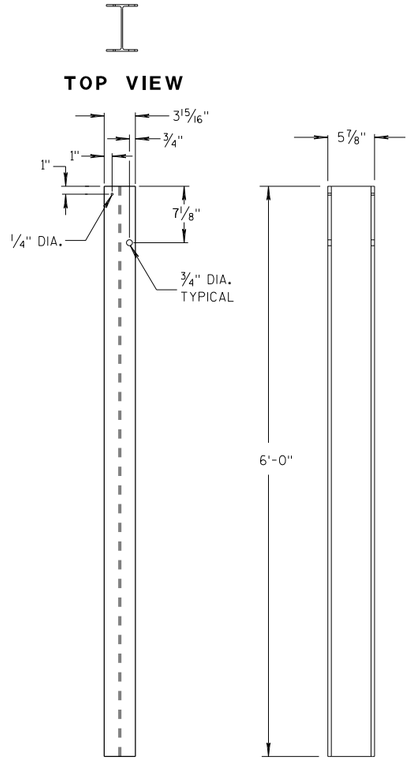


SIDE VIEW



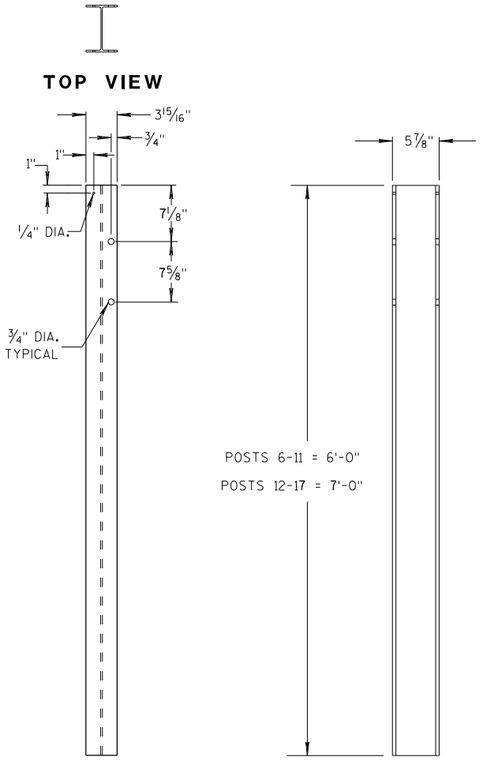
TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL



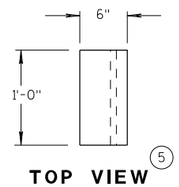
FRONT VIEW SIDE VIEW

STEEL POSTS 1-5 (13)

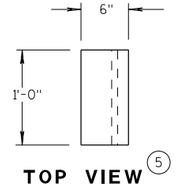


FRONT VIEW SIDE VIEW

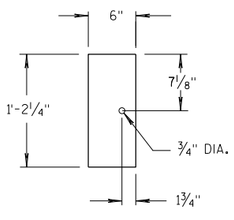
STEEL POSTS 6-17



TOP VIEW (5)

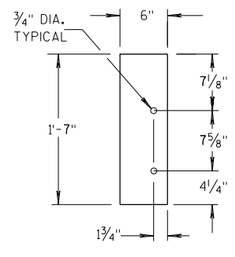


TOP VIEW (5)



FRONT VIEW

BLOCKOUT POSTS 1-5



FRONT VIEW

BLOCKOUT POSTS 6-17

GENERAL NOTES

STEEL POSTS ARE W6X9 OR W6X8.5.

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

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

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

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

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

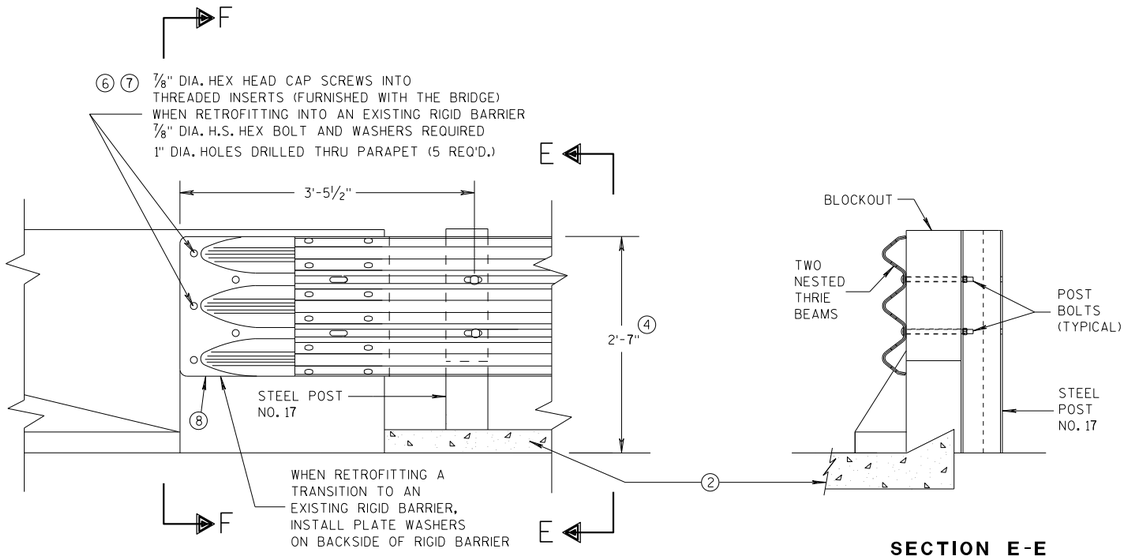
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR 360

6

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

6

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



FRONT VIEW

SECTION E-E

THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS

GENERAL NOTES

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

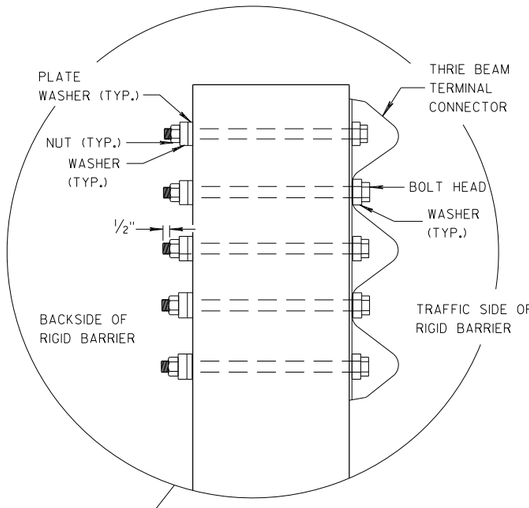
② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

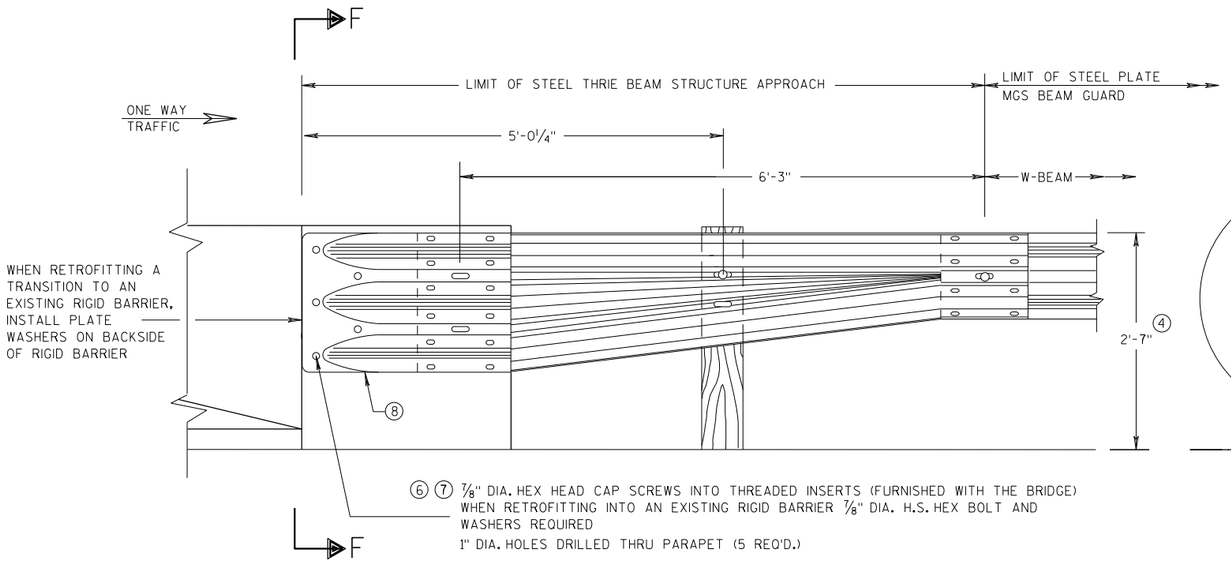
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

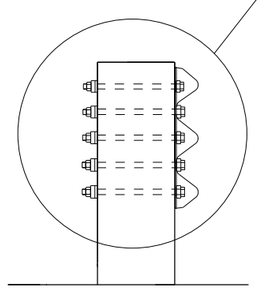
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE.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

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

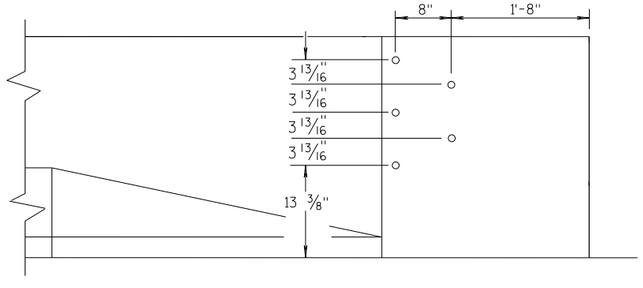




FRONT VIEW



SECTION F-F



DRILL HOLE LOCATION

W BEAM TRANSITION AND CONNECTION TO BRIDGE PARAPETS WITH SQUARE ENDS

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

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

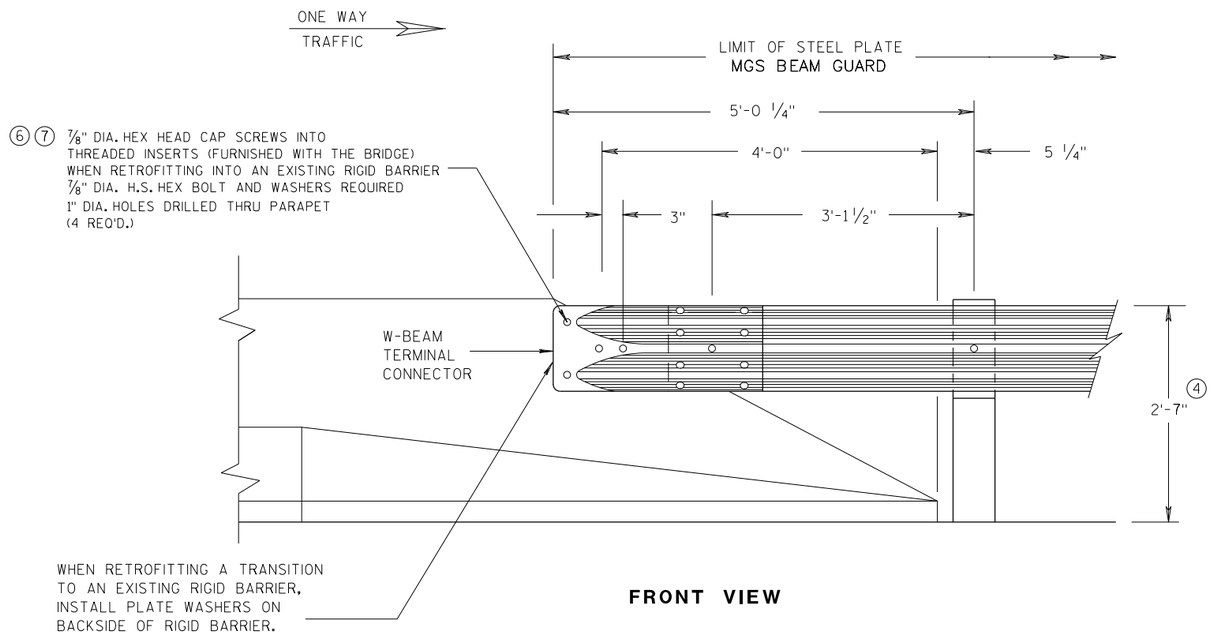
APPROVED
07/2018 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS D UNIT SUPERVI NT
FHWA

6

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

6

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



FRONT VIEW

W BEAM CONNECTION TO PARAPETS WITH SLOPED ENDS

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

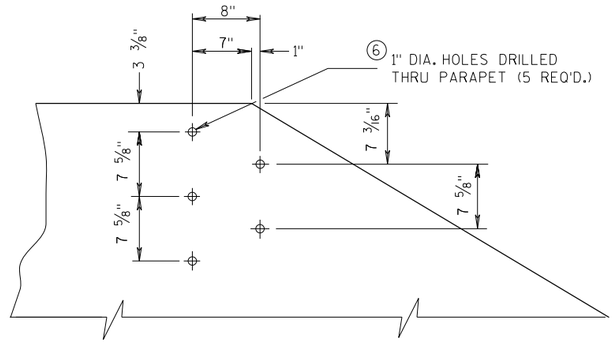
GENERAL NOTES

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

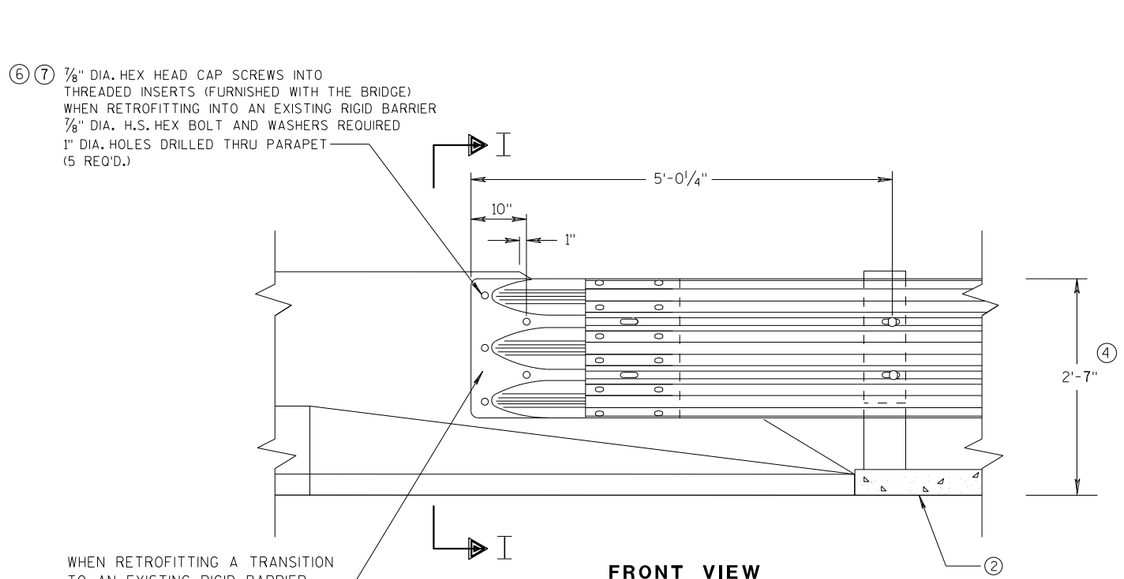
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

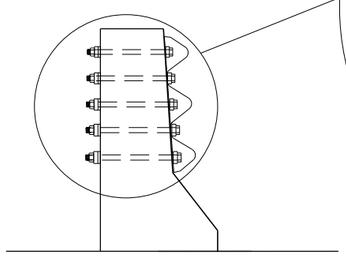
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE.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



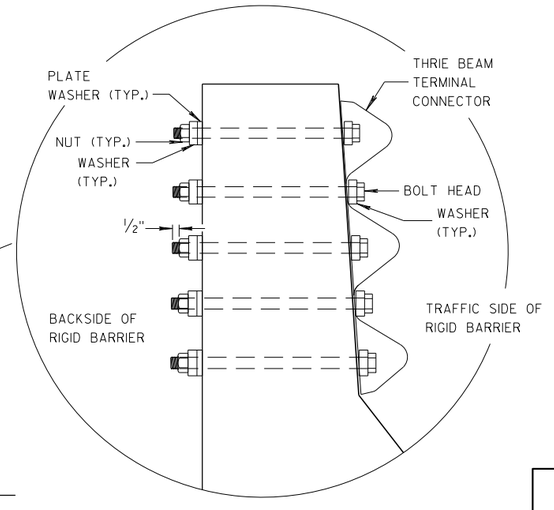
DRILL HOLE LOCATION AND PATTERN
FOR THRIE BEAM CONNECTION



FRONT VIEW



SECTION I-I



THRIE BEAM CONNECTION TO BRIDGE PARAPETS WITH SLOPED ENDS

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

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

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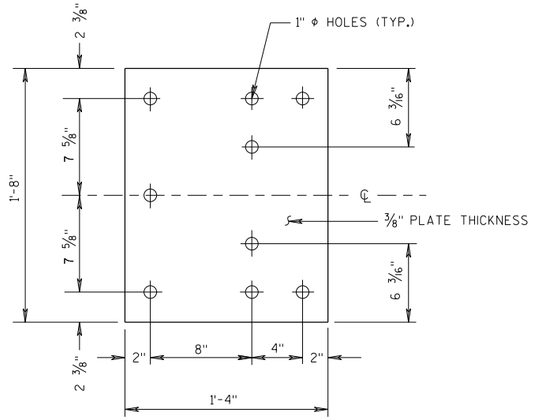
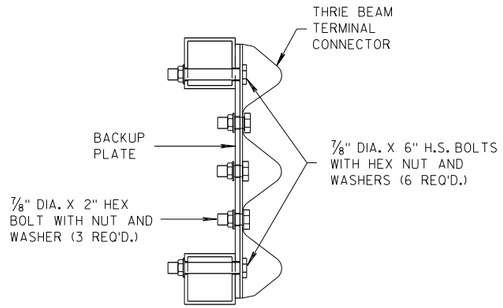
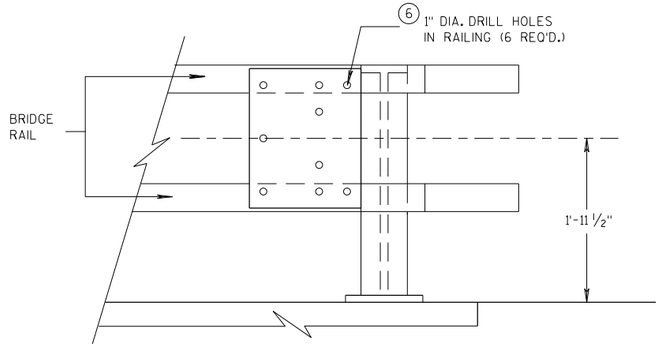
S.D.D. 14 B 45-5f



BACK-UP PLATE DETAIL



SECTION J-J

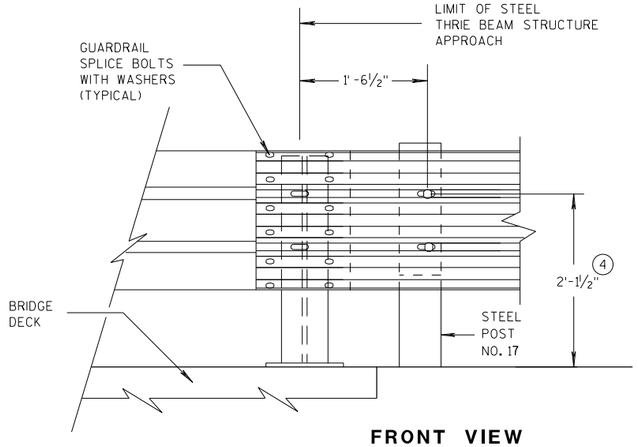


BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING

GENERAL NOTES

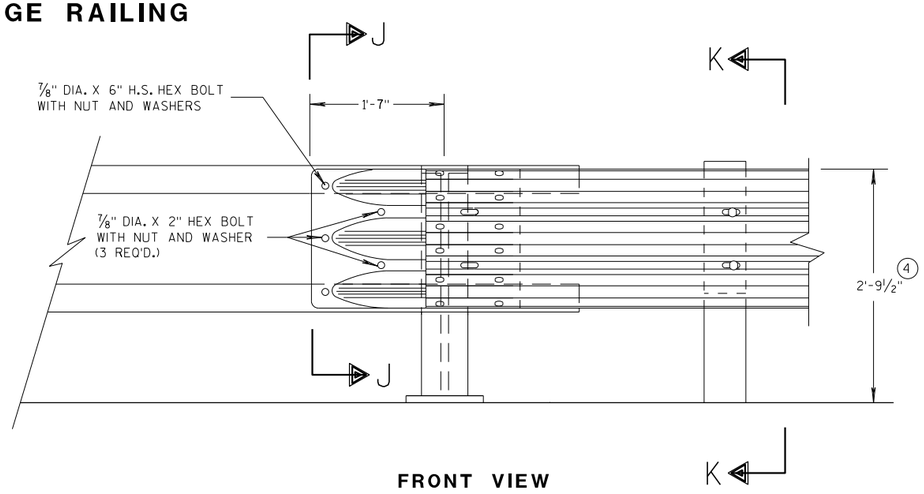
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

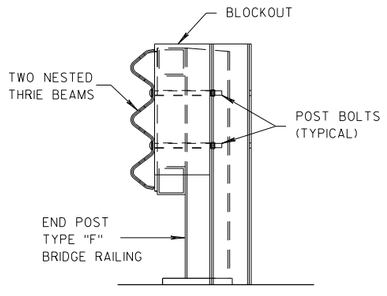


FRONT VIEW

THRIE BEAM CONNECTION TO STEEL RAILING TYPE "W"



FRONT VIEW



SECTION K-K

THRIE BEAM CONNECTION TO TUBULAR RAILING TYPE "F"

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED 07/2018 — DATE
FHWA

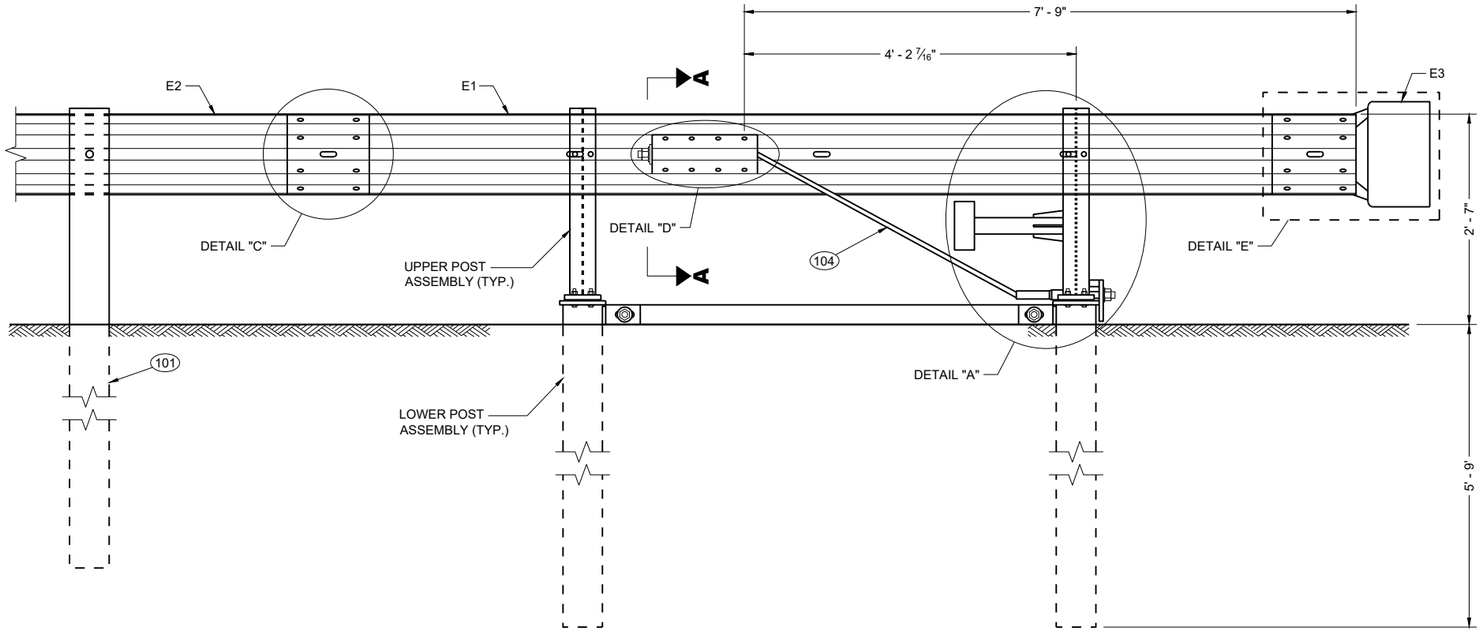
/S/ Rodney Taylor 363
ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

6

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

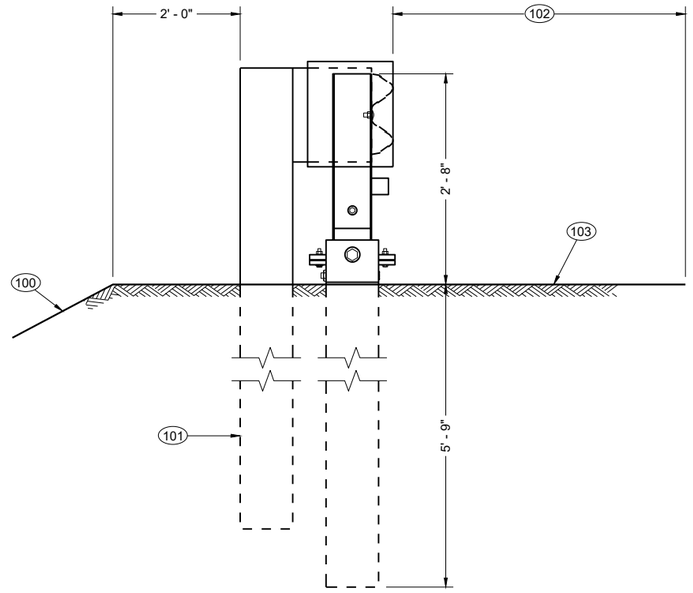
6

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



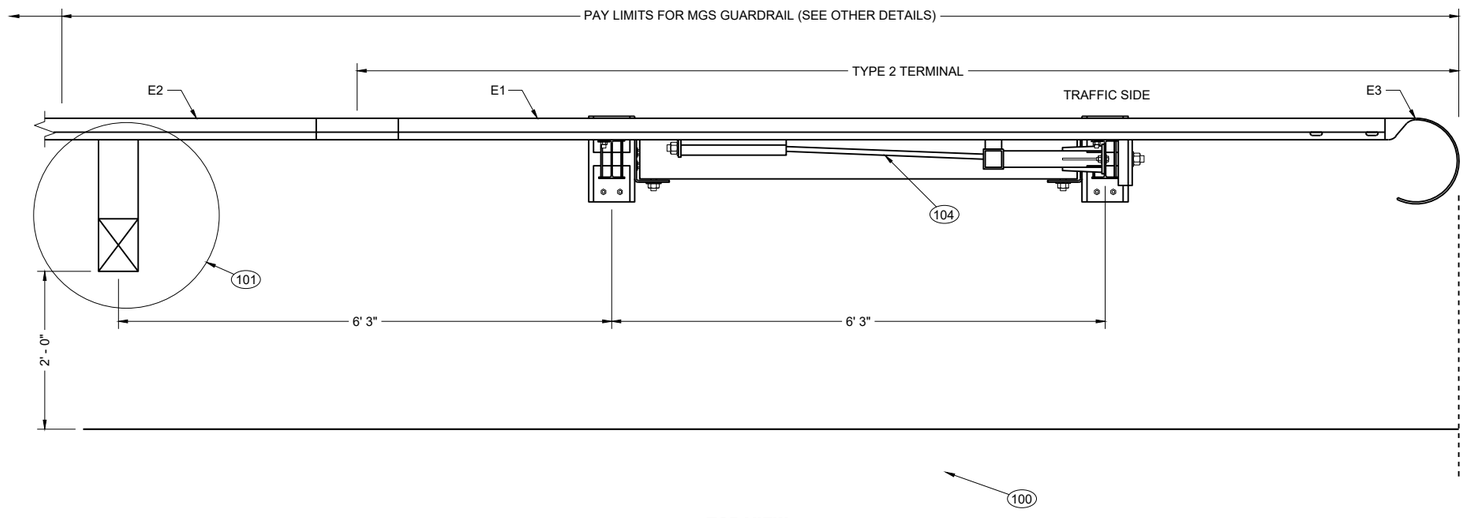
BACK VIEW

TYPE 2 TERMINAL



SIDE VIEW

TYPE 2 TERMINAL



TOP VIEW

TYPE 2 TERMINAL

GENERAL NOTES

SEE SDD 14B42 FOR MORE INFORMATION

(100) MAXIMUM SLOPE IS 2.5:1.

(101) SEE SDD 14B42 FOR MORE INFORMATION.

(102) SHOULDER

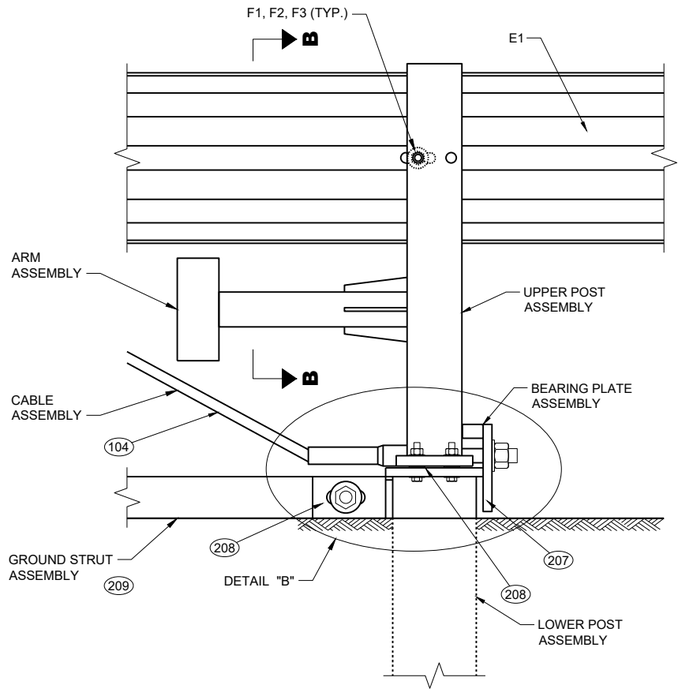
(103) MAXIMUM SLOPE IS 10:1.

(104) AFTER ASSEMBLY, CABLE IS TO BE TIGHTENED WITHOUT TWISTING THE CABLE.

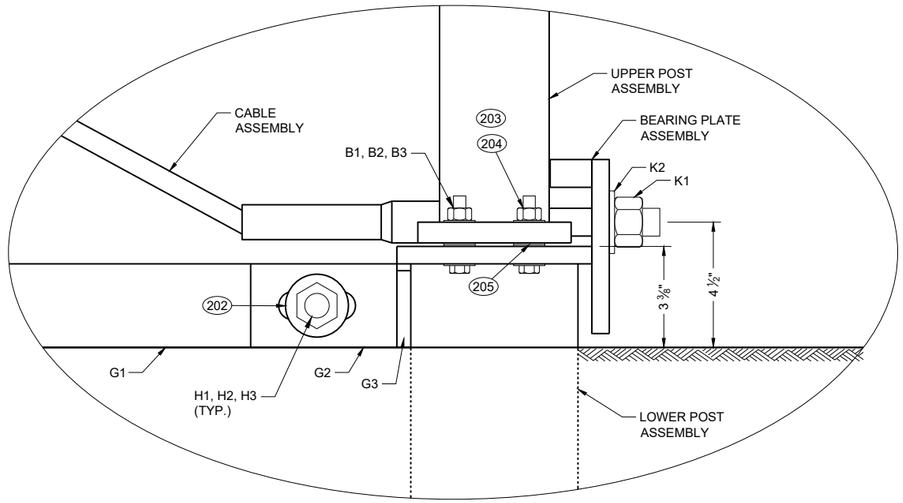
MIDWEST GUARDRAIL SYSTEM (MGS)
TYPE 2 TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

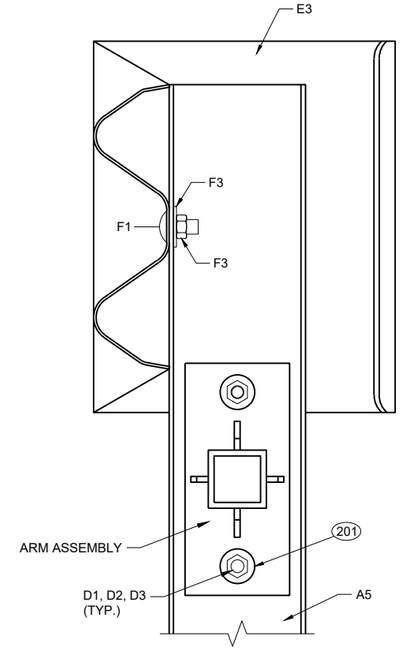
6
SDD 14B47-07a



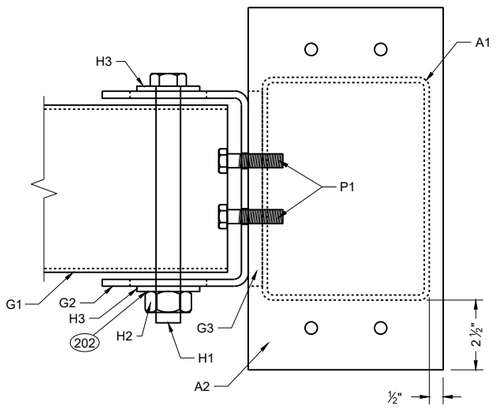
DETAIL "A"



DETAIL "B"

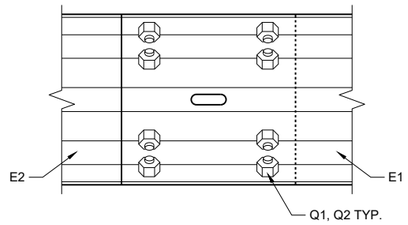


SECTION B - B

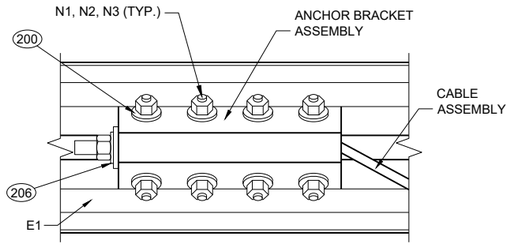


TOP VIEW

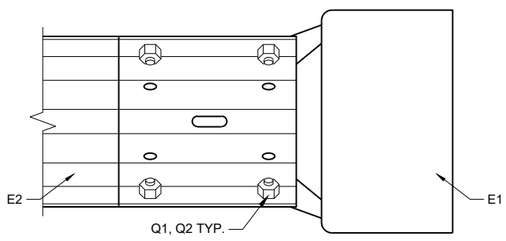
GROUND STRUT CONNECTION DETAIL



DETAIL "C"



DETAIL "D"



DETAIL "E"

GENERAL NOTES

200 INSTALL ONE WASHER UNDER BOLT HEAD AND RAIL AND ON WASHER BETWEEN NUT AND ANCHOR BRACKET ASSEMBLY.

201 INSTALL ONE WASHER UNDER BOLT HEAD AND UPPER POST ASSEMBLY AND ONE WASHER BETWEEN NUT AND ARM PLATE.

202 INSTALL ONE WASHER UNDER BOLT HEAD AND GROUND STRUT CONNECTOR AND ONE WASHER BETWEEN NUT AND GROUND STRUT CONNECTOR.

203 INSTALL ONE WASHER UNDER BOLT HEAD AND LOWER POST ASSEMBLY AND ONE WASHER BETWEEN NUT AND UPPER POST ASSEMBLY.

204 TORQUE VALUE IS BETWEEN 60 - 75 FT-LB.

205 TWO WASHERS BETWEEN UPPER AND LOWER POST ASSEMBLY.

206 INSTALL ONE WASHER BETWEEN NUT AND ANCHOR BRACKET ASSEMBLY.

207 NO MATERIAL IS TO BE PLACED AGAINST THE VERTICAL FACES OF BEARING PLATE.

208 PREVENT OR REMOVE MATERIALS THAT BLOCK ACCESS TO BOLTS FOR POST ASSEMBLIES AND GROUND STRUT.

209 PREVENT OR REMOVE MATERIALS THAT IMPEDE REMOVAL OF GROUND STRUT.

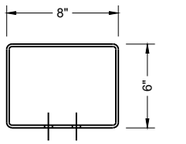
MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

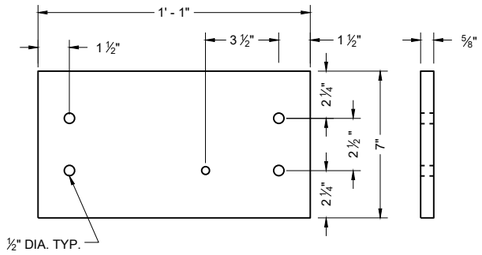
6
SDD 14B47-07b

GENERAL NOTES

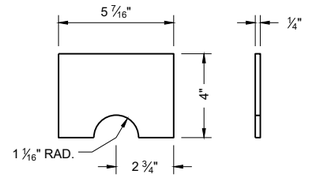
(300) TAP FOR 1/2" AFTER GALVANIZATION



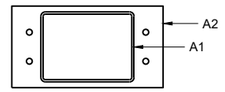
TOP VIEW



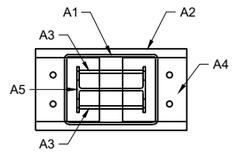
LOWER PLATE (A2)

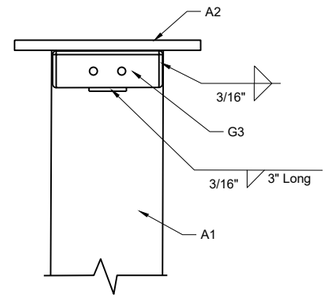


POST GUSSET (A3)

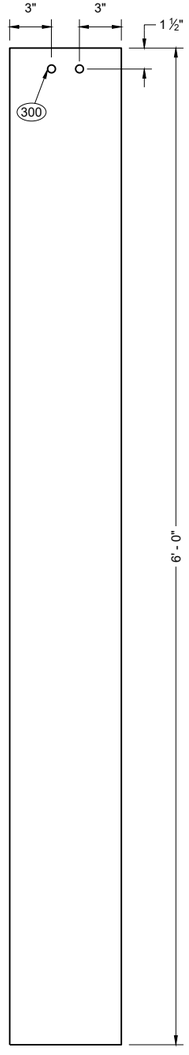


PLAN VIEW



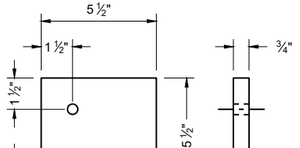


WELDING DETAIL
G3 AND A1

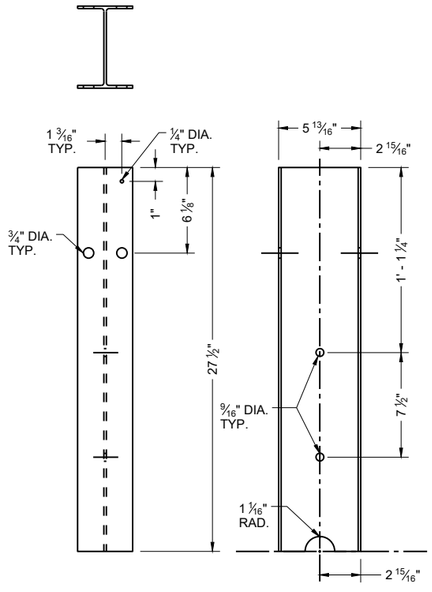


SIDE VIEW

FOUNDATION TUBE (A1)

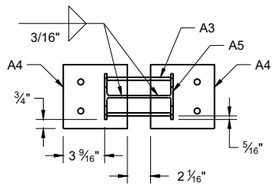


UPPER PLATE (A4)

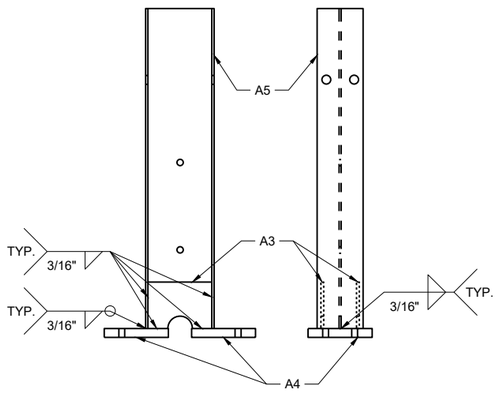


FRONT VIEW SIDE VIEW

TYPE 2 POST (A5)

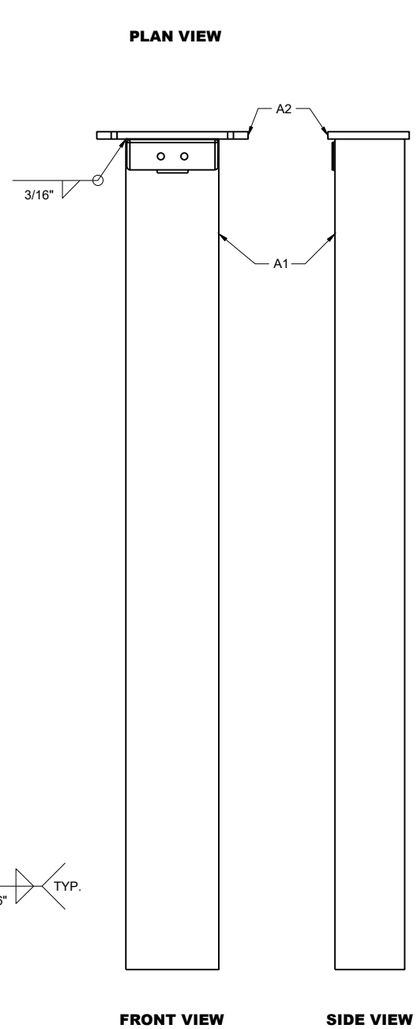


PLAN VIEW



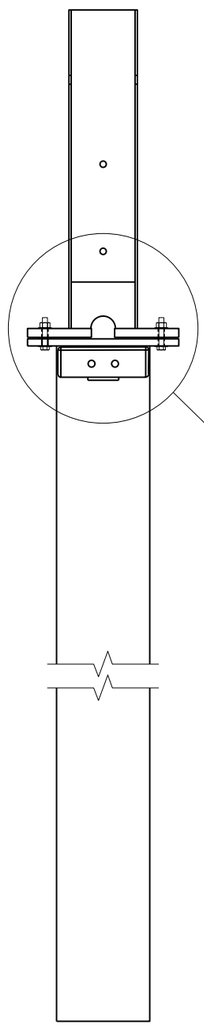
SIDE VIEW FRONT VIEW

UPPER POST ASSEMBLY

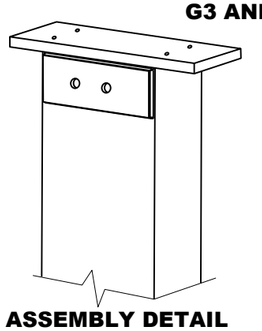


FRONT VIEW SIDE VIEW

LOWER POST ASSEMBLY

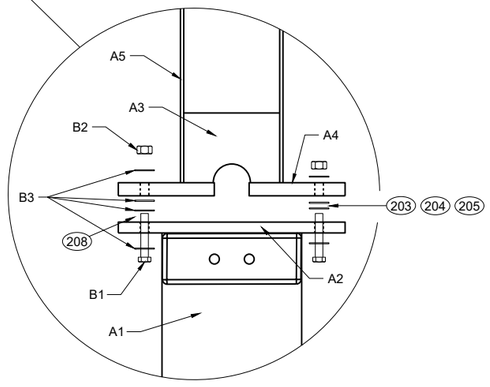


ASSEMBLED POST



ASSEMBLY DETAIL
ISOMETRIC

A1



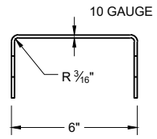
POST CONNECTION DETAIL

MIDWEST GUARDRAIL SYSTEM (MGS)
TYPE 2 TERMINAL

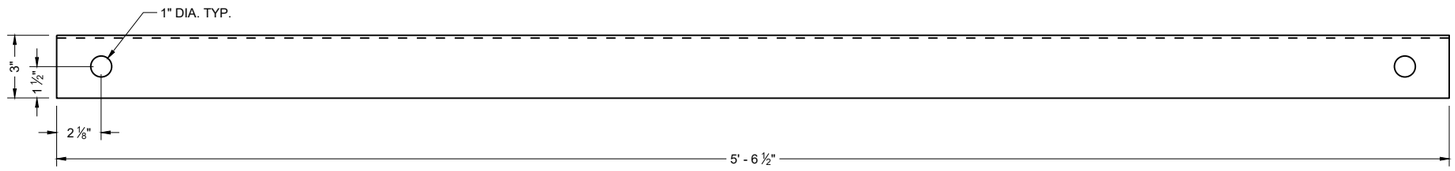
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B47-07c

6

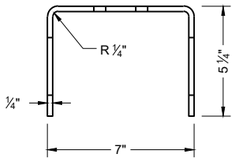


SIDE VIEW

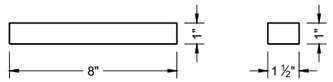


FRONT VIEW

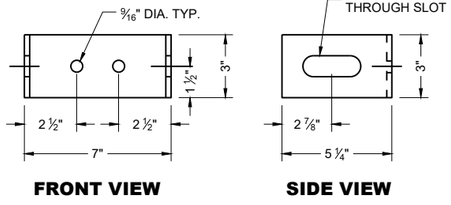
GROUND STRUT CHANNEL (G1)



TOP VIEW



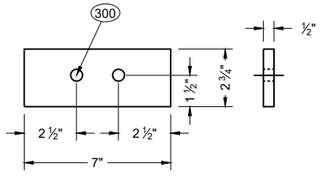
BEARING PLATE FLANGE (L2)



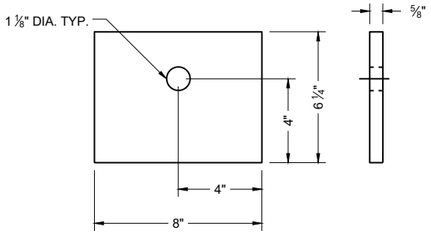
FRONT VIEW

SIDE VIEW

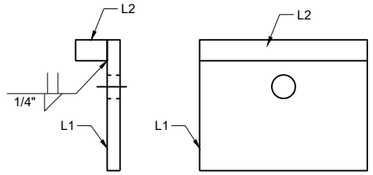
GROUND STRUT CONNECTOR (G2)



GROUND STRUT PLATE (G3)



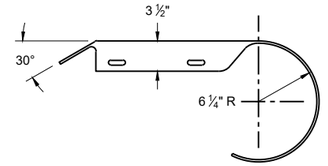
BEARING PLATE (L1)



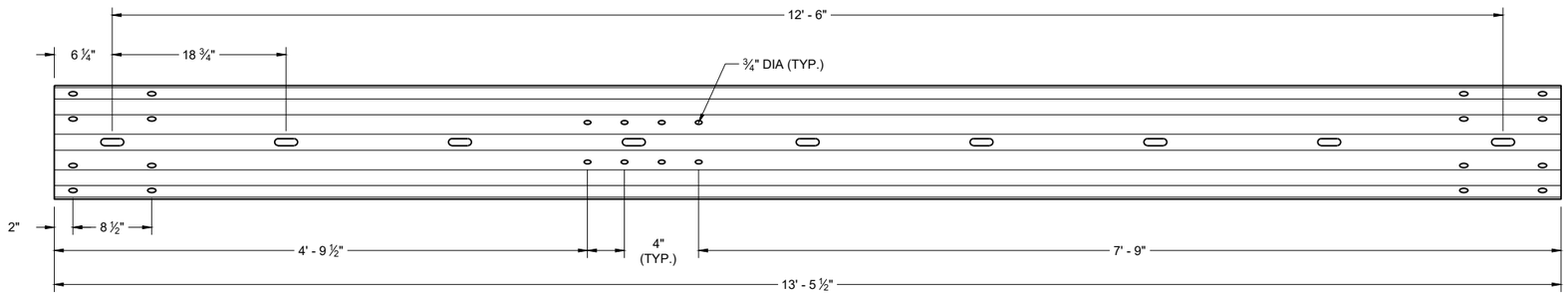
SIDE VIEW

FRONT VIEW

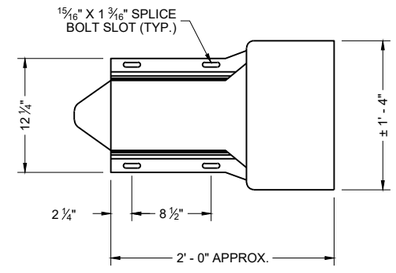
BEARING PLATE ASSEMBLY



PLAN VIEW

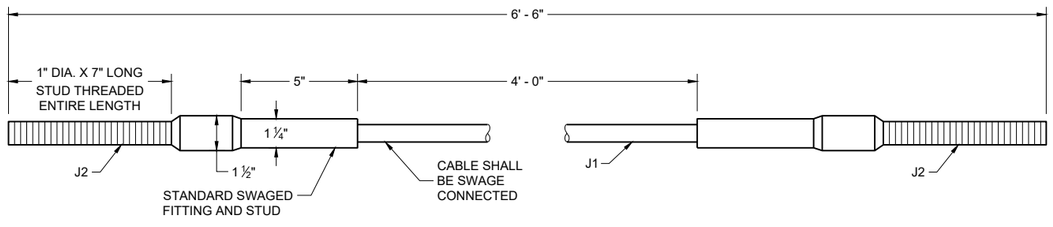


TYPE 2 GUARDRAIL (E1)



ELEVATION VIEW

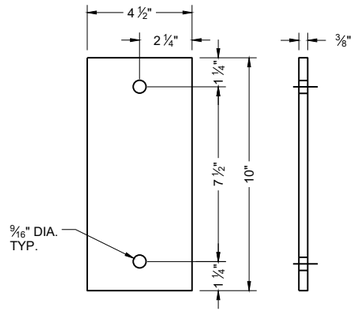
ROUNDED BUFFER END (E3)



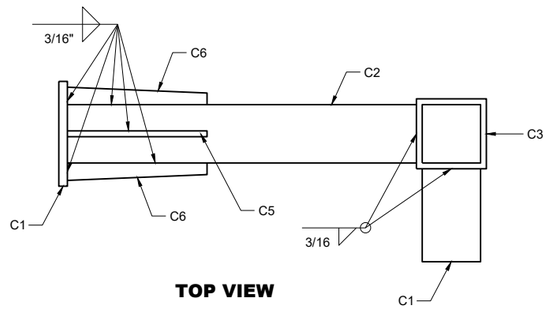
CABLE ASSEMBLY

MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

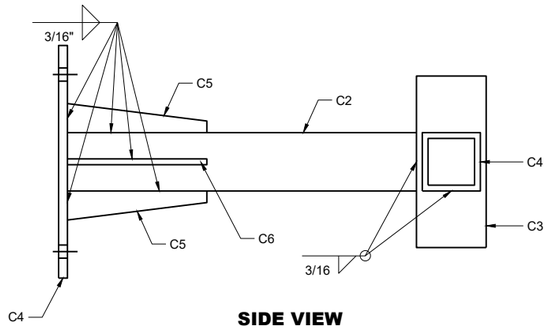
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



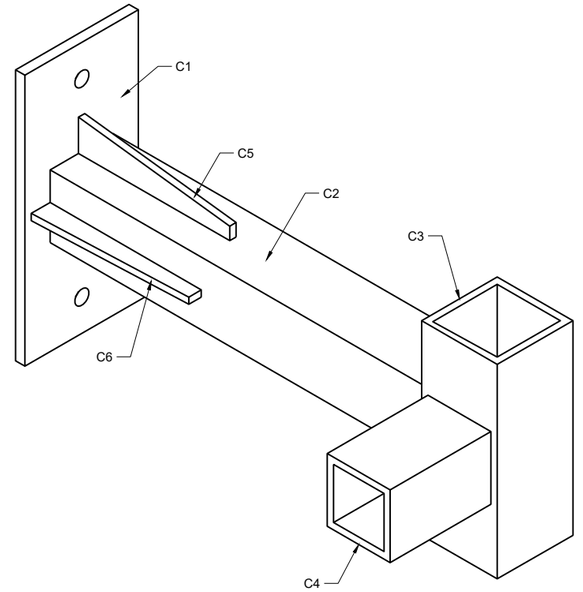
ARM PLATE (C1)



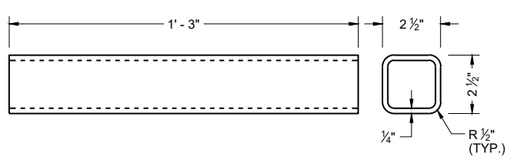
TOP VIEW
ARM ASSEMBLY



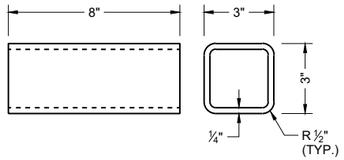
SIDE VIEW
ARM ASSEMBLY



ISOMETRIC VIEW
ARM ASSEMBLY



ARM TUBE 1 (C2)



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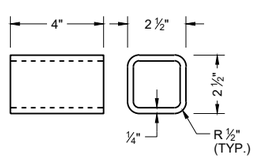
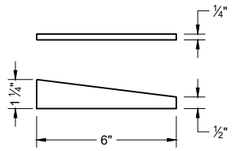
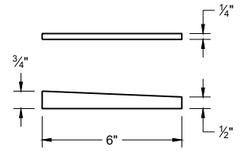


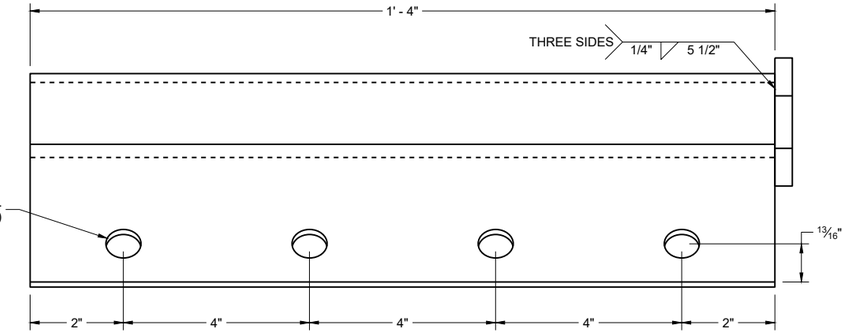
ARM TUBE 3 (C4)

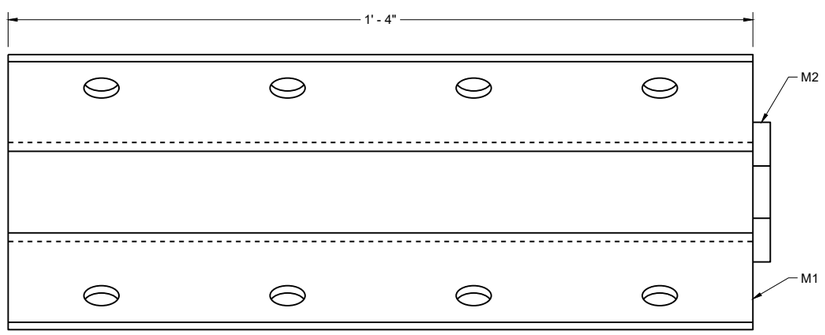


ARM GUSSET PLATE 1 (C5)

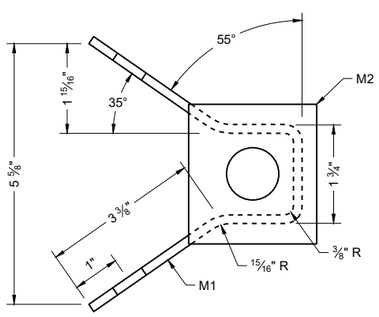


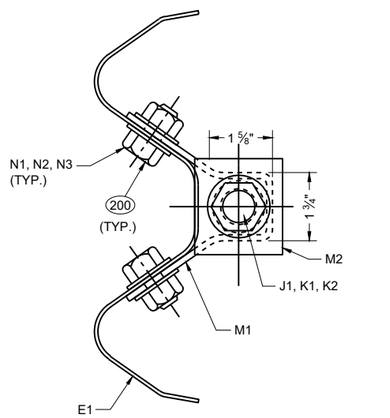
ARM GUSSET PLATE 2 (C6)

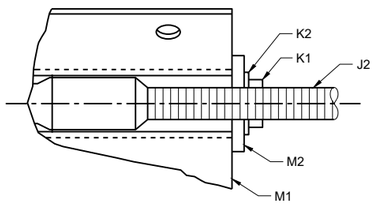




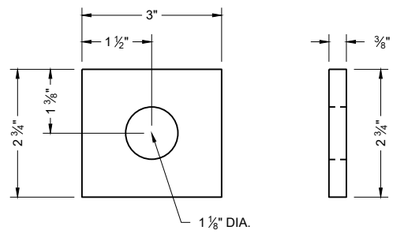
ANCHOR BRACKET (M1, M2)







SECTION A - A



ANCHOR BRACKET BEARING PLATE (M2)

MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
SDD 14B47-07e

BILL OF MATERIALS - TYPE 2 TERMINAL (MGS)

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
A1	TYPE 2 FOUNDATION TUBE	AASHTO M111 / ASTM A123 ASTM A500 GRADE B OR ASTM A-501	TS 8" x 6" x 3/16"
A2	LOWER PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	5/8" THICKNESS
A3	POST GUSSET	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	1/4" THICKNESS
A4	UPPER PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	3/4" THICKNESS
A5	TYPE 2 POST	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI, w6x9 or w6x8.5	
B1	BREAKAWAY BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC HEAVY HEX HEAD ASTM F3125 GRADE A325 TYPE 1 HEAVY HEX HEAD OR SAE J429 GRADE 5 HEAVY HEX HEAD / ASTM A449 TYPE 1 HEAVY HEX HEAD. BOLTS MAY BE FULLY THREADED . PROVIDE ENOUGH THREADING FOR PROPER TIGHTENING OF BOLT.	7/16" DIA.
B2	BREAKAWAY BOLT WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER ONLY)	7/16" DIA.
B3	BREAKAWAY BOLT NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291/ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	
C1	ARM ASSEMBLY PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	3/8" THICKNESS
C2	ARM ASSEMBLY TUBE 1	AASHTO M111 / ASTM A123 ASTM A500 GRADE B OR ASTM A-501	TS 8" x 6" x 3/16"
C3	ARM ASSEMBLY TUBE 2	AASHTO M111 / ASTM A123 ASTM A500 GRADE B OR ASTM A-501	TS 3" x 3" x 1/4"
C4	ARM ASSEMBLY TUBE 3	AASHTO M111 / ASTM A123 ASTM A500 GRADE B OR ASTM A-501	TS 2 1/2" x 2 1/2" X 1/4"
C5	ARM ASSEMBLY GUSSET PLATE 1	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	1/4" THICKNESS
C6	ARM ASSEMBLY GUSSET PLATE 2	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	1/4" THICKNESS
D1	ARM ASSEMBLY BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC HEAVY HEX HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36	1/2" DIA.
D2	ARM ASSEMBLY WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER ONLY)	1/2" DIA.
D3	ARM ASSEMBLY NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	1/2" DIA.
E1	TYPE 2 GUARD RAIL	AASHTO M180 CLASS A TYPE 2 12 GAUGE APPROVED PRODUCER	
E2	BEAM GUARD RAIL	AASHTO M180 CLASS A TYPE 2 12 GAUGE APPROVED PRODUCER	
E3	BEAM GUARD ROUNDED BUFFER END	AASHTO M180 CLASS A TYPE 2 12 GAUGE APPROVED PRODUCER	
F1	POST BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC UNC HEAVY HEX HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36	5/8" DIA.
F2	POST BOLT WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER ONLY)	5/8" DIA.
F3	POST BOLT NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291/ASTM A 563 AASHTO M180 RECESSED HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	
G1	GROUND STRUT CHANNEL	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	1/2" x 11 3/4" x 10 GAUGE
G2	GROUND STRUT CONNECTOR	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	1/4" THICKNESS
G3	GROUND STRUT PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	1/2" THICKNESS

MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 14B47-07f

BILL OF MATERIALS - TYPE 2 TERMINAL (MGS)

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
H1	GROUND STRUT BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC HEAVY HEX HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36	7/8" DIA.
H2	GROUND STRUT BOLT WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER ONLY)	7/8" DIA.
H3	GROUND STRUT BOLT NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC HEAVY HEX HEAD 5/8" ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36	
J1	BCT CABLE	AASHTO M30 / ASTM A741 6 x 19 INDEPENDENT WIRE CORE (IWRC) IMPROVED PLOW STEEL (IPS), 6 x 19 INDEPENDENT WIRE CORE (IWRC) IMPROVED PLOW STEEL (IPS) TYPE II OR IIC, CLASS C ZINC COATED MIN. BREAKING STRENGTH OF 42.7 KIPS	3/4" DIA.
J2	BCT CABLE	UNC 1" ASTM A576 GRADE 1035 SWAGE FITTINGS ARE TO BE FACTORY SWEDGED. MIN BREAKING STRENGTH OF 42.7 KIPS ASME B30.26 "FORGED, CAST, OR DIE STAMPED WITH THE FOLLOWING IN TO CONNECTION: NAME OF MANUFACTURE OR TRADEMARK OF CONNECTION'S MANUFACTURER, SIZE OR RATED LOAD, GRADE FOR ALLOY EYEBOLTS."	
K1	CABLE ASSEMBLY NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	1" DIA.
K2	CABLE ASSEMBLY WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1	1" DIA.
L1	BEARING PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	5/8" THICKNESS
L2	BEARING PLATE FLANGE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	1" THICKNESS
M1	BEAM GUARD ANCHOR BRACKET	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	
M2	BEAM GUARD ANCHOR END PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	3/8" THICKNESS
N1	ANCHOR BRACKET BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC AASHTO M180 HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36	5/8" DIA.
N2	ANCHOR BRACKET BOLT WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER ONLY)	5/8" DIA.
N3	ANCHOR BRACKET BOLT NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 /ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	
P1	FOUNDATION TUBE BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	1/2" DIA.
Q1	SPLICE BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC AASHTO M180 HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36	
Q2	SPLICE NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 AASHTO M180 RECESSED HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	5/8" DIA.

MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

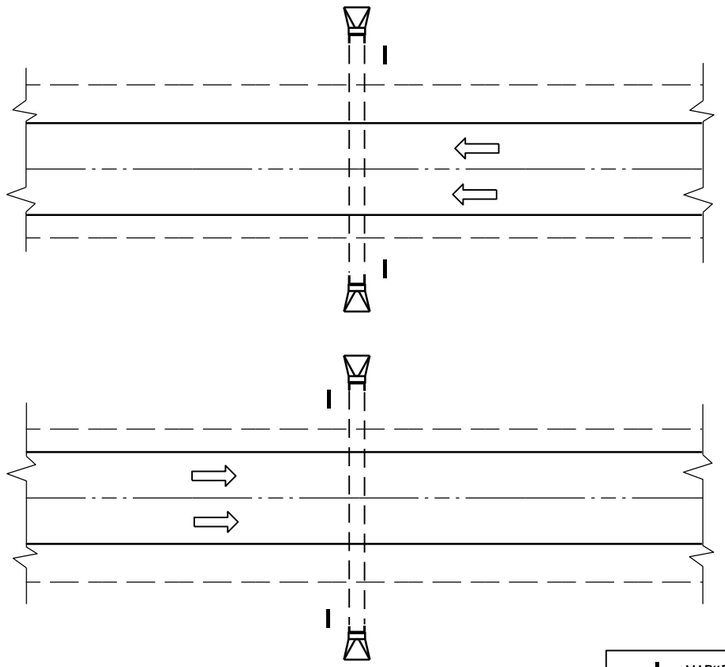
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2025 — DATE
/S/ Rodney Taylor — <position>

FHWA

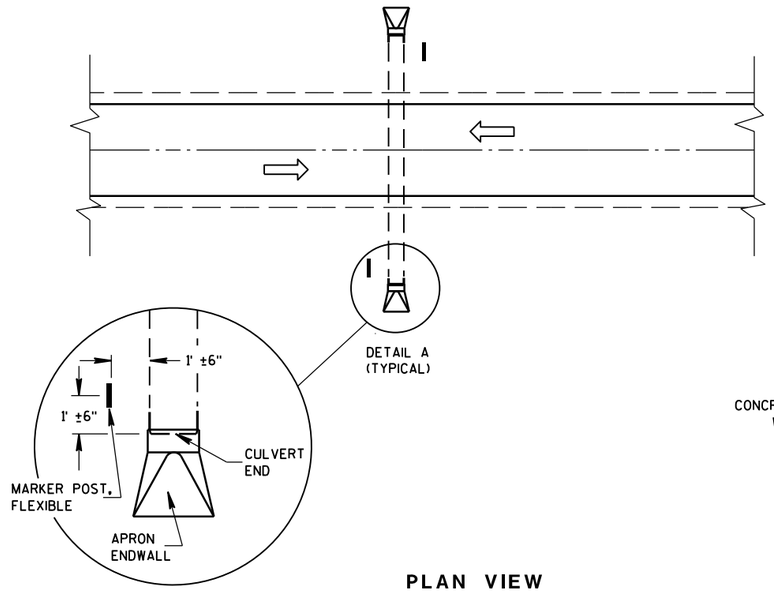
6

SDD 14B47-07g



PLAN VIEW

DIVIDED HIGHWAY



DETAIL A
(TYPICAL)

PLAN VIEW

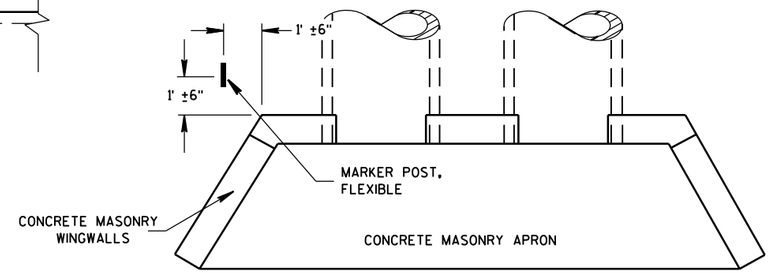
UNDIVIDED HIGHWAY

MARKER POST, FLEXIBLE

DIRECTION OF TRAFFIC FLOW

GENERAL NOTES

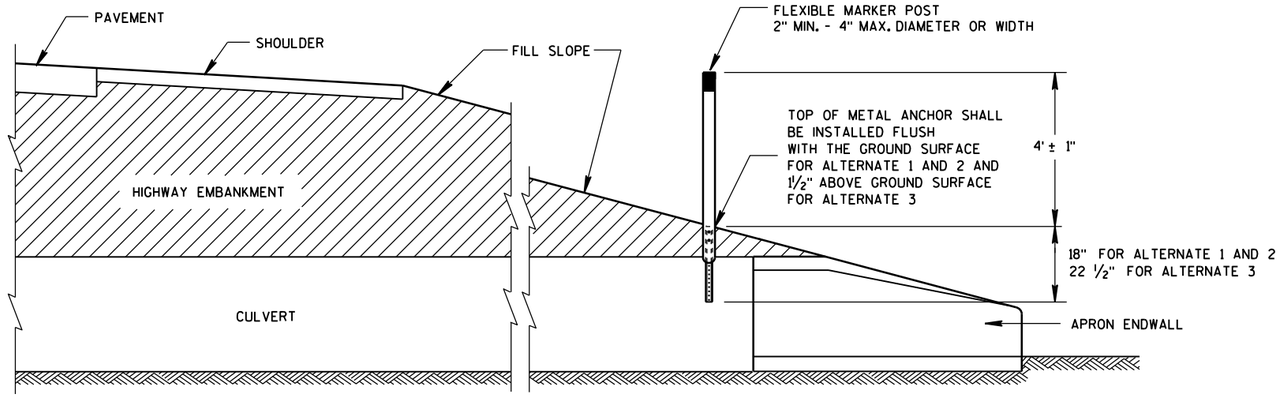
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



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 TRANSPOR

6

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

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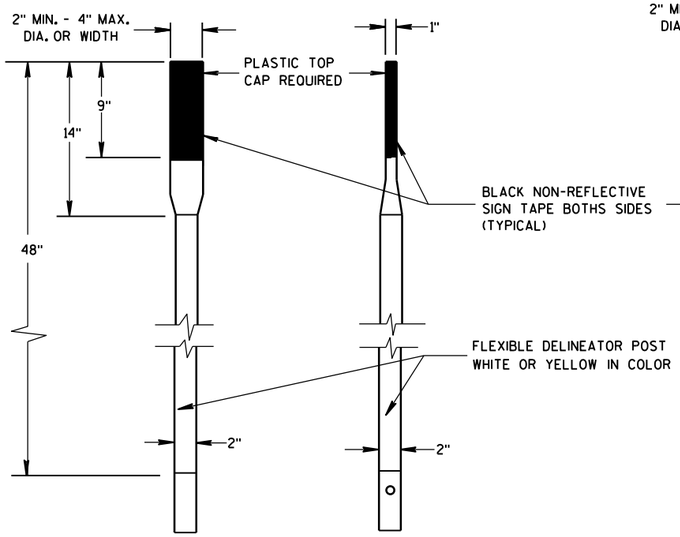
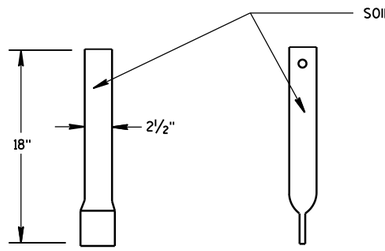
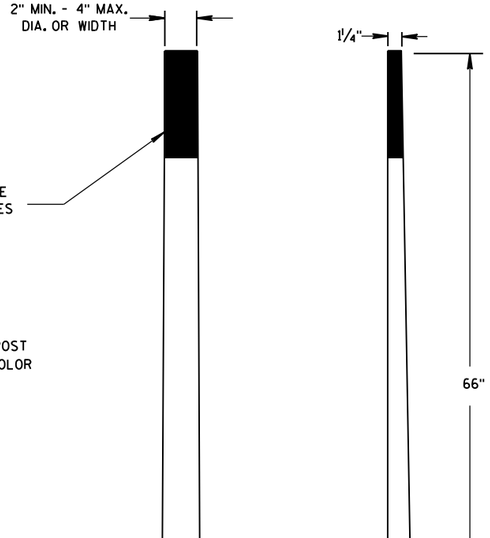
S.D.D. 15 A 3-2a





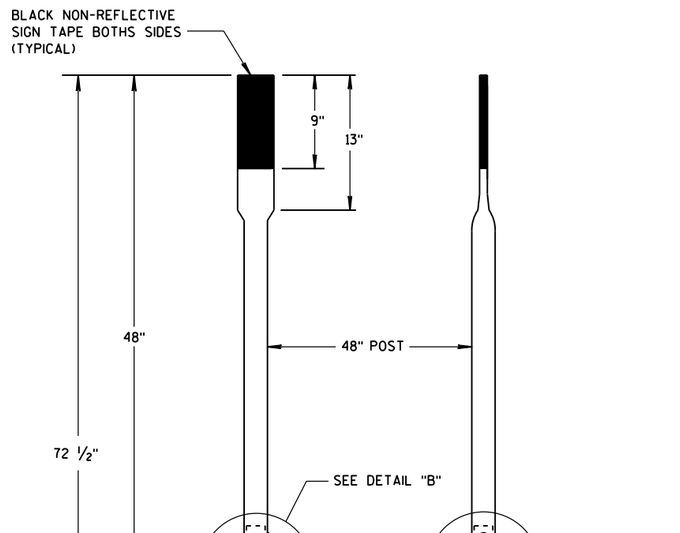
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

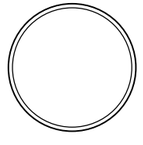
ALTERNATE 2



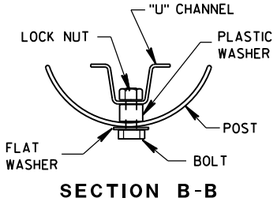
FRONT VIEW SIDE VIEW

ALTERNATE 3

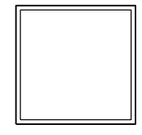
FLEXIBLE MARKER POSTS



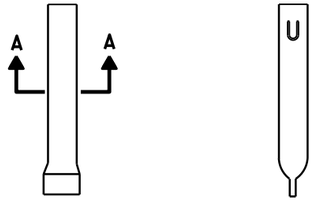
SECTION A-A



SECTION B-B

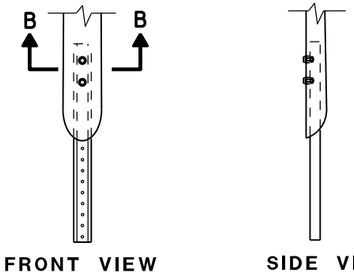


SECTION C-C



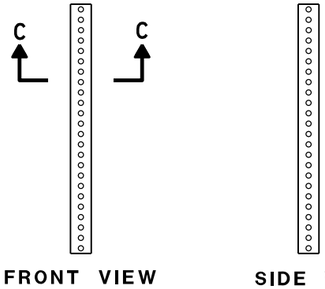
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

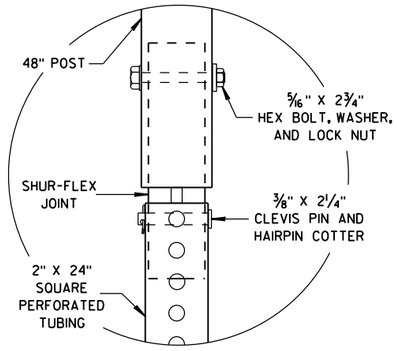
ALTERNATE 2



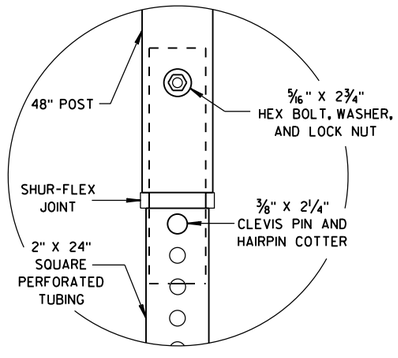
FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POST ANCHORS



DETAIL B



DETAIL C

FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

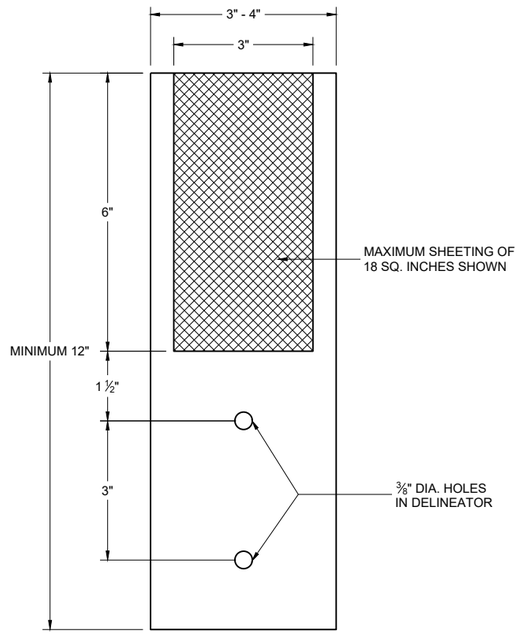
APPROVED
10/1/2012 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

6

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

6

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



4" x 12" DELINEATOR
WITH REFLECTIVE SHEETING

REFLECTOR SPACING TABLE

REFLECTOR SPACING	MINIMUM NUMBER OF REFLECTORS
100' C-C	3

DELINEATOR POST
WITH REFLECTIVE SHEETING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2024
DATE

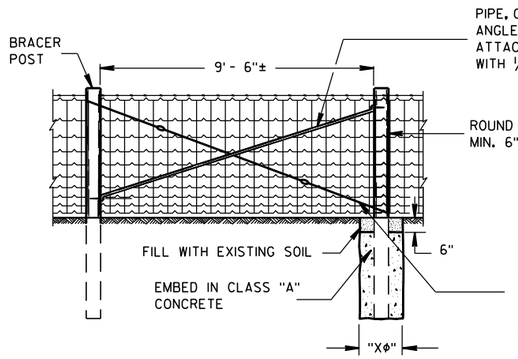
/S/ Jeannie Silver
Statewide Pavement Marking Engineer

FHWA

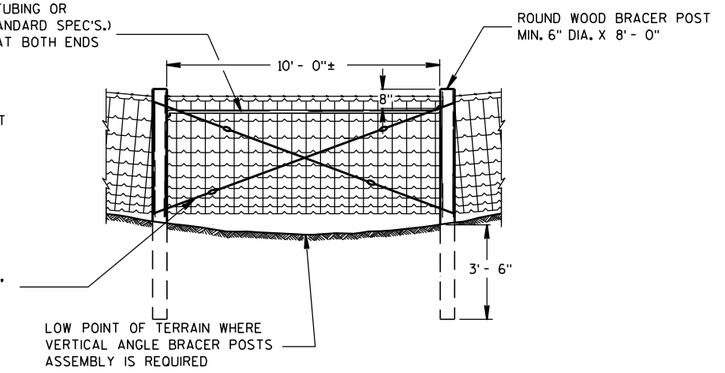
6
SDD 15A04-08e

NOTE: PULL OR STRETCHER POST ASSEMBLIES SHALL BE PLACED MIDWAY BETWEEN END POSTS AND CORNER POSTS WHERE A RUN OF FENCE EXCEEDS 660' BUT IS LESS THAN 1,320'. FOR RUNS OF FENCE IN EXCESS OF 1,320' MAXIMUM SPACING OF PULL OR STRETCHER POST ASSEMBLIES SHALL BE 660'± C-C.

ILLUSTRATION SHOWS POSITION OF STANDARD STEEL BRACE, DOUBLE STRAND GALVANIZED WIRE, AND THE POST TO BE EMBEDDED IN CONCRETE WHEN WIRE FENCE IS INSTALLED FROM LEFT TO RIGHT. THE BRACES SHALL BE POSITIONED ON THE OPPOSITE DIAGONALS AND THE OPPOSITE POST SHALL BE EMBEDDED IN CONCRETE WHEN WIRE FENCE IS INSTALLED FROM RIGHT TO LEFT.



PULL OR STRETCHER POSTS ASSEMBLY



VERTICAL ANGLE BRACER POSTS ASSEMBLY

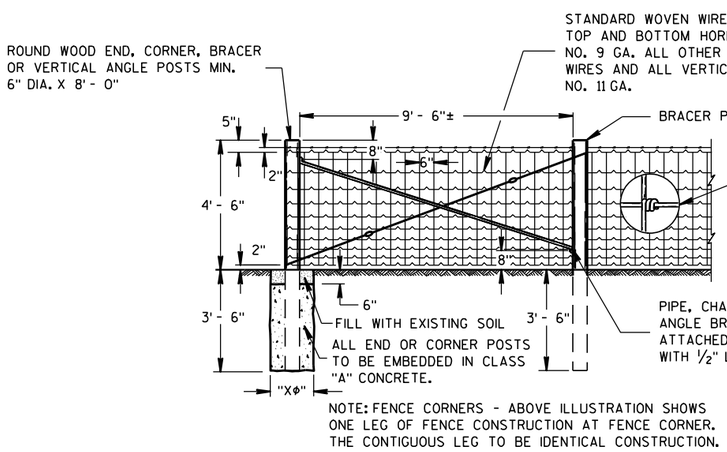
GENERAL NOTES

"XΦ" = DIAMETER OF THE POST PLUS 12".

FENCE STAPLES SHOULD NEVER BE DRIVEN VERTICALLY INTO WOOD POSTS (WITH BOTH LEGS PARALLEL WITH THE WOOD GRAIN). DOING SO CAN SEPARATE THE GRAIN AND SIGNIFICANTLY REDUCE THE HOLDING POWER. ROTATING THE STAPLES SLIGHTLY OFF VERTICAL STRADDLES THE GRAIN AND PROVIDES MORE RESISTANCE TO PULL-OUT.

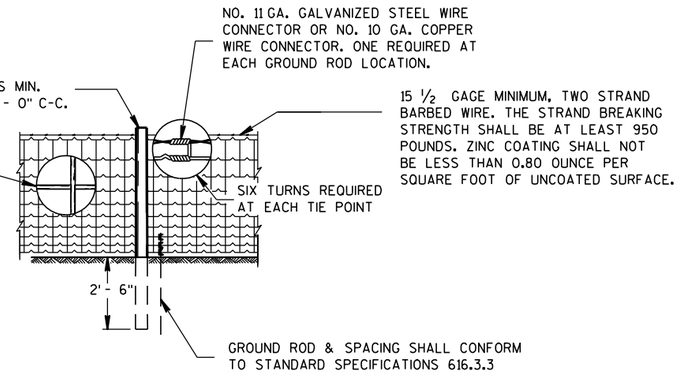
DO NOT STAPLE WIRE TIGHT TO THE LINE POSTS. ALLOW MOVEMENT OF WIRE FOR EXPANSION AND CONTRACTION. STAPLE ARRANGEMENT SHALL BE THE SAME FOR ALL OTHER POSTS EXCEPT THAT THEY SHALL BE DRIVEN TIGHT TO POSTS. ALL STAPLES SHALL BE 2" X 9 GAGE AND SHALL BE MANUFACTURED FROM GALVANIZED WIRE OR HOT DIP GALVANIZED AFTER FORMING. STAPLES SHALL HAVE SLASH-CUT POINTS.

FENCE SHALL BE LOCATED 3'-0" INSIDE THE RIGHT OF WAY LINE UNLESS OTHERWISE INDICATED ON THE PLANS.



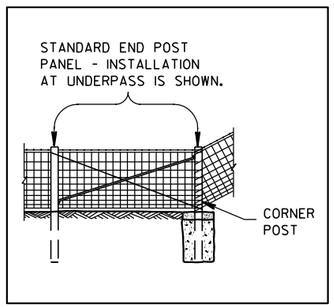
NOTE: FENCE CORNERS - ABOVE ILLUSTRATION SHOWS ONE LEG OF FENCE CONSTRUCTION AT FENCE CORNER. THE CONTIGUOUS LEG TO BE IDENTICAL CONSTRUCTION.

END OR CORNER POSTS ASSEMBLY

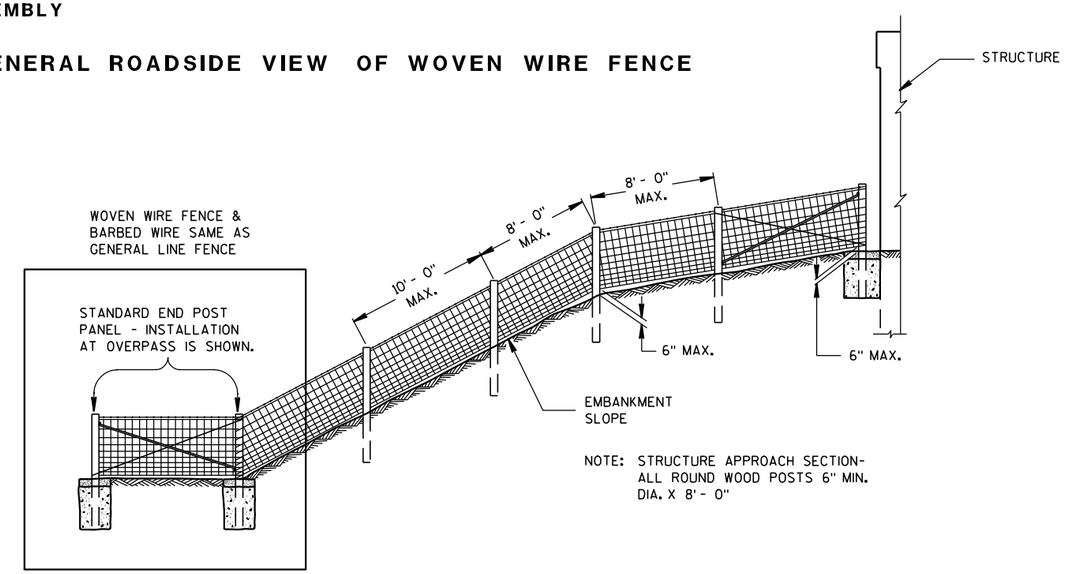


LINE FENCE CONSTRUCTION

GENERAL ROADSIDE VIEW OF WOVEN WIRE FENCE



ALTERNATE FENCE DESIGN AT STRUCTURE



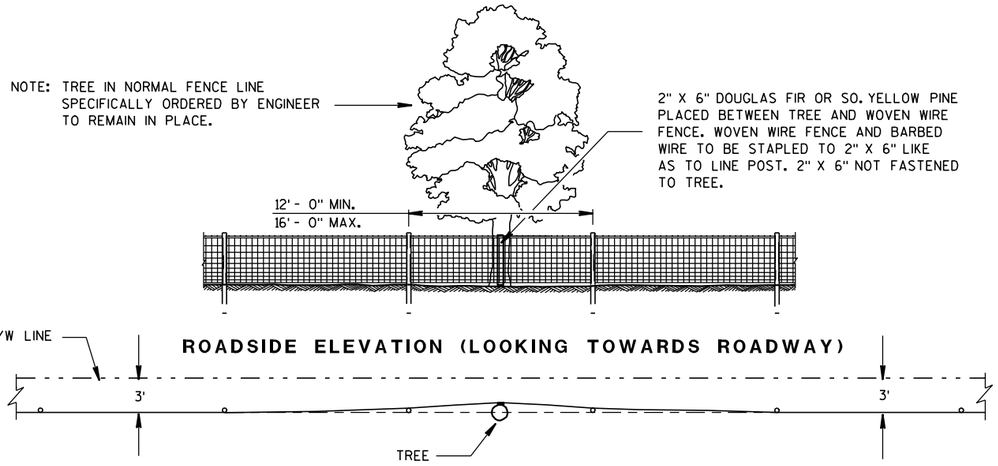
FENCE DESIGN AT STRUCTURE APPROACH

FENCE WOVEN WIRE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

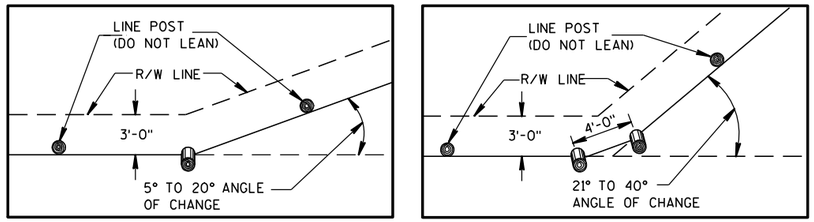
S.D.D. 15 B 1-8a
S.D.D. 15 B 1-8a



ROADSIDE ELEVATION (LOOKING TOWARDS ROADWAY)

PLAN VIEW

FENCE DESIGN AT TREES REMAINING IN NORMAL FENCE LINE



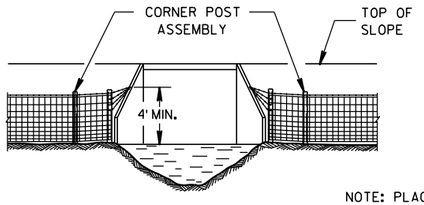
PLAN VIEW
SINGLE POST CORNER

PLAN VIEW
DOUBLE POST CORNER

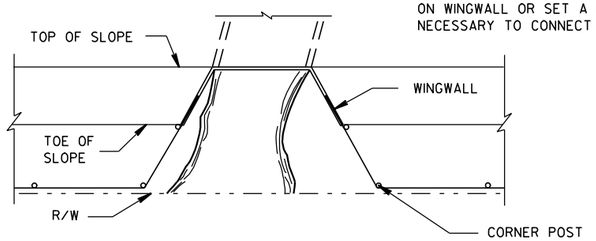
RIGHT OF WAY LINE CHANGE 40° AND LESS

NOTE: SINGLE AND DOUBLE POSTS SHALL BE A MIN. 6" DIA. X 8'-0" WITH A LEAN OF 4" TOWARD THE OUTSIDE OF THE CURVE.

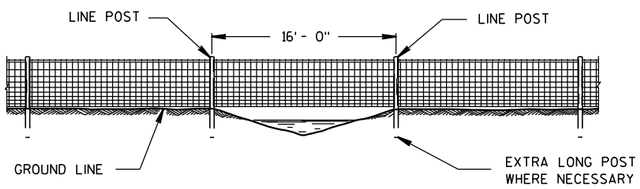
WHEN THE RIGHT OF WAY LINE CHANGE IS MORE THAN 40° USE THE CORNER OR STRETCHER POSTS ASSEMBLY.



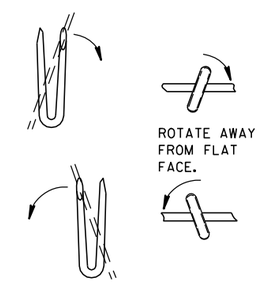
NOTE: PLACE A MINIMUM OF 4 STRANDS OF BARBED WIRE, 6" MAXIMUM CENTERS IN FAN SHAPE CONNECTED TO AN EYE BOLT ON WINGWALL OR SET A LONE POST WHEN NECESSARY TO CONNECT BARBED WIRE.



FENCE INSTALLATION TO WINGWALLS

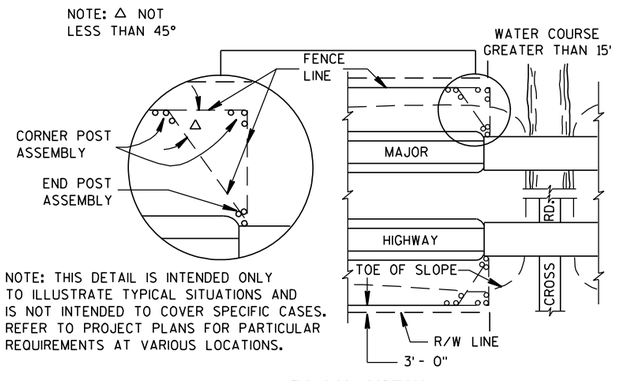


FENCE CONSTRUCTION OVER STREAM COURSES OF 15 FT. OR LESS IN WIDTH



LINE POST

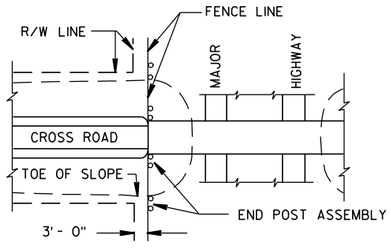
NOTE: WHEN POSTS ARE DRIVEN THE SMALL END SHALL BE DOWN.



NOTE: THIS DETAIL IS INTENDED ONLY TO ILLUSTRATE TYPICAL SITUATIONS AND IS NOT INTENDED TO COVER SPECIFIC CASES. REFER TO PROJECT PLANS FOR PARTICULAR REQUIREMENTS AT VARIOUS LOCATIONS.

PLAN VIEW

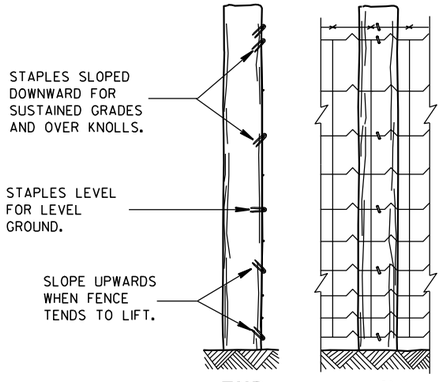
MAJOR HIGHWAY OVERPASS OR STREAM COURSE CROSSING OF GREATER THAN 15 FT. IN WIDTH



PLAN VIEW

MAJOR HIGHWAY UNDERPASS

FENCE LOCATION AT STRUCTURES



END ELEVATION

FARM SIDE ELEVATION

FENCE MOUNTING DETAIL

FENCE WOVEN WIRE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

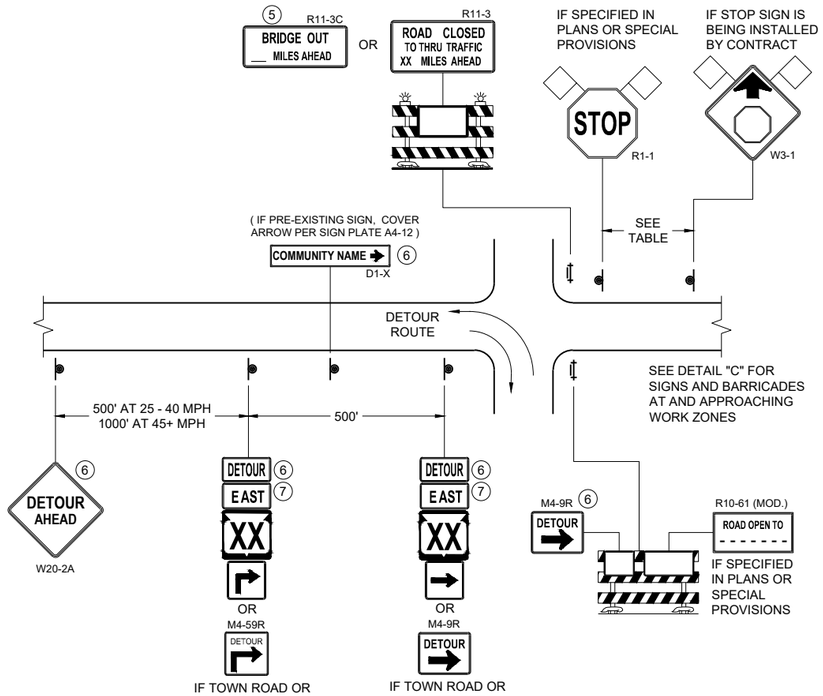
APPROVED
4/4/2008 /S/ Jerry H. 7---
DATE ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

6

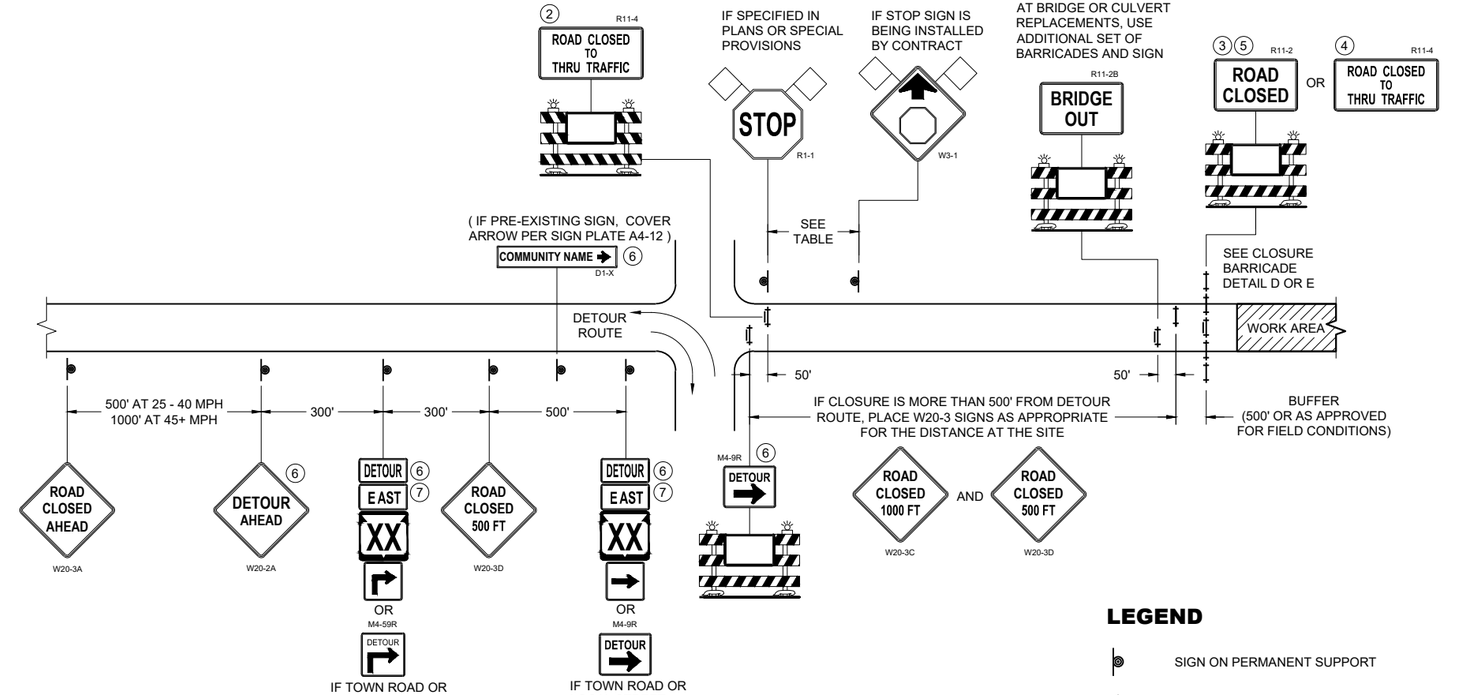
S.D.D. 15 B 1-8b

S.D.D. 15 B 1-8b



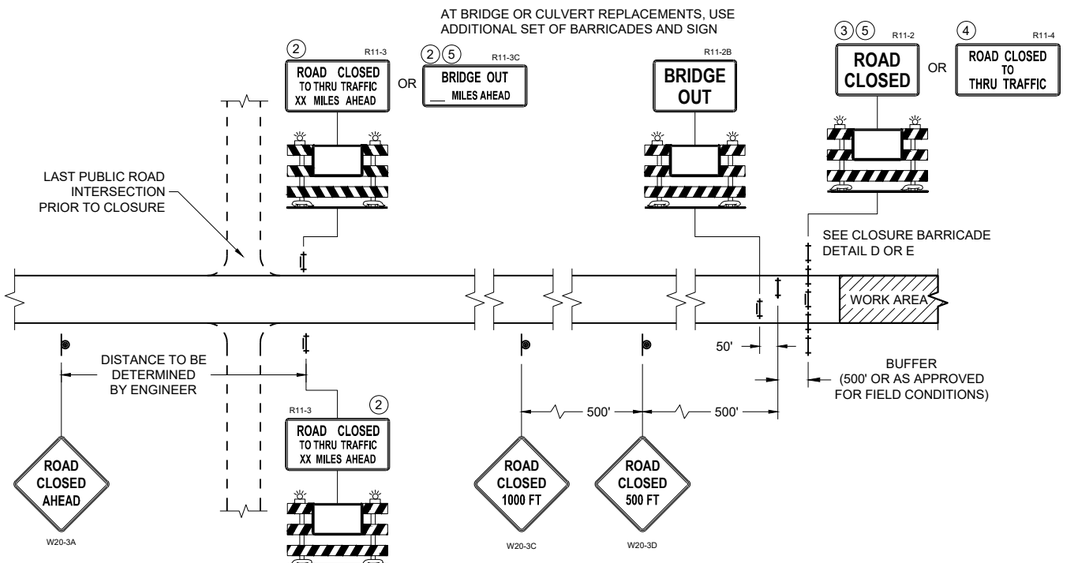
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

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

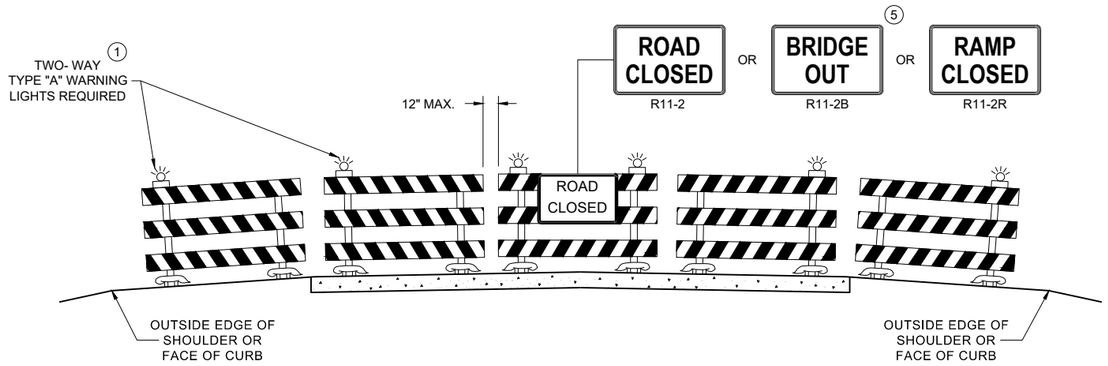
- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA
- FLAGS, 16" X 16" MIN. (ORANGE)
- DETOUR — M4 - 8
- EAST — M3 - X
- XX — M1 - 4 OR XX — M1 - 6 OR COUNTY X — M1 - 5A
- M05 - 1 OR M06 - 1

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2025 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINEER
FHWA

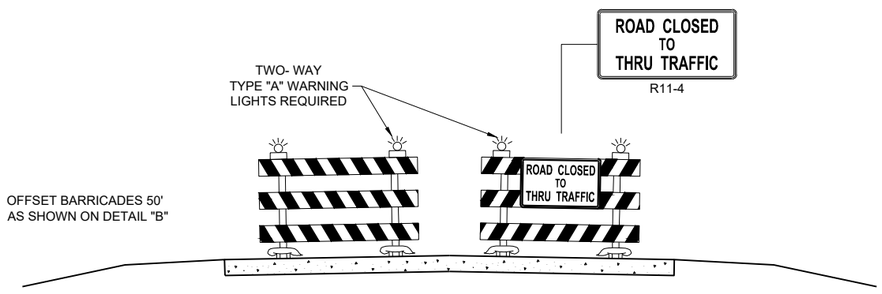
6
SDD 15C02-10a



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.

PARTIAL NUMBERS ON SIGNS SHALL BE DISPLAYED AS A WHOLE NUMBER(AS NEEDED) FOLLOWED BY A FRACTION. SIGNS SHALL NOT DISPLAY NUMBERS IN DECIMAL FORM.

"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"

SIGNS PLACED ON TYPE III BARRICADES THAT ARE SIZES OTHER THAN 48"X30" SHALL HAVE A CORRUGATED POLYPROPYLENE OR POLYETHYLENE PLASTIC SIGN BASE.

(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
November 2025 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINEER

FHWA

6

SDD 15C02-10b

THIS DRAWING PROVIDES GENERAL GUIDANCE ON TYPICAL DETOUR SIGN LAYOUT AND SPACING. SEE PROJECT DETOUR SIGNING SHEETS FOR SPECIFIC DETAILS FOR EACH PROJECT.

LEGEND

- SIGN ON PERMANENT SUPPORT
- WORK AREA
- DETOUR M4 - 8
- EAST M3 - X
- XX M1 - 4 OR XX M1 - 6 OR COUNTY X M1 - 5A
- M05 - 1 OR M06 - 1 OR M06 - 1

GENERAL NOTES

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

IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. MODIFY EXISTING SIGNS WHERE POSSIBLE.

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

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

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

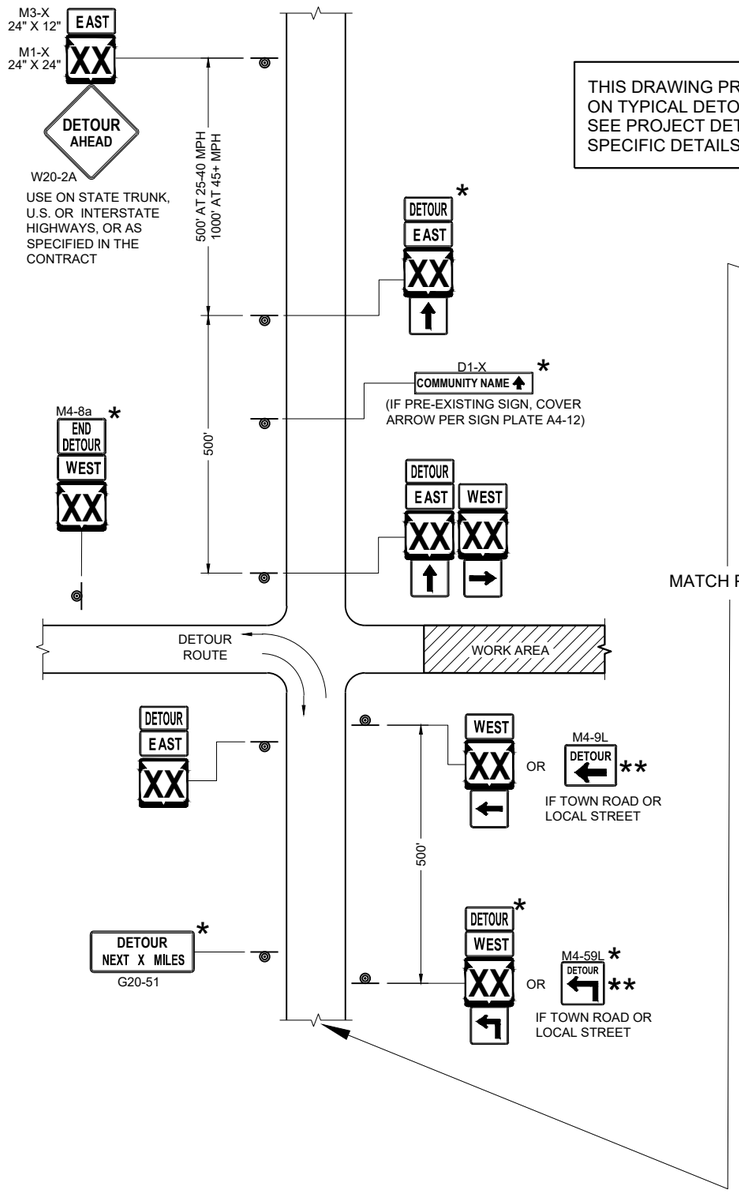
"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

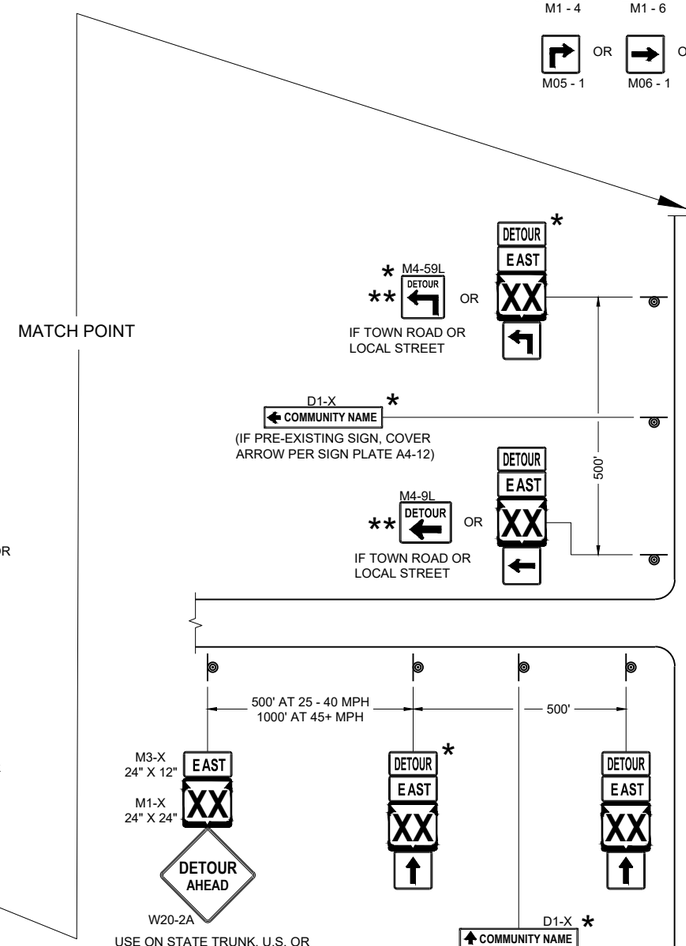
SIGN SIZES SHALL BE AS FOLLOWS:

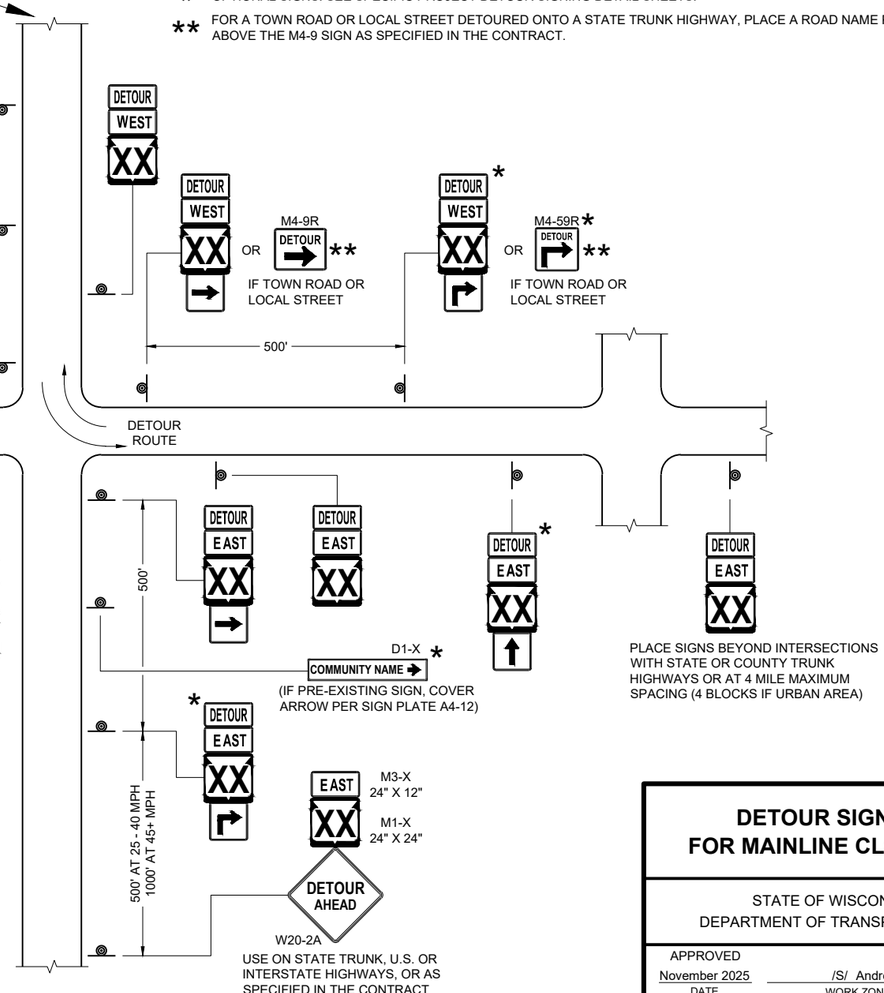
- M3-X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4-8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1-4, M1-5A AND M1-6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS)
- M05-1 AND M06-1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
- M4-9 AND M4-59 SHALL BE 30" X 24"
- M4-8a SHALL BE 24" X 18"
- G20-51 SHALL BE 60" X 24"
- W20-2A SHALL BE 48" X 48"
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.

* OPTIONAL SIGNS. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS.

** FOR A TOWN ROAD OR LOCAL STREET DETOURED ONTO A STATE TRUNK HIGHWAY, PLACE A ROAD NAME PLAQUE ABOVE THE M4-9 SIGN AS SPECIFIED IN THE CONTRACT.







SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS AND DETAIL A OR B ON SDD SHEET 15C02 - SHEET "a"

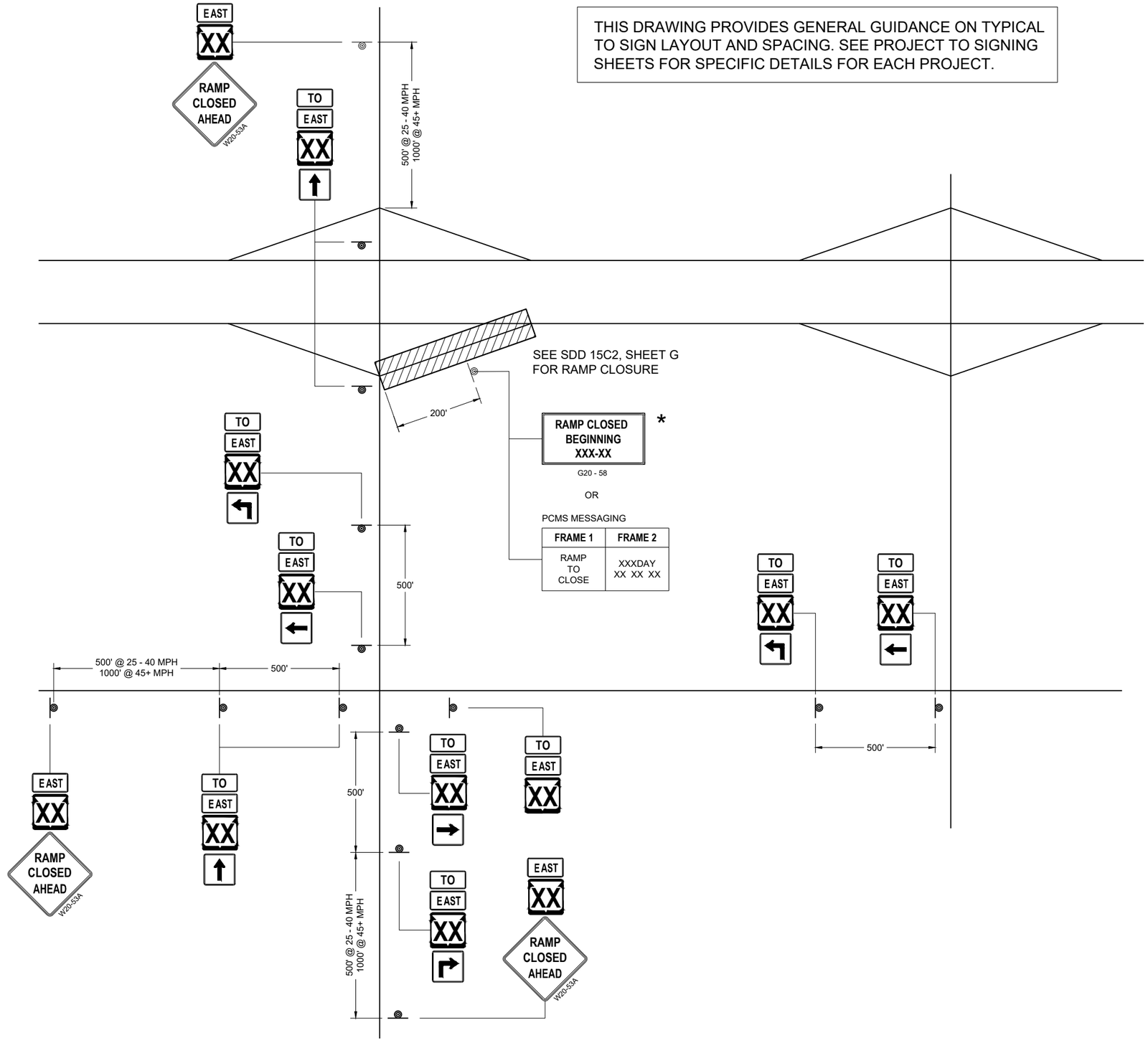
DETAIL F
DETOUR SIGNING

DETOUR SIGNING FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2025 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINEER

FHWA



THIS DRAWING PROVIDES GENERAL GUIDANCE ON TYPICAL TO SIGN LAYOUT AND SPACING. SEE PROJECT TO SIGNING SHEETS FOR SPECIFIC DETAILS FOR EACH PROJECT.

LEGEND

SIGN ON PERMANENT SUPPORT

TO / EAST — MO4 - 5; M3 - X

XX M1 - 6 OR XX M1 - 4 OR INTERSTATE XX M1 - 1

M05 - 1 OR M06 - 1 OR M06 - 1

GENERAL NOTES

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

IF THERE ARE ANY ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE TO ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. SEE SPECIFIC PROJECT TO SIGNING DETAIL SHEETS. MODIFY EXISTING SIGNS WHERE POSSIBLE.

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

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

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

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

SIGN SIZES SHALL BE AS FOLLOW:
- M3 - X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS).
- MO4 - 5 SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS).
- M1 - 1, M1 - 4, AND M1 - 6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS).
- MO5 - 1, MO5 - 2, AND MO6 - 1, SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS).
- W20 - 53A SHALL BE 48" X 48"

* PLACE "RAMP CLOSED BEGINNING" SIGN 7 CALENDAR DAYS PRIOR TO CLOSURE OR AS DIRECTED BY THE ENGINEER. SEE WISCONSIN STANDARD SIGN PLATES FOR LAYOUT.

ON RAMP LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2025 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINEER

FHWA

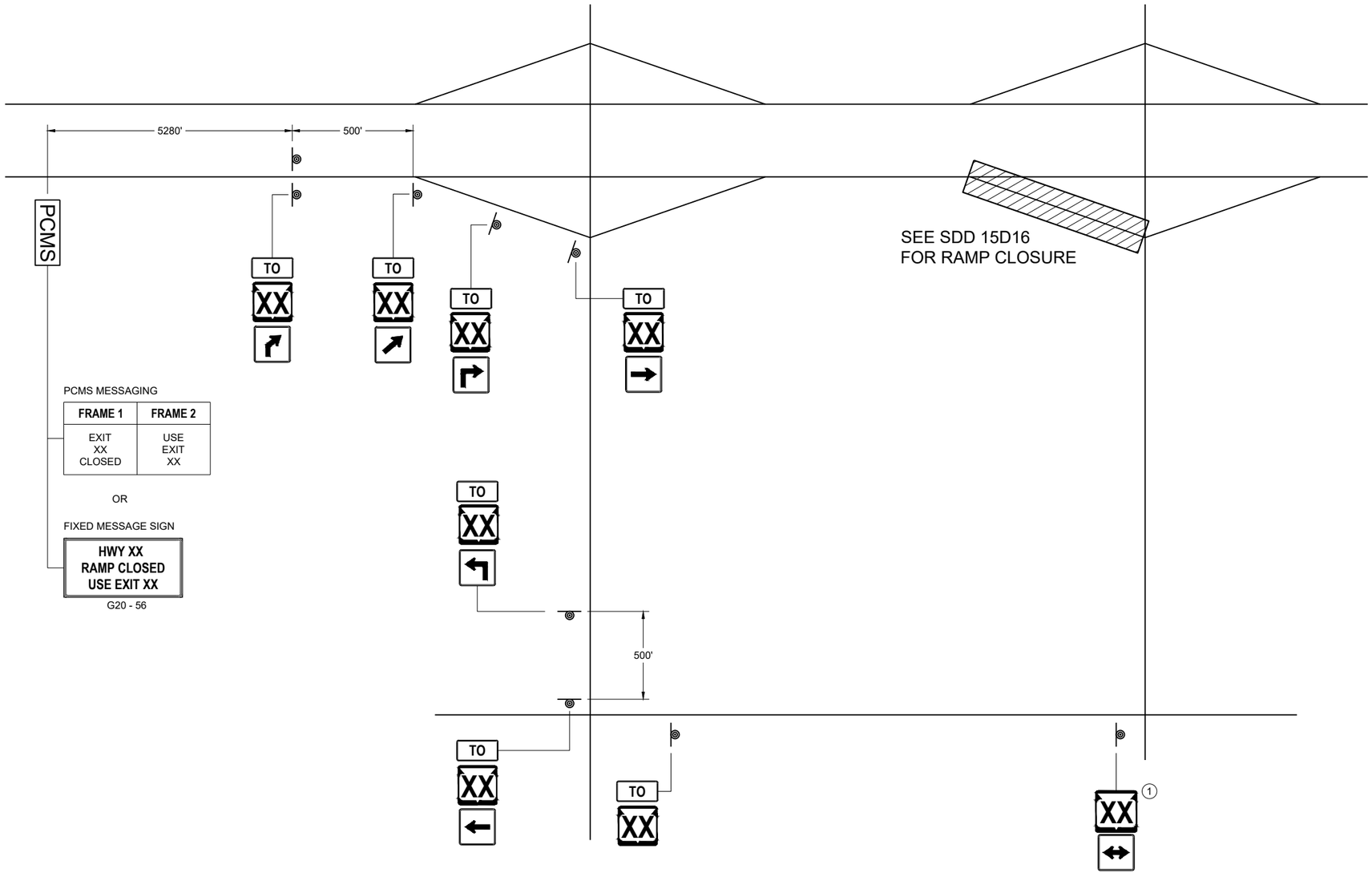
6

SDD 15C02-10d

6

SDD 15C02-10d

THIS DRAWING PROVIDES GENERAL GUIDANCE ON TYPICAL "TO" MO-4 SIGN LAYOUT AND SPACING. SEE PROJECT TO SIGNING SHEETS FOR SPECIFIC DETAILS FOR EACH PROJECT.



PCMS MESSAGING

FRAME 1	FRAME 2
EXIT XX CLOSED	USE EXIT XX

OR

FIXED MESSAGE SIGN

HWY XX
RAMP CLOSED
USE EXIT XX

G20 - 56

LEGEND

- SIGN ON PERMANENT SUPPORT
- PCMS — PORTABLE CHANGEABLE MESSAGE SIGN
- TO — MO4 - 5
- XX — M1 - 4 OR XX — M1 - 6 OR COUNTY X — M1 - 5A
- M05 - 1 OR M05 - 2 OR M06 - 1 OR M06 - 2 OR M06 - 4

GENERAL NOTES

SEE SDD 15D16 "TRAFFIC CONTROL, EXIT RAMP CLOSURE" DETAIL FOR TRAFFIC CONTROL AT EXIT RAMP CLOSURE.

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

IF THERE ARE ANY ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE "TO" MO-4 ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. SEE SPECIFIC PROJECT TO SIGNING DETAIL SHEETS. MODIFY EXISTING SIGNS WHERE POSSIBLE.

THE SPACING BETWEEN TRAFFIC CONTROL AND "TO" MO-4 SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

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

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

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

SIGN SIZES SHALL BE AS FOLLOW:

MO4 - 5 SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS).
M1 - 4, M1 - 5A, AND M1 - 6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS).
MO5 - 1, MO5 - 2, AND MO6 - 1, SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS).

(1) ONLY ADD IF THERE ARE NO EXISTING ROUTE MARKERS FOR THE INTERSECTING ROADWAY.

OFF RAMP LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2025 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINEER

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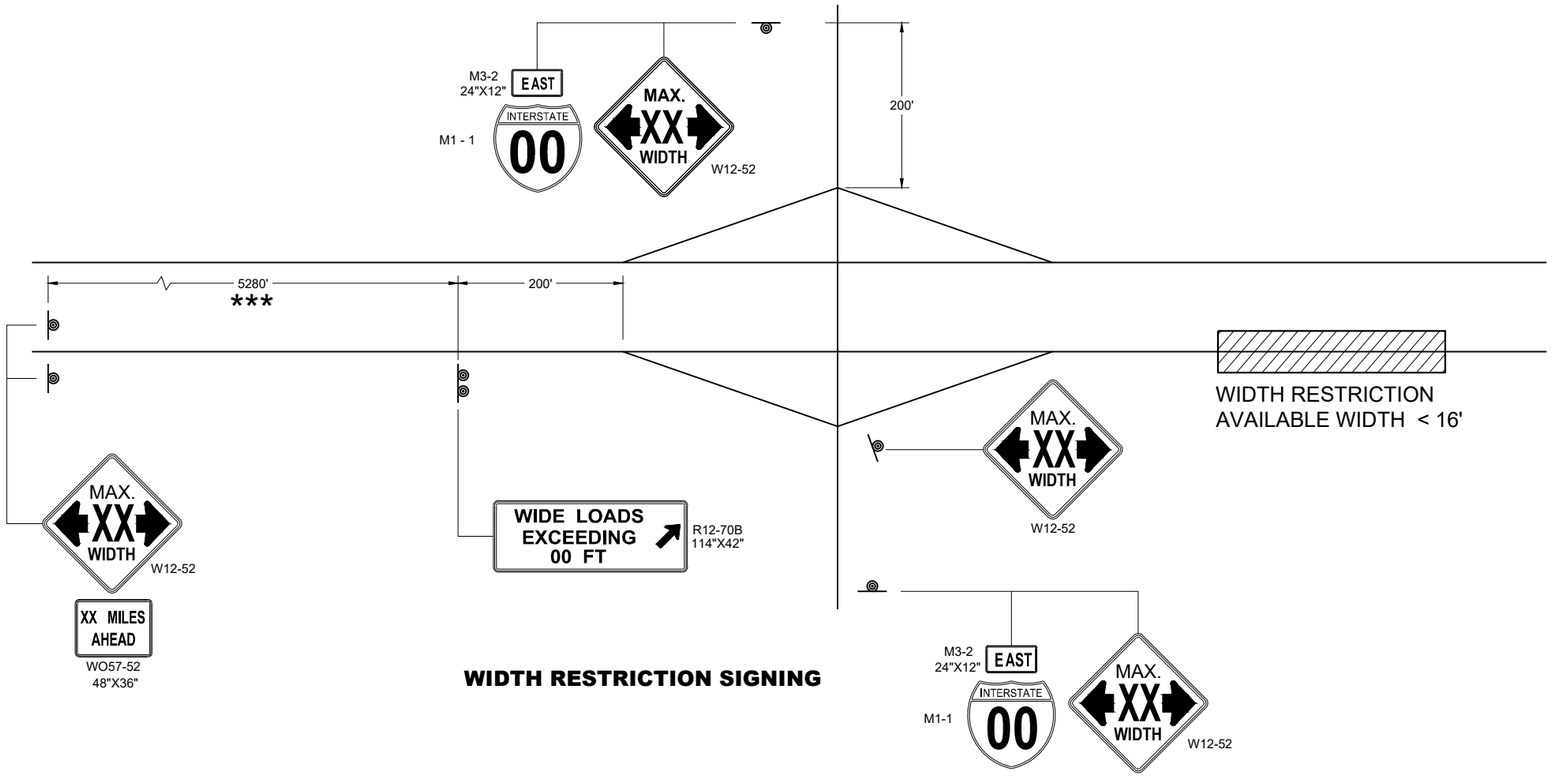
SDD 15C02-10e



WIDTH RESTRICTION SIGNING

LEGEND

SIGN ON PERMANENT SUPPORT

GENERAL NOTES

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

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

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

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

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

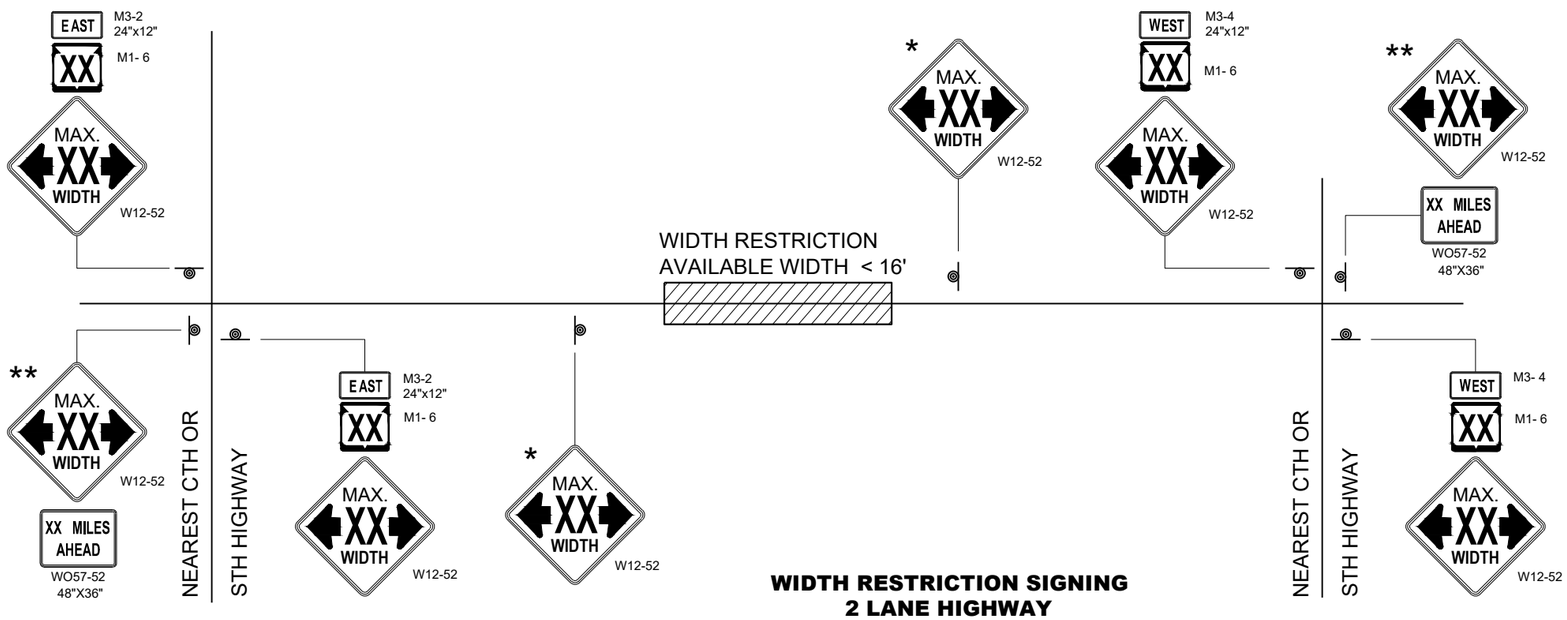
WIDTH ON SIGN TO BE APPROXIMATELY ONE FOOT LESS THAN AVAILABLE WIDTH.

* PLACE 500 FEET AFTER THE W20 - 1A AND 500 FEET BEFORE ADDITIONAL SIGNS FOR ROADWAYS WITH A PRE - CONSTRUCTION SPEED LIMIT OF 45 MPH OR MORE. FOR 35-40 MPH, USE 350 FOOT TYPICAL SPACING. FOR 25-30 MPH, USE 200 FOOT TYPICAL SPACING.

** SIGN SHALL BE VISIBLE FROM ROADWAY.

*** ADDITIONAL SIGNS NEEDED IF THERE IS AN ON RAMP BETWEEN SIGNS.

WIDTH ON SIGN TO BE APPROX. 1 - FOOT LESS THAN AVAILABLE WIDTH



WIDTH RESTRICTION SIGNING
2 LANE HIGHWAY

ADVANCED WIDTH RESTRICTION SIGNING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2025 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINEER

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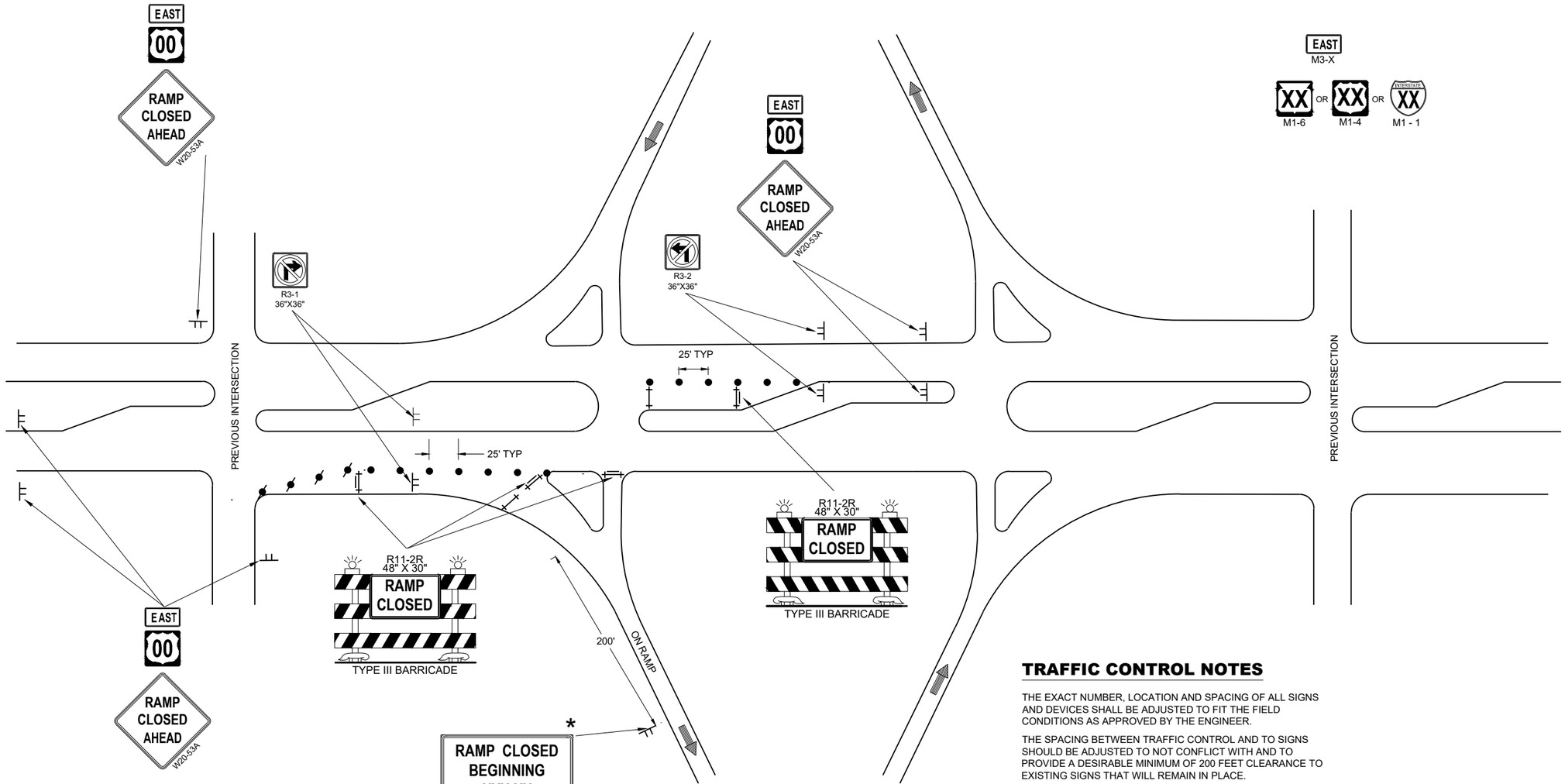
SDD 15C02-10f

SDD 15C02-10f



LEGEND

- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC

TRAFFIC CONTROL NOTES

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

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

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

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

SIGN SIZES SHALL BE AS FOLLOWS:

- M3-X SHALL BE 24"x24" (36" x18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1-1, M1-4, AND M1-6 SHALL BE 24"x24" (36"x36" IF NEEDED TO MATCH EXISTING SIGNS)
- W20-53A SHALL BE 48"X48"

* PLACE "RAMP CLOSED BEGINNING" SIGN 7 CALENDAR DAYS PRIOR TO CLOSURE OR AS DIRECTED BY THE ENGINEER. SEE WISCONSIN STANDARD SIGN PLATES FOR LAYOUT.

TRAFFIC CONTROL FOR ENTRANCE RAMP CLOSURE

TRAFFIC CONTROL FOR ENTRANCE RAMP CLOSURE

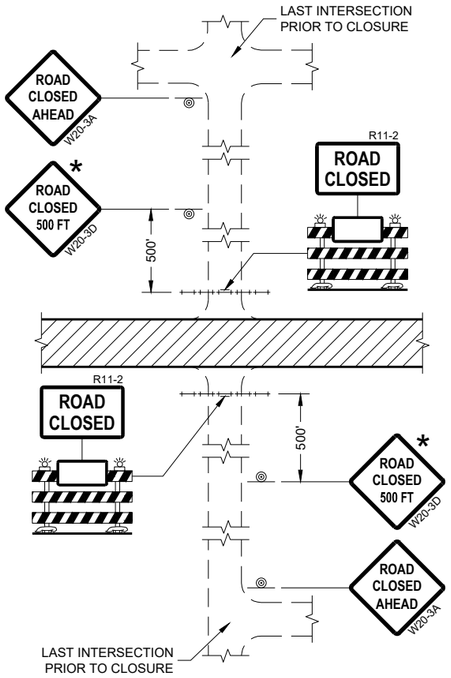
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2025 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINEER

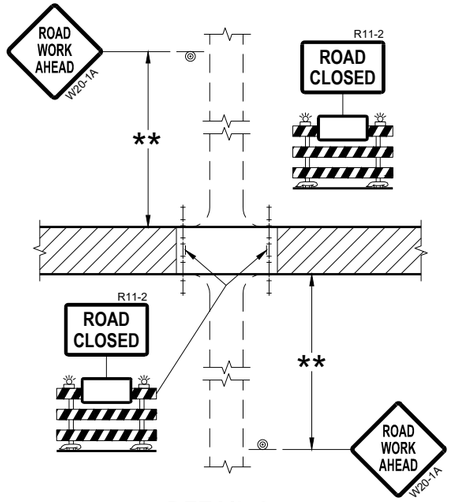
FHWA

6

SDD 15C02-10g



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.

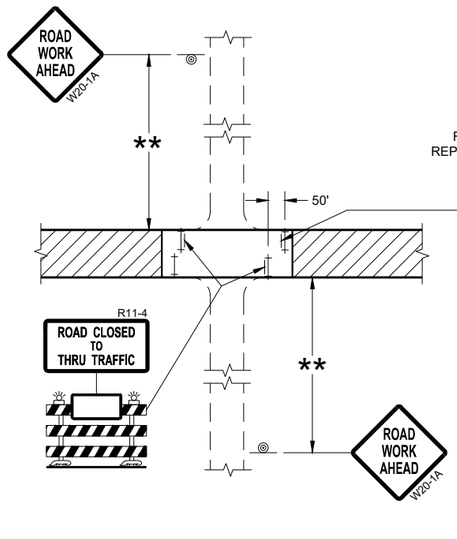
ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
R11-2 SHALL BE 48" X 30".
R11-4 AND R11-3 SHALL BE 60" X 30".

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

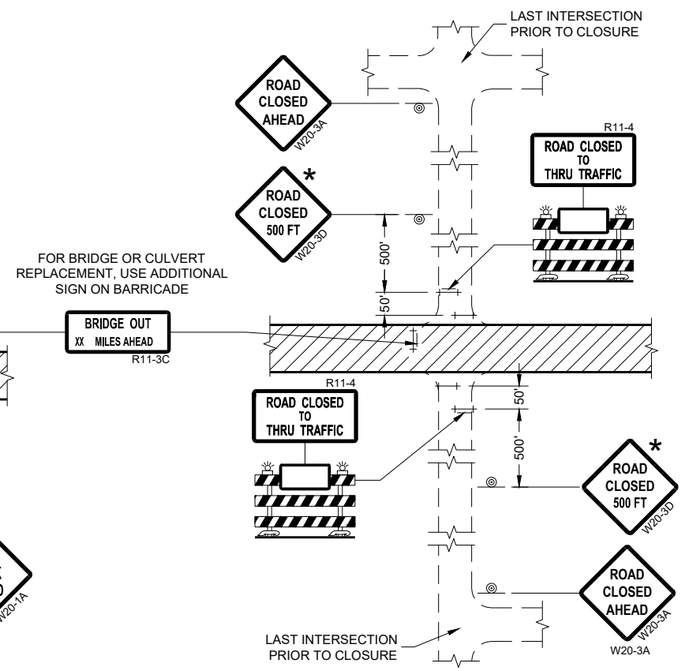
** 500' MAX. OR AT LAST INTERSECTION, WHICHEVER IS CLOSEST.

LEGEND

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



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



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

BARRICADES AND SIGNS FOR SIDEROAD CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15C03 - 05

SDD 15C03 - 05

GENERAL NOTES

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

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

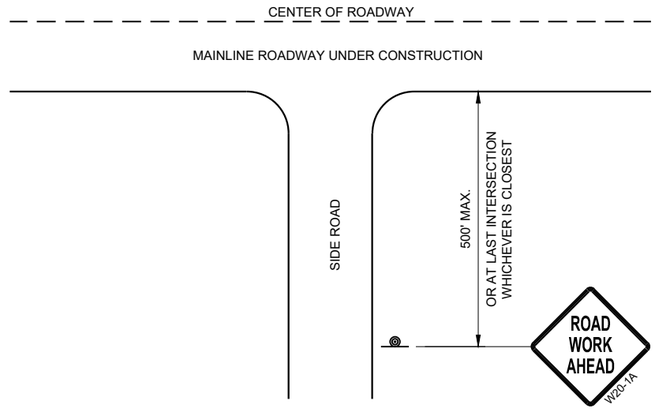
ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

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

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

* OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS

** PLACE AN ADDITIONAL W20-1A "ROAD WORK AHEAD" SIGN IF WORK AREA WITHIN THE PROJECT IS SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA.



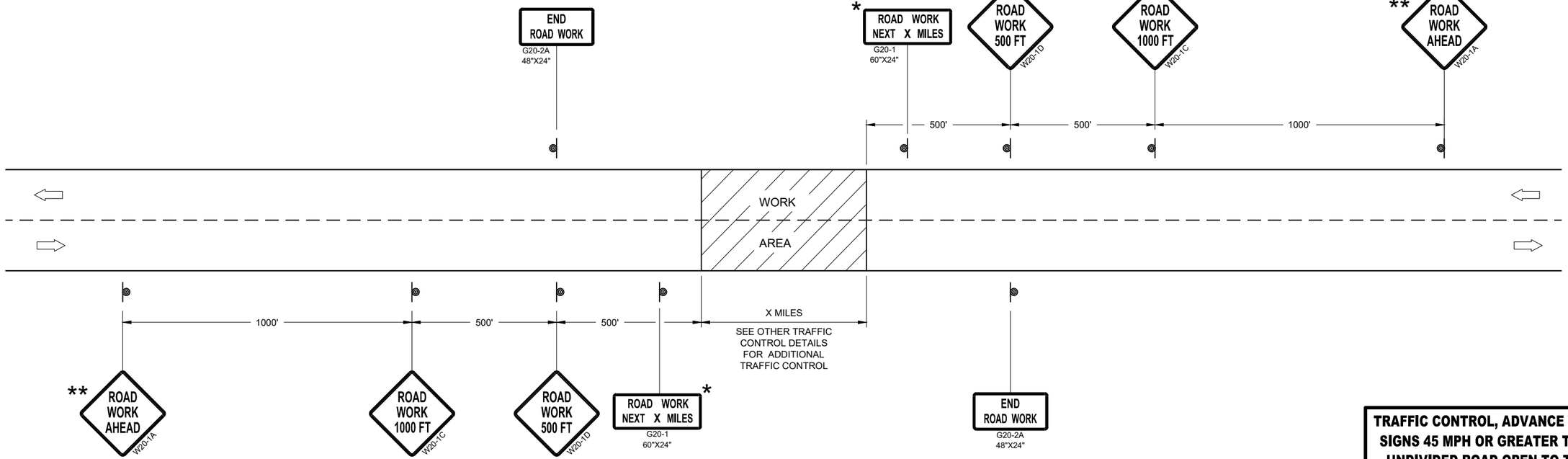
TYPICAL SIDE ROAD APPROACH WARNING SIGN DETAIL

LEGEND

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC

WORK AREA



TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45MPH OR GREATER

TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 MPH OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15C04 - 05

GENERAL NOTES

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

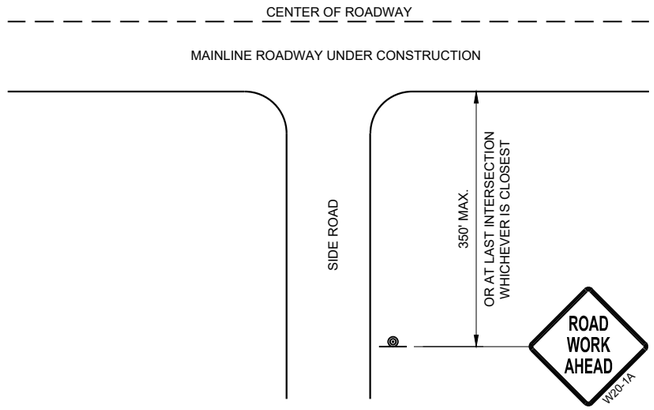
THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS, 36"X36" SIGNS MAY BE USED INSTEAD OF 48" X 48" SIGNS.

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

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

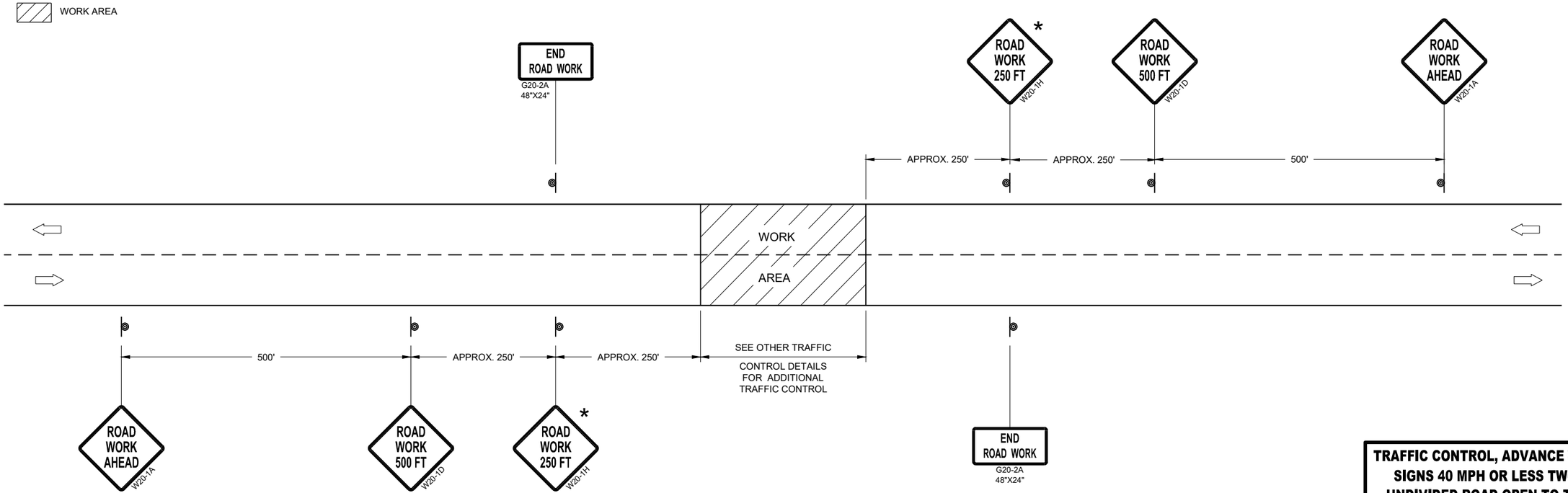
* THE THIRD W20-1 SIGN IS REQUIRED ONLY IF THERE IS AN INTERSECTION BETWEEN THE "ROAD WORK 500 FEET" SIGN AND THE WORK ZONE. ADJUST THE PLACEMENT OF THIS SIGN BASED ON INTERSECTION LOCATION AND OTHER FIELD CONDITIONS.



TYPICAL SIDE ROAD APPROACH WARNING SIGN DETAIL

LEGEND

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



TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40MPH OR LESS

TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 MPH OR LESS TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

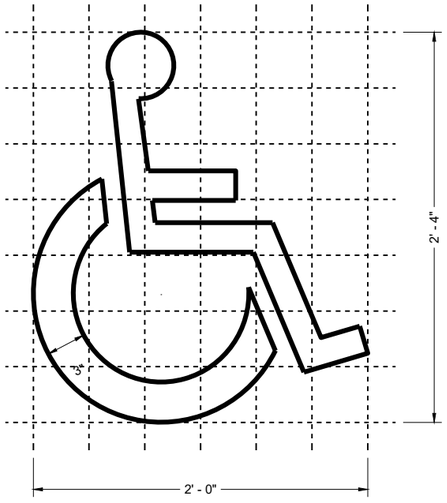
FHWA

6

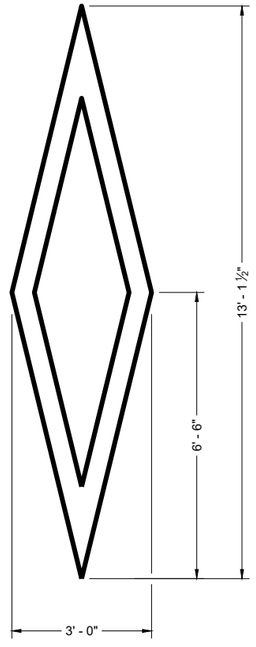
SDD 15C05 - 05

GENERAL NOTES

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



HANDICAP SYMBOL



PREFERENTIAL LANE SYMBOL

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SDD 15C07-16a

SDD 15C07-16a

PAVEMENT MARKING SYMBOLS

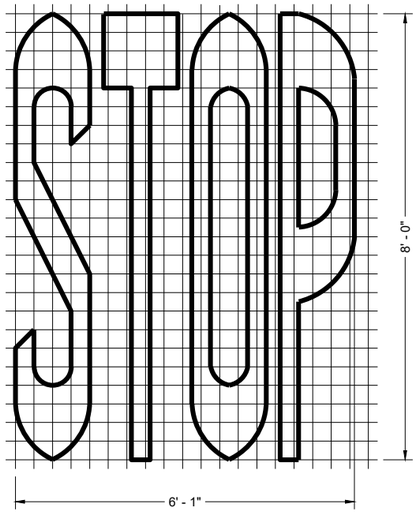
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

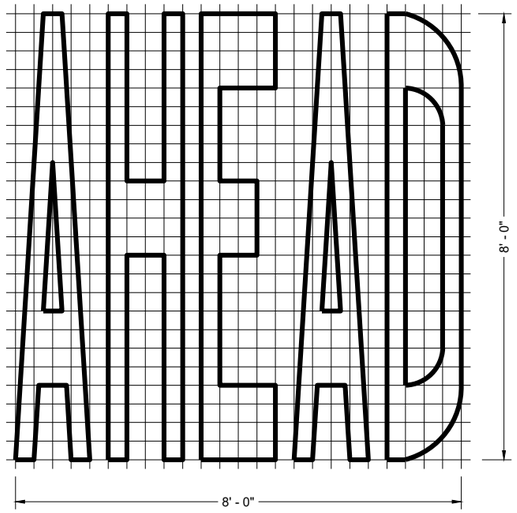
APPROVED

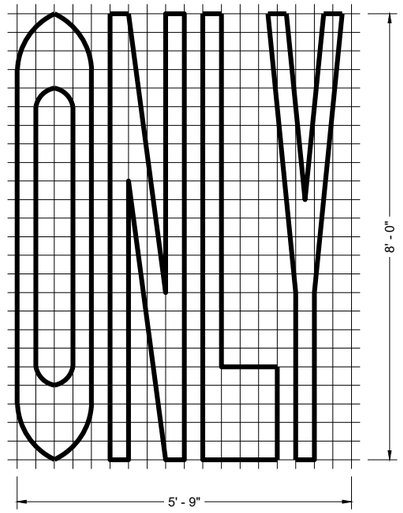
November 2024
DATE

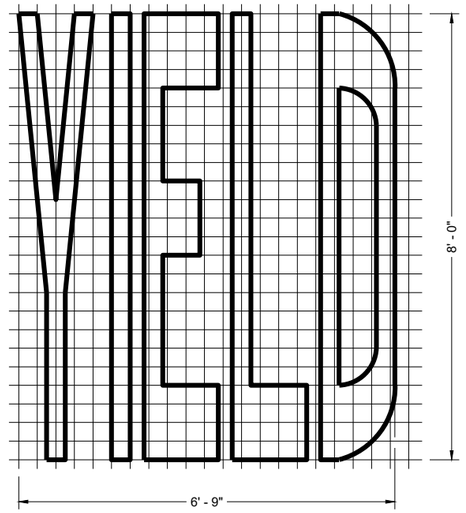
/S/ Jeannie Silver
STATE SIGNING AND MARKING ENGINEER

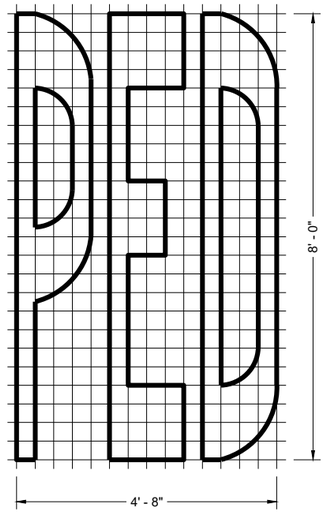
FHWA

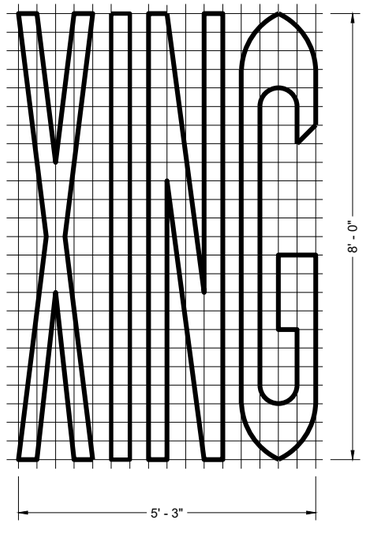


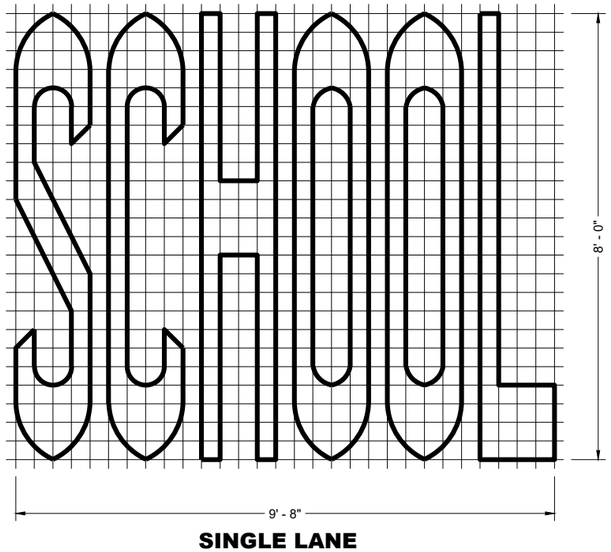




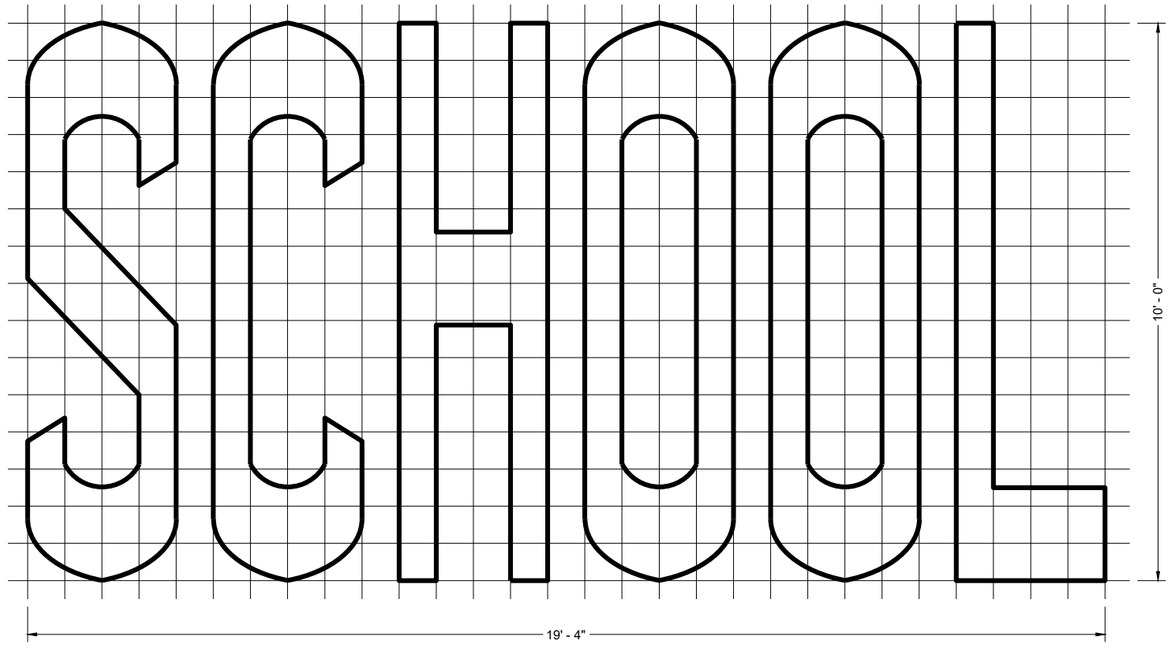








SINGLE LANE



TWO - LANE

GENERAL NOTES

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

PAVEMENT MARKING WORDS

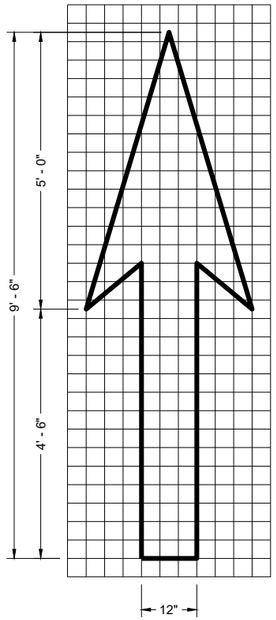
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2024 — DATE
/S/ Jeannie Silver — STATE SIGNING AND MARKING ENGINEER

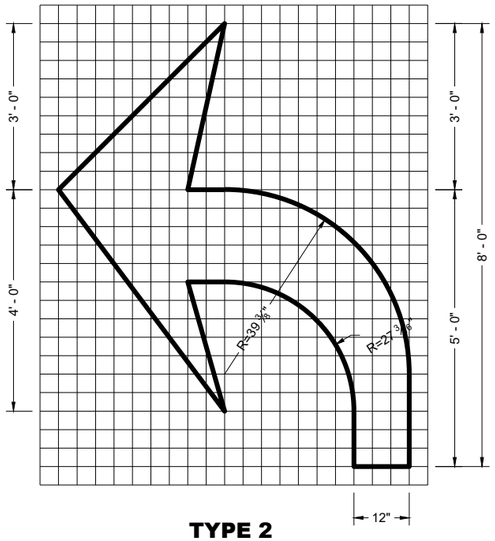
FHWA

6

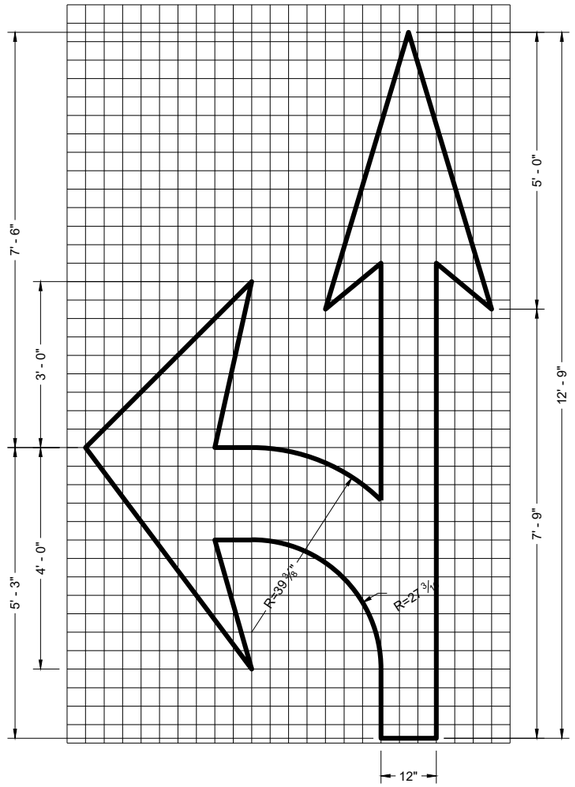
SDD 15C07-16b



TYPE 1



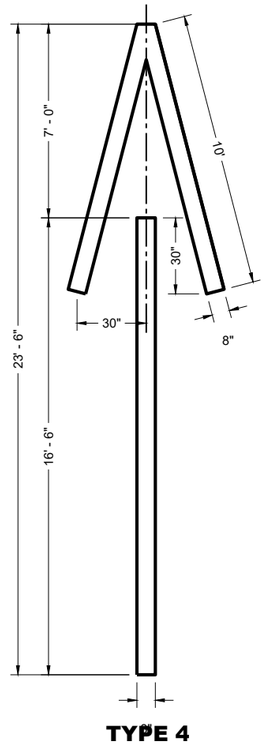
TYPE 2



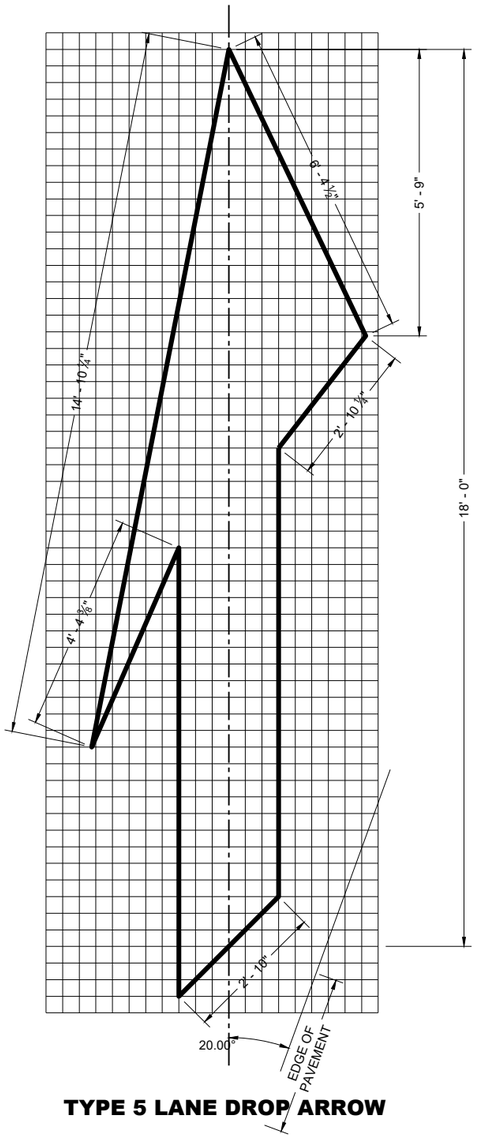
TYPE 3

GENERAL NOTES

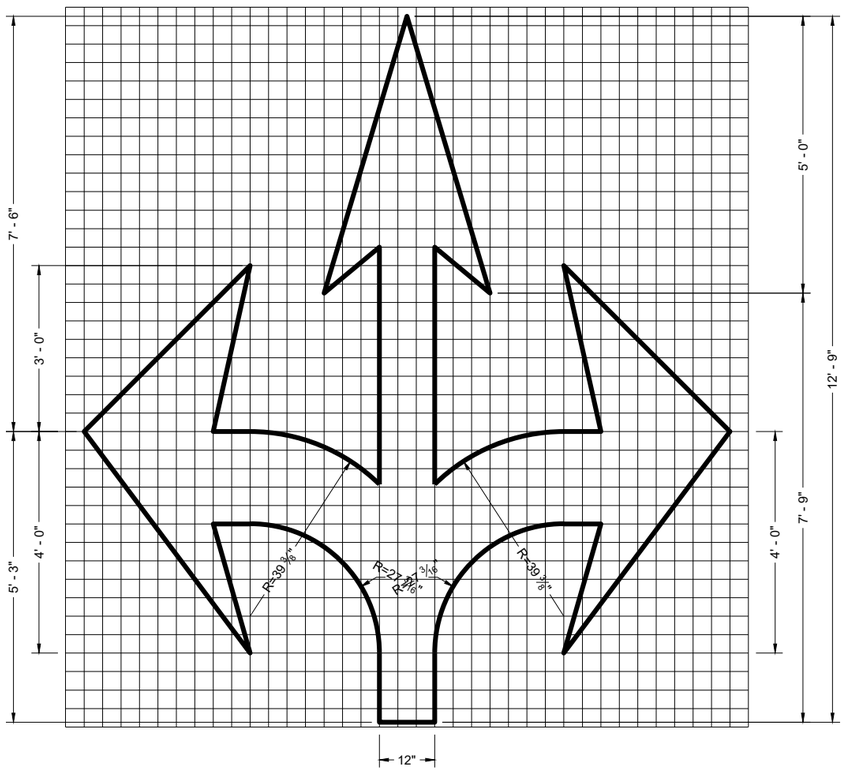
DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.



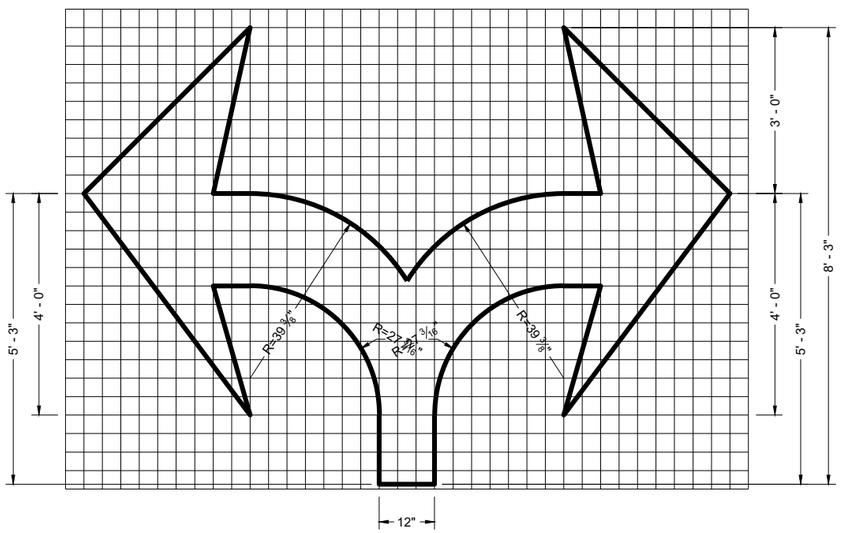
TYPE 4



TYPE 5 LANE DROP ARROW



TYPE 6



TYPE 7

PAVEMENT MARKING ARROWS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2024 — DATE
/S/ Jeannie Silver — STATE SIGNING AND MARKING ENGINEER

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SDD 15C07-16c

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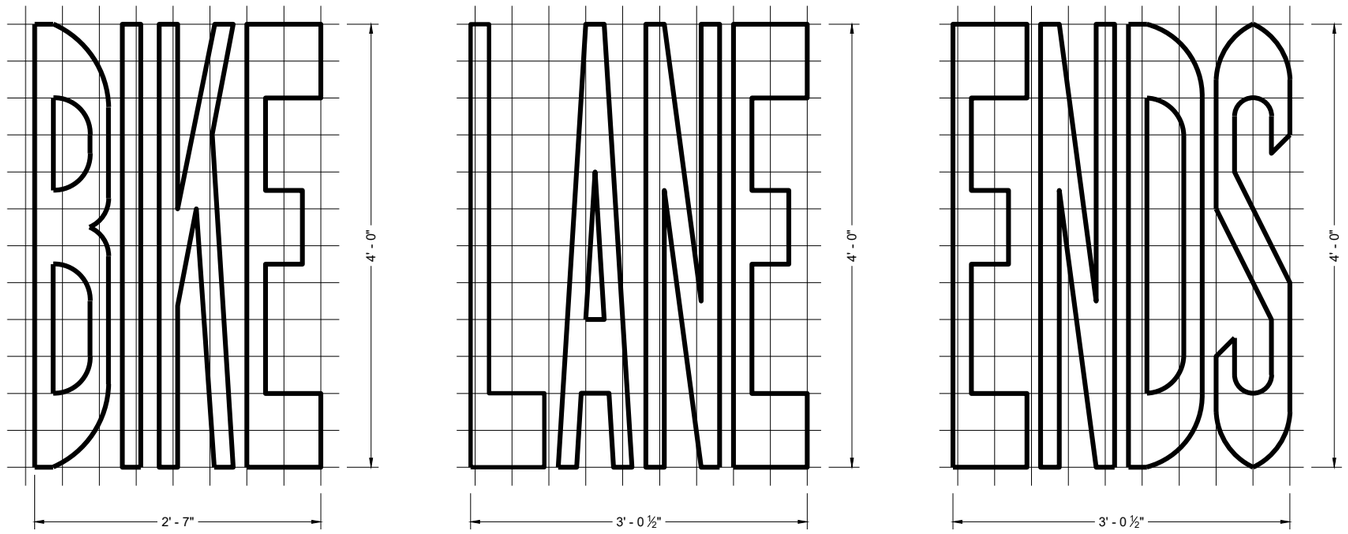
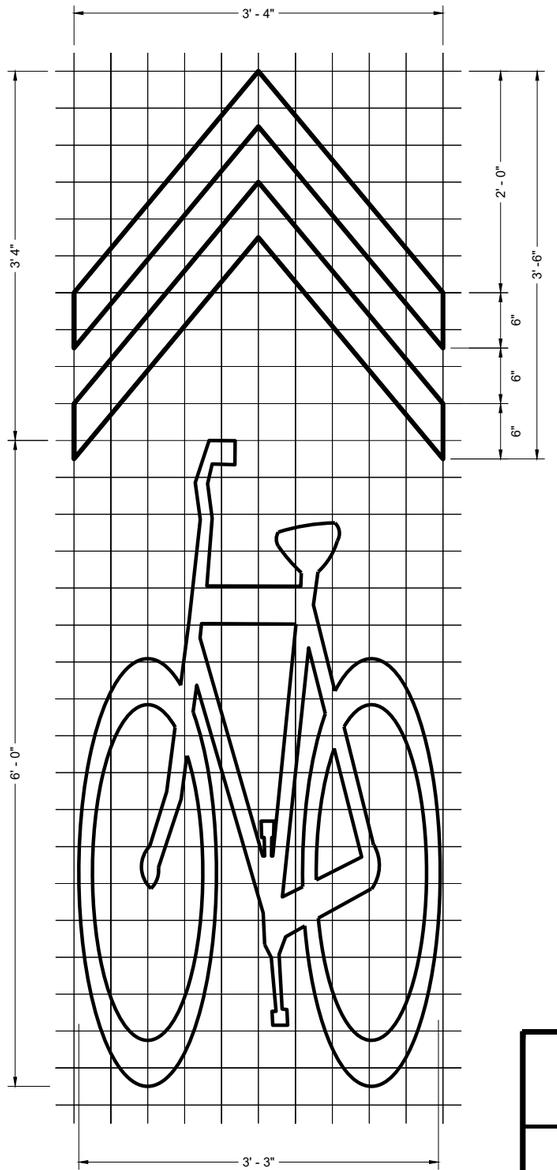


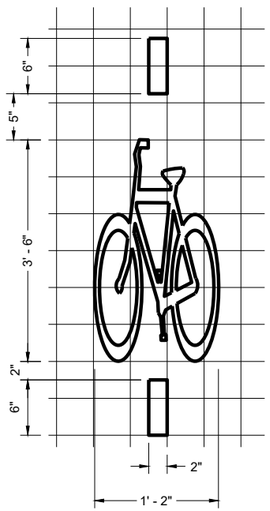
BIKE LANE WORDS

GENERAL NOTES

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



BIKE LANE ARROW



BICYCLE DETECTOR PAVEMENT MARKING

BIKE LANE SYMBOL

BIKE LANE SYMBOL FOR SHARED LANE

PAVEMENT MARKING FOR BIKE LANES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2024 — DATE
/S/ Jeannie Silver — STATE SIGNING AND MARKING ENGINEER

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SDD 15C07-16e

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SDD 15C07-16e

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.

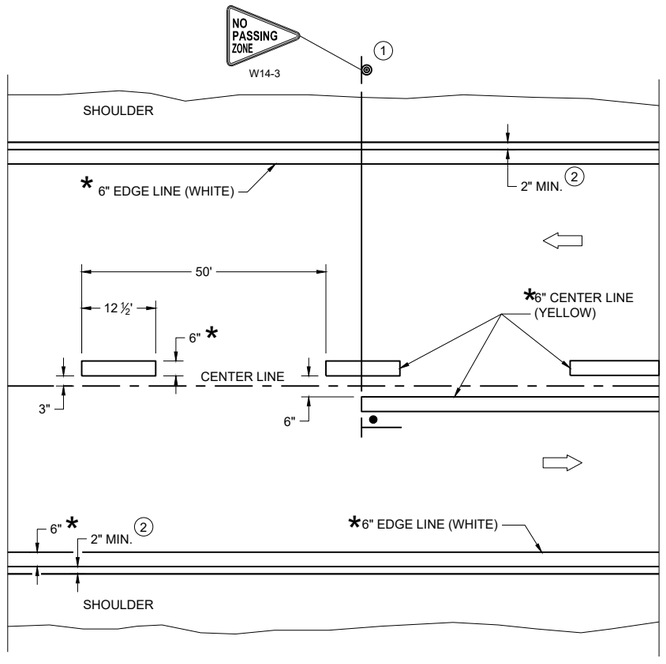
*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

LEGEND

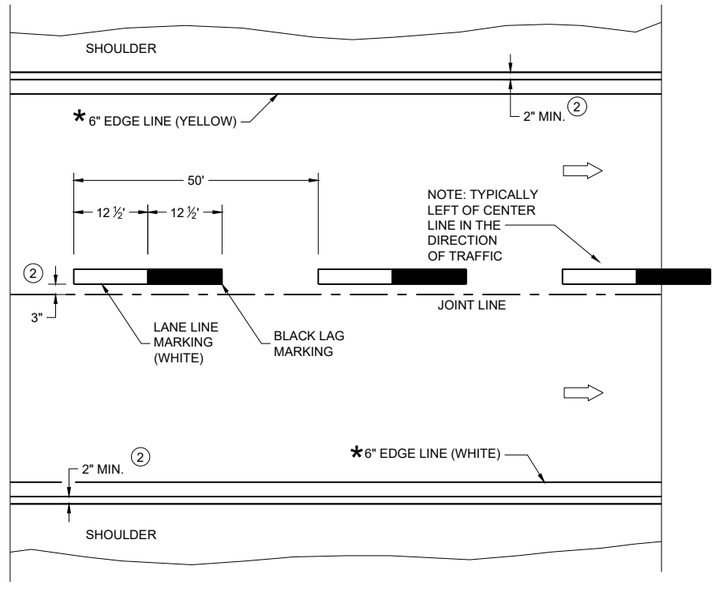
"T" MARKING

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

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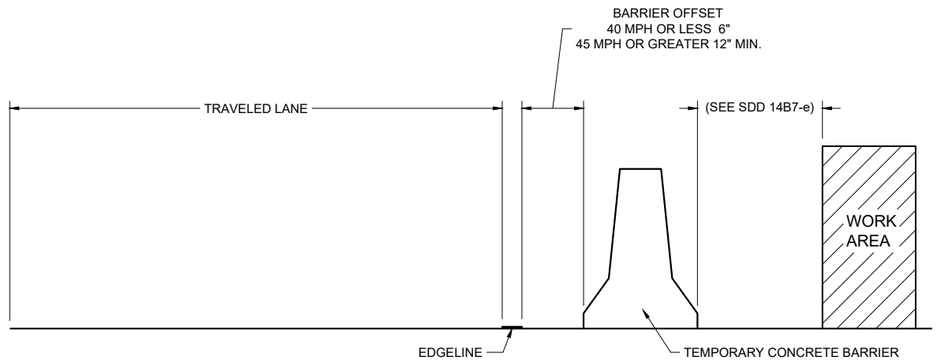
SDD 15C08-24a

6

SDD 15C08-24a



TEMPORARY BARRIER OFFSET FROM EDGELINE

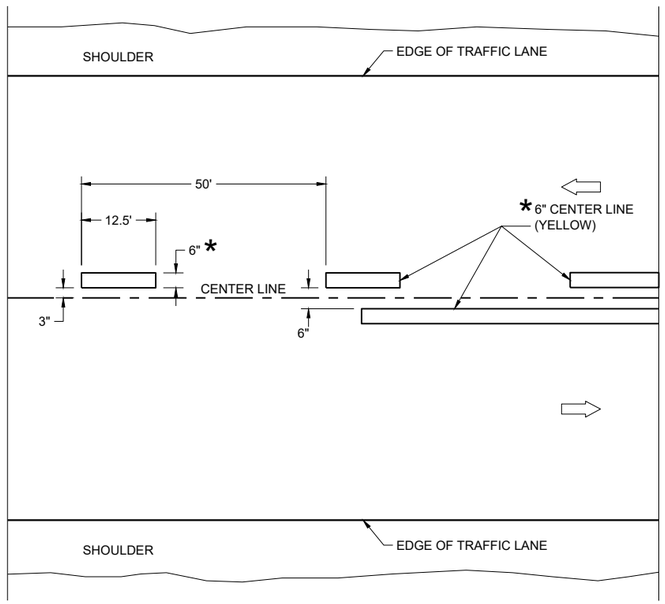
GENERAL NOTES

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

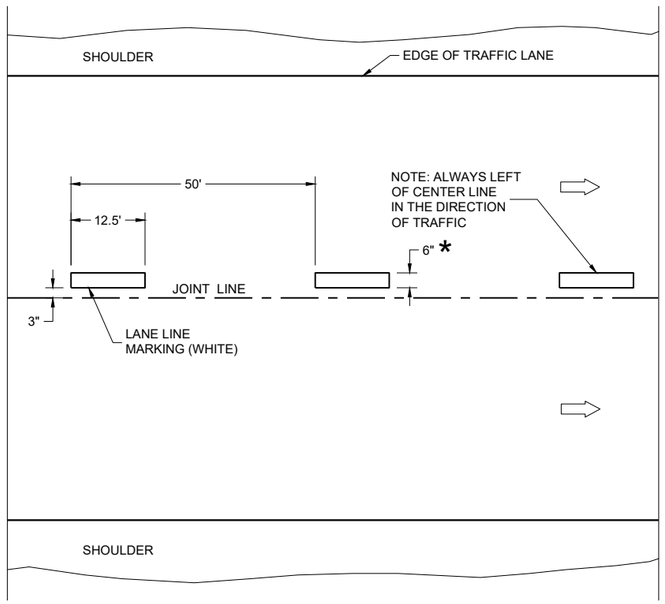
LEGEND

DIRECTION OF TRAFFIC

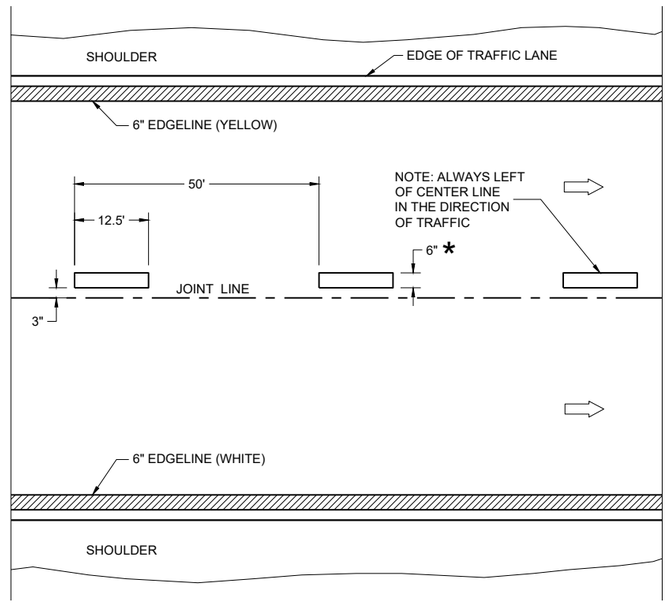
*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



TWO WAY TRAFFIC



ONE WAY TRAFFIC



FREEWAYS AND EXPRESSWAYS

TEMPORARY PAVEMENT MARKING

TEMPORARY LONGITUDINAL PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
December 2024
DATE
/S/ Jeannie Silver
Statewide Pavement Marking Engineer

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SDD 15C08-24b

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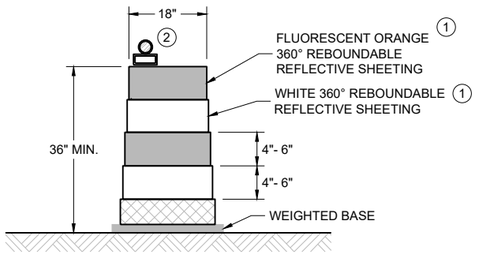
SDD 15C08-24b

GENERAL NOTES

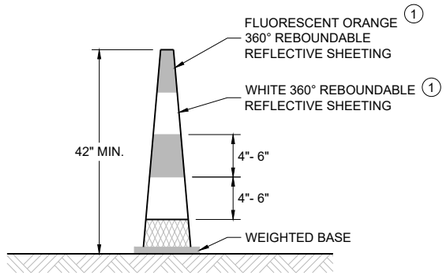
(1) REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.

(2) LOCATION OF WARNING LIGHTS WHEN SHOWN ON THE PLAN.



DRUM

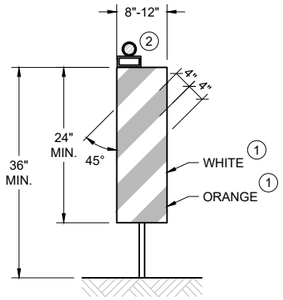
BALLAST WIDTHS
RANGE FROM 24"-36"



42" CONE

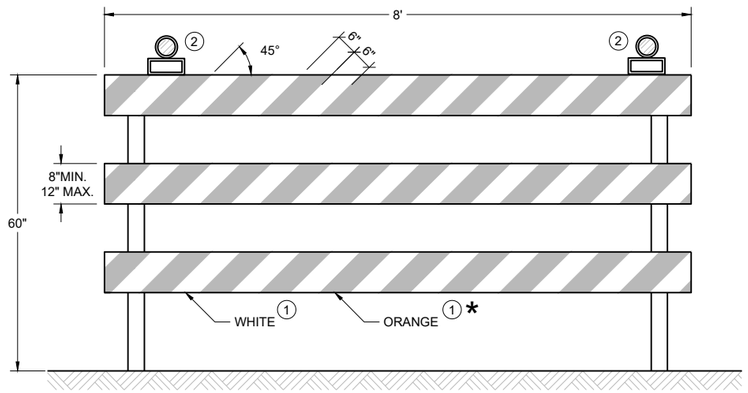
DO NOT USE IN TAPERS
½ SPACING OF DRUMS

BALLAST WIDTHS
RANGE FROM 14"-20"



VERTICAL PANEL

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



TYPE 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
February 2026 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINEER

FHWA

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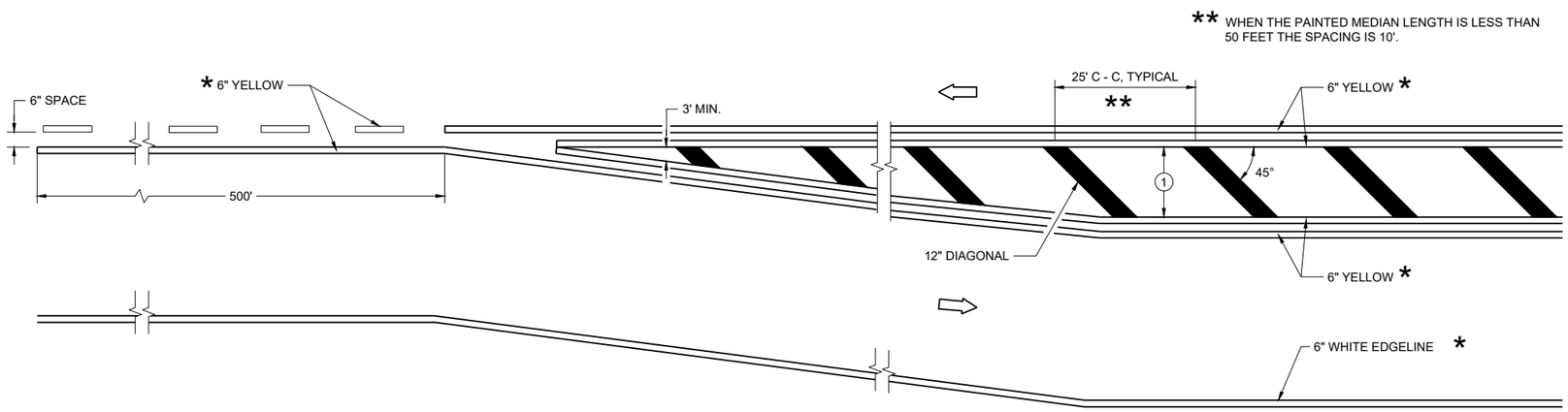
SDD 15C11-11b



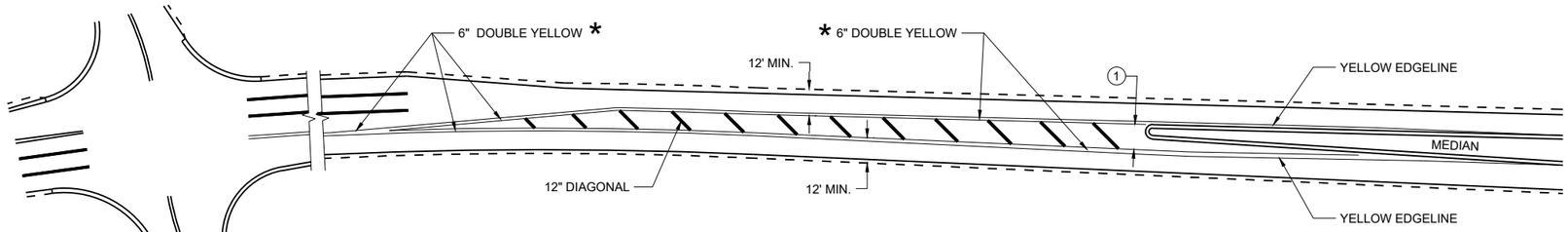
MEDIAN ISLAND DETAIL

GENERAL NOTES

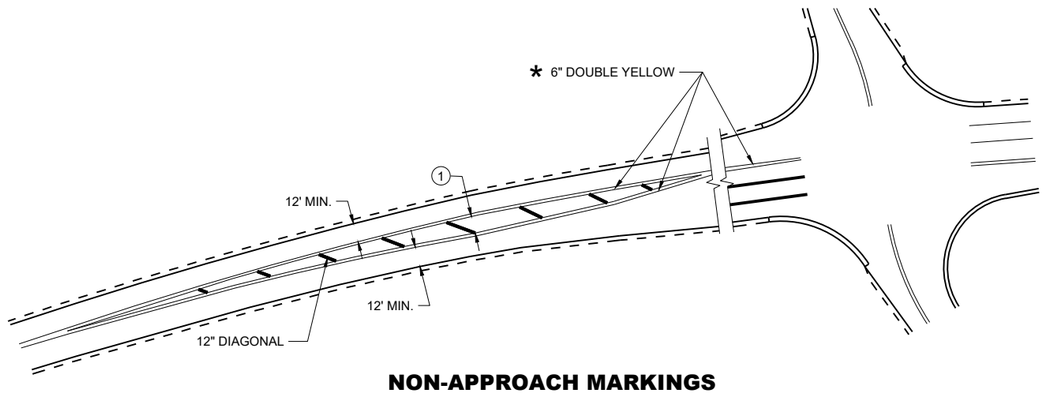
(1) DIAGONALS ARE OPTIONAL WHEN PAINTED ISLAND IS LESS THAN 6 FEET AT THE WIDEST POINT. OMIT DIAGONALS IF WIDTH IS LESS THAN 4 FEET.

DIRECTION OF TRAVEL

*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



APPROACH MARKINGS FOR OTHER MEDIAN TYPES



NON-APPROACH MARKINGS

MEDIAN ISLAND PAVEMENT MARKINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
August 2024
DATE

/S/ Jeannie Silver
Statewide Pavement Marking Engineer

FHWA

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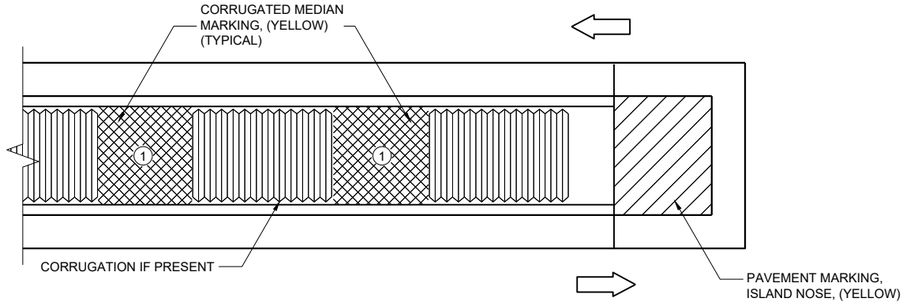
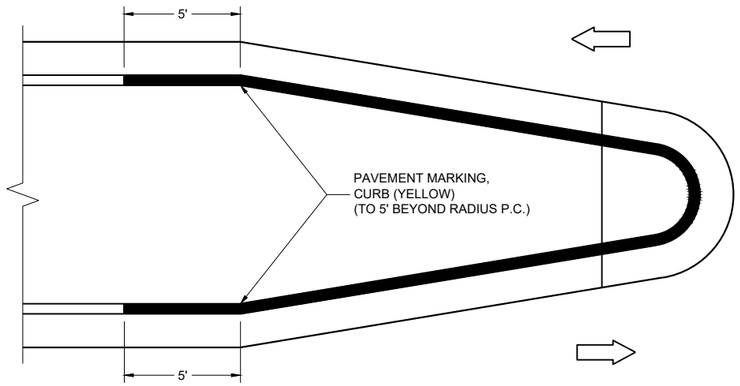
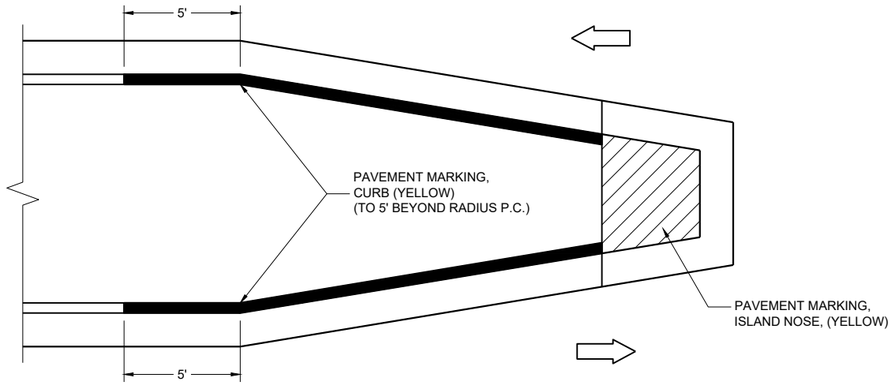
SDD 15C18-09a



MEDIAN ISLAND WITH SQUARE BLUNT NOSE



MEDIAN ISLAND WITH ROUND BLUNT NOSE



MEDIAN ISLAND WITH SLOPED NOSE

**TYPICAL PLACEMENT OF
PAVEMENT MARKING ON MEDIAN ISLANDS**

GENERAL NOTES

WHEN CONCRETE CORRUGATED MEDIAN IS CONSTRUCTED TO SEPARATE TRAFFIC OPERATING IN THE OPPOSING DIRECTION, YELLOW PAVEMENT MARKING SHALL BE APPLIED TO THE FLAT PORTION OF THE CONCRETE CORRUGATED MEDIAN. THE ITEM OF PAVEMENT MARKING, CONCRETE CORRUGATED MEDIAN, WILL BE MEASURED IN PLACE AND ACCEPTED IN ACCORDANCE WITH THE CONTRACT AND PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE FOOT.

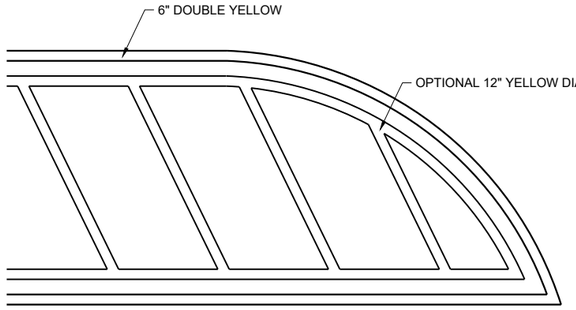
(1) APPLY PAVEMENT MARKING TO THE FLAT PORTION OF CORRUGATED MEDIAN.

ISLAND NOSE MARKING

CURB MARKING

CORRUGATED MEDIAN MARKING

DIRECTION OF TRAVEL



FLUSH MEDIAN ISLAND NOSE

**PAVEMENT MARKINGS,
MEDIAN ISLAND NOSE**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
August 2024
DATE

/S/ Jeannie Silver
Statewide Pavement Marking Engineer

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REQUIREMENTS FOR EDGE LINES		
POSTED SPEED	IS THERE CONTINUOUS LIGHTING?	
	YES	NO
≤ 30 MPH	NO	OPTIONAL
35 OR 40 MPH	OPTIONAL	RECOMMENDED
≥ 45 MPH	RECOMMENDED	REQUIRED

GENERAL NOTES

APPLIES TO ISLANDS AT LEFT TURNS AT ONE WAY ROADWAYS AS WELL.

SEE MISCELLANEOUS QUANTITIES FOR SIGN SIZE.

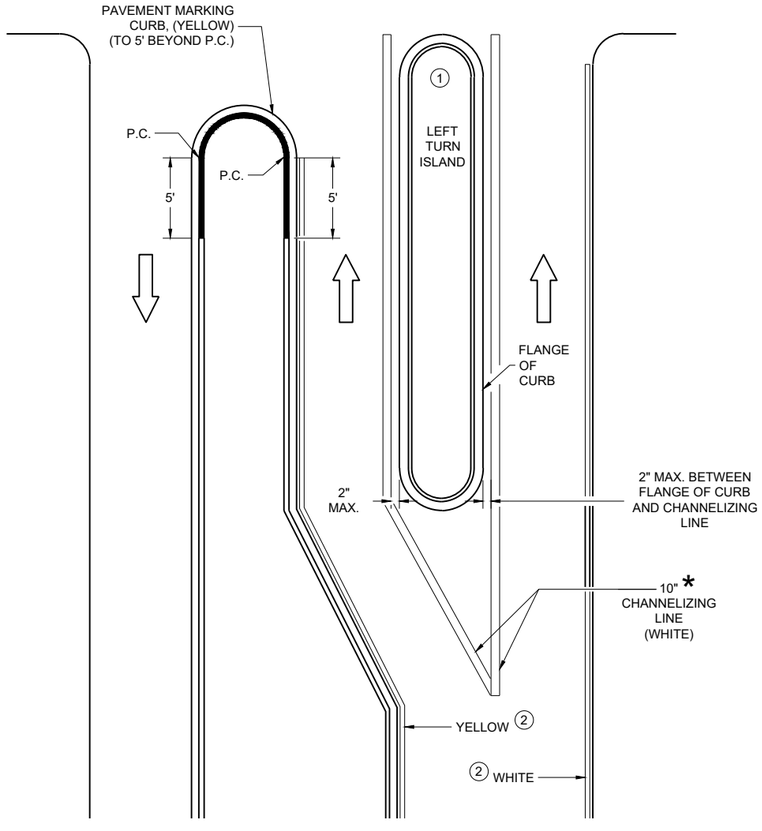
(1) MARK CURB NOSES YELLOW.

(2) MARK ACCORDING TO TABLE.

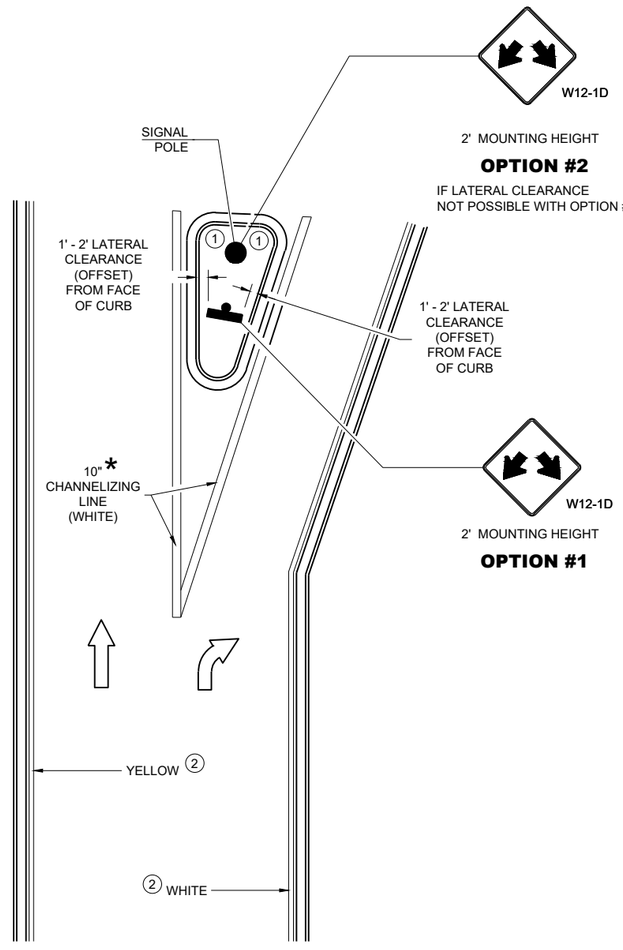
(3) CHEVRON MAY BE OMITTED IF LESS THAN 4" WIDE

DIRECTION OF TRAVEL

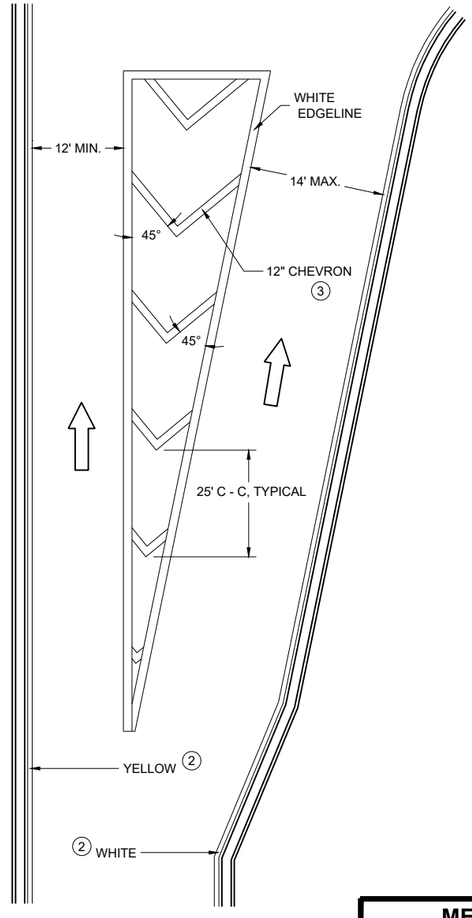
*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



LEFT TURN & MEDIAN ISLAND



RIGHT TURN ISLAND



TURN LANE DETAIL

MEDIAN PAVEMENT MARKINGS, DOUBLE ARROW WARNING SIGN PLACEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
August 2024
DATE

/S/ Jeannie Silver
Statewide Pavement Marking Engineer

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SDD 15C18-09c

6

SDD 15C18-09c

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

WORKERS SHALL NOT PERFORM WORK FROM ANY SHADOW OR PROTECTION VEHICLES.

UPRIGHTS ORIENTED PARALLEL TO AND DOWNSTREAM FROM TRAFFIC.

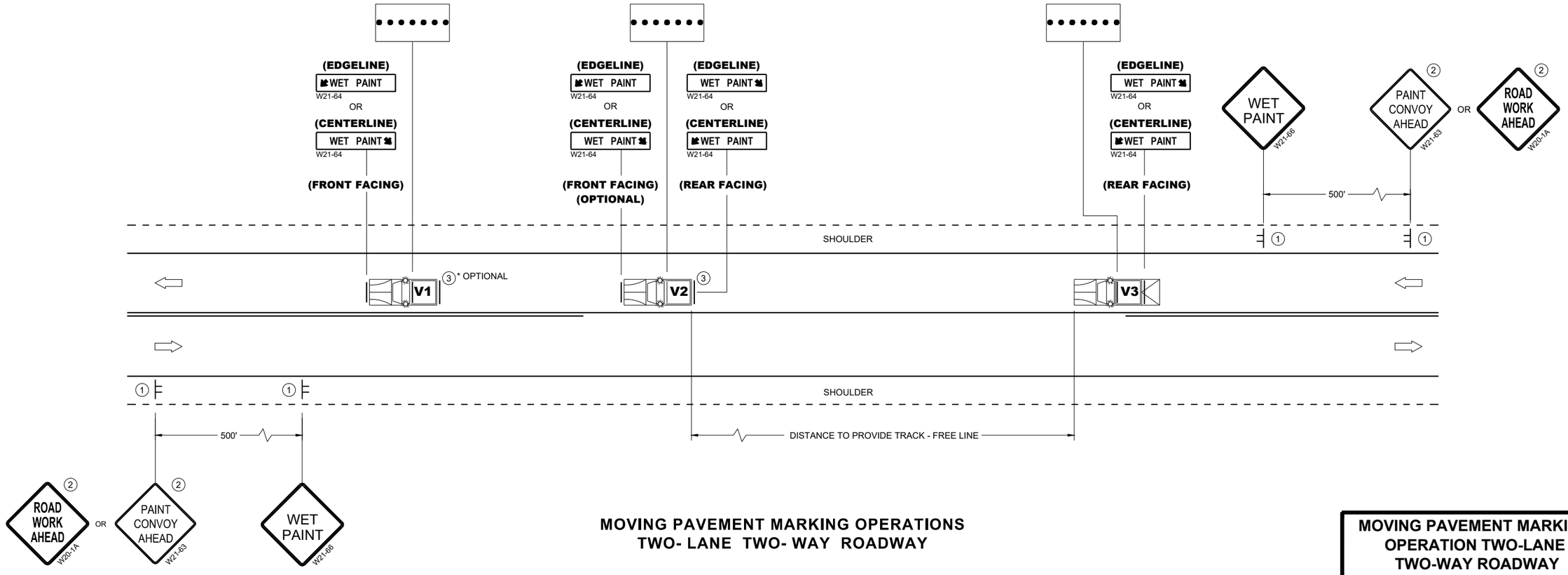
CONES SHOULD BE USED BETWEEN THE MARKING AND SHADOW VEHICLE AT 100 FOOT SPACING. CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.

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
November 2025 — DATE
/S/ Andrew Heidtke — STATE ELECTRICAL ENGINEER

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SDD 15C19-11a

LEGEND

V1 MARKING VEHICLE

V2 SHADOW VEHICLE

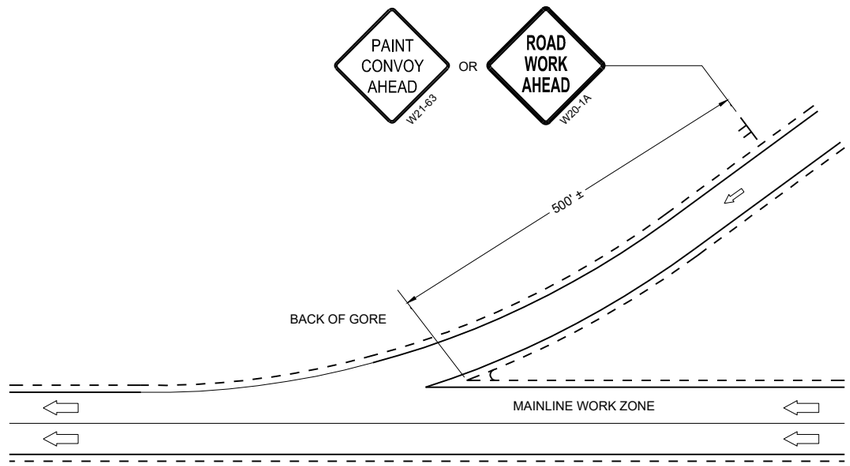
V3 TRAIL VEHICLE

TRUCK MOUNTED ATTENUATOR (TMA)

SIGN ON TEMPORARY SUPPORT

DIRECTION OF TRAFFIC

ARROW PANEL (CAUTION)



GENERAL NOTES

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

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

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

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

WHEN WORK ACTIVITY BLOCKS THE LEFT LANE, REVERSE TRAFFIC CONTROL.

WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, PROVIDE ADDITIONAL TRAFFIC CONTROLS AS SPECIFIED IN THE CONTRACT OR AS APPROVED BY THE ENGINEER.

USE AN ATTENUATOR ON THE REARMOST VEHICLE THAT BLOCKS ALL OR PART OF THE TRAFFIC LANE.

IF THE SHOULDER IS TOO NARROW TO ACCOMMODATE THE LAST TRAILING VEHICLE, THE VEHICLE SHOULD STRADDLE THE EDGE LINE.

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

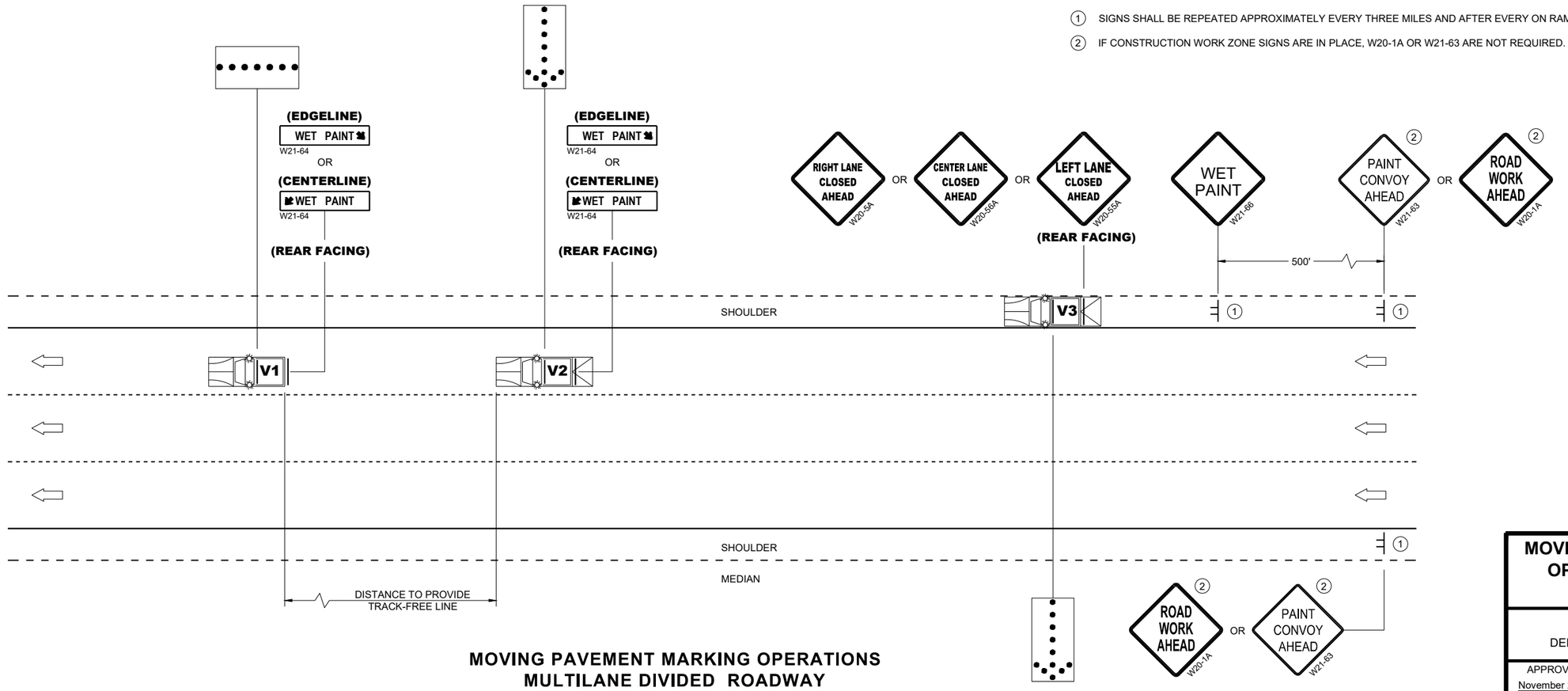
CONES SHOULD BE USED BETWEEN THE MARKING AND SHADOW VEHICLE AT 100 FOOT SPACING. CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.

CONES SHALL BE A MINIMUM HEIGHT OF 28" FOR WET PAVEMENT MARKINGS

WORKERS SHALL NOT PERFORM WORK FROM ANY SHADOW OR PROTECTION VEHICLES.

(1) SIGNS SHALL BE REPEATED APPROXIMATELY EVERY THREE MILES AND AFTER EVERY ON RAMP.

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



MOVING PAVEMENT MARKING OPERATIONS
MULTILANE DIVIDED ROADWAY

MOVING PAVEMENT MARKING OPERATION MULTI-LANE DIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2025
DATE

/S/ Andrew Heidtke
STATE ELECTRICAL ENGINEER

FHWA

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SDD 15C19-11c

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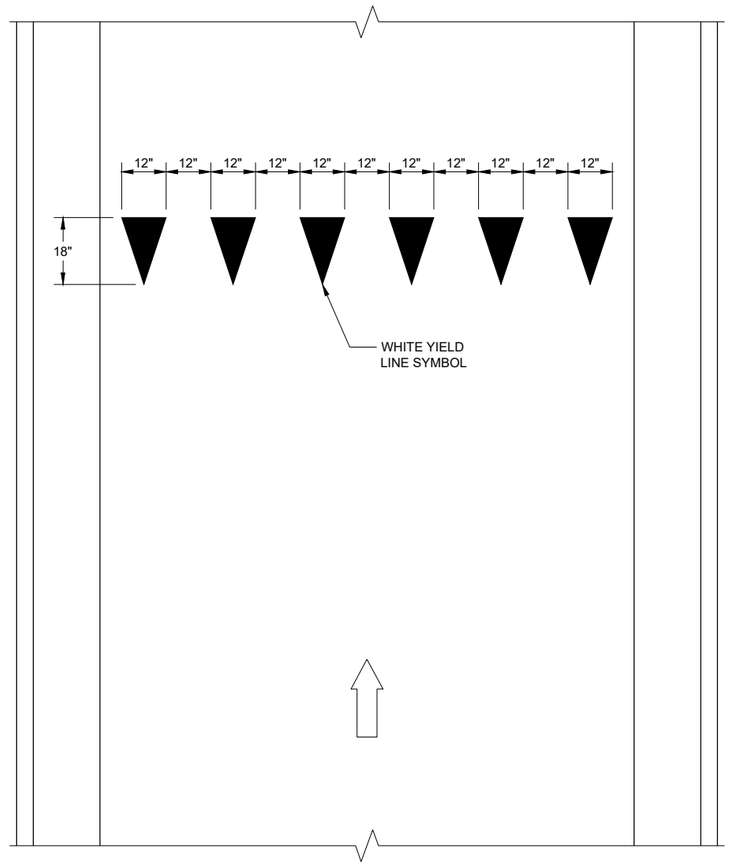
SDD 15C19-11c

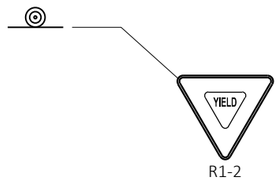


YIELD LINE

LEGEND

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAVEL



R1-2

YIELD MARKINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

4-81-2016
DATE

/S/ Matthew R. Rauch
STATE SIGNING AND MAR ENGINEER

FHWA

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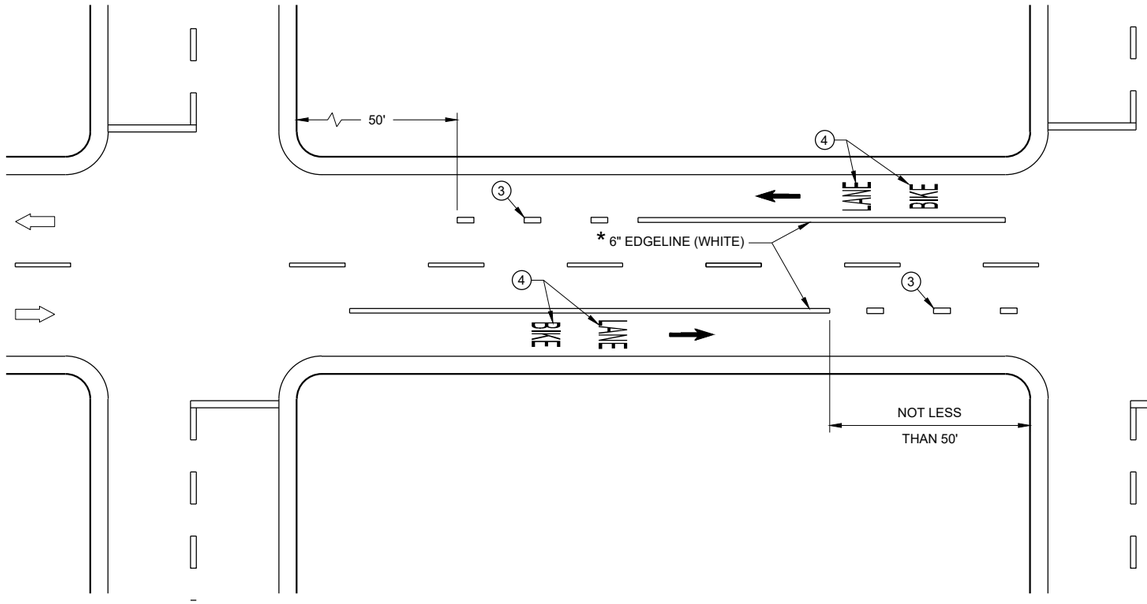
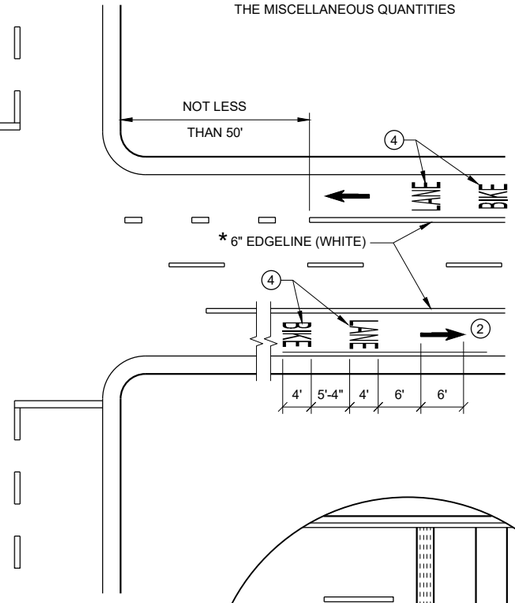




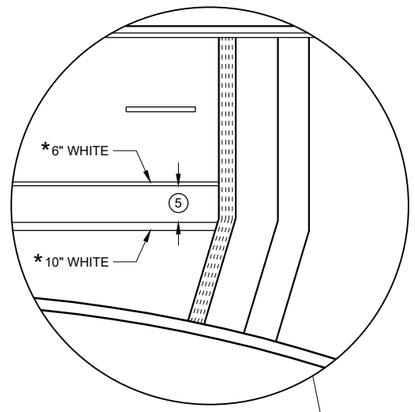
* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

GENERAL NOTES

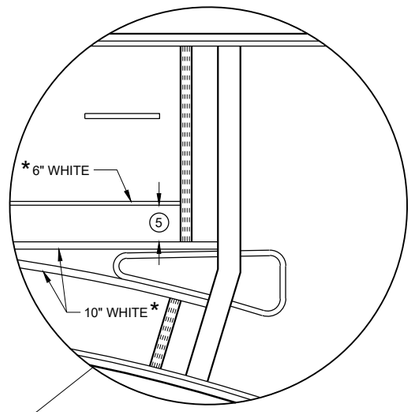
1. DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.
2. MINIMUM OF ONE PER BLOCK. MAXIMUM OF 250 FEET.
3. DOTTED LINES (3' LINE, 9' GAP) SHOULD BE USED 50 FEET TO 200 FEET IN ADVANCE OF AN INTERSECTION WHERE THERE IS NO RIGHT TURN ONLY LANE AND THERE IS HEAVY RIGHT TURN TRAFFIC OR THERE IS A NEAR-SIDE BUS STOP. AT OTHER INTERSECTIONS WHERE RIGHT TURN TRAFFIC IS LIGHT TO MODERATE, A SOLID LINE CAN BE USED UP TO THE INTERSECTION.
4. BIKE SYMBOLS OR WORDS MAY BE USED.
5. BIKE ACCOMMODATION IS TYPICAL 5 FEET WIDE AND MINIMUM OF 4 FEET FROM A LONGITUDINAL JOINT. USE 5 FEET AT ≥ 45 MPH.
6. OMIT THESE MARKINGS FOR WIDER TURN LANE APPLICATIONS (MINIMUM OF 15 FOOT WIDE TURN LANE).
7. REFER TO CONTRACT PLANS FOR LANE WIDTH.

DIRECTION OF TRAVEL

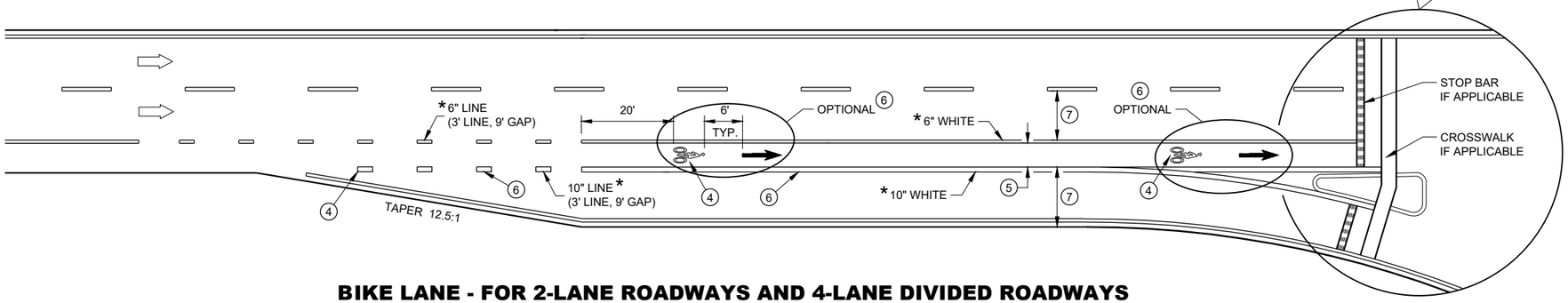
DESIGNATED BIKE LANE - NO PARKING



4 LANE DIVIDED WITHOUT ISLAND



4 LANE DIVIDED WITH ISLAND



BIKE LANE - FOR 2-LANE ROADWAYS AND 4-LANE DIVIDED ROADWAYS (4-LANE DIVIDED WITH RIGHT TURN LANE SHOWN)

BIKE LANE MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 — DATE
/S/ Matthew Rauch — STATE SIGNING AND MAF ENGINEER
FHWA

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SDD 15C29-08a

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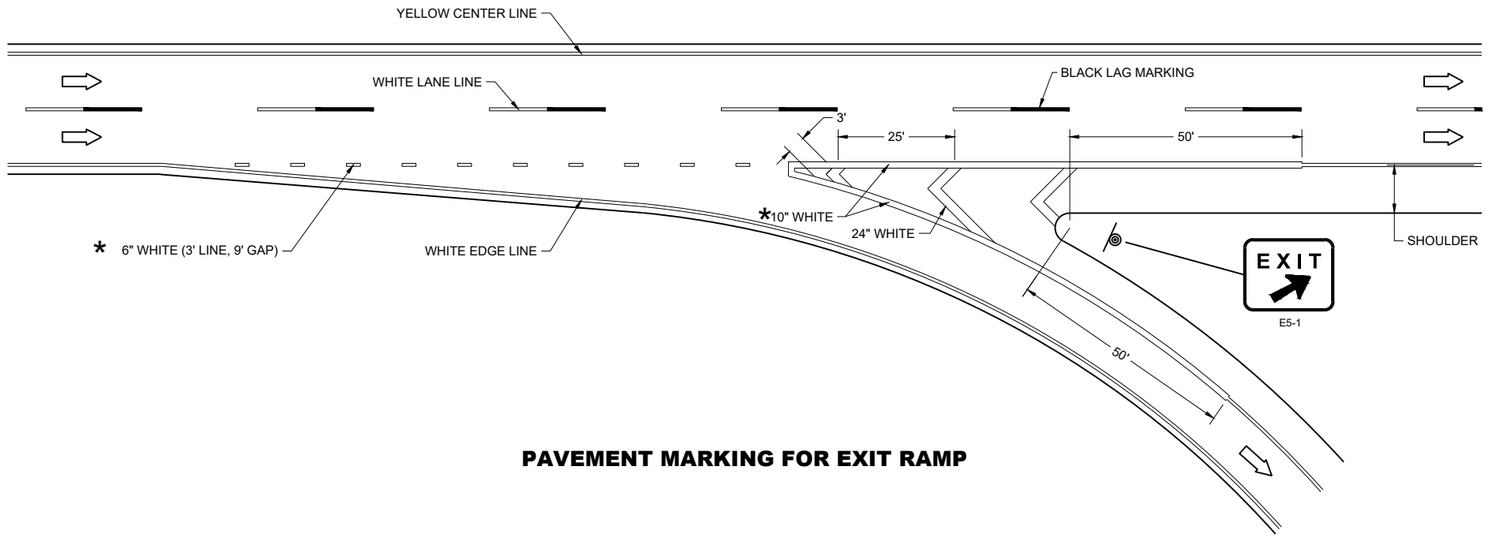
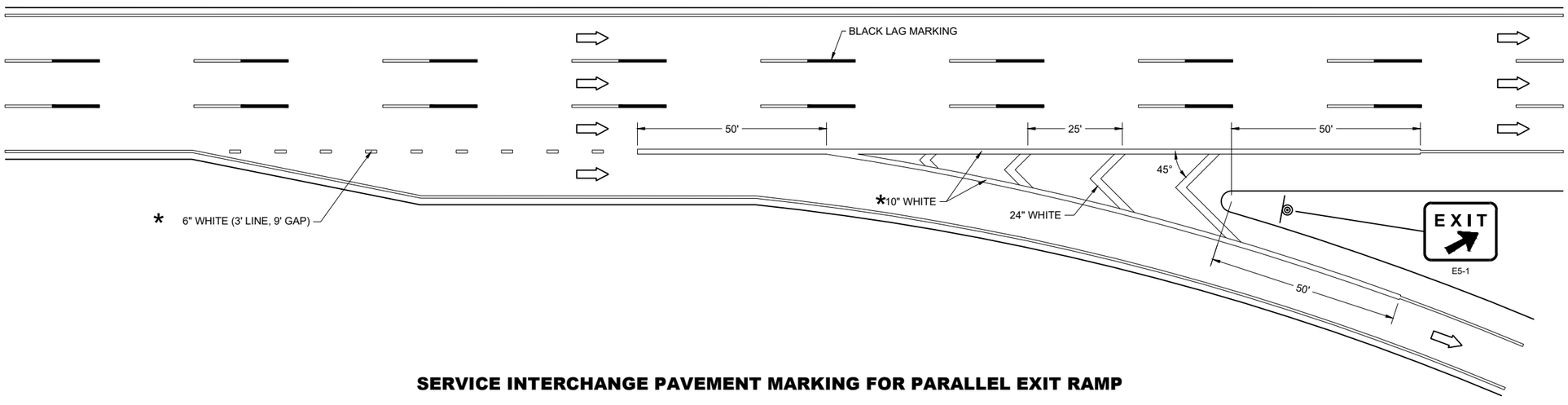


PAVEMENT MARKING FOR EXIT RAMP



SERVICE INTERCHANGE PAVEMENT MARKING FOR PARALLEL EXIT RAMP

GENERAL NOTES

PLACE GROOVE 3 INCHES LEFT OF JOINT.

LEGEND

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAVEL

*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

6

SDD 15C31-08a

PAVEMENT MARKING, EXIT RAMP AND PARALLEL EXIT RAMP

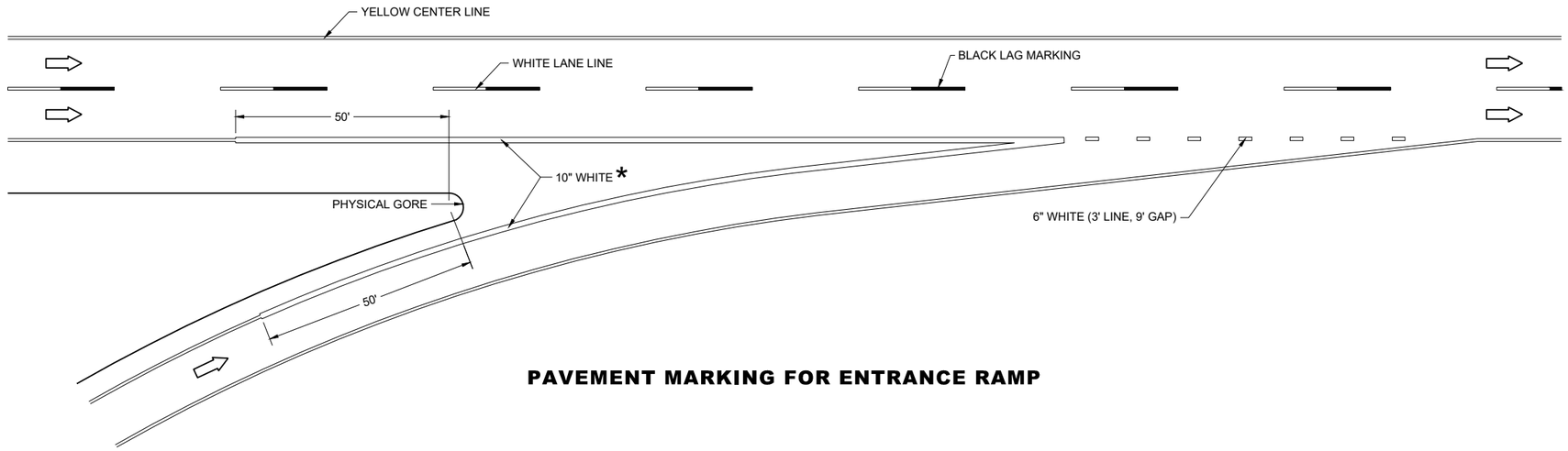
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 15C31-08a

GENERAL NOTES

PLACE GROOVE 3 INCHES LEFT OF JOINT.

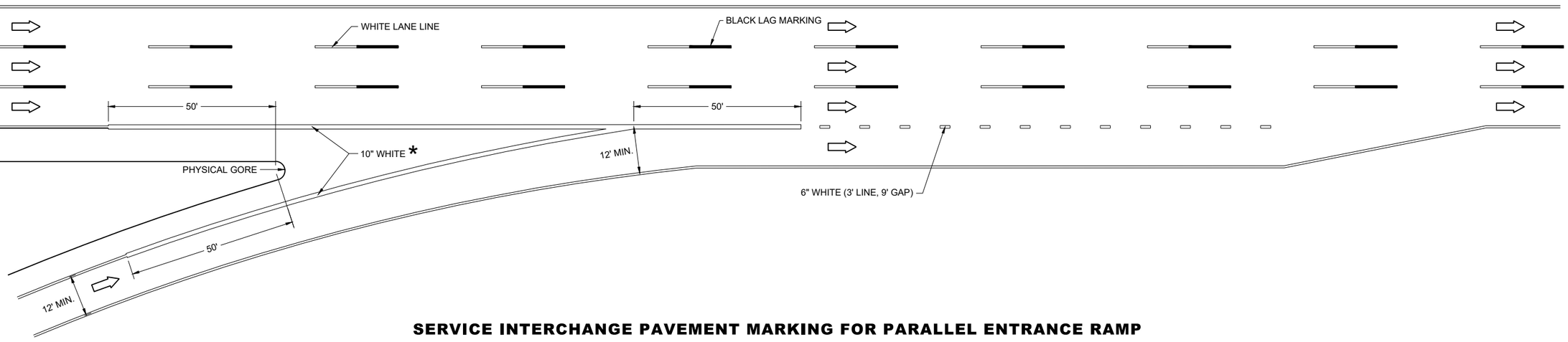


PAVEMENT MARKING FOR ENTRANCE RAMP

LEGEND

DIRECTION OF TRAVEL

*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



SERVICE INTERCHANGE PAVEMENT MARKING FOR PARALLEL ENTRANCE RAMP

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SDD 15C31-08c

PAVEMENT MARKING, ENTRANCE RAMP AND PARALLEL ENTRANCE RAMP

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

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

THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS.

THIS LANE CLOSURE IS TYPICAL FOR CLOSING RIGHT LANE - REVERSE FOR CLOSING LEFT LANE.

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

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

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

FOR A LANE CLOSURE THAT IS IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING LINE IF LANE CLOSURE IS TO BE IN PLACE 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

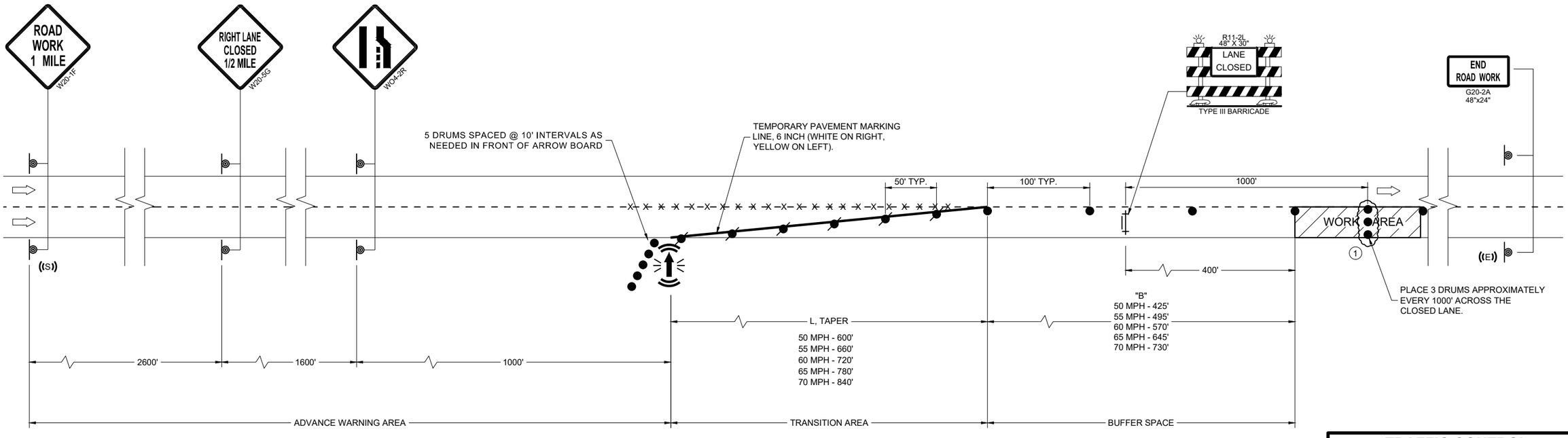
ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP OR INTERSECTION. THE LANE CLOSURE MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE ONE HALF THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.

CONSIDER ROADWAY GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS.

(1) DRUMS IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY REESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- REMOVING PAVEMENT MARKINGS
- DIRECTION OF TRAFFIC
- WORK AREA
- CONNECTED ARROW BOARD
- (S) WZ START LOCATION MARKER
- (E) WZ END LOCATION MARKER



TRAFFIC CONTROL LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2026 — DATE
/S/ Andrew Heidtke — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

FHWA

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SDD 15D12-17a

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SDD 15D12-17a

GENERAL NOTES

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

THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS.

THIS LANE CLOSURE IS TYPICAL FOR CLOSING RIGHT LANE - REVERSE FOR CLOSING LEFT LANE.

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

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

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

CONSIDER ROADWAY GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS.

FOR A LANE CLOSURE THAT IS IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING LINE IF LANE CLOSURE IS TO BE IN PLACE 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP OR INTERSECTION. THE LANE CLOSURE MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE ONE HALF THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.

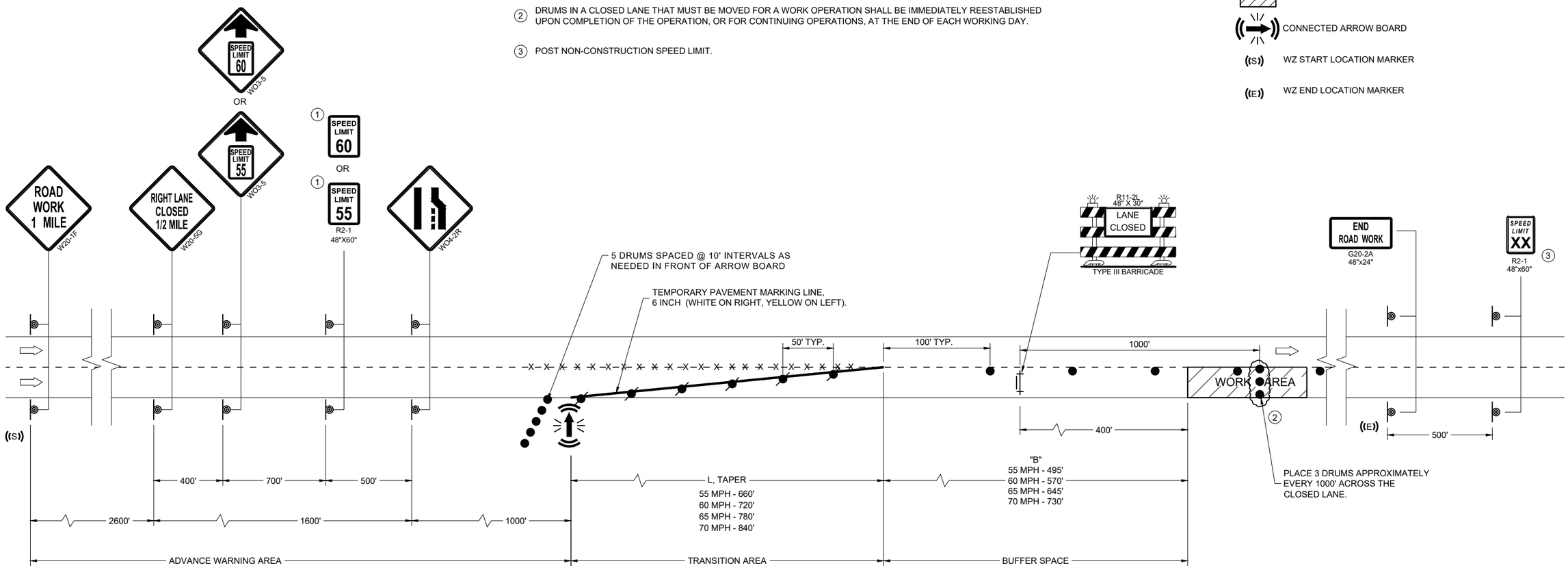
① A SPEED LIMIT SIGN SHALL BE LOCATED 1500 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP. PLACE A SPEED LIMIT SIGN A MINIMUM OF EVERY 3 MILES.

② DRUMS IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY REESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

③ POST NON-CONSTRUCTION SPEED LIMIT.

LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- REMOVING PAVEMENT MARKINGS
- DIRECTION OF TRAFFIC
- WORK AREA
- CONNECTED ARROW BOARD
- (S) WZ START LOCATION MARKER
- (E) WZ END LOCATION MARKER



TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2026 — DATE
/S/ Andrew Heidtke — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

FHWA

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SDD 15D12-17b

LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- REMOVING PAVEMENT MARKINGS
- DIRECTION OF TRAFFIC
- WORK AREA
- (S) WZ START LOCATION MARKER
- (E) WZ END LOCATION MARKER
- CONNECTED ARROW BOARD
- PCMS — PORTABLE CHANGEABLE MESSAGE SIGN
- (S) — PORTABLE TRAFFIC SENSOR (PTS)
- FBS — FLASHING BEACON SIGNS

STOPPED OR SLOW TRAFFIC WHEN FLASHING
WO8-76
96" x 48"

GENERAL NOTES

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

THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS.

THIS LANE CLOSURE IS TYPICAL FOR CLOSING RIGHT LANE - REVERSE FOR CLOSING LEFT LANE.

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

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED OR AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON "COVERED" OR "DOWNED SIGNS.

FOR A LANE CLOSURE THAT IS IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING LINE IF LANE CLOSURE IS TO BE IN PLACE 4 OR MORE CONTINUOUS DAYS AND NIGHTS. WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

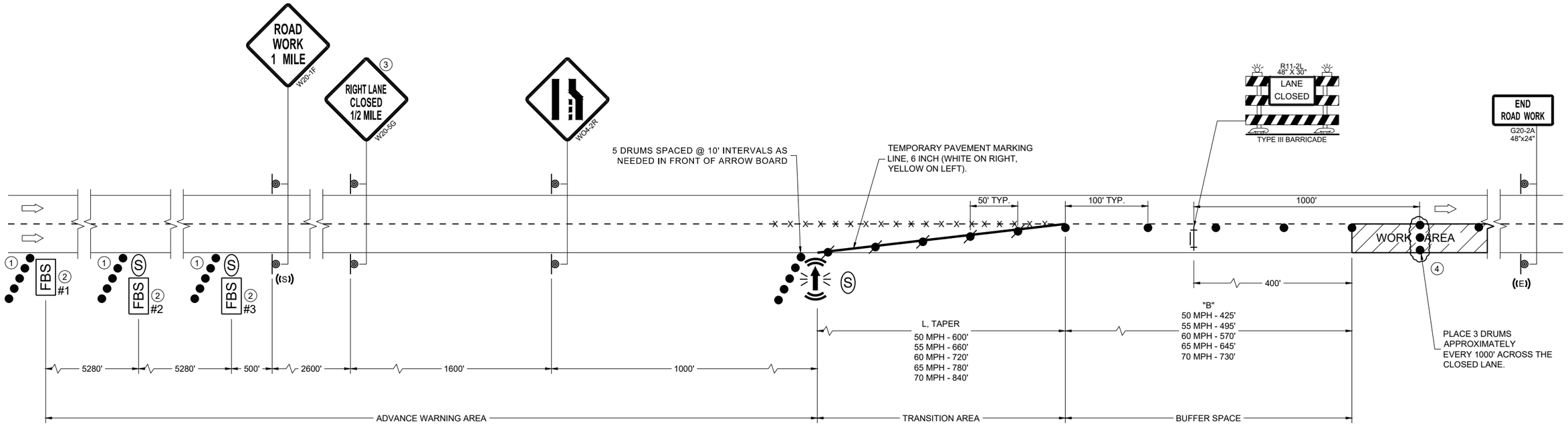
IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP OR INTERSECTION. THE LANE CLOSURE MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE ONE HALF THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.

CONSIDER ROADWAY GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS.

PORTABLE TRAFFIC SENSOR (PTS) MAY BE MOUNTED ON THE FBS, ARROW BOARD OR OTHER TRAILER DEVICES.

1. 5 DRUMS SPACED AT 10 FOOT INTERVALS AS NEEDED.
2. IF THERE ARE MORE THAN TWO LANES OR IF SPECIFIED IN THE PLANS, PLACE FBS ON BOTH SIDES OF THE ROADWAY.
3. IF THERE IS AN APPROVED TEMPORARY SPEED DECLARATION, ADD WO-3-5 SIGNS 400 FEET AFTER THE W20-5G SIGNS AND ADD R2-1 SIGNS (48"x60") 700 FEET AFTER THE WO3-5 SIGNS. A SPEED LIMIT SIGN SHALL BE LOCATED 1500 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP. PLACE A SPEED LIMIT SIGN A MINIMUM OF EVERY 3 MILES. INCLUDE A "RESUME SPEED LIMIT" SIGN 200 FEET MINIMUM (800 FEET DESIRABLE) BEYOND THE G30-3A "END ROAD WORK" SIGN
4. DRUMS IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY REESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.



TRAFFIC CONTROL, LANE CLOSURE, BASIC TRAFFIC QUEUE WARNING SYSTEM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2026 — DATE
/S/ Andrew Heidtke — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

FHWA

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SDD 15D12-17d

SDD 15D12-17d

LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- REMOVING PAVEMENT MARKINGS
- DIRECTION OF TRAFFIC
- WORK AREA
- CONNECTED ARROW BOARD
- WZ START LOCATION MARKER
- WZ END LOCATION MARKER
- TEMPORARY TAPE RUMBLE STRIPS (VARIABLE SPACING)
- PORTABLE TRAFFIC SENSOR (PTS)

GENERAL NOTES

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

THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS.

THIS LANE CLOSURE IS TYPICAL FOR CLOSING RIGHT LANE - REVERSE FOR CLOSING LEFT LANE.

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

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED OR AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS

FOR A LANE CLOSURE THAT IS IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCE WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING LINE IF LANE CLOSURE IS TO BE IN PLACE 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

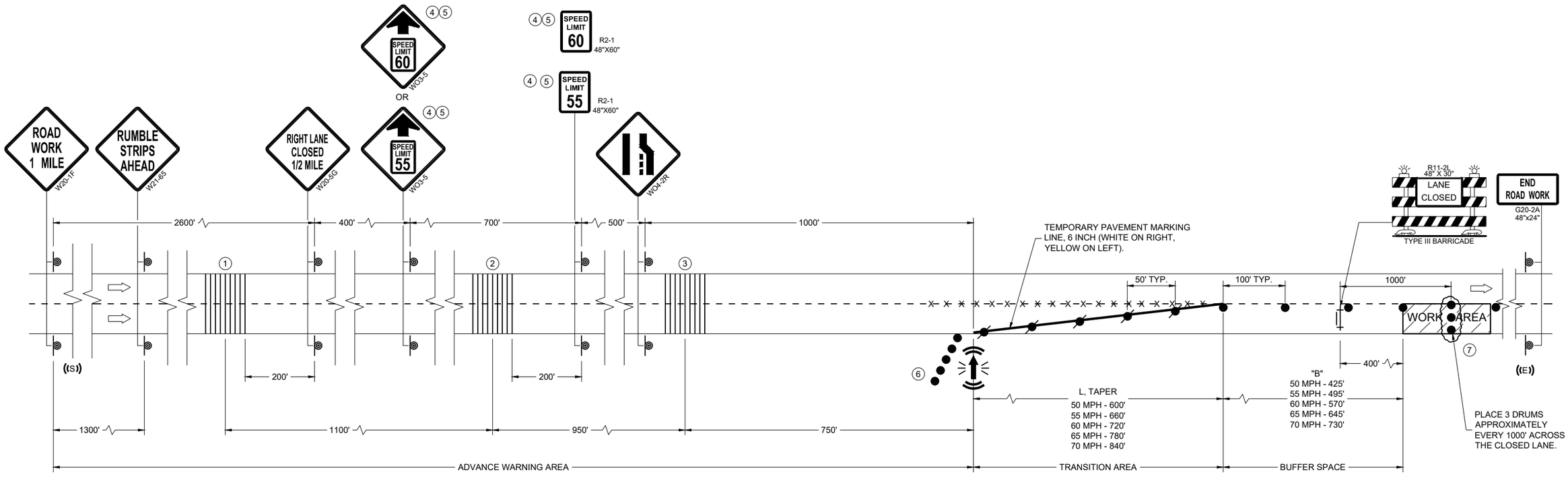
IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP OR INTERSECTION. THE LANE CLOSURE MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE ONE HALF THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.

CONSIDER ROADWAY GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS.

USE THIS DETAIL FOR PLACEMENT OF TEMPORARY TAPE RUMBLE STRIPS AND W21-65 SIGNS. SEE APPROPRIATE LANE CLOSURE SDD FOR DETAILS OF OTHER TRAFFIC CONTROL DEVICES AND SIGNS.

1. NINE RUMBLE STRIPS WITH 10 FOOT SPACING BETWEEN EACH INDIVIDUAL STRIP.
2. NINE RUMBLE STRIPS WITH 5 FOOT SPACING BETWEEN EACH INDIVIDUAL STRIP.
3. NINE RUMBLE STRIPS WITH 1.5 FOOT SPACING BETWEEN EACH INDIVIDUAL STRIP.
4. COVER OR REMOVE PER APPROVED TEMPORARY SPEED DECLARATION.
5. IF NO APPROVED SPEED DECLARATION, OMIT SIGNS.
6. 5 DRUMS SPACED AT 10 FOOT INTERVALS AS NEEDED.
7. DRUMS IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY REESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.



TRAFFIC CONTROL, LANE CLOSURE, WITH TEMPORARY TAPE RUMBLE STRIPS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2026 — DATE
/S/ Andrew Heidtke — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

FHWA

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SDD 15D12-17f

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SDD 15D12-17f

GENERAL NOTES

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

THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS.

THIS LANE CLOSURE IS TYPICAL FOR CLOSING RIGHT LANE - REVERSE FOR CLOSING LEFT LANE.

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

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

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

CONSIDER ROADWAY GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS.

FOR A LANE CLOSURE THAT IS IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING LINE IF LANE CLOSURE IS TO BE IN PLACE 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP OR INTERSECTION. THE LANE CLOSURE MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE ONE HALF THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.

IF THE SPEED LIMIT WILL CHANGE BASED ON THE PRESENCE OF WORKERS, USE THE TAPER LENGTH THAT MATCHES THE HIGHER OF THE TWO SPEEDS FOR A CONTINUOUS LANE CLOSURE.

EXISTING POST MOUNTED SPEED LIMIT SIGNS SHOULD BE COVERED OR REMOVED.

(1) POST NON-CONSTRUCTION SPEED LIMIT.

(2) IF THE LANE CLOSURE MOVES DOWNSTREAM, LEAVE DSLT IN PLACE.

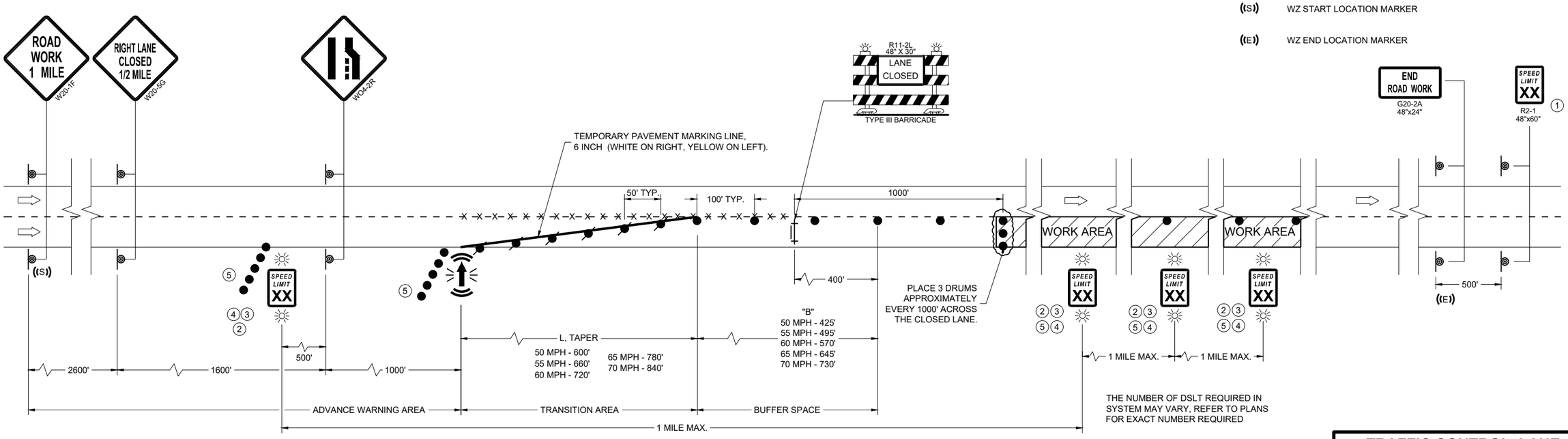
(3) PLACE DSLT AT EXISTING POST MOUNTED SPEED LIMIT SIGN AFTER THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP. IF THERE IS NOT AN EXISTING SIGN, PLACE 1,500 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP

(4) FOR LEFT LANE CLOSURES, DSLT REMAINS ON RIGHT SHOULDER.

(5) 5 DRUMS SPACED @ 10' INTERVALS AS NEEDED.

LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- REMOVING PAVEMENT MARKINGS
- DIRECTION OF TRAFFIC
- WORK AREA
- CONNECTED ARROW BOARD
- DIGITAL SPEED LIMIT TRAILER (DSLT)
- WZ START LOCATION MARKER
- WZ END LOCATION MARKER



TRAFFIC CONTROL, LANE CLOSURE, DIGITAL SPEED REDUCTION SYSTEM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2026 — DATE
/S/ Andrew Heidtke — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

FHWA

SDD 15D12-17g

6

SDD 15D12-17g

LEGEND

SIGN ON PERMANENT SUPPORT

SIGN ON TEMPORARY SUPPORT

TRAFFIC CONTROL DRUM

TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT

REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)

TYPE III BARRICADE WITH ATTACHED SIGN

DIRECTION OF TRAFFIC

GENERAL NOTES

THE INSTALLATIONS SHOWN ON THIS SHEET ARE TYPICAL EXAMPLES AND ARE NOT INTENDED TO REPRESENT ANY PARTICULAR RAMP. AT SPECIFIC FIELD LOCATIONS, SIMILAR INSTALLATIONS SHALL BE USED AND ADJUSTED TO THE GEOMETRICS OF THE RAMP AS COORDINATED WITH THE ENGINEER.

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

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

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

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

SEE SEPARATE LANE CLOSURE DETAIL FOR TYPICAL SPACING OF TYPE III BARRICADES AND R11-2L "LANE CLOSED" SIGNS.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONSECUTIVE DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS. USE SUPPORTS THAT PROVIDE A MINIMUM OF 5 FEET FROM THE BOTTOM OF THE SIGN TO THE PAVEMENT.

IF INDICATED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE FLEXIBLE TUBULAR MARKERS FOR DRUMS IN THE GORE BETWEEN THE ENTRANCE RAMP AND MAINLINE TRAFFIC.

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

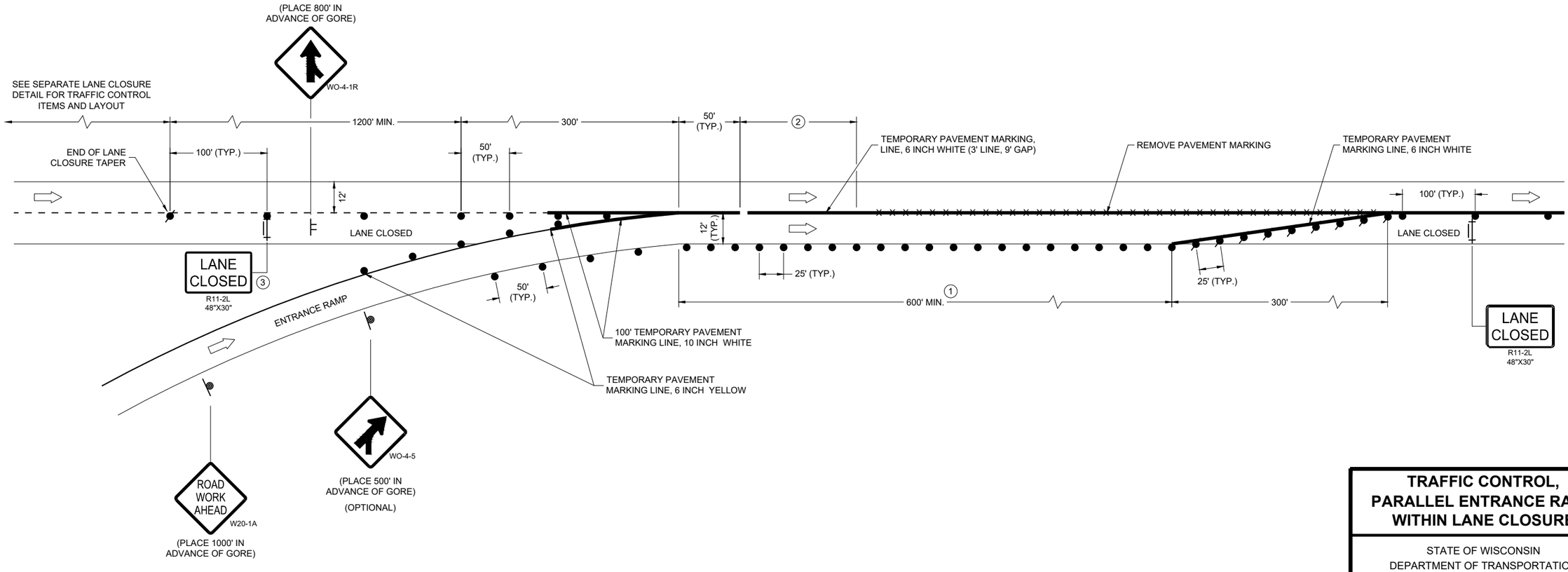
REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING LINES IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

(1) EXTEND THE LENGTH OF THE MERGE ARE IF THE ENTERING (DESIGN) SPEED IS LESS THAN 50MPH OR IF THE MAINLINE GRADE EXCEEDS ±2.2%.

(2) END TEMPORARY PAVEMENT MARKING LINE AT 1/2 THE LENGTH OF FULL WIDTH OF THE ACCELERATION LANE.

(3) IF LOCATED AFTER INITIAL LANE CLOSURE BARRICADE AND "LANE CLOSED" SIGN, USE 3 DRUMS IN PLACE OF BARRICADE AND SIGN.



TRAFFIC CONTROL, PARALLEL ENTRANCE RAMP WITHIN LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

February 2025
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

6

SDD 15D15-08a

LEGEND

- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)
- TYPE III BARRICADE WITH ATTACHED SIGN
- DIRECTION OF TRAFFIC

GENERAL NOTES

THE INSTALLATIONS SHOWN ON THIS SHEET ARE TYPICAL EXAMPLES AND ARE NOT INTENDED TO REPRESENT ANY PARTICULAR RAMP. AT SPECIFIC FIELD LOCATIONS, SIMILAR INSTALLATIONS SHALL BE USED AND ADJUSTED TO THE GEOMETRICS OF THE RAMP AS COORDINATED WITH THE ENGINEER.

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

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

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

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

SEE SEPARATE LANE CLOSURE DETAIL FOR TYPICAL SPACING OF TYPE III BARRICADES AND R11-2L "LANE CLOSED" SIGNS.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONSECUTIVE DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS.

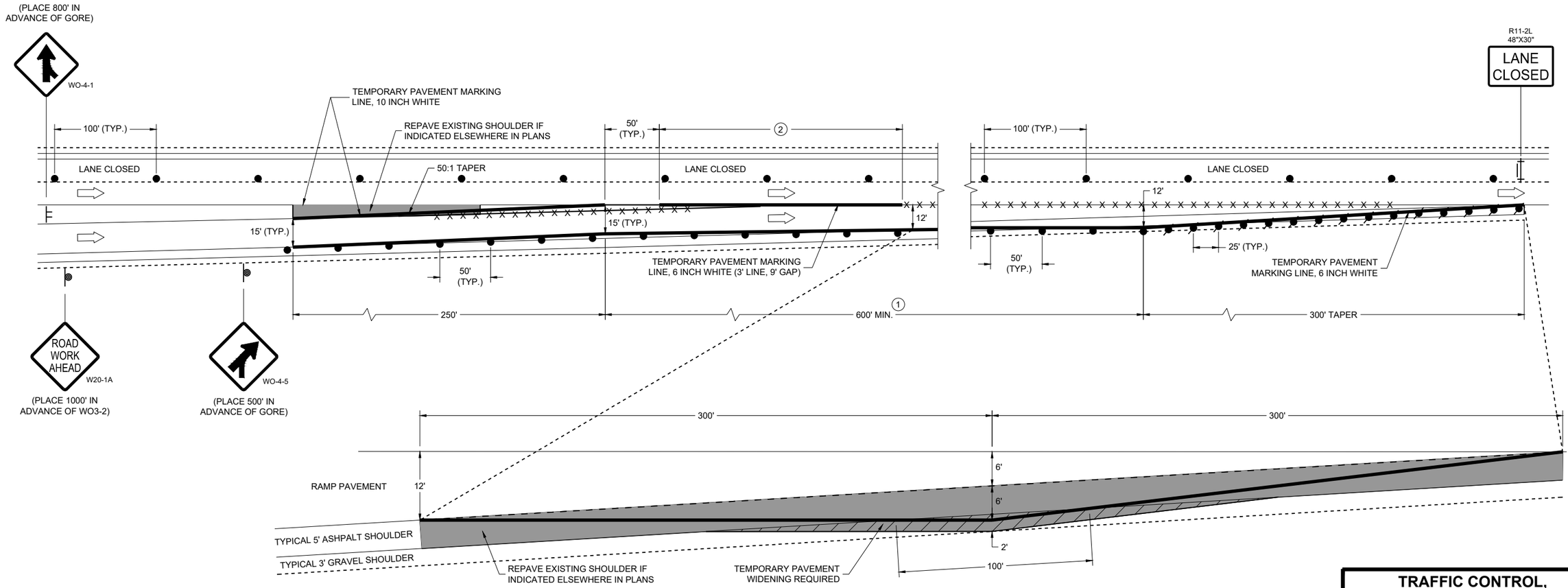
IF INDICATED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE FLEXIBLE TUBULAR MARKERS /OR DRUMS IN THE GORE BETWEEN THE EXIT RAMP AND MAINLINE TRAFFIC.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.
REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING LINES IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

(1) EXTEND THE LENGTH OF THE MERGE AREA IF THE ENTERING (DESIGN) SPEED OF THE RAMP IS LESS THAN 50 MPH OR IF THE MAINLINE GRADE EXCEEDS ±2.2%.

(2) END TEMPORARY PAVEMENT MARKING LINE AT 1/2 THE LENGTH OF FULL WIDTH OF THE ACCELERATION LANE.



TEMPORARY PAVEMENT DETAIL

(EXISTING RAMP DIMENSIONS MAY VARY, ADJUST TEMPORARY PAVEMENT ACCORDINGLY)

TRAFFIC CONTROL, ENTRANCE RAMP WITHIN LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2025 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINEER

FHWA

6

SDD 15D15-08b

6

SDD 15D15-08b

LEGEND

SIGN ON PERMANENT SUPPORT

SIGN ON TEMPORARY SUPPORT

TRAFFIC CONTROL DRUM

TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT

REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)

TYPE III BARRICADE WITH ATTACHED SIGN

FLAGS, 16" X 16" MIN., ORANGE

DIRECTION OF TRAFFIC

GENERAL NOTES

THE INSTALLATIONS SHOWN ON THIS SHEET ARE TYPICAL EXAMPLES AND ARE NOT INTENDED TO REPRESENT ANY PARTICULAR RAMP. AT SPECIFIC FIELD LOCATIONS, SIMILAR INSTALLATIONS SHALL BE USED AND ADJUSTED TO THE GEOMETRICS OF THE RAMP AS COORDINATED WITH THE ENGINEER.

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

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

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

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

SEE SEPARATE LANE CLOSURE DETAIL FOR TYPICAL SPACING OF TYPE III BARRICADES AND R11-2L "LANE CLOSED" SIGNS.

YIELD SIGN AND WARNING SIGNS ON ENTRANCE RAMP ARE ALSO APPROPRIATE FOR CLOSURE OF THE MAINLINE LEFT LANE. OMIT THE YIELD SIGN IF MORE THAN ONE LANE REMAINS OPEN ON THE MAINLINE AND THE RAMP TAPER IS AT LEAST AS LONG AS THE NORMAL ENTRANCE RAMP TAPER AT THE SITE.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONSECUTIVE DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS. USE SUPPORTS THAT PROVIDE A MINIMUM OF 5 FEET FROM THE BOTTOM OF THE SIGN TO THE PAVEMENT.

IF INDICATED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE FLEXIBLE TUBULAR MARKERS FOR DRUMS IN THE GORE BETWEEN THE ENTRANCE RAMP AND MAINLINE TRAFFIC.

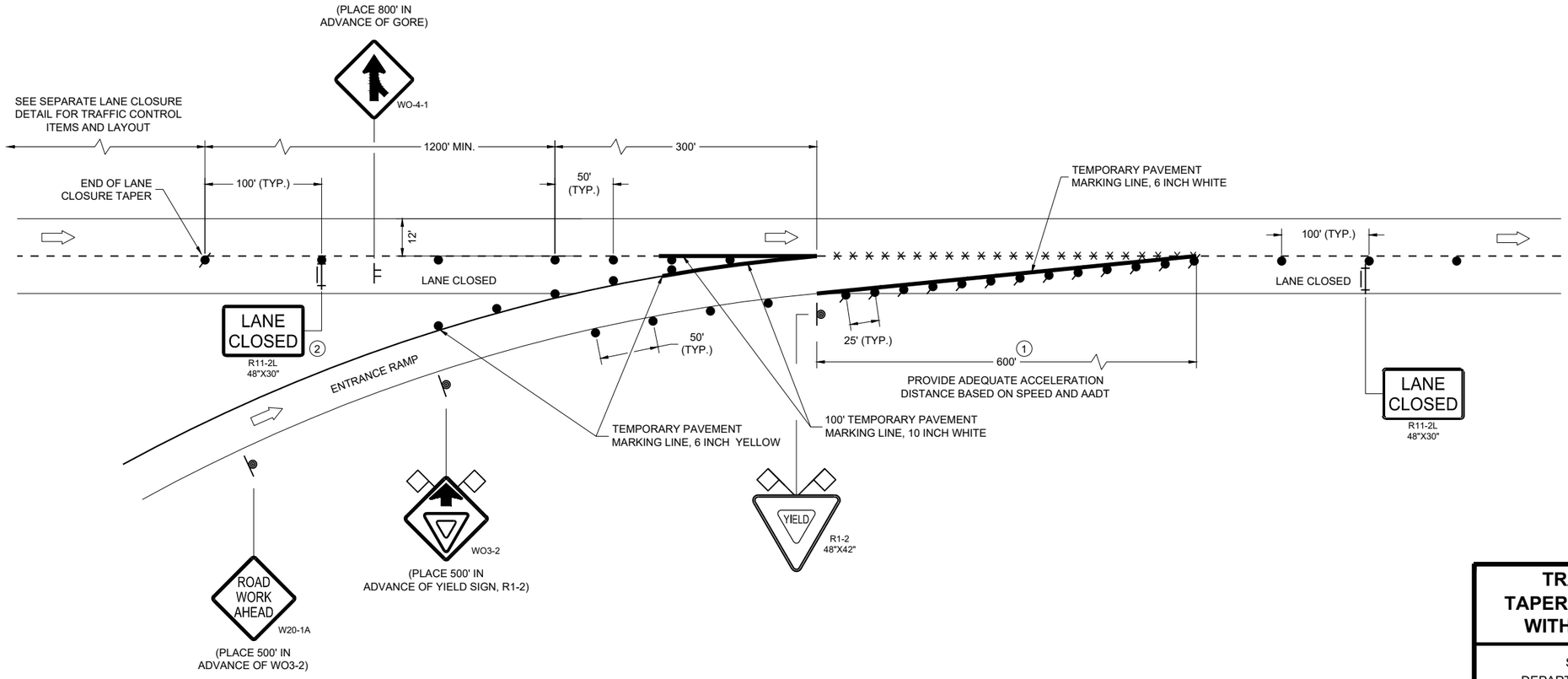
ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING LINES IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

(1) CONSULT WITH REGIONAL WORK ZONE ENGINEER IF NEED TO REDUCE LENGTH EXISTS.

(2) IF LOCATED AFTER INITIAL LANE CLOSURE BARRICADE AND "LANE CLOSED" SIGN, USE 3 DRUMS IN PLACE OF BARRICADE AND SIGN.



TRAFFIC CONTROL, TAPERED ENTRANCE RAMP WITHIN LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2025 — DATE
/S/ Andrew Heidtke — <position>
FHWA

6
SDD 15D15-08c

LEGEND

SIGN ON PERMANENT SUPPORT

SIGN ON TEMPORARY SUPPORT

TRAFFIC CONTROL DRUM

TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT

TYPE III BARRICADE WITH ATTACHED SIGN

FLAGS, 16" X 16" MIN., ORANGE

DIRECTION OF TRAFFIC

GENERAL NOTES

THE INSTALLATIONS SHOWN ON THIS SHEET ARE TYPICAL EXAMPLES AND ARE NOT INTENDED TO REPRESENT ANY PARTICULAR RAMP. AT SPECIFIC FIELD LOCATIONS, SIMILAR INSTALLATIONS SHALL BE USED AND ADJUSTED TO THE GEOMETRICS OF THE RAMP AS COORDINATED WITH THE ENGINEER.

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

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

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

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

SEE SEPARATE LANE CLOSURE DETAIL FOR TYPICAL SPACING OF TYPE III BARRICADES AND R11-2L "LANE CLOSED" SIGNS.

YIELD SIGN AND WARNING SIGNS ON ENTRANCE RAMP ARE ALSO APPROPRIATE FOR CLOSURE OF THE MAINLINE LEFT LANE. OMIT THE YIELD SIGN IF MORE THAN ONE LANE REMAINS OPEN ON THE MAINLINE AND THE RAMP TAPER IS AT LEAST AS LONG AS THE NORMAL ENTRANCE RAMP TAPER AT THE SITE.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONSECUTIVE DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS. USE SUPPORTS THAT PROVIDE A MINIMUM OF 5 FEET FROM THE BOTTOM OF THE SIGN TO THE PAVEMENT.

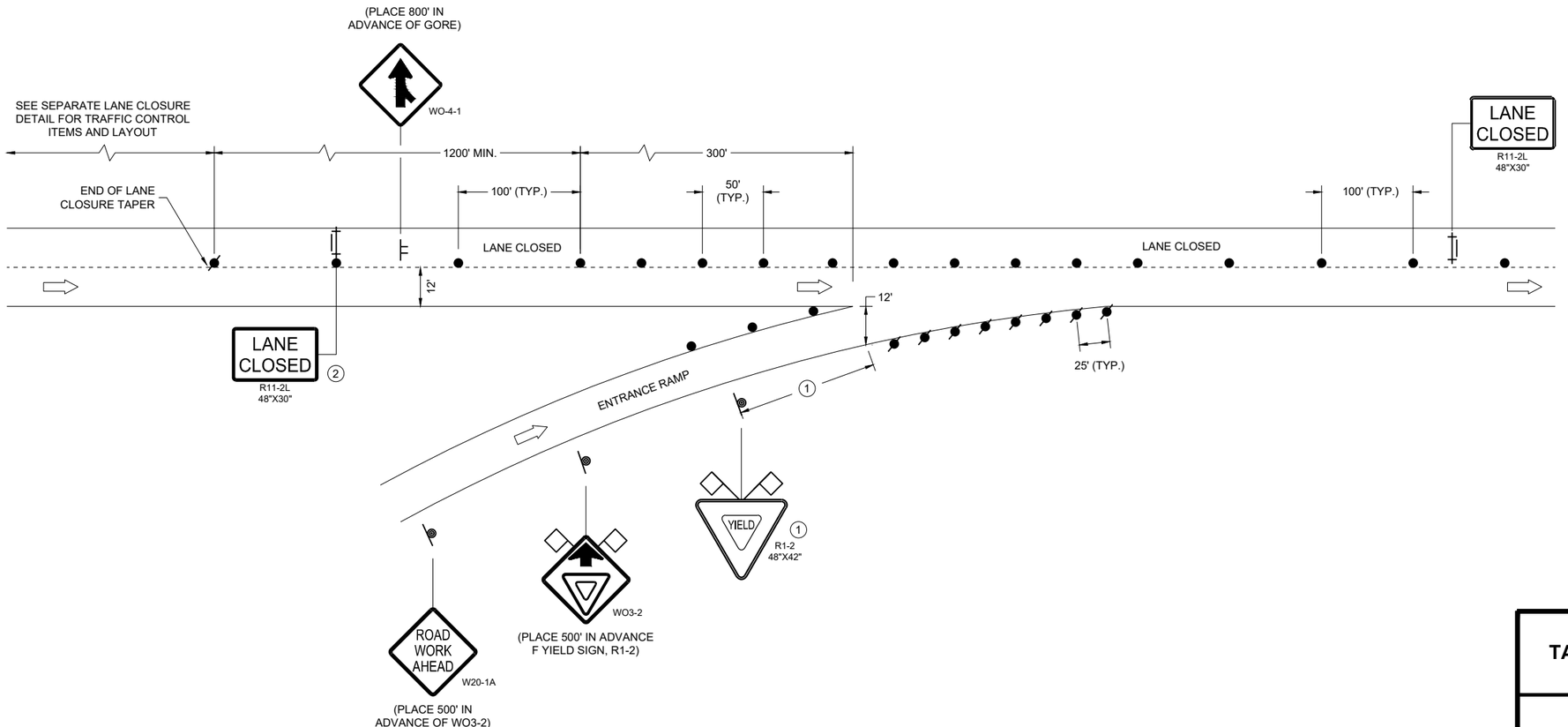
IF INDICATED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE FLEXIBLE TUBULAR MARKERS FOR DRUMS IN THE GORE BETWEEN THE ENTRANCE RAMP AND MAINLINE TRAFFIC.

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

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

(1) PLACE YIELD SIGN TO PROVIDE ADEQUATE SIGHT DISTANCE AND ACCELERATION DISTANCE.

(2) IF LOCATED AFTER INITIAL LANE CLOSURE BARRICADE AND "LANE CLOSED" SIGN, USE 3 DRUMS IN PLACE OF BARRICADE AND SIGN.



TRAFFIC CONTROL, TAPERED ENTRANCE RAMP WITHIN LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2025 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINEER

FHWA

6

SDD 15D15-08d

6

SDD 15D15-08d

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- SIGN ON PERMANENT SUPPORT
- TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC

GENERAL NOTES

THIS RAMP CLOSURE DETAIL IS TYPICAL FOR CLOSING A RIGHT SIDE EXIT RAMP. FOR A LEFT SIDE EXIT RAMP, REVERSE THE TRAFFIC CONTROL.

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

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

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

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

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

PLACE TEMPORARY PAVEMENT MARKING LINE IF RAMP CLOSURE IS TO BE IN PLACE 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

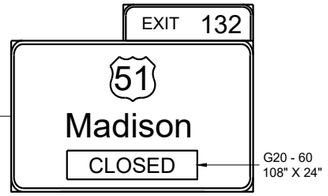
WORK AREAS WITH A DROP OFF ALONG THE EDGE OF AN OPEN TRAVEL LANE SHALL BE LEVELED WITH TEMPORARY FILL WHEN THE CONTRACTOR IS NOT WORKING ADJACENT TO THE TRAVEL LANE. DRUMS SHALL BE PLACED ENTIRELY OUTSIDE THE TRAVEL LANE, ALLOWING THE FULL UNOBSTRUCTED LANE WIDTH, WHEN WORK IS NOT IN PROGRESS.

WHERE MEDIAN BARRIER IS IN PLACE, SIGNS SHOWN ON LEFT SIDE OF ROADWAY MAY BE OMITTED FOR RIGHT SIDE RAMP CLOSURES OF LESS THAN 12 - HOUR DURATION.

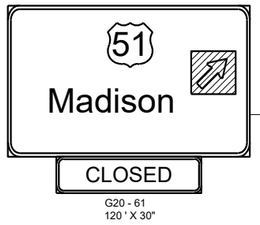
(1) W20 - 1A AND G20 - 2A SIGNS ARE NOT REQUIRED IF THE RAMP CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

(2) PLACE "RAMP CLOSED BEGINNING" SIGN OR PCMS 7 CALENDAR DAYS PRIOR TO CLOSURE OR AS DIRECTED BY THE ENGINEER. SEE WISCONSIN STANDARD SIGN PLATES FOR SIGN LAYOUT.

OR

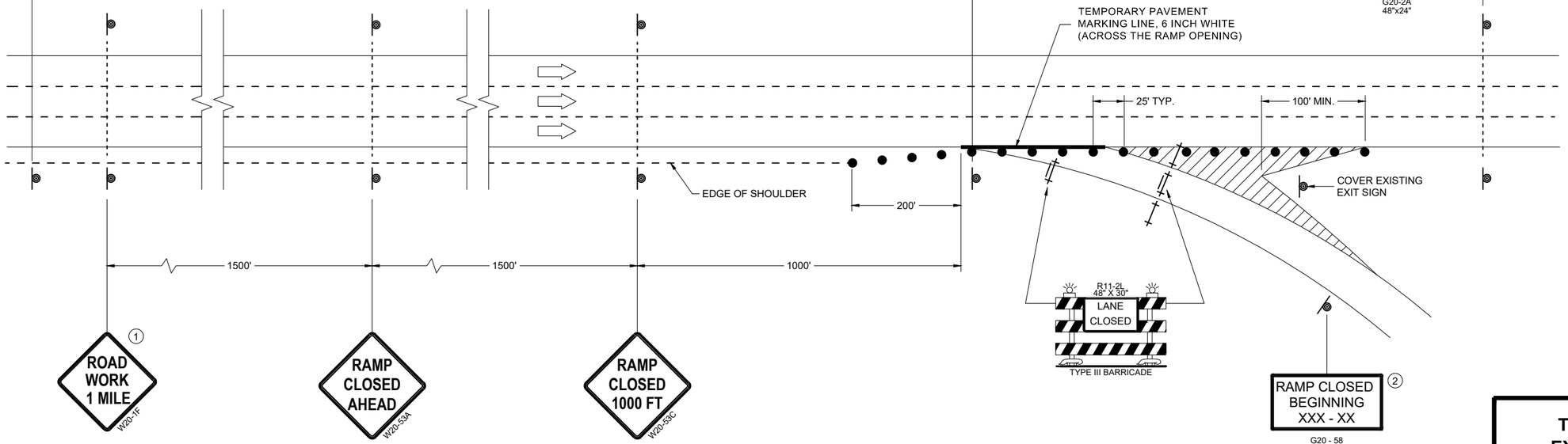


PLACE SIGN G20 - 60 OVER MILEAGE ON EXISTING E1 - 1A SIGN



COVER ARROW ON EXISTING E4 - 1 SIGN (COVERING SIGNS TYPE I)

G20 - 61
120 ' X 30"



FRAME 1	FRAME 2
RAMP TO CLOSE	XXXDAY XX XX XX

TRAFFIC CONTROL, EXIT RAMP CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2025 — DATE
/S/ Andrew Heidtke — <position>

FHWA

6
SDD 15D16-07

LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- REMOVING PAVEMENT MARKINGS
- DIRECTION OF TRAFFIC
- WORK AREA
- CONNECTED ARROW BOARD
- WZ START LOCATION MARKER
- WZ END LOCATION MARKER

GENERAL NOTES

FOR WORK ON ROADWAYS WITH SPEEDS GREATER THAN 45MPH, USE SDD 15D12.

THIS LANE CLOSURE DETAIL IS TYPICAL FOR CLOSING THE LEFT LANE. FOR A RIGHT LANE CLOSURE, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR ROADWAYS WITH EITHER TWO OR THREE LANES IN EACH DIRECTION.

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 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. NO WARNING LIGHTS SHALL BE WORKING ON COVERED OR "DOWNED" SIGNS.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE MAY BE MOUNTED ON TEMPORARY SUPPORTS.

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

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500' DESIRABLE) DISTANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE

W20-1A, G20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE LANE CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING LINE IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARDS SO THE APPROACHING DRIVER HAS A CLEAR VIEW OF THE ARROW BOARDS AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUMS.

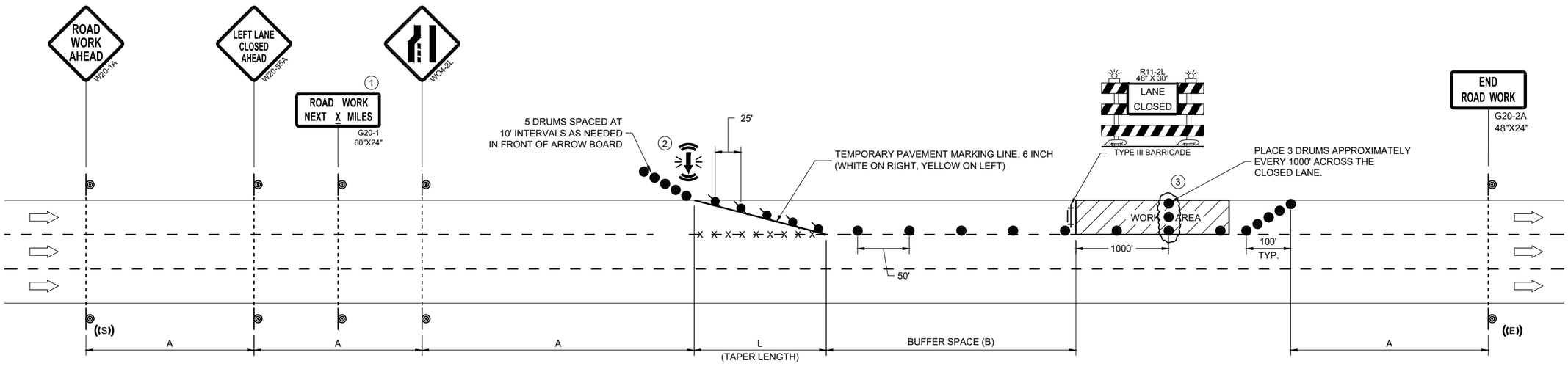
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

(1) OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.

(2) WHERE THE SHOULDER OR TERRACE HAS INSUFFICIENT SPACE TO PLACE THE ARROW BOARD AS SHOWN, PLACE THE ARROW BOARD AT THE END OF THE TAPER.

(3) DRUMS IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY REESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

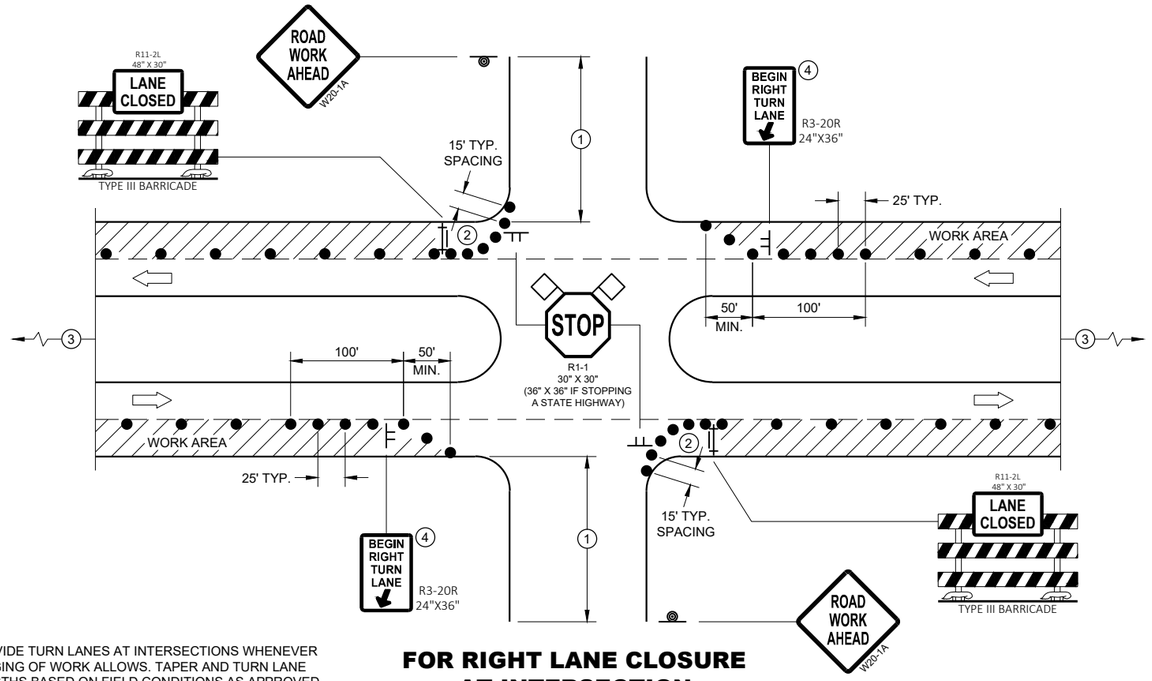


POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	TAPER LENGTH (12 FT. LANE) (L) FEET	BUFFER SPACE (B) FEET
25	200'	125'	155'
30	200'	180'	200'
35	350'	245'	250'
40	350'	320'	305'
45	500'	540'	360'

TRAFFIC CONTROL, SINGLE LANE CLOSURE, DIVIDED NON-FREEWAY/EXPRESSWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
SDD 15D20-12a



PROVIDE TURN LANES AT INTERSECTIONS WHENEVER STAGING OF WORK ALLOWS. TAPER AND TURN LANE LENGTHS BASED ON FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

FOR RIGHT LANE CLOSURE AT INTERSECTION

GENERAL NOTES

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

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON COVERED OR "DOWNED" SIGNS.

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

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500' DESIRABLE) DISTANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

SIGNS THAT WILL REMAIN IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

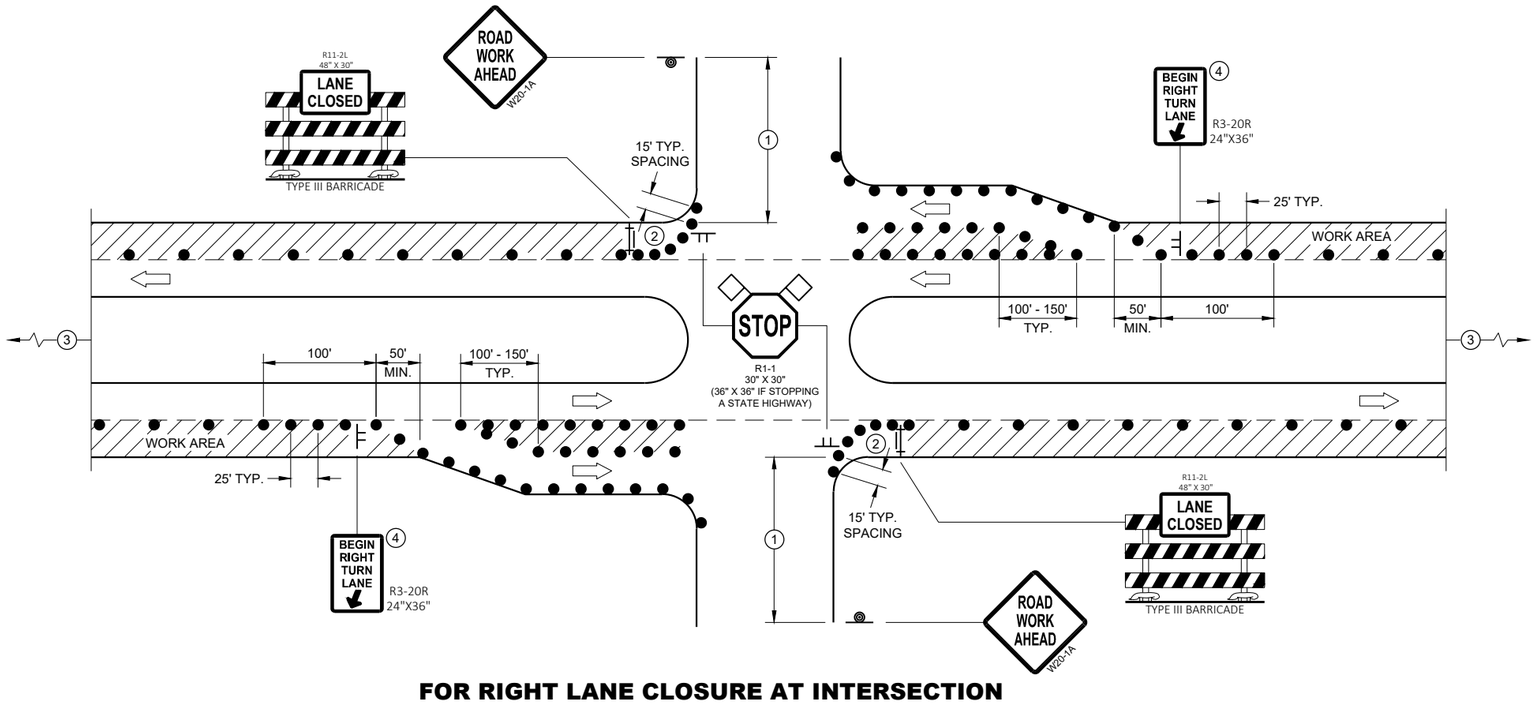
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

(1) 500' TYPICAL OR AT LAST INTERSECTION, WHICHEVER IS CLOSER.
350' IF 35 - 40 MPH.
200' IF 25 - 30 MPH.

(2) ALSO USE BARRICADE AND 15 FOOT TYPICAL DRUM SPACING AT COMMERCIAL DRIVEWAYS

(3) SEE SEPARATE LANE CLOSURE DETAIL FOR ADDITIONAL TRAFFIC CONTROL.

(4) MINIMUM MOUNTING HEIGHT OF 5 FEET FROM EDGE OF PAVEMENT (AT EDGE LINE LOCATION) TO BOTTOM OF SIGN.



FOR RIGHT LANE CLOSURE AT INTERSECTION (WITH RIGHT TURN BAY OPEN)

LEGEND

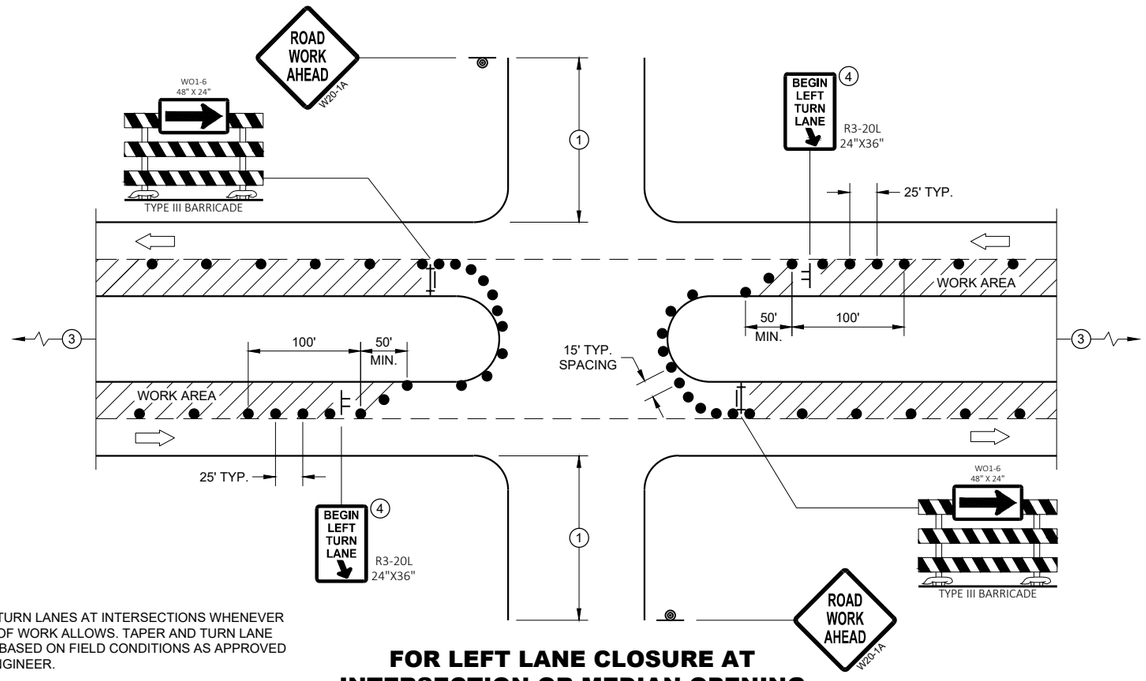
- SIGN ON TEMPORARY SUPPORT
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TYPE III BARRICADE WITH ATTACHED SIGN
- DIRECTION OF TRAFFIC
- FLAGS, 16" X 16" MIN., ORANGE
- WORK AREA

TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE RIGHT LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 15D21 - 07a



PROVIDE TURN LANES AT INTERSECTIONS WHENEVER STAGING OF WORK ALLOWS. TAPER AND TURN LANE LENGTHS BASED ON FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

FOR LEFT LANE CLOSURE AT INTERSECTION OR MEDIAN OPENING

GENERAL NOTES

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

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON COVERED OR "DOWNED" SIGNS.

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

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500' DESIRABLE) DISTANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

SIGNS THAT WILL REMAIN IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

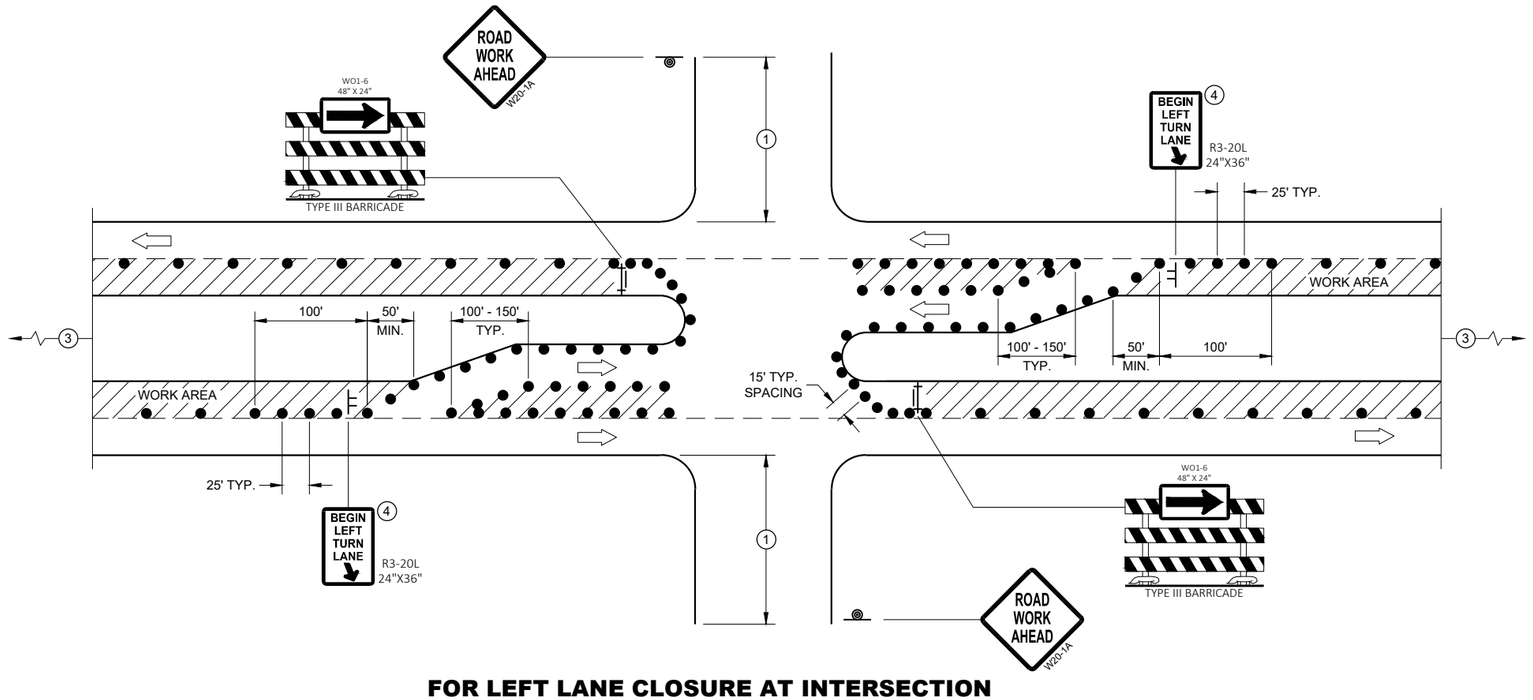
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

(1) 500' TYPICAL OR AT LAST INTERSECTION, WHICHEVER IS CLOSER.
350' IF 35 - 40 MPH.
200' IF 25 - 30 MPH.

(2) ALSO USE BARRICADE AND 15 FOOT TYPICAL DRUM SPACING AT COMMERCIAL DRIVEWAYS

(3) SEE SEPARATE LANE CLOSURE DETAIL FOR ADDITIONAL TRAFFIC CONTROL.

(4) MINIMUM MOUNTING HEIGHT OF 5 FEET FROM EDGE OF PAVEMENT (AT EDGE LINE LOCATION) TO BOTTOM OF SIGN.



FOR LEFT LANE CLOSURE AT INTERSECTION OR MEDIAN OPENING (WITH LEFT TURN BAY OPEN)

LEGEND

- SIGN ON TEMPORARY SUPPORT
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TYPE III BARRICADE WITH ATTACHED SIGN
- DIRECTION OF TRAFFIC
- FLAGS, 16" X 16" MIN., ORANGE
- WORK AREA

TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LEFT LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
August 2020
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

6

SDD 15D21 - 07b

6

SDD 15D21 - 07b

LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- DIRECTION OF TRAFFIC
- CONNECTED ARROW BOARD
- WORK AREA
- (S) WZ START LOCATION MARKER
- (E) WZ END LOCATION MARKER

GENERAL NOTES

THIS DETAIL IS TYPICAL FOR CLOSING THE RIGHT SHOULDER. FOR CLOSING THE LEFT SHOULDER, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR DIVIDED ROADWAYS WITH ANY NUMBER OF TRAVEL LANES.

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.

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

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

WHEN A RAMP OR SIDE ROAD INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

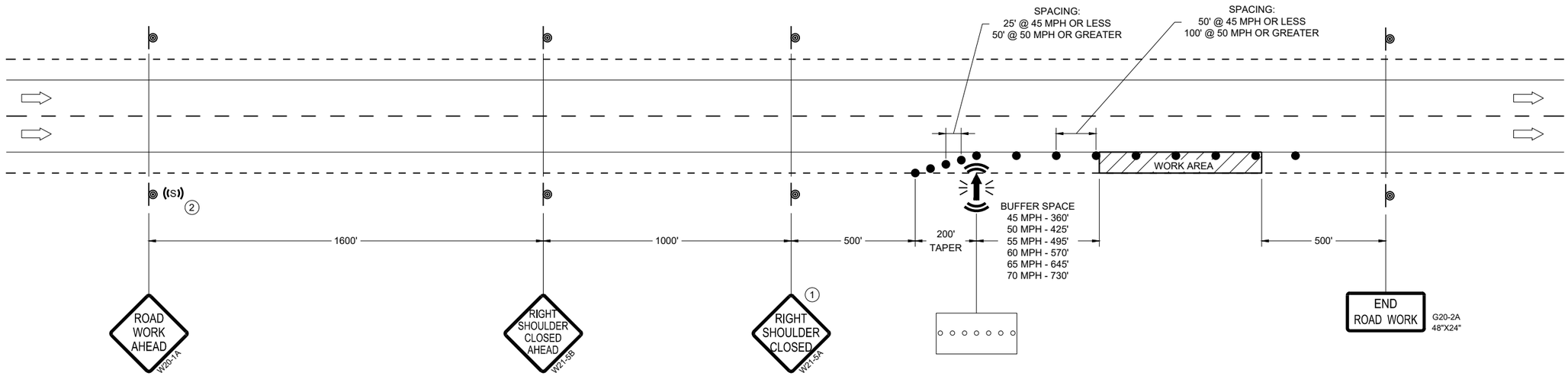
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

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

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

(1) FOR SHORT DURATION SHOULDER WORK OF LESS THAN ONE HOUR THE W21-5A SIGN MAY BE OMITTED.

(2) IF ALREADY PRESENT WITHIN PROJECT , DO NOT INCLUDE ADDITIONAL DEVICE.



TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH

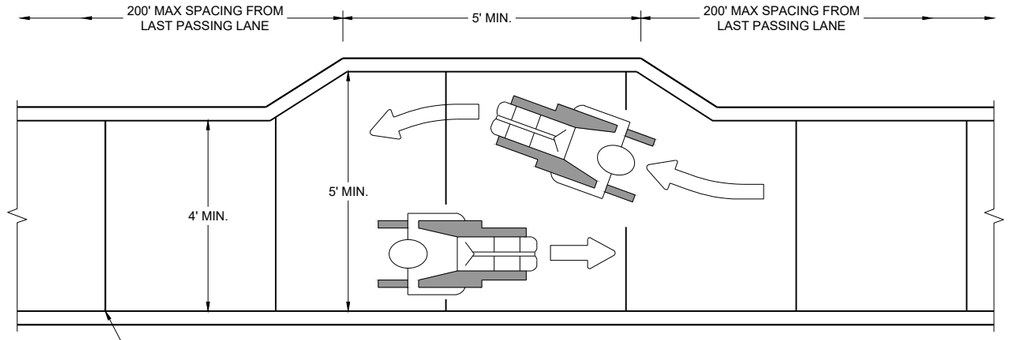
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2026
DATE

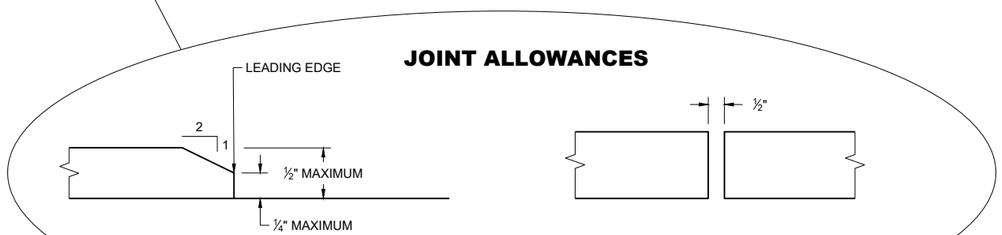
/S/ Andrew Heidtke
STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER

FHWA

6
SDD 15D27-06



NARROW SIDEWALK PASSING DETAIL



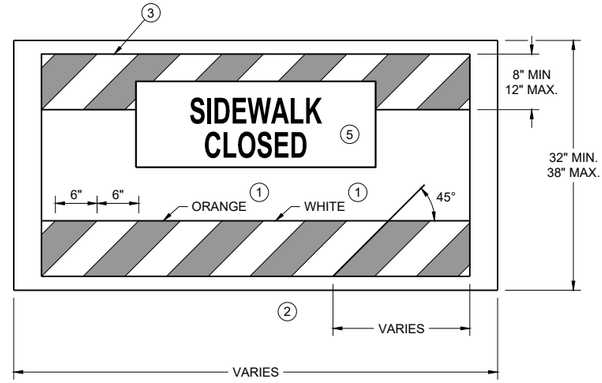
MAXIMUM VERTICAL GAP

MAXIMUM HORIZONTAL GAP

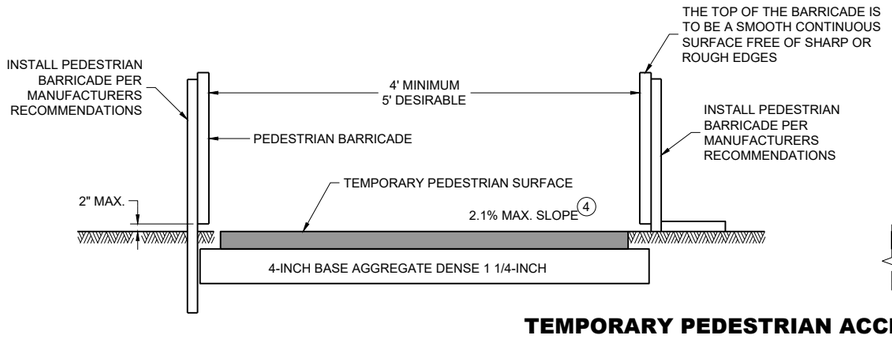
GENERAL NOTES

BARRICADE DEVICE SELECTED FROM APPROVED PRODUCT LIST

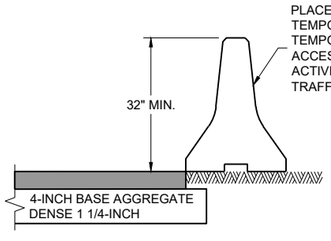
1. REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.
2. SHEETING REQUIRED ON MORE THAN 50% OF BARRICADE WIDTH.
3. PLACE SHEETING ON BOTH SIDES OF THE BARRICADE.
* USE THIS DETAIL FOR SHEETING PLACEMENT REFERENCE.
4. WHEN THE TEMPORARY PEDESTRIAN ACCESS ROUTE RUNS PARALLEL ON THE ROADWAY SURFACE, THE MAXIMUM CROSS SLOPE WILL MATCH THE EXISTING ROADWAY CROSS SLOPE.
5. WHERE SIGNS FOR TEMPORARY PEDESTRIAN ACCOMMODATIONS ARE SHOWN BEING PLACED BEHIND TEMPORARY PEDESTRIAN BARRICADE, THE SIGNS MAY BE MOUNTED ON THE TEMPORARY PEDESTRIAN BARRICADE INSTEAD. A CORRUGATED POLYPROPYLENE OR POLYETHYLENE PLASTIC SIGN BASE SHALL BE USED IF MOUNTED ON THE BARRICADE. THE TOP OF THE SIGN SHALL BE MOUNTED BELOW THE TOP OF THE BARRICADE TO ALLOW A CONTINUOUS HAND-TRAILING EDGE.



TEMPORARY PEDESTRIAN BARRICADE *



TEMPORARY PEDESTRIAN ACCESS



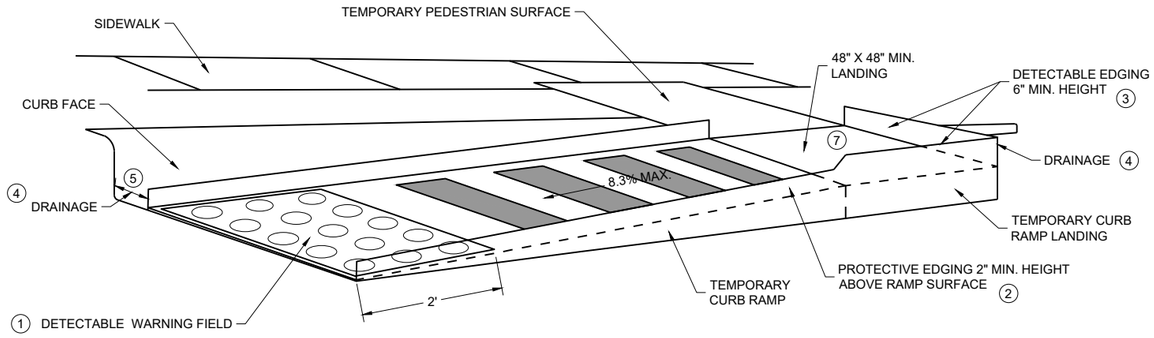
TEMPORARY PEDESTRIAN FLAGGING

LEGEND

- TEMPORARY PEDESTRIAN BARRICADE
- AUDIBLE MESSAGE DEVICE
- TEMPORARY SIGN SUPPORT
- WORK AREA

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



PERSPECTIVE VIEW

GENERAL NOTES

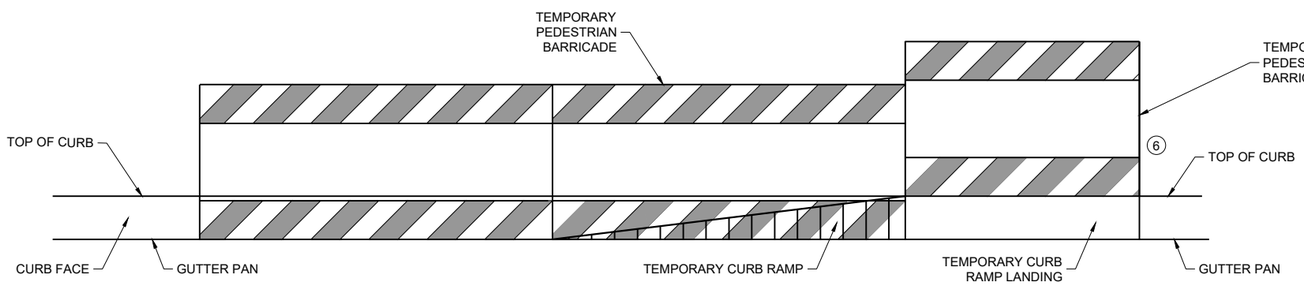
CURB RAMPS SHALL BE 48" MIN. WIDTH WITH A FIRM, STABLE AND SLIP RESISTANT SURFACE.

CURB RAMPS AND LANDINGS SHALL HAVE A 1:48 (2.1%) MAX. CROSS-SLOPE.

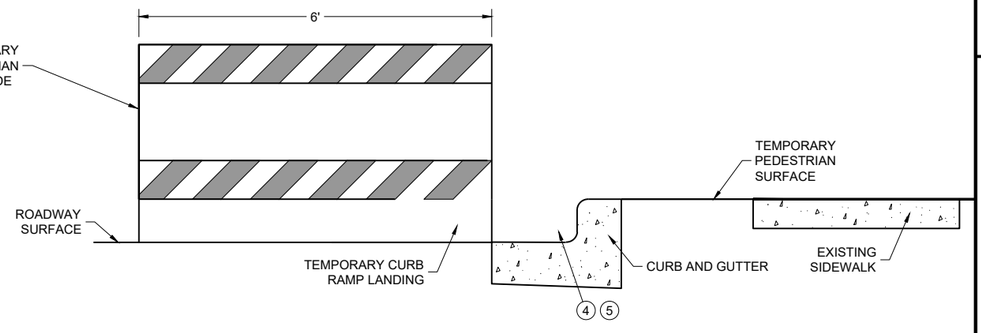
CLEAR SPACE OF 48" X 48" SHALL BE PROVIDED ABOVE AND BELOW THE CURB RAMP. LATERAL JOINTS OR GAPS BETWEEN SURFACES SHALL BE LESS THAN ½" WIDTH.

CHANGES BETWEEN SURFACE HEIGHTS SHALL NOT EXCEED ½". LATERAL EDGES MAY BE VERTICAL UP TO ¼" HIGH AND SHALL BE BEVELED AT 1:2 BETWEEN ¼" AND ½".

1. INSTALL CONTRASTING TEMPORARY DETECTABLE WARNING FIELD AT PEDESTRIAN STREET CROSSINGS, AS SHOWN IN THE PLANS.
2. PROTECTIVE EDGING WITH A 2" MIN. HEIGHT SHALL BE INSTALLED WHEN A CURB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6" OR GREATER OR HAS A SIDE APRON SLOPE STEEPER THAN 1:3 (33%). PROTECTIVE EDGING SHOULD BE CONSIDERED WHEN CURB RAMPS OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3" OR MORE.
3. DETECTABLE EDGING WITH 6" MIN. HEIGHT AND CONTRASTING COLOR SHALL BE INSTALLED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS).
4. DO NOT RESTRICT WATER FLOW IN THE GUTTER SYSTEM.
5. ENSURE CURB RAMP IS OUT OF THE GUTTER PAN.
6. IF ONLY PART OF THE END PANEL OF TEMPORARY PEDESTRIAN BARRICADE PANEL IS NEEDED, EXTEND EXCESS PORTION OF TEMPORARY PEDESTRIAN BARRICADE PANEL HERE.
7. LANDING TO BE SLOPED A MAXIMUM OF 2.1% IN ALL DIRECTIONS OF PEDESTRIAN TRAVEL.



FRONT VIEW



SIDE VIEW

TEMPORARY CURB RAMP PARALLEL TO CURB

6

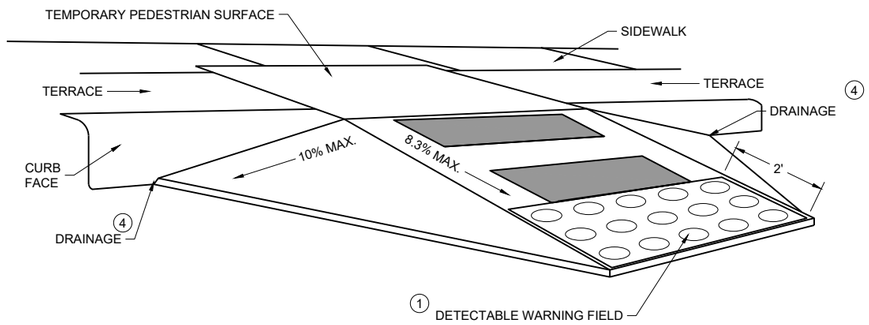
SDD 15D30-12b

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

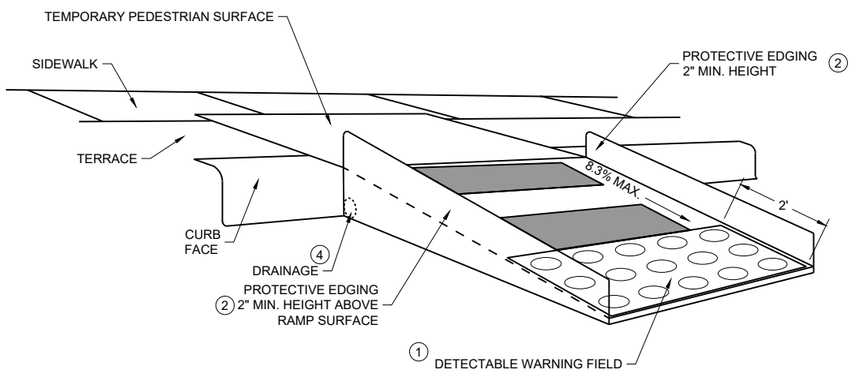
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 15D30-12b



WITH SIDE APRON (5)



WITH PROTECTIVE EDGE

TEMPORARY CURB RAMP PERPENDICULAR TO CURB

GENERAL NOTES

CURB RAMPS SHALL BE 48" MINIMUM WIDTH WITH A FIRM, STABLE AND SLIP RESISTANT SURFACE.

ALTERNATE SIDEWALK WORK BETWEEN LEFT AND RIGHT SIDE OF ROADWAY TO MAINTAIN PEDESTRIAN ACCESS.

CURB RAMPS AND LANDINGS SHALL HAVE A 1:48 (2.1%) MAX. CROSS-SLOPE.

CLEAR SPACE OF 48" X 48" SHALL BE PROVIDED ABOVE AND BELOW THE CURB RAMP.

LATERAL JOINTS OR GAPS BETWEEN SURFACES SHALL BE LESS THAN ½" WIDTH.

CHANGES BETWEEN SURFACE HEIGHTS SHALL NOT EXCEED ½". LATERAL EDGES MAY BE VERTICAL UP TO ¼" HIGH AND SHALL BE BEVELED AT 1:2 BETWEEN ¼" AND ½".

(1) INSTALL CONTRASTING TEMPORARY DETECTABLE WARNING FIELD AT PEDESTRIAN STREET CROSSINGS, AS SHOWN IN THE PLANS

(2) PROTECTIVE EDGING WITH A 2" MIN. HEIGHT SHALL BE INSTALLED WHEN A CURB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6" OR GREATER OR HAS A SIDE APRON SLOPE STEEPER THAN 1:3 (33%). PROTECTIVE EDGING SHOULD BE CONSIDERED WHEN CURB RAMPS OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3" OR MORE.

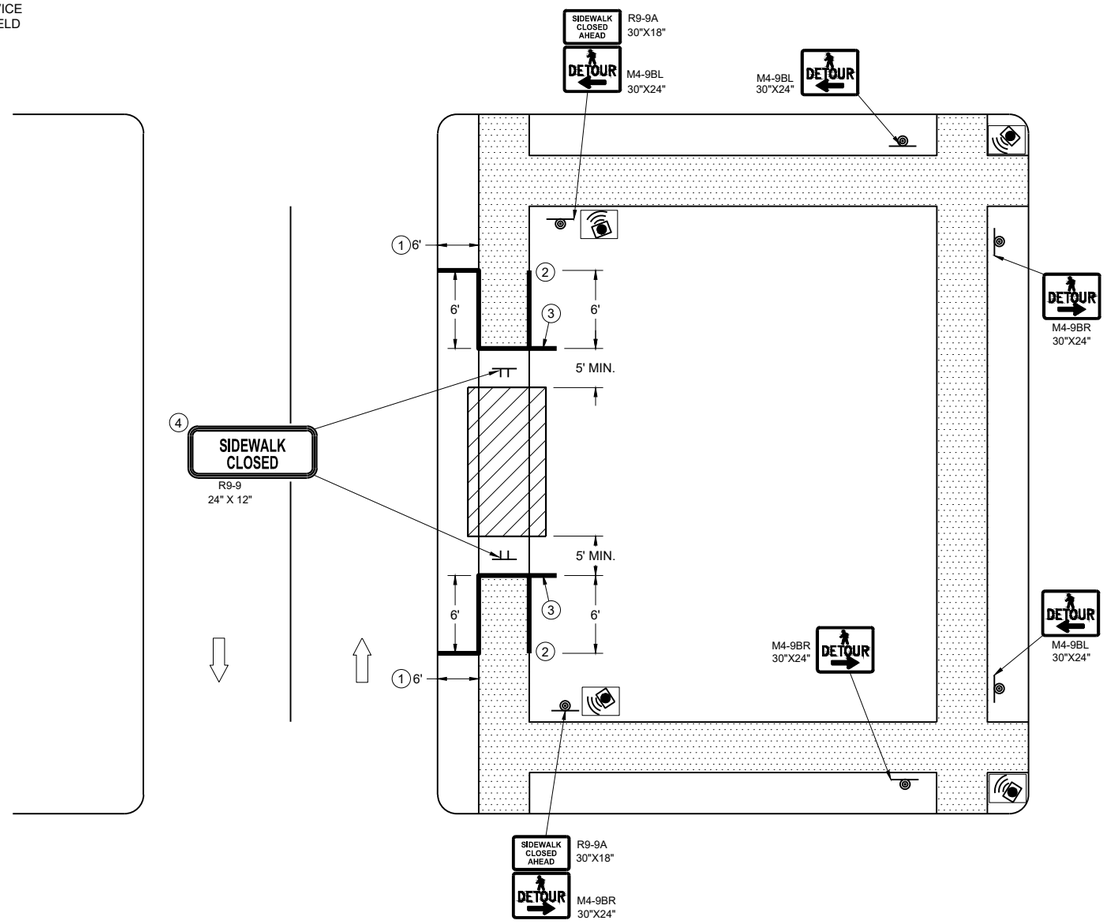
(3) DETECTABLE EDGING WITH 6" MIN. HEIGHT AND CONTRASTING COLOR SHALL BE INSTALLED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS).

(4) DO NOT RESTRICT WATER FLOW IN THE GUTTER SYSTEM.

(5) CAN ONLY BE USED FOR RAMPS WITH 6" OR LESS OF VERTICAL CHANGE.

LEGEND

- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- UNDER PEDESTRIAN TRAFFIC
- WORK AREA
- TEMPORARY PEDESTRIAN BARRICADE
- DIRECTION OF TRAFFIC
- TEMPORARY AUDIBLE MESSAGE DEVICE (EXACT PLACEMENT BASED UPON FIELD CONDITIONS)



SIDEWALK DETOUR, SIDEWALK ONLY ON ONE SIDE

GENERAL NOTES

WHERE TEMPORARY BARRICADE RUNS PARALLEL ALONG SIDEWALK, PLACE THE FACE OF THE BARRICADE AT THE EDGE OF THE SIDEWALK.

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

PLACE TEMPORARY PEDESTRIAN BARRICADE TO FIT FIELD CONDITIONS, AVOIDING CONFLICTS WITH DRIVEWAYS AND OTHER EXISTING FEATURES.

1. IF TERRACE IS LESS THAN 6 FEET WIDE, OMIT TEMPORARY PEDESTRIAN BARRICADE FROM THE SIDEWALK TO THE CURB.
2. PLACE BARRICADE CLOSURE SO THAT THE TEMPORARY PEDESTRIAN BARRICADE END IS AT THE LAST OPEN SIDEWALK ACCESS TO RESIDENCES OR BUSINESSES BEFORE THE SIDEWALK CLOSURE.
3. IF TEMPORARY PEDESTRIAN BARRICADE PANEL IS WIDER THAN THE SIDEWALK WIDTH, THE PORTION OF EXCESS PANEL SHOULD EXTEND INTO THE TERRACE.
4. MOUNTING HEIGHT OF 5 FEET FROM THE SURFACE TO THE BOTTOM OF SIGN.

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

LEGEND

- SIGN ON TEMPORARY SUPPORT
- WORK AREA
- UNDER PEDESTRIAN TRAFFIC
- TEMPORARY PEDESTRIAN SURFACE
- TEMPORARY PEDESTRIAN BARRICADE
- OPTIONAL TEMPORARY PEDESTRIAN BARRICADE
- DIRECTION OF TRAFFIC

GENERAL NOTES

TYPICAL TEMPORARY PEDESTRIAN BARRICADE PANEL IS 6 FEET LONG.

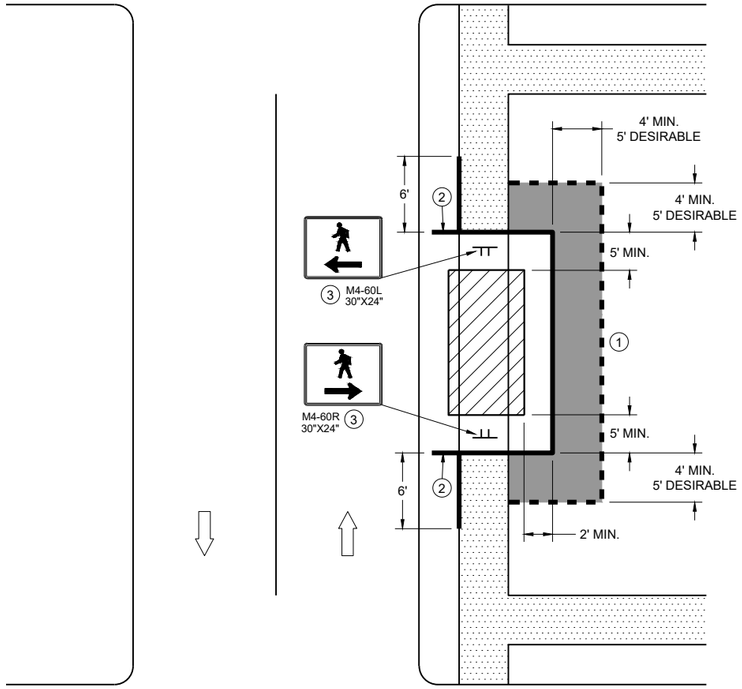
WHERE TEMPORARY BARRICADE RUNS PARALLEL ALONG SIDEWALK, PLACE THE FACE OF THE BARRICADE AT THE EDGE OF THE SIDEWALK.

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

(1) USE TEMPORARY PEDESTRIAN BARRICADE TO SEPARATE PEDESTRIANS FROM DROP OFFS OR FOR ADDITIONAL PEDESTRIAN CHANNELIZATION.

(2) IF TEMPORARY PEDESTRIAN BARRICADE PANEL IS WIDER THAN THE SIDEWALK WIDTH, THE PORTION OF EXCESS PANEL SHOULD EXTEND INTO THE TERRACE.

(3) MOUNTING HEIGHT OF 5 FEET FROM THE SURFACE TO THE BOTTOM OF SIGN.



SIDEWALK BYPASS
SINGLE SIDE

6

SDD 15D30-12g

TRAFFIC CONTROL,
PEDESTRIAN ACCOMMODATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

LEGEND

- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC
- WORK AREA
- REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)
- CONCRETE BARRIER TEMPORARY PRECAST

GENERAL NOTES

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

THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET, (500 FEET DESIRABLE) DISTANCE TO EXISTING SIGNS.

THIS LANE CLOSURE IS TYPICAL FOR LANE SHIFT LEFT - REVERSE FOR SHIFTING RIGHT.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON ANY "COVERED" OR "DOWNED" SIGNS.

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARDS SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUMS.

FOR A LANE CLOSURE THAT IS IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING LINES IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

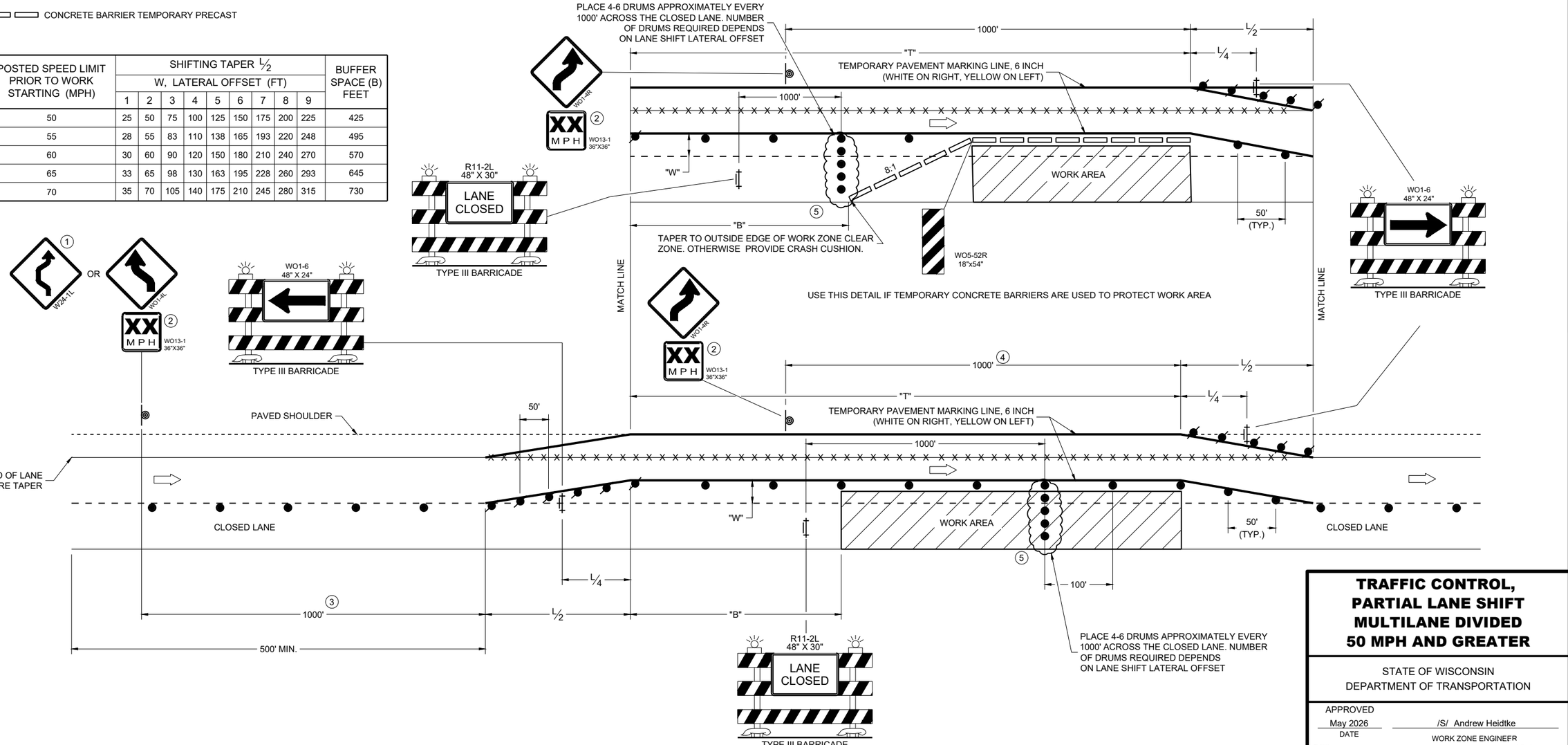
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE SHIFT OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP. THE LANE SHIFT MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE 1/2 THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.

1. USE ONLY WHEN T<600', OMIT WO1-4R.
2. IF NEEDED, USE ONLY IF DESIGN SPEED IS 10 MPH BELOW POSTED SPEED.
3. IF THE BEGINNING OF LANE SHIFT TAPER IS 1200 FEET OR LESS FROM END OF LANE CLOSURE TAPER, PLACE THE WO1-4L SIGN 200 FEET AFTER THE END OF THE LANE CLOSURE TAPER.
4. IF THE BEGINNING OF THE SECOND LANE SHIFT TAPER IS 1200 FEET OR LESS FROM END OF THE FIRST LANE CLOSURE TAPER, PLACE THE WO1-4L SIGN 200 FEET AFTER THE END OF THE FIRST LANE CLOSURE TAPER.
5. DRUMS IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY REESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	SHIFTING TAPER 1/2 W, LATERAL OFFSET (FT)									BUFFER SPACE (B) FEET
	1	2	3	4	5	6	7	8	9	
50	25	50	75	100	125	150	175	200	225	425
55	28	55	83	110	138	165	193	220	248	495
60	30	60	90	120	150	180	210	240	270	570
65	33	65	98	130	163	195	228	260	293	645
70	35	70	105	140	175	210	245	280	315	730



TRAFFIC CONTROL, PARTIAL LANE SHIFT MULTILANE DIVIDED 50 MPH AND GREATER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2026
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

6
SDD 15D40-08d

LEGEND

- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- REMOVING PAVEMENT MARKINGS
- DIRECTION OF TRAFFIC
- WORK AREA
- CONNECTED ARROW BOARD
- WZ START LOCATION MARKER
- WZ END LOCATION MARKER

GENERAL NOTES

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

THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS.

THIS LANE CLOSURE IS TYPICAL FOR CLOSING RIGHT LANE - REVERSE FOR CLOSING LEFT LANE.

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

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED OR AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON "COVERED" OR "DOWNED SIGNS.

FOR A LANE CLOSURE THAT IS IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

CONSIDER ROADWAY GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS.

WHEN A RAMP INTERSECTS THE FACILITY ON WHICH WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS DIRECTED BY THE ENGINEER.

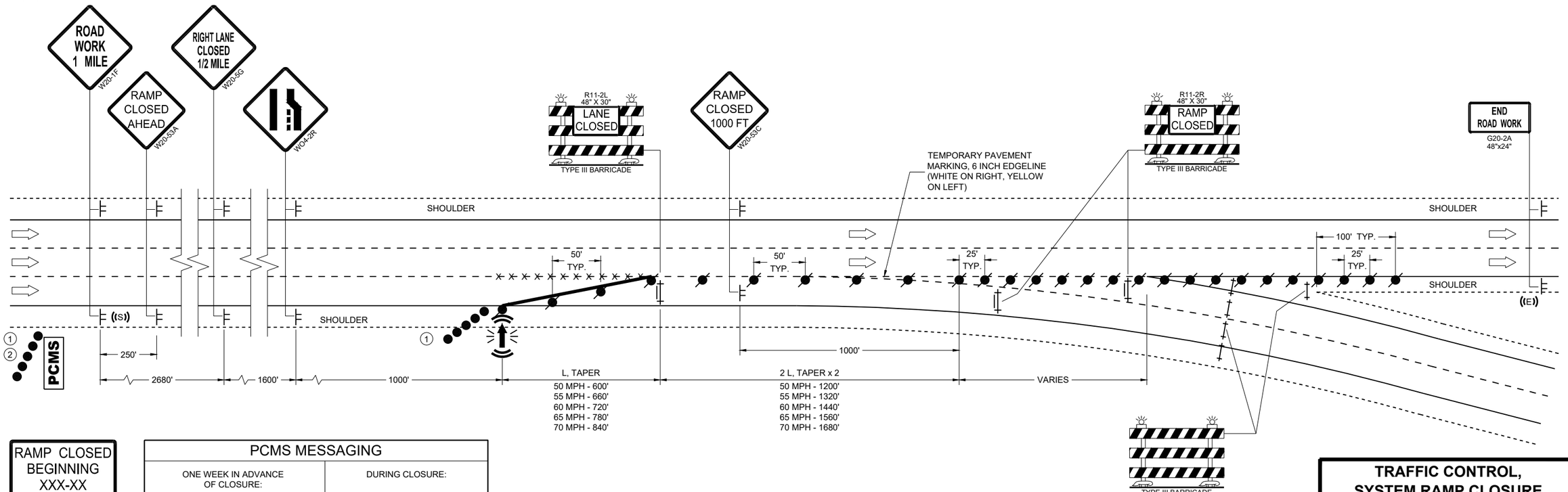
REMOVE ALL ARROW BOARDS AND DEVICES BEYOND THE SHOULDER WHEN THE WORK IS NOT IN PROGRESS.

REFER TO SDD 15C2 FOR SETTING DETOUR SIGNAGE.

ADD FREEWAY SHIELD AND DIRECTION IF APPLICABLE. COVER EXISTING RAMP AND LANE SIGNS IF APPLICABLE.

(1) 5 DRUMS SPACED AT 10 FOOT INTERVALS.

(2) DURING THE PRE-WARNING PERIOD, PLACE THE PCMS AT THE SYSTEM RAMP THAT IS TO BE CLOSED. DURING CLOSURE PERIOD, PLACE PCMS OR FMS AT LAST AVAILABLE EXIT IN ADVANCE OF SYSTEM RAMP CLOSURE. IF DYNAMIC MESSAGE SIGNS (DMS) ARE AVAILABLE, COORDINATE POTENTIAL SIGN MESSAGES WITH THE TRAFFIC MANAGEMENT CENTER (TMC).



SEE SDD 15C2 (SHEET "b"), DETAIL "D" "BARRICADES AND SIGNS FOR MAINLINE CLOSURES" PLACE BARRICADES TO FULLY SEAL OFF ROAD

RAMP CLOSED BEGINNING XXX-XX
G20-58

PCMS MESSAGING

ONE WEEK IN ADVANCE OF CLOSURE:

FRAME 1	FRAME 2
RAMP TO CLOSE	XXXDAY XX XX XX

DURING CLOSURE:

FRAME 1	FRAME 2
HWY XX RAMP CLOSED	USE ALT ROUTE

TRAFFIC CONTROL, SYSTEM RAMP CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2025 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINEER

FHWA

6

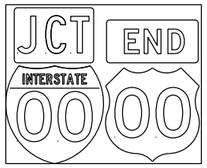
SDD 15D49-05

6

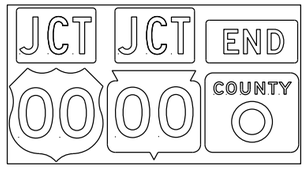
SDD 15D49-05

TYPICAL ASSEMBLIES

J1-1



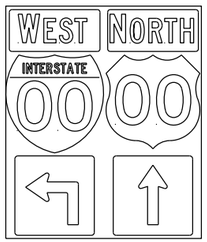
J1-2



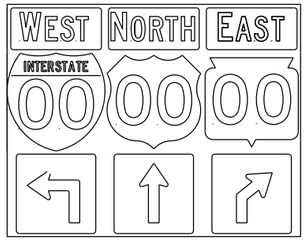
J1-3

JR1-1

J2-1

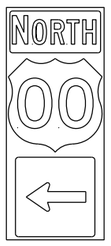


J2-2

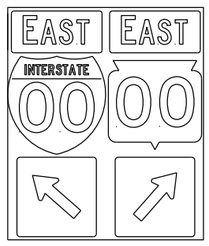


J2-3

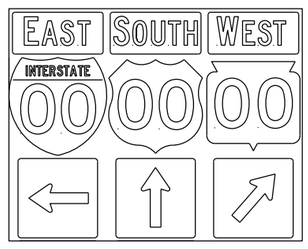
JV
(Typical Vertical J-Assembly
See Note 10 and 11)



J3-1

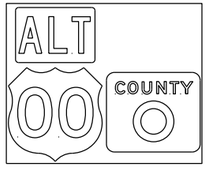


J3-2

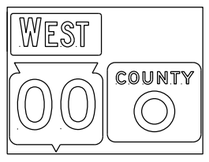


J3-3

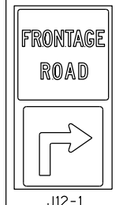
J4-1



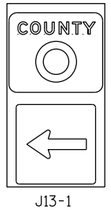
J4-2



J4-2



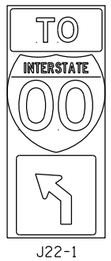
J12-1



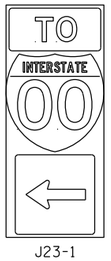
J13-1

J32-1

J33-1



J22-1

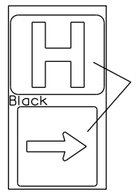


J23-1

JR13-1

JR23-1

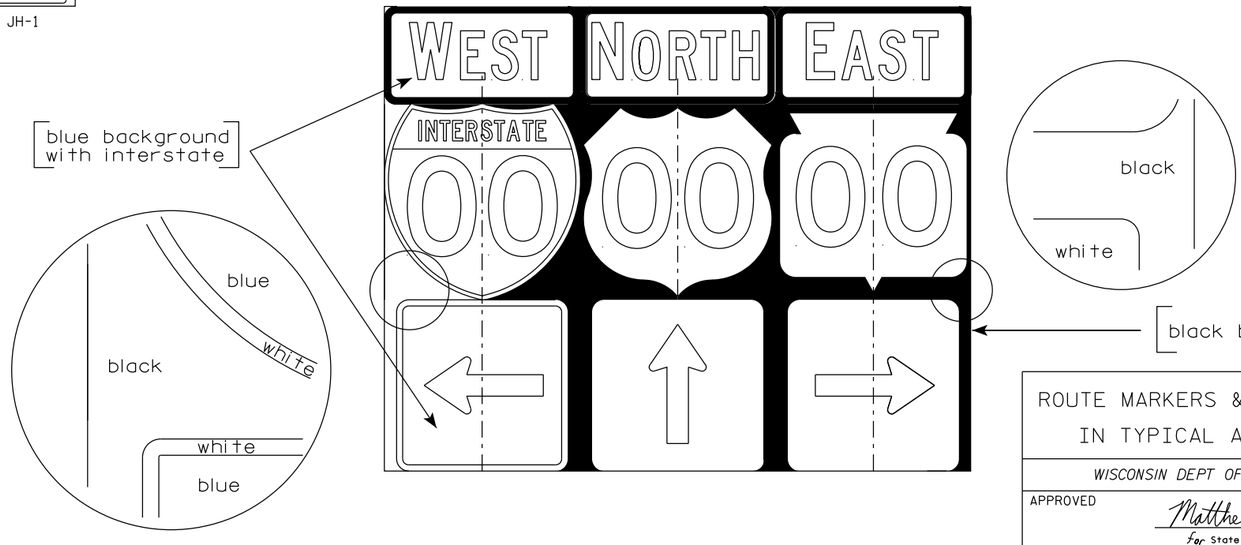
JR99-1



JH-1

NOTES

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



ROUTE MARKERS & COMPONENTS IN TYPICAL ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

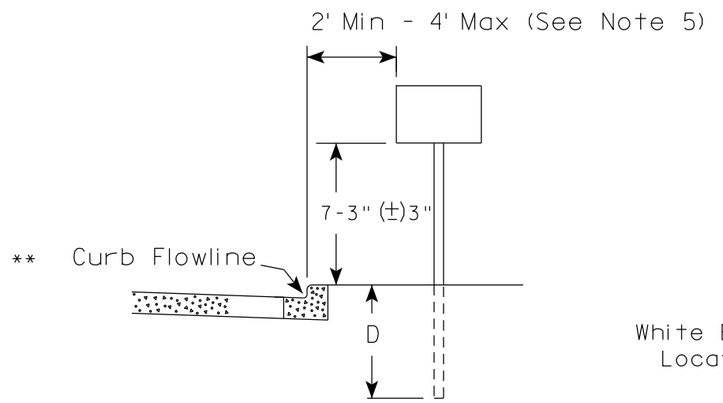
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/7/23 PLATE NO. A2-1S.10

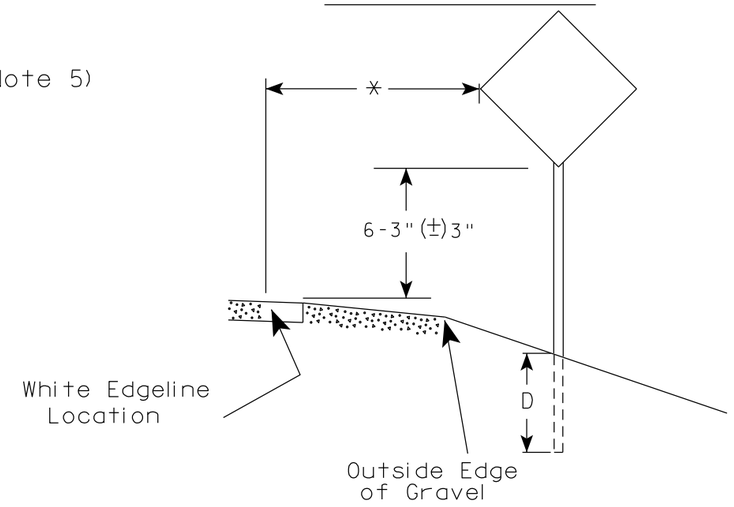
PROJECT NO:

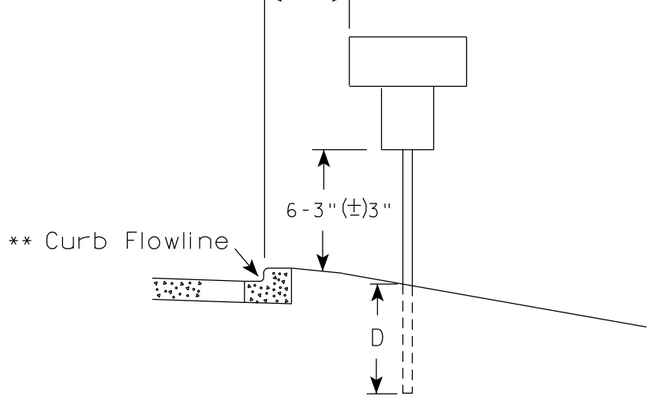
SHEET NO: 423 E

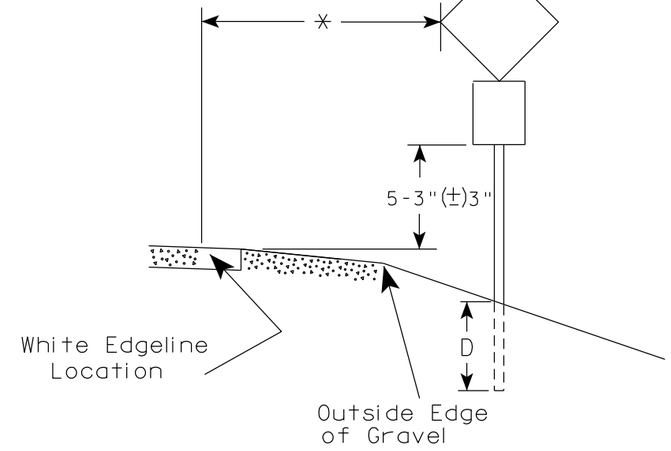
URBAN AREA



RURAL AREA (See Note 2)







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

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

POST EMBEDMENT DEPTH

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

GENERAL NOTES

1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on or behind barrier wall, see A4-10 sign plate.
   The Double Arrow sign (W12-1D) shall be mounted at a height of 2'-3" (±) 3". The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±) 3".
3. For expressways and freeways, mounting height is 7'- 3" (±) 3" or 6'-3" (±) 3" depending upon existence of a sub-sign.
4. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±) 3".
5. Offset distance shall be consistent with existing signs or consistent throughout length of project.
6. Folding signs shall be mounted at a height of 5'-3" (±) 3" or as directd by the Engineer.

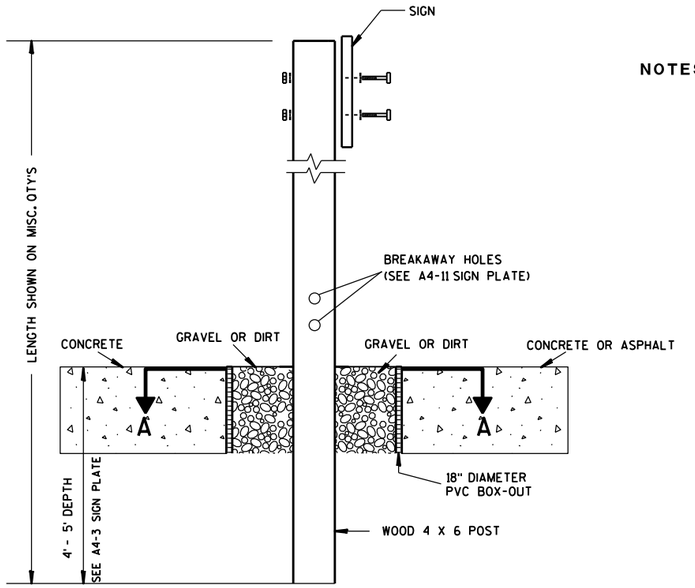
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

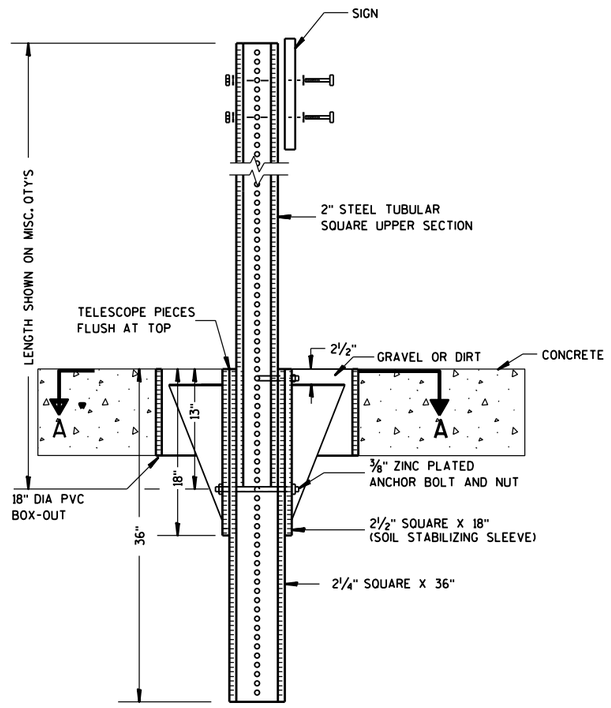
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 424	E



ELEVATION VIEW

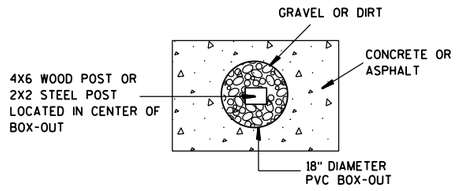
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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

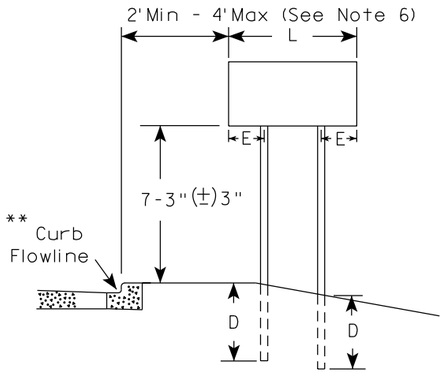
APPROVED Matthew R Rauch
for State Traffic Engineer

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

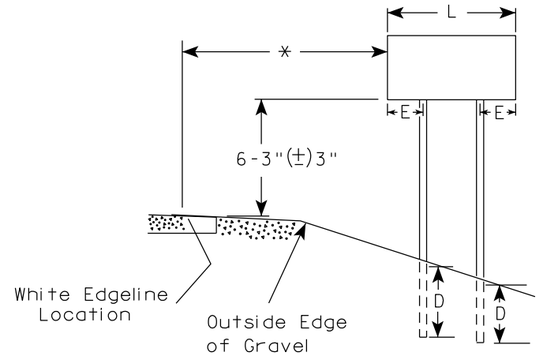
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

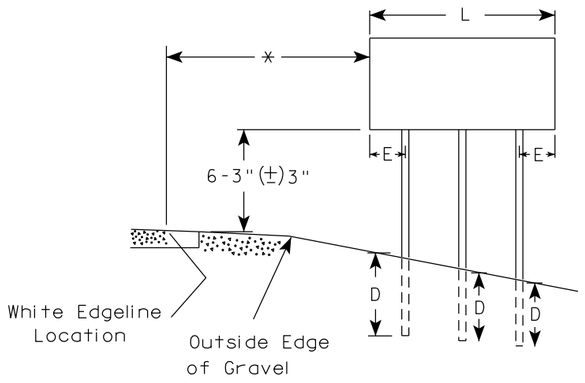
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

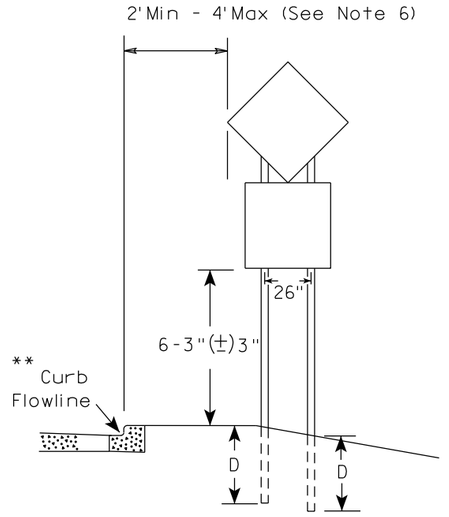
URBAN AREA



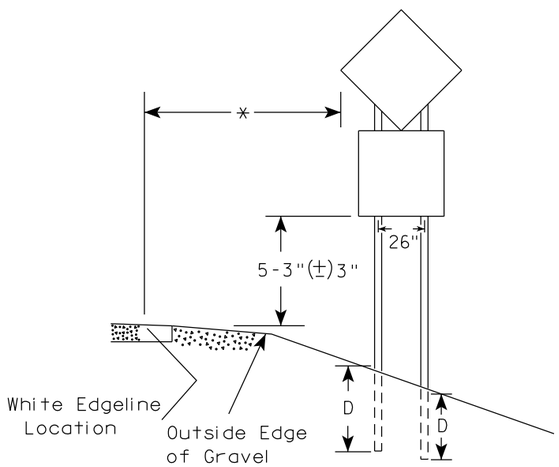
RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN



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'

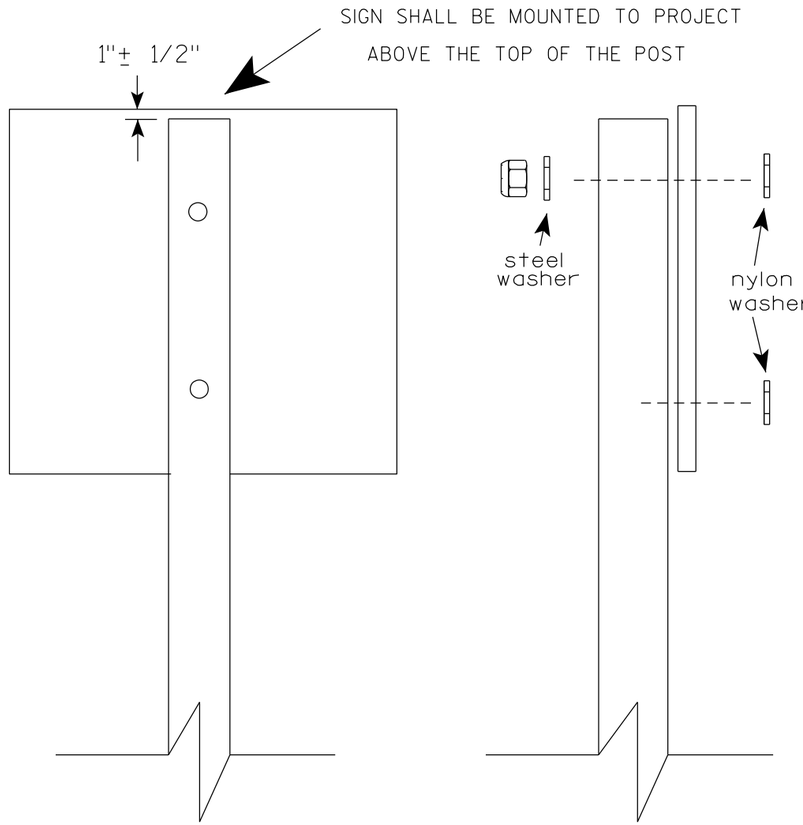
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

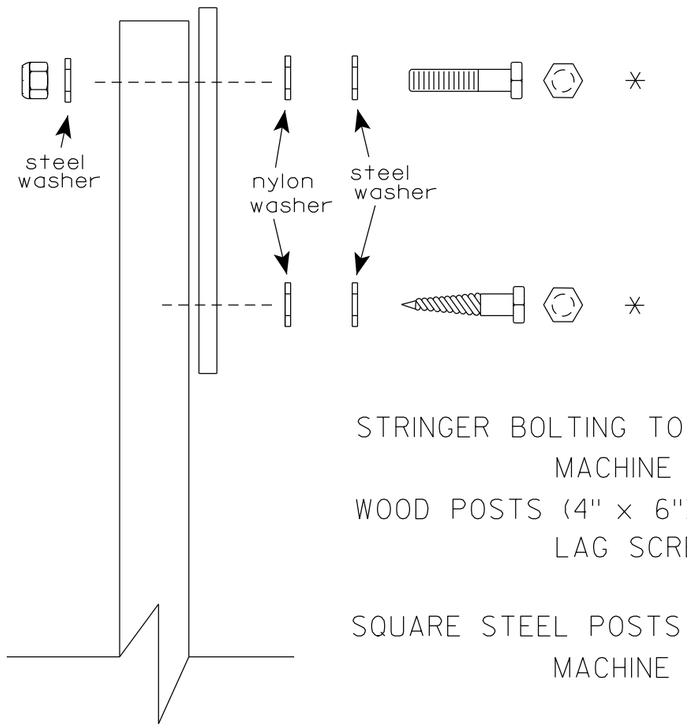
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 426	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

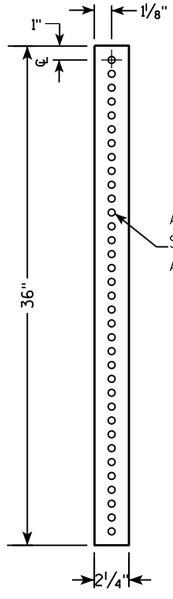
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

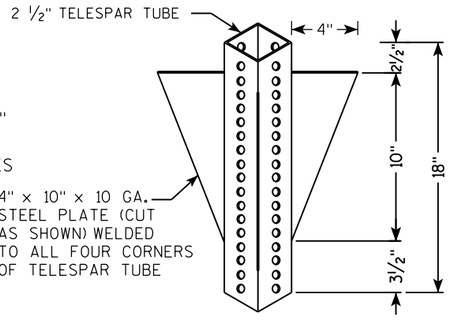
DATE 4/1/2020 PLATE NO. A4-8.9

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

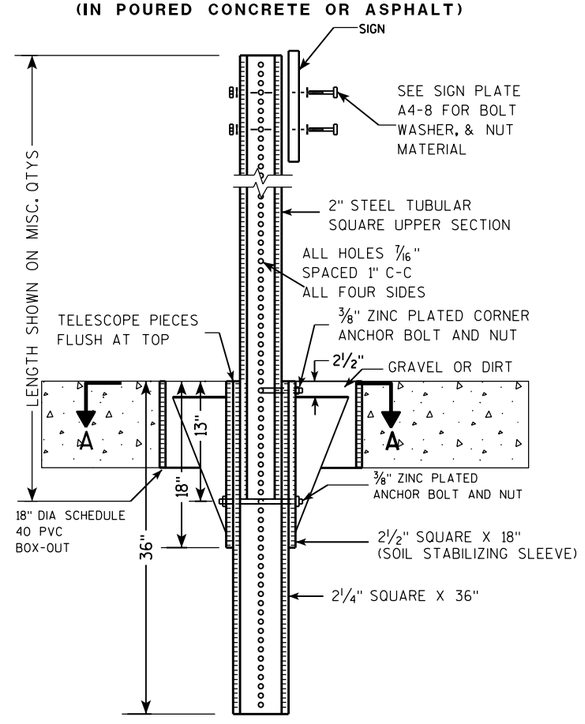
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



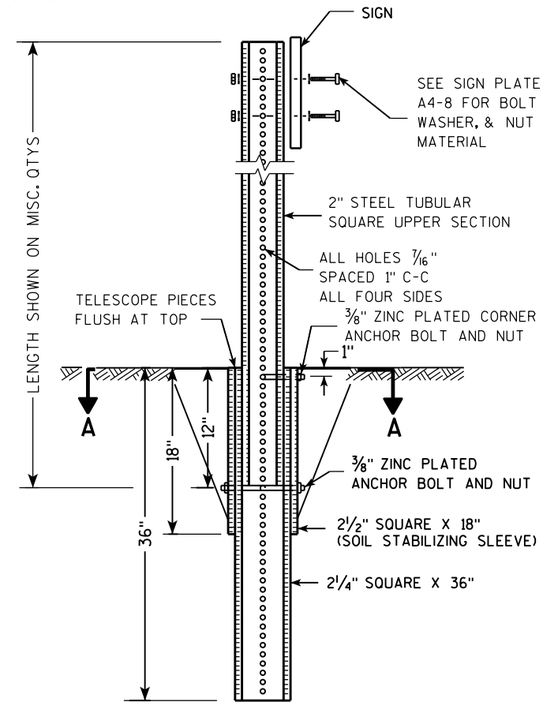
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

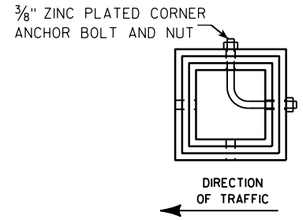


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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).

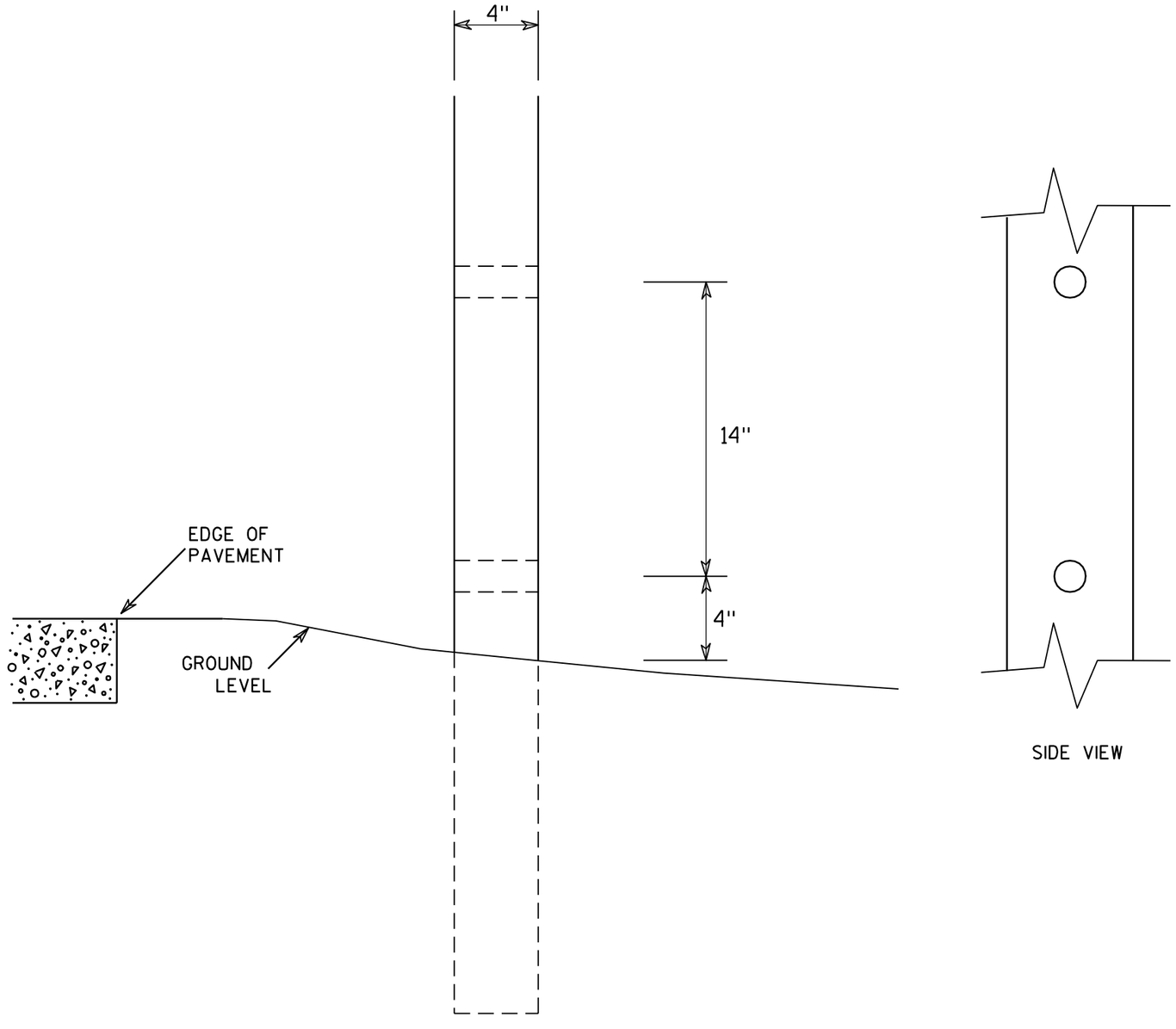
TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE 428 A4-9.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



SIDE VIEW

GENERAL NOTES

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

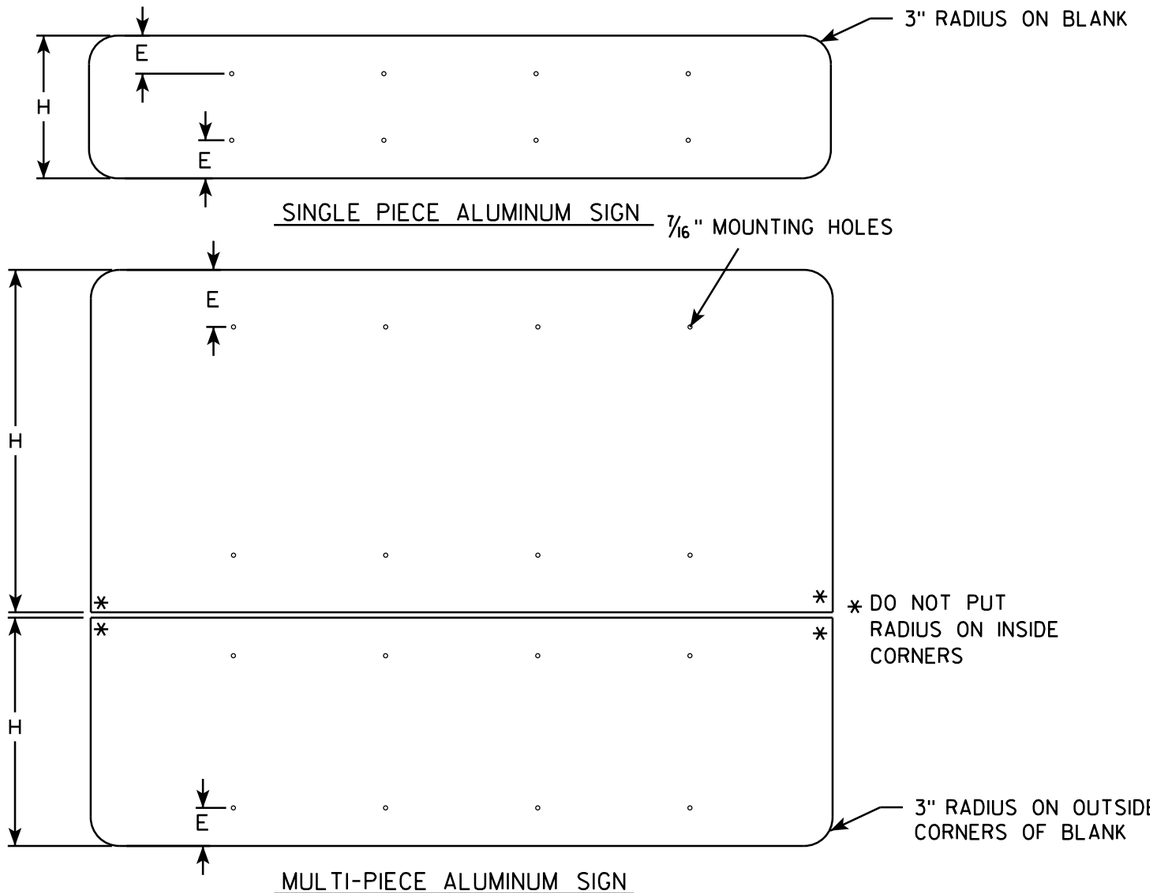
4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang for State Traffic Engineer

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

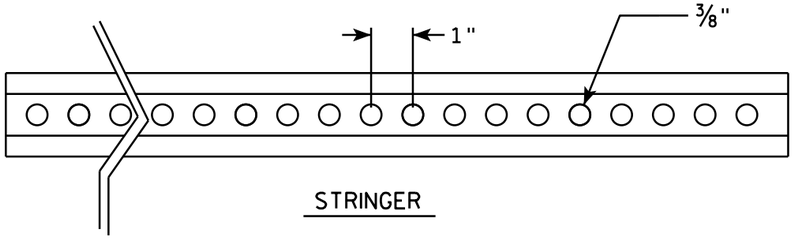
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 429	E



GENERAL NOTES

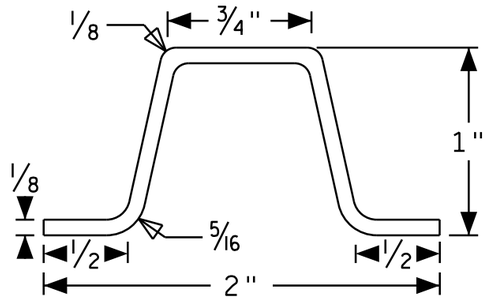
- ALL SIGNS OVER 60" IN WIDTH SHALL HAVE A 3" RADIUS ON THE OUTSIDE CORNERS OF THE ALUMINUM BLANK.
- MOUNTING HOLES SHALL BE 7/16" DIAMETER.
- SEE CHART FOR HOLE SPACING REQUIREMENTS
- FOR SIGN PANELS WITH DIMENSION (H) 36" AND OVER, DIMENSION E SHALL BE 6"
- FOR SIGN PANELS WITH DIMENSION (H) UNDER 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"

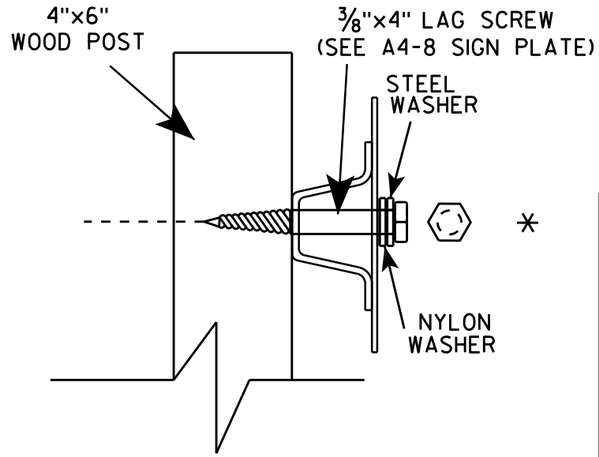


STRINGER

CROSS SECTION VIEW OF CHANNEL



POST MOUNTING



SIGN STRINGER MOUNTING REQUIREMENTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch

for State Traffic Engineer

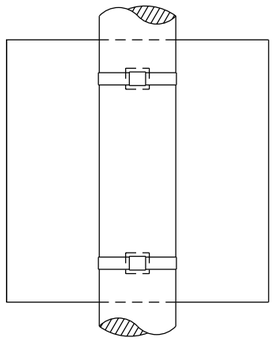
DATE 4/26/16 PLATE NO A4-18.1

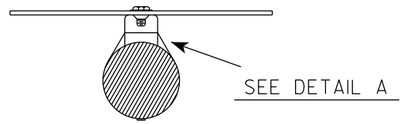
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

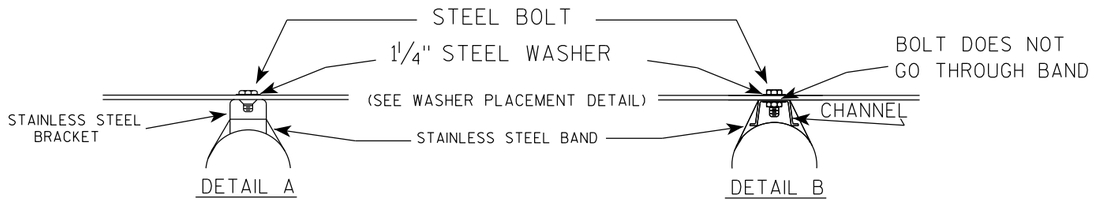
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A418.dgn PLOT DATE : 27-APR-2016 13:56 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 41.805205:1.000000 WISDOT/CADDS SHEET 42

BANDING

SINGLE SIGN



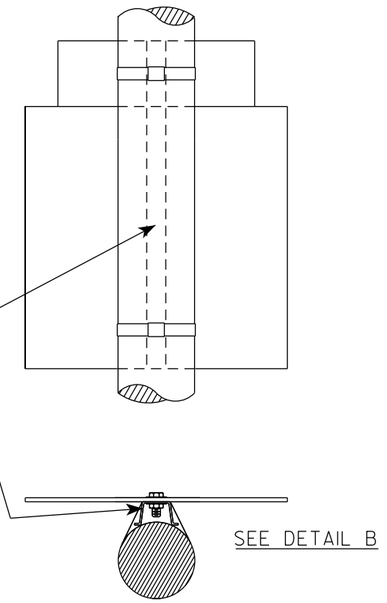




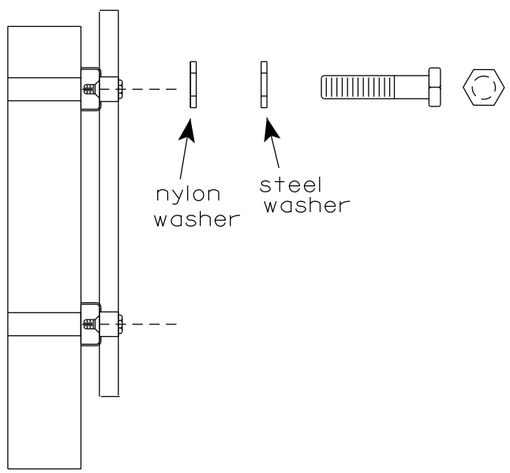
GENERAL NOTES

1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be ¾" in width and 0.025" thickness.
4. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
   a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
   b. Electro-galvanized in accordance with ASTM designation: B 633, Type III, SC 3

"J" ASSEMBLY



WASHER PLACEMENT



WASHERS (ALL POSTS) -
1-1/4" O.D. X ⅜" I.D. X 1/16" STEEL
1-1/4" O.D. X ⅜" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

STANDARD SIGN
SIGN BANDING DETAILS

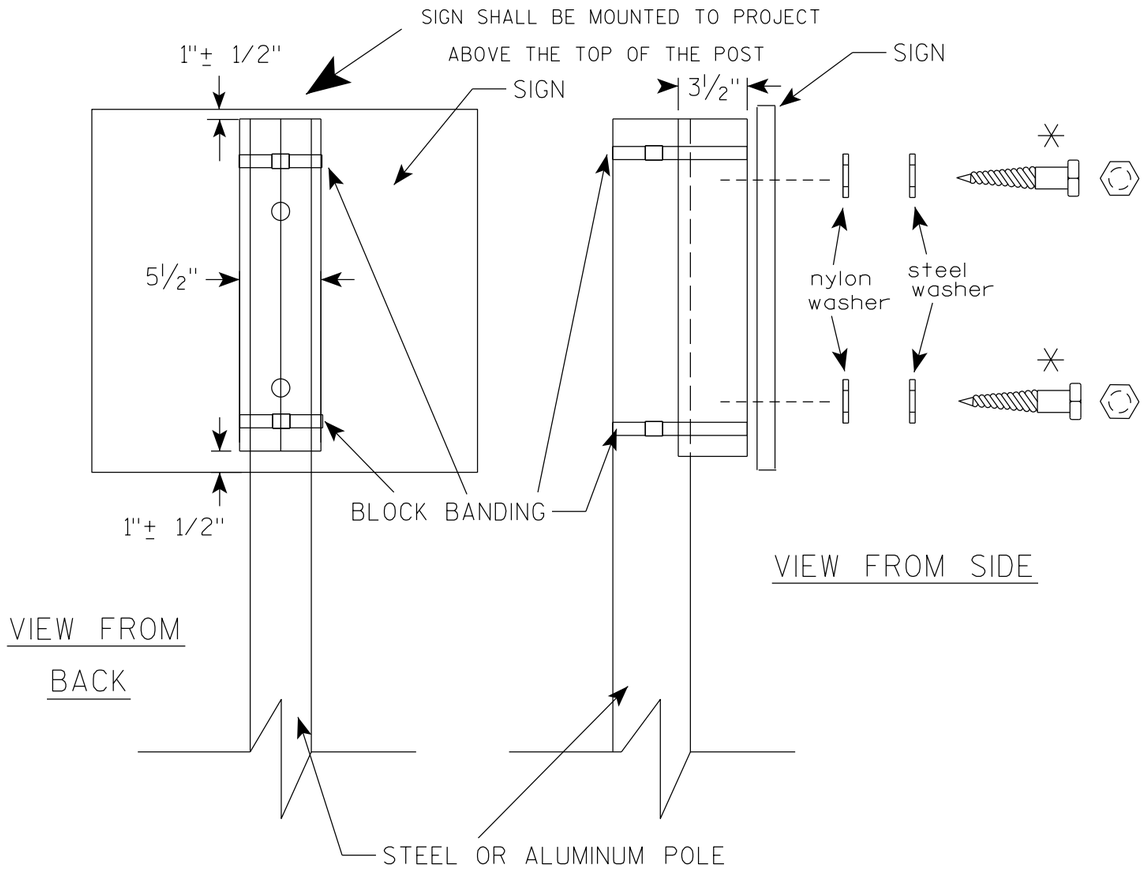
WISCONSIN DEPT OF TRANSPORTATION

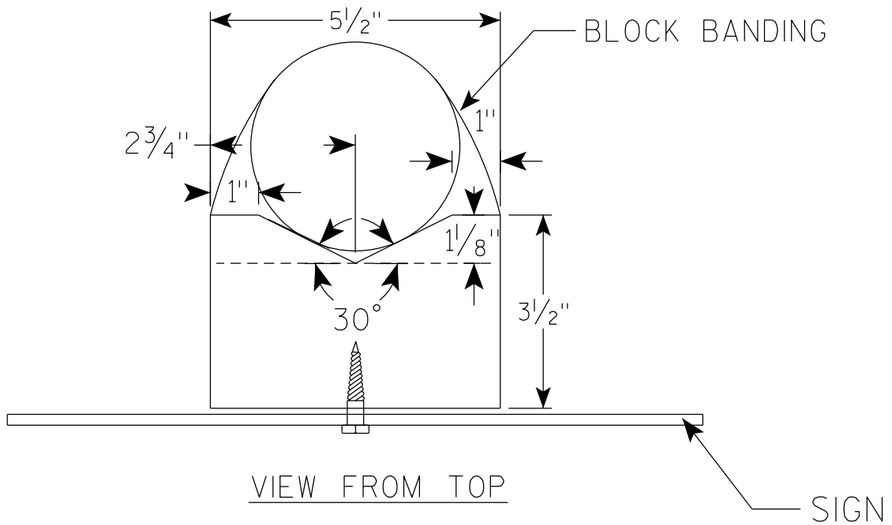
APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 431	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A59.dgn PLOT DATE : 10-JUN 2019 4:10 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : $$.....plotscale.....$$





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)

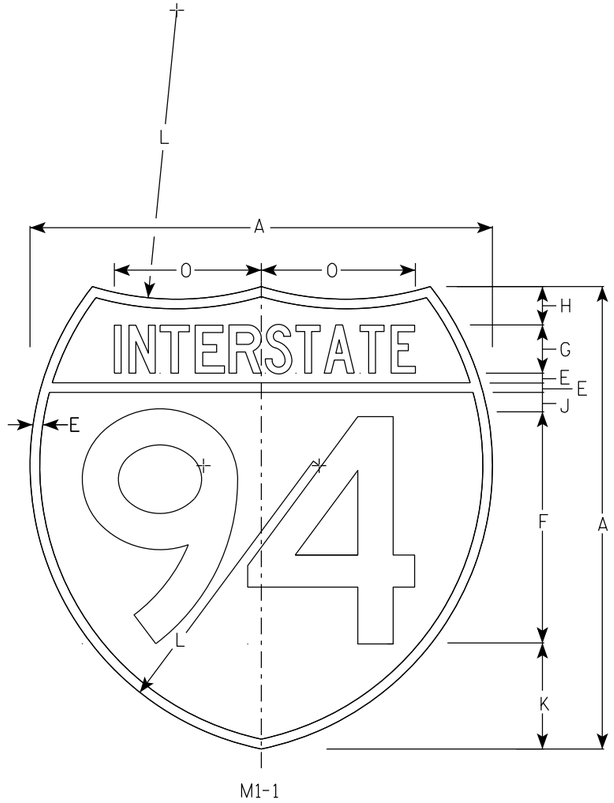
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

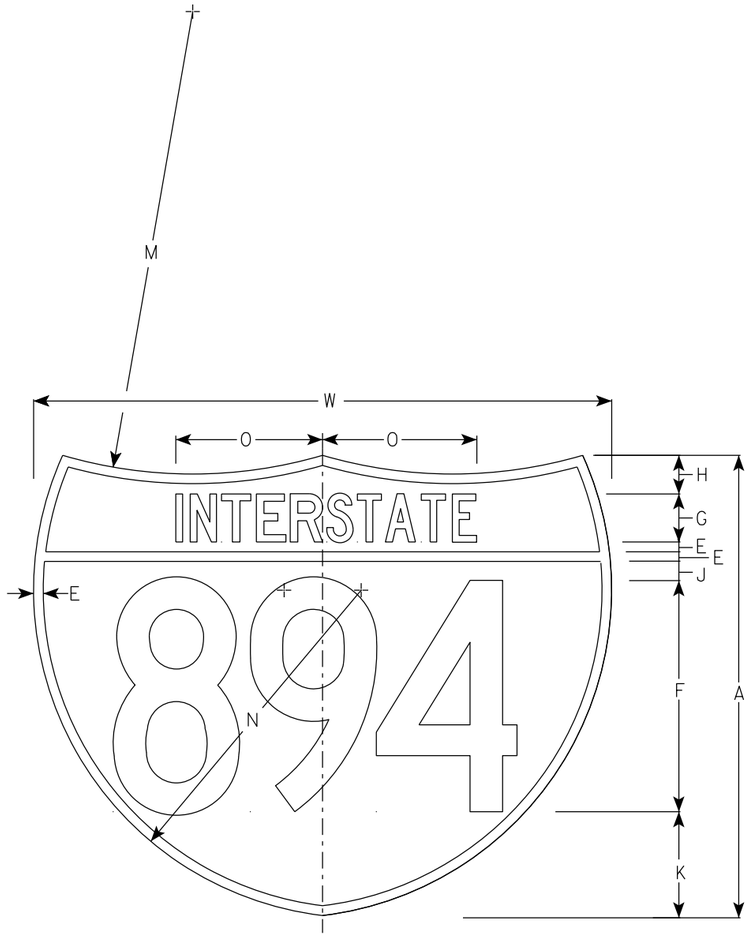
DATE 4/19/2022 PLATE NO. A5-10.3

PROJECT NO:

SHEET NO: 432 E



M1-1



M1-1A

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - Top Red - Bottom Blue
   Message - White
3. Message Series - See note 5
4. Substitute appropriate numerals & ajust spacing as per plate A10-1.
5. M1-1 - Numerals - D
   Interstate - C
   M1-1A - All copy - 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	M1-1 Area sq. ft.	M1-1A Area sq. ft.
1																											
2	24				1/2	12	2 1/2	2		1	5 1/2	15	24	17	7 7/8								30			3.13	3.91
2M	24				1/2	12	2 1/2	2		1	5 1/2	15	24	17	7 7/8								30			3.13	3.91
3	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79
4	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79
5	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79

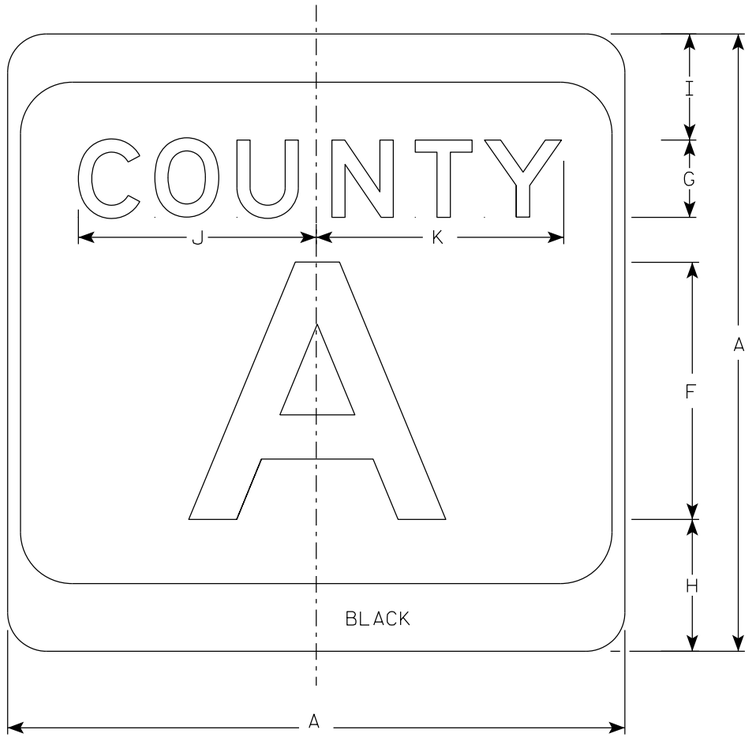
INTERSTATE ROUTE MARKER M1-1 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

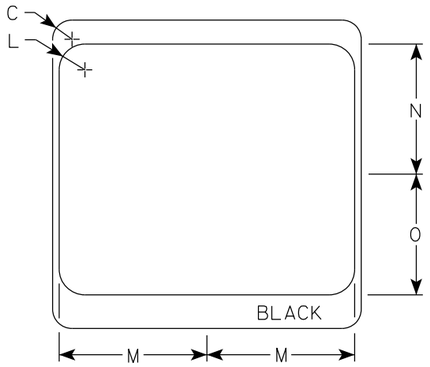
APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 11/7/2022 PLATE NO. M1-1.9

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 433 E

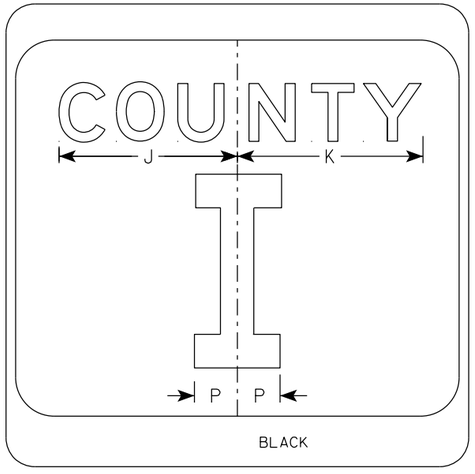


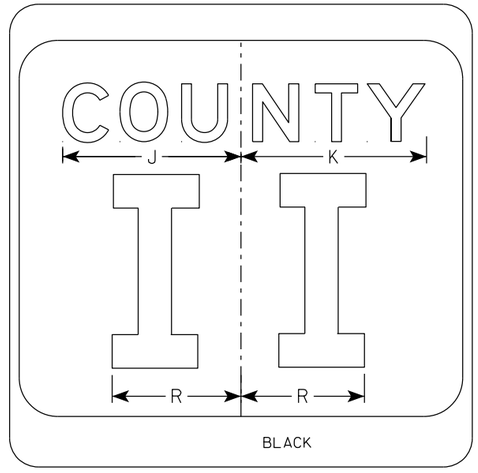
M1-5A



NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White & Black
   Message - Black
3. Message Series - see Note 4
4. Message Series E for 1 letter.
   Message Series D for 2 letters unless message is too big then Series C.
   Message Series C for 3 letters unless message is too big then Series B.
5. Substitute appropriate letters & optically center to achieve proper balance.





SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24		1 1/2			10	3	5 1/8	4 1/8	9 1/4	9 5/8	2	11 1/2	10 1/8	9 3/8	2 1/4		6 5/8									4.0
2M	24		1 1/2			10	3	5 1/8	4 1/8	9 1/4	9 5/8	2	11 1/2	10 1/8	9 3/8	2 1/4		6 5/8									4.0
3	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
4	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
5	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0

CTH MARKER
M1-5A FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

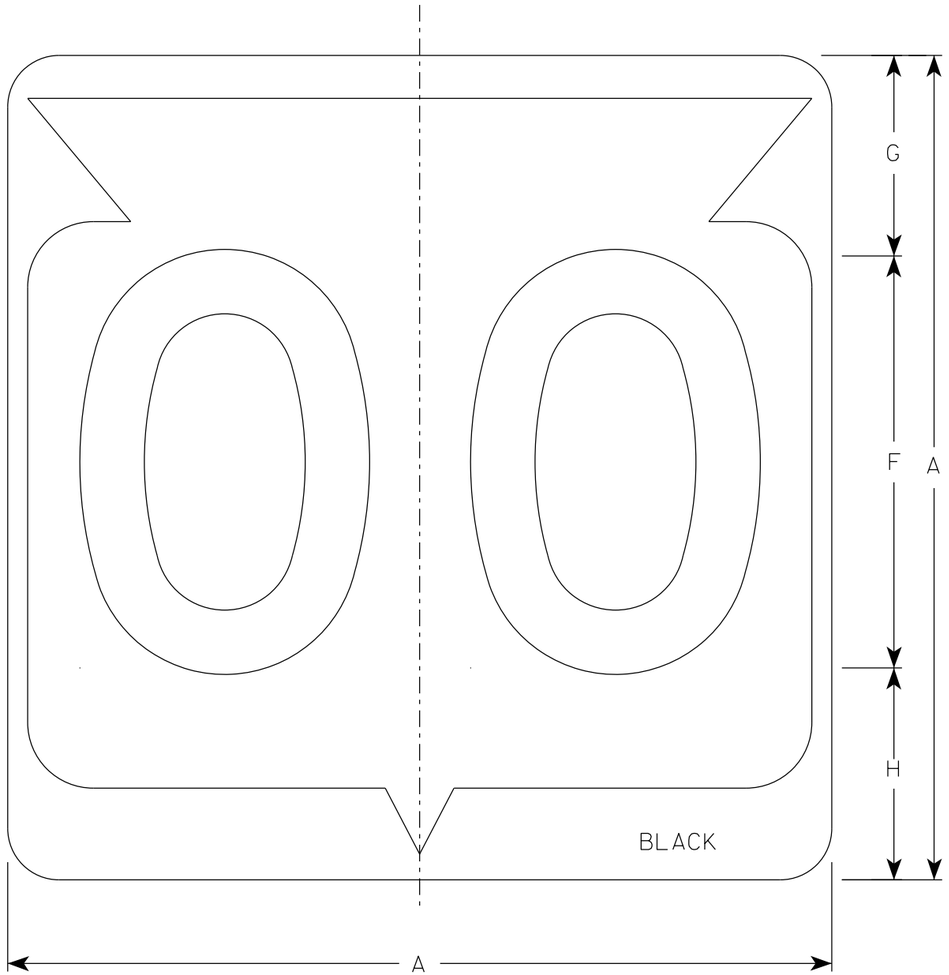
DATE 11/8/2022 PLATE NO. M1-5A.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M15A.dgn PLOT DATE : 8-NOV 2022 8:26 PLOT BY : dotc4c PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42

7

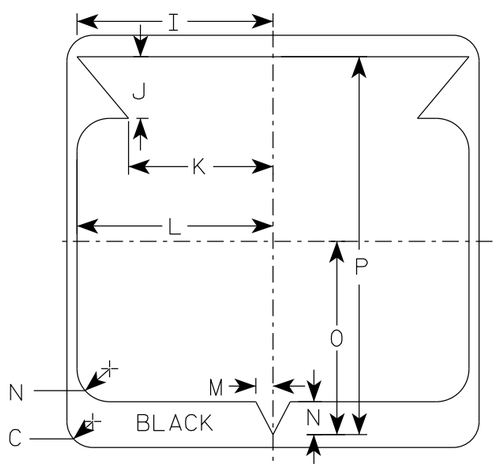
7



M1-6

NOTES

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



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

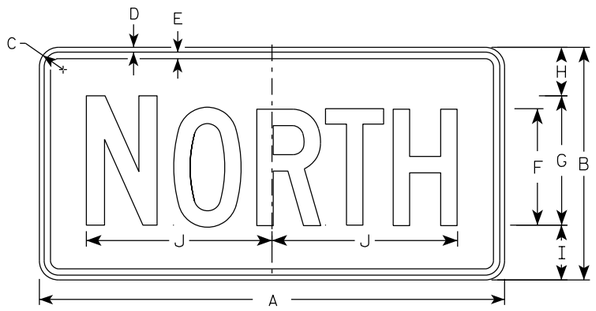
STATE ROUTE MARKER
M1-6 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

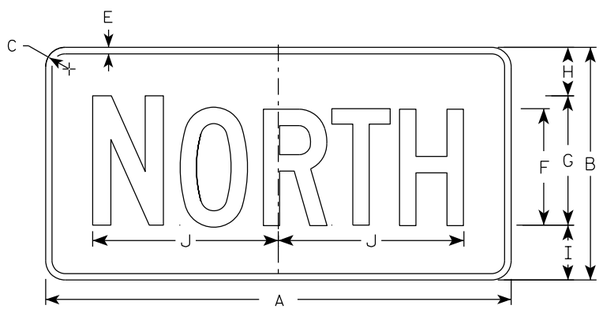
APPROVED Matthew R Rauch
for State Traffic Engineer

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

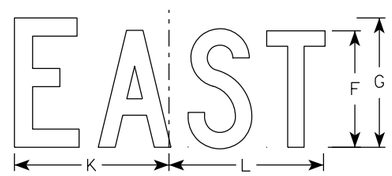
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 435	E



M3-1
MM3-1
MP3-1

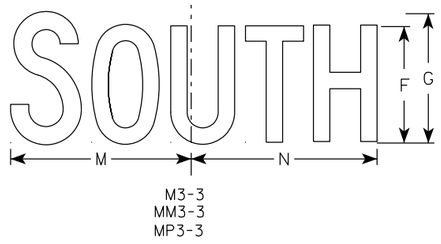


MB3-1
MK3-1
MN3-1

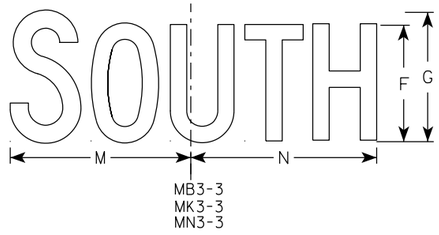


M3-2
MM3-2
MP3-2

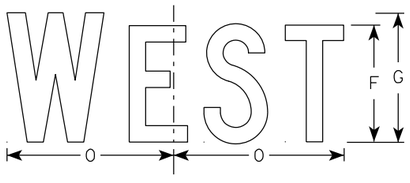
MB3-2
MK3-2
MN3-2



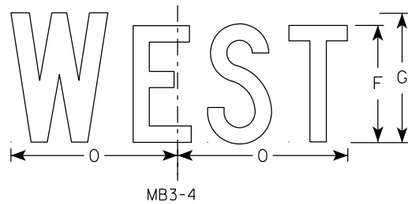
M3-3
MM3-3
MP3-3



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

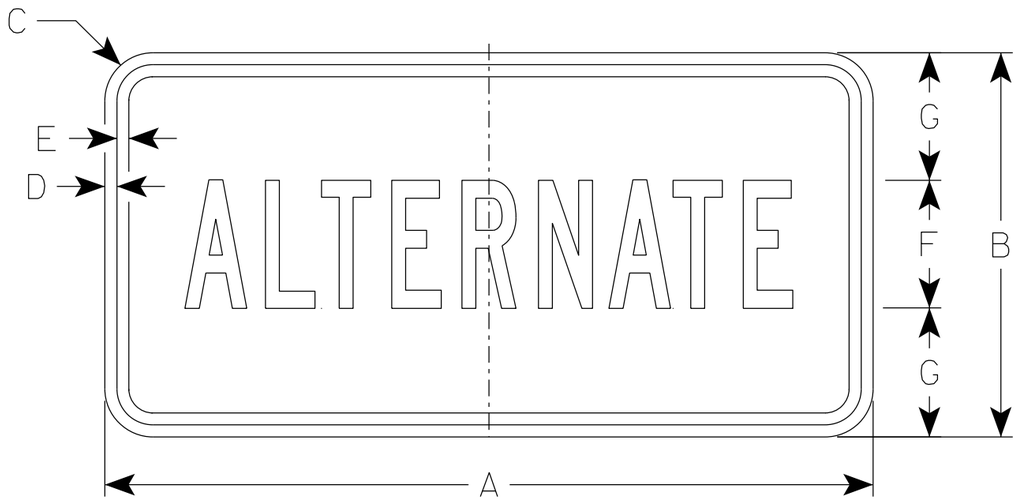
STANDARD SIGNS
M3-1 THRU M3-4
SERIES

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: 436 | E



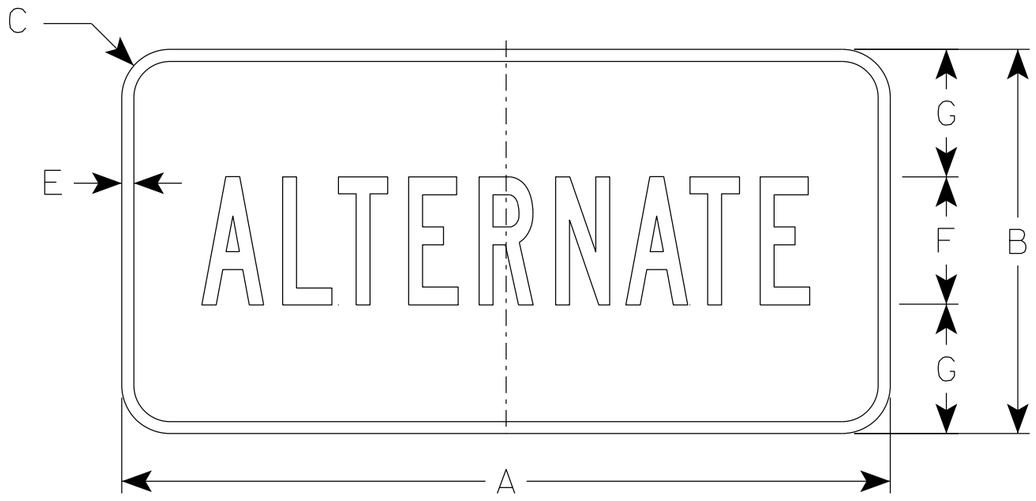
M4-1
MO4-1

NOTES

1. Sign is Type II - Type H Reflective except as Shown
2. Color:
   Background - See Note 5
   Message - See note 5
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.
5. M4-1 Background - White
   Message - Black

   MB4-1 Background - Blue
   Message - White

   MO4-1 Background - Orange - Type F Reflective
   Message - Black



MB4-1

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	4	4	9 3/4	9 1/2																		2.00
2M	24	12	1 1/2	3/8	3/8	4	4	9 3/4	9 1/2																		2.00
3	36	18	1 1/2	3/8	1/2	7	5 1/2	16 3/8	16 1/2																		4.5
4	36	18	1 1/2	3/8	1/2	7	5 1/2	16 3/8	16 1/2																		4.5
5	36	18	1 1/2	3/8	1/2	7	5 1/2	16 3/8	16 1/2																		4.5

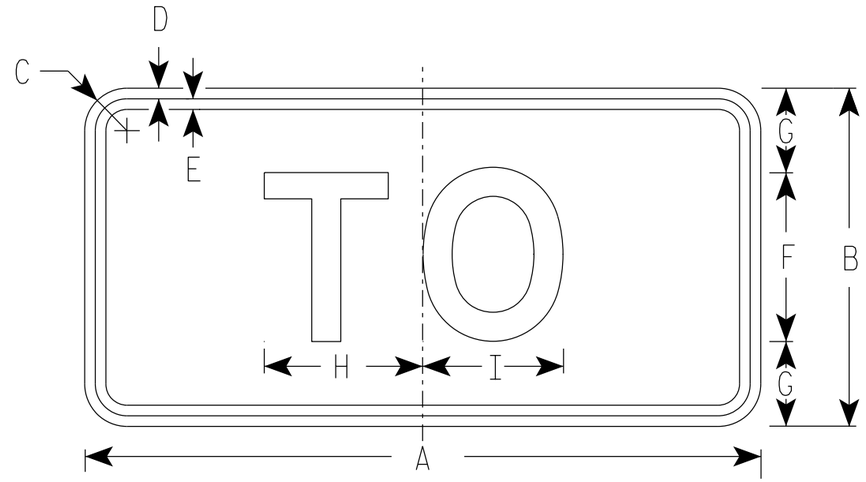
STANDARD SIGN
M4-1

WISCONSIN DEPT OF TRANSPORTATION

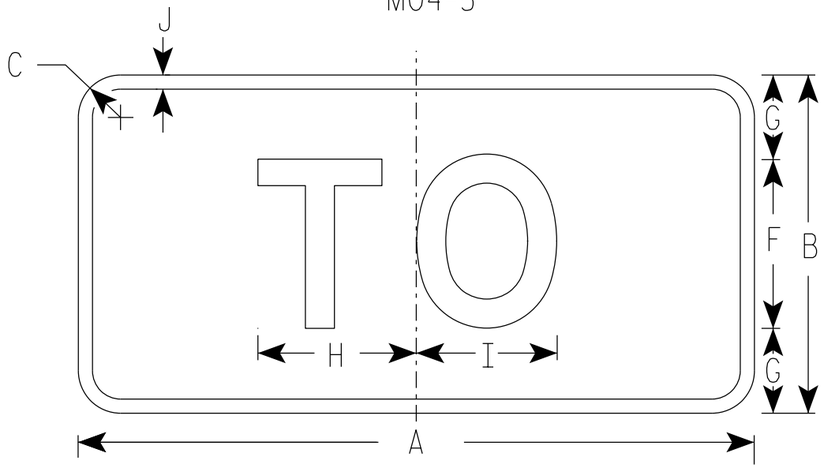
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/8/2023 PLATE NO. M4-1.10

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 437 | E



M4-5
MM4-5
MP4-5
M04-5



MB4-5
MK4-5
MN4-5

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - See note 5
   Message - See note 5
3. Message Series - E
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M4-5 Background - White
   Message - Black

   MB4-5 Background - Blue
   Message - White

   MK4-5 Background - Green
   Message - White

   MM4-5 Background - White
   Message - Green

   MN4-5 Background - Brown
   Message - White

   MP4-5 Background - White
   Message - Blue

   M04-5 Background - Orange Type F Reflective
   Message - Black

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	12	1 ½	⅜	⅜	6	3	5 ⅜	5 ¼	½																	2.00
2M	24	12	1 ½	⅜	⅜	6	3	5 ⅜	5 ¼	½																	2.00
3	36	18	1 ½	⅜	½	9	4 ½	8 ¼	8 ⅜	½																	4.5
4	36	18	1 ½	⅜	½	9	4 ½	8 ¼	8 ⅜	½																	4.5
5	36	18	1 ½	⅜	½	9	4 ½	8 ¼	8 ⅜	½																	4.5

STANDARD SIGN
M4-5

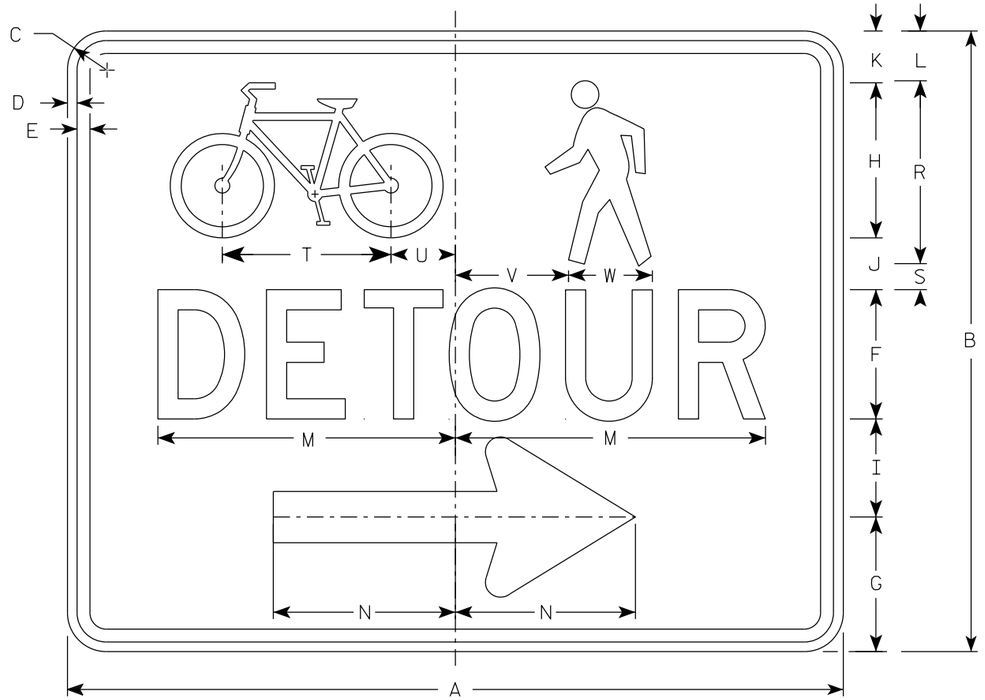
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/8/2023 PLATE NO. M4-5.11

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 438 E

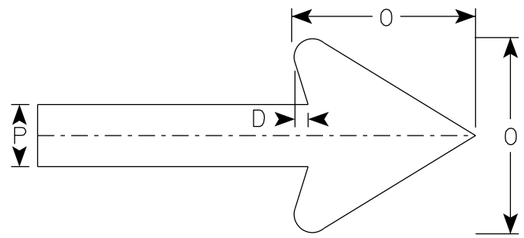
7



M4-9AR

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.
5. M4-9AL is the same as M4-9AR 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																											
2S	30	24	1 1/2	3/8	1/2	5	5 1/4	6	3 3/4	2	2	1 7/8	11 3/4	7	6	2		7 1/8	1	6 1/2	2 1/2	4 3/8	3 1/4				5.00
2M	30	24	1 1/2	3/8	1/2	5	5 1/4	6	3 3/4	2	2	1 7/8	11 3/4	7	6	2		7 1/8	1	6 1/2	2 1/2	4 3/8	3 1/4				5.00
3																											
4																											
5																											

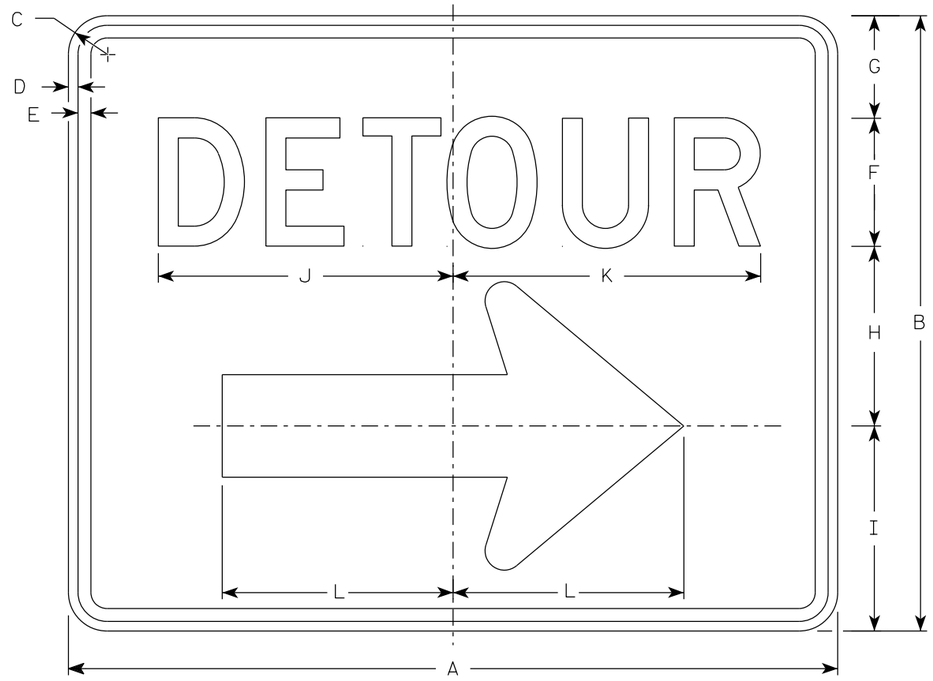
STANDARD SIGN
M4-9A L&R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/9/2023 PLATE NO. M4-9A.3

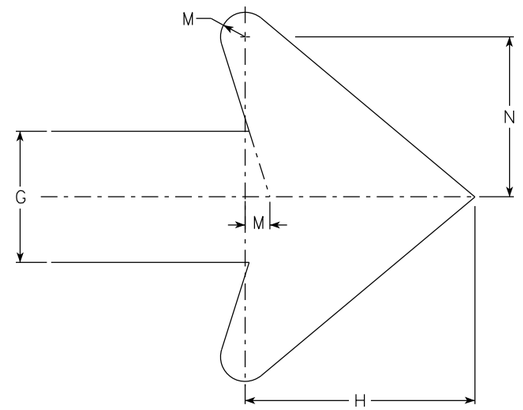
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 439	E



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

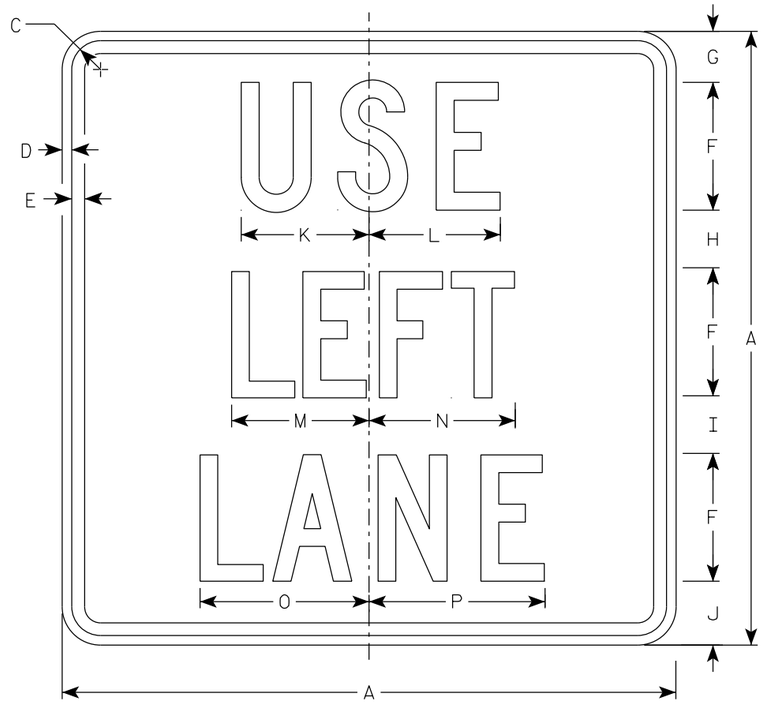
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

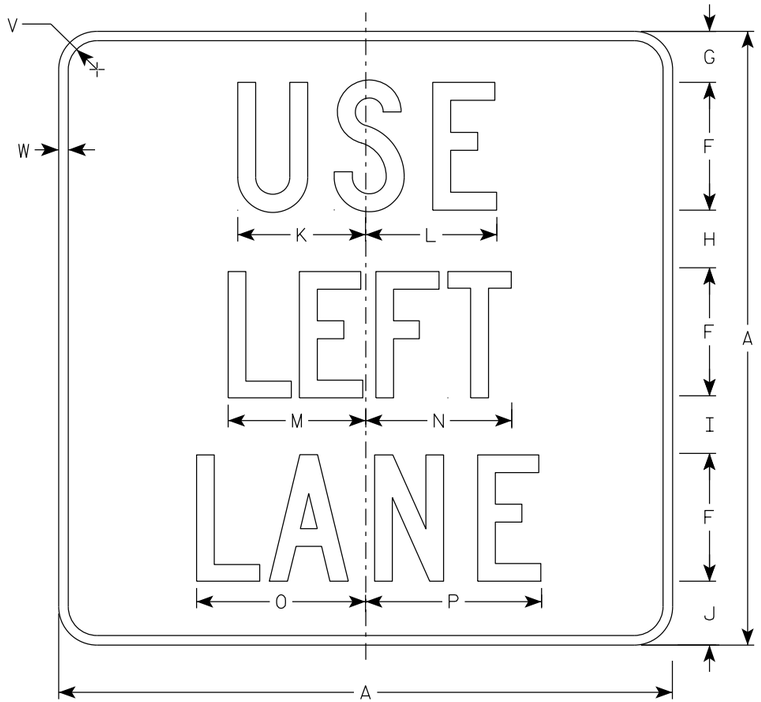
DATE 2/9/2023 PLATE NO. M4-9R.6

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

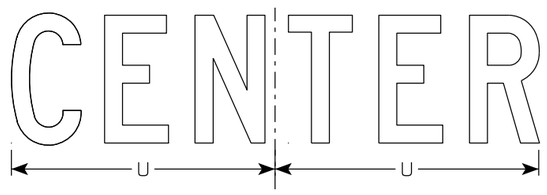
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M49R.dgn PLOT DATE : 21-MARCH 2023 1:40 PLOT BY : dotc4c PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42



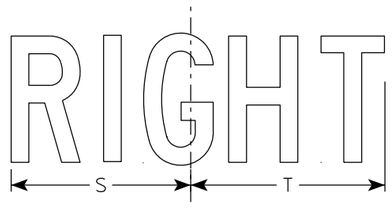
M4-20L
MM4-20L
MO4-20L
MP4-20L



MB4-20L
MK4-20L
MN4-20L
MR4-20L



M4-20C
MB4-20C
MK4-20C
MM4-20C
MN4-20C
MO4-20C
MP4-20C
MR4-20C



M4-20R
MB4-20R
MK4-20R
MM4-20R
MN4-20R
MO4-20R
MP4-20R
MR4-20R

NOTES

1. Sign is Type II - Type H except as Shown
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. M4-20 Background - White
   Message - Black
   MB4-20 Background - Blue
   Message - White
   MK4-20 Background - Green
   Message - White
   MM4-20 Background - White
   Message - Green
   MN4-20 Background - Brown
   Message - White
   MO4-20 Background - Orange - Type F Reflective
   Message - Black
   MP4-20 Background - White
   Message - Blue
   MR4-20 Background - Brown
   Message - Yellow

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24		1 1/2	3/8	1/2	5	2	2 1/4	2 1/4	2 1/2	5	5 1/8	5 3/8	5 3/4	6 5/8	6 7/8			7	7 5/8	10 1/4	1 1/2	1/2				4.0
2M	24		1 1/2	3/8	1/2	5	2	2 1/4	2 1/4	2 1/2	5	5 1/8	5 3/8	5 3/4	6 5/8	6 7/8			7	7 5/8	10 1/4	1 1/2	1/2				4.0
3	36		2 1/4	5/8	3/4	7	4	3	3 1/2	4 1/2	7 1/2	7 3/4	8	8 5/8	9 7/8	10 1/4			10 3/8	11 3/8	14 3/8	1 7/8	1/2				9.0
4	36		2 1/4	5/8	3/4	7	4	3	3 1/2	4 1/2	7 1/2	7 3/4	8	8 5/8	9 7/8	10 1/4			10 3/8	11 3/8	14 3/8	1 7/8	1/2				9.0
5	36		2 1/4	5/8	3/4	7	4	3	3 1/2	4 1/2	7 1/2	7 3/4	8	8 5/8	9 7/8	10 1/4			10 3/8	11 3/8	14 3/8	1 7/8	1/2				9.0

STANDARD SIGN
M4-20

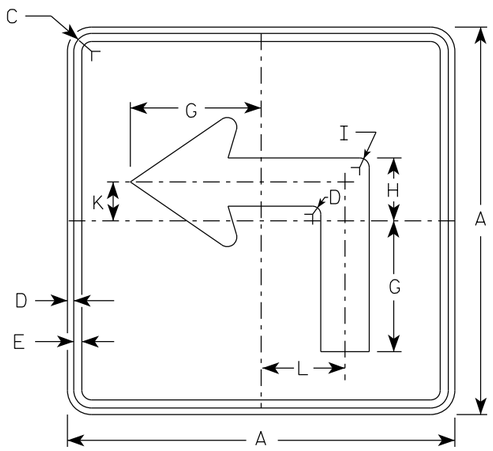
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

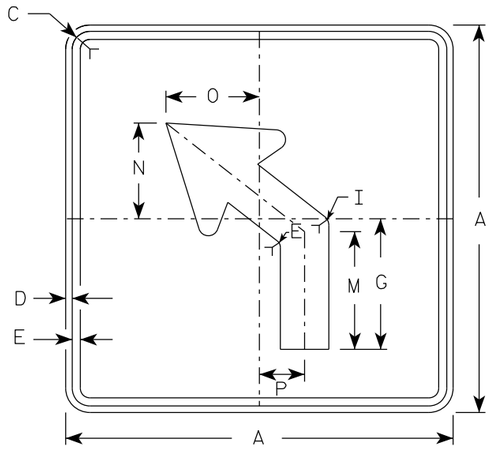
DATE 2/13/2023 PLATE NO. M4-20.6

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

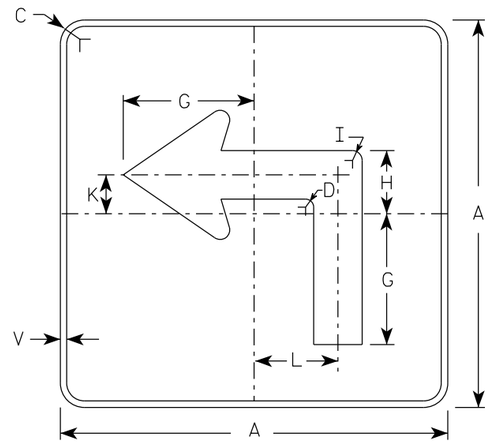
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M420.dgn PLOT DATE : 13-FEB 2023 8:25 PLOT BY : dotc4c PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42



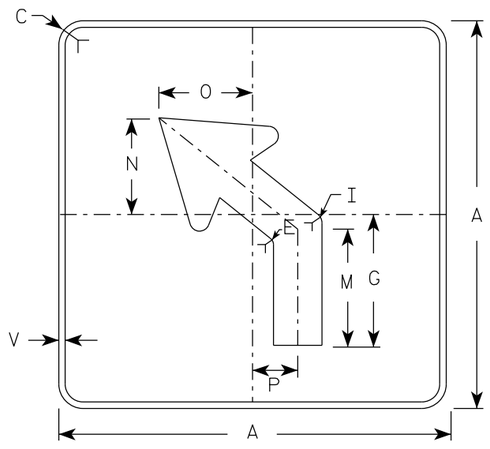
M5-1L
MM5-1L
MO5-1L
MP5-1L



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



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

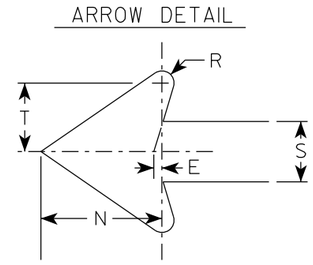


MB5-2L
MK5-2L
MN5-2L
MR5-2L

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

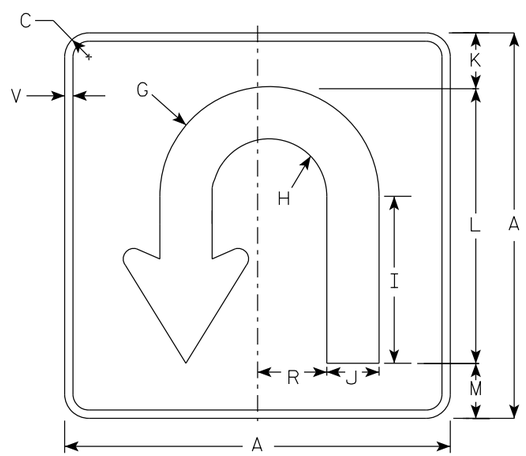
STANDARD SIGN
M5-1 & M5-2

WISCONSIN DEPT OF TRANSPORTATION

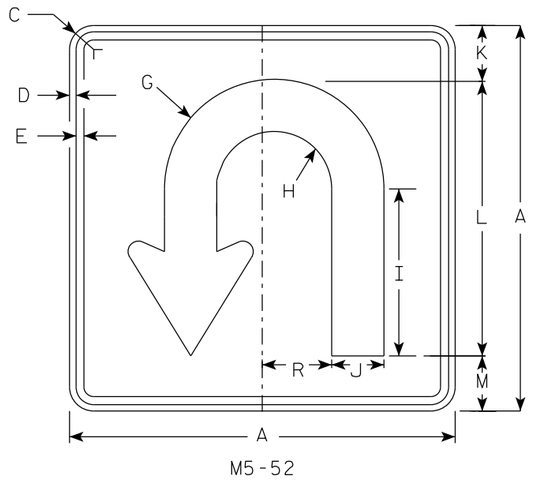
APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 442 | E



M5-52



M5-52

NOTES

1. Signs are Type II - Type H Reflective except as Shown
2. Color:
   Background - See Note 4
   Message - See note 4
3. M5-52 Background - White
   Message - Black

   MB5-52 Background - Blue
   Message - White

   MK5-52 Background - Green
   Message - White

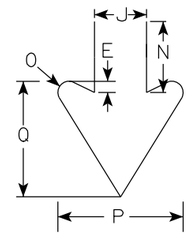
   MM5-52 Background - White
   Message - Green

   MN5-52 Background - Brown
   Message - White

   MO5-52 Background - Orange - Type F Reflective
   Message - Black

   MP5-52 Background - White
   Message - Blue

   MR5-52 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		6	3 1/8	9 1/8	2 7/8	3	15	3	3 7/8	5/8	6 7/8	6 3/4	3 3/4				1/2					3.06
2M	21		1 1/2	3/8	3/8		6	3 1/8	9 1/8	2 7/8	3	15	3	3 7/8	5/8	6 7/8	6 3/4	3 3/4				1/2					3.06
3	30		1 7/8	1/2	5/8		8 1/2	4 1/2	13	4 1/8	4 3/8	21 3/8	4 1/4	5 1/2	7/8	9 3/4	8 1/8	5 1/4				5/8					6.25
4	30		1 7/8	1/2	5/8		8 1/2	4 1/2	13	4 1/8	4 3/8	21 3/8	4 1/4	5 1/2	7/8	9 3/4	8 1/8	5 1/4				5/8					6.25
5	30		1 7/8	1/2	5/8		8 1/2	4 1/2	13	4 1/8	4 3/8	21 3/8	4 1/4	5 1/2	7/8	9 3/4	8 1/8	5 1/4				5/8					6.25

STANDARD SIGN
M5-52
SERIES

WISCONSIN DEPT OF TRANSPORTATION

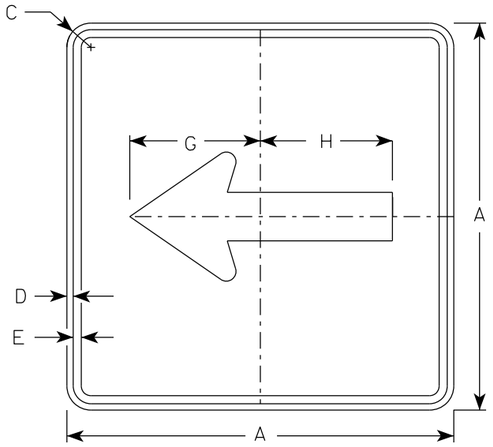
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/13/2023 PLATE NO. M5-52.2

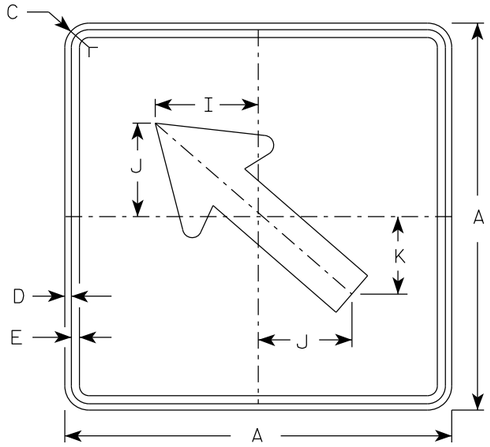
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 443	E

7

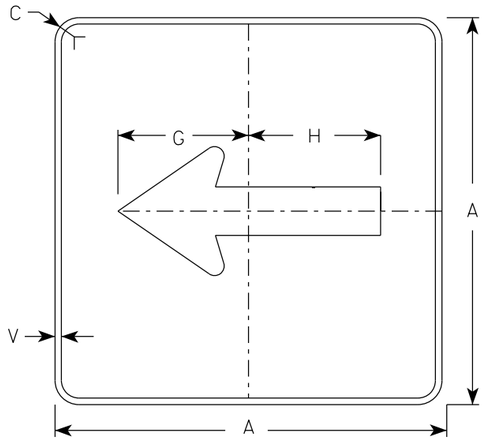
7



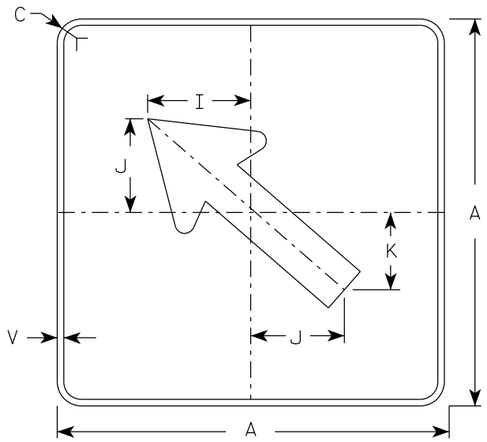
M6-1
MM6-1
MO6-1
MP6-1



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



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

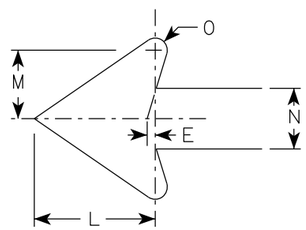


MB6-2
MK6-2
MN6-2
MR6-2

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

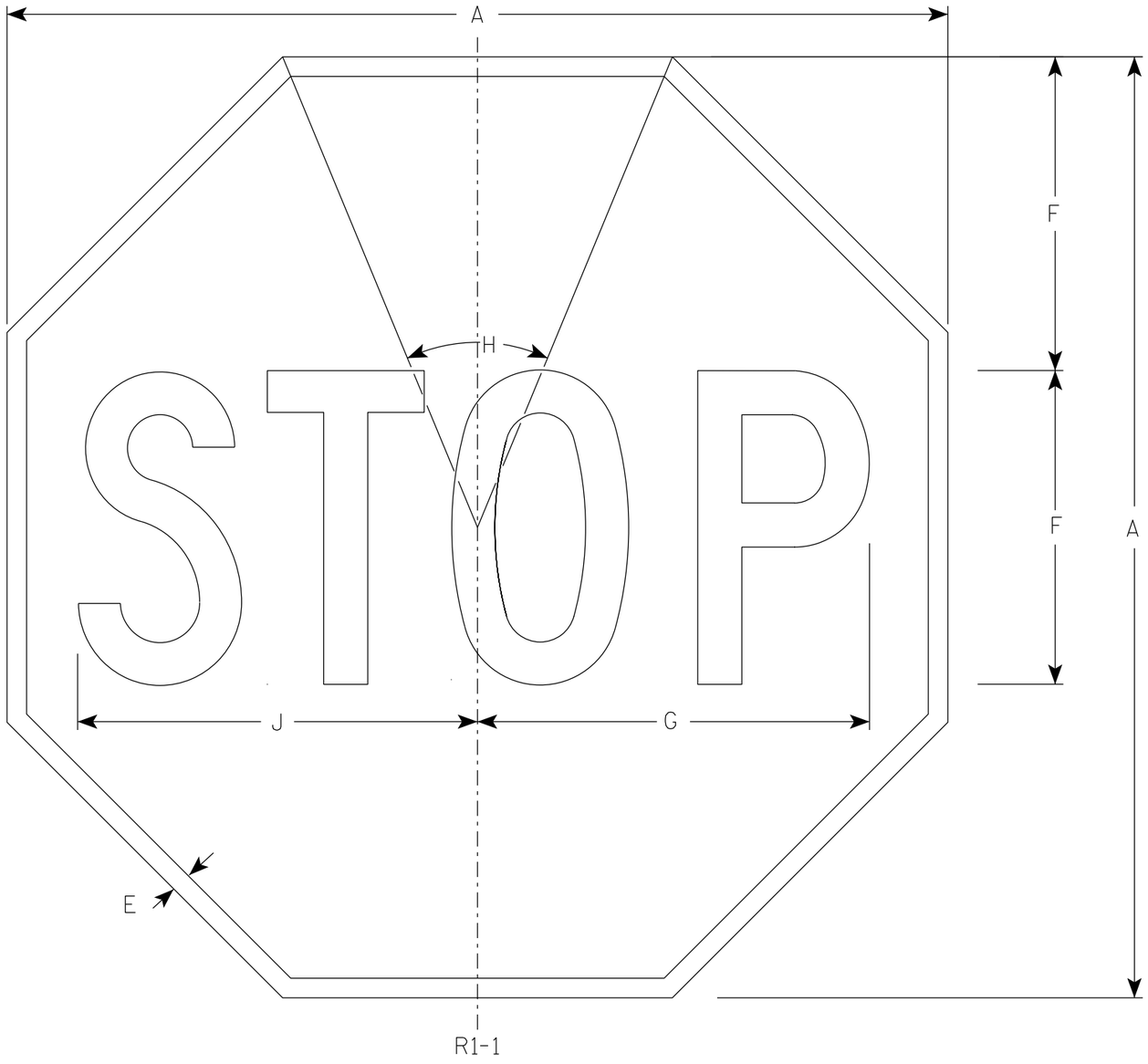
APPROVED Matthew R Rauch
For State Traffic Engineer

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

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 444 | E

7

7



NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - Red
   Message - White
3. Message Series - C

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2S	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2M	36				3/4	12	15	45°		15 3/8																	7.46
3	36				3/4	12	15	45°		15 3/8																	7.46
4	48				1	16	20	45°		20 1/2																	13.25
5	48				1	16	20	45°		20 1/2																	13.25
6	18				3/8	6	7 3/4	45°		7 3/4																	1.86

STANDARD SIGN
R1-1

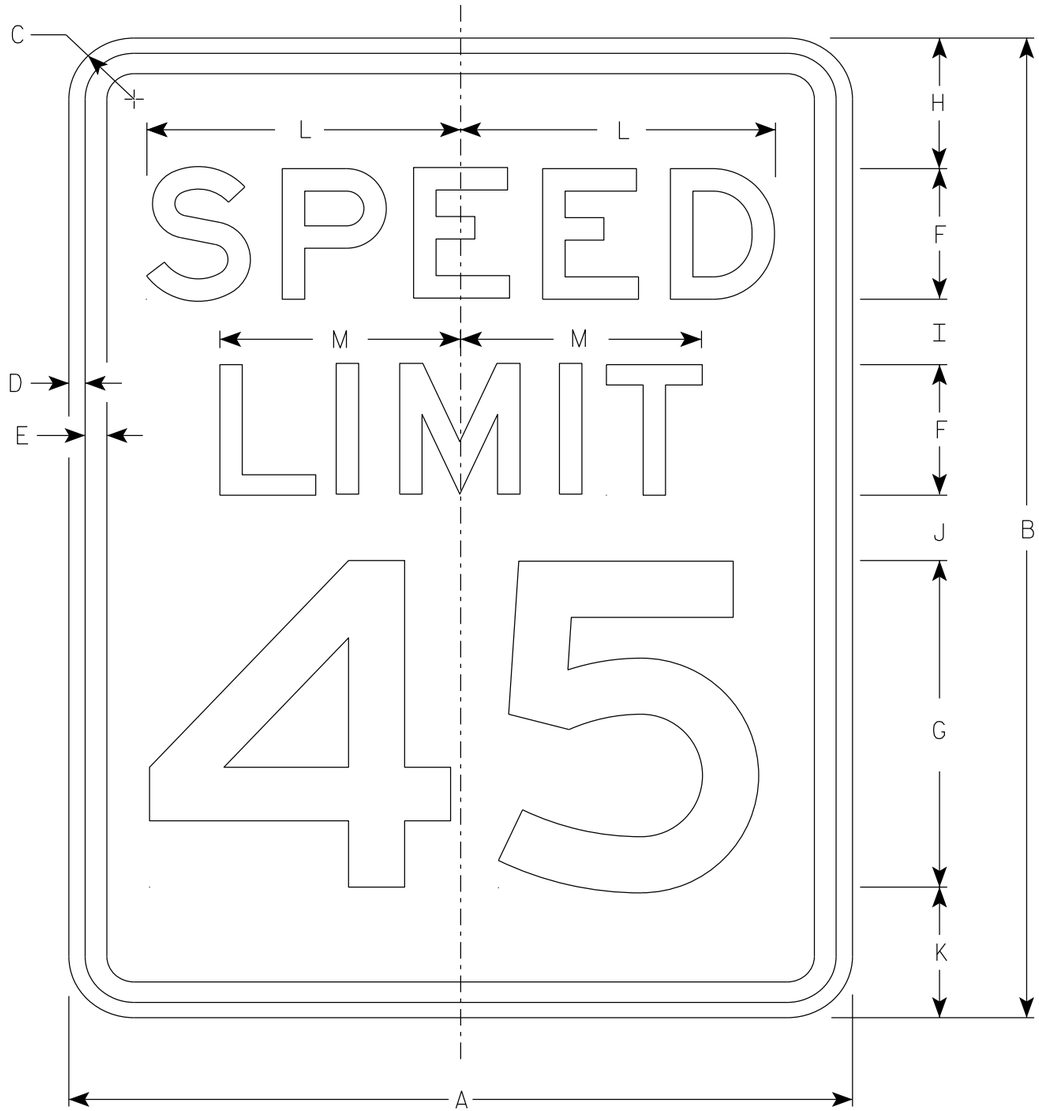
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/9/2025 PLATE NO. R1-1.14

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 445 E

7



R2-1

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - E
4. Substitute appropriate numerals and optically adjust spacing to achieve proper balance.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18	24	1 1/2	3/8	1/2	3	8	3	2	2	3	7 1/4	5 1/2														3.0
2S	24	30	1 1/2	3/8	1/2	4	10	3	2 1/4	3 3/8	3 3/8	9 5/8	7 3/8														5.0
2M	30	36	1 7/8	1/2	5/8	5	12	5	2 1/2	2 1/2	4	12	9 1/4														7.5
3	36	48	1 7/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
4	36	48	1 7/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
5	48	60	3	3/4	1	8	20	6	4 1/2	6 3/4	6 3/4	19 1/4	14 5/8														20.0

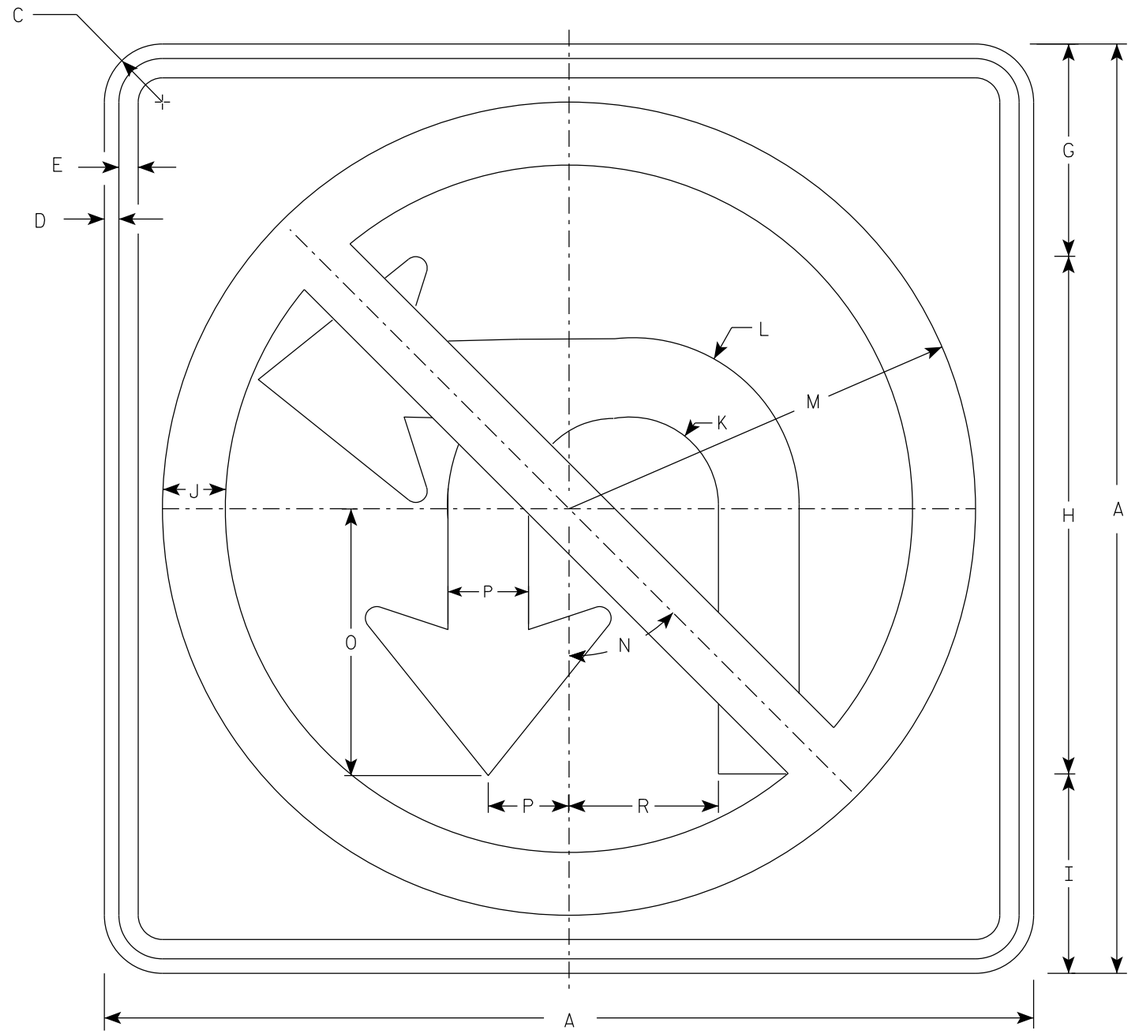
STANDARD SIGN
R2-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/1/23 PLATE NO. R2-1.14

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 446 | E



R3-18

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - See note 3
3. Border & Arrow are non reflective black, the circle with diagonal bar is reflective red.

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		1 1/2	3/8	1/2		5 1/2	13 3/8	5 1/8	1 5/8	2 1/4	4 1/4	10 1/2	45°	6 7/8	2 1/8		3 7/8									4.0
2M	36		2 1/4	5/8	3/4		8 1/4	20	7 3/4	2 1/2	3 3/8	6 1/2	15 3/4	45°	10 3/8	3 1/8		5 3/4									9.0
3	36		2 1/4	5/8	3/4		8 1/4	20	7 3/4	2 1/2	3 3/8	6 1/2	15 3/4	45	10 3/8	3 1/8		5 3/4									9.0
4	36		2 1/4	5/8	3/4		8 1/4	20	7 3/4	2 1/2	3 3/8	6 1/2	15 3/4	45	10 3/8	3 1/8		5 3/4									9.0
5	48		2 1/4	3/4	1		11	26 3/4	10 1/4	3 1/4	4 5/8	8 5/8	21	45°	13 3/4	4 1/8		7 3/4									16.0

STANDARD SIGN
R3-18

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

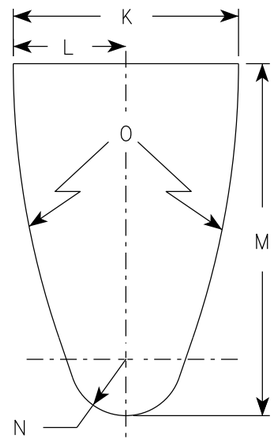
DATE 2/23/23 PLATE NO. R3-18.3

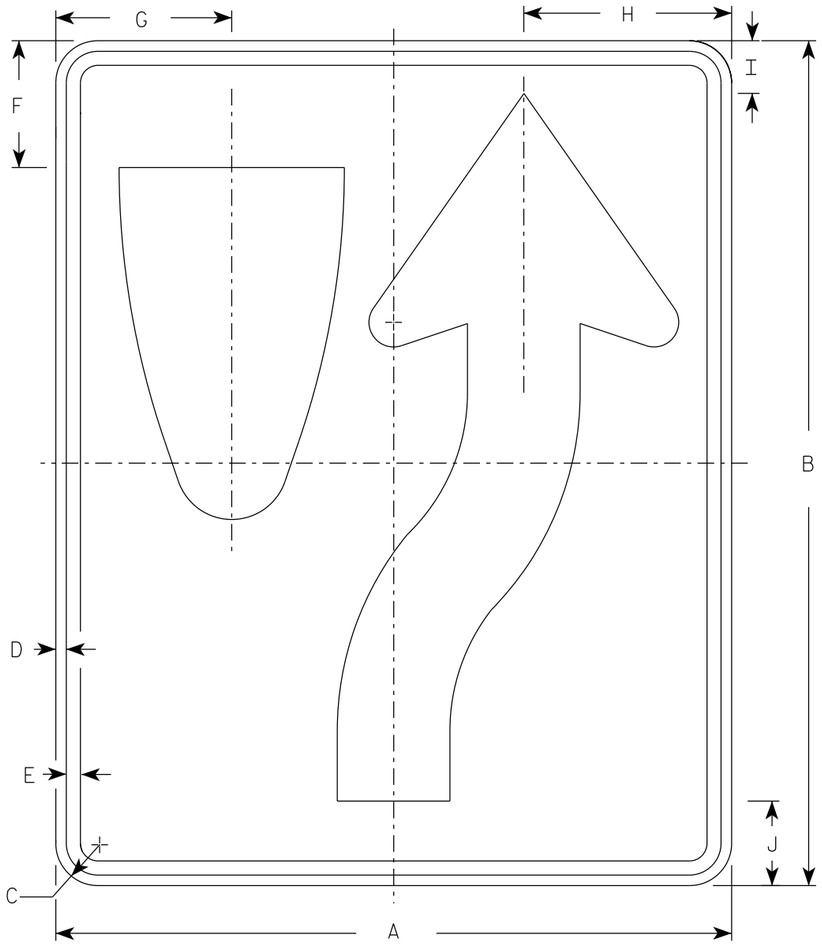
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 447 | E

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. R4-8 is the same as R4-7 except Legend is reversed.

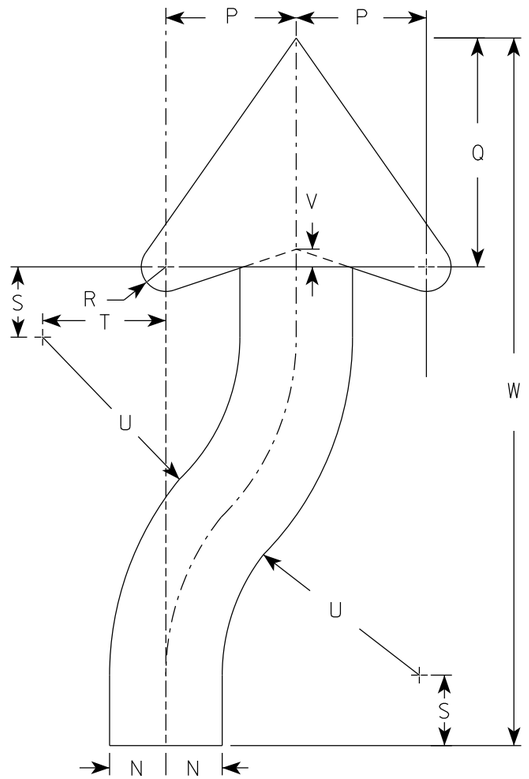
DIVIDER DETAIL





R4-7

ARROW DETAIL



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18	24	1 1/2	3/8	1/2	3 3/8	4 3/4	5 1/2	1 3/8	2 1/4	6	3	9 3/8	1 1/2	22 1/2	3 1/2	6 1/8	5/8	1 7/8	3 1/4	6 3/4	1/2	20 3/8				3.0
2S	24	30	1 1/2	3/8	1/2	4 1/2	6 1/4	7 3/8	1 7/8	3	8	4	12 1/2	2	30	4 5/8	8 1/8	7/8	2 1/2	4 3/8	9	5/8	25 1/8				5.0
2M	24	30	1 1/2	3/8	1/2	4 1/2	6 1/4	7 3/8	1 7/8	3	8	4	12 1/2	2	30	4 5/8	8 1/8	7/8	2 1/2	4 3/8	9	5/8	25 1/8				5.0
3	36	48	1 7/8	1/2	5/8	6 3/4	9 3/8	11 1/8	2 7/8	4 1/2	12	6	18 3/4	3	45	6 7/8	12 1/4	1 1/4	3 3/4	6 5/8	13 1/2	1	40 3/4				12.0
4	36	48	1 7/8	1/2	5/8	6 3/4	9 3/8	11 1/8	2 7/8	4 1/2	12	6	18 3/4	3	45	6 7/8	12 1/4	1 1/4	3 3/4	6 5/8	13 1/2	1	40 3/4				12.0
5	48	60	3	3/4	1	9	12 1/2	14 3/4	3 3/4	6	16	8	25	4	60	9 1/4	16 1/4	1 5/8	5	8 3/4	18	1 1/4	50 1/4				20.0

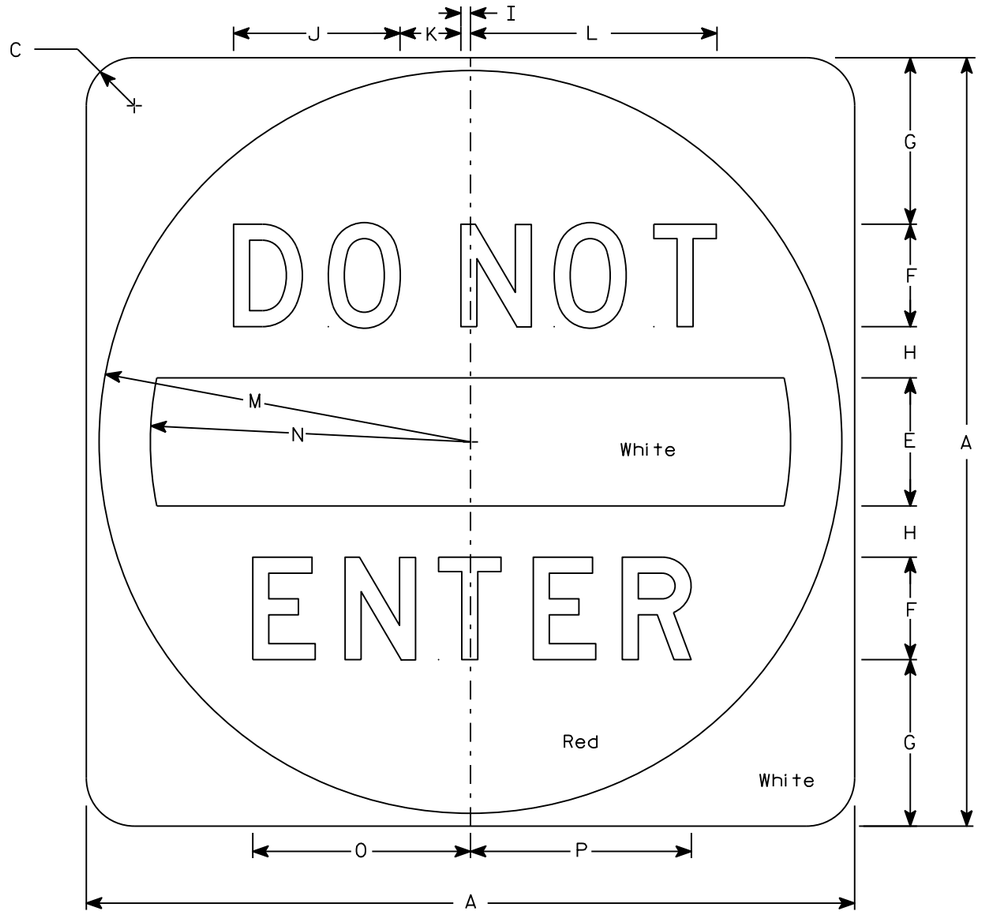
STANDARD SIGN
R4-7 & R4-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 8/17/23 PLATE NO. R4-7.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 448	E



R5-1

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - See detail
   Message - White
3. Message Series - D

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30		1 7/8		5	4	6 1/2	2	3/8	6 1/2	2 3/8	9 5/8	14 1/2	12 1/2	8 1/2	8 5/8											6.25
2M	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
3	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
4	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
5	48		3		8	6	11	3	5/8	9 3/4	3 5/8	14 1/2	23 1/2	20	12 3/4	12 7/8											16.0

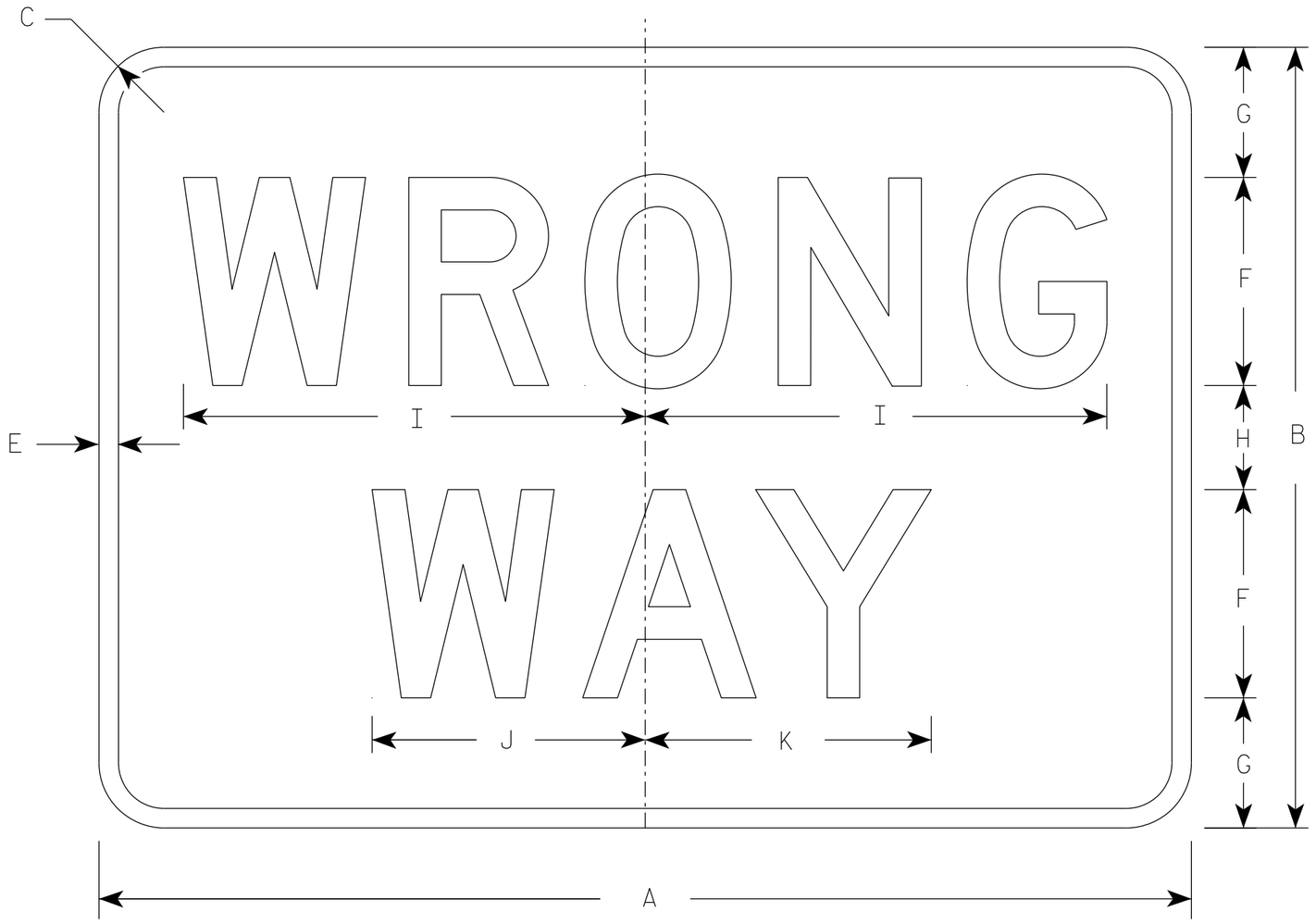
STANDARD SIGN
R5-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/15/18 PLATE NO. R5-1.16

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 449 | E



R5-1A

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - Red
   Message - White
3. Message Series - D

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30	18	1 1/2		1/2	5	3	2	11	6 1/2	6 7/8																3.75
2S	36	24	1 1/2		5/8	6	4 1/2	3	13 1/4	7 7/8	8 1/4																6.00
2M	42	30	1 7/8		3/4	8	5	4	17 3/4	10 1/2	11																8.75
3	42	30	1 7/8		3/4	8	5	4	17 3/4	10 1/2	11																8.75
4	42	30	1 7/8		3/4	8	5	4	17 3/4	10 1/2	11																8.75
5	42	30	1 7/8		3/4	8	5	4	17 3/4	10 1/2	11																8.75

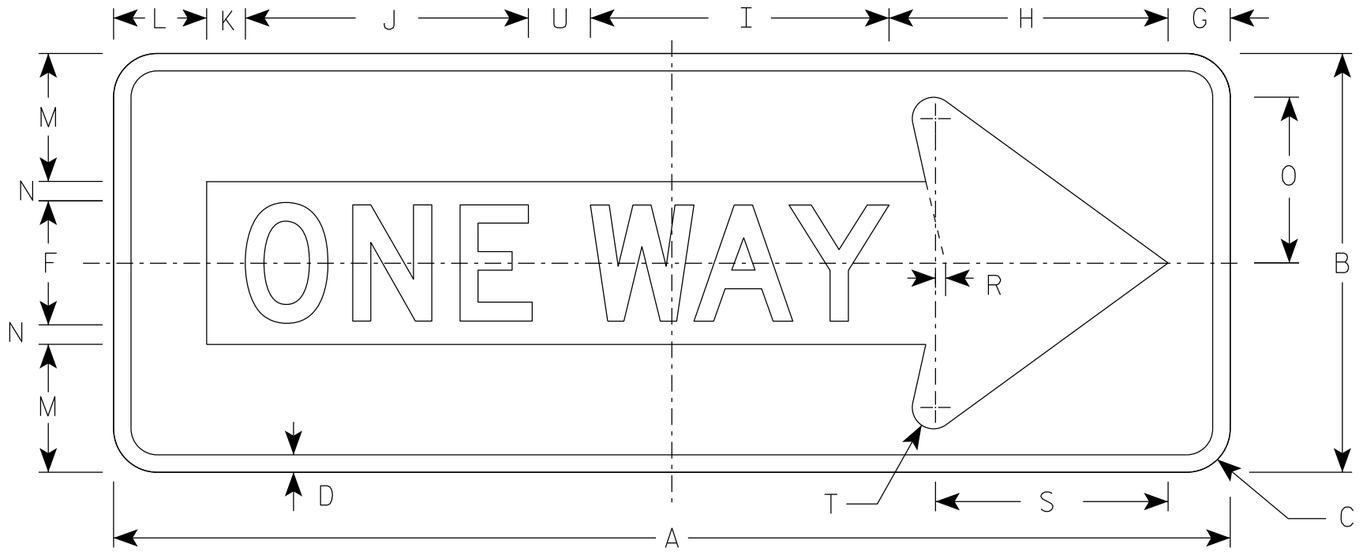
STANDARD SIGN
R5-1A

WISCONSIN DEPT OF TRANSPORTATION

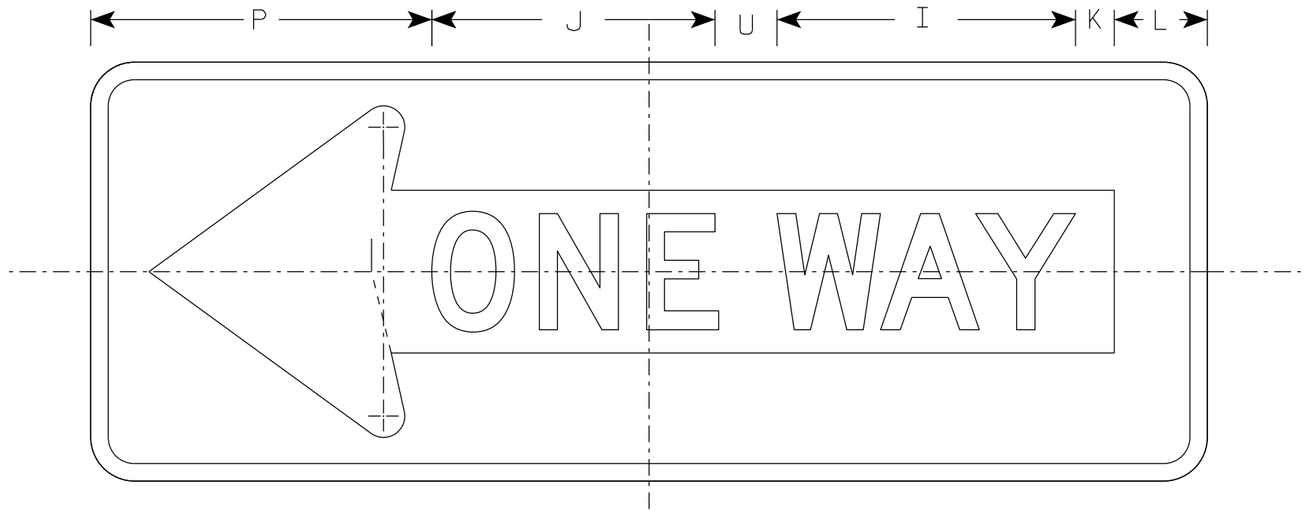
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/17/23 PLATE NO. R5-1A.3

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 450 | E



R6-1R



R6-1L

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - Black
   Message - Black Legend & White Arrow & Border
3. Message Series - D

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	36	12	1 1/2	1/2		4	2	7 1/2	9 5/8	9 1/8	1 1/4	3	3 3/8	5/8	4 3/8	11		3/8	7 1/2	3/4	2						3.0
2M	48	18	1 7/8	3/4		5	2 1/2	11	13	12 1/4	2 3/4	3 1/2	5 1/2	1	7 1/8	13 1/2		1/2	10 1/8	7/8	3						6.0
3	48	18	1 7/8	3/4		5	2 1/2	11	13	12 1/4	2 3/4	3 1/2	5 1/2	1	7 1/8	13 1/2		1/2	10 1/8	7/8	3						6.0
4	48	18	1 7/8	3/4		5	2 1/2	11	13	12 1/4	2 3/4	3 1/2	5 1/2	1	7 1/8	13 1/2		1/2	10 1/8	7/8	3						6.0
5																											

STANDARD SIGN
R6-1 L&R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

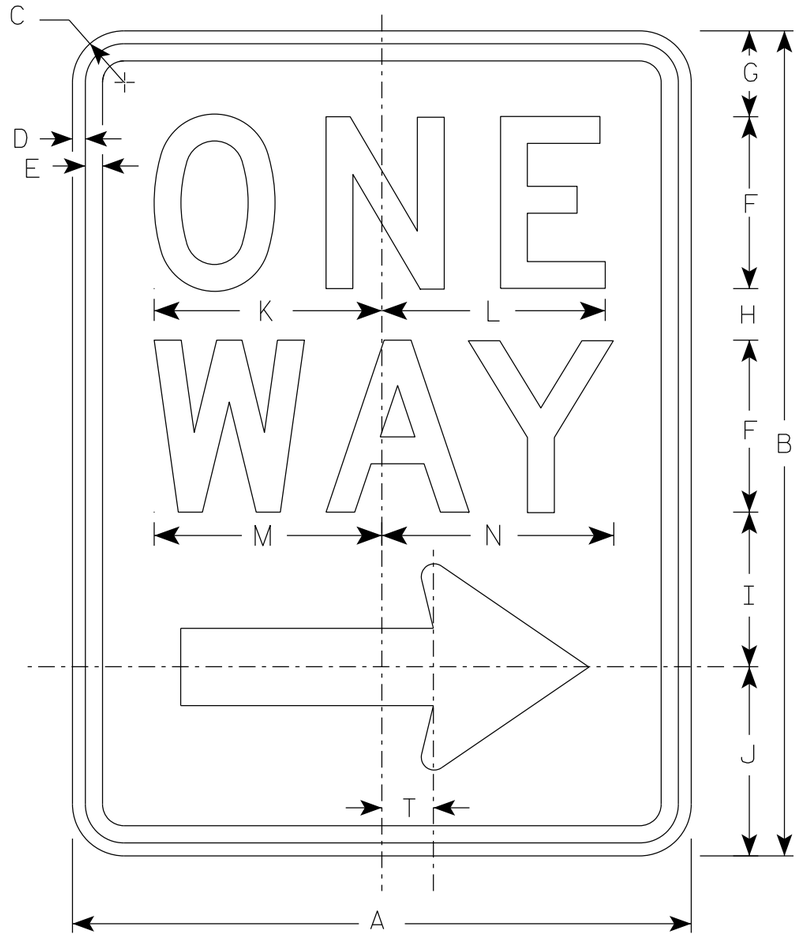
DATE 4/7/2025 PLATE NO. R6-1.5

PROJECT NO:

SHEET NO: 451 E

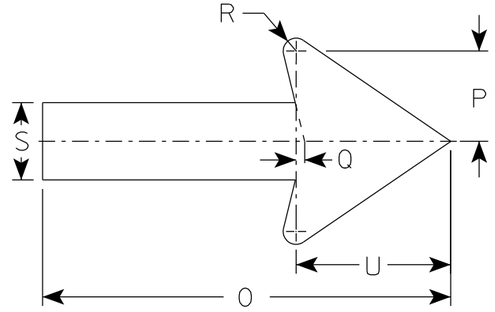
NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. R6-2L same as R6-2R except arrow points to the left.



R6-2R

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
1	18	24	1 1/2	3/8	1/2	5	2 1/2	1 1/2	4 1/2	5 1/2	6 5/8	6 1/2	6 5/8	6 3/4	11 7/8	2 5/8	1/4	3/8	2 1/4	1 1/2	4 1/2					
2S	24	1 1/2	1 1/2	3/8	1/2	6	3	2 1/2	5 1/2	7	8 1/8	8 1/8	8 1/2	8 5/8	16	3 1/2	3/8	1/2	3	2	6					
2M	30	36	1 7/8	1/2	5/8	8	2 1/2	2 5/8	6 7/8	8	10 1/2	10 1/2	11 1/4	11 1/4	20	4 3/8	1/2	5/8	3 3/4	2 1/2	7 1/2					
3	36	48	1 7/8	1/2	5/8	10	5 1/4	3 1/4	9	10 1/2	12 3/4	12 3/4	13 1/4	13 1/2	24	5 5/8	1/2	3/4	4 3/4	3	9					
4	36	48	1 7/8	1/2	5/8	10	5 1/4	3 1/4	9	10 1/2	12 3/4	12 3/4	13 1/4	13 1/2	24	5 5/8	1/2	3/4	4 3/4	3	9					
5																										

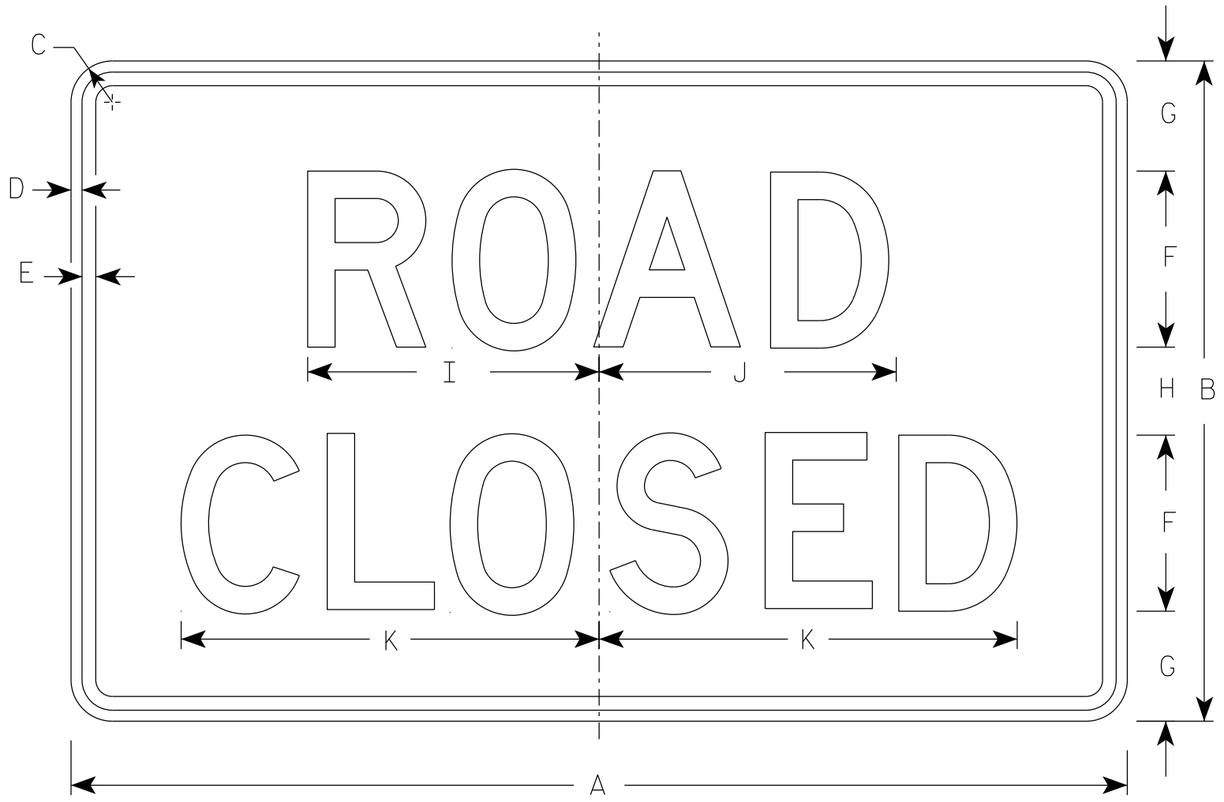
STANDARD SIGN
R6-2 R&L

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/2/10 PLATE NO. R6-2.8

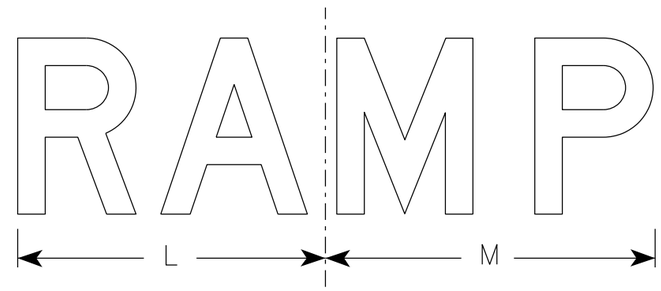
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 452	E



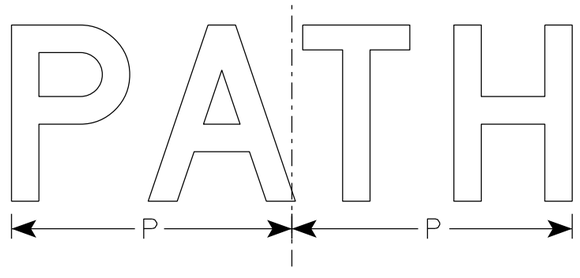
R11-2

NOTES

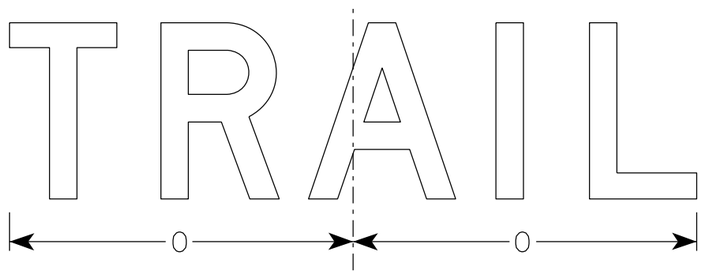
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Modify the message as required.



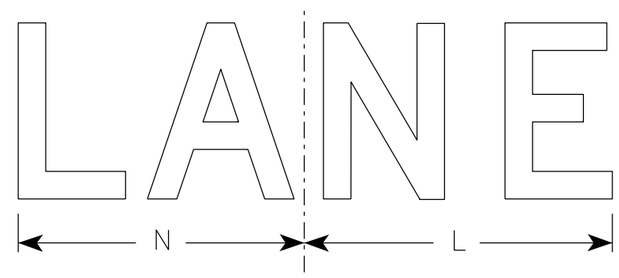
R11-2R



R11-2C



R11-2T



R11-2L

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	30	1 7/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8	12 3/4											10.0
2M	48	30	1 7/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8	12 3/4											10.0
3	48	30	1 7/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8	12 3/4											10.0
4	48	30	1 7/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8	12 3/4											10.0
5	48	30	1 7/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8	12 3/4											10.0

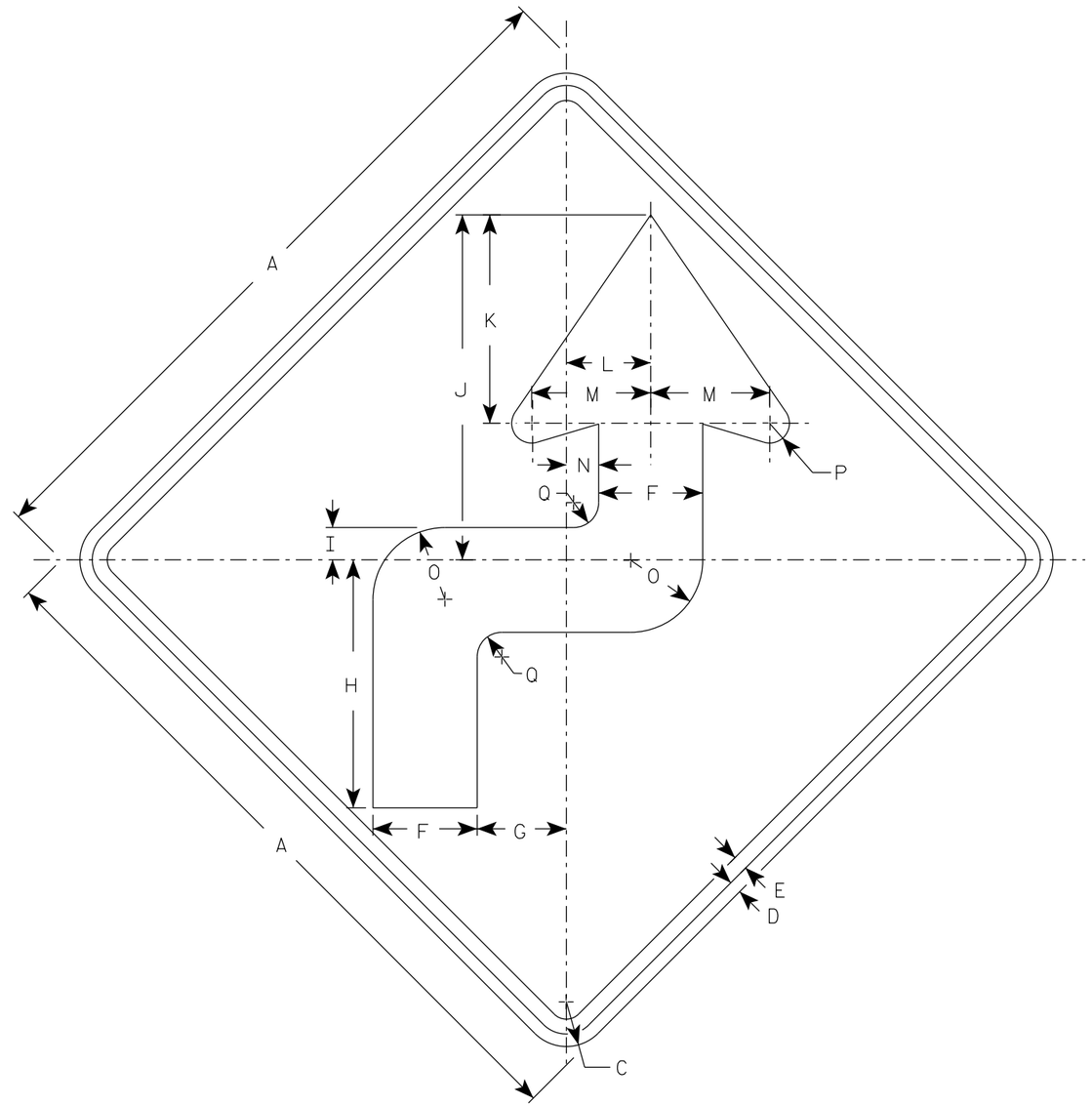
STANDARD SIGN
R11-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/3/26 PLATE NO. R11-2.13

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



W1-3R

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Yellow
   Message - Black
3. W1-3L is the same as W1-3R except the arrow is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/2	3/8	1/2	3 1/2	3	8 3/8	1 1/8	11 5/8	7	2 3/4	4	1 1/8	2 1/2	5/8	7/8										4.0
2S	36		2 1/4	5/8	3/4	5 1/4	4 1/2	12 1/2	1 5/8	17 3/8	10 1/2	4 1/4	6	1 5/8	3 5/8	1	1 1/4										9.0
2M	36		2 1/4	5/8	3/4	5 1/4	4 1/2	12 1/2	1 5/8	17 3/8	10 1/2	4 1/4	6	1 5/8	3 5/8	1	1 1/4										9.0
3	36		2 1/4	5/8	3/4	5 1/4	4 1/2	12 1/2	1 5/8	17 3/8	10 1/2	4 1/4	6	1 5/8	3 5/8	1	1 1/4										9.0
4	36		2 1/4	5/8	3/4	5 1/4	6	12 1/2	1 5/8	17 3/8	10 1/2	4 1/4	6	1 5/8	3 5/8	1	1 1/4										9.0
5	48		3	3/4	1	7	6	16 5/8	2 1/4	23 1/4	14	5 5/8	8	2 1/8	4 7/8	1 1/4	1 5/8										16.0

STANDARD SIGN
W1-3

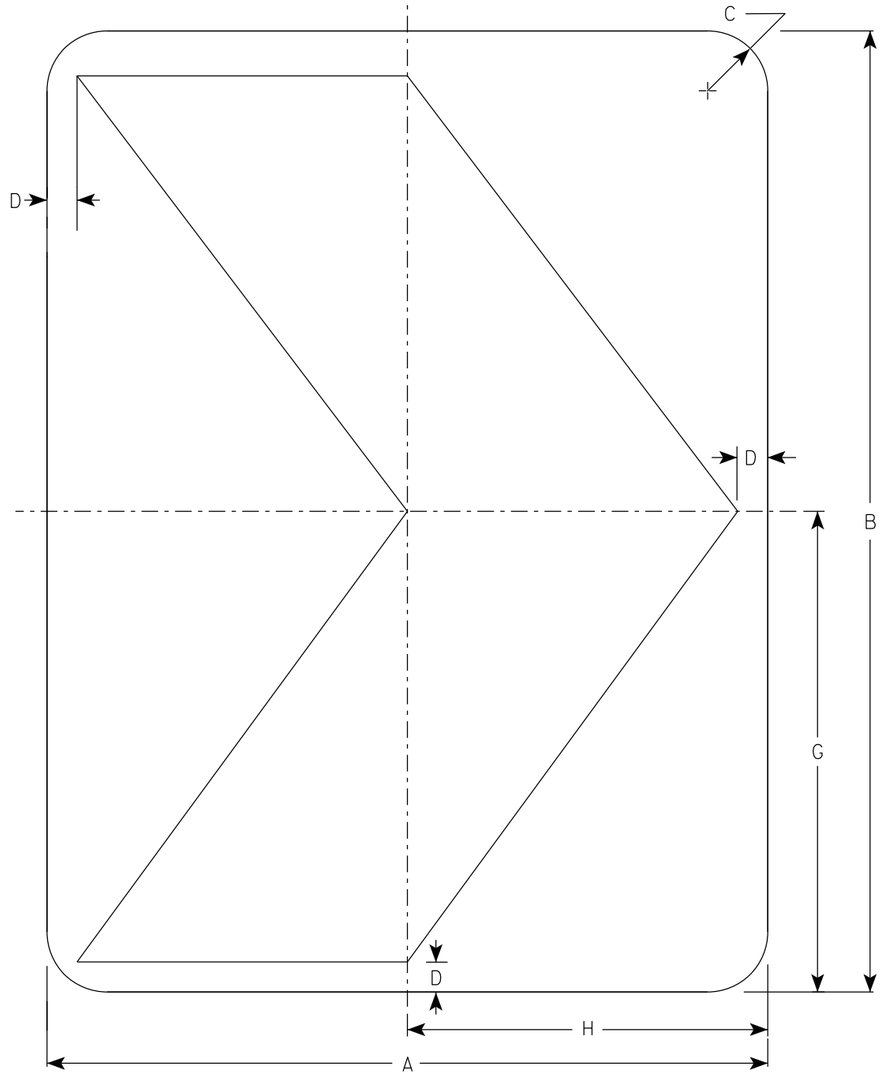
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/23/2023 PLATE NO. W1-3.9

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

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W13.dgn PLOT DATE : 30-OCT 2023 9:16 PLOT BY : dotc4c PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42



W1-8

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Yellow
   Message - Black

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	12	18	1 ½	½			9	6																			1.5
2S	18	24	1 ½	¾			12	9																			3.0
2M	18	24	1 ½	¾			12	9																			3.0
3	24	30	1 ½	1			15	12																			5.0
4	30	36	1 ⅞	1 ¼			18	15																			7.5
5	36	48	1 ⅞	1 ½			24	18																			12.0

STANDARD SIGN

W1-8

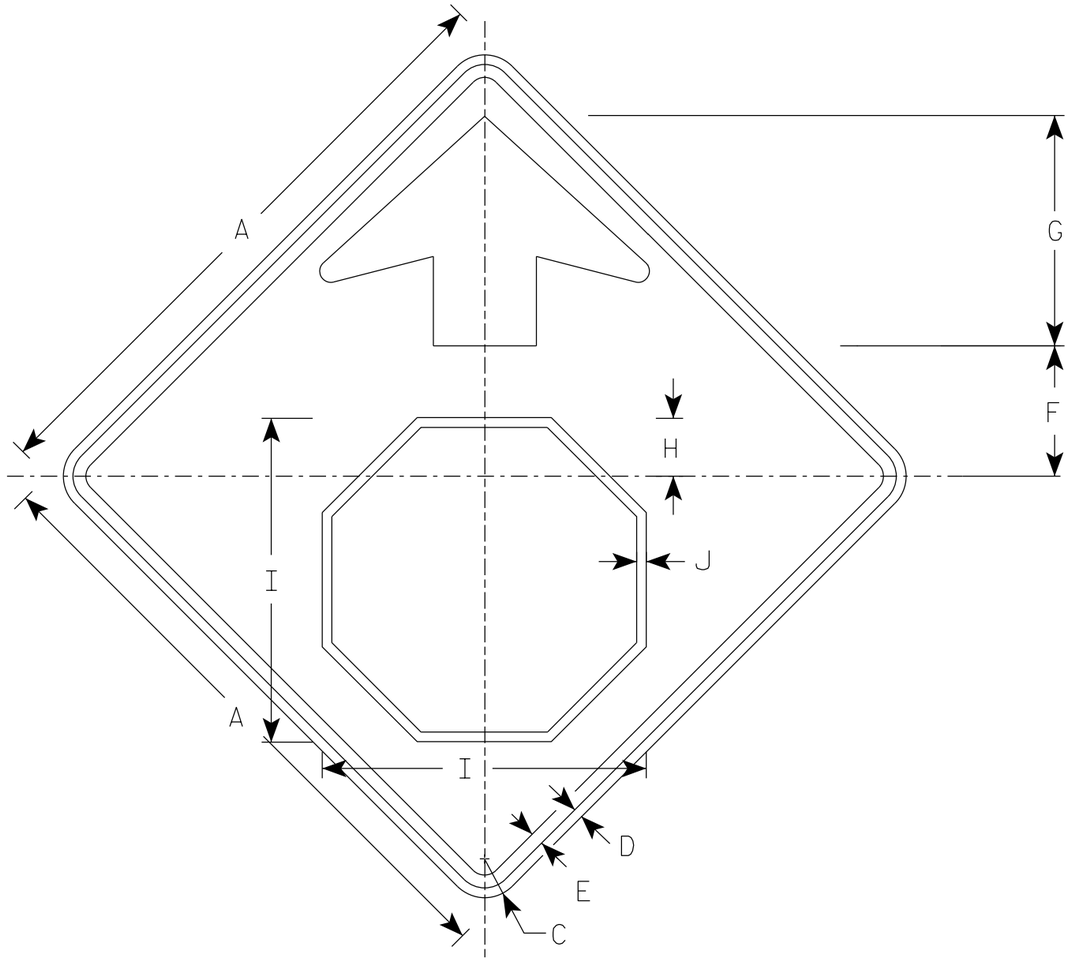
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/11/2023 PLATE NO. W1-8.7

PROJECT NO:

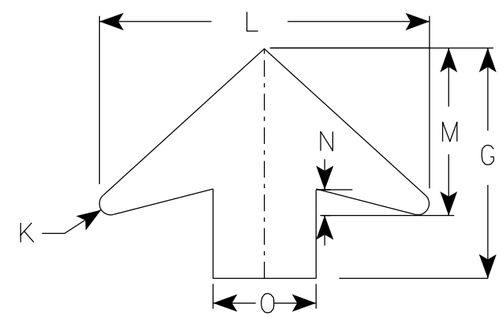
SHEET NO: 455 **E**



W3-1

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Yellow
   Arrow & Border - Black
   Stop Symbol - White Border on Red Background



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 7/8	1/2	5/8	6 1/4	11 1/4	2 7/8	15 3/4	1/2	1/2	16	8	1 1/4	5												6.25
2S	36		2 1/4	5/8	3/4	7 1/2	13 1/2	3 1/2	19	5/8	5/8	19 1/4	9 3/4	1 5/8	6												9.0
2M	36		2 1/4	5/8	3/4	7 1/2	13 1/2	3 1/2	19	5/8	5/8	19 1/4	9 3/4	1 5/8	6												9.0
3	36		2 1/4	5/8	3/4	7 1/2	13 1/2	3 1/2	19	5/8	5/8	19 1/4	9 3/4	1 5/8	6												9.0
4	48		3	3/4	1	10	17 7/8	4 1/2	25 1/8	3/4	7/8	25 5/8	13	2	8												16.0
5	48		3	3/4	1	10	17 7/8	4 1/2	25 1/8	3/4	7/8	25 5/8	13	2	8												16.0

STANDARD SIGN
W3-1

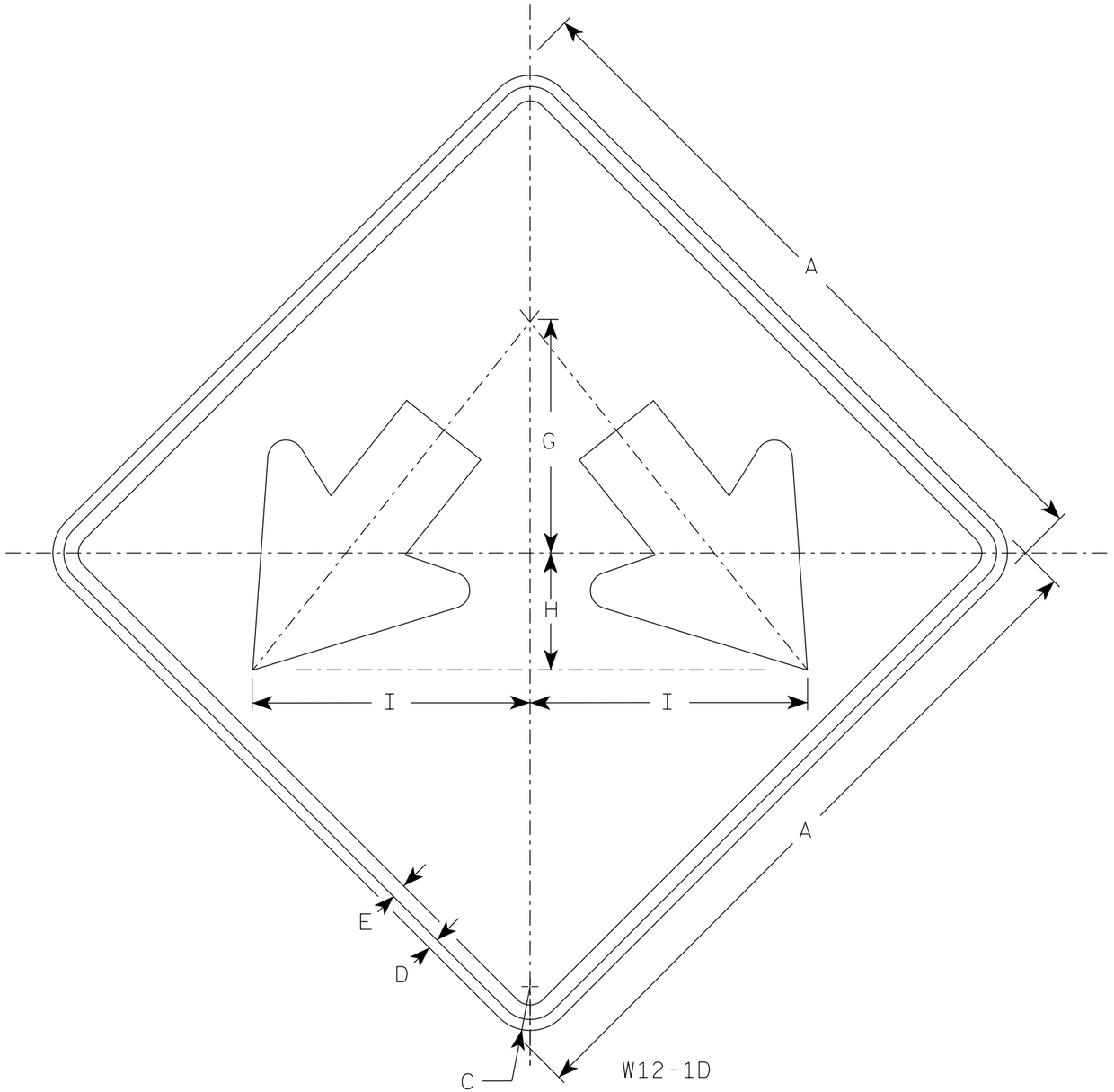
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/17/2023 PLATE NO. W3-1.13

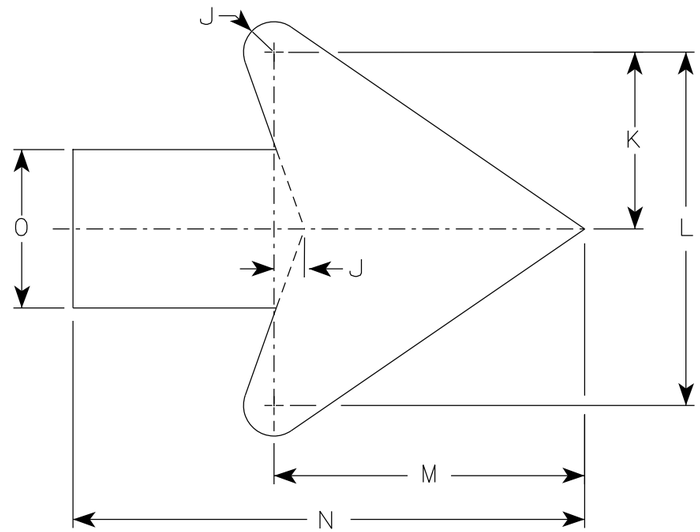
PROJECT NO:

SHEET NO: 456 E



NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Yellow
   Message - Black



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	Areq. sq. ft.
1																											
2S	24		1 ½	½	⅜		8	4	9 ½	⅜	3 ⅜	7 ¼	6 ⅜	10 ⅜	3 ¼												4.0
2M	24		1 ½	½	⅜		8	4	9 ½	⅜	3 ⅜	7 ¼	6 ⅜	10 ⅜	3 ¼												4.0
3	30		1 ⅞	½	⅝		10	5	11 ⅞	¾	4 ½	9	7 ⅞	13	4												6.25
4	36		2 ¼	½	⅝		12	6	14 ¼	1	5 ½	10 ⅞	9 ⅝	15 ¾	4 ¾												9.0
5	48		3	¾	1		16	8	19	1 ¼	7 ¼	14 ½	12 ¾	21	6 ¼												16.0

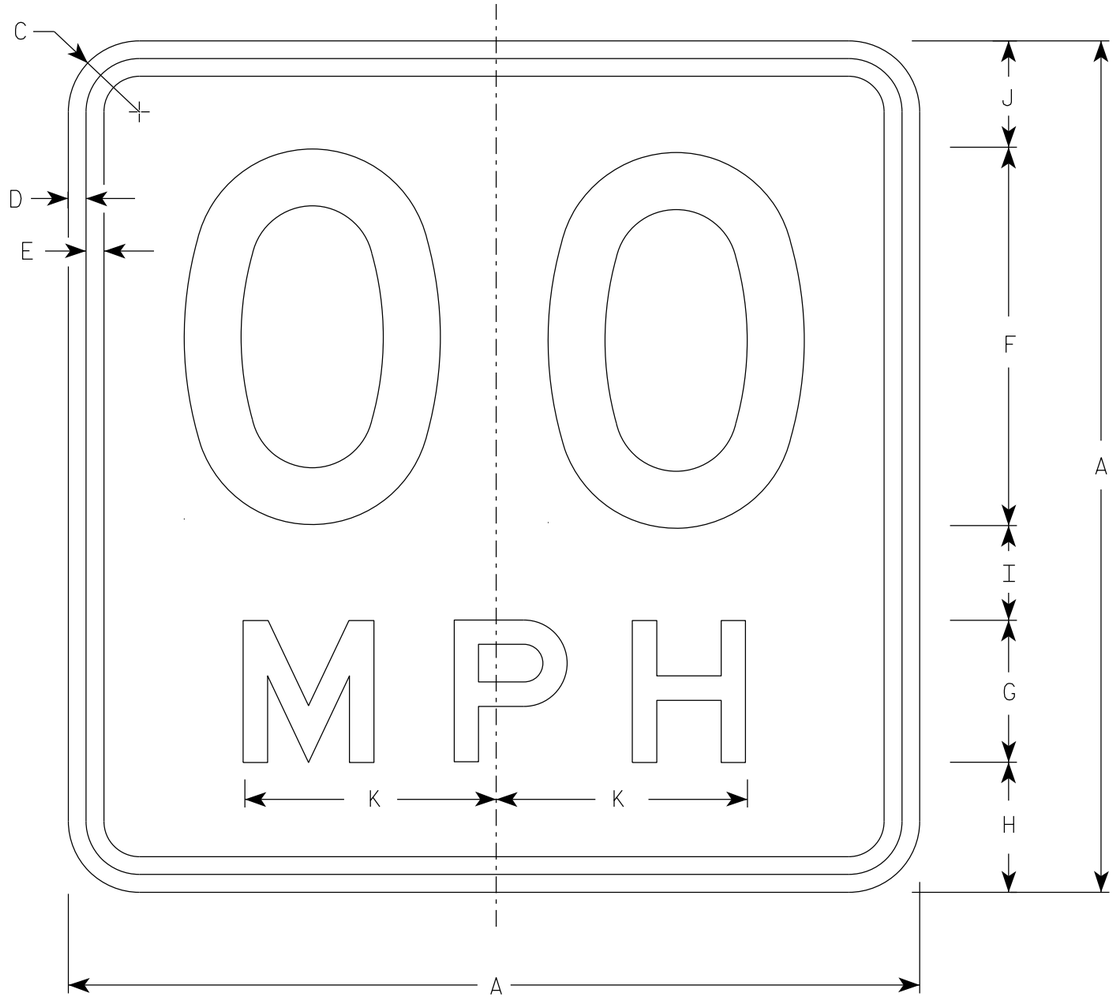
STANDARD SIGN
W12-1D

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/30/2023 PLATE NO. W12-1D.16

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 457	E



W13-1

* For 30" x 30" Warning Signs, use 18" x 18" W13-1 signs.
For 36" x 36" Warning Signs, use 24" x 24" W13-1 signs.

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Yellow
   Message - Black
3. Message Series - See Note 5
4. Substitute appropriate numerals and optically space about centerline to achieve proper balance.
5. Line 1 is Series D
   Line 2 is Series E

	SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
	1	18		1 1/2	3/8	3/8	8	3	2 3/4	2	2 1/4	5 3/8																2.25
*	2S	18		1 1/2	3/8	3/8	8	3	2 3/4	2	2 1/4	5 3/8																2.25
*	2M	18		1 1/2	3/8	3/8	8	3	2 3/4	2	2 1/4	5 3/8																2.25
	3	24		1 1/2	3/8	1/2	10	4	4	2 3/4	3 1/4	6 5/8																4.00
	4	36		2 1/4	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
	5	36		2 1/4	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00

STANDARD SIGN
W13-1

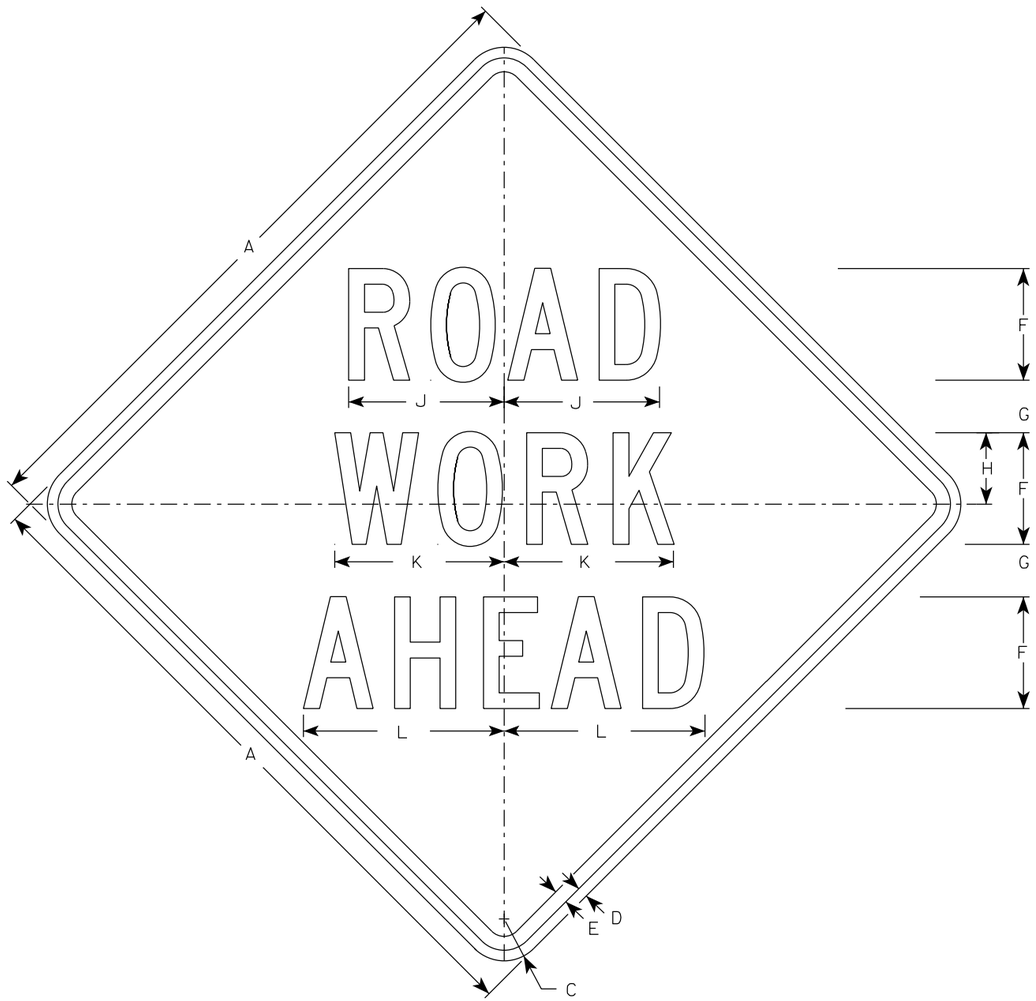
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

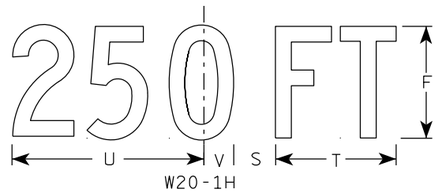
DATE 1/8/2024 PLATE NO. W13-1.17

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

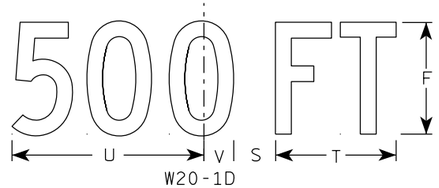
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W131.dgn PLOT DATE : 8-Jan 2024 11:07 PLOT BY : dotc4c PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42



W20-1A



W20-1H



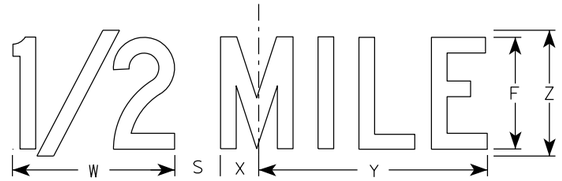
W20-1D

W20-1C

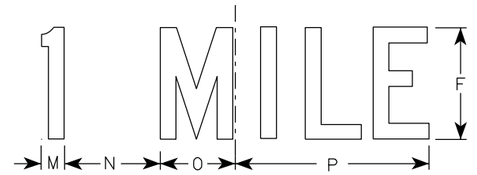
W20-1B

NOTES

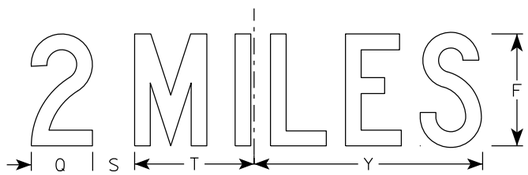
1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



W20-1G



W20-1F



W20-1E

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

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

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/10/2024 PLATE NO. W20-1.12

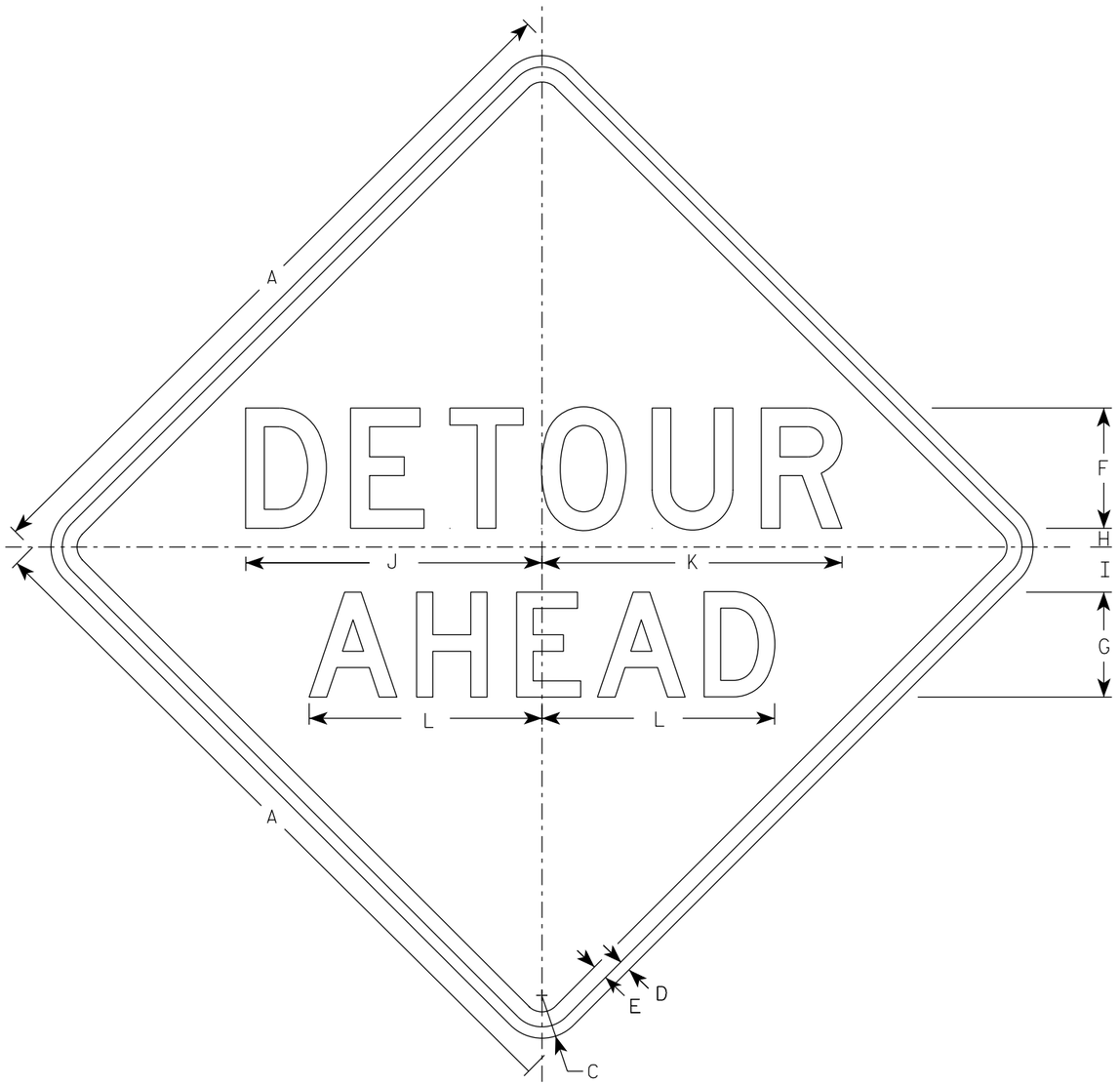
PROJECT NO:

SHEET NO: 459 E

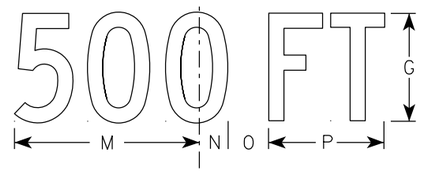
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W201.DGN PLOT DATE : 10-JAN 2024 11:16 PLOT BY : dotc4c

WISDOT/CADDS SHEET 42

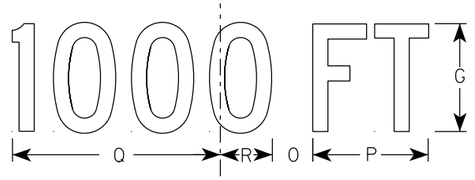
7



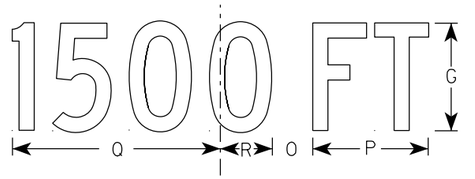
W20-2A



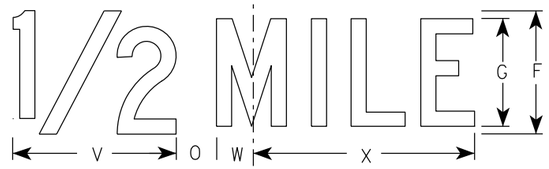
W20-2D



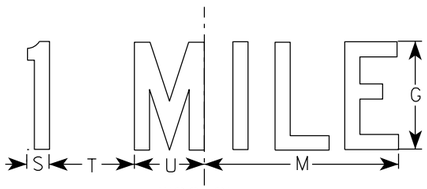
W20-2C



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

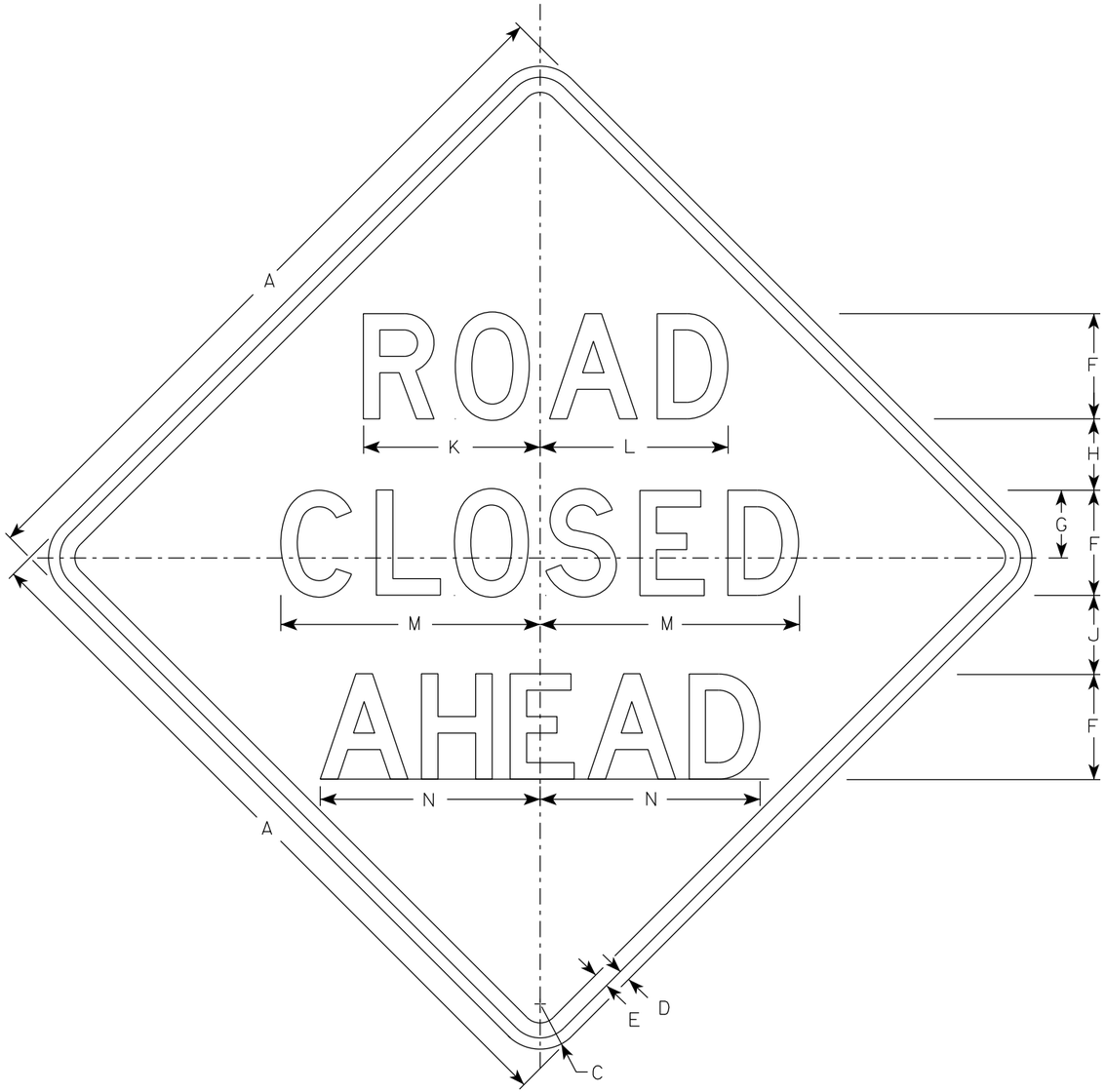
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

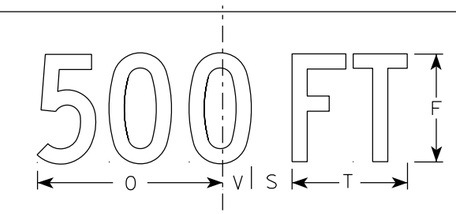
DATE 1/10/2024 PLATE NO. W20-2.7

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

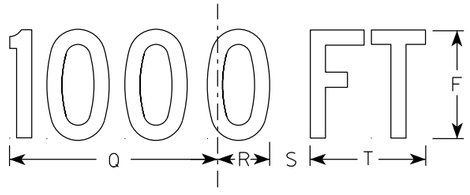
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W202.DGN PLOT DATE : 10-JAN 2024 11:36 PLOT BY : dotc4c PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42



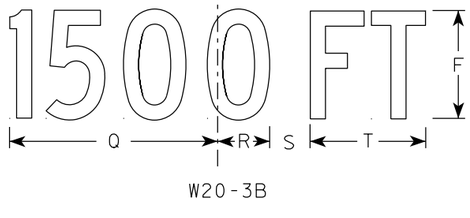
W20-3A



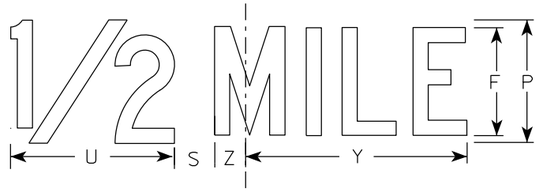
W20-3D



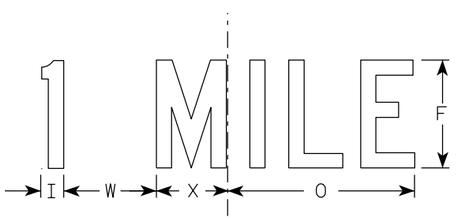
W20-3C



W20-3B



W20-3G



W20-3F

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - see note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Lines 1 and 2 are Series D.
   Line 3 is Series D for AHEAD and Series C for all other distances.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		2 1/4	5/8	3/4	5	3 3/8	3 1/2	1 1/8	4	8 3/8	8 7/8	12 1/2	11	9	6	10 1/8	2 1/2	1 7/8	5 5/8	8	1 3/8	4 1/2	3 1/2	10 3/4	1 3/4	9.0
2S	48		3	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
2M	48		3	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
3	48		3	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
4	48		3	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
5	48		3	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0

STANDARD SIGN
W20-3A, B, C, D, F & G

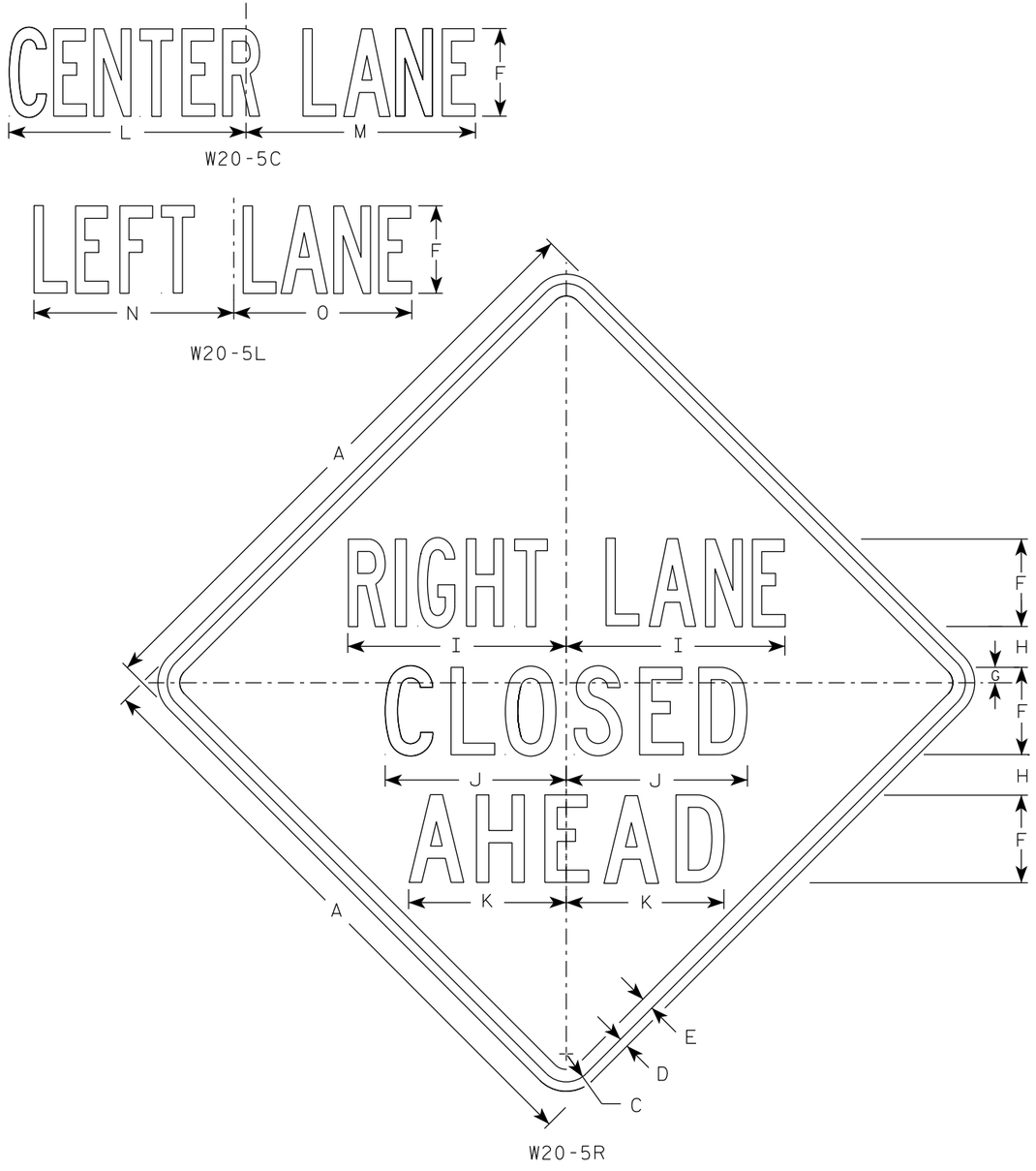
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

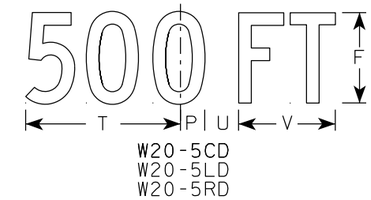
DATE 1/10/2024 PLATE NO. W20-3.8

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

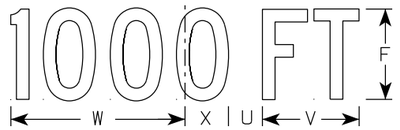
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W203.DGN PLOT DATE : 10-JAN 2024 12:02 PLOT BY : dotc4c PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42



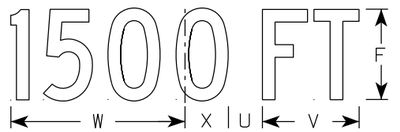
W20-5R



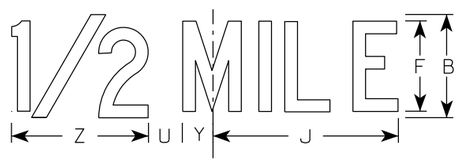
W20-5CD
W20-5LD
W20-5RD



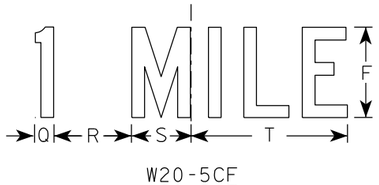
W20-5CE
W20-5LE
W20-5RE



W20-5CB
W20-5LB
W20-5RB



W20-5CG
W20-5LG
W20-5RG



W20-5CF
W20-5LF
W20-5RF

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - See Note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. " _____ LANE" is Series B.
   All other copy is Series C.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	6	2 1/4	5/8	3/4	5	7/8	2 1/2	13 1/8	10 3/4	9 1/2	14 1/4	13 5/8	12	12	1 3/8	1 1/8	4 1/2	3 1/2	9	1 7/8	5 5/8	10 1/8	2 1/2	1 3/4	8	9.0
2S	48	8	3	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
2M	48	8	3	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
3	48	8	3	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
4	48	8	3	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
5	48	8	3	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0

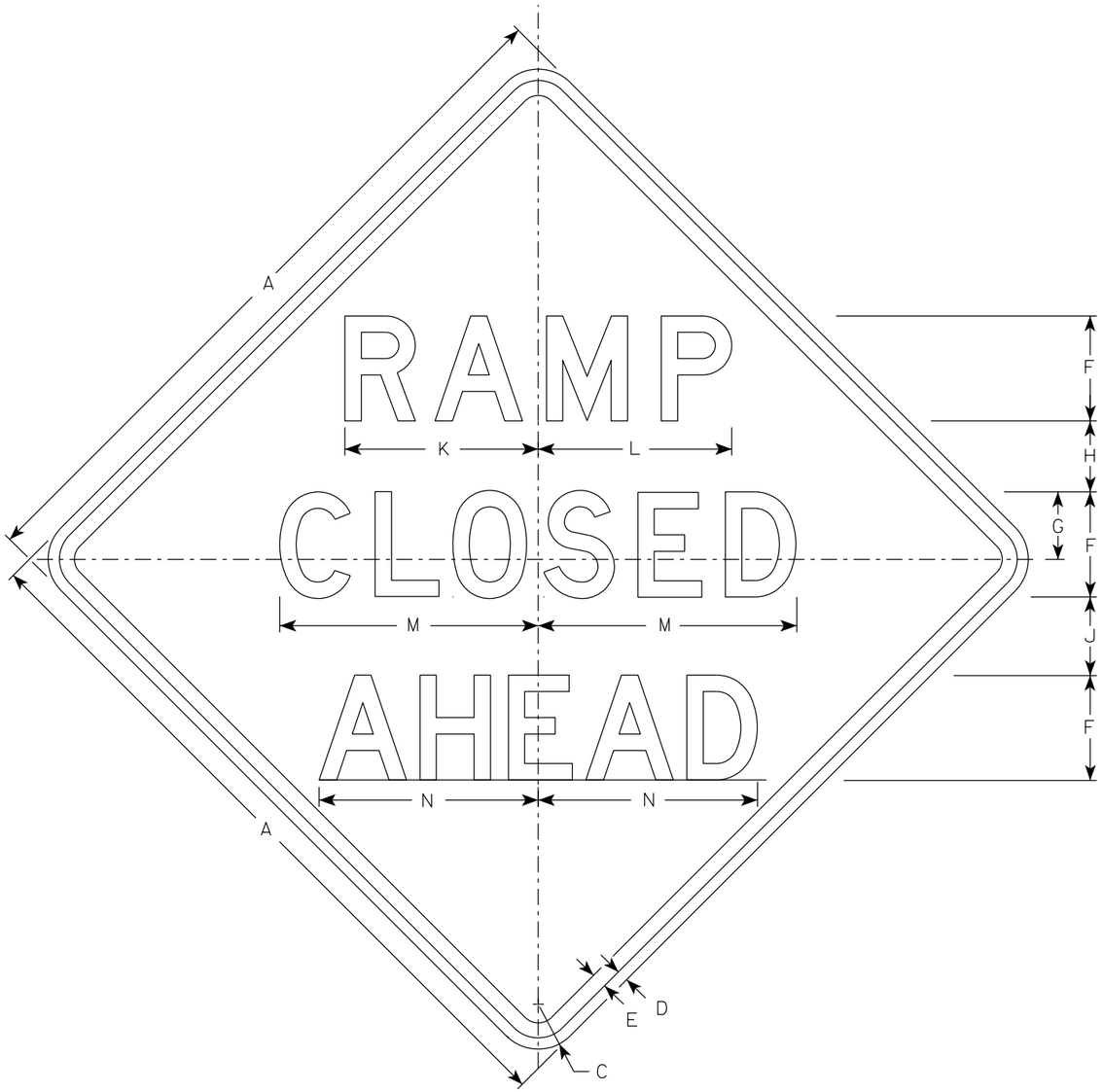
STANDARD SIGN
W20-5C,L,R

WISCONSIN DEPT OF TRANSPORTATION

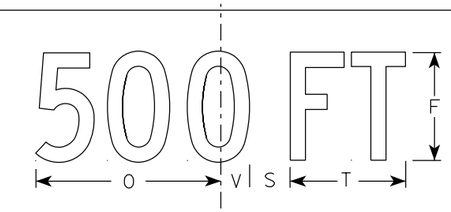
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/23/26 PLATE NO. W20-5.13

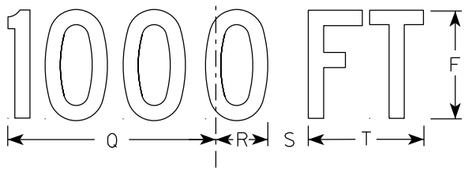
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 462 E



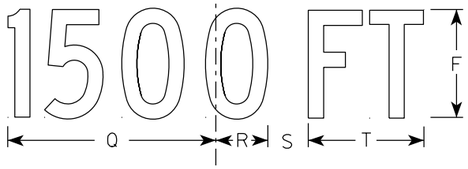
W20-53A



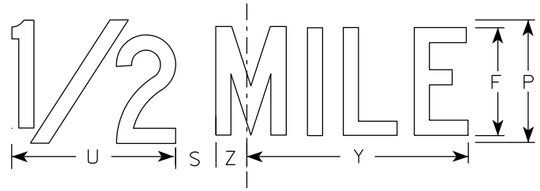
W20-53D



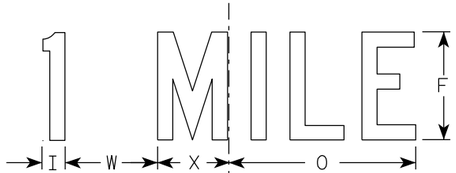
W20-53C



W20-53B



W20-53G



W20-53F

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - see note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Lines 1 and 2 are Series D.
   Line 3 is Series D for AHEAD and Series C for all other distances.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		2 1/4	5/8	3/4	5	3 3/8	3 1/2	1 1/8	4	9 1/4	9 1/4	12 1/2	11	9	6	10 1/8	2 1/2	1 7/8	5 5/8	8	1 3/8	4 1/2	3 1/2	10 3/4	1 3/4	9.0
2S	48		3	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	12 7/8	12 7/8	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
2M	48		3	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	12 7/8	12 7/8	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
3	48		3	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	12 7/8	12 7/8	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
4	48		3	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	12 7/8	12 7/8	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
5	48		3	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	12 7/8	12 7/8	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0

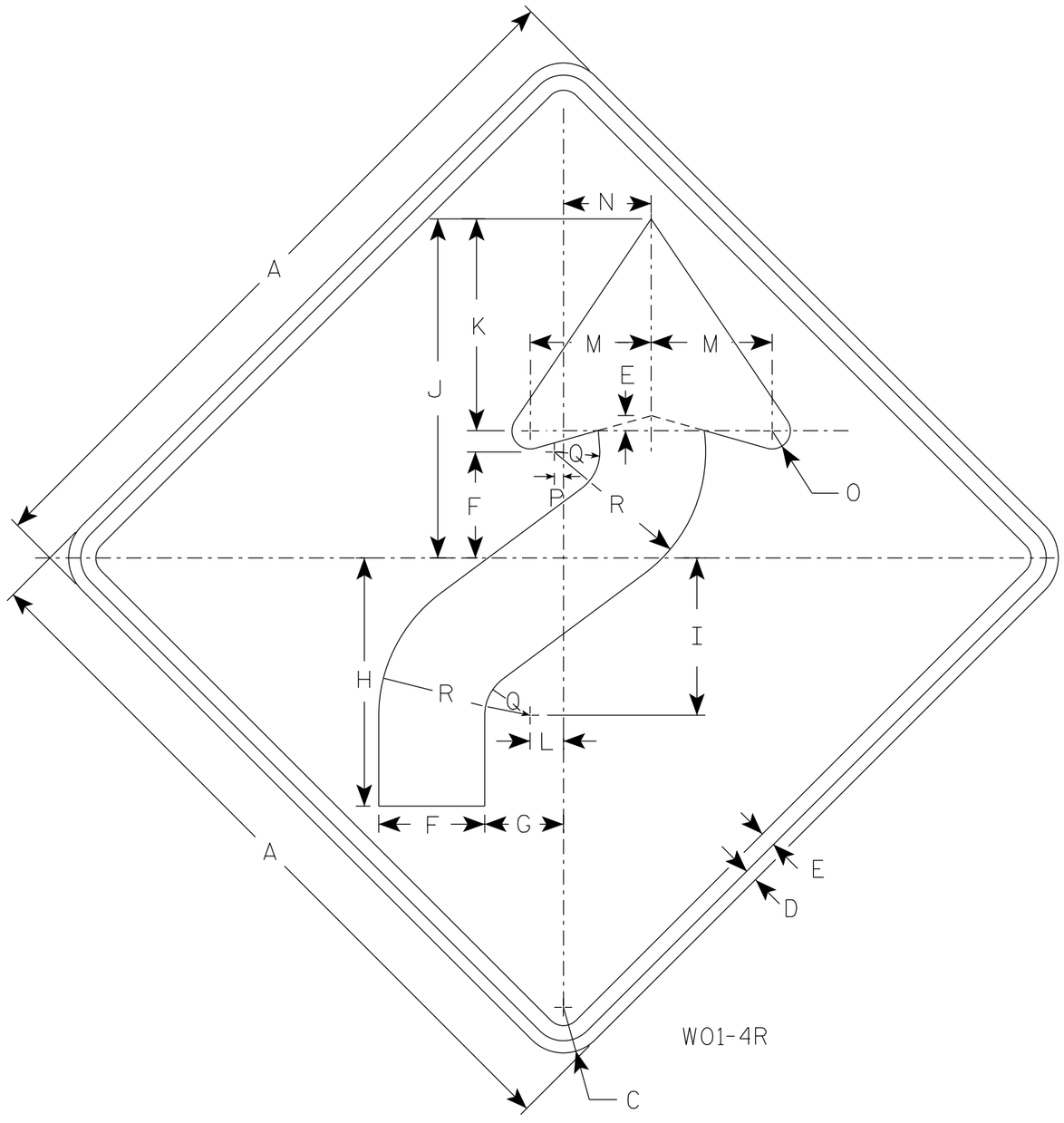
STANDARD SIGN
W20-53A,B,C,D,F,G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/10/2024 PLATE NO. W20-53.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



WO1-4R

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. WO1-4L is the same as WO1-4R except the arrow is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		2 1/4	5/8	3/4	5 1/4	4	12 3/8	7 7/8	16 7/8	10 1/2	1 5/8	6	4 1/2	1	1/2	2 1/4	7 1/2									9.0
2S	48		3	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
2M	48		3	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
3	48		3	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
4	48		3	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
5	48		3	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0

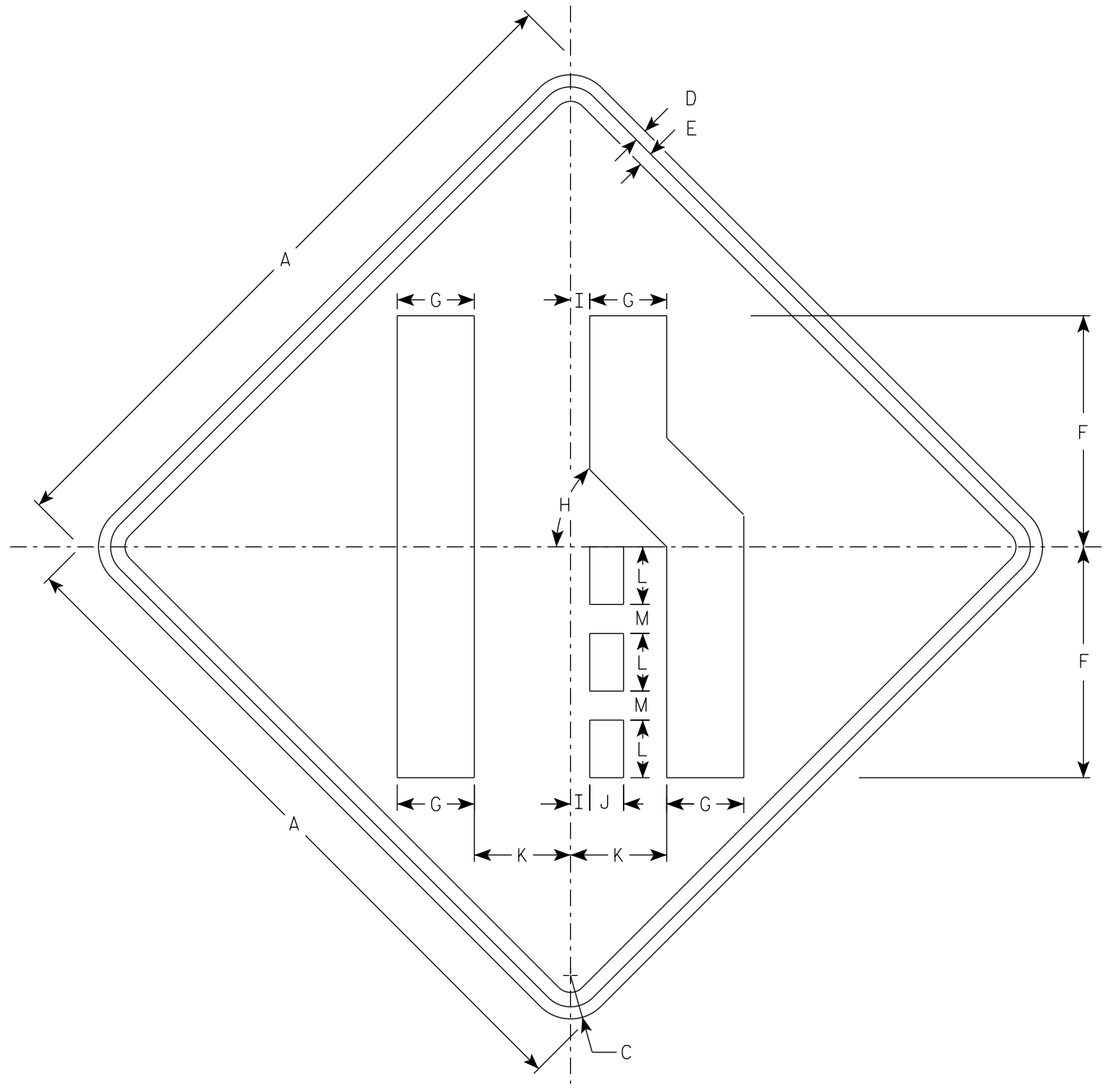
STANDARD SIGN
WO1-4

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 1/24/2024 PLATE NO. WO1-4.2

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 464 E



W04-2R

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W04-2L is the same as W04-2R except the symbol is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		2 1/4	5/8	3/4	12	4	45°	1	1 3/4	5	3	1 1/2														9.0
2S	48		3	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
2M	48		3	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
3	48		3	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
4	48		3	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
5	48		3	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0

STANDARD SIGN
W04-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/25/2024 PLATE NO. W04-2.2

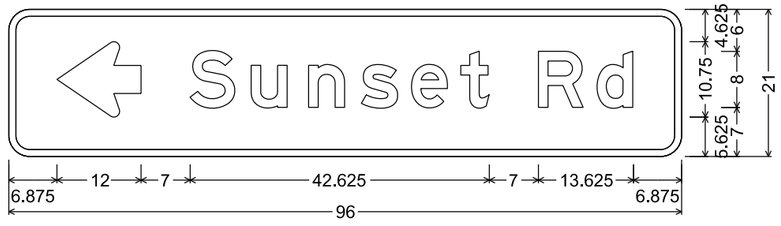
PROJECT NO:

SHEET NO: 465 E

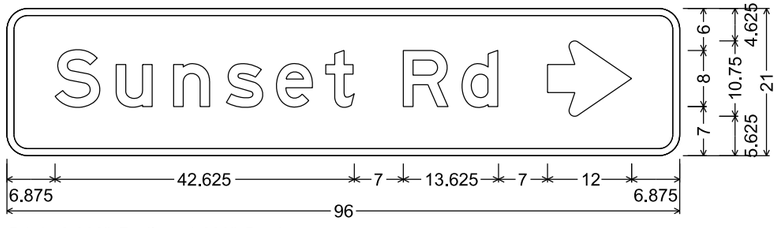
D1-4; 3.000" Radius, 1.000" Border

NOTES

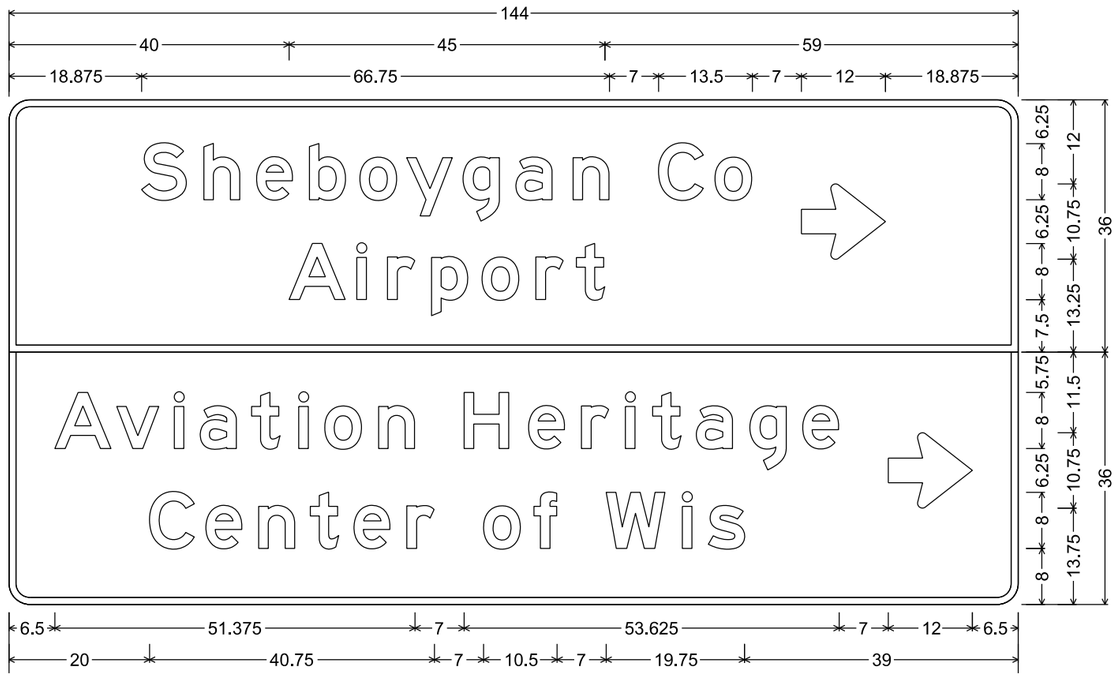
1. Signs are Type II - Type H Reflective
2. Color:
   Background - Green
   Message - White
3. Message Series - E



D1-1; 3.000" Radius, 1.000" Border



D1-1; 3.000" Radius, 1.000" Border



D1-4; 3.000" Radius, 1.000" Border

7

7

PROJECT NO: 1440-41-72	HWY: STH 23	COUNTY: SHEBOYGAN	PERMANENT SIGNING	SHEET NO: 466	E

STATE PROJECT NUMBER

1440-41-71

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HS-20
INVENTORY RATING: HS-21
OPERATING RATING: HS-40
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV): 250 (KIPS)

RATINGS TAKEN FROM HSI, 04/07/2025.

MATERIAL PROPERTIES:

CONCRETE MASONRY: ——— f'_c = 3,500 PSI

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

⚠ LOOSE SOIL SHALL BE REMOVED PRIOR TO PLACING THE RIPRAP HEAVY AND GEOTEXTILE TYPE HR AT SLOPE OF THE FILL IN FRONT OF THE EAST ABUTMENT OF B-59-88 BRIDGE. SLOPE EXCAVATION AND RESHAPING WILL BE INCIDENTAL TO "RIPRAP HEAVY" BID ITEM.

THE SLOPE OF THE FILL IN FRONT OF THE EAST ABUTMENT OF B-59-88 BRIDGE SHALL BE FILLED WITH RIPRAP HEAVY AND GEOTEXTILE TYPE 'HR', AS SHOWN ON THE PLANS AND DIRECTED BY THE ENGINEER.

◒ CONCRETE SURFACE REPAIR REQUIRED. LOCATIONS NOTED MAY NOT BE ALL INCLUSIVE, AND QUANTITIES SHOWN ON SHEET ARE APPROXIMATE. ADDITIONAL CONCRETE SURFACE REPAIR MAY BE REQUIRED DURING CONSTRUCTION AND SHOULD BE PERFORMED AS DIRECTED BY THE ENGINEER.

▲ FILL VOIDS WITH "SELECT CRUSHED MATERIAL FOR TRAVEL CORRIDOR" AS DESCRIBED IN THE SPV AND AS DIRECTED BY THE ENGINEER. WORK TO BE COMPLETED AFTER "RIPRAP HEAVY" IS PLACED. SEE "WILDLIFE PATH DETAIL" FOR MORE DETAILS.

◯ INDICATES WING NUMBER

▨ CONCRETE SURFACE REPAIR

TRAFFIC DATA

STH 23 EB:
ADT = 16,280 (2047)
R.D.S. = 65 MPH

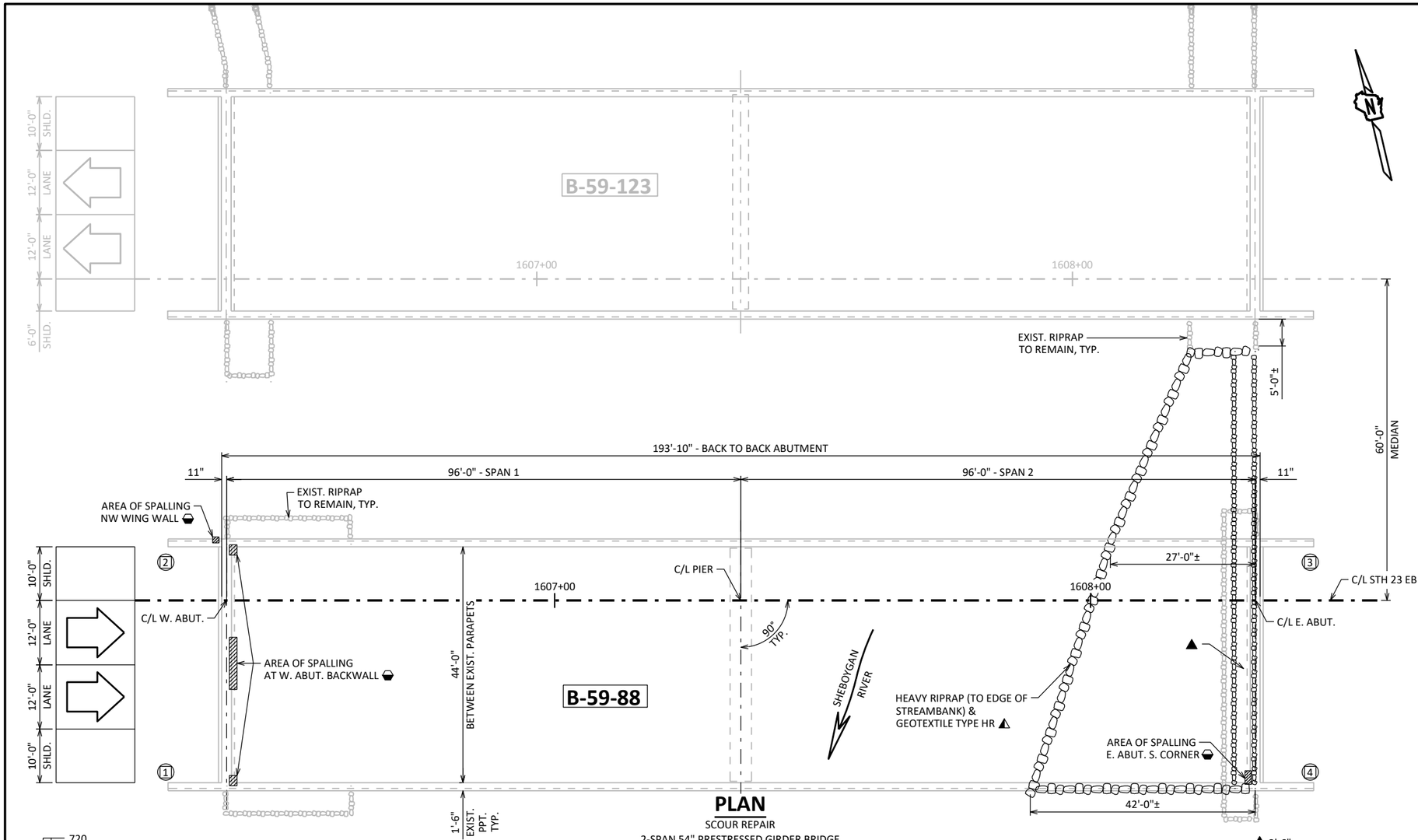
LIST OF DRAWINGS:

1. GENERAL PLAN

SCOPE OF WORK:

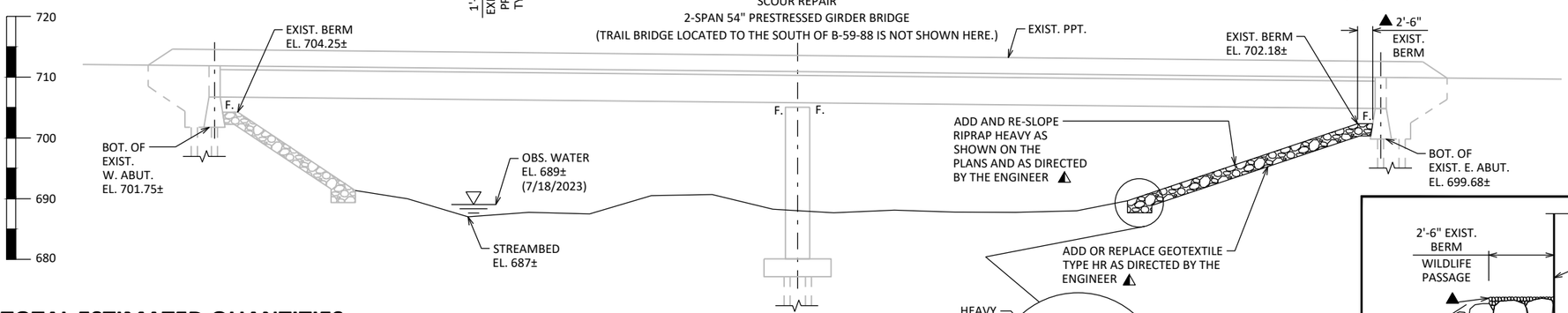
- REMOVING LOOSE SOIL AT THE SLOPE OF THE FILL IN FRONT OF THE EAST ABUTMENT, AND PLACING RIPRAP SUCH THAT IT EXTENDS THROUGH THE MEDIAN TO THE UPSTREAM BRIDGE (B-59-123).
- CONCRETE SURFACE REPAIR ON ABUTMENT BACKWALLS, WING WALL, AND AT THE LOCATIONS DIRECTED BY THE ENGINEER.

STRUCTURE DESIGN CONTACTS:
VISTA SHAHRIARI 608-266-7086
KYLE BUSCH 608-267-0465



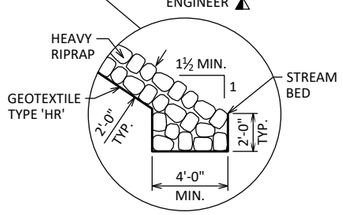
PLAN

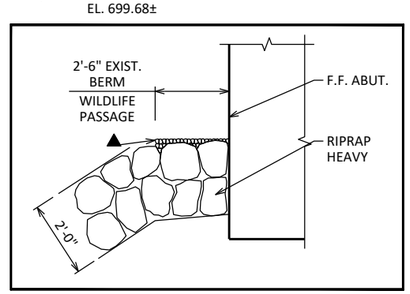
SCOUR REPAIR
2-SPAN 54" PRESTRESSED GIRDER BRIDGE
(TRAIL BRIDGE LOCATED TO THE SOUTH OF B-59-88 IS NOT SHOWN HERE.)



ELEVATION

S. EDGE OF B-59-88 BRIDGE
LOOKING UPSTREAM





WILDLIFE PATH DETAIL

TOTAL ESTIMATED QUANTITIES

	BID ITEM NUMBER	BID ITEMS	UNIT	TOTALS
◒	509.1500	CONCRETE SURFACE REPAIR	SF	10
	606.0300	RIPRAP HEAVY	CY	245
	645.0120	GEOTEXTILE TYPE HR	SY	396
	SPV.0195	SELECT CRUSHED MATERIAL FOR TRAVEL CORRIDOR	TON	8

NO.	DATE	REVISION	BY

BUREAU OF STRUCTURES

ACCEPTED KHB 07/29/26
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-59-88

STH 23 EB OVER SHEBOYGAN RIVER

COUNTY	TOWN
SHEBOYGAN	SHEBOYGAN FALLS

DESIGN SPEC.
REHABILITATION N/A

DESIGNED BY	DESIGN CK'D	DRAWN BY	PLANS CK'D
SGN/VS	CJK	VS	CJK

GENERAL PLAN

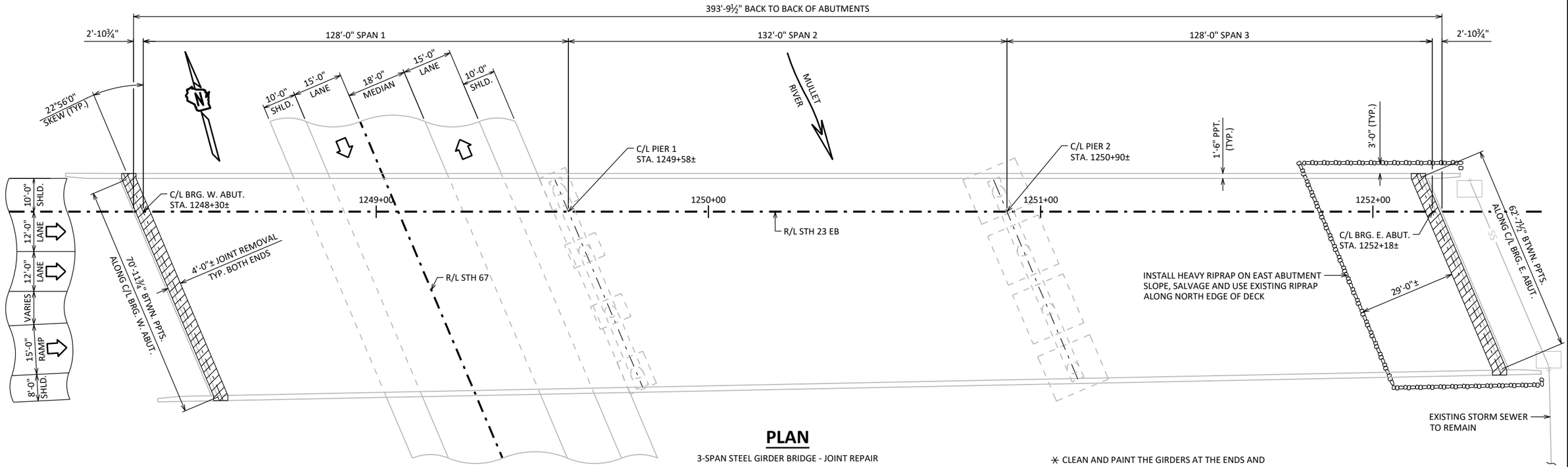
SHEET 1 OF 1
467

I.D. 1440-41-00A DATE: JULY 2026

8 8

STATE PROJECT NUMBER

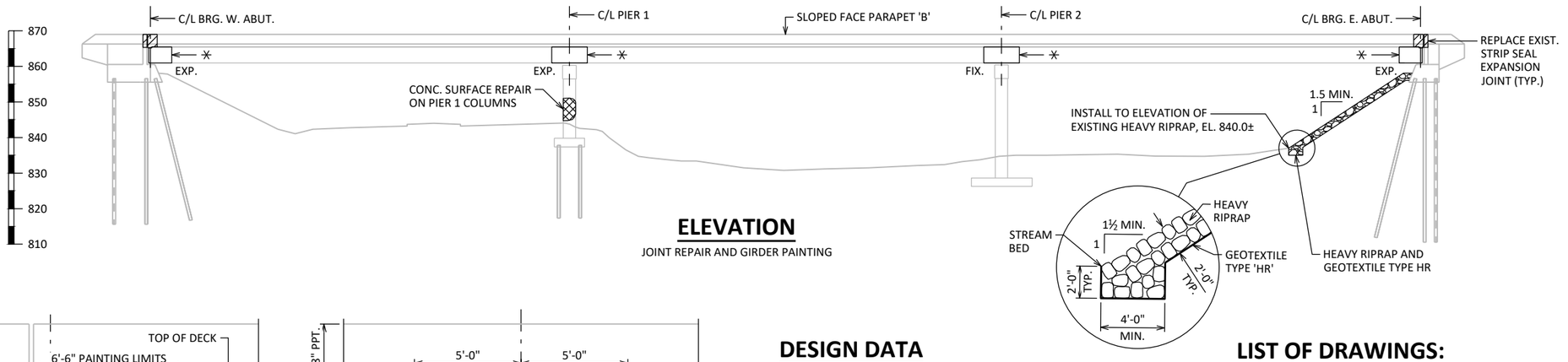
1440-41-71



PLAN

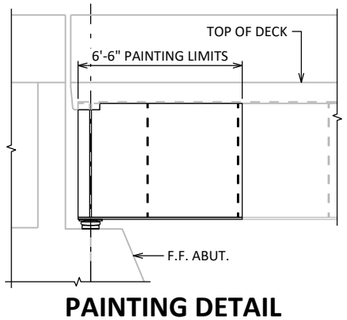
3-SPAN STEEL GIRDER BRIDGE - JOINT REPAIR

⚹ CLEAN AND PAINT THE GIRDERS AT THE ENDS AND OVER THE PIERS. ALSO INCLUDE BEARINGS AND ALL DIAPHRAGMS AND STIFFENERS IN THE PAINTING LIMITS.



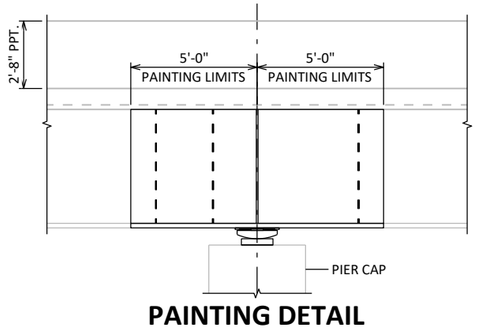
ELEVATION

JOINT REPAIR AND GIRDER PAINTING



PAINTING DETAIL

TYPICAL BOTH ABUTMENTS



PAINTING DETAIL

PIER 1 SHOWN, PIER 2 SIMILAR

DESIGN DATA

LIVE LOAD: (RATINGS TAKEN FROM HSIS, 01/31/2025)

INVENTORY RATING: HS-25
OPERATING RATING: HS-41
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV): 250 (KIPS)

MATERIAL PROPERTIES:

CONCRETE MASONRY
DECK REPAIR — f'_c = 4,000 PSI
ALL OTHER — f'_c = 3,500 PSI

BAR STEEL REINFORCEMENT
GRADE 60 — f_y = 60,000 PSI

LIST OF DRAWINGS:

1. GENERAL PLAN
2. STAGING DETAILS, GENERAL NOTES AND QUANTITIES
3. STAGING PLAN
4. SURFACE REPAIR DETAILS
5. CATHODIC PROTECTION
6. JONT REPAIR REMOVAL DETAILS
7. JOINT REPAIR REINFORCEMENT DETAILS
8. EXPANSION DEVICE
9. COVER PLATE DETAILS

TRAFFIC DATA

STH 23:
ADT = 16280 (2047)
R.D.S. = 65 MPH

SCOPE OF WORK

JOINT REPAIR AT BOTH ABUTMENTS

PAINT GIRDERS AT ENDS AND OVER PIERS

CONCRETE SURFACE REPAIR ON PIER 1 COLUMNS AND ON SOUTH PARAPET ON SPAN 2

DECK REPAIR ON INSIDE SHOULDER AND LANE OVER PIER 2

RESEAL EXISTING PARAPETS WITH PIGMENTED SURFACE SEALER AND AND EXISTING DECK WITH PROTECTIVE SURFACE TREATMENT

INSTALL HEAVY RIPRAP ON EAST ABUTMENT SLOPE

STRUCTURE DESIGN CONTACTS:

CHRIS KUSIAK 608-267-3619
KYLE BUSCH 608-267-0465

NO.	DATE	REVISION	BY

BUREAU OF STRUCTURES

ACCEPTED KHB 9/29/26
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-59-91

STH 23 EB OVER STH 67 AND MULLET RIVER

COUNTY	TOWN
SHEBOYGAN	PLYMOUTH

DESIGN SPEC.
REHABILITATION N/A

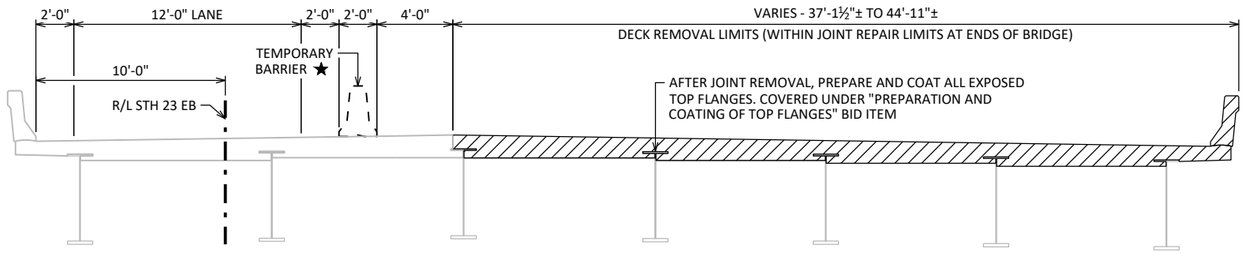
DESIGNED BY	DESIGN CK'D	DRAWN BY	PLANS CK'D
CJK	DLM	CJK	DLM

GENERAL PLAN

SHEET 1 OF 9
468

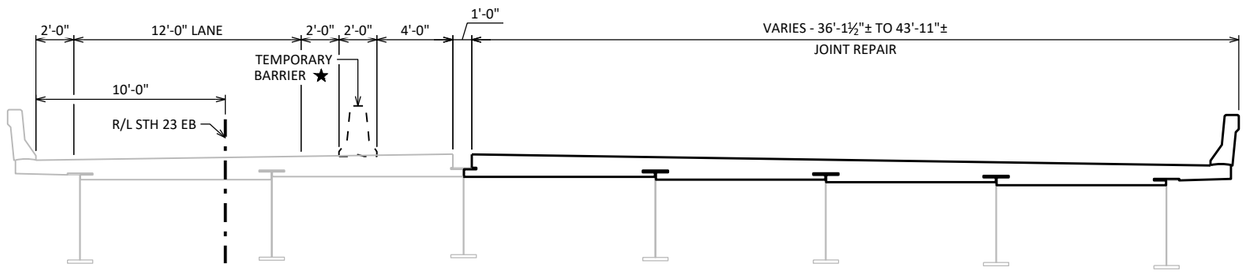
I.D. 1440-41-00B

DATE: SEP. 2026



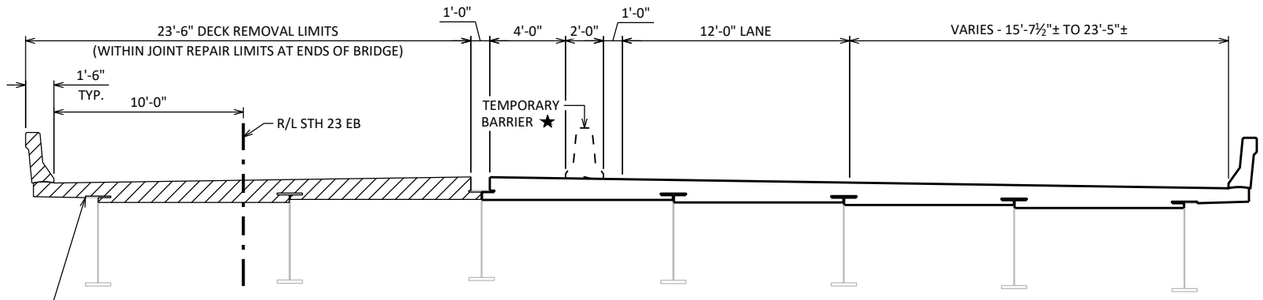
STAGE 2A/2B REMOVAL

LOOKING EAST



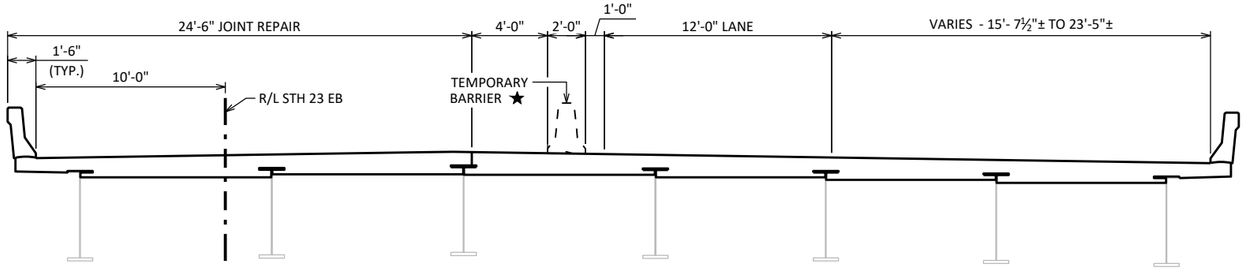
STAGE 2A/2B CONSTRUCTION

LOOKING EAST



STAGE 3 REMOVAL

LOOKING EAST



STAGE 3 CONSTRUCTION

LOOKING EAST

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.

PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE ENTIRE EXPOSED TOP OF DECK AND TO THE VERTICAL AND HORIZONTAL SURFACES OF THE PAVING NOTCHES AT ABUTMENT DIAPHRAGMS.

PIGMENTED SURFACE SEALER TO BE APPLIED TO THE FRONT FACE AND THE TOP OF THE NEW PARAPETS.

PIGMENTED SURFACE SEALER RESEAL TO BE APPLIED TO THE FRONT FACE AND TOP OF THE EXISTING PARAPETS.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

ANY EXCAVATION NECESSARY TO COMPLETE THE JOINT REPAIR AT THE ABUTMENTS IS TO BE CONSIDERED INCIDENTAL TO THE BID ITEM "JOINT REPAIR".

ANY EXCAVATION NECESSARY TO COMPLETE THE CONCRETE SURFACE REPAIR AT THE PIER IS TO BE CONSIDERED INCIDENTAL TO THE BID ITEM "CONCRETE SURFACE REPAIR".

PREPARATION DECKS TYPE 1 AREAS ARE DETERMINED BY THE ENGINEER. DECK PREPARATION SHALL BE FILLED WITH "CONCRETE MASONRY DECK REPAIR".

AREAS OF "PREPARATION DECKS TYPE 1" SHALL BE DEFINED BY A SAW CUT.

CONCRETE SURFACE REPAIR REQUIRED ON SPAN 2 SOUTH RAIL. QUANTITY IS APPROXIMATE AND ADDITIONAL REPAIRS MAY BE REQUIRED AND SHALL BE PERFORMED AS DIRECTED BY THE ENGINEER.

APPLY BRIDGE SEAT PROTECTION, AS PER SECTION 502.3.12 OF THE STANDARD SPECIFICATION, TO THE TOP SURFACES OF BOTH ABUTMENTS BELOW EXPANSION JOINTS.

CLEAN AND PAINT GIRDER ENDS AS SHOWN ON THE PLANS. THE COLOR OF THE TOP COAT SHALL BE BROWN, (FEDERAL STANDARD COLOR NO. 20059).

◒ "EMBEDDED GALVANIC ANODES" ONLY REQUIRED ON PIER 1. THE QUANTITY OF "EMBEDDED GALVANIC ANODES" IS FOR INFORMATIONAL PURPOSES ONLY. THE ENGINEER SHALL VERIFY THE EXACT NUMBER OF ANODES REQUIRED AT EACH PIER SURFACE REPAIR LOCATION PRIOR TO INSTALLATION.

★ DO NOT PIN TEMPORARY BARRIER TO BRIDGE DECK

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	SUPER	W ABUT.	PIER 1	E ABUT.	TOTALS
502.3101	EXPANSION DEVICE	LF	-	71	-	63	134
502.3200	PROTECTIVE SURFACE TREATMENT	SY	-	44	-	39	83
502.3205	PIGMENTED SURFACE SEALER RESEAL	SY	328	-	-	-	328
502.3210	PIGMENTED SURFACE SEALER	SY	-	4	-	4	8
502.3215	PROTECTIVE SURFACE TREATMENT RESEAL	SY	2,624	-	-	-	2,624
502.4205	ADHESIVE ANCHORS NO. 5 BAR	EACH	-	67	-	67	134
505.0400	BAR STEEL REINFORCEMENT STRUCTURES	LB	670	-	-	-	670
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	4,050	-	-	-	4,050
505.0905	BAR COUPLERS NO. 5	EACH	-	5	-	5	10
505.0906	BAR COUPLERS NO. 6	EACH	-	7	-	7	14
509.0301	PREPARATION DECKS TYPE 1	SY	1	-	-	-	1
509.0310.S	SAWING PAVEMENT DECK PREPARATION AREAS	LF	10	-	-	-	10
509.1000	JOINT REPAIR	SY	-	33	-	30	63
509.1500	CONCRETE SURFACE REPAIR	SF	1	-	120	-	121
509.2100.S	CONCRETE MASONRY DECK REPAIR	CY	21	-	-	-	21
517.0901.S	PREPARATION AND COATING OF TOP FLANGES B-59-91	EACH	1	-	-	-	1
517.3001.S	STRUCTURE OVERCOATING CLEANING AND PRIMING B-59-91	EACH	1	-	-	-	1
517.4001.S	CONTAINMENT AND COLLECTION OF WASTE MATERIALS B-59-91	EACH	-	-	-	-	1
517.6001.S	PORTABLE DECONTAMINATION FACILITY	EACH	-	-	-	-	1
606.0300	RIPRAP HEAVY	CY	-	-	-	196	196
645.0120	GEOTEXTILE TYPE HR	SY	-	-	-	343	343
SPV.0060	EMBEDDED GALVANIC ANODES	EACH	-	-	60	-	60
	NON-BID ITEMS						
	BRIDGE SEAT PROTECTION						

◒

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-59-91

DRAWN BY CJK | PLANS CK'D DLM

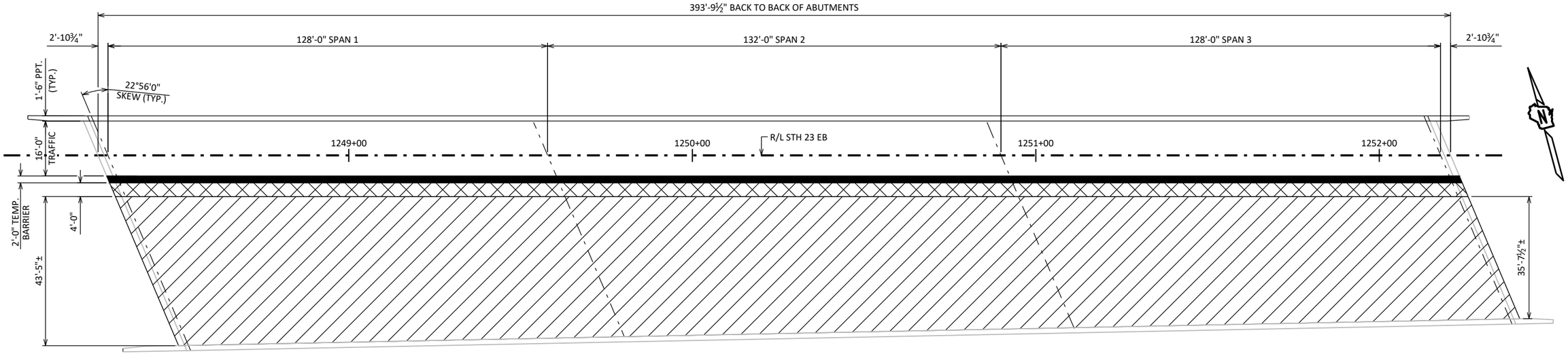
STAGING DETAILS, GENERAL NOTES AND QUANTITIES

SHEET 2
469

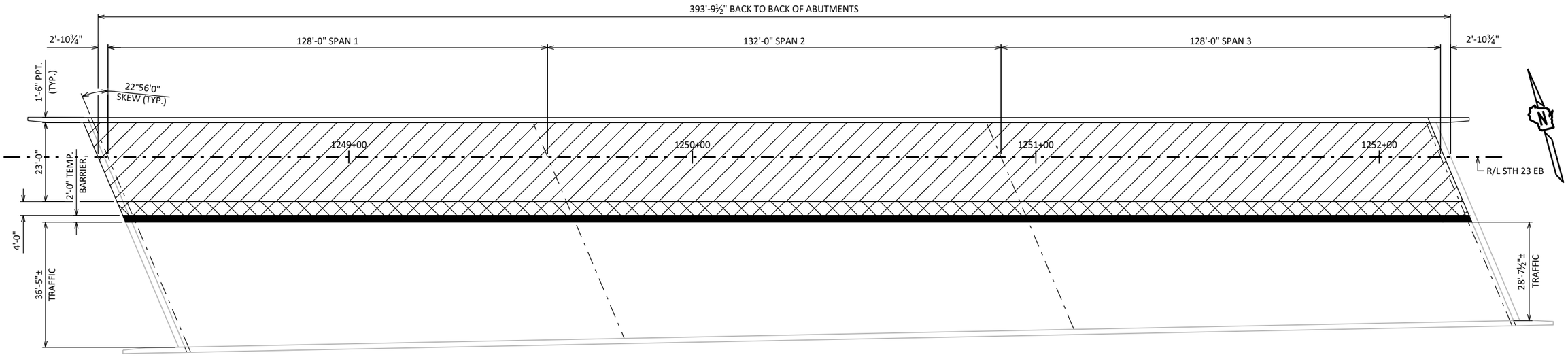
8

8

STATE PROJECT NUMBER
1440-41-71



STAGE 2A/2B PLAN



STAGE 3 PLAN

WORK AREA

AREA FREE OF OBJECTS AND WORKERS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-59-91

DRAWN BY CJK | PLANS CK'D DLM

STAGING PLAN

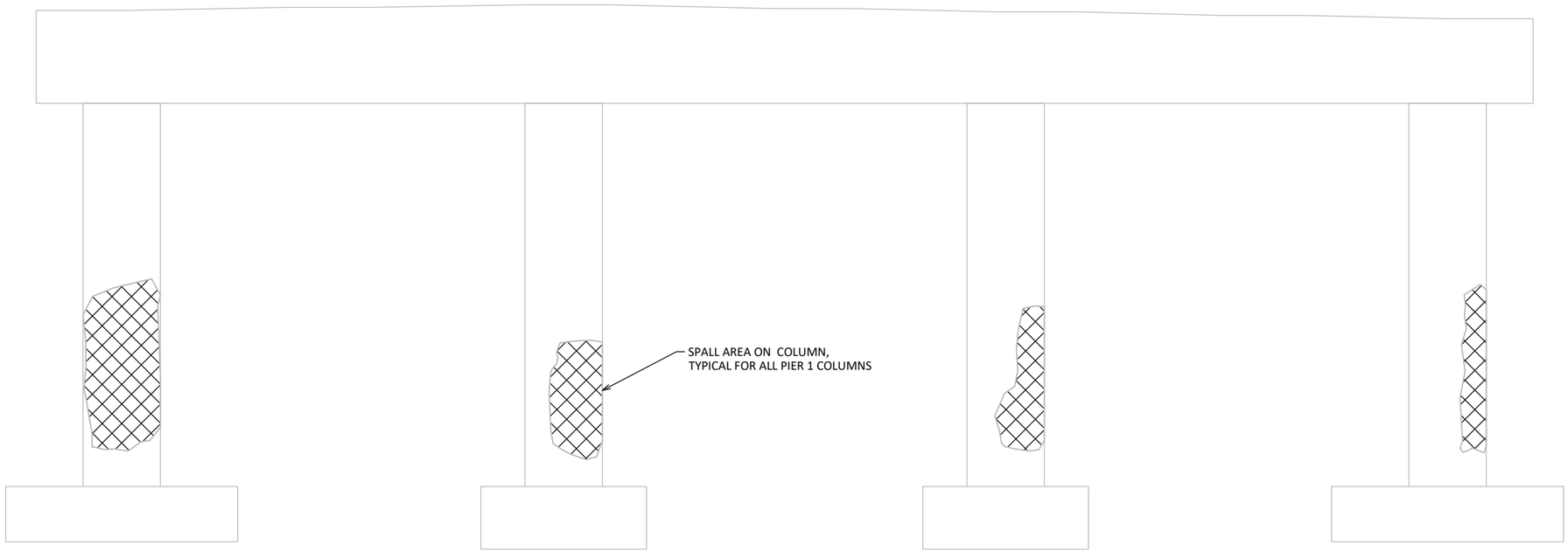
SHEET 3
470

8

8

STATE PROJECT NUMBER

1440-41-71



PIER 1 CONC. SURFACE REPAIR DETAIL

LOOKING EAST

PLAN - PIER 1 CONC. SURFACE REPAIR

8

8

CONCRETE SURFACE REPAIR NOTES

SURFACE REPAIR DETAILS DEPICT THE GENERAL LOCATIONS OF REPAIRS, AND MAY NOT BE ALL INCLUSIVE. QUANTITIES SHOWN ARE APPROXIMATE. ADDITIONAL REPAIRS MAY BE REQUIRED DURING CONSTRUCTION AND SHOULD BE PREFORMED AS DIRECTED BY THE FIELD ENGINEER.

CONTRACTOR SHALL EMPLOY METHODS TO PREVENT REMOVED CONCRETE MATERIAL FROM ENTERING WATERWAY.

CATHODIC PROTECTION TO BE USED IN REPAIR AREAS, AS DETERMINED BY THE ENGINEER. SEE "CATHODIC PROTECTION" SHEET.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-59-91

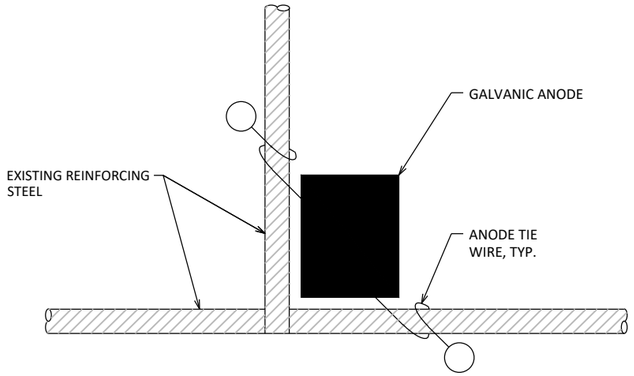
DRAWN BY	CJK	PLANS CK'D	DLM

SURFACE REPAIR DETAILS

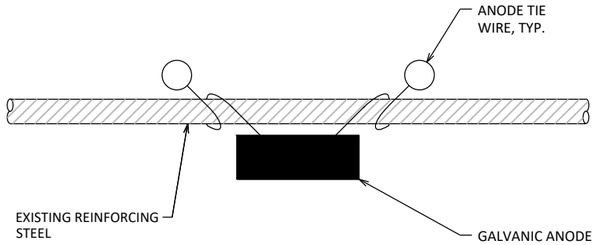
SHEET 4
471

STATE PROJECT NUMBER

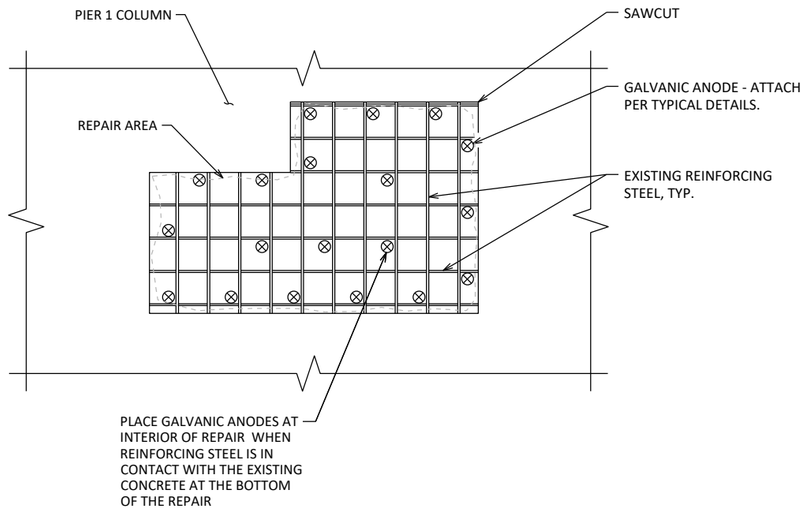
1440-41-71



TYPICAL INSTALLATION AT BAR STEEL INTERSECTION



TYPICAL INSTALLATION FOR BAR STEEL



TYPICAL REPAIR DETAIL

NOTES

SURFACE REPAIR AREAS WITH CATHODIC PROTECTION ARE BASED ON THE PLANS AND AS DETERMINED BY THE ENGINEER. THE PLAN QUANTITY FOR THE BID ITEM "EMBEDDED GALVANIC ANODES" IS BASED ON A MAXIMUM SPACING OF 24-INCHES AROUND THE SURFACE REPAIR PERIMETER. THE ACTUAL QUANTITY SHALL BE BASED ON THE FIELD CONDITIONS AND AS RECOMMENDED BY THE GALVANIC ANODE SUPPLIER.

SURFACE REPAIRS SHALL BE FILLED WITH REPAIR MATERIALS COMPATIBLE WITH CATHODIC PROTECTION, AS RECOMMENDED BY THE ANODE SUPPLIER.

EXISTING REINFORCING STEEL TO BE COMPLETELY CLEANED OF CORRODED MATERIAL AND CONCRETE TO PROVIDE SUFFICIENT ELECTRICAL CONNECTION AND BOND. CATHODIC PROTECTION PREPARATIONS ARE INCLUDED IN THE BID ITEM "EMBEDDED GALVANIC ANODES".

ANODES NEAREST TO EDGE OF REPAIR TO BE WITHIN 6" OF EDGE.

AFTER PLACEMENT, GALVANIC ANODES SHOULD MAINTAIN A MINIMUM TOP COVER OF 1½" AND A MINIMUM BOTTOM COVER OF ¾"

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-59-91

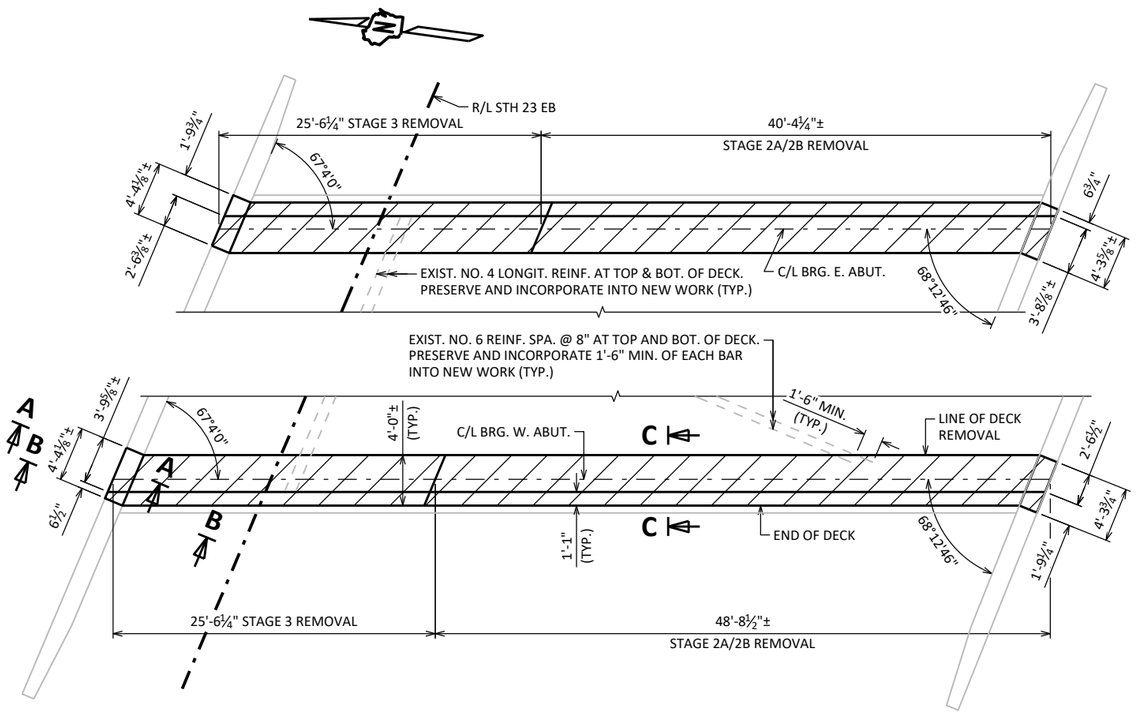
DRAWN BY CJK | PLANS CK'D DLM

CATHODIC PROTECTION

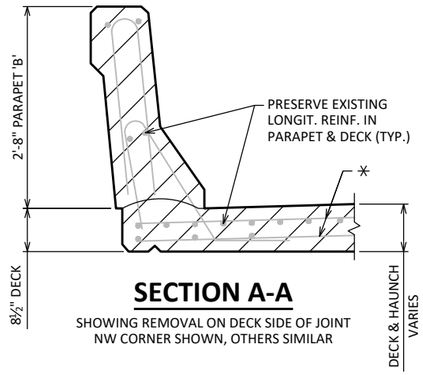
SHEET 5
472

STATE PROJECT NUMBER

1440-41-71

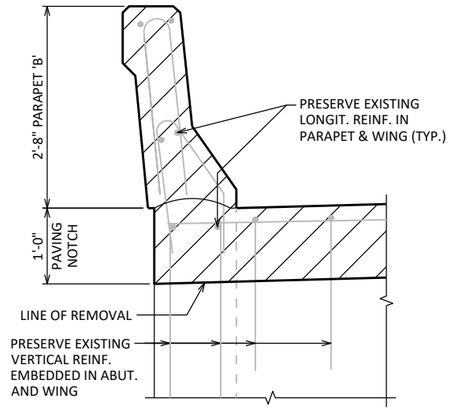


REMOVAL PLAN



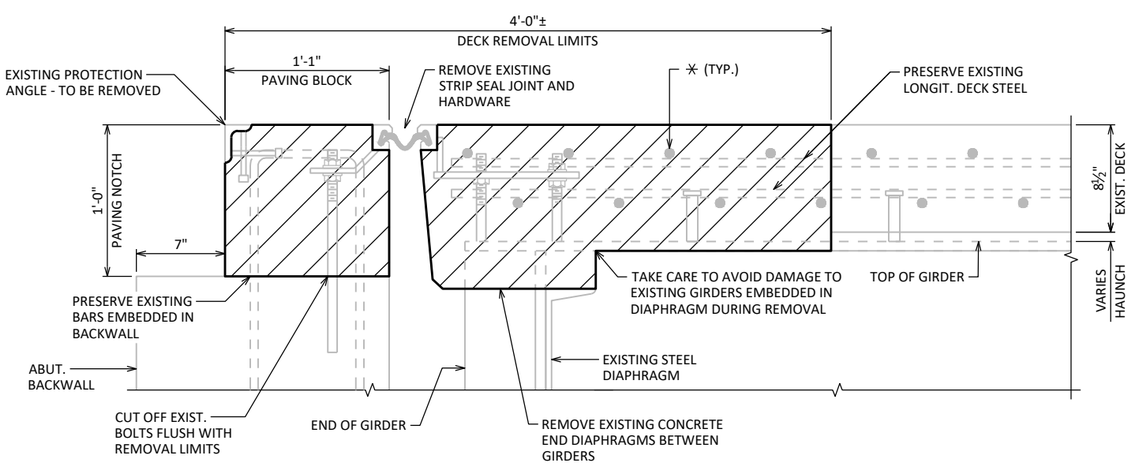
SECTION A-A

SHOWING REMOVAL ON DECK SIDE OF JOINT
NW CORNER SHOWN, OTHERS SIMILAR



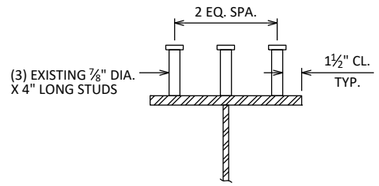
SECTION B-B

SHOWING REMOVAL ON PAVING BLOCK SIDE OF JOINT
NW CORNER SHOWN, OTHERS SIMILAR



JOINT REMOVAL - SECTION C-C

NORMAL TO C/L W. ABUT., E. ABUT. SIMILAR



SHEAR CONN. DETAIL

(STUDS MATERIAL - STRUCTURAL CARBON STEEL)

NOTE: SHEAR STUDS PRESENT AT GIRDER ENDS. SALVAGE AND TAKE CARE TO AVOID DAMAGE TO EXISTING STUDS DURING JOINT REPAIR CONCRETE REMOVAL. REPLACEMENT OF DAMAGED STUDS IS INCIDENTAL TO AND PAID FOR UNDER JOINT REPAIR BID ITEM.

NOTE: EXISTING TRANSVERSE REINFORCEMENT IS PLACED PERPENDICULAR TO C/L OF GIRDERS, NOT ALONG SKEW.

⚹ **SAVE AND INCORPORATE 1'-6" MIN. OF EXISTING TRANSVERSE REINFORCING BARS.**

REMOVAL AREA

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-59-91

DRAWN BY CJK | PLANS CK'D DLM

JONT REPAIR REMOVAL DETAILS

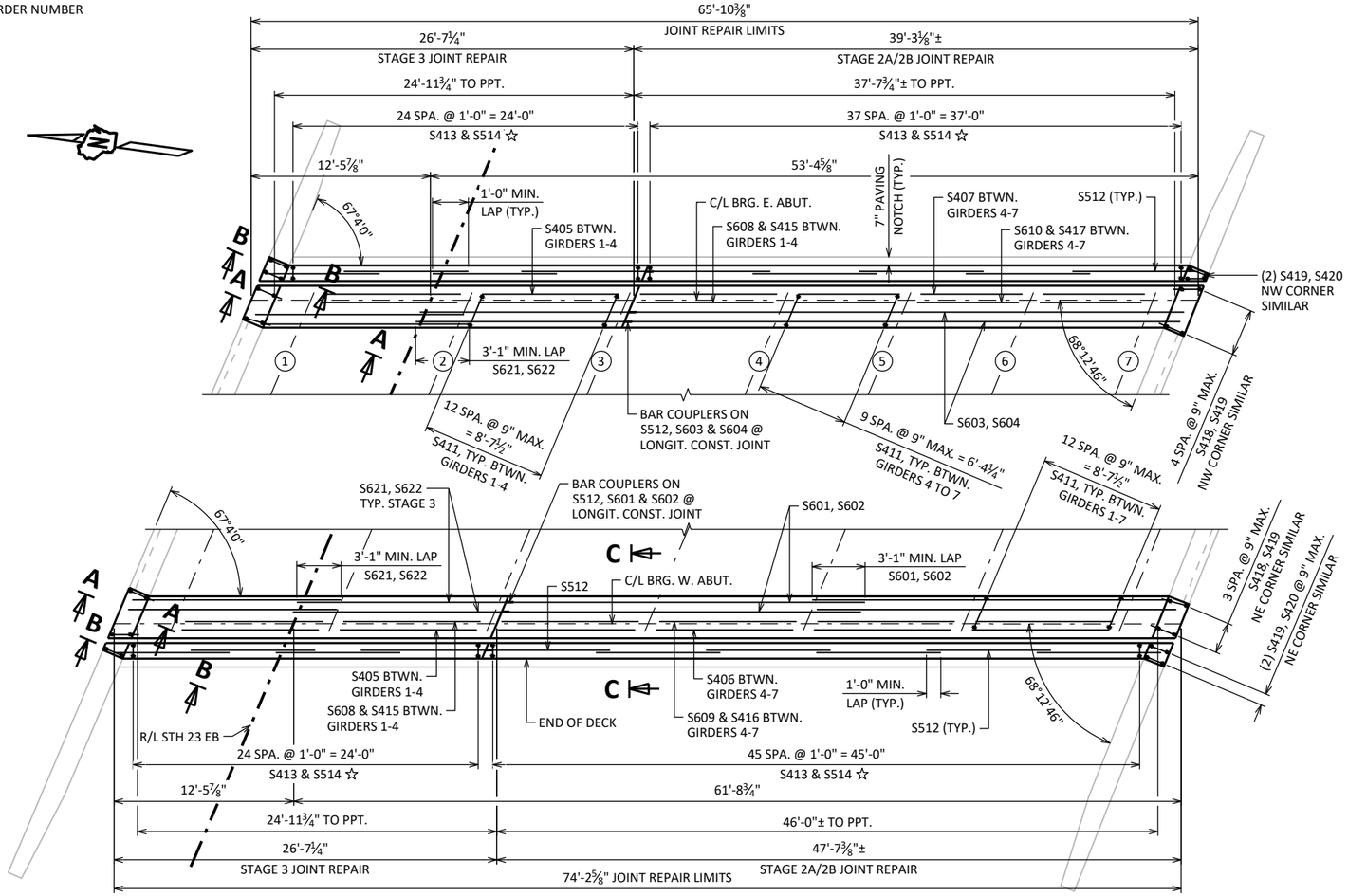
SHEET 6
473

8

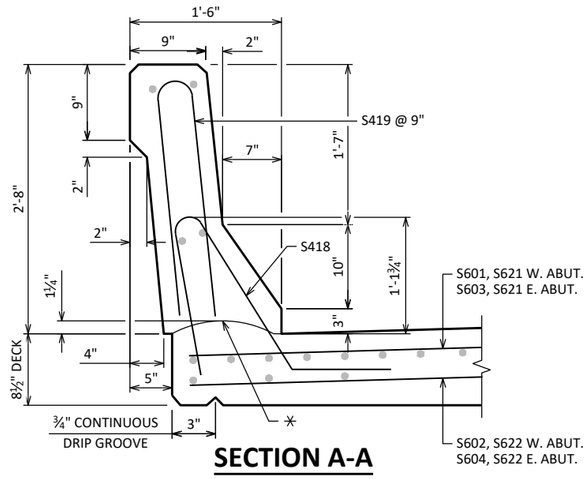
8

STATE PROJECT NUMBER
1440-41-71

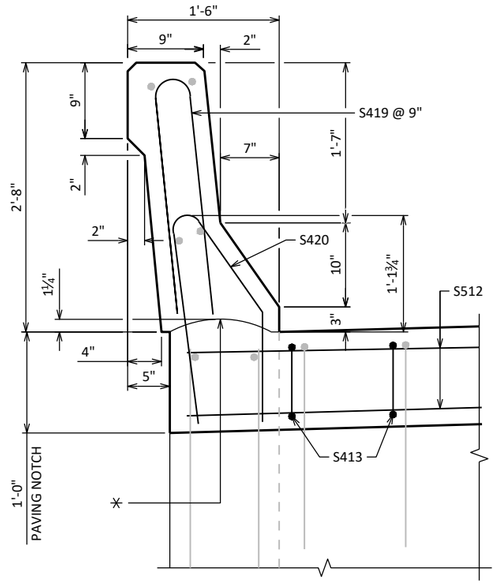
(#) INDICATES GIRDER NUMBER



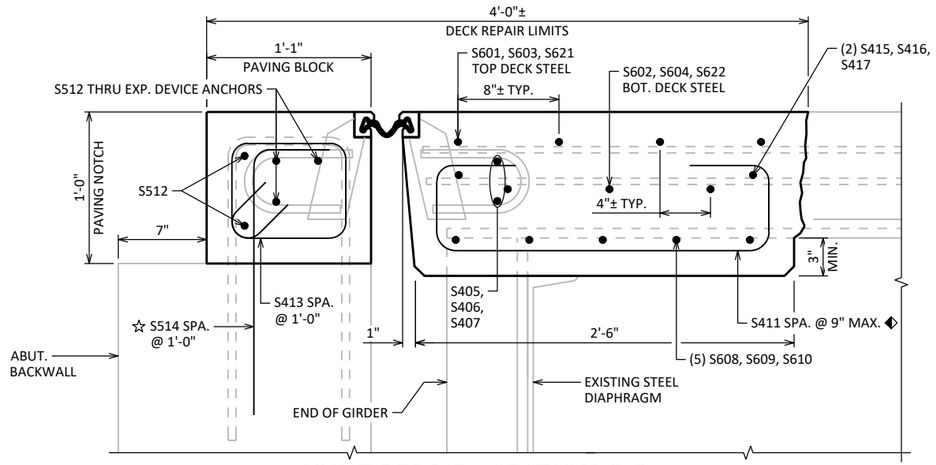
JOINT REPAIR PLAN



SECTION A-A



SECTION B-B



JOINT REPAIR - SECTION C-C

NORMAL TO C/L W. ABUT., E. ABUT SIMILAR

⚹ CONST. JOINT - STRIKE OFF AS SHOWN

☆ ADHESIVE ANCHORS NO.5 BAR. EMBED 1'-0" INTO CONCRETE. SPACE @ 1'-0" MAX. TURN 10" LEG AS NECESSARY TO FIT.

⬖ BARS PLACED PARALLEL TO GIRDERS. SPACING PERPENDICULAR TO GIRDERS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-59-91

DRAWN BY CJK | PLANS CK'D DLM

JOINT REPAIR REINFORCEMENT DETAILS

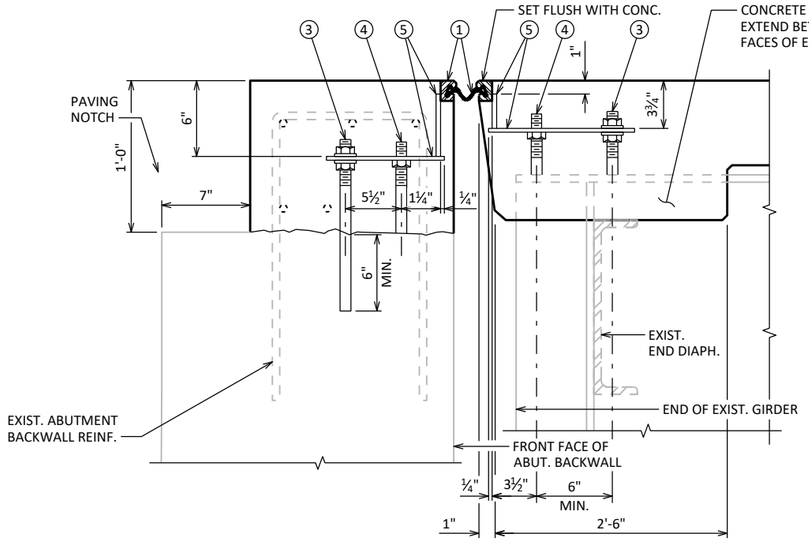
SHEET 7
474

8

8

STATE PROJECT NUMBER

1440-41-71



SECTION THRU JOINT AT ABUTMENT

NORMAL TO C/L SUBSTRUCTURE

BILL OF BARS

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

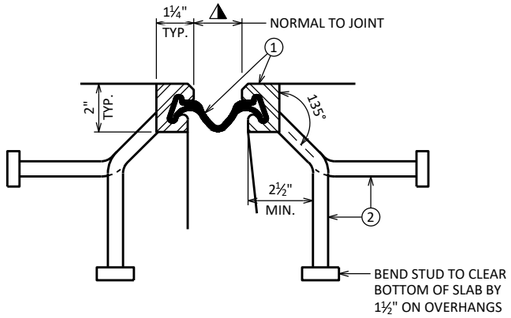
	BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
◓	S601	X	8	25'-0"			DECK - TRAN. TOP - STAGE 2A/2B W. ABUT.
◓	S602		6	25'-0"			DECK - TRAN. BOT. STAGE 2A/2B W. ABUT.
◓	S603	X	4	38'-7"			DECK - TRAN. TOP - STAGE 2A/2B E. ABUT.
◓	S604		3	38'-7"			DECK - TRAN. BOT. STAGE 2A/2B E. ABUT.
	S405	X	12	9'-6"			DECK - TRAN. THRU EXP. DEVICE ANCHORS W. & E. ABUT., BTWN. G1-G4
	S406	X	6	9'-6"			DECK - TRAN. THRU EXP. DEVICE ANCHORS W. ABUT., BTWN. G4-G7
	S407	X	6	7'-1"			DECK - TRAN. THRU EXP. DEVICE ANCHORS E. ABUT., BTWN. G4-G7
	S608	X	30	9'-6"			DECK - DIAPHRAGM BOT. W. & E. ABUT., BTWN. G1-G4
	S609	X	15	9'-6"			DECK - DIAPHRAGM BOT. W. ABUT., BTWN. G4-G7
	S610	X	15	7'-1"			DECK - DIAPHRAGM BOT. E. ABUT., BTWN. G4-G7
	S411	X	147	4'-4"	X		DECK - DIAPHRAGM VERT.
◓	S512	X	95	8'-8"			PAVING BLOCK - HORIZ.
	S413	X	134	3'-2"	X		PAVING BLOCK - STIRRUP
☆	S514	X	134	2'-6"	X		PAVING BLOCK - ADHESIVE ANCHOR
	S415	X	12	9'-6"			DECK - DIAPHRAGM TOP W. & E. ABUT., BTWN. G1-G4
	S416	X	6	9'-6"			DECK - DIAPHRAGM TOP W. ABUT., BTWN. G4-G7
	S417	X	6	7'-1"			DECK - DIAPHRAGM TOP E. ABUT., BTWN. G4-G7
	S418	X	18	4'-3"	X		DECK & PARAPET - VERT.
	S419	X	26	4'-10"	X		PARAPET - VERT.
	S420	X	8	4'-7"	X		PAVING BLOCK & PARAPET - VERT.
◓	S621	X	16	14'-7"			DECK - TRAN. TOP STAGE 3 W. & E. ABUT.
◓	S622		12	14'-7"			DECK - TRAN. BOT. STAGE 3 W. & E. ABUT.

LEGEND

1. NEOPRENE STRIP SEAL (4 - INCH) AND STEEL EXTRUSIONS.
2. STUDS ⅝" DIA. X 6¾" LONG AT 6" ALTERNATE CENTERS. WELD TO EXTRUSIONS AND BEND AS SHOWN AFTER WELDING.
2A. ½" THICK ANCHOR PLATE WITH ⅝" DIA. ROD (OR ALTERNATE STRIP SEAL ANCHOR). WELD ROD TO ANCHOR PLATE, WELD ANCHOR PLATE TO NO. 1 AT 1'-6" CENTERS BETWEEN GIRDERS.
3. ¾" DIA. THREADED ROD WITH 2 NUTS AND PLATE WASHERS. WELD THREADED ROD TO TOP FLANGE OR ATTACH BY BOLTING THRU FLANGE. ON ABUTMENT SIDE GROUT THREADED ROD INTO FIELD DRILLED HOLES IN ABUTMENT BACKWALL AS SHOWN.
4. ¾" DIA. THREADED ROD WITH NUT. TACK WELD NUT TO NO. 5.
5. FABRICATE SUPPORT FROM 3" X ½" BAR AS SHOWN OR EQUIVALENT, ONE PER GIRDER PER SIDE. SHOP OR FIELD WELD TO NO. 1. IF FIELD WELDED, COVER WELDED AREAS WITH EPOXY-COATING MATERIAL. PROVIDE 1½" DIA. HOLE FOR NO. 3 AND 1" DIA. HOLE FOR NO. 4.
6. GALVANIZED PLATE ⅜" X 1'-2" X 2'-0" LONG WITH HOLES FOR NO.7. BEND AS SHOWN.
7. ¾" DIA. X 1½" STAINLESS STEEL SOCKET FLAT HEAD SCREWS WITH ANTI-SEIZE LUBRICANT. PLACE IN COUNTERSUNK HOLE. RECESS 1/16" BELOW PLATE SURFACE.
8. ¾" DIA. X 4" GALVANIZED HEX HEAD BOLT. BEND 45°.
9. ¾" DIA. X 2¼" GALVANIZED THREADED COUPLING.
10. 1" X 5" SLOTTED COUNTERSUNK HOLE FOR NO. 7. PLACE SLOT PARALLEL TO DIRECTION OF MOVEMENT.

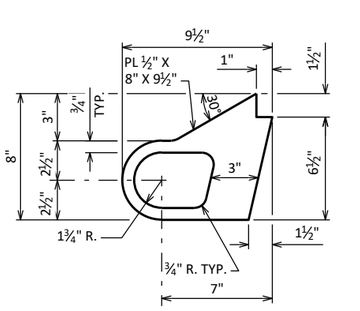
◓ BAR COUPLERS REQUIRED AT CONSTRUCTION JOINT. BAR LENGTH COMPUTED TO C/L OF LONGIT. JOINT & CONTRACTOR TO ADJUST LENGTH OF BARS IF REQUIRED TO ACCOMMODATE COUPLER SYSTEM. PAY BASED ON BARS AS DETAILED.

☆ ADHESIVE ANCHORS NO. 5 BAR. EMBED 1'-0" INTO CONCRETE. SPACE @ 1'-0" MAX. TURN 10" LEG AS NECESSARY TO FIT.

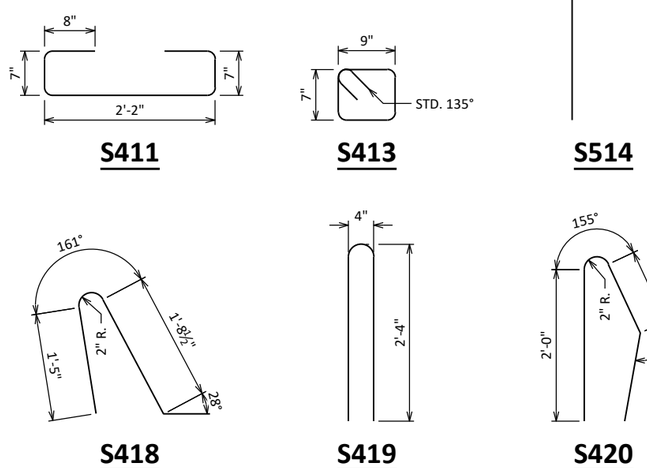


SECTION THRU JOINT

EXTERIOR GIRDER TO EDGE OF DECK, AND AT PARAPETS



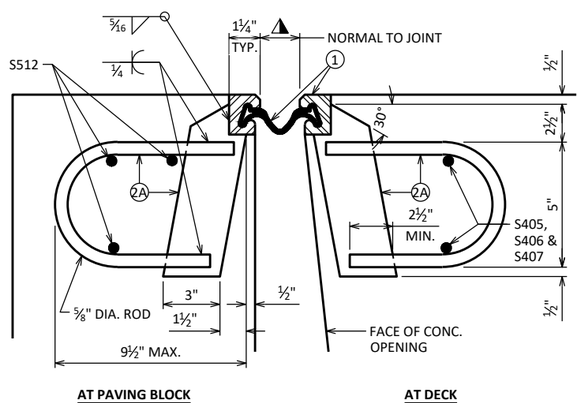
ALTERNATE STRIP SEAL ANCHOR



▲ TEMPERATURE TABLE

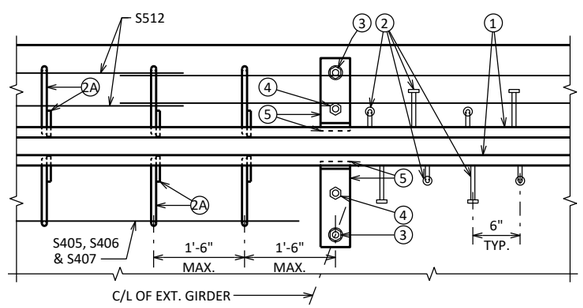
SHADED UNDERSIDE DECK TEMP. (°F)	JOINT OPENING (NORMAL TO JT.)	
	W. ABUT.	E. ABUT.
85°	2"	2"
75°	2 3/16"	2 1/16"
65°	2⅜"	2 3/16"
55°	2 5/16"	2¼"
45°	2¾"	2⅜"
35°	2⅞"	2 7/16"
25°	3 1/16"	2 5/16"
15°	3¼"	2⅝"
5°	3 7/16"	2¾"

A SMALL JOINT OPENING DUE TO A HIGH TEMPERATURE AT TIME OF CONSTRUCTION MAY REQUIRE NEOPRENE STRIP SEAL INSTALLATION INTO STEEL EXTRUSIONS PRIOR TO SETTING THE EXPANSION JOINT.



SECTION THRU JOINT

ROADWAY TRAFFIC AREA BETWEEN EXTERIOR GIRDERS



PART PLAN

NOTES

ONE FIELD SPLICE PERMITTED IN STEEL EXTRUSIONS, UNLESS MORE ARE REQUIRED FOR STAGED CONSTRUCTION, HANDLING OR GALVANIZING REQUIREMENTS. IF USED, ANCHOR PLATES SHALL BE PROVIDED 3" FROM EACH SIDE OF THE FIELD SPLICE. DETAILS SHALL BE SUBMITTED FOR APPROVAL. NO SPLICING PERMITTED IN NEOPRENE STRIP SEAL.

AFTER FABRICATION, BUT BEFORE SHIPMENT, STRAIGHTEN STEEL EXTRUSIONS SUCH THAT THEY SHALL BE FREE FROM WARP, TWIST AND SWEEP.

FABRICATOR SHALL PROVIDE MEANS OF KEEPING GALVANIZED EXTRUSIONS CLEAN AND SMOOTH DURING SHIPMENT AND PRIOR TO APPLYING LUBRICANT ADHESIVE FOR NEOPRENE GLAND INSTALLATION.

SANDBLAST PLATES, SUPPORTS AND EXTRUSIONS AFTER FABRICATION IN ACCORDANCE WITH SSPC SP. #6 "COMMERCIAL BLAST CLEANING". AFTER BLAST CLEANING, THE PLATES, SUPPORTS AND EXTRUSIONS SHALL BE HOT DIPPED GALVANIZED.

ANCHOR SYSTEM NO. 8 AND NO. 9 SHALL CONFORM TO ASTM A307 AND SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C AND D.

ALL MATERIAL IN THE EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS AND HARDWARE SHALL BE PAID AT THE UNIT PRICE BID FOR "EXPANSION DEVICE", LF.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-59-91

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EXPANSION DEVICE

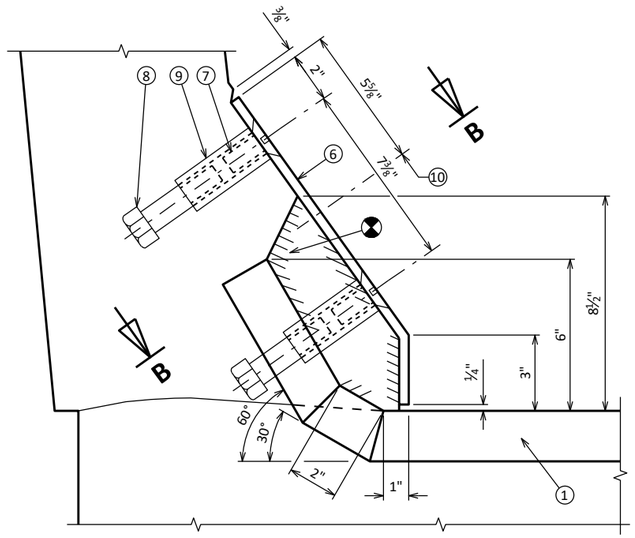
SHEET 8
475

8

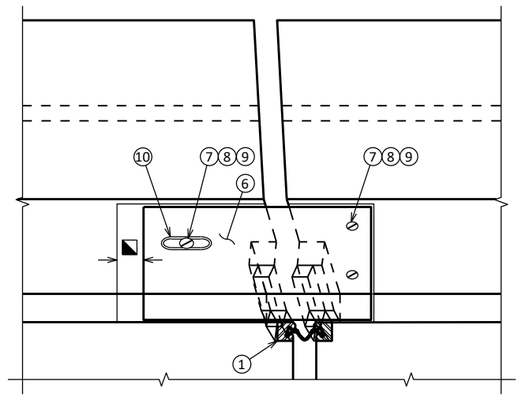
8

STATE PROJECT NUMBER

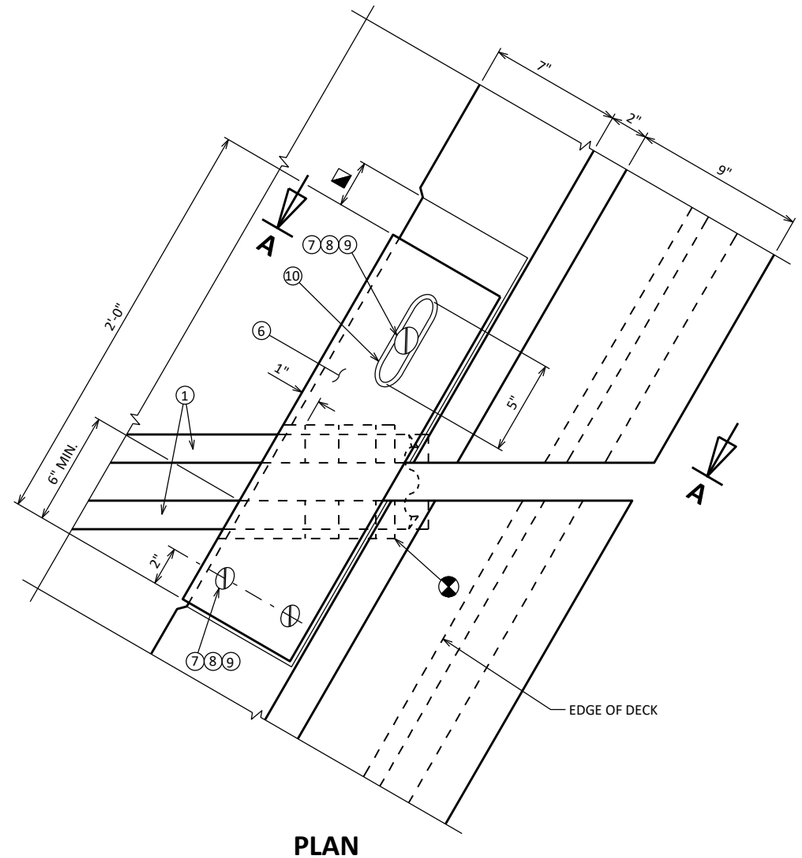
1440-41-71



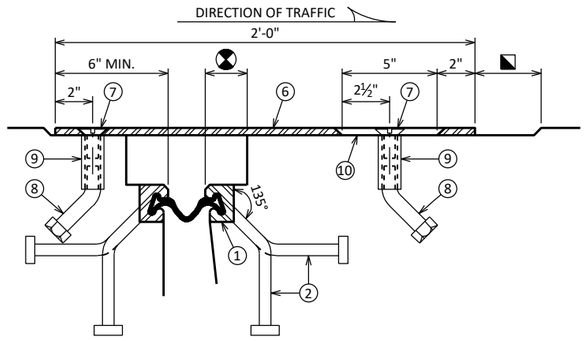
SECTION A-A



VIEW OF PARAPET PLATE FROM ROADWAY



PLAN



SECTION B-B

BLOCK OUT CONCRETE 2" EACH SIDE OF JOINT OPENING.

JOINT OPENING DIMENSION ALONG SKEW PLUS ½".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-59-91

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COVER PLATE DETAILS

SHEET 9
476

8

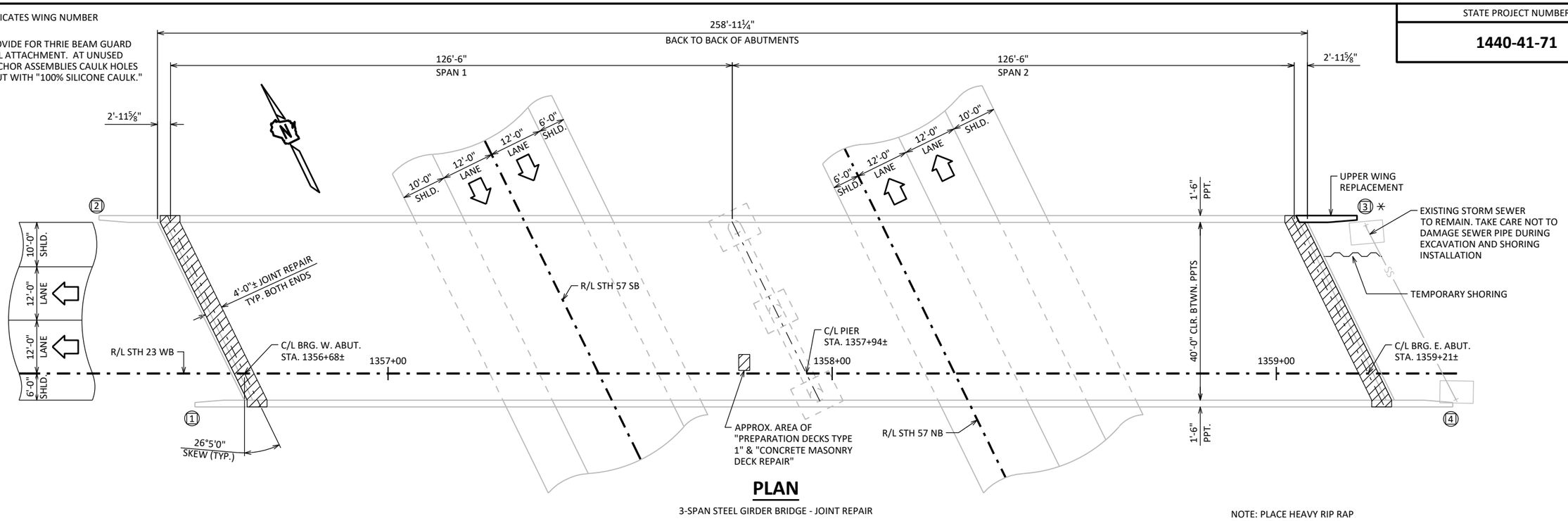
8

STATE PROJECT NUMBER

1440-41-71

(#) INDICATES WING NUMBER

✳ PROVIDE FOR THRIE BEAM GUARD RAIL ATTACHMENT. AT UNUSED ANCHOR ASSEMBLIES CAULK HOLES SHUT WITH "100% SILICONE CAULK."



PLAN

3-SPAN STEEL GIRDER BRIDGE - JOINT REPAIR

DESIGN DATA

LIVE LOAD: (RATINGS TAKEN FROM HSIS 03/12/2025)

INVENTORY RATING: HS-24
OPERATING RATING: HS-41
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV): 250 (KIPS)

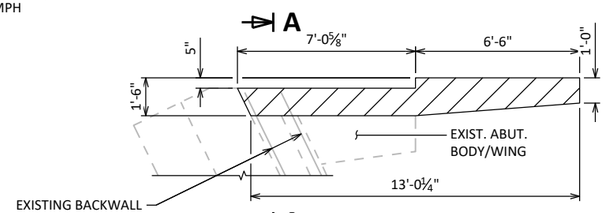
MATERIAL PROPERTIES:

CONCRETE MASONRY
DECK REPAIR: f'_c = 4,000 PSI
ALL OTHER: f'_c = 3,500 PSI

BAR STEEL REINFORCEMENT
GRADE 60 f_y = 60,000 PSI

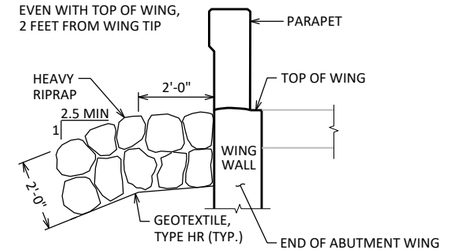
TRAFFIC DATA

STH 23 WB:
ADT = 16,280 (2047)
R.D.S. = 65 MPH



WING 3 REMOVAL PLAN

REMOVAL AREA



TYPICAL FILL SECTION AT WING 3

REPLACE/RESTORE RIPRAP AS SHOWN AND AS DIRECTED BY THE ENGINEER

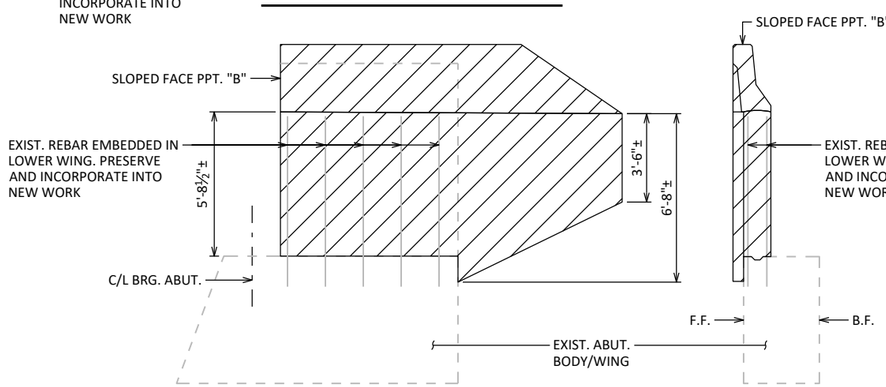
SCOPE OF WORK

JOINT REPAIR AT BOTH ABUTMENTS

REPLACE NE WING

REPAIR DECK SPALLS

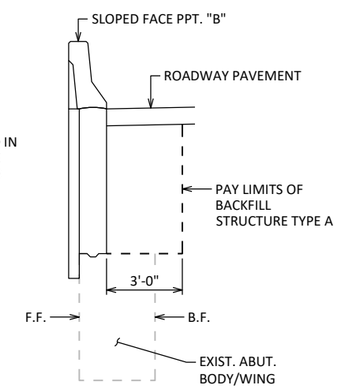
RESEAL EXISTING PARAPETS WITH PIGMENTED SURFACE SEALER AND EXISTING DECK WITH PROTECTIVE SURFACE TREATMENT



WING 3 REMOVAL ELEVATION

SHOWING REMOVAL LIMITS

SECTION A-A



FILL SECTION

LIST OF DRAWINGS:

1. GENERAL PLAN
2. GENERAL NOTES AND QUANTITIES
3. STAGING DETAILS
4. WING 3 REPLACEMENT
5. JOINT REPAIR REMOVAL DETAILS
6. JOINT REPAIR REINFORCEMENT DETAILS
7. EXPANSION DEVICE
8. COVER PLATES
9. SLOPED FACE PARAPET "B"

STRUCTURE DESIGN CONTACTS:
CHRIS KUSIAK 608-267-3619
KYLE BUSCH 608-267-0465

NO.	DATE	REVISION	BY

BUREAU OF STRUCTURES

ACCEPTED KHB 07/29/26
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-59-93

STH 23 WB OVER STH 57

COUNTY	TOWN
SHEBOYGAN	PLYMOUTH

DESIGN SPEC. REHABILITATION N/A

DESIGNED BY	DESIGN CK'D	DRAWN BY	PLANS CK'D
CJK	DLM	CJK	DLM

GENERAL PLAN

SHEET 1 OF 9
477

I.D. 1440-41-00C DATE: JUNE 2025

8

8

STATE PROJECT NUMBER

1440-41-71

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES BRIDGES B-59-93" SHALL BE THE EXISTING GROUNDLINE.

AT THE BACK FACE OF THE WING, ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL TYPE A.

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

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

PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE ENTIRE EXPOSED TOP OF DECK AND APPROACH SLAB SURFACES AND TO THE VERTICAL AND HORIZONTAL SURFACES OF THE PAVING NOTCHES AT ABUTMENT DIAPHRAGMS.

PIGMENTED SURFACE SEALER TO BE APPLIED TO THE FRONT FACE AND THE TOP OF THE NEW PARAPETS.

PIGMENTED SURFACE SEALER RESEAL TO BE APPLIED TO THE FRONT FACE AND TOP OF EXISTING PARAPETS.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

ANY EXCAVATION NECESSARY TO COMPLETE THE JOINT REPAIR AT THE ABUTMENTS IS TO BE CONSIDERED INCIDENTAL TO THE BID ITEM "JOINT REPAIR".

JOINT REPAIR AREA TO BE FILLED WITH CONCRETE MASONRY DECK REPAIR.

LOCATION OF PREPARATION DECKS TYPE 1 SHOWN IS APPROXIMATE AND MAY NOT BE ALL INCLUSIVE. PREPARATION DECKS TYPE 1 AREAS ARE TO BE DETERMINED BY THE ENGINEER. DECK PREPARATION AND JOINT REPAIR AREAS TO BE FILLED WITH "CONCRETE MASONRY DECK REPAIR."

AREAS OF "PREPARATION DECKS TYPE 1" SHALL BE DEFINED BY A SAW CUT.

APPLY BRIDGE SEAT PROTECTION, AS PER SECTION 502.3.12 OF THE STANDARD SPECIFICATION, TO THE TOP SURFACES OF BOTH ABUTMENTS BELOW EXPANSION JOINTS.

THE CONTRACTOR SHALL SUPPLY A NEW NAME PLATE IN ACCORDANCE WITH SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS AND THE STANDARD DETAIL DRAWINGS. NAME PLATE TO SHOW ORIGINAL CONSTRUCTION YEAR 1989.

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	SUPER	W. ABUT.	E. ABUT.	TOTALS
203.0220	REMOVING STRUCTURE B-59-93	EACH	-	-	-	1
206.1001	EXCAVATION FOR STRUCTURES BRIDGES B-59-93	EACH	-	-	-	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	-	-	16	16
502.0100	CONCRETE MASONRY BRIDGES	CY	-	-	4.7	5
502.3101	EXPANSION DEVICE	LF	-	45	45	90
502.3200	PROTECTIVE SURFACE TREATMENT	SY	-	28	28	56
502.3205	PIGMENTED SURFACE SEALER RESEAL	SY	215	-	-	215
502.3210	PIGMENTED SURFACE SEALER	SY	-	4	8	12
502.3215	PROTECTIVE SURFACE TREATMENT RESEAL	SY	1105	-	-	1105
502.4204	ADHESIVE ANCHORS NO. 4 BAR	EACH	-	-	10	10
502.4205	ADHESIVE ANCHORS NO. 5 BAR	EACH	-	46	64	110
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	3210	-	750	3960
505.0906	BAR COUPLERS NO. 6	EACH	-	7	7	14
509.0301	PREPARATION DECKS TYPE 1	SY	1	-	-	1
509.0310.S	SAWING PAVEMENT DECK PREPARATION AREAS	LF	10	-	-	10
509.1000	JOINT REPAIR	SY	-	21	21	42
509.2100.S	CONCRETE MASONRY DECK REPAIR	CY	14	-	-	14
511.1200	TEMPORARY SHORING (B-59-93)	SF	-	-	102	102
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	-	-	2	2
517.0901.S	PREPARATION AND COATING OF TOP FLANGES B-59-93	EACH	1	-	-	1
606.0300	RIPRAP HEAVY	CY	-	-	2	2
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	-	-	15	15
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	-	-	1	1
	NON-BID ITEMS					
	BRIDGE SEAT PROTECTION					

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-59-93

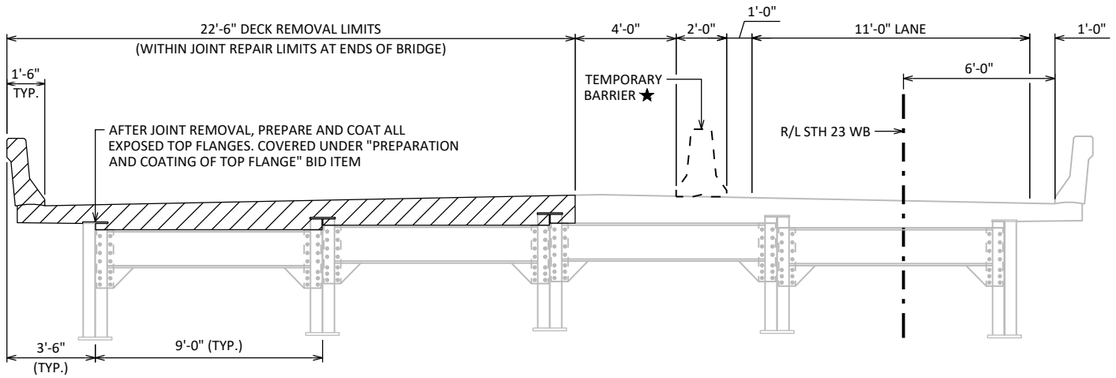
DRAWN BY CJK | PLANS CK'D DLM

GENERAL NOTES AND QUANTITIES

SHEET 2
478

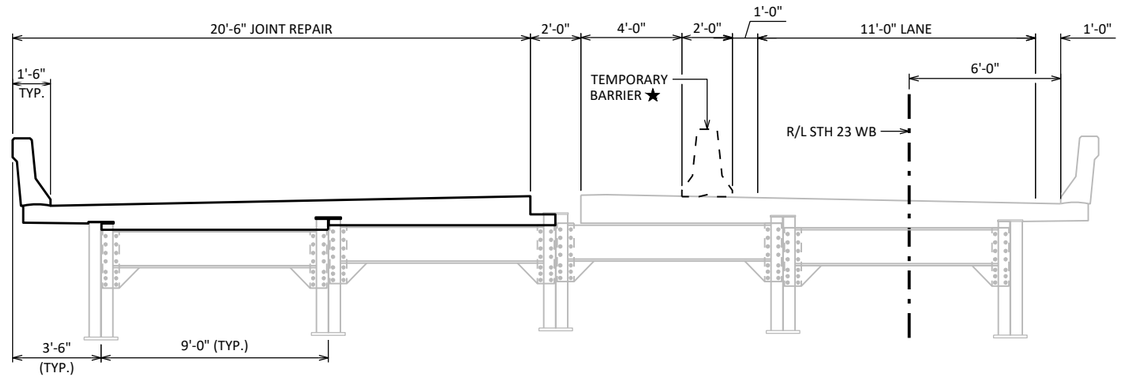
STATE PROJECT NUMBER

1440-41-71



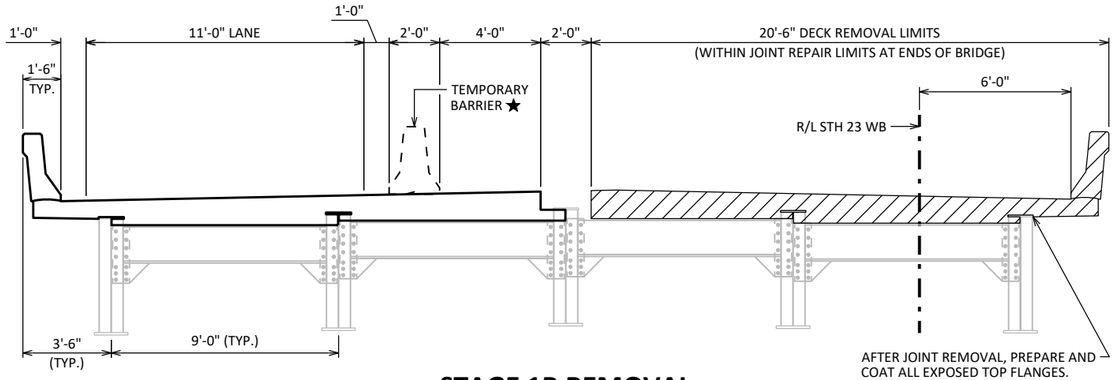
STAGE 1A REMOVAL

LOOKING EAST



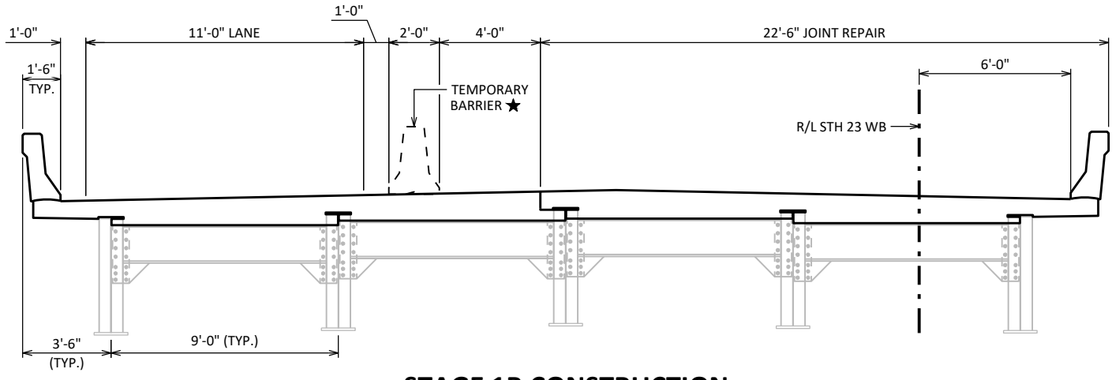
STAGE 1A CONSTRUCTION

LOOKING EAST



STAGE 1B REMOVAL

LOOKING EAST



STAGE 1B CONSTRUCTION

LOOKING EAST

★ DO NOT PIN TEMPORARY BARRIER TO BRIDGE DECK.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-59-93

DRAWN BY CJK | PLANS CK'D DLM

STAGING DETAILS

SHEET 3
479

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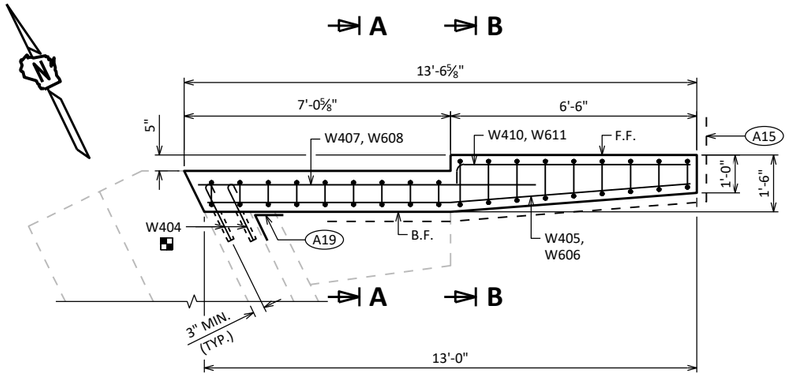
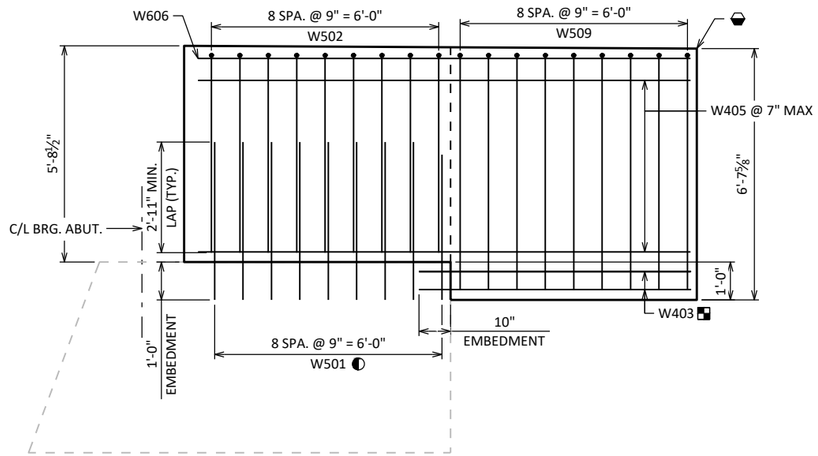
8

STATE PROJECT NUMBER

1440-41-71

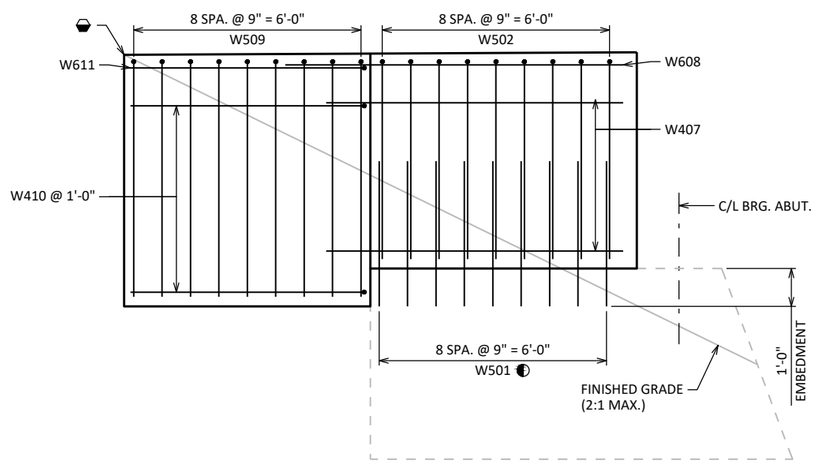


WING 3 PLAN



WING 3 ELEVATION

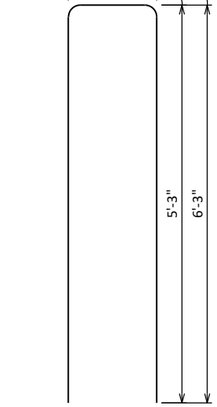
SHOWING B.F.



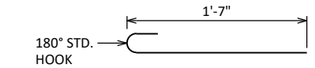
WING 3 ELEVATION

SHOWING F.F.

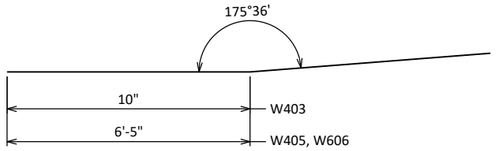
- ☒ CONSTRUCTION JOINT - STRIKE OFF AS SHOWN
- ◪ ADHESIVE ANCHORS, NO. 4 BAR. EMBED 10"
- ◐ ADHESIVE ANCHORS, NO. 5 BAR. EMBED 1'-0". MAINTAIN 3¾" MIN. EDGE DISTANCE WHERE NOT SPECIFIED .
- ⬭ MATCH EXISTING ELEVATION WITH ADJACENT PAVEMENT
- (A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.
- (A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.



W502, W509



W404



W403, W405, W606

W410, W611

BILL OF BARS

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

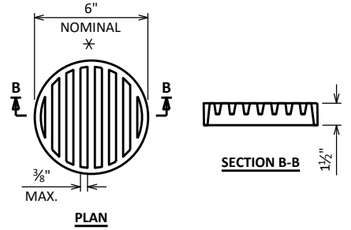
	BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
◐	W501	X	18	4'-2"			WING - VERT. ANCHORS
	W502	X	9	10'-8"	X		WING - VERT.
◪	W403	X	2	7'-2"	X		WING - HORIZ. ANCHORS
◪	W404	X	8	2'-1"	X		WING - HORIZ. BACKWALL ANCHORS
	W405	X	9	12'-9"	X		WING - HORIZ. B.F.
	W606	X	1	12'-9"	X		WING - HORIZ. B.F. TOP
	W407	X	5	8'-11"			WING - HORIZ. F.F.
	W608	X	1	8'-11"			WING - HORIZ. F.F. TOP
	W509	X	9	13'-2"	X	⚠	WING - VERT. OVERHANG
	W410	X	6	6'-9"	X		WING - HORIZ. F.F. OVERHANG
	W611	X	1	7'-0"	X		WING - HORIZ. F.F. OVERHANG TOP

⚠ 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
W509	1 SERIES OF 9	12'-11" TO 13'-5"



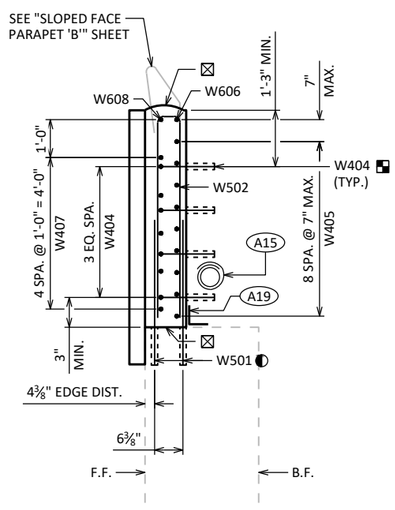
PLAN

RODENT SHIELD DETAIL

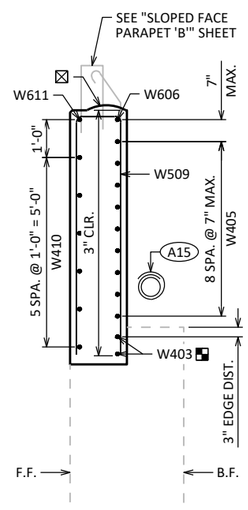
✳ DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.



SECTION A-A



SECTION B-B

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-59-93

DRAWN BY CJK | PLANS CK'D DLM

WING 3 REPLACEMENT

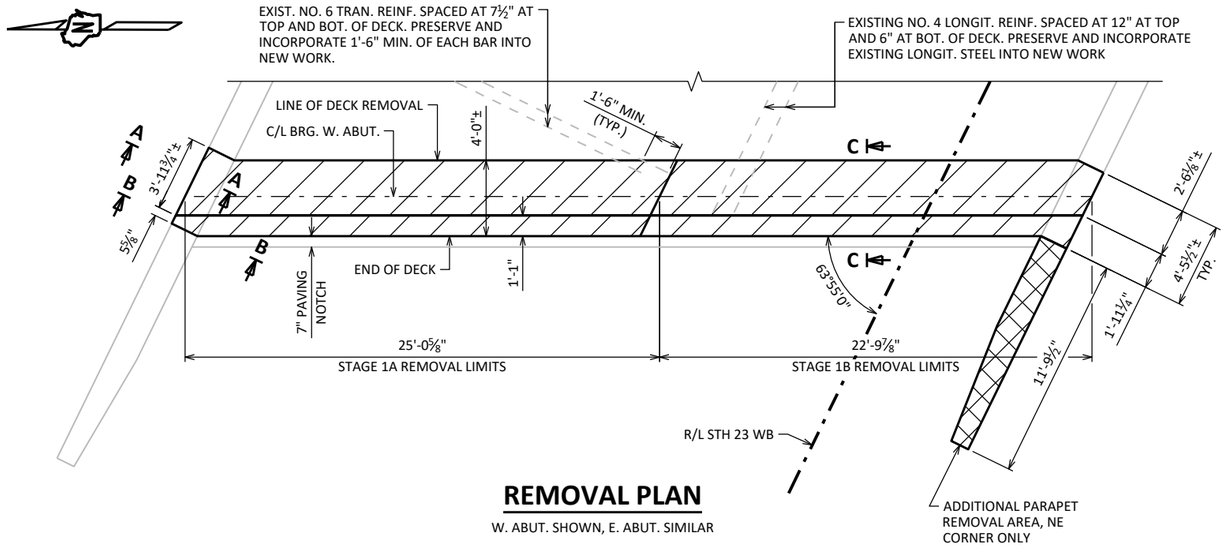
SHEET 4
480

8

8

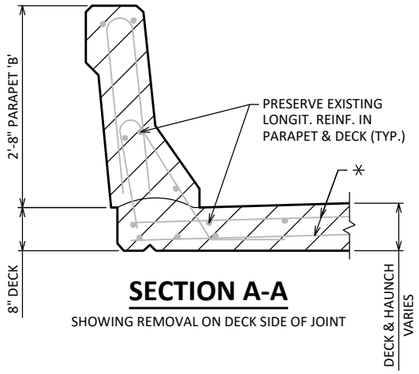
STATE PROJECT NUMBER

1440-41-71



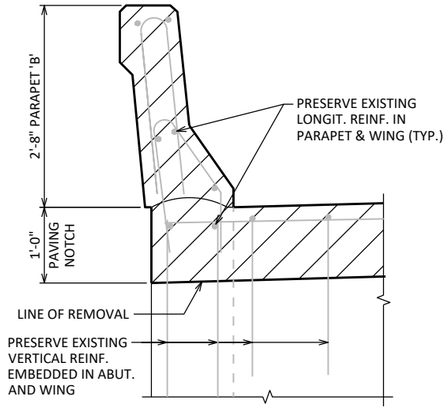
REMOVAL PLAN

W. ABUT. SHOWN, E. ABUT. SIMILAR



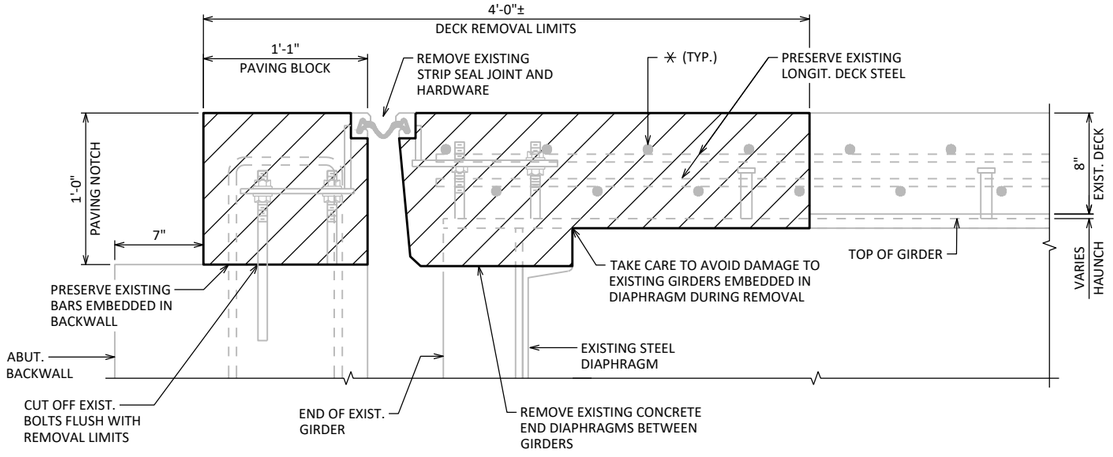
SECTION A-A

SHOWING REMOVAL ON DECK SIDE OF JOINT



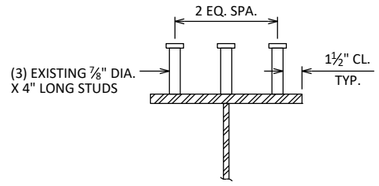
SECTION B-B

SHOWING REMOVAL ON PAVING BLOCK SIDE OF JOINT



JOINT REMOVAL - SECTION C-C

NORMAL TO C/L SUBSTRUCTURE



SHEAR CONN. DETAIL

(STUDS MATERIAL - STRUCTURAL CARBON STEEL)

NOTE: SHEAR STUDS PRESENT AT GIRDER ENDS. SALVAGE AND TAKE CARE TO AVOID DAMAGE TO EXISTING STUDS DURING JOINT REPAIR CONCRETE REMOVAL. REPLACEMENT OF DAMAGED STUDS IS INCIDENTAL TO AND PAID FOR UNDER JOINT REPAIR BID ITEM.

⚹ SAVE AND INCORPORATE 1'-6" MIN. OF EXISTING TRANSVERSE REINFORCING BARS.

REMOVAL AREA

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-59-93

DRAWN BY CJK | PLANS CK'D DLM

JOINT REPAIR REMOVAL DETAILS

SHEET 5
481

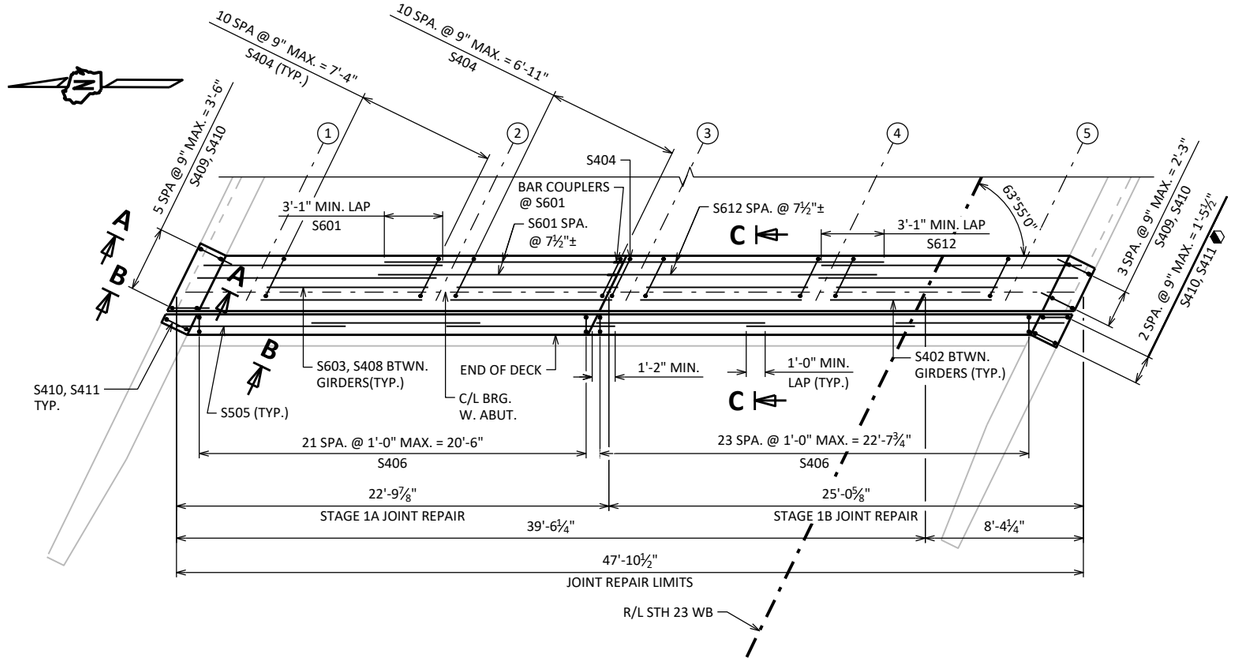
8

8

(#) INDICATES GIRDER NUMBER

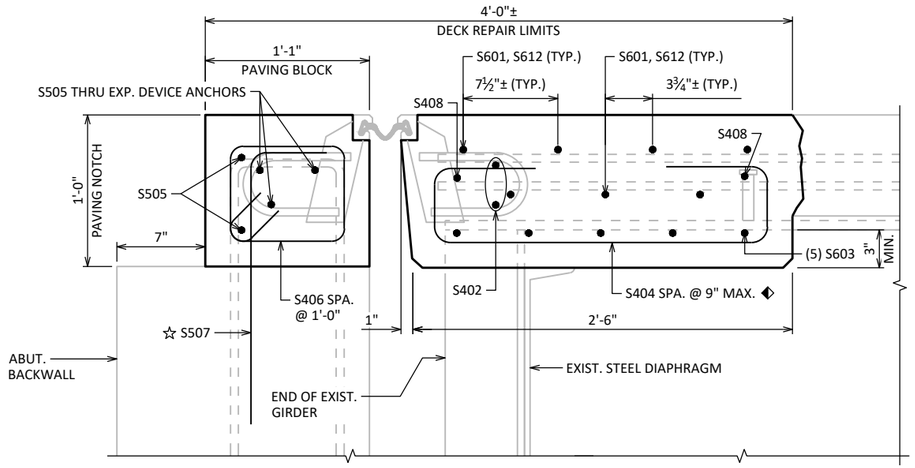
STATE PROJECT NUMBER

1440-41-71



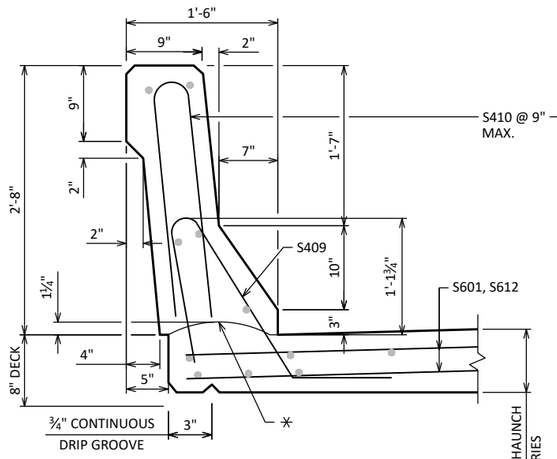
JOINT REPAIR PLAN

W. ABUT. SHOWN, E. ABUT. SIMILAR

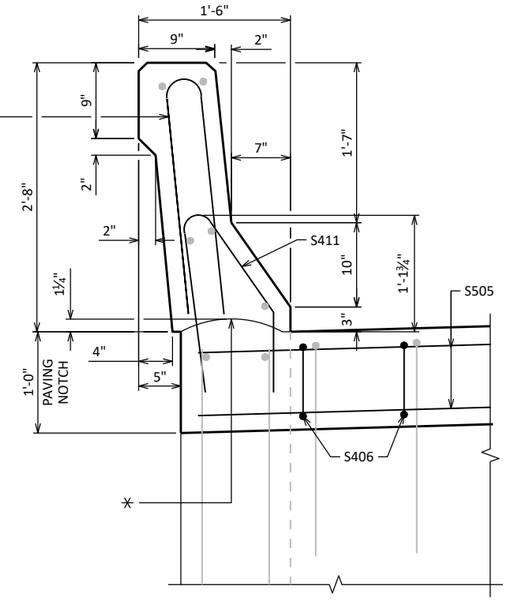


JOINT REPAIR - SECTION C-C

NORMAL TO C/L SUBSTRUCTURE



SECTION A-A



SECTION B-B

✳ CONST. JOINT - STRIKE OFF AS SHOWN

◥ SW CORNER ONLY. SEE "WING 3 REPLACEMENT" FOR REINFORCEMENT DETAILS AT WING 3.

⬖ BARS PLACED PARALLEL TO GIRDERS. SPACING PERPENDICULAR TO C/L GIRDERS.

☆ ADHESIVE ANCHORS NO. 5 BAR . EMBED 1'-0" INTO CONCRETE. SPACE AT 1'0" MAX. TURN 10" LEG AS NECESSARY TO FIT

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-59-93

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JOINT REPAIR REINFORCEMENT DETAILS

SHEET 6
482

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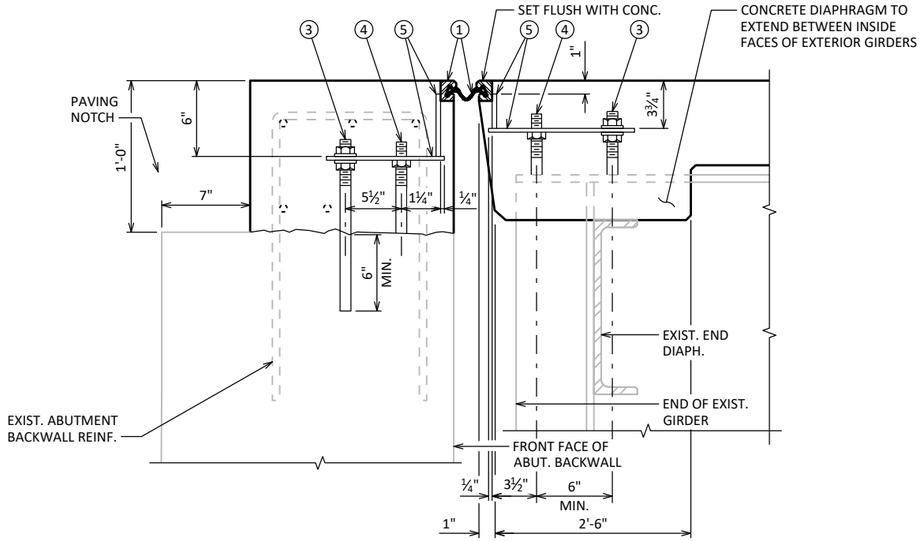
STATE PROJECT NUMBER

1440-41-71



SECTION THRU JOINT AT ABUTMENT

NORMAL TO C/L SUBSTRUCTURE

BILL OF BARS

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

	BAR MARK	COAT	WEST ABUT.	EAST ABUT.	LENGTH	BENT	BAR SERIES	LOCATION
⬭	S601	X	14	14	12'-8"			DECK - TRAN. TOP & BOT. - STAGE 1A
	S402	X	8	8	8'-6"			DECK - TRAN. THRU EXP. DEVICE ANCHORS
	S603	X	20	20	8'-6"			DECK - DIAPHRAGM BOT.
	S404	X	44	44	4'-2"	X		DECK - DIAPHRAGM VERT.
	S505	X	30	30	8'-11"			PAVING BLOCK - HORIZ.
	S406	X	46	46	3'-2"	X		PAVING BLOCK - STIRRUP
☆	S507	X	46	46	2'-7"	X		PAVING BLOCK - ADHESIVE ANCHOR
	S408	X	8	8	8'-6"			DECK - DIAPHRAGM TOP
	S409	X	10	10	4'-3"	X		DECK & PARAPET - VERT.
	S410	X	14	20	4'-10"	X		PARAPET - VERT.
	S411	X	4	10	4'-7"	X		PAVING BLOCK & PARAPET - VERT.
	S612	X	14	14	13'-9"			DECK - TRAN. TOP & BOT. - STAGE 1B

⬭ BAR COUPLERS REQUIRED AT CONSTRUCTION JOINT. BAR LENGTH COMPUTED TO C/L OF LONGIT. JOINT & CONTRACTOR TO ADJUST LENGTH OF BARS IF REQUIRED TO ACCOMMODATE COUPLER SYSTEM. PAY BASED ON BARS AS DETAILED.

LEGEND

(1) NEOPRENE STRIP SEAL (4 - INCH) AND STEEL EXTRUSIONS.

(2) STUDS ⅝" DIA. X 6¾" LONG AT 6" ALTERNATE CENTERS. WELD TO EXTRUSIONS AND BEND AS SHOWN AFTER WELDING.

(2A) ½" THICK ANCHOR PLATE WITH ⅝" DIA. ROD (OR ALTERNATE STRIP SEAL ANCHOR). WELD ROD TO ANCHOR PLATE, WELD ANCHOR PLATE TO NO. 1 AT 1'-6" CENTERS BETWEEN GIRDERS.

(3) ¾" DIA. THREADED ROD WITH 2 NUTS AND PLATE WASHERS. WELD THREADED ROD TO TOP FLANGE OR ATTACH BY BOLTING THRU FLANGE. ON ABUTMENT SIDE GROUT THREADED ROD INTO FIELD DRILLED HOLES IN ABUTMENT BACKWALL AS SHOWN.

(4) ¾" DIA. THREADED ROD WITH NUT. TACK WELD NUT TO NO. 5.

(5) FABRICATE SUPPORT FROM 3" X ½" BAR AS SHOWN OR EQUIVALENT, ONE PER GIRDER PER SIDE. SHOP OR FIELD WELD TO NO. 1. IF FIELD WELDED, COVER WELDED AREAS WITH EPOXY-COATING MATERIAL. PROVIDE 1½" DIA. HOLE FOR NO. 3 AND 1" DIA. HOLE FOR NO. 4.

(6) GALVANIZED PLATE ⅜" X 1'-2" X 2'-0" LONG WITH HOLES FOR NO.7. BEND AS SHOWN.

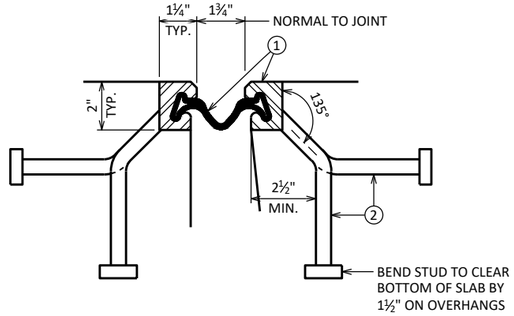
(7) ¾" DIA. X 1½" STAINLESS STEEL SOCKET FLAT HEAD SCREWS WITH ANTI-SEIZE LUBRICANT. PLACE IN COUNTERSUNK HOLE. RECESS 1/16" BELOW PLATE SURFACE.

(8) ¾" DIA. X 4" GALVANIZED HEX HEAD BOLT. BEND 45°.

(9) ¾" DIA. X 2¼" GALVANIZED THREADED COUPLING.

(10) 1" X 5" SLOTTED COUNTERSUNK HOLE FOR NO. 7. PLACE SLOT PARALLEL TO DIRECTION OF MOVEMENT.

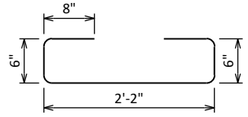
☆ ADHESIVE ANCHORS NO. 5 BAR. EMBED 1'-0" INTO CONCRETE. SPACE AT 1'-0" MAX. TURN 10" LEG AS NECESSARY TO FIT.



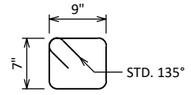
SECTION THRU JOINT

EXTERIOR GIRDER TO EDGE OF DECK, AND AT PARAPETS

ALTERNATE STRIP SEAL ANCHOR



S404



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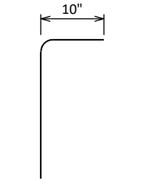

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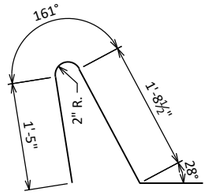

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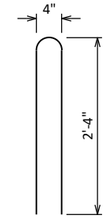

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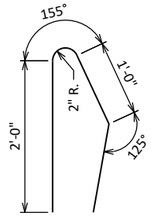
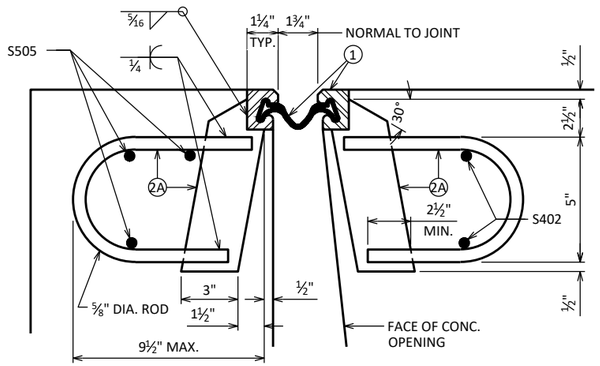
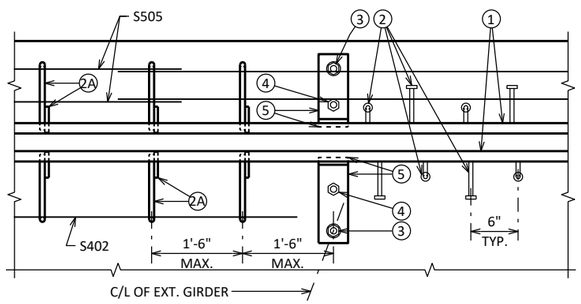


S411



SECTION THRU JOINT

ROADWAY TRAFFIC AREA BETWEEN EXTERIOR GIRDERS



PART PLAN

NOTES

ONE FIELD SPLICE PERMITTED IN STEEL EXTRUSIONS, UNLESS MORE ARE REQUIRED FOR STAGED CONSTRUCTION, HANDLING OR GALVANIZING REQUIREMENTS. IF USED, ANCHOR PLATES SHALL BE PROVIDED 3" FROM EACH SIDE OF THE FIELD SPLICE. DETAILS SHALL BE SUBMITTED FOR APPROVAL. NO SPLICING PERMITTED IN NEOPRENE STRIP SEAL.

AFTER FABRICATION, BUT BEFORE SHIPMENT, STRAIGHTEN STEEL EXTRUSIONS SUCH THAT THEY SHALL BE FREE FROM WARP, TWIST AND SWEEP.

FABRICATOR SHALL PROVIDE MEANS OF KEEPING GALVANIZED EXTRUSIONS CLEAN AND SMOOTH DURING SHIPMENT AND PRIOR TO APPLYING LUBRICANT ADHESIVE FOR NEOPRENE GLAND INSTALLATION.

SANDBLAST PLATES, SUPPORTS AND EXTRUSIONS AFTER FABRICATION IN ACCORDANCE WITH SSPC SP. #6 "COMMERCIAL BLAST CLEANING". AFTER BLAST CLEANING, THE PLATES, SUPPORTS AND EXTRUSIONS SHALL BE HOT DIPPED GALVANIZED.

ANCHOR SYSTEM NO. 8 AND NO. 9 SHALL CONFORM TO ASTM A307 AND SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C AND D.

ALL MATERIAL IN THE EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS AND HARDWARE SHALL BE PAID AT THE UNIT PRICE BID FOR "EXPANSION DEVICE", LF.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-59-93

DRAWN BY CJK | PLANS CK'D DLM

EXPANSION DEVICE

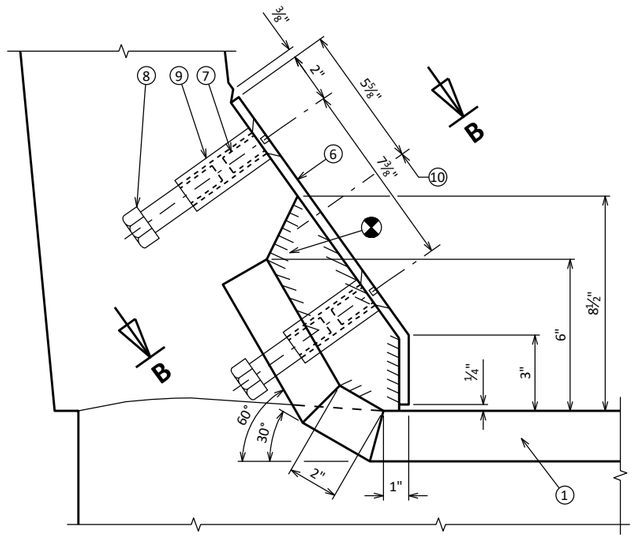
SHEET 7
483

8

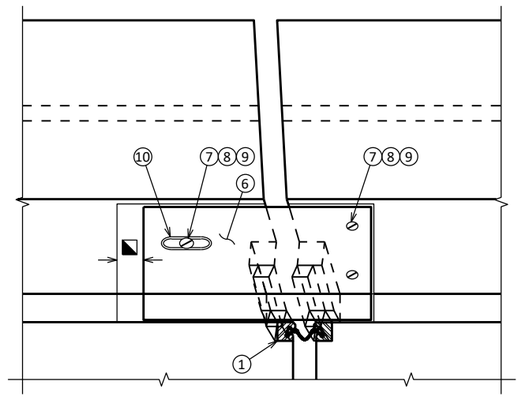
8

STATE PROJECT NUMBER

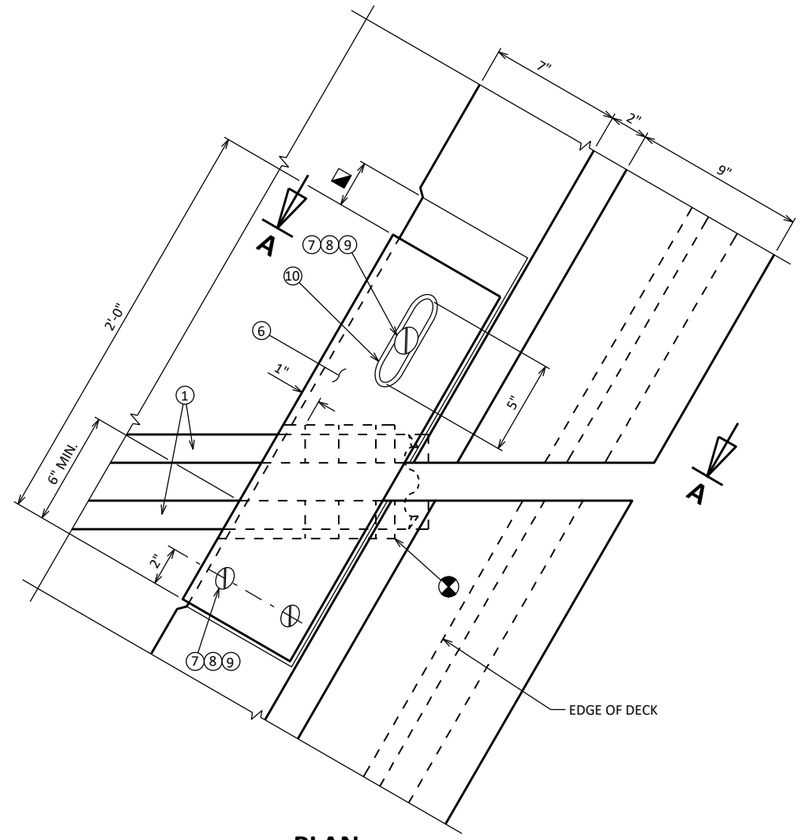
1440-41-71



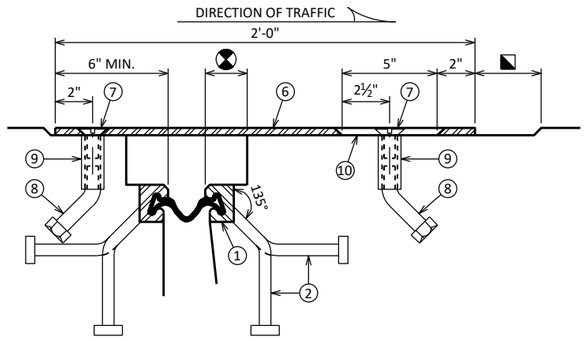
SECTION A-A



VIEW OF PARAPET PLATE FROM ROADWAY



PLAN



SECTION B-B

BLOCK OUT CONCRETE 2" EACH SIDE OF JOINT OPENING.

JOINT OPENING DIMENSION ALONG SKEW PLUS ½".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-59-93

DRAWN BY CJK | PLANS CK'D DLM

COVER PLATES

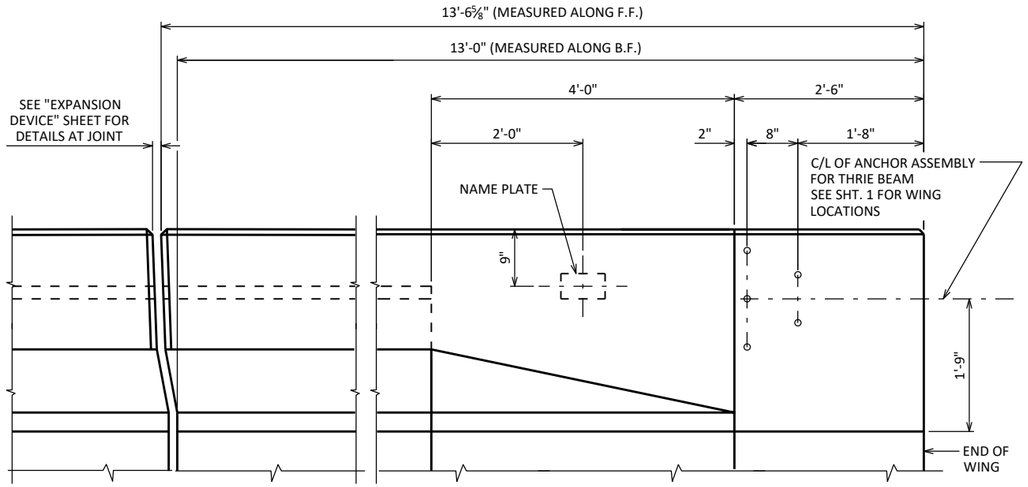
SHEET 8
484

8

8

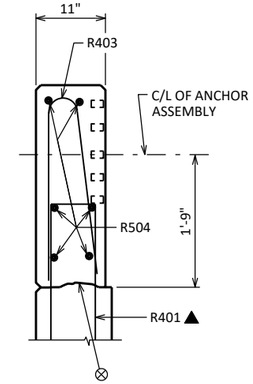
STATE PROJECT NUMBER

1440-41-71

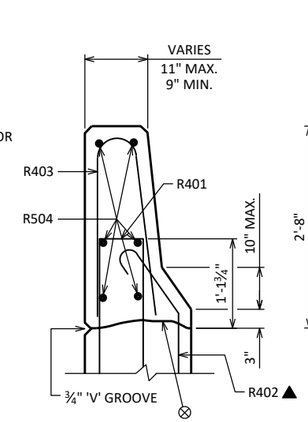


INSIDE ELEVATION

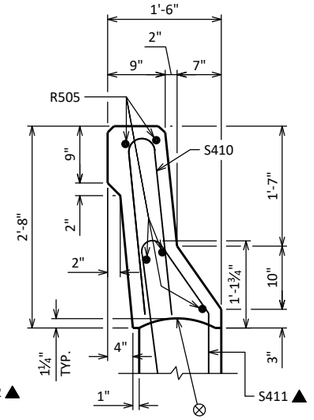
AT NORTHEAST CORNER



SECTION A-A



SECTION B-B



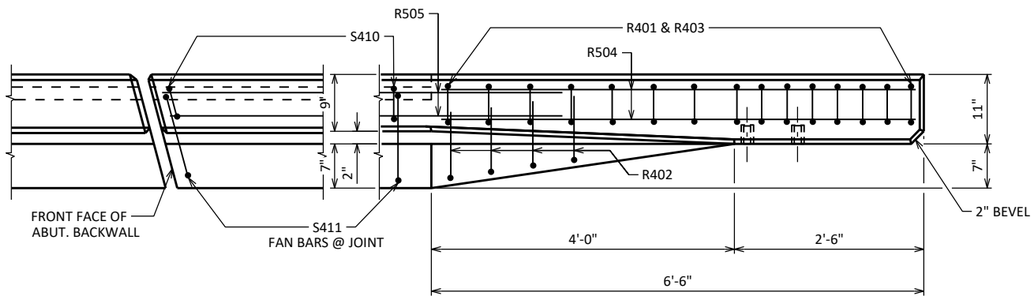
SECTION C-C

BILL OF BARS

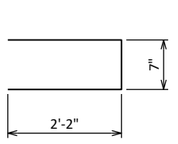
FOR PARAPET AT WING 3

THE FIRST DIGIT OF THE BAR MARK SIGNIFIES THE BAR SIZE.

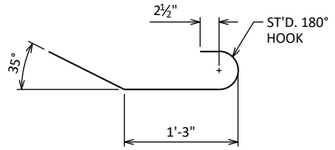
BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	LOCATION
R401	X	15	4'-9"	X	WING STIRRUPS
R402	X	4	3'-1"	X	WINGS
R403	X	15	4'-9"	X	WINGS
R504	X	6	6'-2"		WINGS
R505	X	5	8'-9"		WINGS



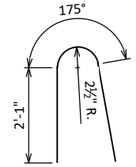
PLAN



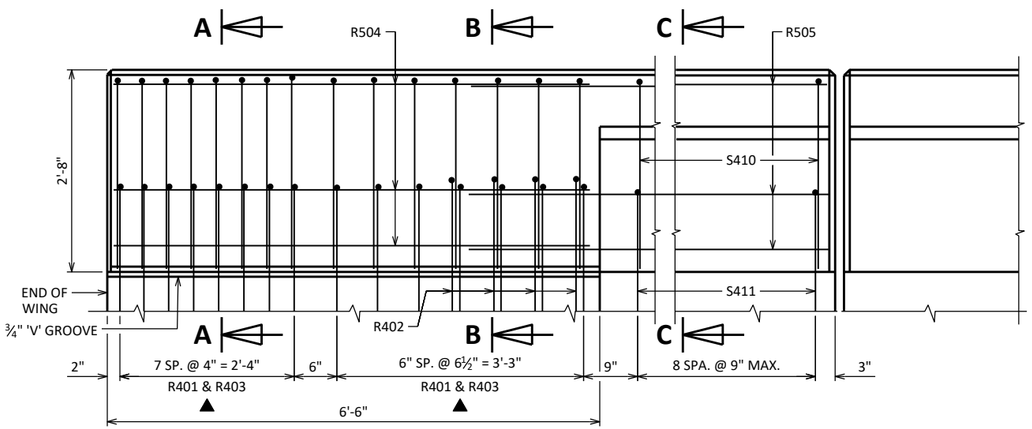
R401



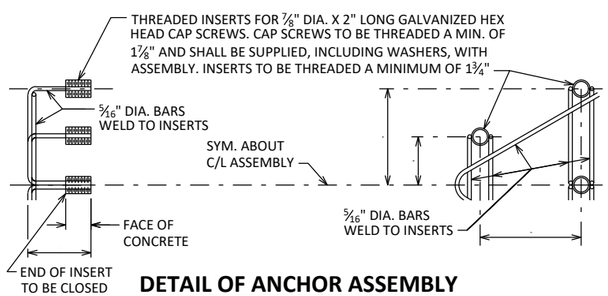
R402



R403



OUTSIDE ELEVATION



DETAIL OF ANCHOR ASSEMBLY

NOTE: HEX HEAD CAP SCREWS & WASHERS TO BE GALVANIZED IN ACCORDANCE WITH ASTM F2329.

ASSEMBLY SHALL BE BID ITEM "ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD", EACH.

⊗ CONST. JOINT - STRIKE OFF AS SHOWN

▲ R401, R402, AND S411 BARS TO BE TIED TO WING STEEL BEFORE WING IS POURED

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-59-93

DRAWN BY CJK | PLANS CK'D DLM

SLOPED FACE PARAPET "B"

SHEET 9
485

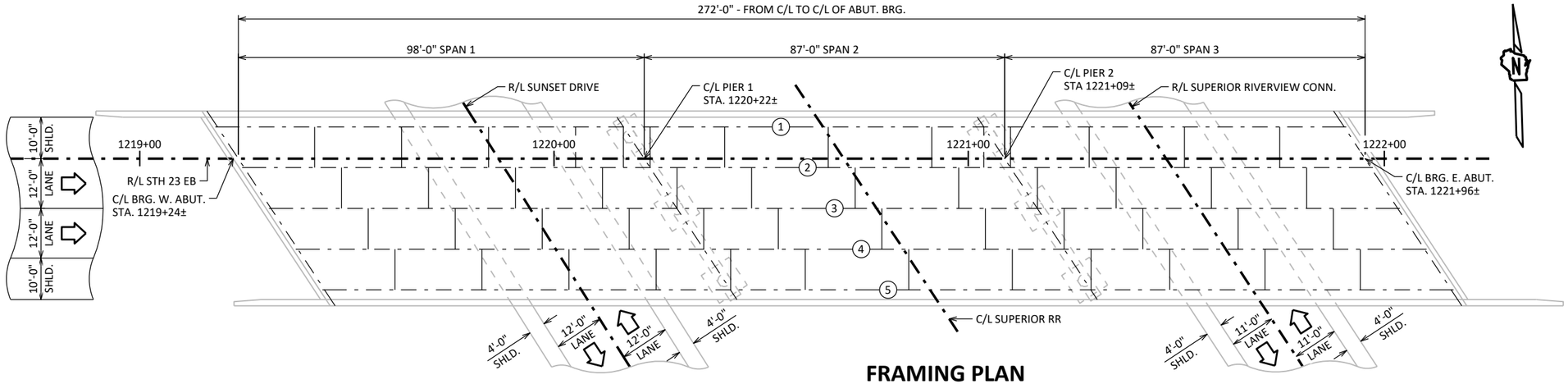
8

8

STATE PROJECT NUMBER

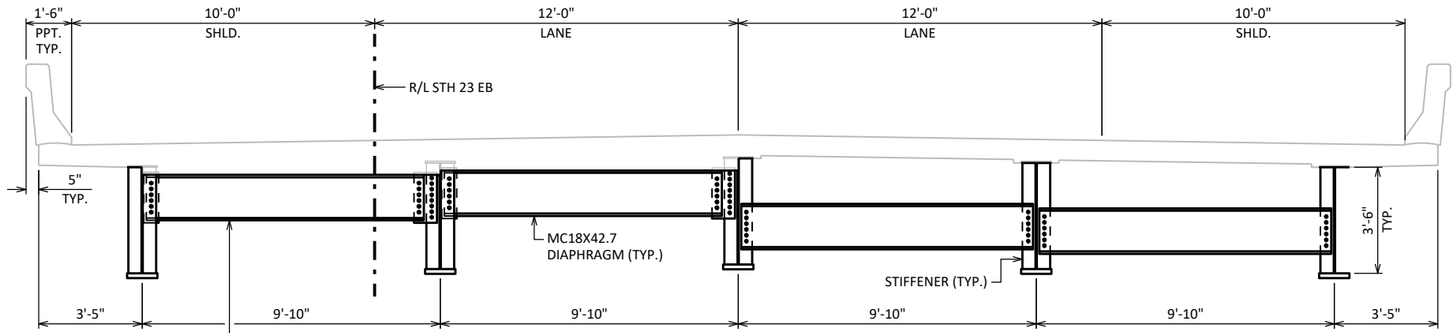
1440-41-71

(#) INDICATES GIRDER NUMBER



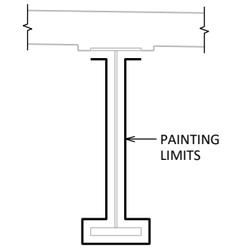
FRAMING PLAN

3-SPAN STEEL GIRDER BRIDGE



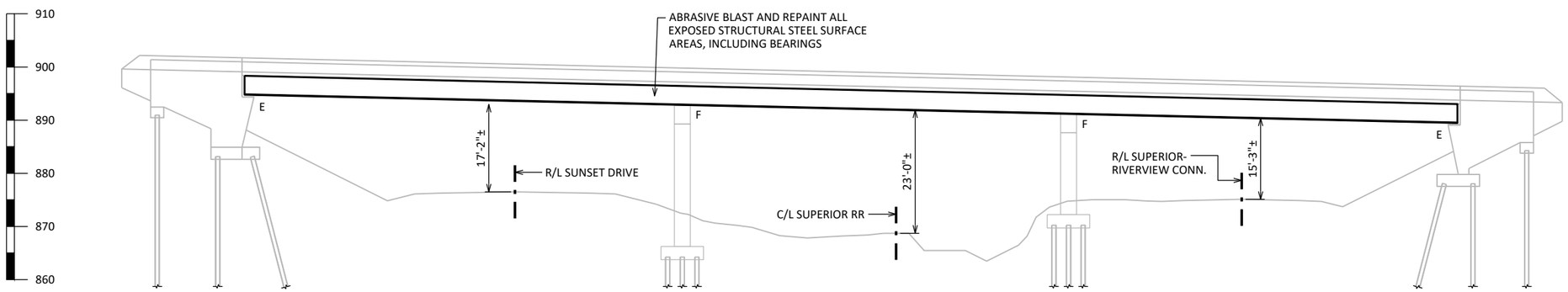
CROSS SECTION THRU ROADWAY

LOOKING EAST



PAINTING LIMITS

TYPICAL TO ALL GIRDERS



ELEVATION

LOOKING NORTH

DESIGN DATA

LIVE LOAD: (RATINGS TAKEN FROM HSIS, 03/31/25)

INVENTORY RATING: HS-24
OPERATING RATING: HS-40
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV): 250 (KIPS)

MATERIAL PROPERTIES

CONCRETE MASONRY DECK REPAIR ——— f'_c = 3500 PSI

TRAFFIC DATA

FEATURE ON:
ADT = 16,280 (2047)
R.D.S. = 65 MPH

SCOPE OF WORK

PAINT ENTIRE STEEL SURFACE OF THE SUPERSTRUCTURE

EPOXY INJECTION IN VERTICAL ABUTMENT CRACKS

CONCRETE SURFACE REPAIR ON SOUTH PARAPET

REPAIR DECK SPALLS

REMOVE LOOSE CONCRETE FROM UNDERSIDE OF DECK AND APPLY CORROSION INHIBITOR

APPLY PIGMENTED SURFACE SEALER TO EXISTING PARAPETS

LIST OF DRAWINGS:

1. STRUCTURE PAINTING
2. GENERAL NOTES AND QUANTITIES

STRUCTURE DESIGN CONTACTS:

CHRIS KUSIAK 608-267-3619
KYLE BUSCH 608-267-0465

NO.	DATE	REVISION	BY

BUREAU OF STRUCTURES

ACCEPTED KHB 07/29/26
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-59-97

STH 23 EB OVER SUNSET DRIVE & SUPERIOR RR

COUNTY	TOWN
SHEBOYGAN	PLYMOUTH

DESIGN SPEC.
REHABILITATION N/A

DESIGNED BY	DESIGN CK'D	DRAWN BY	PLANS CK'D
CJK	DLM	CJK	DLM

STRUCTURE PAINTING

SHEET 1 OF 2
486

I.D. 1440-41-00D

DATE: JUNE 2025

8

8

STATE PROJECT NUMBER

1440-41-71

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

CONCRETE SURFACE REPAIR REQUIRED ON SOUTH PARAPET. ADDITIONAL SURFACE REPAIR MAY BE REQUIRED DURING CONSTRUCTION AND SURFACE REPAIR AREAS SHALL BE DETERMINED AS DIRECTED BY THE ENGINEER.

PIGMENTED SURFACE SEALER TO BE APPLIED TO CONCRETE SURFACE REPAIR AREAS OF PARAPET.

PIGMENTED SURFACE SEALER RESEAL TO BE APPLIED TO TOP AND FRONT FACE OF EXISTING PARAPETS.

"PREPARATION DECKS TYPE 1" AREAS ARE DETERMINED BY THE ENGINEER. DECK PREPARATION AREAS TO BE FILLED WITH "CONCRETE MASONRY DECK REPAIR."

AREAS OF "PREPARATION DECKS TYPE 1" SHALL BE DEFINED BY A SAW CUT.

THE COLOR OF THE FINISH EPOXY TOP COAT SHALL BE BROWN, (FEDERAL STANDARD COLOR NO. 20059).

"REMOVE LOOSE CONCRETE" BID ITEM INCLUDES REMOVING LOOSE CONCRETE FROM UNDERSIDE OF DECK AND APPLYING CORROSION INHIBITOR. SEE SPECIAL PROVISIONS FOR DETAILS. AREAS SHALL BE DETERMINED BY THE ENGINEER.

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	SUPER	W. ABUT.	E. ABUT.	TOTALS
502.3205	PIGMENTED SURFACE SEALER RESEAL	SY	256	-	-	256
502.3210	PIGMENTED SURFACE SEALER	SY	2	-	-	2
509.0301	PREPARATION DECKS TYPE 1	SY	2	-	-	2
509.0310.S	SAWING PAVEMENT DECK PREPARATION AREAS	LF	20	-	-	20
509.1500	CONCRETE SURFACE REPAIR	SF	20	-	-	20
509.2100.S	CONCRETE MASONRY DECK REPAIR	CY	1	-	-	1
509.9025.S	EPOXY INJECTION CRACK REPAIR	LF	-	8	7	15
509.9026.S	CORED HOLES 2-INCH DIAMETER	EACH	-	2	2	4
517.1801.S	STRUCTURE REPAINTING RECYCLED ABRASIVE B-59-97	EACH	1	-	-	1
517.4501.S	NEGATIVE PRESSURE CONTAINMENT AND COLLECTION OF WASTE MATERIALS B-59-97	EACH	-	-	-	1
517.6001.S	PORTABLE DECONTAMINATION FACILITY	EACH	-	-	-	1
SPV.0165	REMOVING LOOSE CONCRETE	SF	50	-	-	50
	NON-BID ITEMS					
	BRIDGE SEAT PROTECTION					

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-59-97

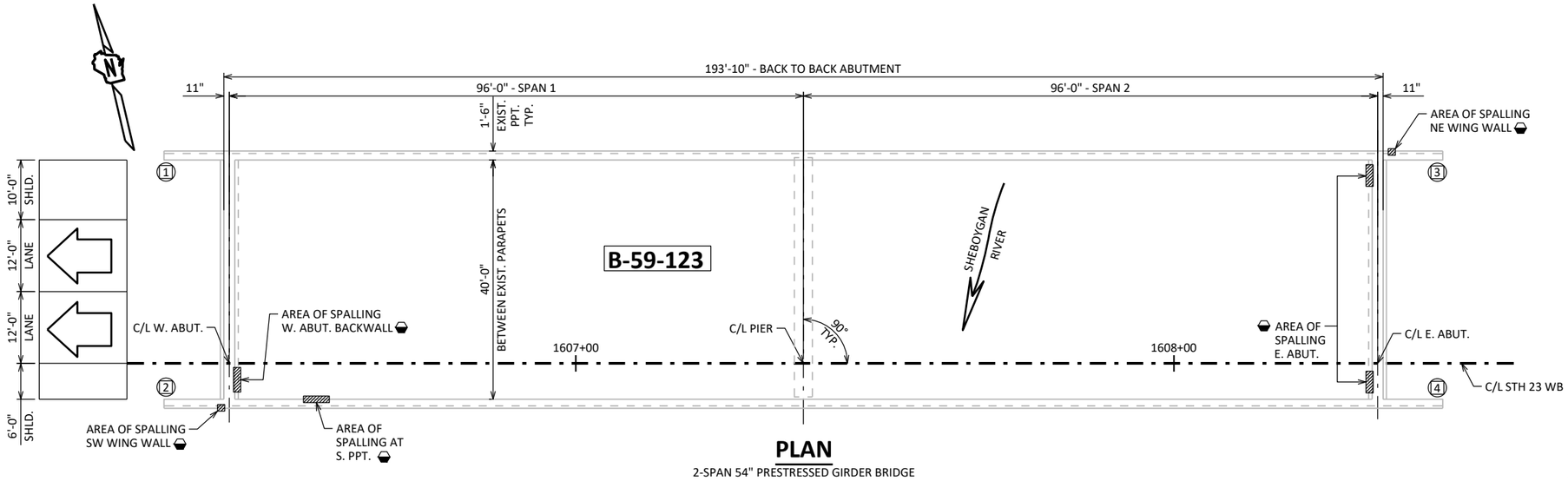
DRAWN BY CJK | PLANS CK'D DLM

GENERAL NOTES AND QUANTITIES

SHEET 2
487

STATE PROJECT NUMBER

1440-41-71



PLAN

2-SPAN 54" PRESTRESSED GIRDER BRIDGE

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HS-20
INVENTORY RATING: HS-20
OPERATING RATING: HS-40
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV): 250 (KIPS)

RATINGS TAKEN FROM HSI, 04/07/2025.

MATERIAL PROPERTIES:

CONCRETE MASONRY: $f'_c = 3{,}500$ PSI

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

CONCRETE SURFACE REPAIR REQUIRED. LOCATIONS NOTED MAY NOT BE ALL INCLUSIVE, AND QUANTITIES SHOWN ON SHEET ARE APPROXIMATE. ADDITIONAL CONCRETE SURFACE REPAIR MAY BE REQUIRED DURING CONSTRUCTION AND SHOULD BE PERFORMED AS DIRECTED BY THE ENGINEER.

INDICATES WING NUMBER

CONCRETE SURFACE REPAIR

TRAFFIC DATA

STH 23 WB:

ADT = 16,280 (2047)
R.D.S. = 65 MPH

LIST OF DRAWINGS:

1. GENERAL PLAN

SCOPE OF WORK:

- CONCRETE SURFACE REPAIR ON ABUTMENT BACKWALLS, PARAPET, WING WALLS, AND AT THE LOCATIONS DIRECTED BY THE ENGINEER.

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	TOTALS
509.1500	CONCRETE SURFACE REPAIR	SF	10

STRUCTURE DESIGN CONTACTS:

VISTA SHAHRIARI 608-266-7086
KYLE BUSCH 608-267-0465

NO.	DATE	REVISION	BY

BUREAU OF STRUCTURES

ACCEPTED KHB 07/29/26
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-59-123

STH 23 WB OVER SHEBOYGAN RIVER

COUNTY	TOWN
SHEBOYGAN	SHEBOYGAN FALLS

DESIGN SPEC.
REHABILITATION N/A

DESIGNED BY	DESIGN CK'D	DRAWN BY	PLANS CK'D
VS	CJK	VS	CJK

GENERAL PLAN

SHEET 1 OF 1
488

I.D. 1440-41-00E

DATE: MAY 2025

8

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EARTHWORK - GUARDRAIL STH 23 EB AT CTH C MEDIAN (STRUCTURE B-59-179) - STAGE 2

STATION	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)				
	CUT	FILL	EBS EXC	CUT	FILL	EBS EXC	CUT	EXPANDED FILL	EBS BACKFILL	REDUCED EBS IN FILL	MASS ORDINATE
							1.00	1.33	1.00	0.70	
				NOTE 1	NOTE 3	NOTE 2	NOTE 1		NOTE 4	NOTE 6	NOTE 8
1190+89.48	0.01	0.33	0.00	0	0	0	0	0	0	0	0
1191+00.00	3.03	12.40	0.00	1	2	0	1	3	0	0	-2
1191+50.00	3.83	11.27	0.00	6	22	0	7	32	0	0	-25
1192+00.00	3.10	11.88	0.00	6	21	0	13	60	0	0	-47
1192+39.48	5.73	6.03	0.00	6	13	0	19	77	0	0	-58
1193+00.00	0.28	12.16	0.00	7	20	0	26	104	0	0	-78
1193+03.72	0.46	12.14	0.00	0	2	0	26	106	0	0	-80
1193+15.85	0.74	12.21	0.00	0	5	0	26	113	0	0	-87
1193+50.00	3.48	11.41	0.00	3	15	0	29	133	0	0	-104
1194+00.00	13.96	3.87	0.00	16	14	0	45	152	0	0	-107
1194+50.00	10.32	10.02	0.00	22	13	0	67	169	0	0	-102
1194+78.77	13.21	5.73	0.00	13	8	0	80	180	0	0	-100
1194+90.91	9.15	10.74	0.00	5	4	0	85	185	0	0	-100
1195+00.00	6.91	13.01	0.00	3	4	0	88	190	0	0	-102
1195+50.00	1.14	17.90	0.00	7	29	0	95	229	0	0	-134
1195+54.65	0.95	18.61	0.00	0	3	0	95	233	0	0	-138
1196+00.00	6.03	12.12	0.00	6	26	0	101	267	0	0	-166
1196+50.00	6.79	10.68	0.00	12	21	0	113	295	0	0	-182
1197+00.00	1.31	17.68	0.00	7	26	0	120	330	0	0	-210
1197+04.65	1.33	19.16	0.00	0	3	0	120	334	0	0	-214
				120	251	0					

NOTES:

(1) CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL

(2) EXCAVATION BELOW SUBGRADE FOR SOIL MITIGATION AREA ONLY

(3) FILL DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME

(4) SOIL MITIGATION AREA WILL BE BACKFILLED WITH SELECT CRUSHED MATERIAL

(6) REDUCED MARSH EXCAVATION THAT CAN BE USED IN FILL

(8) MASS ORDINATE IS CUT - (FILL * FILL FACTOR) + (EBS * FILL FACTOR)

EARTHWORK - GUARDRAIL STH 23 EB AT SUNSET DRIVE RIGHT (STRUCTURE B-59-97) - STAGE 2

STATION	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)				
	CUT	FILL	EBS EXC	CUT	FILL	EBS EXC	CUT	EXPANDED FILL	EBS BACKFILL	REDUCED EBS IN FILL	MASS ORDINATE
							1.00	1.33	1.00	0.70	
				NOTE 1	NOTE 3	NOTE 2	NOTE 1		NOTE 4	NOTE 6	NOTE 8
1212+53.25	0.00	2.29	0.00	0	0	0	0	0	0	0	0
1213+00.00	0.03	4.78	0.00	0	6	0	0	8	0	0	-8
1213+50.00	0.00	23.39	0.00	0	26	0	0	43	0	0	-43
1213+73.25	0.00	38.06	0.00	0	26	0	0	77	0	0	-77
1213+98.25	0.00	23.30	0.00	0	28	0	0	114	0	0	-114
1214+00.00	0.00	22.92	0.00	0	1	0	0	116	0	0	-116
1214+05.51	0.00	20.77	0.00	0	4	0	0	121	0	0	-121
1214+23.25	0.00	16.07	0.00	0	12	0	0	137	0	0	-137
1214+50.00	0.00	4.00	0.00	0	10	0	0	150	0	0	-150
1215+00.00	0.00	4.23	0.00	0	8	0	0	161	0	0	-161
1215+25.51	0.00	4.77	0.00	0	4	0	0	166	0	0	-166
1215+50.51	0.00	5.06	0.00	0	5	0	0	173	0	0	-173
1215+75.51	0.00	4.78	0.00	0	5	0	0	180	0	0	-180
1216+00.00	0.00	4.67	0.00	0	4	0	0	185	0	0	-185
1216+50.00	0.00	4.47	0.00	0	8	0	0	196	0	0	-196
1217+00.00	0.00	4.21	0.00	0	8	0	0	206	0	0	-206
1217+50.00	0.00	4.22	0.00	0	8	0	0	217	0	0	-217
1218+00.00	0.00	4.84	0.00	0	8	0	0	227	0	0	-227
1218+50.00	0.00	5.19	0.00	0	9	0	0	239	0	0	-239
1218+91.12	0.01	6.91	0.00	0	9	0	0	251	0	0	-251
1219+00.00	0.00	7.49	0.00	0	2	0	0	254	0	0	-254
1219+26.37	0.00	0.00	0.00	0	4	0	0	259	0	0	-259
				0	195	0					

EARTHWORK - GUARDRAIL STH 23 EB AT SUNSET DRIVE LEFT (STRUCTURE B-59-97) - STAGE 2

STATION	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)				
	CUT	FILL	EBS EXC	CUT	FILL	EBS EXC	CUT	EXPANDED FILL	EBS BACKFILL	REDUCED EBS IN FILL	MASS ORDINATE
							1.00	1.33	1.00	0.70	
				NOTE 1	NOTE 3	NOTE 2	NOTE 1		NOTE 4	NOTE 6	NOTE 8
1214+05.51	0.00	2.07	0.00	0	0	0	0	0	0	0	0
1214+23.25	0.00	2.47	0.00	0	1	0	0	1	0	0	-1
1214+50.00	0.00	3.10	0.00	0	3	0	0	5	0	0	-5
1215+00.00	0.00	5.40	0.00	0	8	0	0	16	0	0	-16
1215+25.51	0.00	8.64	0.00	0	7	0	0	25	0	0	-25
1215+50.51	0.00	4.12	0.00	0	6	0	0	33	0	0	-33
1215+75.51	0.00	3.82	0.00	0	4	0	0	39	0	0	-39
1216+00.00	0.00	3.75	0.00	0	3	0	0	43	0	0	-43
1216+50.00	0.00	3.99	0.00	0	7	0	0	52	0	0	-52
1217+00.00	0.00	3.84	0.00	0	7	0	0	61	0	0	-61
1217+50.00	0.00	3.58	0.00	0	7	0	0	70	0	0	-70
1218+00.00	0.00	2.81	0.00	0	6	0	0	78	0	0	-78
1218+50.00	0.00	2.92	0.00	0	5	0	0	85	0	0	-85
1218+91.12	0.00	19.05	0.00	0	17	0	0	108	0	0	-108
				0	81	0					

EARTHWORK - GUARDRAIL STH 23 WB AT SUNSET DRIVE LEFT (STRUCTURE B-59-180) - STAGE 2

STATION	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)				
	CUT	FILL	EBS EXC	CUT	FILL	EBS EXC	CUT	EXPANDED FILL	EBS BACKFILL	REDUCED EBS IN FILL	MASS ORDINATE
							1.00	1.33	1.00	0.70	
				NOTE 1	NOTE 3	NOTE 2	NOTE 1		NOTE 4	NOTE 6	NOTE 8
1221+48.84	9.91	16.01	0.00	0	0	0	0	0	0	0	0
1221+78.79	12.37	1.01	0.00	12	9	0	12	12	0	0	0
1222+00.00	12.32	0.77	0.00	10	1	0	22	13	0	0	9
1222+50.00	0.00	3.30	0.00	11	4	0	33	19	0	0	14
1223+00.00	0.00	4.80	0.00	0	7	0	33	28	0	0	5
1223+50.00	0.07	6.30	0.00	0	10	0	33	41	0	0	-8
1224+00.00	0.06	6.41	0.00	0	12	0	33	57	0	0	-24
1224+50.00	0.00	4.92	0.00	0	10	0	33	70	0	0	-37
1224+69.41	0.00	4.08	0.00	0	3	0	33	74	0	0	-41
1224+94.41	0.00	3.47	0.00	0	3	0	33	78	0	0	-45
1225+00.00	0.00	3.46	0.00	0	1	0	33	80	0	0	-47
1225+19.41	0.00	3.42	0.00	0	2	0	33	82	0	0	-49
1225+50.00	0.00	3.82	0.00	0	4	0	33	88	0	0	-55
1225+51.92	0.00	3.76	0.00	0	0	0	33	88	0	0	-55
1225+76.92	0.00	4.50	0.00	0	4	0	33	93	0	0	-60
1226+00.00	0.00	7.58	0.00	0	5	0	33	100	0	0	-67
1226+01.92	0.00	7.82	0.00	0	1	0	33	101	0	0	-68
1226+39.41	0.00	2.44	0.00	0	7	0	33	110	0	0	-77
1226+67.63	0.00	1.31	0.00	0	2	0	33	113	0	0	-80
				33	85	0					

EARTHWORK - GUARDRAIL STH 23 WB AT SUNSET DRIVE RIGHT (STRUCTURE B-59-180) - STAGE 2

STATION	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)				
	CUT	FILL	EBS EXC	CUT	FILL	EBS EXC	CUT	EXPANDED FILL	EBS BACKFILL	REDUCED EBS IN FILL	MASS ORDINATE
							1.00	1.33	1.00	0.70	
				NOTE 1	NOTE 3	NOTE 2	NOTE 1		NOTE 4	NOTE 6	NOTE 8
1221+78.79	7.60	14.89	0.00	0	0	0	0	0	0	0	0
1222+00.00	10.27	0.59	0.00	7	6	0	7	8	0	0	-1
1222+50.00	0.47	0.00	0.00	10	1	0	17	9	0	0	8
1223+00.00	0.41	0.00	0.00	1	0	0	18	9	0	0	9
1223+50.00	0.27	0.00	0.00	1	0	0	19	9	0	0	10
1224+00.00	0.06	0.05	0.00	0	0	0	19	9	0	0	10
1224+50.00	0.00	0.71	0.00	0	1	0	19	11	0	0	8
1224+69.41	0.00	0.87	0.00	0	1	0	19	12	0	0	7
1224+94.41	0.02	1.13	0.00	0	1	0	19	13	0	0	6
1225+00.00	0.04	1.46	0.00	0	0	0	19	13	0	0	6
1225+19.41	0.10	3.85	0.00	0	2	0	19	16	0	0	3
1225+50.00	0.01	0.99	0.00	0	3	0	19	20	0	0	-1
1225+51.92	0.00	0.94	0.00	0	0	0	19	20	0	0	-1
1225+76.92	0.00	0.62	0.00	0	1	0	19	21	0	0	-2
1226+00.00	0.00	0.38	0.00	0	0	0	19	21	0	0	-2
1226+01.92	0.00	0.36	0.00	0	0	0	19	21	0	0	-2
1226+39.41	0.00	0.13	0.00	0	0	0	19	21	0	0	-2
				19	16	0					

EARTHWORK - GUARDRAIL STH 23 EB AT STH 67 LEFT (STRUCTURE B-59-91) - STAGE 2

STATION	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)				
	CUT	FILL	EBS EXC	CUT	FILL	EBS EXC	CUT	EXPANDED FILL	EBS BACKFILL	REDUCED EBS IN FILL	MASS ORDINATE
							1.00	1.33	1.00	0.70	
				NOTE 1	NOTE 3	NOTE 2	NOTE 1		NOTE 4	NOTE 6	NOTE 8
1243+49.26	0.00	3.16	0.00	0	0	0	0	0	0	0	0
1243+50.00	0.00	3.19	0.00	0	0	0	0	0	0	0	0
1244+00.00	0.00	13.88	0.00	0	16	0	0	21	0	0	-21
1244+50.00	0.00	23.76	0.00	0	35	0	0	68	0	0	-68
1244+69.26	0.00	31.35	0.00	0	20	0	0	94	0	0	-94
1244+94.26	0.00	25.89	0.00	0	27	0	0	130	0	0	-130
1245+00.00	0.00	26.90	0.00	0	6	0	0	138	0	0	-138
1245+19.26	0.00	22.70	0.00	0	18	0	0	162	0	0	-162
1245+50.00	0.00	12.31	0.00	0	20	0	0	189	0	0	-189
1246+00.00	0.00	11.98	0.00	0	22	0	0	218	0	0	-218
1246+50.00	0.00	10.54	0.00	0	21	0	0	246	0	0	-246
1247+00.00	0.00	9.18	0.00	0	18	0	0	270	0	0	-270
1247+50.00	0.00	6.72	0.00	0	15	0	0	290	0	0	-290
1248+00.00	0.00	6.05	0.00	0	12	0	0	306	0	0	-306
1248+09.44	0.00	32.48	0.00	0	7	0	0	315	0	0	-315
				0	237	0					

EARTHWORK - GUARDRAIL STH 23 WB AT STH 67 LEFT (STRUCTURE B-59-309) - STAGE 2

STATION	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)				
	CUT	FILL	EBS EXC	CUT	FILL	EBS EXC	CUT	EXPANDED FILL	EBS BACKFILL	REDUCED EBS IN FILL	MASS ORDINATE
							1.00	1.33	1.00	0.70	
				NOTE 1	NOTE 3	NOTE 2	NOTE 1		NOTE 4	NOTE 6	NOTE 8
1252+03.04	10.18	44.62	0.00	0	0	0	0	0	0	0	0
1252+22.59	14.08	9.18	0.00	9	19	0	9	25	0	0	-16
1252+50.00	13.58	4.13	0.00	14	7	0	23	35	0	0	-12
1253+00.00	0.00	2.23	0.00	13	6	0	36	43	0	0	-7
1253+50.00	0.00	1.65	0.00	0	4	0	36	48	0	0	-12
1254+00.00	0.00	0.86	0.00	0	2	0	36	51	0	0	-15
1254+44.58	0.06	0.61	0.00	0	1	0	36	52	0	0	-16
1254+50.00	1.13	0.88	0.00	0	0	0	36	52	0	0	-16
1254+69.58	0.00	2.92	0.00	0	1	0	36	53	0	0	-17
1254+94.58	0.00	19.24	0.00	0	10	0	36	67	0	0	-31
1255+00.00	0.00	17.61	0.00	0	4	0	36	72	0	0	-36
1255+12.94	0.00	14.20	0.00	0	8	0	36	82	0	0	-46
1255+37.94	0.00	8.94	0.00	0	11	0	36	97	0	0	-61
1255+50.00	0.00	6.26	0.00	0	3	0	36	101	0	0	-65
1255+62.94	0.00	3.68	0.00	0	2	0	36	104	0	0	-68
1256+00.00	0.00	0.55	0.00	0	3	0	36	108	0	0	-72
1256+14.58	0.00	0.54	0.00	0	0	0	36	108	0	0	-72
				36	81	0					

EARTHWORK - GUARDRAIL STH 23 WB AT STH 67 RIGHT (STRUCTURE B-59-309) - STAGE 2

STATION	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)				
	CUT	FILL	EBS EXC	CUT	FILL	EBS EXC	CUT	EXPANDED FILL	EBS BACKFILL	REDUCED EBS IN FILL	MASS ORDINATE
							1.00	1.33	1.00	0.70	
				NOTE 1	NOTE 3	NOTE 2	NOTE 1		NOTE 4	NOTE 6	NOTE 8
1252+22.59	7.76	13.05	0.00	0	0	0	0	0	0	0	0
1252+50.00	10.50	0.19	0.00	9	7	0	9	9	0	0	0
1253+00.00	0.00	0.64	0.00	10	1	0	19	11	0	0	8
1253+50.00	0.01	0.63	0.00	0	1	0	19	12	0	0	7
1254+00.00	0.00	0.64	0.00	0	1	0	19	13	0	0	6
1254+44.58	0.03	0.53	0.00	0	1	0	19	15	0	0	4
1254+50.00	0.04	0.52	0.00	0	0	0	19	15	0	0	4
1254+69.58	0.01	0.56	0.00	0	0	0	19	15	0	0	4
1254+94.58	0.00	0.66	0.00	0	1	0	19	16	0	0	3
1255+00.00	0.00	0.67	0.00	0	0	0	19	16	0	0	3
1255+12.94	0.00	0.71	0.00	0	0	0	19	16	0	0	3
1255+37.94	0.00	1.39	0.00	0	1	0	19	17	0	0	2
1255+50.00	0.00	2.02	0.00	0	1	0	19	19	0	0	0
1255+62.94	0.00	2.89	0.00	0	1	0	19	20	0	0	-1
1256+00.00	0.86	0.01	0.00	1	2	0	20	23	0	0	-3
1256+14.58	1.23	0.01	0.00	1	0	0	21	23	0	0	-2
1256+50.00	0.34	0.06	0.00	1	0	0	22	23	0	0	-1
1256+82.94	0.01	0.19	0.00	0	0	0	22	23	0	0	-1
				22	17	0					

EARTHWORK - GUARDRAIL STH 23 EB AT STH 67 RIGHT (STRUCTURE B-59-91) - STAGE 2

STATION	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)				
	CUT	FILL	EBS EXC	CUT	FILL	EBS EXC	CUT	EXPANDED FILL	EBS BACKFILL	REDUCED EBS IN FILL	MASS ORDINATE
							1.00	1.33	1.00	0.70	
				NOTE 1	NOTE 3	NOTE 2	NOTE 1		NOTE 4	NOTE 6	NOTE 8
1252+50.22	9.73	30.52	0.00	0	0	0	0	0	0	0	0
1253+00.00	0.00	2.42	0.00	9	30	0	9	40	0	0	-31
1253+50.00	0.00	2.57	0.00	0	5	0	9	47	0	0	-38
1254+00.00	0.00	2.73	0.00	0	5	0	9	53	0	0	-44
1254+50.00	0.00	4.08	0.00	0	6	0	9	61	0	0	-52
1255+00.00	0.00	4.90	0.00	0	8	0	9	72	0	0	-63
1255+50.00	0.00	4.04	0.00	0	8	0	9	82	0	0	-73
1256+00.00	0.00	3.66	0.00	0	7	0	9	92	0	0	-83
1256+50.00	0.00	4.17	0.00	0	7	0	9	101	0	0	-92
1256+96.13	0.00	3.04	0.00	0	6	0	9	109	0	0	-100
1257+00.00	0.00	2.83	0.00	0	0	0	9	109	0	0	-100
1257+50.00	0.00	1.14	0.00	0	4	0	9	114	0	0	-105
1258+00.00	0.02	0.88	0.00	0	2	0	9	117	0	0	-108
1258+50.00	0.00	1.10	0.00	0	2	0	9	120	0	0	-111
1258+73.71	0.00	0.73	0.00	0	1	0	9	121	0	0	-112
				9	91	0					

EARTHWORK - GUARDRAIL STH 23 EB AT STH 57 RIGHT (STRUCTURE B-59-92) - STAGE 2

STATION	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)				
	CUT	FILL	EBS EXC	CUT	FILL	EBS EXC	CUT	EXPANDED FILL	EBS BACKFILL	REDUCED EBS IN FILL	MASS ORDINATE
							1.00	1.33	1.00	0.70	
				NOTE 1	NOTE 3	NOTE 2	NOTE 1		NOTE 4	NOTE 6	NOTE 8
1351+60.98	0.00	2.52	0.00	0	0	0	0	0	0	0	0
1352+00.00	0.00	4.90	0.00	0	5	0	0	7	0	0	-7
1352+15.31	0.00	8.90	0.00	0	4	0	0	12	0	0	-12
1352+50.00	0.00	13.10	0.00	0	14	0	0	31	0	0	-31
1352+80.98	0.00	23.60	0.00	0	21	0	0	59	0	0	-59
1353+00.00	0.00	11.64	0.00	0	12	0	0	74	0	0	-74
1353+05.98	0.00	8.46	0.00	0	2	0	0	77	0	0	-77
1353+30.98	0.42	5.41	0.00	0	6	0	0	85	0	0	-85
1353+50.00	0.00	3.12	0.00	0	3	0	0	89	0	0	-89
1353+95.31	0.00	2.63	0.00	0	5	0	0	96	0	0	-96
1354+00.00	0.00	2.59	0.00	0	0	0	0	96	0	0	-96
1354+20.31	0.00	2.46	0.00	0	2	0	0	98	0	0	-98
1354+45.31	0.00	2.61	0.00	0	2	0	0	101	0	0	-101
1354+50.00	0.00	2.65	0.00	0	0	0	0	101	0	0	-101
1355+00.00	0.00	2.73	0.00	0	5	0	0	108	0	0	-108
1355+50.00	0.00	1.71	0.00	0	4	0	0	113	0	0	-113
1356+00.00	0.00	1.31	0.00	0	3	0	0	117	0	0	-117
1356+50.00	0.00	3.38	0.00	0	4	0	0	122	0	0	-122
1356+60.92	0.00	3.29	0.00	0	1	0	0	124	0	0	-124
1356+84.10	0.00	24.05	0.00	0	12	0	0	140	0	0	-140
				0	105	0					

EARTHWORK - GUARDRAIL STH 23 EB AT STH 57 LEFT (STRUCTURE B-59-92) - STAGE 2

STATION	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)				
	CUT	FILL	EBS EXC	CUT	FILL	EBS EXC	CUT	EXPANDED FILL	EBS BACKFILL	REDUCED EBS IN FILL	MASS ORDINATE
							1.00	1.33	1.00	0.70	
				NOTE 1	NOTE 3	NOTE 2	NOTE 1		NOTE 4	NOTE 6	NOTE 8
1352+15.31	0.00	1.32	0.00	0	0	0	0	0	0	0	0
1352+50.00	0.00	2.26	0.00	0	2	0	0	3	0	0	-3
1352+80.98	0.00	3.78	0.00	0	3	0	0	7	0	0	-7
1353+00.00	0.00	4.66	0.00	0	3	0	0	11	0	0	-11
1353+05.98	0.00	5.00	0.00	0	1	0	0	12	0	0	-12
1353+30.98	0.00	6.56	0.00	0	5	0	0	19	0	0	-19
1353+50.00	0.00	6.59	0.00	0	5	0	0	25	0	0	-25
1353+95.31	0.00	6.78	0.00	0	11	0	0	40	0	0	-40
1354+00.00	0.00	5.37	0.00	0	1	0	0	41	0	0	-41
1354+20.31	0.00	3.37	0.00	0	3	0	0	45	0	0	-45
1354+45.31	0.00	3.62	0.00	0	3	0	0	49	0	0	-49
1354+50.00	0.00	3.79	0.00	0	1	0	0	51	0	0	-51
1355+00.00	0.00	4.91	0.00	0	8	0	0	61	0	0	-61
1355+50.00	0.00	4.96	0.00	0	9	0	0	73	0	0	-73
1356+00.00	0.00	4.86	0.00	0	9	0	0	85	0	0	-85
1356+50.00	0.00	7.31	0.00	0	11	0	0	100	0	0	-100
1356+60.92	0.66	42.55	0.00	0	10	0	0	113	0	0	-113
				0	85	0					

EARTHWORK - GUARDRAIL STH 23 WB AT STH 57 LEFT (STRUCTURE B-59-93) - STAGE 2

STATION	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)				
	CUT	FILL	EBS EXC	CUT	FILL	EBS EXC	CUT 1.00 NOTE 1	EXPANDED FILL 1.33	EBS BACKFILL 1.00 NOTE 4	REDUCED EBS IN FILL 0.70 NOTE 6	MASS ORDINATE NOTE 8
				NOTE 1	NOTE 3	NOTE 2					
1359+14.71	9.27	32.52	0.00	0	0	0	0	0	0	0	0
1359+36.11	12.40	3.54	0.00	9	14	0	9	19	0	0	-10
1359+50.00	12.50	2.08	0.00	6	1	0	15	20	0	0	-5
1360+00.00	0.00	1.77	0.00	12	4	0	27	25	0	0	2
1360+50.00	0.00	2.71	0.00	0	4	0	27	31	0	0	-4
1361+00.00	0.00	2.89	0.00	0	5	0	27	37	0	0	-10
1361+50.00	0.00	3.39	0.00	0	6	0	27	45	0	0	-18
1361+51.72	0.00	3.39	0.00	0	0	0	27	45	0	0	-18
1361+76.72	0.00	3.37	0.00	0	3	0	27	49	0	0	-22
1362+00.00	0.00	3.03	0.00	0	3	0	27	53	0	0	-26
1362+01.72	0.00	2.99	0.00	0	0	0	27	53	0	0	-26
1362+30.32	0.01	6.98	0.00	0	5	0	27	60	0	0	-33
1362+50.00	0.00	10.84	0.00	0	6	0	27	68	0	0	-41
1362+55.32	0.00	11.37	0.00	0	2	0	27	70	0	0	-43
1362+80.32	0.00	22.53	0.00	0	16	0	27	92	0	0	-65
1363+00.00	0.00	11.54	0.00	0	12	0	27	108	0	0	-81
1363+21.72	0.01	6.70	0.00	0	7	0	27	117	0	0	-90
1363+50.00	0.00	3.59	0.00	0	5	0	27	124	0	0	-97
1364+00.00	0.00	0.56	0.00	0	4	0	27	129	0	0	-102
1364+00.32	0.00	0.56	0.00	0	0	0	27	129	0	0	-102
				27	97	0					

EARTHWORK - GUARDRAIL STH 23 WB AT STH 57 RIGHT (STRUCTURE B-59-93) - STAGE 2

STATION	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)				
	CUT	FILL	EBS EXC	CUT	FILL	EBS EXC	CUT 1.00 NOTE 1	EXPANDED FILL 1.33	EBS BACKFILL 1.00 NOTE 4	REDUCED EBS IN FILL 0.70 NOTE 6	MASS ORDINATE NOTE 8
				NOTE 1	NOTE 3	NOTE 2					
1359+36.11	7.67	34.04	0.00	0	0	0	0	0	0	0	0
1359+50.00	10.80	0.85	0.00	5	9	0	5	12	0	0	-7
1360+00.00	0.00	4.63	0.00	10	5	0	15	19	0	0	-4
1360+50.00	0.00	6.65	0.00	0	10	0	15	32	0	0	-17
1361+00.00	0.00	6.80	0.00	0	12	0	15	48	0	0	-33
1361+50.00	0.00	5.73	0.00	0	12	0	15	64	0	0	-49
1361+51.72	0.00	5.69	0.00	0	0	0	15	64	0	0	-49
1361+76.72	0.00	7.71	0.00	0	6	0	15	72	0	0	-57
1362+00.00	0.00	14.53	0.00	0	10	0	15	85	0	0	-70
1362+01.72	0.00	15.08	0.00	0	1	0	15	86	0	0	-71
1362+30.32	0.00	7.87	0.00	0	12	0	15	102	0	0	-87
1362+50.00	0.00	4.99	0.00	0	5	0	15	109	0	0	-94
1362+55.32	0.00	4.39	0.00	0	1	0	15	110	0	0	-95
1362+80.32	0.01	1.64	0.00	0	3	0	15	114	0	0	-99
1363+00.00	0.03	0.49	0.00	0	1	0	15	116	0	0	-101
1363+21.72	0.00	0.09	0.00	0	0	0	15	116	0	0	-101
				15	87	0					

EARTHWORK - GUARDRAIL STH 23 EB AT STH 57 RIGHT (STRUCTURE B-59-92) - STAGE 2

STATION	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)				
	CUT	FILL	EBS EXC	CUT	FILL	EBS EXC	CUT	EXPANDED FILL	EBS BACKFILL	REDUCED EBS IN FILL	MASS ORDINATE
							1.00	1.33	1.00	0.70	
				NOTE 1	NOTE 3	NOTE 2	NOTE 1		NOTE 4	NOTE 6	NOTE 8
1359+61.70	10.89	44.82	0.00	0	0	0	0	0	0	0	0
1360+00.00	0.00	4.60	0.00	8	35	0	8	47	0	0	-39
1360+50.00	0.00	3.63	0.00	0	8	0	8	57	0	0	-49
1361+00.00	0.18	2.86	0.00	0	6	0	8	65	0	0	-57
1361+50.00	0.59	2.59	0.00	1	5	0	9	72	0	0	-63
1362+00.00	0.37	2.38	0.00	1	5	0	10	78	0	0	-68
1362+50.00	0.32	2.51	0.00	1	5	0	11	85	0	0	-74
1362+74.19	0.32	2.63	0.00	0	2	0	11	88	0	0	-77
1363+00.00	1.12	2.36	0.00	1	2	0	12	90	0	0	-78
1363+34.19	0.59	4.03	0.00	1	4	0	13	96	0	0	-83
				13	72	0					

EARTHWORK - INTERSECTION STH 23 EB AT SUNSET ROAD RIGHT - STAGE 2

STATION	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)				
	CUT	FILL	EBS EXC	CUT	FILL	EBS EXC	CUT	EXPANDED FILL	EBS BACKFILL	REDUCED EBS IN FILL	MASS ORDINATE
							1.00	1.33	1.00	0.70	
				NOTE 1	NOTE 3	NOTE 2	NOTE 1		NOTE 4	NOTE 6	NOTE 8
1568+54.22	17.53	1.52	0.00	0	0	0	0	0	0	0	0
1569+00.00	17.38	0.40	0.00	30	2	0	30	3	0	0	27
1569+50.00	17.04	0.70	0.00	32	1	0	62	4	0	0	58
1569+52.32	17.01	0.78	0.00	1	0	0	63	4	0	0	59
1570+00.00	17.85	2.45	0.00	31	3	0	94	8	0	0	86
1570+50.00	19.03	1.76	0.00	34	4	0	128	13	0	0	115
1571+00.00	20.96	0.72	0.00	37	2	0	165	16	0	0	149
1571+50.00	21.84	0.63	0.00	40	1	0	205	17	0	0	188
1572+00.00	21.73	0.20	0.00	40	1	0	245	19	0	0	226
1572+50.00	22.90	0.39	0.00	41	1	0	286	20	0	0	266
1573+00.00	31.86	0.00	0.00	51	0	0	337	20	0	0	317
1573+50.00	56.97	3.09	0.00	82	3	0	419	24	0	0	395
1574+00.00	62.96	0.00	0.00	111	3	0	530	28	0	0	502
1574+50.00	28.54	0.01	0.00	85	0	0	615	28	0	0	587
1575+00.00	22.50	0.07	0.00	47	0	0	662	28	0	0	634
1575+39.93	18.92	0.38	0.00	31	0	0	693	28	0	0	665
				693	21	0					

EARTHWORK - INTERSECTION STH 23 WB AT SUNSET ROAD LEFT - STAGE 2

STATION	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)				
	CUT	FILL	EBS EXC	CUT	FILL	EBS EXC	CUT	EXPANDED FILL	EBS BACKFILL	REDUCED EBS IN FILL	MASS ORDINATE
							1.00	1.33	1.00	0.70	
				NOTE 1	NOTE 3	NOTE 2	NOTE 1		NOTE 4	NOTE 6	NOTE 8
1570+66.86	21.09	0.00	0.00	0	0	0	0	0	0	0	0
1571+00.00	20.02	0.00	0.00	25	0	0	25	0	0	0	25
1571+50.00	21.89	5.52	0.00	39	5	0	64	7	0	0	57
1572+00.00	45.01	0.00	0.00	62	5	0	126	13	0	0	113
1572+50.00	33.66	0.00	0.00	73	0	0	199	13	0	0	186
1573+00.00	136.50	0.17	0.00	158	0	0	357	13	0	0	344
1573+50.00	66.10	1.99	0.00	188	2	0	545	16	0	0	529
1574+00.00	22.77	10.92	0.00	82	12	0	627	32	0	0	595
1574+50.00	20.49	17.49	0.00	40	26	0	667	67	0	0	601
1575+00.00	20.77	21.72	0.00	38	36	0	705	114	0	0	591
1575+50.00	21.67	23.69	0.00	39	42	0	744	170	0	0	574
1576+00.00	20.21	24.92	0.00	39	45	0	783	230	0	0	553
1576+50.00	18.42	18.39	0.00	36	40	0	819	283	0	0	536
1577+00.00	18.69	4.10	0.00	34	21	0	853	311	0	0	542
1577+21.12	18.78	1.51	0.00	15	2	0	868	314	0	0	554
1577+50.00	19.18	0.24	0.00	20	1	0	888	315	0	0	573
1577+82.24	20.33	0.00	0.00	24	0	0	912	315	0	0	597
				912	237	0					

EARTHWORK - GUARDRAIL STH 23 EB AT CTH TT RIGHT (STRUCTURE B-59-88) - STAGE 2

STATION	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)				
	CUT	FILL	EBS EXC	CUT	FILL	EBS EXC	CUT	EXPANDED FILL	EBS BACKFILL	REDUCED EBS IN FILL	MASS ORDINATE
							1.00	1.33	1.00	0.70	
				NOTE 1	NOTE 3	NOTE 2	NOTE 1		NOTE 4	NOTE 6	NOTE 8
1608+40.93	11.86	15.96	0.00	0	0	0	0	0	0	0	0
1608+50.00	12.78	9.09	0.00	4	4	0	4	5	0	0	-1
1609+00.00	0.02	3.88	0.00	12	12	0	16	21	0	0	-5
1609+50.00	0.00	3.45	0.00	0	7	0	16	31	0	0	-15
1610+00.00	0.00	3.50	0.00	0	6	0	16	39	0	0	-23
1610+50.00	0.00	3.41	0.00	0	6	0	16	47	0	0	-31
1611+00.00	0.00	2.45	0.00	0	5	0	16	53	0	0	-37
1611+50.00	0.00	3.25	0.00	0	5	0	16	60	0	0	-44
1612+00.00	0.03	3.41	0.00	0	6	0	16	68	0	0	-52
1612+28.02	0.00	3.97	0.00	0	4	0	16	73	0	0	-57
1612+50.00	0.00	4.02	0.00	0	3	0	16	77	0	0	-61
1613+00.00	1.76	1.62	0.00	2	5	0	18	84	0	0	-66
1613+04.02	2.00	1.60	0.00	0	0	0	18	84	0	0	-66
				18	63	0					

EARTHWORK - GUARDRAIL STH 23 WB AT CTH TT LEFT (STRUCTURE B-59-123) - STAGE 2

STATION	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)				
	CUT	FILL	EBS EXC	CUT	FILL	EBS EXC	CUT 1.00 NOTE 1	EXPANDED FILL 1.33	EBS BACKFILL 1.00 NOTE 4	REDUCED EBS IN FILL 0.70 NOTE 6	MASS ORDINATE NOTE 8
				NOTE 1	NOTE 3	NOTE 2					
1608+46.08	9.74	45.14	0.00	0	0	0	0	0	0	0	0
1608+50.00	12.43	24.82	0.00	2	5	0	2	7	0	0	-5
1609+00.00	0.00	7.62	0.00	12	30	0	14	47	0	0	-33
1609+50.00	0.00	5.69	0.00	0	12	0	14	63	0	0	-49
1610+00.00	0.00	5.74	0.00	0	11	0	14	77	0	0	-63
1610+50.00	0.00	5.50	0.00	0	10	0	14	90	0	0	-76
1610+61.91	0.00	5.13	0.00	0	2	0	14	93	0	0	-79
1610+86.91	0.00	4.14	0.00	0	4	0	14	98	0	0	-84
1611+00.00	0.00	3.76	0.00	0	2	0	14	101	0	0	-87
1611+11.91	0.00	3.85	0.00	0	2	0	14	104	0	0	-90
1611+50.00	0.00	6.92	0.00	0	8	0	14	114	0	0	-100
1611+61.70	0.00	9.78	0.00	0	4	0	14	120	0	0	-106
1611+86.70	0.00	11.79	0.00	0	10	0	14	133	0	0	-119
1612+00.00	0.00	16.17	0.00	0	7	0	14	142	0	0	-128
1612+11.70	0.00	20.31	0.00	0	8	0	14	153	0	0	-139
1612+39.48	0.00	12.12	0.00	0	17	0	14	176	0	0	-162
1612+50.00	0.00	9.12	0.00	0	4	0	14	181	0	0	-167
1613+00.00	0.00	0.62	0.00	0	9	0	14	193	0	0	-179
1613+18.76	0.00	0.45	0.00	0	0	0	14	193	0	0	-179
				14	145	0					

EARTHWORK - GUARDRAIL STH 23 WB AT CTH TT RIGHT (STRUCTURE B-59-123) - STAGE 2

STATION	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)				
	CUT	FILL	EBS EXC	CUT	FILL	EBS EXC	CUT 1.00 NOTE 1	EXPANDED FILL 1.33	EBS BACKFILL 1.00 NOTE 4	REDUCED EBS IN FILL 0.70 NOTE 6	MASS ORDINATE NOTE 8
				NOTE 1	NOTE 3	NOTE 2					
1608+46.08	7.82	14.49	0.00	0	0	0	0	0	0	0	0
1608+50.00	8.78	6.37	0.00	1	2	0	1	3	0	0	-2
1609+00.00	0.03	5.34	0.00	8	11	0	9	17	0	0	-8
1609+50.00	0.01	0.52	0.00	0	5	0	9	24	0	0	-15
1610+00.00	0.34	0.50	0.00	0	1	0	9	25	0	0	-16
1610+50.00	0.16	0.60	0.00	0	1	0	9	27	0	0	-18
1610+61.91	0.17	0.56	0.00	0	0	0	9	27	0	0	-18
1610+86.91	0.04	1.24	0.00	0	1	0	9	28	0	0	-19
1611+00.00	0.00	2.97	0.00	0	1	0	9	29	0	0	-20
1611+11.91	0.00	4.34	0.00	0	2	0	9	32	0	0	-23
1611+50.00	0.00	2.10	0.00	0	5	0	9	39	0	0	-30
1611+61.70	0.03	1.22	0.00	0	1	0	9	40	0	0	-31
1611+86.70	0.43	0.22	0.00	0	1	0	9	41	0	0	-32
1612+00.00	0.66	0.03	0.00	0	0	0	9	41	0	0	-32
1612+11.70	0.79	0.00	0.00	0	0	0	9	41	0	0	-32
1612+39.48	0.30	0.00	0.00	1	0	0	10	41	0	0	-31
				10	31	0					

EARTHWORK - GUARDRAIL STH 23 EB AT STH 32 LEFT (STRUCTURE B-59-83) - STAGE 2

STATION	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)				
	CUT	FILL	EBS EXC	CUT	FILL	EBS EXC	CUT	EXPANDED FILL	EBS BACKFILL	REDUCED EBS IN FILL	MASS ORDINATE
							1.00	1.33	1.00	0.70	
				NOTE 1	NOTE 3	NOTE 2	NOTE 1		NOTE 4	NOTE 6	NOTE 8
1676+62.93	0.00	1.83	0.00	0	0	0	0	0	0	0	0
1677+00.00	0.00	3.96	0.00	0	4	0	0	5	0	0	-5
1677+50.00	0.00	7.90	0.00	0	11	0	0	20	0	0	-20
1677+82.93	0.00	12.78	0.00	0	13	0	0	37	0	0	-37
1678+00.00	0.00	8.94	0.00	0	7	0	0	47	0	0	-47
1678+07.93	0.00	7.23	0.00	0	2	0	0	49	0	0	-49
1678+32.93	0.00	4.54	0.00	0	5	0	0	56	0	0	-56
1678+50.00	0.00	4.29	0.00	0	3	0	0	60	0	0	-60
1679+00.00	0.00	3.17	0.00	0	7	0	0	69	0	0	-69
1679+50.00	0.00	3.33	0.00	0	6	0	0	77	0	0	-77
1680+00.00	0.00	2.67	0.00	0	6	0	0	85	0	0	-85
1680+50.00	0.00	2.66	0.00	0	5	0	0	92	0	0	-92
1681+00.00	0.00	2.40	0.00	0	5	0	0	98	0	0	-98
1681+50.00	0.15	0.12	0.00	0	2	0	0	101	0	0	-101
1681+61.18	0.00	18.64	0.00	0	4	0	0	106	0	0	-106
				0	80	0					

NOTES:

(1) CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
(2) EXCAVATION BELOW SUBGRADE FOR SOIL MITIGATION AREA ONLY
(3) FILL DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
(4) SOIL MITIGATION AREA WILL BE BACKFILLED WITH SELECT CRUSHED MATERIAL
(6) REDUCED MARSH EXCAVATION THAT CAN BE USED IN FILL
(8) MASS ORDINATE IS CUT - (FILL * FILL FACTOR) + (EBS * FILL FACTOR)

EARTHWORK - GUARDRAIL STH 23 EB AT STH 32 RIGHT (STRUCTURE B-59-83) - STAGE 2

STATION	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)				
	CUT	FILL	EBS EXC	CUT	FILL	EBS EXC	CUT	EXPANDED FILL	EBS BACKFILL	REDUCED EBS IN FILL	MASS ORDINATE
							1.00	1.33	1.00	0.70	
				NOTE 1	NOTE 3	NOTE 2	NOTE 1		NOTE 4	NOTE 6	NOTE 8
1673+50.57	0.00	2.16	0.00	0	0	0	0	0	0	0	0
1674+00.00	0.00	7.91	0.00	0	9	0	0	12	0	0	-12
1674+50.00	0.00	42.21	0.00	0	46	0	0	73	0	0	-73
1674+70.57	0.00	60.72	0.00	0	39	0	0	125	0	0	-125
1674+95.57	0.00	50.76	0.00	0	52	0	0	194	0	0	-194
1675+00.00	0.00	49.96	0.00	0	8	0	0	205	0	0	-205
1675+20.57	0.00	41.18	0.00	0	35	0	0	251	0	0	-251
1675+50.00	0.00	6.73	0.00	0	26	0	0	286	0	0	-286
1676+00.00	0.00	6.20	0.00	0	12	0	0	302	0	0	-302
1676+50.00	0.00	5.44	0.00	0	11	0	0	317	0	0	-317
1676+62.93	0.00	4.42	0.00	0	2	0	0	319	0	0	-319
1677+00.00	0.00	4.76	0.00	0	6	0	0	327	0	0	-327
1677+50.00	0.00	4.36	0.00	0	8	0	0	338	0	0	-338
1677+82.93	0.00	4.42	0.00	0	5	0	0	344	0	0	-344
1678+00.00	0.00	4.41	0.00	0	3	0	0	348	0	0	-348
1678+07.93	0.00	4.30	0.00	0	1	0	0	350	0	0	-350
1678+32.93	0.02	4.20	0.00	0	4	0	0	355	0	0	-355
1678+50.00	0.02	4.15	0.00	0	3	0	0	359	0	0	-359
1679+00.00	0.00	3.76	0.00	0	7	0	0	368	0	0	-368
1679+50.00	0.00	3.20	0.00	0	6	0	0	376	0	0	-376
1680+00.00	0.00	3.26	0.00	0	6	0	0	384	0	0	-384
1680+50.00	0.00	2.93	0.00	0	6	0	0	392	0	0	-392
1681+00.00	0.00	1.98	0.00	0	5	0	0	399	0	0	-399
1681+50.00	13.55	6.37	0.00	13	8	0	13	410	0	0	-397
1681+61.18	11.60	27.67	0.00	5	7	0	18	419	0	0	-401
				18	315	0					

NOTES:

(1) CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL

(2) EXCAVATION BELOW SUBGRADE FOR SOIL MITIGATION AREA ONLY

(3) FILL DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME

(4) SOIL MITIGATION AREA WILL BE BACKFILLED WITH SELECT CRUSHED MATERIAL

(6) REDUCED MARSH EXCAVATION THAT CAN BE USED IN FILL

(8) MASS ORDINATE IS CUT - (FILL * FILL FACTOR) + (EBS * FILL FACTOR)

EARTHWORK - GUARDRAIL STH 67 RAMP TO STH 32 EB RIGHT (STRUCTURE B-59-91) - STAGE 2

STATION	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)				
	CUT	FILL	EBS EXC	CUT NOTE 1	FILL NOTE 3	EBS EXC NOTE 2	CUT 1.00 NOTE 1	EXPANDED FILL 1.33	EBS BACKFILL 1.00 NOTE 4	REDUCED EBS IN FILL 0.70 NOTE 6	MASS ORDINATE NOTE 8
1242+23.53	11.55	0.08	0.00	0	0	0	0	0	0	0	0
1242+50.00	10.92	0.41	0.00	11	0	0	11	0	0	0	11
1243+00.00	5.95	0.41	0.00	16	1	0	27	1	0	0	26
1243+43.54	1.34	6.14	0.00	6	5	0	33	8	0	0	25
1243+50.00	1.24	7.37	0.00	0	2	0	33	11	0	0	22
1243+68.53	1.17	7.16	0.00	1	5	0	34	17	0	0	17
1243+93.53	1.12	11.13	0.00	1	8	0	35	28	0	0	7
1244+00.00	1.12	9.96	0.00	0	3	0	35	32	0	0	3
1244+50.00	5.49	4.90	0.00	6	14	0	41	51	0	0	-10
1245+00.00	0.12	15.65	0.00	5	19	0	46	76	0	0	-30
1245+50.00	0.00	12.42	0.00	0	26	0	46	110	0	0	-64
1246+00.00	0.00	8.90	0.00	0	20	0	46	137	0	0	-91
1246+50.00	0.00	13.87	0.00	0	21	0	46	165	0	0	-119
1247+00.00	0.00	14.83	0.00	0	27	0	46	201	0	0	-155
1247+50.00	0.00	10.68	0.00	0	24	0	46	233	0	0	-187
1248+00.00	0.00	5.92	0.00	0	15	0	46	253	0	0	-207
1248+39.97	0.21	1.99	0.00	0	6	0	46	261	0	0	-215
				46	196	0					

NOTES:

(1) CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
(2) EXCAVATION BELOW SUBGRADE FOR SOIL MITIGATION AREA ONLY
(3) FILL DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
(4) SOIL MITIGATION AREA WILL BE BACKFILLED WITH SELECT CRUSHED MATERIAL
(6) REDUCED MARSH EXCAVATION THAT CAN BE USED IN FILL
(8) MASS ORDINATE IS CUT - (FILL * FILL FACTOR) + (EBS * FILL FACTOR)

EARTHWORK - INTERSECTION SUNSET ROAD AT STH 23 - STAGE 2

STATION	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)				
	CUT	FILL	EBS EXC	CUT	FILL	EBS EXC	CUT	EXPANDED FILL	EBS BACKFILL	REDUCED EBS IN FILL	MASS ORDINATE
							1.00	1.33	1.00	0.70	
				NOTE 1	NOTE 3	NOTE 2	NOTE 1		NOTE 4	NOTE 6	NOTE 8
17+40.00	23.89	0.00	0.00	0	0	0	0	0	0	0	0
17+50.00	50.18	0.13	0.00	14	0	0	14	0	0	0	14
17+69.00	45.75	7.22	0.00	34	3	0	48	4	0	0	44
18+00.00	61.78	0.02	0.00	62	4	0	110	9	0	0	101
INTERSECTION WITH STH 23											
20+50.00	74.06	9.17	0.00	0	0	0	110	9	0	0	101
21+00.00	120.80	0.00	0.00	180	8	0	290	20	0	0	270
21+28.00	70.77	36.01	0.00	99	19	0	389	45	0	0	344
21+50.00	60.92	2.15	0.00	54	16	0	443	67	0	0	377
21+96.36	48.91	0.00	0.00	94	2	0	537	69	0	0	468
				537	52	0					

EARTHWORK - INTERSECTION STH 23 AT SUNSET ROAD MEDIAN - STAGE 3

STATION	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)				
	CUT	FILL	EBS EXC	CUT	FILL	EBS EXC	CUT	EXPANDED FILL	EBS BACKFILL	REDUCED EBS IN FILL	MASS ORDINATE
							1.00	1.33	1.00	0.70	
				NOTE 1	NOTE 3	NOTE 2	NOTE 1		NOTE 4	NOTE 6	NOTE 8
1569+52.32	21.51	0.30	0.00	0	0	0	0	0	0	0	0
1570+00.00	21.95	0.43	0.00	38	1	0	38	1	0	0	37
1570+50.00	23.87	0.87	0.00	42	1	0	80	3	0	0	77
1571+00.00	24.08	6.49	0.00	44	7	0	124	12	0	0	112
1571+50.00	25.84	4.08	0.00	46	10	0	170	25	0	0	145
1572+00.00	31.02	1.70	0.00	53	5	0	223	32	0	0	191
1572+50.00	51.96	0.00	0.00	77	2	0	300	35	0	0	265
1573+00.00	99.12	0.00	0.00	140	0	0	440	35	0	0	405
1573+50.00	100.78	0.00	0.00	185	0	0	625	35	0	0	590
1574+00.00	81.40	0.00	0.00	169	0	0	794	35	0	0	759
1574+50.00	45.07	0.00	0.00	117	0	0	911	35	0	0	876
1575+00.00	41.84	0.00	0.00	80	0	0	991	35	0	0	956
1575+39.93	37.61	0.00	0.00	59	0	0	1050	35	0	0	1015
1575+50.00	36.25	0.00	0.00	14	0	0	1064	35	0	0	1029
1576+00.00	22.53	0.53	0.00	54	0	0	1118	35	0	0	1083
1576+50.00	16.99	4.51	0.00	37	5	0	1155	41	0	0	1114
1577+00.00	15.70	5.49	0.00	30	9	0	1185	53	0	0	1132
1577+17.75	15.73	5.56	0.00	10	4	0	1195	59	0	0	1136
				1195	44	0					

PROJECT NUMBER: 1440-41-71	HWY: STH 23	COUNTY: SHEBOYGAN	COMPUTER EARTHWORK DATA	SHEET NO: 502	E

EARTHWORK - STH 23 EB WEST U-TURN - STAGE 2

STATION	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)				
	CUT	FILL	EBS EXC	CUT	FILL	EBS EXC	CUT	EXPANDED FILL	EBS BACKFILL	REDUCED EBS IN FILL	MASS ORDINATE
							1.00	1.33	1.00	0.70	
				NOTE 1	NOTE 3	NOTE 2	NOTE 1		NOTE 4	NOTE 6	NOTE 8
1578+90.40	5.41	0.01	0.00	0	0	0	0	0	0	0	0
1579+00.00	9.08	0.00	0.00	3	0	0	3	0	0	0	3
1579+50.00	9.54	0.00	0.00	17	0	0	20	0	0	0	20
1579+67.63	46.16	19.18	0.00	18	6	0	38	8	0	0	30
1580+00.00	56.39	179.31	0.00	61	119	0	99	166	0	0	-67
1580+50.00	38.64	276.85	0.00	88	422	0	187	728	0	0	-541
1581+00.00	36.47	239.34	0.00	70	478	0	257	1363	0	0	-1106
1581+37.09	40.51	157.32	0.00	53	272	0	310	1725	0	0	-1415
1581+50.00	38.57	129.60	0.00	19	69	0	329	1817	0	0	-1488
1581+54.26	37.65	120.45	0.00	6	20	0	335	1843	0	0	-1508
1582+00.00	27.09	37.73	0.00	55	134	0	390	2022	0	0	-1632
1582+50.00	35.53	20.92	0.00	58	54	0	448	2093	0	0	-1645
1582+77.62	34.70	17.04	0.00	36	19	0	484	2119	0	0	-1635
				484	1593	0					

NOTES:

(1) CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL

(2) EXCAVATION BELOW SUBGRADE FOR SOIL MITIGATION AREA ONLY

(3) FILL DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME

(4) SOIL MITIGATION AREA WILL BE BACKFILLED WITH SELECT CRUSHED MATERIAL

(6) REDUCED MARSH EXCAVATION THAT CAN BE USED IN FILL

(8) MASS ORDINATE IS CUT - (FILL * FILL FACTOR) + (EBS * FILL FACTOR)

EARTHWORK - INTERSECTION STH 23 EB AT CTH TT - STAGE 2

STATION	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)				
	CUT	FILL	EBS EXC	CUT	FILL	EBS EXC	CUT	EXPANDED FILL	EBS BACKFILL	REDUCED EBS IN FILL	MASS ORDINATE
							1.00	1.33	1.00	0.70	
				NOTE 1	NOTE 3	NOTE 2	NOTE 1		NOTE 4	NOTE 6	NOTE 8
1591+33.50	27.99	6.88	0.00	0	0	0	0	0	0	0	0
1591+50.00	27.80	7.91	0.00	17	5	0	17	7	0	0	10
1592+00.00	27.45	8.12	0.00	51	15	0	68	27	0	0	41
1592+50.00	27.91	2.87	0.00	51	10	0	119	40	0	0	79
1593+00.00	28.03	3.94	0.00	52	6	0	171	48	0	0	123
1593+50.00	28.62	0.98	0.00	52	5	0	223	55	0	0	168
1594+00.00	31.81	8.03	0.00	56	8	0	279	65	0	0	214
1594+50.00	36.09	16.96	0.00	63	23	0	342	96	0	0	246
1595+00.00	37.29	14.53	0.00	68	29	0	410	134	0	0	276
1595+50.00	67.27	14.06	0.00	97	26	0	507	169	0	0	338
1596+00.00	101.92	13.05	0.00	157	25	0	664	202	0	0	462
1596+50.00	158.75	12.45	0.00	241	24	0	905	234	0	0	671
1597+00.00	124.69	43.27	0.00	262	52	0	1167	303	0	0	864
1597+50.00	118.85	41.67	0.00	226	79	0	1393	408	0	0	985
1598+00.00	148.97	12.17	0.00	248	50	0	1641	475	0	0	1166
1598+50.00	256.66	7.56	0.00	376	18	0	2017	499	0	0	1518
1599+00.00	95.31	12.75	0.00	326	19	0	2343	524	0	0	1819
1599+50.00	259.28	1.87	0.00	328	14	0	2671	543	0	0	2128
1600+00.00	296.14	0.02	0.00	514	2	0	3185	545	0	0	2640
1600+50.00	308.35	6.52	0.00	560	6	0	3745	553	0	0	3192
1601+00.00	462.82	0.01	0.00	714	6	0	4459	561	0	0	3898
1601+50.00	492.29	27.74	0.00	884	26	0	5343	596	0	0	4747
1602+00.00	248.82	0.08	0.00	686	26	0	6029	630	0	0	5399
1602+50.00	278.53	0.00	0.00	488	0	0	6517	630	0	0	5887
1602+88.08	109.94	0.00	0.00	274	0	0	6791	630	0	0	6161
1603+00.00	89.11	0.01	0.00	44	0	0	6835	630	0	0	6205
1603+13.08	76.50	0.46	0.00	40	0	0	6875	630	0	0	6245
1603+25.26	63.00	0.43	0.00	31	0	0	6906	630	0	0	6276
1603+38.08	53.40	7.83	0.00	28	2	0	6934	633	0	0	6301
1603+50.00	47.85	8.86	0.00	22	4	0	6956	638	0	0	6318
1603+50.26	47.78	8.98	0.00	0	0	0	6956	638	0	0	6318
1603+75.26	0.09	1.03	0.00	22	5	0	6978	645	0	0	6333
1604+00.00	0.06	1.37	0.00	0	1	0	6978	646	0	0	6332
1604+50.00	0.00	2.54	0.00	0	4	0	6978	652	0	0	6326
1605+00.00	0.00	2.66	0.00	0	5	0	6978	658	0	0	6320
1605+50.00	0.00	5.00	0.00	0	7	0	6978	668	0	0	6310
1606+00.00	0.00	14.58	0.00	0	18	0	6978	692	0	0	6286
1606+28.70	0.64	14.29	0.00	0	15	0	6978	712	0	0	6266
				6978	535	0					

NOTES:

(1) CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL

(2) EXCAVATION BELOW SUBGRADE FOR SOIL MITIGATION AREA ONLY

(3) FILL DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME

(4) SOIL MITIGATION AREA WILL BE BACKFILLED WITH SELECT CRUSHED MATERIAL

(6) REDUCED MARSH EXCAVATION THAT CAN BE USED IN FILL

(8) MASS ORDINATE IS CUT - (FILL * FILL FACTOR) + (EBS * FILL FACTOR)

EARTHWORK - INTERSECTION STH 23 WB AT CTH TT - STAGE 2

STATION	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)				
	CUT	FILL	EBS EXC	CUT	FILL	EBS EXC	CUT	EXPANDED FILL	EBS BACKFILL	REDUCED EBS IN FILL	MASS ORDINATE
							1.00	1.33	1.00	0.70	
				NOTE 1	NOTE 3	NOTE 2	NOTE 1		NOTE 4	NOTE 6	NOTE 8
1598+08.95	29.79	0.00	0.00	0	0	0	0	0	0	0	0
1598+50.00	28.72	0.00	0.00	44	0	0	44	0	0	0	44
1599+00.00	34.91	3.50	0.00	59	3	0	103	4	0	0	99
1599+50.00	45.37	174.84	0.00	74	165	0	177	223	0	0	-46
1600+00.00	39.79	114.39	0.00	79	268	0	256	580	0	0	-324
1600+50.00	183.05	33.28	0.00	206	137	0	462	762	0	0	-300
1601+00.00	279.18	23.17	0.00	428	52	0	890	831	0	0	59
1601+50.00	648.26	0.00	0.00	859	21	0	1749	859	0	0	890
1602+00.00	215.42	0.00	0.00	800	0	0	2549	859	0	0	1690
1602+50.00	49.29	21.38	0.00	245	20	0	2794	886	0	0	1908
1603+00.00	45.34	48.02	0.00	88	64	0	2882	971	0	0	1911
1603+50.00	42.52	88.55	0.00	81	126	0	2963	1138	0	0	1825
1604+00.00	41.03	138.70	0.00	77	210	0	3040	1418	0	0	1622
1604+50.00	38.41	130.82	0.00	74	250	0	3114	1750	0	0	1364
1605+00.00	36.39	81.22	0.00	69	196	0	3183	2011	0	0	1172
1605+50.00	31.94	2.70	0.00	63	78	0	3246	2115	0	0	1131
1606+00.00	28.84	0.00	0.00	56	3	0	3302	2119	0	0	1183
1606+26.77	25.60	1.25	0.00	27	1	0	3329	2120	0	0	1209
				3329	1594	0					

EARTHWORK - STH 23 EB EAST U-TURN - STAGE 2

STATION	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)				
	CUT	FILL	EBS EXC	CUT	FILL	EBS EXC	CUT	EXPANDED FILL	EBS BACKFILL	REDUCED EBS IN FILL	MASS ORDINATE
							1.00	1.33	1.00	0.70	
				NOTE 1	NOTE 3	NOTE 2	NOTE 1		NOTE 4	NOTE 6	NOTE 8
1618+50.00	30.26	0.00	0.00	0	0	0	0	0	0	0	0
1619+00.00	31.39	0.00	0.00	57	0	0	57	0	0	0	57
1619+50.00	46.63	52.98	0.00	72	49	0	129	65	0	0	64
1620+00.00	50.30	126.99	44.97	90	167	42	219	287	42	29	-39
1620+50.00	46.23	255.66	91.45	89	354	126	308	758	168	118	-333
1621+00.00	45.62	265.31	104.71	85	482	182	393	1399	350	245	-761
1621+50.00	32.48	0.06	0.00	72	246	97	465	1726	447	313	-948
				465	1298	447					

NOTES:

(1) CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
(2) EXCAVATION BELOW SUBGRADE FOR SOIL MITIGATION AREA ONLY
(3) FILL DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
(4) SOIL MITIGATION AREA WILL BE BACKFILLED WITH SELECT CRUSHED MATERIAL
(6) REDUCED MARSH EXCAVATION THAT CAN BE USED IN FILL
(8) MASS ORDINATE IS CUT - (FILL * FILL FACTOR) + (EBS * FILL FACTOR)

EARTHWORK - INTERSECTION CTH TT AT STH 23 - STAGE 2

STATION	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)				
	CUT	FILL	EBS EXC	CUT	FILL	EBS EXC	CUT	EXPANDED FILL	EBS BACKFILL	REDUCED EBS IN FILL	MASS ORDINATE
							1.00	1.33	1.00	0.70	
				NOTE 1	NOTE 3	NOTE 2	NOTE 1		NOTE 4	NOTE 6	NOTE 8
42+25.98	84.03	0.00	0.00	0	0	0	0	0	0	0	0
42+50.00	90.42	0.15	0.00	78	0	0	78	0	0	0	78
43+00.00	98.57	0.52	0.00	175	1	0	253	1	0	0	252
43+50.00	76.73	11.40	0.00	162	11	0	415	16	0	0	399
44+00.00	84.35	8.50	0.00	149	18	0	564	40	0	0	524
44+50.00	133.31	2.61	0.00	202	10	0	766	53	0	0	713
45+00.00	269.99	28.20	0.00	373	29	0	1139	92	0	0	1047
45+50.00	521.84	38.15	0.00	733	61	0	1872	173	0	0	1699
46+00.00	812.90	0.01	0.00	1236	35	0	3108	219	0	0	2889
46+50.00	853.30	0.00	0.00	1543	0	0	4651	219	0	0	4432
47+00.00	933.18	0.00	0.00	1654	0	0	6305	219	0	0	6086
47+50.00	1085.76	0.00	0.00	1869	0	0	8174	219	0	0	7955
48+00.00	1120.51	0.00	0.00	2043	0	0	10217	219	0	0	9998
48+50.00	1027.31	0.00	0.00	1989	0	0	12206	219	0	0	11987
49+00.00	1045.08	0.02	0.00	1919	0	0	14125	219	0	0	13906
49+50.00	1952.44	0.01	0.00	2775	0	0	16900	219	0	0	16681
50+00.00	1559.09	0.00	0.00	3251	0	0	20151	219	0	0	19932
50+02.48	1477.42	0.00	0.00	139	0	0	20290	219	0	0	20071
INTERSECTION WITH STH 23											
52+50.00	283.41	286.67	25.67	0	0	0	20290	219	0	0	20071
52+75.00	482.84	348.75	97.51	355	294	57	20645	610	57	40	20074
53+00.00	0.00	380.24	80.19	224	337	82	20869	1059	139	97	19908
53+50.00	365.92	433.23	121.23	339	753	187	21208	2060	326	228	19376
54+00.00	529.12	181.43	187.33	829	569	286	22037	2817	612	428	19648
54+19.00	568.56	149.45	300.36	386	116	172	22423	2971	784	549	20001
54+50.00	531.78	413.63	24.36	632	323	186	23055	3401	970	679	20333
55+00.00	1079.67	973.04	63.52	1492	1284	81	24547	5109	1051	736	20174
55+40.00	1108.23	1058.09	98.99	1621	1505	120	26168	7110	1171	820	19878
55+50.00	1044.27	970.71	111.14	399	376	39	26567	7610	1210	847	19804
56+00.00	747.45	615.33	121.67	1659	1469	216	28226	9564	1426	998	19660
56+50.00	438.21	304.07	104.27	1098	851	209	29324	10696	1635	1145	19773
57+00.00	168.10	70.90	0.00	561	347	97	29885	11157	1732	1212	19940
57+50.00	87.88	17.67	0.00	237	82	0	30122	11266	1732	1212	20068
58+00.00	85.89	18.86	0.00	161	34	0	30283	11312	1732	1212	20184
58+50.00	88.34	11.32	0.00	161	28	0	30444	11349	1732	1212	20308
58+99.96	82.66	0.00	0.00	158	10	0	30602	11362	1732	1212	20452
				30602	8543	1732					

NOTES:

(1) CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL

(2) EXCAVATION BELOW SUBGRADE FOR SOIL MITIGATION AREA ONLY

(3) FILL DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME

(4) SOIL MITIGATION AREA WILL BE BACKFILLED WITH SELECT CRUSHED MATERIAL

(6) REDUCED MARSH EXCAVATION THAT CAN BE USED IN FILL

(8) MASS ORDINATE IS CUT - (FILL * FILL FACTOR) + (EBS * FILL FACTOR)

EARTHWORK - STH 23 EB WEST U-TURN MEDIAN - STAGE 3

STATION	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)				
	CUT	FILL	EBS EXC	CUT	FILL	EBS EXC	CUT	EXPANDED FILL	EBS BACKFILL	REDUCED EBS IN FILL	MASS ORDINATE
							1.00	1.33	1.00	0.70	
				NOTE 1	NOTE 3	NOTE 2	NOTE 1		NOTE 4	NOTE 6	NOTE 8
1579+00.40	0.00	0.00	0.00	0	0	0	0	0	0	0	0
1579+50.00	0.86	0.17	0.00	1	0	0	1	0	0	0	1
1579+67.63	32.17	19.83	0.00	11	7	0	12	9	0	0	3
1580+00.00	62.75	6.65	0.00	57	16	0	69	31	0	0	38
1580+50.00	54.00	72.59	0.00	108	73	0	177	128	0	0	49
1581+00.00	46.94	3.14	0.00	93	70	0	270	221	0	0	49
1581+37.09	45.89	3.78	0.00	64	5	0	334	227	0	0	107
1581+50.00	45.57	3.96	0.00	22	2	0	356	230	0	0	126
1581+54.26	45.50	4.00	0.00	7	1	0	363	231	0	0	132
1582+00.00	43.04	7.67	0.00	75	10	0	438	245	0	0	193
1582+50.00	42.13	10.26	0.00	79	17	0	517	267	0	0	250
1582+77.62	41.28	11.29	0.00	43	11	0	560	282	0	0	278
1583+00.00	40.52	11.87	0.00	34	10	0	594	295	0	0	299
1583+50.00	41.09	11.67	0.00	76	22	0	670	325	0	0	345
1584+00.00	37.48	7.86	0.00	73	18	0	743	348	0	0	395
1584+50.00	38.34	9.46	0.00	70	16	0	813	370	0	0	443
1585+00.00	39.00	10.09	0.00	72	18	0	885	394	0	0	491
1585+50.00	39.11	8.25	0.00	72	17	0	957	416	0	0	541
1586+00.00	39.44	5.57	0.00	73	13	0	1030	434	0	0	596
1586+50.00	40.27	3.82	0.00	74	9	0	1104	446	0	0	658
1587+00.00	38.22	0.95	0.00	73	4	0	1177	451	0	0	726
1587+50.00	30.30	1.38	0.00	63	2	0	1240	454	0	0	786
1587+99.52	25.93	3.92	0.00	52	5	0	1292	460	0	0	832
				1292	346	0					

NOTES:

(1) CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
(2) EXCAVATION BELOW SUBGRADE FOR SOIL MITIGATION AREA ONLY
(3) FILL DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
(4) SOIL MITIGATION AREA WILL BE BACKFILLED WITH SELECT CRUSHED MATERIAL
(6) REDUCED MARSH EXCAVATION THAT CAN BE USED IN FILL
(8) MASS ORDINATE IS CUT - (FILL * FILL FACTOR) + (EBS * FILL FACTOR)

EARTHWORK - INTERSECTION STH 23 AT CTH TT MEDIAN - STAGE 3

STATION	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)				
	CUT	FILL	EBS EXC	CUT	FILL	EBS EXC	CUT	EXPANDED FILL	EBS BACKFILL	REDUCED EBS IN FILL	MASS ORDINATE
							1.00	1.33	1.00	0.70	
				NOTE 1	NOTE 3	NOTE 2	NOTE 1		NOTE 4	NOTE 6	NOTE 8
1593+32.43	6.84	0.00	0.00	0	0	0	0	0	0	0	0
1593+50.00	20.13	0.00	0.00	9	0	0	9	0	0	0	9
1594+00.00	23.78	0.00	0.00	41	0	0	50	0	0	0	50
1594+50.00	28.52	0.29	0.00	48	0	0	98	0	0	0	98
1595+00.00	31.40	2.58	0.00	55	3	0	153	4	0	0	149
1595+50.00	31.46	2.83	0.00	58	5	0	211	11	0	0	200
1596+00.00	31.63	3.49	0.00	58	6	0	269	19	0	0	250
1596+50.00	33.06	5.42	0.00	60	8	0	329	29	0	0	300
1597+00.00	36.55	8.62	0.00	64	13	0	393	47	0	0	346
1597+50.00	38.66	10.62	0.00	70	18	0	463	70	0	0	393
1598+00.00	39.04	11.99	0.00	72	21	0	535	98	0	0	437
1598+50.00	54.71	12.47	0.00	87	23	0	622	129	0	0	493
1599+00.00	46.57	22.88	0.00	94	33	0	716	173	0	0	543
1599+50.00	51.37	17.42	0.00	91	37	0	807	222	0	0	585
1600+00.00	63.97	35.61	0.00	107	49	0	914	287	0	0	627
1600+50.00	54.74	6.28	0.00	110	39	0	1024	339	0	0	685
1601+00.00	106.78	0.00	0.00	150	6	0	1174	347	0	0	827
1601+50.00	145.88	0.00	0.00	234	0	0	1408	347	0	0	1061
1602+00.00	144.81	0.00	0.00	269	0	0	1677	347	0	0	1330
1602+50.00	131.89	0.00	0.00	256	0	0	1933	347	0	0	1586
1602+88.08	86.01	1.83	0.00	154	1	0	2087	348	0	0	1739
1603+00.00	84.54	2.13	0.00	38	1	0	2125	350	0	0	1775
1603+13.08	82.69	2.23	0.00	41	1	0	2166	351	0	0	1815
1603+25.26	82.02	2.13	0.00	37	1	0	2203	352	0	0	1851
1603+38.08	80.20	1.24	0.00	39	1	0	2242	354	0	0	1888
1603+50.00	79.60	1.60	0.00	35	1	0	2277	355	0	0	1922
1603+50.26	79.60	1.61	0.00	1	0	0	2278	355	0	0	1923
1603+75.26	40.15	3.20	0.00	55	2	0	2333	358	0	0	1975
1604+00.00	38.02	4.53	0.00	36	4	0	2369	363	0	0	2006
1604+50.00	35.11	6.63	0.00	68	10	0	2437	376	0	0	2061
1605+00.00	31.10	4.36	0.00	61	10	0	2498	390	0	0	2108
1605+50.00	29.75	1.24	0.00	56	5	0	2554	396	0	0	2158
1606+00.00	28.12	1.54	0.00	54	3	0	2608	400	0	0	2208
1606+28.70	0.60	7.33	0.00	15	5	0	2623	407	0	0	2216
				2623	306	0					

NOTES:

(1) CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL

(2) EXCAVATION BELOW SUBGRADE FOR SOIL MITIGATION AREA ONLY

(3) FILL DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME

(4) SOIL MITIGATION AREA WILL BE BACKFILLED WITH SELECT CRUSHED MATERIAL

(6) REDUCED MARSH EXCAVATION THAT CAN BE USED IN FILL

(8) MASS ORDINATE IS CUT - (FILL * FILL FACTOR) + (EBS * FILL FACTOR)

EARTHWORK - STH 23 EB EAST U-TURN MEDIAN - STAGE 3

STATION	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)				
	CUT	FILL	EBS EXC	CUT NOTE 1	FILL NOTE 3	EBS EXC NOTE 2	CUT 1.00 NOTE 1	EXPANDED FILL 1.33	EBS BACKFILL 1.00 NOTE 4	REDUCED EBS IN FILL 0.70 NOTE 6	MASS ORDINATE NOTE 8
1613+13.90	38.77	6.75	0.00	0	0	0	0	0	0	0	0
1613+50.00	34.01	6.47	0.00	49	9	0	49	12	0	0	37
1614+00.00	30.29	9.04	0.00	60	14	0	109	31	0	0	78
1614+50.00	31.94	11.69	0.00	58	19	0	167	56	0	0	111
1615+00.00	32.83	11.24	0.00	60	21	0	227	84	0	0	143
1615+50.00	34.39	6.73	0.00	62	17	0	289	106	0	0	183
1616+00.00	35.75	3.47	0.00	65	9	0	354	118	0	0	236
1616+50.00	36.90	0.17	0.00	67	3	0	421	122	0	0	299
1617+00.00	38.76	0.00	0.00	70	0	0	491	122	0	0	369
1617+50.00	40.99	0.00	0.00	74	0	0	565	122	0	0	443
1618+00.00	38.02	0.00	0.00	73	0	0	638	122	0	0	516
1618+50.00	39.31	0.00	0.00	72	0	0	710	122	0	0	588
1619+00.00	35.66	0.69	0.00	69	1	0	779	124	0	0	655
1619+50.00	34.24	1.55	0.00	65	2	0	844	126	0	0	718
1620+00.00	36.31	4.22	0.00	65	5	0	909	133	0	0	776
1620+50.00	46.31	54.82	0.00	77	55	0	986	206	0	0	780
1621+00.00	51.84	52.97	0.00	91	100	0	1077	339	0	0	738
1621+50.00	37.06	19.56	0.00	82	67	0	1159	428	0	0	731
				1159	322	0					

NOTES:

(1) CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL

(2) EXCAVATION BELOW SUBGRADE FOR SOIL MITIGATION AREA ONLY

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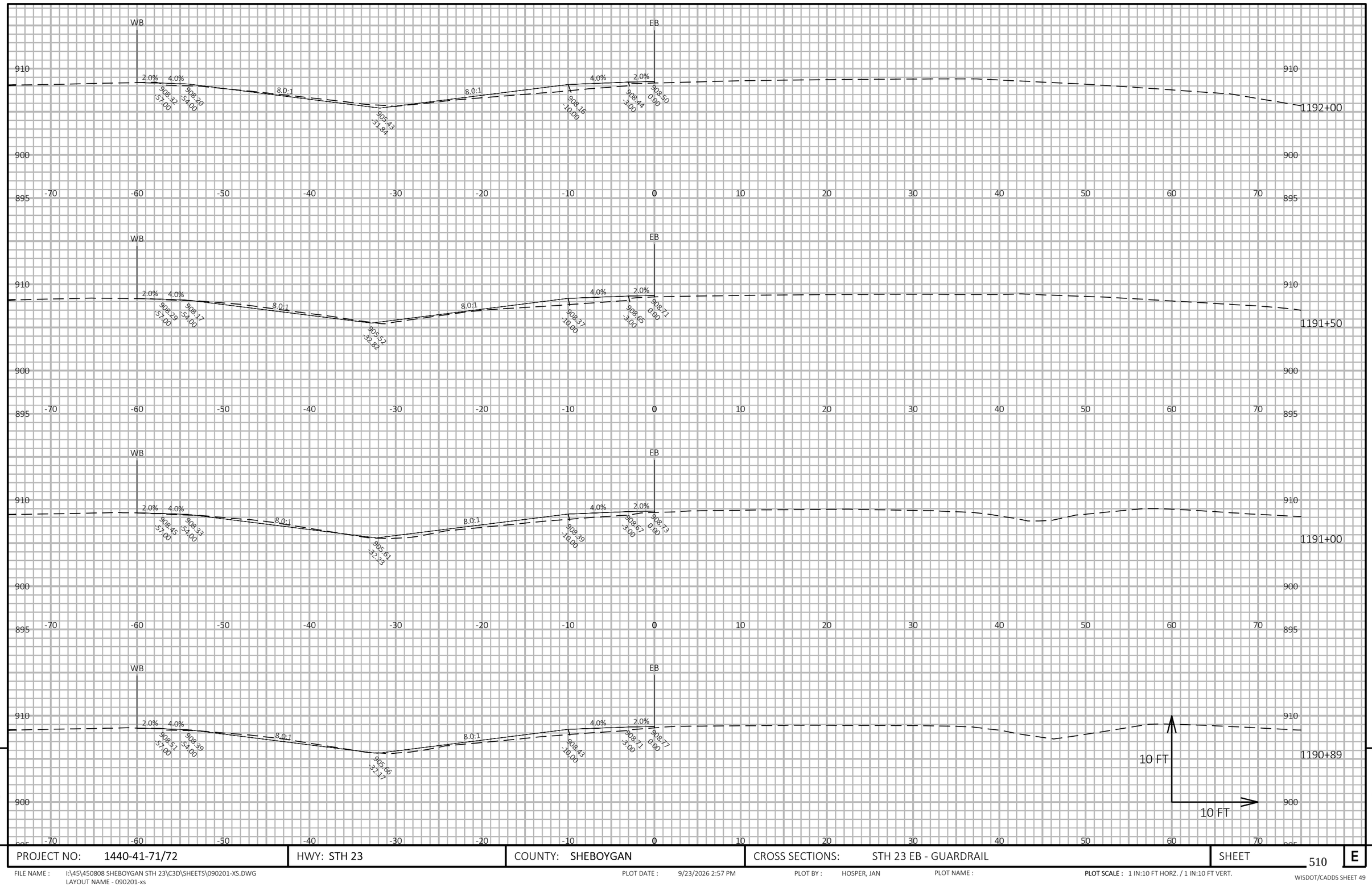
(6) REDUCED MARSH EXCAVATION THAT CAN BE USED IN FILL

(8) MASS ORDINATE IS CUT - (FILL * FILL FACTOR) + (EBS * FILL FACTOR)



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PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 EB - GUARDRAIL	SHEET 510	E

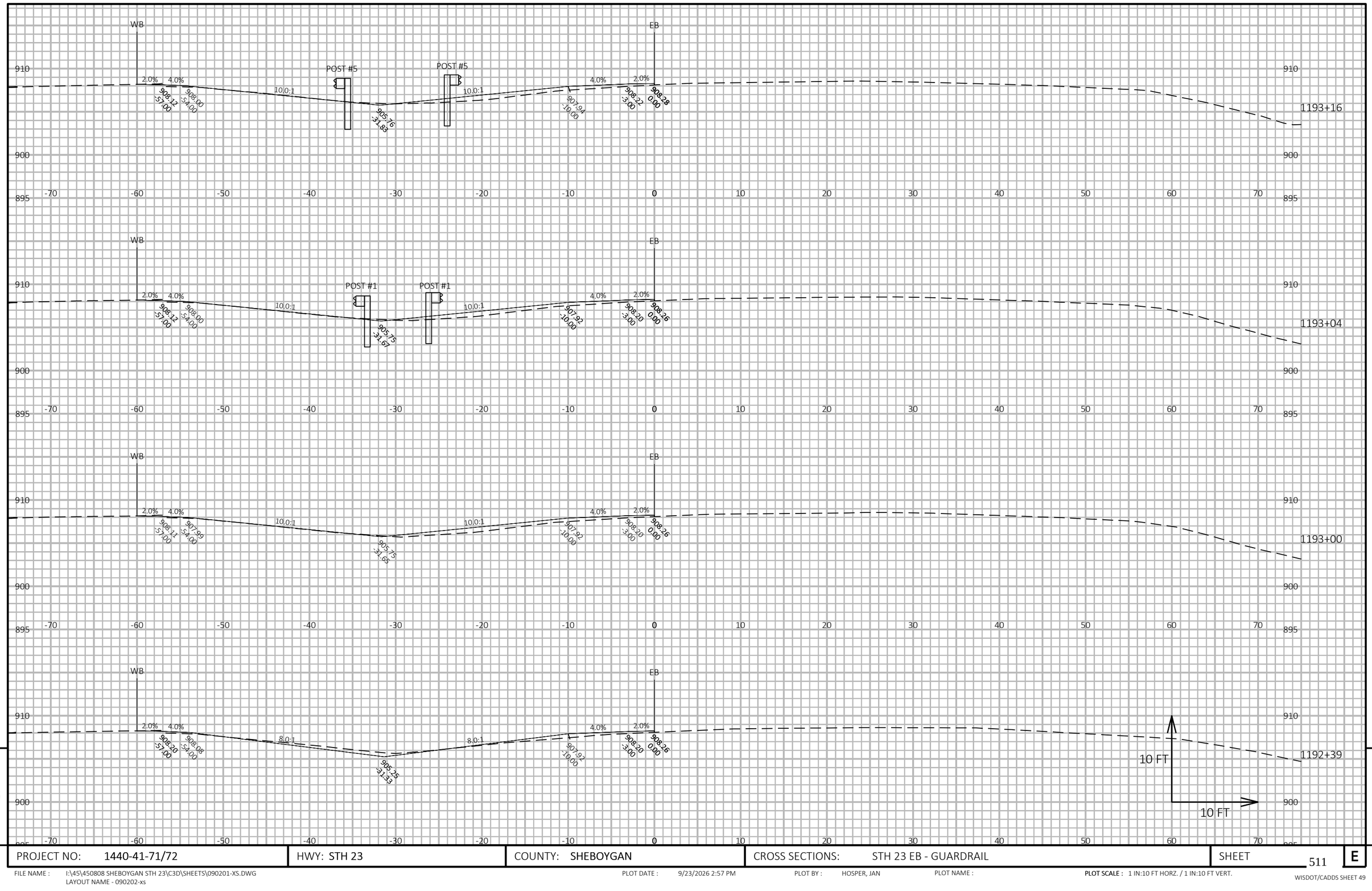
FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090201-XS.DWG
LAYOUT NAME - 090201-xs

PLOT DATE : 9/23/2026 2:57 PM

PLOT BY : HOSPER, JAN

PLOT NAME :

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

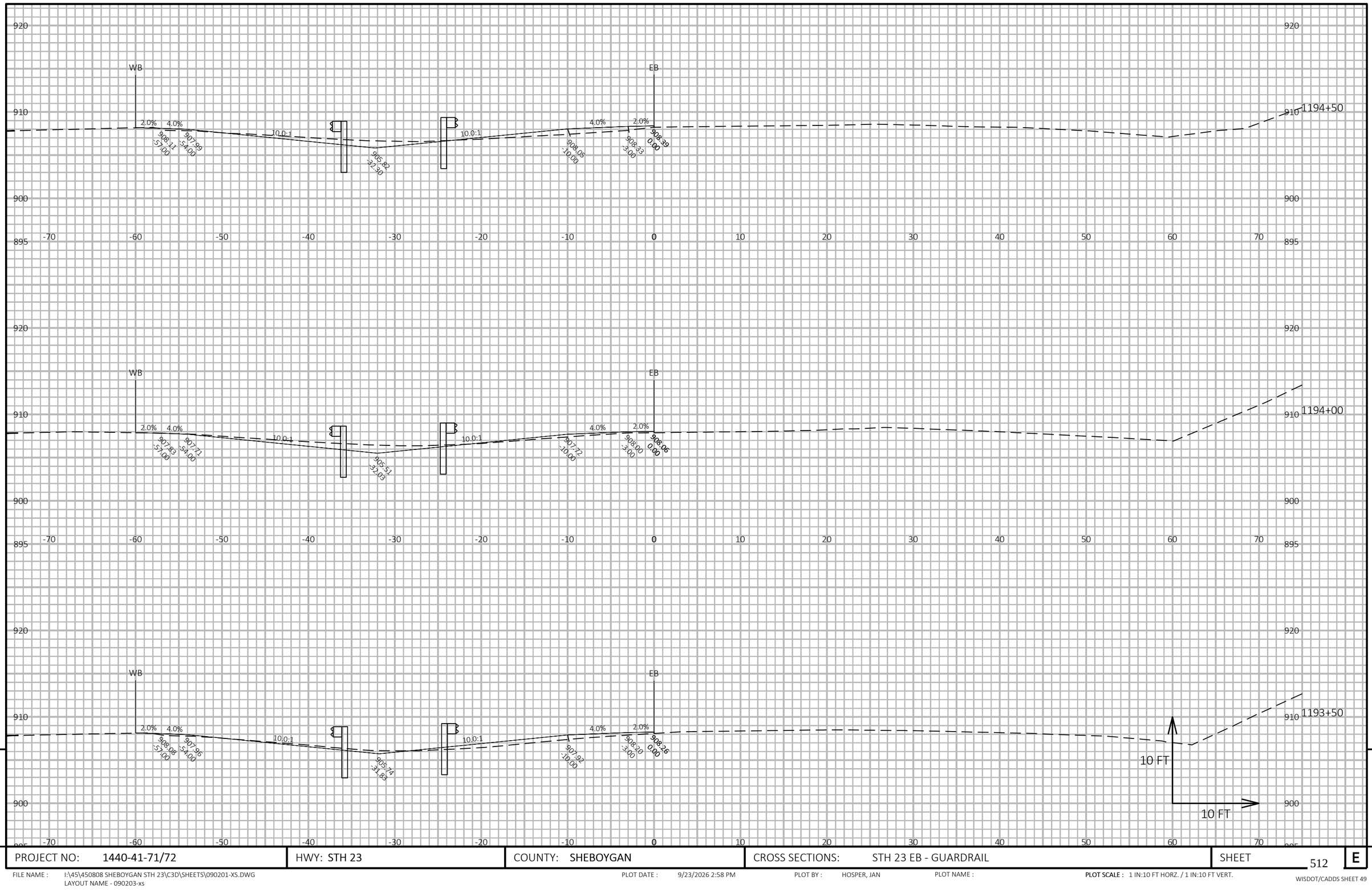


PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 EB - GUARDRAIL	SHEET 511 E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090201-XS.DWG
LAYOUT NAME - 090202-xs

PLOT DATE : 9/23/2026 2:57 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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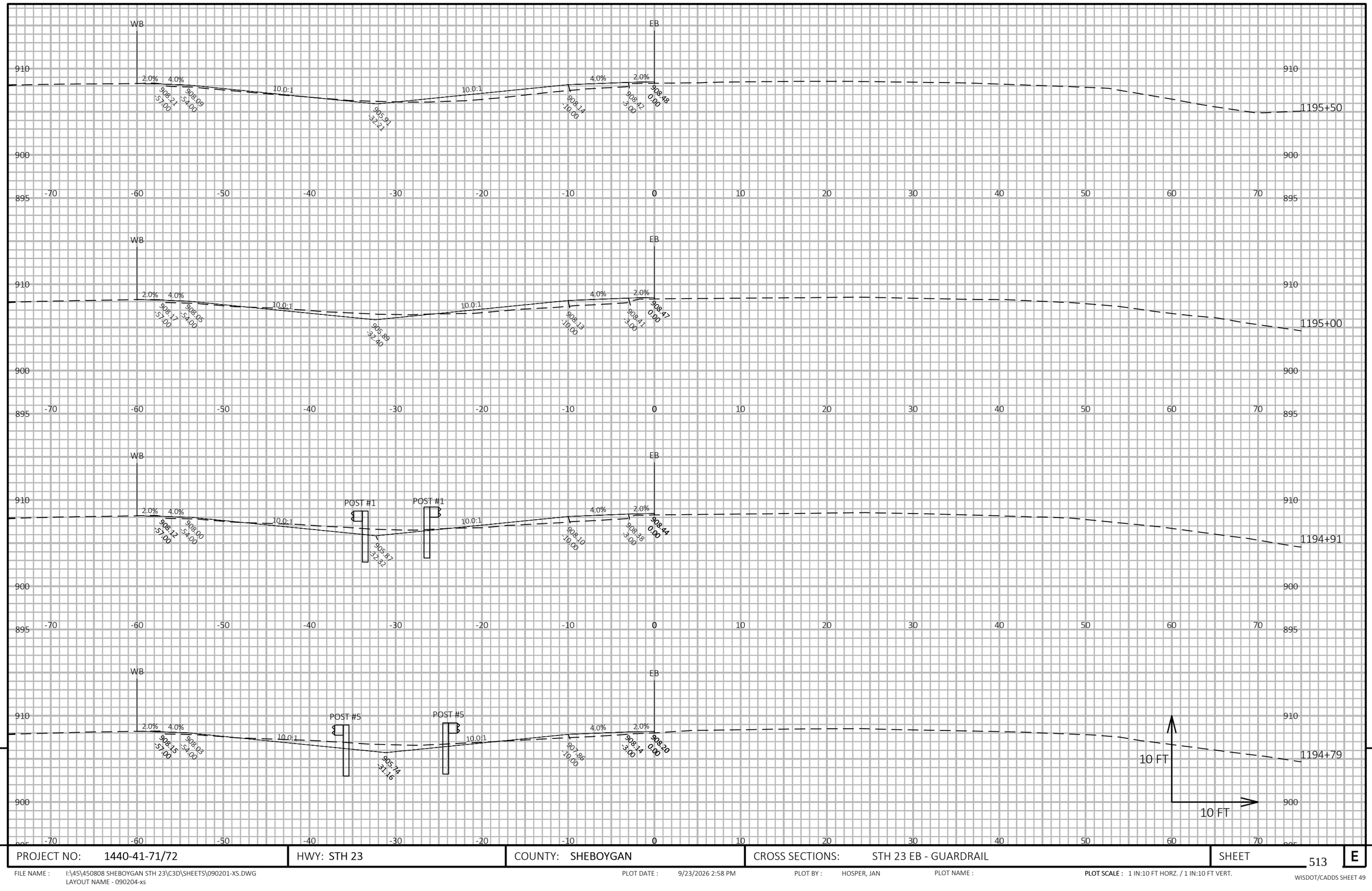
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 EB - GUARDRAIL	SHEET 512	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090201-XS.DWG
LAYOUT NAME - 090203-xs

PLOT DATE : 9/23/2026 2:58 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 EB - GUARDRAIL	SHEET 513	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090201-XS.DWG
LAYOUT NAME - 090204-xs

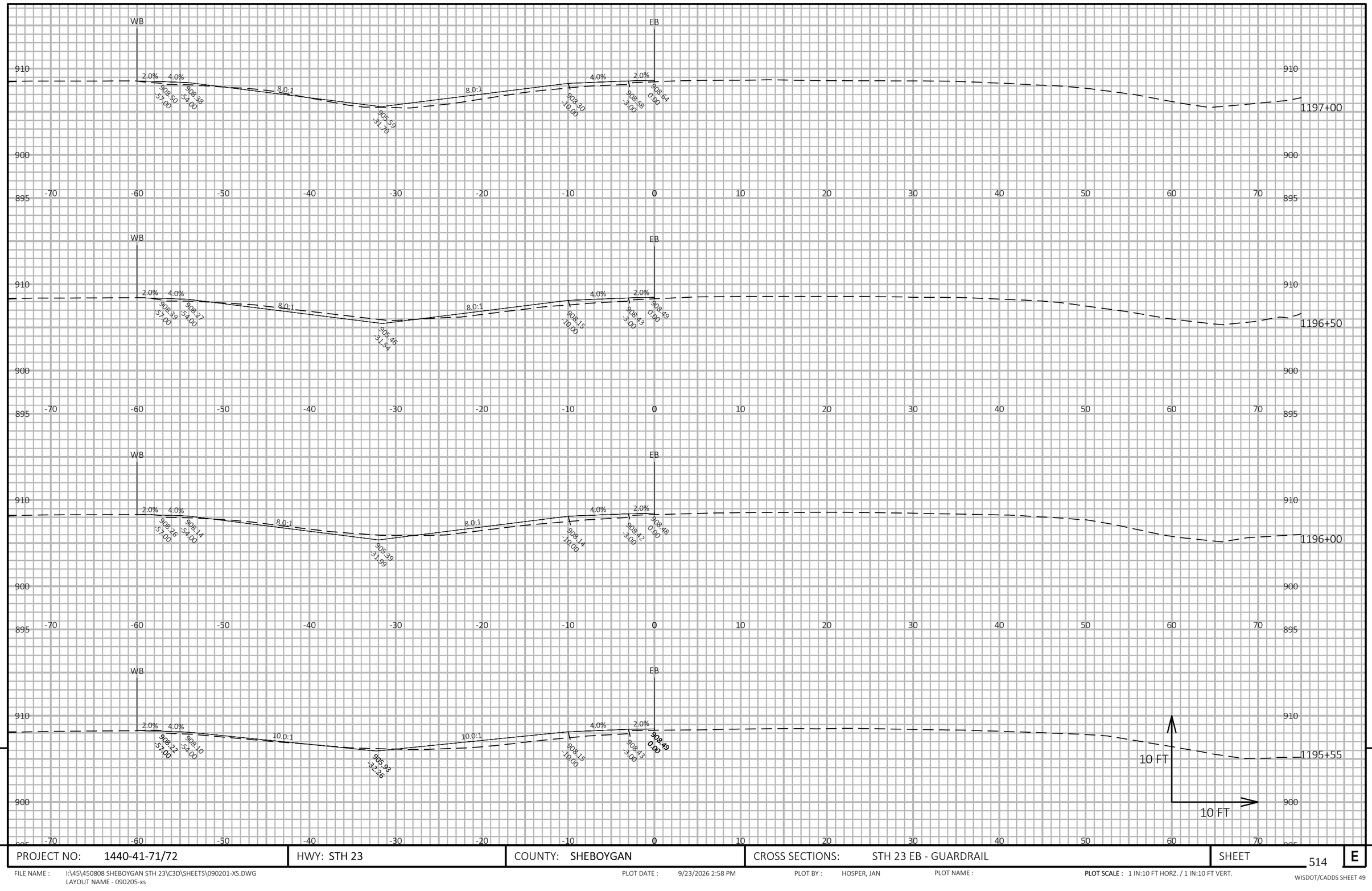
PLOT DATE : 9/23/2026 2:58 PM

PLOT BY : HOSPER, JAN

PLOT NAME :

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

WISDOT/CADDS SHEET 49



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PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 EB - GUARDRAIL	SHEET 514	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090201-XS.DWG
LAYOUT NAME - 090205-xs

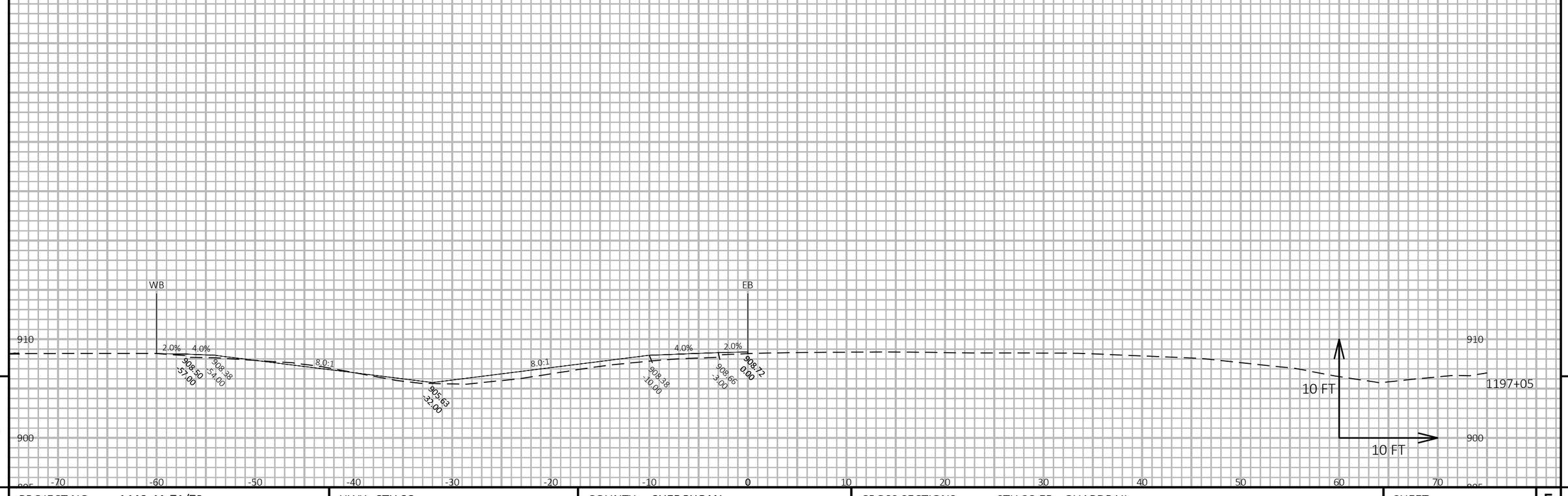
PLOT DATE : 9/23/2026 2:58 PM

PLOT BY : HOSPER, JAN

PLOT NAME :

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

WISDOT/CADDS SHEET 49



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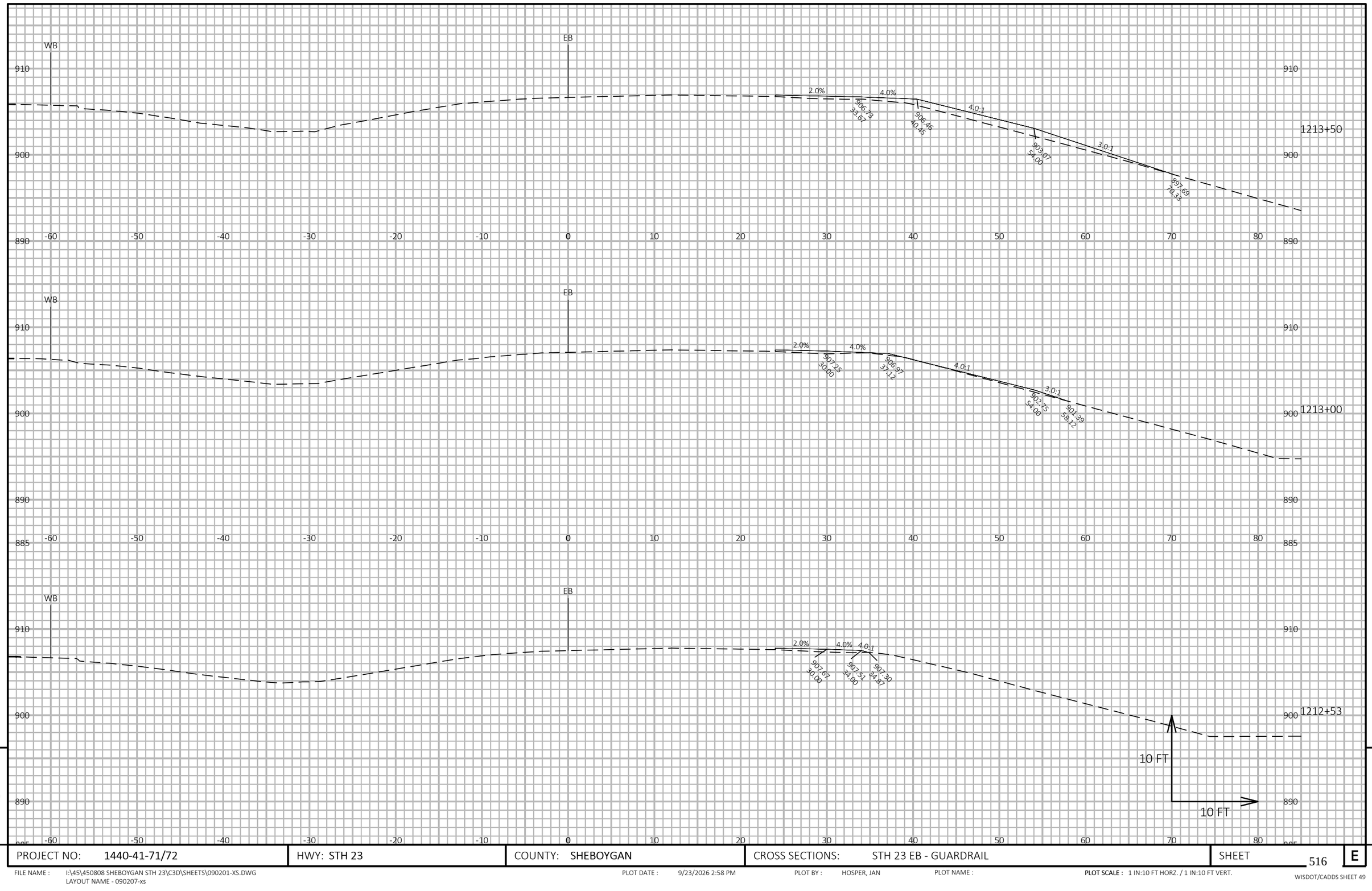
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 EB - GUARDRAIL	SHEET 515	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090201-XS.DWG
LAYOUT NAME - 090206-xs

PLOT DATE : 9/23/2026 2:58 PM PLOT BY : HOSPER, JAN PLOT NAME :

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



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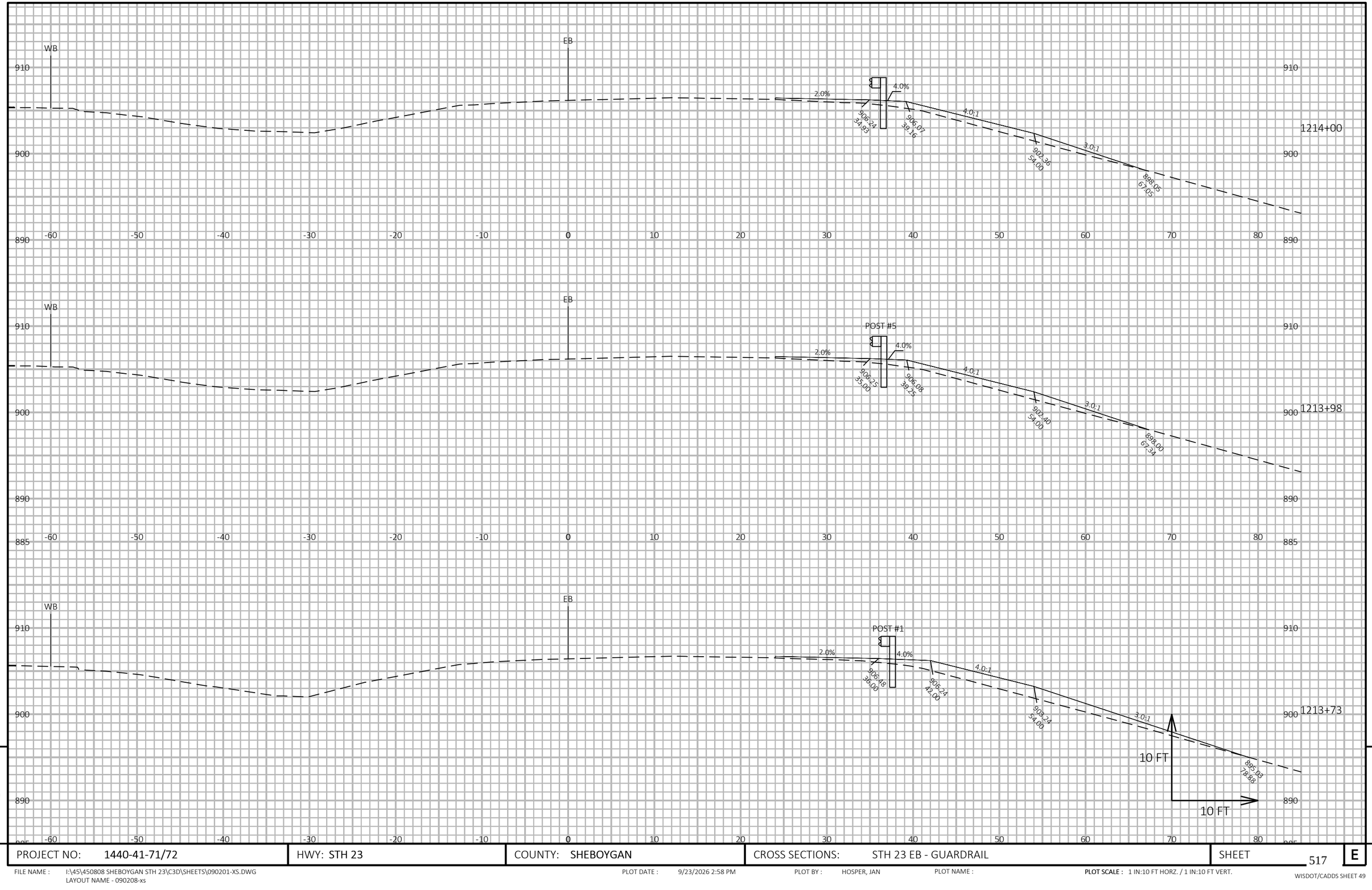
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 EB - GUARDRAIL	SHEET 516	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090201-XS.DWG
LAYOUT NAME - 090207-xs

PLOT DATE : 9/23/2026 2:58 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

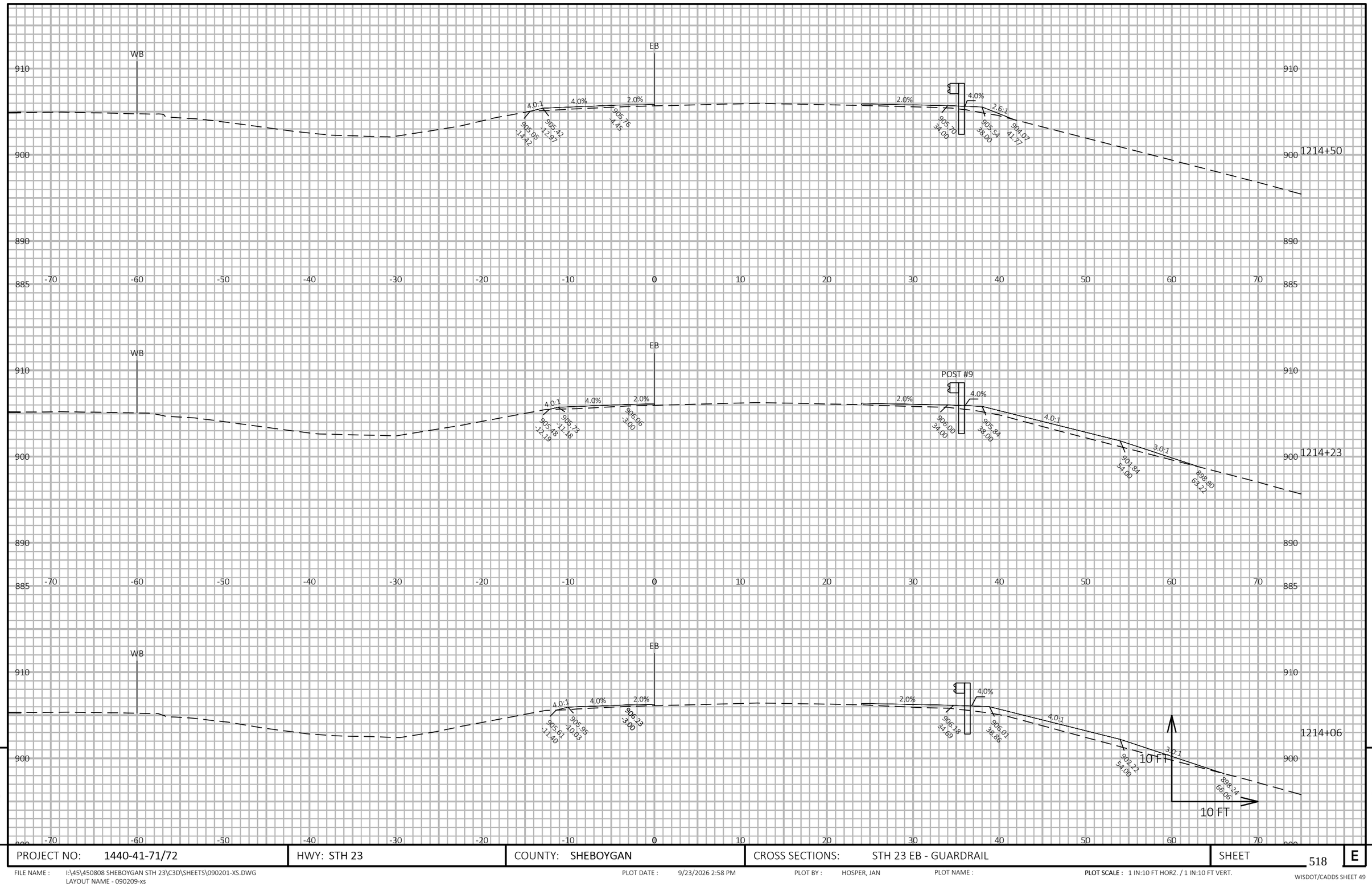


PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 EB - GUARDRAIL	SHEET 517	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090201-XS.DWG
LAYOUT NAME - 090208-xs

PLOT DATE : 9/23/2026 2:58 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 EB - GUARDRAIL	SHEET 518	E

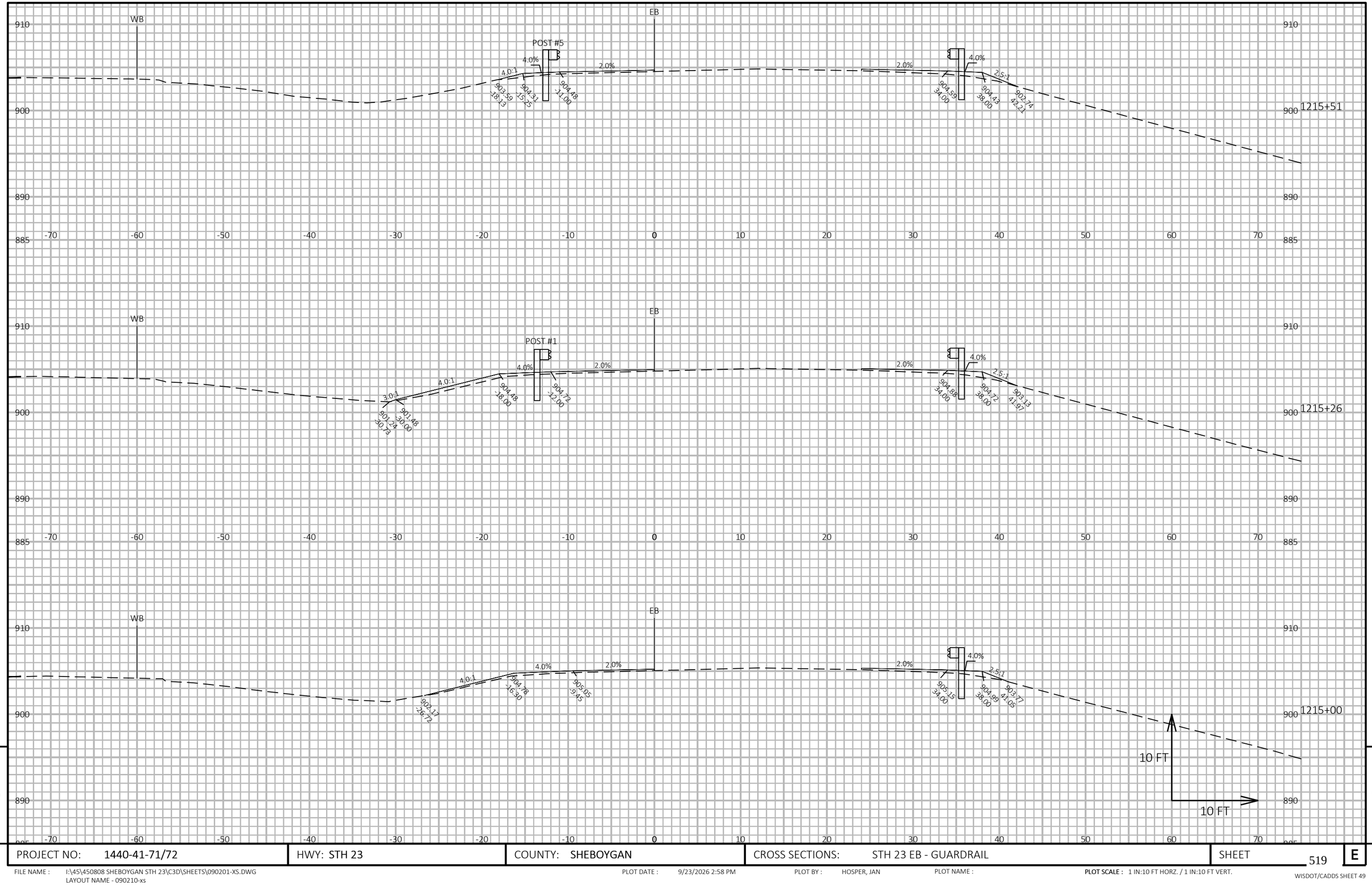
FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090201-XS.DWG
LAYOUT NAME - 090209-xs

PLOT DATE : 9/23/2026 2:58 PM

PLOT BY : HOSPER, JAN

PLOT NAME :

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



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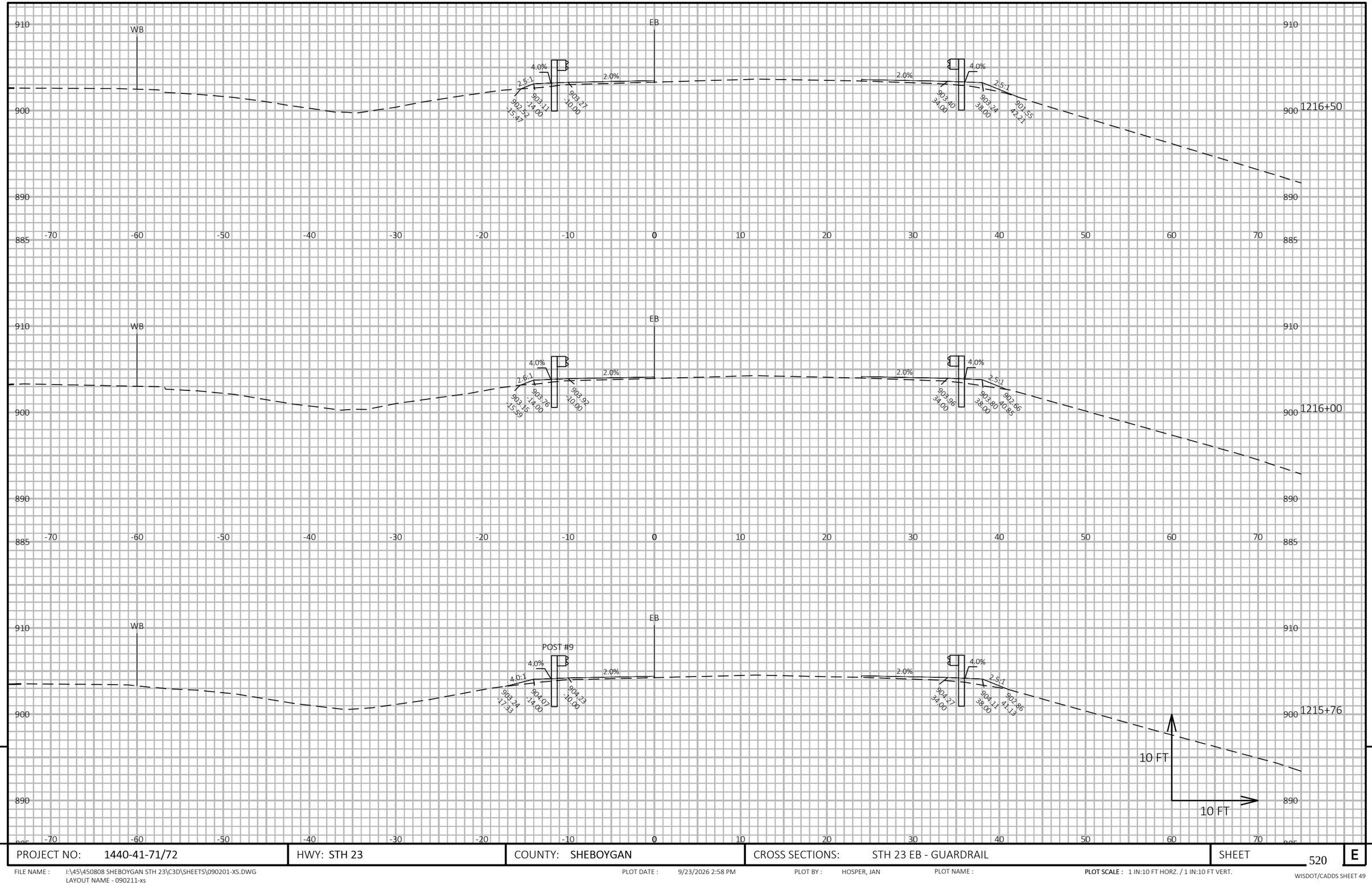
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 EB - GUARDRAIL	SHEET 519	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090201-XS.DWG
LAYOUT NAME - 090210-xs

PLOT DATE : 9/23/2026 2:58 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

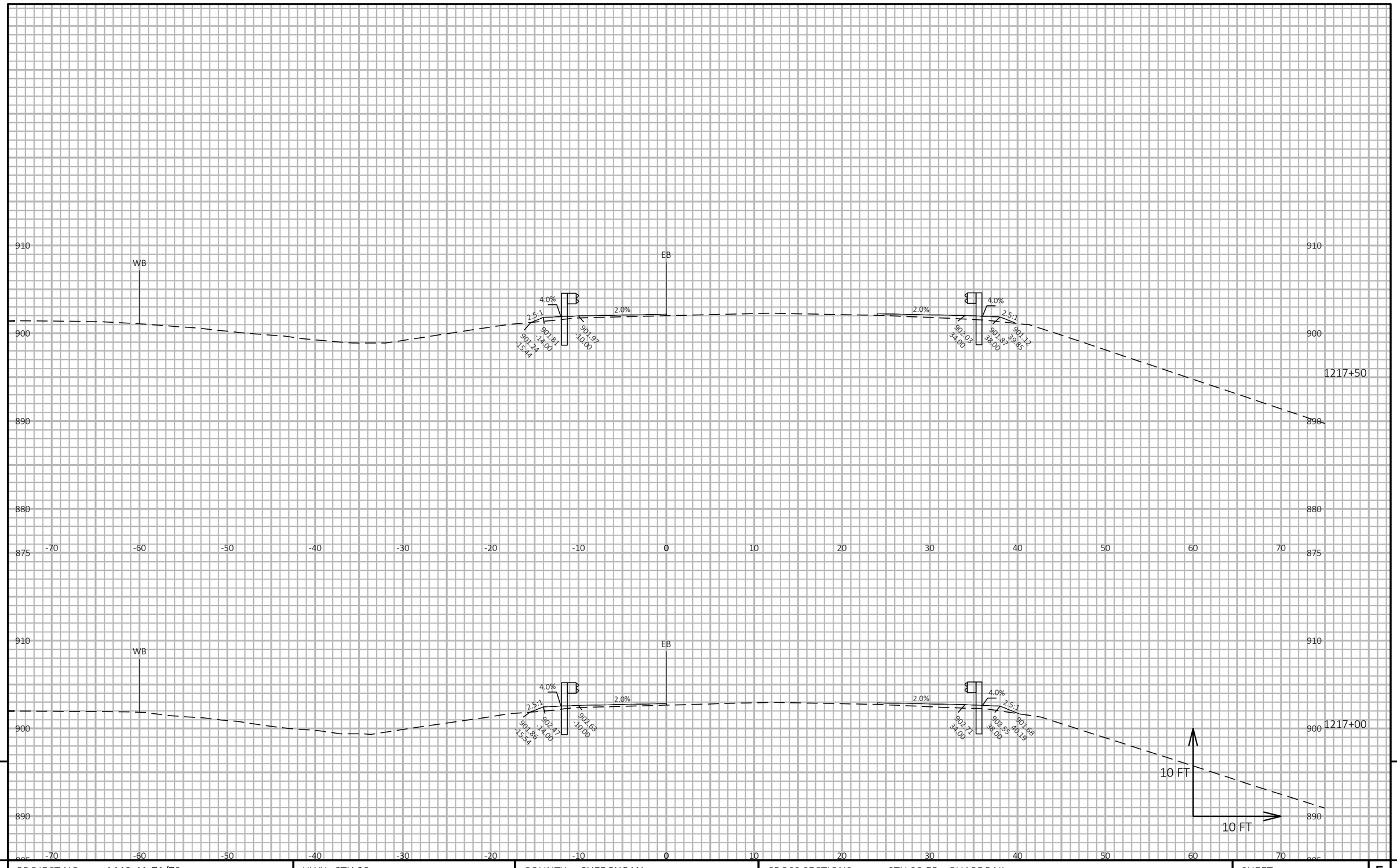


PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 EB - GUARDRAIL	SHEET 520	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090201-XS.DWG
LAYOUT NAME - 090211-xs

PLOT DATE : 9/23/2026 2:58 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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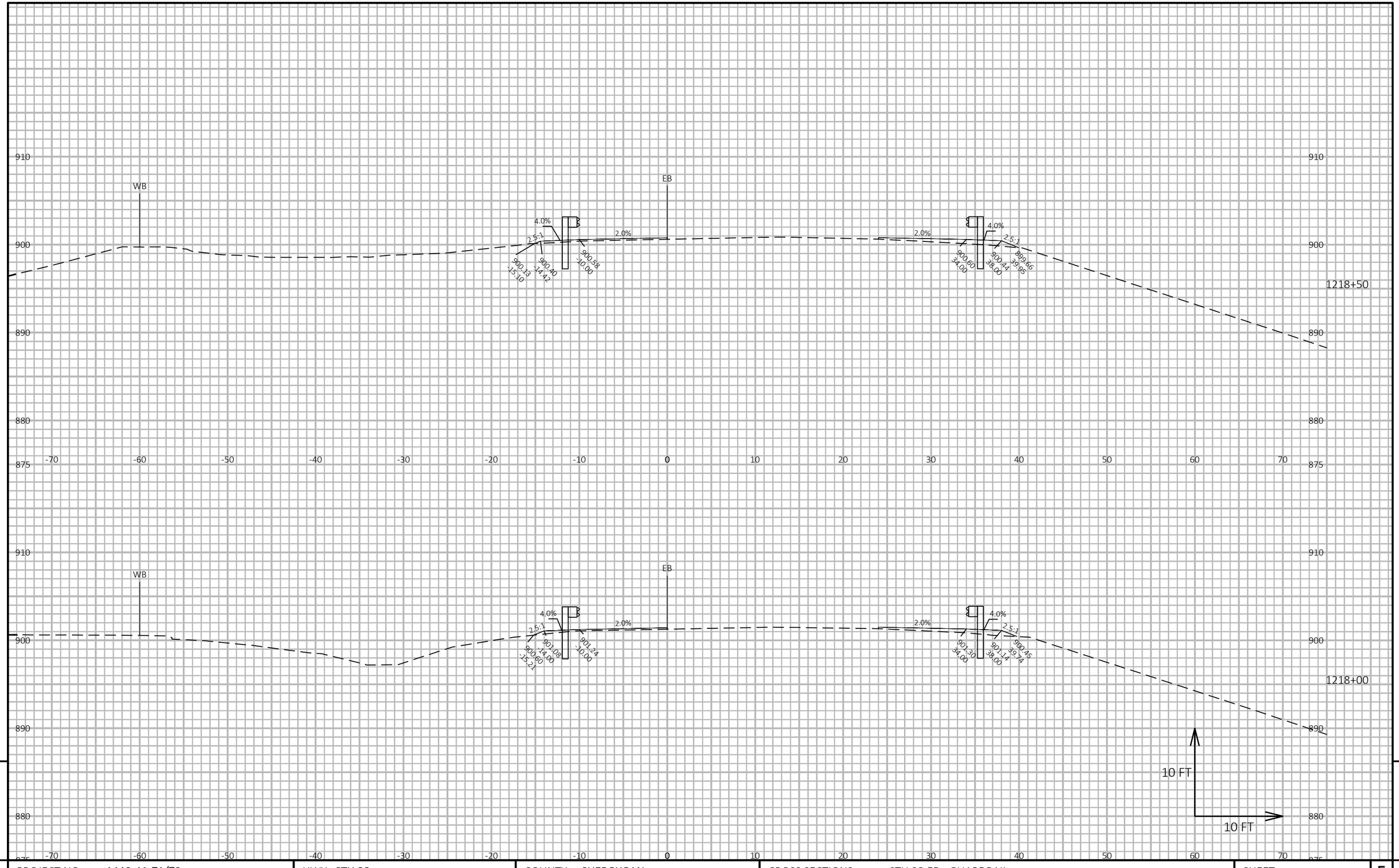
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 EB - GUARDRAIL	SHEET 521	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090201-XS.DWG
LAYOUT NAME - 090212-xs

PLOT DATE : 9/23/2026 2:58 PM PLOT BY : HOSPER, JAN PLOT NAME :

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

WISDOT/CADDS SHEET 49



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PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 EB - GUARDRAIL	SHEET 522	E

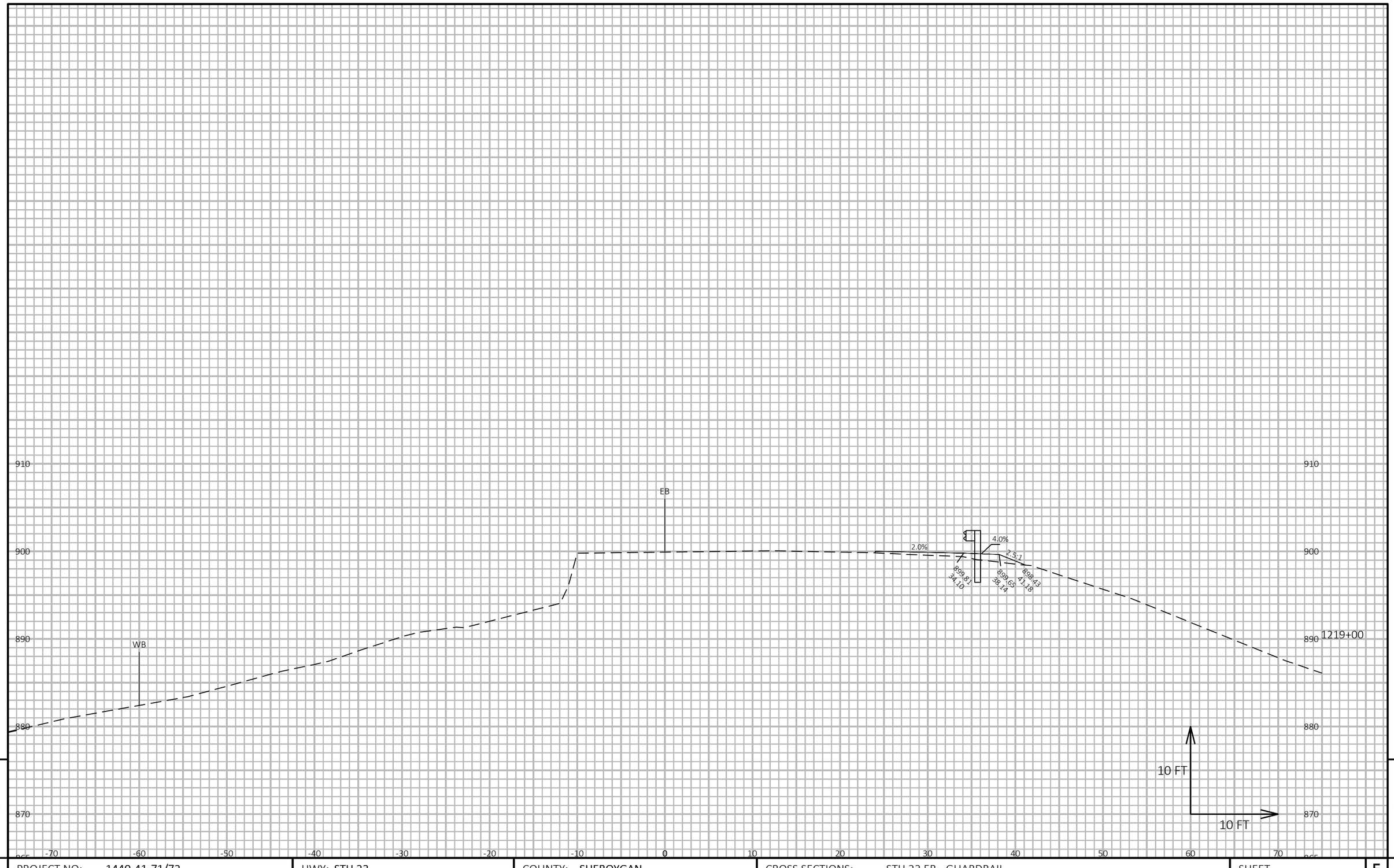
FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090201-XS.DWG
LAYOUT NAME - 090213-xs

PLOT DATE : 9/23/2026 2:58 PM

PLOT BY : HOSPER, JAN

PLOT NAME :

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



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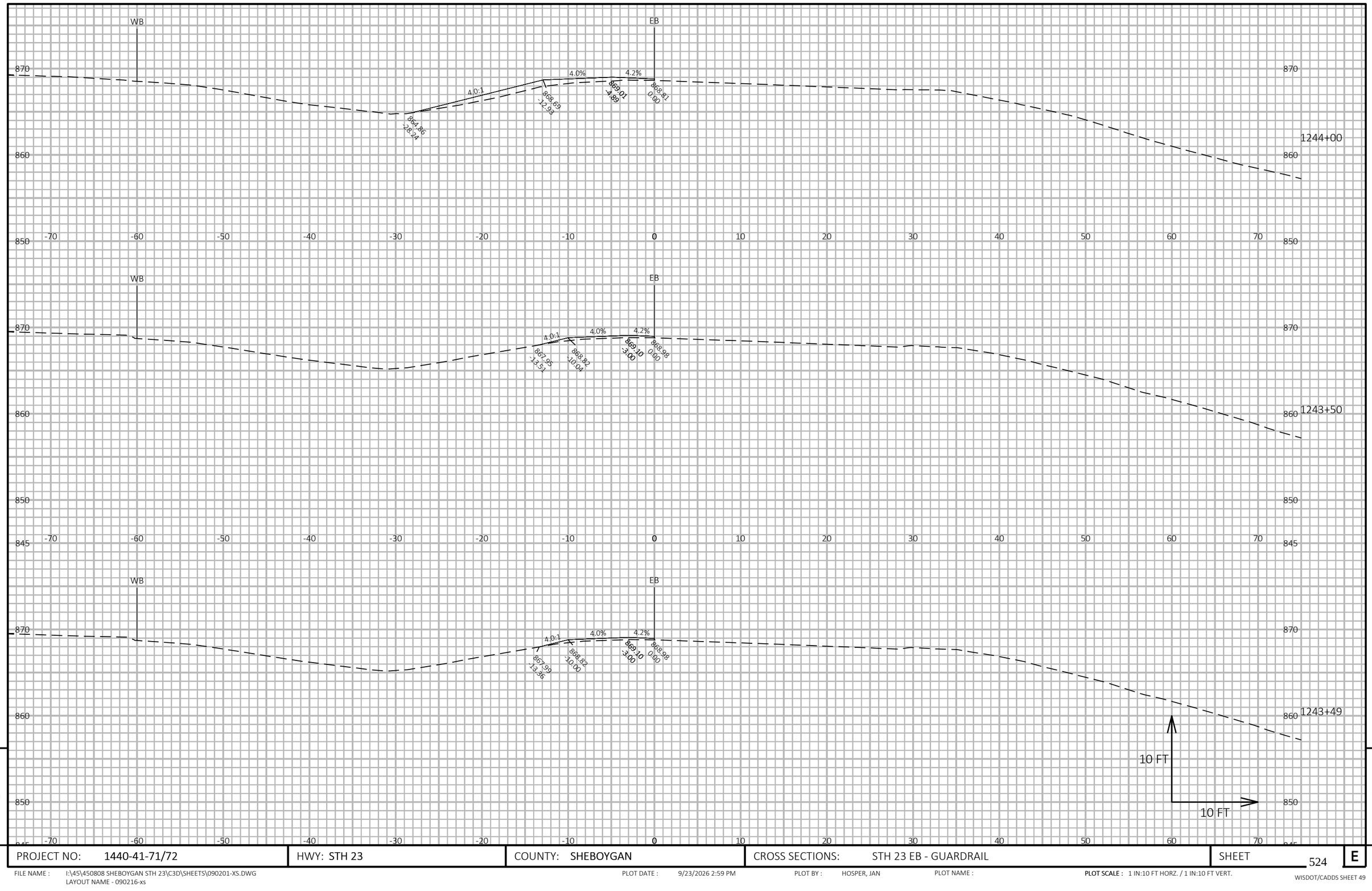
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 EB - GUARDRAIL	SHEET 523	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090201-XS.DWG
LAYOUT NAME - 090214-xs

PLOT DATE : 9/23/2026 2:58 PM PLOT BY : HOSPER, JAN PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



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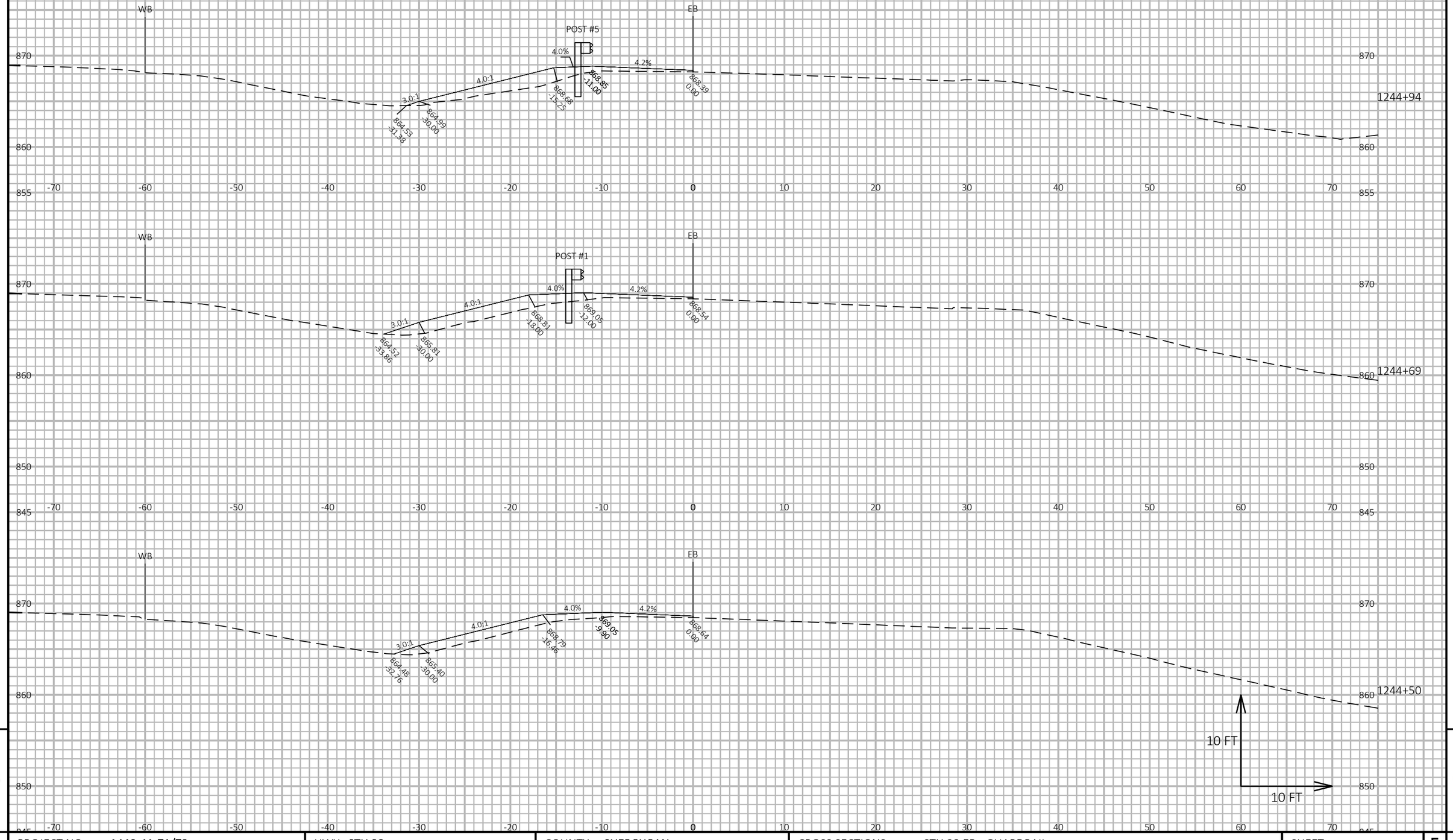
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 EB - GUARDRAIL	SHEET 524	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090201-XS.DWG
LAYOUT NAME - 090216-xs

PLOT DATE : 9/23/2026 2:59 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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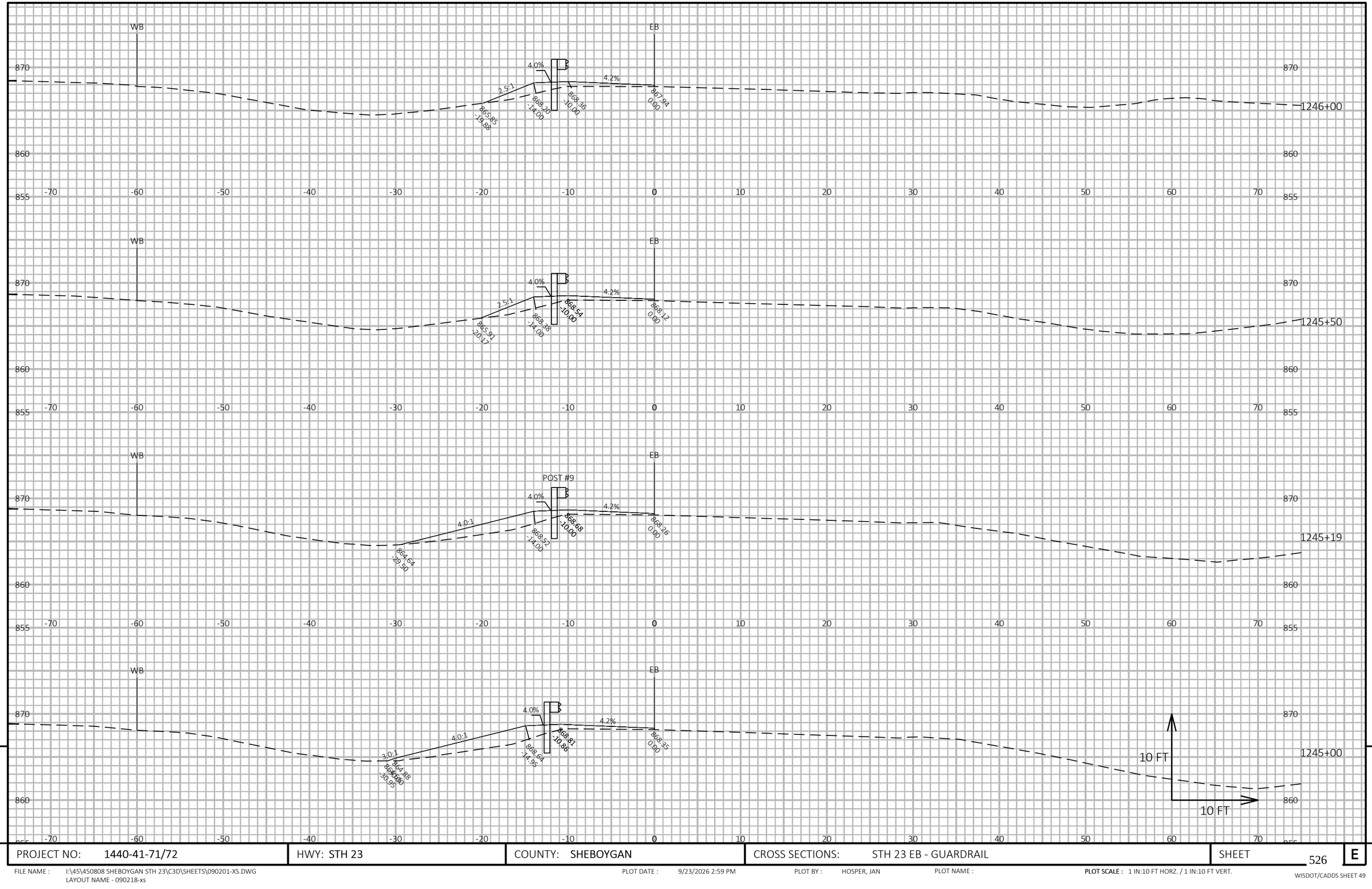
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 EB - GUARDRAIL	SHEET 525	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090201-XS.DWG
LAYOUT NAME - 090217-xs

PLOT DATE : 9/23/2026 2:59 PM PLOT BY : HOSPER, JAN PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



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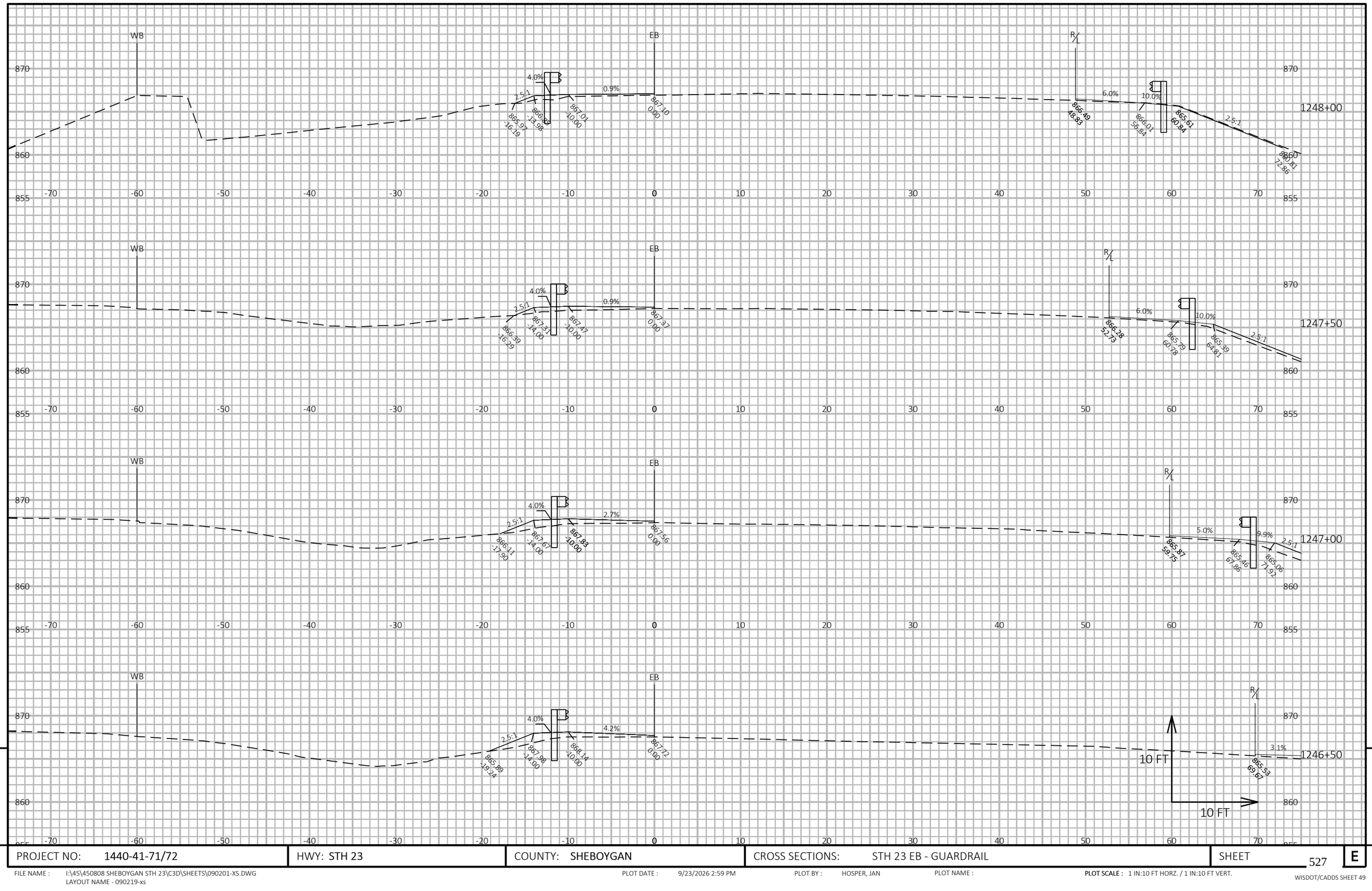
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 EB - GUARDRAIL	SHEET 526	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090201-XS.DWG
LAYOUT NAME - 090218-xs

PLOT DATE : 9/23/2026 2:59 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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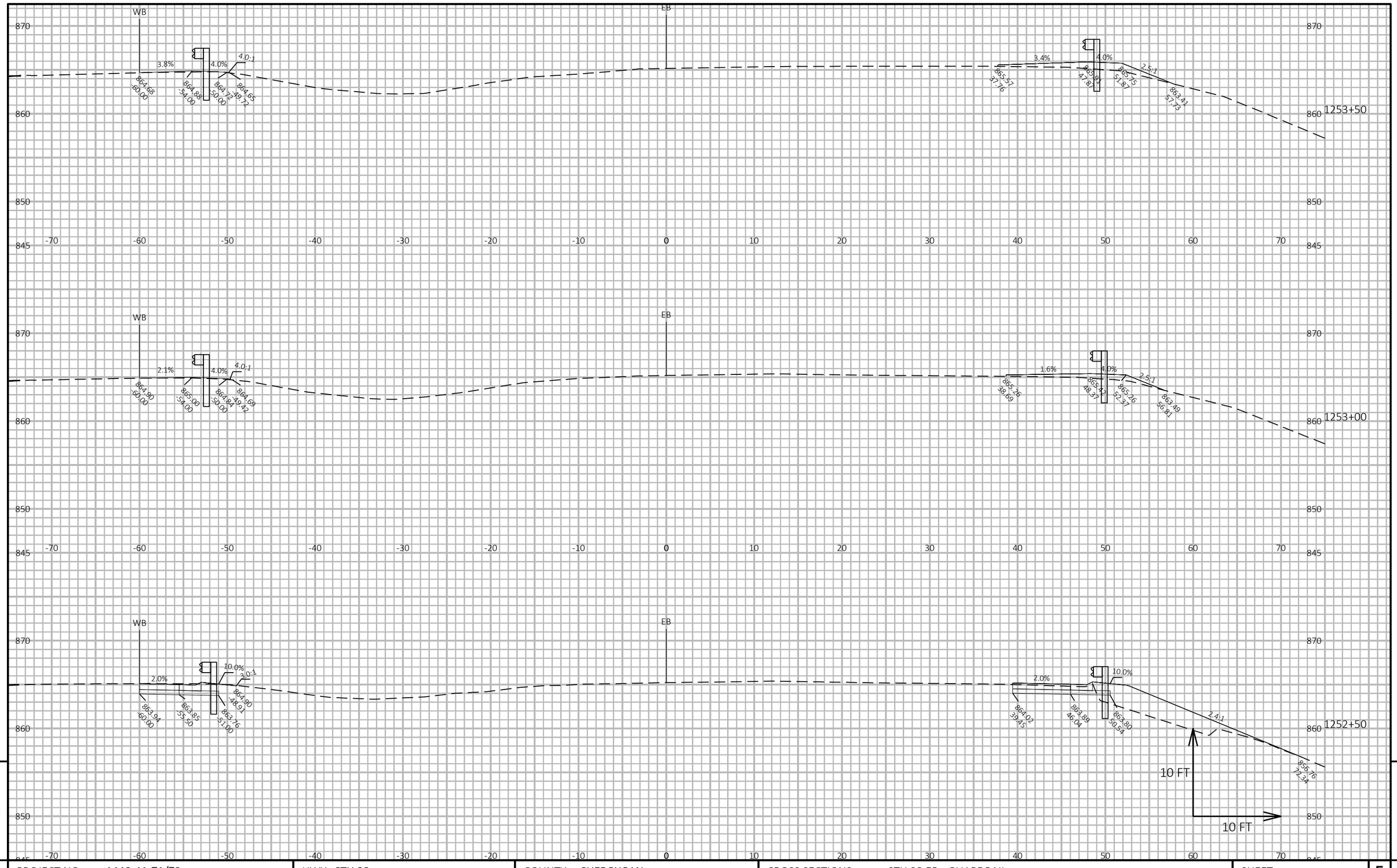
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 EB - GUARDRAIL	SHEET 527	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090201-XS.DWG
LAYOUT NAME - 090219-xs

PLOT DATE : 9/23/2026 2:59 PM PLOT BY : HOSPER, JAN PLOT NAME :

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

WISDOT/CADDS SHEET 49



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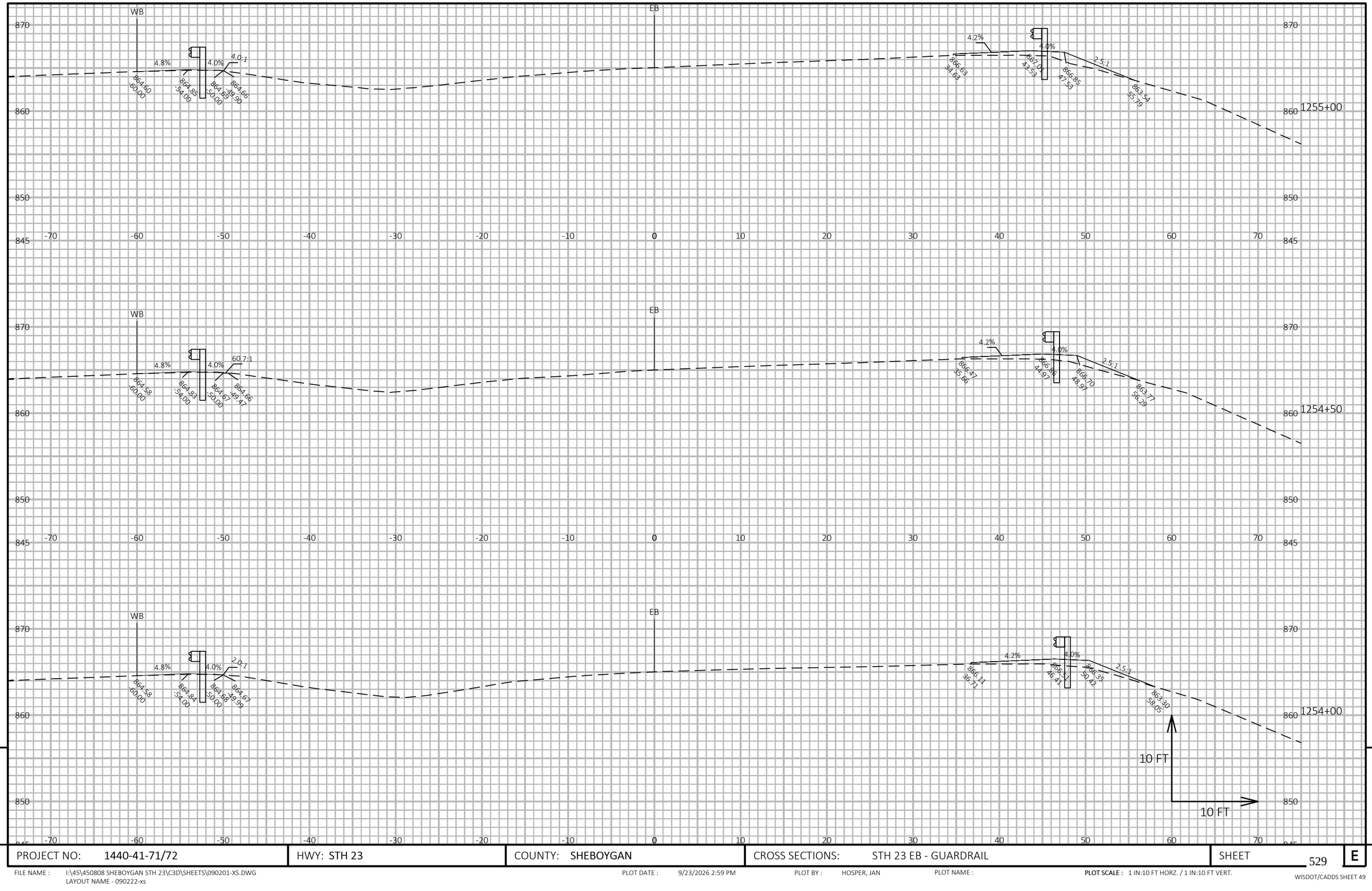
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 EB - GUARDRAIL	SHEET 528	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090201-XS.DWG
LAYOUT NAME - 090221-xs

PLOT DATE : 9/23/2026 2:59 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 EB - GUARDRAIL	SHEET 529	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090201-XS.DWG
LAYOUT NAME - 090222-xs

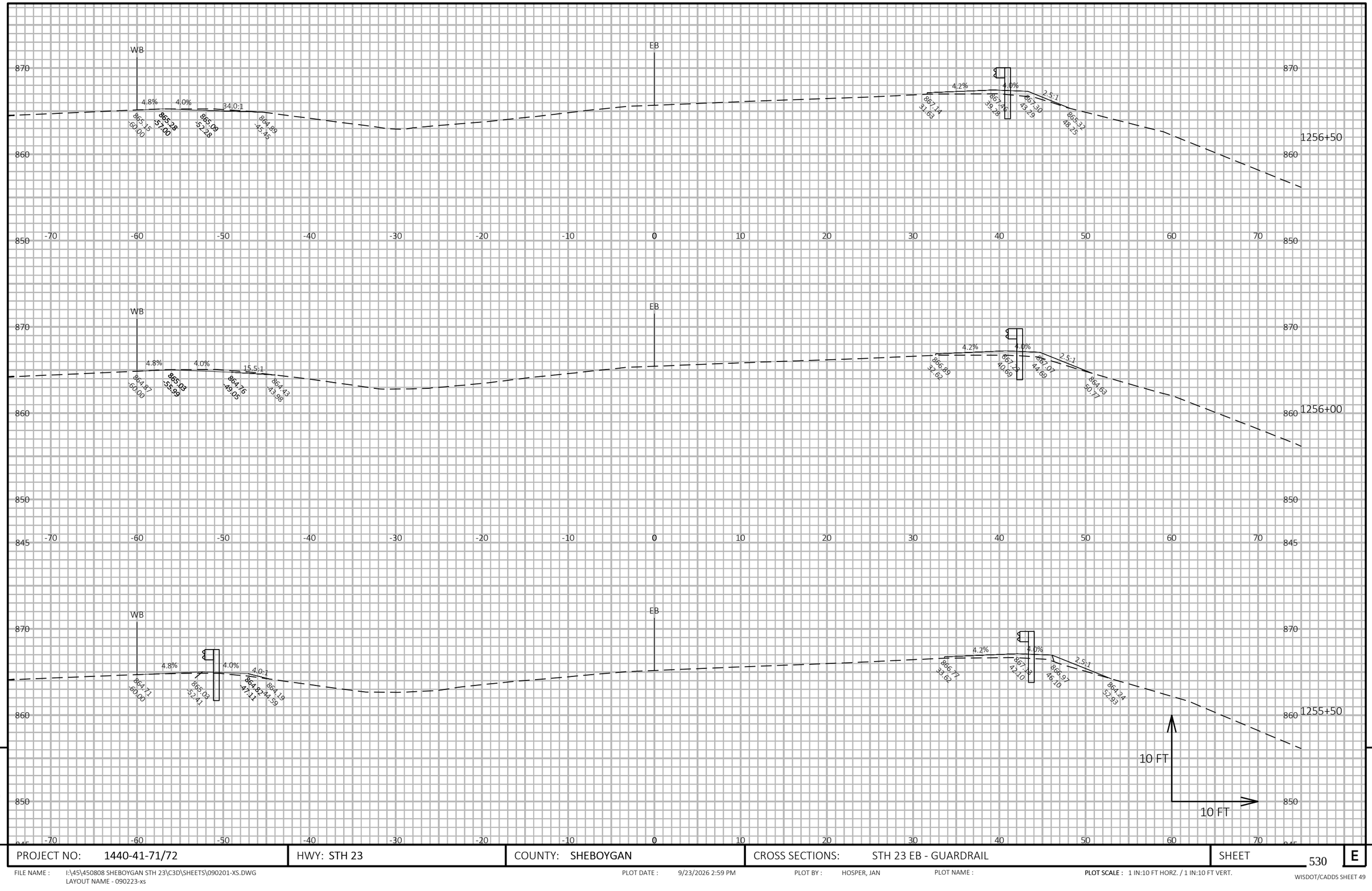
PLOT DATE : 9/23/2026 2:59 PM

PLOT BY : HOSPER, JAN

PLOT NAME :

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

WISDOT/CADDS SHEET 49



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PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 EB - GUARDRAIL	SHEET 530	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090201-XS.DWG
LAYOUT NAME - 090223-xs

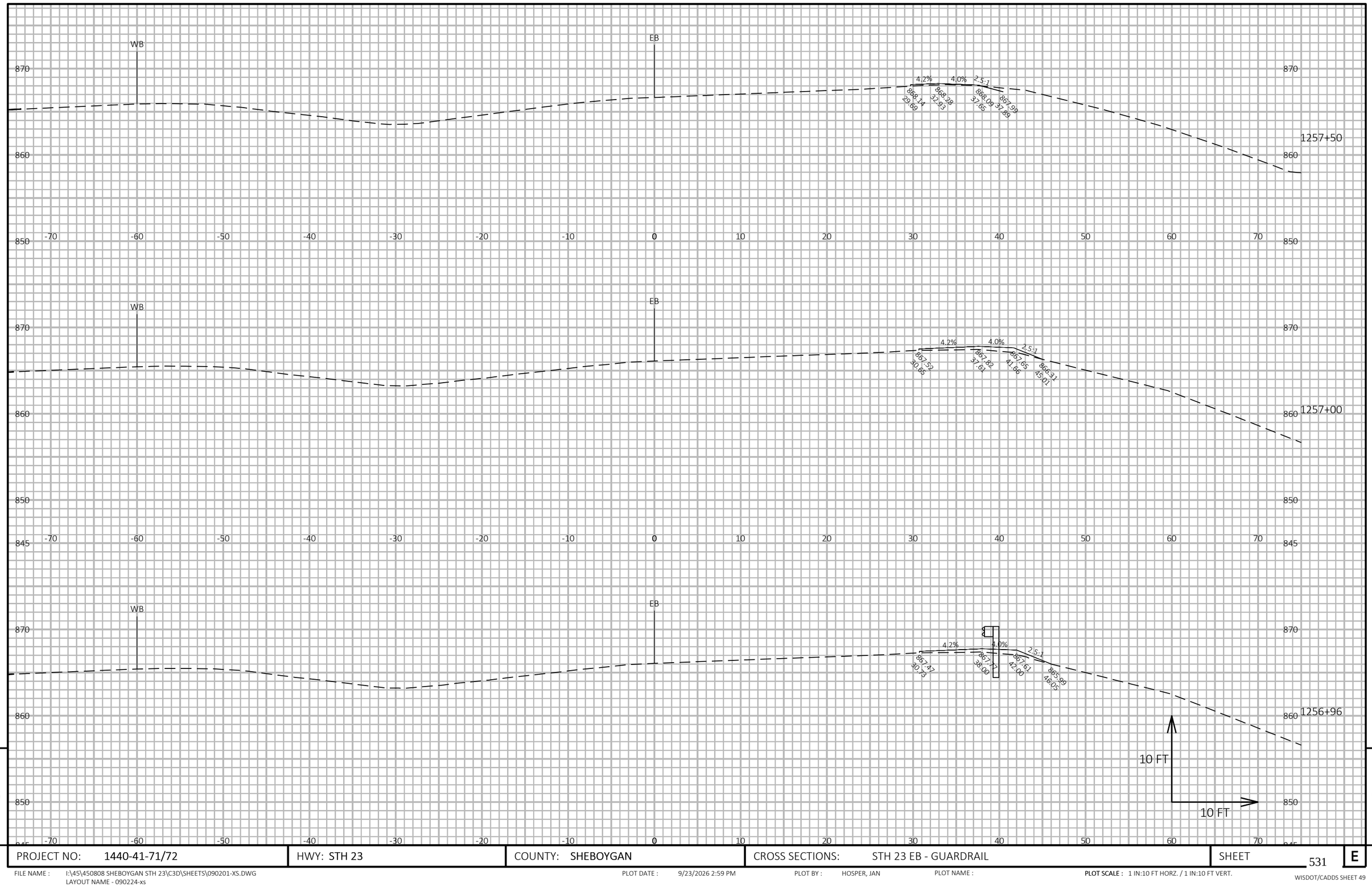
PLOT DATE : 9/23/2026 2:59 PM

PLOT BY : HOSPER, JAN

PLOT NAME :

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

WISDOT/CADDS SHEET 49



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PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 EB - GUARDRAIL	SHEET 531	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090201-XS.DWG
LAYOUT NAME - 090224-xs

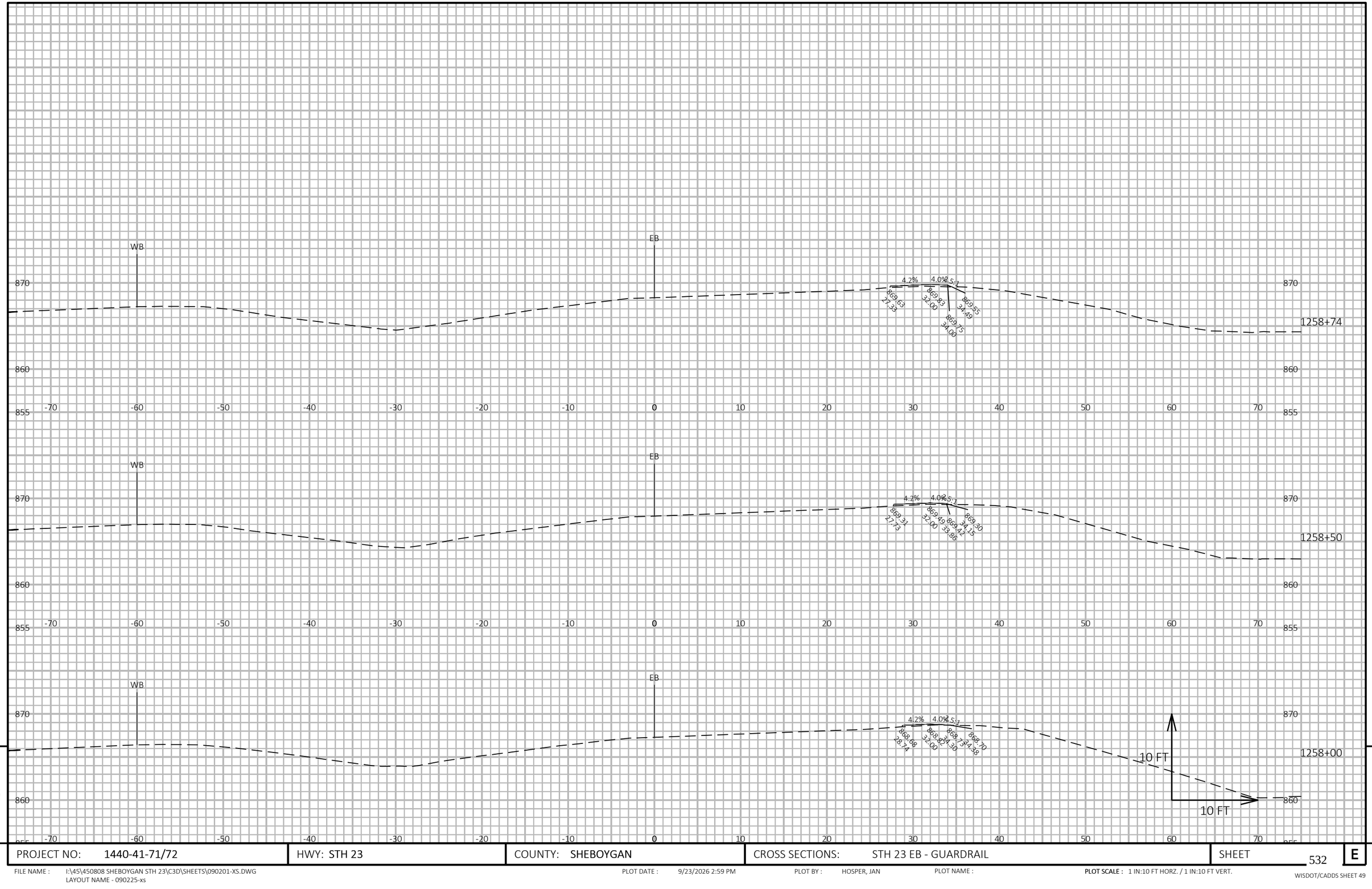
PLOT DATE : 9/23/2026 2:59 PM

PLOT BY : HOSPER, JAN

PLOT NAME :

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

WISDOT/CADDS SHEET 49



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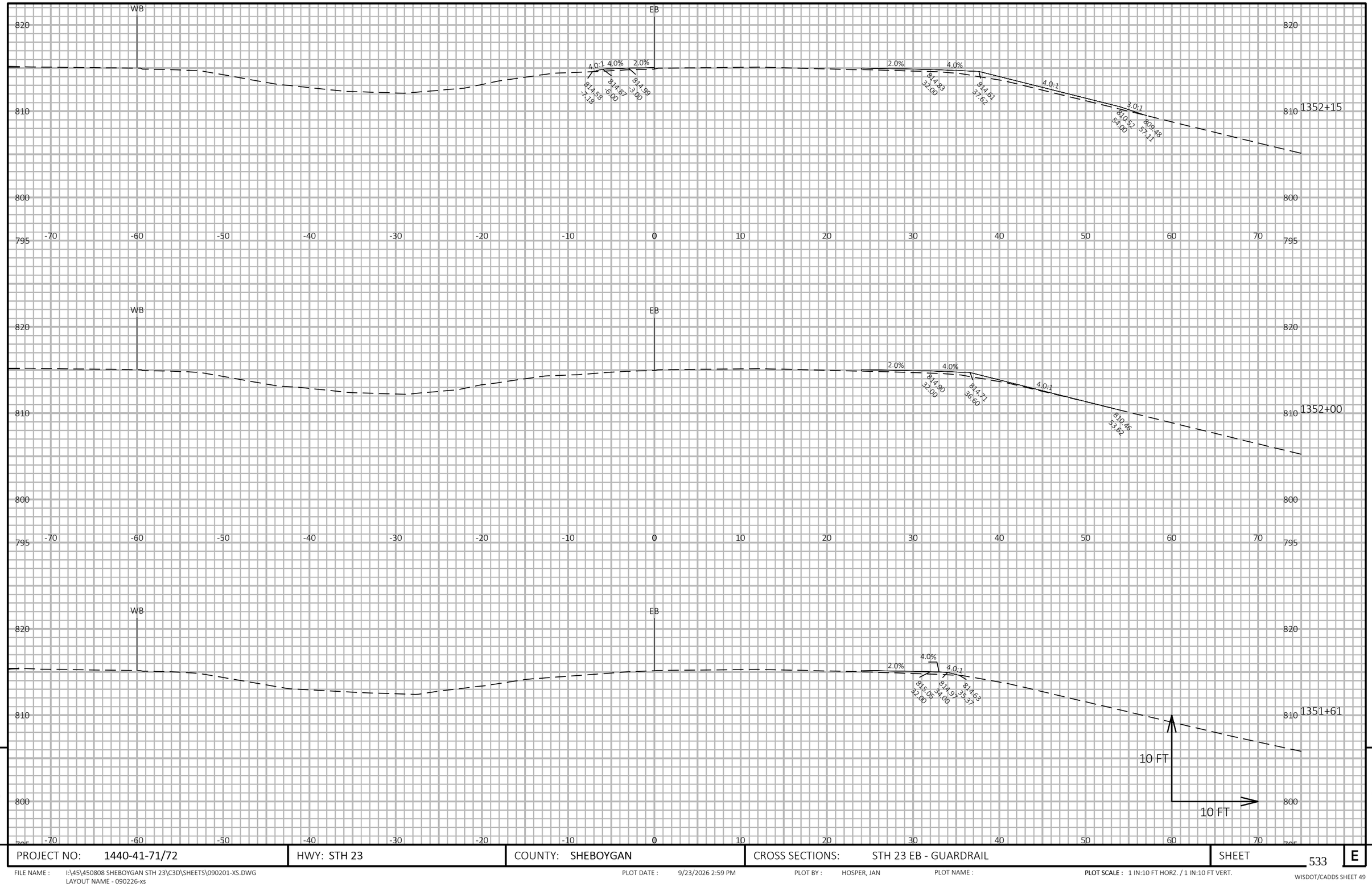
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 EB - GUARDRAIL	SHEET 532	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090201-XS.DWG
LAYOUT NAME - 090225-xs

PLOT DATE : 9/23/2026 2:59 PM PLOT BY : HOSPER, JAN PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 EB - GUARDRAIL	SHEET 533	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090201-XS.DWG
LAYOUT NAME - 090226-xs

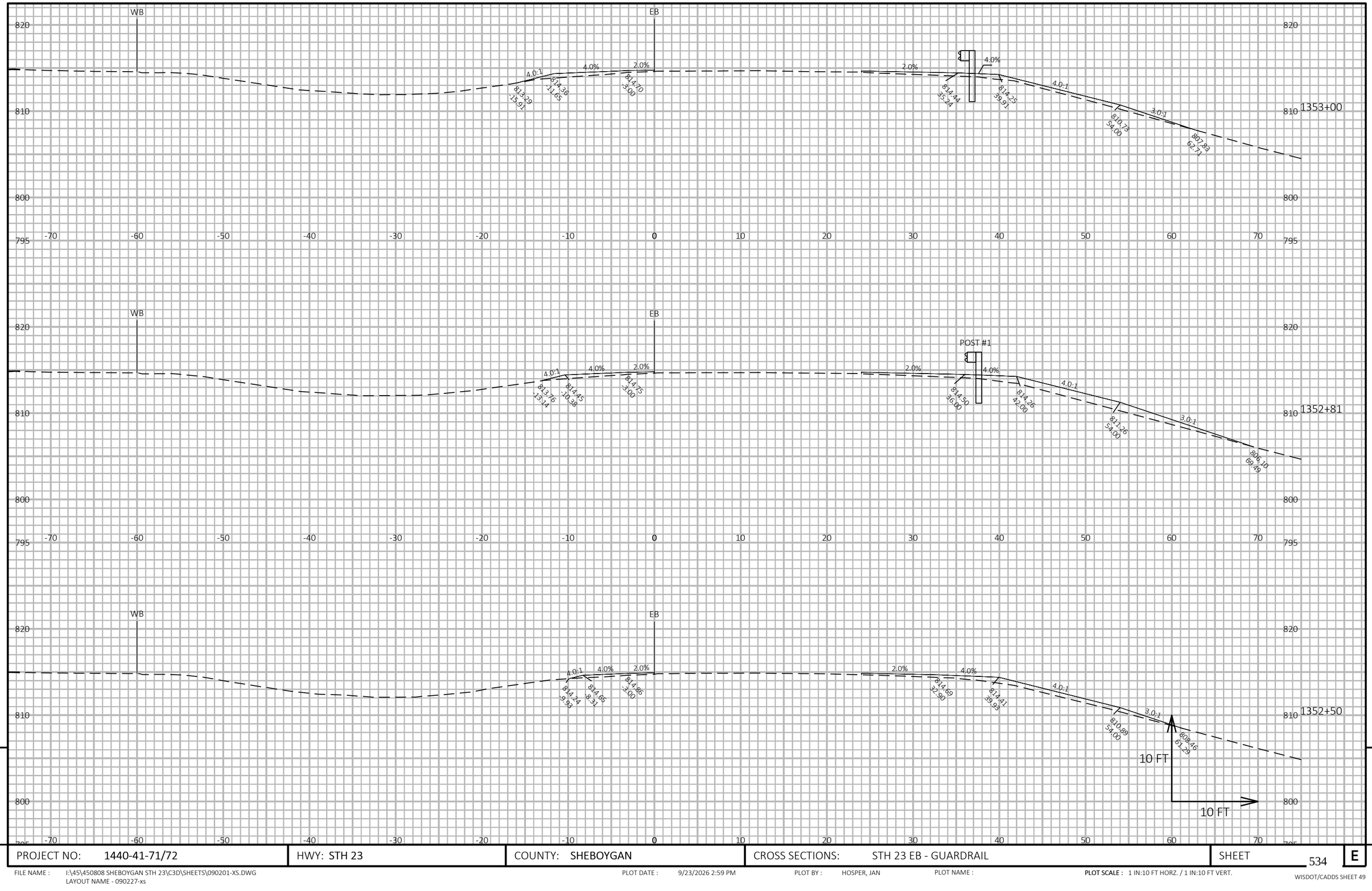
PLOT DATE : 9/23/2026 2:59 PM

PLOT BY : HOSPER, JAN

PLOT NAME :

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

WISDOT/CADDS SHEET 49



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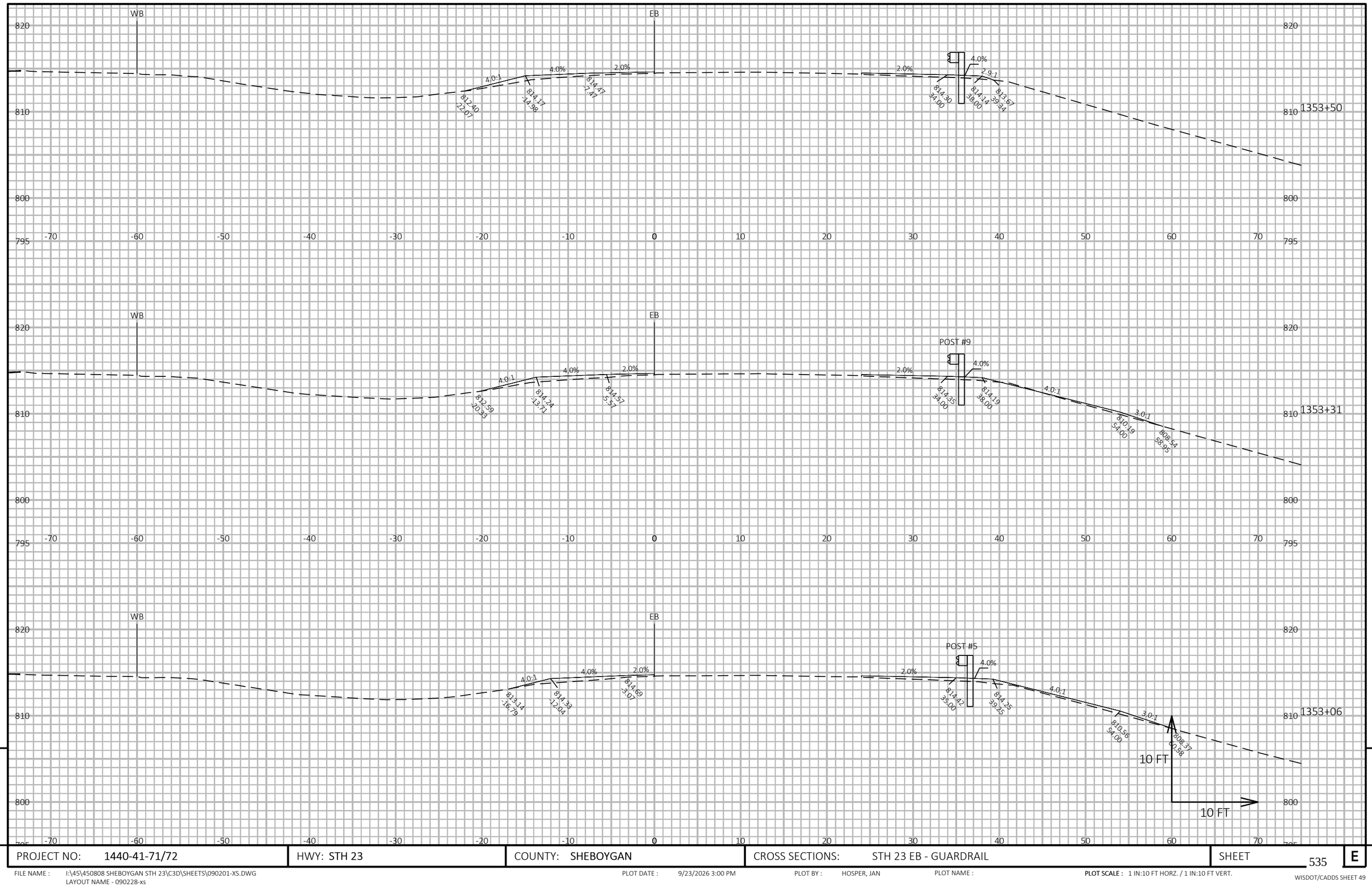
9

PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 EB - GUARDRAIL	SHEET 534	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090201-XS.DWG
LAYOUT NAME - 090227-xs

PLOT DATE : 9/23/2026 2:59 PM PLOT BY : HOSPER, JAN PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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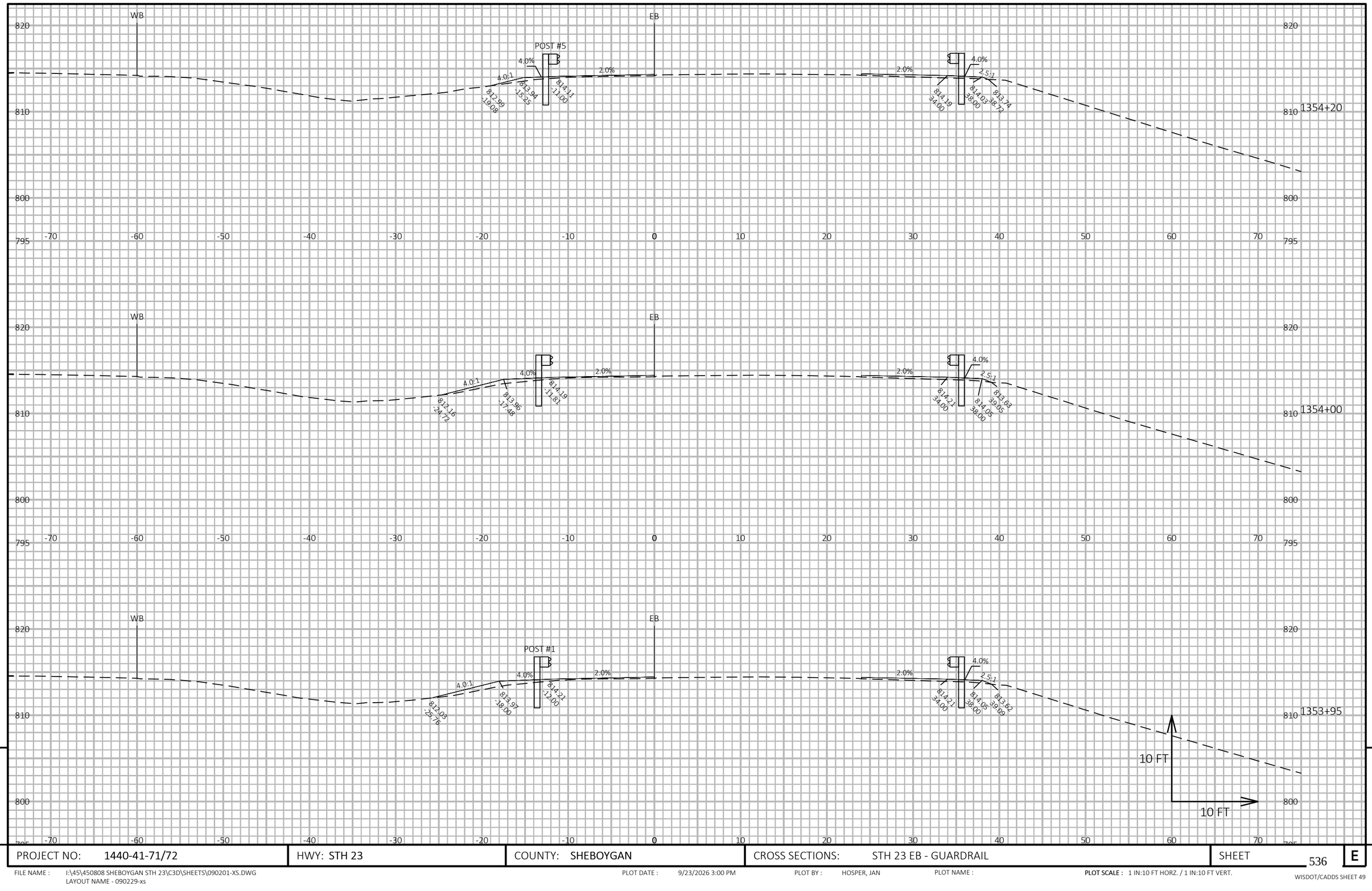
9

PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 EB - GUARDRAIL	SHEET 535	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090201-XS.DWG
LAYOUT NAME - 090228-xs

PLOT DATE : 9/23/2026 3:00 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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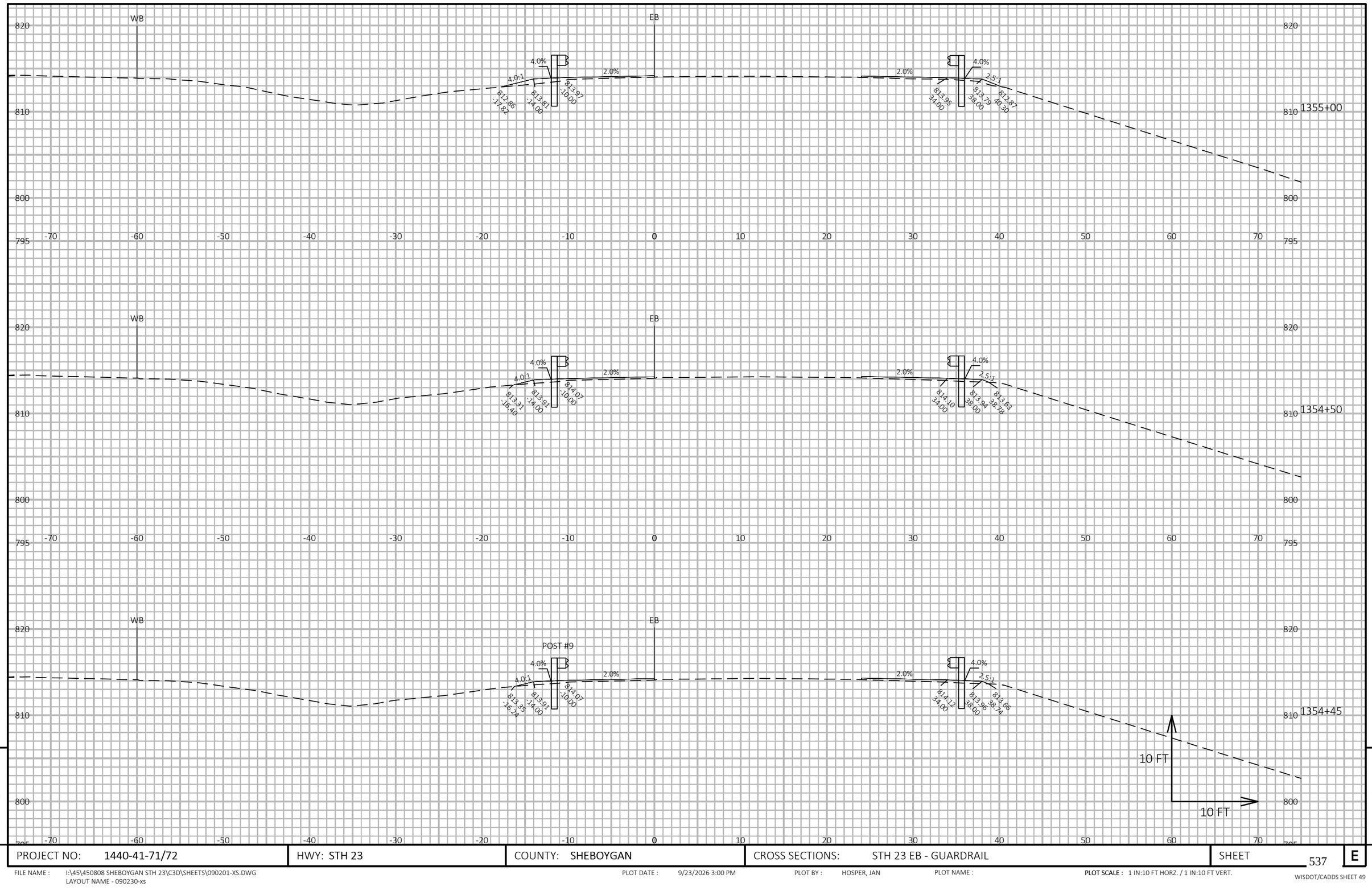
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 EB - GUARDRAIL	SHEET 536	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090201-XS.DWG
LAYOUT NAME - 090229-xs

PLOT DATE : 9/23/2026 3:00 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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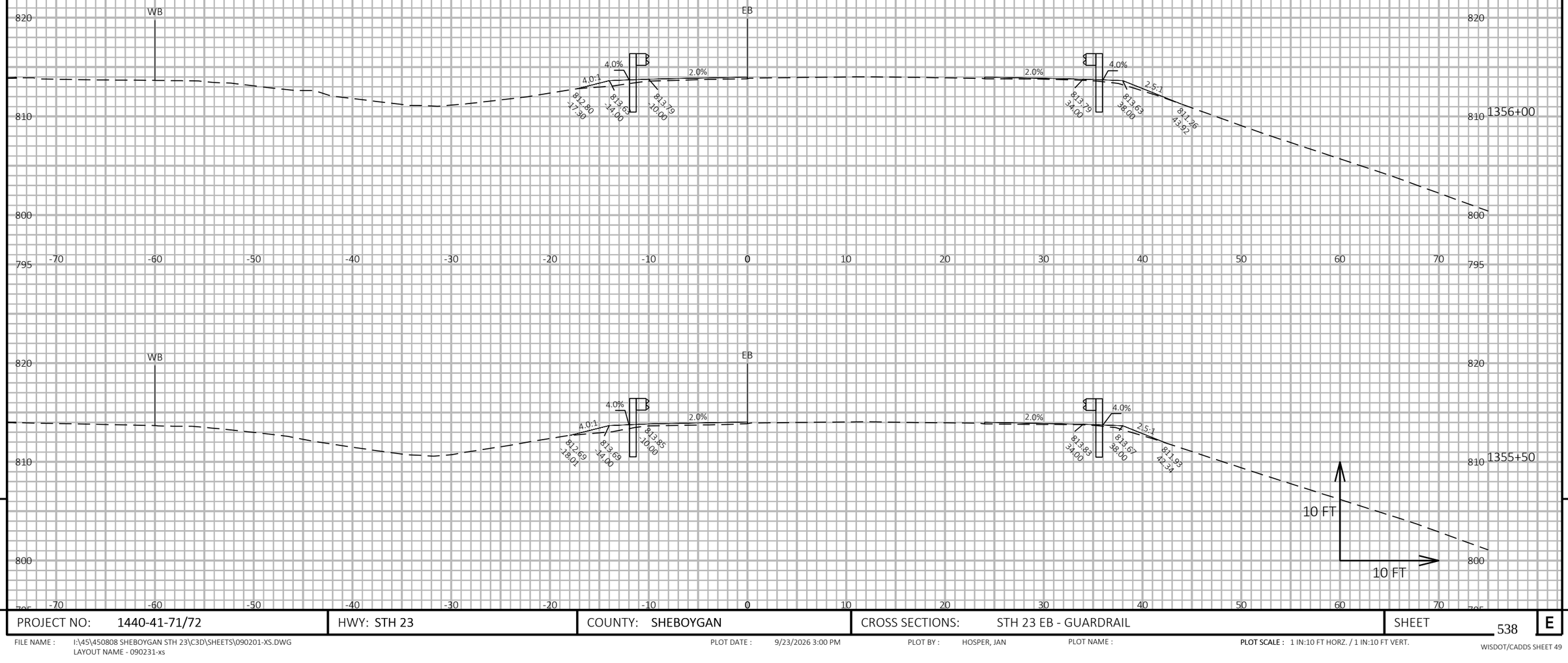
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 EB - GUARDRAIL	SHEET 537	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090201-XS.DWG
LAYOUT NAME - 090230-xs

PLOT DATE : 9/23/2026 3:00 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



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PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 EB - GUARDRAIL	SHEET 538	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090201-XS.DWG
LAYOUT NAME - 090231-xs

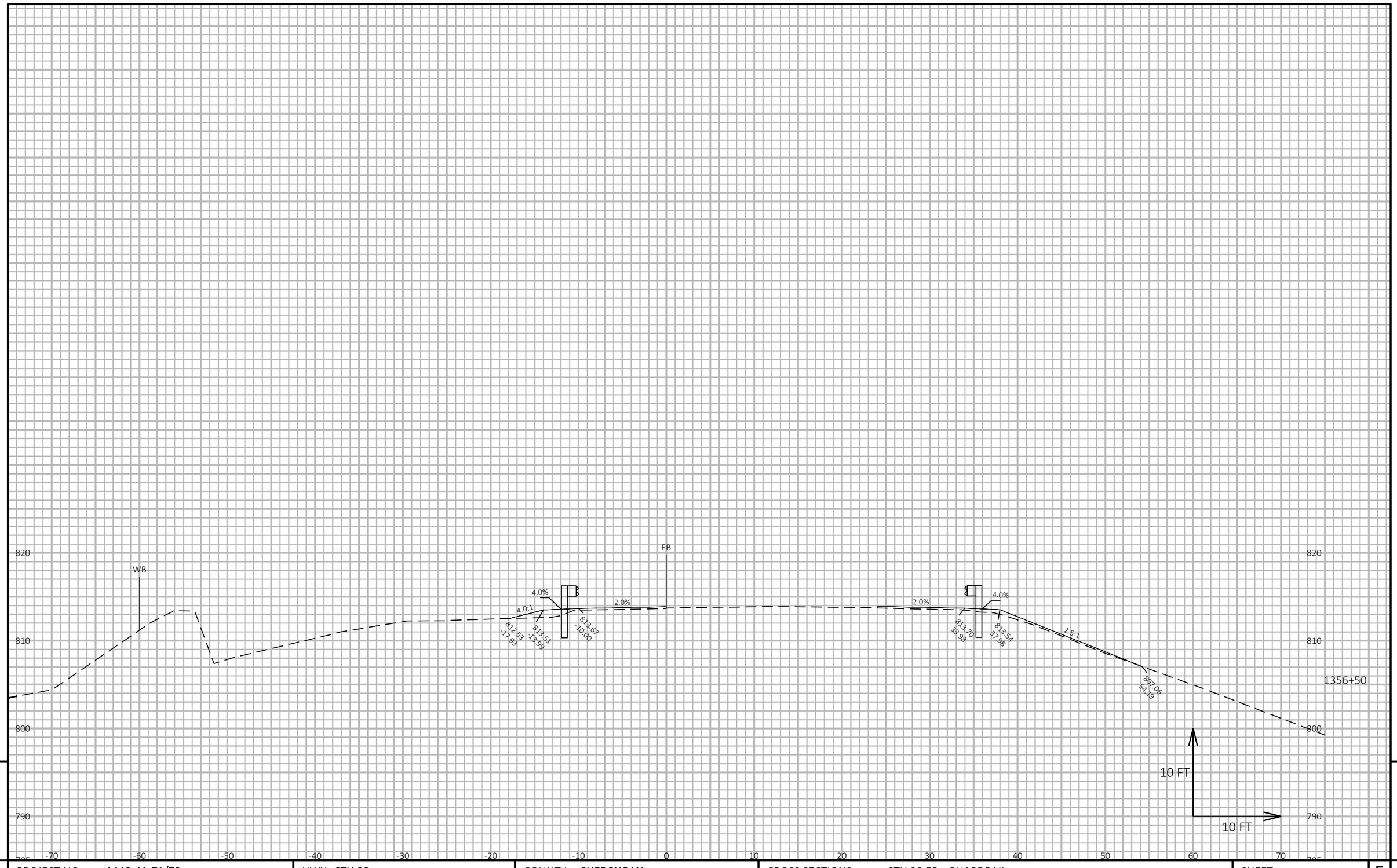
PLOT DATE : 9/23/2026 3:00 PM

PLOT BY : HOSPER, JAN

PLOT NAME :

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

WISDOT/CADDS SHEET 49



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PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 EB - GUARDRAIL	SHEET 539	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090201-XS.DWG
LAYOUT NAME - 090232-xs

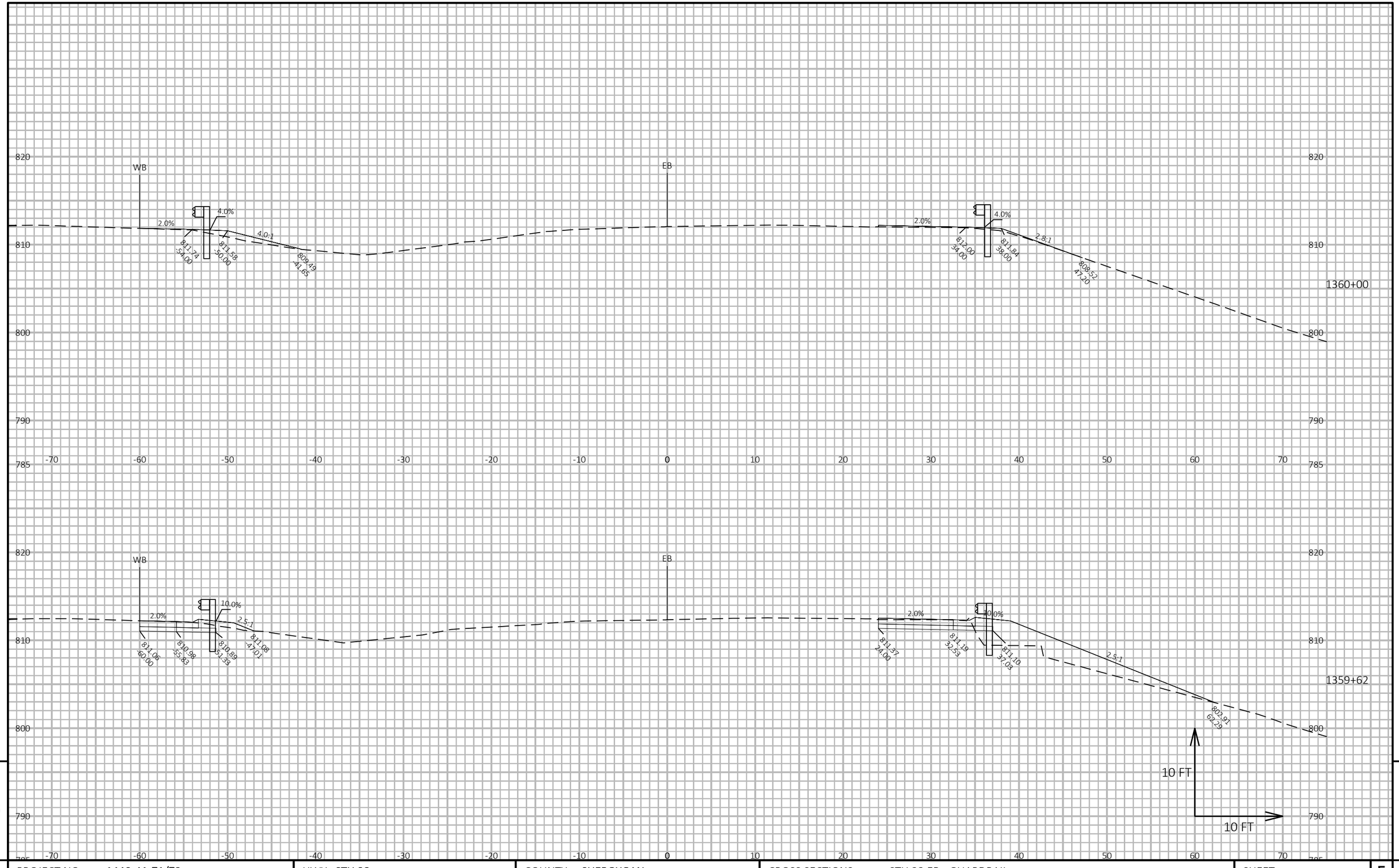
PLOT DATE : 9/23/2026 3:00 PM

PLOT BY : HOSPER, JAN

PLOT NAME :

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

WISDOT/CADDS SHEET 49



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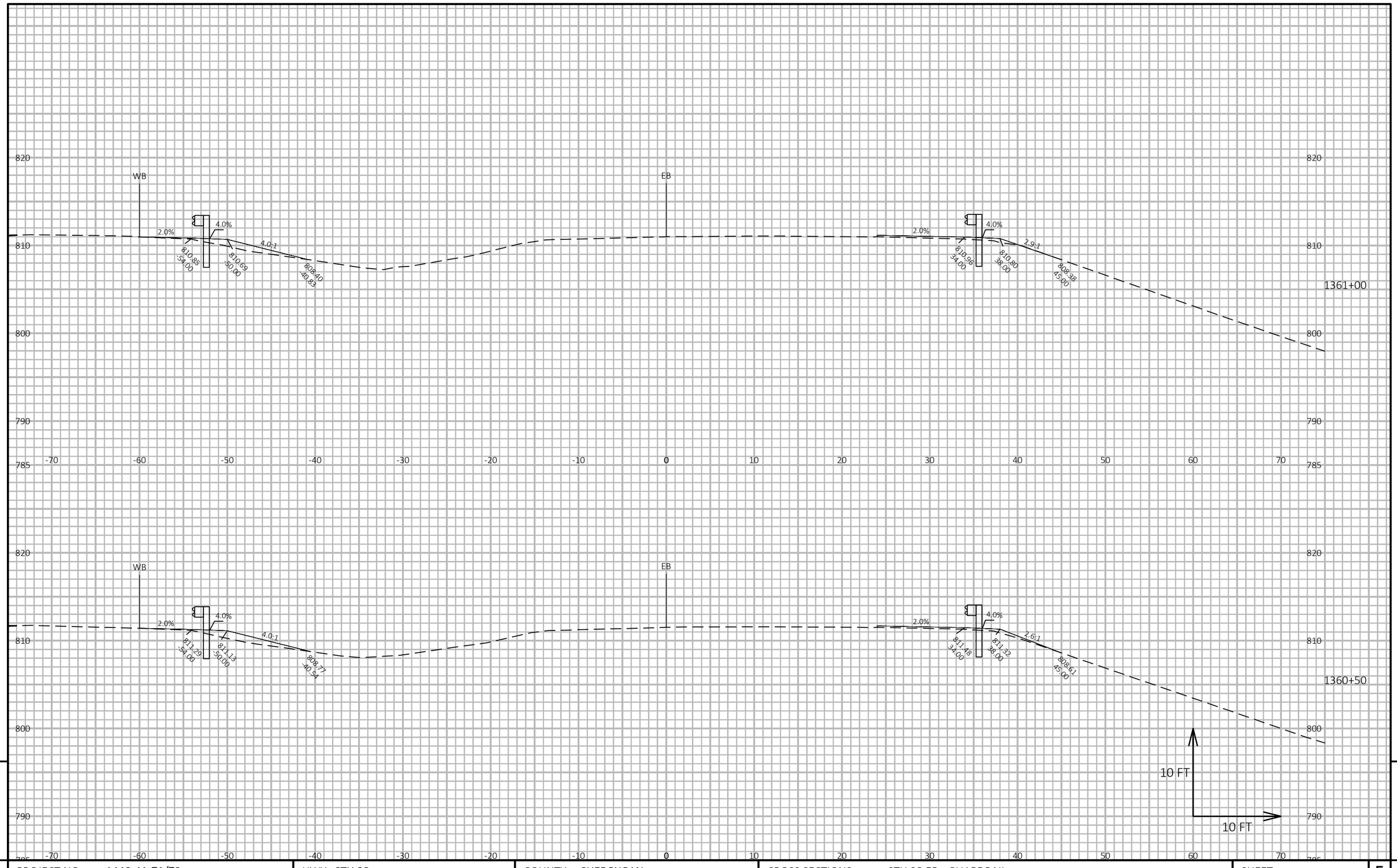
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 EB - GUARDRAIL	SHEET 540	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090201-XS.DWG
LAYOUT NAME - 090234-xs

PLOT DATE : 9/23/2026 3:00 PM PLOT BY : HOSPER, JAN PLOT NAME :

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

WISDOT/CADDS SHEET 49



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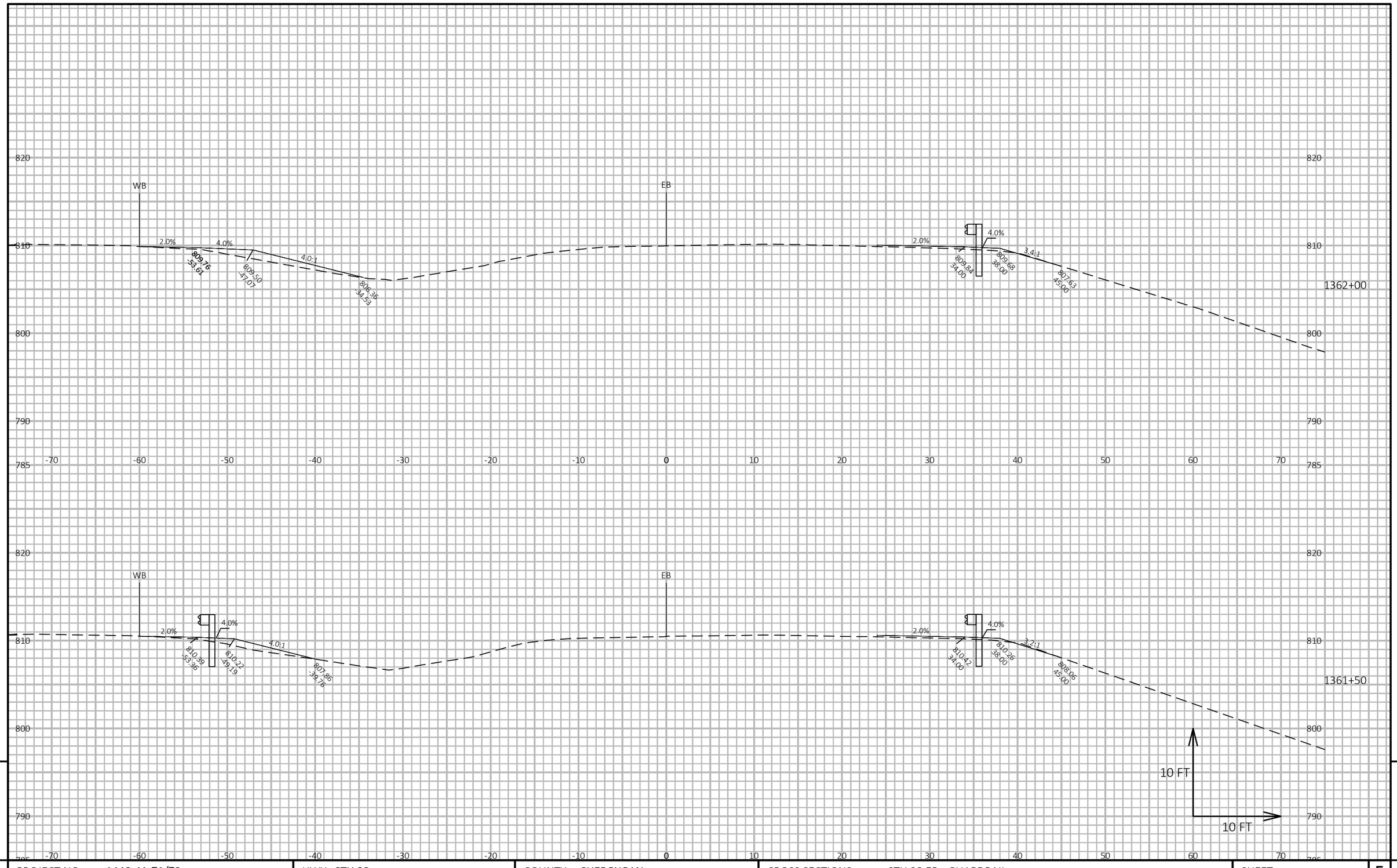
9

PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 EB - GUARDRAIL	SHEET 541	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090201-XS.DWG
LAYOUT NAME - 090235-xs

PLOT DATE : 9/23/2026 3:00 PM PLOT BY : HOSPER, JAN PLOT NAME :

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



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9

PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 EB - GUARDRAIL	SHEET 542	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090201-XS.DWG
LAYOUT NAME - 090236-xs

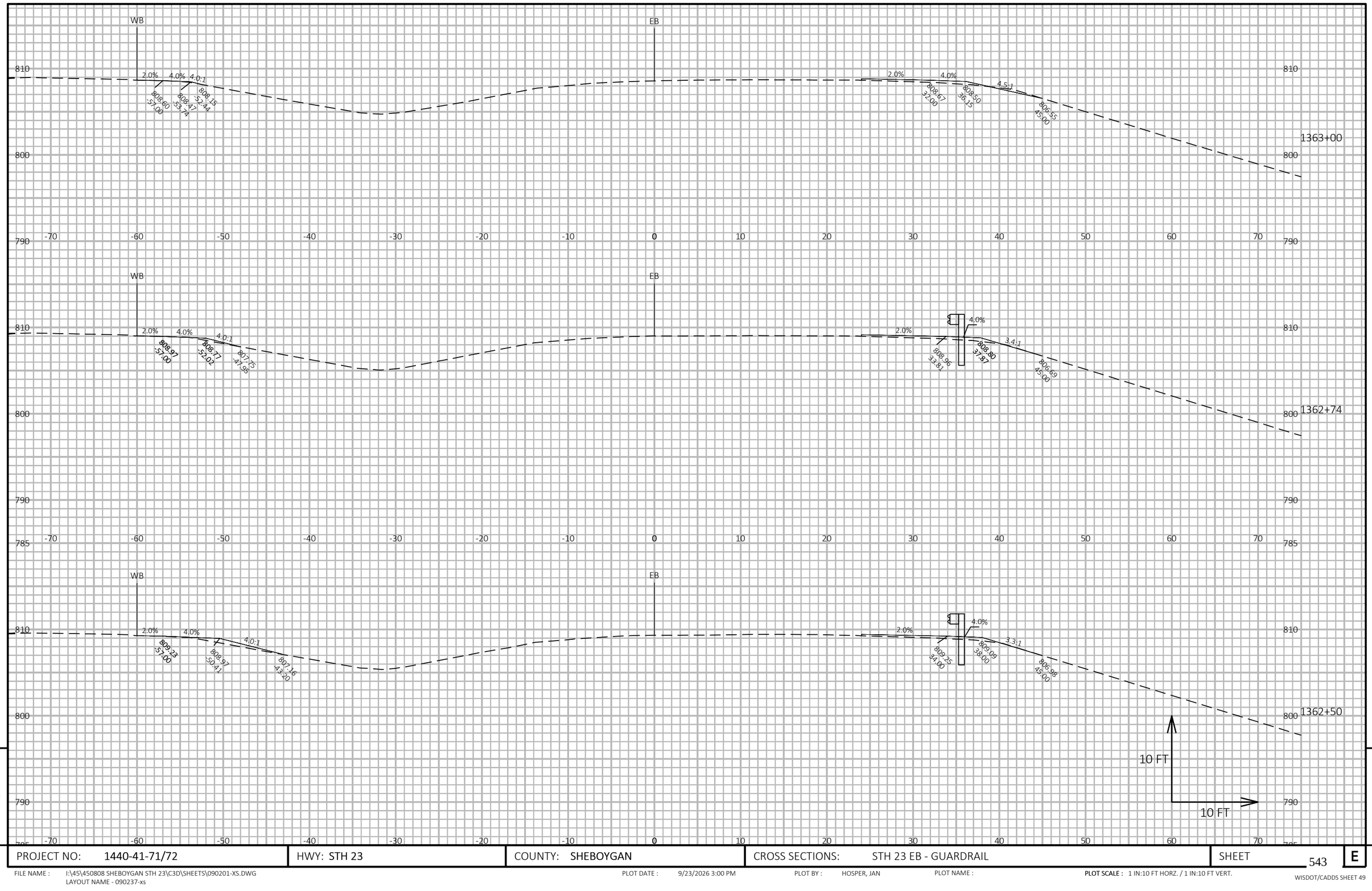
PLOT DATE : 9/23/2026 3:00 PM

PLOT BY : HOSPER, JAN

PLOT NAME :

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

WISDOT/CADDS SHEET 49



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PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 EB - GUARDRAIL	SHEET 543	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090201-XS.DWG
LAYOUT NAME - 090237-xs

PLOT DATE : 9/23/2026 3:00 PM PLOT BY : HOSPER, JAN PLOT NAME :

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

WISDOT/CADDS SHEET 49

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PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 EB - GUARDRAIL	SHEET 544	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090201-XS.DWG
LAYOUT NAME - 090239-xs

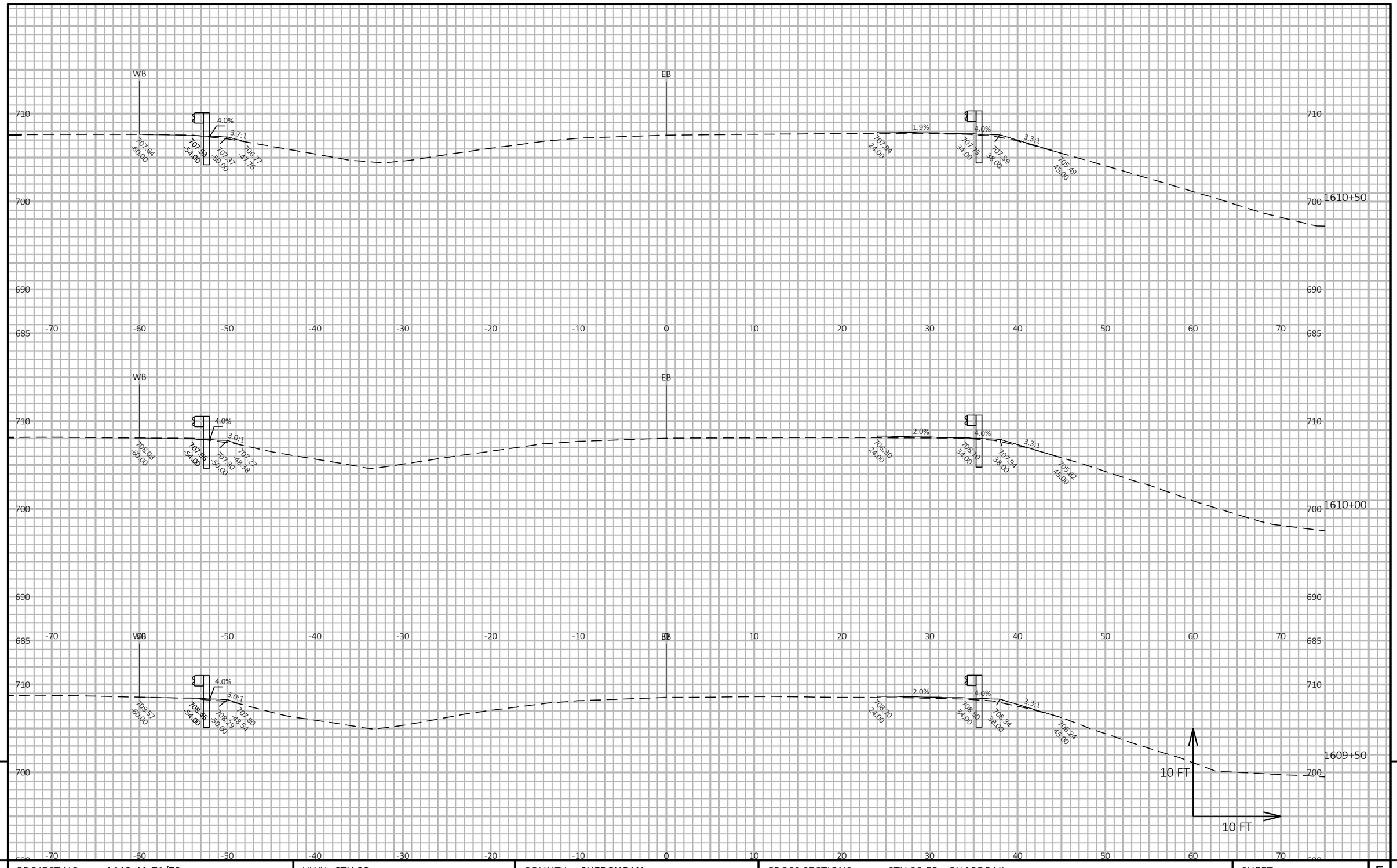
PLOT DATE : 9/23/2026 3:00 PM

PLOT BY : HOSPER, JAN

PLOT NAME :

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

WISDOT/CADDS SHEET 49



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PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 EB - GUARDRAIL	SHEET 545	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090201-XS.DWG
LAYOUT NAME - 090240-xs

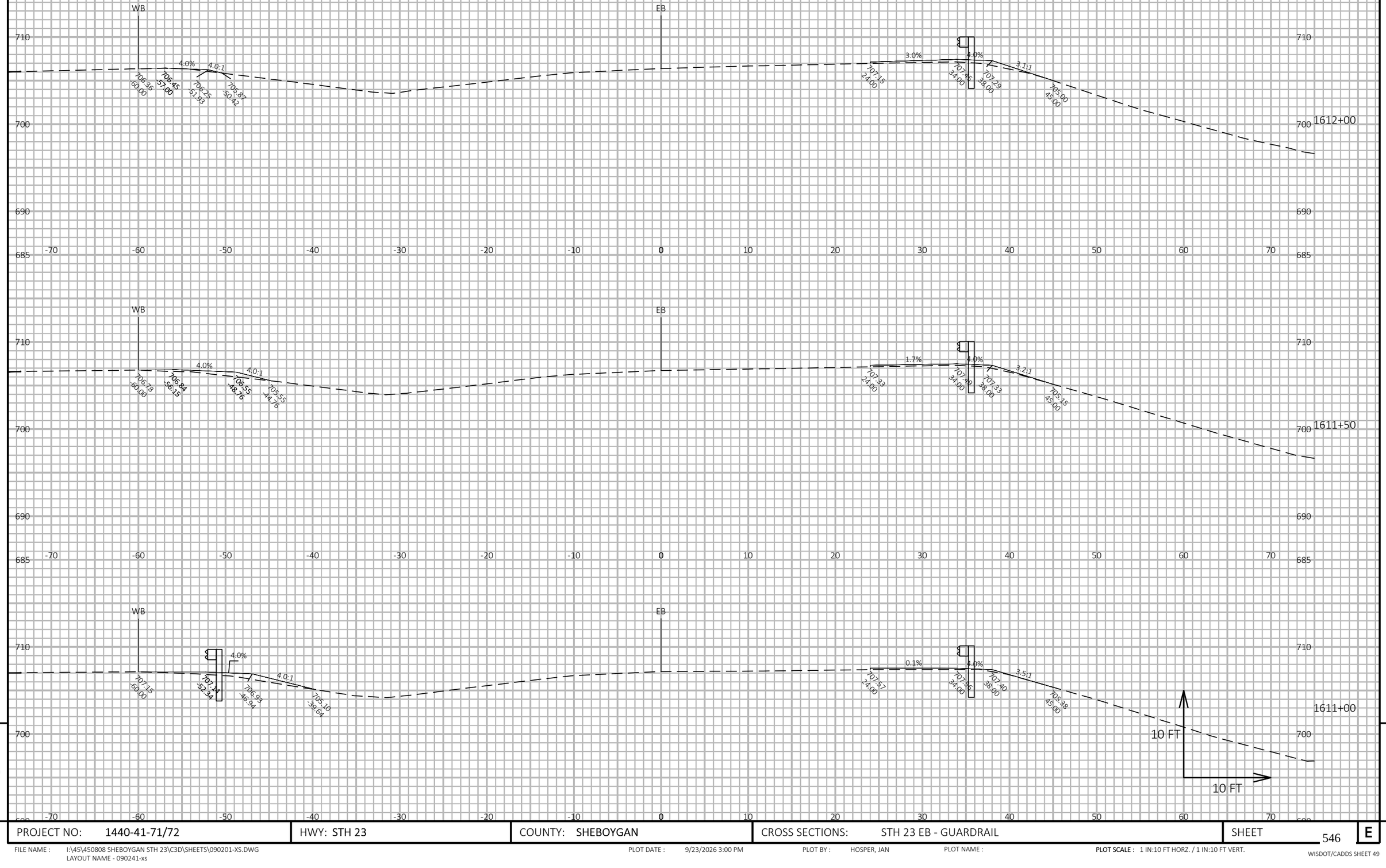
PLOT DATE : 9/23/2026 3:00 PM

PLOT BY : HOSPER, JAN

PLOT NAME :

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

WISDOT/CADDS SHEET 49



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PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 EB - GUARDRAIL	SHEET 546	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090201-XS.DWG
LAYOUT NAME - 090241-xs

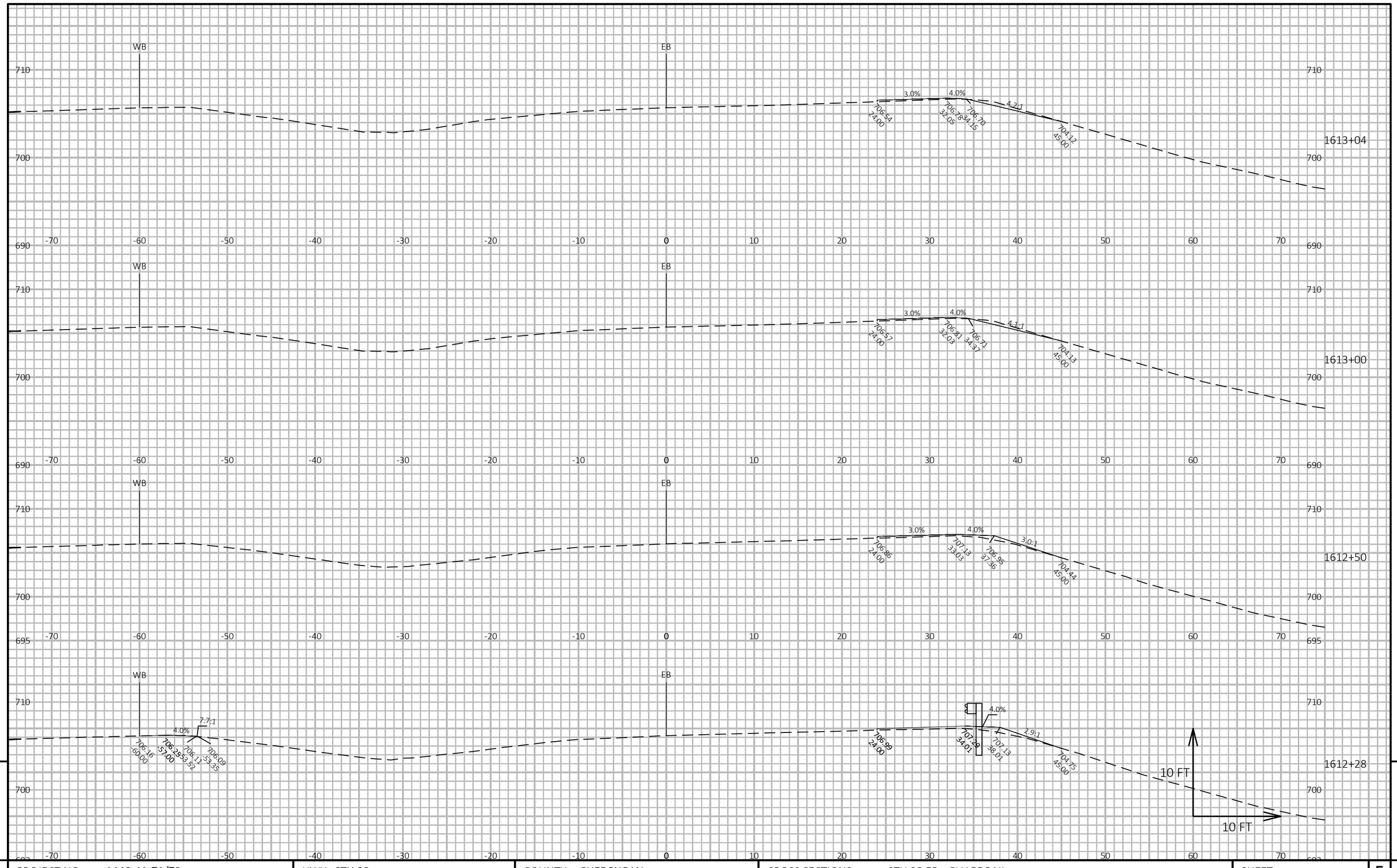
PLOT DATE : 9/23/2026 3:00 PM

PLOT BY : HOSPER, JAN

PLOT NAME :

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

WISDOT/CADDS SHEET 49



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PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 EB - GUARDRAIL	SHEET 547	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090201-XS.DWG
LAYOUT NAME - 090242-xs

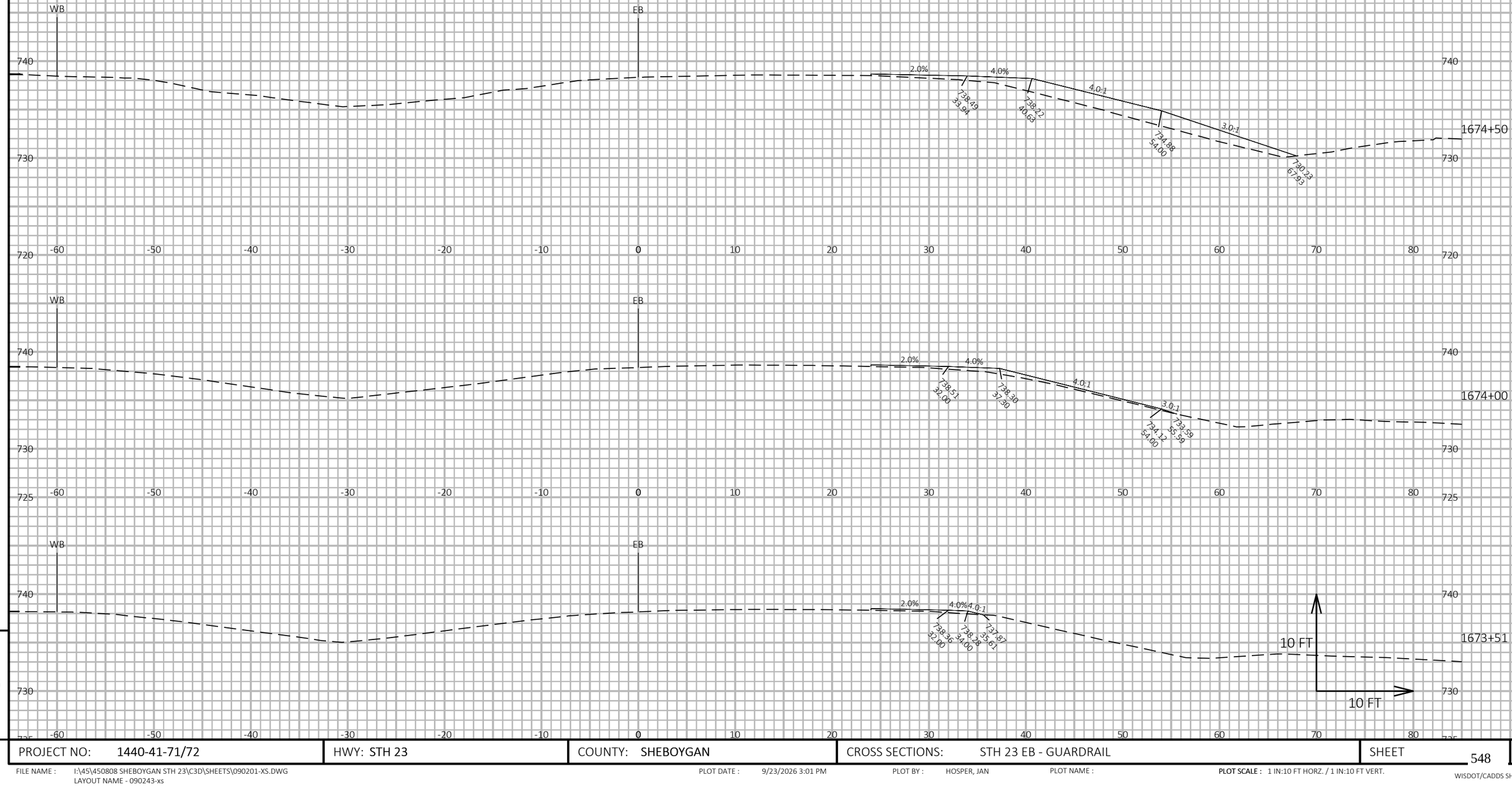
PLOT DATE : 9/23/2026 3:01 PM

PLOT BY : HOSPER, JAN

PLOT NAME :

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

WISDOT/CADDS SHEET 49



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PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 EB - GUARDRAIL	SHEET 548	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090201-XS.DWG
LAYOUT NAME - 090243-xs

PLOT DATE : 9/23/2026 3:01 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

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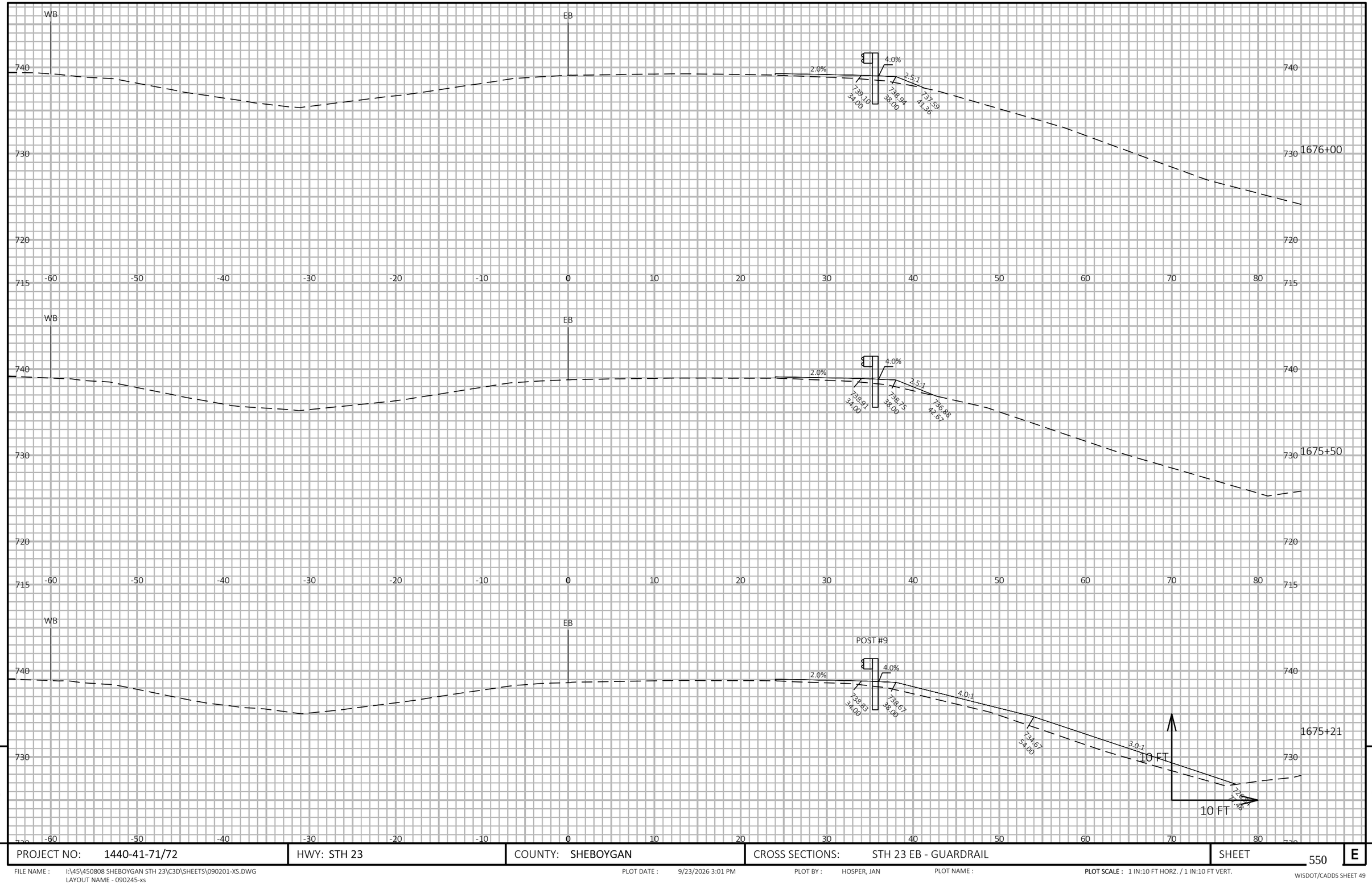
9

PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 EB - GUARDRAIL	SHEET 549	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090201-XS.DWG
LAYOUT NAME - 090244-xs

PLOT DATE : 9/23/2026 3:01 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



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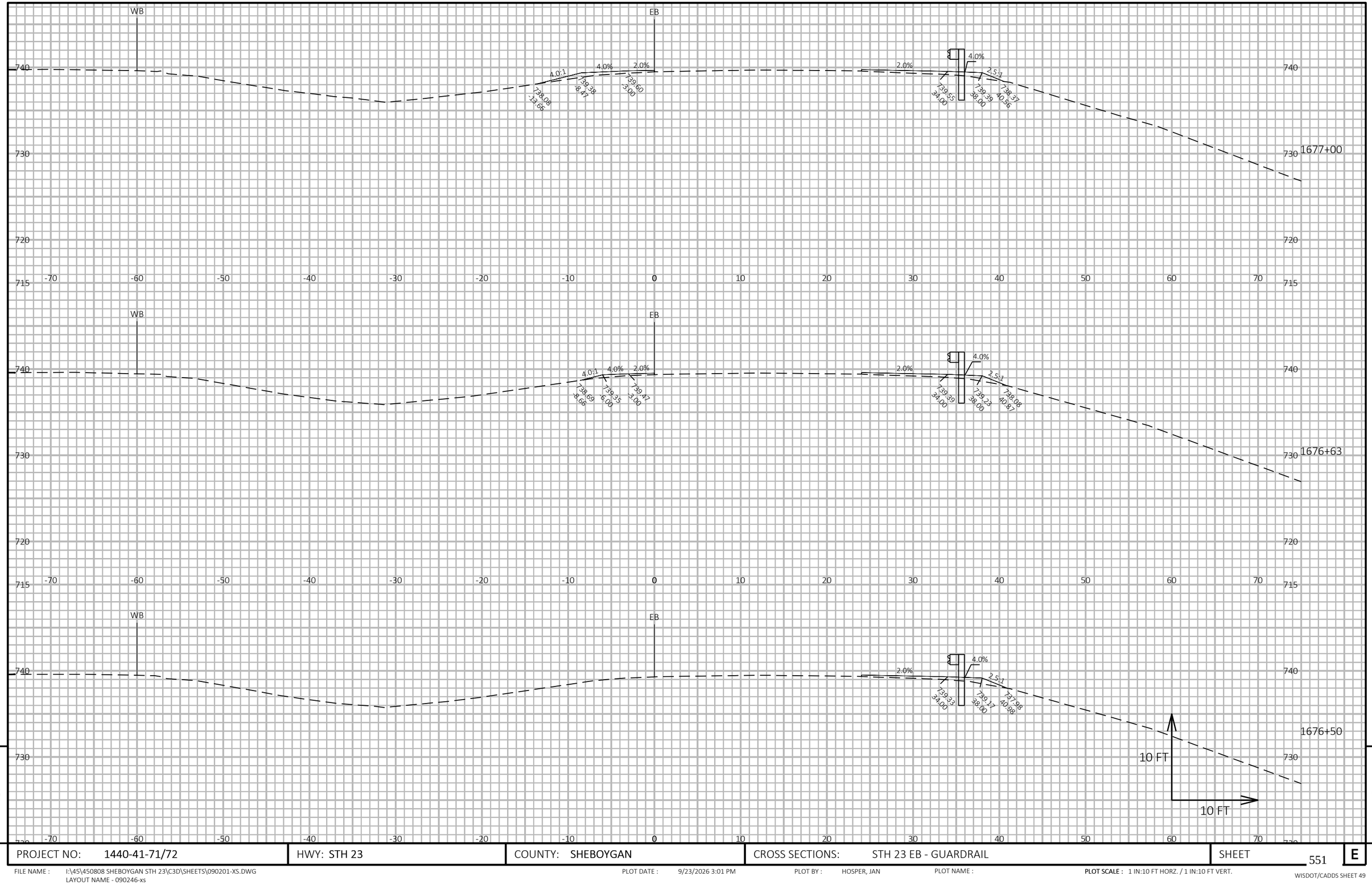
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 EB - GUARDRAIL	SHEET 550	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090201-XS.DWG
LAYOUT NAME - 090245-xs

PLOT DATE : 9/23/2026 3:01 PM PLOT BY : HOSPER, JAN PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



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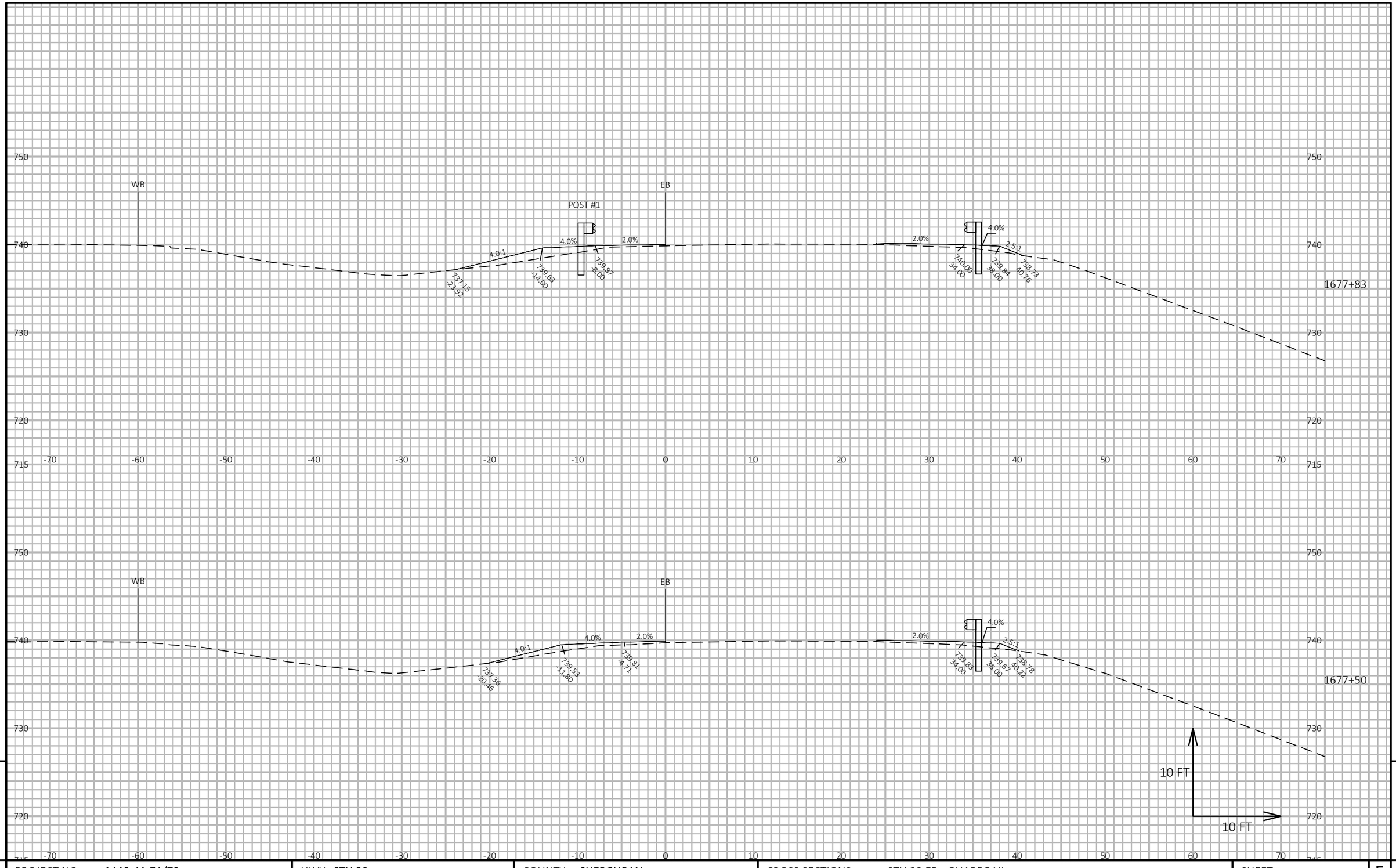
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 EB - GUARDRAIL	SHEET 551	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090201-XS.DWG
LAYOUT NAME - 090246-xs

PLOT DATE : 9/23/2026 3:01 PM PLOT BY : HOSPER, JAN PLOT NAME :

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

WISDOT/CADDS SHEET 49



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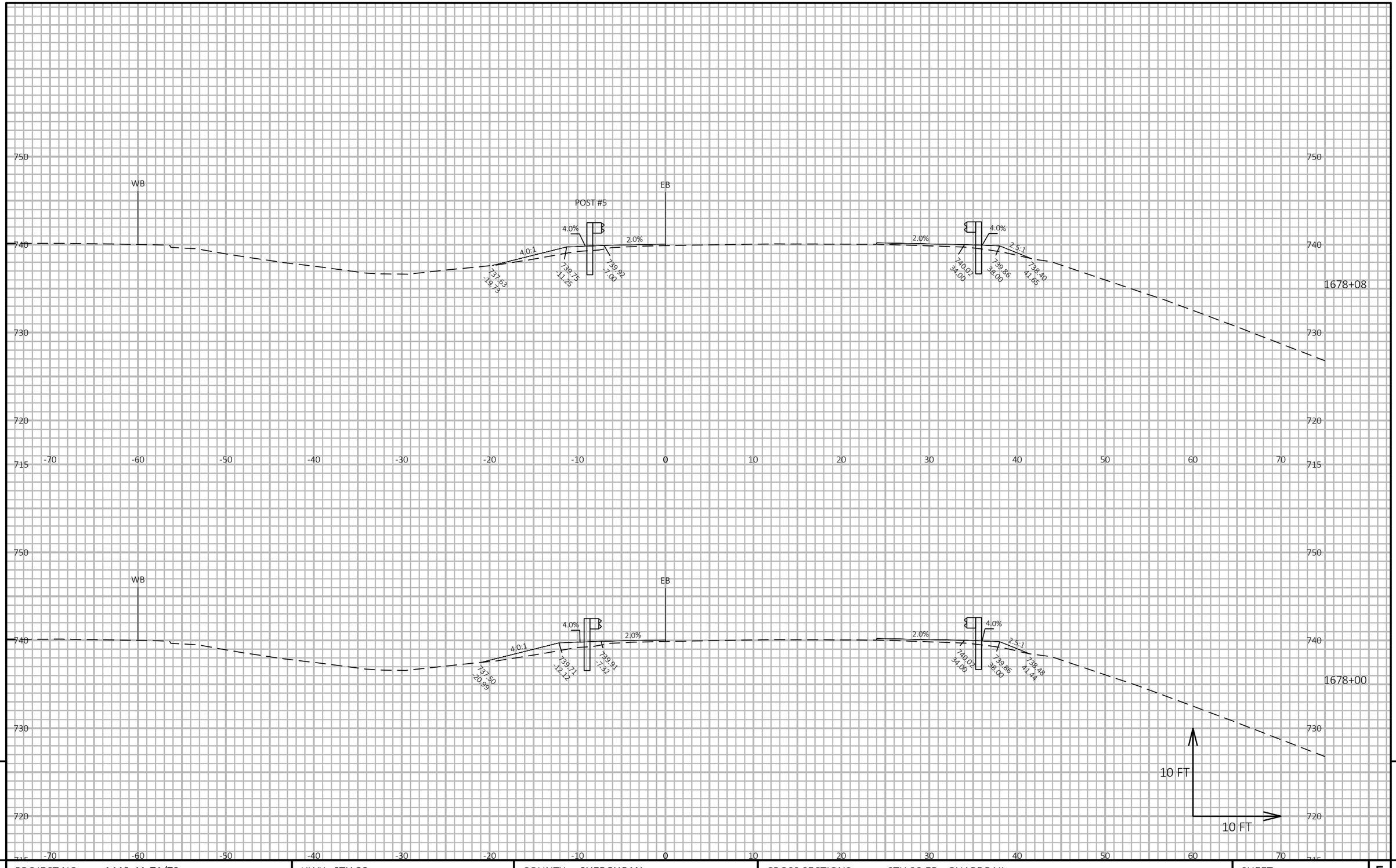
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 EB - GUARDRAIL	SHEET 552	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090201-XS.DWG
LAYOUT NAME - 090247-xs

PLOT DATE : 9/23/2026 3:01 PM PLOT BY : HOSPER, JAN PLOT NAME :

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

WISDOT/CADDS SHEET 49



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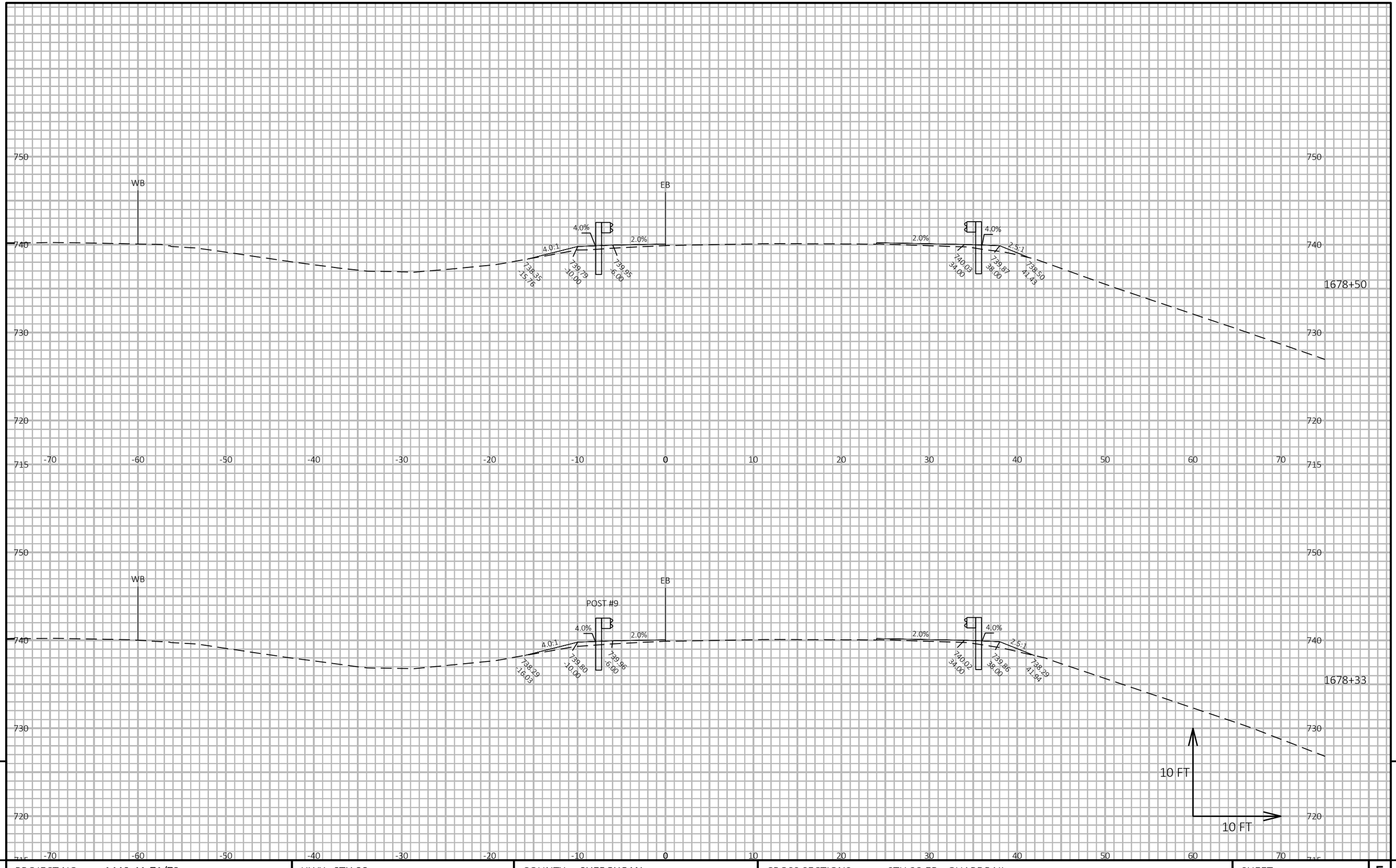
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 EB - GUARDRAIL	SHEET 553	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090201-XS.DWG
LAYOUT NAME - 090248-xs

PLOT DATE : 9/23/2026 3:01 PM PLOT BY : HOSPER, JAN PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



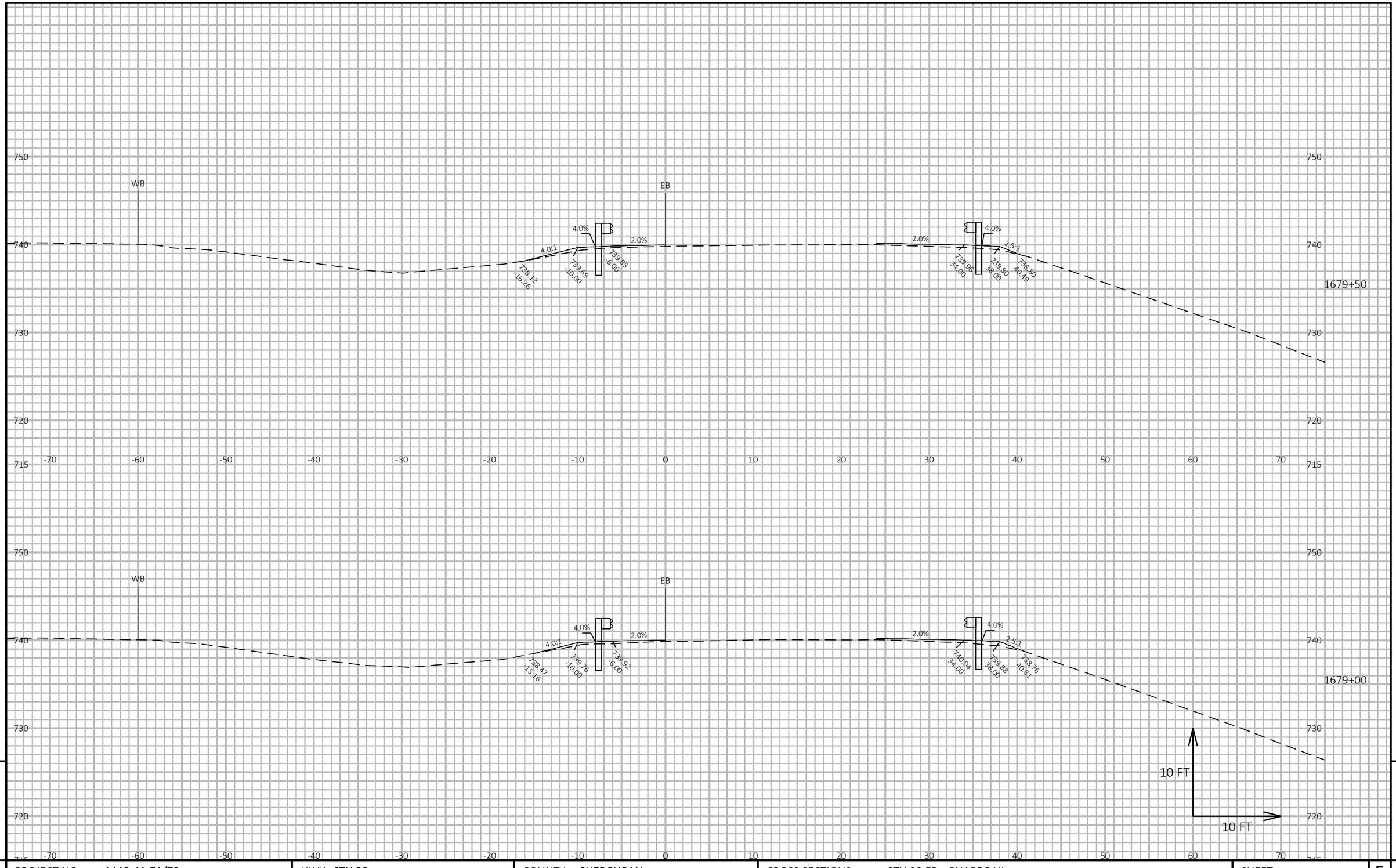
9 9

PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 EB - GUARDRAIL	SHEET 554	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090201-XS.DWG
LAYOUT NAME - 090249-xs

PLOT DATE : 9/23/2026 3:01 PM PLOT BY : HOSPER, JAN PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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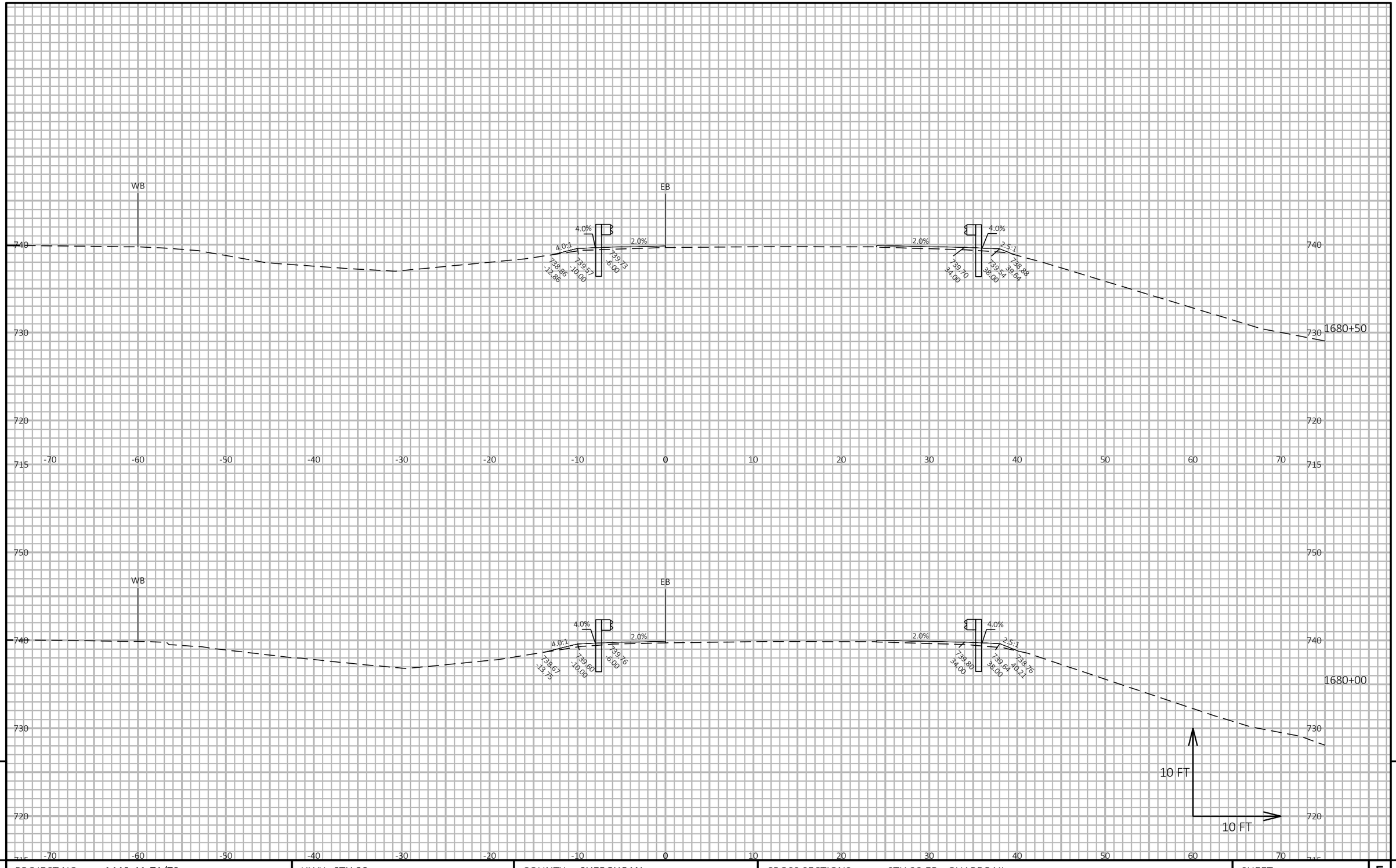
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 EB - GUARDRAIL	SHEET 555	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090201-XS.DWG
LAYOUT NAME - 090250-xs

PLOT DATE : 9/23/2026 3:01 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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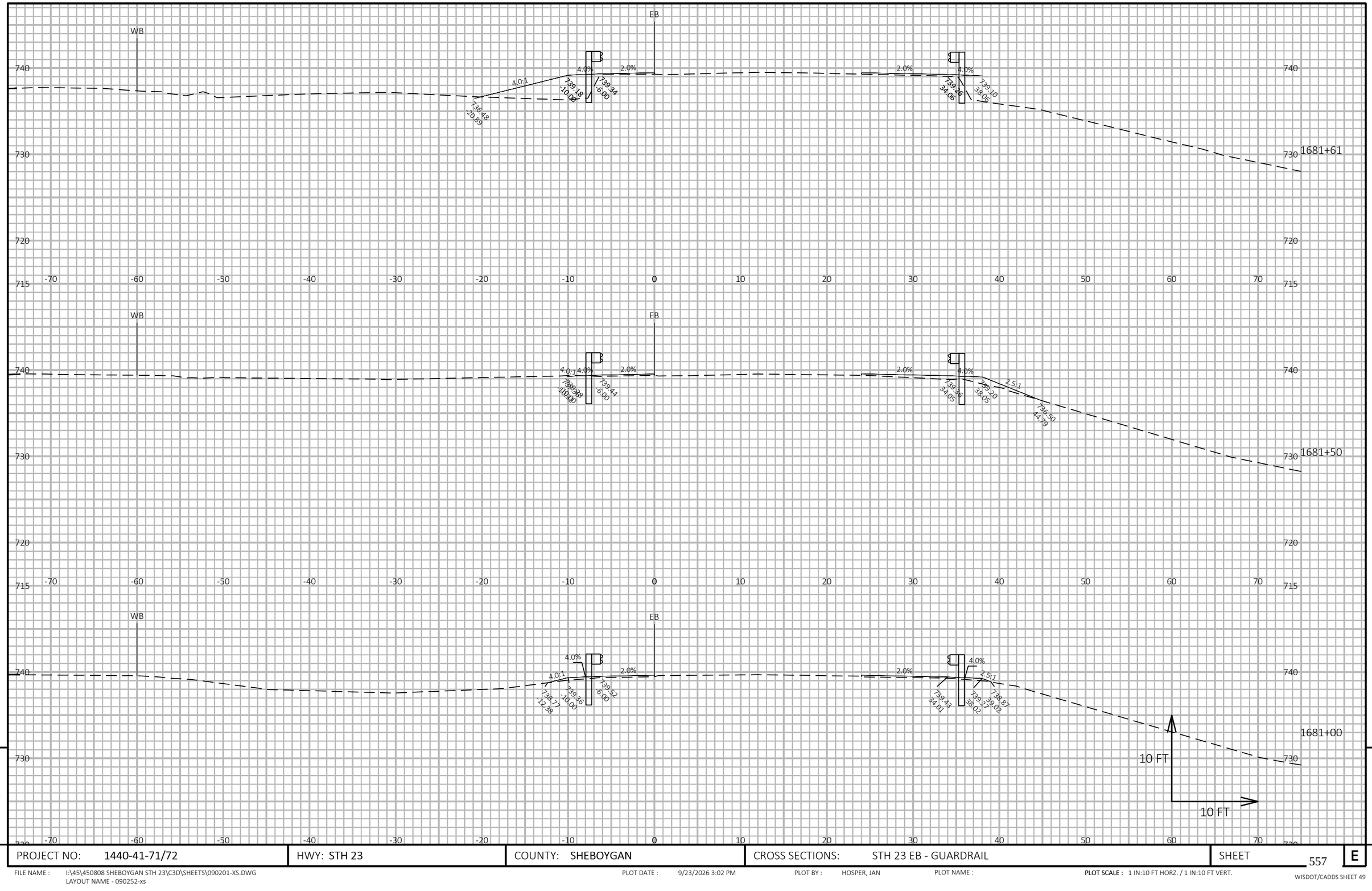
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 EB - GUARDRAIL	SHEET 556	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090201-XS.DWG
LAYOUT NAME - 090251-xs

PLOT DATE : 9/23/2026 3:01 PM PLOT BY : HOSPER, JAN PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 EB - GUARDRAIL	SHEET 557	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090201-XS.DWG
LAYOUT NAME - 090252-xs

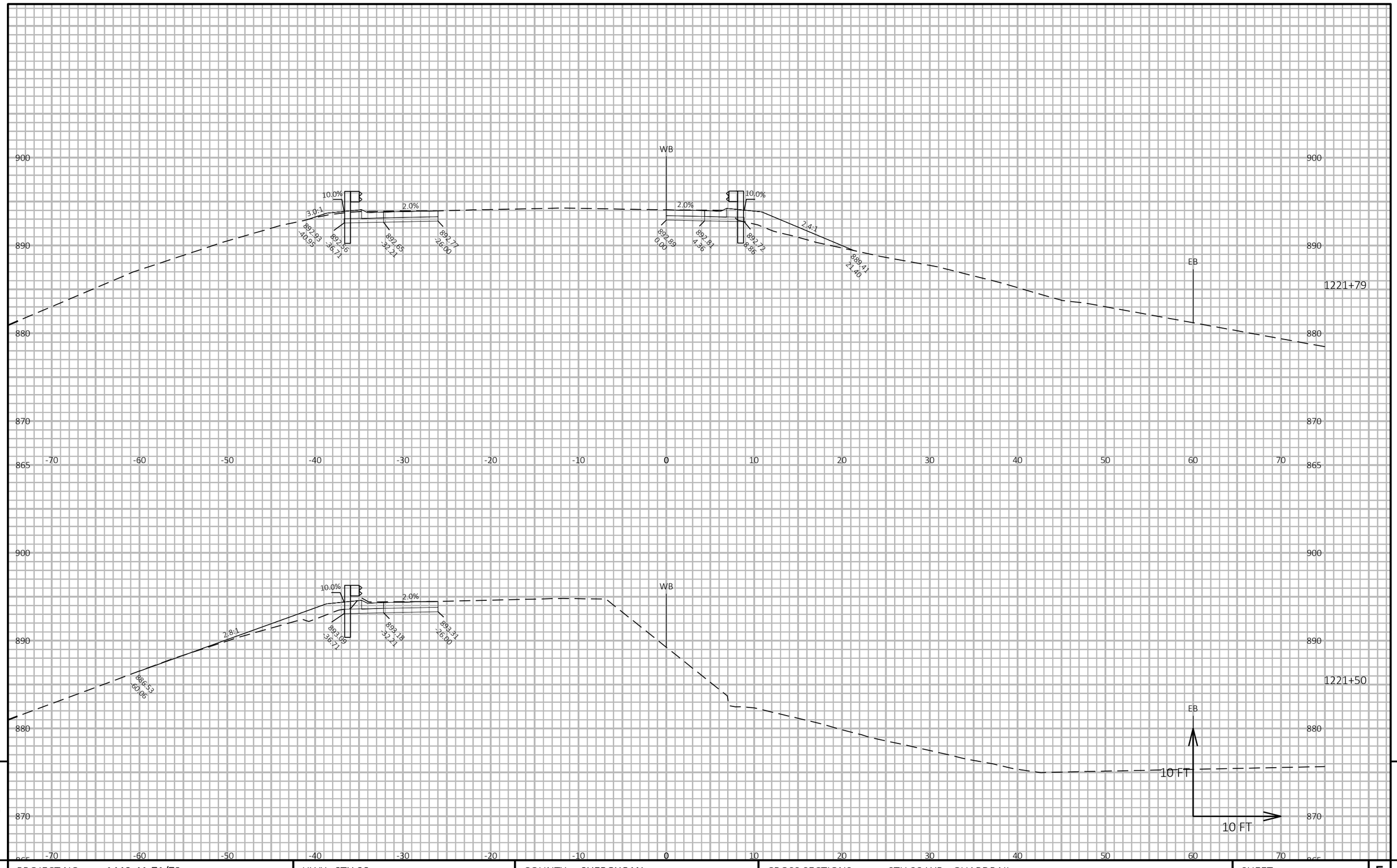
PLOT DATE : 9/23/2026 3:02 PM

PLOT BY : HOSPER, JAN

PLOT NAME :

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

WISDOT/CADDS SHEET 49



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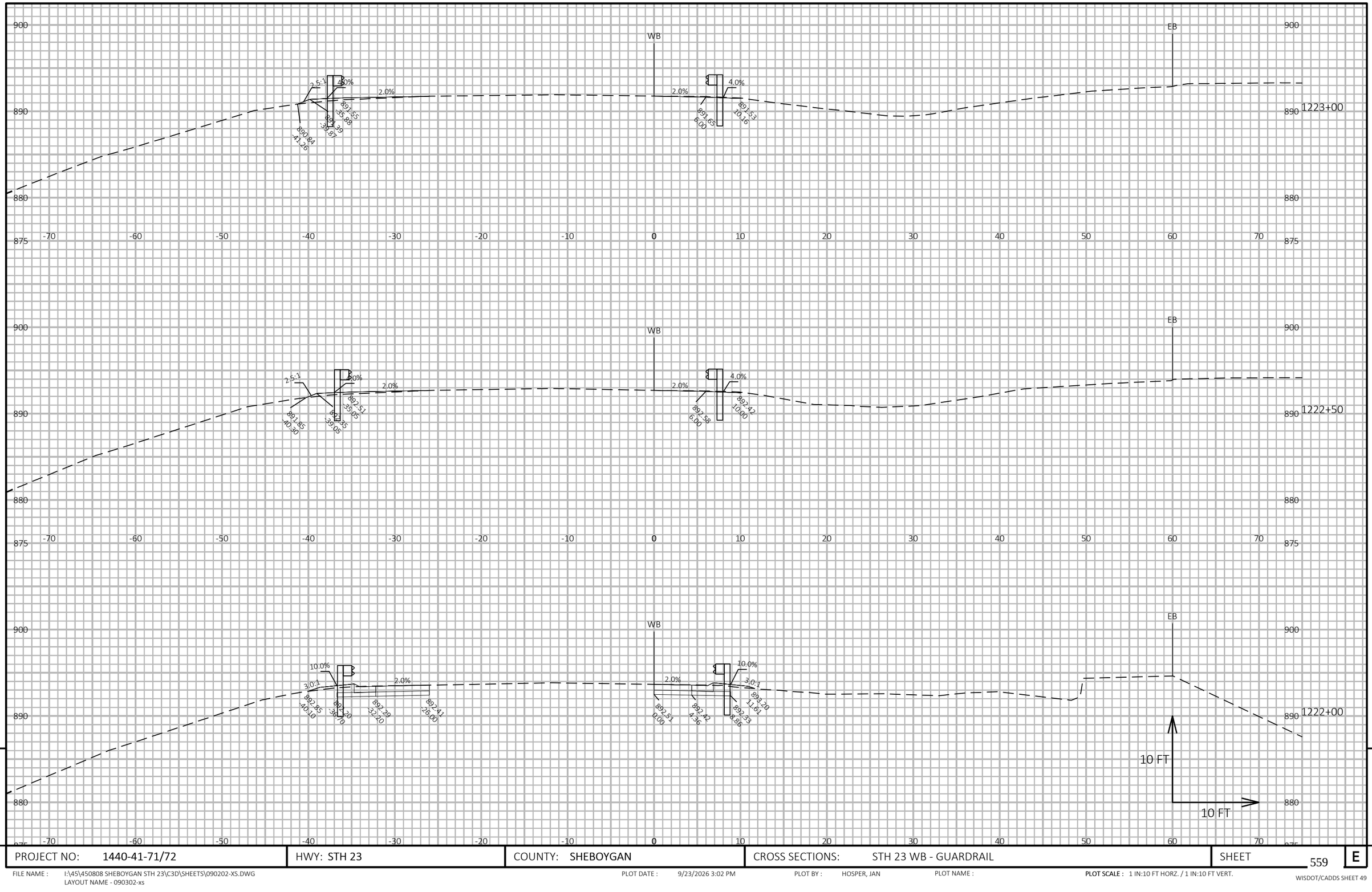
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 WB - GUARDRAIL	SHEET 558	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090202-XS.DWG
LAYOUT NAME - 090301-xs

PLOT DATE : 9/23/2026 3:02 PM PLOT BY : HOSPER, JAN PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



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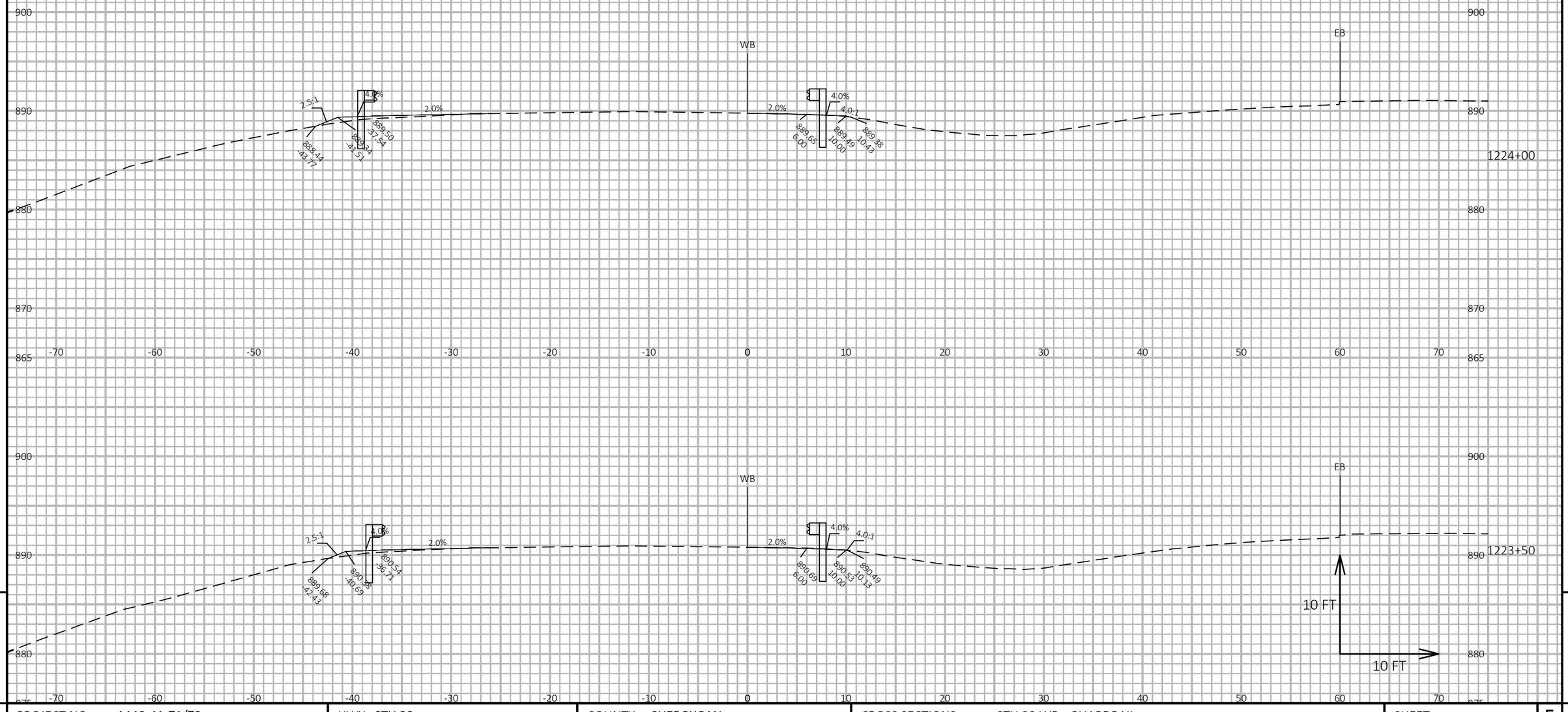
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 WB - GUARDRAIL	SHEET 559	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090202-XS.DWG
LAYOUT NAME - 090302-xs

PLOT DATE : 9/23/2026 3:02 PM PLOT BY : HOSPER, JAN PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 WB - GUARDRAIL	SHEET 560	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090202-XS.DWG
LAYOUT NAME - 090303-xs

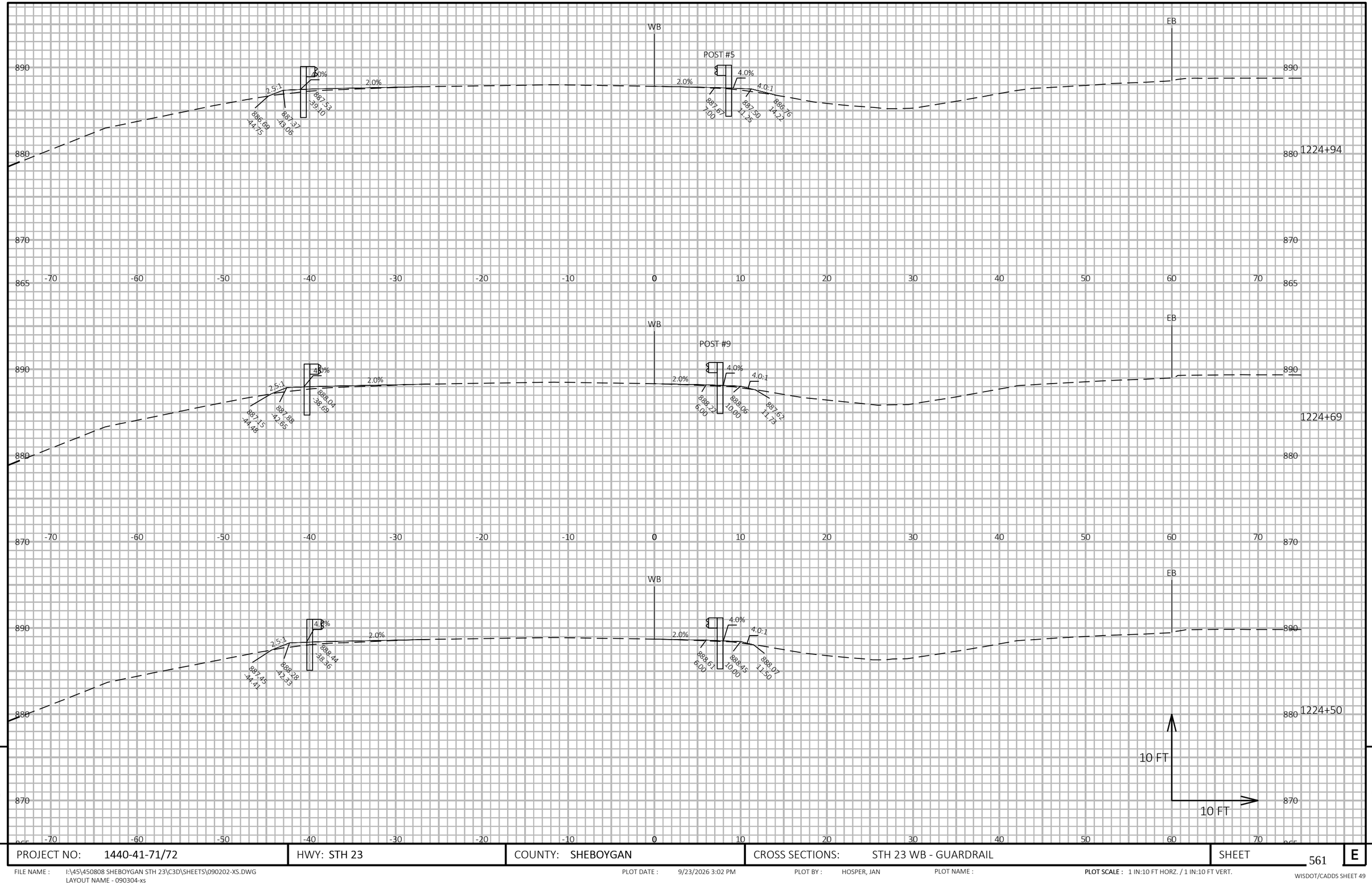
PLOT DATE : 9/23/2026 3:02 PM

PLOT BY : HOSPER, JAN

PLOT NAME :

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

WISDOT/CADDS SHEET 49



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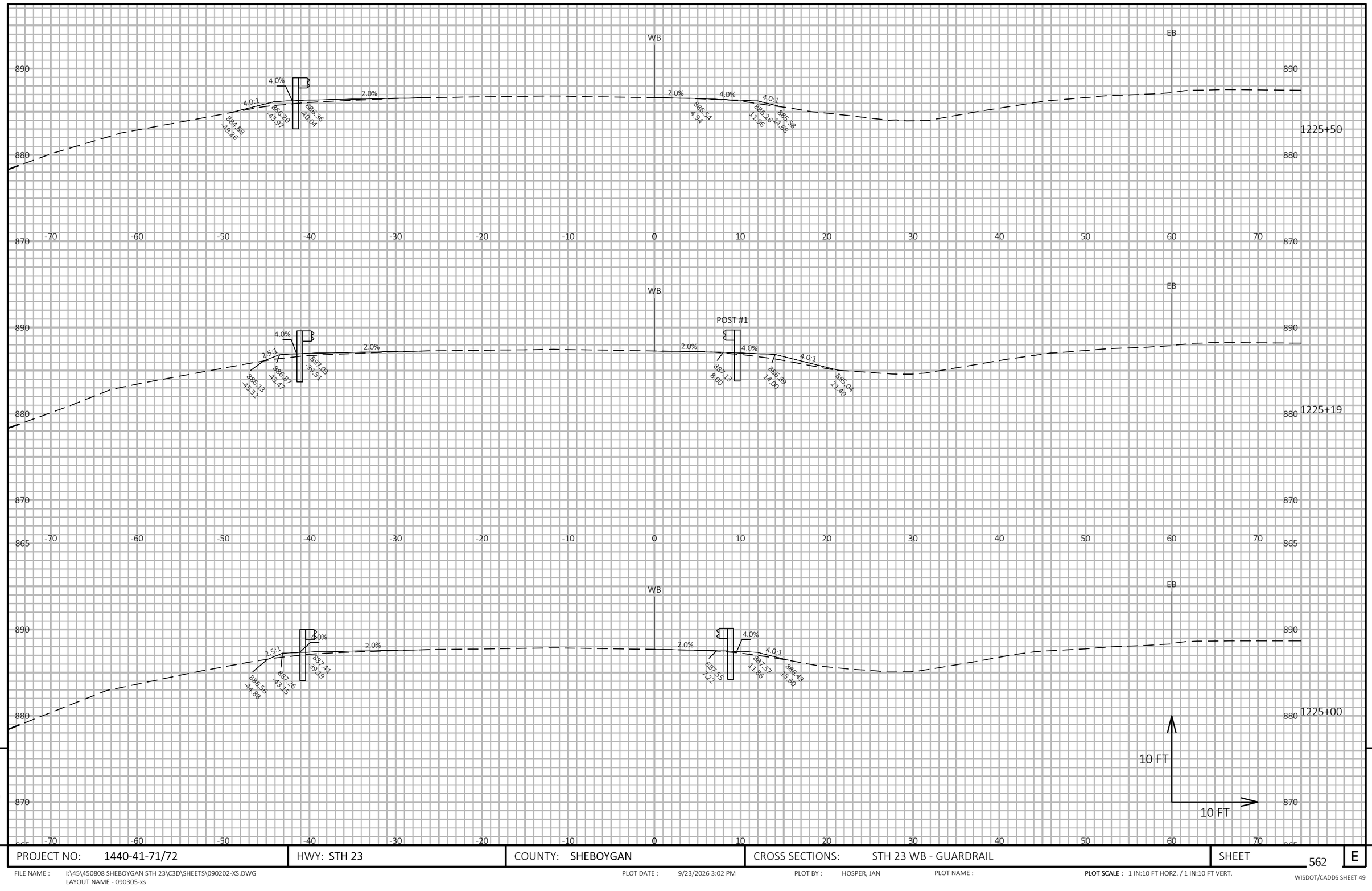
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 WB - GUARDRAIL	SHEET 561	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090202-XS.DWG
LAYOUT NAME - 090304-xs

PLOT DATE : 9/23/2026 3:02 PM PLOT BY : HOSPER, JAN PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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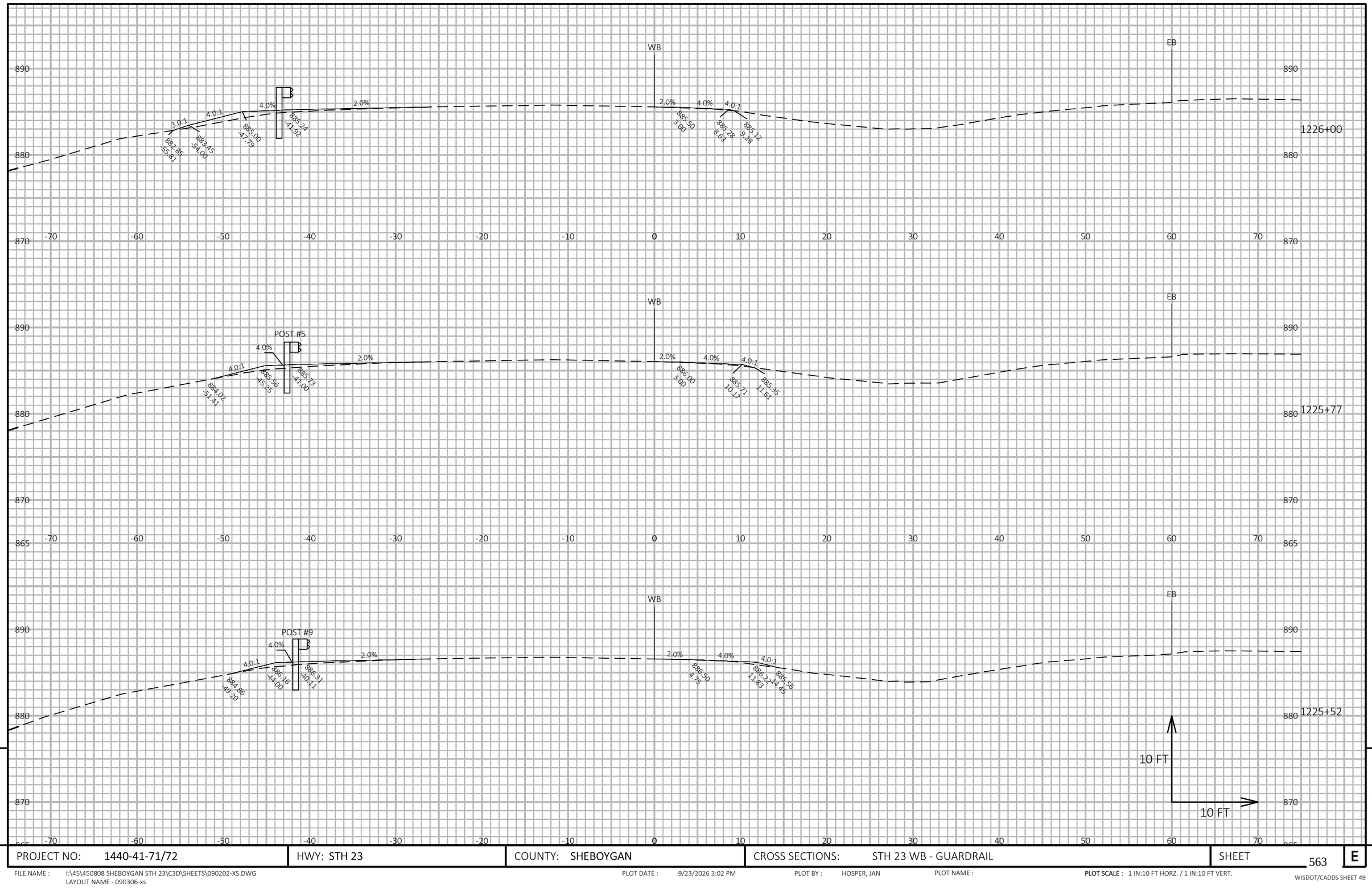
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 WB - GUARDRAIL	SHEET 562	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090202-XS.DWG
LAYOUT NAME - 090305-xs

PLOT DATE : 9/23/2026 3:02 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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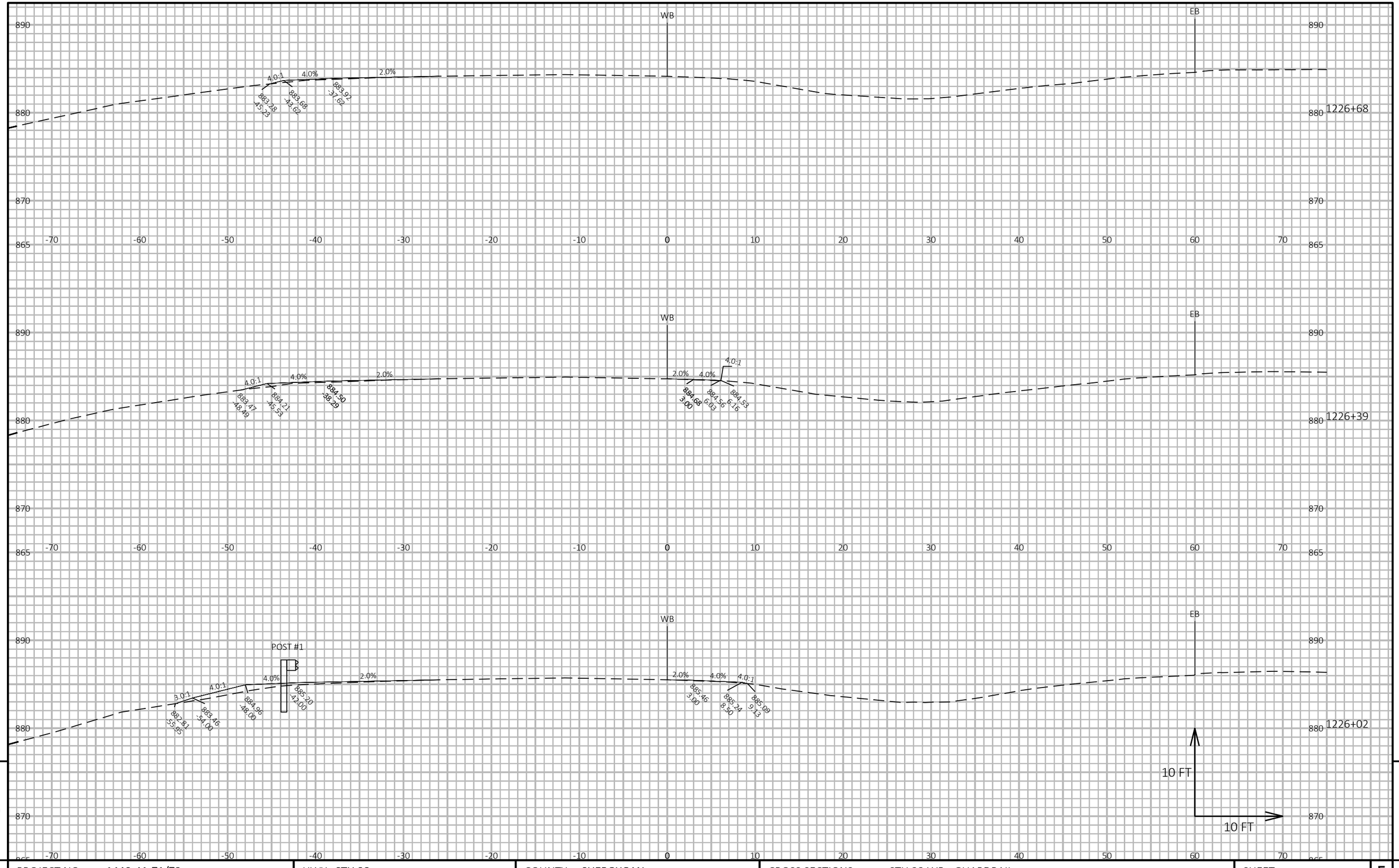
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 WB - GUARDRAIL	SHEET 563	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090202-XS.DWG
LAYOUT NAME - 090306-xs

PLOT DATE : 9/23/2026 3:02 PM PLOT BY : HOSPER, JAN PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

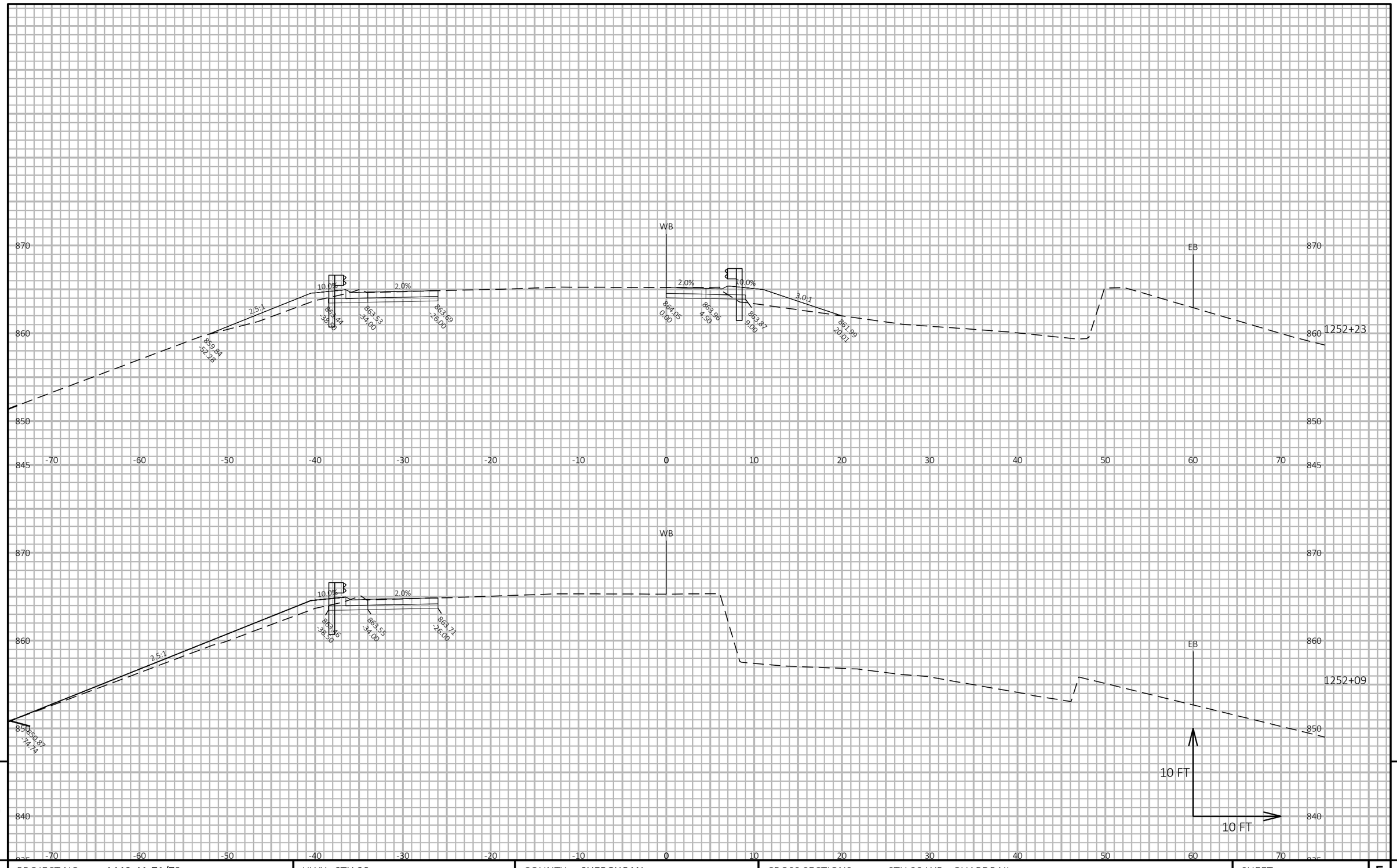


PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 WB - GUARDRAIL	SHEET 564	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090202-XS.DWG
LAYOUT NAME - 090307-xs

PLOT DATE : 9/23/2026 3:03 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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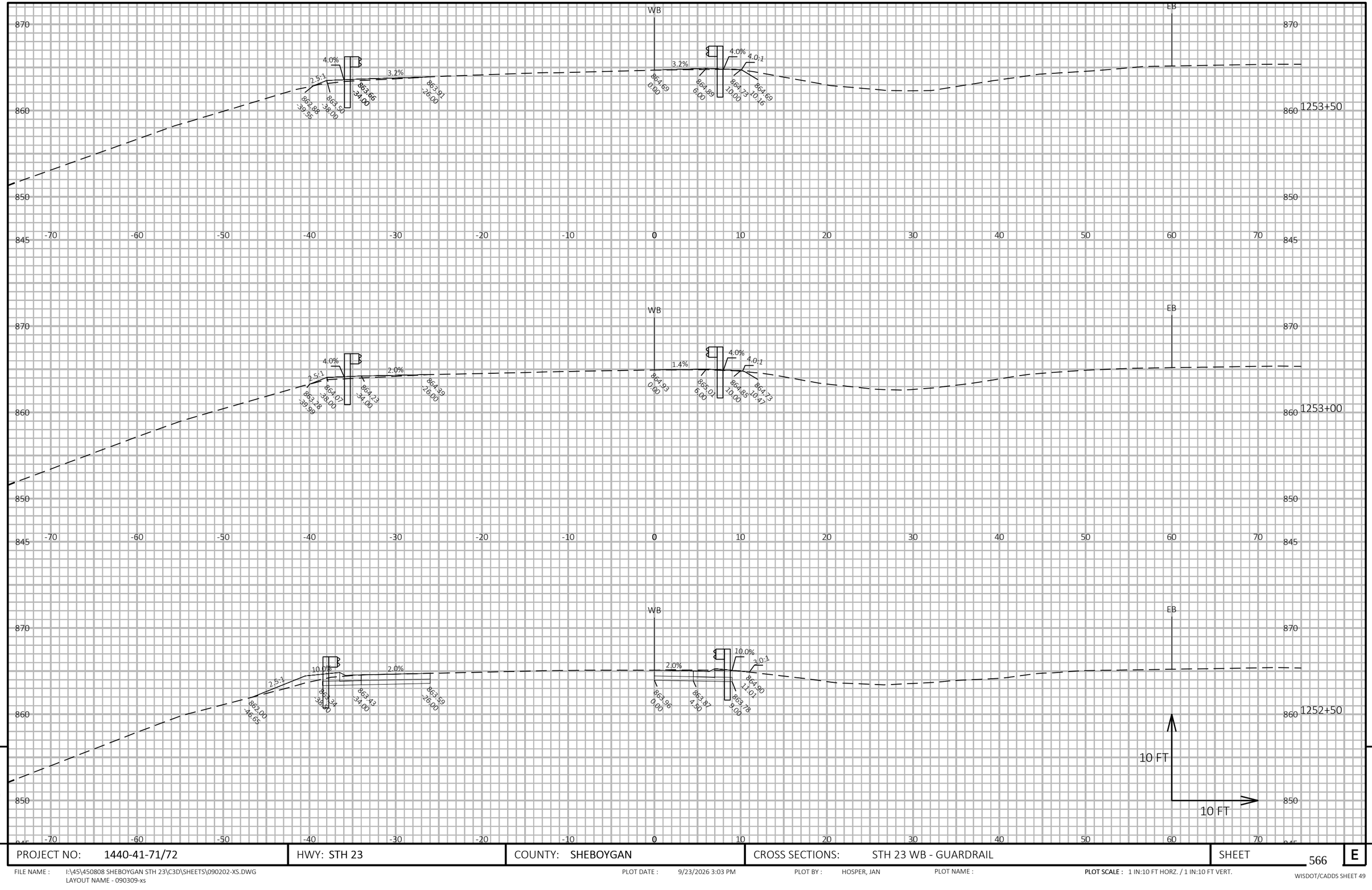
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 WB - GUARDRAIL	SHEET 565	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090202-XS.DWG
LAYOUT NAME - 090308-xs

PLOT DATE : 9/23/2026 3:03 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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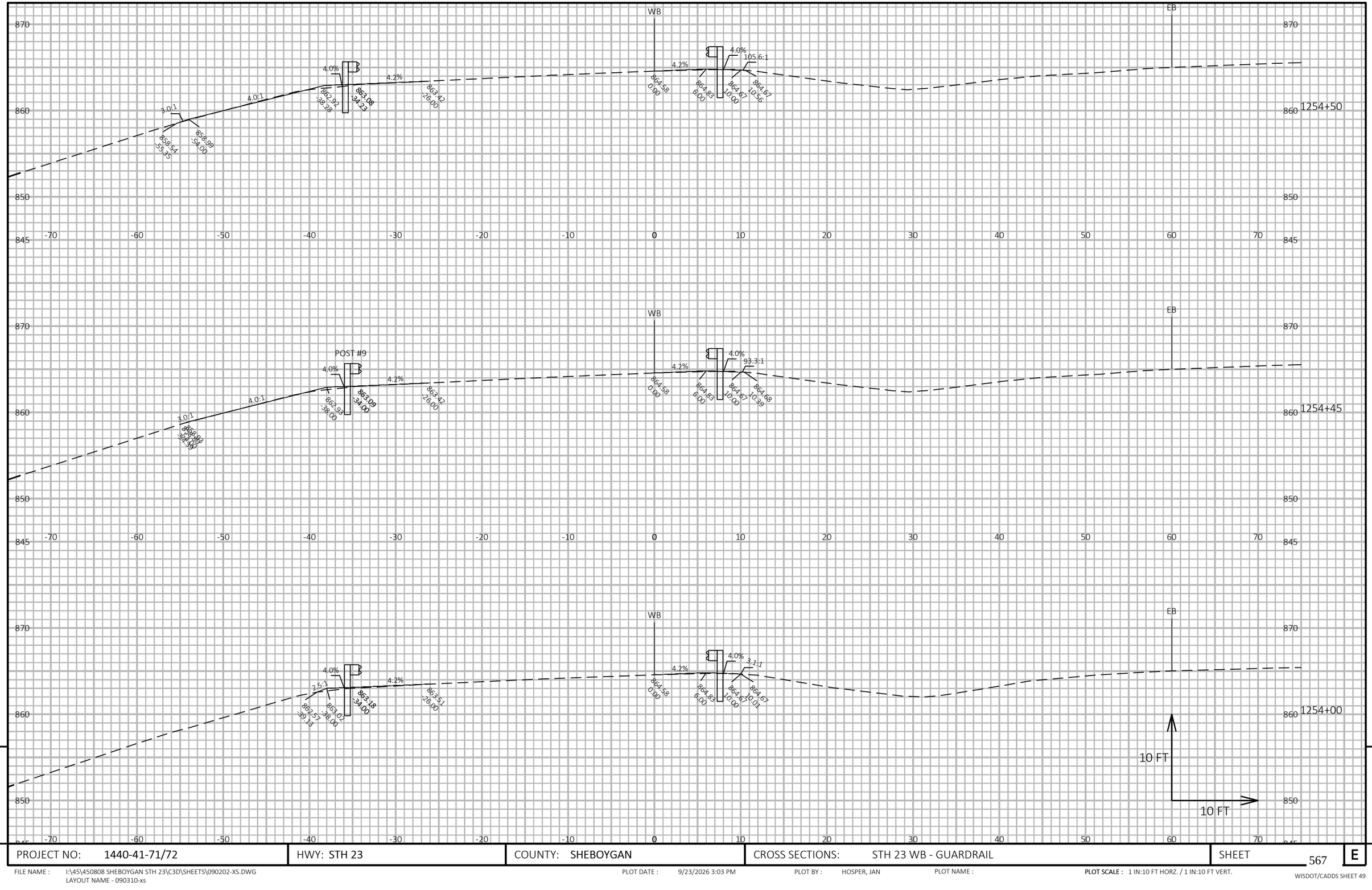
9

PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 WB - GUARDRAIL	SHEET 566	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090202-XS.DWG
LAYOUT NAME - 090309-xs

PLOT DATE : 9/23/2026 3:03 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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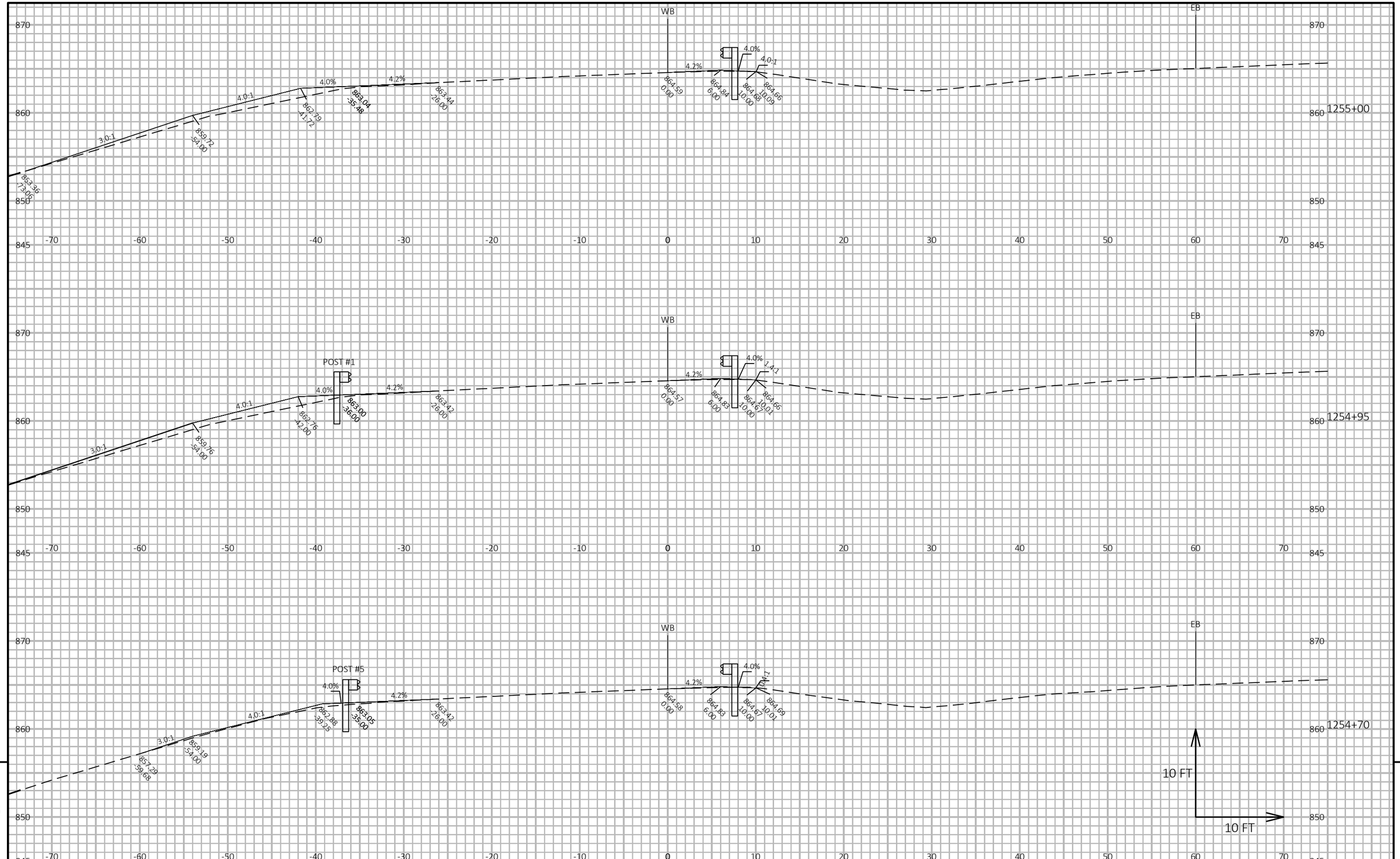
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 WB - GUARDRAIL	SHEET 567	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090202-XS.DWG
LAYOUT NAME - 090310-xs

PLOT DATE : 9/23/2026 3:03 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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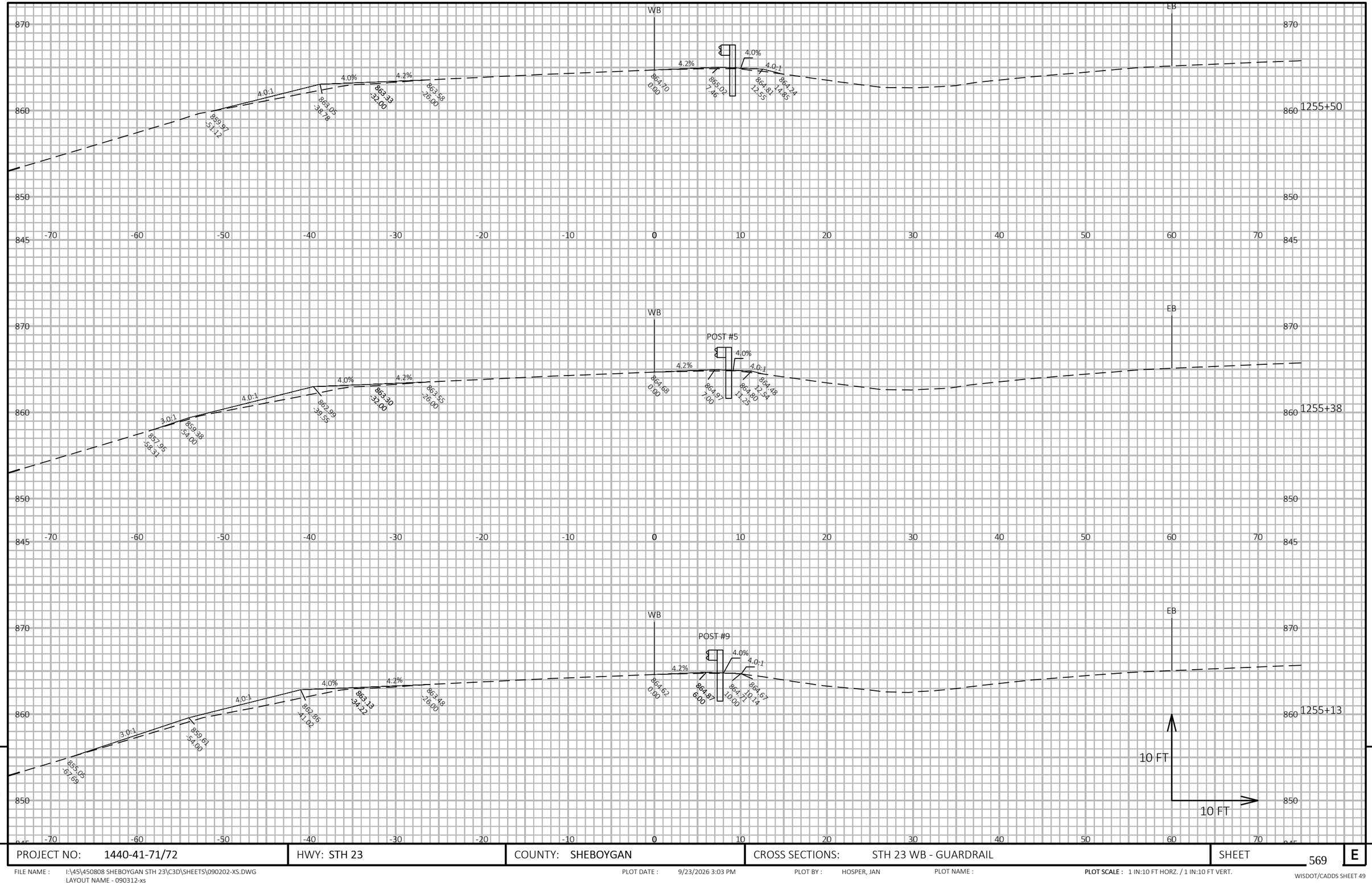
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 WB - GUARDRAIL	SHEET 568	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090202-XS.DWG
LAYOUT NAME - 090311-xs

PLOT DATE : 9/23/2026 3:03 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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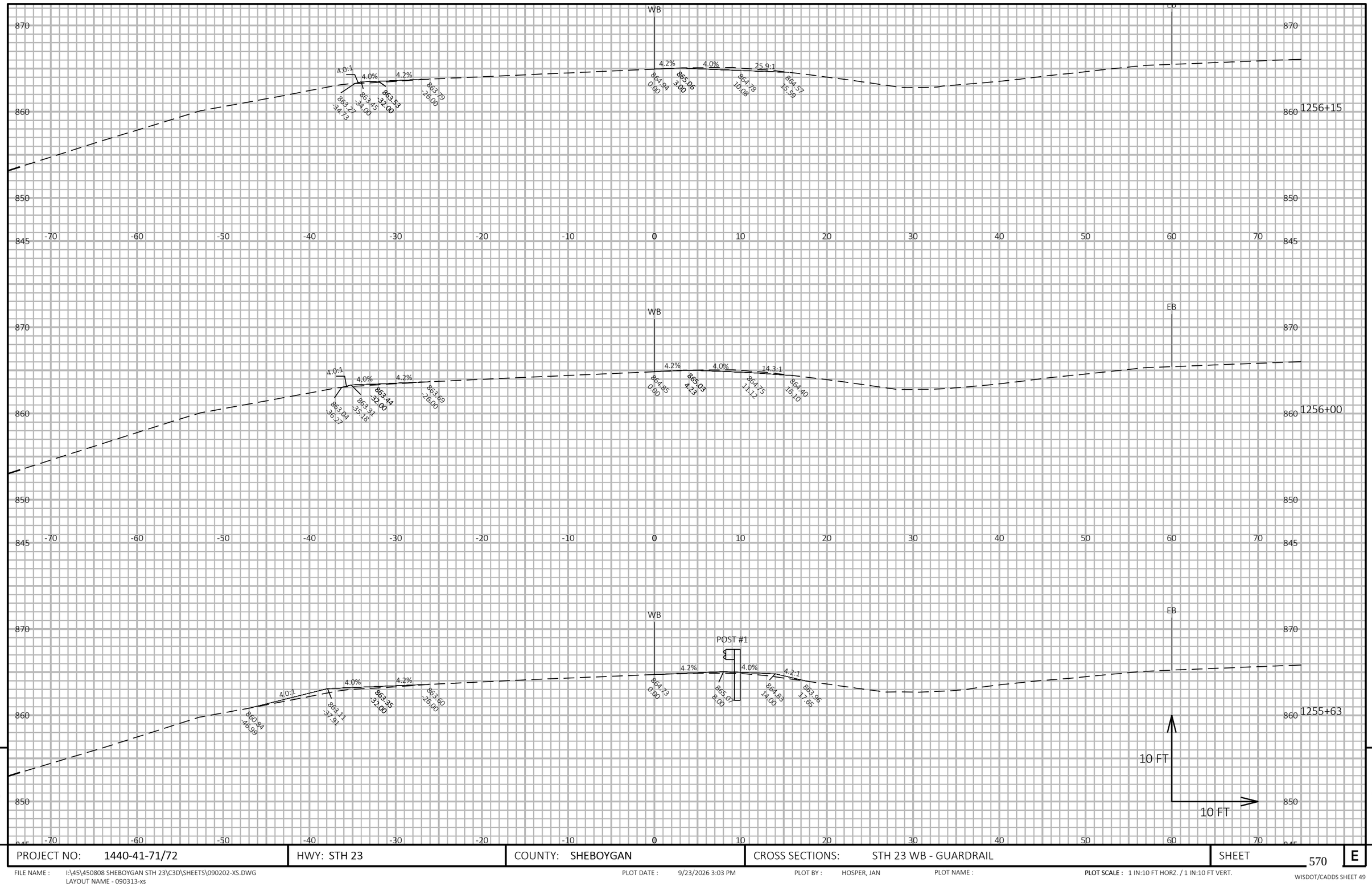
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 WB - GUARDRAIL	SHEET 569	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090202-XS.DWG
LAYOUT NAME - 090312-xs

PLOT DATE : 9/23/2026 3:03 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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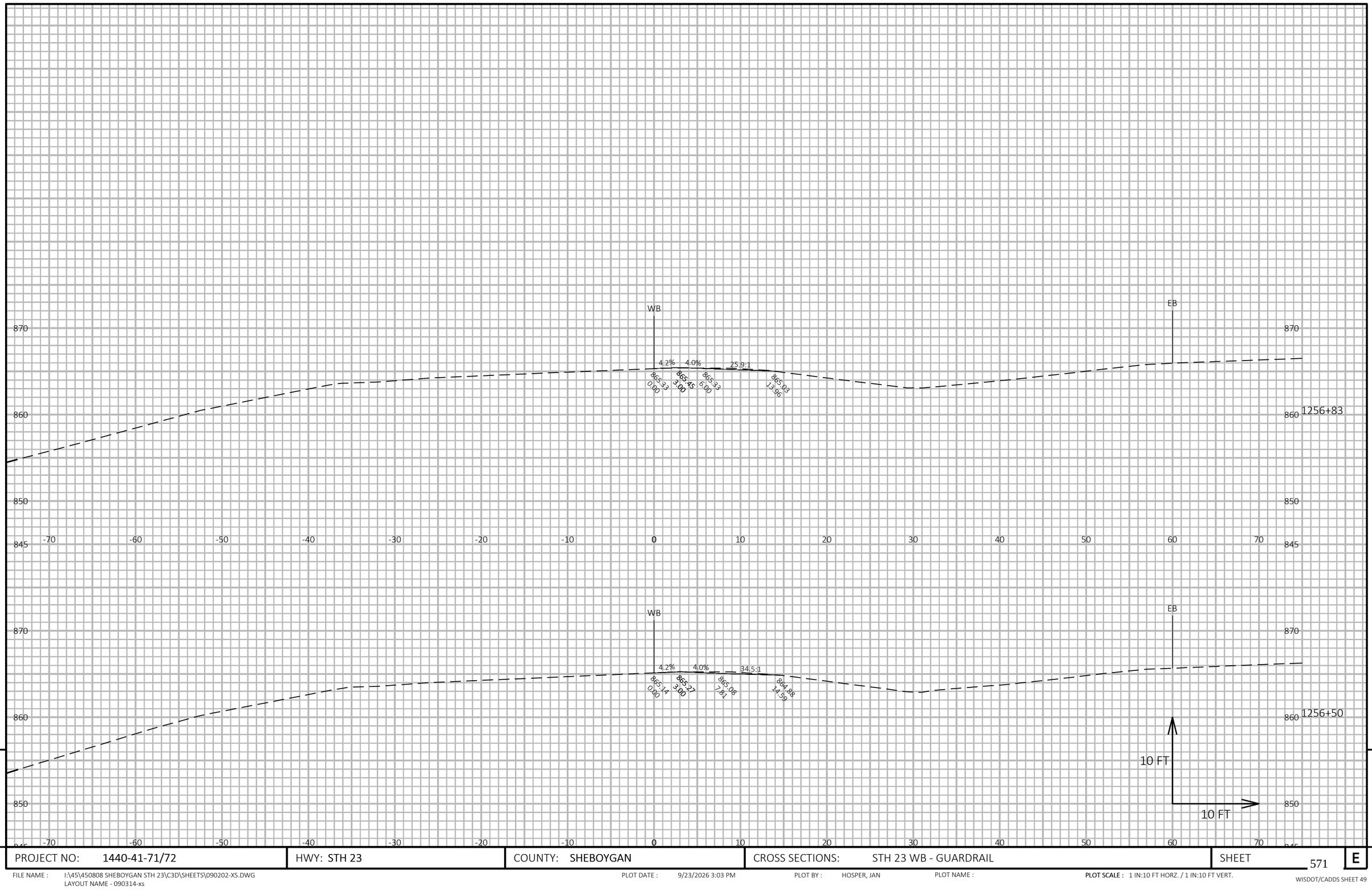
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 WB - GUARDRAIL	SHEET 570	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090202-XS.DWG
LAYOUT NAME - 090313-xs

PLOT DATE : 9/23/2026 3:03 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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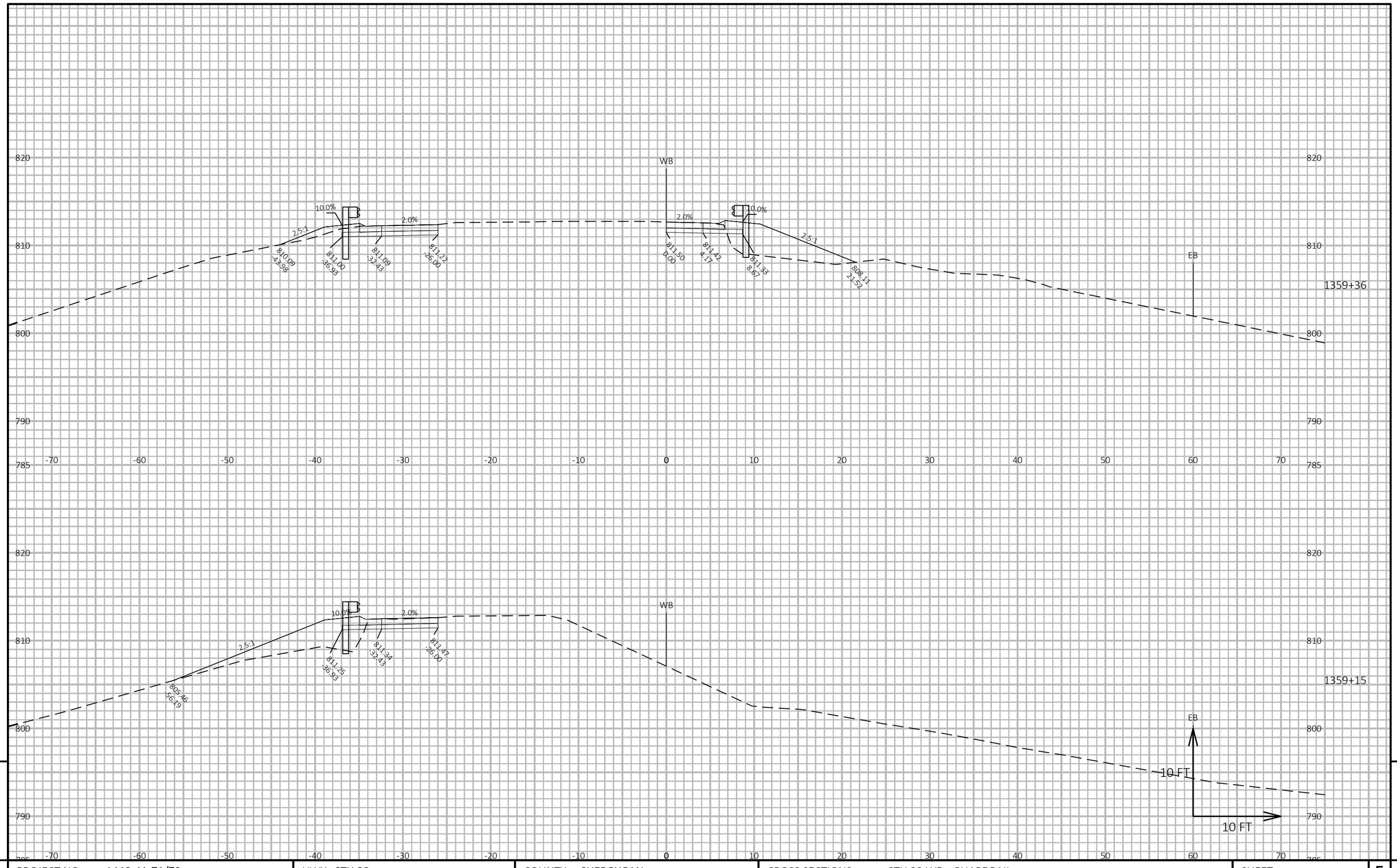
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 WB - GUARDRAIL	SHEET 571	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090202-XS.DWG
LAYOUT NAME - 090314-xs

PLOT DATE : 9/23/2026 3:03 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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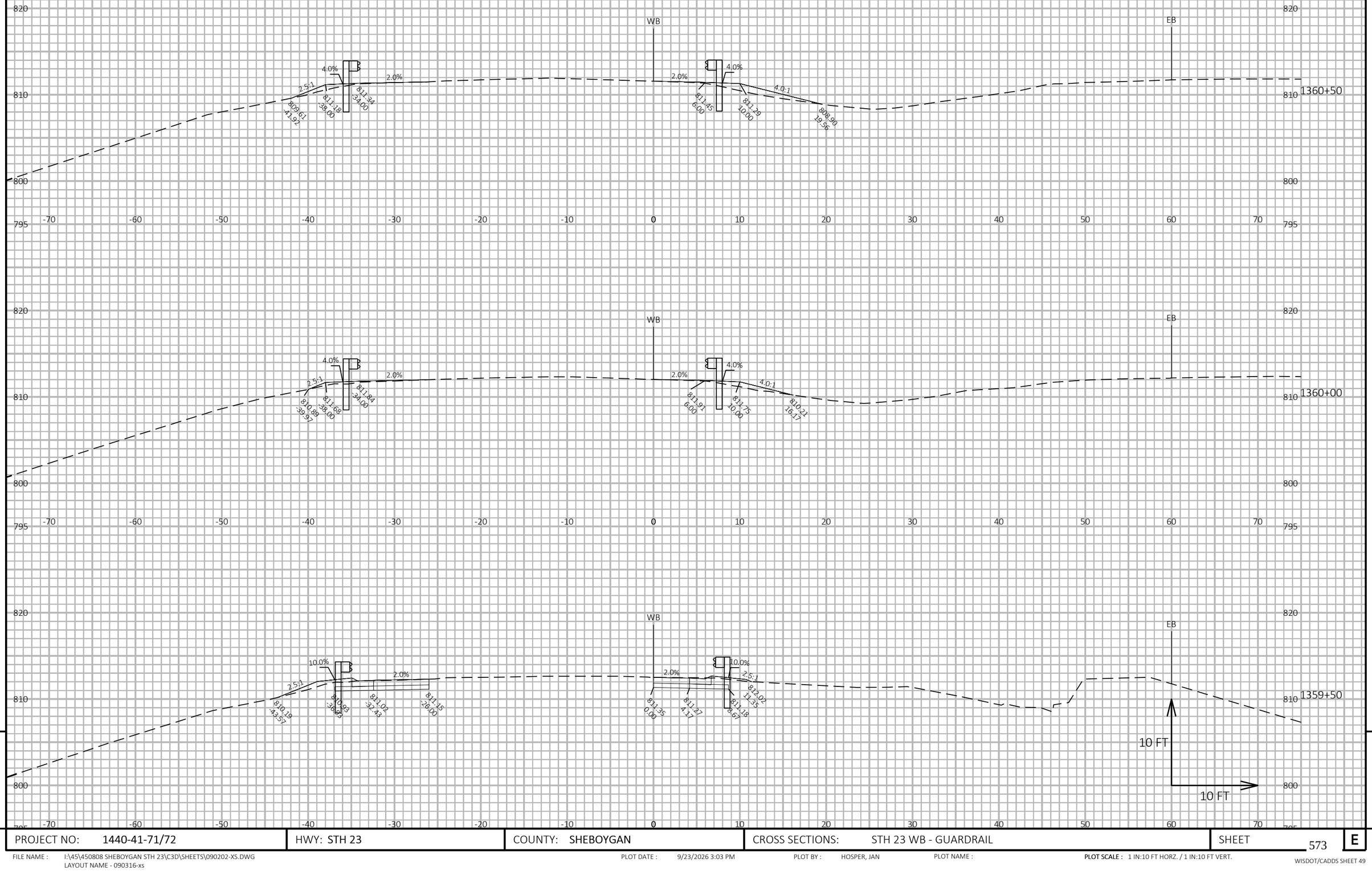
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 WB - GUARDRAIL	SHEET 572	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090202-XS.DWG
LAYOUT NAME - 090315-xs

PLOT DATE : 9/23/2026 3:03 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

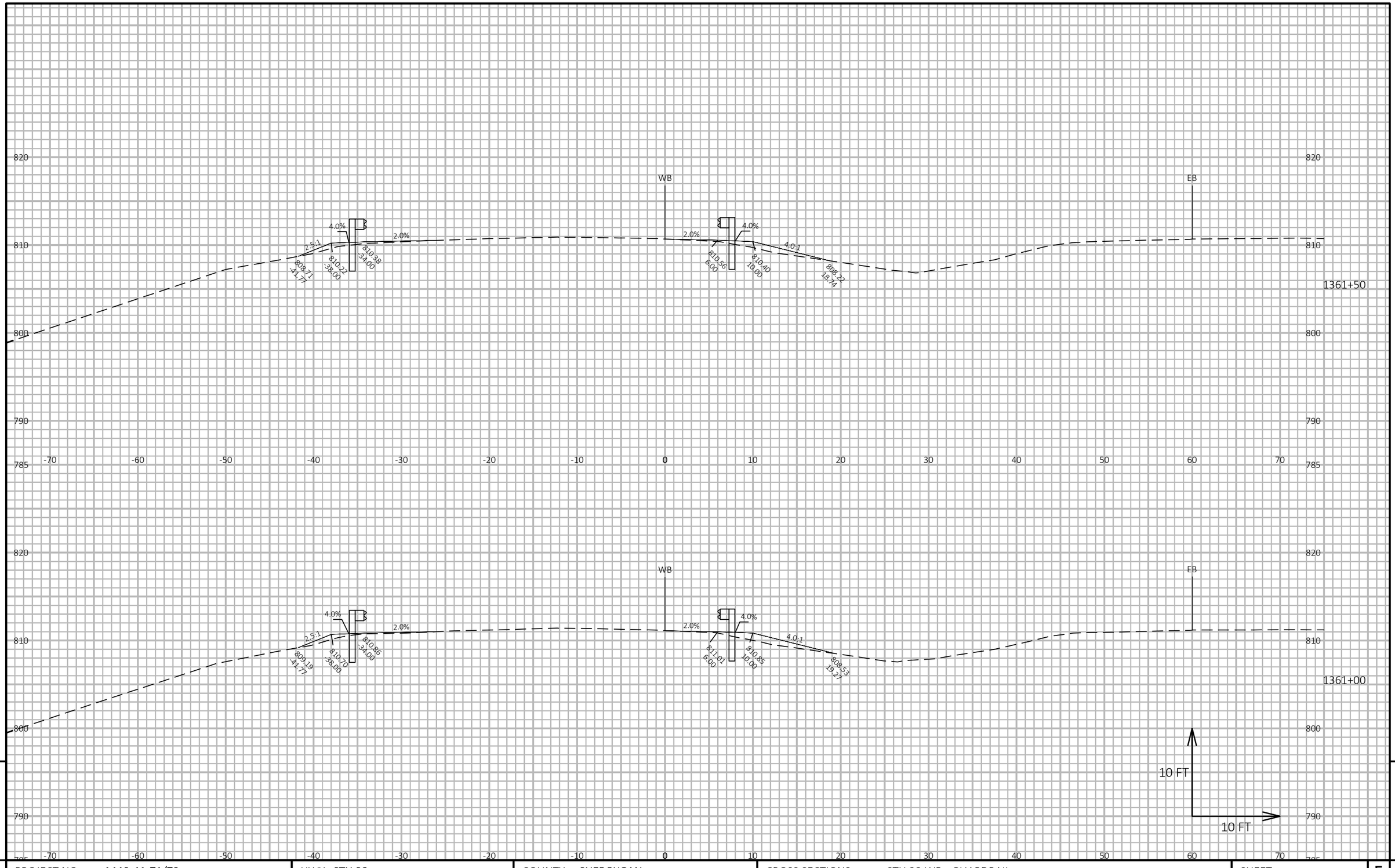


PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 WB - GUARDRAIL	SHEET 573	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090202-XS.DWG
LAYOUT NAME - 090316-xs

PLOT DATE : 9/23/2026 3:03 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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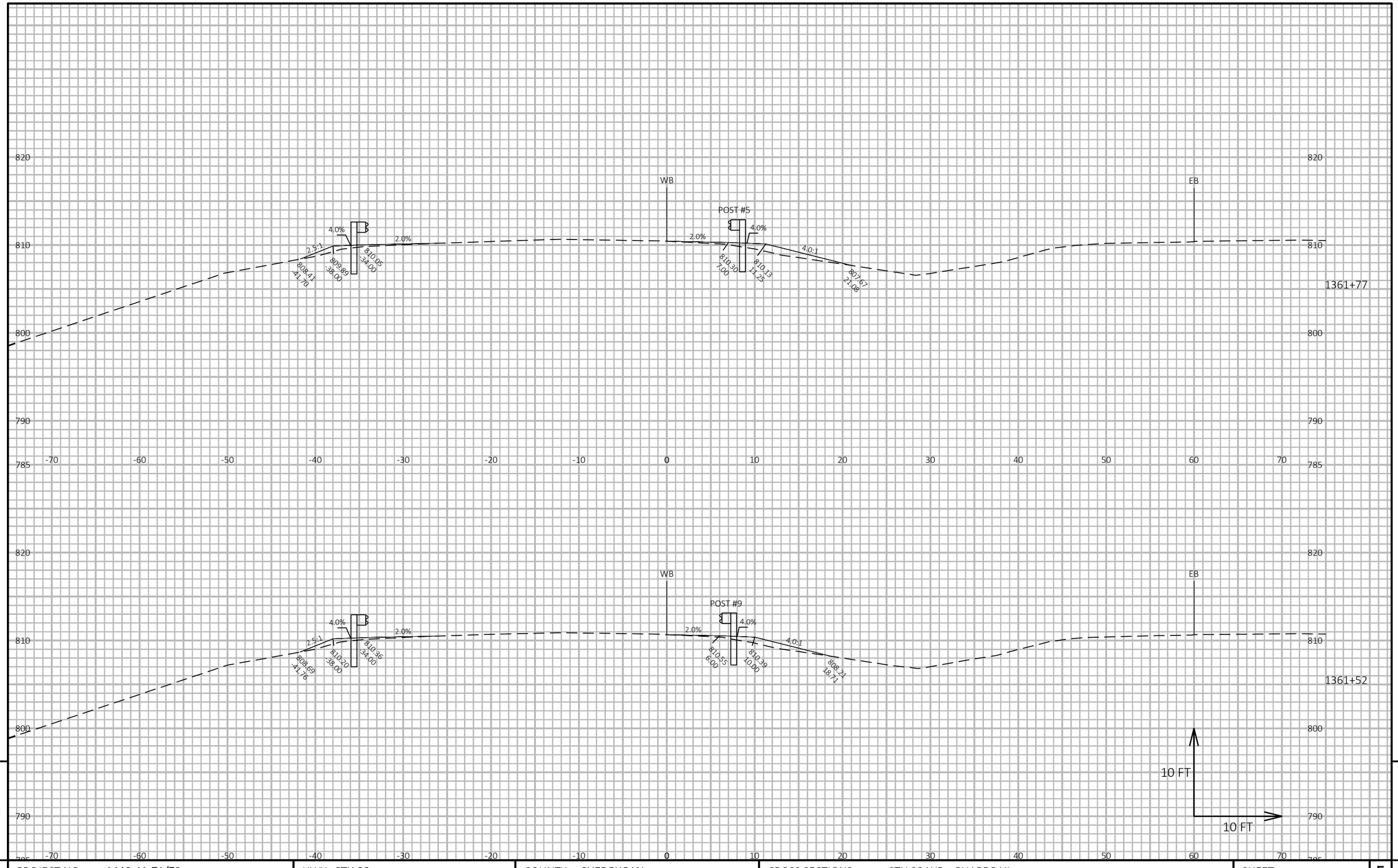
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 WB - GUARDRAIL	SHEET 574	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090202-XS.DWG
LAYOUT NAME - 090317-xs

PLOT DATE : 9/23/2026 3:04 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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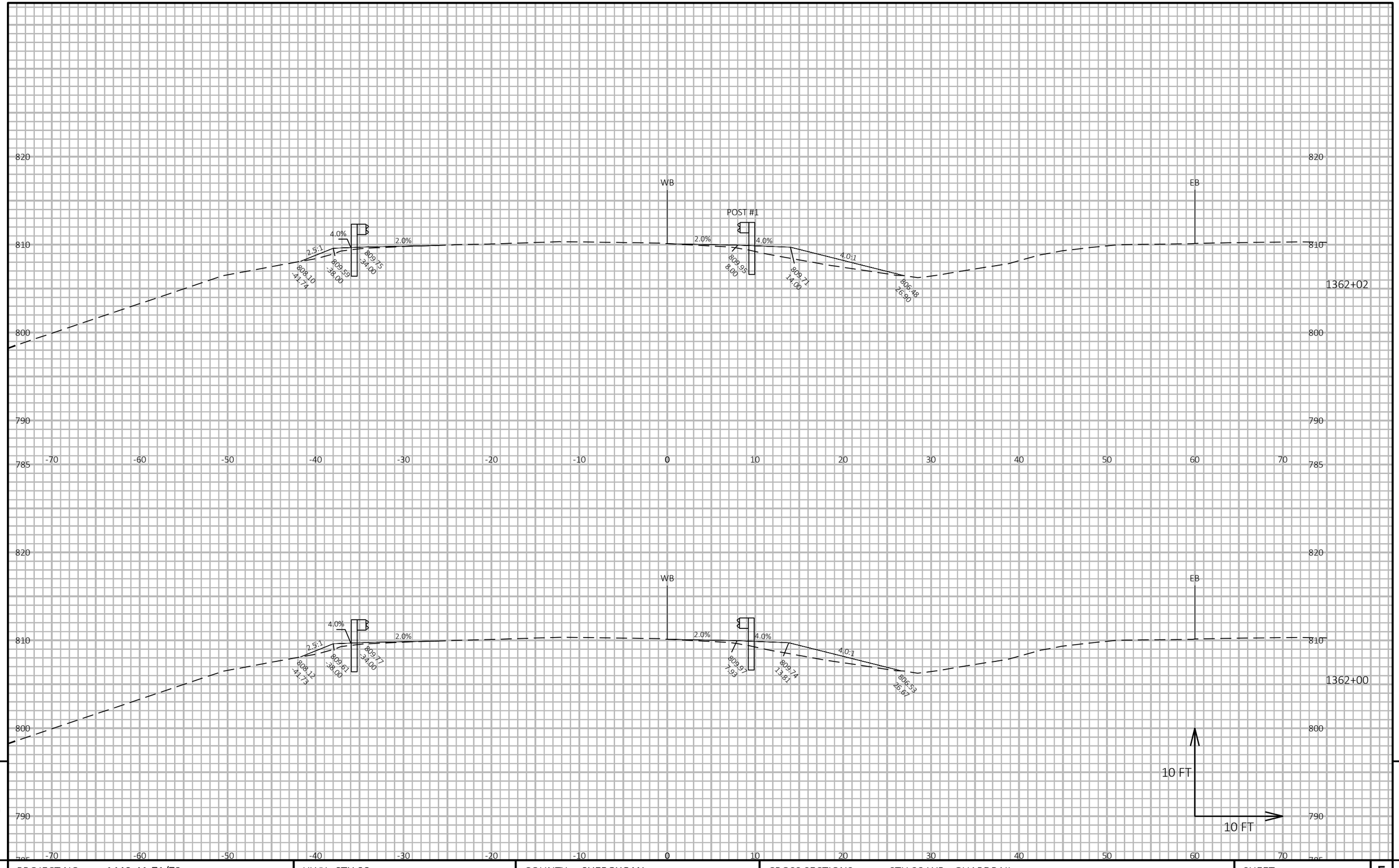
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 WB - GUARDRAIL	SHEET 575	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090202-XS.DWG
LAYOUT NAME - 090318-xs

PLOT DATE : 9/23/2026 3:04 PM PLOT BY : HOSPER, JAN PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 WB - GUARDRAIL	SHEET 576	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090202-XS.DWG
LAYOUT NAME - 090319-xs

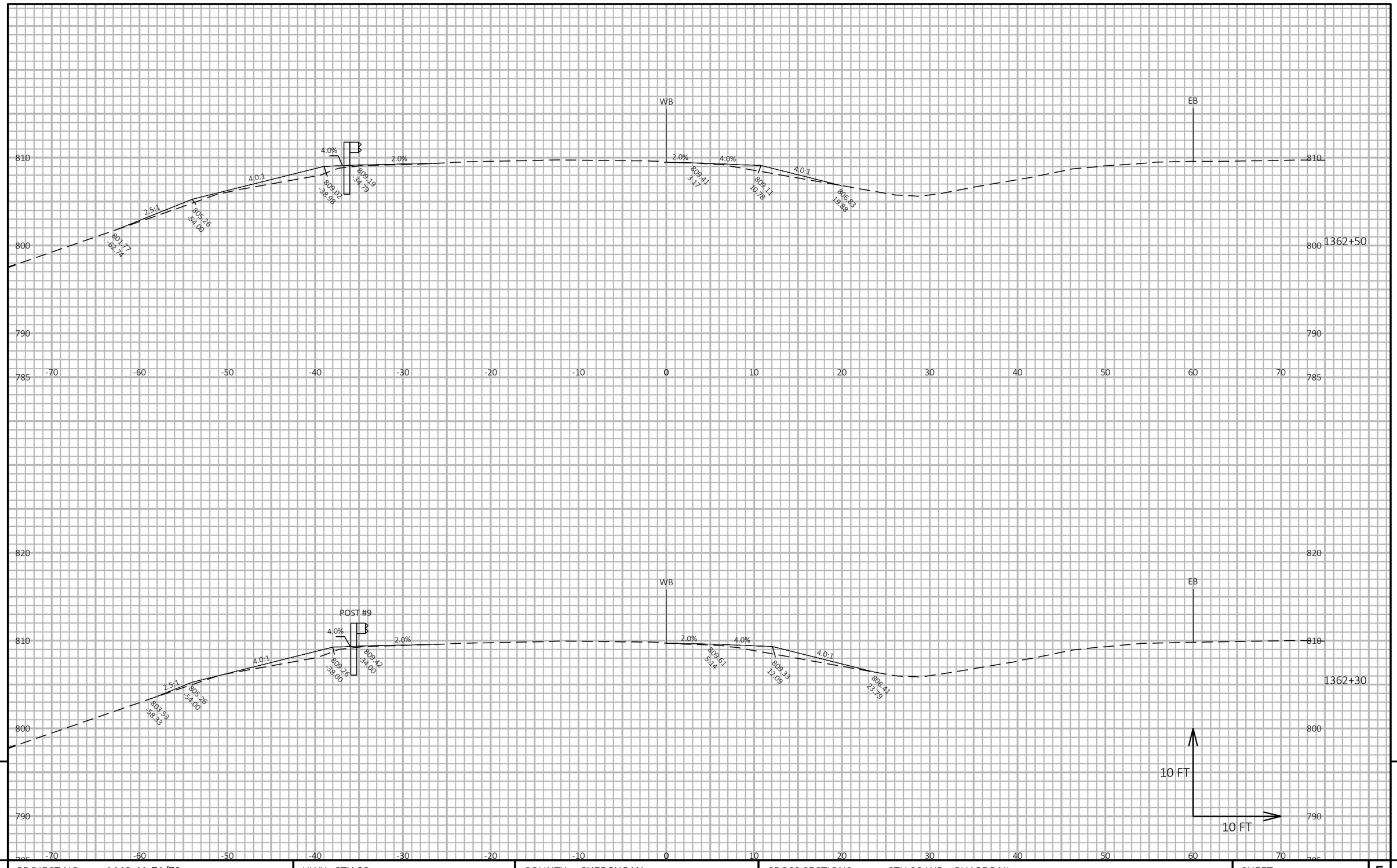
PLOT DATE : 9/23/2026 3:04 PM

PLOT BY : HOSPER, JAN

PLOT NAME :

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

WISDOT/CADDS SHEET 49



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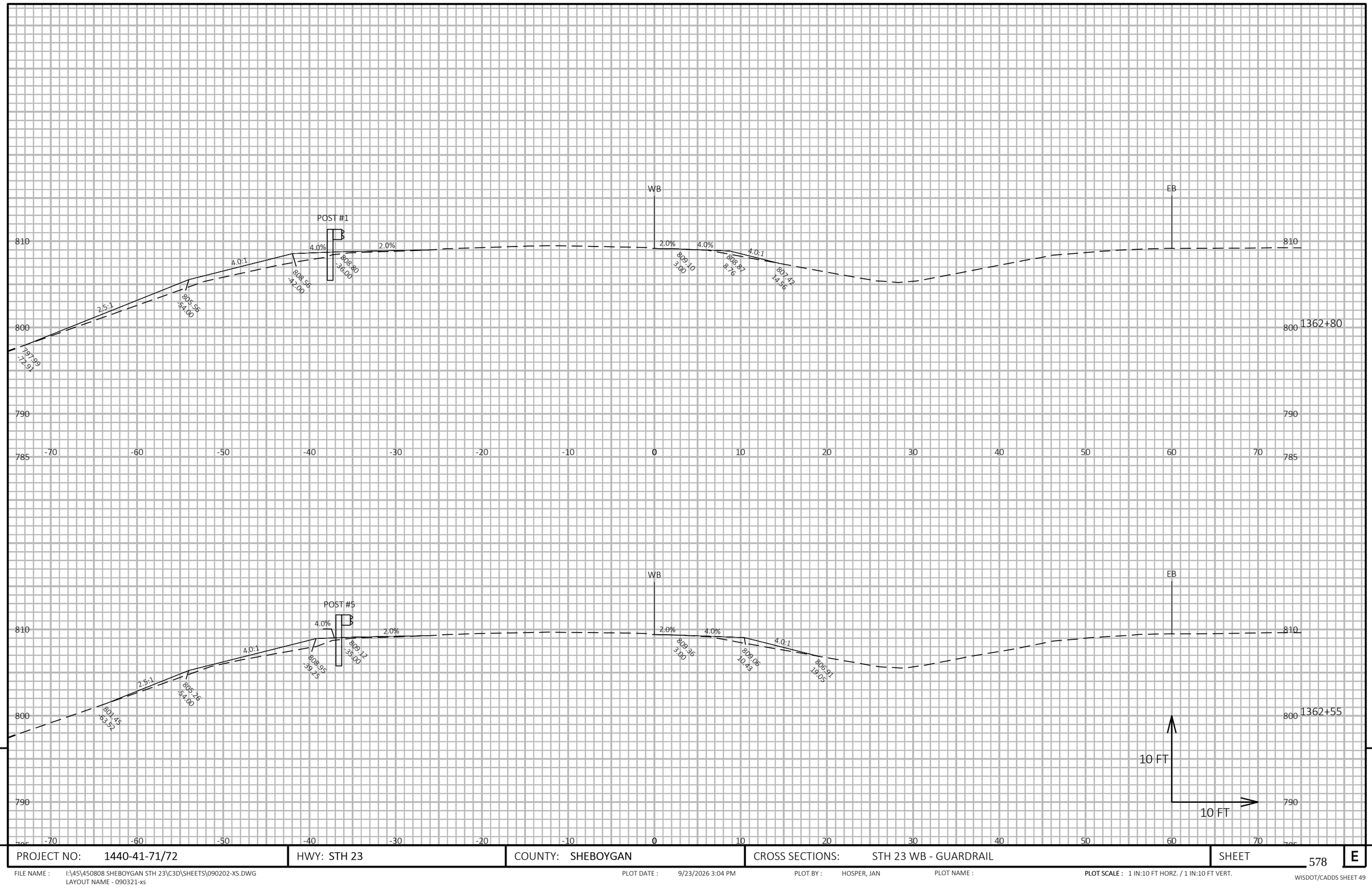
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 WB - GUARDRAIL	SHEET 577	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090202-XS.DWG
LAYOUT NAME - 090320-xs

PLOT DATE : 9/23/2026 3:04 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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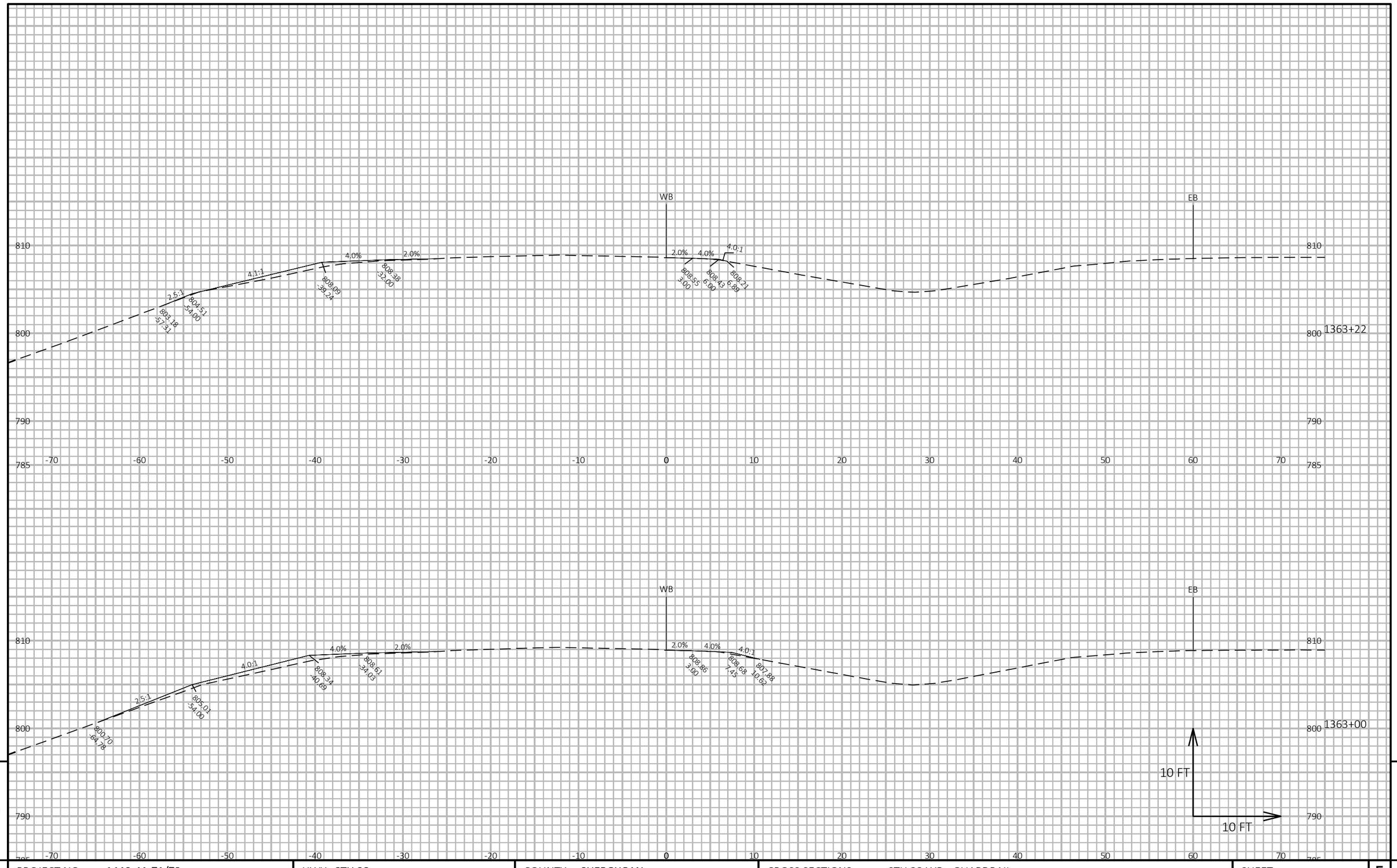
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 WB - GUARDRAIL	SHEET 578	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090202-XS.DWG
LAYOUT NAME - 090321-xs

PLOT DATE : 9/23/2026 3:04 PM PLOT BY : HOSPER, JAN PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 WB - GUARDRAIL	SHEET 579	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090202-XS.DWG
LAYOUT NAME - 090322-xs

PLOT DATE : 9/23/2026 3:04 PM PLOT BY : HOSPER, JAN PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

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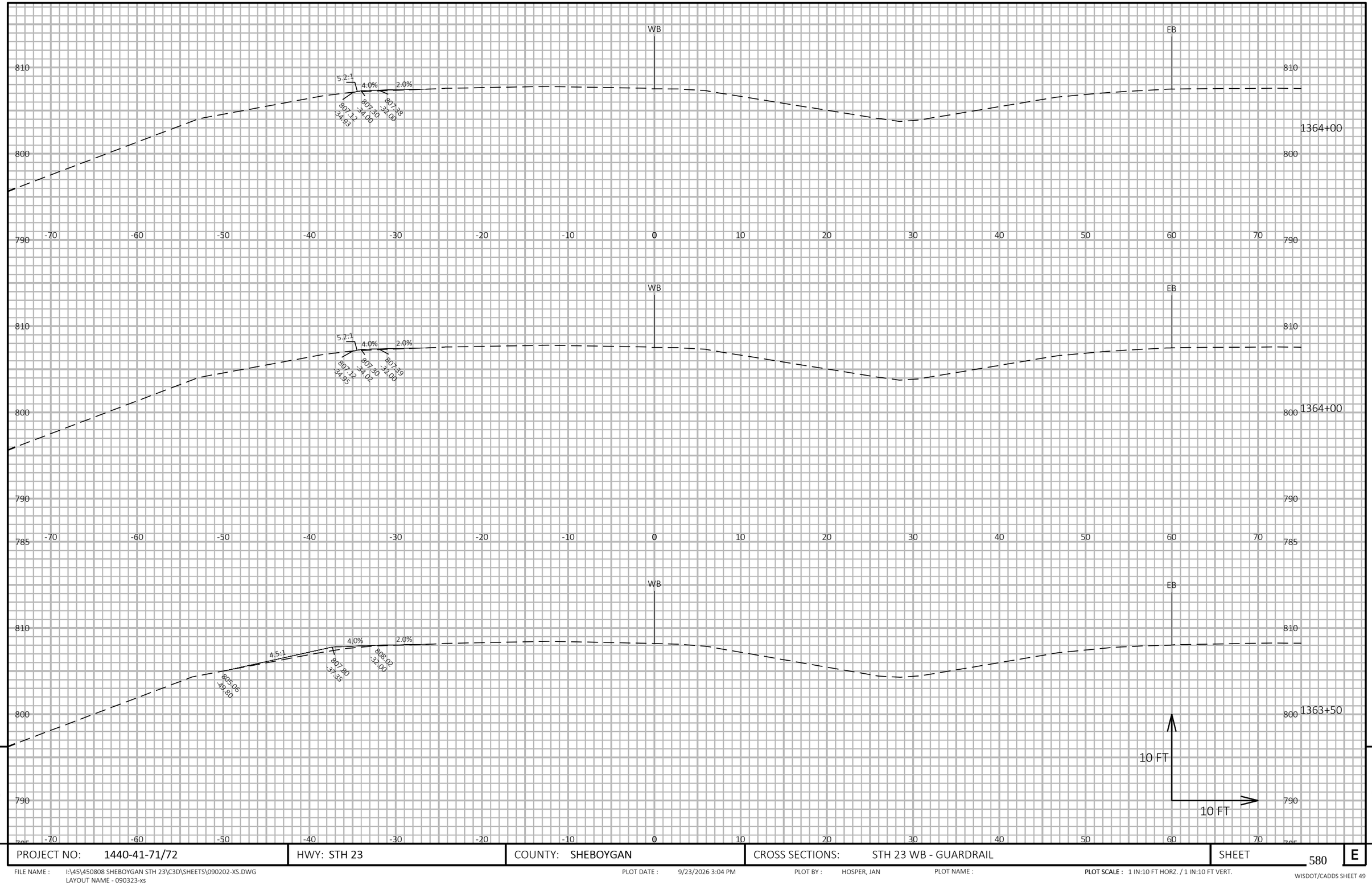

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PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 WB - GUARDRAIL	SHEET 580	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090202-XS.DWG
LAYOUT NAME - 090323-xs

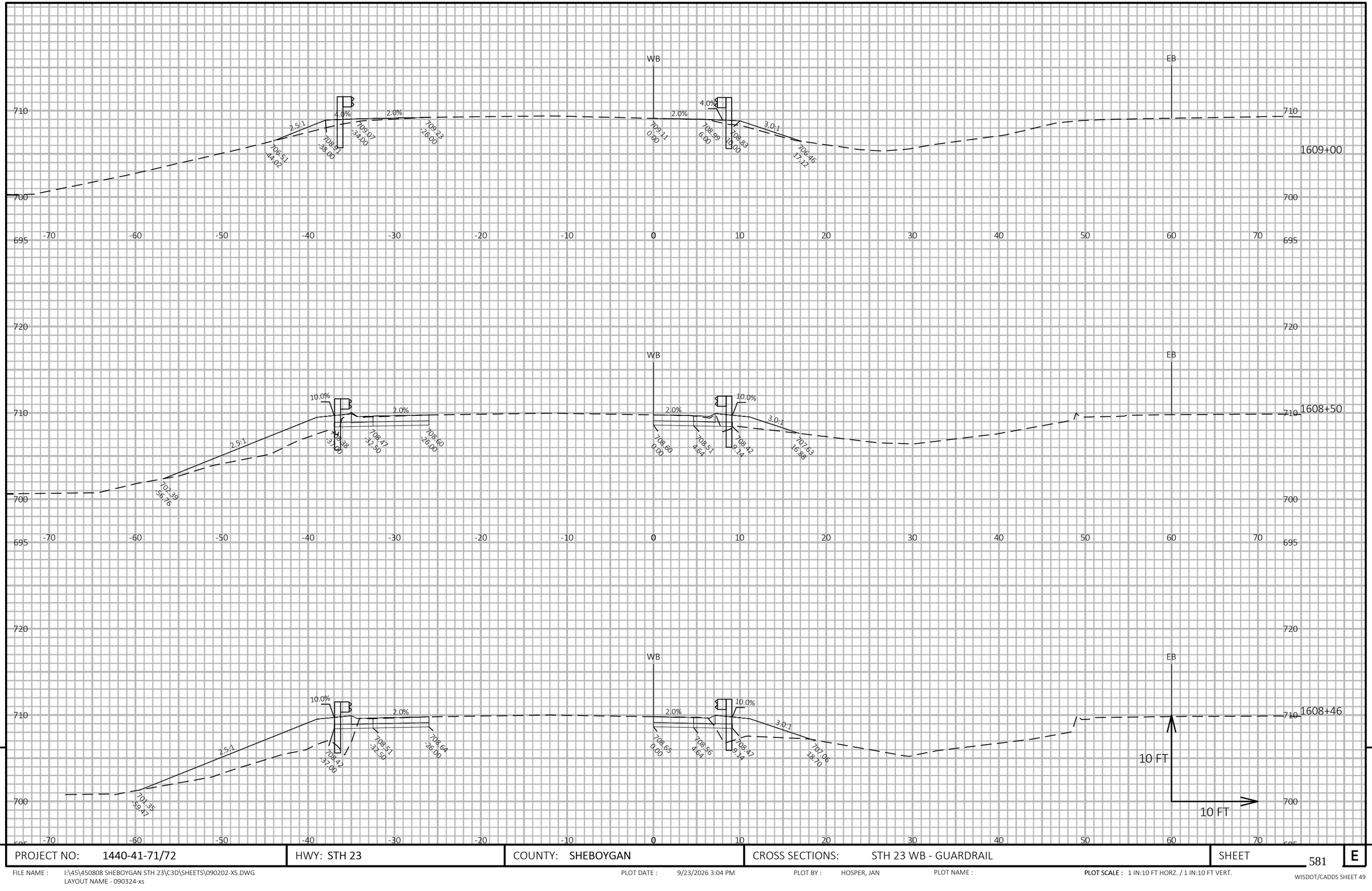
PLOT DATE : 9/23/2026 3:04 PM

PLOT BY : HOSPER, JAN

PLOT NAME :

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

WISDOT/CADDS SHEET 49



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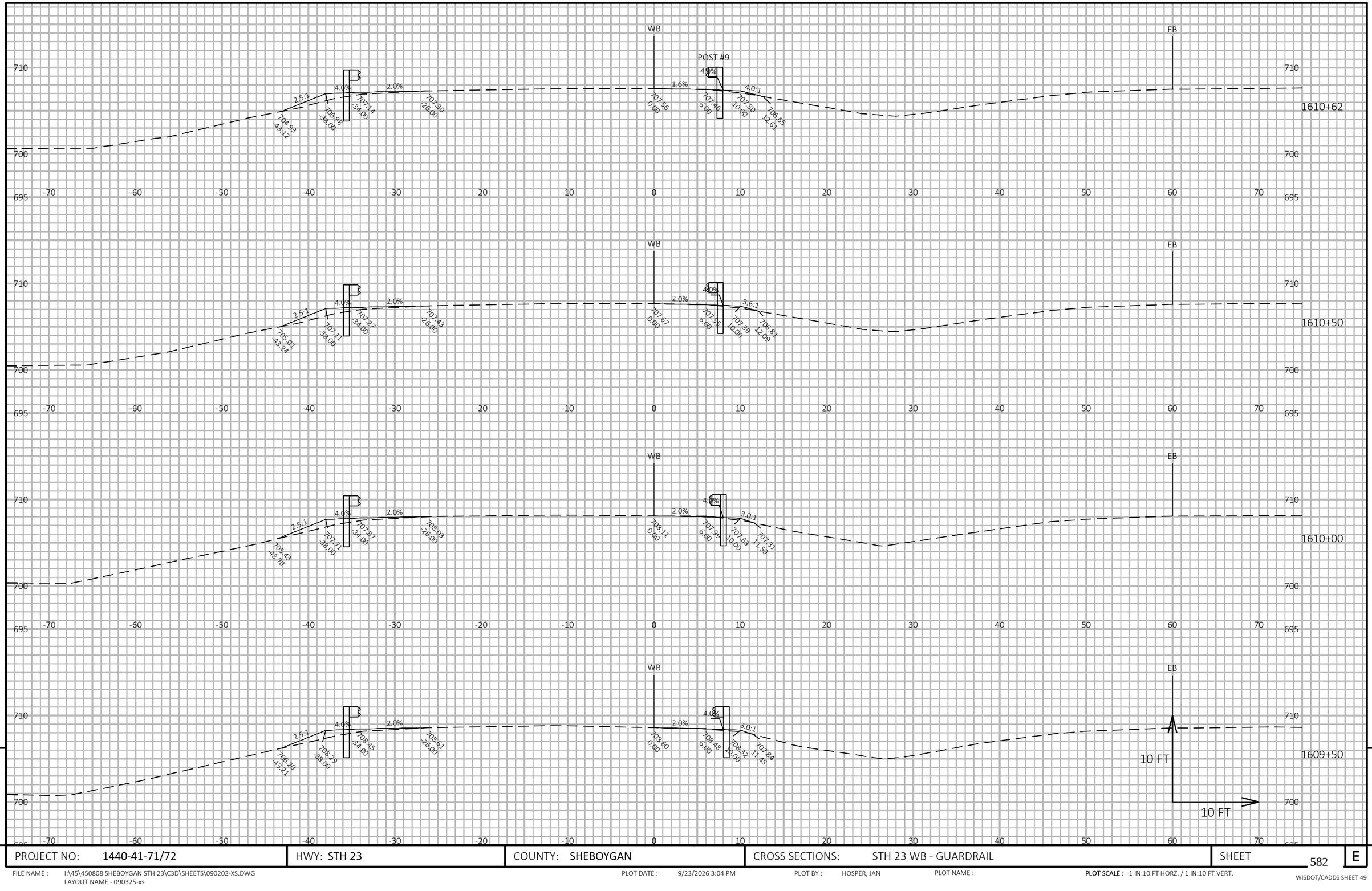
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 WB - GUARDRAIL	SHEET 581	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090202-XS.DWG
LAYOUT NAME - 090324-xs

PLOT DATE : 9/23/2026 3:04 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 WB - GUARDRAIL	SHEET 582	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090202-XS.DWG
LAYOUT NAME - 090325-xs

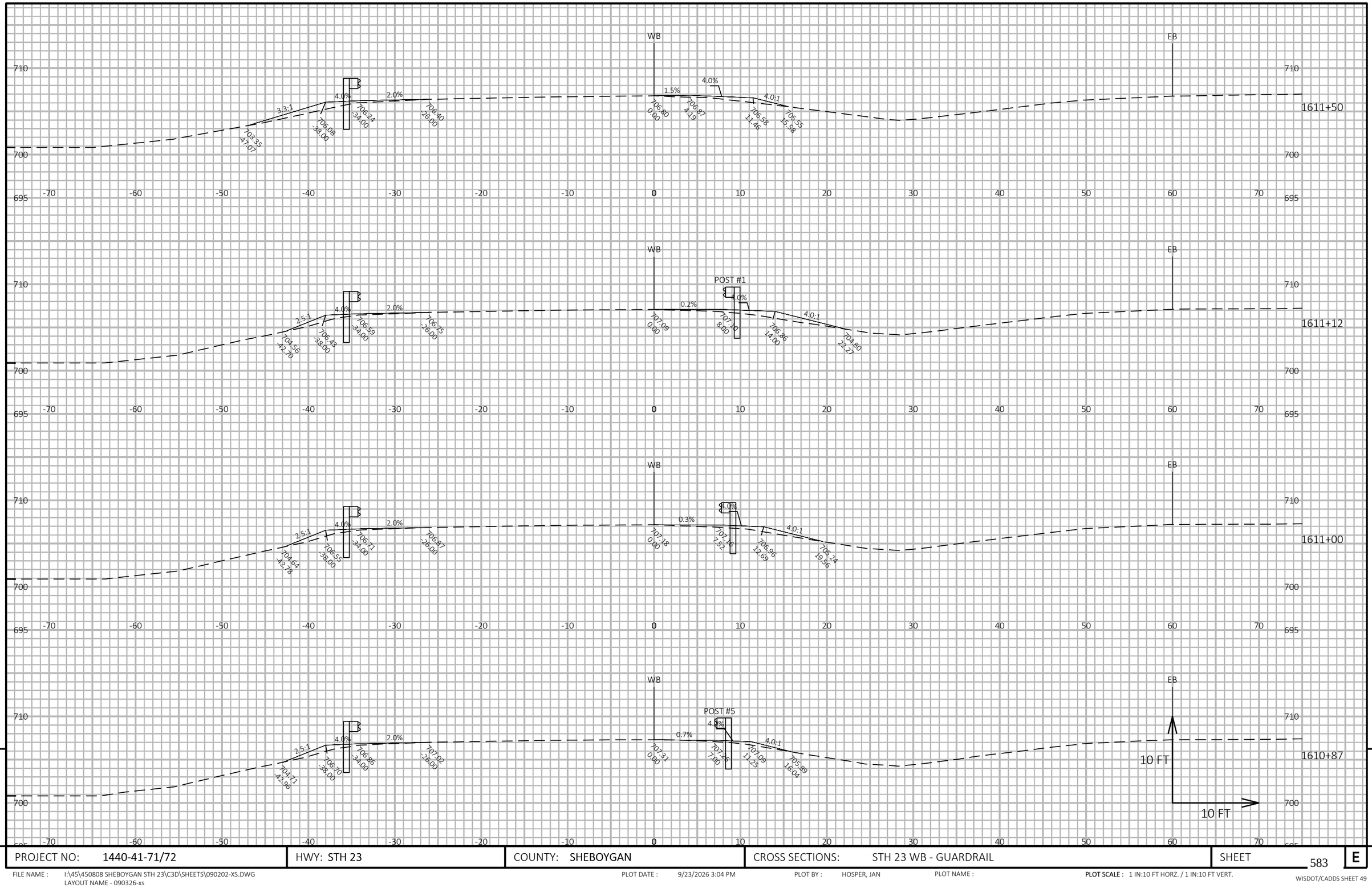
PLOT DATE : 9/23/2026 3:04 PM

PLOT BY : HOSPER, JAN

PLOT NAME :

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

WISDOT/CADDS SHEET 49



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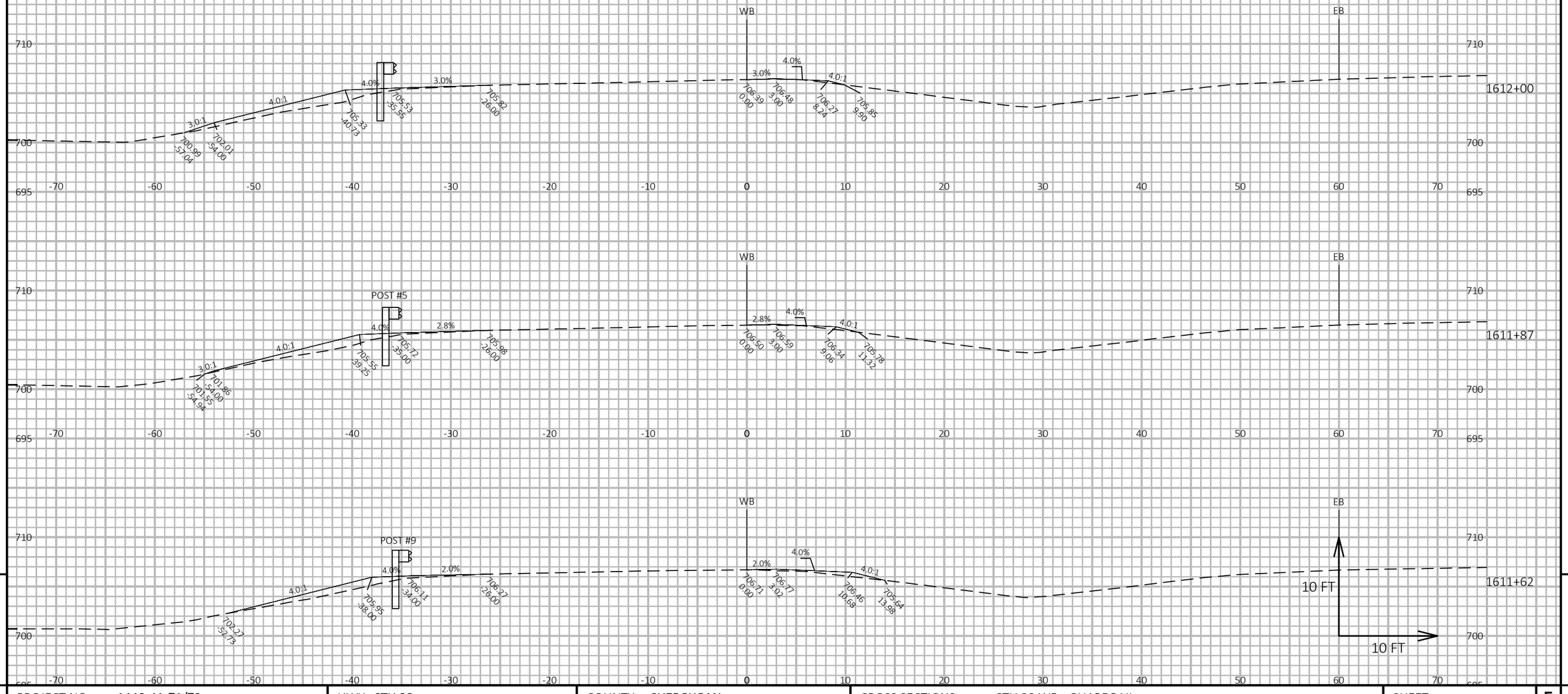
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 WB - GUARDRAIL	SHEET 583	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090202-XS.DWG
LAYOUT NAME - 090326-xs

PLOT DATE : 9/23/2026 3:04 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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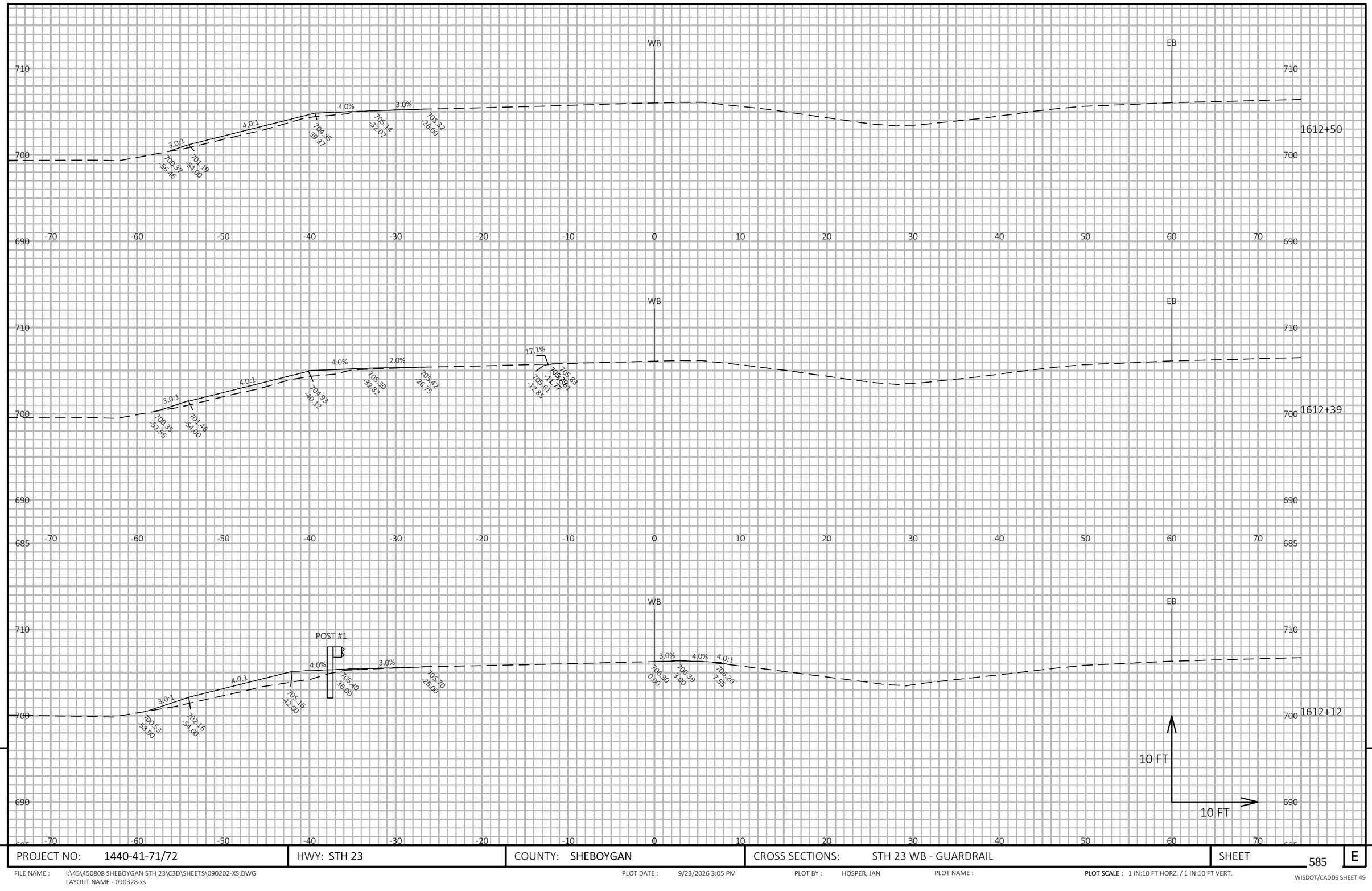
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 WB - GUARDRAIL	SHEET 584	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090202-XS.DWG
LAYOUT NAME - 090327-xs

PLOT DATE : 9/23/2026 3:05 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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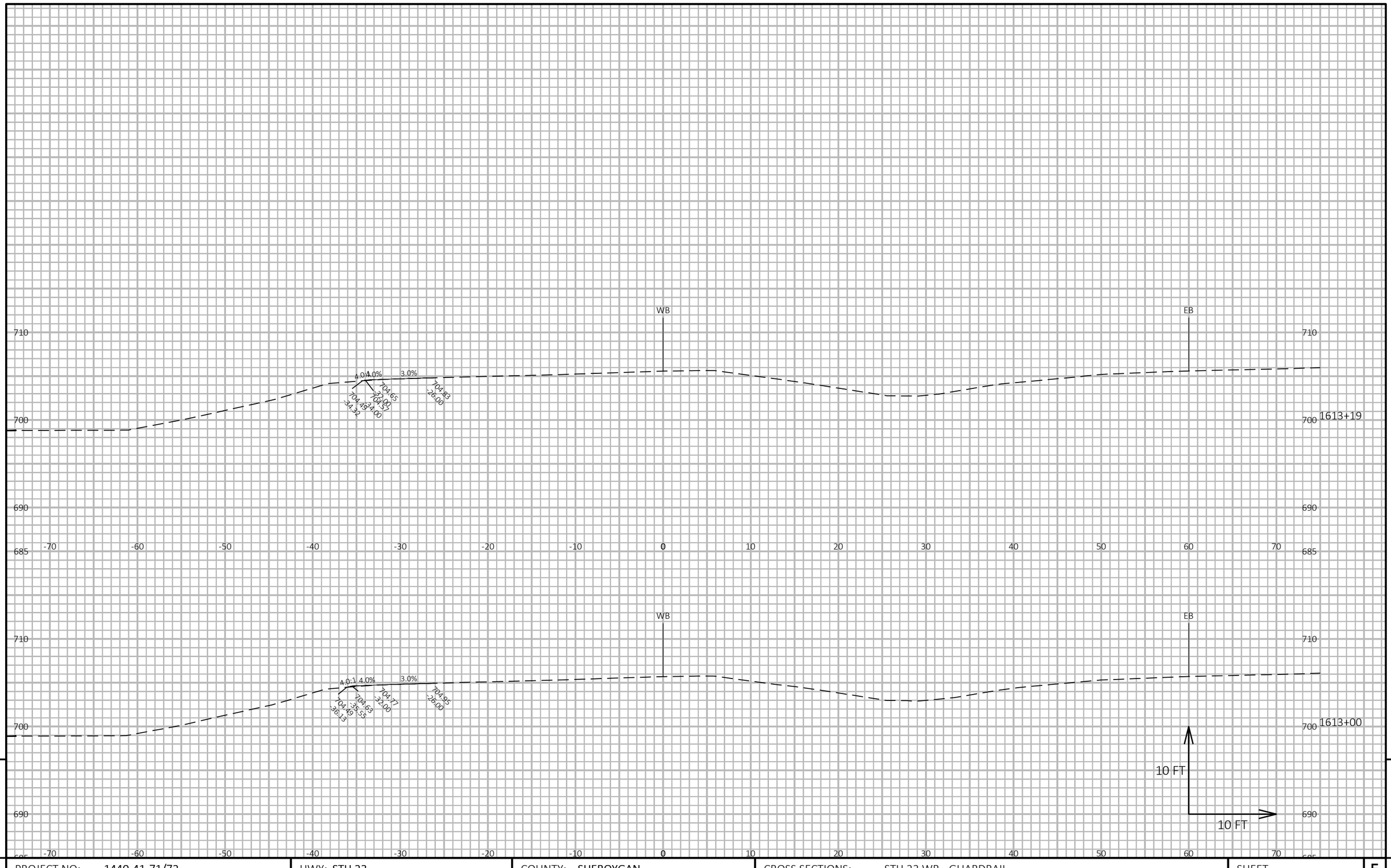
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 WB - GUARDRAIL	SHEET 585	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090202-XS.DWG
LAYOUT NAME - 090328-xs

PLOT DATE : 9/23/2026 3:05 PM PLOT BY : HOSPER, JAN 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: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 WB - GUARDRAIL	SHEET 586	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090202-XS.DWG
LAYOUT NAME - 090329-xs

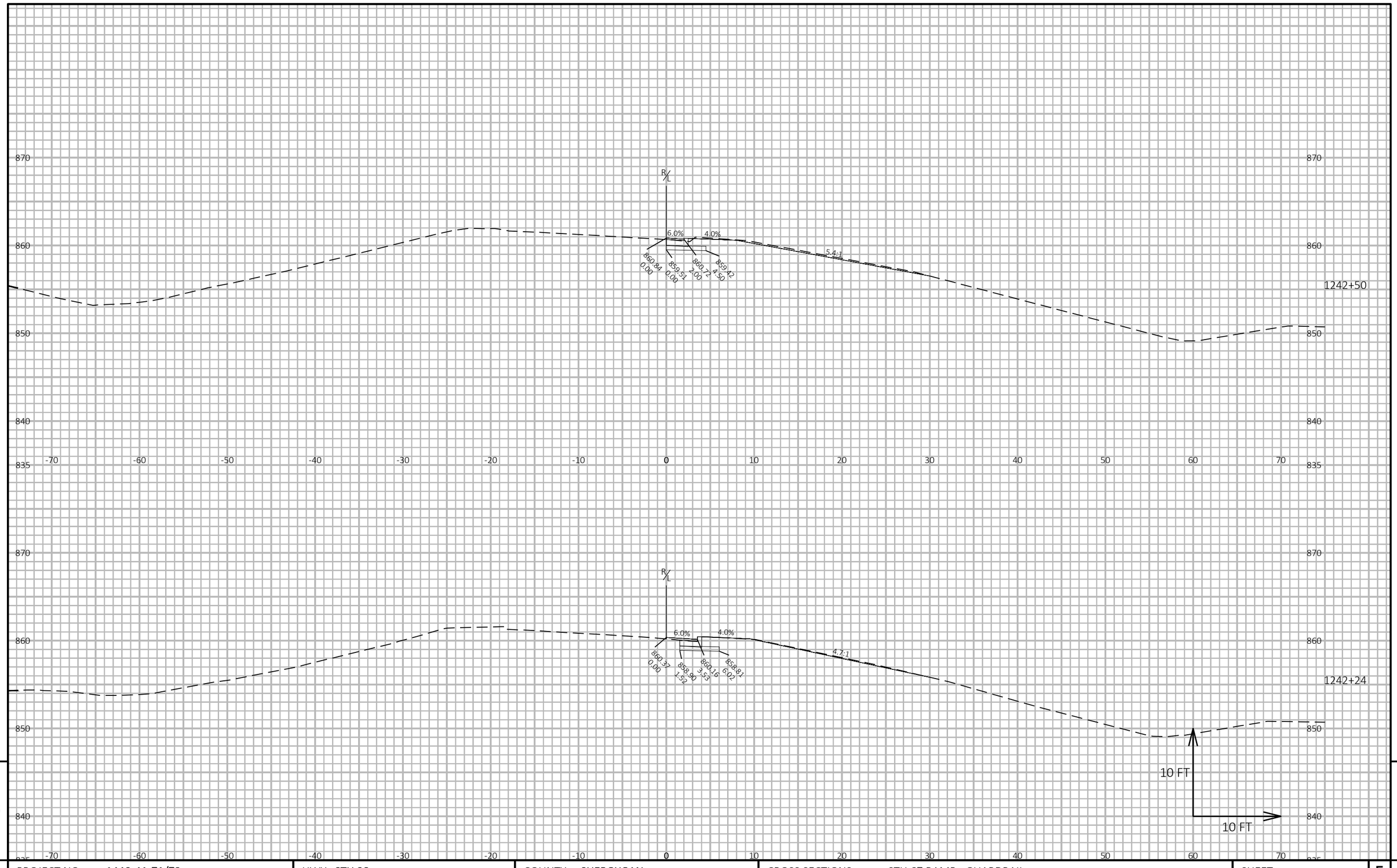
PLOT DATE : 9/23/2026 3:05 PM

PLOT BY : HOSPER, JAN

PLOT NAME :

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

WISDOT/CADDS SHEET 49



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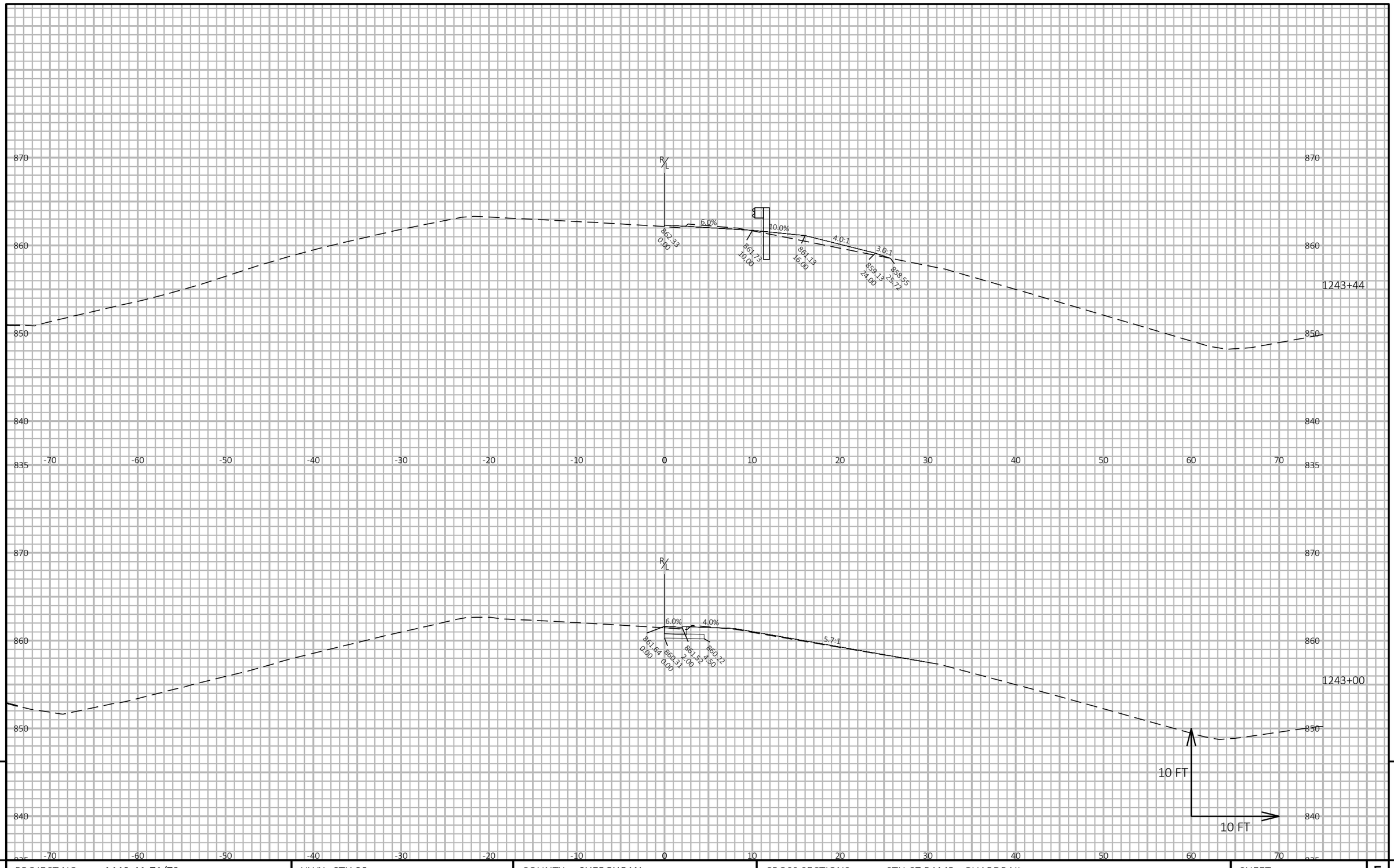
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 67 RAMP - GUARDRAIL	SHEET 587	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090203-XS.DWG
LAYOUT NAME - 090401-xs

PLOT DATE : 9/23/2026 3:05 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



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PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 67 RAMP - GUARDRAIL	SHEET 588	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090203-XS.DWG
LAYOUT NAME - 090402-xs

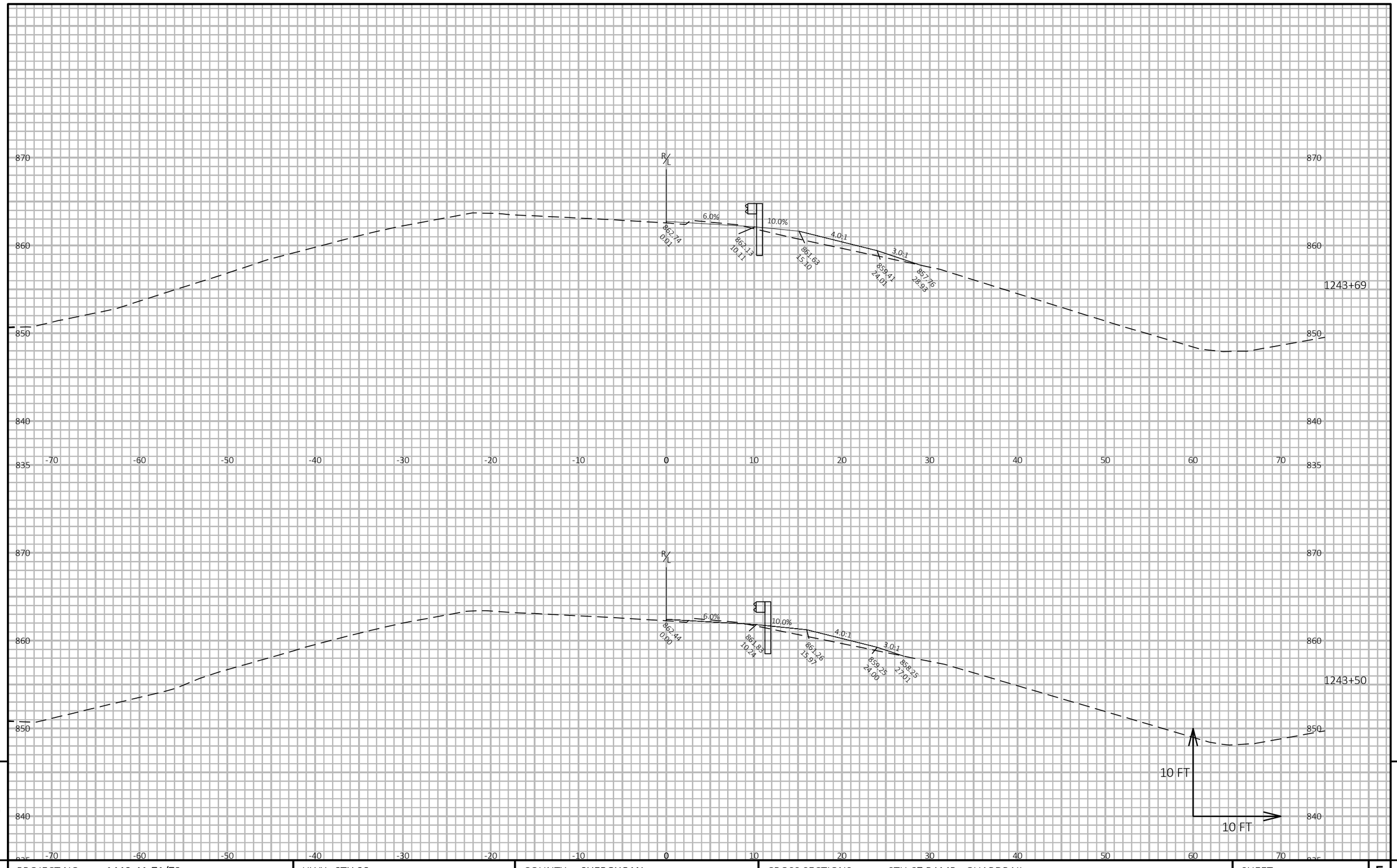
PLOT DATE : 9/23/2026 3:05 PM

PLOT BY : HOSPER, JAN

PLOT NAME :

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

WISDOT/CADDS SHEET 49



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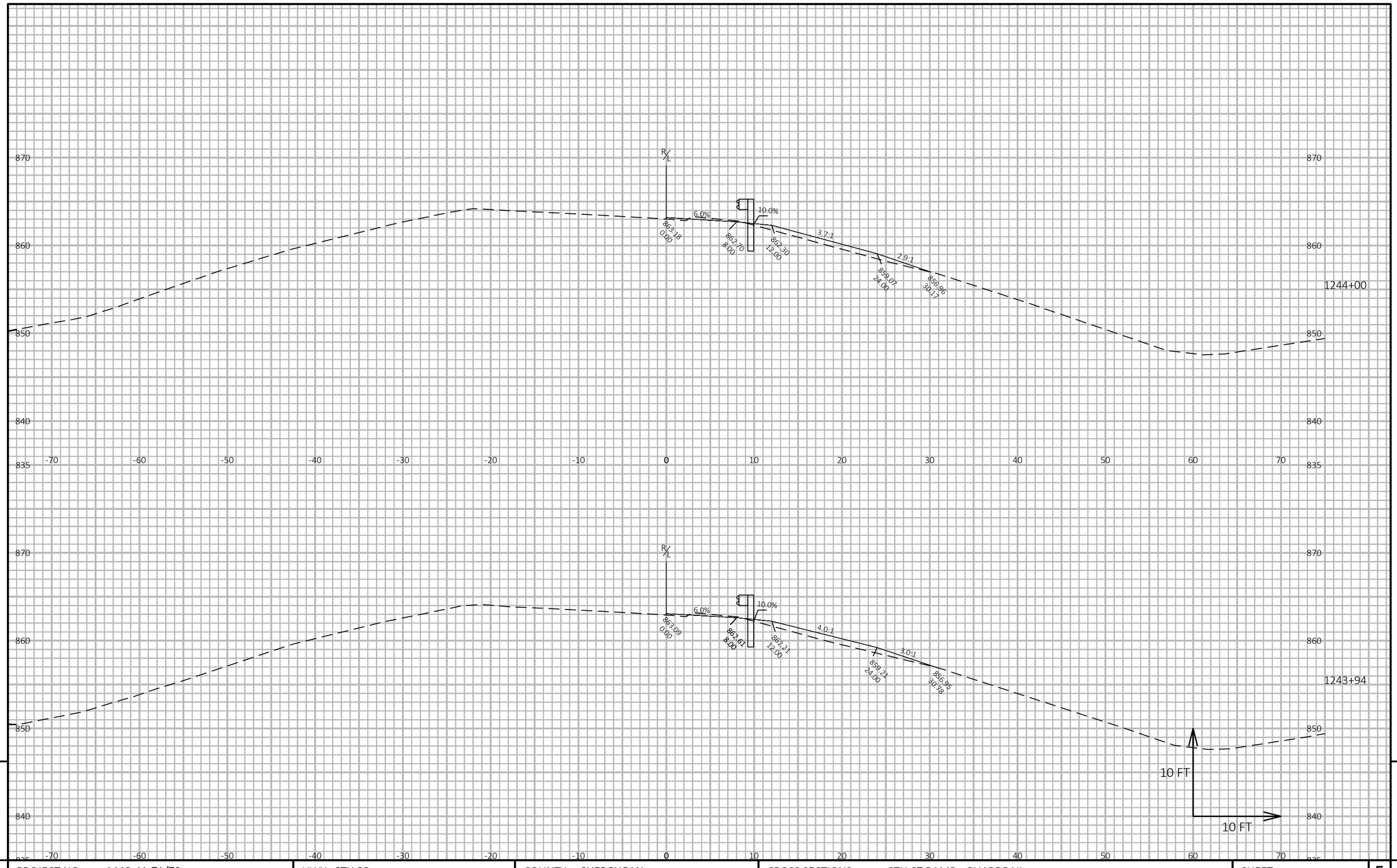
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 67 RAMP - GUARDRAIL	SHEET 589	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090203-XS.DWG
LAYOUT NAME - 090403-xs

PLOT DATE : 9/23/2026 3:05 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

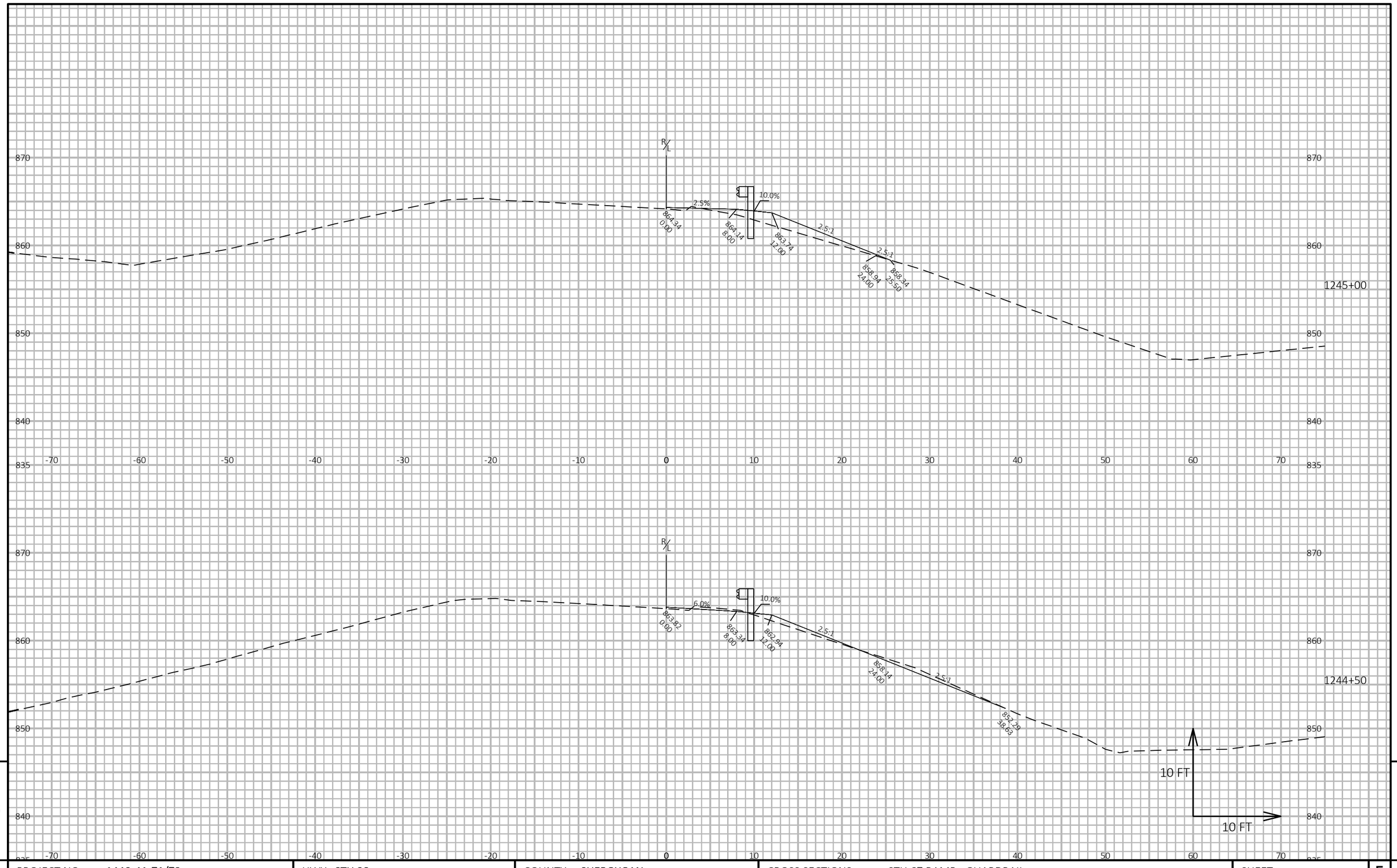


PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 67 RAMP - GUARDRAIL	SHEET 590	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090203-XS.DWG
LAYOUT NAME - 090404-xs

PLOT DATE : 9/23/2026 3:05 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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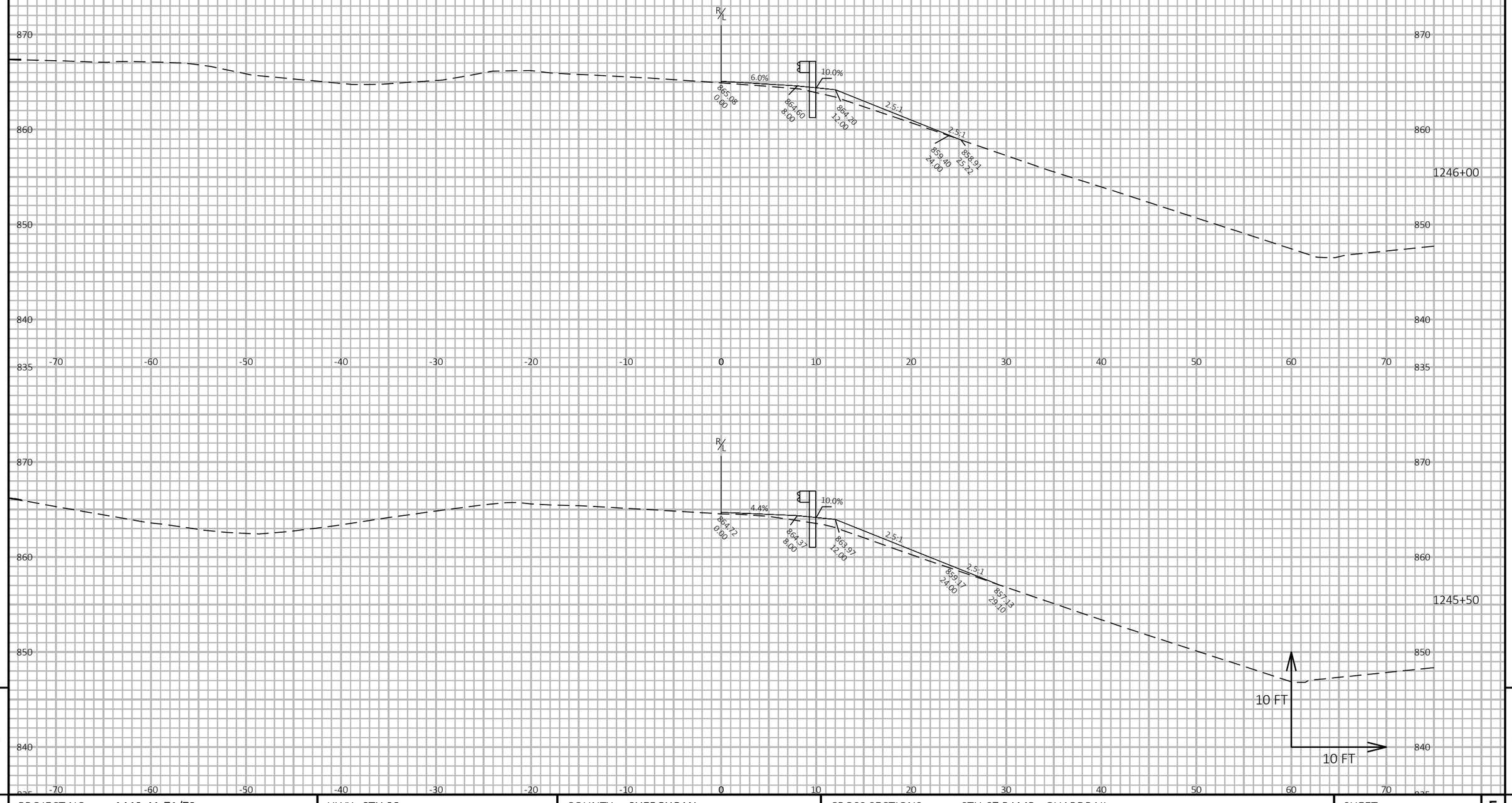
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 67 RAMP - GUARDRAIL	SHEET 591	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090203-XS.DWG
LAYOUT NAME - 090405-xs

PLOT DATE : 9/23/2026 3:06 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



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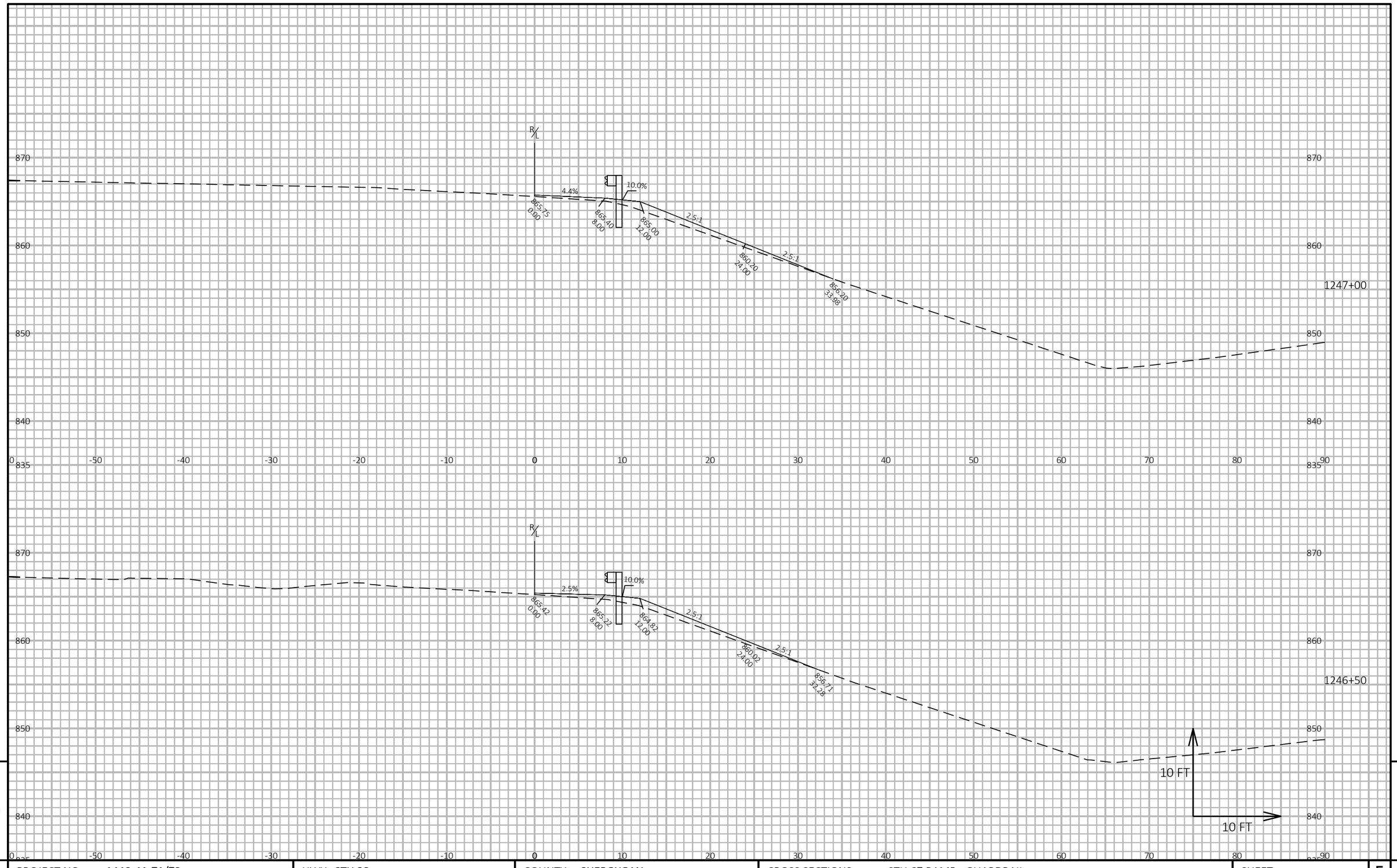
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 67 RAMP - GUARDRAIL	SHEET 592	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090203-XS.DWG
LAYOUT NAME - 090406-xs

PLOT DATE : 9/23/2026 3:06 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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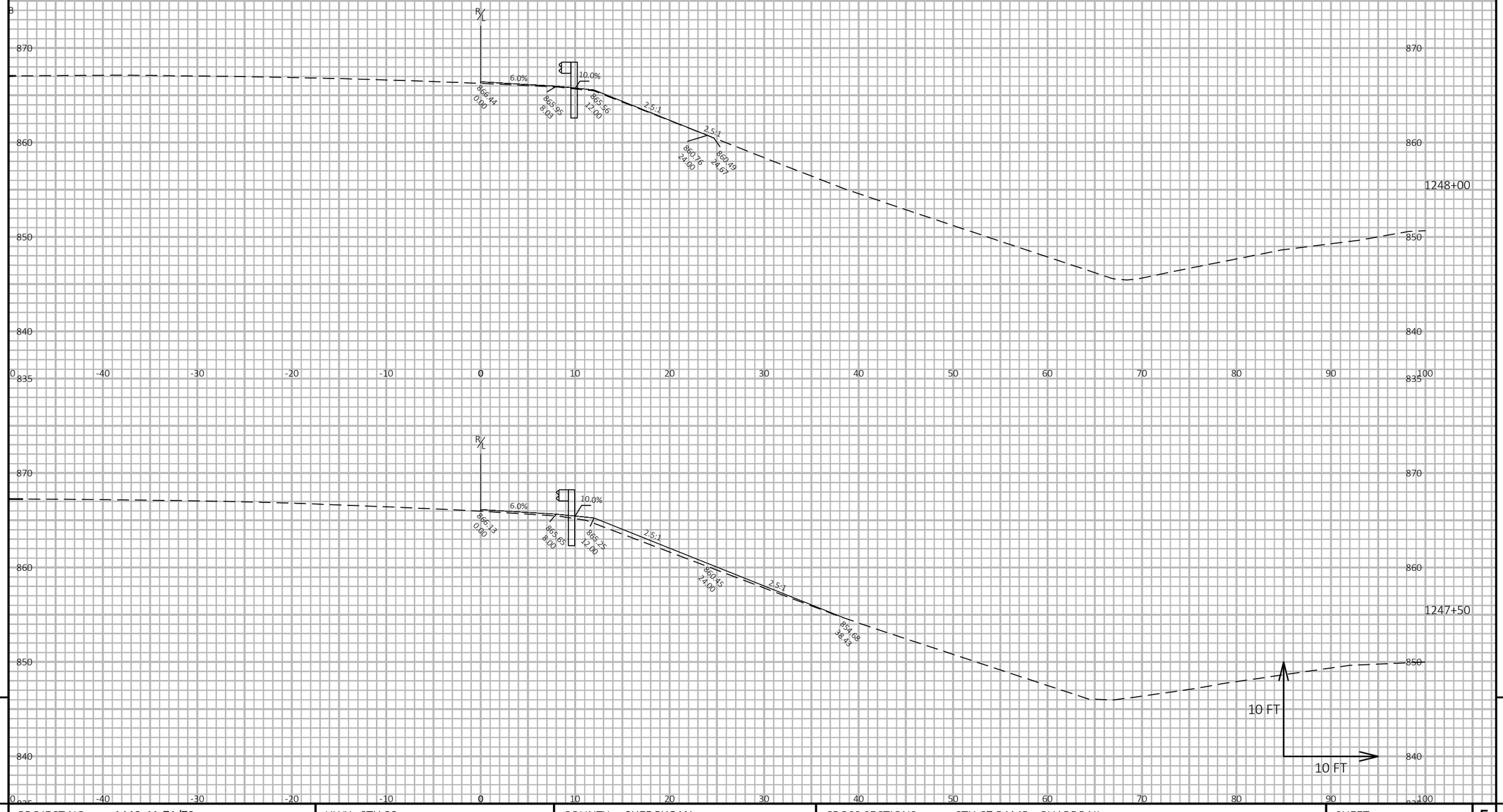
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 67 RAMP - GUARDRAIL	SHEET 593	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090203-XS.DWG
LAYOUT NAME - 090407-xs

PLOT DATE : 9/23/2026 3:06 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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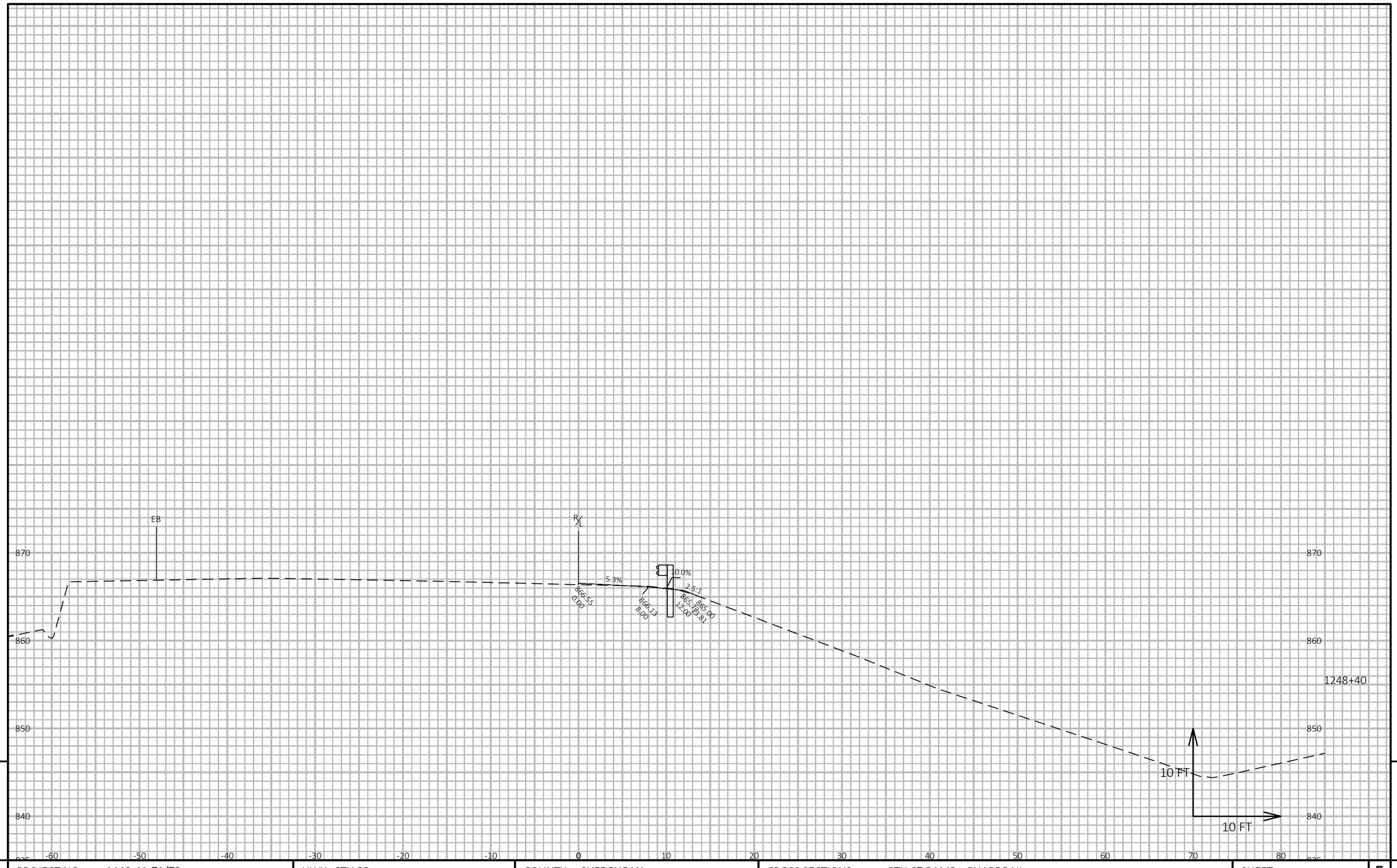
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 67 RAMP - GUARDRAIL	SHEET 594	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090203-XS.DWG
LAYOUT NAME - 090408-xs

PLOT DATE : 9/23/2026 3:06 PM PLOT BY : HOSPER, JAN PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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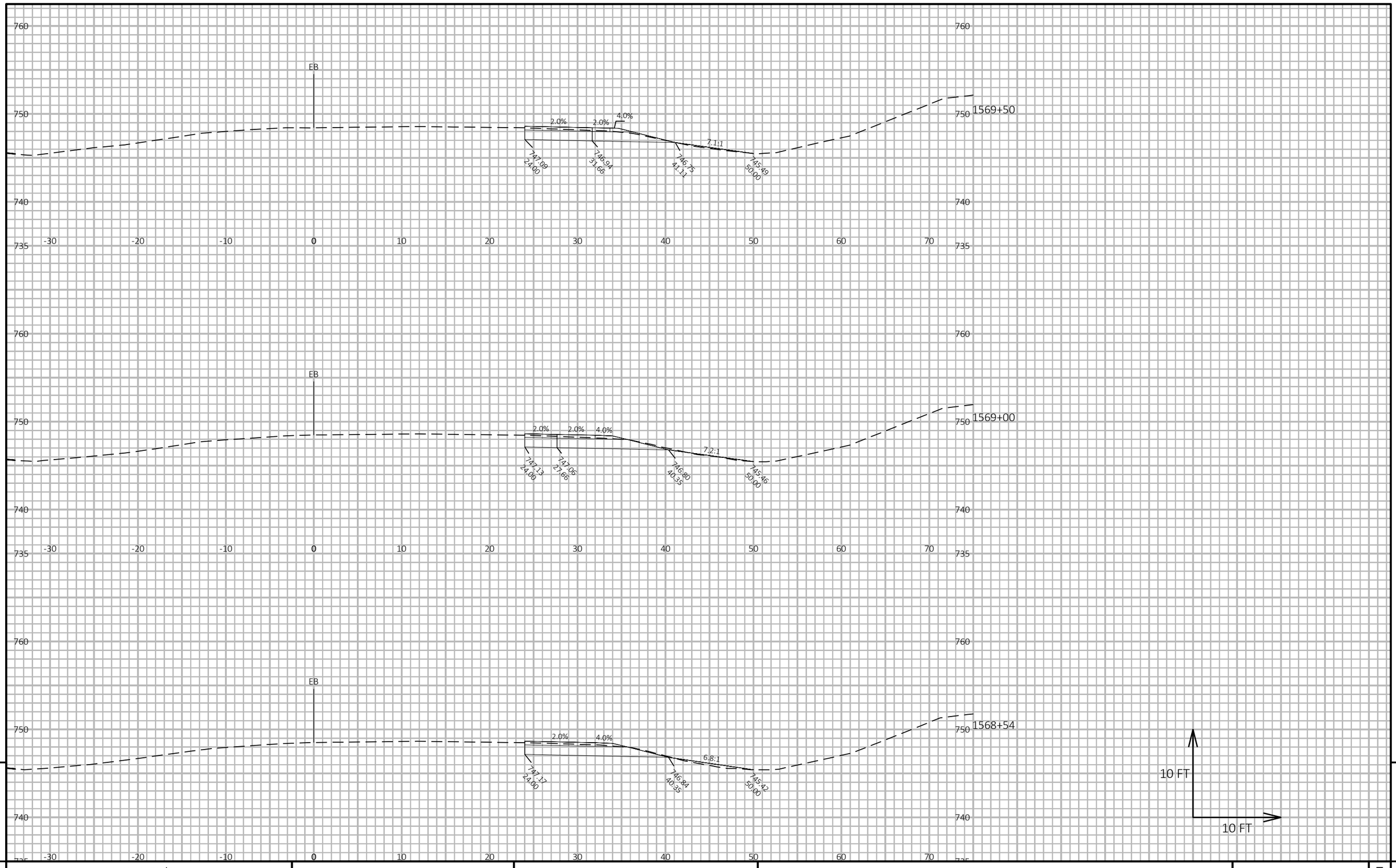
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 67 RAMP - GUARDRAIL	SHEET 595	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090203-XS.DWG
LAYOUT NAME - 090409-xs

PLOT DATE : 9/23/2026 3:06 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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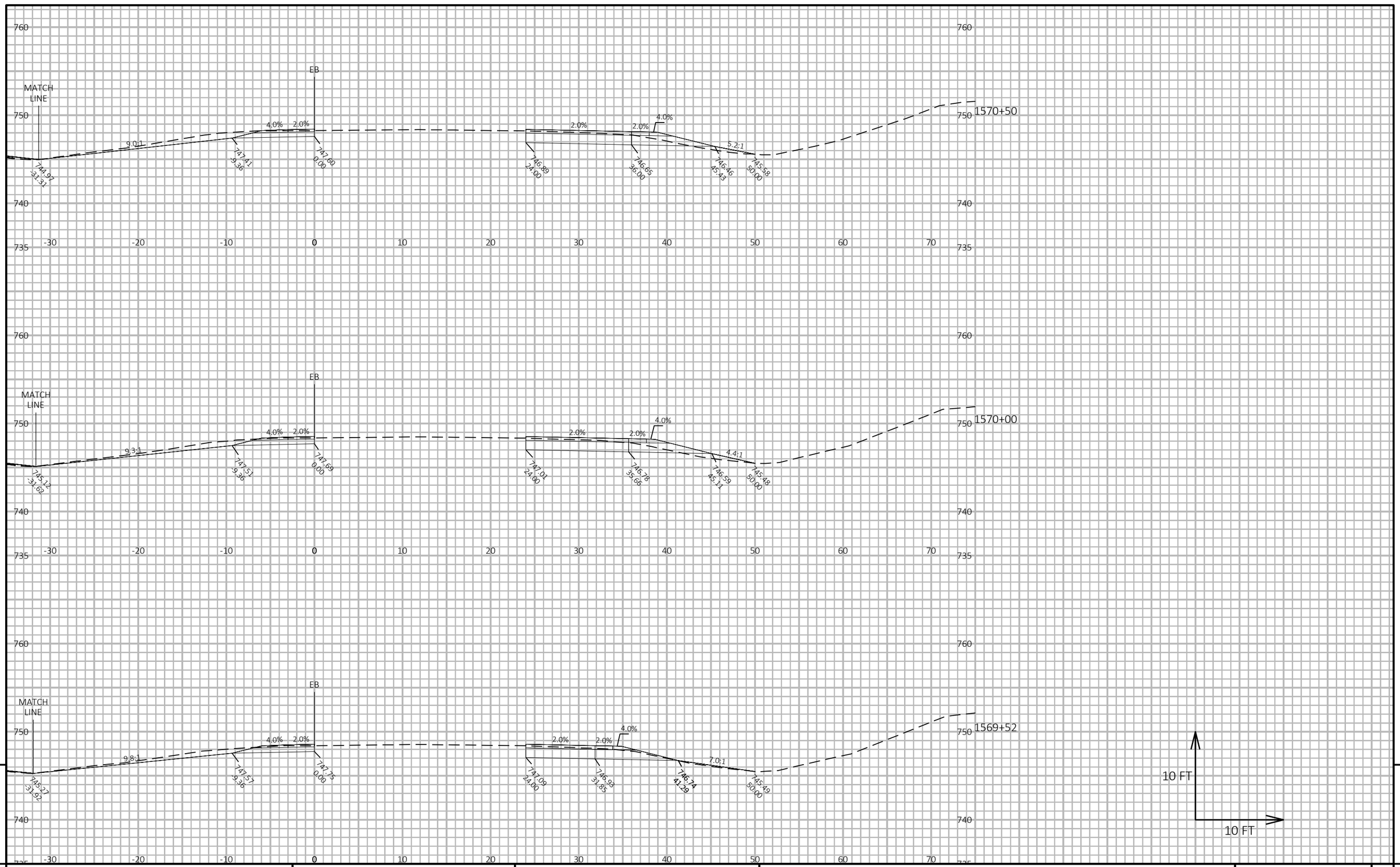
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 EB - SUNSET RD	SHEET 596	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090204-XS.DWG
LAYOUT NAME - 090501-xs

PLOT DATE : 9/23/2026 3:06 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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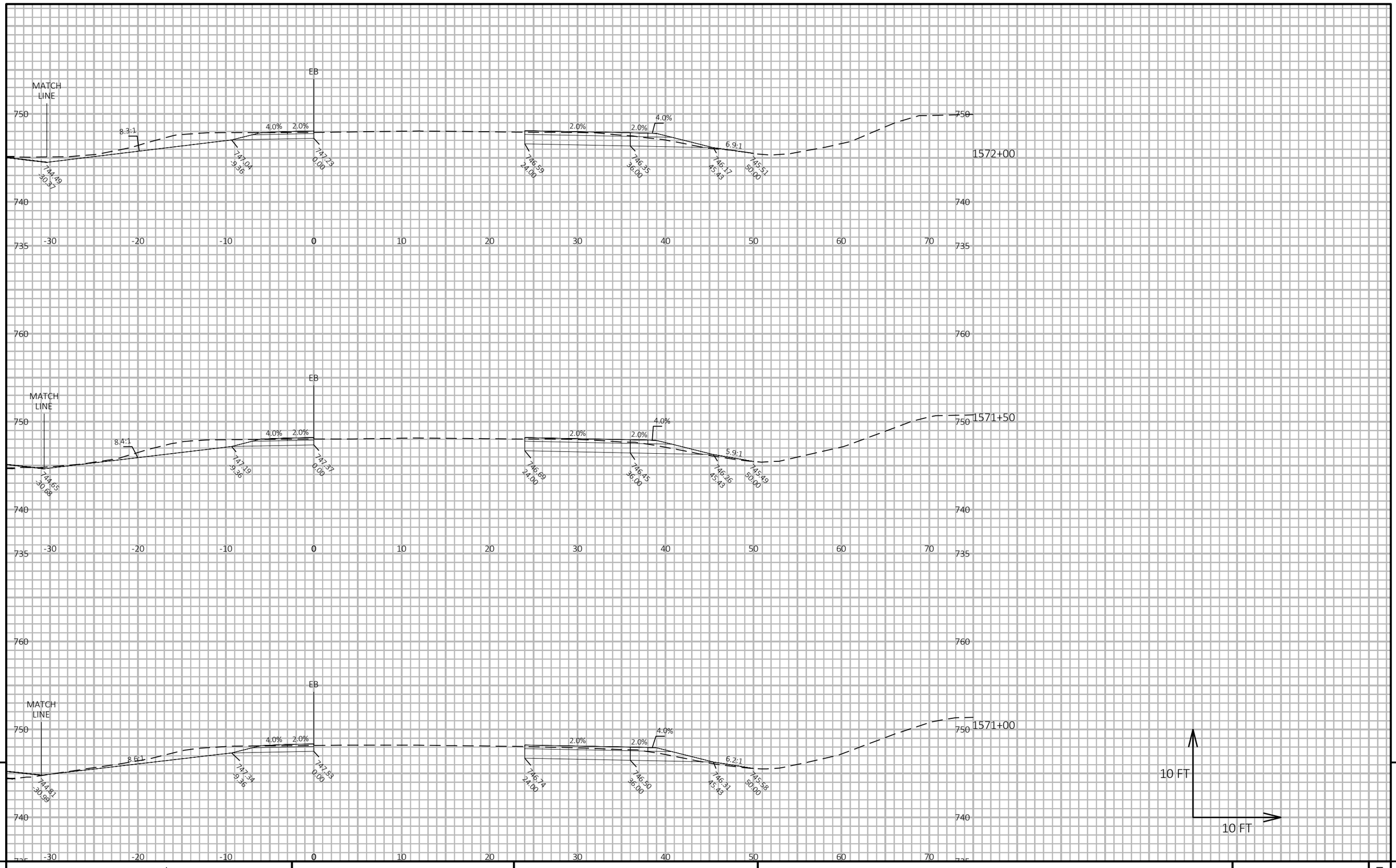
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 EB - SUNSET RD	SHEET 597	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090204-XS.DWG
LAYOUT NAME - 090502-xs

PLOT DATE : 9/23/2026 3:06 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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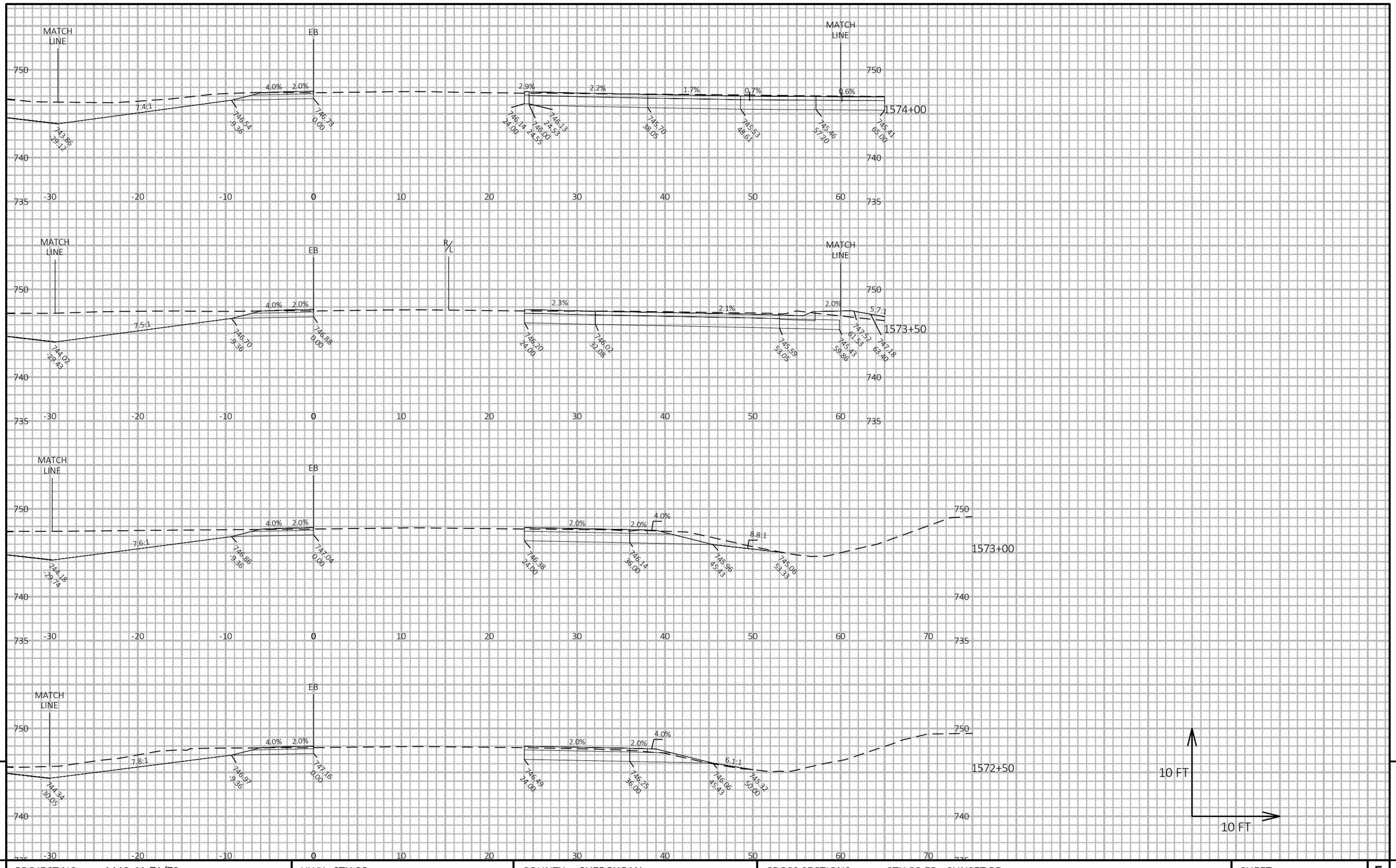
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 EB - SUNSET RD	SHEET 598	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090204-XS.DWG
LAYOUT NAME - 090503-xs

PLOT DATE : 9/23/2026 3:07 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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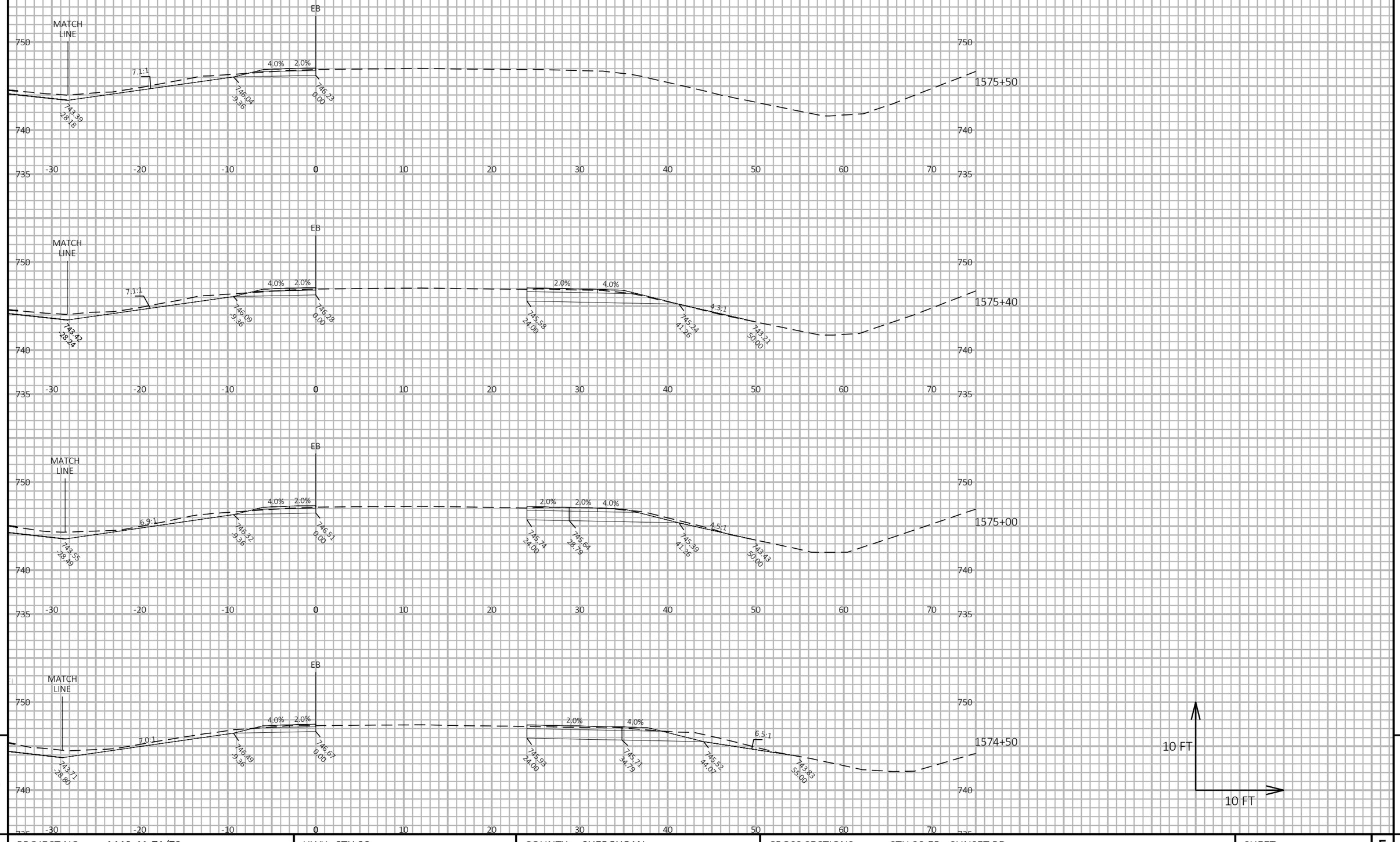
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 EB - SUNSET RD	SHEET 599	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090204-XS.DWG
LAYOUT NAME - 090504-xs

PLOT DATE : 9/23/2026 3:07 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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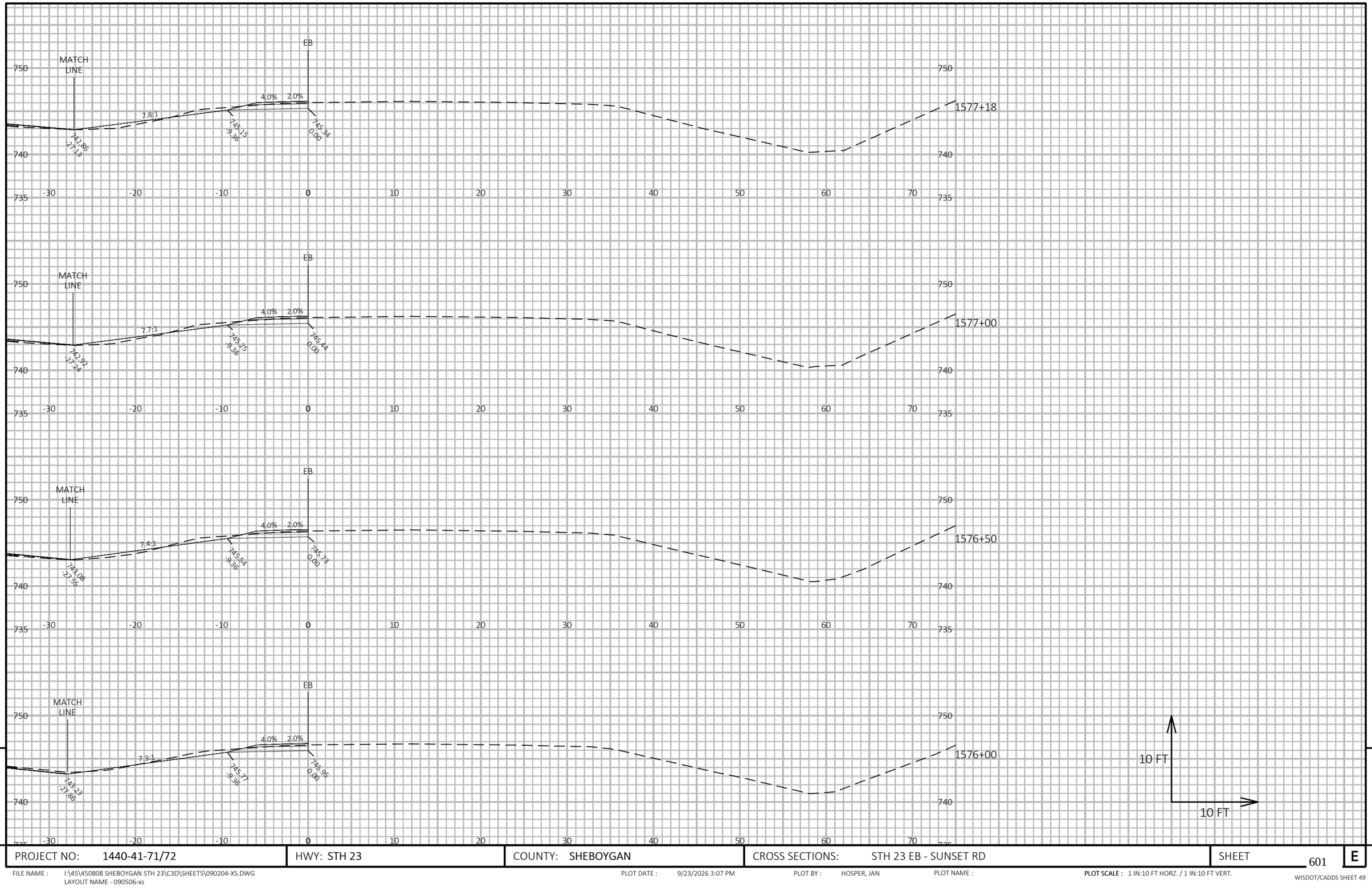
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 EB - SUNSET RD	SHEET 600	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090204-XS.DWG
LAYOUT NAME - 090505-xs

PLOT DATE : 9/23/2026 3:07 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



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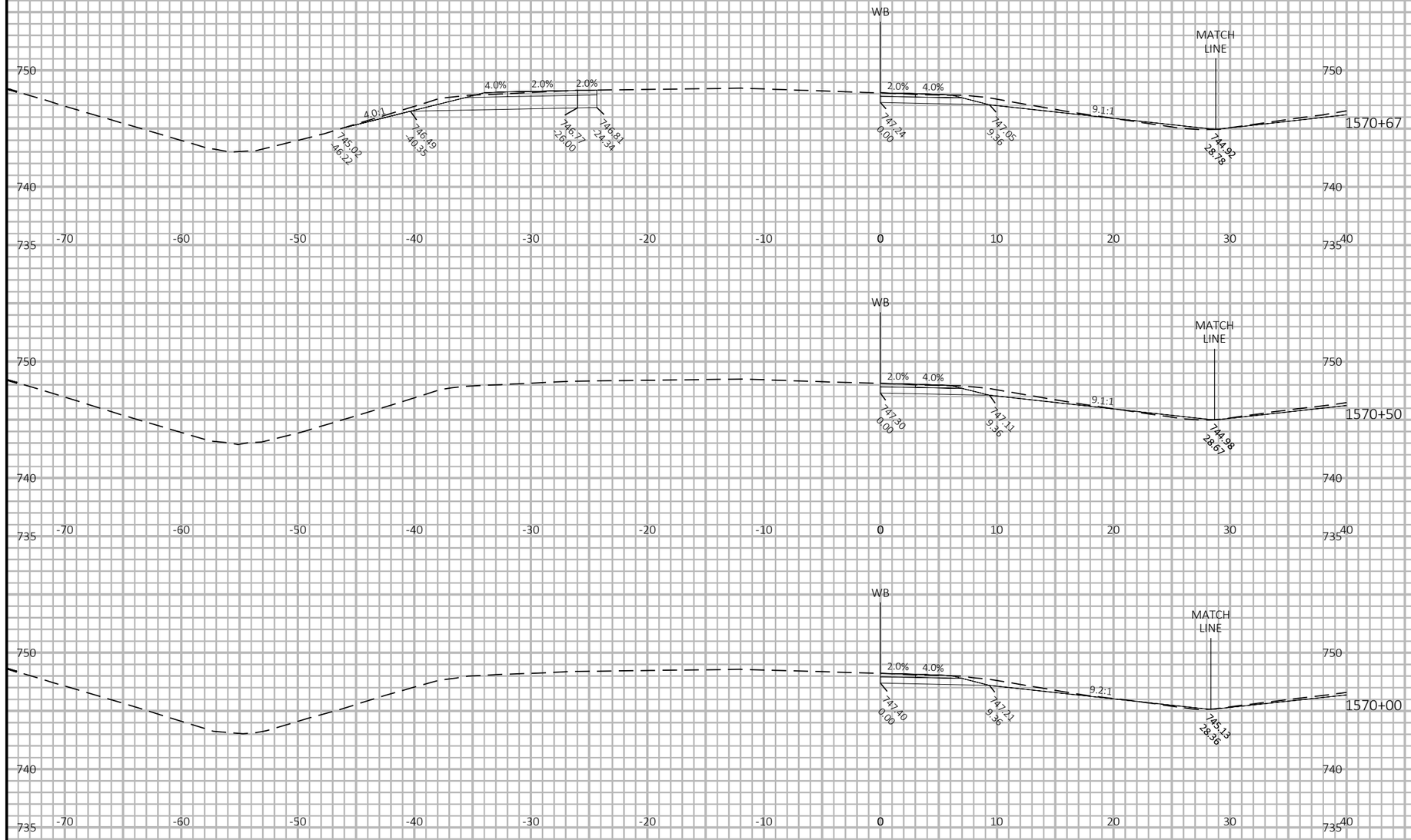
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 EB - SUNSET RD	SHEET 601	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090204-XS.DWG
LAYOUT NAME - 090506-xs

PLOT DATE : 9/23/2026 3:07 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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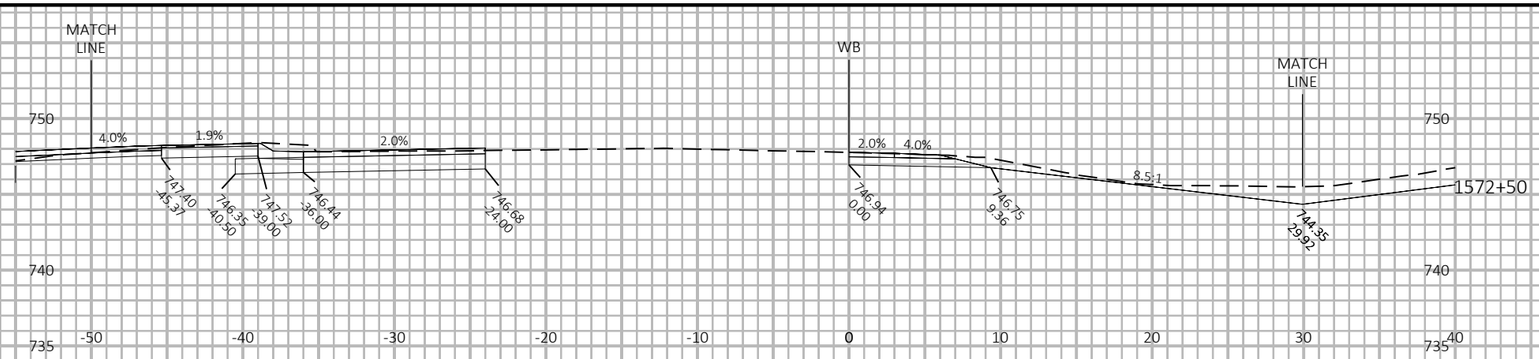
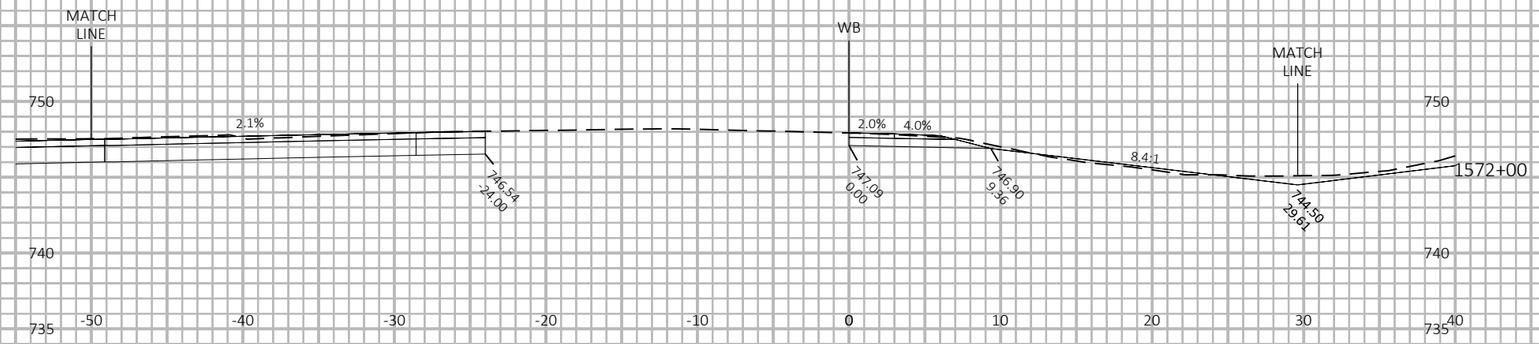
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 WB - SUNSET RD	SHEET 602	E

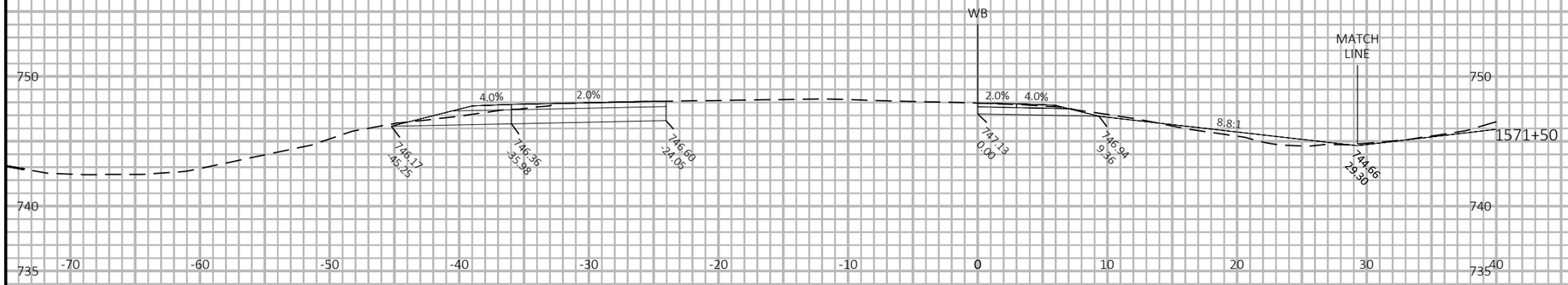
FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090204-XS.DWG
LAYOUT NAME - 090510-xs

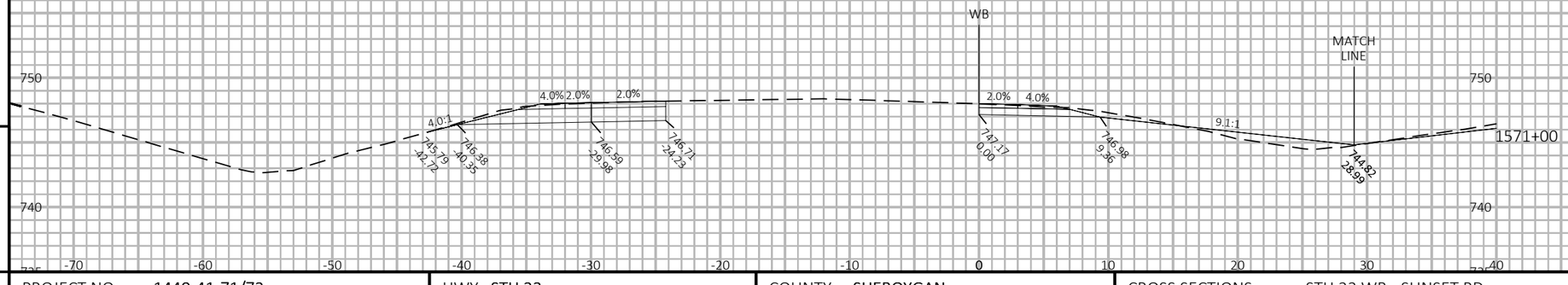
PLOT DATE : 9/23/2026 3:07 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49









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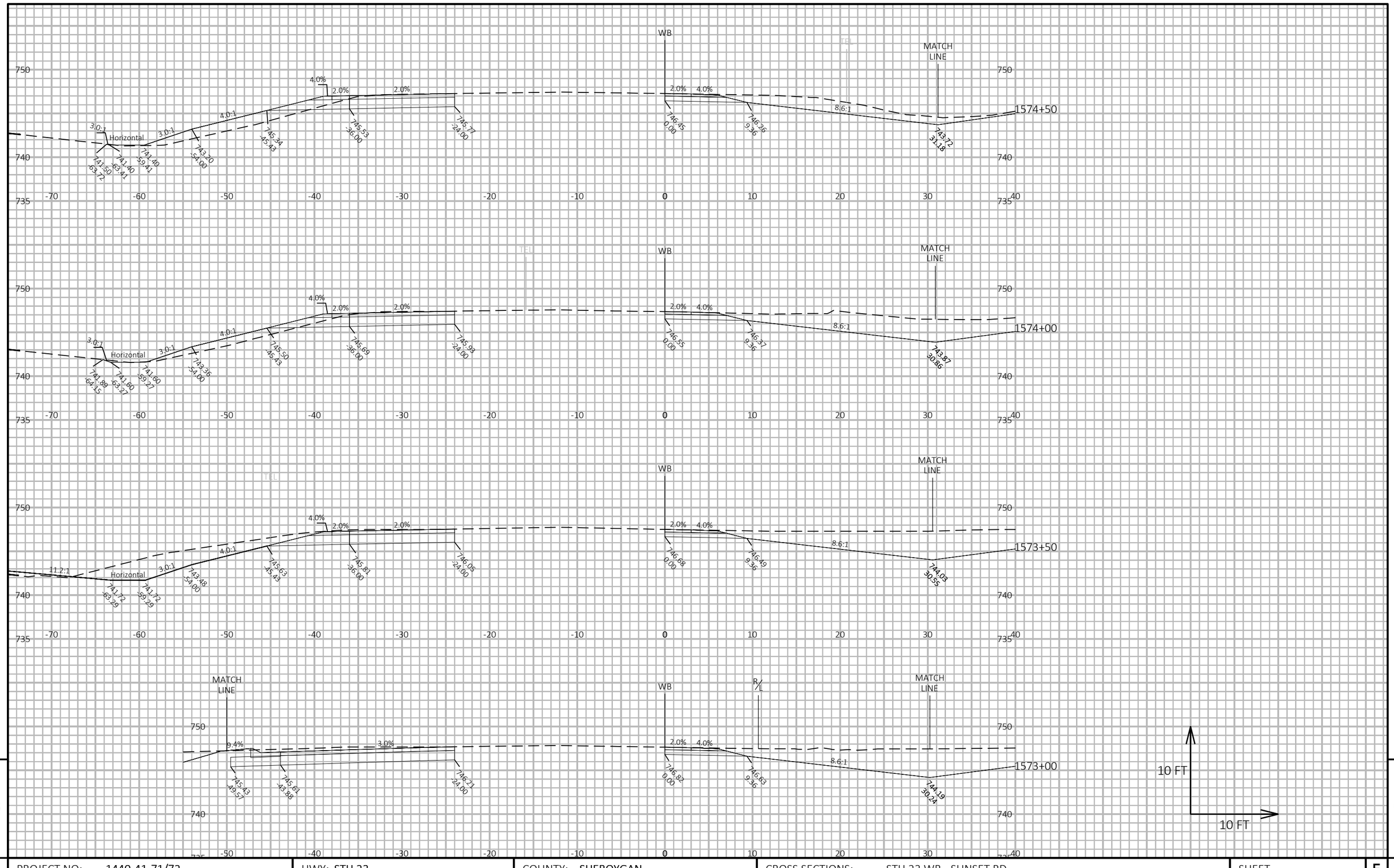
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 WB - SUNSET RD	SHEET 603	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090204-XS.DWG
LAYOUT NAME - 090511-xs

PLOT DATE : 9/23/2026 3:07 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



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PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 WB - SUNSET RD	SHEET 604	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090204-XS.DWG
LAYOUT NAME - 090512-xs

PLOT DATE : 9/23/2026 3:07 PM

PLOT BY : HOSPER, JAN

PLOT NAME :

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

WISDOT/CADDS SHEET 49

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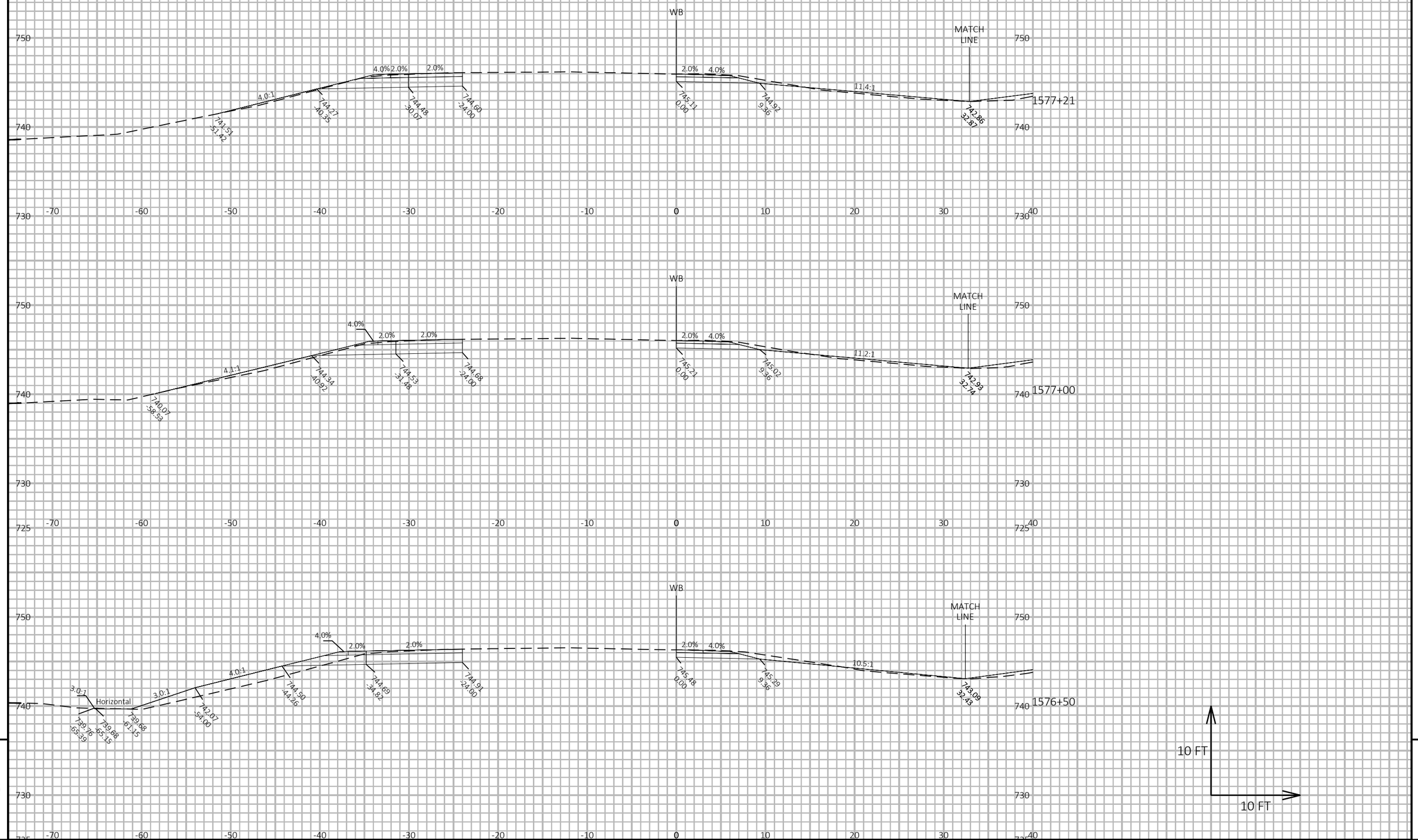
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 WB - SUNSET RD	SHEET 605	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090204-XS.DWG
LAYOUT NAME - 090513-xs

PLOT DATE : 9/23/2026 3:07 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

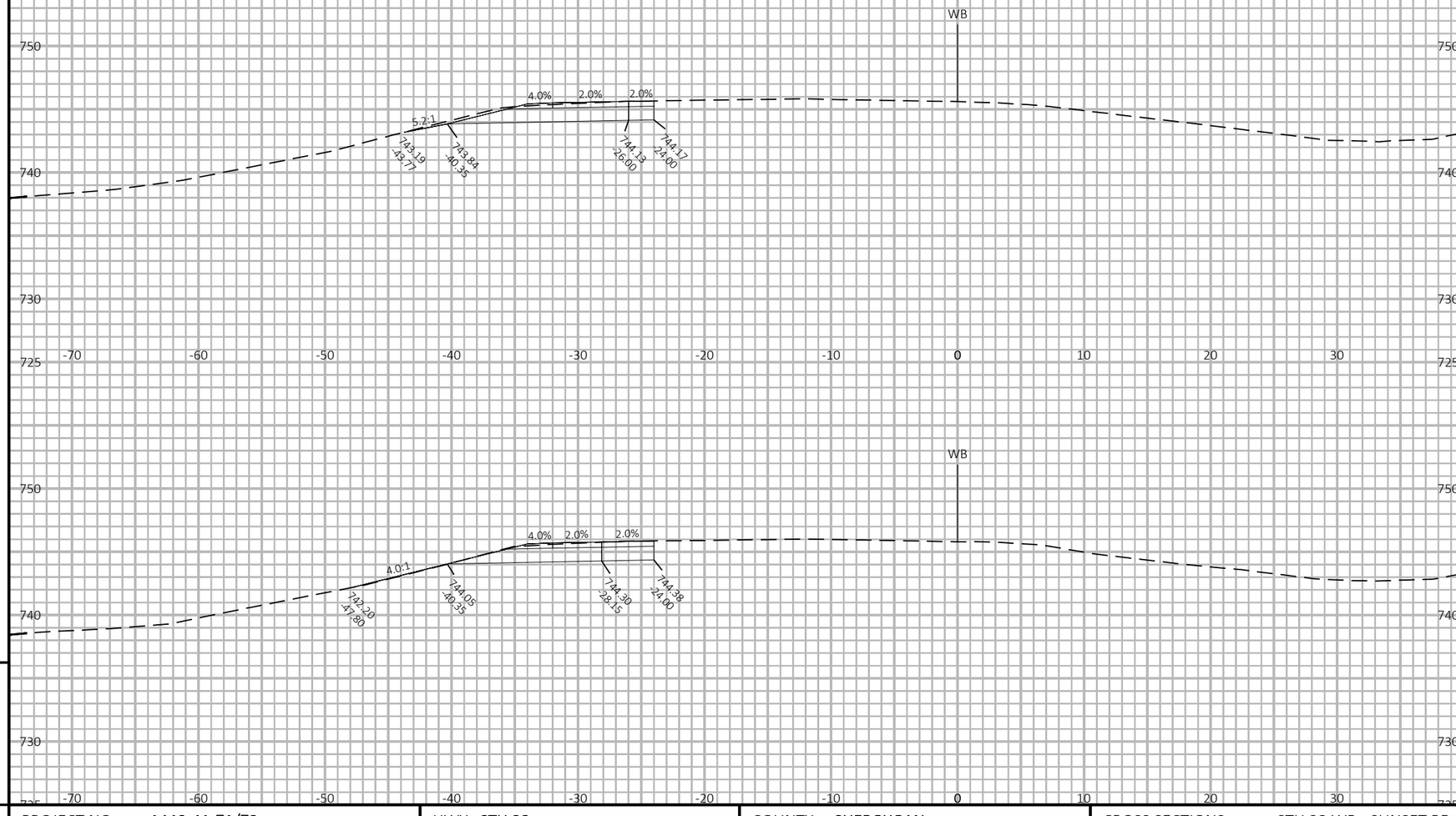


PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 WB - SUNSET RD	SHEET 606	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090204-XS.DWG
LAYOUT NAME - 090514-xs

PLOT DATE : 9/23/2026 3:07 PM PLOT BY : HOSPER, JAN PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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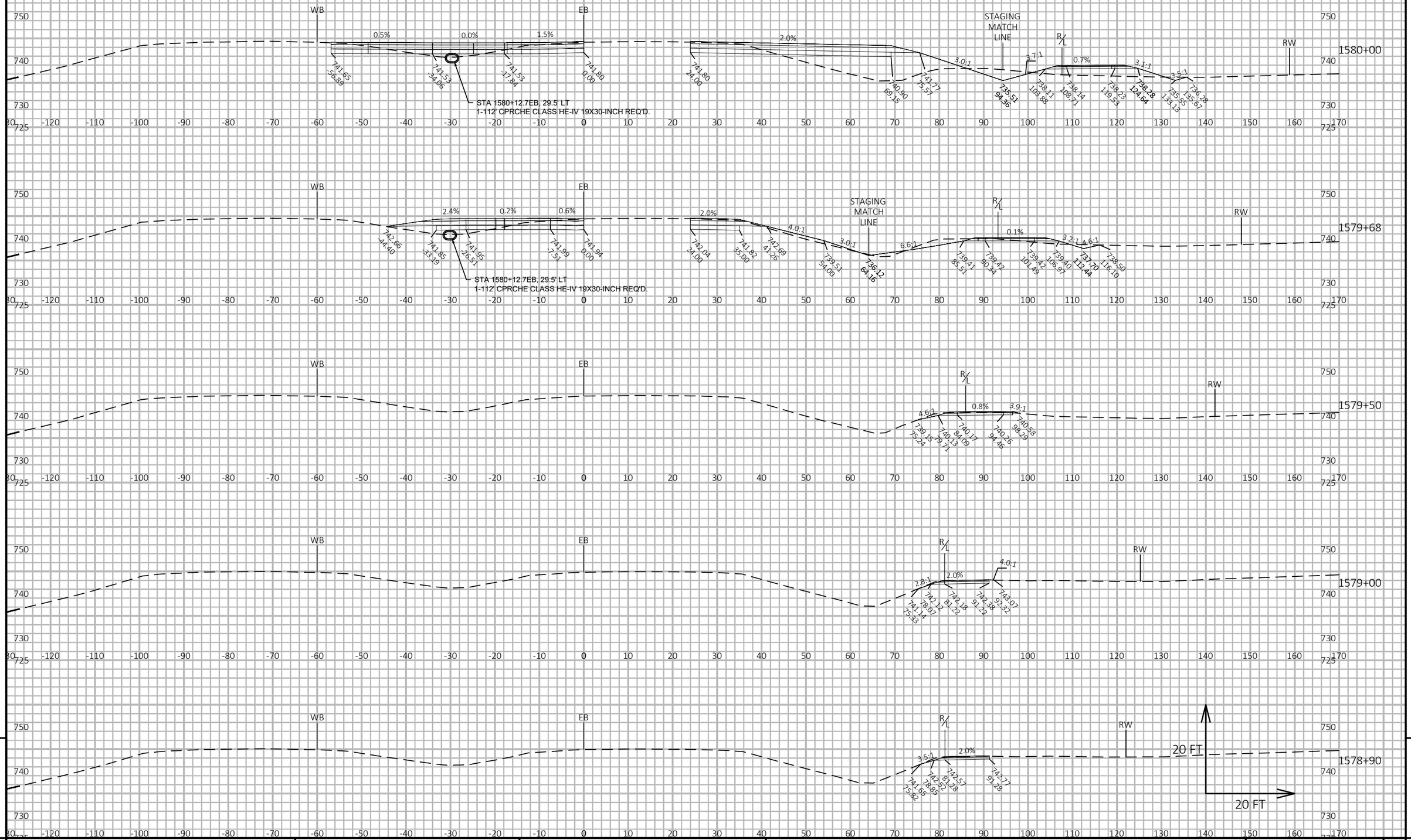
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 WB - SUNSET RD	SHEET 607	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090204-XS.DWG
LAYOUT NAME - 090515-xs

PLOT DATE : 9/23/2026 3:08 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 EB - CTH TT	SHEET 608	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090205-XS.DWG
LAYOUT NAME - 090601-xs

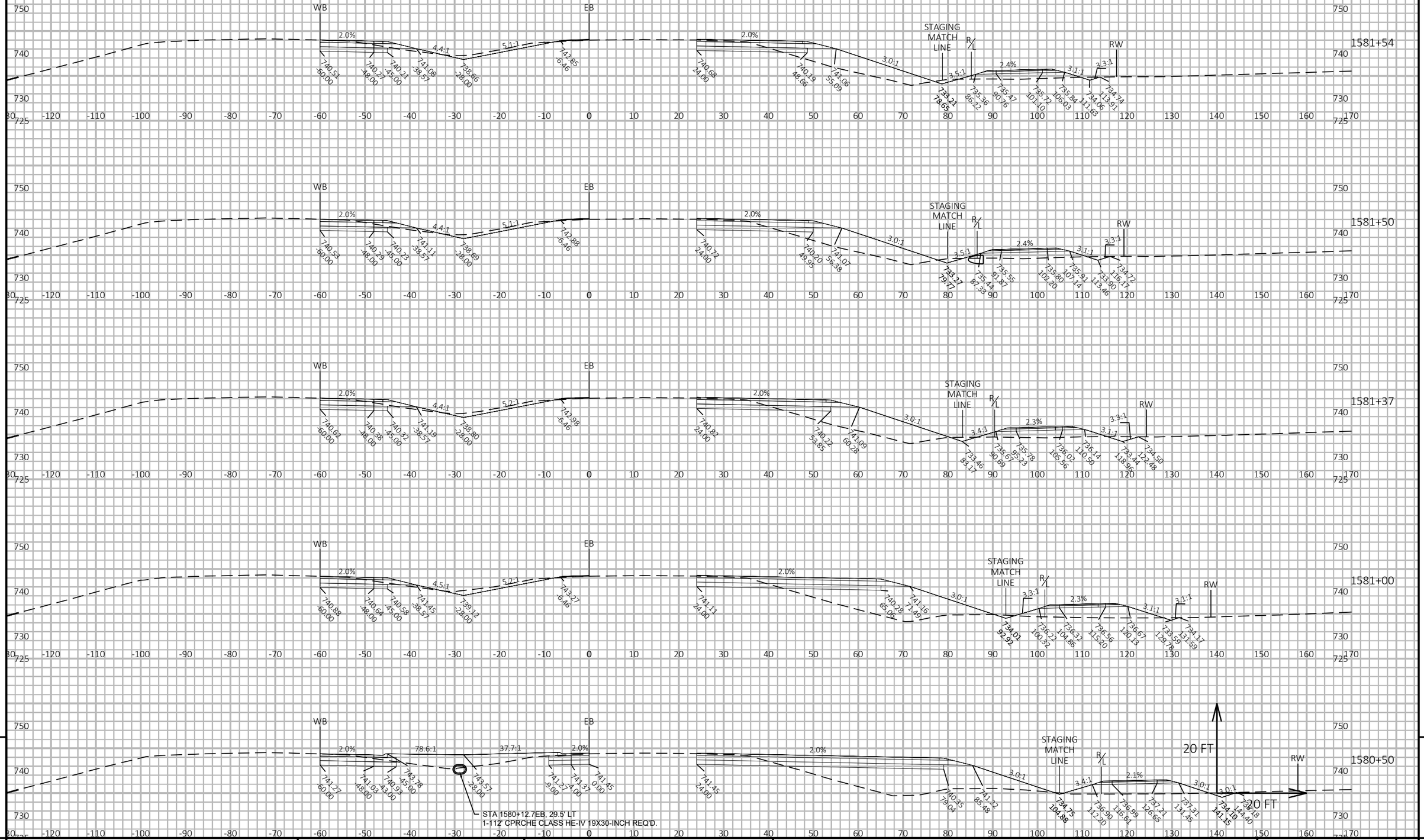
PLOT DATE : 9/23/2026 3:08 PM

PLOT BY : HOSPER, JAN

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 EB - CTH TT	SHEET 609	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090205-XS.DWG
LAYOUT NAME - 090602-xs

PLOT DATE : 9/23/2026 3:08 PM

PLOT BY : HOSPER, JAN

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 EB - CTH TT	SHEET 610	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090205-XS.DWG
LAYOUT NAME - 090603-xs

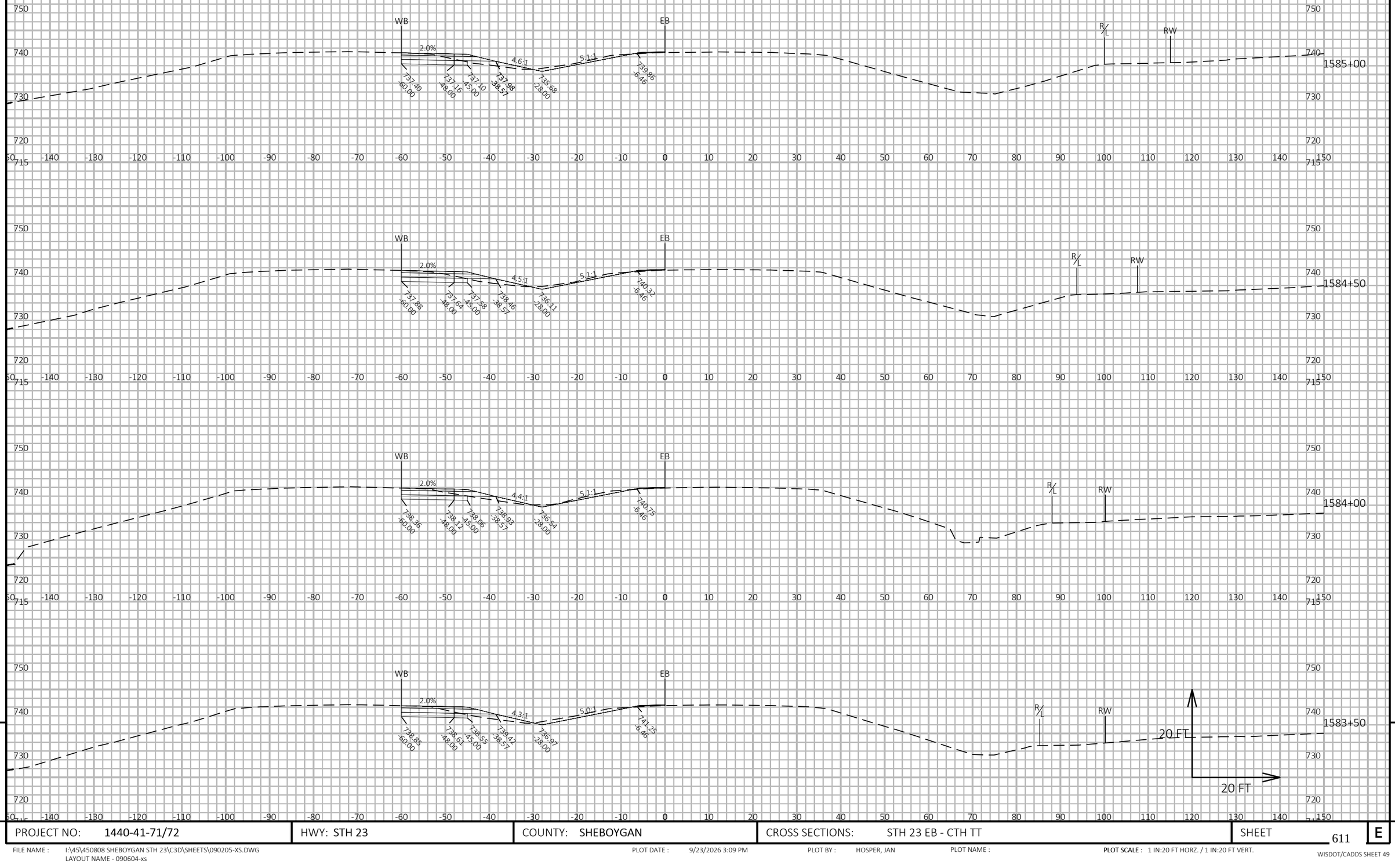
PLOT DATE : 9/23/2026 3:09 PM

PLOT BY : HOSPER, JAN

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

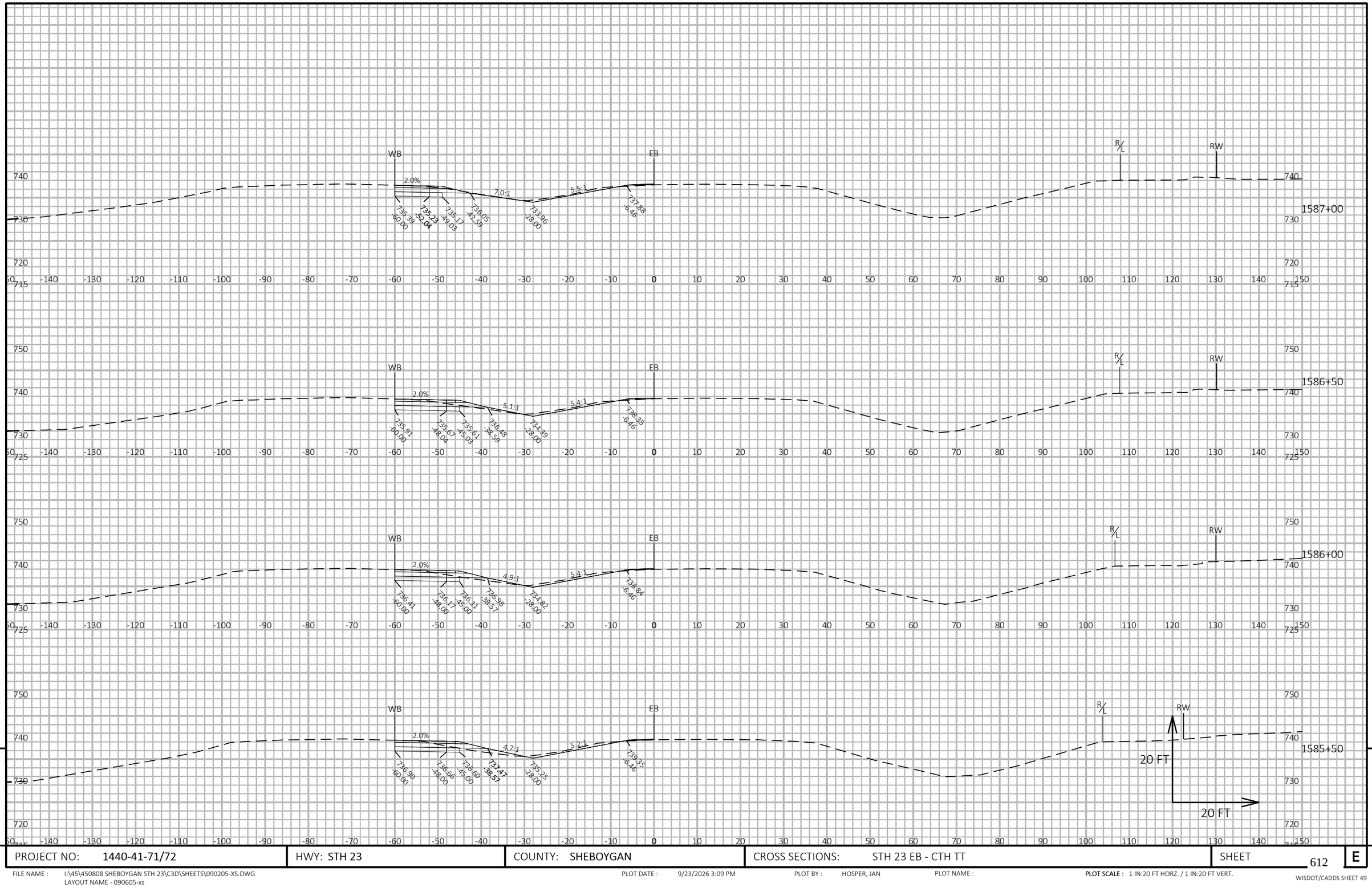


PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 EB - CTH TT	SHEET 611	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090205-XS.DWG
LAYOUT NAME - 090604-xs

PLOT DATE : 9/23/2026 3:09 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 EB - CTH TT	SHEET 612 E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090205-XS.DWG
LAYOUT NAME - 090605-xs

PLOT DATE : 9/23/2026 3:09 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

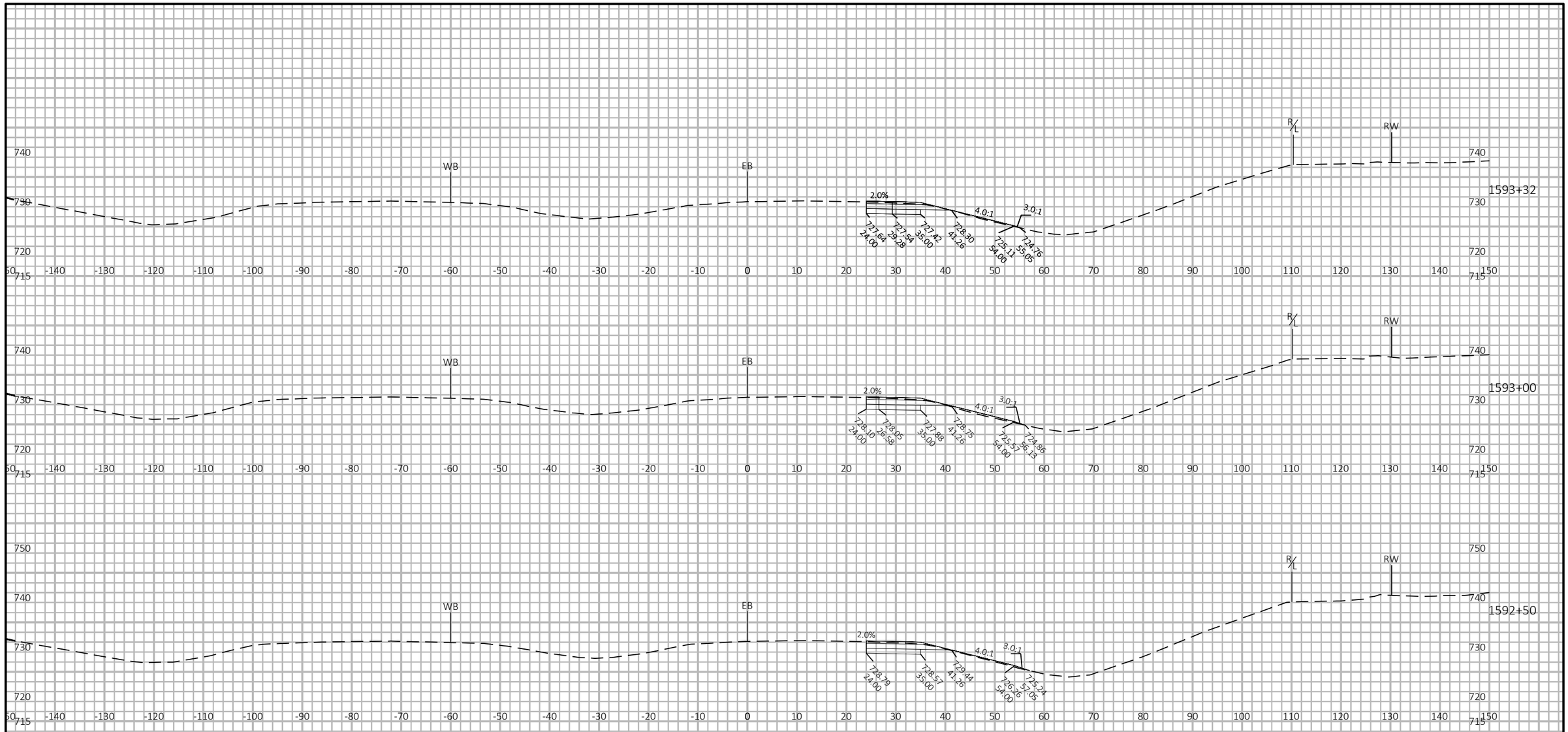
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 EB - CTH TT	SHEET 613	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090205-XS.DWG
LAYOUT NAME - 090606-xs

PLOT DATE : 9/23/2026 3:09 PM PLOT BY : HOSPER, JAN PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 EB - CTH TT	SHEET 614	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090205-XS.DWG
LAYOUT NAME - 090607-xs

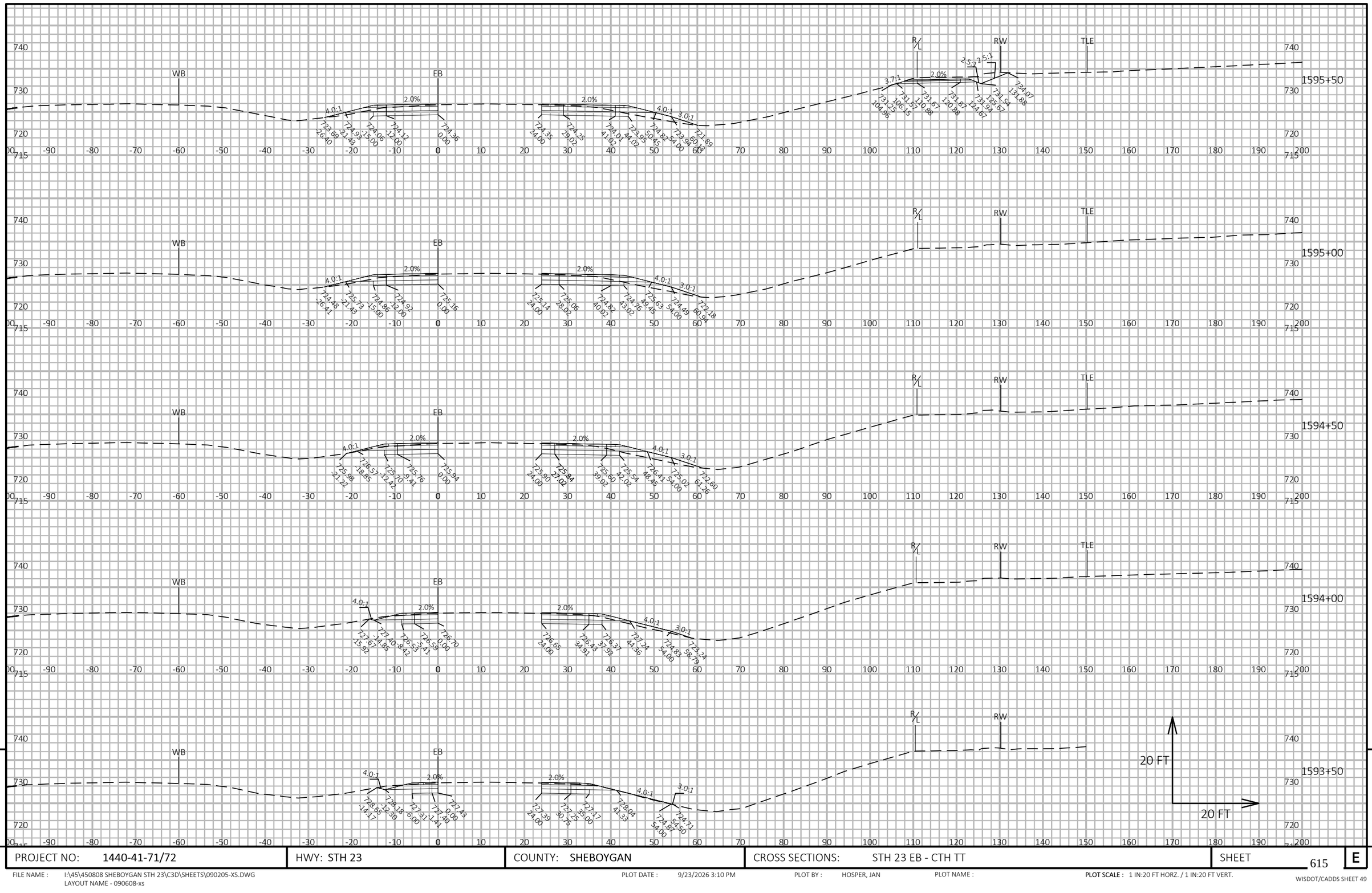
PLOT DATE : 9/23/2026 3:09 PM

PLOT BY : HOSPER, JAN

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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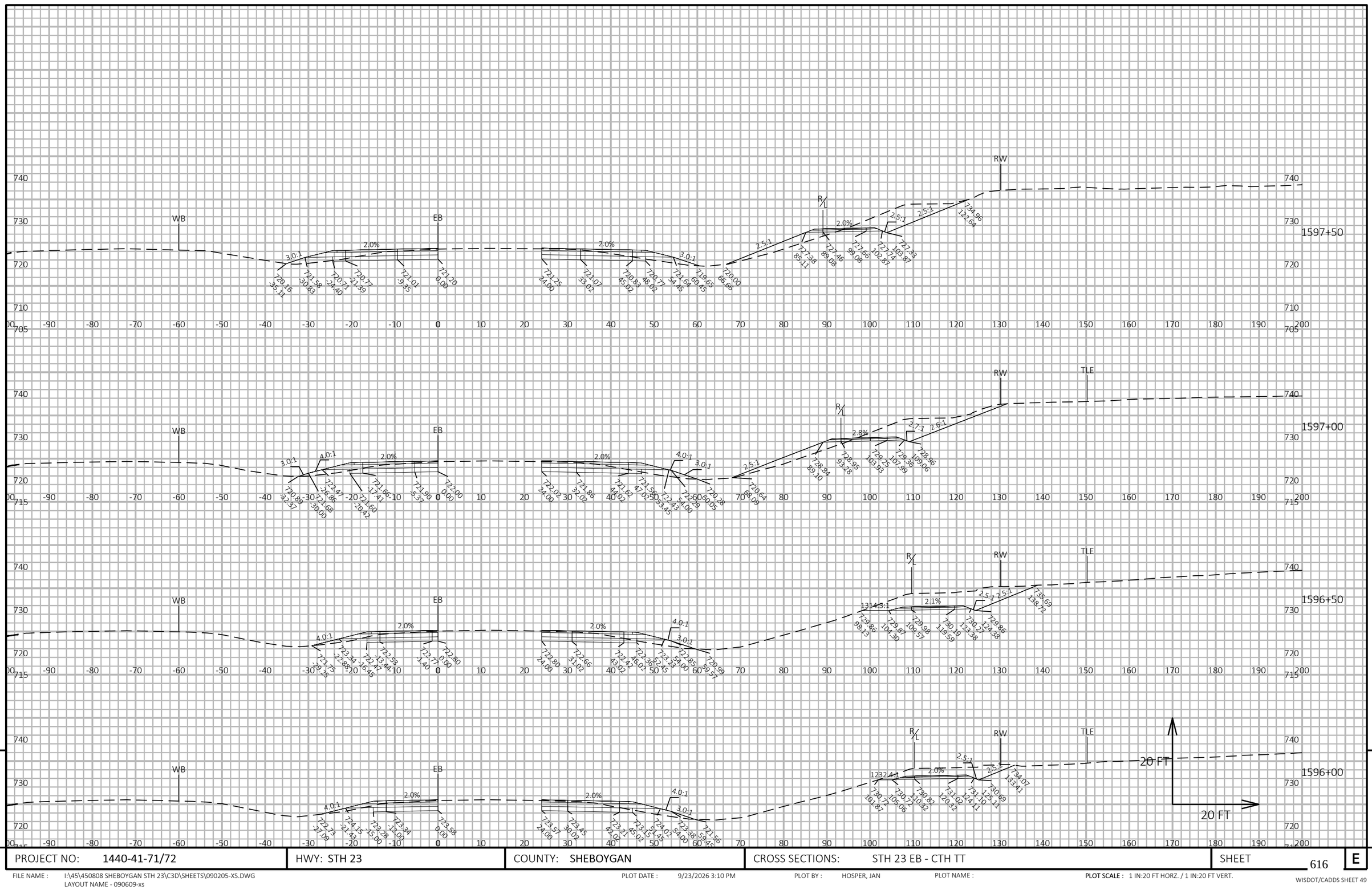
9

PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 EB - CTH TT	SHEET 615	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090205-XS.DWG
LAYOUT NAME - 090608-xs

PLOT DATE : 9/23/2026 3:10 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 EB - CTH TT	SHEET 616	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090205-XS.DWG
LAYOUT NAME - 090609-xs

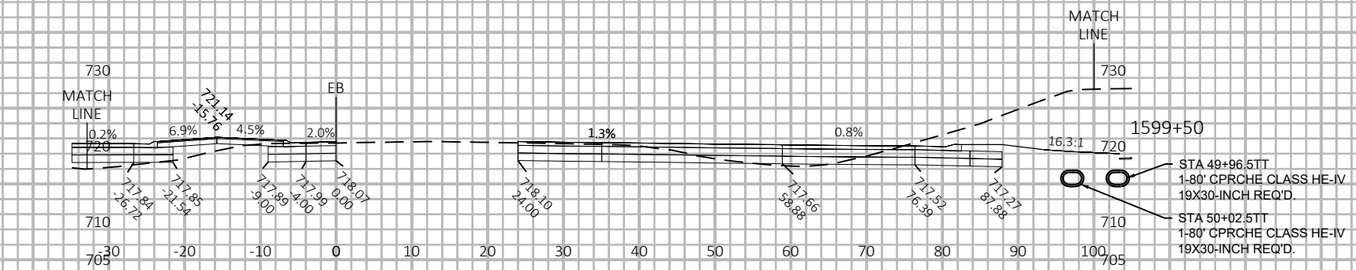
PLOT DATE : 9/23/2026 3:10 PM

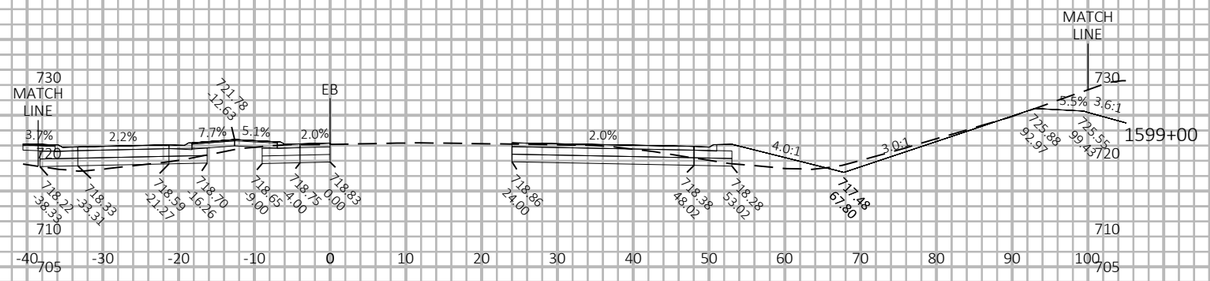
PLOT BY : HOSPER, JAN

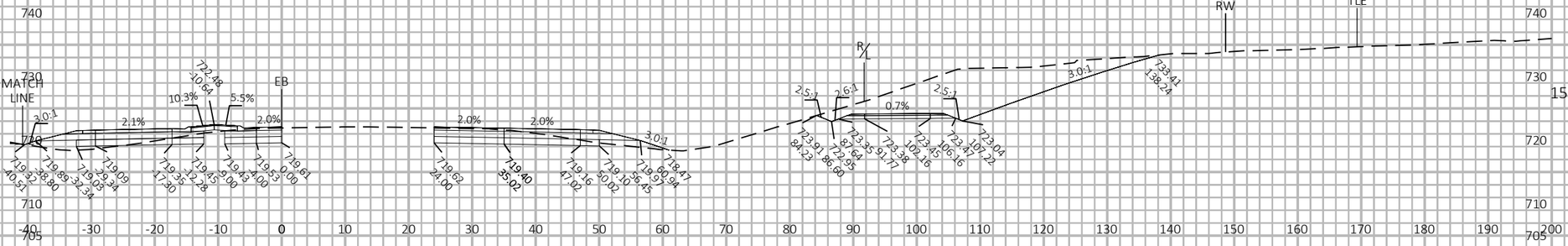
PLOT NAME :

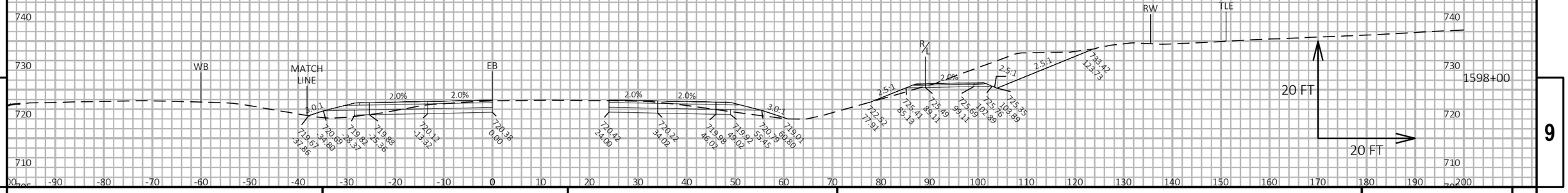
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49









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PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 EB - CTH TT	SHEET 617	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090205-XS.DWG
LAYOUT NAME - 090610-xs

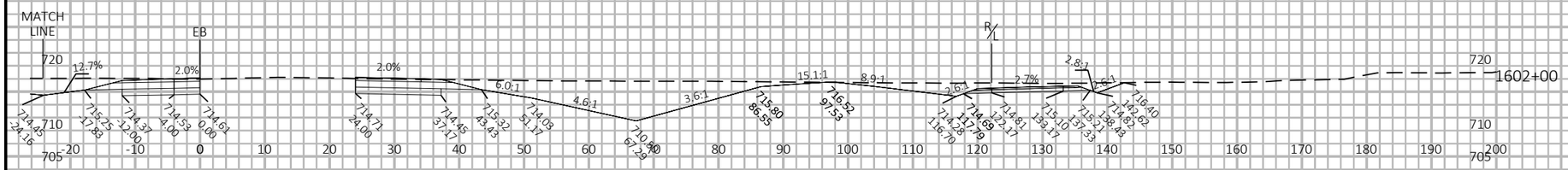
PLOT DATE : 9/23/2026 3:10 PM

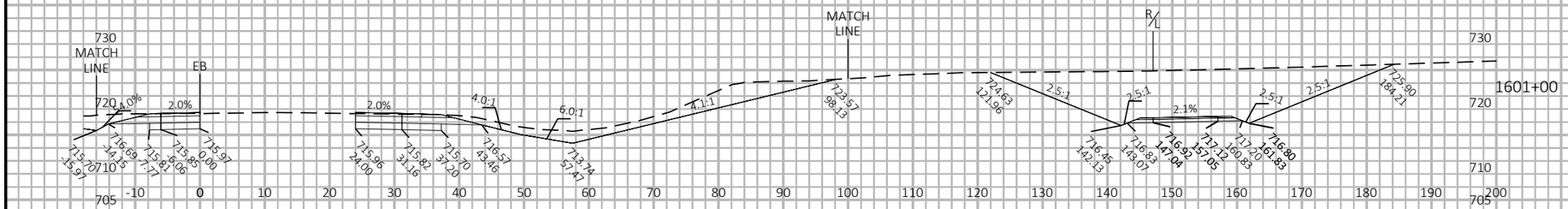
PLOT BY : HOSPER, JAN

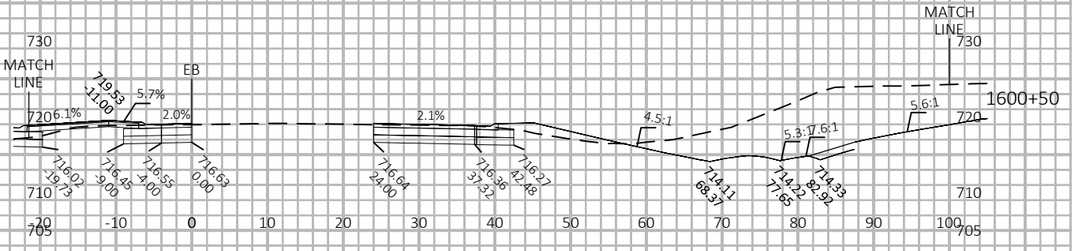
PLOT NAME :

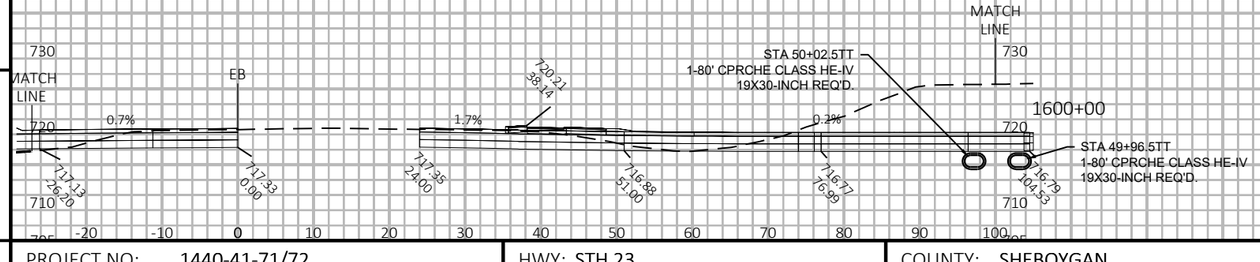
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

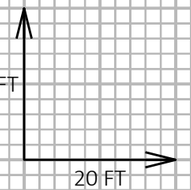
WISDOT/CADDS SHEET 49











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PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 EB - CTH TT	SHEET 618	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090205-XS.DWG
LAYOUT NAME - 090611-xs

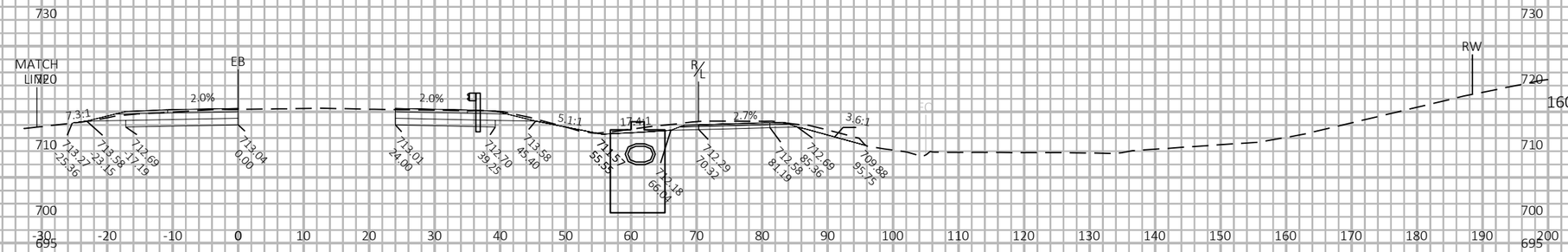
PLOT DATE : 9/23/2026 3:10 PM

PLOT BY : HOSPER, JAN

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 EB - CTH TT	SHEET 619	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090205-XS.DWG
LAYOUT NAME - 090612-xs

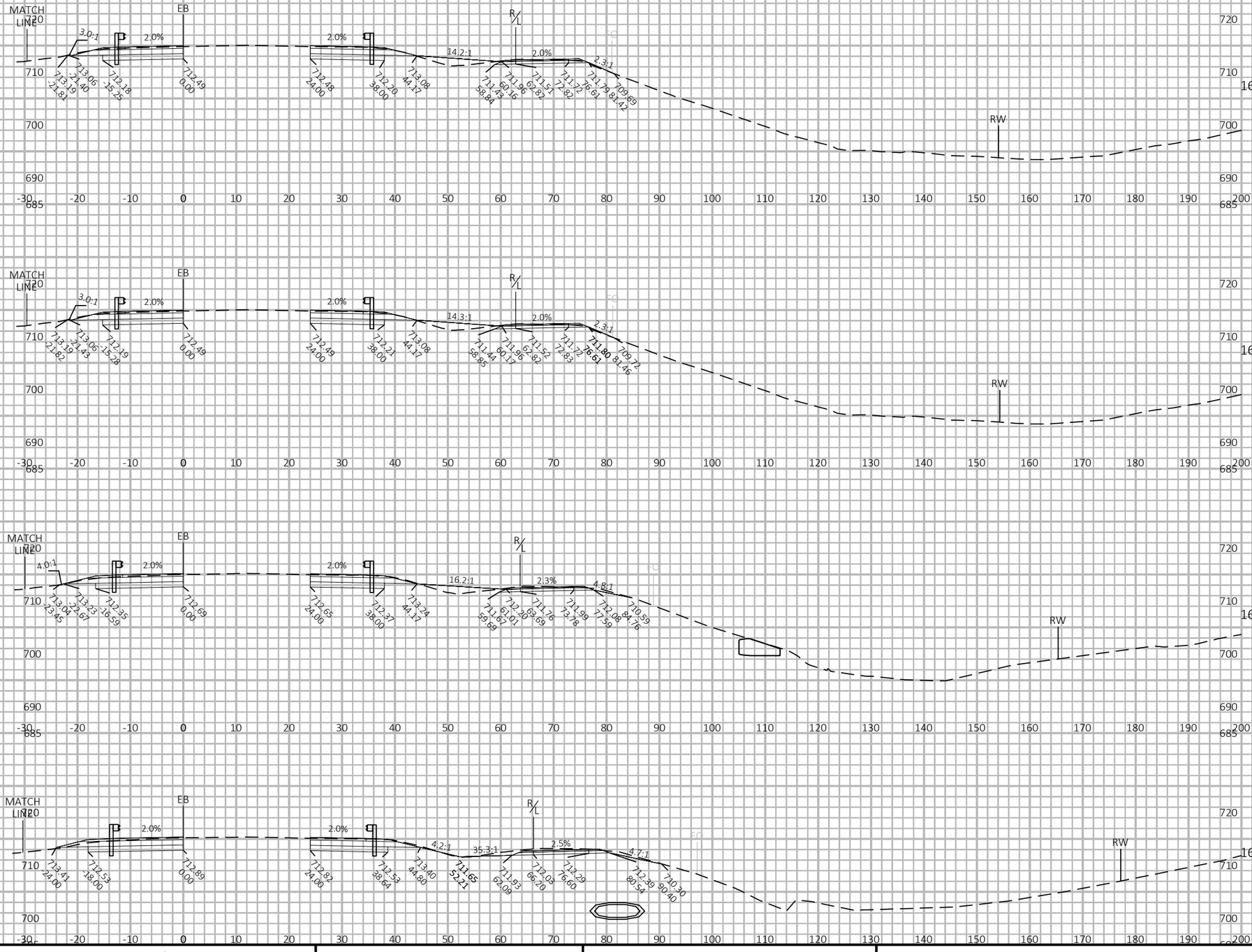
PLOT DATE : 9/23/2026 3:10 PM

PLOT BY : HOSPER, JAN

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 EB - CTH TT	SHEET 620	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090205-XS.DWG
LAYOUT NAME - 090613-xs

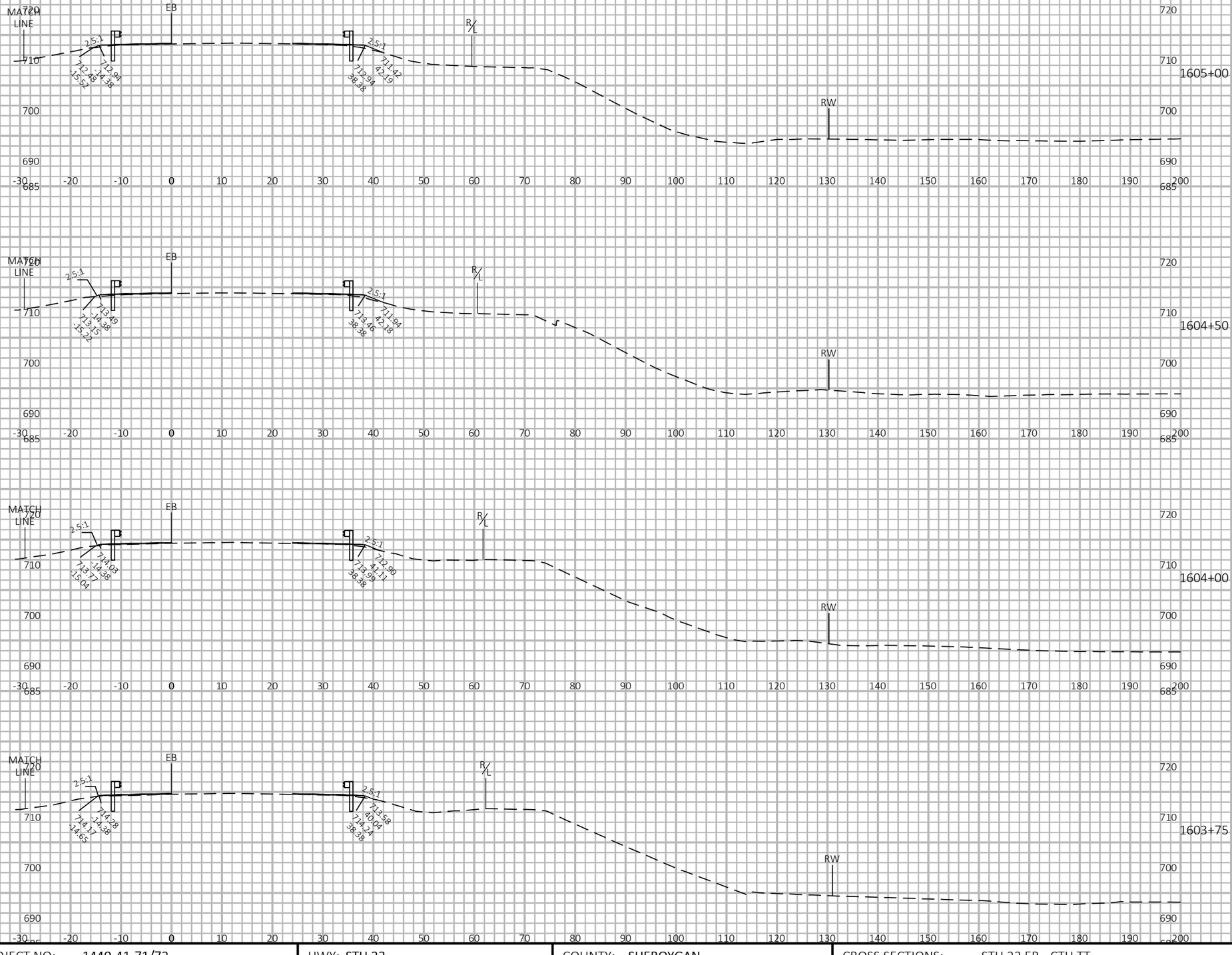
PLOT DATE : 9/23/2026 3:11 PM

PLOT BY : HOSPER, JAN

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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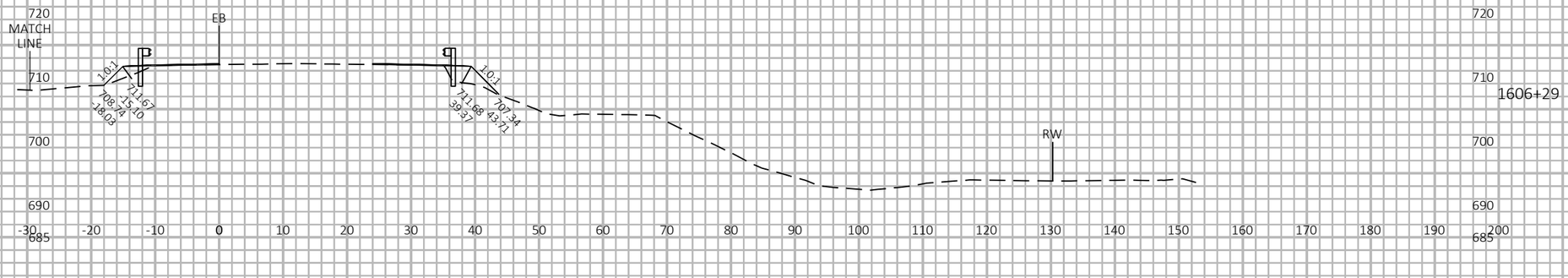
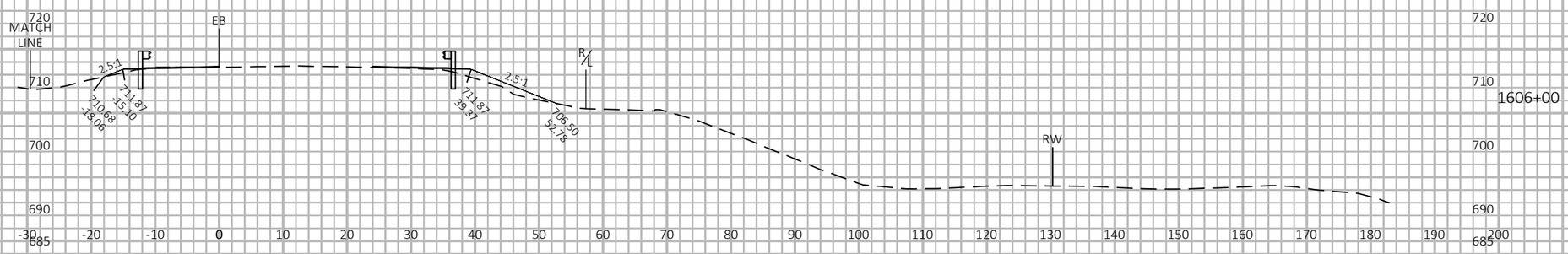
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 EB - CTH TT	SHEET 621	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090205-XS.DWG
LAYOUT NAME - 090614-xs

PLOT DATE : 9/23/2026 3:11 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49





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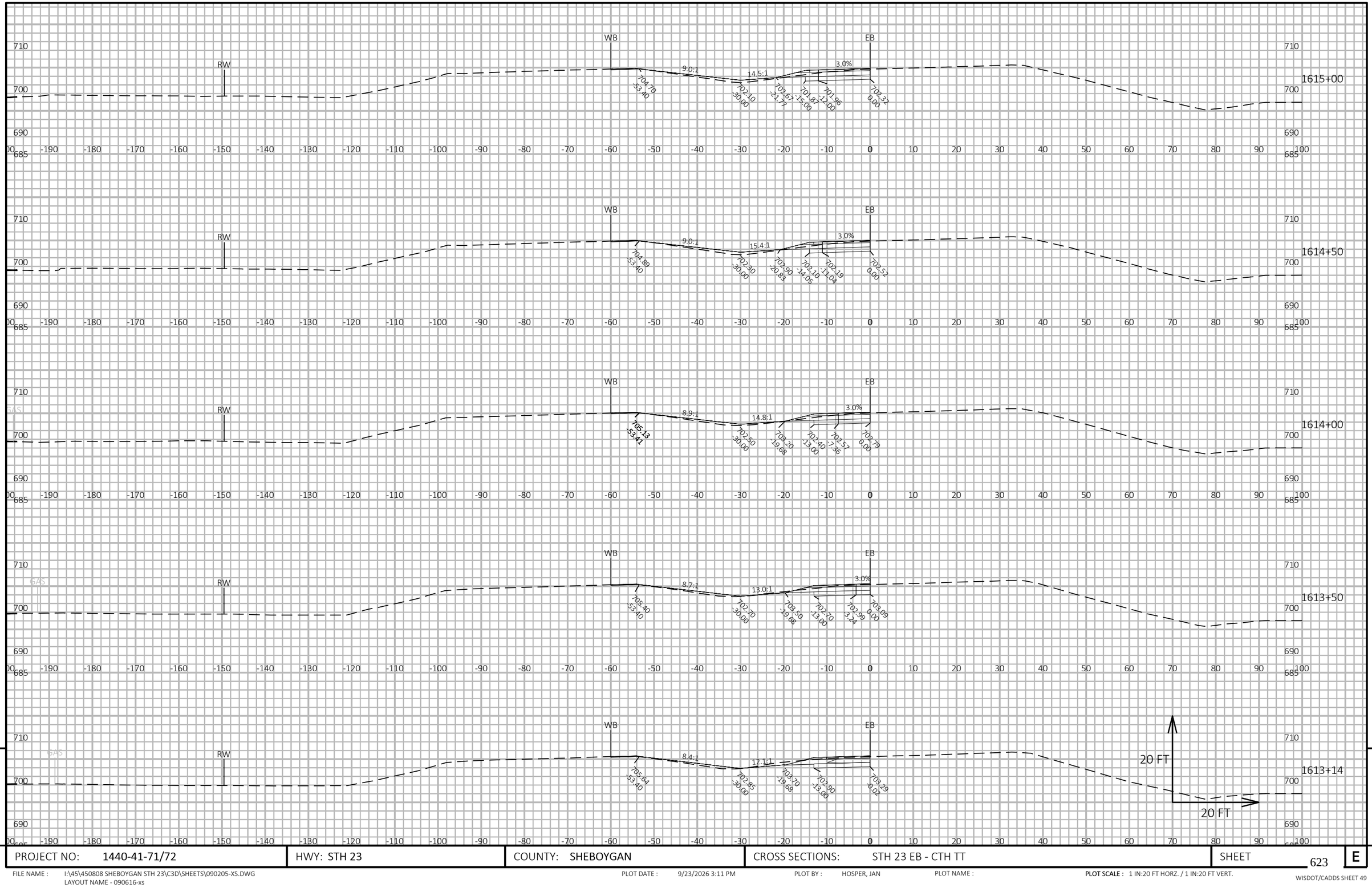
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 EB - CTH TT	SHEET 622	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090205-XS.DWG
LAYOUT NAME - 090615-xs

PLOT DATE : 9/23/2026 3:11 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

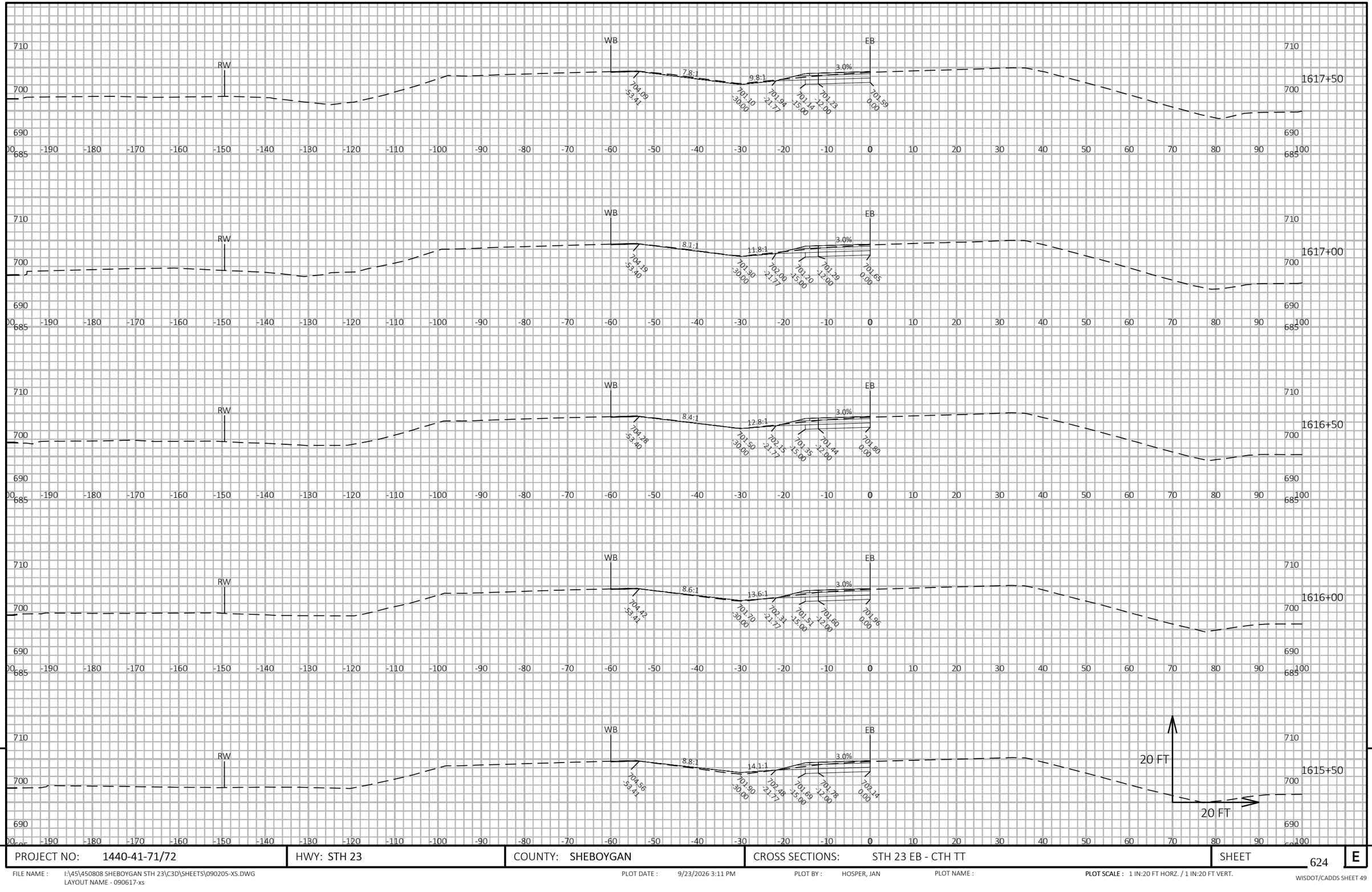


PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 EB - CTH TT	SHEET 623	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090205-XS.DWG
LAYOUT NAME - 090616-xs

PLOT DATE : 9/23/2026 3:11 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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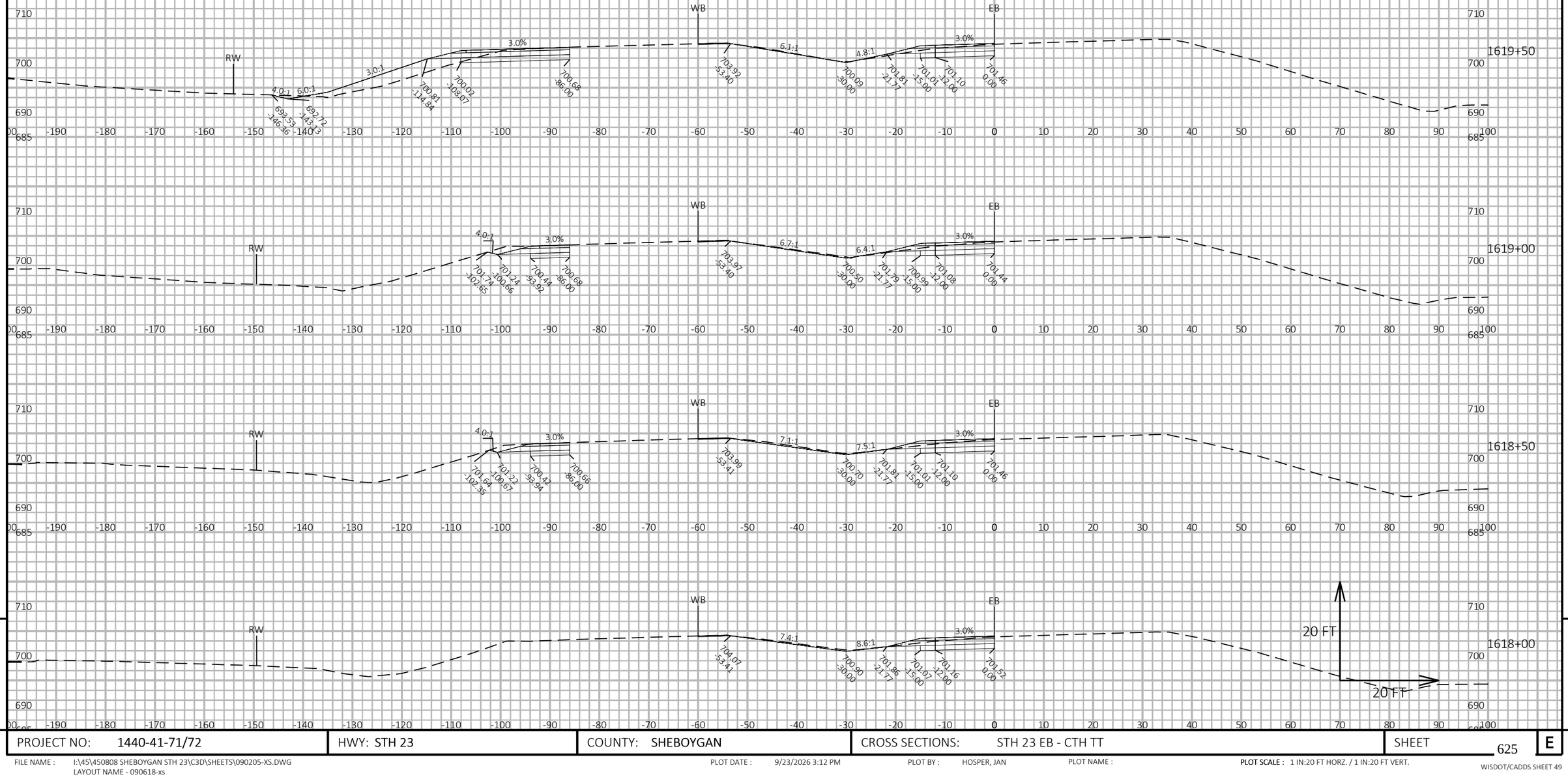
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 EB - CTH TT	SHEET 624	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090205-XS.DWG
LAYOUT NAME - 090617-xs

PLOT DATE : 9/23/2026 3:11 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 EB - CTH TT	SHEET 625	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090205-XS.DWG
LAYOUT NAME - 090618-xs

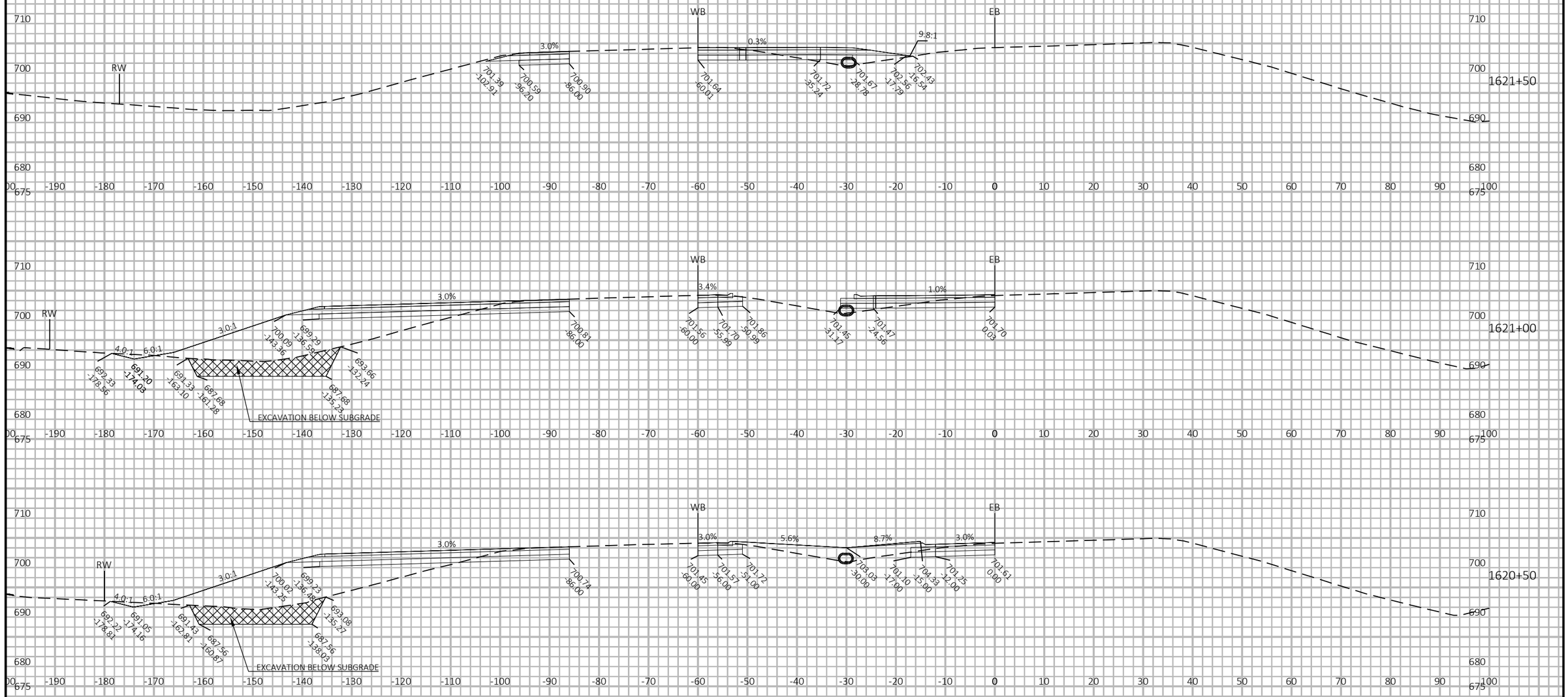
PLOT DATE : 9/23/2026 3:12 PM

PLOT BY : HOSPER, JAN

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

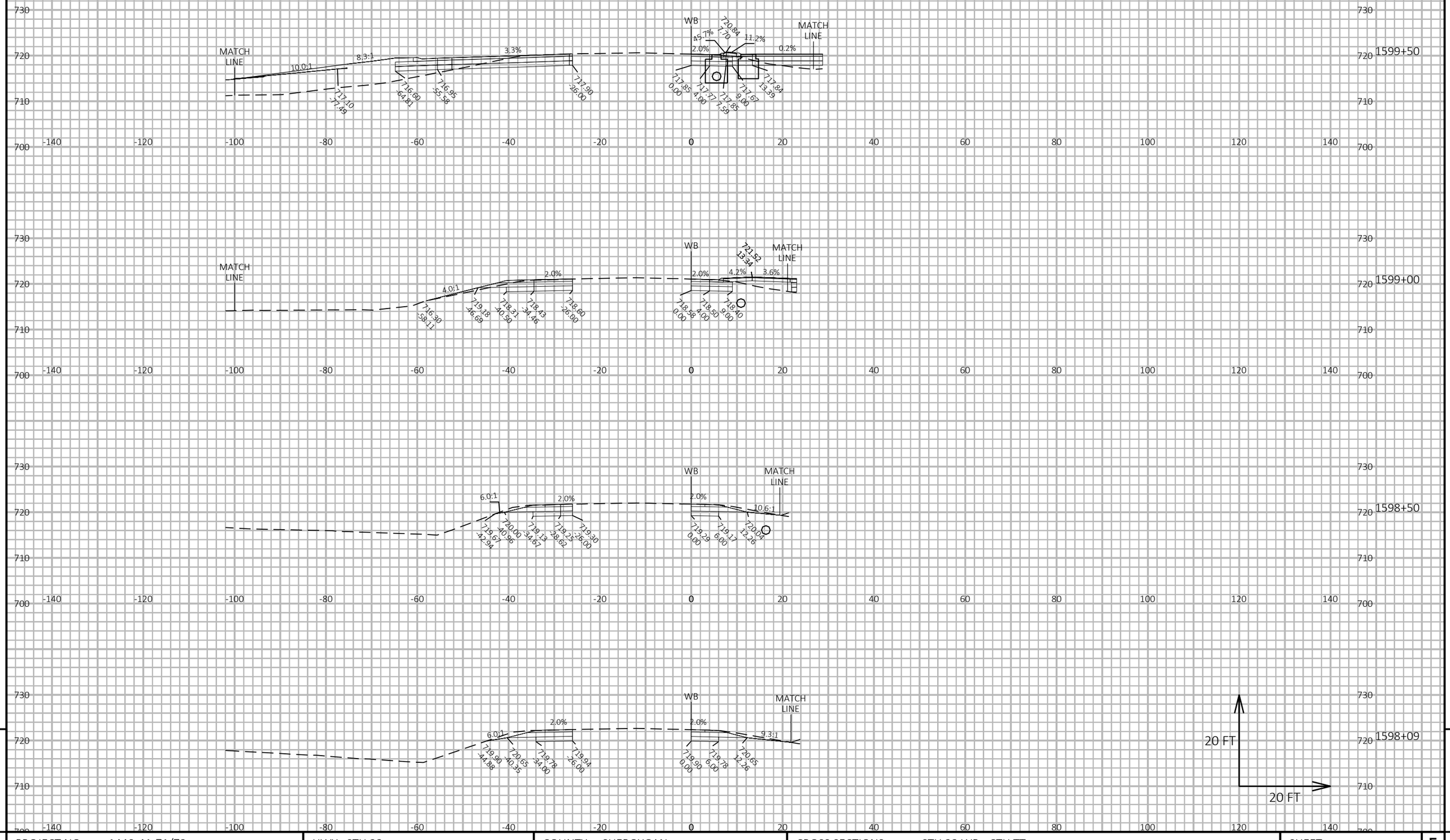


PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 EB - CTH TT	SHEET 626	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090205-XS.DWG
LAYOUT NAME - 090619-xs

PLOT DATE : 9/23/2026 3:12 PM PLOT BY : HOSPER, JAN PLOT NAME : **PLOT SCALE :** 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 WB - CTH TT	SHEET 627	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090205-XS.DWG
LAYOUT NAME - 090630-xs

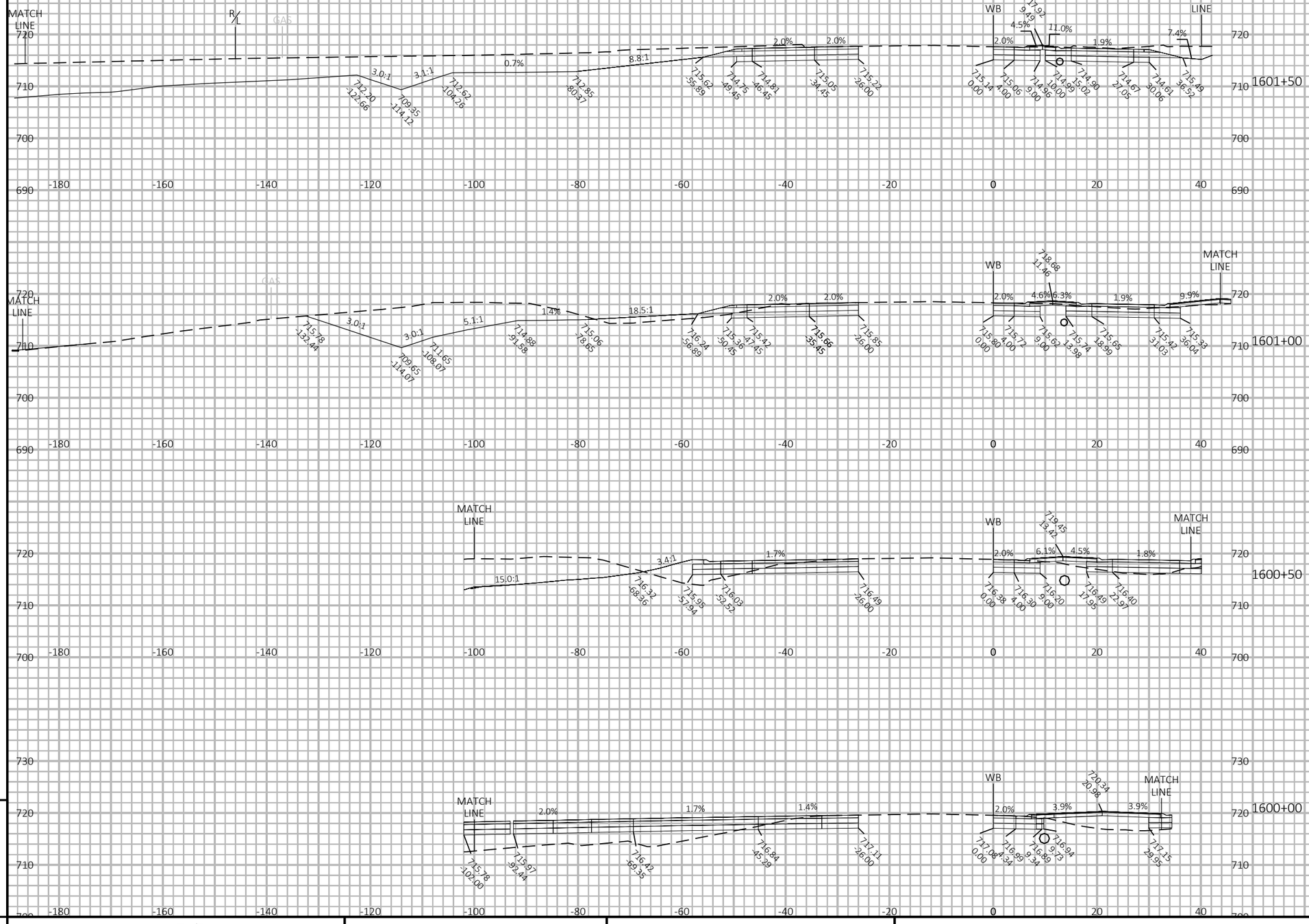
PLOT DATE : 9/23/2026 3:12 PM

PLOT BY : HOSPER, JAN

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 WB - CTH TT	SHEET 628	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090205-XS.DWG
LAYOUT NAME - 090631-xs

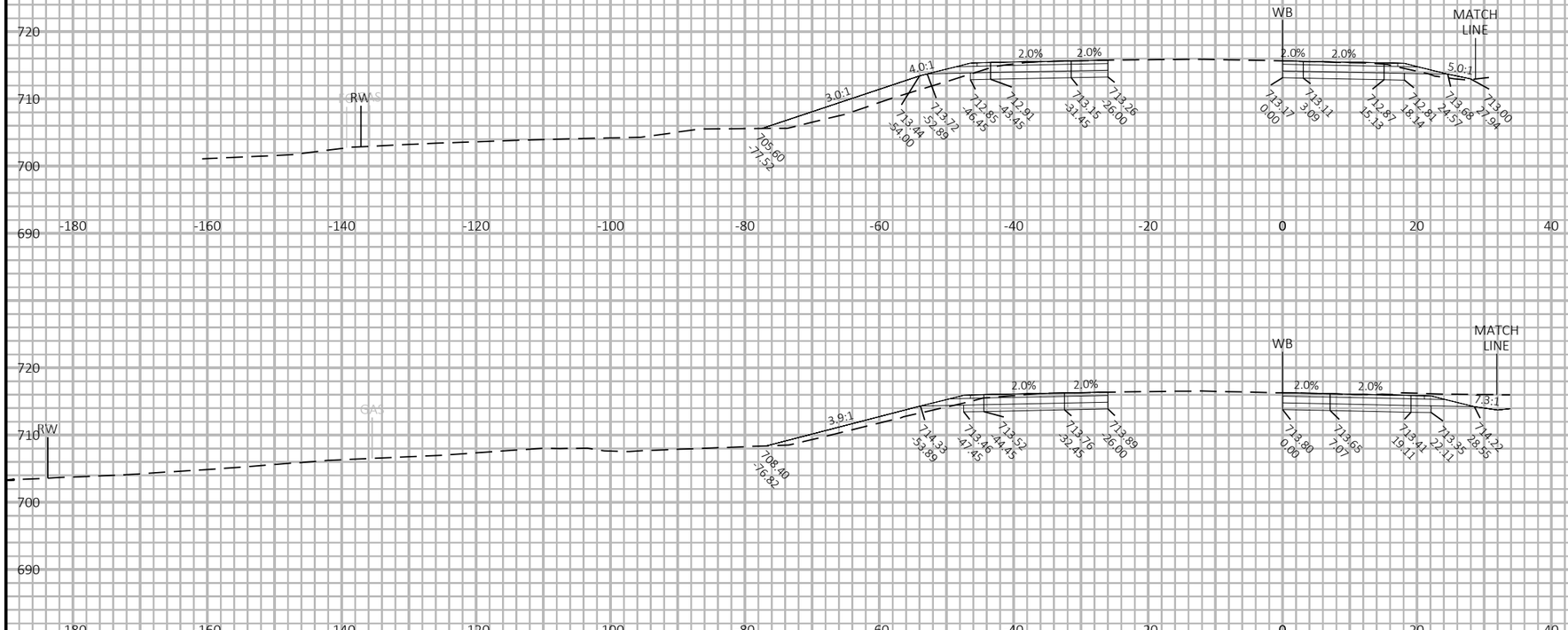
PLOT DATE : 9/23/2026 3:12 PM

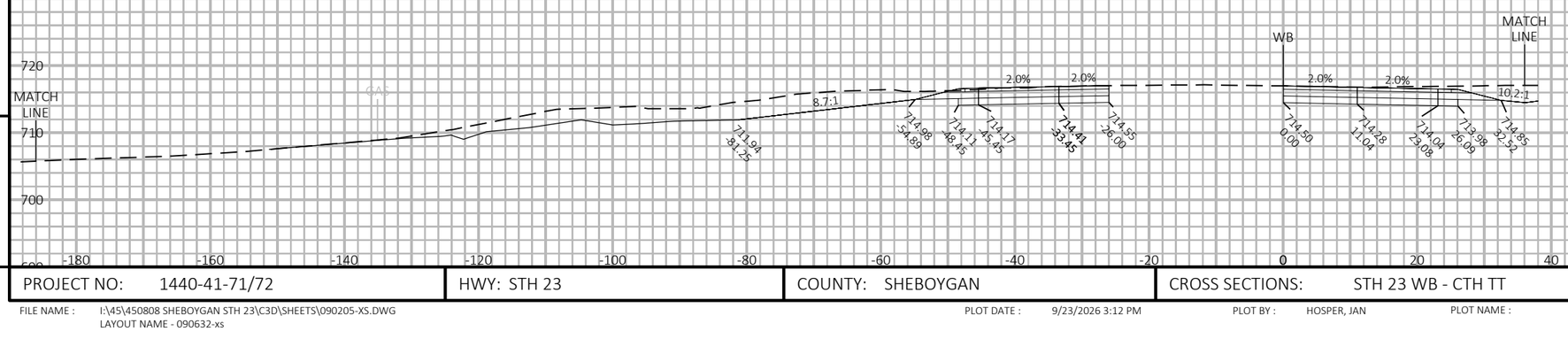
PLOT BY : HOSPER, JAN

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49





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PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 WB - CTH TT	SHEET 629	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090205-XS.DWG
LAYOUT NAME - 090632-xs

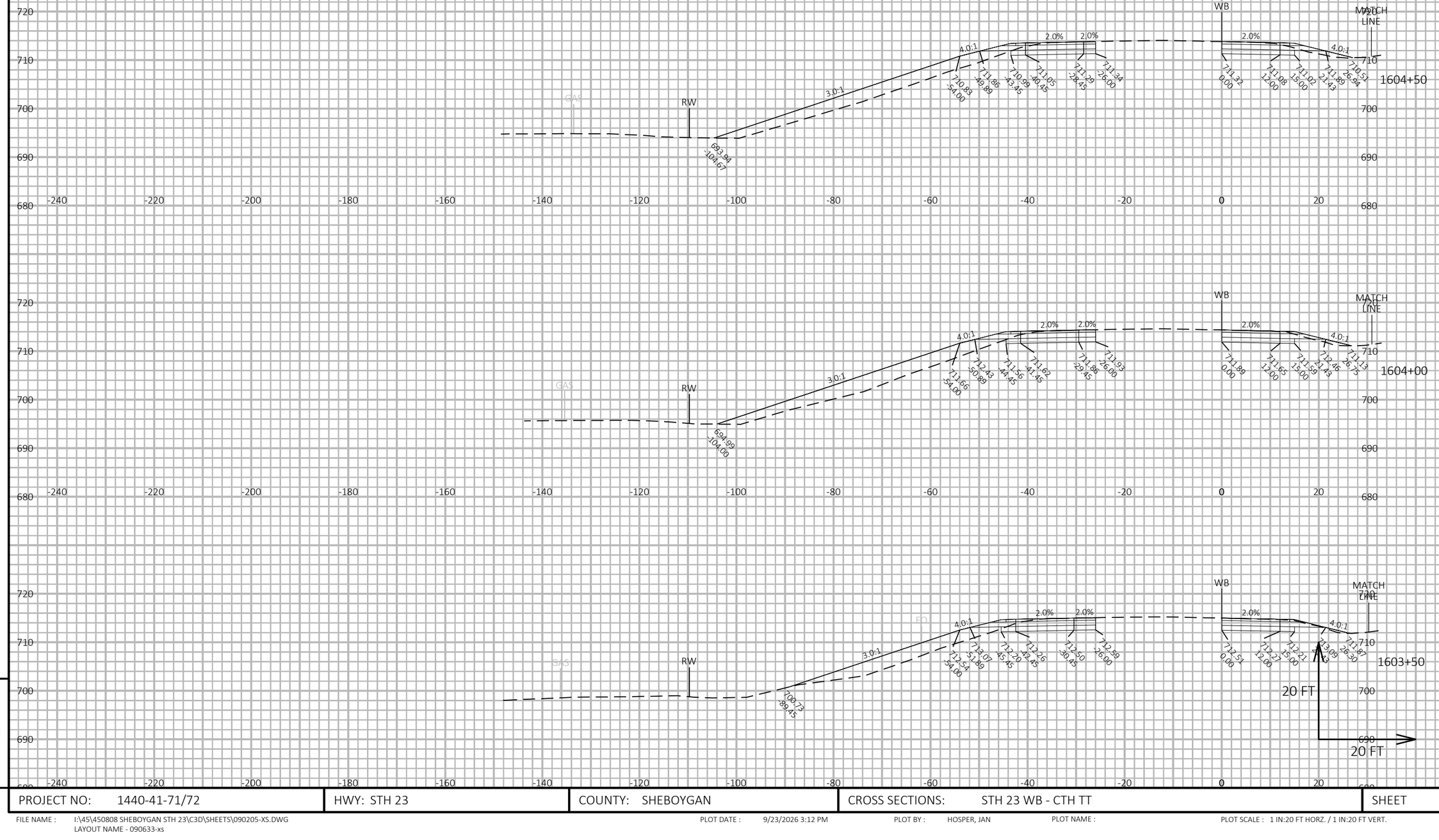
PLOT DATE : 9/23/2026 3:12 PM

PLOT BY : HOSPER, JAN

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 WB - CTH TT	SHEET 630	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090205-XS.DWG
LAYOUT NAME - 090633-xs

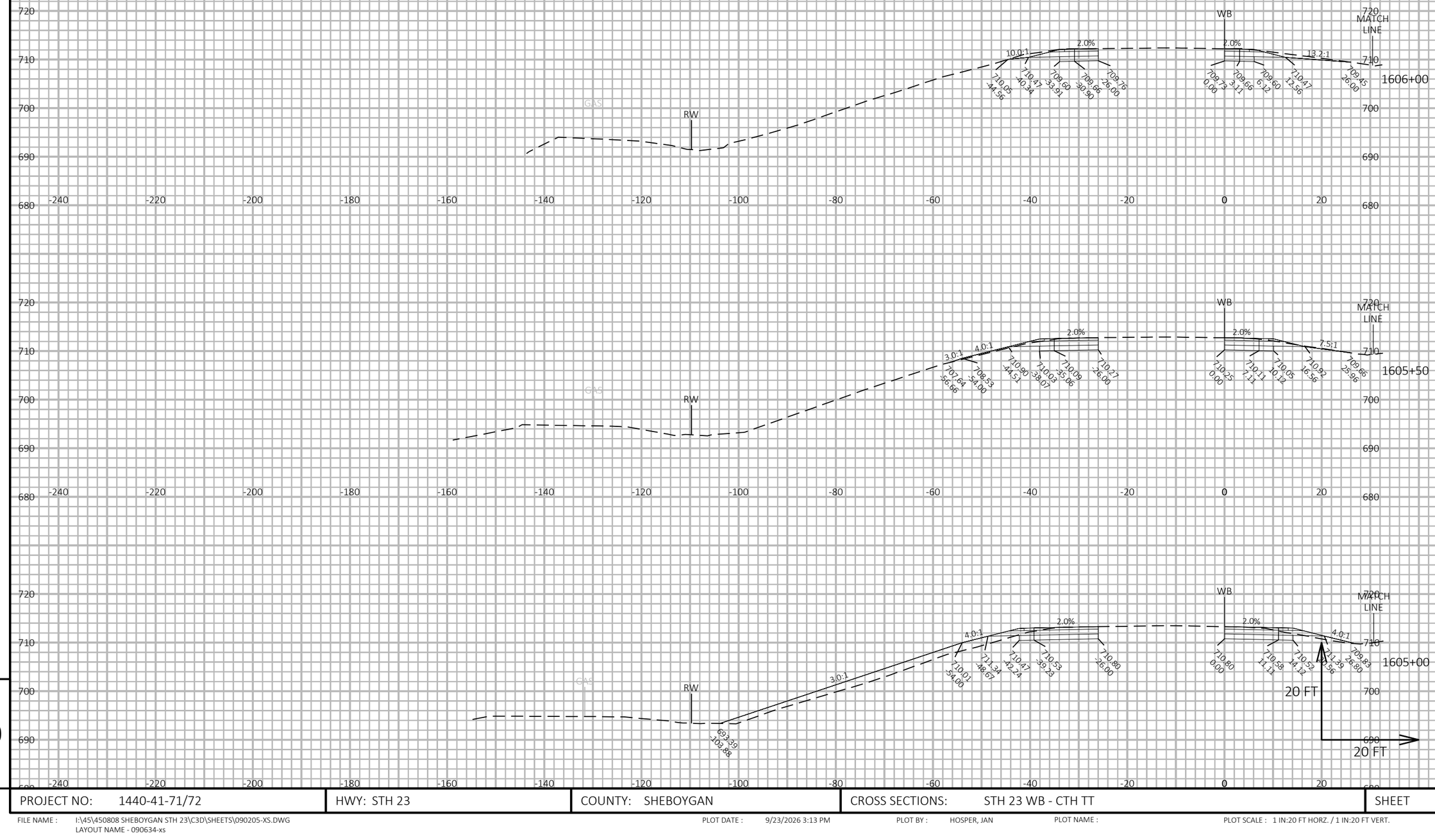
PLOT DATE : 9/23/2026 3:12 PM

PLOT BY : HOSPER, JAN

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 WB - CTH TT	SHEET

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090205-XS.DWG
LAYOUT NAME - 090634-xs

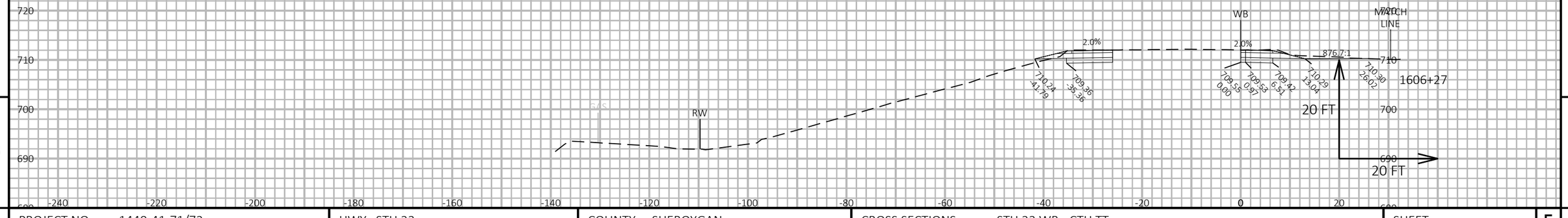
PLOT DATE : 9/23/2026 3:13 PM

PLOT BY : HOSPER, JAN

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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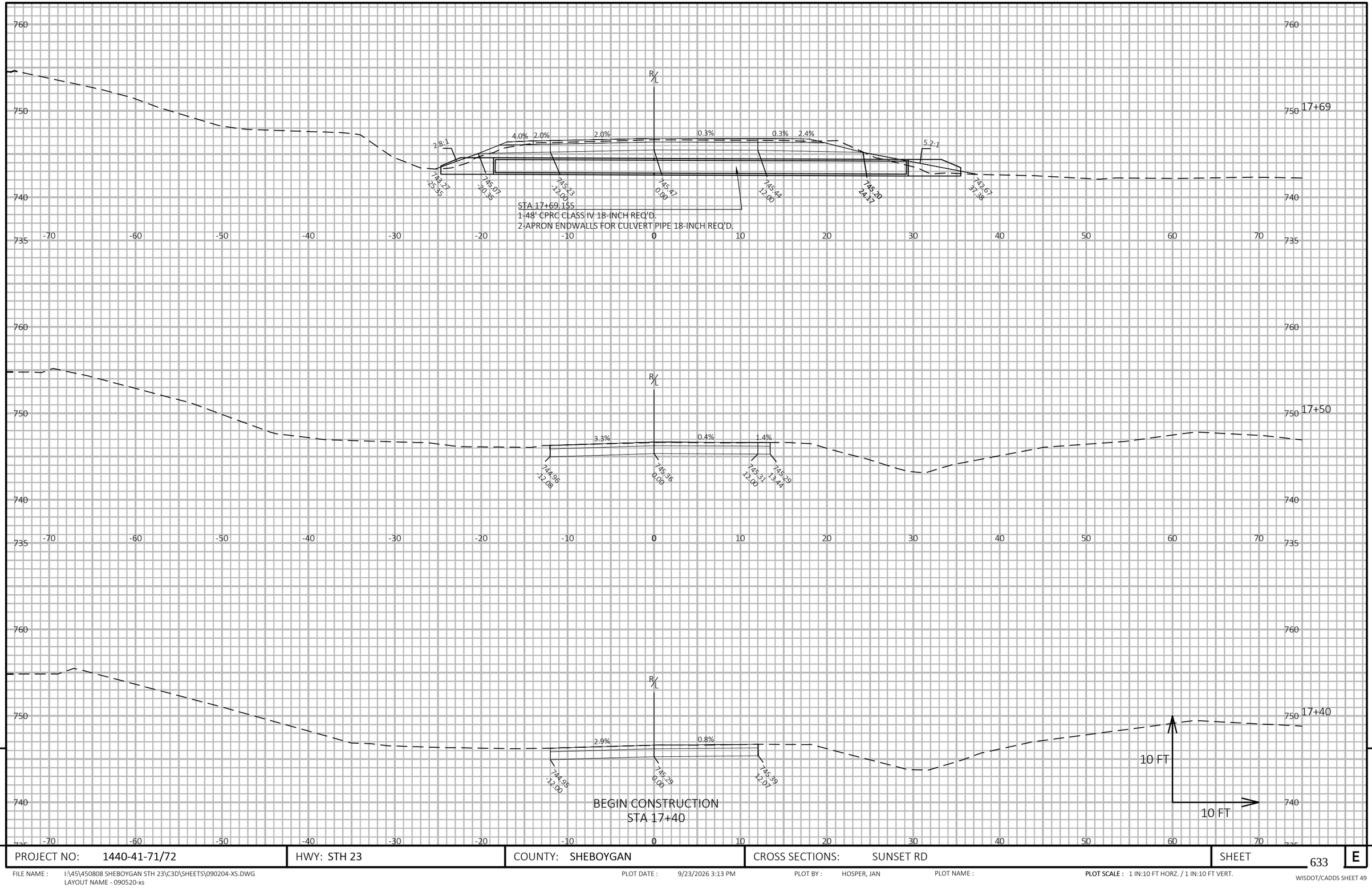
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 23 WB - CTH TT	SHEET 632	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090205-XS.DWG
LAYOUT NAME - 090635-xs

PLOT DATE : 9/23/2026 3:13 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

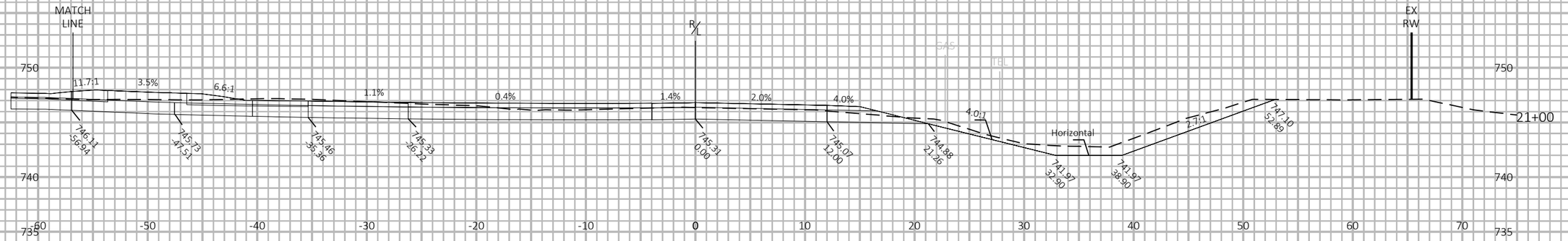


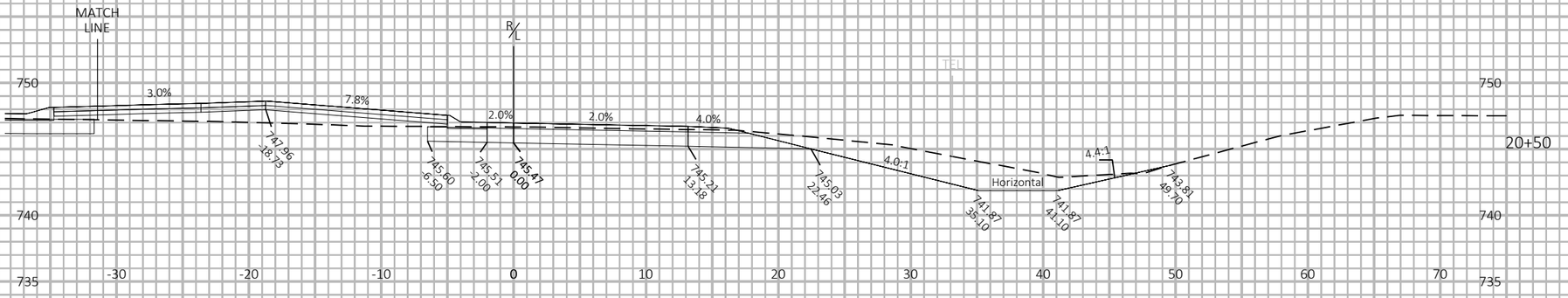
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: SUNSET RD	SHEET 633	E

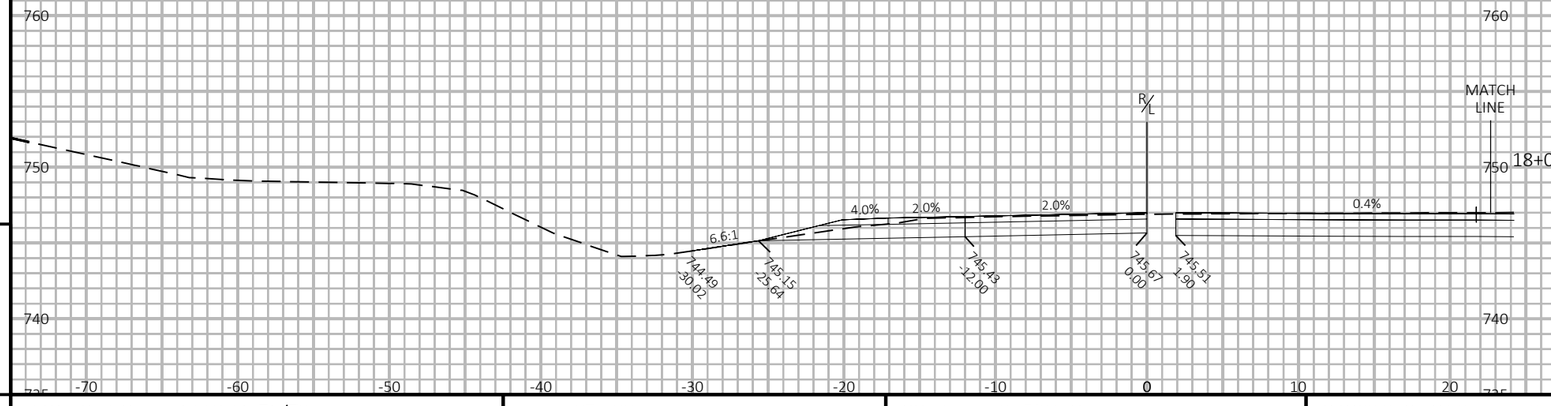
FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090204-XS.DWG
LAYOUT NAME - 090520-xs

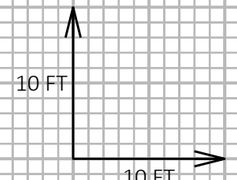
PLOT DATE : 9/23/2026 3:13 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49









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PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: SUNSET RD	SHEET 634	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090204-XS.DWG
LAYOUT NAME - 090521-xs

PLOT DATE : 9/23/2026 3:13 PM

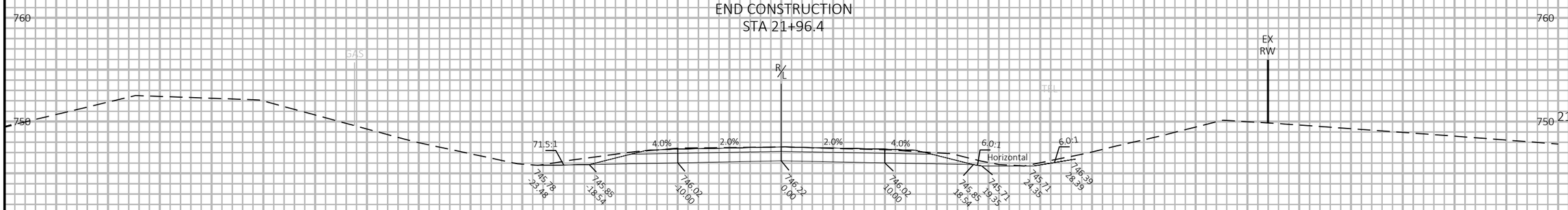
PLOT BY : HOSPER, JAN

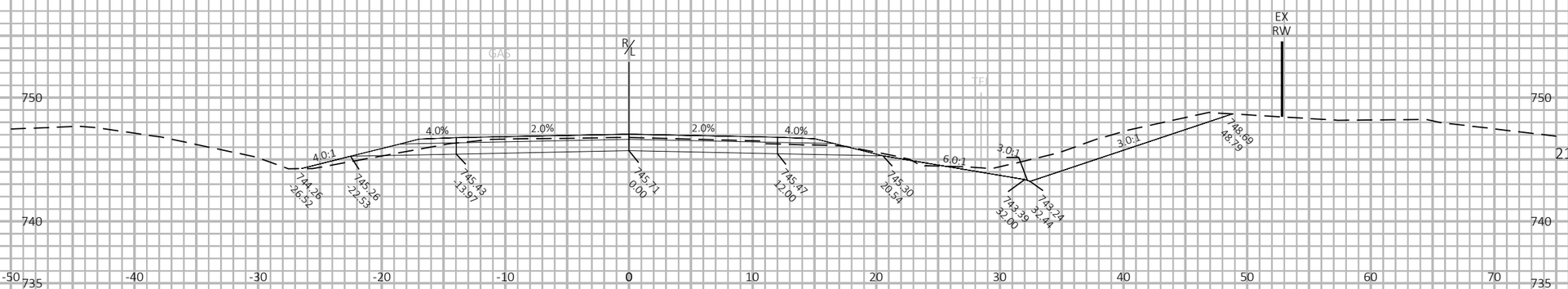
PLOT NAME :

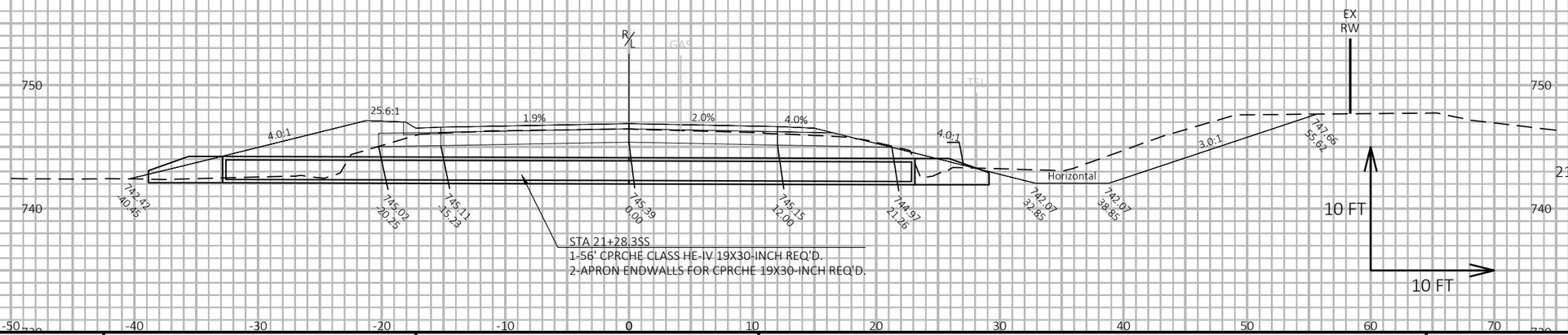
PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

END CONSTRUCTION
STA 21+96.4





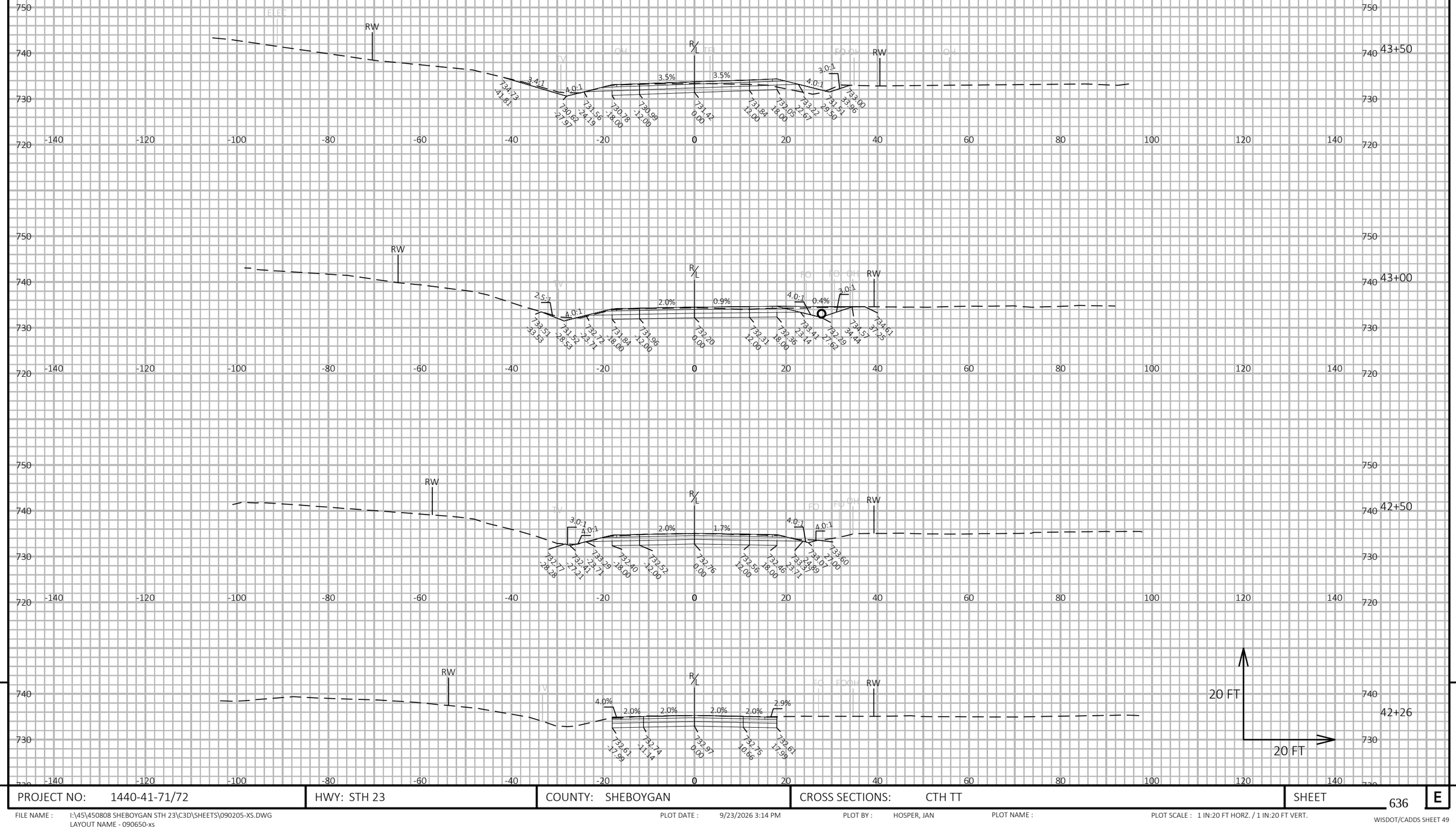


STA 21+28 3SS
1-56' CPRCHE CLASS HE-IV 19X30-INCH REQ'D.
2-APRON ENDWALLS FOR CPRCHE 19X30-INCH REQ'D.

9 9

PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: SUNSET RD	SHEET 635	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090204-XS.DWG
LAYOUT NAME - 090522-xs
PLOT DATE : 9/23/2026 3:13 PM
PLOT BY : HOSPER, JAN
PLOT NAME :
PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.
WISDOT/CADDS SHEET 49



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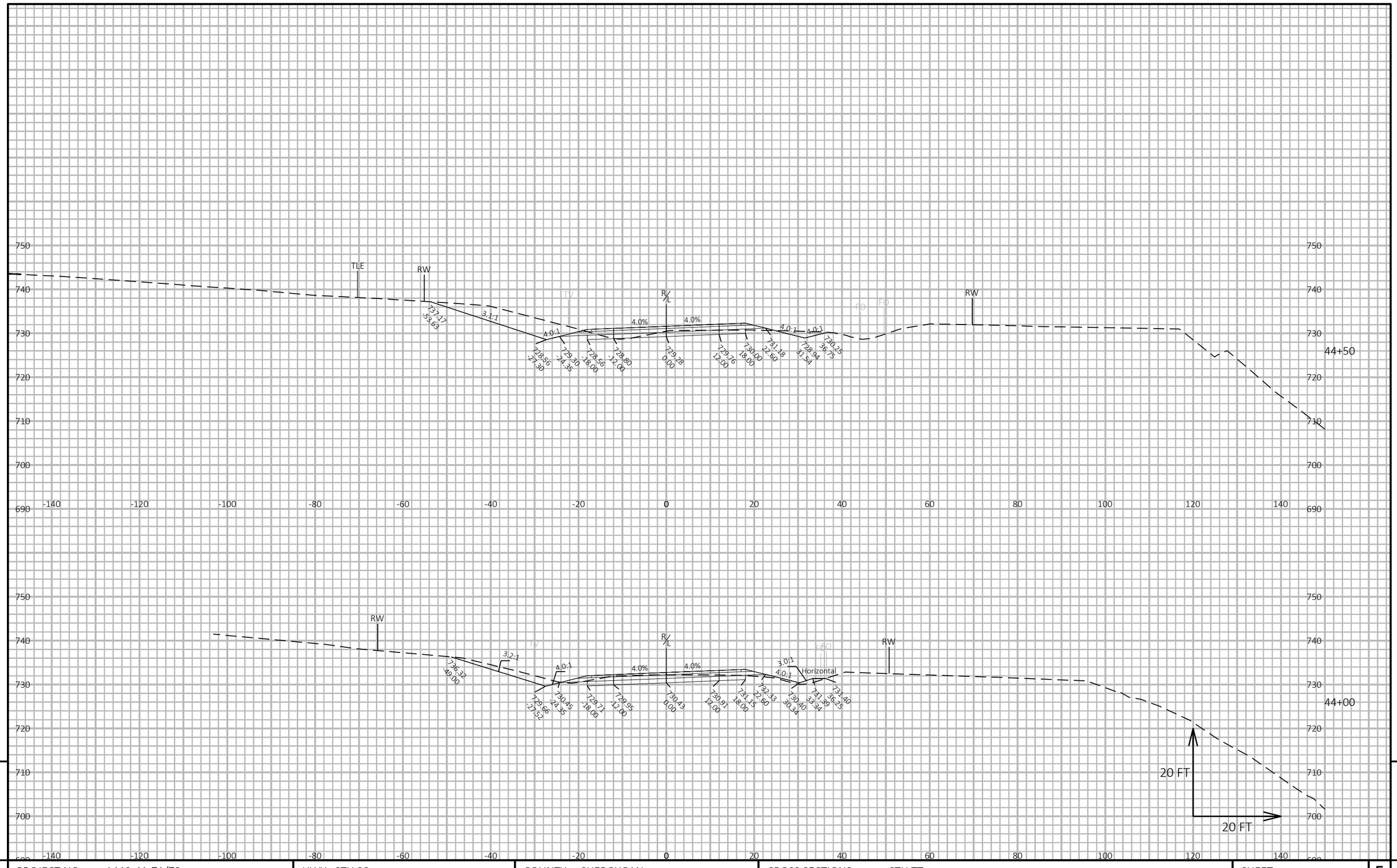
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: CTH TT	SHEET 636	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090205-XS.DWG
LAYOUT NAME - 090650-xs

PLOT DATE : 9/23/2026 3:14 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

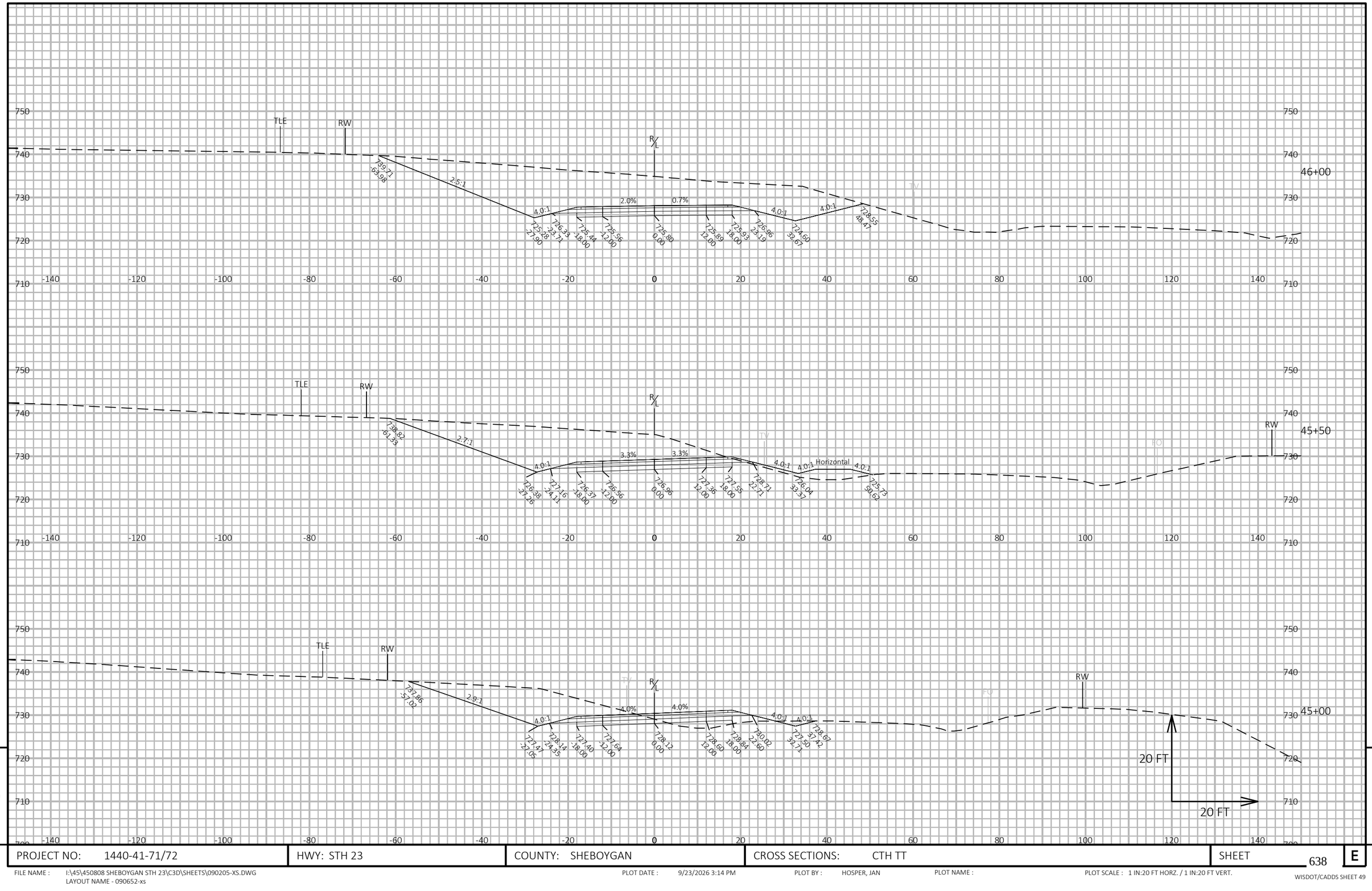


PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: CTH TT	SHEET 637	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090205-XS.DWG
LAYOUT NAME - 090651-xs

PLOT DATE : 9/23/2026 3:14 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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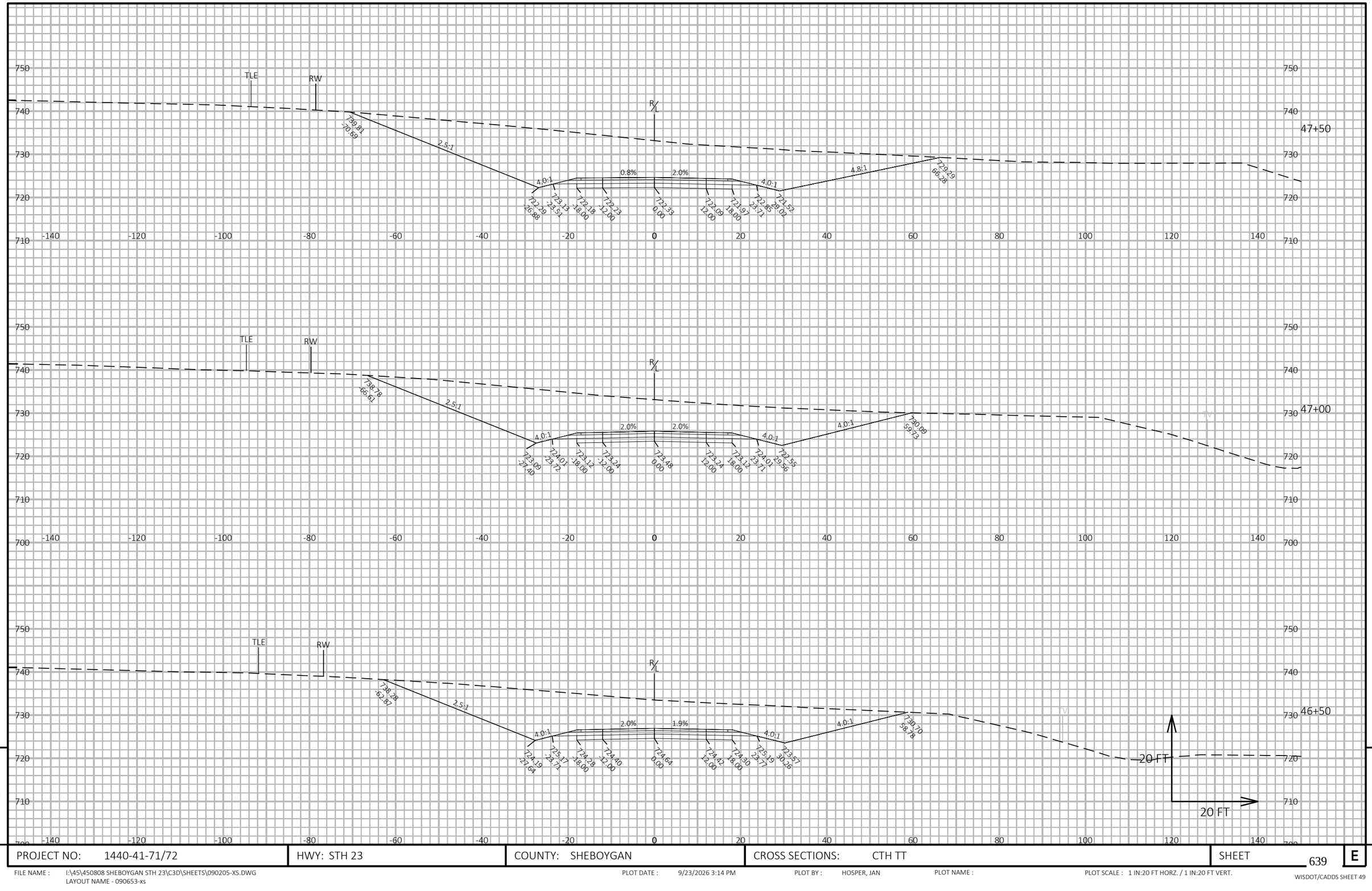
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: CTH TT	SHEET 638	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090205-XS.DWG
LAYOUT NAME - 090652-xs

PLOT DATE : 9/23/2026 3:14 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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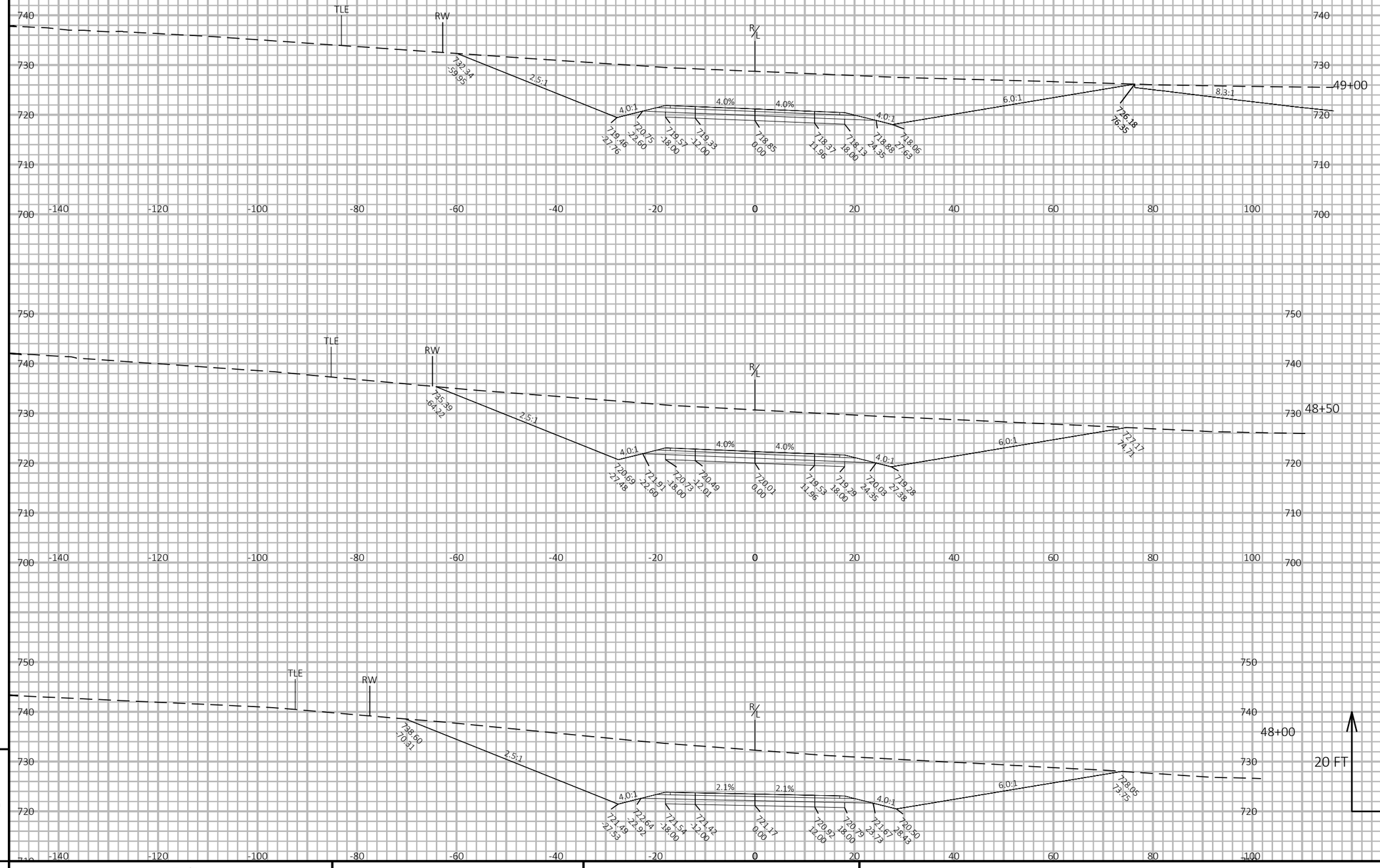
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: CTH TT	SHEET 639	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090205-XS.DWG
LAYOUT NAME - 090653-xs

PLOT DATE : 9/23/2026 3:14 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

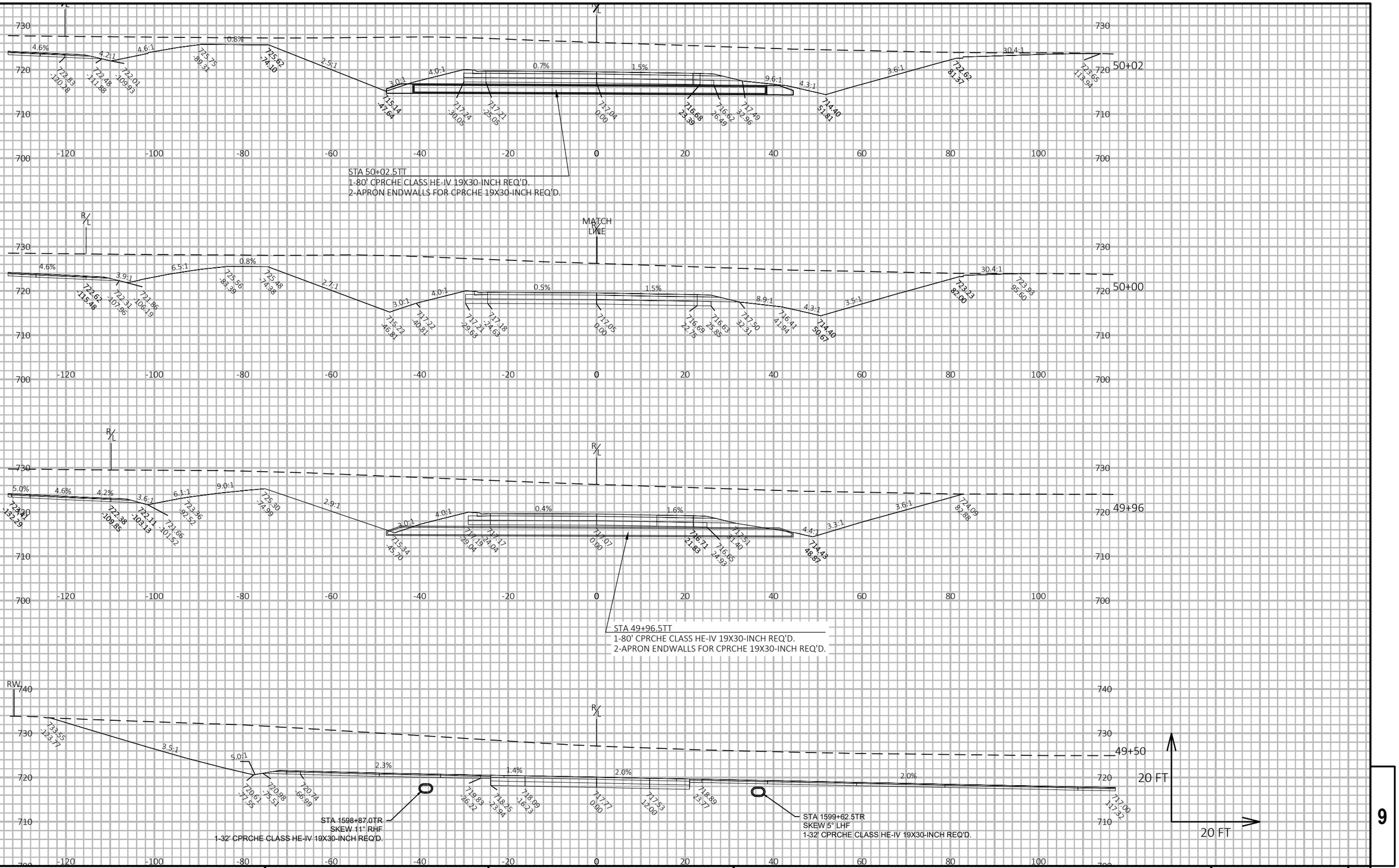


PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: CTH TT	SHEET 640	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090205-XS.DWG
LAYOUT NAME - 090654-xs

PLOT DATE : 9/23/2026 3:15 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

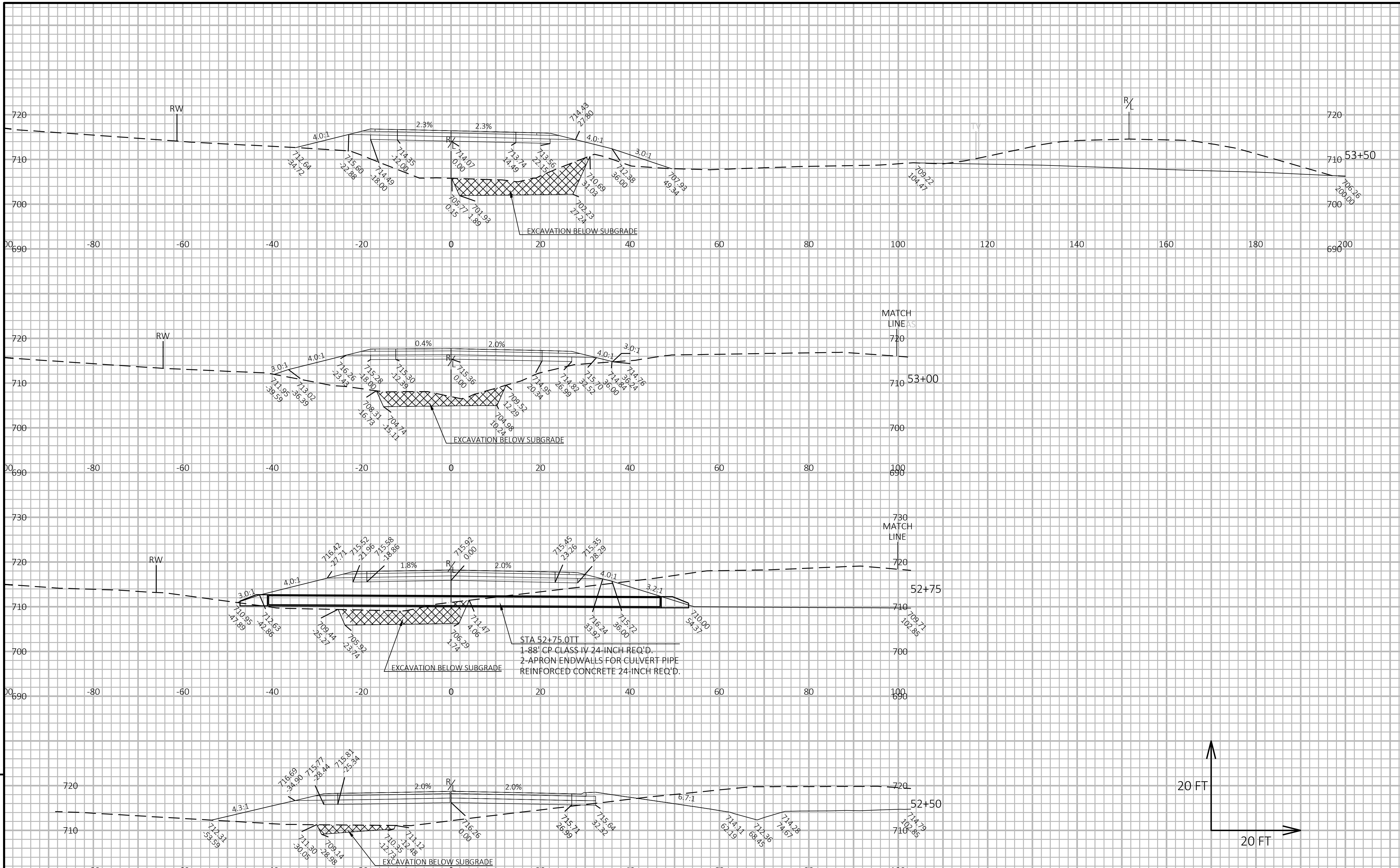


PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: CTH TT	SHEET 641 E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090205-XS.DWG
LAYOUT NAME - 090655-xs

PLOT DATE : 9/23/2026 3:15 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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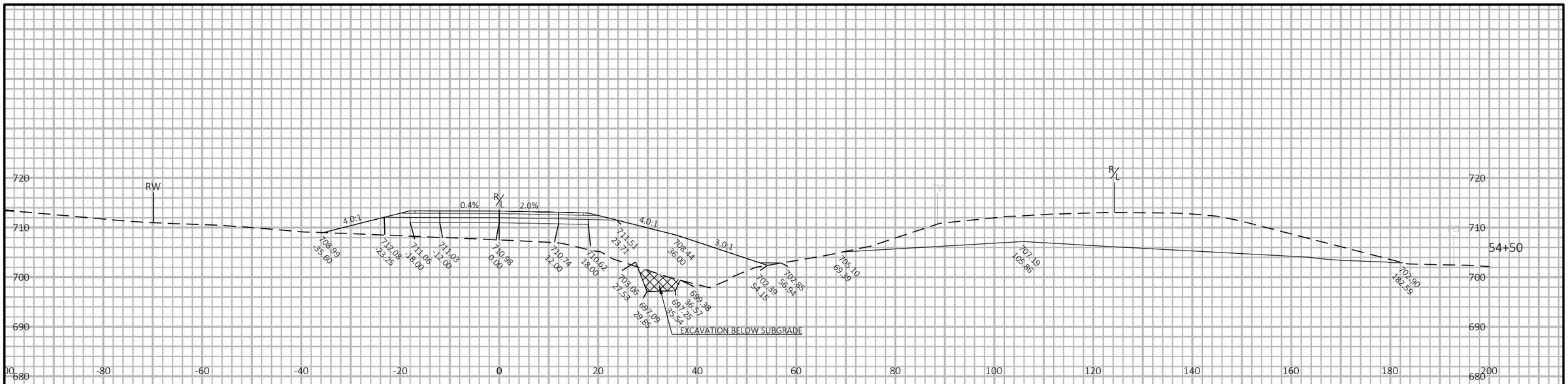
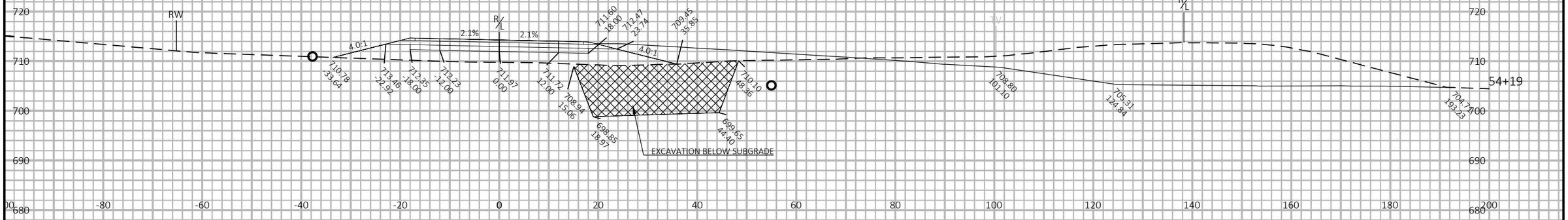
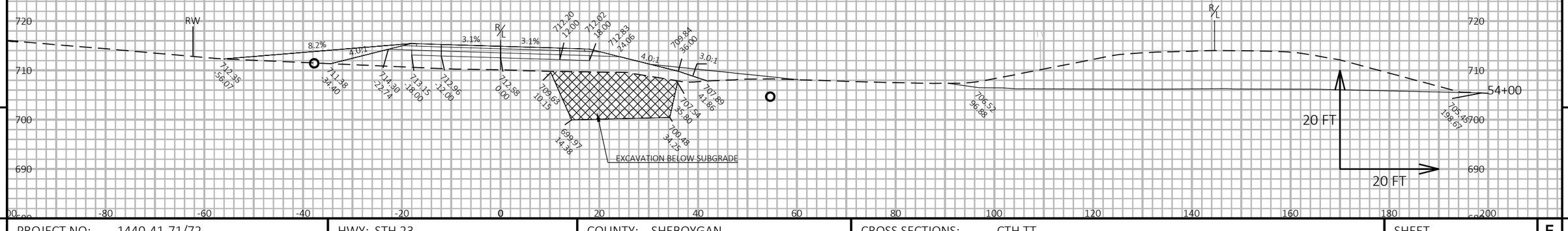
PROJECT NO: 1440-41-71/72 | HWY: STH 23 | COUNTY: SHEBOYGAN | CROSS SECTIONS: CTH TT | SHEET 642 | E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090205-XS.DWG
LAYOUT NAME - 090656-xs
PLOT DATE : 9/23/2026 3:15 PM
PLOT BY : HOSPER, JAN
PLOT NAME :
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.
WISDOT/CADDS SHEET 49







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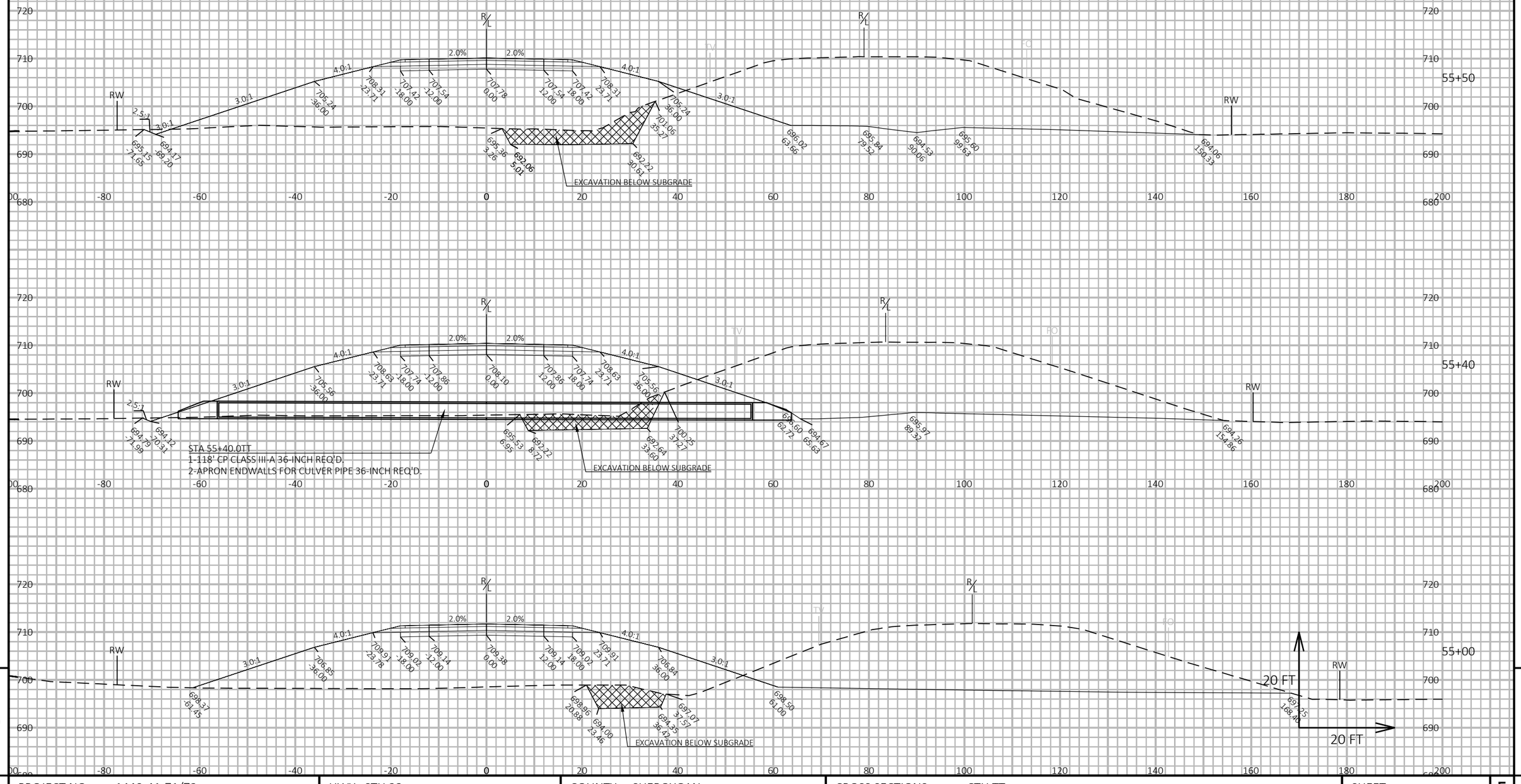
PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: CTH TT	SHEET 643	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090205-XS.DWG
LAYOUT NAME - 090657-xs

PLOT DATE : 9/23/2026 3:15 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

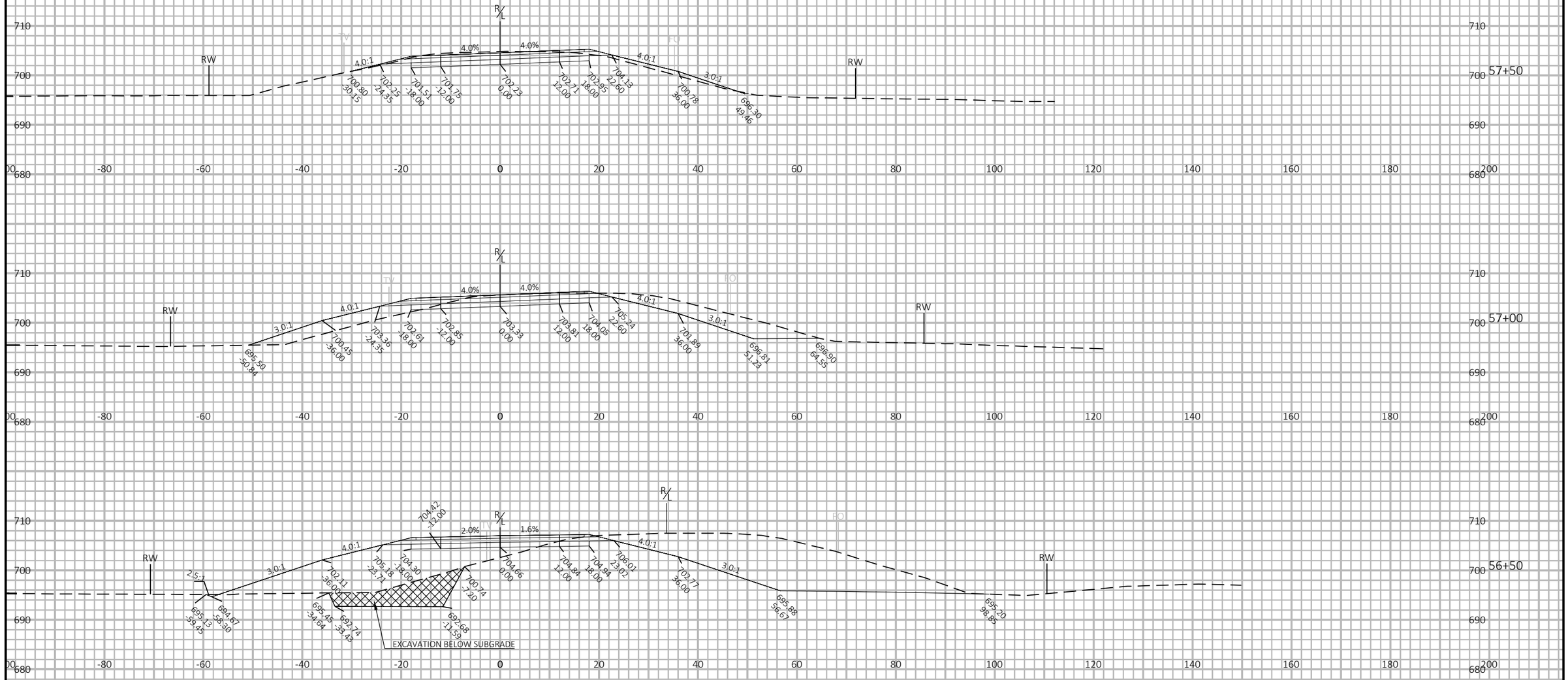


PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: CTH TT	SHEET 644 E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090205-XS.DWG
LAYOUT NAME - 090658-xs

PLOT DATE : 9/23/2026 3:15 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

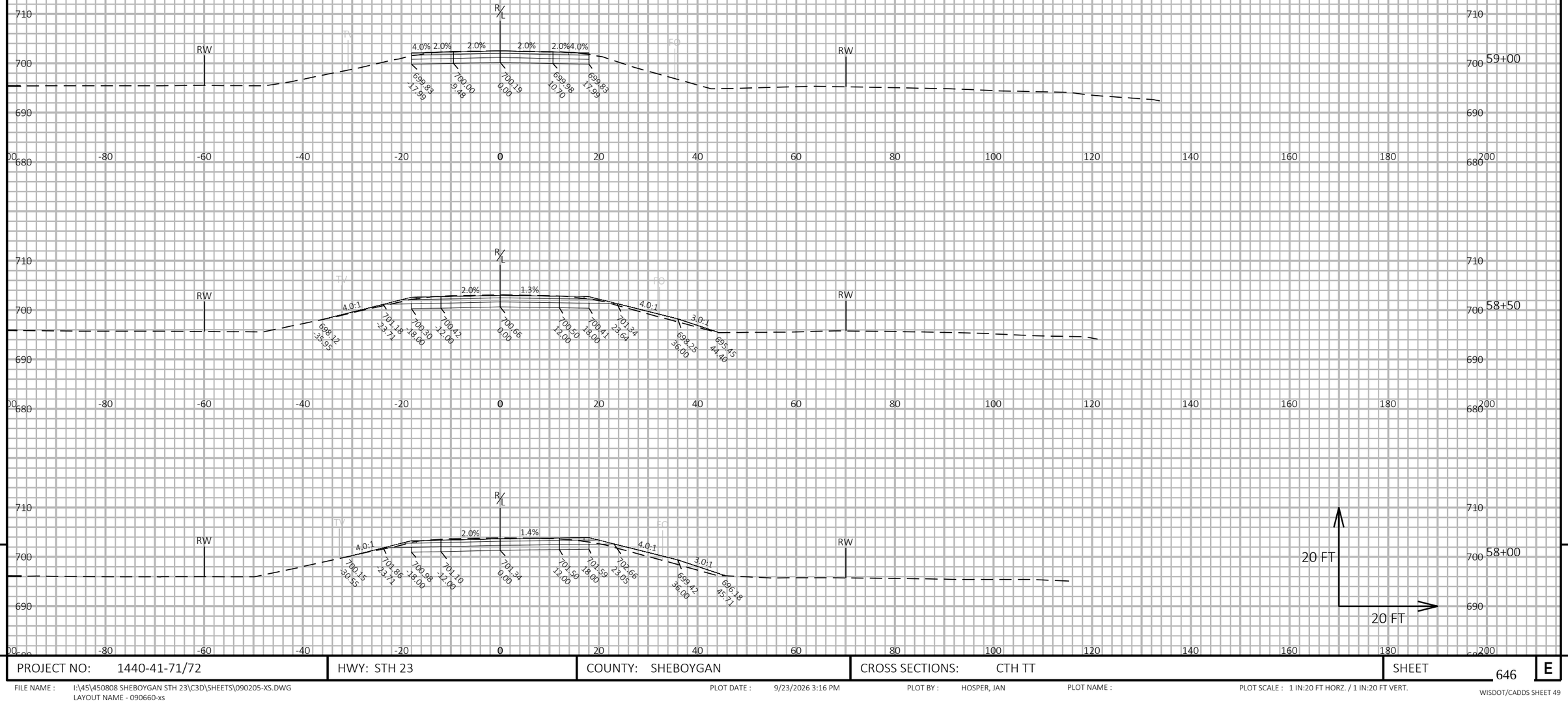


PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: CTH TT	SHEET 645	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090205-XS.DWG
LAYOUT NAME - 090659-xs

PLOT DATE : 9/23/2026 3:16 PM PLOT BY : HOSPER, JAN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1440-41-71/72	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: CTH TT	SHEET 646	E

FILE NAME : I:\45\450808 SHEBOYGAN STH 23\C3D\SHEETS\090205-XS.DWG
LAYOUT NAME - 090660-xs

PLOT DATE : 9/23/2026 3:16 PM

PLOT BY : HOSPER, JAN

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

Notes

Wisconsin Department of Transportation

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