GRE SEPTEMBER 2024

PROJECT ID: 4010-21-71 & 4010-26-71

WITH: N/A

COUNTY: SHEBOYGAN

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 = 400

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

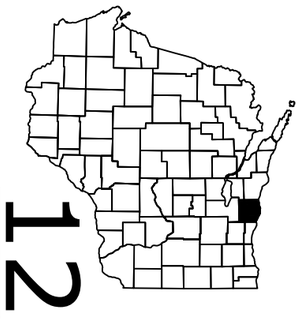
STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
4010-21-71	WISC 2024436	1
4010-26-71	WISC 2024443	1

KEWASKUM-WALDO
SCL-STH 57

STH 28
SHEBOYGAN COUNTY

V. OF CASCADE
N BRANCH MIL RIVER

STH 28
SHEBOYGAN COUNTY



N

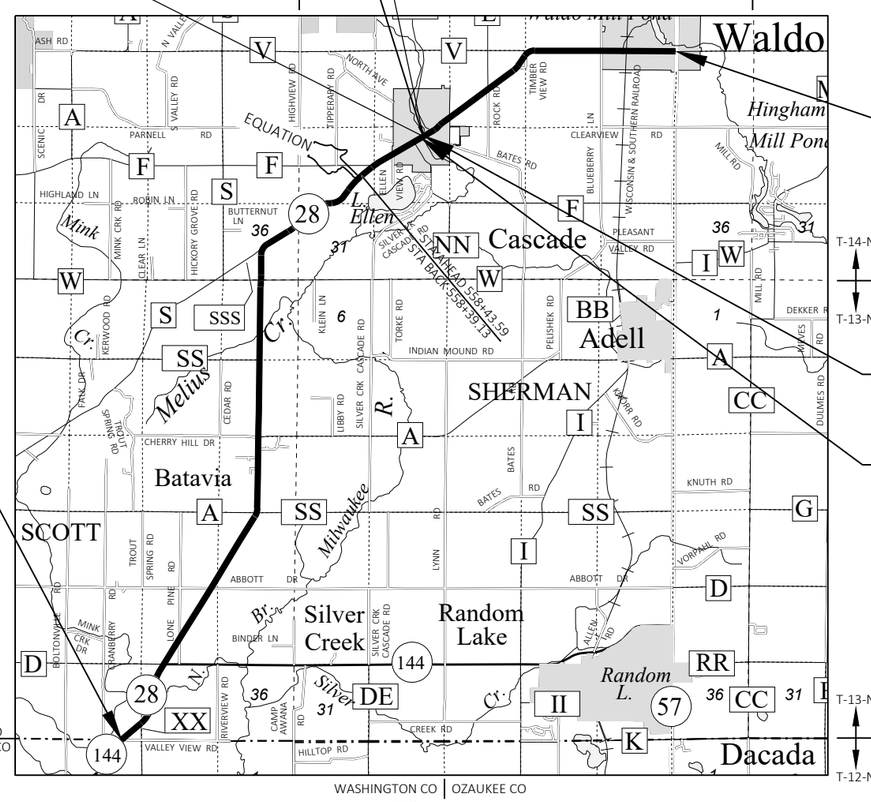
STATE PROJECT NUMBER
4010-21-71

STATE PROJECT NUMBER
4010-26-71

EXCEPTION TO NET CENTERLINE LENGTH PROJECT 4010-26-71
STA. 608+90.72 TO STA. 609+27.89

PROJECT 4010-26-71
STRUCTURE B-59-321

EXCEPTION TO NET CENTERLINE LENGTH PROJECT 4010-21-71
STA. 607+75.72 TO STA. 610+41.72



SHEBOYGAN CO
WASHINGTON CO

WASHINGTON CO | OZAUKEE CO
LAYOUT

SHEBOYGAN CO
OZAUKEE CO

SCALE 0 2 MI

END PROJECT 4010-21-71
STA 806+14.45
Y= 148,949.515
X= 158,494.112

END PROJECT 4010-26-71
STA 610+41.72
Y= 143,068.496
X= 141,044.418

BEGIN PROJECT 4010-26-71
STA 607+75.72
Y= 142,933.528
X= 140,815.202

BEGIN PROJECT 4010-21-71
STA 100+19.80
Y= 100,971.835
X= 119,923.337

DESIGN DESIGNATION

A.A.D.T.	2025	=	3610
A.A.D.T.	2045	=	3900
D.H.V.		=	422
D.D.		=	50/50
T.		=	18%
DESIGN SPEED		=	55 MPH
ESALS		=	1,200,000

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

TOTAL NET LENGTH OF CENTERLINE (PROJECT ID 4010-21-71) = 13.319 MI
TOTAL NET LENGTH OF CENTERLINE (PROJECT ID 4070-26-71) = 0.038 MI

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.

ORIGINAL PLANS PREPARED BY

raSmith
CREATIVITY BEYOND ENGINEERING
rasmith.com

WISCONSIN
BRAD E. SEVERSON
E-37958
APPLETON
WI
PROFESSIONAL ENGINEER

5/1/2024 (Date)

Brad Severson (Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	WisDOT/raSmith
Designer	raSmith
Project Manager	KIMBERLY SLEZAK
Regional Examiner	
Regional Supervisor	ROBERT WAGNER

APPROVED FOR THE DEPARTMENT

DATE: 5/1/2024 Kimberly A Slezak, P.E (Signature)

E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\010101-TI.DWG PLOT DATE : 4/17/2024 2:16 PM PLOT BY : SIEBERT, LUKE PLOT NAME :

UTILITIES CONTACTS

ANR PIPELINE CO - GAS/PETROLEUM
JASON JENSEN
6827 CONSOLIDATED SCHOOL RD
JANESVILLE, WI 53545
(608) 373-6940
jason_jensen@tcenergy.com

ATC MANAGEMENT, INC. - ELECTRICITY-TRANSMISSION
CHRIS DAILEY
PO BOX 47
WAUKESHA, WI 53187-0047
(262) 506-6884
cdailey@atcllc.com

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

LYNDON SANITARY DISTRICT #1 - SEWER
RAY ZIMMERMAN
W6322 LAKE ELLEN DR
CASCADE, WI 53011
(920) 528-8036
rzimmermann1@wi.rr.com

SPECTRUM - COMMUNICATION LINE
JOHN BALDE
1320 N. DR. MARTIN LUTHER KING JR. DR.
MILWAUKEE, WI 53212
(414) 908-1333
john.balde@charter.com

TOWN OF SCOTT SANITARY DISTRICT #1 - SEWER
LUANNE RADY (PRIMARY CONTACT)
N1306 BOLTONVILLE RD
ADELL, WI 53001
(920) 994-4727
townofscottclerk@gmail.com

VILLAGE OF CASCADE - SEWER
SHAWN BIGELOW
301 FIRST ST
P.O. BOX 157
CASCADE, WI 53011-0157
(920) 980-5585
sbcascade48@gmail.com

VILLAGE OF CASCADE - WATER
SHAWN BIGELOW
301 FIRST ST
P.O. BOX 157
CASCADE, WI 53011-0157
(920) 980-5585
sbcascade48@gmail.com

VILLAGE OF WALDO - SEWER
BRUCE NEERHOF
810 SECOND ST
WALDO, WI 53093
(920) 946-4448
bruce.neerhof@villageofwaldo.com

VILLAGE OF WALDO - WATER
BRUCE NEERHOF
810 SECOND ST
WALDO, WI 53093
(920) 946-4448
bruce.neerhof@villageofwaldo.com

WE ENERGIES - ELECTRICITY
GREGORY BOERNER
500 S 116TH STREET
WEST ALLIS, WI 53214
(618) 409-5861
gregory.boerner@we-energies.com

WE ENERGIES - GAS/PETROLEUM
ANDREW SCHARA
500 S 116TH STREET
WEST ALLIS, WI 53214
(414) 751-7206
andrew.shara@we-energies.com

OTHER CONTACTS

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QUINN BUKOURICZ
1581 E RACINE AVE
WAUKESHA, WI 53186
(920) 619-7965
qbukouricz@fivestarenergyservices.com

DNR LIAISON

JAY SCHIEFELBEIN
DNR NORTHEST REGIONAL HEADQUARTERS
2984 SHAWANO AVE.
GREEN BAY, WI 54313
(920)360-3784
jeremiah.schiefelbein@wisconsin.gov

SHEBOYGAN COUNTY HIGHWAY COMMISSIONER

GREG SCHNELL
1211 N 23RD ST
SHEBOYGAN, WI 53082
(920)459-3822
greg.schnell@sheboygancounty.com

NE REGION DESIGN PROJECT MANAGER

KIMBERLY A. SLEZAK, PE
944 VANDERPERREN WAY
GREEN BAY, WI 54304
(920)492-4131
kimberly.slezak@dot.wi.gov

NE REGION SURVEY COORDINATOR

MICHAEL ANDRASCHKO, RLS
944 VANDERPERREN WAY
GREEN BAY, WI 54304
(920)492-4166
michael.andraschko@dot.wi.gov

DESIGN CONSULTANT

raSmith
BRAD SEVERSON PE
100 W LAWRENCE ST, SUITE 412
APPLETON, WI 54911-5754
(920)843-5738
brad.severson@rasmith.com

ORDER OF SECTION 2 DETAIL SHEETS

GENERAL NOTES
PROJECT OVERVIEW
TYPICAL SECTIONS
CONSTRUCTION DETAILS
PLAN DETAILS
- CURB RAMP DETAILS
- GUARDRAIL & CULVERT REPLACEMENTS
- CURB & GUTTER REPLACEMENTS

PAVING DETAILS
STORM SEWER
EROSION CONTROL
TRAFFIC CONTROL
TEMPORARY PEDESTRIAN ACCOMMODATIONS
DETOUR PLAN
SIGNING
PAVEMENT MARKING
ALIGNMENT PLAN
RAILROAD CROSSING DETAIL

RUNOFF COEFFICIENT TABLE

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

TOTAL PROJECT AREA = 161.58 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 63.27 ACRES

GENERAL NOTES

1. THE LOCATIONS OF EXISTING UTILITY FACILITIES AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY FACILITIES WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.
2. NO TREES OR SHRUBS SHALL BE REMOVED UNLESS DESIGNATED FOR REMOVAL BY THE ENGINEER.
3. KEEP ALL EQUIPMENT AND MATERIALS OUT OF ADJACENT WETLANDS AND WATERWAYS.
4. EXISTING SUPERELEVATION WILL BE RETAINED THROUGHOUT THE PROJECT.

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

CTH XX

VALLEY VIEW DR

BEGIN PROJECT 4010-21-71
STA 100+19.80
Y=100,971.835
X=119,923.337

100

MINK CREEK

B-59-188
EXISTING STRUCTURE TO REMAIN

150

CTH D

STH 144

BRAZELTON DR

LONE PINE RD

200

STH 28

250

ABBOTT DR

CTH A

BATAVIA CREEK

300

B-59-148
EXISTING STRUCTURE TO REMAIN

CTH SS

CTH A

CHERRY HILL DR

UNINCORPORATED
VILLAGE OF BATAVIA

350

WETLAND
BOUNDARY
(TYP)

400

CTH SS

MELIUS CREEK

C-59-047
EXISTING STRUCTURE TO REMAIN

CTH W

CTH V

450

CTH S

C-59-050
EXISTING STRUCTURE TO REMAIN

CHAMBERS CREEK

500

550

CTH F

EXISTING STRUCTURE TO REMAIN

MELIUS CREEK

EQUATION

STA BACK = 558+39.13
STA AHEAD = 558+43.59

JOHNSON DR

600

N. BRANCH MILW RIVER

MILW RIVER

CTH F

VILLAGE OF
CASCADE

CTH NN

CTH V

650

STH 28

BATES RD

CTH E

CTH E

REMOVE OLD STRUCTURE
STA 633+78

700

TIMBERVIEW RD

STH 28

BLUEBERRY LN

750

BLUEBERRY LN

WISCONSIN & SOUTHERN RAILROAD

LYNDON ST

ONION RIVER

800

VILLAGE OF WALDO

STH 57

STH 57/MILL ST

EXCEPTION TO NET CENTERLINE LENGTH
FOR PROJECT 4010-21-71
STA. 607+75.72 TO STA. 610+41.72

EXCEPTION TO NET CENTERLINE LENGTH
FOR PROJECT 4010-26-71
STA. 608+90.72 TO STA. 609+27.89

PROJECT 4010-26-71
STRUCTURE B-59-321

BEGIN PROJECT 4010-26-71
STA 607+75.72
Y=142,933.528
X=140,815.202

END PROJECT 4010-26-71
STA 610+41.72
Y= 143,068.496
X= 141,044.418

END PROJECT 4010-21-71
STA 806+14.45
Y= 148,949.515
X= 158,494.112

WASHINGTON COUNTY

OZAUKEE COUNTY

SHEBOYGAN COUNTY

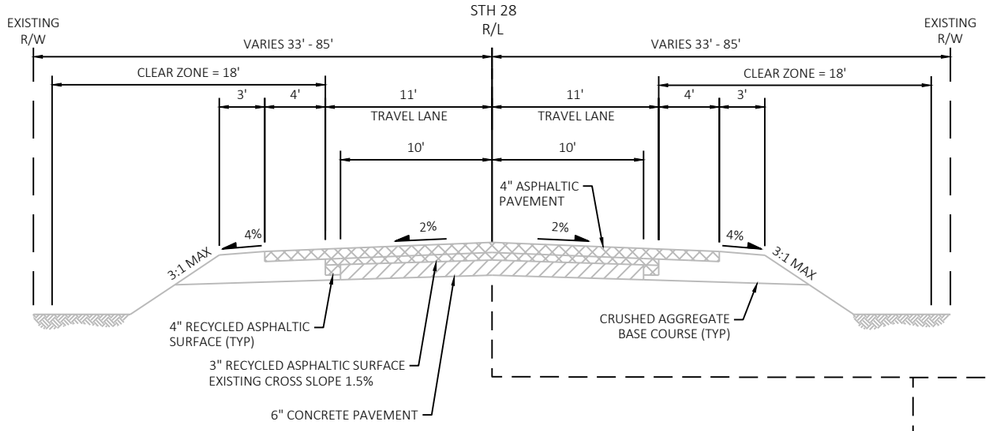
VILLAGE OF
RANDOM LAKE

N

2

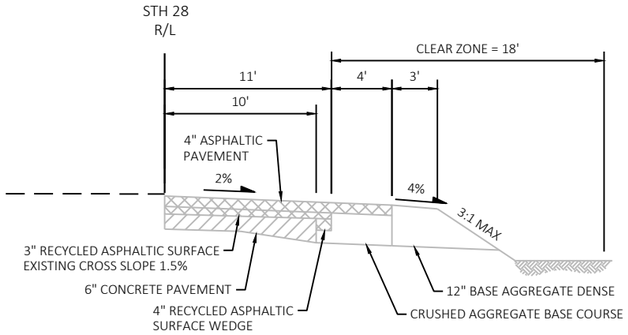
PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	PROJECT OVERVIEW	SHEET 3	E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\020201-PO.DWG
LAYOUT NAME - 020201-po
PLOT DATE : 4/23/2024 2:19 PM
PLOT BY : SIEBERT, LUKE
PLOT NAME :
PLOT SCALE : 1 IN:4000 FT
WISDOT/CADDS SHEET 42



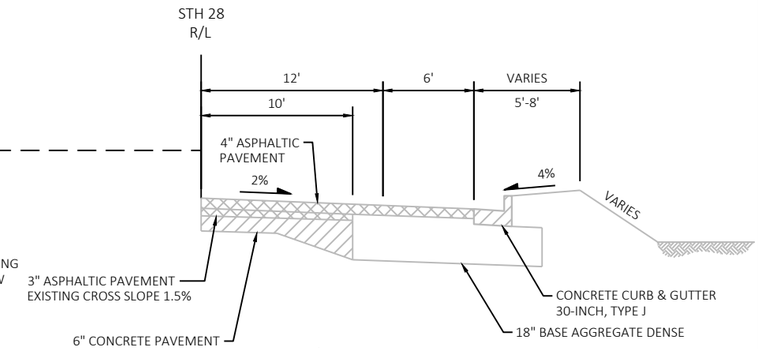
EXISTING TYPICAL SECTION STH 28

STA 100+20 TO STA 116+50
STA 150+00 TO STA 218+00
STA 223+00 TO STA 296+00
STA 318+00 TO STA 378+00
STA 416+00 TO STA 481+00
STA 493+00 TO STA 543+00
STA 574+00 TO STA 590+50 LT
STA 574+00 TO STA 591+50 RT
STA 617+60 TO STA 620+75 LT
STA 617+60 TO STA 620+50 RT
STA 634+00 TO STA 669+00
STA 676+00 TO STA 744+20
STA 754+00 TO STA 772+48



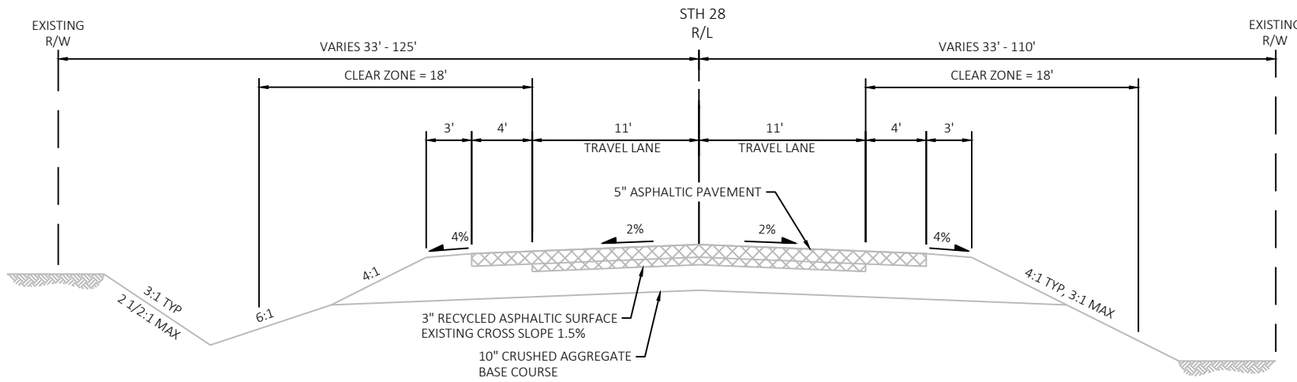
EXISTING 1/2 TYPICAL SECTION STH 28

LOCATIONS VARY



EXISTING 1/2 TYPICAL SECTION STH 28

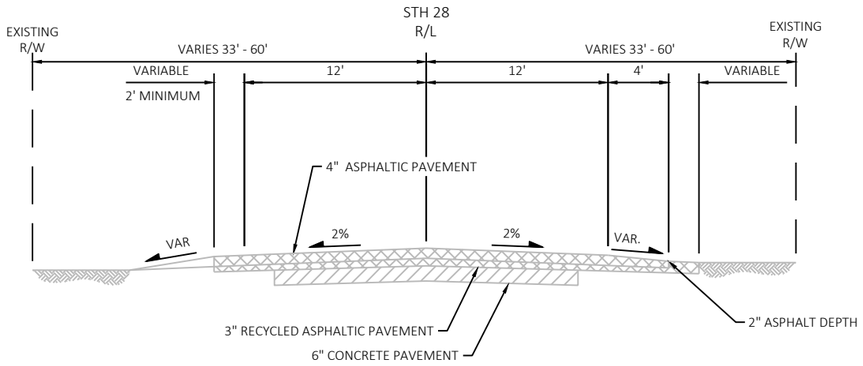
STA 192+50 TO STA 194+30 LT
STA 277+05 TO STA 280+43 LT
STA 372+50 TO STA 377+50 LT
STA 452+50 TO STA 458+15 LT
STA 620+50 TO STA 623+75 RT
STA 617+54 TO STA 624+52 LT
STA 628+00 TO STA 633+00 RT
STA 628+00 TO STA 633+00 LT
STA 716+50 TO STA 719+50 RT
STA 730+70 TO STA 731+75 RT



EXISTING TYPICAL SECTION STH 28

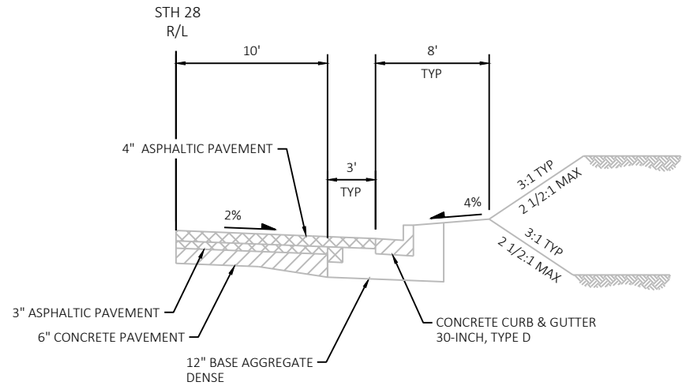
STA 116+50 TO STA 150+00
STA 218+00 TO STA 223+00
STA 378+00 TO STA 416+00
STA 481+00 TO STA 493+00
STA 543+00 TO STA 574+00
STA 669+00 TO STA 676+00
STA 744+20 TO STA 754+00

PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	TYPICAL SECTIONS	SHEET 4	E



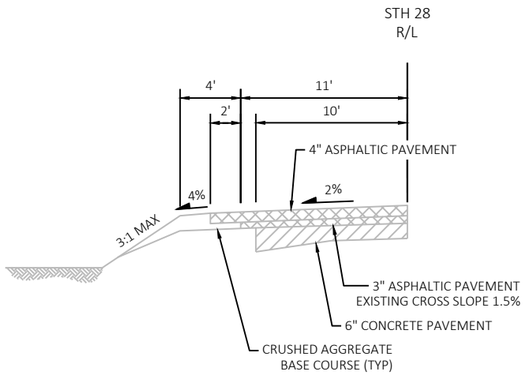
EXISTING TYPICAL SECTION STH 28

STA 303+30 TO STA 318+00 LT
STA 303+00 TO STA 318+29 RT



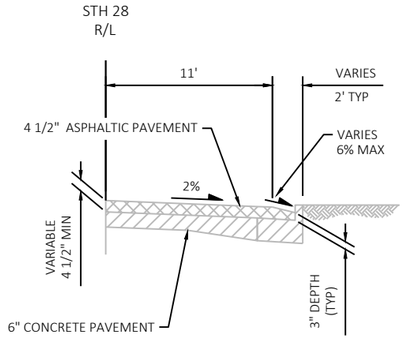
EXISTING 1/2 TYPICAL SECTION STH 28

STA 324+10 TO STA 333+00 RT



EXISTING 1/2 TYPICAL SECTION STH 28

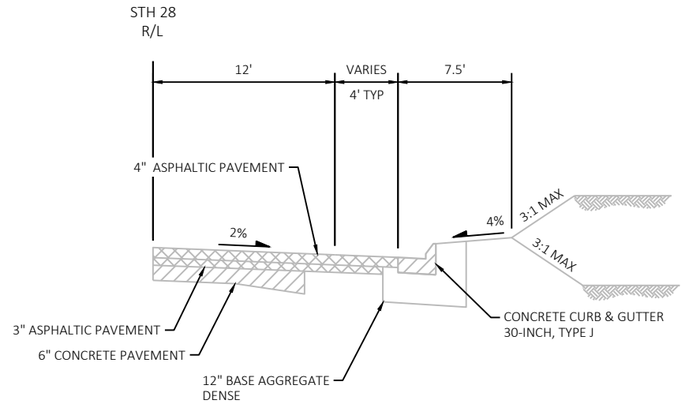
STA 318+00 TO STA 333+00 LT



EXISTING 1/2 TYPICAL SECTION STH 28

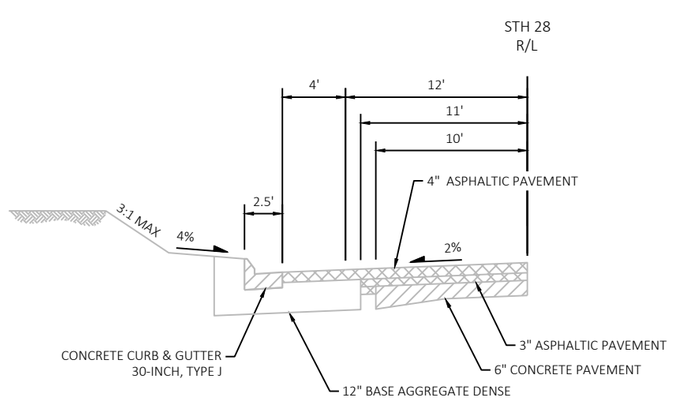
(IN CURB AND GUTTER AREAS)

STA 295+00 TO STA 303+30 LT
STA 296+00 TO STA 303+00 RT
STA 341+37 TO STA 343+00 RT
STA 342+83 TO STA 343+00 LT



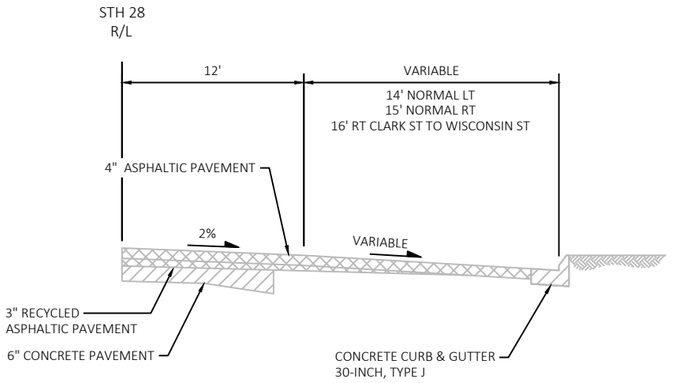
EXISTING 1/2 TYPICAL SECTION STH 28

STA 583+95 TO STA 594+00 LT
STA 597+60 TO STA 601+80 LT
STA 596+90 TO STA 601+87 RT



EXISTING 1/2 TYPICAL SECTION STH 28

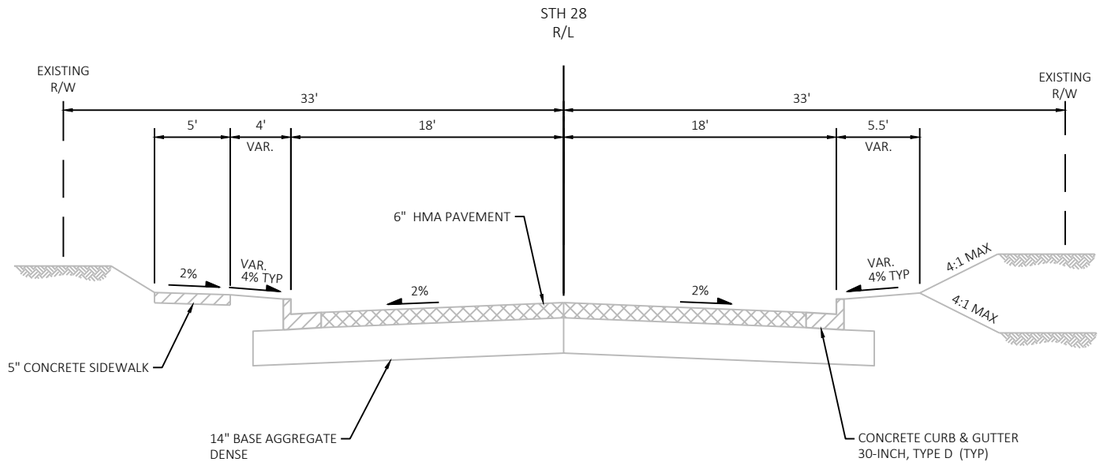
STA 594+00 TO STA 597+60 LT



EXISTING 1/2 TYPICAL SECTION STH 28

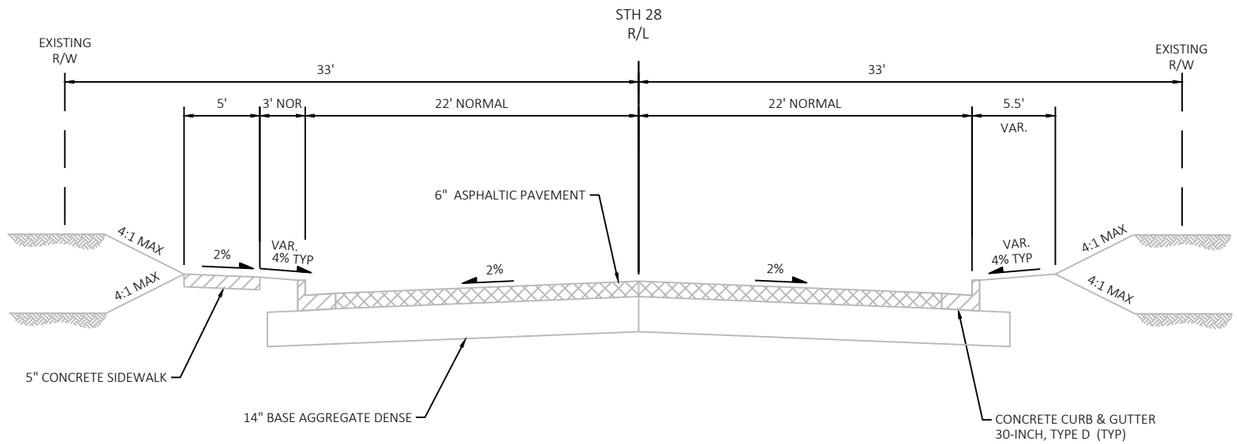
STA 591+50 TO STA 596+90 RT
STA 601+80 TO STA 607+75 LT
STA 601+87 TO STA 607+75 RT
STA 610+42 TO STA 617+50 LT
STA 610+42 TO STA 617+50 RT

PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	TYPICAL SECTIONS	SHEET 6	E



EXISTING TYPICAL SECTION STH 28

STA 772+53 TO STA 773+70 LT
STA 772+53 TO STA 794+00 RT
STA 777+55 TO STA 794+00 LT
STA 799+55 TO STA 806+32 RT
STA 799+70 TO STA 806+32 LT

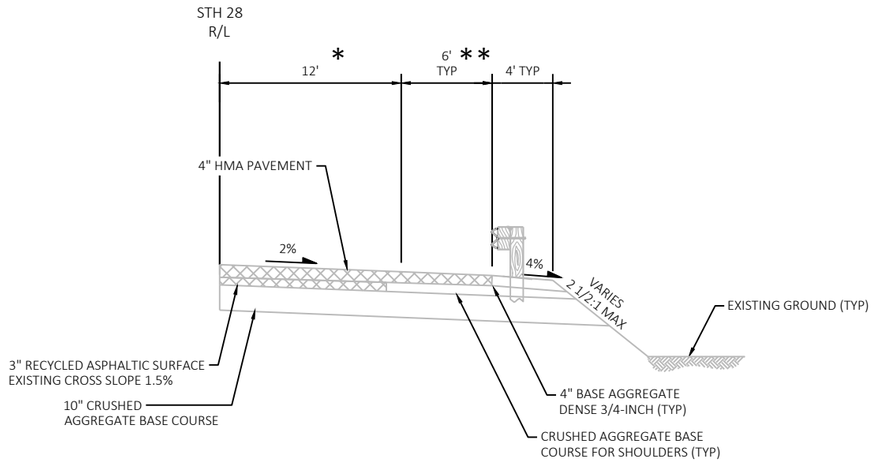


EXISTING TYPICAL SECTION STH 28

STA 773+70 TO STA 777+55 LT
STA 794+00 TO STA 799+55 RT
STA 794+00 TO STA 799+70 LT

PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	TYPICAL SECTIONS	SHEET 7	E

2

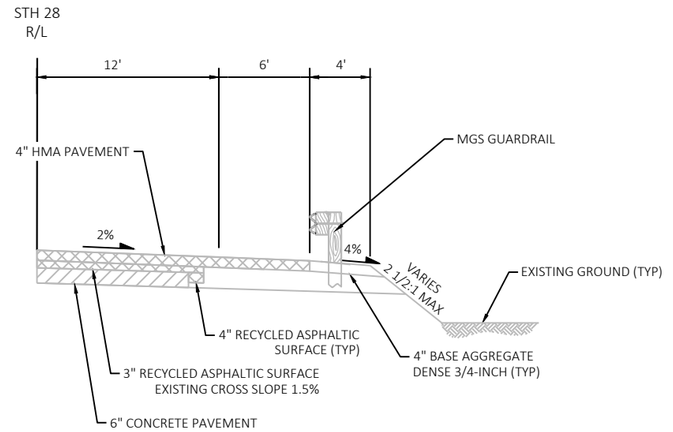


EXISTING TYPICAL SECTION STH 28

STA 140+80.32 TO STA 145+69.5 RT
STA 142+20.7 TO STA 147+37.8 LT
STA 408+21.6 TO STA 410+98.5 RT
STA 408+30.2 TO STA 412+83.6 LT
STA 486+05.2 TO STA 490+09.5 RT
STA 487+48.8 TO STA 492+65.8 LT
STA 566+41.5 TO STA 570+80.9 RT
STA 569+24.66 TO STA 572+17.5 LT
STA 632+91.13 TO STA 634+70.7 RT
STA 632+91.79 TO STA 634+96.4 LT

* VARIES 12' TO 24' FROM
STA 569+24.66 TO STA 572+17.5 LT

** VARIES 3' TO 6' FROM
STA 569+24.66 TO STA 572+17.5 LT

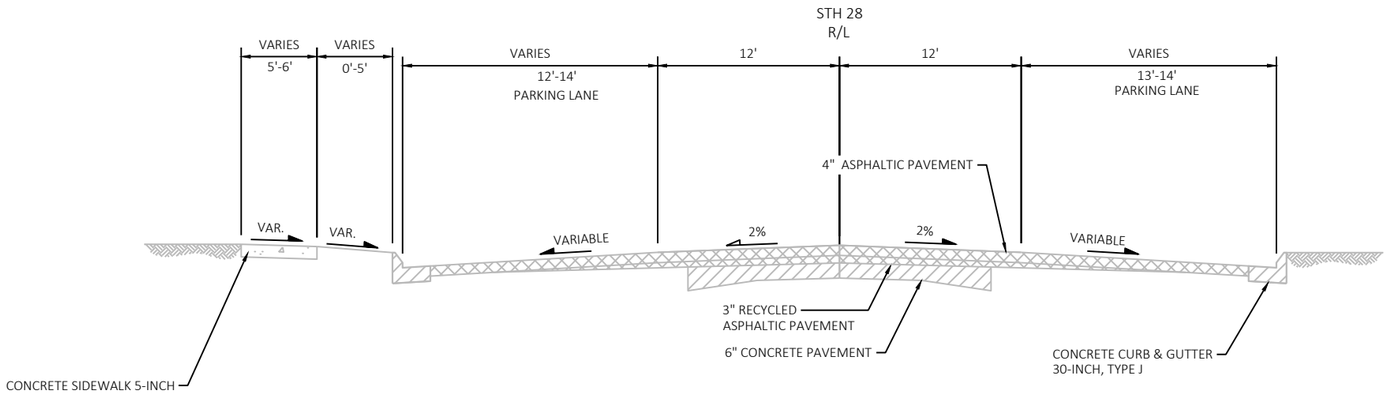


EXISTING TYPICAL SECTION STH 28

STA 226+64.2 TO STA 230+93.4

PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	TYPICAL SECTIONS	SHEET 8	E

2



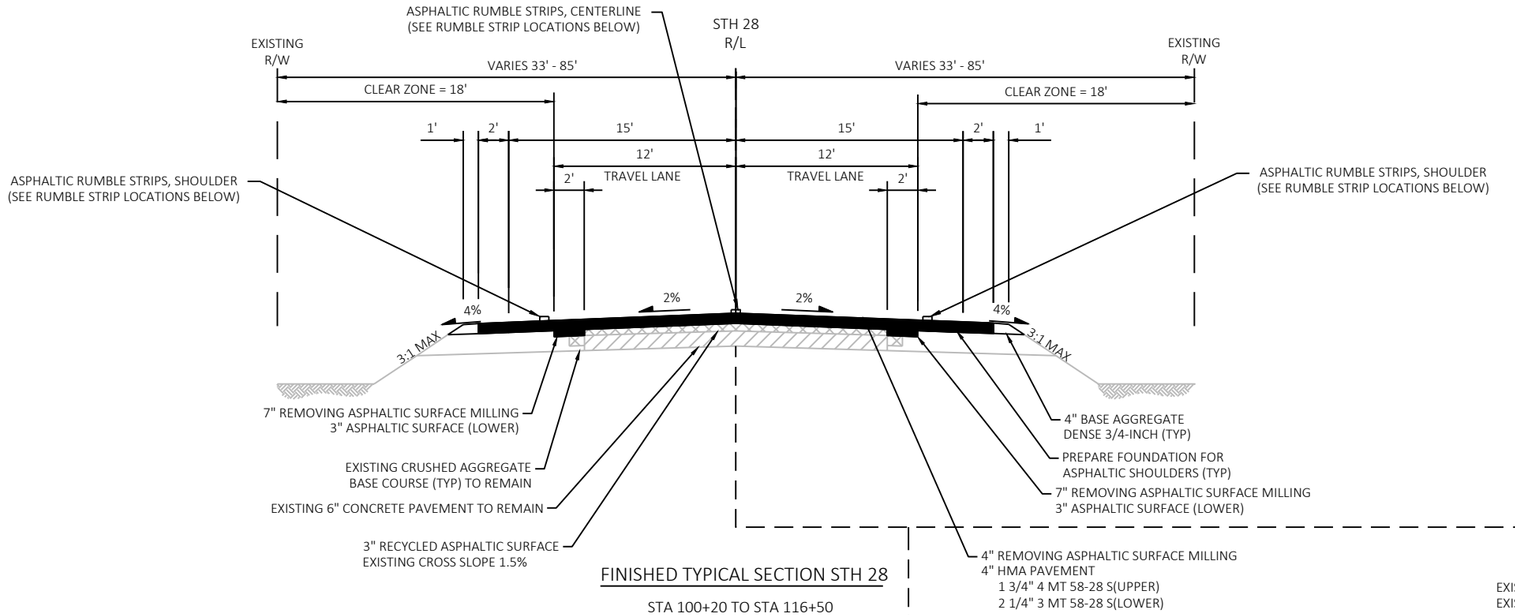
EXISTING TYPICAL SECTION STH 28

STA 607+75.72 TO STA 609+00.00
STA 609+18.00 TO STA 610+41.72

PROJECT NO: 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	TYPICAL SECTIONS	SHEET 9	E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\020301-TS.DWG
LAYOUT NAME - 020306-ts

PLOT DATE : 4/23/2024 3:38 PM PLOT BY : SIEBERT, LUKE PLOT NAME : PLOT SCALE : 1IN:10 FT

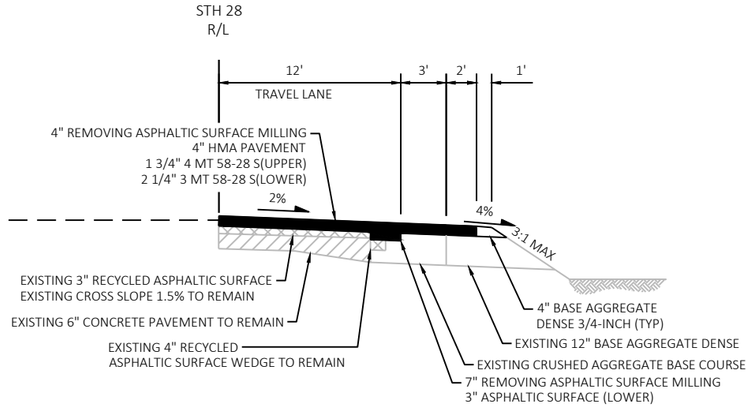


FINISHED TYPICAL SECTION STH 28

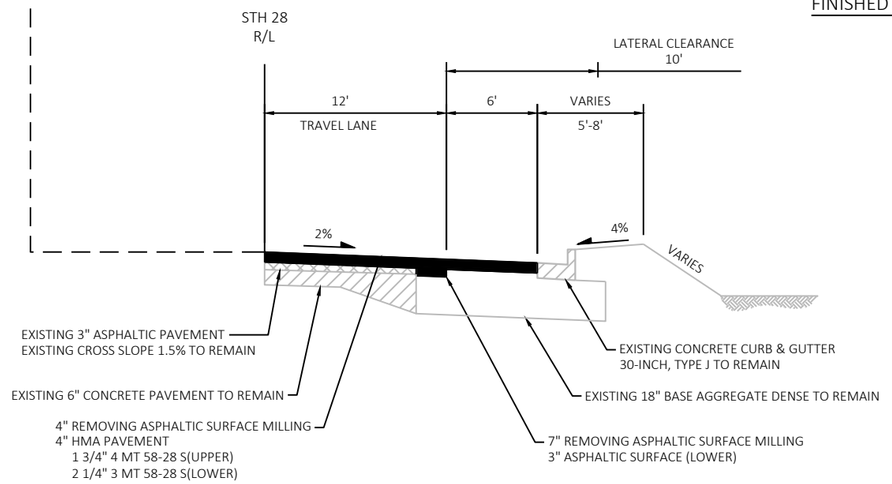
STA 100+20 TO STA 116+50
STA 150+00 TO STA 218+00
STA 223+00 TO STA 296+00
STA 317+50 TO STA 378+00
STA 416+00 TO STA 481+00
STA 493+00 TO STA 543+00
STA 574+00 TO STA 590+50 LT
STA 574+00 TO STA 591+50 RT
STA 617+60 TO STA 620+75 LT
STA 617+60 TO STA 620+50 RT
STA 633+00 TO STA 669+00
STA 676+00 TO STA 744+20
STA 754+00 TO STA 772+48

RUMBLE STRIPS LOCATIONS

STA 100+20 - STA 292+00
STA 344+00 - STA 575+80
STA 633+00 - STA 763+00

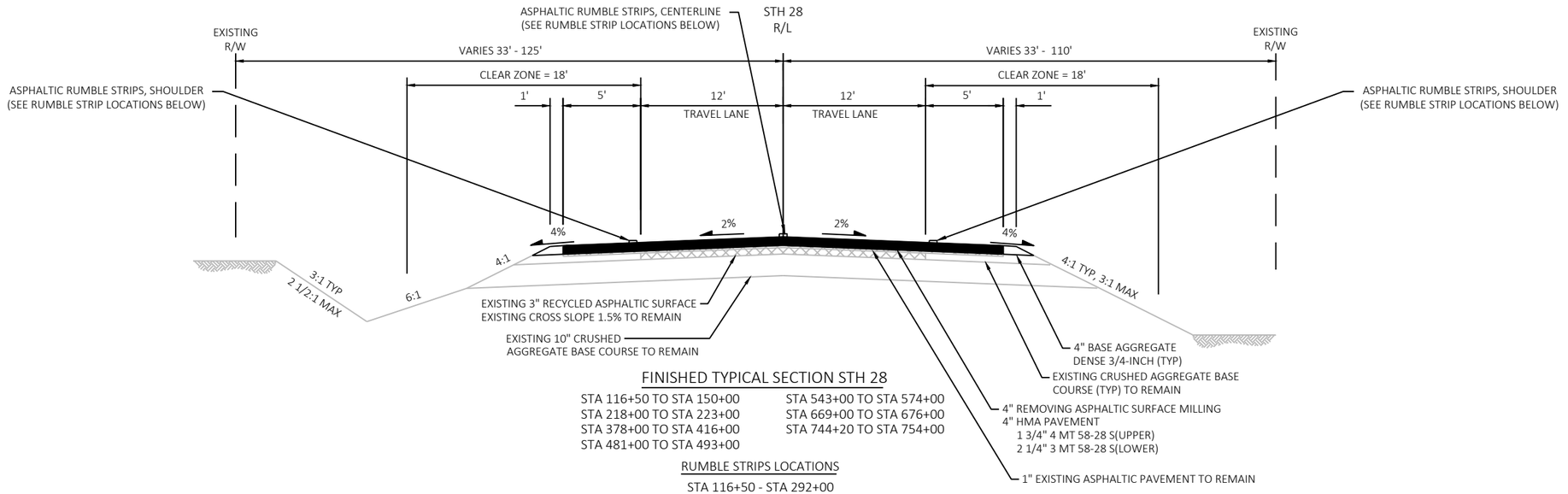


FINISHED 1/2 TYPICAL SECTION STH 28
LOCATIONS VARY



FINISHED 1/2 TYPICAL SECTION STH 28

STA 192+50 TO STA 194+30 LT	STA 617+54 TO STA 624+52 LT
STA 277+05 TO STA 280+43 LT	STA 628+00 TO STA 633+00 RT
STA 372+50 TO STA 377+50 LT	STA 628+00 TO STA 633+00 LT
STA 452+50 TO STA 458+15 LT	STA 716+50 TO STA 719+50 RT
STA 620+50 TO STA 623+75 RT	STA 730+70 TO STA 731+75 RT

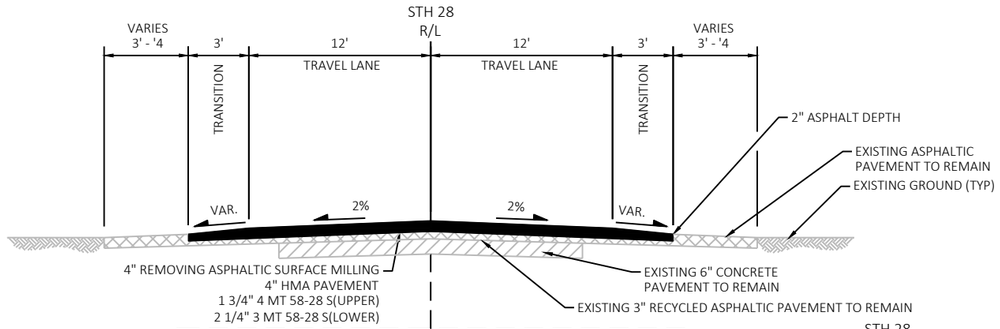


FINISHED TYPICAL SECTION STH 28

STA 116+50 TO STA 150+00
STA 218+00 TO STA 223+00
STA 378+00 TO STA 416+00
STA 481+00 TO STA 493+00
STA 543+00 TO STA 574+00
STA 669+00 TO STA 676+00
STA 744+20 TO STA 754+00

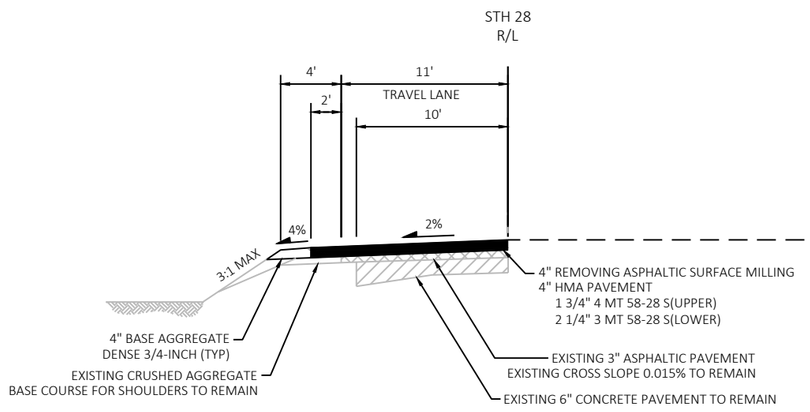
RUMBLE STRIPS LOCATIONS

STA 116+50 - STA 292+00
STA 344+00 - STA 575+80
STA 633+00 - STA 754+00



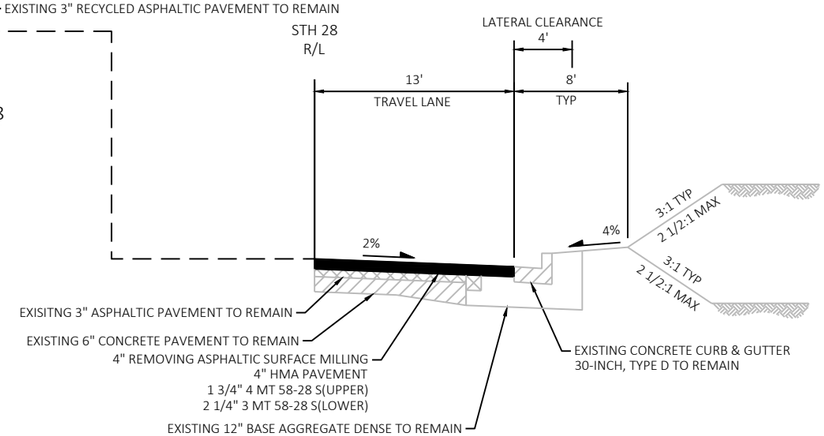
FINISHED TYPICAL SECTION STH 28

STA 303+00 TO STA 317+50 RT
STA 303+30 TO STA 317+50 LT



FINISHED 1/2 TYPICAL SECTION STH 28

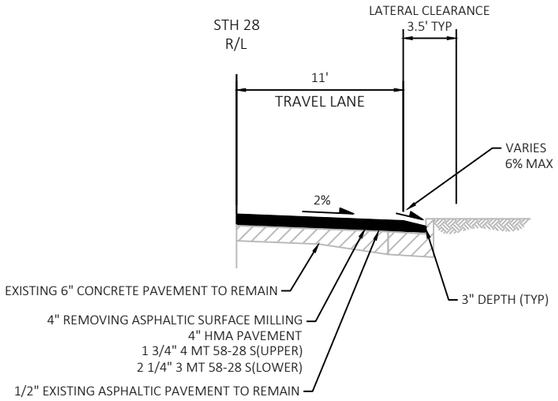
STA 317+50 TO STA 333+00 LT



FINISHED 1/2 TYPICAL SECTION STH 28

STA 324+10 TO STA 333+00 RT

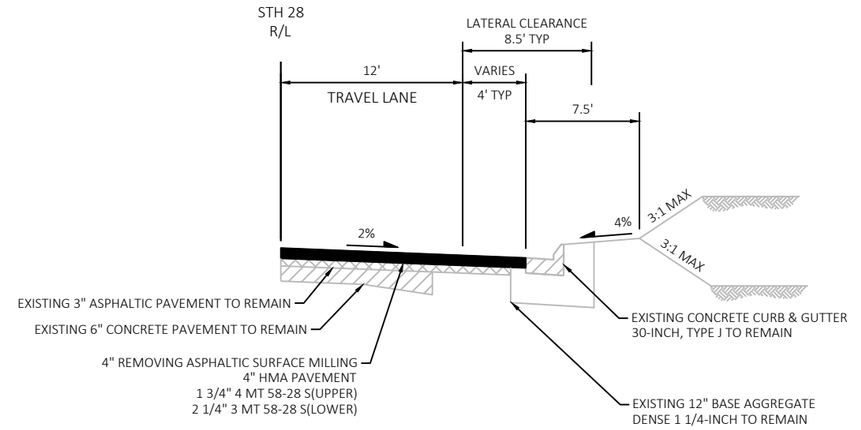
PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	TYPICAL SECTIONS	SHEET 11	E



FINISHED 1/2 TYPICAL SECTION STH 28

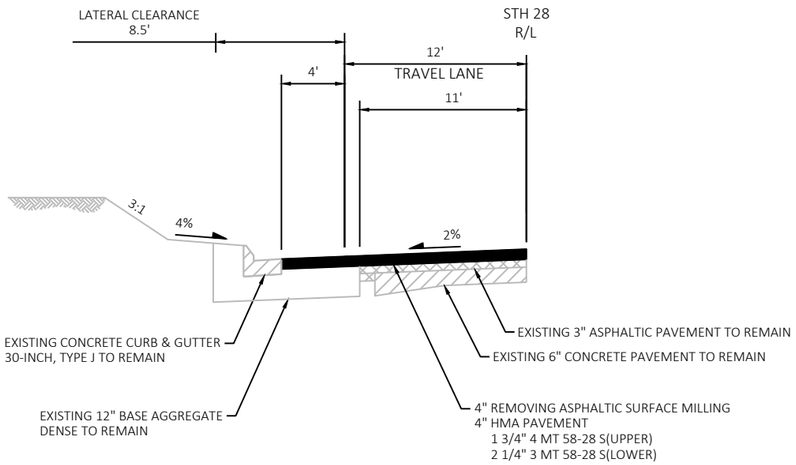
(IN CURB AND GUTTER AREAS)

STA 296+00 TO STA 303+30 LT
STA 296+00 TO STA 303+00 RT
STA 341+37 TO STA 343+00 RT
STA 342+83 TO STA 343+00 LT



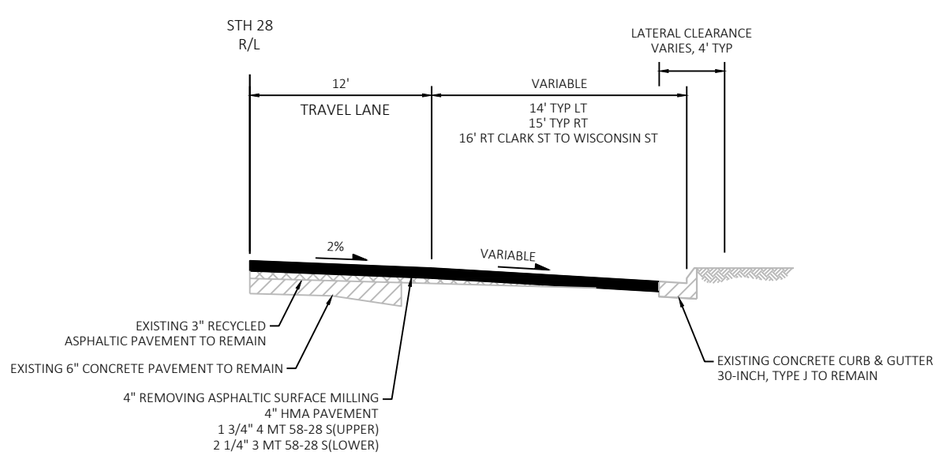
FINISHED 1/2 TYPICAL SECTION STH 28

STA 583+95 TO STA 594+00 LT
STA 597+60 TO STA 601+80 LT
STA 596+90 TO STA 601+87 RT



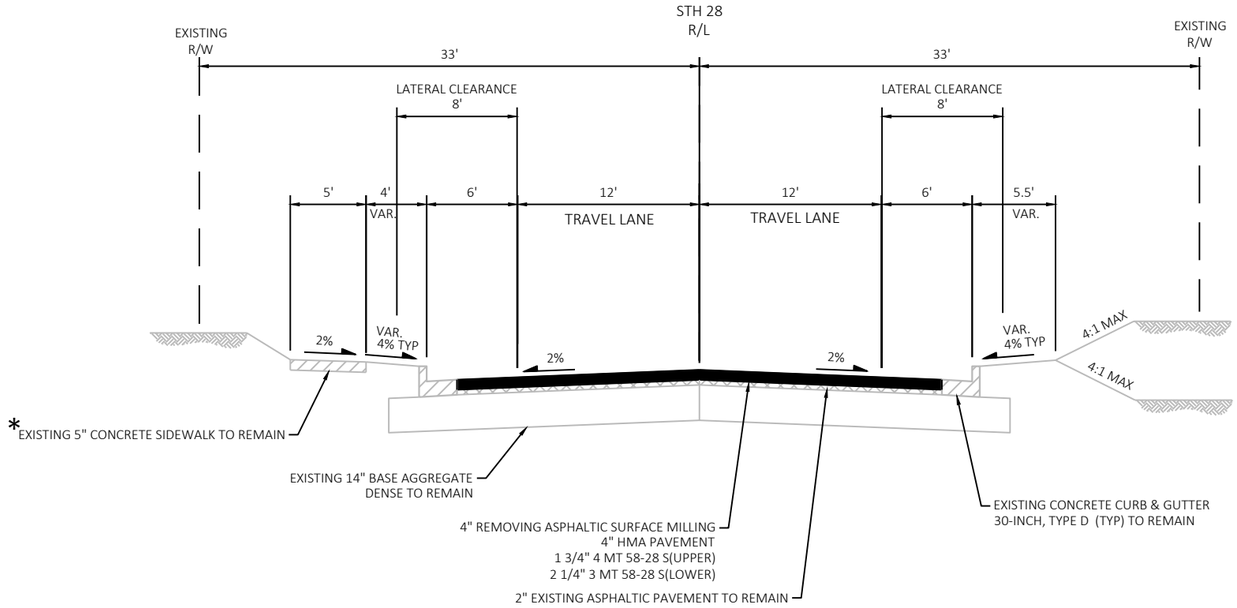
FINISHED 1/2 TYPICAL SECTION STH 28

STA 594+00 TO STA 597+60 LT



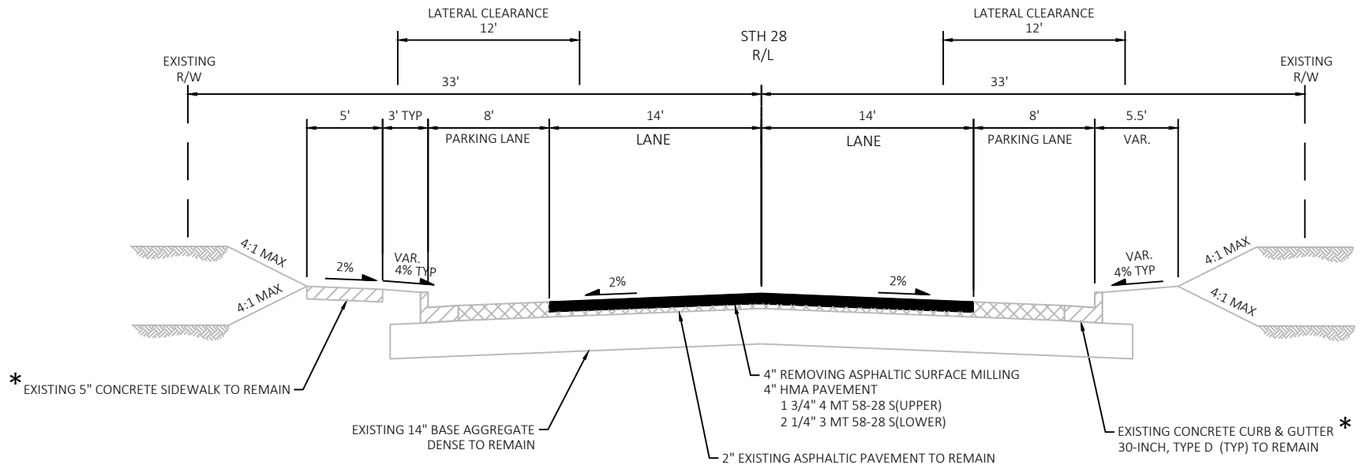
FINISHED 1/2 TYPICAL SECTION STH 28

STA 591+50 TO STA 596+90 RT
STA 601+80 TO STA 607+75 LT
STA 601+87 TO STA 607+75 RT
STA 610+42 TO STA 617+50 LT
STA 610+42 TO STA 617+50 RT



FINISHED TYPICAL SECTION STH 28

STA 772+53 TO STA 773+70 LT
STA 772+53 TO STA 794+40 RT
STA 777+55 TO STA 794+20 LT
STA 799+55 TO STA 806+14 RT
STA 799+70 TO STA 806+14 LT



FINISHED TYPICAL SECTION STH 28

STA 773+70 TO STA 777+55 LT
STA 794+40 TO STA 799+55 RT
STA 794+20 TO STA 799+70 LT

* SIDEWALK AND CURB & GUTTER REPLACEMENTS AT CURB RAMPS

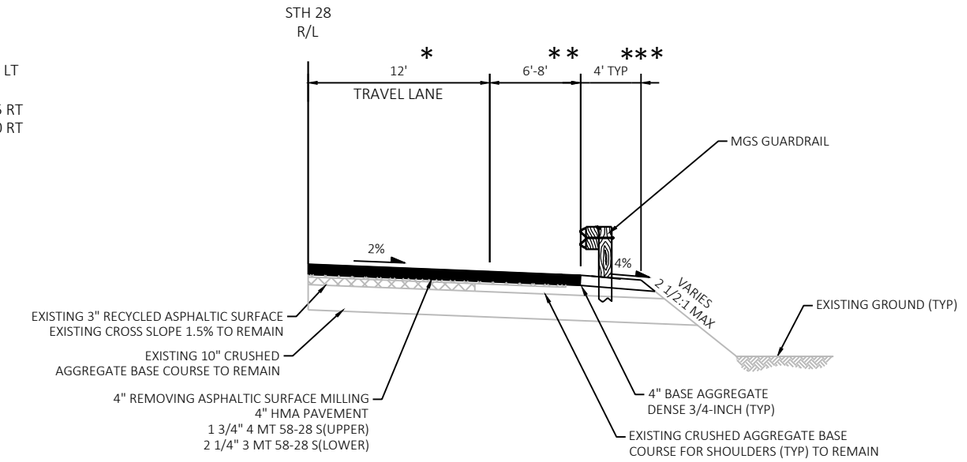
PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	TYPICAL SECTIONS	SHEET 13	E

2

* VARIES 12' TO 24' FROM
STA 569+19.8 TO STA 572+20.1 LT

** 3' FROM
STA 569+19.8 TO STA 571+03.9 LT

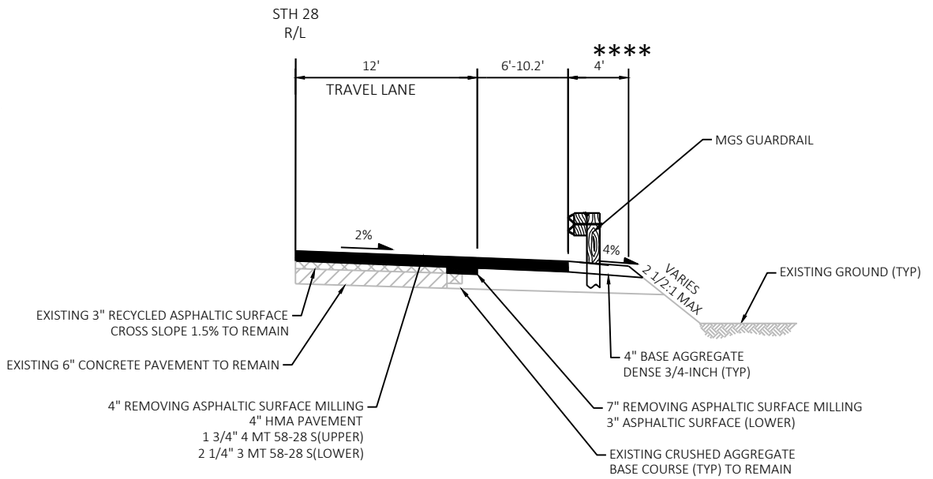
*** 3' FROM
STA 409+84.4 TO STA 410+96.8 LT
2' FROM
STA 143+75.1 TO STA 145+16.5 RT
STA 488+38.2 TO STA 489+48.0 RT



FINISHED TYPICAL SECTION STH 28

STA 140+80.32 TO STA 145+69.5 RT
STA 142+11.6 TO STA 147+42.8 LT
STA 408+12.2 TO STA 410+90.27 RT
STA 408+14.8 TO STA 412+83.6 LT
STA 486+01.5 TO STA 490+20.2 RT
STA 487+29.8 TO STA 492+73.5 LT
STA 566+46 TO STA 570+79.1 RT
STA 569+19.8 TO STA 572+20.1 LT

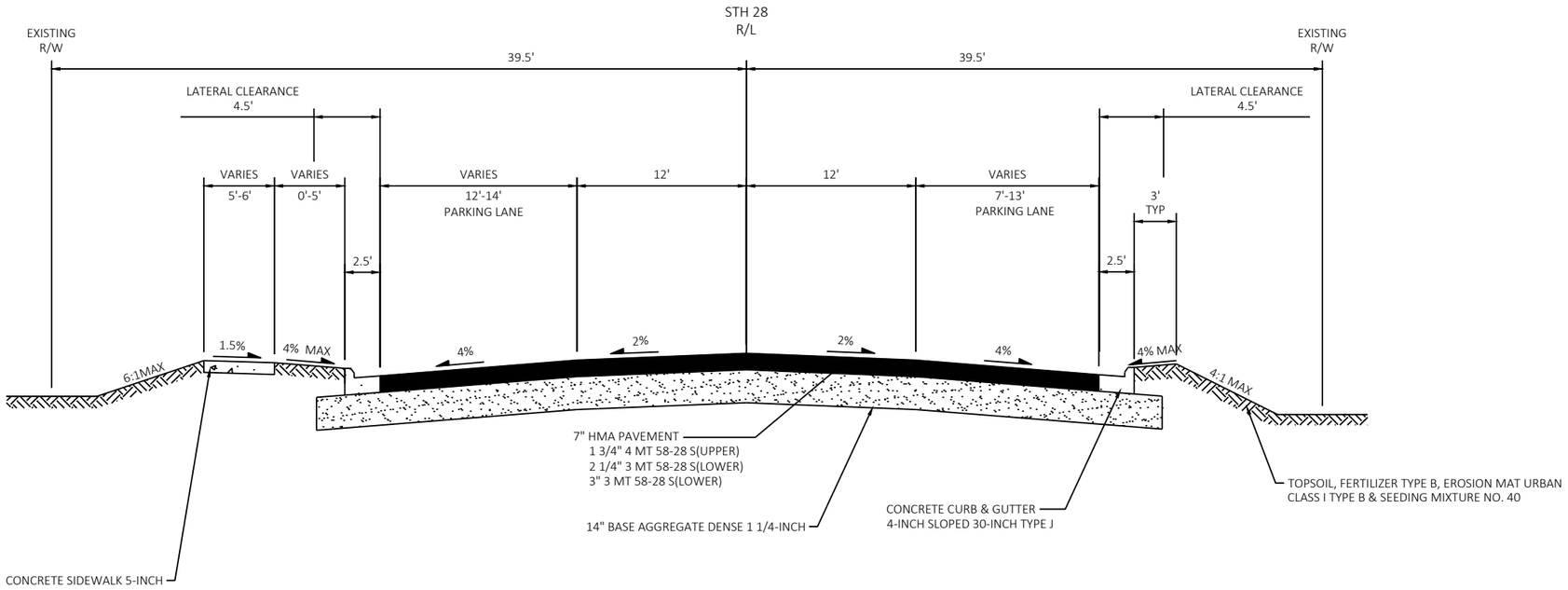
**** 2' FROM
STA 229+11.6 TO STA 229+50.1 RT



FINISHED TYPICAL SECTION STH 28

STA 226+64.4 TO STA 230+95.5

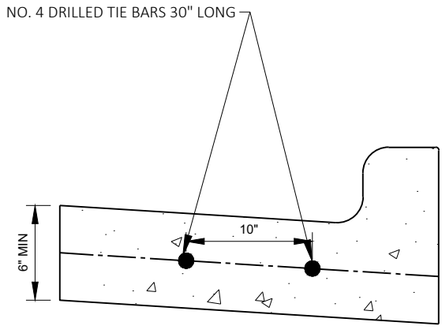
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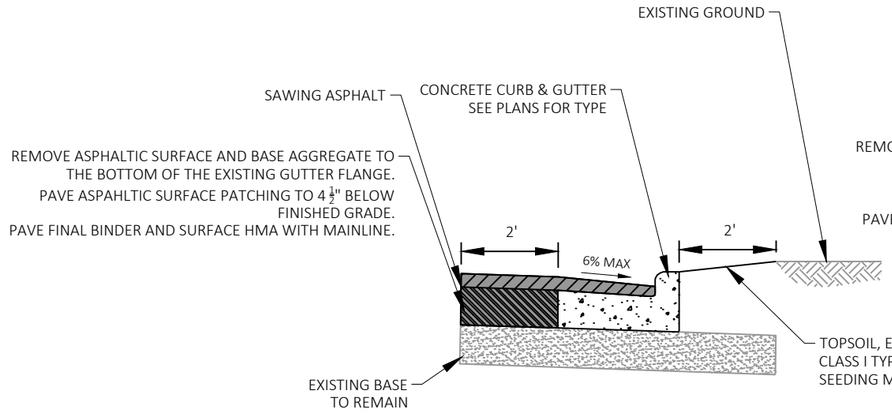
FINISHED TYPICAL SECTION STH 28

STA 607+75.72 TO STA 608+90.72
STA 609+27.89 TO STA 610+41.72

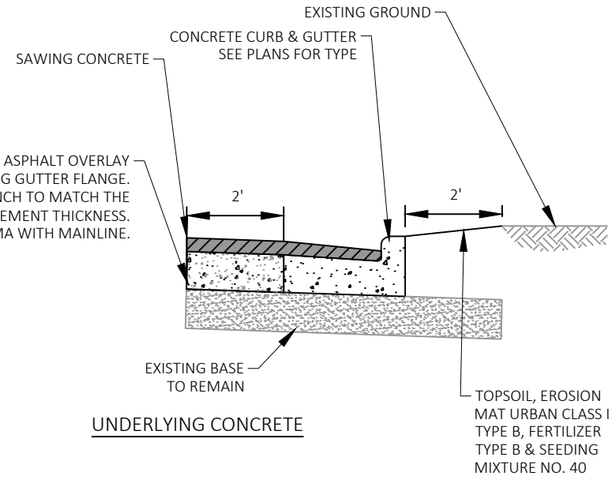
PROJECT NO: 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	TYPICAL SECTIONS	SHEET 15	E



DRILLED TIE BAR DETAIL AT CURB & GUTTER MATCH POINTS



UNDERLYING ASPHALT OR BASE MATERIAL

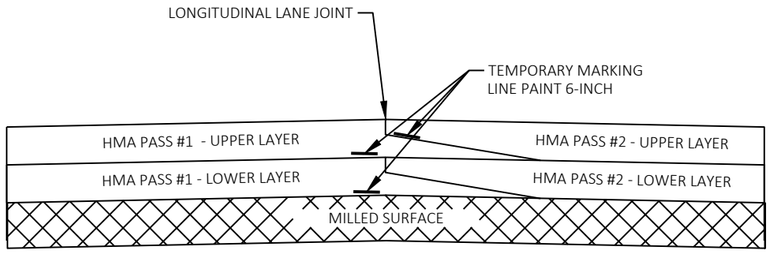


UNDERLYING CONCRETE

DETAIL FOR CURB AND GUTTER REPLACEMENT AREAS

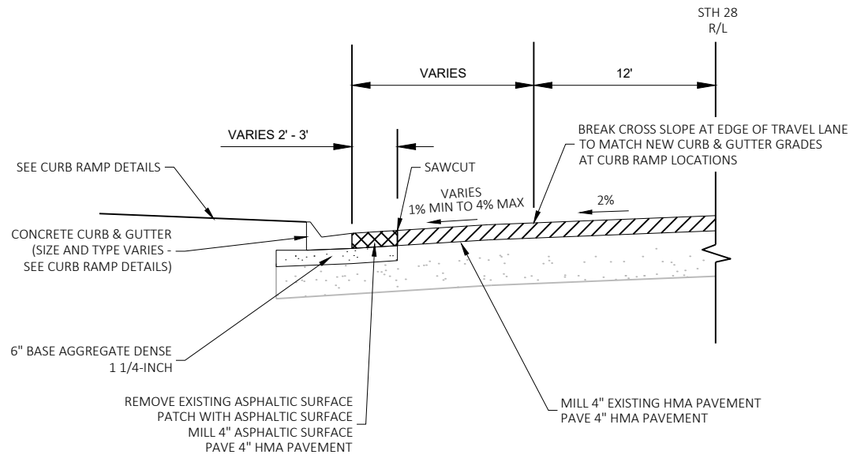
SEE PLAN DETAILS FOR LOCATIONS.

NOTES:
1. ASPHALT REMOVAL IN FRONT OF CURB PAID AS REMOVING ASPHALTIC SURFACE.
2. WHERE EXISTING CONCRETE PAVEMENT IS OVERLAID BY ASPHALT, ASPHALT REMOVAL IS INCIDENTAL TO THE REMOVING CONCRETE PAVEMENT ITEM.
3. REMOVING EXCESS BASE AGGREGATE IS INCIDENTAL TO THE CURB AND GUTTER ITEM.
4. TIE CONCRETE CURB & GUTTER PLACED UNDER THIS CONTRACT TO ADJACENT EXISTING CONCRETE CURB & GUTTER TO REMAIN.



MILL AND OVERLAY SECTION

PAVEMENT MARKING DETAIL FOR TAPERED OVERLAPPING JOINTS IN HMA PAVEMENTS

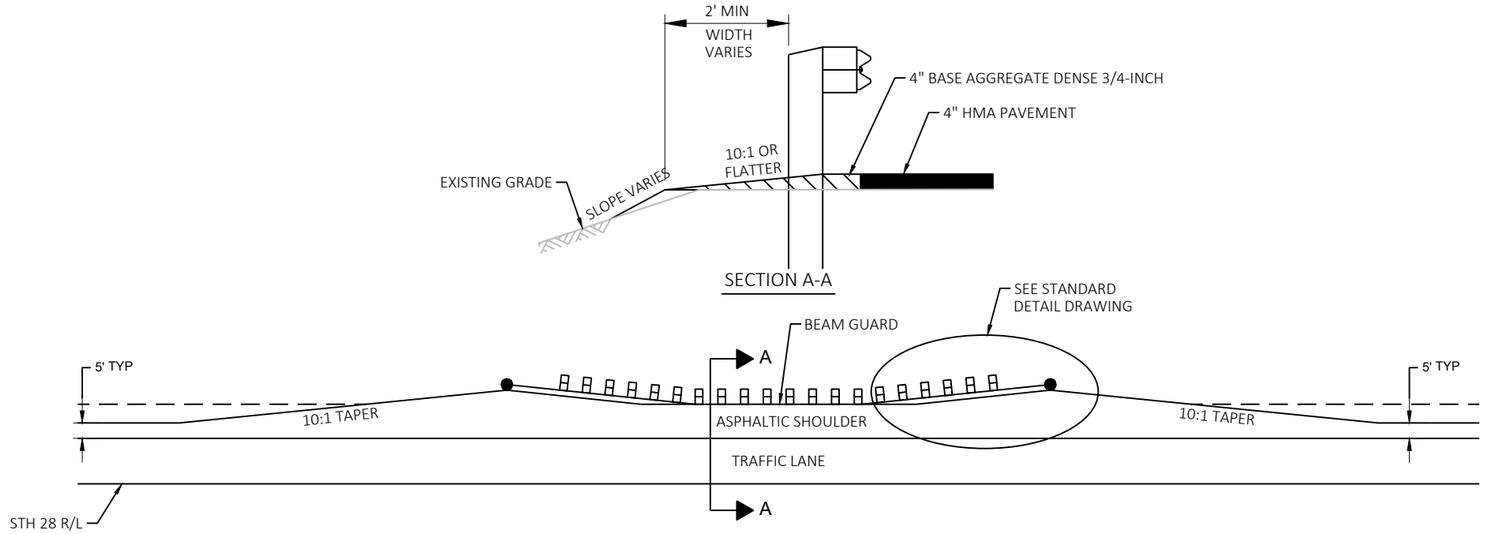


CURB & GUTTER DETAIL AT CURB RAMPS

HALF SECTION

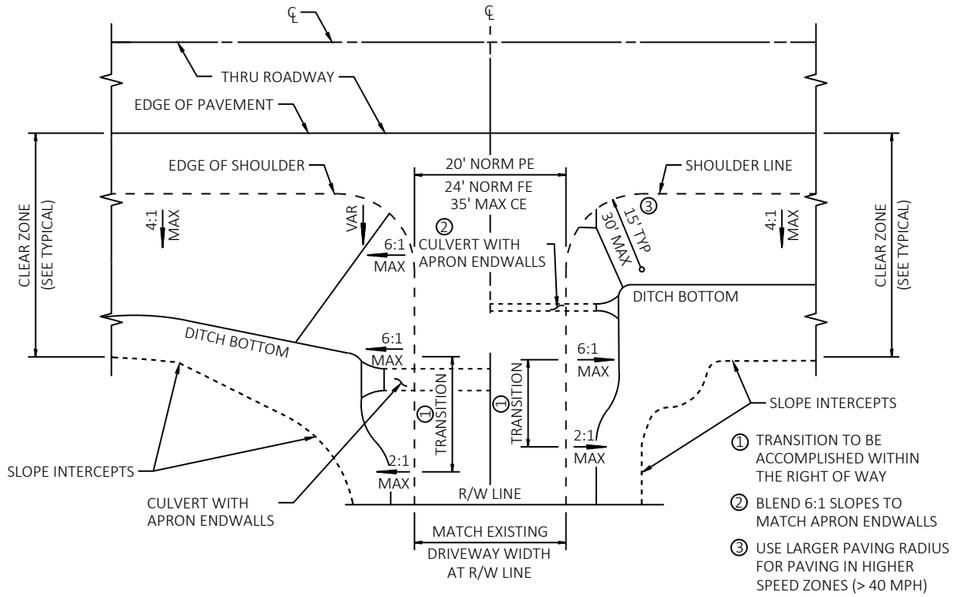
PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	CONSTRUCTION DETAILS	SHEET 16	E

2



DETAIL FOR ASPHALTIC SHOULDER AT BEAM GUARD

SEE PLAN DETAILS AND CROSS SECTIONS FOR ADDITIONAL INFORMATION

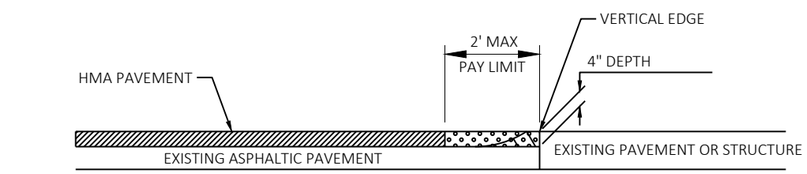


FOR CULVERTS OVER 24" DIAMETER

FOR CULVERTS 24" DIAMETER & LESS

PLAN VIEW

RURAL DRIVEWAY GRADING AND/OR PAVING DETAIL



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

REMOVING ASPHALTIC SURFACE MILLING

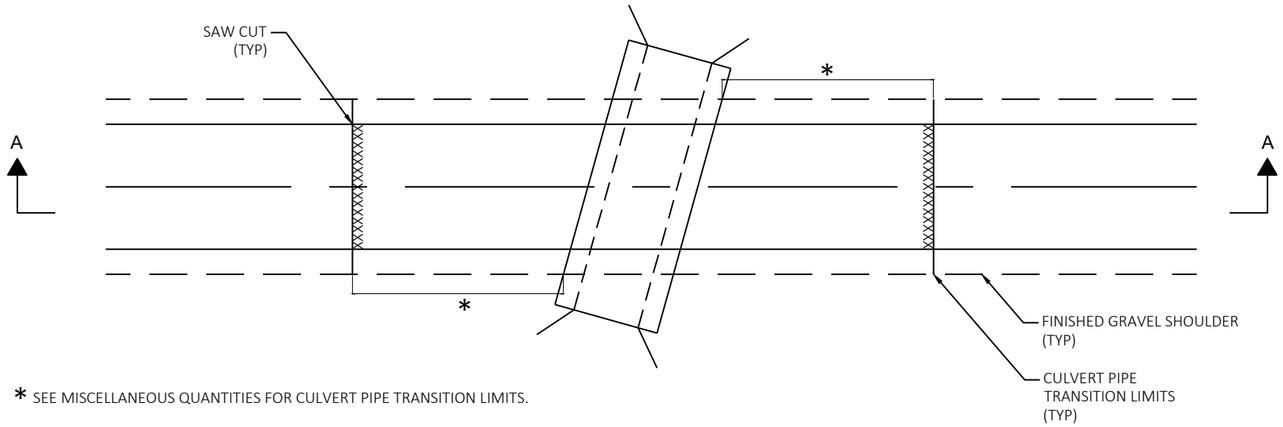
REMOVING ASPHALTIC SURFACE BUTT JOINTS

REMOVE ASPHALTIC SURFACE WEDGE AT BUTT JOINT TO CREATE VERTICAL EDGE

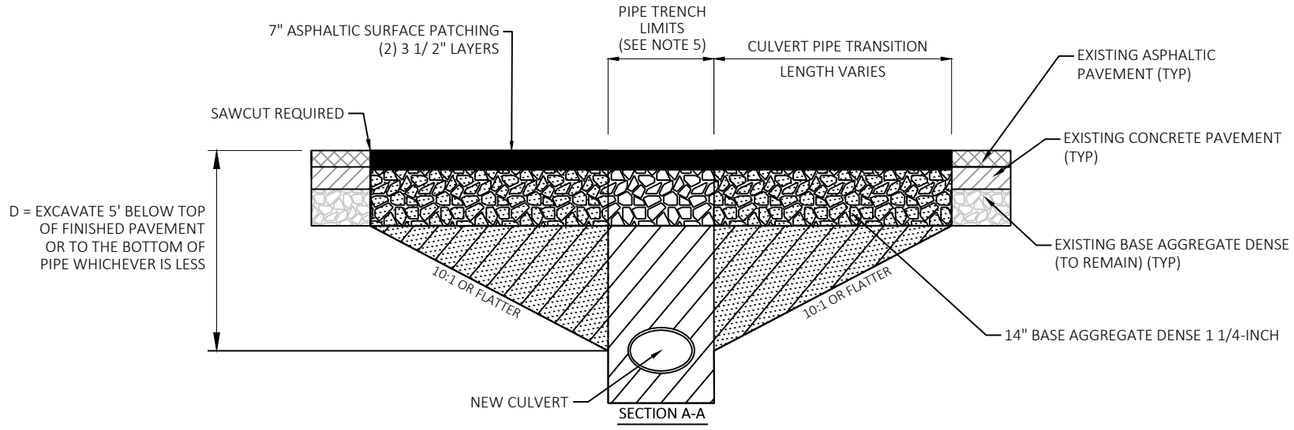
BUTT JOINT DETAIL FOR ASPHALTIC PAVEMENTS (NO PROFILE CHANGE)

REQUIRED AT BEGIN/END PROJECT LIMITS AND AT ALL SIDE ROAD INTERSECTION MATCH POINTS

PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	CONSTRUCTION DETAILS	SHEET 17	E



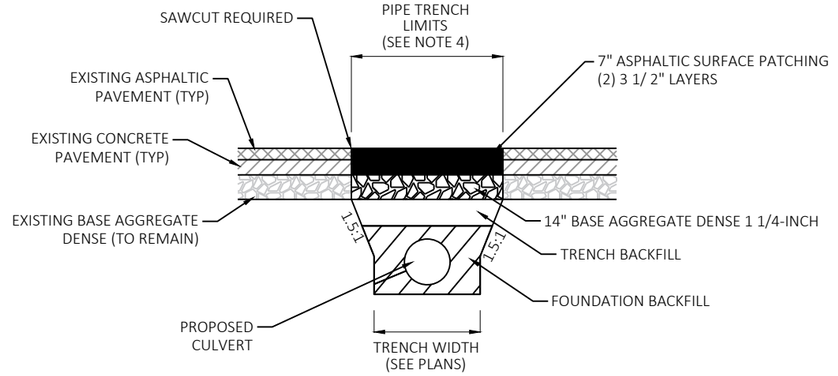
* SEE MISCELLANEOUS QUANTITIES FOR CULVERT PIPE TRANSITION LIMITS.



NOTES:
1. PERFORM WORK IN ACCORDANCE TO STANDARD SPECIFICATION 520.
2. CULVERT PIPE TRANSITION AREAS WILL BE PAID BY COMMON EXCAVATION & FOUNDATION BACKFILL.
3. PAVEMENT SAWCUT TO BE PERPENDICULAR TO ROADWAY PAVEMENT.
4. CONTINUE MILLING AND PAVING THROUGH ASPHALTIC PATCH.
5. FOUNDATION BACKFILL IN THE PIPE TRENCH LIMITS IS PAID UNDER THAT ITEM.
6. CROSS SECTIONS SHOWN AT/NEAR CULVERT LOCATIONS ARE NOT MEASURED FOR YARDAGE.

SHALLOW CULVERT PIPE REPLACEMENT & TRANSITION DETAIL

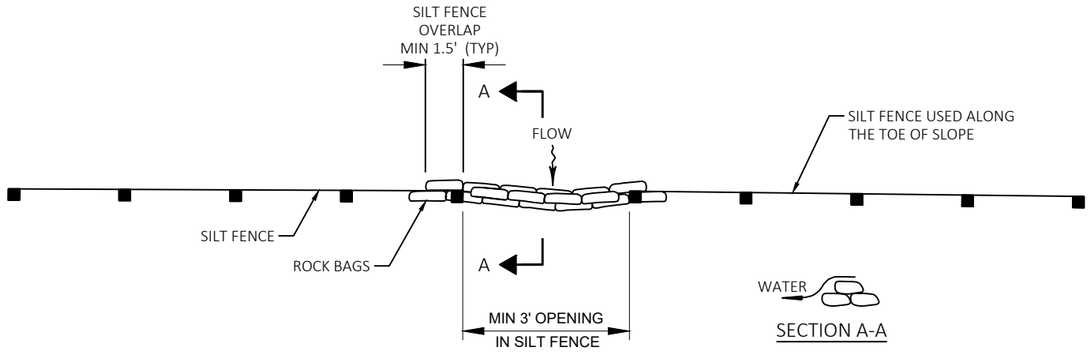
STA 318+13
STA 633+78



NOTES:
1. PERFORM WORK IN ACCORDANCE TO STANDARD SPECIFICATION 520.
2. PAVEMENT SAWCUT TO BE PERPENDICULAR TO ROADWAY PAVEMENT.
3. CONTINUE MILLING AND PAVING THROUGH ASPHALTIC PATCH.
4. TRENCH AND FOUNDATION BACKFILL IN THE PIPE TRENCH LIMITS ARE INCIDENTAL TO THE CULVERT PIPE ITEM.
5. CROSS SECTIONS SHOWN AT/NEAR CULVERT LOCATIONS ARE NOT MEASURED FOR YARDAGE.

STANDARD CULVERT REPLACEMENT DETAIL

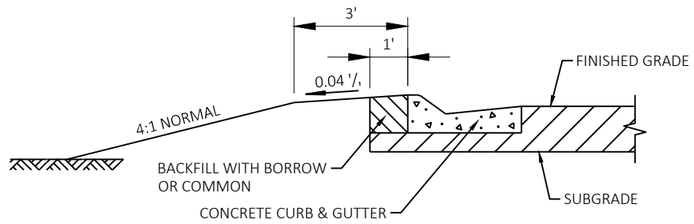
STA 678+08



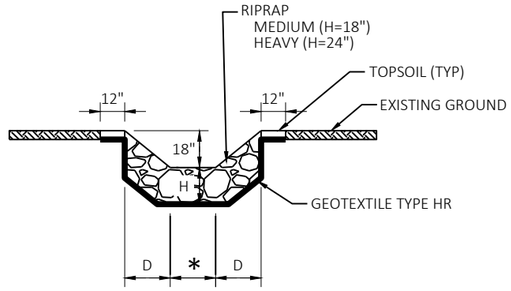
SECTION A-A

TOP VIEW

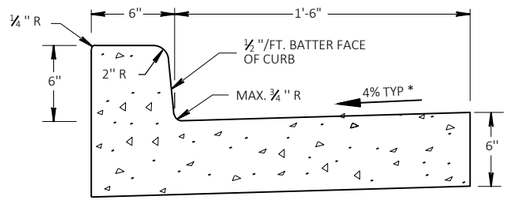
ROCK BAGS USED FOR SILT FENCE RELIEF DETAIL



BERM DETAIL BEHIND CURB & GUTTER

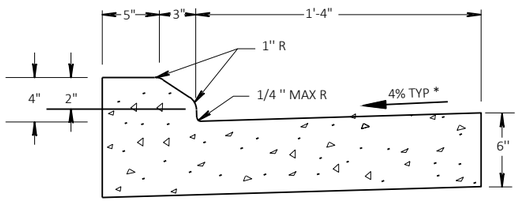


SECTION A-A



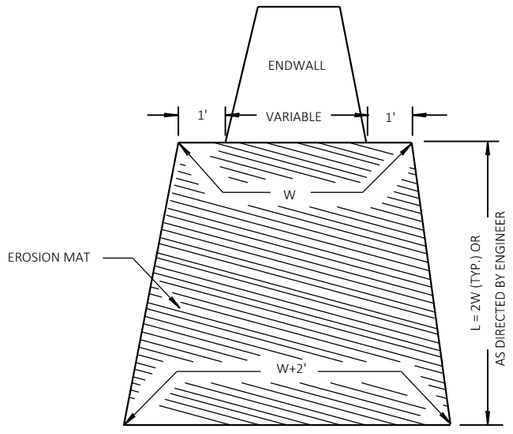
CONCRETE CURB & GUTTER 24-INCH TYPE D

*SEE CURB RAMP DETAILS FOR GUTTER CROSS SLOPE WARPING LOCATIONS



CONCRETE CURB & GUTTER 4" SLOPED 24-INCH TYPE J

*SEE CURB RAMP DETAILS FOR GUTTER CROSS SLOPE WARPING LOCATIONS



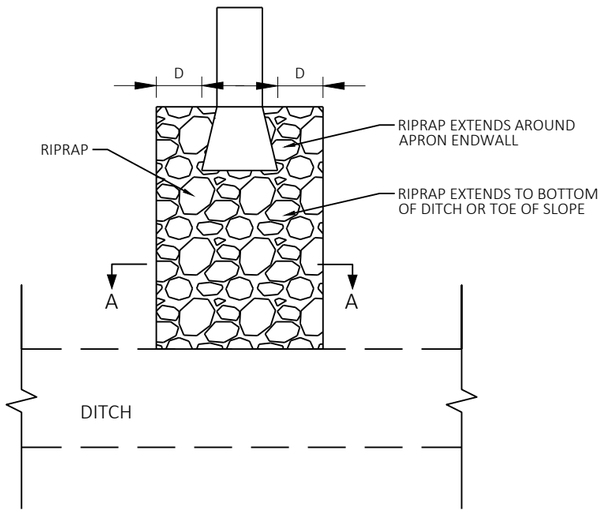
DETAIL FOR EROSION MAT TREATMENT AT CULVERTS

SEE EROSION CONTROL PLAN FOR LOCATIONS

SECTION A-A

* APRON ENDWALL WIDTH

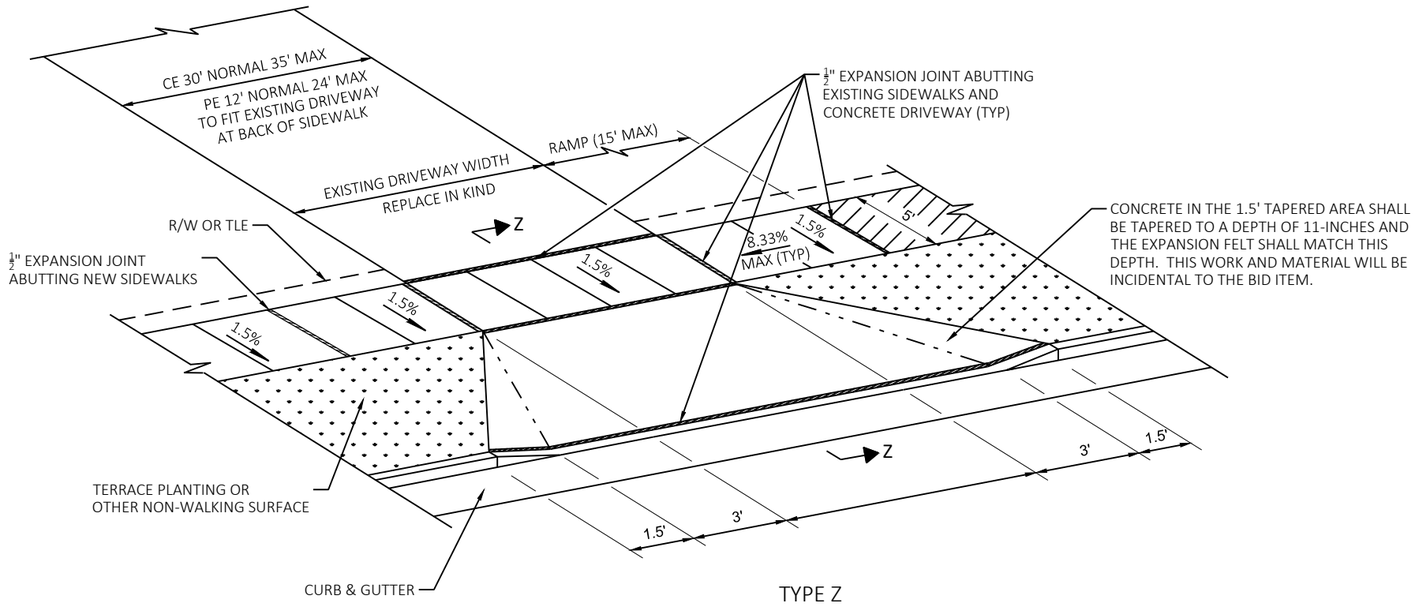
D = PIPE DIAMETER



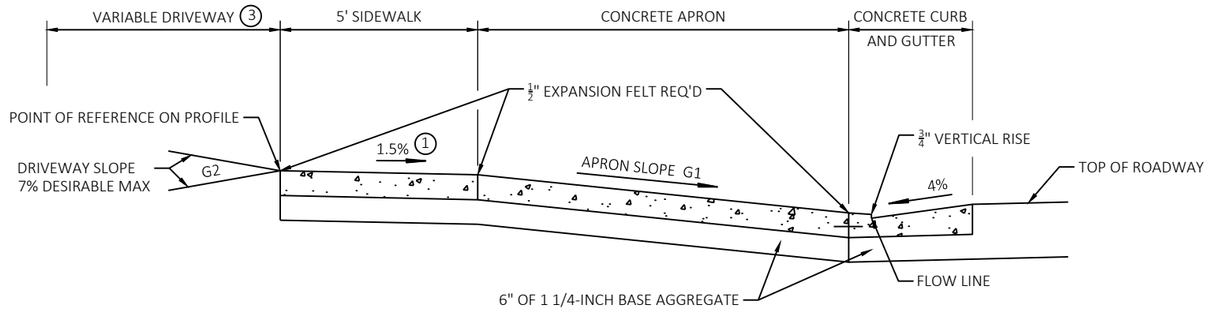
PLAN VIEW

RIPRAP TREATMENT AT STORM SEWER OUTFALLS

SEE EROSION CONTROL PLAN FOR LOCATIONS & TYPES



TYPE Z
SIDEWALK WITH WIDER TERRACE
TERRACE VARIES 3 TO 8 FEET



SECTION Z-Z

SEE PLAN FOR ADDITIONAL INFORMATION

GENERAL NOTES

CONSTRUCTION TOLERANCE OF +/- 0.5% FOR SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

12' MAXIMUM SPACING FOR CONTRACTION JOINTS IN DRIVEWAY APPROACHES.

OFFSETS, ELEVATIONS, AND PERCENT GRADE ARE SHOWN IN THE PLAN.

SIDEWALK AND APRON WITHIN THE LIMITS OF THE DRIVEWAY PAID FOR AS CONCRETE DRIVEWAY, 6-INCH.

USE 4% GUTTER CROSS SLOPE UNLESS OTHERWISE NOTED IN PLANS.

DRIVEWAY TYPES

- 6-INCH CONCRETE DRIVEWAY PAVEMENT OVER 6" BASE AGGREGATE DENSE 1 1/4-INCH.
- 3-INCH ASPHALTIC SURFACE OVER 6" BASE AGGREGATE DENSE 1 1/4-INCH.
- 6-INCH BASE AGGREGATE DENSE 3/4-INCH.

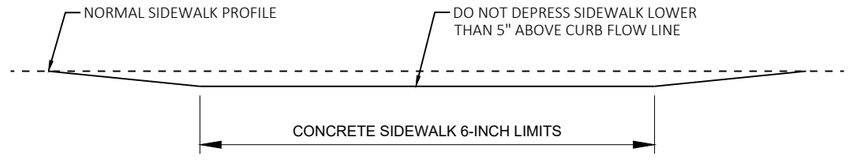
TERRACE WIDTH	APRON SLOPE G1		
	MIN %	DESIRABLE %	MAXIMUM %
3 FT	7.0	8.5	10.0
4 FT	5.0	7.0	10.0
5 FT	4.0	7.0	10.0
6 FT	4.0	7.0	10.0
7 FT	3.5	7.0	10.0
8 FT	3.0	7.0	10.0

NOTE:

ALGEBRAIC DIFFERENCE BETWEEN TANGENT GRADES G1 & G2 NOT TO EXCEED 10% DESIRABLE MAXIMUM.

DEPRESS SIDEWALK PROFILE IF DRIVEWAY APRON EXCEEDS MAXIMUM SLOPE.

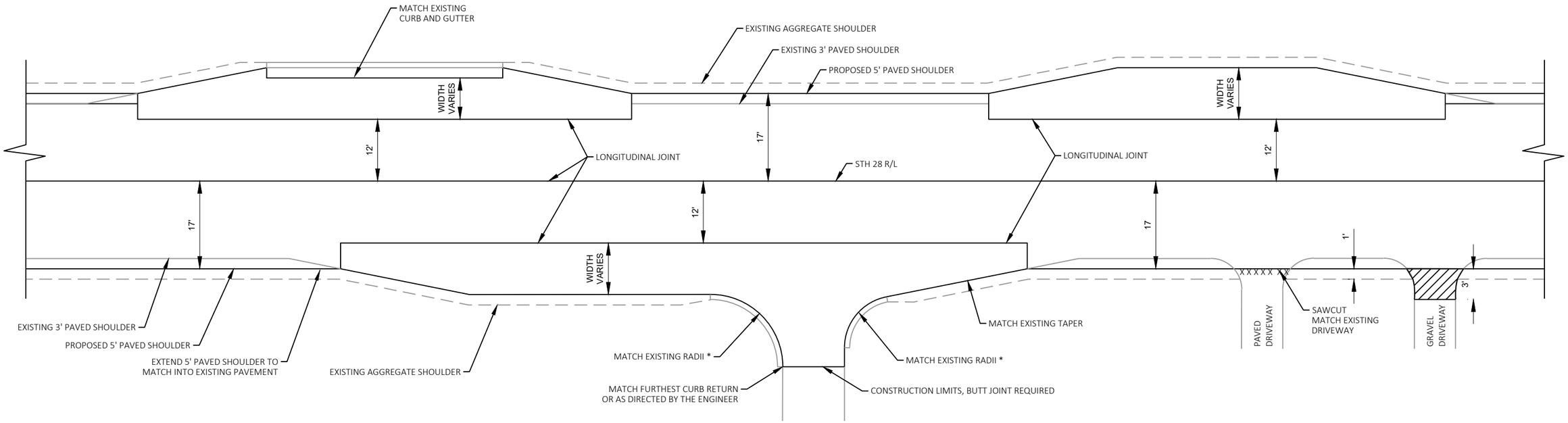
SEPARATE PAYMENT FOR BASE AGGREGATE WILL BE MADE.



DEPRESSED SIDEWALK PROFILE DETAIL

DRIVEWAY ENTRANCE DETAIL WITH SIDEWALK, CURB & GUTTER

2



* MATCH CURB AND GUTTER FLANGE FOR
INTERSECTIONS WITH CURB AND GUTTER.
MATCH EXISTING EDGE OF PAVEMENT FOR
INTERSECTIONS WITHOUT CURB AND GUTTER

HMA LONGITUDINAL JOINT DETAIL, DRIVEWAY DETAIL, AND TYPICAL SIDE ROAD DETAIL

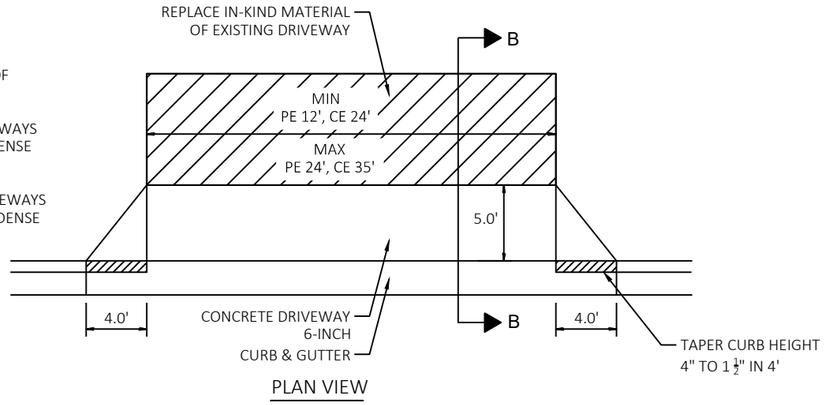
TO BE USED AT ALL INTERSECTIONS, BYPASS LANES,
RURAL CURB SECTIONS, AND RURAL DRIVEWAYS

NOTES:
NON-PAVED DRIVEWAYS SHALL CONSIST OF 6" OF BASE AGGREGATE DENSE.

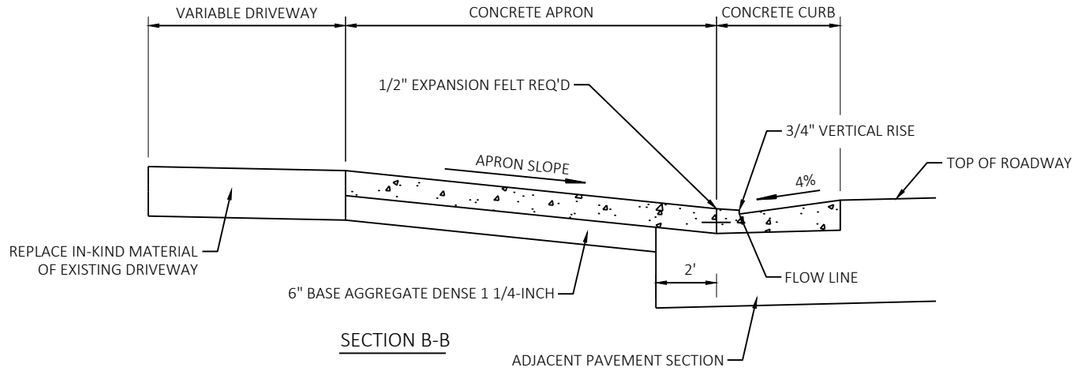
RESIDENTIAL ENTRANCE ASPHALTIC DRIVEWAYS SHALL CONSIST OF 6" BASE AGGREGATE DENSE AND 3" OF ASPHALTIC PAVEMENT.

COMMERCIAL ENTRANCE ASPHALTIC DRIVEWAYS SHALL CONSIST OF 12" BASE AGGREGATE DENSE AND 4" OF ASPHALTIC PAVEMENT.

SEE PLAN FOR MORE DETAILS.

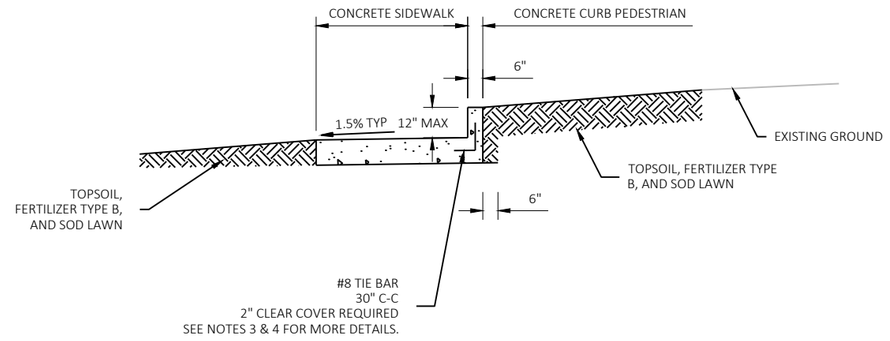


PLAN VIEW



SECTION B-B

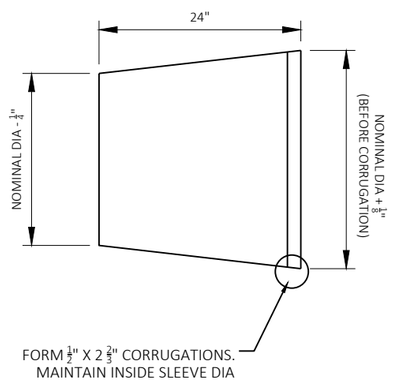
RURAL DRIVEWAYS WITH CURB & GUTTER



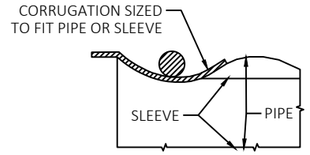
CONCRETE CURB PEDESTRIAN SECTION

NOTES:
1. PAYMENT FOR CONCRETE CURB PEDESTRIAN SHALL BE MADE USING THE BID ITEM CONCRETE CURB PEDESTRIAN
2. THE HEIGHT OF THE CURB SHALL VARY BETWEEN 0 INCHES AND 12 INCHES BASED ON THE GRADES SHOWN ON THE CURB RAMP DETAILS.
3. WHEN THE HEIGHT OF THE PEDESTRIAN CURB IS GREATER THAN 6 INCHES, THE CURB SHALL BE POURED MONOLITHICALLY WITH THE CONCRETE SIDEWALK AND SHALL BE TIED TO THE SIDEWALK USING A #8 TIE BAR SPACED 30" CENTER TO CENTER. THE TIE BARS ARE INCIDENTAL TO THE CONCRETE CURB PEDESTRIAN.
4. WHEN THE HEIGHT OF THE PEDESTRIAN CURB IS 6 INCHES OR LESS IT MAY BE POURED MONOLITHICALLY WITH THE CONCRETE SIDEWALK OR POURED SEPARATELY. WHEN POURED SEPARATELY EXPANSION FELT IS REQUIRED BETWEEN THE CONCRETE SIDEWALK AND CONCRETE CURB PEDESTRIAN. TIE BARS ARE NOT REQUIRED WHEN THE HEIGHT OF THE PEDESTRIAN CURB IS 6 INCHES OR LESS.

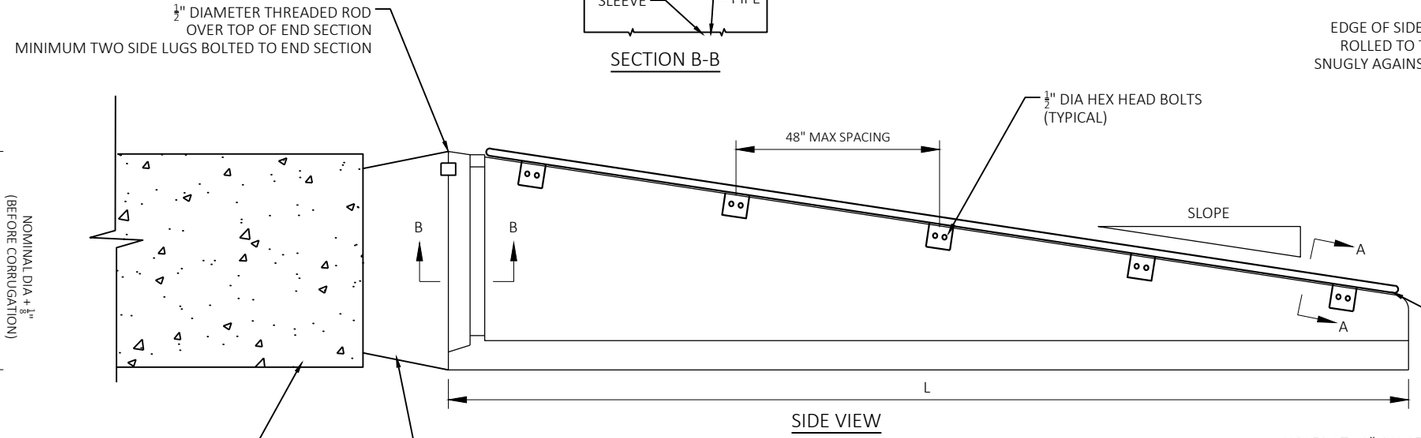
DIMENSIONS									
INCHES		MIN. THICK.		INCHES					SLOPE
SPAN	RISE	IN.	GAGE	A	H	W	TOTAL WIDTH	L	
60	38	0.109	12	16	12	66	98	112	4:1



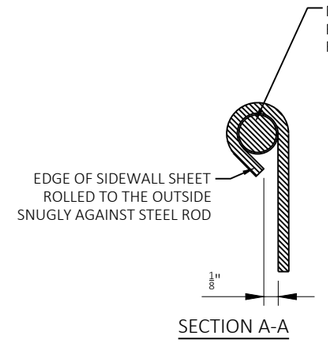
SMOOTH TAPERED SLEEVE DETAIL



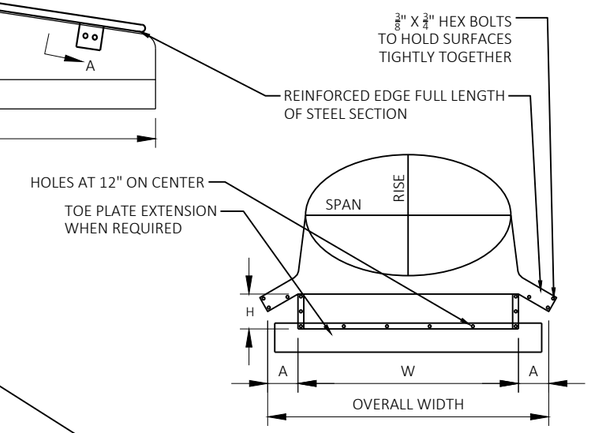
SECTION B-B



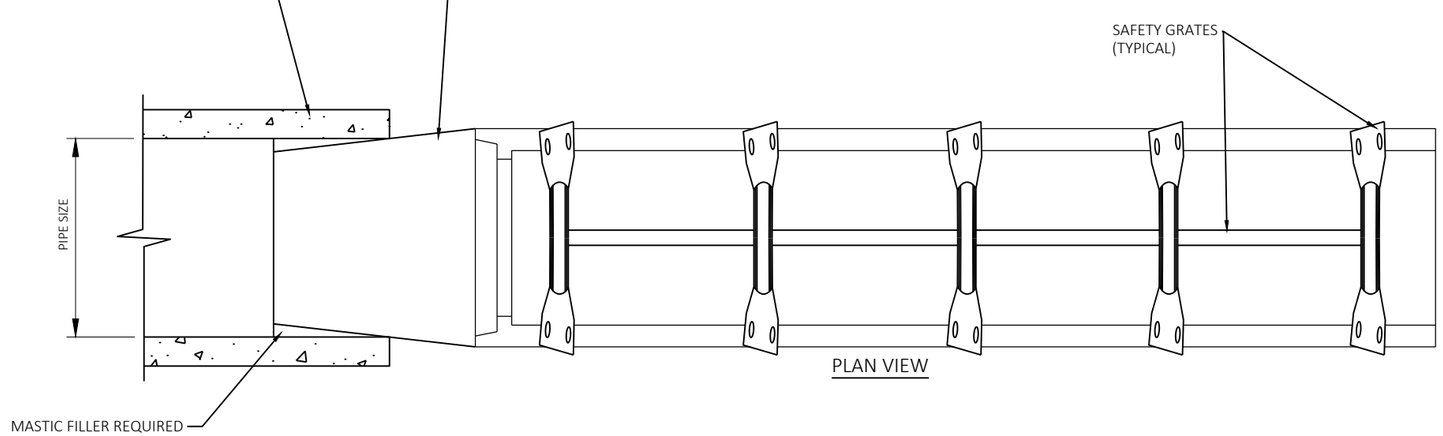
SIDE VIEW



SECTION A-A



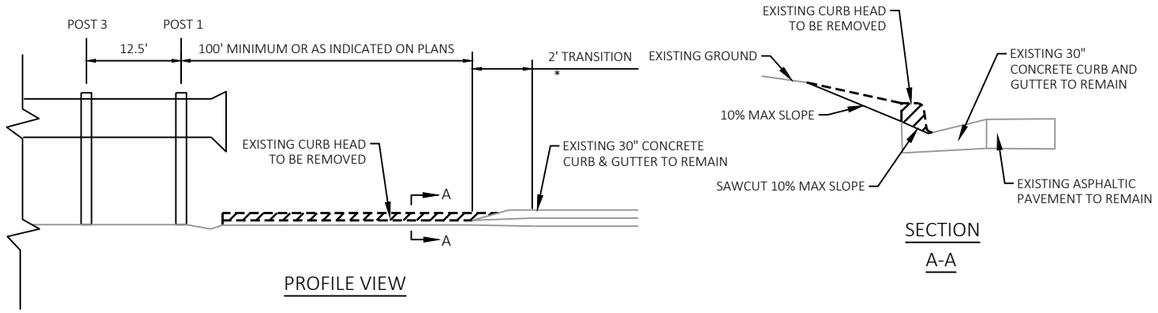
END VIEW



PLAN VIEW

APRON ENDWALLS FOR CULVERT PIPE SLOPED CROSS DRAINS STEEL 38x60-INCH 4 TO 1

1. SMOOTH TAPERED SLEEVE MADE OF 12 GAGE SMOOTH GALVANIZED STEEL IN ACCORDANCE WITH AASHTO M218.
2. STEEL SHALL MEET AASHTO SPECIFICATIONS.
3. SAFETY GRATES SHALL BE FABRICATED FROM 3-INCH DIAMETER GALVANIZED PIPE MEETING THE REQUIREMENTS OF ASTM A-53, GRADE B, SCHEDULE 40 OR APPROVED EQUAL. THE LONGITUDINAL BAR SHALL BE WELDED TO THE TRANSVERSE BARS WHERE THE BARS CROSS. THE NUMBER OF TRANSVERSE BARS REQUIRED WILL VARY DEPENDING ON THE LENGTH OF THE END SECTION.
4. TOE PLATE IS 8" HIGH.
5. TOE PLATE OVERLAP IS 2".
6. SEE SDD FOR STEEL APRON ENDWALLS FOR CULVERT PIPE ARCH SLOPED CROSS DRAINS FOR ADDITIONAL INFORMATION.

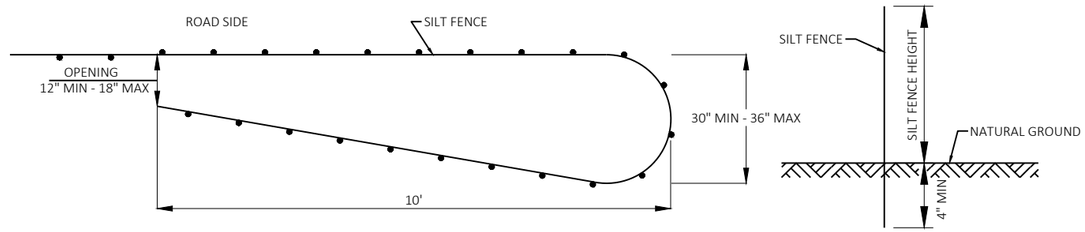


PROFILE VIEW

SECTION
A-A

PROFILE CURB CUT AT EAT

* NO TRANSITION NECESSARY IF LIMITS ARE MATCHING
AN EXISTING CURB CUT SECTION.
MAINTAIN EXISTING DRAINAGE PATTERNS.
SEE CONSTRUCTION DETAILS FOR MORE INFORMATION.
STA 570+81 - STA 571+69
STA 145+70 - STA 146+75

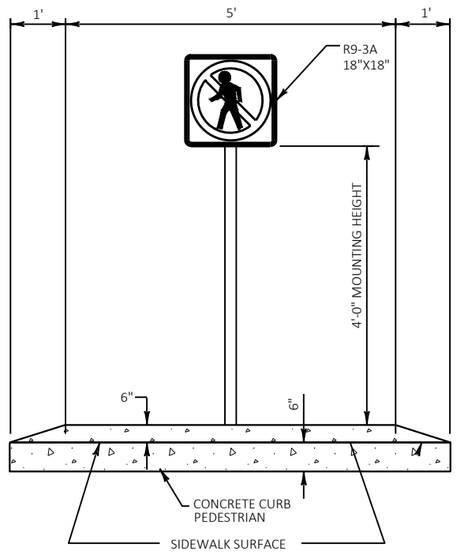


PLAN VIEW

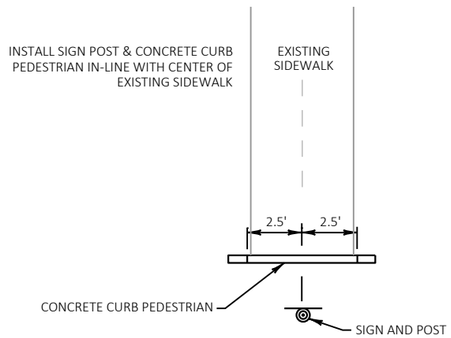
SIDE VIEW

SILT FENCE TURN-AROUND DETAIL

SILT FENCE POSTS FOR THE TURN-AROUND SHOULD BE ON THE OUTSIDE OF THE TURN-AROUND.



PROFILE VIEW



PLAN VIEW

PEDESTRIAN BARRIER DETAIL

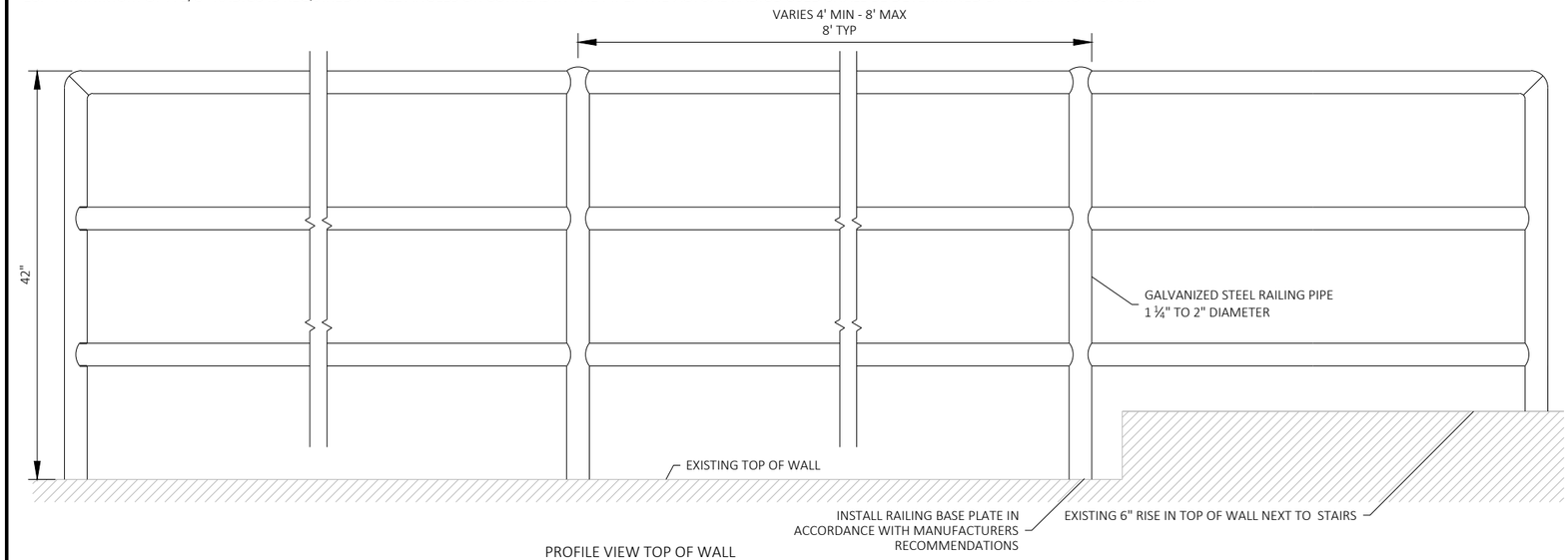
NOT TO SCALE

STH 28 AND CLARK ST INTERSECTION SOUTHEAST QUADRANT

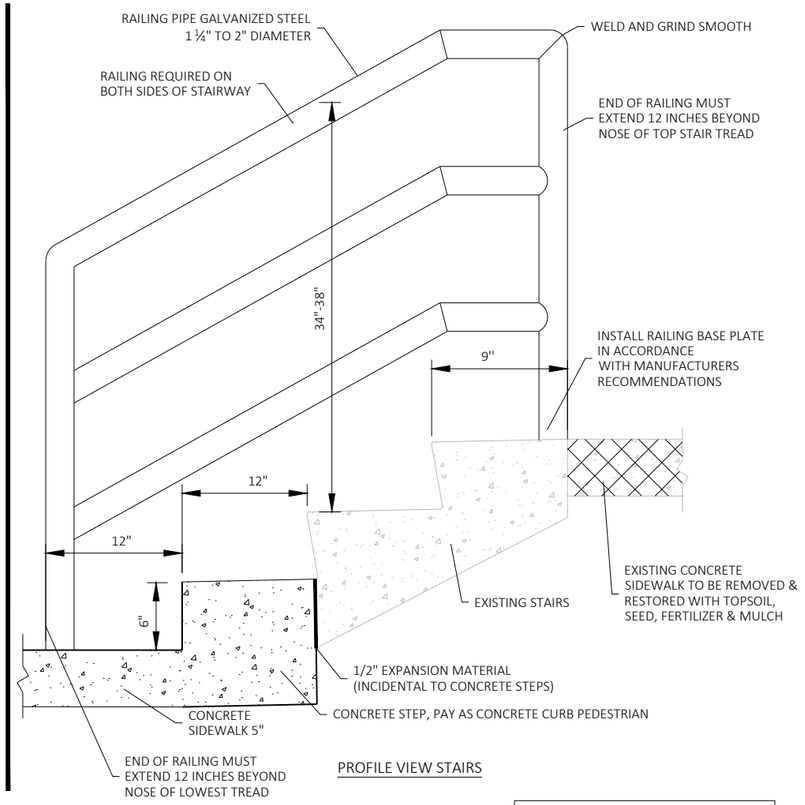
2

NOTES:

1. ALL STAIRWAY AND RAILING CONSTRUCTION SHALL MEET AMERICANS WITH DISABILITIES ACT REQUIREMENTS AND ALL LOCAL BUILDING CODES.
2. SEE CONSTRUCTION DETAILS FOR DIMENSIONS AND ELEVATIONS AT EACH STAIRWAY LOCATION.
3. PROVIDE SHOP DRAWINGS FOR ALL RAILING COMPONENTS TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO ORDERING OR FABRICATING RAILING COMPONENTS.
4. RAILINGS SHALL BE MOUNTED TO THE STAIR TREAD AND NOT THE CURB ADJACENT TO THE STAIRWAY.
5. A RAILING IS REQUIRED ON BOTH SIDES OF OF A STAIRWAY.
6. RAILING HEIGHT SHALL BE MEASURED FROM THE NOSE OF EACH STAIR TREAD. THE HEIGHT SHALL BE CONSISTENT AT EACH STAIR TREAD.
7. RAILINGS SHALL BE MOUNTED TO STAIRWAY USING ANCHOR BOLTS AND A BASE PLATE. VERTICAL MEMBER OF RAILING SHALL NOT BE EMBEDDED DIRECTLY INTO CONCRETE STEPS.
8. PLACE ANCHOR BOLTS FOR RAILING INTO CONCRETE IN ACCORDANCE WITH SECTION 513. DRILL ANCHOR BOLTS INTO EXISTING CONCRETE IN ACCORDANCE WITH MANUFACTURER REQUIREMENT AND THE STANDARD SPECIFICATIONS.
9. GRIND AND SMOOTH ALL CONNECTIONS OF SECTIONS OF PIPE.
10. A MINIMUM OF A 1/8" RADIUS IS REQUIRED AT ALL ANGLES OR CORNERS IN THE PIPE. THE ACTUAL RADIUS USED SHALL BE DETERMINED BY THE MANUFACTURER.



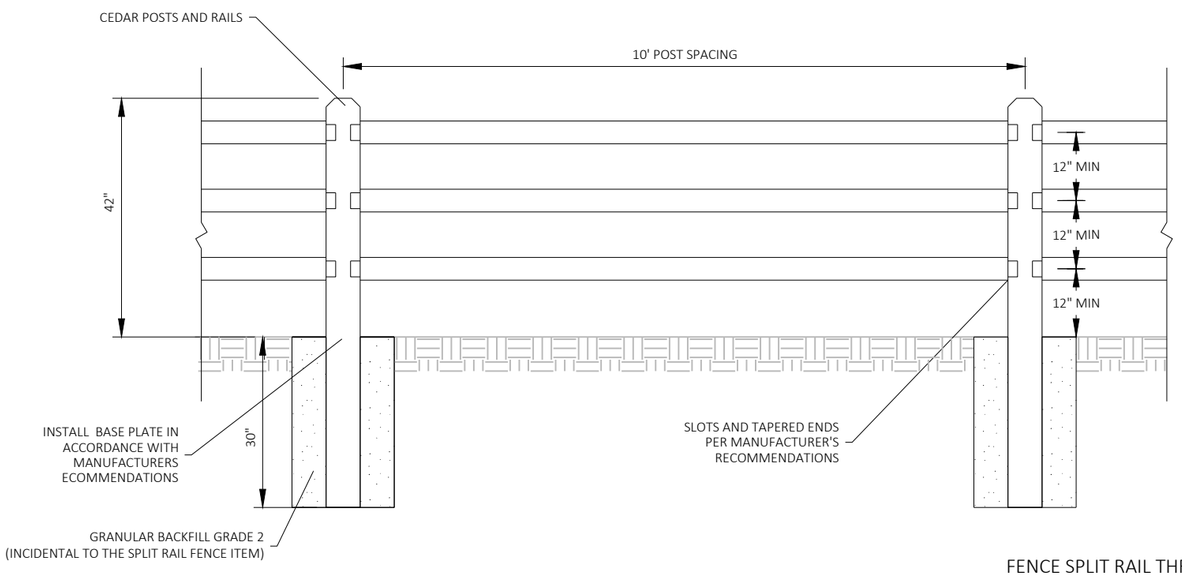
PROFILE VIEW TOP OF WALL

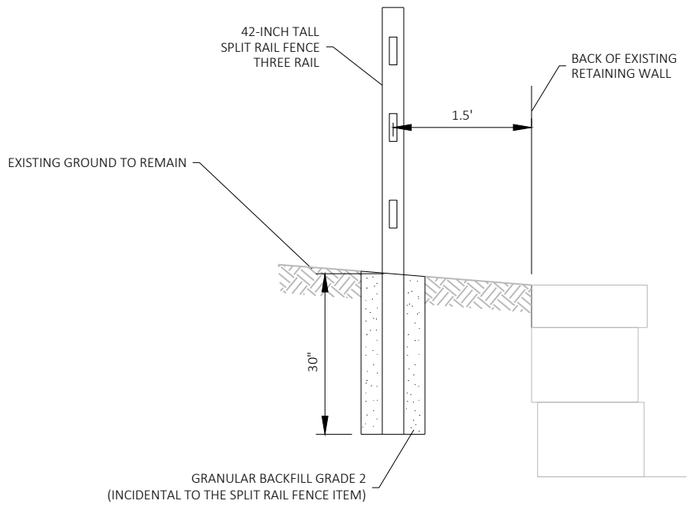


PROFILE VIEW STAIRS

RAILING DETAIL

SEE RAILING & FENCE SPLIT RAIL THREE RAIL LOCATION DETAIL ON NEXT PAGE.



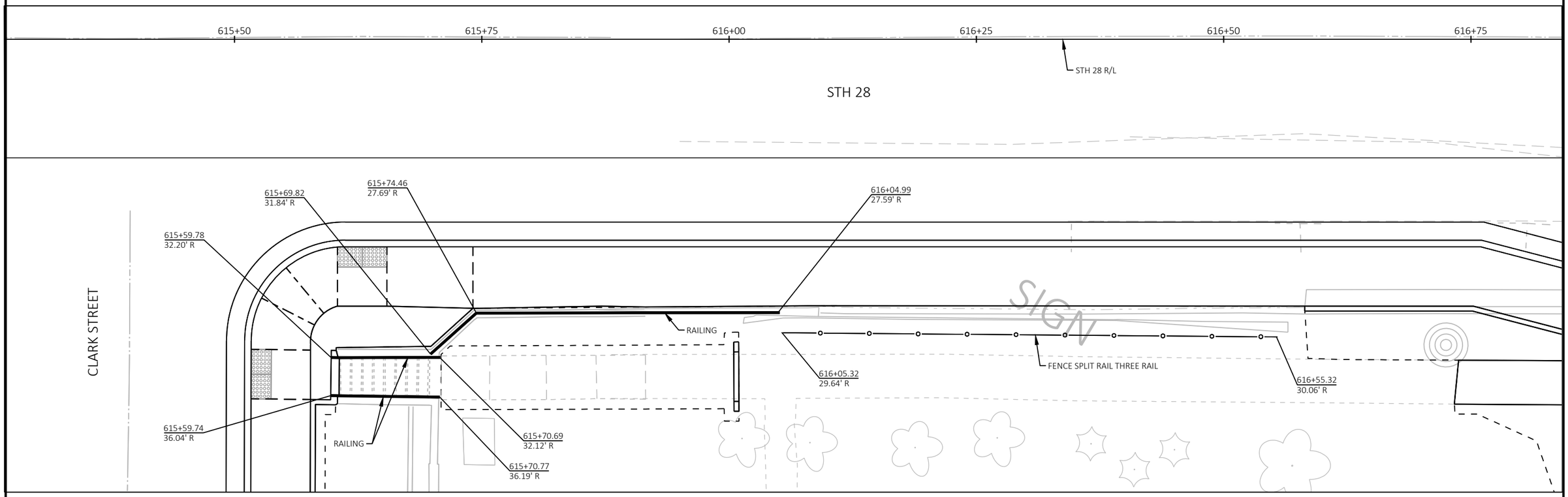


PROFILE VIEW

FENCE SPLIT RAIL THREE RAIL DETAIL

PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	CONSTRUCTION DETAILS	SHEET 25	E

2



RAILING & FENCE SPLIT RAIL THREE RAIL LOCATION DETAIL

PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	CONSTRUCTION DETAILS	SHEET 26	E

2

2

LAKE STREET

R/W

R/W

TYPE 2
CURB
RAMP

TYPE 3 MODIFIED CURB RAMP

TYPE 2 CURB RAMP

TYPE 2 CURB RAMP

TILE

1001
BM

STH 28

600+75 601+00 601+25 601+50 601+75 602+00 602+25 602+50 602+75 603+00

TYPE 7A CURB RAMP

TYPE 7A CURB RAMP

TYPE 7A
CURB RAMP

TYPE 7A
CURB RAMP

R/W

TLE

R/W

CURB RAMP OVERVIEW
STH 28 & LAKE STREET

PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	PLAN DETAILS - CURB RAMPS	SHEET 27	E

2

2

LEGEND

- AS — ASPHALTIC SURFACE PATCHING (MATCH ADJACENT PAVEMENT DEPTH)
- CCP — CONCRETE CURB PEDESTRIAN
- CG18D — CONCRETE CURB & GUTTER 18-INCH TYPE D
- CG24D — CONCRETE CURB & GUTTER 24-INCH TYPE D
- CG24J — CONCRETE CURB & GUTTER 24-INCH TYPE J
- CG30D — CONCRETE CURB & GUTTER 30-INCH TYPE D
- CG30J — CONCRETE CURB & GUTTER 4-INCH SLOPED 30-INCH TYPE J
- SA — SAWING ASPHALT
- SC — SAWING CONCRETE
- SEED — TOPSOIL, SEEDING MIXTURE NO. 40, FERTILIZER TYPE B, EROSION MAT URBAN CLASS I TYPE B
- SW5 — CONCRETE SIDEWALK 5-INCH
- STONE — GRAVEL LANDSCAPING STONES
- LL — LEVEL LANDING
- MEF — MAXIMUM EXTENT FEASIBLE TECHNICAL INFEASIBILITY PRESENT
- SLOPE INTERCEPTS
- SIDEWALK GRADE BREAK LOCATION (FOR INFORMATION ONLY)
- PAVED FLARE (10% MAX)
- GRADED FLARE (6:1 MAX)
- DETECTABLE WARNING FIELD YELLOW

REMOVE EXISTING RAILING BASE HARDWARE WHEN EXISTING SIDEWALK IS REMOVED. REINSTALL EXISTING RAILING BASE HARDWARE INTO PROPOSED CONCRETE SIDEWALK. THIS WORK IS INCIDENTAL TO THE CONCRETE SIDEWALK ITEM.

LOWER FINISHED SIDEWALK GRADE A MAXIMUM OF 2" AT BOTTOM OF EXISTING STEP

SLOPE INTERCEPT

TYPE 2 CURB RAMP

TYPE 3 MODIFIED CURB RAMP

LAKE ST

STH 28

601+36.42 -33.23' LT 894.48
601+51.14 -33.25' LT 894.27
601+51.93 -31.83' LT 894.12
601+36.53 -31.90' LT 894.42
601+50.24 -31.36' LT 893.92
601+55.24 -31.34' LT 893.84
601+61.85 -27.22' LT Y=142,647.294 X=140,271.470 7.0' RADIUS TO FLANGE
601+57.48 -38.31' LT 893.72
601+66.55 -37.94' LT 893.60
601+67.21 -37.91' LT 893.52
601+69.05 -37.88' LT 893.48
601+66.44 -32.31' LT 893.32
601+61.37 -32.32' LT 893.56
601+67.11 -32.29' LT 893.32
601+68.94 -32.26' LT 893.28
601+66.35 -27.31' LT 893.26
601+61.36 -27.32' LT 893.49
601+67.02 -27.29' LT 893.26
601+68.85 -27.26' LT 893.22
601+36.60 -26.90' LT 894.29
601+50.23 -26.36' LT 893.84
601+55.23 -26.34' LT 893.77
601+64.63 -23.69' LT 893.51
PC 601+68.85 -27.10' LT 893.22
601+36.67 -22.75' LT 894.06
601+44.51 -22.74' LT 893.93
601+50.22 -22.74' LT 893.54
601+55.22 -22.73' LT 893.47
601+58.51 -22.73' LT 893.72
601+36.66 -22.08' LT 893.72
601+66.17 -21.72' LT 893.14
601+58.51 -22.06' LT 893.38
601+65.04 -23.16' LT 893.18
601+36.66 -20.25' LT 893.80
601+50.22 -22.07' LT 893.54
601+50.22 -20.23' LT 893.58
601+55.22 -22.06' LT 893.47
601+55.23 -20.23' LT 893.50
PT 601+61.84 -20.22' LT 893.29

R = 7.00'

601+25 601+50 601+75

NOTES

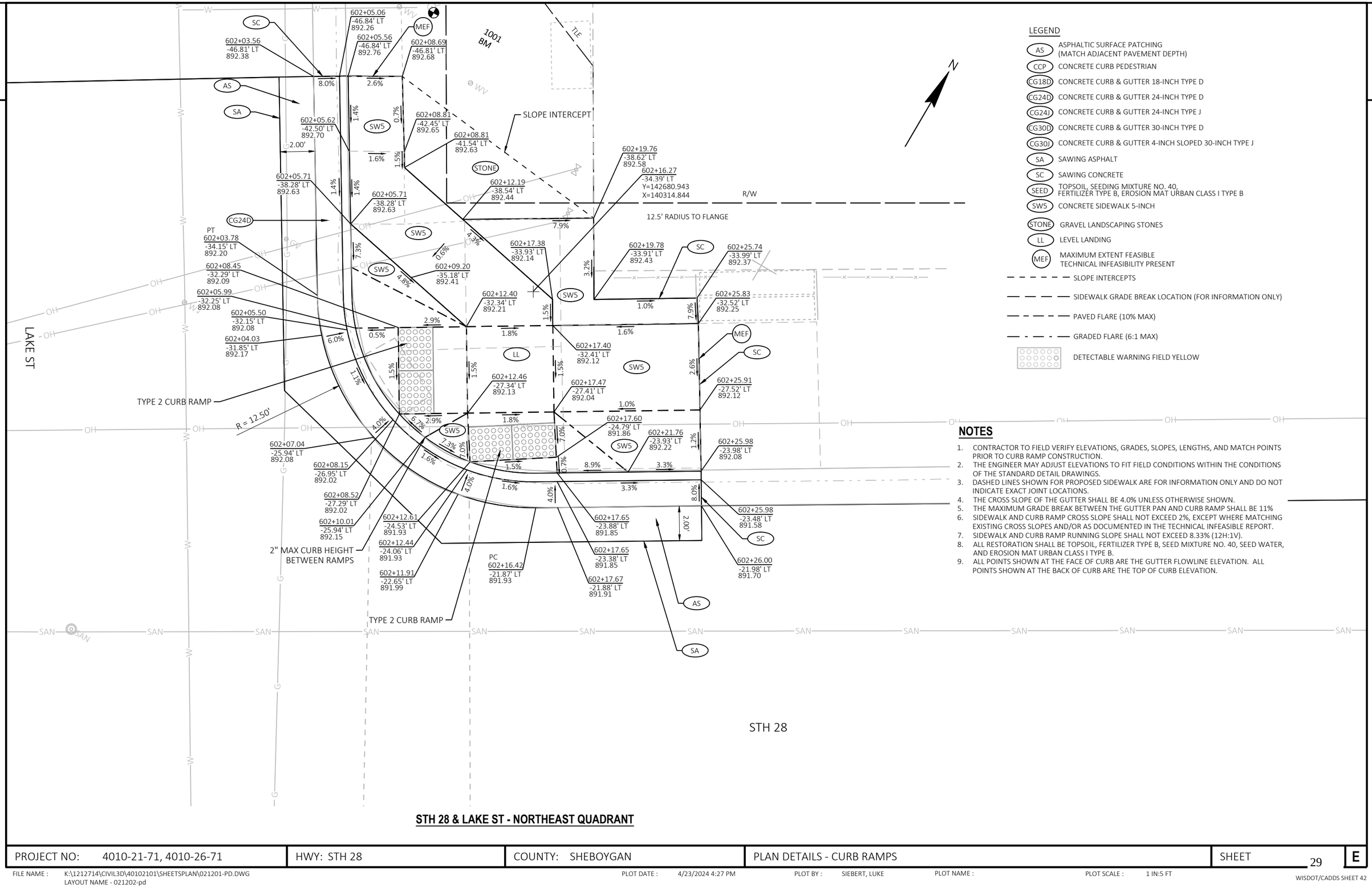
1. CONTRACTOR TO FIELD VERIFY ELEVATIONS, GRADES, SLOPES, LENGTHS, AND MATCH POINTS PRIOR TO CURB RAMP CONSTRUCTION.
2. THE ENGINEER MAY ADJUST ELEVATIONS TO FIT FIELD CONDITIONS WITHIN THE CONDITIONS OF THE STANDARD DETAIL DRAWINGS.
3. DASHED LINES SHOWN FOR PROPOSED SIDEWALK ARE FOR INFORMATION ONLY AND DO NOT INDICATE EXACT JOINT LOCATIONS.
4. THE CROSS SLOPE OF THE GUTTER SHALL BE 4.0% UNLESS OTHERWISE SHOWN.
5. THE MAXIMUM GRADE BREAK BETWEEN THE GUTTER PAN AND CURB RAMP SHALL BE 11%
6. SIDEWALK AND CURB RAMP CROSS SLOPE SHALL NOT EXCEED 2%, EXCEPT WHERE MATCHING EXISTING CROSS SLOPES AND/OR AS DOCUMENTED IN THE TECHNICAL INFEASIBLE REPORT.
7. SIDEWALK AND CURB RAMP RUNNING SLOPE SHALL NOT EXCEED 8.33% (12H:1V).
8. ALL RESTORATION SHALL BE TOPSOIL, FERTILIZER TYPE B, SEED MIXTURE NO. 40, SEED WATER, AND EROSION MAT URBAN CLASS I TYPE B.
9. ALL POINTS SHOWN AT THE FACE OF CURB ARE THE GUTTER FLOWLINE ELEVATION. ALL POINTS SHOWN AT THE BACK OF CURB ARE THE TOP OF CURB ELEVATION.

STH 28 & LAKE ST - NORTHWEST QUADRANT

PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	PLAN DETAILS - CURB RAMPS	SHEET 28	E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\021201-PD.DWG
LAYOUT NAME - 021201-pd
PLOT DATE : 4/23/2024 4:26 PM PLOT BY : SIEBERT, LUKE PLOT NAME : PLOT SCALE : 1 IN:5 FT

2

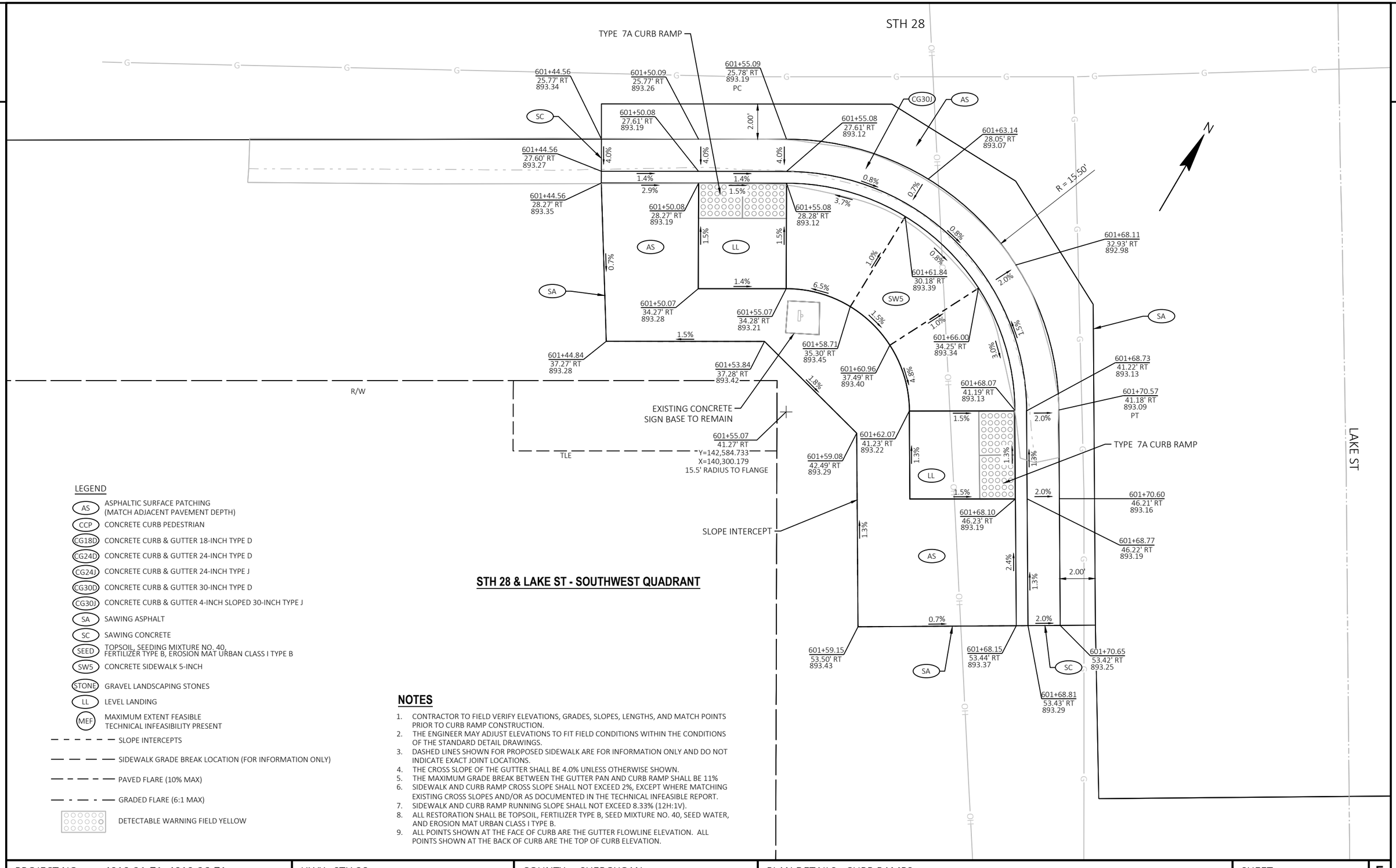


NOTES

1. CONTRACTOR TO FIELD VERIFY ELEVATIONS, GRADES, SLOPES, LENGTHS, AND MATCH POINTS PRIOR TO CURB RAMP CONSTRUCTION.
2. THE ENGINEER MAY ADJUST ELEVATIONS TO FIT FIELD CONDITIONS WITHIN THE CONDITIONS OF THE STANDARD DETAIL DRAWINGS.
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8. ALL RESTORATION SHALL BE TOPSOIL, FERTILIZER TYPE B, SEED MIXTURE NO. 40, SEED WATER, AND EROSION MAT URBAN CLASS I TYPE B.
9. ALL POINTS SHOWN AT THE FACE OF CURB ARE THE GUTTER FLOWLINE ELEVATION. ALL POINTS SHOWN AT THE BACK OF CURB ARE THE TOP OF CURB ELEVATION.

STH 28 & LAKE ST - NORTHEAST QUADRANT

PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	PLAN DETAILS - CURB RAMPS	SHEET 29	E



LEGEND

- AS — ASPHALTIC SURFACE PATCHING (MATCH ADJACENT PAVEMENT DEPTH)
- CCP — CONCRETE CURB PEDESTRIAN
- CG18D — CONCRETE CURB & GUTTER 18-INCH TYPE D
- CG24D — CONCRETE CURB & GUTTER 24-INCH TYPE D
- CG24J — CONCRETE CURB & GUTTER 24-INCH TYPE J
- CG30D — CONCRETE CURB & GUTTER 30-INCH TYPE D
- CG30J — CONCRETE CURB & GUTTER 4-INCH SLOPED 30-INCH TYPE J
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- SIDEWALK GRADE BREAK LOCATION (FOR INFORMATION ONLY)
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- GRADED FLARE (6:1 MAX)
- DETECTABLE WARNING FIELD YELLOW

STH 28 & LAKE ST - SOUTHWEST QUADRANT

NOTES

1. CONTRACTOR TO FIELD VERIFY ELEVATIONS, GRADES, SLOPES, LENGTHS, AND MATCH POINTS PRIOR TO CURB RAMP CONSTRUCTION.
2. THE ENGINEER MAY ADJUST ELEVATIONS TO FIT FIELD CONDITIONS WITHIN THE CONDITIONS OF THE STANDARD DETAIL DRAWINGS.
3. DASHED LINES SHOWN FOR PROPOSED SIDEWALK ARE FOR INFORMATION ONLY AND DO NOT INDICATE EXACT JOINT LOCATIONS.
4. THE CROSS SLOPE OF THE GUTTER SHALL BE 4.0% UNLESS OTHERWISE SHOWN.
5. THE MAXIMUM GRADE BREAK BETWEEN THE GUTTER PAN AND CURB RAMP SHALL BE 11%
6. SIDEWALK AND CURB RAMP CROSS SLOPE SHALL NOT EXCEED 2%, EXCEPT WHERE MATCHING EXISTING CROSS SLOPES AND/OR AS DOCUMENTED IN THE TECHNICAL INFEASIBLE REPORT.
7. SIDEWALK AND CURB RAMP RUNNING SLOPE SHALL NOT EXCEED 8.33% (12H:1V).
8. ALL RESTORATION SHALL BE TOPSOIL, FERTILIZER TYPE B, SEED MIXTURE NO. 40, SEED WATER, AND EROSION MAT URBAN CLASS I TYPE B.
9. ALL POINTS SHOWN AT THE FACE OF CURB ARE THE GUTTER FLOWLINE ELEVATION. ALL POINTS SHOWN AT THE BACK OF CURB ARE THE TOP OF CURB ELEVATION.

PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	PLAN DETAILS - CURB RAMPS	SHEET 30	E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\021201-PD.DWG
LAYOUT NAME - 021203-pd
PLOT DATE : 4/23/2024 4:27 PM
PLOT BY : SIEBERT, LUKE
PLOT NAME :
PLOT SCALE : 1 IN:5 FT
WISDOT/CADDS SHEET 42

STH 28

LAKE ST

TYPE 7A CURB RAMP

602+11.56
28.80' RT
892.06
PT

602+15.46
28.74' RT
891.94

602+20.46
28.67' RT
891.86

602+26.42
28.59' RT
891.64

602+31.24
29.52' RT
891.47

602+33.80
29.48' RT
891.37

602+33.82
30.98' RT
891.31

602+08.96
31.45' RT
892.28

602+15.48
30.24' RT
891.88

602+20.48
30.17' RT
891.80

2.00'

2" MAX CURB HEIGHT BETWEEN RAMPS

R = 8.00'

4.0%

1.5%

4.0%

3.6%

4.0%

5.3%

4.7%

602+15.49
30.74' RT
891.88

602+20.49
30.68' RT
891.80

602+26.45
30.63' RT
892.09

3.2%

602+33.82
31.48' RT
891.81

602+31.06
31.52' RT
891.90

602+03.68
36.88' RT
892.45
PC

3.8%

2.5%

SW5

MEF

1.0%

602+15.57
36.74' RT
891.97

1.5%

LL

1.5%

1.5%

1.7%

602+20.57
36.67' RT
891.89

602+26.54
36.59' RT
892.17

SW5

SC

602+13.47
37.64' RT
892.20

10.4%

1.5%

4.7%

3.8%

10.4%

602+15.57
37.24' RT
892.47

602+20.57
37.17' RT
892.39

602+26.54
37.09' RT
892.18

602+33.90
36.98' RT
891.91

602+05.22
41.20' RT
892.52

602+03.72
41.21' RT
892.58

602+05.77
41.19' RT
892.52

R/W

602+13.11
39.75' RT
892.63

½" FELT EXPANSION JOINT
(INCIDENTAL TO CONCRETE SIDEWALK 5-INCH ITEM)

602+11.68
36.80' RT
Y=142617.160
X=140346.797
8.0' RADIUS TO FLANGE

4.0%

1.0%

1.5%

602+12.61
41.19' RT
892.59

LL

1.5%

602+13.11
41.19' RT
892.70

TYPE 7A CURB RAMP

4.0%

1.0%

602+03.77
46.21' RT
892.66

602+05.77
46.19' RT
892.60

602+13.12
46.19' RT
892.92

602+05.27
46.20' RT
892.60

602+12.62
46.19' RT
892.67

SW5

6.9%

7.2%

SLOPE INTERCEPT

½" FELT EXPANSION JOINT
(INCIDENTAL TO CONCRETE SIDEWALK 5-INCH ITEM)

CG24D

602+05.90
59.01' RT
893.48

AS

3.0%

CCP

602+07.63
58.95' RT
893.50

602+12.63
58.77' RT
893.57

SA

2.00'

TRANSITION FROM
CG24J TO CG24D

4.0%

1.5%

1.3%

602+13.13
58.77' RT
893.57

SEED

1.1%

1.5%

4.0%

2.1%

602+03.94
62.99' RT
893.16

602+13.13
62.89' RT
893.63

MEF

SC

602+05.44
62.97' RT
893.10

602+05.94
62.97' RT
893.60

602+09.34
63.00' RT
893.55

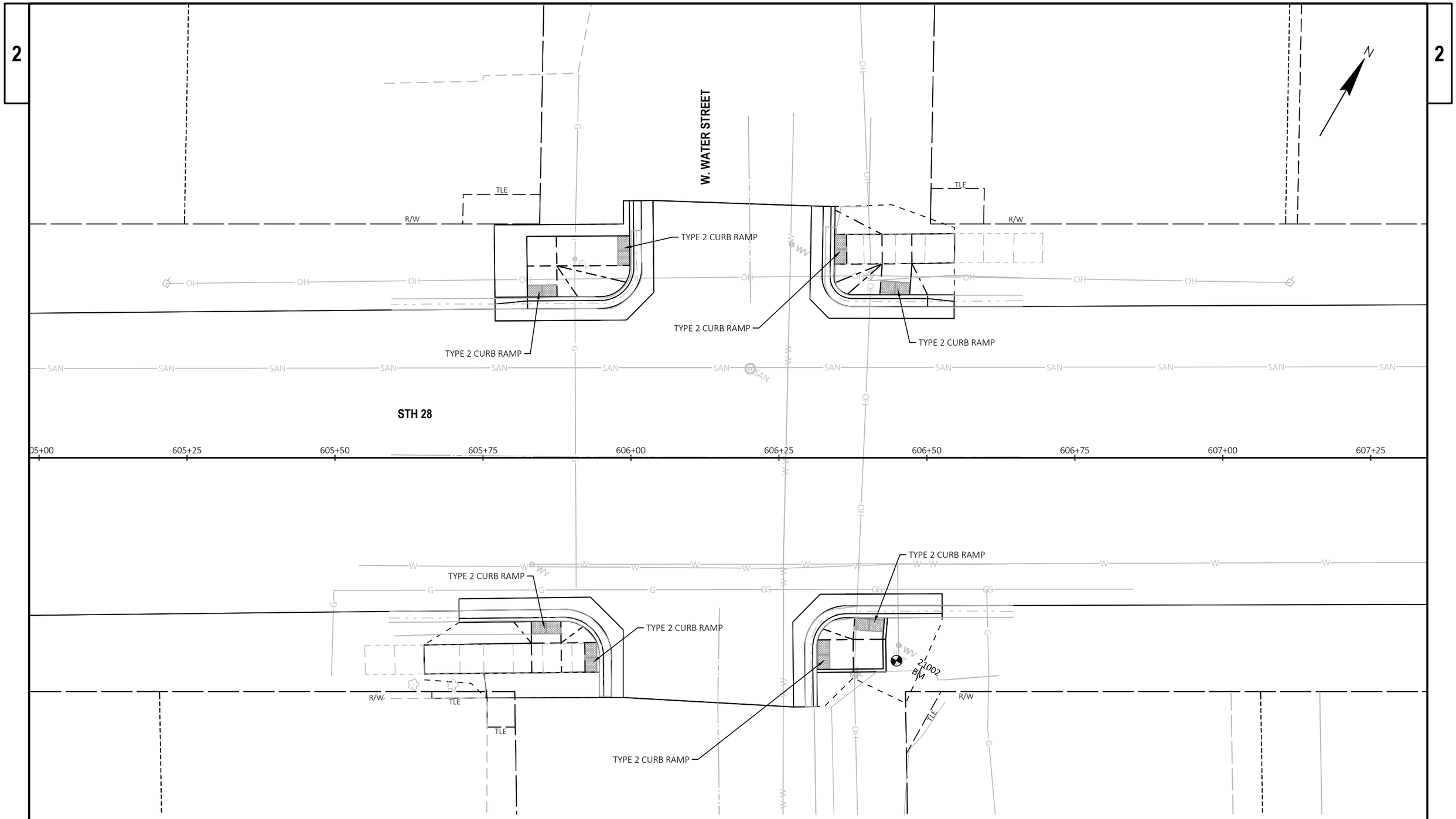
STH 28 & LAKE ST - SOUTHEAST QUADRANT

LEGEND

- AS — ASPHALTIC SURFACE PATCHING (MATCH ADJACENT PAVEMENT DEPTH)
- CCP — CONCRETE CURB PEDESTRIAN
- CG18D — CONCRETE CURB & GUTTER 18-INCH TYPE D
- CG24D — CONCRETE CURB & GUTTER 24-INCH TYPE D
- CG24J — CONCRETE CURB & GUTTER 24-INCH TYPE J
- CG30D — CONCRETE CURB & GUTTER 30-INCH TYPE D
- CG30J — CONCRETE CURB & GUTTER 4-INCH SLOPED 30-INCH TYPE J
- SA — SAWING ASPHALT
- SC — SAWING CONCRETE
- SEED — TOPSOIL, SEEDING MIXTURE NO. 40, FERTILIZER TYPE B, EROSION MAT URBAN CLASS I TYPE B
- SW5 — CONCRETE SIDEWALK 5-INCH
- STONE — GRAVEL LANDSCAPING STONES
- LL — LEVEL LANDING
- MEF — MAXIMUM EXTENT FEASIBLE TECHNICAL INFEASIBILITY PRESENT
- SLOPE INTERCEPTS
- SIDEWALK GRADE BREAK LOCATION (FOR INFORMATION ONLY)
- PAVED FLARE (10% MAX)
- GRADED FLARE (6:1 MAX)
- DETECTABLE WARNING FIELD YELLOW

NOTES

1. CONTRACTOR TO FIELD VERIFY ELEVATIONS, GRADES, SLOPES, LENGTHS, AND MATCH POINTS PRIOR TO CURB RAMP CONSTRUCTION.
2. THE ENGINEER MAY ADJUST ELEVATIONS TO FIT FIELD CONDITIONS WITHIN THE CONDITIONS OF THE STANDARD DETAIL DRAWINGS.
3. DASHED LINES SHOWN FOR PROPOSED SIDEWALK ARE FOR INFORMATION ONLY AND DO NOT INDICATE EXACT JOINT LOCATIONS.
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7. SIDEWALK AND CURB RAMP RUNNING SLOPE SHALL NOT EXCEED 8.33% (12H:1V).
8. ALL RESTORATION SHALL BE TOPSOIL, FERTILIZER TYPE B, SEED MIXTURE NO. 40, SEED WATER, AND EROSION MAT URBAN CLASS I TYPE B.
9. ALL POINTS SHOWN AT THE FACE OF CURB ARE THE GUTTER FLOWLINE ELEVATION. ALL POINTS SHOWN AT THE BACK OF CURB ARE THE TOP OF CURB ELEVATION.



CURB RAMP OVERVIEW
STH 28 & W. WATER STREET

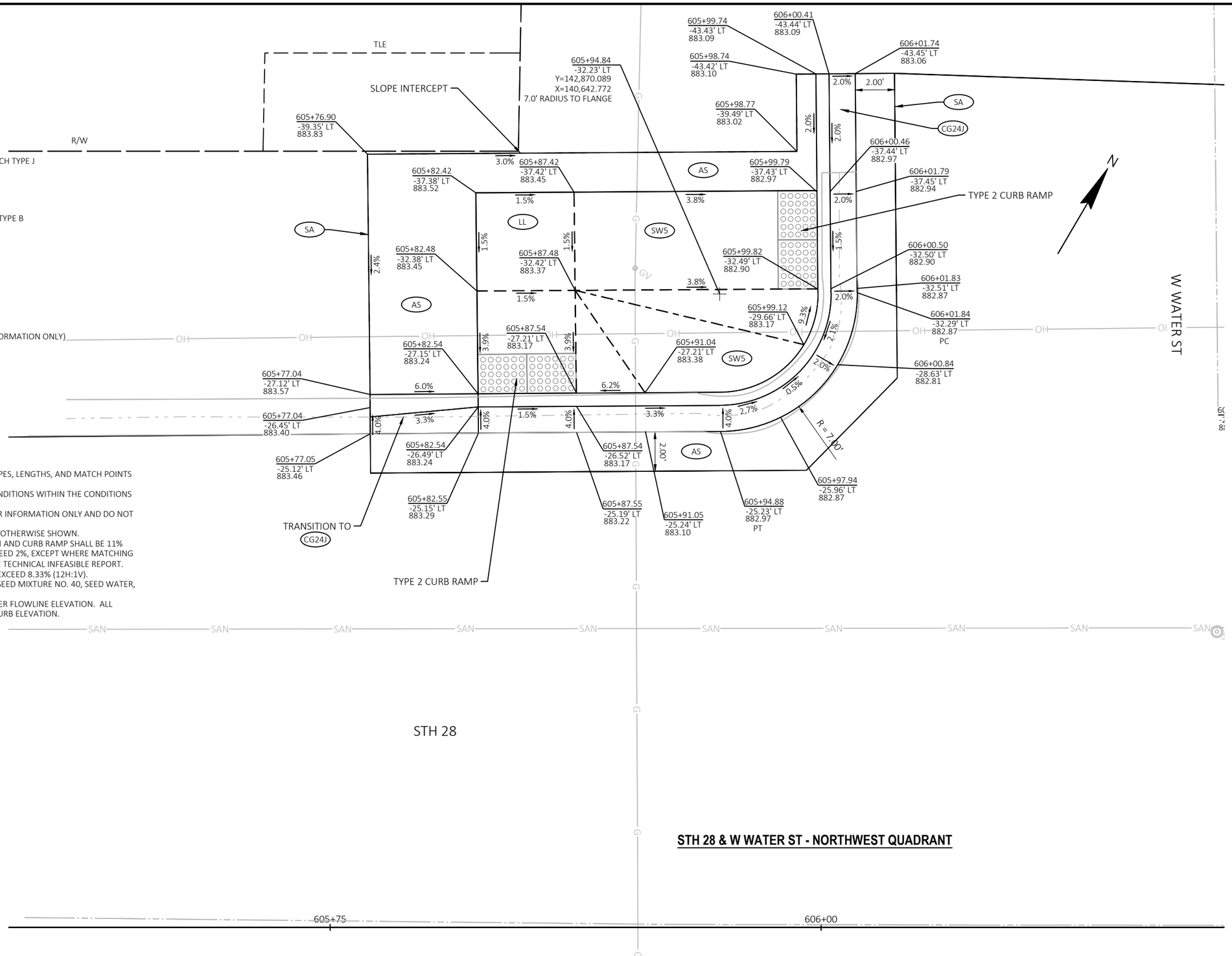
PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	PLAN DETAILS - CURB RAMPS	SHEET 32	E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\021201-PD.DWG
LAYOUT NAME - 021205a-pd

PLOT DATE : 4/23/2024 4:27 PM PLOT BY : SIEBERT, LUKE PLOT NAME : PLOT SCALE : 1 IN:15 FT

LEGEND

- (AS) ASPHALTIC SURFACE PATCHING (MATCH ADJACENT PAVEMENT DEPTH)
- (CCP) CONCRETE CURB PEDESTRIAN
- (CG18D) CONCRETE CURB & GUTTER 18-INCH TYPE D
- (CG24D) CONCRETE CURB & GUTTER 24-INCH TYPE D
- (CG24J) CONCRETE CURB & GUTTER 24-INCH TYPE J
- (CG30D) CONCRETE CURB & GUTTER 30-INCH TYPE D
- (CG30J) CONCRETE CURB & GUTTER 4-INCH SLOPED 30-INCH TYPE J
- (SA) SAWING ASPHALT
- (SC) SAWING CONCRETE
- (SEED) TOPSOIL, SEEDING MIXTURE NO. 40, FERTILIZER TYPE B, EROSION MAT URBAN CLASS I TYPE B
- (SW5) CONCRETE SIDEWALK 5-INCH
- (STONE) GRAVEL LANDSCAPING STONES
- (LL) LEVEL LANDING
- (MEF) MAXIMUM EXTENT FEASIBLE TECHNICAL INFEASIBILITY PRESENT
- SLOPE INTERCEPTS
- SIDEWALK GRADE BREAK LOCATION (FOR INFORMATION ONLY)
- PAVED FLARE (10% MAX)
- GRADED FLARE (6:1 MAX)
- DETECTABLE WARNING FIELD YELLOW

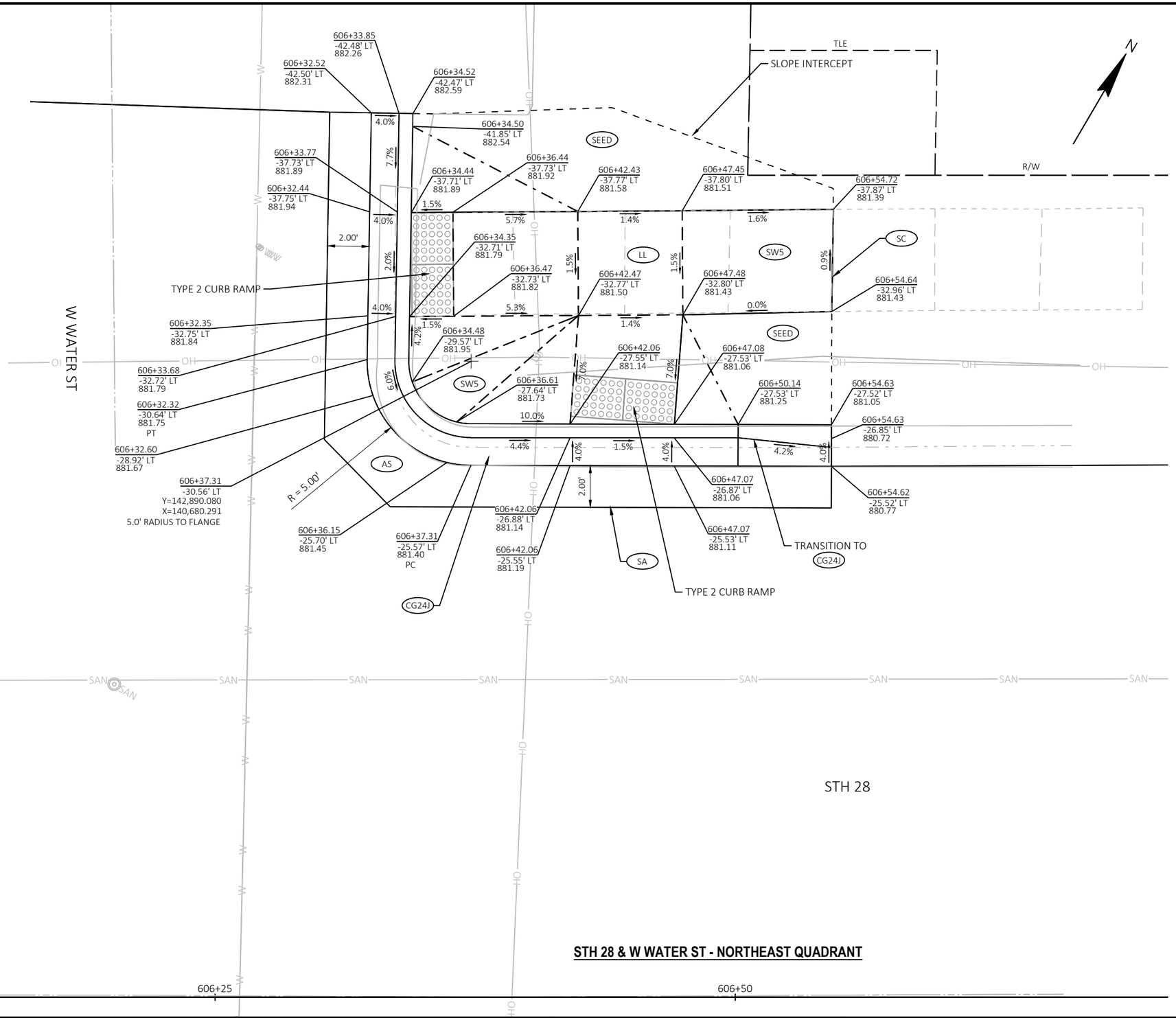


NOTES

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STH 28 & W WATER ST - NORTHWEST QUADRANT

PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	PLAN DETAILS - CURB RAMPS	SHEET 33	E



LEGEND

- (AS) ASPHALTIC SURFACE PATCHING (MATCH ADJACENT PAVEMENT DEPTH)
- (CCP) CONCRETE CURB PEDESTRIAN
- (CG18D) CONCRETE CURB & GUTTER 18-INCH TYPE D
- (CG24D) CONCRETE CURB & GUTTER 24-INCH TYPE D
- (CG24J) CONCRETE CURB & GUTTER 24-INCH TYPE J
- (CG30D) CONCRETE CURB & GUTTER 30-INCH TYPE D
- (CG30J) CONCRETE CURB & GUTTER 4-INCH SLOPED 30-INCH TYPE J
- (SA) SAWING ASPHALT
- (SC) SAWING CONCRETE
- (SEED) TOPSOIL, SEEDING MIXTURE NO. 40, FERTILIZER TYPE B, EROSION MAT URBAN CLASS I TYPE B
- (SW5) CONCRETE SIDEWALK 5-INCH
- (STONE) GRAVEL LANDSCAPING STONES
- (LL) LEVEL LANDING
- (MEF) MAXIMUM EXTENT FEASIBLE TECHNICAL INFEASIBILITY PRESENT
- SLOPE INTERCEPTS
- SIDEWALK GRADE BREAK LOCATION (FOR INFORMATION ONLY)
- PAVED FLARE (10% MAX)
- GRADED FLARE (6:1 MAX)
- DETECTABLE WARNING FIELD YELLOW

NOTES

1. CONTRACTOR TO FIELD VERIFY ELEVATIONS, GRADES, SLOPES, LENGTHS, AND MATCH POINTS PRIOR TO CURB RAMP CONSTRUCTION.
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STH 28 & W WATER ST - NORTHEAST QUADRANT

606+25 606+50

2

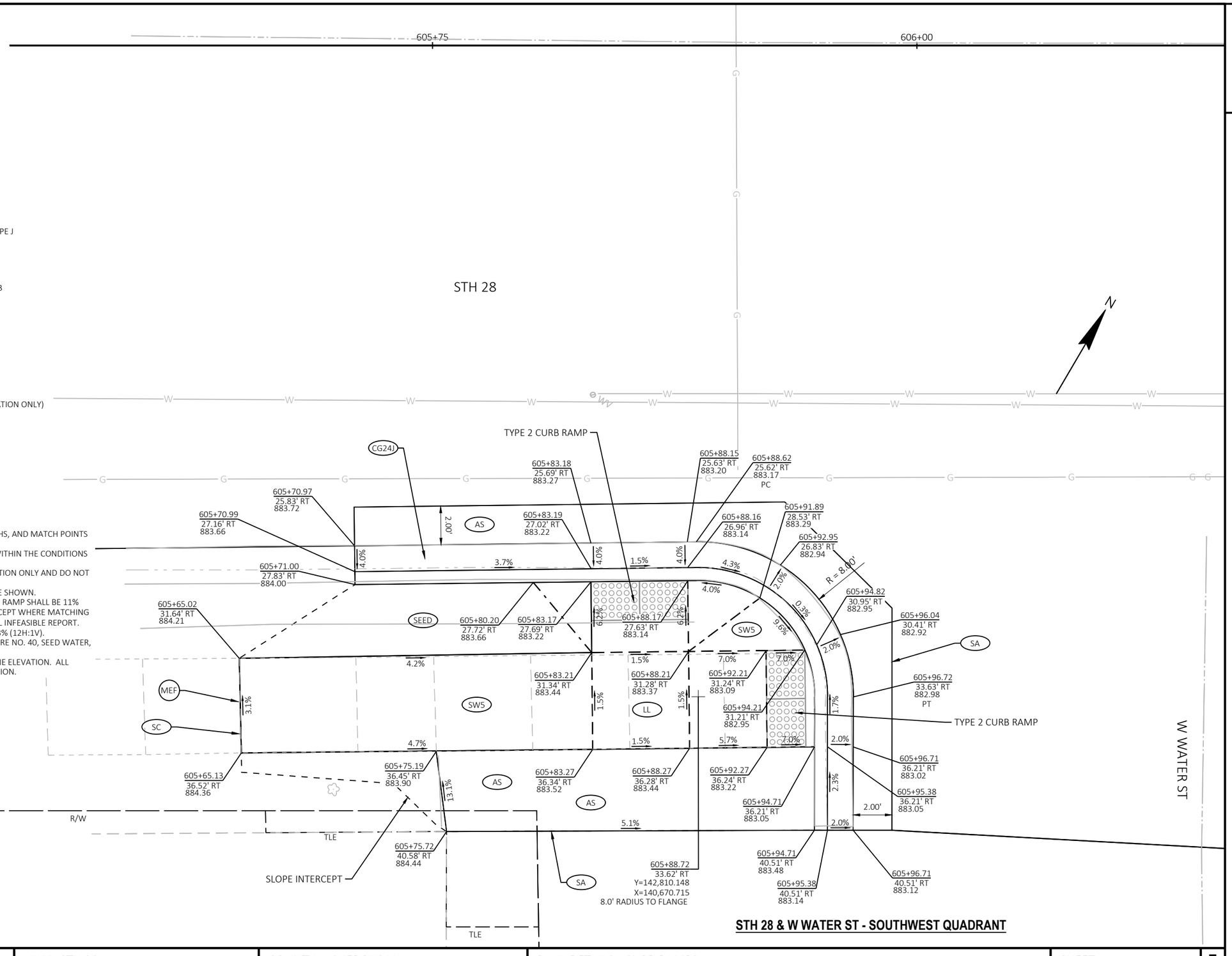
2

LEGEND

- AS — ASPHALTIC SURFACE PATCHING (MATCH ADJACENT PAVEMENT DEPTH)
- CCP — CONCRETE CURB PEDESTRIAN
- CG18D — CONCRETE CURB & GUTTER 18-INCH TYPE D
- CG24D — CONCRETE CURB & GUTTER 24-INCH TYPE D
- CG24J — CONCRETE CURB & GUTTER 24-INCH TYPE J
- CG30D — CONCRETE CURB & GUTTER 30-INCH TYPE D
- CG30J — CONCRETE CURB & GUTTER 4-INCH SLOPED 30-INCH TYPE J
- SA — SAWING ASPHALT
- SC — SAWING CONCRETE
- SEED — TOPSOIL, SEEDING MIXTURE NO. 40, FERTILIZER TYPE B, EROSION MAT URBAN CLASS I TYPE B
- SW5 — CONCRETE SIDEWALK 5-INCH
- STONE — GRAVEL LANDSCAPING STONES
- LL — LEVEL LANDING
- MEF — MAXIMUM EXTENT FEASIBLE TECHNICAL INFEASIBILITY PRESENT
- SLOPE INTERCEPTS
- SIDEWALK GRADE BREAK LOCATION (FOR INFORMATION ONLY)
- PAVED FLARE (10% MAX)
- GRADED FLARE (6:1 MAX)
- DETECTABLE WARNING FIELD YELLOW

NOTES

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STH 28 & W WATER ST - SOUTHWEST QUADRANT

PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	PLAN DETAILS - CURB RAMPS	SHEET 35	E

606+25 606+50 606+75

STH 28

W WATER ST

606+32.47
28.93' RT
881.89

606+30.97
27.66' RT
881.77

606+29.61
30.28' RT
881.95

606+30.90
30.62' RT
881.90

606+29.39
32.10' RT
881.98
PC

606+29.42
35.80' RT
882.04

606+30.76
35.79' RT
881.98

606+29.48
42.07' RT
882.17

606+30.81
42.06' RT
882.25

606+31.48
42.05' RT
882.58

606+31.43
36.28' RT
882.34

606+31.42
35.78' RT
881.99

606+31.55
30.78' RT
881.90

606+36.39
32.04' RT
Y=142835.570
X=140711.076
7.0' RADIUS TO FLANGE

606+36.36
25.04' RT
881.41
PT

606+37.83
26.36' RT
881.26

606+37.83
25.03' RT
881.32

606+37.83
27.03' RT
881.26

606+37.55
30.71' RT
881.51

606+37.61
35.71' RT
881.58

606+37.61
36.21' RT
882.58

606+42.84
25.01' RT
881.22

606+42.85
26.35' RT
881.16

606+42.85
27.01' RT
881.17

606+42.57
30.66' RT
881.41

606+42.63
35.66' RT
881.50

606+43.07
30.67' RT
882.42

606+43.35
27.01' RT
881.47

606+43.13
36.15' RT
882.50

606+52.59
24.98' RT
880.66

606+52.60
26.31' RT
880.60

606+52.60
26.98' RT
880.94

TYPE 2 CURB RAMP

TYPE 2 CURB RAMP

2" MAX CURB HEIGHT
BETWEEN RAMPS

R = 7.00'

SA

AS

SW5

SEED

LL

CG24J

CCP
1' HEIGHT
(SEE CONSTRUCTION DETAIL)

SLOPE INTERCEPT

R/W

2.00'

7.4%
8.1%
6.6%
6.5%
5.7%
4.0%
2.0%
1.5%
1.8%
1.7%
0.3%
3.7%
6.0%

21002 BAY

TILE

STH 28 & W WATER ST - SOUTHEAST QUADRANT

LEGEND

- AS — ASPHALTIC SURFACE PATCHING (MATCH ADJACENT PAVEMENT DEPTH)
- CCP — CONCRETE CURB PEDESTRIAN
- CG18D — CONCRETE CURB & GUTTER 18-INCH TYPE D
- CG24D — CONCRETE CURB & GUTTER 24-INCH TYPE D
- CG24J — CONCRETE CURB & GUTTER 24-INCH TYPE J
- CG30D — CONCRETE CURB & GUTTER 30-INCH TYPE D
- CG30J — CONCRETE CURB & GUTTER 4-INCH SLOPED 30-INCH TYPE J
- SA — SAWING ASPHALT
- SC — SAWING CONCRETE
- SEED — TOPSOIL, SEEDING MIXTURE NO. 40, FERTILIZER TYPE B, EROSION MAT URBAN CLASS I TYPE B
- SW5 — CONCRETE SIDEWALK 5-INCH
- STONE — GRAVEL LANDSCAPING STONES
- LL — LEVEL LANDING
- MEF — MAXIMUM EXTENT FEASIBLE TECHNICAL INFEASIBILITY PRESENT
- SLOPE INTERCEPTS
- SIDEWALK GRADE BREAK LOCATION (FOR INFORMATION ONLY)
- PAVED FLARE (10% MAX)
- GRADED FLARE (6:1 MAX)
- DETECTABLE WARNING FIELD YELLOW

NOTES

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2

2

E. WATER STREET

STH 28

TYPE 3 MODIFIED CURB RAMP

TYPE 2 CURB RAMP

TYPE 2 CURB RAMP

TYPE 2 CURB RAMP

TYPE 2 CURB RAMP

TYPE 2 CURB RAMP

TYPE 2 CURB RAMP

R/W

TLE

610+00 610+25 610+50 610+75 611+00 611+25 611+50 611+75 612+00 612+25

1004 BM

CURB RAMP OVERVIEW
STH 28 & E. WATER STREET

PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	PLAN DETAILS - CURB RAMPS	SHEET 37	E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\021201-PD.DWG
LAYOUT NAME - 021209a-pd

PLOT DATE : 4/30/2024 10:06 AM PLOT BY : WHITEFOOT, DANIEL PLOT NAME : PLOT SCALE : 1 IN:15 FT

WISDOT/CADDS SHEET 42

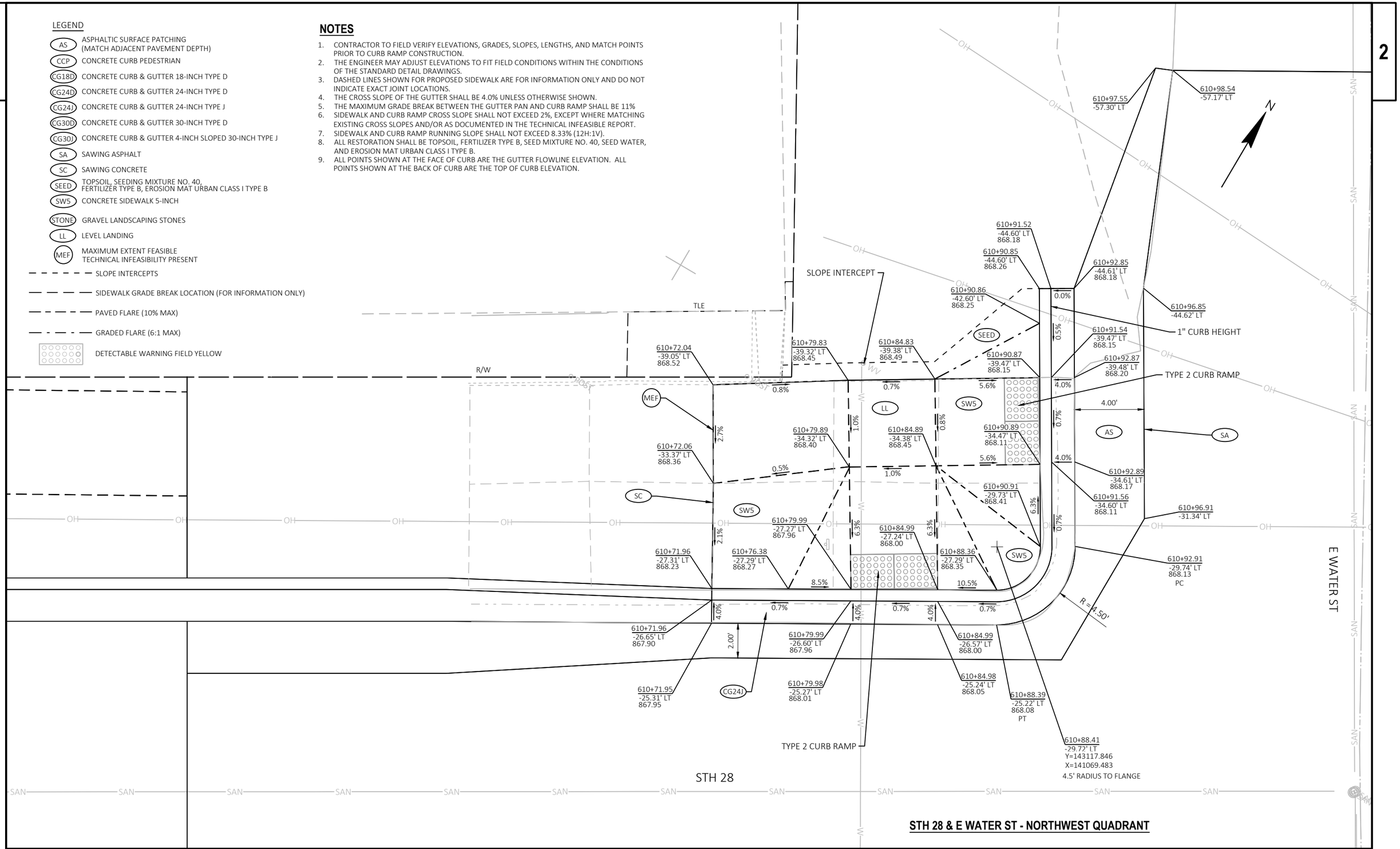
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LEGEND

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- CG30D — CONCRETE CURB & GUTTER 30-INCH TYPE D
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- DETECTABLE WARNING FIELD YELLOW

NOTES

1. CONTRACTOR TO FIELD VERIFY ELEVATIONS, GRADES, SLOPES, LENGTHS, AND MATCH POINTS PRIOR TO CURB RAMP CONSTRUCTION.
2. THE ENGINEER MAY ADJUST ELEVATIONS TO FIT FIELD CONDITIONS WITHIN THE CONDITIONS OF THE STANDARD DETAIL DRAWINGS.
3. DASHED LINES SHOWN FOR PROPOSED SIDEWALK ARE FOR INFORMATION ONLY AND DO NOT INDICATE EXACT JOINT LOCATIONS.
4. THE CROSS SLOPE OF THE GUTTER SHALL BE 4.0% UNLESS OTHERWISE SHOWN.
5. THE MAXIMUM GRADE BREAK BETWEEN THE GUTTER PAN AND CURB RAMP SHALL BE 11%
6. SIDEWALK AND CURB RAMP CROSS SLOPE SHALL NOT EXCEED 2%, EXCEPT WHERE MATCHING EXISTING CROSS SLOPES AND/OR AS DOCUMENTED IN THE TECHNICAL INFEASIBLE REPORT.
7. SIDEWALK AND CURB RAMP RUNNING SLOPE SHALL NOT EXCEED 8.33% (12H:1V).
8. ALL RESTORATION SHALL BE TOPSOIL, FERTILIZER TYPE B, SEED MIXTURE NO. 40, SEED WATER, AND EROSION MAT URBAN CLASS I TYPE B.
9. ALL POINTS SHOWN AT THE FACE OF CURB ARE THE GUTTER FLOWLINE ELEVATION. ALL POINTS SHOWN AT THE BACK OF CURB ARE THE TOP OF CURB ELEVATION.



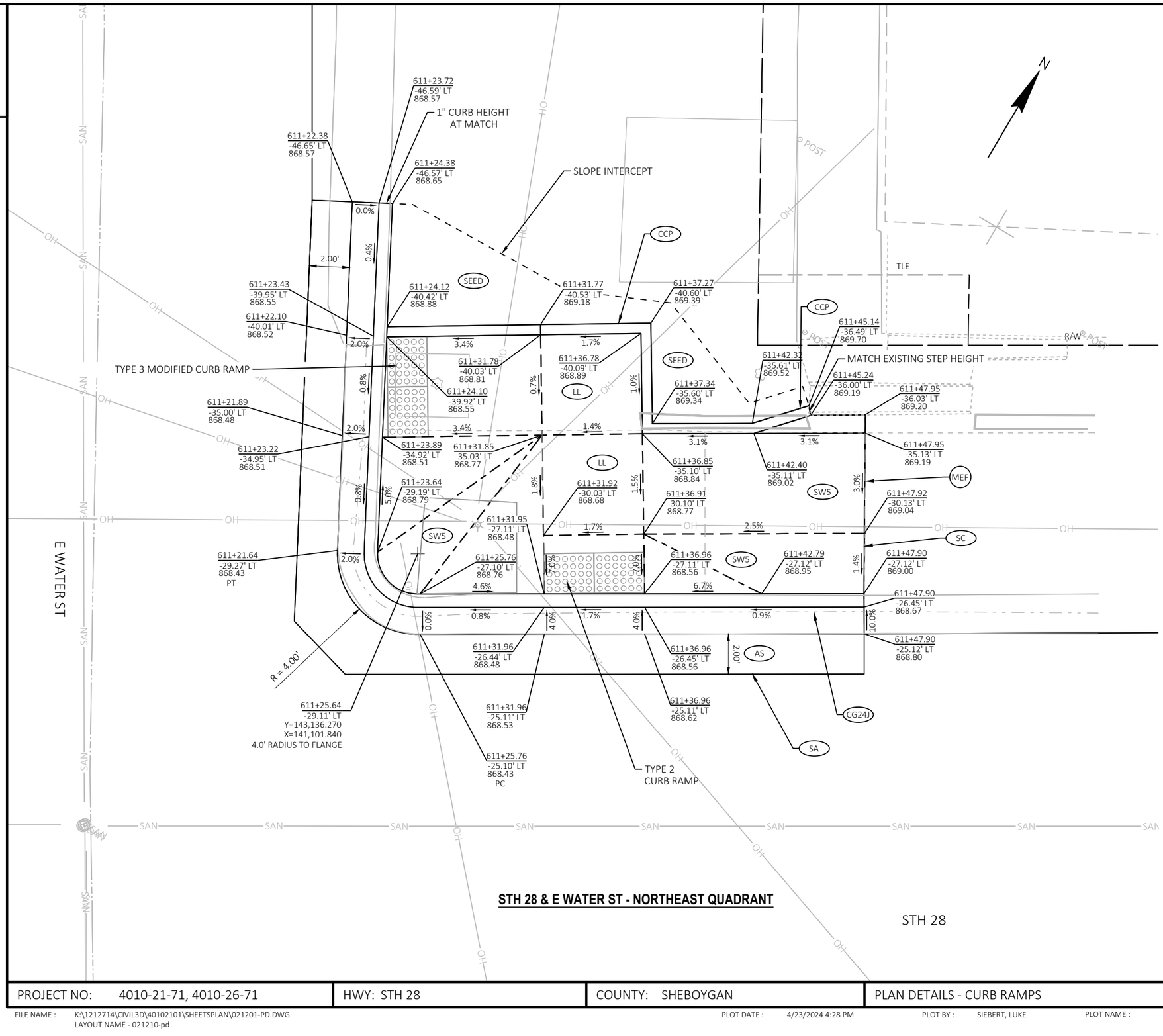
STH 28 & E WATER ST - NORTHWEST QUADRANT

PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	PLAN DETAILS - CURB RAMPS	SHEET 38	E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\021201-PD.DWG
LAYOUT NAME - 021209-pd

PLOT DATE : 4/23/2024 4:28 PM PLOT BY : SIEBERT, LUKE PLOT NAME : PLOT SCALE : 1 IN:5 FT

WISDOT/CADDS SHEET 42



STH 28 & E WATER ST - NORTHEAST QUADRANT

LEGEND

- AS — ASPHALTIC SURFACE PATCHING (MATCH ADJACENT PAVEMENT DEPTH)
- CCP — CONCRETE CURB PEDESTRIAN
- CG18D — CONCRETE CURB & GUTTER 18-INCH TYPE D
- CG24D — CONCRETE CURB & GUTTER 24-INCH TYPE D
- CG24J — CONCRETE CURB & GUTTER 24-INCH TYPE J
- CG30D — CONCRETE CURB & GUTTER 30-INCH TYPE D
- CG30J — CONCRETE CURB & GUTTER 4-INCH SLOPED 30-INCH TYPE J
- SA — SAWING ASPHALT
- SC — SAWING CONCRETE
- SEED — TOPSOIL, SEEDING MIXTURE NO. 40, FERTILIZER TYPE B, EROSION MAT URBAN CLASS I TYPE B
- SW5 — CONCRETE SIDEWALK 5-INCH
- STONE — GRAVEL LANDSCAPING STONES
- LL — LEVEL LANDING
- MEF — MAXIMUM EXTENT FEASIBLE TECHNICAL INFEASIBILITY PRESENT
- SLOPE INTERCEPTS
- SIDEWALK GRADE BREAK LOCATION (FOR INFORMATION ONLY)
- PAVED FLARE (10% MAX)
- GRADED FLARE (6:1 MAX)
- DETECTABLE WARNING FIELD YELLOW

NOTES

1. CONTRACTOR TO FIELD VERIFY ELEVATIONS, GRADES, SLOPES, LENGTHS, AND MATCH POINTS PRIOR TO CURB RAMP CONSTRUCTION.
2. THE ENGINEER MAY ADJUST ELEVATIONS TO FIT FIELD CONDITIONS WITHIN THE CONDITIONS OF THE STANDARD DETAIL DRAWINGS.
3. DASHED LINES SHOWN FOR PROPOSED SIDEWALK ARE FOR INFORMATION ONLY AND DO NOT INDICATE EXACT JOINT LOCATIONS.
4. THE CROSS SLOPE OF THE GUTTER SHALL BE 4.0% UNLESS OTHERWISE SHOWN.
5. THE MAXIMUM GRADE BREAK BETWEEN THE GUTTER PAN AND CURB RAMP SHALL BE 11%
6. SIDEWALK AND CURB RAMP CROSS SLOPE SHALL NOT EXCEED 2%, EXCEPT WHERE MATCHING EXISTING CROSS SLOPES AND/OR AS DOCUMENTED IN THE TECHNICAL INFEASIBLE REPORT.
7. SIDEWALK AND CURB RAMP RUNNING SLOPE SHALL NOT EXCEED 8.33% (12H:1V).
8. ALL RESTORATION SHALL BE TOPSOIL, FERTILIZER TYPE B, SEED MIXTURE NO. 40, SEED WATER, AND EROSION MAT URBAN CLASS I TYPE B.
9. ALL POINTS SHOWN AT THE FACE OF CURB ARE THE GUTTER FLOWLINE ELEVATION. ALL POINTS SHOWN AT THE BACK OF CURB ARE THE TOP OF CURB ELEVATION.

PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	PLAN DETAILS - CURB RAMPS	SHEET 39	E

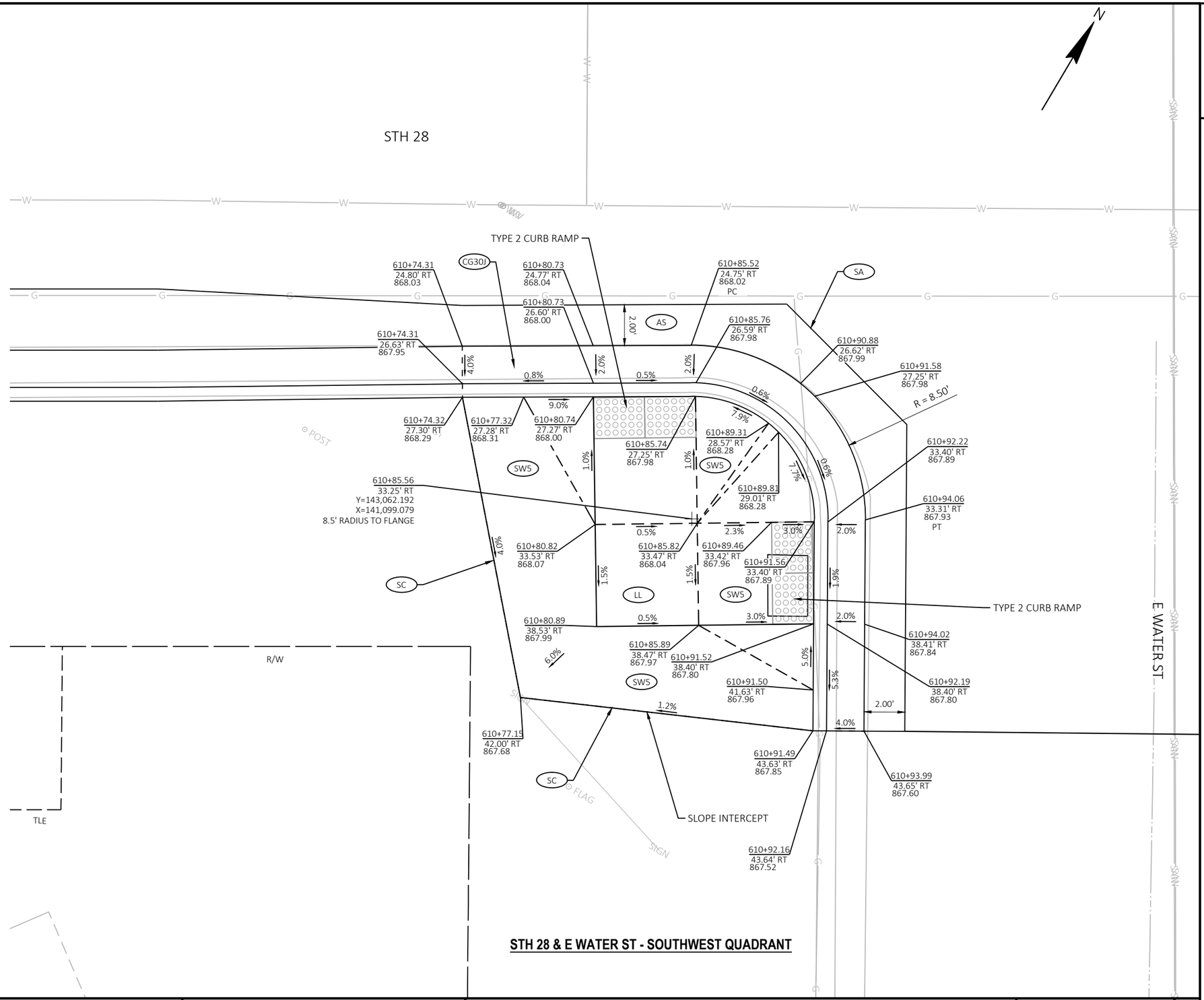
2

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LEGEND

- (AS) ASPHALTIC SURFACE PATCHING (MATCH ADJACENT PAVEMENT DEPTH)
- (CCP) CONCRETE CURB PEDESTRIAN
- (CG18D) CONCRETE CURB & GUTTER 18-INCH TYPE D
- (CG24D) CONCRETE CURB & GUTTER 24-INCH TYPE D
- (CG24J) CONCRETE CURB & GUTTER 24-INCH TYPE J
- (CG30D) CONCRETE CURB & GUTTER 30-INCH TYPE D
- (CG30J) CONCRETE CURB & GUTTER 4-INCH SLOPED 30-INCH TYPE J
- (SA) SAWING ASPHALT
- (SC) SAWING CONCRETE
- (SEED) TOPSOIL, SEEDING MIXTURE NO. 40, FERTILIZER TYPE B, EROSION MAT URBAN CLASS I TYPE B
- (SW5) CONCRETE SIDEWALK 5-INCH
- (STONE) GRAVEL LANDSCAPING STONES
- (LL) LEVEL LANDING
- (MEF) MAXIMUM EXTENT FEASIBLE TECHNICAL INFEASIBILITY PRESENT
- SLOPE INTERCEPTS
- SIDEWALK GRADE BREAK LOCATION (FOR INFORMATION ONLY)
- PAVED FLARE (10% MAX)
- GRADED FLARE (6:1 MAX)
- DETECTABLE WARNING FIELD YELLOW



STH 28 & E WATER ST - SOUTHWEST QUADRANT

PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	PLAN DETAILS - CURB RAMPS	SHEET 40	E

STH 28

E WATER ST

611+29.79
24.35' RT
868.32
PT

TYPE 2 CURB RAMP

611+32.69
24.36' RT
868.40

611+37.70
24.38' RT
868.48

611+24.96
25.95' RT
868.18

611+32.69
25.69' RT
868.35

611+37.69
25.72' RT
868.43

2.00'

611+45.54
24.42' RT
868.60

R = 8.00'

611+45.53
25.75' RT
868.55

611+29.75
32.35' RT
Y=143,085.467
X=141,136.663
8.0' RADIUS TO FLANGE

611+40.60
26.39' RT
868.81

611+45.53
26.42' RT
868.88

611+29.65
26.35' RT
868.60

611+32.69
26.36' RT
868.35

611+23.08
33.00' RT
867.91

611+21.76
32.28' RT
867.98
PC

611+26.16
27.55' RT
868.46

SEED

1004
BM

611+32.78
32.89' RT
868.51

611+37.69
26.38' RT
868.43

611+21.75
32.99' RT
867.97

611+23.76
33.00' RT
867.91

611+37.78
32.83' RT
868.58

611+47.42
32.75' RT
868.88

611+23.70
38.00' RT
867.81

TYPE 2 CURB RAMP

611+21.70
37.99' RT
867.87

611+23.04
38.00' RT
867.81

611+32.84
37.89' RT
868.42

611+37.84
37.82' RT
868.51

611+47.61
37.70' RT
868.95

R/W

SLOPE INTERCEPT

TLE

611+23.67
41.94' RT
867.95

611+23.65
43.94' RT
867.85

611+21.65
43.93' RT
867.57

611+22.98
43.94' RT
867.51

SA
CG24J
AS
SW5
LL
SC
SEED

3.3%
4.0%
1.6%
8.1%
2.4%
9.1%
6.6%
1.5%
3.1%
1.7%
4.5%
2.0%
5.0%
1.4%

NOTES

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LEGEND

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- SLOPE INTERCEPTS
- SIDEWALK GRADE BREAK LOCATION (FOR INFORMATION ONLY)
- PAVED FLARE (10% MAX)
- GRADED FLARE (6:1 MAX)
- DETECTABLE WARNING FIELD YELLOW

STH 28 & E WATER ST - SOUTHEAST QUADRANT

PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	PLAN DETAILS - CURB RAMPS	SHEET 41	E

2

CLARK STREET

STH 28

TYPE 2 CURB RAMP

4" CURB HEIGHT

TYPE 2 CURB RAMP

TYPE 2 CURB RAMP

TYPE 2 CURB RAMP

TYPE 2 CURB RAMP

TYPE 7A CURB RAMP

TYPE 7A CURB RAMP

TYPE 2 CURB RAMP

1005 BM

R/W

TLE

OH

W

G

SAN

4+75 615+00 615+25 615+50 615+75 616+00 616+25 616+50 616+75 617

MATCH STA 617+00

MATCH STA 617+00

STH 28

CURB RAMP OVERVIEW
STH 28 & CLARK ST

PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	PLAN DETAILS - CURB RAMPS	SHEET 42	E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\021201-PD.DWG
LAYOUT NAME - 021213a-pd

PLOT DATE : 4/23/2024 4:29 PM PLOT BY : SIEBERT, LUKE PLOT NAME : PLOT SCALE : 1 IN:15 FT

2

LEGEND

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- CCP — CONCRETE CURB PEDESTRIAN
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SLOPE INTERCEPTS

SIDEWALK GRADE BREAK LOCATION (FOR INFORMATION ONLY)

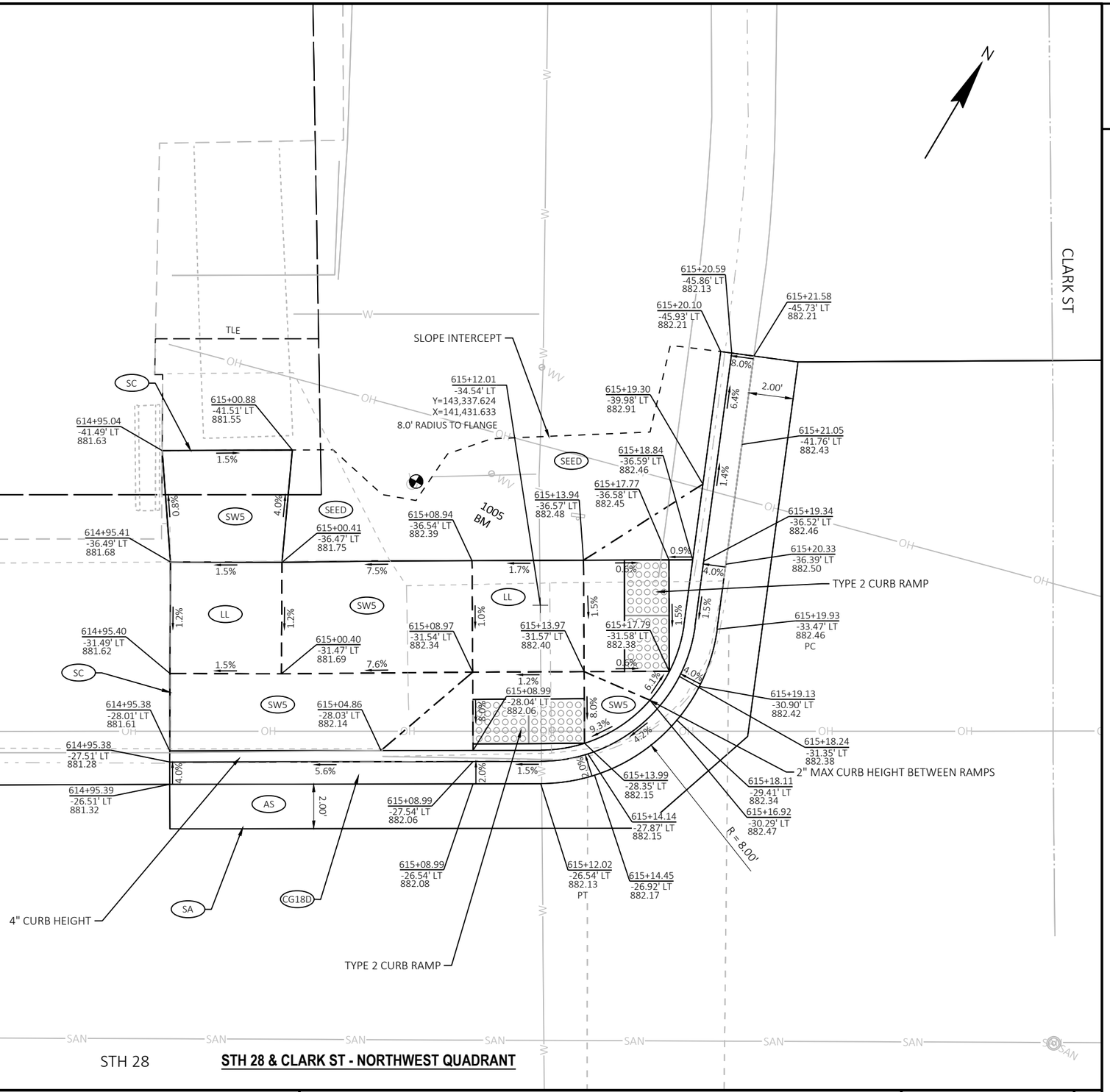
PAVED FLARE (10% MAX)

GRADED FLARE (6:1 MAX)

DETECTABLE WARNING FIELD YELLOW

NOTES

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STH 28

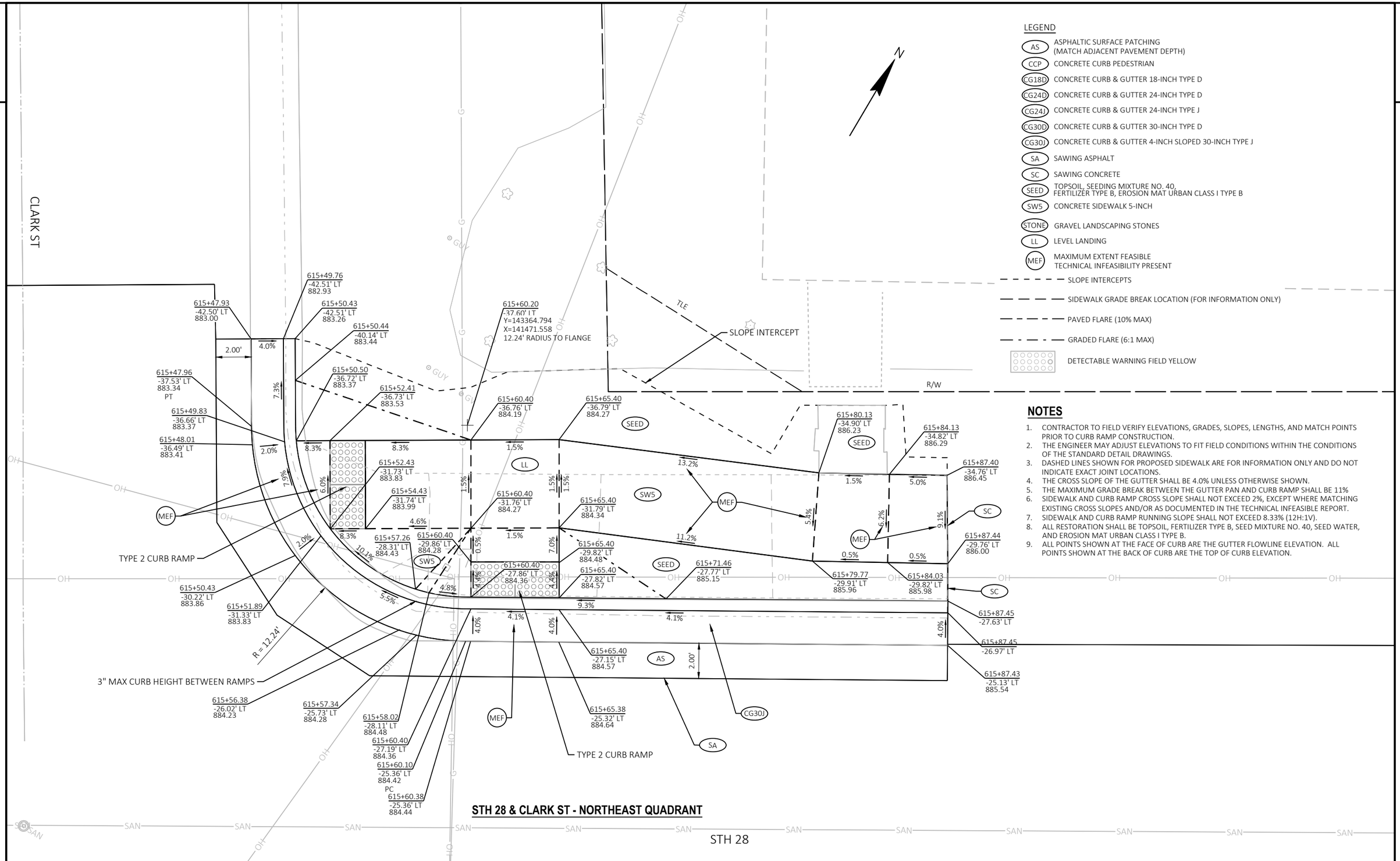
STH 28 & CLARK ST - NORTHWEST QUADRANT

PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	PLAN DETAILS - CURB RAMPS	SHEET 43	E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\021201-PD.DWG
LAYOUT NAME - 021213-pd

PLOT DATE : 4/23/2024 4:29 PM PLOT BY : SIEBERT, LUKE PLOT NAME : PLOT SCALE : 1 IN:5 FT

WISDOT/CADDS SHEET 42

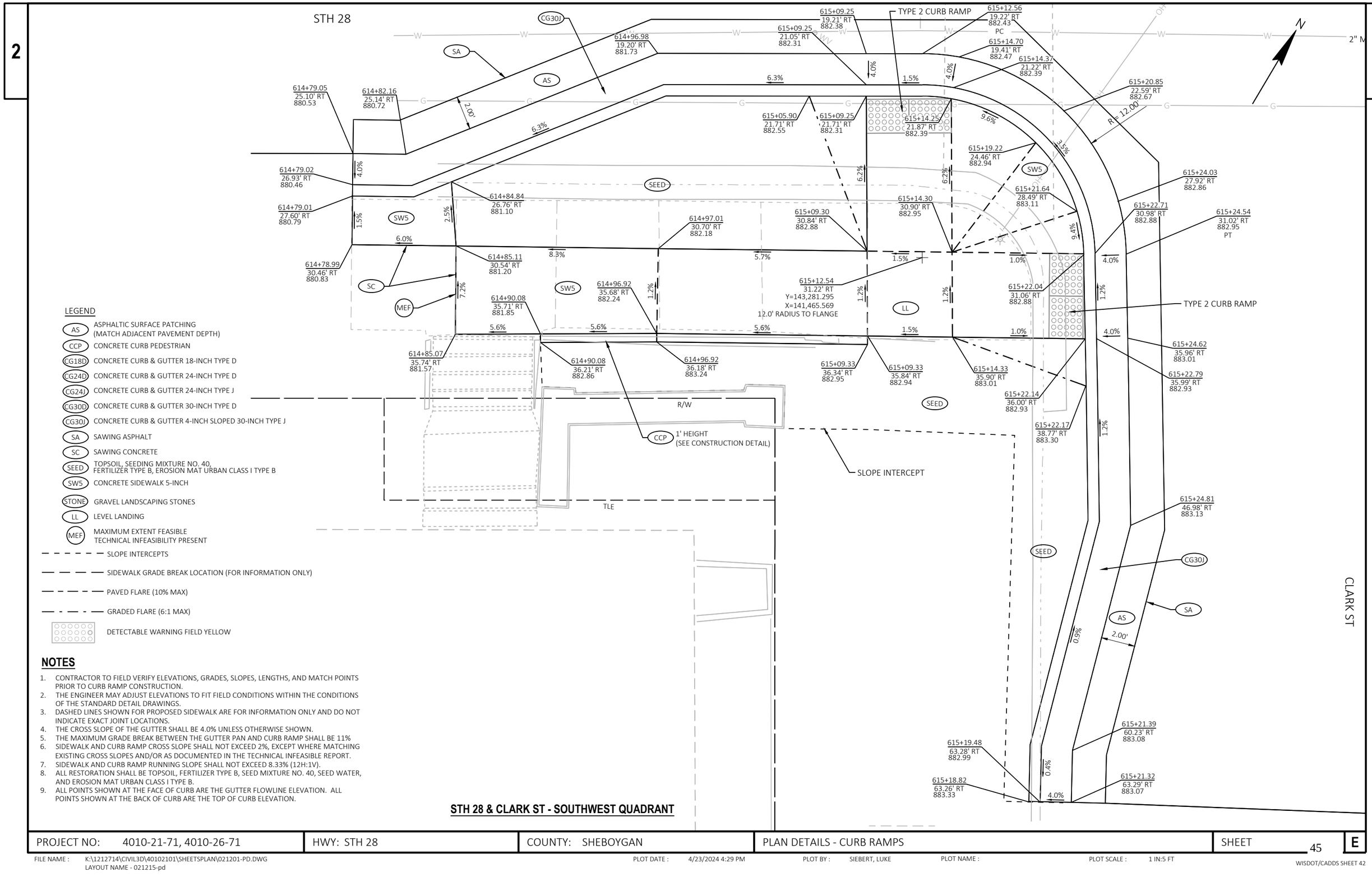


LEGEND

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- (CCP) CONCRETE CURB PEDESTRIAN
- (CG18D) CONCRETE CURB & GUTTER 18-INCH TYPE D
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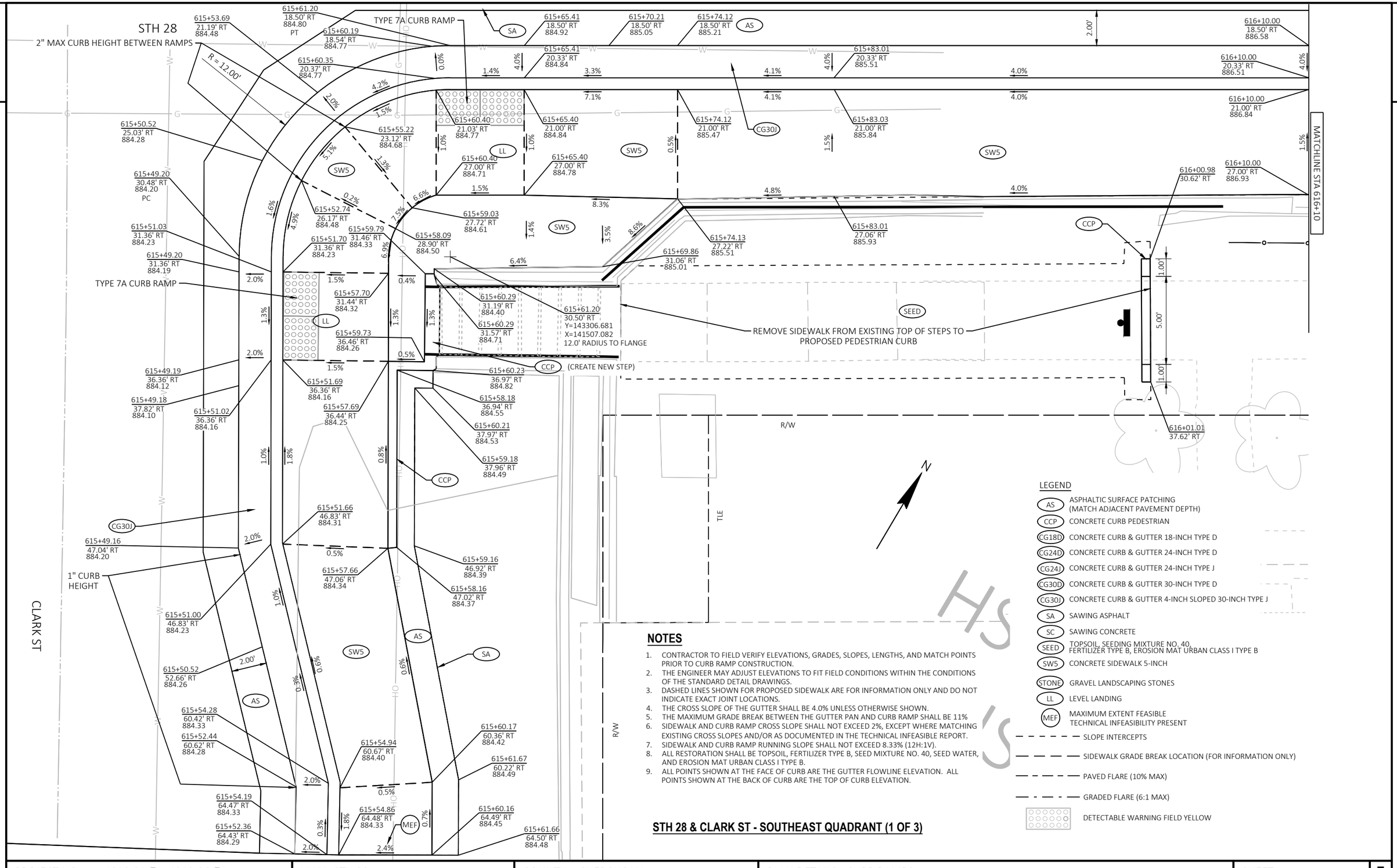
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STH 28 & CLARK ST - SOUTHWEST QUADRANT

PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	PLAN DETAILS - CURB RAMPS	SHEET 45	E



NOTES

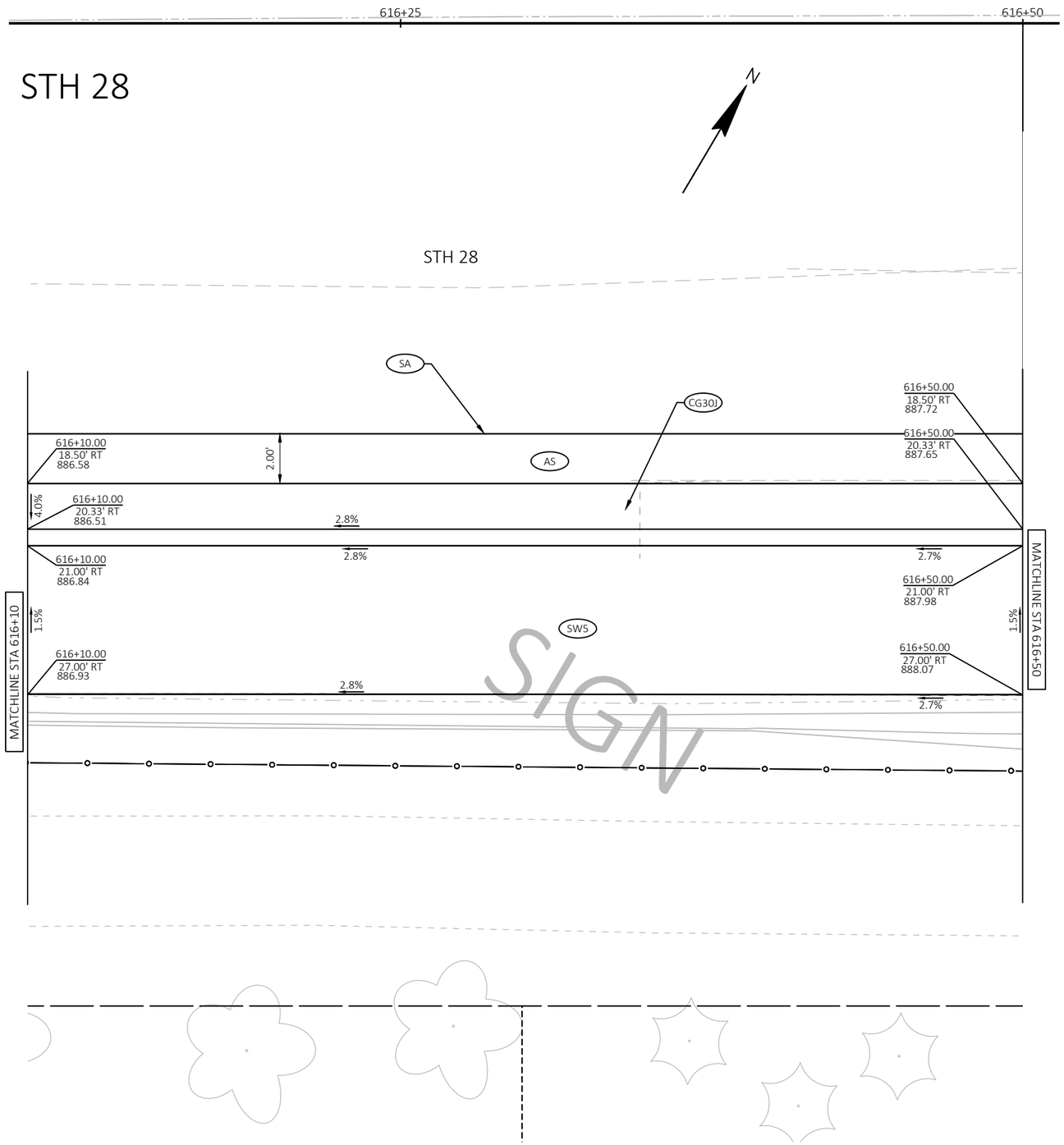
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- SA — SAWING ASPHALT
- SC — SAWING CONCRETE
- SEED — TOPSOIL, SEEDING MIXTURE NO. 40, FERTILIZER TYPE B, EROSION MAT URBAN CLASS I TYPE B
- SW5 — CONCRETE SIDEWALK 5-INCH
- STONE — GRAVEL LANDSCAPING STONES
- LL — LEVEL LANDING
- MEF — MAXIMUM EXTENT FEASIBLE TECHNICAL INFEASIBILITY PRESENT
- SLOPE INTERCEPTS
- SIDEWALK GRADE BREAK LOCATION (FOR INFORMATION ONLY)
- PAVED FLARE (10% MAX)
- GRADED FLARE (6:1 MAX)
- DETECTABLE WARNING FIELD YELLOW

STH 28 & CLARK ST - SOUTHEAST QUADRANT (1 OF 3)

PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	PLAN DETAILS - CURB RAMPS	SHEET 46	E



STH 28 & CLARK ST - SOUTHEAST QUADRANT (2 OF 3)

LEGEND

- (AS) ASPHALTIC SURFACE PATCHING (MATCH ADJACENT PAVEMENT DEPTH)
- (CCP) CONCRETE CURB PEDESTRIAN
- (CG18D) CONCRETE CURB & GUTTER 18-INCH TYPE D
- (CG24D) CONCRETE CURB & GUTTER 24-INCH TYPE D
- (CG24J) CONCRETE CURB & GUTTER 24-INCH TYPE J
- (CG30D) CONCRETE CURB & GUTTER 30-INCH TYPE D
- (CG30J) CONCRETE CURB & GUTTER 4-INCH SLOPED 30-INCH TYPE J
- (SA) SAWING ASPHALT
- (SC) SAWING CONCRETE
- (SEED) TOPSOIL, SEEDING MIXTURE NO. 40, FERTILIZER TYPE B, EROSION MAT URBAN CLASS I TYPE B
- (SW5) CONCRETE SIDEWALK 5-INCH
- (STONE) GRAVEL LANDSCAPING STONES
- (LL) LEVEL LANDING
- (MEF) MAXIMUM EXTENT FEASIBLE TECHNICAL INFEASIBILITY PRESENT
- SLOPE INTERCEPTS
- SIDEWALK GRADE BREAK LOCATION (FOR INFORMATION ONLY)
- PAVED FLARE (10% MAX)
- GRADED FLARE (6:1 MAX)
- DETECTABLE WARNING FIELD YELLOW

NOTES

1. CONTRACTOR TO FIELD VERIFY ELEVATIONS, GRADES, SLOPES, LENGTHS, AND MATCH POINTS PRIOR TO CURB RAMP CONSTRUCTION.
2. THE ENGINEER MAY ADJUST ELEVATIONS TO FIT FIELD CONDITIONS WITHIN THE CONDITIONS OF THE STANDARD DETAIL DRAWINGS.
3. DASHED LINES SHOWN FOR PROPOSED SIDEWALK ARE FOR INFORMATION ONLY AND DO NOT INDICATE EXACT JOINT LOCATIONS.
4. THE CROSS SLOPE OF THE GUTTER SHALL BE 4.0% UNLESS OTHERWISE SHOWN.
5. THE MAXIMUM GRADE BREAK BETWEEN THE GUTTER PAN AND CURB RAMP SHALL BE 11%
6. SIDEWALK AND CURB RAMP CROSS SLOPE SHALL NOT EXCEED 2%, EXCEPT WHERE MATCHING EXISTING CROSS SLOPES AND/OR AS DOCUMENTED IN THE TECHNICAL INFEASIBLE REPORT.
7. SIDEWALK AND CURB RAMP RUNNING SLOPE SHALL NOT EXCEED 8.33% (12H:1V).
8. ALL RESTORATION SHALL BE TOPSOIL, FERTILIZER TYPE B, SEED MIXTURE NO. 40, SEED WATER, AND EROSION MAT URBAN CLASS I TYPE B.
9. ALL POINTS SHOWN AT THE FACE OF CURB ARE THE GUTTER FLOWLINE ELEVATION. ALL POINTS SHOWN AT THE BACK OF CURB ARE THE TOP OF CURB ELEVATION.

2

2

LEGEND

- AS — ASPHALTIC SURFACE PATCHING (MATCH ADJACENT PAVEMENT DEPTH)
- CCP — CONCRETE CURB PEDESTRIAN
- CG18D — CONCRETE CURB & GUTTER 18-INCH TYPE D
- CG24D — CONCRETE CURB & GUTTER 24-INCH TYPE D
- CG24J — CONCRETE CURB & GUTTER 24-INCH TYPE J
- CG30D — CONCRETE CURB & GUTTER 30-INCH TYPE D
- CG30J — CONCRETE CURB & GUTTER 4-INCH SLOPED 30-INCH TYPI
- SA — SAWING ASPHALT
- SC — SAWING CONCRETE
- SEED — TOPSOIL, SEEDING MIXTURE NO. 40, FERTILIZER TYPE B, EROSION MAT URBAN CLASS I TYPE B
- SW5 — CONCRETE SIDEWALK 5-INCH
- STONE — GRAVEL LANDSCAPING STONES
- LL — LEVEL LANDING
- MEF — MAXIMUM EXTENT FEASIBLE TECHNICAL INFEASIBILITY PRESENT
- SLOPE INTERCEPTS
- SIDEWALK GRADE BREAK LOCATION (FOR INFORMATION ONLY)
- PAVED FLARE (10% MAX)
- GRADED FLARE (6:1 MAX)
- DETECTABLE WARNING FIELD YELLOW

MATCHLINE STA 616+50

616+50.00 18.50' RT 887.72
616+50.00 20.33' RT 887.65
616+50.00 21.00' RT 887.98
616+50.00 27.00' RT 888.07
616+58.21 26.99' RT 888.27
616+58.21 27.49' RT 888.74
616+75.24 27.00' RT 888.50
616+75.18 27.50' RT 889.00
616+73.76 32.45' RT 889.88
616+76.33 18.50' RT 888.15
616+76.09 20.33' RT 888.08
616+76.01 21.00' RT 888.41
616+88.29 32.48' RT 889.00
616+85.31 32.50' RT 889.05
616+88.26 37.00' RT 889.06
616+73.33 36.90' RT 889.97
616+85.30 36.98' RT 889.10
616+88.26 37.50' RT 889.10
616+85.26 51.25' RT 890.18
616+88.25 51.34' RT 890.19
616+96.05 26.19' RT 888.50
616+94.55 32.00' RT 888.56
616+94.55 37.05' RT 888.62
616+94.55 32.54' RT 888.56
616+94.55 37.50' RT 889.08
617+02.21 25.20' RT 888.26
617+02.00 27.04' RT 888.39
617+01.92 27.71' RT 888.52
617+04.43 25.17' RT 888.27
617+04.43 25.38' RT 888.26
617+04.46 27.00' RT 888.20
617+04.47 27.67' RT 888.53
617+04.50 29.41' RT 888.56
617+04.64 37.12' RT 888.68
617+04.64 37.61' RT 889.17
617+21.61 27.90' RT 888.67
617+22.39 32.80' RT 889.33
617+22.92 37.26' RT 889.41
617+22.92 37.76' RT 889.42

1.7% 1.7% 1.5% 1.3% 2.00' 0.4% 0.4% 1.5% 0.4% 0.3% 1.5% 1.0% 0.3% 1.2% 4.3% 7.3% 1.5% 2.0% 1.3% 1.3% 1.3% 1.5% 7.3% 7.0% 0.5% 4.0% 1.7% 7.5% 7.9% TLE TLE

R/W R/W

SA AS CG30J SW5 SEED LL SC CCP

NOTES

1. CONTRACTOR TO FIELD VERIFY ELEVATIONS, GRADES, SLOPES, LENGTHS, AND MATCH POINTS PRIOR TO CURB RAMP CONSTRUCTION.
2. THE ENGINEER MAY ADJUST ELEVATIONS TO FIT FIELD CONDITIONS WITHIN THE CONDITIONS OF THE STANDARD DETAIL DRAWINGS.
3. DASHED LINES SHOWN FOR PROPOSED SIDEWALK ARE FOR INFORMATION ONLY AND DO NOT INDICATE EXACT JOINT LOCATIONS.
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9. ALL POINTS SHOWN AT THE FACE OF CURB ARE THE GUTTER FLOWLINE ELEVATION. ALL POINTS SHOWN AT THE BACK OF CURB ARE THE TOP OF CURB ELEVATION.

STH 28 & CLARK ST - SOUTHEAST QUADRANT (3 OF 3)

PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	PLAN DETAILS - CURB RAMPS	SHEET 48	E

2

2

STH 28

618+50
618+75
619+00
619+25
619+50
619+75
620+00
620+25
620+50
620+7

SAN
SAN
SAN

OH
OH
OH

W
W
W
W
W
W

G
G
G
G
G
G

WV
WV
WV
WV

GV

100.0
BM

R/W

STREET

WISCONSIN

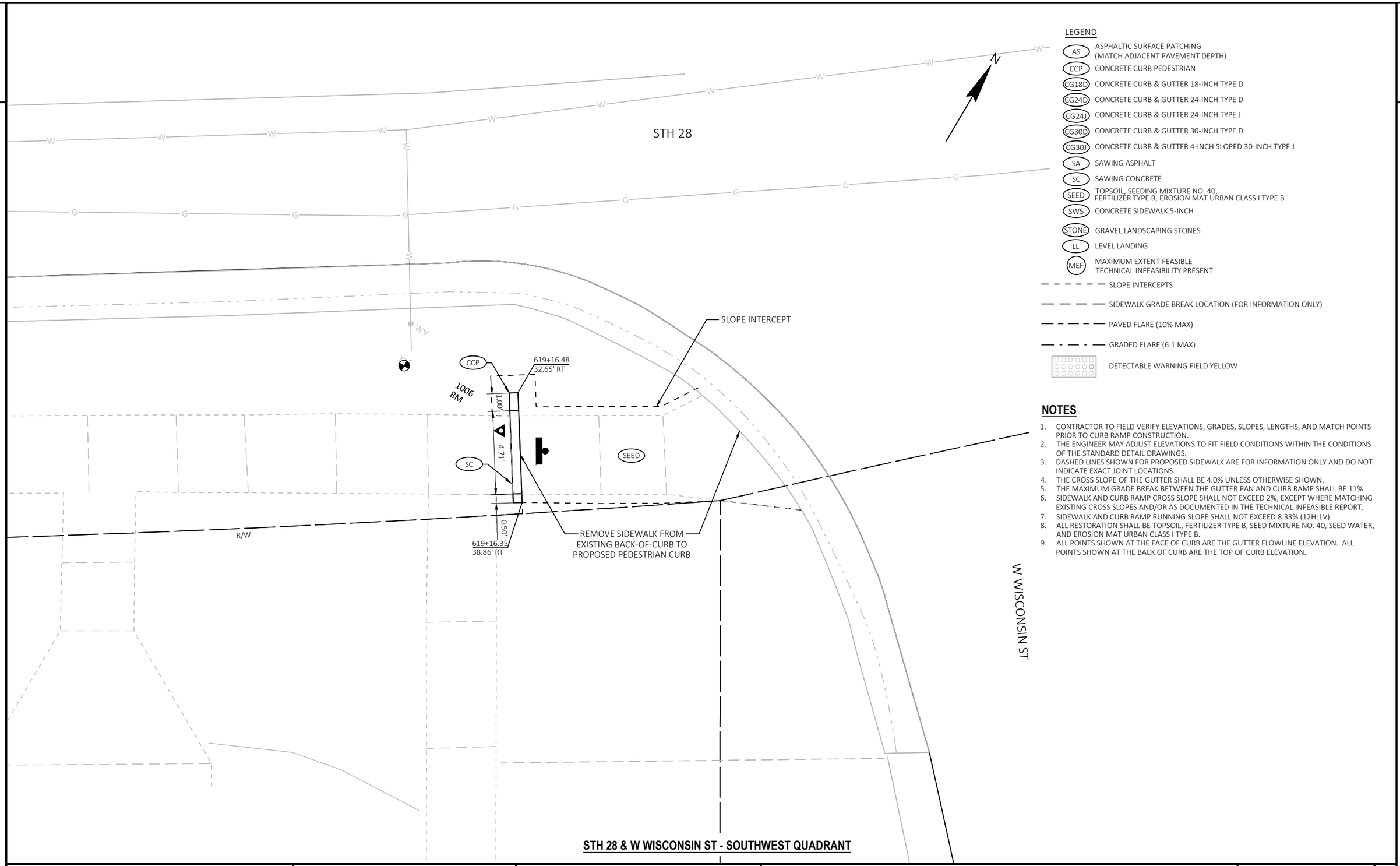
CURB RAMP OVERVIEW
STH 28 & WISCONSIN ST

PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	PLAN DETAILS - CURB RAMPS	SHEET 49	E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\021201-PD.DWG
LAYOUT NAME - 021217a-pd

PLOT DATE : 4/23/2024 4:30 PM PLOT BY : SIEBERT, LUKE PLOT NAME : PLOT SCALE : 1 IN:15 FT

2



LEGEND

- AS — ASPHALTIC SURFACE PATCHING (MATCH ADJACENT PAVEMENT DEPTH)
- CCP — CONCRETE CURB PEDESTRIAN
- CG18D — CONCRETE CURB & GUTTER 18-INCH TYPE D
- CG24D — CONCRETE CURB & GUTTER 24-INCH TYPE D
- CG24J — CONCRETE CURB & GUTTER 24-INCH TYPE J
- CG30D — CONCRETE CURB & GUTTER 30-INCH TYPE D
- CG30J — CONCRETE CURB & GUTTER 4-INCH SLOPED 30-INCH TYPE J
- SA — SAWING ASPHALT
- SC — SAWING CONCRETE
- SEED — TOPSOIL, SEEDING MIXTURE NO. 40, FERTILIZER TYPE B, EROSION MAT URBAN CLASS I TYPE B
- SW5 — CONCRETE SIDEWALK 5-INCH
- STONE — GRAVEL LANDSCAPING STONES
- LL — LEVEL LANDING
- MEF — MAXIMUM EXTENT FEASIBLE TECHNICAL INFEASIBILITY PRESENT
- SLOPE INTERCEPTS
- SIDEWALK GRADE BREAK LOCATION (FOR INFORMATION ONLY)
- PAVED FLARE (10% MAX)
- GRADED FLARE (6:1 MAX)
- DETECTABLE WARNING FIELD YELLOW

NOTES

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STH 28 & W WISCONSIN ST - SOUTHWEST QUADRANT

2

N

DEPOT STREET

STH 28

2269
BM

1010
CP

1007
BM

TYPE 2/3 MODIFIED CURB RAMP

TYPE 4B1 CURB RAMP

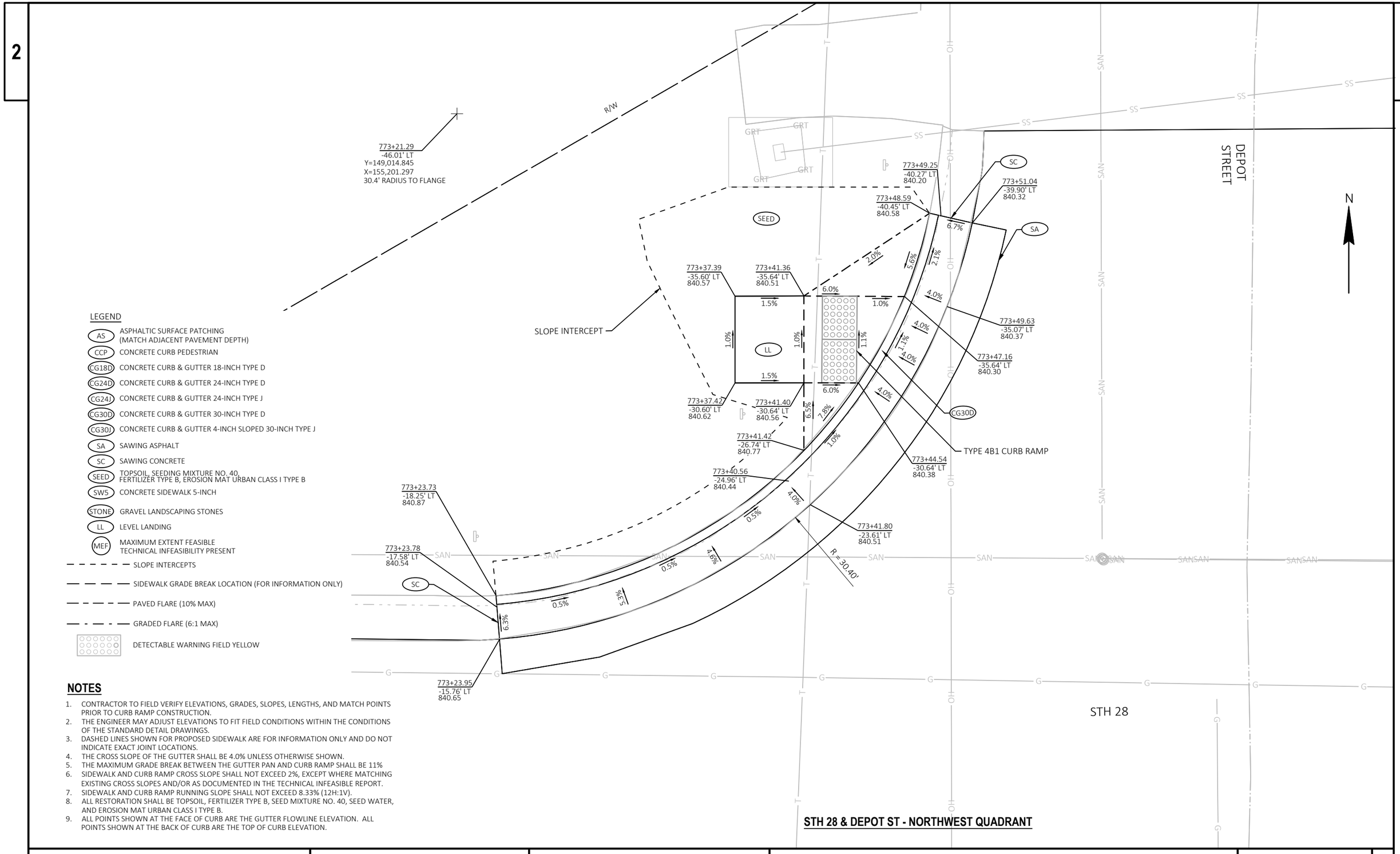
772+75 773+00 773+25 773+50 773+75 774+00 774+25 774+50 774+75

CURB RAMP OVERVIEW
STH 28 & DEPOT ST

PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	PLAN DETAILS - CURB RAMPS	SHEET 51	E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\021201-PD.DWG
LAYOUT NAME - 021218a-pd

PLOT DATE : 4/23/2024 4:30 PM PLOT BY : SIEBERT, LUKE PLOT NAME : PLOT SCALE : 1 IN:15 FT



LEGEND

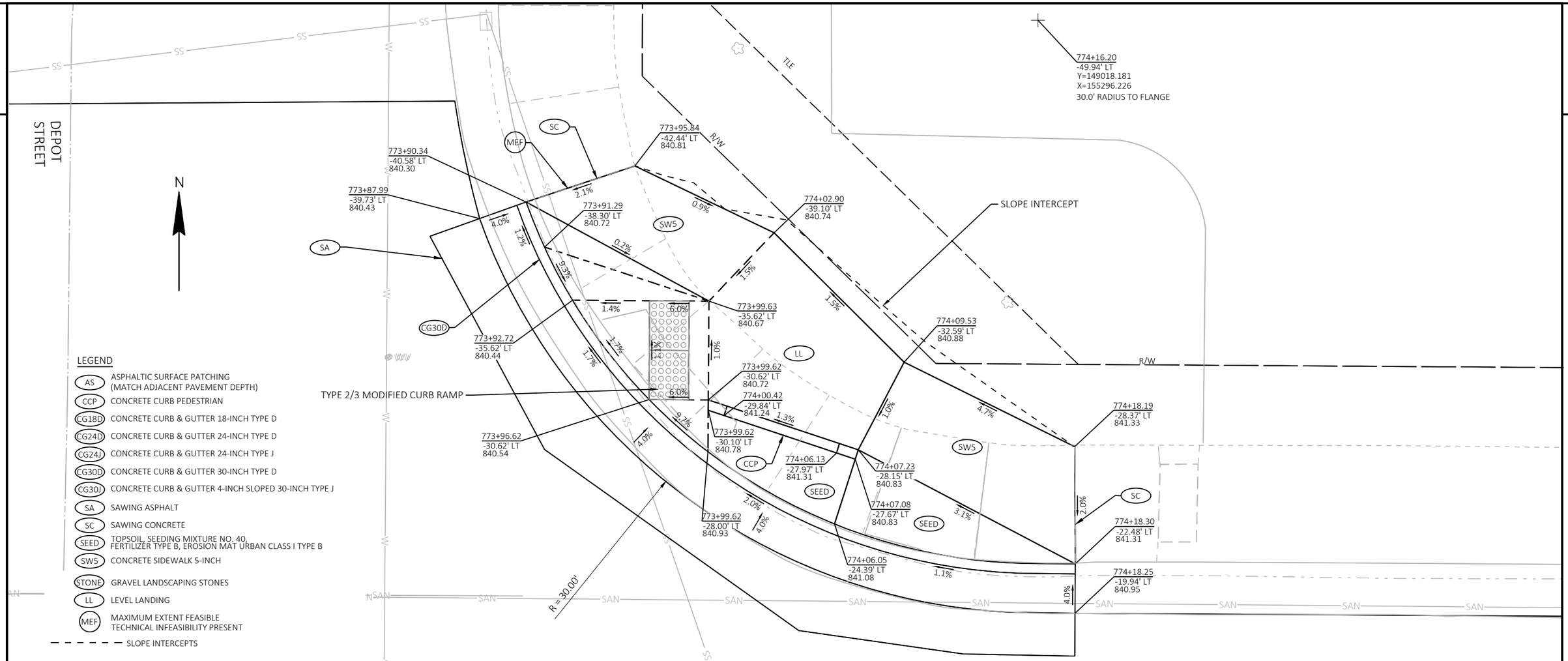
- AS — ASPHALTIC SURFACE PATCHING (MATCH ADJACENT PAVEMENT DEPTH)
- CCP — CONCRETE CURB PEDESTRIAN
- CG18D — CONCRETE CURB & GUTTER 18-INCH TYPE D
- CG24D — CONCRETE CURB & GUTTER 24-INCH TYPE D
- CG24J — CONCRETE CURB & GUTTER 24-INCH TYPE J
- CG30D — CONCRETE CURB & GUTTER 30-INCH TYPE D
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- SA — SAWING ASPHALT
- SC — SAWING CONCRETE
- SEED — TOPSOIL, SEEDING MIXTURE NO. 40, FERTILIZER TYPE B, EROSION MAT URBAN CLASS I TYPE B
- SW5 — CONCRETE SIDEWALK 5-INCH
- STONE — GRAVEL LANDSCAPING STONES
- LL — LEVEL LANDING
- MEF — MAXIMUM EXTENT FEASIBLE TECHNICAL INFEASIBILITY PRESENT
- SLOPE INTERCEPTS
- SIDEWALK GRADE BREAK LOCATION (FOR INFORMATION ONLY)
- PAVED FLARE (10% MAX)
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9. ALL POINTS SHOWN AT THE FACE OF CURB ARE THE GUTTER FLOWLINE ELEVATION. ALL POINTS SHOWN AT THE BACK OF CURB ARE THE TOP OF CURB ELEVATION.

STH 28 & DEPOT ST - NORTHWEST QUADRANT

PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	PLAN DETAILS - CURB RAMPS	SHEET 52	E



LEGEND

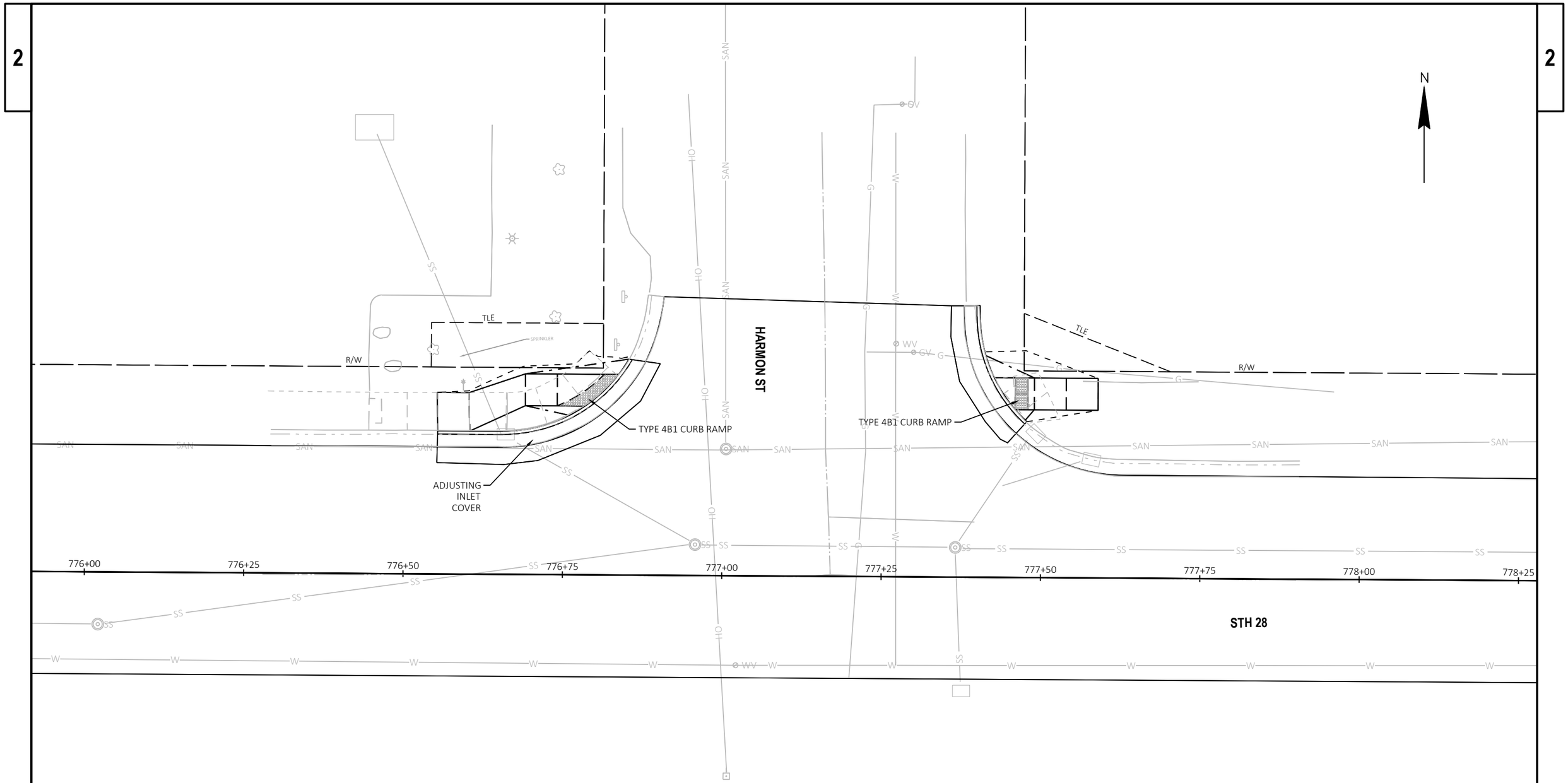
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- CCP — CONCRETE CURB PEDESTRIAN
- CG18D — CONCRETE CURB & GUTTER 18-INCH TYPE D
- CG24D — CONCRETE CURB & GUTTER 24-INCH TYPE D
- CG24J — CONCRETE CURB & GUTTER 24-INCH TYPE J
- CG30D — CONCRETE CURB & GUTTER 30-INCH TYPE D
- CG30J — CONCRETE CURB & GUTTER 4-INCH SLOPED 30-INCH TYPE J
- SA — SAWING ASPHALT
- SC — SAWING CONCRETE
- SEED — TOPSOIL, SEEDING MIXTURE NO. 40, FERTILIZER TYPE B, EROSION MAT URBAN CLASS I TYPE B
- SW5 — CONCRETE SIDEWALK 5-INCH
- STONE — GRAVEL LANDSCAPING STONES
- LL — LEVEL LANDING
- MEF — MAXIMUM EXTENT FEASIBLE TECHNICAL INFEASIBILITY PRESENT
- SLOPE INTERCEPTS
- SIDEWALK GRADE BREAK LOCATION (FOR INFORMATION ONLY)
- PAVED FLARE (10% MAX)
- GRADED FLARE (6:1 MAX)
- DETECTABLE WARNING FIELD YELLOW

NOTES

1. CONTRACTOR TO FIELD VERIFY ELEVATIONS, GRADES, SLOPES, LENGTHS, AND MATCH POINTS PRIOR TO CURB RAMP CONSTRUCTION.
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9. ALL POINTS SHOWN AT THE FACE OF CURB ARE THE GUTTER FLOWLINE ELEVATION. ALL POINTS SHOWN AT THE BACK OF CURB ARE THE TOP OF CURB ELEVATION.

STH 28 & DEPOT ST - NORTHEAST QUADRANT

PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	PLAN DETAILS - CURB RAMPS	SHEET 53	E



CURB RAMP OVERVIEW
STH 28 & HARMON ST

PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	PLAN DETAILS - CURB RAMPS	SHEET 54	E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\021201-PD.DWG
LAYOUT NAME - 021219a-pd
PLOT DATE : 4/23/2024 4:31 PM
PLOT BY : SIEBERT, LUKE
PLOT NAME :
PLOT SCALE : 1 IN:15 FT

2

N

HARMON STREET

776+65.47
-45.21' LT
Y=149,011.906
X=155,545.466
25.3' RADIUS TO FLANGE

TLE

R/W

SLOPE INTERCEPT

776+85.76
-33.79' LT
840.08

776+85.22
-33.86' LT
840.21

776+87.88
-33.50' LT
840.18

776+83.62
-31.45' LT
840.07

776+81.37
-31.45' LT
840.09

776+74.04
-31.46' LT
840.11

776+69.04
-31.47' LT
840.15

776+60.19
-28.46' LT
840.19

776+55.20
-28.46' LT
840.31

SPRINKLER

SEED

LL

SC

MEF

SW5

SA

776+69.03
-26.48' LT
840.07

776+74.03
-26.47' LT
840.03

776+78.40
-26.46' LT
839.98

776+55.31
-22.44' LT
840.12

776+60.33
-22.44' LT
840.09

776+83.15
-27.14' LT
840.09

TYPE 4B1 CURB RAMP

776+55.25
-19.94' LT
839.92

776+71.64
-20.77' LT
839.87

776+75.92
-24.98' LT
840.23

CG30D

ADJUSTING INLET COVER

R = 25.28'

0.4% 0.8% 0.2% 1.0% 4.7% 2.4% 4.0% 1.5% 1.4% 8.5% 0.2% 0.8% 1.5% 0.5% 0.6% 0.3% 0.5% 4.0% 2.4% 3.2%

SAN SS OH

RADIAL WARNING FIELD PANEL LAYOUT TABLE				
QUADRANT	BACK OF CURB RADIUS (FT)	LANDING LENGTH 'XR' (FT)	RADIAL WARNING FIELD AREA (SF)	RADIAL LONG CHORD (FT)
NORTHWEST	22.8	9.58	15.0	7.17

STH 28 & HARMON ST - NORTHWEST QUADRANT

STH 28

776+50

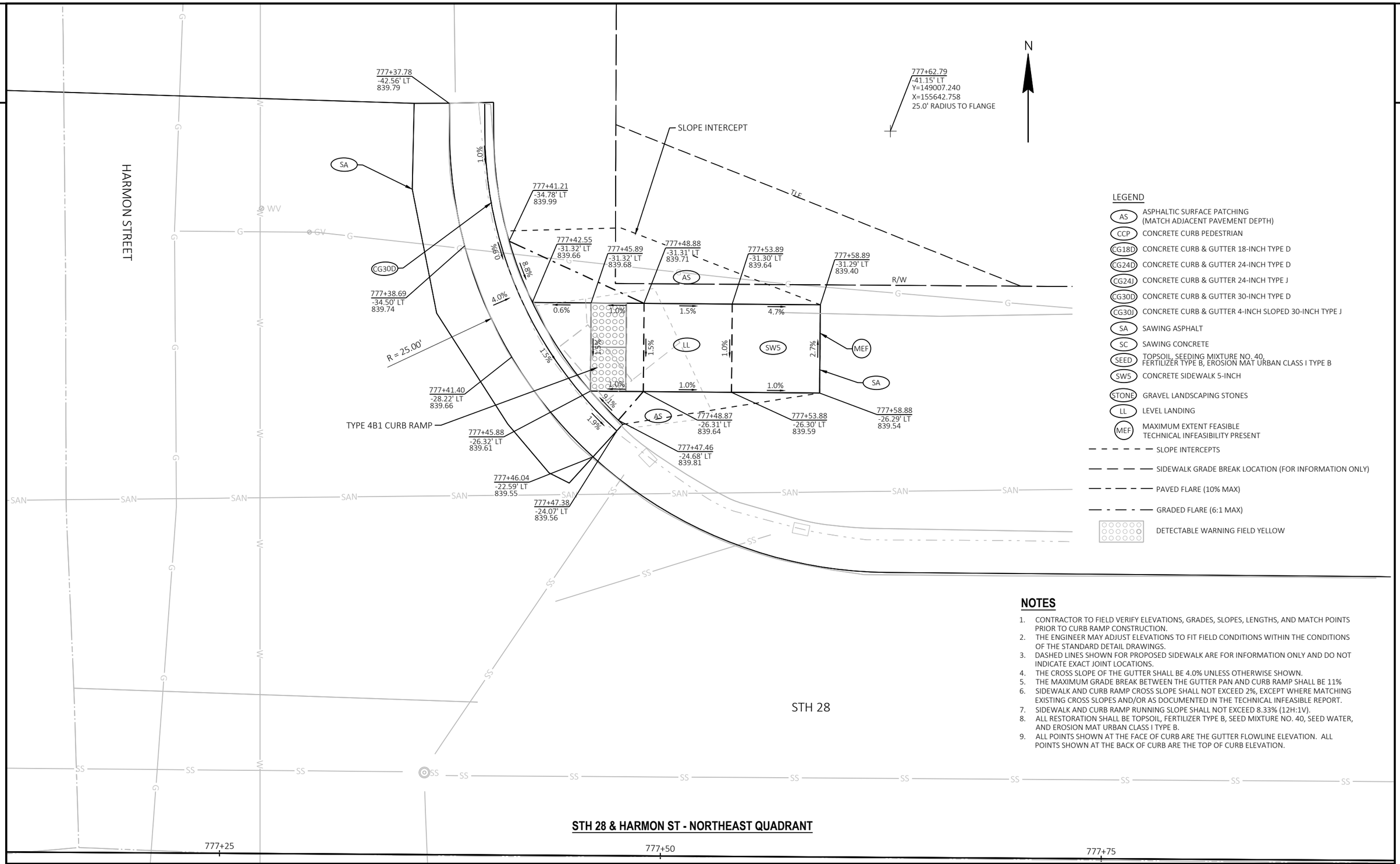
776+75

LEGEND

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- SW5 — CONCRETE SIDEWALK 5-INCH
- STONE — GRAVEL LANDSCAPING STONES
- LL — LEVEL LANDING
- MEF — MAXIMUM EXTENT FEASIBLE TECHNICAL INFEASIBILITY PRESENT

SLOPE INTERCEPTS

SIDEWALK GRADE BREAK LOCATION (FOR INFORMATION ONLY)

PAVED FLARE (10% MAX)

GRADED FLARE (6:1 MAX)

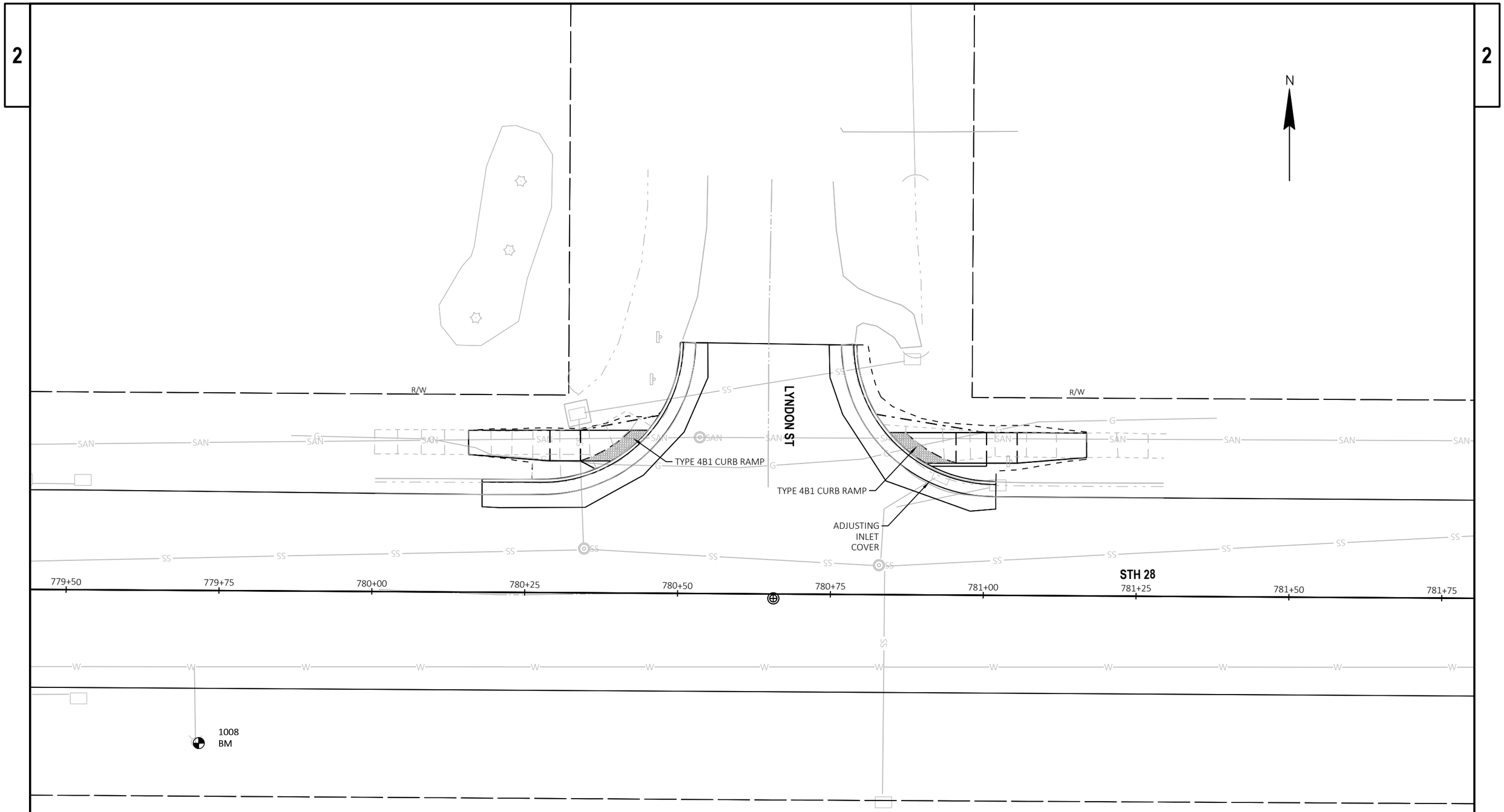
DETECTABLE WARNING FIELD YELLOW

NOTES

1. CONTRACTOR TO FIELD VERIFY ELEVATIONS, GRADES, SLOPES, LENGTHS, AND MATCH POINTS PRIOR TO CURB RAMP CONSTRUCTION.
2. THE ENGINEER MAY ADJUST ELEVATIONS TO FIT FIELD CONDITIONS WITHIN THE CONDITIONS OF THE STANDARD DETAIL DRAWINGS.
3. DASHED LINES SHOWN FOR PROPOSED SIDEWALK ARE FOR INFORMATION ONLY AND DO NOT INDICATE EXACT JOINT LOCATIONS.
4. THE CROSS SLOPE OF THE GUTTER SHALL BE 4.0% UNLESS OTHERWISE SHOWN.
5. THE MAXIMUM GRADE BREAK BETWEEN THE GUTTER PAN AND CURB RAMP SHALL BE 11%
6. SIDEWALK AND CURB RAMP CROSS SLOPE SHALL NOT EXCEED 2%, EXCEPT WHERE MATCHING EXISTING CROSS SLOPES AND/OR AS DOCUMENTED IN THE TECHNICAL INFEASIBLE REPORT.
7. SIDEWALK AND CURB RAMP RUNNING SLOPE SHALL NOT EXCEED 8.33% (12H:1V).
8. ALL RESTORATION SHALL BE TOPSOIL, FERTILIZER TYPE B, SEED MIXTURE NO. 40, SEED WATER, AND EROSION MAT URBAN CLASS I TYPE B.
9. ALL POINTS SHOWN AT THE FACE OF CURB ARE THE GUTTER FLOWLINE ELEVATION. ALL POINTS SHOWN AT THE BACK OF CURB ARE THE TOP OF CURB ELEVATION.

STH 28 & HARMON ST - NORTHEAST QUADRANT

PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	PLAN DETAILS - CURB RAMPS	SHEET 56	E



CURB RAMP OVERVIEW
STH 28 & LYNDON ST

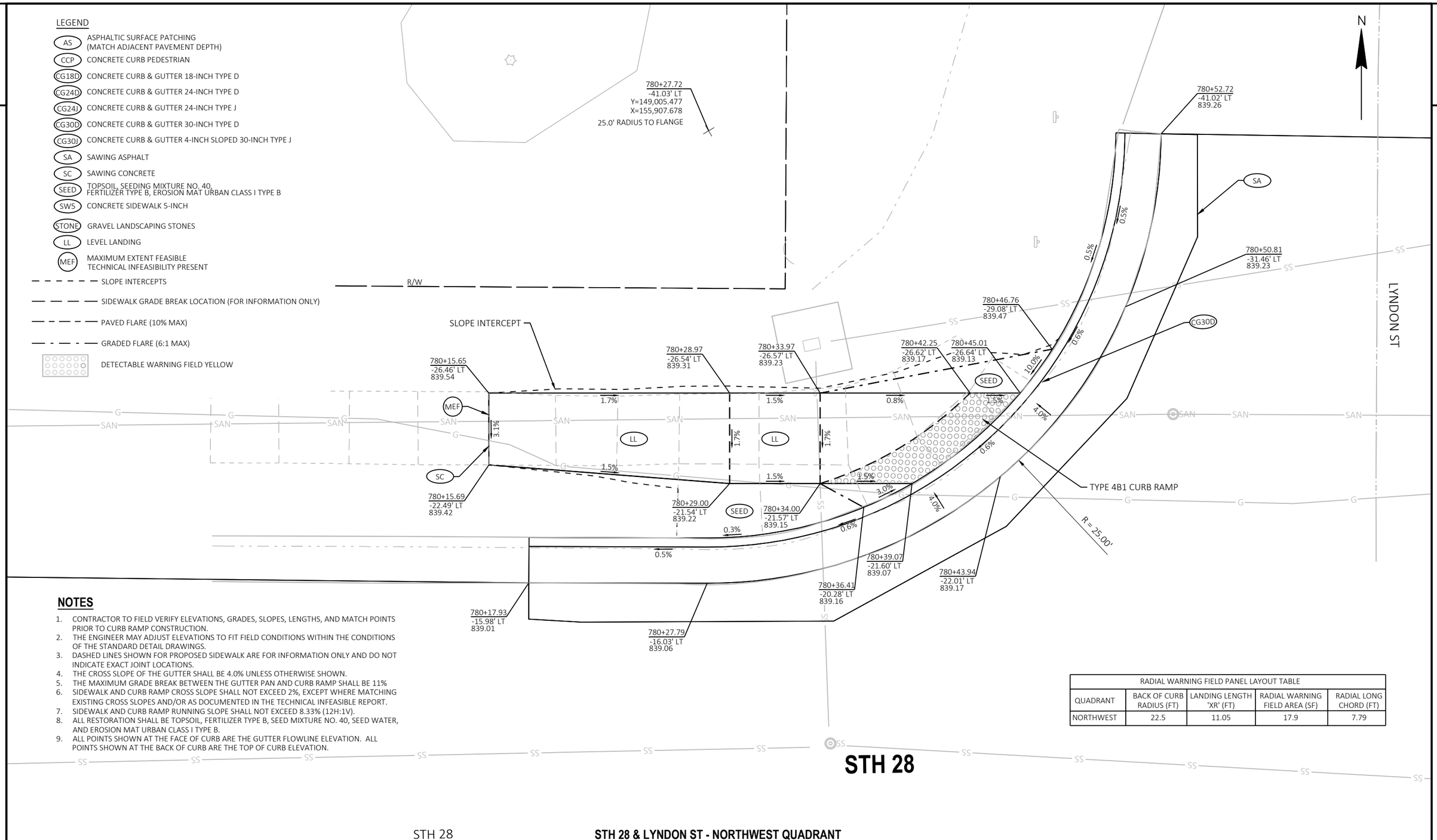
PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	PLAN DETAILS - CURB RAMPS	SHEET 57	E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\021201-PD.DWG
LAYOUT NAME - 021221a-pd
PLOT DATE : 4/23/2024 4:31 PM
PLOT BY : SIEBERT, LUKE
PLOT NAME :
PLOT SCALE : 1 IN:15 FT
WISDOT/CADDS SHEET 42

2

LEGEND

- AS — ASPHALTIC SURFACE PATCHING (MATCH ADJACENT PAVEMENT DEPTH)
- CCP — CONCRETE CURB PEDESTRIAN
- CG18D — CONCRETE CURB & GUTTER 18-INCH TYPE D
- CG24D — CONCRETE CURB & GUTTER 24-INCH TYPE D
- CG24J — CONCRETE CURB & GUTTER 24-INCH TYPE J
- CG30D — CONCRETE CURB & GUTTER 30-INCH TYPE D
- CG30J — CONCRETE CURB & GUTTER 4-INCH SLOPED 30-INCH TYPE J
- SA — SAWING ASPHALT
- SC — SAWING CONCRETE
- SEED — TOPSOIL, SEEDING MIXTURE NO. 40, FERTILIZER TYPE B, EROSION MAT URBAN CLASS I TYPE B
- SW5 — CONCRETE SIDEWALK 5-INCH
- STONE — GRAVEL LANDSCAPING STONES
- LL — LEVEL LANDING
- MEF — MAXIMUM EXTENT FEASIBLE TECHNICAL INFEASIBILITY PRESENT
- SLOPE INTERCEPTS
- SIDEWALK GRADE BREAK LOCATION (FOR INFORMATION ONLY)
- PAVED FLARE (10% MAX)
- GRADED FLARE (6:1 MAX)
- DETECTABLE WARNING FIELD YELLOW



NOTES

1. CONTRACTOR TO FIELD VERIFY ELEVATIONS, GRADES, SLOPES, LENGTHS, AND MATCH POINTS PRIOR TO CURB RAMP CONSTRUCTION.
2. THE ENGINEER MAY ADJUST ELEVATIONS TO FIT FIELD CONDITIONS WITHIN THE CONDITIONS OF THE STANDARD DETAIL DRAWINGS.
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9. ALL POINTS SHOWN AT THE FACE OF CURB ARE THE GUTTER FLOWLINE ELEVATION. ALL POINTS SHOWN AT THE BACK OF CURB ARE THE TOP OF CURB ELEVATION.

RADIAL WARNING FIELD PANEL LAYOUT TABLE				
QUADRANT	BACK OF CURB RADIUS (FT)	LANDING LENGTH 'XR' (FT)	RADIAL WARNING FIELD AREA (SF)	RADIAL LONG CHORD (FT)
NORTHWEST	22.5	11.05	17.9	7.79

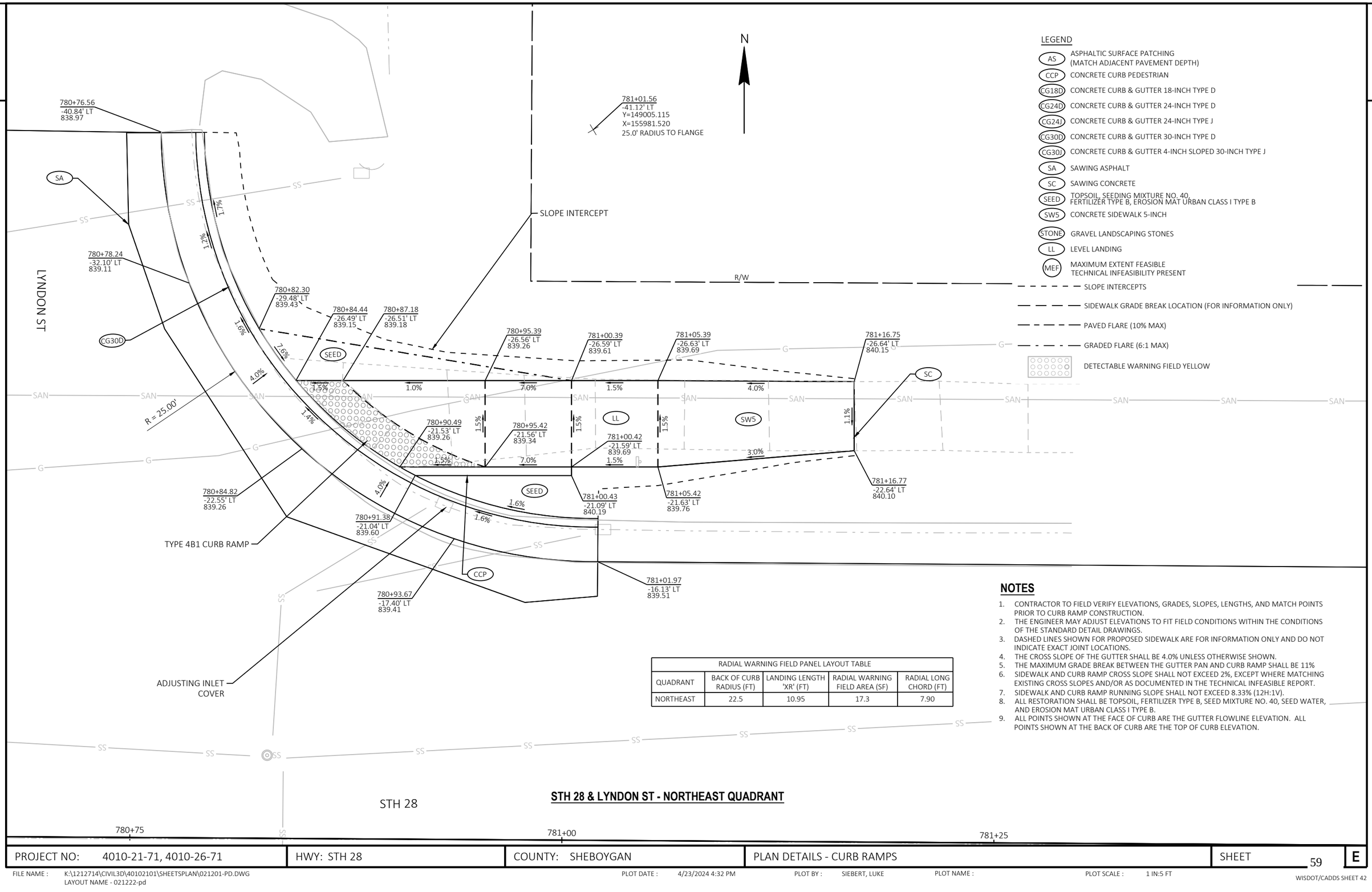
STH 28

STH 28 & LYNDON ST - NORTHWEST QUADRANT

780+00 780+25 780+50

PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	PLAN DETAILS - CURB RAMPS	SHEET 58	E

2



LEGEND

AS	ASPHALTIC SURFACE PATCHING (MATCH ADJACENT PAVEMENT DEPTH)
CCP	CONCRETE CURB PEDESTRIAN
CG18D	CONCRETE CURB & GUTTER 18-INCH TYPE D
CG24D	CONCRETE CURB & GUTTER 24-INCH TYPE D
CG24J	CONCRETE CURB & GUTTER 24-INCH TYPE J
CG30D	CONCRETE CURB & GUTTER 30-INCH TYPE D
CG30J	CONCRETE CURB & GUTTER 4-INCH SLOPED 30-INCH TYPE J
SA	SAWING ASPHALT
SC	SAWING CONCRETE
SEED	TOPSOIL, SEEDING MIXTURE NO. 40, FERTILIZER TYPE B, EROSION MAT URBAN CLASS I TYPE B
SW5	CONCRETE SIDEWALK 5-INCH
STONE	GRAVEL LANDSCAPING STONES
LL	LEVEL LANDING
MEF	MAXIMUM EXTENT FEASIBLE TECHNICAL INFEASIBILITY PRESENT

SLOPE INTERCEPTS

SIDEWALK GRADE BREAK LOCATION (FOR INFORMATION ONLY)

PAVED FLARE (10% MAX)

GRADED FLARE (6:1 MAX)

DETECTABLE WARNING FIELD YELLOW

RADIAL WARNING FIELD PANEL LAYOUT TABLE				
QUADRANT	BACK OF CURB RADIUS (FT)	LANDING LENGTH 'XR' (FT)	RADIAL WARNING FIELD AREA (SF)	RADIAL LONG CHORD (FT)
NORTHEAST	22.5	10.95	17.3	7.90

NOTES

1. CONTRACTOR TO FIELD VERIFY ELEVATIONS, GRADES, SLOPES, LENGTHS, AND MATCH POINTS PRIOR TO CURB RAMP CONSTRUCTION.
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STH 28 & LYNDON ST - NORTHEAST QUADRANT

PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	PLAN DETAILS - CURB RAMPS	SHEET 59	E

2

2

N

LAWSON ST

TYPE 4B1 CURB RAMP

TYPE 4B CURB RAMP

STH 28

783+25 783+50 783+75 R/W 784+00 784+25 784+50 784+75 785+00 785+25

1009
BM

CURB RAMP OVERVIEW
STH 28 & LAWSON ST

PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	PLAN DETAILS - CURB RAMPS	SHEET 60	E

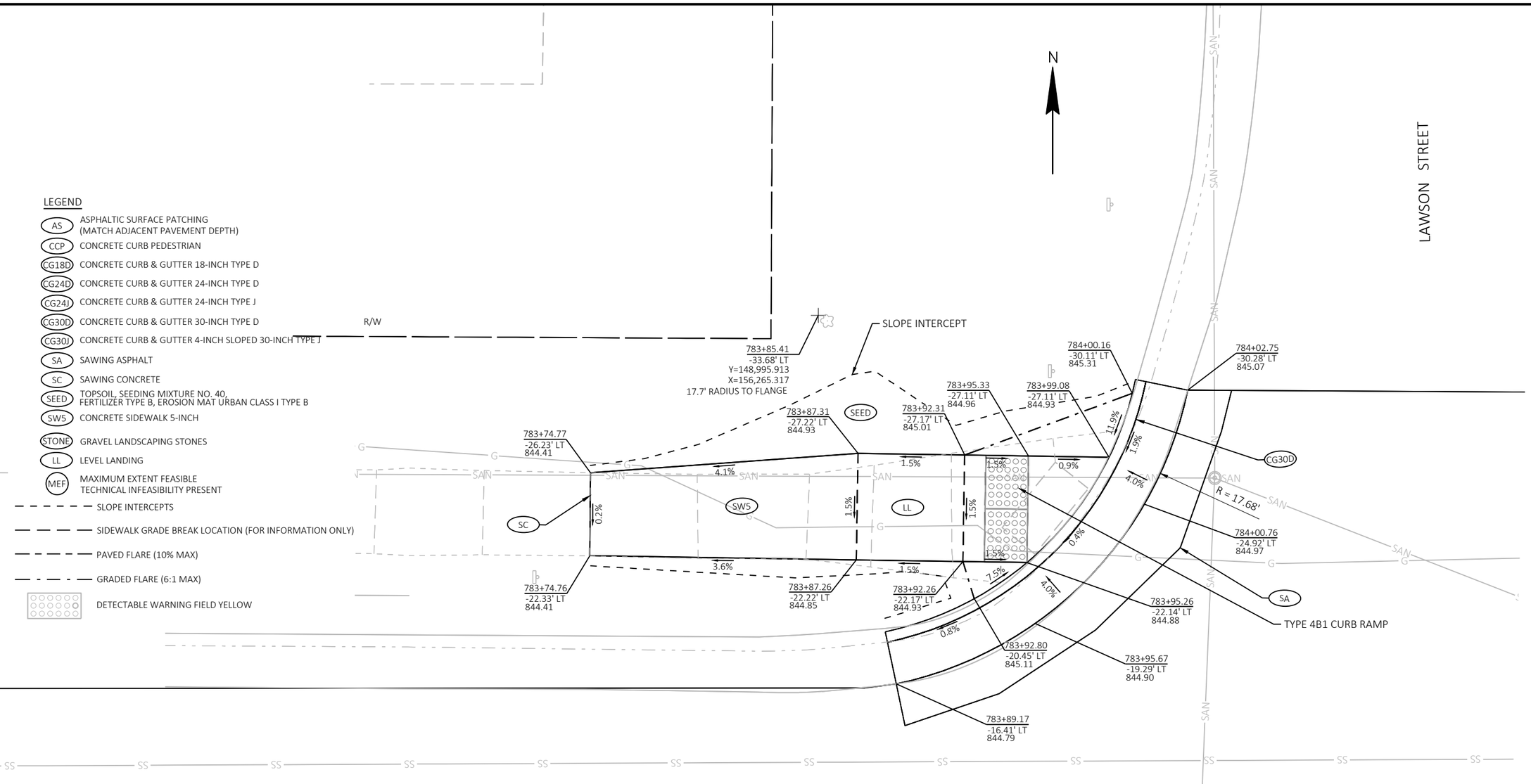
FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\021201-PD.DWG
LAYOUT NAME - 021223a-pd

PLOT DATE : 4/23/2024 4:32 PM PLOT BY : SIEBERT, LUKE PLOT NAME : PLOT SCALE : 1 IN:15 FT

2

LEGEND

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- CCP — CONCRETE CURB PEDESTRIAN
- CG18D — CONCRETE CURB & GUTTER 18-INCH TYPE D
- CG24D — CONCRETE CURB & GUTTER 24-INCH TYPE D
- CG24J — CONCRETE CURB & GUTTER 24-INCH TYPE J
- CG30D — CONCRETE CURB & GUTTER 30-INCH TYPE D
- CG30J — CONCRETE CURB & GUTTER 4-INCH SLOPED 30-INCH TYPE J
- SA — SAWING ASPHALT
- SC — SAWING CONCRETE
- SEED — TOPSOIL, SEEDING MIXTURE NO. 40, FERTILIZER TYPE B, EROSION MAT URBAN CLASS I TYPE B
- SW5 — CONCRETE SIDEWALK 5-INCH
- STONE — GRAVEL LANDSCAPING STONES
- LL — LEVEL LANDING
- MEF — MAXIMUM EXTENT FEASIBLE TECHNICAL INFEASIBILITY PRESENT
- SLOPE INTERCEPTS
- SIDEWALK GRADE BREAK LOCATION (FOR INFORMATION ONLY)
- PAVED FLARE (10% MAX)
- GRADED FLARE (6:1 MAX)
- DETECTABLE WARNING FIELD YELLOW



NOTES

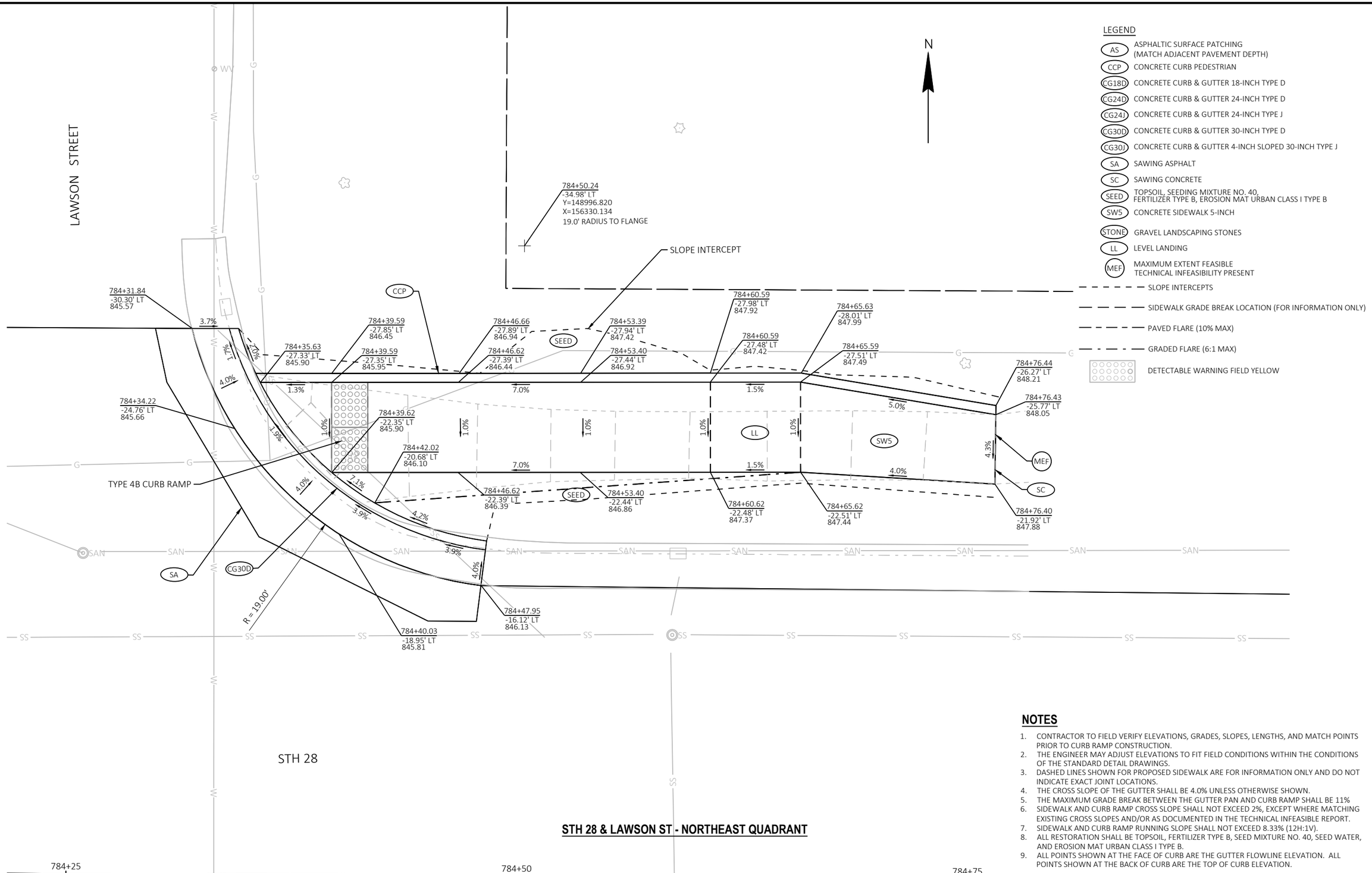
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STH 28

STH 28 & LAWSON ST - NORTHWEST QUADRANT

783+50 783+75 784+00

2



LEGEND

- AS — ASPHALTIC SURFACE PATCHING (MATCH ADJACENT PAVEMENT DEPTH)
- CCP — CONCRETE CURB PEDESTRIAN
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- CG24J — CONCRETE CURB & GUTTER 24-INCH TYPE J
- CG30D — CONCRETE CURB & GUTTER 30-INCH TYPE D
- CG30J — CONCRETE CURB & GUTTER 4-INCH SLOPED 30-INCH TYPE J
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- SEED — TOPSOIL, SEEDING MIXTURE NO. 40, FERTILIZER TYPE B, EROSION MAT URBAN CLASS I TYPE B
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- STONE — GRAVEL LANDSCAPING STONES
- LL — LEVEL LANDING
- MEF — MAXIMUM EXTENT FEASIBLE TECHNICAL INFEASIBILITY PRESENT
- SLOPE INTERCEPTS
- SIDEWALK GRADE BREAK LOCATION (FOR INFORMATION ONLY)
- PAVED FLARE (10% MAX)
- GRADED FLARE (6:1 MAX)
- DETECTABLE WARNING FIELD YELLOW

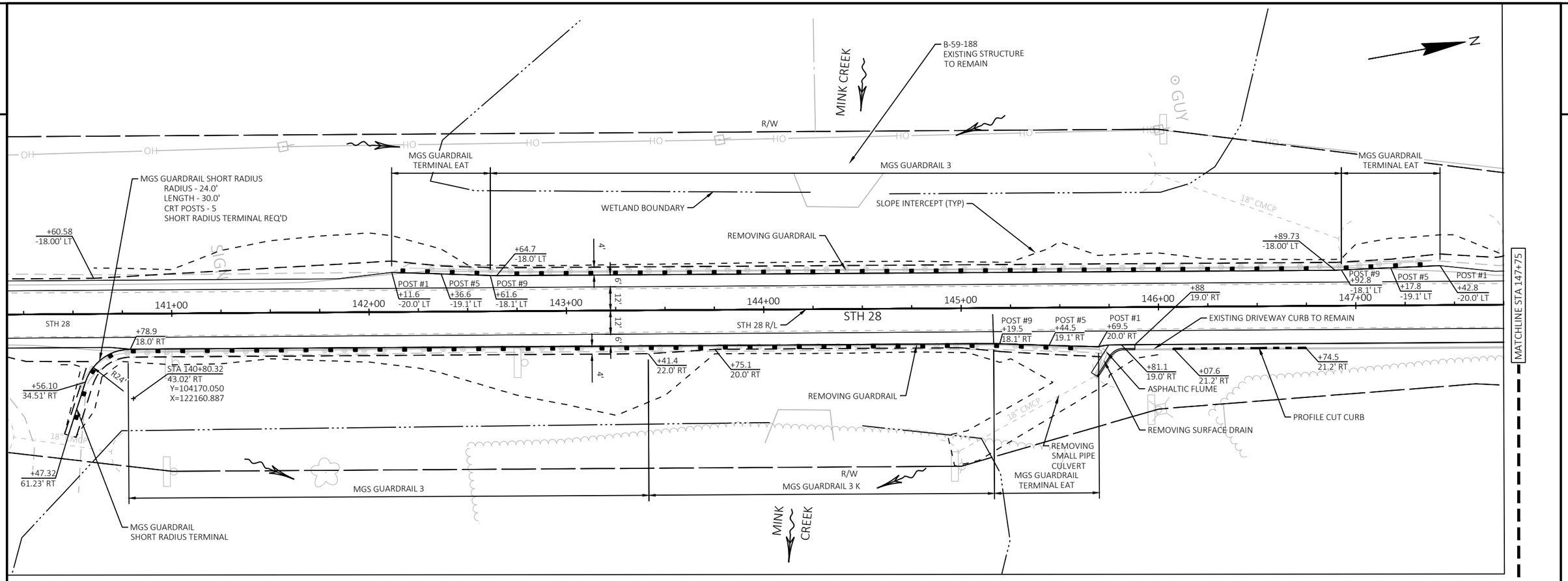
NOTES

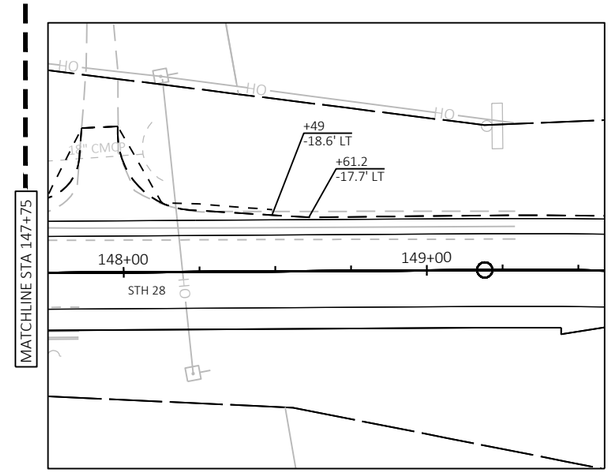
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STH 28 & LAWSON ST - NORTHEAST QUADRANT

PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	PLAN DETAILS - CURB RAMPS	SHEET 62	E

2

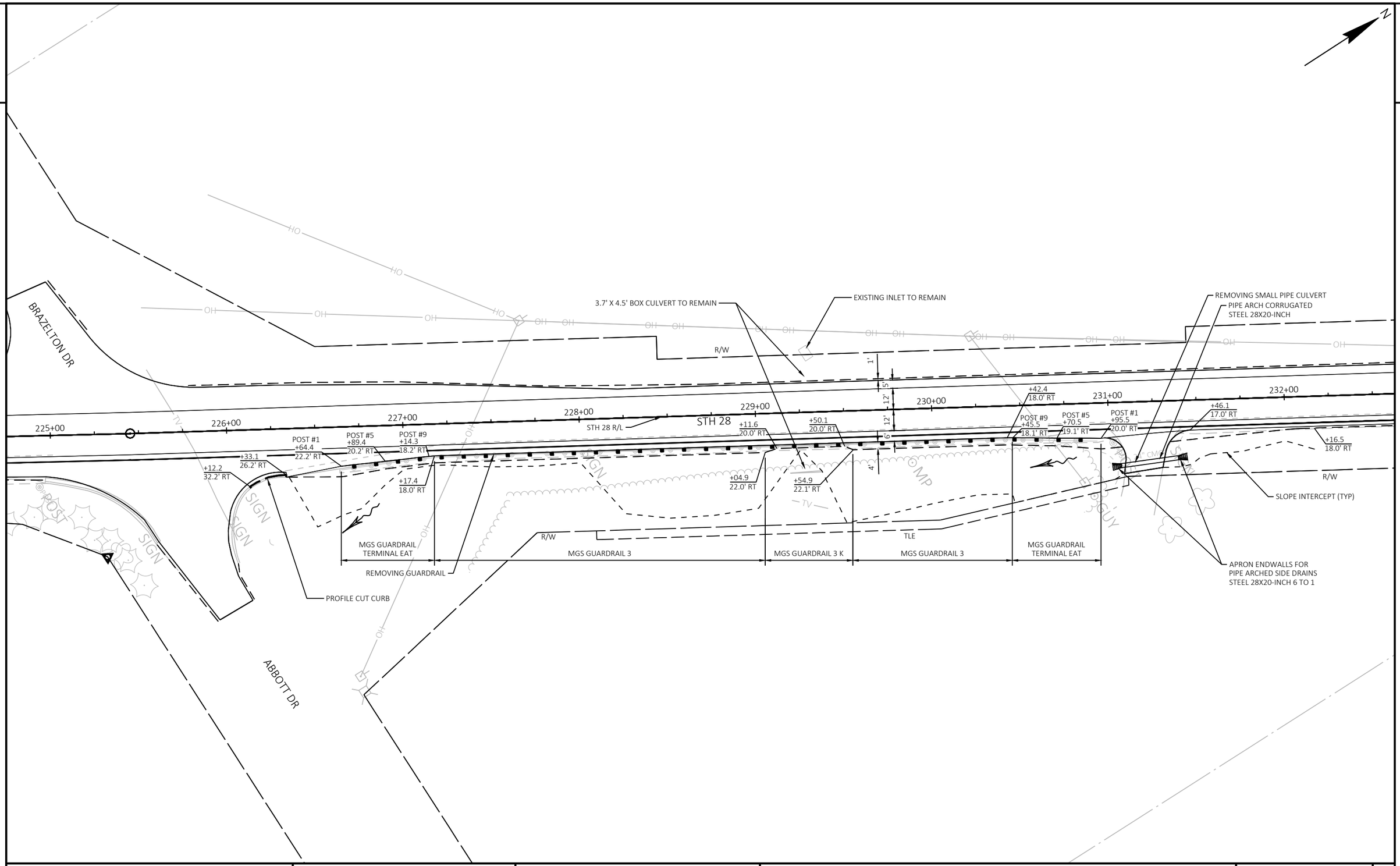




NOTES
MGS GUARDRAIL SHORT RADIUS FIELD CUT REQUIRED.

PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	PLAN DETAILS - GUARDRAIL & CULVERT REPLACEMENTS	SHEET 63	E

2



PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	PLAN DETAILS - GUARDRAIL & CULVERT REPLACEMENTS	SHEET 64	E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\021301-PD.DWG
LAYOUT NAME - 021302-pd

PLOT DATE : 4/23/2024 4:34 PM PLOT BY : SIEBERT, LUKE PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

2

N

SCHOOL DR

SLOPE INTERCEPT

APRON ENDWALLS FOR CULVERT PIPE SLOPED CROSS DRAINS STEEL 38x60-INCH 4 TO 1

REMOVING SMALL PIPE CULVERTS

LIMITS OF CULVERT PIPE TRANSITION (SEE DETAIL)

TLE

R/W

R/W

R/W

OH

OH

OH

3:1

12'

315+00

316+00

317+00

318+00

319+00

320+00

321+00

STH 28

STH 28 R/L

131.4'

R/W

CAUTION

WETLAND BOUNDARY

R/W

LIMITS OF CULVERT PIPE TRANSITION (SEE DETAIL)

WETLAND BOUNDARY

CPRCHE CLASS HE-IV 38X60-INCH
STA 318+22.77, -22.37' LT
INVERT 1: 848.95
STA 318+22.77, 29.62' RT
INVERT 2: 848.58
LENGTH: 52 FT
SLOPE: 0.71%
SKEW 0°

CPRCHE CLASS HE-IV 38X60-INCH
STA 318+13.31, -22.37' LT
INVERT 1: 848.95
STA 318+13.31, 29.62' RT
INVERT 2: 848.58
LENGTH: 52 FT
SLOPE: 0.71%
SKEW 0°

APRON ENDWALLS FOR CULVERT PIPE SLOPED CROSS DRAINS STEEL 38x60-INCH 4 TO 1

PLE

RIPRAP MEDIUM

PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	PLAN DETAILS - GUARDRAIL & CULVERT REPLACEMENTS	SHEET 65	E

2

N

MELIUS CREEK

R/W

WETLAND BOUNDARY (TYP)

SLOPE INTERCEPT (TYP)

MGS GUARDRAIL TERMINAL EAT

MGS GUARDRAIL 3

MGS GUARDRAIL 3K

MGS GUARDRAIL 3

MGS GUARDRAIL TERMINAL EAT

REMOVING GUARDRAIL

+08.9 -18.0' LT

+78.9 -18.0' LT

18" CMCP

+84.8 -17.0' LT

POST #1 +14.8 -20.0' LT

+68 -18.0' LT

+84.4 -21.0' LT

+80.5 -22.0' LT

+05.5 -22.0' LT

+96.8 -21.0' LT

+30.5 -18.0' LT

18" CMCP

+13.4 -18.0' LT

+02 -17.7' LT

+19.7 -17.8' LT

POST #5 +39.8 -19.1' LT

POST #9 +64.8 -18.1' LT

POST #9 +33.6 -18.1' LT

POST #5 +58.6 -19.1' LT

POST #1 +83.58 -20.00' LT

3'

6'

12'

12'

6'

4'

407+00

408+00

409+00

410+00

411+00

412+00

413+00

414+00

STH 28

STH 28 R/L

STH 28

STH 28

POST #1 +12.2 20.0' RT

POST #5 +37.2 19.1' RT

POST #9 +62.2 18.1' RT

+90.27 18.00' RT

+36.9 20.0' RT

+65.2 17.0' RT

+75 18.0' RT

+81.8 17.0' RT

+65.3 18.0' RT

MGS GUARDRAIL TERMINAL EAT

REMOVING GUARDRAIL

MGS GUARDRAIL 3

R24

MGS GUARDRAIL SHORT RADIUS
RADIUS - 24.0'
LENGTH - 25.0'
CRT POSTS - 4
SHORT RADIUS TERMINAL REQ'D

+11 29.9' RT

MELIUS CREEK

R/W

STA 410+90.28 42.00' RT Y=129192.714 X=129609.968

+25.2 54.2' RT

MGS GUARDRAIL SHORT RADIUS TERMINAL

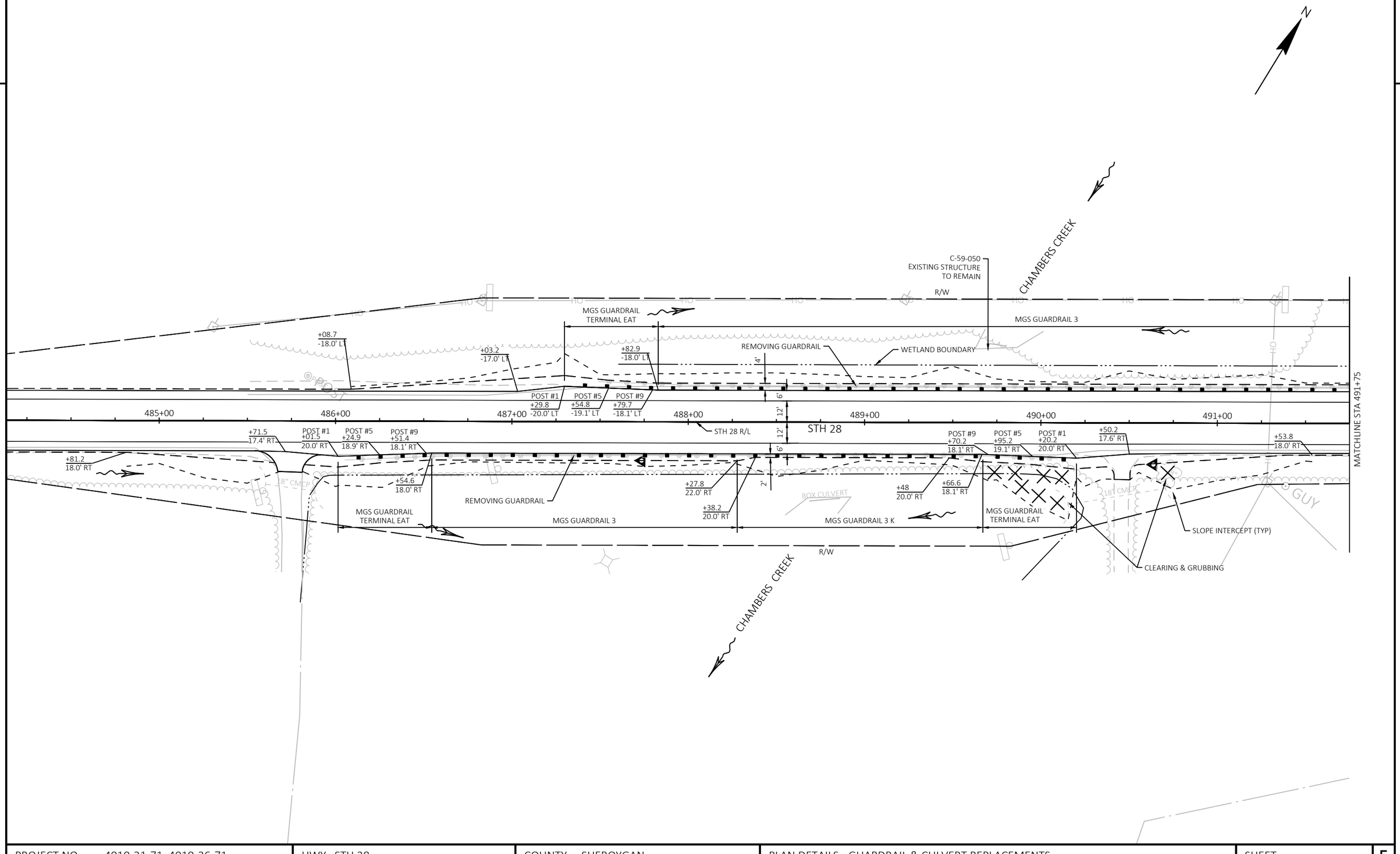
C-59-047
EXISTING STRUCTURE
TO REMAIN

PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	PLAN DETAILS - GUARDRAIL & CULVERT REPLACEMENTS	SHEET 66	E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\021301-PD.DWG
LAYOUT NAME - 021303-pd

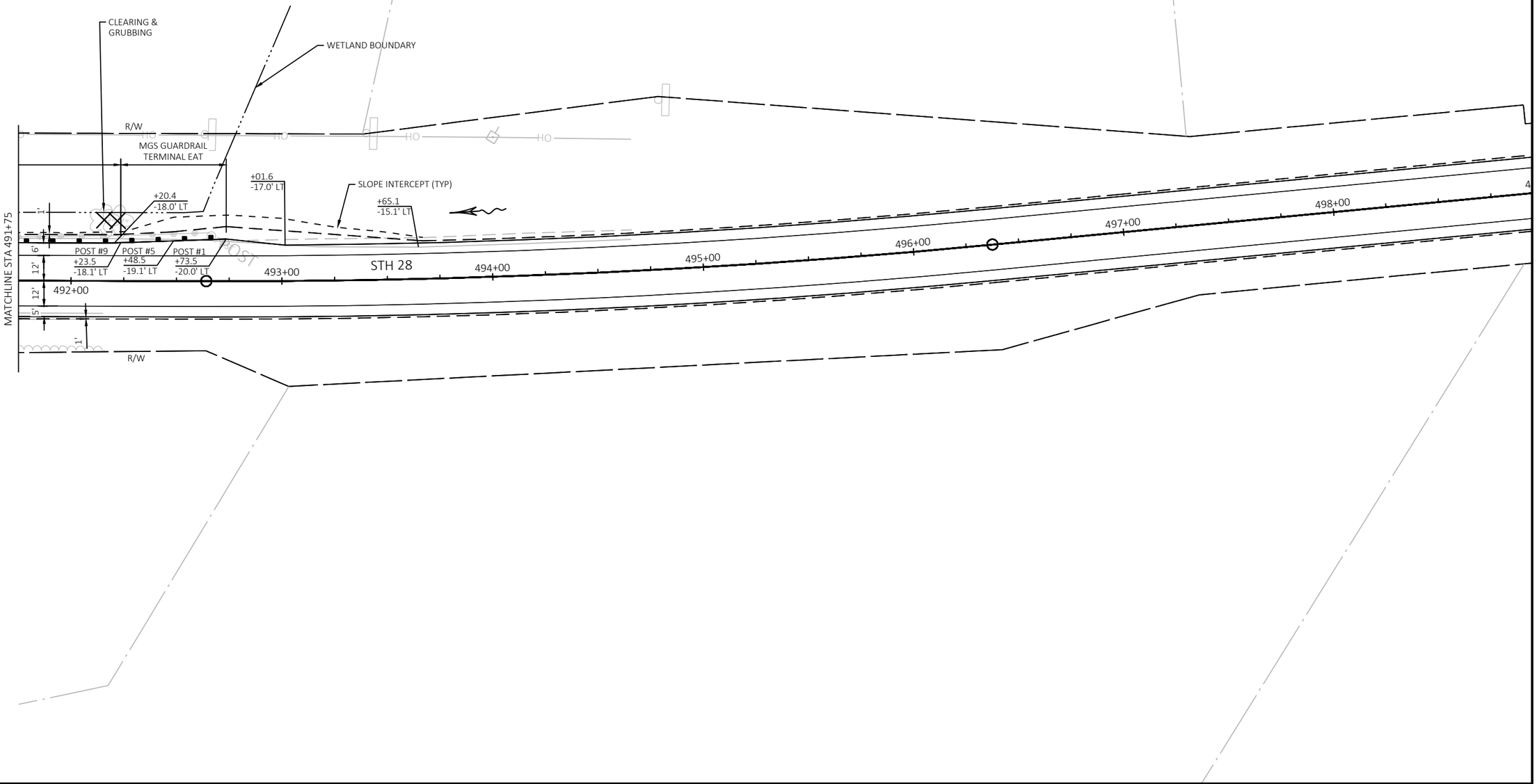
PLOT DATE : 4/24/2024 2:41 PM PLOT BY : SIEBERT, LUKE PLOT NAME : PLOT SCALE : 1 IN:50 FT

2



PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	PLAN DETAILS - GUARDRAIL & CULVERT REPLACEMENTS	SHEET 67	E

2



PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	PLAN DETAILS - GUARDRAIL & CULVERT REPLACEMENTS	SHEET 68	E

NOTES
MGS GUARDRAIL SHORT RADIUS FIELD CUT REQUIRED.

CLEARING & GRUBBING

APRON ENDWALLS FOR CULVERT PIPE STEEL 15-INCH
STA 77+79.55, -36.85 LT
INVERT: 901.88

CPCS 36-INCH
STA 77+99.69, -34.54' LT
INVERT 1: 895.89
STA 78+02.51, -37.30' LT
INVERT 2: 895.57
LENGTH: 4 FT
SLOPE: 7.62%

MGS GUARDRAIL TERMINAL EAT

APRON ENDWALLS FOR CULVERT PIPE STEEL 36-INCH
STA 78+02.51, -37.30 LT
INVERT: 895.57

EXISTING STRUCTURE TO REMAIN

WETLAND BOUNDARY

MGS GUARDRAIL 3

MGS GUARDRAIL TERMINAL EAT

REMOVING GUARDRAIL

MGS GUARDRAIL SHORT RADIUS
RADIUS - 62.0'
LENGTH - 51.0'
CRT POSTS - 9

STH 28

STH 28 R/L

CTH F

R/W

45" CMP

36" CMP

15" CMP

60" CMP

R62'

R3083'

CAUTION

BM 1013

BM 1014

SLOPE INTERCEPT (TYP.)

PROFILE CUT CURB

MATCHLINE STA 573+00

MATCHLINE STA 573+00

PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	PLAN DETAILS - GUARDRAIL & CULVERT REPLACEMENTS	SHEET 69 E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\021301-PD.DWG
LAYOUT NAME - 021305-pd
PLOT DATE : 4/24/2024 2:53 PM
PLOT BY : SIEBERT, LUKE
PLOT NAME :
PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 42

2

2

CAUTION

REMOVE EXISTING 6" PIPE TO GRADING LIMITS. GRADE AREA TO DRAIN INTO DITCH AND NEW CULVERT PIPE.

APRON ENDWALLS FOR CULVERT PIPE SLOPED CROSS DRAINS STEEL 48-INCH 4 TO 1

REMOVING MASONRY (FOR CONCRETE BEYOND THE ENDWALLS/WINGWALLS INCLUDING STEPS,WALKWAYS, ETC. IN ORDER TO INSTALL THE PROPOSED PIPE)

REMOVING FENCE

SLOPE INTERCEPT (TYP)

LIMITS OF CULVERT PIPE TRANSITION (SEE DETAIL)

WETLAND BOUNDARY

+33.7
-33.0' LT

ASPHALTIC FLUME

+82.4
-17.9' LT

+53
-34.9' LT

TLE

R/W

REMOVING GUARDRAIL

CLEARING & GRUBBING

1016 BM

1018 BM

631+00 632+00 633+00 634+00 635+00 636+00 637+00 638

12'

5'

1'

+86
18.1' RT

ASPHALTIC FLUME

LIMITS OF CULVERT PIPE TRANSITION (SEE DETAIL)

WETLAND BOUNDARY

REMOVING GUARDRAIL

REMOVE OLD STRUCTURE
STA 633+78
42"X54" CONCRETE BOX CULVERT
55'W X 4.5'L

REMOVING MASONRY (FOR CONCRETE BEYOND THE ENDWALLS/WINGWALLS INCLUDING STEPS,WALKWAYS, ETC. IN ORDER TO INSTALL THE PROPOSED PIPE)

CPRC CLASS IV 48-INCH
STA 633+78.40, -30.11' LT
INVERT 1: 874.07
STA 633+78.32, 31.94' RT
INVERT 2: 873.61
LENGTH: 62 FT
SLOPE: 0.74%
SKEW 0°

APRON ENDWALLS FOR CULVERT PIPE SLOPED CROSS DRAINS STEEL 48-INCH 4 TO 1

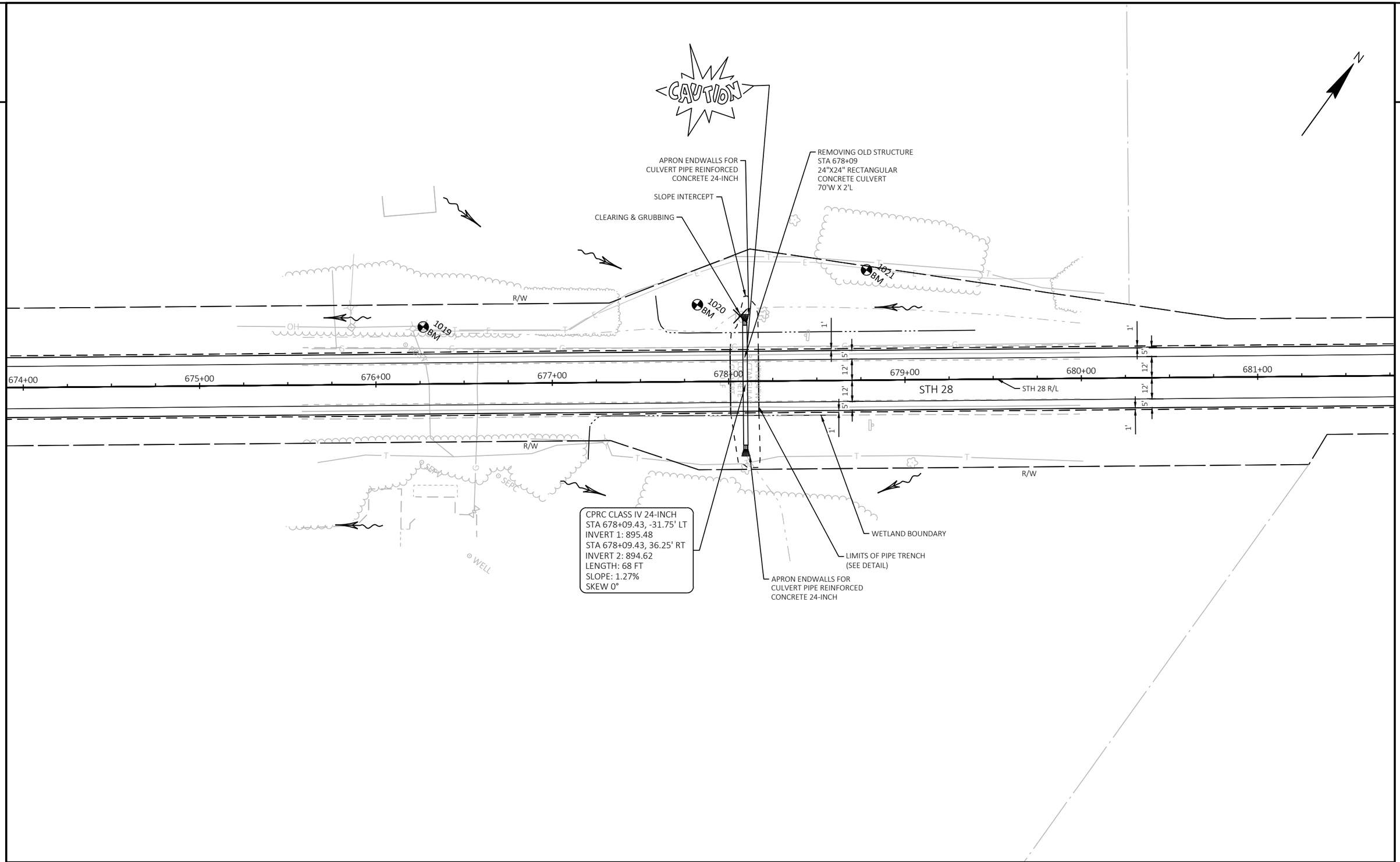
PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	PLAN DETAILS - GUARDRAIL & CULVERT REPLACEMENTS	SHEET 70	E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\021301-PD.DWG
LAYOUT NAME - 021306-pd

PLOT DATE : 7/26/2024 2:03 PM PLOT BY : SIEBERT, LUKE PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

2

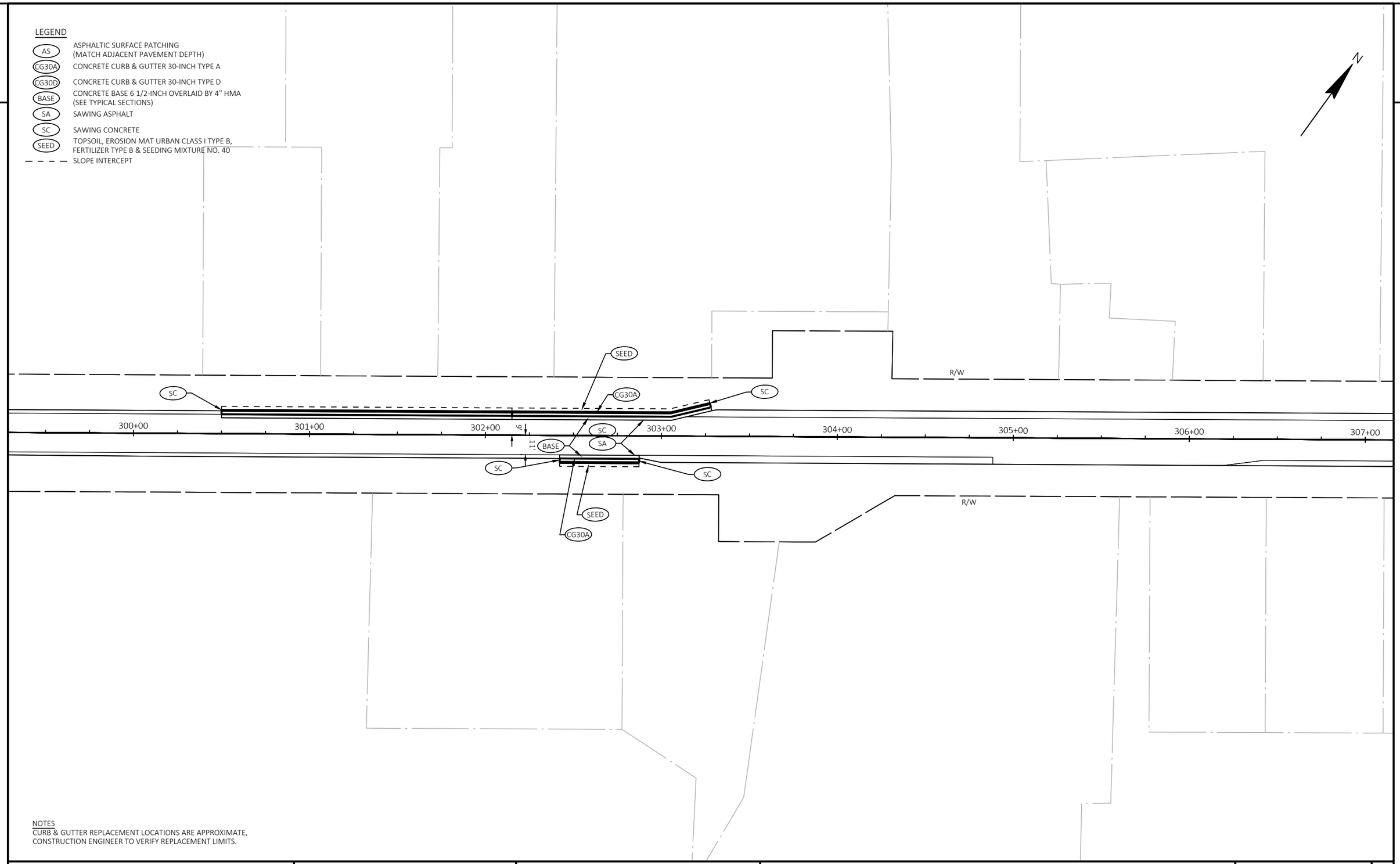


PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	PLAN DETAILS - GUARDRAIL & CULVERT REPLACEMENTS	SHEET 71	E

2

LEGEND

- AS — ASPHALTIC SURFACE PATCHING (MATCH ADJACENT PAVEMENT DEPTH)
- CG30A — CONCRETE CURB & GUTTER 30-INCH TYPE A
- CG30D — CONCRETE CURB & GUTTER 30-INCH TYPE D
- BASE — CONCRETE BASE 6 1/2-INCH OVERLAID BY 4" HMA (SEE TYPICAL SECTIONS)
- SA — SAWING ASPHALT
- SC — SAWING CONCRETE
- SEED — TOPSOIL, EROSION MAT URBAN CLASS I TYPE B, FERTILIZER TYPE B & SEEDING MIXTURE NO. 40
- SLOPE INTERCEPT



NOTES
CURB & GUTTER REPLACEMENT LOCATIONS ARE APPROXIMATE, CONSTRUCTION ENGINEER TO VERIFY REPLACEMENT LIMITS.

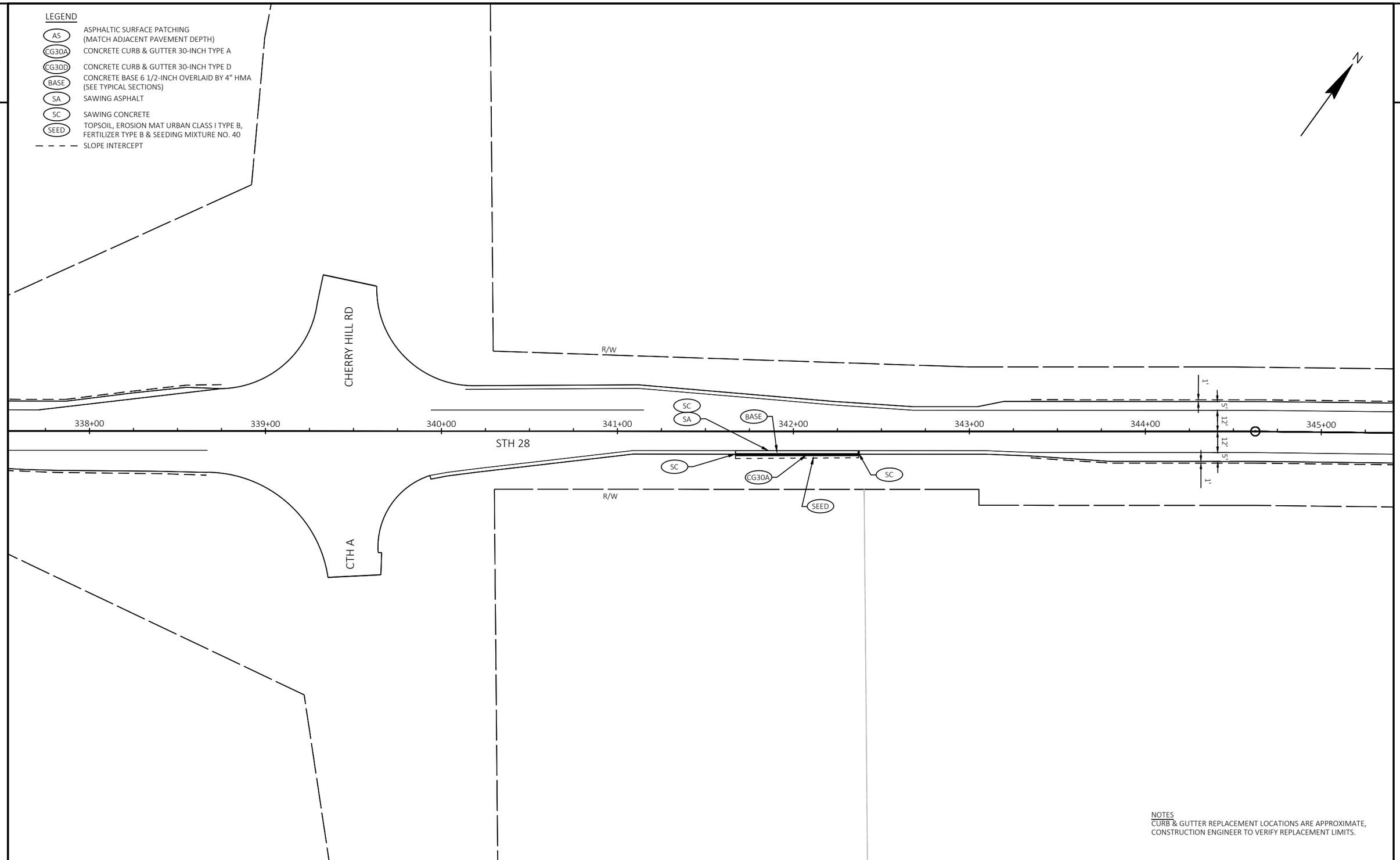
PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	PLAN DETAILS - CURB & GUTTER REPLACEMENTS	SHEET 72	E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\021301-PD.DWG
LAYOUT NAME - 021308-pd
PLOT DATE : 4/23/2024 4:35 PM
PLOT BY : SIEBERT, LUKE
PLOT NAME :
PLOT SCALE : 1 IN:50 FT

2

LEGEND

- AS — ASPHALTIC SURFACE PATCHING (MATCH ADJACENT PAVEMENT DEPTH)
- CG30A — CONCRETE CURB & GUTTER 30-INCH TYPE A
- CG30D — CONCRETE CURB & GUTTER 30-INCH TYPE D
- BASE — CONCRETE BASE 6 1/2-INCH OVERLAID BY 4" HMA (SEE TYPICAL SECTIONS)
- SA — SAWING ASPHALT
- SC — SAWING CONCRETE
- SEED — TOPSOIL, EROSION MAT URBAN CLASS I TYPE B, FERTILIZER TYPE B & SEEDING MIXTURE NO. 40
- SLOPE INTERCEPT



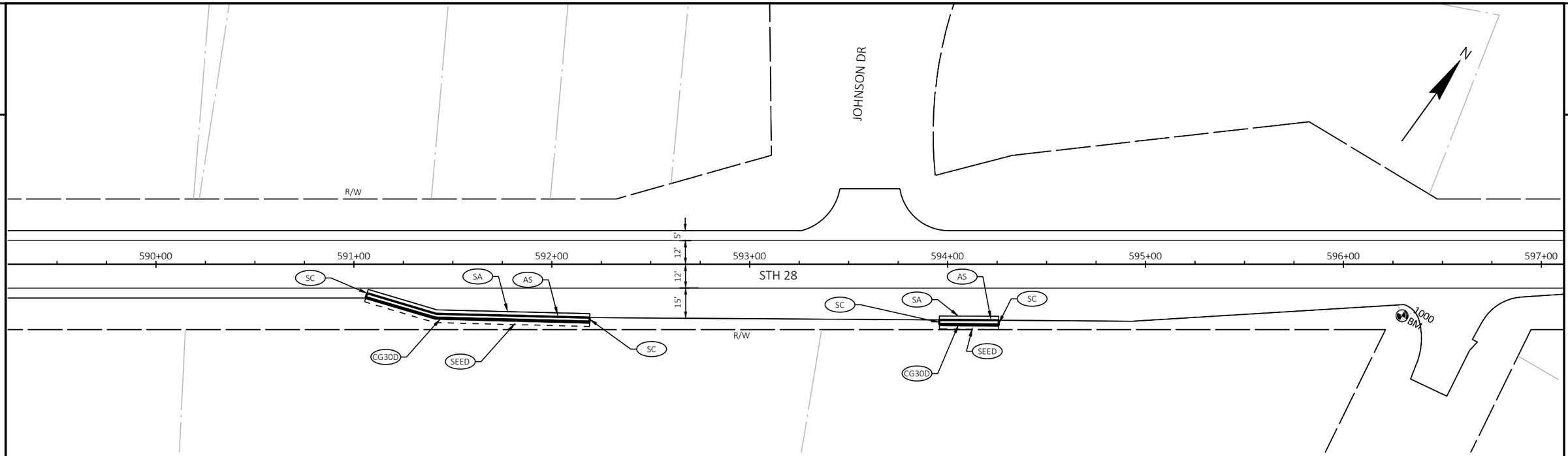
NOTES
CURB & GUTTER REPLACEMENT LOCATIONS ARE APPROXIMATE, CONSTRUCTION ENGINEER TO VERIFY REPLACEMENT LIMITS.

PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	PLAN DETAILS - CURB & GUTTER REPLACEMENTS	SHEET 73	E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\021301-PD.DWG
LAYOUT NAME - 021309-pd

PLOT DATE : 4/23/2024 4:35 PM PLOT BY : SIEBERT, LUKE PLOT NAME : PLOT SCALE : 1 IN:50 FT

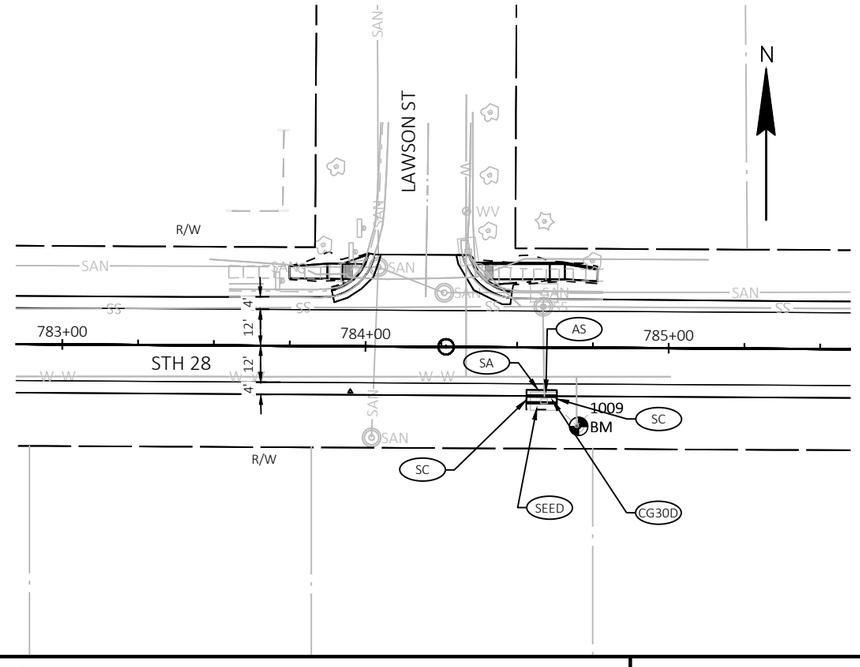
WISDOT/CADDS SHEET 42



NOTES
CURB & GUTTER REPLACEMENT LOCATIONS ARE APPROXIMATE, CONSTRUCTION ENGINEER TO VERIFY REPLACEMENT LIMITS.

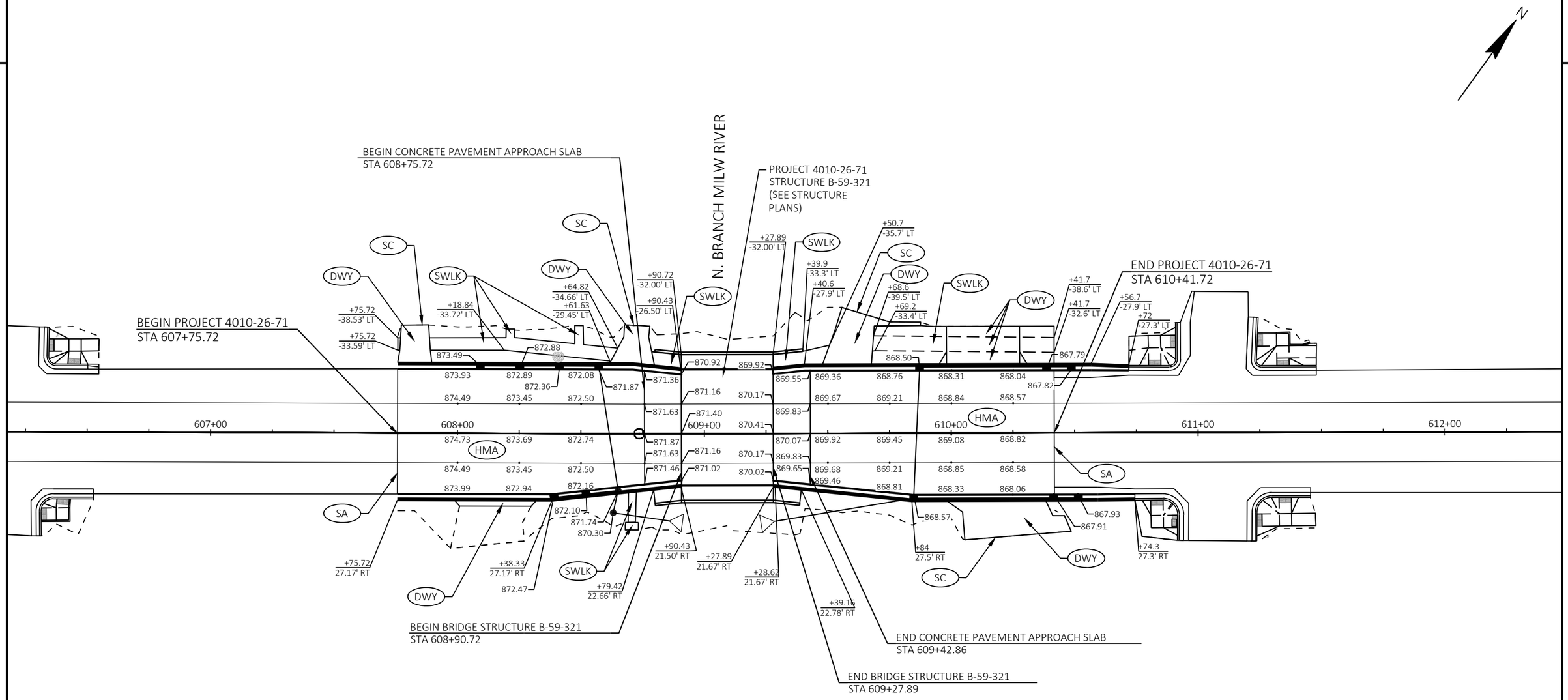
LEGEND

AS	ASPHALTIC SURFACE PATCHING (MATCH ADJACENT PAVEMENT DEPTH)
CG30A	CONCRETE CURB & GUTTER 30-INCH TYPE A
CG30D	CONCRETE CURB & GUTTER 30-INCH TYPE D
BASE	CONCRETE BASE 6 1/2-INCH OVERLAID BY 4" HMA (SEE TYPICAL SECTIONS)
SA	SAWING ASPHALT
SC	SAWING CONCRETE
SEED	TOPSOIL, EROSION MAT URBAN CLASS I TYPE B, FERTILIZER TYPE B & SEEDING MIXTURE NO. 40
- - - -	SLOPE INTERCEPT



PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	PLAN DETAILS - CURB & GUTTER REPLACEMENTS	SHEET 74	E

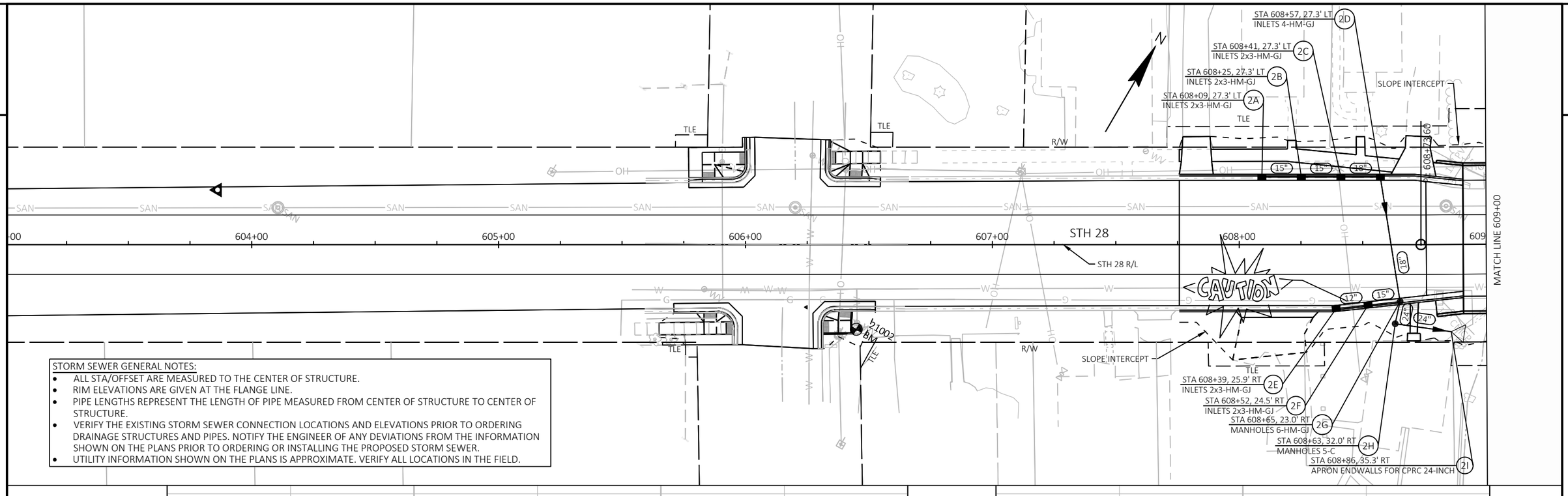
2



LEGEND

HMA	HMA PAVEMENT
CG30J	CONCRETE CURB & GUTTER 4-INCH SLOPED 30-INCH TYPE J
DWY	CONCRETE DRIVEWAY 6-INCH
SWLK	CONCRETE SIDEWALK 5-INCH
SA	SAWING ASPHALT
SC	SAWING CONCRETE
SEED	TOPSOIL, EROSION MAT URBAN CLASS I TYPE B, FERTILIZER TYPE B & SEEDING MIXTURE NO. 40
– – – –	SLOPE INTERCEPT

PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	PAVING DETAILS	SHEET 75	E


STA 608+57, 27.3' LT
INLETS 4-HM-GJ
2D
STA 608+41, 27.3' LT
INLETS 2x3-HM-GJ
2C
STA 608+25, 27.3' LT
INLETS 2x3-HM-GJ
2B
STA 608+09, 27.3' LT
INLETS 2x3-HM-GJ
2A
SLOPE INTERCEPT
TLE
R/W
608+73.60
15"
15"
48"
OH
SAN
SAN
SAN

2

MATCH LINE 609+00

1C STA 609+87, 26.8' LT
INLETS 2x3-HM-GJ

1B STA 610+39, 26.8' LT
INLETS 2x3-HM-GJ

1A STA 610+49, 26.8' LT
INLETS 2x3-HM-GJ

1D STA 610+51, 26.3' RT
INLETS 2x3-HM-GJ

1E STA 610+41, 26.3' RT
INLETS 2x3-HM-GJ

1F STA 609+85, 26.3' RT
INLETS 4-HM-GJ

1G STA 609+28, 35.6' RT
APRON ENDWALLS FOR CPRC 18-INCH

SLOPE INTERCEPT

TLE

R/W

STH 28

STH 28 R/L

12"

15"

18"

CAUTION

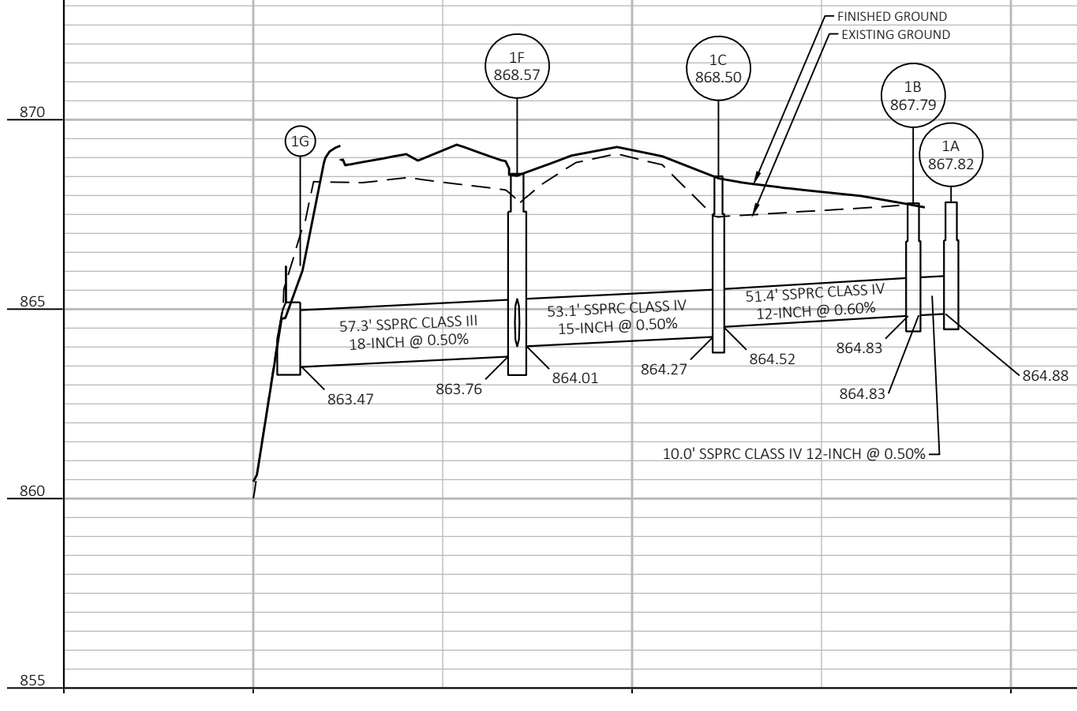
BM 1003

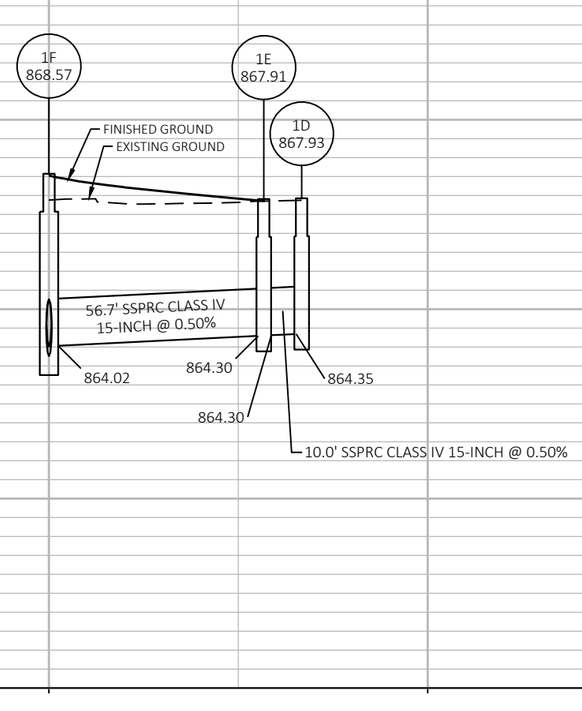
BM 1004

+00 610+00 611+00 612+00 613+00 614+00 615+00

STORM SEWER GENERAL NOTES:

- ALL STA/OFFSET ARE MEASURED TO THE CENTER OF STRUCTURE.
- RIM ELEVATIONS ARE GIVEN AT THE FLANGE LINE.
- PIPE LENGTHS REPRESENT THE LENGTH OF PIPE MEASURED FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE.
- VERIFY THE EXISTING STORM SEWER CONNECTION LOCATIONS AND ELEVATIONS PRIOR TO ORDERING DRAINAGE STRUCTURES AND PIPES. NOTIFY THE ENGINEER OF ANY DEVIATIONS FROM THE INFORMATION SHOWN ON THE PLANS PRIOR TO ORDERING OR INSTALLING THE PROPOSED STORM SEWER.
- UTILITY INFORMATION SHOWN ON THE PLANS IS APPROXIMATE. VERIFY ALL LOCATIONS IN THE FIELD.





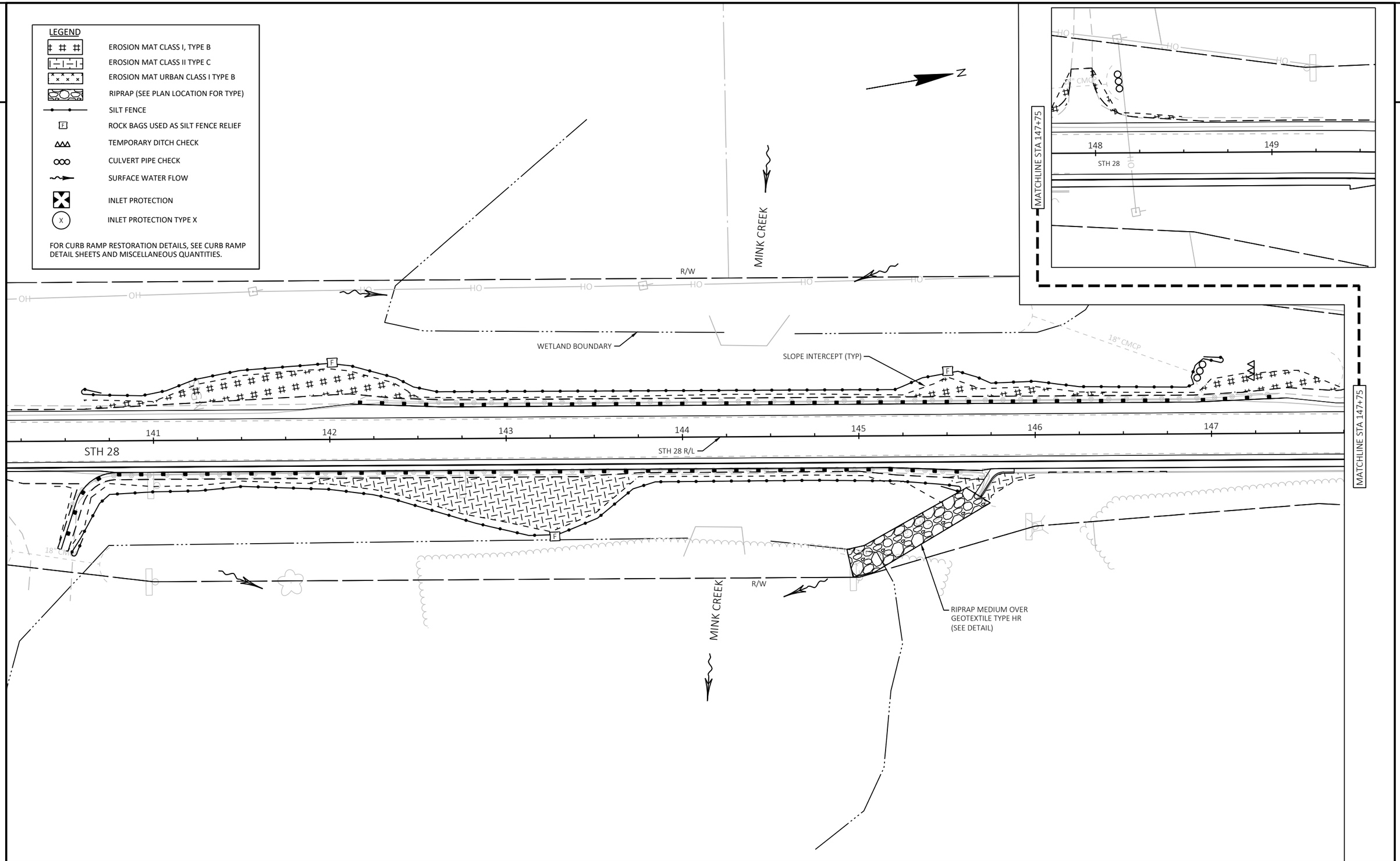
PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	STORM SEWER	SHEET 77	E

2

LEGEND

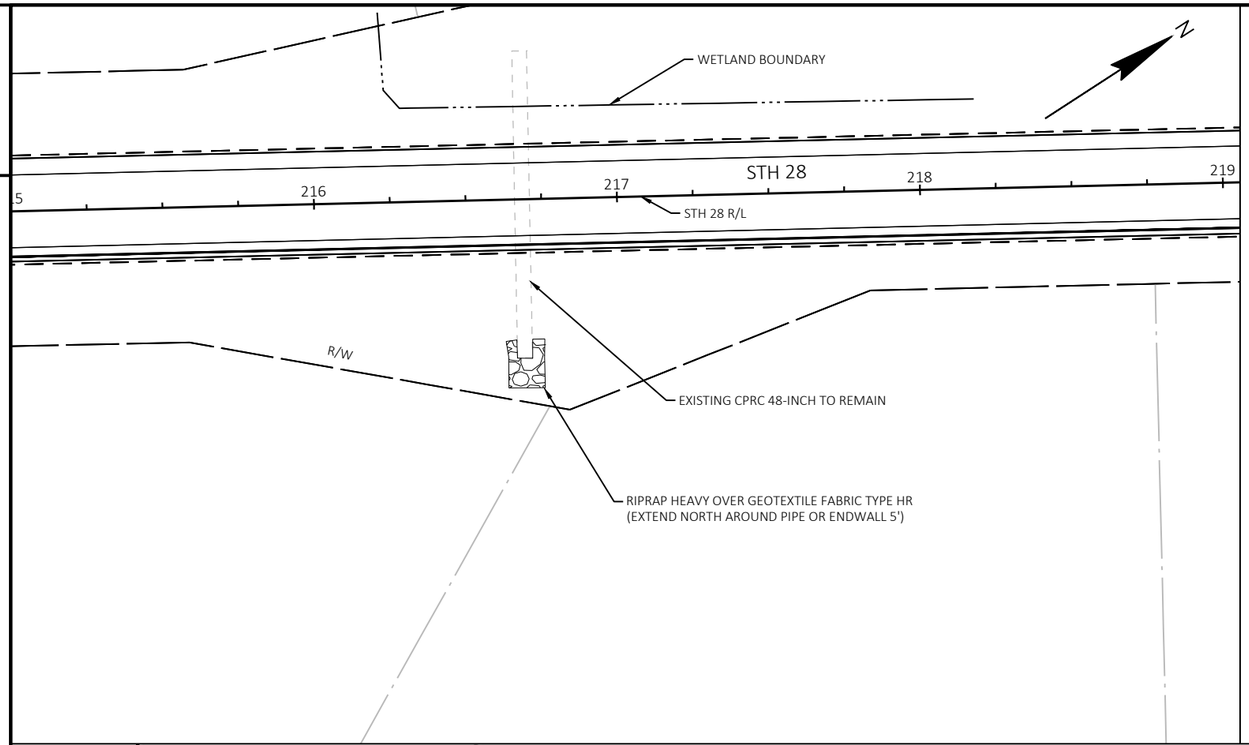
- EROSION MAT CLASS I, TYPE B
- EROSION MAT CLASS II TYPE C
- EROSION MAT URBAN CLASS I TYPE B
- RIPRAP (SEE PLAN LOCATION FOR TYPE)
- SILT FENCE
- F — ROCK BAGS USED AS SILT FENCE RELIEF
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW
- INLET PROTECTION
- X — INLET PROTECTION TYPE X

FOR CURB RAMP RESTORATION DETAILS, SEE CURB RAMP DETAIL SHEETS AND MISCELLANEOUS QUANTITIES.



PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	EROSION CONTROL	SHEET 78	E

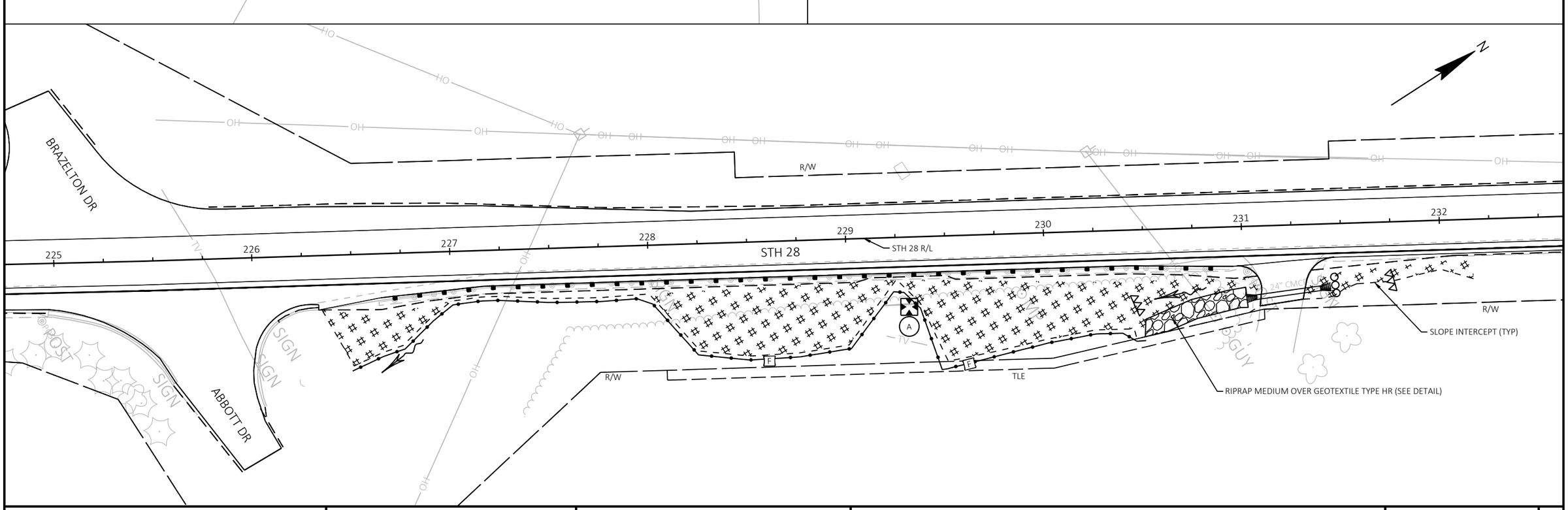
2



LEGEND

- EROSION MAT CLASS I, TYPE B
- EROSION MAT CLASS II TYPE C
- EROSION MAT URBAN CLASS I TYPE B
- RIPRAP (SEE PLAN LOCATION FOR TYPE)
- SILT FENCE
- ROCK BAGS USED AS SILT FENCE RELIEF
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW
- INLET PROTECTION
- INLET PROTECTION TYPE X

FOR CURB RAMP RESTORATION DETAILS, SEE CURB RAMP DETAIL SHEETS AND MISCELLANEOUS QUANTITIES.



PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	EROSION CONTROL	SHEET 79	E

2

LEGEND

- EROSION MAT CLASS I, TYPE B
- EROSION MAT CLASS II TYPE C
- EROSION MAT URBAN CLASS I TYPE B
- RIPRAP (SEE PLAN LOCATION FOR TYPE)
- SILT FENCE
- F — ROCK BAGS USED AS SILT FENCE RELIEF
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW
- INLET PROTECTION
- X — INLET PROTECTION TYPE X

FOR CURB RAMP RESTORATION DETAILS, SEE CURB RAMP DETAIL SHEETS AND MISCELLANEOUS QUANTITIES.

N

2

SCHOOL DR

SLOPE INTERCEPT

TLE

R/W

R/W

R/W

315 316 317 318 319 320 321

STH 28 R/L

STH 28

R/W

WETLAND BOUNDARY

R/W

WETLAND BOUNDARY

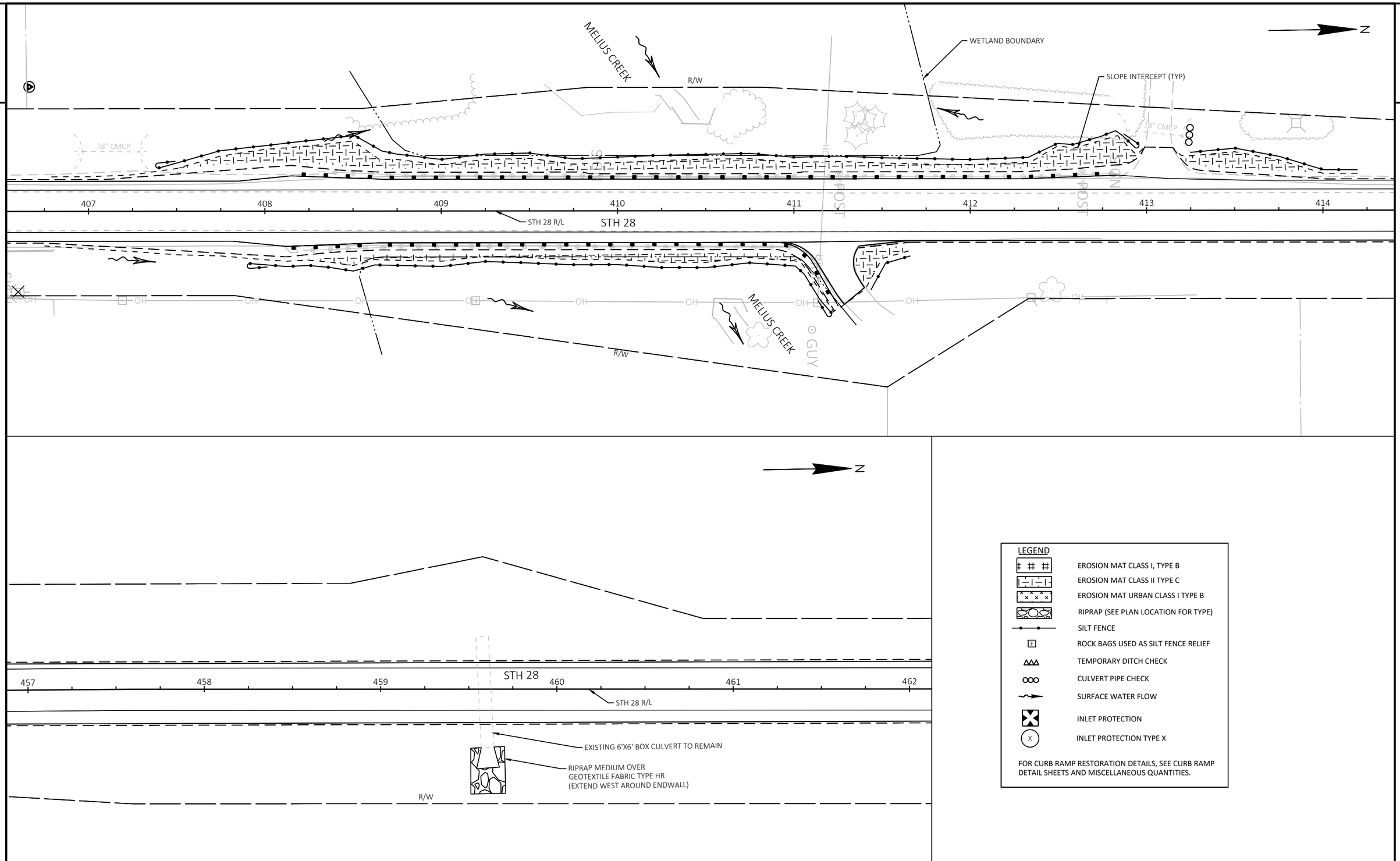
RIPRAP MEDIUM OVER GEOTEXTILE TYPE HR (SEE DETAIL)

EXISTING PLE

PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	EROSION CONTROL	SHEET 80	E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\022001-EC.DWG
LAYOUT NAME - 022003-ec

PLOT DATE : 4/23/2024 4:38 PM PLOT BY : SIEBERT, LUKE PLOT NAME : PLOT SCALE : 1 IN:50 FT



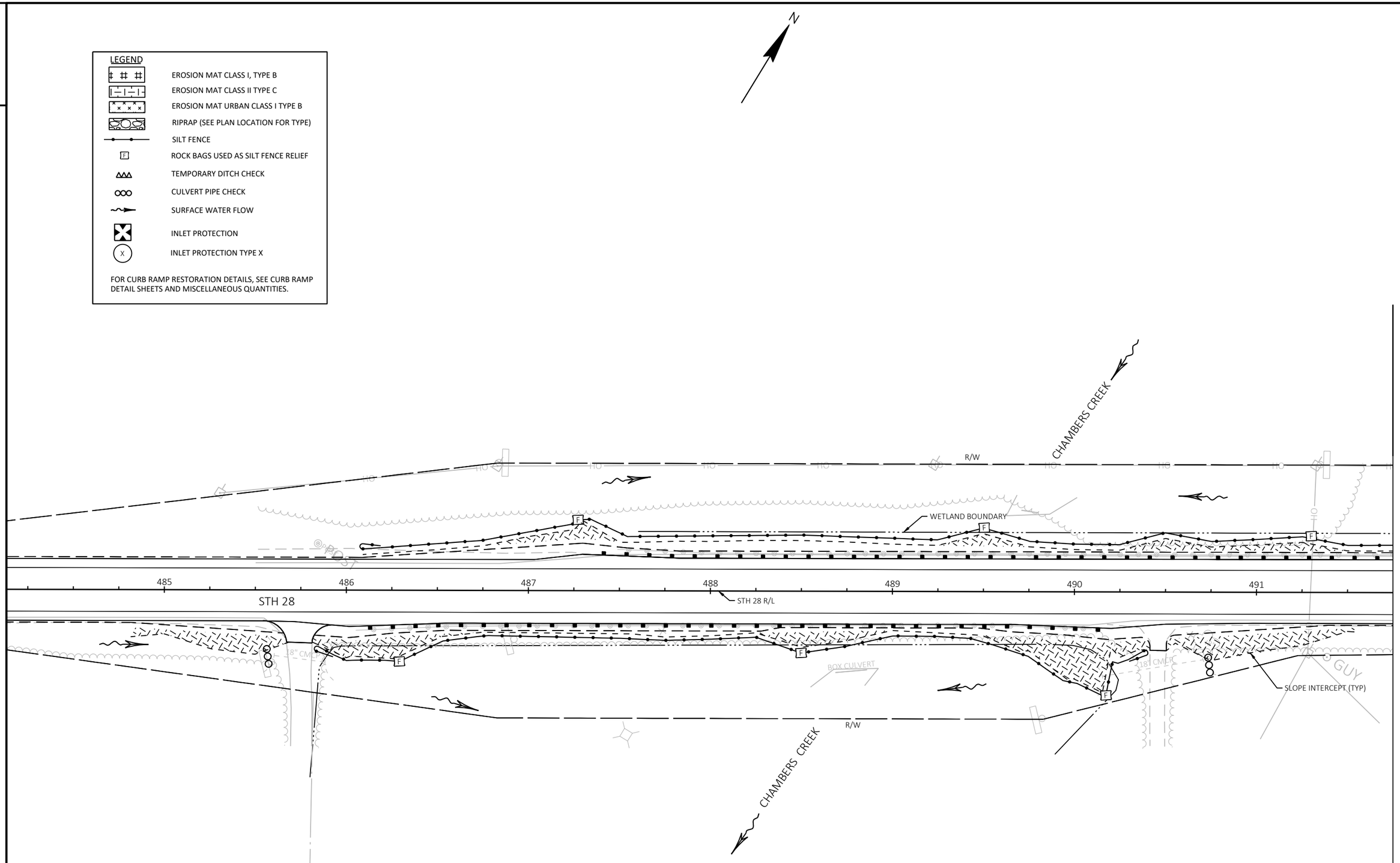
PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	EROSION CONTROL	SHEET 81	E

2

LEGEND

- EROSION MAT CLASS I, TYPE B
- EROSION MAT CLASS II TYPE C
- EROSION MAT URBAN CLASS I TYPE B
- RIPRAP (SEE PLAN LOCATION FOR TYPE)
- SILT FENCE
- F — ROCK BAGS USED AS SILT FENCE RELIEF
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW
- INLET PROTECTION
- X — INLET PROTECTION TYPE X

FOR CURB RAMP RESTORATION DETAILS, SEE CURB RAMP DETAIL SHEETS AND MISCELLANEOUS QUANTITIES.

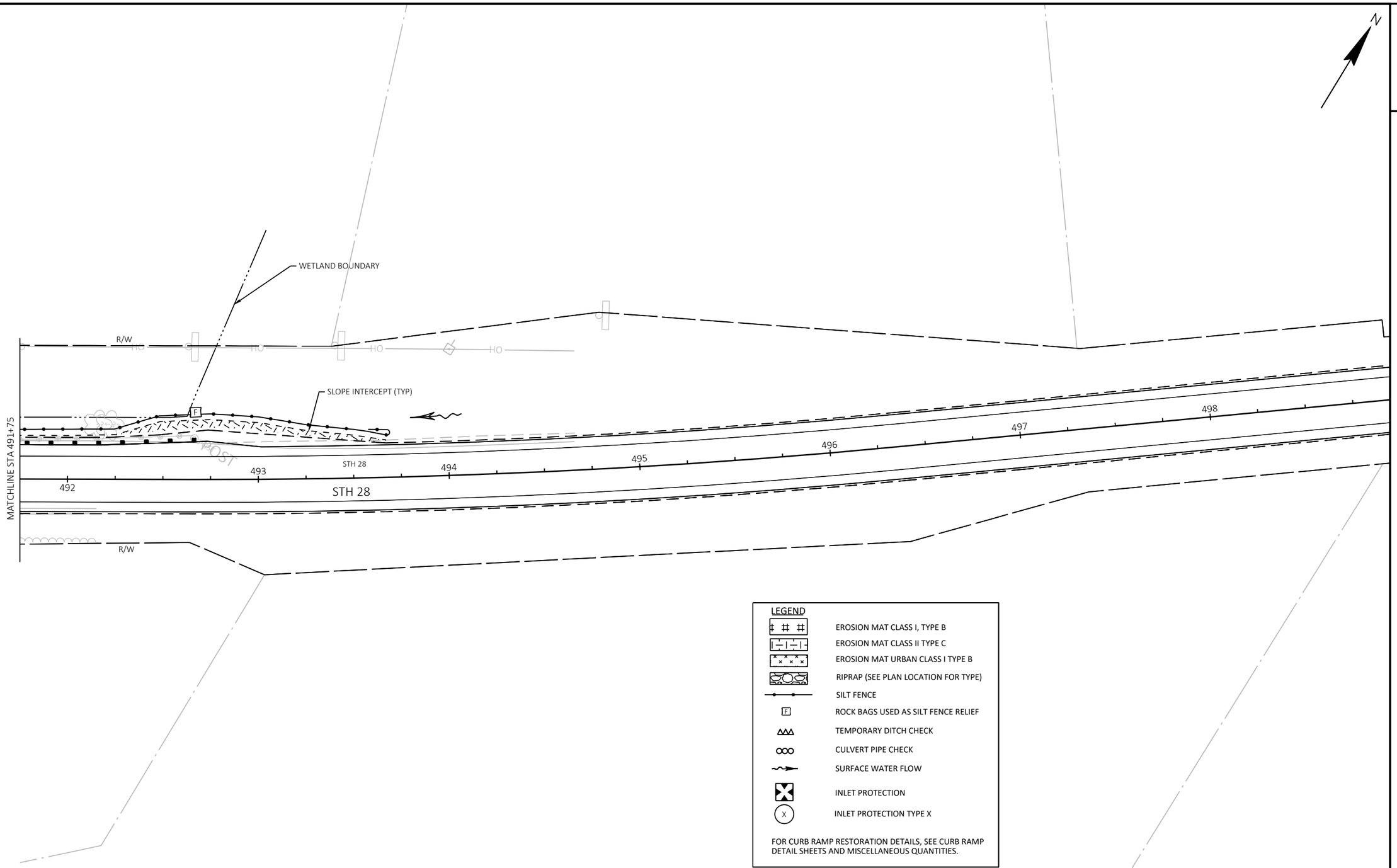


PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	EROSION CONTROL	SHEET 82	E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\022001-EC.DWG
LAYOUT NAME - 022005-ec

PLOT DATE : 4/23/2024 4:38 PM PLOT BY : SIEBERT, LUKE PLOT NAME : PLOT SCALE : 1 IN:50 FT

2



LEGEND

- EROSION MAT CLASS I, TYPE B
- EROSION MAT CLASS II TYPE C
- EROSION MAT URBAN CLASS I TYPE B
- RIPRAP (SEE PLAN LOCATION FOR TYPE)
- SILT FENCE
- F — ROCK BAGS USED AS SILT FENCE RELIEF
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW
- INLET PROTECTION
- X — INLET PROTECTION TYPE X

FOR CURB RAMP RESTORATION DETAILS, SEE CURB RAMP DETAIL SHEETS AND MISCELLANEOUS QUANTITIES.

PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	EROSION CONTROL	SHEET 83	E

2

LEGEND

- EROSION MAT CLASS I, TYPE B
- EROSION MAT CLASS II TYPE C
- EROSION MAT URBAN CLASS I TYPE B
- RIPRAP (SEE PLAN LOCATION FOR TYPE)
- SILT FENCE
- F — ROCK BAGS USED AS SILT FENCE RELIEF
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW
- INLET PROTECTION
- X — INLET PROTECTION TYPE X

FOR CURB RAMP RESTORATION DETAILS, SEE CURB RAMP DETAIL SHEETS AND MISCELLANEOUS QUANTITIES.

N

76+00
77+00
78+00
79+00
CTH F
45" CMP
36" CMP
45" CMP
60" CMP
R/W
OH
T
G
SS
GUY
F
WETLAND BOUNDARY
SLOPE INTERCEPT (TYP)
566
567
568
569
570
571
572
573
574
575
STH 28 R/L
STH 28
MATCHLINE STA 572+75
MATCHLINE STA 572+75
SIGN

PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	EROSION CONTROL	SHEET 84	E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\022001-EC.DWG
LAYOUT NAME - 022007-ec

PLOT DATE : 4/23/2024 4:38 PM PLOT BY : SIEBERT, LUKE PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

LEGEND

- EROSION MAT CLASS I, TYPE B
- EROSION MAT CLASS II TYPE C
- EROSION MAT URBAN CLASS I TYPE B
- RIPRAP (SEE PLAN LOCATION FOR TYPE)
- SILT FENCE
- ROCK BAGS USED AS SILT FENCE RELIEF
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW
- INLET PROTECTION
- INLET PROTECTION TYPE X

FOR CURB RAMP RESTORATION DETAILS, SEE CURB RAMP DETAIL SHEETS AND MISCELLANEOUS QUANTITIES.

N. BRANCH MILW RIVER

PROJECT 4010-26-71
STRUCTURE B-59-321

TLE

R/W

606 607 608 609 610 611 612

STH 28

STH 28 R/L

W WATER ST

E WATER ST

PROJECT ID 4010-26-71

PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	EROSION CONTROL	SHEET 85	E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\022001-EC.DWG
LAYOUT NAME - 022008-ec

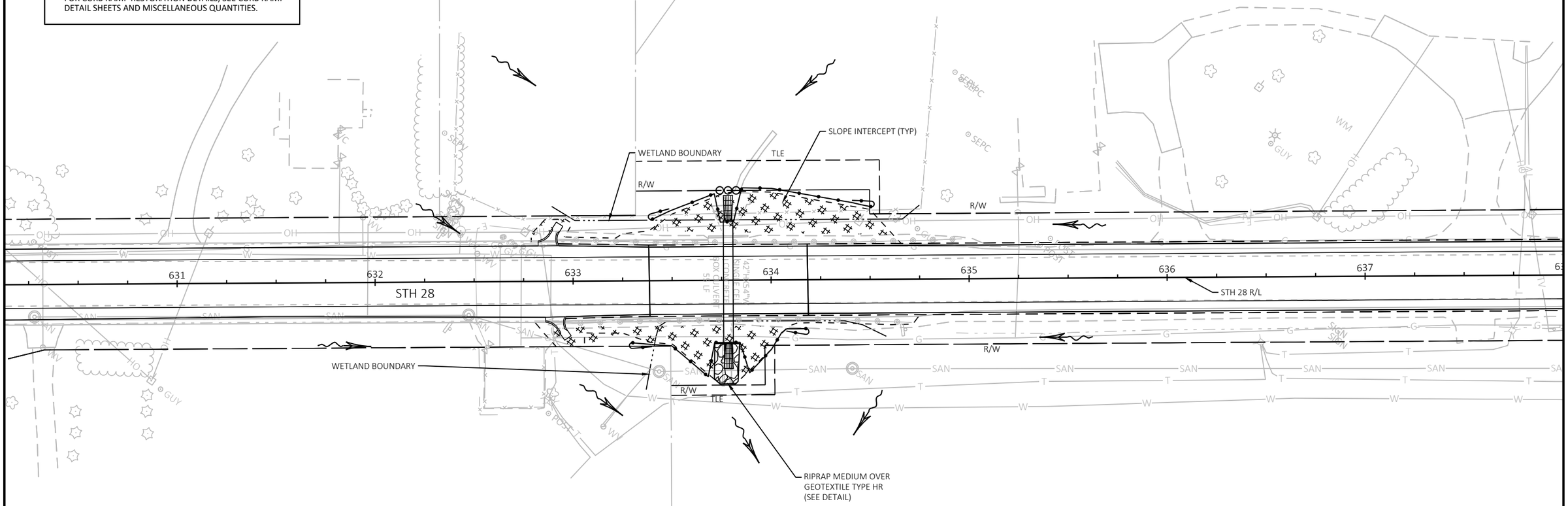
PLOT DATE : 7/24/2024 3:21 PM PLOT BY : SIEBERT, LUKE PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

LEGEND

- EROSION MAT CLASS I, TYPE B
- EROSION MAT CLASS II TYPE C
- EROSION MAT URBAN CLASS I TYPE B
- RIPRAP (SEE PLAN LOCATION FOR TYPE)
- SILT FENCE
- ROCK BAGS USED AS SILT FENCE RELIEF
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW
- INLET PROTECTION
- INLET PROTECTION TYPE X

FOR CURB RAMP RESTORATION DETAILS, SEE CURB RAMP DETAIL SHEETS AND MISCELLANEOUS QUANTITIES.

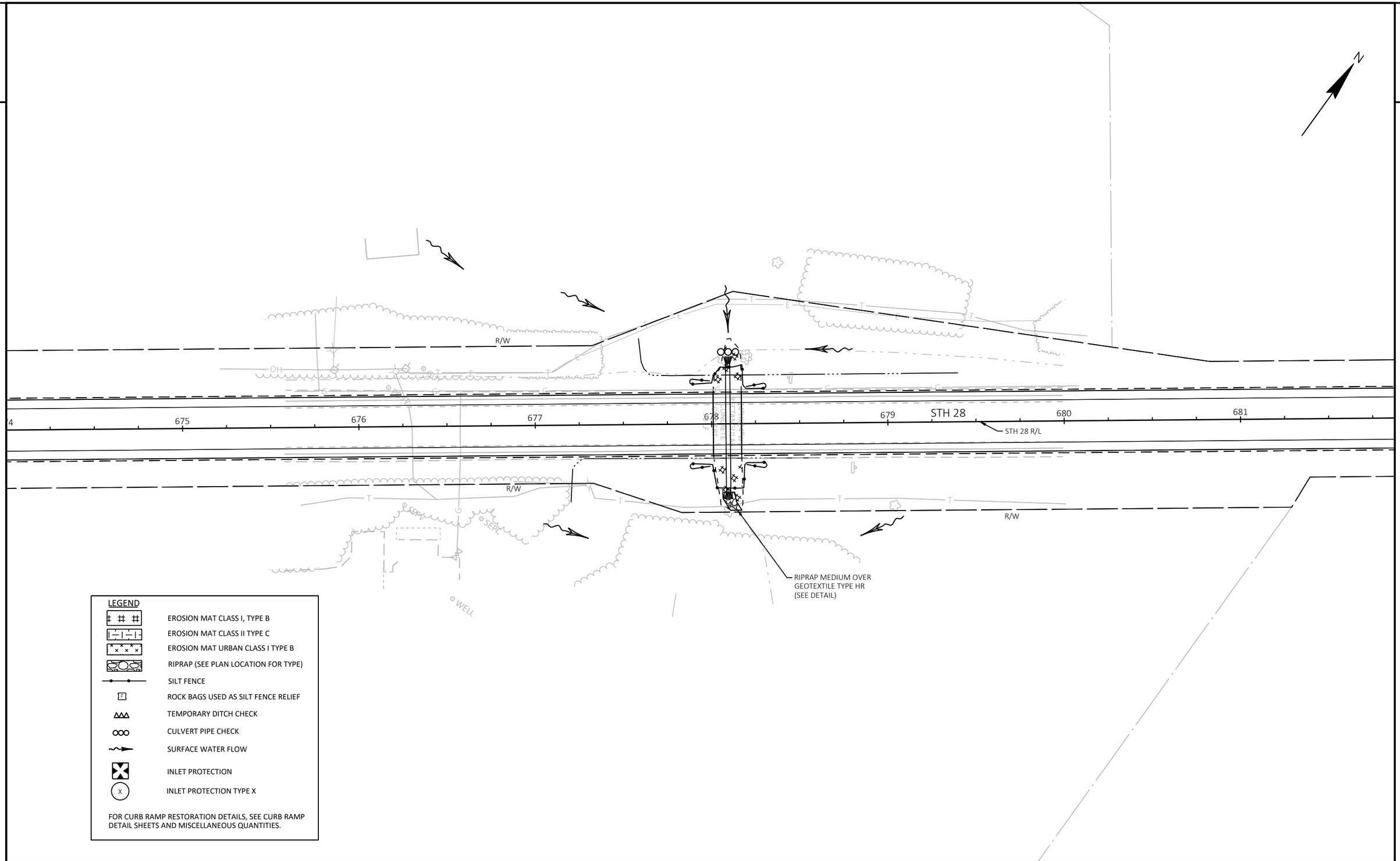


PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	EROSION CONTROL	SHEET 86	E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\022001-EC.DWG
LAYOUT NAME - 022009-ec

PLOT DATE : 4/23/2024 4:39 PM PLOT BY : SIEBERT, LUKE PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

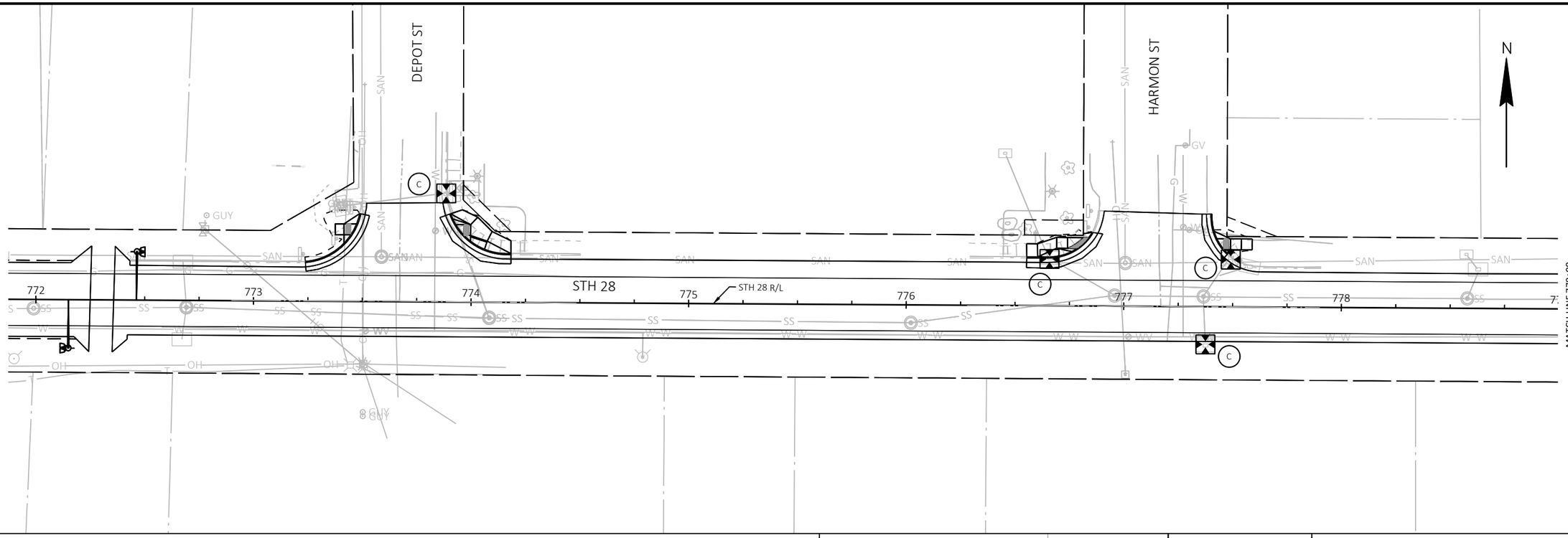


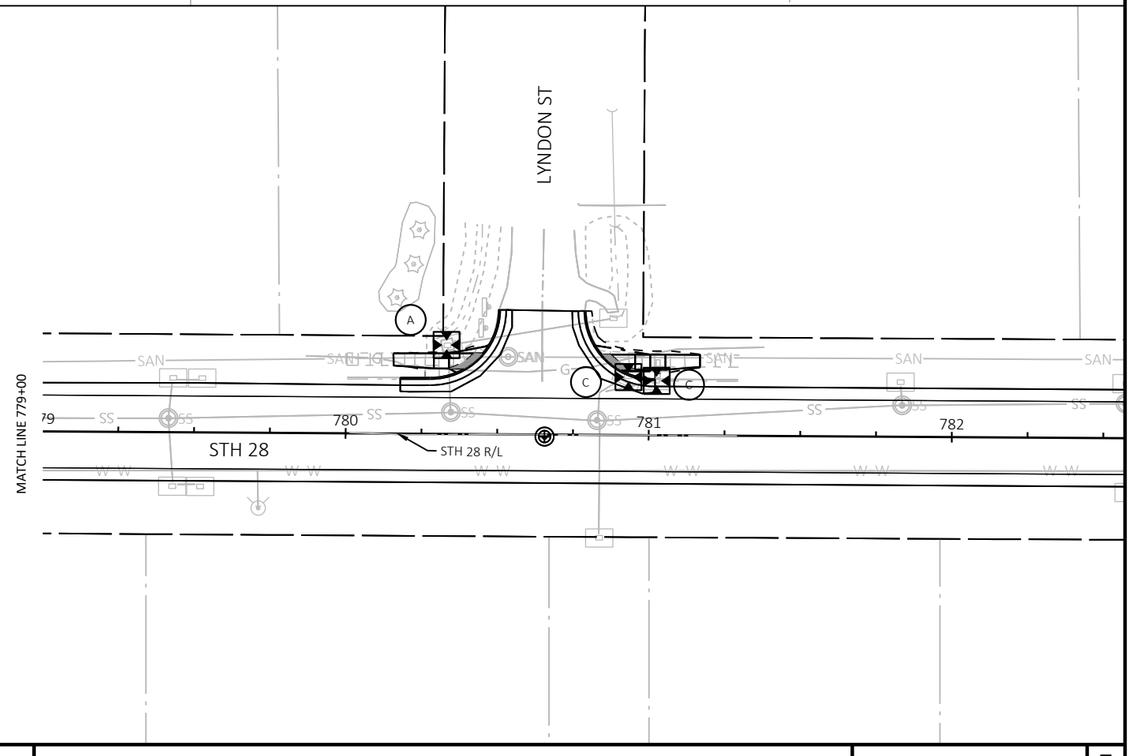
LEGEND

- EROSION MAT CLASS I, TYPE B
- EROSION MAT CLASS II TYPE C
- EROSION MAT URBAN CLASS I TYPE B
- RIPRAP (SEE PLAN LOCATION FOR TYPE)
- SILT FENCE
- ROCK BAGS USED AS SILT FENCE RELIEF
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW
- INLET PROTECTION
- INLET PROTECTION TYPE X

FOR CURB RAMP RESTORATION DETAILS, SEE CURB RAMP DETAIL SHEETS AND MISCELLANEOUS QUANTITIES.

PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	EROSION CONTROL	SHEET 87	E





LEGEND

- EROSION MAT CLASS I, TYPE B
- EROSION MAT CLASS II TYPE C
- EROSION MAT URBAN CLASS I TYPE B
- RIPRAP (SEE PLAN LOCATION FOR TYPE)
- SILT FENCE
- ROCK BAGS USED AS SILT FENCE RELIEF
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW
- INLET PROTECTION
- INLET PROTECTION TYPE X

FOR CURB RAMP RESTORATION DETAILS, SEE CURB RAMP DETAIL SHEETS AND MISCELLANEOUS QUANTITIES.

PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	EROSION CONTROL	SHEET 88	E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\022001-EC.DWG
LAYOUT NAME - 022011-ec

PLOT DATE : 4/23/2024 4:39 PM PLOT BY : SIEBERT, LUKE PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

2

LEGEND

PCMS	TRAFFIC CONTROL SIGNS PCMS
①	PLACE ADVANCED WARNING SIGNING AND SIGN G20-2A PER SDD TRAFFIC CONTROL, ADVANCED WARNING SIGNS 45 MPH OR MORE, TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC.
②	PLACE SIGN W20-1A FOR A TYPICAL SIDE ROAD APPROACH PER SDD TRAFFIC CONTROL, ADVANCED WARNING SIGNS 40 MPH OR LESS, TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC.
‡	TYPE III BARRICADE.
‡	TYPE III BARRICADE WITH ATTACHED SIGN.

N

NOTES

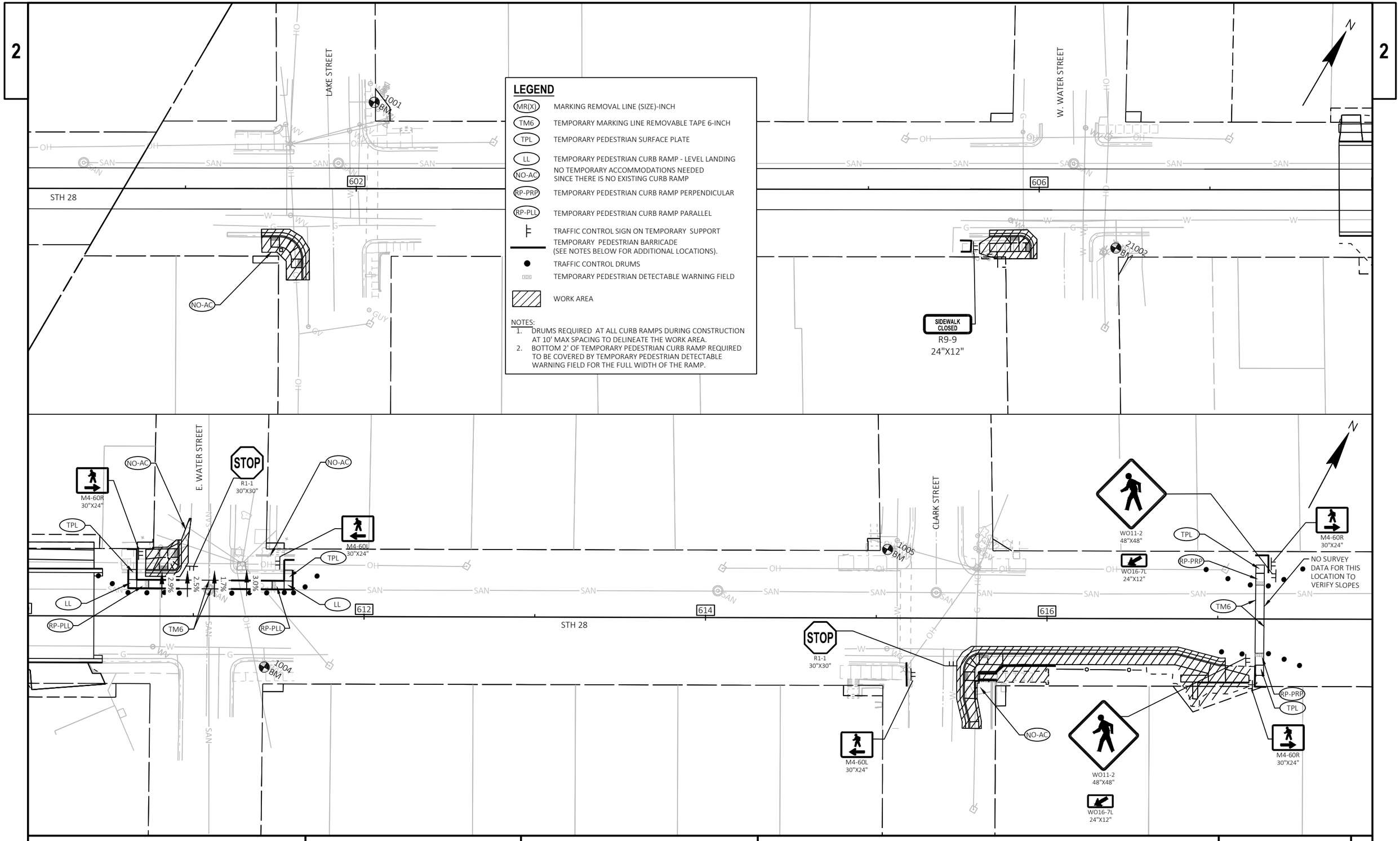
1. PLACE MESSAGE BOARDS WITH AN APPROVED PROJECT START UP MESSAGE SEVEN DAYS PRIOR TO CONSTRUCTION. CONTACT NE REGION TRAFFIC AT (920) 366-8033 FOR MESSAGE APPROVAL.
2. IF THE MESSAGE BOARD IS NOT BEHIND A BARRIER THEN PLACE FOUR TRAFFIC CONTROL DRUMS WITH TYPE C LIGHTS IN FRONT OF IT.
3. CONSTRUCTION SHALL BE COMPLETED UNDER TRAFFIC. MAINTAIN A MINIMUM OF ONE 12-FOOT TRAVEL LANE USING FLAGGING OPERATIONS AND ONLY WHEN ADJACENT TO ACTIVE CONSTRUCTION OPERATIONS.
4. MAXIMUM FLAGGING LENGTH SHALL BE ONE CITY BLOCK. TWO CONSECUTIVE SIDE STREETS INTERSECTING STH 28 SHALL NOT BE RESTRICTED CONCURRENTLY IN URBAN AREAS.
5. SEE CONSTRUCTION DETAILS AND TEMPORARY PEDESTRIAN ACCOMMODATION STAGING PLANS FOR ADDITIONAL TRAFFIC CONTROL REQUIREMENTS.

CTH XX
VALLEY VIEW DR
BEGIN PROJECT 4010-21-71
STA 100+19.80
100+00
PCMS
CTH D
STH 144
150+00
BRAZELTON DR
LONE PINE RD
STH 28
200+00
ABBOTT DR
250+00
CTH A
CTH SS
300+00
CHERRY HILL DR
350+00
CTH A
CTH SS
400+00
CTH W
450+00
CTH W
500+00
CTH F
550+00
JOHNSON DR
PROJECT 4010-26-71
STRUCTURE B-59-321
600+00
N. BRANCH MILW RIVER
CTH NN
CTH F
VILLAGE OF CASCADE
RR
650+00
STH 28
CTH E
CTH E
BEGIN PROJECT 4010-26-71
STA 607+75.72
END PROJECT 4010-26-71
STA 610+41.72
700+00
TIMBERVIEW RD
STH 28
750+00
BLUEBERRY LN
BLUEBERRY LN
WISCONSIN & SOUTHERN RAILROAD
LYNDON ST
END PROJECT 4010-21-71
STA 806+14.45
800+00
VILLAGE OF WALDO
STH 57
STH 57/MILL ST
PCMS

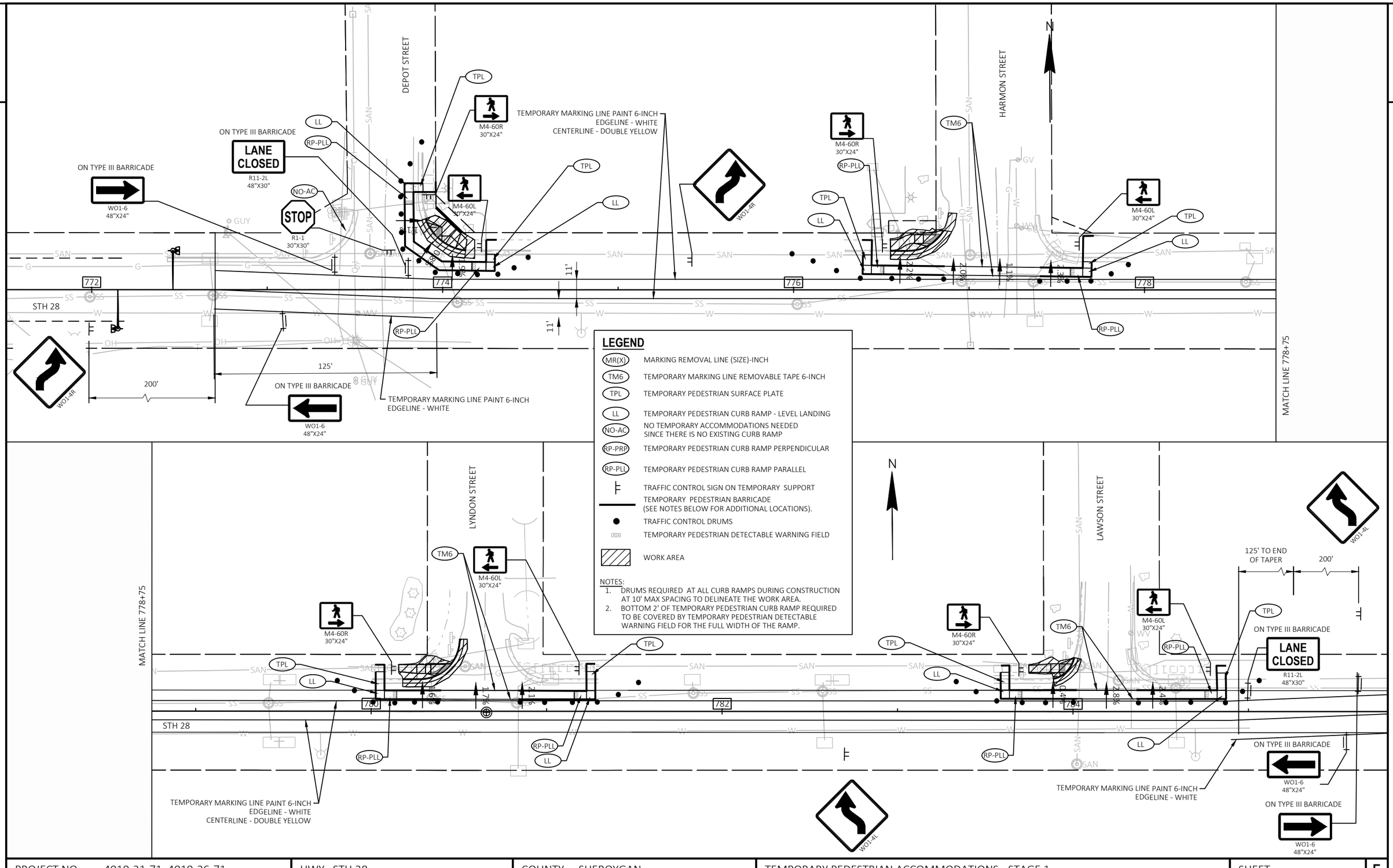
600+00
LAKE ST
W WATER ST
STRUCTURE B-59-321
610+00
BEGIN PROJECT 4010-26-71
STA. 610+41.72
E WATER ST
END PROJECT 4010-26-71
STA. 610+41.72
CLARK ST
620+00
WISCONSIN ST

BRIDGE OUT
R11-2B
48"X30"
ROAD CLOSED
R11-2
48"X30"
610+00
ROAD CLOSED
R11-2
48"X30"
BRIDGE OUT
R11-2B
48"X30"

PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	TRAFFIC CONTROL	SHEET 89	E



PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	TEMPORARY PEDESTRIAN ACCOMMODATIONS - STAGE 1	SHEET 90	E



PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	TEMPORARY PEDESTRIAN ACCOMMODATIONS - STAGE 1	SHEET 91 E

2

LAKE STREET

M4-60L 30"X24"

M4-60R 30"X24"

WO11-2 48"X48"

WO16-7L 24"X12"

RP-PRP

MR(6)

TM6

STOP R1-1 30"X30"

602

-2.2%

604

STH 28

606

LL

16%

14%

15%

M4-60D 30"X24"

-1.0%

-1.2%

SIDEWALK CLOSED R9-9 24"X12"

NO SURVEY DATA FOR THIS LOCATION TO VERIFY SLOPES, AREA THAT IS CLOSEST TO THIS LOCATION WITH SURVEY HAS SLOPES AROUND 1.8%-2.3%

TPL

W. WATER STREET

NO-AC

N

E. WATER STREET

610

612

KEEP STAGE 1 TEMPORARY CROSSWALK

CLARK STREET

NO SURVEY DATA FOR THIS LOCATION TO VERIFY SLOPES, CLOSEST SLOPES WITH SURVEY ARE AROUND 3%

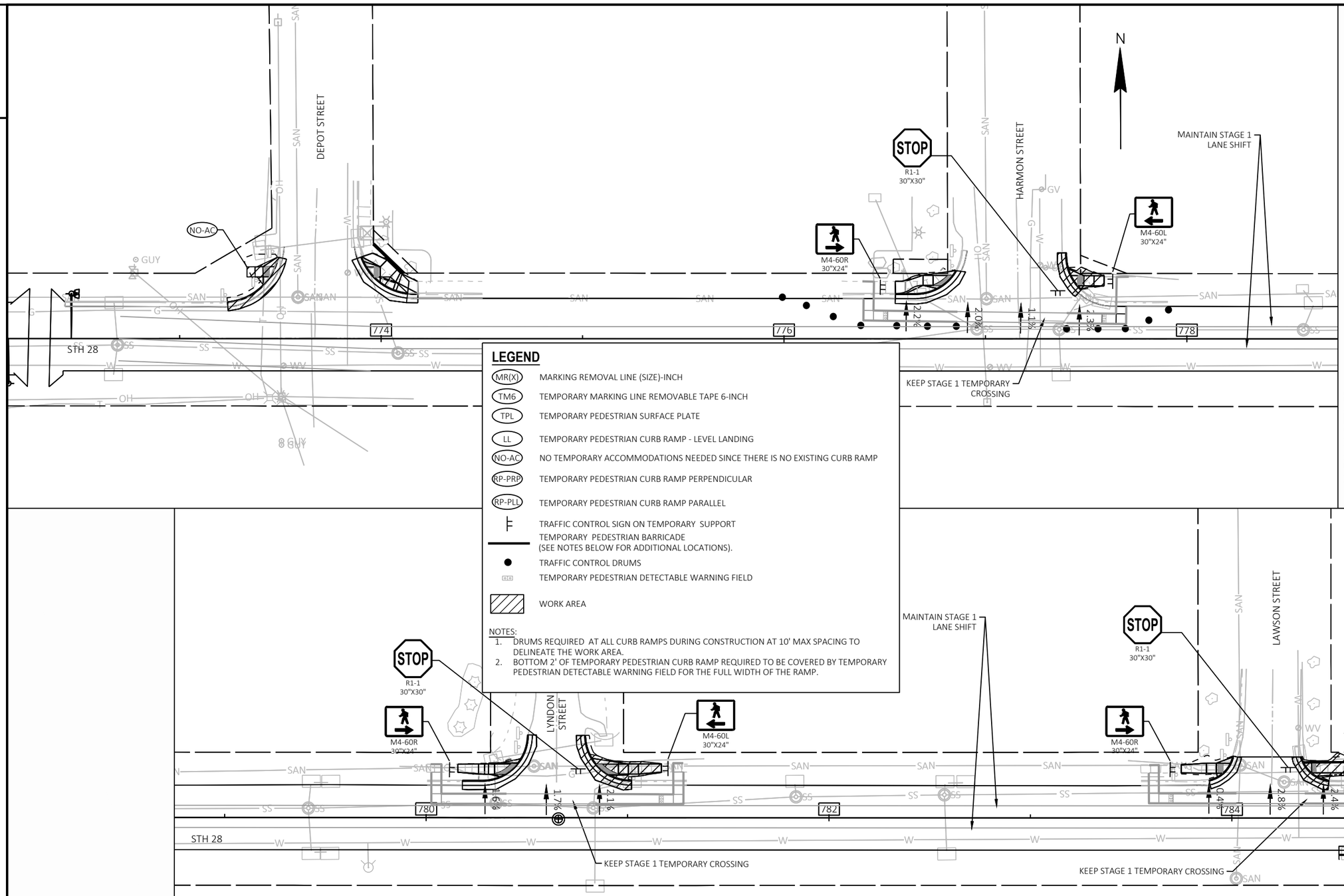
616

LEGEND

MR(X)	MARKING REMOVAL LINE (SIZE)-INCH
TM6	TEMPORARY MARKING LINE REMOVABLE TAPE 6-INCH
TPL	TEMPORARY PEDESTRIAN SURFACE PLATE
LL	TEMPORARY PEDESTRIAN CURB RAMP - LEVEL LANDING
NO-AC	NO TEMPORARY ACCOMMODATIONS NEEDED SINCE THERE IS NO EXISTING CURB RAMP
RP-PRP	TEMPORARY PEDESTRIAN CURB RAMP PERPENDICULAR
RP-PLL	TEMPORARY PEDESTRIAN CURB RAMP PARALLEL
	TRAFFIC CONTROL SIGN ON TEMPORARY SUPPORT
	TEMPORARY PEDESTRIAN BARRICADE (SEE NOTES BELOW FOR ADDITIONAL LOCATIONS).
	TRAFFIC CONTROL DRUMS
	TEMPORARY PEDESTRIAN DETECTABLE WARNING FIELD
	WORK AREA

NOTES:
1. DRUMS REQUIRED AT ALL CURB RAMPS DURING CONSTRUCTION AT 10' MAX SPACING TO DELINEATE THE WORK AREA.
2. BOTTOM 2' OF TEMPORARY PEDESTRIAN CURB RAMP REQUIRED TO BE COVERED BY TEMPORARY PEDESTRIAN DETECTABLE WARNING FIELD FOR THE FULL WIDTH OF THE RAMP.

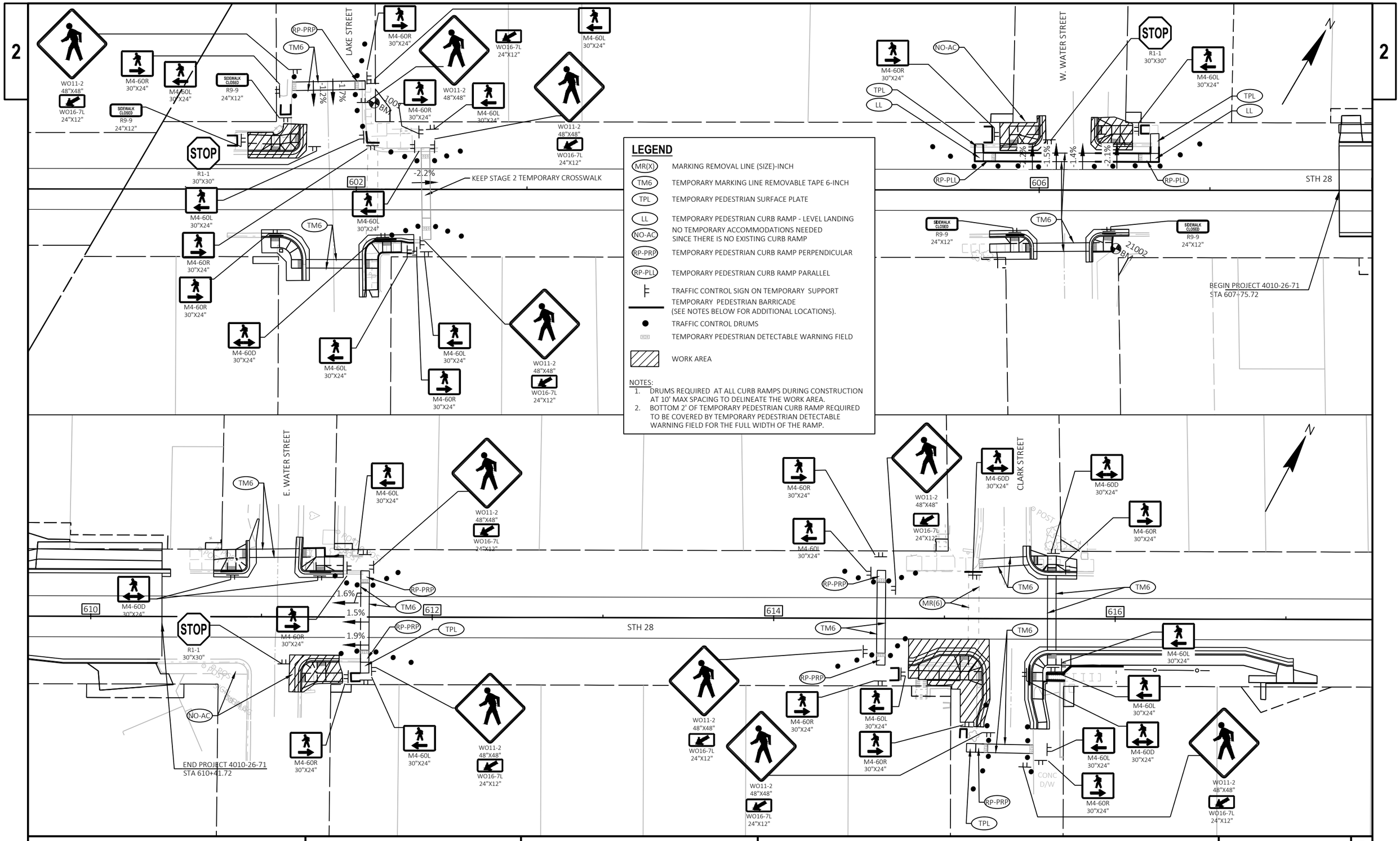
PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	TEMPORARY PEDESTRIAN ACCOMMODATIONS - STAGE 2	SHEET 92	E



PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	TEMPORARY PEDESTRIAN ACCOMMODATIONS - STAGE 2	SHEET 93	E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\026001-S2.DWG
LAYOUT NAME - 02

PLOT DATE : 4/23/2024 4:41 PM PLOT BY : SIEBERT, LUKE PLOT NAME : PLOT SCALE : 1 IN:50 FT



PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	TEMPORARY PEDESTRIAN ACCOMMODATIONS - STAGE 3	SHEET 94 E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\026001-S3.DWG
LAYOUT NAME - 01
PLOT DATE : 4/23/2024 4:42 PM
PLOT BY : SIEBERT, LUKE
PLOT NAME :
PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 42

2

KEEP STAGE 3 TEMPORARY CROSSWALK

LAKE STREET

-1.2%

-1.7%

WO11-2
48"X48"

WO16-7L
24"X12"

M4-60R
30"X24"

M4-60L
30"X24"

1001
BM

-2.2%

602

604

606

STH 28

TM6

W. WATER STREET

N

BEGIN PROJECT 4010-26-71
STA 607+75.72

12100
BM

M4-60D
30"X24"

2

END PROJECT 4010-26-71
STA 610+41.72

E. WATER STREET

610

612

NO-AC

SIDEWALK CLOSED
R9-9
24"X12"

CLARK STREET

614

616

STOP
R1-1
30"X30"

KEEP STAGE 3
TEMPORARY CROSSING

LEGEND

MR(X)	MARKING REMOVAL LINE (SIZE)-INCH
TM6	TEMPORARY MARKING LINE REMOVABLE TAPE 6-INCH
TPL	TEMPORARY PEDESTRIAN SURFACE PLATE
LL	TEMPORARY PEDESTRIAN CURB RAMP - LEVEL LANDING
NO-AC	NO TEMPORARY ACCOMMODATIONS NEEDED SINCE THERE IS NO EXISTING CURB RAMP
RP-PRP	TEMPORARY PEDESTRIAN CURB RAMP PERPENDICULAR
RP-PLL	TEMPORARY PEDESTRIAN CURB RAMP PARALLEL
	TRAFFIC CONTROL SIGN ON TEMPORARY SUPPORT
	TEMPORARY PEDESTRIAN BARRICADE (SEE NOTES BELOW FOR ADDITIONAL LOCATIONS).
	TRAFFIC CONTROL DRUMS
DTC	TEMPORARY PEDESTRIAN DETECTABLE WARNING FIELD
	WORK AREA

NOTES:
1. DRUMS REQUIRED AT ALL CURB RAMPS DURING CONSTRUCTION AT 10' MAX SPACING TO DELINEATE THE WORK AREA.
2. BOTTOM 2' OF TEMPORARY PEDESTRIAN CURB RAMP REQUIRED TO BE COVERED BY TEMPORARY PEDESTRIAN DETECTABLE WARNING FIELD FOR THE FULL WIDTH OF THE RAMP.

PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	TEMPORARY PEDESTRIAN ACCOMMODATIONS - STAGE 4	SHEET 95	E

LEGEND

(X) SIGN NUMBER. REFER TO MISCELLANEOUS QUANTITY SHEET

SIGN MOUNTED ON TYPE III BARRICADE

POST MOUNTED SIGN

(X) CHANGEABLE PORTABLE MESSAGE BOARD

N

WORK ZONE

PCMS

PCMS

COVER Milwaukee D1-3 J4-1 (7, 9)

MODIFY DETOUR M04-8 36" x 18" SOUTH WEST 57 28 M06-1 30" x 30" J2-2 (5)

DETOUR M04-8 36" x 18" WEST M3-4 36" x 18" 28 M1-6 36" x 36" M06-1 30" x 30" (6)

HWY 28 WEST CLOSED NO ACCESS TO CASCADE FOLLOW DETOUR FMS 114" x 60" (3, 4)

WEST M3-4 36" x 18" 28 M1-6 36" x 36" DETOUR AHEAD W20-2A 48" x 48" (1, 2)

MODIFY DETOUR M04-8 36" x 18" WEST 28 M06-1 30" x 30" J3-1 (8)

J3-1 COVER (11)

COVER COUNTY V J3-2 (12)

COVER Green Bay Sheboygan D1-3 (14)

COVER NORTH EAST 57 28 J2-3 (15)

BRIDGE OUT 1 ½ MILES AHEAD LOCAL TRAFFIC ONLY R11-3B 60" x 30" (41)

BRIDGE OUT 1 MILE AHEAD LOCAL TRAFFIC ONLY R11-3B 60" x 30" (40)

BRIDGE OUT ½ MILES AHEAD LOCAL TRAFFIC ONLY R11-3B 60" x 30" (37)

BRIDGE OUT 3 ½ MILES AHEAD LOCAL TRAFFIC ONLY R11-3B 60" x 30" (10)

DETOUR M04-8 36" x 18" WEST M3-4 36" x 18" 28 M1-6 36" x 36" (13)

DETOUR M4-9R 30" x 24"

BRIDGE OUT 3 MILES AHEAD LOCAL TRAFFIC ONLY R11-3B 60" x 30" (47)

DETOUR M04-8 36" x 18" WEST M3-4 36" x 18" 28 M1-6 36" x 36" DETOUR AHEAD W20-2A 48" x 48" (24, 25)

DETOUR M04-8 36" x 18" WEST M3-4 36" x 18" 28 M1-6 36" x 36" M06-1 30" x 30" (23)

DETOUR M04-8 36" x 18" WEST M3-4 36" x 18" 28 M1-6 36" x 36" M06-1 30" x 30" (22)

DETOUR M04-8 36" x 18" WEST M3-4 36" x 18" 28 M1-6 36" x 36" M05-1R 30" x 30" (19, 20)

DETOUR M04-8 36" x 18" WEST M3-4 36" x 18" 28 M1-6 36" x 36" M06-1 30" x 30" (31, 31A)

DETOUR M04-8 36" x 18" EAST M3-2 36" x 18" 28 M1-6 36" x 36" M06-1 30" x 30" (21, 32)

END DETOUR M4-8A 30" x 24" 28 J1-1 MODIFY (16)

DETOUR M04-8 36" x 18" WEST M3-4 36" x 18" 28 M1-6 36" x 36" M06-1 30" x 30" (17)

DETOUR M04-8 36" x 18" EAST M3-2 36" x 18" 28 M1-6 36" x 36" M06-1 30" x 30" (18)

DETOUR M04-8 24" x 12" EAST M3-2 24" x 12" 28 M1-6 24" x 24" M05-1R 21" x 21" (44)

DETOUR M04-8 24" x 12" EAST M3-2 24" x 12" 28 M1-6 24" x 24" M06-1 21" x 21" (43)

BRIDGE OUT 5 MILES AHEAD LOCAL TRAFFIC ONLY R11-3B 60" x 30" DETOUR M4-9R 30" x 24" (42)

MODIFY 28 M06-1 21" x 21" J13-1 (35)

COVER EAST 28 J4-1 (36)

DETOUR M04-8 24" x 12" EAST M3-2 24" x 12" 28 M1-6 24" x 24" (34)

MODIFY END DETOUR M4-8A 24" x 18" 28 J1-1 (33)

DETOUR AHEAD W20-2A 48" x 48" (45, 46)

HWY 28 CLOSED NO ACCESS TO HWY 57 FOLLOW DETOUR FMS 66" x 48"

DETOUR M04-8 24" x 12" EAST M3-2 24" x 12" 28 M1-6 24" x 24" M05-1L 21" x 21" (30)

DETOUR M04-8 24" x 12" WEST M3-4 24" x 12" 28 M1-6 24" x 24" (29)

WEST M3-4 36" x 18" 28 M1-6 36" x 36" DETOUR AHEAD W20-2A 48" x 48" (26, 27)

DETOUR M04-8 24" x 12" EAST M3-2 24" x 12" 28 M1-6 24" x 24" M06-1 21" x 21" (28)

PLAN SHEET PRODUCED BY WisDOT-NE REGION

PROJECT NO: 4010-29-71	HWY: STH 28	COUNTY: SHEBOYGAN	DETOUR SIGNING DETAIL	SHEET	E

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

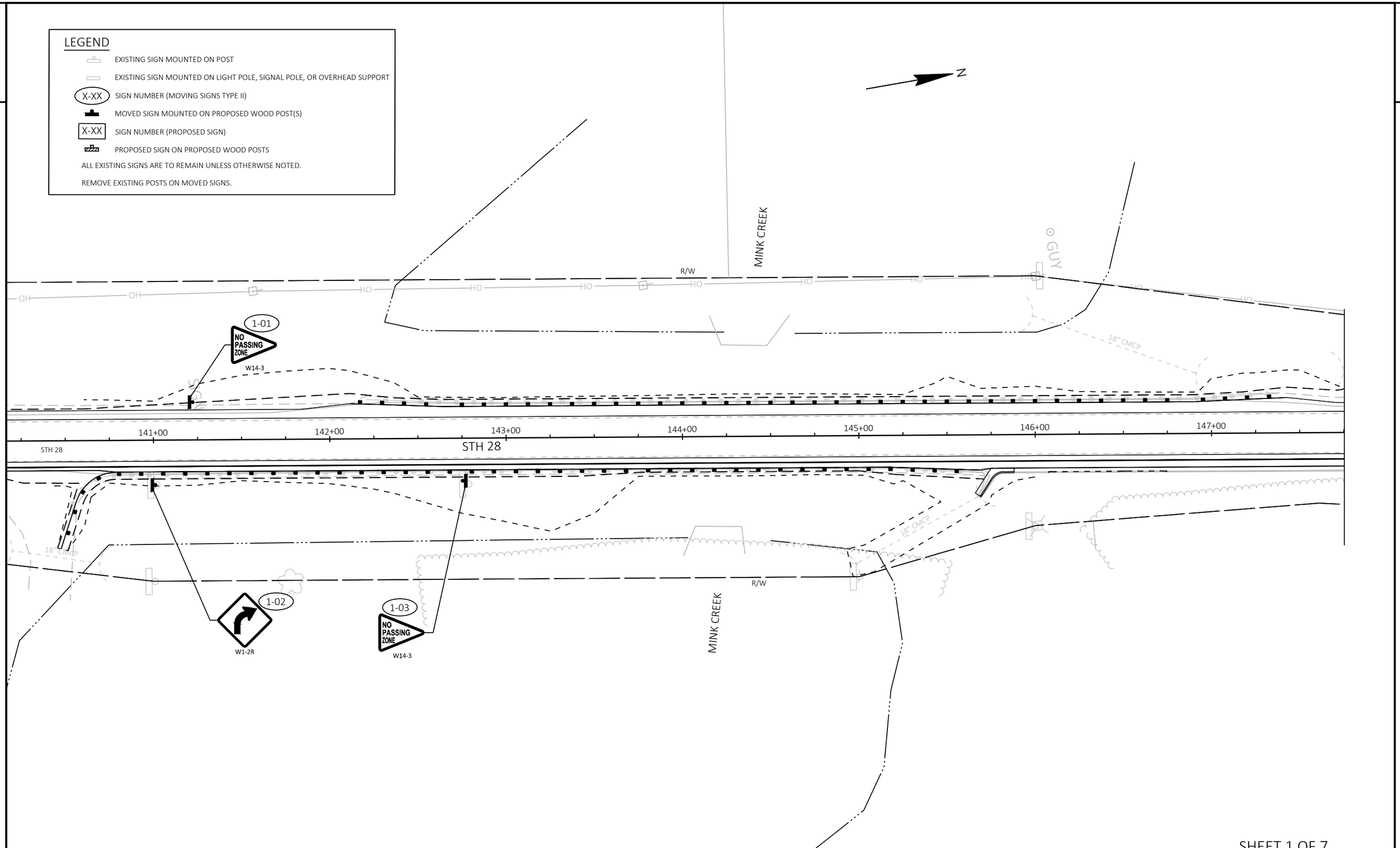
2

LEGEND

- EXISTING SIGN MOUNTED ON POST
- EXISTING SIGN MOUNTED ON LIGHT POLE, SIGNAL POLE, OR OVERHEAD SUPPORT
- X-XX — SIGN NUMBER (MOVING SIGNS TYPE II)
- MOVED SIGN MOUNTED ON PROPOSED WOOD POST(S)
- X-XX — SIGN NUMBER (PROPOSED SIGN)
- PROPOSED SIGN ON PROPOSED WOOD POSTS

ALL EXISTING SIGNS ARE TO REMAIN UNLESS OTHERWISE NOTED.

REMOVE EXISTING POSTS ON MOVED SIGNS.



SHEET 1 OF 7

PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	SIGNING	SHEET 97	E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\023201-PS.DWG
LAYOUT NAME - 023201-ps

PLOT DATE : 4/23/2024 4:43 PM PLOT BY : SIEBERT, LUKE PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

2

N

LEGEND

- EXISTING SIGN MOUNTED ON POST
- EXISTING SIGN MOUNTED ON LIGHT POLE, SIGNAL POLE, OR OVERHEAD SUPPORT
- X-XX — SIGN NUMBER (MOVING SIGNS TYPE II)
- MOVED SIGN MOUNTED ON PROPOSED WOOD POST(S)
- X-XX — SIGN NUMBER (PROPOSED SIGN)
- PROPOSED SIGN ON PROPOSED WOOD POSTS

ALL EXISTING SIGNS ARE TO REMAIN UNLESS OTHERWISE NOTED.

REMOVE EXISTING POSTS ON MOVED SIGNS.

2-01
2 SIGNS
MELIUS CREEK
I3-1

MELIUS CREEK
R/W
18" CMCP
18" CMCP
STOP AHEAD
STOP
407+00
408+00
409+00
410+00
411+00
412+00
413+00
414+00
STH 28
STH 28
STH 28
OH
MELIUS CREEK
R/W
GUY

SHEET 2 OF 7

PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	SIGNING	SHEET 98	E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\023201-PS.DWG
LAYOUT NAME - 023204-ps

PLOT DATE : 4/23/2024 4:43 PM PLOT BY : SIEBERT, LUKE PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

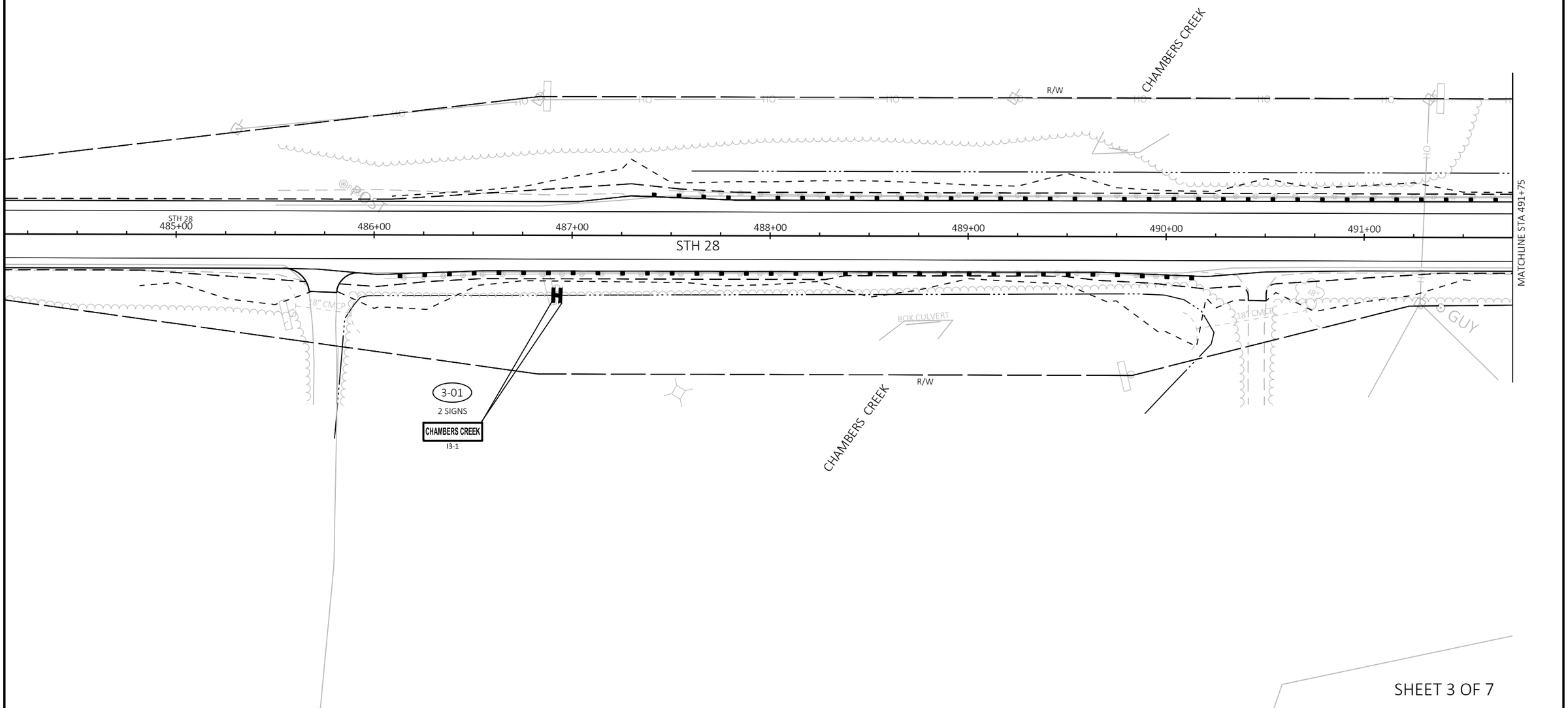
2

LEGEND

- EXISTING SIGN MOUNTED ON POST
- EXISTING SIGN MOUNTED ON LIGHT POLE, SIGNAL POLE, OR OVERHEAD SUPPORT
- X-XX — SIGN NUMBER (MOVING SIGNS TYPE II)
- MOVED SIGN MOUNTED ON PROPOSED WOOD POST(S)
- X-XX — SIGN NUMBER (PROPOSED SIGN)
- PROPOSED SIGN ON PROPOSED WOOD POSTS

ALL EXISTING SIGNS ARE TO REMAIN UNLESS OTHERWISE NOTED.

REMOVE EXISTING POSTS ON MOVED SIGNS.



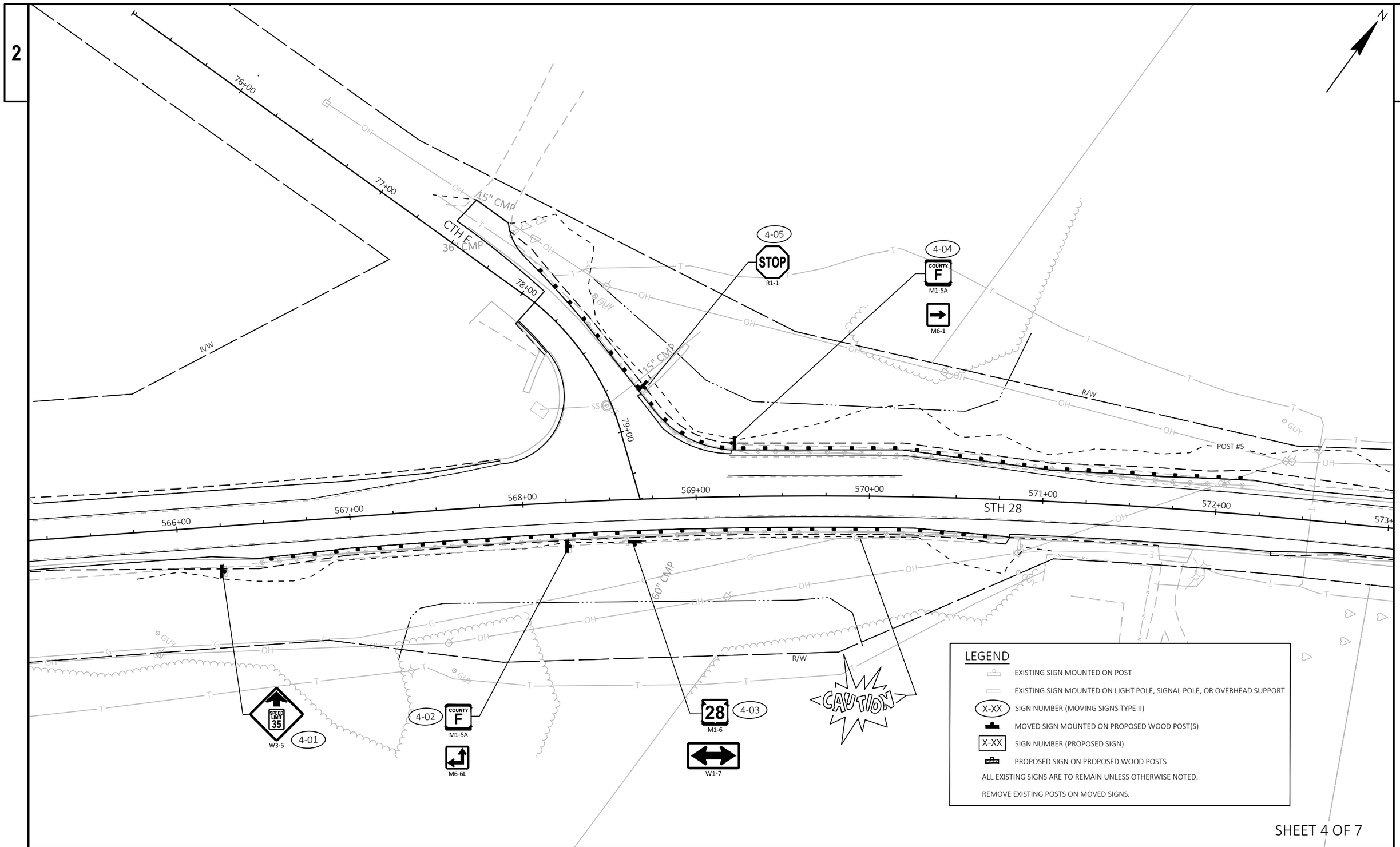
SHEET 3 OF 7

PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	SIGNING	SHEET 99	E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\023201-PS.DWG
LAYOUT NAME - 023205-ps

PLOT DATE : 4/23/2024 4:43 PM PLOT BY : SIEBERT, LUKE PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42



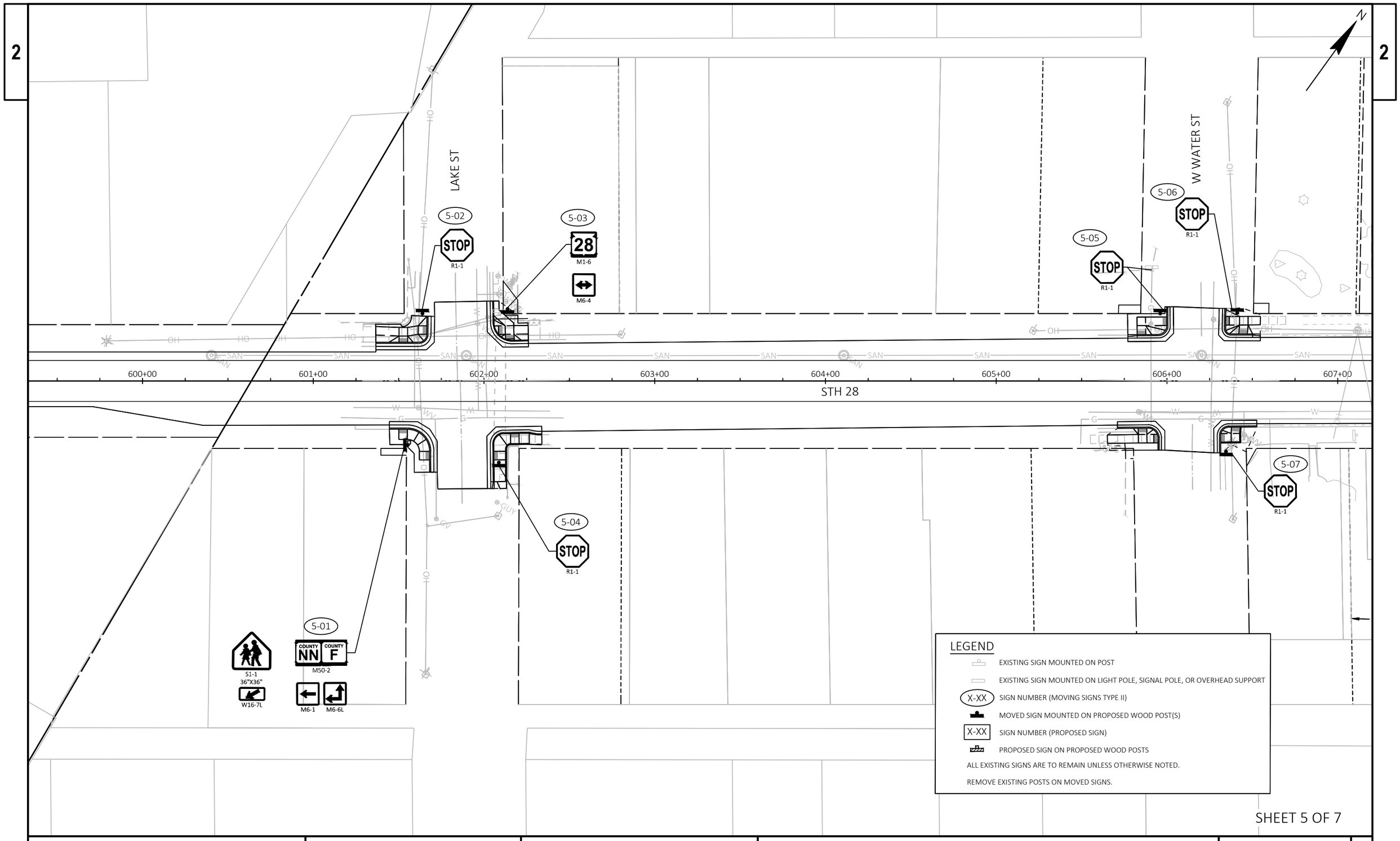
SHEET 4 OF 7

PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	SIGNING	SHEET 100	E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\023201-PS.DWG
LAYOUT NAME - 023206-ps

PLOT DATE : 4/23/2024 4:43 PM PLOT BY : SIEBERT, LUKE PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42



SHEET 5 OF 7

PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	SIGNING	SHEET 101	E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\023201-PS.DWG
LAYOUT NAME - 023207-ps
PLOT DATE : 4/23/2024 4:43 PM
PLOT BY : SIEBERT, LUKE
PLOT NAME :
PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 42

2

PROJECT LIMITS FOR PROJECT ID 4010-26-71

6A-01
JCT
M2-1
COUNTY F
M1-5A

6B-03
NO PASSING ZONE
W14-3
SPEED LIMIT 35
R2-1

N. BRANCH MILW RIVER

607+00 608+00 609+00 610+00 611+00 612+00 613+00 614+00

S. BRANCH MILW RIVER

TRUCK ROUTE
R14-1
6A-02
M5-1R

E WATER ST

6B-04
STOP
R1-1

NOTES:
SIGNS WITH THE 6A DESIGNATION ARE PAID UNDER THE 4010-26-71 ID.

SIGNS WITH THE 6B DESIGNATION ARE PAID UNDER THE 4010-21-71 ID.

LEGEND

- EXISTING SIGN MOUNTED ON POST
- EXISTING SIGN MOUNTED ON LIGHT POLE, SIGNAL POLE, OR OVERHEAD SUPPORT
- X-XX SIGN NUMBER (MOVING SIGNS TYPE II)
- MOVED SIGN MOUNTED ON PROPOSED WOOD POST(S)
- X-XX SIGN NUMBER (PROPOSED SIGN)
- PROPOSED SIGN ON PROPOSED WOOD POSTS

ALL EXISTING SIGNS ARE TO REMAIN UNLESS OTHERWISE NOTED.

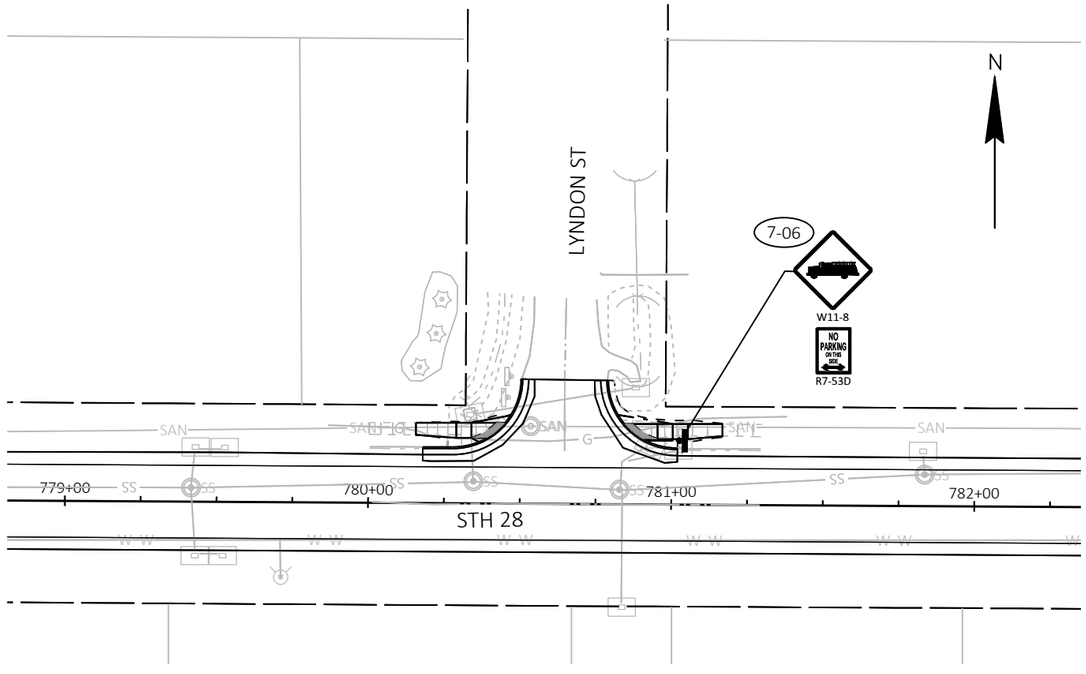
REMOVE EXISTING POSTS ON MOVED SIGNS.

SHEET 6 OF 7

PROJECT NO: 4010-21-71, **4010-26-71**	HWY: STH 28	COUNTY: SHEBOYGAN	SIGNING	SHEET 102	E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\023201-PS.DWG
LAYOUT NAME - 023208-ps
PLOT DATE : 4/23/2024 4:43 PM PLOT BY : SIEBERT, LUKE PLOT NAME : PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 42





LEGEND

- EXISTING SIGN MOUNTED ON POST
- EXISTING SIGN MOUNTED ON LIGHT POLE, SIGNAL POLE, OR OVERHEAD SUPPORT
- X-XX — SIGN NUMBER (MOVING SIGNS TYPE II)
- MOVED SIGN MOUNTED ON PROPOSED WOOD POST(S)
- X-XX — SIGN NUMBER (PROPOSED SIGN)
- PROPOSED SIGN ON PROPOSED WOOD POSTS

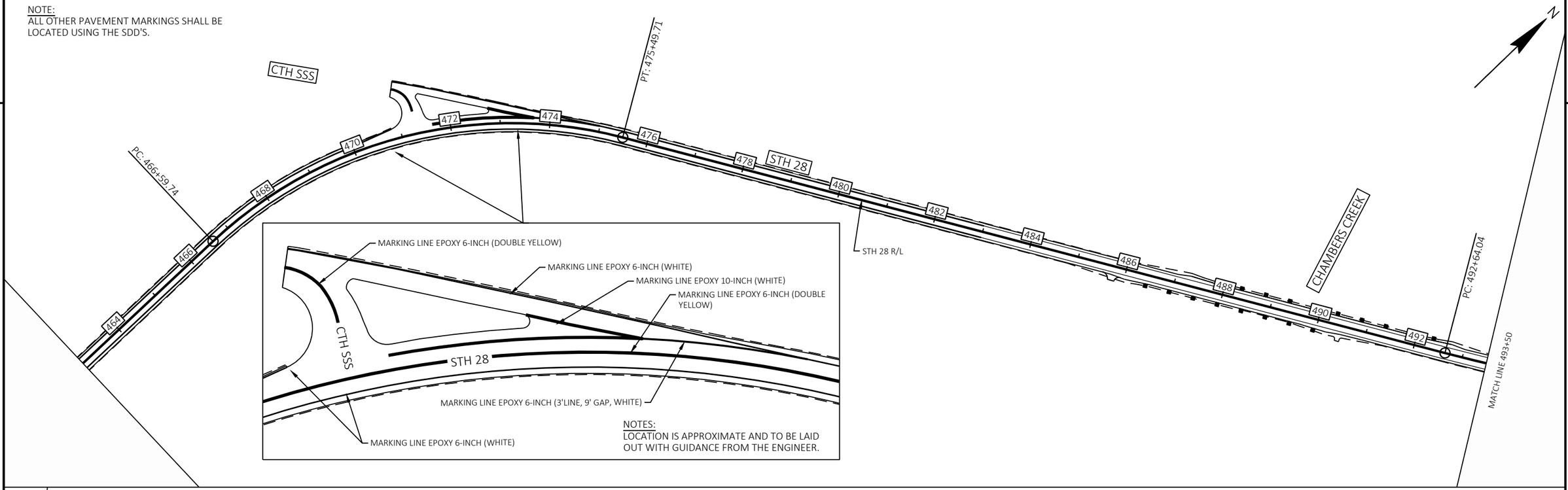
ALL EXISTING SIGNS ARE TO REMAIN UNLESS OTHERWISE NOTED.

REMOVE EXISTING POSTS ON MOVED SIGNS.

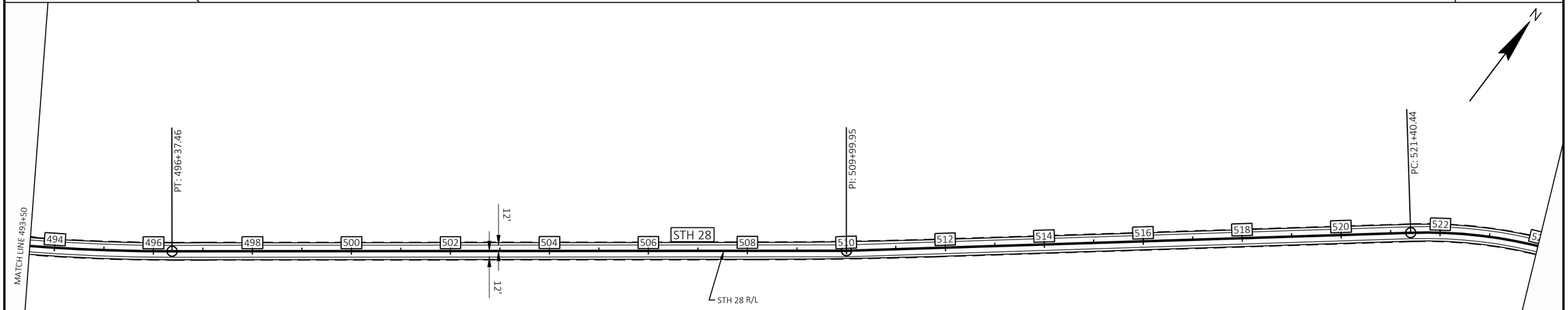
SHEET 7 OF 7

PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	SIGNING	SHEET 103	E

NOTE:
ALL OTHER PAVEMENT MARKINGS SHALL BE LOCATED USING THE SDD'S.



NOTES:
LOCATION IS APPROXIMATE AND TO BE LAID OUT WITH GUIDANCE FROM THE ENGINEER.



PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	PAVEMENT MARKING	SHEET 104	E

2

2



PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	ALIGNMENT PLAN	SHEET 105	E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\027201-AD.DWG
LAYOUT NAME - 01

PLOT DATE : 4/23/2024 4:44 PM PLOT BY : SIEBERT, LUKE PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 42

2



2

PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	ALIGNMENT PLAN	SHEET 106	E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\027201-AD.DWG
LAYOUT NAME - 02

PLOT DATE : 4/23/2024 4:45 PM PLOT BY : SIEBERT, LUKE PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 42

2

2

N

MATCH LINE 156+00

MATCH LINE 186+50

CTH D

STH 28 R/L

160 165 170 L24 STH 28 175 180 185

STH 144

LONE PINE ROAD

PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	ALIGNMENT PLAN	SHEET 107	E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\027201-AD.DWG
LAYOUT NAME - 03

PLOT DATE : 4/23/2024 4:45 PM PLOT BY : SIEBERT, LUKE PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 42

2

2

N

MATCH LINE 186+50

MATCH LINE 217+00



PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	ALIGNMENT PLAN	SHEET 108	E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\027201-AD.DWG
LAYOUT NAME - 04

PLOT DATE : 4/23/2024 4:45 PM PLOT BY : SIEBERT, LUKE PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 42

2

2

N

BRAZELTON DRIVE

STH 28 R/L

STH 28

L26 220 225 230 235 L27 240 245

MATCH LINE 217+00

MATCH LINE 247+50

ABBOTT DRIVE

PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	ALIGNMENT PLAN	SHEET 109	E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\027201-AD.DWG
LAYOUT NAME - 05

PLOT DATE : 4/23/2024 4:45 PM PLOT BY : SIEBERT, LUKE PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 42

2

N

MATCH LINE STA 247+50



MATCH LINE STA 278+00

PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	ALIGNMENT PLAN	SHEET 110	E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\027201-AD.DWG
LAYOUT NAME - 06

PLOT DATE : 4/23/2024 4:45 PM PLOT BY : SIEBERT, LUKE PLOT NAME : PLOT SCALE : 1 IN:200 FT

2



2

PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	ALIGNMENT PLAN	SHEET 111	E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\027201-AD.DWG
LAYOUT NAME - 07

PLOT DATE : 4/23/2024 4:45 PM PLOT BY : SIEBERT, LUKE PLOT NAME : PLOT SCALE : 1 IN:200 FT

2

2

N

MATCH LINE 308+50

SCHOOL DRIVE

WESTERN AVENUE

STH 28

STH 28 R/L

310 315 320 325 L31 330 335

HILLSIDE DRIVE

MATCH LINE 339+00

PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	ALIGNMENT PLAN	SHEET 112	E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\027201-AD.DWG
LAYOUT NAME - 08

PLOT DATE : 4/23/2024 4:45 PM PLOT BY : SIEBERT, LUKE PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 42

2

2

N

CHERRY HILL DRIVE

STH 28

STH 28 R/L

340 345 350 L32 355 360 365 L33

CTH A

MATCH LINE 339+00

MATCH LINE 369+50

PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	ALIGNMENT PLAN	SHEET 113	E

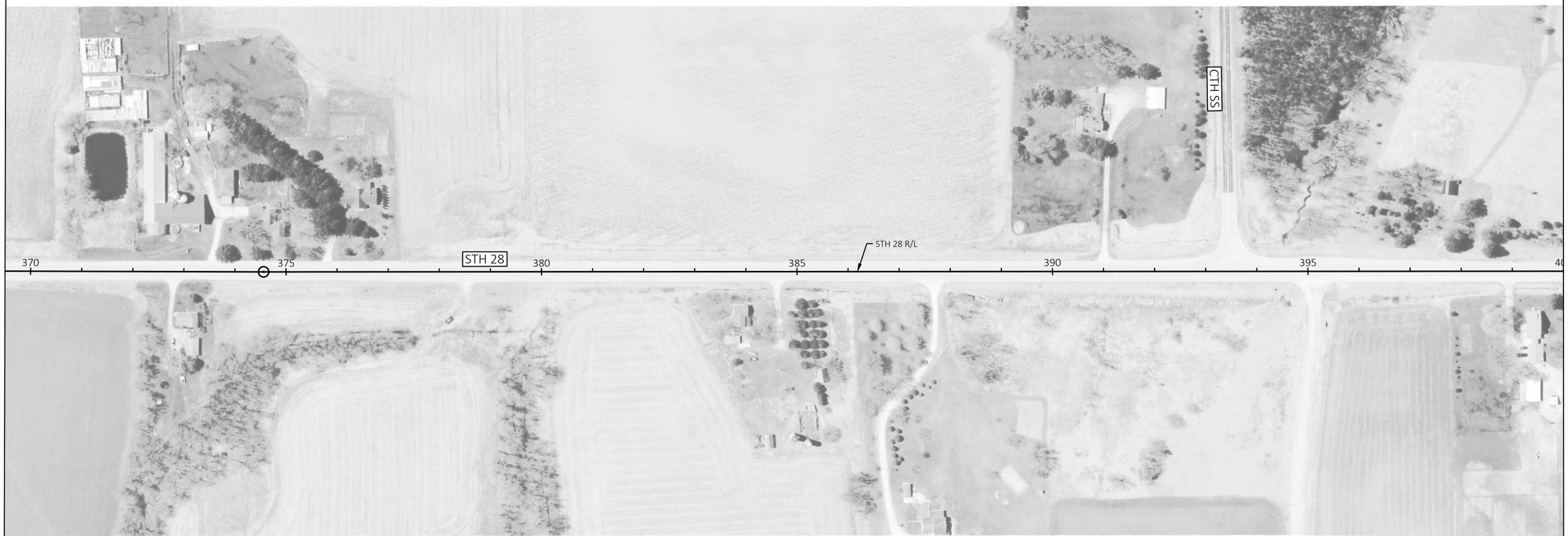
FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\027201-AD.DWG
LAYOUT NAME - 09

PLOT DATE : 4/23/2024 4:45 PM PLOT BY : SIEBERT, LUKE PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 42

2

N



PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	ALIGNMENT PLAN	SHEET 114	E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\027201-AD.DWG
LAYOUT NAME - 10
PLOT DATE : 4/23/2024 4:45 PM
PLOT BY : SIEBERT, LUKE
PLOT NAME :
PLOT SCALE : 1 IN:200 FT
WISDOT/CADDS SHEET 42

2

2

N

MATCH LINE 400+00

L34

405

STH 28

410

415

STH 28 R/L

420

425

430

MATCH LINE 430+50

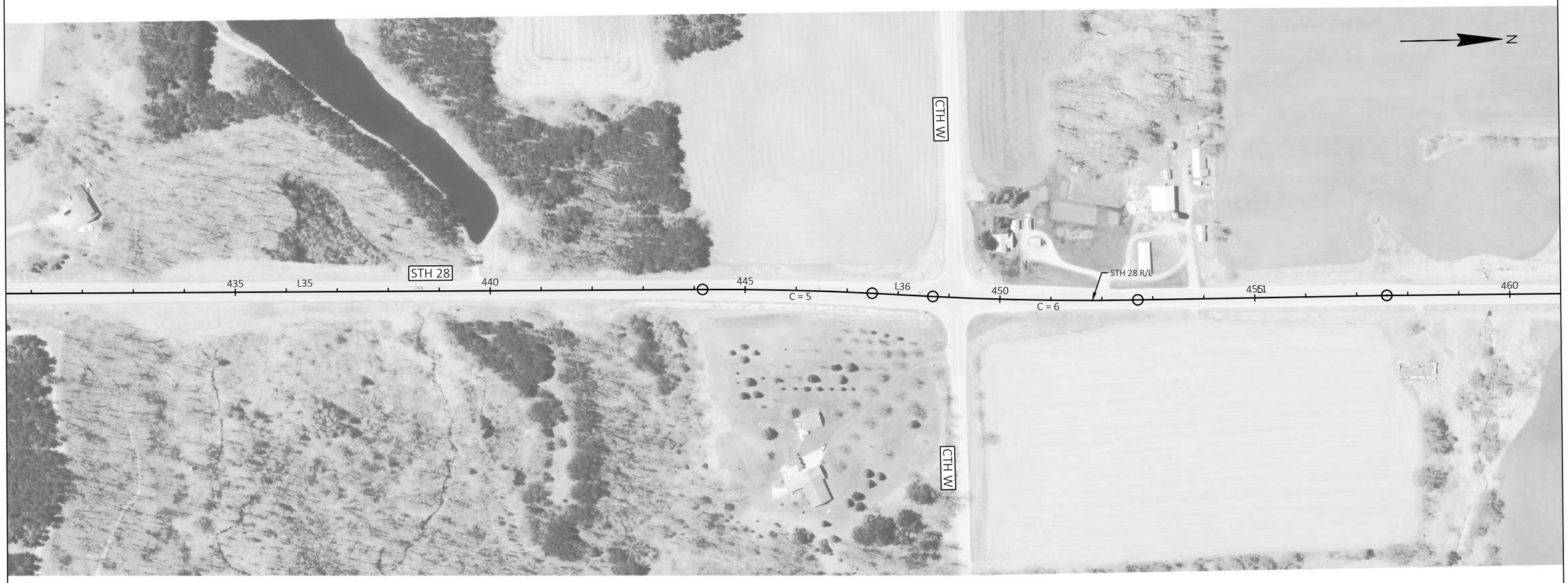
PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	ALIGNMENT PLAN	SHEET 115	E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\027201-AD.DWG
LAYOUT NAME - 11

PLOT DATE : 4/23/2024 4:45 PM PLOT BY : SIEBERT, LUKE PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 42

2



MATCH LINE 430+50

MATCH LINE 461+00

2

PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	ALIGNMENT PLAN	SHEET 116	E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\027201-AD.DWG
LAYOUT NAME - 12

PLOT DATE : 4/23/2024 4:45 PM PLOT BY : SIEBERT, LUKE PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 42

2



PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	ALIGNMENT PLAN	SHEET 117	E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\027201-AD.DWG
LAYOUT NAME - 13

PLOT DATE : 4/23/2024 4:45 PM PLOT BY : SIEBERT, LUKE PLOT NAME : PLOT SCALE : 1 IN:200 FT

2



2

PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	ALIGNMENT PLAN	SHEET 118	E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\027201-AD.DWG
LAYOUT NAME - 14

PLOT DATE : 4/23/2024 4:46 PM PLOT BY : SIEBERT, LUKE PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 42

2

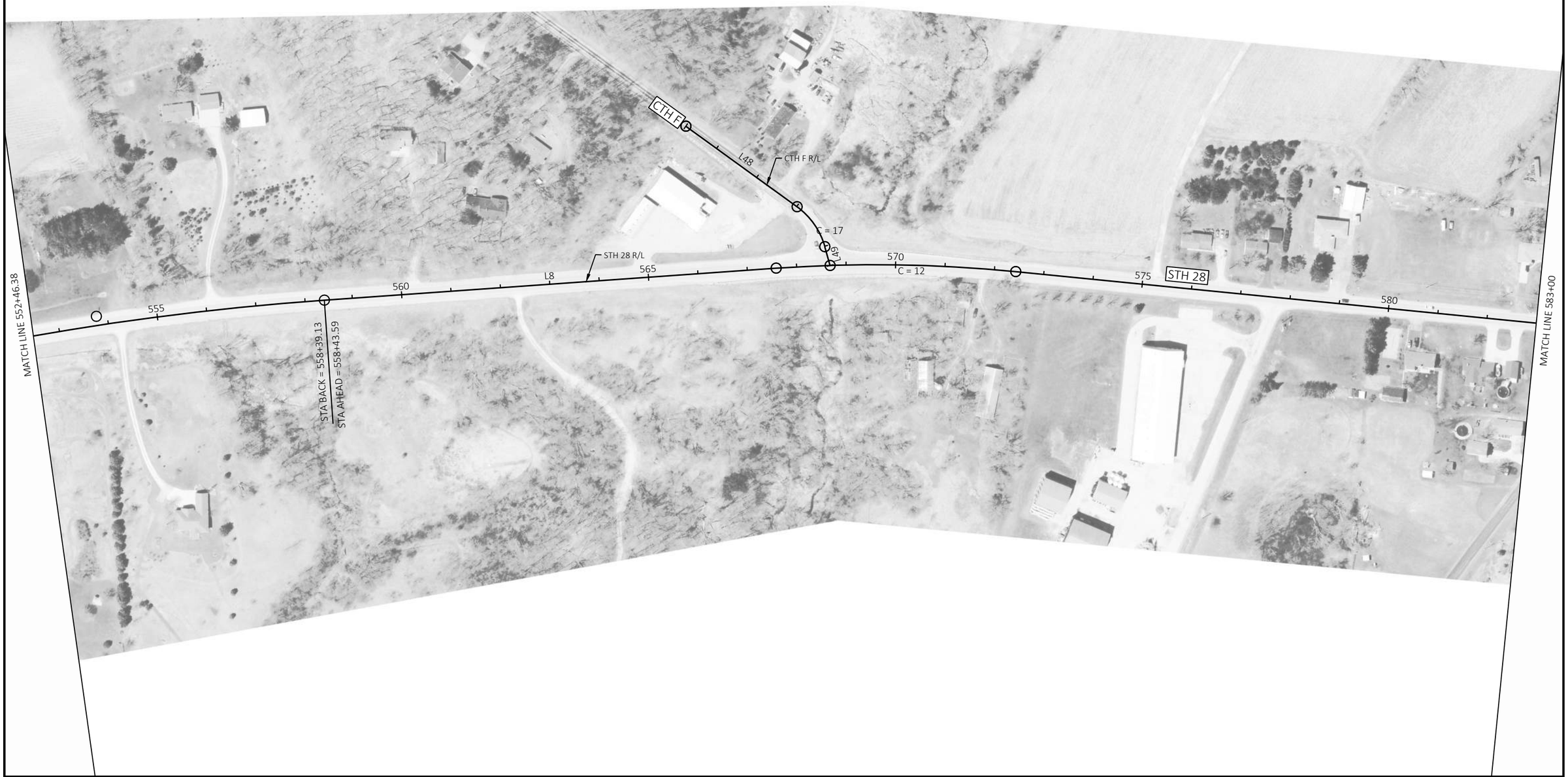


PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	ALIGNMENT PLAN	SHEET 119	E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\027201-AD.DWG
LAYOUT NAME - 15

PLOT DATE : 4/23/2024 4:46 PM PLOT BY : SIEBERT, LUKE PLOT NAME : PLOT SCALE : 1 IN:200 FT

2



PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	ALIGNMENT PLAN	SHEET 120	E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\027201-AD.DWG
LAYOUT NAME - 16

PLOT DATE : 4/23/2024 4:46 PM PLOT BY : SIEBERT, LUKE PLOT NAME : PLOT SCALE : 1 IN:200 FT

2



MATCH LINE 583+00

MATCH LINE 613+50

PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	ALIGNMENT PLAN	SHEET 121	E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\027201-AD.DWG
LAYOUT NAME - 17

PLOT DATE : 4/23/2024 4:46 PM PLOT BY : SIEBERT, LUKE PLOT NAME : PLOT SCALE : 1 IN:200 FT

2



2

PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	ALIGNMENT PLAN	SHEET 122	E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\027201-AD.DWG
LAYOUT NAME - 18

PLOT DATE : 4/23/2024 4:46 PM PLOT BY : SIEBERT, LUKE PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 42

2



MATCH LINE 644+00

MATCH LINE 674+50

2

PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	ALIGNMENT PLAN	SHEET 123	E

2

2



PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	ALIGNMENT PLAN	SHEET 124	E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\027201-AD.DWG
LAYOUT NAME - 20

PLOT DATE : 4/23/2024 4:47 PM PLOT BY : SIEBERT, LUKE PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 42

2

2

N



PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	ALIGNMENT PLAN	SHEET 125	E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\027201-AD.DWG
LAYOUT NAME - 21

PLOT DATE : 4/23/2024 4:47 PM PLOT BY : SIEBERT, LUKE PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 42

2

N

BLUEBERRY LANE

STH 28 R/L

740 745 L18 STH 28 750 755 760 765

BLUEBERRY LANE

MATCH LINE 735+50

MATCH LINE 766+00

2

PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	ALIGNMENT PLAN	SHEET 126	E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\027201-AD.DWG
LAYOUT NAME - 22

PLOT DATE : 4/23/2024 4:47 PM PLOT BY : SIEBERT, LUKE PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 42

2

2

N

DEPOT STREET

HARMON STREET

N LYNDON STREET

LAWSON STREET

STH 28 R/L

STH 28

L19 770 775 780 785 790 795 L20

MATCH LINE 766+00

MATCH LINE 796+50

PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	ALIGNMENT PLAN	SHEET 127	E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\027201-AD.DWG
LAYOUT NAME - 23

PLOT DATE : 4/23/2024 4:47 PM PLOT BY : SIEBERT, LUKE PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 42

2

N



PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	ALIGNMENT PLAN	SHEET 128	E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\027201-AD.DWG
LAYOUT NAME - 24

PLOT DATE : 4/23/2024 4:47 PM PLOT BY : SIEBERT, LUKE PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 42

2

STH 28																
NUMBER	BEGIN LINE (STA)	END LINE (STA)	BEGIN LINE (Y,X)	END LINE (Y,X)	PI (STA)	PI (Y,X)	DELTA	DEGREE	TANGENT	LENGTH	EXTERNAL	RADIUS	PC (STA)	PT (STA)	BEARING BACK	BEARING AHEAD
L21	95+00.00	97+75.71	100564.23 119601.47	100785.63 119765.77						275.71'						N36°34'40.0"E
C = 1					100+00.24	100965.94 119899.57	13°24'37"	3°00'00"	224.53'	447.01'	13.15'	1909.86'	97+75.71	102+22.71	N36°34'40.0"E	N49°59'16.7"E
L22	102+22.71	118+29.62	101110.30 120071.54	102143.46 121302.28						1606.90'						N49°59'16.7"E
C = 2					125+19.76	102587.18 121830.86	39°44'07"	3°00'00"	690.14'	1324.51'	120.87'	1909.86'	118+29.62	131+54.13	N49°59'16.7"E	N10°15'09.4"E
L23	131+54.13	149+19.09	103266.31 121953.70	105003.08 122267.84						1764.96'						N10°15'09.4"E
C = 3					152+81.23	105359.44 122332.30	21°28'01"	2°59'57"	362.14'	715.79'	34.02'	1910.46'	149+19.09	156+34.87	N10°15'09.4"E	N31°43'10.4"E
L24	156+34.87	187+62.86	105667.49 122522.70	108328.25 124167.28						3127.99'						N31°43'10.4"E
L25	187+62.86	213+34.67	108328.25 124167.28	110510.34 125528.41						2571.80'						N31°57'18.0"E
L26	213+34.67	225+45.27	110510.34 125528.41	111539.95 126165.16						1210.60'						N31°44'02.3"E
L27	225+45.27	246+49.45	111539.95 126165.16	113338.32 127257.60						2104.18'						N31°16'37.7"E
L28	246+49.45	264+59.15	113338.32 127257.60	114888.65 128191.14						1809.70'						N31°03'16.4"E
L29	264+59.15	283+90.19	114888.65 128191.14	116527.17 129213.00						1931.05'						N31°56'57.6"E
C = 4					287+07.09	116796.07 129380.69	30°55'00"	5°00'00"	316.90'	618.34'	43.01'	1145.93'	283+90.19	290+08.54	N31°56'57.6"E	N1°01'57.1"E
L30	290+08.54	313+46.58	117112.92 129386.40	119450.58 129428.53						2338.04'						N1°01'57.1"E
L31	313+46.58	344+62.48	119450.58 129428.53	122566.21 129469.08						3115.89'						N0°44'44.5"E
L32	344+62.48	357+44.02	122566.21 129469.08	123847.39 129499.37						1281.54'						N1°21'14.9"E
L33	357+44.02	374+55.69	123847.39 129499.37	125558.86 129525.60						1711.67'						N0°52'41.1"E
L34	374+55.69	428+57.98	125558.86 129525.60	130960.79 129588.58						5402.29'						N0°40'04.9"E
L35	428+57.98	444+16.12	130960.79 129588.58	132518.72 129614.14						1558.14'						N0°56'23.8"E
C = 5					445+82.57	132685.15 129616.87	3°19'43"	1°00'01"	166.45'	332.81'	2.42'	5728.70'	444+16.12	447+48.93	N0°56'23.8"E	N4°16'06.7"E
L36	447+48.93	448+68.11	132851.14 129629.26	132969.98 129638.13						119.17'						N4°16'06.7"E
C = 6					450+69.32	133170.64 129653.11	4°01'21"	1°00'00"	201.21'	402.26'	3.53'	5729.90'	448+68.11	452+70.37	N4°16'06.7"E	N0°14'46.0"E
L1	452+70.37	457+58.94	133371.85 129653.97	133860.42 129656.07						488.57'						N0°14'46.0"E
L2	457+58.94	466+59.74	133860.42 129656.07	134761.15 129667.10						900.80'						N0°42'04.3"E
C = 7					471+46.82	135248.20 129673.06	57°50'55"	6°30'00"	487.09'	889.98'	125.63'	881.47'	466+59.74	475+49.71	N0°42'04.3"E	N58°32'59.2"E
L3	475+49.71	492+64.04	135502.34 130088.59	136396.80 131551.07						1714.33'						N58°32'59.2"E
C = 8					494+50.90	136494.30 131710.48	5°36'06"	1°30'00"	186.86'	373.42'	4.57'	3819.49'	492+64.04	496+37.46	N58°32'59.2"E	N52°56'53.3"E
L4	496+37.46	509+99.95	136606.89 131859.61	137427.84 132947.00						1362.48'						N52°56'53.3"E
L5	509+99.95	521+40.44	137427.84 132947.00	138143.29 133835.17						1140.49'						N51°08'50.5"E
C = 9					524+34.14	138327.54 134063.89	34°11'34"	6°00'00"	293.71'	569.88'	44.15'	954.92'	521+40.44	527+10.31	N51°08'50.5"E	N85°20'24.5"E

2

STH 28																
NUMBER	BEGIN LINE (STA)	END LINE (STA)	BEGIN LINE (Y,X)	END LINE (Y,X)	PI (STA)	PI (Y,X)	DELTA	DEGREE	TANGENT	LENGTH	EXTERNAL	RADIUS	PC (STA)	PT (STA)	BEARING BACK	BEARING AHEAD
L6	527+10.31	529+24.41	138351.40 134356.63	138368.79 134570.02						214.10'						N85°20'24.5"E
C = 10					534+48.14	138411.34 135092.01	49°07'28"	5°00'00"	523.73'	982.49'	114.01'	1145.92'	529+24.41	539+06.90	N85°20'24.5"E	N36°12'56.1"E
L7	539+06.90	544+59.83	138833.88 135401.45	139279.99 135728.13						552.93'						N36°12'56.1"E
C = 11					551+52.83	139839.10 136137.57	13°47'35"	1°00'00"	693.00'	1379.29'	41.76'	5729.58'	544+59.83	558+43.59	N36°12'56.1"E	N50°00'30.7"E
L8	558+43.59	567+58.43	140284.47 136668.51	140872.41 137369.40						914.84'						N50°00'30.7"E
C = 12					570+01.22	141028.45 137555.42	9°41'19"	2°00'00"	242.79'	484.43'	10.27'	2864.75'	567+58.43	572+42.86	N50°00'30.7"E	N59°41'49.9"E
L9	572+42.86	608+73.60	141150.95 137765.03	142982.92 140899.71						3630.74'						N59°41'49.9"E
L10	608+73.60	618+58.57	142982.92 140899.71	143484.31 141747.52						984.97'						N59°23'59.9"E
C = 13					619+88.67	143550.54 141859.50	15°31'02"	6°00'00"	130.11'	258.62'	8.82'	954.93'	618+58.57	621+17.19	N59°23'59.9"E	N43°52'58.1"E
L11	621+17.19	623+37.66	143644.31 141949.69	143803.22 142102.52						220.47'						N43°52'58.1"E
C = 14					624+62.90	143893.49 142189.34	9°59'38"	4°00'00"	125.24'	249.85'	5.46'	1432.41'	623+37.66	625+87.51	N43°52'58.1"E	N53°52'35.8"E
L12	625+87.51	644+53.82	143967.32 142290.50	145067.56 143798.01						1866.31'						N53°52'35.8"E
L13	644+53.82	665+47.38	145067.56 143798.01	146318.61 145476.66						2093.56'						N53°18'14.2"E
L14	665+47.38	687+32.88	146318.61 145476.66	147611.16 147238.98						2185.50'						N53°44'32.1"E
C = 15					689+77.70	147755.95 147436.39	19°23'53"	4°00'00"	244.82'	484.95'	20.77'	1432.41'	687+32.88	692+17.84	N53°44'32.1"E	N34°20'39.4"E
L15	692+17.84	700+38.37	147958.09 147574.51	148635.57 148037.42						820.53'						N34°20'39.4"E
C = 16					704+70.69	148992.52 148281.32	55°41'06"	7°00'00"	432.33'	795.50'	107.16'	818.51'	700+38.37	708+33.87	N34°20'39.4"E	S89°58'14.7"E
L16	708+33.87	729+04.64	148992.30 148713.65	148991.25 150784.42						2070.77'						S89°58'14.7"E
L17	729+04.64	738+99.12	148991.25 150784.42	148989.88 151778.91						994.49'						S89°55'15.9"E
L18	738+99.12	754+54.05	148989.88 151778.91	148980.41 153333.81						1554.93'						S89°39'04.4"E
L19	754+54.05	784+26.55	148980.41 153333.81	148961.98 156306.25						2972.50'						S89°38'40.8"E
L20	784+26.55	806+56.43	148961.98 156306.25	148949.28 158536.09						2229.88'						S89°40'25.2"E

2

CTH F																
NUMBER	BEGIN LINE (STA)	END LINE (STA)	BEGIN LINE (Y,X)	END LINE (Y,X)	PI (STA)	PI (Y,X)	DELTA	DEGREE	TANGENT	LENGTH	EXTERNAL	RADIUS	PC (STA)	PT (STA)	BEARING BACK	BEARING AHEAD
L48	75+23.38	78+00.80	140997.58 137053.27	140997.58 137330.69						277.42'						N90°00'00.0"E
C = 17					78+52.87	140997.58 137382.76	38°17'10"	38°11'50"	52.07'	100.23'	8.78'	150.00'	78+00.80	79+01.03	N90°00'00.0"E	S51°42'49.6"E
L49	79+01.03	79+40.26	140965.31 137423.63	140941.01 137454.42						39.23'						S51°42'49.6"E

2

2

N

PROPOSED RAILROAD SIGNAL PAVEMENT MARKING TO START AT EXISTING SIGN LOCATION

PROPOSED RAILROAD SIGNAL BUNGALOW (WORK BY OTHERS)

WISCONSIN & SOUTHERN RAILROAD R/W

EXISTING RAILROAD SIGNAL BOX TO BE REMOVED (WORK BY OTHERS)

DEPOT STREET

EXISTING W10-1 TO REMAIN

R/W

STH 28

770 771 772 773 774 775

EXISTING W10-1 TO REMAIN

REMOVE & REPLACE EXISTING RAILROAD SIGNALS (WORK BY OTHERS)

PROPOSED RAILROAD SIGNAL PAVEMENT MARKING TO START AT EXISTING SIGN LOCATION

WISCONSIN & SOUTHERN RAILROAD R/W

PROJECT NO: 4010-21-71	HWY: STH 28	COUNTY: SHEBOYGAN	RAILROAD CROSSING DETAIL	SCALE, FEET 0 20 40	SHEET 132	E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\027301-RR.DWG
LAYOUT NAME - 01

PLOT DATE : 4/23/2024 4:48 PM PLOT BY : SIEBERT, LUKE PLOT NAME : PLOT SCALE : 1 IN:40 FT

Estimate Of Quantities

Line	Item	Item Description	Unit	Total	4010-21-71 Qty	4010-26-71 Qty
0002	201.0105	Clearing	STA	7.000	5.000	2.000
0004	201.0120	Clearing	ID	16.000	16.000	
0006	201.0205	Grubbing	STA	7.000	5.000	2.000
0008	201.0220	Grubbing	ID	16.000	16.000	
0010	203.0100	Removing Small Pipe Culverts	EACH	4.000	4.000	
0012	203.0220	Removing Structure (structure) 01. 42"X54" Box Culvert, 633+78	EACH	1.000	1.000	
0014	203.0220	Removing Structure (structure) 02. 24"X24" Box Culvert, 678+09	EACH	1.000	1.000	
0016	203.0250	Removing Structure Over Waterway Remove Debris (structure) 01. C-59-114	EACH	1.000		1.000
0018	204.0100	Removing Concrete Pavement	SY	972.000	416.000	556.000
0020	204.0110	Removing Asphaltic Surface	SY	337.000	337.000	
0022	204.0115	Removing Asphaltic Surface Butt Joints	SY	303.000	303.000	
0024	204.0120	Removing Asphaltic Surface Milling	SY	281,900.000	281,900.000	
0026	204.0150	Removing Curb & Gutter	LF	1,547.000	1,051.000	496.000
0028	204.0155	Removing Concrete Sidewalk	SY	778.000	444.000	334.000
0030	204.0165	Removing Guardrail	LF	4,448.000	4,421.000	27.000
0032	204.0170	Removing Fence	LF	161.000	123.000	38.000
0034	204.0185	Removing Masonry	CY	16.000	15.000	1.000
0036	204.0190	Removing Surface Drains	EACH	1.000	1.000	
0038	204.0220	Removing Inlets	EACH	4.000		4.000
0040	204.0245	Removing Storm Sewer (size) 01. 12-Inch	LF	18.000		18.000
0042	204.0245	Removing Storm Sewer (size) 02. 15-Inch	LF	150.000		150.000
0044	204.0245	Removing Storm Sewer (size) 03. 18-Inch	LF	20.000		20.000
0046	204.9060.S	Removing (item description) 01. Apron Endwalls	EACH	1.000	1.000	
0048	205.0100	Excavation Common	CY	1,375.000	660.000	715.000
0050	206.1001	Excavation for Structures Bridges (structure) 01. B-59-321	EACH	1.000		1.000
0052	210.1500	Backfill Structure Type A	TON	522.000		522.000
0054	211.0101	Prepare Foundation for Asphaltic Paving (project) 01. 4010-21-71	EACH	1.000	1.000	
0056	211.0400	Prepare Foundation for Asphaltic Shoulders	STA	1,240.000	1,240.000	
0058	213.0100	Finishing Roadway (project) 01. 4010-21-71	EACH	1.000	1.000	
0060	213.0100	Finishing Roadway (project) 02. 4010-26-71	EACH	1.000		1.000
0062	305.0110	Base Aggregate Dense 3/4-Inch	TON	5,950.000	5,950.000	
0064	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	2,240.000	830.000	1,410.000
0066	305.0504.S	Hauling Excess Shoulder Material	CY	2,830.000	2,830.000	
0068	320.0130	Concrete Base 6 1/2-Inch	SY	88.000	88.000	
0070	415.0410	Concrete Pavement Approach Slab	SY	150.000		150.000
0072	416.0610	Drilled Tie Bars	EACH	227.000	219.000	8.000
0074	455.0605	Tack Coat	GAL	34,110.000	33,995.000	115.000
0076	460.0105.S	HMA Percent Within Limits (PWL) Test Strip Volumetrics	EACH	2.000	2.000	
0078	460.0110.S	HMA Percent Within Limits (PWL) Test Strip Density	EACH	2.000	2.000	
0080	460.2005	Incentive Density PWL HMA Pavement	DOL	44,350.000	44,350.000	
0082	460.2007	Incentive Density HMA Pavement Longitudinal Joints	DOL	14,100.000	14,100.000	
0084	460.2010	Incentive Air Voids HMA Pavement	DOL	70,650.000	70,270.000	380.000
0086	460.6223	HMA Pavement 3 MT 58-28 S	TON	38,000.000	37,640.000	360.000
0088	460.6224	HMA Pavement 4 MT 58-28 S	TON	29,385.000	29,255.000	130.000
0090	465.0105	Asphaltic Surface	TON	3,870.000	3,870.000	
0092	465.0110	Asphaltic Surface Patching	TON	780.000	780.000	
0094	465.0120	Asphaltic Surface Driveways and Field Entrances	TON	32.000	32.000	
0096	465.0315	Asphaltic Flumes	SY	28.000	28.000	
0098	465.0520	Asphaltic Rumble Strips, Shoulder	LF	91,011.000	91,011.000	

Line	Item	Item Description	Unit	Total	4010-21-71 Qty	4010-26-71 Qty
0100	465.0560	Asphaltic Rumble Strips, Centerline	LF	48,069.000	48,069.000	
0102	502.0100	Concrete Masonry Bridges	CY	273.000		273.000
0104	502.3200	Protective Surface Treatment	SY	273.000		273.000
0106	502.3210	Pigmented Surface Sealer	SY	49.000		49.000
0108	505.0400	Bar Steel Reinforcement HS Structures	LB	7,300.000		7,300.000
0110	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	31,750.000		31,750.000
0112	513.2001	Railing Pipe	LF	59.000	59.000	
0114	513.7016	Railing Steel Type C3	LF	115.000		115.000
0116	516.0500	Rubberized Membrane Waterproofing	SY	38.000		38.000
0118	520.8700	Cleaning Culvert Pipes	EACH	3.000	3.000	
0120	521.0348	Apron Endwalls for Culvert Pipe Sloped Cross Drains Steel 48-Inch 4 to 1	EACH	2.000	2.000	
0122	521.1015	Apron Endwalls for Culvert Pipe Steel 15-Inch	EACH	1.000	1.000	
0124	521.1036	Apron Endwalls for Culvert Pipe Steel 36-Inch	EACH	1.000	1.000	
0126	521.1042	Apron Endwalls for Culvert Pipe Steel 42-Inch	EACH	1.000	1.000	
0128	521.1728	Apron Endwalls for Pipe Arch Sloped Side Drains Steel 28x20-Inch 6 to 1	EACH	2.000	2.000	
0130	521.3136	Culvert Pipe Corrugated Steel 36-Inch	LF	4.000	4.000	
0132	521.3728	Pipe Arch Corrugated Steel 28x20-Inch	LF	33.000	33.000	
0134	522.0424	Culvert Pipe Reinforced Concrete Class IV 24-Inch	LF	68.000	68.000	
0136	522.0448	Culvert Pipe Reinforced Concrete Class IV 48-Inch	LF	62.000	62.000	
0138	522.1018	Apron Endwalls for Culvert Pipe Reinforced Concrete 18-Inch	EACH	1.000		1.000
0140	522.1024	Apron Endwalls for Culvert Pipe Reinforced Concrete 24-Inch	EACH	3.000	2.000	1.000
0142	524.0627	Apron Endwalls for Culvert Pipe Salvaged 27-Inch	EACH	1.000	1.000	
0144	550.0010	Pre-Boring Unconsolidated Materials	LF	198.000		198.000
0146	550.0500	Pile Points	EACH	18.000		18.000
0148	550.2128	Piling CIP Concrete 12 3/4 X 0.50-Inch	LF	1,035.000		1,035.000
0150	601.0407	Concrete Curb & Gutter 18-Inch Type D	LF	40.000	40.000	
0152	601.0409	Concrete Curb & Gutter 30-Inch Type A	LF	395.000	395.000	
0154	601.0411	Concrete Curb & Gutter 30-Inch Type D	LF	406.000	406.000	
0156	601.0576	Concrete Curb & Gutter 4-Inch Sloped 30-Inch Type J	LF	922.000	462.000	460.000
0158	601.0600	Concrete Curb Pedestrian	LF	260.000	260.000	
0160	602.0410	Concrete Sidewalk 5-Inch	SF	7,254.000	6,013.000	1,241.000
0162	602.0505	Curb Ramp Detectable Warning Field Yellow	SF	370.000	370.000	
0164	602.0605	Curb Ramp Detectable Warning Field Radial Yellow	SF	51.000	51.000	
0166	602.0810	Concrete Driveway 6-Inch	SY	211.000		211.000
0168	606.0200	Riprap Medium	CY	170.000	170.000	
0170	606.0300	Riprap Heavy	CY	242.000	15.000	227.000
0172	608.0318	Storm Sewer Pipe Reinforced Concrete Class III 18-Inch	LF	57.000		57.000
0174	608.0324	Storm Sewer Pipe Reinforced Concrete Class III 24-Inch	LF	32.000		32.000
0176	608.0412	Storm Sewer Pipe Reinforced Concrete Class IV 12-Inch	LF	74.000		74.000
0178	608.0415	Storm Sewer Pipe Reinforced Concrete Class IV 15-Inch	LF	165.000		165.000
0180	608.0418	Storm Sewer Pipe Reinforced Concrete Class IV 18-Inch	LF	67.000		67.000
0182	611.0612	Inlet Covers Type C	EACH	1.000		1.000
0184	611.0630	Inlet Covers Type HM-GJ	EACH	13.000		13.000
0186	611.2005	Manholes 5-FT Diameter	EACH	1.000		1.000
0188	611.2006	Manholes 6-FT Diameter	EACH	1.000		1.000
0190	611.3004	Inlets 4-FT Diameter	EACH	2.000		2.000
0192	611.3230	Inlets 2x3-FT	EACH	10.000		10.000
0194	611.8115	Adjusting Inlet Covers	EACH	2.000	2.000	
0196	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	232.000		232.000

Estimate Of Quantities

Line	Item	Item Description	Unit	Total	4010-21-71 Qty	4010-26-71 Qty
0198	614.0010	Barrier System Grading Shaping Finishing	EACH	18.000	18.000	
0200	614.2300	MGS Guardrail 3	LF	2,728.360	2,728.360	
0202	614.2330	MGS Guardrail 3 K	LF	490.400	490.400	
0204	614.2350	MGS Guardrail Short Radius	LF	106.000	106.000	
0206	614.2610	MGS Guardrail Terminal EAT	EACH	16.000	16.000	
0208	614.2630	MGS Guardrail Short Radius Terminal	EACH	2.000	2.000	
0210	618.0100	Maintenance and Repair of Haul Roads (project) 01. 4010-21-71	EACH	1.000	1.000	
0212	618.0100	Maintenance and Repair of Haul Roads (project) 02. 4010-26-71	EACH	1.000		1.000
0214	619.1000	Mobilization	EACH	1.000	0.900	0.100
0216	624.0100	Water	MGAL	146.000	118.000	28.000
0218	625.0100	Topsoil	SY	1,607.000	1,253.000	354.000
0220	627.0200	Mulching	SY	1,000.000	1,000.000	
0222	628.1504	Silt Fence	LF	7,492.000	7,265.000	227.000
0224	628.1520	Silt Fence Maintenance	LF	11,242.000	10,902.000	340.000
0226	628.1905	Mobilizations Erosion Control	EACH	15.000	12.000	3.000
0228	628.1910	Mobilizations Emergency Erosion Control	EACH	7.000	6.000	1.000
0230	628.2004	Erosion Mat Class I Type B	SY	900.000	900.000	
0232	628.2008	Erosion Mat Urban Class I Type B	SY	816.000	462.000	354.000
0234	628.7005	Inlet Protection Type A	EACH	5.000	3.000	2.000
0236	628.7015	Inlet Protection Type C	EACH	23.000	9.000	14.000
0238	628.7020	Inlet Protection Type D	EACH	5.000		5.000
0240	628.7504	Temporary Ditch Checks	LF	49.000	49.000	
0242	628.7555	Culvert Pipe Checks	EACH	80.000	80.000	
0244	628.7560	Tracking Pads	EACH	2.000		2.000
0246	628.7570	Rock Bags	EACH	463.000	413.000	50.000
0248	629.0210	Fertilizer Type B	CWT	2.300	1.900	0.400
0250	630.0130	Seeding Mixture No. 30	LB	40.000	40.000	
0252	630.0140	Seeding Mixture No. 40	LB	40.000	22.000	18.000
0254	630.0200	Seeding Temporary	LB	74.000	62.000	12.000
0256	630.0300	Seeding Borrow Pit	LB	11.000		11.000
0258	630.0500	Seed Water	MGAL	55.000	37.000	18.000
0260	633.5200	Markers Culvert End	EACH	17.000	15.000	2.000
0262	634.0614	Posts Wood 4x6-Inch X 14-FT	EACH	23.000	21.000	2.000
0264	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	6.000	6.000	
0266	637.2210	Signs Type II Reflective H	SF	4.500	4.500	
0268	638.2102	Moving Signs Type II	EACH	27.000	25.000	2.000
0270	638.3000	Removing Small Sign Supports	EACH	24.000	23.000	1.000
0272	642.5201	Field Office Type C	EACH	1.000	0.900	0.100
0274	643.0300	Traffic Control Drums	DAY	17,658.000	17,658.000	
0276	643.0420	Traffic Control Barricades Type III	DAY	1,230.000	420.000	810.000
0278	643.0705	Traffic Control Warning Lights Type A	DAY	2,460.000	840.000	1,620.000
0280	643.0715	Traffic Control Warning Lights Type C	DAY	45.000	45.000	
0282	643.0900	Traffic Control Signs	DAY	33,705.000	19,530.000	14,175.000
0284	643.0920	Traffic Control Covering Signs Type II	EACH	7.000		7.000
0286	643.1000	Traffic Control Signs Fixed Message	SF	117.000		117.000
0288	643.1050	Traffic Control Signs PCMS	DAY	38.000	24.000	14.000
0290	643.3165	Temporary Marking Line Paint 6-Inch	LF	524,500.000	524,500.000	
0292	643.3265	Temporary Marking Line Paint 10-Inch	LF	1,957.000	1,957.000	
0294	643.3350	Temporary Marking Crosswalk Removable Tape 6-inch	LF	2,683.000	2,683.000	

Line	Item	Item Description	Unit	Total	4010-21-71 Qty	4010-26-71 Qty
0296	643.5000	Traffic Control	EACH	1.000	0.900	0.100
0298	644.1430	Temporary Pedestrian Surface Plate	SF	571.000	571.000	
0300	644.1601	Temporary Pedestrian Curb Ramp	DAY	1,282.000	1,282.000	
0302	644.1605	Temporary Pedestrian Detectable Warning Field	SF	310.000	310.000	
0304	644.1810	Temporary Pedestrian Barricade	LF	2,253.000	2,253.000	
0306	645.0111	Geotextile Type DF Schedule A	SY	106.000		106.000
0308	645.0120	Geotextile Type HR	SY	846.000	484.000	362.000
0310	646.2020	Marking Line Epoxy 6-Inch	LF	16,867.000	16,760.000	107.000
0312	646.2040	Marking Line Grooved Wet Ref Epoxy 6-Inch	LF	190,500.000	190,500.000	
0314	646.4040	Marking Line Grooved Wet Ref Epoxy 10-Inch	LF	1,957.000	1,957.000	
0316	646.4720	Marking Line Same Day Epoxy 6-Inch	LF	15,580.000	15,580.000	
0318	646.5320	Marking Railroad Crossing Epoxy	EACH	2.000	2.000	
0320	646.6120	Marking Stop Line Epoxy 18-Inch	LF	132.000	132.000	
0322	646.7420	Marking Crosswalk Epoxy Transverse Line 6-Inch	LF	1,520.000	1,520.000	
0324	646.9002	Marking Removal Line 6-Inch	LF	230.000	230.000	
0326	650.4000	Construction Staking Storm Sewer	EACH	16.000		16.000
0328	650.4500	Construction Staking Subgrade	LF	229.000		229.000
0330	650.5000	Construction Staking Base	LF	229.000		229.000
0332	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	2,157.000	1,697.000	460.000
0334	650.6000	Construction Staking Pipe Culverts	EACH	5.000	5.000	
0336	650.6501	Construction Staking Structure Layout (structure) 01. B-59-321	EACH	1.000		1.000
0338	650.8000	Construction Staking Resurfacing Reference	LF	70,328.000	70,328.000	
0340	650.9000	Construction Staking Curb Ramps	EACH	24.000	24.000	
0342	650.9500	Construction Staking Sidewalk (project) 01. 4010-21-71	EACH	1.000	1.000	
0344	650.9500	Construction Staking Sidewalk (project) 02. 4010-26-71	EACH	1.000		1.000
0346	650.9911	Construction Staking Supplemental Control (project) 01. 4010-21-71	EACH	1.000	1.000	
0348	650.9911	Construction Staking Supplemental Control (project) 02. 4010-26-71	EACH	1.000		1.000
0350	650.9920	Construction Staking Slope Stakes	LF	229.000		229.000
0352	690.0150	Sawing Asphalt	LF	2,364.000	2,258.000	106.000
0354	690.0250	Sawing Concrete	LF	530.000	391.000	139.000
0356	715.0502	Incentive Strength Concrete Structures	DOL	1,700.000		1,700.000
0358	715.0720	Incentive Compressive Strength Concrete Pavement	DOL	500.000		500.000
0360	740.0440	Incentive IRI Ride	DOL	107,000.000	107,000.000	
0362	999.1001.S	Seismograph	EACH	1.000		1.000
0364	999.1501.S	Crack and Damage Survey	EACH	5.000		5.000
0366	999.2000.S	Installing and Maintaining Bird Deterrent System (station) 01. 609+10	EACH	1.000		1.000
0368	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	2,500.000	2,500.000	
0370	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	3,280.000	3,280.000	
0372	SPV.0035	Special 01. Foundation Backfill	CY	480.000	480.000	
0374	SPV.0060	Special 01. Apr Endwall For Cul Pipe Hori Ellip Cross Drains Stl 38x60-Inch 4:1	EACH	4.000	4.000	
0376	SPV.0060	Special 02. Locating Culvert Pipe	EACH	1.000	1.000	
0378	SPV.0060	Special 03. Adjust Sanitary Sewer Manhole	EACH	20.000	18.000	2.000
0380	SPV.0090	Special 01. Concrete Curb & Gutter 24-Inch Type D	LF	99.000	99.000	
0382	SPV.0090	Special 02. Concrete Curb & Gutter 24-Inch Type J	LF	280.000	280.000	
0384	SPV.0090	Special 03. Cul Pipe Reinforced Concrete Hori Ellip Class HE-IV 38x60-Inch	LF	104.000	104.000	
0386	SPV.0090	Special 04. Profile Cut Curb	LF	154.000	154.000	
0388	SPV.0090	Special 05. Fence Split Rail Three Rail	LF	50.000	50.000	

3

ID 4010-21-71 CLEARING & GRUBBING

CATEGORY 0010

ROADWAY	STATION	TO	STATION		201.0105 CLEARING STA	201.0120 CLEARING ID	201.0205 GRUBBING STA	201.0220 GRUBBING ID
STH 28								
	489+00	-	491+00	---	2	---	2	---
	---	-	492+15	29' LT	---	3	---	3
	---	-	492+22	29' LT	---	3	---	3
	634+00	-	635+00	---	1	---	1	---
	---	-	678+07	38' LT	---	10	---	10
	733+00	-	734+00	---	1	---	1	---
CTH F								
	77+00	-	78+00	---	1	---	1	---
				TOTAL 0010	5	16	5	16

ID 4010-26-71

CATEGORY 0010

ROADWAY	STATION	TO	STATION	201.0105 CLEARING STA	201.0205 GRUBBING STA
STH 28					
	608+00	-	610+00	2	2
			TOTAL 0010	2	2

ID 4010-21-71	**5**	**5**
ID 4010-26-71	**2**	**2**
TOTAL	**7**	**7**

ID 4010-21-71 REMOVING STRUCTURES

CATEGORY 0010

ROADWAY	LOCATION	203.0220.01 REMOVING STRUCTURE 42"X54" BOX CULVERT 633+78 EACH	203.0220.02 REMOVING STRUCTURE 24"X24" BOX CULVERT 678+09 EACH	REMARKS
STH28				
	633+78	1	---	42"HX54"W SINGLE CELL CONCRETE BOX CULVERT, 55 LF
	678+09	---	1	24"HX24"W CONCRETE BOX CULVERT, 70 LF
	TOTAL 0010	1	1	

ID 4010-21-71 REMOVING APRON ENDWALLS

CATEGORY 0010

ROADWAY	STATION, OFFSET	DESCRIPTION	204.9060.S.01 REMOVING (APRON ENDWALLS) EACH
STH 28			
	751+65, 52' LT	42" STEEL	1
		TOTAL 0010	1

3

ID 4010-21-71 REMOVING SMALL PIPE CULVERTS

CATEGORY 0010

ROADWAY	STATION	LOCATION	DESCRIPTION	203.0100 REMOVING SMALL PIPE CULVERTS EACH
STH 28				
	145+32	53' RT	18" CMCP, 80 LF	1
	231+24	33' RT	24" CMCP, 38 LF	1
	318+12	UNDER STH 28	56" X 39" PACS, 50 LF	1
	318+21	UNDER STH 28	56" X 39" PACS, 50 LF	1
			TOTAL 0010	4

ID 4010-21-71 REMOVING MASONRY

CATEGORY 0010

ROADWAY	STATION	LOCATION	204.0185 REMOVING MASONRY CY
STH 28			
	633+78	LT	9
	633+78	RT	6
		TOTAL 0010	15

ID 4010-26-71

CATEGORY 0010

ROADWAY	STATION	LOCATION	204.0185 REMOVING MASONRY CY
STH 28			
	609+37	LT	1
		TOTAL 0010	1

ID 4010-21-71	**15**
ID 4010-26-71	**1**
TOTAL	**16**

ID 4010-21-71 REMOVING SURFACE DRAINS

CATEGORY 0010

ROADWAY	STATION	TO	STATION	LOCATION	204.0190 REMOVING SURFACE DRAINS EACH
STH 28					
	145+69	-	145+88	RT	1
				TOTAL 0010	1

3

ID 4010-21-71

CATEGORY 0010

REMOVING ASPHALTIC SURFACE ITEMS

ROADWAY	STATION	TO	STATION	LOCATION	204.0110 REMOVING ASPHALTIC SURFACE SY	204.0115 REMOVING ASPHALTIC SURFACE BUTT JOINTS SY	204.0120 REMOVING ASPHALTIC SURFACE MILLING SY
STH 28							
	100+19.8	-	163+10	SOUTH COUNTY LINE (START PROJECT) - CTH D/STH 144	---	21	24,360
	163+10	-	225+45	CTH D/STH 144 - BRAZELTON DR/ABBOTT DR	---	24	25,490
	225+45	-	287+00	BRAZELTON DR/ABBOTT DR- W CTH A/E CTH SS	---	10	24,710
	287+00	-	339+39	W CTH A/E CTH SS - CHERRY HILL DR/E CTH A	---	27	20,150
	339+39	-	393+47	CHERRY HILL DR/E CTH A - W CTH SS	---	15	20,820
	393+47	-	449+13	W CTH SS - CTH W	---	9	21,910
	449+13	-	558+39.13	CTH W - STATION EQUATION	---	14	42,440
	558+43.59	-	607+75.72	STATION EQUATION - START PROJECT ID 4010-26-71	120	49	21,600
	610+41.42	-	665+45	END PROJECT ID 4010-26-71 - ROCK RD/CTH E	155	35	23,010
	665+45	-	754+82	ROCK RD/CTH E - BLUEBERRY LN	---	24	35,430
	754+82	-	806+14.85	BLUEBERRY LN - STH 57 (END PROJECT)	62	75	20,110
				TOTAL 0010	337	303	280,030
CATEGORY 0020							
	585+55.10	-	594+93.16	PARKING LANES, RT	---	---	570
	602+35.51	-	607+75.72	PARKING LANES, LT & RT	---	---	600
	610+41.42	-	618+91.22	PARKING LANES, LT & RT	---	---	700
				TOTAL 0020	---	---	1,870
				PROJECT TOTAL	337	303	281,900

ID 4010-21-71

CATEGORY 0010

PREPARE FOUNDATION FOR ASPHALTIC PAVING

LOCATION	211.0101.01 PREPARE FOUNDATION FOR ASPHALTIC PAVING (PROJECT) (4010-21-71) EACH
PROJECT WIDE	1

ID 4010-21-71

CATEGORY 0010

REMOVING FENCE

ROADWAY	STATION	TO	STATION	LOCATION	204.0170 REMOVING FENCE LF
STH 28					
	633+32	-	634+55	LT	123
				TOTAL 0010	123

ID 4010-26-71

CATEGORY 0010

ROADWAY	STATION	TO	STATION	LOCATION	204.0170 REMOVING FENCE LF
STH 28					
	608+83	-	608+99	LT&RT	38
				TOTAL 0010	38

ID 4010-21-71	**123**
ID 4010-26-71	**38**
TOTAL	**161**

ID 4010-21-71

CATEGORY 0010

REMOVING CONCRETE ITEMS

ROADWAY	STATION	TO	STATION	LOCATION	204.0100 REMOVING CONCRETE PAVEMENT SY	204.0150 REMOVING CURB & GUTTER LF	204.0155 REMOVING CONCRETE SIDEWALK SY	SPV.0090.04 PROFILE CUT CURB LF
STH 28								
	146+07	-	146+75	RT	---	---	---	67
	300+50	-	303+28	LT	140	---	---	---
	302+42	-	302+88	RT	23	---	---	---
	317+60	-	318+70	MAINLINE	204	---	---	---
	341+67	-	342+38	RT	20	---	---	---
	570+81	-	571+69	RT	---	---	---	87
	591+07	-	592+20	RT	---	115	---	---
	593+95	-	594+26	RT	---	30	---	---
	601+36	-	602+34	LAKE STREET INTERSECTION	---	161	85	---
	605+70	-	606+55	W WATER STREET INTERSECTION	---	155	28	---
	610+71	-	611+48	E WATER STREET INTERSECTION	---	140	87	---
	614+79	-	617+19	CLARK STREET INTERSECTION	29	209	126	---
	619+11	-	619+40	WISCONSIN STREET INTERSECTION	---	---	8	---
	773+24	-	774+19	DEPOT STREET INTERSECTION	---	74	20	---
	776+55	-	777+59	HARMON STREET INTERSECTION	---	35	30	---
	780+17	-	781+17	LYDON STREET INTERSECTION	---	83	29	---
	783+74	-	784+77	LAWSON STREET INTERSECTION	---	39	31	---
	784+53	-	784+63	RT	---	10	---	---
				TOTAL 0010	416	1,051	444	154

ID 4010-26-71

CATEGORY 0010

ROADWAY	STATION	TO	STATION	LOCATION	204.0100 REMOVING CONCRETE PAVEMENT SY	204.0150 REMOVING CURB & GUTTER LF	204.0155 REMOVING CONCRETE SIDEWALK SY
STH 28							
	607+75.72	-	609+00.72	MAINLINE	278	216	134
	609+16.69	-	610+41.72	MAINLINE	278	250	200
	610+41.72	-	610+60.00	MAINLINE	---	30	---
				TOTAL 0010	556	496	334

ID 4010-21-71	**416**	**1,051**	**444**
ID 4010-26-71	**556**	**496**	**334**
TOTAL	**972**	**1,547**	**778**

3

3

ID 4010-21-71 REMOVING GUARDRAIL

CATEGORY 0010

ROADWAY	STATION	TO	STATION	LOCATION	204.0165 REMOVING GUARDRAIL LF
STH 28					
	140+54	-	145+70	RT	530
	142+20	-	147+38	LT	518
	226+64	-	230+94	RT	430
	408+21	-	411+24	RT	317
	408+30	-	412+85	LT	455
	486+05	-	490+10	RT	405
	487+48	-	492+66	LT	518
	566+41	-	570+82	RT	437
	568+77	-	572+24	LT	358
	632+91	-	634+97	LT	205
	632+91	-	634+71	RT	180
CTH F					
	78+34	-	78+94	LT	68
				TOTAL 0010	4,421

ID 4010-26-71 204.0165

CATEGORY 0010

ROADWAY	STATION	TO	STATION	LOCATION	REMOVING GUARDRAIL LF
STH 28					
	609+18	-	609+44	LT	27
				TOTAL 0010	27

ID 4010-21-71	**4,421**
ID 4010-26-71	**27**
TOTAL	**4,448**

ID 4010-26-71 REMOVING INLETS

CATEGORY 0010

ROADWAY	STATION	LOCATION	204.0220 REMOVING INLETS EACH
STH 28			
	608+80	RT	1
	608+86	LT	1
	609+85	RT	1
	609+87	LT	1
		TOTAL 0010	4

ID 4010-26-71 REMOVING STORM SEWER

CATEGORY 0010

ROADWAY	STATION	TO	STATION	LOCATION	204.0245.01 REMOVING STORM SEWER (12-INCH) LF	204.0245.02 REMOVING STORM SEWER (15-INCH) LF	204.0245.03 REMOVING STORM SEWER (18-INCH) LF	REMARKS
STH 28								
	608+82	-	608+95	RT	---	---	20	CMP
	608+86	-	608+96	LT	18	---	---	PVC
	609+14	-	609+95	RT	---	72	---	CMP
	609+15	-	609+87	LT	---	78	---	PLASTIC
				TOTAL 0010	18	150	20	

ID 4010-21-71 PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS

CATEGORY 0010

ROADWAY	STATION	TO	STATION	LOCATION	211.0400 PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS STA
STH 28					
	100+19.8	-	163+10	SOUTH COUNTY LINE (START PROJECT) - CTH D/STH 144	130
	163+10	-	225+45	CTH D/STH 144 - BRAZELTON DR/ABBOTT DR	126
	225+45	-	287+00	BRAZELTON DR/ABBOTT DR- W CTH A/E CTH SS	124
	287+00	-	339+39	W CTH A/E CTH SS - CHERRY HILL DR/E CTH A	62
	339+39	-	393+47	CHERRY HILL DR/E CTH A - W CTH SS	110
	393+47	-	449+13	W CTH SS - CTH W	112
	449+13	-	558+39	CTH W - STATION EQUATION	220
	558+44	-	607+76	STATION EQUATION - START PROJECT ID 4010-26-71	67
	610+41	-	665+45	END PROJECT ID 4010-26-71 - ROCK RD/CTH E	71
	665+45	-	754+82	ROCK RD/CTH E - BLUEBERRY LN	182
	754+82	-	806+15	BLUEBERRY LN - STH 57 (END PROJECT)	36
				TOTAL 0010	1,240

3

EARTHWORK SUMMARY

ID 4010-21-71 INTERSECTION OR LOCATION	DESCRIPTION	205.0100 COMMON EXCAVATION (1) [CY]	* SALVAGED/UNUSABLE PAVEMENT MATERIAL (2) [CY]	* AVAILABLE MATERIAL (3) [CY]	* UNEXPANDED FILL [CY]	* EXPANDED FILL EXPANSION FACTOR 1.30	SPV.0035.01 FOUNDATION BACKFILL [CY] EXPANSION FACTOR 1.15	* MASS ORDINATE +/- (4) [CY]	* WASTE (5) [CY]
STA 318+20	CULVERT REPLACEMENT	420	60	360	43	56	360	360	360
STA 633+78	CULVERT REPLACEMENT	240	40	200	36	47	120	200	200
PROJECT ID 4010-21-71 TOTALS		660	100	560	79	103	480	560	560

ID 4010-26-71 LOCATION	DESCRIPTION	205.0100 COMMON EXCAVATION (1) [CY]	* SALVAGED/UNUSABLE PAVEMENT MATERIAL (2) [CY]	* AVAILABLE MATERIAL (3) [CY]	* UNEXPANDED FILL [CY]	* EXPANDED FILL [CY] EXPANSION FACTOR 1.30	SPV.0035.01 FOUNDATION BACKFILL [CY] EXPANSION FACTOR 1.15	* MASS ORDINATE +/- (4) [CY]	* WASTE (5) [CY]
CATEGORY 0010 ROADWAY	607+75.72/610+41.72	595	361	234	47	61	---	295	295
CATEGORY 0030 PARKING LANES	607+75.72/610+41.72	120	12	108	---	---	---	108	108
PROJECT ID 4010-26-71 TOTALS		715	373	342	47	61	---	403	403

TOTALS	**1,375**	**473**	**902**	**126**	**164**	**480**	**963**	**963**

NOTES:
* FOR INFORMATION ONLY (NOT A BID ITEM)
(1) COMMON EXCAVATION IS THE CUT. ITEM NUMBER 205.0100.
(2) SALVAGED/UNUSABLE PAVEMENT MATERIAL IS INCLUDED IN CUT.
(3) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSABLE PAVEMENT MATERIAL
(4) MASS ORDINATE = AVAILABLE MATERIAL, (+) PLUS INDICATES AN EXCESS OF MATERIAL AT A LOCATION, (-) MINUS INDICATES A SHORTAGE OF MATERIAL AT A LOCATION
(5) WASTE = MASS ORDINATE
(6) FACTORS USED TO COMPUTE ANTICIPATED WASTE AND THE COMPUTED WASTE VOLUME ARE FOR GENERAL INFORMATION ONLY.

ID 4010-21-71

BASE AGGREGATE DENSE

CATEGORY 0010

ROADWAY	STATION	TO	STATION	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	305.0504.S HAULING EXCESS SHOULDER MATERIAL CY	624.0100 WATER AGGREGATE COMPACTION MGAL	624.0100 WATER DUST CONTROL
STH 28									
	100+19.8	-	163+10	SOUTH COUNTY LINE (START PROJECT) - CTH D/STH 144	720	---	300	11	1
	163+10	-	225+45	CTH D/STH 144 - BRAZELTON DR/ABBOTT DR	580	---	310	9	---
	225+45	-	287+00	BRAZELTON DR/ABBOTT DR- W CTH A/E CTH SS	620	---	300	10	1
	287+00	-	339+39	W CTH A/E CTH SS - CHERRY HILL DR/E CTH A	200	400	110	9	2
	339+39	-	393+47	CHERRY HILL DR/E CTH A - W CTH SS	470	---	250	8	---
	393+47	-	449+13	W CTH SS - CTH W	650	---	270	10	1
	449+13	-	558+39	CTH W - STATION EQUATION	1,160	---	530	18	1
	558+44	-	607+76	STATION EQUATION - START PROJECT ID 4010-26-71	360	---	130	6	2
	610+41	-	665+45	END PROJECT ID 4010-26-71 - ROCK RD/CTH E	340	290	180	10	2
	665+45	-	754+82	ROCK RD/CTH E - BLUEBERRY LN	710	60	370	12	1
	754+82	-	806+15	BLUEBERRY LN - STH 57 (END PROJECT)	140	---	80	3	1
UNDISTRIBUTED									
					---	80		---	---
SUBTOTAL									
					5,950	830	2,830	106	12
				TOTAL 0010	5,950	830	2,830	118	

ID 4010-26-71

CATEGORY 0010

ROADWAY	STATION	TO	STATION	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	624.0100 WATER AGGREGATE COMPACTION MGAL	624.0100 WATER DUST CONTROL
STH 28						
	607+75.72	-	608+90.72	590	11	2
	609+27.89	-	610+41.72	590	11	2
DRIVEWAYS						
	PROJECT WIDE			70	2	---
SUBTOTALS						
				1,250	24	4
			TOTAL 0010	1,250	28	

CATEGORY 0030*

ROADWAY	STATION	TO	STATION	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON
STH 28				
	607+75.72	-	608+90.72	80
	609+27.89	-	610+41.72	80
			TOTAL 0030	160

*USED FOR PARKING LANES.

ID 4010-21-71	**830**	**118**
ID 4010-26-71	**1,410**	**28**
TOTAL	**2,240**	**146**

ID 4010-21-71

CATEGORY 0010

HMA PAVEMENT ITEMS

ROADWAY	STATION	TO	STATION	LOCATION	455.0605 TACK COAT GAL	460.0105.S HMA PERCENT WITHIN LIMITS (PWL) TEST STRIP VOLUMETRICS EACH	460.0110.S HMA PERCENT WITHIN LIMITS (PWL) TEST STRIP DENSITY EACH	460.6223 HMA PAVEMENT 3 MT 58-28 S TON	460.6224 HMA PAVEMENT 4 MT 58-28 S TON	465.0105 ASPHALTIC SURFACE TON	465.0110 ASPHALTIC SURFACE PATCHING TON	465.0120 ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES TON	465.0520 ASPHALTIC RUMBLE STRIPS, SHOULDER LF		465.0560 ASPHALTIC RUMBLE STRIPS, CENTERLINE LF
													LT	RT	
STH 28															
	100+19.8	-	163+10	SOUTH COUNTY LINE (START PROJECT) - CTH D/STH 144	3,030	---	---	3,350	2,610	240	---	---	5,515	5,340	5,480
	163+10	-	225+45	CTH D/STH 144 - BRAZELTON DR/ABBOTT DR	3,060	---	---	3,380	2,630	460	---	---	4,885	4,605	5,035
	225+45	-	287+00	BRAZELTON DR/ABBOTT DR- W CTH A/E CTH SS	2,930	---	---	3,240	2,520	490	---	12	5,180	5,230	5,755
	287+00	-	339+39	W CTH A/E CTH SS - CHERRY HILL DR/E CTH A	2,390	---	---	2,640	2,050	240	170	---	175	350	300
	339+39	-	393+47	CHERRY HILL DR/E CTH A - W CTH SS	2,560	---	---	2,830	2,200	310	---	---	4,390	4,575	4,750
	393+47	-	449+13	W CTH SS - CTH W	2,660	---	---	2,940	2,290	270	---	5	4,666	4,261	4,966
	449+13	-	558+39.13	CTH W - STATION EQUATION	5,170	---	---	5,720	4,450	650	---	15	9,076	9,571	9,526
	558+43.59	-	607+75.72	STATION EQUATION - START PROJECT ID 4010-26-71	2,540	---	---	2,810	2,180	140	40	---	807	1,182	1,057
	610+41.42	-	665+45	END PROJECT ID 4010-26-71 - ROCK RD/CTH E	2,710	---	---	3,000	2,340	350	170	---	2,720	2,986	3,045
	665+45	-	754+82	ROCK RD/CTH E - BLUEBERRY LN	4,310	---	---	4,770	3,710	580	30	---	7,145	7,487	7,537
	754+82	-	806+14.85	BLUEBERRY LN - STH 57 (END PROJECT)	2,410	---	---	2,670	2,080	140	20	---	350	515	618
PROJECT WIDE															
					---	2	2	---	---	---	350	---	---	---	---
SUBTOTALS															
					33,770	2	2	37,350	29,060	3,870	780	32	44,909	46,102	48,069
				TOTAL 0010	33,770	2	2	37,350	29,060	3,870	780	32	91,011		48,069

CATEGORY 0020

ROADWAY	STATION	TO	STATION	LOCATION	455.0605 TACK COAT GAL	460.6223 HMA PAVEMENT 3 MT 58-28 S TON	460.6224 HMA PAVEMENT 4 MT 58-28 S TON
STH 28							
	585+55.10	-	594+93.16	PARKING LANES, RT	70	90	55
	602+35.51	-	607+75.72	PARKING LANES, LT & RT	70	95	65
	610+41.42	-	618+91.22	PARKING LANES, LT & RT	85	105	75
				SUBTOTALS	225	290	195
				TOTAL 0020	225	290	195

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HMA PAVEMENT ITEMS (CONTINUED)

ID 4010-26-71

CATEGORY 0010

ROADWAY	STATION	TO	STATION	LOCATION	455.0605 TACK COAT GAL	460.6223 HMA PAVEMENT 3 MT 58-28 S TON	460.6224 HMA PAVEMENT 4 MT 58-28 S TON
STH 28							
	607+75.72	-	608+75.72		46	140	50
	609+42.89	-	610+41.72		44	140	50
				TOTAL 0010	90	280	100

CATEGORY 0030

	607+75.72	-	608+75.72		12	40	15
	609+42.89	-	610+41.72		13	40	15
				TOTAL 0030	25	80	30
				PROJECT TOTAL	115	360	130

ID 4010-21-71	**33,995**	**37,640**	**29,255**
ID 4010-26-71	**115**	**360**	**130**
TOTAL	**34,110**	**38,000**	**29,385**

IDs 4010-21-71, 4010-26-71

PWL MIXTURE USE TABLE

LOCATION	PROJECT ID	STATION	TO	STATION	MIXTURE USE	UNDERLYING SURFACE	BID ITEM	TONS	THICKNESS	QUALITY MANAGEMENT PROGRAM TO BE USED FOR: MIXTURE ACCEPTANCE	QUALITY MANAGEMENT PROGRAM TO BE USED FOR: DENSITY ACCEPTANCE
2 - 12 FOOT DRIVING LANES	4010-21-71	100+19.8	-	558+39	UPPER LAYER	3MT 58-28 S	460.6224 4MT 58-28 S	12,640	1 3/4"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	PWL INCENTIVE DENSITY HMA PAVEMENT 460.2005
2 - 12 FOOT DRIVING LANES	4010-21-71	100+19.8	-	558+39	LOWER LAYER	ASPHALT MILLED SURFACE	460.6223 3MT 58-28 S	16,240	2 1/4"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	PWL INCENTIVE DENSITY HMA PAVEMENT 460.2005
2 - 12 FOOT DRIVING LANES	4010-21-71	558+44	-	607+76	UPPER LAYER	3MT 58-28 S	460.6224 4MT 58-28 S	1,370	1 3/4"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	PWL INCENTIVE DENSITY HMA PAVEMENT 460.2005
2 - 12 FOOT DRIVING LANES	4010-21-71	558+44	-	607+76	LOWER LAYER	ASPHALT MILLED SURFACE	460.6223 3MT 58-28 S	1,750	2 1/4"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	PWL INCENTIVE DENSITY HMA PAVEMENT 460.2005
2 - 12 FOOT DRIVING LANES, PARKING LANES	4010-26-71	607+76	-	610+41	UPPER LAYER	3MT 58-28 S	460.6224 4MT 58-28 S	100	1 3/4"	** PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY DEPARTMENT, NOT ELIGIBLE FOR INCENTIVE
2 - 12 FOOT DRIVING LANES, PARKING LANES	4010-26-71	607+76	-	610+41	LOWER LAYER	3MT 58-28 S	460.6223 3MT 58-28 S	120	2 1/4"	** PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY DEPARTMENT, NOT ELIGIBLE FOR INCENTIVE
2 - 12 FOOT DRIVING LANES, PARKING LANES	4010-26-71	607+76	-	610+41	LOWER LAYER	BASE AGGREGATE DENSE	460.6223 3MT 58-28 S	160	3"	** PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY DEPARTMENT, NOT ELIGIBLE FOR INCENTIVE
2 - 12 FOOT DRIVING LANES	4010-21-71	610+41	-	806+14.85	UPPER LAYER	3MT 58-28 S	460.6224 4MT 58-28 S	5,400	1 3/4"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	PWL INCENTIVE DENSITY HMA PAVEMENT 460.2005
2 - 12 FOOT DRIVING LANES	4010-21-71	610+41	-	806+14.85	LOWER LAYER	ASPHALT MILLED SURFACE	460.6223 3MT 58-28 S	6,950	2 1/4"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	PWL INCENTIVE DENSITY HMA PAVEMENT 460.2005
PAVED SHOULDER, INTERSECTIONS, TURN LANES (<1500')	4010-21-71	100+19.8	-	806+14.85	UPPER LAYER	3MT 58-28 S	460.6224 4MT 58-28 S	11,340	1 3/4"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY DEPARTMENT, NOT ELIGIBLE FOR INCENTIVE
PAVED SHOULDER, INTERSECTIONS, TURN LANES (<1500')	4010-21-71	100+19.8	-	806+14.85	LOWER LAYER	ASPHALT MILLED SURFACE*	460.6223 3MT 58-28 S	10,780	2 1/4"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY DEPARTMENT, NOT ELIGIBLE FOR INCENTIVE
*** 2 - 2 FOOT WIDE SWATHS AT OUTER EDGES OF DRIVING LANE	4010-21-71	100+19.8	-	806+14.85	LOWER LAYER	BASE AGGREGATE DENSE	465.0105 ASPHALTIC SURFACE	3,870	3"	QMP AS PER SS 465.	ACCEPTANCE BY ORDINARY COMPACTION
CURB RAMP WEDGES, CURB & GUTTER REPLACEMENT WEDGES	4010-21-71	300+50.	-	784+63	UPPER LAYER	BASE AGGREGATE DENSE	465.0110 ASPHALTIC SURFACE PATCHING	95	4"	QMP AS PER SS 465.	ACCEPTANCE BY ORDINARY COMPACTION
CULVERT PIPE REPLACEMENT PATCHES	4010-21-71	317+63	-	678+20	UPPER & LOWER LAYERS	VARIOUS	465.0110 ASPHALTIC SURFACE PATCHING	315	7"	QMP AS PER SS 465.	ACCEPTANCE BY ORDINARY COMPACTION

*SEE TYPICAL SECTIONS FOR LOCATIONS WITH BASE AGGREGATE DENSE.

**ACCEPTANCE AND INCENTIVE TO BE BASED ON TEST STRIP INFORMATION FROM PROJECT 4010-21-71.

***NOT FOR CONTINUOUS LENGTH. SEE TYPICAL SECTIONS FOR SPECIFIC LOCATIONS.

ID 4010-21-71 ASPHALTIC FLUMES
CATEGORY 0010

ROADWAY	LOCATION	465.0315 ASPHALTIC FLUMES SY
STH 28		
	145+75 RT	12
	632+87 LT	8
	632+90 RT	8
	TOTAL 0010	28

ID 4010-21-71

CONCRETE ITEMS

ROADWAY	STATION	TO	STATION	LOCATION	320.0130 CONCRETE BASE 6 1/2-INCH SY	416.0610 DRILLED TIE BARS EACH	601.0407 CONCRETE CURB & GUTTER 18-INCH TYPE D LF	601.0409 CONCRETE CURB & GUTTER 30-INCH TYPE A LF	601.0411 CONCRETE CURB & GUTTER 30-INCH TYPE D LF	601.0576 CONCRETE CURB & GUTTER 4-INCH SLOPED 30-INCH TYPE J LF	601.0600 CONCRETE CURB PEDESTRIAN LF	602.0410 CONCRETE SIDEWALK 5-INCH SF	602.0505 CURB RAMP DETECTABLE WARNING FIELD YELLOW SF	602.0605 CURB RAMP DETECTABLE WARNING FIELD RADIAL YELLOW SF	650.9000 CONSTRUCTION STAKING CURB RAMPS EACH	SPV.0090.01 CONCRETE CURB & GUTTER 24-INCH TYPE D LF	SPV.0090.02 CONCRETE CURB & GUTTER 24-INCH TYPE J LF
STH 28																	
	300+50	-	303+28	LT	62	95	---	278	---	---	---	---	---	---	---	---	---
	302+42	-	302+88	RT	10	15	---	46	---	---	---	---	---	---	---	---	---
	341+67	-	342+38	RT	16	27	---	71	---	---	---	---	---	---	---	---	---
	591+07	-	592+20	RT	---	4	---	---	115	---	---	---	---	---	---	---	---
	593+95	-	594+26	RT	---	4	---	---	30	---	---	---	---	---	---	---	---
	601+36	-	602+34	LAKE STREET INTERSECTION	---	12	---	---	---	89	35	1,152	80	---	4	99	---
	605+70	-	606+55	W WATER STREET INTERSECTION	---	8	---	---	---	---	20	618	80	---	4	---	146
	610+71	-	611+48	E WATER STREET INTERSECTION	---	12	---	---	---	47	27	889	80	---	4	---	134
	614+79	-	617+19	CLARK STREET INTERSECTION	---	14	40	---	---	326	111	2,223	80	---	4	---	---
	619+11	-	619+40	WISCONSIN STREET INTERSECTION	---	2	---	---	---	---	8	---	---	---	---	---	---
	773+24	-	774+19	DEPOT STREET INTERSECTION	---	4	---	---	74	---	8	308	20	---	2	---	---
	776+55	-	777+59	HARMON STREET INTERSECTION	---	6	---	---	56	---	---	227	10	15	2	---	---
	780+17	-	781+17	LYDON STREET INTERSECTION	---	4	---	---	83	---	10	287	---	36	2	---	---
	783+74	-	784+77	LAWSON STREET INTERSECTION	---	8	---	---	38	---	41	309	20	---	2	---	---
	784+53	-	784+63	RT	---	4	---	---	10	---	---	---	---	---	---	---	---
				TOTAL 0010	88	219	40	395	406	462	260	6,013	370	51	24	99	280

ID 4010-26-71

CATEGORY 0010

ROADWAY	STATION	TO	STATION	416.0610 DRILLED TIE BARS EACH	601.0576 CONCRETE CURB & GUTTER 4-INCH SLOPED 30-INCH TYPE J LF	602.0410 CONCRETE SIDEWALK 5-INCH SF	415.0410 CONCRETE PAVEMENT APPROACH SLAB SY	602.0810 CONCRETE DRIVEWAY 6-INCH SY
STH 28								
	607+75.72	-	608+75.72	4	200	487	---	52
	608+75.72	-	608+90.72	---	31	124	75	---
	609+27.89	-	609+42.86	---	31	184	75	---
	609+42.89	-	610+41.72	4	198	446	---	159
			TOTAL 0010	8	460	1,241	150	211

ID 4010-21-71	219	ID 4010-21-71	460	6,013
ID 4010-26-71	8	ID 4010-26-71	462	1,241
TOTAL	227	TOTAL	922	7,254

3

ID 4010-21-71

CROSS CULVERT PIPE ITEMS

ROADWAY	INLET			DISCHARGE				521.0348 APRON ENDWALLS FOR CULVERT PIPE SLOPED CROSS DRAINS STEEL 48 -INCH 4 TO 1 EACH	521.1036 APRON ENDWALLS FOR CULVERT PIPE STEEL 36 -INCH EACH	521.1042 APRON ENDWALLS FOR CULVERT PIPE STEEL 42 -INCH EACH	521.3136 CULVERT PIPE CORRUGATED STEEL 36 -INCH LF	522.0424 CULVERT PIPE REINFORCED CONCRETE CLASS IV 24-INCH LF	522.0448 CULVERT PIPE REINFORCED CONCRETE CLASS IV 48-INCH LF	* 522.1024 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH EACH	524.0627 APRON ENDWALLS FOR CULVERT PIPE SALVAGED 27-INCH EACH	* 633.5200 MARKERS CULVERT END EACH	650.6000 CONSTRUCTION STAKING PIPE CULVERTS EACH	SPV.0060.01 APRON ENDWALLS FOR CULVERT PIPE HORIZONTAL ELLIPTICAL CROSS DRAINS STEEL 38X60-INCH 4 TO 1 EACH	SPV.0090.03 CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-IV 38X60-INCH LF	MINIMUM THICKNESS IN
STH 28	STATION	OFFSET	ELEV	STATION	OFFSET	ELEV	SLOPE (FT/FT)														
	318+13.31	22.37'LT	848.95	318+13.31	29.62'RT	848.58	0.0071	---	---	---	---	---	---	---	---	---	1	2	52	N/A
	318+22.77	22.37'LT	848.95	318+22.77	29.62'RT	848.58	0.0071	---	---	---	---	---	---	---	---	2	1	2	52	N/A
	633+78.40	30.11'LT	874.07	633+78.32	31.94'RT	873.61	0.0074	2	---	---	---	---	62	---	---	2	1	---	---	N/A
	678+09.43	31.75'LT	895.48	678+09.43	36.25'RT	894.62	0.0126	---	---	---	---	68	---	2	---	2	1	---	---	N/A
	---	---	---	743+84.99	36.57'RT	**	---	---	---	---	---	---	---	---	1	1	---	---	---	N/A
	751+64.54	52.48'LT	**	751+63.70	43.87'RT	---	---	---	---	---	1	---	---	---	---	2	---	---	---	0.109
CTH F																				
	77+99.69	34.54'LT	**	78+02.51	37.30'LT	895.57	---	---	1	---	4	---	---	---	---	---	1	---	---	0.079
						TOTAL 0010		2	1	1	4	68	62	2	1	9	5	4	104	

*ADDITIONAL QUANTITIES ELSEWHERE IN THE PLANS.

** PROPOSED INVERT ELEVATION = EXISTING INVERT ELEVATION

3

ID 4010-21-71 CLEANING PIPE CULVERTS

CATEGORY 0010

ROADWAY	STATION	DESCRIPTION	520.8700 CLEANING CULVERT PIPES EACH	* 633.5200 MARKERS CULVERT END EACH
STH 28				
	125+82	24" CPCS, 137 LF	1	2
	523+75	24X38" CPRCHE, 87 LF	1	2
	733+30	24" CPRC, 65 LF	1	2
		TOTAL 0010	3	6

*ADDITIONAL QUANTITIES ELSEWHERE IN THE PLANS.

ID 4010-21-71 ADJUSTING INLET COVERS

CATEGORY 0010

ROADWAY	STATION	LOCATION	611.8115 ADJUSTING INLET COVERS EACH
STH 28			
	776+66	LT	1
	780+93	LT	1
		TOTAL 0010	2

3

ID 4010-21-71 DRIVEWAY CULVERT PIPE ITEMS

ROADWAY	INLET STATION	INLET OFFSET	DISCHARGE STATION	DISCHARGE OFFSET	521.1015 APRON ENDWALLS FOR CULVERT PIPE STEEL 15-INCH EACH	521.1728 APRON ENDWALLS FOR PIPE ARCH SLOPED SIDE DRAINS STEEL 28X20- INCH 6 TO 1 EACH	521.3728 PIPE ARCH CORRUGATED STEEL 28X20-INCH LF	MINIMUM METAL PIPE THICKNESS IN
STH 28								
	231+39.01	32.39' RT	231+06.67	35.89' RT	---	2	33	0.064
CTH F								
	---	---	77+79.55	36.85' LT	1	---	---	0.064
				TOTAL 0010	1	2	33	

ID 4010-21-71 RAILING

CATEGORY 0010

ROADWAY	STATION	TO	STATION	LOCATION	513.2001 RAILING PIPE LF
STH 28					
	615+59	-	616+05	RT	59
				TOTAL 0010	59

ID 4010-26-71

CATEGORY 0010

STORM SEWER STRUCTURES

STRUCTURE	STATION	OFFSET	* RIM ELEVATION	PIPE INVERT ELEVATION	** DEPTH FT	522.1018 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 18-INCH EACH	*** 522.1024 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH EACH	611.0612 INLET COVERS TYPE C EACH	611.0630 INLET COVERS TYPE HM-GJ EACH	**** 611.2006 MANHOLES 6-FT DIAMETER EACH	611.3004 INLETS 4-FT DIAMETER EACH	611.3230 INLETS 2X3-FT EACH	611.2005 MANHOLES 5-FT DIAMETER EACH	*** 633.5200 MARKERS CULVERT END	650.4000 CONSTRUCTION STAKING STORM SEWER EACH
1A	610+48.67	26.76' LT	867.82	864.88	2.11	---	---	---	1	---	---	1	---	---	1
1B	610+38.67	26.76' LT	867.79	864.83	2.13	---	---	---	1	---	---	1	---	---	1
1C	609+87.25	26.76' LT	868.50	864.27	3.42	---	---	---	1	---	---	1	---	---	1
1D	610+51.40	26.32' RT	867.93	864.35	2.77	---	---	---	1	---	---	1	---	---	1
1E	610+41.40	26.32' RT	867.91	864.30	2.80	---	---	---	1	---	---	1	---	---	1
1F	609+84.71	26.32' RT	868.57	863.76	4.02	---	---	---	1	---	1	---	---	---	1
1G	609+28.21	35.60' RT	---	863.47	---	1	---	---	---	---	---	---	---	1	1
2A	608+09.14	27.33' LT	873.49	869.29	3.39	---	---	---	1	---	---	1	---	---	1
2B	608+25.15	27.33' LT	872.88	868.97	3.10	---	---	---	1	---	---	1	---	---	1
2C	608+41.15	27.33' LT	872.36	868.40	3.17	---	---	---	1	---	---	1	---	---	1
2D	608+57.15	27.33' LT	871.87	868.08	3.00	---	---	---	1	---	1	---	---	---	1
2E	608+39.26	25.89' RT	872.47	868.78	2.86	---	---	---	1	---	---	1	---	---	1
2F	608+52.18	24.47' RT	872.10	868.34	2.95	---	---	---	1	---	---	1	---	---	1
2G	608+65.10	23.04' RT	871.74	865.87	5.12	---	---	---	1	1	---	---	---	---	1
2H	608+63.13	32.00' RT	870.30	865.78	3.53	---	---	1	---	---	---	---	1	---	1
2I	608+85.64	35.27' RT	---	865.55	---	---	1	---	---	---	---	---	---	1	1
					TOTALS 0010	1	1	1	13	1	2	10	1	2	16

NOTES:

STATIONS AND OFFSETS ARE MEASURED TO THE CENTER OF STRUCTURE.

*RIM ELEVATIONS ARE GIVEN AT THE FLANGE LINE.

**STR DEPTH=RIM ELEV-INVERT ELEV-CASTING HEIGHT-ADJUSTMENT RING HEIGHT+LOWEST PIPE THICKNESS

CASTING HEIGHT=8 7/8" FOR TYPE C COVERS, 6" FOR TYPE HM-GJ

ADJUSTMENT RING HEIGHT=6" TYPICAL

***ADDITIONAL QUANTITIES SHOWN ELSEWHERE IN THE PLANS.

ID 4010-26-71

CATEGORY 0010

STORM SEWER PIPES

FROM	- TO	INLET ELEVATION	DISCHARGE ELEVATION	SLOPE FT/FT	608.0318 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 18-INCH LF	608.0324 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 24-INCH LF	608.0412 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 12-INCH LF	608.0415 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 15-INCH LF	608.0418 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 18-INCH LF
1A	- 1B	864.88	864.83	0.0050	---	---	10	---	---
1B	- 1C	864.83	864.52	0.0060	---	---	51	---	---
1C	- 1F	864.27	864.01	0.0050	---	---	---	53	---
1D	- 1E	864.35	864.30	0.0050	---	---	---	10	---
1E	- 1F	864.30	864.02	0.0050	---	---	---	57	---
1F	- 1G	863.76	863.47	0.0050	57	---	---	---	---
2A	- 2B	869.29	868.97	0.0200	---	---	---	16	---
2B	- 2C	868.97	868.65	0.0200	---	---	---	16	---
2C	- 2D	868.40	868.08	0.0200	---	---	---	---	16
2D	- 2G	868.08	867.06	0.0200	---	---	---	---	51
2E	- 2F	868.78	868.59	0.0150	---	---	13	---	---
2F	- 2G	868.34	868.14	0.0150	---	---	---	13	---
2G	- 2H	865.87	865.78	0.0100	---	9	---	---	---
2H	- 2I	865.78	865.55	0.0100	---	23	---	---	---
				TOTALS 0010	57	32	74	165	67

3

ID 4010-21-71
CATEGORY 0010

MGS GUARDRAIL

ROADWAY	STATION	TO	STATION	LOCATION	614.0010 BARRIER SYSTEM GRADING SHAPING FINISHING EACH	614.2300 MGS GUARDRAIL 3 LF	614.2330 MGS GUARDRAIL 3 K LF	614.2350 MGS GUARDRAIL SHORT RADIUS LF	614.2610 MGS GUARDRAIL TERMINAL EAT EACH	614.2630 MGS GUARDRAIL SHORT RADIUS TERMINAL EACH	* EXCAVATION COMMON CY	* BORROW CY	* TOPSOIL SY	* FERTILIZER TYPE B CWT	* SEEDING MIXTURE NO. 30 LB	* SEEDING TEMPORARY LB	* EROSION MAT CLASS I TYPE B SY	* EROSION MAT CLASS II TYPE C SY	* SEED WATER MGAL
STH 28																			
	140+43	-	146+00	RT	2	290.63	175.00	30.00	1	1	5	70	370	0.3	7	10	---	370	9
	140+61	-	148+49	LT	2	425.00	---	---	2	---	1	54	340	0.3	7	10	340	---	8
	226+50	-	232+17	RT	2	275.00	50.00	---	2	---	20	955	1,000	0.4	10	15	1,000	---	23
	407+40	-	414+20	LT	2	237.50	125.00	---	2	---	3	80	400	0.3	8	11	---	400	9
	407+46	-	411+50	RT	2	253.13	---	25.00	1	1	2	24	140	0.1	3	4	---	140	3
	484+82	-	491+54	RT	2	172.10	140.40	---	2	---	11	64	380	0.3	7	11	---	380	9
	486+76	-	493+52	LT	2	437.50	---	---	2	---	7	9	150	0.1	3	4	---	150	4
	565+75	-	571+07	RT	2	325.00	---	---	2	---	7	17	120	0.1	3	4	120	---	3
	568+77	-	573+09	LT	1	250.00	---	51.00	1	---	8	140	580	0.4	11	16	---	580	13
CTH F																			
	77+25	-	78+94	LT	1	62.50	---	---	1	---	1	87	150	0.1	3	4	150	---	4
			TOTAL 0010		18	2728.36	490.40	106.00	16	2	65	1,500	3,630	2	62	89	1,610	2,020	85

*FOR INFORMATION ONLY

ID 4010-21-71
CATEGORY 0010

EROSION CONTROL

ROADWAY	STATION	TO	STATION	LOCATION	627.0200 MULCHING SY	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH	628.2004 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	628.7504 TEMPORARY DITCH CHECKS LF	628.7555 CULVERT PIPE CHECKS EACH	628.7570 ROCK BAGS EACH
STH 28																
	140+43	-	146+00	RT	---	562	843	---	---	---	---	---	---	---	4	15
	140+61	-	148+49	LT	---	694	1,041	---	---	---	---	---	---	13	3	30
	216+62		216+75	RT	---	---	---	---	---	---	---	---	---	---	---	30
	226+50	-	232+17	RT	---	468	702	---	---	---	---	1	---	26	---	---
	317+62		318+97	LT & RT	---	---	---	---	---	286	---	---	---	---	36	---
	407+40	-	414+20	LT	---	691	1,037	---	---	---	---	---	---	---	---	45
	407+46	-	411+50	RT	---	405	608	---	---	---	---	---	---	---	---	15
	459+51		459+71	RT	---	---	---	---	---	---	---	---	---	---	---	---
	484+82	-	491+54	RT	---	516	774	---	---	---	---	---	---	---	4	45
	486+76	-	493+52	LT	---	797	1,196	---	---	---	---	---	---	---	---	60
	565+75	-	571+07	RT	---	564	846	---	---	---	---	---	---	---	---	45
	568+77	-	573+09	LT	---	441	662	---	---	---	---	---	---	---	---	30
	601+36	-	619+40	LT & RT	---	---	---	---	---	---	167	---	---	---	---	---
	632+75	-	643+64	LT & RT	---	323	485	---	---	373	---	---	---	---	14	---
	678+00	-	678+18	LT & RT	---	180	270	---	---	61	---	---	---	---	3	---
	773+24	-	784+77	LT & RT	---	---	---	---	---	---	202	1	7	---	---	---
CTH F																
	77+25	-	78+94	LT	---	171	257	---	---	---	---	---	---	---	---	15
UNDISTRIBUTED																
					1,000	1,453	2,181	12	6	180	93	1	2	10	16	83
				TOTAL 0010	1,000	7,265	10,902	12	6	900	462	3	9	49	80	413

ID 4010-26-71
CATEGORY 0010

ROADWAY	STATION	TO	STATION	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH	628.2008 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	628.7560 TRACKING PADS EACH	628.7570 ROCK BAGS EACH
STH 28													
	607+75.72	-	608+90.72	76	114	---	---	163	1	9	---	---	---
	609+27.89	-	610+41.72	105	158	---	---	120	---	2	4	---	---
UNDISTRIBUTED													
				46	68	3	1	71	1	3	1	2	50
			TOTAL 0010	227	340	3	1	354	2	14	5	2	50

ID 4010-21-71	7,265	10,902	12	6	462	3	9	413
ID 4010-26-71	227	340	3	1	354	2	14	50
TOTAL	7,492	11,242	15	7	816	5	23	463

ID 4010-21-71
CATEGORY 0010

RESTORATION ITEMS

ROADWAY	STATION	TO	STATION	LOCATION	606.0200 RIPRAP MEDIUM CY	606.0300 RIPRAP HEAVY CY	625.0100 TOPSOIL SY	629.0210 FERTILIZER TYPE B CWT	630.0130 SEEDING MIXTURE NO. 30 LB	630.0140 SEEDING MIXTURE NO. 40 LB	630.0200 SEEDING TEMPORARY LB	630.0500 SEED WATER MGAL	645.0120 GEOTEXTILE TYPE HR SY
STH 28													
	140+43	-	146+00	RT	78	---	---	---	---	---	---	---	183
	216+62		216+75	RT	---	15	---	---	---	---	---	---	33
	226+50	-	232+17	RT	33	---	---	---	---	---	---	---	87
	317+62		318+97	LT & RT	26	---	286	0.20	13	---	8	7	83
	459+51		459+71	RT	25	---	---	---	---	---	---	---	71
	601+36	-	602+34	LAKE STREET INTERSECTION	---	---	2	0.10	---	1	2	1	---
	605+70	-	606+55	W WATER STREET INTERSECTION	---	---	36	0.10	---	2	3	1	---
	610+71	-	611+48	E WATER STREET INTERSECTION	---	---	32	0.10	---	2	3	1	---
	614+79	-	617+19	CLARK STREET INTERSECTION	---	---	143	0.10	---	7	11	4	---
	619+11	-	619+40	WISCONSIN STREET INTERSECTION	---	---	10	0.10	---	1	2	1	---
	632+75	-	643+64	LT & RT	3	---	373	0.30	16	---	10	8	11
	678+00	-	678+18	LT & RT	5	---	61	0.10	3	---	2	2	16
	773+85	-	774+19	DEPOT STREET INTERSECTION	---	---	6	0.10	---	1	2	1	---
	776+55	-	777+59	HARMON STREET INTERSECTION	---	---	16	0.10	---	1	2	1	---
	780+17	-	781+17	LYDON STREET INTERSECTION	---	---	19	0.10	---	1	2	1	---
	783+74	-	784+77	LAWSON STREET INTERSECTION	---	---	18	0.10	---	1	2	1	---
UNDISTRIBUTED													
					---	---	251	0.40	8	5	13	8	---
				TOTAL 0010	170	15	1253	1.90	40	22	62	37	484

ID 4010-26-71
CATEGORY 0010

ROADWAY	STATION	TO	STATION	625.0100 TOPSOIL SY	629.0210 FERTILIZER TYPE B CWT	630.0140 SEEDING MIXTURE NO. 40 LB	630.0200 SEEDING TEMPORARY LB	630.0300 SEEDING BORROW PIT LB	630.0500 SEED WATER MGAL
STH 28									
	607+75.72	-	608+90.72	163	0.20	8	5	---	4
	609+27.89	-	610+41.72	120	0.10	6	4	---	3
UNDISTRIBUTED									
				71	0.10	4	3	11	11
			TOTAL 0010	354	0.40	18	12	11	18

ID 4010-21-71	**1,253**	**1.90**	**22**	**52**	**37**
ID 4010-26-71	**354**	**0.40**	**18**	**12**	**18**
TOTAL	**1,607**	**2.30**	**40**	**64**	**55**

ID 4010-21-71
CATEGORY 0010

SIGNING

SIGN #	SIGN CODE	SHEET	ROADWAY	STATION	LOCATION	634.0614 POSTS WOOD 4X6-INCH X 14-FT EACH	634.0616 POSTS WOOD 4X6-INCH X 16-FT EACH	637.2210 SIGNS TYPE II REFLECTIVE H SF	* 638.2102 MOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	REMARKS
1-01	W14-3	1 OF 7	STH 28	141+23	LT	1	---	---	1	1	---
1-02	W1-2R	1 OF 7	STH 28	141+00	RT	---	1	---	1	1	---
1-03	W14-3	1 OF 7	STH 28	142+75	RT	---	1	---	1	1	---
2-01	I3-1	2 OF 7	STH 28	409+90	LT	1	---	---	1	1	MELIUS CREEK, TWO SIGNS
3-01	I3-1	3 OF 7	STH 28	486+90	RT	1	---	---	1	1	CHAMBERS CREEK, TWO SIGNS
4-01	W3-5	4 OF 7	STH 28	566+25	RT	---	1	---	1	1	---
4-02	M1-5A/M6-6L	4 OF 7	STH 28	568+25	RT	1	---	---	1	1	CTH F
4-03	M1-6/W1-7	4 OF 7	STH 28	568+65	RT	1	---	---	1	1	---
4-04	M1-5A/M6-1	4 OF 7	STH 28	569+22	LT	1	---	---	1	1	CTH F
4-05	R1-1	4 OF 7	CTH F	78+80	LT	1	---	---	1	1	---
5-01	M50-2/M6-1/M6-6L/S1-1/W16-7L	5 OF 7	STH 28	601+55	RT	---	1	---	1	1	CTH F, CTH NN
5-02	R1-1	5 OF 7	STH 28	601+65	LT	1	---	---	1	1	---
5-03	M1-6/M6-4	5 OF 7	STH 28	602+10	LT	---	1	---	1	1	STH 28
5-04	R1-1	5 OF 7	STH 28	602+10	RT	1	---	---	1	1	---
5-05	R1-1	5 OF 7	STH 28	605+90	LT	1	---	---	1	1	---
5-06	R1-1	5 OF 7	STH 28	606+38	LT	1	---	---	1	1	---
5-07	R1-1	5 OF 7	STH 28	606+36	RT	1	---	---	1	1	---
6B-03	W14-3/R2-1	6 OF 7	STH 28	610+75	LT	1	---	---	1	1	35 MPH
6B-04	R1-1	6 OF 7	STH 28	611+25	RT	1	---	---	1	1	---
7-01	R1-1	7 OF 7	STH 28	615+15	LT	1	---	---	1	1	---
7-02	---	7 OF 7	STH 28	615+55	LT	1	---	---	1	---	MILL POND PARK, RIGHT ARROW
7-03	M1-5A/M6-6R	7 OF 7	STH 28	615+70	LT	1	---	---	1	1	---
7-04	---	7 OF 7	STH 28	615+20	RT	1	---	---	1	---	MILL POND PARK, LEFT ARROW
7-05	R1-1	7 OF 7	STH 28	615+52	RT	1	---	---	1	1	---
7-06	W11-8/R7-53D	7 OF 7	STH 28	781+05	LT	---	1	---	1	1	---
7-07	R9-3A	7 OF 7	STH 28	615+98	RT	1	---	2.25	---	---	---
7-08	R9-3A	7 OF 7	STH 28	619+19	RT	1	---	2.25	---	---	---
					TOTAL 0010	21	6	4.50	25	23	

ID 4010-26-71
CATEGORY 0010

SIGN #	SIGN CODE	SHEET	ROADWAY	STATION	LOCATION	634.0614 POSTS WOOD 4X6-INCH X 14-FT EACH	* 638.2102 MOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	REMARKS
6A-01	R14-1/M5-1R	6 OF 7	STH 28	609+42	RT	1	1	1	
6A-02	M2-1/M1-5A	6 OF 7	STH 28	609+75	LT	1	1	---	CTH F
					TOTAL 0010	2	2	1	

*MOVING SIGNS IS MEASURED BY EACH LOCATION AND NOT INDIVIDUAL SIGNS.

ID 4010-21-71	**21**	**25**	**23**
ID 4010-26-71	**2**	**2**	**1**
TOTAL	**23**	**27**	**24**

3

ID 4010-21-71
CATEGORY 0010

TRAFFIC CONTROL

ESTIMATED CALENDAR DAYS **	EACH **	643.0300 * TRAFFIC CONTROL DRUMS DAY	EACH **	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C DAY	EACH **	643.0900 * TRAFFIC CONTROL SIGNS DAY		643.1050 TRAFFIC CONTROL SIGNS PCMS DAY	643.5000 TRAFFIC CONTROL EACH	REMARKS
7	5	35	5	35	---	---	2	14	---	PRIOR TO CONSTRUCTION
275	---	---	---	---	42	11,550	---	---	---	ADVANCED WARNING, G20-1 EVERY 2 MILES, SIDE ROADS
40	50	2,000	---	---	---	---	---	---	---	CULVERT & GUARDRAIL WORK
---		10		10		2,890		10	1	UNDISTRIBUTED
TOTAL 0010		2,045		45		14,440		24	1	

*ADDITIONAL QUANTITIES ON DETOUR AND TEMPORARY PEDESTRIAN ACCOMMODATIONS TABLE.
** FOR INFORMATIONAL PURPOSES ONLY.

FILE NAME: "K:\1212714\Civil3D\40102101\SheetsPlan\030201-mq.pptx" PLOT DATE 7/24/2024 4:11:26 PM PLOT BY : LSS PLOT SCALE : 1:1

ID 4010-26-71

TRAFFIC CONTROL DETOUR SIGN SUMMARY

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3

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD **135** DAYS	643.0900 SIGNS DAYS	643.0420 BARRICADES TYPE III DAYS	643.0705 WARNING LIGHTS TYPE A DAYS	643.1000 SIGNS FIXED MESSAGE SF	643.1050 PORTABLE CHANGEABLE MESSAGE SIGN EACH	NO OF CYCLES	643.0920 COVERING SIGNS TYPE II EACH	REMARKS
1	STH 57/28, N. OF STH 28 SPLIT, PLACE 1500' N. OF STH 28 INTERSECTION ON RIGHT SHOULDER	M 3-4	36"X18"	1	135	135							
	"	M 1-6	36"X36"	1	135	135							28
	"	W 20-2A	48"X48"	1	135	135							
2	STH 57/28, N. OF STH 28 SPLIT, PLACE 1500' N. OF STH 28 INTERSECTION IN MEDIAN	M 3-4	36"X18"	1	135	135							
	"	M 1-6	36"X36"	1	135	135							28
	"	W 20-2A	48"X48"	1	135	135							
3	STH 57/28, N. OF STH 28 SPLIT, PLACE 1000' N. OF STH 28 INTERSECTION ON RIGHT SHOULDER	FMS	114"X60"	1					47.5				SEE SIGN DETAIL SHEET
4	STH 57/28, N. OF STH 28 SPLIT, PLACE 1000' N. OF STH 28 INTERSECTION IN MEDIAN	FMS	114"X60"	1					47.5				SEE SIGN DETAIL SHEET
5	STH 57/28, N. OF STH 28 SPLIT, MODIFY EXISTING J2-2 SIGN AS SHOWN	MO 4-8	36"X18"	1	135	135							
	"	MO 6-1	30"X30"	1	135	135							AHEAD
6	STH 57/28, N. OF STH 28 SPLIT, PLACE ACROSS FROM SIGN #5	MO 4-8	36"X18"	1	135	135							
	"	M 3-4	36"X18"	1	135	135							
	"	M 1-6	36"X36"	1	135	135							28
	"	MO 6-1	30"X30"	1	135	135							AHEAD
7	STH 57/28, N. OF STH 28 SPLIT, COVER EXISTING D1-3 SIGN AS SHOWN										1	1	COVER "CASCADE-KEWASKUM"
8	STH 57/28, AT STH 28 SPLIT, MODIFY EXISTING J3-1 SIGN AS SHOWN	MO 4-8	36"X18"	1	135	135							
	"	MO 6-1	30"X30"	1	135	135							AHEAD
9	STH 28, W. OF STH 57, COVER EXISTING J4-1 SIGN AS SHOWN										1	1	COVER ENTIRE SIGN
10	STH 28, AT STH 57, PLACE ON RIGHT SHOULDER IN NW QUADRANT OF INTERSECTION	R 11-3B	60"X30"	1	135	135	135	270					3 1/2 MILES AHEAD
	"	M 4-9R	30"X24"	1	135	135							
11	STH 57, AT STH 28, COVER EXISTING J3-1 SIGN AS SHOWN										1	1	COVER ENTIRE SIGN
12	STH 57, AT STH 28, COVER EXISTING J3-2 SIGN AS SHOWN										1	1	COVER "EAST 28 LT"
13	STH 57, S. OF STH 28, PLACE RIGHT OF EXISTING J4-1 SIGN	MO 4-8	36"X18"	1	135	135							
	"	M 3-4	36"X18"	1	135	135							
	"	M 1-6	36"X36"	1	135	135							28
14	STH 57, S. OF STH 28, COVER EXISTING D1-3 SIGN AS SHOWN										1	1	COVER "KEWASKUM"
15	STH 57, S. OF STH 28, COVER EXISTING J2-3 SIGN AS SHOWN										1	1	COVER "WEST 28 ADV LT"
16	STH 57, S. OF STH 28, MODIFY EXISTING J1-1 SIGN AS SHOWN	M 4-8A	30"X24"	1	135	135							
17	STH 57, N. OF CTH F, PLACE 250' N. OF CTH F INTERSECTION	MO 4-8	36"X18"	1	135	135							
	"	M 3-4	36"X18"	1	135	135							
	"	M 1-6	36"X36"	1	135	135							28
	"	MO 6-1	30"X30"	1	135	135							AHEAD
18	STH 57, S. OF CTH F, PLACE 250' S. OF CTH F INTERSECTION	MO 4-8	36"X18"	1	135	135							
	"	M 3-2	36"X18"	1	135	135							
	"	M 1-6	36"X36"	1	135	135							28
	"	MO 6-1	30"X30"	1	135	135							AHEAD
19	STH 57, N. OF CTH A, PLACE 750' N. OF CTH W INTERSECTION ON RIGHT SHOULDER	MO 4-8	36"X18"	1	135	135							
	"	M 3-4	36"X18"	1	135	135							
	"	M 1-6	36"X36"	1	135	135							28
	"	MO 5-1R	30"X30"	1	135	135							
20	STH 57, N. OF CTH A, PLACE 750' N. OF CTH W INTERSECTION IN MEDIAN	MO 4-8	36"X18"	1	135	135							
	"	M 3-4	36"X18"	1	135	135							
	"	M 1-6	36"X36"	1	135	135							28
	"	MO 5-1R	30"X30"	1	135	135							
	PAGE SUBTOTALS			38		4,860	135	270	95	0		6	

ID 4010-26-71

TRAFFIC CONTROL DETOUR SIGN SUMMARY

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SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD **135** DAYS	643.0900 SIGNS DAYS	643.0420 BARRICADES TYPE III DAYS	643.0705 WARNING LIGHTS TYPE A DAYS	643.1000 SIGNS FIXED MESSAGE SF	643.1050 PORTABLE CHANGEABLE MESSAGE SIGN EACH	NO OF CYCLES	643.0920 COVERING SIGNS TYPE II EACH	REMARKS
21	STH 57, S. OF CTH I/W, PLACE 250' S. OF CTH I/W INTERSECTION	MO 4-8	36"X18"	1	135	135							
	"	M 3-2	36"X18"	1	135	135							
	"	M 1-6	36"X36"	1	135	135							28
	"	MO 6-1	30"X30"	1	135	135							AHEAD
22	STH 57, AT CTH A, PLACE RIGHT OF EXISTING J13-1 SIGN AT CTH A INTERSECTION	MO 4-8	36"X18"	1	135	135							
	"	M 3-4	36"X18"	1	135	135							
	"	M 1-6	36"X36"	1	135	135							28
	"	MO 6-1	30"X30"	1	135	135							RIGHT
23	STH 57, AT CTH A, PLACE IN MEDIAN AT CTH A INTERSECTION	MO 4-8	36"X18"	1	135	135							
	"	M 3-4	36"X18"	1	135	135							
	"	M 1-6	36"X36"	1	135	135							28
	"	MO 6-1	30"X30"	1	135	135							LEFT
24	STH 57, S. OF CTH A, PLACE 750' S. OF CTH A INTERSECTION IN MEDIAN	MO 4-8	36"X18"	1	135	135							
	"	M 3-4	36"X18"	1	135	135							
	"	M 1-6	36"X36"	1	135	135							28
	"	MO 5-1L	30"X30"	1	135	135							
25	STH 57, S. OF CTH A, PLACE 750' S. OF CTH A INTERSECTION ON RIGHT SHOULDER	MO 4-8	36"X18"	1	135	135							
	"	M 3-4	36"X18"	1	135	135							
	"	M 1-6	36"X36"	1	135	135							28
	"	MO 5-1L	30"X30"	1	135	135							
26	STH 57, S. OF CTH A, PLACE 1500' S. OF CTH A INTERSECTION IN MEDIAN	M 3-4	36"X18"	1	135	135							
	"	M 1-6	36"X36"	1	135	135							28
	"	W 20-2A	48"X48"	1	135	135							
27	STH 57, S. OF CTH A, PLACE 1500' S. OF CTH A INTERSECTION ON RIGHT SHOULDER	M 3-4	36"X18"	1	135	135							
	"	M 1-6	36"X36"	1	135	135							28
	"	W 20-2A	48"X48"	1	135	135							
28	CTH A, AT STH 57, PLACE RIGHT OF EXISTING R1-1 SIGN AT STH 57 INTERSECTION	MO 4-8	24"X12"	1	135	135							
	"	M 3-2	24"X12"	1	135	135							
	"	M 1-6	24"X24"	1	135	135							28
	"	MO 6-1	21"X21"	1	135	135							LEFT
29	CTH A, W. OF STH 57, PLACE 250' W. OF STH 57 INTERSECTION	MO 4-8	24"X12"	1	135	135							
	"	M 3-4	24"X12"	1	135	135							
	"	M 1-6	24"X24"	1	135	135							28
30	CTH A, W. OF STH 57, PLACE 500' W. OF STH 57 INTERSECTION	MO 4-8	24"X12"	1	135	135							
	"	M 3-2	24"X12"	1	135	135							
	"	M 1-6	24"X24"	1	135	135							28
	"	MO 5-1L	21"X21"	1	135	135							
	PAGE SUBTOTALS			37		4,995	0	0	0	0		0	

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TRAFFIC CONTROL DETOUR SIGN SUMMARY

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD **135** DAYS	643.0900 SIGNS DAYS	643.0420 BARRICADES TYPE III DAYS	643.0705 WARNING LIGHTS TYPE A DAYS	643.1000 SIGNS FIXED MESSAGE SF	643.1050 PORTABLE CHANGEABLE MESSAGE SIGN EACH	NO OF CYCLES	643.0920 COVERING SIGNS TYPE II EACH	REMARKS
31	STH 57, N. OF CTH I/W, PLACE 250' N. OF CTH I/W INTERSECTION	MO 4-8	36"X18"	1	135	135							
	"	M 3-4	36"X18"	1	135	135							
	"	M 1-6	36"X36"	1	135	135							28
	"	MO 6-1	30"X30"	1	135	135							AHEAD
31A	STH 57, N. OF CTH W, PLACE 250' N. OF CTH W INTERSECTION	MO 4-8	36"X18"	1	135	135							
	"	M 3-4	36"X18"	1	135	135							
	"	M 1-6	36"X36"	1	135	135							28
	"	MO 6-1	30"X30"	1	135	135							AHEAD
32	STH 57, S. OF CTH W, PLACE 250' S. OF CTH W INTERSECTION	MO 4-8	36"X18"	1	135	135							
	"	M 3-2	36"X18"	1	135	135							
	"	M 1-6	36"X36"	1	135	135							28
	"	MO 6-1	30"X30"	1	135	135							AHEAD
33	CTH A, E. OF STH 28, MODIFY EXISTING J1-1 SIGN AS SHOWN	M 4-8A	24"X18"	1	135	135							
34	CTH A, E. OF STH 28, PLACE 250' E. OF STH 28 INTERSECTION	MO 4-8	24"X12"	1	135	135							
	"	M 3-2	24"X12"	1	135	135							
	"	M 1-6	24"X24"	1	135	135							28
35	CTH A, AT STH 28, MODIFY EXISTING J13-1 SIGN AS SHOWN	MO 6-1	21"X21"	1	135	135							LEFT
36	STH 28, N. OF CTH A, COVER EXISTING J4-1 SIGN AS SHOWN										1	1	COVER ENTIRE SIGN
37	STH 28, AT CTH F, PLACE ON RIGHT SHOULDER AT CTH F INTERSECTION	R 11-3B	60"X30"	1	135	135	135	270					3/4 MILE AHEAD
38	STH 28, S. OF CTH NN/F, PLACE ON RIGHT SHOULDER, FIELD DETERMINE LOCATION	PCMS		1						7			PLACE IN ADVANCE OF CLOSURE
39	STH 28, N. OF CTH NN, PLACE ON RIGHT SHOULDER, FIELD DETERMINE LOCATION	PCMS		1						7			PLACE IN ADVANCE OF CLOSURE
40	STH 28, AT CTH E, PLACE ON RIGHT SHOULDER AT CTH E INTERSECTION	R 11-3B	60"X30"	1	135	135	135	270					1 MILE AHEAD
41	STH 28, AT CTH V, PLACE ON RIGHT SHOULDER AT CTH V INTERSECTION	R 11-3B	60"X30"	1	135	135	135	270					1 3/4 MILES AHEAD
42	STH 28, AT CTH A, PLACE ON RIGHT SHOULDER IN NE QUADRANT OF INTERSECTION	R 11-3B	60"X30"	1	135	135	135	270					5 MILES AHEAD
	"	M 4-9R	30"X24"	1	135	135							
43	STH 28, AT CTH A, PLACE RIGHT OF EXISTING J13-1 SIGN	MO 4-8	24"X12"	1	135	135							
	"	M 3-2	24"X12"	1	135	135							
	"	M 1-6	24"X24"	1	135	135							28
	"	MO 6-1	21"X21"	1	135	135							RIGHT
44	STH 28, S. OF CTH A, PLACE 500' S. OF CTH A INTERSECTION	MO 4-8	24"X12"	1	135	135							
	"	M 3-2	24"X12"	1	135	135							
	"	M 1-6	24"X24"	1	135	135							
	"	MO 6-1	21"X21"	1	135	135							
45	STH 28, S. OF CTH A, PLACE 1000' S. OF CTH A INTERSECTION	FMS	66"X48"	1					22				SEE SIGN DETAIL SHEET
46	STH 28, S. OF CTH A, PLACE 1500' S. OF CTH A INTERSECTION	W 20-2A	48"X48"	1	135	135							
47	STH 28, AT CTH W, PLACE ON RIGHT SHOULDER AT CTH W INTERSECTION	R 11-3B	60"X30"	1	135	135	135	270					3 MILE AHEAD
	PAGE SUBTOTALS			35		4,320	675	1,350	22	14		1	
	DETOUR TOTALS			**110**		**14,175**	**810**	**1,620**	**117**	**14**		**7**	

ID 4010-21-71
CATEGORY 0010

TEMPORARY PEDESTRIAN ACCOMMODATIONS

STAGE	ESTIMATED DURATION (CALENDAR DAYS)	** EACH	* 643.0300 TRAFFIC CONTROL DRUMS DAY	** EACH	643.0420 TRAFFIC CONTROL BARRICADES TYPE III DAY	** EACH	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A DAY	** EACH	* 643.0900 TRAFFIC CONTROL SIGNS DAY	* 643.3165 TEMPORARY MARKING LINE PAINT 6-INCH YELLOW LF	643.3165 TEMPORARY MARKING LINE PAINT 6-INCH WHITE LF	643.3350 TEMPORARY MARKING CROSSWALK REMOVABLE TAPE 6-INCH EACH	644.1430 TEMPORARY PEDESTRIAN SURFACE PLATE SF	** EACH	644.1601 TEMPORARY PEDESTRIAN CURB RAMP DAY	644.1605 TEMPORARY PEDESTRIAN DETECTABLE WARNING FIELD SF	644.1810 TEMPORARY PEDESTRIAN BARRICADE LF	646.9002 MARKING REMOVAL LINE 6-INCH LF
1	28	140	3,920	6	168	12	336	30	840	2,700	1,600	405	420	12	336	120	1,158	---
2	28	170	4,760	6	168	12	336	40	1,120	---	---	325	10	14	392	80	187	115
3	24	115	2,760	---	---	---	---	60	1,440	---	---	683	141	8	192	110	372	115
4	21	50	1,050	---	---	---	---	32	672	---	---	733	---	5	105	---	85	---
UNDISTRIBUTED			3,123		84		168		1,018	---	---	537	---		257	---	451	---
SUBTOTALS			15,613		420		840		5,090	2,700	1,600	2,683	571		1,282	310	2,253	230
TOTAL 0010			15,613		420		840		5,090	4,300		2,683	571		1,282	310	2,253	230

*ADDITIONAL QUANTITIES ON TRAFFIC CONTROL TABLES.
** FOR INFORMATIONAL PURPOSES ONLY.
***ADDITIONAL QUANTITIES ON PAVEMENT MARKING TABLE

FILE NAME: "K:\1212714\Civil3D\40102101\SheetsPlan\030201-mq.pptx" PLOT DATE 7/24/2024 4:11:26 PM PLOT BY : LSS PLOT SCALE : 1:1

ID 4010-21-71

PAVEMENT MARKING

CATEGORY 0010

ROADWAY	STATION	TO	STATION	LOCATION	643.3165 * TEMPORARY MARKING LINE PAINT 6-INCH LF YELLOW	643.3165 * TEMPORARY MARKING LINE PAINT 6-INCH LF WHITE	643.3265 TEMPORARY MARKING LINE PAINT 10-INCH LF WHITE	646.2020 MARKING LINE EPOXY 6-INCH LF WHITE	646.4720 MARKING LINE SAME DAY EPOXY 6-INCH LF YELLOW	646.5320 MARKING RAILROAD CROSSINGS EPOXY EACH WHITE	646.7420 CROSSWALK EPOXY TRANSVERSE LINE 6-INCH LF WHITE	646.2040 MARKING LINE GROOVED WET REF EPOXY 6-INCH LF YELLOW	646.2040 MARKING LINE GROOVED WET REF EPOXY 6-INCH LF WHITE	646.4040 MARKING LINE GROOVED WET REF EPOXY 10-INCH LF WHITE	646.6120 MARKING STOP LINE EPOXY 18-INCH LF WHITE	REMARKS
STH 28																
	100+19.8	-	163+10	SOUTH COUNTY LINE (START PROJECT) - CTH D/STH 144	38,000	12,300	88	---	---	---	---	9,500	12,300	88	42	SEE NOTE 1.
	163+10	-	225+45	CTH D/STH 144 - BRAZELTON DR/ABBOTT DR	23,500	11,900	188	---	---	---	---	5,900	11,900	188	42	SEE NOTE 2.
	225+45	-	287+00	BRAZELTON DR/ABBOTT DR- W CTH A/E CTH SS	40,400	12,100	190	---	---	---	---	10,100	12,100	190	---	SEE NOTE 3.
	287+00	-	339+39	W CTH A/E CTH SS - CHERRY HILL DR/E CTH A	42,000	10,100	198	9,120	8,800	---	---	1,700	900	198	---	SEE NOTE 4.
	339+39	-	393+47	CHERRY HILL DR/E CTH A - W CTH SS	23,000	10,700	108	940	---	---	---	5,800	9,700	108	---	SEE NOTE 5.
	393+47	-	449+13	W CTH SS - CTH W	34,900	11,000	220	---	---	---	---	8,800	11,000	220	24	SEE NOTE 6.
	449+13	-	558+39.13	CTH W - STATION EQUATION	75,400	21,200	430	---	---	---	---	18,900	21,200	430	24	SEE NOTE 7.
	558+43.59	-	607+76	STATION EQUATION - START PROJECT ID 4010-26-71	23,700	5,000	100	2,770	4,700	---	662	1,200	2,200	100	---	SEE NOTE 8.
	610+41	-	665+45	END PROJECT ID 4010-26-71 - ROCK RD/CTH E	31,100	8,200	58	1,780	2,000	---	600	5,800	6,400	58	---	SEE NOTE 9.
	665+45	-	754+82	ROCK RD/CTH E - BLUEBERRY LN	48,200	17,400	270	---		---	---	12,100	17,400	270	---	SEE NOTE 10.
	754+82	-	806+14.85	BLUEBERRY LN - STH 57 (END PROJECT)	16,700	3,400	107	1,850	80	2	258	4,100	1,500	107	---	SEE NOTE 11, 12.
SUBTOTALS					396,900	123,300	1,957	16,460	15,580	2	1,520	83,900	106,600	1,957	132	
				TOTAL 0010	520,200		1,957	16,460	15,580	2	1,520	190,500		1,957	132	

*ADDITIONAL QUANTITIES ON THE TEMPORARY PEDESTRIAN ACCOMMODATIONS TABLE.

CATEGORY 0020

ROADWAY	STATION	TO	STATION	LOCATION	646.2020 MARKING LINE EPOXY 6-INCH WHITE LF
STH 28					
	585+55.10	-	594+93.16	PARKING LANES**, RT	100
	602+35.51	-	607+75.72	PARKING LANES**, LT & RT	100
	610+41.42	-	618+91.22	PARKING LANES**, LT & RT	100
				TOTAL 0020	300

**REPLICATE EXISTING PARKING LANE MARKINGS

NOTES:
1. ITEMS 646.4040 & 646.6120 AT SOUTH HALF OF CTH D/STH 144.
2. ITEMS 646.4040 & 646.6120 AT NORTH HALF OF CTH D/STH 144 AND ITEM 646.3040 AT SOUTH HALF OF BRAZELTON DR/ABBOTT DR.
3. ITEM 646.4040 AT NORTH HALF OF BRAZELTON DR/ABBOTT DR AND AT SOUTH HALF OF THE W CTH A/E CTH SS.
4. ITEM 646.4040 AT NORTH HALF OF W CTH A/E CTH SS AND SOUTH HALF OF CHERRY HILL DR/E CTH A.
5. ITEM 646.4040 AT NORTH HALF OF CHERRY HILL DR/E CTH A.
6. ITEM 646.4040 AT CTH S AND ITEMS 646.3040 & 646.6120 AT SOUTH HALF OF CTH W.
7. ITEMS 646.4040 & 646.6120 AT NORTH HALF OF CTH W AND ITEM 646.3040 AT CTH SSS.
8. ITEM 646.4040 AT CTH F.
9. ITEM 646.4040 AT WEST HALF OF ROCK ROAD/CTH E.
10. ITEM 646.4040 AT EAST HALF OF ROCK ROAD/CTH E, CTH V AND AT WEST HALF OF BLUEBERRY LANE.
11. ITEM 646.4040 AT EAST HALF OF BLUEBERRY LANE.

3

PAVEMENT MARKING (CONTINUED)

ID 4010-26-71

CATEGORY 0010

ROADWAY	STATION	TO	STATION		646.2020 MARKING LINE EPOXY 6-INCH YELLOW LF	646.2020 MARKING LINE EPOXY 6-INCH WHITE LF	REMARKS
STH 28							
	607+75.72	-	610+41.72		67	---	CENTERLINE
				TOTAL 0010	67		

CATEGORY 0030

	607+75.72	-	608+70.85		---	20	PARKING LANES
	609+42.86	-	610+41.72		---	20	PARKING LANES
				TOTAL 0030	40		
				PROJECT TOTAL	107		

ID 4010-21-71	16,760
ID 4010-26-71	107
TOTAL	16,867

ID 4010-21-71 CONSTRUCTION STAKING LF

CATEGORY 0010

ROADWAY	STATION	TO	STATION	LOCATION	650.5500 CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER LF
STH 28					
	300+50	-	303+28	LT	278
	302+42	-	302+88	RT	46
	341+67	-	342+38	RT	71
	591+07	-	592+20	RT	115
	593+95	-	594+26	RT	30
	601+36	-	602+34	LAKE STREET INTERSECTION	188
	605+70	-	606+55	W WATER STREET INTERSECTION	146
	610+71	-	611+48	E WATER STREET INTERSECTION	181
	614+79	-	617+19	CLARK STREET INTERSECTION	366
	619+11	-	619+40	WISCONSIN STREET INTERSECTION	42
	773+31	-	773+40	LT	10
	773+85	-	774+19	DEPOT STREET INTERSECTION	37
	776+55	-	777+59	HARMON STREET INTERSECTION	56
	780+17	-	781+17	LYDON STREET INTERSECTION	83
	783+74	-	784+77	LAWSON STREET INTERSECTION	38
	784+53	-	784+63	RT	10
				TOTAL 0010	1,697

ID 4010-26-71

CATEGORY 0010

ROADWAY	STATION	TO	STATION	650.4500 CONSTRUCTION STAKING SUBGRADE LF	650.5000 CONSTRUCTION STAKING BASE LF	650.5500 CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER LF	650.9920 CONSTRUCTION STAKING SLOPE STAKES LF
STH 28							
	607+75.72	-	608+90.72	115	115	231	115
	609+27.89	-	610+41.72	114	114	229	114
			TOTAL 0010	229	229	460	229

ID 4010-21-71	**1,697**
ID 4010-26-71	**460**
TOTAL	**2,157**

3

ID 4010-21-71 CONSTRUCTION STAKING RESURFACING

CATEGORY 0010

ROADWAY	STATION	TO	STATION	LOCATION	650.8000 CONSTRUCTION STAKING RESURFACING REFERENCE LF
STH 28					
	100+19.8	-	163+10	SOUTH COUNTY LINE (START PROJECT) - CTH D/STH 144	6,291
	163+10	-	225+45	CTH D/STH 144 - BRAZELTON DR/ABBOTT DR	6,235
	225+45	-	287+00	BRAZELTON DR/ABBOTT DR- W CTH A/E CTH SS	6,155
	287+00	-	339+39	W CTH A/E CTH SS - CHERRY HILL DR/E CTH A	5,239
	339+39	-	393+47	CHERRY HILL DR/E CTH A - W CTH SS	5,408
	393+47	-	449+13	W CTH SS - CTH W	5,566
	449+13	-	558+39.13	CTH W - STATION EQUATION	10,927
	558+43.59	-	607+75.72	STATION EQUATION - START PROJECT ID 4010-26-71	4,933
	610+41.42	-	665+45	END PROJECT ID 4010-26-71 - ROCK RD/CTH E	5,504
	665+45	-	754+82	ROCK RD/CTH E - BLUEBERRY LN	8,937
	754+82	-	806+14.85	BLUEBERRY LN - STH 57 (END PROJECT)	5,133
				TOTAL 0010	70,328

3

ID 4010-21-71 SAWING PAVEMENT

CATEGORY 0010

ROADWAY	STATION	TO	STATION	LOCATION	690.0150 SAWING ASPHALT LF	690.0250 SAWING CONCRETE LF
STH 28						
	287+00	-	339+39	W CTH A/E CTH SS - CHERRY HILL DR/E CTH A	384	52
	339+39	-	393+47	CHERRY HILL DR/E CTH A - W CTH SS	70	5
	558+43.59	-	607+75.72	STATION EQUATION - START PROJECT ID 4010-26-71	677	108
	610+41.42	-	665+45	END PROJECT ID 4010-26-71 - ROCK RD/CTH E	721	114
	665+45	-	754+82	ROCK RD/CTH E - BLUEBERRY LN	20	40
	754+82	-	806+14.85	BLUEBERRY LN - STH 57 (END PROJECT)	386	72
				TOTAL 0010	2,258	391

ID 4010-26-71

CATEGORY 0010

ROADWAY	STATION	TO	STATION	690.0150 SAWING ASPHALT LF	690.0250 SAWING CONCRETE LF
STH 28					
	607+75.72	-	608+90.72	42	38
	609+27.89	-	610+41.72	64	101
			TOTAL 0010	106	139

ID 4010-21-71	2,258	391
ID 4010-26-71	106	139
TOTAL	2,364	530

ID 4010-26-71 SEISMOGRAPH & CRACK AND DAMAGE SURVEYS

CATEGORY 0010

LOCATION	999.1001.S SEISMOGRAPH EACH	999.1501.S CRACK AND DAMAGE SURVEY EACH
PROJECT WIDE		
	1	5
TOTAL 0010	1	5

ID 4010-21-71 LOCATING CULVERT PIPE

CATEGORY 0010

ROADWAY	STATION	DESCRIPTION	SPV.0060.02 LOCATING CULVERT PIPE EACH
STH28			
	125+82	24" CPCS	1
		TOTAL 0010	1

3

ID 4010-21-71 ADJUST SANITARY SEWER MANHOLE

CATEGORY 0020

ROADWAY	STATION	LOCATION	SPV.0060.03 ADJUST SANITARY SEWER MANHOLE EACH
STH 28			
	585+47	19'LT	1
	589+42	19'LT	1
	593+42	19'LT	1
	595+13	20'LT	1
	598+80	20'LT	1
	600+40	15'LT	1
	601+90	15'LT	1
	604+11	15'LT	1
	606+20	15'LT	1
	611+09	16'LT	1
	614+07	16'LT	1
	615+35	15'LT	1
	618+86	15'LT	1
	620+98	19'LT	1
	623+69	20'LT	1
	627+50	16'RT	1
	630+28	16'RT	1
	632+47	17'RT	1
		TOTAL 0020	18

ID 4010-21-71 FENCE SPLIT RAIL THREE RAIL

CATEGORY 0010

ROADWAY	STATION	TO	STATION	LOCATION	SPV.0090.05 FENCE SPLIT RAIL THREE RAIL LF
STH 28		-			
	616+05	-	616+56	RT	50
				TOTAL 0010	50

ID 4010-26-71 BIRD DETERRENT SYSTEM

CATEGORY 0010

LOCATION	999.2000.S.01 INSTALLING AND MAINTAINING BIRD DETERRENT SYSTEM (609+10) EACH
PROJECT WIDE	
	1
TOTAL 0010	1

ID 4010-26-71

CATEGORY 0030

ROADWAY	STATION	LOCATION	SPV.0060.03 ADJUST SANITARY SEWER MANHOLE EACH
STH 28			
	608+74	15'LT	1
	609+54	15'LT	1
		TOTAL 0030	2

ID 4010-21-71	18
ID 4010-26-71	2
TOTAL	20

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
TRANSPORTATION PROJECT PLAT TITLE SHEET
4010-21-21
KEWASKUM-WALDO
SCL-STH 57
STH 28
SHEBOYGAN COUNTY



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

	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 ABBREVIATIONS

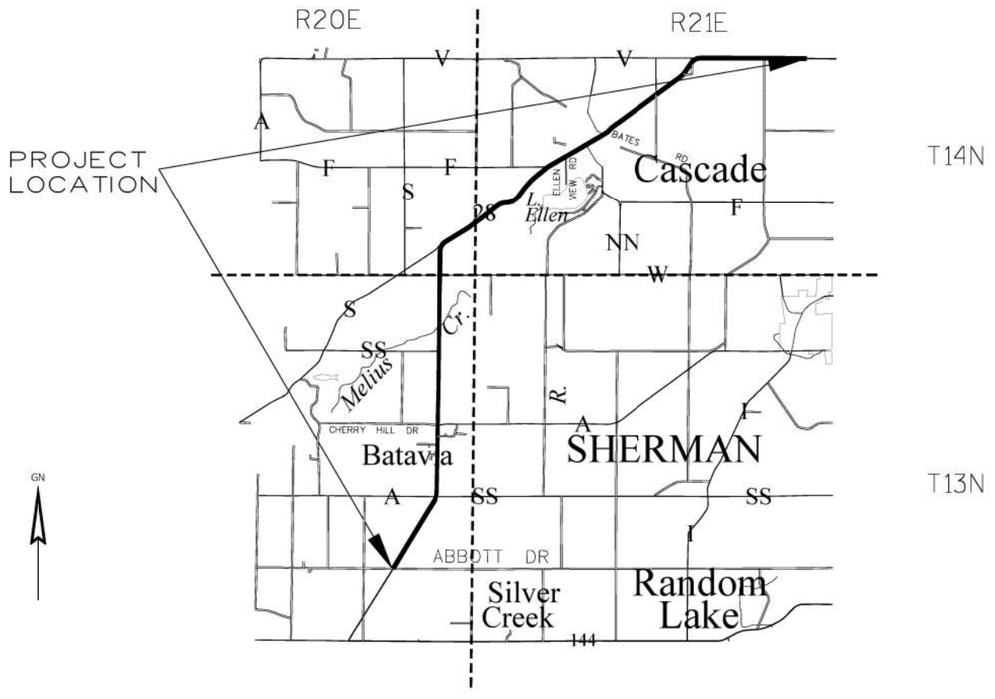
ACCESS RIGHTS	AR	POINT OF COMPOUND CURVE	PCC
ACRES	AC	POINT OF INTERSECTION	PI
AHEAD	AH	PROPERTY LINE	PL
ALUMINUM	ALUM	RECORDED AS	(100')
AND OTHERS	ET AL	REEL / IMAGE	R/I
BACK	BK	REFERENCE LINE	R/L
BLOCK	BLK	REMAINING	REM
CENTERLINE	C/L	RESTRICTIVE DEVELOPMENT EASEMENT	RDE
CERTIFIED SURVEY MAP	CSM	RIGHT	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

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



THE NOTES,CONVENTIONAL SIGNS, AND ABBREVIATIONS ARE ASSOCIATED WITH EACH TRANSPORTATION PROJECT PLAT FOR PROJECT 4010-21-21

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 ¾" X 24" IRON REBARS), 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.

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

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

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

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

raSmith
CREATIVITY BEYOND ENGINEERING
16745 W. Bluemound Road
Brookfield, WI 53005-5938
(262) 781-1000
rasmith.com

PROJECT NUMBER 4010-21-21 -4. 01
SHEET 2 OF 2
AMENDMENT NO:

FILE NAME : S:\5168671\DWG\4010-21-00\PLAT\TPP100 SHEETS.DWG
LAYOUT NAME: TPP Title
PLOT DATE : 9/16/2015 3:04 PM PLOT BY : SCHWEITZER, JEFFREY PLOT NAME : _____

TRANSPORTATION PROJECT PLAT NO: 4010-21-21 - 4.01

THAT PART OF THE SOUTHEAST 1/4 OF THE SOUTHEAST 1/4, SECTION 23, TOWN OF SCOTT, TOWNSHIP 13 NORTH, RANGE 20 EAST, SHEBOYGAN COUNTY, WISCONSIN.

RELOCATION ORDER STH 28 KEWASKUM - WALDO (SCL TO STH 57), SHEBOYGAN COUNTY

TO PROPERLY ESTABLISH, LAY OUT, WIDEN, ENLARGE, EXTEND, CONSTRUCT, RECONSTRUCT, IMPROVE, OR MAINTAIN A PORTION OF THE HIGHWAY DESIGNATED ABOVE, THE STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DEEMS IT NECESSARY TO RELOCATE OR CHANGE SAID HIGHWAY AND ACQUIRE CERTAIN LANDS AND INTERESTS OR RIGHTS IN LANDS FOR THE ABOVE NAMED PROJECT.

TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SUBSECTIONS 84.02(3), 84.09 AND 84.30, WISCONSIN STATUTES, THE DEPARTMENT OF TRANSPORTATION HEREBY ORDERS THAT:
1. THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAT IS LAID OUT AND ESTABLISHED TO THE LINES AND WIDTHS AS SO SHOWN FOR THE ABOVE-NAMED PROJECT.
2. THE LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAT ARE REQUIRED BY THE DEPARTMENT FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF THE STATE OF WISCONSIN, PURSUANT TO THE PROVISIONS OF SUBSECTION 84.09 (1) OR (2), WISCONSIN STATUTES.

NOTES:

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

ALL NEW RIGHT-OF-WAY MONUMENTS WILL BE TYPE 2 (TYPICALLY 3/4" X 24" IRON REBARS), UNLESS OTHERWISE NOTED, AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

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

FOR ADDITIONAL INFORMATION SEE SHEET 2 OF 2 OF THIS DOCUMENT

2141766
SHEBOYGAN COUNTY WI
RECORDED ON
09/16/2022 03:04 PM
ELLEN R. SCHLEICHER
REGISTER OF DEEDS
PLAT FEE: 25.00
Cashier ID: 7
Vol.: Page(s):

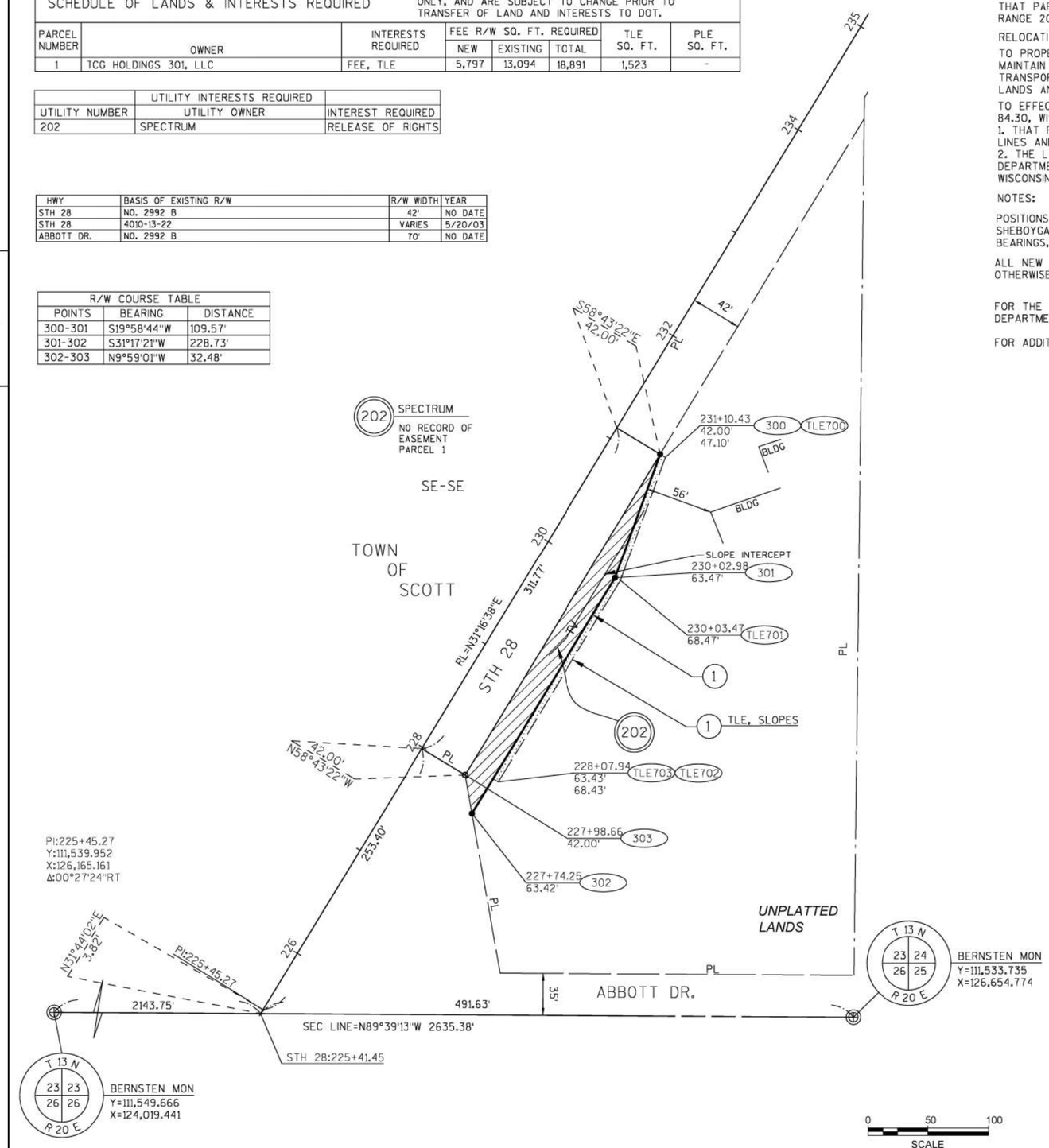
RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER 4010-21-21 - 4.01
AMENDMENT NO:

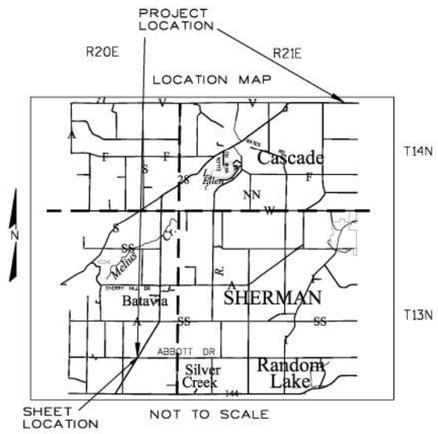
SCHEDULE OF LANDS & INTERESTS REQUIRED		OWNERS NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY, AND ARE SUBJECT TO CHANGE PRIOR TO TRANSFER OF LAND AND INTERESTS TO DOT.					
PARCEL NUMBER	OWNER	INTERESTS REQUIRED	FEE R/W SQ. FT. REQUIRED			TLE SQ. FT.	PLE SQ. FT.
			NEW	EXISTING	TOTAL		
1	TCG HOLDINGS 301, LLC	FEE, TLE	5,797	13,094	18,891	1,523	-

UTILITY INTERESTS REQUIRED		
UTILITY NUMBER	UTILITY OWNER	INTEREST REQUIRED
202	SPECTRUM	RELEASE OF RIGHTS

HWY	BASIS OF EXISTING R/W	R/W WIDTH	YEAR
STH 28	NO. 2992 B	42'	NO DATE
STH 28	4010-13-22	VARIES	5/20/03
ABBOTT DR.	NO. 2992 B	70'	NO DATE

R/W COURSE TABLE		
POINTS	BEARING	DISTANCE
300-301	S19°58'44"W	109.57'
301-302	S31°17'21"W	228.73'
302-303	N9°59'01"W	32.48'





raSmith
CREATIVITY BEYOND ENGINEERING

16745 W. Bluemound Road
Brookfield, WI 53005-5938
(262) 781-1000
rasmith.com

I, MICHAEL J. RATZBURG, PROFESSIONAL LAND SURVEYOR, HEREBY CERTIFY THAT IN FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 84.095 OF WISCONSIN STATUTES AND UNDER THE DIRECTION OF THE DEPARTMENT OF TRANSPORTATION, I HAVE SURVEYED AND MAPPED THIS TRANSPORTATION PROJECT PLAT 4010-21-21-4.01 AND THAT SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.

WISCONSIN MICHAEL J. RATZBURG S-2236 WAUKESHA WI LAND SURVEYOR

9/14/2022
MICHAEL J. RATZBURG DATE
AGENT FOR raSmith
S-2236

THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR THE WISCONSIN DEPARTMENT OF TRANSPORTATION.

ALAN ROMMEL
PRINTED NAME

09/14/2022
SIGNATURE DATE

FILE NAME : S:\5168671\DWG\4010-21-00\PLAT\TPP100 SHEETS.DWG
APPRAISAL PLAT DATE : 9/14/2022
PLOT DATE : 9/15/2022 7:37 AM
PLOT BY : RATZBURG, MICHAEL
PLOT NAME :
PLOT SCALE :

S:\5168671\Dwg\4010-21-00\Plat\tpp100 sheets.dwg, 4.01, 9/15/2022 7:37:28 AM, mjr

TRANSPORTATION PROJECT PLAT NO: 4010-21-21 - 4.02

THAT PART OF THE SOUTHEAST 1/4 OF THE NORTHWEST 1/4, SECTION 13, TOWN OF SCOTT, TOWNSHIP 13 NORTH, RANGE 20 EAST, SHEBOYGAN COUNTY, WISCONSIN.

RELOCATION ORDER STH 28 KEWASKUM - WALDO (SCL TO STH 57), SHEBOYGAN COUNTY

TO PROPERLY ESTABLISH, LAY OUT, WIDEN, ENLARGE, EXTEND, CONSTRUCT, RECONSTRUCT, IMPROVE, OR MAINTAIN A PORTION OF THE HIGHWAY DESIGNATED ABOVE, THE STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DEEMS IT NECESSARY TO RELOCATE OR CHANGE SAID HIGHWAY AND ACQUIRE CERTAIN LANDS AND INTERESTS OR RIGHTS IN LANDS FOR THE ABOVE NAMED PROJECT.

TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SUBSECTIONS 84.02(3), 84.09 AND 84.30, WISCONSIN STATUTES, THE DEPARTMENT OF TRANSPORTATION HEREBY ORDERS THAT:
1. THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAT IS LAID OUT AND ESTABLISHED TO THE LINES AND WIDTHS AS SO SHOWN FOR THE ABOVE-NAMED PROJECT.
2. THE LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAT ARE REQUIRED BY THE DEPARTMENT FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF THE STATE OF WISCONSIN, PURSUANT TO THE PROVISIONS OF SUBSECTION 84.09 (1) OR (2), WISCONSIN STATUTES.

NOTES:

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

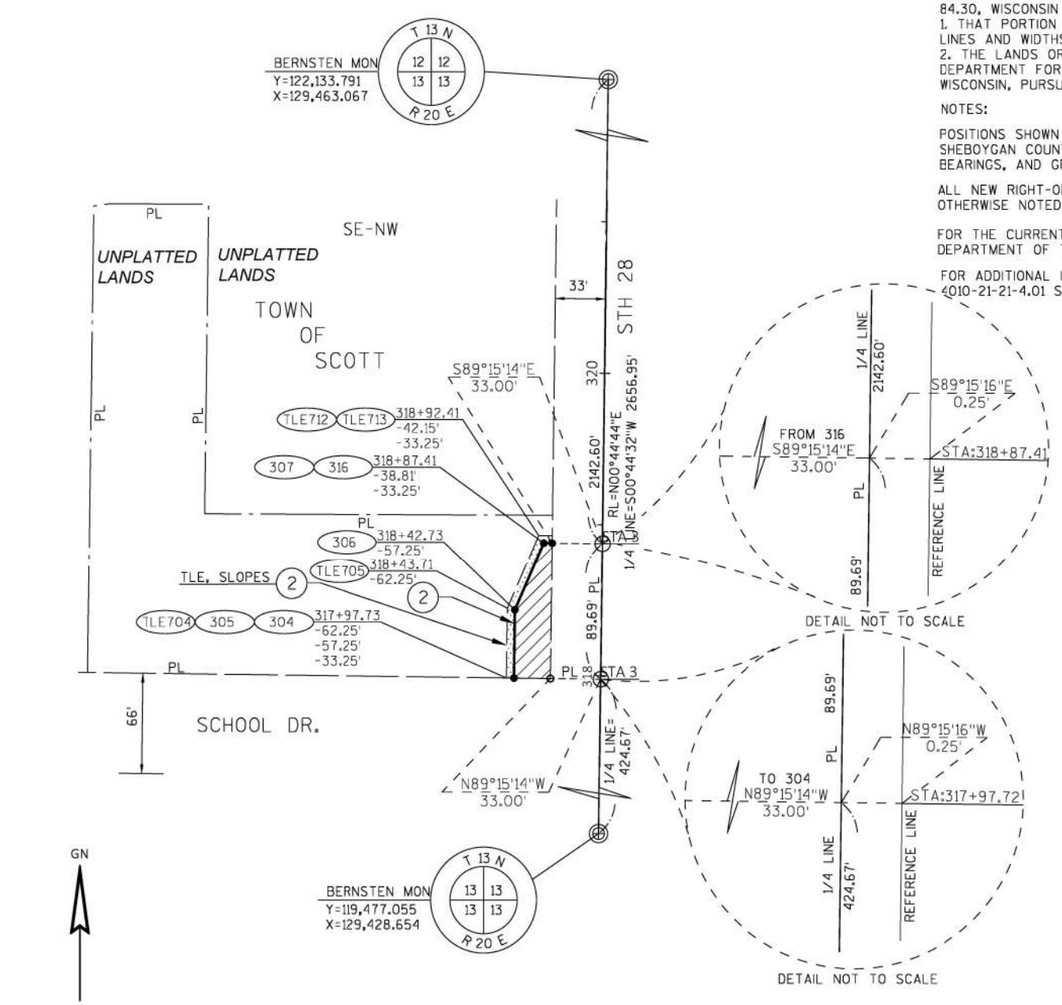
ALL NEW RIGHT-OF-WAY MONUMENTS WILL BE TYPE 2 (TYPICALLY 3/4" X 24" IRON REBARS), UNLESS OTHERWISE NOTED, AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

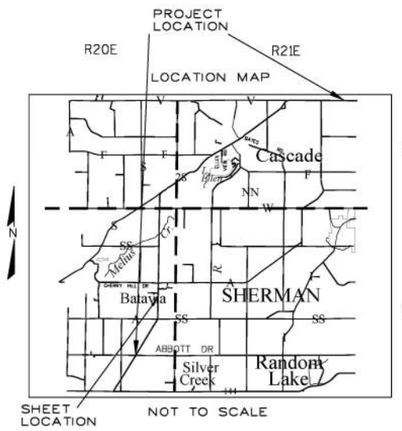
FOR THE CURRENT ACCESS/DRIVEWAY INFORMATION CONTACT THE PLANNING UNIT OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION OFFICE IN GREEN BAY.

FOR ADDITIONAL INFORMATION REFER TO TRANSPORTATION PROJECT NO. 4010-21-21-4.01 SHEET 2 OF 2 RECORDED AS DOCUMENT NO. 2141766.

2141923
SHEBOYGAN COUNTY WI
RECORDED ON
09/20/2022 02:35 PM
ELLEN R. SCHLEICHER
REGISTER OF DEEDS
PLAT FEE: 25.00
Cashier ID: 9
Vol.: 1 Page(s): 210

RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER 4010-21-21 - 4.02
AMENDMENT NO:___





R/W COURSE TABLE		
POINTS	BEARING	DISTANCE
304-305	N89°15'14"W	24.00'
305-306	N00°44'32"E	45.00'
306-307	N23°10'24"E	48.34'
307-316	S89°15'28"E	5.55'

HWY	BASIS OF EXISTING R/W	R/W WIDTH	YEAR
STH 28	4010-13-22	33'	5/20/05
STH 28	NO. 2992 B	33'	NO DATE
SCHOOL RD.	4010-13-22	66'	5/20/05

SCHEDULE OF LANDS & INTERESTS REQUIRED

OWNERS NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY, AND ARE SUBJECT TO CHANGE PRIOR TO TRANSFER OF LAND AND INTERESTS TO DOT.

PARCEL NUMBER	OWNER	INTERESTS REQUIRED	FEE R/W SQ. FT. REQUIRED			TLE SQ. FT.	PLE SQ. FT.
			NEW	EXISTING	TOTAL		
2	CHARLES H. BEAM & TAYLOR R. BEAM	FEE, TLE	1,740	2,960	4,700	516	-

raSmith
CREATIVITY BEYOND ENGINEERING
16745 W. Bluemound Road
Brookfield, WI 53005-5938
(262) 781-1000
rasmith.com

I, MICHAEL J. RATZBURG, PROFESSIONAL LAND SURVEYOR, HEREBY CERTIFY THAT IN FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 84.095 OF WISCONSIN STATUTES AND UNDER THE DIRECTION OF THE DEPARTMENT OF TRANSPORTATION, I HAVE SURVEYED AND MAPPED THIS TRANSPORTATION PROJECT PLAT 4010-21-21-4.02 AND THAT SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.

WISCONSIN
MICHAEL J. RATZBURG
S-2236
WAUKESHA
WI
LAND SURVEYOR

Michael J. Ratzburg 9/14/2022

MICHAEL J. RATZBURG — DATE
AGENT FOR raSmith
S-2236

THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR THE WISCONSIN DEPARTMENT OF TRANSPORTATION.

ALAN ROMMEL — 09/19/2022
PRINTED NAME — SIGNATURE — DATE

TRANSPORTATION PROJECT PLAT NO: 4010-21-21 - 4.03

THAT PART OF THE SOUTHWEST 1/4 OF THE SOUTHWEST 1/4, SECTION 21, TOWN OF LYNDON AND THE VILLAGE OF CASCADE, ALL IN TOWNSHIP 14 NORTH, RANGE 21 EAST, SHEBOYGAN COUNTY, WISCONSIN.

RELOCATION ORDER STH 28 KEWASKUM - WALDO (SCL TO STH 57), SHEBOYGAN COUNTY

TO PROPERLY ESTABLISH, LAY OUT, WIDEN, ENLARGE, EXTEND, CONSTRUCT, RECONSTRUCT, IMPROVE, OR MAINTAIN A PORTION OF THE HIGHWAY DESIGNATED ABOVE, THE STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DEEMS IT NECESSARY TO RELOCATE OR CHANGE SAID HIGHWAY AND ACQUIRE CERTAIN LANDS AND INTERESTS OR RIGHTS IN LANDS FOR THE ABOVE NAMED PROJECT.

TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SUBSECTIONS 84.02(3), 84.09 AND 84.30, WISCONSIN STATUTES, THE DEPARTMENT OF TRANSPORTATION HEREBY ORDERS THAT:
1. THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAT IS LAID OUT AND ESTABLISHED TO THE LINES AND WIDTHS AS SO SHOWN FOR THE ABOVE-NAMED PROJECT.
2. THE LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAT ARE REQUIRED BY THE DEPARTMENT FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF THE STATE OF WISCONSIN, PURSUANT TO THE PROVISIONS OF SUBSECTION 84.09 (1) OR (2), WISCONSIN STATUTES.

NOTES:

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

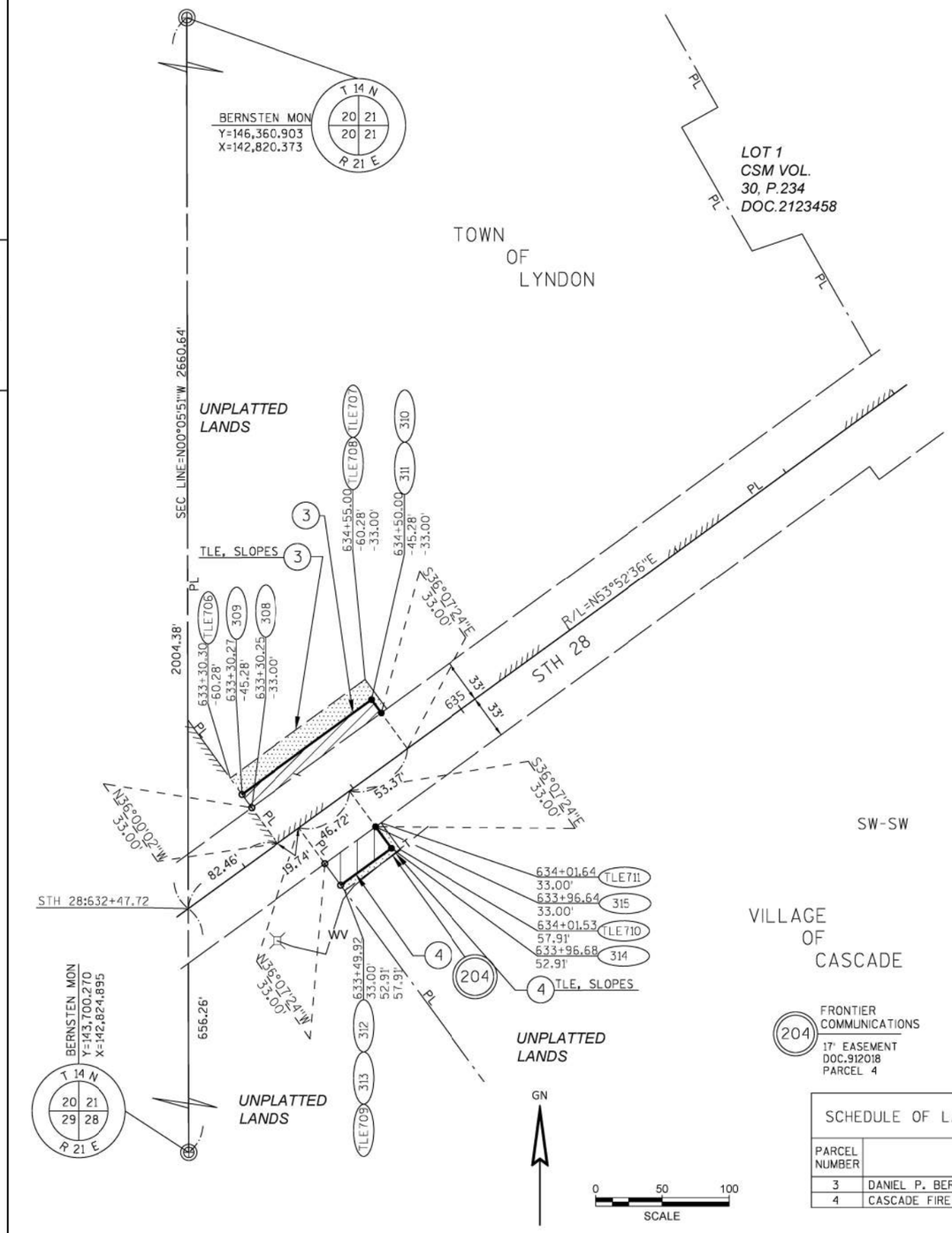
ALL NEW RIGHT-OF-WAY MONUMENTS WILL BE TYPE 2 (TYPICALLY 3/4" X 24" IRON REBARS), UNLESS OTHERWISE NOTED, AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

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

FOR ADDITIONAL INFORMATION REFER TO TRANSPORTATION PROJECT NO. 4010-21-21-4.01 SHEET 2 OF 2 RECORDED AS DOCUMENT NO. 2141766.

2141924
SHEBOYGAN COUNTY WI
RECORDED ON
09/20/2022 02:37 PM
ELLEN R. SCHLEICHER
REGISTER OF DEEDS
PLAT FEE: 25.00
Cashier ID: 9
Vol.: 1 Page(s): 209

RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER 4010-21-21 - 4.03
AMENDMENT NO: ___



SW-SW

VILLAGE
OF
CASCADE

(204) FRONTIER COMMUNICATIONS
17' EASEMENT
DOC.912018
PARCEL 4

R/W COURSE TABLE		
POINTS	BEARING	DISTANCE
308-309	N36°00'02"W	12.27'
309-310	N53°52'36"E	119.73'
310-311	S36°07'24"E	12.27'
315-314	S36°15'13"E	19.91'
314-313	S53°52'36"W	46.76'
313-312	N36°07'24"W	19.91'

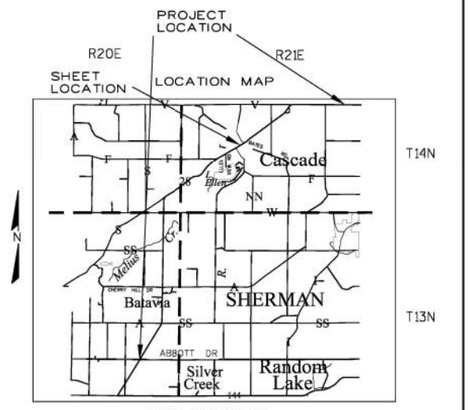
	UTILITY INTERESTS REQUIRED	
UTILITY NUMBER	UTILITY OWNER	INTEREST REQUIRED
204	FRONTIER COMMUNICATIONS	RELEASE OF RIGHTS

HWY	BASIS OF EXISTING R/W	R/W WIDTH	YEAR
STH 28	NO. 2992 B	33'	NO DATE

SCHEDULE OF LANDS & INTERESTS REQUIRED

OWNERS NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY, AND ARE SUBJECT TO CHANGE PRIOR TO TRANSFER OF LAND AND INTERESTS TO DOT.

PARCEL NUMBER	OWNER	INTERESTS REQUIRED	FEE R/W SQ. FT. REQUIRED			TLE SQ. FT.	PLE SQ. FT.
			NEW	EXISTING	TOTAL		
3	DANIEL P. BERG	FEE, TLE	1,470	3,952	5,422	1,932	-
4	CASCADE FIRE DEPARTMENT INC.	FEE, TLE	930	1,542	2,472	356	-



NOT TO SCALE

raSmith
CREATIVITY BEYOND ENGINEERING
16745 W. Bluemound Road
Brookfield, WI 53005-5938
(262) 781-1000
rasmith.com

I, MICHAEL J. RATZBURG, PROFESSIONAL LAND SURVEYOR, HEREBY CERTIFY THAT IN FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 84.095 OF WISCONSIN STATUTES AND UNDER THE DIRECTION OF THE DEPARTMENT OF TRANSPORTATION, I HAVE SURVEYED AND MAPPED THIS TRANSPORTATION PROJECT PLAT 4010-21-21-4.03 AND THAT SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.

WISCONSIN
MICHAEL J. RATZBURG
S-2236
WAUKESHA
WI
LAND SURVEYOR

9/14/2022
MICHAEL J. RATZBURG — DATE
AGENT FOR raSmith
S-2236

THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR THE WISCONSIN DEPARTMENT OF TRANSPORTATION

ALAN ROMMEL — PRINTED NAME
SIGNATURE — 09/19/2022 — DATE

FILE NAME : S:\5168671\DWG\4010-21-00\PLAT\TPP100 SHEETS.DWG
APPRAISAL PLAT DATE : 9/14/2022
PLOT DATE : 9/19/2022 7:56 AM
PLOT BY : RATZBURG, MICHAEL
PLOT NAME :
PLOT SCALE :

S:\5168671\Dwg\4010-21-00\Plat\tpp100 sheets.dwg, 4.03, 9/19/2022 7:56:07 AM, mjr

TRANSPORTATION PROJECT PLAT NO: 4010-21-21 - 4.04

THAT PART OF LOT 1, CSM V.27 P.160 DOC.2021071, AND LOT 1, BLOCK 3, OF THE ORIGINAL PLAT OF THE VILLAGE OF WALDO ALL IN THE SOUTHEAST 1/4 OF THE SOUTHWEST 1/4, SECTION 14, VILLAGE OF WALDO, TOWNSHIP 14 NORTH, RANGE 21 EAST, SHEBOYGAN COUNTY, WISCONSIN.

RELOCATION ORDER STH 28 KEWASKUM - WALDO (SCL TO STH 57), SHEBOYGAN COUNTY

TO PROPERLY ESTABLISH, LAY OUT, WIDEN, ENLARGE, EXTEND, CONSTRUCT, RECONSTRUCT, IMPROVE, OR MAINTAIN A PORTION OF THE HIGHWAY DESIGNATED ABOVE, THE STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DEEMS IT NECESSARY TO RELOCATE OR CHANGE SAID HIGHWAY AND ACQUIRE CERTAIN LANDS AND INTERESTS OR RIGHTS IN LANDS FOR THE ABOVE NAMED PROJECT.

TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SUBSECTIONS 84.02(3), 84.09 AND 84.30, WISCONSIN STATUTES, THE DEPARTMENT OF TRANSPORTATION HEREBY ORDERS THAT:
1. THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAT IS LAID OUT AND ESTABLISHED TO THE LINES AND WIDTHS AS SO SHOWN FOR THE ABOVE-NAMED PROJECT.
2. THE LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAT ARE REQUIRED BY THE DEPARTMENT FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF THE STATE OF WISCONSIN, PURSUANT TO THE PROVISIONS OF SUBSECTION 84.09 (1) OR (2), WISCONSIN STATUTES.

NOTES:

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

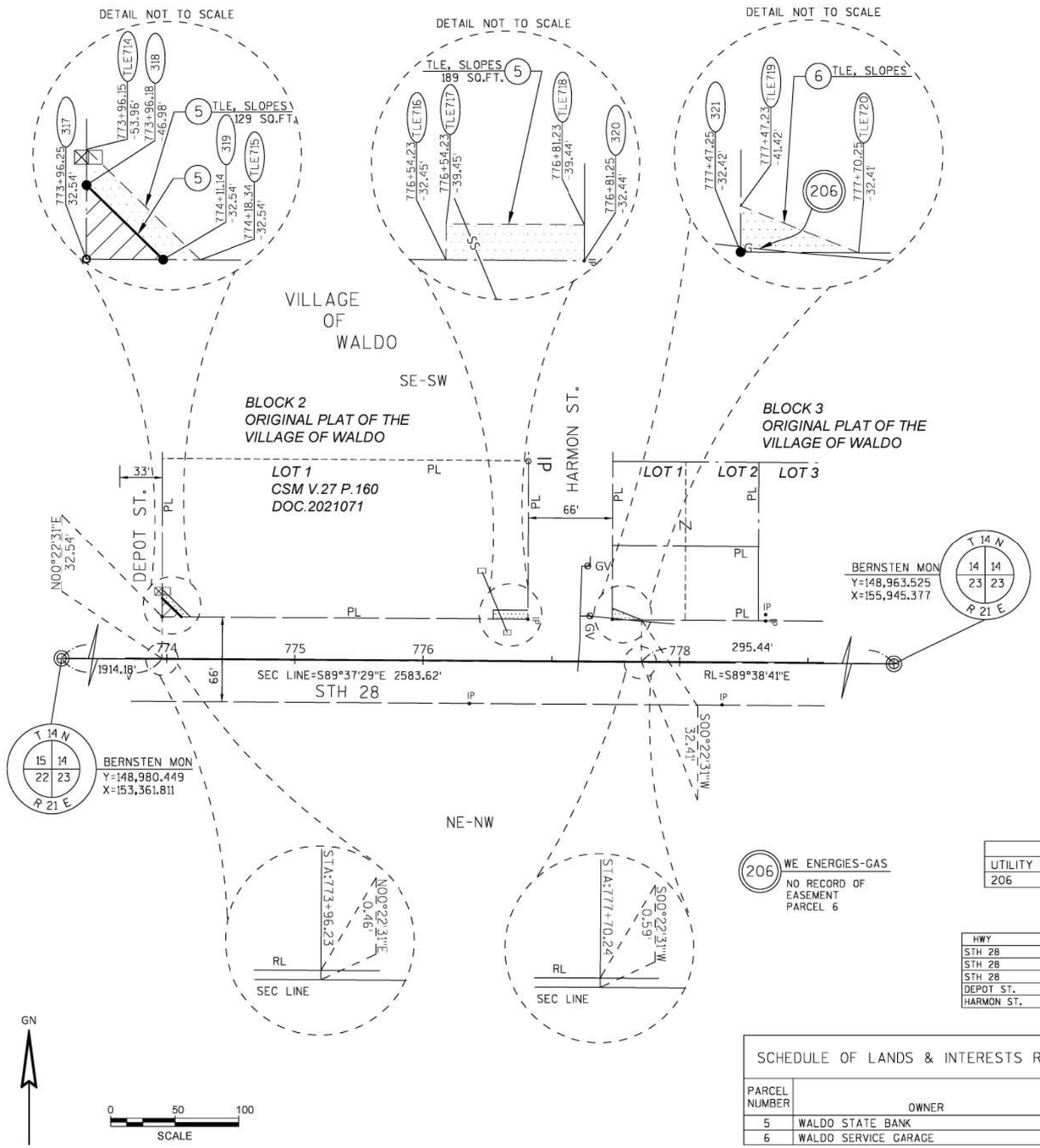
ALL NEW RIGHT-OF-WAY MONUMENTS WILL BE TYPE 2 (TYPICALLY 3/4" X 24" IRON REBARS), UNLESS OTHERWISE NOTED, AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

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

FOR ADDITIONAL INFORMATION REFER TO TRANSPORTATION PROJECT NO. 4010-21-21-4.01 SHEET 2 OF 2 RECORDED AS DOCUMENT NO. 2141766.

2141925
SHEBOYGAN COUNTY WI
RECORDED ON
09/20/2022 02:39 PM
ELLEN R. SCHLEICHER
REGISTER OF DEEDS
PLAT FEE: 25.00
Cashier ID: 9
Vol.: 1 Page(s): 211

RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER 4010-21-21 - 4.04
AMENDMENT NO:___



R/W COURSE TABLE		
POINTS	BEARING	DISTANCE
317-318	N00°06'31"E	14.44'
318-319	S45°38'56"E	20.79'
319-320	S89°37'29"E	270.11'
320-321	S89°37'29"E	66.00'
321-TLE720	S89°37'29"E	23.00'

206 WE ENERGIES-GAS
NO RECORD OF EASEMENT
PARCEL 6

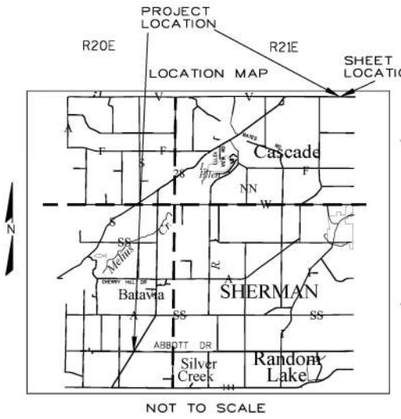
	UTILITY INTERESTS REQUIRED	
UTILITY NUMBER	UTILITY OWNER	INTEREST REQUIRED
206	WE ENERGIES-GAS	RELEASE OF RIGHTS

HWY	BASS OF EXISTING R/W	R/W WIDTH	YEAR
STH 28	NO. 2992 B	33'	NO DATE
STH 28	ORIGINAL PLAT OF THE VILLAGE OF WALDO	33'	1976
STH 28	CSM V.27 P.160	33'	2016
DEPOT ST.	ORIGINAL PLAT OF THE VILLAGE OF WALDO	33'	1976
HARMON ST.	ORIGINAL PLAT OF THE VILLAGE OF WALDO	66'	1976

SCHEDULE OF LANDS & INTERESTS REQUIRED

OWNERS NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY, AND ARE SUBJECT TO CHANGE PRIOR TO TRANSFER OF LAND AND INTERESTS TO DOT.

PARCEL NUMBER	OWNER	INTERESTS REQUIRED	FEE R/W SQ. FT. REQUIRED			TLE SQ. FT.	PLE SQ. FT.
			NEW	EXISTING	TOTAL		
5	WALDO STATE BANK	FEE, TLE	108	-	108	318	-
6	WALDO SERVICE GARAGE	TLE	-	-	-	104	-



NOT TO SCALE

raSmith
CREATIVITY BEYOND ENGINEERING
16745 W. Bluemound Road
Brookfield, WI 53005-5938
(262) 781-1000
rasmith.com

I, MICHAEL J. RATZBURG, PROFESSIONAL LAND SURVEYOR, HEREBY CERTIFY THAT IN FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 84.095 OF WISCONSIN STATUTES AND UNDER THE DIRECTION OF THE DEPARTMENT OF TRANSPORTATION, I HAVE SURVEYED AND MAPPED THIS TRANSPORTATION PROJECT PLAT 4010-21-21-4.04 AND THAT SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.

WISCONSIN MICHAEL J. RATZBURG S-2236 WAUKESHA WI LAND SURVEYOR

Michael J. Ratzburg 9/14/2022
MICHAEL J. RATZBURG DATE
AGENT FOR raSmith
S-2236

THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR THE WISCONSIN DEPARTMENT OF TRANSPORTATION.

ALAN ROMMEL 09/19/2022
PRINTED NAME SIGNATURE DATE

FILE NAME : S:\5168671\DWG\4010-21-00\PLAT\TPP100 SHEETS.DWG
APPRAISAL PLAT DATE : 9/14/2022
PLOT DATE : 9/19/2022 2:02 PM
PLOT BY : SCHWEITZER, JEFFREY
PLOT NAME :
PLOT SCALE :

BEGIN PROJECT
STA 100+19.80
Y=100,971.835
X=119,923.337

PC: 97+75.71

PT: 102+22.71

CURVE 1

98 100 102 104 106 108 110 112 114 116 118 120 122 124 126

HMA HMA

STH 28

R/W R/W

STH 28 R/L

VALLEY VIEW ROAD

CTH XX

HMA HMA

PC: 118+29.62

CURVE 2

EXISTING CPCS 24-INCH TO REMAIN

LOCATING CULVERT PIPE
CLEANING CULVERT PIPE

MATCH LINE 127+50

N

5

5

B-59-188
EXISTING STRUCTURE TO REMAIN

WETLAND BOUNDARY

MINK CREEK

SLOPE INTERCEPT

PT: 131+54.13

PC: 149+19.09

CURVE 3

PT: 156+34.87

R/W R/W

128 130 132 134 136 138 140 142 144 146 148 150 152 154 156

STH 28

STH 28 R/L

MATCH LINE 127+50

MATCH LINE 158+00

CURVE 2

SANDY HILL LANE

SEE PLAN DETAILS FOR GUARDRAIL REPLACEMENT

N

PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	PLAN SHEETS	SHEET 167	E



5

5

PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	PLAN SHEETS	SHEET 168	E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 050202-pn

PLOT DATE : 4/23/2024 6:38 PM PLOT BY : SIEBERT, LUKE PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 42



5

5

PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	PLAN SHEETS	SHEET 169	E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 050203-pn

PLOT DATE : 4/23/2024 6:38 PM PLOT BY : SIEBERT, LUKE PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 42



BENCHMARKS

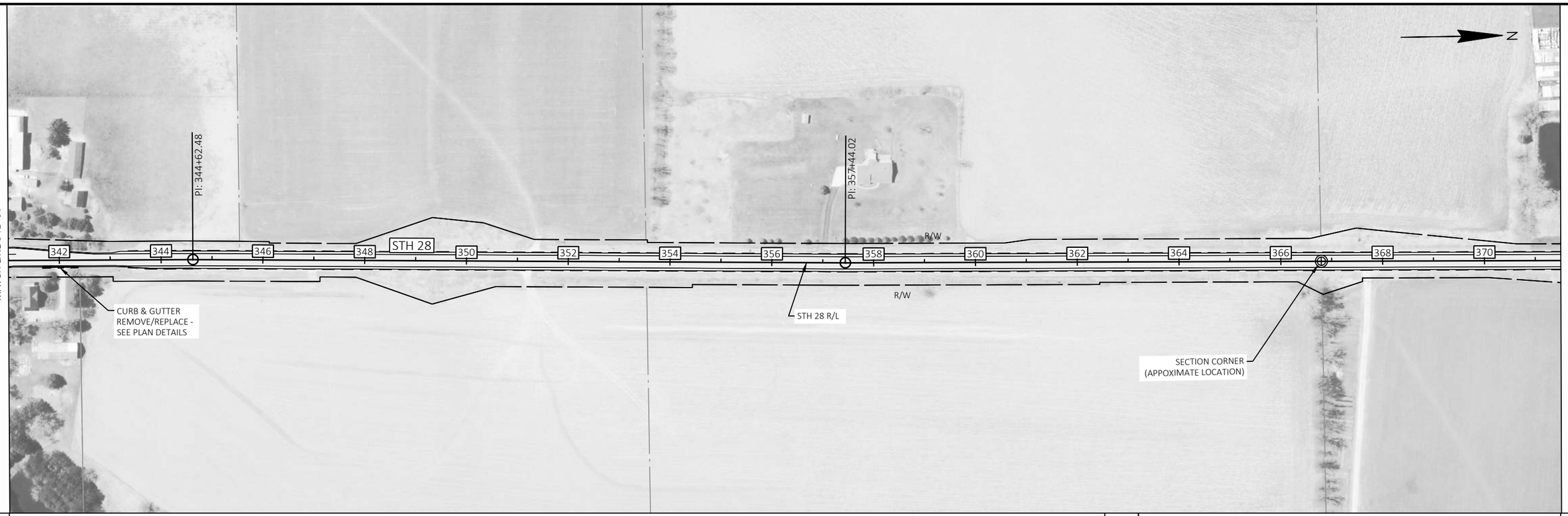
	DESCRIPTION	ELEVATION
BM 1011	60D NAIL IN PPOL #70-21093 NE QUADRANT OF SCHOOL DRIVE AND STH 28, Y=119905.97, X=129455.27	854.20
BM 1012	60D NAIL IN PPOL #77-13741, Y=120015.82, X=129405.94	853.88
BM 1022	60D NAIL IN PPOL #96-02825 NW QUADRANT OF SCHOOL DRIVE AND STH 28, Y=119893.50, X=129372.33	855.86

PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	PLAN SHEETS	SHEET 170 E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 050204-pn

PLOT DATE : 4/23/2024 6:39 PM PLOT BY : SIEBERT, LUKE PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 42





5

5

PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	PLAN SHEETS	SHEET 171	E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 050205-pn

PLOT DATE : 4/23/2024 6:39 PM PLOT BY : SIEBERT, LUKE PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 42

MELIUS CREEK

WETLAND BOUNDARY

MATCH LINE 402+00

STH 28

R/W

SLOPE INTERCEPT

C-59-047
EXISTING STRUCTURE
TO REMAIN

SEE PLAN DETAILS FOR
GUARDRAIL REPLACEMENT

STH 28 R/L

SECTION CORNER
(APPOXIMATE LOCATION)

PI: 428+57.98

MATCH LINE 432+50

5

5

MATCH LINE 432+50

CTH W

PC: 444+16.12

CURVE 6

PT: 447+48.93

PC: 448+68.11

HMA

CURVE 7

PT: 452+70.37

PI: 457+58.94

STH 28

R/W

WETLAND BOUNDARY

STH 28 R/L

EXISTING CPRCHE 24X38-INCH TO REMAIN

EXISTING 6'x6' BOX CULVERT TO REMAIN

SECTION CORNER
(APPOXIMATE LOCATION)

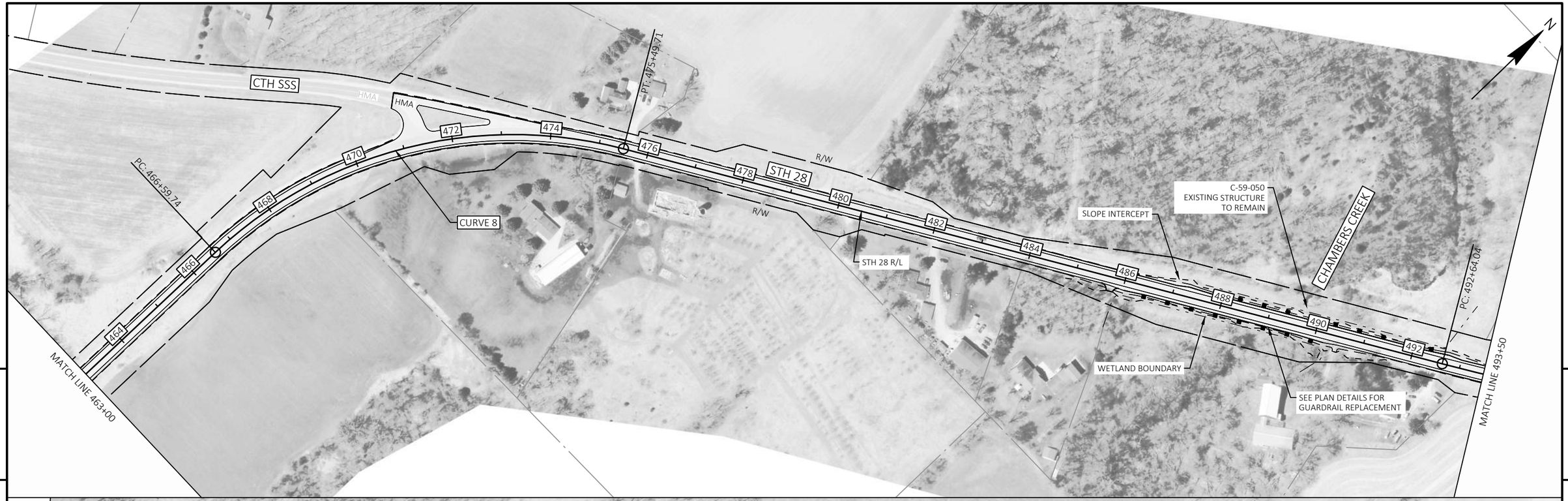
MATCH LINE 463+00

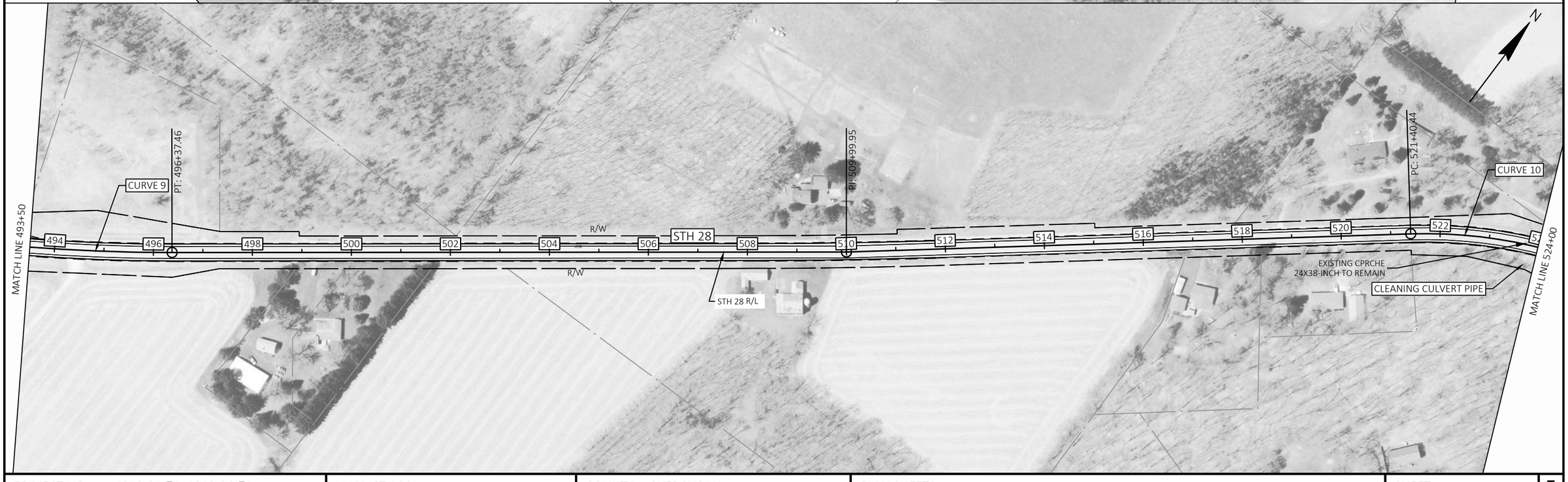
PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	PLAN SHEETS	SHEET 172	E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 050206-pn

PLOT DATE : 4/23/2024 6:39 PM PLOT BY : SIEBERT, LUKE PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 42





PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	PLAN SHEETS	SHEET 173	E

MATCH LINE 524+00

CURVE 10

PT: 527+10.31

PC: 529+24.41

CURVE 11

R/W

STH 28

PI: 536+53.90

PC: 544+59.83

CURVE 12

MATCH LINE 554+50

R/W

STH 28 R/L

DUSTY LANE

CTH F

MELIUS CREEK

EXISTING STRUCTURE TO REMAIN

CURVE 13

PT: 572+42.86

PT: 558+43.59

EQUATION

STA BACK = 558+39.13

STA AHEAD = 558+43.59

SLOPE INTERCEPT

SEE PLAN DETAILS FOR GUARDRAIL REPLACEMENT

SECTION CORNER (APPOXIMATE LOCATION)

WETLAND BOUNDARY

ELLEN VIEW ROAD

MATCH LINE 585+00

BENCHMARKS

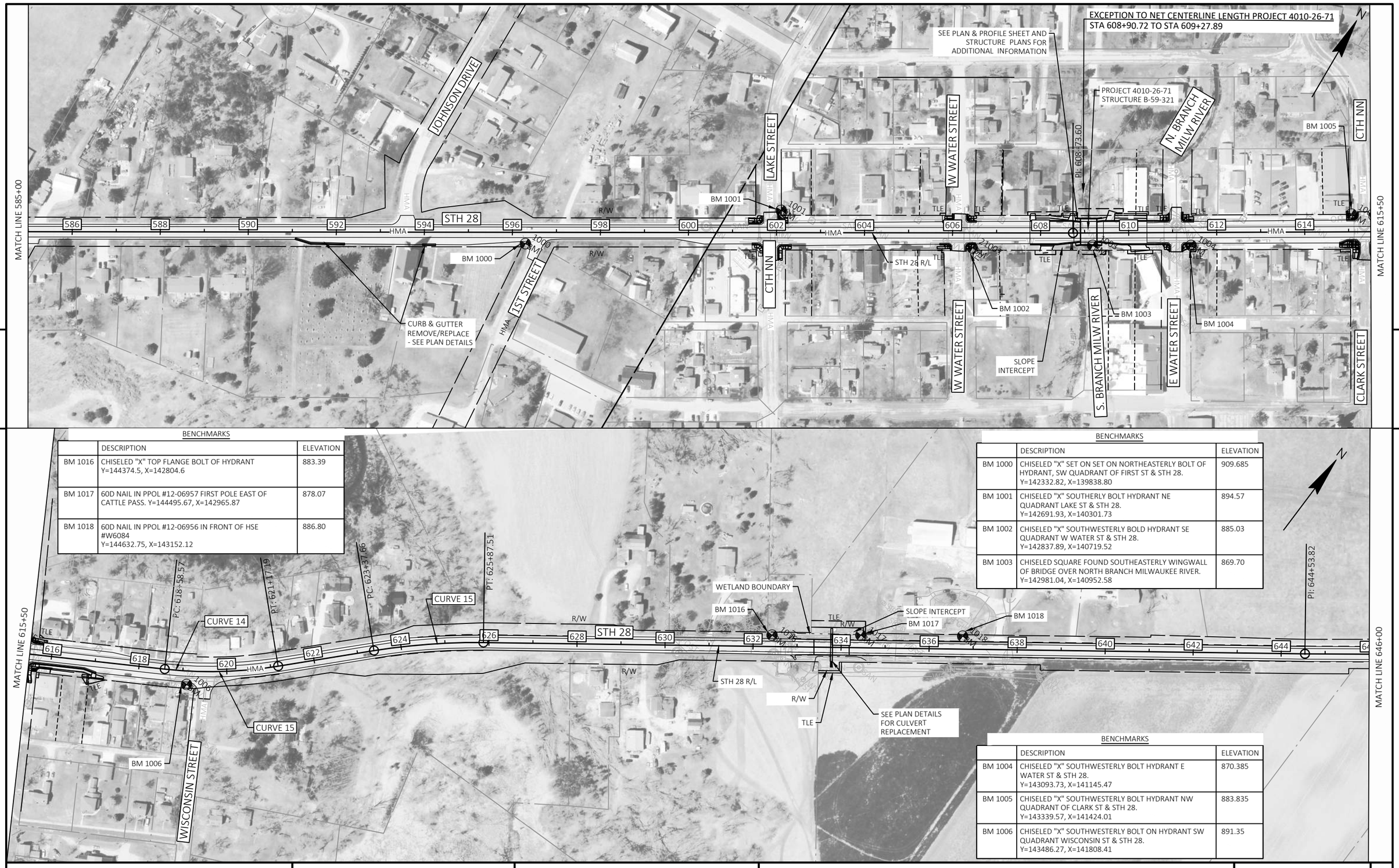
	DESCRIPTION	ELEVATION
BM 1013	60D NAIL IN PPOL #83-00285, Y=141043.04, X=137648.59	901.11
BM 1014	60D NAIL IN PPOL #77-1377, Y=141177.38, X=137746.49	901.24
BM 1015	60D NAIL IN PPOL #06-02303, Y=141289.41, X=137913.23	906.77

PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	PLAN SHEETS	SHEET 174	E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 050208-pn

PLOT DATE : 4/23/2024 6:40 PM PLOT BY : SIEBERT, LUKE PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 42



BENCHMARKS

	DESCRIPTION	ELEVATION
BM 1016	CHISELED "X" TOP FLANGE BOLT OF HYDRANT Y=144374.5, X=142804.6	883.39
BM 1017	60D NAIL IN PPOL #12-06957 FIRST POLE EAST OF CATTLE PASS. Y=144495.67, X=142965.87	878.07
BM 1018	60D NAIL IN PPOL #12-06956 IN FRONT OF HSE #W6084 Y=144632.75, X=143152.12	886.80

BENCHMARKS

	DESCRIPTION	ELEVATION
BM 1000	CHISELED "X" SET ON SET ON NORTHEASTERLY BOLT OF HYDRANT, SW QUADRANT OF FIRST ST & STH 28. Y=142332.82, X=139838.80	909.685
BM 1001	CHISELED "X" SOUTHERLY BOLT HYDRANT NE QUADRANT LAKE ST & STH 28. Y=142691.93, X=140301.73	894.57
BM 1002	CHISELED "X" SOUTHWESTERLY BOLD HYDRANT SE QUADRANT W WATER ST & STH 28. Y=142837.89, X=140719.52	885.03
BM 1003	CHISELED SQUARE FOUND SOUTHEASTERLY WINGWALL OF BRIDGE OVER NORTH BRANCH MILWAUKEE RIVER. Y=142981.04, X=140952.58	869.70

BENCHMARKS

	DESCRIPTION	ELEVATION
BM 1004	CHISELED "X" SOUTHWESTERLY BOLT HYDRANT E WATER ST & STH 28. Y=143093.73, X=141145.47	870.385
BM 1005	CHISELED "X" SOUTHWESTERLY BOLT HYDRANT NW QUADRANT OF CLARK ST & STH 28. Y=143339.57, X=141424.01	883.835
BM 1006	CHISELED "X" SOUTHWESTERLY BOLT ON HYDRANT SW QUADRANT WISCONSIN ST & STH 28. Y=143486.27, X=141808.41	891.35

PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	PLAN SHEETS	SHEET 175	E



BENCHMARKS		
	DESCRIPTION	ELEVATION
BM 1019	60D NAIL IN PPOL #96-09360 Y=146983.18, X=146328.11	900.13
BM 1020	TOP 1" IRON PIPE WITH CAP. Y=174084.29, X=146446.92	900.89
BM 1021	60D NAIL IN 7" MAPLE TREE Y=147156.39, X=146513.24	902.14



PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	PLAN SHEETS	SHEET 177	E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 050211-pn
PLOT DATE : 4/23/2024 6:40 PM
PLOT BY : SIEBERT, LUKE
PLOT NAME :
PLOT SCALE : 1 IN:200 FT
WISDOT/CADDS SHEET 42



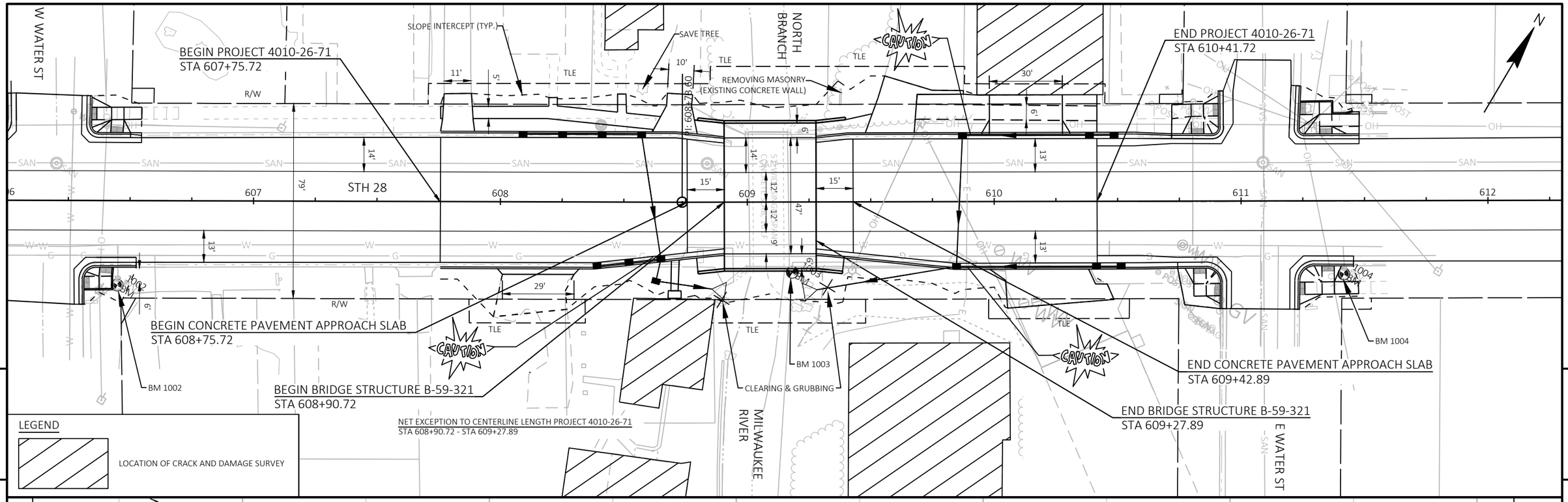
BENCHMARKS

	DESCRIPTION	ELEVATION
BM 1007	CHISELED "X" SET ON BURY BOLT OF HYDRANT SOUTH SIDE OF STH 28 SOUTH OF STATE BANK. Y=148942.70, X=155358.90	841.865
BM 1008	CHISELED "X" BURY BOLT HYDRANT SOUTH SIDE STH 28 AT HSE #711 90'+/- WEST OF N LYNDON ST. Y=148939.82, X=155851.39	841.06
BM 1009	CHISELED "X" BURY BOLT HYDRANT SOUTH SIDE STH 28 DUPLEX #605 AT N LAWSON ST. Y=148935.68, X=156349.95	849.645

PROJECT NO: 4010-21-71, 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	PLAN SHEETS	SHEET 178	E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 050212-pn

PLOT DATE : 4/23/2024 6:41 PM PLOT BY : SIEBERT, LUKE PLOT NAME : PLOT SCALE : 1 IN:200 FT



BENCHMARKS

	DESCRIPTION	ELEVATION
BM 1002	CHISELED "X" SOUTHWESTERLY BOLD HYDRANT SE QUADRANT W WATER ST & STH 28. Y=142837.89, X=140719.52	885.03
BM 1003	CHISELED SQUARE FOUND SOUTHEASTERLY WINGWALL OF BRIDGE OVER NORTH BRANCH MILWAUKEE RIVER. Y=142981.04, X=140952.58	869.70
BM 1004	CHISELED "X" SOUTHWESTERLY BOLT HYDRANT E WATER ST & STH 28. Y=143093.73, X=141145.47	870.385

PROJECT NO: 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	PLAN AND PROFILE: PLAN & PROFILE - BRIDGE AREA	SHEET 179	E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\050202-PP.DWG
LAYOUT NAME - Sheet - (8)
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PLOT BY : SIEBERT, LUKE
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 44

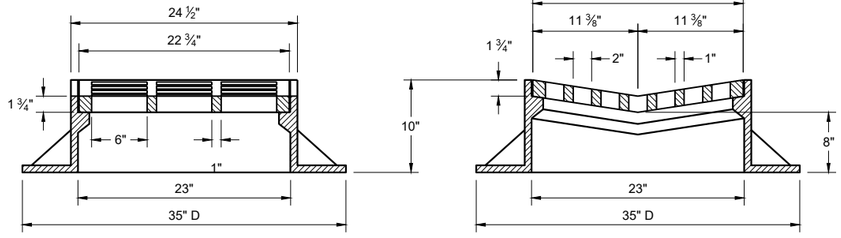
Standard Detail Drawing List

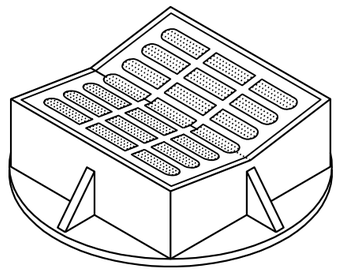
08A05-21B	INLET COVERS TYPE B, B-A, C, MS, MS-A, & WM
08A05-21C	INLET COVERS TYPE F, HM, HM-S, S, T, HM-GJ & HM-GJ-S
08B09-04	MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT, 8-FT, 9-FT, 10-FT DIAMETER
08C06-03	INLETS 3-FT AND 4-FT DIAMETER
08C07-03	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT, 2.5X3-FT & 2X3.5-FT
08D01-23A	CONCRETE CURB & GUTTER
08D01-23B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D04-07	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08D05-21A	CURB RAMPS TYPES 1 AND 1-A
08D05-21B	CURB RAMPS TYPES 2 AND 3
08D05-21C	CURB RAMPS TYPES 4A AND 4A1
08D05-21D	CURB RAMPS TYPE 4B AND 4B1
08D05-21E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08D05-21F	CURB RAMPS RADIAL DETECTABLE WARNING FIELD APPLICATIONS
08D05-21G	CURB RAMPS RECTANGULAR AND RADIAL DETECTABLE WARNING PLATES
08D18-04	DRIVEWAY AND SIDEWALK RAMPS TYPES X & Y
08D19-04	DRIVEWAY AND SIDEWALK RAMPS TYPE Z
08D20-01	DRIVEWAYS WITH CURB & GUTTER RETURNS
08D21-01	DRIVEWAYS WITHOUT CURB & GUTTER
08D22-01	DRIVEWAYS WITHOUT CURB & GUTTER RESURFACING PROJECTS RURAL
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08E14-01	TRACKING PAD
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
08F07-05	STEEL APRON ENDWALLS FOR CULVERT PIPE AND PIPE ARCH SLOPED SIDE DRAINS
08F08-02	STEEL APRON ENDWALLS FOR CULVERT PIPE AND PIPE ARCH SLOPED CROSS DRAINS
12A03-10	NAME PLATE (STRUCTURES)
12A04-03	STRUCTURE IDENTIFICATION PLAQUES, RAMP GATES, SIGN BRIDGES & OVERHEAD SIGN SUPPORTS & TRAFFIC SIGNALS
13A10-03A	SHOULDER RUMBLE STRIPS - ASPHALT
13A10-03G	SHOULDER AND EDGE LINE RUMBLE STRIPS - CROSSINGS, INTERSECTIONS, BRIDGES, DRIVEWAYS
13A10-03H	SHOULDER AND EDGE LINE RUMBLE STRIPS - RAILROAD, PASSING, CLIMBING AND BYPASS LANES
13A11-04A	CENTERLINE RUMBLE STRIPS - ASPHALT
13A11-04D	CENTERLINE RUMBLE STRIPS - INTERSECTIONS, DRIVEWAYS, BRIDGES, RAILROADS
13B01-11A	PAVEMENT DETAILS FOR RAILROAD APPROACH
13B01-11B	TYPICAL SECTIONS FOR RAILWAY APPROACH
13B02-09A	CONCRETE PAVEMENT APPROACH SLAB
13C01-19	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
13C13-11	URBAN DOWELED CONCRETE PAVEMENT
13C15-08A	CONCRETE BASE
13C15-08B	CONCRETE BASE
13C19-03	HMA LONGITUDINAL JOINTS
14B29-01	SAFETY EDGE
14B42-07A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07D	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-04A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B53-02A	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-02B	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-02C	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-02D	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-02E	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-02F	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-02G	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-02H	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-02I	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15C02-09A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-09B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C02-09C	DETOUR SIGNING FOR MAINLINE CLOSURES

6

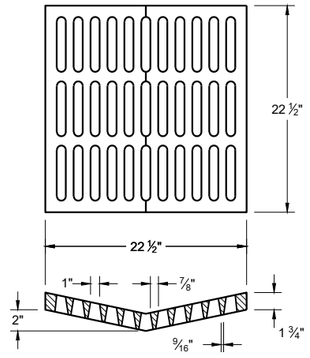
Standard Detail Drawing List

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
15C06-12	SIGNING & MARKING FOR TWO LANE BRIDGES
15C08-23A	PERMANENT LONGITUDINAL PAVEMENT MARKINGS
15C08-23B	TEMPORARY LONGITUDINAL PAVEMENT MARKING
15C08-23C	PAVEMENT MARKING (TURN LANES)
15C08-23D	PAVEMENT MARKING (TURN LANES)
15C09-13A	SIGNING AND PAVEMENT MARKING DETAILS FOR RAILROAD-HIGHWAY GRADE CROSSINGS
15C11-10B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C12-09A	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15C12-09B	TRAFFIC CONTROL, LANE CLOSURE WITH AUTOMATED FLAGGER ASSISTANCE DEVICE
15C19-08A	MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY
15C33-04	STOP LINE AND CROSSWALK PAVEMENT MARKING
15C35-06A	PAVEMENT MARKING (INTERSECTIONS)
15D28-04	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
15D30-09A	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-09B	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-09C	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-09D	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-09E	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-09F	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-09G	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-09H	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-09I	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-09J	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-09K	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-09L	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D39-02	TRAFFIC CONTROL, DROP-OFF SIGNING
15D40-05C	TRAFFIC CONTROL, PARTIAL LANE SHIFT NON-FREEWAY/EXPRESSWAY OR MULTILANE DIVIDED 45 MPH AND UNDER
15D43-02	TRAFFIC CONTROL, SHORT DURATION MOBILE OPERATIONS
15D44-02	TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH MILLED SURFACES
15D45-03	TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH LOOSE GRAVEL
15D51-01	TRAFFIC CONTROL, MOBILE OPERATIONS ON AN UNDIVIDED ROADWAY





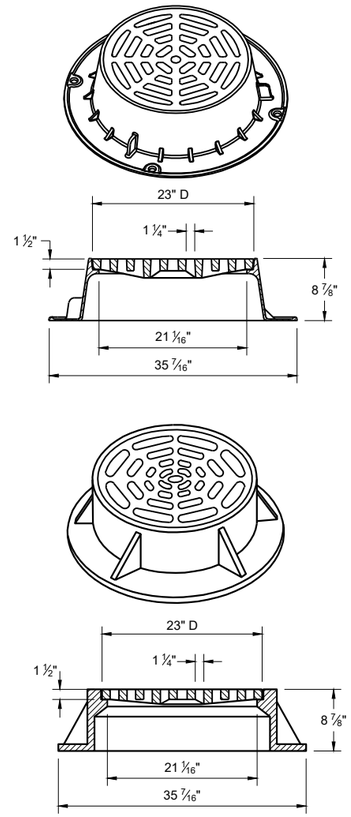
TYPE "B"



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"

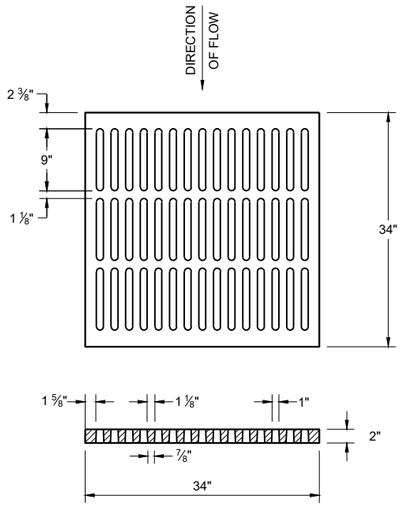
NOTE: EITHER CASTING IS ACCEPTABLE

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.

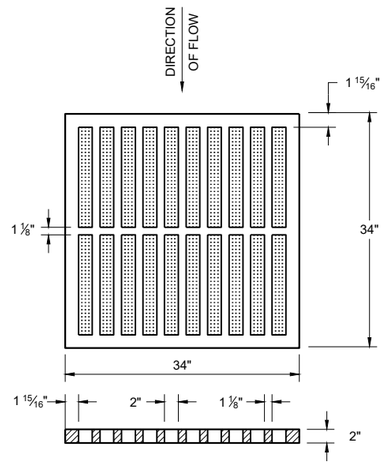
ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.



ALTERNATIVE TYPE "MS"

USE WHERE PEDESTRIAN OF BICYCLE TRAFFIC IS PERMITTED

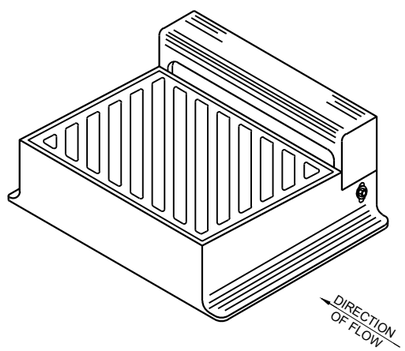
NOTED AS TYPE MS-A ON THE DRAINAGE TABLE



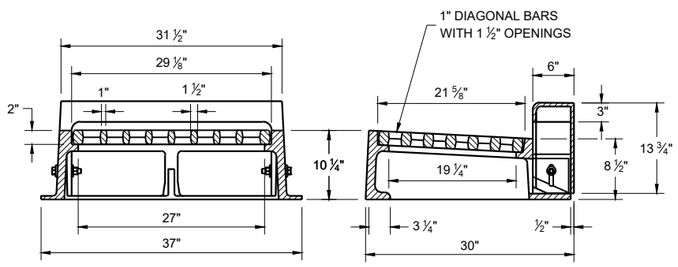
TYPE "MS"

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"

INLET COVERS TYPES B, B-A, C, MS, MS-A AND WM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
December 2023 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

FHWA

6

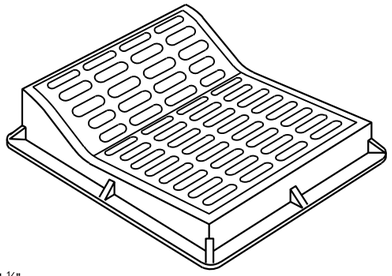
SDD 08A05-21b

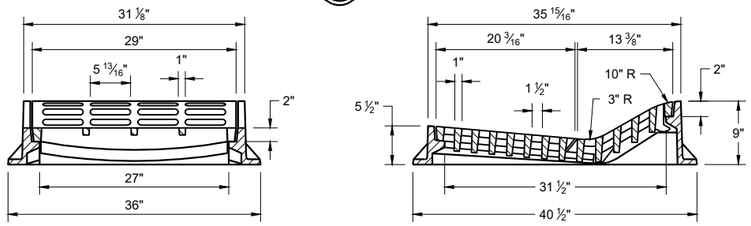
SDD 08A05-21b

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.

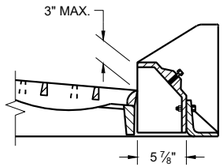
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.





TYPE "F"

USE WITH TYPES "A" AND "D" CONCRETE CURB AND GUTTER, 36"

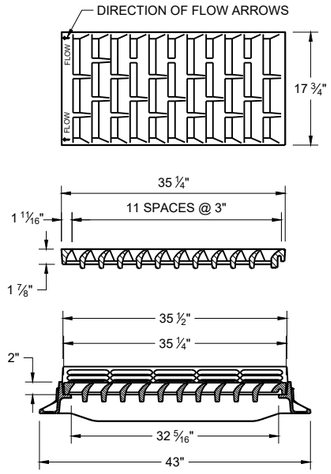


ALTERNATIVE CURB BOX FOR TYPE "HM" COVER

USE WITH TYPES "G" AND "J" CONCRETE CURB AND GUTTER, 30 INCH
NOTED AS TYP "HM-GJ" ON DRAINAGE TABLE

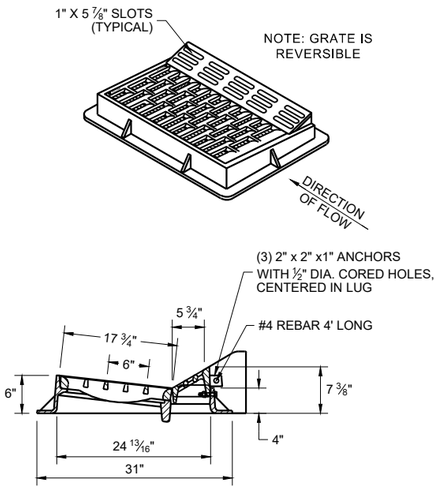
NOTE:
SPECIAL GRATE FOR THE TYPE "H" COVER MAY ALSO BE USED FOR THE TYPE "HM-GJ" COVER.

NOTED AS TYPE HM-GJ-S ON THE DRAINAGE TABLE.



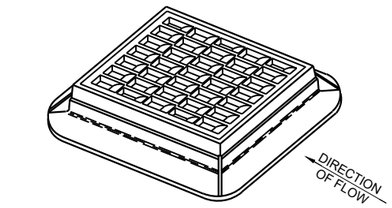
TYPE "HM"

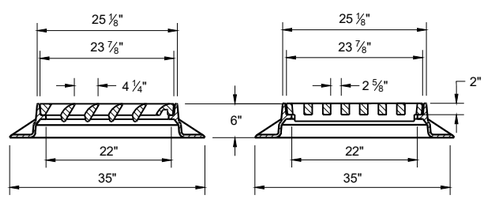
USE WITH TYPES "A" AND "D" CONCRETE CURB AND GUTTER, 36"



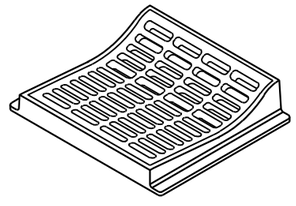
NOTE:
SPECIAL GRATE FOR THE TYPE "H" COVER MAY ALSO BE USED FOR THE TYPE "HM-GJ" COVER.

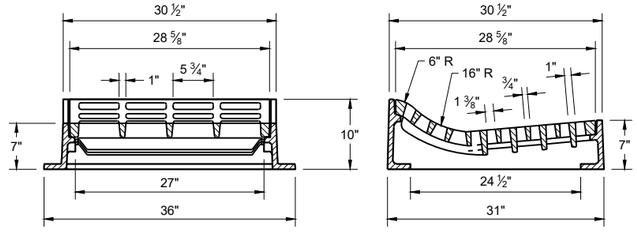
NOTED AS TYPE HM-GJ-S ON THE DRAINAGE TABLE.





TYPE "S"





TYPE "T"

USE WITH TYPES "R" AND "T" CONCRETE CURB AND GUTTER, 36"

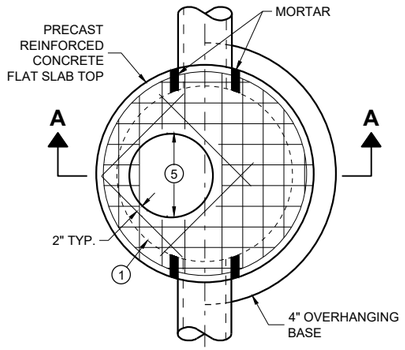
INLET COVERS
TYPES F, HM, HM-S, S, T, HM-GJ AND HM-GJ-S

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
December 2023 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

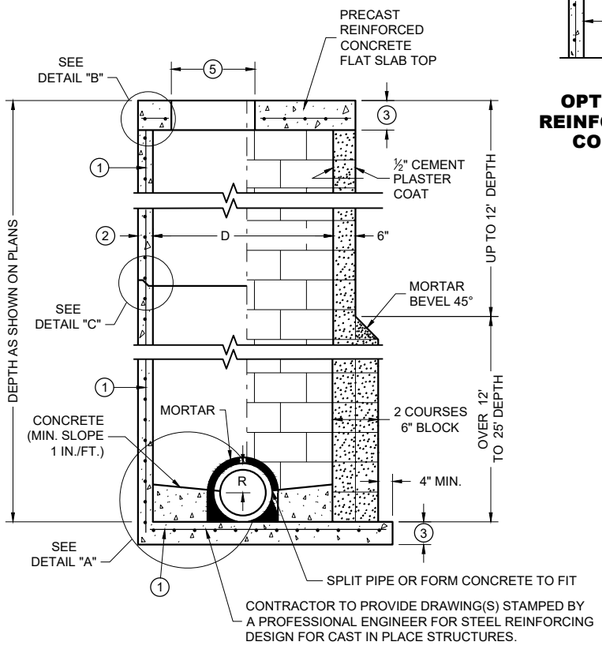
FHWA

6
SDD 08A05-21c



PLAN VIEW

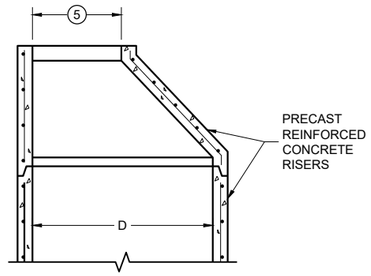
CIRCULAR OPENING



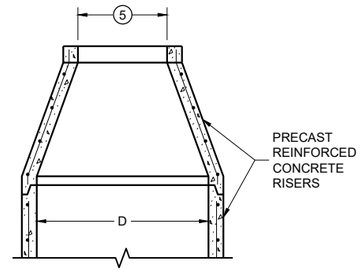
SECTION A - A

PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

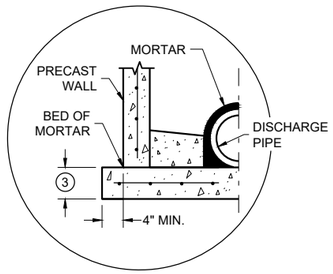
CONCRETE BLOCK WITH CAST IN PLACE OR PRECAST REINFORCED CONCRETE BASE (1)



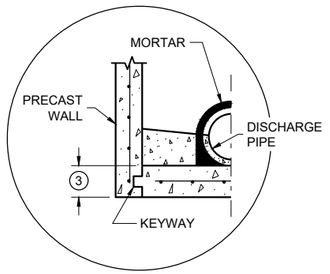
OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP



OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP

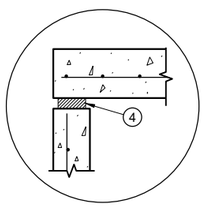


SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

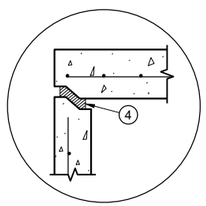


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION

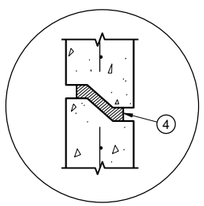
DETAIL "A"



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".

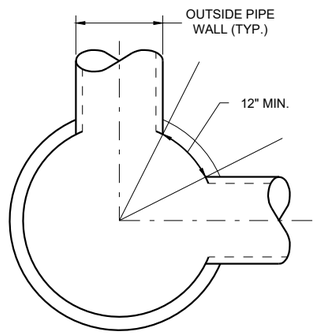
(1) FOR PRECAST MANHOLES AND REINFORCED CONCRETE BASES PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.

(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"

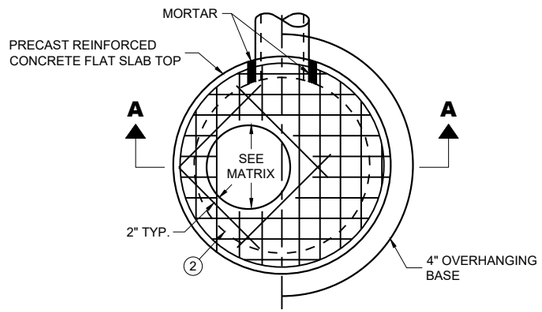
MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT, 8-FT, 9-FT AND 10-FT DIAMETER

MANHOLES, 3-FT, 4-FT 5-FT, 6-FT, 7-FT, 8-FT, 9-FT AND 10-FT DIAMETER

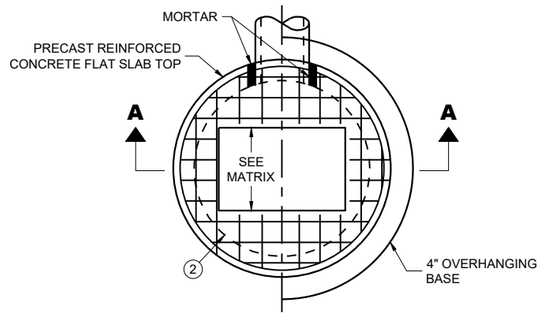
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December 2023 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

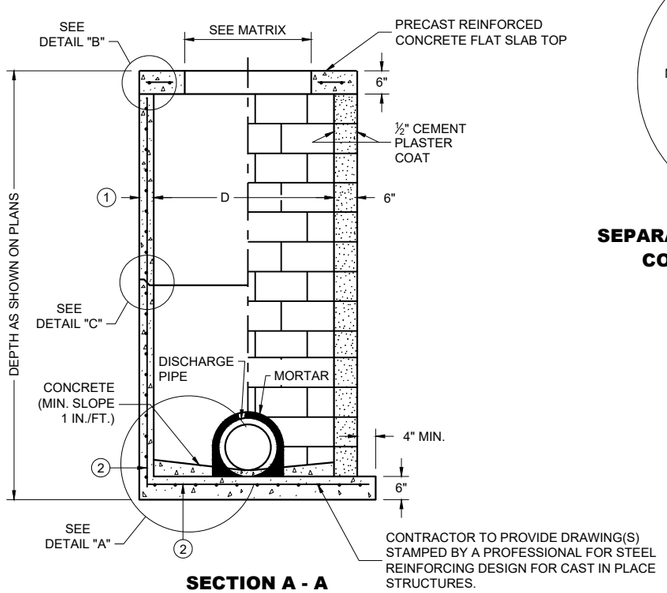
FHWA



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)

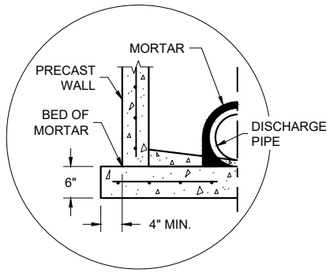
CIRCULAR INLETS WITH FLAT TOP

CATCH BASIN COVER OPENING MATRIX

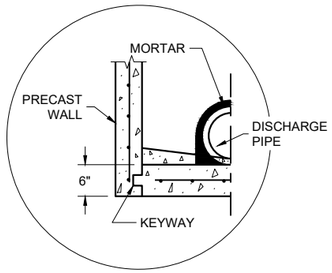
INLET SIZE	INLET COVER TYPE	ALL A'S	ALL B'S	BW	C	F	ALL H'S	S	T	V	WM	Z
	OPENING SIZE (FT.)											
3-FT	2 DIA.				X							X
	2 X 2	X	X					X		X		
4-FT	2 DIA.				X							X
	2 X 2	X	X					X		X		
	2 X 2.5			X				X	X	X	X	
	2 X 3						X					
	2.5 X 3					X						

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

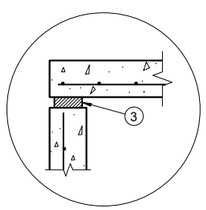


SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

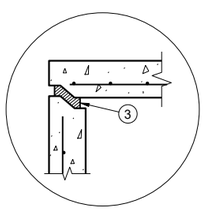


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION

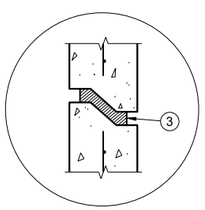
DETAIL "A"



TOP WITH PLAIN END JOINT



TOP WITH TONGUE AND GROOVE JOINT



RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B" **DETAIL "C"**

INLETS 3-FT AND 4-FT DIAMETER

GENERAL NOTES

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

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

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR 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.

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.

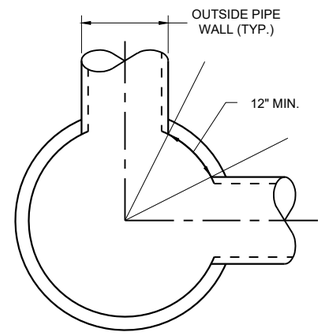
4" OVERHANGING BASES ARE REQUIRED FOR ALL CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

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"

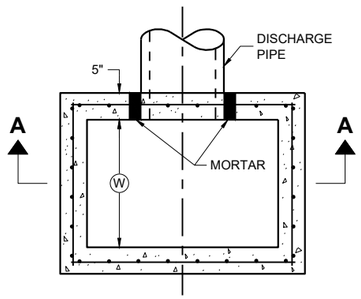
INLETS 3-FT AND 4-FT DIAMETER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

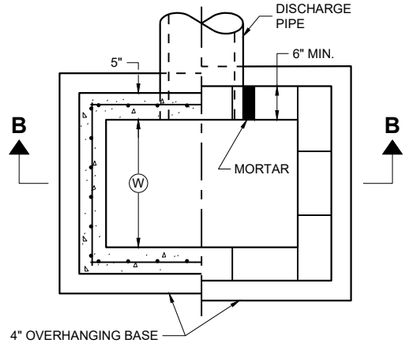
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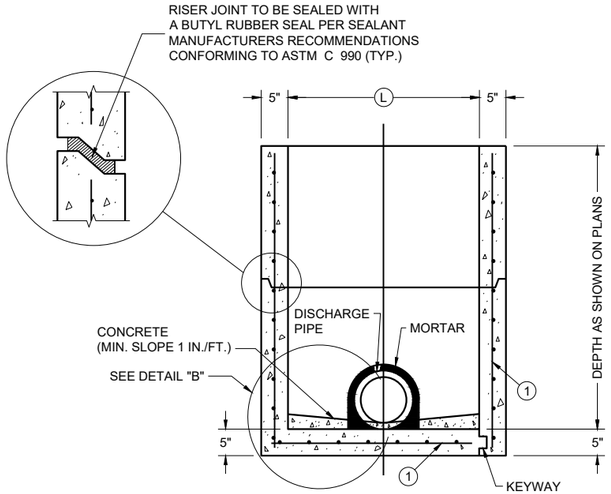
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PLAN VIEW



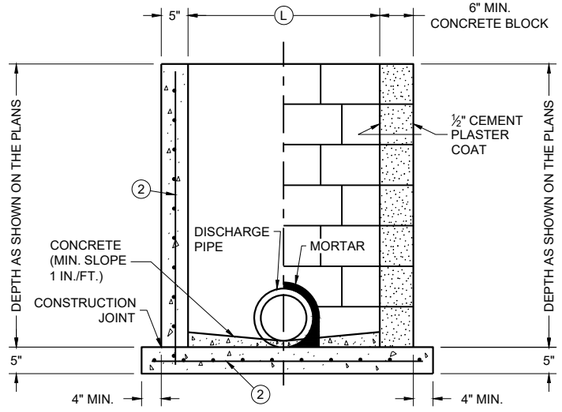
PLAN VIEW



PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE

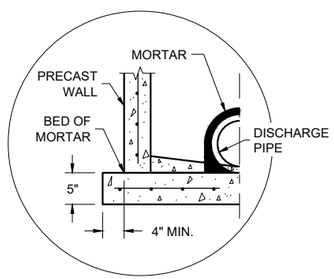
SECTION A - A



CAST IN PLACE REINFORCED CONCRETE

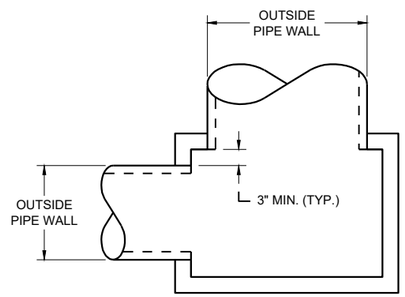
CONCRETE BLOCK WITH CAST IN PLACE OR PRECAST REINFORCED CONCRETE BASE (1)

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

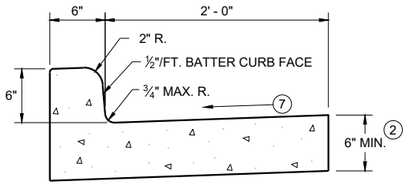
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DATE

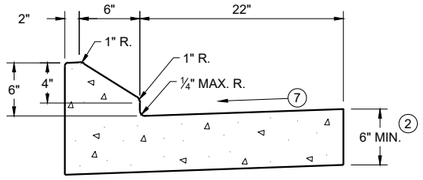
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ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

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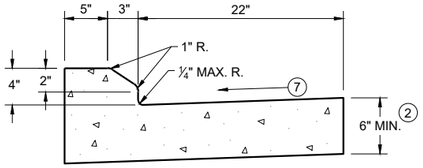
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SDD 08C07-03



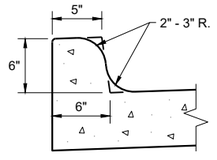
TYPES A (1) & D



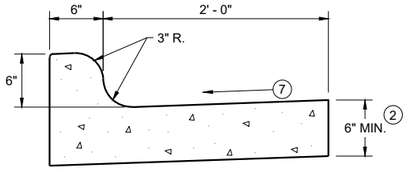
6" SLOPED CURB TYPES G (1) & J



4" SLOPED CURB TYPES G (1) & J

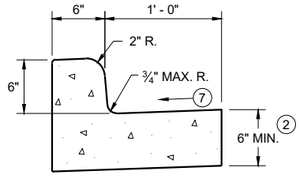


TYPES K (1) & L
(OPTIONAL CURB SHAPE)



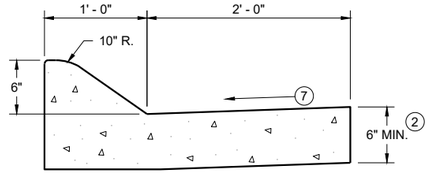
TYPES K (1) & L

CONCRETE CURB AND GUTTER 30"

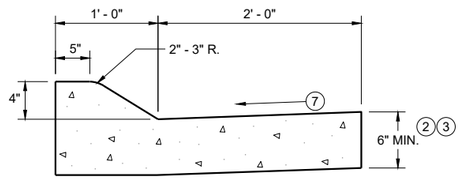


TYPES A (1) & D

CONCRETE CURB AND GUTTER 18"

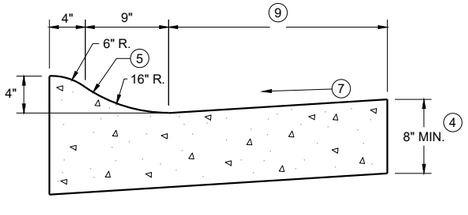


6" SLOPED CURB TYPES A (1) & D



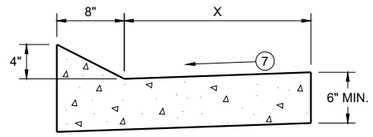
4" SLOPED CURB TYPES A (1) & D

CONCRETE CURB AND GUTTER 36"



4" SLOPED CURB TYPES R (1) & T

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

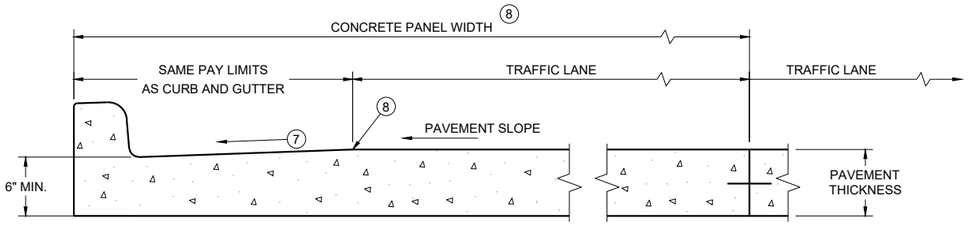


TYPES TBT & TBTT (1)

CONCRETE CURB AND GUTTER

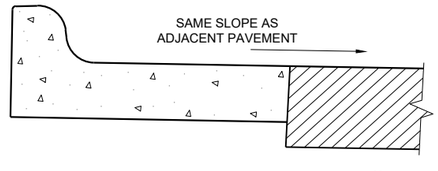
PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE

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



PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB AND GUTTER *

* BIKE LANE IS NOT SHOWN



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

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

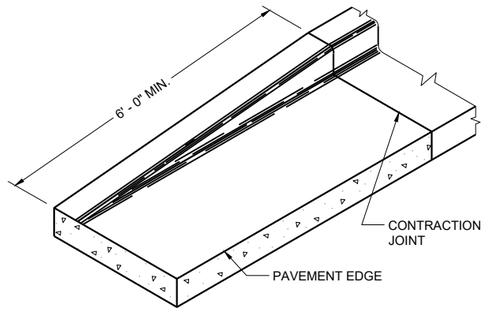
(8) INCLUDE LONGITUDINAL JOINT AND TIE BARS ALONG LANE EDGE WHEN CONCRETE PANEL WIDTH EXCEEDS THE MAXIMUM WIDTH PER TABLE BELOW. LONGITUDINAL JOINT(S) ARE NOT ALLOWED WITHIN TRAFFIC LANES AND BIKE LANES. LONGITUDINAL JOINT MAY BE SAWED.

(9) CONCRETE CURB AND GUTTER 4-INCH SLOPED 30-INCH TYPE "R" AND "T" = 17 INCHES
CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE "R" AND "T" = 23 INCHES

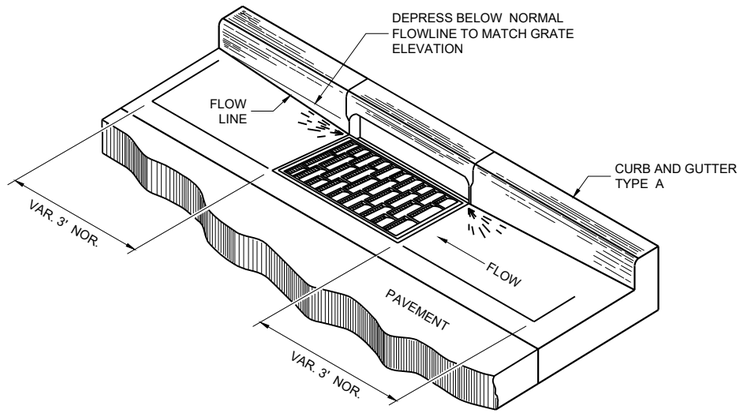
CONCRETE CURB AND GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 08D01-23a



END SECTION CURB AND GUTTER



DETAIL OF CURB AND GUTTER AT INLETS

(TYPICAL H INLET COVER SHOWN)

GENERAL NOTES

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

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

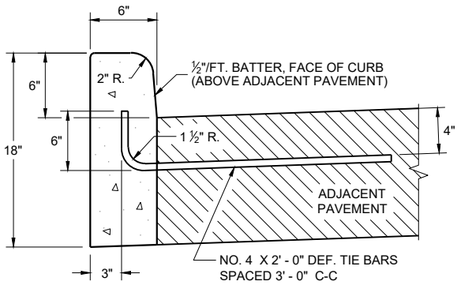
UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2' - 0" BEHIND THE BACK OF CURBS.

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

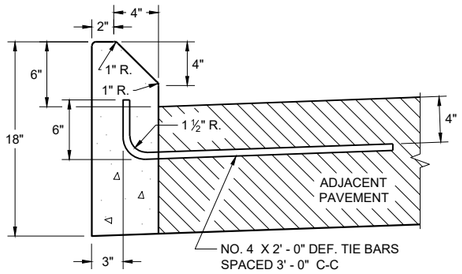
(2) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

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

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

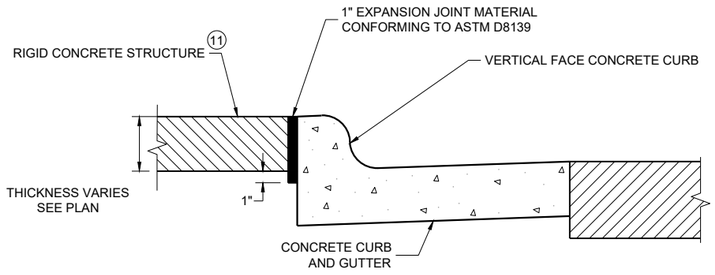


TYPES A (1) & D

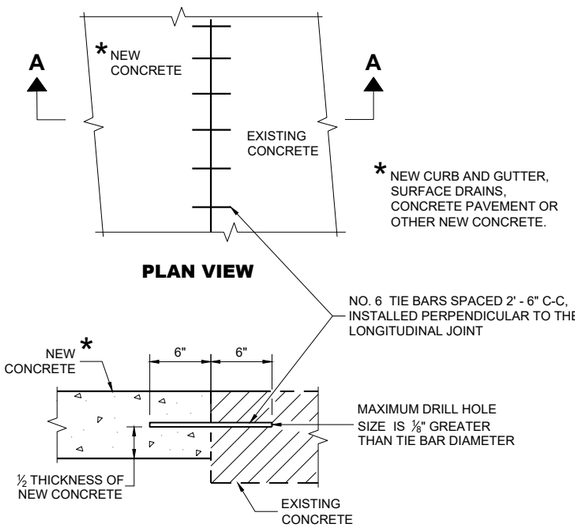


TYPES G (1) & J

CONCRETE CURB



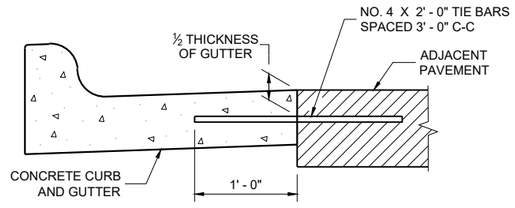
EXPANSION JOINT DETAIL FOR VERTICAL CURB ABUTTING A RIGID STRUCTURE (11)



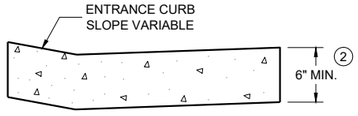
PLAN VIEW

SECTION A - A

TIE BARS DRILLED INTO EXISTING PAVEMENT



TYPICAL TIE BAR LOCATION (1)



DRIVEWAY ENTRANCE CURB (10)

(WHEN DIRECTED BY THE ENGINEER)

CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

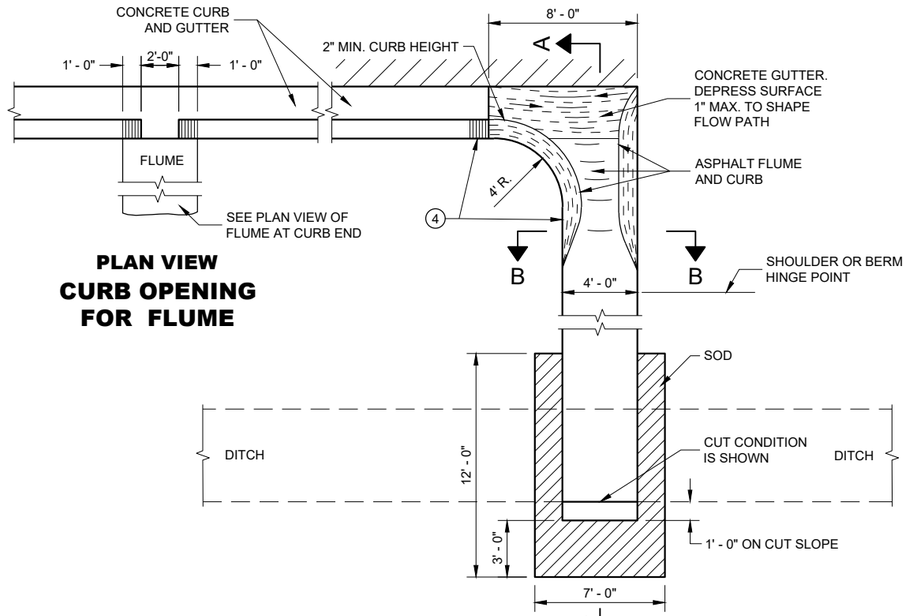
APPROVED
May 2023 — DATE
/S/ Rodnery Taylor — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

FHWA

6
SDD 08D01-23b

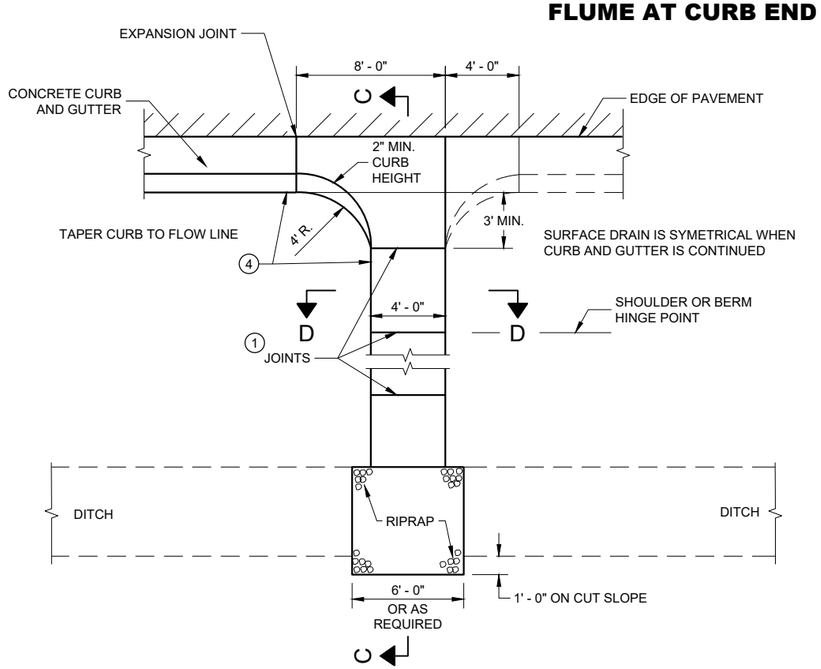
NOTE: TAPER CURB ENDS TO GUTTER IN 1' - 0"

ASPHALTIC FLUME



PLAN VIEW
CURB OPENING FOR FLUME

PLAN VIEW
FLUME AT CURB END



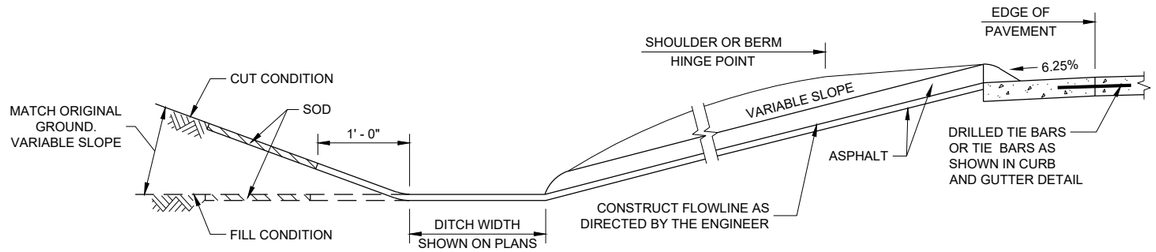
PLAN VIEW
CONCRETE SURFACE DRAIN

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.

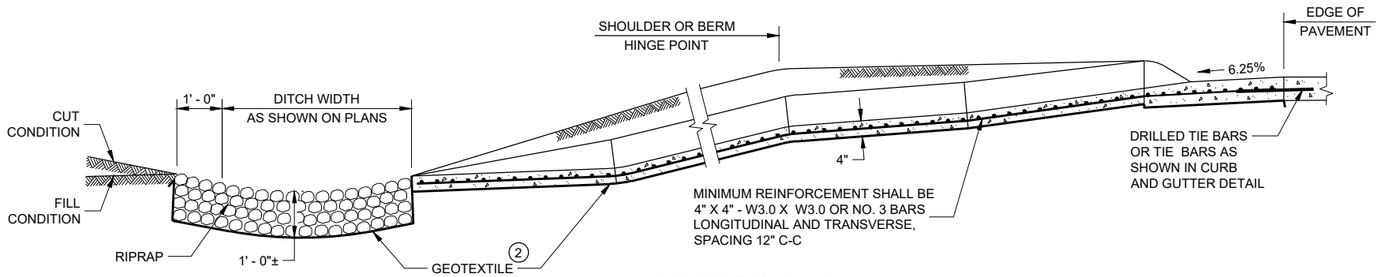
4" X 4" - W3.0 X W3.0 CONCRETE REINFORCEMENT SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

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.

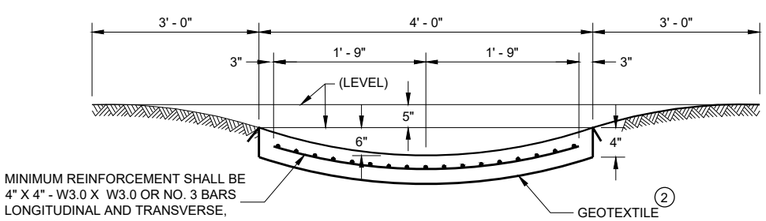


SECTION A - A

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

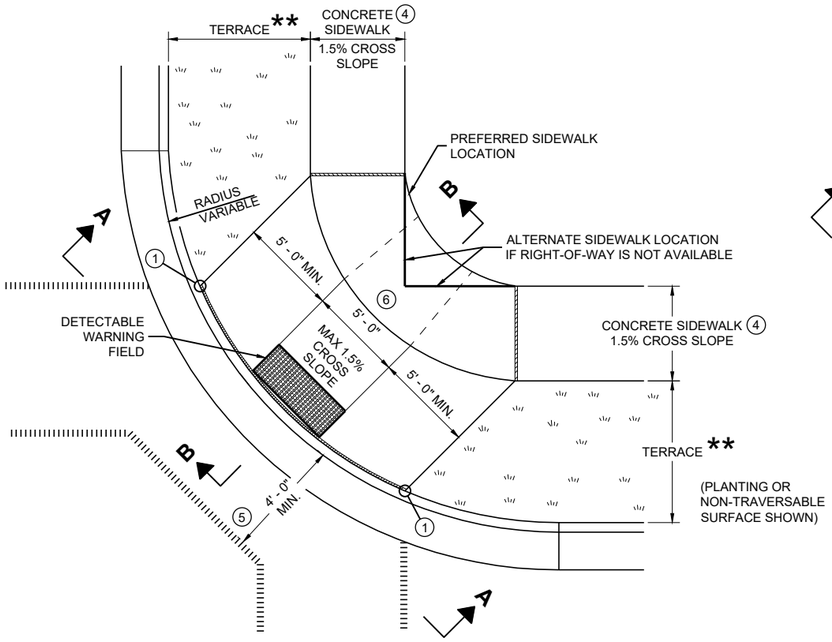
FHWA

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SDD 08D04 - 07

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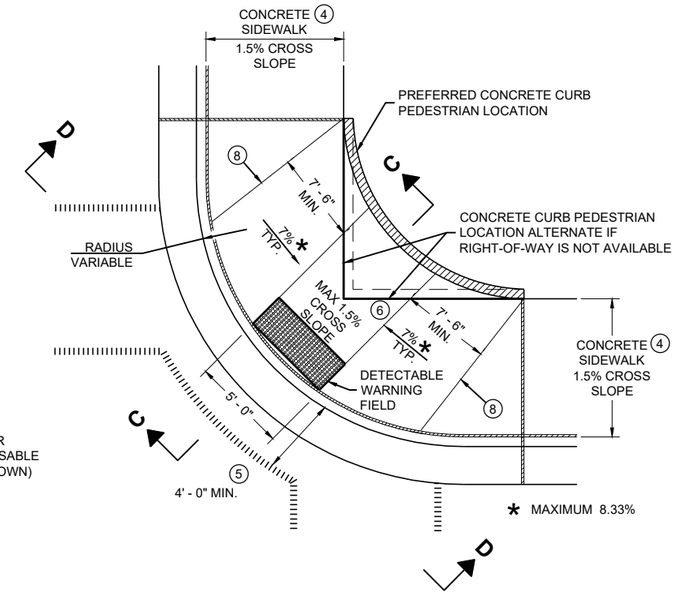
SDD 08D04 - 07



PLAN VIEW

CURB RAMP TYPE 1

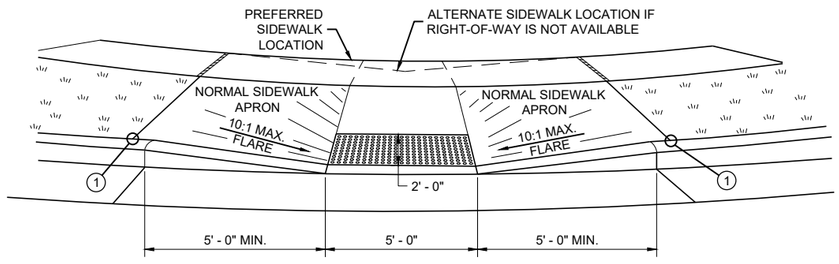
(CENTER OF CORNER RADIUS)



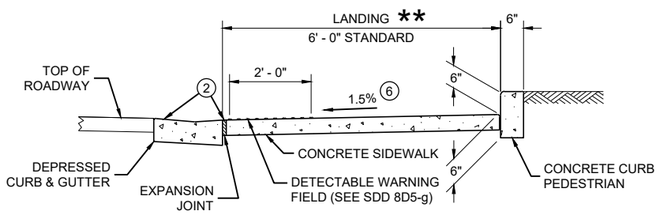
PLAN VIEW

CURB RAMP TYPE 1 - A

(NO TERRACE)

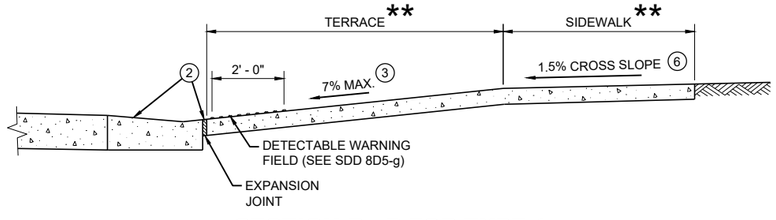


VIEW A - A FOR TYPE 1

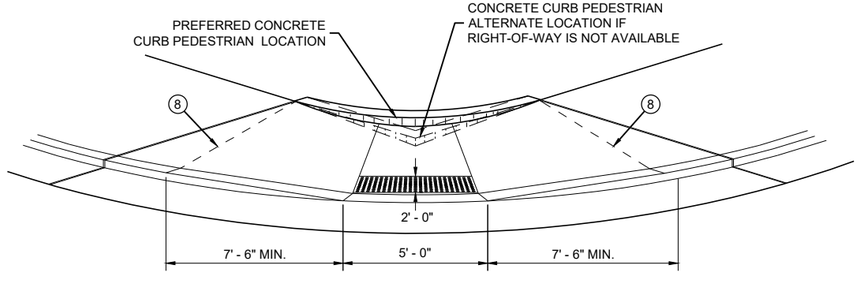


SECTION C - C FOR TYPE 1 - A

** WIDTH SHOWN ELSEWHERE IN THE PLANS



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 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 RAMP.

TYPE 1 CURB RAMPS SHALL HAVE A NORMAL SIDEWALK APRON AND CURB ON BOTH SIDES OF 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 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 FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ½ - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) MAXIMUM 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(5) PROVIDE A LEVEL LANDING IN THE STREET AND GUTTER AREA (2% MAXIMUM SLOPE IN ANY DIRECTION). WHEN THE GUTTER SLOPE EXCEEDS 2%, CONSTRUCT THE LEVEL LANDING IN THE STREET AREA. 4 FOOT WIDTH IS MEASURED FROM THE FLANGE LINE

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

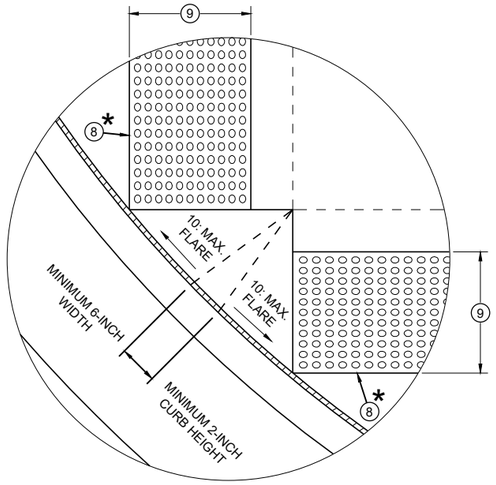
LEGEND

- ½" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

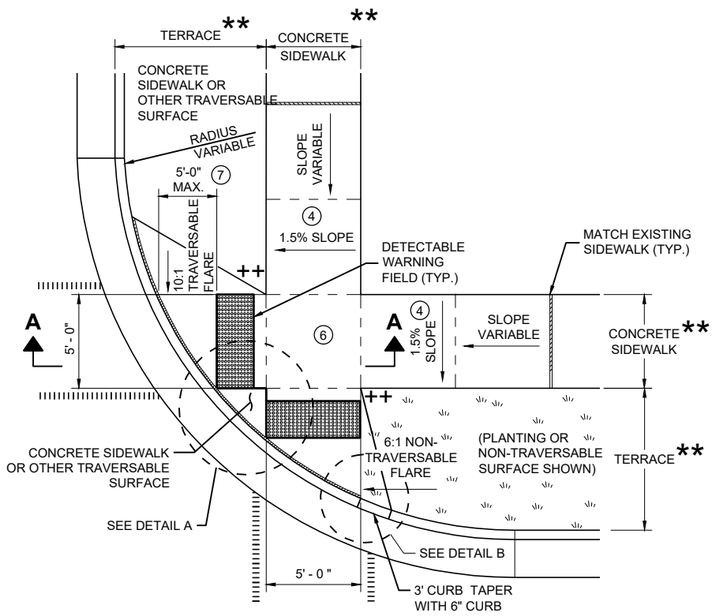
CURB RAMPS TYPE 1 AND 1-A

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

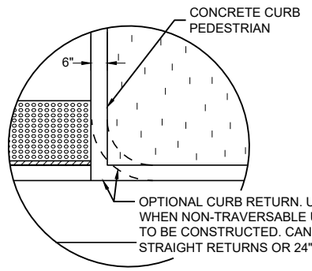
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SDD 08D05-21a



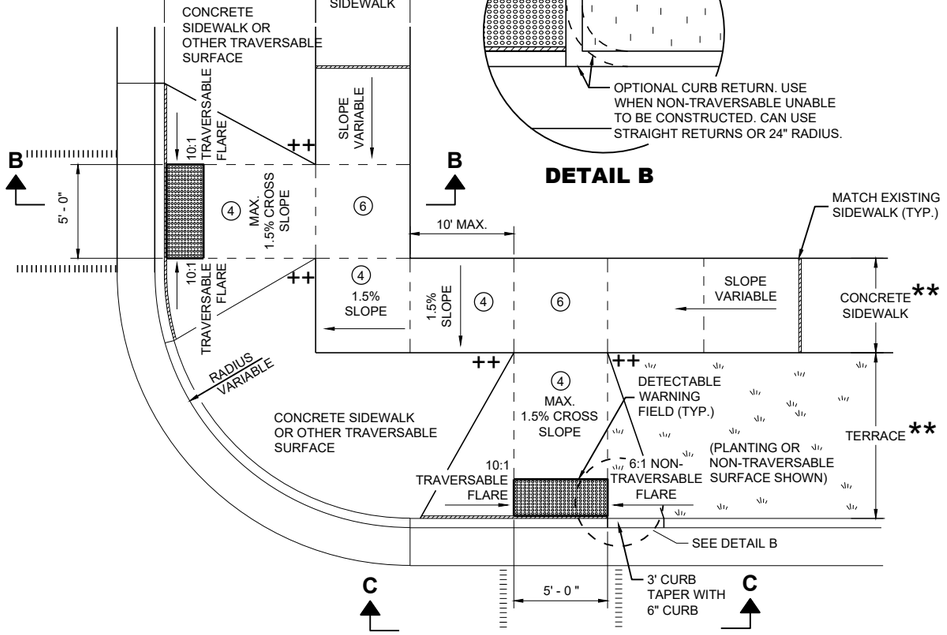
DETAIL A



PLAN VIEW
CURB RAMP TYPE 2
(CENTER OF CORNER RADIUS)



DETAIL B



PLAN VIEW
CURB RAMP TYPE 3
(OUTSIDE OF CROSSWALK AREA)

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF 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 FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼ - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE (2.67% OR LESS) AND NOT TO EXCEED 11% GRADE CHANGE.

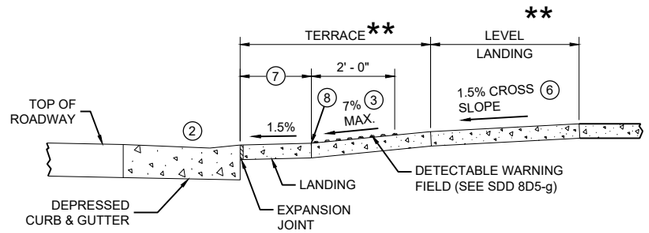
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET X 5 FEET.

(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% SLOPE OR FLATTER ALONG THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 7% SLOPE OR FLATTER ON RAMP. CONSTRUCT 2-INCH MINIMUM CURB HEIGHT BETWEEN 10:1 FLARES.

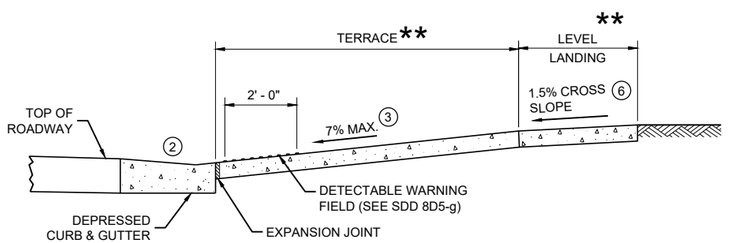


SECTION A - A FOR TYPE 2

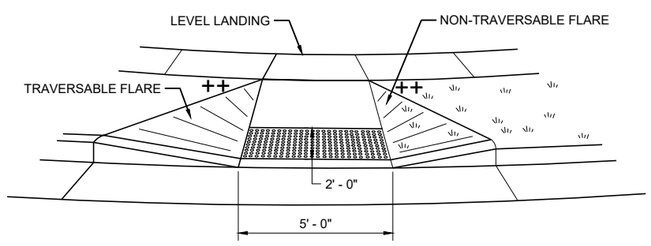
* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK

** WIDTH SHOWN ELSEWHERE IN THE PLANS

++ CONSTRUCT 6" WEDGE TO AVOID CONCRETE BREAKAGE



SECTION B - B FOR TYPE 3



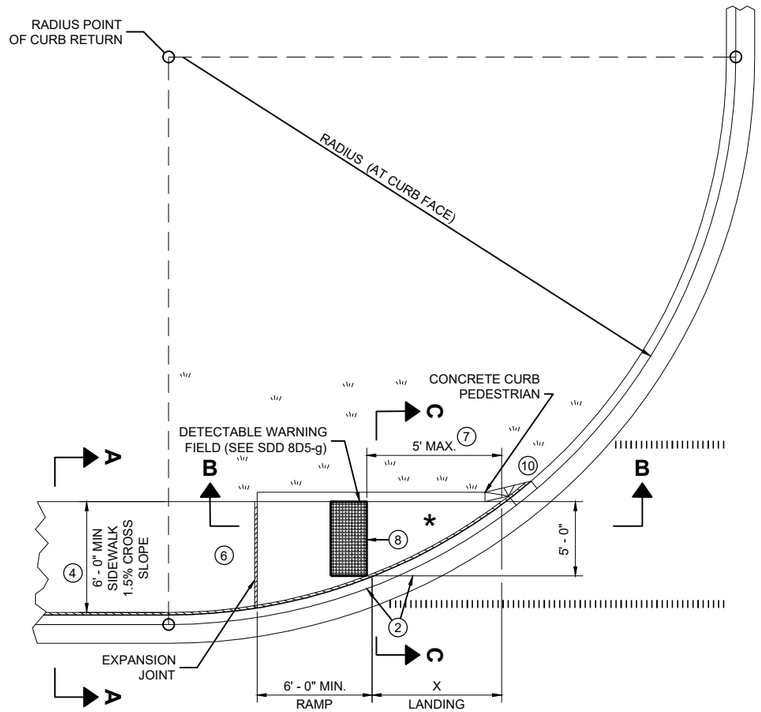
VIEW C - C FOR TYPE 3

LEGEND

- ½" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT SIDEWALK
- PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS TYPE 2 AND 3

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

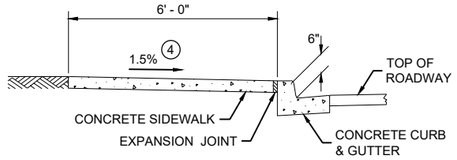


PLAN VIEW

CURB RAMP TYPE 4A

RADIUS (AT CURB FACE)	X
10 FEET	4' - 7"

INTERMEDIATE RADII CAN BE INTERPOLATED



SECTION A - A FOR TYPE 4A

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF 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 FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼ - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.

(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.

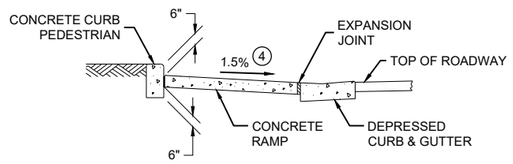
(10) INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.

LEGEND

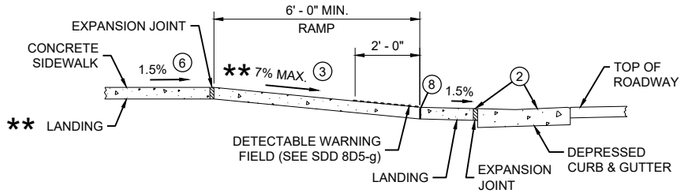
½" EXPANSION JOINT SIDEWALK

CONTRACTION JOINT SIDEWALK

PAVEMENT MARKING CROSSWALK (WHITE)

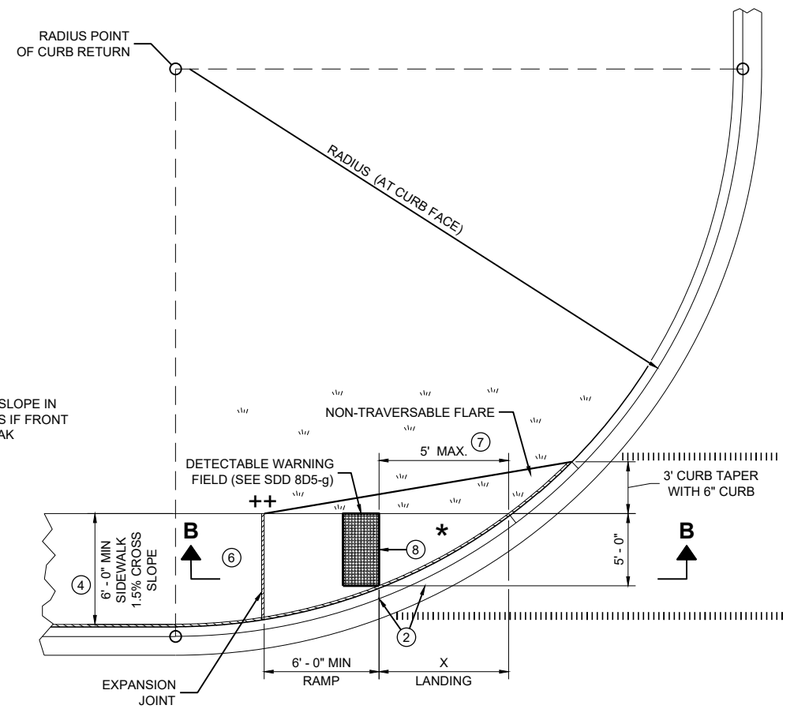


SECTION C - C FOR TYPE 4A



SECTION B - B FOR TYPE 4A AND TYPE 4A1

** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

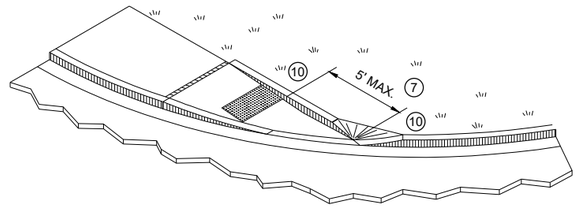


* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IF FRONT OF GRADE BREAK

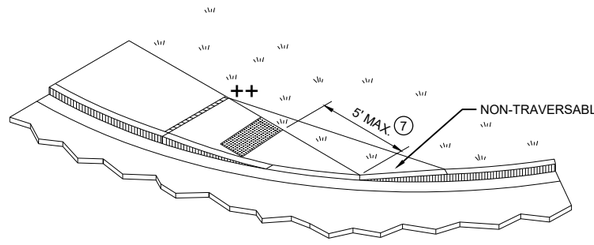
PLAN VIEW

CURB RAMP TYPE 4A1

++ CONSTRUCT 6" WEDGE TO AVOID CONCRETE BREAKAGE



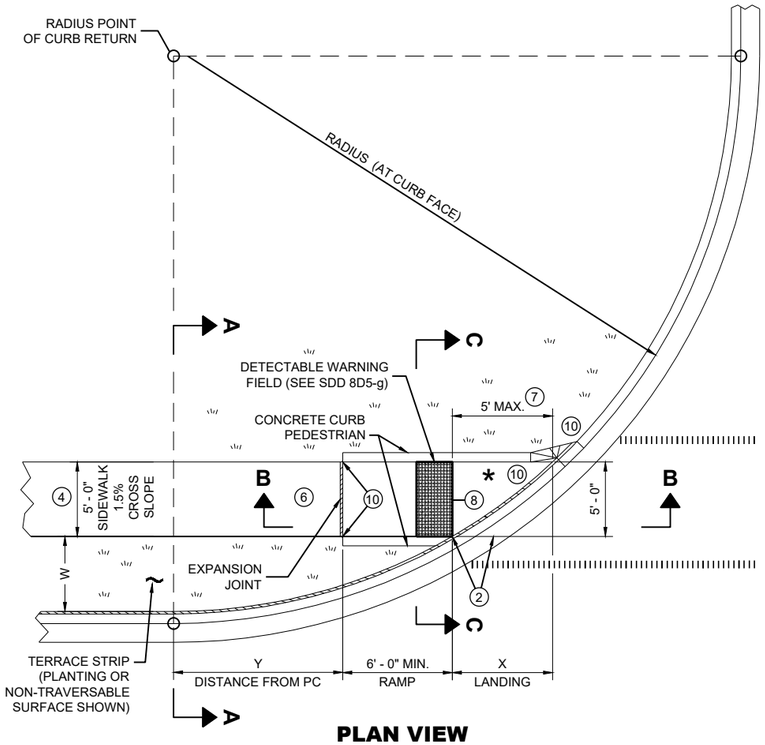
ISOMETRIC VIEW FOR TYPE 4A



ISOMETRIC VIEW FOR TYPE 4A1

CURB RAMPS
TYPE 4A AND 4A1

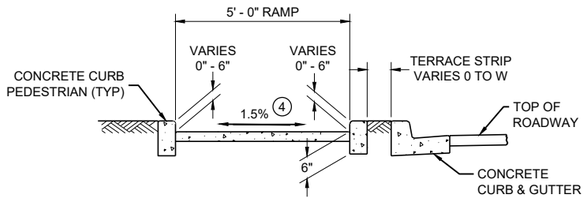
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



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 1/4"	0' - 5"	2' - 1"	1' - 4 1/2"	1' - 5"	2' - 1"	0' - 10"	2' - 7 1/2"	0' - 3 1/4"	3' - 0 1/4"						
15 FEET	4' - 6 3/4"	2' - 1 3/4"	3' - 9"	3' - 5 3/4"	3' - 1 1/4"	4' - 6"	2' - 6 3/4"	5' - 4 1/2"	2' - 1"	6' - 1"	1' - 8"	6' - 8 1/2"	1' - 3 1/4"	7' - 2 1/2"	0' - 10 3/4"	7' - 7 1/4"
20 FEET			4' - 11 1/2"	5' - 1 3/4"	4' - 3 1/4"	6' - 5 1/2"	3' - 8 3/4"	7' - 7"	3' - 3"	8' - 6 1/2"	2' - 10"	9' - 4 1/2"	2' - 5 1/2"	10' - 1 1/4"	2' - 1 1/4"	10' - 9"
30 FEET									4' - 10 3/4"	12' - 5 3/4"	4' - 5 1/2"	13' - 7 3/4"	4' - 0 3/4"	14' - 8 1/2"	3' - 8 1/2"	15' - 8 1/4"
40 FEET															4' - 10 3/4"	19' - 8 1/4"

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)

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF 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 FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼ - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

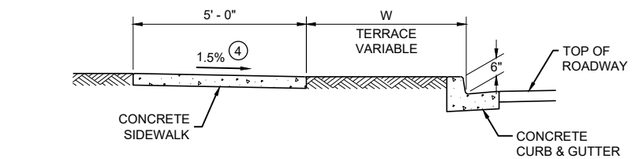
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.

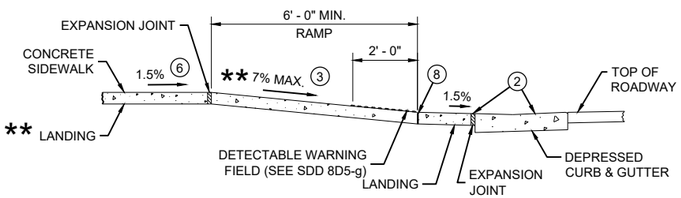
(7) WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

(10) INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.

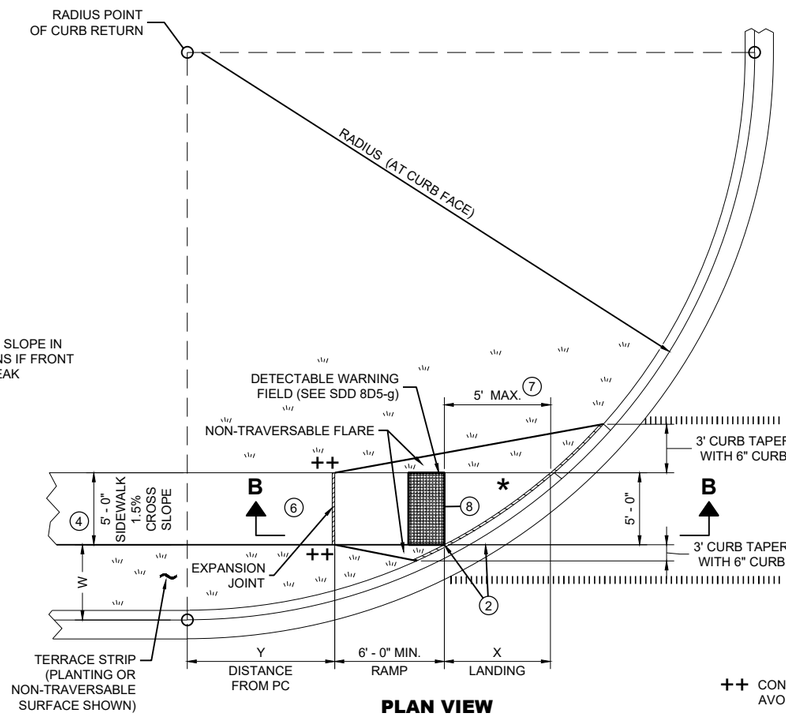


SECTION A - A FOR TYPE 4B



SECTION B - B FOR TYPE 4B AND TYPE 4B1

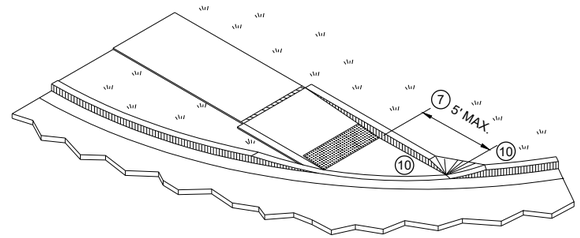
** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED



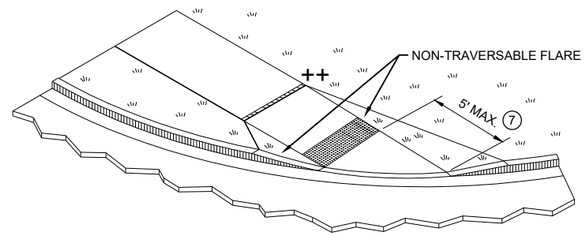
PLAN VIEW
CURB RAMP TYPE 4B1

* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IF FRONT OF GRADE BREAK

++ CONSTRUCT 6" WEDGE TO AVOID CONCRETE BREAKAGE



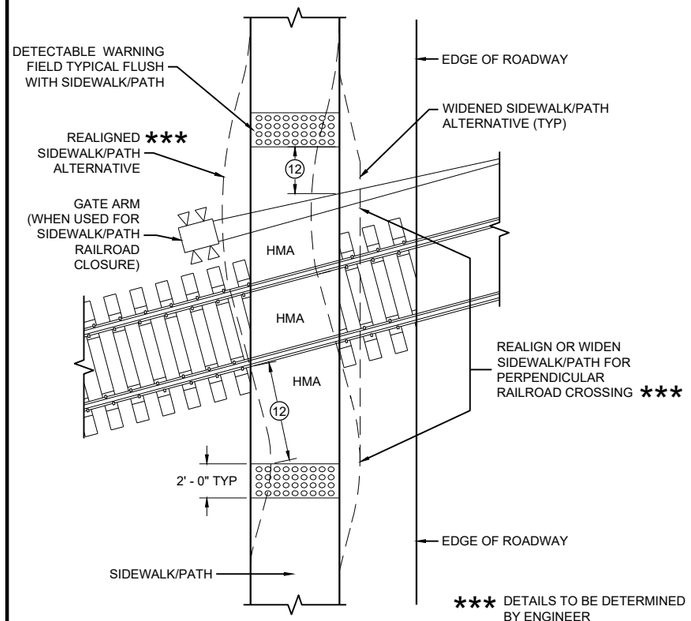
ISOMETRIC VIEW FOR TYPE 4B



ISOMETRIC VIEW FOR TYPE 4B1

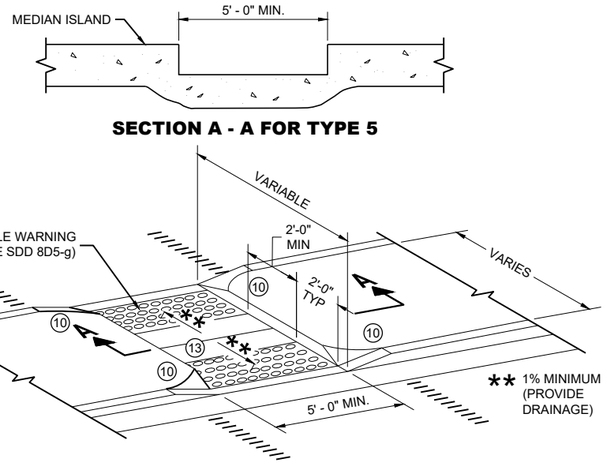
CURB RAMPS
TYPE 4B AND 4B1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



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 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%.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼ - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.

(10) INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.

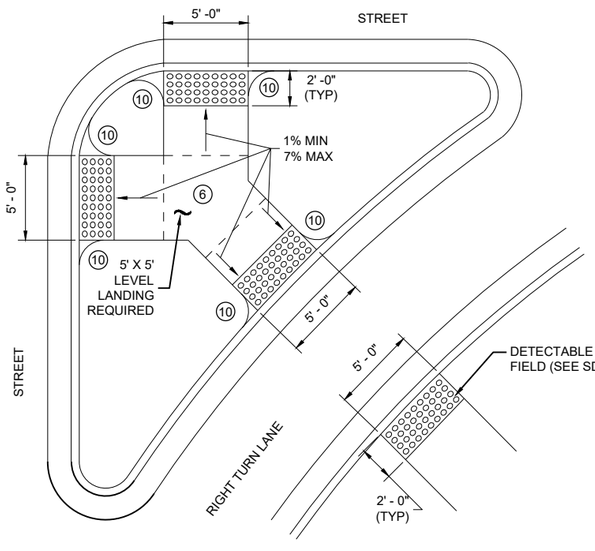
(11) SLOPE SIDEWALK TOWARD LANDING AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.

(12) THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO A RAILROAD CROSSING SHALL BE 1.5 FEET ±0.1' FROM THE FACE OF THE GATE ARM IF THE GATE ARM EXTENDS ACROSS THE SIDEWALK/PATH. WHERE THERE IS NO PEDESTRIAN GATE, THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO THE RAILROAD TRACK IS 15 FEET MAXIMUM AND 12 FEET MINIMUM, 15 FEET TYPICAL 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.

LEGEND

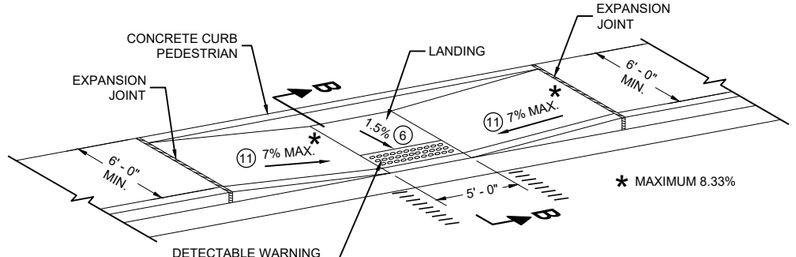
- ½" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)



CURB RAMP TYPE 6

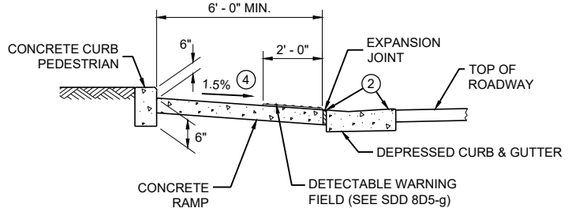
DETECTABLE WARNING AT ISLANDS

REFER TO GENERAL NOTES (2) AND (3) FOR ALL ISLAND CURB RAMPS

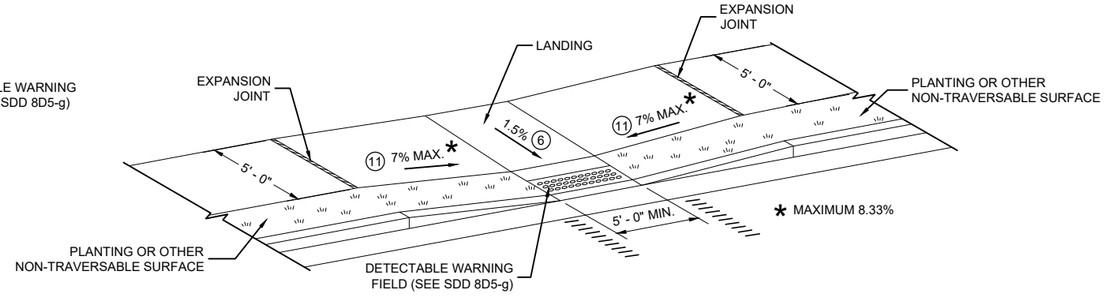


CURB RAMP TYPE 7A

FOR INTERSECTIONS AND MID BLOCK CROSSINGS



SECTION B - B FOR TYPE 7A



CURB RAMP TYPE 7B

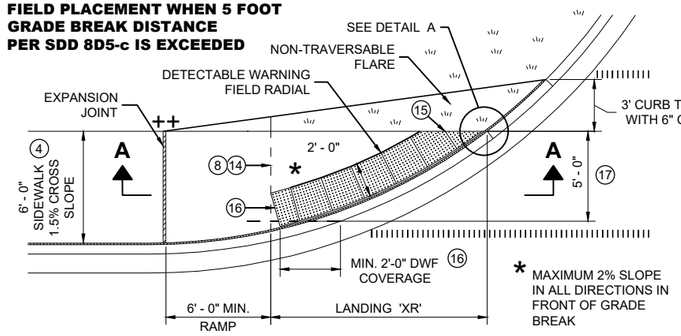
FOR INTERSECTIONS AND MID BLOCK CROSSINGS

CURB RAMPS TYPE 5, 6, 7A, 7B & 8

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

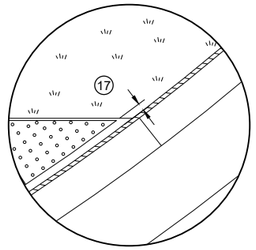
SDD 08D05-21e

RADIAL DETECTABLE WARNING FIELD PLACEMENT WHEN 5 FOOT GRADE BREAK DISTANCE PER SDD 8D5-c IS EXCEEDED

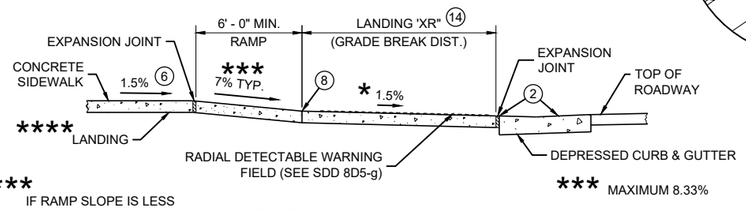


PLAN VIEW

CURB RAMP TYPE 4A1
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)



DETAIL A



**** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

*** MAXIMUM 8.33%

SECTION A - A FOR TYPE 4A1

LEGEND

- ½" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT SIDEWALK
- PAVEMENT MARKING CROSSWALK (WHITE)

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF 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 FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼ - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET BY 5 FEET.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

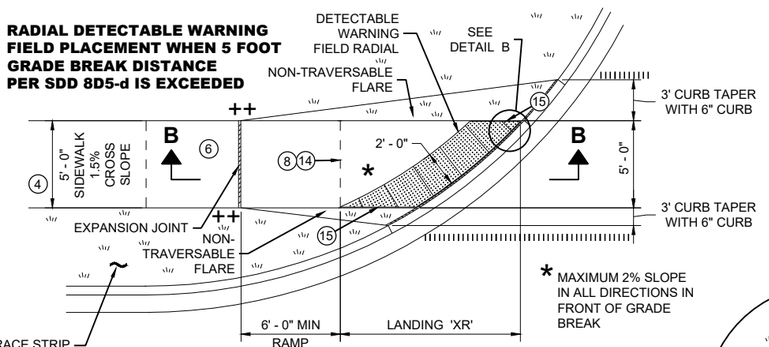
(14) CONSULT ENGINEER IF GRADE BREAK LOCATION (END OF LANDING DIMENSION "XR") REQUIRES FIELD ADJUSTMENT WHEN ESTABLISHING FINAL RADIAL DETECTABLE WARNING FIELD LOCATION.

(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.

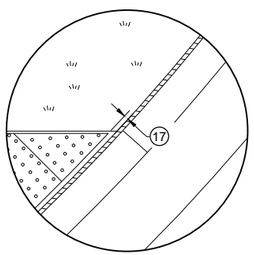
(17) A MAXIMUM 3 INCH CONCRETE BORDER WIDTH IS ALLOWABLE IN FRONT OF RADIAL DETECTABLE WARNING FIELD FOR CONSTRUCTABILITY PURPOSES. CONCRETE BORDER WIDTH MAY VARY UP TO 1 INCH.

RADIAL DETECTABLE WARNING FIELD PLACEMENT WHEN 5 FOOT GRADE BREAK DISTANCE PER SDD 8D5-d IS EXCEEDED

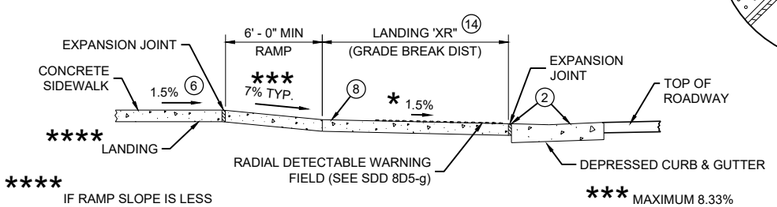


PLAN VIEW

CURB RAMP TYPE 4B1
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)



DETAIL B

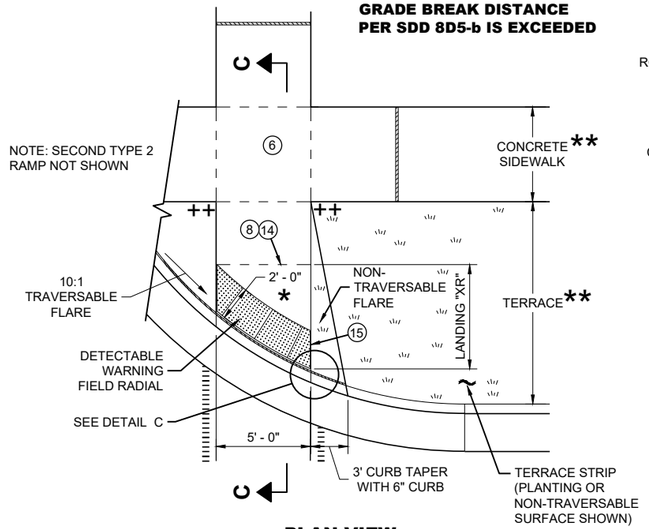


**** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

*** MAXIMUM 8.33%

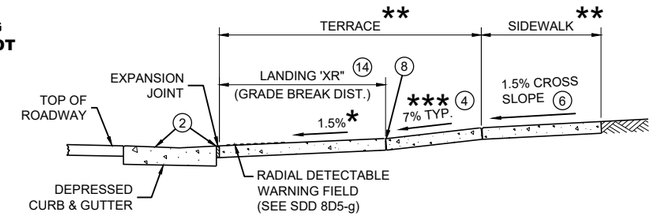
SECTION B - B FOR TYPE 4B1

RADIAL DETECTABLE WARNING FIELD PLACEMENT WHEN 5 FOOT GRADE BREAK DISTANCE PER SDD 8D5-b IS EXCEEDED

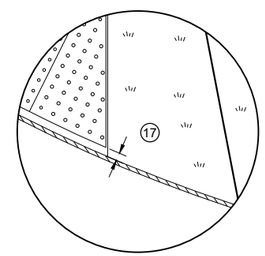


PLAN VIEW

CURB RAMP TYPE 2
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)
(ON LINE WITH SIDEWALK)



SECTION C - C FOR TYPE 2



DETAIL C

* MAXIMUM 2% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK

** WIDTH SHOWN ELSEWHERE IN THE PLANS

*** MAXIMUM 8.33%

++ CONSTRUCT 6" WEDGE TO AVOID CONCRETE BREAKAGE

CURB RAMPS
RADIAL DETECTABLE WARNING

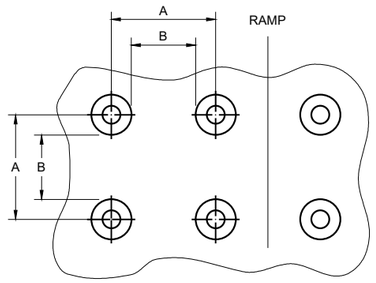
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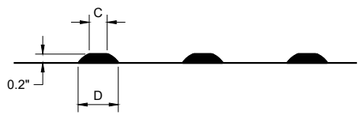
SDD 08D05-21f

	MIN.	MAX.
A	1.6"	2.4"
B	0.65"	1.5"
C	*	*
D	0.9"	1.4"

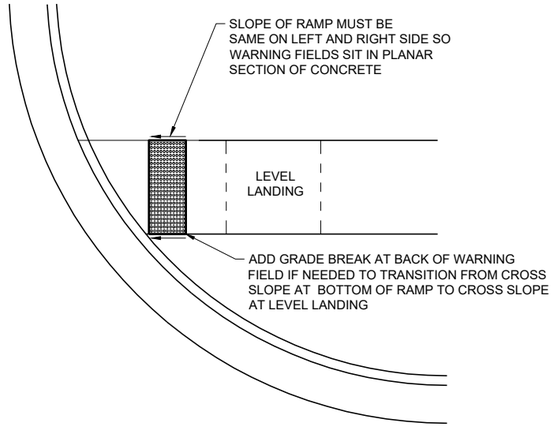
* THE C DIMENSION IS 50% TO 65% OF THE D DIMENSION.



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.

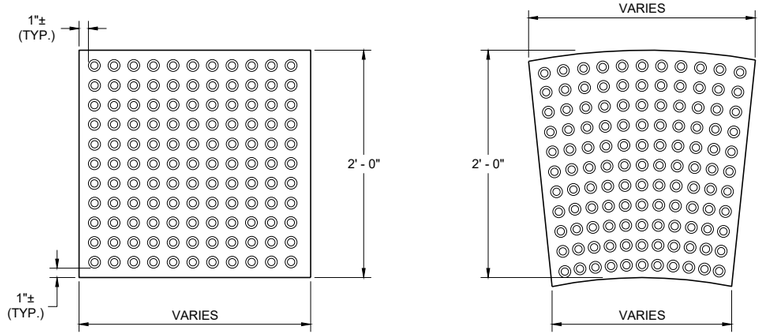
FOR RADIAL DETECTABLE WARNING FIELD APPLICATIONS WHERE STANDARD RADIAL PLATES ARE NOT AVAILABLE AT AN INTERSECTION CURB RADIUS, A COMBINATION OF SQUARE OR RECTANGULAR PLATES AND RADIAL PLATES MAY BE USED TO FORM RADIAL CONFIGURATION. RADIAL WEDGE PLATES IN COMBINATION WITH SQUARE PLATES ARE ALSO ACCEPTABLE. 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.

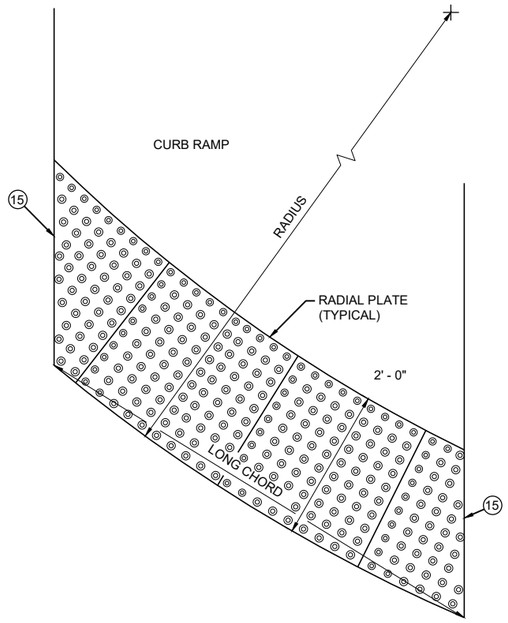
TRUNCATED DOMES
DETECTABLE WARNING PATTERN DETAIL



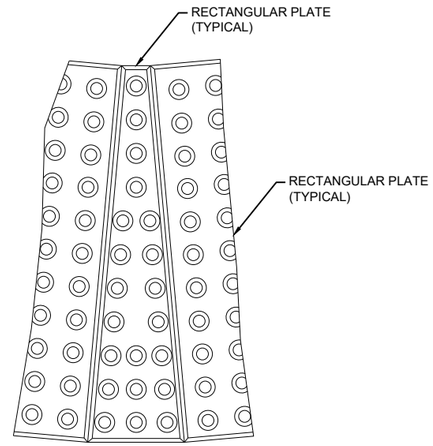
RECTANGULAR PLATES

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

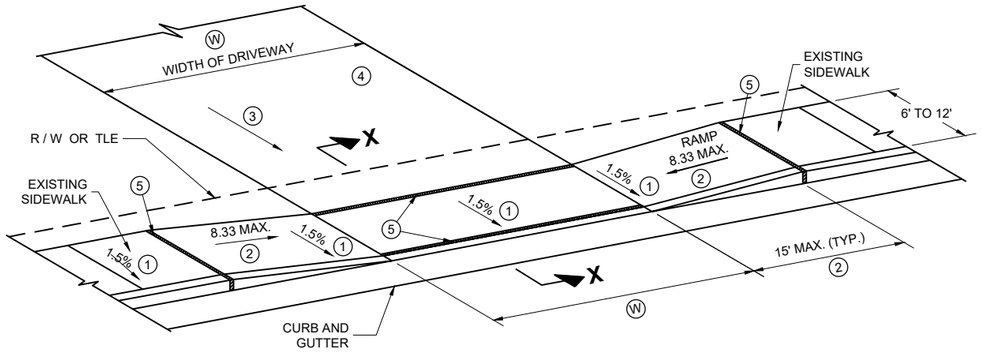
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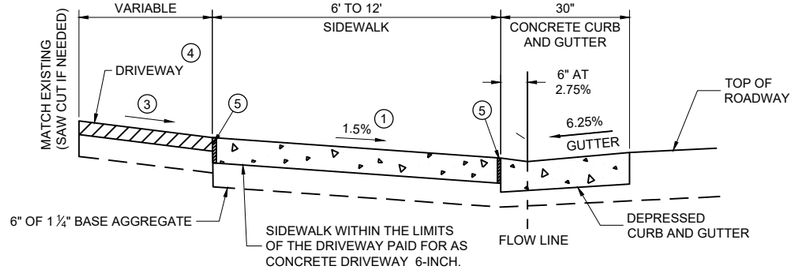
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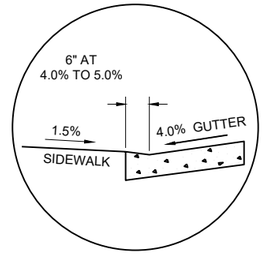
SDD 08D05-21g



TYPE X
SIDEWALK ABUTS CURB AND GUTTER
TERRACE VARIES 0 TO 3 FEET



SECTION X - X



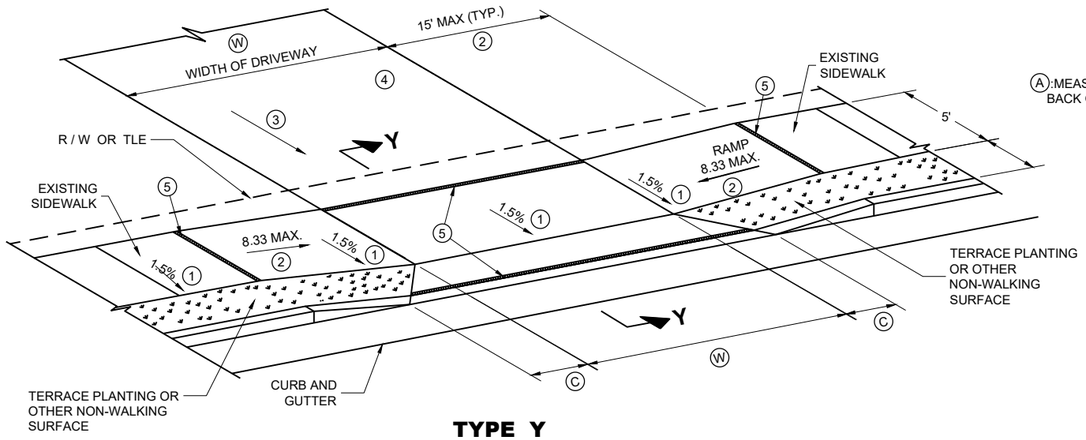
SECTION X - X
4% GUTTER SLOPE

Ⓦ: 12' MIN. - 24' MAX. RESIDENTIAL AND NON-COMMERCIAL (PE & FE)

16' MIN. - 35' MAX. COMMERCIAL (CE)

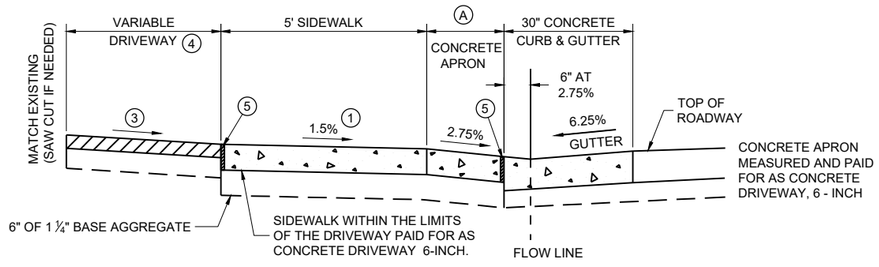
TABLE Y

Ⓐ FEET	Ⓒ FEET
3.5'	2.0'
4.5'	3.0'
5.5'	3.5'



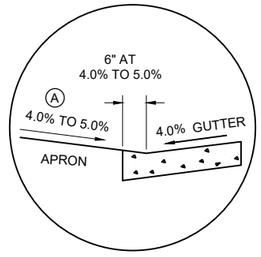
TYPE Y
SIDEWALK WITH NARROWER TERRACE
TERRACE VARIES 4 TO 6 FEET

Ⓐ:MEASURE FROM BACK OF CURB



NOTE: SIDEWALK MY BE DEPRESSED IN DRIVEWAY AREAS

SECTION Y - Y



SECTION Y - Y
4% GUTTER SLOPE

DRIVEWAY DETAIL WITH CONCRETE CURB AND GUTTER
(URBAN AND SUBURBAN)

GENERAL NOTES

PROVIDE CONSTRUCTION JOINTS ALONG THE CENTER OF THE CONCRETE FOR DRIVEWAYS UNDER 20 FEET IN WIDTH AND AT THE THIRD POINTS OVER 20 FEET IN WIDTH.

Ⓦ IS SHOWN ON PLAN AND PROFILE SHEETS.

OFFSETS, ELEVATIONS, AND PERCENT GRADE ARE SHOWN ON THE CROSS SECTIONS.

① CONSTRUCTION TOLERANCE OF 0.5%± FOR SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

② THE SIDEWALK RAMP MAXIMUM RUNNING SLOPE SHALL NOT REQUIRE THE RAMP LENGTH TO EXCEED 15 FEET TO AVOID CHASING THE SLOPE INDEFINITELY WHEN CONNECTING TO STEEP GRADES. WHEN APPLYING THE 15 FOOT MAXIMUM LENGTH, THE RUNNING SLOPE OF THE SIDEWALK SHALL BE AS FLAT AS FEASIBLE AND NOT EXCEED THE LONGITUDINAL GRADE OF THE ROADWAY. SLOPE SIDEWALK RAMP TOWARD APRON AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.

③ DRIVEWAY SLOPES: DESIRABLE MAXIMUM
- 10.5% UP AWAY FROM SIDEWALK (SAG)
- 8.5% DOWN AWAY FROM SIDEWALK (CREST)
- ABSOLUTE MAXIMUM 15% FOR BOTH CREST AND SAG

④ DRIVEWAY TYPES
- 6-INCH CONCRETE DRIVEWAY PAVEMENT OVER 6-INCH BASE AGGREGATE
- 2-INCH TO 3-INCH ASPHALTIC SURFACE OVER 6-INCH BASE AGGREGATE
- 6-INCH BASE AGGREGATE (MAY BE INCREASED FOR CLAY SUBGRADES.)

⑤ ½" EXPANSION JOINT FILLER

DRIVEWAY AND SIDEWALK RAMPS TYPES X AND Y

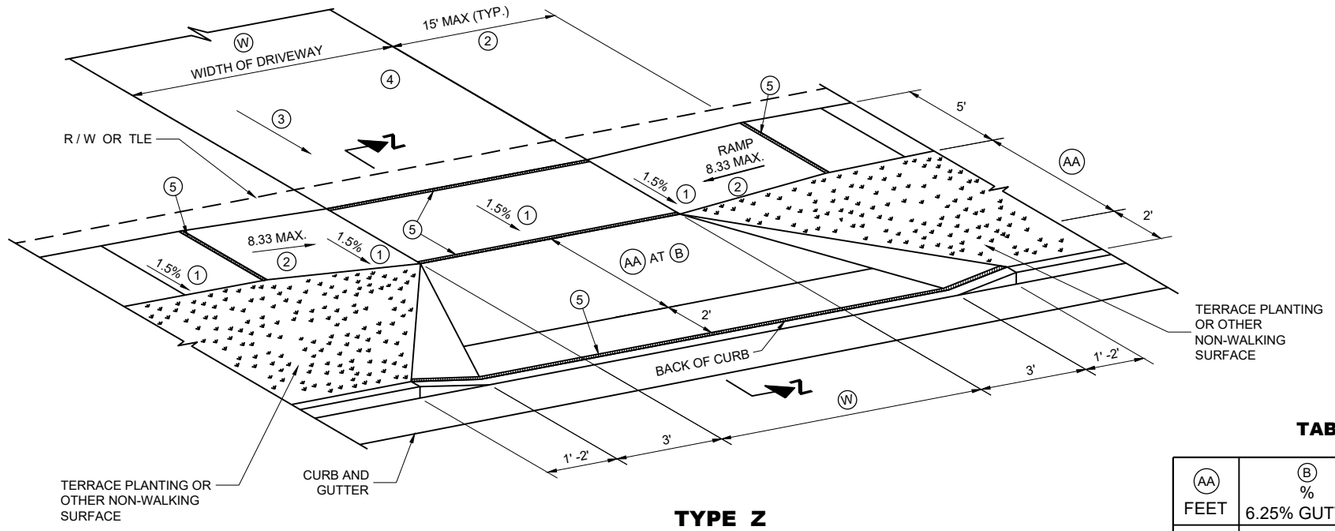
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TYPE Z

SIDEWALK WITH WIDER TERRACE
TERRACE VARIES 7 TO 12 FEET

GENERAL NOTES

PROVIDE CONSTRUCTION JOINTS ALONG THE CENTER OF THE CONCRETE FOR DRIVEWAYS UNDER 20 FEET IN WIDTH AND AT THE THIRD POINTS OVER 20 FEET IN WIDTH.

(W) IS SHOWN ON PLAN AND PROFILE SHEETS.

OFFSETS, ELEVATIONS, AND PERCENT GRADE ARE SHOWN ON THE CROSS SECTIONS.

(1) CONSTRUCTION TOLERANCE OF 0.5%± FOR SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

(2) THE SIDEWALK RAMP MAXIMUM RUNNING SLOPE SHALL NOT REQUIRE THE RAMP LENGTH TO EXCEED 15 FEET TO AVOID CHASING THE SLOPE INDEFINITELY WHEN CONNECTING TO STEEP GRADES. WHEN APPLYING THE 15 FOOT MAXIMUM LENGTH, THE RUNNING SLOPE OF THE SIDEWALK SHALL BE AS FLAT AS FEASIBLE AND NOT EXCEED THE LONGITUDINAL GRADE OF THE ROADWAY.

(3) DRIVEWAY SLOPES: DESIRABLE MAXIMUM
- 10.5% UP AWAY FROM SIDEWALK (SAG)
- 8.5% DOWN AWAY FROM SIDEWALK (CREST)
- ABSOLUTE MAXIMUM 15% FOR BOTH CREST AND SAG

(4) DRIVEWAY TYPES
- 6-INCH CONCRETE DRIVEWAY PAVEMENT OVER 6-INCH BASE AGGREGATE
- 2-INCH TO 3-INCH ASPHALTIC SURFACE OVER 6-INCH BASE AGGREGATE
- 6-INCH BASE AGGREGATE (MAY BE INCREASED FOR CLAY SUBGRADES.)

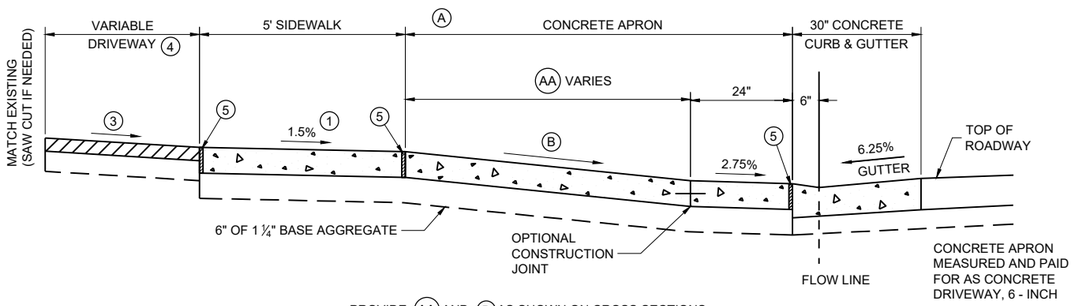
(5) ½" EXPANSION JOINT FILLER.

TABLE Z

(AA) FEET	(B) % 6.25% GUTTER	(B) % 4% GUTTER
4.5'	11.5%	9% TO 11.5%
5.5'	9% TO 11.5%	8% TO 11.5%
6.5'	8% TO 11.5%	6% TO 11.5%
7.5'	7% TO 11.5%	6% TO 11.5%
8.5'	6% TO 11.5%	5% TO 11.5%
9.5'	5% TO 11.5%	4% TO 11.5%

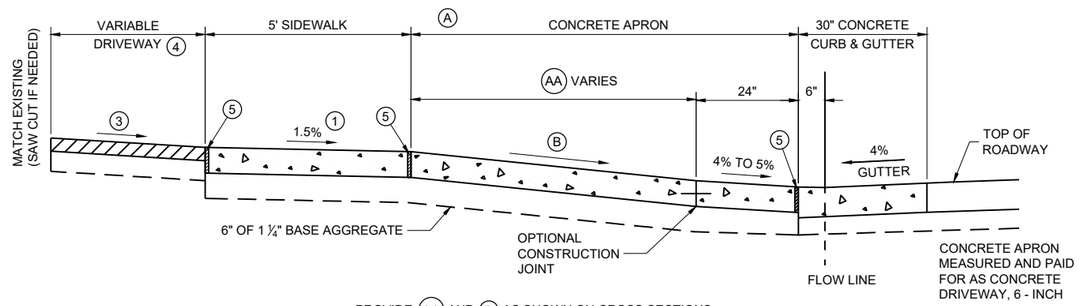
(W): 12' MIN. - 24' MAX. RESIDENTIAL AND NON-COMMERCIAL (PE & FE)

16' MIN. - 35' MAX. COMMERCIAL (CE)



PROVIDE (AA) AND (B) AS SHOWN ON CROSS SECTIONS.

6.25% GUTTER SLOPE



PROVIDE (AA) AND (B) AS SHOWN ON CROSS SECTIONS.

4% GUTTER SLOPE

NOTE: SIDEWALK MY BE DEPRESSED IN DRIVEWAY AREAS FOR (B) VALUES NOT SHOWN IN TABLE Z.

SIDEWALK WITHIN THE LIMITS OF THE DRIVEWAY PAID FOR AS CONCRETE DRIVEWAY 6-INCH.

SECTION Z - Z
DRIVEWAY DETAIL WITH CONCRETE CURB AND GUTTER
(URBAN AND SUBURBAN)

DRIVEWAY AND SIDEWALK RAMPS TYPE Z

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GENERAL NOTES

A MAXIMUM RADIUS OF 10 FEET SHALL BE USED FOR NON-COMMERCIAL PRIVATE ENTRANCES. RADII FOR COMMERCIAL DRIVEWAYS SHALL BE DETERMINED BY THE ENGINEER BASED ON TRAFFIC AND DRIVEWAY PERMIT RESTRICTIONS.

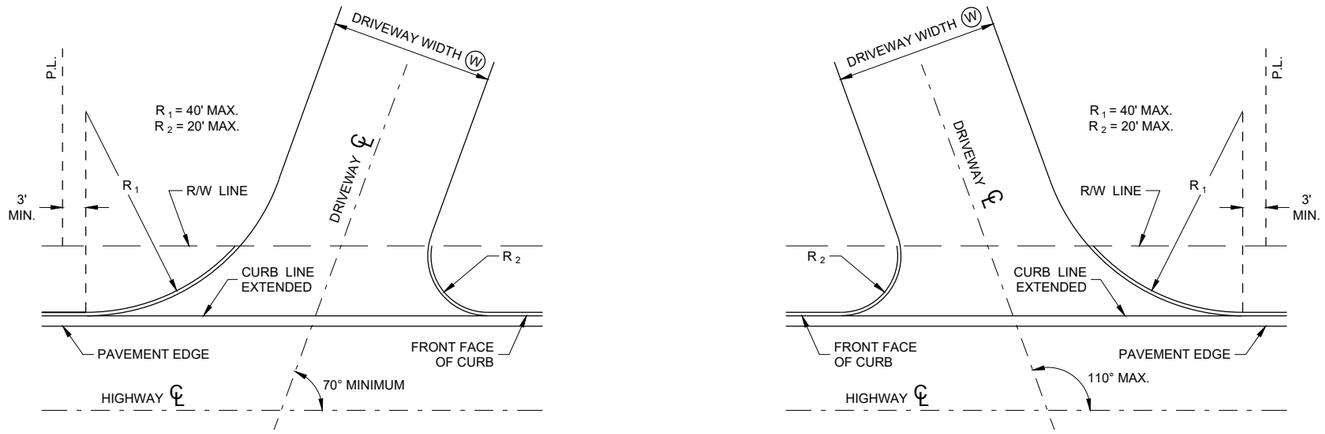
THE MINIMUM ANGLE OF INTERSECTION BETWEEN THE DRIVEWAY AND HIGHWAY CENTERLINES SHALL BE 70°.

ALL CURVILINEAR PRIVATE ENTRANCE OUTLINES SHALL BE CONTAINED WITHIN THE HIGHWAY R/W.

NO DRIVEWAY SHALL BE BUILT WITHIN 3 FEET OF THE PROPERTY LINE EXCEPT FOR EXISTING JOINT DRIVEWAY SHARED BY TWO OWNERS.

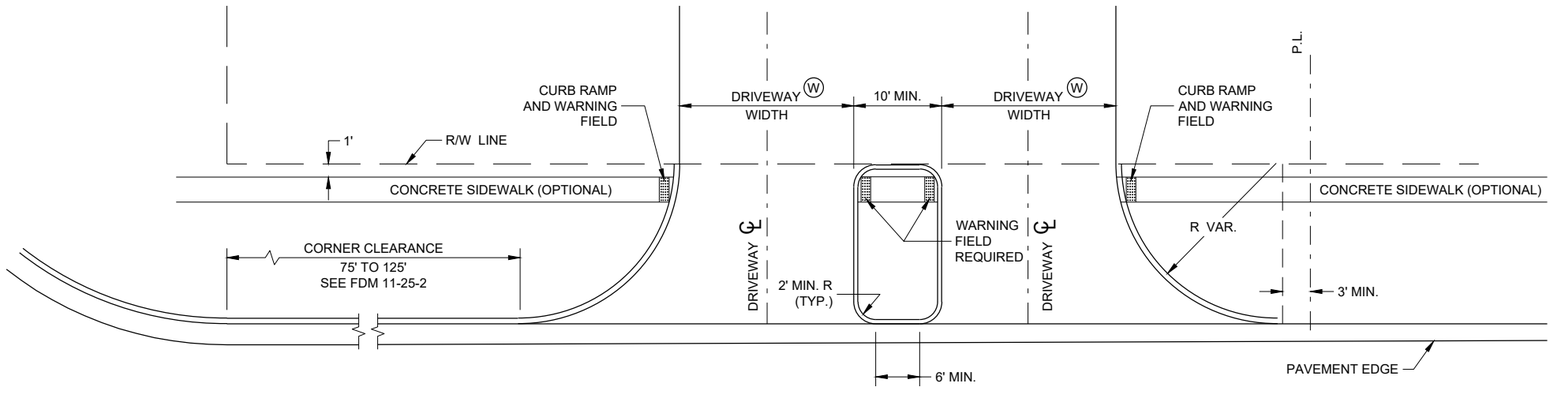
Ⓦ: 12' MIN. - 24' MAX. RESIDENTIAL AND NON-COMMERCIAL (PE & FE)

16' MIN. - 35' MAX. COMMERCIAL (CE)



SKEWED DRIVEWAY DETAILS (COMMERCIAL AND NON-COMMERCIAL)

SIDEWALK NOT SHOWN



DRIVEWAY LOCATION AND SPACING DETAILS

SIDEWALK SHOWN

DRIVEWAYS WITH CURB AND GUTTER RETURNS

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/S/ <AUTHOR> — ROADWAY STANDARDS DEVE ENGINEER

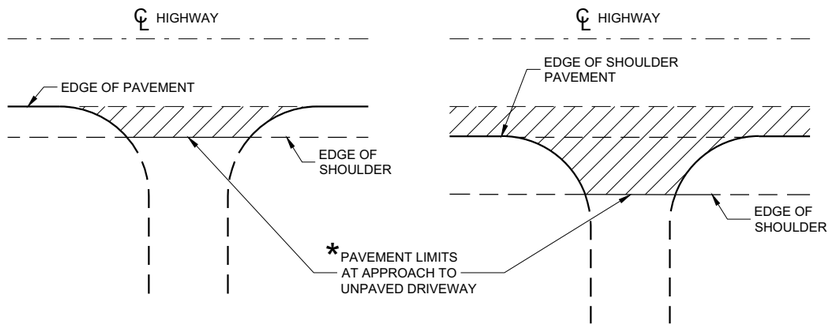
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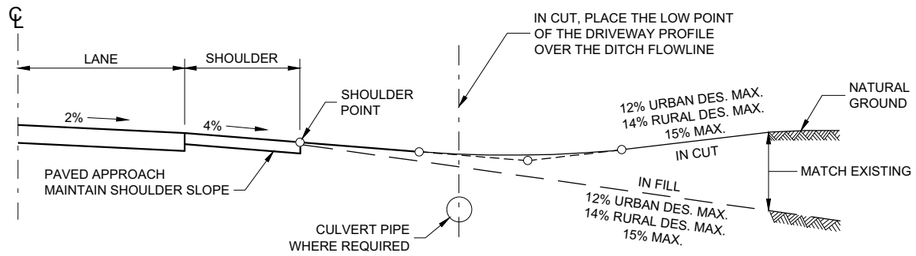
SDD 08D20 - 01



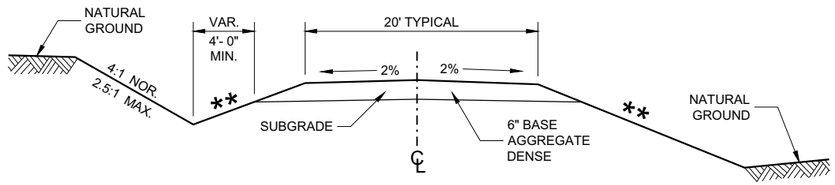
PLAN VIEW
(UNPAVED SHOULDER ON HIGHWAY)

PLAN VIEW
(PAVED SHOULDER ON HIGHWAY)

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



TYPICAL DRIVEWAY PROFILES

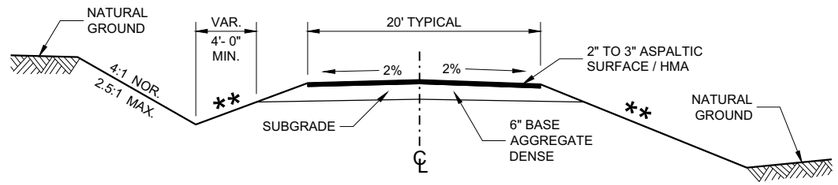


IN CUT **IN FILL**

TYPICAL CROSS SECTION FOR PRIVATE DRIVE OR FIELD ENTRANCE AGGREGATE SURFACE

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

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



IN CUT **IN FILL**

TYPICAL CROSS SECTION FOR PRIVATE DRIVE OR FIELD ENTRANCE ASPHALTIC SURFACE

DRIVEWAYS WITHOUT CURB AND GUTTER

STATE OF WISCONSIN
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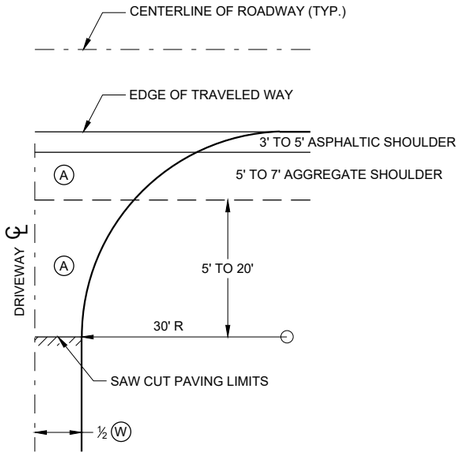
SDD 08D21 - 01

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SDD 08D21 - 01

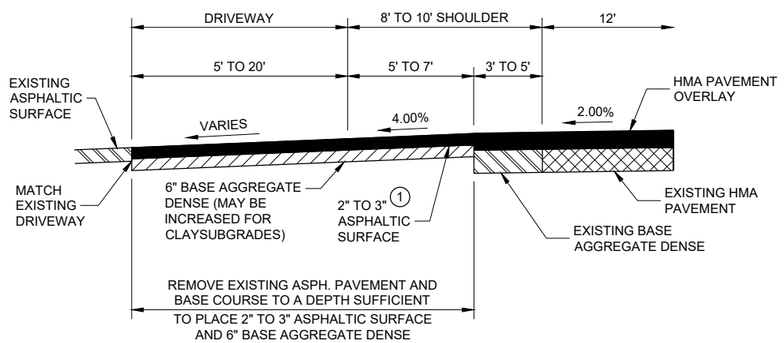
GENERAL NOTES

(1) DESIGN WILL DETERMINE FINAL DRIVEWAY ASPHALTIC THICKNESS BASED ON TYPE OF USAGE AND LOADINGS.



PLAN VIEW

HALF SECTION



PROFILE VIEW

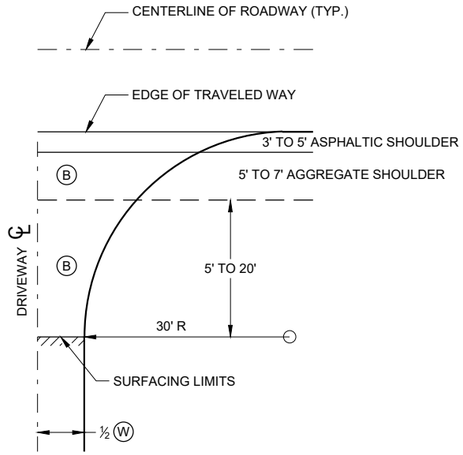
RURAL ENTRANCE WITH ASPHALTIC SURFACE

RESURFACING PROJECTS

(A) : PAID FOR AS ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES. (TON)

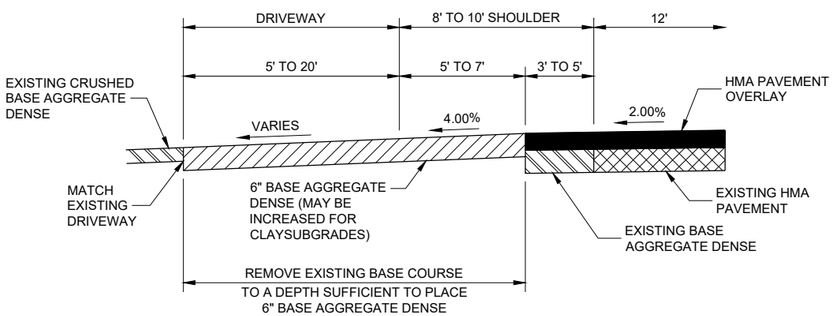
(B) : PAID FOR AS BASE AGGREGATE DENSE 1 ¼" (TON)

(W) : DRIVEWAY WIDTH 16' MIN. - 24' MAX.



PLAN VIEW

HALF SECTION



PROFILE VIEW

RURAL ENTRANCE WITH AGGREGATE SURFACE

6" BASE AGGREGATE DENSE

RESURFACING PROJECTS

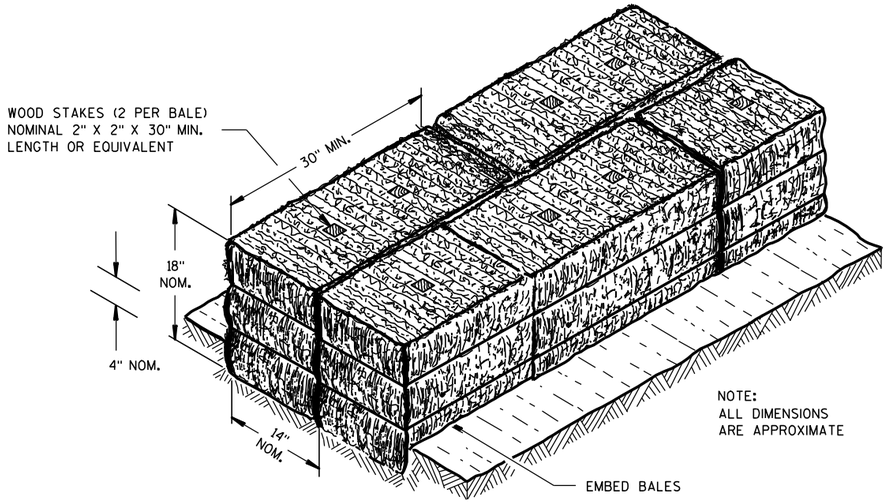
DRIVEWAYS WITHOUT CURB AND GUTTER RESURFACING PROJECTS RURAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

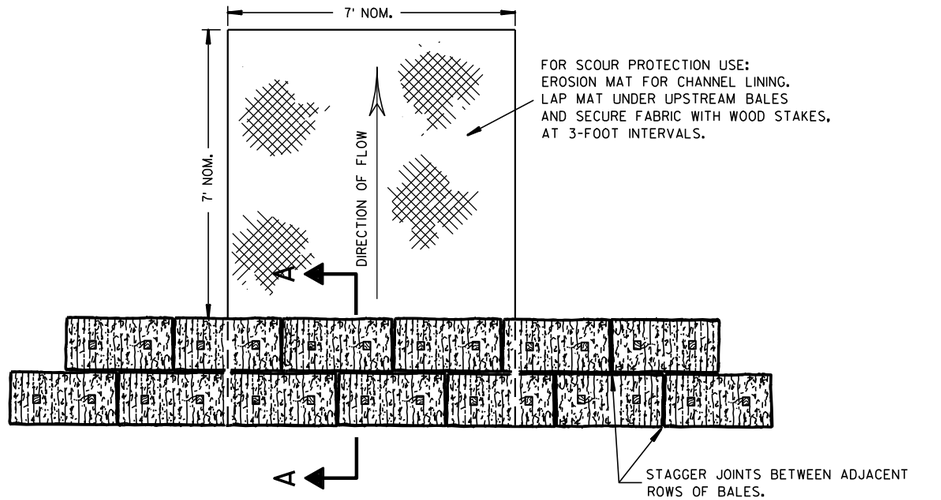
APPROVED
December 2016 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE ENGINEER
FHWA

6

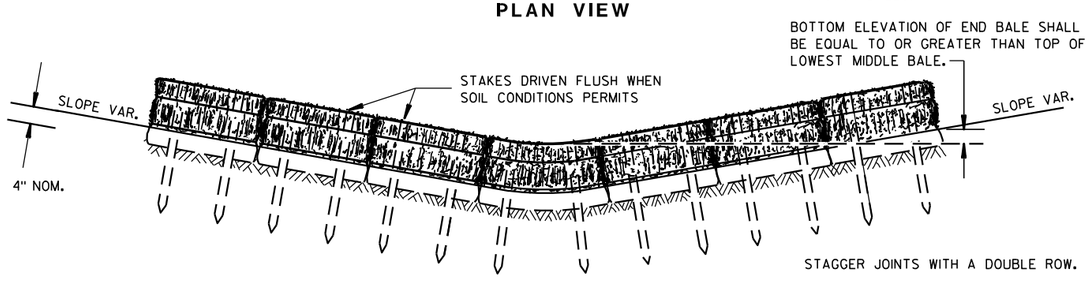
SDD 08D22 - 01



SECTION A-A



PLAN VIEW



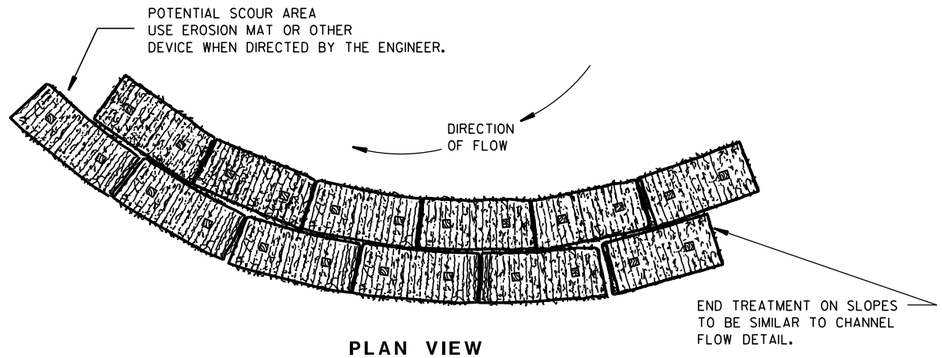
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES (1)

GENERAL NOTES

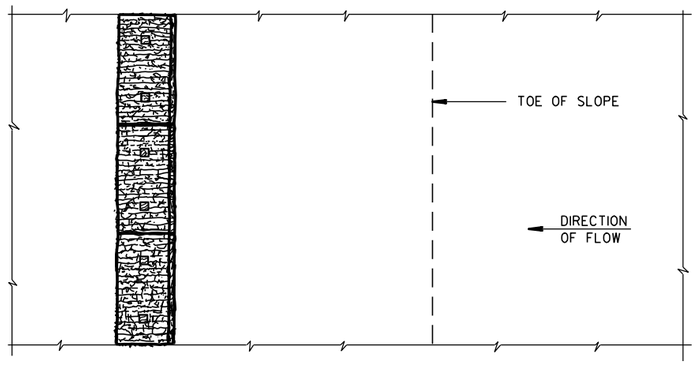
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

(1) TEMPORARY DITCH CHECKS EITHER EROSION BALES OR MANUFACTURED SHALL BE PAID FOR UNDER THE BID ITEM OF TEMPORARY DITCH CHECK. THE DEPARTMENT WILL NOT PAY FOR TEMPORARY DITCH CHECKS CONSTRUCTED OF A SINGLE ROW OF EROSION BALES.

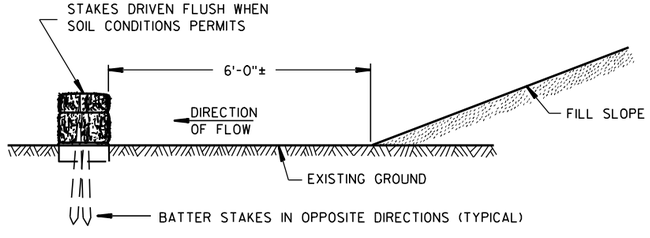


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

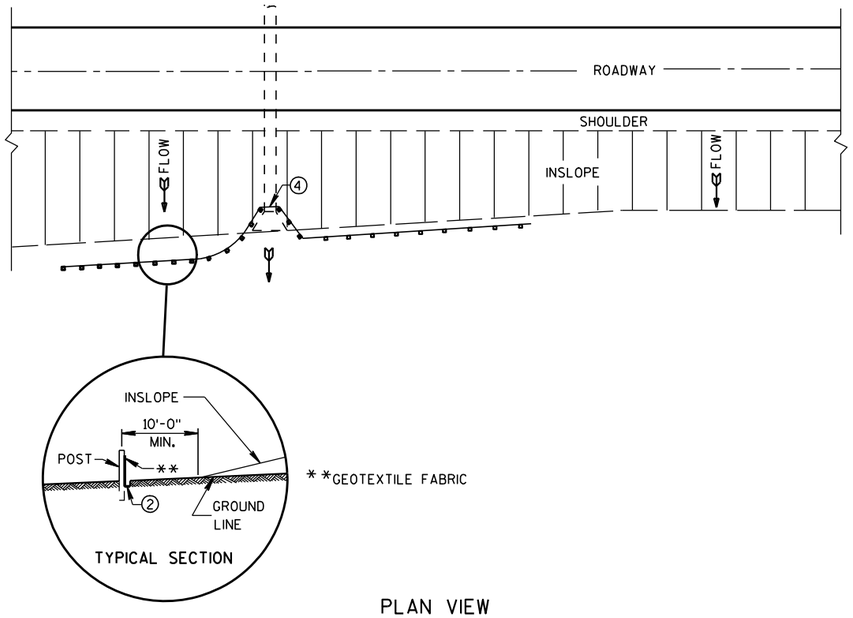
EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

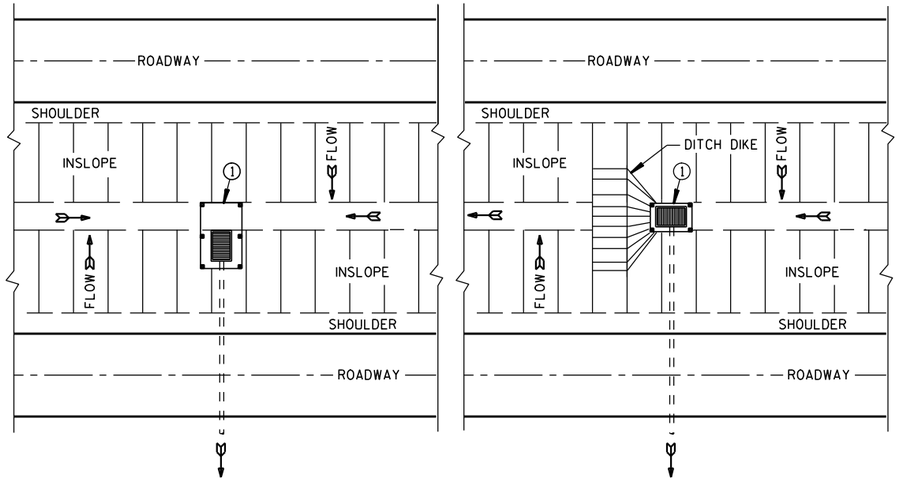
APPROVED
6/04/02 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

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



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



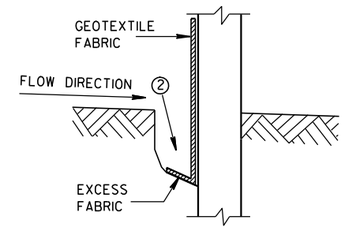
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

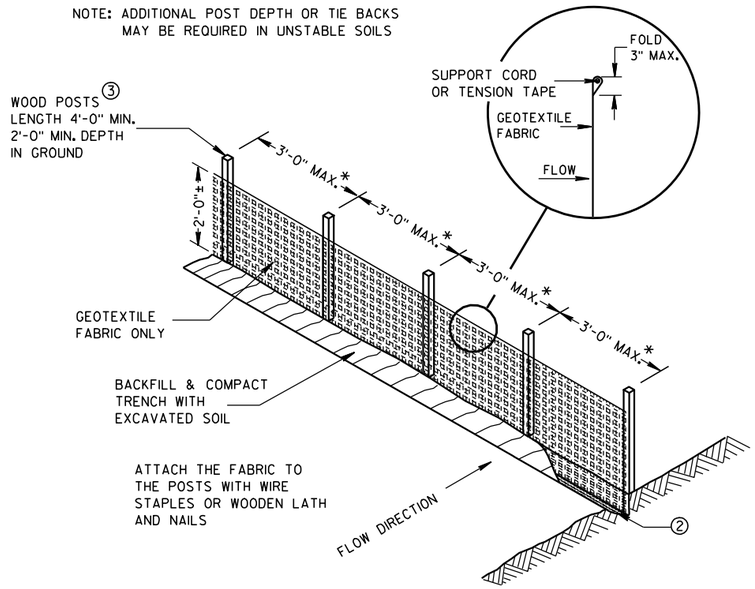
GENERAL NOTES

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

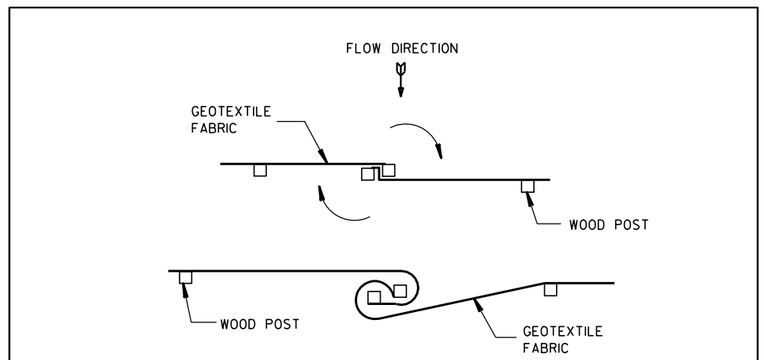
1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL 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.



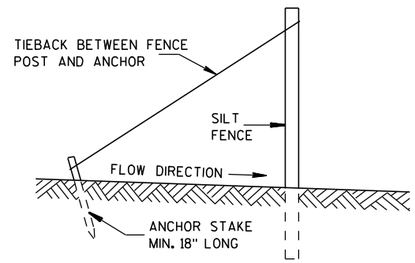
TRENCH DETAIL



SILT FENCE



JOINING TWO LENGTHS OF SILT FENCE 5



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

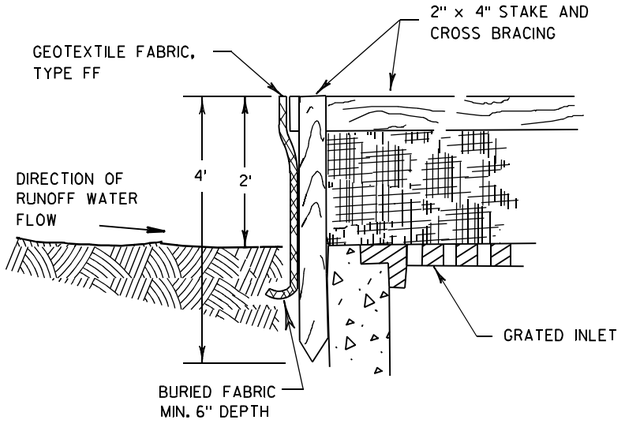
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

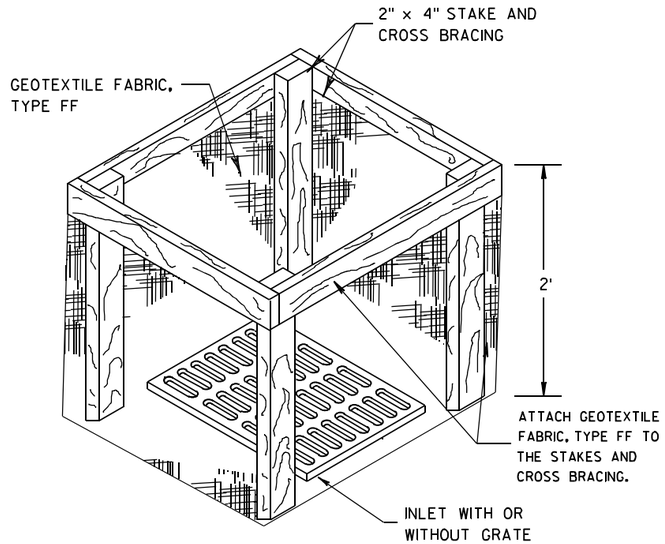
6

S.D.D. 8 E 9-6

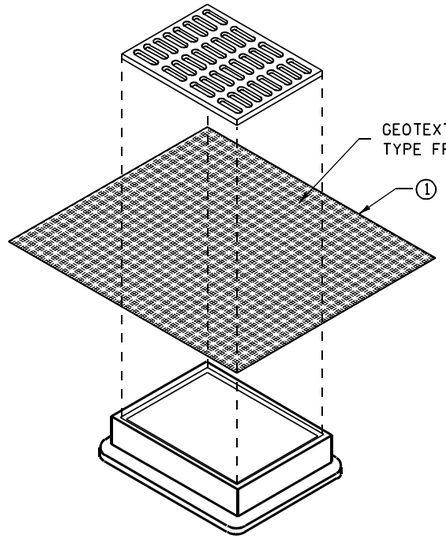
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S.D.D. 8 E 9-6



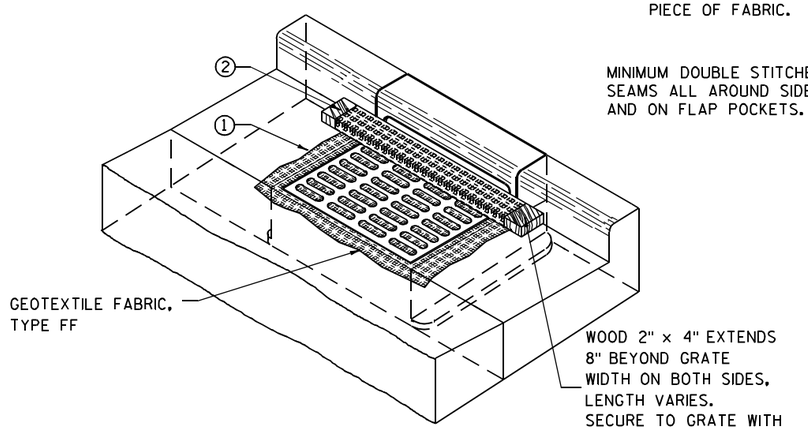


INLET PROTECTION, TYPE A

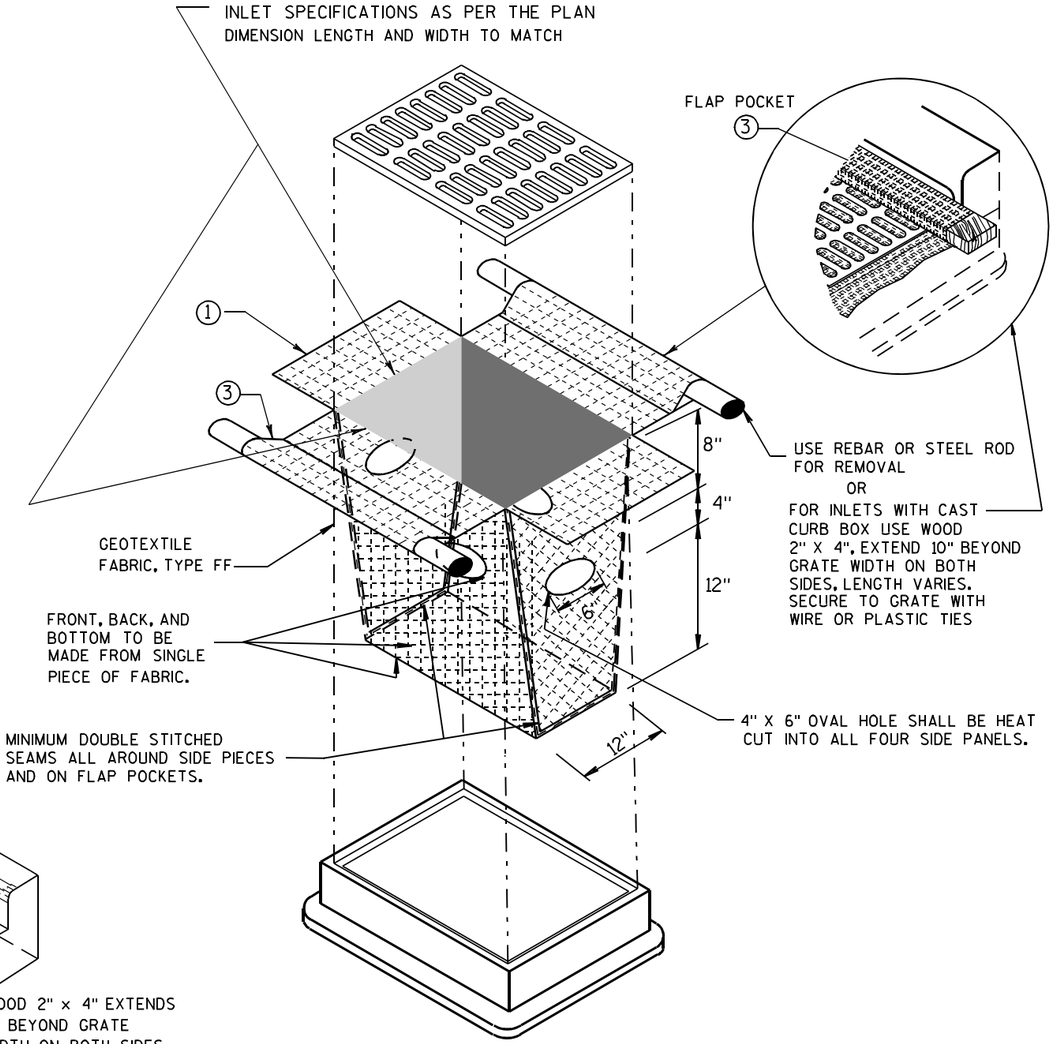


INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

(CAN BE INSTALLED IN ANY INLET WITHOUT A CURB BOX)



INLET PROTECTION, TYPE C (WITH CURB BOX)



INLET PROTECTION, TYPE D

(CAN BE INSTALLED IN ANY INLET TYPE WITH
OR WITHOUT A CURB BOX AS PER NOTE ②)

GENERAL NOTES

INLET PROTECTION DEVICES SHALL BE MAINTAINED OR REPLACED AT THE DIRECTION OF THE ENGINEER.

MANUFACTURED ALTERNATIVES APPROVED AND LISTED ON THE DEPARTMENT'S EROSION CONTROL PRODUCT ACCEPTABILITY LIST MAY BE SUBSTITUTED.

WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

① FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.

② FOR INLET PROTECTION, TYPE C (WITH CURB BOX), AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX OPENING.

③ FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2X4.

INSTALLATION NOTES

TYPE B & C

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

TYPE D

DO NOT INSTALL INLET PROTECTION TYPE D IN INLETS SHALLOWER THAN 30", MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE.

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE BOTTOM OF THE BAG.

INLET PROTECTION
TYPE A, B, C, AND D

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

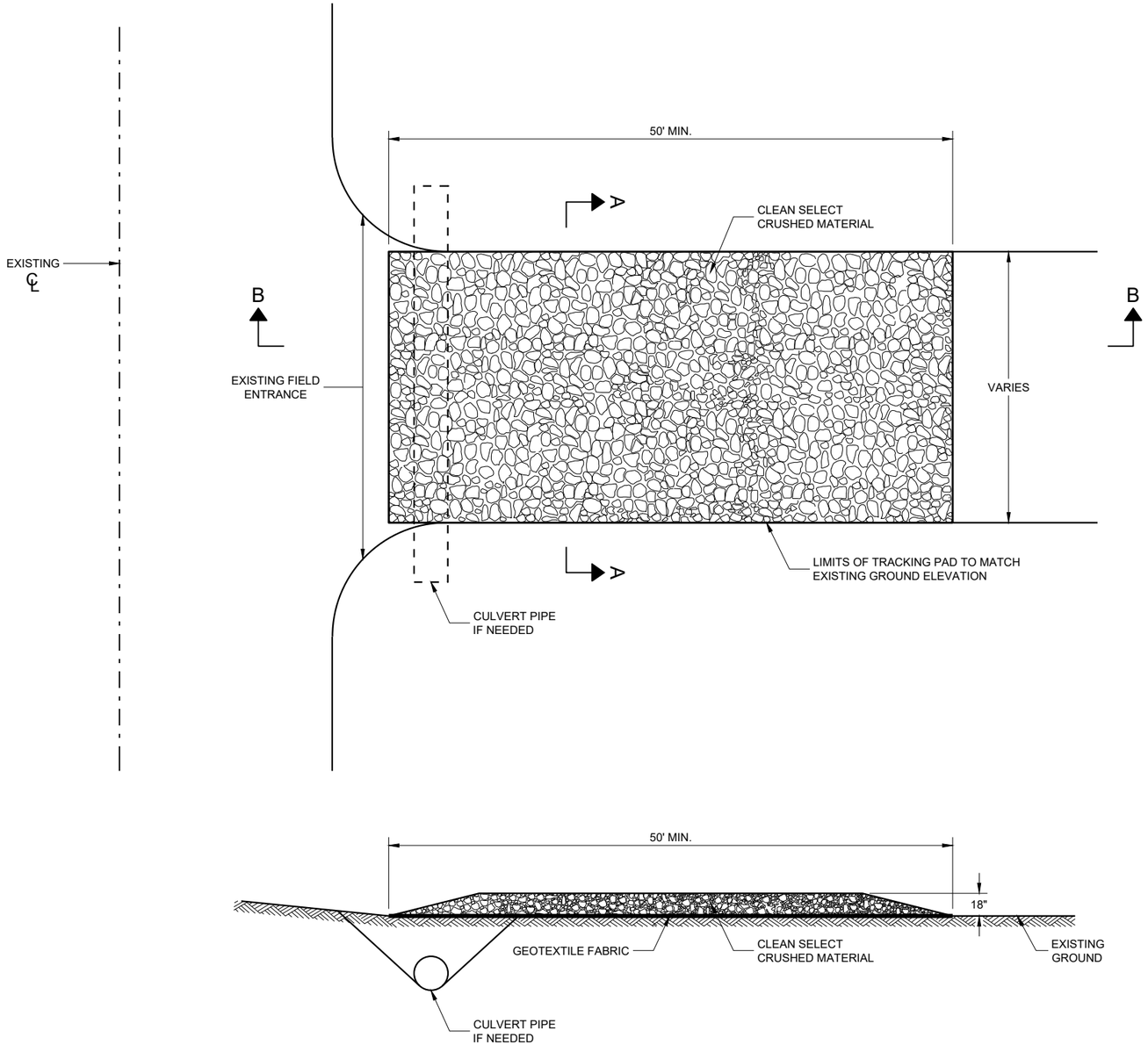
APPROVED

10/16/02
DATE

/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

6
S.D.D. 8 E 10-2



SECTION B - B

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.

TRACKING PAD SHALL BE INSPECTED DAILY. DEFICIENT AREAS SHALL BE REPAIRED OR REPLACED IMMEDIATELY.

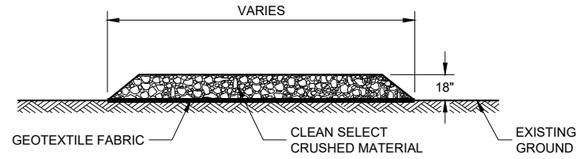
TRACKING PAD TO BE REMOVED AFTER CONSTRUCTION IS COMPLETED.

TRACKING PAD SHALL BE THE FULL WIDTH OF THE EGRESS POINT.

SURFACE WATER MUST BE PREVENTED FROM PASSING THROUGH THE TRACKING PAD. FLOWS SHALL BE DIVERTED AWAY, AROUND OR CONVEYED UNDER THE TRACKING PAD.

CULVERT PIPE OR OTHER BMP USED TO DIVERT WATER AWAY, AROUND OR UNDER THE TRACKING PAD SHALL BE DESIGNED TO CONVEY THE 2 YEAR - 24 HOUR EVENT.

THE COST OF ADDITIONAL BMP TO DIVERT WATER ARE INCIDENTAL TO THE TRACKING PAD BID ITEM.



SECTION A - A

6

SDD 08E14 - 01

TRACKING PAD

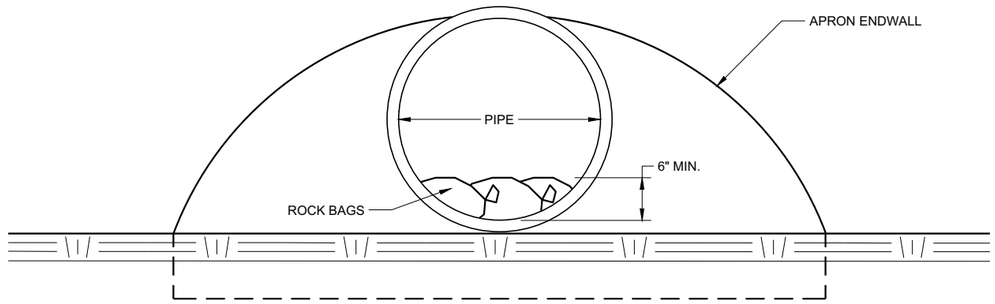
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
3/24/2011
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVE ENGINEER

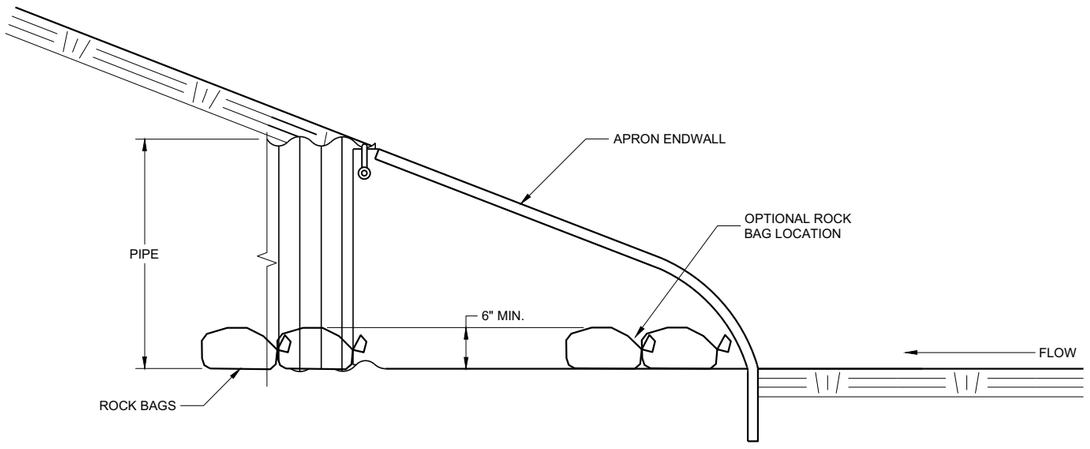
FHWA

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SDD 08E14 - 01



END VIEW



SIDE VIEW

CULVERT PIPE CHECK

(INSTALL ON INLET END ONLY)

CULVERT PIPE CHECK

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2019
DATE

/S/ Daniel Schave
EROSION CONTROL ENGI

FHWA

6

SDD 08E15 - 01

6

SDD 08E15 - 01

METAL APRON ENDWALLS

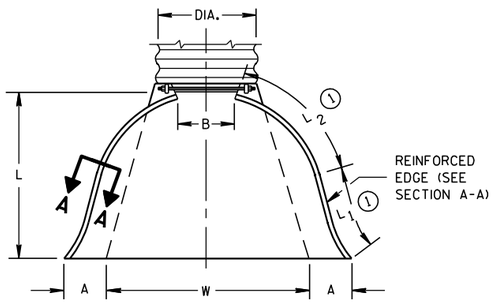
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4	36	2 1/2 to 1	1 Pc.
21	.064	.060	9	12	6	36	18	29 5/8	42	2 1/2 to 1	1 Pc.
24	.064	.075	10	13	6	41	18	37 1/4	48	2 1/2 to 1	1 Pc.
30	.079	.075	12	16	8	51	18	52 1/4	60	2 1/2 to 1	1 Pc.
36	.079	.105	14	19	9	60	24	59 3/4	72	2 1/2 to 1	2 Pc.
42	.109	.105	16	22	11	69	24	75 5/8	84	2 1/2 to 1	2 Pc.
48	.109	.105	18	27	12	78	24	81	90	2 1/4 to 1	3 Pc.
54	.109	.105	18	30	12	84	30	85 1/2	102	2 1/4 to 1	3 Pc.
60	.109×	.105×	18	33	12	87	—	—	114	2 to 1	3 Pc.
66	.109×	.105×	18	36	12	87	—	—	120	2 to 1	3 Pc.
72	.109×	.105×	18	39	12	87	—	—	126	2 to 1	3 Pc.
78	.109×	.105×	18	42	12	87	—	—	132	1 1/2 to 1	3 Pc.
84	.109×	.105×	18	45	12	87	—	—	138	1 1/2 to 1	3 Pc.
90	.109×	.105×	18	37	12	87	—	—	144	1 1/2 to 1	3 Pc.
96	.109×	.105×	18	35	12	87	—	—	150	1 1/2 to 1	3 Pc.

× EXCEPT CENTER PANEL SEE GENERAL NOTES

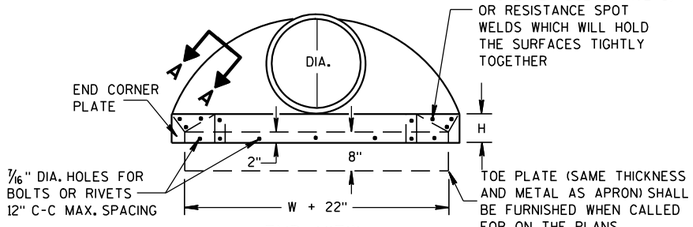
REINFORCED CONCRETE APRON ENDWALLS

PIPE DIA. (IN.)	DIMENSIONS (Inches) T	A	B	C	D	E	G	APPROX. SLOPE
12	2	4	24	48 7/8	72 1/8	24	2	3 to 1
15	2 1/4	6	27	46	73	30	2 1/4	3 to 1
18	2 1/2	9	27	46	73	36	2 1/2	3 to 1
21	2 3/4	9	36	37 1/2	73 1/2	42	2 3/4	3 to 1
24	3	9 1/2	43 1/2	30	73 1/2	48	3	3 to 1
27	3 1/4	10 1/2	49 1/2	24	73 1/2	54	3 1/4	3 to 1
30	3 1/2	12	54	19 3/4	73 1/2	60	3 1/2	3 to 1
36	4	15	63	34 3/4	97 3/4	72	4	3 to 1
42	4 1/2	21	63	35	98	78	4 1/2	3 to 1
48	5	24	72	26	98	84	5	3 to 1
54	5 1/2	27	65	* 33 1/4 - ** 35	* 98 1/4 - ** 100	90	5 1/2	2 2/5 to 1
60	6	* 30 - ** 35	60	39	99	96	5	2 to 1
66	6 1/2	* 24 - ** 30	* 72 - ** 78	* 21 - ** 27	99	102	5 1/2	2 to 1
72	7	* 24 - ** 36	78	21	99	108	6	2 to 1
78	7 1/2	* 24 - ** 36	78	21	99	114	6 1/2	2 to 1
84	8	36	90 1/2	21	111 1/2	120	6 1/2	1 1/2 to 1
90	8 1/2	41	87 1/2	24	111 1/2	132	6 1/2	1 1/2 to 1

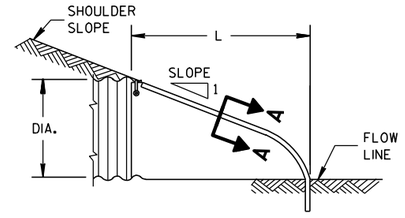
*MINIMUM
**MAXIMUM



PLAN VIEW

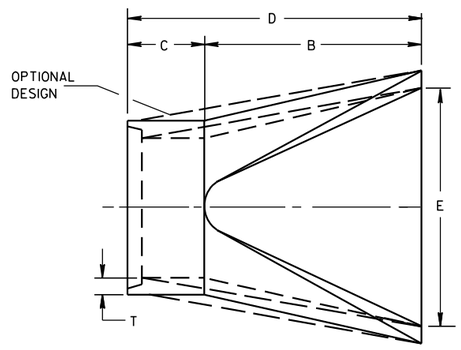


END VIEW

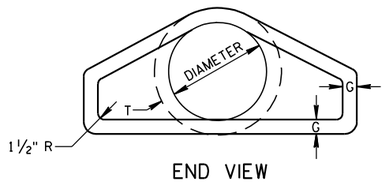


SIDE ELEVATION

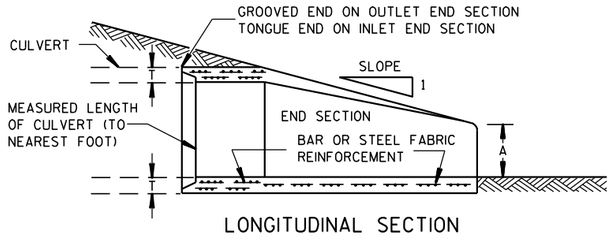
METAL ENDWALLS



PLAN

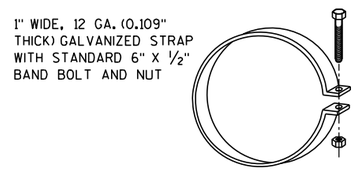


END VIEW



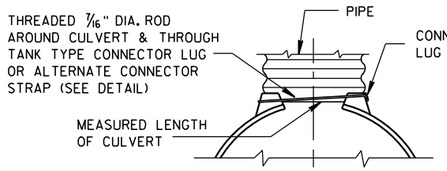
LONGITUDINAL SECTION

CONCRETE ENDWALLS

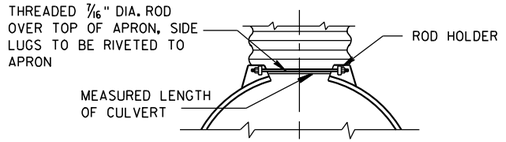


ALTERNATE FOR TYPE 1 CONNECTION

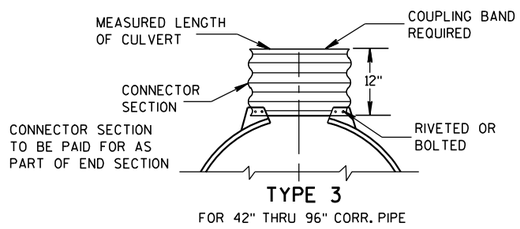
END SECTION CONNECTOR STRAP



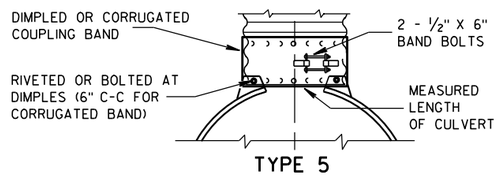
TYPE 1
FOR 12" THRU 24" CORR. PIPE



TYPE 2
FOR 30" THRU 96" CORR. PIPE



TYPE 3
FOR 42" THRU 96" CORR. PIPE



TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

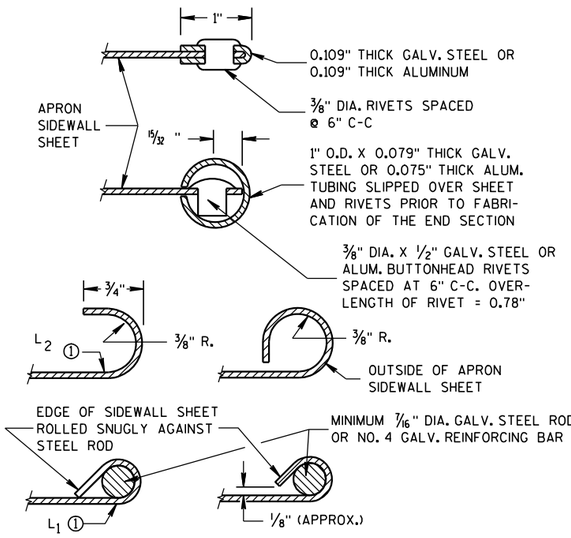
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

FOR CIRCUMFERENTIALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2, 3 OR 5 AS APPLICABLE.

FOR HELICALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2 OR 5.

FOR HELICALLY CORRUGATED PIPES WITH TWO CIRCUMFERENTIAL CORRUGATIONS AT EACH END USE ENDWALL CONNECTION DETAILS 1, 2 OR 3.

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

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

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

ALL THREE PIECE STEEL APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT OF THE PIPE PERIMETER.

LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS. FOR THE 60" THROUGH 96" DIAMETER APRON ENDWALL SIZES, THE REINFORCED EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES. THE ANGLES SHALL BE ATTACHED BY GALVANIZED NUTS AND BOLTS FOR STEEL UNITS AND ALUMINUM NUTS AND BOLTS FOR ALUMINUM UNITS.

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

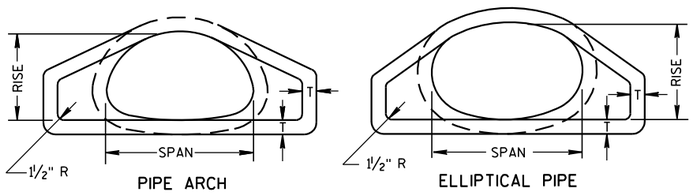
① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR CULVERT PIPE

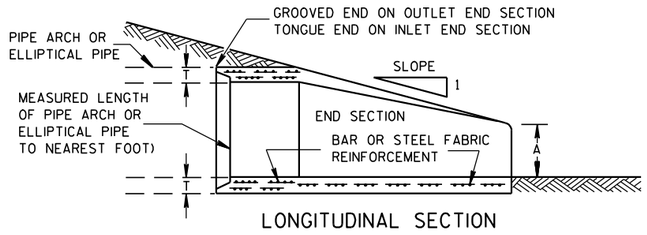
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

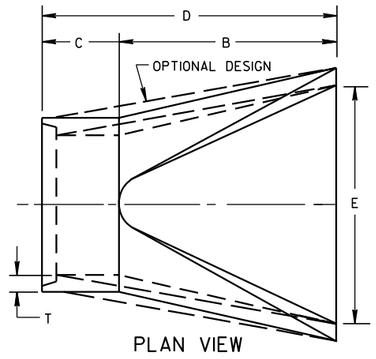
6
S.D.D. 8 F 1-11



END VIEW

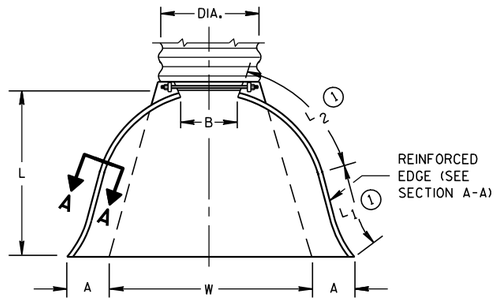


LONGITUDINAL SECTION

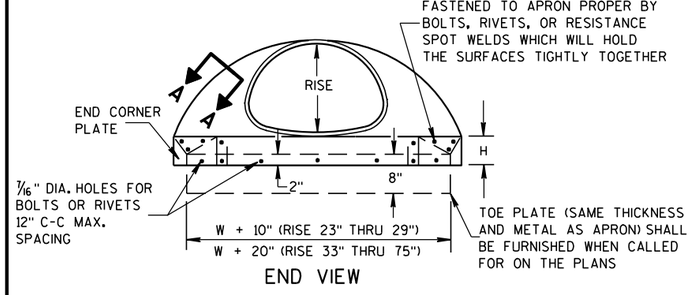


PLAN VIEW

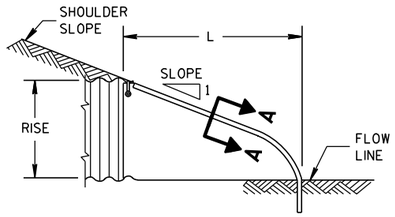
CONCRETE ENDWALLS



PLAN VIEW

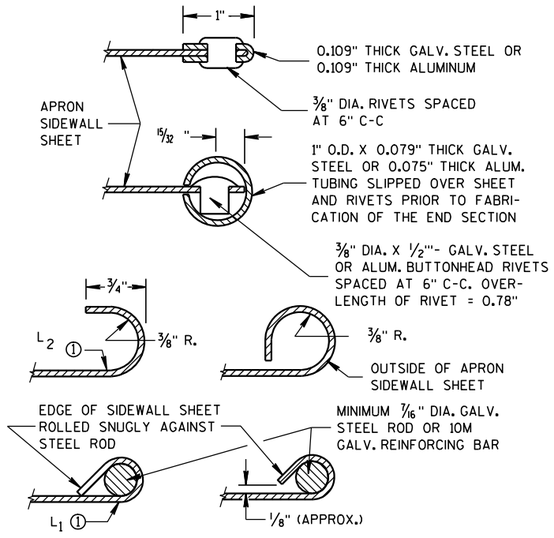


END VIEW



SIDE ELEVATION

METAL ENDWALLS



SECTION A-A

2- ⅔" X ½" 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 (±1½")	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 (±1½")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
48	53	41	.109	.105	18	26	12	63	24	72¾	90	2½ to 1	2 Pc.
54	60	46	.109	.105	18	30	12	70	30	82¼	102	2 to 1	2 Pc.
60	66	51	.109*	.105*	18	33	12	77	—	—	114	1½ to 1	3 Pc.
66	73	55	.109*	.105*	18	36	12	77	—	—	126	1½ to 1	3 Pc.
72	81	59	.109*	.105*	18	39	12	77	—	—	138	2 to 1	3 Pc.
78	87	63	.109*	.105*	22	38	12	77	—	—	148	1½ to 1	3 Pc.
84	95	67	.109*	.105*	22	34	12	77	—	—	162	1½ to 1	3 Pc.
90	103	71	.109*	.105*	22	38	12	77	—	—	174	1½ to 1	3 Pc.
96	112	75	.109*	.105*	24	40	12	77	—	—	174	1½ to 1	3 Pc.

NOTE: ALL SPLICES TO BE LAP RIVETED OR BOLTED.

* EXCEPT CENTER PANEL SEE GENERAL NOTES

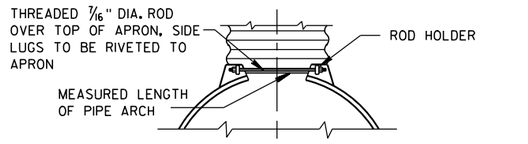
REINFORCED CONCRETE PIPE ARCH

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

REINFORCED CONCRETE ELLIPTICAL PIPE

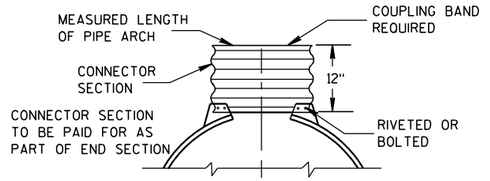
EQUIV. DIA. (Inches)	DIMENSIONS (Inches) ** SPAN	** RISE	T	A	B	C	D	E	APPROX. SLOPE
24	30	19	3¼	8½	39	33	72	48	3 to 1
30	38	24	3¾	9½	54	18	72	60	3 to 1
36	45	29	4½	11⅛	60	24	84	72	2½ to 1
42	53	34	5	15¾	60	36	96	78	2½ to 1
48	60	38	5½	21	60	36	96	84	2½ to 1
54	68	43	6	25½	60	36	96	90	2½ to 1
60	76	48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

**NOMINAL SIZE



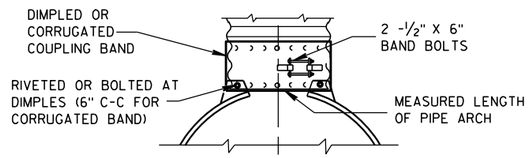
TYPE 2

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



TYPE 3

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



TYPE 5

ALTERNATE FOR:

ALL SIZES CORRUGATED PIPE ARCHES

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

CONNECTION DETAILS

GENERAL NOTES

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

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

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

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

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

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

APRON ENDWALLS FOR PIPE ARCH AND ELLIPTICAL PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

11/30/94 — DATE

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

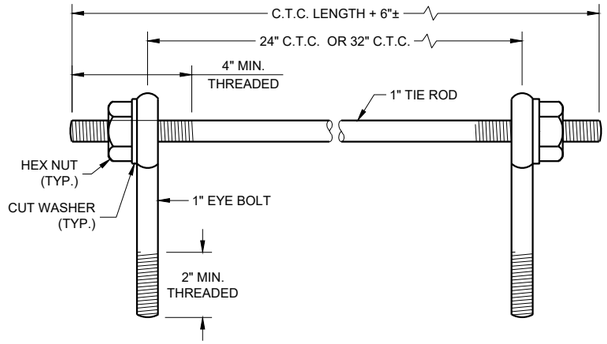
FHWA

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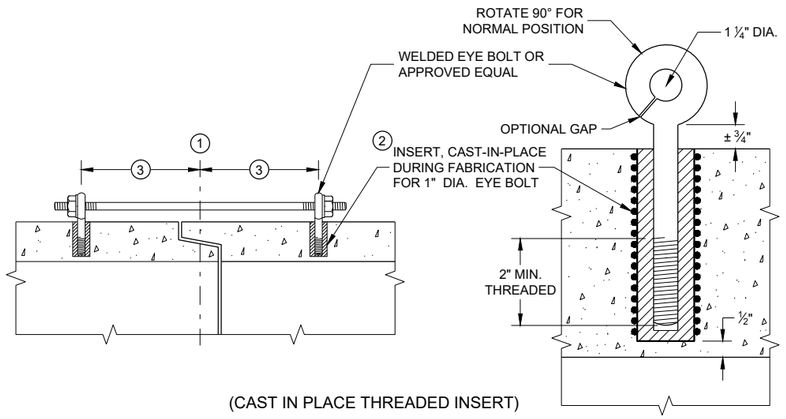
S.D.D. 8 F 2-1

6

S.D.D. 8 F 2-1



EYE BOLTS AND TIE ROD



(CAST IN PLACE THREADED INSERT)

LONGITUDINAL SECTIONS

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

GENERAL NOTES

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

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

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

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

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

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

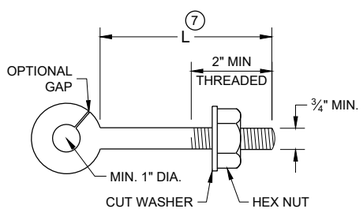
(3) HOLES SHALL BE CAST-IN-PLACE OR DRILLED PER THE APPLICABLE DETAIL, AND EQUAL DISTANCE FROM THE CENTERLINE OF THE JOINT.

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

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

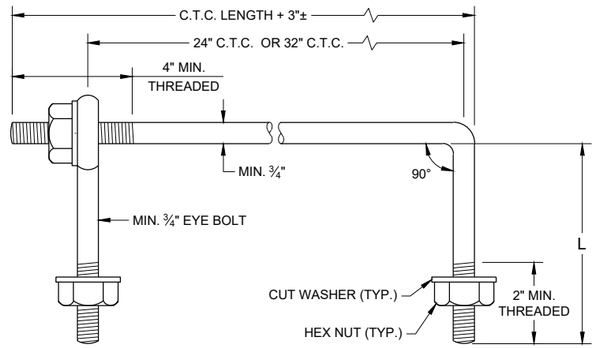
(6) LENGTH ADEQUATE TO EXTEND TO WITHIN ½ INCH OF THE INNER SURFACE OF THE PIPE.

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

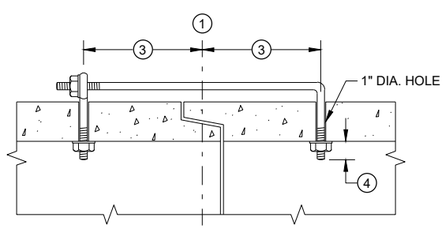


EYE BOLT (7)

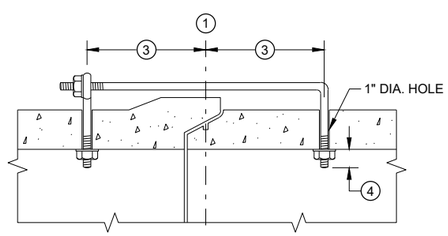
NOTE: TWO EYE BOLTS MAY BE USED WITH A 30" OR 38" LONG THREADED ROD IN LIEU OF THE 90° BENT TIE ROD.



EYE BOLT AND TIE ROD



(TONGUE AND GROOVE PIPE)



(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

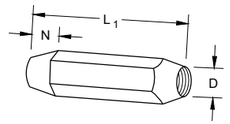
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

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

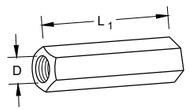
ADJUSTABLE TIE ROD TABLE

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

DIMENSIONS SHOWN ARE IN INCHES



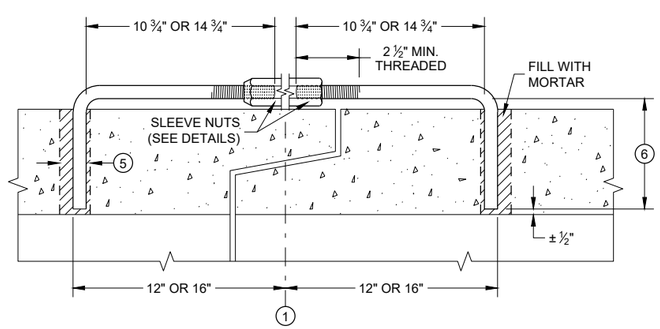
TAPERED



PLAIN

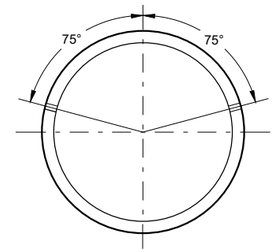
RIGHT AND LEFT THREADS

SLEEVE NUTS



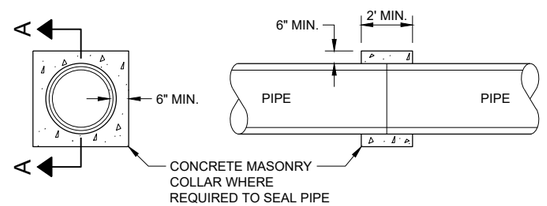
LONGITUDINAL SECTION

ADJUSTABLE TIE ROD (ALTERNATE NO. 3)



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

TRANSVERSE SECTION



SECTION A - A

CONCRETE COLLAR DETAIL

JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

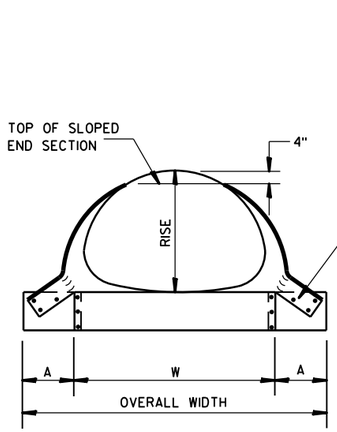
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

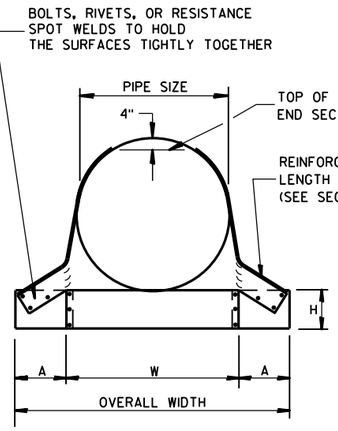
FHWA

SDD 08F04 - 08

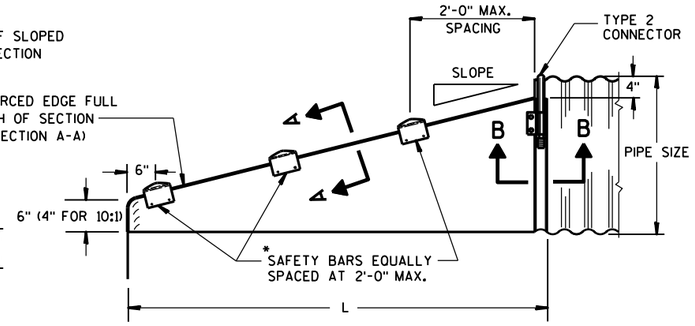
SDD 08F04 - 08



FRONT VIEW



FRONT VIEW



SIDE VIEW

GENERAL NOTES

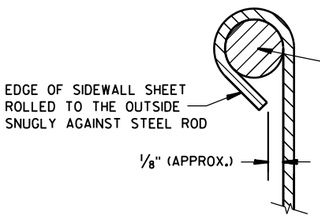
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

SLOPED END SECTIONS SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS, SECTION 521 FOR STEEL APRON ENDWALLS.

SAFETY BARS SHALL BE FABRICATED FROM GALVANIZED STEEL PIPE MEETING THE REQUIREMENTS OF ASTM A-53, GRADE B, SCHEDULE 40 OR APPROVED EQUAL.

STEEL APRON ENDWALLS FOR CULVERT PIPE SLOPED SIDE DRAINS

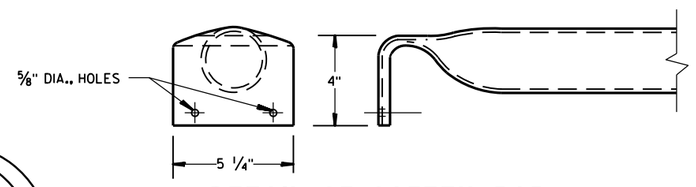
PIPE DIA. (IN.)	MIN. THICK. (Inches)	DIMENSIONS (Inches)				L DIMENSIONS					
		A	H	W	OVERALL WIDTH	SLOPE	LENGTH INCHES	SLOPE	LENGTH INCHES	SLOPE	LENGTH INCHES
15	.064	8	6	21	37	4:1	20	6:1	30	10:1	70
18	.064	8	6	24	40	4:1	32	6:1	48	10:1	100
21	.064	8	6	27	43	4:1	44	6:1	66	10:1	130
24	.064	8	6	30	46	4:1	56	6:1	84	10:1	160
30	.109	12	9	36	60	4:1	80	6:1	120	10:1	220
36	.109	12	9	42	66	4:1	104	6:1	156	10:1	280
42	.109	16	12	48	80	4:1	128	6:1	192	——	——
48	.109	16	12	54	86	4:1	152	6:1	228	——	——
54	.109	16	12	60	92	4:1	176	6:1	264	——	——
60	.109	16	12	66	98	4:1	200	6:1	300	——	——



SECTION A-A

*NOTE:
THREE SAFETY BARS ARE SHOWN. ACTUAL NUMBER OF BARS REQUIRED AT A 2'-0" C-C MAX. SPACING WILL VARY DEPENDING ON THE LENGTH OF THE END SECTION.

3" GALVANIZED PIPE. FLATTEN ENDS, THEN BEND OUTSIDE 4" TO MATCH END SECTION SIDES.

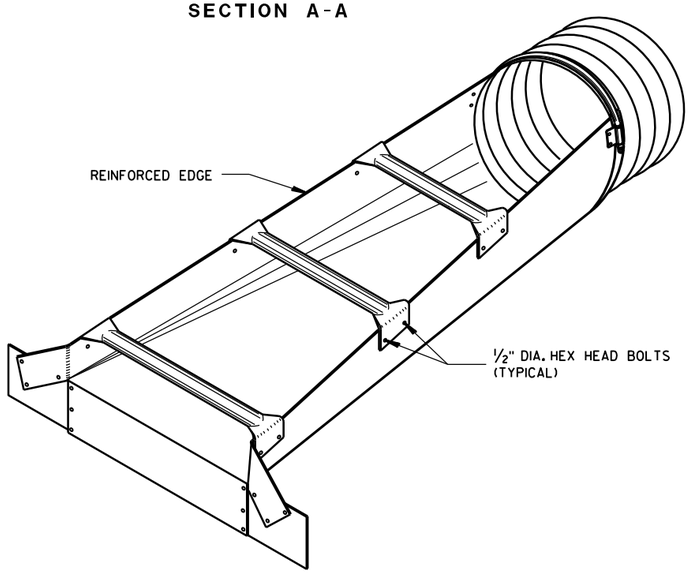


DETAIL OF SAFETY BAR

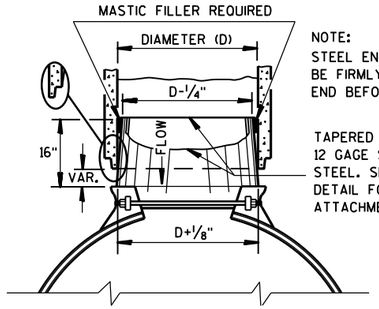
STEEL APRON ENDWALLS FOR PIPE ARCH SLOPED SIDE DRAINS

EQUIV. DIA. (Inches)	(Inches) SPAN	(Inches) RISE	MIN. THICK. (Inches) ①	DIMENSIONS (Inches) A	H	W	OVERALL WIDTH	L DIMENSIONS SLOPE	LENGTH INCHES	SLOPE	LENGTH INCHES	SLOPE	LENGTH INCHES
15	17	13	.064 *	7	6	30	44	4:1	19	6:1	30	10:1 ②	70
18	21	15	.064 *	8	6	27	43	4:1	20	6:1	30	10:1	70
21	24	18	.064 *	8	6	30	46	4:1	32	6:1	48	10:1	100
24	28	20	.064 *	8	6	34	50	4:1	40	6:1	60	10:1	120
30	35	24	.079 *	12	9	41	65	4:1	56	6:1	84	10:1	160
36	42	29	.109 *	12	9	48	72	4:1	76	6:1	114	10:1	210
42	49	33	.109	16	12	55	87	4:1	92	6:1	138	——	——
48	57	38	.109	16	12	63	95	4:1	112	6:1	168	——	——
54	64	43	.109	16	12	70	102	4:1	132	6:1	198	——	——

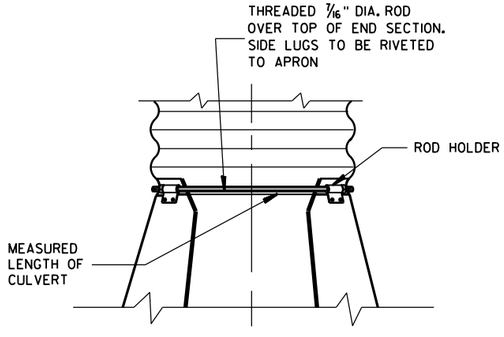
① * MINIMUM THICKNESS OF ALL 10:1 SLOPED SIDE DRAINS IS 0.109".
② ACTUAL SLOPE GREATER THAN 10:1.



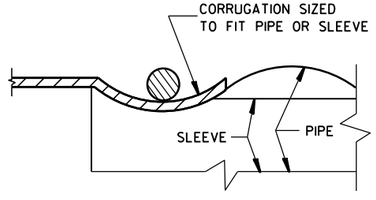
ISOMETRIC VIEW



STEEL ADAPTER SLEEVE FOR CONCRETE PIPE



TYPE 2
CONNECTION DETAIL



SECTION B-B

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

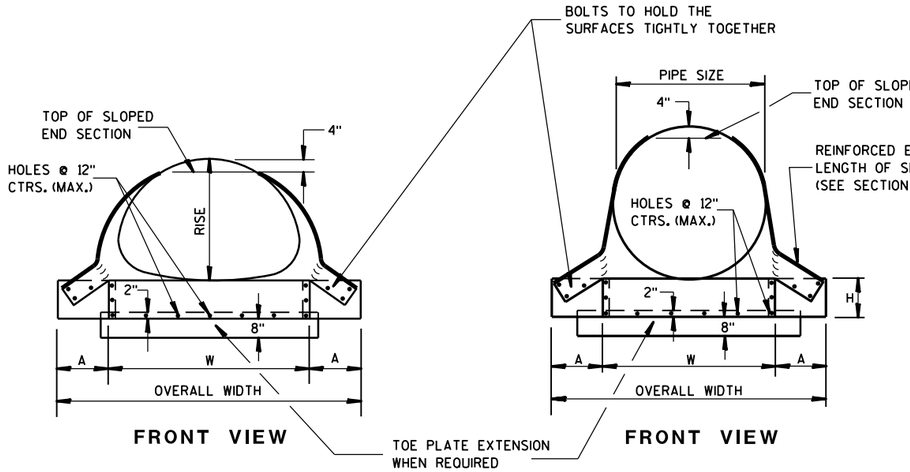
APPROVED
9/14/2012 DATE
/S/ Jerry H. Zoda
ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 8 F 7-5

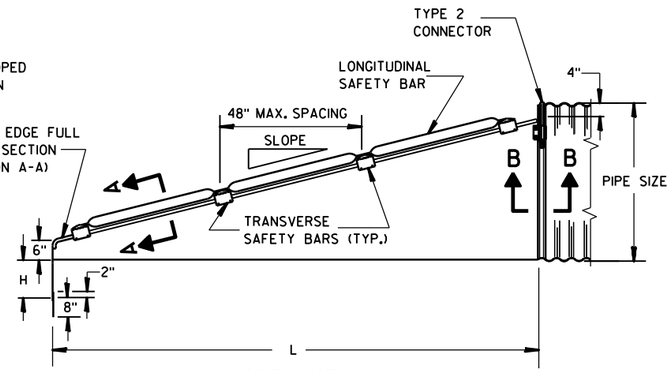
6

S.D.D. 8 F 7-5



FRONT VIEW

FRONT VIEW



SIDE VIEW
(48" SIZE ILLUSTRATED)

GENERAL NOTES

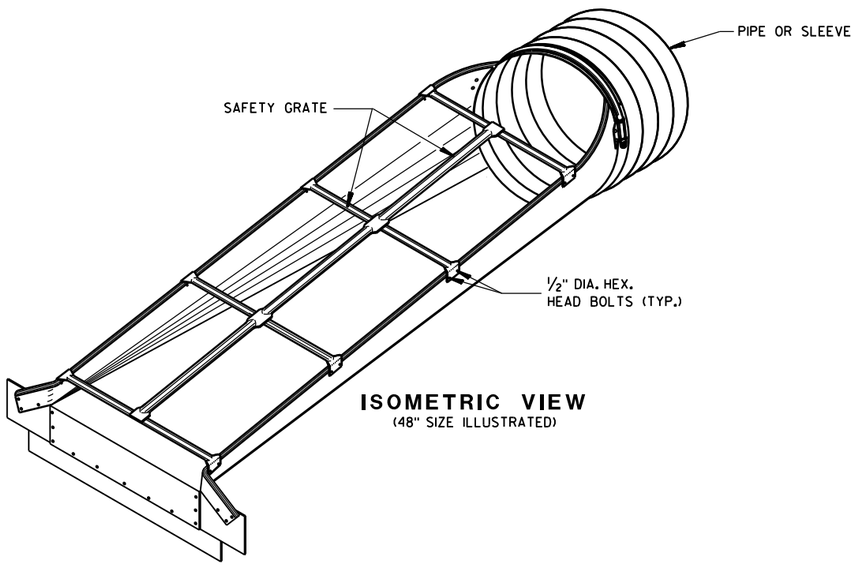
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

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

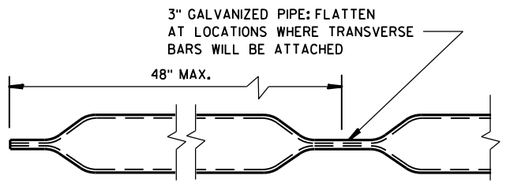
SLOPED STEEL ENDWALLS LOCATED AT THE ENDS OF CONCRETE CULVERT PIPE SHALL BE FURNISHED WITH STEEL ADAPTER SLEEVES.

STEEL APRON ENDWALLS FOR CULVERT PIPE CROSS DRAINS

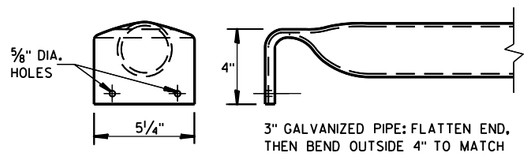
PIPE DIA. (IN.)	MIN. THICK.		DIMENSIONS (Inches)				L DIMENSIONS			
	IN.	GAGE	A	H	W	OVERALL WIDTH	SLOPE	LENGTH INCHES	SLOPE	LENGTH INCHES
36	.109	12	12	9	42	66	4:1	104	6:1	156
42	.109	12	16	12	48	80	4:1	128	6:1	192
48	.109	12	16	12	54	86	4:1	152	6:1	228
54	.109	12	16	12	60	92	4:1	176	6:1	264
60	.109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



ISOMETRIC VIEW
(48" SIZE ILLUSTRATED)



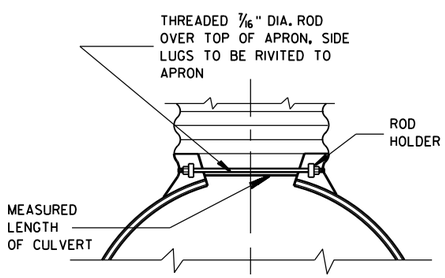
LONGITUDINAL SAFETY BAR



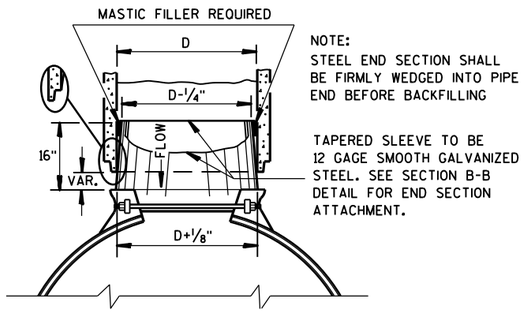
TRANSVERSE SAFETY BAR

STEEL APRON ENDWALLS FOR PIPE ARCH SLOPED CROSS DRAINS

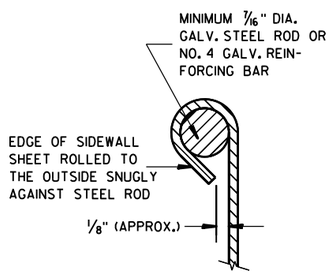
EQUIV. DIA. (IN.)	INCHES		MIN. THICK.		DIMENSIONS (Inches)				L DIMENSIONS			
	SPAN	RISE	IN.	GAGE	A	H	W	OVERALL WIDTH	SLOPE	LENGTH INCHES	SLOPE	LENGTH INCHES
30	35	24	.079	14	12	9	41	65	4:1	56	6:1	84
36	42	29	.109	12	12	9	48	72	4:1	76	6:1	114
42	49	33	.109	12	16	12	55	87	4:1	92	6:1	138
48	57	38	.109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



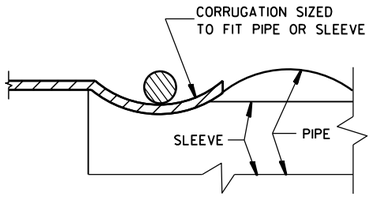
TYPE 2 CONNECTOR DETAIL



STEEL ADAPTER SLEEVE FOR CONCRETE PIPE



SECTION A-A



SECTION B-B

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/5/2012 — DATE

/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER

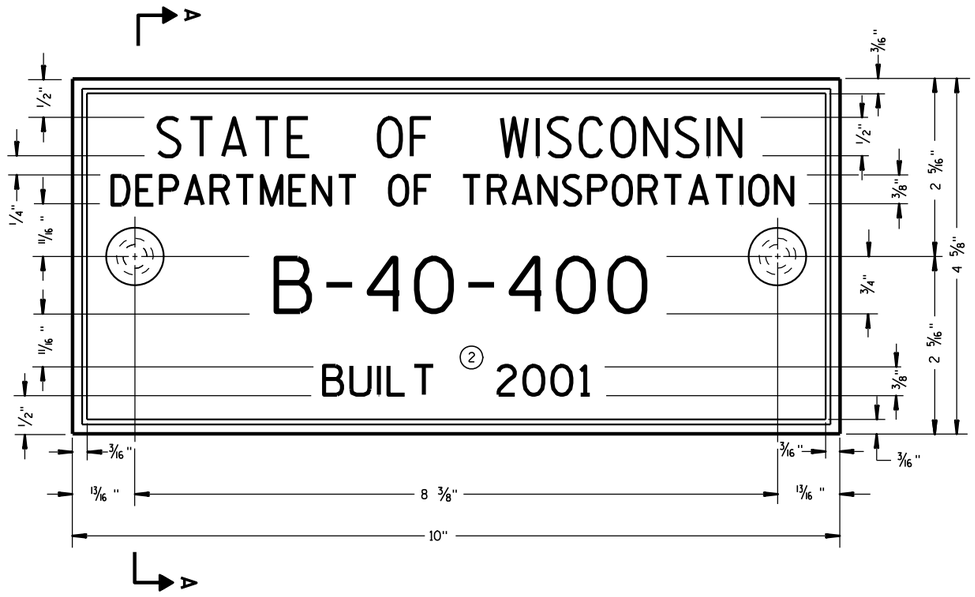
FHWA

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S.D.D. 8 F 8-2

6

S.D.D. 8 F 8-2



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

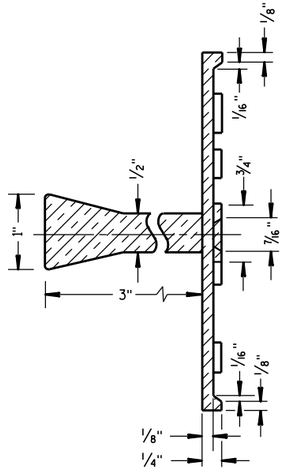
GENERAL NOTES

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

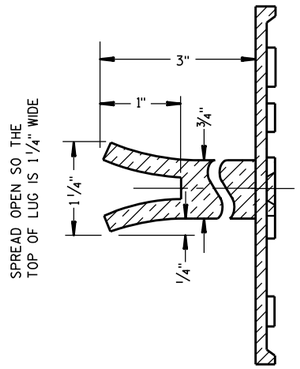
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

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

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



SECTION A-A



ALTERNATE LUG

FOR MULTI-UNIT STRUCTURES
LINE 3 ABOVE SHALL READ

B = BRIDGE
C = CULVERT
R = RETAINING WALL

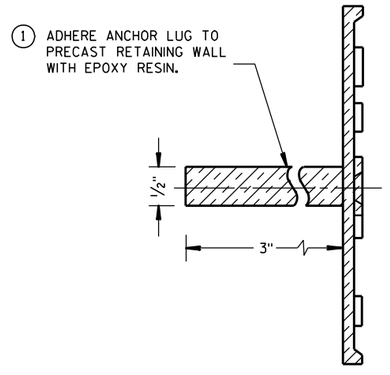
COUNTY NO.

BRIDGE NO.

UNIT NO. FOR MULTIPLE UNIT BRIDGE

B-40-400-1A

NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES



ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/26/10 DATE

/S/ Scot Beck -- CHIEF STRUCTURAL DEVELOP ENGINEER

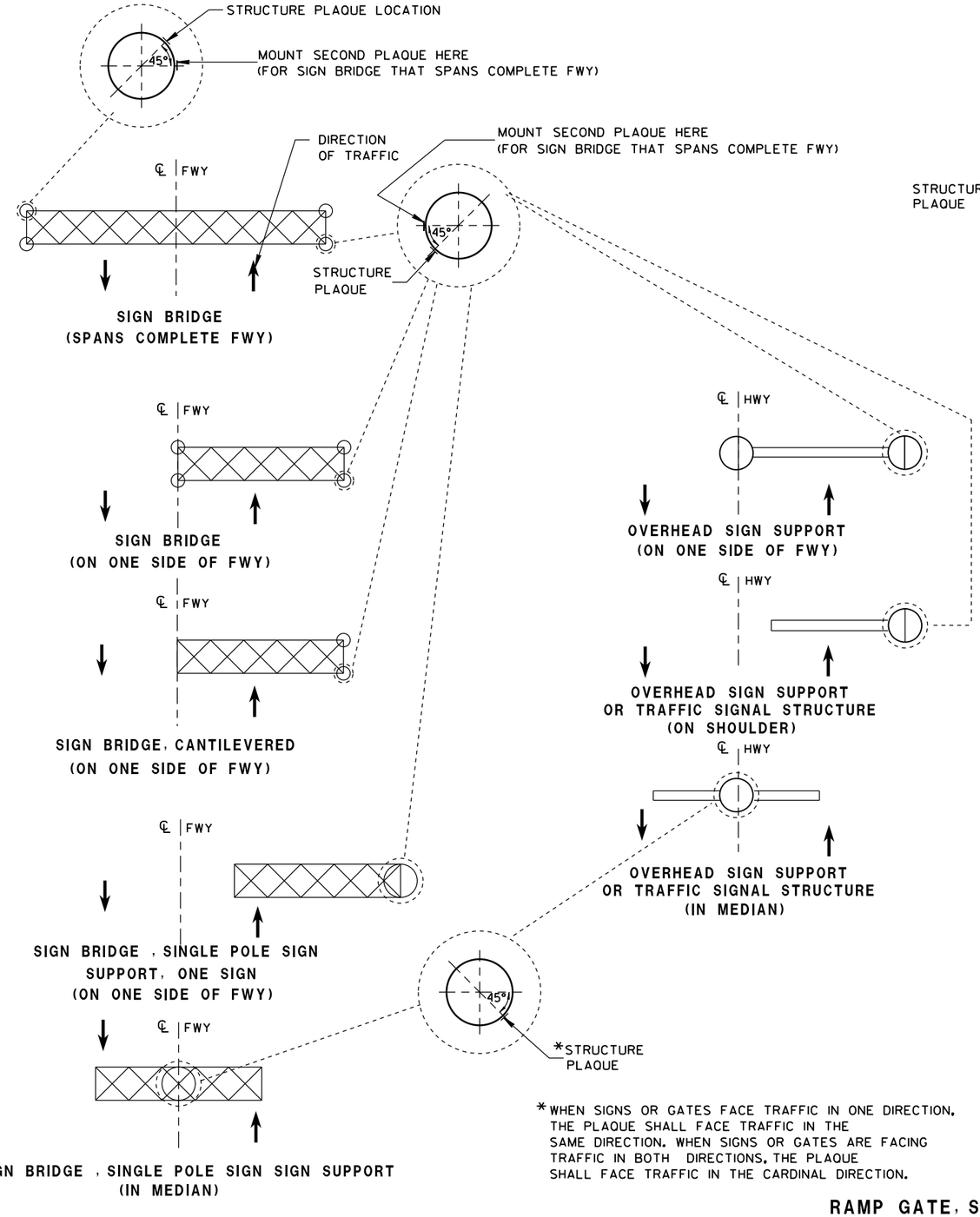
FHWA

6

S.D.D. 12 A 3-10

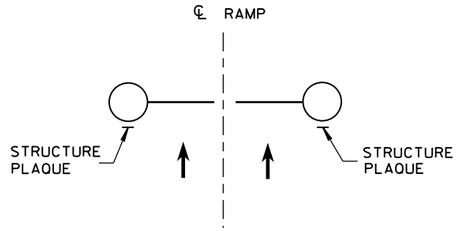
6

S.D.D. 12 A 3-10

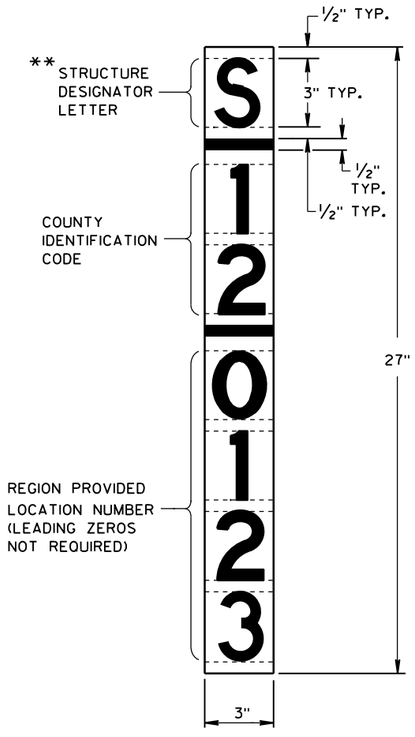


*WHEN SIGNS OR GATES FACE TRAFFIC IN ONE DIRECTION, THE PLAQUE SHALL FACE TRAFFIC IN THE SAME DIRECTION. WHEN SIGNS OR GATES ARE FACING TRAFFIC IN BOTH DIRECTIONS, THE PLAQUE SHALL FACE TRAFFIC IN THE CARDINAL DIRECTION.

LOCATION OF RAMP GATE, SIGN BRIDGE, OVERHEAD SIGN SUPPORT & TRAFFIC SIGNAL STRUCTURE PLAQUES



**RAMP GATE
(ACROSS FWY ON-RAMP)**



RAMP GATE, SIGN BRIDGE, OVERHEAD SIGN SUPPORT AND TRAFFIC SIGNAL STRUCTURE PLAQUE FOR SIGN BRIDGES AND OVERHEAD SIGN SUPPORT WHICH ARE NOT STRUCTURE MOUNTED

** LETTER "G" UTILIZED FOR RAMP GATES. LETTER "S" UTILIZED FOR SIGN BRIDGES, OVERHEAD SIGN SUPPORTS, AND TRAFFIC SIGNALS.

GENERAL NOTES

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

PLAQUES SHALL BE INCIDENTAL TO ALL NEW INSTALLATIONS.

IF THE PROPOSED SIGN BRIDGE OR OVERHEAD SIGN SUPPORT IS REPLACING AN EXISTING SIGN BRIDGE OR OVERHEAD SIGN SUPPORT, A NEW IDENTIFICATION PLAQUE WILL BE REQUIRED.

FASTEN TOP, CENTER AND BOTTOM OF PLAQUE TO POLE OR OTHER LOCATION AS FOLLOWS:

GALVANIZED STEEL SHAFT - 3 STAINLESS STEEL POP RIVETS

A588 STEEL SHAFT - SHIM FOR DRAINAGE WITH STAINLESS WASHERS; FASTEN WITH STAINLESS SELF-TAPPING SCREWS

ALUMINUM SHAFTS - 3 ALUMINUM POP RIVETS

MOUNTING HEIGHT SHALL BE APPROXIMATELY 5.0' ABOVE CURB OR SHOULDER. ADJUST IF IT IS KNOWN THAT REQUIRED TRAFFIC SIGNS WILL OBSTRUCT.

PLAQUE MATERIALS:

BASE - SHEET ALUMINUM, 0.060" THICK.

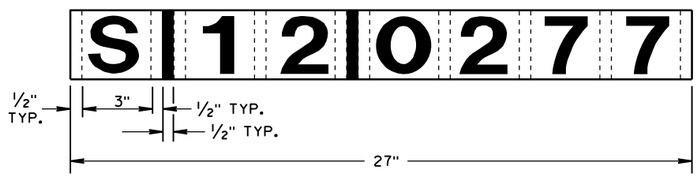
FACE - WHITE, SELF-ADHESIVE VINYL SHEETING, NON-RETROREFLECTIVE

LINES - BLACK, ½" WIDE, SELF-ADHESIVE

CHARACTERS:- BLACK, SELF ADHESIVE, SERIES "D", SIZE AS SHOWN.

FOR SIGN BRIDGES, STRUCTURE MOUNTED, THE STRUCTURE PLAQUE SHALL BE MOUNTED HORIZONTALLY AS SHOWN ON THE DRAWING. THE STRUCTURE PLAQUE SHALL BE MOUNTED HORIZONTALLY TO THE BACK OF THE SIGN, BETWEEN THE ALUMINUM EXTRUSIONS, NEAR THE TOP LEFT HAND CORNER OF THE SIGN. THE BASE MATERIAL SHALL BE OMITTED AND THE FACE ADHERED DIRECTLY TO THE ALUMINUM SURFACE. PRIOR TO ADHERING THE MATERIAL, THE ALUMINUM SURFACE SHALL BE SMOOTH, CLEAN AND DRY.

WHERE SIGN BRIDGE ILLUMINATION IS PROVIDED, THE STRUCTURE MUST ALSO HAVE A SIGN BRIDGE CIRCUIT PLAQUE AS SHOWN IN THE ELECTRICAL DETAILS.



IDENTIFICATION PLAQUE FOR SIGN BRIDGE, STRUCTURE MOUNTED

STRUCTURE IDENTIFICATION PLAQUES, RAMP GATES, SIGN BRIDGES, OVERHEAD SIGN SUPPORTS, & TRAFFIC SIGNALS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

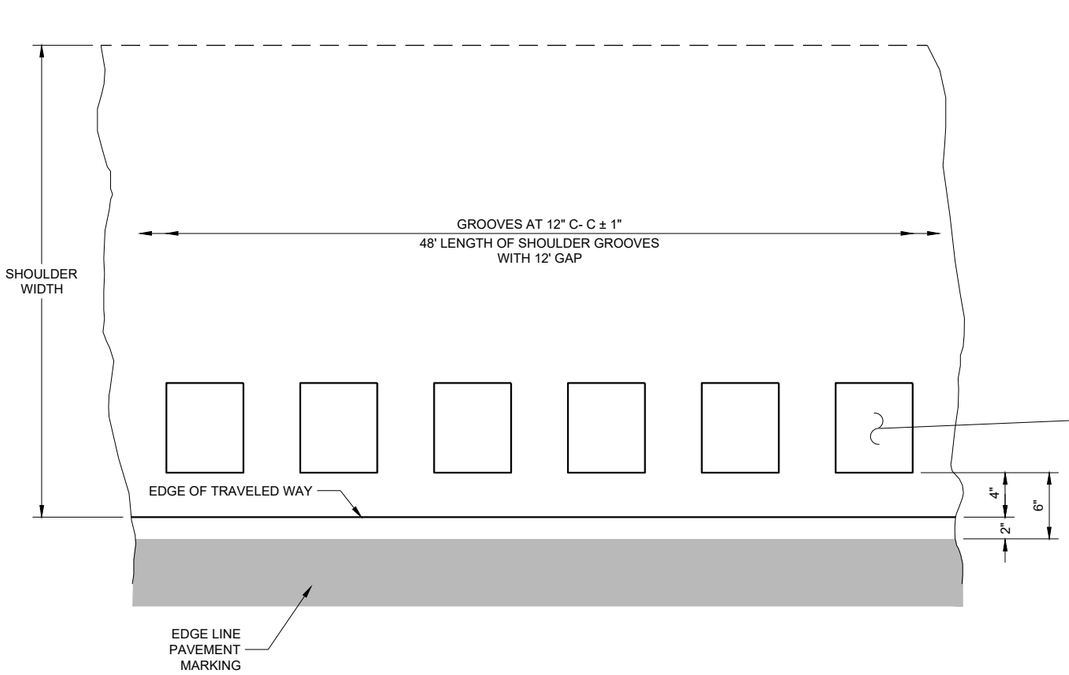
APPROVED
12/4/2012 DATE
/S/ Travis Feltes STATE TRAFFIC ENGINEER
FHWA

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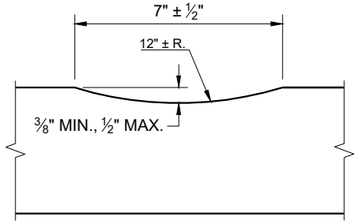
S.D.D. 12 A 4-3

6

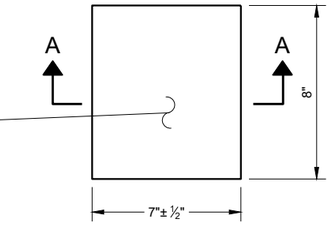
S.D.D. 12 A 4-3



PLAN DETAIL VIEW
SHOULDER WITH GROOVES



SECTION A - A

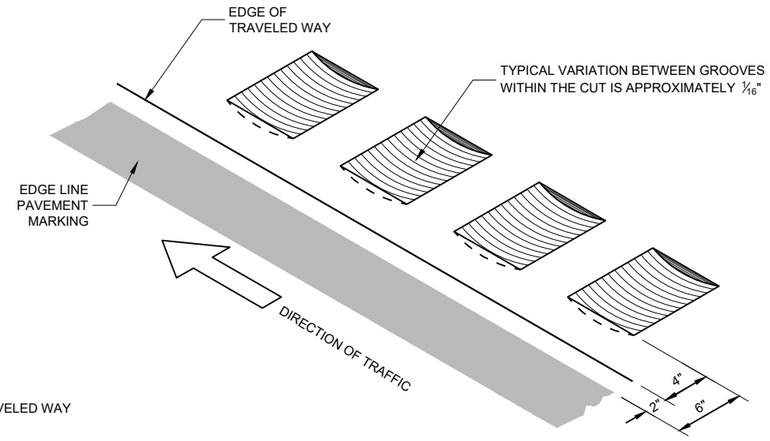


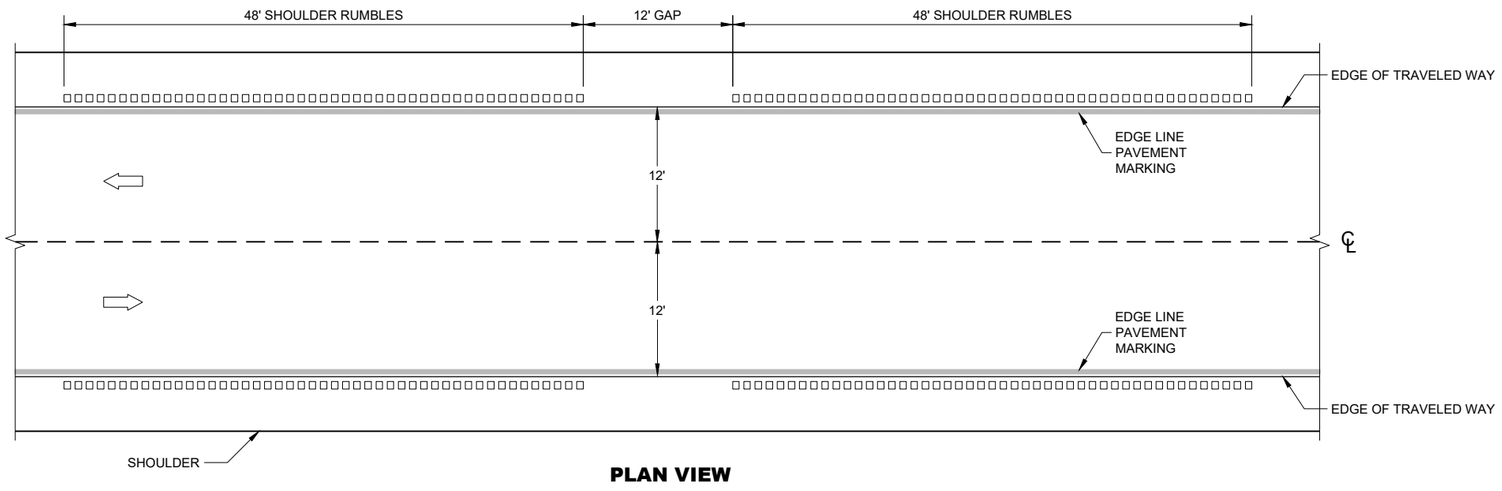
PLAN VIEW
(SINGLE GROOVE)

GENERAL NOTES

DO NOT MILL SHOULDER GROOVES THROUGH INTERSECTIONS, MARKED CROSSWALKS, NON-MOTORIZED PATH CROSSINGS, ETC. REFER TO SDD 13A10 SHEETS "g" AND "h".

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





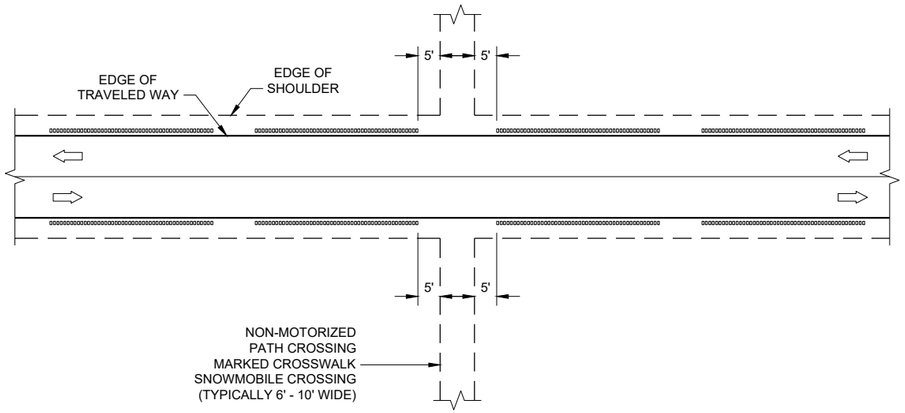
PLAN VIEW

SHOULDER RUMBLE STRIPS - ASPHALT

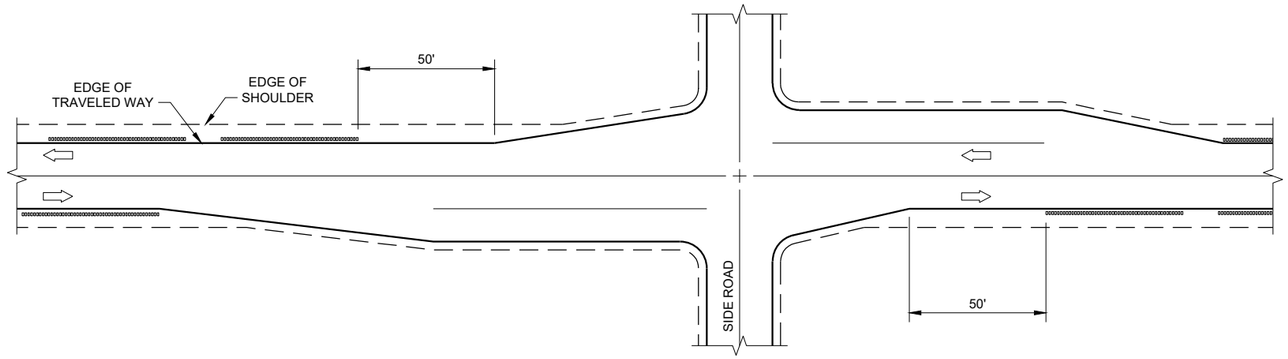
SHOULDER RUMBLE STRIPS ASPHALT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTA

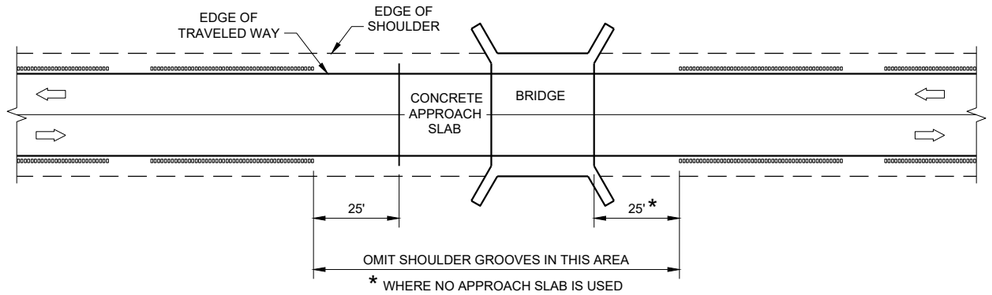
6
SDD 13A10 - 03a



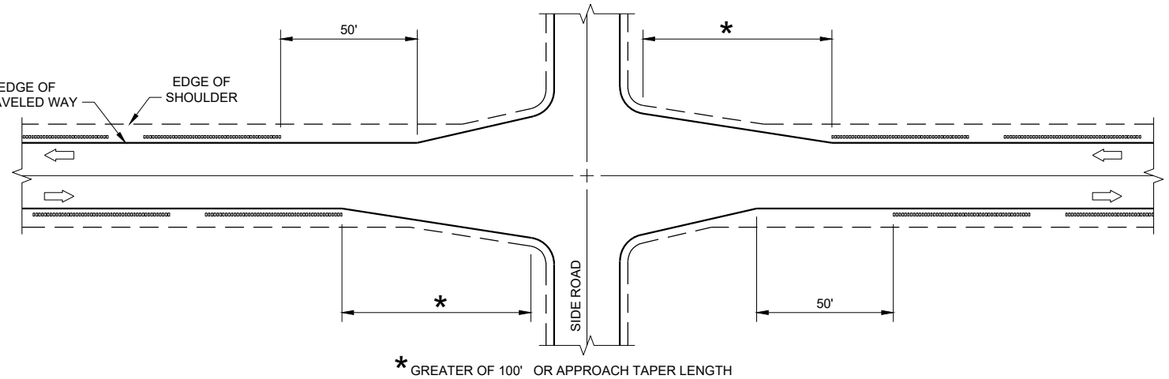
GROOVES AT MISCELLANEOUS CROSSINGS



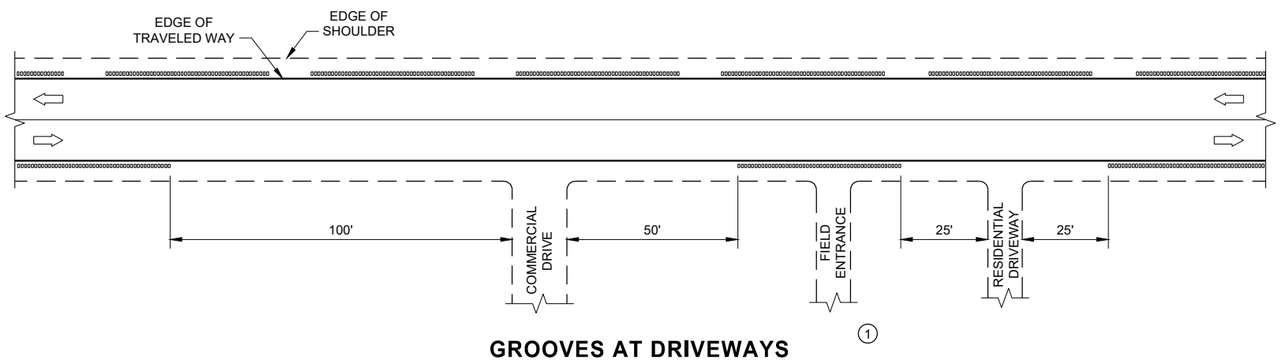
GROOVES AT RIGHT TURN LANE



GROOVES AT BRIDGES



GROOVES AT INTERSECTIONS WITH APPROACH TAPER



GROOVES AT DRIVEWAYS (1)

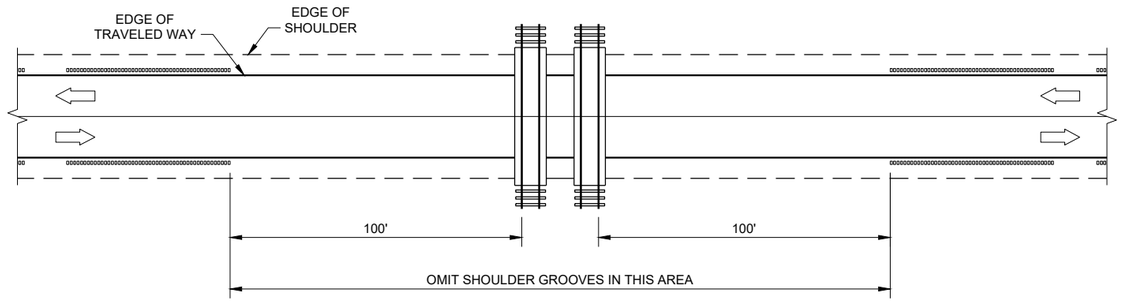
GENERAL NOTES

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

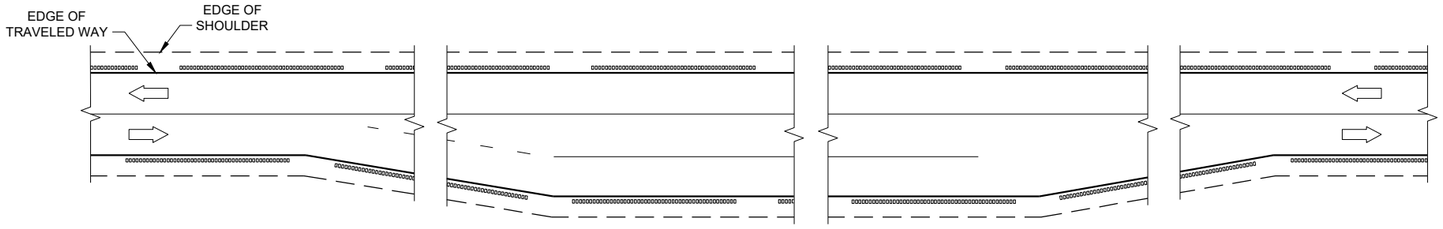
SHOULDER AND EDGE LINE RUMBLE STRIPS CROSSINGS, INTERSECTIONS, BRIDGES, DRIVEWAYS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

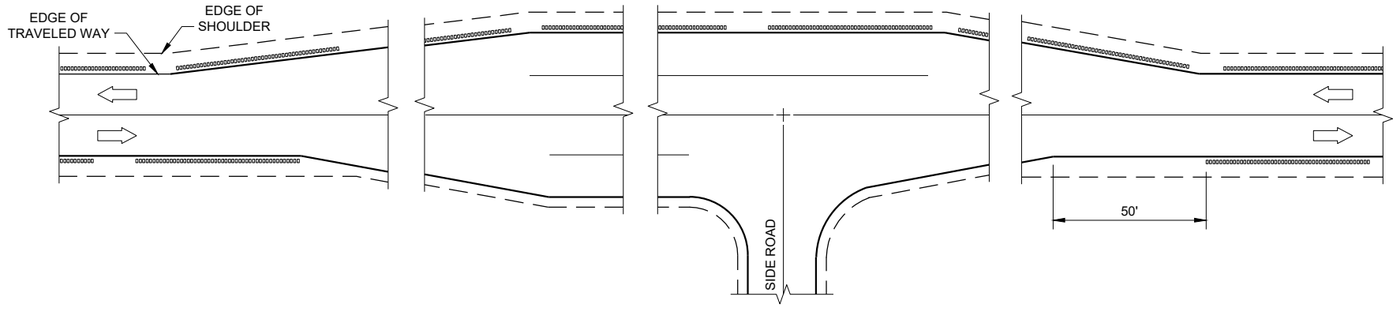
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SDD 13A10 - 03g



GROOVES AT RAILROADS



GROOVES AT PASSING AND CLIMBING LANES



GROOVES AT BYPASS LANES

6

SDD 13A10 - 03h

6

SDD13A10 - 03h

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

May 2023
DATE

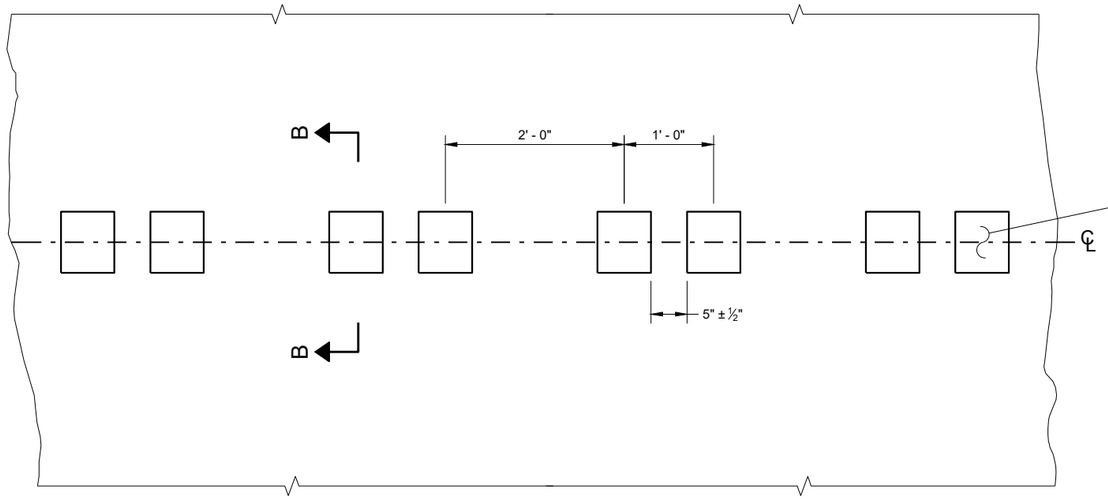
/S/ John Jenkins
ROADWAY STANDARDS DEVE ENGINEER

FHWA

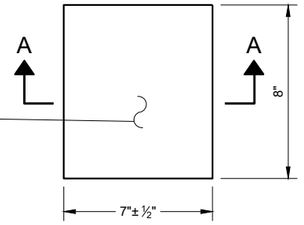
GENERAL NOTES

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

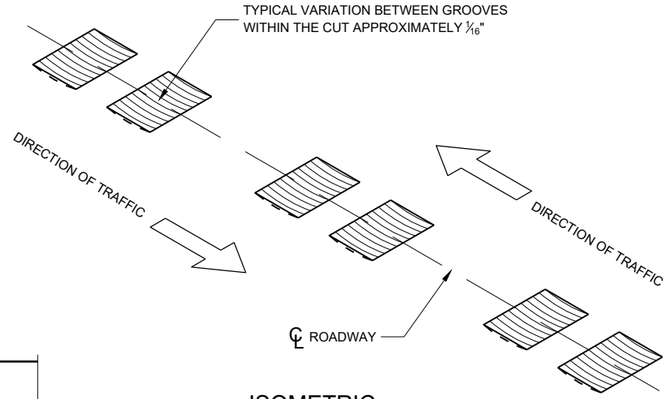
CENTERLINE GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS WHEN DIRECTED BY THE ENGINEER.



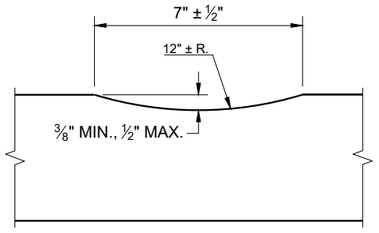
PLAN DETAIL VIEW



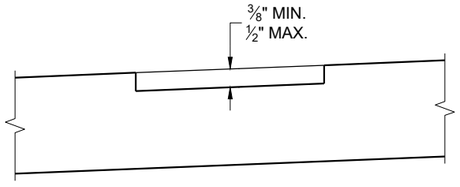
PLAN VIEW
(SINGLE GROOVE)



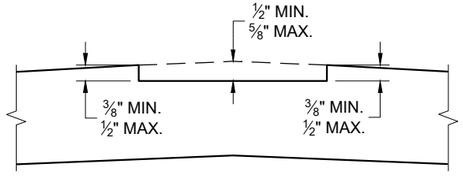
ISOMETRIC



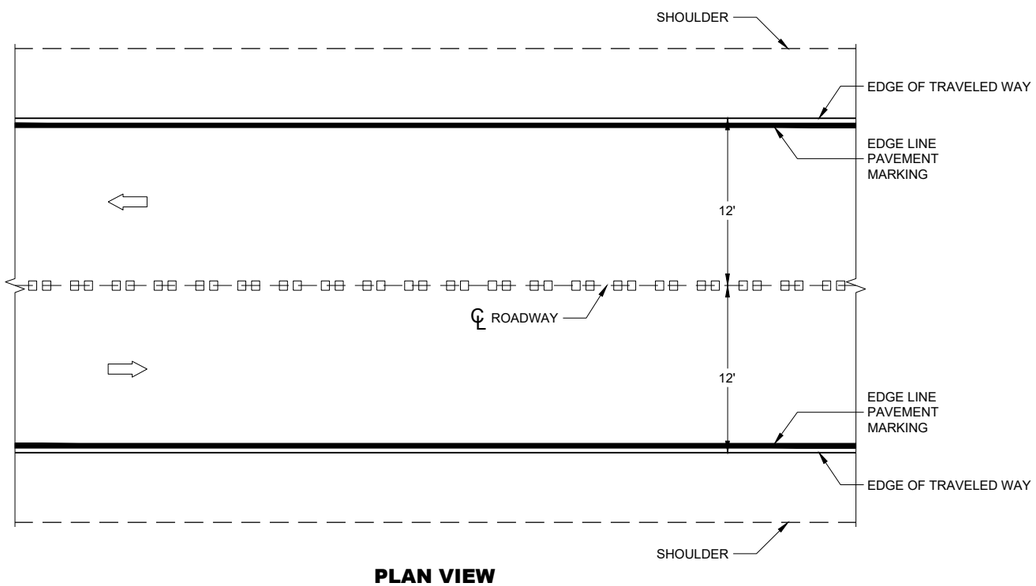
SECTION A - A



SECTION B - B
SUPERELEVATED ROADWAY



SECTION B - B
CROWNED ROADWAY



PLAN VIEW

CENTERLINE RUMBLE STRIPS - ASPHALT

CENTERLINE RUMBLE STRIPS - ASPHALT

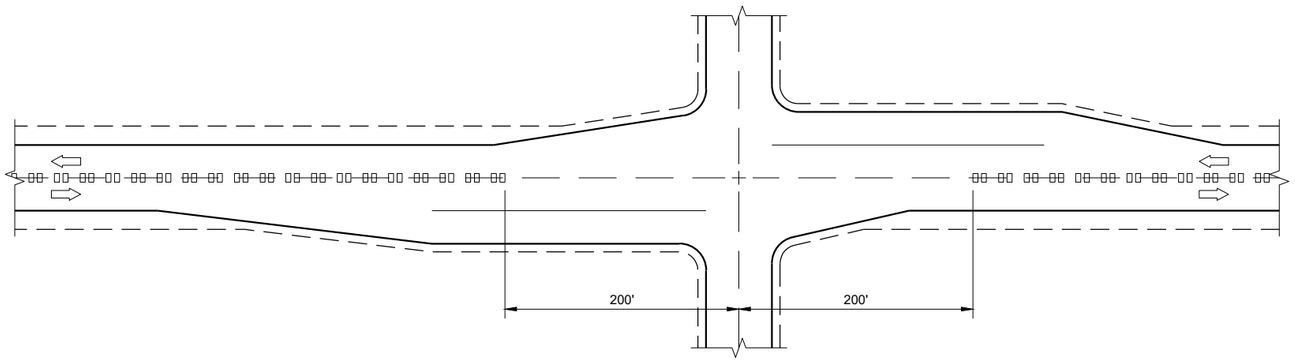
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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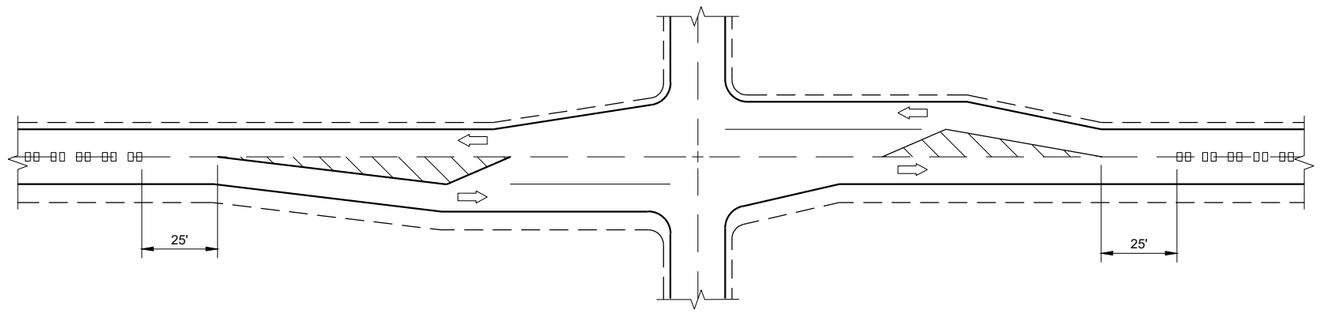
SDD 13A11 - 04a

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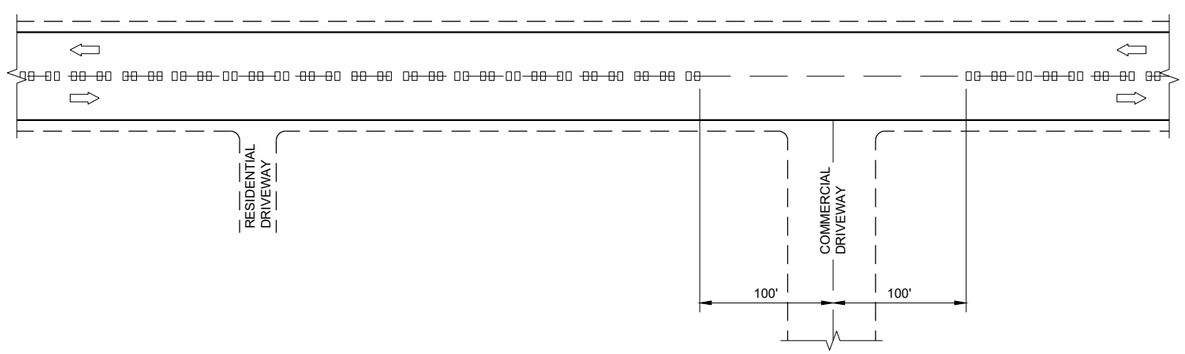
SDD 13A11 - 04a



CENTERLINE GROOVES AT INTERSECTIONS



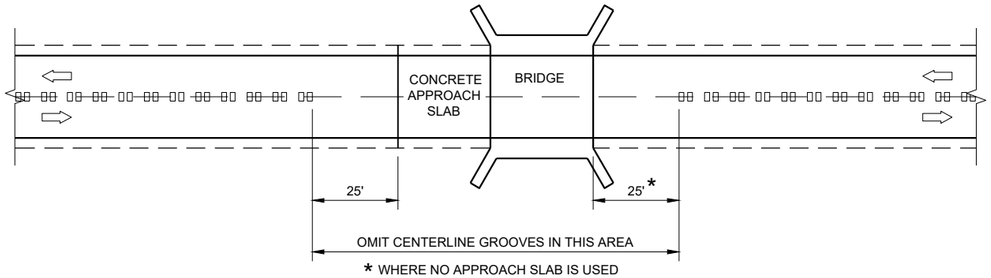
CENTERLINE GROOVES AT INTERSECTIONS (WITH LEFT TURN LANES)



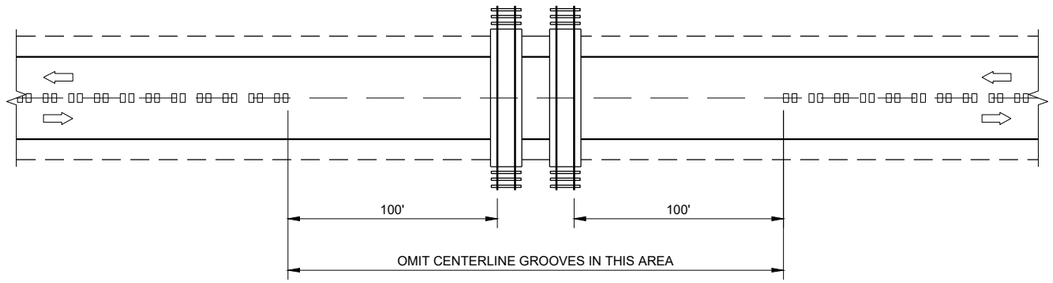
CENTERLINE GROOVES AT DRIVEWAYS (1)

GENERAL NOTES

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



CENTERLINE GROOVES AT BRIDGES



CENTERLINE GROOVES AT RAILROADS

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

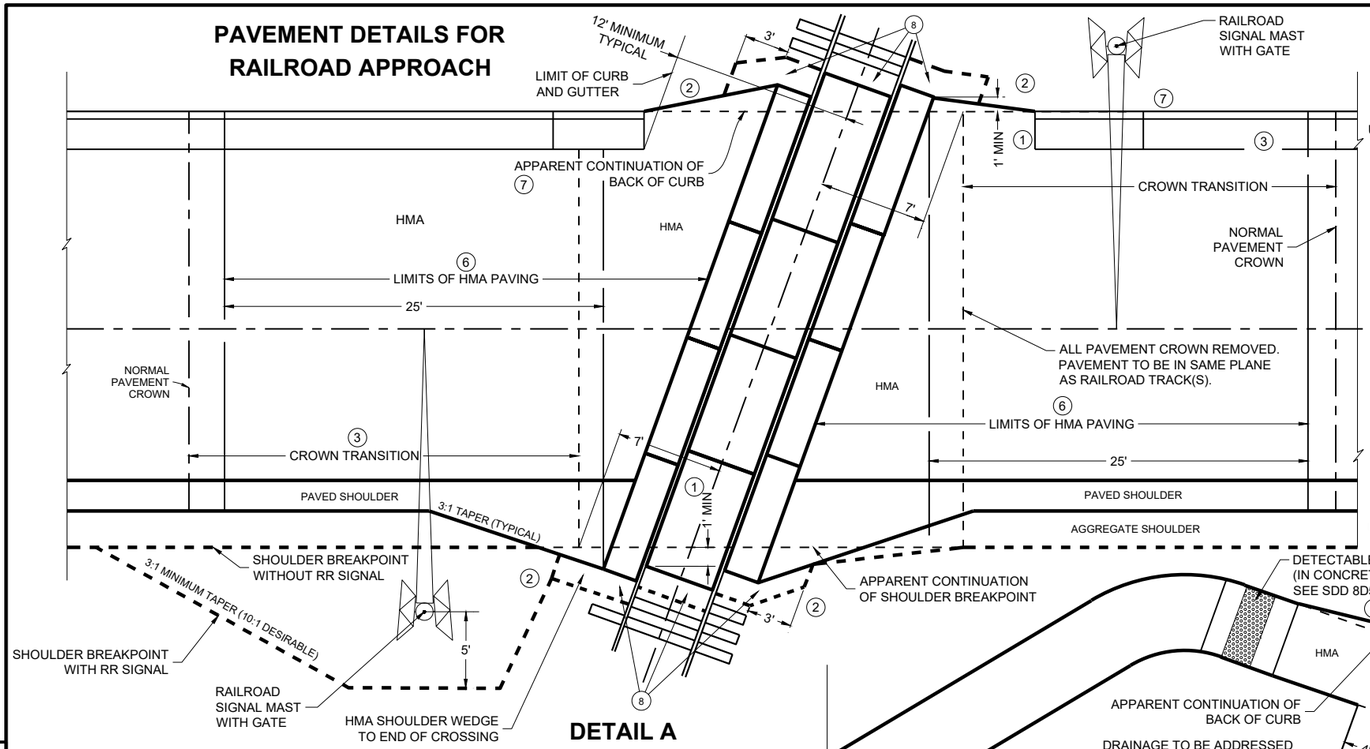
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

6
SDD 13A11 - 04d

PAVEMENT DETAILS FOR RAILROAD APPROACH



DETAIL A
RAILROAD APPROACH

GENERAL NOTES CONTINUED

(1) 1' MINIMUM CROSSING SURFACE COVERAGE PAST THE APPARENT CONTINUATION OF SHOULDER BREAKPOINT, BACK OF CURB, OR OUTSIDE EDGE OF SIDEWALK/PATH. INDIVIDUAL RAILROADS MAY HAVE DIFFERENT MINIMUM STANDARDS.

(2) HMA FLARE FROM OUTSIDE EDGE OF SIDEWALK/PATH, BACK OF CURB, OR AGGREGATE SHOULDER BREAKPOINT TO THE END OF CROSSING SURFACE MATERIAL.

(3) CROWN TRANSITION LENGTH SHOWN ELSEWHERE IN THE PLAN.

(4) NEAR EDGE OF PATH TO THE CENTER OF SIGNAL OR GATE MAST SHOULD BE A MINIMUM OF 5'-0". FOR SIDEWALK, THE NEAR EDGE SHOULD BE A MINIMUM OF 3'-0" TO THE CENTER OF SIGNAL OR GATE. NEAR EDGE OF SIDEWALK TO A NON-GATED MAST OR CANTILEVER SHOULD BE A MINIMUM OF 2'-6". SEE PLAN FOR RAILROAD SIGNAL AND GATE LOCATION IF THEY ARE NOT ALREADY INSTALLED.

(5) TERRACE WIDTH VARIES. SEE PLAN FOR RAILROAD SIGNAL AND GATE LOCATIONS. PER PLAN OR PROJECT ENGINEER THE TERRACE AND SIDEWALK/PATH GRADES SHALL BE TRANSITIONED TO MATCH THE GRADE OF THE TRACK. FIELD FIT TO AVOID PONDING.

(6) 25' MINIMUM HMA PAVING MEASURED PARALLEL TO THE ROAD OR 10' MINIMUM MEASURED PERPENDICULAR TO THE TRACK FROM THE EDGE OF THE CROSSING SURFACE, WHICHEVER IS GREATER.

(7) REFERENCE SDD 8-D-01 END SECTION CURB AND GUTTER. MEDIAN END NEAR THE TRACK SHOULD BE PARALLEL TO THE TRACK. 6'-0" TAPER FOR A MEDIAN SHOULD BE REDUCED TO GET FULL HEIGHT CURB WHERE THE GATE COMES DOWN. DESIGN OPTION TO POUR MEDIAN TAPER IN ONE PIECE. BUILD PER PLAN UNLESS OTHERWISE APPROVED BY THE RAILROAD ENGINEER AND THE PROJECT ENGINEER.

(8) IF METAL END PLATES ARE NOT INSTALLED BY THE RAILROAD THEN HMA PAVEMENT WEDGE SHALL BE PLACED AT THE END OF THE LAST PANEL TAPERED TO BACK EDGE OF NEXT TIE AND THOROUGHLY COMPACTED. SEE DETAIL G.

GENERAL NOTES

PLANS AND SECTIONS ARE TYPICAL. DIMENSIONS VARY PER PROJECT.

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

CROSSING SURFACE MATERIAL, RAILS, TIES, BALLAST, AND CROSSING DRAINAGE SYSTEM BY OTHERS UNLESS DIRECTED OTHERWISE. IF THE FINAL GRADES DON'T MATCH TO THE PLAN GRADES THEN GRADE ADJUSTMENTS WILL BE NECESSARY. CONFIRM NEW GRADES WITH PROJECT ENGINEER.

HMA PAVEMENT APPROACHES, HMA PAVEMENT CROSSING SURFACES, AND HMA FLANGEWAY/FIELD FILLERS TO BE REPLACED BY ROADWAY CONTRACTOR UNLESS DIRECTED OTHERWISE BY THE PLANS, SPECIAL PROVISIONS, RAILROAD ENGINEER, OR PROJECT ENGINEER.

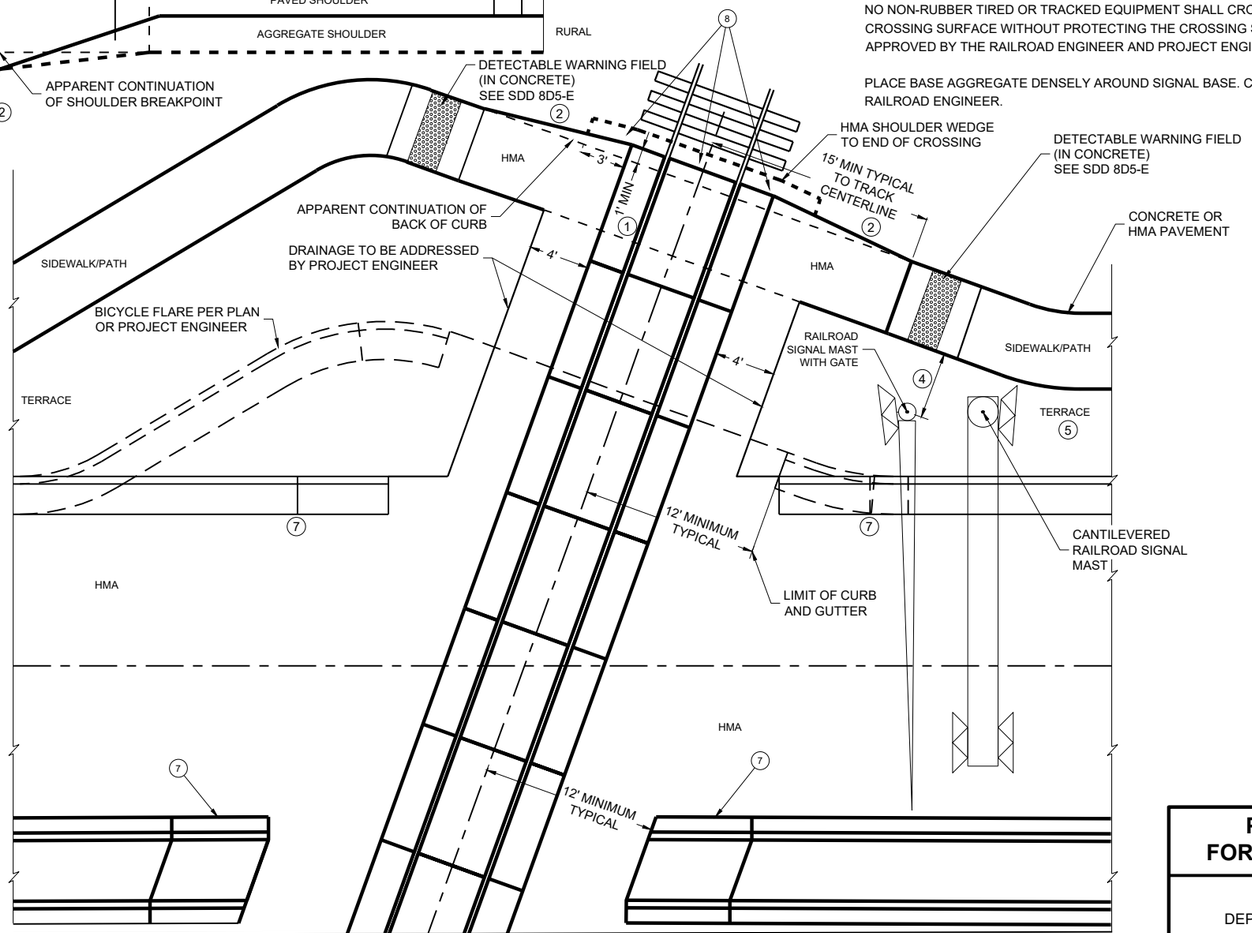
HMA PAVEMENT SHALL BE ROLLED PARALLEL TO THE TRACK.

WHEN THERE IS A SIDEWALK OR SHARED-USE PATH, ADD DETECTABLE WARNING FIELDS PER CURRENT STANDARD DETAIL DRAWING 8D5-E.

THE CROSSING SHALL NOT BE OPENED TO ANY TYPE OF TRAFFIC UNTIL IT IS FULLY PAVED AND COOLED SUFFICIENTLY UNLESS OTHERWISE APPROVED BY THE RAILROAD ENGINEER AND THE PROJECT ENGINEER.

NO NON-RUBBER TIRED OR TRACKED EQUIPMENT SHALL CROSS OR SIT ON THE CROSSING SURFACE WITHOUT PROTECTING THE CROSSING SURFACE WITH A METHOD APPROVED BY THE RAILROAD ENGINEER AND PROJECT ENGINEER.

PLACE BASE AGGREGATE DENSELY AROUND SIGNAL BASE. COORDINATE WITH THE RAILROAD ENGINEER.



DETAIL B
MEDIAN AND SIDEWALK/SHARED-USE PATH APPROACH

PAVEMENT DETAILS FOR RAILROAD APPROACH

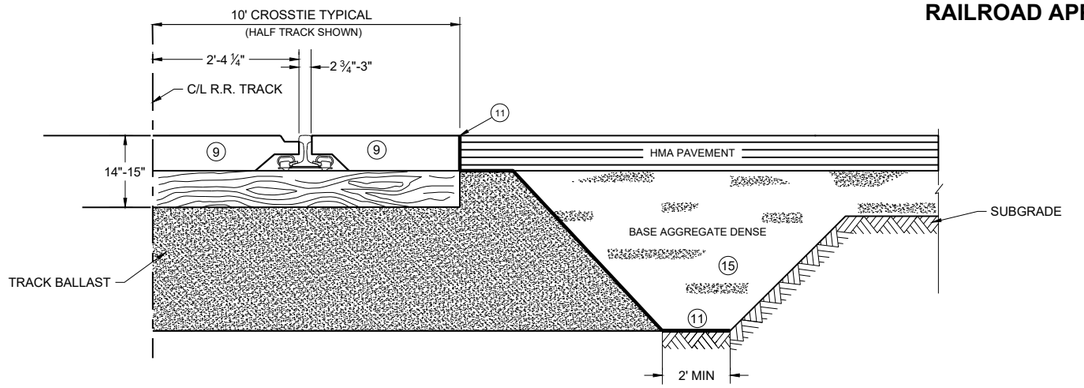
STATE OF WISCONSIN
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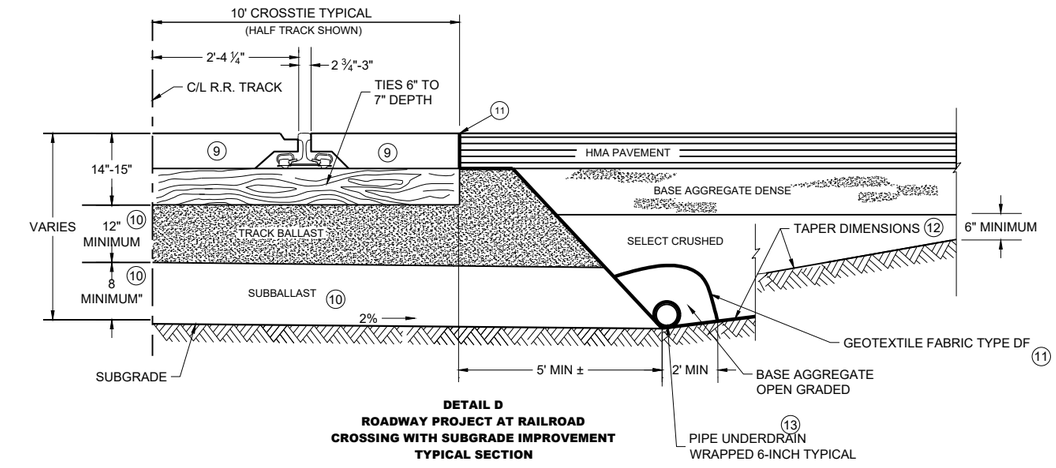
/S/ Kristen Sommers
STATE RAILROAD ENGINEERING AND SAFETY SUPERVISO

FHWA

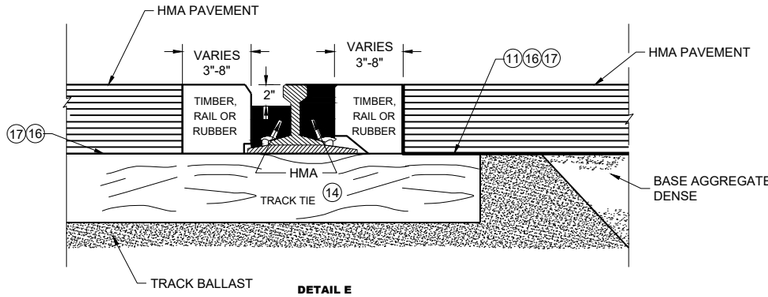
TYPICAL SECTIONS FOR RAILROAD APPROACH



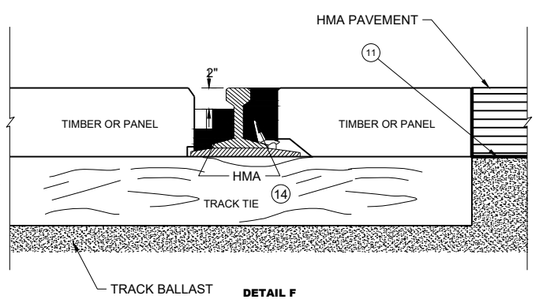
DETAIL C
ROADWAY PROJECT AT RAILROAD
CROSSING WITHOUT SUBGRADE IMPROVEMENT
TYPICAL SECTION



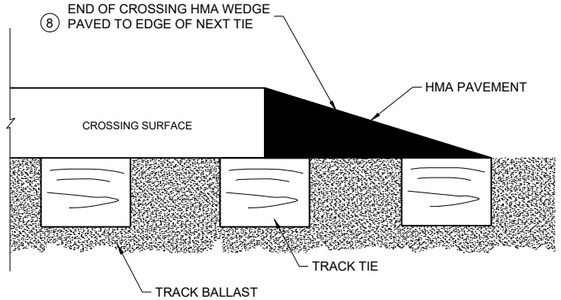
DETAIL D
ROADWAY PROJECT AT RAILROAD
CROSSING WITH SUBGRADE IMPROVEMENT
TYPICAL SECTION



DETAIL E
TIMBER, RAIL OR RUBBER SECTION
HMA FLANGEWAY
AND FIELD FILLERS



DETAIL F
PANEL SECTION
HMA FLANGEWAY
AND FIELD FILLERS



DETAIL G
END OF CROSSING HMA WEDGE

GENERAL NOTES

(8) IF METAL END PLATES ARE NOT INSTALLED BY THE RAILROAD THEN HMA PAVEMENT WEDGE SHALL BE PLACED AT THE END OF THE LAST PANEL TAPERED TO BACK EDGE OF NEXT TIE AND THOROUGHLY COMPACTED. SEE DETAIL A AND B.

(9) MATCH THE CROSSING TYPE THAT IS INSTALLED UNLESS OTHERWISE DIRECTED BY PROJECT ENGINEER.

(10) TRACK BALLAST AND SUBBALLAST REQUIRED 12" AND 8" MINIMUM DEPTHS RESPECTIVELY. DIMENSION FROM BOTTOM OF TRACK TIE TO HIGH SIDE OF 2% SLOPE. THE 2% SLOPE IS REQUIRED ON RAILROAD SUBBALLAST. SEE PLAN FOR CROWN, MATERIAL THICKNESS, AND SLOPE DIRECTION. SUBBALLAST CAN BE HMA, 1 1/2" BASE AGGREGATE DENSE, SELECT CRUSHED, OR A COMBINATION OF THEM.

(11) GEOTEXTILE FABRIC TYPE SAS PLACED IN ORDER TO PROVIDE STABILIZATION AND SEPARATION ON TOP OF THE TRACK BALLAST WHERE IT IS UNDER HMA PAVEMENT, BASE AGGREGATE DENSE OR SELECT CRUSHED MATERIAL AND THE FIELD SIDE BALLAST CRIBS. GEOTEXTILE FABRIC TYPE DF PLACED IN ORDER TO PROVIDE STABILIZATION AND SEPARATION UNDER AND AROUND THE PIPE UNDERDRAIN. PLACING GEOTEXTILE FABRIC OR GEOGRID UNDER THE SUBBALLAST IS OPTIONAL.

(12) TAPER DIMENSIONS PROVIDED BY PLAN OR BY PROJECT ENGINEER.

(13) IF SHOWN ON THE PLAN, TYPICAL 6-INCH PERFORATED PVC SCHEDULE 80 PIPE UNDERDRAIN TO BE PLACED ALONG THE TOE OF SLOPE, GRADED TO DRAIN AND DAYLIGHT OR INTO STORM SEWER. BASE AGGREGATE OPEN GRADED OVER PIPE UNDERDRAIN AND THEN WRAPPED IN GEOTEXTILE FABRIC TYPE DF SCHEDULE A IN ORDER TO STABILIZE AND SEPARATE FROM SELECT CRUSHED.

(14) HMA FLANGEWAY AND FIELD FILLERS ARE TO BE PLACED AND THOROUGHLY HAND COMPACTED BY THE CONTRACTOR, WHEN NOT PROVIDED BY OTHERS AS PART OF THE CROSSING SURFACE MATERIAL. IF THE CROSSING SURFACE IS NOT BEING REPLACED, THEN REMOVE AND REPLACE THE HMA FLANGEWAY AND FIELD FILLERS AS DIRECTED BY THE RAILROAD OR PROJECT ENGINEER.

(15) GRADE TO MATCH EXISTING OR PROPOSED TYPICAL SECTION OF ROADWAY. SEE PLAN OR PROJECT ENGINEER FOR MORE DETAIL. IF NOT NOTED OTHERWISE IN THE PLAN, BACKFILL ANY REMOVED BASE AND SUBGRADE WITH BASE AGGREGATE DENSE.

(16) IF THE CROSSING IS NOT BEING REPLACED, REMOVE AND REPLACE HMA AS DIRECTED BY RAILROAD AND PROJECT ENGINEER. CARE MUST BE TAKEN TO NOT DAMAGE CROSSING PANELS, TIES, RAIL, PLATES AND SPIKES.

(17) PLACE HMA FULL DEPTH. AGGREGATE IS NOT TO BE PLACED BETWEEN THE RAILROAD TIES AND THE HMA PAVEMENT.

TYPICAL SECTIONS FOR RAILWAY APPROACH

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE

/S/ Kristen Sommers
STATE RAILROAD ENGINEERING AND SAFETY SUPERVISOR

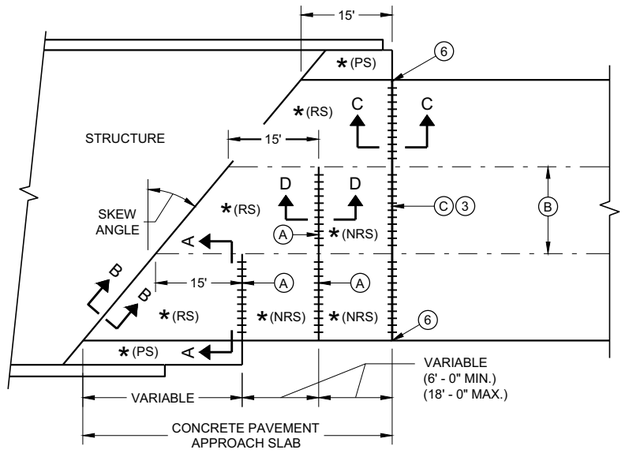
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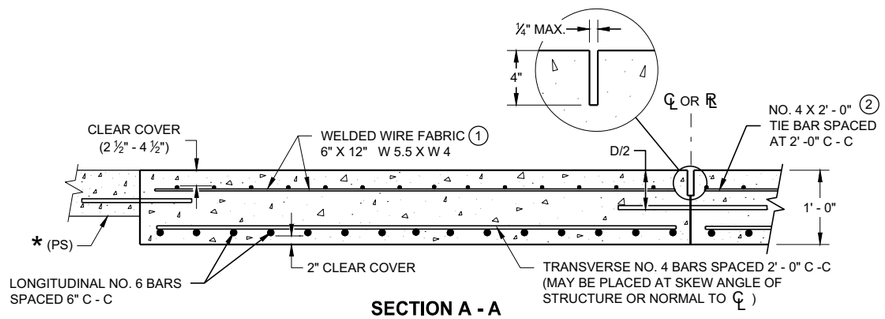
SKEWED APPROACH
(PAVEMENT MORE THAN TWO LANES)

* (RS) = REINFORCED CONCRETE SLAB

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

* (NRS) - NON - REINFORCED CONCRETE SLAB

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



SECTION A - A
REINFORCEMENT POSITIONING DETAIL

GENERAL NOTES

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

TACK WELD DOWEL BARS TO THE BASKETS ON ALTERNATE ENDS.

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

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

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

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

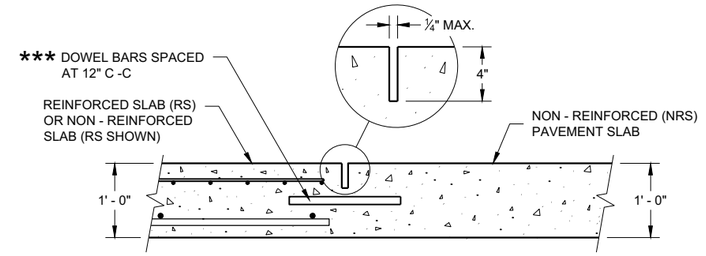
(5) PLACE EXPANSION CAP ON THE END OF THE DOWEL THAT IS NOT TACK WELDED TO THE BASKET. DO NOT FORCE DOWEL BAR PAST THE DOWEL STOP.

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

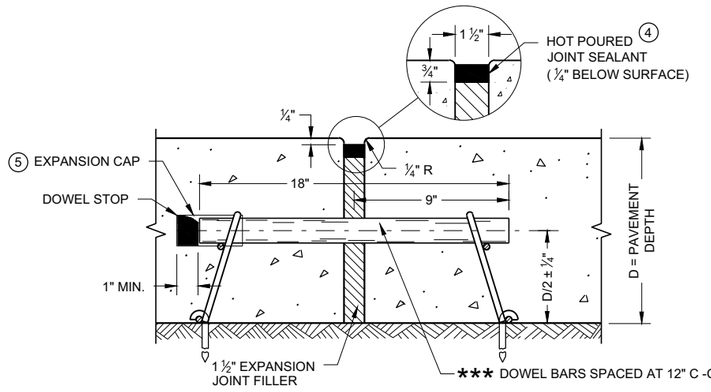
(A) STANDARD CONTRACTION JOINT NORMAL TO ℄ OR ℞.

(B) STANDARD LONGITUDINAL JOINT WITH TIE BARS.

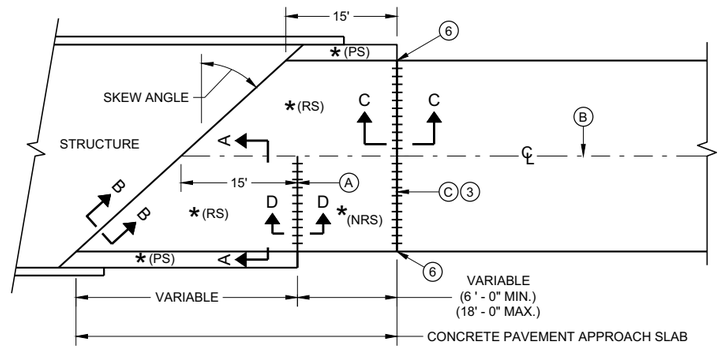
(C) 1 ½" EXPANSION JOINT WITH DOWEL BARS NORMAL TO ℄ OR ℞ .



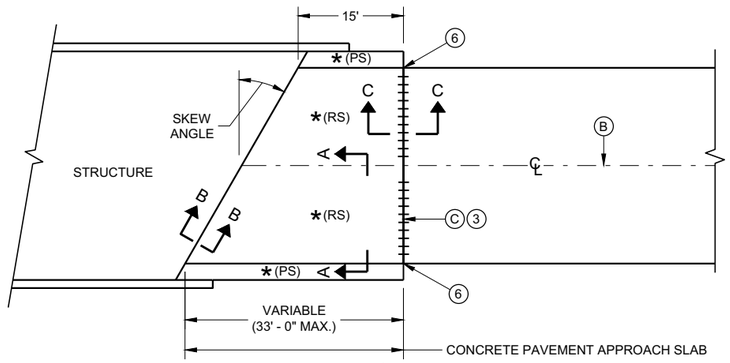
SECTION D - D
CONTRACTION JOINT



EXPANSION JOINT DETAIL

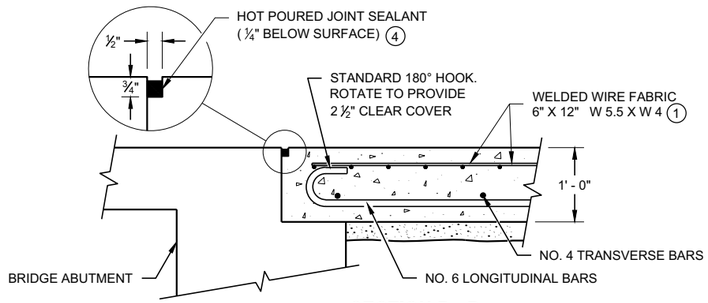


SKEWS > 20°
(PAVEMENT WIDTH ≤ 30')

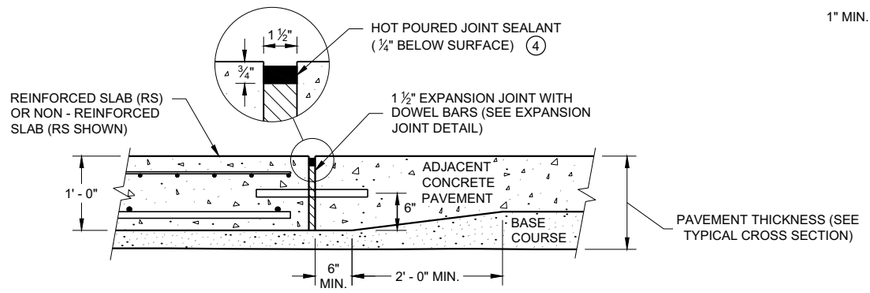


SKEWS ≤ 20°
(PAVEMENT WIDTH ≤ 30')

APPROACH SLAB AND ADJACENT PAVEMENT



SECTION B - B
BEND DETAIL
BOTTOM REINFORCEMENT



SECTION C - C
TRANSITION DETAIL
APPROACH SLAB TO ADJACENT PAVEMENT

CONCRETE PAVEMENT APPROACH SLAB

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

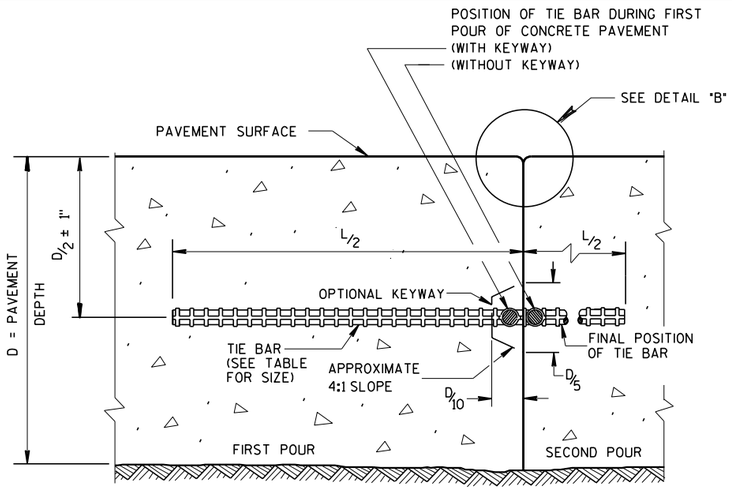
APPROVED
November 2018
DATE

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

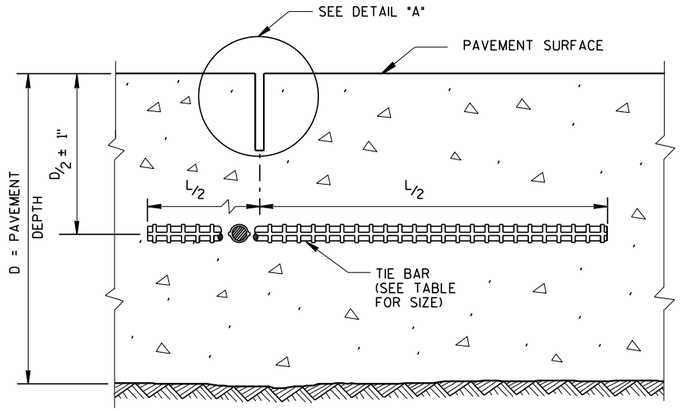
FHWA

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SDD 13B02 - 09a



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

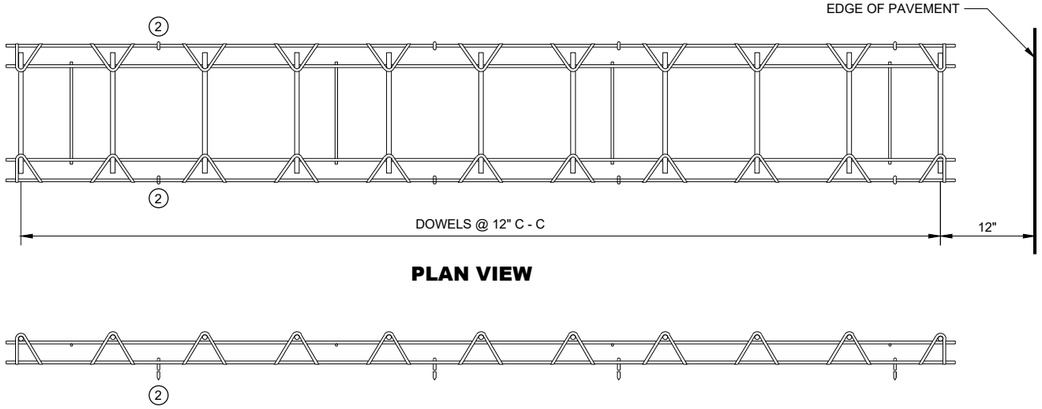
APPROVED
March 2018
DATE
/S/ Peter Kemp PE
PAVEMENT SUPE
FHWA

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S.D.D. 13 C 1-19

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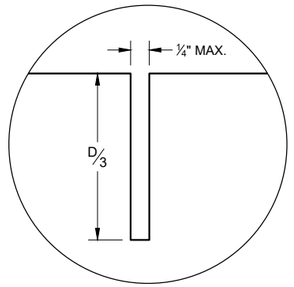
S.D.D. 13 C 1-19



PLAN VIEW

SIDE VIEW

CONTRACTION JOINT DOWEL ASSEMBLY (1)



JOINT DETAIL

GENERAL NOTES

CONTRACTION JOINTS

CONSTRUCT TRANSVERSE CONTRACTION JOINTS NORMAL TO THE CENTERLINE. SHOW THE LOCATION OF CONTRACTION JOINTS THROUGH INTERSECTIONS ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

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

FOR PAVEMENT SLABS OF VARYING WIDTHS, LOCATE THE OUTER MOST DOWEL BAR SO THAT THE CENTER OF THE BAR IS A MINIMUM OF 6 INCHES FROM AND A MAXIMUM OF 18 INCHES FROM THE FREE EDGE OF PAVEMENT.

CONSTRUCTION JOINTS

LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO THE CONTRACTION JOINTS.

(1) OBTAIN THE ENGINEER'S APPROVAL FOR THE USE OF ALTERNATIVE DESIGNS OF THE DOWEL ASSEMBLY. USE MECHANICAL DOWEL BAR INSERTERS OR DOWEL ASSEMBLIES WHEN CONSTRUCTION CONTRACTION JOINTS.

(2) SECURE BASKETS WITH ANCHORS TO HOLD DOWEL BARS IN THE CORRECT POSITION AND ALIGNMENT. TYPE, LOCATION, NUMBER AND LENGTH OF ANCHORS ARE DEPENDENT UPON FIELD CONDITIONS.

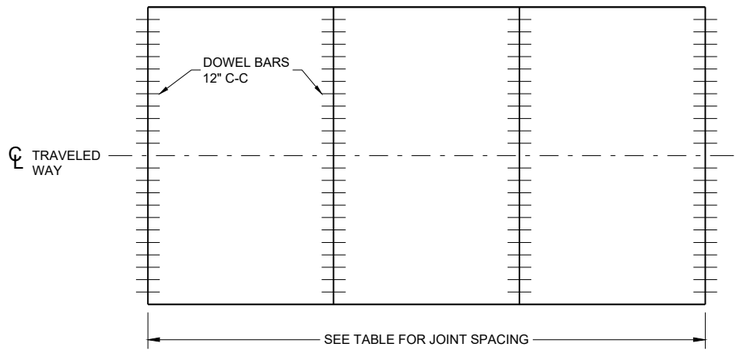
(3) FORM OR SAW CONSTRUCTION JOINTS. PROVIDE A ¼" RADIUS AT FORMED JOINTS.

(4) PROVIDE A SMOOTH VERTICAL FACE FOR THE ENTIRE DEPTH OF THE PAVEMENT WHEN FORMING CONSTRUCTION JOINTS.

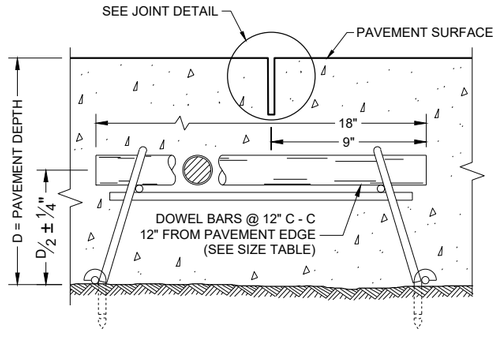
(5) INSTALL DOWEL BARS AT CONSTRUCTION JOINTS BY FORMING OR DRILLING. INSTALL FORMED DOWEL BARS 12 INCHES C - C AND 12 INCHES FROM PAVEMENT EDGE. REMOVE EXCESS CONCRETE FROM THE FREE END OF THE DOWEL BAR IF DOWEL BARS ARE FORMED THROUGH A HEADER BOARD. INSTALL DRILLED DOWEL BARS ACCORDING TO THE "DRILLED DOWEL BAR CONSTRUCTION JOINT" DETAIL.

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

(7) ANCHOR DOWEL BARS AND TIE BARS INTO DRILLED HOLES WITH AN EPOXY. MAXIMUM DRILLED HOLE SIZE IS ⅛" GREATER THAN DOWEL BAR DIAMETER, 9 INCHES IN LENGTH.



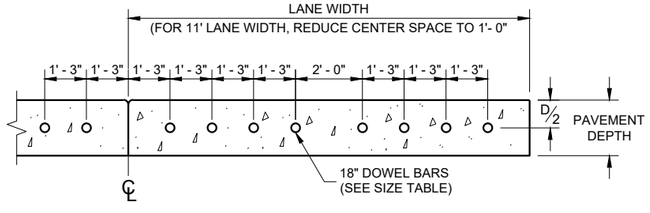
CONTRACTION JOINT LOCATIONS



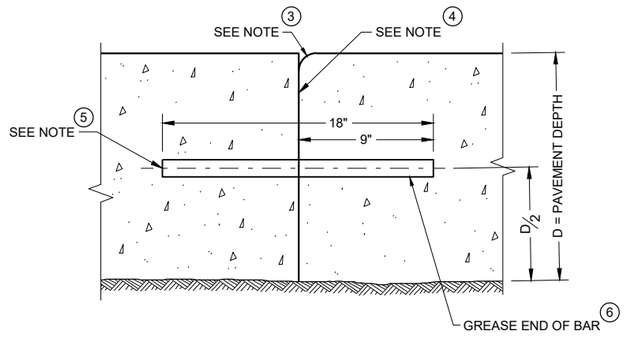
DOWELED CONTRACTION JOINT

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'



DRILLED DOWEL BAR CONSTRUCTION JOINT (7)



TRANSVERSE CONSTRUCTION JOINT

URBAN DOWELED CONCRETE PAVEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2022
DATE

/S/ Peter Kemp P.E.
PAVEMENT SUPERVIS

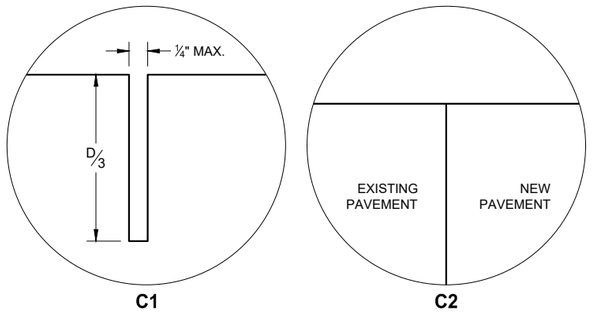
FHWA

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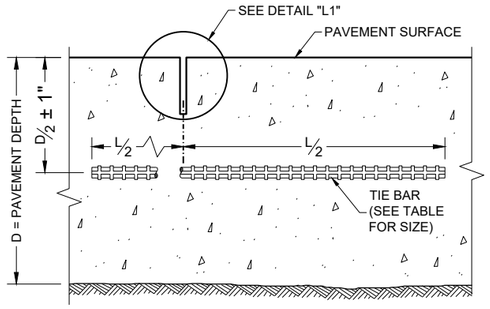
SDD 13C13 - 11

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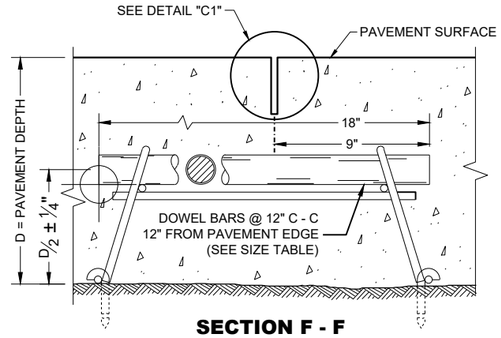
SDD 13C13 - 11



TRANSVERSE JOINTS



SECTION C - C
SAWED JOINT



SECTION F - F
CONTRACTION JOINT

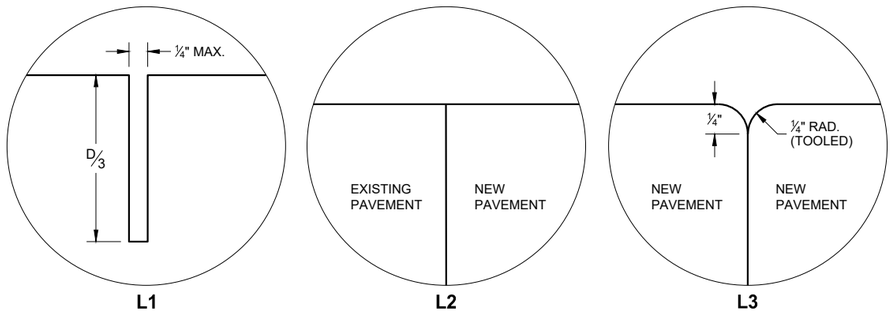
GENERAL NOTES

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

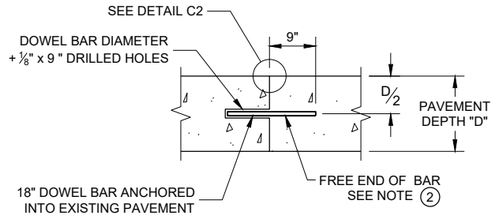
PROVIDE A MIMIMUM DISTANCE OF 15 INCHES FROM AN EXISTING TRANSVERSE JOINT OR EDGE OF REPLACEMENT TO THE CENTER OF THE TIE BAR NEAREST THAT JOINT OR EDGE.

(1) INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

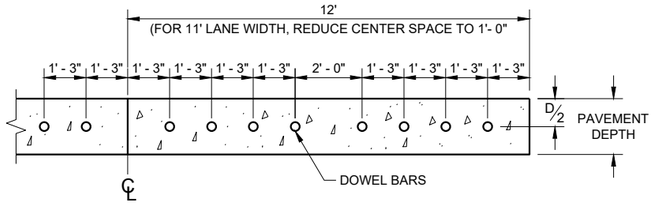
(2) APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.



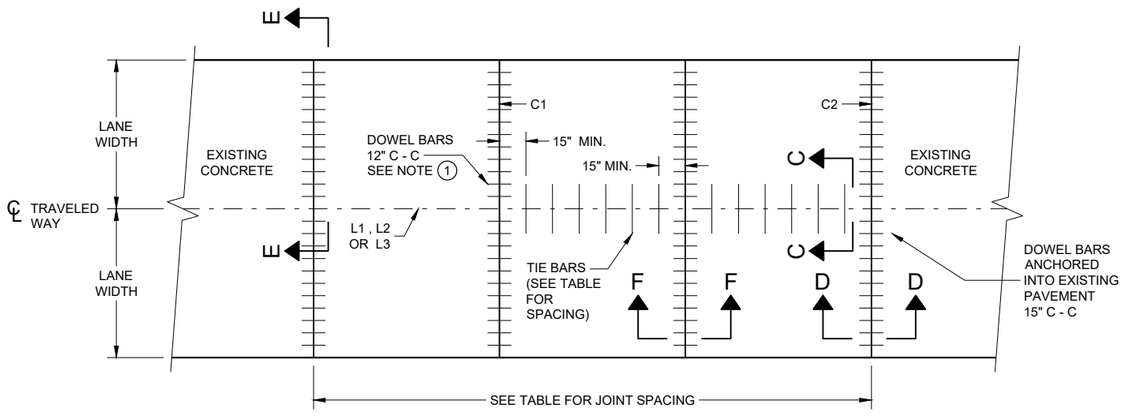
LONGITUDINAL JOINTS



SECTION D - D



SECTION E - E
SPACING OF DOWEL BARS
ANCHORED INTO EXISTING PAVEMENT



PLAN VIEW
CONCRETE BASE
CONTRACTION JOINT LOCATIONS

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	CONTRACTION JOINT SPACING
6", 6 ½"	NONE	12'
7", 7 ½"	1"	14'
8" & ABOVE	1 ¼"	15'

CONCRETE BASE

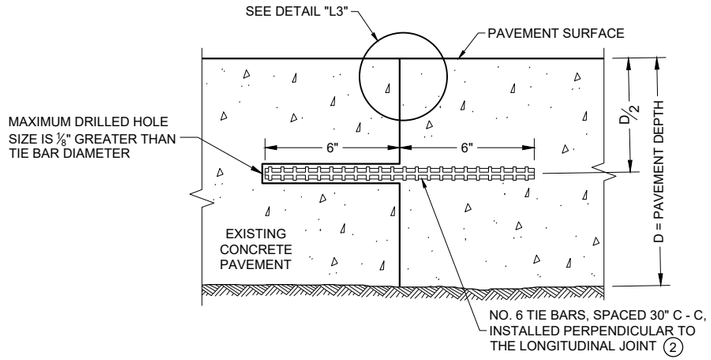
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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SDD 13C15 - 08a
SDD 13C15 - 08a

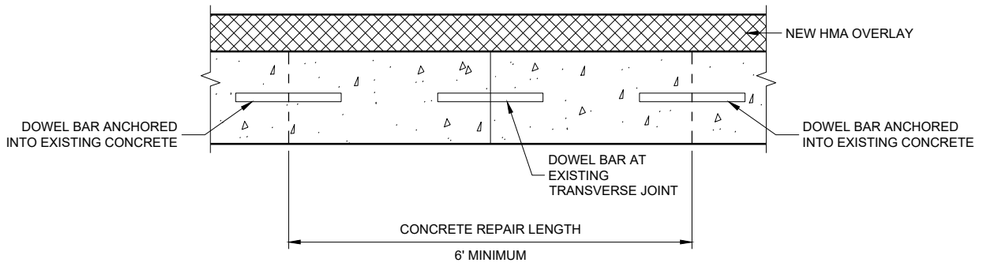
GENERAL NOTES

1. USE AN ENGINEER APPROVED BOND BREAKER (E.G. RELEASE AGENT, CURING COMPOUND) AT THE LONGITUDINAL JOINT IN LIEU OF TIE BARS FOR SINGLE LANE CONCRETE BASE REPAIRS UP TO 15 FEET IN LENGTH.
2. ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.
3. PAVEMENT THAT WAS IN PLACE PRIOR TO THE CONTRACT.

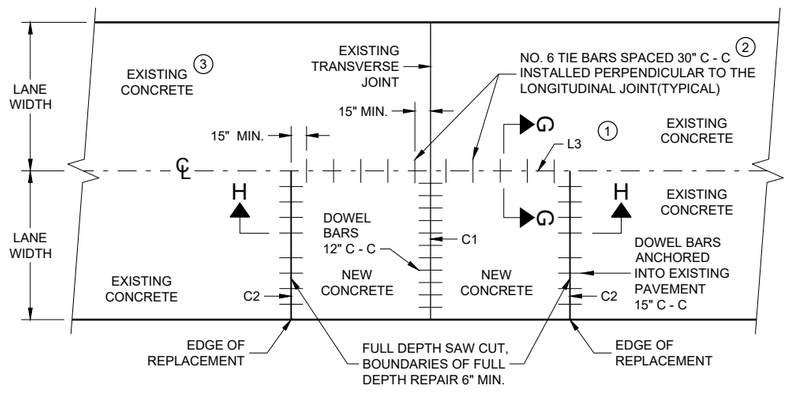


SECTION G - G

TIE BARS ANCHORED INTO EXISTING PAVEMENT



SECTION H - H



PLAN VIEW

SINGLE LANE CONCRETE BASE REPAIR

CONCRETE BASE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

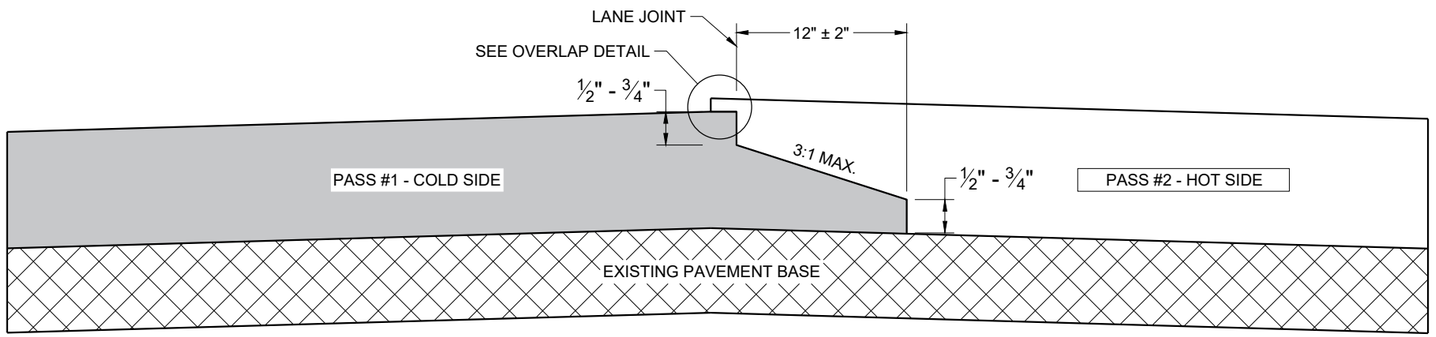
APPROVED
November 2022
DATE

/S/ Peter Kemp P.E.
PAVEMENT SUPERVIS

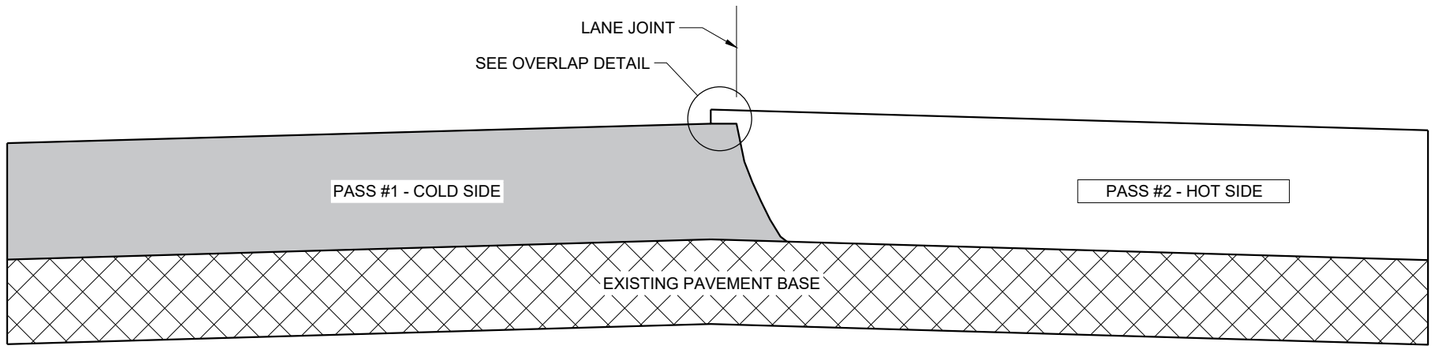
FHWA

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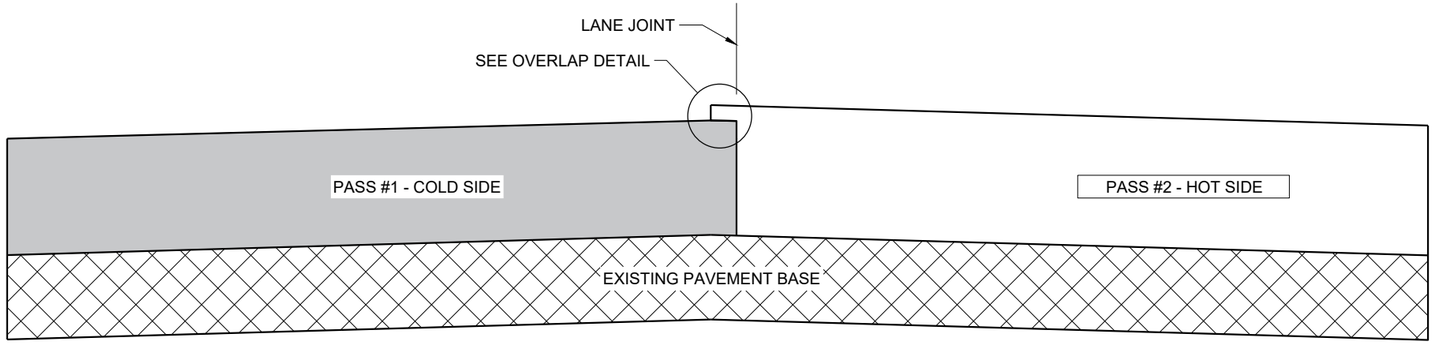
SDD 13C15 - 08b
SDD 13C15 - 08b



TYPICAL PAVEMENT CROSS SECTION
NOTCHED WEDGE JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT (MILLED)

GENERAL NOTES

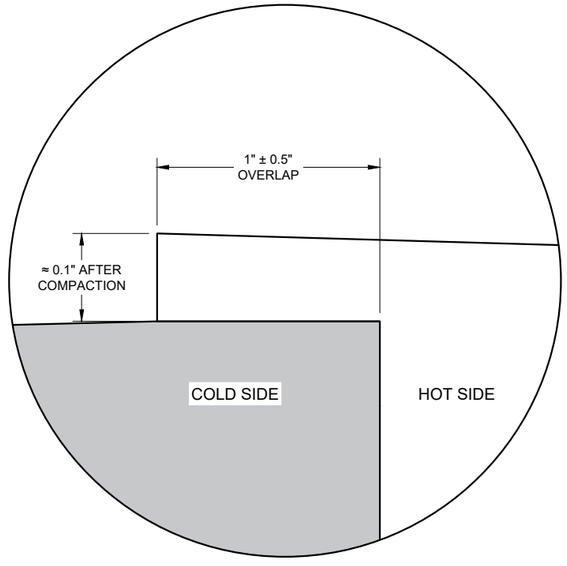
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

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

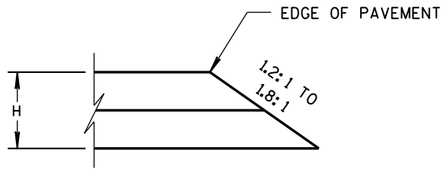
HMA LONGITUDINAL JOINTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2020
DATE

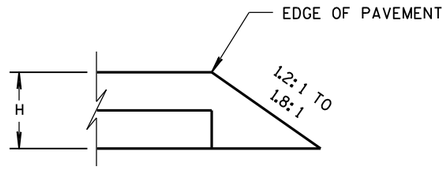
/S/ Steven Hefel
HMA PAVEMENT ENGIN

FHWA



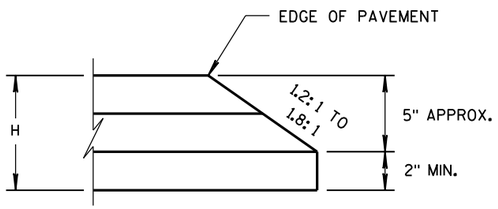
CONSTRUCTED WITH FINAL TWO LAYERS

FOR H 5" OR LESS



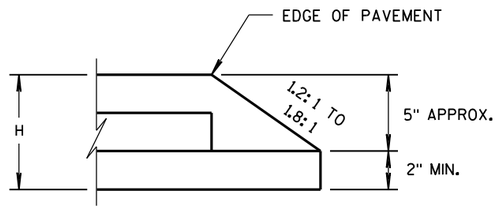
CONSTRUCTED WITH FINAL LAYER

FOR H 5" OR LESS



CONSTRUCTED WITH FINAL TWO LAYERS

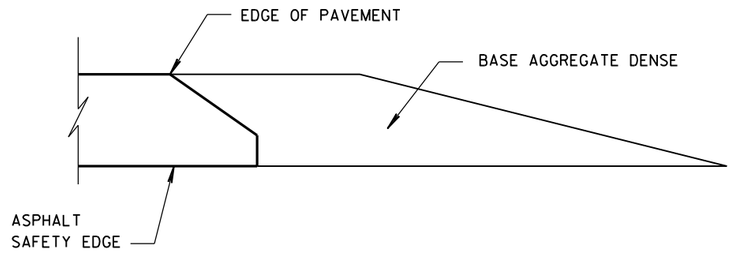
FOR H GREATER THAN 5"



CONSTRUCTED WITH FINAL LAYER

FOR H GREATER THAN 5"

HMA PAVEMENT AND HMA OVERLAYS



FINISHED SHOULDER AGGREGATE PLACEMENT

6

6

S.D.D. 14 B 29-1

S.D.D. 14 B 29-1

SAFETY EDGE SM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

11/30/2012
DATE

/S/ Jerry H. Zoda
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

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

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

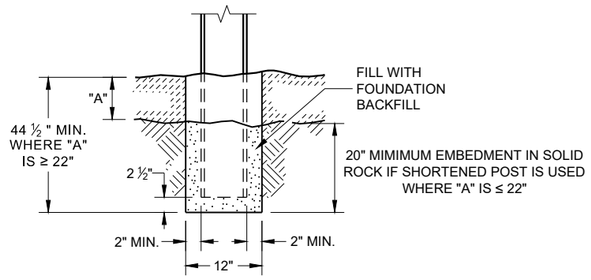
(3) IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL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

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

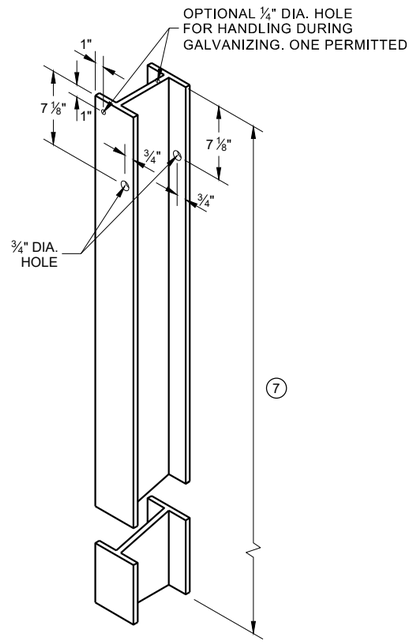
(5) FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ±1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 ¾" TO 32".

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

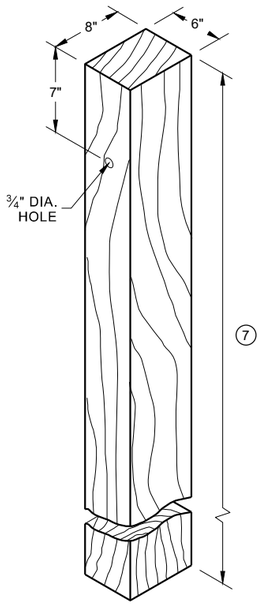
(7) TOTAL POST LENGTH FOR TYPE K IS 7' - 0".
TOTAL POST LENGTH FOR OTHER MGS TYPES IS 6' - 0".



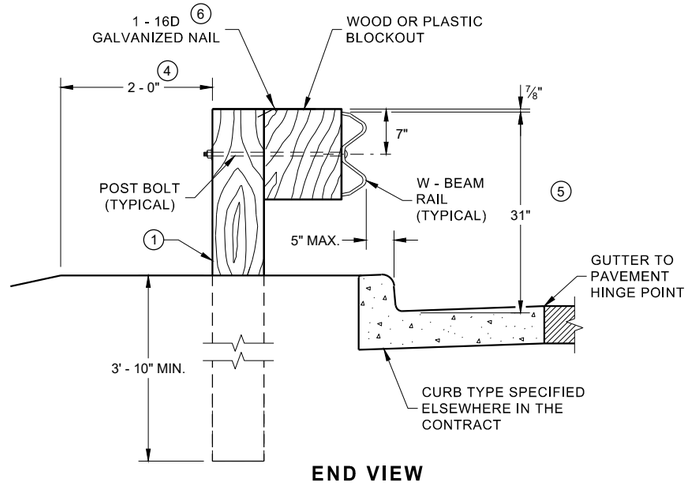
END VIEW
SETTING STEEL OR WOOD POST IN ROCK (3)



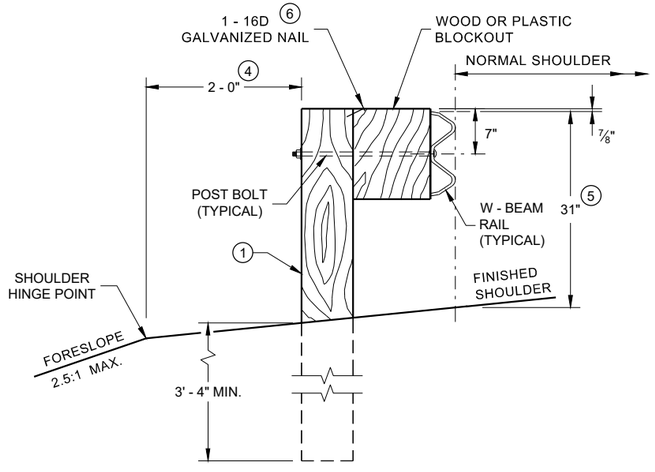
STEEL POST & HOLE PUNCHING DETAIL (W 6 X 9) (1)



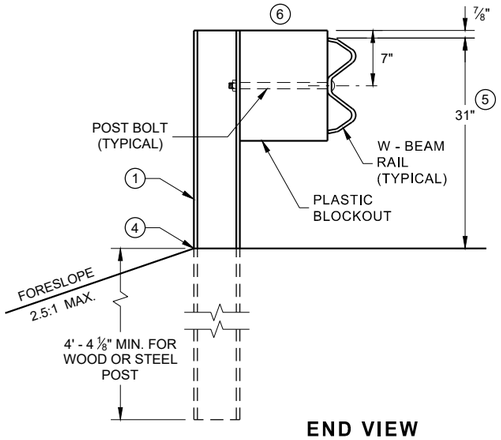
WOOD POST (6" X 8") NOMINAL (1)



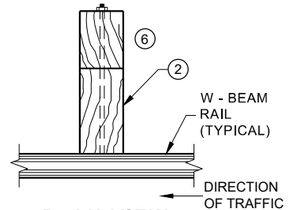
END VIEW
LOCATED ALONG A CURBED ROADWAY



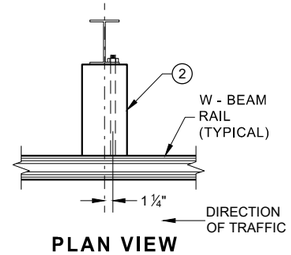
END VIEW
LOCATED ALONG A ROADWAY SHOULDER STANDARD INSTALLATION



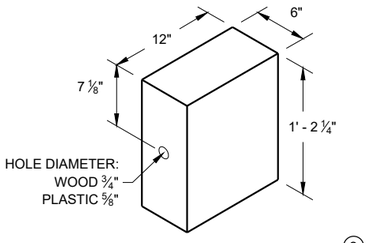
END VIEW
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



PLAN VIEW
WOOD POST, BLOCKOUT & BEAM



PLAN VIEW
STEEL POST, PLASTIC BLOCKOUT & BEAM



WOOD OR PLASTIC BLOCKOUT (2)

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

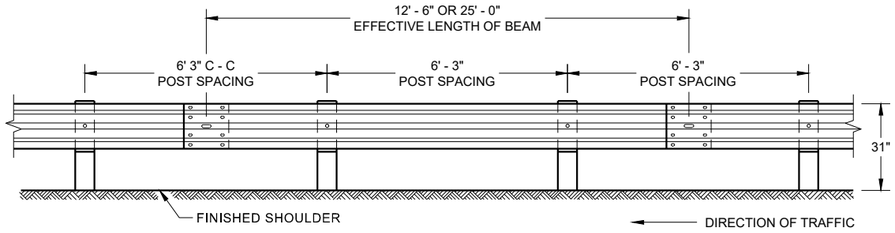
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

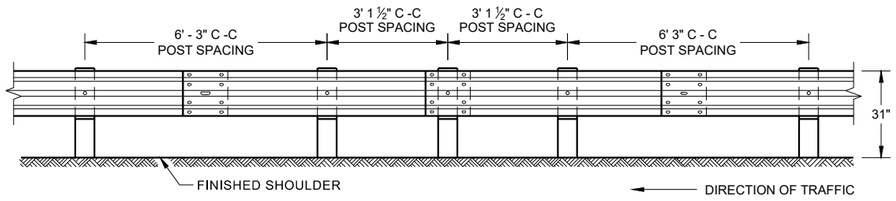
SDD 14B42 - 07a

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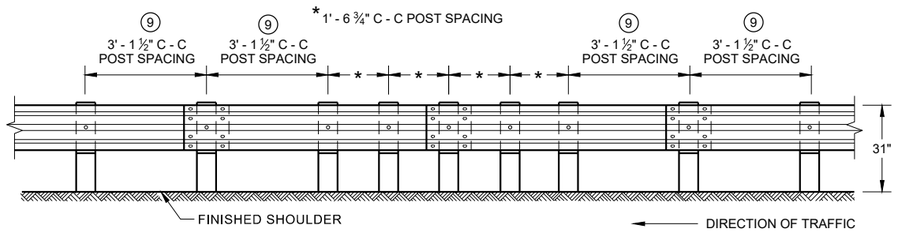
SDD 14B42 - 07a



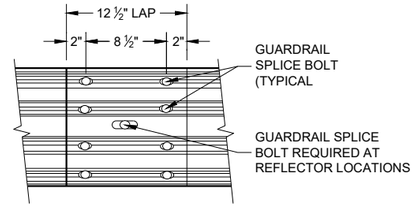
FRONT VIEW
POST SPACING STANDARD INSTALLATION



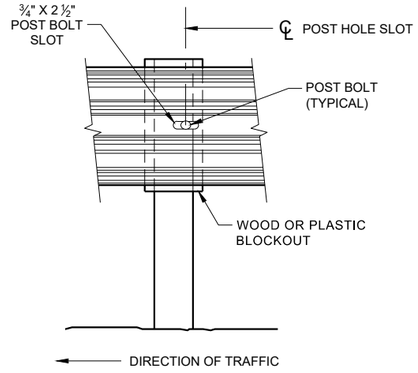
FRONT VIEW
HALF POST SPACING (HS) AND HALF POST SPACING WITH LONGER POSTS (K)



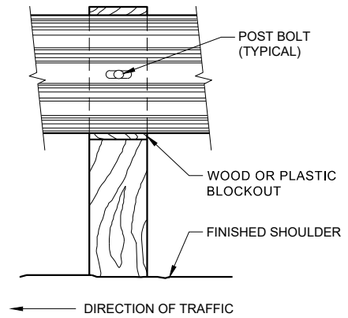
FRONT VIEW
QUARTER POST SPACING (QS)



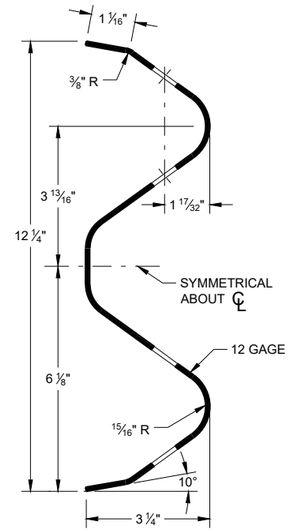
FRONT VIEW
MID-SPAN BEAM SPLICE



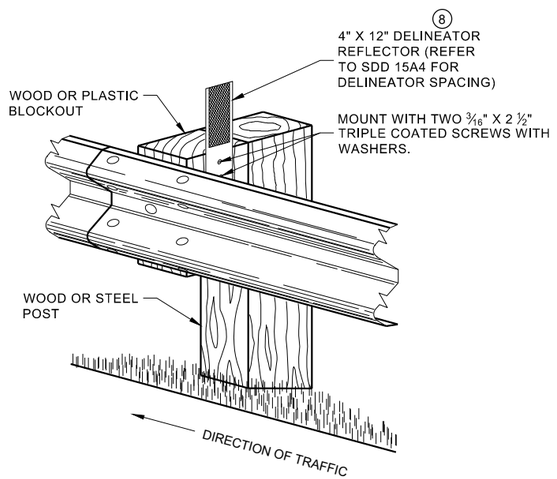
FRONT VIEW AT STEEL POST



FRONT VIEW AT WOOD POST



SECTION THRU W-BEAM RAIL



ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION

GENERAL NOTES

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

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

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

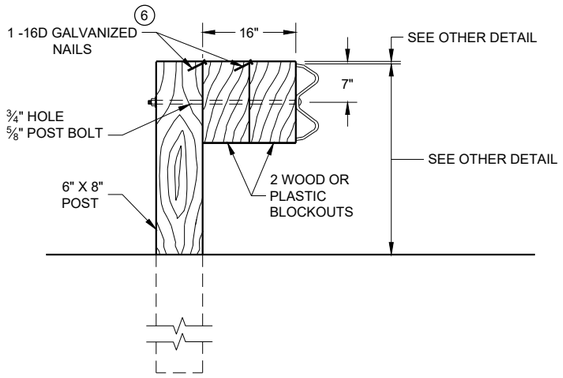
GUARD RAIL SPLICE BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

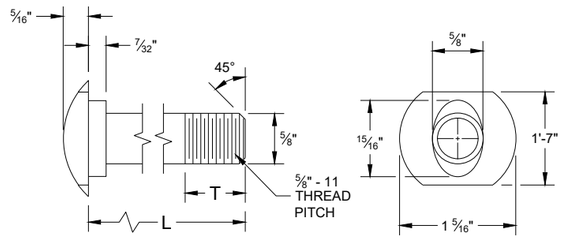


DETAIL FOR 16" BLOCKOUT DEPTH

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

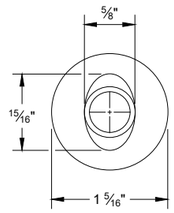
NOTE:

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

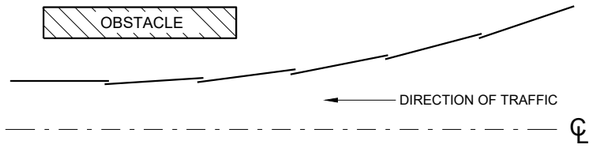


POST BOLT TABLE

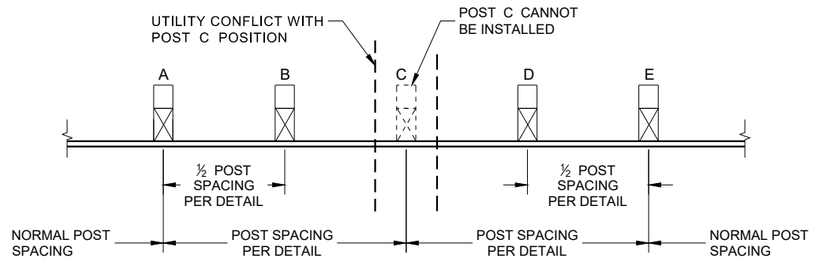
L	T (MIN.)
1 ¼"	1 ⅛"
2"	1 ¾"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"



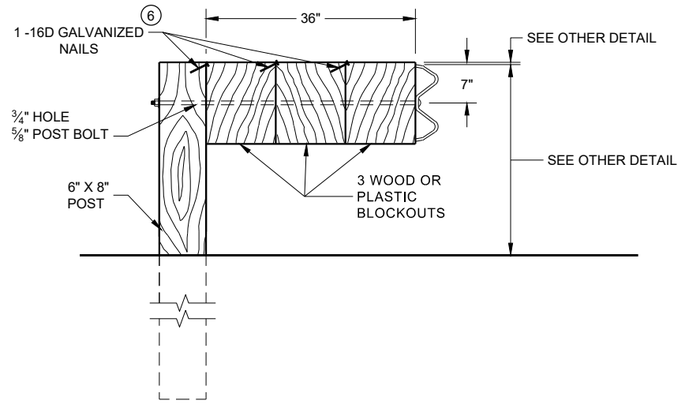
ALTERNATE BOLT HEAD



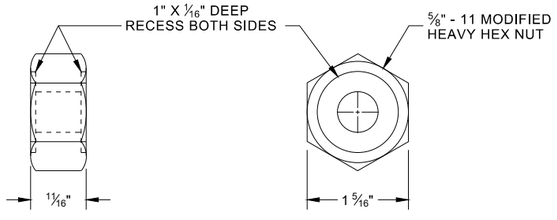
PLAN VIEW
BEAM LAPPING DETAIL



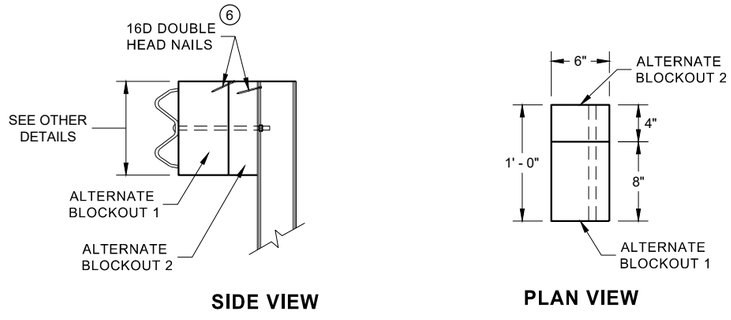
POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



DETAIL FOR 36" BLOCKOUT DEPTH



POST BOLT, SPLICE BOLT AND RECESS NUT



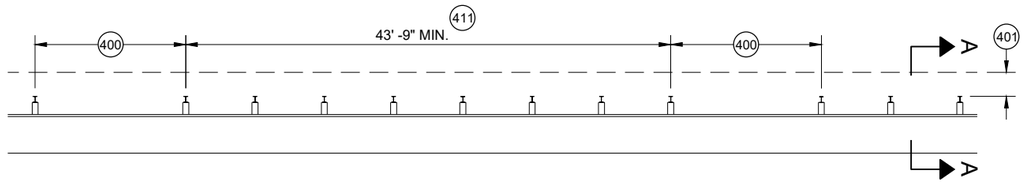
ALTERNATE WOOD BLOCKOUT DETAIL

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

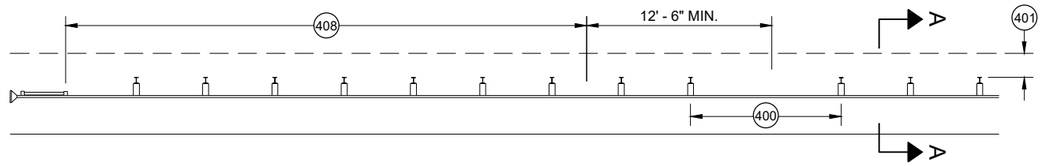
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

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

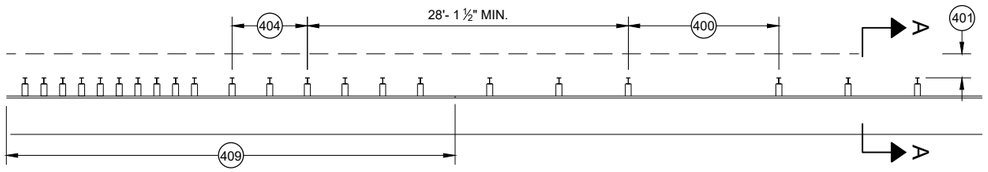
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL



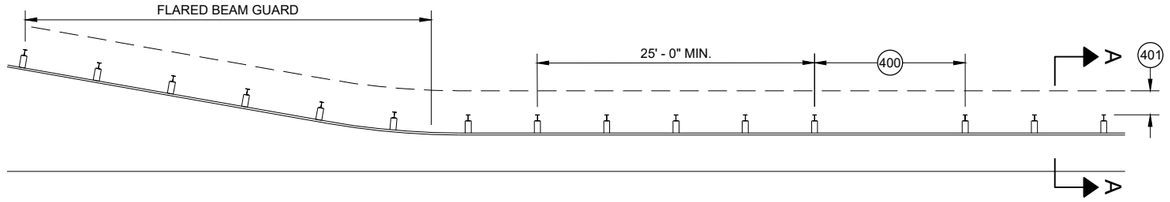
MISSING POST IN MGS GUARDRAIL



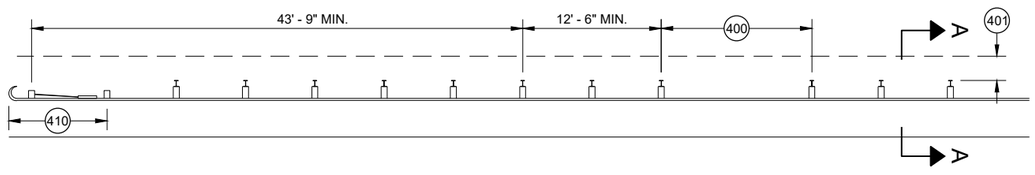
MISSING POST IN MGS GUARDRAIL NEAR EAT



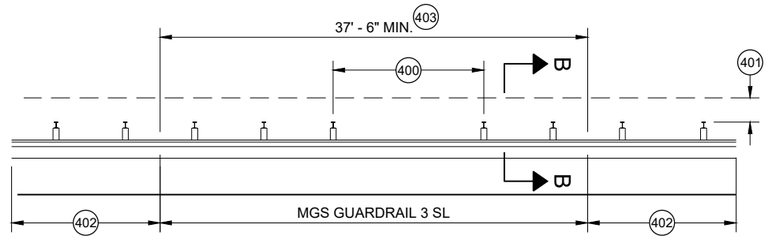
MISSING POST IN MGS GUARDRAIL NEAR AN APPROACH TRANSITION



MISSING POST IN MGS GUARDRAIL NEAR FLARED BEAM GUARD

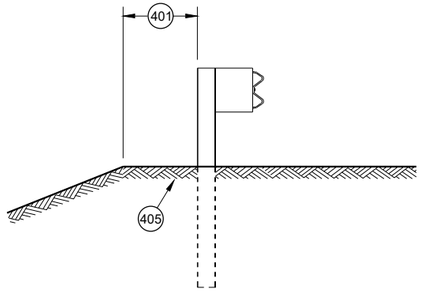


MISSING POST IN MGS GUARDRAIL NEAR A TYPE 2 END TERMINAL

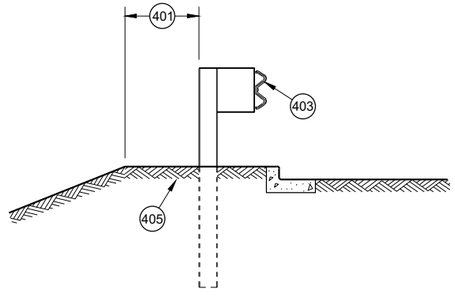


MISSING POST IN SHORT SPAN MGS GUARDRAIL NEAR CURB (SL) 407

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



SECTION A - A 406



SECTION B - B 406

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

6

SDD 14B42 - 07d

GENERAL NOTES

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

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

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

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

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

DIMENSIONS MAY VARY, MANUFACTURER'S INFORMATION.

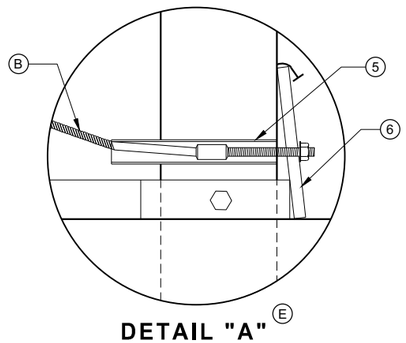
SEE SDD 14B42 FOR MORE INFORMATION.

* DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.

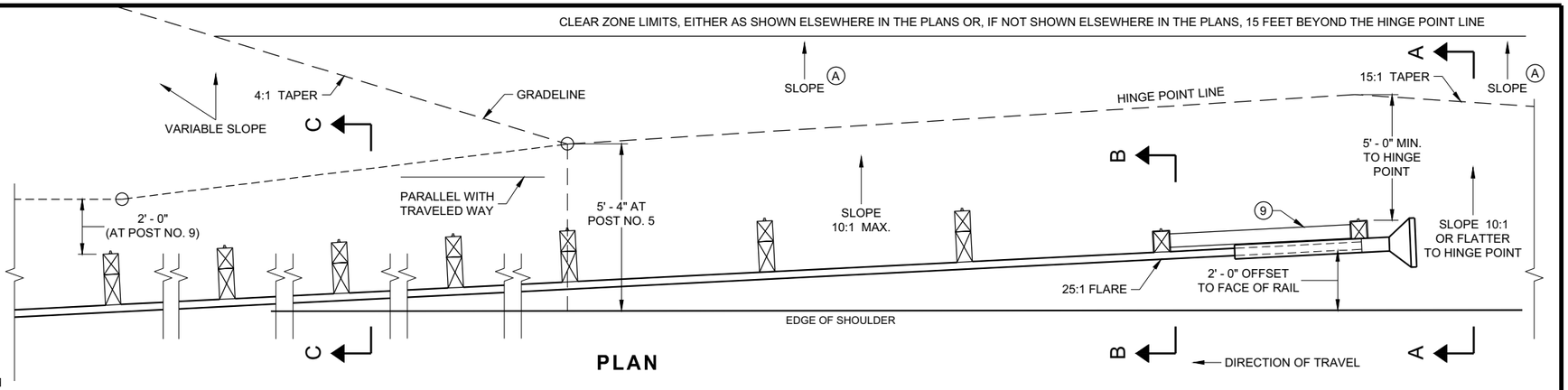
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

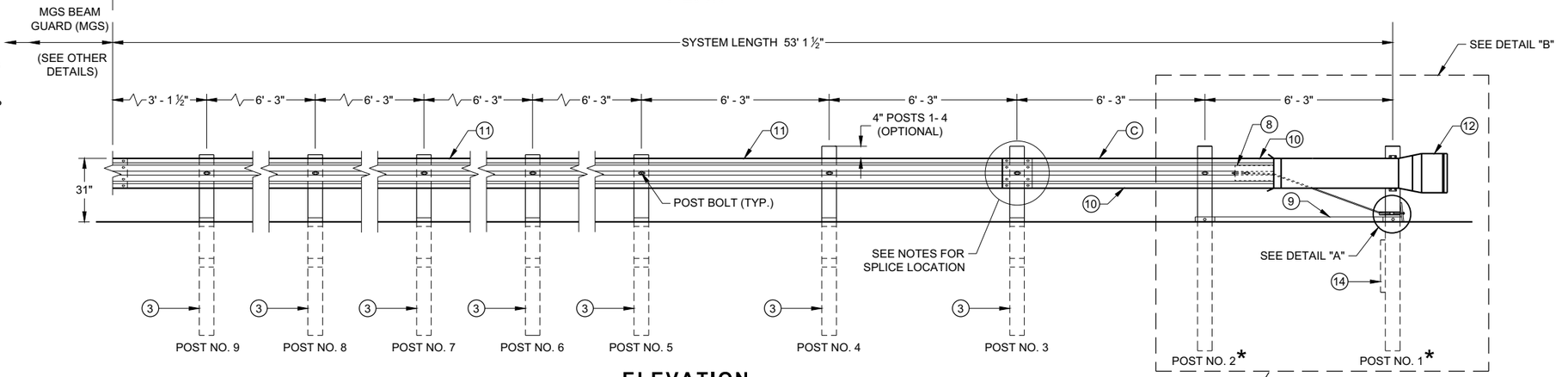
SEE MANUFACTURER'S DRAWING FOR SPLICE LOCATION, HARDWARE DIMENSIONS AND INSTALLATION INSTRUCTIONS.

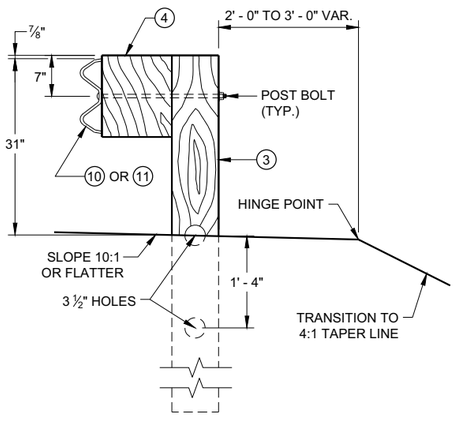
THE CENTER OF THE UPPER 3 ½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE. WOOD BLOCKS ON POSTS NUMBERED 3 THROUGH 9 MAY BE ADJUSTED UP TO 3" ABOVE THE TOP OF POST.



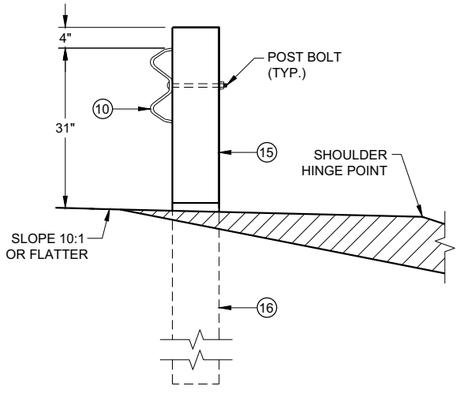
DETAIL "A" (E)



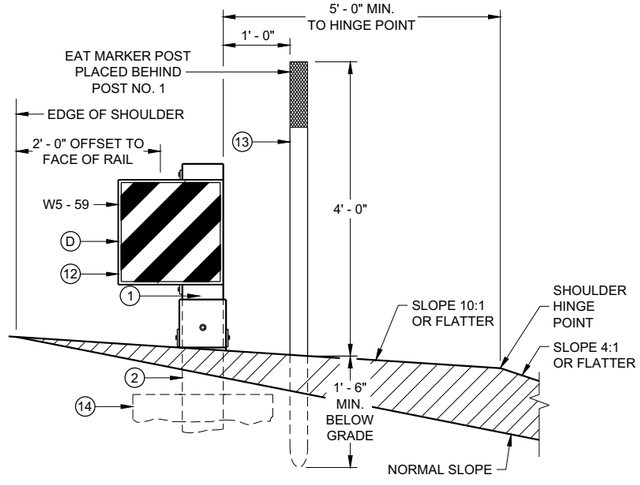




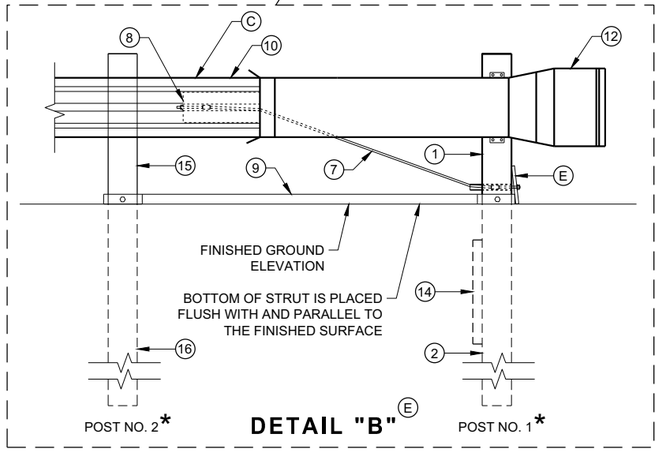
SECTION C - C
TYPICAL AT POST NOS. 3 - 9



SECTION B - B
TYPICAL AT POST NO. 2*



SECTION A - A
TYPICAL AT POST NO. 1*



MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)

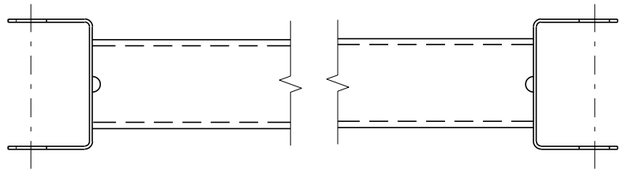
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B44 - 04a

SDD 14B44 - 04a

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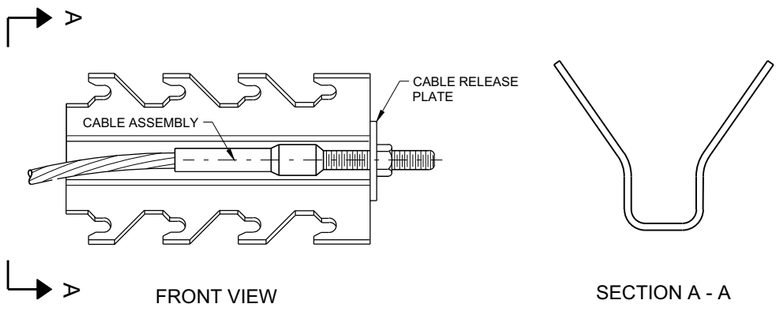
6



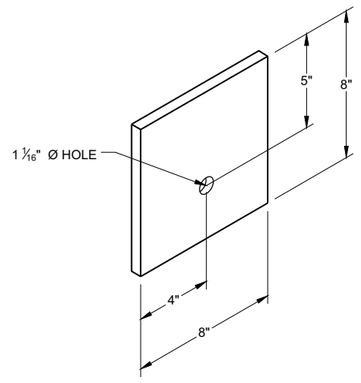
GENERIC GROUND STRUT (9) (E)

BILL OF MATERIALS

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



GENERIC ANCHOR CABLE BOX (9) (E)



BEARING PLATE (6) (E)

6

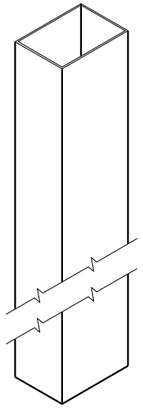
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SDD 14B44 - 04b

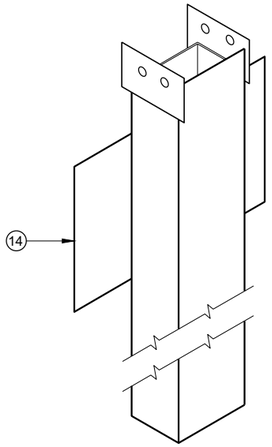
SDD 14B44 - 04b

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

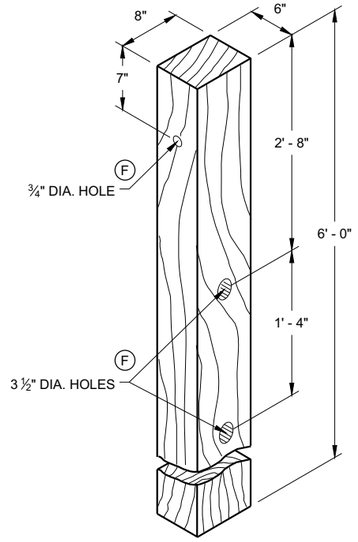
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



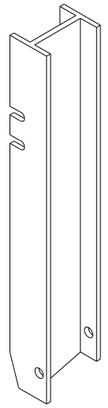
UPPER POST NO. 1 (1) (E)



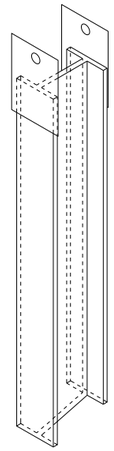
LOWER POST NO. 1 (2) (E)



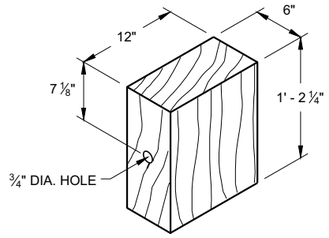
WOOD CRT POST (3) (E)
POSTS NUMBER 3-9



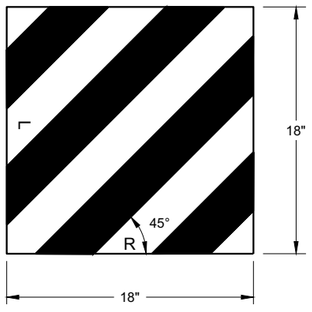
UPPER POST NO. 2 (15) (E)



LOWER POST NO. 2 (16) (E)

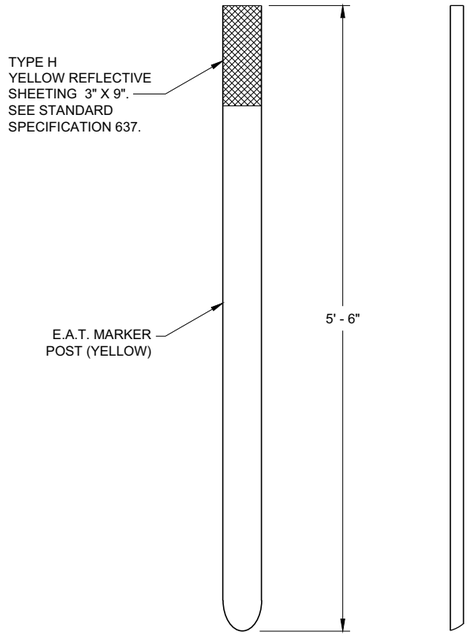


WOOD BLOCKOUT (4)
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



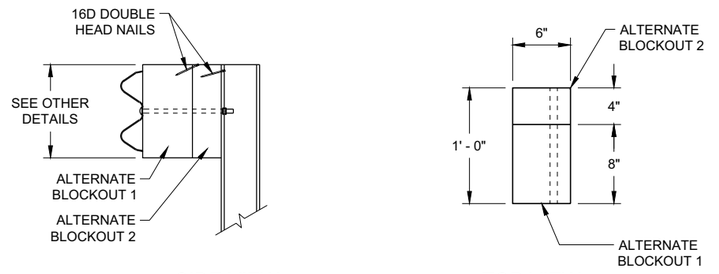
W5 - 59

REFLECTIVE SHEETING DETAIL (E)



FRONT VIEW SIDE VIEW

E.A.T. MARKER POST (13)



SIDE VIEW TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

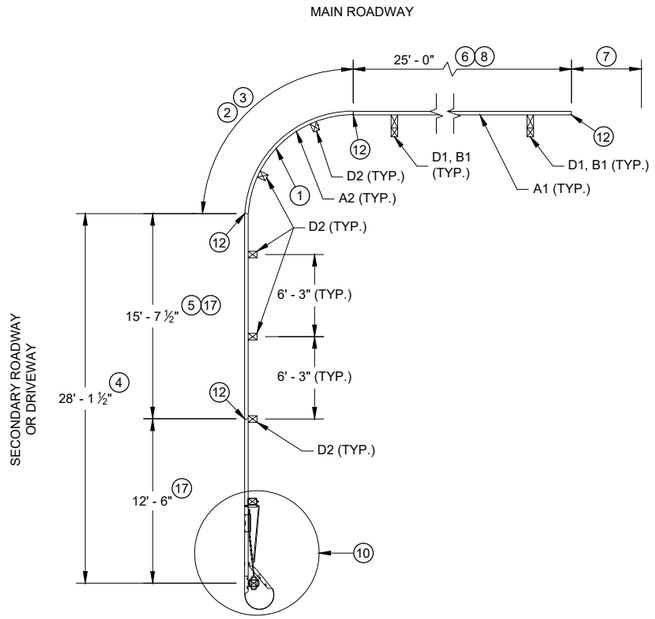
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

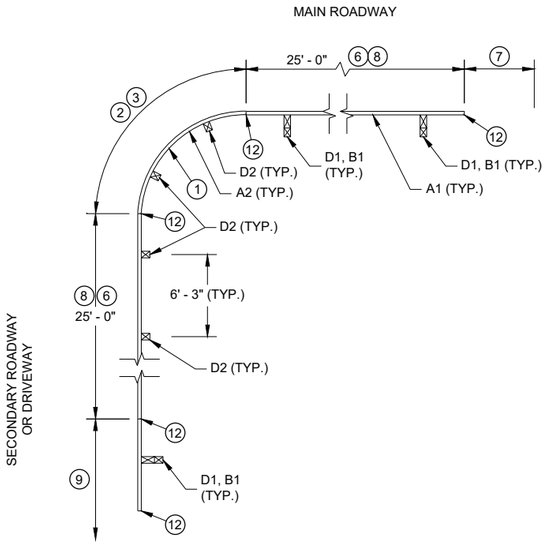
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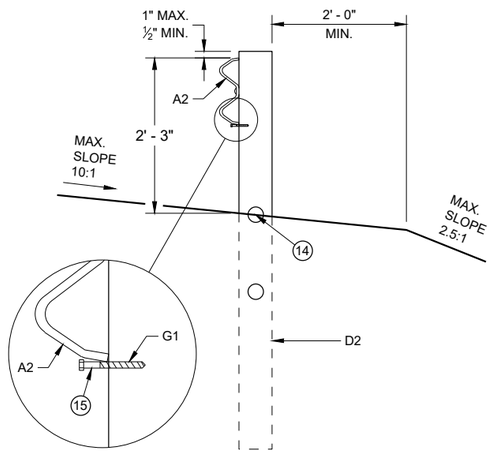
PLAN VIEW

SHORT RADIUS BEAM GUARD WITH SHORT RADIUS TERMINAL ON SECONDARY ROAD OR DRIVEWAY

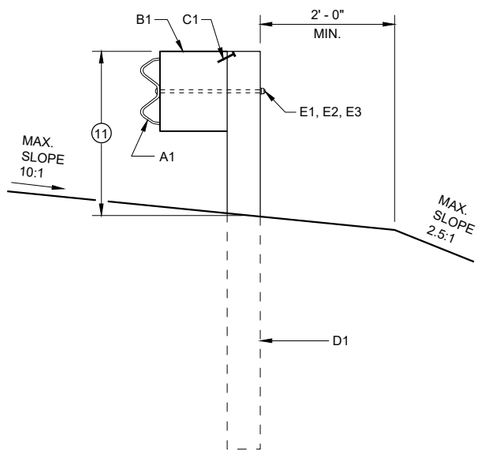


PLAN VIEW

SHORT RADIUS BEAM GUARD WITH EAT, ADDITIONAL BEAM GUARD OR TRANSITION TO RIGID BARRIER ON SECONDARY ROAD OR DRIVEWAY



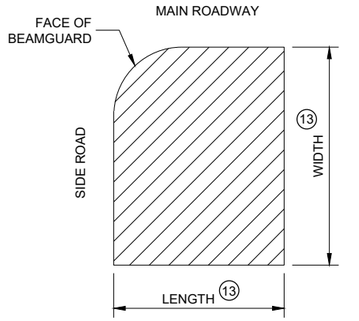
CONTROLLED RELEASE TERMINAL POST (CRT) IN RADIUS



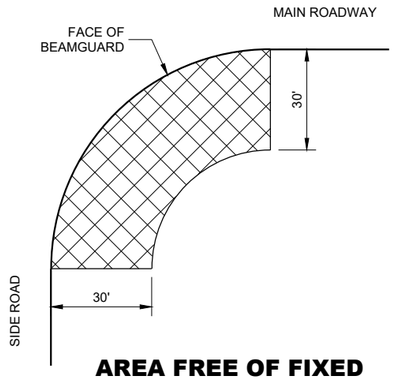
BEAM GUARD POSTS IN HEIGHT TRANSITION

TABLE FOR RADIUS OF 32' AND LESS

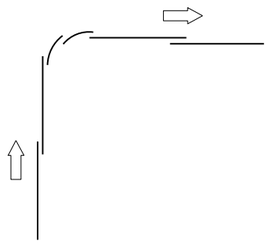
RADIUS (FT)	LENGTH (FT)	WIDTH (FT)
8	25	15
16	30	15
24	40	20
32	50	30



AREA FREE OF FIXED OBJECTS FOR RADIUS 32' AND LESS (16)



AREA FREE OF FIXED OBJECTS FOR RADIUS GREATER THAN 32'



LAP SPLICE DETAIL

GENERAL NOTES

SEE PLANS FOR OTHER BARRIER SYSTEM AND LOCATION SPECIFICS.

SEE SDD 14B42 FOR MORE INFORMATION ON BEAM GUARD INSTALLATION, PARTS, MATERIALS, AND INSTALLATION INFORMATION.

GALVANIZE PARTS AFTER FABRICATION.

WELDING TO FOLLOW CURRENT REQUIREMENTS OF THE AMERICAN WELDING SOCIETY STRUCTURAL WELDING CODE ANSI / AWS D1.1.

UNLESS NOTED OTHERWISE, ALL PLATES ARE FLAT AND FREE OF WARP.

UNLESS NOTED OTHERWISE, ALL EDGES ARE SMOOTH, STRAIGHT AND VERTICAL.

ALL CUTS AND HOLES, EXCEPT IN BEAM GUARD RAIL ARE TO BE MACHINED OR MACHINE FLAME CUT.

UNLESS NOTED OTHERWISE, CUT OR PROVIDE BOLTS THAT ARE ¼" TO ½" BEYOND THE NUT.

DRAWINGS ARE NOT TO SCALE.

(1) RADIUS MEASURE FROM INSIDE OF RAIL. LENGTH OF BEAM GUARD SHORT RADIUS GUARD MEASURED ALONG TRAFFIC SIDE OF RAIL. RADIUS BETWEEN 8 FEET TO 150 FEET. SEE PLAN FOR REQUIRED RADIUS. BEAM GUARD RAIL IN RADIUS IS SHOP BENT. ODD RAIL LENGTH OR FIELD CUTS MAY BE REQUIRED.

(2) CONTROLLED RELEASE TERMINAL (CRT) POSTS ARE USED IN THE RADIUS. CONTROLLED RELEASE TERMINAL (CRT) POSTS ARE SPACED 6' - 3". SEE PLAN FOR NUMBER OF CONTROLLED RELEASE (CRT) POSTS.

(3) WITHIN RADIUS BEAM GUARD RAILS ARE NOT BOLTED TO POSTS. BEAM GUARD RAIL IS RESTED ON TOP OF LAG SCREW.

(4) MINIMUM LENGTH OF BEAM GUARD ALONG SIDE ROAD OR DRIVEWAY TO INSTALL SHORT RADIUS TERMINAL. BEAM GUARD IS PAID WITH BEAM GUARD ITEM.

(5) ODD LENGTH OF BEAM GUARD REQUIRED TO INSTALL SHORT RADIUS TERMINAL.

(6) MINIMUM AMOUNT OF BEAM GUARD TO BE INSTALLED PRIOR TO TRANSITION TO RIGID BARRIER. ADDITIONAL BEAM GUARD, OR EAT. BEAM GUARD PAID FOR WITH BEAM GUARD ITEM. SEE PLANS FOR MORE DETAIL.

(7) BEAM GUARD, EAT, OR TRANSITION TO RIGID BARRIER. SEE PLAN.

(8) TOP OF BEAM GUARD BY THE RADIUS IS 27". HEIGHT OF BEAM GUARD IS 31" BY TRANSITION TO RIGID BARRIER, ADDITIONAL BEAM GUARD OR EAT.

(9) ADDITIONAL BEAM GUARD, EAT OR TRANSITION TO RIGID BARRIER. BEAM GUARD SHOWN. SEE PLAN FOR DETAILS.

(10) SHORT RADIUS TERMINAL (SEE OTHER DETAILS).

(11) HEIGHT VARIES. SEE NOTE (8) AND (8).

(12) BEAM GUARD RAIL SPLICE LOCATION. SPLICE LOCATION REQUIRES PART F1 AND F2. SEE SDD 14B42 FOR DETAILS.

(13) SEE TABLE FOR VALUES.

(14) MAXIMUM HEIGHT FOR CENTER OF HOLE IS ¾" ABOVE FINISHED GROUND ±1".

(15) DRILL POST $^{15}/_{64}$" DIA. PILOT HOLE. DO NOT HAMMER LAG SCREW INTO POST.

(16) SMALL SIGNS ON BREAKAWAY HARDWARE ARE ACCEPTABLE.

(17) TOP OF RAIL HEIGHT IS 27" WHEN USING A SHORT RADIUS TERMINAL (CRT).

SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)

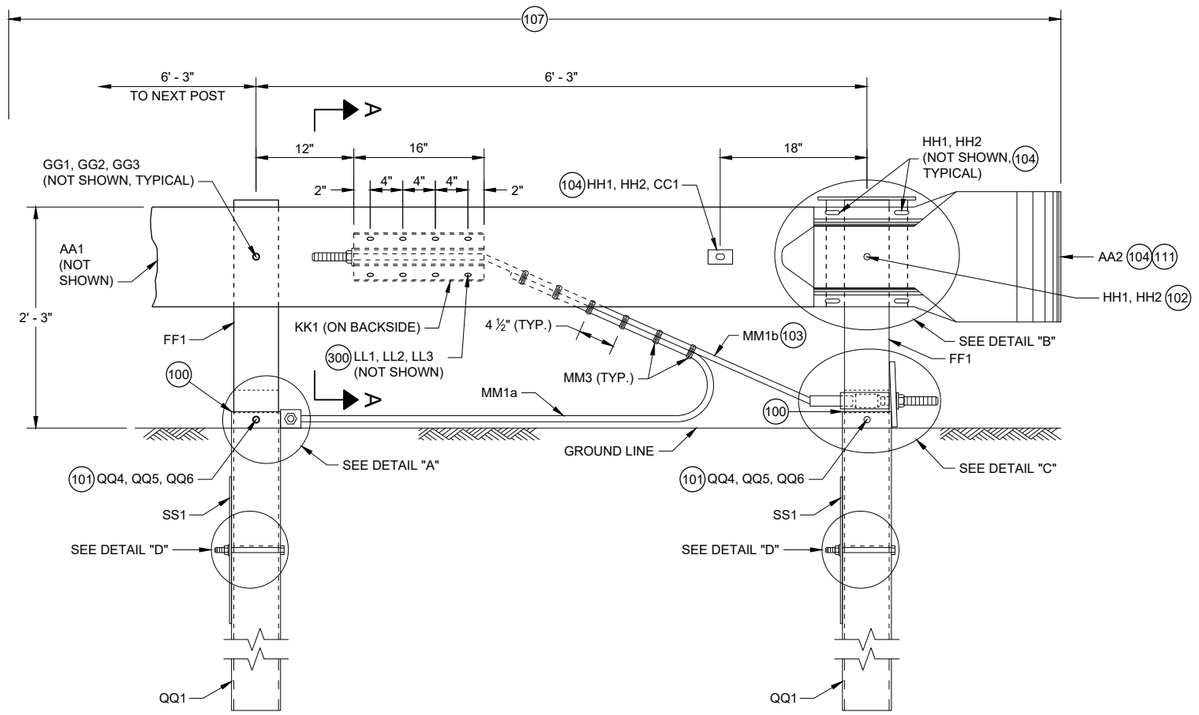
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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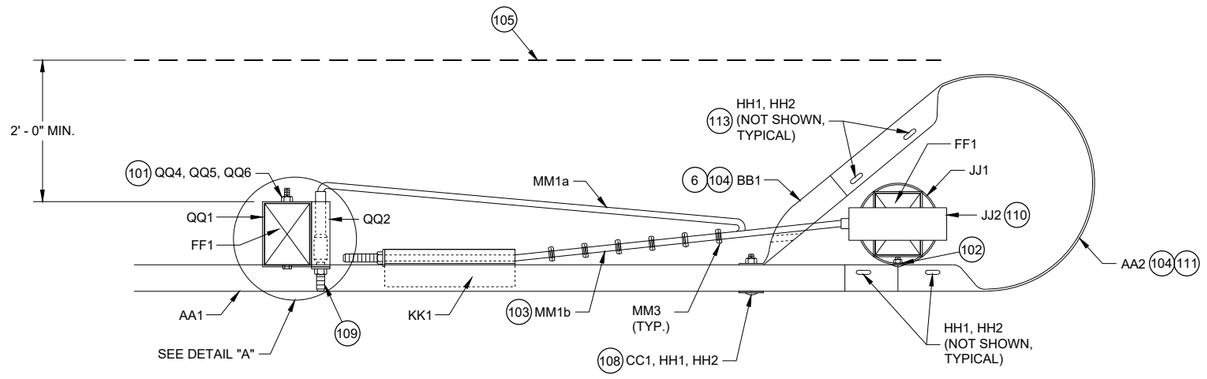
6

SDD 14B53 - 02a



PROFILE VIEW

SHORT RADIUS TERMINAL



TOP VIEW

SHORT RADIUS TERMINAL

GENERAL NOTES

100 TOP OF FOUNDATION TUBE 2 INCHES MAXIMUM ABOVE FINISHED GROUND.

101 WASHERS REQUIRED BETWEEN BOLT HEAD AND FOUNDATION TUBE AND BETWEEN NUT AND FOUNDATION TUBE.

102 SPLICE BOLT AND NUT CONNECTS BEAM GUARD RAIL, W-BEAM SECTION BUFFER, AND STEEL PIPE ASSEMBLY. NO WASHER REQUIRED. SEE DETAIL "B".

103 CABLE IS TAUT.

104 ADJUST AA2 AND BB1 TO FIT.

105 BREAK POINT OF SHOULDER.

106 TACK WELD CABLE CONNECTOR TUBE PLATE TO CABLE CONNECTION TUBE. SEE DETAIL "A" PROFILE VIEW.

107 PAY LIMIT FOR BEAM GUARD.

108 SQUARE WASHER BETWEEN HEAD OF BOLT AND TRAFFIC FACE OF BEAM GUARD. ROUND WASHER REQUIRED BETWEEN NUT AND BB1.

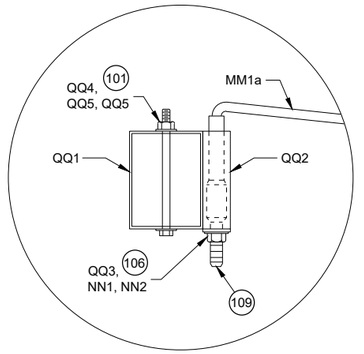
109 CUT OR PROVIDE THREADED STUD THAT IS FLUSH WITH FACE OF BEAM GUARD RAIL KK1 (PLUS OR MINUS ½" TOLERANCE). DEBURR AFTER CUTTING.

110 SEE STEEL PIPE ASSEMBLY DETAILS.

111 ATTACH UU2 WITH UU3. SHOP APPLY UU1 TO UU2.

112 FOUR (4) HH1 AND HH2 REQUIRED TO ATTACH AA1 TO AA2.

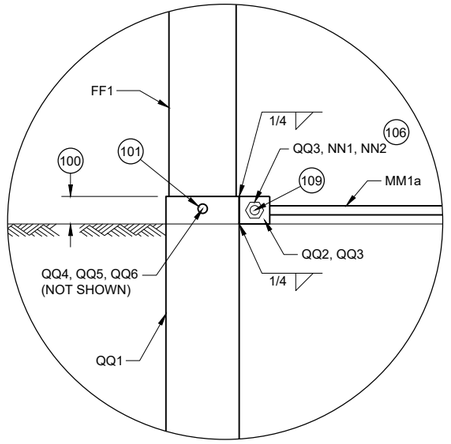
113 FOUR (4) HH1 AND HH2 REQUIRED TO ATTACH AA2 TO BB1.



TOP VIEW

DETAIL "A"

(WOOD BREAKAWAY AND BEAM GUARD RAIL POSTS NOT SHOWN)



PROFILE VIEW

DETAIL "A"

SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

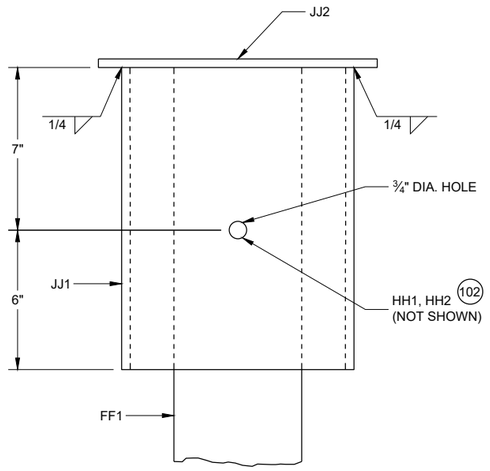
SDD 14B53 - 02b

6

SDD 14B53 - 02b

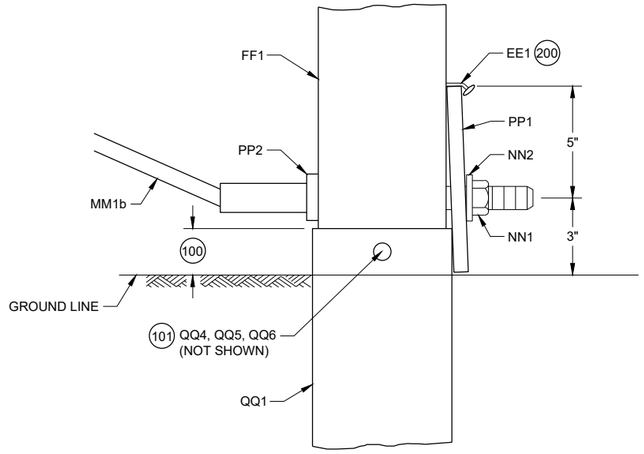
GENERAL NOTES

(200) TWO (2) NAILS SPACED 4 INCHES CENTER TO CENTER.



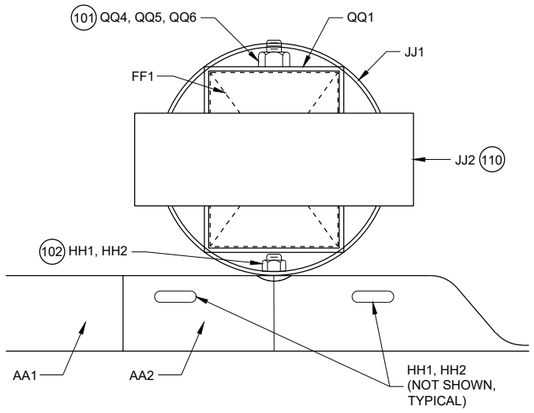
PROFILE VIEW

DETAIL "B"
STEEL PIPE ASSEMBLY
(BEAM GUARD AND W BEAM END SECTION NOT SHOWN)



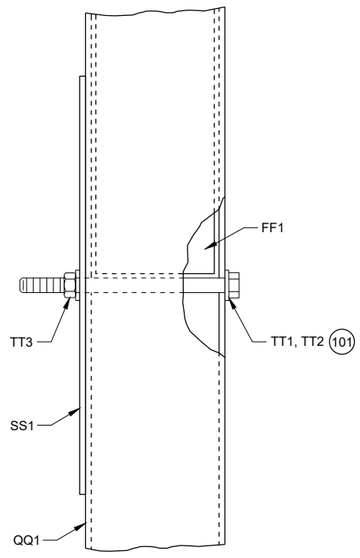
PROFILE VIEW

DETAIL "C"



PLAN VIEW

DETAIL "B"
STEEL PIPE ASSEMBLY



PROFILE VIEW

DETAIL "D"

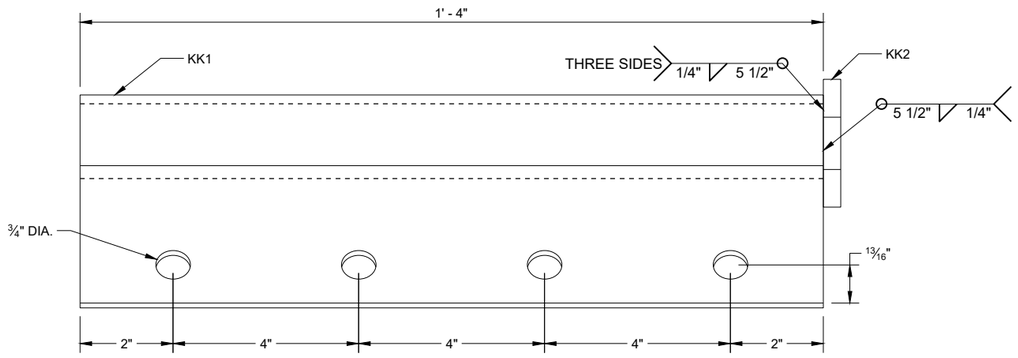
SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)

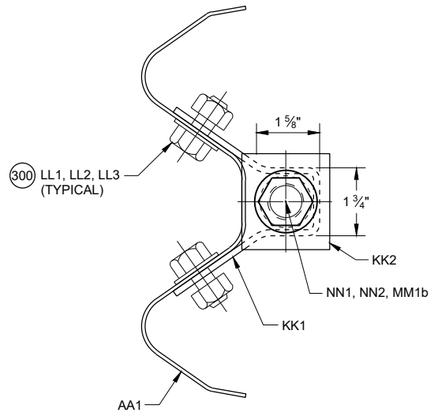
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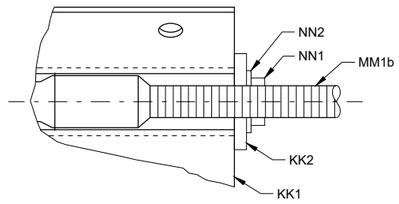
SDD 14B53 - 02c

GENERAL NOTES

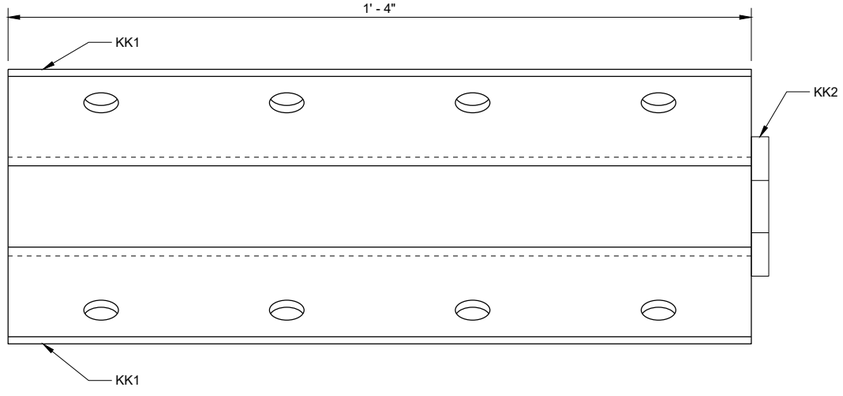
(300) WASHERS REQUIRED BETWEEN BOLT HEAD AND BEAM GUARD RAIL AND BETWEEN NUT AND ANCHOR BRACKET. EIGHT (8) LL1 AND LL3 REQUIRED. SIXTEEN (16) LL2 REQUIRED.

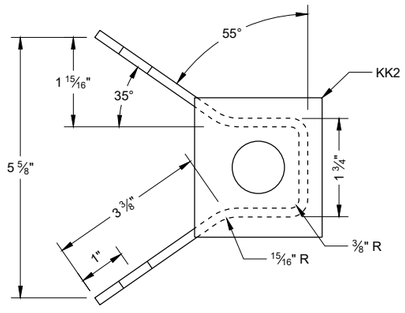




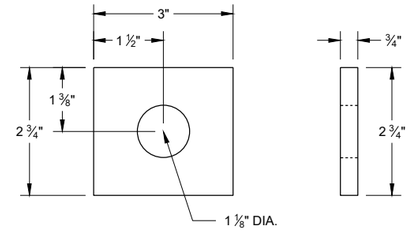


SECTION A - A





ANCHOR BRACKET (KK1, KK2)



ANCHOR BRACKET BEARING PLATE (KK2)

6

6

SDD 14B53 - 02d

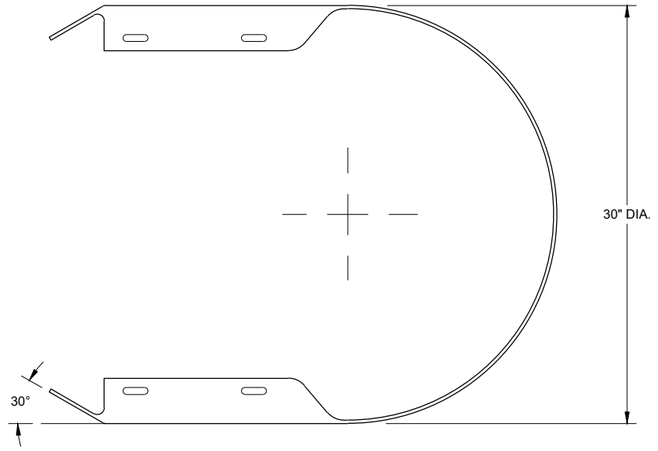
SDD 14B53 - 02d

SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)

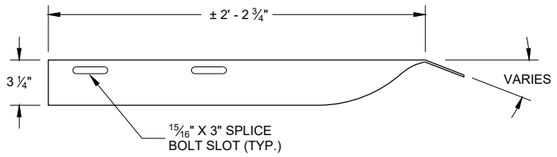
GENERAL NOTES

(400) CROSS SECTION OF PART IS TO FIT OVER AA1 .

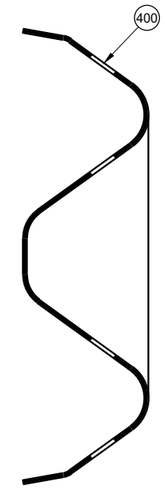
(401) CROSS SECTION OF PART IS TO FIT OVER OR UNDER AA1 .



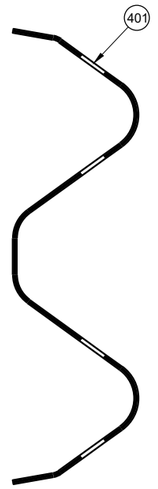
TOP VIEW



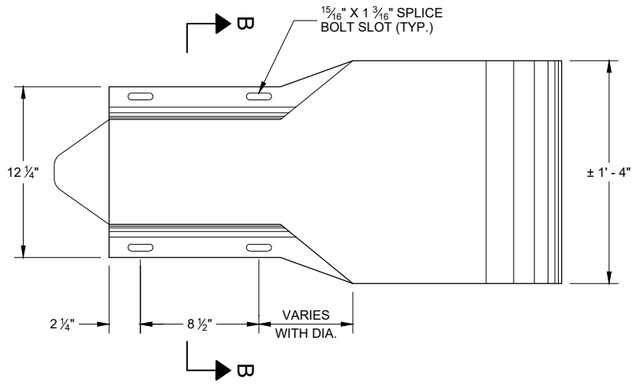
TOP VIEW



SECTION B -B

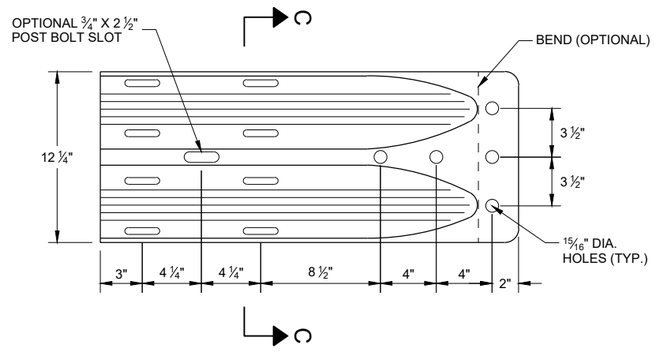


SECTION C -C



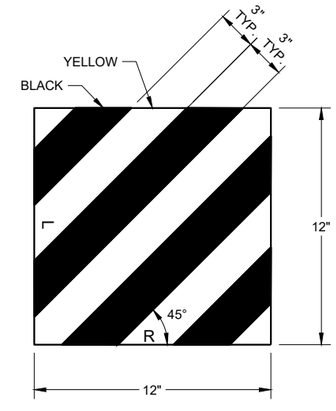
PROFILE VIEW

W BEAM
END SECTION BUFFER (AA2)



PROFILE VIEW

W BEAM
TERMINAL CONNECTOR (BB1)



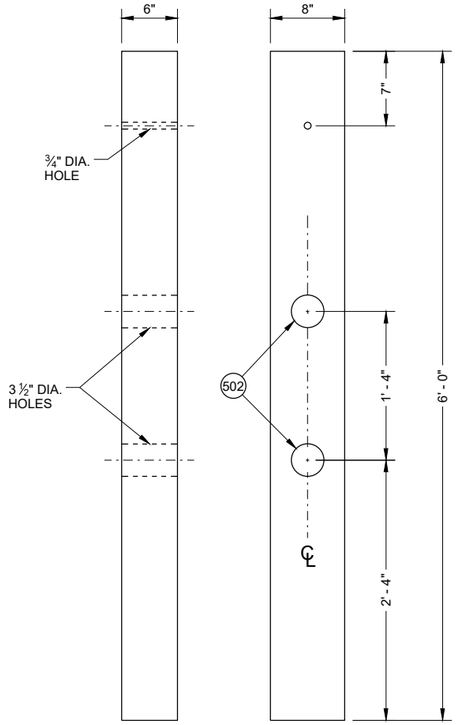
REFLECTIVE SHEETING (UU1, UU2)

SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

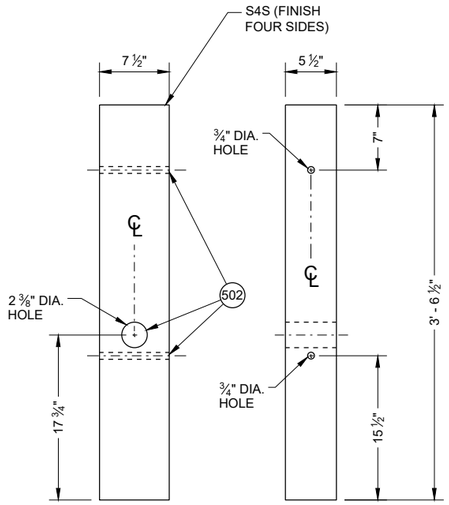
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SDD 14B53 - 02e



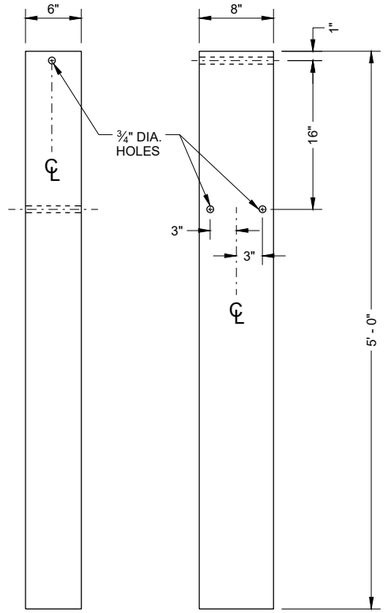
FRONT VIEW SIDE VIEW

CONTROLLED RELEASE POST (CRT) (DD2)



FRONT VIEW SIDE VIEW

WOOD BREAKAWAY POST (FF1)



FRONT VIEW SIDE VIEW

FOUNDATION TUBE (QQ1) (500)

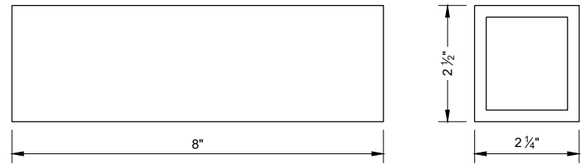
GENERAL NOTES

(500) SEE DETAIL "D" FOR LOCATION AND ATTACHMENT OF SS1.

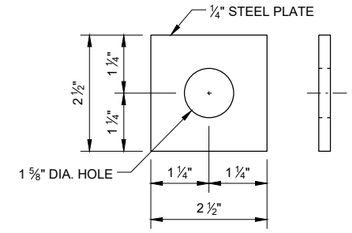
(501) FOR MM1a THREADED STUD ONLY REQUIRED ON ONE END. SWAGED FITTING REQUIRED.

(502) LOCATE HOLES ON THE CENTERLINE OF THE SIDE OF THE POST.

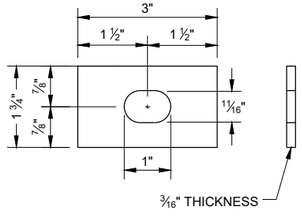
(503) MM1a MAY HAVE ONE THREADED STUD 4 INCHES LONG. SEE NOTE (109).



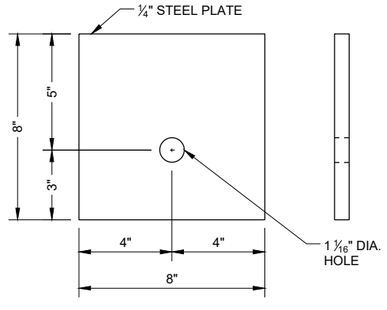
FOUNDATION TUBE - ANCHOR CABLE TUBE (QQ2)



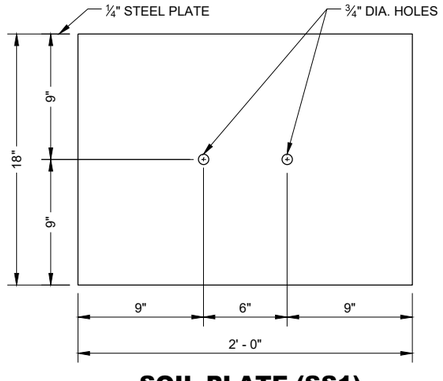
ANCHOR CABLE TUBE END PLATE (QQ3)



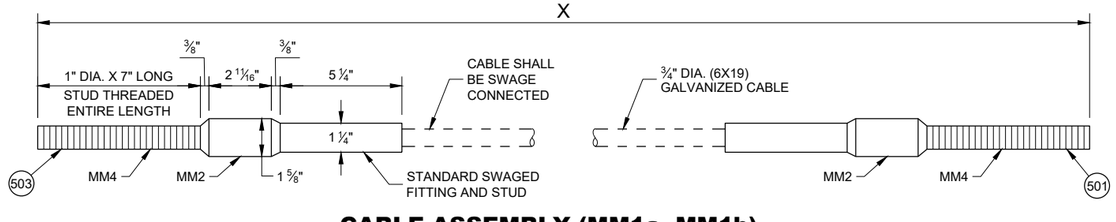
RECTANGULAR PLATE WASHER (CC1)



BEARING PLATE (PP1)



SOIL PLATE (SS1)



CABLE ASSEMBLY (MM1a, MM1b)

"X" LENGTH

MM1b	9' - 0"
MM1b	6' - 8"

SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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SDD 14B53 - 02f

BILL OF MATERIALS - SHORT RADIUS BEAM GUARD (MGS)

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
A1	BEAM GUARD RAIL	AASHTO M180, CLASS A, TYPE 2	
		APPROVED PRODUCER	
A2	BEAM GUARD RAIL - SHOP BENT	INDICATE ON BACK OF RAIL THE RADIUS THAT RAIL WAS BENT TO. SHOP BEND RADIUS IS TO THE NEAREST FOOT. FOLLOW AASHTO M180 ON HOW TO MARK RADIUS INFORMATION.	
		AASHTO M180, CLASS A, TYPE 2	
		APPROVED PRODUCER	
B1	BLOCK - WOOD	WISDOT SPEC. 614	SEE SDD 14B42
C1	NAIL	ASTM A153 HOT DIP CLASS D	
		ASTM F1667 TYPE 1 STYLE 12 (16 DOUBLE HEAD)	
D1	POST-STRONG POST-WOOD	WISDOT SPEC. 614	SEE SDD 14B42
D2	POST-CRT-WOOD	WISDOT SPEC. 614	
E1	POST BOLT	ASTM A307 GRADE A OR SAE J429 GRADE 2	5/8" DIA. SEE SDD 14B42 FOR BOLT GEOMETRY
		AASHTO M180	
		GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	
		UNC	
E2	POST BOLT - WASHER	ASTM F436 TYPE 1 (HARDEN TYPICALLY USED WITH STEEL) OR ASTM F844 (UNHARDENED TYPICALLY WITH WOOD)	5/8" DIA.
		GALV. AASHTO M111 / ASTM A 123 OR GALV. HOT DIP. TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329	
E3	POST BOLT - NUT	AASHTO M180 DOUBLE RECESSED HEAVY HEX HEAD	5/8" DIA. SEE SDD 14B42 FOR BOLT GEOMETRY
		GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	
		UNC	
		OVER TAPPED NUTS OVER-SIZE AS SPECIFIED IN AASHTO 291 / ASTM A 563	
		ASTM A563 GRADE A HEAVY HEX HEAD	
F1	SPLICE BOLT	GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	5/8" DIA. SEE SDD 14B42 FOR BOLT GEOMETRY
		ASTM A307 GRADE A OR SAE J429 GRADE 2	
		UNC	
		AASHTO M180	

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
F2	SPLICE BOLT - NUT	ASTM A563 GRADE A	5/8" DIA. SEE SDD 14B42 FOR BOLT GEOMETRY
		AASHTO M180 DOUBLE RECESSED HEAVY HEX HEAD	
		GALV. HOT DIP TO AASHTO M232 CLASS C/ASTM A153 CLASS C/ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1/ASTM B695 CLASS 50, TYPE 1	
		OVER TAPPED NUTS OVER-SIZE AS SPECIFIED IN AASHTO 291 / ASTM A 563	
		UNC	
G1	LAG SCREW	ASTM A308 GRADE A ASTM A153 CLASS D	1/2" DIA. 6" LONG
H1	DELINEATOR - BEAM GUARD		SEE SDD 14B42 FOR MORE INFORMATION
H2	DELINEATION - SHEETING	YELLOW OR WHITE	
		WISDOT SPEC 637 TYPE SH	
		APPROVED PRODUCT LIST	
J1	FOUNDATION BACKFILL	STANDARD SPEC. 614	
AA1	BEAM GUARD RAIL - PUNCHED	AASHTO M180, CLASS A, TYPE 2	
		APPROVED PRODUCER	
AA2	BEAM GUARD RAIL - END SECTION BUFFER	AASHTO M180, CLASS A, TYPE 2	
		APPROVED PRODUCER	
BB1	BEAM GUARD RAIL - TERMINAL CONNECTOR MODIFIED	AASHTO M180, CLASS A, TYPE 2	
		APPROVED PRODUCER	
CC1	SHORT RADIUS - SQUARE WASHER	AASHTO M180	
		GALV. AASHTO M111 / ASTM A123	
EE1	NAIL	ASTM A153 HOT DIP CLASS D	
		ASTM F1667 TYPE 1 STYLE 12 (16 DOUBLE HEADED)	
FF1	POST - BCT - WOOD	S4S FINISH ON 4 SIDES	
		WISDOT SPEC. 614	
GG1	POST BOLT	ASTM A307 GRADE A OR SAE J429 GRADE 2	3/8" DIA. SEE SDD 14B42 FOR BOLT GEOMETRY
		AASHTO M180	
		GALV. HOT DIP TO AASHTO M232 CLASS C/ASTM A153 CLASS C/ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1/ASTM B695 CLASS 50, TYPE 1	
		UNC	
GG2	POST BOLT - WASHER	ASTM F436 TYPE 1 (HARDEN TYPICALLY USED WITH STEEL) OR ASTM F844 (UNHARDENED TYPICALLY WITH WOOD)	3/8" DIA.
		GALV. AASHTO M111 / ASTM A 123 OR GALV. HOT DIP. TO AASHTO M232 CLASS C/ASTM A153 CLASS C / ASTM F2329	

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SDD 14B53 - 02g

SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTA

BILL OF MATERIALS - SHORT RADIUS BEAM GUARD (MGS)

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
GG3	POST BOLT - NUT	ASTM A563 GRADE A	⅜" DIA. SEE 14B42 FOR GEOMETRY
		AASHTO M180 DOUBLE RECESSED HEAVY HEX HEAD	
		GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	
		UNC	
		OVER TAPPED NUTS OVER-SIZE AS SPECIFIED IN AASHTO 291 / ASTM A 563	
		ASTM A563 GRADE A HEAVY HEX HEAD	
HH1	SPLICE BOLT	GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	⅜" DIA. SEE SDD 14B42 FOR BOLT GEOMETRY
		ASTM A307 GRADE A OR SAE J429 GRADE 2	
		UNC	
		AASHTO M180 HEAD GEOMETRY	
HH2	SPLICE BOLT - NUT	ASTM A563 GRADE A	⅜" DIA. SEE SDD 14B42 FOR BOLT GEOMETRY
		AASHTO M180 DOUBLE RECESSED HEAVY HEX HEAD	
		GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	
		OVER TAPPED NUTS OVER-SIZE AS SPECIFIED IN AASHTO 291 / ASTM A 563	
		UNC	
JJ1	PIPE - STEEL	ASTM A53 GALVANIZED GRADE B SCHEDULE 40	10" O.D.
JJ2	TOP PLATE	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	DIMENSIONS ⅜" X 4" X 1' - 0"
		GALV. AASHTO M111 / ASTM A123	
KK1	ANCHOR BRACKET	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	
		GALV. AASHTO M111 / ASTM A123	
KK2	ANCHOR BRACKET - BEARING PLATE	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	
		GALV. AASHTO M111 / ASTM A123	
LL1	ANCHOR BRACKET - BOLT	ASTM A307 GRADE B HEAVY HEX HEAD OR SAE J429 GRADE 2 HEAVY HEX HEAD	⅝" DIA.
		GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	
		UNC	

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
LL2	ANCHOR BRACKET - WASHER	ASTM F436 TYPE 1 (HARDEN WASHER ONLY)	⅝" DIA.
		GALV. AASHTO M111 / ASTM A123 OR GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329	
LL3	ANCHOR BRACKET - NUT	ASTM A563 GRADE A	⅝" DIA.
		GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	
		OVER TAPPED NUTS OVER-SIZE AS SPECIFIED IN AASHTO 291 / ASTM A 563	
		UNC	
MM1a	ANCHOR CABLE	AASHTO M30 / ASTM A741 INDEPENDENT WIRE CORE (IWRC) OR WIRE STRAND CORE (WCS), IMPROVED PLOW STEEL (IPS), 6X19, TYPE II OR IIc CLASS C ZINC COATED	
MM1b	ANCHOR CABLE	AASHTO M30 / ASTM A741 INDEPENDENT WIRE CORE (IWRC) OR WIRE STRAND CORE (WCS), IMPROVED PLOW STEEL (IPS), 6X19, TYPE II OR IIc CLASS C ZINC COATED	
MM2	ANCHOR CABLE - SWAGE FITTING	ASTM A576 GRADE 1035	
		SWAGE FITTINGS ARE TO BE FACTORY SWEDGED. WITH A BREAKING STRENGTH 40,000 LBS.	
		GALV. AASHTO M111 / ASTM A123	
		ASME B30.26 FORGED, CAST, OR DIE STAMPED WITH THE FOLLOWING INTO CONNECTION: NAME OF MANUFACTURER OR TRADEMARK OF CONNECTION'S MANUFACTURER, SIZE OR RATED LOAD, GRADE.	
MM3	WIRE ROPE CABLE CLAMPS	FF-C-450D TYPE 1 CLASS 1	¾"
		ASTM A153 HOT DIP CLASS D	
MM4	ANCHOR CABLE - SWAGE FITTING - STUD	ASTM F3125 GRADE A325 TYPE 1 OR SAE GRADE 5 OR ASTM A449 TYPE 1 HEAVY HEX HEAD	
		GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	
		UNC	
NN1	ANCHOR CABLE - NUT	ASTM A563 GRADE A	1" DIA.
		AASHTO M180 DOUBLE RECESSED HEAVY HEX HEAD	
		GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	
		OVER TAPPED NUTS OVER-SIZE AS SPECIFIED IN AASHTO 291 / ASTM A 563	
		UNC	
NN2	ANCHOR CABLE - NUT - WASHER	ASTM F436 TYPE 1 (HARDEN WASHER ONLY)	1" DIA.
		GALV. AASHTO M111 / ASTM A123 OR GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329	

SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)

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SDD 14B53 - 02h

BILL OF MATERIALS - SHORT RADIUS BEAM GUARD (MGS)

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
PP1	BEARING PLATE AT POST	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	
		GALV. AASHTO M111 / ASTM A123	
PP2	PIPE - STEEL	ASTM A53 GALVANIZED GRADE B SCHEDULE 40	2" DIA. x 6" LONG
QQ1	FOUNDATION TUBE	ASTM A500 GRADE B	8" X 6" X 3/16"
		GALV. AASHTO M111 / ASTM A123	
QQ2	SHORT RADIUS - FOUNDATION TUBE - ANCHOR CABLE - TUBE	ASTM A500 GRADE B	DIMENSIONS 2 1/2" X 2 1/4" X 1/4" X 8"
		GALV. AASHTO M111 / ASTM A123	
QQ3	SHORT RADIUS - SOIL TUBE - ANCHOR CABLE - TUBE - END PLATE	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	DIMENSIONS 2 1/2" X 2 1/2" X 1/4"
		GALV. AASHTO M111 / ASTM A123	
QQ4	GROUND STRUT AND YOKE - BOLT	GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	5/8 DIA.
		ASTM A307 GRADE B HEAVY HEX HEAD OR SAE J429 GRADE 2 HEAVY HEX HEAD	
		UNC	
QQ5	GROUND PLATE AND YOKE - WASHER	ASTM F436 TYPE 1 (HARDEN WASHER ONLY)	5/8 DIA.
		GALV. AASHTO M111 / ASTM A123 OR GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329	
QQ6	GROUND STRUT AND YOKE - NUT	HEAVY HEX	5/8 DIA.
		UNC	
		ASTM A563 GRADE A	
		OVER TAPPED NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563	
		GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
SS1	SOIL PLATE	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	
		GALV. AASHTO M111 / A123	
TT1	SOIL PLATE - BOLT	ASTM A307 GRADE B HEAVY HEX HEAD OR SAE J429 GRADE 2 HEAVY HEX HEAD	5/8 DIA.
		GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	
		UNC	
TT2	SOIL PLATE - WASHER	ASTM F436 TYPE 1 (HARDEN WASHER ONLY)	5/8 DIA.
		GALV. AASHTO M111 / ASTM A123 OR GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329	
TT3	SOIL PLATE - NUT	GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	5/8 DIA.
UU1	OBJECT MARKER - SHEETING	MUTCD / WISDOT OBJECT MARKER TYPE 3	PATTERN AND COLOR FOR SHEETING. SHEETING TYPE FOR MARKER.
		WISDOT SPEC 637 TYPE F	
		APPROVED PRODUCT LIST	
UU2	OBJECT MARKER - ALUMINUM PLATE	WISDOT SPEC 637 ALUMINUM PLATE	MATERIAL AND THICKNESS OF MATERIALS
UU3	OBJECT MARKER - SCREWS	STAINLESS SELF-TAPPING SCREWS	
VV1	FOUNDATION BACKFILL	WISDOT SPEC 614	

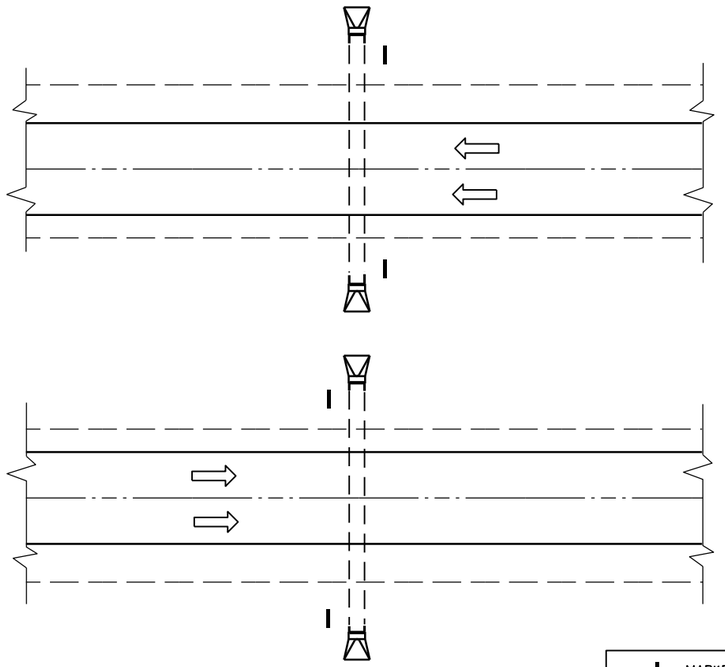
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SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

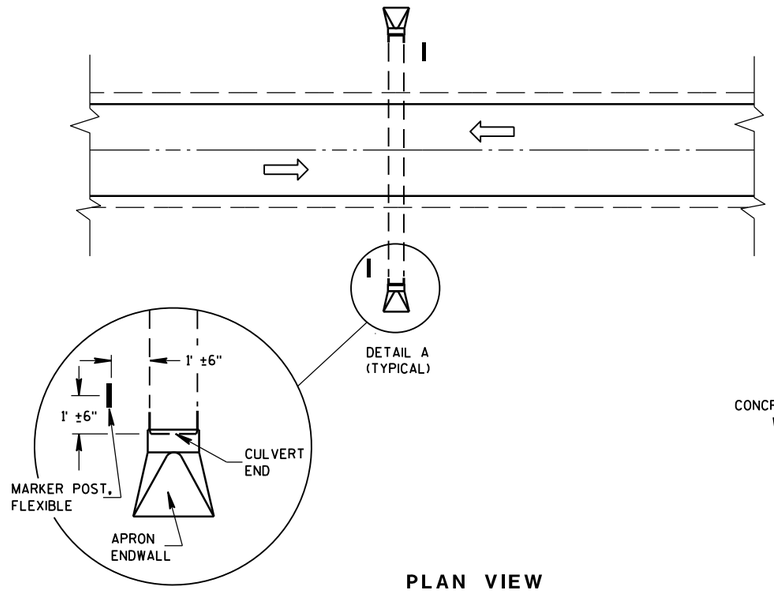
APPROVED
May 2022 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE ENGINEER
FHWA

SDD 14B53 - 02i



PLAN VIEW

DIVIDED HIGHWAY



DETAIL A
(TYPICAL)

PLAN VIEW

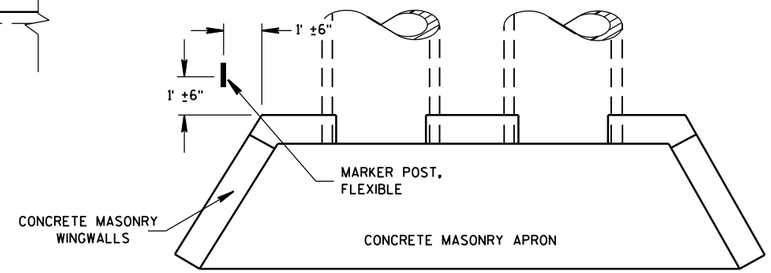
UNDIVIDED HIGHWAY

MARKER POST, FLEXIBLE

DIRECTION OF TRAFFIC FLOW

GENERAL NOTES

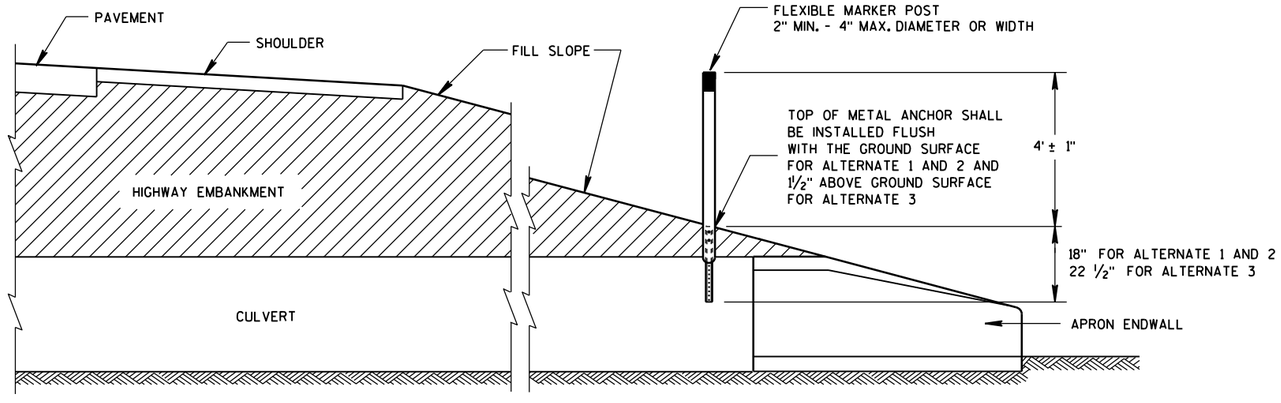
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



PLAN VIEW

CONCRETE MASONRY ENDWALLS FOR CULVERT PIPE AND PIPE ARCH

FLEXIBLE MARKER POST LOCATION



CROSS SECTION

FLEXIBLE MARKER POST

FLEXIBLE MARKER POST
FOR CULVERT END

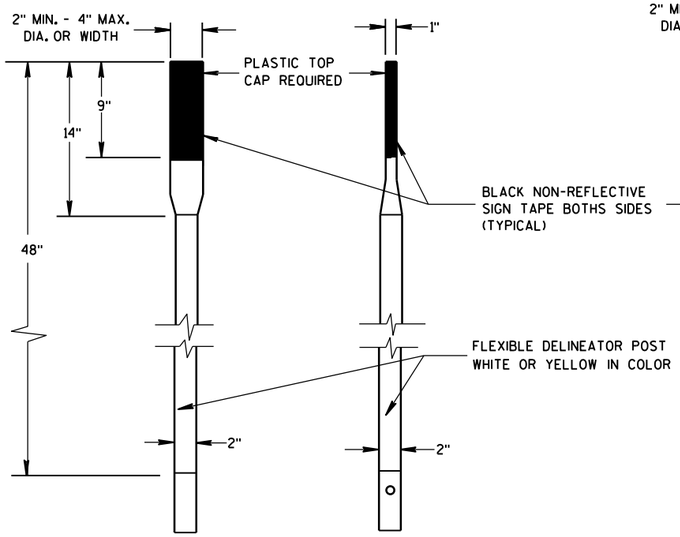
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

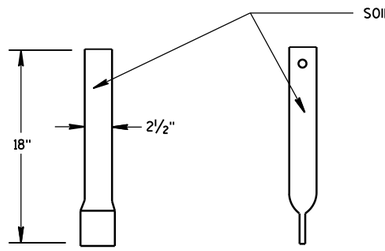
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S.D.D. 15 A 3-2a

6

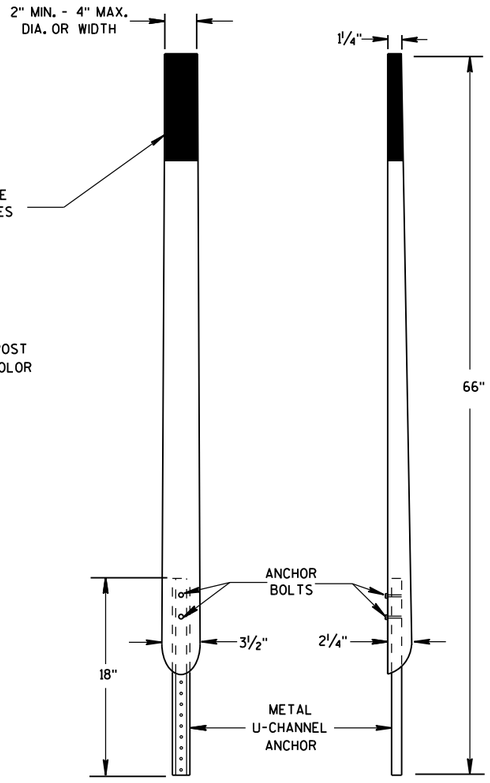
S.D.D. 15 A 3-2a





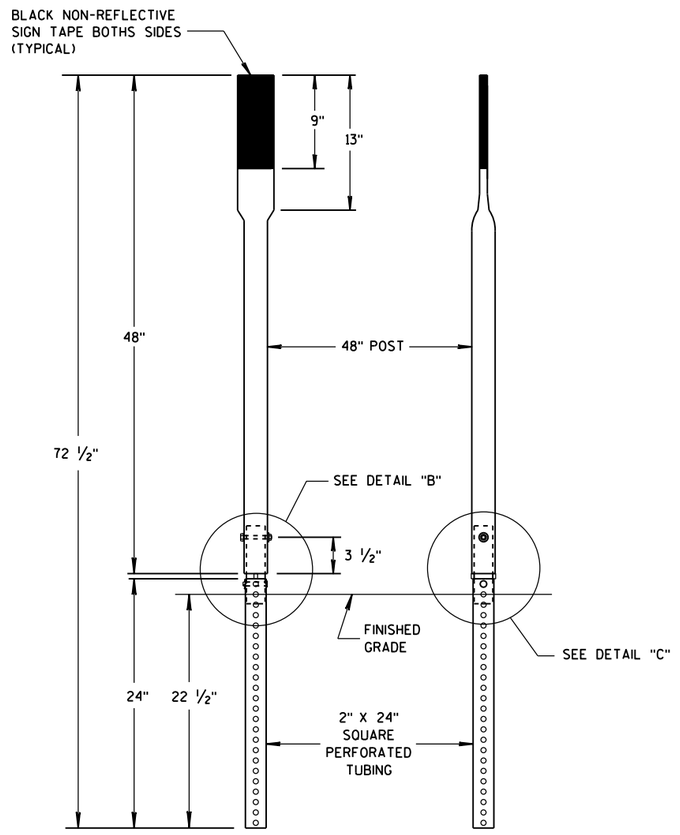
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

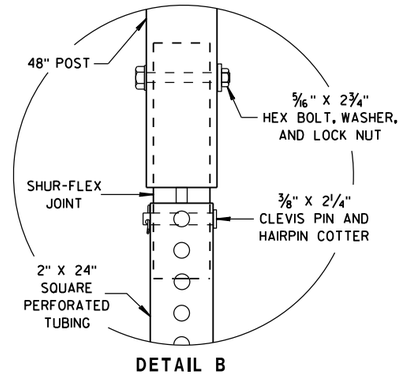
ALTERNATE 2



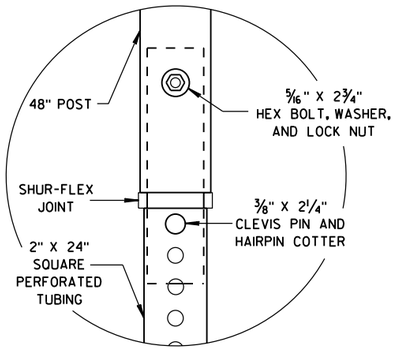
FRONT VIEW SIDE VIEW

ALTERNATE 3

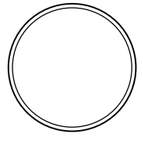
FLEXIBLE MARKER POSTS



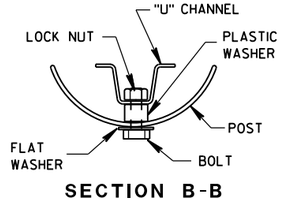
DETAIL B



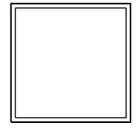
DETAIL C



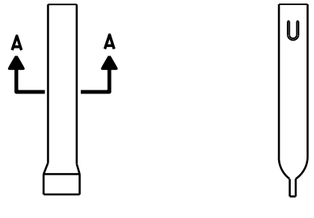
SECTION A-A



SECTION B-B

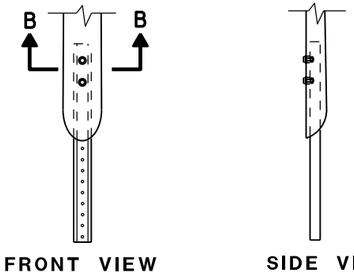


SECTION C-C



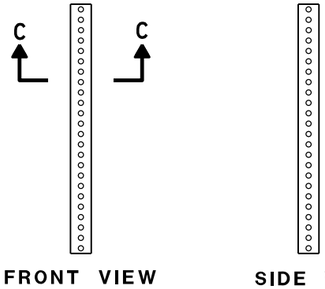
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

ALTERNATE 2



FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POST ANCHORS

FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

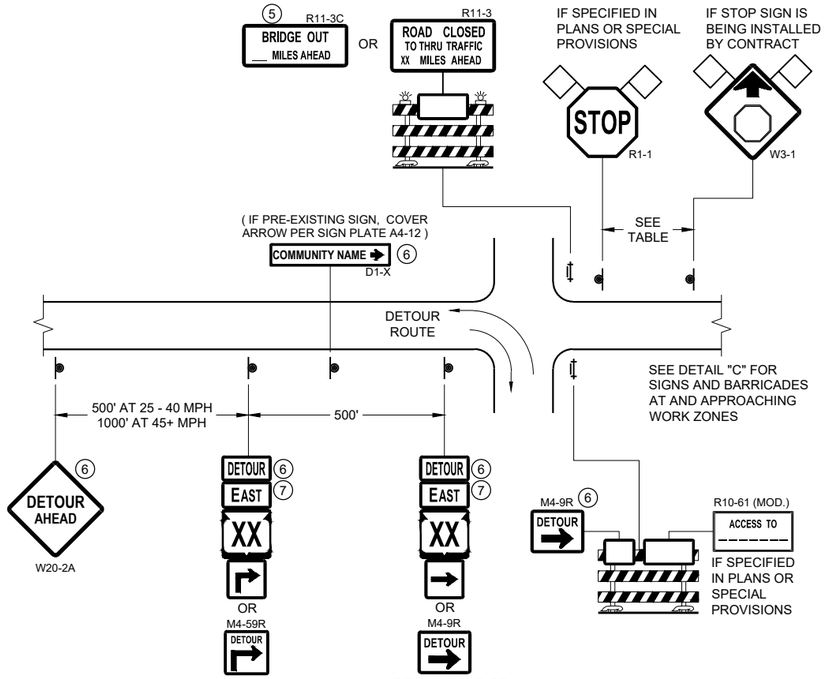
APPROVED
10/1/2012 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

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

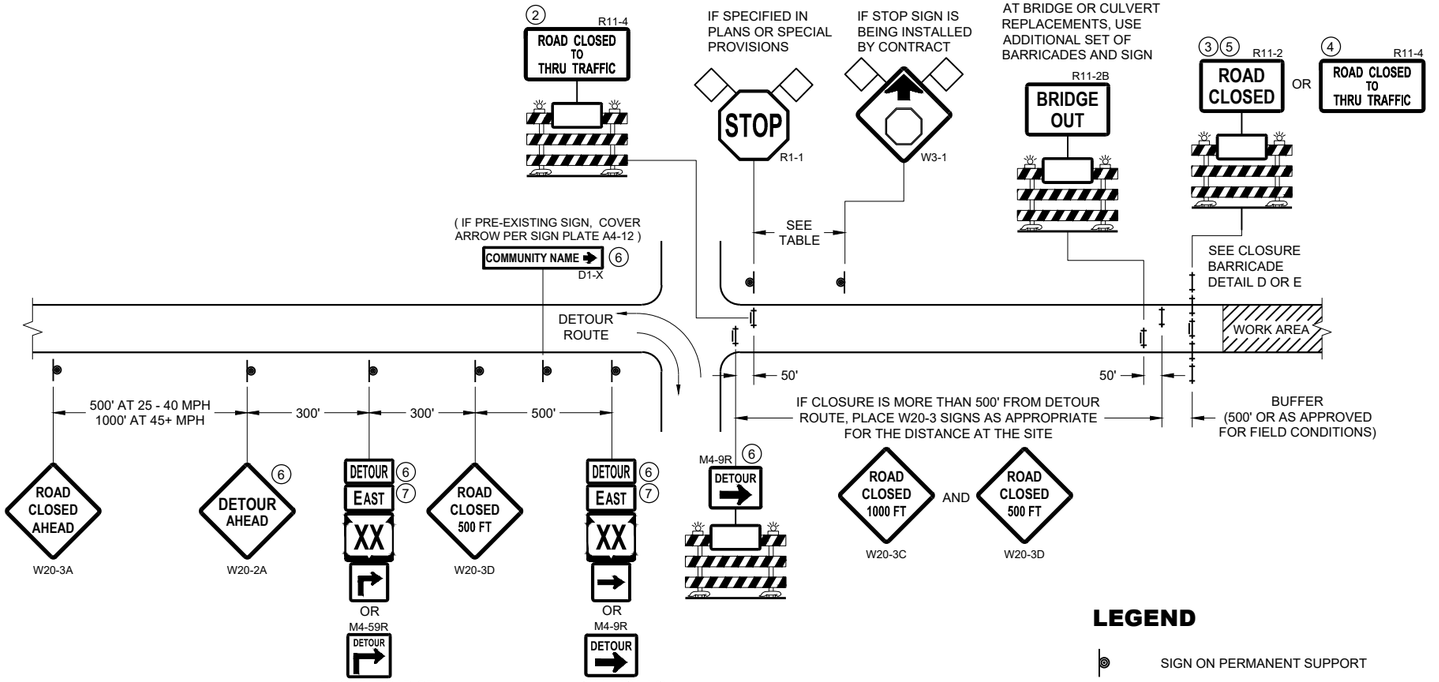
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S.D.D. 15 A 3-2b



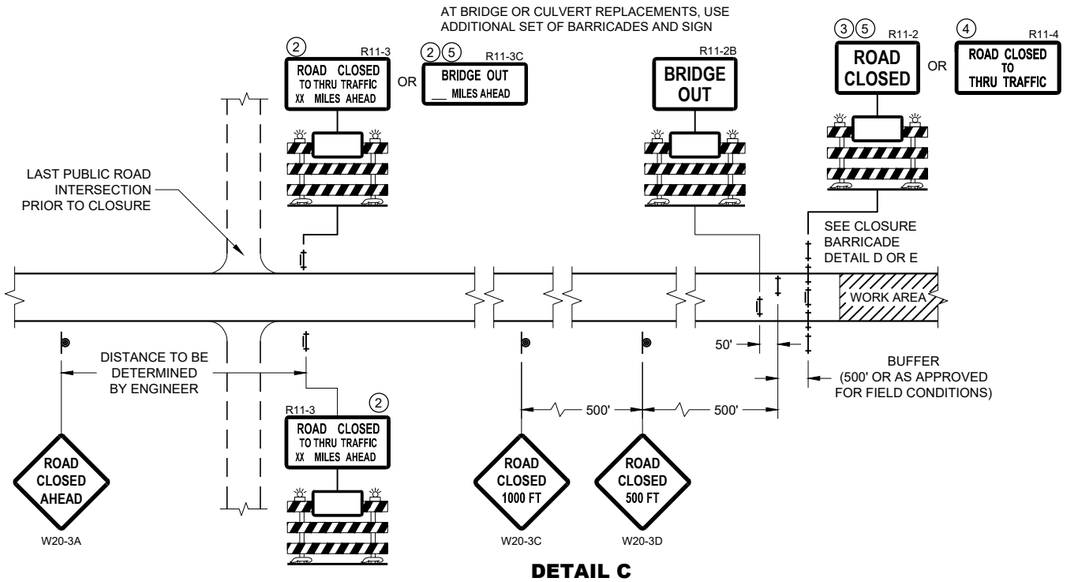
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

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



DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

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



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

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

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

LEGEND

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

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

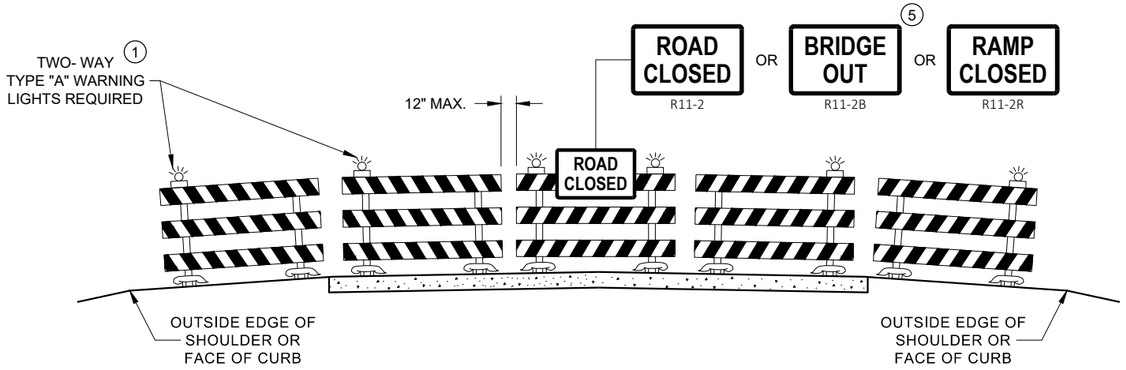
FHWA

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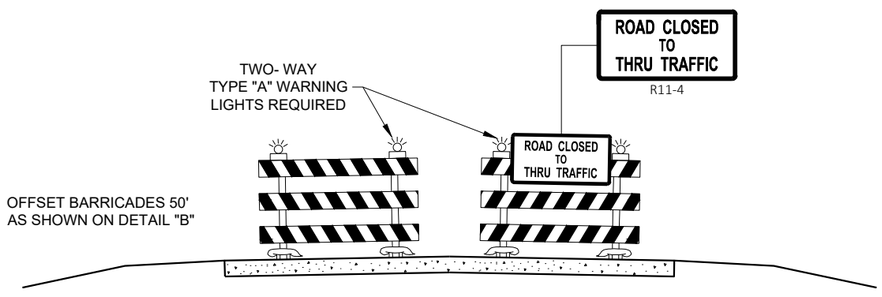
SDD 15C02 - 09a

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SDD 15C02 - 09a



DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW



DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW

SEE SDD 15C2 - SHEET "a" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

BARRICADES AND SIGNS FOR VARIOUS CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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SDD 15C02 - 09b

THIS DRAWING PROVIDES GENERAL GUIDANCE ON TYPICAL DETOUR SIGN LAYOUT AND SPACING. SEE PROJECT DETOUR SIGNING SHEETS FOR SPECIFIC DETAILS FOR EACH PROJECT.

LEGEND

- SIGN ON PERMANENT SUPPORT
- WORK AREA
- DETOUR / EAST — M4 - 8, M3 - X
- XX — M1 - 4; OR XX — M1 - 6; OR COUNTY X — M1 - 5A
- M05 - 1; OR M06 - 1; OR M06 - 1

GENERAL NOTES

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

IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. MODIFY EXISTING SIGNS WHERE POSSIBLE.

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

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

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

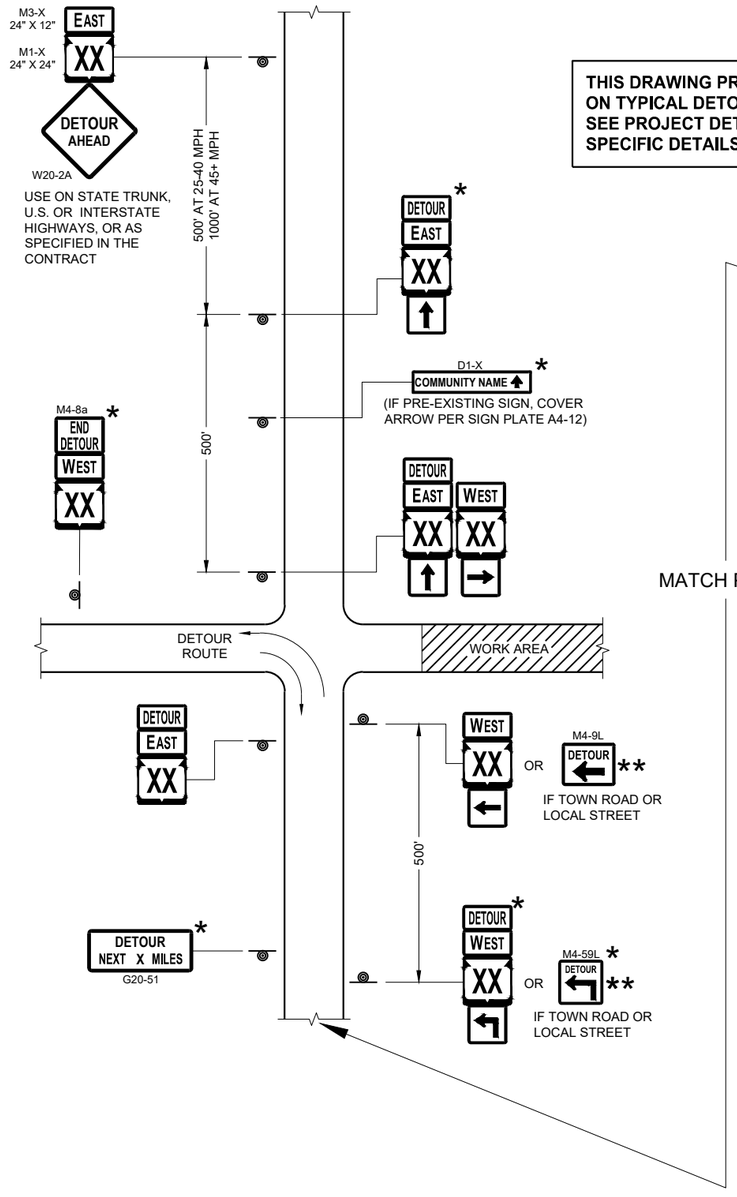
"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

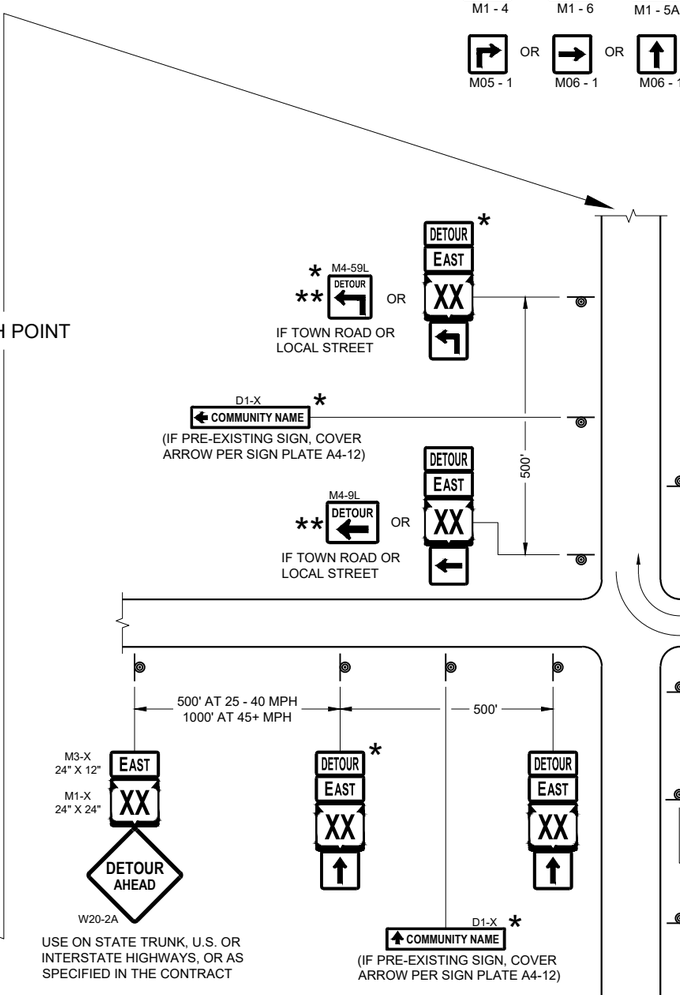
SIGN SIZES SHALL BE AS FOLLOWS:

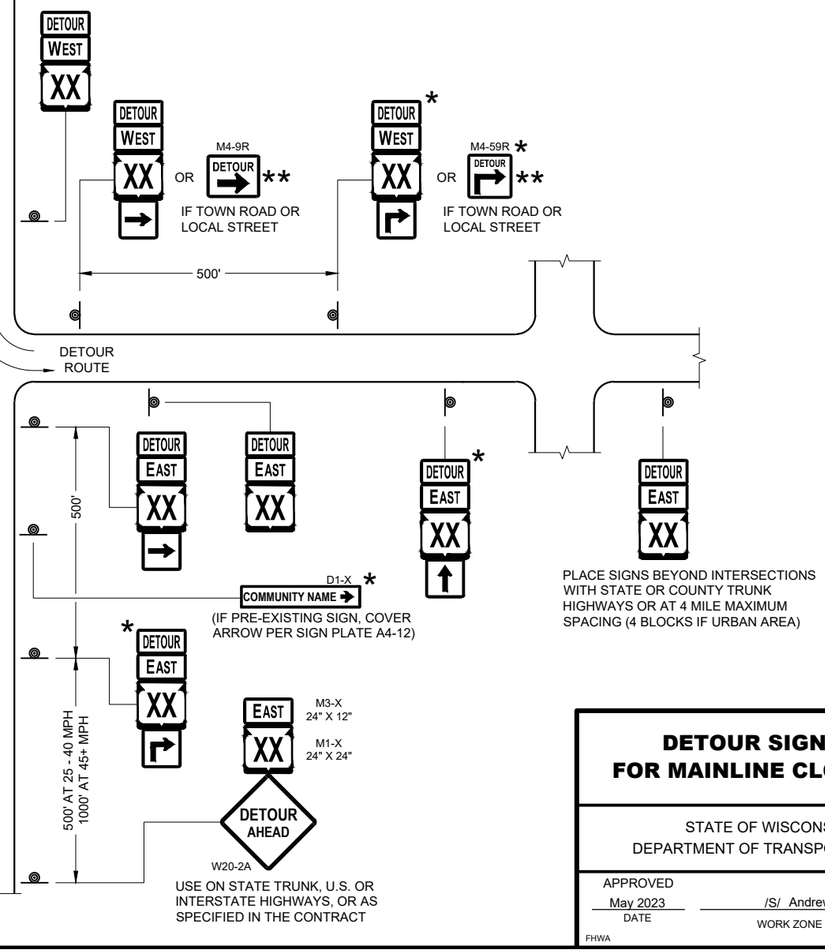
- M3-X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4-8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1-4, M1-5A AND M1-6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS)
- M05-1 AND M06-1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
- M4-9 AND M4-59 SHALL BE 30" X 24"
- M4-8a SHALL BE 24" X 18"
- G20-51 SHALL BE 60" X 24"
- W20-2A SHALL BE 48" X 48"
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.

* OPTIONAL SIGNS. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS.

** FOR A TOWN ROAD OR LOCAL STREET DETOURED ONTO A STATE TRUNK HIGHWAY, PLACE A ROAD NAME PLAQUE ABOVE THE M4-9 SIGN AS SPECIFIED IN THE CONTRACT.







SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS AND DETAIL A OR B ON SDD SHEET 15C02 - SHEET "a"

DETAIL F
DETOUR SIGNING

DETOUR SIGNING FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

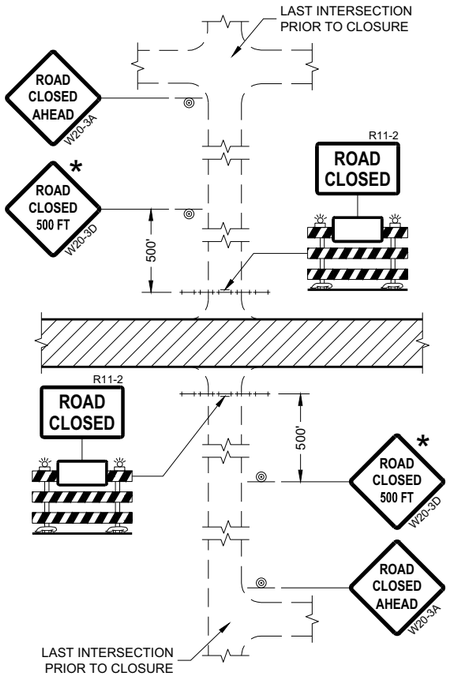
APPROVED
May 2023
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

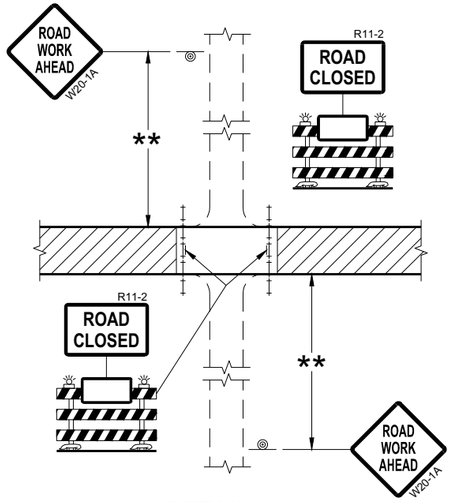
FHWA

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SDD 15C02 - 09c



DETAIL 1
(NO ACCESS TO PROJECT)



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

GENERAL NOTES

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

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

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE (500 FEET DESIRABLE) TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

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

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

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

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

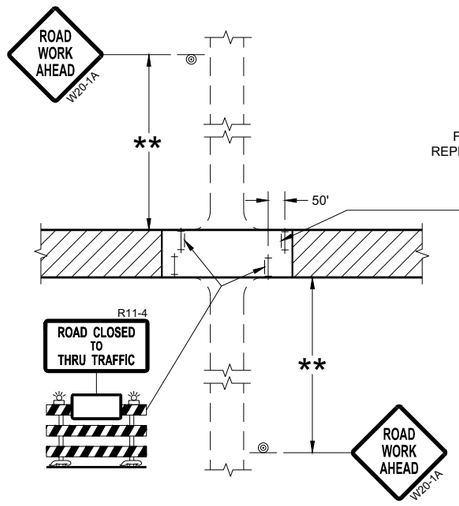
TYPE "A" LOW-INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

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

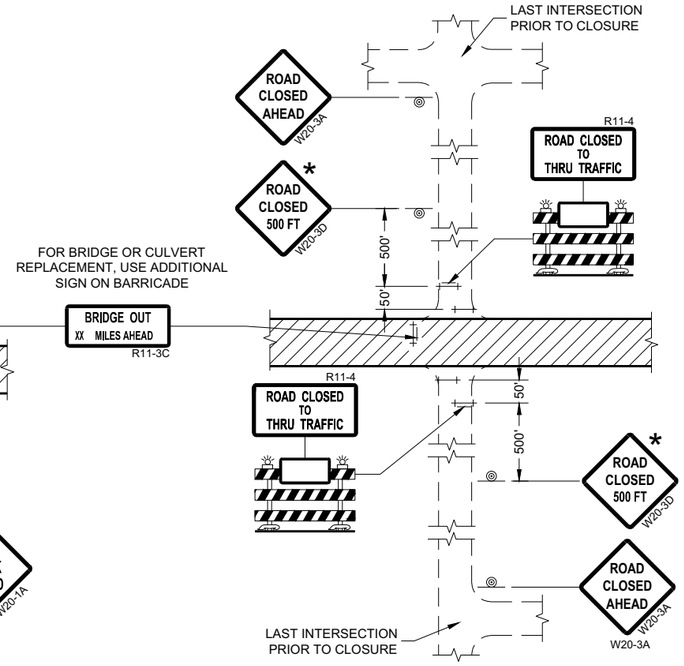
ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
R11-2 SHALL BE 48" X 30".
R11-4 AND R11-3 SHALL BE 60" X 30".

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

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



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



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

LEGEND

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

BARRICADES AND SIGNS FOR SIDEROAD CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

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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.

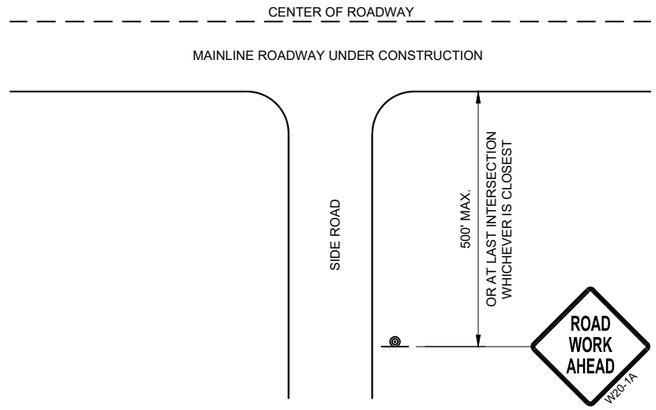
ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

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.



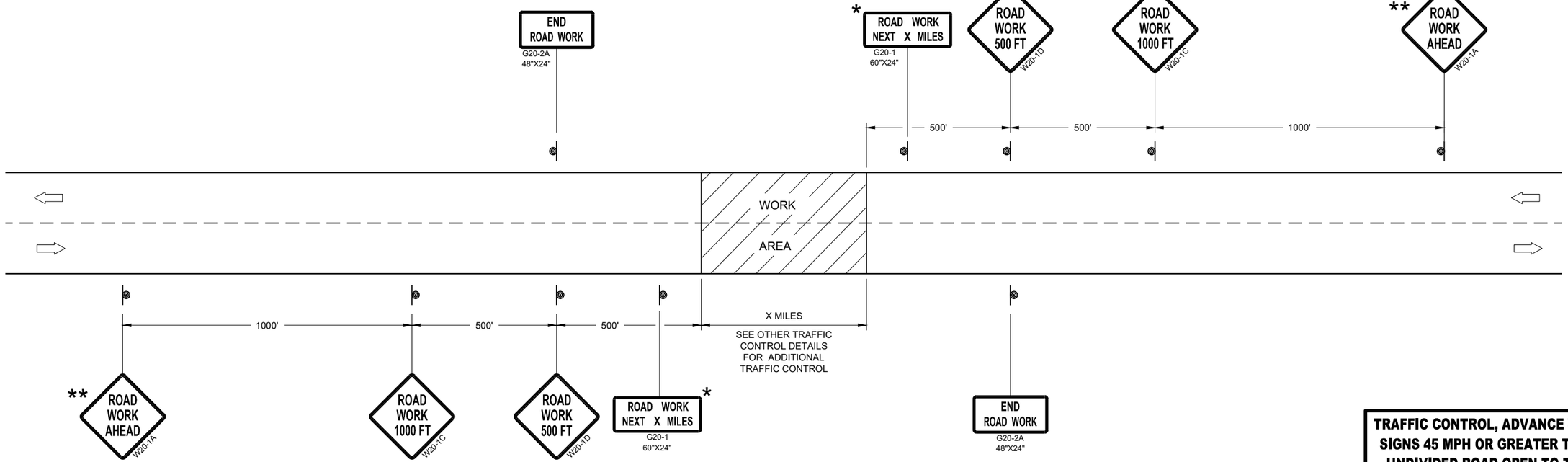
TYPICAL SIDE ROAD APPROACH WARNING SIGN DETAIL

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

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SDD 15C04 - 05

GENERAL NOTES

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

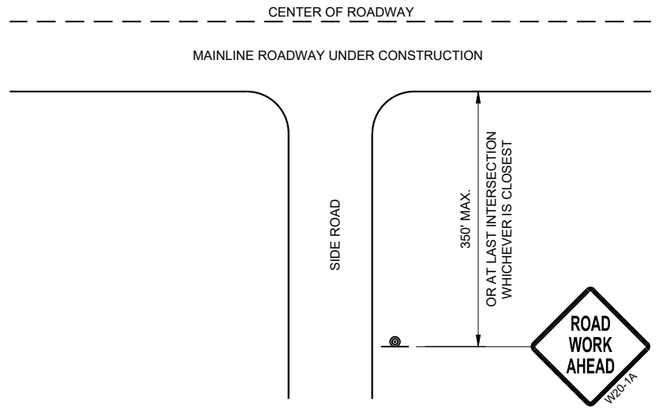
THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS, 36"X36" SIGNS MAY BE USED INSTEAD OF 48" X 48" SIGNS.

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

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

* THE THIRD W20-1 SIGN IS REQUIRED ONLY IF THERE IS AN INTERSECTION BETWEEN THE "ROAD WORK 500 FEET" SIGN AND THE WORK ZONE. ADJUST THE PLACEMENT OF THIS SIGN BASED ON INTERSECTION LOCATION AND OTHER FIELD CONDITIONS.



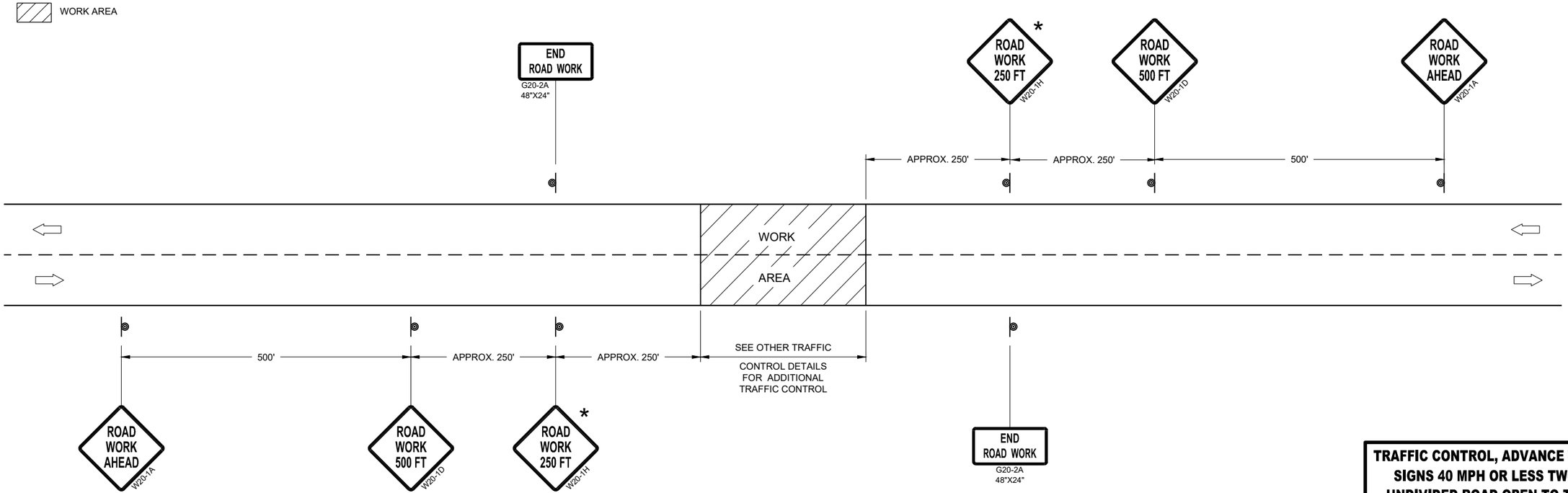
TYPICAL SIDE ROAD APPROACH WARNING SIGN DETAIL

LEGEND

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC

WORK AREA



TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40MPH OR LESS

TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 MPH OR LESS TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

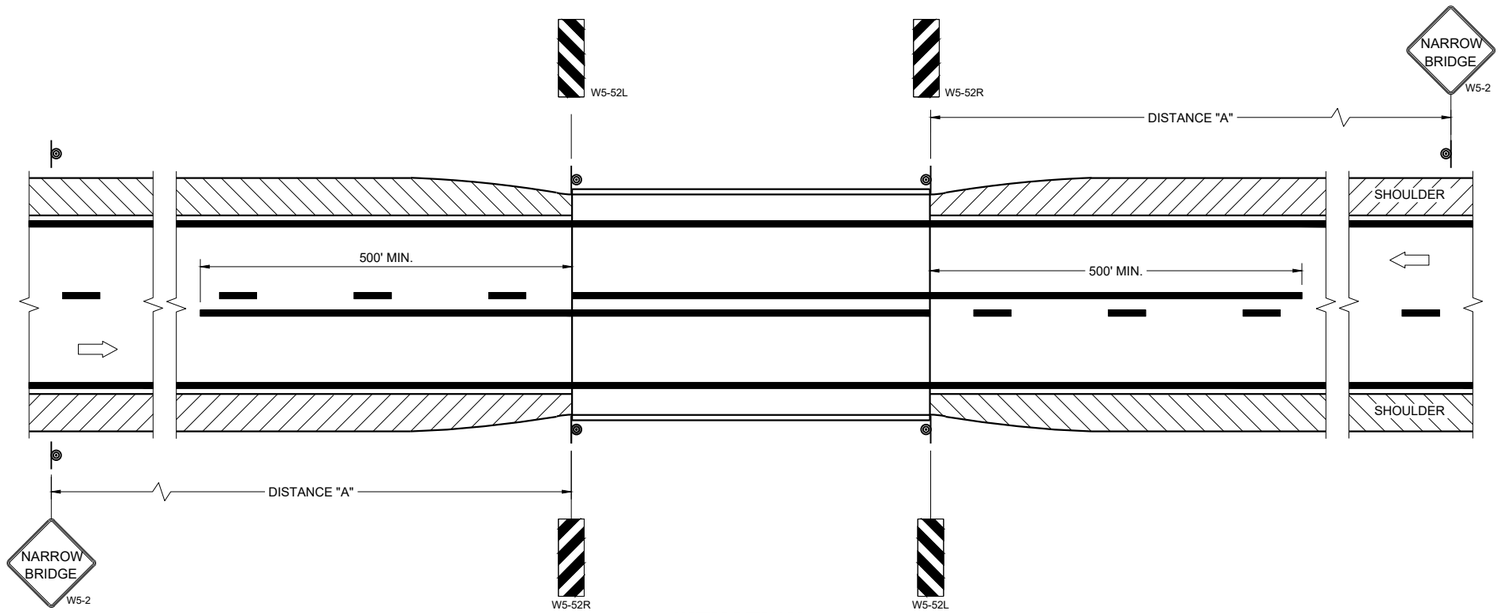
APPROVED
July 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

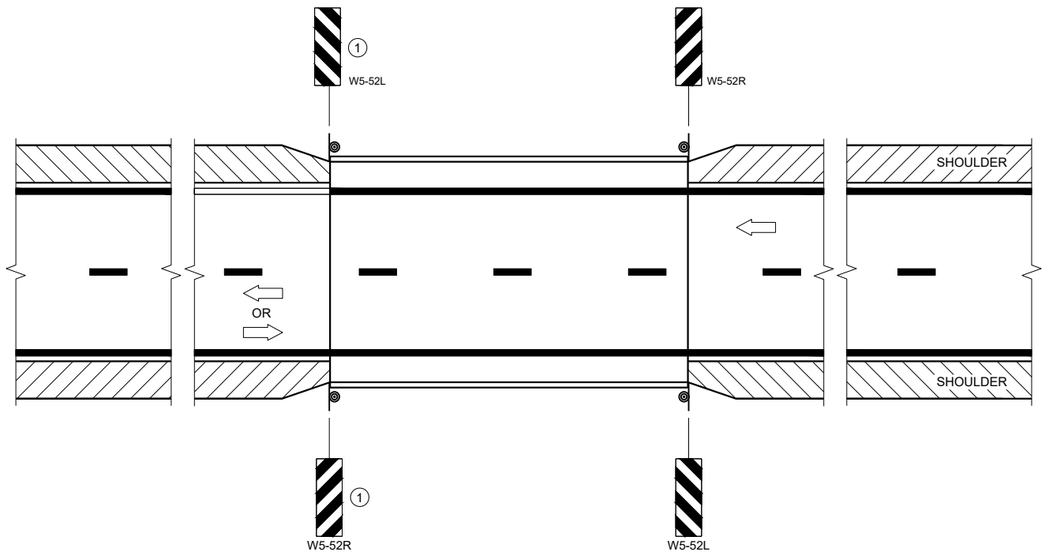
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SDD 15C05 - 05



SITUATION 1

WARRANTING CRITERIA:
BRIDGE WIDTH IS AT LEAST 16 FEET BUT LESS THAN 24 FEET.



SITUATION 2

WARRANTING CRITERIA:
1. BRIDGE WIDTH IS AT LEAST 24 FEET AND
2. BRIDGE SHOULDER WIDTH IS LESS THAN 6 FEET

GENERAL NOTES

DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THE DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

LOCATE W5-52 SIGN POST(S) BEHIND GUARDRAIL WHEN PRESENT.

PLACE THE EDGE OF THE W5-52 SIGN IN LINE WITH FACE OF CURB OR PARAPET.

ON BRIDGE ONLY PROJECTS, PLACE 300 FEET OF EDGELINE.

OMIT EDGELINES ON ROADWAYS WITHOUT EXISTING EDGELINES.

(1) OMIT ON ONE-WAY TRAVELED WAYS.

LEGEND

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC

DISTANCE TABLE

POSTED OR 85TH PERCENTILE SPEED	DISTANCE "A"
25	150'
30	200'
35	250'
40	300'
45	400'
50	550'
55	700'

SIGNING AND MARKING FOR TWO LANE BRIDGES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE
/S/ Jeannie Silver
Statewide Pavement Marking Engineer
FHWA

6
SDD 15C06-12

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.

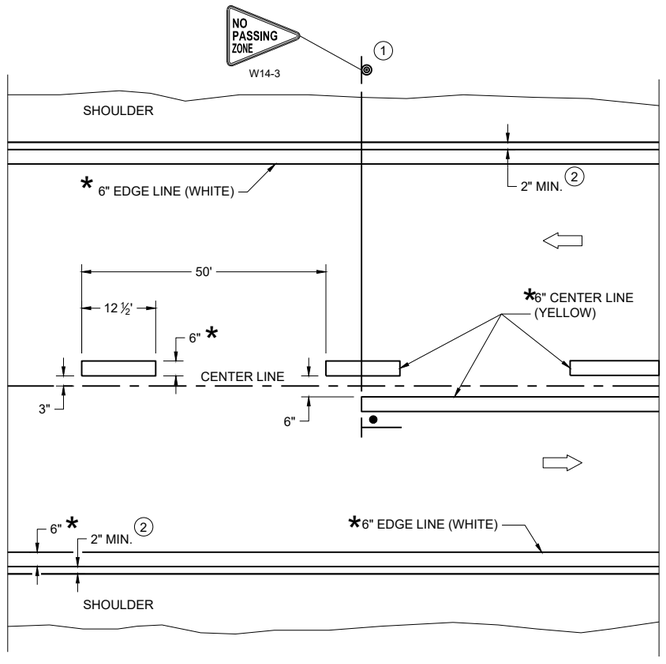
*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

LEGEND

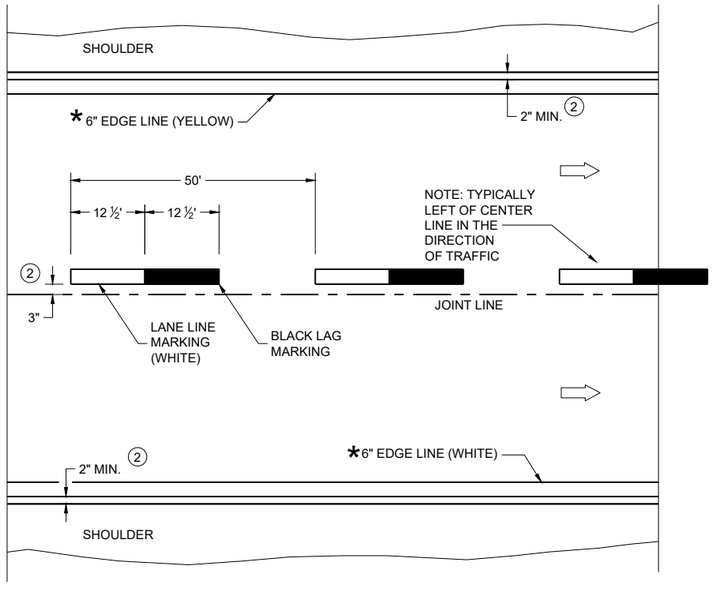
"T" MARKING

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

6

PERMANENT LONGITUDINAL PAVEMENT MARKINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

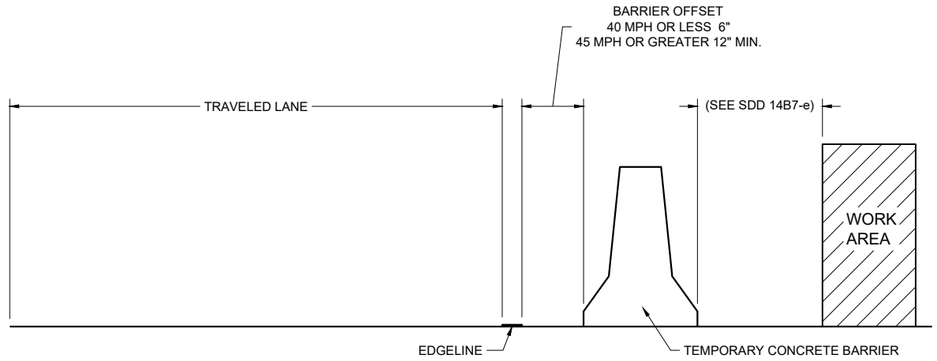
APPROVED

May 2023
DATE

/S/ Jeannie Silver
Statewide Pavement Marking Engineer

FHWA

SDD 15C08-23a



TEMPORARY BARRIER OFFSET FROM EDGELINE

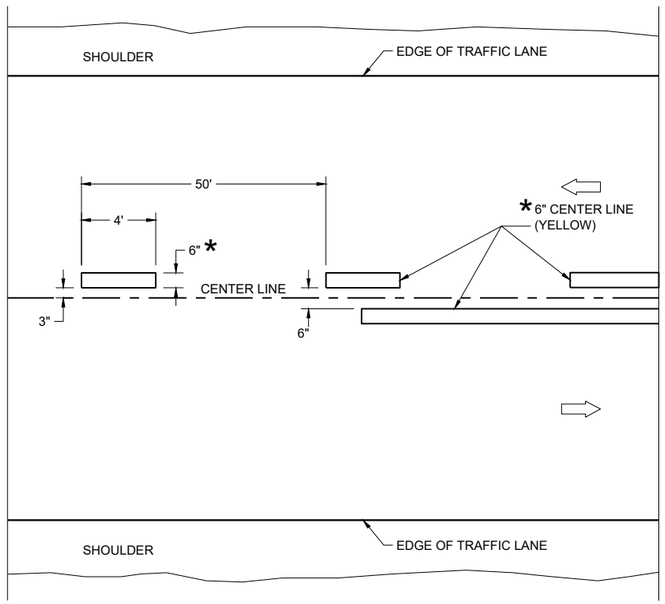
GENERAL NOTES

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

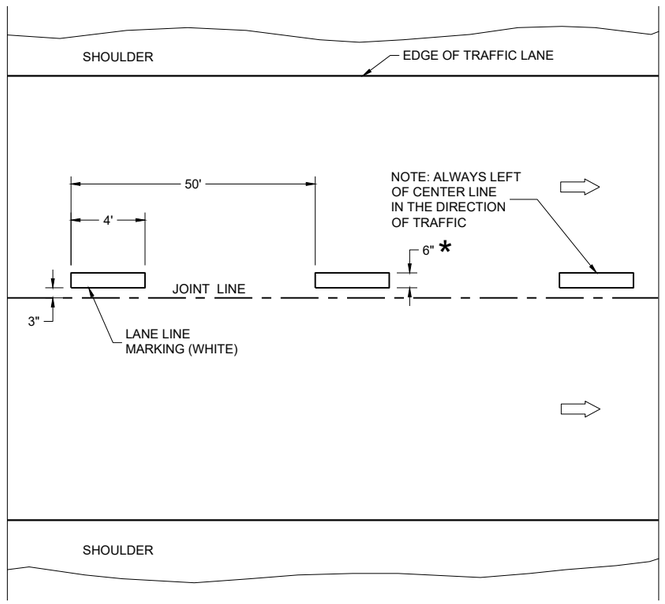
LEGEND

DIRECTION OF TRAFFIC

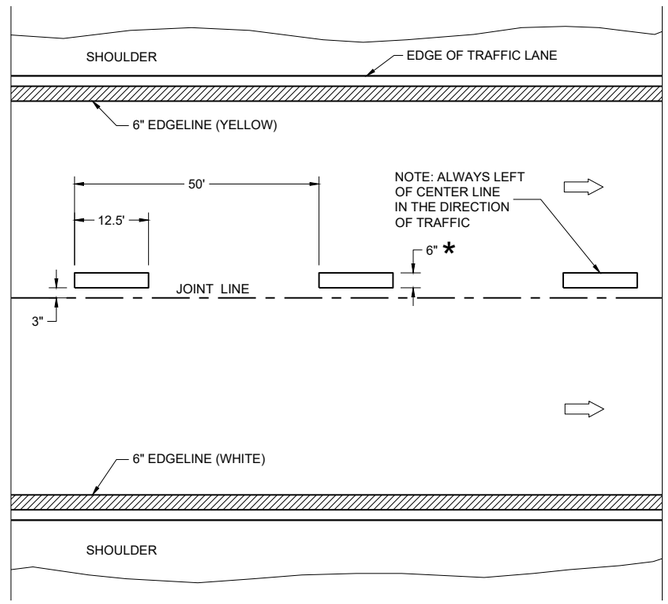
*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



TWO WAY TRAFFIC



ONE WAY TRAFFIC



FREEWAYS AND EXPRESSWAYS

TEMPORARY PAVEMENT MARKING

TEMPORARY LONGITUDINAL PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 — DATE
/S/ Jeannie Silver — Statewide Pavement Marking Engineer

FHWA

6

SDD 15C08-23b

6

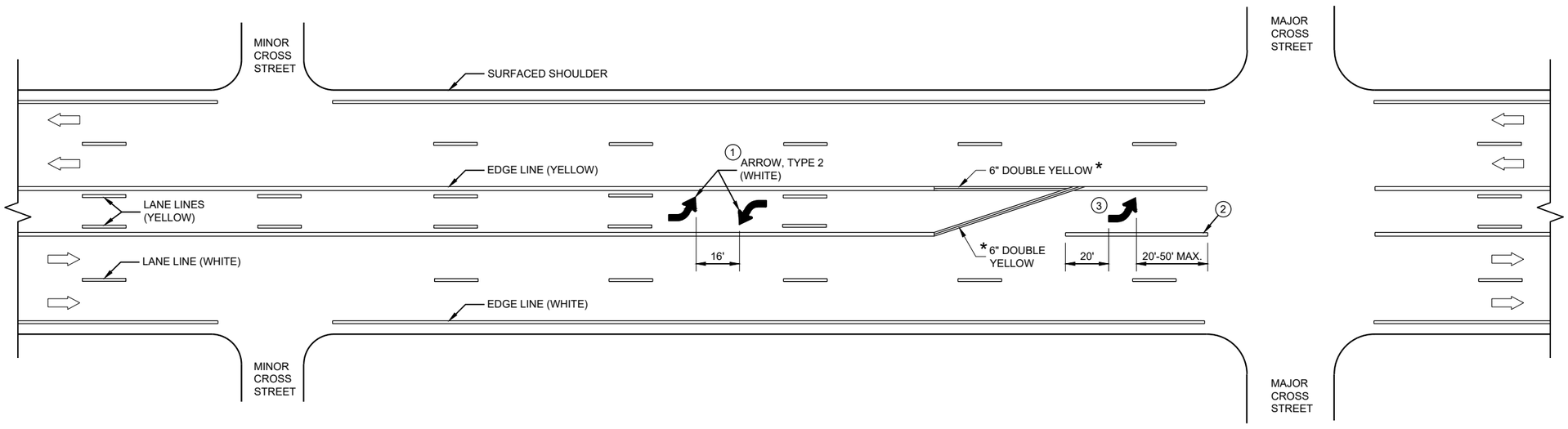
SDD 15C08-23b

GENERAL NOTES

1. A SET OF ARROWS IS REQUIRED EVERY 400 FEET OR NEAR INTERSECTIONS OR DRIVEWAYS WITH TURNING TRAFFIC.
2. 10" WHITE
3. TURN BAY LENGTH OF LESS THAN 48' DOES NOT REQUIRE PAVEMENT ARROWS OR TEXT.

⇨ DIRECTION OF TRAFFIC

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



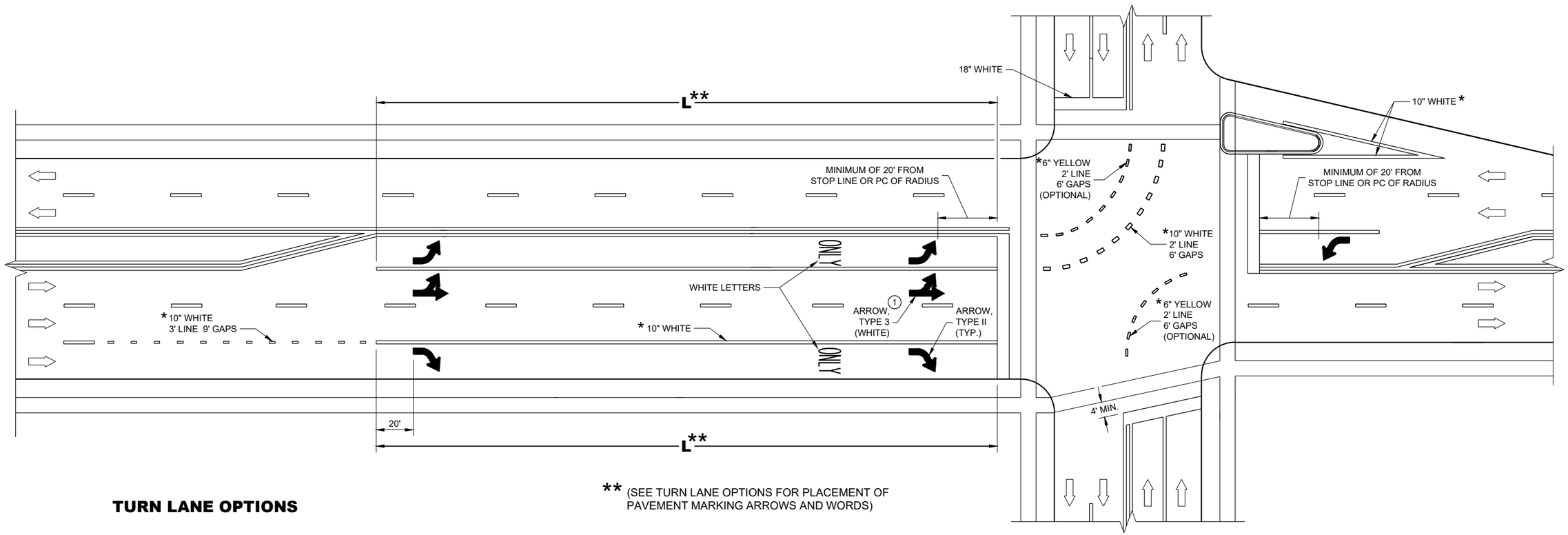
TWO WAY LEFT TURN LANE

PAVEMENT MARKING (TURN LANES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTA· 255

SDD 15C08-23c

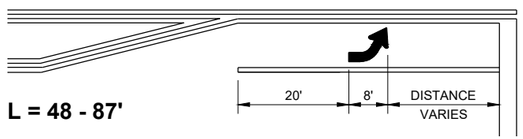
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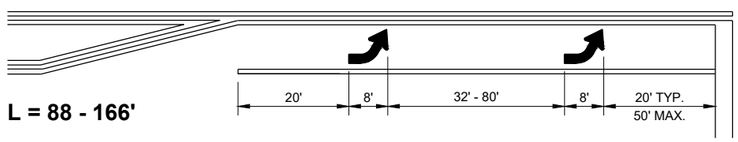
** (SEE TURN LANE OPTIONS FOR PLACEMENT OF PAVEMENT MARKING ARROWS AND WORDS)

TURN LANE OPTIONS

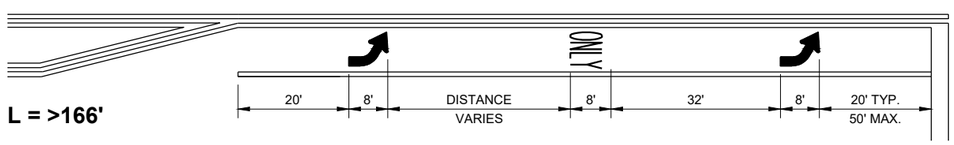
LENGTH OF TURN BAY (**L**) OF 0 - 47' DOES NOT REQUIRE PAVEMENT MARKING ARROWS OR WORDS



L = 48 - 87'



L = 88 - 166'



L = >166'

GENERAL NOTES

(1) QUANTITY AND LOCATION OF TYPE 3 ARROWS ARE THE SAME AS THE TYPE II ARROWS IN THE ADJACENT TURN LANE. FOR TURN LANES WITH A PHYSICAL SEPARATION IN THE SAME DIRECTION OF TRAVEL, THE ARROWS AND "ONLY" MARKING MAY BE ELIMINATED.

⇨ DIRECTION OF TRAFFIC

L = LENGTH OF TURN BAY

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

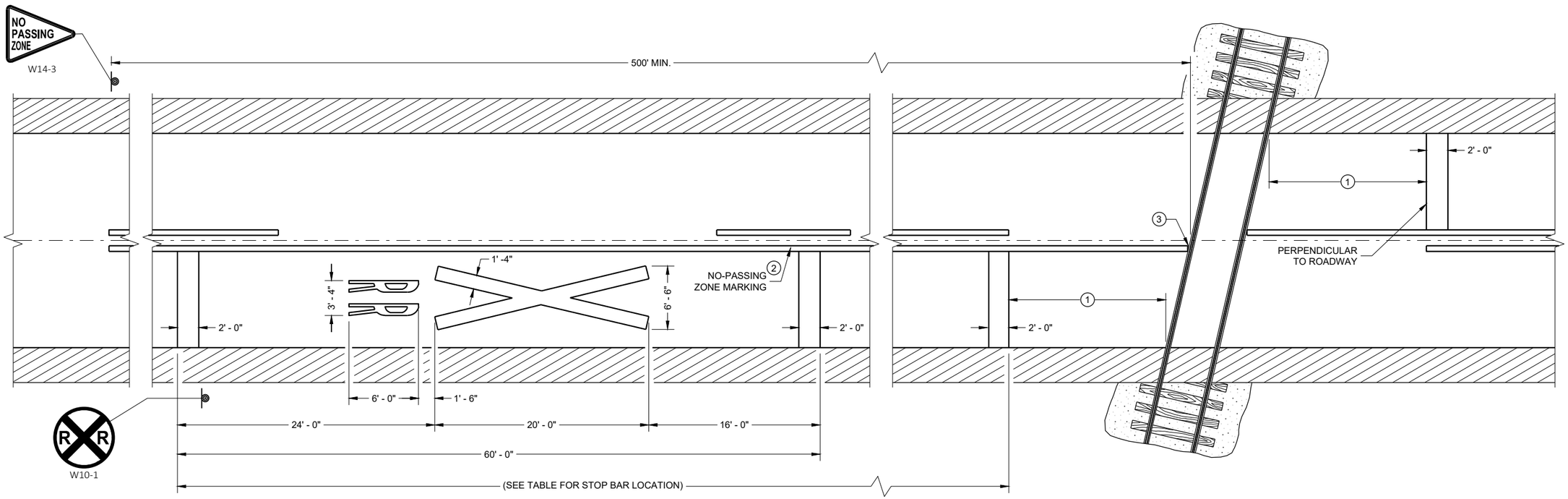
PAVEMENT MARKING (TURN LANES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

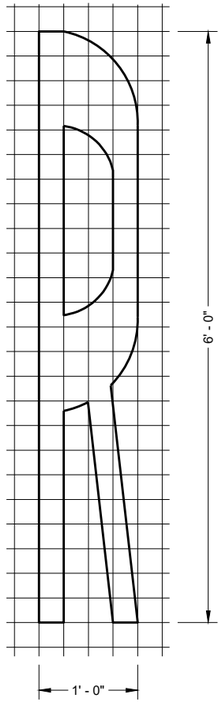
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SDD 15C08-23d

SDD 15C08-23d



PAVEMENT MARKING



LEGEND

SIGN ON PERMANENT SUPPORT

GENERAL NOTES

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

ON MULTI-LANE ROADS THE TRANSVERSE BANDS SHOULD EXTEND ACROSS ALL APPROACH LANES, AND INDIVIDUAL R X R SYMBOLS SHOULD BE USED IN EACH APPROACH LANE.

CENTER OR LANE LINES AND NO-PASSING ZONE MARKINGS SHOWN ON THIS DRAWING ARE REQUIRED AND PAID FOR UNDER OTHER ITEMS IN THE CONTRACT.

TRACE EXISTING SYMBOL WHERE EXISTING SYMBOLS ARE PLACED.

(1) PLACE STOP BAR APPROXIMATELY 8 FEET IN ADVANCE OF THE GATE (IF PRESENT), BUT NO CLOSER THAN 15 FEET IN ADVANCE OF THE NEAREST RAIL. FIELD-FIT STOP BAR TO MAXIMIZE VIEW OF APPROACHING TRAIN.

(2) 500' MINIMUM. MARKING LIMITS MAY BE EXTENDED AS DIRECTED BY THE ENGINEER TO MEET ADJACENT NO-PASSING ZONE MARKINGS.

(3) FOR MULTIPLE TRACK CROSSINGS, THE BARRIER LINE SHALL EXTEND TO THE NEAR RAIL OF THE FURTHEST TRACK IN THE DIRECTION OF HIGHWAY TRAVEL.

DISTANCE TABLE

TABLE BASED UPON 2C-4 WISCONSIN SUPPLEMENT OF MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

POSTED SPEED (M.P.H.)	DIMENSION RANGE (FEET)
25	150* - 250'
30	200* - 300'
35	250* - 450'
40	300* - 500'
45	400* - 650'
50	550* - 800'
55	750* - 1000'
60	1000* - 1250'
65	1000* - 1250'

* THE MINIMUM DISTANCES IN THE TABLE ARE DESIRABLE AND SHOULD BE USED. THE DISTANCES MAY BE INCREASED UP TO THE MAXIMUM TO ALLOW FOR FIELD CONDITIONS SUCH AS THE CLOSED PROXIMITY OF DRIVEWAYS, BRIDGES, SIDE ROADS OR OTHER FEATURES THAT WOULD PROHIBIT THE MINIMUM DISTANCES FROM BEING USED.

SIGNING AND PAVEMENT MARKING DETAILS FOR RAILROAD - HIGHWAY GRADE CROSSINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 — DATE
/S/ Matthew R. Rauch — STATE SIGNING AND MAR ENGINEER

FHWA

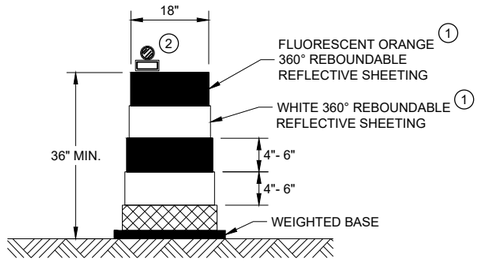
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SDD 15C09-13a

SDD 15C09-13a

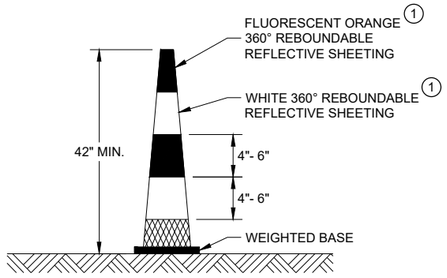
GENERAL NOTES

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



DRUM

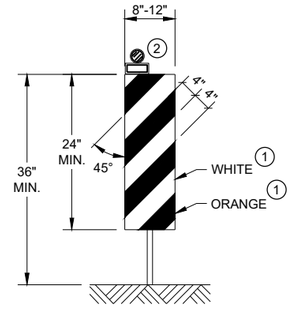
BALLAST WIDTHS
RANGE FROM 24"-36"



42" CONE

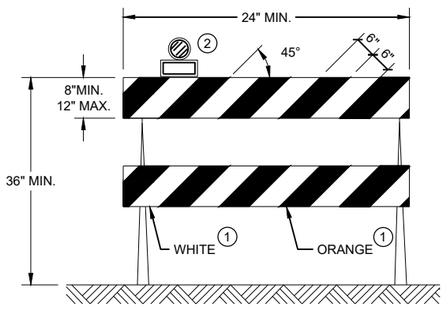
DO NOT USE IN TAPERS
½ SPACING OF DRUMS

BALLAST WIDTHS
RANGE FROM 14"-20"



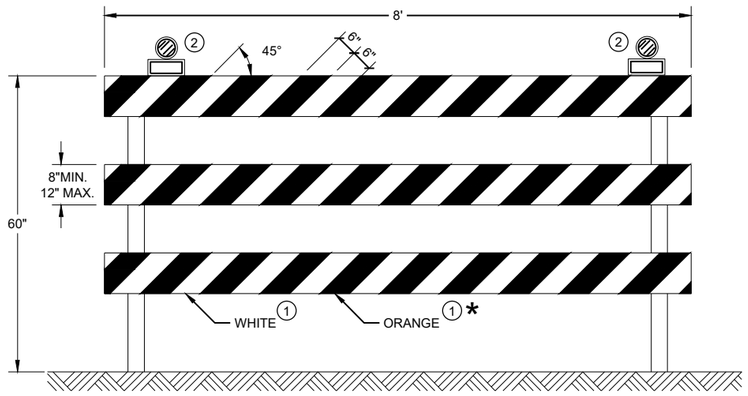
VERTICAL PANEL

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



TYPE II BARRICADE

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



TYPE III BARRICADE

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

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2022
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15C11 - 10b

6

SDD 15C11 - 10b

LEGEND

SIGN ON PORTABLE OR PERMANENT SUPPORT

TEMPORARY PORTABLE RUMBLE STRIP ARRAY

DIRECTION OF TRAFFIC

WORK AREA

FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

GENERAL NOTES

DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

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

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

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

THE FIRST ADVANCE WARNING SIGN SHOULD TYPICALLY BE LOCATED IN ADVANCE OF THE ANTICIPATED TRAFFIC BACKUP OR QUEUE.

WHEN A SIDE ROAD OR RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

FLAGGING

FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT REMOVE TEMPORARY PORTABLE RUMBLE STRIPS PRIOR TO COVERING OR REMOVING ALL ADVANCE SIGNING.

(1) FOR MOVING WORK OPERATIONS, POST ADDITIONAL W20-7A FLAGGER SIGNS AT APPROXIMATELY 3,500' INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.

(2) SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

WHEN THE DISTANCE BETWEEN FLAGGERS EXCEEDS 2 MILES, A PILOT CAR IS REQUIRED. WHEN CURVES REDUCE SIGHT DISTANCE BELOW 400', A PILOT CAR IS REQUIRED.

TEMPORARY PORTABLE RUMBLE STRIPS

UTILIZE TEMPORARY PORTABLE RUMBLE STRIPS ON ALL FLAGGING OPERATIONS.

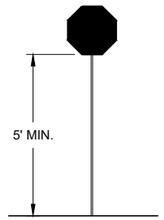
(3) EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS PLACED TRANSVERSE ACROSS THE LANE AT THE LOCATIONS SHOWN. WITHIN EACH ARRAY, SPACING BETWEEN RUMBLE STRIPS SHALL BE 15 FEET ON CENTER

ONLY USE TEMPORARY PORTABLE RUMBLE STRIPS FROM THE APPROVED PRODUCTS LIST.

INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS.

PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.

DO NOT INSTALL TEMPORARY PORTABLE RUMBLE STRIPS ON GRAVEL, MILLED SURFACES, OR ASPHALT THAT HAS BEEN PAVED LESS THAN 12 HOURS.



STOP/SLOW PADDLE ON SUPPORT STAFF

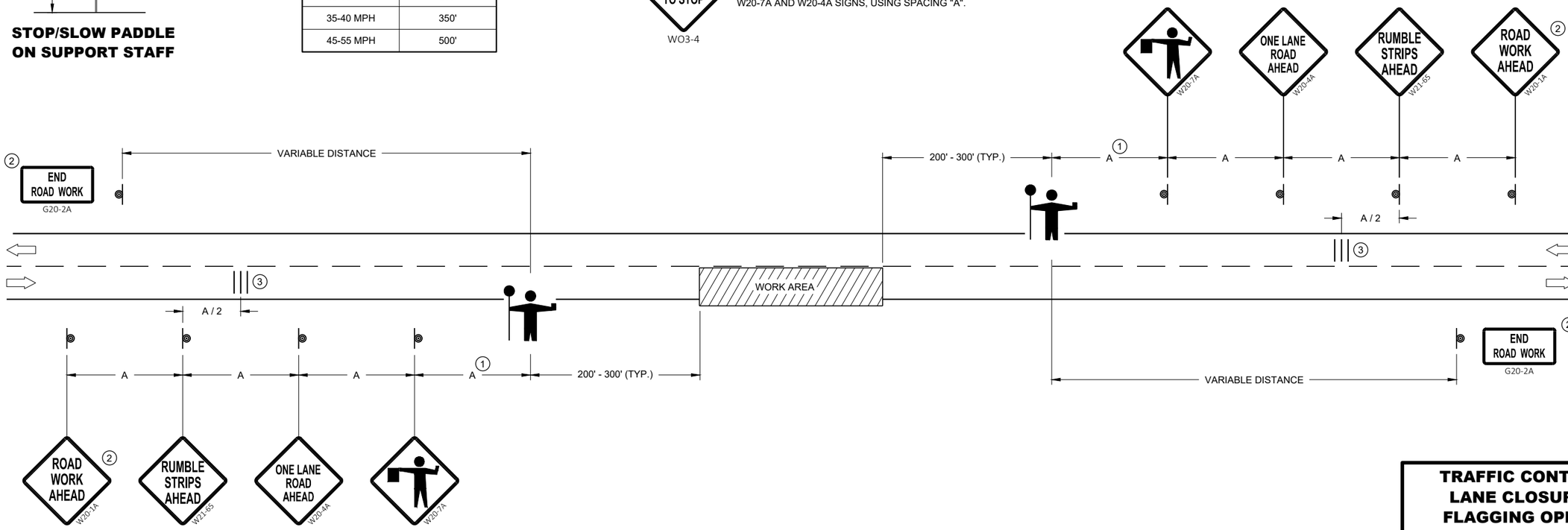
SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

SPEED LIMIT	SPACING "A"
25-30 MPH	200'
35-40 MPH	350'
45-55 MPH	500'



WO3-4

USE OF WO3-4 SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7A AND W20-4A SIGNS, USING SPACING "A".



TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2022
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

SDD 15C12 - 09a

SDD 15C12 - 09a

GENERAL NOTES

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL CONE 42-INCH
- TRAFFIC CONTROL DRUM
- TEMPORARY PORTABLE RUMBLE STRIP ARRAY
- DIRECTION OF TRAFFIC
- WORK AREA
- AFAD — AUTOMATED FLAGGER ASSISTANCE DEVICE (AFAD)

GENERAL NOTES

DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

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

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

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

THE FIRST ADVANCE WARNING SIGN SHOULD TYPICALLY BE LOCATED IN ADVANCE OF THE ANTICIPATED TRAFFIC BACKUP OR QUEUE.

WHEN A SIDE ROAD OR RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

FLAGGING

IF THE AUTOMATED FLAGGER ASSISTANCE DEVICE (AFAD) STOPS WORKING, FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT REMOVE TEMPORARY PORTABLE RUMBLE STRIPS PRIOR TO COVERING OR REMOVING ALL ADVANCE SIGNING.

WHEN THE DISTANCE BETWEEN FLAGGERS EXCEEDS 2 MILES, A PILOT CAR IS REQUIRED. WHEN CURVES REDUCE SIGHT DISTANCE BELOW 400', A PILOT CAR IS REQUIRED.

(1) SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

(2) IF FLAGGERS ARE PHYSICALLY NEEDED TO FLAG, REPLACE WO3-4 SIGNS WITH W20-7A SIGNS.

TEMPORARY PORTABLE RUMBLE STRIPS

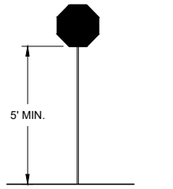
UTILIZE TEMPORARY PORTABLE RUMBLE STRIPS ON ALL FLAGGING OPERATIONS.

ONLY USE TEMPORARY PORTABLE RUMBLE STRIPS FROM THE APPROVED PRODUCTS LIST.

PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.

DO NOT INSTALL TEMPORARY PORTABLE RUMBLE STRIPS ON GRAVEL, MILLED SURFACES, OR ASPHALT THAT HAS BEEN PAVED LESS THAN 12 HOURS.

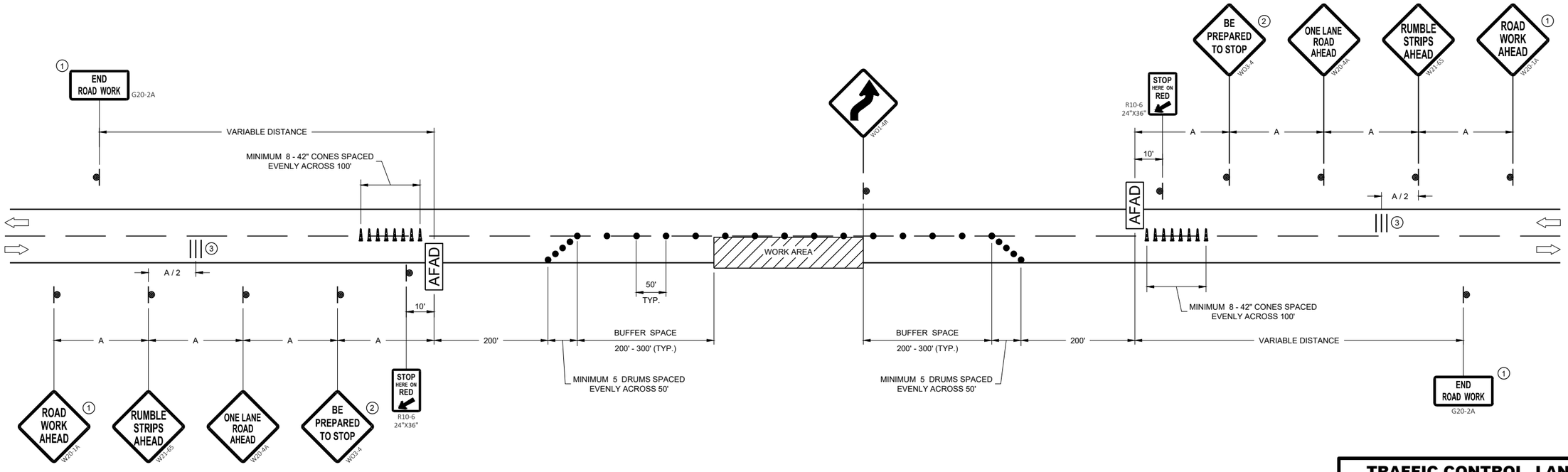
(3) EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS PLACED TRANSVERSELY AT THE LOCATIONS SHOWN. WITHIN EACH ARRAY, SPACING BETWEEN RUMBLE STRIPS SHALL BE 15 FEET ON CENTER.



STOP/SLOW PADDLE ON SUPPORT STAFF

SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

SPEED LIMIT	SPACING "A"
25-30 MPH	200'
35-40 MPH	350'
45-55 MPH	500'



TRAFFIC CONTROL, LANE CLOSURE WITH AUTOMATED FLAGGER ASSISTANCE DEVICE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2022 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINEER
FHWA

SDD 15C12 - 09b

6
SDD 15C12 - 09b

LEGEND

V1 LEAD VEHICLE

V2 MARKING VEHICLE

V3 SHADOW VEHICLE

TRUCK MOUNTED ATTENUATOR (TMA)

SIGN ON TEMPORARY SUPPORT

DIRECTION OF TRAFFIC

FLASHING 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 OPERATING IN CAUTION MODE. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE ARROW PANEL.

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

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

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

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

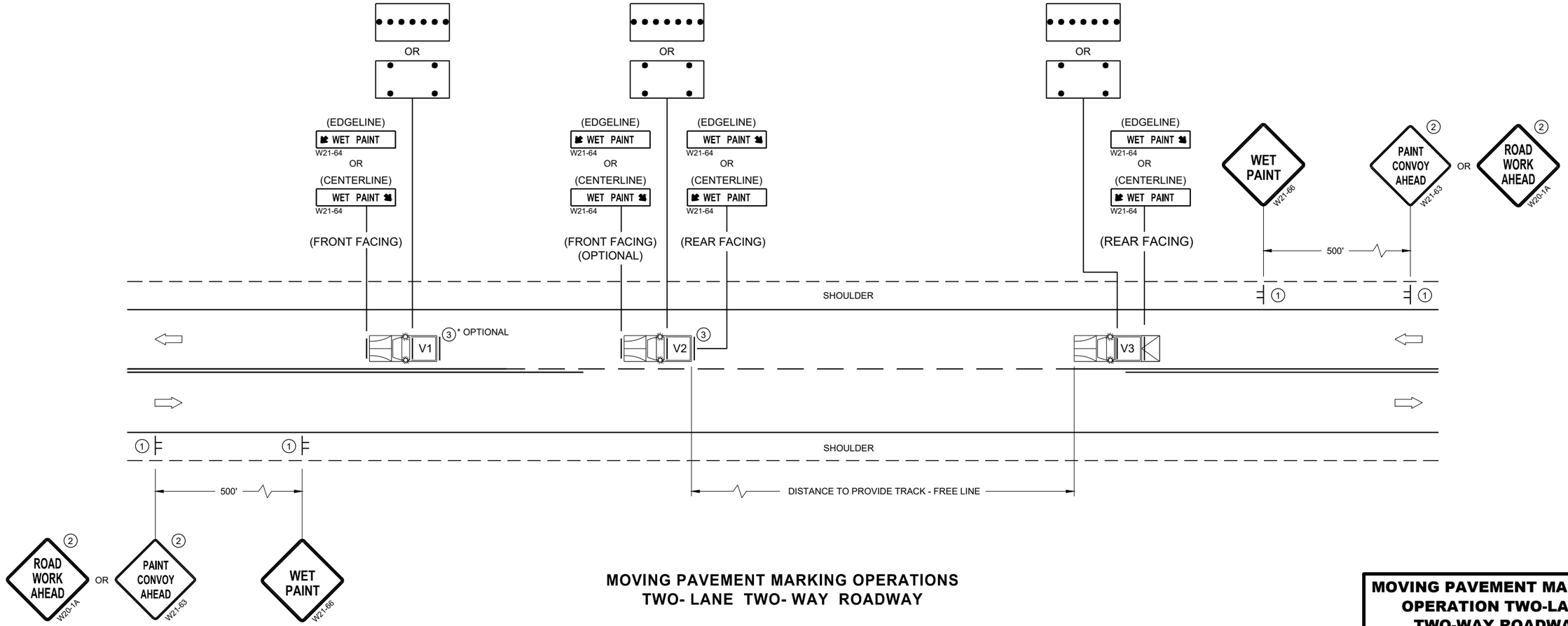
CONES SHOULD BE USED BETWEEN THE MARKING AND SHADOW VEHICLE AT 100 FOOT SPACING. CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.

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

(1) SIGNS SHALL BE REPEATED APPROXIMATELY EVERY THREE MILES.

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

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



MOVING PAVEMENT MARKING OPERATIONS
TWO- LANE TWO- WAY ROADWAY

MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2023
DATE

/S/ Andrew I
WORK ZONE EN

FHWA

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SDD 15C19-08a

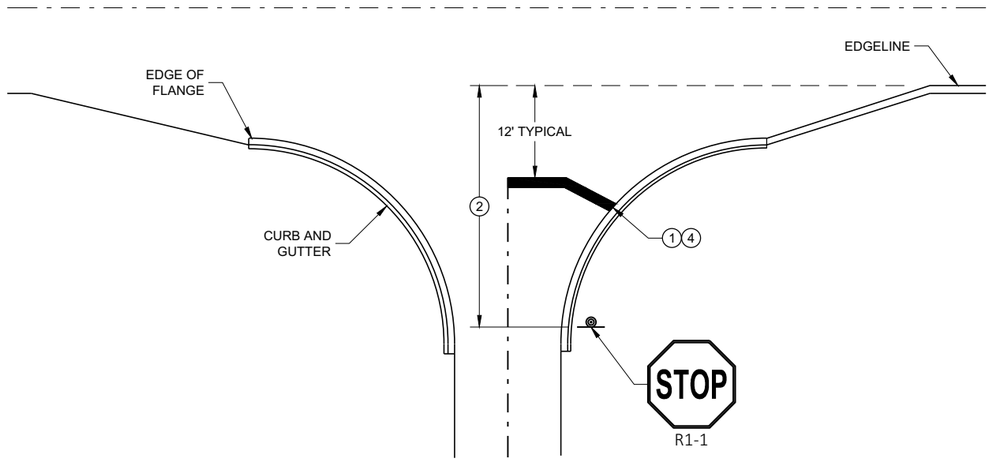
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SDD 15C19-08a

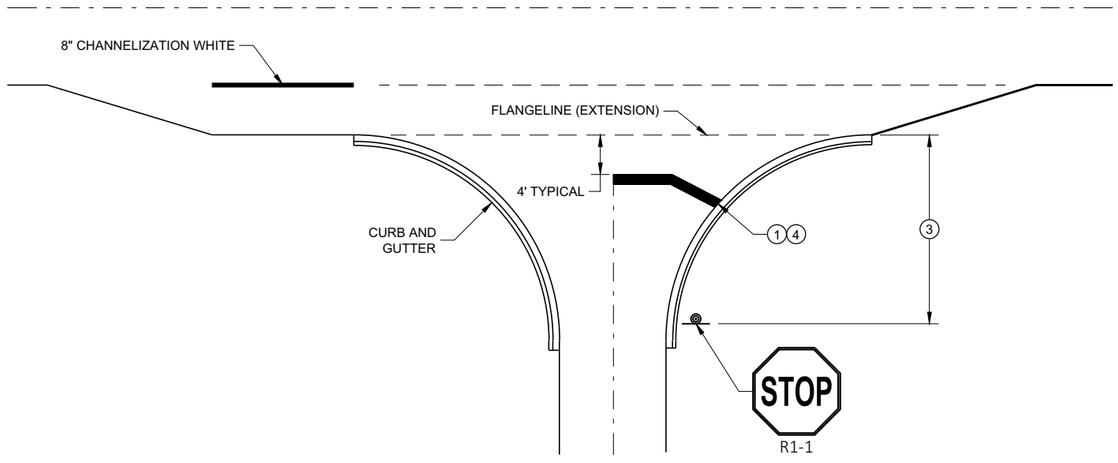
GENERAL NOTES

STOP SIGN SHALL BE PLACED A MINIMUM OF 6 FEET TO A MAXIMUM OF 50 FEET FROM THE EDGELINE LOCATION.

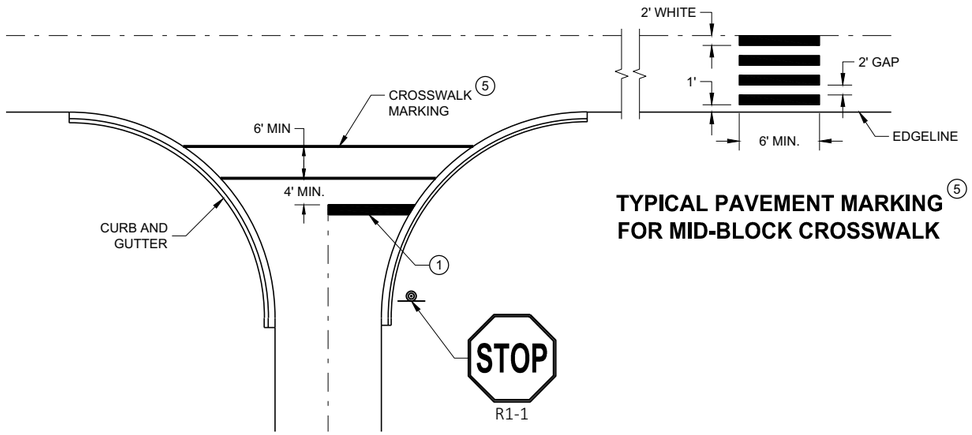
1. 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE REGION MARKING ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
2. NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE.
3. NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE EXTENSION.
4. MOVE CLOSER TO THE EDGE OF TRAVEL LINE AS NEEDED FOR VISIBILITY AND SIGHT LINES (NO CLOSER THAN 4 FEET).
5. LADDER BAR CROSSWALKS SHOULD ONLY BE USED FOR MID BLOCK CROSSINGS. USE 2 - 6" TRANSVERSE LINES INSTEAD.



TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER

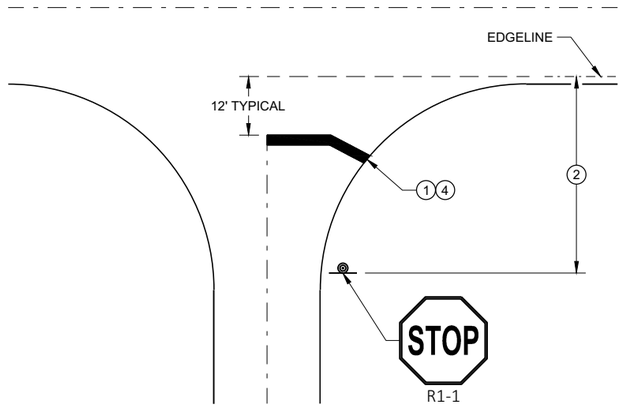


TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH RIGHT TURN LANE



TYPICAL PAVEMENT MARKING FOR MID-BLOCK CROSSWALK 5

TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH CROSSWALK MARKING



TYPICAL STOP LINE PAVEMENT MARKING WITHOUT CURB AND GUTTER

STOP LINE AND CROSSWALK PAVEMENT MARKING

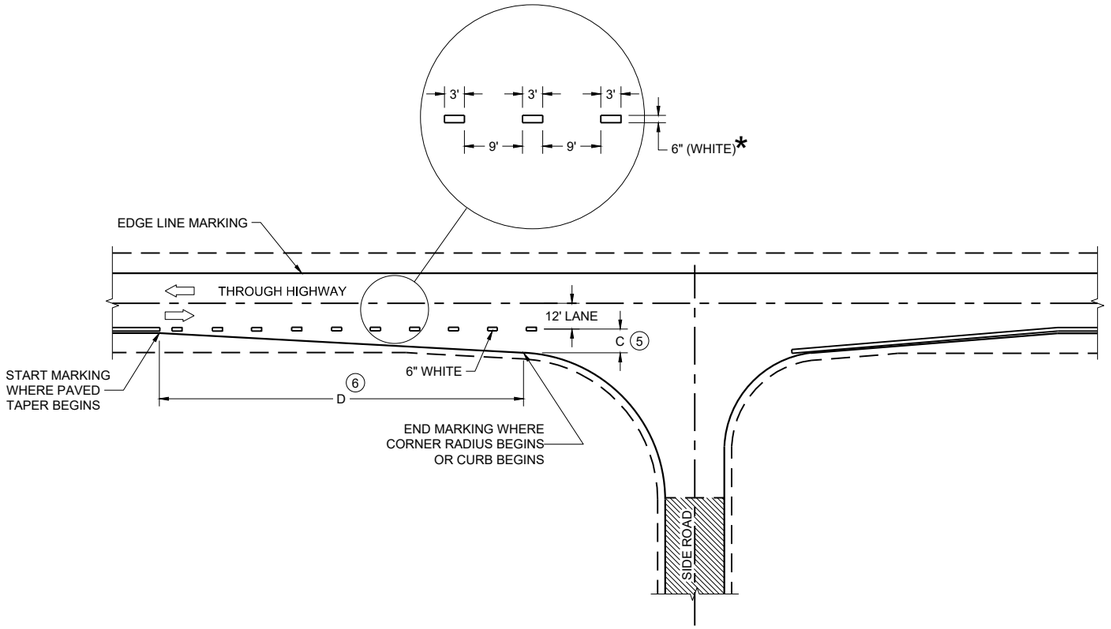
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2019 — DATE
/S/ Matthew Rauch — STATE SIGNING AND MARKING ENGINEER

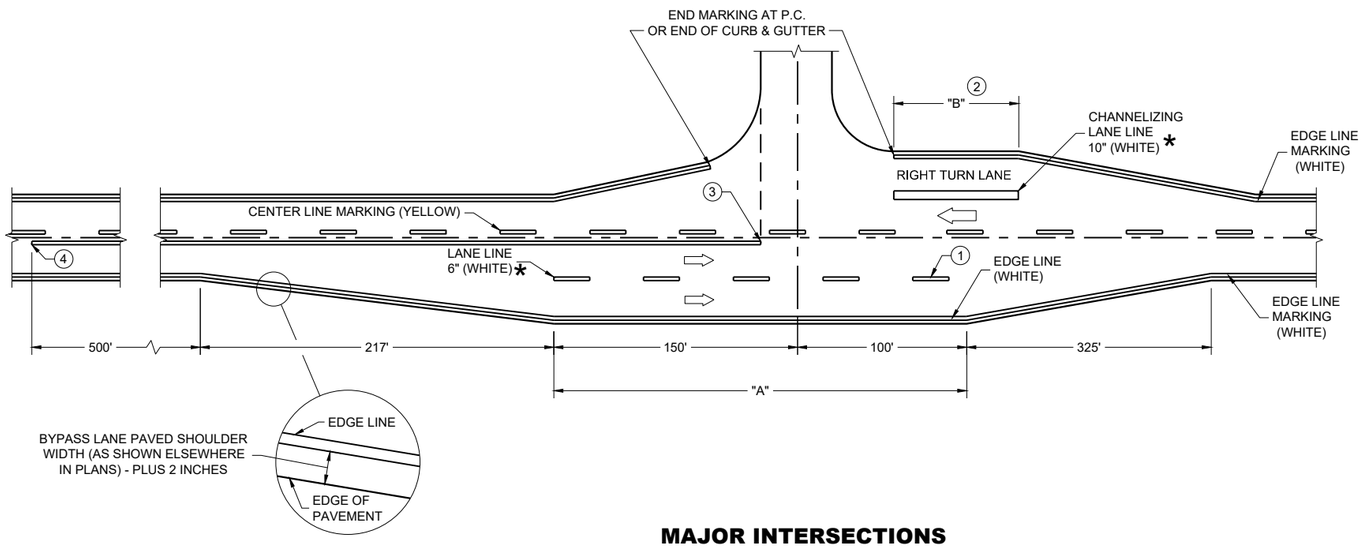
FHWA

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SDD 15C33 - 04



MINOR INTERSECTION



MAJOR INTERSECTIONS

(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANE)

*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

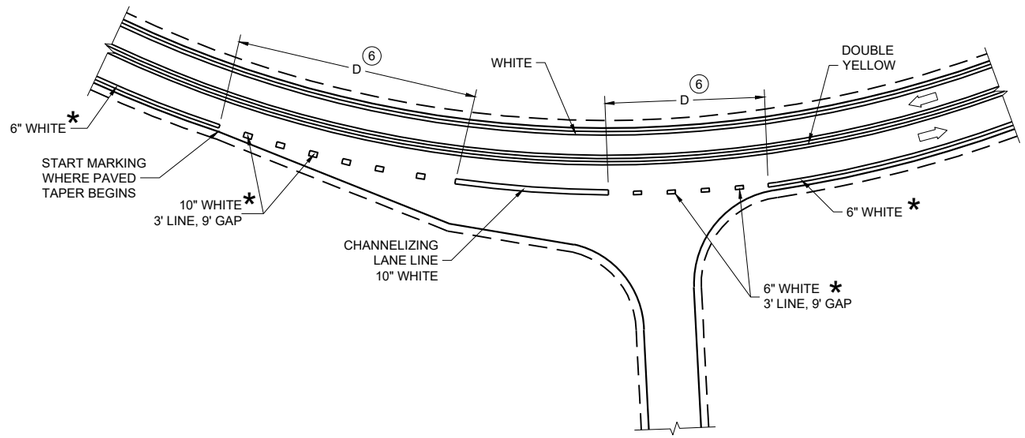
GENERAL NOTES

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

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

LEGEND

DIRECTION OF TRAVEL



INTERSECTION ON OUTSIDE OF CURVE

PAVEMENT MARKING (INTERSECTIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

LEGEND

SIGN ON PERMANENT SUPPORT

TRAFFIC CONTROL DRUM

DIRECTION OF TRAFFIC

WORK ZONE

GENERAL NOTES

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

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

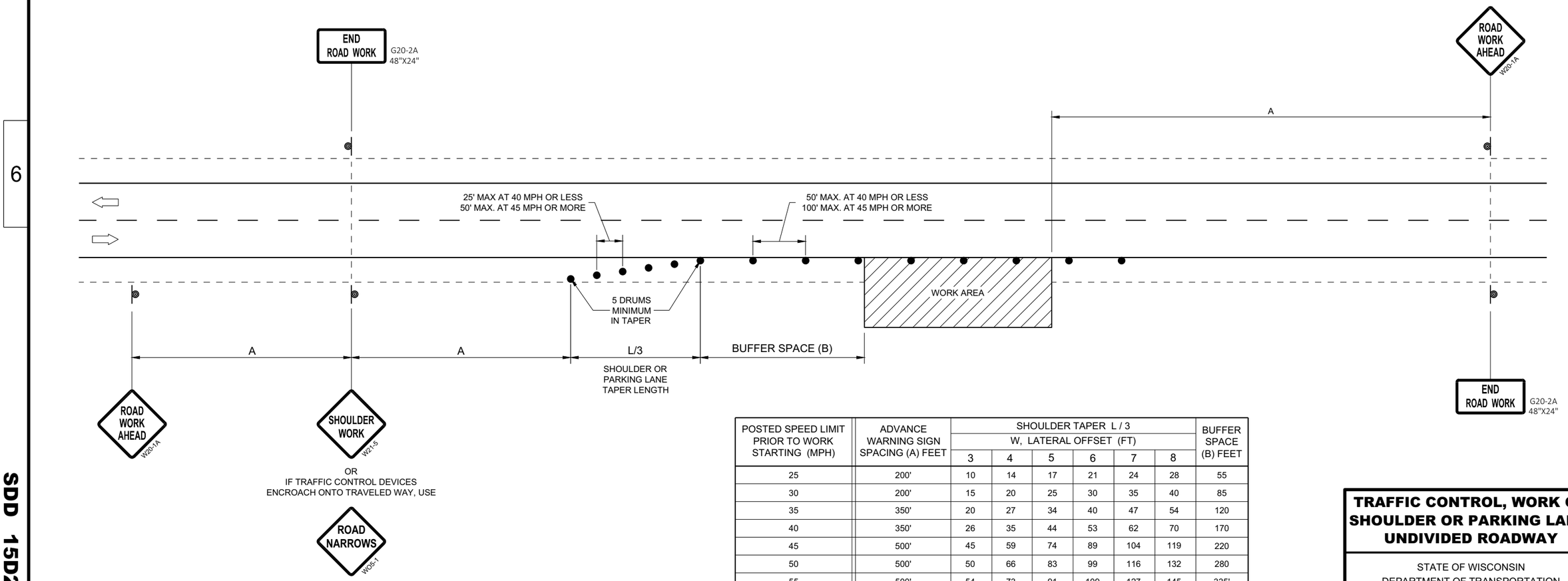
ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

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

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

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

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



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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2020
DATE

/S/ Andrew Heidtke
STATEWIDE WORK ZONE T SAFETY ENGINEER

FHWA

SDD 15D28 - 04

SDD 15D28 - 04

GENERAL NOTES

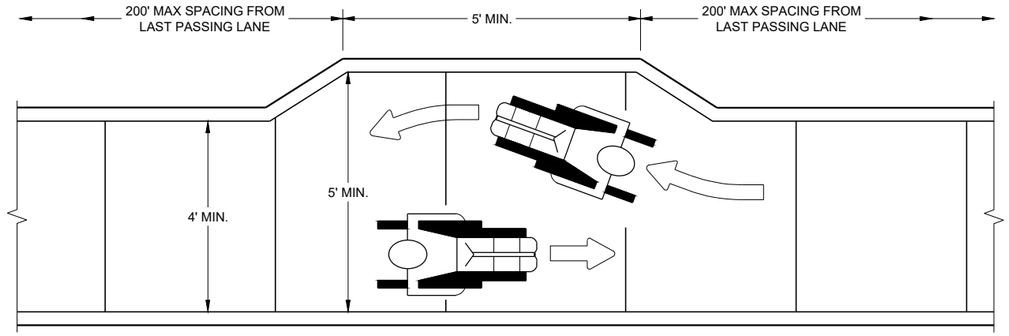
BARRICADE DEVICE SELECTED FROM APPROVED PRODUCT LIST

(1) REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.

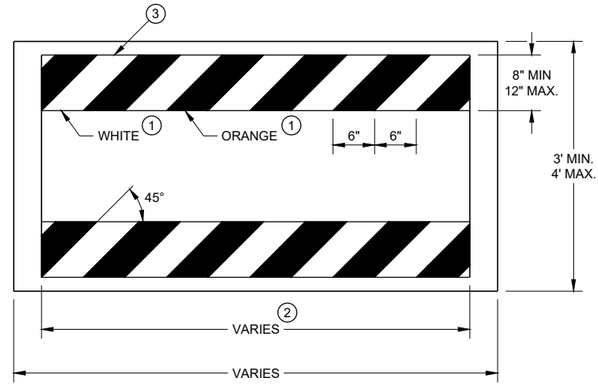
(2) SHEETING REQUIRED ON MORE THAN 50% OF BARRICADE WIDTH.

(3) PLACE SHEETING ON BOTH SIDES OF THE BARRICADE.

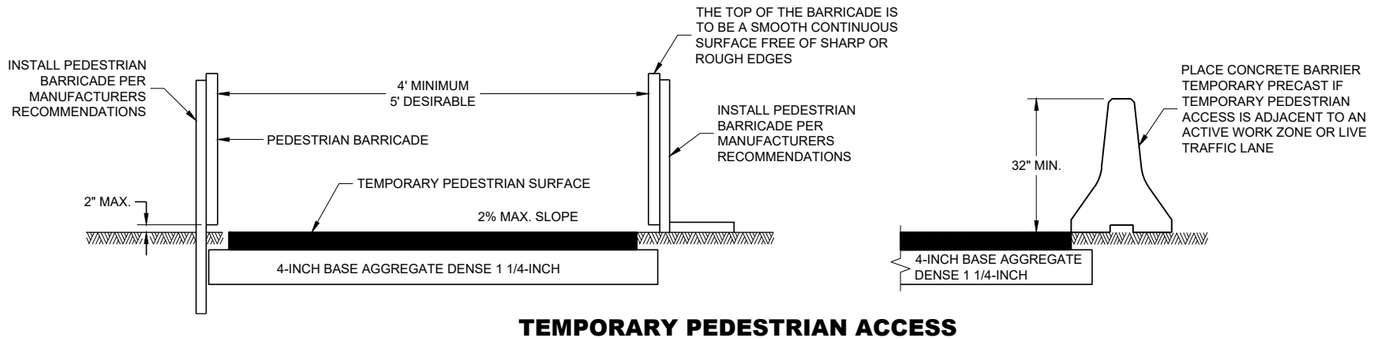
* USE THIS DETAIL FOR SHEETING PLACEMENT REFERENCE.



NARROW SIDEWALK PASSING DETAIL



TEMPORARY PEDESTRIAN BARRICADE*

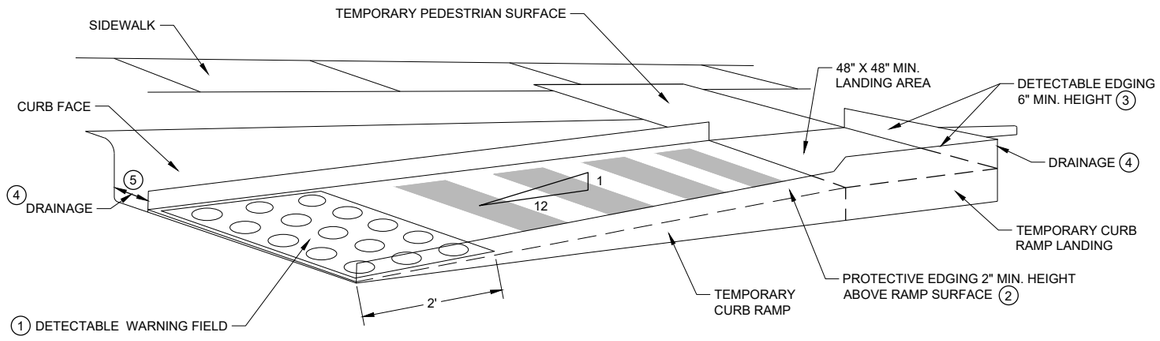


TEMPORARY PEDESTRIAN ACCESS

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

6

SDD 15D30 - 09a



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 1:50 (2%) 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.

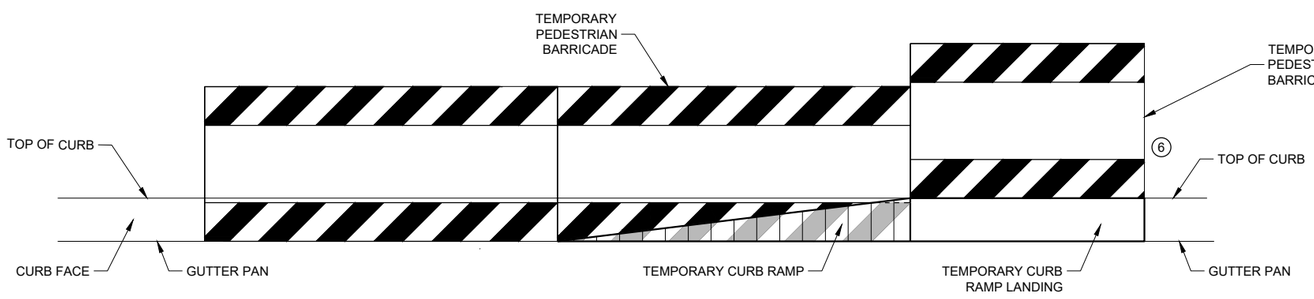
(2) PROTECTIVE EDGING WITH A 2" MIN. HEIGHT SHALL BE INSTALLED WHEN A CURB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6" OR GREATER OR HAS A SIDE APRON SLOPE STEEPER THAN 1:3 (33%). PROTECTIVE EDGING SHOULD BE CONSIDERED WHEN CURB RAMPS OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3" OR MORE.

(3) DETECTABLE EDGING WITH 6" MIN. HEIGHT AND CONTRASTING COLOR SHALL BE INSTALLED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS).

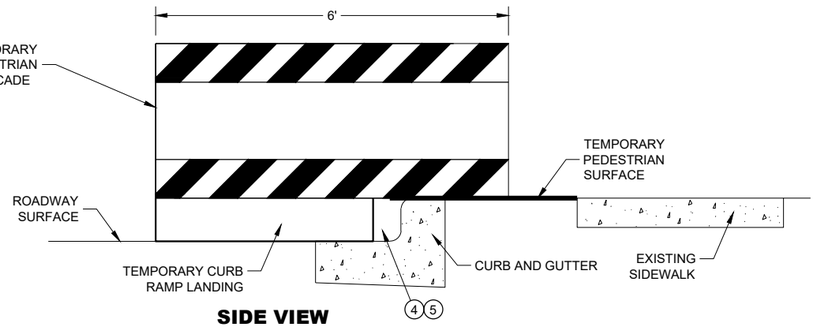
(4) DO NOT RESTRICT WATER FLOW IN THE GUTTER SYSTEM.

(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.



FRONT VIEW



SIDE VIEW

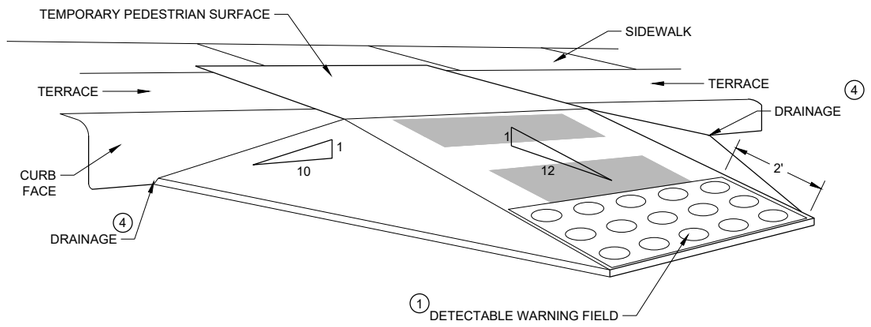
TEMPORARY CURB RAMP PARALLEL TO CURB

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

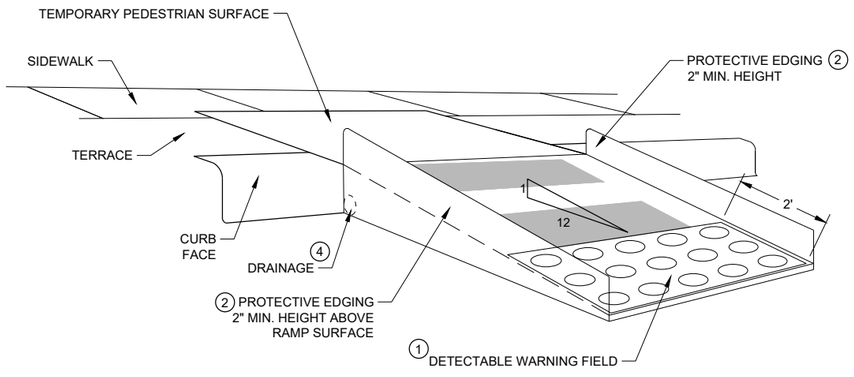
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 15D30 - 09b



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 1:50 (2%) 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.

GENERAL NOTES

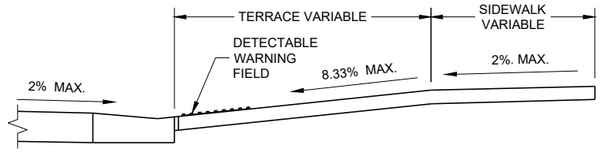
BARRICADE DEVICE SELECTED FROM APPROVED PRODUCT LIST

(1) REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.

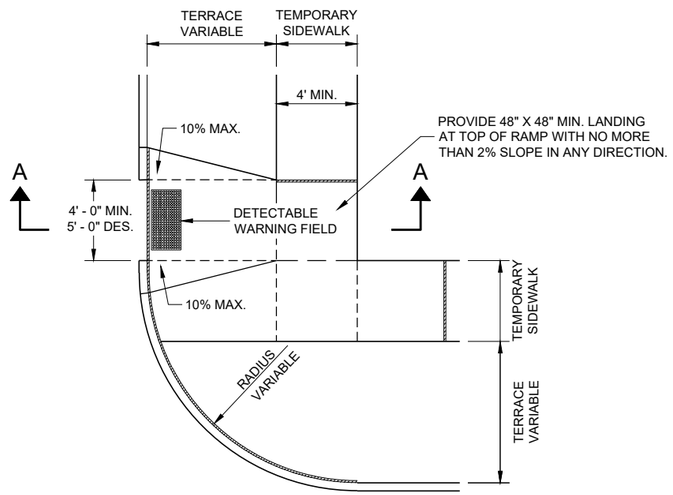
(2) SHEETING REQUIRED ON MORE THAN 50% OF BARRICADE WIDTH.

(3) PLACE SHEETING ON BOTH SIDES OF THE BARRICADE.

* USE THIS DETAIL FOR SHEETING PLACEMENT REFERENCE.



SECTION A - A



PLAN VIEW

TEMPORARY TYPE 3 RAMP

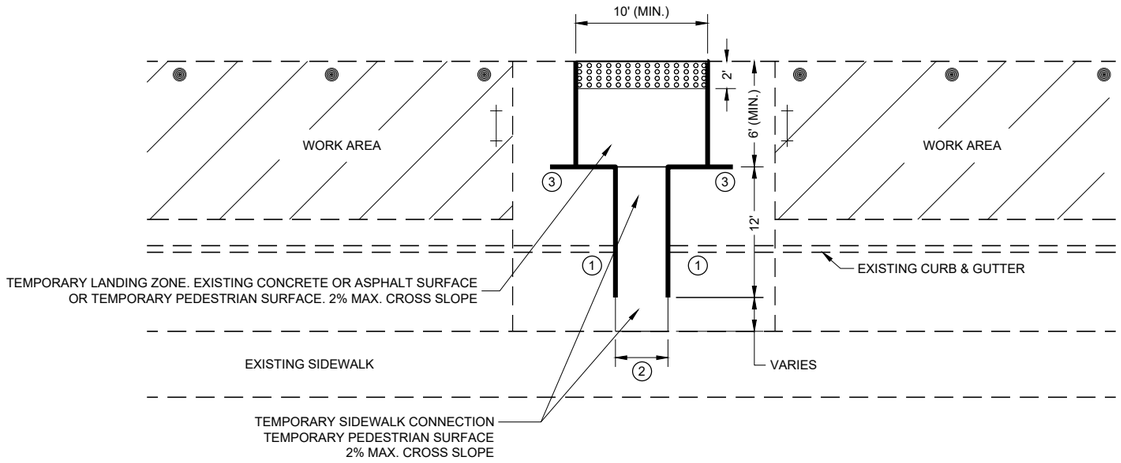
(OUTSIDE OF CROSSWALK AREA)

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

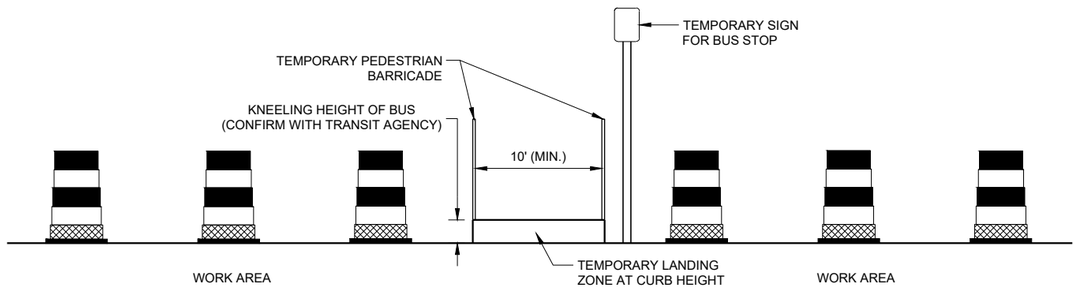
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6
SDD 15D30-09d



PLAN VIEW



PROFILE VIEW

TEMPORARY BUS STOP PAD

GENERAL NOTES

TYPICAL TEMPORARY PEDESTRIAN BARRICADE PANEL IS 6 FEET LONG.

NOTIFY THE BUS COMPANY 7 DAYS IN ADVANCE OF THE BUS STOP RELOCATION.

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.

DETECTABLE EDGING WITH 6" MIN. HEIGHT AND CONTRASTING COLOR SHALL BE INSTALLED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS).

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".

CURB RAMPS AND LANDINGS SHALL HAVE A 1:50 (2%) MAX. CROSS-SLOPE.

(1) DO NOT RESTRICT WATER FLOW IN THE GUTTER SYSTEM.

(2) 5' WIDE MIN. WITH TEMPORARY PEDESTRIAN BARRICADE, 10' WIDE MIN. WITHOUT TEMPORARY PEDESTRIAN BARRICADE.

(3) PLACE EXCESS PORTION OF TEMPORARY PEDESTRIAN BARRICADE INTO THIS SPACE.

LEGEND

- TRAFFIC CONTROL DRUM
- TYPE III BARRICADE
- TEMPORARY PEDESTRIAN BARRICADE
- TEMPORARY DETECTABLE WARNING FIELD
- WORK AREA

6

6

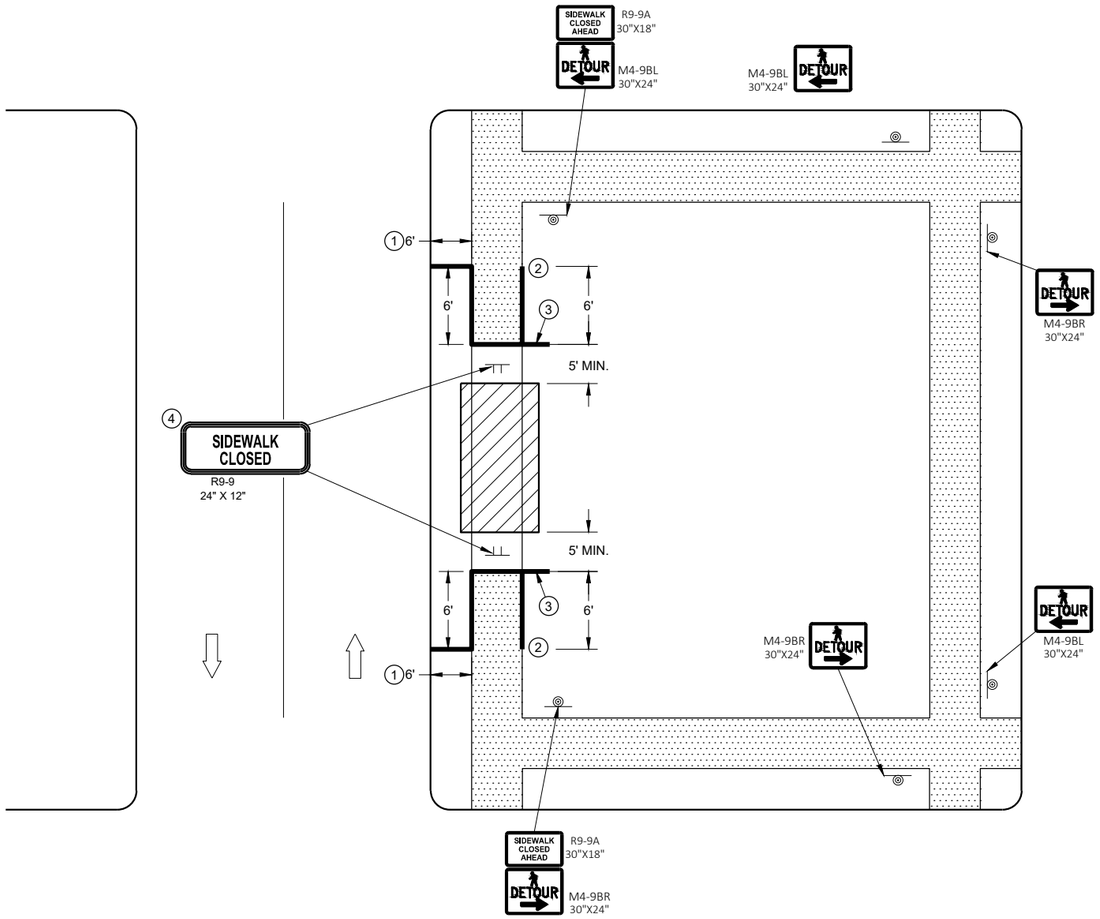
SDD 15D30 - 09e

SDD 15D30 - 09e

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

LEGEND

- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- UNDER PEDESTRIAN TRAFFIC
- WORK AREA
- TEMPORARY PEDESTRIAN BARRICADE
- DIRECTION OF TRAFFIC



GENERAL NOTES

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE WISCONSIN STANDARD SIGN PLATES.

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.

SIDEWALK DETOUR, SIDEWALK ONLY ON ONE SIDE

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

6

SDD 15D30 - 09f

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

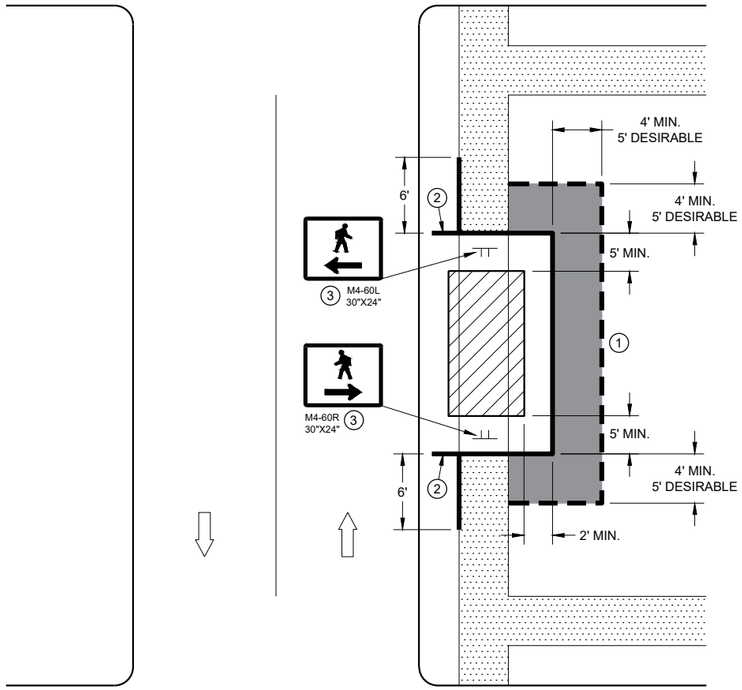
TYPICAL TEMPORARY PEDESTRIAN BARRICADE PANEL IS 6 FEET LONG.

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE WISCONSIN STANDARD SIGN PLATES.

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 DIVERSION
SINGLE SIDE

6

SDD 15D30 - 09g

6

SDD15D30 - 09g

TRAFFIC CONTROL,
PEDESTRIAN ACCOMMODATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

LEGEND

- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- WORK AREA
- UNDER PEDESTRIAN TRAFFIC
- TEMPORARY CURB RAMP
- TEMPORARY PEDESTRIAN SURFACE "A"
- TEMPORARY PEDESTRIAN SURFACE "B"
- TEMPORARY PEDESTRIAN BARRICADE
- DIRECTION OF TRAFFIC

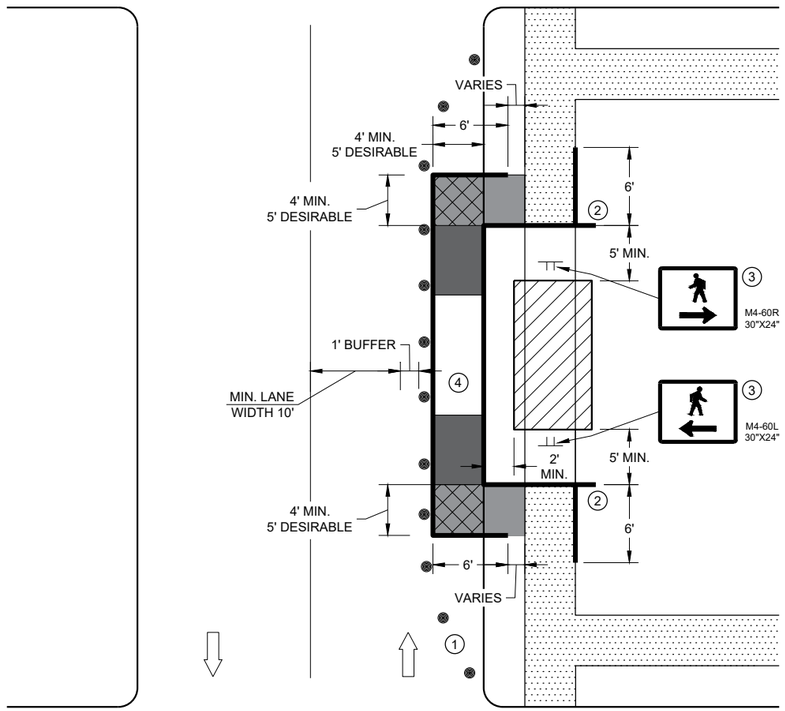
GENERAL NOTES

TYPICAL TEMPORARY PEDESTRIAN BARRICADE PANEL IS 6 FEET LONG.

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE WISCONSIN STANDARD SIGN PLATES.

WHERE TEMPORARY BARRICADE RUNS PARALLEL ALONG SIDEWALK, PLACE THE FACE OF THE BARRICADE AT THE EDGE OF THE SIDEWALK.

1. SHOULDER OR LANE CLOSURE ADVANCE WARNING AND BUFFER SPACE REQUIRED.
2. PLACE EXCESS PORTION OF TEMPORARY PEDESTRIAN BARRICADE PANEL PAST THE SIDEWALK ON THE SIDE AWAY FROM THE ROAD.
3. MOUNTING HEIGHT OF 5 FEET FROM THE SURFACE TO THE BOTTOM OF SIGN.
4. USE EXISTING PAVEMENT SURFACE. IF EXISTING PAVEMENT SURACE HAS BEEN REMOVED, USE A TEMPORARY PEDESTRIAN SURFACE.



SIDEWALK DIVERSION, SINGLE SIDE

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

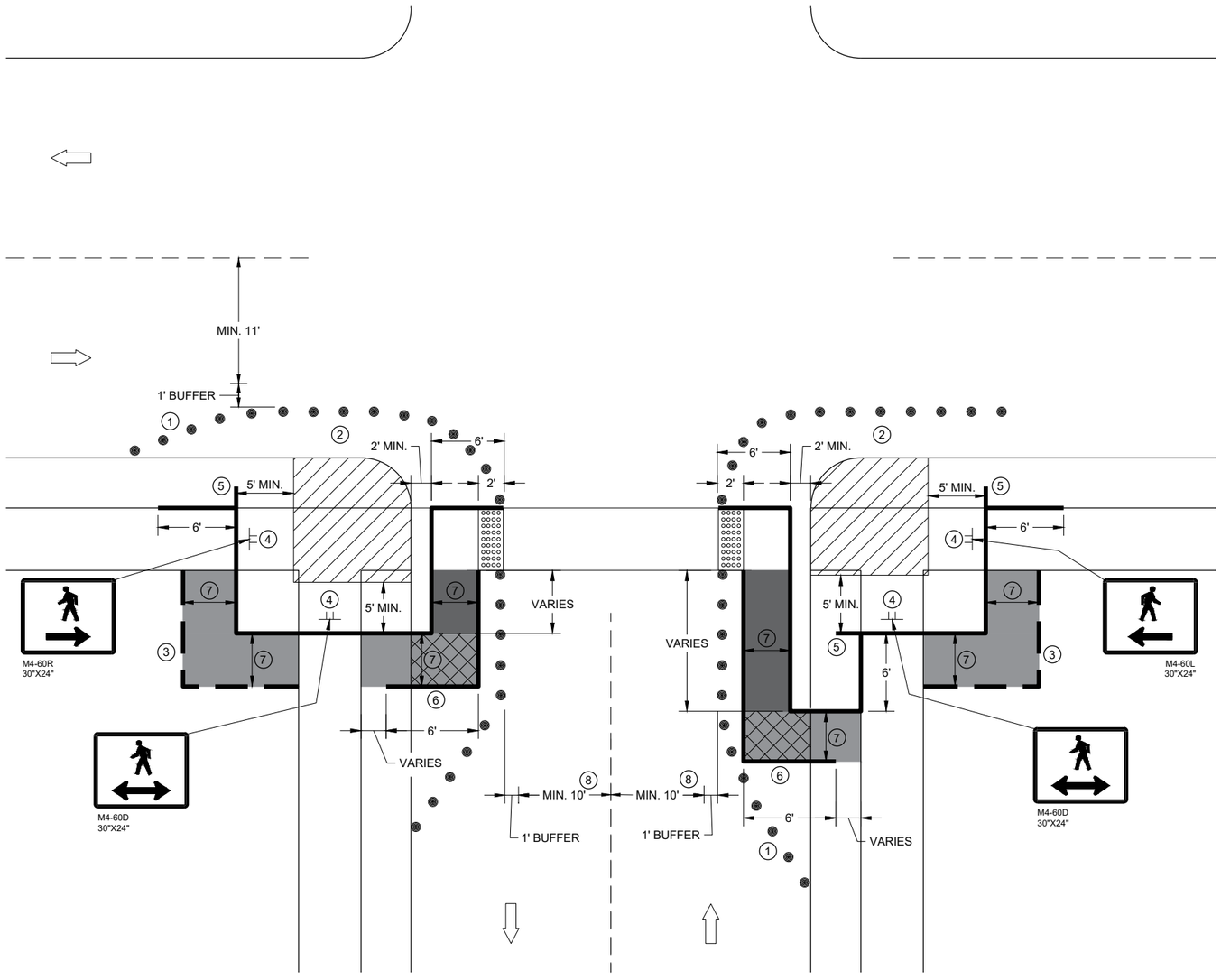
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 15D30 - 09h

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SDD 15D30 - 09h



CURB RAMP PEDESTRIAN TRAFFIC CONTROL
SIDEWALK ON SINGLE SIDE

GENERAL NOTES

IF PEDESTRIAN PUSH BUTTONS ARE PRESENT ON THE EXISTING FACILITY, ENSURE THEY ARE MAINTAINED/ACCESSIBLE FOR PEDESTRIAN USE THROUGHOUT THE TEMPORARY PEDESTRIAN ACCOMMODATIONS.

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE WISCONSIN STANDARD SIGN PLATES.

TYPICAL TEMPORARY PEDESTRIAN BARRICADE PANEL IS 6 FEET LONG

WHEN TEMPORARY PEDESTRIAN BARRICADE RUNS PARALLEL ALONG THE SIDEWALK, PLACE THE FACE OF THE BARRICADE AT THE EDGE OF THE SIDEWALK.

(1) SHOULDER OR LANE CLOSURE ADVANCE WARNING AND PROPER BUFFER SPACE REQUIRED.

(2) PROVIDE ADEQUATE SPACE FOR CONTRACTOR OPERATIONS

(3) USE TEMPORARY PEDESTRIAN BARRICADE TO SEPARATE PEDESTRIANS FROM DROP OFFS OR FOR ADDITIONAL PEDESTRIAN CHANNELIZATION.

(4) MOUNTING HEIGHT OF 5 FEET FROM SIDEWALK SURFACE TO BOTTOM OF SIGN.

(5) PLACE EXCESS PORTION OF TEMPORARY PEDESTRIAN BARRICADE PANEL IN THE SIDEWALK TERRACE.

(6) IF TEMPORARY PEDESTRIAN BARRICADE DOES NOT REACH THE FACE OF THE CURB, USE AN ADDITIONAL PANEL AND EXTEND INTO THE TERRACE.

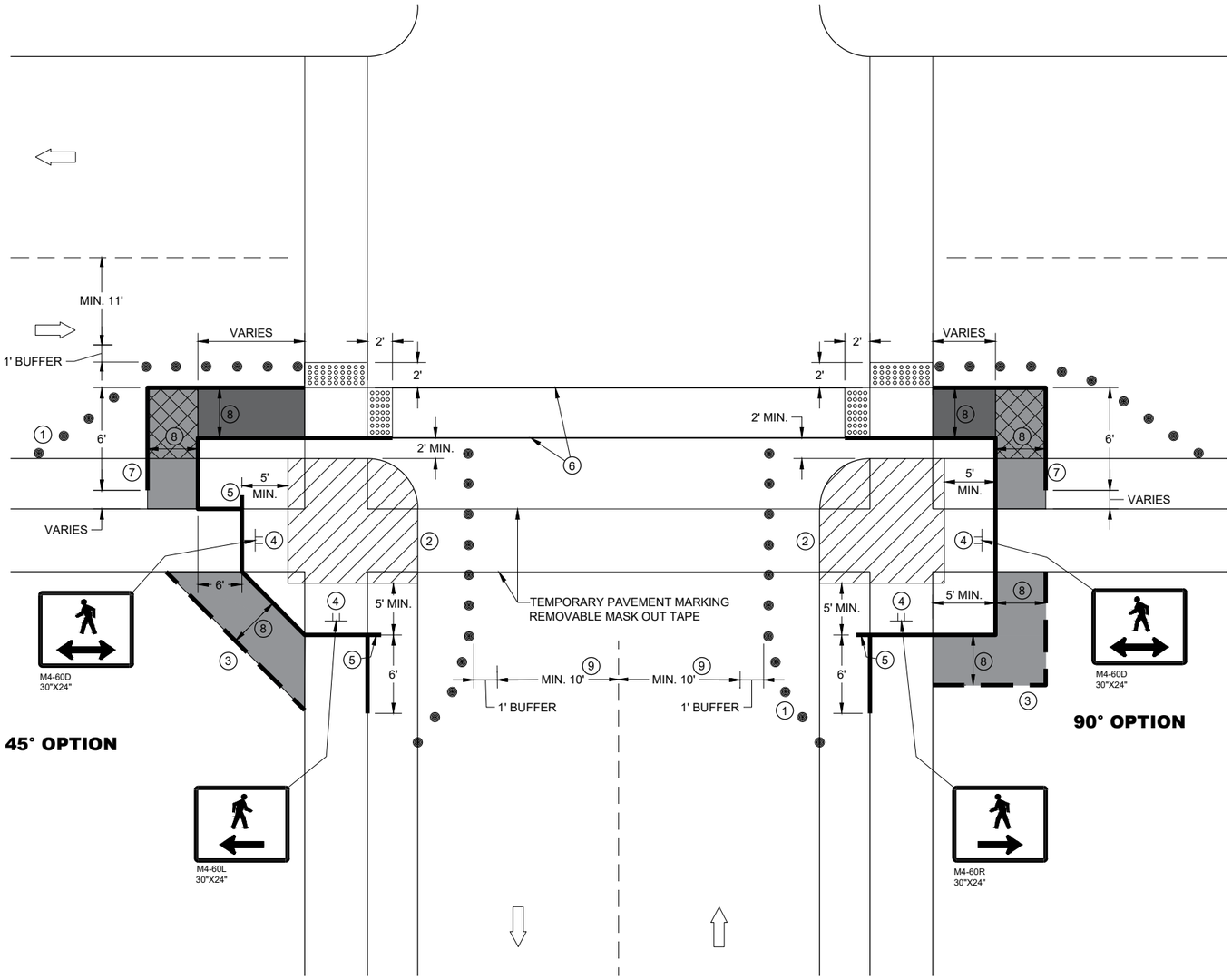
(7) 4 FEET MINIMUM, 5 FEET DESIRABLE

(8) IF MINIMUM LANE WIDTHS CAN'T BE ATTAINED, CURB RAMPS MAY NEED TO BE CONSTRUCTED AT SEPARATE TIMES.

LEGEND

- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- WORK AREA
- TEMPORARY CURB RAMP
- TEMPORARY PEDESTRIAN SURFACE "A"
- TEMPORARY PEDESTRIAN SURFACE "B"
- TEMPORARY DETECTABLE WARNING FIELD
- TEMPORARY PEDESTRIAN BARRICADE
- OPTIONAL TEMPORARY PEDESTRIAN BARRICADE
- DIRECTION OF TRAFFIC

TRAFFIC CONTROL,
PEDESTRIAN ACCOMMODATION



CURB RAMP PEDESTRIAN TRAFFIC CONTROL

GENERAL NOTES

IF PEDESTRIAN PUSH BUTTONS ARE PRESENT ON THE EXISTING FACILITY, ENSURE THEY ARE MAINTAINED/ACCESSIBLE FOR PEDESTRIAN USE THROUGHOUT THE TEMPORARY PEDESTRIAN ACCOMMODATIONS.

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE WISCONSIN STANDARD SIGN PLATES.

TYPICAL TEMPORARY PEDESTRIAN BARRICADE PANEL IS 6 FEET LONG

WHEN TEMPORARY PEDESTRIAN BARRICADE RUNS PARALLEL ALONG THE SIDEWALK, PLACE THE FACE OF THE BARRICADE AT THE EDGE OF THE SIDEWALK.

1. SHOULDER OR LANE CLOSURE ADVANCE WARNING AND PROPER BUFFER SPACE REQUIRED.
2. PROVIDE ADEQUATE SPACE FOR CONTRACTOR OPERATIONS
3. USE TEMPORARY PEDESTRIAN BARRICADE TO SEPARATE PEDESTRIANS FROM DROP OFFS OR FOR ADDITIONAL PEDESTRIAN CHANNELIZATION.
4. MOUNTING HEIGHT OF 5 FEET FROM SIDEWALK SURFACE TO BOTTOM OF SIGN.
5. PLACE EXCESS PORTION OF TEMPORARY PEDESTRIAN BARRICADE PANEL IN THE SIDEWALK TERRACE.
6. WHITE 6" TEMPORARY PAVEMENT MARKING
7. IF TEMPORARY PEDESTRIAN BARRICADE DOES NOT REACH THE FACE OF THE CURB, USE AN ADDITIONAL PANEL AND EXTEND INTO THE TERRACE.
8. 4 FEET MINIMUM, 5 FEET DESIRABLE
9. IF MINIMUM LANE WIDTHS CAN'T BE ATTAINED, CURB RAMPS MAY NEED TO BE CONSTRUCTED AT SEPARATE TIMES.

LEGEND

- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- WORK AREA
- TEMPORARY CURB RAMP
- TEMPORARY PEDESTRIAN SURFACE "A"
- TEMPORARY PEDESTRIAN SURFACE "B"
- TEMPORARY DETECTABLE WARNING FIELD
- TEMPORARY PEDESTRIAN BARRICADE
- OPTIONAL TEMPORARY PEDESTRIAN BARRICADE
- DIRECTION OF TRAFFIC

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

SDD 15D30 - 09j

6

LEGEND

SIGN ON PERMANENT SUPPORT

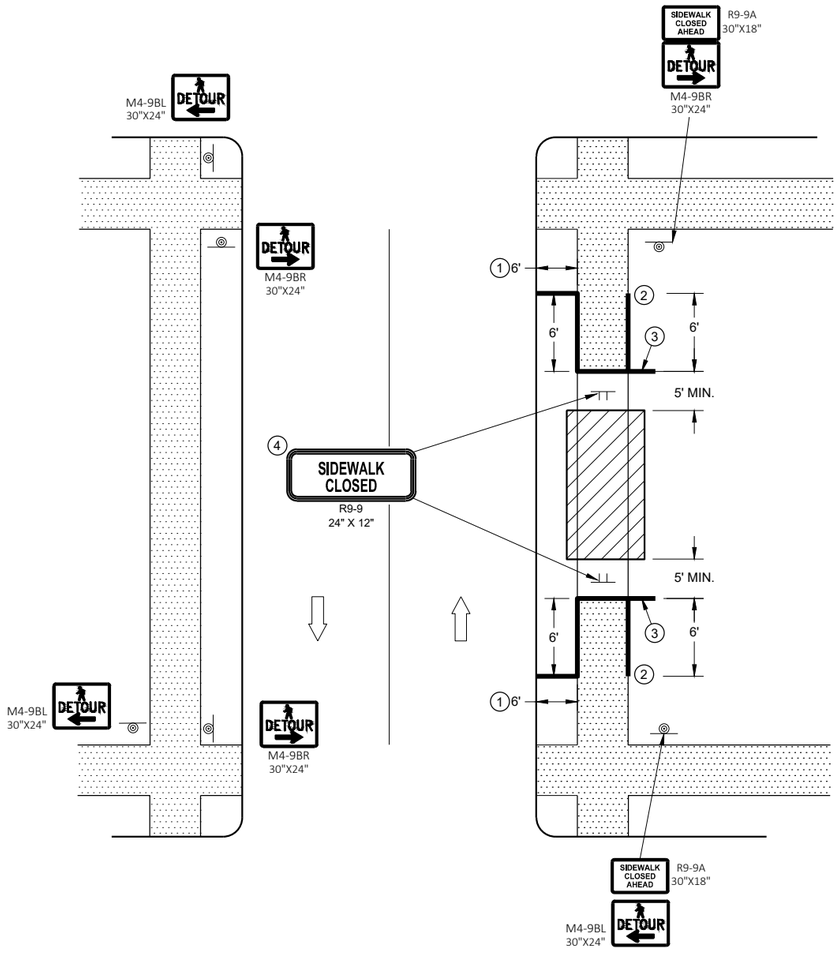
SIGN ON TEMPORARY SUPPORT

UNDER PEDESTRIAN TRAFFIC

WORK AREA

TEMPORARY PEDESTRIAN BARRICADE

DIRECTION OF TRAFFIC



GENERAL NOTES

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE WISCONSIN STANDARD SIGN PLATES.

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 CONFLICT WITH DRIVEWAYS AND OTHER EXISTING FEATURES.

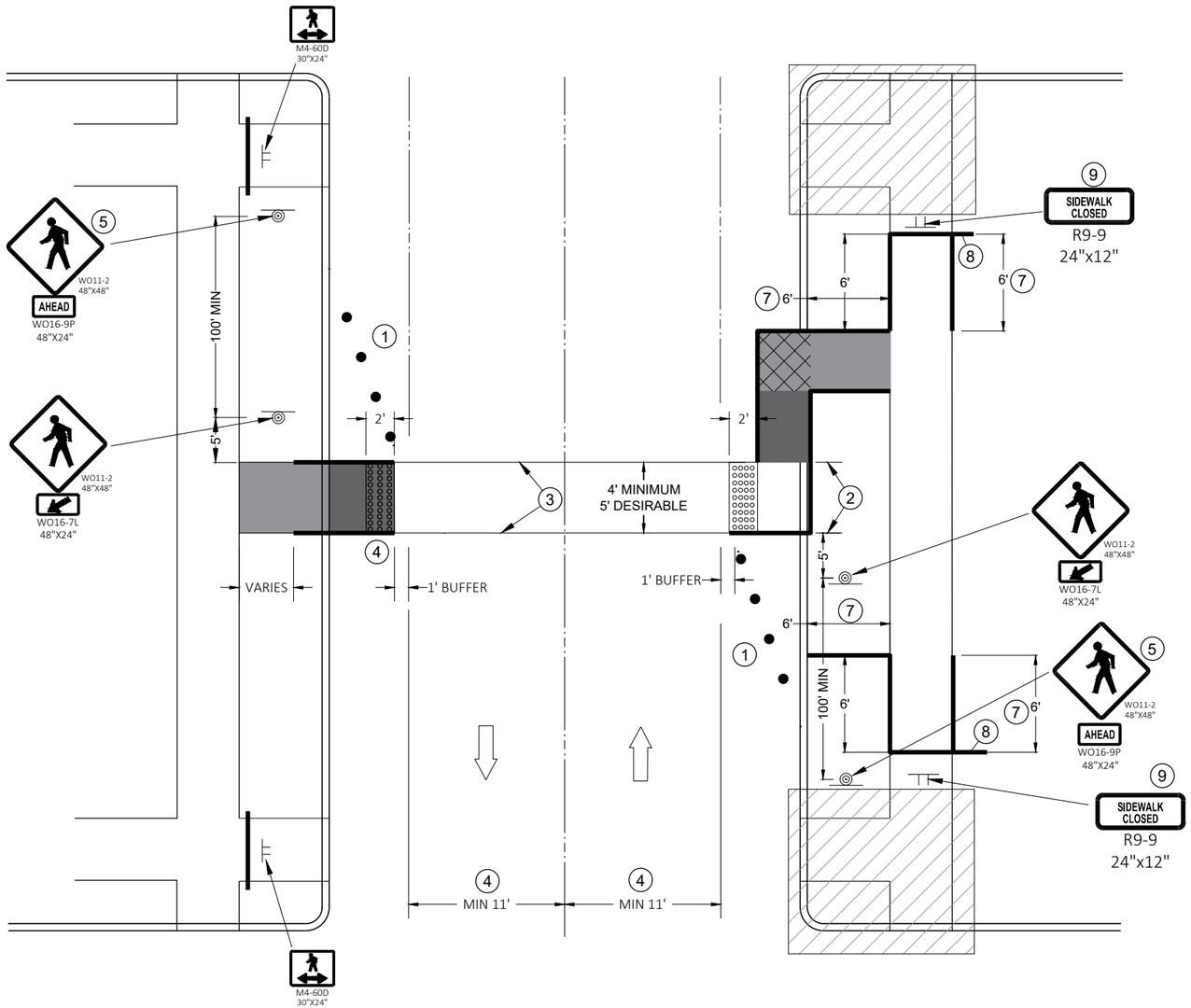
1. IF TERRACE IS LESS THAN 6 FEET WIDE, OMIT TEMPORARY PEDESTRIAN BARRICADE FROM THE SIDEWALK TO THE CURB.
2. PLACE BARRICADE CLOSURE SO THAT THE TEMPORARY PEDESTRIAN BARRICADE END IS AT THE LAST OPEN SIDEWALK ACCESS TO RESIDENCES OR BUSINESSES BEFORE THE SIDEWALK CLOSURE.
3. IF TEMPORARY PEDESTRIAN 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.

SIDEWALK DETOUR, SIDEWALK ON BOTH SIDES

6

SDD 15D30 - 09k

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION



TEMPORARY PEDESTRIAN CROSSING

GENERAL NOTES

TYPICAL TEMPORARY PEDESTRIAN BARRICADE PANEL IS 6 FEET LONG.

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE WISCONSIN STANDARD SIGN PLATES.

SEE OTHER PEDESTRIAN ACCOMMODATION DETAILS FOR SIGNING AND DEVICES FOR DIFFERENT PEDESTRIAN FACILITIES CLOSURES.

(1) SHOULDER OR LANE CLOSURE ADVANCED WARNING AND PROPER BUFFER SPACE REQUIRED.

(2) 4 FEET MINIMUM, 5 FEET DESIRABLE.

(3) WHITE 6" TEMPORARY PAVEMENT MARKING.

(4) IF MINIMUM LANE WIDTHS CAN'T BE ATTAINED, PERPENDICULAR CURB RAMPS MAY NEED TO BE UTILIZED.

(5) IF MINIMUM 100' SPACING FROM THE MID-BLOCK CROSSING CANNOT BE ATTAINED BEFORE THE INTERSECTION, REMOVE THIS SIGN ASSEMBLY.

(6) IF TERRACE IS LESS THAN 6 FEET WIDE, OMIT TEMPORARY PEDESTRIAN BARRICADE FROM THE SIDEWALK TO THE CURB.

(7) 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.

(8) IF TEMPORARY PEDESTRIAN BARRICADE PANEL IS WIDER THAN THE SIDEWALK WIDTH, THE PORTION OF THE EXCESS PANEL SHOULD EXTEND INTO THE TERRACE.

(9) MOUNTING HEIGHT OF 5 FEET FROM THE SURFACE TO THE BOTTOM OF THE SIGN.

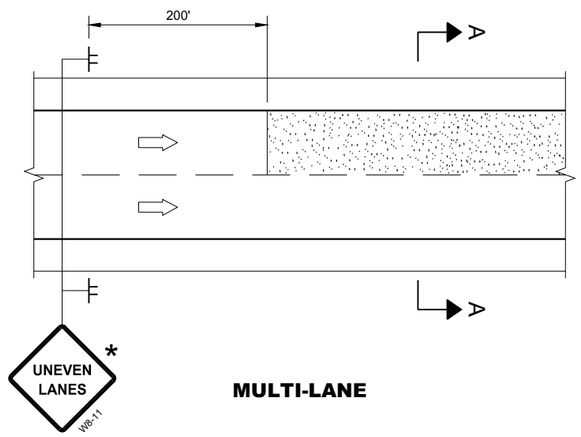
LEGEND

- TRAFFIC CONTROL DRUM
- SIGN ON TEMPORARY SUPPORT
- TEMPORARY CURB RAMP
- TEMPORARY DETECTABLE WARNING FIELD
- TEMPORARY PEDESTRIAN SURFACE "A"
- TEMPORARY PEDESTRIAN SURFACE "B"
- WORK AREA
- TEMPORARY PEDESTRIAN BARRICADE
- DIRECTION OF TRAFFIC

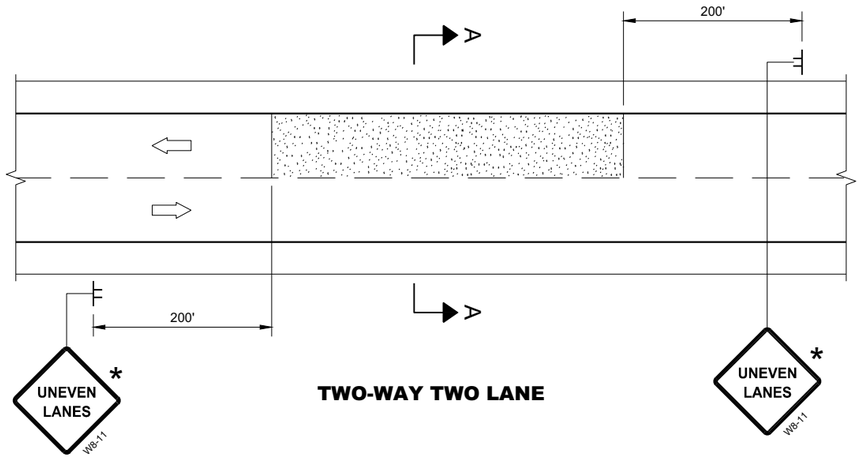
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SDD 15D30 - 09L

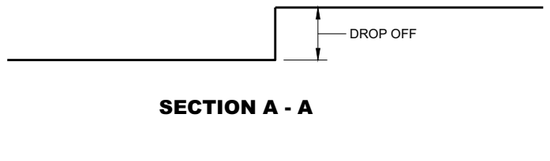
TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION



MULTI-LANE

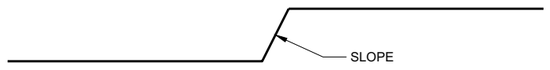


TWO-WAY TWO LANE

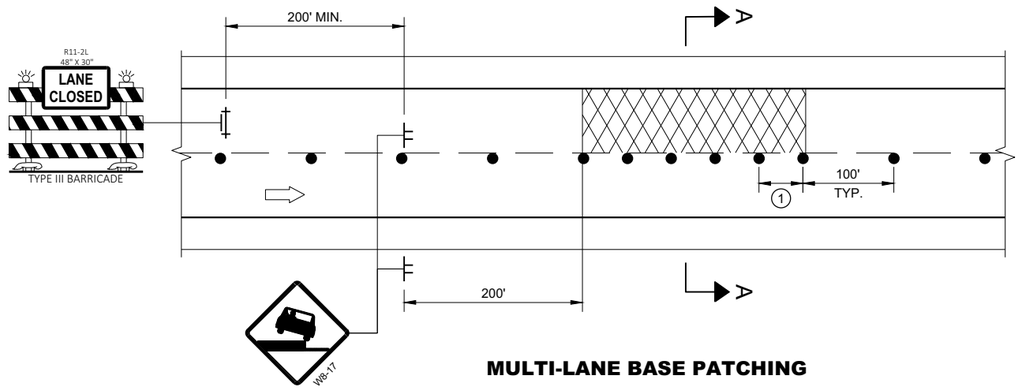


SECTION A - A

OR

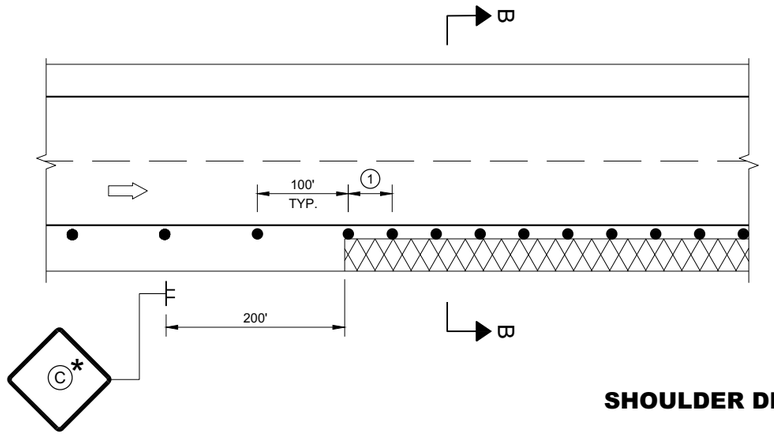


SECTION A - A

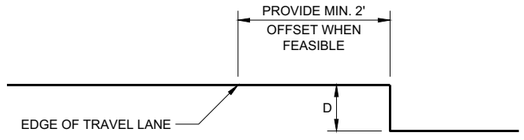


MULTI-LANE BASE PATCHING

ADJACENT LANE DROP-OFFS



SHOULDER DROP-OFFS



SECTION B - B

D	SIGN (C)
< 2" WITH A SLOPE STEEPER THAN 3:1	LOW SHOULDER WO8-9
2" < 6" WITH A SLOPE STEEPER THAN 3:1	SHOULDER DROP - OFF W8-9A PROVIDE A 3:1 OR FLATTER SLOPE OF MATERIAL ADJACENT TO THE PAVEMENT

GENERAL NOTES

FOR SPOT LOCATIONS USE ENGINEERING JUDGEMENT WHEN PLACING ADDITIONAL SIGNS.

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

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

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

* IF THE DROP-OFF IS CONTINUOUS ALONG THE PROJECT, PLACE ADDITIONAL SIGNS EVERY 1 MILE AND AFTER EVERY ENTRANCE RAMP.

(1) USE CLOSER SPACING WHEN DELINEATING DROP-OFF.

LEGEND

- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC
- WORK AREA WITH DROP-OFF
- MILLED SURFACE

TRAFFIC CONTROL, DROP-OFF SIGNING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINEE
FHWA

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SDD 15D39 - 02

LEGEND

- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC
- WORK AREA
- REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)
- CONCRETE BARRIER TEMPORARY PRECAST

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.

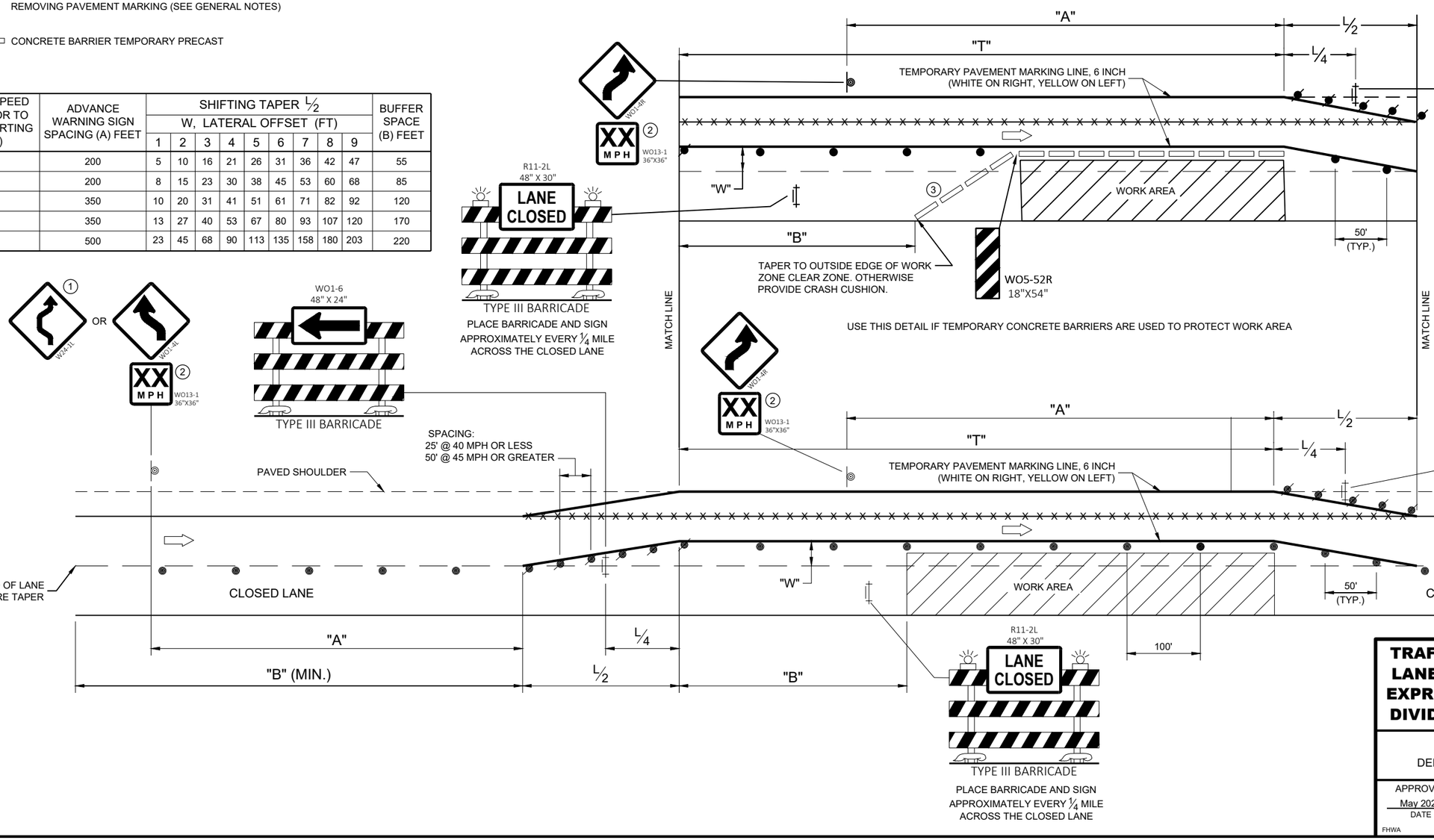
ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE SHIFT OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP. THE LANE SHIFT MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP 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) BARRIER FLARE RATE: 6:1 @ 40 MPH OR LESS
8:1 @ 45 MPH OR GREATER

POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	SHIFTING TAPER L/2 W, LATERAL OFFSET (FT)									BUFFER SPACE (B) FEET
		1	2	3	4	5	6	7	8	9	
25	200	5	10	16	21	26	31	36	42	47	55
30	200	8	15	23	30	38	45	53	60	68	85
35	350	10	20	31	41	51	61	71	82	92	120
40	350	13	27	40	53	67	80	93	107	120	170
45	500	23	45	68	90	113	135	158	180	203	220



TRAFFIC CONTROL, PARTIAL LANE SHIFT, NON-FREEWAY/ EXPRESSWAY OR MULTILANE DIVIDED 45 MPH AND UNDER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

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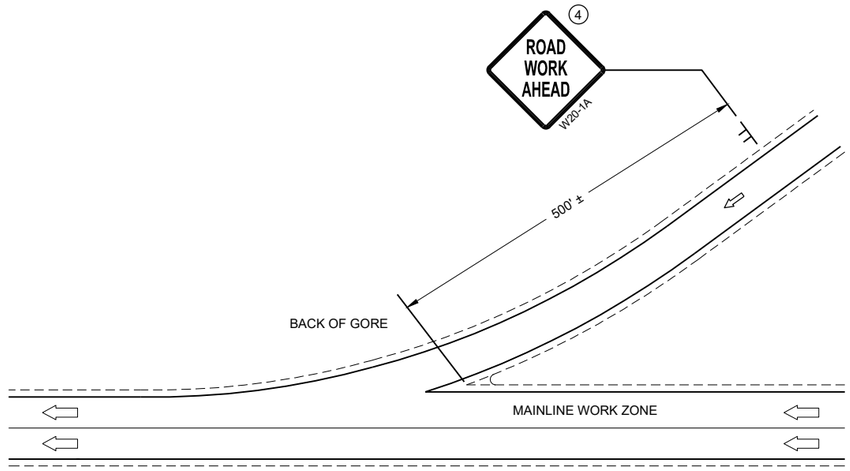
SDD 15D40-05c

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SDD 15D40-05c

LEGEND

- V1 SHADOW VEHICLE 1
- V2 SHADOW VEHICLE 2
- V3 ADVANCE WARNING TRUCK
- ● TRAFFIC CONTROL DRUM
- TRUCK MOUNTED ATTENUATOR (TMA)
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC
- FLASHING ARROW PANEL (MERGE)
- FLASHING ARROW PANEL (CAUTION)
- PCMS PORTABLE CHANGEABLE MESSAGE SIGN
- WORK AREA



GENERAL NOTES

SHORT DURATION IS WORK THAT OCCUPIES A LOCATION UP TO 1 HOUR.

MOBILE IS WORK THAT MOVES INTERMITTENTLY OR CONTINUOUSLY.

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

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

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

WHEN WORK ACTIVITY BLOCKS THE RIGHT LANE, REVERSE TRAFFIC CONTROL.

WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, PROVIDE ADDITIONAL TRAFFIC CONTROLS AS SPECIFIED IN THE CONTRACT OR AS APPROVED BY THE ENGINEER.

USE DOUBLE ARROWS WHEN CONVOY IS IN CENTER LANE ONLY.

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

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

(2) DRUMS ARE TO BE USED FOR BRIDGE DECK SEALING AND OTHER PROJECTS THAT REQUIRE DELINEATION.

(3) WITHIN 5 MILES, RELOCATE SIGNS AS WORK PROGRESSES AND NECESSARY OR AS DIRECTED BY THE ENGINEER.

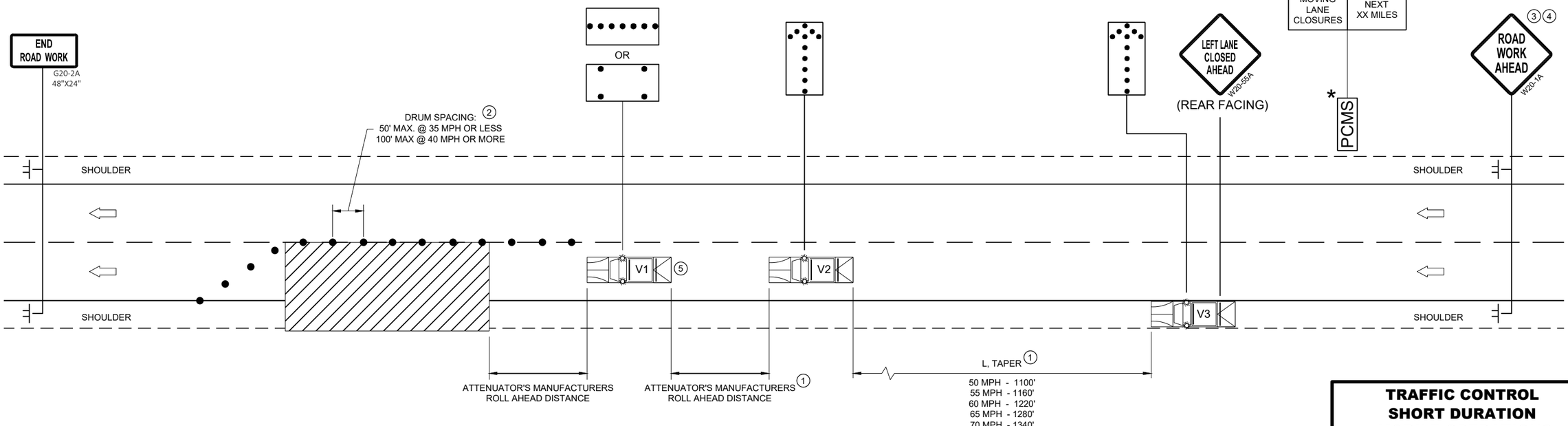
(4) SIGN NOT REQUIRED IF MOVING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

(5) SHADOW VEHICLE 1 (V1) IS OPTIONAL

* PCMS OPTIONAL

PCMS MESSAGING

FRAME 1	FRAME 2
MOVING LANE CLOSURES	NEXT XX MILES



TRAFFIC CONTROL SHORT DURATION MOBILE OPERATIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
August 2021
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15D43 - 02

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SDD 15D43 - 02

GENERAL NOTES

DRAWING NOT TO SCALE. ALL SIGNS AND POSTS ON THIS SHEET SHALL BE PAID FOR WITH 'TRAFFIC CONTROL SIGNS' BID ITEM. ALL SIDE ROADS WHICH ARE UNDER CONSTRUCTION OF CURB AND GUTTER AND/OR GRADING SHALL BE ADEQUATELY SIGNED.

ALL SIGNS AND DEVICES SHALL BE IN CONFORMANCE WITH THE WISCONSIN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (WMUTCD). SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE WISDOT STANDARD SIGN PLATES.

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

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

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

ALL SIGNS INAPPROPRIATE TO THE STATUS OF THE CONTROL ZONE, INCLUDING PRE-EXISTING SIGNS IN THE VICINITY, SHALL BE COVERED OR REMOVED AS DIRECTED BY THE ENGINEER.

SEE 15C34 FOR ADDITIONAL TRAFFIC CONTROL SIGNING WHEN CENTERLINE PAVEMENT MAKINGS ARE MISSING. 'DO NOT PASS' SIGNS MUST BE INSTALLED ON THE SAME DAY AS MILLING OPERATIONS.

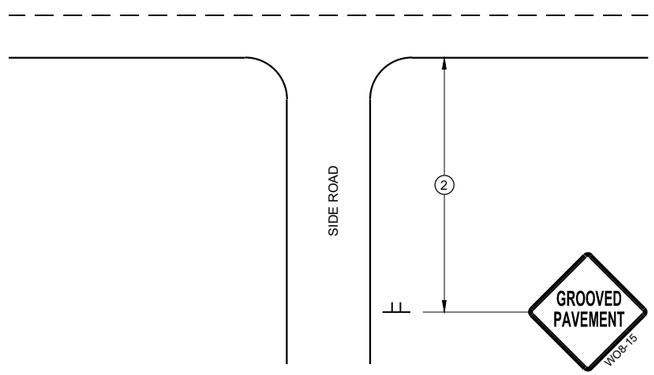
(1) PLACE SIGNS 350' IN ADVANCE OF MILLED SURFACES AND AT 1 MILE INTERVALS, OR AS DIRECTED BY THE ENGINEER.

(2) PLACE SIGN 200' MIN. FROM INTERSECTION AND 200' MIN. AFTER ADVANCE WARNING SIGN SHOWN IN SDD 15C04.

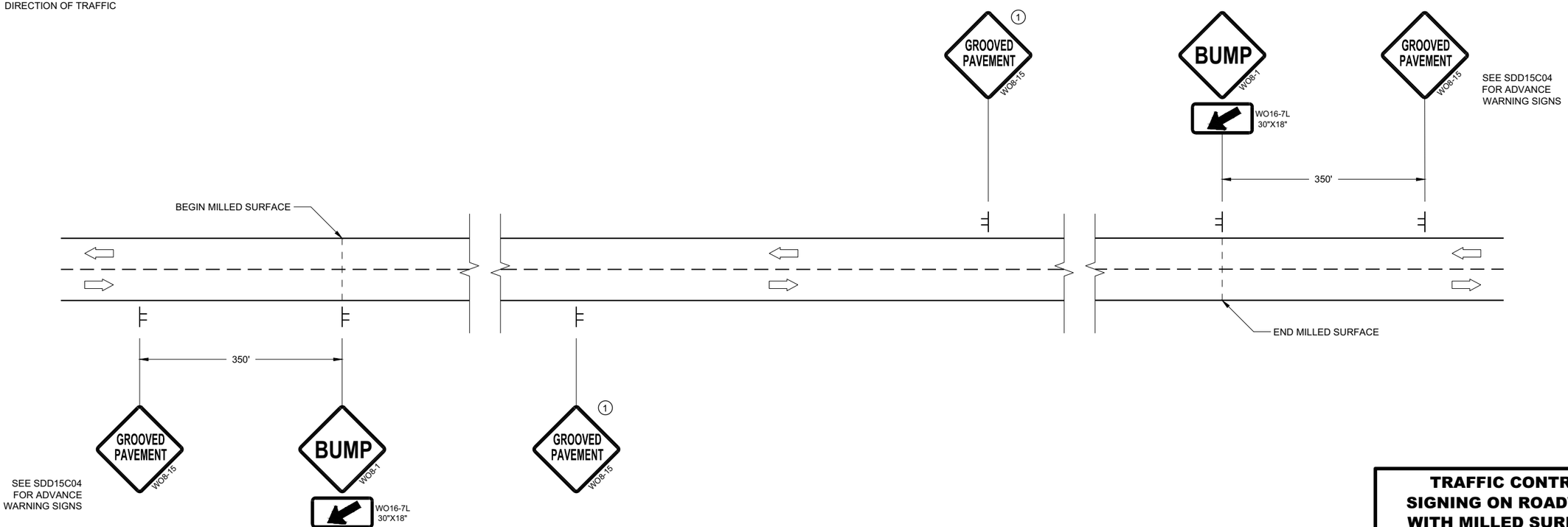
LEGEND

SIGN ON TEMPORARY SUPPORT

DIRECTION OF TRAFFIC



TYPICAL SIDE ROAD APPROACH SIGN DETAIL



DETAIL FOR SIGNING ON MILLED SURFACES

TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH MILLED SURFACES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6
SDD 15D44 - 02

GENERAL NOTES

DRAWING NOT TO SCALE. ALL SIGNS AND POSTS ON THIS SHEET SHALL BE PAID FOR WITH 'TRAFFIC CONTROL SIGNS' BID ITEM. ALL SIDE ROADS WHICH ARE UNDER CONSTRUCTION OF CURB AND GUTTER AND/OR GRADING SHALL BE ADEQUATELY SIGNED.

ALL SIGNS AND DEVICES SHALL BE IN CONFORMANCE WITH THE WISCONSIN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (WMUTCD). SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE WISDOT STANDARD SIGN PLATES.

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

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

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

ALL SIGNS INAPPROPRIATE TO THE STATUS OF THE CONTROL ZONE, INCLUDING PRE-EXISTING SIGNS IN THE VICINITY, SHALL BE COVERED OR REMOVED AS DIRECTED BY THE ENGINEER.

SEE 15C34 FOR ADDITIONAL TRAFFIC CONTROL SIGNING WHEN CENTERLINE PAVEMENT MAKINGS ARE MISSING. 'DO NOT PASS' SIGNS MUST BE INSTALLED ON THE SAME DAY AS MILLING OPERATIONS.

(1) PLACE SIGNS 350' IN ADVANCE OF CHIP SEALED OR LOOSE GRAVEL SURFACES AND AT 1 MILE INTERVALS, OR AS DIRECTED BY THE ENGINEER.

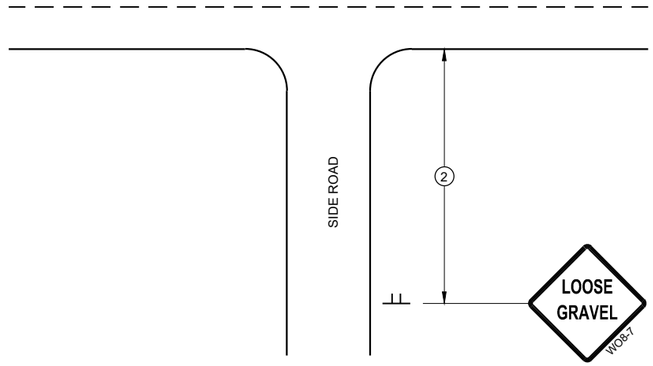
(2) PLACE SIGN 200' MIN. FROM INTERSECTION AND 200' MIN. AFTER ADVANCE WARNING SIGN SHOWN IN SDD 15C04.

(3) ADD WO8-1 OR WO8-2 SIGN WHEN THE CONDITION IS PRESENT.

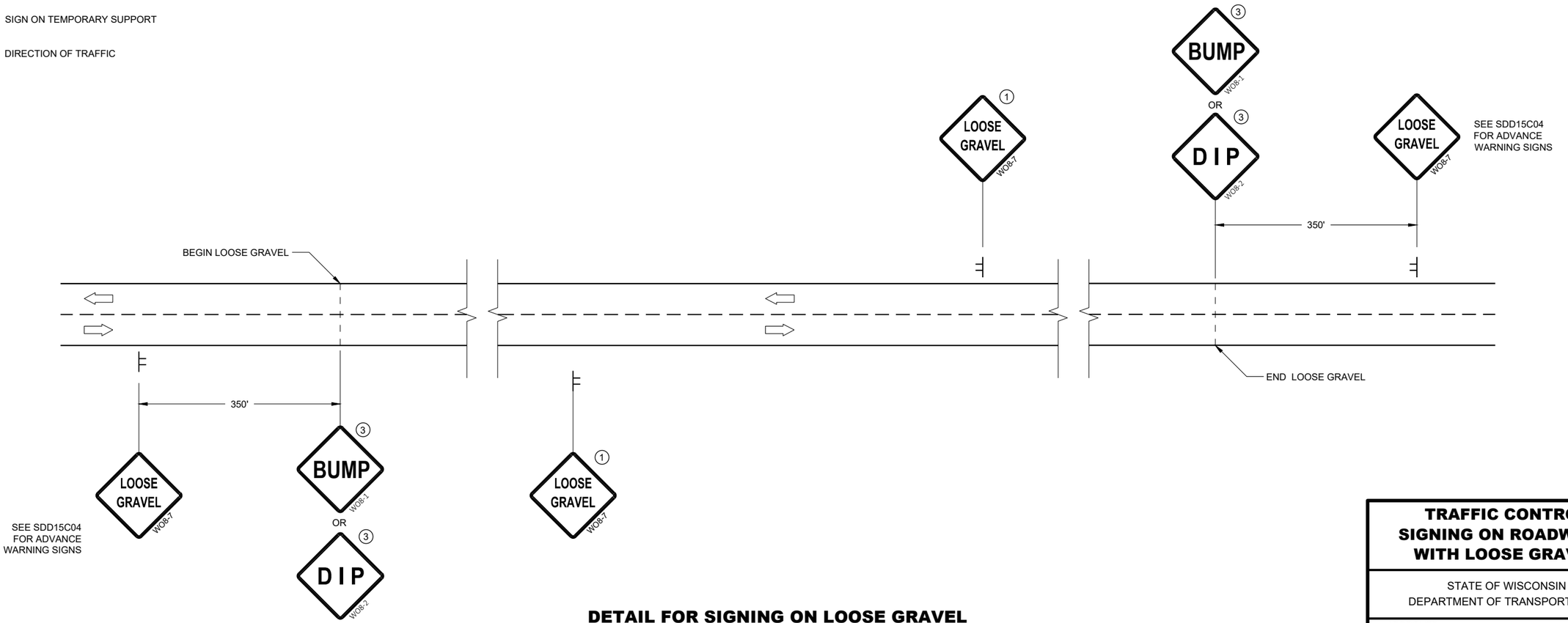
LEGEND

SIGN ON TEMPORARY SUPPORT

DIRECTION OF TRAFFIC



TYPICAL SIDE ROAD APPROACH SIGN DETAIL



DETAIL FOR SIGNING ON LOOSE GRAVEL OR CHIP SEALED SURFACES

TRAFFIC CONTROL SIGNING ON ROADWAYS WITH LOOSE GRAVEL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2021
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15D45 - 03

LEGEND

V1 WORK VEHICLE

V2 SHADOW VEHICLE

TRUCK MOUNTED ATTENUATOR (TMA)

FLASHING ARROW PANEL (CAUTION)

WORK AREA

DIRECTION OF TRAFFIC

POSTED SPEED PRIOR TO WORK STARTING (MPH)	DECISION SIGHT DISTANCE (D)
0 - 25	550'
30	550'
35	700'
40	700'
45	900'
50	900'
55	1200'

GENERAL NOTES

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.

MOBILE IS WORK THAT MOVES CONTINUOUSLY OR MOVES AT LEAST THE DECISION SIGHT DISTANCE EVERY 15 MINUTES.

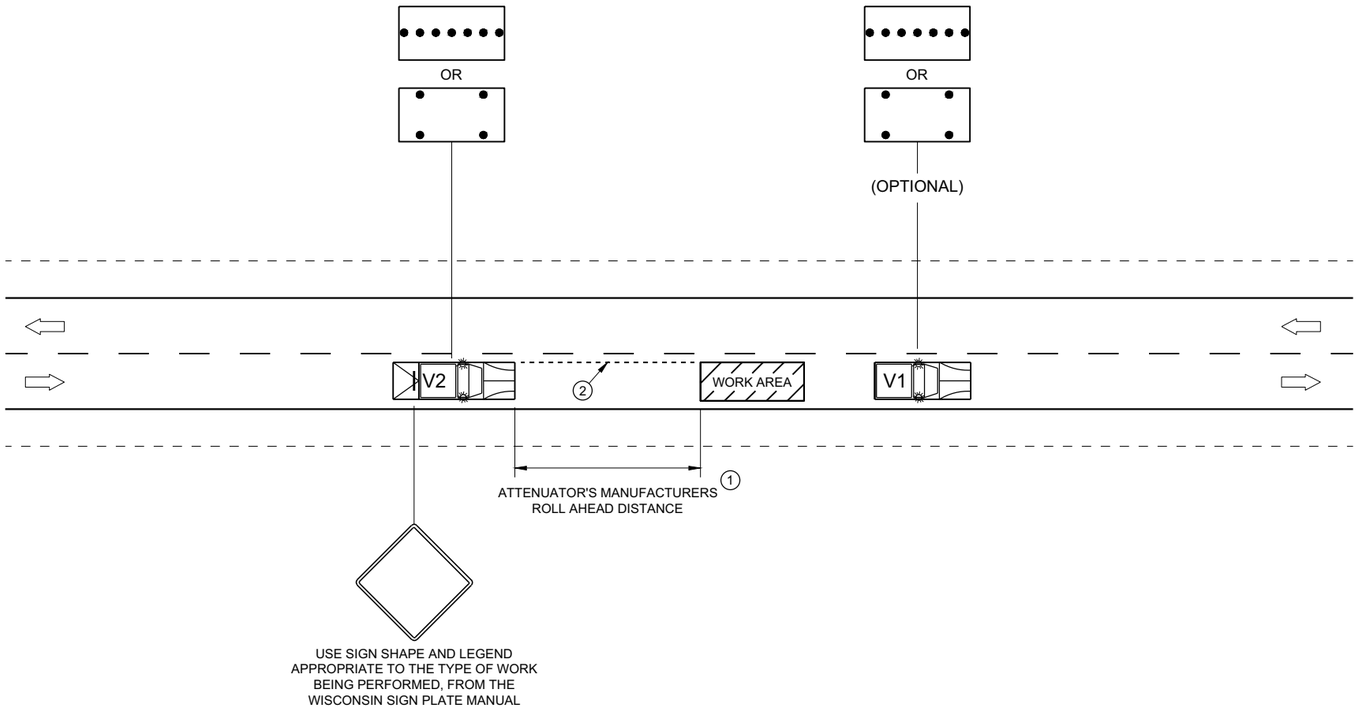
ALL VEHICLES SHALL BE EQUIPPED WITH TWO 360 DEGREE HIGH INTENSITY YELLOW FLASHING LIGHTS OR STROBE LIGHTS AND OPERATED WITH HEADLIGHTS TURNED ON.

ALL ARROW PANELS SHALL BE REAR FACING, TYPE "B" OR "C", AND DISPLAYING THE FLASHING CAUTION MODE. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE ARROW PANEL.

USE AN ATTENUATOR ON THE REARMOST VEHICLE THAT BLOCKS ALL OR PART OF THE TRAFFIC LANE.

(1) DISTANCE BETWEEN VEHICLES MAY INCREASE FROM THE ATTENUATOR'S ROLL AHEAD BASED ON TERRAIN, SIGHT DISTANCE, AND OTHER FACTORS. WHENEVER ADEQUATE STOPPING SIGHT DISTANCE EXISTS TO THE REAR, SHADOW VEHICLES SHOULD MAINTAIN THE MINIMUM DISTANCE FROM THE WORK VEHICLE AND PROCEED AT THE SAME SPEED AS THE WORK VEHICLE. SHADOW VEHICLES SHOULD SLOW DOWN IN ADVANCE OF VERTICAL OR HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.

(2) ALIGN LEFT SIDE OF SHADOW VEHICLE WITH EDGE OF WORK AREA.



6

SDD 15D51 - 01

TRAFFIC CONTROL, MOBILE OPERATIONS ON AN UNDIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

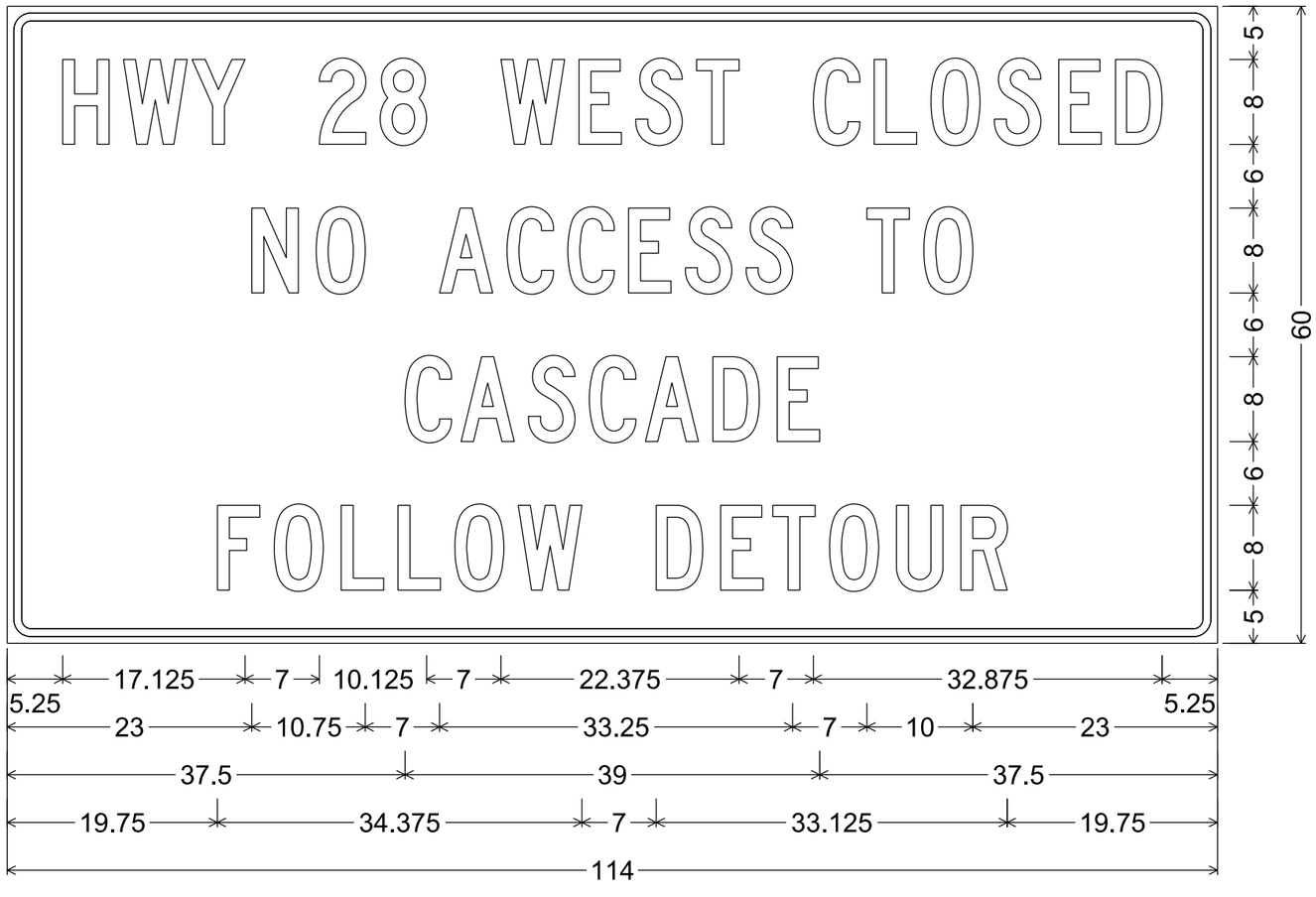
APPROVED
February 2021 — DATE
/S/ Andrew Heidtke — STATEWIDE WORK ZONE T SAFETY ENGINEER
FHWA

6

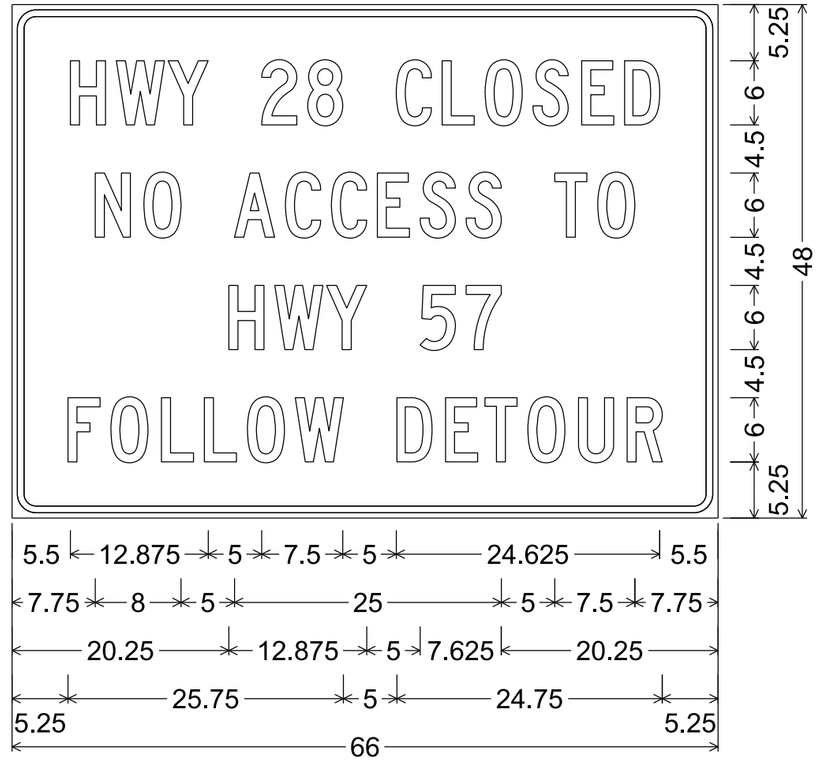
SDD 15D51 - 01

NOTES

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



2.250" Radius, 0.750" Border, 0.625" Indent

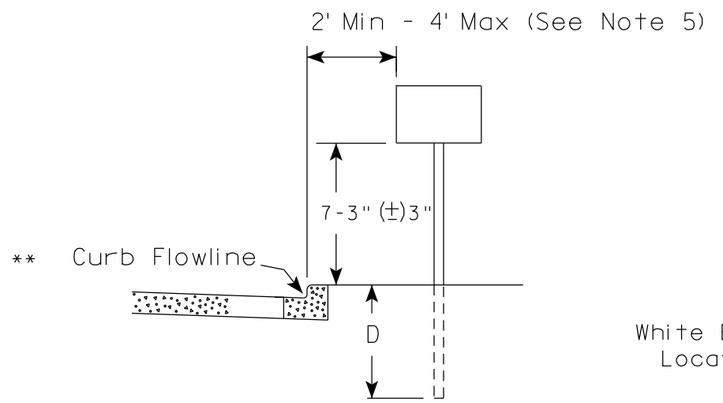


2.250" Radius, 0.625" Border, 0.500" Indent

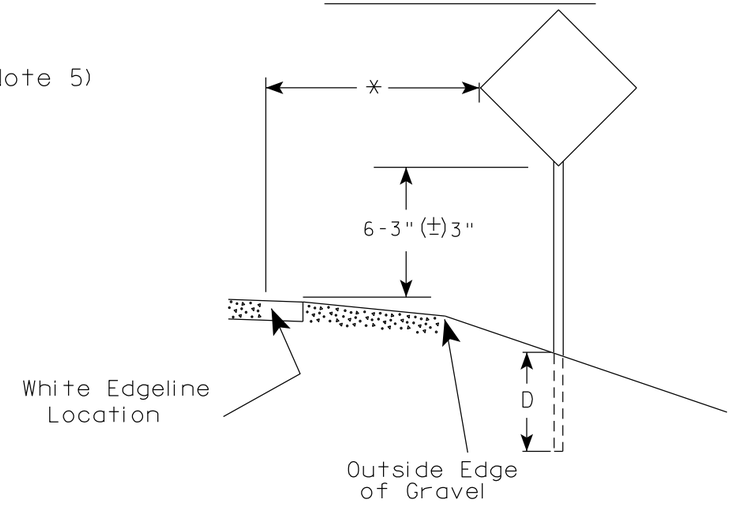
7

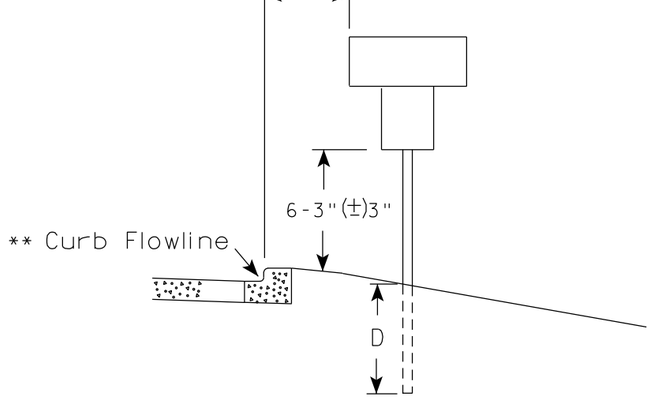
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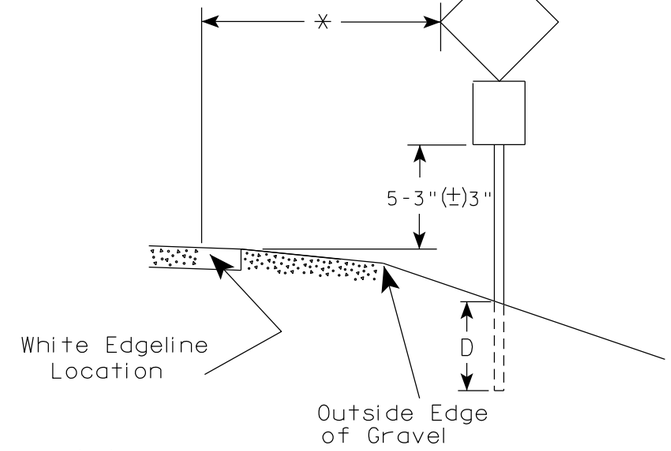
URBAN AREA



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.

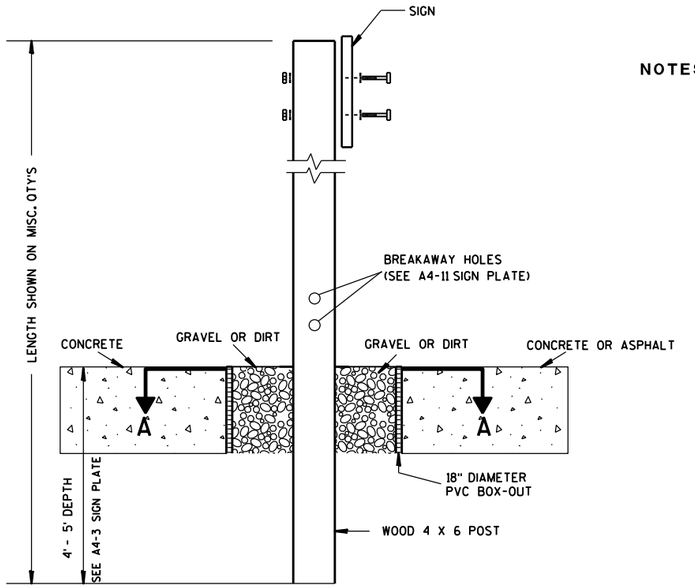
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

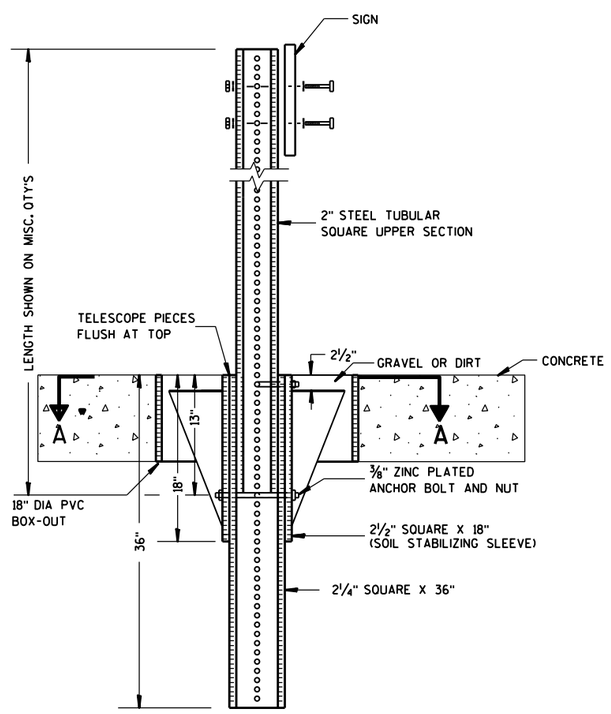
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 284	E



ELEVATION VIEW

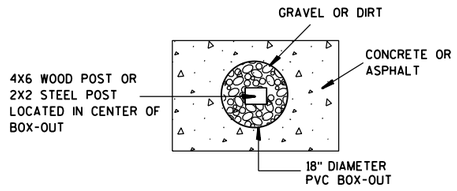
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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



ELEVATION VIEW

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



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B

WISCONSIN DEPT OF TRANSPORTATION

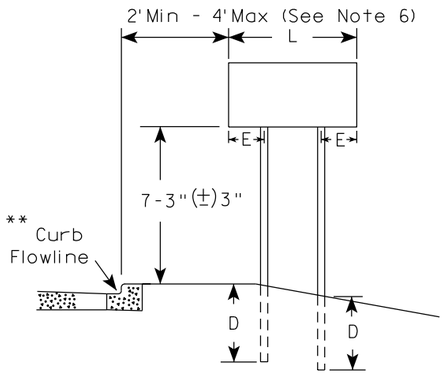
APPROVED Matthew R Rauch
for State Traffic Engineer

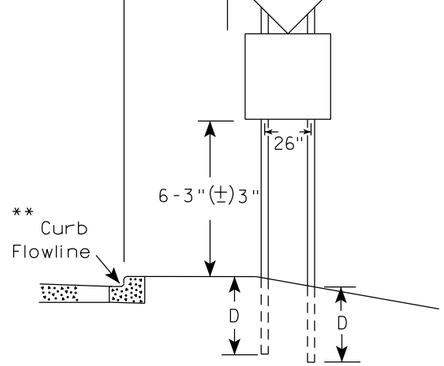
DATE 1/27/14 PLATE NO. A4-3B.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

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

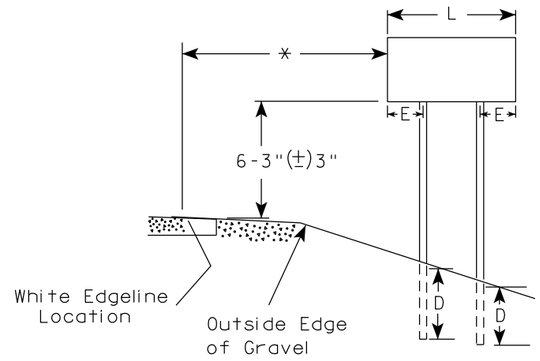
URBAN AREA

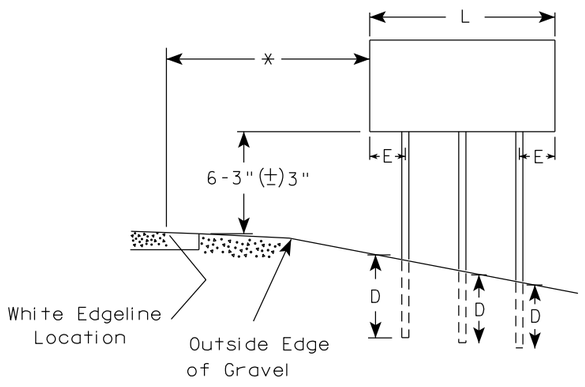


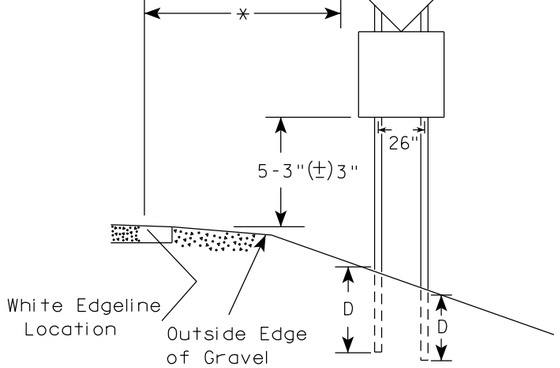


48" DIAMOND WARNING SIGN

RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN

GENERAL NOTES

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

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

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

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

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

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

POST EMBEDMENT DEPTH

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

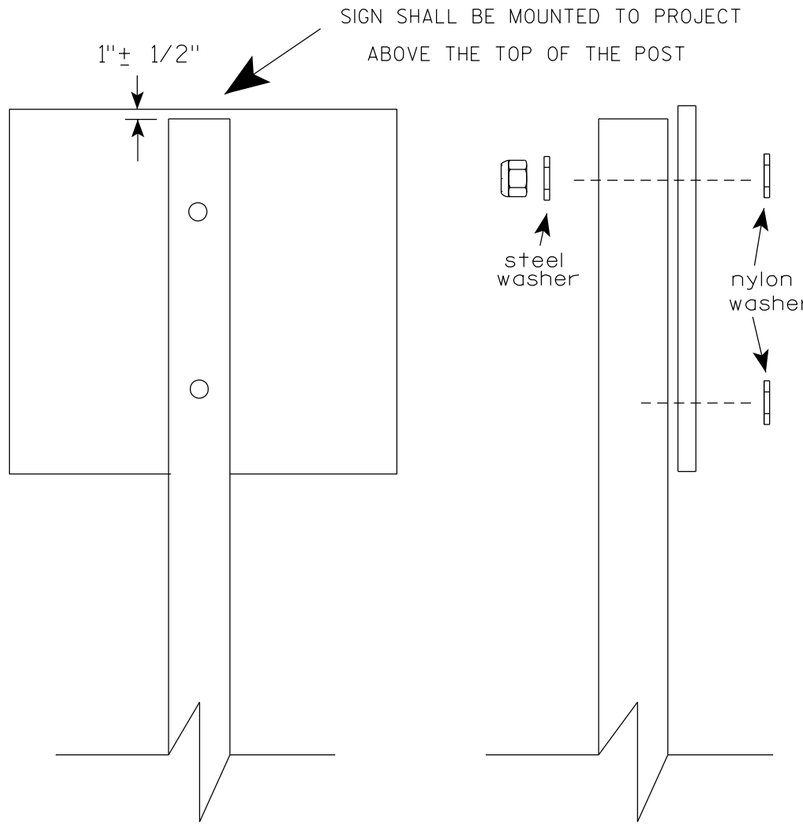
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

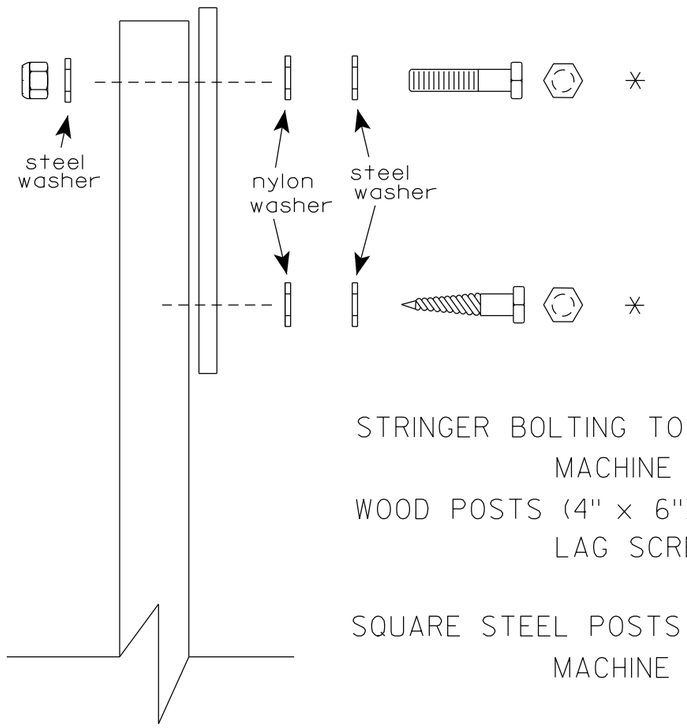
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 286	E





Nuts, bolts and lags used for mounting signs shall have hexagonal heads and shall be either :

a. Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3

b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

Threads on bolts and nuts shall be manufactured with sufficient allowance for the cadmium plate or galvanized coating to permit the nuts to run freely on the bolts.

STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)

MACHINE BOLTS - 5/16" X 1-3/4" Length w/ lock nuts

WOOD POSTS (4" x 6")

LAG SCREWS - 3/8" X 3" (NO STRINGERS ON BACK OF SIGN)
3/8" X 4" (STRINGERS ON BACK OF SIGN)

SQUARE STEEL POSTS (2" x 2")

MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)
3/8" X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)

RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL
O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

WASHERS (ALL POSTS) -

1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON

* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require the use of 3 fasteners.

ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

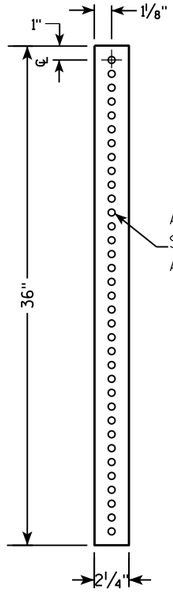
DATE 4/1/2020 PLATE NO. A4-8.9

PROJECT NO:

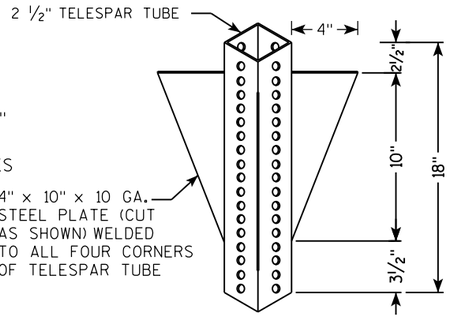
SHEET NO: 287 E

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

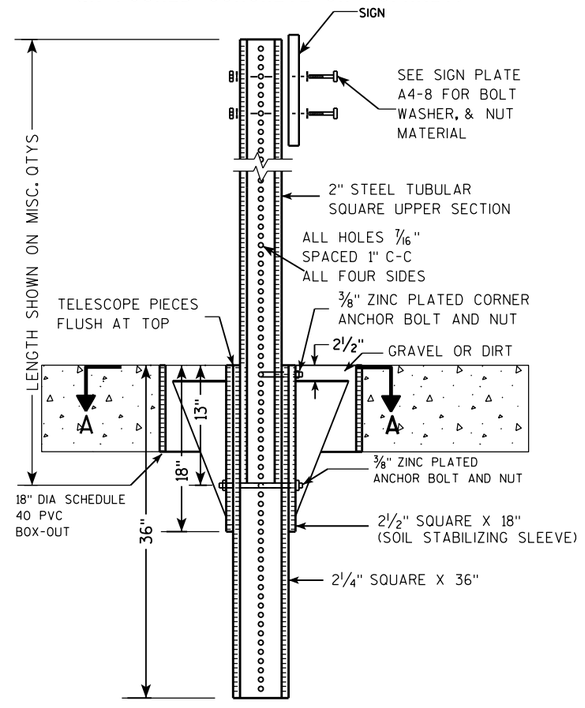
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



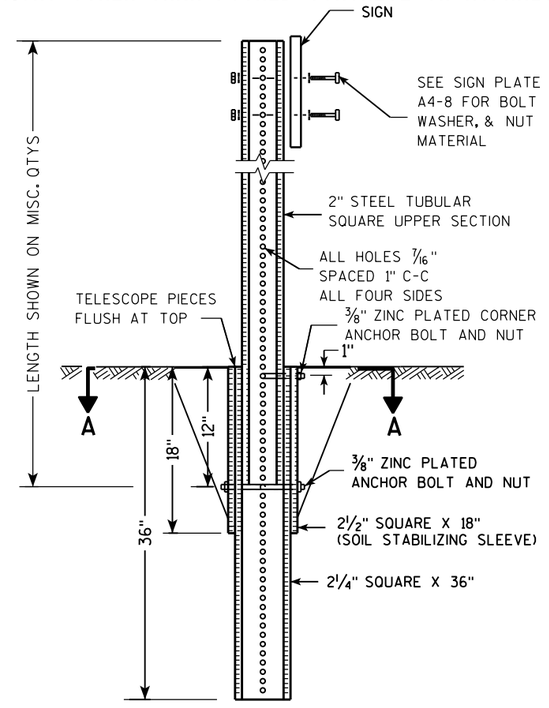
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

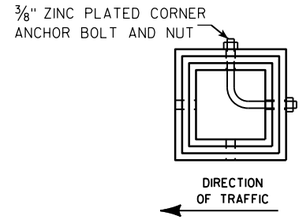


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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





SECTION A-A

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

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

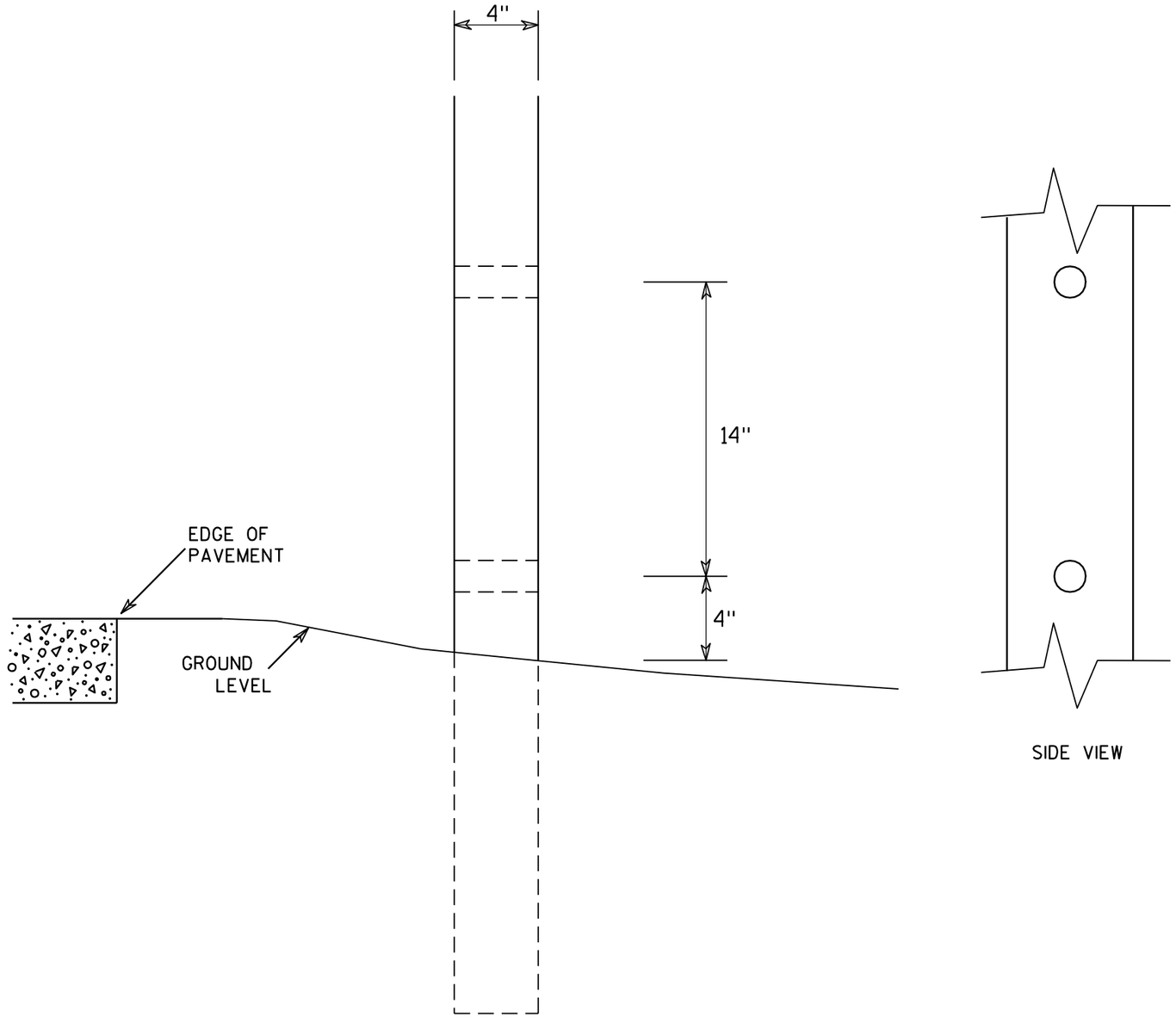
TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE 288 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

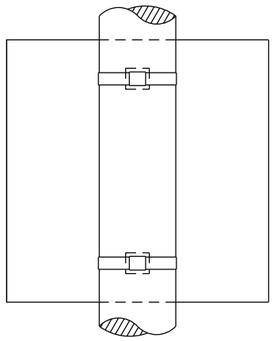
APPROVED Chester J Spang for State Traffic Engineer

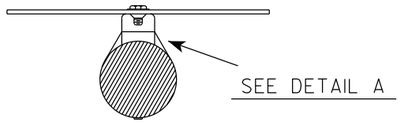
DATE 3/27/97 PLATE NO. A4-11.2

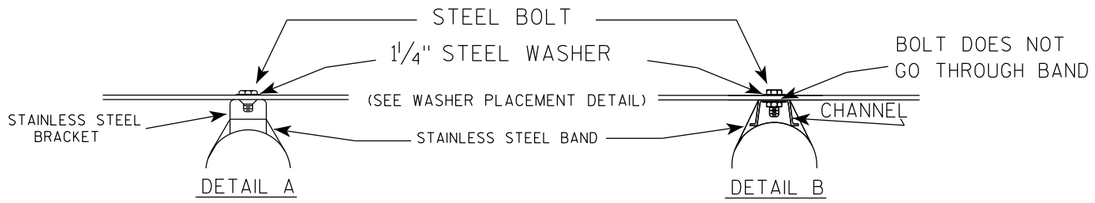
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 289	E

BANDING

SINGLE SIGN



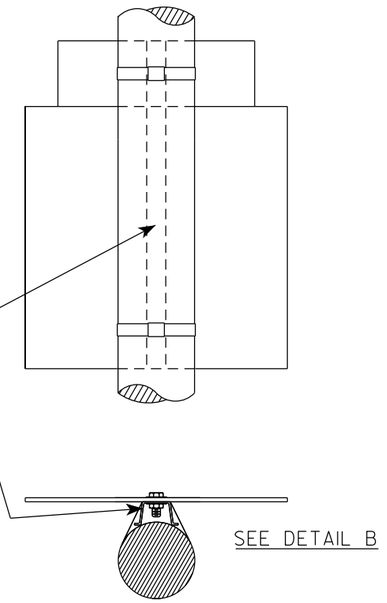




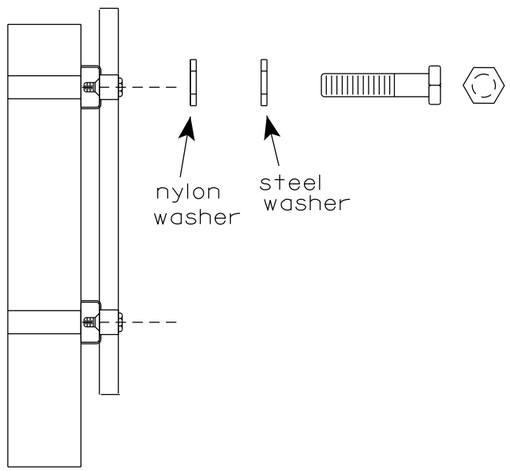
GENERAL NOTES

1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be ¾" in width and 0.025" thickness.
4. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
   a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
   b. Electro-galvanized in accordance with ASTM designation: B 633, Type III, SC 3

"J" ASSEMBLY



WASHER PLACEMENT



WASHERS (ALL POSTS) -
1-1/4" O.D. X ⅜" I.D. X 1/16" STEEL
1-1/4" O.D. X ⅜" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

STANDARD SIGN
SIGN BANDING DETAILS

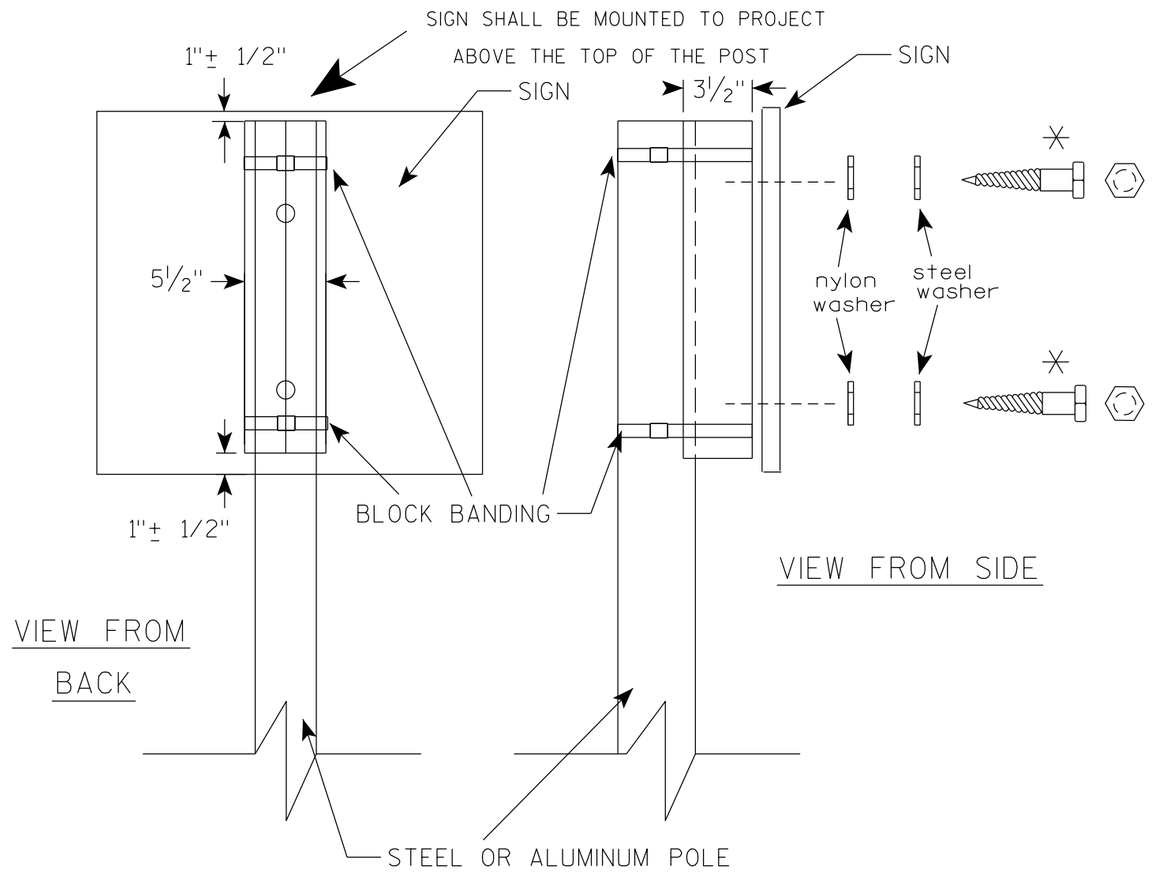
WISCONSIN DEPT OF TRANSPORTATION

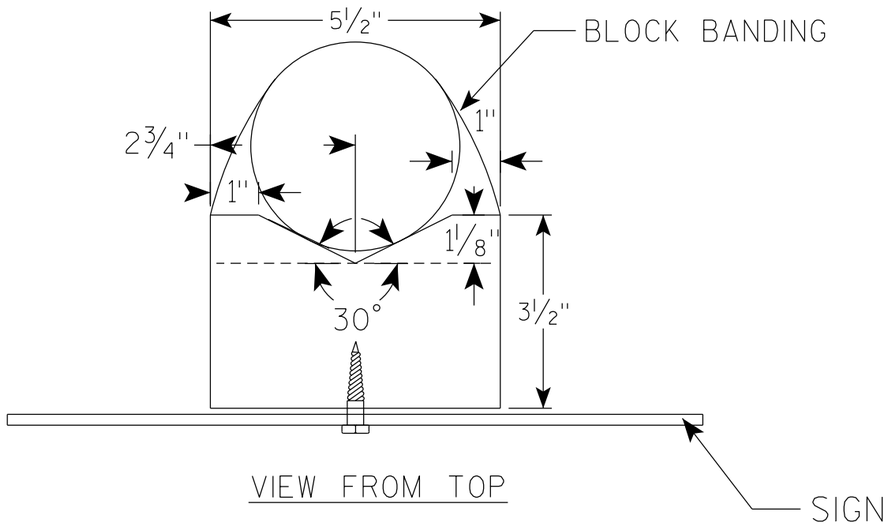
APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 290	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)

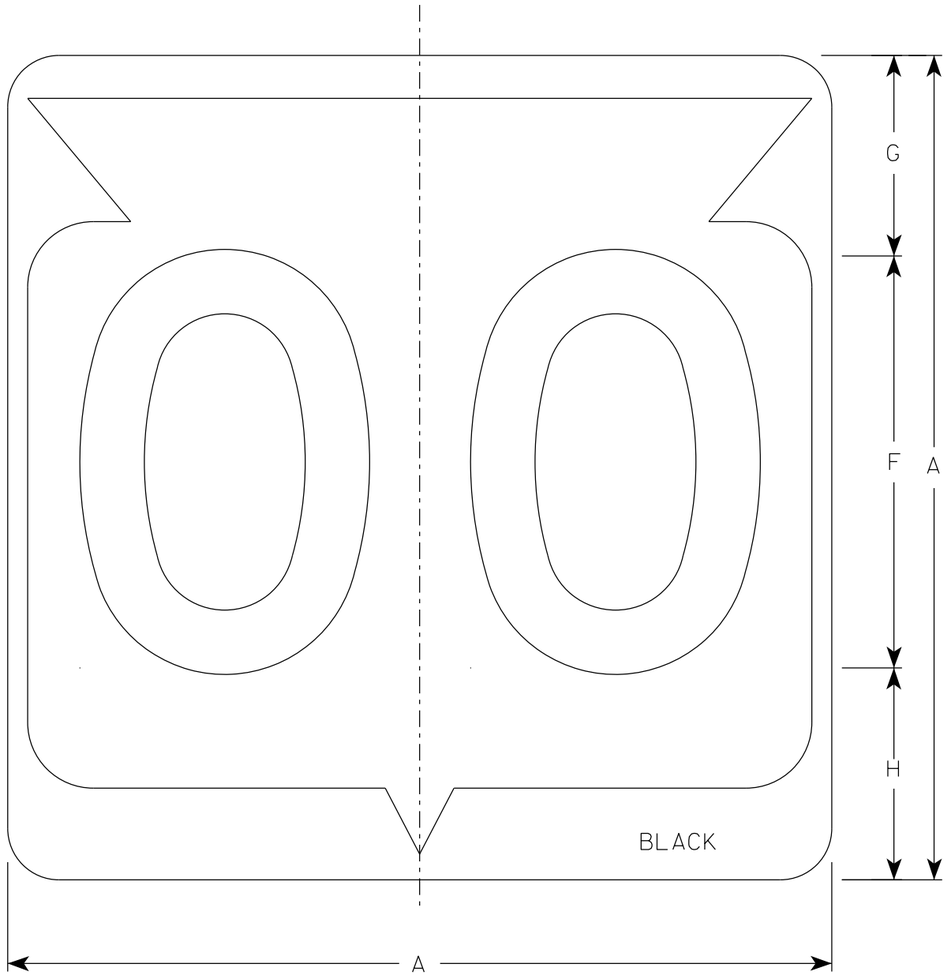
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:

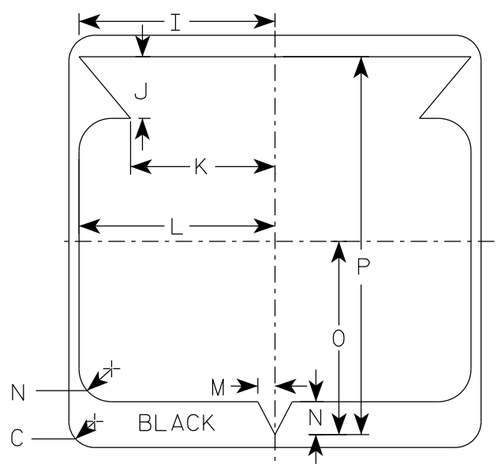
SHEET NO: 291 E



M1-6

NOTES

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



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

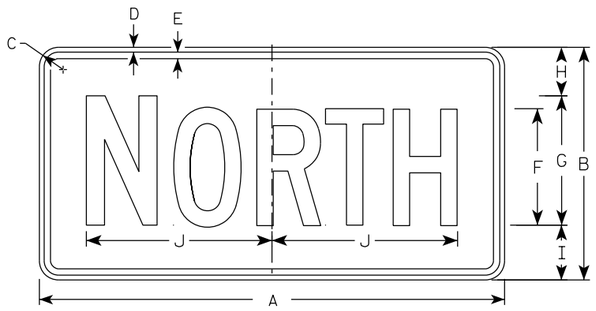
STATE ROUTE MARKER
M1-6 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

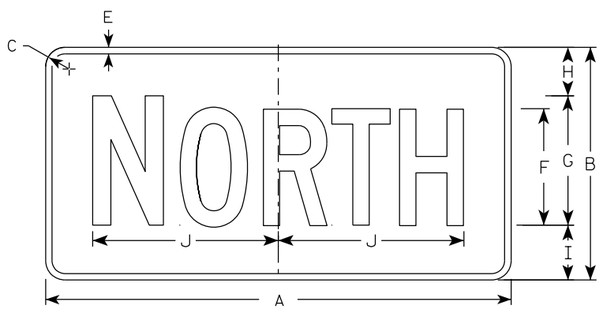
APPROVED Matthew R Rauch
for State Traffic Engineer

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

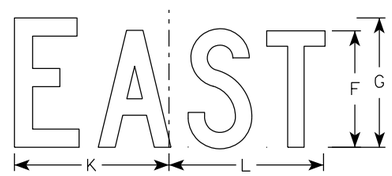
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 292	E



M3-1
MM3-1
MP3-1



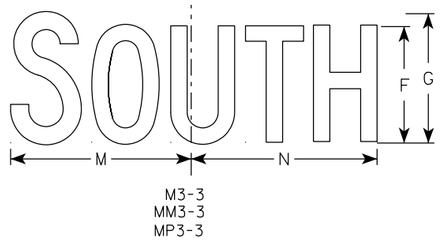
MB3-1
MK3-1
MN3-1



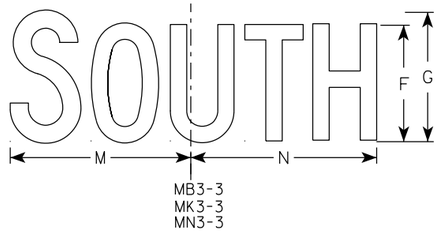
M3-2
MM3-2
MP3-2



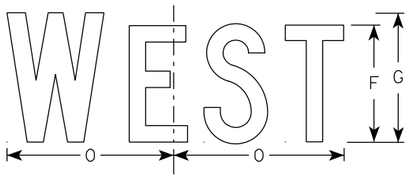
MB3-2
MK3-2
MN3-2



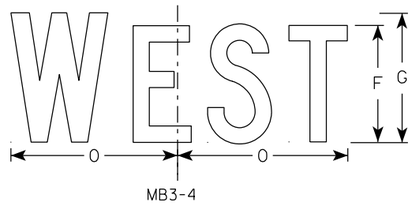
M3-3
MM3-3
MP3-3



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

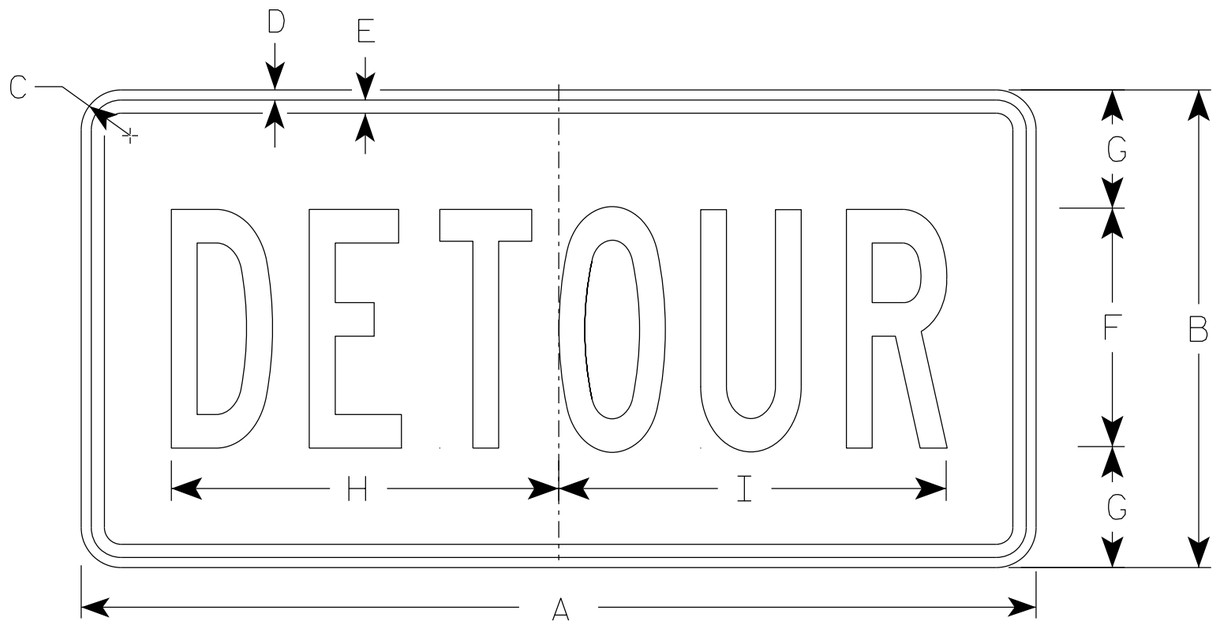
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 2/8/2023 PLATE NO. M3-1.15

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 293 | E

7



M4-8

NOTES

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

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

STANDARD SIGN
M4-8

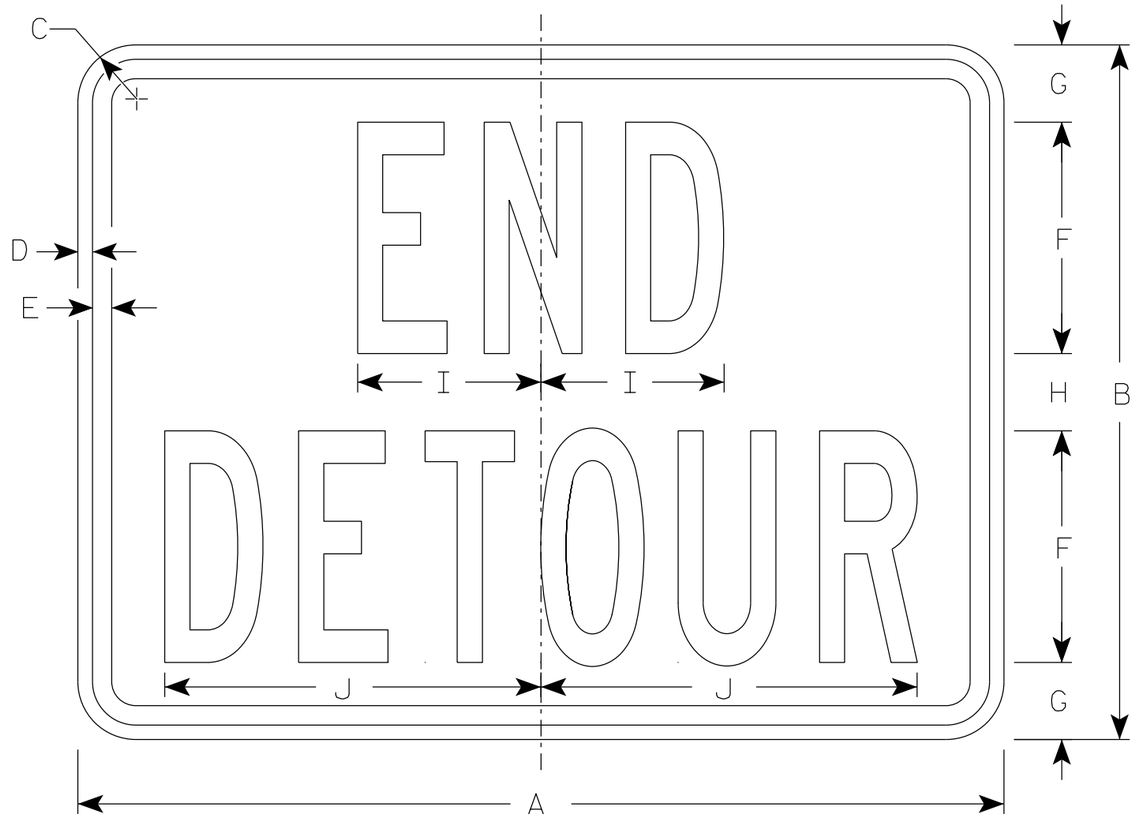
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

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



M4-8A

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	18	1 ½	⅜	½	6	2	2	4 ¾	9 ¾																	3.0
2M	24	18	1 ½	⅜	½	6	2	2	4 ¾	9 ¾																	3.0
3	30	24	1 ½	⅜	½	8	2 ½	3	6 ¾	13																	5.0
4	30	24	1 ½	⅜	½	8	2 ½	3	6 ¾	13																	5.0
5	30	24	1 ½	⅜	½	8	2 ½	3	6 ¾	13																	5.0

STANDARD SIGN
M4-8A

WISCONSIN DEPT OF TRANSPORTATION

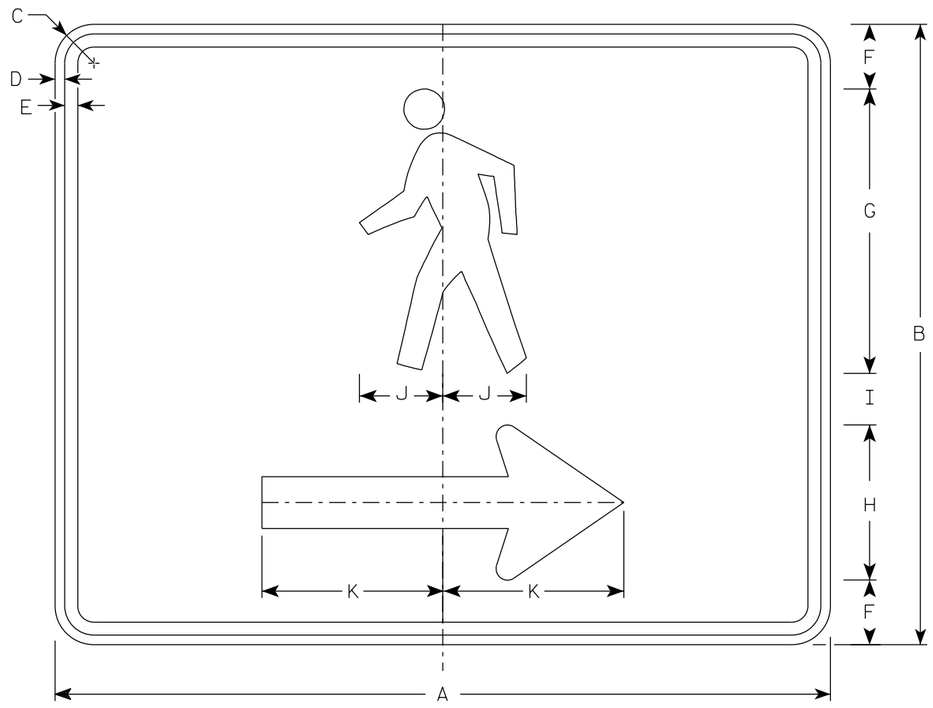
APPROVED Matthew R Rauch
for State Traffic Engineer

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

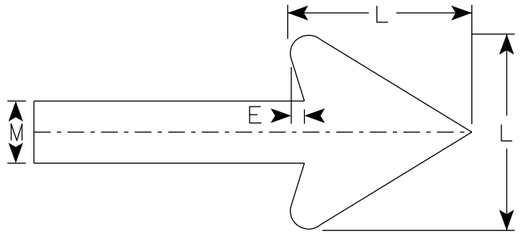
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 295 | E

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. M4-60L is the same as M4-60R except the arrow is reversed.



M4-60R



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 ½	⅜	½	2 ½	11	6	2	3 ¼	7	6	2														5.00
2M	30	24	1 ½	⅜	½	2 ½	11	6	2	3 ¼	7	6	2														5.00
3																											
4																											
5																											

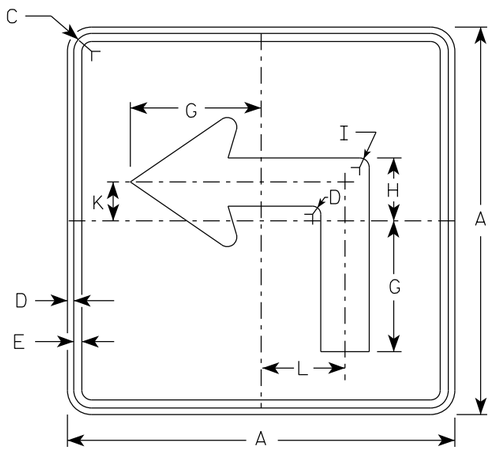
STANDARD SIGN
M4-60 L&R

WISCONSIN DEPT OF TRANSPORTATION

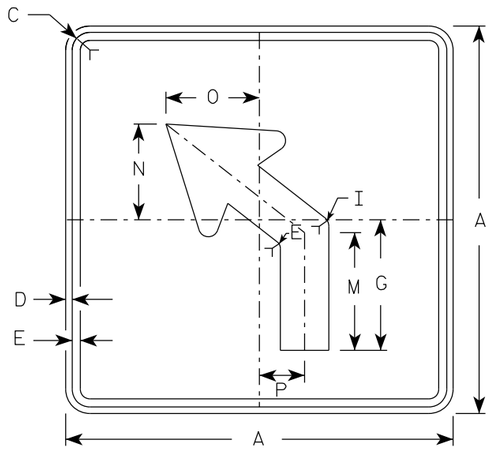
APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 2/14/2023 PLATE NO. M4-60.2

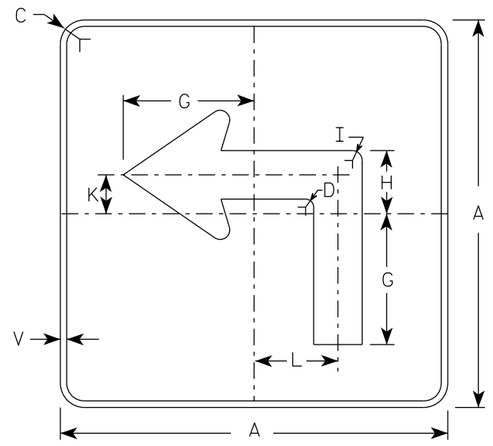
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 296 | E



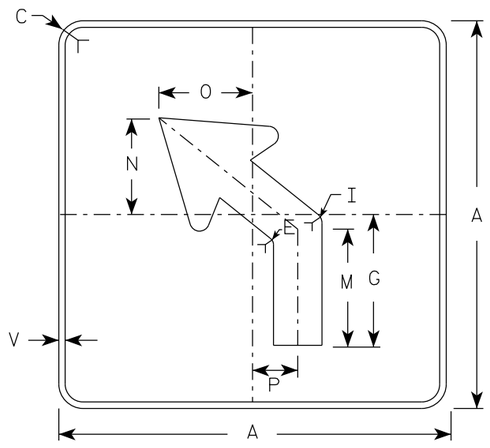
M5-1L
MM5-1L
MO5-1L
MP5-1L



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



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

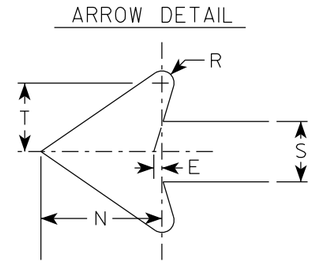


MB5-2L
MK5-2L
MN5-2L
MR5-2L

NOTES

1. Signs are Type II - Type H reflective except as shown
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M5-1 and M5-2 Background - White
   Message - Black
   MB5-1 and MB5-2 Background - Blue
   Message - White
   MK5-1 and MK5-2 Background - Green
   Message - White
   MM5-1 and MM5-2 Background - White
   Message - Green
   MN5-1 and MN5-2 Background - Brown
   Message - White
   MO5-1 and MO5-2 Background - Orange - Type F Reflective
   Message - Black
   MP5-1 and MP5-2 Background - White
   Message - Blue
   MR5-1 and MR5-2 Background - Brown
   Message - Yellow
5. M5-1R same as M5-1L except arrow points right.
6. M5-2R same as M5-2L except arrow tilts right.

ARROW DETAIL



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	21		1 1/2	3/8	3/8		7	3 3/8	5/8		2 1/8	4 1/2	6 3/8	5 1/4	5	2 1/2		1/2	2 5/8	3		1/2					3.06
2M	21		1 1/2	3/8	3/8		7	3 3/8	5/8		2 1/8	4 1/2	6 3/8	5 1/4	5	2 1/2		1/2	2 5/8	3		1/2					3.06
3	30		1 7/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4		1/2					6.25
4	30		1 7/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4		1/2					6.25
5	30		1 7/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4		1/2					6.25

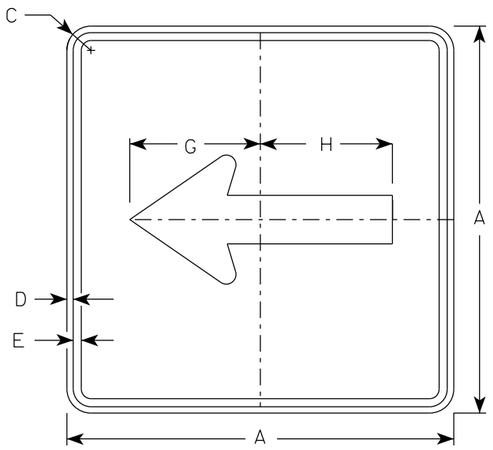
STANDARD SIGN
M5-1 & M5-2

WISCONSIN DEPT OF TRANSPORTATION

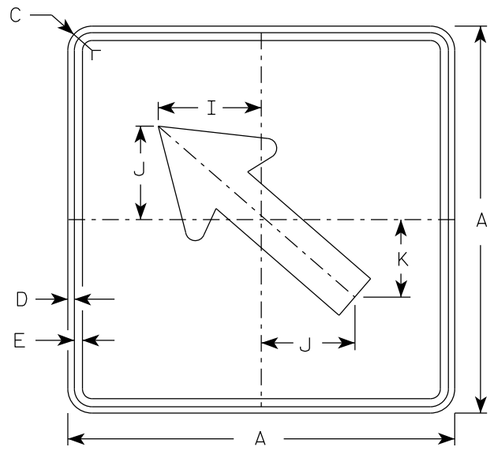
APPROVED Matthew R Rauch
for State Traffic Engineer

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

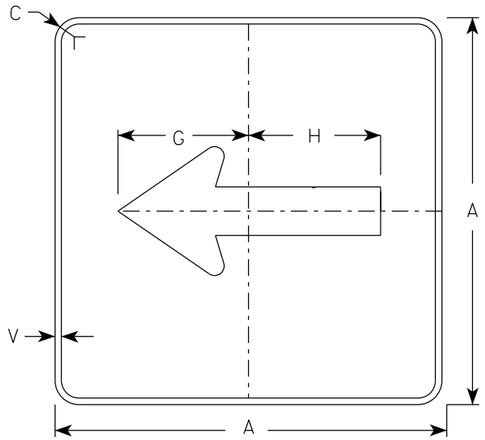
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 297 | E



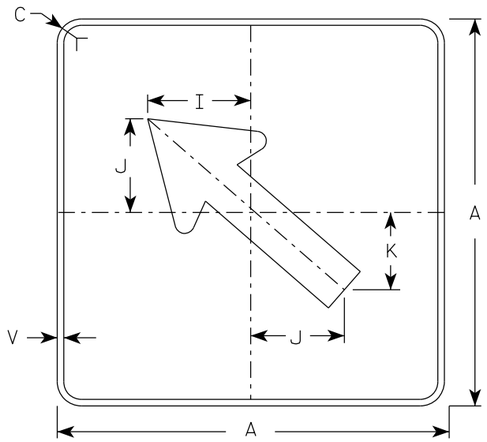
M6-1
MM6-1
MO6-1
MP6-1



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



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

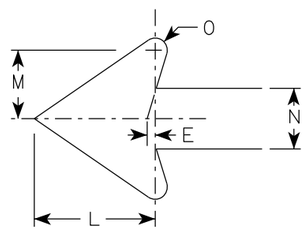


MB6-2
MK6-2
MN6-2
MR6-2

NOTES

1. Signs are Type II - Type H Reflective except as Shown
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-1 and M6-2 Background - White
   Message - Black
   MB6-1 and MB6-2 Background - Blue
   Message - White
   MK6-1 and MK6-2 Background - Green
   Message - White
   MM6-1 and MM6-2 Background - White
   Message - Green
   MN6-1 and MN6-2 Background - Brown
   Message - White
   MO6-1 and MO6-2 Background - Orange - Type F Reflective
   Message - Black
   MP6-1 and MP6-2 Background - White
   Message - Blue
   MR6-1 and MR6-2 Background - Brown
   Message - Yellow

ARROW DETAIL



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	21		1 1/2	3/8	3/8		7 1/2	7 1/8	5 5/8	5	4 1/4	5 1/4	3	2 5/8	1/2							1/2					3.06
2M	21		1 1/2	3/8	3/8		7 1/2	7 1/8	5 5/8	5	4 1/4	5 1/4	3	2 5/8	1/2							1/2					3.06
3	30		1 7/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4							1/2					6.25
4	30		1 7/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4							1/2					6.25
5	30		1 7/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4							1/2					6.25

STANDARD SIGN
M6-1 & M6-2
SERIES

WISCONSIN DEPT OF TRANSPORTATION

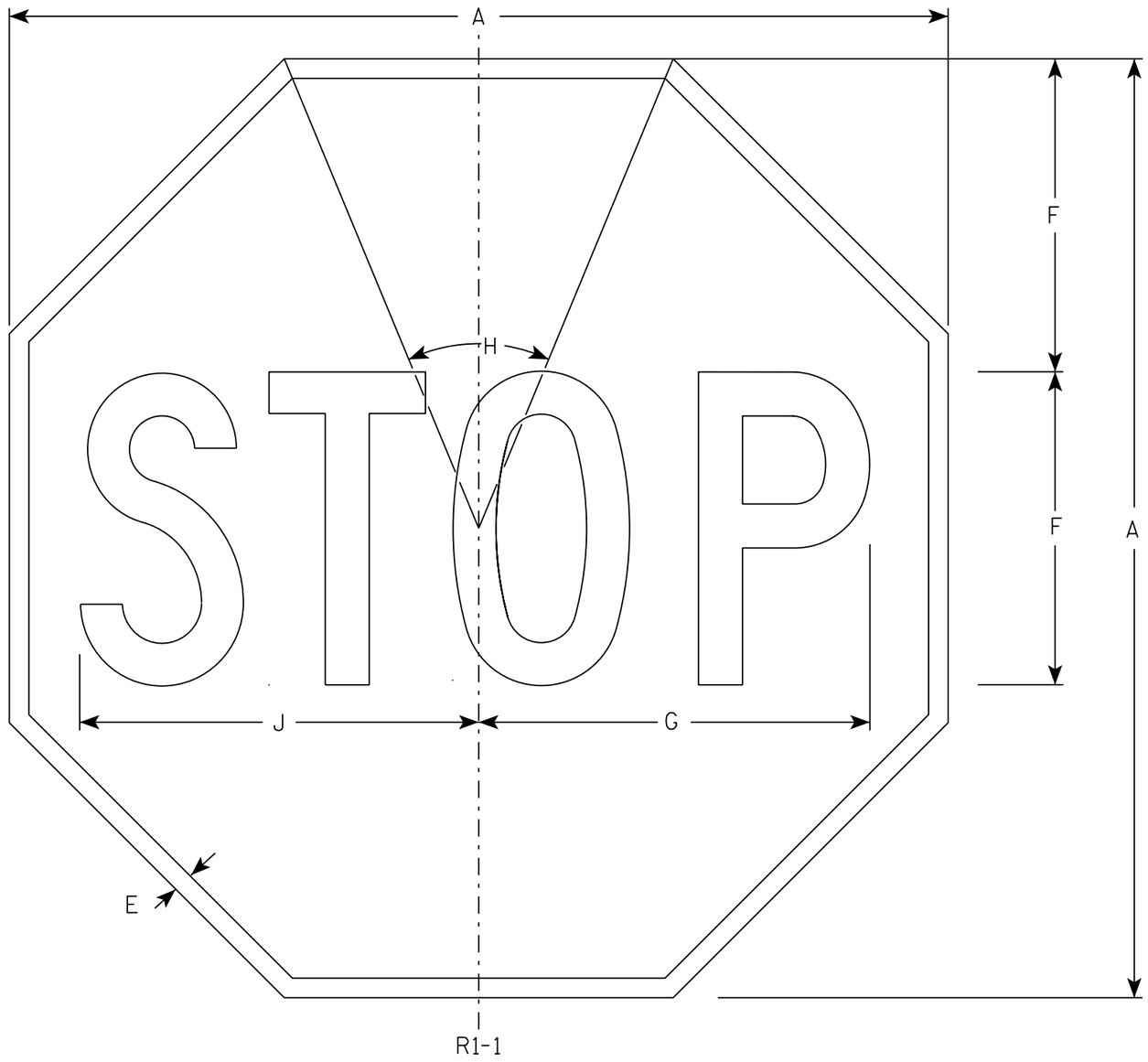
APPROVED Matthew R Rauch
For State Traffic Engineer

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

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 298 | E

7

7



NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Red
   Message - White
3. Message Series - C

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2S	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2M	36				3/4	12	15	45°		15 3/8																	7.46
3	36				3/4	12	15	45°		15 3/8																	7.46
4	48				1	16	20	45°		20 1/2																	13.25
5	48				1	16	20	45°		20 1/2																	13.25
6	18				3/8	6	7 3/4	45°		7 3/4																	1.86
7	12				1/4	4	5	45°		5 1/8																	0.78

STANDARD SIGN

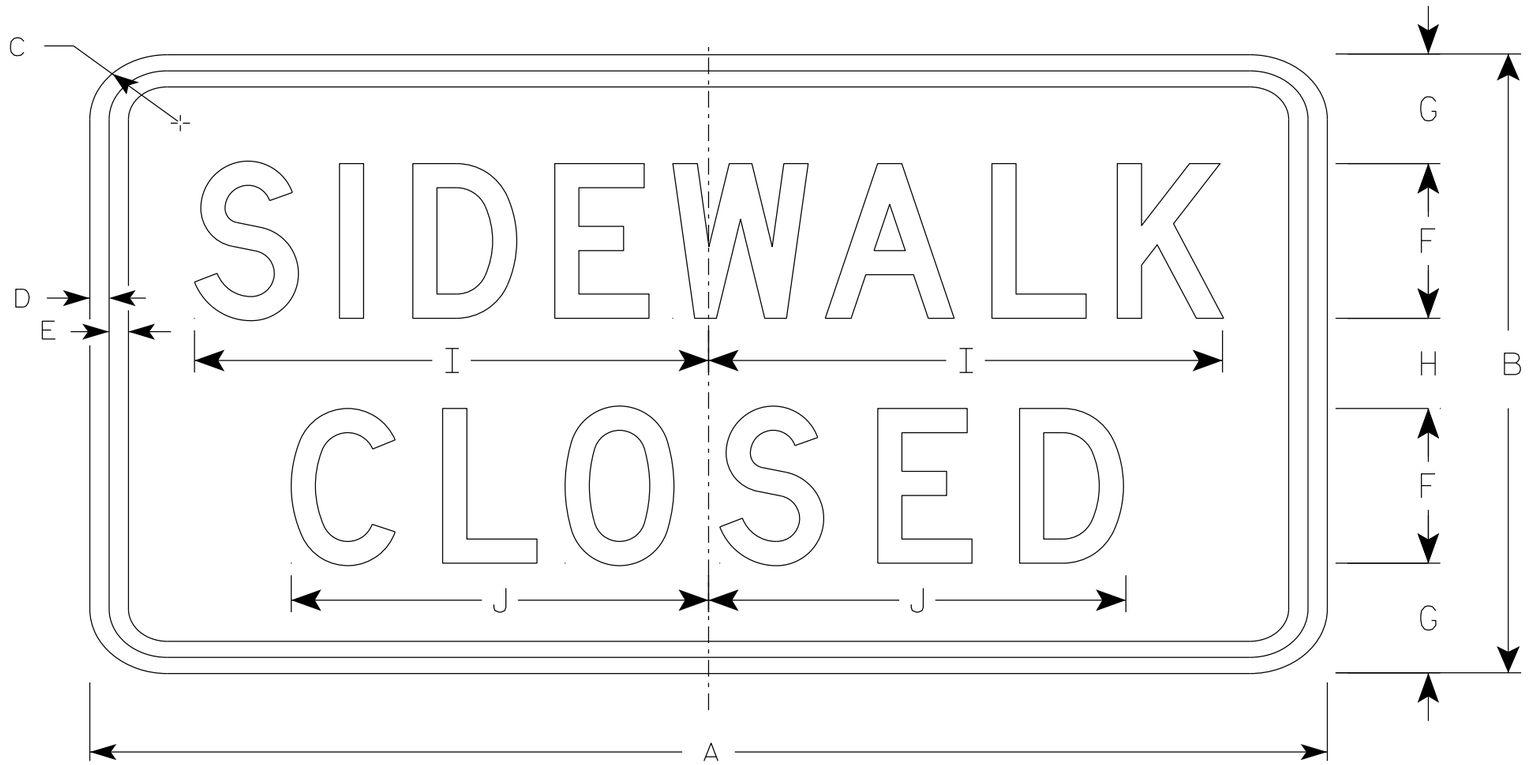
R1-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/12/15 PLATE NO. R1-1.13

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 299	E



R9-9

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - C
4. Use Size 2 for Sidewalks. Use Size 3 for Paths and Trails.

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	½	½	3	2 ⅛	1 ¾	10	8 ⅛																	2.0
2M	24	12	1 ½	½	½	3	2 ⅛	1 ¾	10	8 ⅛																	2.0
3	30	18	1 ½	½	½	4	3 ½	3	12 ½	10 ¼																	3.75
4																											
5																											

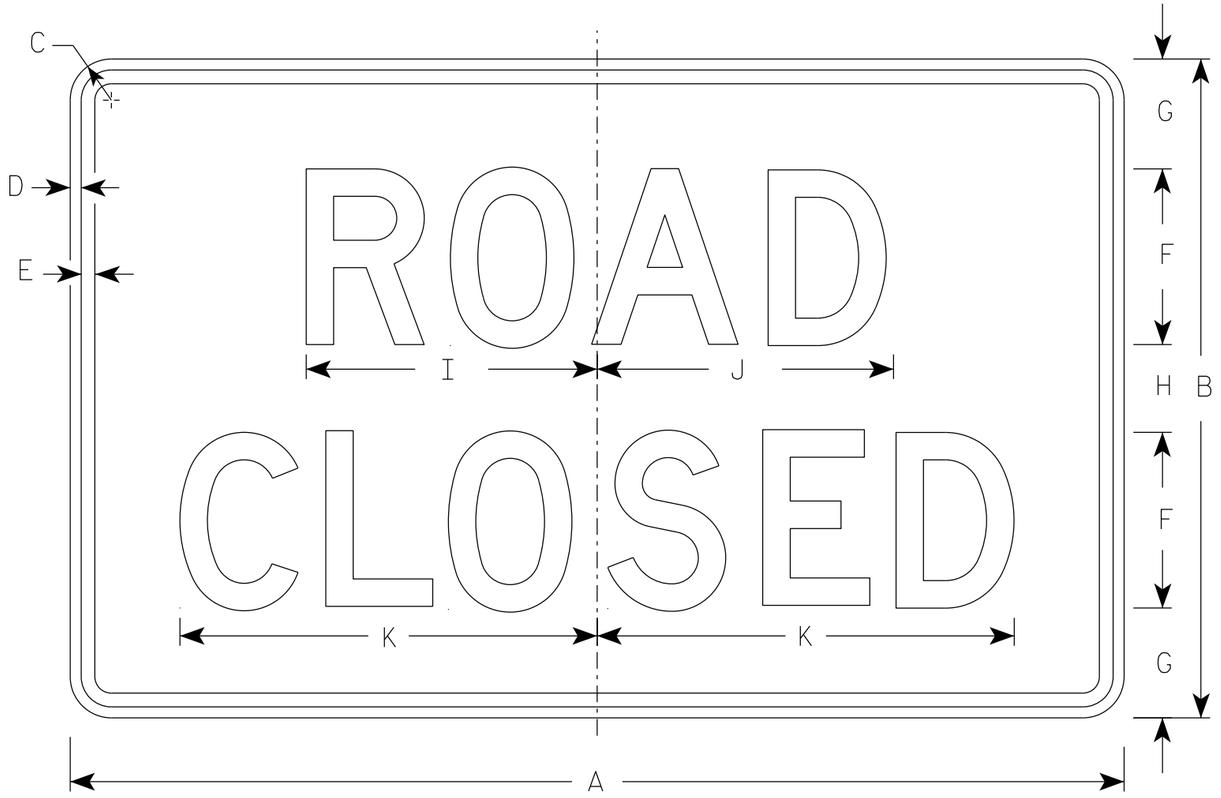
STANDARD SIGN
R9-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/24/24 PLATE NO. R9-9.7

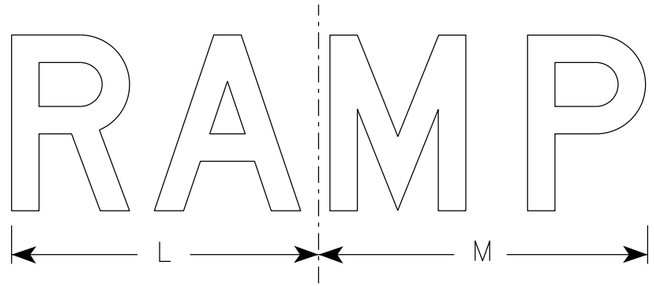
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 300 | E



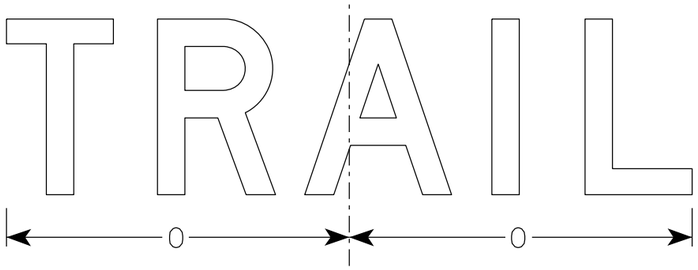
R11-2

NOTES

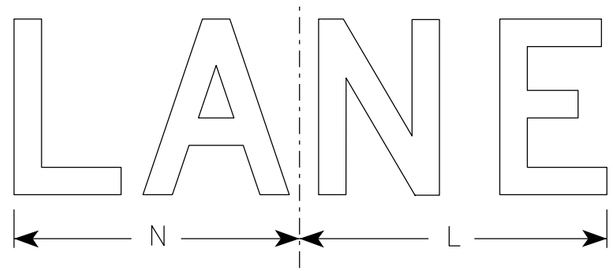
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Modify the message as required.



R11-2R



R11-2T



R11-2L

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	30	1 7/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0
2M	48	30	1 7/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0
3	48	30	1 7/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0
4	48	30	1 7/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0
5	48	30	1 7/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0

STANDARD SIGN
R11-2

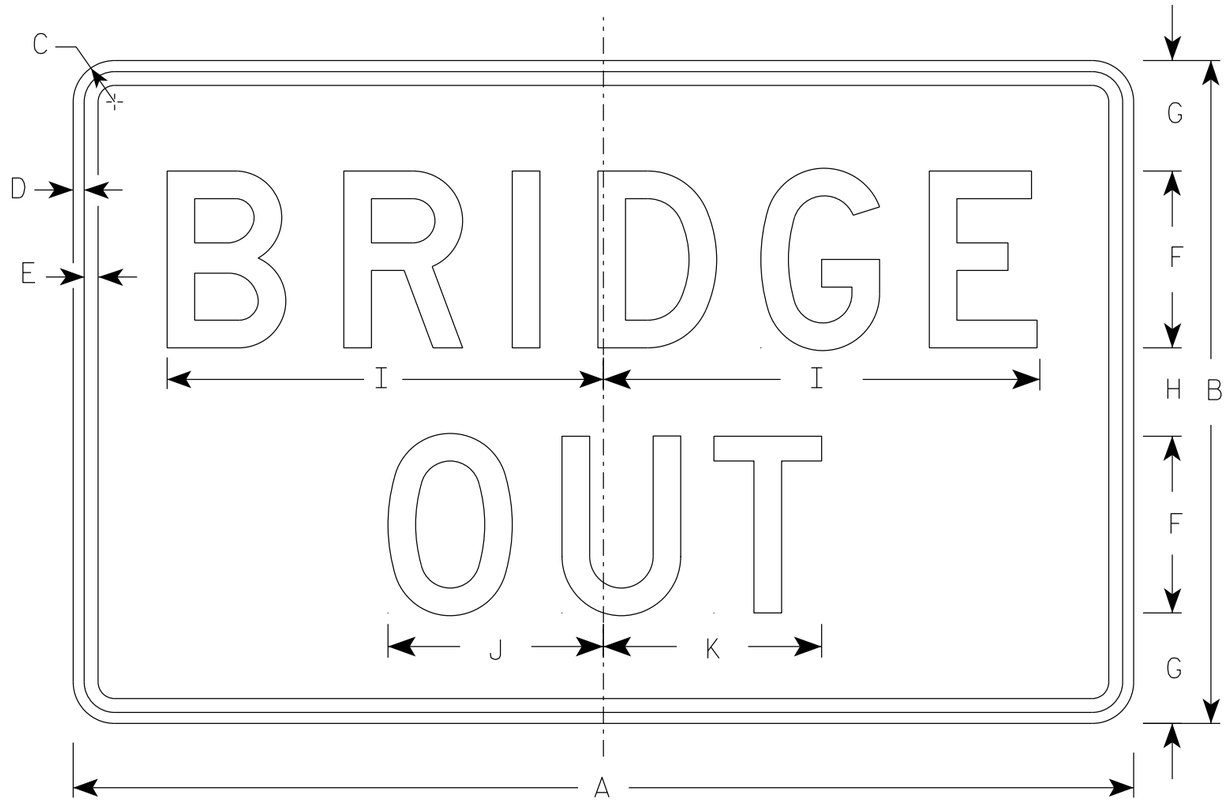
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/5/24 PLATE NO. R11-2.12

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R112.dgn PLOT DATE : 5-FEB 2024 2:10 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42



R11-2B

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.

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	19 3/4	9 3/4	9 7/8																10.0
2M	48	30	1 7/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
3	48	30	1 7/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
4	48	30	1 7/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
5	48	30	1 7/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0

STANDARD SIGN
R11-2B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

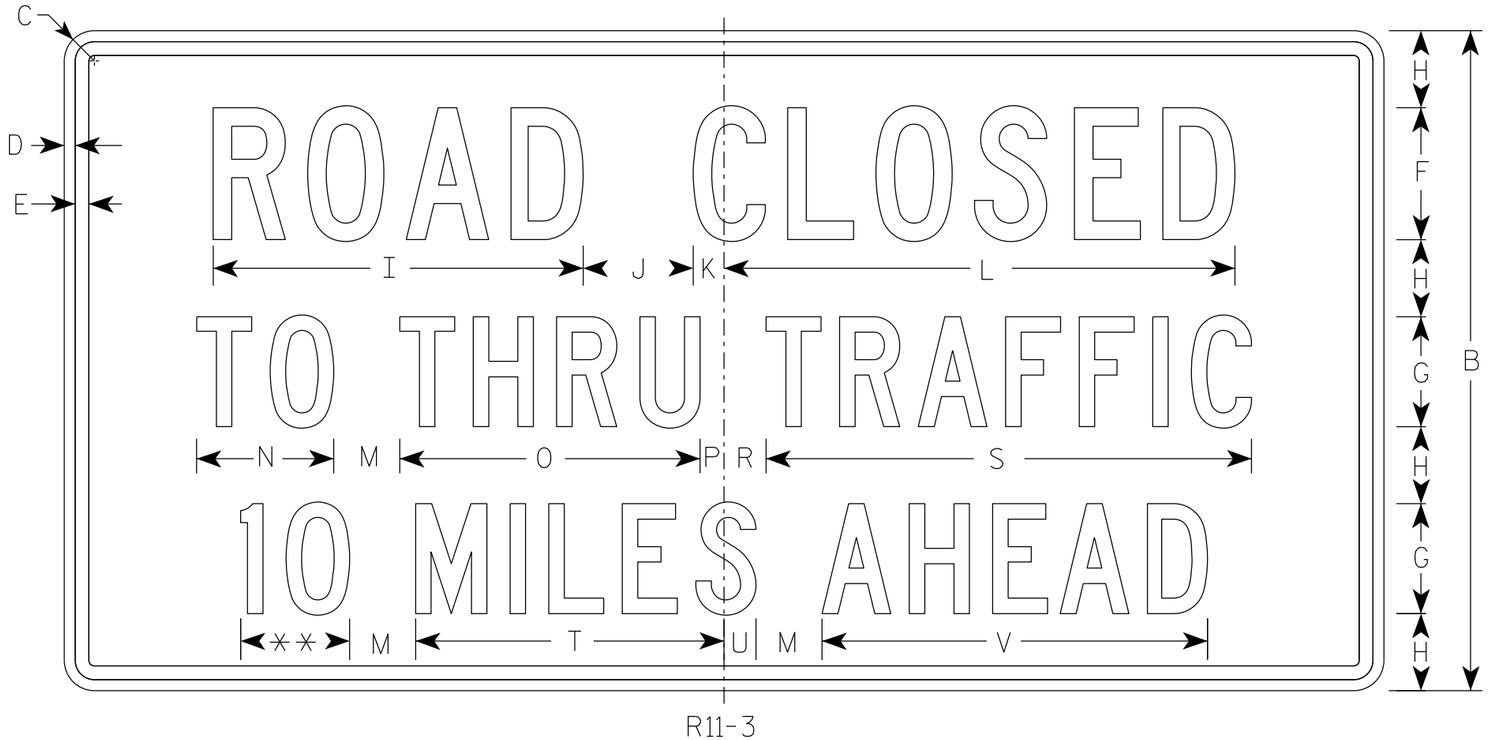
DATE 2/5/24 PLATE NO. R11-2B.3

PROJECT NO:

SHEET NO: 302 E

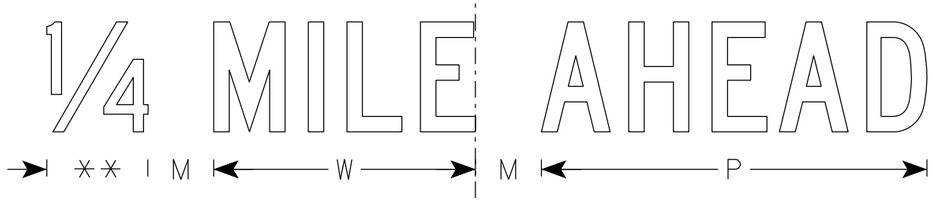
NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals to nearest quarter mile and optically adjust spacing to achieve proper balance.



R11-3

** See Note 5



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	18	1 1/2	3/8	3/8	4	3	2	11 1/4	3	1 1/8	15 3/8	2	3 3/4	8 1/4	5/8		1 3/8	13 1/4	8 3/8	7/8	10 1/2	7 1/8				4.5
2S	60	30	1 7/8	1/2	5/8	6	5	3 1/2	16 7/8	5	1 3/8	23 1/4	3	6 1/4	13 5/8	1 1/8		1 7/8	22 1/8	14	1 1/2	17 1/2	11 7/8				12.5
2M	60	30	1 7/8	1/2	5/8	6	5	3 1/2	16 7/8	5	1 3/8	23 1/4	3	6 1/4	13 5/8	1 1/8		1 7/8	22 1/8	14	1 1/2	17 1/2	11 7/8				12.5
3																											
4																											
5																											

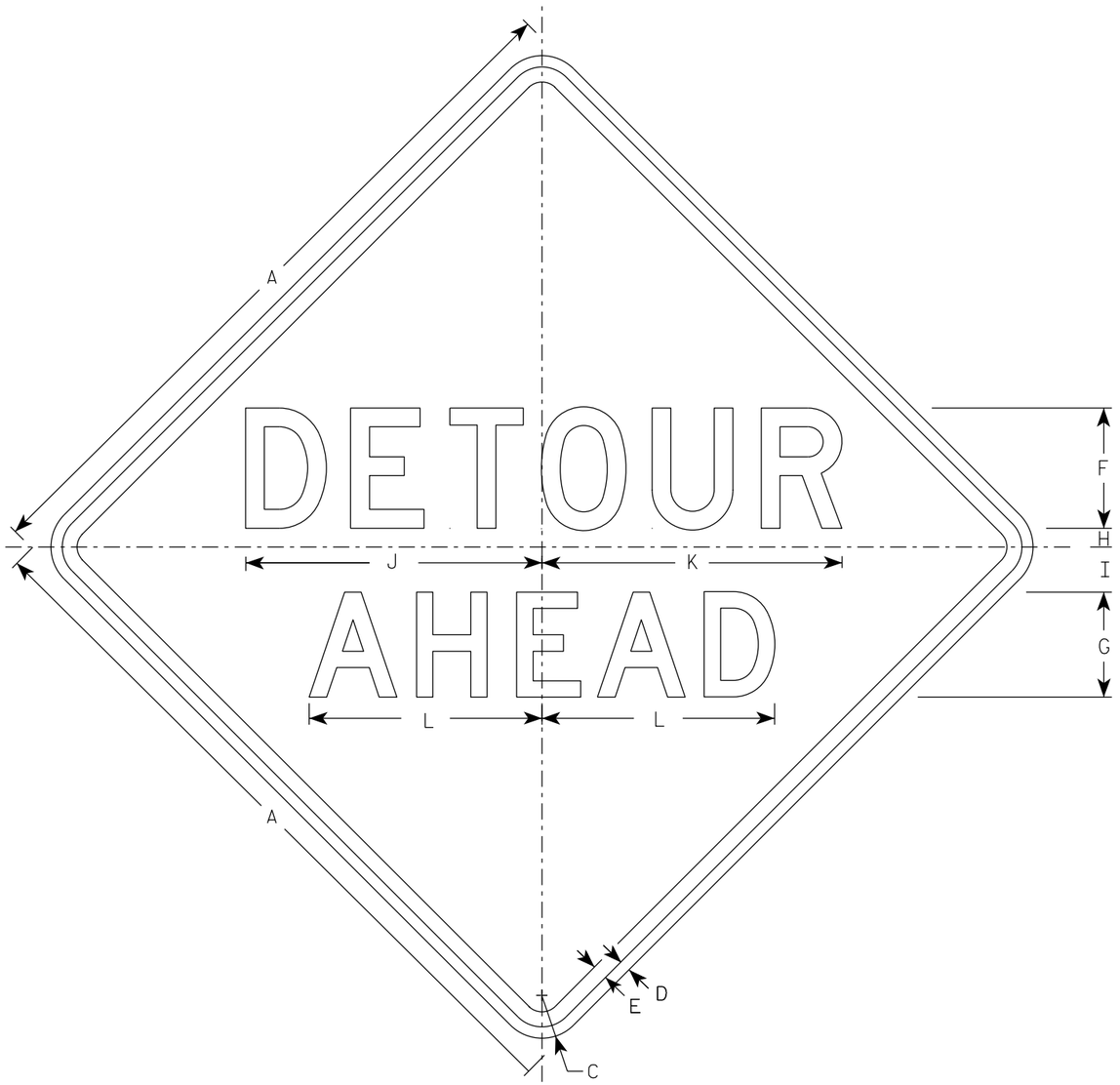
STANDARD SIGN
R11-3

WISCONSIN DEPT OF TRANSPORTATION

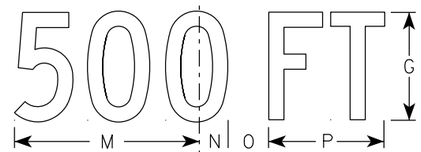
APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 303	E



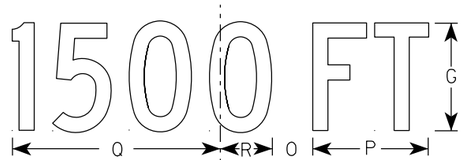
W20-2A



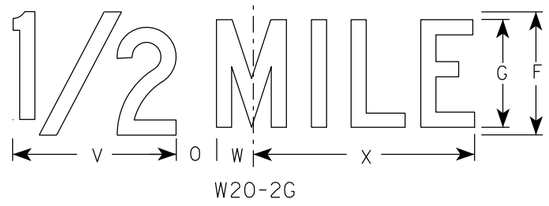
W20-2D



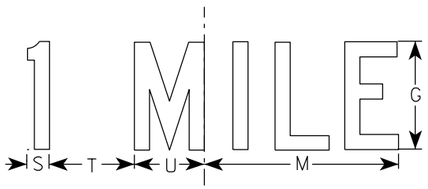
W20-2C



W20-2B



W20-2G



W20-2F

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - See note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Line 1 is Series D.
   Line 2 is Series D for AHEAD and Series C for all other distances.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		2 1/4	5/8	3/4	6	5	1	2 1/4	14 3/4	15	11 5/8	9	1 3/8	1 7/8	5 5/8	10 1/8	2 1/2	1 1/8	4 1/2	3 1/2	8	1 3/4	10 3/4			9.0
2S	48		3	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
2M	48		3	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
3	48		3	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
4	48		3	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
5	48		3	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0

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

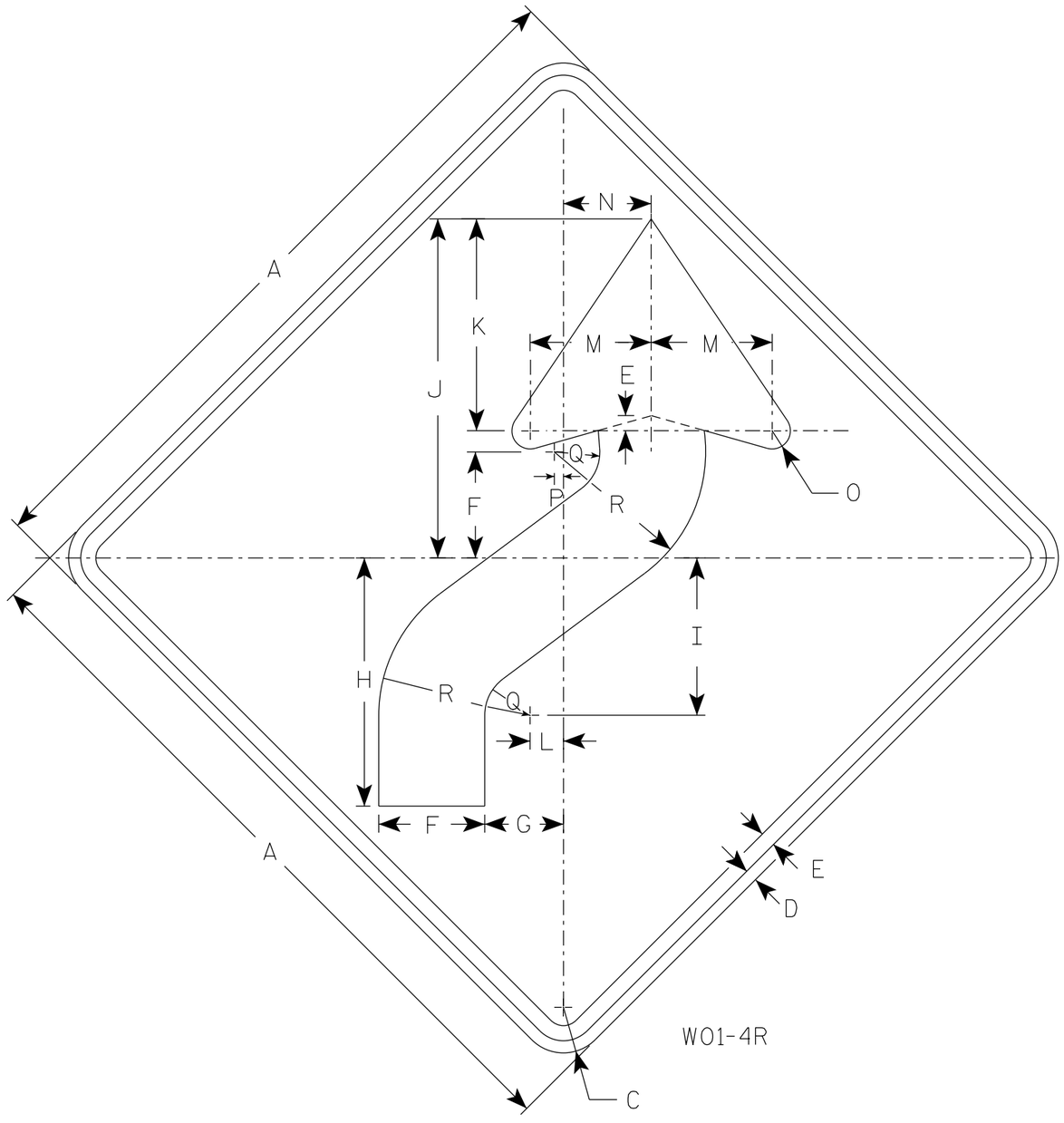
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

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



W01-4R

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. W01-4L is the same as W01-4R 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

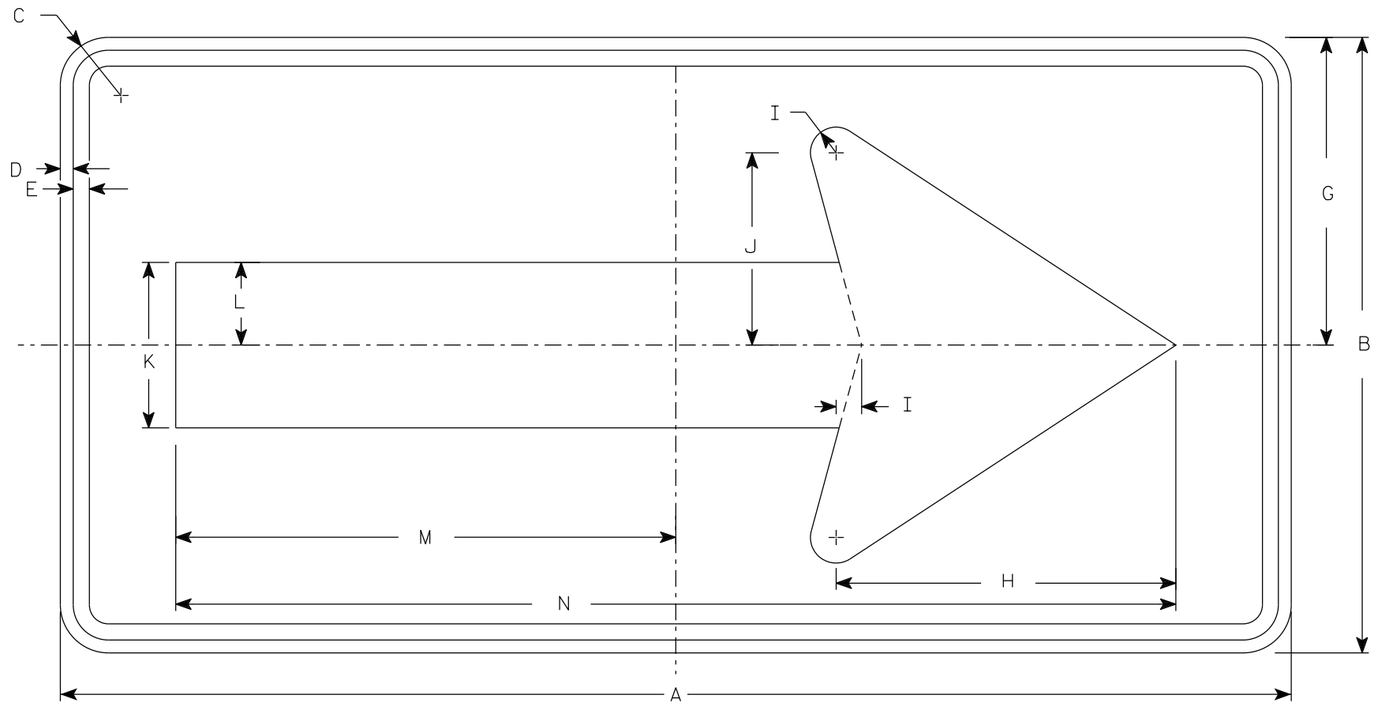
STANDARD SIGN
W01-4

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 1/24/2024 PLATE NO. W01-4.2

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 305 E



WO1-6

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.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	24	1 7/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
2M	48	24	1 7/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
3	60	30	1 7/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
4	60	30	1 7/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
5	60	30	1 7/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5

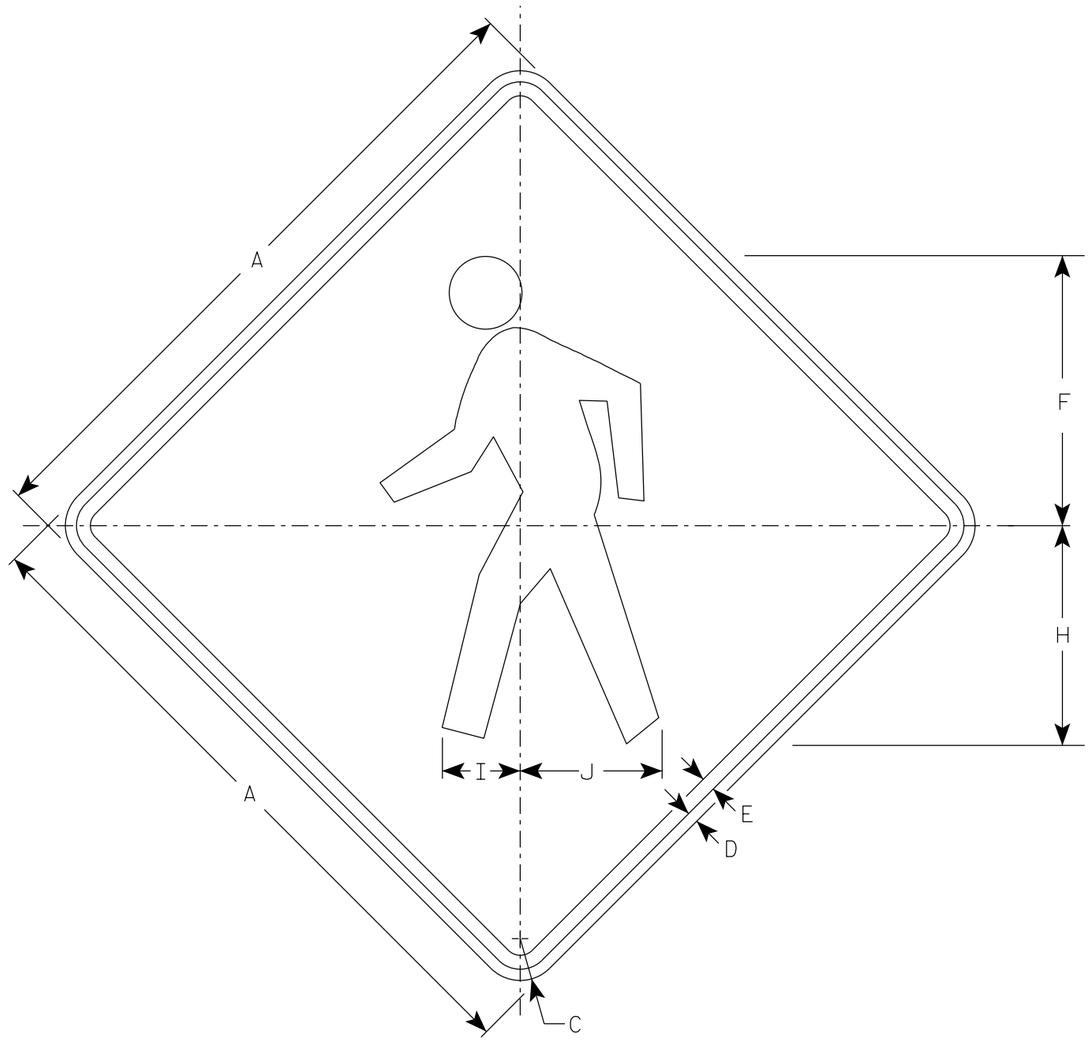
STANDARD SIGN
WO1-6

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/24/2024 PLATE NO. WO1-6.2

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



WO11-2

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.

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	14 1/2		11 7/8	4 1/4	7 5/8																	9.0
2S	48		3	3/4	1	19 3/8		15 3/4	5 5/8	10 1/4																	16.0
2M	48		3	3/4	1	19 3/8		15 3/4	5 5/8	10 1/4																	16.0
3	48		3	3/4	1	19 3/8		15 3/4	5 5/8	10 1/4																	16.0
4	48		3	3/4	1	19 3/8		15 3/4	5 5/8	10 1/4																	16.0
5																											

STANDARD SIGN

WO11-2

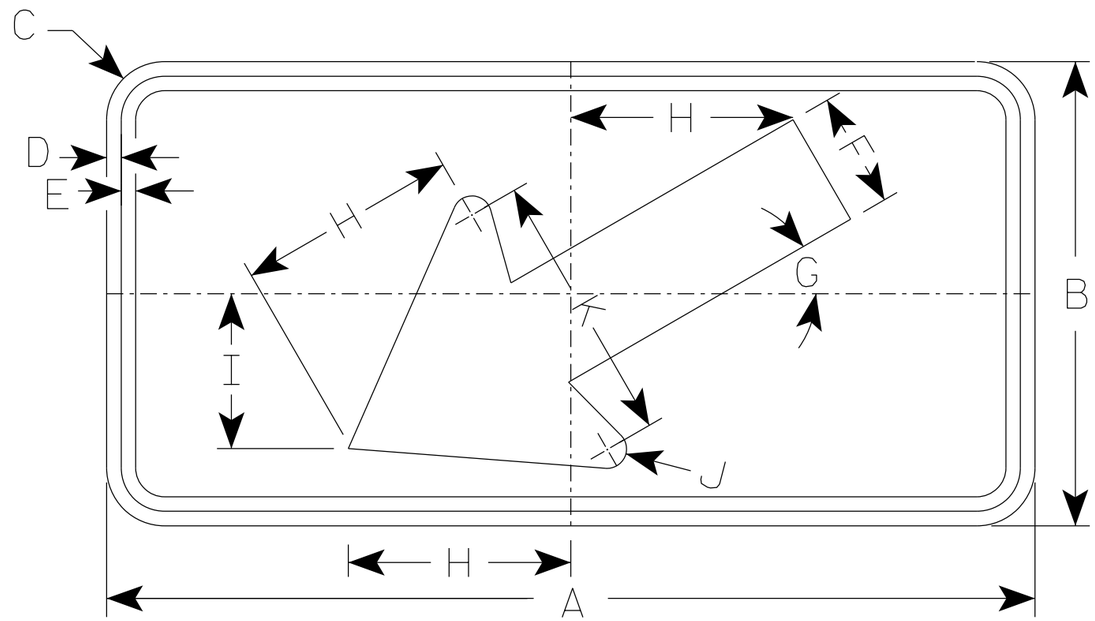
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch

For State Traffic Engineer

DATE 2/1/2024 PLATE NO. WO11-2.2

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 307 E



W016-7L

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded but corners shall be rounded when base material is metal.
4. W016-7R is the same as W016-L except the arrow is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30	18	1 1/2	3/8	1/2	4 1/2	30°	8 1/2	6	5/8	10 1/4																3.75
2S	48	24	1 7/8	1/2	5/8	6	30°	11 1/2	8	1	14																8.0
2M	48	24	1 7/8	1/2	5/8	6	30°	11 1/2	8	1	14																8.0
3	48	24	1 7/8	1/2	5/8	6	30°	11 1/2	8	1	14																8.0
4	48	24	1 7/8	1/2	5/8	6	30°	11 1/2	8	1	14																8.0
5	48	24	1 7/8	1/2	5/8	6	30°	11 1/2	8	1	14																8.0

STANDARD SIGN
W016-7

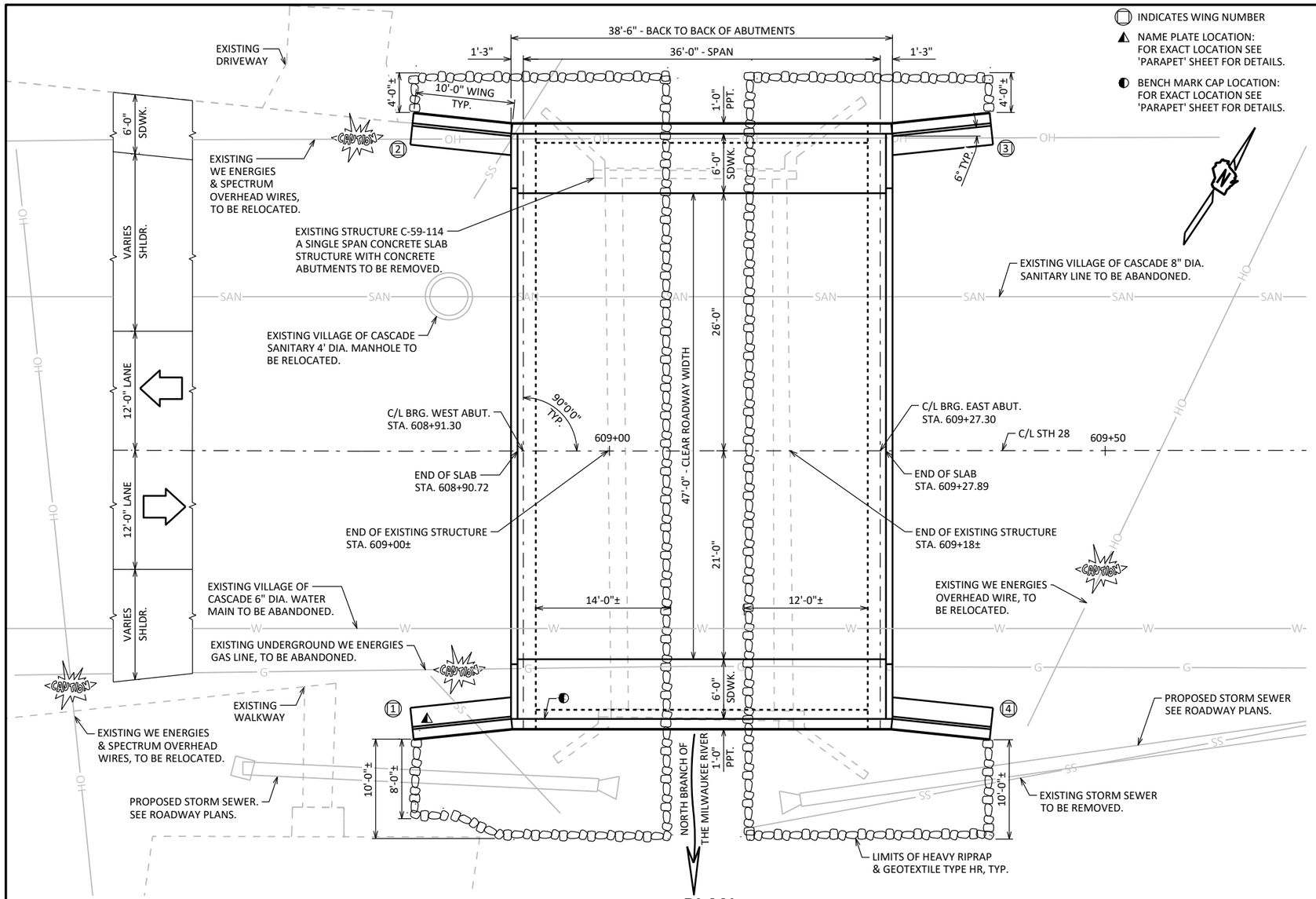
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/1/2024 PLATE NO. W016-7.3

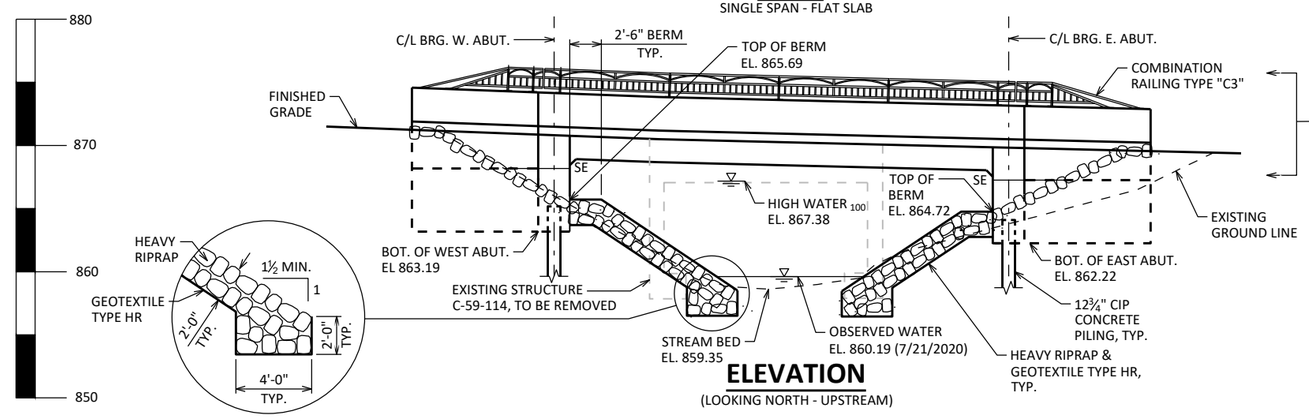
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 308 E

7



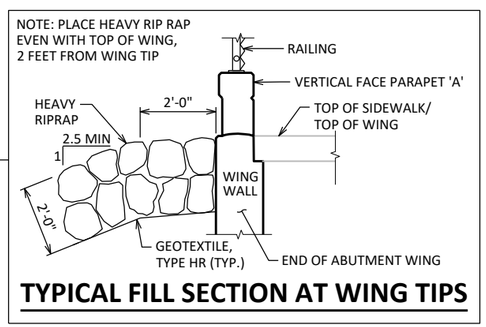
PLAN

SINGLE SPAN - FLAT SLAB



ELEVATION

(LOOKING NORTH - UPSTREAM)



TYPICAL FILL SECTION AT WING TIPS

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING: RF = 1.14
OPERATING RATING: RF = 1.48
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV): 250 (KIPS)

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 POUNDS PER SQUARE FOOT.

MATERIAL PROPERTIES:

CONCRETE MASONRY:
SUPERSTRUCTURE — f'_c = 4,000 PSI
ALL OTHER — f'_c = 3,500 PSI

BAR STEEL REINFORCEMENT
GRADE 60 — f_y = 60,000 PSI

FOUNDATION DATA

SUPPORT ABUTMENTS ON 12 ¾" DIA X 0.50" CAST-IN-PLACE (CIP) CONCRETE PILING. PRE-BORE THROUGH SHALLOW LAYER OF DENSE SOILS WITH COBBLES AND POSSIBLE BOULDERS, THEN DRIVE PILES FROM THE BOTTOM OF THE PRE-BORED HOLES UNTIL THE REQUIRED DRIVING RESISTANCE OF 140 TONS ** PER PILE IS ACHIEVED AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. PILE POINTS REQUIRED.

WEST ABUTMENT = ESTIMATED 50'-0" LONG PILES, PRE-BORE 13'-0" MINIMUM
EAST ABUTMENT = ESTIMATED 65'-0" LONG PILES, PRE-BORE 9'-0" MINIMUM

**THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.5 USING MODIFIED GATES TO DETERMINE PILE CAPACITY.

HYDRAULIC DATA

100-YEAR FREQUENCY:

Q_{100}= 1000 C.F.S.
V_{100}= 10.28 F.P.S.
HW_{100}= EL. 867.38
WATERWAY AREA = 97.3 SQ. FT.
DRAINAGE AREA = 9.04 SQ. MI.
ROADWAY OVERTOPPING = N/A
SCOUR CRITICAL CODE = 5

2-YEAR FREQUENCY:

Q_2= 240 C.F.S.
V_2= 5.2 F.P.S.
HW_2= EL. 863.84

TRAFFIC DATA

STH 28:

A.D.T. = 4,000 (2045)
R.D.S. = 35 MPH

LIST OF DRAWINGS:

1. GENERAL PLAN
2. CROSS SECTION & QUANTITIES
3. SUBSURFACE EXPLORATION
4. WEST ABUTMENT
5. WEST ABUTMENT DETAILS
6. EAST ABUTMENT
7. EAST ABUTMENT DETAILS
8. SUPERSTRUCTURE CROSS SECTIONS
9. SUPERSTRUCTURE PLAN
10. SUPERSTRUCTURE LONGITUDINAL SECTIONS
11. SUPERSTRUCTURE DATA & BAR DETAILS
12. SIDEWALK & VERTICAL FACE PARAPET 'A' DETAILS
13. PARAPET & COMBINATION RAILING, TYPE "C3"
14. COMBINATION RAILING, TYPE "C3" DETAILS
15. ALTERNATE CONSTRUCTION JOINT

STRUCTURE DESIGN CONTACTS:

LEXI HANLEY 608-266-3350
DOMINIQUE BECHLE 608-261-8205

STATE PROJECT NUMBER

4010-26-71

NO.	DATE	REVISION	BY

BUREAU OF STRUCTURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED — DMB — 05/01/24
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-59-321

STH 28 OVER NORTH BRANCH OF MILWAUKEE RIVER

COUNTY	VILLAGE
SHEBOYGAN	CASCADE

DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPECIFICATION

DESIGNED BY	DESIGNED CK'D	DRAWN BY	PLANS CK'D
LIH	KHB	JPH	LIH

GENERAL PLAN

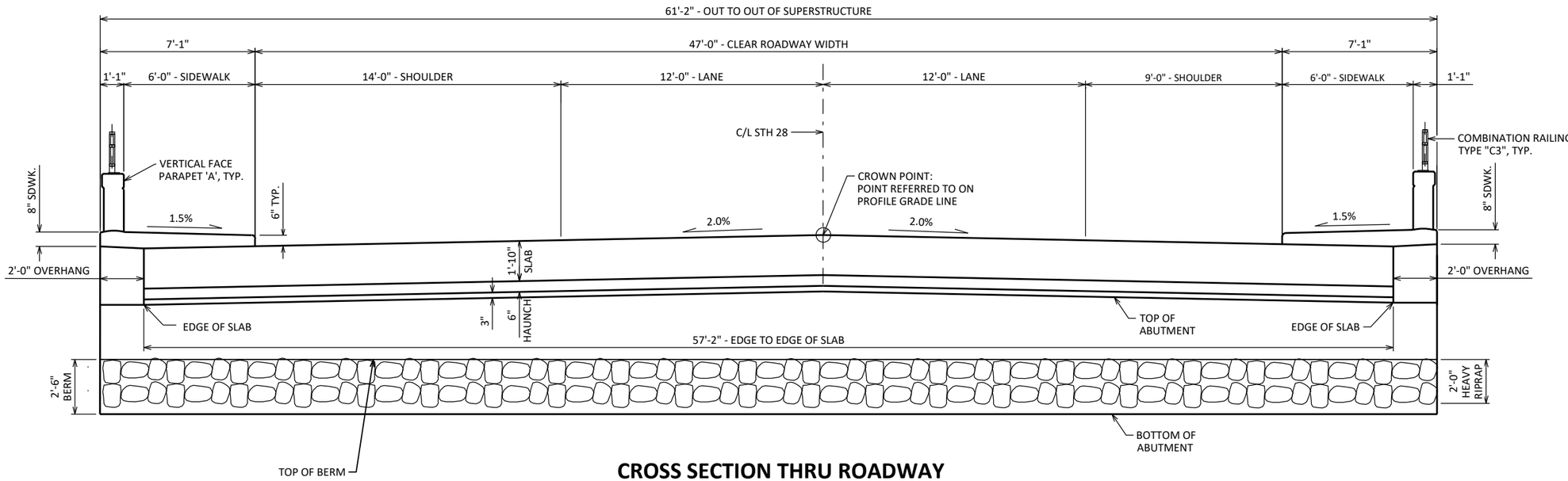
SHEET 1 OF 15
309

SCALE = 12

I.D. 4010-26-00A DATE: APR. 2024

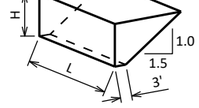
STATE PROJECT NUMBER

4010-26-71



CROSS SECTION THRU ROADWAY

(LOOKING EAST)

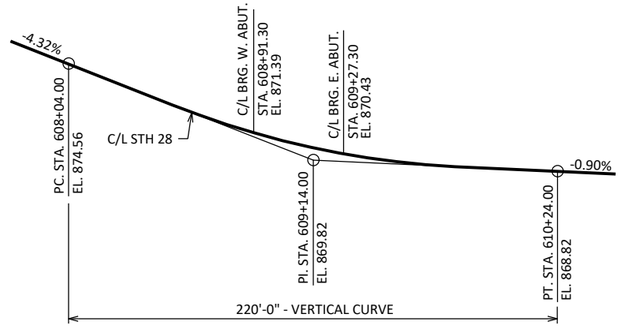


ABUTMENT BACKFILL DIAGRAM

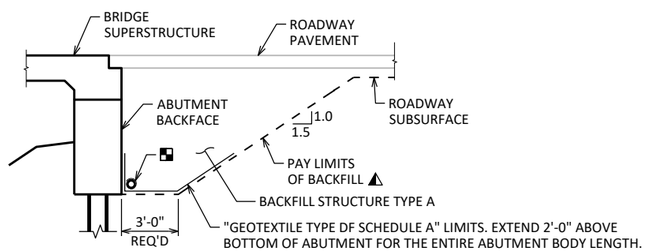
L = OUT TO OUT OF ABUTMENT BODY INCLUDING WINGS (FT)
H = AVERAGE ABUTMENT FILL HEIGHT (FT)
EF = EXPANSION FACTOR (1.20 FOR CY BID ITEMS AND 1.00 FOR TON BID ITEMS)
V_{CF} = (L)(3.0')(H) + (L)(0.5)(1.5H)(H)
V_{CY} = V_{CF}(EF)/27
V_{TON} = V_{CY}(2.0)

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	SUPER.	WEST ABUT.	EAST ABUT.	TOTALS
203.0250	REMOVING STRUCTURE OVER WATERWAY REMOVE DEBRIS C-59-114	EACH	---	---	---	1
206.1001	EXCAVATION FOR STRUCTURES BRIDGES B-59-321	EACH	---	---	---	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	---	261	261	522
502.0100	CONCRETE MASONRY BRIDGES	CY	177.8	47.7	47.4	273
502.3200	PROTECTIVE SURFACE TREATMENT	SY	269	2	2	273
502.3210	PIGMENTED SURFACE SEALER	SY	31	9	9	49
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	---	3,650	3,650	7,300
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	28,020	1,870	1,860	31,750
513.7016	RAILING STEEL TYPE C3	LF	115	---	---	115
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	---	19	19	38
550.0010	PRE-BORING UNCONSOLIDATED MATERIALS	LF	---	117	81	198
550.0500	PILE POINTS	EACH	---	9	9	18
550.2128	PILING CIP CONCRETE 12 3/4 X 0.50-INCH	LF	---	450	585	1,035
606.0300	RIPRAP HEAVY	CY	---	119	108	227
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	---	116	116	232
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	---	53	53	106
645.0120	GEOTEXTILE TYPE HR	SY	---	191	171	362
	NON-BID ITEMS					
	FILLER	SIZE	---	---	---	1/2", 3/4"



PROFILE GRADE LINE - STH 28



TYPICAL SECTION THRU ABUTMENT

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

▪ PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

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

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE SHOWN OR NOTED.

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES BRIDGES B-59-321" SHALL BE THE EXISTING GROUNDLINE.

AT THE BACK FACE OF ABUTMENT 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.

EXCAVATION BELOW THE ABUTMENT AND ABUTMENT BEDDING MATERIALS REQUIRES ENGINEER APPROVAL. GEOTEXTILE SHALL BE SET AT THE BOTTOM OF EXCAVATION AND EXTEND 2'-0" ABOVE BOTTOM OF ABUTMENT.

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

PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE ENTIRE EXPOSED TOP OF SLAB AND TO THE VERTICAL AND HORIZONTAL SURFACES OF THE PAVING NOTCHES AT ABUTMENTS AND TO THE EXPOSED TOP AND VERTICAL SURFACES OF SIDEWALK.

PIGMENTED SURFACE SEALER TO BE APPLIED TO THE FRONT FACE AND THE TOP OF THE PARAPETS.

THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH HEAVY RIPRAP AND GEOTEXTILE TYPE "HR" TO THE EXTENT SHOWN ON SHEET 1 AND THE ABUTMENT DETAILS.

SLAB FALSEWORK SHALL BE SUPPORTED ON PILES OR THE SUBSTRUCTURE, UNLESS AN ALTERNATE METHOD IS APPROVED BY THE ENGINEER.

AT ABUTMENTS, CONCRETE POURED UNDER WATER WILL BE ALLOWED AND SHALL BE DONE IN ACCORDANCE WITH SECTION 502.3.5.3 OF THE STANDARD SPECIFICATIONS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-59-321

DRAWN BY JPH | PLANS CK'D LIH

CROSS SECTION & QUANTITIES

SHEET 2
310

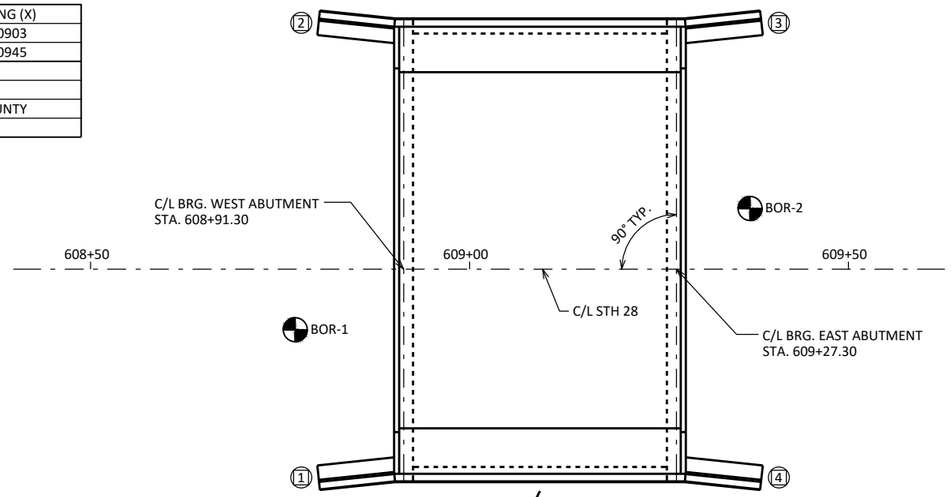
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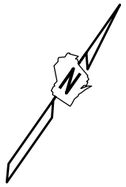
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8

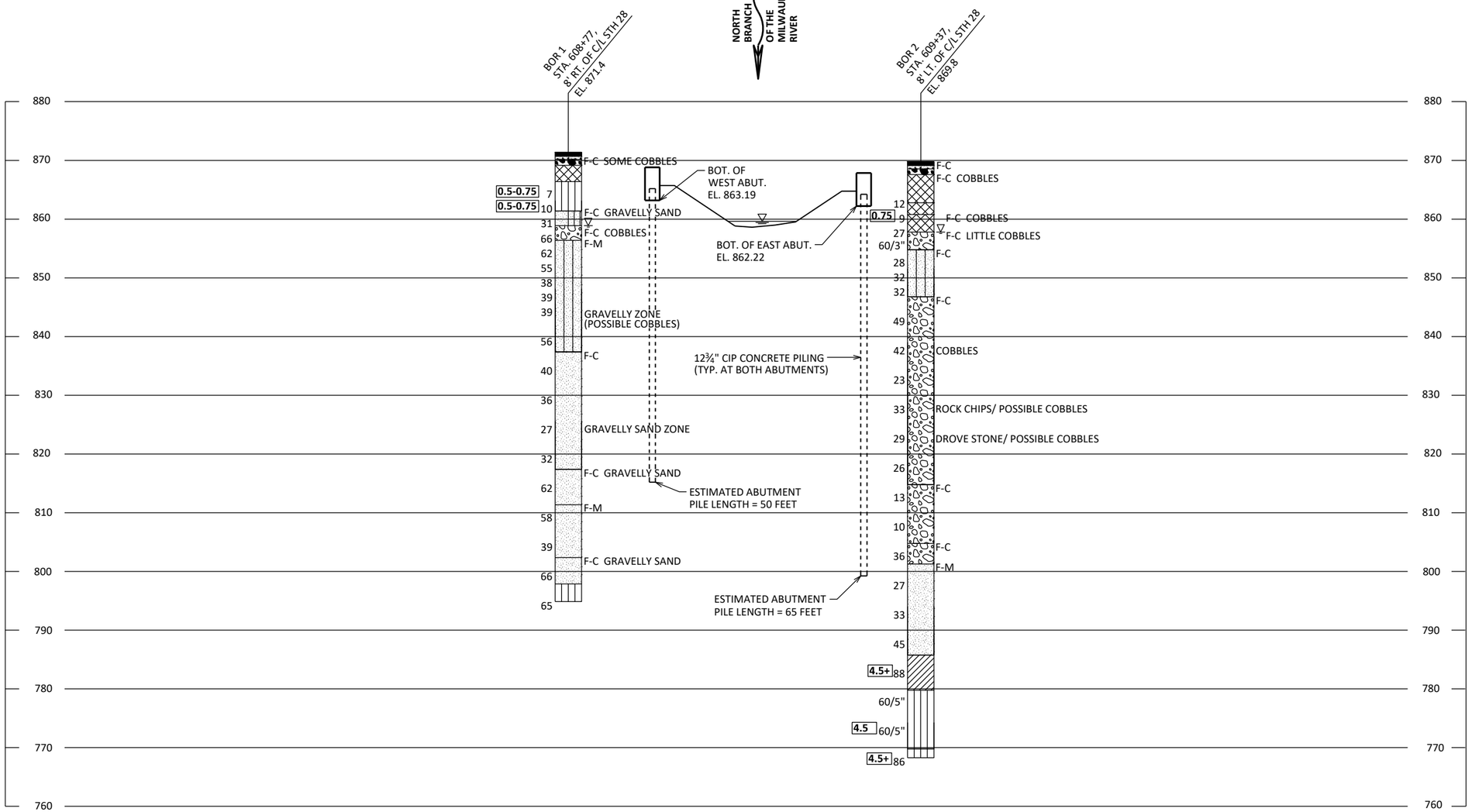
BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	04/25/2022	142980	140903
2	05/04/2022	143032	140945
BORINGS COMPLETED BY: WISDOT			
REPORT COMPLETED BY: WISDOT			
ALL COORDINATES REFERENCED TO WCCS NAD 83 (91) SHEBOYGAN COUNTY			
COORDINATES COLLECTED USING NON-SURVEY GRADE EQUIPMENT			

WING NUMBERS





NORTH BRANCH OF THE MILWAUKEE RIVER



8

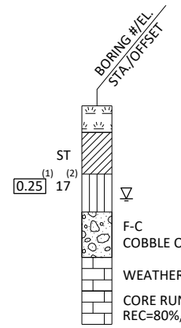
STATE PROJECT NUMBER

4010-26-71

MATERIAL SYMBOLS

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

LEGEND OF BORING



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

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

GROUND WATER ELEVATION

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

ABBREVIATIONS

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

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-59-321

DRAWN BY JPH | PLANS CK'D LIH

SUBSURFACE EXPLORATION

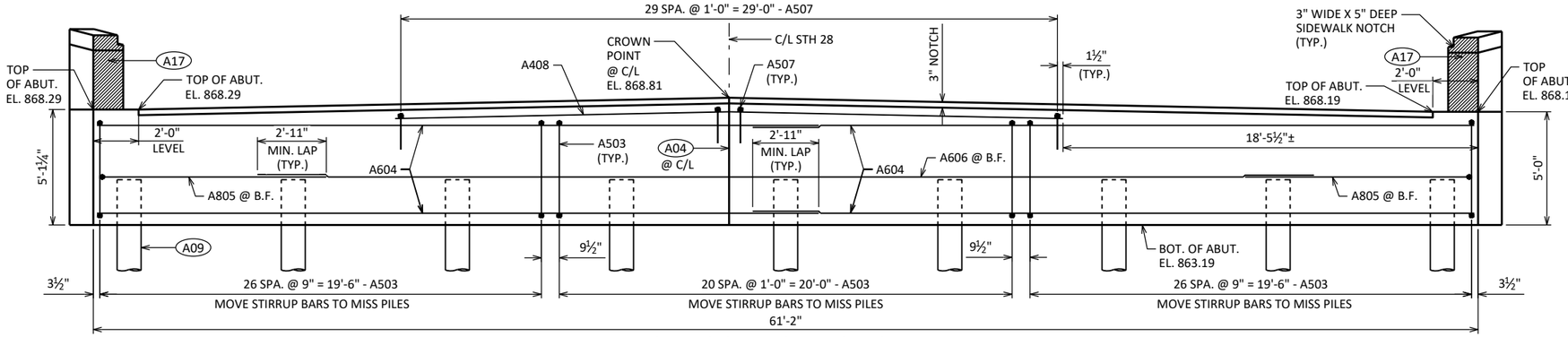
SHEET 3
311

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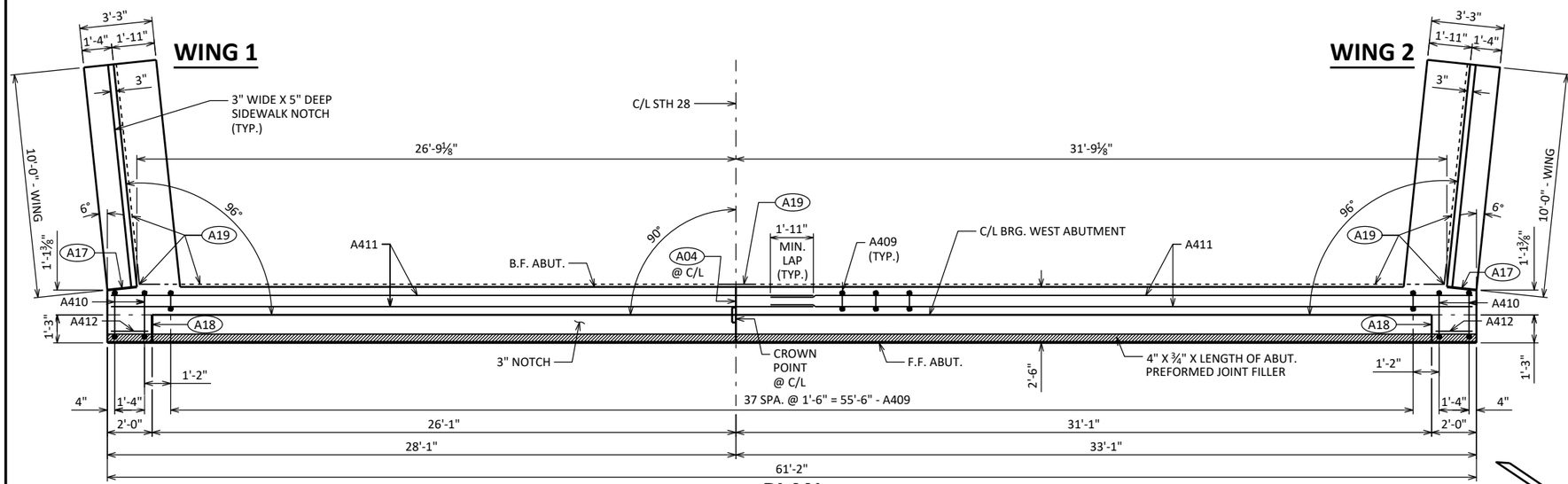
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STATE PROJECT NUMBER

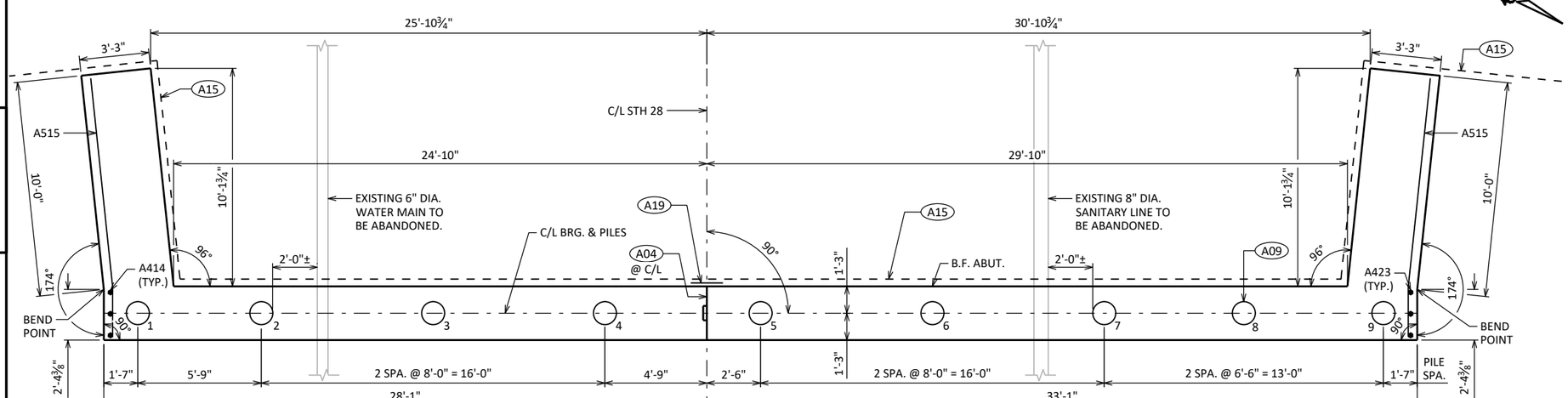
4010-26-71



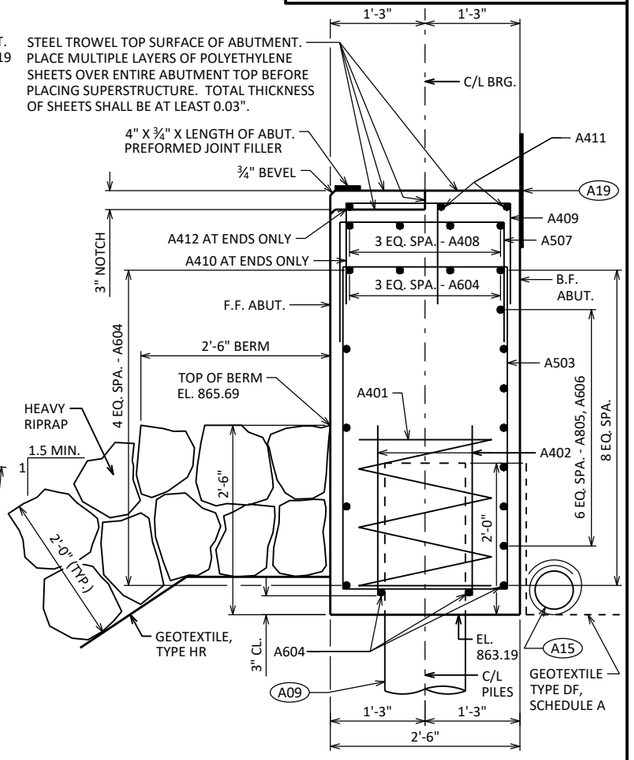
ELEVATION LOOKING WEST @ F.F. ABUT.



PLAN



PILE PLAN



SECTION THRU BODY

(A04) VERT. CONST. JOINT: KEYWAY FORMED BY A BEVELED 2" x 8". ¾" "V" GROOVE @ THE FRONT FACE AND 18" RMW @ BACKFACE. FOR OPTIONAL DETAILS SEE "ALTERNATE CONSTRUCTION JOINT" SHEET.

(A09) SUPPORT ABUTMENT ON 12¾" DIA. X 0.50" CIP CONCRETE PILING. ESTIMATED 50'-0" LONG. PRE-BORE THROUGH SHALLOW DENSE SOILS WITH COBBLES AND POSSIBLE BOULDERS A MINIMUM OF 13 FEET BELOW BOTTOM OF ABUTMENT, THEN DRIVE PILES FROM THE BOTTOM OF THE PRE-BORED HOLE UNTIL THE REQUIRED DRIVING RESISTANCE OF 140 TONS PER PILE IS ACHIEVED. PILE POINTS REQUIRED.

(A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

(A17) ½" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

(A18) ¾" CORK FILLER ON VERT. NOTCH FACES THAT RUN PARALLEL WITH ROADWAY.

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-59-321

DRAWN BY JPH | PLANS CK'D LIH

WEST ABUTMENT

SHEET 4
312

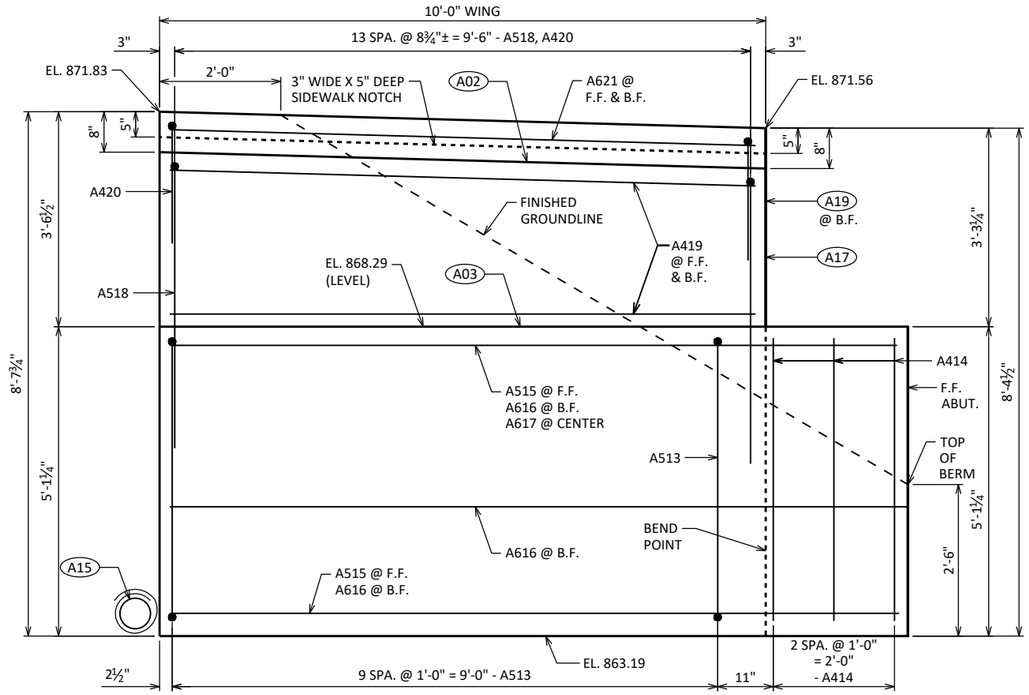
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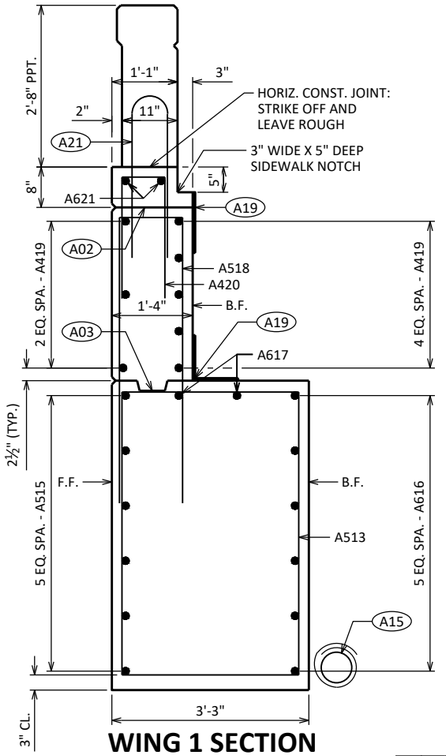
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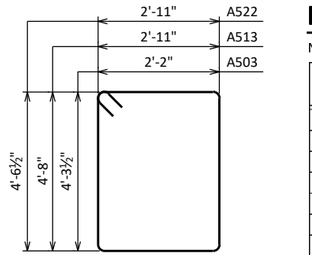
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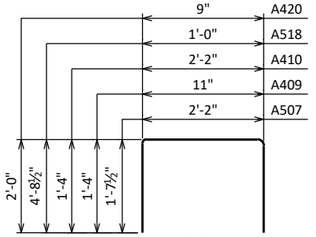
WING 1 ELEVATION LOOKING @ F.F. WING



WING 1 SECTION



A503 A513 A522



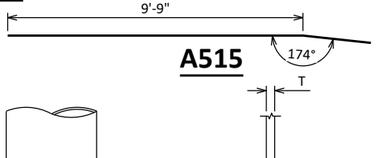
A507 A409 A410

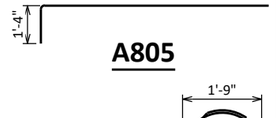
A518 A420

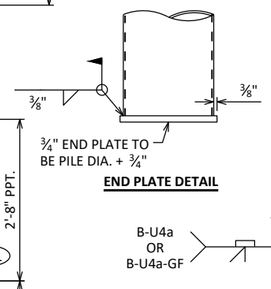
BILL OF BARS

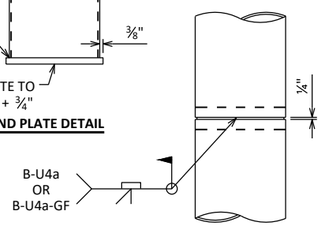
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

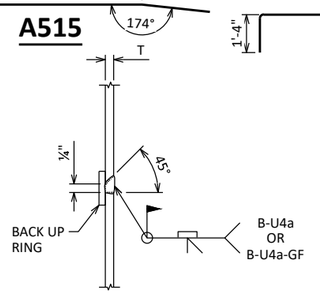
BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
A401		9	28'-0"	X		BODY-BOT.-SPIRAL-1 PER PILE-VERT.
A402		18	2'-3"			BODY-BOT.-2 PER PILE-VERT.
A503		75	13'-7"	X		BODY-STIRRUPS-VERT.
A604		22	32'-0"			BODY-HORIZ.
A805		14	11'-2"	X		BODY-HORIZ.-B.F.-AT BOTH ENDS ONLY
A606		7	46'-8"			BODY-HORIZ.-B.F.-AT CENTER
A507		30	5'-2"	X		BODY-TOP-VERT.-AT CENTER
A408		4	29'-3"			BODY-TOP-HORIZ.-AT CENTER
A409		38	3'-5"	X		BODY-TOP-VERT.-B.F.-ALONG 3" NOTCH
A410		4	4'-8"	X		BODY-TOP-VERT.-AT BOTH ENDS ONLY
A411		4	31'-6"			BODY-TOP-HORIZ.-B.F.
A412		2	1'-8"			BODY-TOP-HORIZ.-F.F.-AT BOTH ENDS ONLY
A513	X	10	15'-10"	X		WING 1-BOT.-STIRRUPS-VERT.
A414	X	3	4'-8"			WING 1/BODY-BOT.-VERT.-F.F.
A515	X	12	12'-0"	X		WINGS 1&2-BOT.-HORIZ.-F.F.
A616	X	12	12'-2"			WINGS 1&2-BOT.-HORIZ.-B.F.
A617	X	4	12'-0"			WINGS 1&2-BOT.-HORIZ.
A518	X	28	10'-2"	X		WINGS 1&2-TOP-VERT.
A419	X	16	9'-8"			WINGS 1&2-TOP-HORIZ.-F.F. & B.F.
A420	X	28	4'-7"	X		WINGS 1&2-TOP-VERT.
A621	X	4	9'-8"			WINGS 1&2-TOP-HORIZ.-F.F. & B.F.
A522	X	10	15'-7"	X		WING 2-BOT.-STIRRUPS-VERT.
A423	X	3	4'-7"			WING 2/BODY-BOT.-VERT.-F.F.



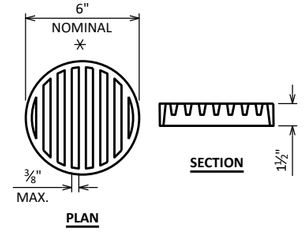








CIP PILE DETAILS



C.I.P. PILE WELD DETAIL

(A02) CONST. JOINT: POUR CONCRETE ABOVE THIS JOINT AFTER SUPERSTRUCTURE CONCRETE IS IN PLACE. STRIKE OFF AND LEAVE ROUGH. ¾" "V" GROOVE @ F.F. AND 18" RMW @ B.F. OF JOINT.

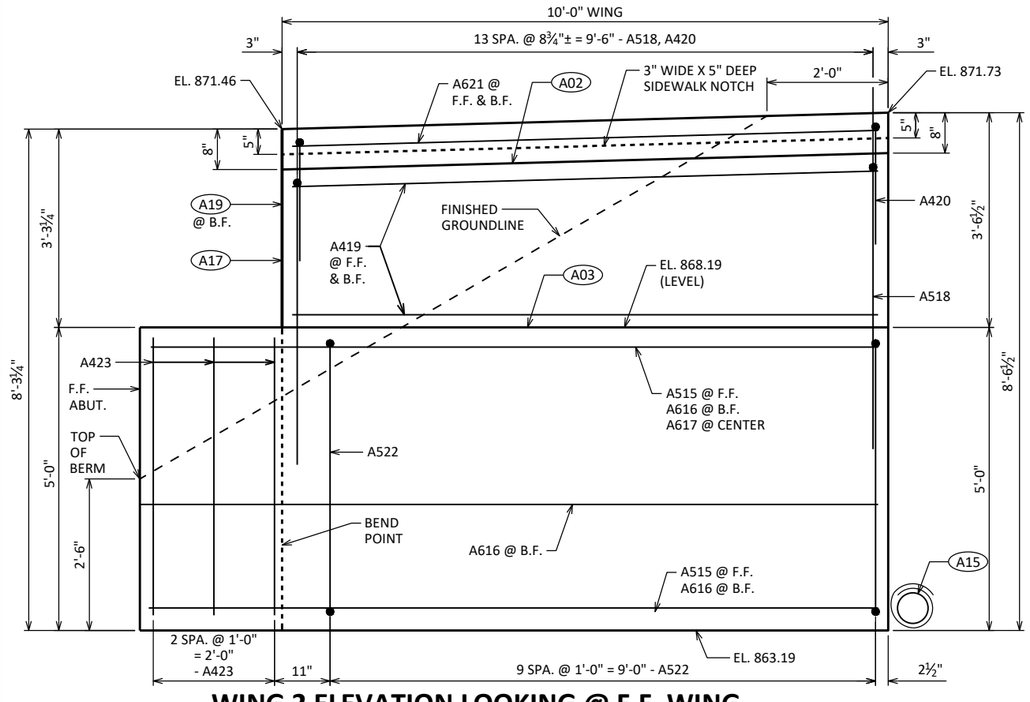
(A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2" x 6". (18" RMW @ B.F. & ¾" "V" GROOVE @ F.F. IF JOINT IS USED).

(A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

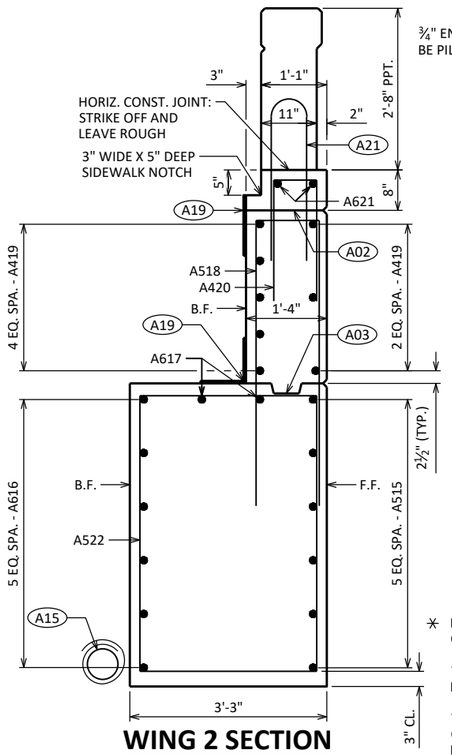
(A17) ½" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

(A21) FOR PPT. BARS & DIMENSIONS SEE PARAPET SHEET.



WING 2 ELEVATION LOOKING @ F.F. WING



WING 2 SECTION

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 UNDERDRAING 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.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-59-321

DRAWN BY JPH | PLANS CK'D LIH

WEST ABUTMENT DETAILS

SHEET 5
313

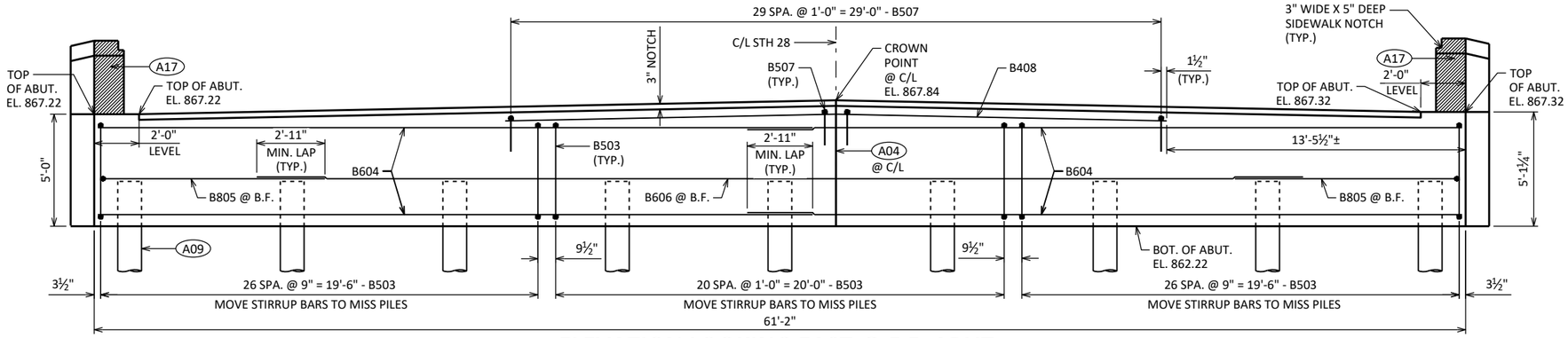
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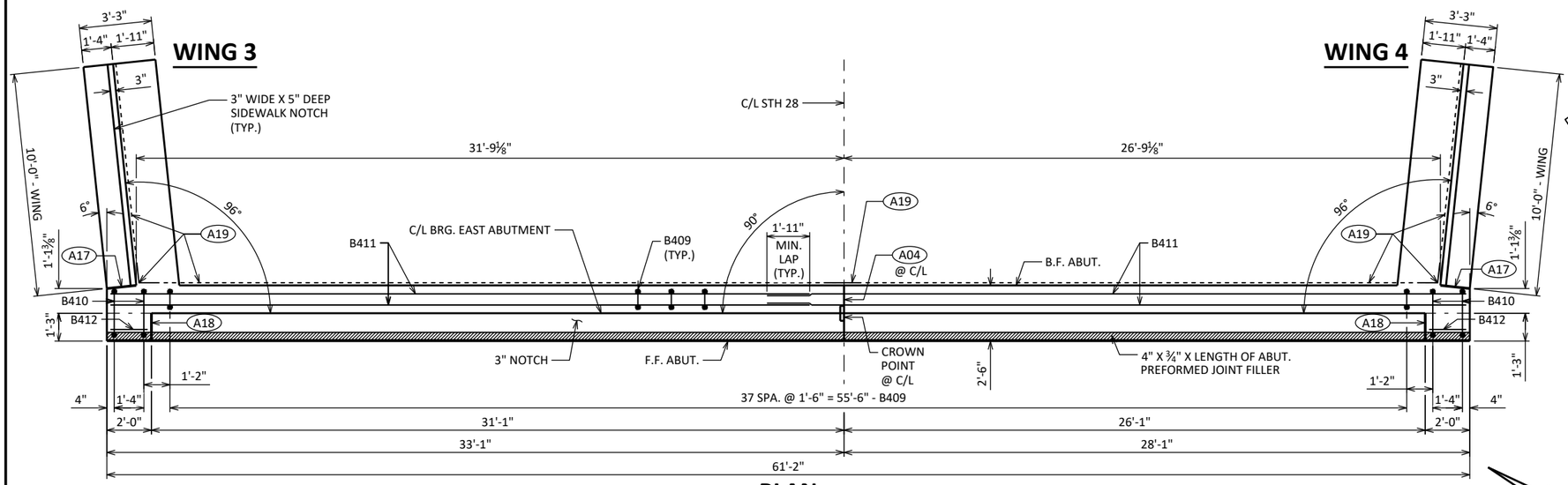
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STATE PROJECT NUMBER

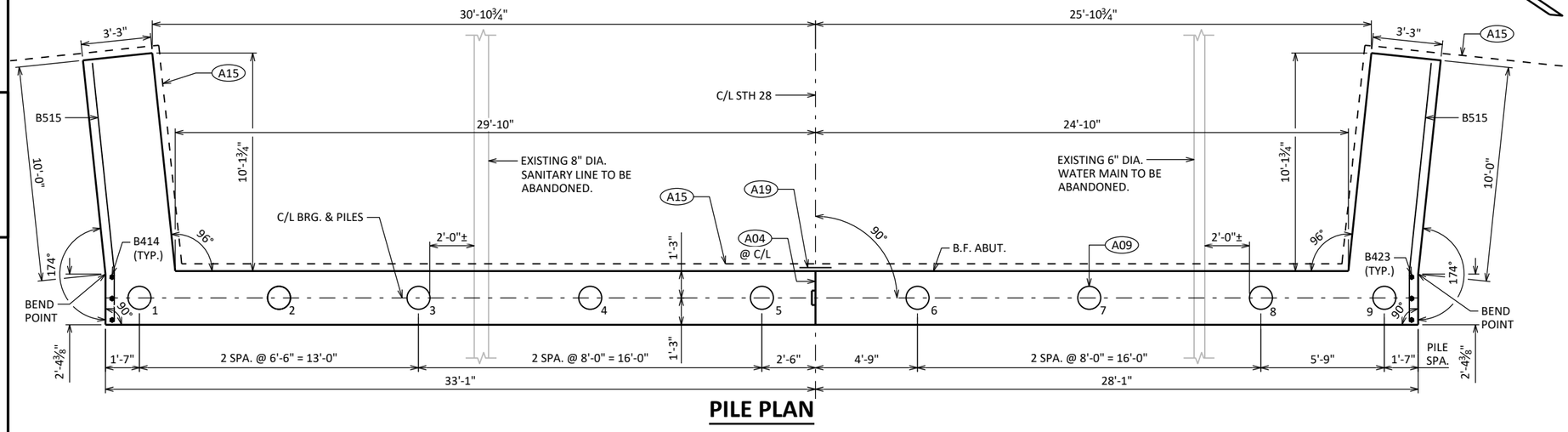
4010-26-71



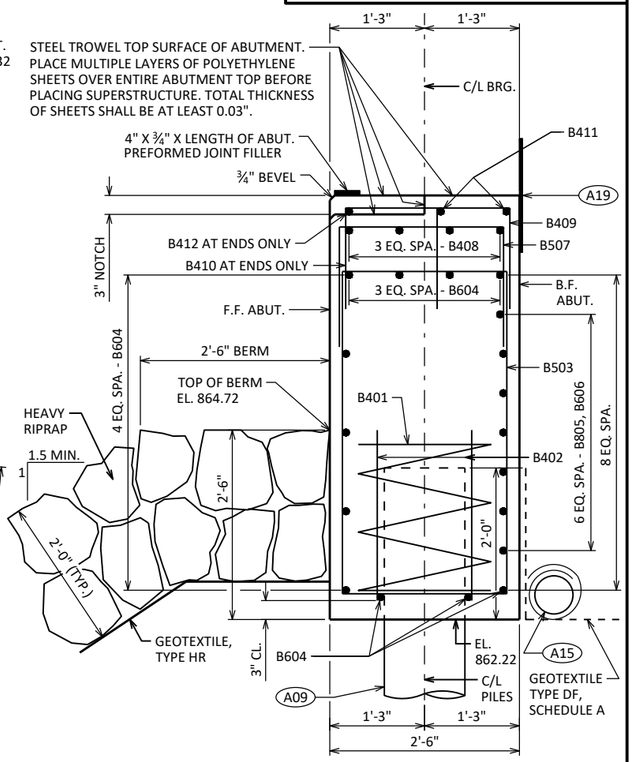
ELEVATION LOOKING EAST @ F.F. ABUT.



PLAN



PILE PLAN



SECTION THRU BODY

(A04) VERT. CONST. JOINT: KEYWAY FORMED BY A BEVELED 2" x 8". ¾" "V" GROOVE @ THE FRONT FACE AND 18" RMW @ BACKFACE. FOR OPTIONAL DETAILS SEE "ALTERNATE CONSTRUCTION JOINT" SHEET.

(A09) SUPPORT ABUTMENT ON 12¾" DIA. X 0.50" CIP CONCRETE PILING. ESTIMATED 65'-0" LONG. PRE-BORE THROUGH SHALLOW DENSE SOILS WITH COBBLES AND POSSIBLE BOULDERS A MINIMUM OF 9 FEET BELOW BOTTOM OF ABUTMENT, THEN DRIVE PILES FROM THE BOTTOM OF THE PRE-BORED HOLE UNTIL THE REQUIRED DRIVING RESISTANCE OF 140 TONS PER PILE IS ACHIEVED. PILE POINTS REQUIRED.

(A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

(A17) ½" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

(A18) ¾" CORK FILLER ON VERT. NOTCH FACES THAT RUN PARALLEL WITH ROADWAY.

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-59-321

DRAWN BY JPH | PLANS CK'D LIH

EAST ABUTMENT

SHEET 6
314

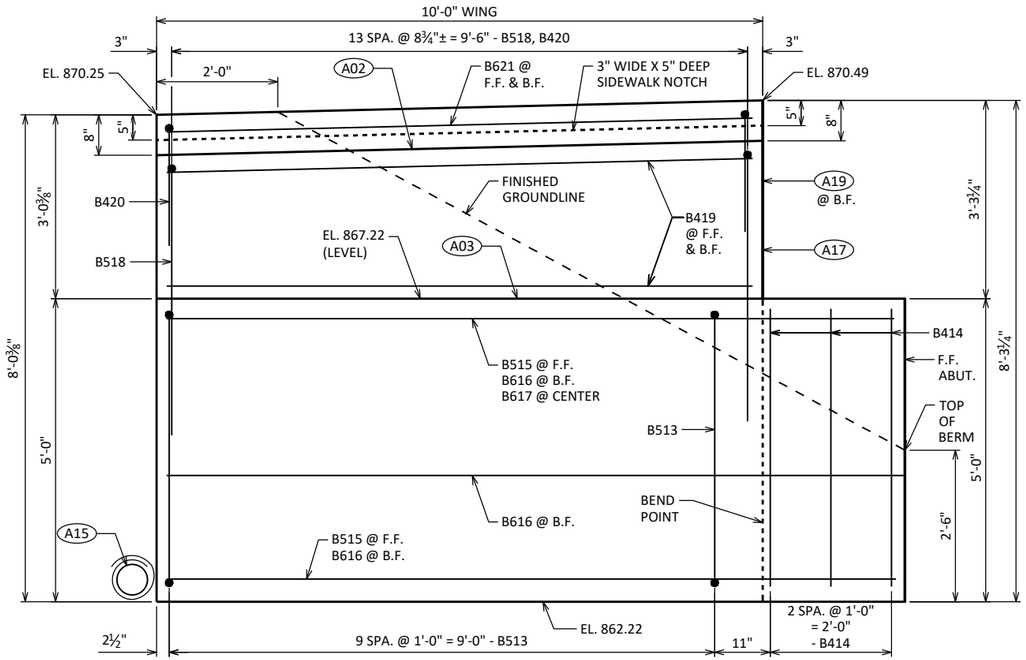
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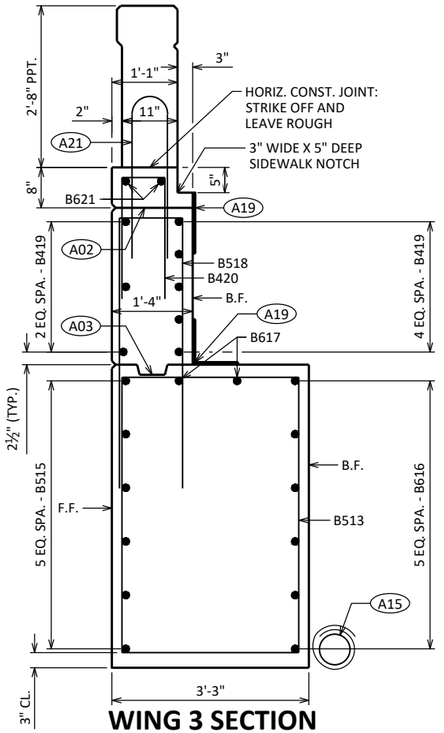
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STATE PROJECT NUMBER

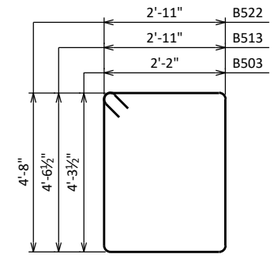
4010-26-71



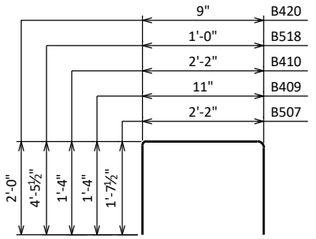
WING 3 ELEVATION LOOKING @ F.F. WING



WING 3 SECTION



B503 B513 B522



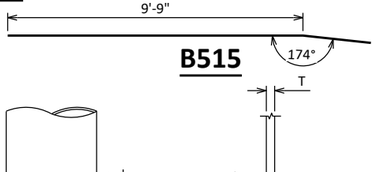
B507 B409 B410

B518 B420

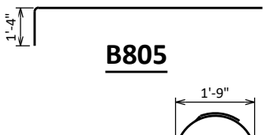
BILL OF BARS

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

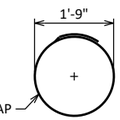
BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
B401		9	28'-0"	X		BODY-BOT.-SPIRAL-1 PER PILE-VERT.
B402		18	2'-3"			BODY-BOT.-2 PER PILE-VERT.
B503		75	13'-7"	X		BODY-STIRRUPS-VERT.
B604		22	32'-0"			BODY-HORIZ.
B805		14	11'-2"	X		BODY-HORIZ.-B.F.-AT BOTH ENDS ONLY
B606		7	46'-8"			BODY-HORIZ.-B.F.-AT CENTER
B507		30	5'-2"	X		BODY-TOP-VERT.-AT CENTER
B408		4	29'-3"			BODY-TOP-HORIZ.-AT CENTER
B409		38	3'-5"	X		BODY-TOP-VERT.-B.F.-ALONG 3" NOTCH
B410		4	4'-8"	X		BODY-TOP-VERT.-AT BOTH ENDS ONLY
B411		4	31'-6"			BODY-TOP-HORIZ.-B.F.
B412		2	1'-8"			BODY-TOP-HORIZ.-F.F.-AT BOTH ENDS ONLY
B513	X	10	15'-7"	X		WING 3-BOT.-STIRRUPS-VERT.
B414	X	3	4'-7"			WING 3/BODY-BOT.-VERT.-F.F.
B515	X	12	12'-0"	X		WINGS 3&4-BOT.-HORIZ.-F.F.
B616	X	12	12'-2"			WINGS 3&4-BOT.-HORIZ.-B.F.
B617	X	4	12'-0"			WINGS 3&4-BOT.-HORIZ.
B518	X	28	9'-8"	X		WINGS 3&4-TOP-VERT.
B419	X	16	9'-8"			WINGS 3&4-TOP-HORIZ.-F.F. & B.F.
B420	X	28	4'-7"	X		WINGS 3&4-TOP-VERT.
B621	X	4	9'-8"			WINGS 3&4-TOP-HORIZ.-F.F. & B.F.
B522	X	10	15'-10"	X		WING 4-BOT.-STIRRUPS-VERT.
B423	X	3	4'-8"			WING 4/BODY-BOT.-VERT.-F.F.



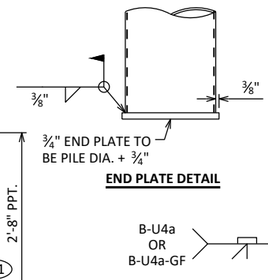
B515



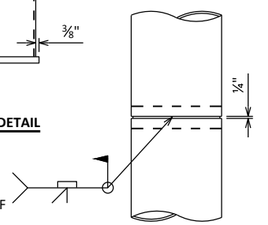
B805



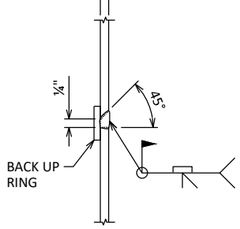
B401



END PLATE DETAIL



CAST-IN-PLACE 'PIPE' PILE



C.I.P. PILE WELD DETAIL

CIP PILE DETAILS

(A02) CONST. JOINT: POUR CONCRETE ABOVE THIS JOINT AFTER SUPERSTRUCTURE CONCRETE IS IN PLACE. STRIKE OFF AND LEAVE ROUGH. ¾" "V" GROOVE @ F.F. AND 18" RMW @ B.F. OF JOINT.

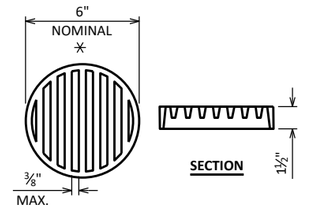
(A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2" x 6". (18" RMW @ B.F. & ¾" "V" GROOVE @ F.F. IF JOINT IS USED).

(A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

(A17) ½" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

(A21) FOR PPT. BARS & DIMENSIONS SEE PARAPET SHEET.



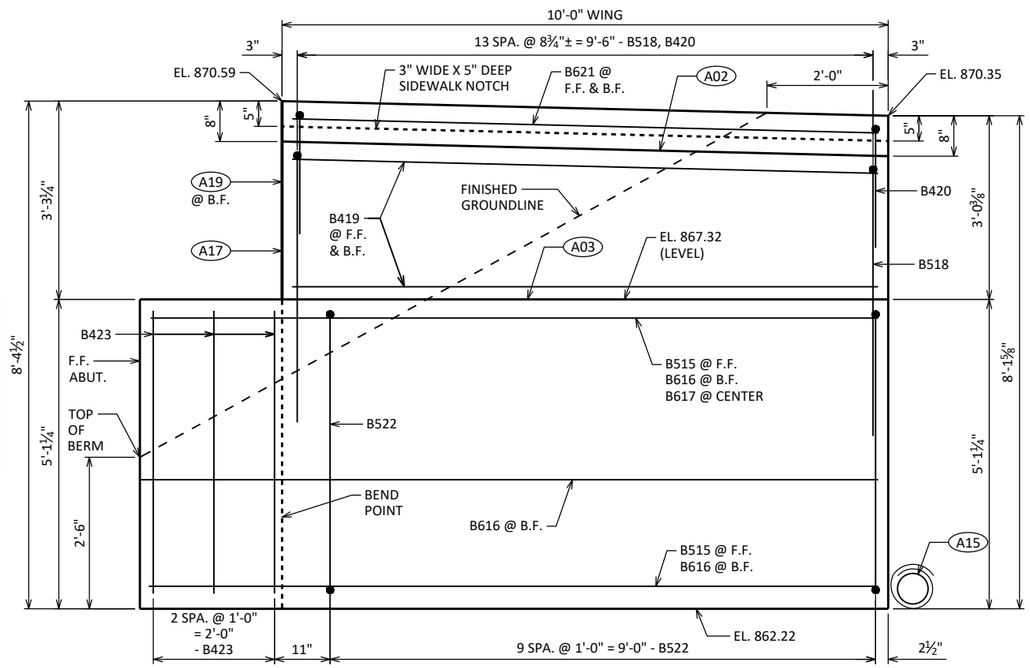
PLAN

RODENT SHIELD DETAIL

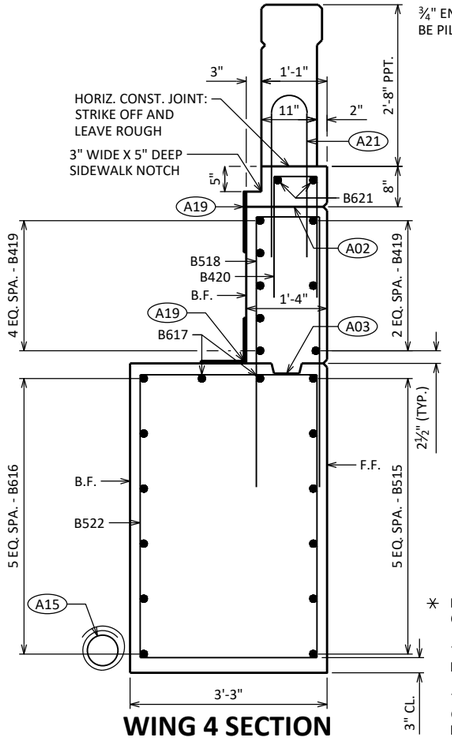
✳ DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAING 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.



WING 4 ELEVATION LOOKING @ F.F. WING



WING 4 SECTION

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-59-321

DRAWN BY JPH | PLANS CK'D LIH

EAST ABUTMENT DETAILS

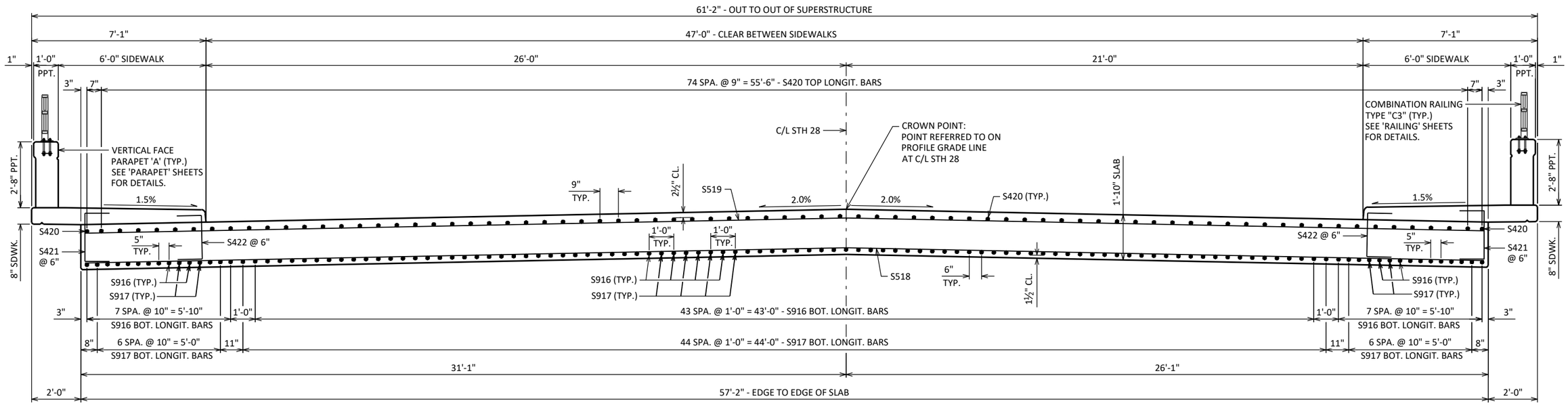
SHEET 7
315

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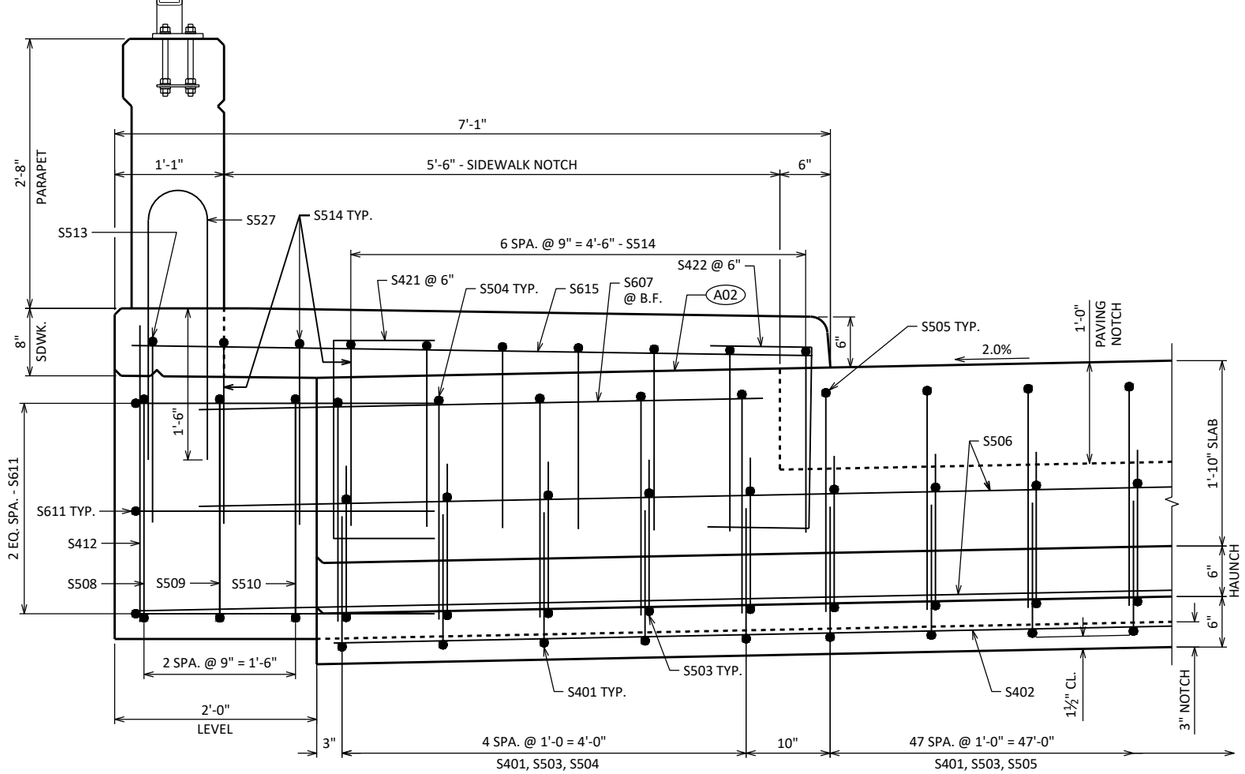
8

STATE PROJECT NUMBER
4010-26-71



CROSS SECTION THRU ROADWAY

(LOOKING EAST)



TYPICAL CROSS SECTION AT ABUTMENT CORNERS

A02 CONST. JOINT: POUR CONCRETE ABOVE THIS JOINT AFTER SUPERSTRUCTURE CONCRETE IS IN PLACE. STRIKE OFF AND LEAVE ROUGH. FOR SLAB POUR, MATCH BRIDGE 2.0% SLOPE. BOTTOM OF SIDEWALK PAVING NOTCH IS THE TOP OF SLAB POUR EXTENDED.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-59-321

DRAWN BY JPH | PLANS CK'D LIH

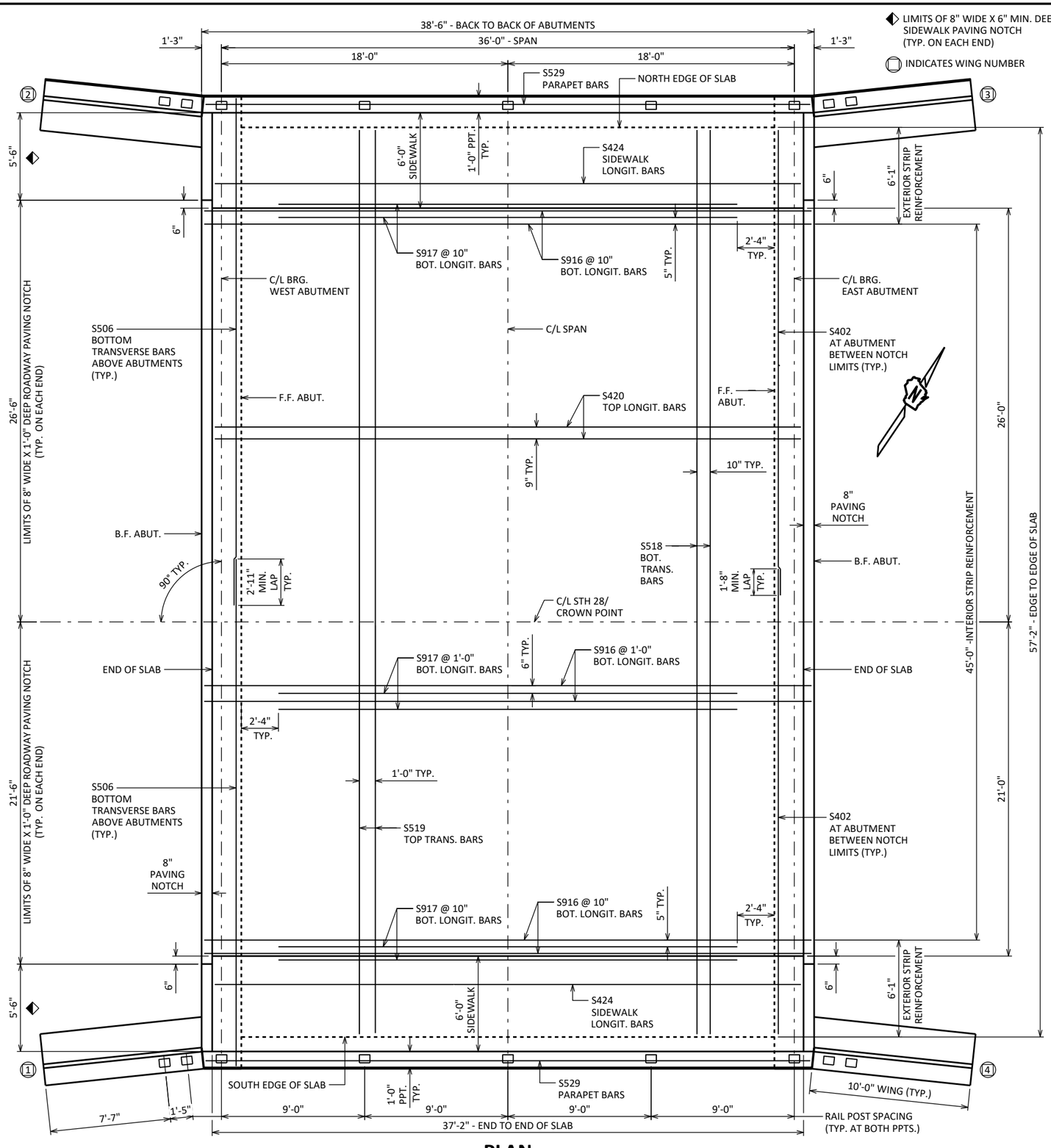
SUPERSTRUCTURE CROSS SECTIONS

SHEET 8
316

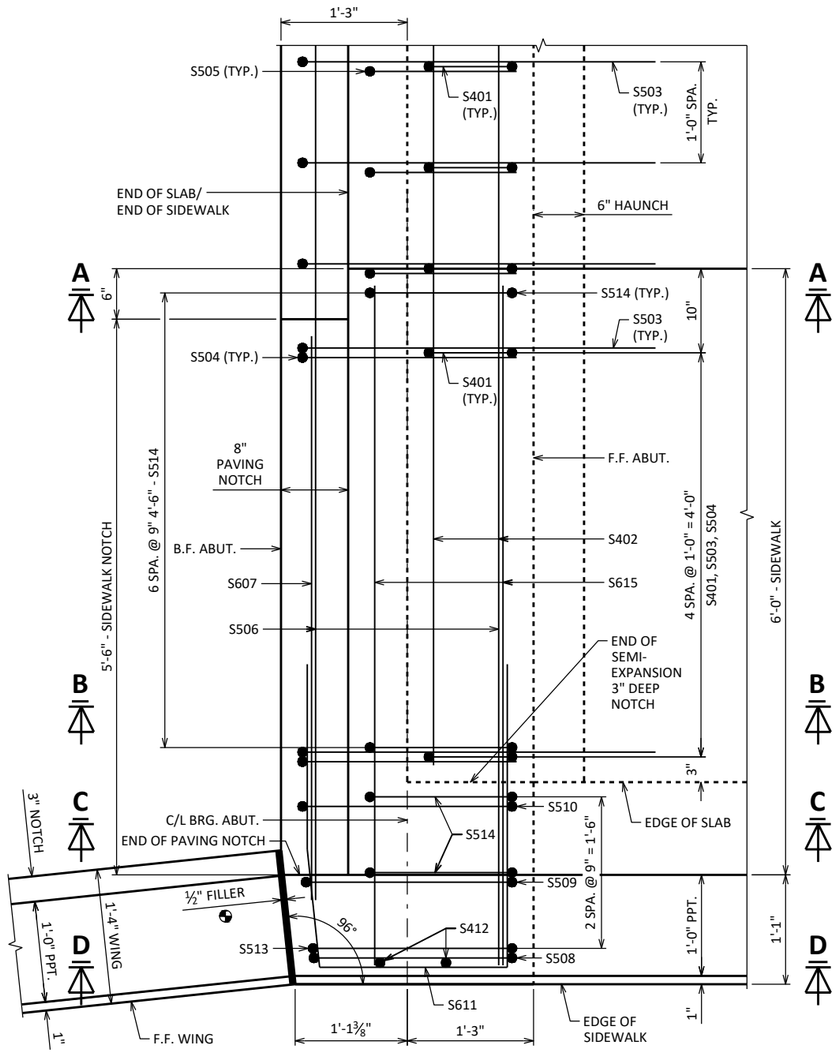
SCALE = 4.1667

STATE PROJECT NUMBER

4010-26-71



PLAN



TYPICAL WING CORNER DETAIL

(WING 1 PLAN VIEW SHOWN)
(SEE "SUPERSTRUCTURE LONGITUDINAL SECTIONS" SHEET FOR SECTIONS A-A, B-B, C-C & D-D)

◓ ½" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-59-321

DRAWN BY JPH | PLANS CK'D LIH

SUPERSTRUCTURE PLAN

SHEET 9
317

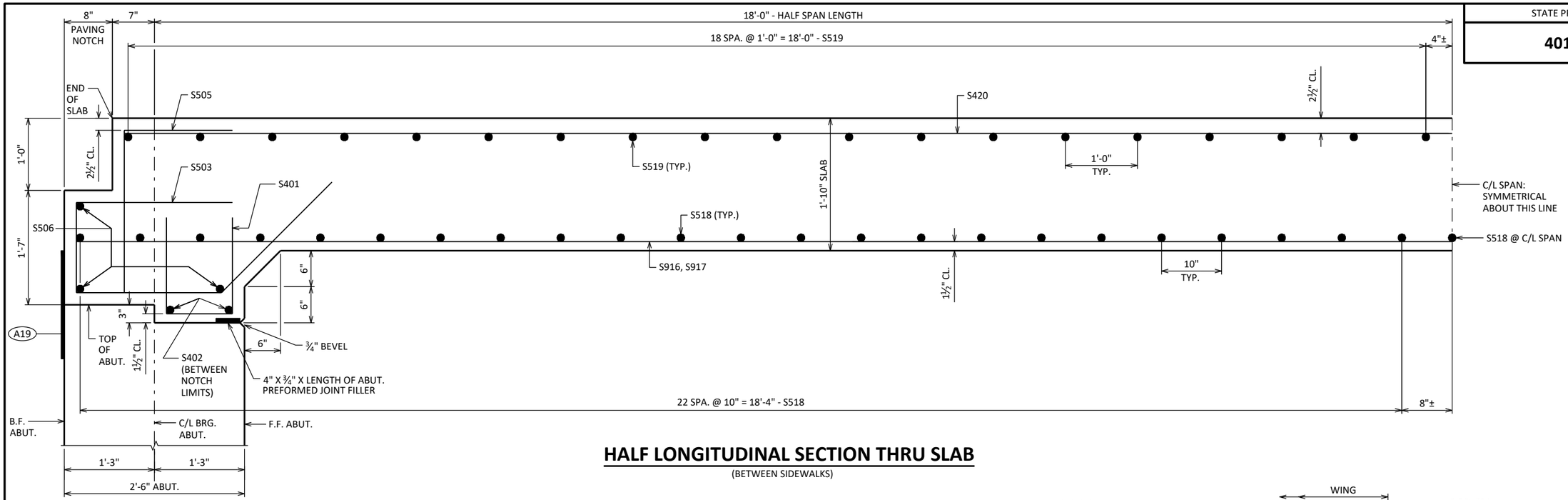
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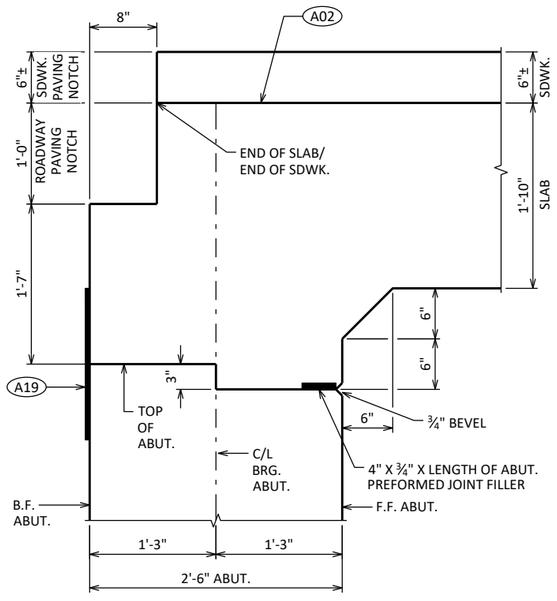
STATE PROJECT NUMBER

4010-26-71



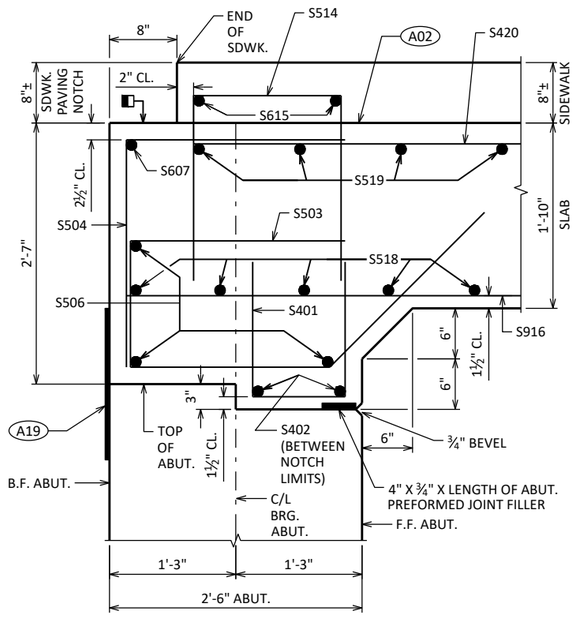
HALF LONGITUDINAL SECTION THRU SLAB

(BETWEEN SIDEWALKS)



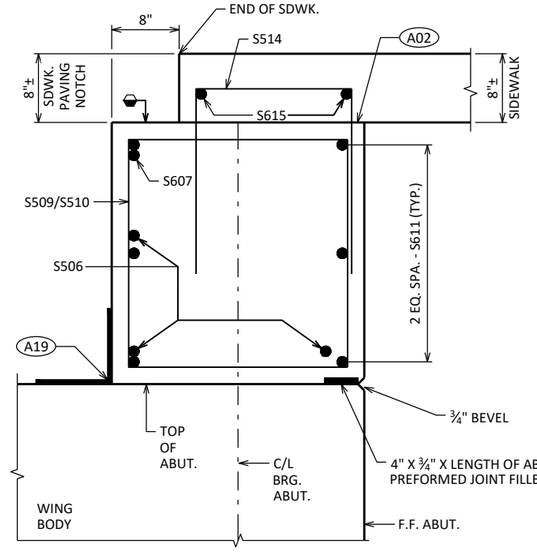
SECTION A-A

STEEL REINFORCEMENT NOT SHOWN



SECTION B-B

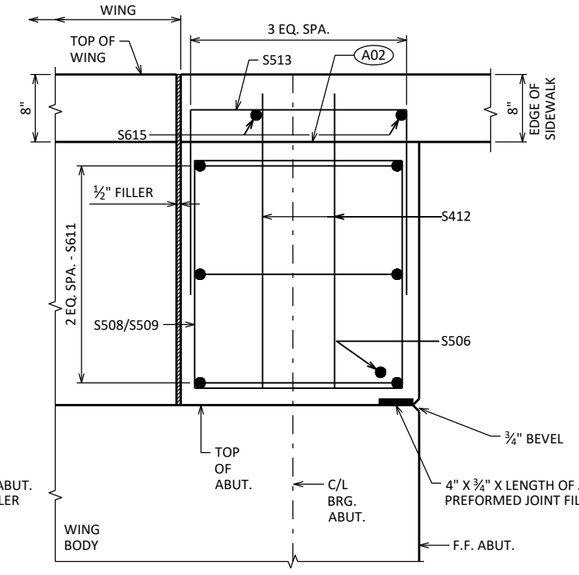
STEEL REINFORCEMENT NOT SHOWN



SECTION C-C

(BETWEEN SLAB & PARAPET)

SIDEWALK REINFORCEMENT NOT SHOWN



SECTION D-D

(UNDER PARAPET)

SIDEWALK REINFORCEMENT NOT SHOWN

(A02) CONST. JOINT: POUR CONCRETE ABOVE THIS JOINT AFTER SUPERSTRUCTURE CONCRETE IS IN PLACE. STRIKE OFF AND LEAVE ROUGH. FOR SLAB POUR, MATCH BRIDGE 2.0% SLOPE. BOTTOM OF SIDEWALK PAVING NOTCH IS THE TOP OF SLAB POUR EXTENDED.

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

◧ MATCH BOTTOM OF SIDEWALK PAVING NOTCH WITH 2.0% SLOPE OF 'TOP OF SLAB' INSIDE THE EDGE OF SLAB.

◒ MATCH BOTTOM OF SIDEWALK PAVING NOTCH WITH SLOPE OF 'BOTTOM OF SIDEWALK' OUTSIDE THE EDGE OF SLAB.

NOTES

TOP TRANSVERSE BARS IN SLAB SHALL BE SUPPORTED BY INDIVIDUAL BAR CHAIRS AT APPROXIMATELY 3'-0" CENTERS EACH WAY. BOTTOM LONGITUDINAL BARS SHALL BE SUPPORTED BY CONTINUOUS BAR CHAIRS AT APPROXIMATELY 4'-0" CENTERS.

ALL SLAB THICKNESS DIMENSIONS ARE MINIMUM. ANY TOLERANCES NECESSARY TO CORRECT CONSTRUCTION DISCREPANCIES ARE TO BE PLUS (+).

SEE "SUPERSTRUCTURE DATA & BAR DETAILS" SHEET FOR THE 'BILL OF BARS' AND BAR DETAILS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-59-321

DRAWN BY JPH | PLANS CK'D LIH

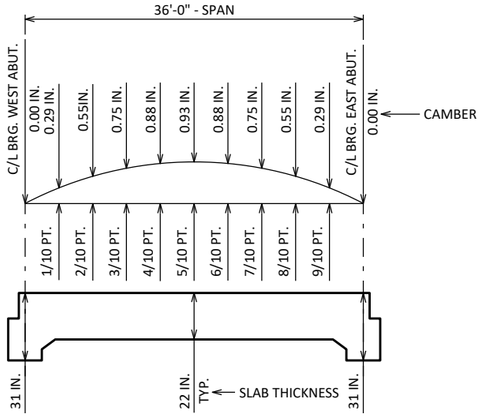
SUPERSTRUCTURE LONGITUDINAL SECTIONS

SHEET 10
318

SCALE = 1.5

8

8



CAMBER AND SLAB THICKNESS DIAGRAM

CAMBER SHOWN IS BASED ON 3 TIMES DEAD LOAD DEFLECTIONS.
CAMBER SPANS AS SHOWN TO PROVIDE FOR DEAD LOAD DEFLECTION AND FUTURE CREEP. CAMBER DOES NOT INCLUDE ALLOWANCE FOR FORM SETTLEMENT.
PARAPETS AND SIDEWALKS PLACED ON TOP OF THE SLAB SHALL BE POURED AFTER FALSEWORK HAS BEEN RELEASED.

TO DETERMINE FALSEWORK ELEVATION AT EDGE OF SLAB, CROWN OR REFERENCE LINE FOLLOW THIS PROCEDURE:

	TOP OF SLAB ELEVATION AT FINAL GRADE
MINUS	SLAB THICKNESS
PLUS	CAMBER
PLUS	FORM SETTLEMENT/DEFLECTION DUE TO PLACEMENT OF SLAB CONCRETE (TO BE COMPUTED BY THE CONTRACTOR)
EQUALS	TOP OF SLAB FALSEWORK ELEVATION

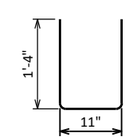
TOP OF SLAB ELEVATIONS

LOCATION	C/L BRG. W. ABUT.	1/10 PT.	2/10 PT.	3/10 PT.	4/10 PT.	5/10 PT.	6/10 PT.	7/10 PT.	8/10 PT.	9/10 PT.	C/L BRG. E. ABUT.
NORTH EDGE OF SLAB ☆	870.77	870.66	870.56	870.46	870.36	870.26	870.16	870.07	869.98	869.89	869.81
C/L STH 28	871.39	871.28	871.18	871.08	870.98	870.88	870.78	870.69	870.60	870.51	870.43
SOUTH EDGE OF SLAB ☆	870.87	870.76	870.66	870.56	870.46	870.36	870.26	870.17	870.08	869.99	869.91

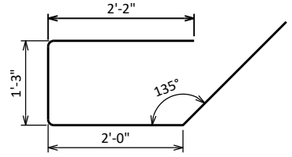
SURVEY TOP OF SLAB ELEVATIONS

LOCATION	C/L BRG. WEST ABUTMENT	5/10 PT.	C/L BRG. EAST ABUTMENT
NORTH EDGE OF SLAB ☆			
C/L STH 28			
SOUTH EDGE OF SLAB ☆			

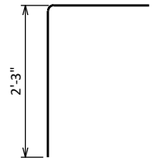
PRIOR TO RELEASING SLAB FALSEWORK, TAKE TOP OF SLAB ELEVATIONS AT THE C/L BRG. ABUTMENTS AND AT 5/10 POINTS TO VERIFY CAMBER. TAKE ELEVATIONS ALONG EDGES OF SLAB AND C/L STH 28. RECORD THE ELEVATIONS IN THE ABOVE TABLE FOR THE "AS BUILT" PLANS.



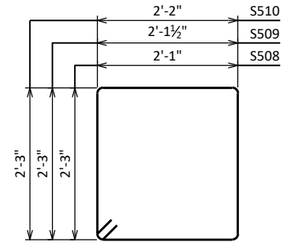
S401



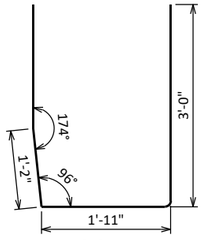
S503



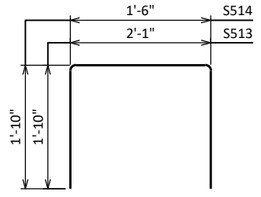
S504 S505



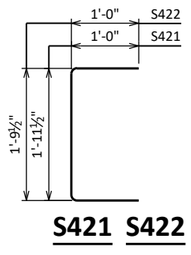
S508 S509 S510
(STIRRUP BARS)



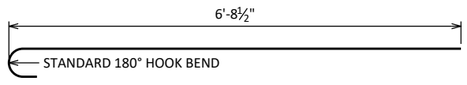
S611



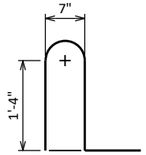
S513 S514



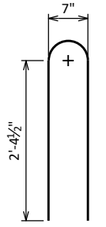
S421 S422



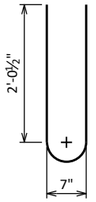
S525



S526



S527



S528

NOTES

FILL IN THE TABLE OF "SURVEY TOP OF SLAB ELEVATIONS" FOR EACH SPAN ON AS BUILT PLANS.

☆ EDGE OF SLAB ELEVATION IS THE TOP OUTER EDGE OF THE SLAB BENEATH SIDEWALK.

STATE PROJECT NUMBER

4010-26-71

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	LOCATION
S401	X	116	3'-5"	X	ABUT. DIAPH.-F.F.-BOT.-VERT.-LONGIT.-AT 3" NOTCH
S402	X	8	29'-4"		ABUT. DIAPH.-F.F.-BOT.-HORIZ.-TRANS.-AT 3" NOTCH
S503	X	116	7'-3"	X	ABUT. DIAPH.-BOT.-VERT.-LONGIT.-BTWN. EDGES OF SLAB
S504	X	20	4'-4"	X	ABUT. DIAPH.-VERT.-LONGIT.-UNDER SDWK. PAV. NOTCH
S505	X	96	3'-8"	X	ABUT. DIAPH.-VERT.-LONGIT.-AT RDWY. PAV. NOTCH
S506	X	12	31'-11"		ABUT. DIAPH.-BOT.-HORIZ.-TRANS.
S607	X	4	5'-6"		ABUT. DIAPH.-TOP-B.F.-HORIZ.-TRANS.-UNDER SDWK.
S508	X	4	9'-4"	X	ABUT. DIAPH.-VERT.-LONGIT.-UNDER SDWKS.
S509	X	4	9'-5"	X	ABUT. DIAPH.-VERT.-LONGIT.-UNDER SDWKS.
S510	X	4	9'-6"	X	ABUT. DIAPH.-VERT.-LONGIT.-UNDER SDWKS.
S611	X	12	7'-8"	X	ABUT. DIAPH.-HORIZ.-TRANS.-UNDER SDWKS.
S412	X	8	2'-11"		ABUT. DIAPH./SDWK.-VERT.-AT ALL FOUR CORNERS
S513	X	4	5'-6"	X	ABUT. DIAPH./SDWK.-VERT.-LONGIT.-UNDER PARAPETS
S514	X	36	4'-11"	X	ABUT. DIA./SDWK.-VERT.-LONGIT.-AT SDWK. PAV. NOTCH
S615	X	8	6'-9"		SDWKS.-TOP-HORIZ.-TRANS.-ABOVE ABUT. ONLY
S916	X	60	38'-2"		SLAB-BOT.-HORIZ.-LONGIT.
S917	X	59	28'-10"		SLAB-BOT.-HORIZ.-LONGIT.-CUT OFF BARS
S518	X	47	56'-10"		SLAB-BOT.-HORIZ.-TRANS.
S519	X	38	56'-10"		SLAB-TOP-HORIZ.-TRANS.
S420	X	77	36'-10"		SLAB-TOP-HORIZ.-LONGIT.
S421	X	150	3'-10"	X	SLAB/SDWKS.-VERT.-TRANS.-OUTSIDE EDGES
S422	X	150	3'-8"	X	SLAB/SDWKS.-VERT.-TRANS.-INSIDE EDGES
S423	X	52	2'-10"		SDWKS.-BOT.-HORIZ.-TRANS.-OUTSIDE EDGES
S424	X	26	36'-10"		SDWKS.-TOP-HORIZ.-LONGIT.
S525	X	224	7'-4"	X	SDWKS.-TOP-VERT.-TRANS.
S526	X	92	4'-4"	X	SDWKS./PARAPETS-VERT.-TRANS.
S527	X	4	5'-8"	X	ABUT. DIAPH./SDWK./PPTS.-VERT.-TRANS.-AT ALL 4 ENDS
S528	X	94	5'-0"	X	PARAPETS-VERT.-TRANS.
S529	X	16	38'-0"		PARAPETS-BOTH FACES-HORIZ.-LONGIT.

NO.	DATE	REVISION	BY

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STRUCTURES DESIGN SECTION

STRUCTURE B-59-321

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SUPERSTRUCTURE DATA & BAR DETAILS

SHEET 11
319

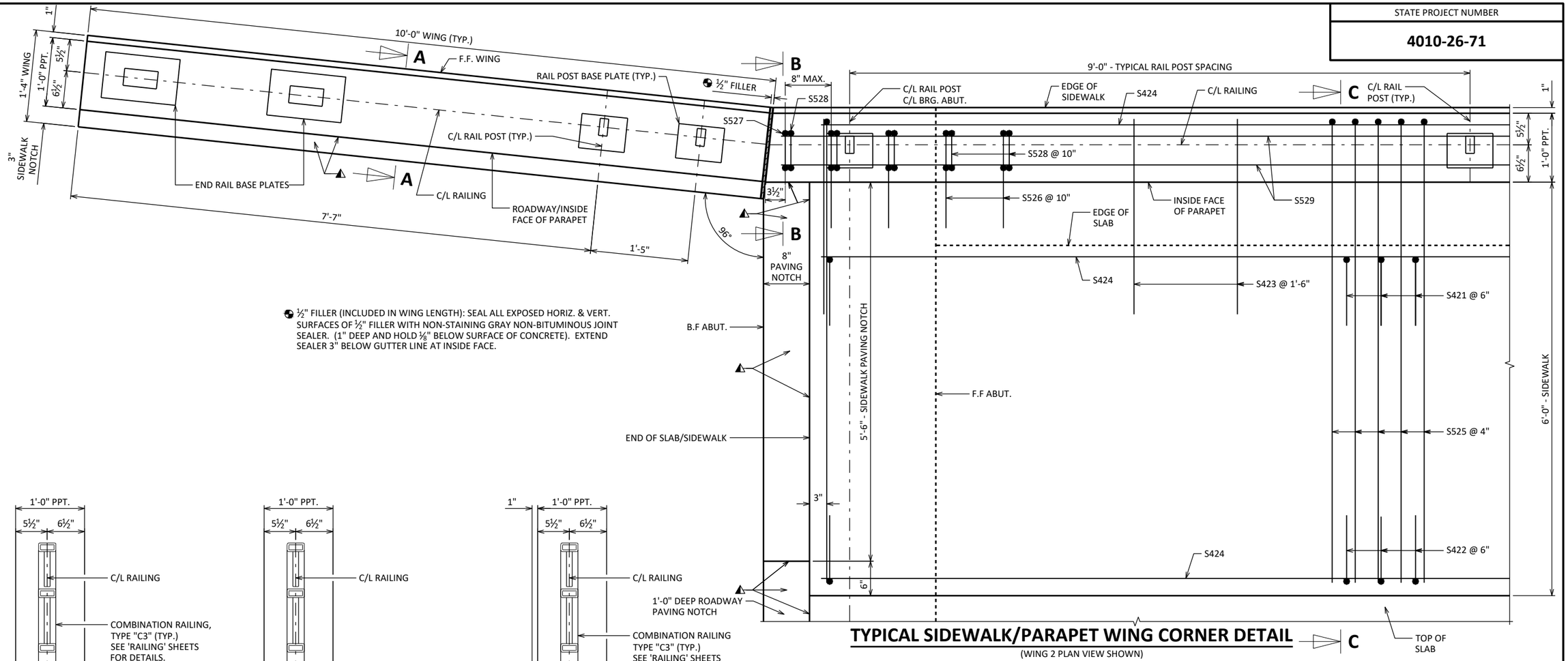
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STATE PROJECT NUMBER

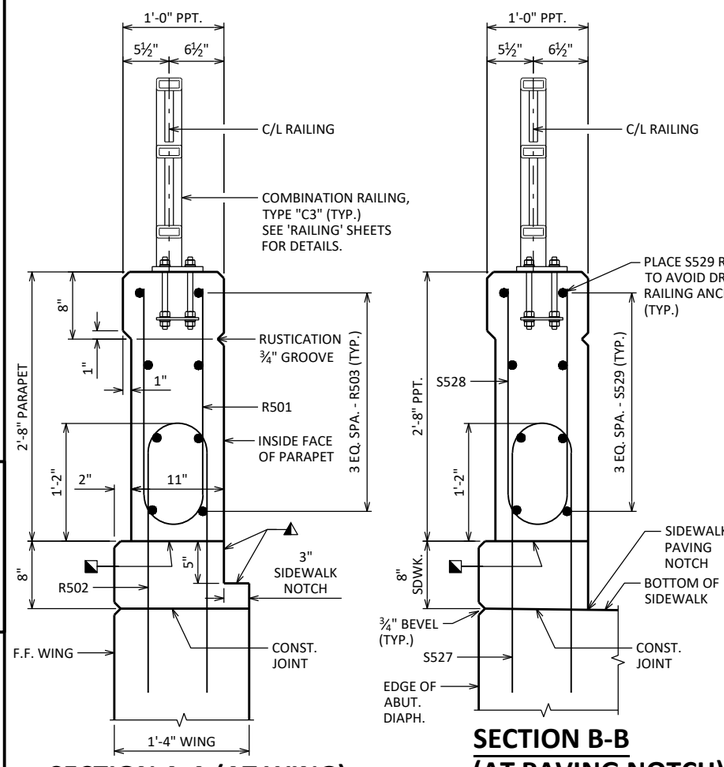
4010-26-71



½" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

TYPICAL SIDEWALK/PARAPET WING CORNER DETAIL C

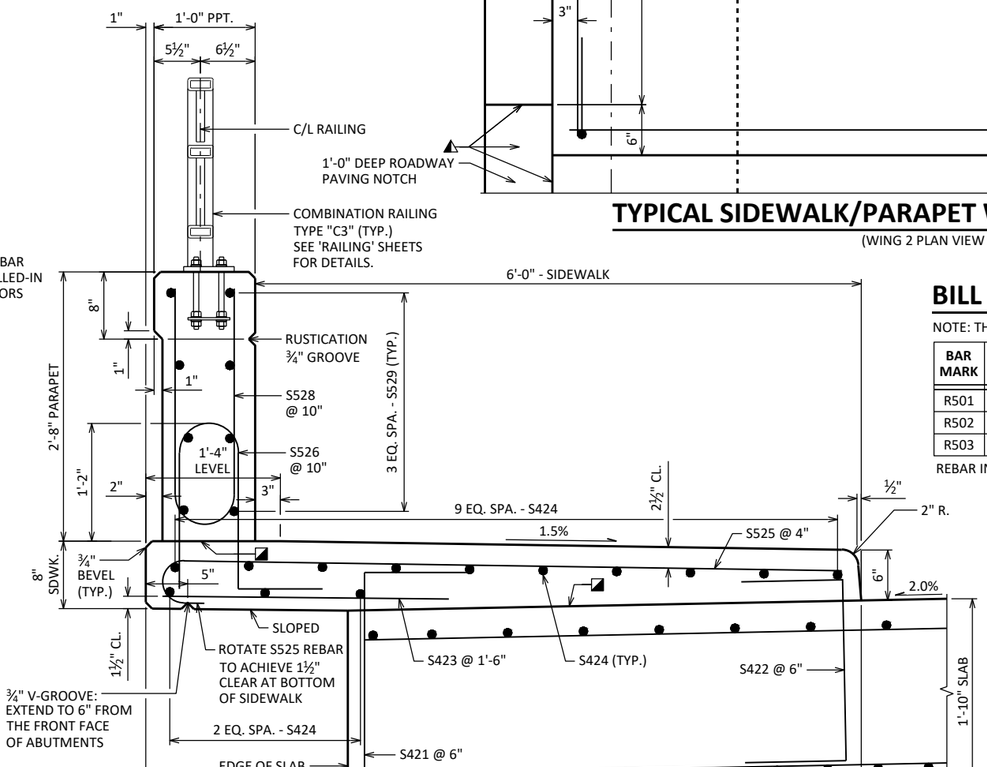
(WING 2 PLAN VIEW SHOWN)



SECTION A-A (AT WING)

SEE NEXT SHEET FOR R501 & R502 REBAR SPACING

SECTION B-B (AT PAVING NOTCH)



SECTION C-C (AT SIDEWALK ON SLAB)

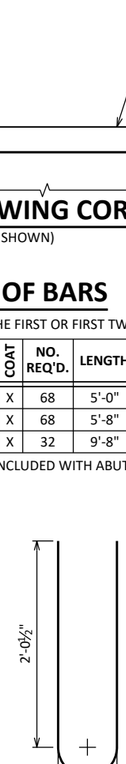
SEE "SUPERSTRUCTURE DATA & BAR DETAILS" SHEET FOR THE 'BILL OF BARS' AND BAR DETAILS

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
R501	X	68	5'-0"	X		PARAPET-VERTICAL-TRANSVERSE-AT ALL 4 WINGS
R502	X	68	5'-8"	X		WING/PARAPET-VERTICAL-TRANSVERSE-AT ALL 4 WINGS
R503	X	32	9'-8"			PARAPET-HORIZONTAL-LONGITUDINAL-BOTH FACES AT ALL 4 WINGS

REBAR INCLUDED WITH ABUTMENT BAR STEEL QUANTITIES



R501



R502

◪ HORIZ. CONST. JOINT: STRIKE OFF AND LEAVE ROUGH.

◭ APPLY "PROTECTIVE SURFACE TREATMENT" TO THE VERTICAL AND HORIZONTAL SURFACES OF THE SIDEWALK AND ROADWAY PAVING NOTCHES.

NO.	DATE	REVISION	BY

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DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-59-321

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SIDEWALK & VERTICAL FACE PARAPET 'A' DETAILS

SHEET 12
320

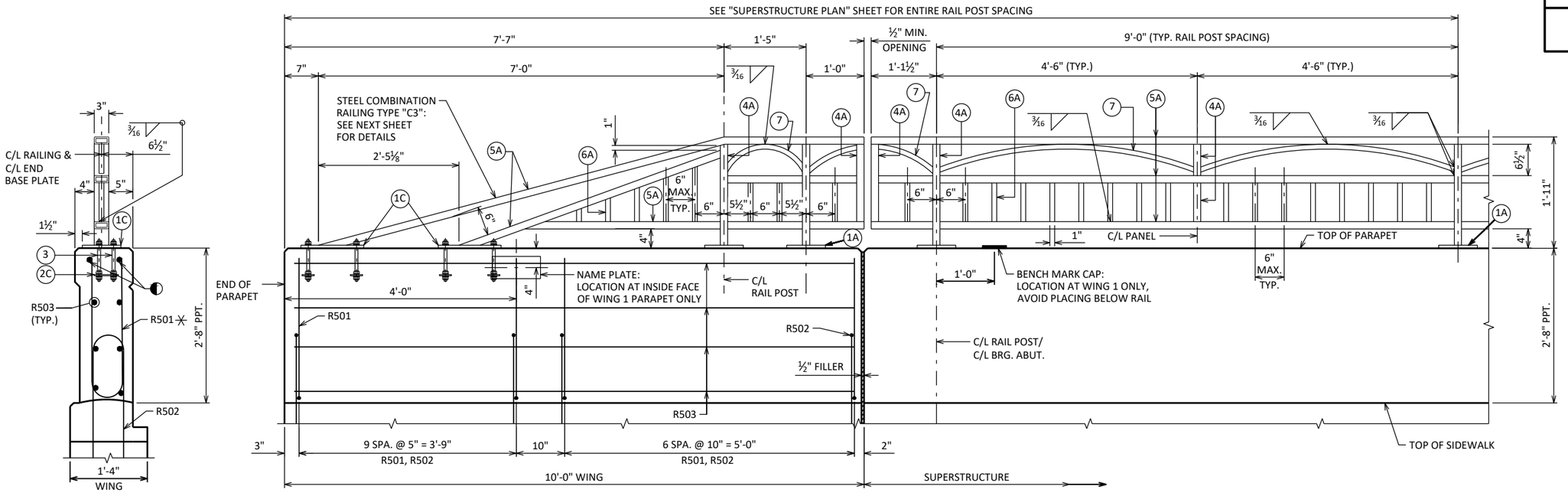
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STATE PROJECT NUMBER

4010-26-71



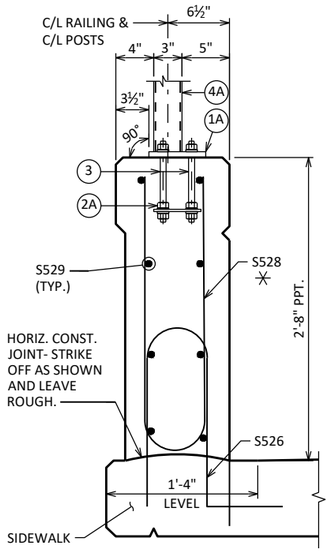
SECTION THRU PARAPET ON WING

ELEVATION OF PARAPET & RAILING

(TYP. AT ALL FOUR WINGS)

◐ IF ALTERNATIVE ADHESIVE ANCHORS ARE USED, FIELD BEND AND/OR DISPLACE TO AVOID HITTING LONGITUDINAL BAR WHEN DRILLING FOR ADHESIVE ANCHORS.

⚹ ADJUST LOCATIONS OF BARS TO ALLOW PLACEMENT OF ANCHOR ASSEMBLY FOR RAILING.



SECTION THRU PARAPET ON BRIDGE

SEE PREVIOUS SHEET FOR S526, S528 & S529 REBAR SPACING

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-59-321

DRAWN BY JPH | PLANS CK'D LIH

PARAPET & COMBINATION RAILING TYPE "C3"

SHEET 13
321

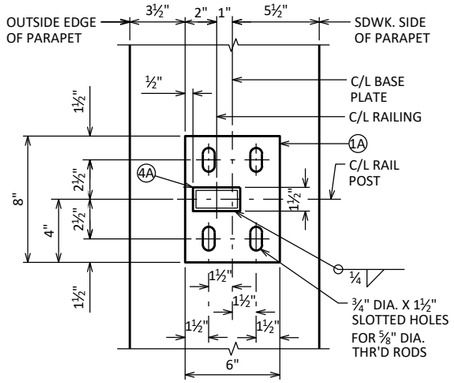
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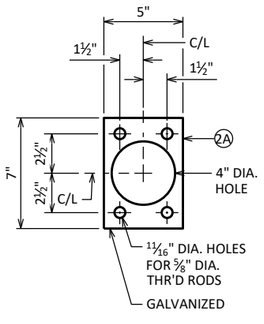
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STATE PROJECT NUMBER

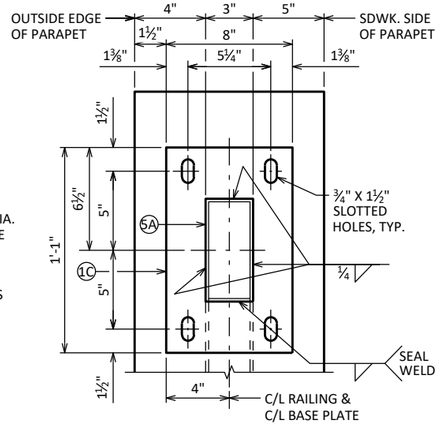
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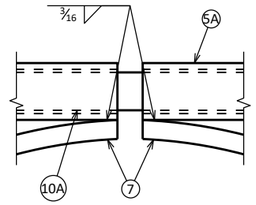
TYPICAL RAIL POST BASE PLATE



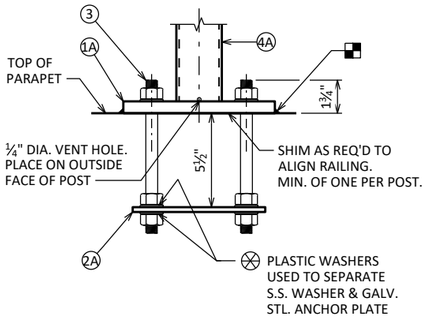
ANCHOR PLATE



END RAIL BASE PLATE

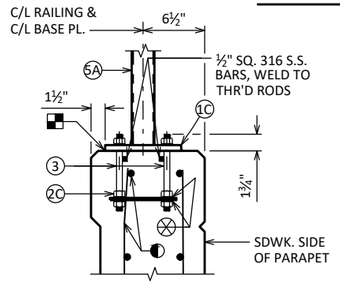


CURVED MEMBER JOINT DETAIL



ANCHORAGE FOR RAIL POSTS

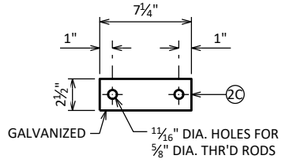
NOTE: ANCHOR PLATE NOT REQUIRED WHEN ADHESIVE ANCHORS ARE USED.



ANCHORAGE FOR END RAIL

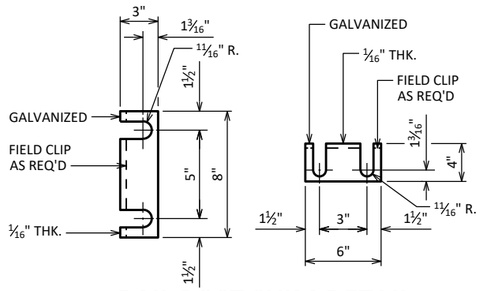
NOTE: ANCHOR PLATE NOT REQUIRED WHEN ADHESIVE ANCHORS ARE USED.

◐ WHEN ADHESIVE ANCHORS ARE USED, FIELD BEND AND/OR DISPLACE TO AVOID HITTING LONGITUDINAL BAR WHEN DRILLING FOR ADHESIVE ANCHORS.



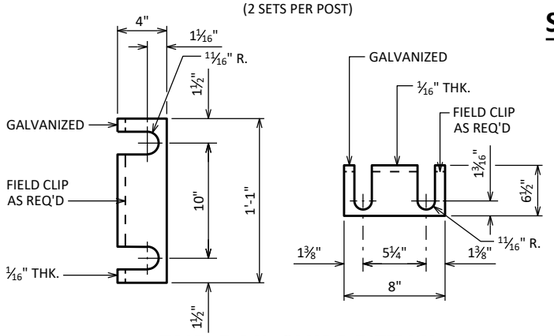
END RAIL ANCHOR PLATE

2 REQ'D. PER END RAIL BASE PLATE



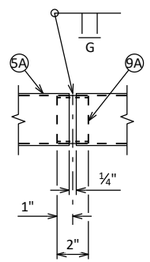
RAIL POST SHIM DETAIL

(2 SETS PER POST)



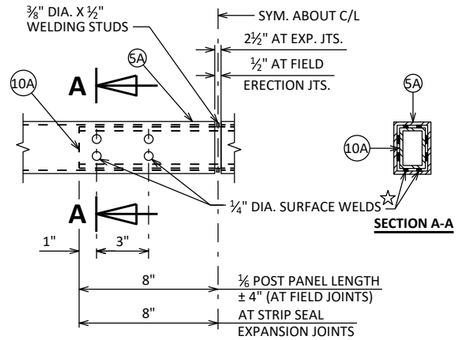
END RAIL SHIM DETAIL

(2 SETS PER POST)



SHOP RAIL SPLICE DETAIL

(LOCATION MUST BE SHOWN ON SHOP DRAWINGS)



FIELD ERECTION JOINT DETAIL

☆ MIN. ⅝" FLAT SURFACE DIA. PUNCHINGS OR STUDS MAY BE USED AS AN ALTERNATE.

LEGEND

- (1A) PLATE ⅝" X 6" X 8" WITH ¾" X 1½" SLOTTED HOLES.
- (1C) PLATE ⅝" X 8" X 1'-1" WITH ¾" X 1½" SLOTTED HOLES.
- (2A) ¼" X 5" X 7" ANCHOR PLATE WITH 11/16" DIA. HOLES FOR THR'D RODS NO. 3.
- (2C) ¼" X 2½" X 7¼" ANCHOR PLATE WITH 11/16" DIA. HOLES FOR THR'D RODS NO. 3.
- (3) ⅝" DIA. X 9" LONG, TYPE 316 STAINLESS STEEL THREADED RODS (MIN. TENSILE STRENGTH = 70 KSI) WITH NUT AND WASHERS OF SAME ALLOY GROUP. ALTERNATIVE ANCHORAGE: CONCRETE ADHESIVE ANCHORS ⅝-INCH. EMBED 7" IN CONCRETE FOR RAIL POSTS. EMBED 5" IN CONCRETE FOR END RAILS. ADHESIVE ANCHORS SHALL CONFORM TO SECTIONS 502.2.12 OF THE STANDARD SPECIFICATIONS.
- (4A) STRUCTURAL TUBING 3" X 1½" X 3/16". PLACE VERTICAL. WELD TO NO. 1 & 5.
- (5A) STRUCTURAL TUBING 3" X 1½" X 3/16" RAILS. WELD TO NO. 1 & NO. 4. INSIDE OF TUBE TO BE PAINTED AT ALL FIELD ERECTION & EXPANSION JOINTS.
- (6A) BAR 1" X 1" PICKETS. WELD TO NO. 5. PLACE VERTICAL.
- (7) BAR 1" X 1". BEND TO REQUIRED RADIUS. WELD TO NO. 4 & 5.
- (9A) RECTANGULAR SLEEVE FABRICATED FROM 3/16" PLATES. PROVIDE "SLIDING FIT".
- (10A) RECTANGULAR SLEEVE FABRICATED FROM 3/16" PLATES. (1'-4" @ FIELD ERECTION JTS.) (1'-4" @ STRIP SEAL EXP. JTS.)

RAILING NOTES

BID ITEM SHALL BE "RAILING STEEL TYPE C3", WHICH SHALL INCLUDE ALL STEEL ITEMS SHOWN.

POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT, AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.

ALL PLATES, BARS, AND RECTANGULAR SLEEVES SHALL CONFORM TO ASTM A709 GRADE 36. ALL STRUCTURAL TUBING SHALL CONFORM TO ASTM A500 GRADE B.

ANCHORAGES SHALL BE ACCURATELY PLACED TO PROVIDE CORRECT ALIGNMENT OF RAILING. SET NORMAL TO GRADE.

CUT BOTTOM OF POST TO MAKE POST VERTICAL IN BOTH TRANSVERSE AND LONGITUDINAL DIRECTION.

STEEL SHIMS SHALL BE PROVIDED & USED UNDER BASE PLATES WHERE REQUIRED FOR ALIGNMENT, AND SHALL BE GALVANIZED.

■ CAULK AROUND PERIMETER OF BASE PLATES, NO. 1, AND FILL BOLT SLOT OPENINGS IN SHIMS AND BASE PLATES WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

ALL JOINTS AND RECESSES IN CONCRETE PARAPET ARE TO BE VERTICAL.

ALL MATERIAL (EXCEPT NO. 3) SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING, THE STEEL RAILING SHALL BE GIVEN A NO. 6 BLAST CLEANING PER SSPC SPECIFICATIONS. PAINT OVER GALVANIZING WITH AN APPROVED TIE COAT AND TOP COAT AS SPECIFIED IN THE CONTRACT DOCUMENTS. THE RAILING SHALL BE PAINTED AMS STD. COLOR NO. 27038, BLACK.

VENT HOLES SHALL BE DRILLED IN POST AND RAIL MEMBERS AS REQUIRED TO FACILITATE GALVANIZING AND DRAINAGE.

RAILING SHALL BE FABRICATED IN LENGTHS THAT INCLUDE 3 OR 4 POSTS.

TOUCH-UP PAINTING TO BE DONE AT COMPLETION OF STEEL RAILING INSTALLATION TO THE SATISFACTION OF THE ENGINEER AT NO EXTRA COST.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-59-321

DRAWN BY JPH | PLANS CK'D LIH

COMBINATION RAILING TYPE "C3" DETAILS

SHEET 14
322

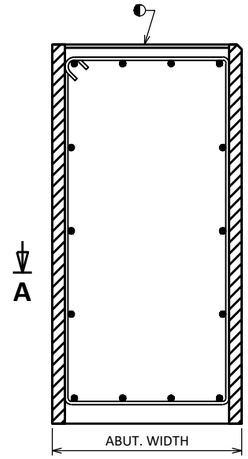
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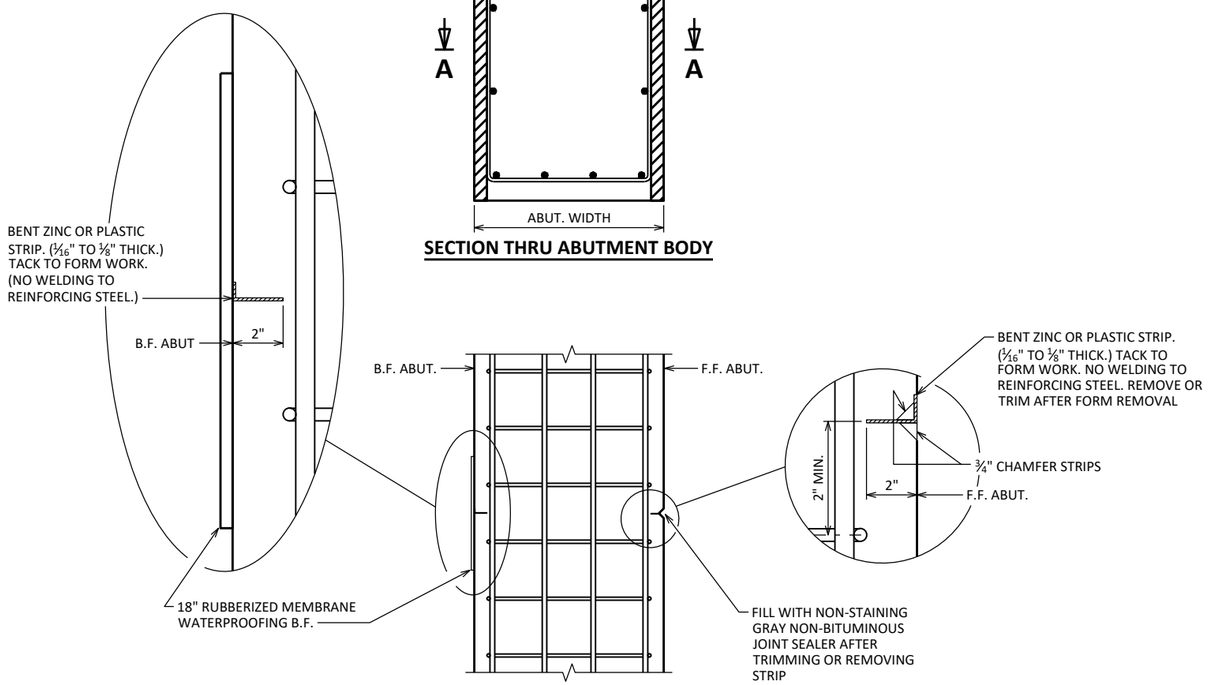
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STATE PROJECT NUMBER

4010-26-71



SECTION THRU ABUTMENT BODY



SECTION A-A

ALTERNATE CONSTRUCTION JOINT AT ABUTMENT

NOTES

PARTIAL ZINC OR PLASTIC BULKHEAD MAY BE USED AS ALTERNATIVE CONSTRUCTION JOINT, WITH THE PERMISSION OF THE ENGINEER, AT THE CONTRACTOR'S EXPENSE.

VERTICAL CONSTRUCTION JOINT KEYWAY IS NOT REQUIRED WHEN USING ALTERNATE CONSTRUCTION JOINT.

CARE IS TO BE USED IN CASTING CONCRETE AROUND BULKHEAD TO PREVENT DISLOCATION OR MISALIGNMENT OF THE BULKHEAD.

SAW CUTTING JOINT IS NOT ALLOWED.

◐ USE A JOINT TOOL TO CONSTRUCT A CONTRACTION JOINT APPROXIMATELY 1/2" DEEP.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-59-321

DRAWN BY JPH | PLANS CK'D LIH

ALTERNATE CONSTRUCTION JOINT

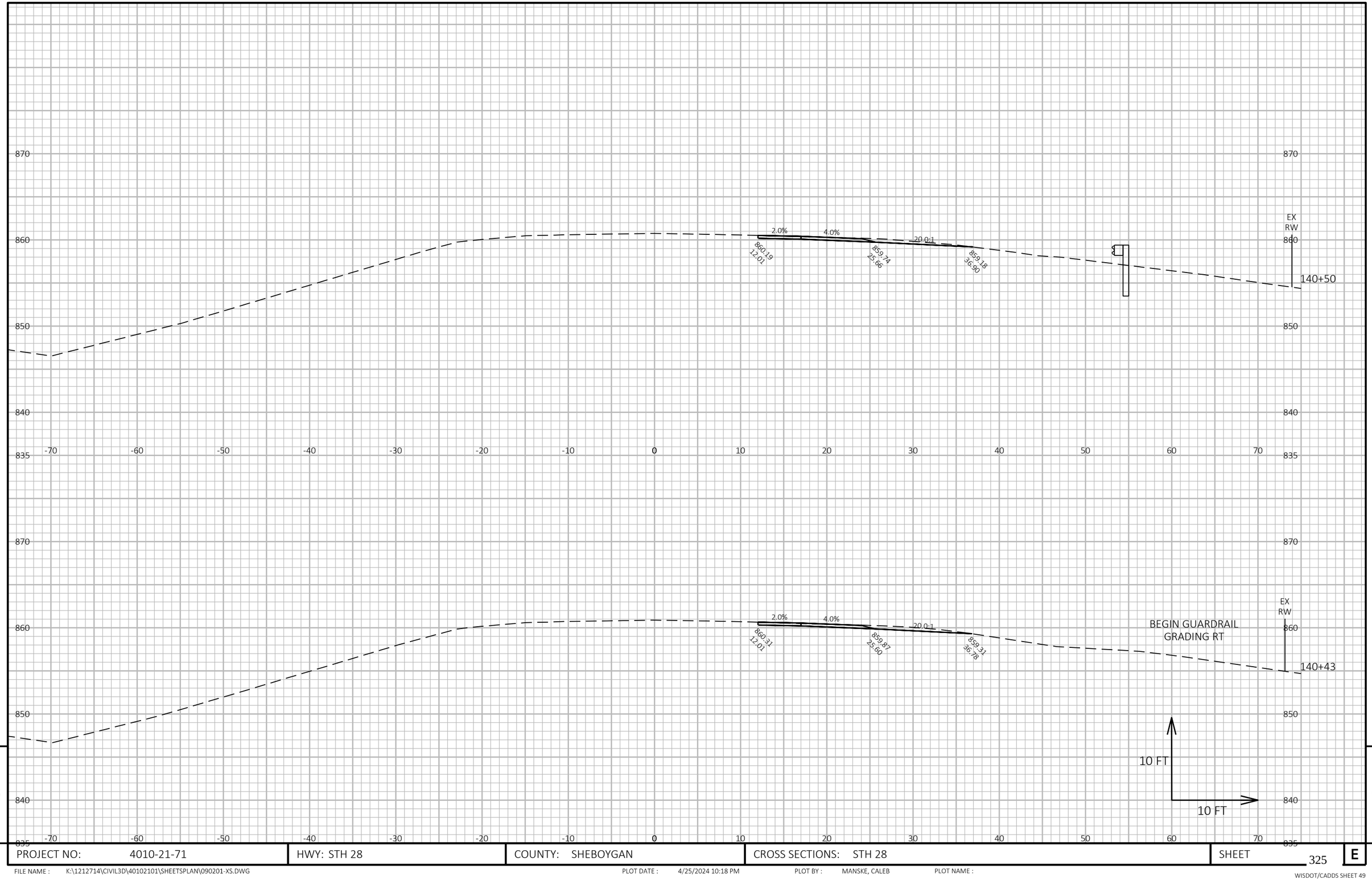
SHEET 15
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SCALE = 2.00

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8

STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
		CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL	MASS ORDINATE
								1.00	1.30	
607+75.72	0.00	115.24	29.50	0.26	0	0	0	0	0	0
608+00.00	24.28	96.76	29.50	5.13	95	27	2	95	3	65
608+50.00	50.00	71.65	29.50	6.88	156	55	11	251	17	152
608+75.72	25.71	51.64	29.50	10.09	59	28	8	310	27	173
608+90.72	15.00	54.17	29.50	5.36	29	16	4	339	33	181
609+27.89	0.00	70.49	29.50	2.60	0	0	0	339	33	181
609+42.89	15.00	72.84	29.50	7.62	40	16	3	379	36	201
609+50.00	7.12	73.23	29.50	6.89	19	8	2	398	39	209
610+00.00	50.00	86.41	29.50	5.91	148	55	12	546	55	286
610+41.72	41.71	131.94	29.50	0.95	169	46	5	715	61	403

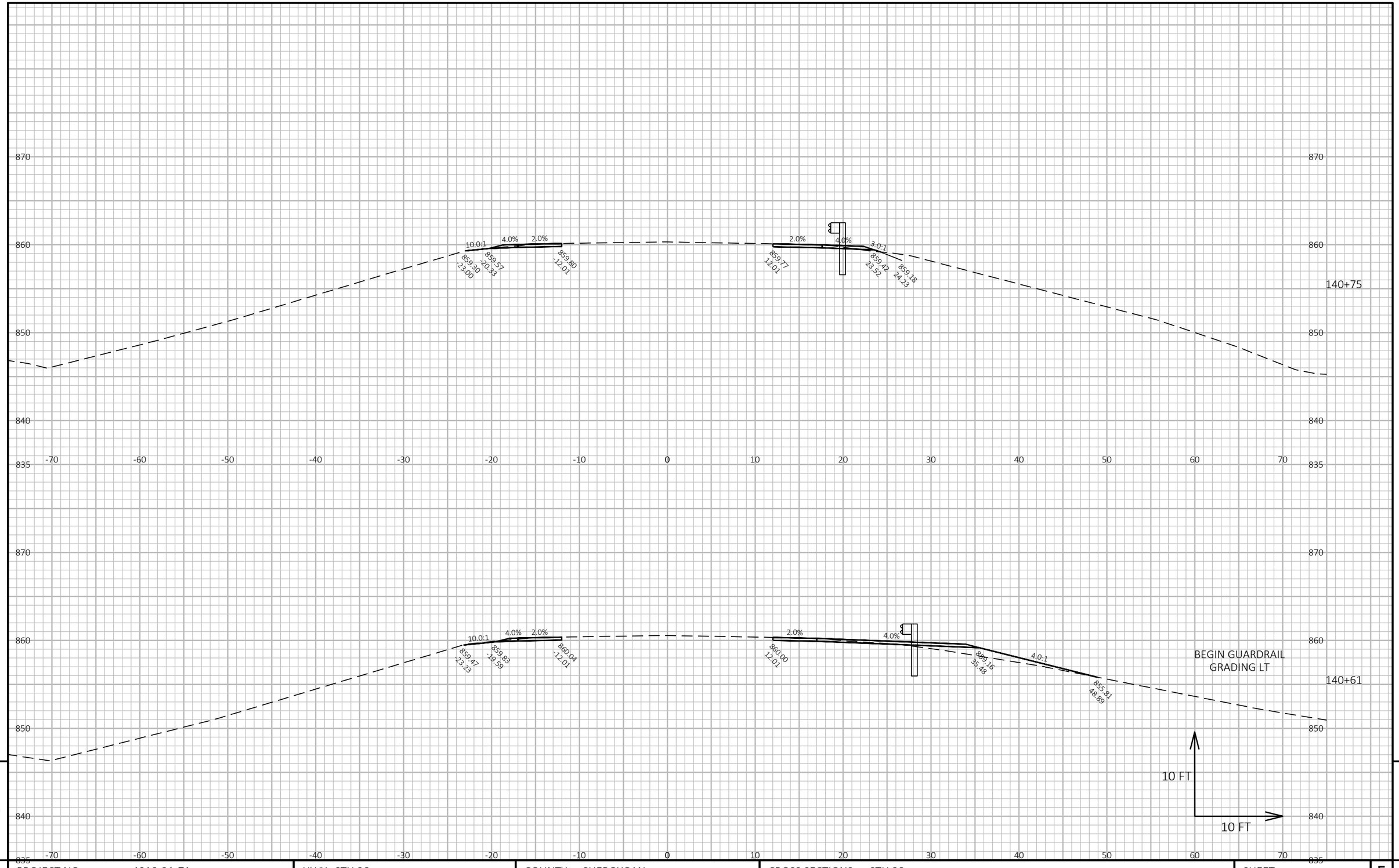


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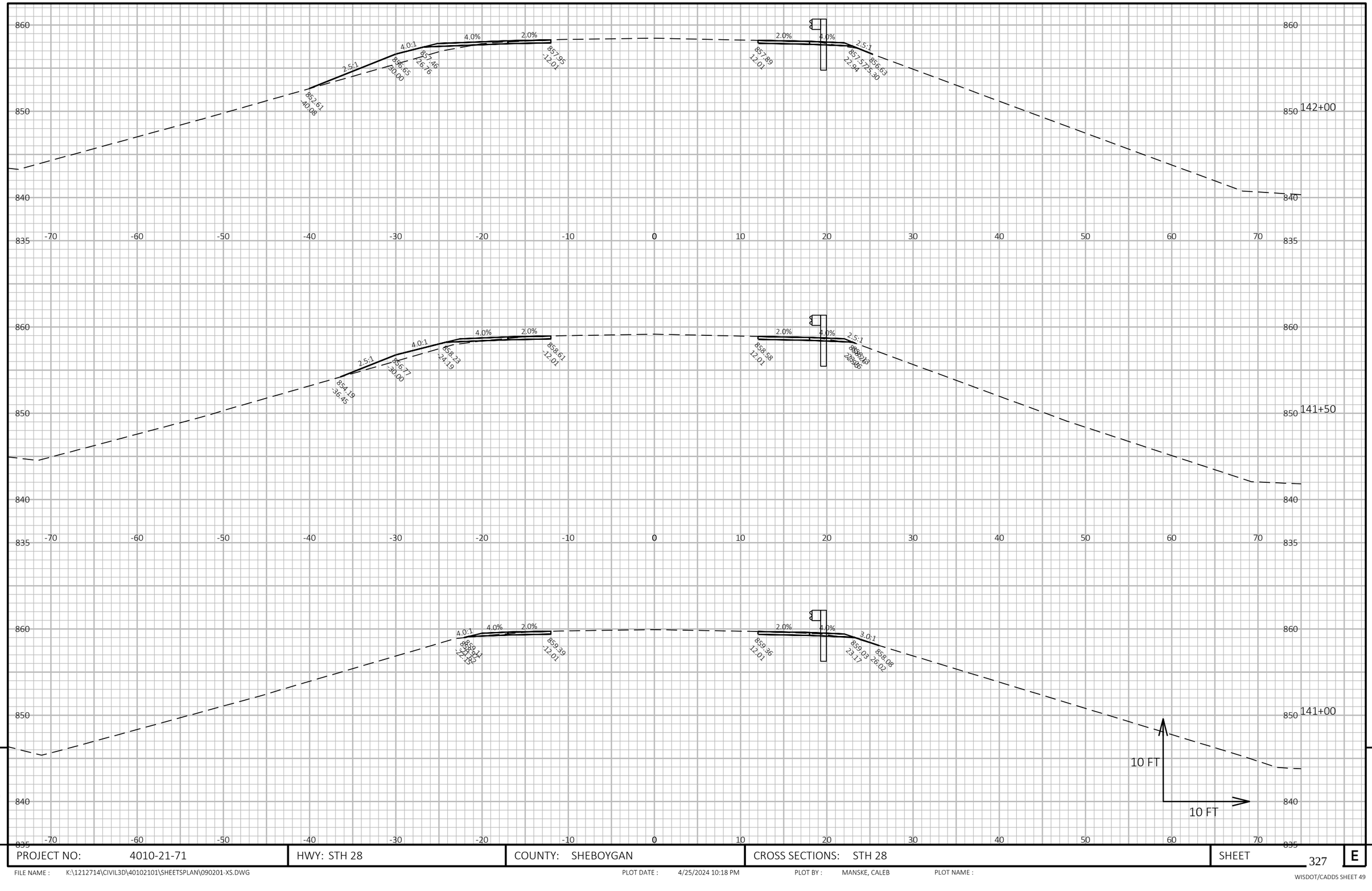
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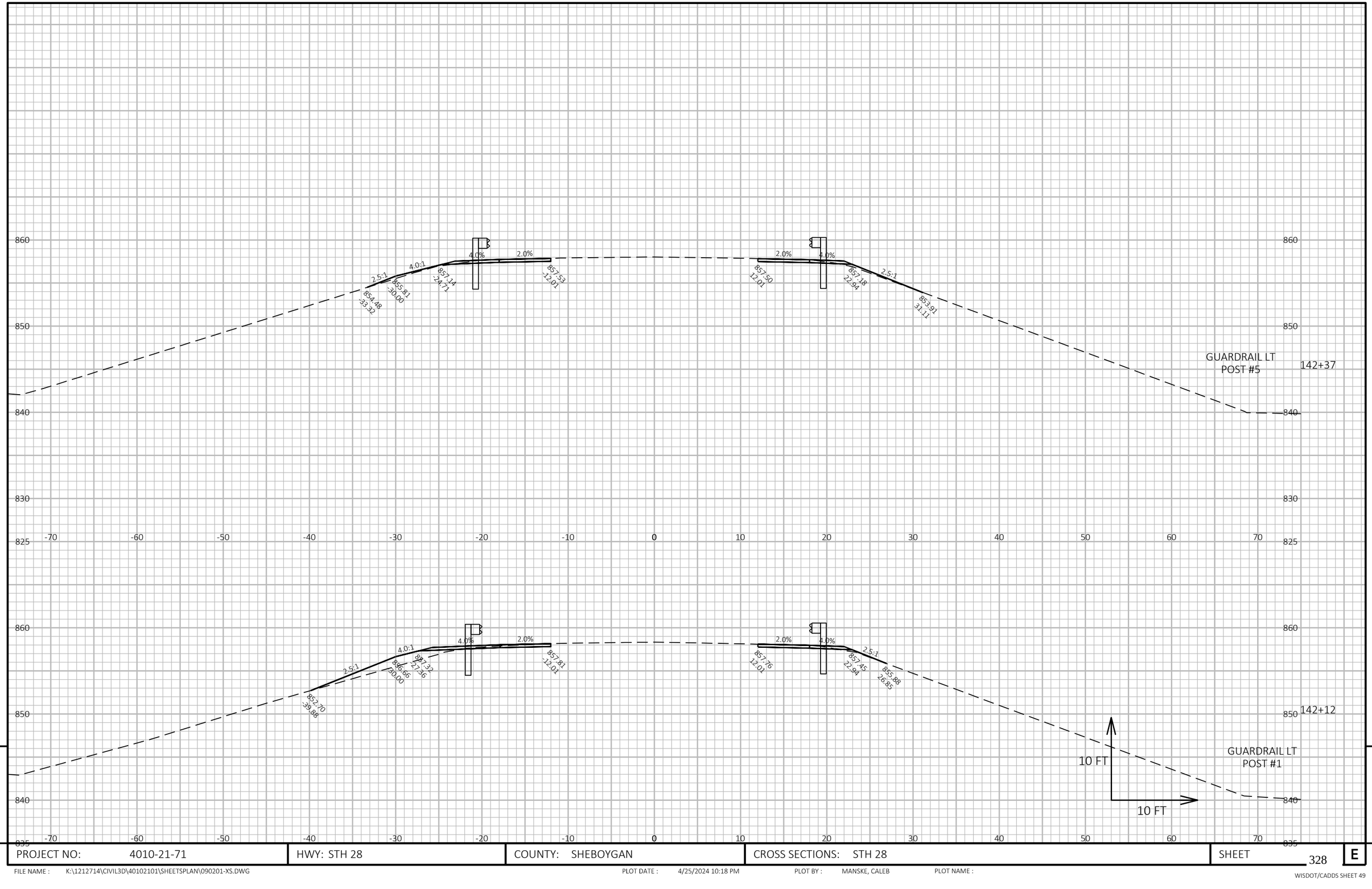
WISDOT/CADDS SHEET 49



PROJECT NO: 4010-21-71	HWY: STH 28	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 28	SHEET 327 E

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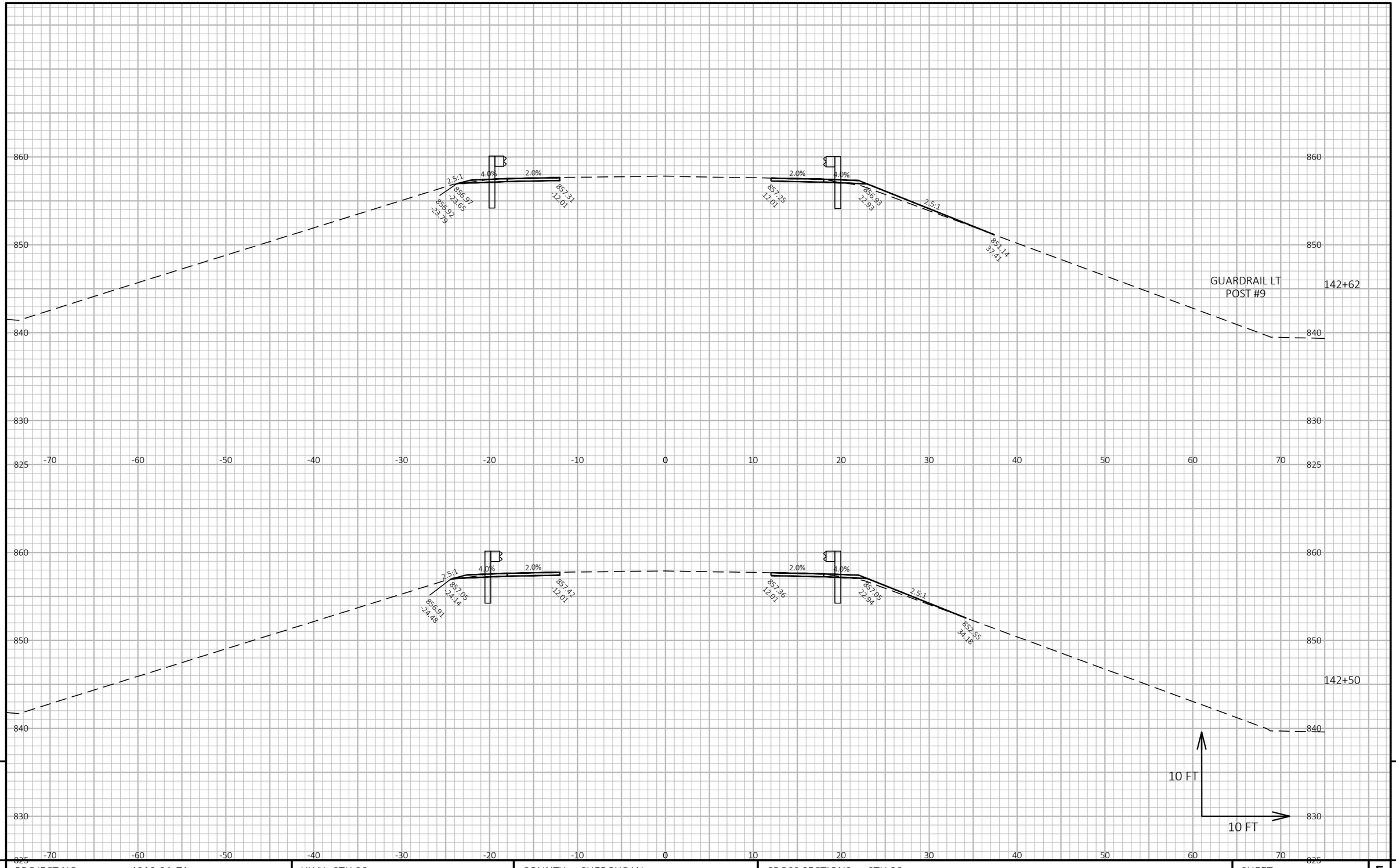
WISDOT/CADDS SHEET 49



PROJECT NO: 4010-21-71	HWY: STH 28	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 28	SHEET 328	E

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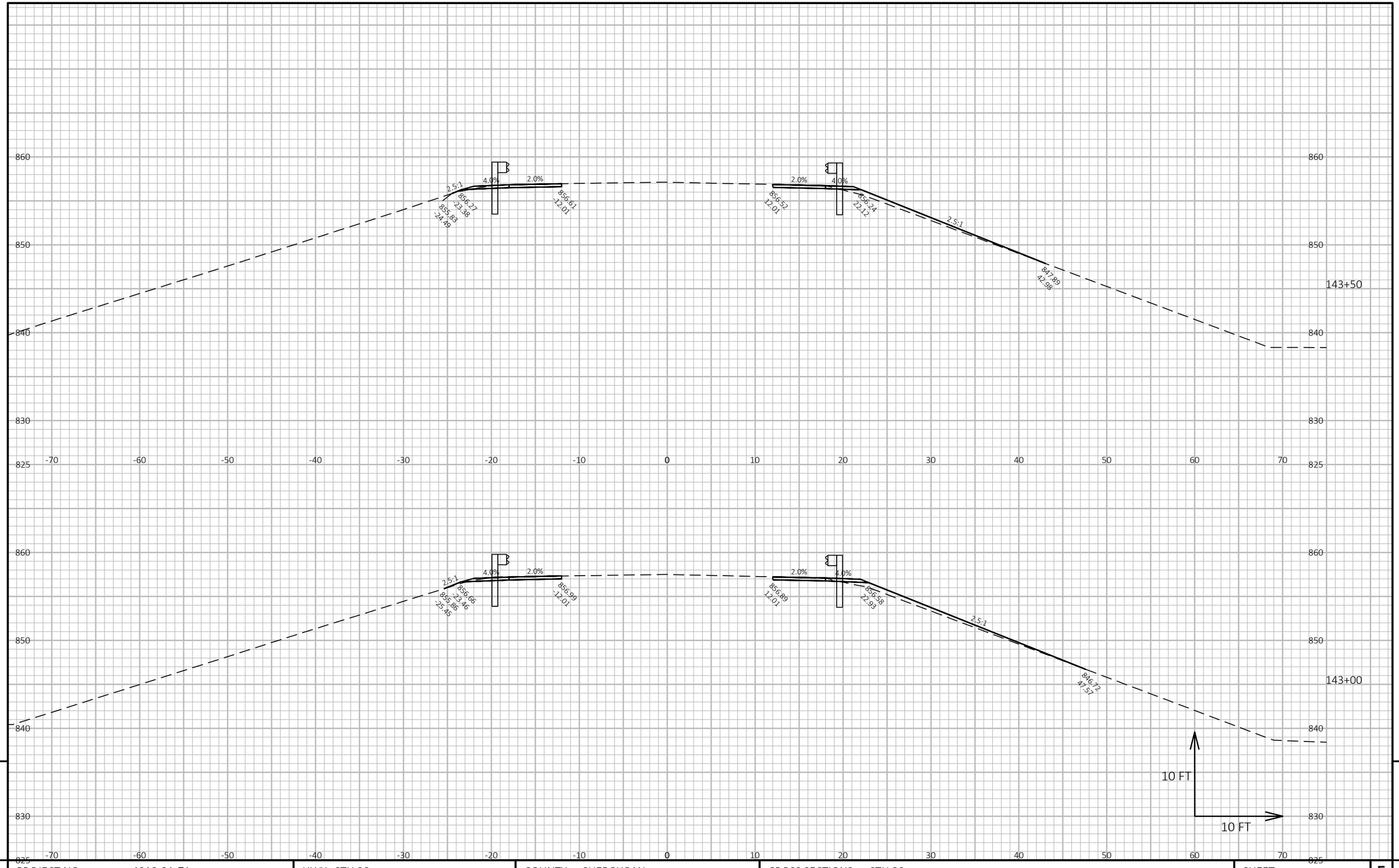
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PROJECT NO: 4010-21-71	HWY: STH 28	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 28	SHEET 329	E

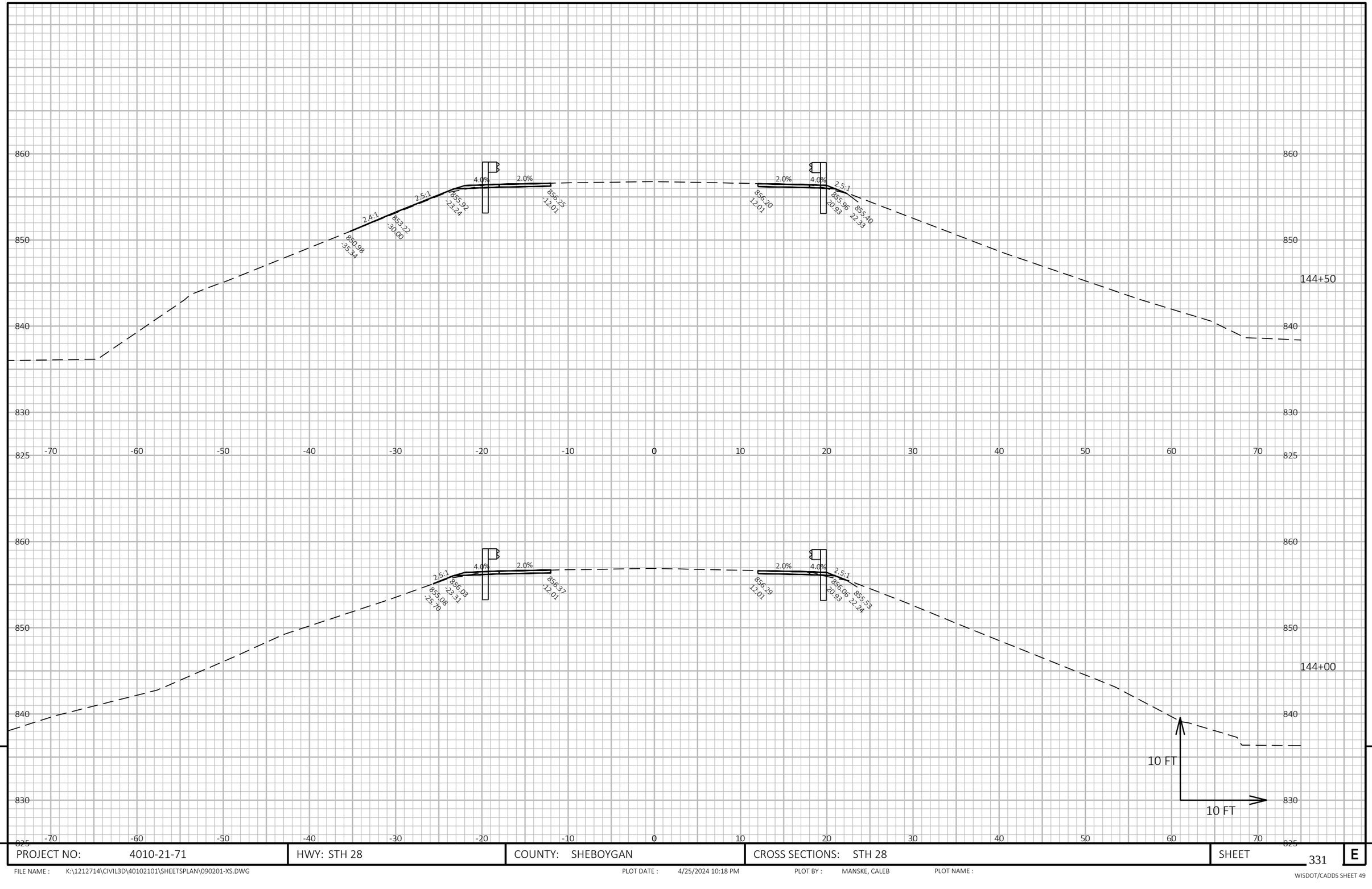


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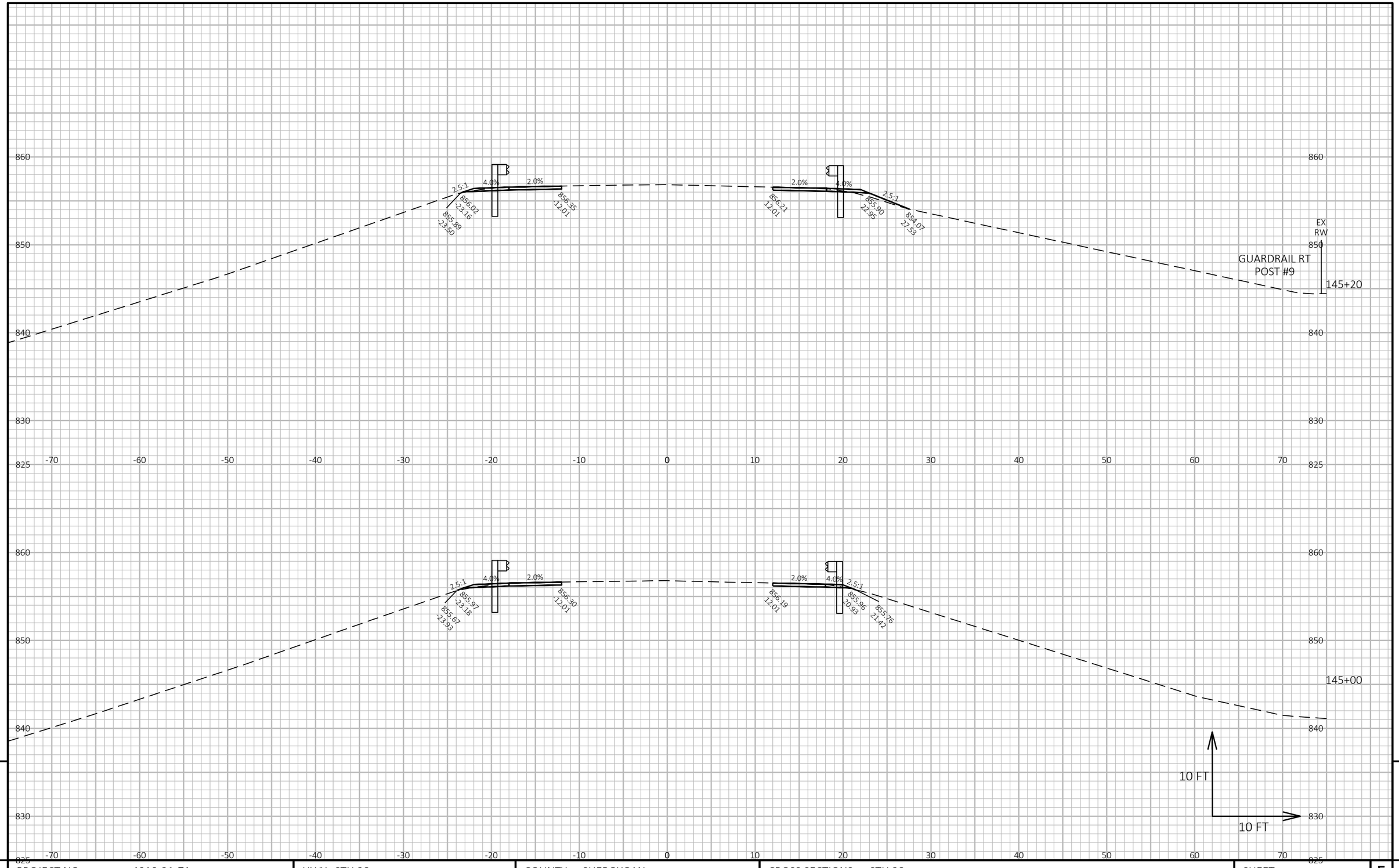
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PROJECT NO: 4010-21-71	HWY: STH 28	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 28	SHEET 331	E

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WISDOT/CADDS SHEET 49

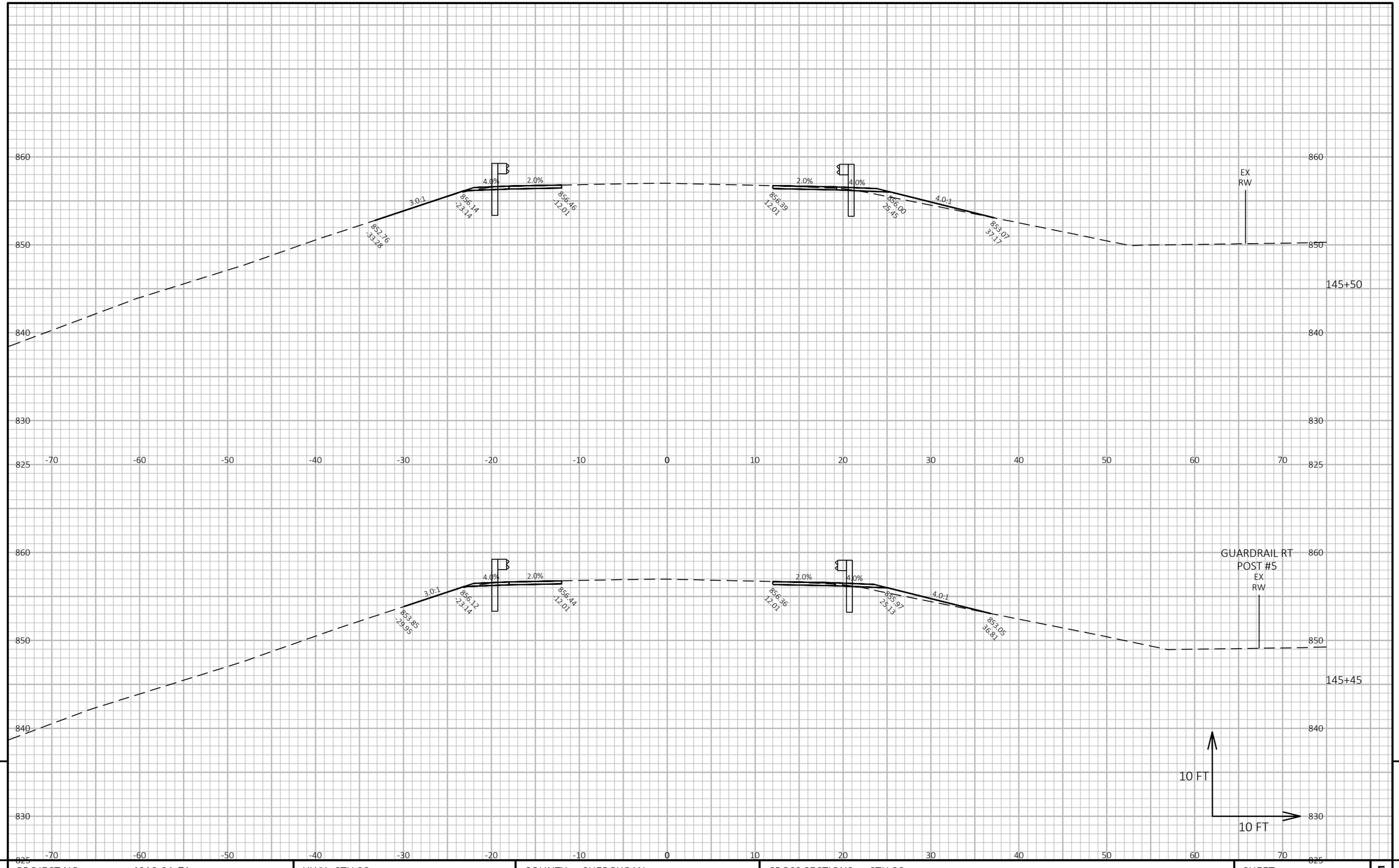


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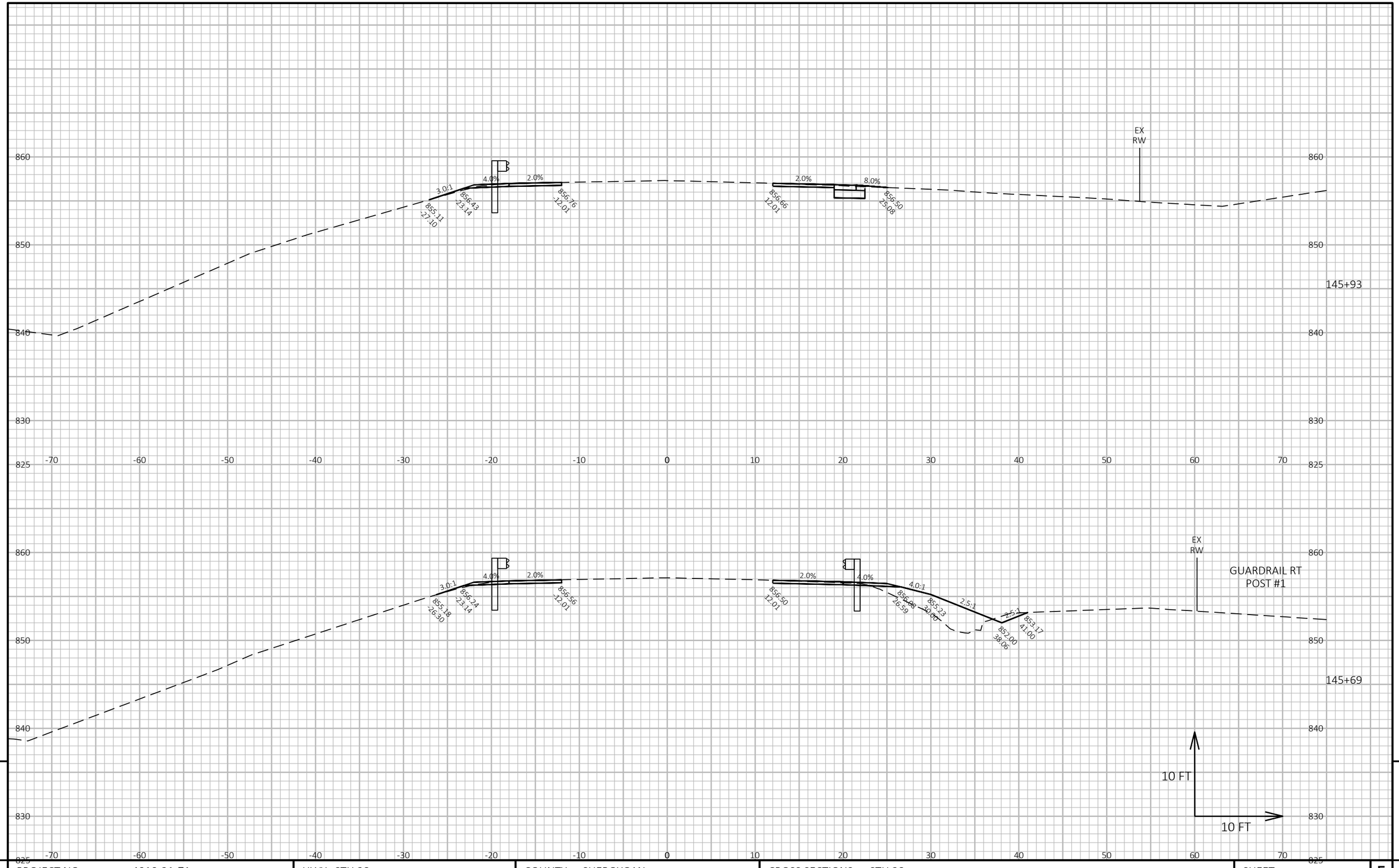
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WISDOT/CADDS SHEET 49



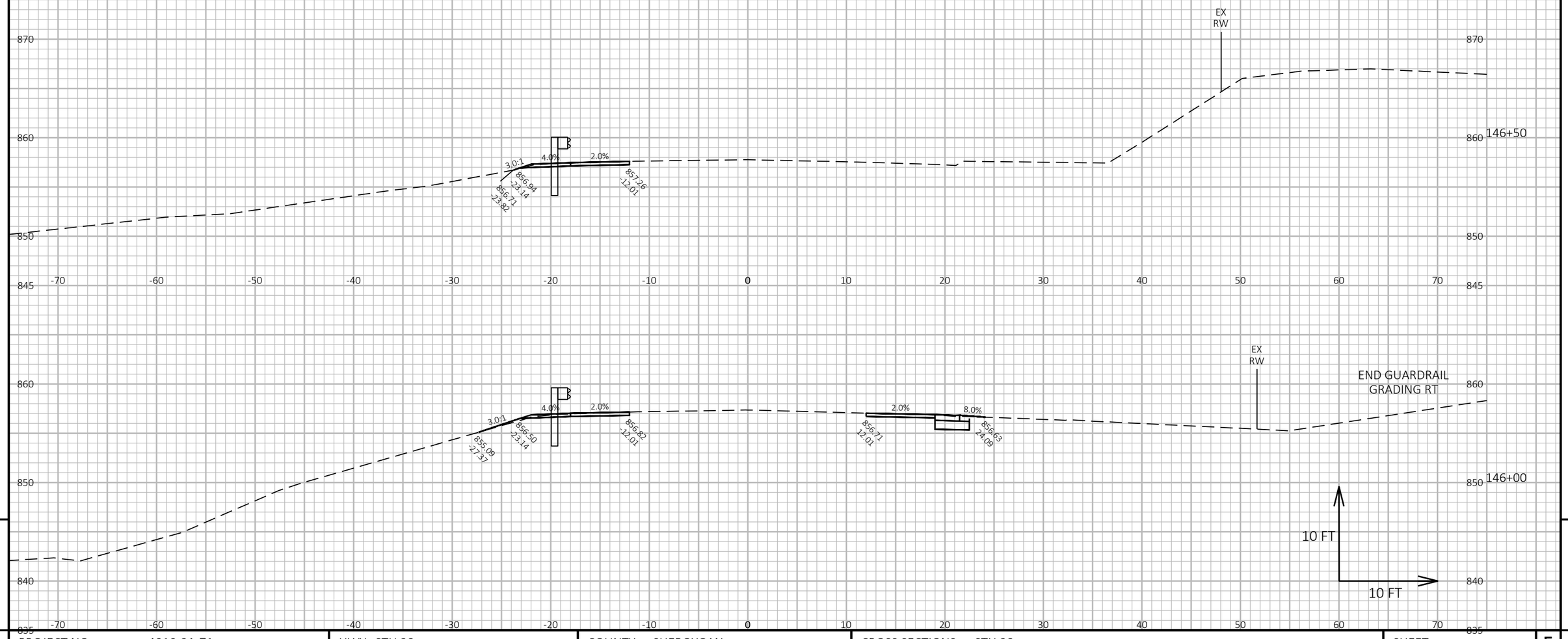
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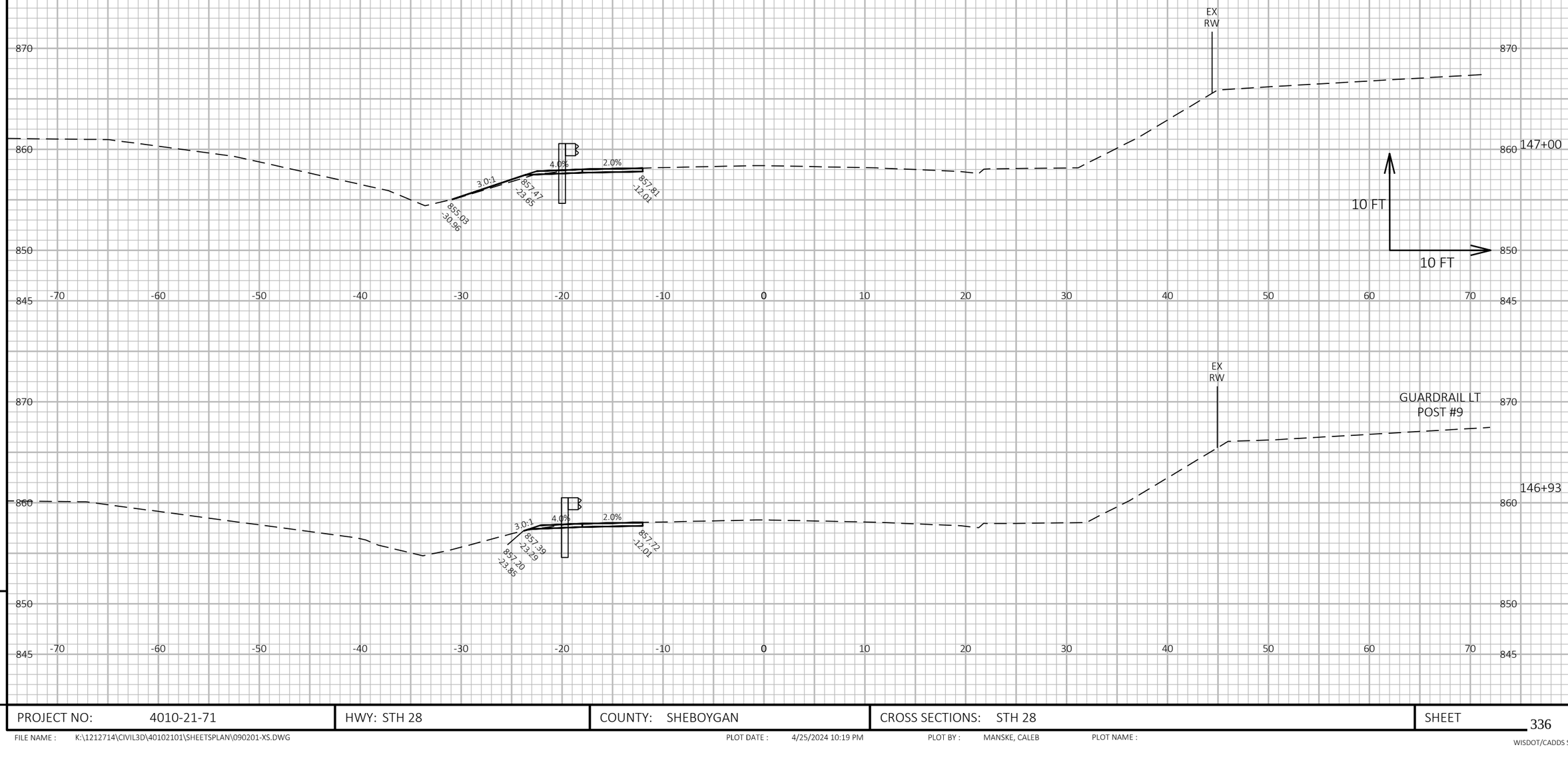


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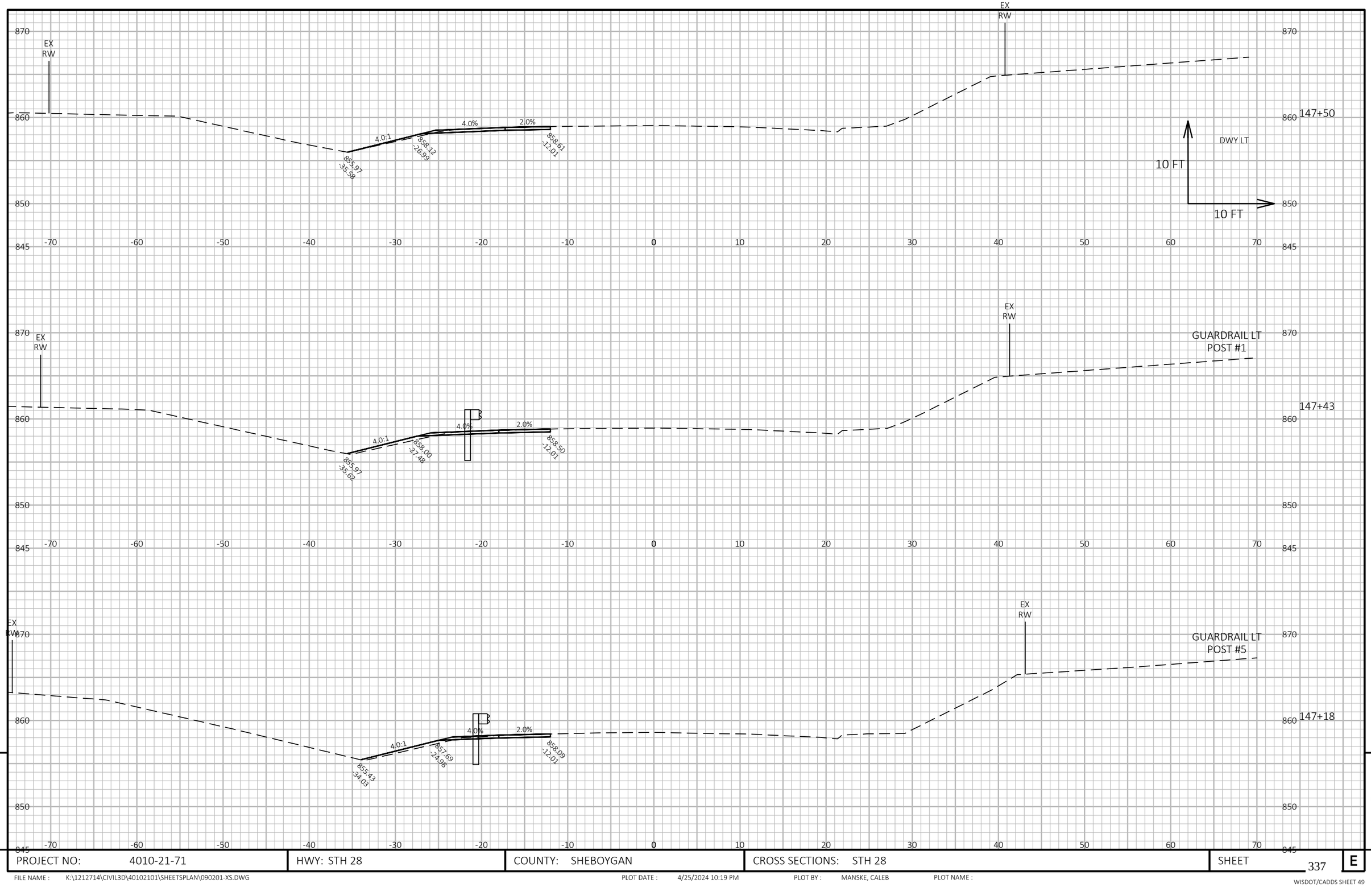
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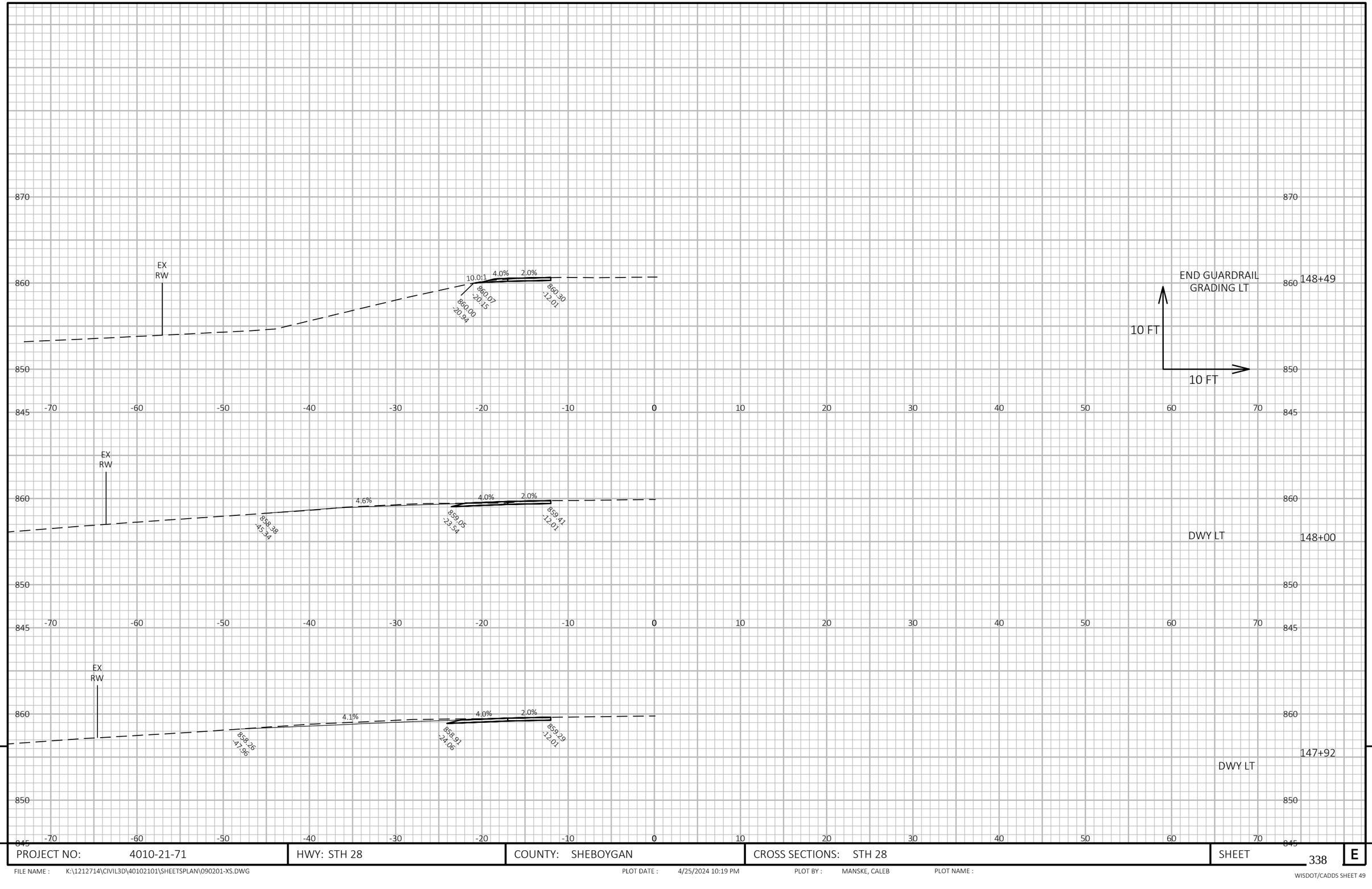
WISDOT/CADDS SHEET 49



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PROJECT NO: 4010-21-71	HWY: STH 28	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 28	SHEET 337	E



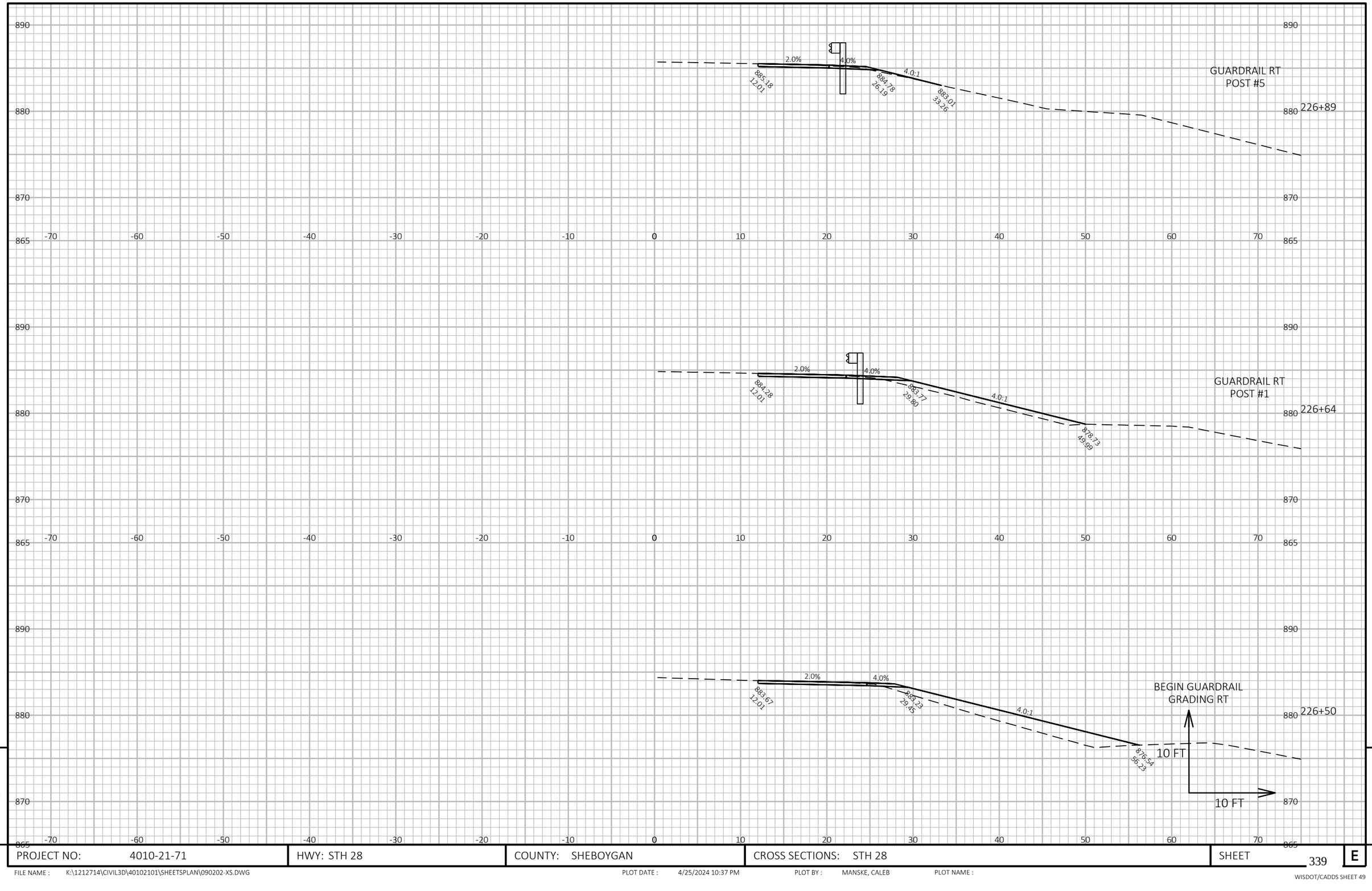
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WISDOT/CADDS SHEET 49



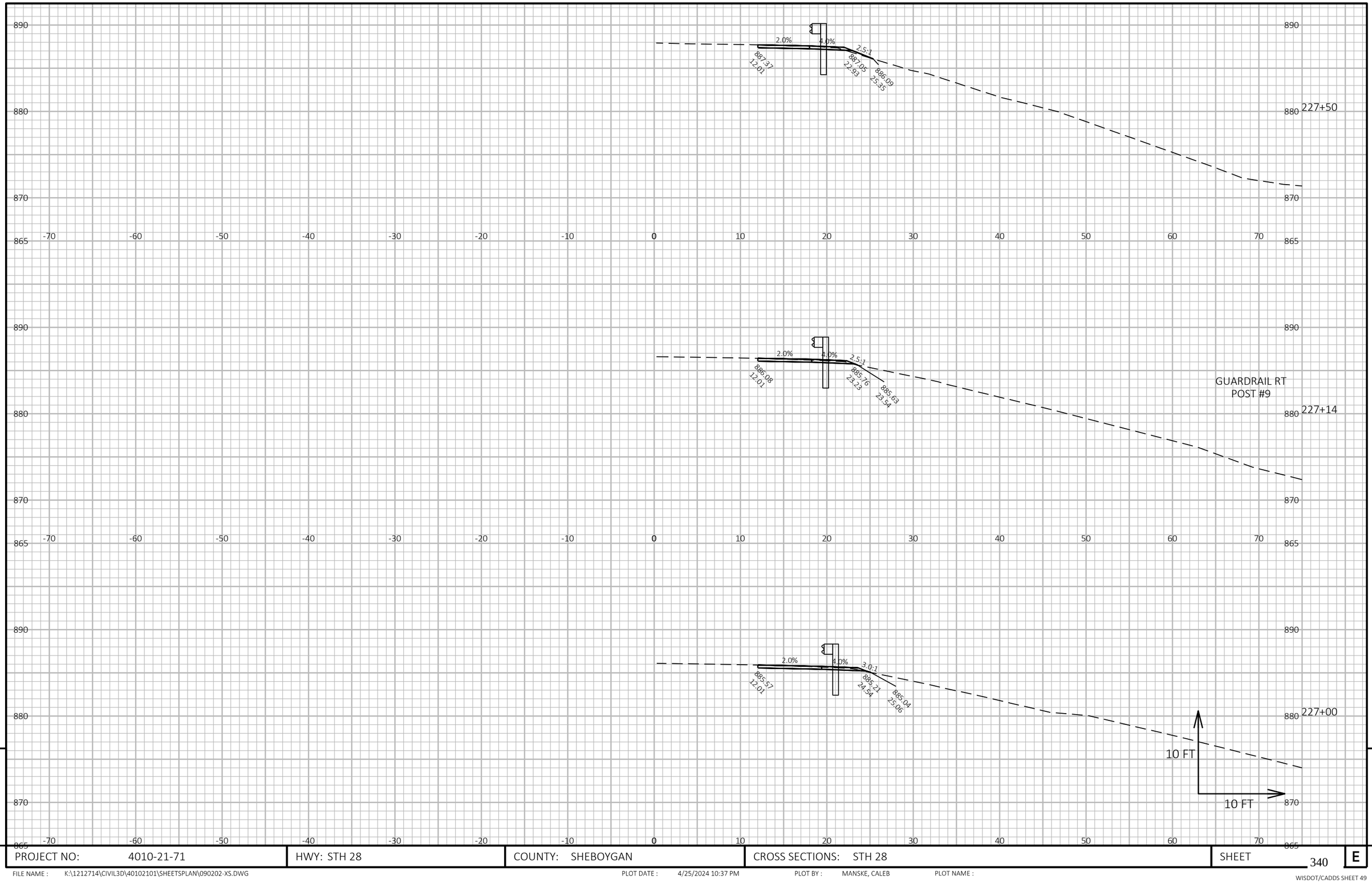
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WISDOT/CADDS SHEET 49

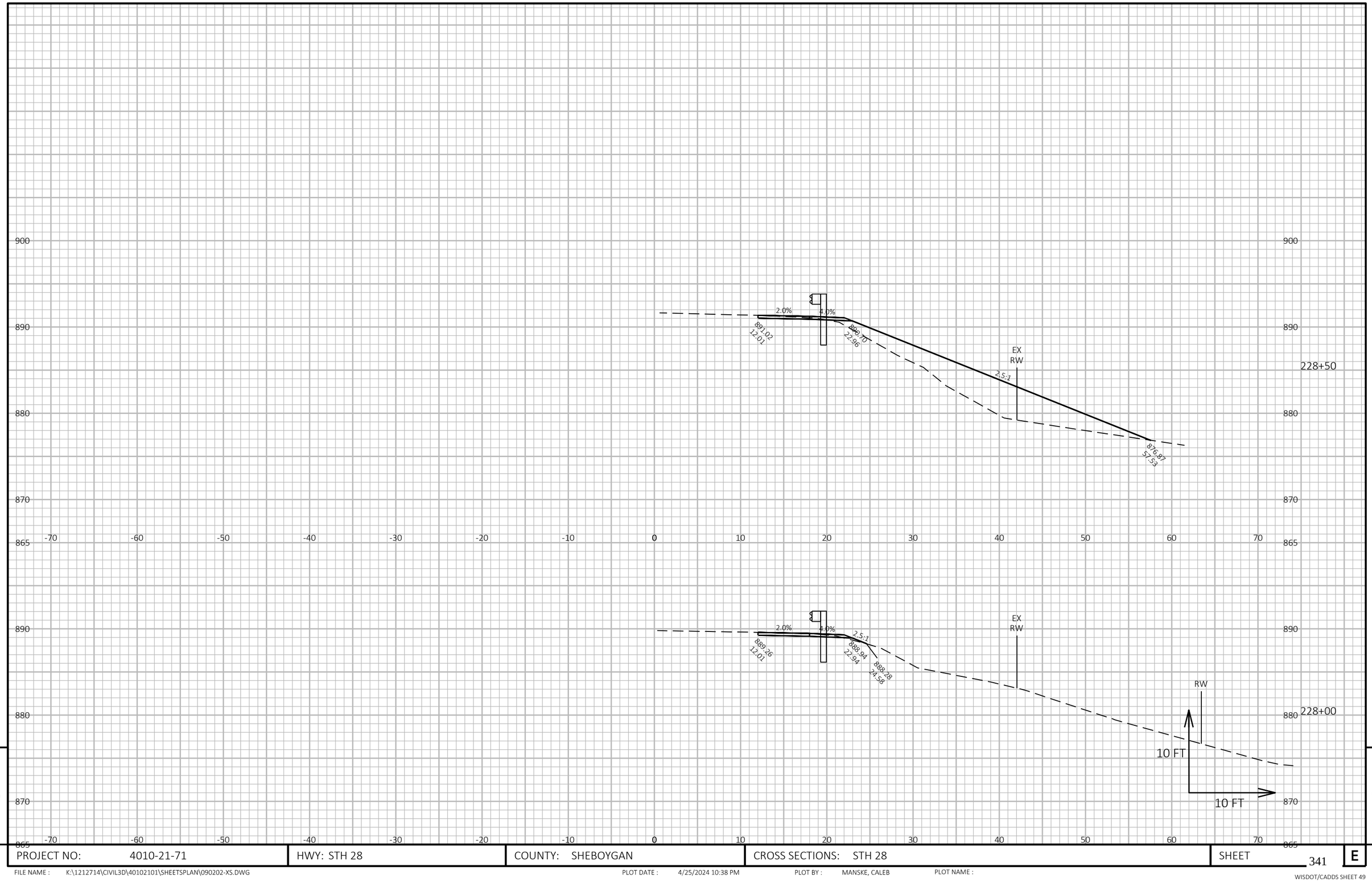


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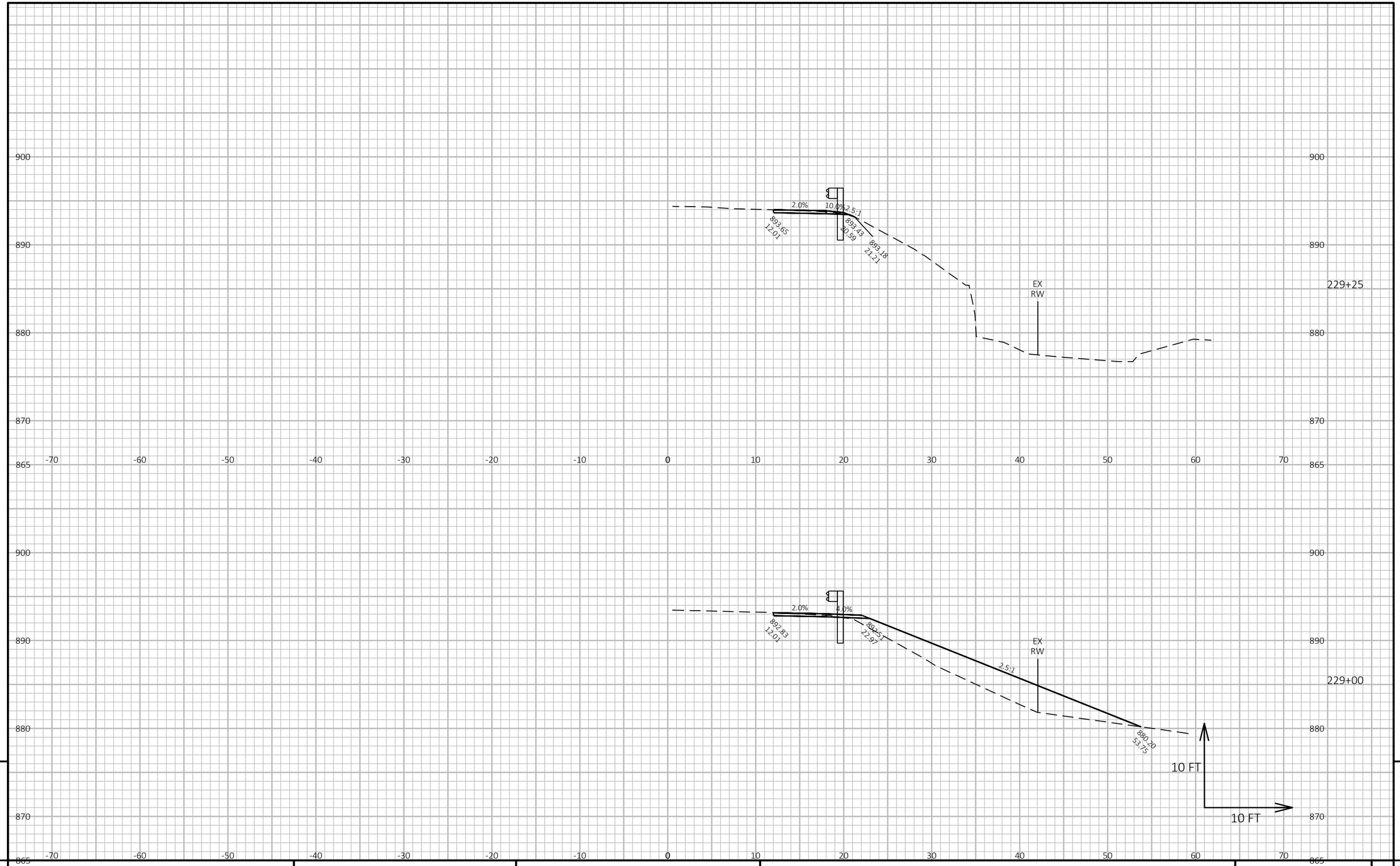
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PROJECT NO: 4010-21-71	HWY: STH 28	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 28	SHEET 341	E

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WISDOT/CADDS SHEET 49

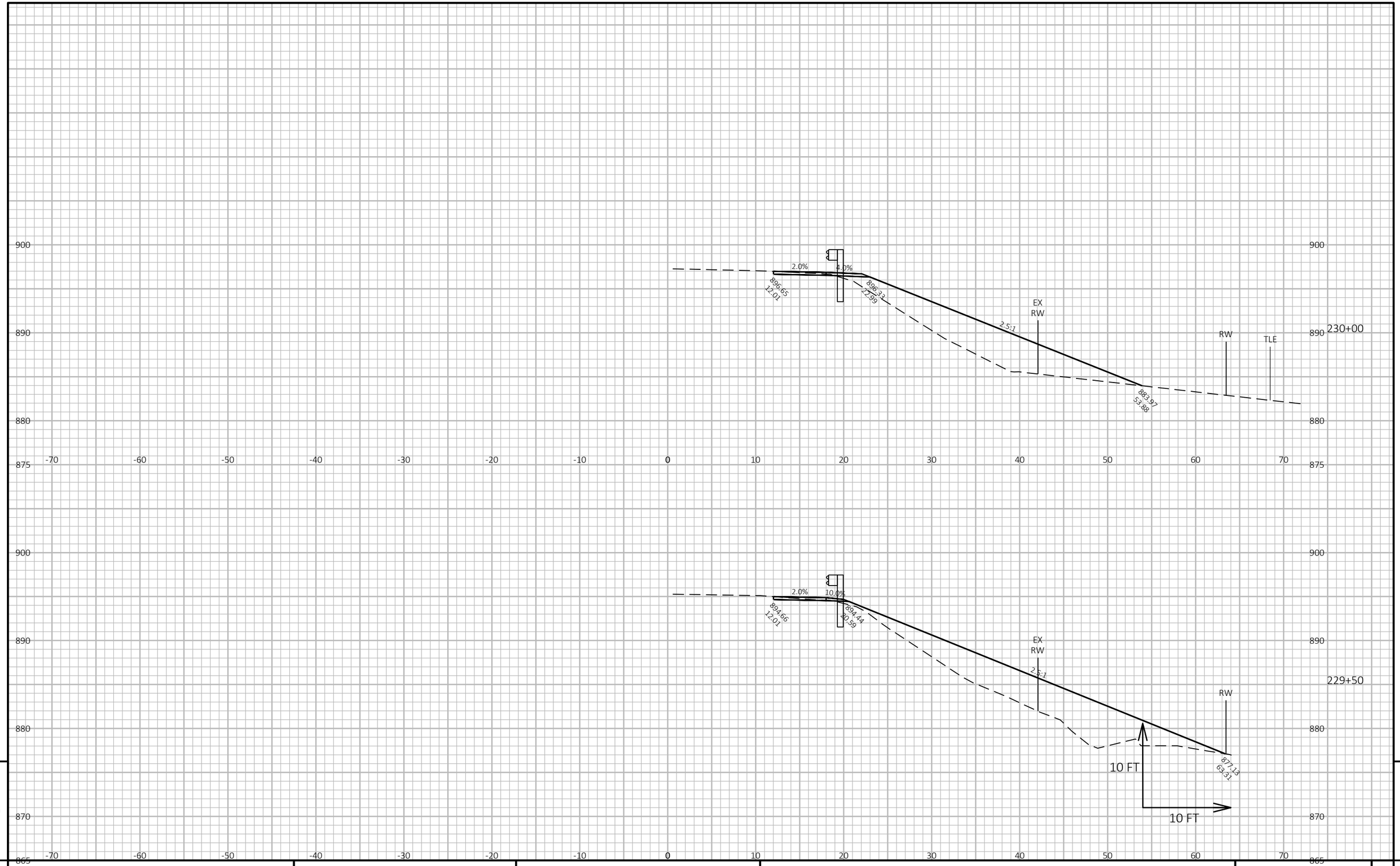


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PROJECT NO: 4010-21-71	HWY: STH 28	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 28	SHEET 342	E

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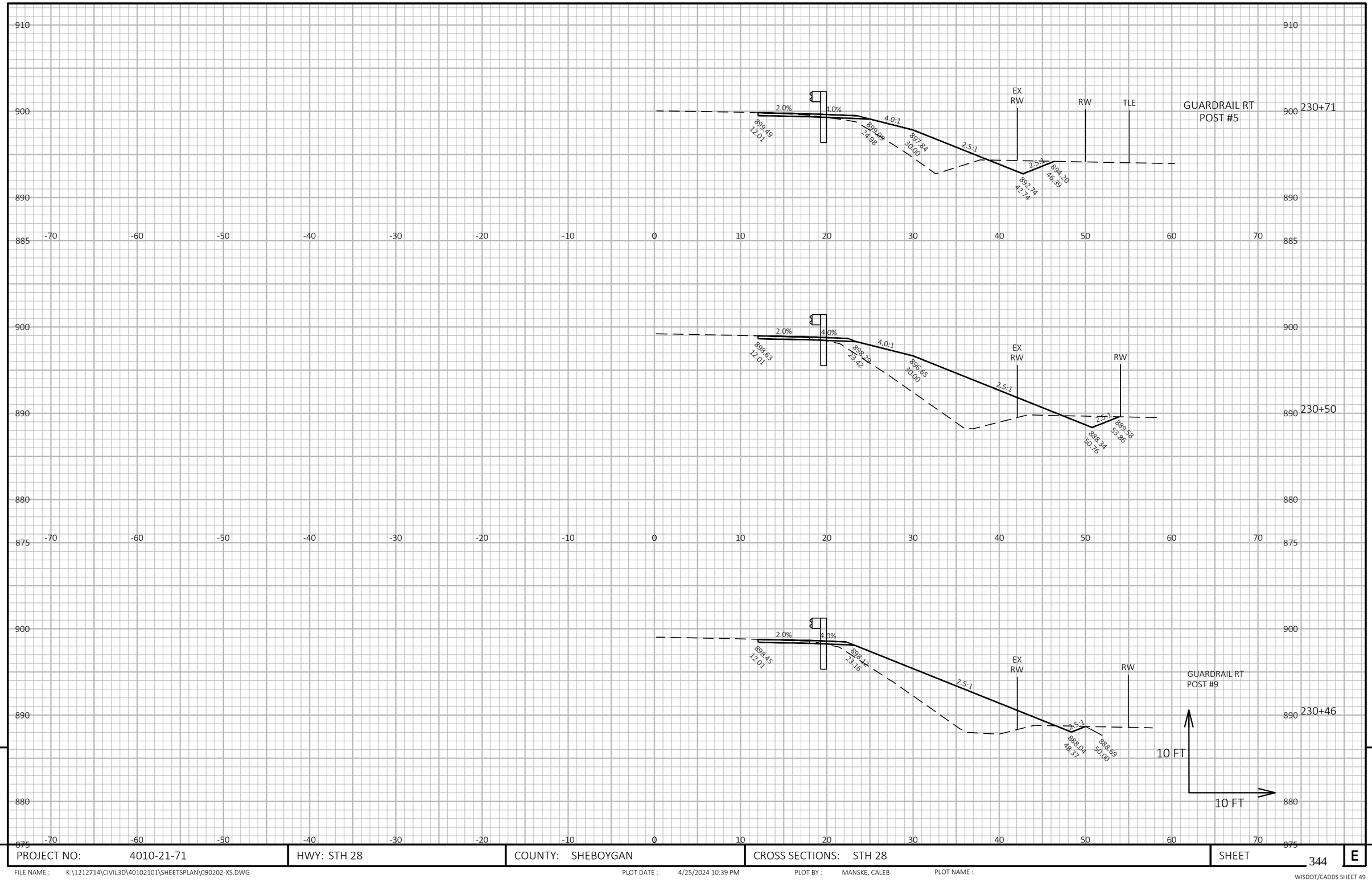
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WISDOT/CADDS SHEET 49



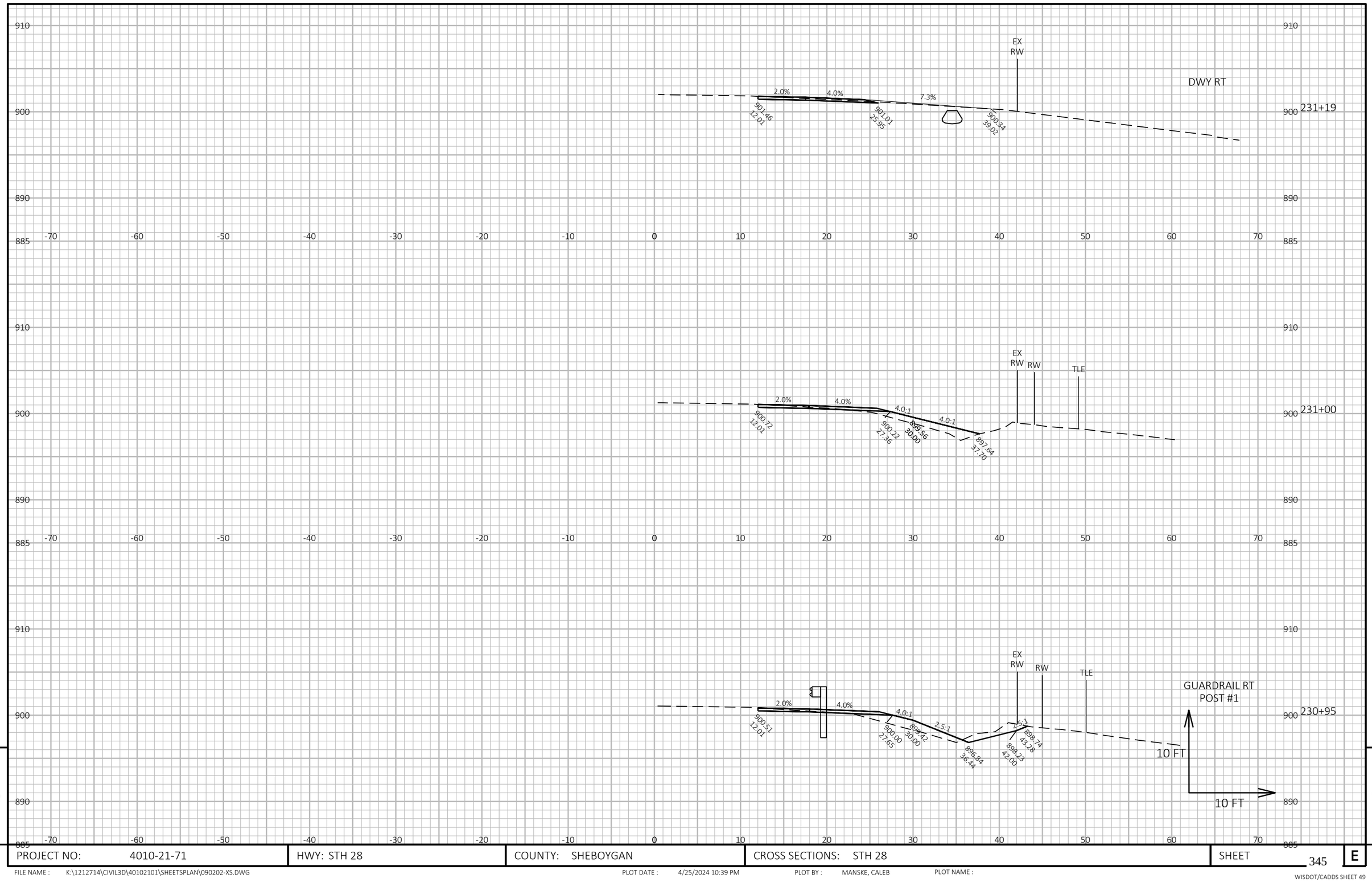
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WISDOT/CADDS SHEET 49



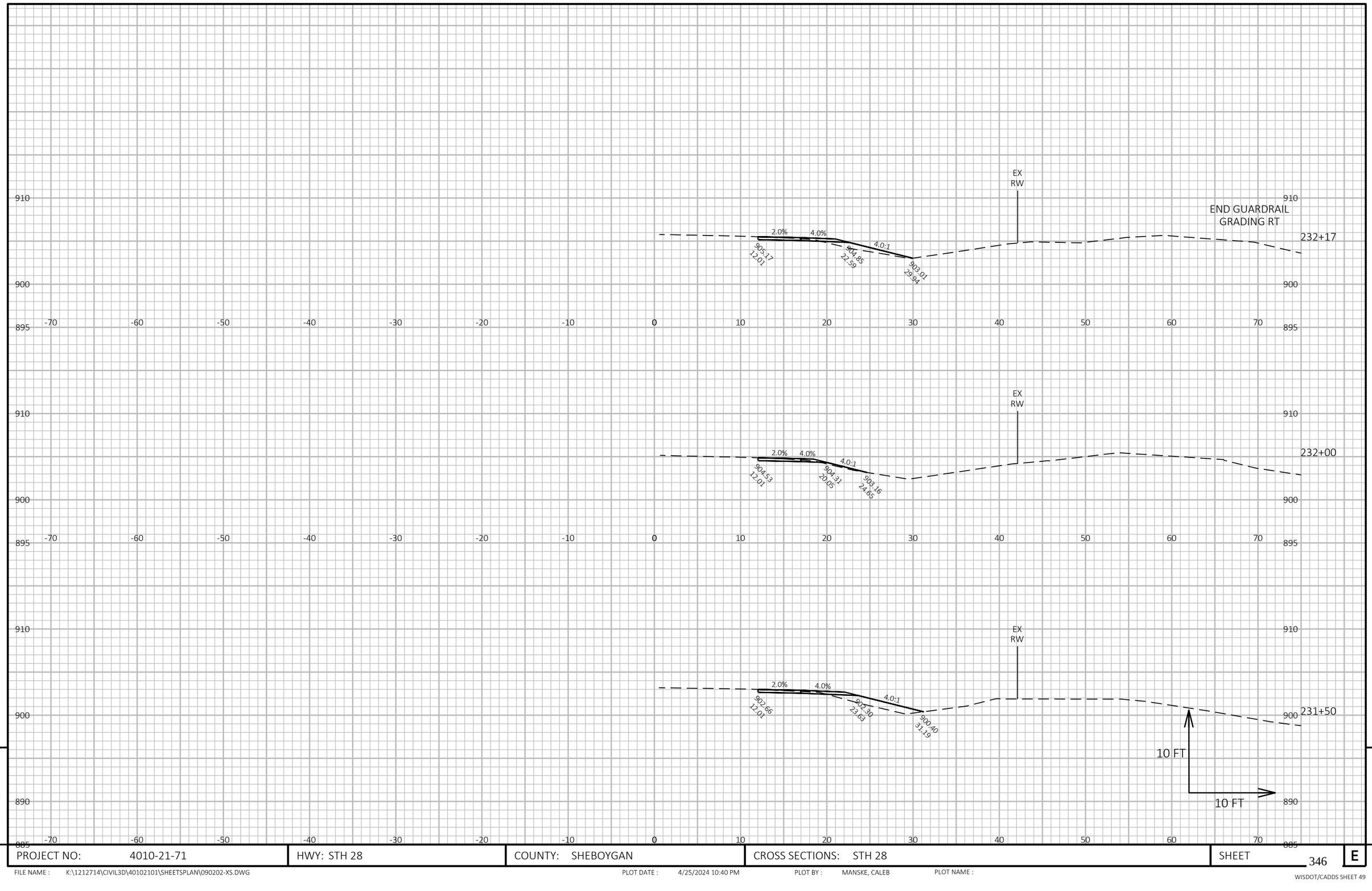
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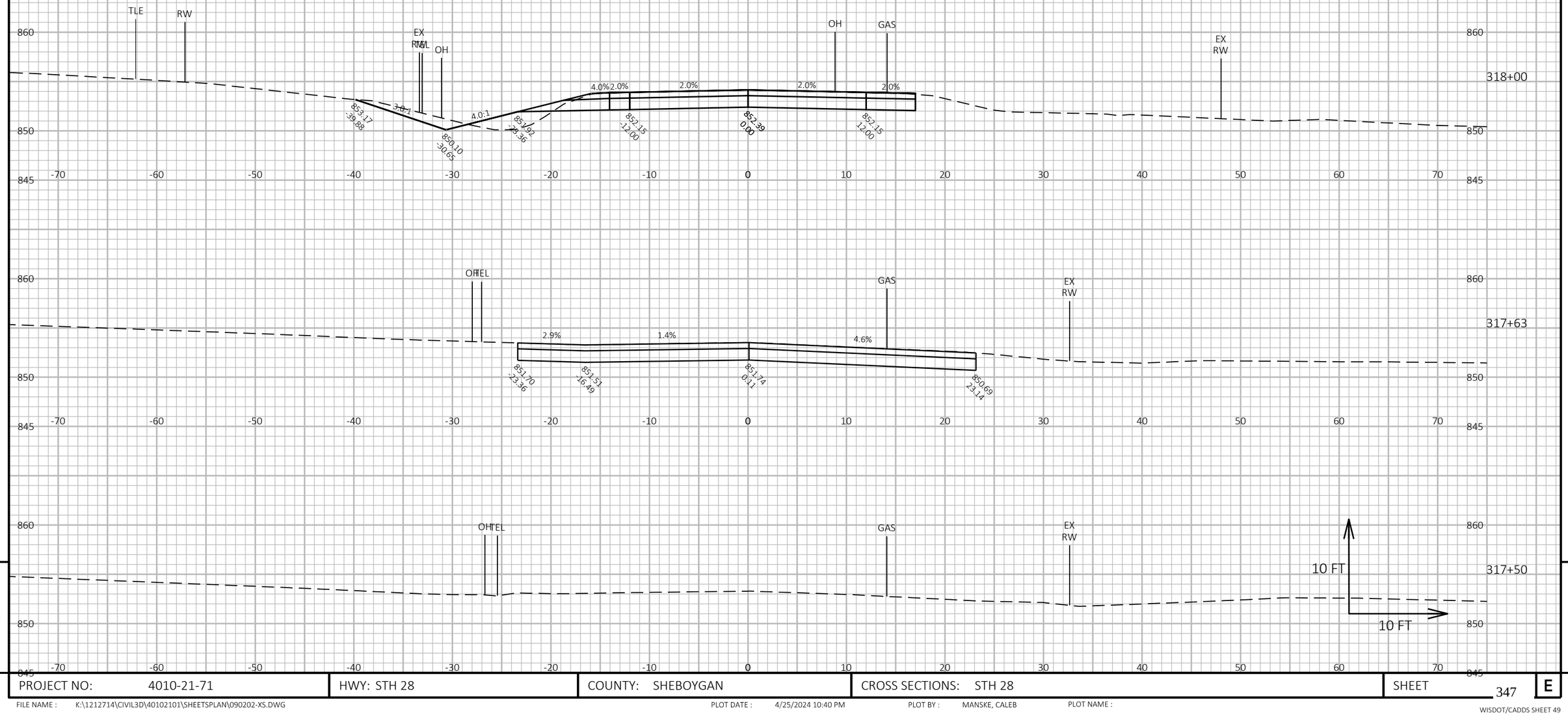


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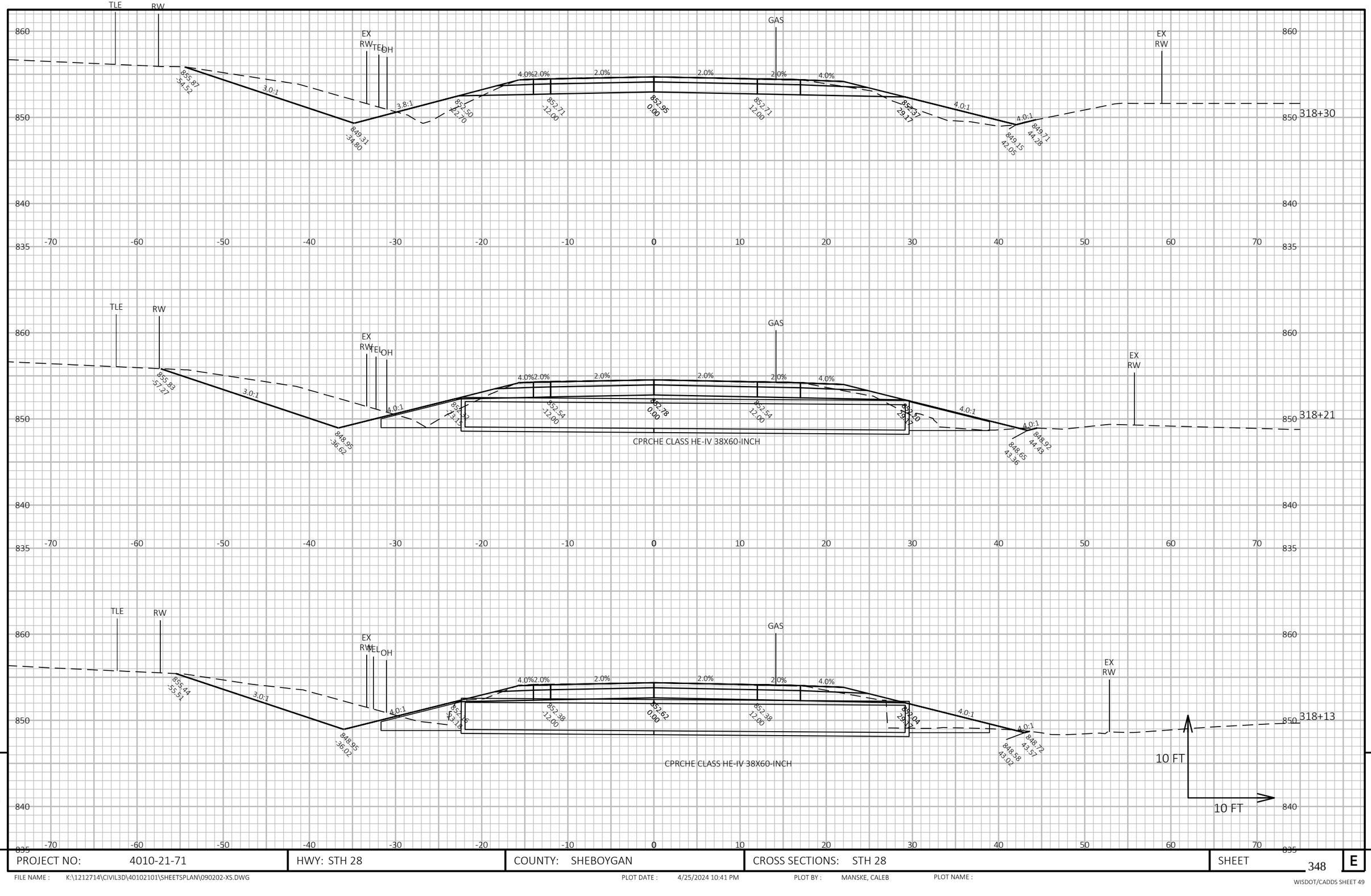
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PROJECT NO: 4010-21-71	HWY: STH 28	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 28	SHEET 347 E

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WISDOT/CADDS SHEET 49



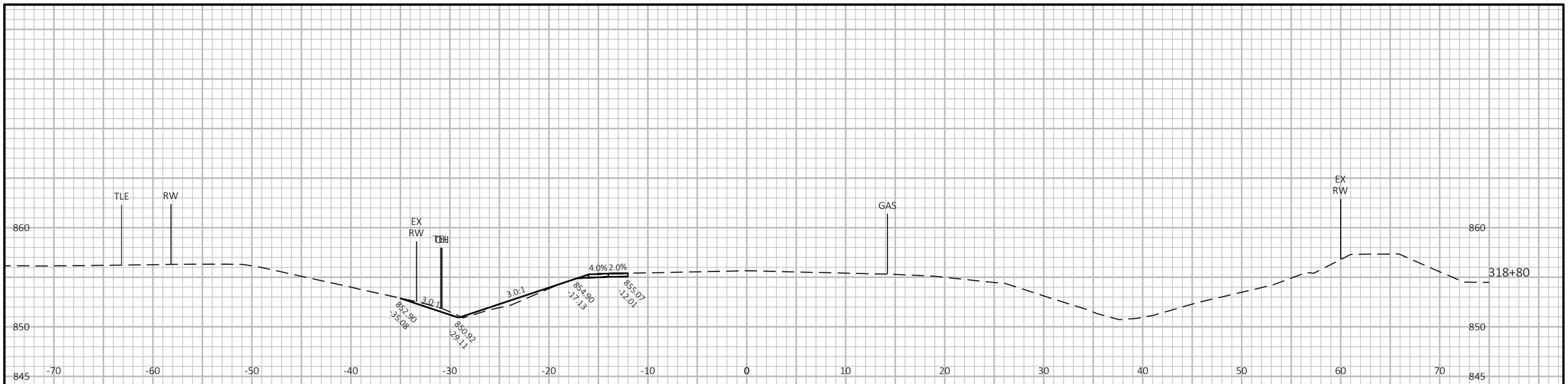
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PROJECT NO: 4010-21-71	HWY: STH 28	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 28	SHEET 348	E

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WISDOT/CADDS SHEET 49



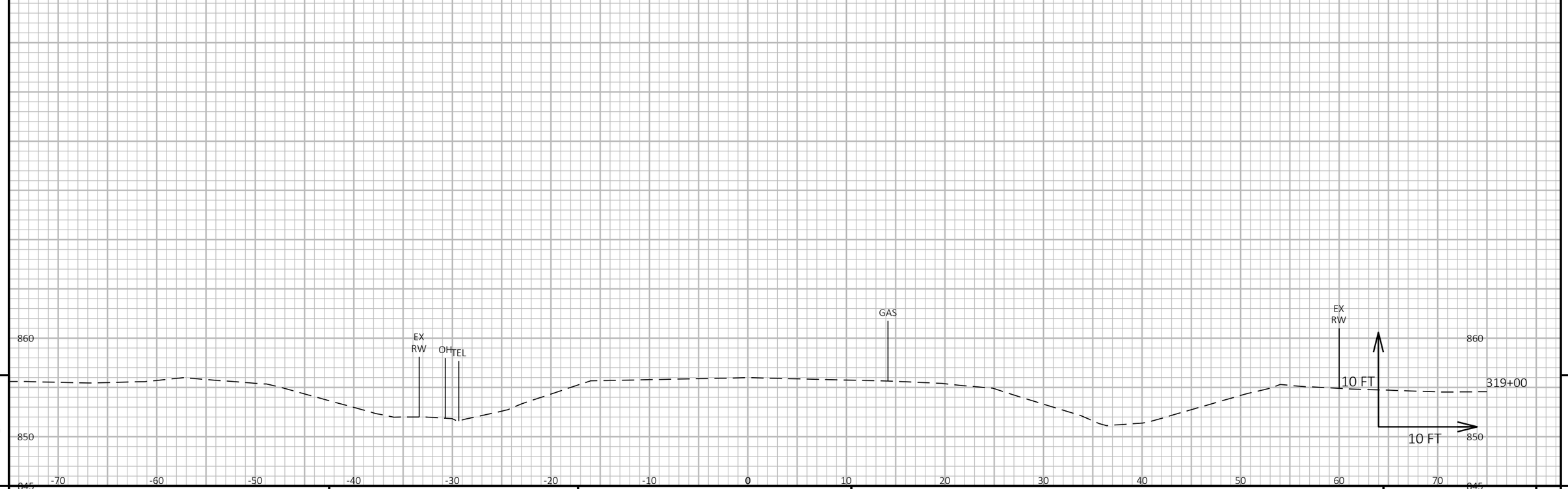
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PROJECT NO: 4010-21-71	HWY: STH 28	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 28	SHEET 349	E

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WISDOT/CADDS SHEET 49

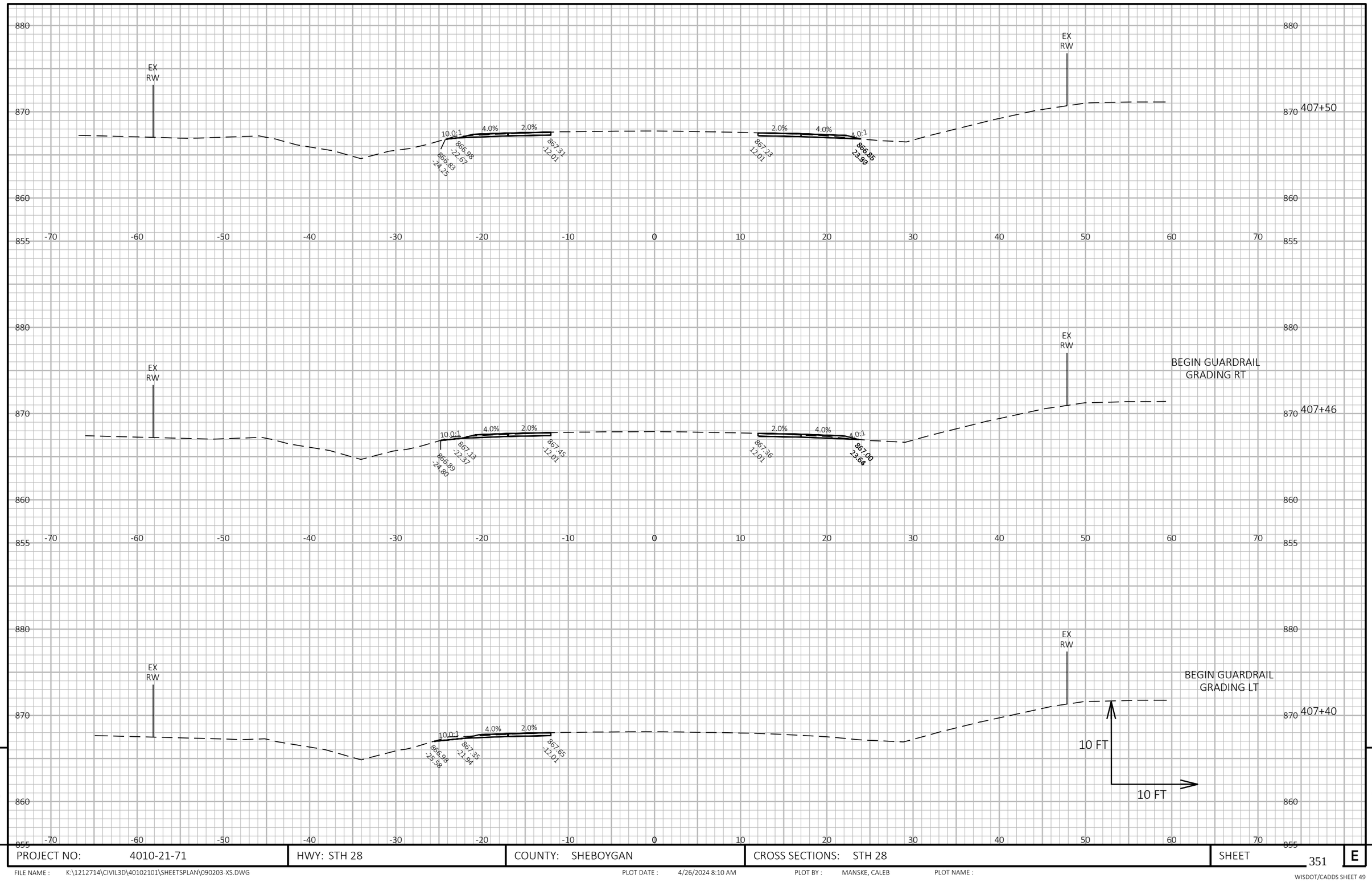


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PROJECT NO: 4010-21-71	HWY: STH 28	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 28	SHEET 350	E

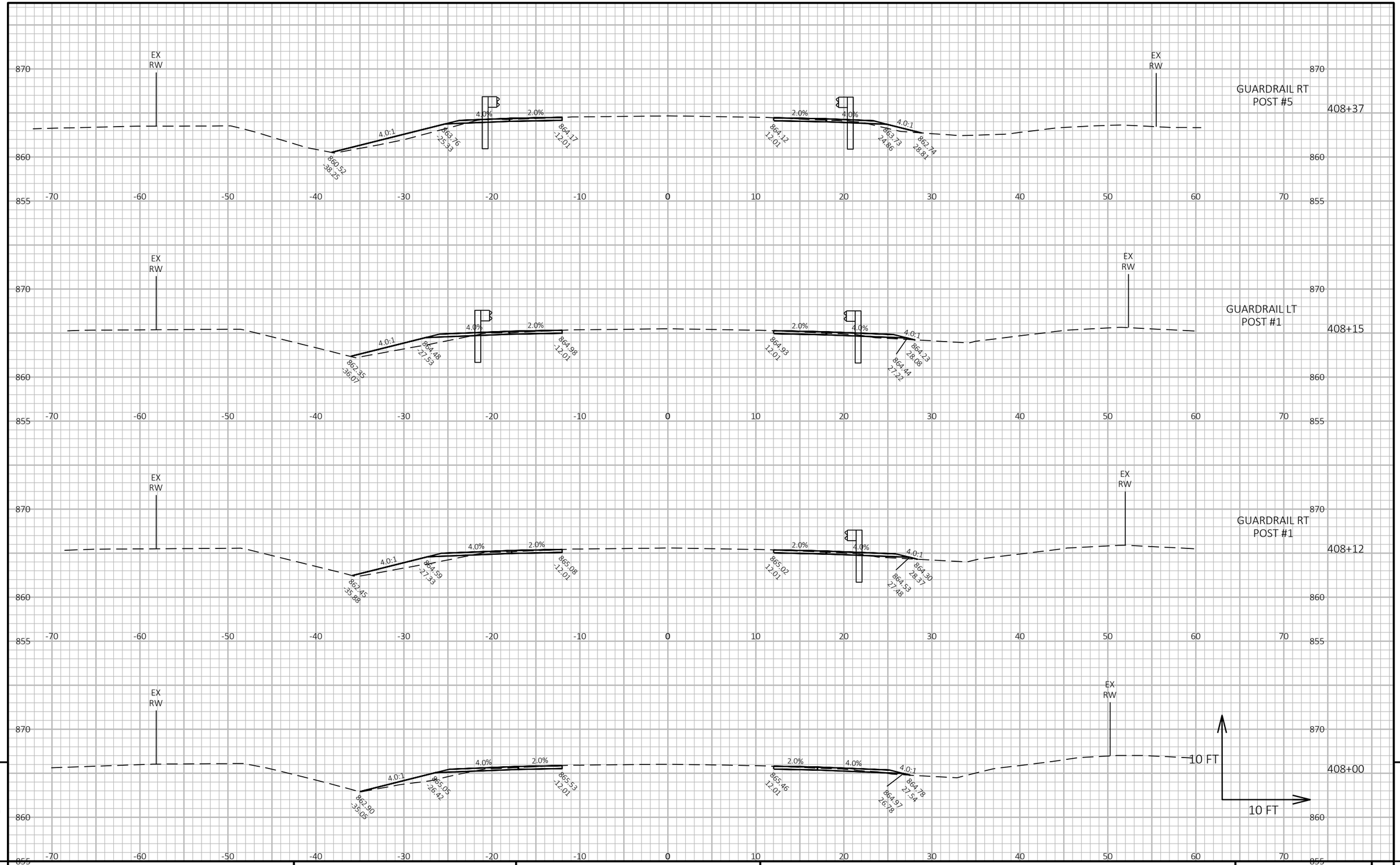
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PROJECT NO: 4010-21-71	HWY: STH 28	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 28	SHEET 351	E



PROJECT NO: 4010-21-71	HWY: STH 28	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 28	SHEET 352	E

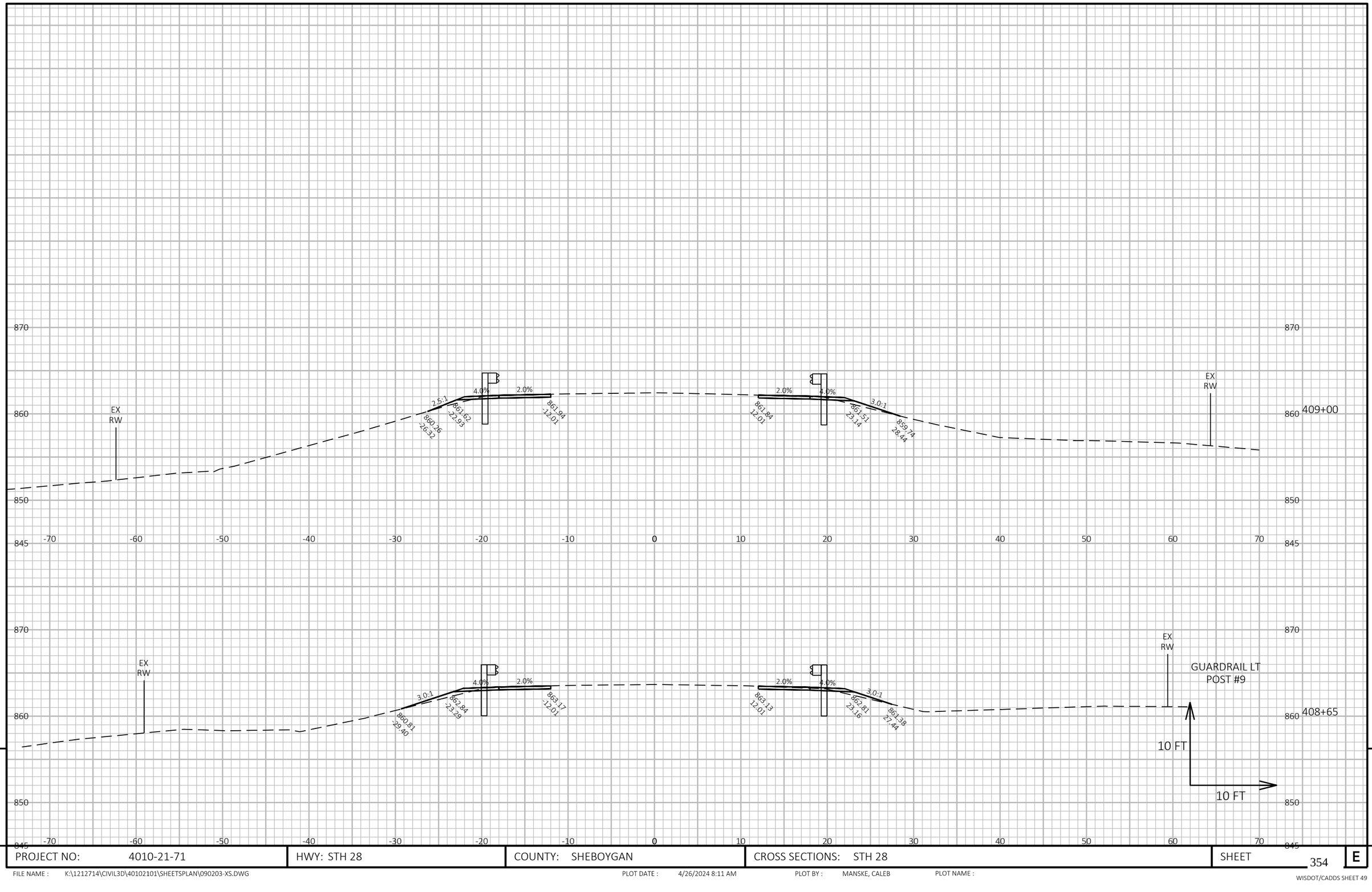
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WISDOT/CADDS SHEET 49

PROJECT NO: 4010-21-71	HWY: STH 28	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 28	SHEET 353	E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\090203-XS.DWG PLOT DATE : 4/26/2024 8:11 AM PLOT BY : MANSKE, CALEB PLOT NAME :

WISDOT/CADDS SHEET 49



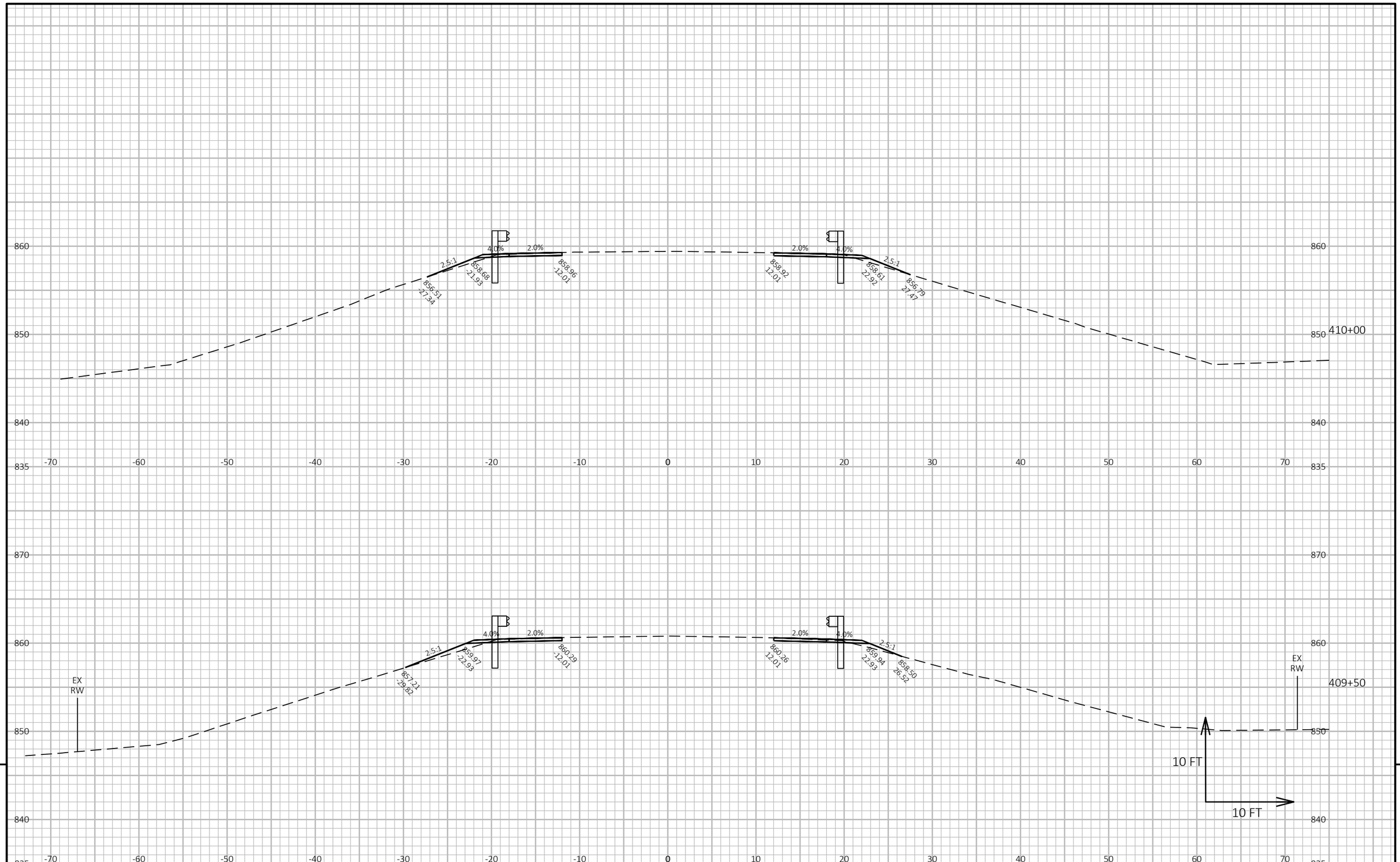
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PROJECT NO: 4010-21-71	HWY: STH 28	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 28	SHEET 354	E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\090203-XS.DWG PLOT DATE : 4/26/2024 8:11 AM PLOT BY : MANSKE, CALEB PLOT NAME :

WISDOT/CADDS SHEET 49

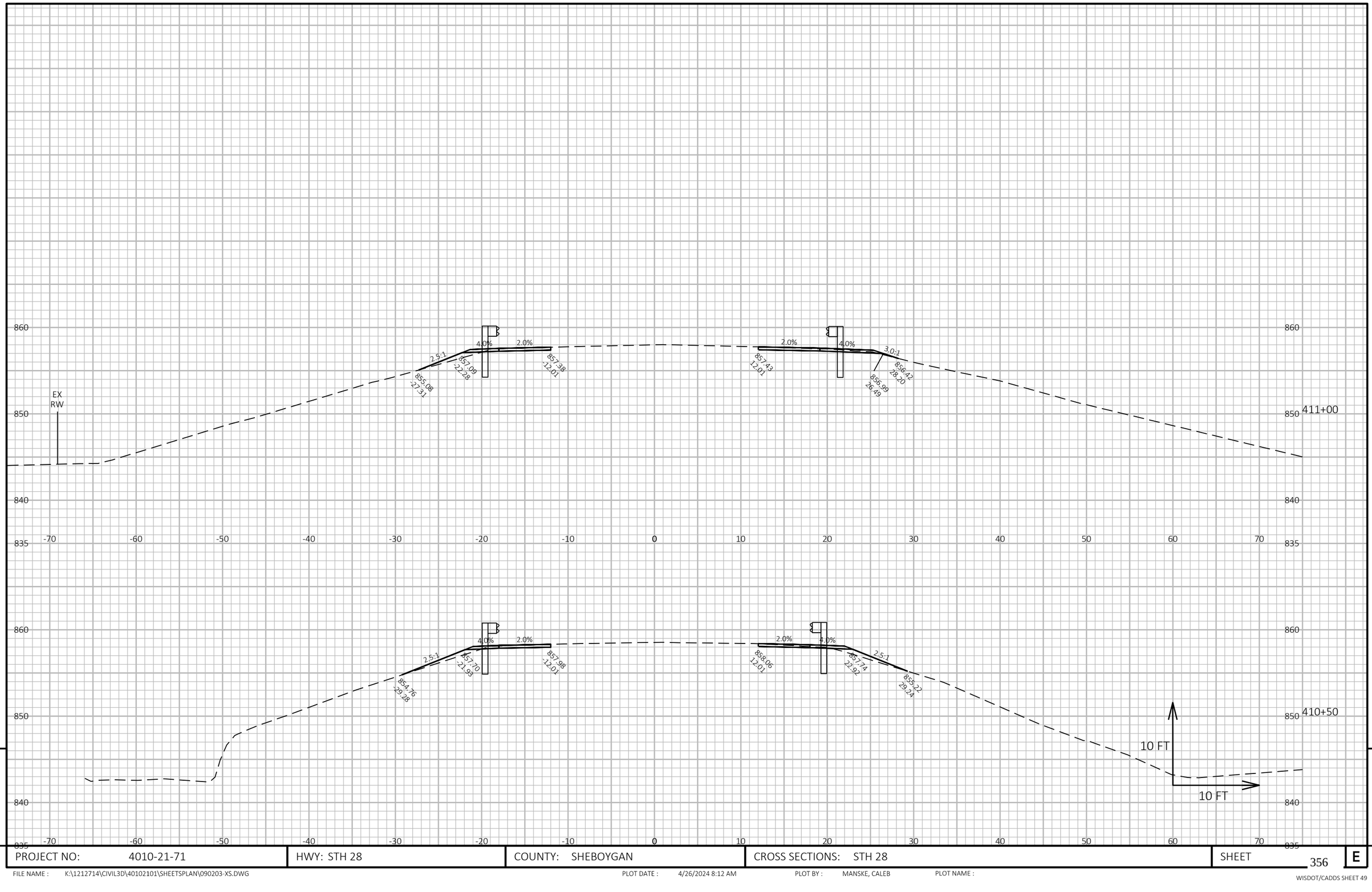


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PROJECT NO: 4010-21-71	HWY: STH 28	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 28	SHEET 355	E

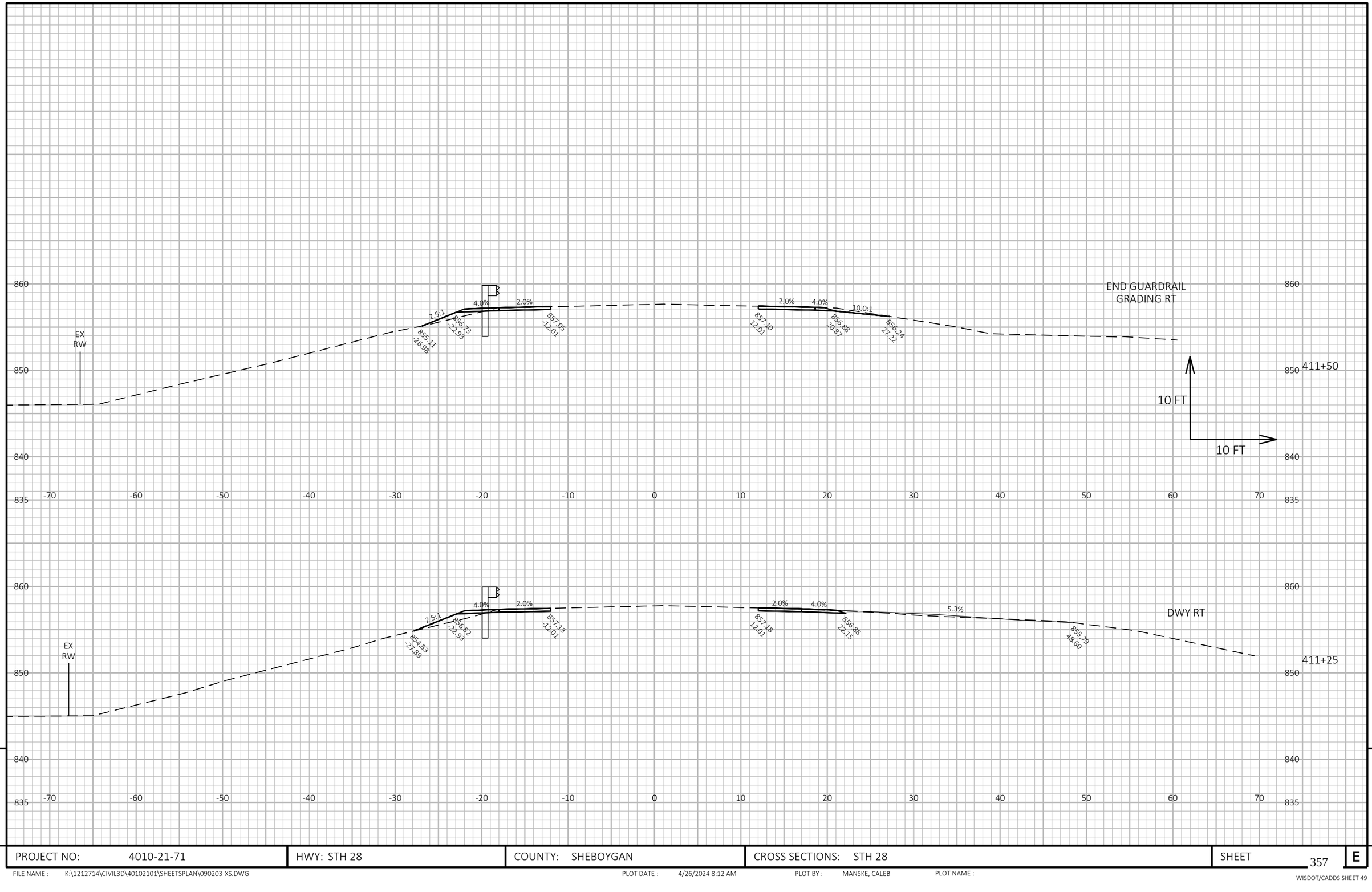
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PROJECT NO: 4010-21-71	HWY: STH 28	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 28	SHEET 356	E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\090203-XS.DWG PLOT DATE : 4/26/2024 8:12 AM PLOT BY : MANSKE, CALEB PLOT NAME :

WISDOT/CADDS SHEET 49



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PROJECT NO: 4010-21-71	HWY: STH 28	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 28	SHEET 357	E

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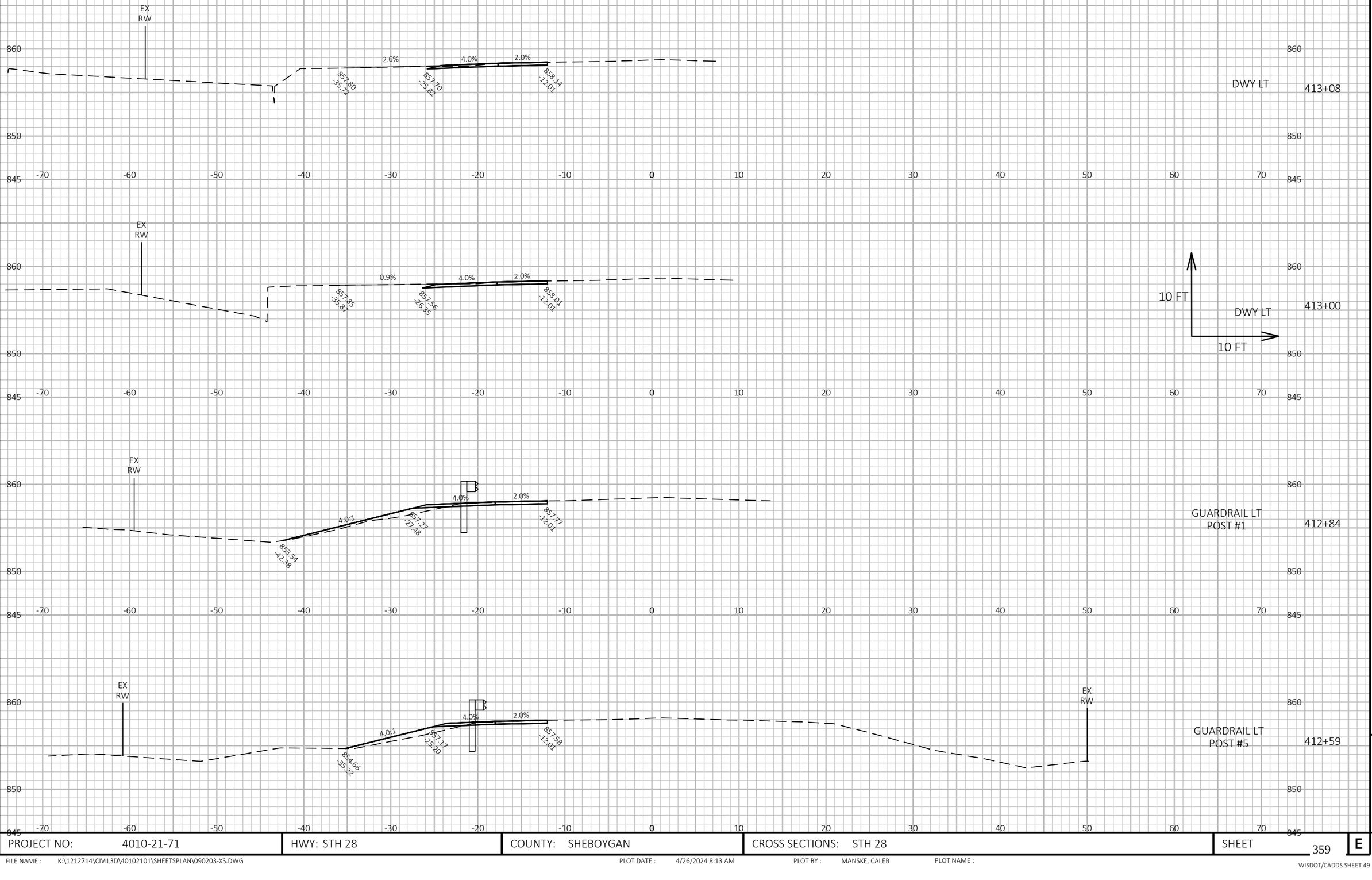
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WISDOT/CADDS SHEET 49

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PROJECT NO: 4010-21-71	HWY: STH 28	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 28	SHEET 358	E



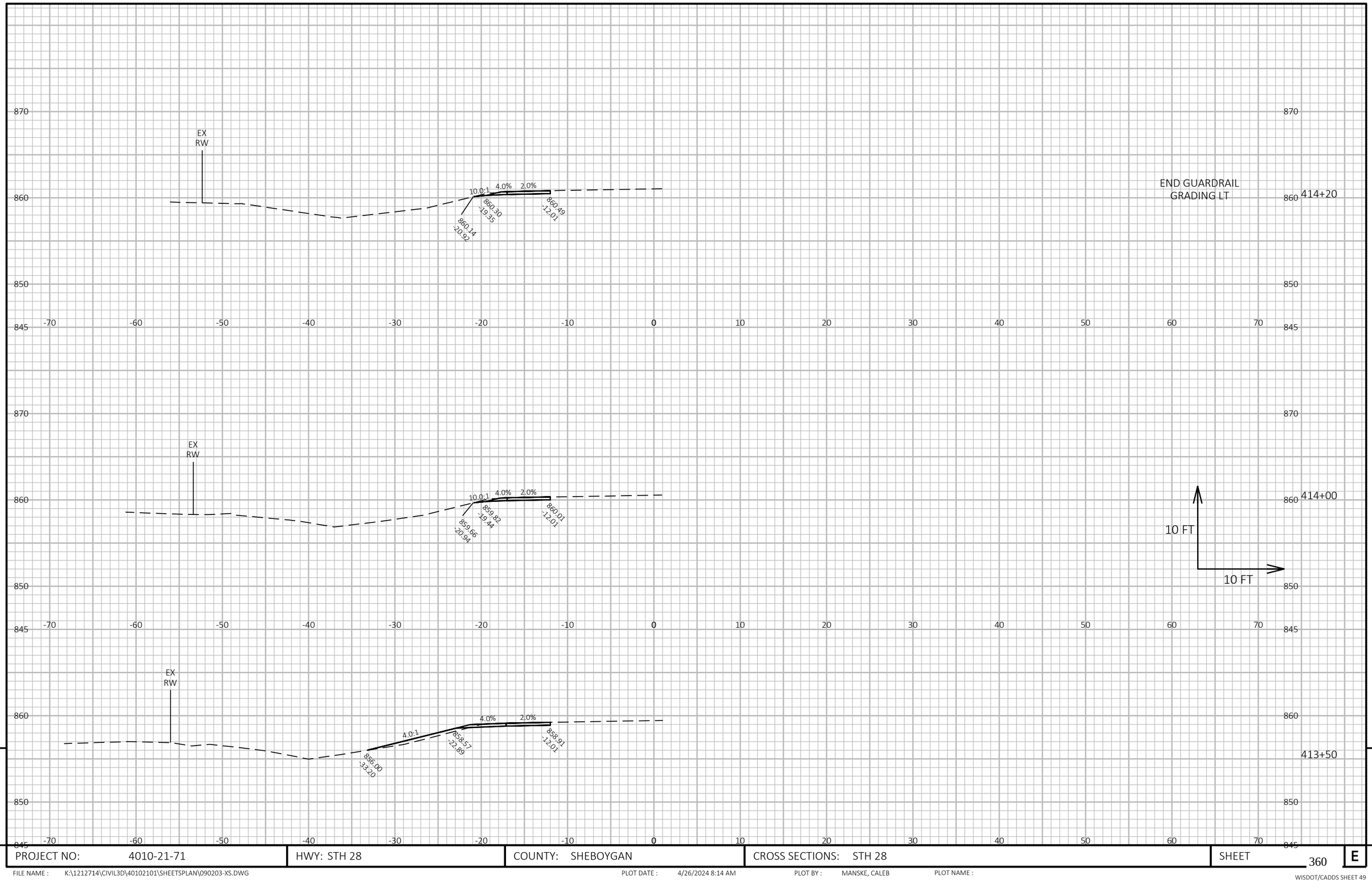
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PROJECT NO: 4010-21-71	HWY: STH 28	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 28	SHEET 359	E

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WISDOT/CADDS SHEET 49

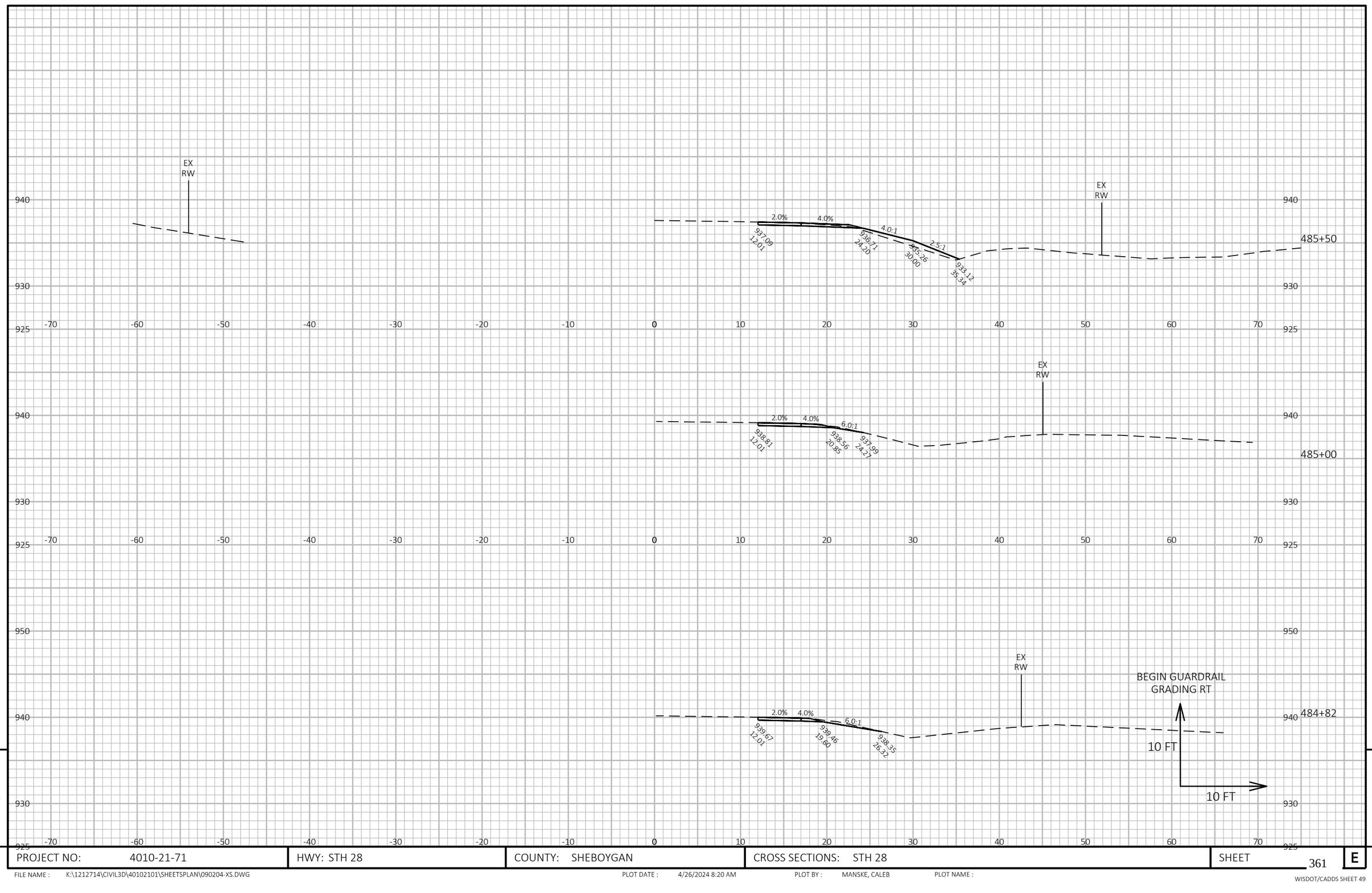


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PROJECT NO: 4010-21-71	HWY: STH 28	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 28	SHEET 360	E

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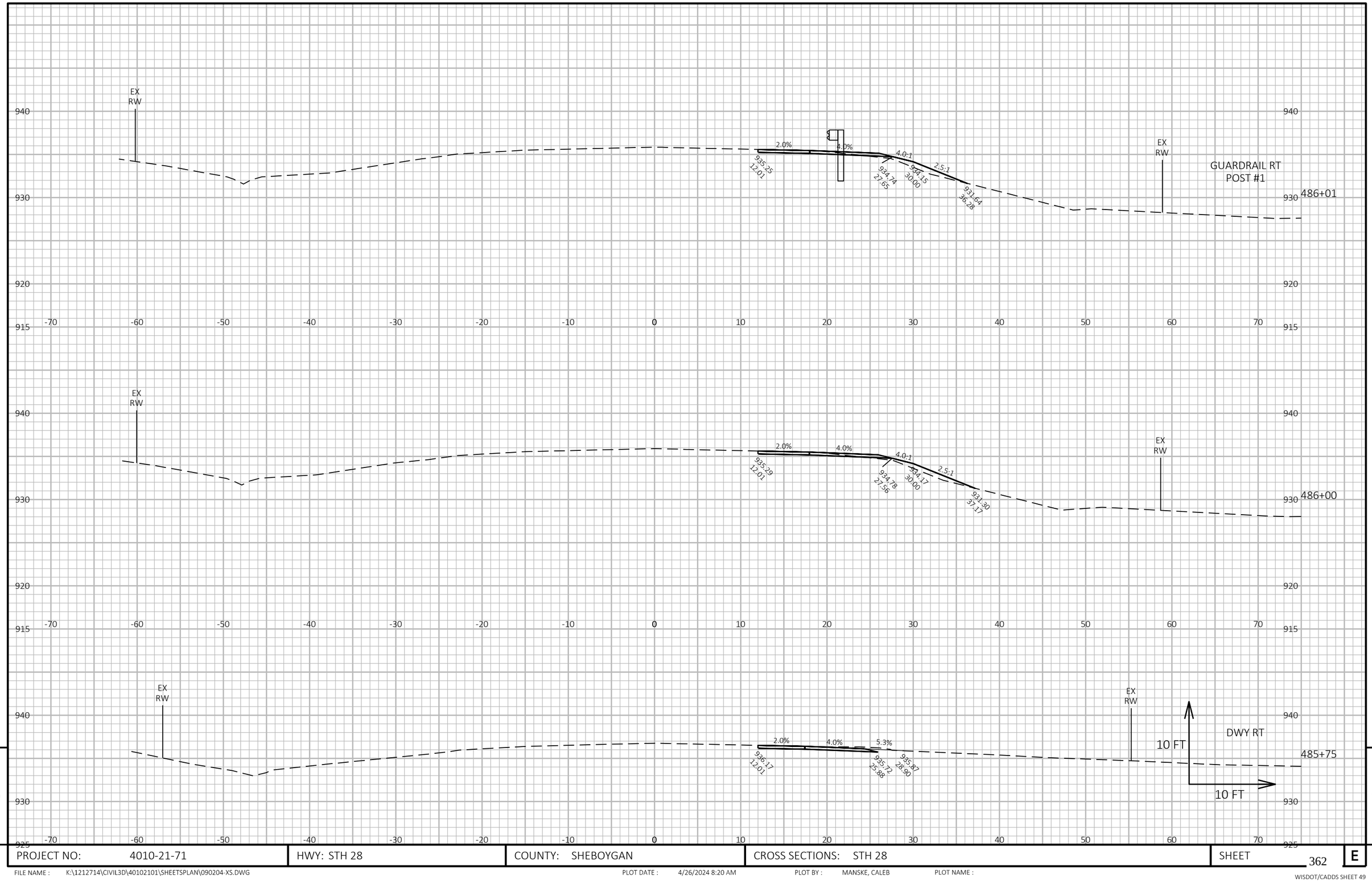
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PROJECT NO: 4010-21-71	HWY: STH 28	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 28	SHEET 361	E

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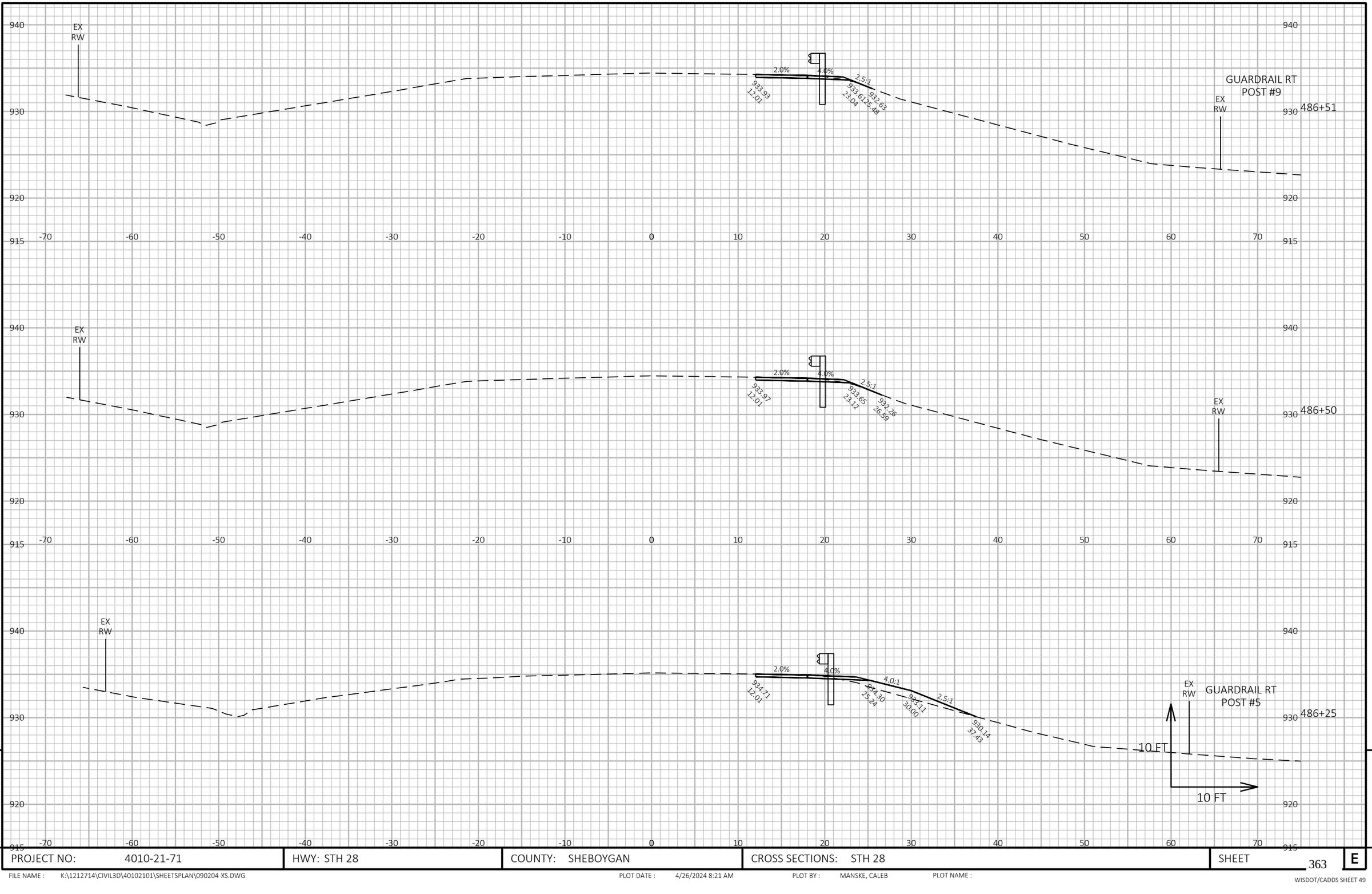
WISDOT/CADDS SHEET 49



PROJECT NO: 4010-21-71	HWY: STH 28	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 28	SHEET 362

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\090204-XS.DWG PLOT DATE : 4/26/2024 8:20 AM PLOT BY : MANSKE, CALEB PLOT NAME :

WISDOT/CADDS SHEET 49



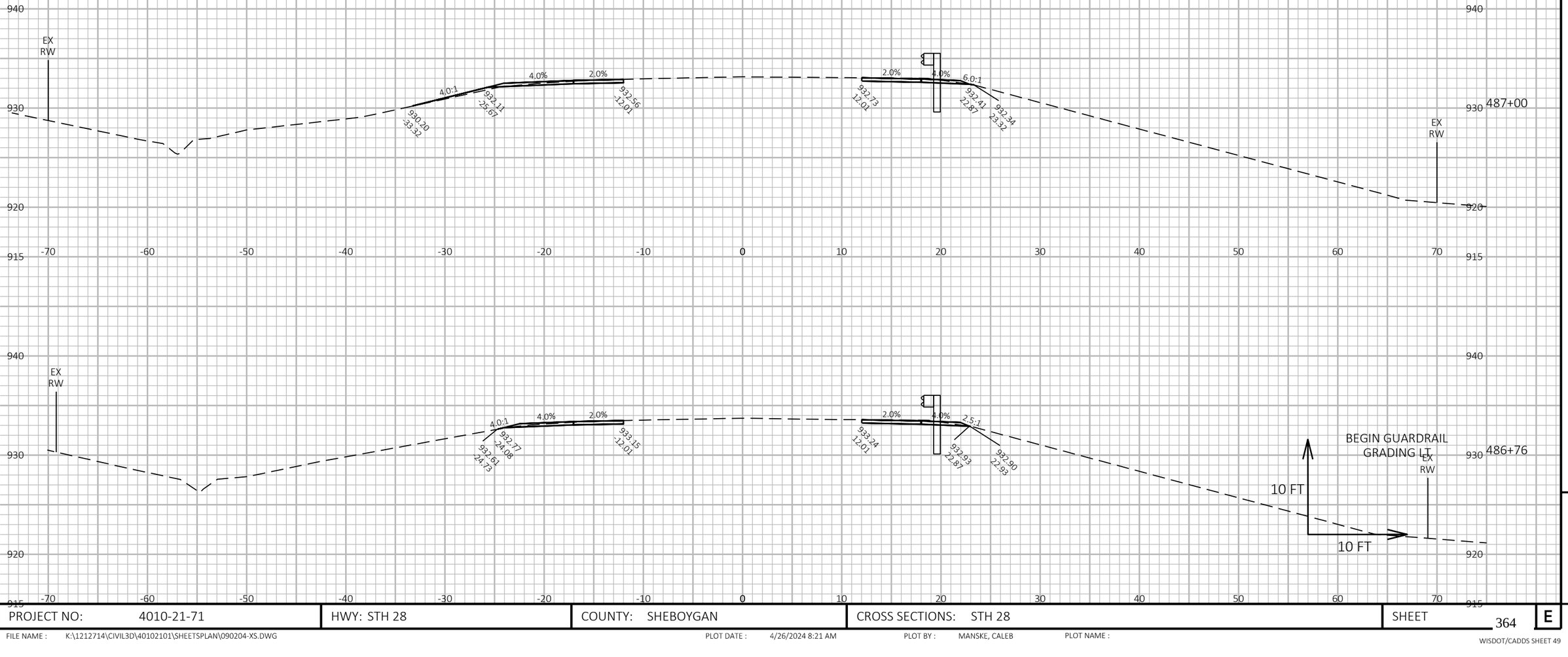
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PROJECT NO: 4010-21-71	HWY: STH 28	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 28	SHEET 363	E

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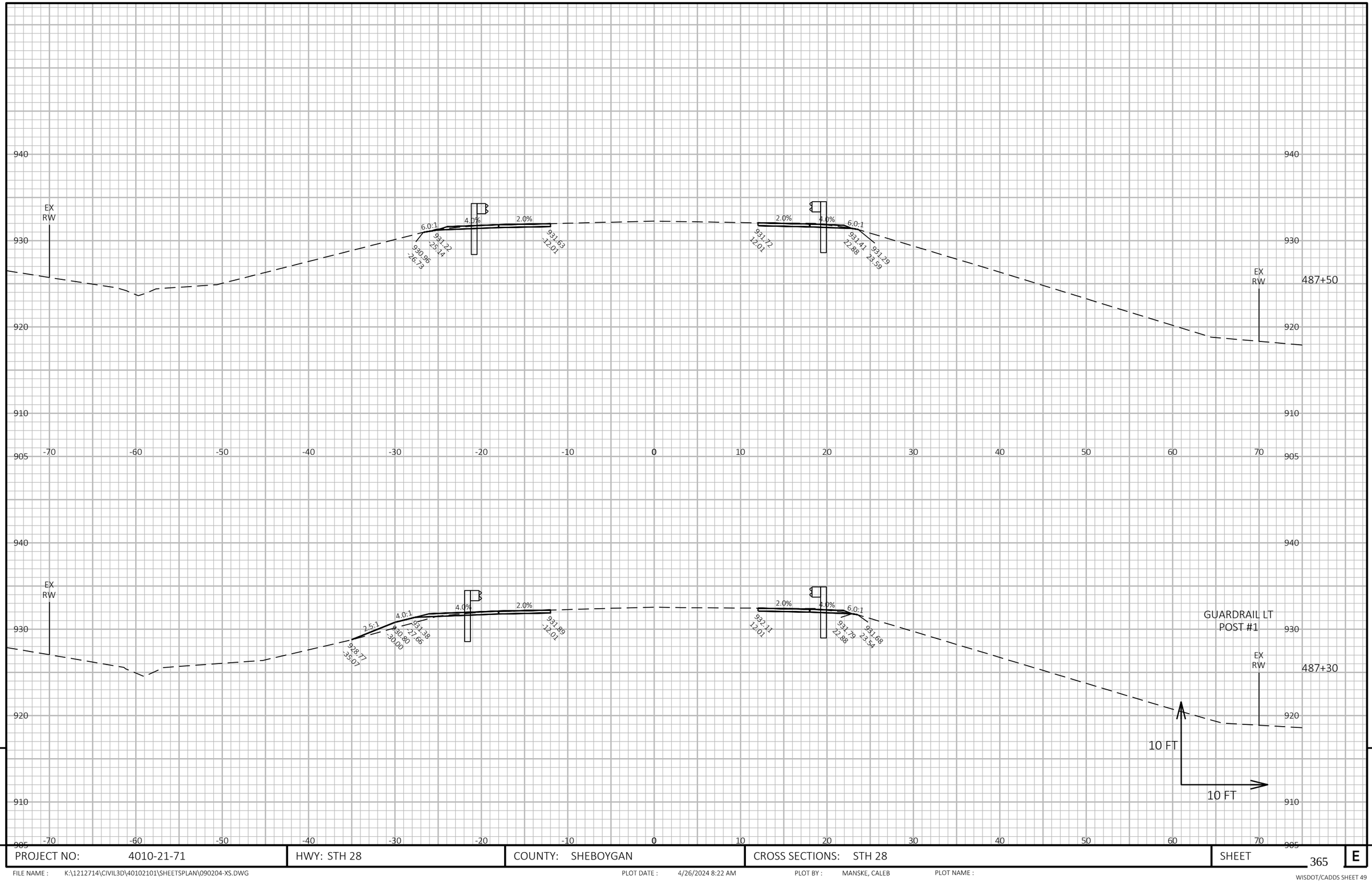
WISDOT/CADDS SHEET 49



PROJECT NO: 4010-21-71	HWY: STH 28	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 28	SHEET 364	E

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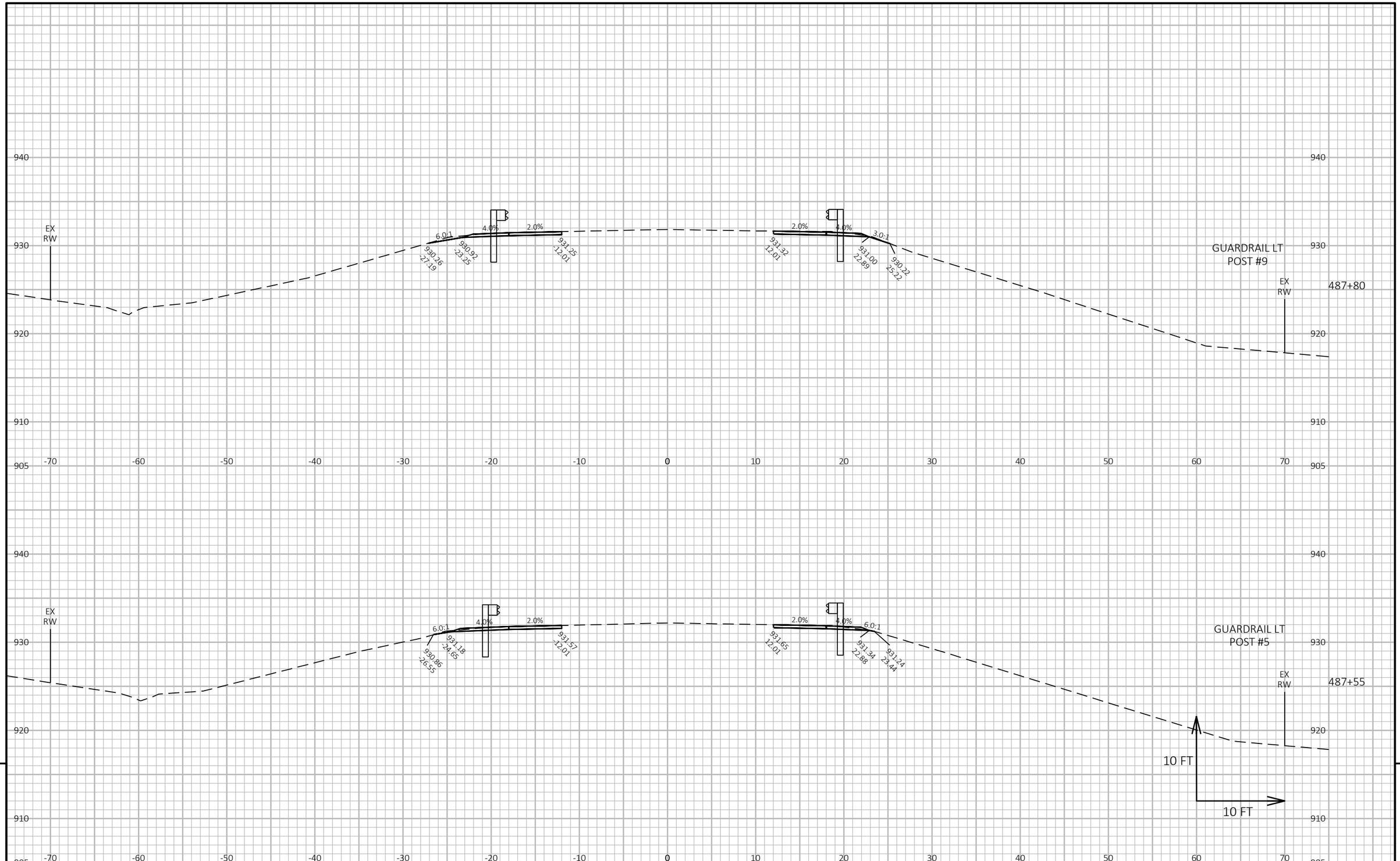
WISDOT/CADDS SHEET 49



PROJECT NO: 4010-21-71	HWY: STH 28	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 28	SHEET 365 E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\090204-XS.DWG PLOT DATE : 4/26/2024 8:22 AM PLOT BY : MANSKE, CALEB PLOT NAME :

WISDOT/CADDS SHEET 49



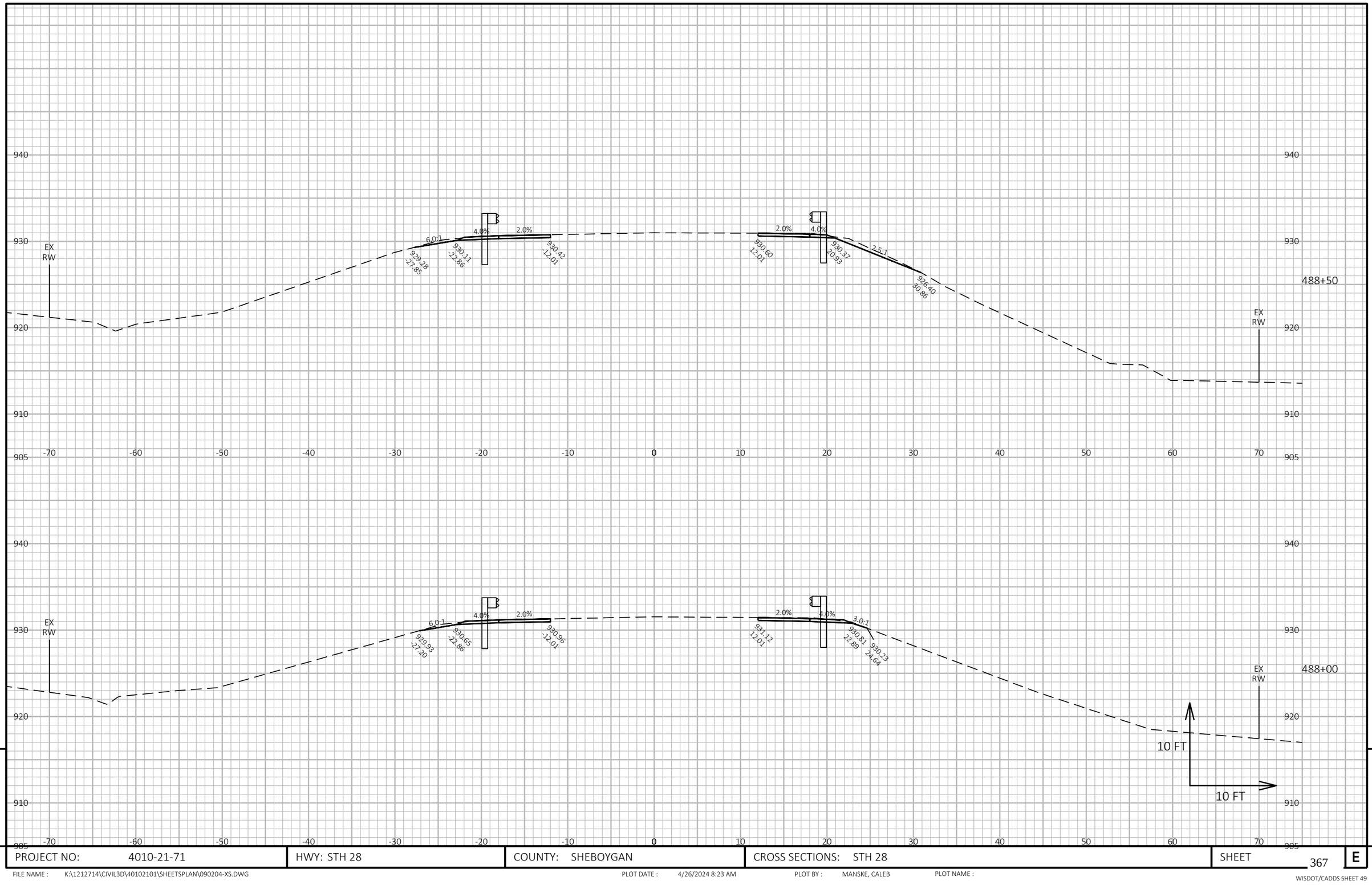
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PROJECT NO: 4010-21-71	HWY: STH 28	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 28	SHEET 366	E

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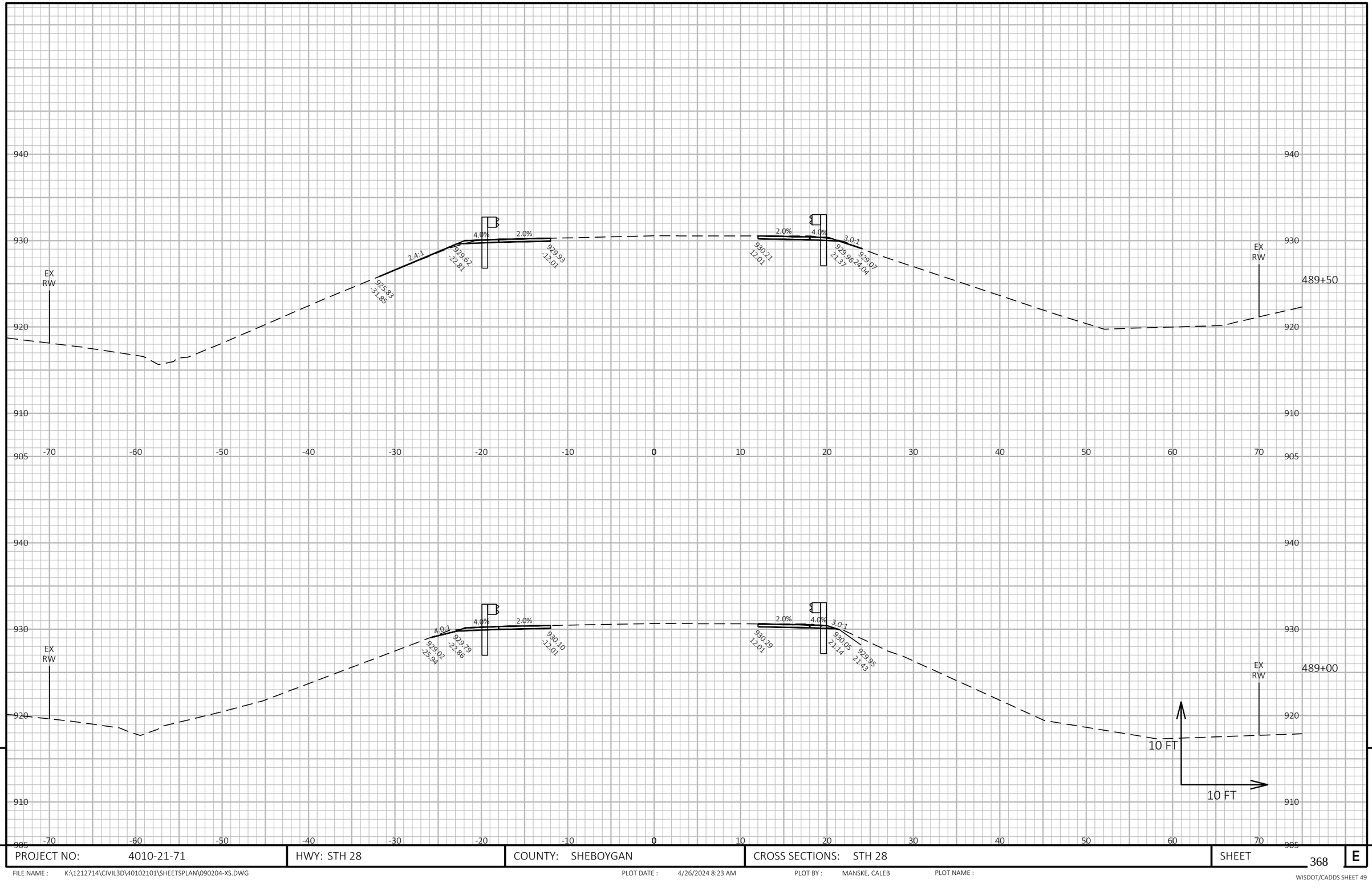
WISDOT/CADDS SHEET 49



PROJECT NO: 4010-21-71	HWY: STH 28	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 28	SHEET 367 E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\090204-XS.DWG PLOT DATE : 4/26/2024 8:23 AM PLOT BY : MANSKE, CALEB PLOT NAME :

WISDOT/CADDS SHEET 49



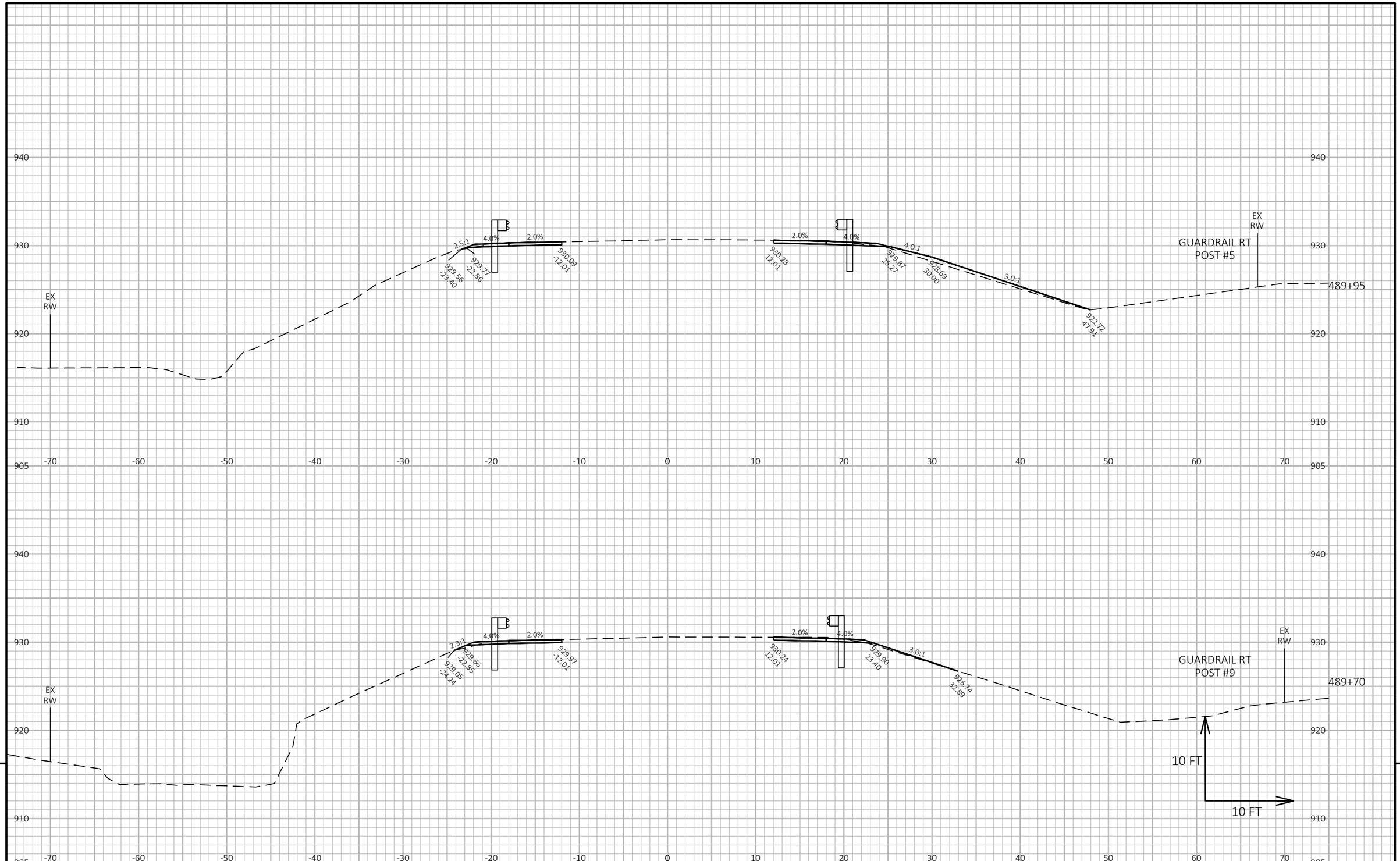
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PROJECT NO: 4010-21-71	HWY: STH 28	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 28	SHEET 368	E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\090204-XS.DWG PLOT DATE : 4/26/2024 8:23 AM PLOT BY : MANSKE, CALEB PLOT NAME :

WISDOT/CADDS SHEET 49

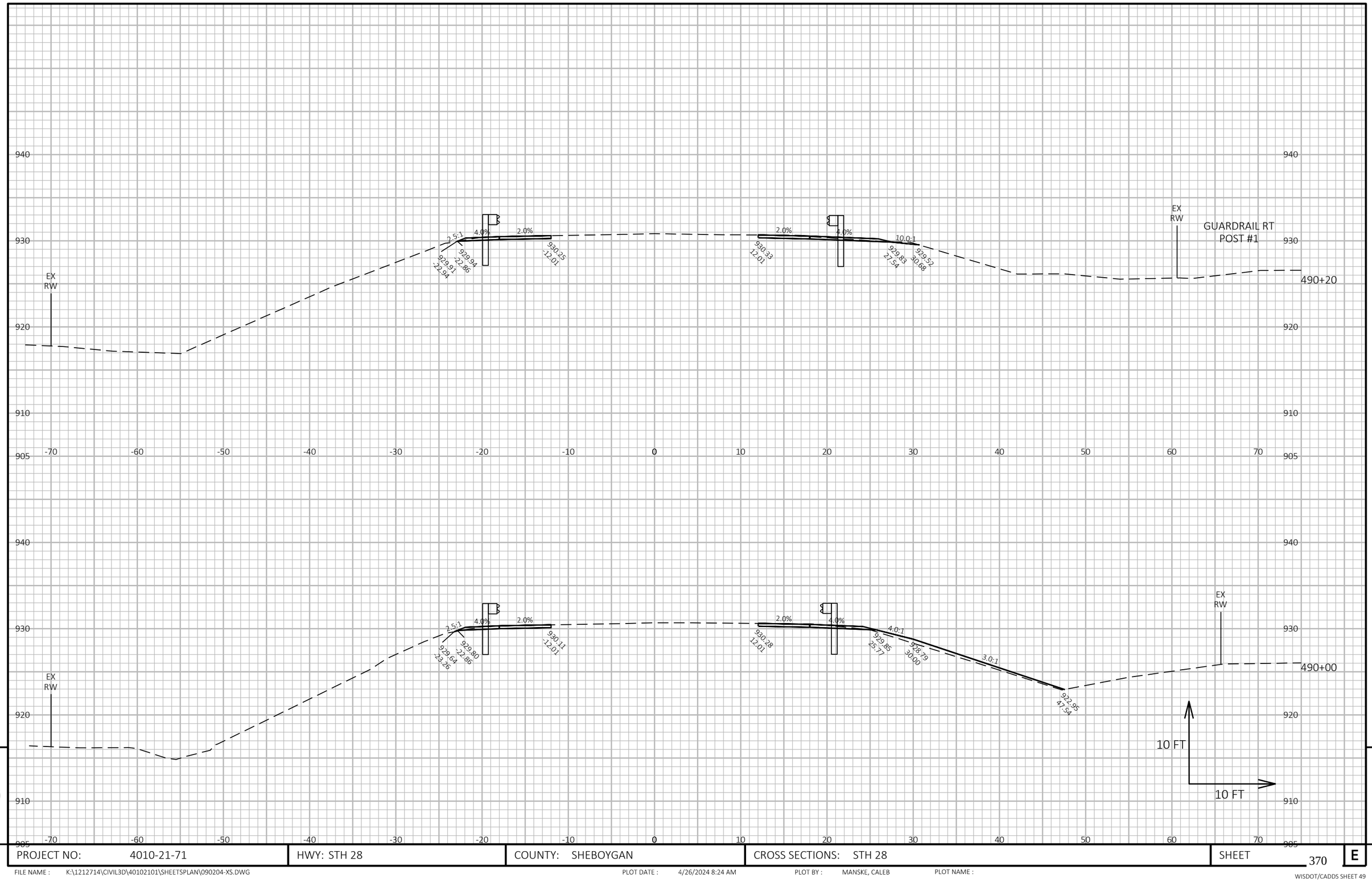


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PROJECT NO: 4010-21-71	HWY: STH 28	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 28	SHEET 369	E

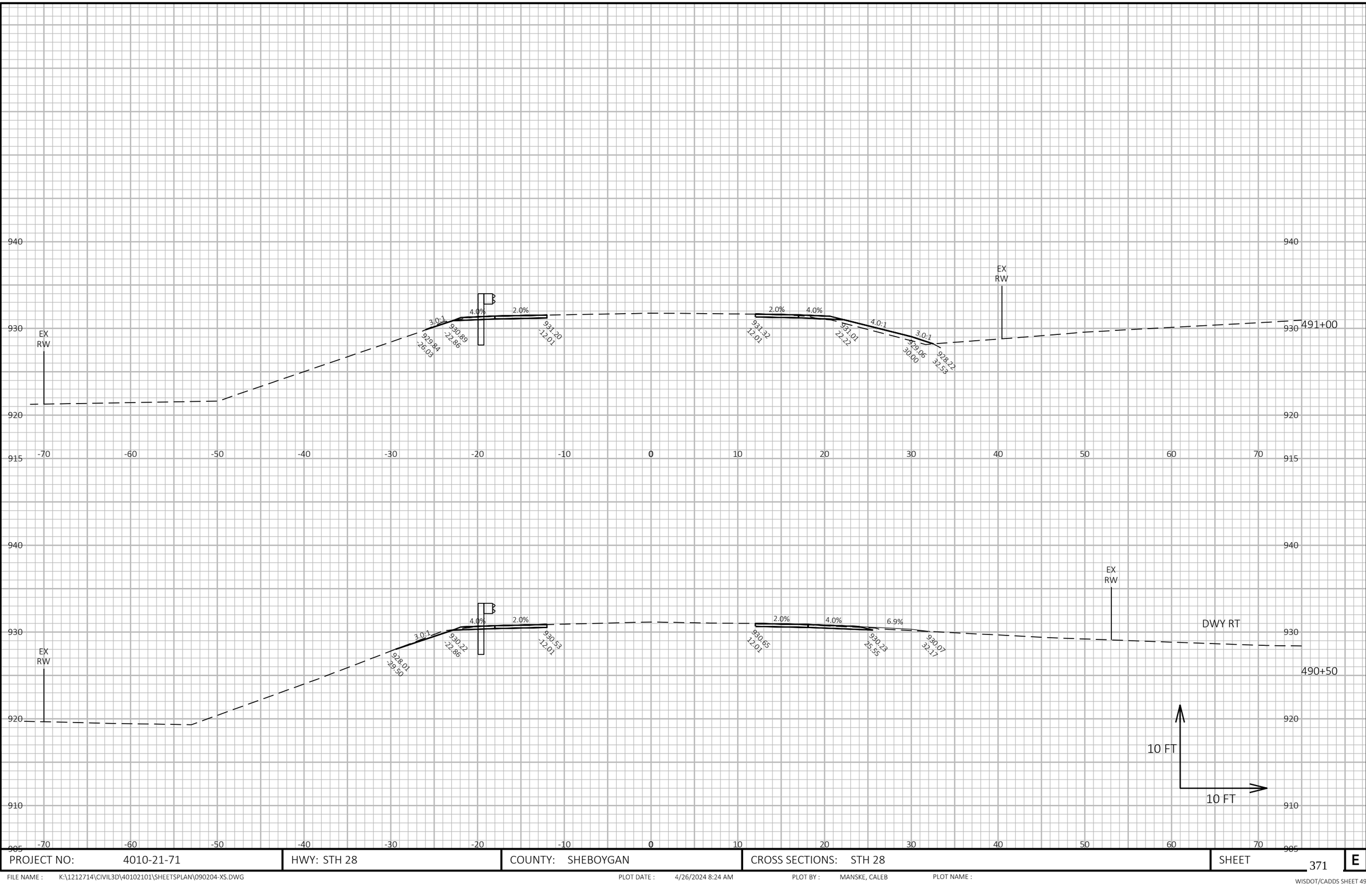
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PROJECT NO: 4010-21-71	HWY: STH 28	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 28	SHEET 370 E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\090204-XS.DWG PLOT DATE : 4/26/2024 8:24 AM PLOT BY : MANSKE, CALEB PLOT NAME :

WISDOT/CADDS SHEET 49



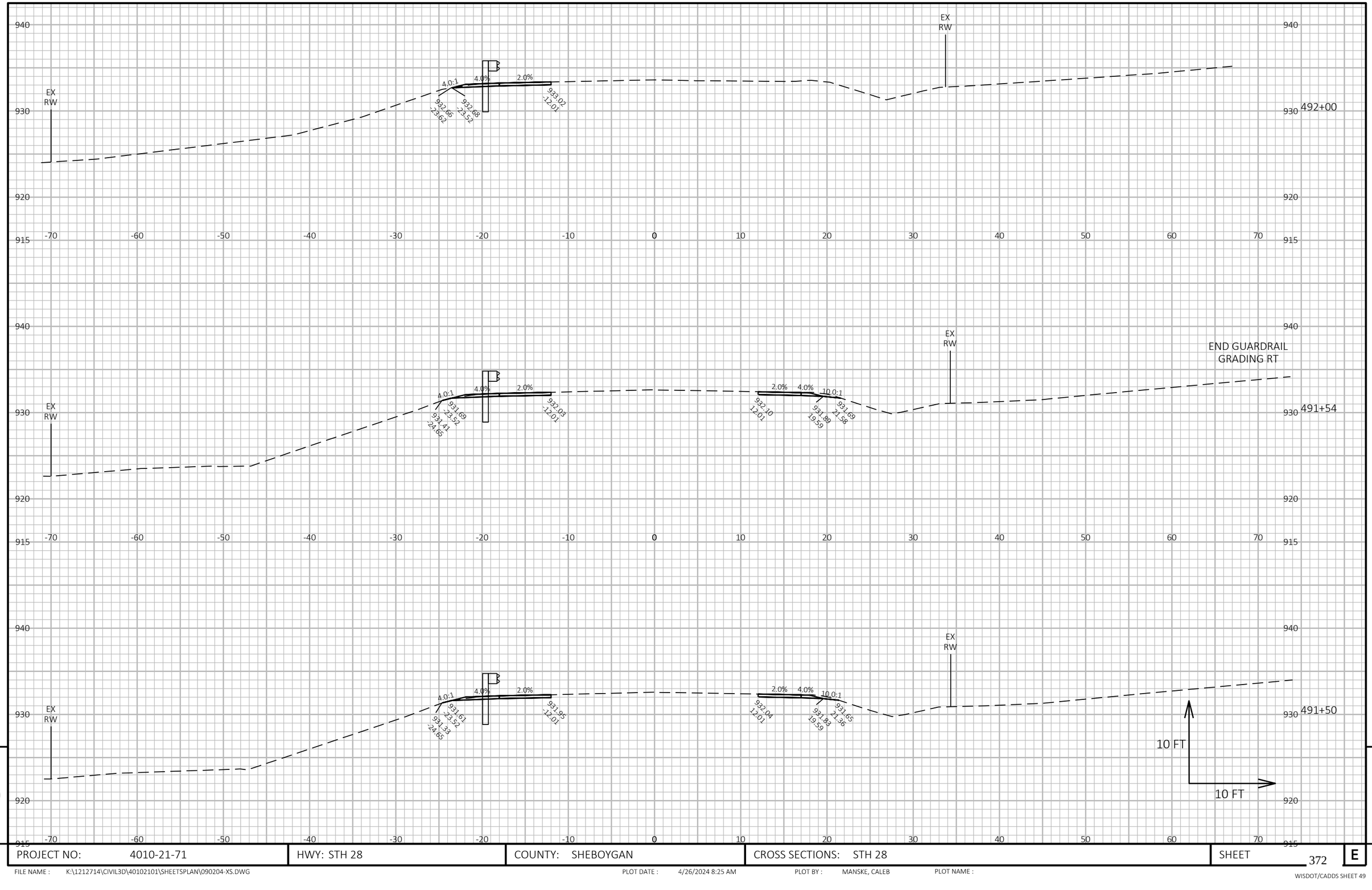
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PROJECT NO: 4010-21-71	HWY: STH 28	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 28	SHEET 371	E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\090204-XS.DWG PLOT DATE : 4/26/2024 8:24 AM PLOT BY : MANSKE, CALEB PLOT NAME :

WISDOT/CADDS SHEET 49



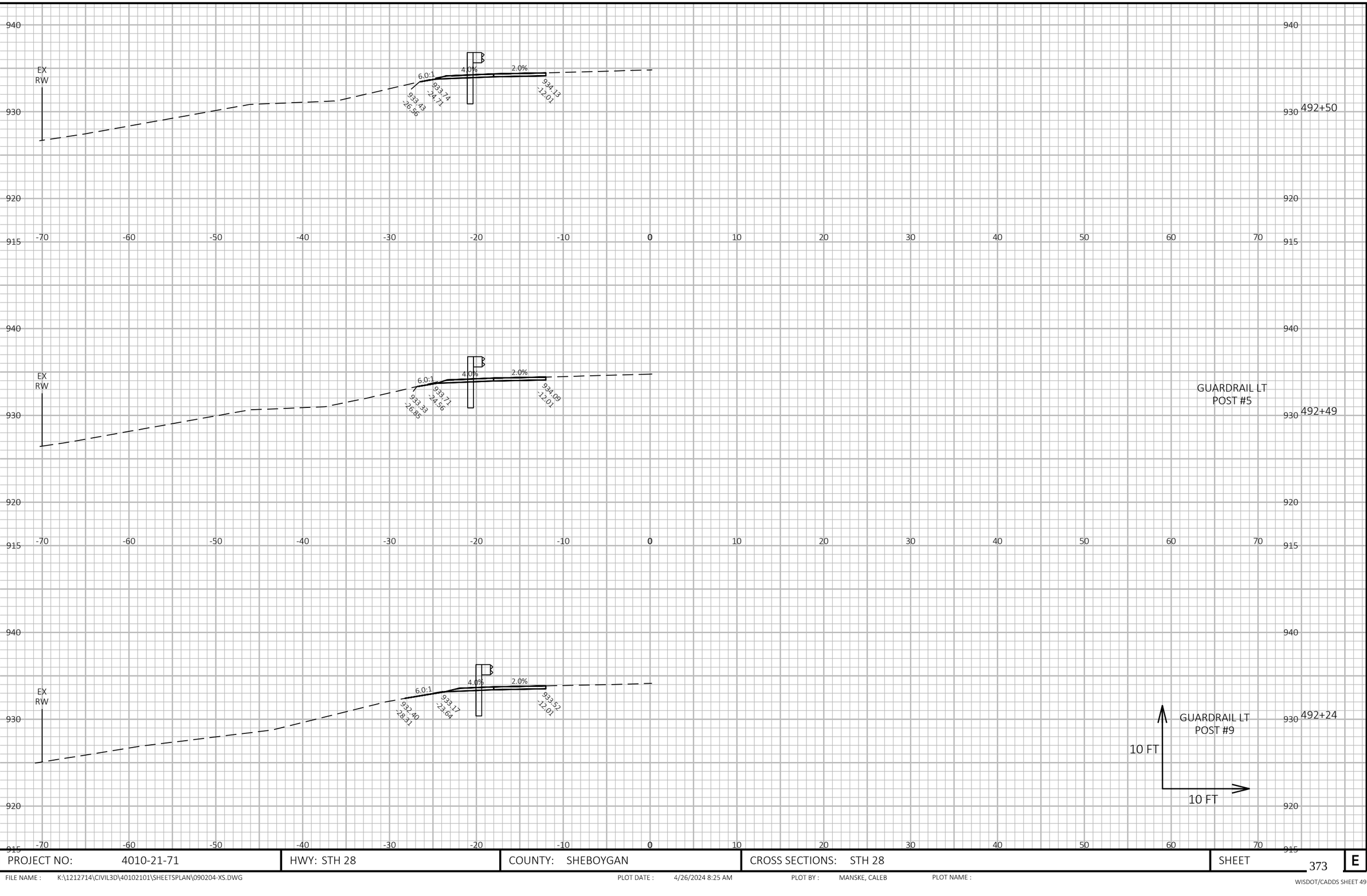
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PROJECT NO: 4010-21-71	HWY: STH 28	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 28	SHEET 372	E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\090204-XS.DWG PLOT DATE : 4/26/2024 8:25 AM PLOT BY : MANSKE, CALEB PLOT NAME :

WISDOT/CADDS SHEET 49



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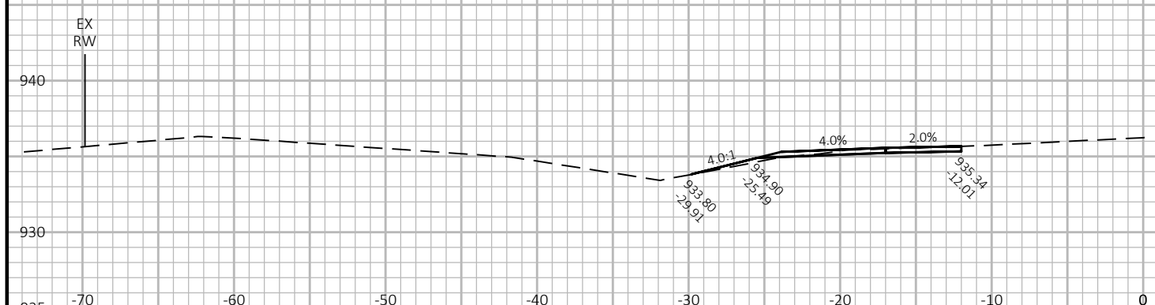
PROJECT NO: 4010-21-71	HWY: STH 28	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 28	SHEET 373	E

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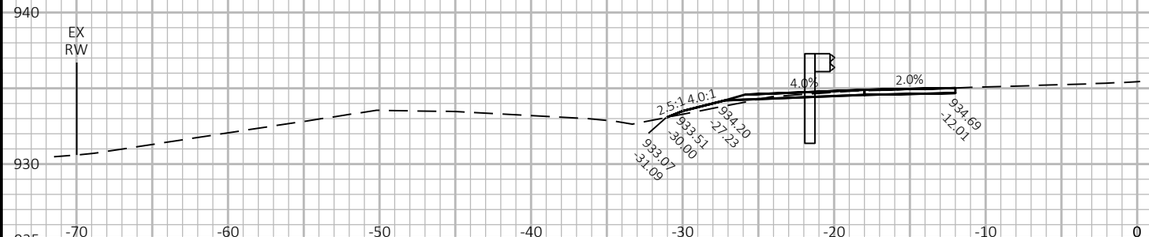
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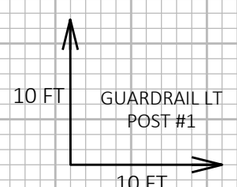


493+50



493+00





492+74

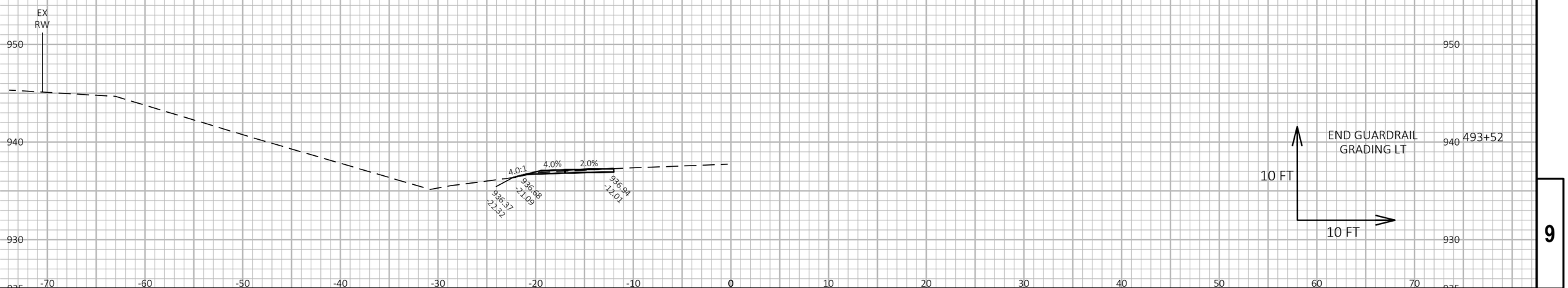
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PROJECT NO: 4010-21-71	HWY: STH 28	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 28	SHEET 374	E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\090204-XS.DWG PLOT DATE : 4/26/2024 8:26 AM PLOT BY : MANSKE, CALEB PLOT NAME :

WISDOT/CADDS SHEET 49



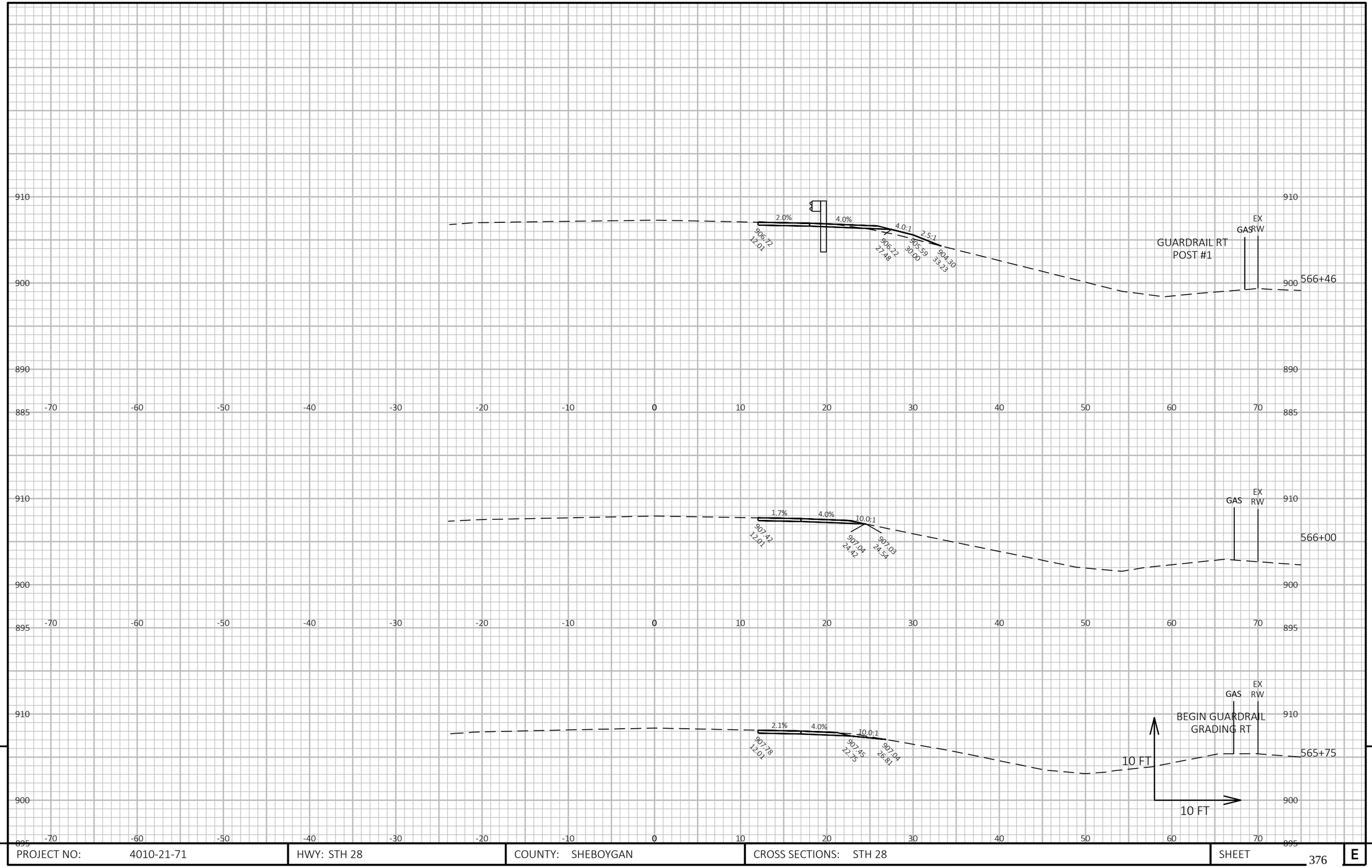
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PROJECT NO: 4010-21-71	HWY: STH 28	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 28	SHEET 375	E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\090204-XS.DWG PLOT DATE : 4/26/2024 8:26 AM PLOT BY : MANSKE, CALEB PLOT NAME :

WISDOT/CADDS SHEET 49



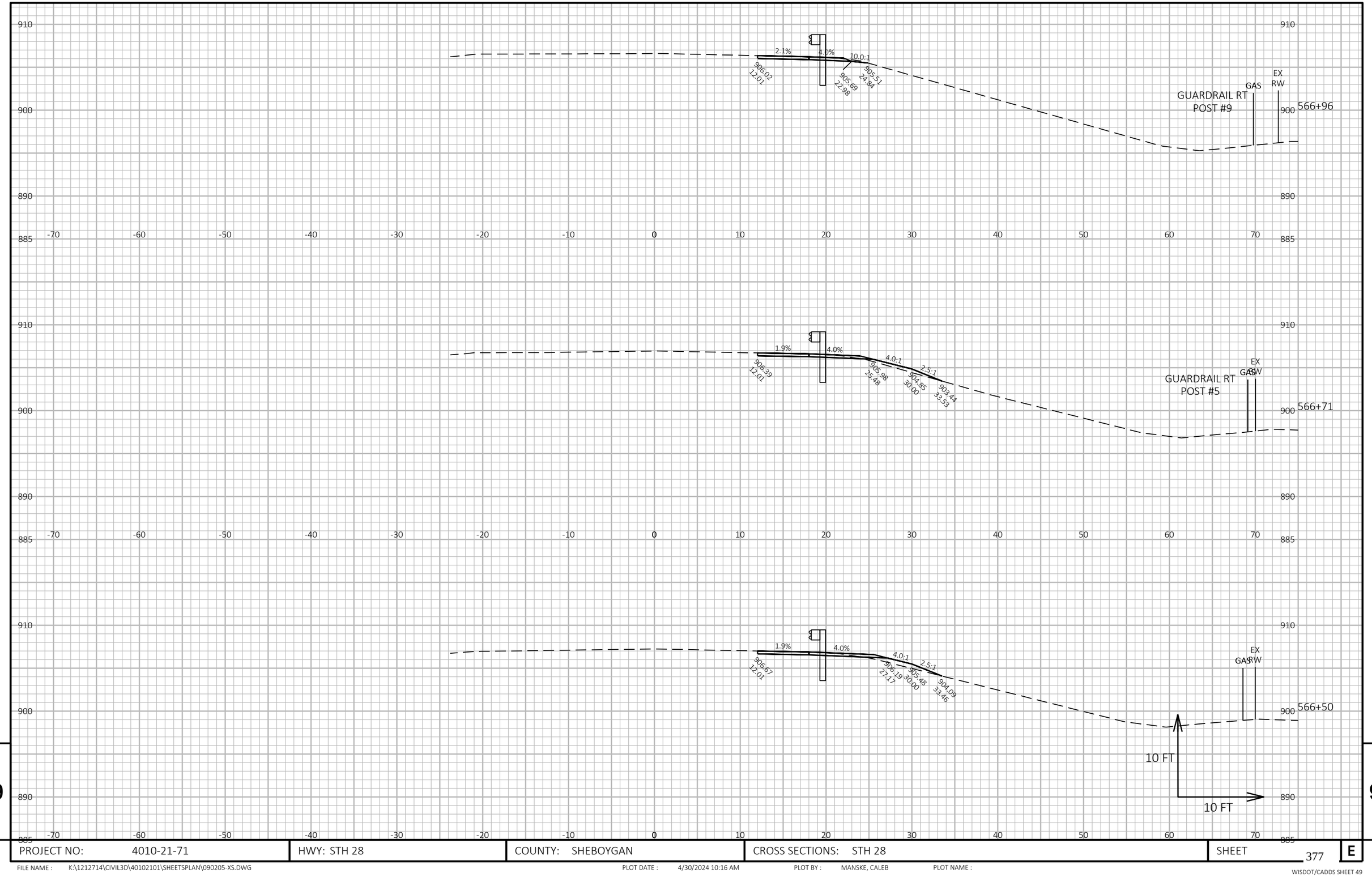
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PROJECT NO: 4010-21-71	HWY: STH 28	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 28	SHEET 376	E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\090205-XS.DWG PLOT DATE : 4/30/2024 10:16 AM PLOT BY : MANSKE, CALEB PLOT NAME :

WISDOT/CADDS SHEET 49



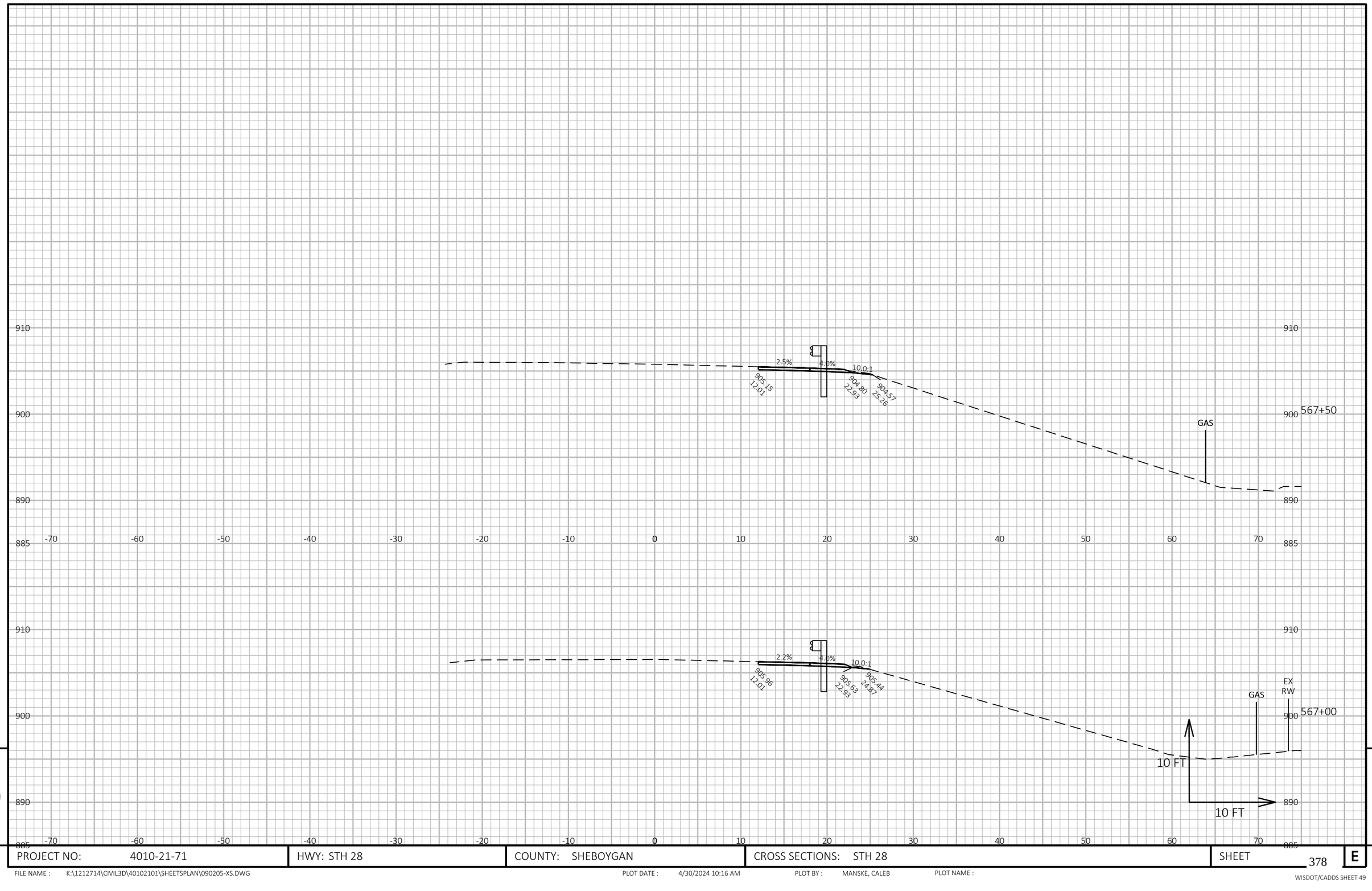
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PROJECT NO: 4010-21-71	HWY: STH 28	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 28	SHEET 377	E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\090205-XS.DWG PLOT DATE : 4/30/2024 10:16 AM PLOT BY : MANSKE, CALEB PLOT NAME :

WISDOT/CADDS SHEET 49

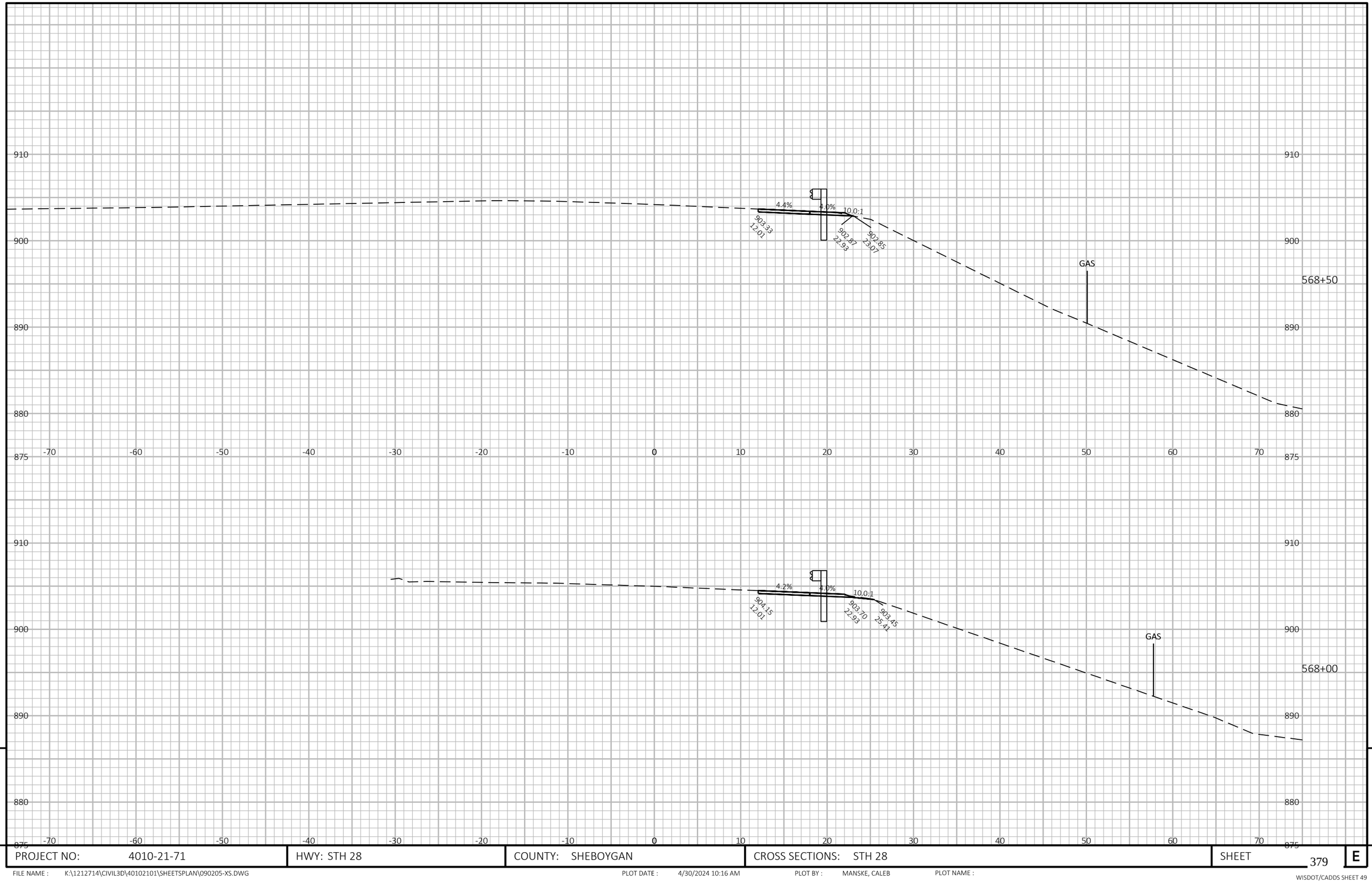


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PROJECT NO: 4010-21-71	HWY: STH 28	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 28	SHEET 378	E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\090205-XS.DWG PLOT DATE : 4/30/2024 10:16 AM PLOT BY : MANSKE, CALEB PLOT NAME :



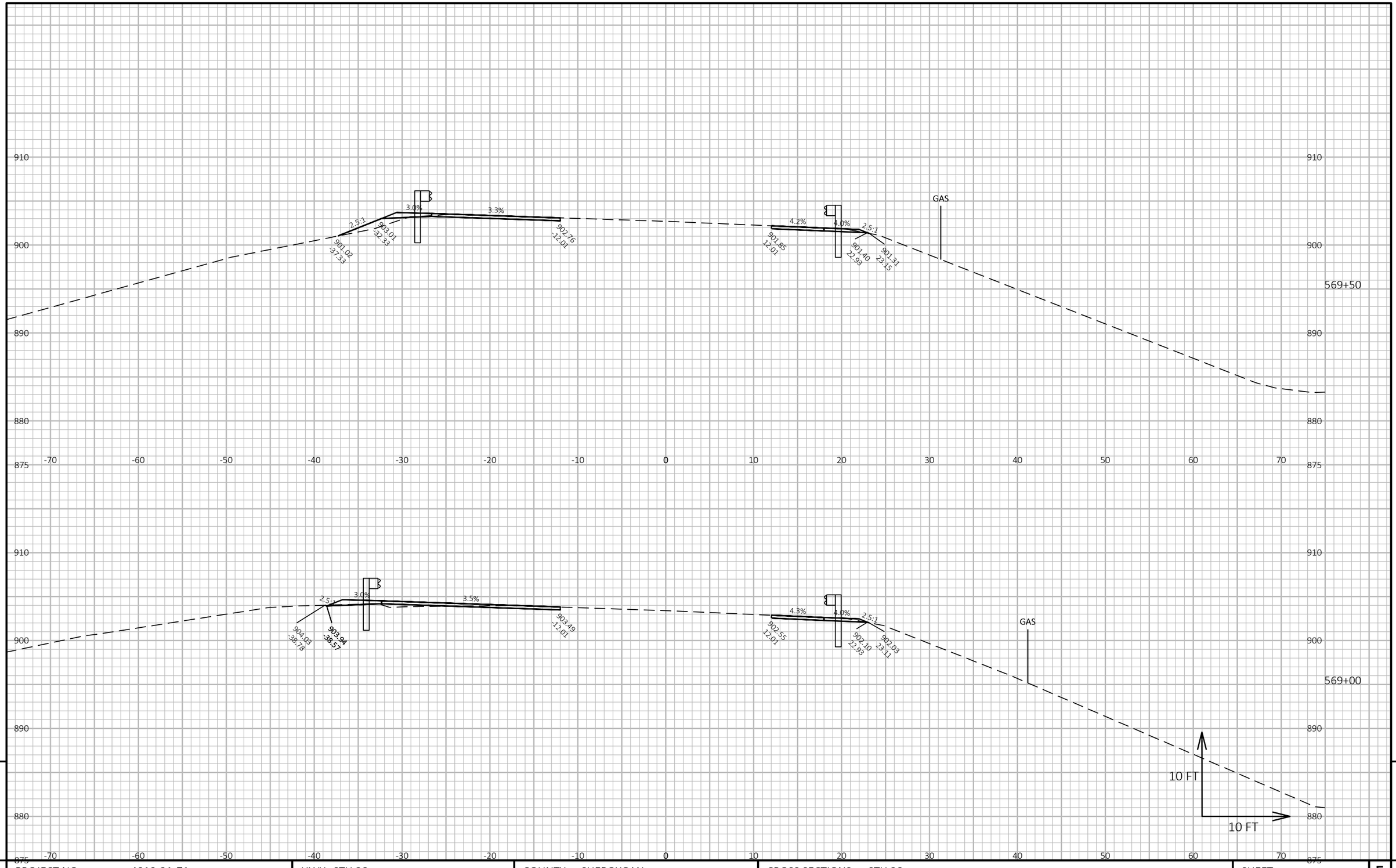
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PROJECT NO: 4010-21-71	HWY: STH 28	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 28	SHEET 379	E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\090205-XS.DWG PLOT DATE : 4/30/2024 10:16 AM PLOT BY : MANSKE, CALEB PLOT NAME :

WISDOT/CADDS SHEET 49

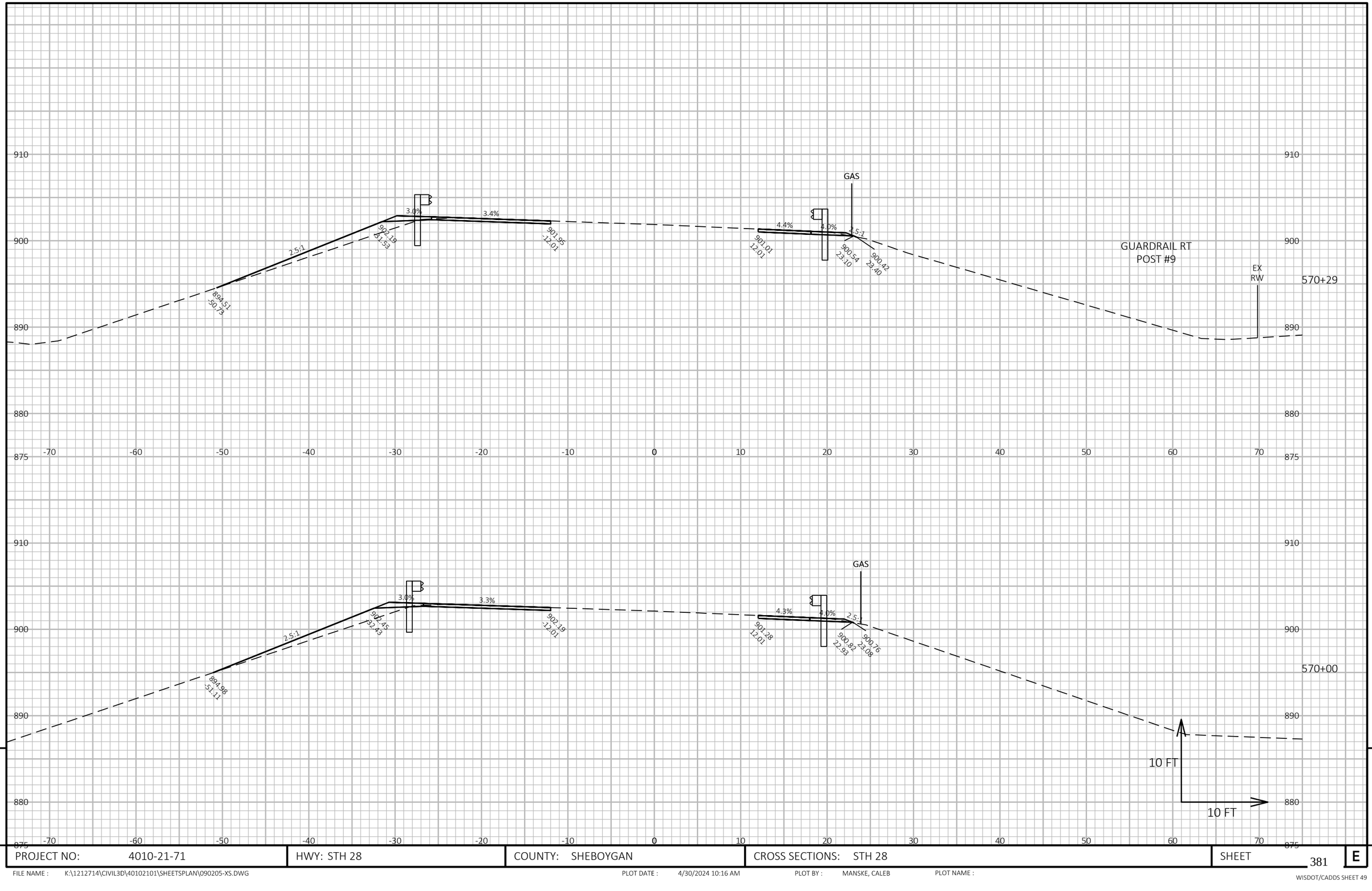


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PROJECT NO: 4010-21-71	HWY: STH 28	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 28	SHEET 380	E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\090205-XS.DWG PLOT DATE : 4/30/2024 10:16 AM PLOT BY : MANSKE, CALEB PLOT NAME :



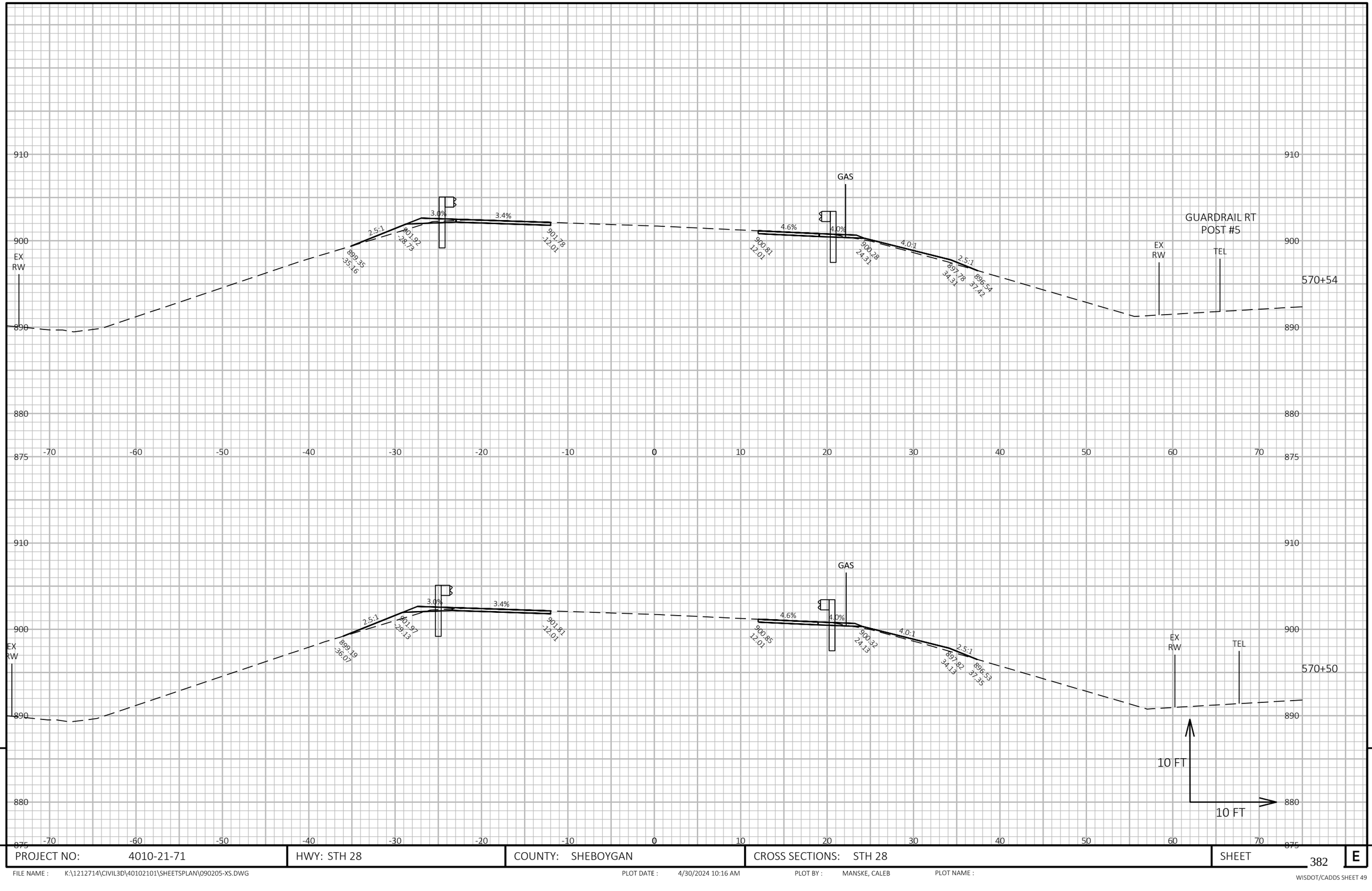
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PROJECT NO: 4010-21-71	HWY: STH 28	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 28	SHEET 381	E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\090205-XS.DWG PLOT DATE : 4/30/2024 10:16 AM PLOT BY : MANSKE, CALEB PLOT NAME :

WISDOT/CADDS SHEET 49



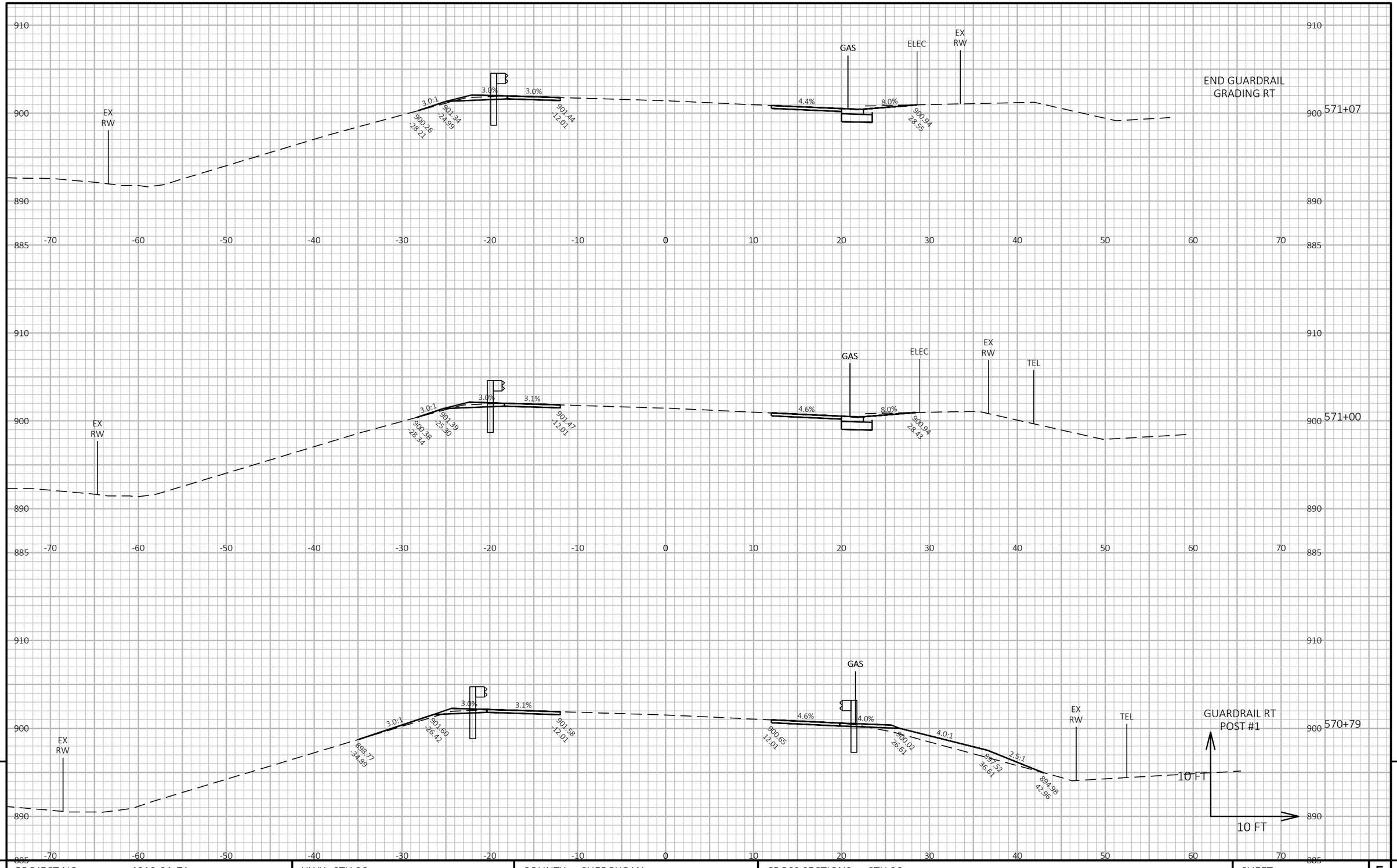
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PROJECT NO: 4010-21-71	HWY: STH 28	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 28	SHEET 382	E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\090205-XS.DWG PLOT DATE : 4/30/2024 10:16 AM PLOT BY : MANSKE, CALEB PLOT NAME :

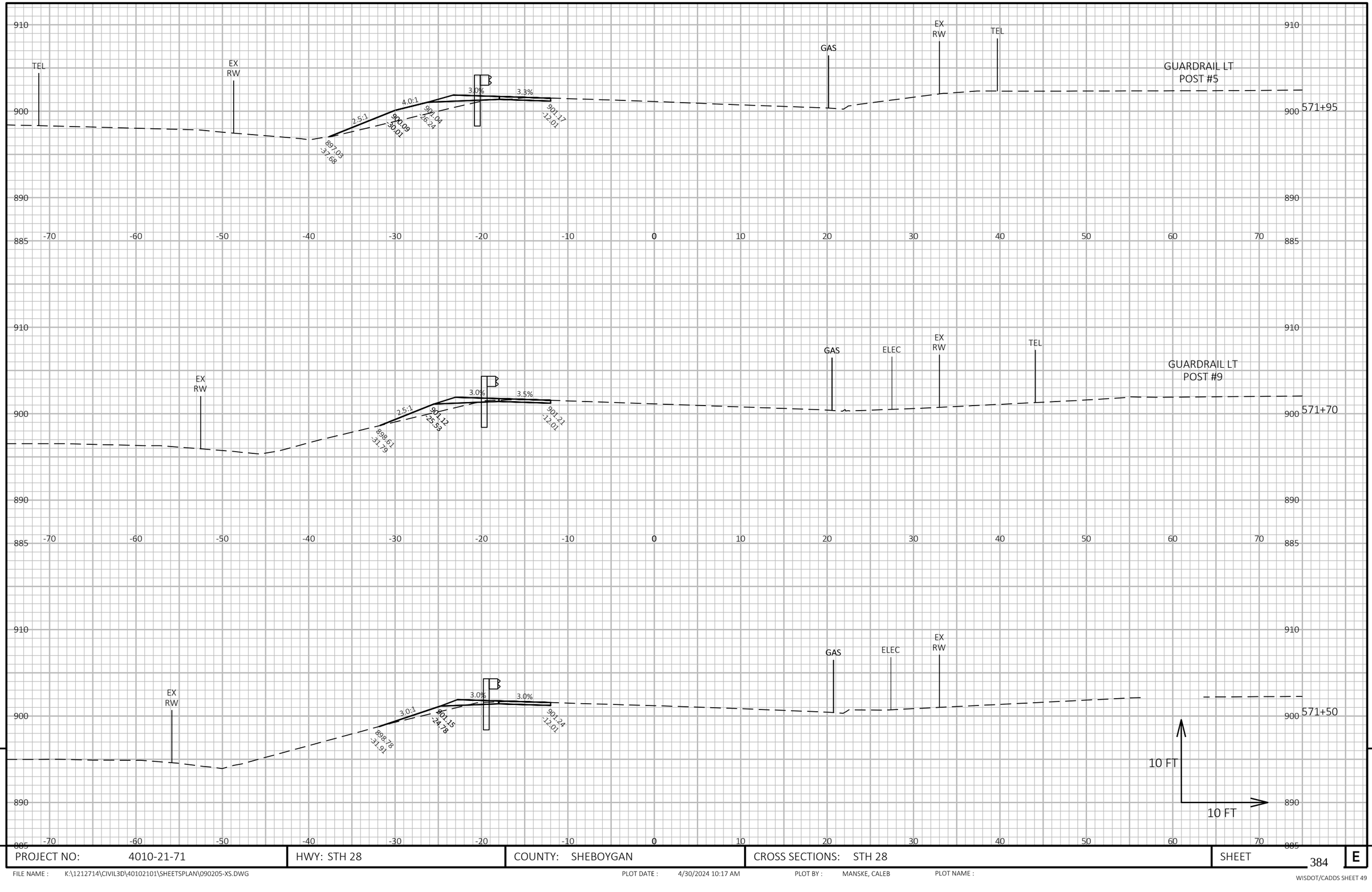
WISDOT/CADDS SHEET 49



PROJECT NO: 4010-21-71	HWY: STH 28	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 28	SHEET 383	E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\090205-XS.DWG PLOT DATE : 4/30/2024 10:16 AM PLOT BY : MANSKE, CALEB PLOT NAME :

WISDOT/CADDS SHEET 49



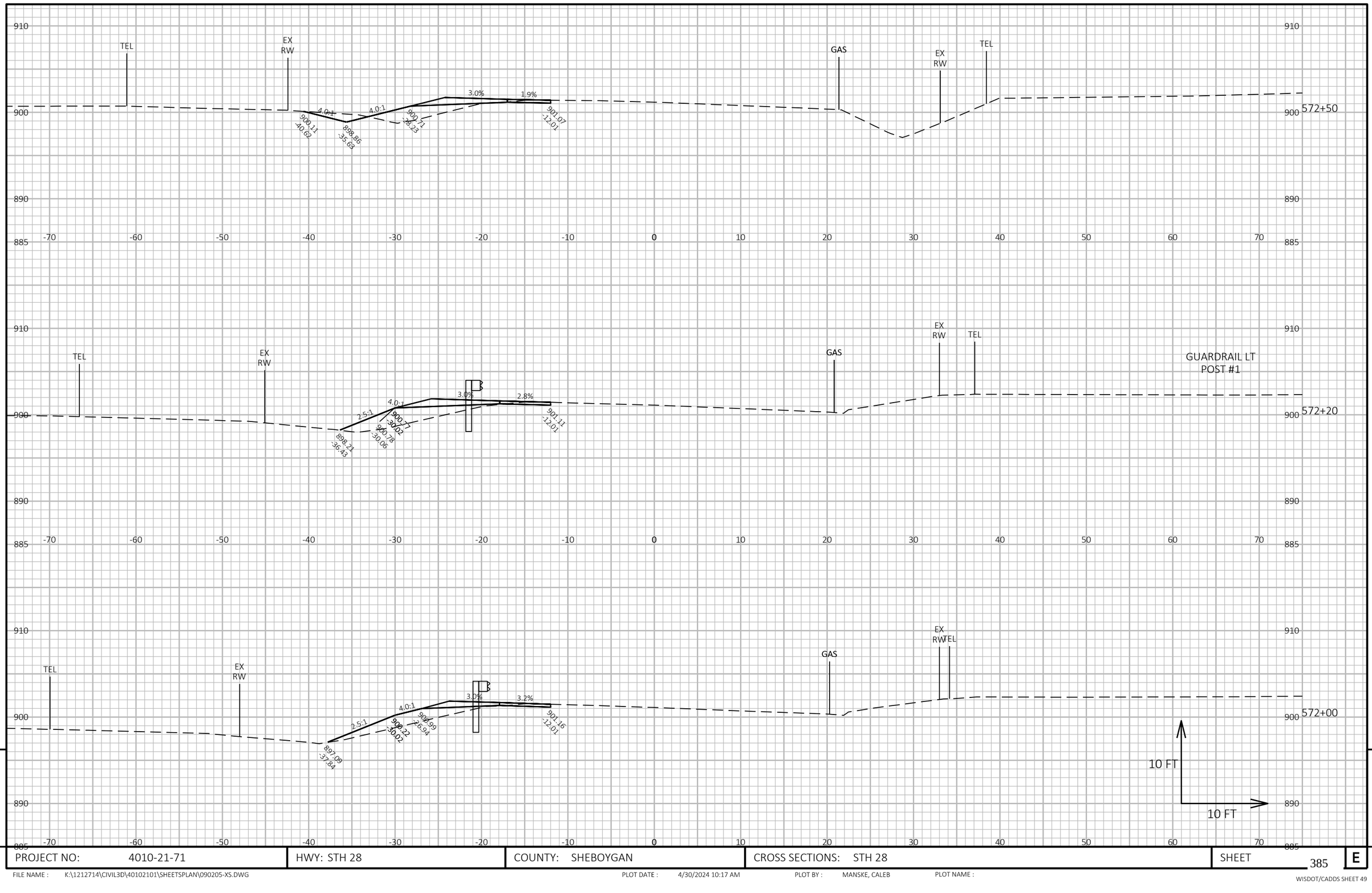
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PROJECT NO: 4010-21-71	HWY: STH 28	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 28	SHEET 384	E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\090205-XS.DWG PLOT DATE : 4/30/2024 10:17 AM PLOT BY : MANSKE, CALEB PLOT NAME :

WISDOT/CADDS SHEET 49

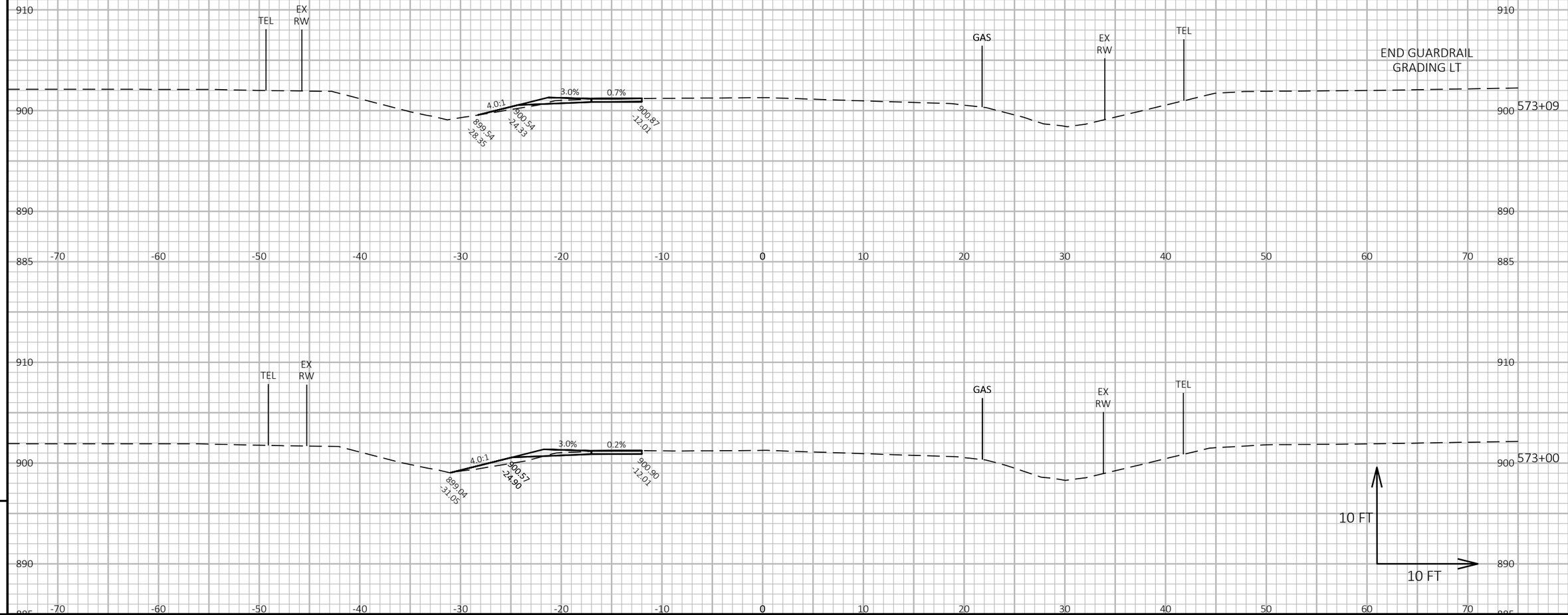


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PROJECT NO: 4010-21-71	HWY: STH 28	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 28	SHEET 385	E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\090205-XS.DWG PLOT DATE : 4/30/2024 10:17 AM PLOT BY : MANSKE, CALEB PLOT NAME :



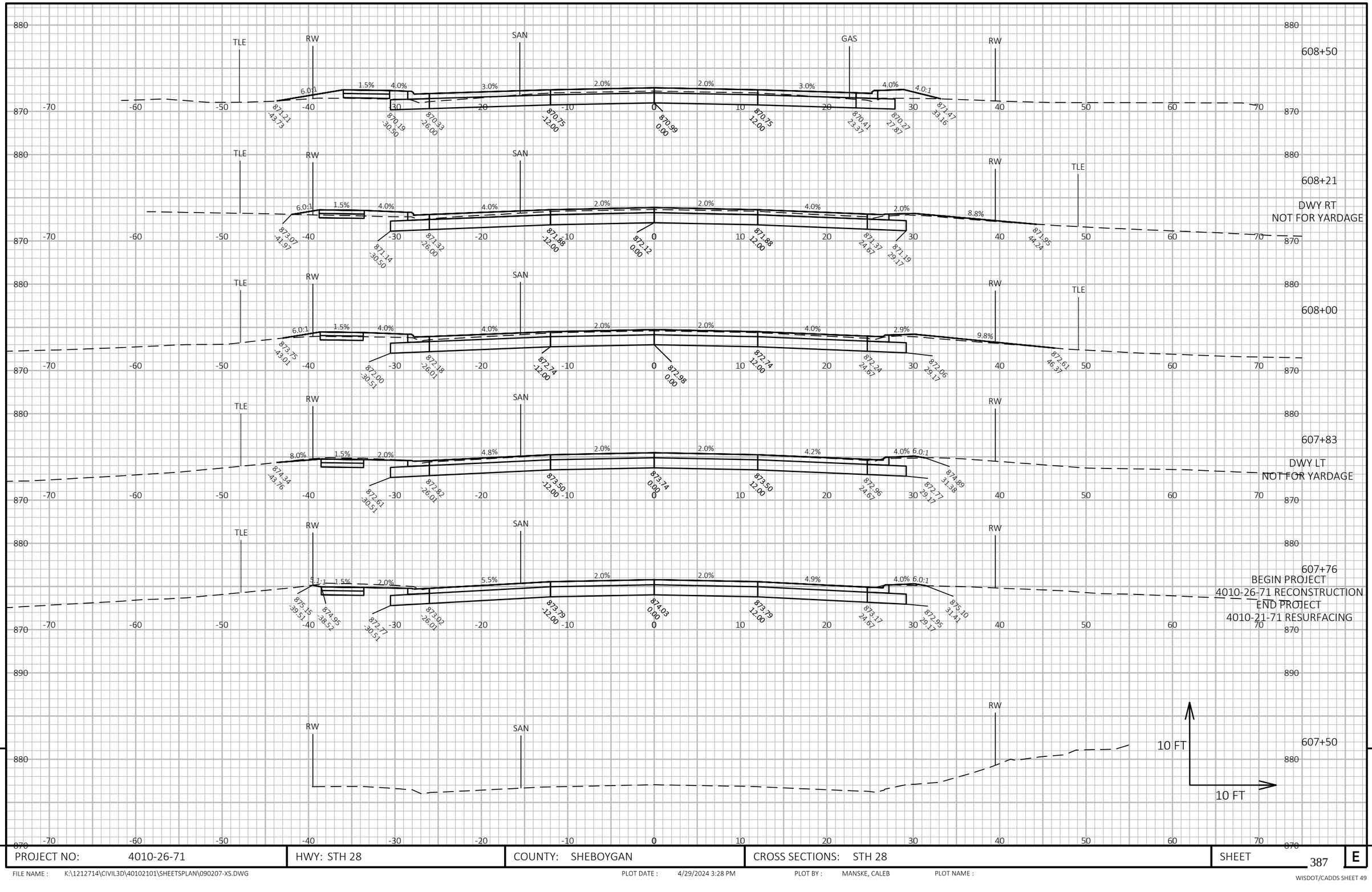
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PROJECT NO: 4010-21-71	HWY: STH 28	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 28	SHEET 386	E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\090205-XS.DWG PLOT DATE : 4/30/2024 10:17 AM PLOT BY : MANSKE, CALEB PLOT NAME :

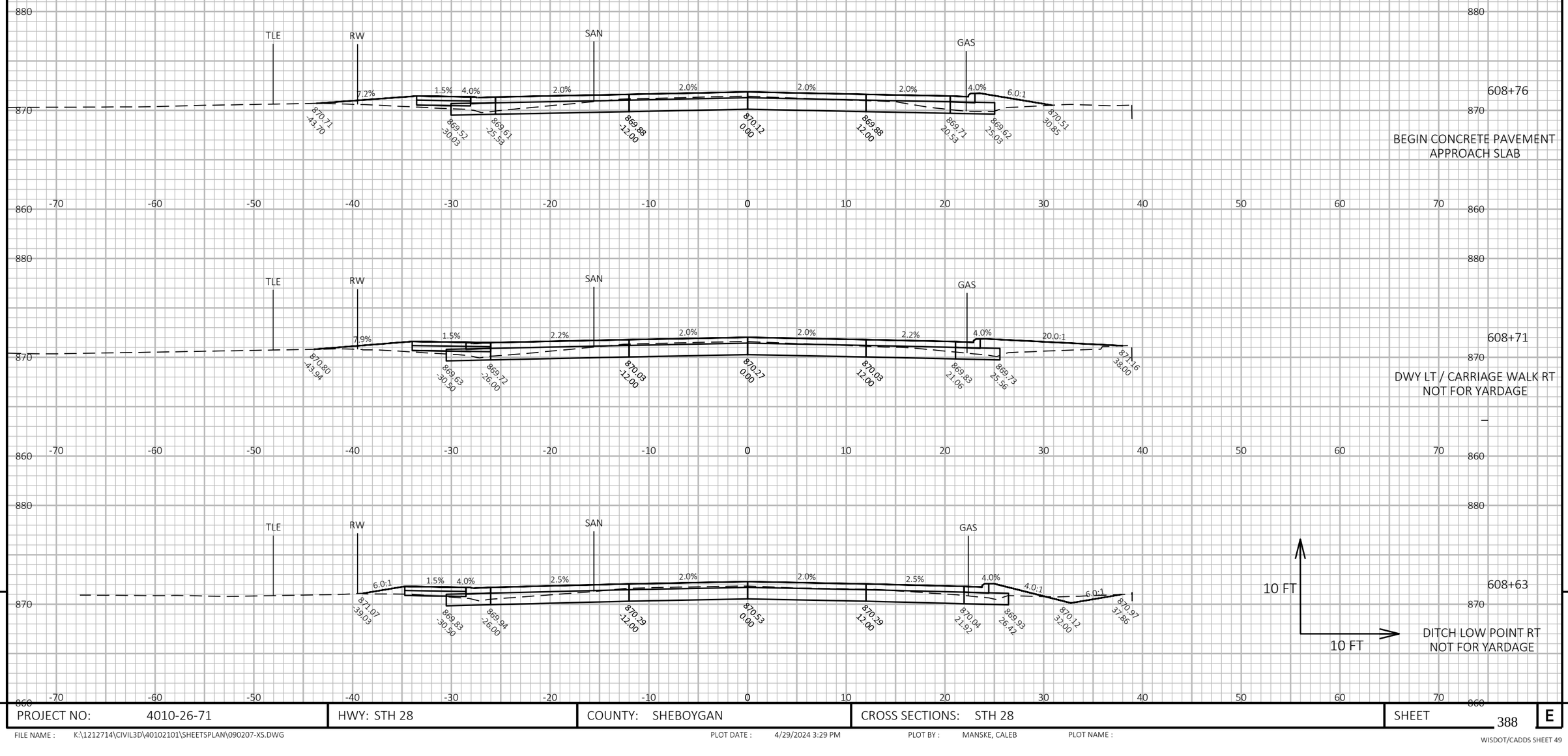
WISDOT/CADDS SHEET 49



PROJECT NO: 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 28	SHEET 387 E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\090207-XS.DWG PLOT DATE : 4/29/2024 3:28 PM PLOT BY : MANSKE, CALEB PLOT NAME :

WISDOT/CADDS SHEET 49

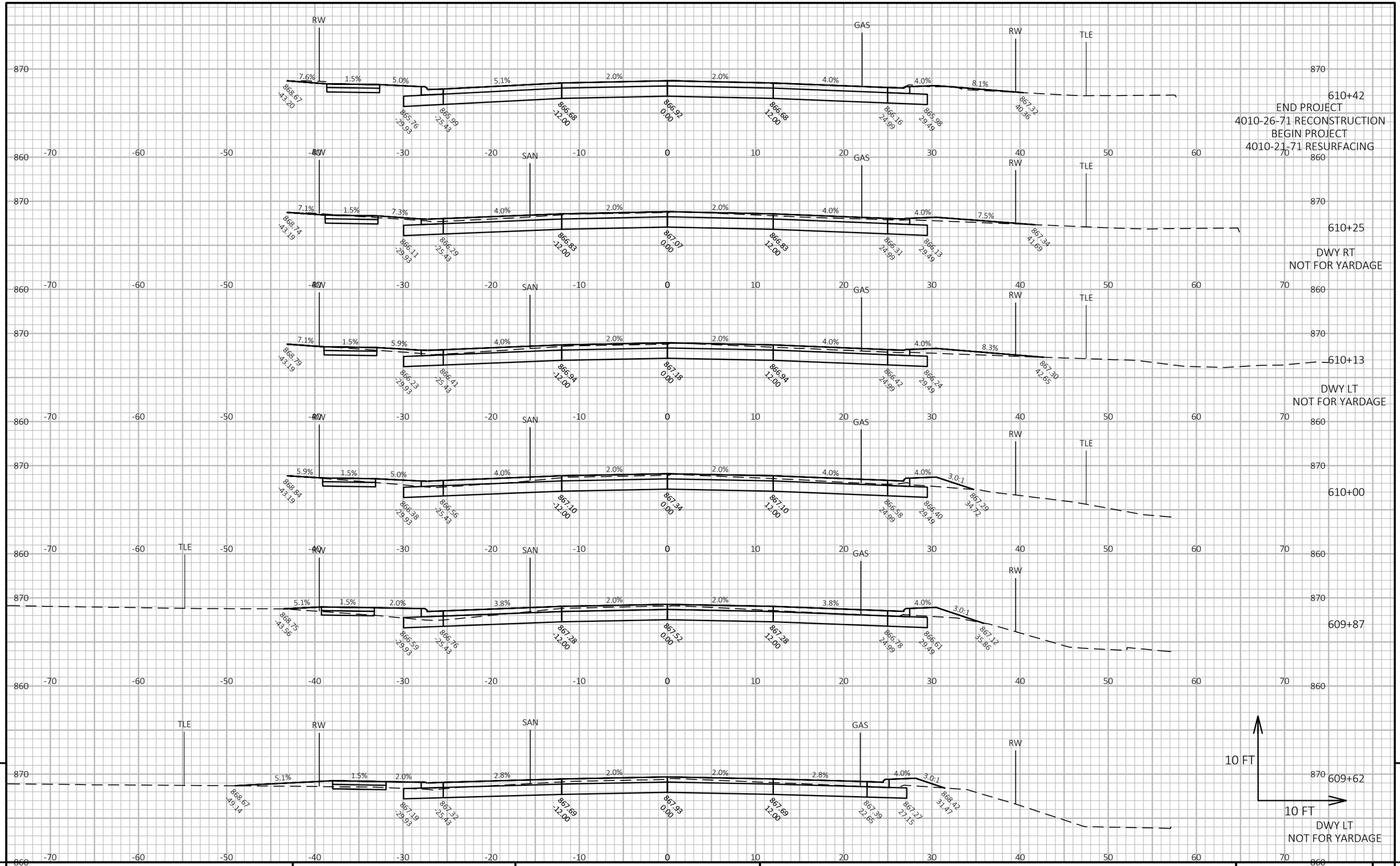


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PROJECT NO: 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 28	SHEET 388	E

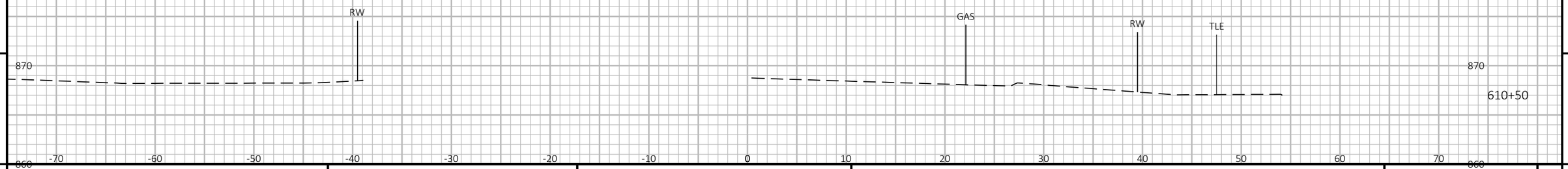
PROJECT NO: 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 28	SHEET 389	E



PROJECT NO: 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 28	SHEET 390	E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\090207-XS.DWG PLOT DATE : 7/24/2024 11:25 AM PLOT BY : SIEBERT, LUKE PLOT NAME :

WISDOT/CADDS SHEET 49



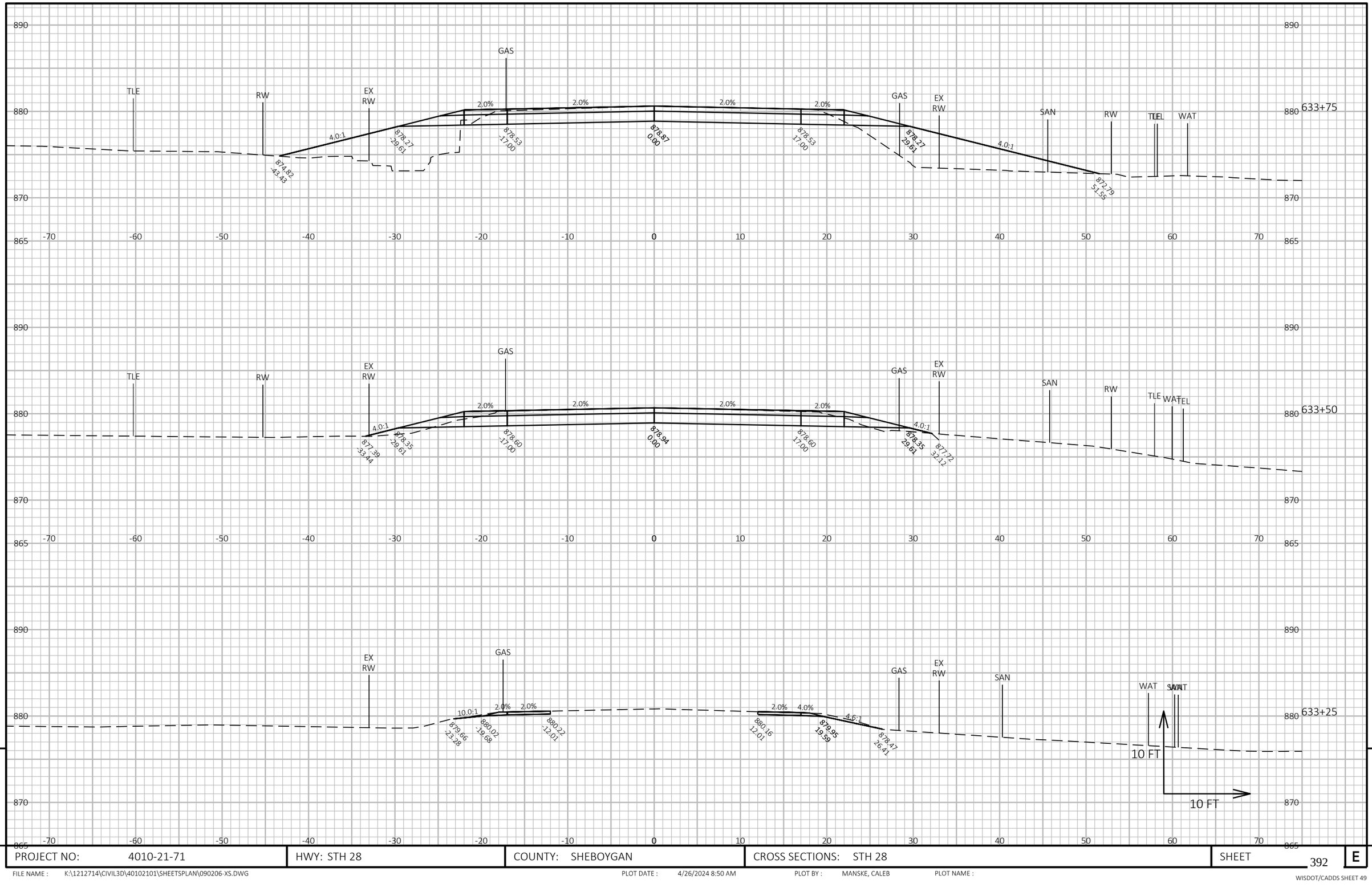
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PROJECT NO: 4010-26-71	HWY: STH 28	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 28	SHEET 391	E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\090207-XS.DWG PLOT DATE : 7/24/2024 11:25 AM PLOT BY : SIEBERT, LUKE PLOT NAME :

WISDOT/CADDS SHEET 49



PROJECT NO: 4010-21-71	HWY: STH 28	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 28	SHEET 392	E

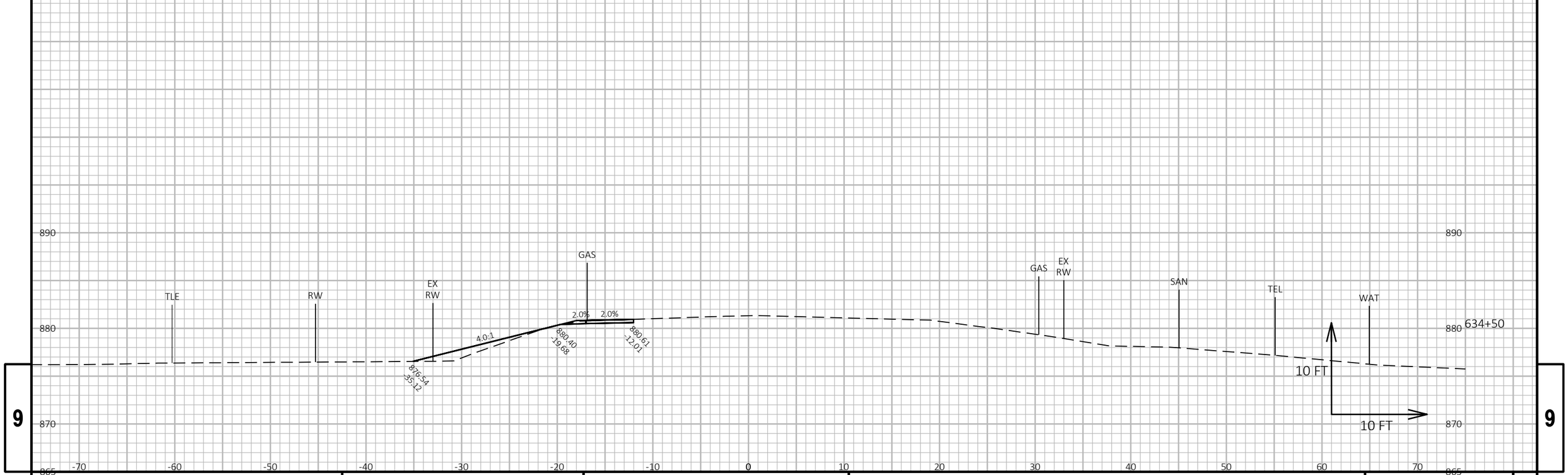
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WISDOT/CADDS SHEET 49

PROJECT NO: 4010-21-71	HWY: STH 28	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 28	SHEET 393	E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\090206-XS.DWG PLOT DATE : 4/26/2024 8:50 AM PLOT BY : MANSKE, CALEB PLOT NAME :

WISDOT/CADDS SHEET 49



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PROJECT NO: 4010-21-71	HWY: STH 28	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 28	SHEET 394	E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\090206-XS.DWG PLOT DATE : 4/26/2024 8:50 AM PLOT BY : MANSKE, CALEB PLOT NAME :

WISDOT/CADDS SHEET 49

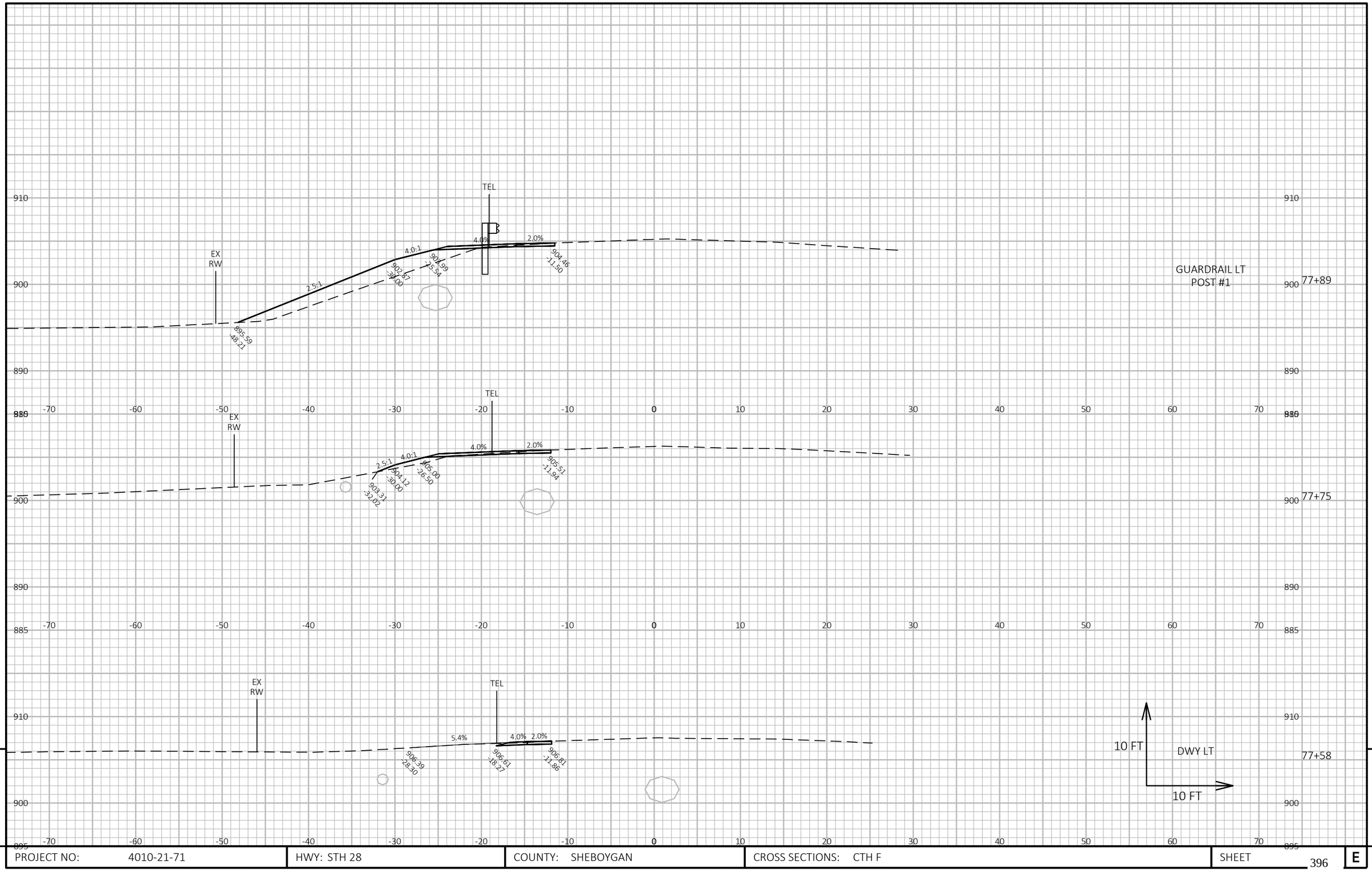
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PROJECT NO: 4010-21-71	HWY: STH 28	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 28	SHEET 395	E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\090206-XS.DWG PLOT DATE : 4/26/2024 8:51 AM PLOT BY : MANSKE, CALEB PLOT NAME :

WISDOT/CADDS SHEET 49

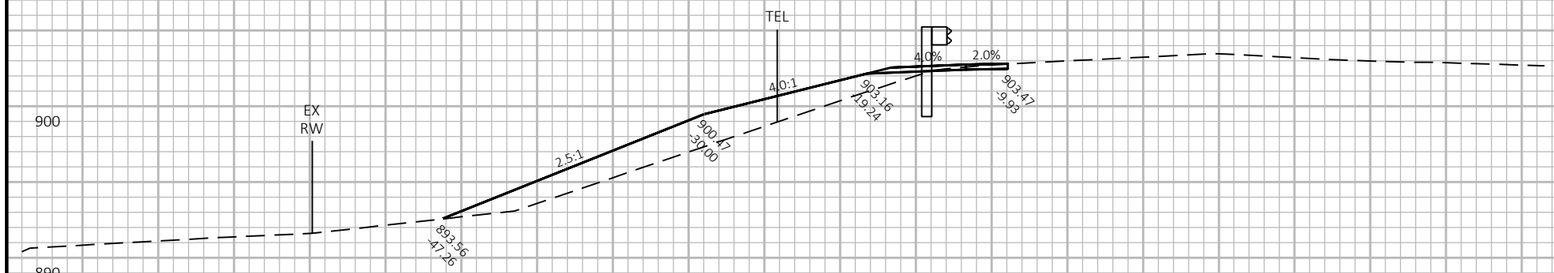


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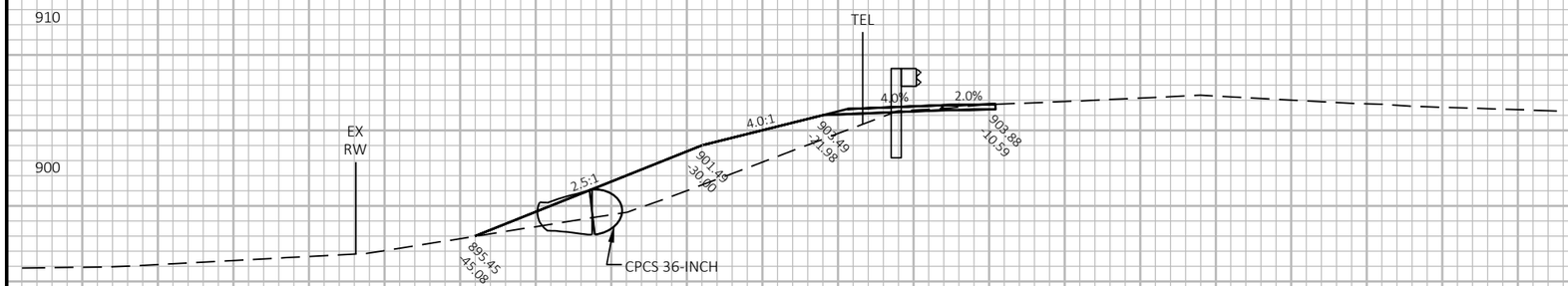
PROJECT NO: 4010-21-71	HWY: STH 28	COUNTY: SHEBOYGAN	CROSS SECTIONS: CTH F	SHEET 396	E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\090205-XS.DWG PLOT DATE : 4/26/2024 8:40 AM PLOT BY : MANSKE, CALEB PLOT NAME :

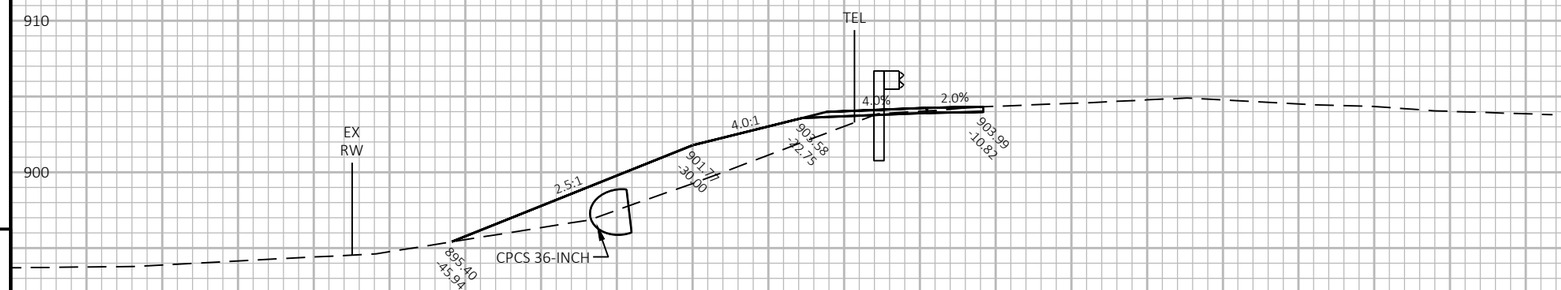


GUARDRAIL LT
POST #5

78+14



78+03



78+00



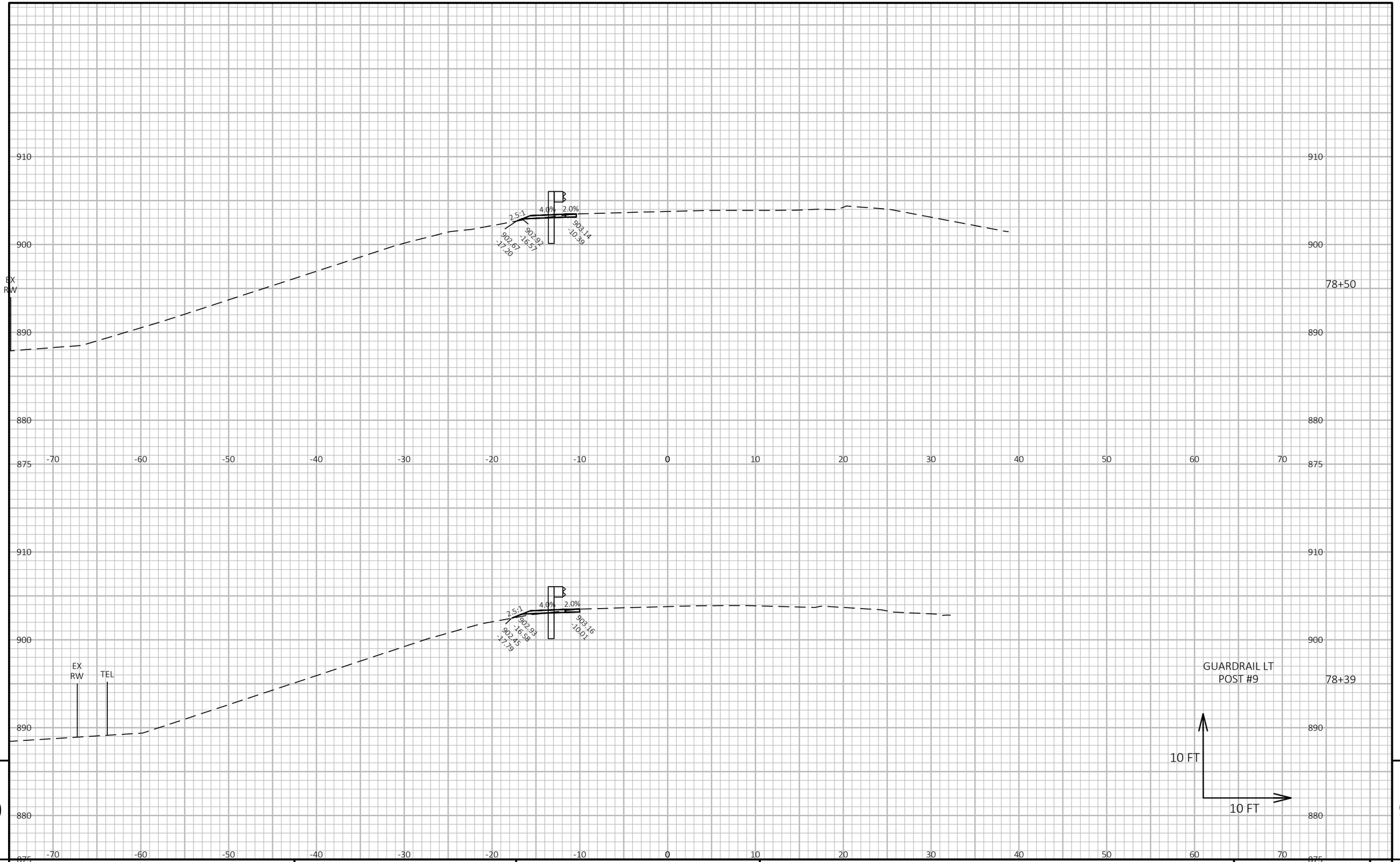
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PROJECT NO: 4010-21-71	HWY: STH 28	COUNTY: SHEBOYGAN	CROSS SECTIONS: CTH F	SHEET 397	E

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WISDOT/CADDS SHEET 49

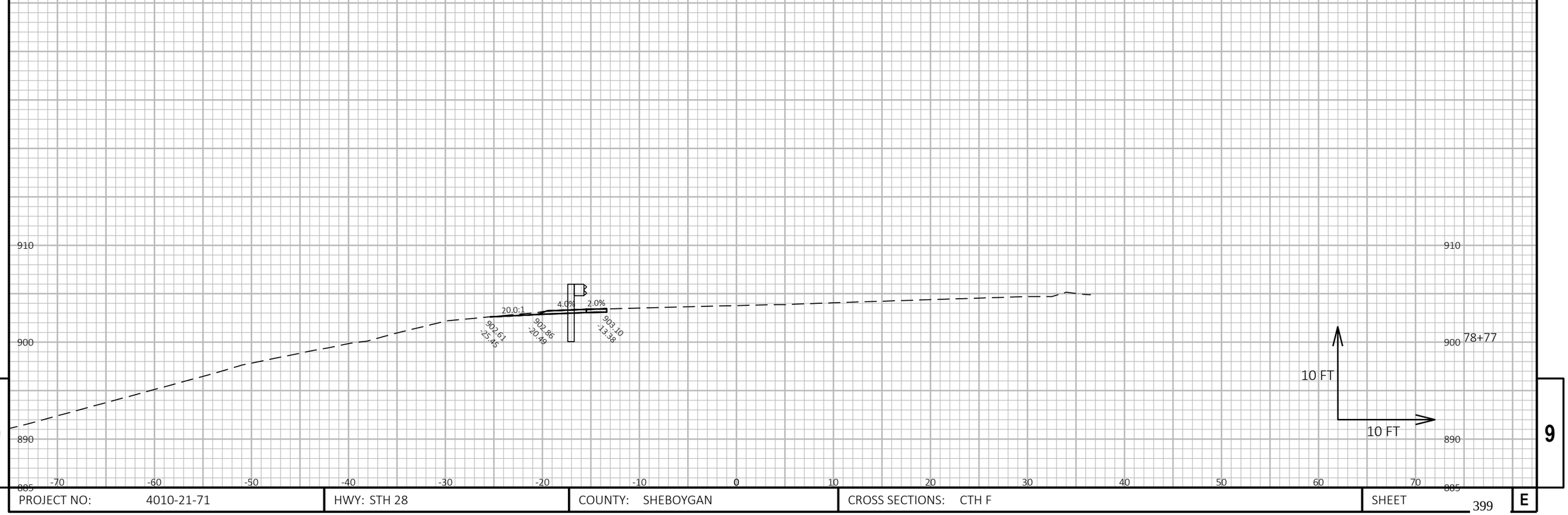


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PROJECT NO: 4010-21-71	HWY: STH 28	COUNTY: SHEBOYGAN	CROSS SECTIONS: CTH F	SHEET 398	E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\090205-XS.DWG PLOT DATE : 4/26/2024 8:41 AM PLOT BY : MANSKE, CALEB PLOT NAME :



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PROJECT NO: 4010-21-71	HWY: STH 28	COUNTY: SHEBOYGAN	CROSS SECTIONS: CTH F	SHEET 399	E

FILE NAME : K:\1212714\CIVIL3D\40102101\SHEETSPLAN\090205-XS.DWG PLOT DATE : 4/26/2024 8:41 AM PLOT BY : MANSKE, CALEB PLOT NAME :

WISDOT/CADDS SHEET 49

Wisconsin Department of Transportation

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