WKE

DECEMBER 2026

PROJECT ID: 2695-05-72

WITH: N/A

COUNTY: OZAUKEE

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 = 154



21

DESIGN DESIGNATION

A.A.D.T.	2027	=	14,700
A.A.D.T.	2047	=	15,800
D.H.V.		=	1,660
D.D.		=	58/42
T.		=	5.8%
DESIGN SPEED		=	50 MPH
ESALS		=	3,100,000

CONVENTIONAL SYMBOLS

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

C MEQUON/T GRAFTON, PIONEER RD

INTERSECTION PORT WASHINGTON RD

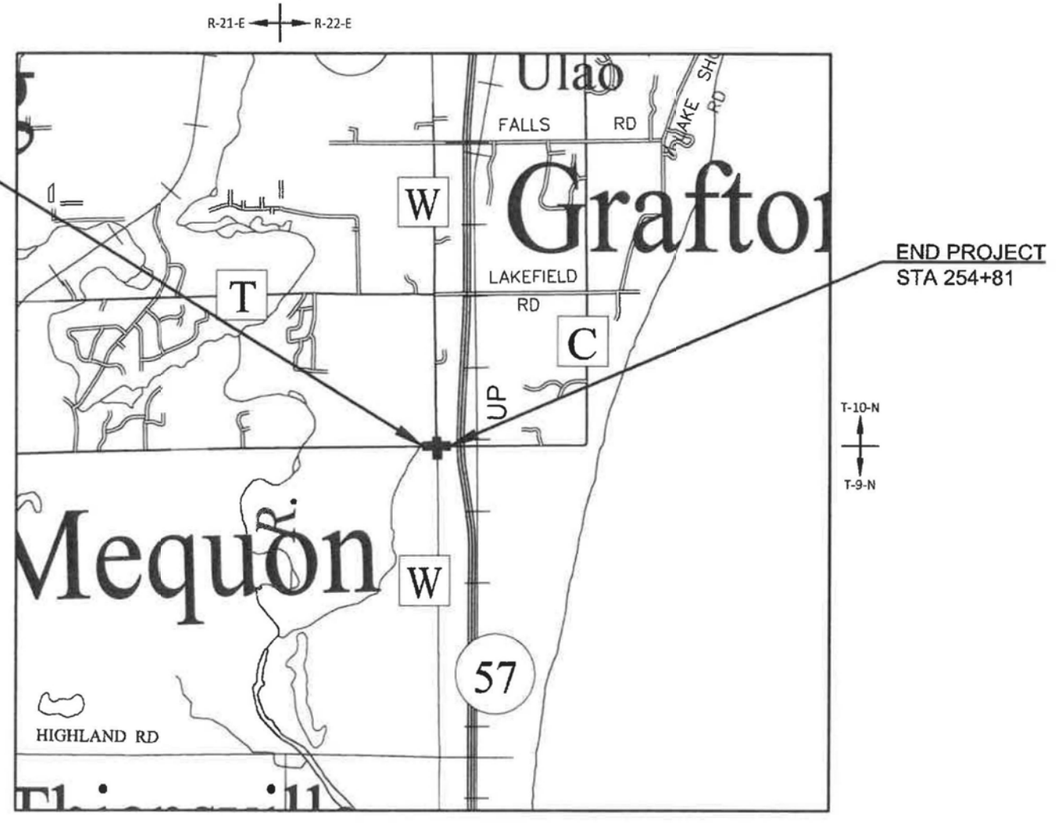
CTH C

OZAUKEE COUNTY

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
2695-05-72	WISC 2027076	1

STATE PROJECT NUMBER

2695-05-72



LAYOUT

SCALE 0 1 MI

TOTAL NET LENGTH OF CENTERLINE = 0.122 MI

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

ACCEPTED FOR OZAUKEE COUNTY

7/21/26 (DATE) (COUNTY HIGHWAY COMMISSIONER)

ORIGINAL PLANS PREPARED BY

AYRES

WISCONSIN ANDREW A. ROWELL E-38296 GREEN BAY WI PROFESSIONAL ENGINEER

7/21/2026 (Date)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	AYRES
Designer	AYRES
Project Manager	GREG HAFEMAN
Regional Supervisor	AMY TAETSCH

APPROVED FOR THE DEPARTMENT

DATE: 07/21/2026 (Signature)

E

FILE NAME : I:\45\450785 OZAUKEE CTH W & CTH C HSIP\C3D\SHEETS\010101-TI.DWG

PLOT DATE : 7/2/2026 5:33 PM

PLOT BY : GARNICA, BRANDON

PLOT NAME :

UTILITIES CONTACTS

AT&T DISTRIBUTION
COMMUNICATION
JAMIE BRATZ
9016 W CALUMET RD
MILWAUKEE, WI 53224
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EMAIL: JB8357@ATT.COM

LUMEN
COMMUNICATION
BRAHIM GADDOUR
235 INTERTECH DR
BROOKFIELD, WI 53045
PHONE: 414-908-1027
EMAIL: brahim.gaddour@lumen.com

VERIZON
COMMUNICATION
RJ CICATELLO
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NEW BERLIN, WI 53151
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EMAIL: randy.cicatello@verizon.com

SPECTRUM
COMMUNICATION
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5475 W ABBOTT AVE
GREENFIELD, WI 53220
PHONE: 414-207-0215
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WE ENERGIES
ELECTRIC
JOE FELLENZ
W140 N9100 LILLY ROAD
MENOMONEE FALLS, WI 53051
PHONE: 262-502-6831
EMAIL: joseph.fellenz@we-energies.com

WE ENERGIES
GAS
SPENSER DOONER
700 S KANE ST
BURLINGTON, WI 53105
PHONE: 262-763-1083
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ORDER OF SECTION 2 DETAIL SHEETS

GENERAL NOTES
TYPICAL SECTIONS
CONSTRUCTION DETAILS
PLAN DETAILS
PLAN GRADES
EROSION CONTROL
STORM SEWER
TRAFFIC SIGNAL PLAN
TEMPORARY TRAFFIC SIGNAL
PAVEMENT MARKING
TRAFFIC CONTROL
ALIGNMENT
UTILITY PLAN

WISCONSIN DNR LIAISON

RYAN PAPPAS
SOUTHEASTERN REGION
1027 W ST PAUL AVENUE
MILWAUKEE, WI 53233--2641
PHONE: 414-750-7495
EMAIL: ryan.pappas@wisconsin.gov

SOUTHEASTERN WISCONSIN RPC

ROB MERRY
CHIEF SURVEYOR
W239 N1812 ROCKWOOD DRIVE
P.O. BOX 1607
WAUKESHA, WI 53187-1607
PHONE: 262-953-4289 OR 920-912-1036
EMAIL: RMERRY@SEWRPC.ORG

ANDY TRAEGER
CONSTRUCTION COORDINATOR
W239 N1812 ROCKWOOD DRIVE
P.O. BOX 1607
WAUKESHA, WI 53187-1607
PHONE: 262-953-4296 OR 262-853-8463
EMAIL: ATRAEGER@SEWRPC.ORG

WISCONSIN DEPT OF TRANSPORTATION GEODETIC SERVICES

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DESIGN PROJECT MANAGER

GREG HAFEMAN, PE
WISCONSIN DEPARTMENT OF TRANSPORTATION
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DESIGN PROJECT LEADER

ANDREW ROWELL, PE, PTOE
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EMAIL: rowella@ayresassociates.com

COUNTY HIGHWAY COMMISSIONER

JON E EDGREN, PE
OZAUKEE COUNTY
410 SOUTH SPRING STREET
PORT WASHINGTON, WI 53074
PHONE: 262-238-8335
EMAIL: jedgren@ozaukeecounty.gov

GENERAL NOTES

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

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

CURVE DATA IS BASED ON THE RADIUS DEFINITION.

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

BEARINGS SHOWN ON THE PLAN ARE TRUE BEARINGS.

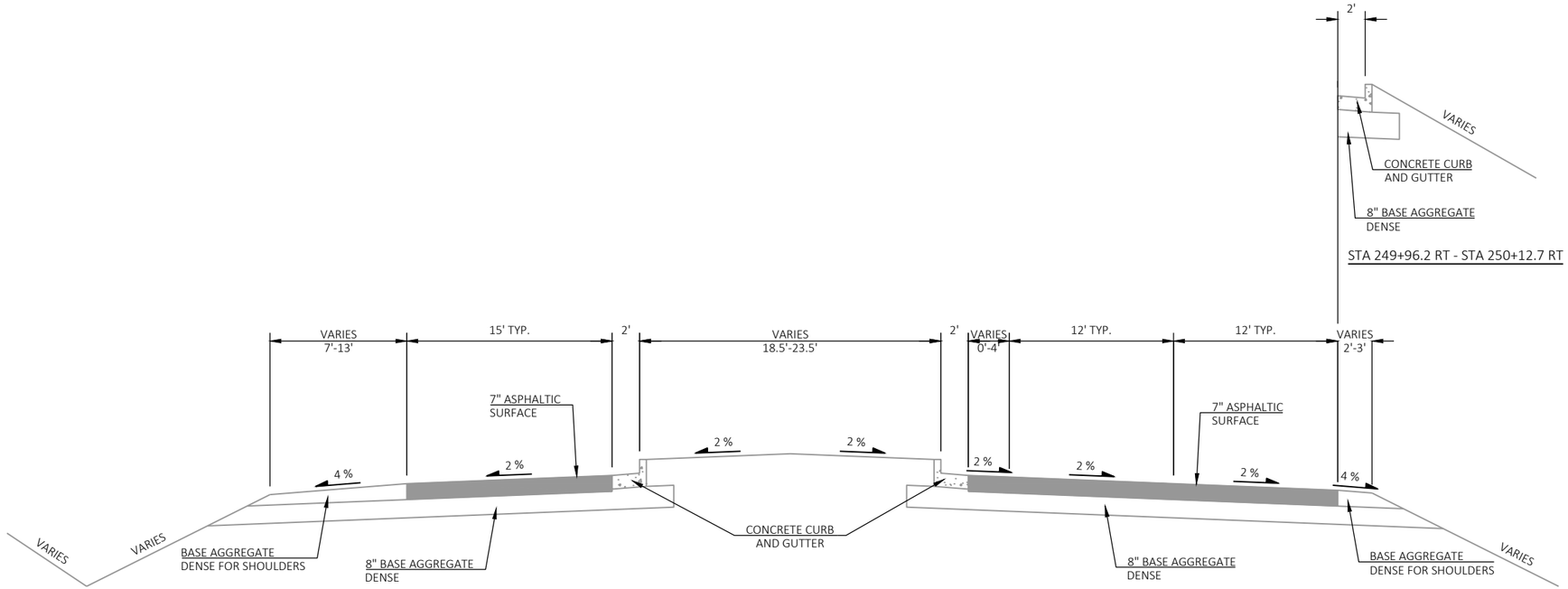
RUNOFF COEFFICIENT TABLE

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

TOTAL PROJECT AREA = 0.50 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.20 ACRES

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

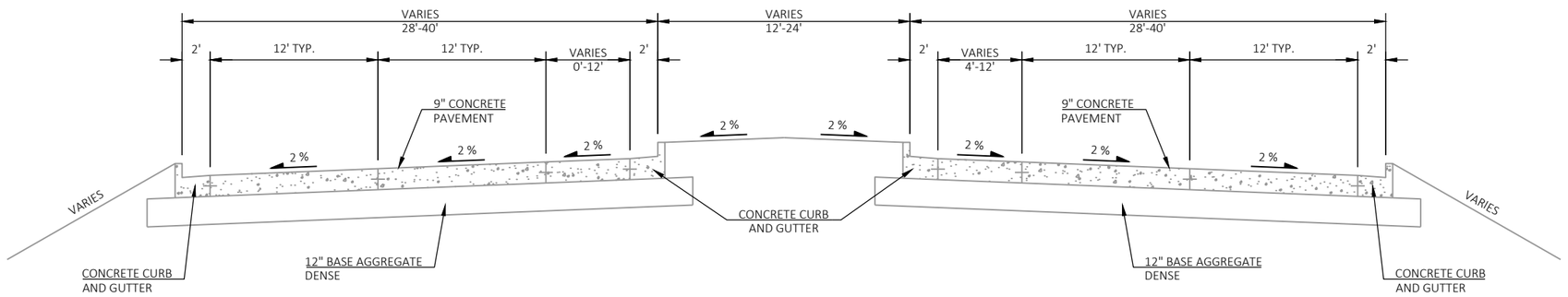
2



STA 249+96.2 RT - STA 250+12.7 RT

EXISTING TYPICAL SECTION FOR CTH C

STA 248+34.0 RT - STA 250+12.7 RT
STA 251+98.5 LT - STA 252+22.6 LT

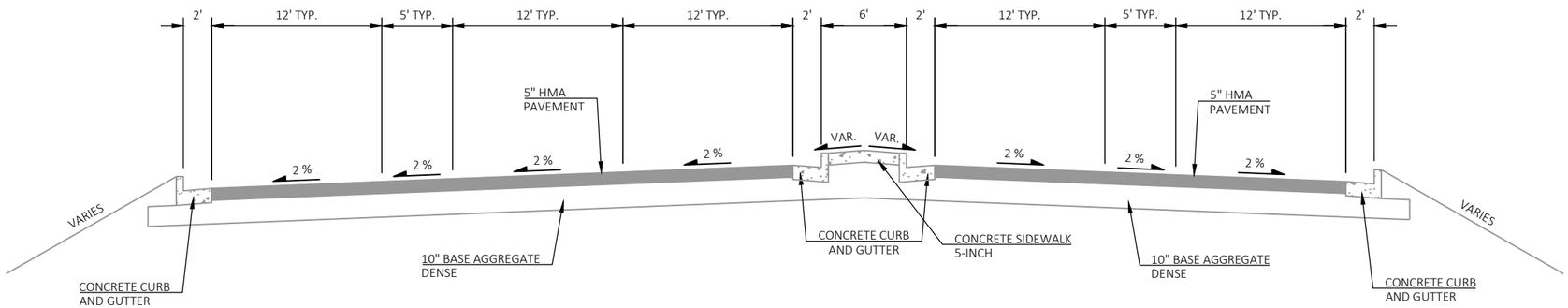


EXISTING TYPICAL SECTION FOR CTH C

STA 250+12.7 RT - STA 253+09.9 RT
STA 252+22.6 LT - STA 253+09.9 LT

PROJECT NO: 2695-05-72	HWY: CTH C	COUNTY: OZAUKEE	TYPICAL SECTIONS	SHEET 3	E

2



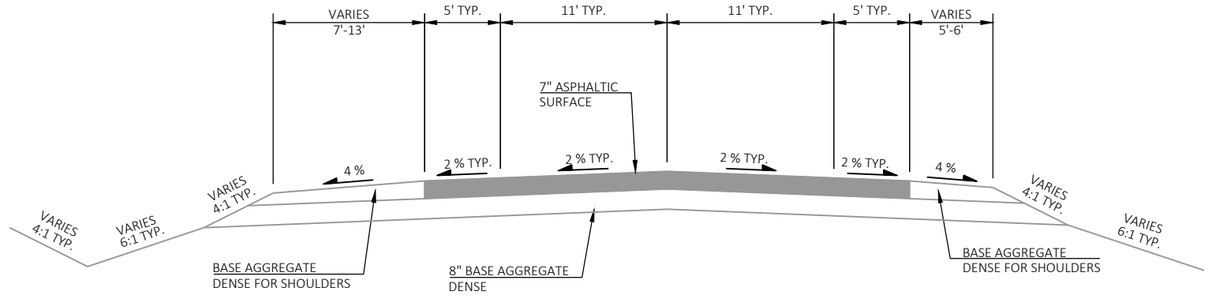
EXISTING TYPICAL SECTION FOR CTH C

STA 253+09.9 - STA 254+81.0

PROJECT NO: 2695-05-72	HWY: CTH C	COUNTY: OZAUKEE	TYPICAL SECTIONS	SHEET 4	E

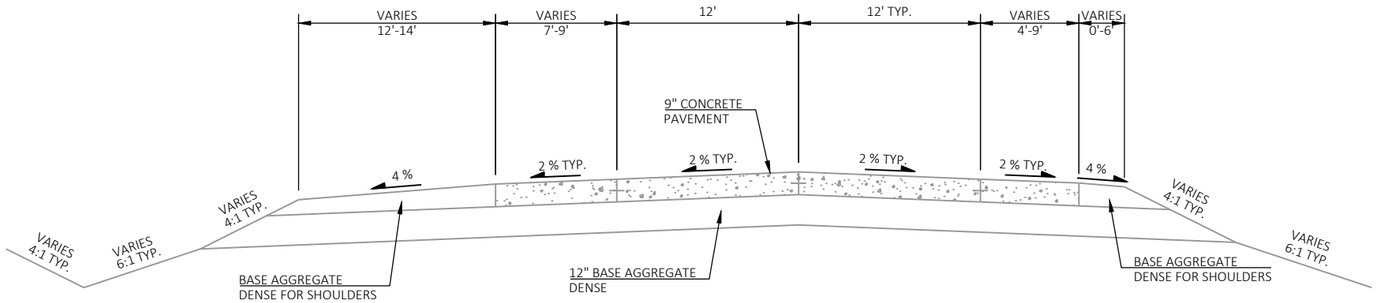
FILE NAME : I:\45\450785 OZAUKEE CTH W & CTH C HSIP\C3D\SHEETS\020301-TS.DWG
LAYOUT NAME - 020302-ts

PLOT DATE : 7/29/2026 10:18 AM PLOT BY : GARNICA, BRANDON PLOT NAME : PLOT SCALE : 1 IN:10 FT



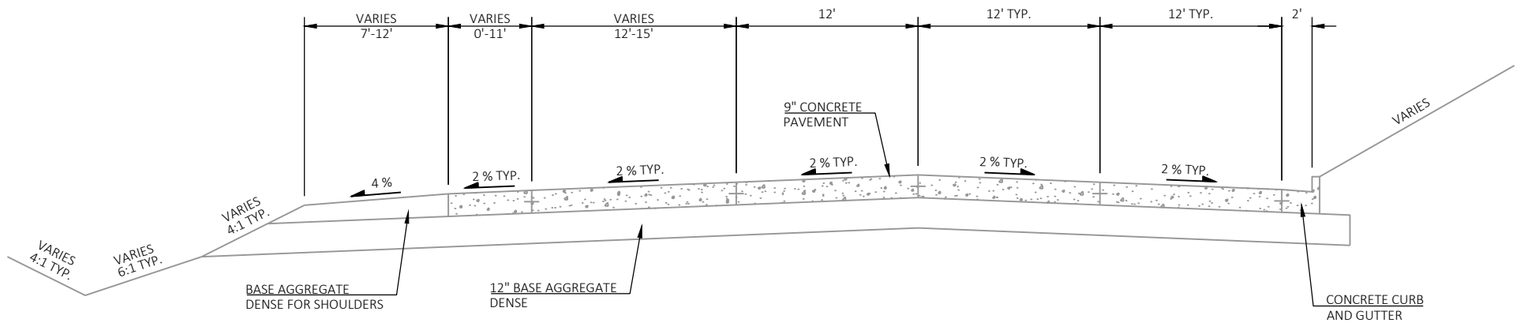
EXISTING TYPICAL SECTION FOR CTH W

STA 13+24.6 - STA 15+15.0



EXISTING TYPICAL SECTION FOR CTH W

STA 15+15.0 - STA 15+52.6

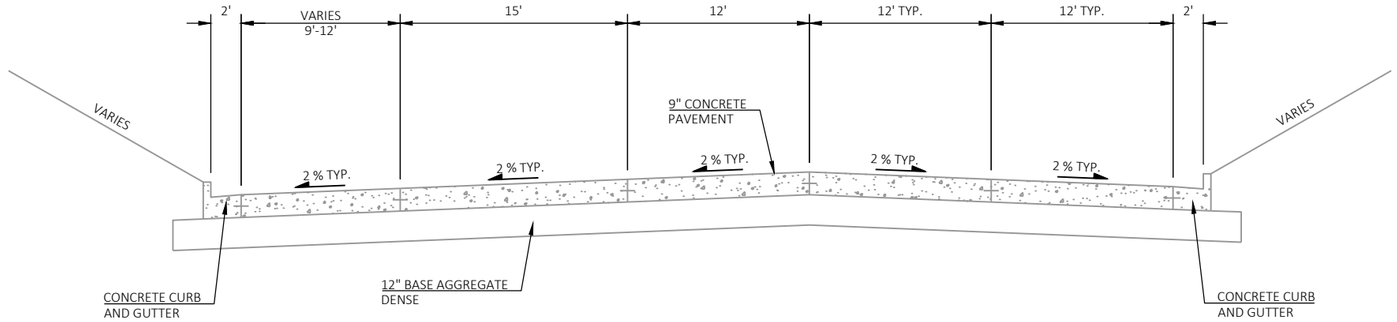


EXISTING TYPICAL SECTION FOR CTH W

STA 15+52.6 - STA 16+97.2

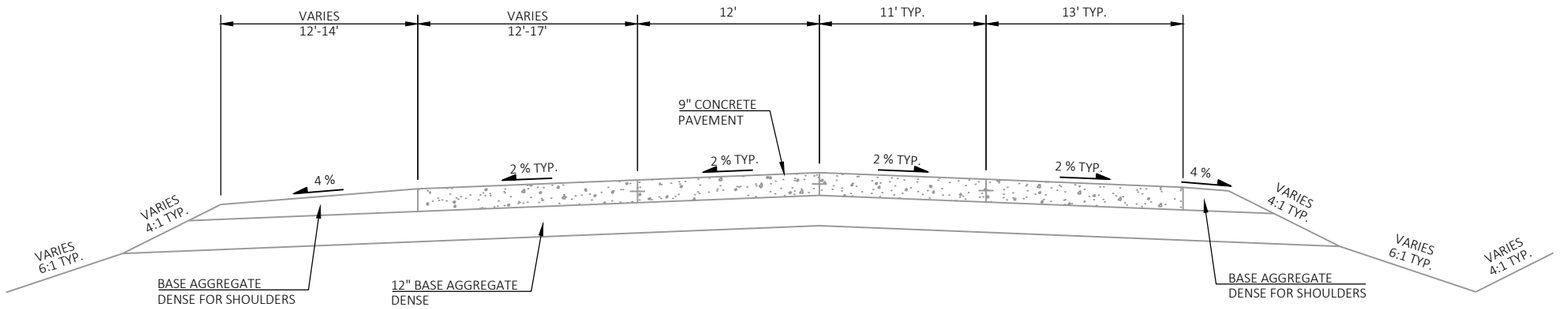
PROJECT NO: 2695-05-72	HWY: CTH C	COUNTY: OZAUKEE	TYPICAL SECTIONS	SHEET 5	E

2



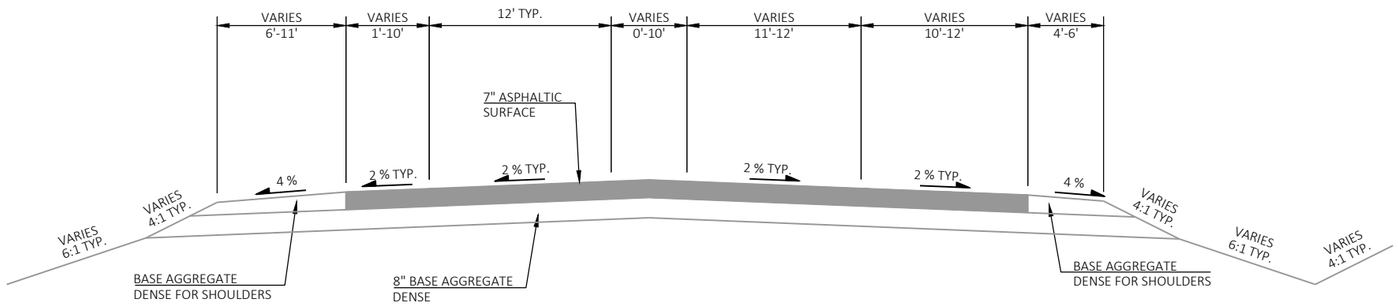
EXISTING TYPICAL SECTION FOR CTH W

STA 16+97.2 - STA 18+41.2



EXISTING TYPICAL SECTION FOR CTH W

STA 18+41.2 - STA 20+32.8

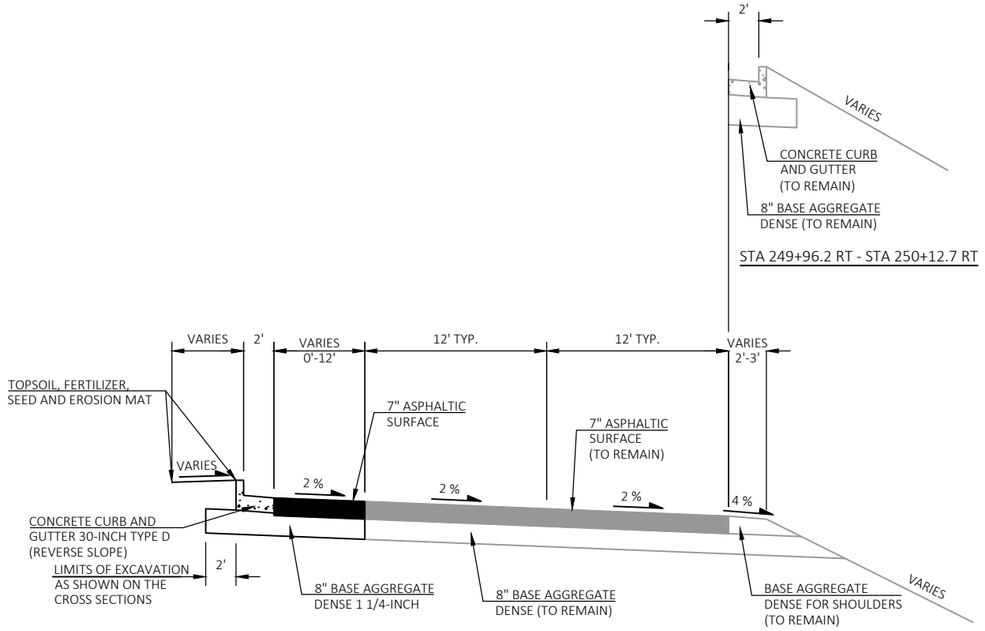


EXISTING TYPICAL SECTION FOR CTH W

STA 20+32.8 - STA 20+66.9

PROJECT NO: 2695-05-72	HWY: CTH C	COUNTY: OZAUKEE	TYPICAL SECTIONS	SHEET 6	E

2

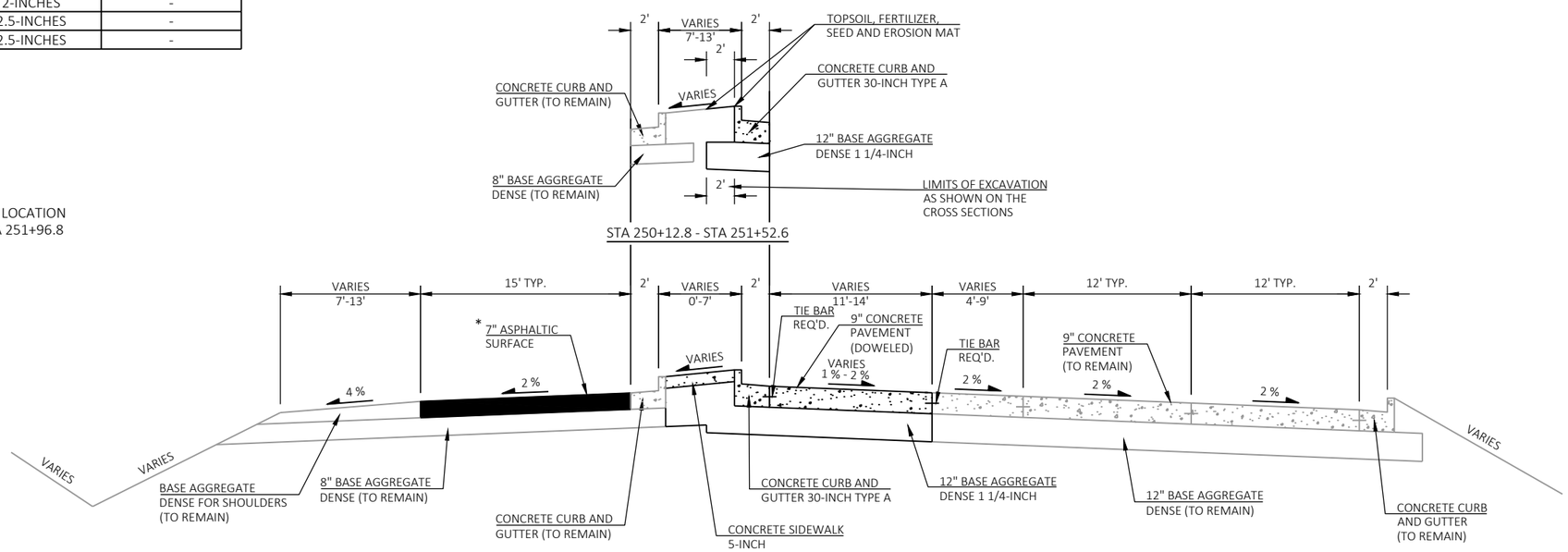


FINISHED TYPICAL 1/2 SECTION FOR CTH C

STA 248+36 RT - STA 250+12.8 RT

7" ASPHALTIC SURFACE		
LAYER	THICKNESS	TYPE
UPPER	2-INCHES	-
LOWER	2.5-INCHES	-
LOWER	2.5-INCHES	-

* ASPHALT SURFACE LOCATION
STA 251+86.7 - STA 251+96.8

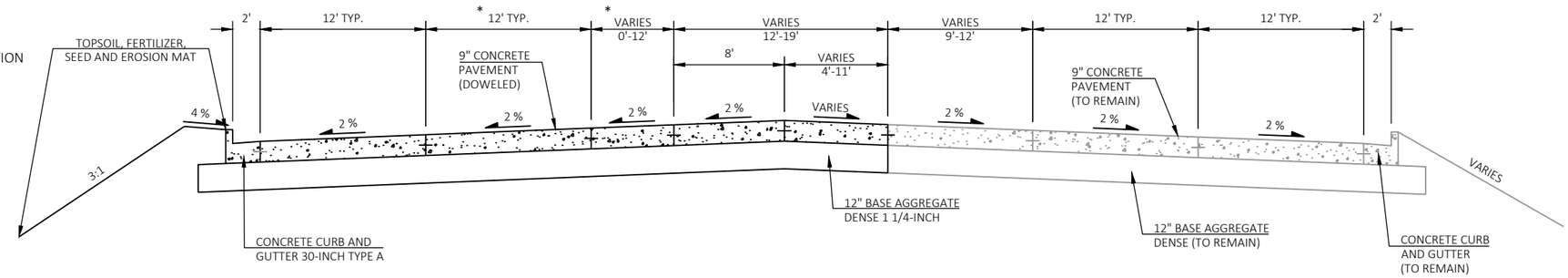


FINISHED TYPICAL SECTION FOR CTH C

STA 250+12.7 RT - STA 252+09.2 RT
STA 252+00.5 LT - STA 252+09.1 LT

PROJECT NO: 2695-05-72	HWY: CTH C	COUNTY: OZAUKEE	TYPICAL SECTIONS	SHEET 7	E

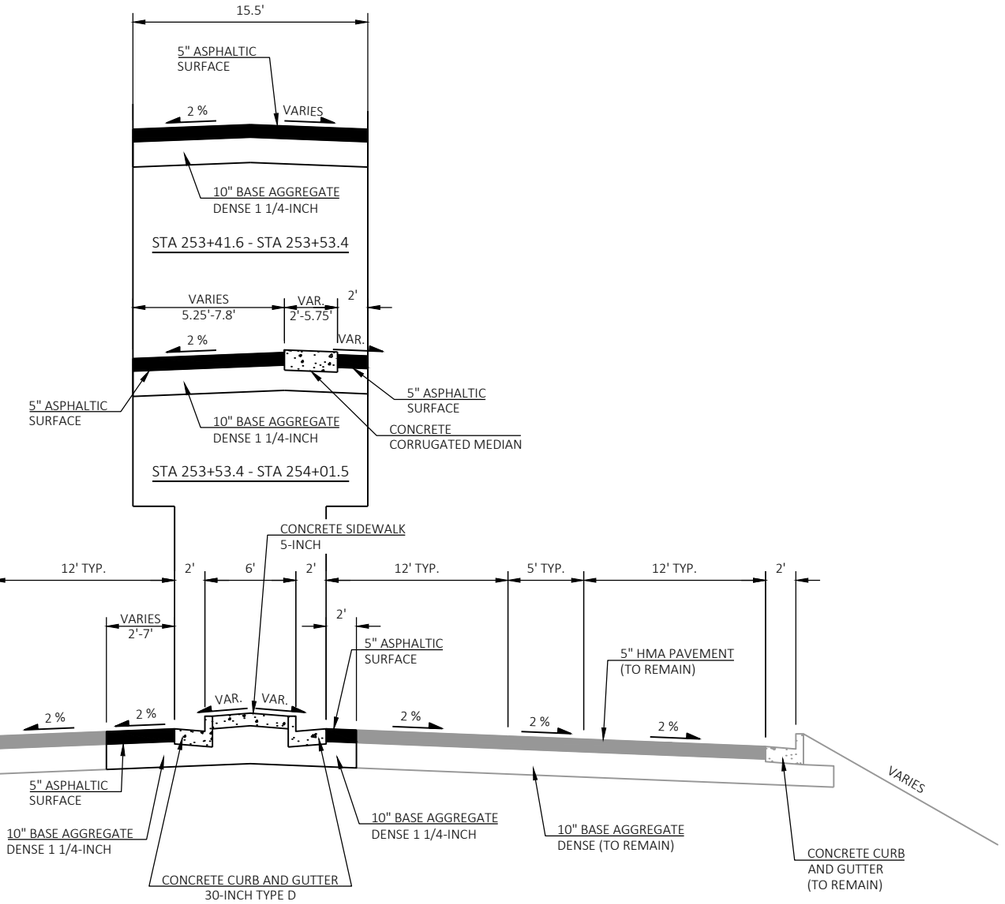
* WESTBOUND LANES CONCRETE PAVEMENT REPLACEMENT LOCATION STA 251+96.7 - STA 252+22.7



FINISHED TYPICAL SECTION FOR CTH C

STA 252+09.1 LT - STA 252+41.1 LT
STA 252+09.2 RT - STA 252+41.1 RT

5" ASPHALTIC SURFACE		
LAYER	THICKNESS	TYPE
UPPER	2-INCHES	-
LOWER	3-INCHES	-

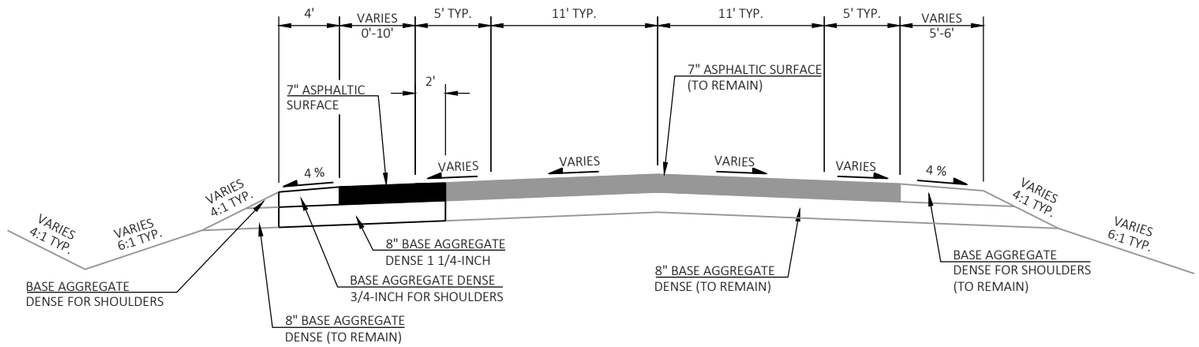


FINISHED TYPICAL SECTION FOR CTH C

STA 253+41.6 - STA 254+79

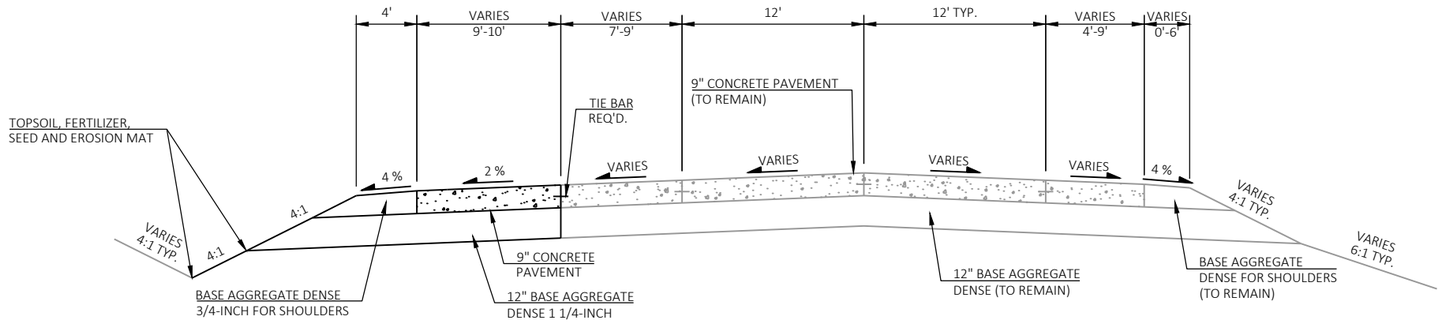
PROJECT NO: 2695-05-72	HWY: CTH C	COUNTY: OZAUKEE	TYPICAL SECTIONS	SHEET 8	E

7" ASPHALTIC SURFACE		
LAYER	THICKNESS	TYPE
UPPER	2-INCHES	-
LOWER	2.5-INCHES	-
LOWER	2.5-INCHES	-



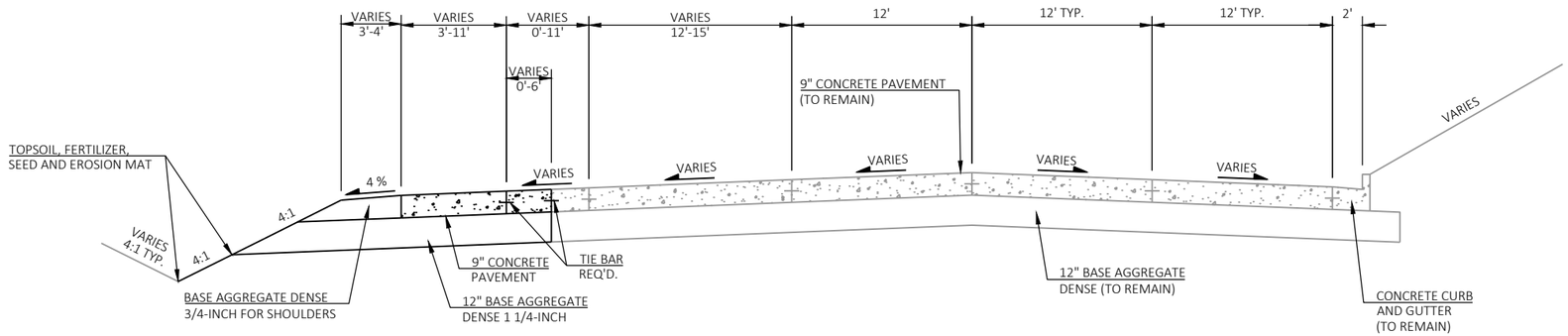
FINISHED TYPICAL SECTION FOR CTH W

STA 13+24.6 - STA 15+15.0



FINISHED TYPICAL SECTION FOR CTH W

STA 15+15.0 - STA 15+52.6

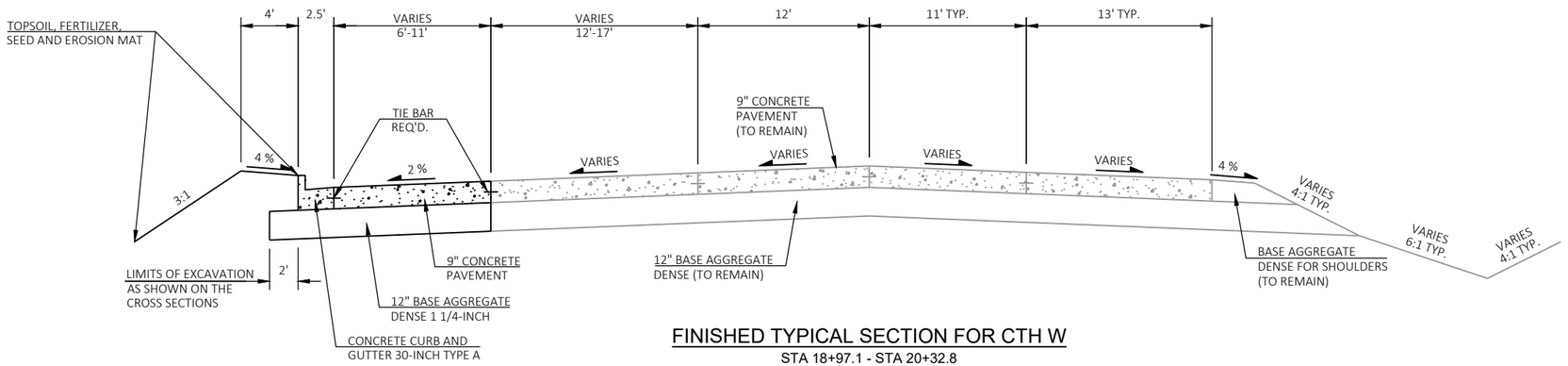


FINISHED TYPICAL SECTION FOR CTH W

STA 15+52.6 - STA 17+17.6

PROJECT NO: 2695-05-72	HWY: CTH C	COUNTY: OZAUKEE	TYPICAL SECTIONS	SHEET 9	E

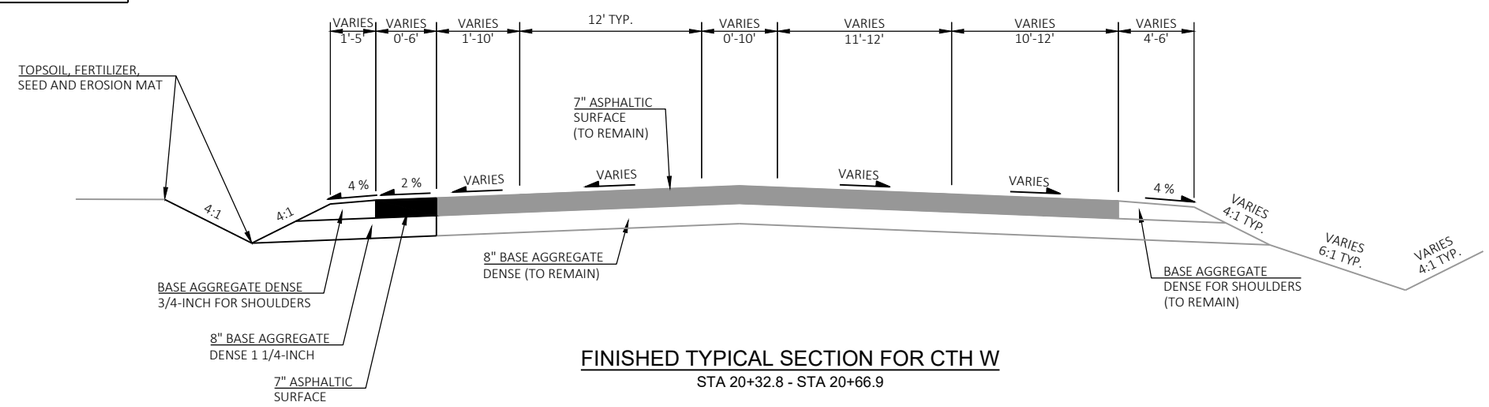
2



FINISHED TYPICAL SECTION FOR CTH W

STA 18+97.1 - STA 20+32.8

7" ASPHALTIC SURFACE		
LAYER	THICKNESS	TYPE
UPPER	2-INCHES	-
LOWER	2.5-INCHES	-
LOWER	2.5-INCHES	-



FINISHED TYPICAL SECTION FOR CTH W

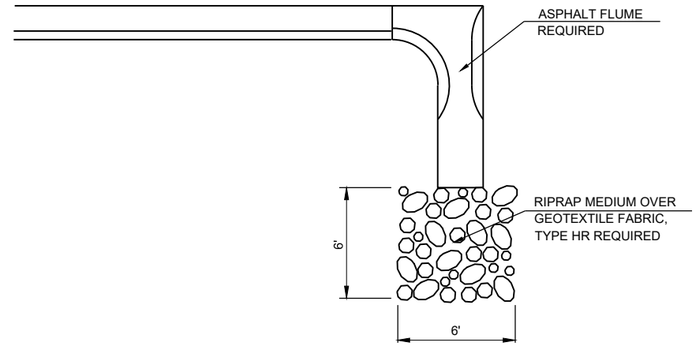
STA 20+32.8 - STA 20+66.9

PROJECT NO: 2695-05-72	HWY: CTH C	COUNTY: OZAUKEE	TYPICAL SECTIONS	SHEET 10	E

FILE NAME : I:\45\450785 OZAUKEE CTH W & CTH C HSIP\C3D\SHEETS\020301-TS.DWG
LAYOUT NAME - 020308-ts

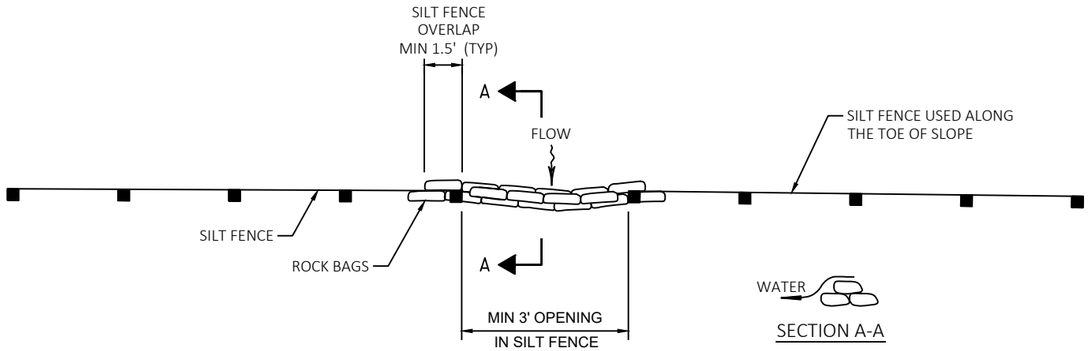
PLOT DATE : 7/29/2026 10:13 AM PLOT BY : GARNICA, BRANDON PLOT NAME : PLOT SCALE : 1 IN:10 FT

2



RIPRAP MEDIUM AT ASPHALT FLUME

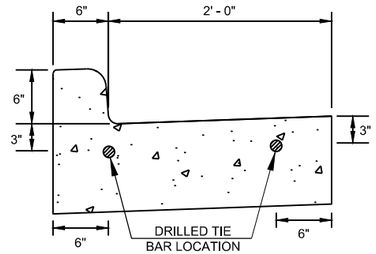
(SEE MISCELLANEOUS QUANTITIES FOR LOCATION)



TOP VIEW

SECTION A-A

ROCK BAGS USED FOR SILT FENCE RELIEF DETAIL



DRILLED TIE BAR LOCATION FOR MATCHING
INTO EXISTING CURB AND GUTTER

2

LEGEND

- XXXXX SAW CUTS ASPHALT
- ΔΔΔΔΔ SAW CUT CONCRETE
- CONCRETE PAVEMENT
- HMA PAVEMENT
- HES CONCRETE PAVEMENT

N

2

P.I.

BURIED TELEPHONE LINE
(APPROXIMATE LOCATION)

BURIED FIBER OPTIC CABLE
(APPROXIMATE LOCATION)

EXISTING R/W

EXISTING R/W

CP #12

CTH C

245 246 247 248 249 250

STA 248+36.6
1.3' RT

STA 248+34.0
5.2' RT

CONCRETE CURB AND
GUTTER 30-INCH TYPE A

SLOPE
INTERCEPTS

STA 250+12.8
1.3' RT

STA 250+38.6
1.3' RT

STA 250+41.1
1.2' RT

CONCRETE CURB AND
GUTTER 30-INCH TYPE D

STA 249+93.8
15.7' RT

STA 250+12.8
15.4' RT

MATCH LINE STA 251+00

12'

12'

BEGIN PROJECT
STA 248+34
Y = 387615.358
X = 601557.322

EXISTING R/W

EXISTING R/W

BURIED ELECTRICAL CABLE
(APPROXIMATE LOCATION)

BURIED TELEPHONE LINE
(APPROXIMATE LOCATION)

P.I.

PROJECT NO: 2695-05-72	HWY: CTH C	COUNTY: OZAUKEE	PLAN DETAILS	SHEET 12	E

FILE NAME : I:\45\450785 OZAUKEE CTH W & CTH C HSIP\C3D\SHEETS\021201-PD.DWG
LAYOUT NAME - 021201-pd

PLOT DATE : 7/29/2026 10:18 AM PLOT BY : GARNICA, BRANDON PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

2

LEGEND

- XXXXX SAW CUTS ASPHALT
- SAW CUT CONCRETE
- CONCRETE PAVEMENT
- HMA PAVEMENT
- HES CONCRETE PAVEMENT

N

MATCH LINE STA 19+50

MATCH LINE STA 251+00

MATCH LINE STA 16+50

CTH W

CTH C

EXISTING R/W

R/W

P.L.

CAUTION

BURIED GAS LINE (APPROXIMATE LOCATION)

CP #15

STA 251+88.9 92.2' LT 55' R

SLOPE INTERCEPTS

BURIED TELEPHONE LINE (APPROXIMATE LOCATION)

CONCRETE CURB AND GUTTER 30-INCH TYPE A

BURIED FIBER OPTIC CABLE (APPROXIMATE LOCATION)

STA 252+01.3 38.6' LT

STA 252+23.4 34.7' LT

STA 252+22.7 14.4' LT

STA 252+01.7 36.2' LT

STA 252+09.1 11.6' LT

STA 251+86.8 34.7' LT

STA 251+96.7 11.6' LT

STA 251+86.7 13.6' LT

STA 251+52.6 11.1' LT

STA 251+52.6 5.1' LT

STA 251+18.2 10.2' RT

STA 251+17.9 13.9' RT

STA 252+01.8 13.6' LT

STA 252+09.2 7.6' LT

CONCRETE MEDIAN SLOPED NOSE

STA 252+41.1 3.7' RT

STA 252+56.8 98.3' LT

STA 252+43.9 93.5' LT

STA 252+56.9 71.8' LT

STA 252+59.1 68.0' LT

STA 252+60.3 38.0' LT

STA 252+23.1 37.2' LT

STA 252+41.1 14.2' LT

STA 252+50.8 38.2' RT

PI: 252+63.15

STA 251+93.2 37.7' RT

STA 251+93.2 39.7' RT

STA 251+92.1 94.7' RT 55' R

STA 252+46.4 86.2' RT

STA 16+97.2W 36.0' LT

STA 16+72.8W 35.0' LT

STA 16+55.8W 3.7' LT

PLSS 10221670 SE 31-10-22

STA 252+85.40 CTH C = STA 18+02.29 CTH W
Y = 387623.278
X = 602008.662

PLSS 09220110 NE 6-9-22

PAVEMENT MARKING TYP.

STA 253+41.6 0.0'

STA 253+41.6 13.2' RT

STA 253+63.4 13.2' RT

STA 253+63.5 18.2' RT

STA 253+73.4 13.2' RT

STA 253+73.5 18.2' RT

STA 254+03.7 7.1' RT

STA 254+03.7 9.1' RT

STA 254+79.0 9.1' RT

STA 254+81.0 13.1' RT

STA 254+81.0 0.8' LT

STA 254+79.0 3.2' RT

LIMITS OF WETLANDS

BURIED FIBER OPTIC CABLE (APPROXIMATE LOCATION)

18" CMCP

CONCRETE CURB AND GUTTER 30-INCH TYPE D

CONCRETE CORRUGATED MEDIAN

15" RCCP

24" RCCP

12" RCCP

CP #300

BURIED TELEPHONE LINE (APPROXIMATE LOCATION)

BURIED ELECTRICAL CABLE (APPROXIMATE LOCATION)

END PROJECT STA 254+81

PROJECT NO: 2695-05-72	HWY: CTH C	COUNTY: OZAUKEE	PLAN DETAILS	SHEET 13	E

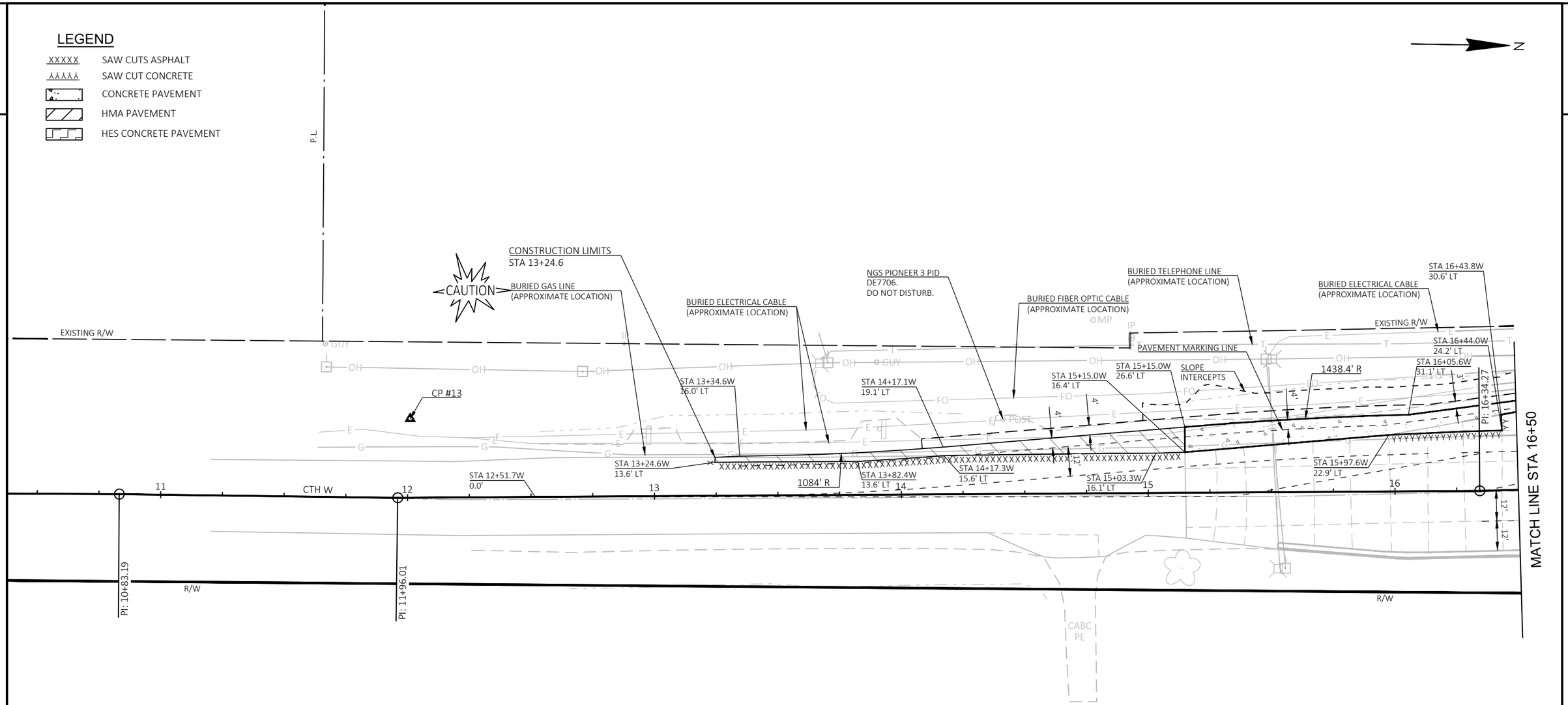
FILE NAME : I:\45\450785 OZAUKEE CTH W & CTH C HSIP\C3D\SHEETS\021201-PD.DWG
LAYOUT NAME - 021202-pd

PLOT DATE : 7/29/2026 10:15 AM PLOT BY : GARNICA, BRANDON PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

LEGEND

- XXXXX SAW CUTS ASPHALT
- ΛΛΛΛΛ SAW CUT CONCRETE
- CONCRETE PAVEMENT
- HMA PAVEMENT
- HES CONCRETE PAVEMENT



PROJECT NO: 2695-05-72	HWY: CTH C	COUNTY: OZAUKEE	PLAN DETAILS	SHEET 14	E

2

LEGEND

- XXXXX SAW CUTS ASPHALT
- ΔΔΔΔΔ SAW CUT CONCRETE
- CONCRETE PAVEMENT
- HMA PAVEMENT
- HES CONCRETE PAVEMENT

N

CONCRETE DRIVEWAY

CONCRETE CURB AND GUTTER 30-INCH TYPE A

BURIED FIBER OPTIC CABLE (APPROXIMATE LOCATION)

BURIED GAS LINE (APPROXIMATE LOCATION)

CAUTION

ASPHALTIC FLUME REQ'D.

SLOPE INTERCEPTS

CONSTRUCTION LIMITS STA 20+66.9

STA 20+33.2W 31.0' LT

PAVEMENT MARKING TYP.

EXISTING R/W

STA 20+32.8W 23.3' LT

STA 20+00.5W 36.8' LT

STA 20+66.9W 23.0' LT

PI: 21+43.12

PI: 23+90.62

EP: 25+49.51

CABC

FE

28'

11'

13'

12'

MATCH LINE STA 19+50

20 21 22 CTH W 23 24 25

P.L.

CP #14

LIMITS OF WETLANDS

ASPH CE

24" CMCP

EXISTING R/W

PLANTER

ASPHALT

BLDG

3LDG

TEL

IP

OH

GV

GU

G

2

PROJECT NO: 2695-05-72	HWY: CTH C	COUNTY: OZAUKEE	PLAN DETAILS	SHEET 15	E

FILE NAME : I:\45\450785 OZAUKEE CTH W & CTH C HSIP\C3D\SHEETS\021201-PD.DWG
LAYOUT NAME - 021204-pd

PLOT DATE : 7/29/2026 10:18 AM PLOT BY : GARNICA, BRANDON PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

N

245

CTH C

246

247

248

249

250

668.12

668.25

668.35

668.48

668.59

668.68

668.90

669.01

668.77

669.17

668.93

669.60

669.36

670.11

669.85

670.60

670.32

MATCH LINE STA 251+00

BEGIN PROJECT
STA 248+34
Y = 387615.358
X = 601557.322

PROJECT NO: 2695-05-72	HWY: CTH C	COUNTY: OZAUKEE	PLAN GRADES	SHEET 16	E

2

N

MATCH LINE STA 19+50

CONCRETE

CTH W

CTH C

MATCH LINE STA 251+00

670.31
670.09
670.51
670.72
670.90
671.12
670.95
671.48
671.53
671.97
671.51
672.04
672.16
671.95
672.10
672.21
672.38
672.10
671.03
671.55
672.40
672.38
671.91
670.60
671.00
671.50
671.87
672.30
672.42
672.58
670.81
671.34
671.80
672.18
672.45
670.32
671.81
671.94
672.43
673.01
672.42
673.17
673.39
673.41
674.12
674.60
675.27
675.55
676.82
677.69
675.97
674.09
674.46
675.14
675.58
675.76
676.60
677.48

252
253
254
255
256
257
18
17
16

END PROJECT
STA 254+81

MATCH LINE STA 16+50

PROJECT NO: 2695-05-72	HWY: CTH C	COUNTY: OZAUKEE	PLAN GRADES	SHEET 17	E

FILE NAME : I:\45\450785 OZAUKEE CTH W & CTH C HSIP\C3D\SHEETS\021205-GR.DWG
LAYOUT NAME - 021206-gr
PLOT DATE : 7/29/2026 10:15 AM
PLOT BY : GARNICA, BRANDON
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

2

2

N

CABC
FE

669.34
669.09
669.03
669.66
670.09
669.88
669.57
669.23
669.14
670.31

CONSTRUCTION LIMITS
STA 20+66.9

MATCH LINE STA 19+50

20
21
22
CTH W
23
24
25

ASPH
CE

ASPH
CE

ASPHALT

BLDG

BLDG

PROJECT NO: 2695-05-72	HWY: CTH C	COUNTY: OZAUKEE	PLAN GRADES	SHEET 18	E

FILE NAME : I:\45\450785 OZAUKEE CTH W & CTH C HSIP\C3D\SHEETS\021205-GR.DWG
LAYOUT NAME - 021207-gr

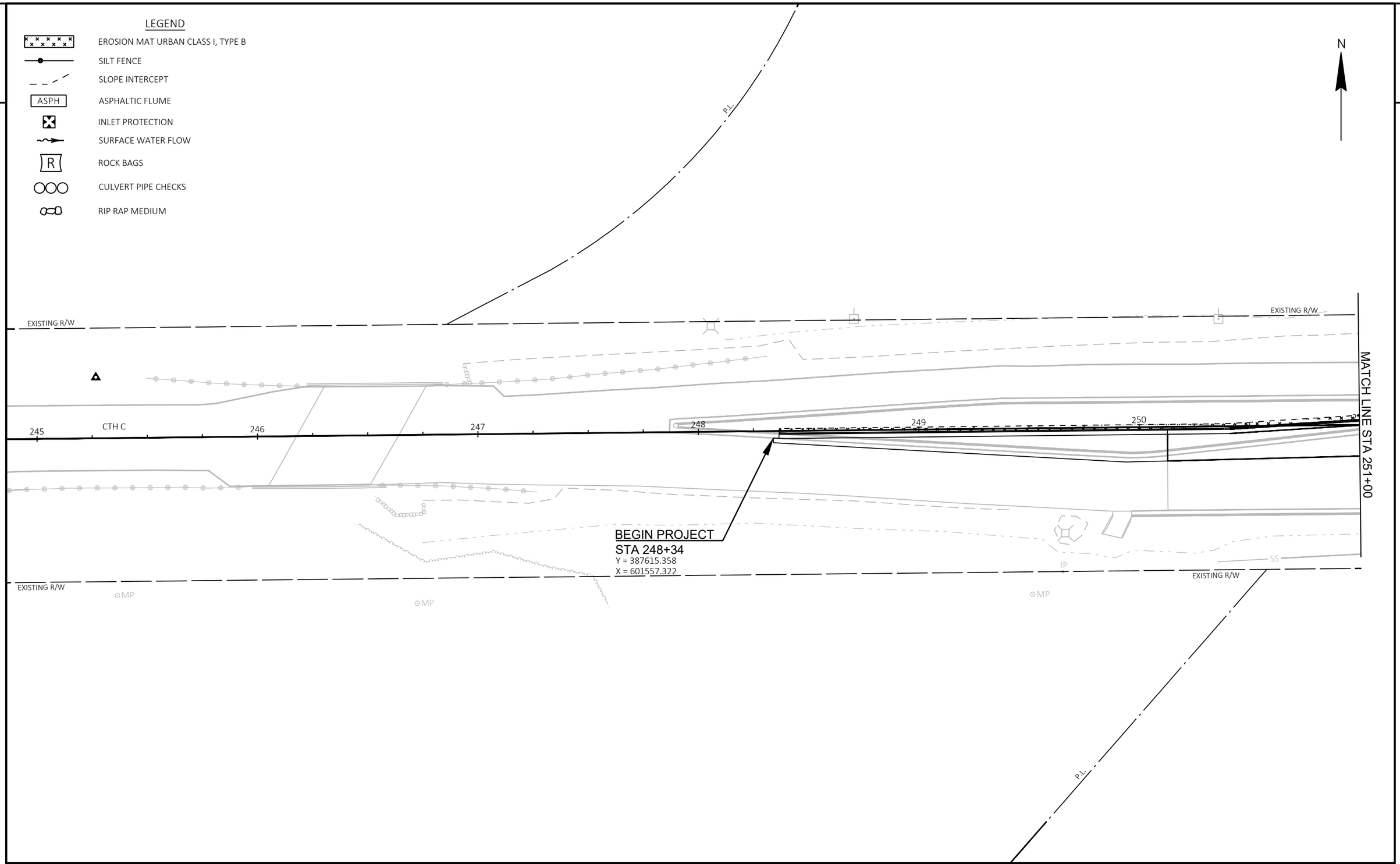
PLOT DATE : 7/29/2026 10:18 AM PLOT BY : GARNICA, BRANDON PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

LEGEND

- EROSION MAT URBAN CLASS I, TYPE B
- SILT FENCE
- SLOPE INTERCEPT
- ASPH — ASPHALTIC FLUME
- INLET PROTECTION
- SURFACE WATER FLOW
- R — ROCK BAGS
- CULVERT PIPE CHECKS
- RIP RAP MEDIUM



2

PROJECT NO: 2695-05-72	HWY: CTH C	COUNTY: OZAUKEE	EROSION CONTROL	SHEET 19	E

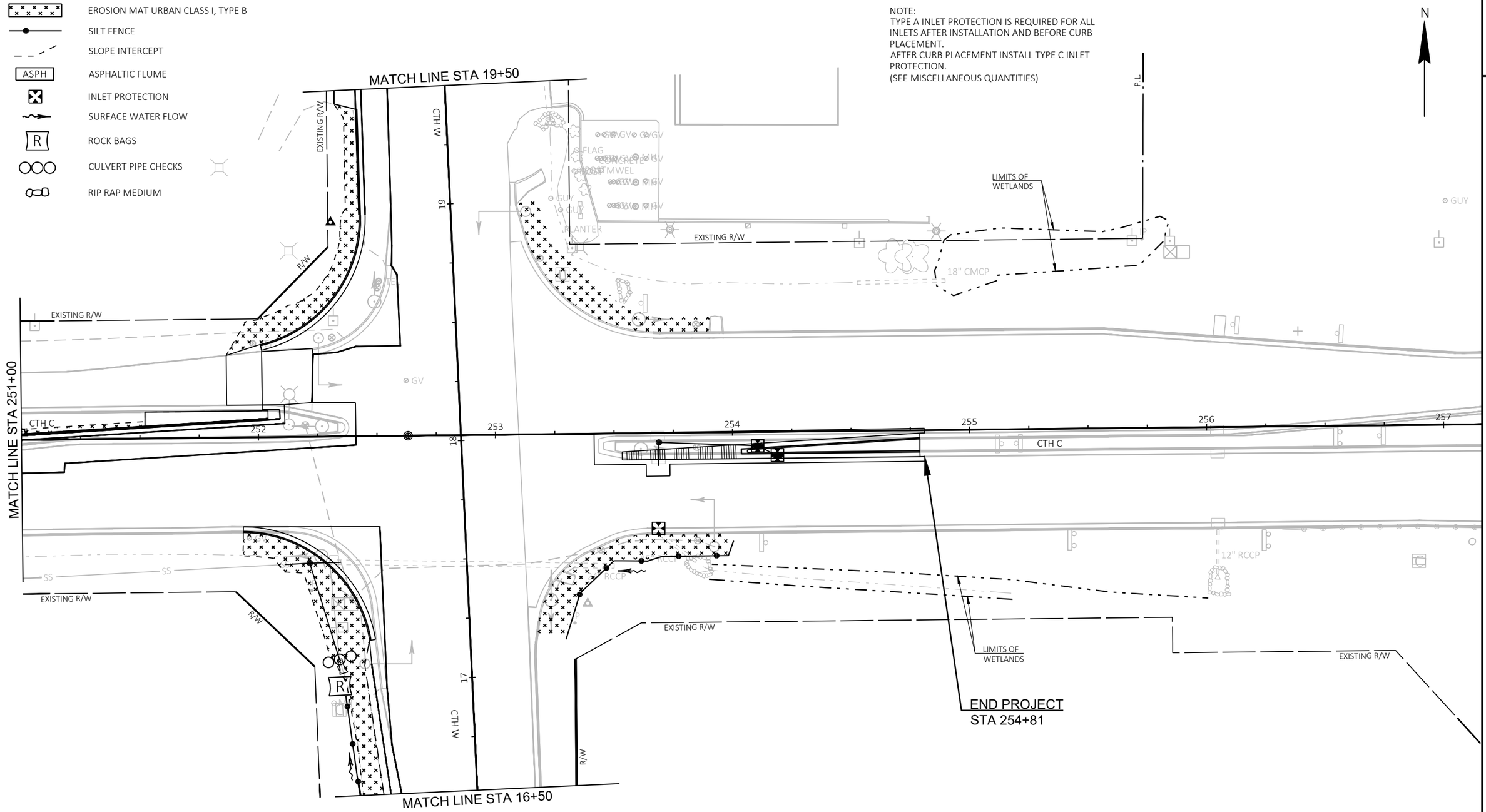
FILE NAME : I:\45\450785 OZAUKEE CTH W & CTH C HSIP\C3D\SHEETS\022001-EC.DWG
LAYOUT NAME - 022001-ec

PLOT DATE : 10/19/2026 3:56 PM PLOT BY : WILKE, CASSANDRA PLOT NAME : PLOT SCALE : 1 IN:40 FT

LEGEND

- EROSION MAT URBAN CLASS I, TYPE B
- SILT FENCE
- SLOPE INTERCEPT
- ASPH — ASPHALTIC FLUME
- INLET PROTECTION
- SURFACE WATER FLOW
- R — ROCK BAGS
- CULVERT PIPE CHECKS
- RIP RAP MEDIUM

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



PROJECT NO: 2695-05-72	HWY: CTH C	COUNTY: OZAUKEE	EROSION CONTROL	SHEET 20	E

FILE NAME : I:\45\450785 OZAUKEE CTH W & CTH C HSIP\C3D\SHEETS\022001-EC.DWG
LAYOUT NAME - 022002-ec
PLOT DATE : 10/19/2026 3:56 PM PLOT BY : WILKE, CASSANDRA PLOT NAME : PLOT SCALE : 1 IN:40 FT

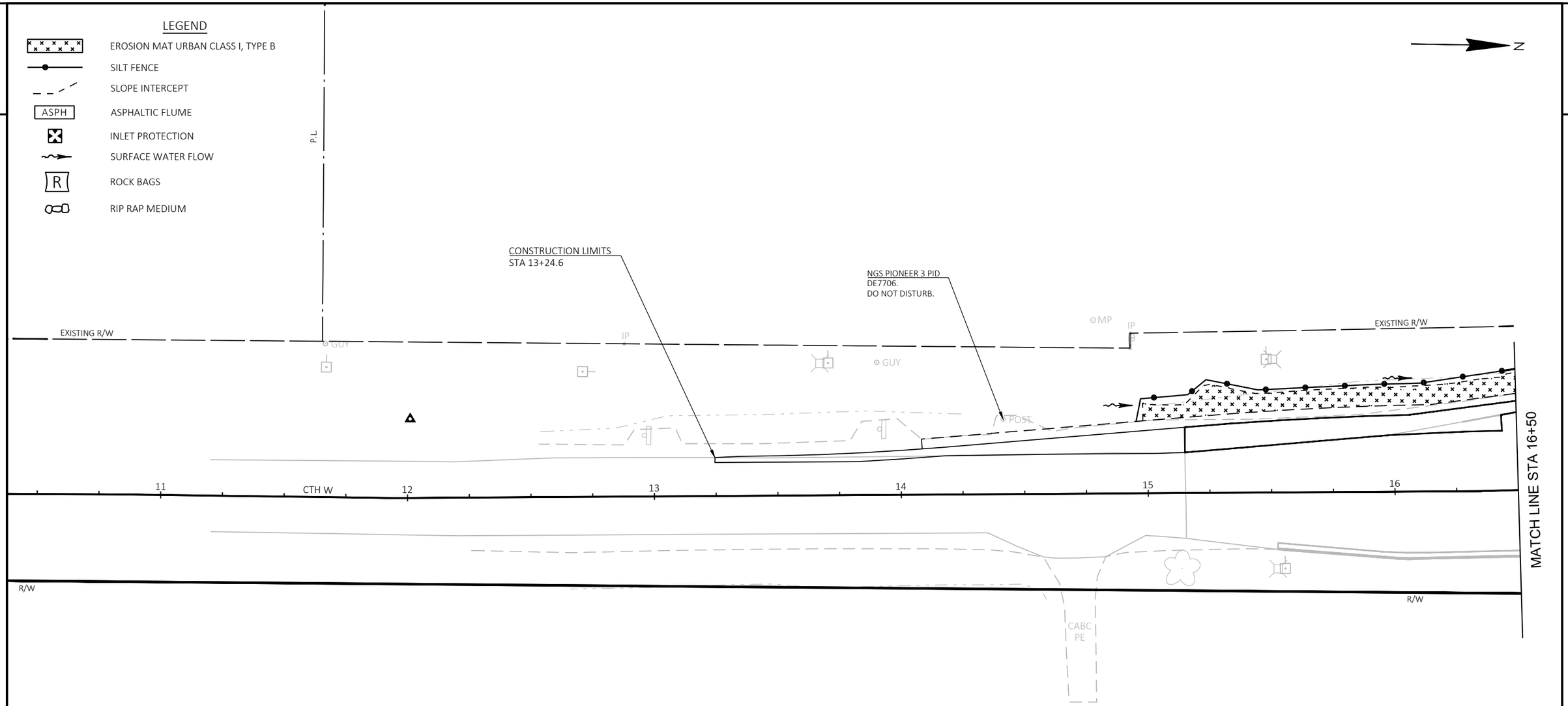
2

LEGEND

- EROSION MAT URBAN CLASS I, TYPE B
- SILT FENCE
- SLOPE INTERCEPT
- ASPH — ASPHALTIC FLUME
- INLET PROTECTION
- SURFACE WATER FLOW
- R — ROCK BAGS
- RIP RAP MEDIUM

N

2



PROJECT NO: 2695-05-72	HWY: CTH C	COUNTY: OZAUKEE	EROSION CONTROL	SHEET 21	E

FILE NAME : I:\45\450785 OZAUKEE CTH W & CTH C HSIP\C3D\SHEETS\022001-EC.DWG
LAYOUT NAME - 022003-ec

PLOT DATE : 7/29/2026 10:15 AM PLOT BY : GARNICA, BRANDON PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

LEGEND

- EROSION MAT URBAN CLASS I, TYPE B
- SILT FENCE
- SLOPE INTERCEPT
- ASPH — ASPHALTIC FLUME
- INLET PROTECTION
- SURFACE WATER FLOW
- R — ROCK BAGS
- RIP RAP MEDIUM

N

CONSTRUCTION LIMITS
STA 20+66.9

P.L.

CABC
FE

EXISTING R/W

R

ASPH

EXISTING R/W

GV

MATCH LINE STA 19+50

20 21 CTH W 22 23 24 25

ASPH
CE

24" CMCP

EXISTING R/W

PLANTER

ASPHALT

TEL

ASPH
CE

24" CMCP

IP

IP

BLDG

BLDG

P.L.

2

PROJECT NO: 2695-05-72	HWY: CTH C	COUNTY: OZAUKEE	EROSION CONTROL	SHEET 22	E

FILE NAME : I:\45\450785 OZAUKEE CTH W & CTH C HSIP\C3D\SHEETS\022001-EC.DWG
LAYOUT NAME - 022004-ec

PLOT DATE : 7/29/2026 10:16 AM PLOT BY : GARNICA, BRANDON PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

MEASUREMENT NOTES:
1. OFFSET DISTANCE IS TO CENTER OF MANHOLE, CENTER OF INLETS, AND END OF PIPE AT ENDWALLS.
2. RIM ELEVATION IS TO CENTER OF MANHOLE AND CENTER OF INLETS.

SLOPE INTERCEPTS
EXISTING R/W
CTH W
PI: 252+63.15
CTH C
SLOPE INTERCEPTS
250
251
252
253
254
255
256
SALVAGED INLET COVERS
4 STA 254+10.57, 5.78' RT
INLETS 2x3-H SALVAGED COVER
5 STA 254+18.96, 10.14' RT
INLETS 2x3-H SALVAGED COVER
STA 253+68.86, 3.98' RT
MANHOLES 4-J-S 3
END PROJECT
STA 254+81
MATCH EXISTING
24" RCCP
15" RCCP
24" RCCP
12"
EXISTING R/W
SLOPE INTERCEPTS
STA 252+21.11, 53.33' RT
MANHOLES 5-J-S 1
P.L.
MATCH EXISTING
15" RCCP
LIMITS OF WETLANDS
EXISTING R/W
LIMITS OF WETLANDS
P.L.
18" CMCP
N

675
670
665
660

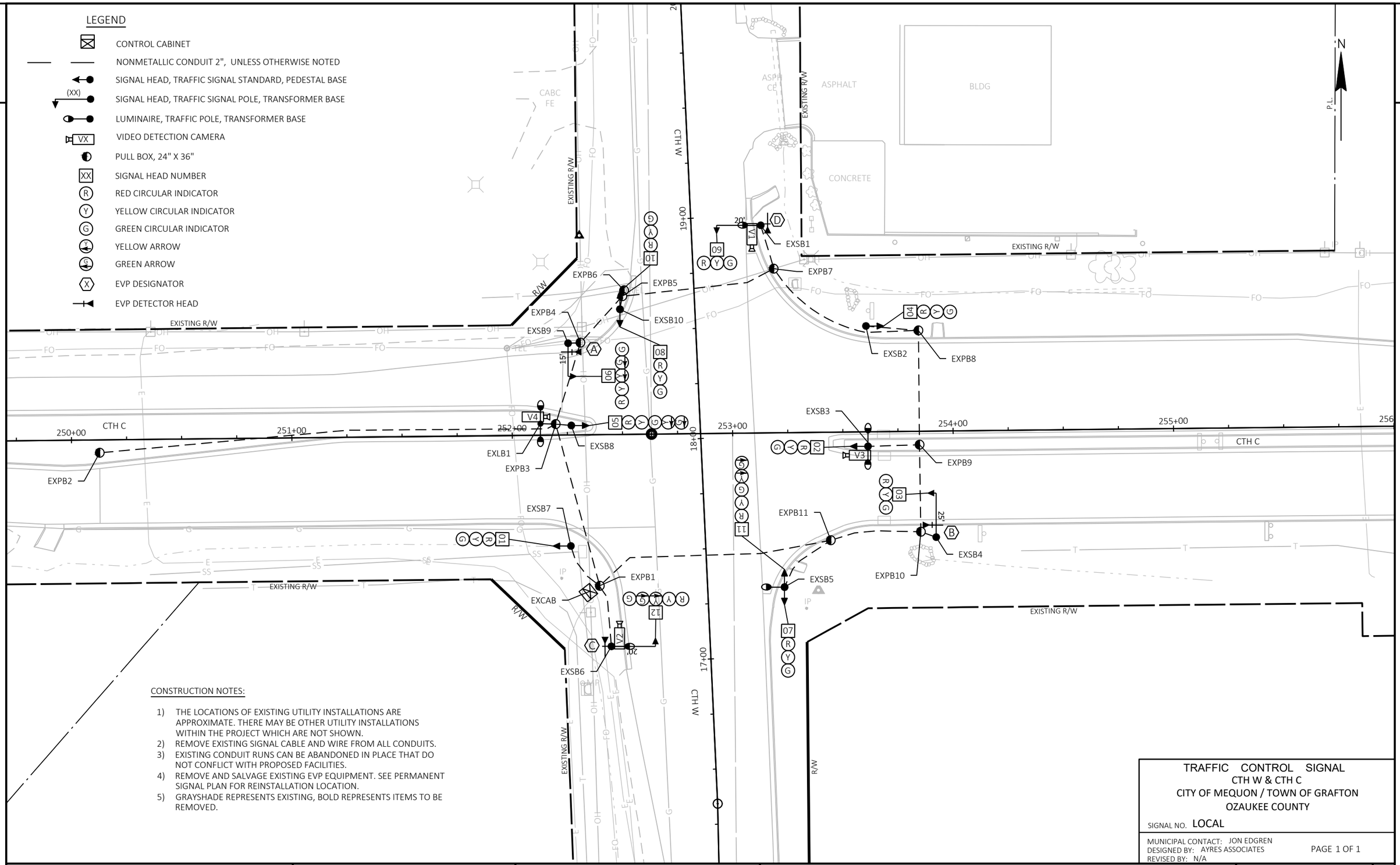
1
FINISHED GRADE
672.97
CONCRETE COLLAR REQ'D.
EXISTING GRADE
EXISTING 24" RCCP
668.53
668.05
668.40
668.22
SSPRC CLASS IV 24-INCH @ 0.98%
CONCRETE COLLAR REQ'D.
SSPRC CLASS IV 24-INCH @ 1.62%

EXISTING GRADE
1
FINISHED GRADE
672.97
SSP CLASS III-A 18-INCH @ 4.08%
671.00
669.26

EXISTING GRADE
FINISHED GRADE
3
4
5
675.54
675.57
674.39
CONCRETE COLLAR REQ'D.
EXISTING15" RCCP
SSPRC CLASS IV 15-INCH @ 2.85%
672.16
672.10
672.11
670.96
670.97
670.97
SSPRC CLASS IV 15-INCH @ 0.06%
SSPRC CLASS IV 15-INCH @ 0.15%

PROJECT NO: 2695-05-72	HWY: CTH C	COUNTY: OZAUKEE	STROM SEWER PLAN	SHEET 23	E

FILE NAME : I:\45\450785 OZAUKEE CTH W & CTH C HSIP\C3D\SHEETS\022501-SS.DWG
LAYOUT NAME - 022501-ss
PLOT DATE : 10/19/2026 4:05 PM PLOT BY : WILKE, CASSANDRA PLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 41



CONSTRUCTION NOTES:

1) THE LOCATIONS OF EXISTING UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
2) REMOVE EXISTING SIGNAL CABLE AND WIRE FROM ALL CONDUITS.
3) EXISTING CONDUIT RUNS CAN BE ABANDONED IN PLACE THAT DO NOT CONFLICT WITH PROPOSED FACILITIES.
4) REMOVE AND SALVAGE EXISTING EVP EQUIPMENT. SEE PERMANENT SIGNAL PLAN FOR REINSTALLATION LOCATION.
5) GRAYSHADE REPRESENTS EXISTING, BOLD REPRESENTS ITEMS TO BE REMOVED.

TRAFFIC CONTROL SIGNAL
CTH W & CTH C
CITY OF MEQUON / TOWN OF GRAFTON
OZAUKEE COUNTY

SIGNAL NO. LOCAL

MUNICIPAL CONTACT: JON EDGREN
DESIGNED BY: AYRES ASSOCIATES
REVISED BY: N/A

PAGE 1 OF 1

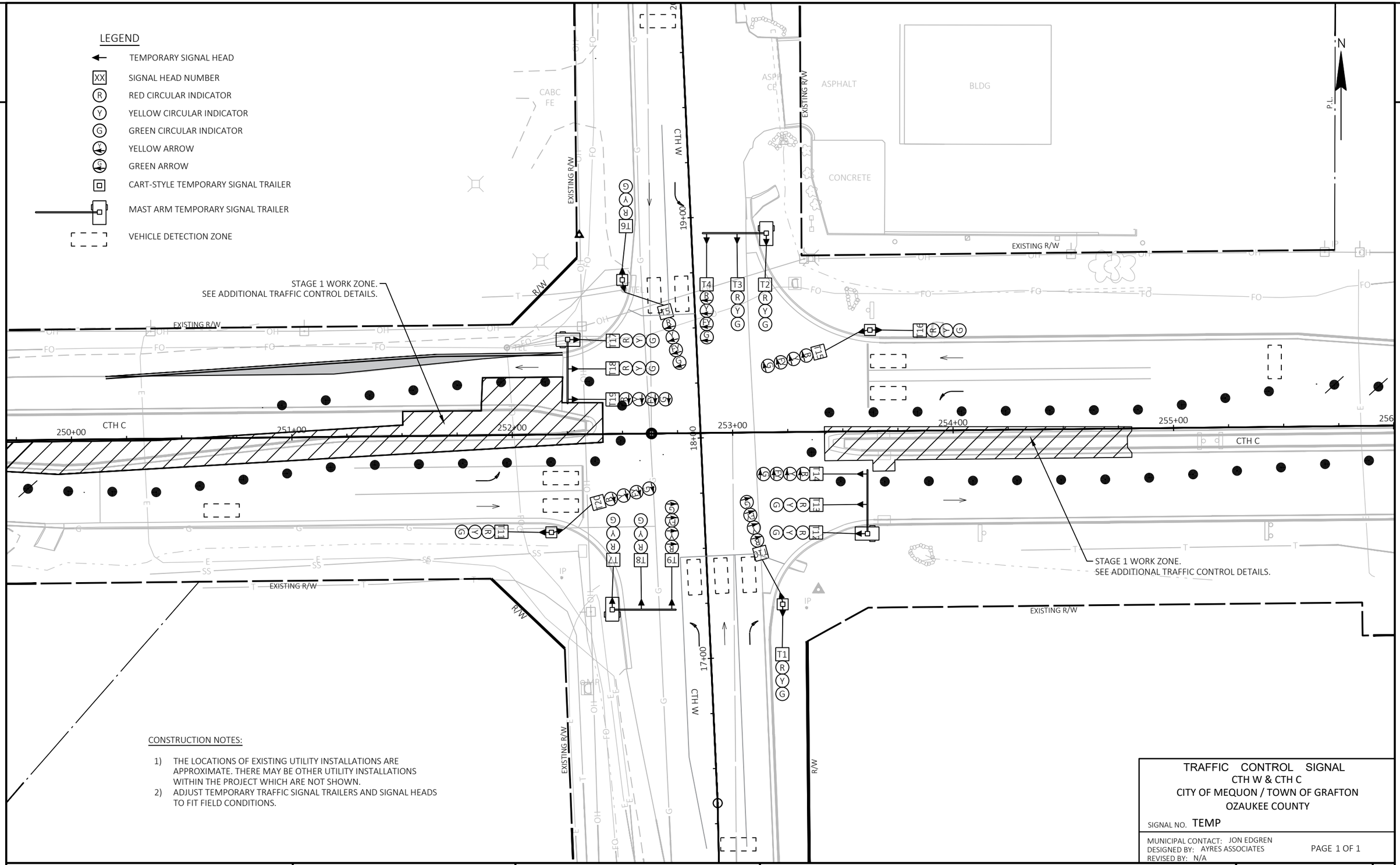
PROJECT NO: 2695-05-72	HWY: CTH C	COUNTY: OZAUKEE	TRAFFIC SIGNAL REMOVAL PLAN	SHEET 24	E

FILE NAME : I:\45\450785 OZAUKEE CTH W & CTH C HSIP\C3D\SHEETS\024001-SR.DWG
LAYOUT NAME - 024001-sr
PLOT DATE : 7/30/2026 8:34 AM
PLOT BY : ROWELL, ANDREW
PLOT NAME :
PLOT SCALE : 1 IN:40 FT

2

LEGEND

- TEMPORARY SIGNAL HEAD
- XX SIGNAL HEAD NUMBER
- R RED CIRCULAR INDICATOR
- Y YELLOW CIRCULAR INDICATOR
- G GREEN CIRCULAR INDICATOR
- Y YELLOW ARROW
- G GREEN ARROW
- CART-STYLE TEMPORARY SIGNAL TRAILER
- MAST ARM TEMPORARY SIGNAL TRAILER
- VEHICLE DETECTION ZONE



CONSTRUCTION NOTES:

1) THE LOCATIONS OF EXISTING UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
2) ADJUST TEMPORARY TRAFFIC SIGNAL TRAILERS AND SIGNAL HEADS TO FIT FIELD CONDITIONS.

TRAFFIC CONTROL SIGNAL
CTH W & CTH C
CITY OF MEQUON / TOWN OF GRAFTON
OZAUKEE COUNTY

SIGNAL NO. TEMP

MUNICIPAL CONTACT: JON EDGREN
DESIGNED BY: AYRES ASSOCIATES
REVISED BY: N/A

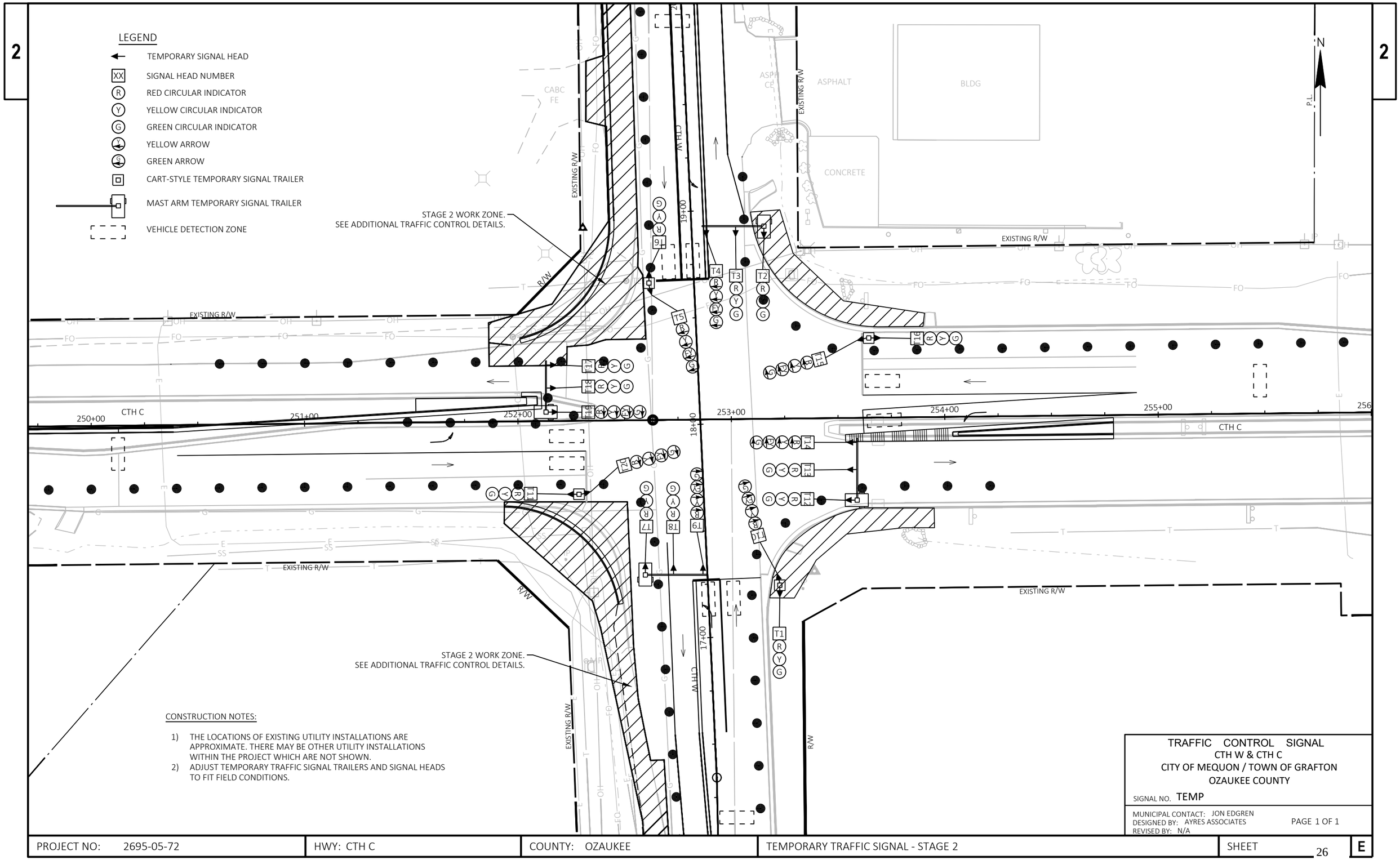
PAGE 1 OF 1

PROJECT NO: 2695-05-72	HWY: CTH C	COUNTY: OZAUKEE	TEMPORARY TRAFFIC SIGNAL - STAGE 1	SHEET 25	E

FILE NAME : I:\45\450785 OZAUKEE CTH W & CTH C HSIP\C3D\SHEETS\024101-ST.DWG
LAYOUT NAME - 024101-st

PLOT DATE : 7/29/2026 10:15 AM PLOT BY : GARNICA, BRANDON PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42



CONSTRUCTION NOTES:

1) THE LOCATIONS OF EXISTING UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
2) ADJUST TEMPORARY TRAFFIC SIGNAL TRAILERS AND SIGNAL HEADS TO FIT FIELD CONDITIONS.

TRAFFIC CONTROL SIGNAL
CTH W & CTH C
CITY OF MEQUON / TOWN OF GRAFTON
OZAUKEE COUNTY

SIGNAL NO. TEMP

MUNICIPAL CONTACT: JON EDGREN
DESIGNED BY: AYRES ASSOCIATES
REVISED BY: N/A

PAGE 1 OF 1

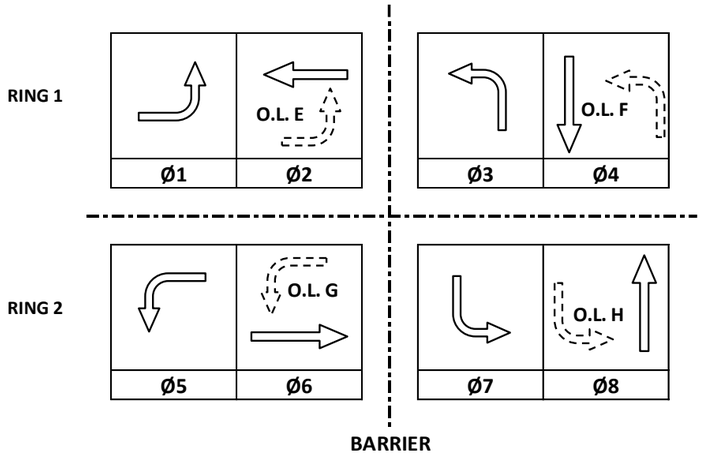
PROJECT NO: 2695-05-72	HWY: CTH C	COUNTY: OZAUKEE	TEMPORARY TRAFFIC SIGNAL - STAGE 2	SHEET 26	E

FILE NAME : I:\45\450785 OZAUKEE CTH W & CTH C HSIP\C3D\SHEETS\024101-ST.DWG
LAYOUT NAME - 024102-st

PLOT DATE : 7/29/2026 10:18 AM PLOT BY : GARNICA, BRANDON PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

	HEAD NUMBERS	FLASH
Ø1	T14,T15	R ->
Ø2	T16,T17,T18	R
Ø3	T04,T05	R ->
Ø4	T06,T07,T08	R
Ø5	T19,T20	R ->
Ø6	T11,T12,T13	R
Ø7	T09,T10	R ->
Ø8	T01,T02,T03	R
Ø2P	NONE	
Ø4P	NONE	
Ø6P	NONE	
Ø8P	NONE	



CONTROLLER LOGIC

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACTIVE
1		5,6		X
2		5,6	MIN	X
3		7,8		X
4		7,8		X
5		1,2		X
6		1,2	MIN	X
7		3,4		X
8		3,4		X



GENERAL NOTES:

1. ANY ACTUATED PHASE FOR WHICH THERE IS NO CALL SHALL BE SKIPPED.
2. WHEN ONE PHASE IS ON ALONE, ANY NONCONFLICTING PHASE MAY START TIMING CONCURRENTLY WITHOUT A CLEARANCE INTERVAL.
3. WHEN OPPOSING THRU PHASES ARE TIMING CONCURRENLTY THEY SHALL TERMINATE TOGETHER DUE TO PERMISSIVE LEFT TURN CONFLICT.
4. SET DETECTORS PER FIELD CONDITIONS AND TEMPORARY SIGNAL PROVIDER RECOMMENDATIONS.

BASIC ACTUATED PARAMETERS - PER PHASE (SECONDS)

	PHASE							
	EBLT	WB	NBLT	SB	WBLT	EB	SBLT	NB
	1	2	3	4	5	6	7	8
MIN GREEN	6	15	6	10	6	15	6	10
MAX GREEN	10	40	10	25	10	35	15	25
PASSAGE	3.0	4.0	3.0	4.0	3.0	4.0	3.0	4.0
MIN GAP	-	2.0	-	2.0	-	2.0	-	2.0
TIME B4 REDUCTION	-	20	-	15	-	20	-	15
TIME TO REDUCE	-	10	-	10	-	10	-	10
YELLOW	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
RED	2.0	2.5	2.0	2.5	2.0	2.5	2.0	2.5

110 SECOND MAX CYCLE

CTH W & CTH C
CITY OF MEQUON / TOWN OF GRAFTON
OZAUKEE COUNTY

SIGNAL NO: COUNTY	CABINET TYPE: TEMP
	CONTROLLER TYPE: TEMP
DATE: 8/2026	PAGE NO. 2 OF 2

LEGEND

- CONTROL CABINET
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- (XX) MONOTUBE BASE, POLE, 15'-30' ARM
- (XX) MONOTUBE BASE, POLE, 35'-55' ARM
- LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE
- VIDEO DETECTION AREA
- VX VIDEO DETECTION CAMERA
- PULL BOX, 24" X 42"
- XX SIGNAL HEAD NUMBER
- R RED CIRCULAR INDICATOR
- Y YELLOW CIRCULAR INDICATOR
- G GREEN CIRCULAR INDICATOR
- R RED ARROW
- Y YELLOW ARROW
- G GREEN ARROW
- X EVP DESIGNATOR
- EVP DETECTOR HEAD
- LANE DESIGNATION FOR INFO ONLY

NOTES:
- ALL LENSES ARE 12-INCH
- GRAYSHADE REPRESENTS EXISTING

MONOTUBE SIGNAL STRUCTURES

SB2 = S-45-1144-02
SB4 = S-45-1144-04
SB6 = S-45-1144-06
SB8 = S-45-1144-08

CONSTRUCTION NOTES:

1) THE LOCATIONS OF EXISTING UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
2) REINSTALL EVP DETECTORS AND CABINET EQUIPMENT PER MANUFACTURERS RECOMMENDATIONS.
3) ALL LUMINAIRES ARE LED-C UNLESS OTHERWISE NOTED.

TRAFFIC CONTROL SIGNAL
CTH W & CTH C
CITY OF MEQUON / TOWN OF GRAFTON
OZAUKEE COUNTY

SIGNAL NO. LOCAL

REGION CONTACT: JON EDGREN
DESIGNED BY: AYRES ASSOCIATES
REVISED BY: N/A

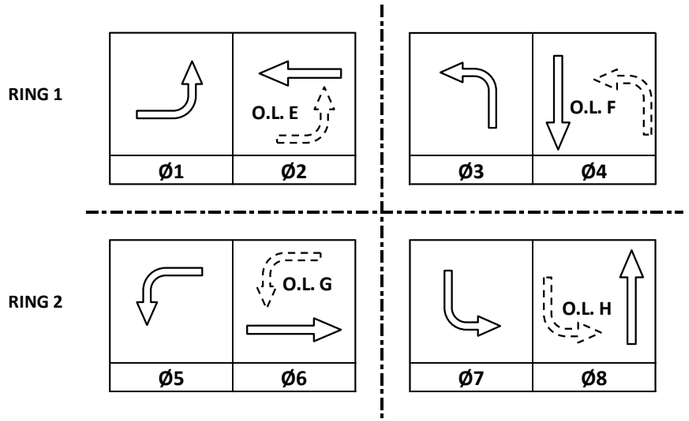
PAGE 1 OF 3

PROJECT NO: 2695-05-72	HWY: CTH C	COUNTY: OZAUKEE	TRAFFIC SIGNAL PLAN	SHEET 28	E

FILE NAME : I:\45\450785 OZAUKEE CTH W & CTH C HSIP\C3D\SHEETS\024201-SP.DWG
LAYOUT NAME - 024201-sp
PLOT DATE : 7/29/2026 10:20 AM
PLOT BY : GARNICA, BRANDON
PLOT NAME :
PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

	HEAD NUMBERS	FLASH
Ø1	14,15	R ->
Ø2	16,17,18	R
Ø3	04,05	R ->
Ø4	06,07,08	R
Ø5	19,20	R ->
Ø6	11,12,13	R
Ø7	09,10	R ->
Ø8	01,02,03	R
Ø2P	NONE	
Ø4P	NONE	
Ø6P	NONE	
Ø8P	NONE	



GENERAL NOTES:

1. ANY ACTUATED PHASE FOR WHICH THERE IS NO CALL SHALL BE SKIPPED.
2. WHEN ONE PHASE IS ON ALONE, ANY NONCONFLICTING PHASE MAY START TIMING CONCURRENTLY WITHOUT A CLEARANCE INTERVAL.
3. WHEN OPPOSING THRU PHASES ARE TIMING CONCURRENLTY THEY SHALL TERMINATE TOGETHER DUE TO PERMISSIVE LEFT TURN CONFLICT.

N

CONTROLLER LOGIC

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACTIVE
1		5,6		X
2		5,6	MIN	X
3		7,8		X
4		7,8		X
5		1,2		X
6		1,2	MIN	X
7		3,4		X
8		3,4		X

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTOR	A	B	C	D
MOVEMENT				
PHASE	2+5	1+6	4+7	3+8

AFTER PREEMPTION SEQUENCE 2+5 OR 6+1, CONTROLLER SHALL RETURN TO PHASES 2+6.

AFTER PREEMPTION SEQUENCE 4+7 OR 3+8, CONTROLLER SHALL RETURN TO PHASES 2+6.

TYPE OF INTERCONNECT/COMMUNICATION	
NONE	X
CLOSED LOOP	
TWISTED PAIR	
FIBER OPTIC*	
FIBER OPTIC (ETHERNET)	
RADIO	
CELL MODEM	

TYPE OF COORDINATION	
NONE	X
TBC	
TRAFFIC RESPONSIVE	
ADAPTIVE	
*LOCATION OF MASTER CONTROLLER NO: S-	
SIGNAL SYSTEM NO: SS-	

TYPE OF LIGHTING	
BY OTHER AGENCY	
IN TRAFFIC CABINET	X
IN SEPARATE DOT LIGHTING CABINET	

TYPE OF PRE-EMPT	
NONE	X
RAILROAD	
EMERGENCY VEHICLE	
GTT	
TOMAR	X
HARDWIRE	
OTHER	
LIFT BRIDGE	
QUEUE DETECTION	

DETECTOR LOGIC

DETECTOR INPUT	3	1	7	5	11	9	15	13	19	17	23	21					DETECTOR INPUT
PLAN LOOP DETECTOR*(S)	21	11	31	23	43	41	61	51	81	71		83					PLAN LOOP DETECTOR*(S)
CALLED PHASE	2	1	3	2	4	4	6	5	8	7		8					CALLED PHASE
CALL OPTION		X	X	X	X			X		X		X					CALL OPTION
DELAY TIME																	DELAY TIME
EXTENTION OPTION	X	X	X	X	X	X	X	X	X	X		X					EXTENTION OPTION
EXTEND TIME																	EXTEND TIME
USE ADDED INITIAL																	USE ADDED INITIAL
CROSS SWITCH PHASE																	CROSS SWITCH PHASE

DETECTOR INPUT	4	2	8	6	12	10	16	14	20	18	24	22					DETECTOR INPUT
PLAN LOOP DETECTOR*(S)	22	12	32		44	42	62	52	82	72		84					PLAN LOOP DETECTOR*(S)
CALLED PHASE	2	1	3		4	4	6	5	8	7		8					CALLED PHASE
CALL OPTION			X		X	X	X	X	X	X		X					CALL OPTION
DELAY TIME					X							X					DELAY TIME
EXTENTION OPTION	X	X	X		X	X	X	X	X	X		X					EXTENTION OPTION
EXTEND TIME																	EXTEND TIME
USE ADDED INITIAL																	USE ADDED INITIAL
CROSS SWITCH PHASE																	CROSS SWITCH PHASE

CTH W & CTH C

CITY OF MEQUON / TOWN OF GRAFTON

OZAUKEE COUNTY

SIGNAL NO: COUNTY **CABINET TYPE: TS2**

CONTROLLER TYPE: McCAIN

DATE: 8/2026 **PAGE NO. 2 OF 3**

PROJECT ID:	**2695-05-72**
INTERSECTION:	**CTH W & CTH C**

DATE: 8/1/2026

SIGNAL WIRE COLOR CODING	BLK - black	RED - red	GRN - green
	WHT - white	BLU - blue	ORG - orange

CB1 TO	AWG 14 # OF CONDUCTORS	HEAD NO.	SIGNAL INDICATION WIRE COLOR									PED BUTTON INPUT
			RED	YELLOW	GREEN	<RED>	<YELLOW>	<GREEN>	<FLASHING YELLOW>	D/ WALK	WALK	
SB1	12	11	RED	ORG	GRN							
		20				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT			
SB2	12	17	RED	ORG	GRN							
		18	RED	ORG	GRN							
		19				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT			
SB3	12	06	RED	ORG	GRN							
		05				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT			
SB4	12	02	RED	ORG	GRN							
		03	RED	ORG	GRN							
		04				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT			
SB5	12	16	RED	ORG	GRN							
		15				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT			
SB6	12	12	RED	ORG	GRN							
		13	RED	ORG	GRN							
		14				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT			
SB7	12	01	RED	ORG	GRN							
		10				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT			
SB8	12	07	RED	ORG	GRN							
		08	RED	ORG	GRN							
		09				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT			

NOTES: 1 - USE THE WHITE CONDUCTOR IN THE CABLE ASSEMBLY AS THE GROUND CONDUCTOR FOR ALL TRAFFIC SIGNAL INDICATIONS.

EQUIPMENT GROUNDING CONDUCTOR 10 AWG GREEN XLP	
FROM	**TO**
CAB	SB1
SB1	SB2
SB2	SB3
SB3	SB4
SB4	SB5
SB5	SB6
SB6	SB7
SB7	SB8
SB8	CB1

VIDEO DETECTION CABLE	
FROM	**TO**
CAB	V1 (SB4)
CAB	V2 (SB8)
CAB	V3 (SB6)
CAB	V4 (SB2)

EVP CABLE	
FROM	**TO**
CAB	SB2
CAB	SB4
CAB	SB6
CAB	SB8

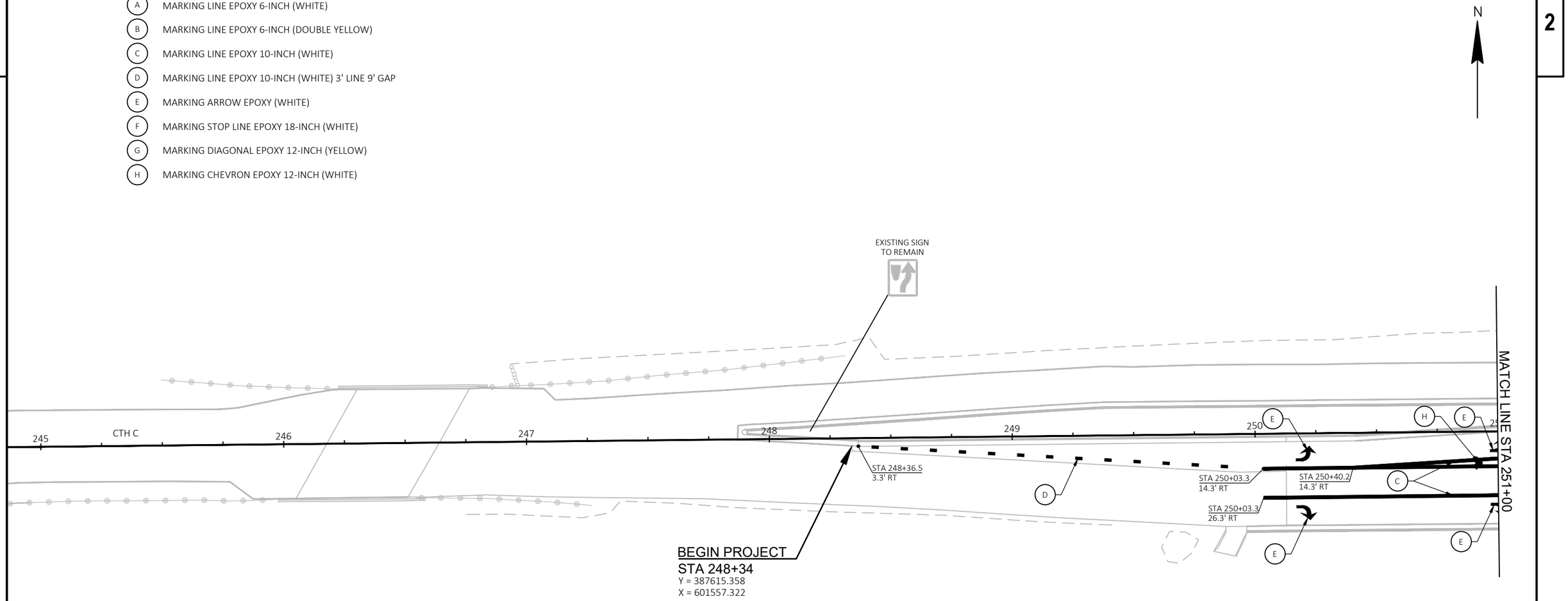
CTH W & CTH C
CITY OF MEQUON / TOWN OF GRAFTON
OZAUKEE COUNTY

SIGNAL NO: COUNTY **CABINET TYPE: TS2**
CONTROLLER TYPE: McCAIN
DATE: 8/2026 **PAGE NO. 3 OF 3**

2

LEGEND

- (A) MARKING LINE EPOXY 6-INCH (WHITE)
- (B) MARKING LINE EPOXY 6-INCH (DOUBLE YELLOW)
- (C) MARKING LINE EPOXY 10-INCH (WHITE)
- (D) MARKING LINE EPOXY 10-INCH (WHITE) 3' LINE 9' GAP
- (E) MARKING ARROW EPOXY (WHITE)
- (F) MARKING STOP LINE EPOXY 18-INCH (WHITE)
- (G) MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
- (H) MARKING CHEVRON EPOXY 12-INCH (WHITE)



PROJECT NO: 2695-05-72	HWY: CTH C	COUNTY: OZAUKEE	PAVEMENT MARKING AND SIGNING	SHEET 31	E

2

LEGEND

- (A) MARKING LINE EPOXY 6-INCH (WHITE)
- (B) MARKING LINE EPOXY 6-INCH (DOUBLE YELLOW)
- (C) MARKING LINE EPOXY 10-INCH (WHITE)
- (D) MARKING LINE EPOXY 10-INCH (WHITE) 3' LINE 9' GAP
- (E) MARKING ARROW EPOXY (WHITE)
- (F) MARKING STOP LINE EPOXY 18-INCH (WHITE)
- (G) MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
- (H) MARKING CHEVRON EPOXY 12-INCH (WHITE)

N

MATCH LINE STA 19+50

CTH W

CONCRETE

Pioneer Rd
INSTALL ON SIGNAL MAST ARM
SEE SIGN DETAIL
204

STA 19+28.5
16.4' RT

Port Washington Rd
INSTALL ON SIGNAL MAST ARM
SEE SIGN DETAIL
205

COUNTY C
MOVE
M-103

DO NOT ENTER
R5-1
30"X30"
208

COUNTY W
EXISTING SIGN
AND POST
TO REMAIN

STA 18+65.2
4.2' RT

STA 18+56.1
35.8' LT

R4-7
24"X30"
201
**

MATCH EXISTING
PAVEMENT MARKING

STA 254+90.0
27.4' LT

STA 254+89.9
22.4' LT

STA 254+89.9
10.4' LT

MATCH LINE STA 251+00

CTH C

252 253 254 255 256 257

CTH C

STA 17+38.5
0.4' RT

STA 17+28.5
3.6' LT

EXISTING SIGN
TO REMAIN
COUNTY W

M-101
M-102
COUNTY W
MOVE
H
MOVE
207
DO NOT ENTER
R5-1
30"X30"

202
R4-7
24"X30"
**

203
Port Washington Rd
INSTALL ON SIGNAL MAST ARM
SEE SIGN DETAIL

206
Pioneer Rd
INSTALL ON SIGNAL MAST ARM
SEE SIGN DETAIL

STA 16+55.8
3.7' LT

CTH W

MATCH LINE STA 16+50

END PROJECT
STA 254+81

STOP
R1-1F
36"X36"
209 211
210 212
INSTALL FOLDING STOP
SIGNS ON ALL NEAR
RIGHT SIGNAL POLES

(XXXX) SIGN NUMBER

** 12-INCH CONCRETE BOX OUT
FOR SIGN POST REQUIRED

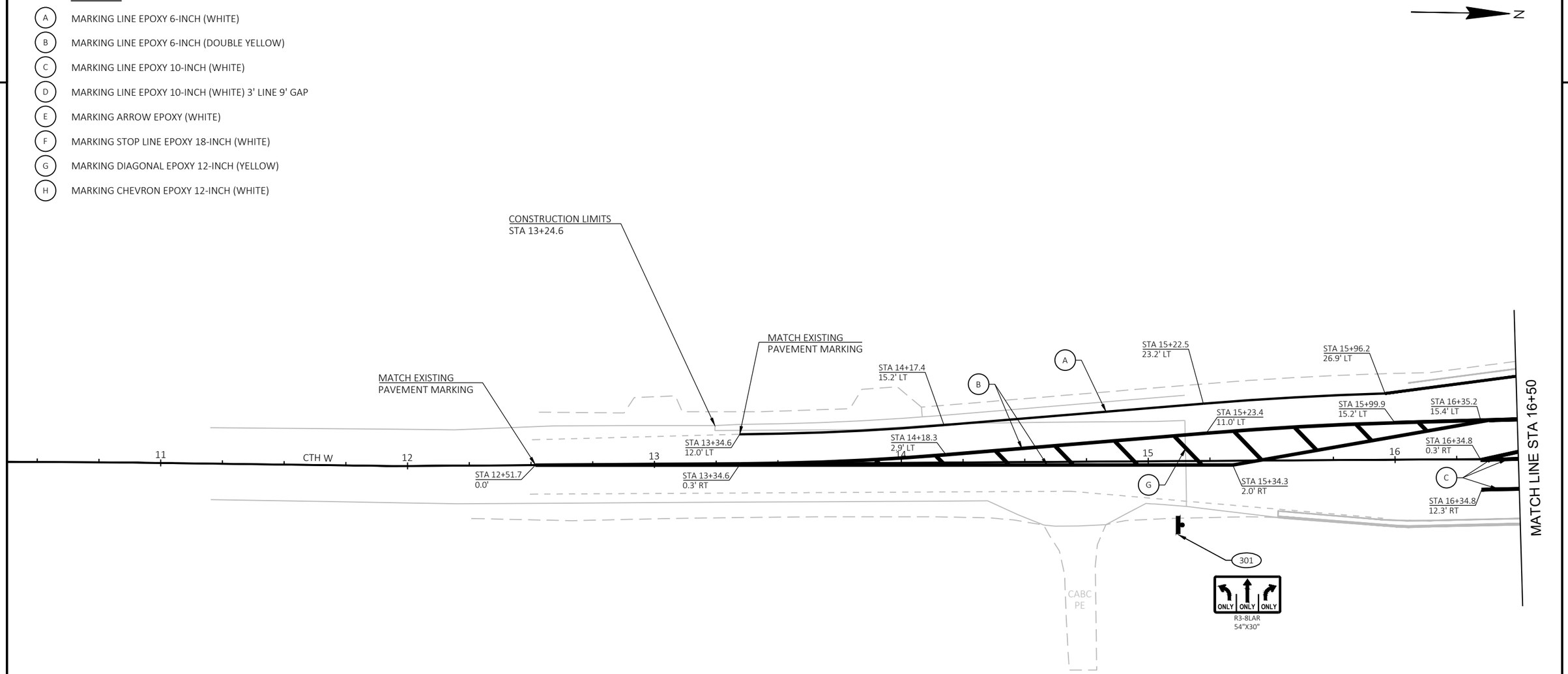
PROJECT NO: 2695-05-72	HWY: CTH C	COUNTY: OZAUKEE	PAVEMENT MARKING AND SIGNING	SHEET 32	E

FILE NAME : I:\45\450785 OZAUKEE CTH W & CTH C HSIP\C3D\SHEETS\024501-PM.DWG
LAYOUT NAME - 024502-pm
PLOT DATE : 7/29/2026 10:14 AM PLOT BY : GARNICA, BRANDON PLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

2

LEGEND

- (A) MARKING LINE EPOXY 6-INCH (WHITE)
- (B) MARKING LINE EPOXY 6-INCH (DOUBLE YELLOW)
- (C) MARKING LINE EPOXY 10-INCH (WHITE)
- (D) MARKING LINE EPOXY 10-INCH (WHITE) 3' LINE 9' GAP
- (E) MARKING ARROW EPOXY (WHITE)
- (F) MARKING STOP LINE EPOXY 18-INCH (WHITE)
- (G) MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
- (H) MARKING CHEVRON EPOXY 12-INCH (WHITE)



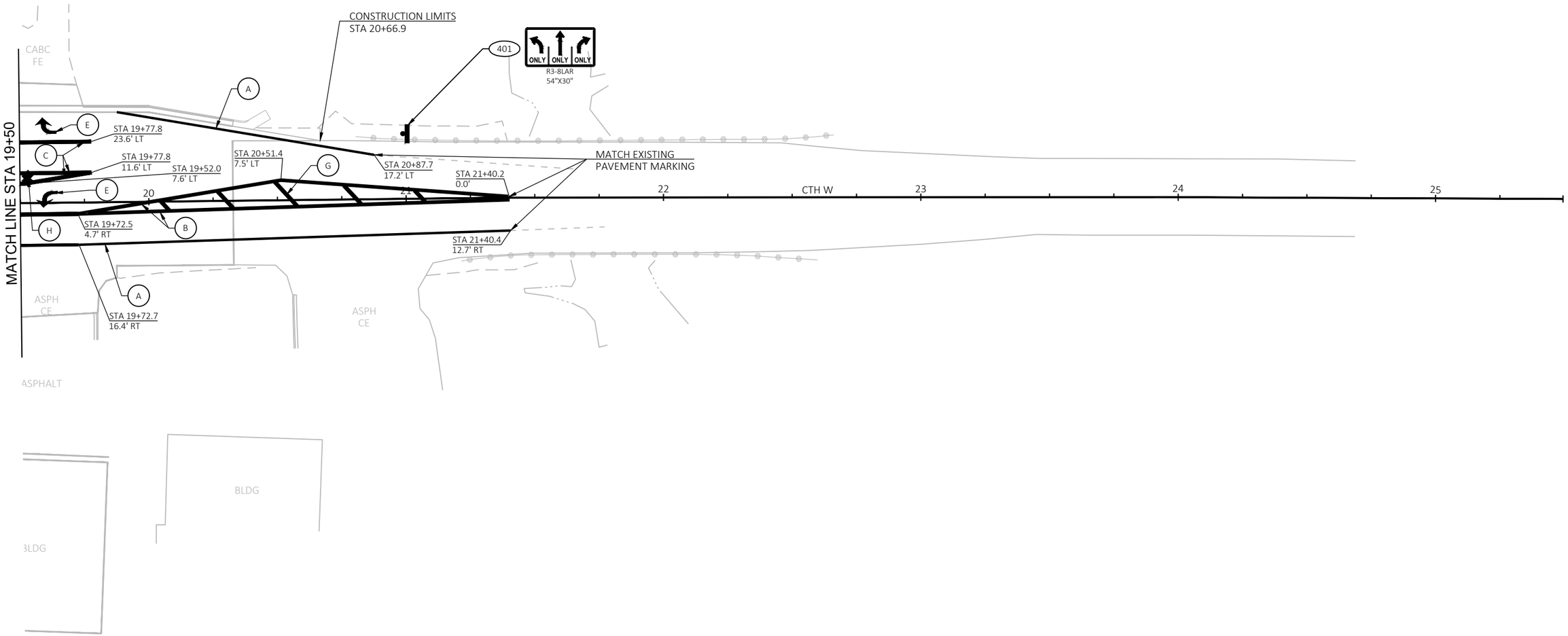
PROJECT NO: 2695-05-72	HWY: CTH C	COUNTY: OZAUKEE	PAVEMENT MARKING AND SIGNING	SHEET 33	E

FILE NAME : I:\45\450785 OZAUKEE CTH W & CTH C HSIP\C3D\SHEETS\024501-PM.DWG
LAYOUT NAME - 024503-pm
PLOT DATE : 7/29/2026 10:14 AM PLOT BY : GARNICA, BRANDON PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

LEGEND

- (A) MARKING LINE EPOXY 6-INCH (WHITE)
- (B) MARKING LINE EPOXY 6-INCH (DOUBLE YELLOW)
- (C) MARKING LINE EPOXY 10-INCH (WHITE)
- (D) MARKING LINE EPOXY 10-INCH (WHITE) 3' LINE 9' GAP
- (E) MARKING ARROW EPOXY (WHITE)
- (F) MARKING STOP LINE EPOXY 18-INCH (WHITE)
- (G) MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
- (H) MARKING CHEVRON EPOXY 12-INCH (WHITE)



PROJECT NO: 2695-05-72	HWY: CTH C	COUNTY: OZAUKEE	PAVEMENT MARKING AND SIGNING	SHEET 34	E

FILE NAME : I:\45\450785 OZAUKEE CTH W & CTH C HSIP\C3D\SHEETS\024501-PM.DWG
LAYOUT NAME - 024504-pm

PLOT DATE : 7/29/2026 10:17 AM PLOT BY : GARNICA, BRANDON PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

CONSTRUCTION NOTES:

1) REMOVE OR COVER ANY PAVEMENT MARKING LINES, ARROWS, OR WORDS IN CONFLICT WITH STAGE TRAFFIC CONTROL LANES. USE EXISTING LANE LINES WHEN POSSIBLE FOR TURN LANES.
2) USE PCMS 7 DAYS IN ADVANCE OF PROJECT. MESSAGE: "LANE CLOSURES BEGIN / XX-XX-XX EXPECT DELAYS".

N

STAGE 1B CONSTRUCTION AREA

PAVE TEMPORARY ASPHALT PRIOR TO CONSTRUCTING WESTBOUND PAVEMENT TO ACCOMMODATE WESTBOUND TRAFFIC. REMOVE CURBING AT INTERSECTION AS REQUIRED TO OBTAIN MINIMUM LANE WIDTH.

TEMPORARY MARKING LINE PAINT, 6-INCH EDGELINE (WHITE)

WO1-6 48"X24"
TYPE III BARRICADE

150' MINIMUM SHIFTING TAPER

MIN 12'

CTH W

246+00 247+00 248+00 249+00 250+00 251+00 252+00 253+00

CTH C

ROAD WORK AHEAD W20-1A

SEE STANDARD DETAIL DRAWING "TRAFFIC CONTROL, ADDED LANE CLOSURE WITHOUT LANE SHIFT" FOR ADDITIONAL SIGNING AND GUIDANCE

WO1-6 48"X24"
TYPE III BARRICADE

MB

EXISTING MARKINGS

11'
12'

100' MINIMUM TURN LANE TAPER

100' MINIMUM LEFT TURN LANE

BEGIN LEFT TURN LANE R3-20L 24"X36"

SEE STANDARD DETAIL DRAWING "TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LEFT LANE CLOSURE" FOR ADDITIONAL SIGNING AND GUIDANCE

19+00 18+00 17+00

INTERSECTION OPERATING WITH TEMPORARY SIGNAL. SEE TEMPORARY SIGNAL DETAIL

BEGIN LEFT TURN LANE R3-20L 24"X36"

SEE STANDARD DETAIL DRAWING "TRAFFIC CONTROL, ADDED LANE CLOSURE WITHOUT LANE SHIFT" FOR ADDITIONAL SIGNING AND GUIDANCE

I-43 SB OFF RAMP

ROAD WORK AHEAD W20-1A

N

150' MINIMUM LEFT TURN LANE

75' MINIMUM TURN LANE TAPER

EXISTING MARKINGS

MB

253+00 254+00 255+00 256+00 257+00 258+00 259+00

CTH C

CTH W

STAGE 1B CONSTRUCTION AREA

WO1-6 48"X24"
TYPE III BARRICADE

WO1-6 48"X24"
TYPE III BARRICADE

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- SIGN ON PERMANENT SUPPORT
- WORK AREA
- DIRECTION OF TRAFFIC
- MB — PORTABLE CHANGEABLE MESSAGE BOARD

PROJECT NO: 2695-05-72	HWY: CTH C	COUNTY: OZAUKEE	TRAFFIC CONTROL - STAGE 1B	SHEET 35	E

CONSTRUCTION NOTES:

1) REMOVE OR COVER ANY PAVEMENT MARKING LINES, ARROWS, OR WORDS IN CONFLICT WITH STAGE TRAFFIC CONTROL LANES. USE EXISTING LANE LINES WHEN POSSIBLE FOR TURN LANES.
2) USE PCMS 7 DAYS IN ADVANCE OF PROJECT. MESSAGE: "LANE CLOSURES BEGIN / XX-XX-XX EXPECT DELAYS".

SEE STANDARD DETAIL DRAWING "TRAFFIC CONTROL, ADDED LANE CLOSURE WITHOUT LANE SHIFT" FOR ADDITIONAL SIGNING AND GUIDANCE

TEMPORARY MARKING LINE, REMOVABLE TAPE 6-INCH EDGELINE (WHITE)

STAGE 2 WORK ZONE

TEMPORARY MARKING LINE, REMOVABLE TAPE 10-INCH CHANNELIZING (WHITE)

TEMPORARY MARKING LINE, REMOVABLE TAPE 6-INCH (DOUBLE YELLOW)

ROAD WORK AHEAD W20-1A

CTH C

CTH W

MB

R3-8LF 36"X30"

137'

75' MINIMUM LEFT TURN LANE

WO1-6 48"X24"

TYPE III BARRICADE

SEE STANDARD DETAIL DRAWING "TRAFFIC CONTROL, ADDED LANE CLOSURE WITHOUT LANE SHIFT" FOR ADDITIONAL SIGNING AND GUIDANCE

TURN LANES CONSTRUCTED IN STAGE 1B

165' MINIMUM LEFT TURN LANE

150'

STAGE 2 WORK ZONE

TEMPORARY MARKING STOPLINE REMOVABLE TAPE 18-INCH

INTERSECTION OPERATING WITH TEMPORARY SIGNAL. SEE TEMPORARY SIGNAL DETAIL

TEMPORARY MARKING LINE, REMOVABLE TAPE 10-INCH CHANNELIZING (WHITE)

TEMPORARY MARKING LINE, REMOVABLE TAPE 6-INCH EDGELINE (WHITE)

TEMPORARY MARKING LINE, REMOVABLE TAPE 6-INCH (DOUBLE YELLOW)

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- SIGN ON PERMANENT SUPPORT
- WORK AREA
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD

PROJECT NO: 2695-05-72	HWY: CTH C	COUNTY: OZAUKEE	TRAFFIC CONTROL - STAGE 2	SHEET 36	E

FILE NAME : I:\45\450785 OZAUKEE CTH W & CTH C HSIP\C3D\SHEETS\026201-S2.DWG
LAYOUT NAME - 026201
PLOT DATE : 7/29/2026 10:15 AM PLOT BY : GARNICA, BRANDON PLOT NAME : PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 42

2

N

BP: 242+88.23
Y = 387612.700
X = 601011.553

CP #12
FENO W/ALUM. AYRES CAP
STA 245+26.93, 27.68' LT
Y = 387642.908
X = 601249.940

245

N89°23'32"E

CTH C

250

PI: 252+63.15
Y = 387623.042
X = 601986.417

PI: 21+43.12
Y = 387963.746
X = 601992.946

PI: 23+90.62
Y = 388211.086
X = 601984.095

N1°43'47"W

EP: 25+49.51
Y = 388369.904
X = 601979.299

25

20 N2°38'34"W

N2°02'58"W

CTH W

CP #15
FENO W/ALUM. AYRES CAP
STA 252+31.35, 90.37' LT
Y = 387713.066
X = 601953.657

CP #14
FENO W/ALUM. AYRES CAP
STA 16+18.28, 29.96' RT
Y = 388241.931
X = 602013.141

CP #300
CONC. MON. W/ALUM. CAP
STA 253+38.15, 71.57' RT
Y = 387552.268
X = 602062.165

255

N89°23'30"E

CTH C

EP: 259+58.23
Y = 387630.421
X = 602681.457

BP: 1+00.00
Y = 385921.350
X = 602037.987

5 N0°37'10"W

CTH W

10

PI: 10+83.19
Y = 386904.482
X = 602027.356

N0°15'52"W

PI: 11+96.01
Y = 387017.301
X = 602026.835

CP #13
FENO W/ALUM. AYRES CAP
STA 12+01.25, 31.99' LT
Y = 387021.783
X = 601994.731

N1°21'47"W 15

PI: 16+34.27
Y = 387455.438
X = 602016.409

PROJECT NO: 2695-05-72	HWY: CTH C	COUNTY: OZAUKEE	ALIGNMENT	SHEET 37	E

FILE NAME : I:\45\450785 OZAUKEE CTH W & CTH C HSIP\C3D\SHEETS\027201-AD.DWG
LAYOUT NAME - 027201-ad

PLOT DATE : 7/29/2026 10:14 AM PLOT BY : GARNICA, BRANDON PLOT NAME : PLOT SCALE : 1 IN:200 FT

UTILITY TYPES	
Communication Line	CL
Communication Tower	CT
Electricity - Transmission	ET
Electricity	E
Gas-Petroleum	G
Sanitary Sewer	SAN
Steam	SM
Water	W

GENERAL	
Discontinued In Place	D
Removed	R
Overhead	OH
Underground	UG
Additional	ADD
Information	INFO
Left	LT
Right	RT
Alignment	ALG
Project	PROJ

UTILITY ENTITIES	
AT&T - Communication Line	ATT - CL
Lumen - Communication Line	LUM - CL
MCI - Communication Line	MCI - CL
Spectrum - Communication Lin	SPE - CL
We Energies - Electricity	WE - E
We Energies - Gas-Petroleum	WE - G

DURING CONSTRUCTION

UTILITY IMPACT ID	PROJECT STAGE	HIGHWAY CONTRACT WORK COMPLETED	WORKING DAYS	STARTING WORKING DAY	WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 5	WEEK 6	WEEK 7	WEEK 8	WEEK 9	WEEK 10	WEEK 11	WEEK 12
ATT - CL	2	AFTER CURB & GUTTER INSTALLATION	2	29												

2

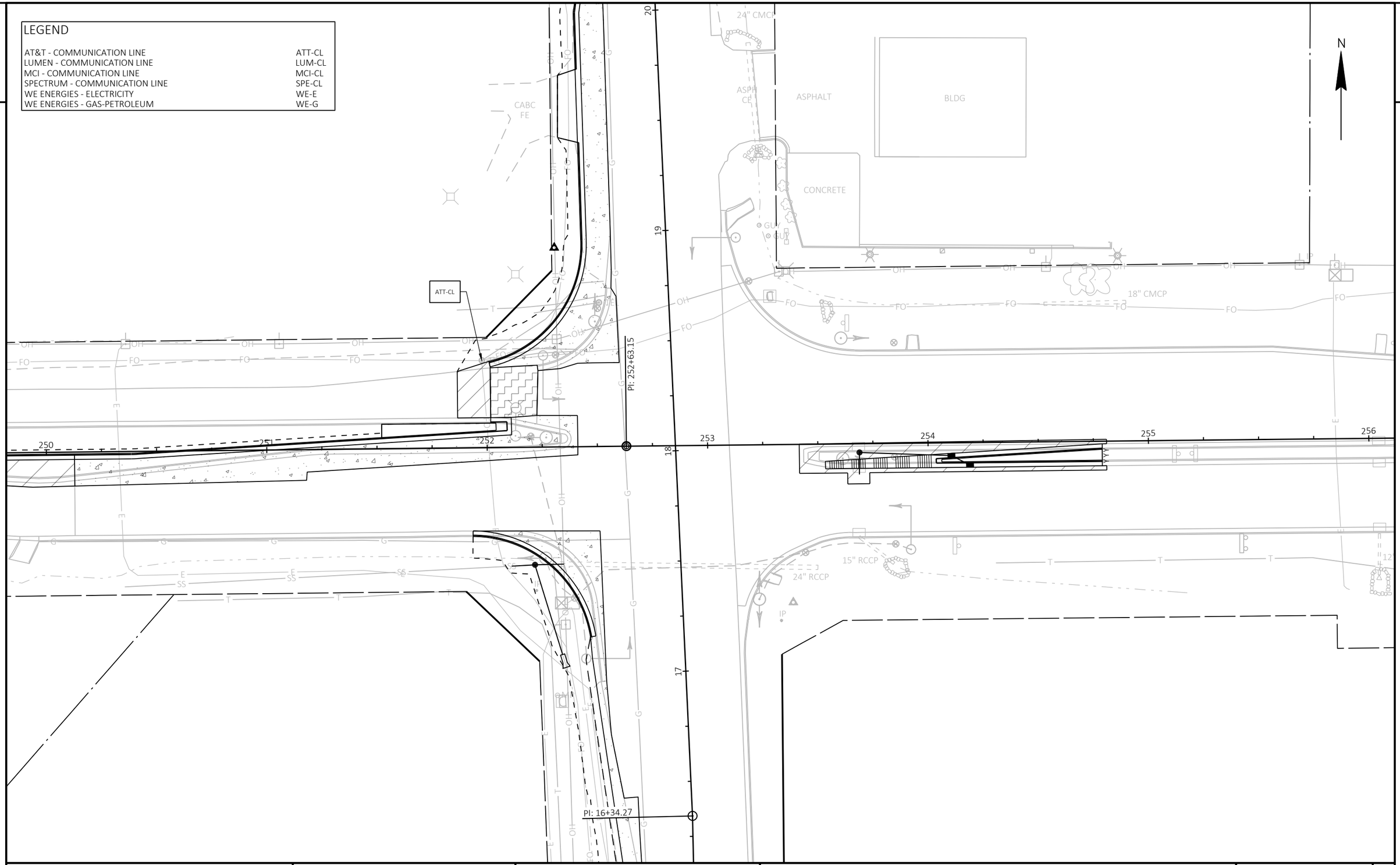
EXISTING UTILITY FACILITIES										DURING CONSTRUCTION RESOLUTION							
UTILITY PLAN SHEET	UTILITY IMPACT ID	UTILITY TYPE	OH/ UG	FACILITY COMPONENT	FACILITY SIZE	ALG	STATION / OFFSET START	STATION / OFFSET END	IN CONFLICT WITH	UTILITY WORK PERFORMED	STATION / OFFSET START	STATION / OFFSET END	DISCON. OR REM. (D/R)	PROJ. STAGE	HIGHWAY CONTRACT WORK COMPLETED	WORKING DAYS TO PERFORM	ADD. INFO.
1	ATT - CL	CL	UG	MANHOLE	-	CTH C	251+97	-	CURB & GUTTER	ADJUSTMENT	251+97	-	-	2	OTHER - DESCRIBE IN NARRATIVE	2	1

1) ADJUST FINAL GRADE AFTER CURB AND GUTTER INSTALLATION.

2

LEGEND

AT&T - COMMUNICATION LINE	ATT-CL
LUMEN - COMMUNICATION LINE	LUM-CL
MCI - COMMUNICATION LINE	MCI-CL
SPECTRUM - COMMUNICATION LINE	SPE-CL
WE ENERGIES - ELECTRICITY	WE-E
WE ENERGIES - GAS-PETROLEUM	WE-G



PROJECT NO: 2695-05-72	HWY: CTH C	COUNTY: OZAUKEE	UTILITY PLAN	SHEET 40 E

Estimate Of Quantities

2695-05-72

Line	Item	Item Description	Unit	Total	Qty
0002	204.0100	Removing Concrete Pavement	SY	370.000	370.000
0004	204.0150	Removing Curb & Gutter	LF	455.000	455.000
0006	204.0155	Removing Concrete Sidewalk	SY	71.000	71.000
0008	204.0195	Removing Concrete Bases	EACH	12.000	12.000
0010	204.0220	Removing Inlets	EACH	3.000	3.000
0012	204.0245	Removing Storm Sewer (size) 01. 15-Inch	LF	12.000	12.000
0014	204.0245	Removing Storm Sewer (size) 02. 18-Inch	LF	42.000	42.000
0016	204.0245	Removing Storm Sewer (size) 03. 24-Inch	LF	19.000	19.000
0018	204.9060.S	Removing (item description) 01. Traffic Signals	EACH	1.000	1.000
0020	204.9060.S	Removing (item description) 02. Traffic Signal Cable and Wiring	EACH	1.000	1.000
0022	205.0100	Excavation Common	CY	952.000	952.000
0024	213.0100	Finishing Roadway (project) 01. 2695-05-72	EACH	1.000	1.000
0026	305.0110	Base Aggregate Dense 3/4-Inch	TON	60.000	60.000
0028	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	1,090.000	1,090.000
0030	415.0090	Concrete Pavement 9-Inch	SY	895.000	895.000
0032	415.1090	Concrete Pavement HES 9-Inch	SY	55.000	55.000
0034	416.0610	Drilled Tie Bars	EACH	282.000	282.000
0036	416.0620	Drilled Dowel Bars	EACH	42.000	42.000
0038	455.0605	Tack Coat	GAL	55.000	55.000
0040	465.0105	Asphaltic Surface	TON	165.000	165.000
0042	465.0125	Asphaltic Surface Temporary	TON	20.000	20.000
0044	465.0315	Asphaltic Flumes	SY	6.000	6.000
0046	520.1018	Apron Endwalls for Culvert Pipe 18-Inch	EACH	1.000	1.000
0048	520.8000	Concrete Collars for Pipe	EACH	3.000	3.000
0050	601.0409	Concrete Curb & Gutter 30-Inch Type A	LF	490.000	490.000
0052	601.0411	Concrete Curb & Gutter 30-Inch Type D	LF	323.000	323.000
0054	602.0410	Concrete Sidewalk 5-Inch	SF	460.000	460.000
0056	602.0810	Concrete Driveway 6-Inch	SY	30.000	30.000
0058	606.0200	Riprap Medium	CY	2.000	2.000
0060	608.0415	Storm Sewer Pipe Reinforced Concrete Class IV 15-Inch	LF	64.000	64.000
0062	608.0424	Storm Sewer Pipe Reinforced Concrete Class IV 24-Inch	LF	24.000	24.000
0064	608.3018	Storm Sewer Pipe Class III-A 18-Inch	LF	43.000	43.000
0066	611.0535	Manhole Covers Type J-Special	EACH	2.000	2.000
0068	611.2004	Manholes 4-FT Diameter	EACH	1.000	1.000
0070	611.2005	Manholes 5-FT Diameter	EACH	1.000	1.000
0072	611.3230	Inlets 2x3-FT	EACH	2.000	2.000
0074	611.9710	Salvaged Inlet Covers	EACH	2.000	2.000
0076	619.1000	Mobilization	EACH	1.000	1.000
0078	620.0100	Concrete Corrugated Median	SF	230.000	230.000
0080	620.0300	Concrete Median Sloped Nose	SF	86.000	86.000
0082	624.0100	Water	MGAL	22.000	22.000
0084	625.0100	Topsoil	SY	945.000	945.000
0086	628.1504	Silt Fence	LF	470.000	470.000
0088	628.1520	Silt Fence Maintenance	LF	940.000	940.000
0090	628.1905	Mobilizations Erosion Control	EACH	5.000	5.000
0092	628.1910	Mobilizations Emergency Erosion Control	EACH	3.000	3.000
0094	628.2008	Erosion Mat Urban Class I Type B	SY	945.000	945.000
0096	628.7005	Inlet Protection Type A	EACH	4.000	4.000
0098	628.7015	Inlet Protection Type C	EACH	4.000	4.000

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Line	Item	Item Description	Unit	Total	Qty
0100	628.7555	Culvert Pipe Checks	EACH	3.000	3.000
0102	628.7570	Rock Bags	EACH	25.000	25.000
0104	629.0210	Fertilizer Type B	CWT	1.000	1.000
0106	630.0140	Seeding Mixture No. 40	LB	43.000	43.000
0108	630.0500	Seed Water	MGAL	24.000	24.000
0110	634.0614	Posts Wood 4x6-Inch x 14-FT	EACH	4.000	4.000
0112	634.0616	Posts Wood 4x6-Inch x 16-FT	EACH	3.000	3.000
0114	637.2220	Signs Type II Reflective SH	SF	67.500	67.500
0116	637.2225	Signs Type II Reflective SH Folding	SF	29.840	29.840
0118	638.2102	Moving Signs Type II	EACH	4.000	4.000
0120	638.2602	Removing Signs Type II	EACH	14.000	14.000
0122	638.3000	Removing Small Sign Supports	EACH	4.000	4.000
0124	642.5001	Field Office Type B	EACH	1.000	1.000
0126	643.0300	Traffic Control Drums	DAY	3,805.000	3,805.000
0128	643.0420	Traffic Control Barricades Type III	DAY	268.000	268.000
0130	643.0705	Traffic Control Warning Lights Type A	DAY	536.000	536.000
0132	643.0715	Traffic Control Warning Lights Type C	DAY	600.000	600.000
0134	643.0900	Traffic Control Signs	DAY	800.000	800.000
0136	643.1050	Traffic Control Signs PCMS	DAY	28.000	28.000
0138	643.3165	Temporary Marking Line Paint 6-Inch	LF	250.000	250.000
0140	643.3180	Temporary Marking Line Removable Tape 6-Inch	LF	1,650.000	1,650.000
0142	643.3280	Temporary Marking Line Removable Tape 10-Inch	LF	280.000	280.000
0144	643.3850	Temporary Marking Stop Line Removable Tape 18-Inch	LF	35.000	35.000
0146	643.5000	Traffic Control	EACH	1.000	1.000
0148	645.0120	Geotextile Type HR	SY	7.000	7.000
0150	646.2020	Marking Line Epoxy 6-Inch	LF	3,180.000	3,180.000
0152	646.4020	Marking Line Epoxy 10-Inch	LF	1,810.000	1,810.000
0154	646.5020	Marking Arrow Epoxy	EACH	18.000	18.000
0156	646.6120	Marking Stop Line Epoxy 18-Inch	LF	180.000	180.000
0158	646.7120	Marking Diagonal Epoxy 12-Inch	LF	105.000	105.000
0160	646.7320	Marking Chevron Epoxy 12-Inch	LF	130.000	130.000
0162	646.8020	Marking Corrugated Median Epoxy	SF	76.000	76.000
0164	646.8120	Marking Curb Epoxy	LF	20.000	20.000
0166	646.8220	Marking Island Nose Epoxy	EACH	2.000	2.000
0168	646.9010	Marking Removal Line Water Blasting 4-Inch	LF	2,130.000	2,130.000
0170	646.9110	Marking Removal Line Water Blasting 8-Inch	LF	1,069.000	1,069.000
0172	646.9210	Marking Removal Line Water Blasting Wide	LF	153.000	153.000
0174	646.9310	Marking Removal Special Marking Water Blasting	EACH	18.000	18.000
0176	650.4000	Construction Staking Storm Sewer	EACH	4.000	4.000
0178	650.4500	Construction Staking Subgrade	LF	1,212.000	1,212.000
0180	650.5000	Construction Staking Base	LF	541.000	541.000
0182	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	323.000	323.000
0184	650.7000	Construction Staking Concrete Pavement	LF	671.000	671.000
0186	650.8501	Construction Staking Electrical Installations (project) 01. 2695-05-72	EACH	1.000	1.000
0188	650.9500	Construction Staking Sidewalk (project) 01. 2695-05-72	EACH	1.000	1.000
0190	650.9911	Construction Staking Supplemental Control (project) 01. 2695-05-72	EACH	1.000	1.000
0192	650.9920	Construction Staking Slope Stakes	LF	982.000	982.000
0194	652.0225	Conduit Rigid Nonmetallic Schedule 40 2-Inch	LF	165.000	165.000
0196	652.0235	Conduit Rigid Nonmetallic Schedule 40 3-Inch	LF	305.000	305.000

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Line	Item	Item Description	Unit	Total	Qty
0198	652.0615	Conduit Special 3-Inch	LF	640.000	640.000
0200	653.0164	Pull Boxes Non-Conductive 24x42-Inch	EACH	8.000	8.000
0202	653.0905	Removing Pull Boxes	EACH	11.000	11.000
0204	654.0101	Concrete Bases Type 1	EACH	1.000	1.000
0206	654.0102	Concrete Bases Type 2	EACH	3.000	3.000
0208	654.0113	Concrete Bases Type 13	EACH	2.000	2.000
0210	654.0120	Concrete Bases Type 10-Special	EACH	2.000	2.000
0212	654.0217	Concrete Control Cabinet Bases Type 9 Special	EACH	1.000	1.000
0214	655.0230	Cable Traffic Signal 5-14 AWG	LF	380.000	380.000
0216	655.0240	Cable Traffic Signal 7-14 AWG	LF	375.000	375.000
0218	655.0260	Cable Traffic Signal 12-14 AWG	LF	1,635.000	1,635.000
0220	655.0320	Cable Type UF 2-10 AWG Grounded	LF	614.000	614.000
0222	655.0515	Electrical Wire Traffic Signals 10 AWG	LF	1,083.000	1,083.000
0224	655.0610	Electrical Wire Lighting 12 AWG	LF	690.000	690.000
0226	655.0900	Traffic Signal EVP Detector Cable	LF	840.000	840.000
0228	656.0201	Electrical Service Meter Breaker Pedestal (location) 01. CTH W & CTH C Intersection	EACH	1.000	1.000
0230	657.0100	Pedestal Bases	EACH	1.000	1.000
0232	657.0255	Transformer Bases Breakaway 11 1/2-Inch Bolt Circle	EACH	3.000	3.000
0234	657.0315	Poles Type 4	EACH	3.000	3.000
0236	657.0347	Poles Type 9-Special	EACH	1.000	1.000
0238	657.0352	Poles Type 10-Special	EACH	1.000	1.000
0240	657.0355	Poles Type 12	EACH	1.000	1.000
0242	657.0360	Poles Type 13	EACH	1.000	1.000
0244	657.0425	Traffic Signal Standards Aluminum 15-FT	EACH	1.000	1.000
0246	657.0546	Monotube Arms 45-FT-Special	EACH	2.000	2.000
0248	657.0550	Monotube Arms 50-FT	EACH	1.000	1.000
0250	657.0555	Monotube Arms 55-FT	EACH	1.000	1.000
0252	657.0615	Luminaire Arms Single Member 4 1/2-Inch Clamp 8-FT	EACH	3.000	3.000
0254	657.0808	Luminaire Arms Steel 8-FT	EACH	2.000	2.000
0256	657.0825	Luminaire Arms Steel Type 13 Pole Clamp 15-FT	EACH	1.000	1.000
0258	657.0830	Luminaire Arms Steel Type 10 Special Pole Clamp 15-FT	EACH	1.000	1.000
0260	658.0173	Traffic Signal Face 3S 12-Inch	EACH	12.000	12.000
0262	658.0174	Traffic Signal Face 4S 12-Inch	EACH	8.000	8.000
0264	658.5070	Signal Mounting Hardware (location) 01. CTH W & CTH C Intersection	EACH	1.000	1.000
0266	659.1125	Luminaires Utility LED C	EACH	5.000	5.000
0268	659.5000.S	Lamp, Ballast, LED, Switch Disposal by Contractor	EACH	6.000	6.000
0270	690.0150	Sawing Asphalt	LF	740.000	740.000
0272	690.0250	Sawing Concrete	LF	610.000	610.000
0274	715.0720	Incentive Compressive Strength Concrete Pavement	DOL	500.000	500.000
0276	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	200.000	200.000
0278	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	900.000	900.000
0280	SPV.0060	Special 01. Traffic Signal Controller and Cabinet	EACH	1.000	1.000
0282	SPV.0060	Special 02. Vehicular Video Detection System	EACH	1.000	1.000
0284	SPV.0060	Special 03. Retroreflective Backplate 3S	EACH	12.000	12.000
0286	SPV.0060	Special 04. Retroreflective Backplate 4S	EACH	8.000	8.000
0288	SPV.0060	Special 05. Salvage and Reinstall EVP Equipment	EACH	1.000	1.000
0290	SPV.0060	Special 06. Section Corner Monuments	EACH	2.000	2.000
0292	SPV.0060	Special 07. Portable Temporary Traffic Signal System	EACH	1.000	1.000

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REMOVING CONCRETE PAVEMENT

STATION	TO	STATION	LOCATION	204.0100 REMOVING CONCRETE PAVEMENT SY
250+12	-	252+42	CTH C	234
15+97	-	16+45	CTH W	16
16+72	-	17+66	CTH W	80
18+41	-	18+75	CTH W	40
			TOTAL 0010	370

REMOVING CURB & GUTTER

STATION	TO	STATION	LOCATION	204.0150 REMOVING CURB & GUTTER LF
248+36	-	250+12	CTH C	177
253+43	-	254+79	CTH C	278
			TOTAL 0010	455

REMOVING CONCRETE SIDEWALK

STATION	TO	STATION	LOCATION	204.0155 REMOVING CONCRETE SIDEWALK SY
253+50	-	254+79	CTH C	71
			TOTAL 0010	71

REMOVING CONCRETE BASES

SB NO.	STATION	OFFSET	LOCATION	204.0195 REMOVING CONCRETE BASES EACH
EXCAB	17+32	55' LT	CTH W	1
EXSB1	18+94	32' RT	CTH W	1
EXSB2	18+47	77' RT	CTH W	1
EXSB3	17+94	75' RT	CTH W	1
EXSB4	17+50	104' RT	CTH W	1
EXSB5	17+31	35' RT	CTH W	1
EXSB6	17+07	44' LT	CTH W	1
EXSB7	17+54	61' LT	CTH W	1
EXSB8	18+09	58' LT	CTH W	1
EXSB9	18+46	58' LT	CTH W	1
EXSB10	18+60	34' LT	CTH W	1
EXLB1	18+10	72' LT	CTH W	1
			TOTAL 0010	12

REMOVING STORM SEWER

STATION	TO	STATION	LOCATION	204.0220 REMOVING INLETS EACH	204.0245.01 REMOVING STORM SEWER 15-INCH LF	204.0245.02 REMOVING STORM SEWER 18-INCH LF	204.0245.03 REMOVING STORM SEWER 24-INCH LF
252+10	-	252+34	CTH C	1	-	42	19
253+68	-	254+19	CTH C	2	12	-	-
			TOTAL 0010	3	12	42	19

DIVISION	FROM/TO STATION	LOCATION	205.0100 EXCAVATION COMMON (1) CUT (2)	SALVAGED/UNUSABLE PAVEMENT MATERIAL (4)	AVAILABLE MATERIAL (5)	UNEXPANDED FILL	EXPANDED FILL (13) FACTOR 1.30	MASS ORDINATE +/- (14)	WASTE	COMMENT
1	248+36 - 254+79	CTH C	506	40	466	7	9	457	506	
2	13+24 - 20+66	CTH W	446	7	439	12	16	423	446	
GRAND TOTAL			952	47	905	19	25	880	952	
TOTAL COMMON EXC			952							

NOTES:

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

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

(4) SALVAGED/UNUSABLE PAVEMENT MATERIAL

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

(13) EXPANDED FILL FACTOR = 1.30

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

BASE AGGREGATE DENSE

STATION	TO	STATION	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	624.0100 WATER MGAL
248+34	-	250+12	CTH C	-	99	2
250+12	-	252+41	CTH C	-	305	5
251+52	-	252+04	CTH C	-	6	1
251+86	-	252+01	CTH C	-	16	1
253+41	-	254+81	CTH C	-	93	2
254+06	-	254+79	CTH C	-	6	1
13+24	-	15+15	CTH W	18	64	1
15+15	-	17+65	CTH W	36	236	4
18+41	-	20+33	CTH W	-	256	4
20+33	-	20+66	CTH W	6	9	1
			TOTAL 0010	60	1,090	22

CONCRETE CURB & GUTTER

STATION	TO	STATION	LOCATION	601.0409 CONCRETE CURB & GUTTER 30-INCH TYPE A LF	601.0411 CONCRETE CURB & GUTTER 30-INCH TYPE D LF	620.0300 CONCRETE MEDIAN SLOPED NOSE SF
248+36	-	252+11	CTH C	200	177	57
254+01	-	254+79	CTH C	-	146	29
251+93	-	252+46	CTH C	77	-	-
18+43	-	20+34	CTH W	213	-	-
			TOTAL 0010	490	323	86

ASPHALTIC FLUMES

STATION	LOCATION	465.0315 ASPHALTIC FLUMES SY
20+35	CTH W	6
	TOTAL 0010	6

CONCRETE PAVEMENT

STATION	TO	STATION	LOCATION	415.0090 CONCRETE PAVEMENT 9-INCH SY	415.1090 CONCRETE PAVEMENT HES 9-INCH SY
250+12	-	252+41	CTH C	327	55
15+15	-	17+65	CTH W	262	-
18+41	-	20+33	CTH W	306	-
			TOTAL 0010	895	55

ASPHALTIC SURFACE TEMPORARY

STATION	TO	STATION	LOCATION	465.0125 ASPHALTIC SURFACE TEMPORARY TON
250+00	-	252+25	CTH C	20
			TOTAL 0010	20

MEDIANS

STATION	TO	STATION	LOCATION	602.0410 CONCRETE SIDEWALK 5-INCH SF	620.0100 CONCRETE CORRUGATED MEDIAN SF
251+52	-	252+04	CTH C	239	-
253+53	-	254+02	CTH C	-	230
254+06	-	254+79	CTH C	221	-
			TOTAL 0010	460	230

CONCRETE DRIVEWAY 6-INCH

STATION	TO	STATION	LOCATION	602.0810 CONCRETE DRIVEWAY 6-INCH SY
19+41	-	19+75	CTH W	30
			TOTAL 0010	30

DRILLED TIE AND DOWEL BARS

STATION	TO	STATION	LOCATION	416.0610 DRILLED TIE BARS EACH	416.0620 DRILLED DOWEL BARS EACH
248+36	-	252+41	CTH C	82	14
254+79			CTH C	4	-
15+15	-	17+65	CTH W	122	-
18+41	-	20+33	CTH W	74	28
			TOTAL 0010	282	42

ASPHALTIC SURFACE

STATION	TO	STATION	LOCATION	455.0605 TACK COAT GAL	465.0105 ASPHALTIC SURFACE TON
248+34	-	250+12	CTH C	22	62
251+86	-	252+01	CTH C	6	16
253+41	-	254+81	CTH C	10	39
13+24	-	15+15	CTH W	15	43
20+33	-	20+66	CTH W	2	5
			TOTAL 0010	55	165

RIPRAP

STATION	LOCATION	606.0200 RIPRAP MEDIUM CY	645.0120 GEOTEXTILE TYPE HR SY	REMARKS
20+35	CTH W	2	7	ASPHALTIC FLUME
	TOTAL 0010	2	7	

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STORM SEWER

STATION	TO	STATION	LOCATION	520.1018 APRON ENDWALLS FOR CULVERT PIPE 18-INCH EACH	520.8000 CONCRETE COLLARS FOR PIPE EACH	608.0415 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 15-INCH LF	608.0424 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 24-INCH LF	608.3018 STORM SEWER PIPE CLASS III-A 18-INCH LF	611.0535 MANHOLE COVERS TYPE J-SPECIAL EACH	611.2004 MANHOLES 4-FT DIAMETER EACH	611.2005 MANHOLES 5-FT DIAMETER EACH	611.3230 INLETS 2X3-FT EACH	611.9710 SALVAGED INLET COVERS EACH	REMARKS
252+10	-	252+34	CTH C	1	2	-	24	43	1	-	1	-	-	STRUCTURE 1
253+68	-	254+19	CTH C	-	1	64	-	-	1	1	-	2	2	STRUCTURE 3, 4, 5
			TOTAL 0010	1	3	64	24	43	2	1	1	2	2	

MOBILIZATIONS EROSION CONTROL

LOCATION	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH
PROJECT	5	3
TOTAL 0010	5	3

INLET PROTECTION

STATION	LOCATION	628.7005 INLET PROTECTION TYPE A EACH	628.7015 INLET PROTECTION TYPE C EACH	REMARKS
253+68	CTH C	1	1	EXISTING
254+10	CTH C	1	1	STRUCTURE 4
254+18	CTH C	1	1	STRUCTURE 5
	UNDISTRIBUTED	1	1	
	TOTAL 0010	4	4	

CULVERT PIPE CHECKS

CATEGORY	STATION	LOCATION	628.7555 CULVERT PIPE CHECKS EACH
0010	17+00	CTH W	2
		UNDISTRIBUTED	1
		TOTAL 0010	3

EROSION CONTROL AND LANDSCAPING

STATION	TO	STATION	LOCATION	625.0100 TOPSOIL SY	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.2008 EROSION MAT URBAN CLASS I TYPE B SY	628.7570 ROCK BAGS EACH	629.0210 FERTILIZER TYPE B CWT	630.0140 SEEDING MIXTURE NO. 40 LB	630.0500 SEED WATER MGAL
248+36	-	252+52	CTH C MEDIAN	70	-	-	70	-	0.1	3.2	2
253+10	-	254+00	CTH C, LT	105	-	-	105	-	0.1	4.8	3
253+10	-	254+00	CTH C, RT	105	100	200	105	-	0.1	4.9	3
14+95	-	17+65	CTH W	335	215	430	335	-	0.3	15.0	8
18+40	-	20+68	CTH W	170	75	150	170	20	0.2	7.8	4
			UNDISTRIBUTED	160	80	160	160	5	0.2	7.3	4
			TOTAL 0010	945	470	940	945	25	1.0	43.0	24

PERMANENT SIGNING

SIGN NO.	STATION	LOCATION	SIGN FACE DIRECTION	SIDE CODE	SIZE	634.0614 POSTS WOOD 4X6-INCH X 14-FT EACH	634.0616 POSTS WOOD 4X6-INCH X 16-FT EACH	637.2220 SIGNS TYPE II REFLECTIVE SH SF	637.2225 SIGNS TYPE II REFLECTIVE SH FOLDING SF	638.2102 MOVING SIGNS TYPE II EACH	* 638.3000 REMOVING SMALL SIGN SUPPORTS EACH	REMARKS
M-101	252+00	CTH C, RT	EB	-	-	-	1	-	-	2	1	COUNTY W
M-102	252+00	CTH C, RT	EB	-	-	-	1	-	-	2	1	HOSPITAL
M-103	18+75	CTH W, LT	WB	-	-	-	1	-	-	-	1	COUNTY C
201	251+90	CTH C MEDIAN	WB	R4-7	24X30	1	-	5.00	-	-	-	KEEP RIGHT
202	254+30	CTH C MEDIAN	EB	R4-7	24X30	1	-	5.00	-	-	-	KEEP RIGHT
203	253+60	CTH C, RT	EB	M1-94	66X15	-	-	6.88	-	-	-	PORT WASHINGTON RD
204	18+90	CTH W, RT	NB	M1-94	42X15	-	-	4.38	-	-	-	PIONEER RD
205	252+00	CTH C , LT	WB	M1-94	66X15	-	-	6.88	-	-	-	PORT WASHINGTON RD
206	17+20	CTH W, LT	SB	M1-94	42X15	-	-	4.38	-	-	-	PIONEER RD
207	252+00	CTH C , RT	WB	R5-1	30X30	-	-	6.25	-	-	-	DO NOT ENTER
208	253+55	CTH C, LT	EB	R5-1	30X30	-	-	6.25	-	-	-	DO NOT ENTER
209	253+60	CTH C, LT	WB	R1-1F	36X36	-	-	-	7.46	-	-	FOLDING STOP
210	18+75	CTH W, LT	SB	R1-1F	36X36	-	-	-	7.46	-	-	FOLDING STOP
211	252+00	CTH C , RT	EB	R1-1F	36X36	-	-	-	7.46	-	-	FOLDING STOP
212	17+35	CTH W, RT	NB	R1-1F	36X36	-	-	-	7.46	-	-	FOLDING STOP
301	15+20	CTH W, RT	NB	R3-8LAR	54X30	1	-	11.25	-	-	-	LANE DESIGNATION
401	21+00	CTH W, LT	SB	R3-8LAR	54X30	1	-	11.25	-	-	-	LANE DESIGNATION
					TOTAL 0010	4	3	67.50	29.84	4	3	

SIGN REMOVALS

SIGN NO.	STATION	LOCATION	638.2602 REMOVING SIGNS TYPE II EACH	* 638.3000 REMOVING SMALL SIGN SUPPORTS EACH	REMARKS
REM-01	251+40	CTH C MEDIAN	1	1	DO NOT ENTER
REM-02	252+10	CTH C, RT	1	-	FOLDING STOP SIGN
REM-03	252+25	CTH C MEDIAN	1	-	FOLDING STOP SIGN
REM-04	252+25	CTH C MEDIAN	1	-	KEEP RIGHT
REM-05	252+25	CTH C, LT	1	-	STREET NAME SIGN
REM-06	253+60	CTH C MEDIAN	1	-	FOLDING STOP SIGN
REM-07	253+60	CTH C MEDIAN	1	-	KEEP RIGHT
REM-08	253+60	CTH C, LT	1	-	FOLDING STOP SIGN
REM-09	253+60	CTH C, LT	1	-	DO NOT ENTER
REM-10	253+90	CTH C, RT	1	-	STREET NAME SIGN
REM-11	17+10	CTH W, LT	1	-	STREET NAME SIGN
REM-12	17+30	CTH W, RT	1	-	FOLDING STOP SIGN
REM-13	18+60	CTH W, LT	1	-	FOLDING STOP SIGN
REM-14	18+95	CTH W, RT	1	-	STREET NAME SIGN
		TOTAL 0010	14	1	

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TRAFFIC CONTROL

STAGE	LOCATION	ESTIMATED STAGE DAYS	643.0300 TRAFFIC CONTROL DRUMS NO.	643.0300 DAY	643.0420 TRAFFIC CONTROL BARRICADES TYPE III NO.	643.0420 DAY	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A NO.	643.0705 DAY	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C NO.	643.0715 DAY	643.0900 TRAFFIC CONTROL SIGNS NO.	643.0900 DAY	643.1050 TRAFFIC CONTROL SIGNS PCMS DAY	643.3165 TEMPORARY MARKING LINE PAINT 6-INCH LF	643.3180 TEMPORARY MARKING LINE REMOVABLE TAPE 6-INCH LF	643.3280 TEMPORARY MARKING LINE REMOVABLE TAPE 10-INCH LF	643.3850 TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH LF	REMARKS
STAGE 1A	CTH C	2	20	40	2	4	4	8	-	-	5	10	14	-	-	-	-	PCMS START IN ADVANCE OF CLSOURES
STAGE 1A	CTH W	2	20	40	2	4	4	8	-	-	5	10	14	-	-	-	-	PCMS START IN ADVANCE OF CLSOURES
STAGE 1B	CTH C	30	60	1,800	4	120	8	240	20	600	10	300		250	-	-	-	
STAGE 1B	CTH W	30	-	-	-	-	-	-	-	-	2	60		-	-	-	-	
STAGE 2	CTH C	35	25	875	2	70	4	140	-	-	4	140		-	-	-	-	
STAGE 2	CTH W	35	30	1,050	2	70	4	140	-	-	8	280		-	1,650	280	35	
	TOTAL 0010			3,805		268		536		600		800	28	250	1,650	280	35	

3

PAVEMENT MARKING

STATION	TO	STATION	LOCATION	646.2020 MARKING LINE EPOXY 6-INCH YELLOW LF	646.2020 MARKING LINE EPOXY 6-INCH WHITE LF	646.4020 MARKING LINE EPOXY 10-INCH LF	646.5020 MARKING ARROW EPOXY EACH	646.6120 MARKING STOP LINE EPOXY 18-INCH LF	646.7120 MARKING DIAGONAL EPOXY 12-INCH LF	646.7320 MARKING CHEVRON EPOXY 12-INCH LF	646.8020 MARKING CORRUGATED MEDIAN EPOXY SF	646.8120 MARKING CURB EPOXY LF	646.8220 MARKING ISLAND NOSE EPOXY EACH
248+34	-	252+05	CTH C	-	-	611	6	36	-	46	-	10	1
253+60	-	254+89	CTH C	-	-	516	4	44	-	28	76	10	1
12+51	-	17+38	CTH W	1,560	385	313	4	45	70	28	-	-	-
18+56	-	21+40	CTH W	885	350	370	4	55	35	28	-	-	-
			TOTAL 0010	3,180		1,810	18	180	105	130	76	20	2

PAVEMENT MARKING REMOVALS

STATION	TO	STATION	LOCATION	646.9010 MARKING REMOVAL LINE WATER BLASTING 4-INCH LF	646.9110 MARKING REMOVAL LINE WATER BLASTING 8-INCH LF	646.9210 MARKING REMOVAL LINE WATER BLASTING WIDE LF	646.9310 MARKING REMOVAL SPECIAL MARKING WATER BLASTING EACH
248+34	-	252+05	CTH C	-	301	34	6
253+60	-	254+89	CTH C	195	440	43	7
12+51	-	17+38	CTH W	990	238	44	4
18+56	-	21+40	CTH W	945	90	32	1
			TOTAL 0010	2,130	1,069	153	18

CONSTRUCTION STAKING

CATEGORY	STATION	TO	STATION	LOCATION	650.4000 CONSTRUCTION STAKING STORM SEWER EACH	650.4500 CONSTRUCTION STAKING SUBGRADE LF	650.5000 CONSTRUCTION STAKING BASE LF	650.5500 CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER LF	650.7000 CONSTRUCTION STAKING CONCRETE PAVEMENT LF	650.8501.01 CONSTRUCTION STAKING ELECTRICAL INSTALLATIONS 2695-05-72 EACH	650.9920 CONSTRUCTION STAKING SLOPE STAKES LF
0010	248+34	-	252+42	CTH C	-	408	179	177	229	-	318
0010	253+41	-	254+81	CTH C	-	140	140	146	-	-	-
0010	13+26	-	17+65	CTH W	-	439	189	-	250	-	439
0010	18+41	-	20+66	CTH W	-	225	33	-	192	-	225
0010				PROJECT	4	-	-	-	-	1	-
				TOTAL 0010	4	1,212	541	323	671	1	982

3

CONDUIT

FROM	TO	LOCATION	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF	652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH LF	652.0615 CONDUIT SPECIAL 3-INCH LF	REMARKS
CAB	- PB1	CTH C	40	40	-	2 RUNS EACH
CAB	- PB8	CTH C	50	50	-	2 RUNS EACH
PB1	- PB2	CTH C	-	-	190	2 RUNS
PB2	- PB3	CTH C	-	80	-	2 RUNS
PB3	- PB4	CTH C	-	-	80	
PB4	- PB5	CTH C	-	45	-	
PB5	- PB6	CTH C	-	-	194	2 RUNS
PB6	- PB7	CTH C	-	90	-	2 RUNS
PB7	- PB8	CTH C	-	-	176	2 RUNS
PB1	- SB1	CTH C	10	-	-	
PB2	- SB2	CTH C	10	-	-	
PB3	- SB3	CTH C	8	-	-	
PB4	- SB4	CTH C	10	-	-	
PB5	- SB5	CTH C	7	-	-	
PB6	- SB6	CTH C	8	-	-	
PB7	- SB7	CTH C	7	-	-	
PB8	- SB8	CTH C	15	-	-	
		TOTAL 0010	165	305	640	

3

PULL BOXES

NO.	STATION	OFFSET	LOCATION	653.0164 PULL BOXES NON-CONDUCTIVE 24X42-INCH EACH
PB1	252+11	46' RT	CTH C	1
PB2	252+14	48' LT	CTH C	1
PB3	18+82	44' LT	CTH W	1
PB4	18+80	37' RT	CTH W	1
PB5	253+54	50' LT	CTH C	1
PB6	253+55	57' RT	CTH C	1
PB7	17+24	37' RT	CTH W	1
PB8	17+30	50' LT	CTH W	1
			TOTAL 0010	8

REMOVING PULL BOXES

NO.	STATION	OFFSET	LOCATION	653.0905 REMOVING PULL BOXES EACH
EXPB1	17+35	49' LT	CTH W	1
EXPB2	250+15	5'RT	CTH C	1
EXPB3	18+10	65' LT	CTH W	1
EXPB4	18+46	42' LT	CTH W	1
EXPB5	18+66	33' LT	CTH W	1
EXPB6	18+68	33' LT	CTH W	1
EXPB7	18+75	36' RT	CTH W	1
EXPB8	18+44	100' RT	CTH W	1
EXPB9	17+93	99' RT	CTH W	1
EXPB10	17+53	98' RT	CTH W	1
EXPB11	17+51	57' RT	CTH W	1
			TOTAL 0010	11

TRAFFIC SIGNAL CABLE

FROM		TO	LOCATION	655.0230 CABLE TRAFFIC SIGNAL 5-14 AWG LF	655.0240 CABLE TRAFFIC SIGNAL 7-14 AWG LF	655.0260 CABLE TRAFFIC SIGNAL 12-14 AWG LF	655.0900 TRAFFIC SIGNAL EVP DETECTOR CABLE LF	VIDEO DETECTOR CABLE - FOR INFORMATION ONLY LF
CAB	-	SB1	CTH C	-	-	68	-	-
CAB	-	SB2	CTH C	-	-	178	191	201
CAB	-	SB3	CTH C	-	-	231	-	-
CAB	-	SB4	CTH C	-	-	328	311	321
CAB	-	SB5	CTH C	-	-	345	-	-
CAB	-	SB6	CTH C	-	-	234	232	242
CAB	-	SB7	CTH C	-	-	173	-	-
CAB	-	SB8	CTH C	-	-	78	106	116
SB1	-	HEAD 11	CTH C	20	-	-	-	-
SB1	-	HEAD 20	CTH C	-	20	-	-	-
SB2	-	HEAD 17	CTH C	20	-	-	-	-
SB2	-	HEAD 18	CTH C	55	-	-	-	-
SB2	-	HEAD 19	CTH C	-	75	-	-	-
SB3	-	HEAD 05	CTH C	-	20	-	-	-
SB3	-	HEAD 06	CTH C	20	-	-	-	-
SB4	-	HEAD 02	CTH C	20	-	-	-	-
SB4	-	HEAD 03	CTH C	50	-	-	-	-
SB4	-	HEAD 04	CTH C	-	70	-	-	-
SB5	-	HEAD 15	CTH C	20	-	-	-	-
SB5	-	HEAD 16	CTH C	-	20	-	-	-
SB6	-	HEAD 12	CTH C	35	-	-	-	-
SB6	-	HEAD 13	CTH C	50	-	-	-	-
SB6	-	HEAD 14	CTH C	-	80	-	-	-
SB7	-	HEAD 01	CTH C	20	-	-	-	-
SB7	-	HEAD 10	CTH C	-	20	-	-	-
SB8	-	HEAD 07	CTH C	20	-	-	-	-
SB8	-	HEAD 08	CTH C	50	-	-	-	-
SB8	-	HEAD 09	CTH C	-	70	-	-	-
			TOTAL 0010	380	375	1,635	840	880

CONCRETE BASES

SB NO.	STATION	OFFSET	LOCATION	654.0101 CONCRETE BASES TYPE 1 EACH	654.0102 CONCRETE BASES TYPE 2 EACH	654.0113 CONCRETE BASES TYPE 13 EACH	654.0120 CONCRETE BASES TYPE 10-SPECIAL EACH
SB1	252+01	46' RT	CTH C	-	1	-	-
SB2	252+05	46' LT	CTH C	-	-	1	-
SB3	18+76	47' LT	CTH W	1	-	-	-
SB4	18+91	35' RT	CTH W	-	-	-	1
SB5	253+61	48' LT	CTH C	-	1	-	-
SB6	253+62	50' RT	CTH C	-	-	1	-
SB7	17+31	37' RT	CTH W	-	1	-	-
SB8	17+15	47' LT	CTH W	-	-	-	1
			TOTAL 0010	1	3	2	2

ELECTRICAL WIRE TRAFFIC SIGNALS

TO		FROM	LOCATION	655.0515 ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG LF
CB1	-	SB1	CTH C	68
SB1	-	SB2	CTH C	161
SB2	-	SB3	CTH C	104
SB3	-	SB4	CTH C	144
SB4	-	SB5	CTH C	108
SB5	-	SB6	CTH C	158
SB6	-	SB7	CTH C	106
SB7	-	SB8	CTH C	156
SB8	-	CB1	CTH C	78
			TOTAL 0010	1,083

LIGHTING CABLE AND WIRING

FROM	TO	LOCATION	655.0320 CABLE TYPE UF 2-10 AWG GROUNDED LF	655.0610 ELECTRICAL WIRE LIGHTING 12 AWG LF
CB1	SB1	CTH C	68	-
SB1	LUMINAIRE	CTH C	-	138
CB1	SB7	CTH C	173	-
SB7	LUMINAIRE	CTH C	-	138
SB7	SB6	CTH C	107	-
SB6	LUMINAIRE	CTH C	-	138
SB6	SB5	CTH C	158	-
SB5	LUMINAIRE	CTH C	-	138
SB5	SB4	CTH C	108	-
SB4	LUMINAIRE	CTH C	-	138
		TOTAL 0010	614	690

TRAFFIC SIGNAL FACES

SB NO.	STATION	OFFSET	LOCATION	658.0173 TRAFFIC SIGNAL FACE 3S 12-INCH EACH	658.0174 TRAFFIC SIGNAL FACE 4S 12-INCH EACH	SPV.0060.03 RETROREFLECTIVE BACKPLATE 3S EACH	SPV.0060.04 RETROREFLECTIVE BACKPLATE 4S EACH
SB1	252+01	46' RT	CTH C	1	1	1	1
SB2	252+05	46' LT	CTH C	2	1	2	1
SB3	18+76	47' LT	CTH W	1	1	1	1
SB4	18+91	35' RT	CTH W	2	1	2	1
SB5	253+61	48' LT	CTH C	1	1	1	1
SB6	253+62	50' RT	CTH C	2	1	2	1
SB7	17+31	37' RT	CTH W	1	1	1	1
SB8	17+15	47' LT	CTH W	2	1	2	1
			TOTAL 0010	12	8	12	8

LAMP BALLAST DISPOSAL

BASE NO.	STATION	OFFSET	LOCATION	659.5000.S LAMP, BALLAST, LED, SWITCH DISPOSAL BY CONTRACTOR EACH
EXSB1	18+95	32' RT	CTH W	1
EXSB3	17+75	75' RT	CTH W	2
EXSB5	17+30	35' RT	CTH W	1
EXLB1	18+10	72' LT	CTH W	2
			TOTAL 0010	6

TRAFFIC SIGNAL STRUCTURE ITEMS

SB NO.	STATION	OFFSET	LOCATION	657.0100 PEDESTAL BASES EACH	657.0255 TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE EACH	657.0315 POLES TYPE 4 EACH	657.0347 POLES TYPE 9-SPECIAL EACH	657.0352 POLES TYPE 10-SPECIAL EACH	657.0355 POLES TYPE 12 EACH	657.0360 POLES TYPE 13 EACH	657.0425 TRAFFIC SIGNAL STANDARDS ALUMINUM 15-FT EACH	657.0546 MONOTUBE ARMS 45-FT-SPECIAL EACH	657.0550 MONOTUBE ARMS 50-FT EACH	657.0555 MONOTUBE ARMS 55-FT EACH	657.0615 LUMINAIRE ARMS SINGLE MEMBER 4 1/2-INCH CLAMP 8-FT EACH	657.0808 LUMINAIRE ARMS STEEL 8-FT EACH	657.0825 LUMINAIRE ARMS STEEL TYPE 13 POLE CLAMP 15-FT EACH	657.0830 LUMINAIRE ARMS STEEL TYPE 10 SPECIAL POLE CLAMP 15-FT EACH	659.1125 LUMINAIRES UTILITY LED C EACH
SB1	252+01	46' RT	CTH C	-	1	1	-	-	-	-	-	-	-	-	1	-	-	-	1
SB2	252+05	46' LT	CTH C	-	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-
SB3	18+76	47' LT	CTH W	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
SB4	18+91	35' RT	CTH W	-	-	-	-	1	-	-	-	1	-	-	-	1	-	1	1
SB5	253+61	48' LT	CTH C	-	1	1	-	-	-	-	-	-	-	-	1	-	-	-	1
SB6	253+62	50' RT	CTH C	-	-	-	-	-	-	1	-	-	-	1	-	1	1	-	1
SB7	17+31	37' RT	CTH W	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	1
SB8	17+15	47' LT	CTH W	-	-	-	1	-	-	-	-	1	-	-	1	-	-	-	-
			TOTAL 0010	1	3	3	1	1	1	1	1	2	1	1	3	2	1	1	5

SAWING

STATION	TO	STATION	LOCATION	690.0150 SAWING ASPHALT LF	690.0250 SAWING CONCRETE LF
248+34	-	252+60	CTH C	203	392
253+41	-	254+81	CTH C	309	10
13+24	-	15+15	CTH W	194	-
15+97	-	16+44	CTH W	-	54
16+72	-	17+65	CTH W	-	154
20+33	-	20+67	CTH W	34	-
			TOTAL 0010	740	610

SECTION CORNER MONUMENTS

CATEGORY	STATION	LOCATION	SPV.0060.06 SECTION CORNER MONUMENTS EACH	REMARKS
0010	252+63	CTH C	1	PLSS 10221670 SE 31-10-22
0010	252+85	CTH C	1	PLSS 09220110 NE 6-9-22
		TOTAL 0010	2	

TRAFFIC SIGNAL CONTROL ITEMS

STATION	OFFSET	LOCATION	654.0217 CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL EACH	656.0201.01 ELECTRICAL SERVICE METER BREAKER PEDESTAL 01. CTH W & CTH C INTERSECTION EACH	SPV.0060.01 TRAFFIC SIGNAL CONTROLLER AND CABINET EACH	SPV.0060.02 VEHICULAR VIDEO DETECTION SYSTEM EACH	SPV.0060.05 SALVAGE AND REINSTALL EVP EQUIPMENT EACH	SPV.0060.07 PORTABLE TEMPORARY TRAFFIC SIGNAL SYSTEM EACH
17+39	75' LT	CTH W	1	1	1	1	1	1
		TOTAL 0010	1	1	1	1	1	1

1185928

TRANSPORTATION PROJECT PLAT NO: 2695-05-02-4.01 AMENDMENT NO: 1

AMENDS UTILITY NUMBERS 100, 101 AND 102 AND ELIMINATES UTILITY NUMBERS 103 AND 104 OF TRANSPORTATION PROJECT PLAT NO: 2695-05-02-4.01, RECORDED AS DOCUMENT NUMBER 1182930 AND AMENDS THE SECTION NUMBER IN CAPTION.

THAT PART OF LOT 1 OF CSM 1446 BEING IN PART OF THE SOUTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 31, TOWNSHIP 10 NORTH, RANGE 22 EAST, TOWN OF GRAFTON AND THAT PART OF LOT 2 OF CSM 4286, BEING PART OF NORTHEAST QUARTER OF THE NORTHEAST QUARTER OF SECTION 6 AND THAT PART OF THE NORTHWEST QUARTER OF THE NORTHWEST QUARTER OF SECTION 5, TOWNSHIP 9 NORTH, RANGE 22 EAST, CITY OF MEQUON, OZAUKEE COUNTY, WISCONSIN.

RELOCATION ORDER CTH C INTERSECTION PORT WASHINGTON ROAD OZAUKEE COUNTY

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

TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SECTIONS 83.07 AND 83.08, WISCONSIN STATUTES, THE COUNTY OF OZAUKEE 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 PROJECT.
2. THE LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAT ARE REQUIRED BY THE COUNTY FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF OZAUKEE COUNTY, PURSUANT TO THE PROVISIONS OF SUBSECTION 83.07 AND 83.08, WISCONSIN STATUES.

JENNIFER J. LAURIN
OZAUKEE COUNTY
REGISTER OF DEEDS
PORT WASHINGTON, WI

RECORDED ON
07/09/2026 09:22 AM
53
Jennifer J Laurin

RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER: 2695-05-02 - 4.01
AMENDMENT NO: 1
SHEET 1 OF 2

HWY	BASIS OF EXISTING R/W	R/W WIDTH	YEAR
CTH W	CSM # 1446	66'	1983
CTH W / CTH C	CSM # 4286	VARIES	2025

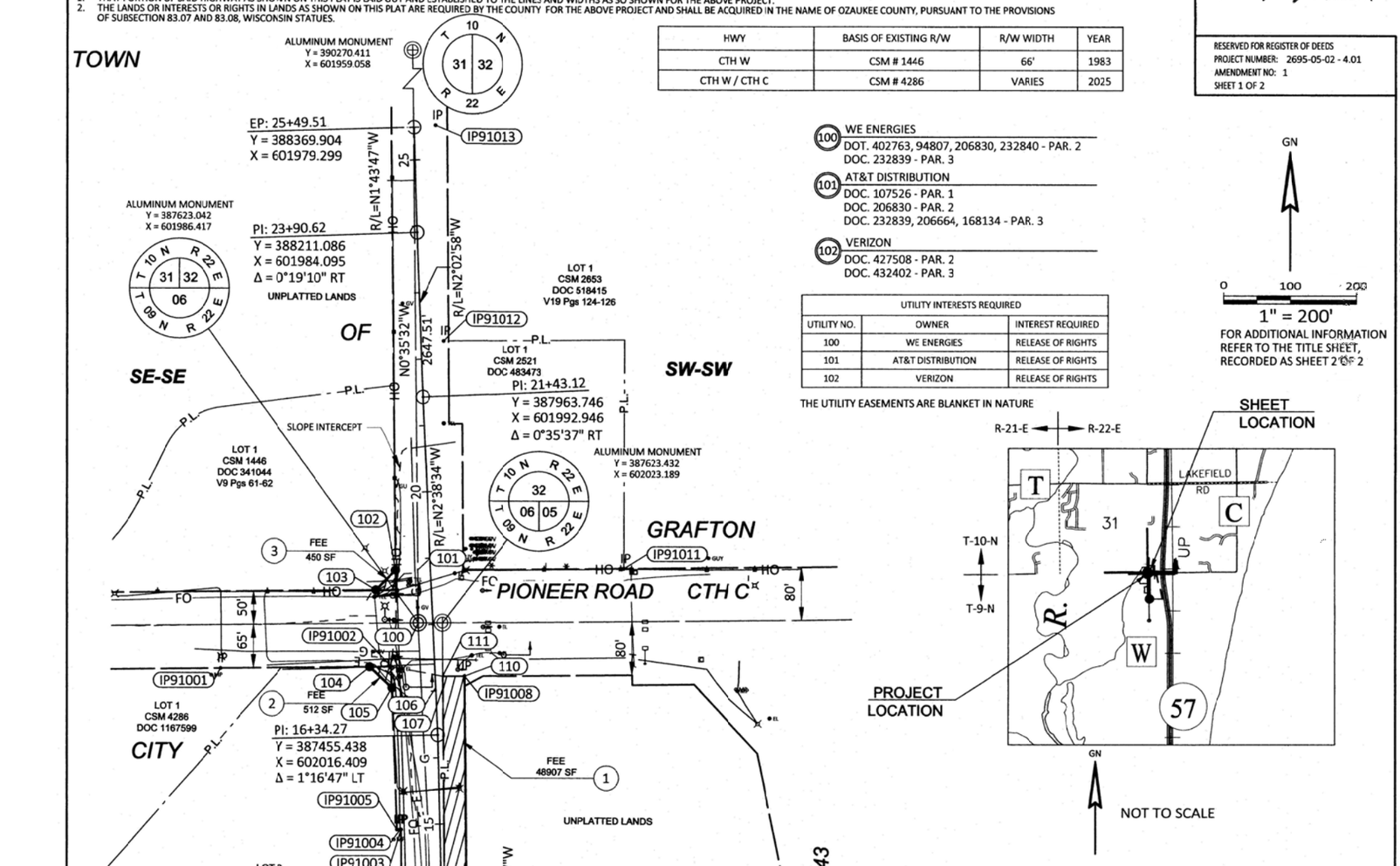
100 WE ENERGIES
DOT. 402763, 94807, 206830, 232840 - PAR. 2
DOC. 232839 - PAR. 3

101 AT&T DISTRIBUTION
DOC. 107526 - PAR. 1
DOC. 206830 - PAR. 2
DOC. 232839, 206664, 168134 - PAR. 3

102 VERIZON
DOC. 427508 - PAR. 2
DOC. 432402 - PAR. 3

UTILITY INTERESTS REQUIRED		
UTILITY NO.	OWNER	INTEREST REQUIRED
100	WE ENERGIES	RELEASE OF RIGHTS
101	AT&T DISTRIBUTION	RELEASE OF RIGHTS
102	VERIZON	RELEASE OF RIGHTS

THE UTILITY EASEMENTS ARE BLANKET IN NATURE



GN
0 100 200
1" = 200'
FOR ADDITIONAL INFORMATION REFER TO THE TITLE SHEET, RECORDED AS SHEET 2 OF 2

STATION & OFFSET TABLE		
POINT	STATION	OFFSET
100	18+03.08	22.23' LT
101	18+83.02	19.37' LT
102	18+84.20	52.35' LT
103	18+55.28	83.40' LT
104	17+40.67	97.88' LT
105	17+07.53	66.03' LT
106	17+05.08	0.00' RT
107	17+04.68	10.91' RT
108	2+40.05	0.78' RT
109	2+40.17	33.78' RT
110	17+20.65	44.53' RT
111	17+21.83	11.55' RT

FOUND MONUMENT TABLE			
POINT	Y COORDS	X COORDS	DESCR.
IP91001	387554.751	601688.657	IP / 0.75IN OD FND
IP91002	387557.646	601945.697	IP / 0.75 IN OD IR FND
IP91003	387312.835	601961.047	IP / 1.25 IN OD FND
IP91004	387312.855	601959.865	IP / 1.25 IN OD FND
IP91005	387312.776	601954.982	IP / 0.75 IN OD IR FND
IP91006	387107.973	601962.812	IP / 1.5 IN OD FND
IP91007	386785.444	601965.780	IP / 1 IN OD FND
IP91008	387544.039	602056.806	IP / 1.5 IN OD FND
IP91011	387706.021	602296.041	IP / 1.5 IN OD FND
IP91012	388048.228	602024.526	IP / 1.5 IN OD FND
IP91013	388373.265	602012.043	IP / 1.5 IN OD FND

SCHEDULE OF LANDS & INTERESTS REQUIRED			OWNERS NAMES ARE SHOWN FOR REFERENCE PURPOSE ONLY AND ARE SUBJECT TO CHANGE PRIOR TO TRANSFER OF LAND INTERESTS TO DOT			
			FEE R/W (SF)			TLE
PARCEL NUMBER	OWNER(S)	INTEREST(S) REQUIRED	NEW	EXISTING	TOTAL	(SF)
1	MARK MALETZKE	FEE	---	48907	48907	---
2	ODRE1, LLC	FEE	512	---	512	---
3	LEBEN FAMILY LIMITED PARTNERSHIP	FEE	450	---	450	---

OWNERS'S NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO THE DEPARTMENT. PURPOSE OF ALL TLE'S ARE FOR SLOPING AND GRADING UNLESS NOTED.

NOTES:

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COUNTY COORDINATES, OZAUKEE 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 AND PERMANENT EASEMENT MONUMENTS WILL BE TYPE 2 (TYPICALLY ¾" X 24" IRON REBAR), 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 WAUKESHA.

AYRES

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

SIGNATURE: DATE: 6/18/2026
PRINT NAME: MICHAEL R. ANDRASCHKO
REGISTRATION NUMBER: S-2895

WISCONSIN LAND SURVEYOR
MICHAEL R. ANDRASCHKO
S-2895
GREEN BAY WIS.

THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR BY OZAUKEE COUNTY.

SIGNATURE: DATE: 7/8/26
PRINT NAME: JON EDGREN

2695-05-02-4.01
2695-05-02
PLOT SCALE :
PLOT NAME :
PLOT BY : Andraschko, Mike
PLOT DATE : 6/18/2026 8:37 AM
PLOT DATE :
PLOT DATE :
FILE NAME : I:\45\450785 OZAUKEE CTH W & CTH C HSIP\C3D\RW\DWG\4.01 TPP AMENDMENT 1.DWG
APPRAISAL PLAT DATE :



STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
TRANSPORTATION PROJECT PLAT TITLE SHEET
2695-05-02
C MEQUON /T GRAFTON, PIONEER ROAD
INTERSECTION PORT WASHINGTON ROAD
CTH C
OZAUKEE COUNTY

4

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
EXISTING CENTERLINE
CORPORATE LIMITS
NEW R/W (FEE OR HE) (HATCHING VARIES BY OWNER)
TEMPORARY LIMITED EASEMENT AREA
EASEMENT AREA (PERMANENT LIMITED OR RESTRICTED DEVELOPMENT)
BUILDING
TO BE REMOVED
BRIDGE
CULVERT

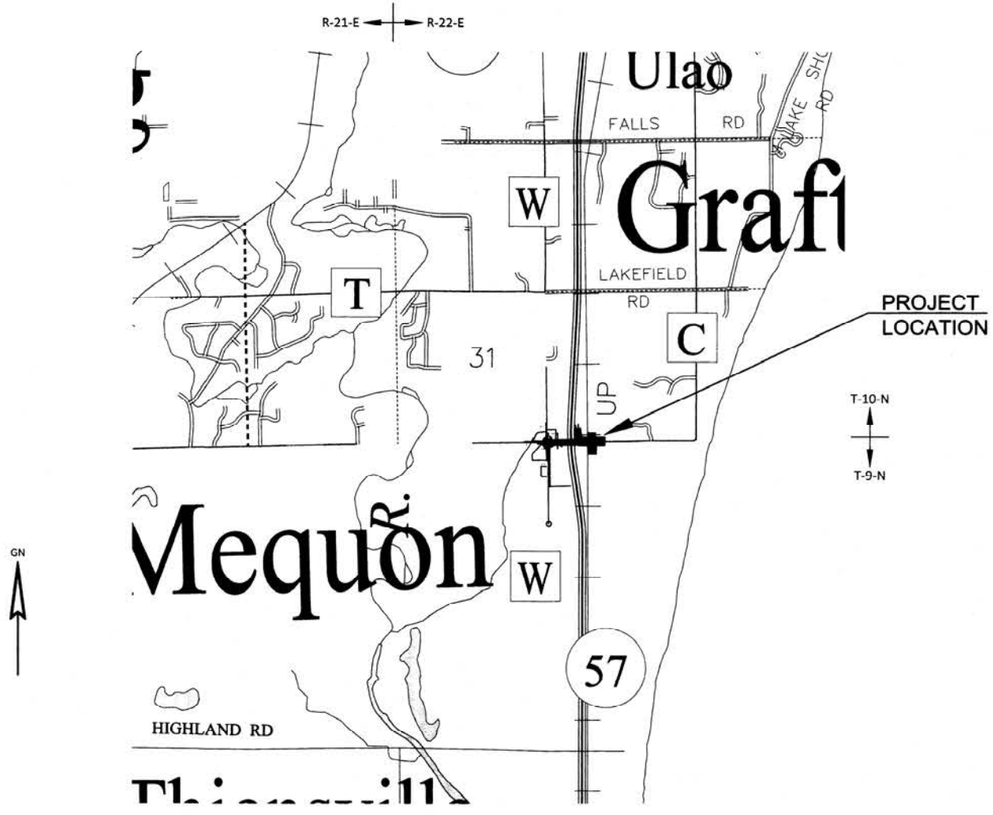
SECTION CORNER SYMBOL
SECTION CORNER MONUMENT
GEODETIC SURVEY MONUMENT
NON-PERMITTED SIGN
PERMITTED SIGN
ACCESS RESTRICTED BY ACQUISITION
NO ACCESS (BY STATUTORY AUTHORITY)
ACCESS RESTRICTED (BY PREVIOUS PROJECT OR CONTROL)
NO ACCESS (NEW HIGHWAY)
PARCEL NUMBER (25)
PARALLEL OFFSETS
R/W MONUMENT (TO BE SET)
NON-MONUMENTED R/W POINT
FOUND SURVEY MONUMENT (SEE FOUND MONUMENT TABLE) IP

CONVENTIONAL ABBREVIATIONS

ACCESS RIGHTS	AR	PROPERTY LINE	PL
ACRES	AC	RECORDED AS	(100')
ALUMINUM	ALUM	REEL / IMAGE	R/I
AND OTHERS	ET AL	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 TRUNK HIGHWAY	CTH	SECTION	SEC
CORNER	COR	SEPTIC VENT	SEPV
DOCUMENT NUMBER	DOC	SQUARE FEET	SF
EASEMENT	EASE	STATE TRUNK HIGHWAY	STH
EXISTING	EX	STATION	STA
GAS VALVE	GV	TELEPHONE PEDESTAL	TP
GRID NORTH	GN	TRANSPORTATION PROJECT PLAT	TPP
IDENTIFICATION	ID	UNITED STATES HIGHWAY	USH
INTERSTATE HIGHWAY	IH	VOLUME	V
LEFT	LT		
MONUMENT	MON		
NATIONAL GEODETIC SURVEY	NGS		
NUMBER	NO		
OUTLOT	OL		
PAGE	P		
POINT OF TANGENCY	PT		
POINT OF BEGINNING	POB		
POINT OF CURVATURE	PC		
POINT OF COMPOUND CURVE	PCC		
POINT OF INTERSECTION	PI		

CURVE DATA ABBREVIATIONS

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



THE NOTES,CONVENTIONAL SIGNS, AND ABBREVIATIONS ARE ASSOCIATED WITH EACH TRANSPORTATION PROJECT PLAT FOR PROJECT 2695-05-02

NOTES:

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COORDINATE REFERENCE SYSTEM COORDINATES (WISCRS), OZAUKEE 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 AND PERMANENT EASEMENT 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.

A PERMANENT LIMITED EASEMENT (PLE) IS A RIGHT FOR CONSTRUCTION AND MAINTENANCE PURPOSES, AS DEFINED HEREIN, INCLUDING THE RIGHT TO OPERATE NECESSARY EQUIPMENT THEREON AND THE RIGHT OF INGRESS AND EGRESS, AS LONG AS REQUIRED FOR SUCH PUBLIC PURPOSE, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE, OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM DESIRABLE, BUT WITHOUT PREJUDICE TO THE OWNER'S RIGHTS TO MAKE OR CONSTRUCT IMPROVEMENTS ON SAID LANDS OR TO FLATTEN THE SLOPES, PROVIDING SAID ACTIVITIES WILL NOT IMPAIR OR OTHERWISE ADVERSELY AFFECT THE HIGHWAY FACILITIES.

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

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

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

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

PROJECT NUMBER 2695-05-02- 4.00
SHEET 2 OF 2
AMENDMENT NO: 1

FILE NAME : I:\45\450785 OZAUKEE CTH W & CTH C HSIP\C3D\RW\DWG\4.01 TPP AMENDMENT 1.DWG
LAYOUT NAME: TPP Title 34x22
PLOT DATE : 9/16/2015 3:04 PM PLOT BY : ANDRASCHKO, MIKE PLOT NAME : _____

Standard Detail Drawing List

08A05-22E	INLET COVER TYPE BW, MANHOLE COVERS, TYPE K, J, J-S, L AND M
08B09-04	MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT, 8-FT, 9-FT AND 10-FT DIAMETER
08C07-03	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT, 2.5X3-FT & 2X3.5-FT
08D01-24A	CONCRETE CURB AND GUTTER
08D01-24B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D04-07	CONCRETE SURFACE DRAINS AND ASPHALTIC FLUMES
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPES A, B, C AND D
08E15-01	CULVERT PIPE CHECK
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F04-08	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
09B02-10	CONDUIT
09B16-04	PULL BOXES NON-CONDUCTIVE
09C02-09	CONCRETE BASES, TYPES 1, 2, 5, & 6
09C03-04	TRANSFORMER/PEDESTAL BASES
09C06-07	CONCRETE CONTROL CABINET BASE, TYPE 9, SPECIAL
09C12-10A	CONCRETE BASE TYPE 13
09C12-10B	CONCRETE BASE TYPE 13
09C15-03	CONCRETE BASE TYPE 10 SPECIAL
09C16-01	CONCRETE BASE TYPE 10 SPECIAL EXTENSION
09D01-05	CABINET SERVICE INSTALLATION (METER BREAKER PEDESTAL)
09D02-03	SIGNAL CONTROL CABINET
09E01-17C	POLE MOUNTINGS FOR TRAFFIC SIGNALS AND LIGHTING UNITS, TYPE 4
09E01-17G	HARDWARE DETAILS FOR POLE MOUNTING
09E06-06	TRAFFIC SIGNAL STANDARD POLY BRACKET MOUNTINGS (TYPICAL) 13 FT. OR 15 FT.
09E08-11D	TYPE 9 SPECIAL POLE 45' MONOTUBE ARM
09E08-11H	TYPE 10 SPECIAL POLE 45' MONOTUBE ARM
09E08-11I	TYPE 12 POLE 35'-55' MONOTUBE ARM
09E08-11J	TYPE 13 POLE 35'-55' MONOTUBE ARM
09E08-11K	GENERAL NOTES AND HARDWARE FOR TYPES 9, 10, 9/10 SPECIAL,12 AND13 POLES WITH MONOTUBE ARMS
11B01-05	CONCRETE CORRUGATED MEDIAN
11B02-02	CONCRETE MEDIAN NOSE
12A04-03	STRUCTURE IDENTIFICATION PLAQUES, RAMP GATES, SIGN BRIDGES, OVERHEAD SIGN SUPPORTS & TRAFFIC SIGNALS
13C01-19	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
13C13-11	URBAN DOWELED CONCRETE PAVEMENT
13C19-03	HMA LONGITUDINAL JOINTS
15C07-16B	PAVEMENT MARKING WORDS
15C07-16C	PAVEMENT MARKING ARROWS
15C08-24A	PERMANENT LONGITUDINAL PAVEMENT MARKINGS
15C08-24B	TEMPORARY LONGITUDINAL PAVEMENT MARKING
15C08-24D	PAVEMENT MARKING (TURN LANES)
15C11-11B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C18-09A	MEDIAN ISLAND PAVEMENT MARKINGS
15C18-09B	PAVEMENT MARKINGS, MEDIAN ISLAND NOSE
15C33-05	STOP LINE AND CROSSWALK PAVEMENT MARKING
15D20-12B	TRAFFIC CONTROL, SINGLE RIGHT LANE CLOSURE, UNDIVIDED NON-FREEWAY/EXPRESSWAY
15D21-07A	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE RIGHT LANE CLOSURE
15D21-07B	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LEFT LANE CLOSURE
15D28-06	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
15D50-05A	TRAFFIC CONTROL, ADDED LANE CLOSURE WITHOUT LANE SHIFT
15D50-05B	TRAFFIC CONTROL, ADDED LANE CLOSURE WITH LANE SHIFT

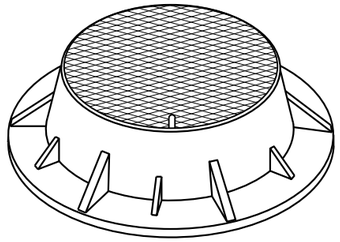
6

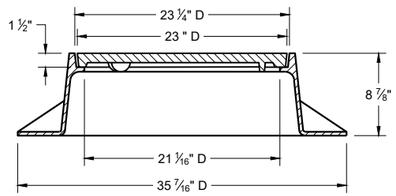
GENERAL NOTES

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

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

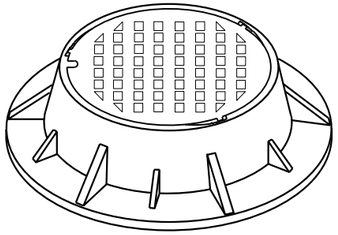
ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.

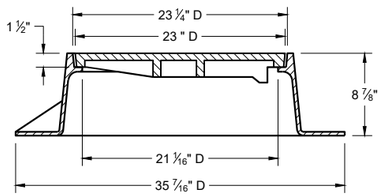




TYPE "J"

NOTE: EITHER CASTING IS ACCEPTABLE

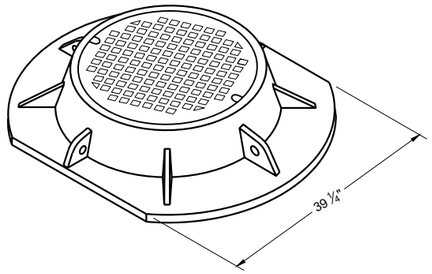


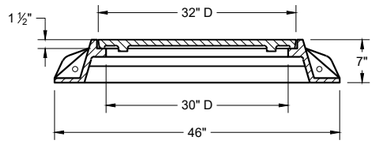


TYPE "J" SPECIAL

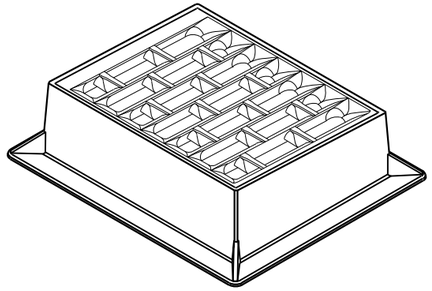
TYPE "B" NON-ROCKING SELF-SEAL LID
(NOTED AS TYPE J-S ON THE DRAINAGE TABLE)

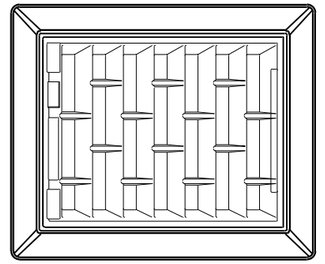
NOTE: EITHER CASTING IS ACCEPTABLE

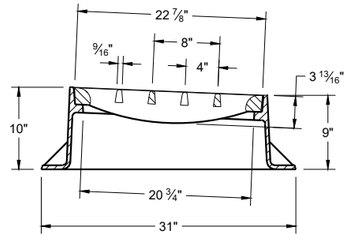


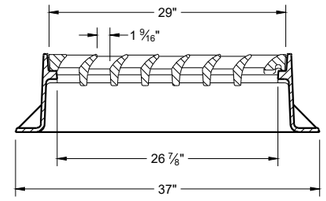


TYPE "K"

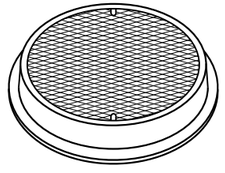


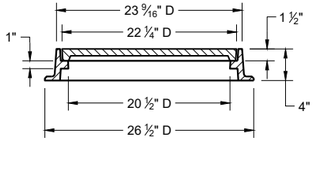




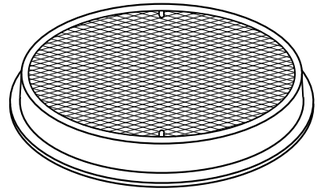


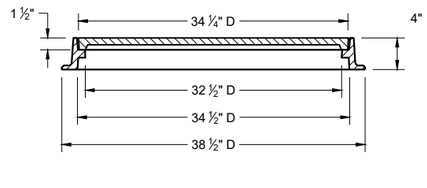
INLET COVER TYPE "BW"





TYPE "L"





TYPE "M"

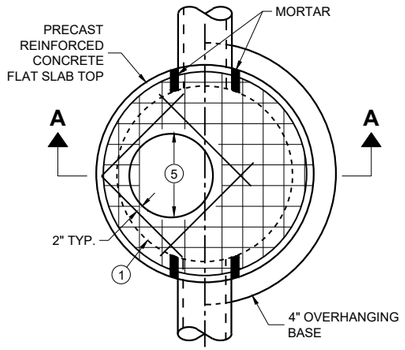
INLET COVERS TYPES BW
MANHOLE COVERS TYPES K, J, J-S, L, AND M

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

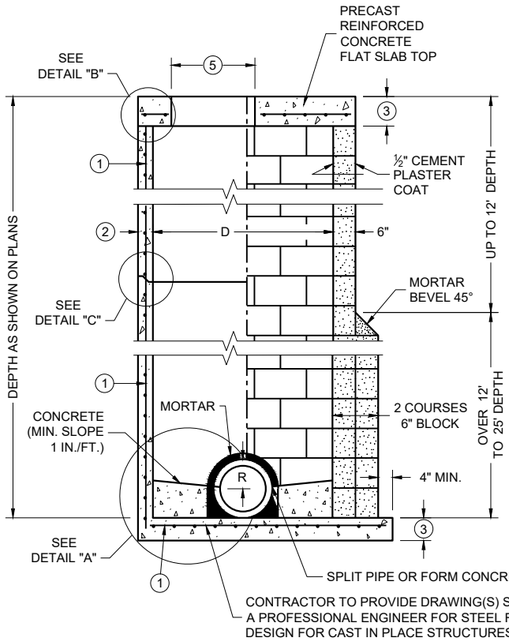
FHWA

6
SDD 08A05-22e



PLAN VIEW

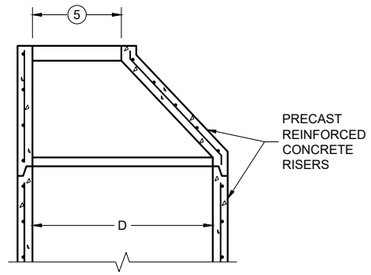
CIRCULAR OPENING



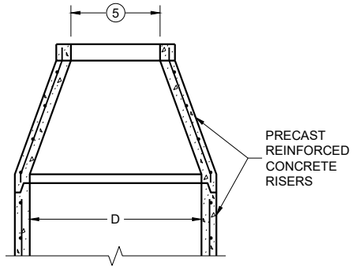
SECTION A - A

PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

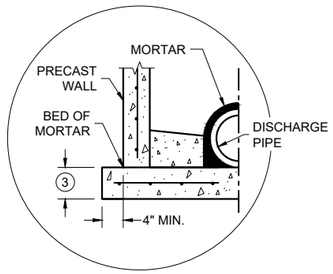
CONCRETE BLOCK WITH CAST IN PLACE OR PRECAST REINFORCED CONCRETE BASE (1)



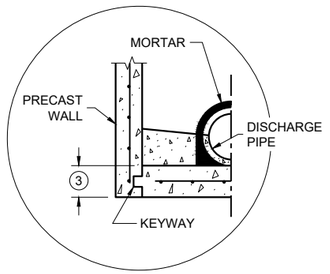
OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP



OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP

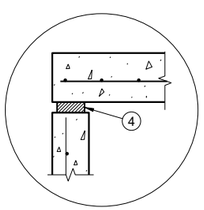


SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

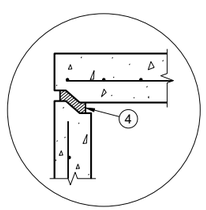


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION

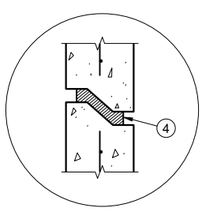
DETAIL "A"



TOP WITH PLAIN END JOINT



TOP WITH TONGUE AND GROOVE JOINT



RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"

DETAIL "C"

MANHOLE COVER OPENING MATRIX

OPENING SIZE (FT.) (5) \ MANHOLE COVER TYPE	C	ALL J'S	K	L	M
2 DIA.	X	X		X	
3 DIA.			X		X

PIPE MATRIX

MANHOLE SIZE (DIA.)	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES		MINIMUM WALL THICKNESS (IN)	MINIMUM PRECAST FLAT SLAB TOP AND BASE THICKNESS
	180° SEPARATION (IN)	90° SEPARATION (IN)		
3-FT	15	12	4	6
4-FT	24	18	4	6
5-FT	36	24	5	8
6-FT	42	36	6	8
7-FT	48	36/42 *	7	8
8-FT	60	42	8	8
9-FT	66	54	9	10
10-FT	72	60	10	10

*A 36" PIPE AND A 42" PIPE CAN BE PLACED WITHIN 90 DEGREES. SEE MINIMUM HORIZONTAL PIPE SEPARATION DETAIL.

GENERAL NOTES

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

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

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATE THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF FOUNDATION BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

PRECAST REINFORCED CONCRETE CONE TOPS (ECCENTRIC OR CONCENTRIC) OR PRECAST REINFORCED CONCRETE FLAT SLAB TOPS MAY BE USED ON CONCRETE BLOCK STRUCTURES.

ECCENTRIC CONE TOPS MAY BE USED ON ALL STRUCTURES. CONCENTRIC CONE TOPS SHALL BE USED ONLY ON STRUCTURES 5 FEET OR LESS IN DEPTH UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

STEPS MEETING AASHTO M199 AND THE FOLLOWING REQUIREMENTS SHALL BE INSTALLED IN ALL STRUCTURES OVER 5 FEET IN DEPTH: 16 INCH C-C MAXIMUM SPACING; PROJECT A MINIMUM CLEAR DISTANCE OF 4 INCHES FROM THE WALL AT THE POINT OF EMBEDMENT; MINIMUM LENGTH OF 10 INCHES; MINIMUM WALL EMBEDMENT OF 3 INCHES. FERROUS METAL STEPS NOT PAINTED OR TREATED TO RESIST CORROSION SHALL HAVE A MINIMUM CROSS SECTIONAL IMENSION OF 1 INCH.

STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCEMENT BAR ARE ACCEPTABLE. REINFORCING BAR MUST BE A MINIMUM OF ½ INCH AND MEET THE REQUIREMENTS OF ASTM A615.

CERTIFICATION SHALL BE PROVIDED THAT INSTALLED STEPS WHEN TESTED IN ACCORDANCE WITH SECTION 10 OF AASHTO T280 CAN WITHSTAND A VERTICAL LOAD OF 800 LBS. AND A HORIZONTAL LOAD OF 400 LBS.

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

ALL PRECAST MANHOLE UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M199.

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

CONCRETE BLOCK WILL NOT BE PERMITTED FOR STRUCTURES GREATER THAN 4 FEET IN DIAMETER.

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

FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "D".

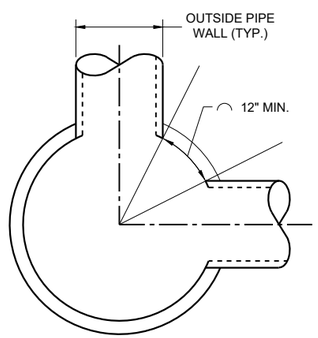
(1) FOR PRECAST MANHOLES AND REINFORCED CONCRETE BASES PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.

(2) SEE PIPE MATRIX TABLE FOR MINIMUM WALL THICKNESS FOR PRECAST MANHOLES

(3) SEE PIPE MATRIX TABLE FOR MINIMUM THICKNESS OF PRECAST FLAT SLAB TOPS AND BASES.

(4) JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 OR RUBBER GASKETS CONFORMING TO ASTM C443.

(5) SEE MANHOLE COVER OPENING MATRIX.



MINIMUM HORIZONTAL PIPE SEPARATION

DETAIL "D"

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

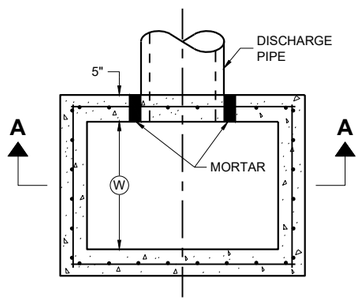
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

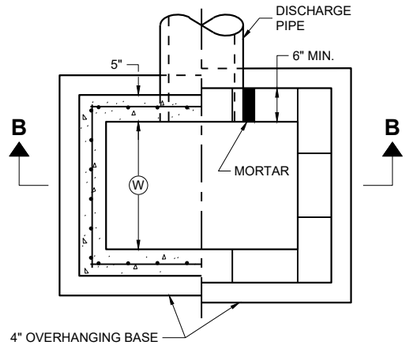
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MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT, 8-FT, 9-FT AND 10-FT DIAMETER

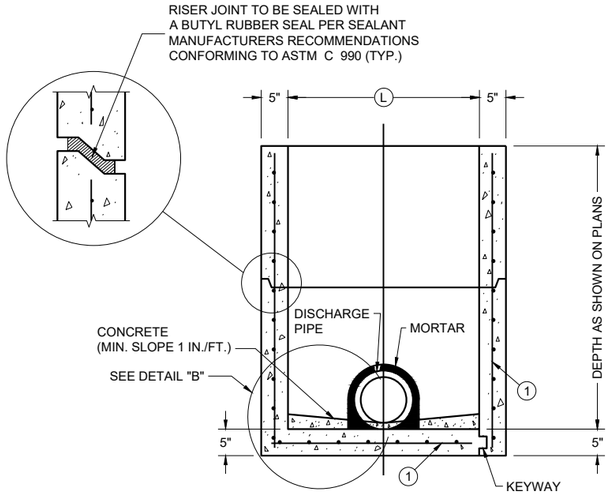
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SDD 08B09-04



PLAN VIEW



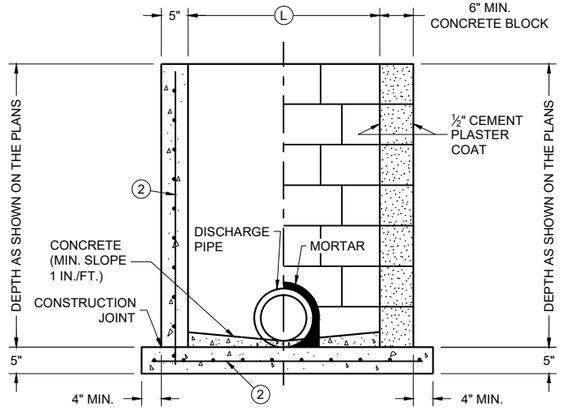
PLAN VIEW



PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE

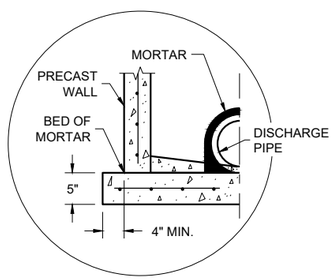
SECTION A - A



CAST IN PLACE REINFORCED CONCRETE

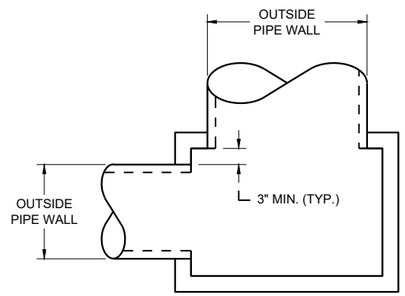
CONCRETE BLOCK WITH CAST IN PLACE OR PRECAST REINFORCED CONCRETE BASE (1)

SECTION B - B



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "B"



DETAIL "A"

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP N0T SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF ASTM C 913.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATES THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF FOUNDATION BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

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

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

4" OVERHANGING BASES ARE REQUIRED FOR CAST-IN-PLACE REINFORCED CONCRETE AND CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3" CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

(1) FOR PRECAST INLETS AND REINFORCED CONCRETE BASES PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913
(2) CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

CATCH BASIN COVER MATRIX

INLET SIZE	WIDTH (W) (FT.)	LENGTH (L) (FT.)	INLET COVER TYPE									
			ALL A'S	ALL B'S	BW	F	ALL H'S	S	T	V	WM	V V-B
2 X 2-FT	2	2	X	X				X				
2 X 2.5-FT	2	2.5			X			X	X	X	X	
2 X 3-FT	2	3					X					
2.5 X 3-FT	2.5	3				X						
2 X 3.5-FT	2	3.5										X

PIPE MATRIX

CATCH BASIN SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	WIDTH (IN)	LENGTH (IN)
2 X 2-FT	12	12
2 X 2.5-FT	12	18
2 X 3-FT	12	24
2.5 X 3-FT	18	24
2 X 3.5-FT	12	30

INLETS 2 X 2-FT, 2 X 2.5-FT, 2 X 3-FT, 2.5 X 3-FT AND 2X3.5-FT

INLETS 2 X 2-FT, 2 X 2.5-FT, 2 X 3-FT, 2.5 X 3-FT AND 2 X 3.5-FT

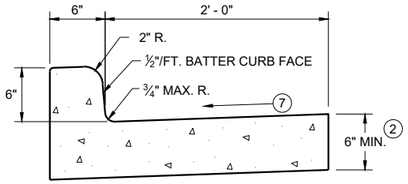
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
December 2023
DATE

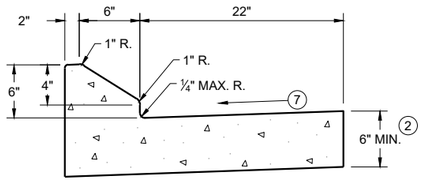
/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

FHWA

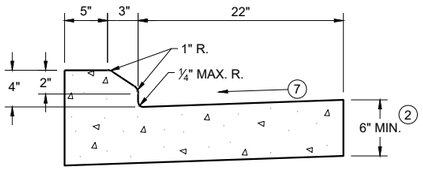
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SDD 08C07-03



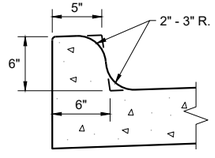
TYPES A (1) & D



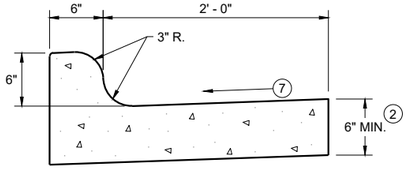
6" SLOPED CURB TYPES G (1) & J



4" SLOPED CURB TYPES G (1) & J

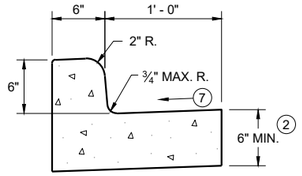


TYPES K (1) & L
(OPTIONAL CURB SHAPE)



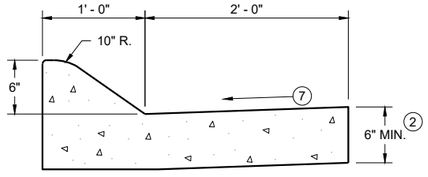
TYPES K (1) & L

CONCRETE CURB AND GUTTER 30"

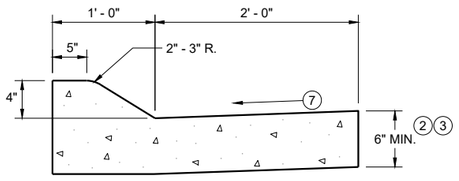


TYPES A (1) & D

CONCRETE CURB AND GUTTER 18"

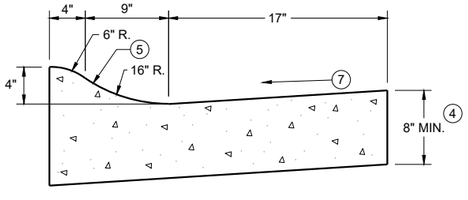


6" SLOPED CURB TYPES A (1) & D



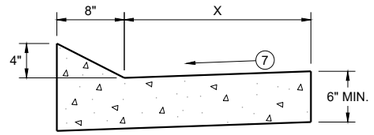
4" SLOPED CURB TYPES A (1) & D

CONCRETE CURB AND GUTTER 36"



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

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

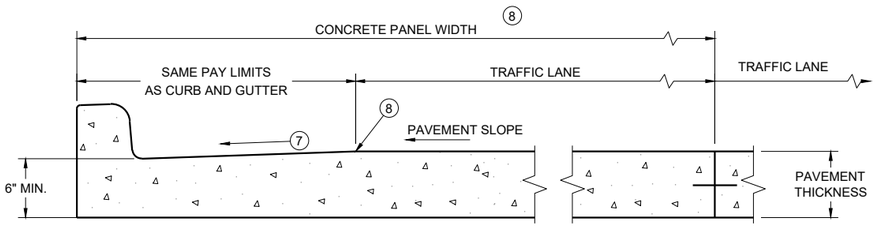


TYPES TBT & TBTT (1)

CONCRETE CURB AND GUTTER

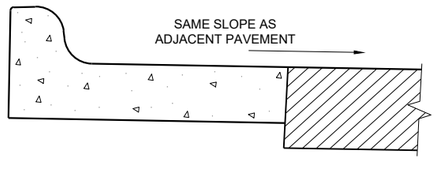
PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE

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



PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB AND GUTTER *

* BIKE LANE IS NOT SHOWN



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

GENERAL NOTES

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

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

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

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

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

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

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

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

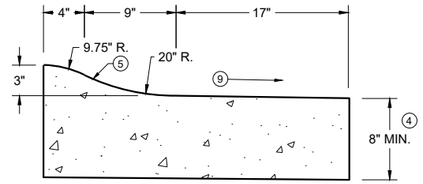
(5) UNLESS OTHERWISE NOTED, FOR STAKING PURPOSES THE FACE OF CURB IS 6" FROM THE BACK OF CURB.

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

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

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

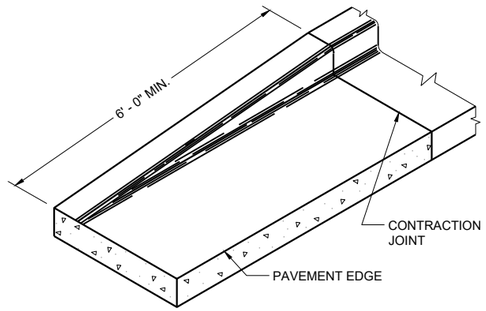
(9) SLOPE TO BE REVERSE SLOPE MATCHING THE SLOPE OF THE PAVEMENT AND THE CIRCULATORY ROADWAY



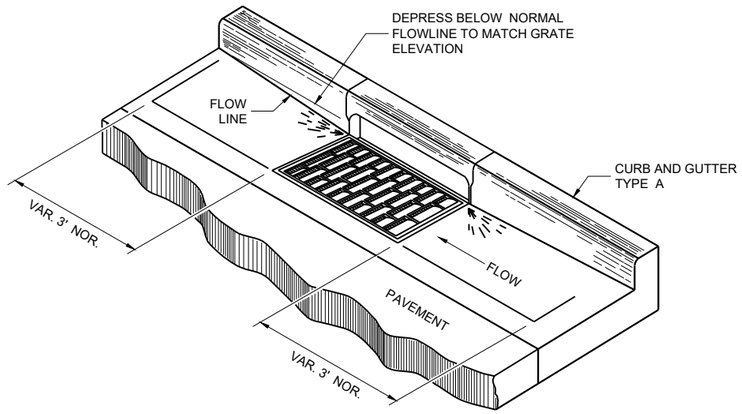
3" SLOPED CURB TYPES R (1) & T

CONCRETE CURB AND GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



END SECTION CURB AND GUTTER



DETAIL OF CURB AND GUTTER AT INLETS

(TYPICAL H INLET COVER SHOWN)

GENERAL NOTES

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

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

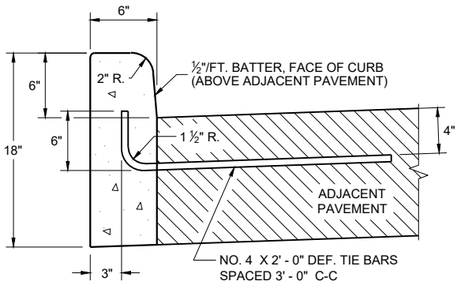
UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2' - 0" BEHIND THE BACK OF CURBS.

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

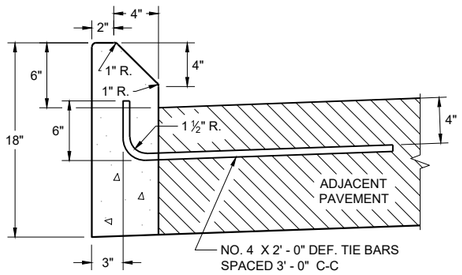
(2) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

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

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

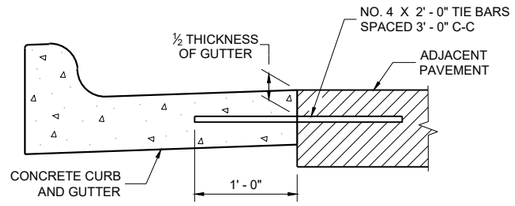


TYPES A (1) & D

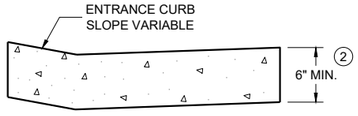


TYPES G (1) & J

CONCRETE CURB

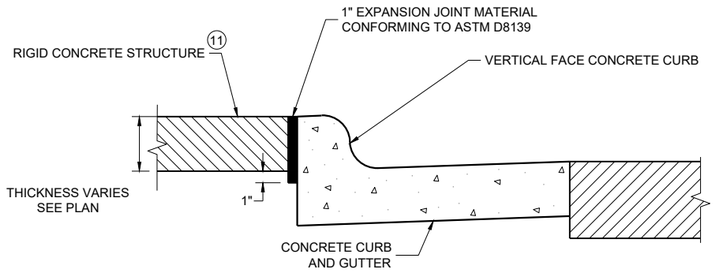


TYPICAL TIE BAR LOCATION (1)

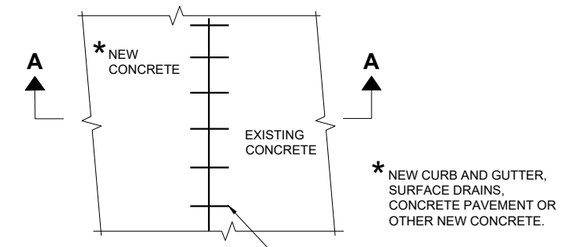


DRIVEWAY ENTRANCE CURB (10)

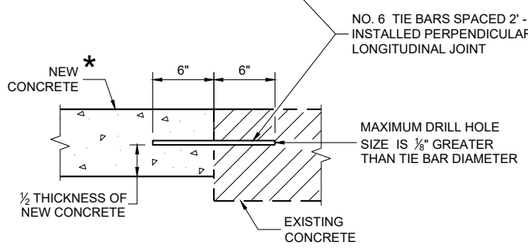
(WHEN DIRECTED BY THE ENGINEER)



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



PLAN VIEW



SECTION A - A

TIE BARS DRILLED INTO EXISTING PAVEMENT

CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

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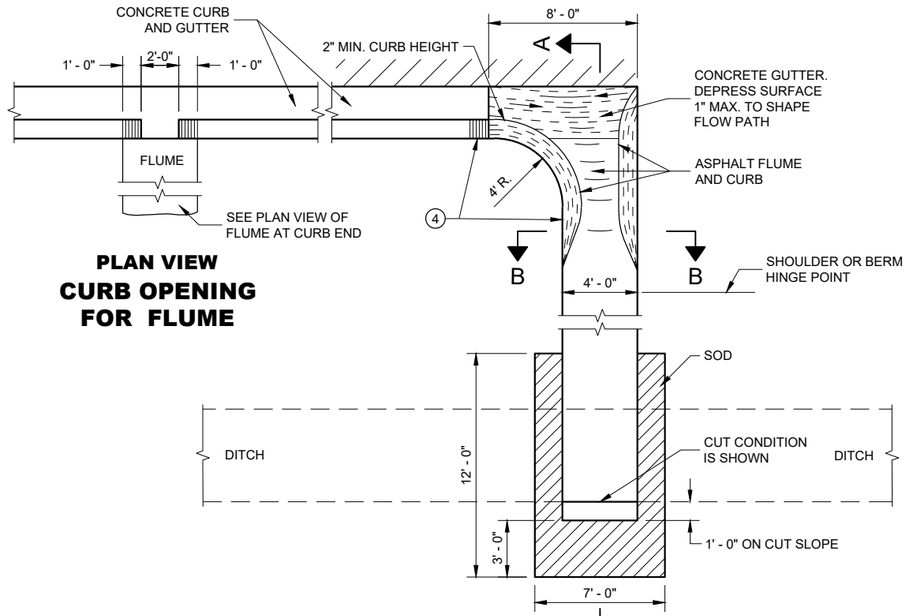
SDD 08D01-24b

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SDD 08D01-24b

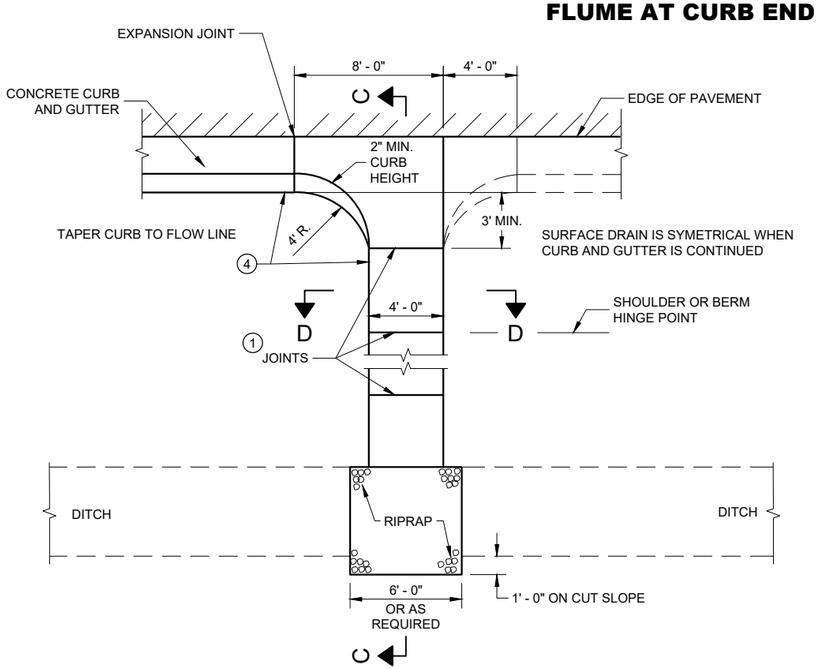
NOTE: TAPER CURB ENDS TO GUTTER IN 1' - 0"

ASPHALTIC FLUME



PLAN VIEW
CURB OPENING FOR FLUME

PLAN VIEW
FLUME AT CURB END



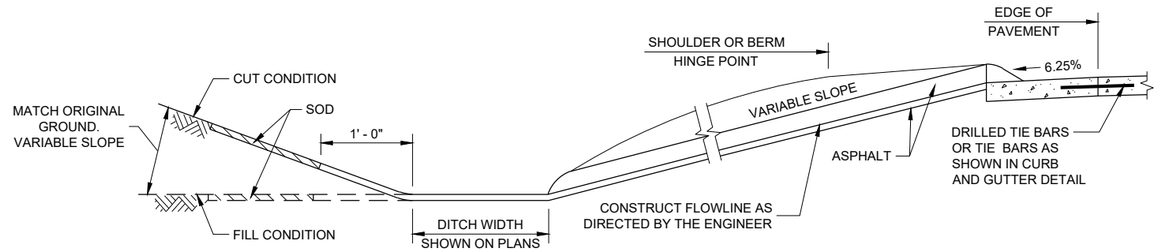
PLAN VIEW
CONCRETE SURFACE DRAIN

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.

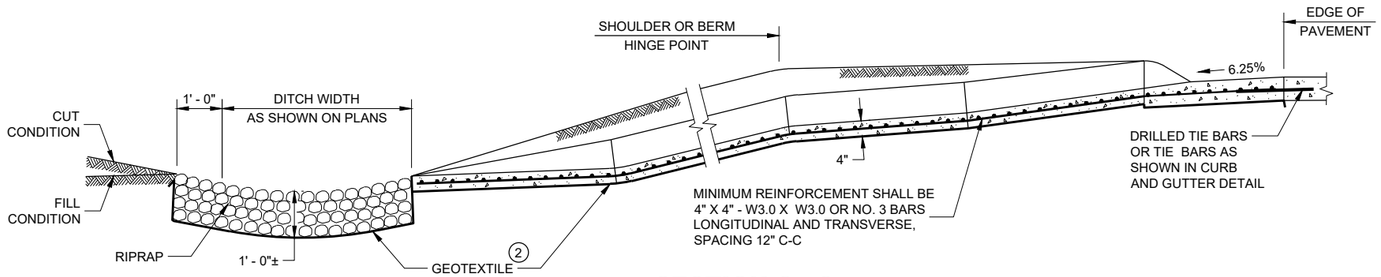
4" X 4" - W3.0 X W3.0 CONCRETE REINFORCEMENT SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

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.

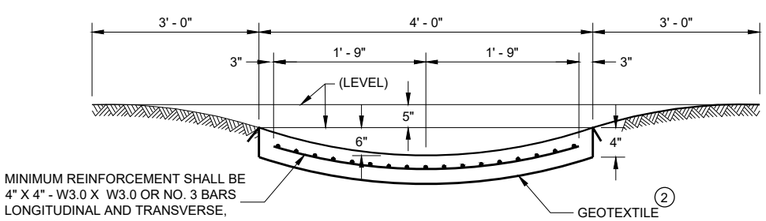


SECTION A - A

SECTION B - B



SECTION C - C



SECTION D - D

CONCRETE SURFACE DRAINS AND ASPHALTIC FLUMES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

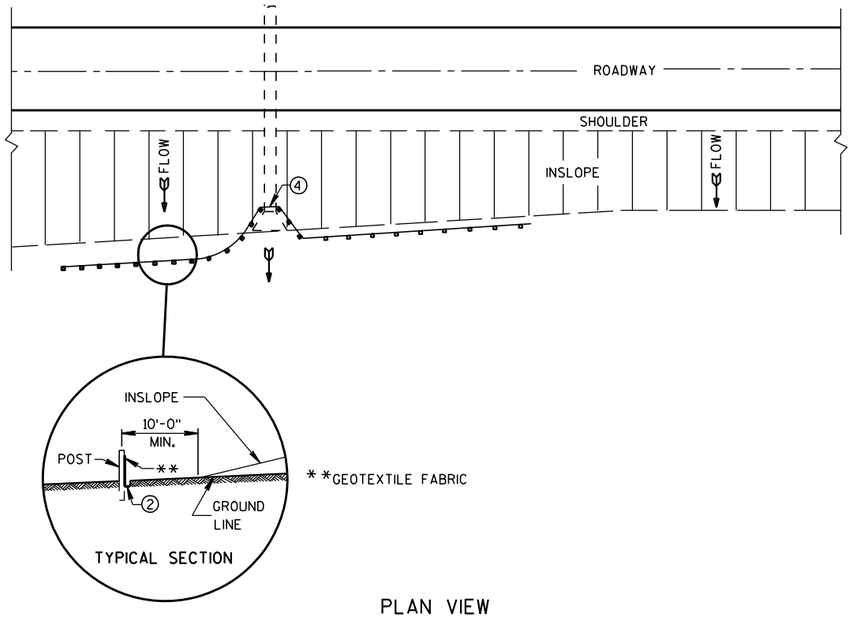
APPROVED
May 2023
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS DEVE ENGINEER

FHWA

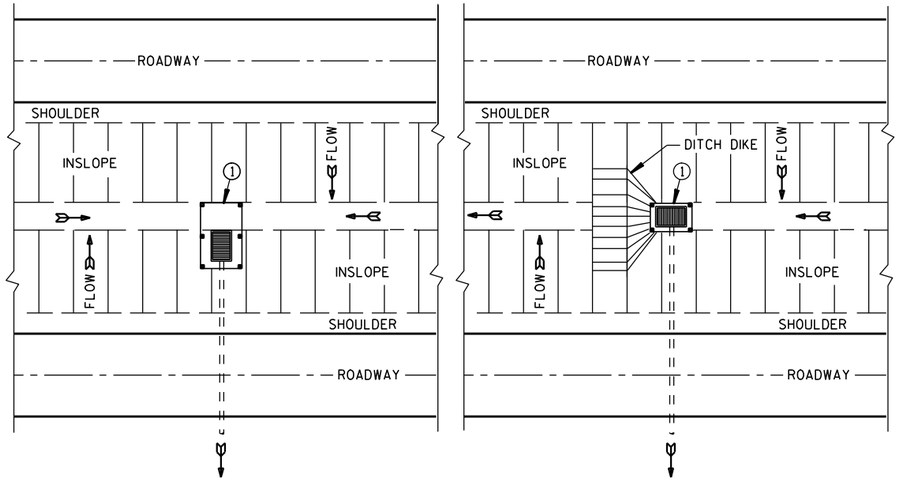
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SDD 08D04 - 07



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

GENERAL NOTES

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

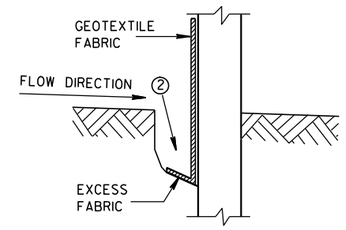
① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

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

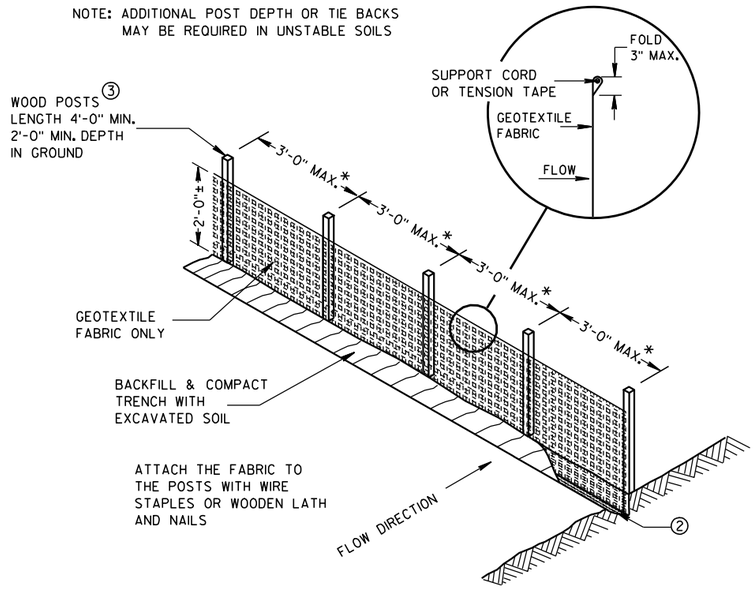
③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

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

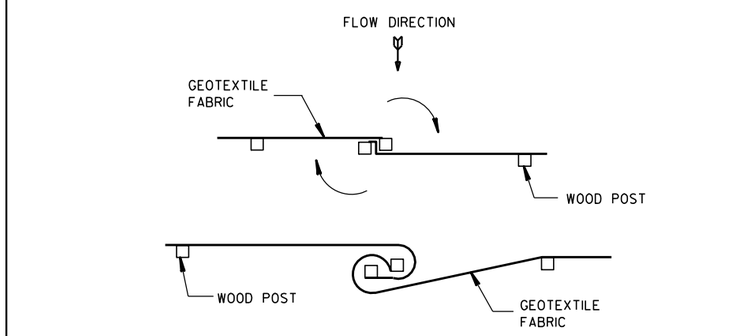
⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



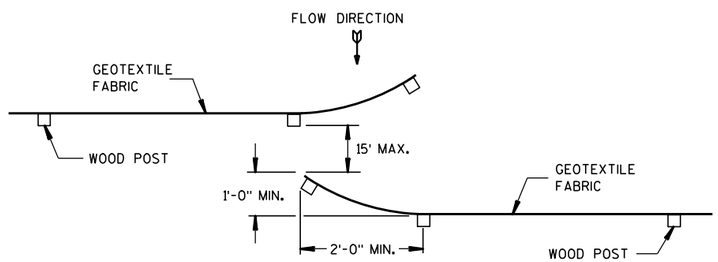
TRENCH DETAIL



SILT FENCE

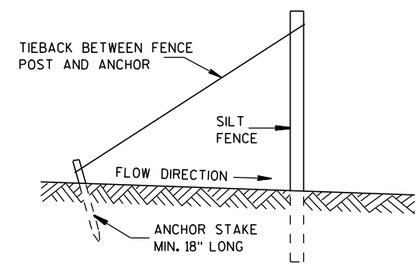


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE ⑤



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

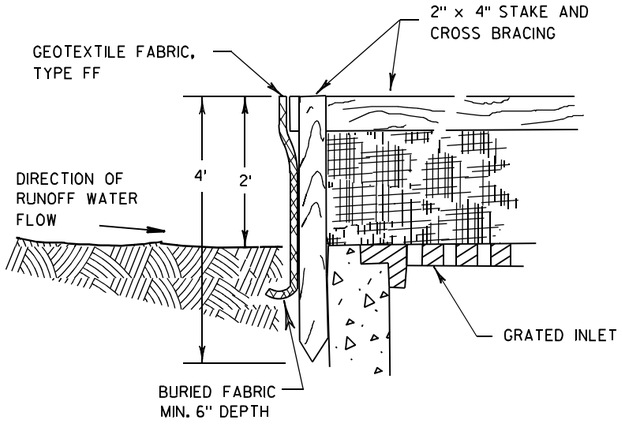
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

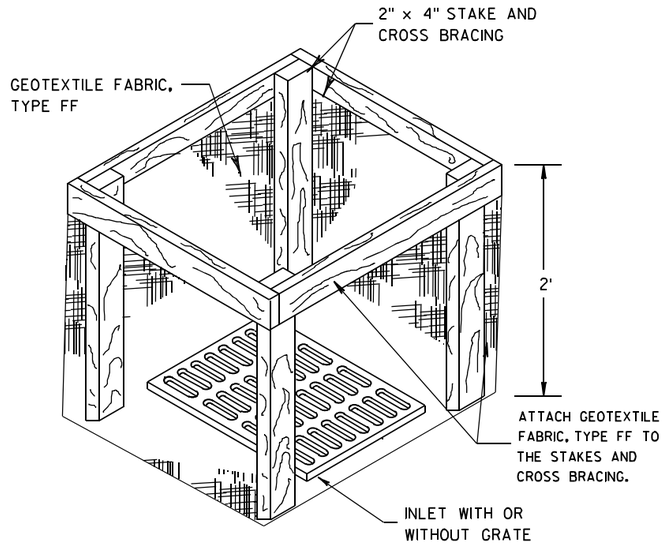
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S.D.D. 8 E 9-6

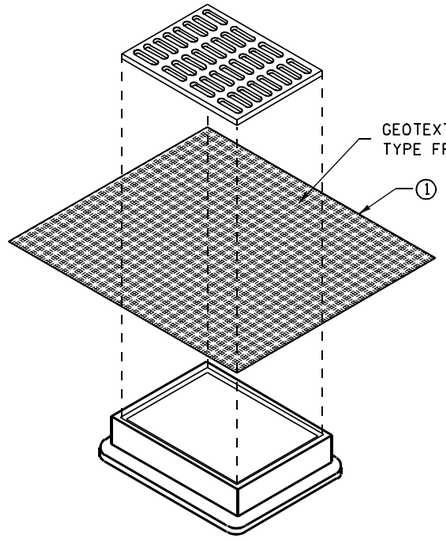
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S.D.D. 8 E 9-6



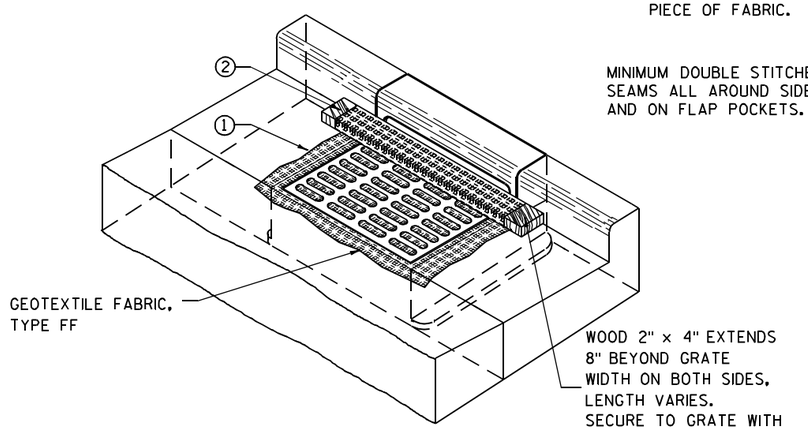


INLET PROTECTION, TYPE A

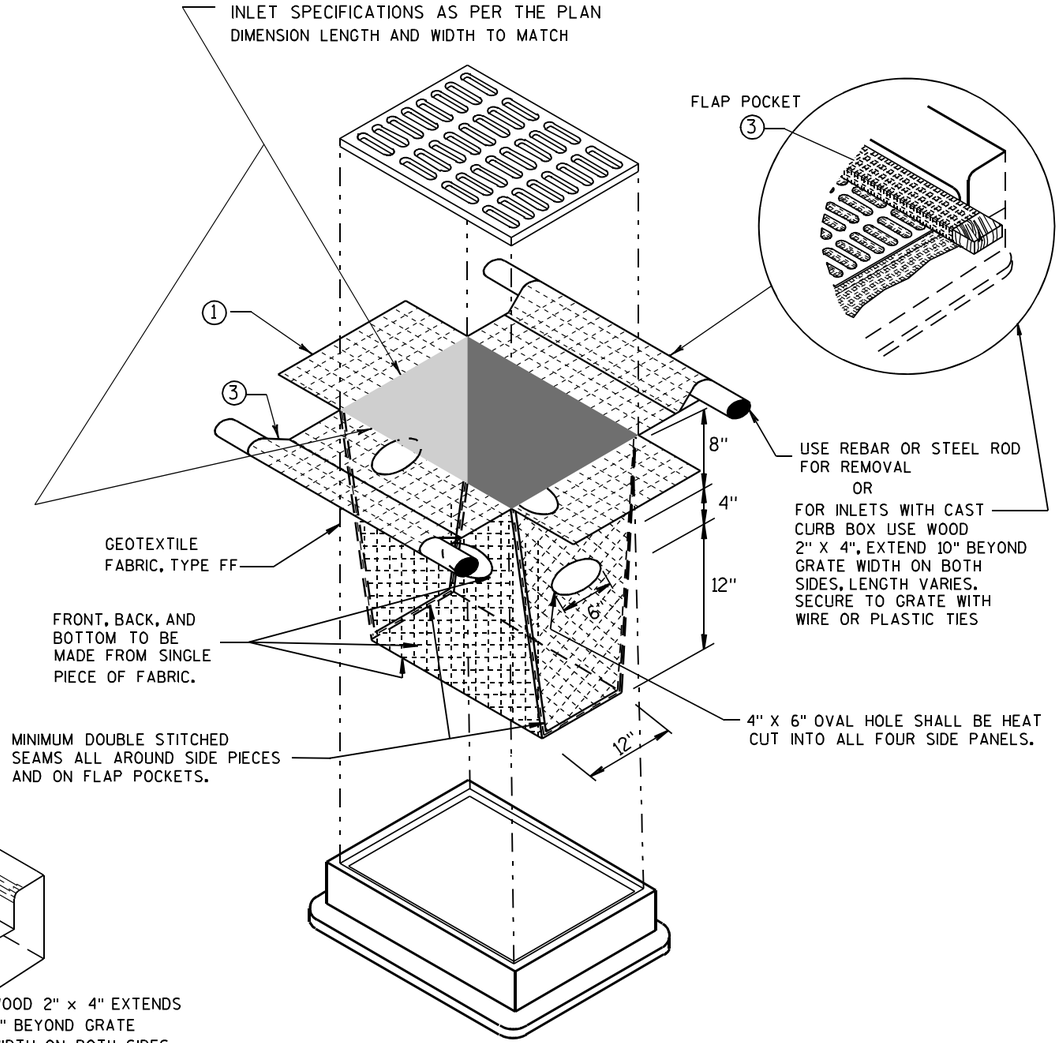


INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

(CAN BE INSTALLED IN ANY INLET WITHOUT A CURB BOX)



INLET PROTECTION, TYPE C (WITH CURB BOX)



INLET PROTECTION, TYPE D

(CAN BE INSTALLED IN ANY INLET TYPE WITH
OR WITHOUT A CURB BOX AS PER NOTE ②)

GENERAL NOTES

INLET PROTECTION DEVICES SHALL BE MAINTAINED OR REPLACED AT THE DIRECTION OF THE ENGINEER.

MANUFACTURED ALTERNATIVES APPROVED AND LISTED ON THE DEPARTMENT'S EROSION CONTROL PRODUCT ACCEPTABILITY LIST MAY BE SUBSTITUTED.

WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

① FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.

② FOR INLET PROTECTION, TYPE C (WITH CURB BOX), AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX OPENING.

③ FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2X4.

INSTALLATION NOTES

TYPE B & C

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

TYPE D

DO NOT INSTALL INLET PROTECTION TYPE D IN INLETS SHALLOWER THAN 30", MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE.

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE BOTTOM OF THE BAG.

INLET PROTECTION
TYPE A, B, C, AND D

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

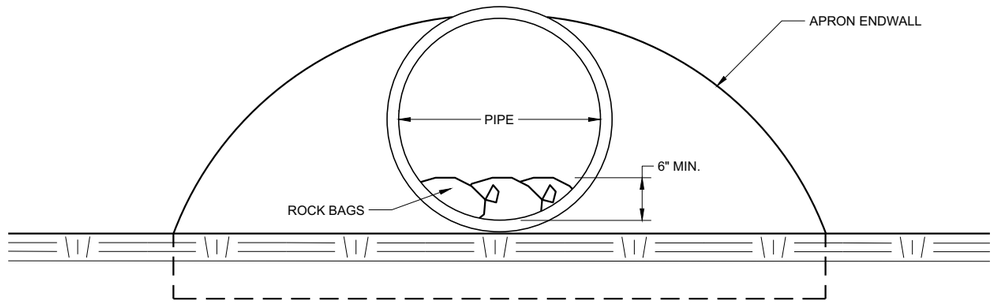
APPROVED

10/16/02
DATE

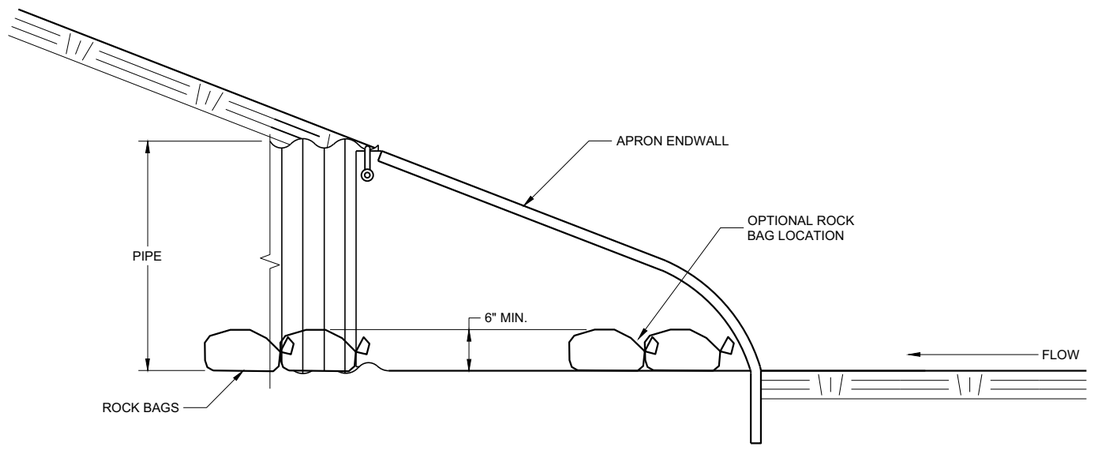
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

6
S.D.D. 8 E 10-2



END VIEW



SIDE VIEW

CULVERT PIPE CHECK

(INSTALL ON INLET END ONLY)

CULVERT PIPE CHECK

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2019 — DATE
/S/ Daniel Schave — EROSION CONTROL ENGI
FHWA

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SDD 08E15 - 01

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SDD 08E15 - 01

METAL APRON ENDWALLS

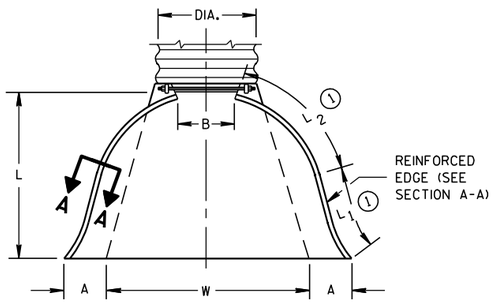
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4	36	2 1/2 to 1	1 Pc.
21	.064	.060	9	12	6	36	18	29 5/8	42	2 1/2 to 1	1 Pc.
24	.064	.075	10	13	6	41	18	37 1/4	48	2 1/2 to 1	1 Pc.
30	.079	.075	12	16	8	51	18	52 1/4	60	2 1/2 to 1	1 Pc.
36	.079	.105	14	19	9	60	24	59 3/4	72	2 1/2 to 1	2 Pc.
42	.109	.105	16	22	11	69	24	75 5/8	84	2 1/2 to 1	2 Pc.
48	.109	.105	18	27	12	78	24	81	90	2 1/4 to 1	3 Pc.
54	.109	.105	18	30	12	84	30	85 1/2	102	2 1/4 to 1	3 Pc.
60	.109×	.105×	18	33	12	87	—	—	114	2 to 1	3 Pc.
66	.109×	.105×	18	36	12	87	—	—	120	2 to 1	3 Pc.
72	.109×	.105×	18	39	12	87	—	—	126	2 to 1	3 Pc.
78	.109×	.105×	18	42	12	87	—	—	132	1 1/2 to 1	3 Pc.
84	.109×	.105×	18	45	12	87	—	—	138	1 1/2 to 1	3 Pc.
90	.109×	.105×	18	37	12	87	—	—	144	1 1/2 to 1	3 Pc.
96	.109×	.105×	18	35	12	87	—	—	150	1 1/2 to 1	3 Pc.

× EXCEPT CENTER PANEL SEE GENERAL NOTES

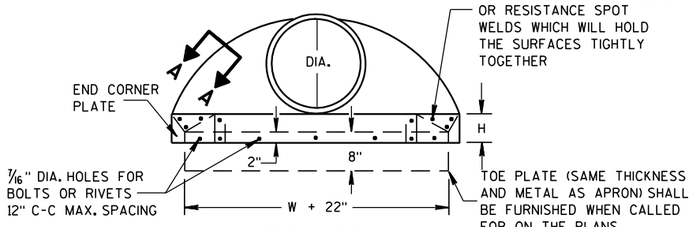
REINFORCED CONCRETE APRON ENDWALLS

PIPE DIA. (IN.)	DIMENSIONS (Inches) T	A	B	C	D	E	G	APPROX. SLOPE
12	2	4	24	48 7/8	72 1/8	24	2	3 to 1
15	2 1/4	6	27	46	73	30	2 1/4	3 to 1
18	2 1/2	9	27	46	73	36	2 1/2	3 to 1
21	2 3/4	9	36	37 1/2	73 1/2	42	2 3/4	3 to 1
24	3	9 1/2	43 1/2	30	73 1/2	48	3	3 to 1
27	3 1/4	10 1/2	49 1/2	24	73 1/2	54	3 1/4	3 to 1
30	3 1/2	12	54	19 3/4	73 1/2	60	3 1/2	3 to 1
36	4	15	63	34 3/4	97 3/4	72	4	3 to 1
42	4 1/2	21	63	35	98	78	4 1/2	3 to 1
48	5	24	72	26	98	84	5	3 to 1
54	5 1/2	27	65	* 33 1/4 - ** 35	* 98 1/4 - ** 100	90	5 1/2	2 2/5 to 1
60	6	* 30 - ** 35	60	39	99	96	5	2 to 1
66	6 1/2	* 24 - ** 30	* 72 - ** 78	* 21 - ** 27	99	102	5 1/2	2 to 1
72	7	* 24 - ** 36	78	21	99	108	6	2 to 1
78	7 1/2	* 24 - ** 36	78	21	99	114	6 1/2	2 to 1
84	8	36	90 1/2	21	111 1/2	120	6 1/2	1 1/2 to 1
90	8 1/2	41	87 1/2	24	111 1/2	132	6 1/2	1 1/2 to 1

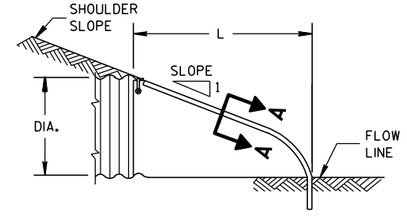
*MINIMUM
**MAXIMUM



PLAN VIEW

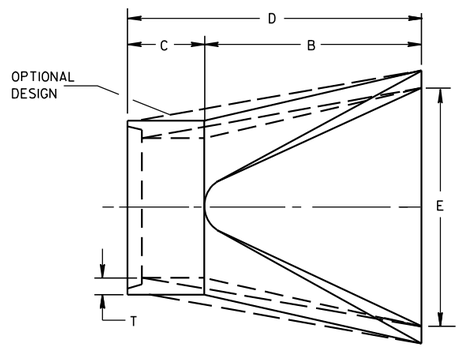


END VIEW

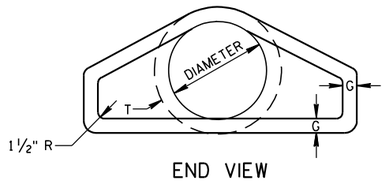


SIDE ELEVATION

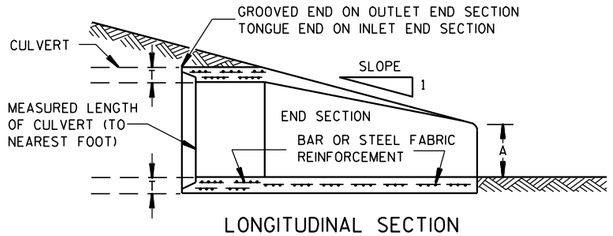
METAL ENDWALLS



PLAN

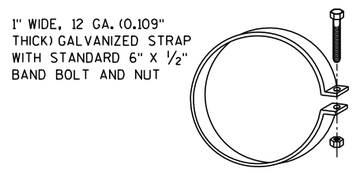


END VIEW



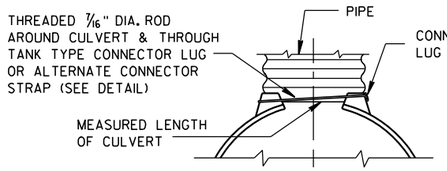
LONGITUDINAL SECTION

CONCRETE ENDWALLS

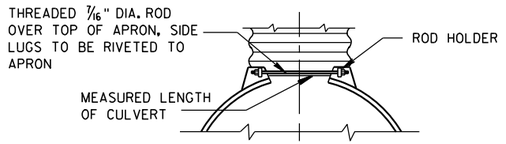


ALTERNATE FOR TYPE 1 CONNECTION

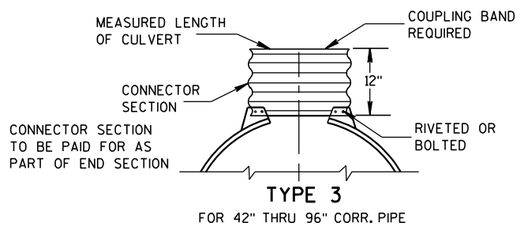
END SECTION CONNECTOR STRAP



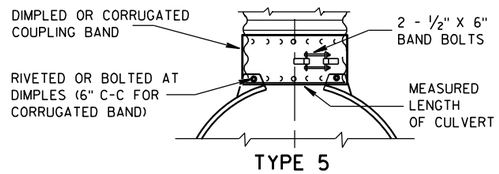
TYPE 1
FOR 12" THRU 24" CORR. PIPE



TYPE 2
FOR 30" THRU 96" CORR. PIPE



TYPE 3
FOR 42" THRU 96" CORR. PIPE



TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

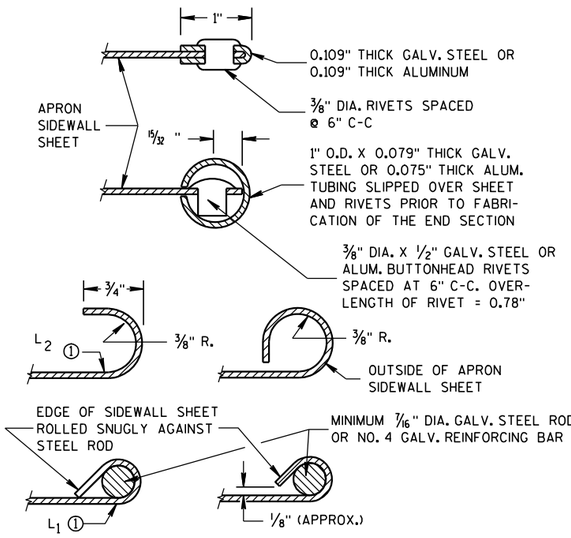
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

FOR CIRCUMFERENTIALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2, 3 OR 5 AS APPLICABLE.

FOR HELICALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2 OR 5.

FOR HELICALLY CORRUGATED PIPES WITH TWO CIRCUMFERENTIAL CORRUGATIONS AT EACH END USE ENDWALL CONNECTION DETAILS 1, 2 OR 3.

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

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

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

ALL THREE PIECE STEEL APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT OF THE PIPE PERIMETER.

LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS. FOR THE 60" THROUGH 96" DIAMETER APRON ENDWALL SIZES, THE REINFORCED EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES. THE ANGLES SHALL BE ATTACHED BY GALVANIZED NUTS AND BOLTS FOR STEEL UNITS AND ALUMINUM NUTS AND BOLTS FOR ALUMINUM UNITS.

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

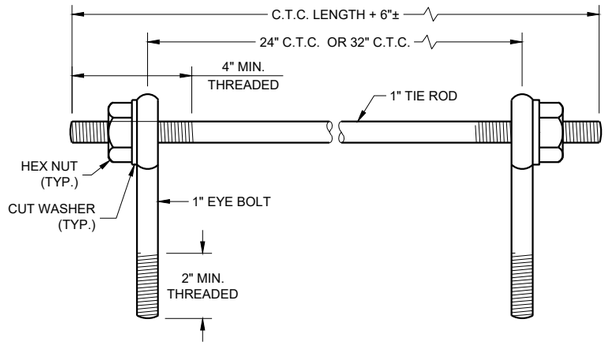
① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR CULVERT PIPE

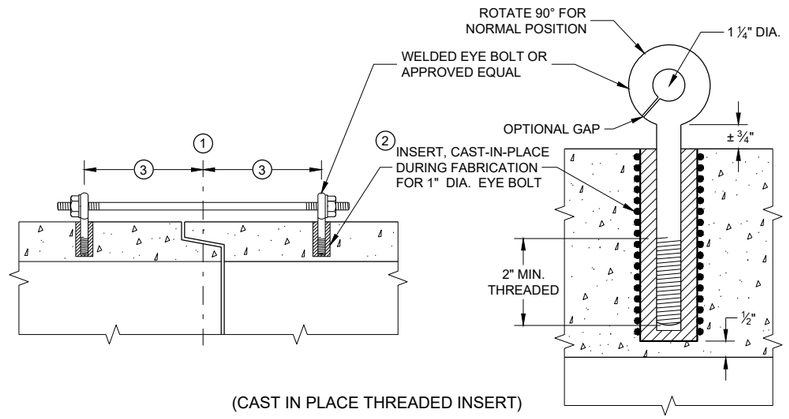
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/30/94 DATE
/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOP 65 NEER
FHWA

6
S.D.D. 8 F 1-11



EYE BOLTS AND TIE ROD



(CAST IN PLACE THREADED INSERT)

LONGITUDINAL SECTIONS

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

GENERAL NOTES

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

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

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

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

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

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

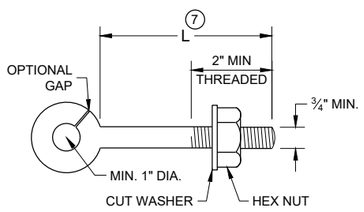
(3) HOLES SHALL BE CAST-IN-PLACE OR DRILLED PER THE APPLICABLE DETAIL, AND EQUAL DISTANCE FROM THE CENTERLINE OF THE JOINT.

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

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

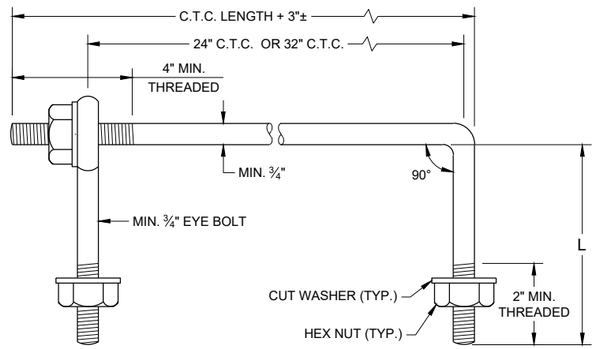
(6) LENGTH ADEQUATE TO EXTEND TO WITHIN ½ INCH OF THE INNER SURFACE OF THE PIPE.

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

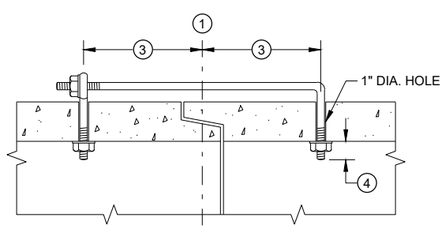


EYE BOLT (7)

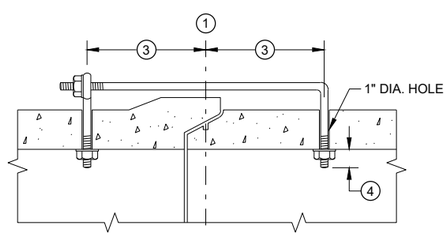
NOTE: TWO EYE BOLTS MAY BE USED WITH A 30" OR 38" LONG THREADED ROD IN LIEU OF THE 90° BENT TIE ROD.



EYE BOLT AND TIE ROD



(TONGUE AND GROOVE PIPE)



(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

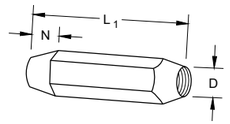
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

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

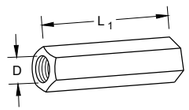
ADJUSTABLE TIE ROD TABLE

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

DIMENSIONS SHOWN ARE IN INCHES



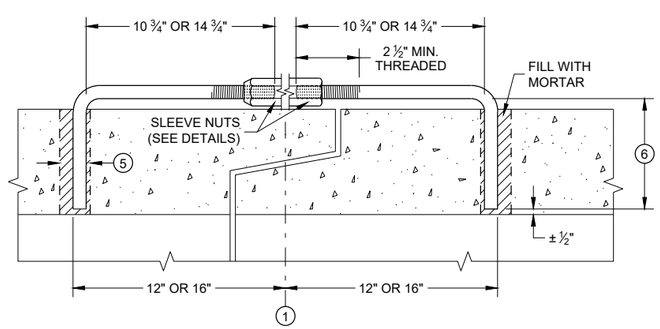
TAPERED



PLAIN

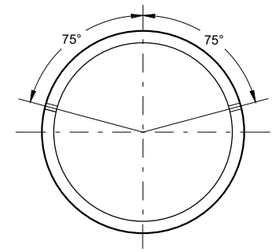
RIGHT AND LEFT THREADS

SLEEVE NUTS



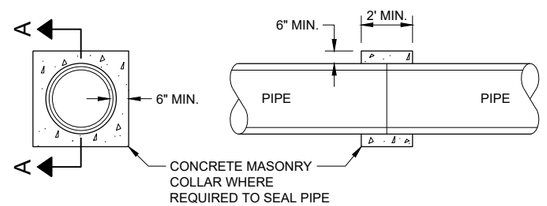
LONGITUDINAL SECTION

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

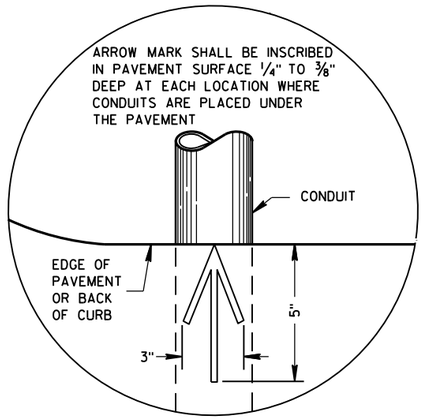
JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

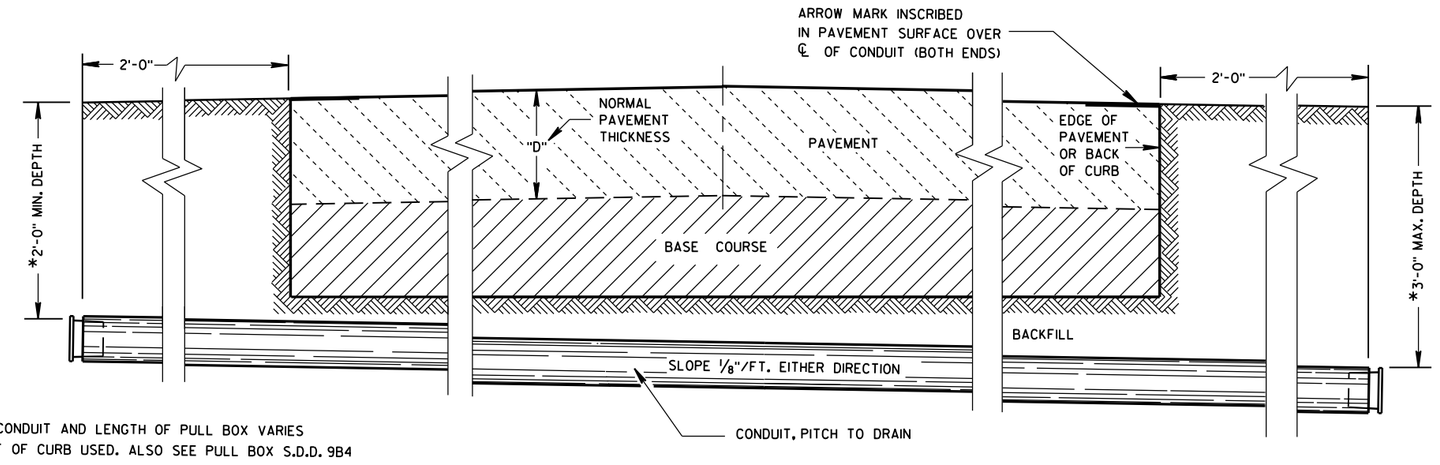
SDD 08F04 - 08

SDD 08F04 - 08



PLAN VIEW

ARROW MARK



*DEPTH OF CONDUIT AND LENGTH OF PULL BOX VARIES WITH HEIGHT OF CURB USED. ALSO SEE PULL BOX S.D.D. 9B4

SIDE ELEVATION

DETAIL FOR CONDUIT UNDER PAVED HIGHWAYS

GENERAL NOTES

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

METALLIC (STANDARD SPECIFICATION 652.2.2) OR NONMETALLIC (STANDARD SPECIFICATION 652.2.3) CONDUIT SHALL BE FURNISHED AND PLACED AS SHOWN.

DEPTH OF CONDUIT INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES MINIMUM AND 36 INCHES MAXIMUM.

DEPTH OF CONDUIT INSTALLED THAT IS NOT BELOW THE TRAVELED WAY SHALL BE 18 INCHES MINIMUM AND 36 INCHES MAXIMUM.

ANY EXCEPTION TO THE MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE ENGINEER.

THE TRENCH SHALL NOT BE BACKFILLED PRIOR TO INSPECTION OF THE CONDUIT.

ALL METALLIC CONDUIT RACEWAY ENDS SHALL BE REAMED AND THREADED.

ALL METALLIC CONDUIT IN WHICH WIRE OR CABLE IS TO BE INSTALLED SHALL BE BUSHED WITH APPROVED THREADED BUSHINGS BEFORE INSTALLATION OF THE WIRE OR CABLE.

ALL METALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT TO BE INSTALLED SHALL BE CAPPED WITH THREADED PROTECTIVE CAPS, AS APPROVED BY THE ENGINEER.

ALL NONMETALLIC CONDUIT SHALL BE CAPPED OR PLUGGED IMMEDIATELY AFTER INSTALLATION AND SHALL REMAIN CAPPED OR PLUGGED UNTIL WIRE/CABLES ARE INSTALLED.

NONMETALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

BENDING OF PVC ELECTRICAL CONDUIT SHALL BE ACCOMPLISHED BY USING A BLANKET OR EMERSION TYPE TANK DESIGNED FOR THE PURPOSE OF BENDING PVC ELECTRICAL CONDUIT.

ALL CUT ENDS SHALL BE TRIMMED INSIDE AND OUTSIDE TO REMOVE ALL ROUGH EDGES ON NONMETALLIC CONDUIT. (SEE NEC 347.5)

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

PRIOR TO CONDUIT ACCEPTANCE, CONDUIT CAPS OR PLUGS SHALL BE REMOVED, AND THE CAPS, PLUGS AND CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND THEN THE CAPS OR PLUGS REINSTALLED TO ENSURE THAT THE CAPS OR PLUGS CAN BE EASILY REMOVED IN THE FUTURE.

ALL CONDUIT BEING FURNISHED AND INSTALLED SHALL HAVE THE U.L. LABEL FIRMLY ATTACHED.

CONDUIT RUNS SHALL BE THE SAME SIZE OF CONDUIT FROM ONE END TO THE OTHER (FROM PULL BOX TO PULL BOX-OR-JUNCTION BOX TO JUNCTION BOX-OR-BASE TO BASE, ETC.).

TRACER WIRE SHALL BE INSTALLED AS STATED IN THE STANDARD SPECIFICATION, ITEM 652.3.1.1.

ALL CONDUIT RUNS SHALL BE STRAIGHT (WITHOUT BENDS) FROM PULL BOX TO PULL BOX, PULL BOX TO BASE AND BASE TO BASE AS SHOWN ON THE PLANS.

6

S.D.D. 9 B 2-10

6

S.D.D. 9 B 2-10

CONDUIT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

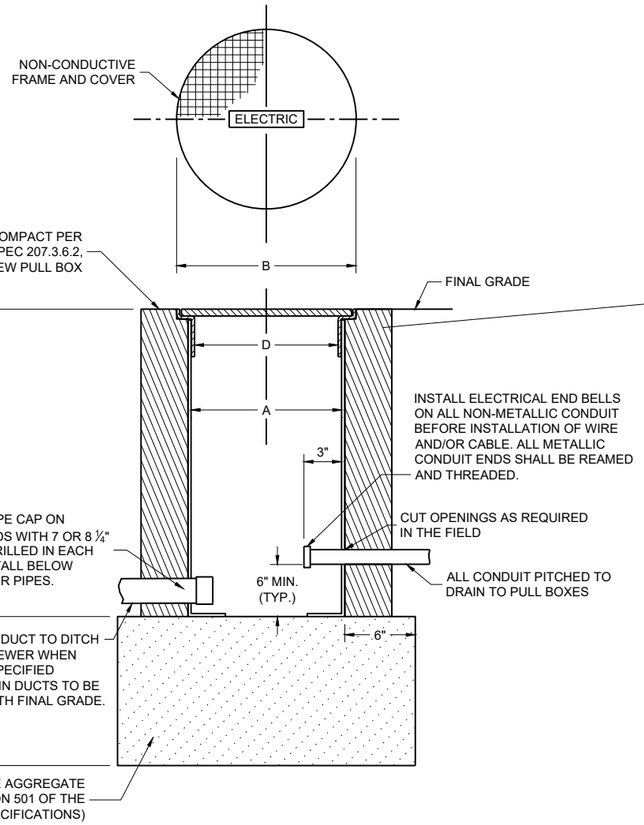
APPROVED
March, 2017 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

TABLE OF NOMINAL DIMENSIONS
AND WEIGHTS

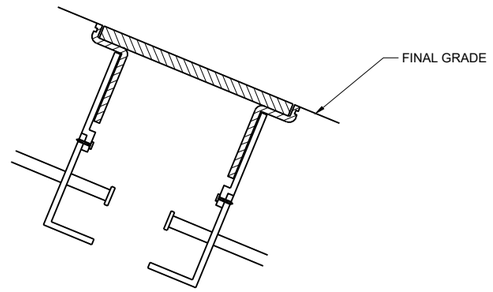
DIMENSION IN INCHES		NON- CONDUCTIVE PULL BOX	
BOX DIAMETER ** (INSIDE)	A	24	24
BOX OVERALL OUTSIDE DIAMETER	B	27	27
BOX LENGTH	C	36	42
FRAME OPENING	D	22 ½	22 ½
WEIGHT IN POUNDS *			
COVER		50	50
BOX ONLY		75	85

*THE ACTUAL WEIGHT OF THE COVER OR BOX ONLY MAY VARY NOT TO EXCEED 100 LBS INDIVIDUALLY.

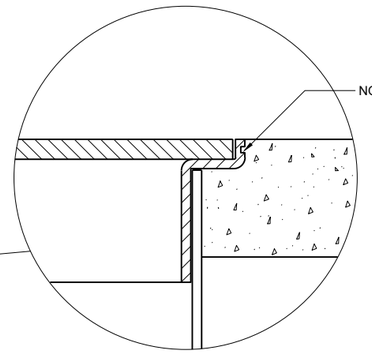
** DIAMETER VARIES FROM TOP TO BOTTOM WITH THE DIAMETER LARGER AT THE BOTTOM TO PREVENT FROST HEAVE.



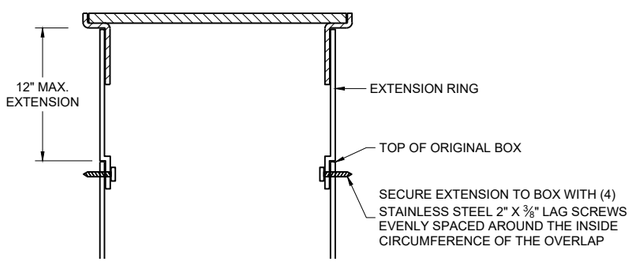
NON-CONDUCTIVE PULL BOX



**INSTALLED IN SOD
OR CRUSHED AGGREGATE**



INSTALLED IN SIDEWALK



BOX EXTENSION

GENERAL NOTES

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

ALL BOXES, FRAMES AND COVERS SHALL BE SUITABLE FOR TIER 15 LOADING AS SPECIFIED IN ANSI/SCTE 77.

PROVIDE AN OPENING FOR TOOL ASSISTED COVER REMOVAL NOT LARGE ENOUGH TO PERMIT PASSAGE OF A SPHERE MORE THAN ½" DIAMETER

ENSURE COVER SURFACE IS SKID RESISTANT WITH A COEFFICIENT OF FRICTION OF AT LEAST 0.5 AND VERTICAL SURFACE DICONTINUITIES LESS THAN ¼".

COVER SHALL BE MAGNETICALLY LOCATABLE.

BOXES AND EXTENSIONS ARE TRIMMABLE FOR CUSTOM LENGTHS. TRIMMED PIECES SHALL MAINTAIN A UNIFORM LENGTH.

ENTRANCE HOLES INTO PULL BOXES SHALL BE CUT WITH A CIRCULAR HOLE SAW OR HYDRAULIC CONDUIT PUNCH. HOLE SIZE SHALL BE THE OUTSIDE DIAMETER OF THE CONDUIT THAT IS TO FIT IN THE OPENING PLUS NO MORE THAN ¼".

THE CONTRACTOR SHALL NOT INSTALL WIRE IN ANY PULL BOX UNTIL ITS INSTALLATION HAS BEEN INSPECTED AND ACCEPTED BY THE ENGINEER.

ALL METALLIC CONDUIT IN WHICH WIRE AND/OR CABLE IS TO BE INSTALLED, SHALL BE BUSHED BEFORE INSTALLATION OF THE WIRE AND/OR CABLE.

ENTIRE BOX MUST BE CONSTRUCTED OF NON-CONDUCTIVE MATERIALS WITH THE EXCEPTION OF STAINLESS STEEL FASTENERS AND MAGNETIC LOCATABLE DEVICE.

WHEN A PULL BOX IS INSTALLED IN CRUSHED AGGREGATE SHOULDERS, PLACE IT 2-3 INCHES BELOW GRADE AND COVER IT WITH 2-3 INCHES OF CRUSHED AGGREGATE.

LABEL ON COVER SHALL READ "ELECTRIC" FOR SIGNAL AND LIGHTING SYSTEMS, "WISDOT ITS" FOR COMMUNICATIONS AND ITS EQUIPMENT SYSTEMS.

INSTALL PULL BOX TO MATCH GRADE UP TO 3:1 MAX.

RING SHALL BE FLUSH WITH TOP OF PULL BOX.

COMPACT AROUND PULL BOX.

**MEASUREMENT DETAIL FOR
WIRE/CABLE IN THE PULL BOX**

**PULL BOXES
NON-CONDUCTIVE**

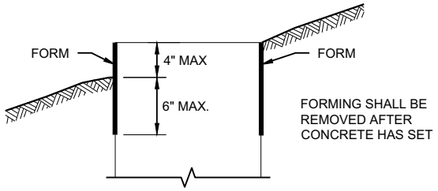
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2026 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL ENGINEER

FHWA

6
SDD 09B16-04

FORM DEPTH SHALL BE NO MORE THAN 6" BELOW GRADE ON THE LOWER SIDE OF BASE



FORMING DETAIL

QUANTITY REQUIREMENTS	CONCRETE BASE TYPE		
	1	2	5 & 6
APPROX. CUBIC YARDS OF CONCRETE	0.40	0.57	0.40
LBS. OF HOOP BAR STEEL	NONE	23	16
LBS. OF VERTICAL BAR STEEL	NONE	60	18

GENERAL NOTES

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

BASES SHALL BE EXCAVATED BY USE OF A CIRCULAR AUGER.

TOP SURFACES OF CONCRETE BASES SHALL BE TROWEL FINISHED SMOOTH AND LEVEL.

CONDUIT SIZES AND LOCATIONS SHALL BE SHOWN ON THE PLANS

THE FINAL OR TERMINATING CONCRETE BASE IN A CONDUIT RUN SHALL HAVE A 6" EXIT STUB INSTALLED FOR FUTURE CABLING USE. THE EXIT STUB SHALL BE SIZED AS USED THROUGHOUT THE CONDUIT RUN AS SHOWN A THE ENTRANCE OF THE BASE.

ENDS OF CONDUIT INSTALLED BELOW GRADE FRO FUTURE USE SHALL BE CAPPED IF METALLIC OR PLUGGED IF NON-METALLIC.

MINIMUM BENDING RADIUS OF CONDUIT IS EQUAL TO 6X THE DIAMETER.

CONDUIT HEIGHT ABOVE CONCRETE BASES SHALL BE 1 INCH. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NON-METALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF CONCRETE BASES BEFORE INSTALLATION.

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

IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE DIRT OR FILL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING AROUND THE BASE. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BARE CONCRETE BASE IN LAYERS OF 1 FOOT OR LESS.

A NO. 4 AWG STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD) FOR TYPE 2, TYPE 5 AND TYPE 6 BASES.

THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE FURNISHED AND INSTALLED TO ENTER ALL BASE TYPES THROUGH A 1 INCH CONDUIT INSTALLED FOR GROUNDING PURPOSES, LEAVING A 4 FOOT COIL OF WIRE ABOVE THE CONCRETE BASE. THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE NEATLY COILED AND THE COILS TIED TOGETHER.

ANCHOR RODS SHALL BE THREADED 12" IN LENGTH ON EACH END OF THE ROD. ANCHOR RODS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 654.2.1 OF THE STANDARD SPECIFICATIONS.

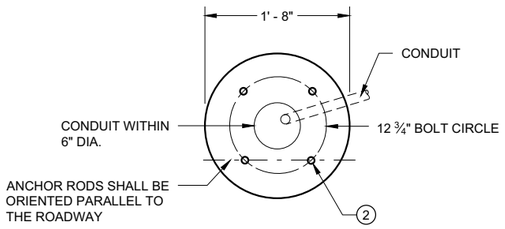
WASHERS AND LOCK WASHERS ARE REQUIRED ON ALL ANCHOR RODS.

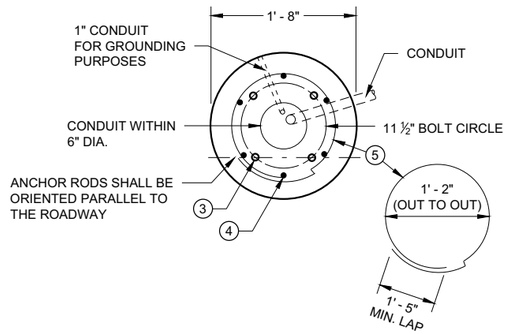
WHEN ANCHOR RODS USING THE ALTERNATE "L" BEND ARE FURNISHED, THE 4 INCH"L" BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR ROD BAR LENGTH. THE "L" BEND SHALL NOT BE THREADED.

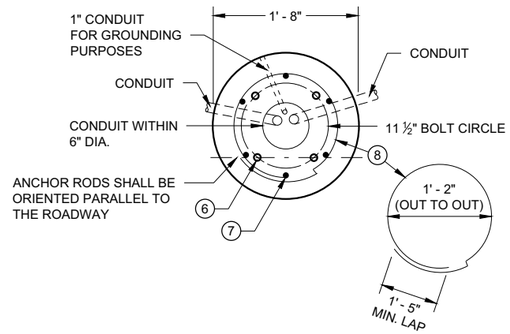
ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

WELDING OF THE ANCHOR RODS TO THE CAGE IS UNACCEPTABLE. TIE WIRES SHALL BE USED.

BAR STEEL REINFORCEMENT SHALL BE COATED WITH POWDERED EPOXY RESIN IN ACCORDANCE WITH SECTION 505 OF THE STANDARD SPECIFICATIONS (LATEST EDITION).







1 THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES EXCEPT WITH WRITTEN APPROVAL OF THE ENGINEER.

2 (4) 1" DIA. X 3' - 6" ANCHOR RODS.

3 (4) 1" DIA. X 5' - 0" ANCHOR RODS.

4 (6) NO. 6 X 6' - 8" BAR STEEL REINFORCEMENT.

5 (7) NO. 4 X 5' - 1" BAR STEEL REINFORCEMENT @ 1' - 0" C - C.

6 (4) 1" DIA. X 3' - 6" ANCHOR RODS.

7 (6) NO. 4 X 4' - 8" BAR STEEL REINFORCEMENT.

8 (5) NO. 4 X 5' - 1" BAR STELL REINFORCEMENT @ 1' - 0" C -C.

9 EXOTHERMIC CONNECTION TO EUIPMENT GROUNDING CONDUCTOR

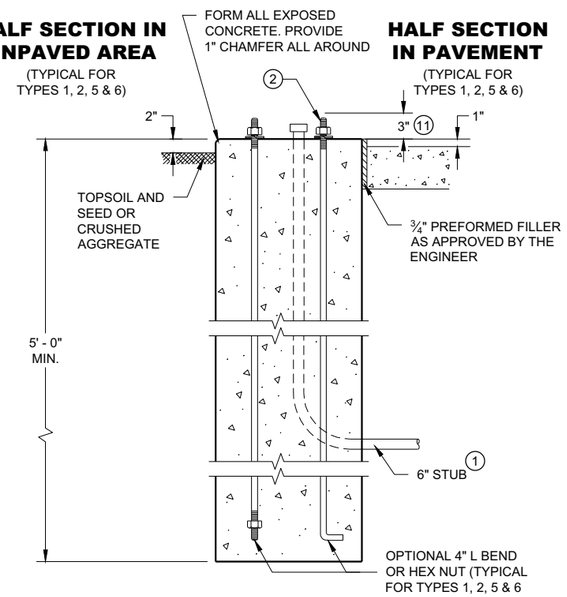
10 ⅝" DIA. X 8' -0" COPPERCLAD EQUIPMENT GROUNDING ELECTRODE REQUIRED

11 ANY ANCHOR ROD PROJECTION SHORTER THAN 2 ¾" OR LONGER THAN 3 ¼" SHALL REQUIRE THE BASE TO BE REMOVED AND REPLACED AT THE CONTRACTORS EXPENSE.

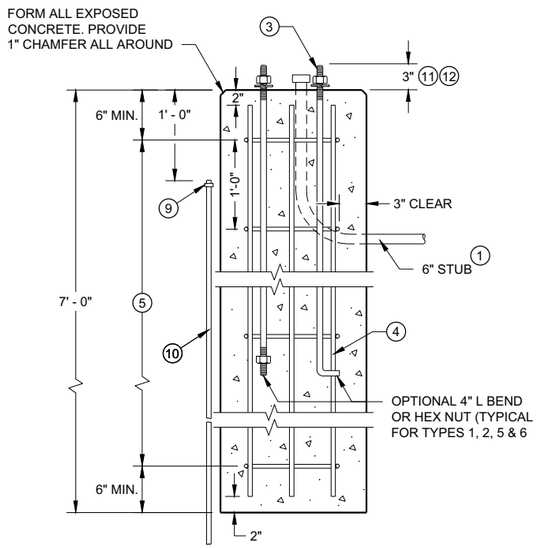
12 FOR NON - BREAKAWAY INSTALLATIONS, 4 ½" ± ANCHOR ROD PROJECTION WITH THE USE OF LEVELING NUTS. RODENT SCREEN REQUIRED.

HALF SECTION IN UNPAVED AREA
(TYPICAL FOR TYPES 1, 2, 5 & 6)

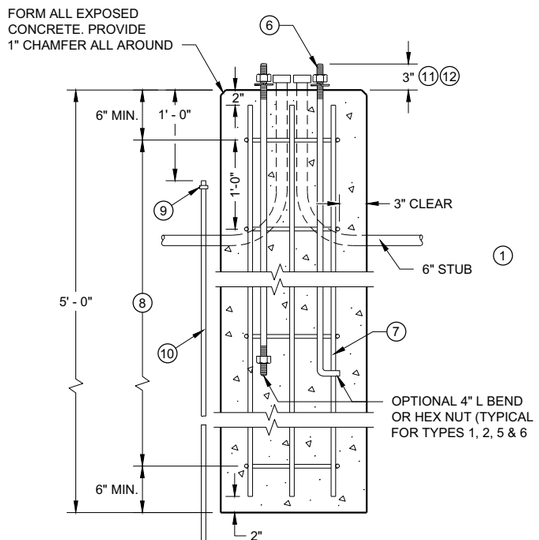
HALF SECTION IN PAVEMENT
(TYPICAL FOR TYPES 1, 2, 5 & 6)



TYPE 1



TYPE 2



TYPE 5 & 6

CONCRETE BASES

CONCRETE BASES
TYPES 1, 2, 5, & 6

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2019
DATE
/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGI

FHWA

6
SDD 09C02 - 09

GENERAL NOTES

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

FOUR (4) BOLTS SHALL BE FURNISHED WITH EACH TRANSFORMER BASE. BOLTS SHALL BE 1" DIAMETER, 4" IN LENGTH, WITH WASHERS, LOCK WASHERS AND NUTS. BOLTS, NUTS AND WASHERS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 531.2.2 OF THE STANDARD SPECIFICATIONS.

LEVELING SHIMS, IF NEEDED, SHALL BE DESIGNED FOR THE PURPOSE AND USED UNDER CAST BASES WHEN PLUMBING POLES OR STANDARDS DURING INSTALLATION. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE.

SHIM LENGTH SHALL BE LONG ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.

DOUBLE NUTTING IS NOT ACCEPTABLE FOR LEVELING OR MOUNTING PURPOSES.

A NEMA APPROVED, U.L. LISTED, COPPER WITH BRASS OR STAINLESS STEEL SET SCREW, DIRECT BURY RATED, MECHANICAL CONNECTOR (LUG), SIZED TO ACCEPT AWG. #10 TO #4 COPPER STRANDED WIRE SHALL BE FURNISHED AND INSTALLED IN THE PEDESTAL AND TRANSFORMER BASES.

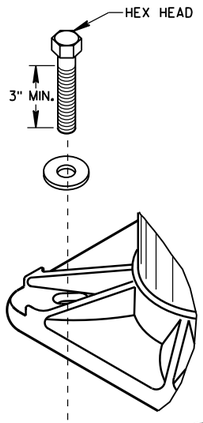
THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

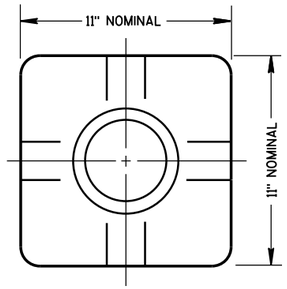
SHOULD THE MANNER OF ATTACHMENT OF THE LUG REQUIRE WASHERS, HEX NUTS, LOCK WASHER - THEY SHALL BE STAINLESS STEEL AS IS THE BOLT. THE MANNER OF ATTACHMENT SHALL NOT BLOCK ACCESSIBILITY TO WIRE PLACEMENT IN THE CONNECTOR.

PEDESTAL BASE COLLAR THREADING SHALL BE TAPERED AND IN ACCORDANCE WITH NATIONAL PIPE THREADING DIMENSIONS.

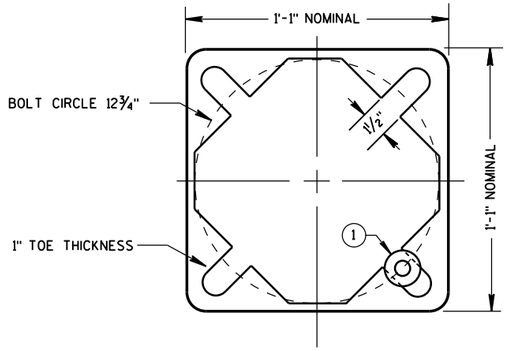
BASE COLLAR THREADING SHALL EXTEND INTO THE BASE COLLAR WITH SUFFICIENT DEPTH TO ACCEPT THE INSTALLATION OF TRAFFIC SIGNAL STANDARDS TO A DEPTH OF 1 1/2", THEN TIGHTENING TO A POINT OF BEING IMMOVABLE.

THE ACCESS DOOR SHALL BE OF THE SAME MATERIAL AS THE BASE.

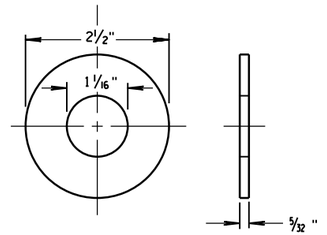




TOP VIEW
(PEDESTAL BASE)

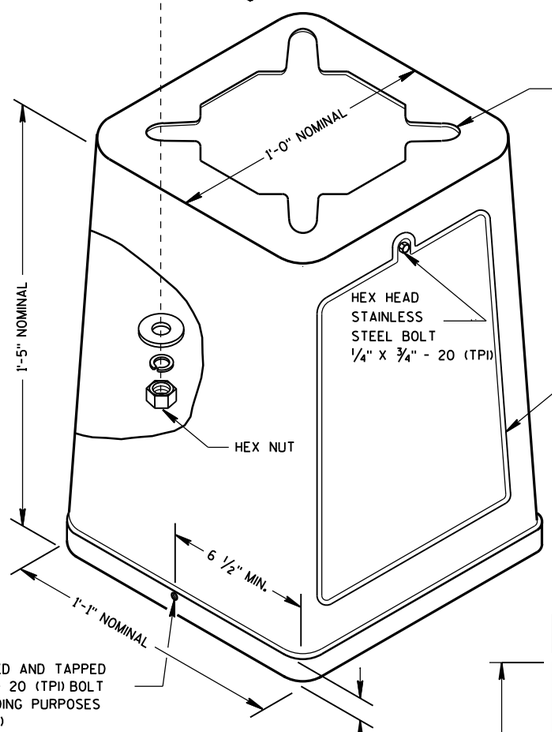


BOTTOM VIEW
(PEDESTAL BASE)

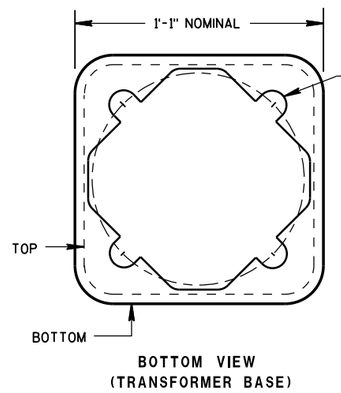


ZINC COATED STEEL WASHER
TO BE PROVIDED BY THE CONTRACTOR

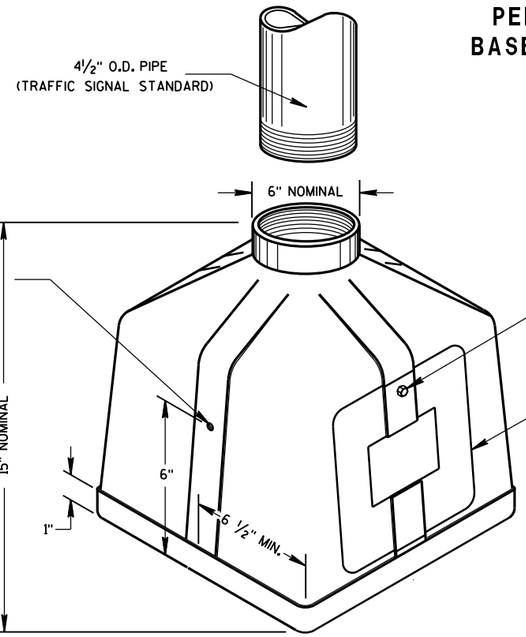
PEDESTAL BASE WASHER (1)



ISOMETRIC VIEW

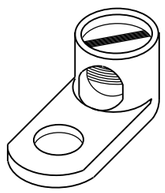


BOTTOM VIEW
(TRANSFORMER BASE)



ISOMETRIC VIEW

PEDESTAL BASE

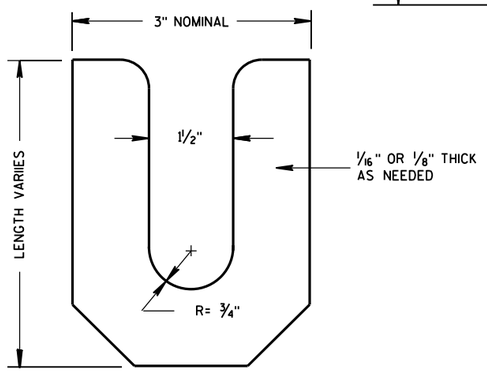


TYPICAL MECHANICAL CONNECTOR LUG

TO BE FURNISHED WITH EACH BASE

TRANSFORMER BASE

INTENDED FOR USE WITH TYPE 2, 3, 4, 5 & 6 POLES



LEVELING SHIM

TRANSFORMER/PEDESTAL BASES

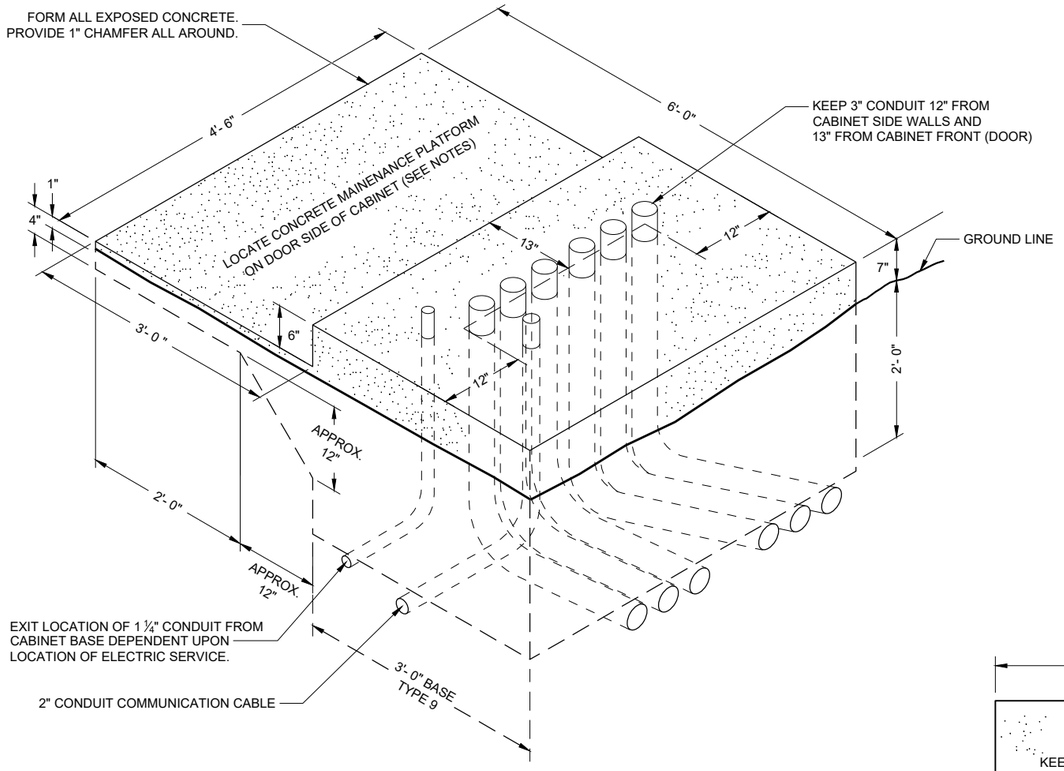
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

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S.D.D. 9 C 3-4

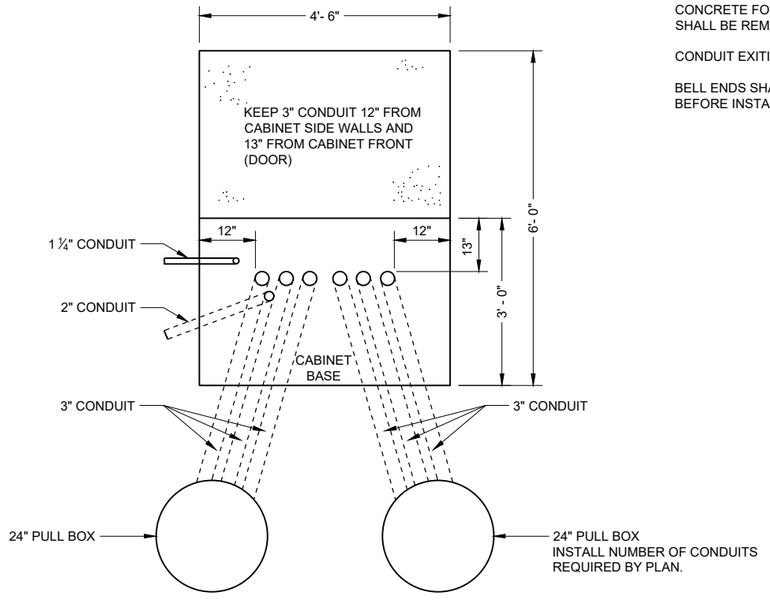
SDD 09C06 Concrete Control Cabinet Base, Type 9, Special



ISOMETRIC VIEW

TYPE 9 SPECIAL

(C.Y. CONCRETE = APPROX. 1.56)



PLAN VIEW

CONCRETE CONTROL CABINET BASE, TYPE 9 SPECIAL

GENERAL NOTES

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

INSTALL FOUR INCH MINIMUM DIAMETER X 4 INCH MINIMUM LENGTH STAINLESS STEEL APPROVED CONCRETE MASONRY ANCHORS WITH A PULLOUT STRENGTH OF 9,000 LBS. TO ANCHOR THE CABINET TO TYPE 6, 7, 8, AND 9 BASES. THE ANCHOR STUDS SHALL BE LOCATED AS DIRECTED BY THE ENGINEER TO PROPERLY ANCHOR THE CONTROL CABINET TO THE BASE.

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

CONDUIT HEIGHT ABOVE THE CONCRETE BASE SHALL BE 1 INCH.

DEPTH OF CONDUIT INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES MINIMUM AND 36 INCHES MAXIMUM.

DEPTH OF CONDUIT INSTALLED THAT IS NOT BELOW THE TRAVELED WAY SHALL BE 18 INCHES MINIMUM AND 36 INCHES MAXIMUM.

ANY EXCEPTION TO THE MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE ENGINEER.

CONTROL CABINET BASE TOP SURFACE SHALL BE TROWEL FINISHED SMOOTH AND LEVEL.

MAINTENANCE PLATFORM SHALL BE FLOAT OR BROOM FINISHED AND LEVEL.

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

MINIMUM BENDING RADIUS OF CONDUIT EQUALS 6 TIMES THE DIAMETER.

ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

CAP ALL BELOW GRADE METALLIC CONDUIT ENDS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED.

PLUG ALL BELOW GRADE NON - METALLIC CONDUIT ENDS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED.

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

CONCRETE FORM DEPTH BELOW FINISHED GRADE SHALL BE 6 INCHES MAXIMUM. CONCRETE FORMS SHALL BE REMOVED AFTER CONCRETE HAS SET.

CONDUIT EXITING THE CONCRETE BASE (SIX 3") SHALL TERMINATE IN PULL BOXES AS SHOWN ON THE PLANS.

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

CONCRETE CONTROL CABINET BASE TYPE 9, SPECIAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
September 2014
DATE

/S/ Ahmet Demerbilek
STATE ELECTRICAL ENGI

FHWA

SDD 09C06 - 07

GENERAL NOTES

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

BASES (SHAFT), BELOW THE WING, SHALL BE EXCAVATED BY THE USE OF A CIRCULAR AUGER. IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE SOIL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING AROUND THE BASE. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BARE CONCRETE BASE IN LAYERS OF 1 FOOT OR LESS.

TOP SURFACE OF THE CONCRETE BASE SHALL BE TROWEL FINISHED AND LEVEL.

USE 3" CLEAR FOR ALL REINFORCEMENT UNLESS NOTED OTHERWISE.

BENDING DIMENSIONS FOR REINFORCING BARS ARE OUT TO OUT.

BAR STEEL REINFORCEMENT SHALL BE COATED WITH POWDERED EPOXY RESIN IN ACCORDANCE WITH SECTION 505 OF THE STANDARD SPECIFICATIONS.

ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

WELDING OF ANCHOR RODS TO THE CAGE IS UNACCEPTABLE. TEMPLATES SHALL BE USED.

ORIENT ANCHOR RODS IN FOOTING AND PROVIDE ANCHOR ROD PROJECTION ABOVE TOP OF CONCRETE FOOTING BASE PER THIS SHEET.

CONDUIT SIZE AND LOCATIONS SHALL BE AS SHOWN ON THE PLANS.

MINIMUM BENDING RADIUS OF CONDUIT IS EQUAL TO 6 X THE DIAMETER.

CONDUIT HEIGHT ABOVE CONCRETE BASE SHALL BE 4 ½ INCHES. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED. NONMETALLIC CONDUIT SHALL HAVE BELL ENDS INSTALLED. ALL CONDUIT SHALL SLOPE TO PULL BOX.

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

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

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

A NO. 4 AWG, STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD).

THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE FURNISHED AND INSTALLED TO ENTER THE BASE THROUGH A 1-INCH CONDUIT INSTALLED FOR GROUNDING PURPOSES, LEAVING A 4-FOOT COIL OF WIRE ABOVE THE CONCRETE BASE, THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE NEATLY COILED AND THE COILS TIED TOGETHER.

THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO THE TYPE AND LOCATION OF THE UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO.

(1) THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVEL WAY SHALL BE 24-INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18-INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36-INCHES, (GREATER THAN 36-INCHES IF INSTALLED IN BREAKER-RUN), EXCEPT WITH THE WRITTEN APPROVAL OF THE ENGINEER.

(2) (6) 1 ¾" DIA. X 7' - 2" ANCHOR RODS

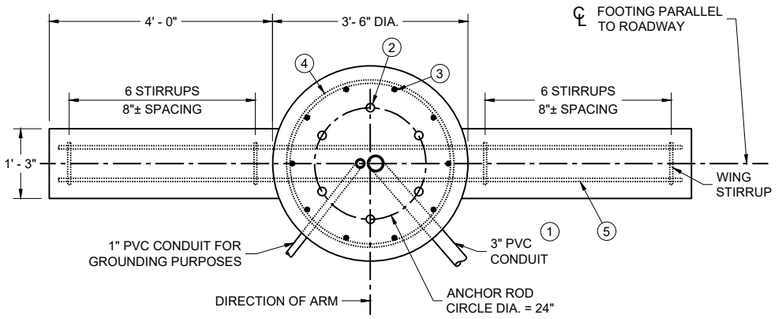
(3) (10) NO. 6 X 14' - 1" BAR STEEL VERTICAL REINFORCEMENT.

(4) (22) NO. 5 X 11'- 0" BAR STEEL REINFORCEMENT @ 8" MAX. C-C.

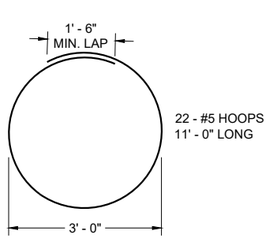
(5) (10) NO. 5 X 11' - 0" BAR STEEL HORIZONTAL REINFORCEMENT

CONCRETE MASONRY.....fc = 3,500 p.s.i
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60.....fy = 60,000 p.s.i.
ANCHOR RODS, ASTM F1554 GRADE 55 (IN ACCORDANCE WITH SECTION 531.2.2 OF THE STANDARD SPECIFICATION).....fy = 55,000 p.s.i.
TEMPLATES, ASTM A709, GRADE 36.....fy = 36,000 p.s.i.

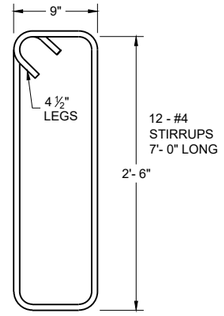
** RODENT PROTECTION REQUIRED



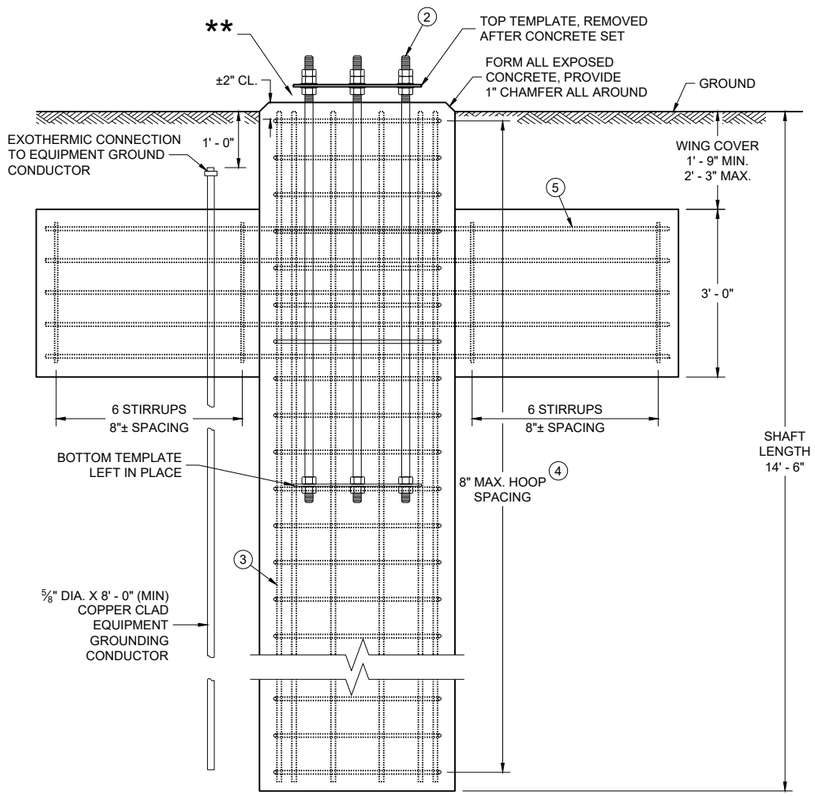
PLAN VIEW



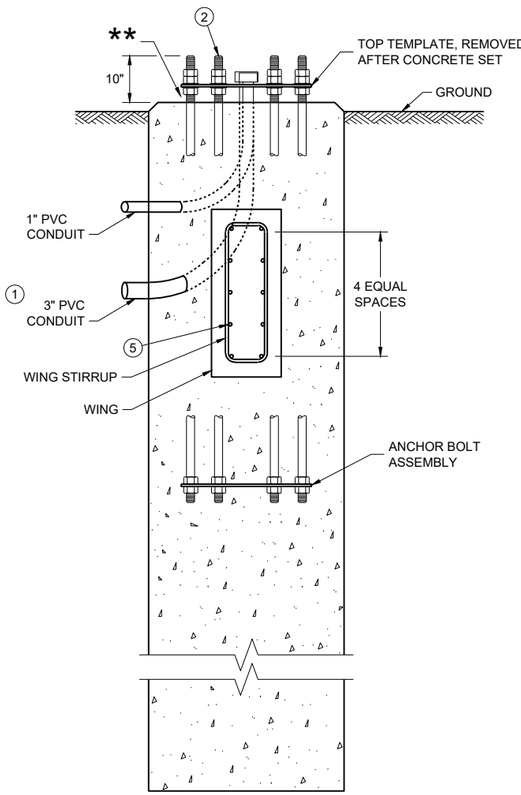
HOOP DETAIL



WING STIRRUP DETAIL



ELEVATION VIEW
(CONDUITS NOT SHOWN ON THIS VIEW FOR CLARITY)



(HOOPS AND VERTICAL SHAFT REINFORCEMENT NOT SHOWN ON THIS VIEW FOR CLARITY)

CONCRETE BASE, TYPE 13

(FOR TYPE 12, TYPE 13 AND OVER HEIGHT (OH) POLES)

CONCRETE = 6.3 CUBIC YARD
H.S. REINFORCEMENT = 635 LBS.

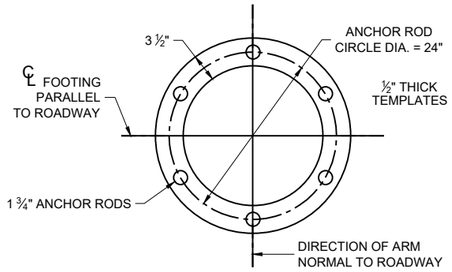
TO BE USED WHEN GROUND ELEVATION AT BASE EQUALS OR IS GREATER THAN HIGH POINT OF ROADWAY ELEVATION. SEE 9C13 WHEN GROUND ELEVATION AT BASE IS LOWER THAN HIGH POINT OF ROADWAY ELEVATION

CONCRETE BASE TYPE 13

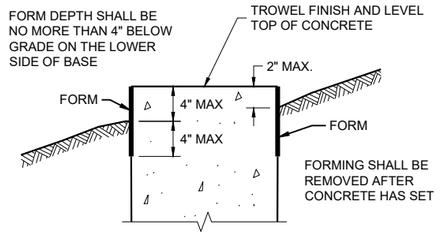
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

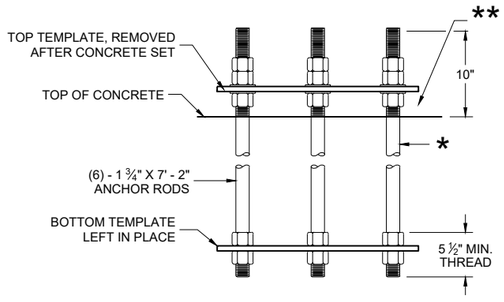
SDD 09C12-10a



TOP AND BOTTOM TEMPLATE



FORMING DETAIL



ANCHOR ROD ASSEMBLY DETAILS

* THREAD TOP 11" OF ANCHOR ROD FOR 3 NUTS AND 2 WASHERS AND BOTTOM 5 ½" FOR 2 NUTS PER ANCHOR ROD. HOT DIP GALVANIZE THE ENTIRE LENGTH OF THE ANCHOR ROD (ASTM A123) AND HOT DIP NUTS AND WASHERS (ASTM A153. USE ZINC COATED NUTS MANUFACTURED WITH SUFFICIENT ALLOWANCE TO ALLOW NUTS TO RUN FREELY ON THE THREADS.

** RODENT PROTECTION REQUIRED

6

SDD 09C12-10b

CONCRETE BASE TYPE 13

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2025 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL ENGINEER

FHWA

6
SDD 09C12-10b

GENERAL NOTES

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

THE CONTRACTOR IS RESPONSIBLE FOR MAKING THEIR OWN DETERMINATION AS TO THE TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO.

BASES (SHAFT) SHALL BE EXCAVATED BY THE USE OF A CIRCULAR AUGER. IF BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE SOIL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING. A STEEL CASING OR CORRUGATED METAL PIPE IS ALLOWED TO REMAIN. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BASE IN LAYERS OF ONE FOOT OR LESS.

TOP SURFACE OF THE CONCRETE BASE SHALL BE TROWEL FINISHED AND LEVEL.

ANY DAMAGE TO THE CONCRETE BASE AND ANCHOR RODS DURING CONSTRUCTION OPERATIONS SHALL BE REPAIRED AT THE ENGINEER'S DIRECTION, AT THE EXPENSE OF THE CONTRACTOR.

THE REINFORCEMENT AND ANCHOR RODS SHALL BE ADEQUATELY SUPPORTED IN THE PROPER POSITIONS SO NO MOVEMENT OCCURS DURING CONCRETE PLACEMENT.

ORIENT ANCHOR RODS IN FOOTING AND PROVIDE ANCHOR RODS STICK OUT ABOVE TOP OF CONCRETE FOOTING BASE PER THIS SHEET.

ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

BAR STEEL REINFORCEMENT SHALL BE COATED WITH POWDERED EPOXY RESIN IN ACCORDANCE WITH SECTION 505 OF THE STANDARD SPECIFICATIONS (LATEST EDITION).

BENDING DIMENSIONS FOR REINFORCING BARS ARE OUT TO OUT.

WELDING OF ANCHOR RODS TO THE CAGE IS UNACCEPTABLE. TEMPLATES SHALL BE USED.

USE 3" CLEAR FOR ALL REINFORCEMENT UNLESS NOTED OTHERWISE.

FORM ALL EXPOSED CONCRETE CORNERS WITH 1" CHAMFER ALL AROUND. TOP OF THE CONCRETE BASE SHALL BE TROWEL FINISHED AND LEVEL.

CONDUIT SIZES AND LOCATIONS SHALL BE SHOWN ON THE PLANS.

MINIMUM BENDING RADIUS OF CONDUIT IS EQUAL TO 6 TIMES THE DIAMETER.

CONDUIT HEIGHT ABOVE CONCRETE BASES SHALL BE 4 ½" INCHES. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED. NON-METALLIC CONDUIT SHALL HAVE BELL ENDS INSTALLED. ALL CONDUIT SHALL SLOPE TO PULL BOX.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NON-METALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

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

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

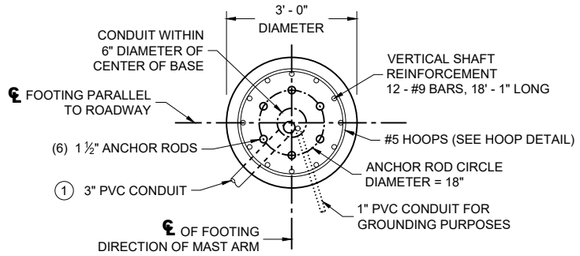
A NO. 4 AWG STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD).

THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE FURNISHED AND INSTALLED TO ENTER THE BASE THROUGH A 1 INCH CONDUIT INSTALLED FOR GROUNDING PURPOSES, LEAVING A 4 FOOT COIL OF WIRE ABOVE THE CONCRETE BASE. THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE NEATLY COILED AND THE COILS TIED TOGETHER.

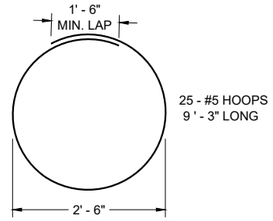
THE FINAL OR TERMINATING CONCRETE BASE IN A CONDUIT RUN SHALL HAVE A 6" EXIT STUB INSTALLED FOR FUTURE CABLING USE. THE EXIT STUB SHALL BE SIZED AS USED THROUGHOUT THE CONDUIT RUN AS SHOWN A THE ENTRANCE OF THE BASE.

(1) THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES (GREATER THAN 36 INCHES IF INSTALLED IN BREAKER RUN) EXCEPT WITH WRITTEN APPROVAL OF THE ENGINEER.

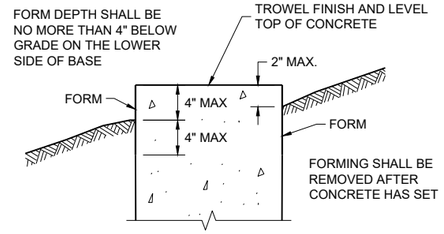
CONCRETE MASONRY.....fc = 3,500 p.s.i
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60.....fy = 60,000 p.s.i.
ANCHOR RODS, ASTM F1554 GRADE 55.....fy = 55,000 p.s.i.
(IN ACCORDANCE WITH SECTION 531.2.2 OF THE STANDARD SPECIFICATION)
TEMPLATES, ASTM A709, GRADE 36.....fy = 36,000 p.s.i.



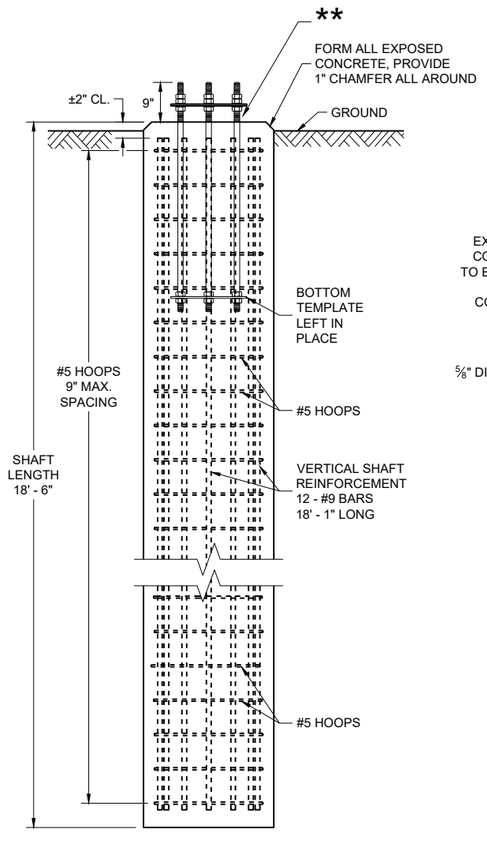
PLAN VIEW



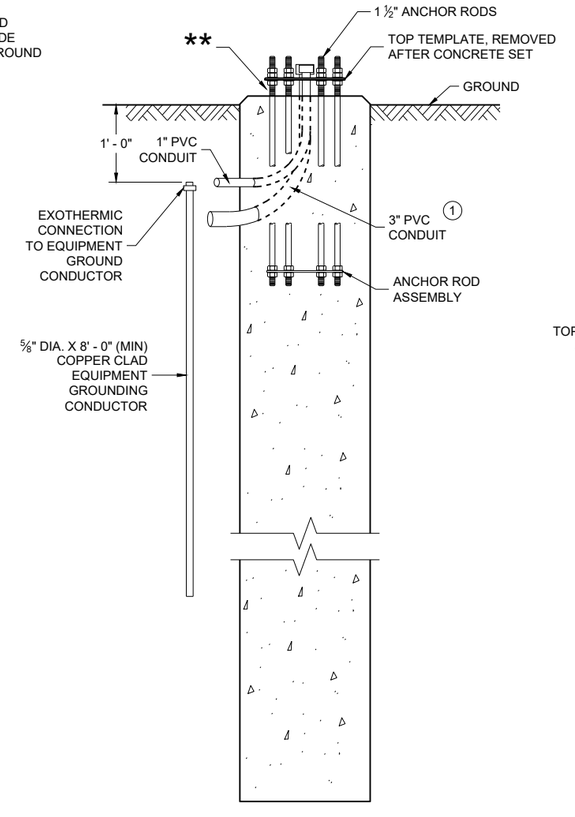
HOOP DETAIL



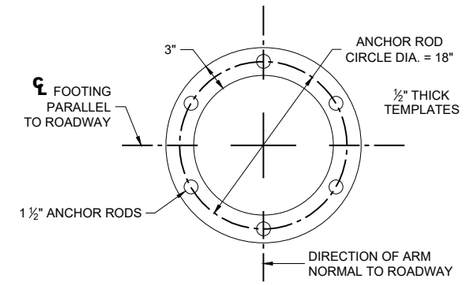
FORMING DETAIL



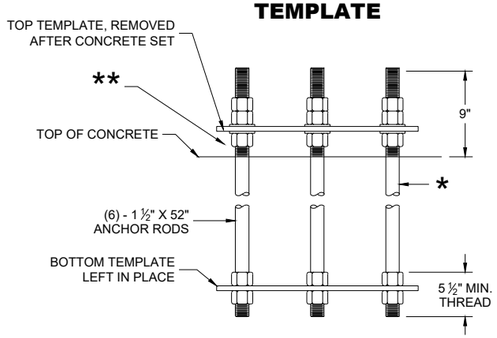
ELEVATION VIEW
(CONDUITS NOT SHOWN ON THIS VIEW FOR CLARITY)



SIDE VIEW
(HOOPS AND VERTICAL SHAFT REINFORCEMENT NOT SHOWN ON THIS VIEW FOR CLARITY)



TOP AND BOTTOM TEMPLATE



ANCHOR ROD ASSEMBLY DETAILS

* THREAD TOP 10" OF ANCHOR ROD FOR 3 NUTS AND 2 WASHERS AND BOTTOM 5 ½" FOR 2 NUTS PER ANCHOR ROD. HOT DIP GALVANIZE THE ENTIRE LENGTH OF THE ANCHOR ROD (ASTM A123) AND HOT DIP NUTS AND WASHERS (ASTM A153. USE ZINC COATED NUTS MANUFACTURED WITH SUFFICIENT ALLOWANCE TO ALLOW NUTS TO RUN FREELY ON THE THREADS.

** RODENT PROTECTION REQUIRED

CONCRETE BASE, TYPE 10 SPECIAL
(FOR TYPE 9 SPECIAL AND TYPE 10 SPECIAL POLES AND OVER HEIGHT (OH) POLES)

CONCRETE = 4.8 CUBIC YARD
H.S. REINFORCEMENT = 979 LBS.

FOR USE WHEN GROUND ELEVATION AT BASE EQUALS OR IS GREATER THAN HIGH POINT OF ROADWAY ELEVATION.

CONCRETE BASE TYPE 10 SPECIAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

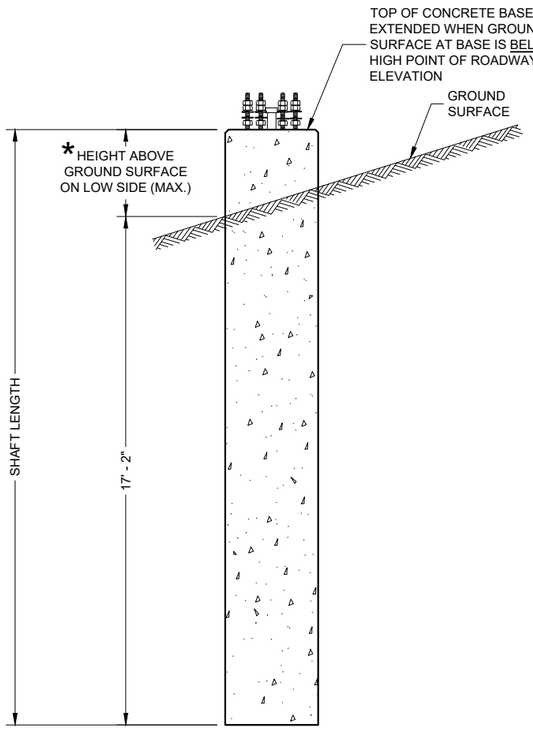
APPROVED
November 2025 — DATE
/S/ Alex Crabtree — WIND LOADED STRUCTURES PROGRAM LEADER

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SDD 09C15-03

REINFORCEMENT AND CONCRETE QUANTITIES
ADJUSTED FOR EXTENDED TYPE 10 SPECIAL CONCRETE BASE

HEIGHT INCREASE REQUIRED	*HEIGHT ABOVE GROUND SURFACE ON LOW SIDE (MAX.)	SHAFT LENGTH	LENGTH OF #8 VERTICAL REINF.	NO. OF #5 HOOPS	CU. YD. OF CONCRETE	LBS. OF HOOP BAR STEEL	LBS. OF VERTICAL STEEL
>0" TO 6"	10"	18' - 0"	17' - 7"	25	4.7	241	563
>6" TO 1' - 0"	1' - 4"	18' - 6"	18' - 1"	25	4.8	241	579
>1' - 0" TO 1' - 6"	1' - 10"	19' - 0"	18' - 7"	26	5.0	251	595
>1' - 6" TO 2 - 0"	2' - 4"	19' - 6"	19' - 1"	27	5.1	260	611



CONCRETE BASE TYPE 10 SPECIAL (EXTENDED)

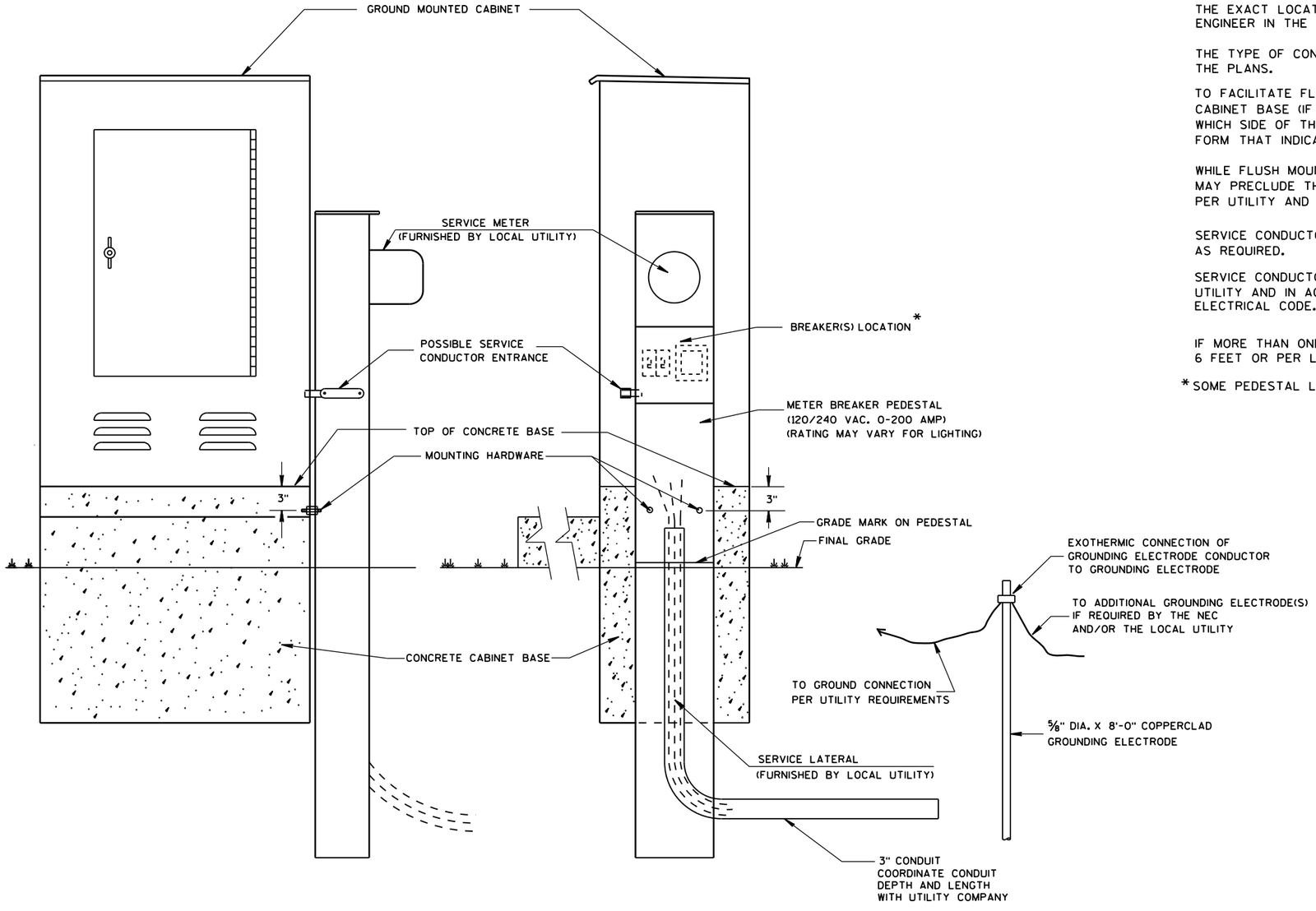
CONCRETE BASE TYPE 10 SPECIAL EXTENSION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2023
DATE
/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGI 75

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TYPICAL CABINET SERVICE INSTALLATION

GENERAL NOTES

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

THE EXACT LOCATION OF THE METER BREAKER PEDESTAL SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

THE TYPE OF CONCRETE CABINET BASE TO BE INSTALLED SHALL BE AS CALLED FOR IN THE PLANS.

TO FACILITATE FLUSH MOUNTING OF THE METER BREAKER PEDESTAL AGAINST THE SIDE OF THE CABINET BASE (IF FLUSH MOUNTING POSSIBLE. CONFER WITH THE LOCAL UTILITY TO DETERMINE WHICH SIDE OF THE CONCRETE BASE THE ELECTRICAL SERVICE LATERAL WILL APPROACH. THEN FORM THAT INDICATED SIDE FOR FULL SIDE DEPTH.

WHILE FLUSH MOUNTING IS THE MOST DESIRABLE MOUNTING CONFIGURATION UTILITY REQUIREMENTS MAY PRECLUDE THIS OPTION. CONTRACTOR MUST PROVIDE UTILITY APPROVED PEDESTAL AND INSTALL PER UTILITY AND MANUFACTURERS REQUIREMENTS.

SERVICE CONDUCTOR ENTRANCES SHALL BE RIGID METALLIC CONDUIT, NIPPLES AND/OR CONDULETS AS REQUIRED.

SERVICE CONDUCTOR ENTRANCES SHALL BE SIZED AND LOCATED AS REQUIRED BY THE LOCAL UTILITY AND IN ACCORDANCE WITH APPROPRIATE ARTICLES OF THE LATEST ACCEPTED NATIONAL ELECTRICAL CODE.

IF MORE THAN ONE GROUNDING ELECTRODE IS REQUIRED, THE DISTANCE APART SHALL BE 6 FEET OR PER LOCAL UTILITY REGULATIONS.

*SOME PEDESTAL LIGHTING PLANS SHOW MAIN LUGS ONLY.

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S.D.D. 9 D 1-5

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S.D.D. 9 D 1-5

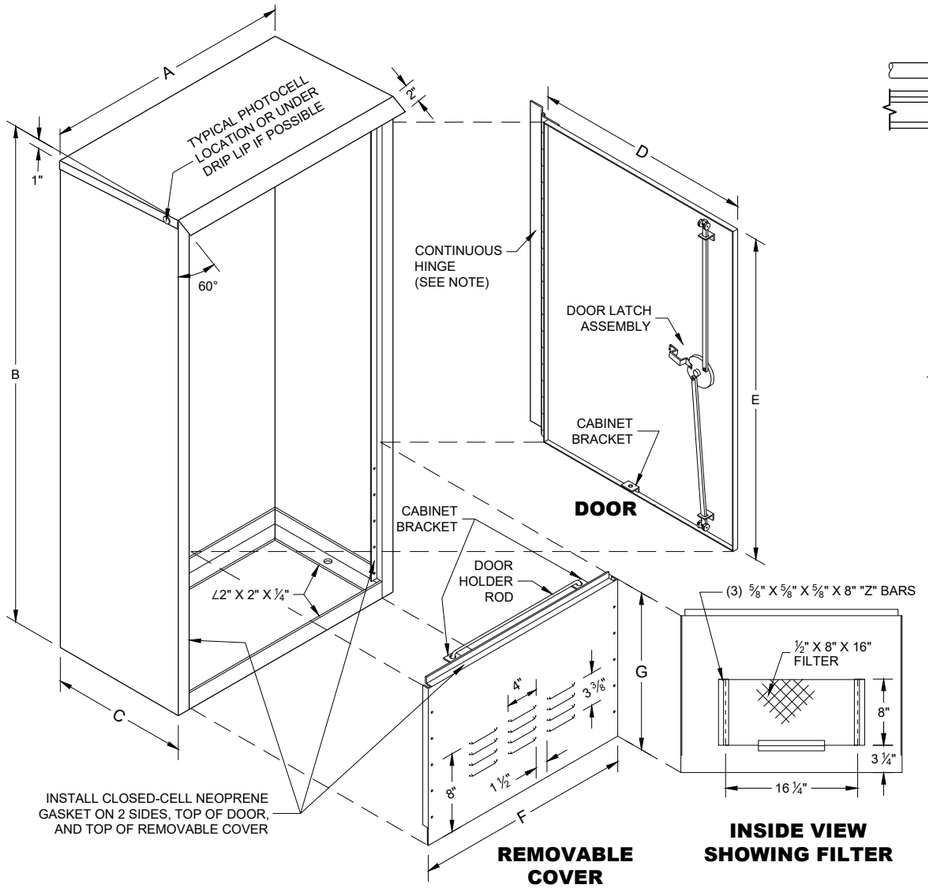
CABINET SERVICE INSTALLATION (METER BREAKER PEDESTAL)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014
DATE

/S/ Ahmet Demirbilek
STATE ELECTRICAL

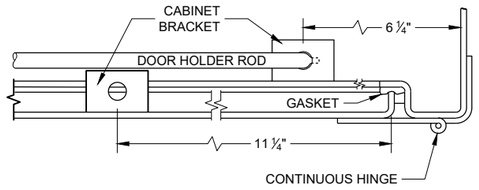
FHWA



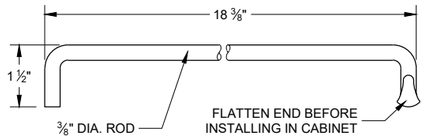
DOOR

REMOVABLE COVER

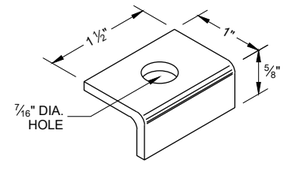
INSIDE VIEW SHOWING FILTER



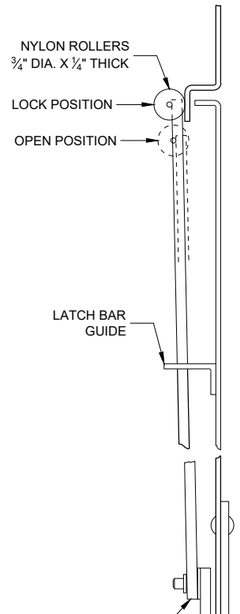
HINGE AND DOOR HOLDER

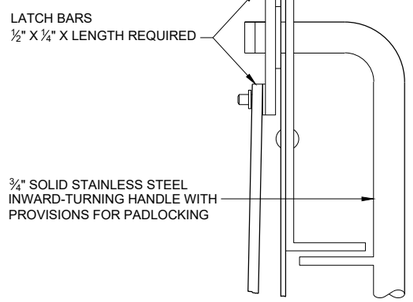


HOLDER ROD

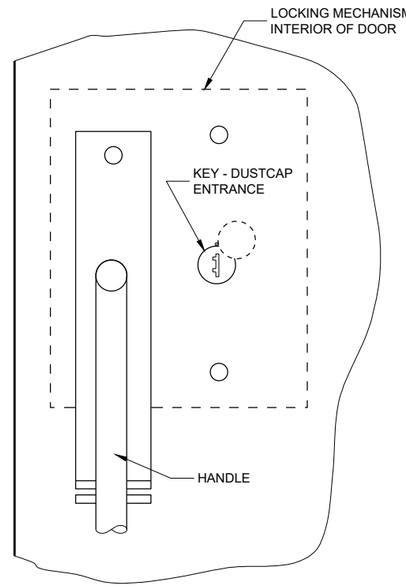


CABINET BRACKET





SIDE VIEW



FRONT VIEW

LATCH ASSEMBLY

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.

PRIME WITH PHOSPHATE TREATMENT AND PRIMER.

FINISH EXTERIOR SURFACES WITH RUSTOLEUM #906 SILVER GRAY OR APPROVED EQUAL.

FINISH INTERIOR WITH RUSTOLEUM #2766 HIGH GLOSS WHITE ENAMEL OR APPROVED EQUAL.

ALL SHEET METAL PARTS SHALL BE .125 INCH THICK ALUMINUM.

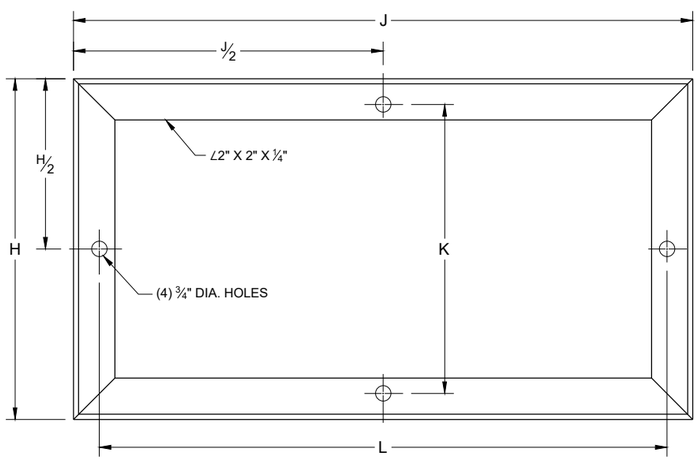
ALL SEAMS SHALL BE CONTINUOUSLY WELDED.

ALUMINUM SHALL BE TYPE 5052-H32.

CONTINUOUS HINGE SHALL BE HEAVY GAUGE ALUMINUM WITH ¼" DIAMETER STAINLESS STEEL HINGE PIN. HINGE IS SECURED WITH ¼" X 20 TPI STAINLESS STEEL CARRIAGE BOLTS AND STAINLESS STEEL NYLOCK NUTS.

A SINGLE PHOTOCELL SHALL BE LOCATED ON THE NORTH - NORTHEAST SIDE OF THE CABINET UNLESS OTHERWISE CALLED FOR IN THE SPECIAL PROVISIONS. THE PHOTOCELL SHALL BE PLACED AS SHOWN AND SHALL BE LISTED ON THE DEPARTMENTS APPROVED PRODUCTS LIST.

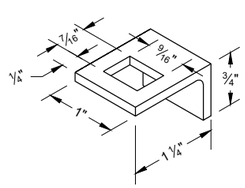
DOOR LATCH ASSEMBLY TO BE PROVIDED WITH THREE-POINT LOCKING MECHANISM.



MOUNTING BASE

TABLE OF DIMENSIONS (INCHES)

MARK	CABINET TYPE		
	3060	3860	3866
A	30	38	38
B	60	60	66
C	16 ½	16 ½	24
D	26 ½	34 ¾	33 ¾
E	38 ¾	38 ¾	38 ¾
F	26 ½	34 ¾	33 ¾
G	19	19	25
H	16 ½	16 ½	24
H/2	8 ¼	8 ¼	12
J	30	38	38
J/2	15	19	19
K	13 ¾	13 ¾	21 ¼
L	27 ½	35 ½	35 ½



LATCH BAR GUIDE

SIGNAL CONTROL CABINET

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
September 2014
DATE

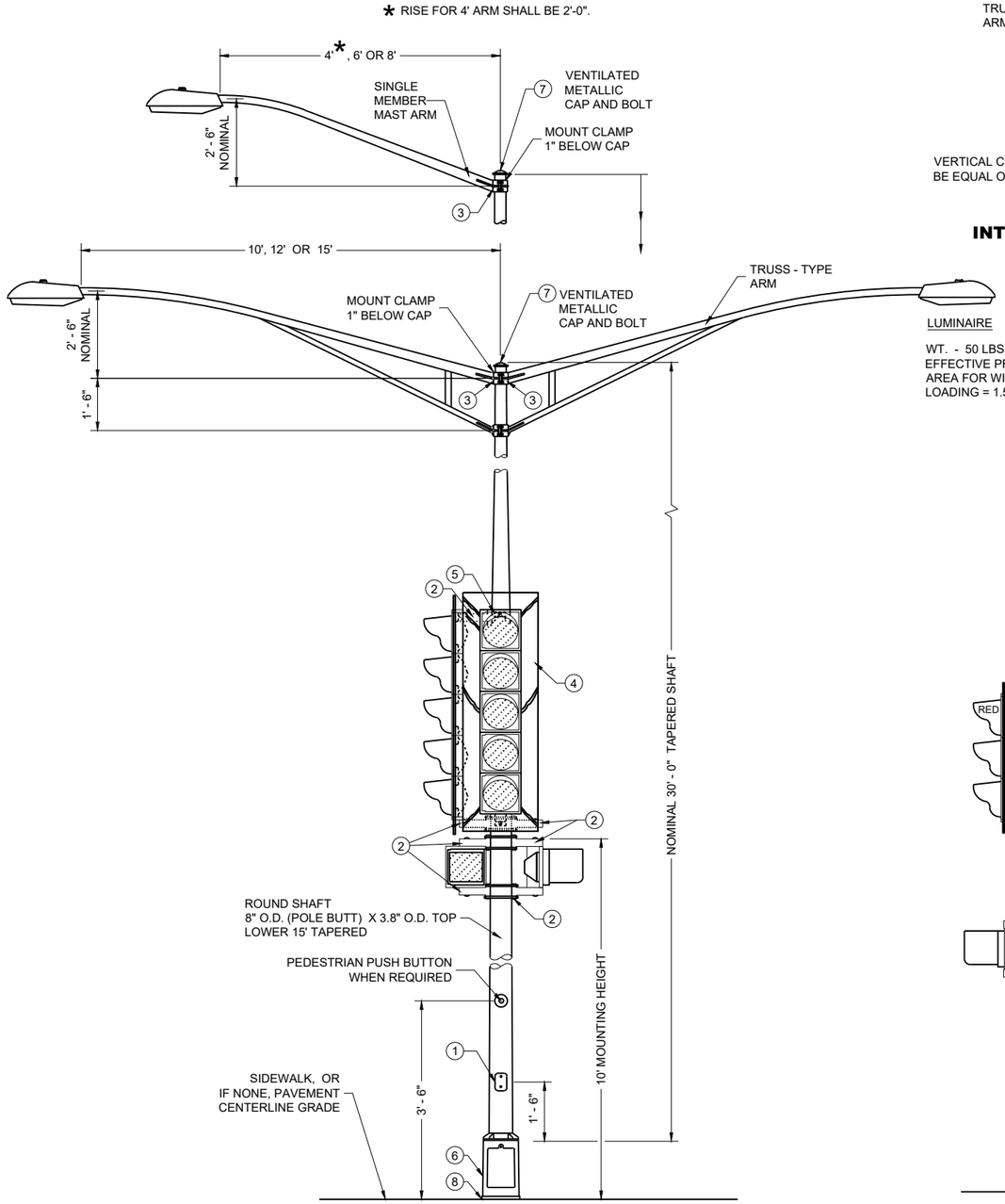
/S/ Ahmet Demerbilek
STATE ELECTRICAL ENGI

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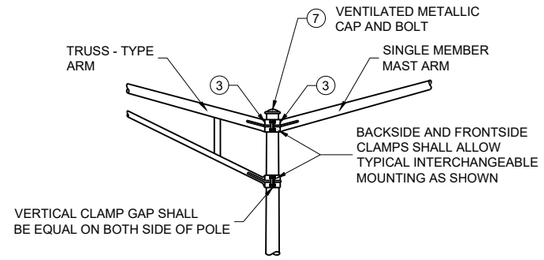
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(MAXIMUM LOAD)



INTERCHANGEABLE MOUNTING DETAIL

LUMINAIRE

WT. - 50 LBS.
EFFECTIVE PROJECTED AREA FOR WIND LOADING = 1.5 SQ. FT.

GENERAL NOTES

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

ALL TYPE 3 POLE MOUNTINGS SHALL BE DESIGNED TO INCLUDE TWIN 15' ARMS WITH LUMINAIRES.

POLES SHALL BE GALVANIZED STEEL WITH A MINIMUM WALL THICKNESS OF U.S. STANDARD 11 GAGE (.1196").

SECTION 657, POLES, OF THE STANDARD SPECIFICATIONS SHALL APPLY TO THIS DRAWING.

A PULL WIRE / ROPE SHALL BE INSTALLED IN EACH TROMBONE ARM RACEWAY DURING THE MANUFACTURING PROCESS.

THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 2 ⅜ INCHES IN OUTSIDE DIAMETER. THE STRAIGHT PORTION OF THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 12 INCHES IN LENGTH.

WHEN TRANSFORMER BASES ARE USED, WIRE CONNECTIONS SHALL BE MADE IN THE TRANSFORMER BASE.

(1) 4" X 6" REINFORCED HANDHOLE AND COVER ASSEMBLY WITH TWO (2) ¼"X¾" - 20 TPI , STAINLESS STEEL, HEX HEAD BOLTS.

(2) SIGNAL FACE MOUNTING BRACKETS. MOUNT WITH CAP SCREWS AND BANDING.

(3) GROMMETS. 1" CHASE NIPPLES OR 1" CLOSE CONDUIT NIPPLES WITH BUSHINGS SHALL BE PROVIDED FOR 1 ⅜" HOLE IN POLE SHAFT FOR WIRING.

(4) SECURELY MOUNT DULL BLACK POLYCARBONATE BACK PLATES, PROJECTING 5" BEYOND ALL SIDES OF THE SIGNAL FACE HOUSING, PER MANUFACTURER'S RECOMMENDATIONS.

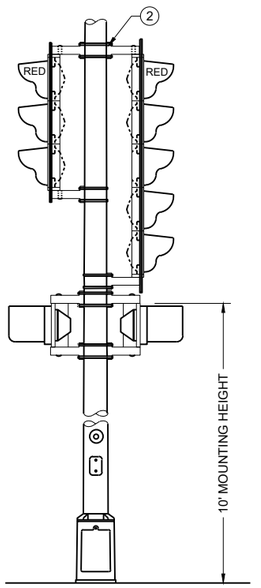
(5) POLE MOUNTED SIGNAL FACES SHALL REQUIRE ONE OR MORE MOUNTING SPACERS UNDER THE TOP MOUNTING BRACKET(S) AS REQUIRED, TO PLUMB THE SIGNAL FACE.

(6) CAST ALUMINUM TRANSFORMER BASE. WHEN REQUIRED.

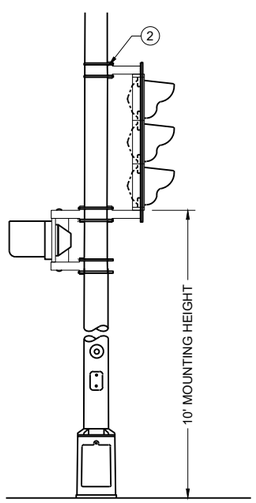
(7) FURNISH AND INSTALL VENTILATED, CAST METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) ¼"X¾" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.

(8) SHIMMING, IF NEEDED, SHALL BE LOCATED BETWEEN THE CONCRETE FOUNDATION AND POLE.

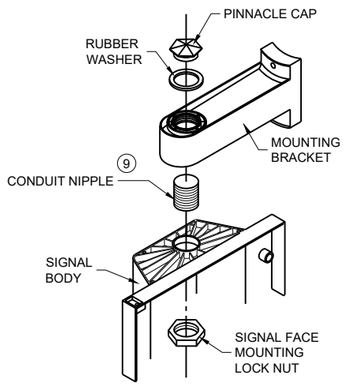
(9) USE 1 ½" ID NIPPLES ZINC-COATED RIGID METAL CONDUIT, LONG ENOUGH TO ACCOMMODATE FULL DEPTH THREADING INTO THE HEAD MOUNTING LOCK NUT IN ORDER TO TIGHTEN THE FACE, BUT THAT DO NOT INTERFERE WITH REFLECTOR CLOSURE. THREAD THE NIPPLE INTO THE MOUNTING BRACKET/ELBOW UNTIL TIGHT. USE APPROVED PINNACLE TYPE HARDWARE FROM A DEPARTMENT APPROVED MANUFACTURER TO CLOSE THE UNUSED 1 ½" OPENING IN SIGNAL FACES AND BRACKET ENDS.



TYPICAL MOUNTING OF BACK TO BACK 3 AND 5 SECTION SIGNAL FACES



TYPICAL MOUNTING OF 3 SECTION SIGNAL FACE



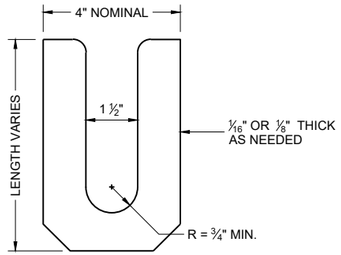
SIGNAL FACE MOUNTING DETAIL

(BANDED)

TYPE 3 POLE MOUNTING CONFIGURATION

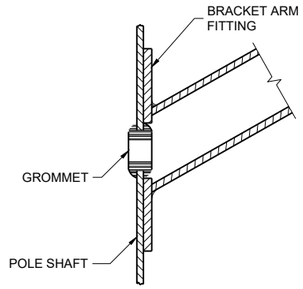
POLE MOUNTINGS FOR TRAFFIC SIGNALS AND LIGHTING UNITS, TYPE 4

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DEPARTMENT OF TRANSPORTATION

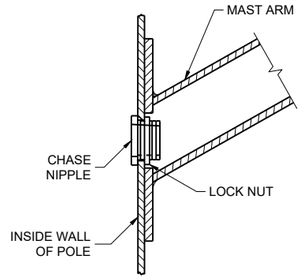


①

LEVELING SHIM
SHALL BE ALUMINUM



TYPICAL APPLICATION OF GROMMET IN POLE SHAFT



TYPICAL APPLICATION OF CHASE NIPPLE IN POLE SHAFT

GENERAL NOTES

CLAMP BOLT-NUT TIGHTENING TORQUE SHALL BE INDICATED BY INDENT STAMPING (1/2 INCH NUMERALS AND LETTERS) OR WEATHERPROOF PRINTING ON THE INSIDE OF THE CLAMP THAT IS WELDED TO THE ARM MEMBER.

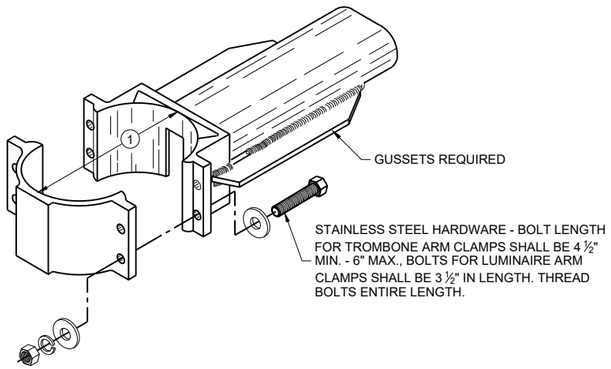
① 4.5" I.D. FOR LUMINAIRE MAST ARM CLAMP. 6.625" I.D. FOR TROMBONE MAST ARM CLAMP.

② INDIVIDUAL BASE PLATE ANCHOR ROD COVERS. (4 REQUIRED)

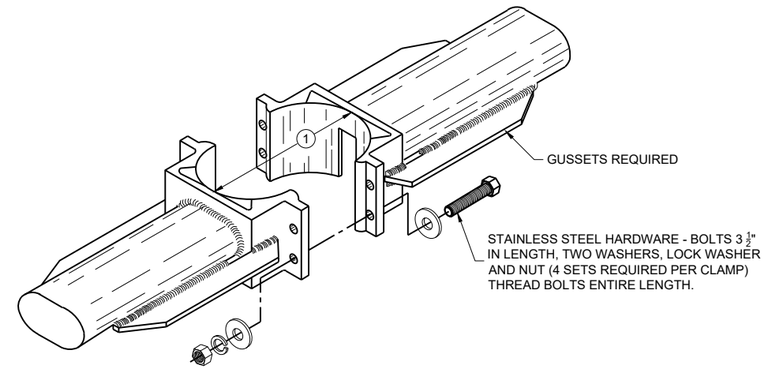
③ BASE PLATE SLOTTED TO ACCEPT 11" THROUGH 12" BOLT CIRCLE USING 1" DIAMETER ANCHOR RODS.

④ LEVELING SHIMS, DESIGNED FOR THE PURPOSE, SHALL BE USED WHEN PLUMBING POLES. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE. LEVELING SHIMS SHALL BE USED ONLY BETWEEN THE TOP OF THE CONCRETE BASE AND A METALLIC BASE PLATE.

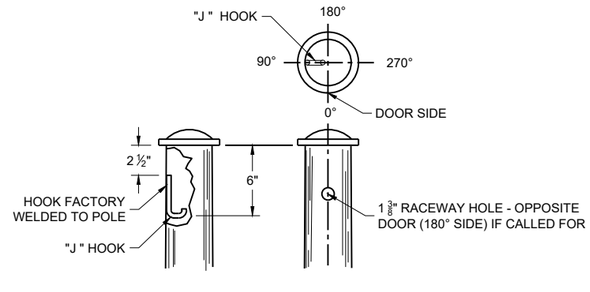
SHIMS SHALL BE LONG ENOUGH AND WIDE ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.



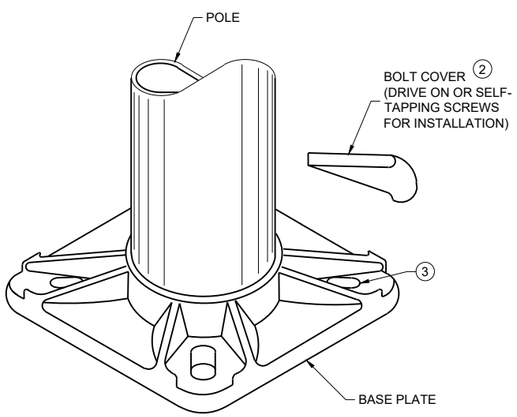
TYPICAL TROMBONE MAST ARM AND SINGLE LUMINAIRE MAST ARM MOUNTING CLAMP



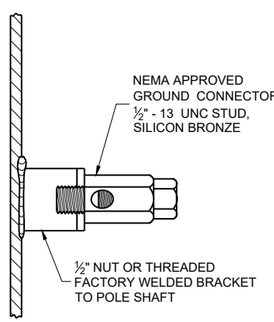
TYPICAL LUMINAIRE MAST ARM (DOUBLE) MOUNTING BRACKETS

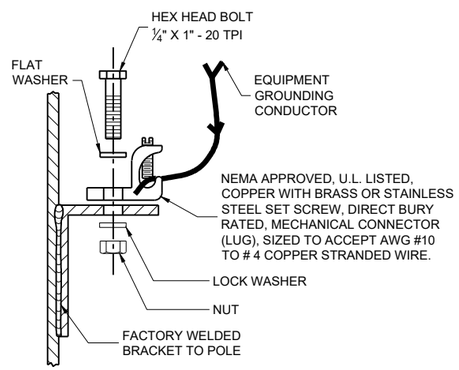


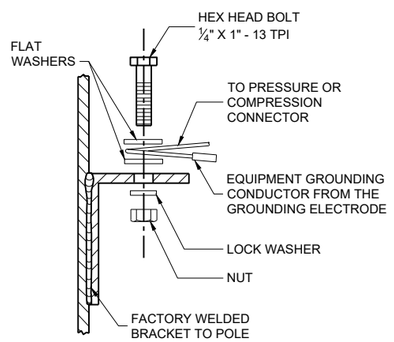
TYPICAL "J" HOOK LOCATION



BASE PLATE







TYPICAL GROUNDING CONNECTIONS
NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL

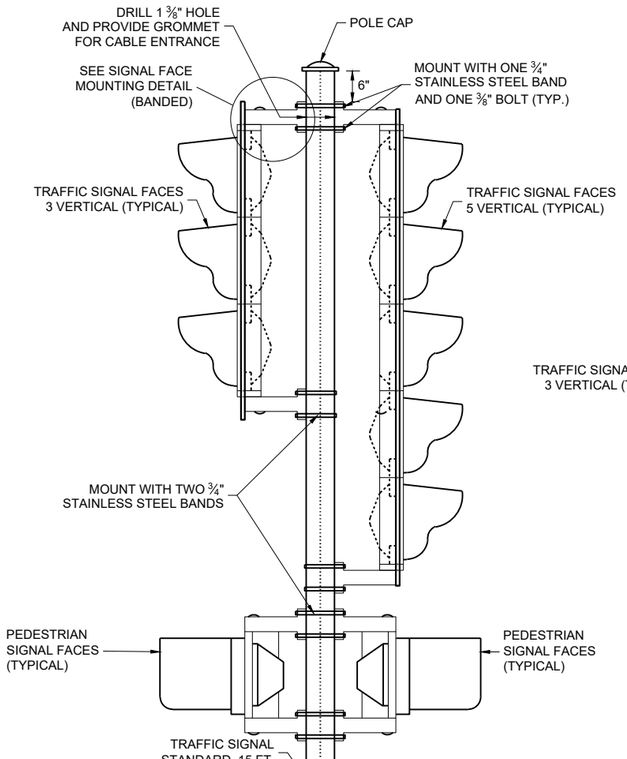
HARDWARE DETAILS FOR POLE MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

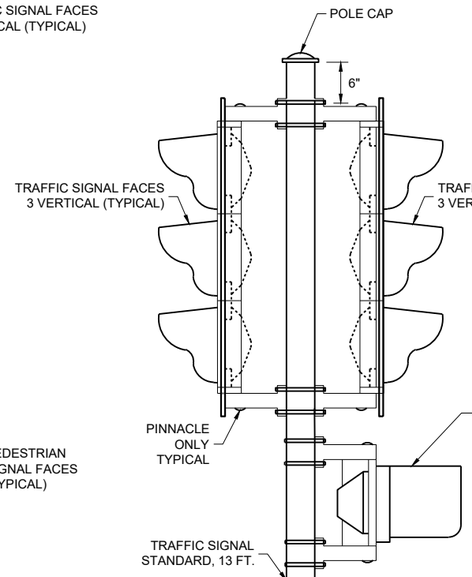
APPROVED
February 2026 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL ENGINEER

FHWA

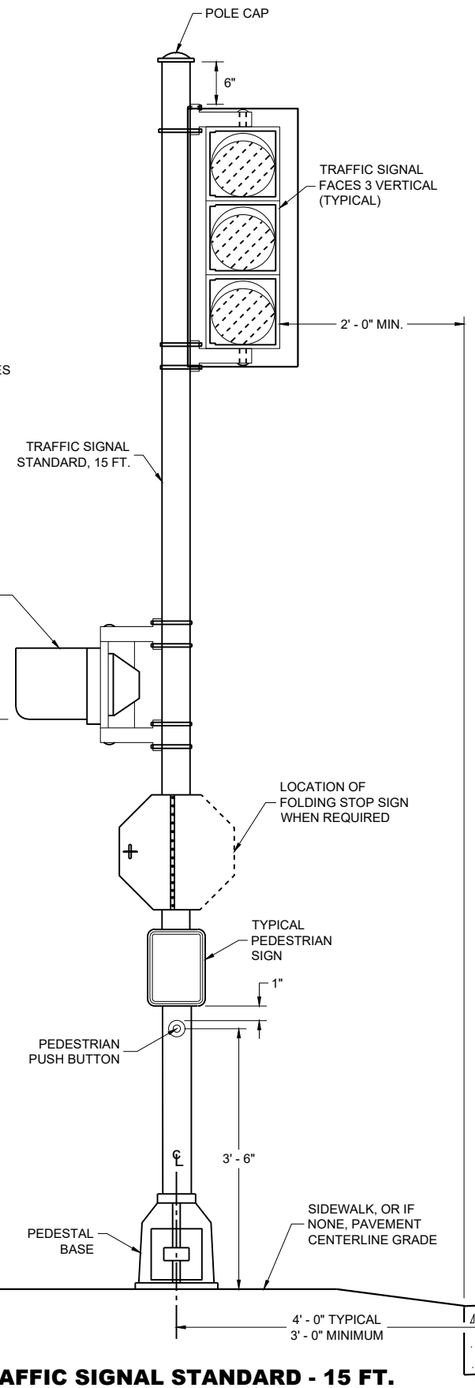
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SDD 09E01-17g



TRAFFIC SIGNAL
STANDARD - 15 FT.



TRAFFIC SIGNAL
STANDARD - 13 FT.



TRAFFIC SIGNAL STANDARD - 15 FT.
3M MOUNTING (TYPICAL)

GENERAL NOTES

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

SEE THE SIGNAL PLAN FOR REQUIRED SIGNAL FACE SIZES.

ALL PEDESTAL BASES SHALL BE MOUNTED ON CONCRETE BASE - TYPE 1.

FOR APPROVED MOUNTING HARDWARE, SEE THE CONTRACT SPECIAL PROVISIONS.

POLYCARBONATE MOUNTING BRACKETS SHALL BE USED.

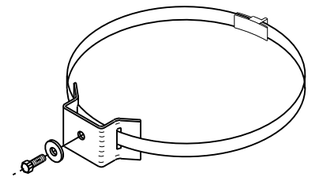
LENGTH AND LOCATION OF TRAFFIC SIGNAL STANDARDS SHALL BE AS SHOWN ON THE PLANS.

OPTICALLY PROGRAMMED SIGNAL FACES SHALL BE MASKED IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS, AND UNDER THE DIRECTIONS OF THE REGION TRAFFIC ENGINEER.

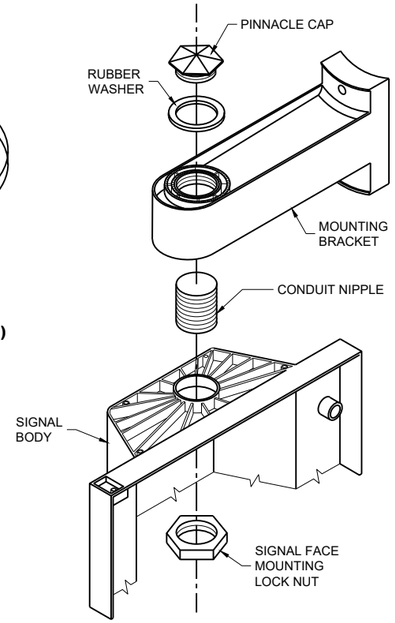
FOLDING STOP SIGNS SHALL BE IN ACCORDANCE WITH THE MUTCD AND/OR THE LATEST WISCONSIN SUPPLEMENT. THE SIGNS SHALL BE SIZED AND LOCATED AS CALLED FOR IN IN THE PLANS.

PEDESTRIAN SIGNS SHALL BE AS DESIGNATED IN THE PLANS.

FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) 1/4" X 3/4" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.



TYPICAL SIGN MOUNTING BAND
(TOP AND BOTTOM OF SIGN)



SIGNAL FACE MOUNTING DETAIL (BANDED)

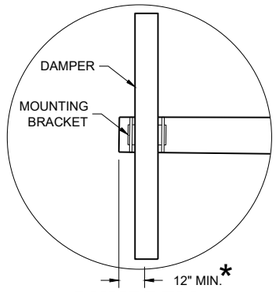
TRAFFIC SIGNAL STANDARD
POLY BRACKET MOUNTINGS
(TYPICAL) 13 FT. OR 15 FT.

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

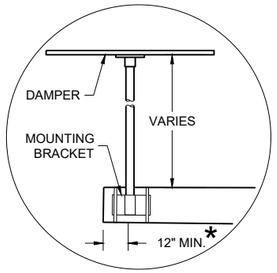
APPROVED
February 2026 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL ENGINEER

FHWA

SDD 09E06-06
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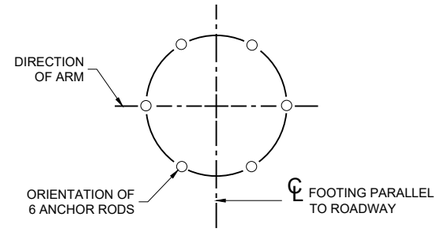


DUMBBELL VIBRATION DAMPER

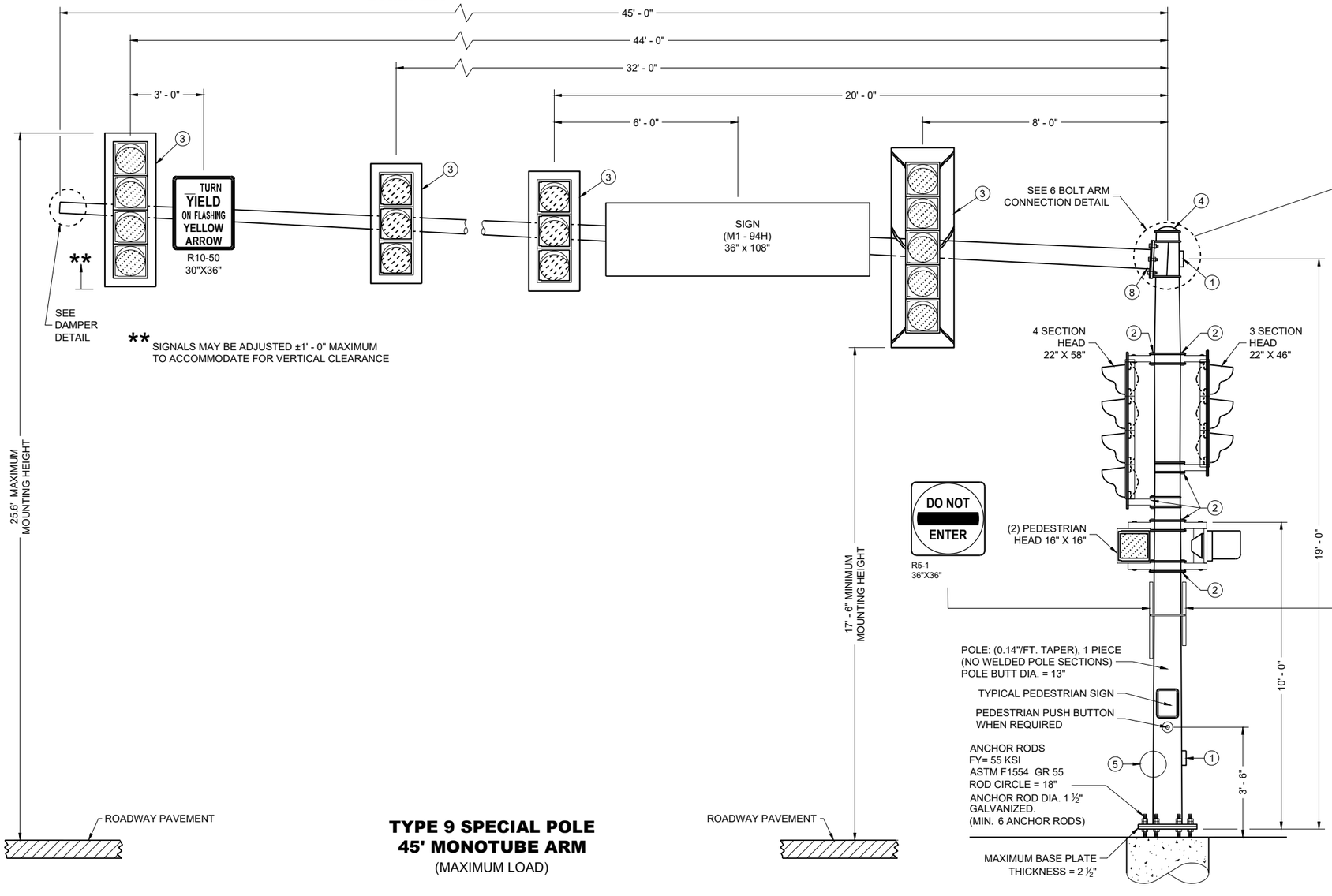


FLAT VIBRATION DAMPER

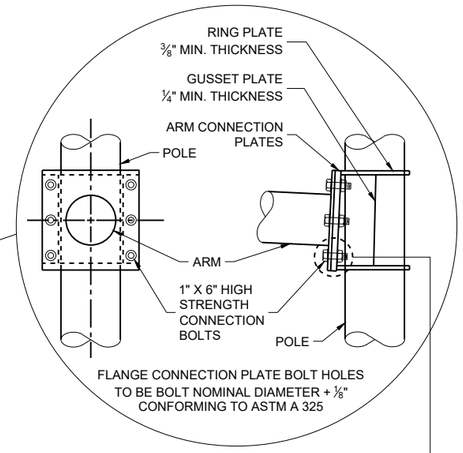
* MOUNT AS CLOSE TO END OF MAST ARM FOR MAXIMUM DAMPING PER MANUFACTURER'S RECOMMENDATIONS.



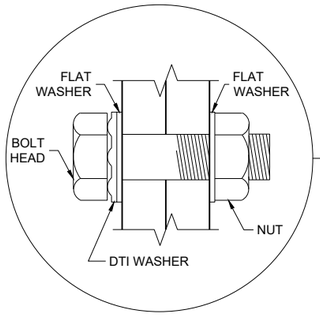
ANCHOR ROD LOCATION



TYPE 9 SPECIAL POLE
45' MONOTUBE ARM
(MAXIMUM LOAD)



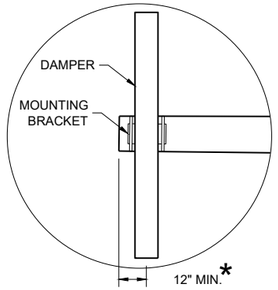
6 BOLT ARM CONNECTION DETAIL



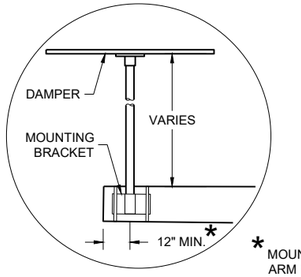
RECOMMENDED BOLT ASSEMBLY DETAIL

TYPE 9 SPECIAL POLE
45' MONOTUBE ARM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

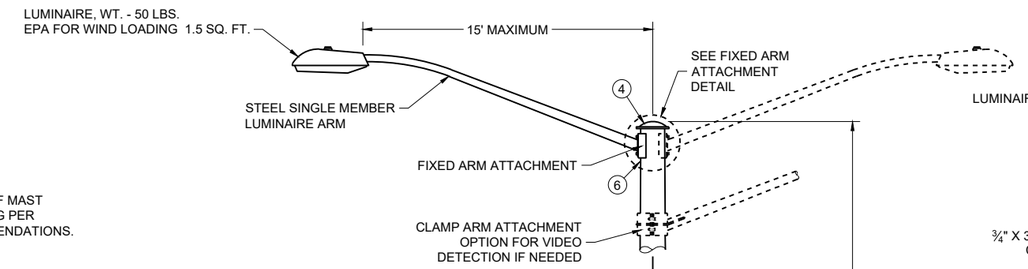


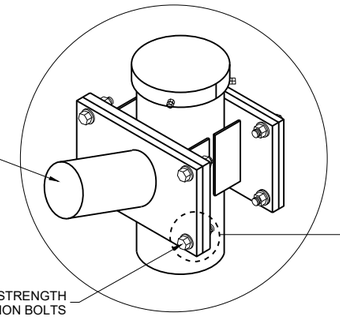
DUMBBELL VIBRATION DAMPER



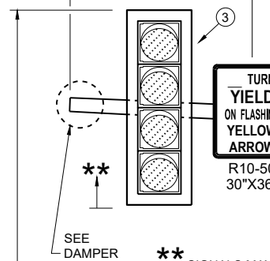
FLAT VIBRATION DAMPER

* MOUNT AS CLOSE TO END OF MAST ARM FOR MAXIMUM DAMPING PER MANUFACTURER'S RECOMMENDATIONS.

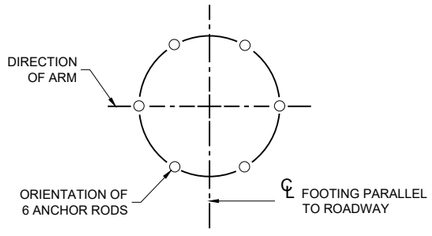




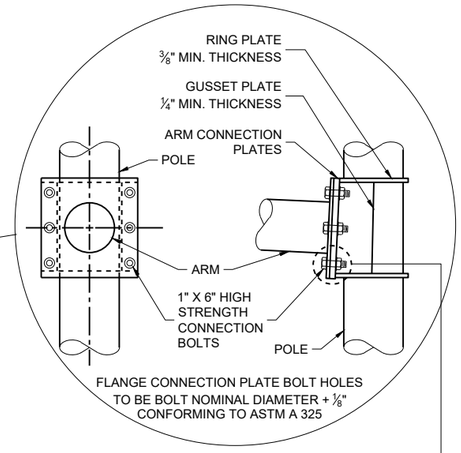
FIXED ARM ATTACHMENT DETAIL



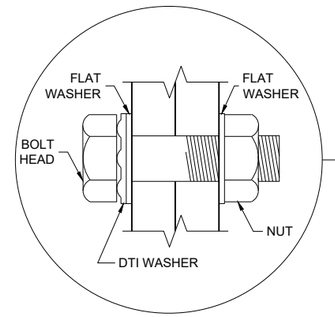
** SIGNALS MAY BE ADJUSTED ±1' - 0" MAXIMUM TO ACCOMMODATE FOR VERTICAL CLEARANCE



ANCHOR ROD LOCATION



6 BOLT ARM CONNECTION DETAIL



RECOMMENDED BOLT ASSEMBLY DETAIL

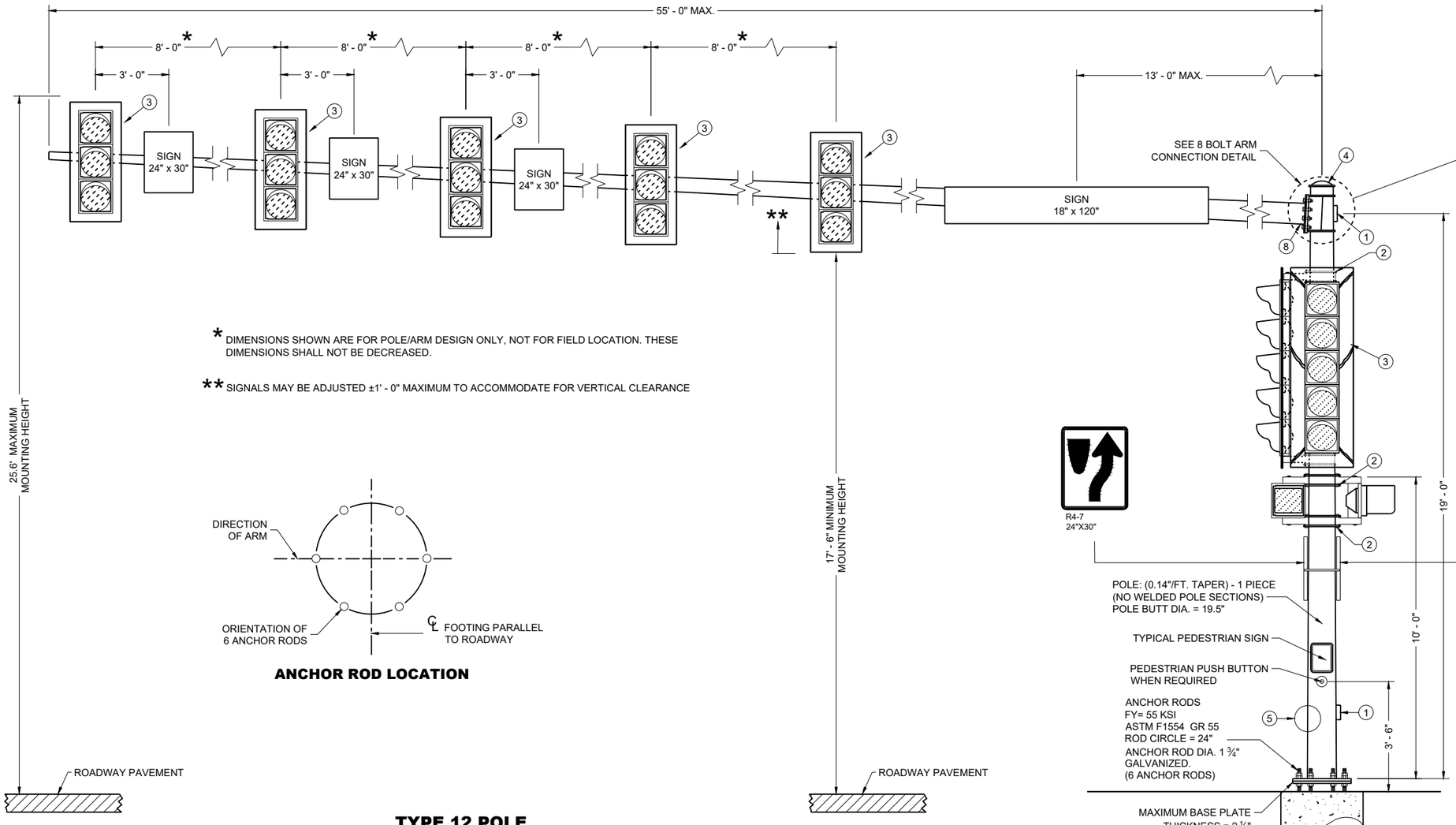
ROADWAY PAVEMENT

TYPE 10 SPECIAL POLE
45' MONOTUBE ARM
(MAXIMUM LOAD)

ROADWAY PAVEMENT

TYPE 10 SPECIAL POLE
45' MONOTUBE ARM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

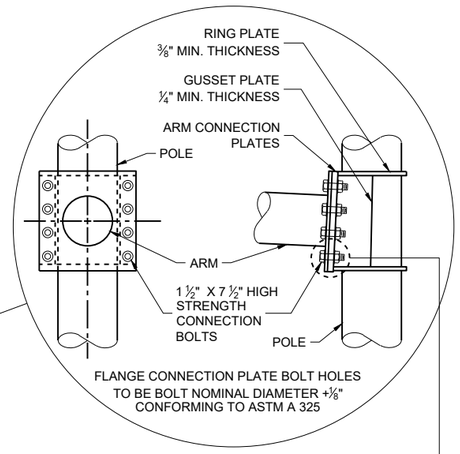


* DIMENSIONS SHOWN ARE FOR POLE/ARM DESIGN ONLY, NOT FOR FIELD LOCATION. THESE DIMENSIONS SHALL NOT BE DECREASED.

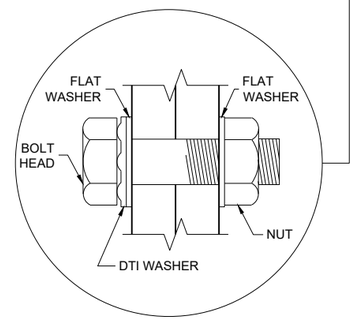
** SIGNALS MAY BE ADJUSTED ±1' - 0" MAXIMUM TO ACCOMMODATE FOR VERTICAL CLEARANCE

ANCHOR ROD LOCATION

TYPE 12 POLE
35' - 55' MONOTUBE ARM
(MAXIMUM LOAD)



8 BOLT ARM CONNECTION DETAIL

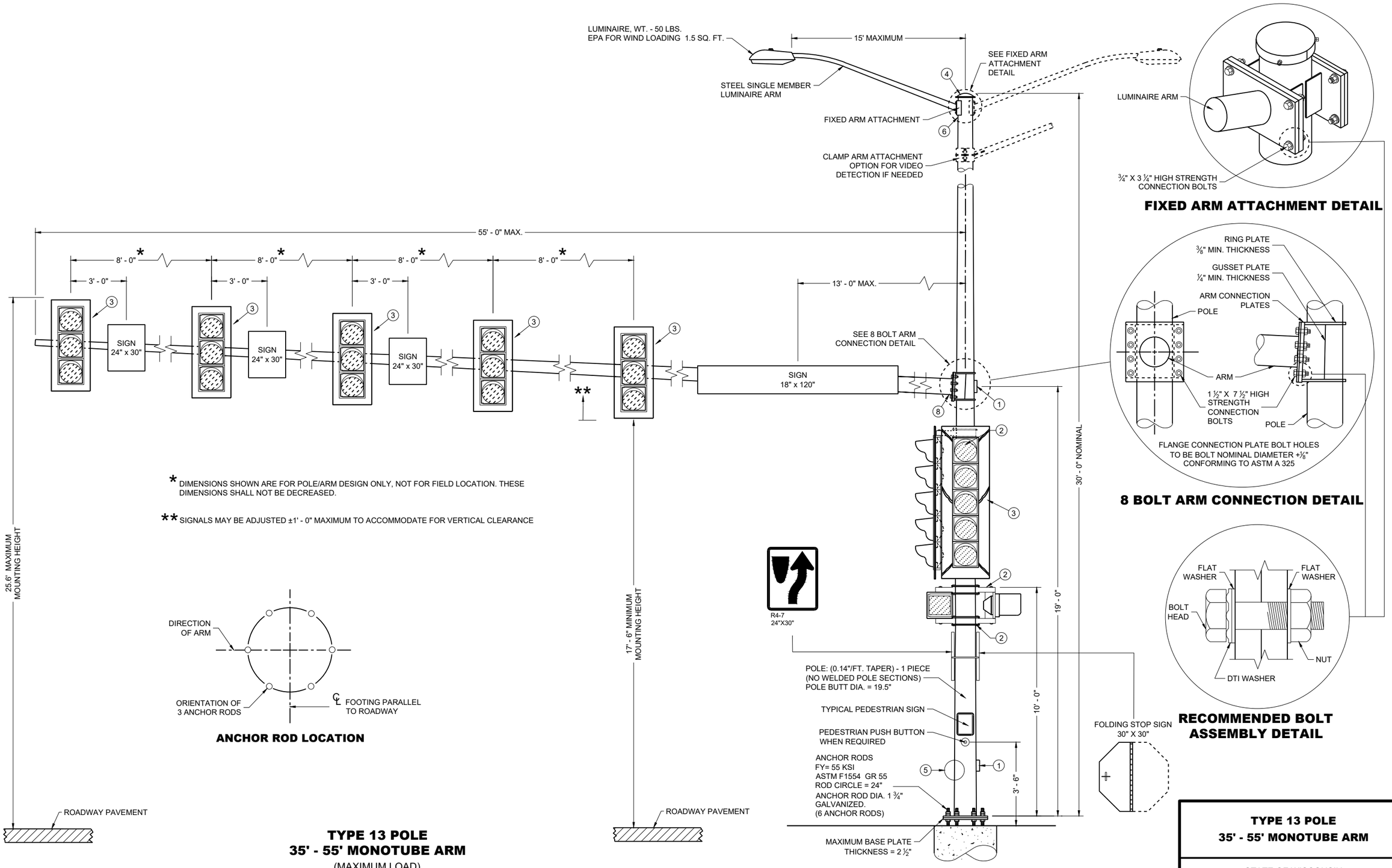


RECOMMENDED BOLT ASSEMBLY DETAIL

TYPE 12 POLE
35' - 55' MONOTUBE ARM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 09E08-11i



* DIMENSIONS SHOWN ARE FOR POLE/ARM DESIGN ONLY, NOT FOR FIELD LOCATION. THESE DIMENSIONS SHALL NOT BE DECREASED.

** SIGNALS MAY BE ADJUSTED ±1' - 0" MAXIMUM TO ACCOMMODATE FOR VERTICAL CLEARANCE

FIXED ARM ATTACHMENT DETAIL

8 BOLT ARM CONNECTION DETAIL

RECOMMENDED BOLT ASSEMBLY DETAIL

ANCHOR ROD LOCATION

TYPE 13 POLE
35' - 55' MONOTUBE ARM
(MAXIMUM LOAD)

TYPE 13 POLE
35' - 55' MONOTUBE ARM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

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

POLE TYPES 9 AND 10 ARE FOR ARM LENGTHS 15 FOOT TO 30 FOOT.

POLE TYPES 9 SPECIAL AND 10 SPECIAL ARE FOR ARM LENGTHS 35 FOOT, 40 FOOT, AND 45 FOOT.

POLE TYPES 12 AND 13 ARE FOR ARM LENGTHS 35 FOOT TO 55 FOOT.

MONOTUBE POLES AND ARMS SHALL BE GALVANIZED STEEL.

RING STIFFENED BUILT UP BOX TYPE OF ATTACHMENT FOR TRAFFIC SIGNAL ARM.

ONE PIECE POLE CONSTRUCTION (NO WELDED POLE SECTIONS).

STANDARD STRAIGHT ARM DESIGN (3% ± RISE).

SECTION 657, POLES OF THE STANDARD SPECIFICATION SHALL APPLY TO THIS DRAWING.

PROVIDE WIREWAY THRU POLE WALL AND ARM CONNECTION PLATES. PROVIDE ROUND, SMOOTH INSIDE SURFACE.

MANUFACTURER'S SUBMITTED POLE DESIGNS AND DRAWINGS SHALL BE SIGNED AND STAMPED BY A REGISTERED PROFESSIONAL ENGINEER AND CERTIFIED AS BEING IN COMPLIANCE WITH THE AASHTO "LRFD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNAL 2015 1ST EDITION (INCLUDING INTERIM REVISIONS)" AND ALL PERTINENT WISDOT SPECIFICATIONS AND DRAWINGS FOR THE LIGHTING STRUCTURES AS FOLLOWS:

CATEGORY III FATIGUE LOADS OF GALLOPING, TRUCK GUSTS (AT 45 MPH VEHICLE VELOCITY) AND NATURAL WIND GUSTS FOR DESIGN OF TYPE 9 AND TYPE 10 STRUCTURES.

CATEGORY II FATIGUE LOADS OF TRUCK GUSTS (AT 45 MPH VEHICLE VELOCITY) AND NATURAL WIND GUSTS FOR DESIGN OF TYPE 9 SPECIAL AND TYPE 10 SPECIAL STRUCTURES. IN LIEU OF DESIGNING FOR GALLOPING, A VIBRATION DAMPER MITIGATION DEVICE IS REQUIRED TO BE SUPPLIED AND INSTALLED AT THE END OF THE MAST ARM.

CATEGORY II FATIGUE FATIGUE LOADS OF GALLOPING, TRUCK GUSTS (AT 45 MPH VEHICLE VELOCITY) AND NATURAL WIND GUSTS FOR DESIGN OF TYPE12 AND TYPE 13 STRUCTURES.

115 MPH (700 YEAR MRI BASIC WIND SPEED).

SECURE THE OPENING BELOW THE BASE PLATE WITH STAINLESS STEEL OR GALVANIZED STEEL MESH AND SECURE THE MESH WITH ¾" STAINLESS STEEL BANDING AROUND THE LEVELING NUTS.

INDENT PRINT (NOMINAL ½" HIGH) THE POLE LENGTH AND FIRST TWO LETTERS OF THE MANUFACTURERS NAME ON TWO SIDES OF THE BASE PLATE 180 DEGREES APART, BEFORE GALVANIZING. THE ARM SHALL BE IDENTIFIED WITH THE SAME INFORMATION BY INDENT PRINT.

SIGNAL FACE SHALL BE MOUNTED 6 INCHES (NOMINAL) FROM THE END OF THE MONOTUBE ARM OR AS SHOWN ON THE PLAN CONSTRUCTION DETAIL OR A S DIRECTED BY THE PROJECT ENGINEER/ELECTRICAL OPERATIONS PERSONNEL. MOUNT ALL LIKE HEAD AT SAME ELEVATION.

SIGN MOUNTING BRACKETS SHALL BE FURNISHED IN ACCORDANCE WITH SECTION 637 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION.

(1) DESIGN FOR MAXIMUM ALLOWABLE HAND HOLE WITH COVER ASSEMBLY WITH TWO ¼" X ¾" - 20 TPI STAINLESS STEEL HEX HEAD BOLTS.

(2) SIGNAL MOUNTING BRACKETS FOR POLE MOUNTING, MOUNT WITH CAP SCREW AND BANDING (SEE SPECIFICATION SECTION 658).

(3) SECURELY MOUNT BACK PLATES, PROJECTING 5" BEYOND ALL SIDES OF THE SIGNAL FACE HOUSING, PER MANUFACTURERS RECOMMENDATIONS.

(4) THE TOP OF THE POLE SHAFT AND THE MONOTUBE ARM SHALL BE EQUIPPED WITH A REMOVABLE, VENTILATED CAP HELD SECURELY IN PLACE WITH SET SCREWS.

(5) FACTORY WELDED BRACKET FOR GROUNDING LUG, OPPOSITE HAND HOLD, (LUG AND HARDWARE PAID UNDER SEPARATE ITEM). PROVIDE HOLE IN BRACKET FOR ¼" X ¾" - 20 TPI STAINLESS STEEL HEX HEAD BOLT.

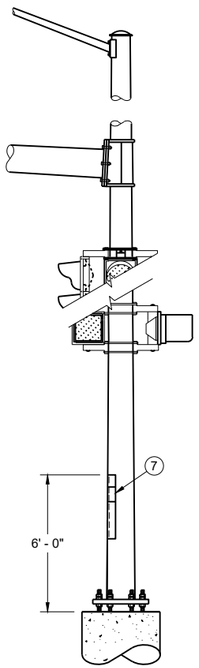
(6) FACTORY WELDED "J" HOOK FOR STRAIN RELIEF FOR POLE LUMINAIRE WIRE.

(7) INSTALL STRUCTURAL IDENTIFICATION PLAQUES.

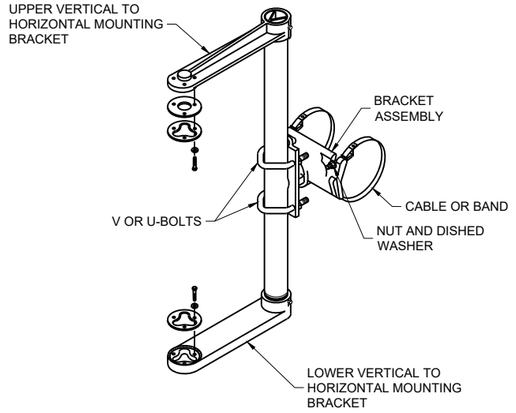
STRUCTURAL IDENTIFICATION PLAQUES SHALL BE PLACED ON THE POLES IN THE SAME DIRECTION AS THE ARM.

MOUNTING HEIGHT SHALL BE 6' - 0" ABOVE THE CURB OR SHOULDER. ADJUST IF IT IS KNOWN THAT REQUIRED TRAFFIC SIGNS WILL BE OBSTRUCTED.

(8) FACTORY DRILLED ½" DRAIN HOLE 2" FROM FLANGE CONNECTION PLATE.

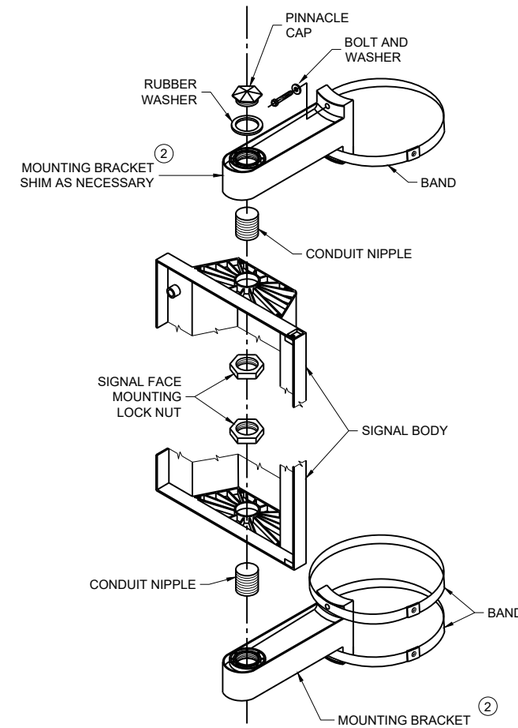


STRUCTURAL IDENTIFICATION PLAQUE PLACEMENT

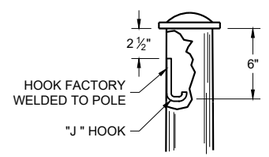


SIGNAL FACE MOUNTING BRACKET DETAIL FOR MONOTUBE ARM
(MOUNT PER MANFACTURER'S RECOMMENDATION)

TYPICAL GROUNDING (5) CONNECTIONS
NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL



SIGNAL FACE VERTICAL MOUNTING DETAIL



TYPICAL "J" HOOK WIRE SUPPORT (6)

GENERAL NOTES AND HARDWARE FOR TYPES 9,10, 9/10 SPECIAL, 12 AND 13 POLES WITH MONOTUBE ARMS

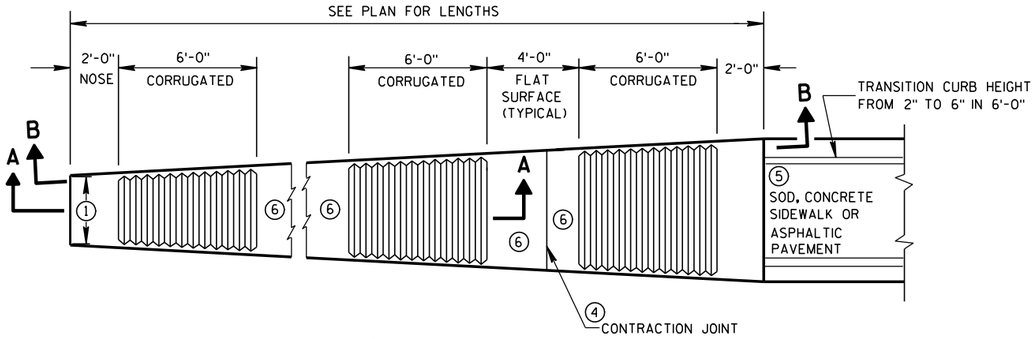
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2026
DATE

/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGINEER

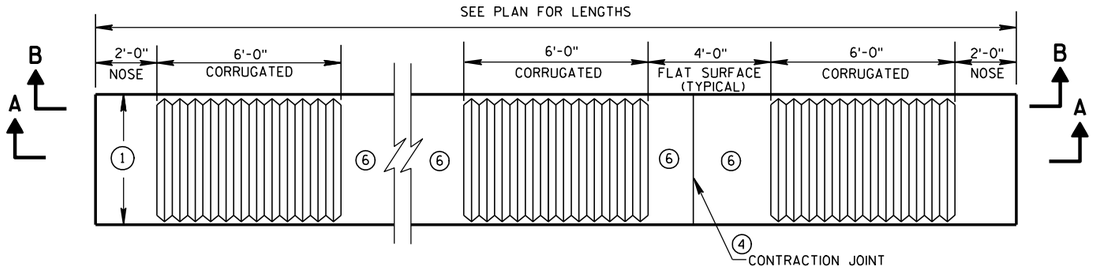
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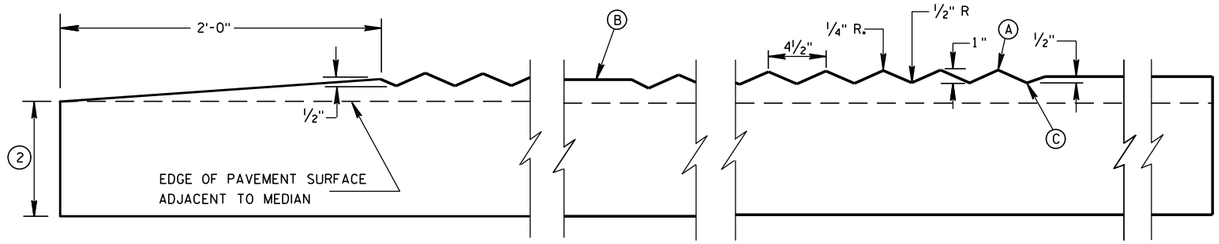
PLAN VIEW

VARIABLE WIDTH CONCRETE CORRUGATED MEDIAN



PLAN VIEW

UNIFORM WIDTH CONCRETE CORRUGATED MEDIAN



SECTION A-A

LONGITUDINAL SECTION

GENERAL NOTES

(1) SEE PLANS FOR CONSTANT OR VARIABLE WIDTH.

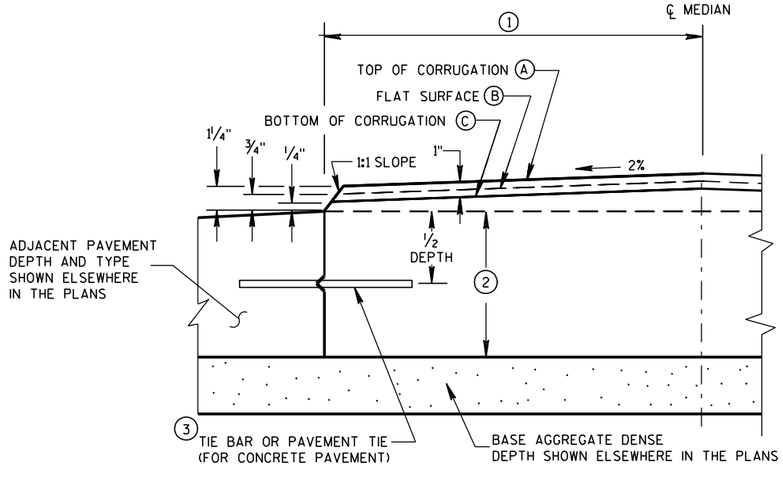
(2) THE DEPTH OF THE CONCRETE CORRUGATED MEDIAN SHALL BE 9-INCHES UNLESS SHOWN OTHERWISE IN THE PLAN.
ADJACENT PAVEMENT STRUCTURE DETAILS ARE SHOWN IN THE PLAN. TYPICAL OPTIONS ARE:
(1) NEW OR EXISTING CONCRETE PAVEMENT.
(2) ASPHALTIC CONCRETE OVER NEW OR EXISTING CONCRETE BASE COURSE, OR PAVEMENT.
(3) ASPHALTIC PAVEMENT OVER BASE AGGREGATE DENSE.

(3) TIE BARS OR PAVEMENT TIES REQUIRED IN NEW CONCRETE PAVEMENT OR CONCRETE BASE COURSE. TIE BARS SHALL BE NO. 4 X 2'-0" SPACED AT 2'-0" C-C.
INSTALL TIE BARS TO MAINTAIN A MINIMUM OF 3-INCHES OF COVER BETWEEN THE TIE BAR AND THE CONCRETE SURFACE (BOTTOM AND TOP).
PAVEMENT TIES REQUIRED IN EXISTING CONCRETE PAVEMENT OR CONCRETE BASE COURSE, PAVEMENT TIES SHALL BE NO. 6 X 1'-0" SPACED AT 3'-0" C-C INSTALLED ON A HORIZONTAL SKEW OF 6:1. THE DIRECTION OF SKEW SHALL ALTERNATE AFTER EVERY ONE OR TWO BARS.

(4) CONCRETE CORRUGATED MEDIAN CONTRACTION JOINTS SHALL BE CONSTRUCTED TO MATCH THE JOINTS IN ADJACENT CONCRETE PAVEMENT. WHERE ADJACENT PAVEMENT IS ASPHALT WITH BASE AGGREGATE DENSE. TRANSVERSE CONTRACTION JOINTS SHALL BE PROVIDED AT 20 FOOT INTERVALS.

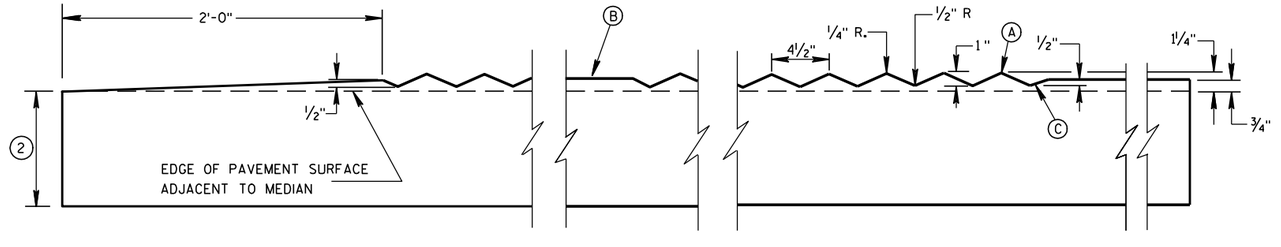
(5) SURFACE TYPE AND DETAILS ARE DEFINED ELSEWHERE IN THE PLAN.

(6) YELLOW MARKING ON FLAT SURFACE WHEN MEDIAN SEPARATES OPPOSING TRAFFIC.



HALF CROSS SECTION

(2) CONCRETE CORRUGATED MEDIAN AND ADJACENT PAVEMENT



SECTION B-B

LONGITUDINAL SECTION

CONCRETE CORRUGATED MEDIAN

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

12/17/07
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER

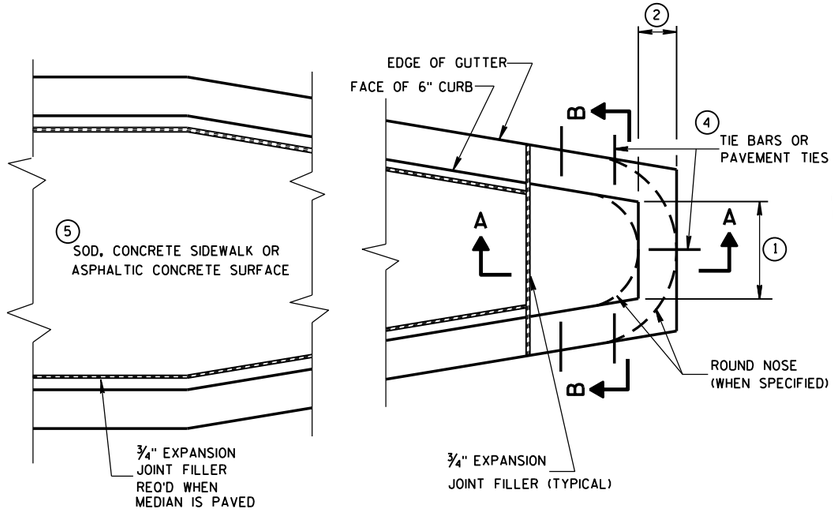
FHWA

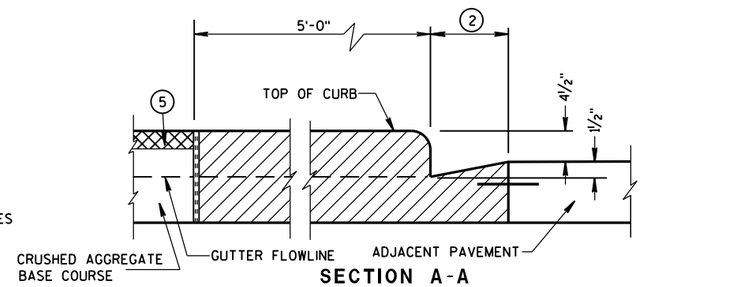
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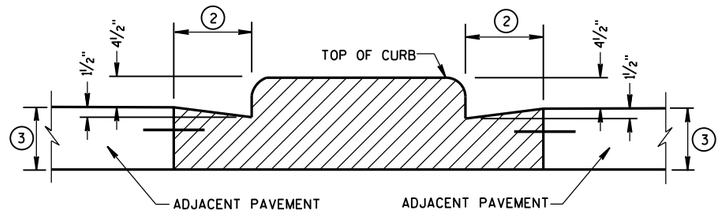
S.D.D. 11 B 1-5

6

S.D.D. 11 B 1-5







CONCRETE MEDIAN BLUNT NOSE DETAIL

GENERAL NOTES

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

(1) SEE PLAN FOR MEDIAN NOSE WIDTH AND RADIUS (FOR ROUND NOSE ALTERNATE).

(2) WIDTH OF GUTTER TO MATCH EXISTING ADJACENT GUTTER OR AS SPECIFIED ELSEWHERE IN THE PLAN.

(3) DEPTH EQUAL TO ADJACENT PAVEMENT. ADJACENT PAVEMENT STRUCTURE DETAILS ARE SHOWN ON THE PLAN. TYPICAL OPTIONS ARE:

(1) NEW OR EXISTING CONCRETE PAVEMENT.

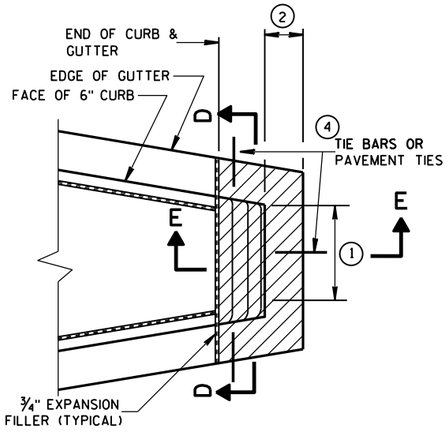
(2) ASPHALTIC CONCRETE PAVEMENT OVER NEW OR EXISTING CONCRETE BASE COURSE.

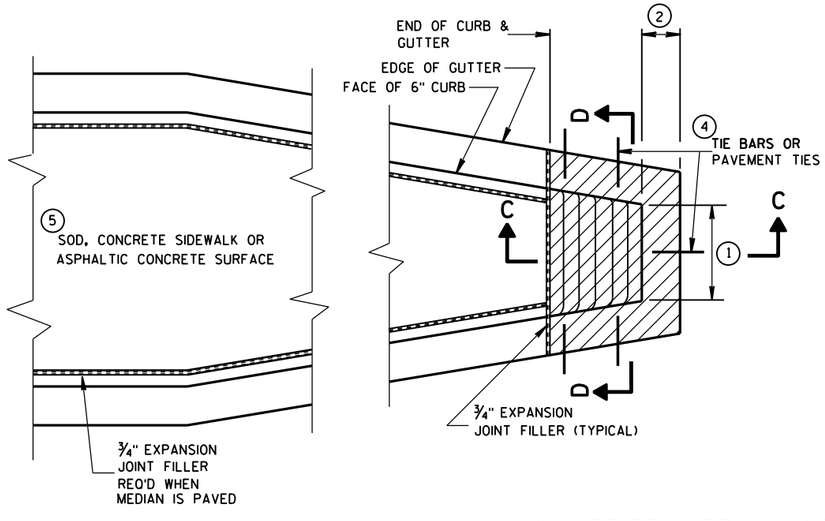
(3) ASPHALTIC CONCRETE PAVEMENT OVER CRUSHED AGGREGATE BASE COURSE.

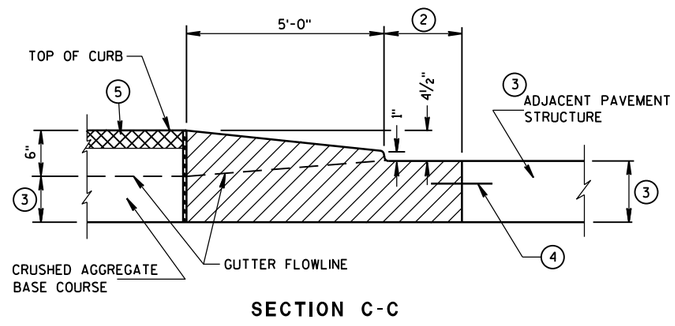
(4) TIE BARS OR PAVEMENT TIES REQUIRED IN NEW CONCRETE PAVEMENT OR CONCRETE BASE COURSE. TIE BARS SHALL BE NO. 4 X 2'-0" SPACED AT 2'-0" C-C.

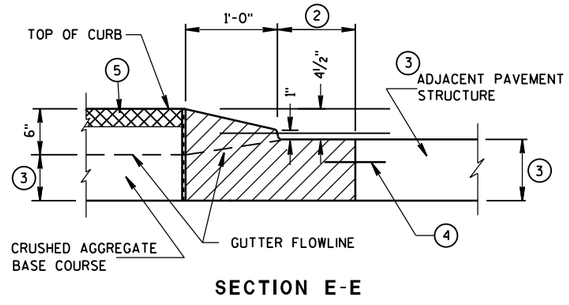
PAVEMENT TIES REQUIRED IN EXISTING CONCRETE BASE COURSE. PAVEMENT TIES SHALL BE NO. 6 X 1'-0" SPACED AT 3'-0" C-C INSTALLED ON A HORIZONTAL SKEW OF 6:1. THE DIRECTION OF SKEW SHALL ALTERNATE AFTER EVERY ONE OR TWO BARS.

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



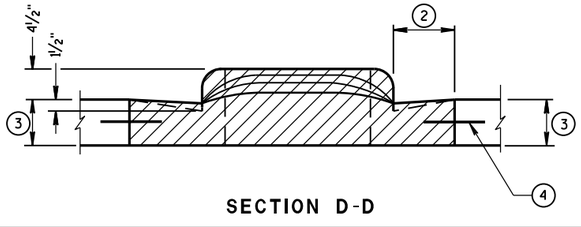






CONCRETE MEDIAN SLOPED NOSE TYPE 1

CONCRETE MEDIAN SLOPED NOSE TYPE 2



CONCRETE MEDIAN NOSE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/8/2006
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER

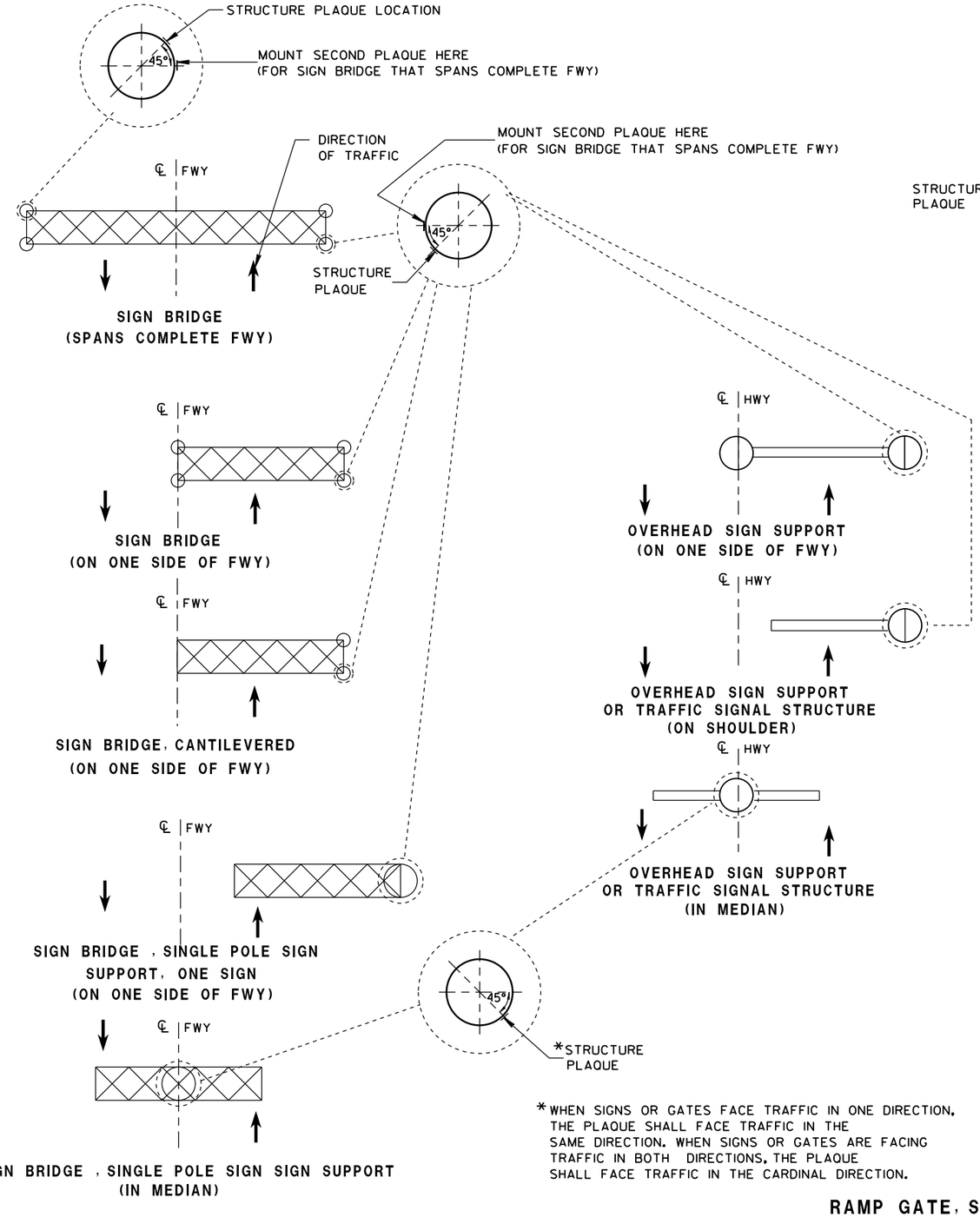
FHWA

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S.D.D. 11 B 2-2

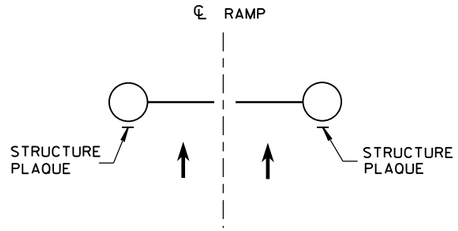
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S.D.D. 11 B 2-2

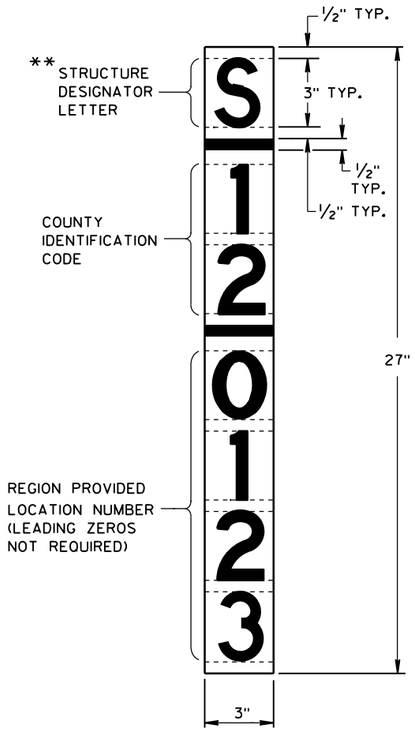


*WHEN SIGNS OR GATES FACE TRAFFIC IN ONE DIRECTION, THE PLAQUE SHALL FACE TRAFFIC IN THE SAME DIRECTION. WHEN SIGNS OR GATES ARE FACING TRAFFIC IN BOTH DIRECTIONS, THE PLAQUE SHALL FACE TRAFFIC IN THE CARDINAL DIRECTION.

LOCATION OF RAMP GATE, SIGN BRIDGE, OVERHEAD SIGN SUPPORT & TRAFFIC SIGNAL STRUCTURE PLAQUES



RAMP GATE
(ACROSS FWY ON-RAMP)



** LETTER "G" UTILIZED FOR RAMP GATES. LETTER "S" UTILIZED FOR SIGN BRIDGES, OVERHEAD SIGN SUPPORTS, AND TRAFFIC SIGNALS.

RAMP GATE, SIGN BRIDGE, OVERHEAD SIGN SUPPORT AND TRAFFIC SIGNAL STRUCTURE PLAQUE FOR SIGN BRIDGES AND OVERHEAD SIGN SUPPORT WHICH ARE NOT STRUCTURE MOUNTED

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.

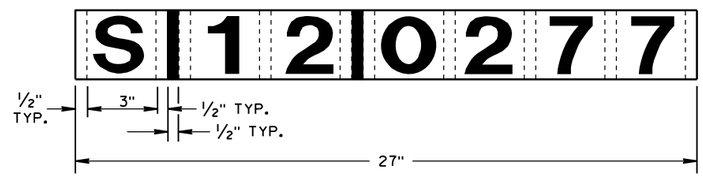
FACE - WHITE, SELF-ADHESIVE VINYL SHEETING, NON-RETROREFLECTIVE

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

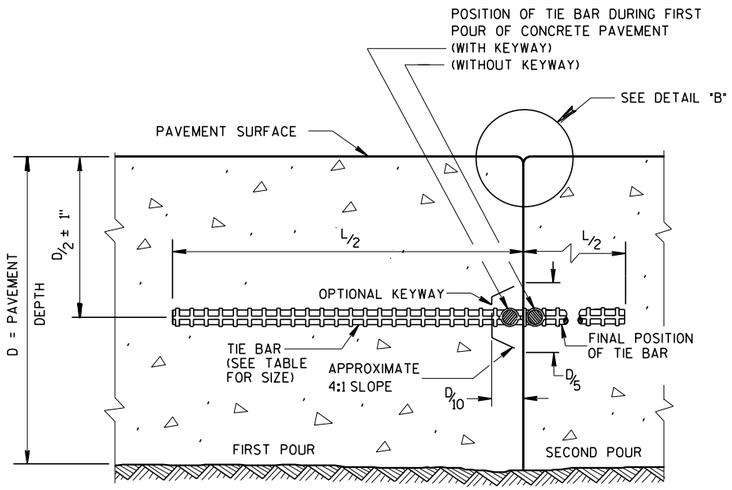
APPROVED
12/4/2012 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

6

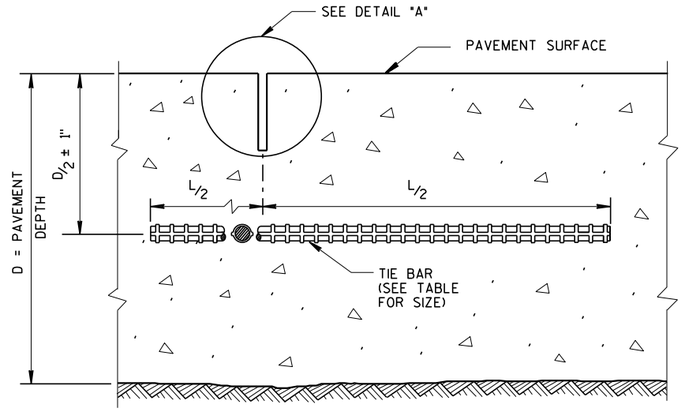
S.D.D. 12 A 4-3

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S.D.D. 12 A 4-3



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.

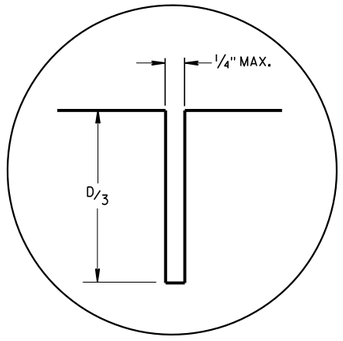
(1) ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

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

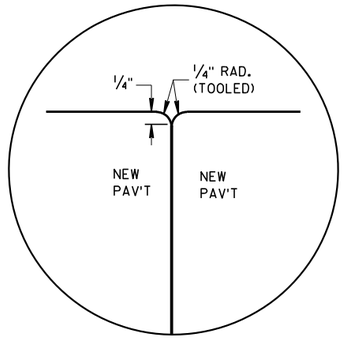
PLAN VIEW

SECTION A-A

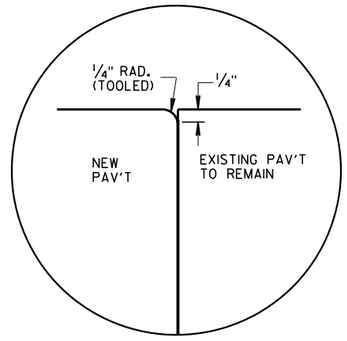
LONGITUDINAL CONSTRUCTION JOINT TIE BARS ANCHORED INTO EXISTING PAVEMENT



DETAIL "A"



DETAIL "B"



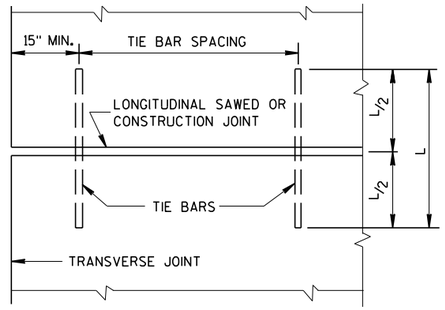
DETAIL "C"

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.



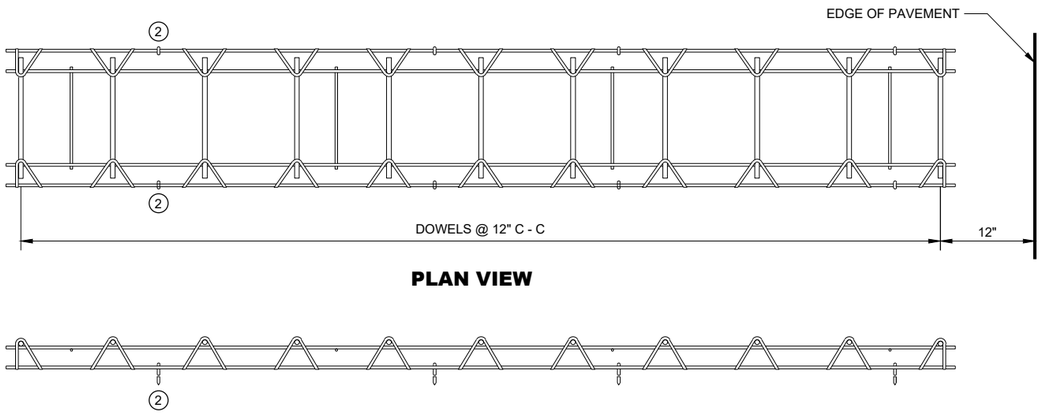
PLAN VIEW
SHOWING LOCATION OF TIE BARS

CONCRETE PAVEMENT
LONGITUDINAL JOINTS AND TIES

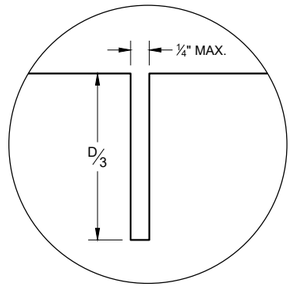
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6
S.D.D. 13 C 1-19



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.

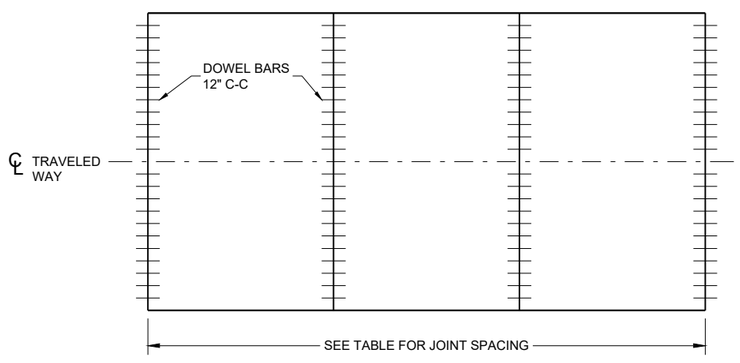
(3) FORM OR SAW CONSTRUCTION JOINTS. PROVIDE A ¼" RADIUS AT FORMED JOINTS.

(4) PROVIDE A SMOOTH VERTICAL FACE FOR THE ENTIRE DEPTH OF THE PAVEMENT WHEN FORMING CONSTRUCTION JOINTS.

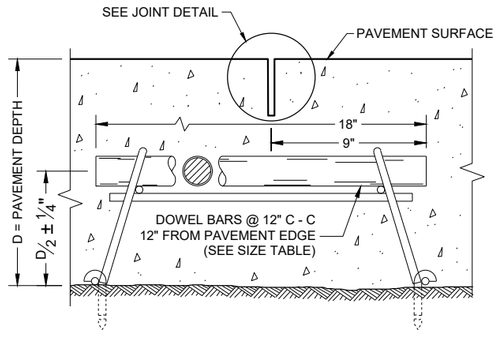
(5) INSTALL DOWEL BARS AT CONSTRUCTION JOINTS BY FORMING OR DRILLING. INSTALL FORMED DOWEL BARS 12 INCHES C - C AND 12 INCHES FROM PAVEMENT EDGE. REMOVE EXCESS CONCRETE FROM THE FREE END OF THE DOWEL BAR IF DOWEL BARS ARE FORMED THROUGH A HEADER BOARD. INSTALL DRILLED DOWEL BARS ACCORDING TO THE "DRILLED 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.



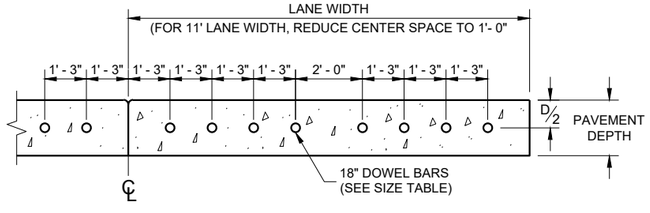
CONTRACTION JOINT LOCATIONS



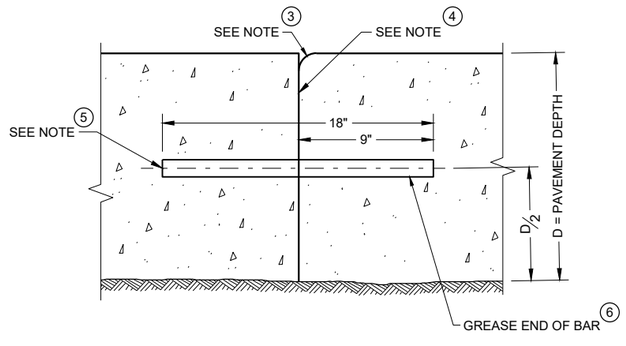
DOWELED CONTRACTION JOINT

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

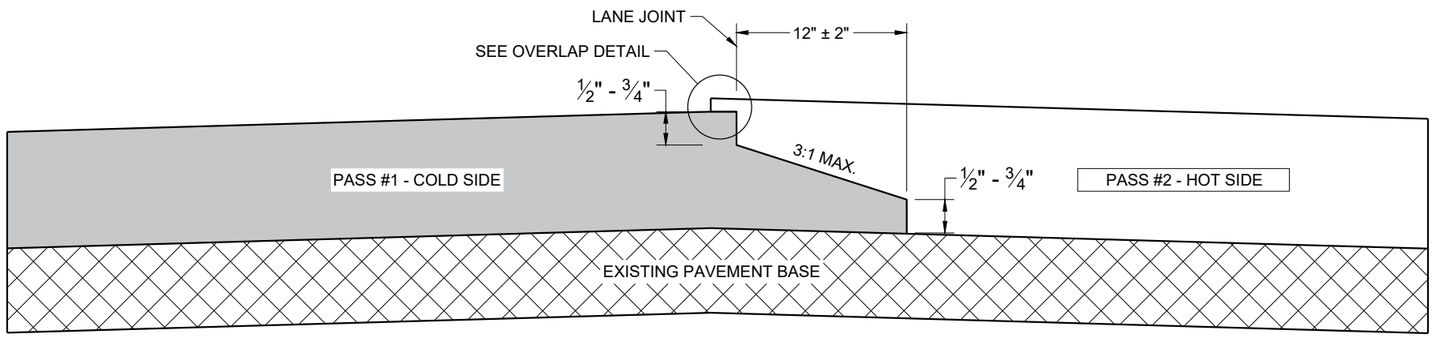
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2022
DATE

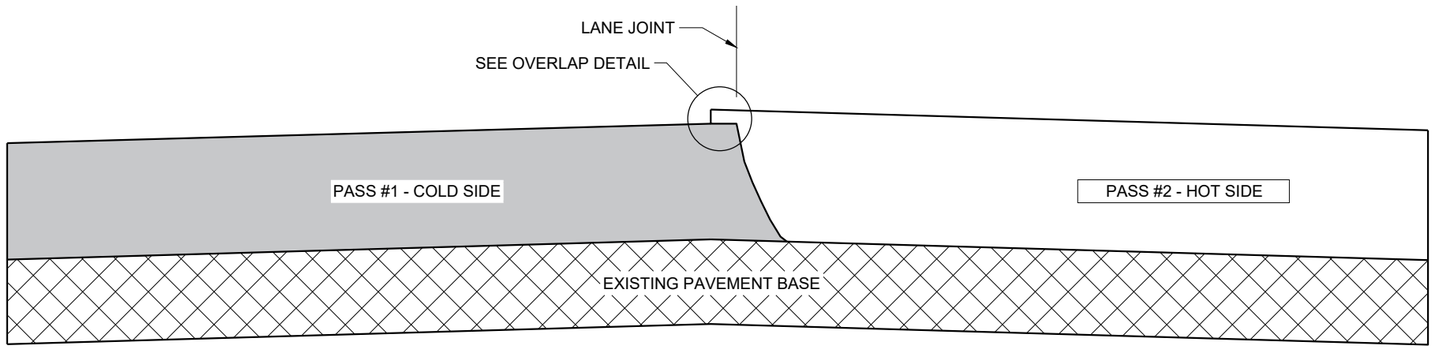
/S/ Peter Kemp P.E.
PAVEMENT SUPERVISOR

FHWA

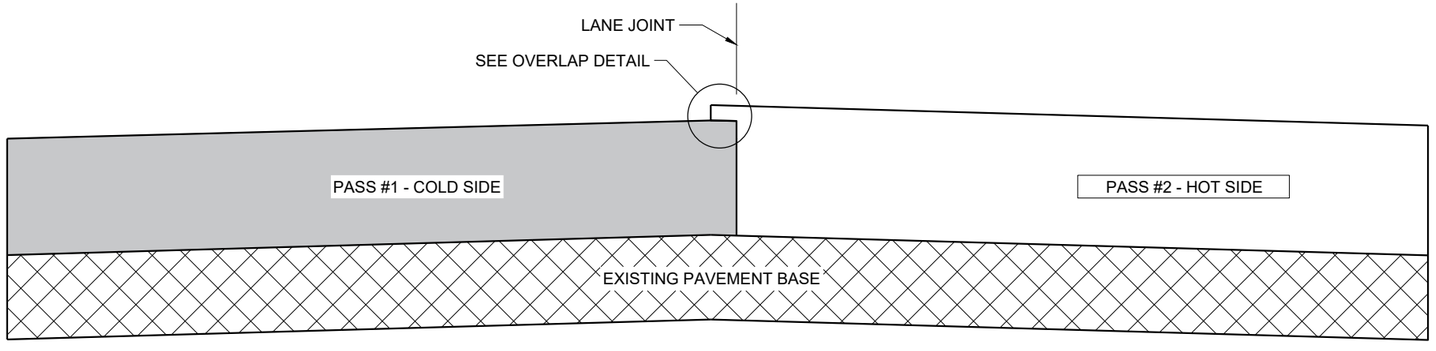
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SDD 13C13 - 11



TYPICAL PAVEMENT CROSS SECTION
NOTCHED WEDGE JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT (MILLED)

GENERAL NOTES

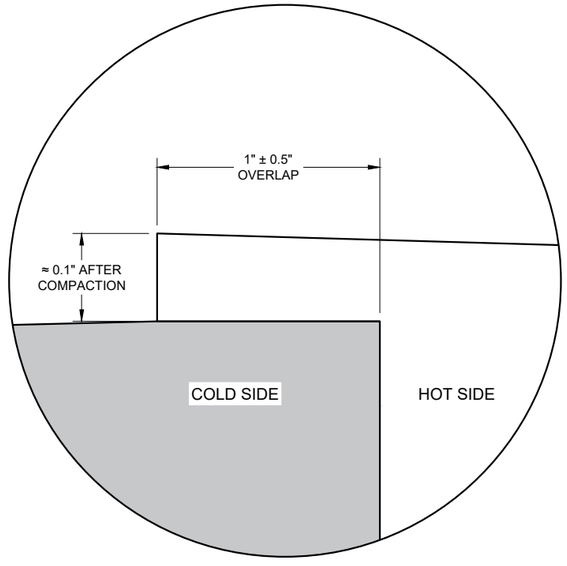
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

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

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

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

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



OVERLAP DETAIL (TYPICAL)

6

6

SDD 13C19 - 03

SDD 13C19 - 03

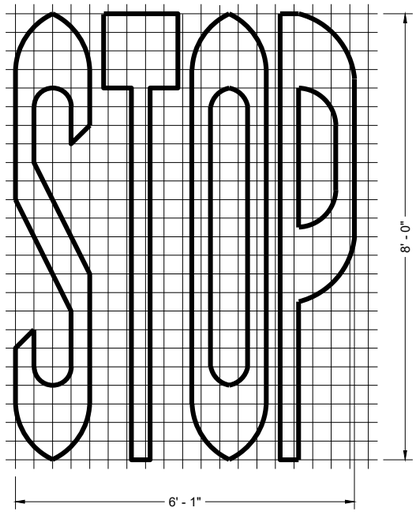
HMA LONGITUDINAL JOINTS

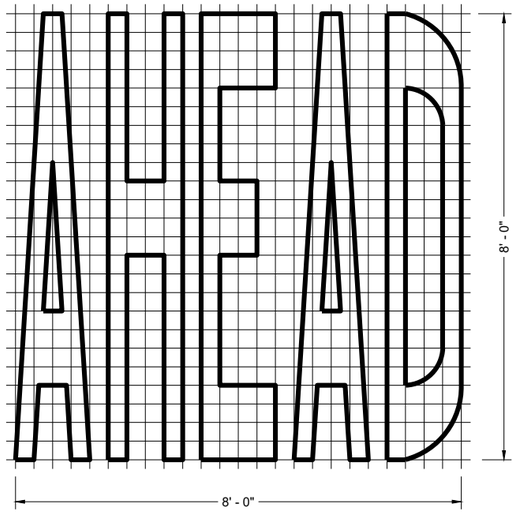
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

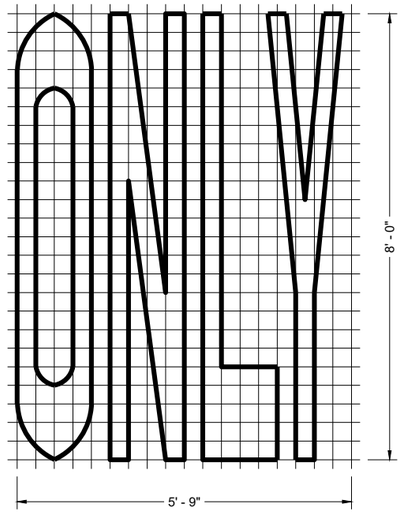
APPROVED
November 2020
DATE

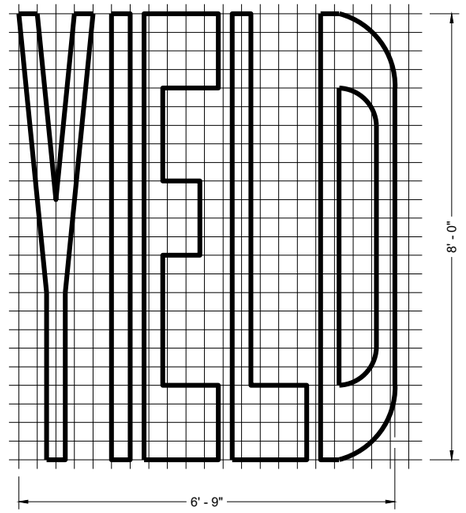
/S/ Steven Hefel
HMA PAVEMENT ENGIN

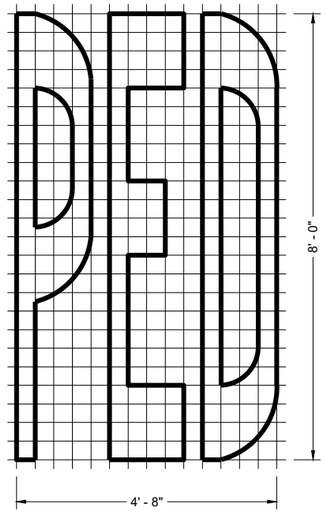
FHWA

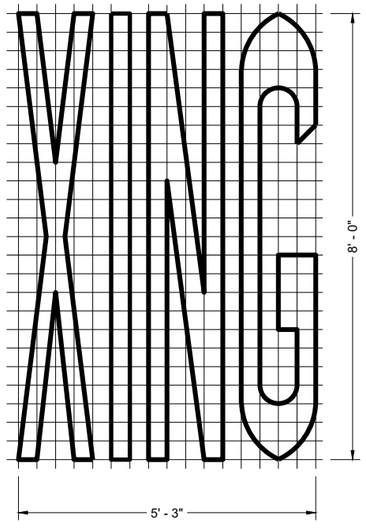


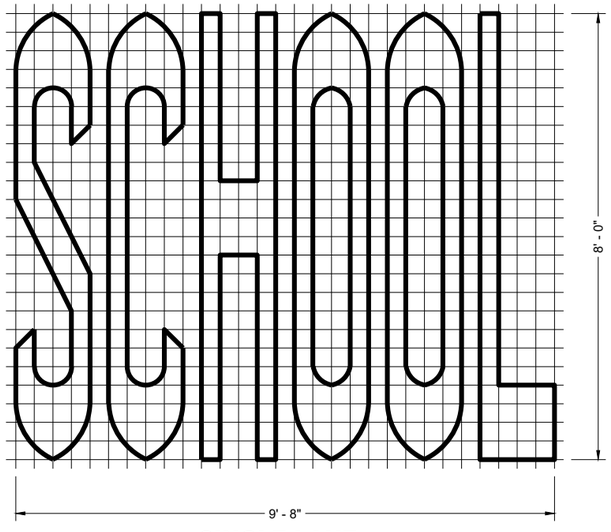




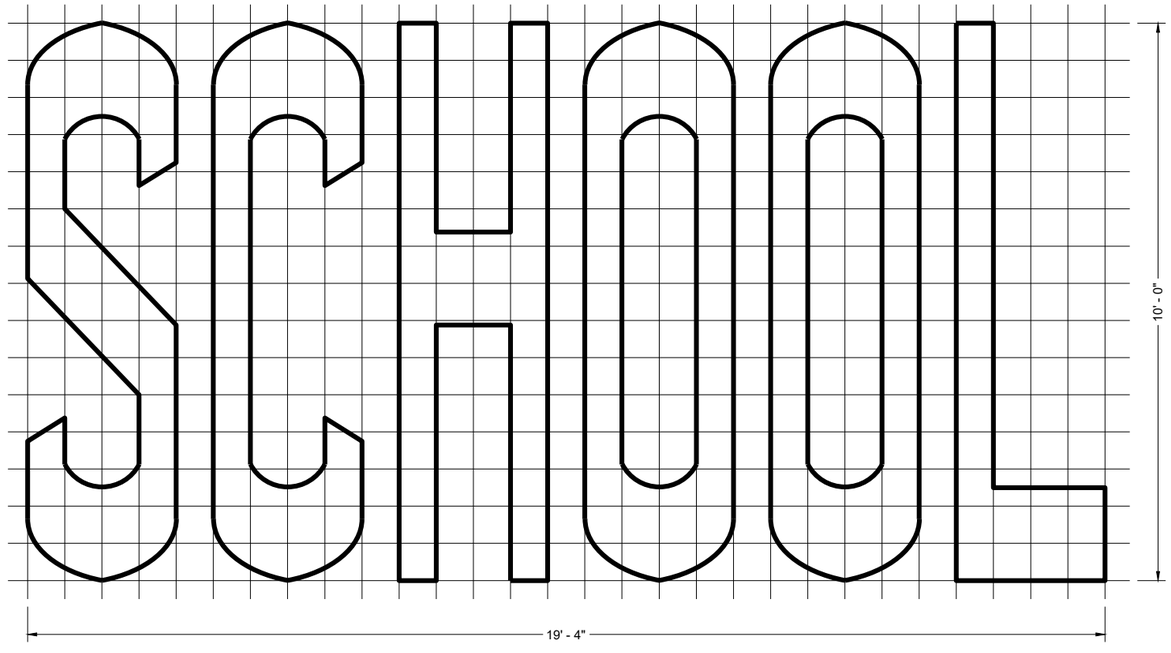








SINGLE LANE



TWO - LANE

GENERAL NOTES

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

PAVEMENT MARKING WORDS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

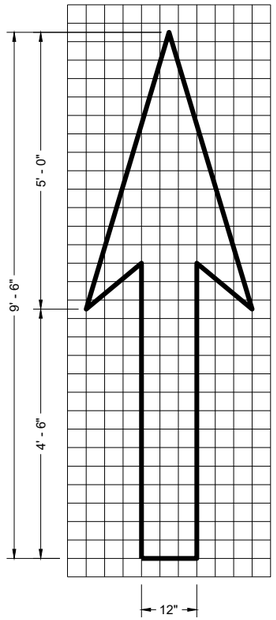
APPROVED
November 2024 — DATE
/S/ Jeannie Silver — STATE SIGNING AND MARKING ENGINEER

FHWA

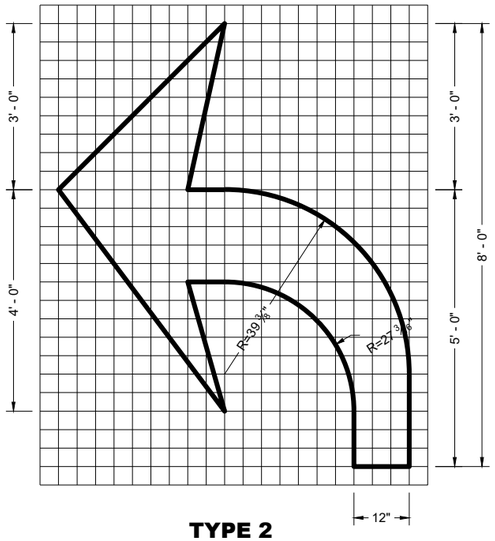
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SDD 15C07-16b

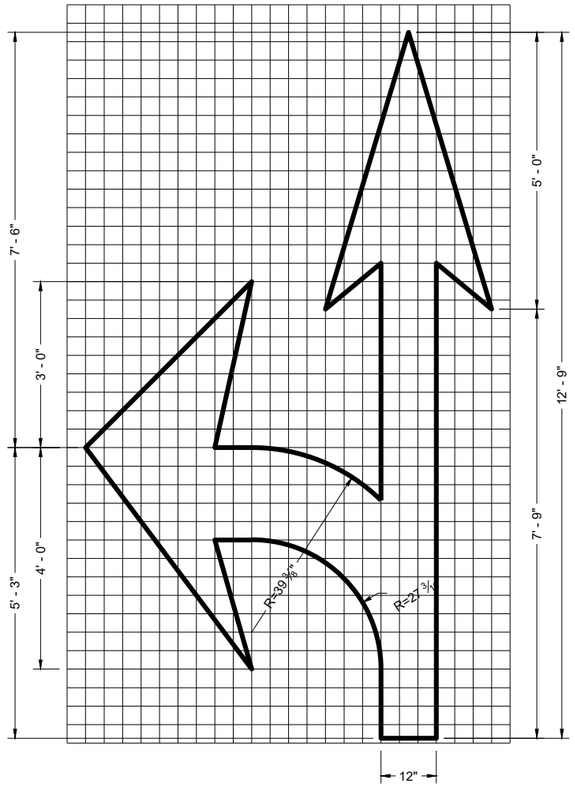
SDD 15C07-16b



TYPE 1



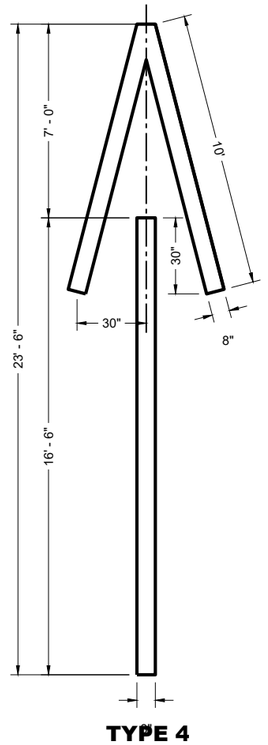
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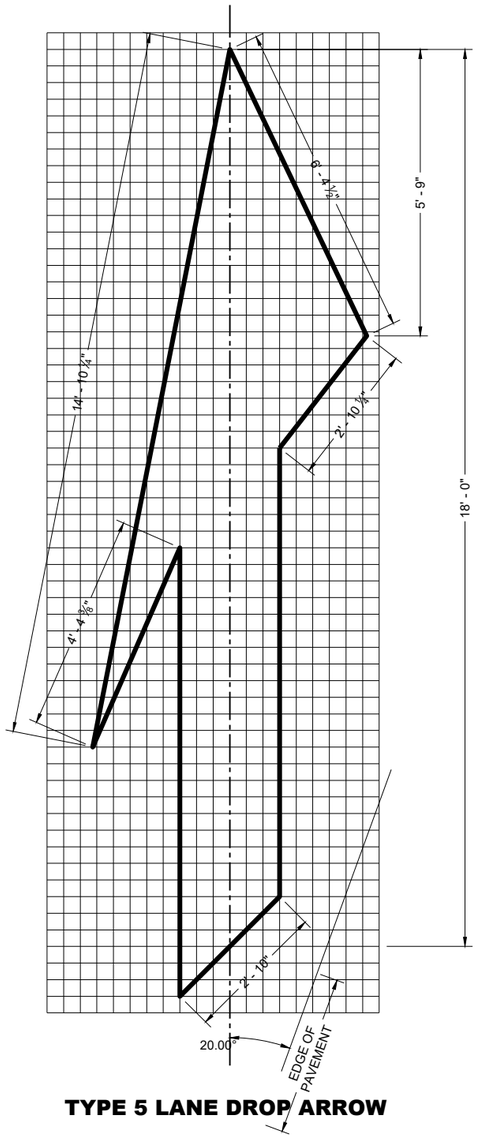
TYPE 3

GENERAL NOTES

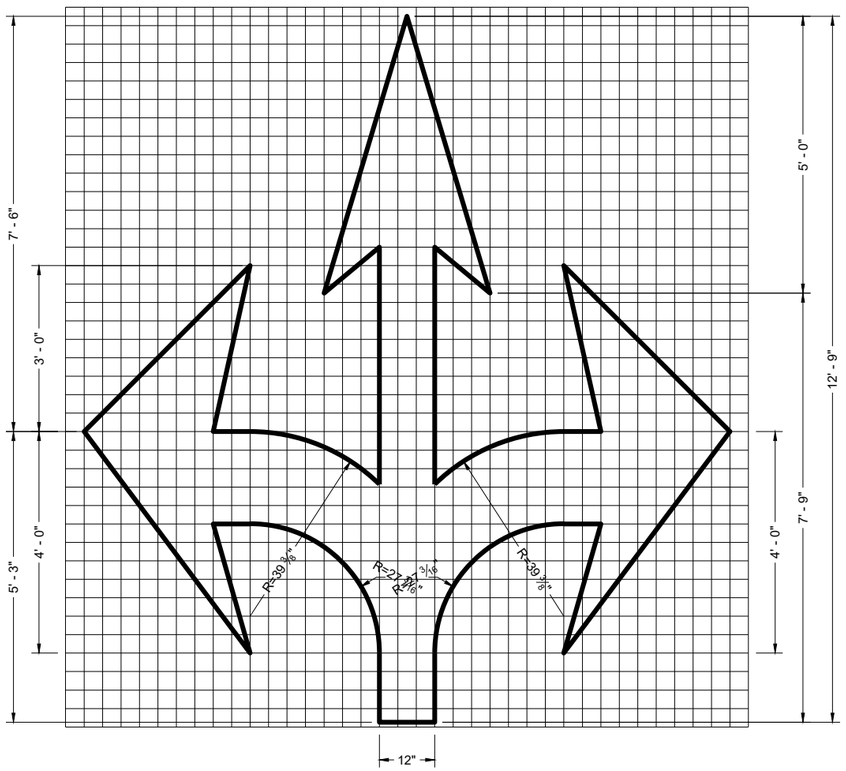
DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.



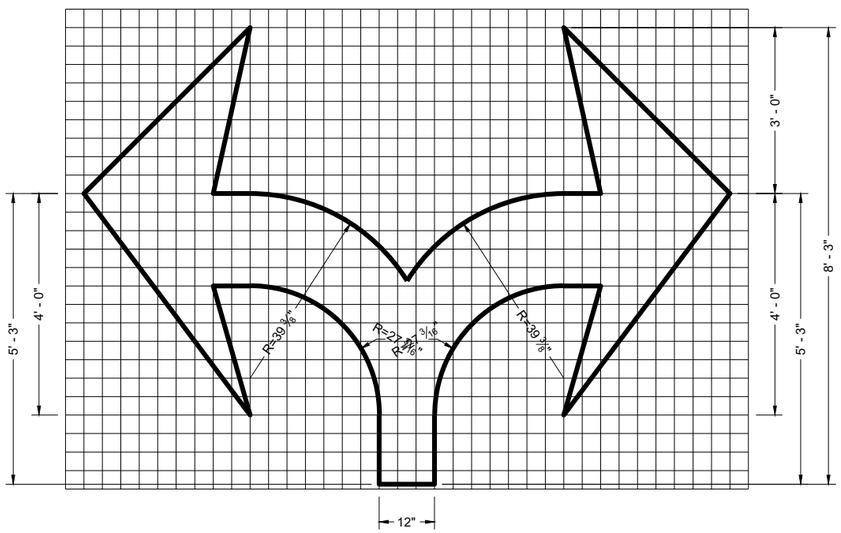
TYPE 4



TYPE 5 LANE DROP ARROW



TYPE 6



TYPE 7

PAVEMENT MARKING ARROWS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2024 — DATE
/S/ Jeannie Silver — STATE SIGNING AND MARKING ENGINEER

FHWA

6

SDD 15C07-16c

GENERAL NOTES

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

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

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

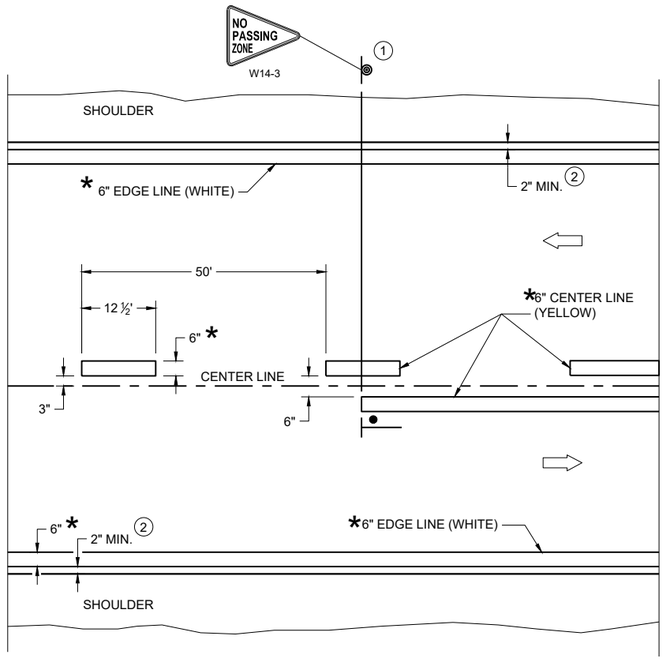
*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

LEGEND

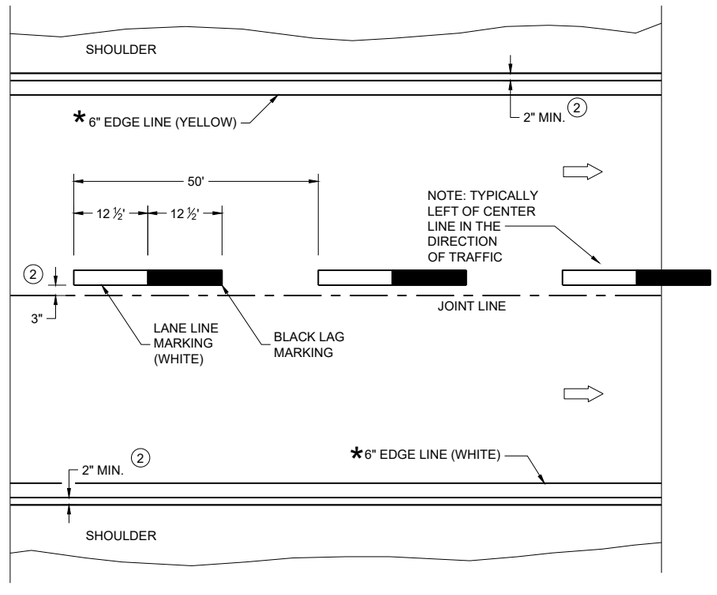
"T" MARKING

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

PERMANENT LONGITUDINAL PAVEMENT MARKINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

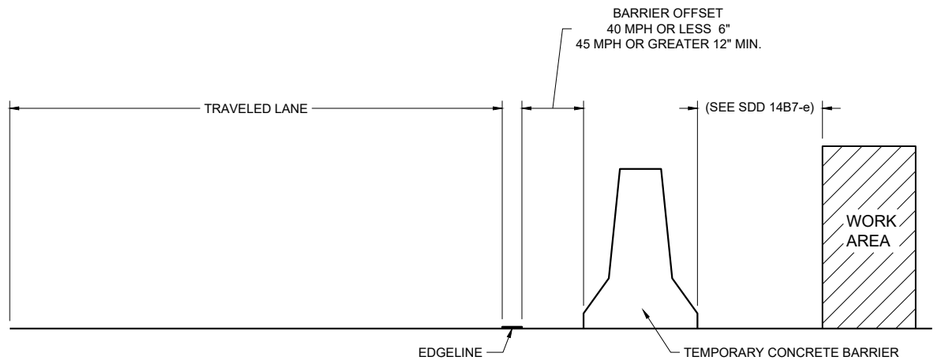
APPROVED
December 2024
DATE
/S/ Jeannie Silver
Statewide Pavement Marking Engineer
FHWA

6

SDD 15C08-24a

6

SDD 15C08-24a



TEMPORARY BARRIER OFFSET FROM EDGELINE

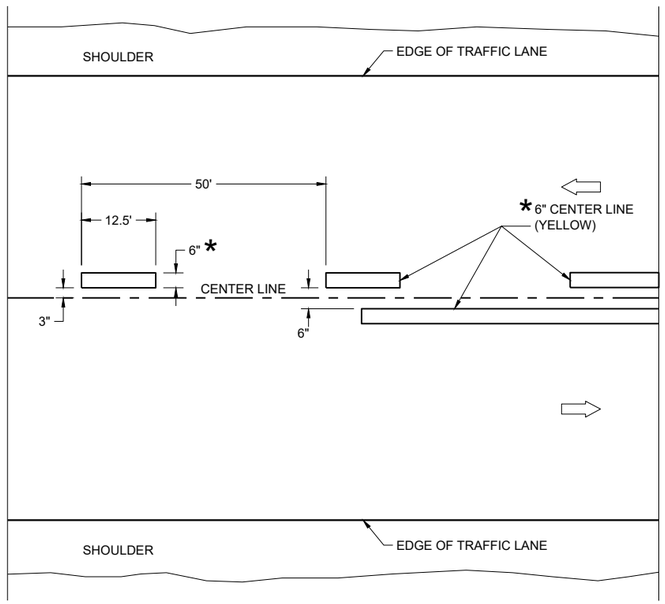
GENERAL NOTES

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

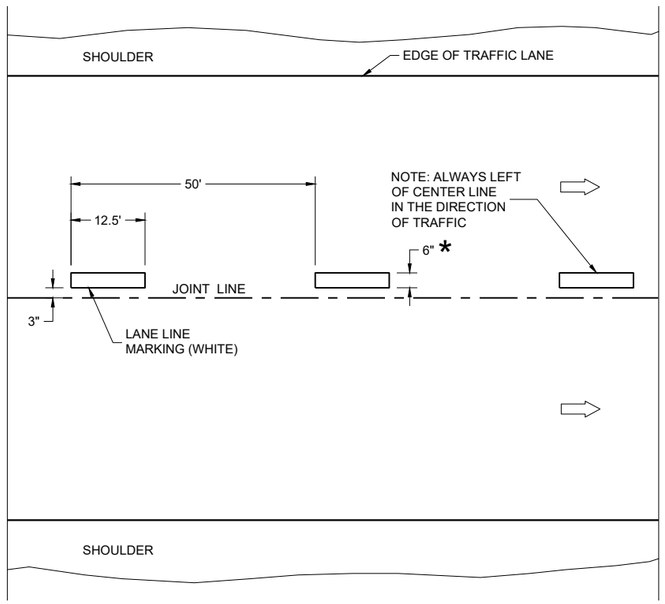
LEGEND

DIRECTION OF TRAFFIC

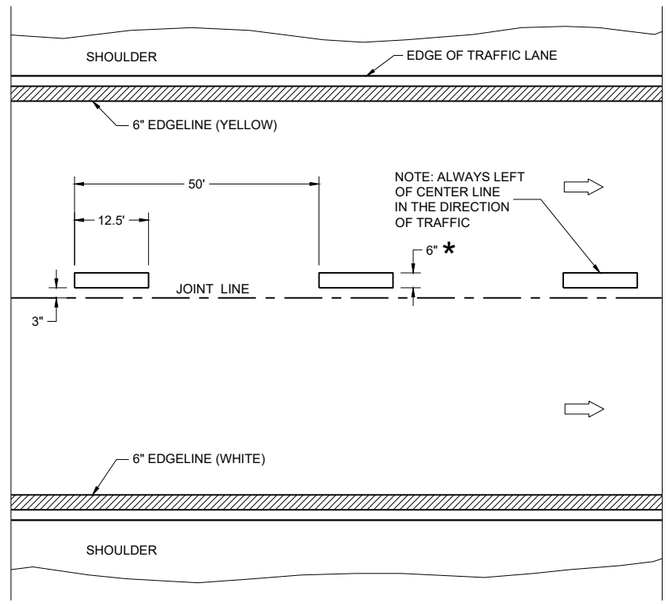
*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



TWO WAY TRAFFIC



ONE WAY TRAFFIC



FREEWAYS AND EXPRESSWAYS

TEMPORARY PAVEMENT MARKING

TEMPORARY LONGITUDINAL PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
December 2024
DATE
/S/ Jeannie Silver
Statewide Pavement Marking Engineer

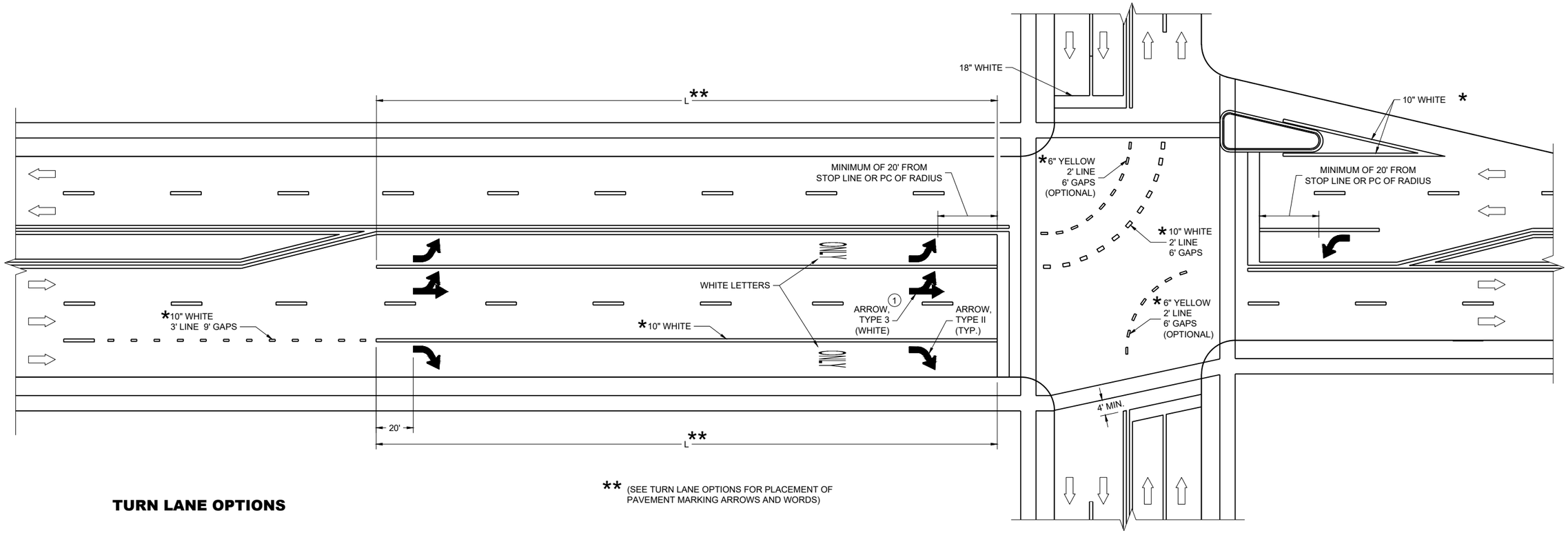
FHWA

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SDD 15C08-24b

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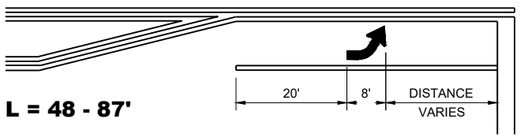
SDD 15C08-24b



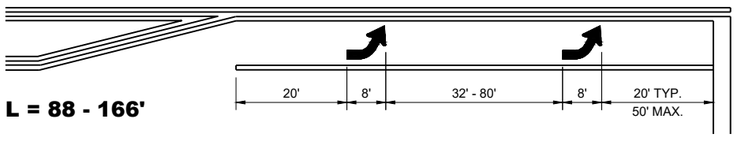
** (SEE TURN LANE OPTIONS FOR PLACEMENT OF PAVEMENT MARKING ARROWS AND WORDS)

TURN LANE OPTIONS

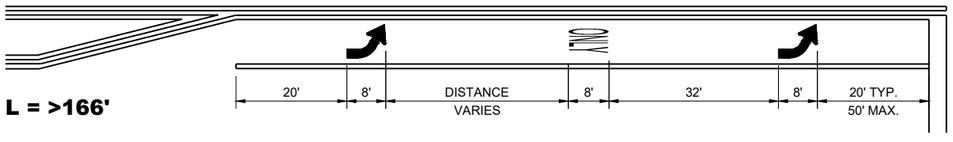
LENGTH OF TURN BAY (**L**) OF 0 - 47' DOES NOT
REQUIRE PAVEMENT MARKING ARROWS OR WORDS



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

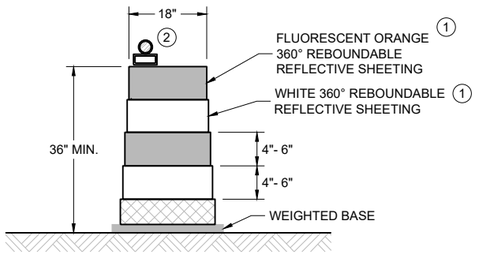
PAVEMENT MARKING (TURN LANES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

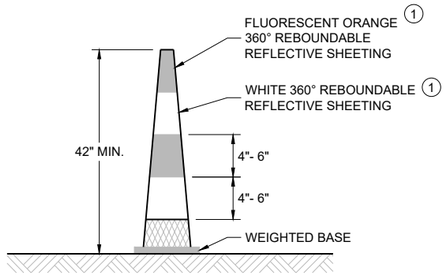
(1) REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.

(2) LOCATION OF WARNING LIGHTS WHEN SHOWN ON THE PLAN.



DRUM

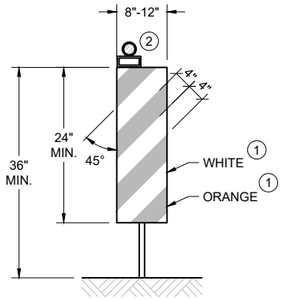
BALLAST WIDTHS
RANGE FROM 24"-36"



42" CONE

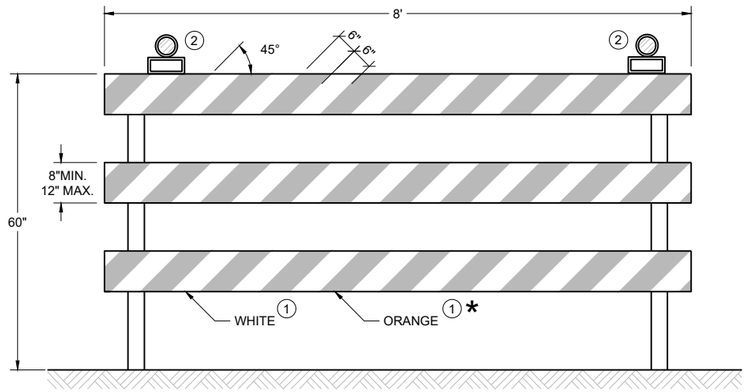
DO NOT USE IN TAPERS
½ SPACING OF DRUMS

BALLAST WIDTHS
RANGE FROM 14"-20"



VERTICAL PANEL

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



TYPE III BARRICADE

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

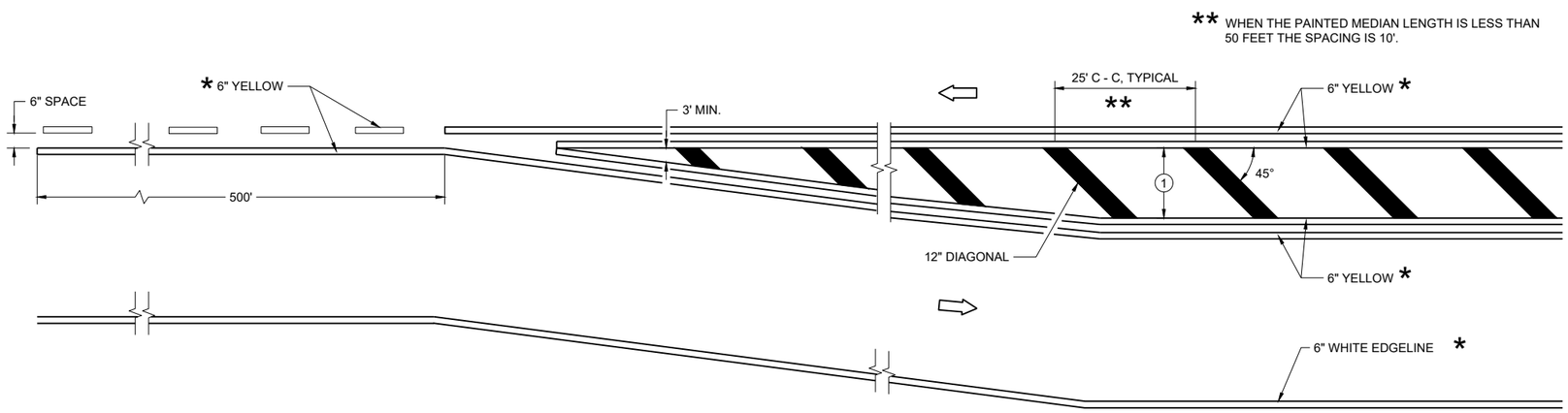
* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

CHANNELIZING DEVICES
DRUMS, CONES, BARRICADES
AND VERTICAL PANELS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2026 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINEER
FHWA

6
SDD 15C11-11b



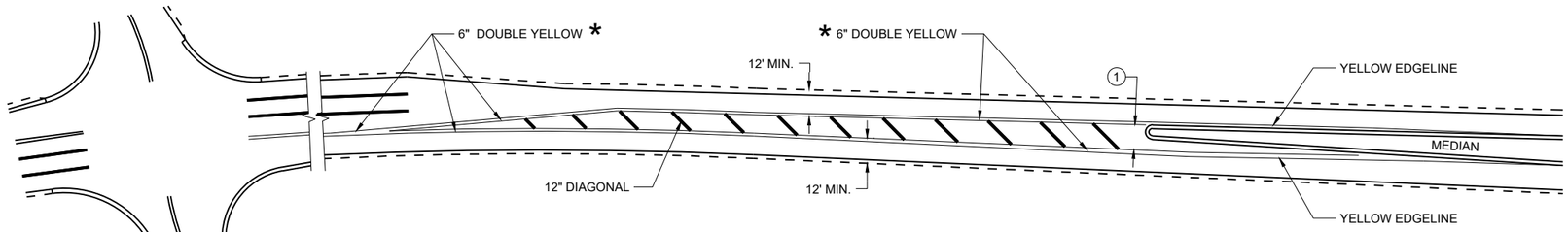
MEDIAN ISLAND DETAIL

GENERAL NOTES

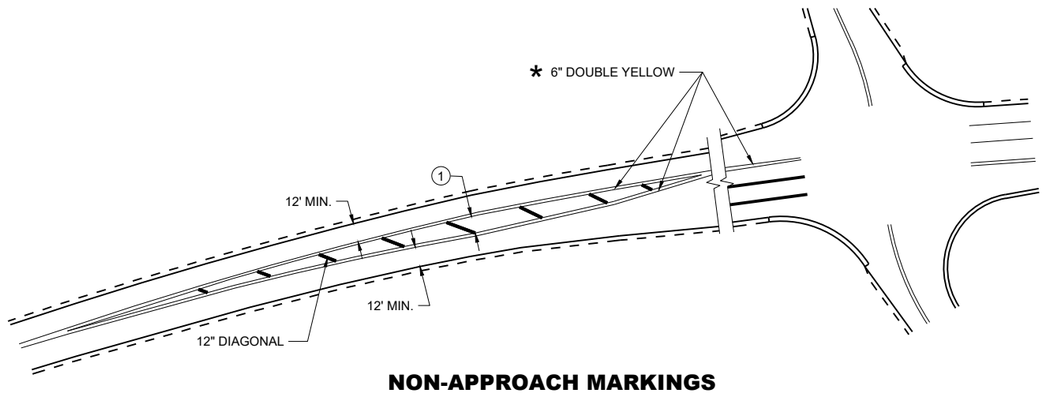
(1) DIAGONALS ARE OPTIONAL WHEN PAINTED ISLAND IS LESS THAN 6 FEET AT THE WIDEST POINT. OMIT DIAGONALS IF WIDTH IS LESS THAN 4 FEET.

DIRECTION OF TRAVEL

*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



APPROACH MARKINGS FOR OTHER MEDIAN TYPES



NON-APPROACH MARKINGS

MEDIAN ISLAND PAVEMENT MARKINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

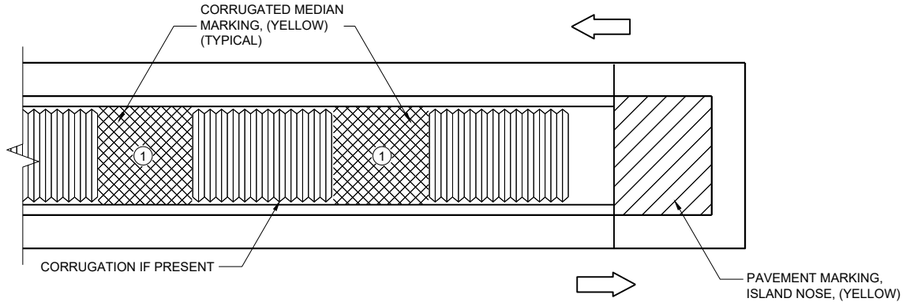
APPROVED
August 2024
DATE

/S/ Jeannie Silver
Statewide Pavement Marking Engineer

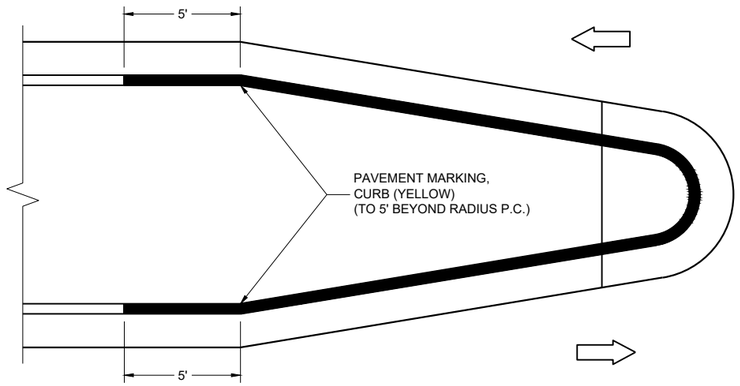
FHWA

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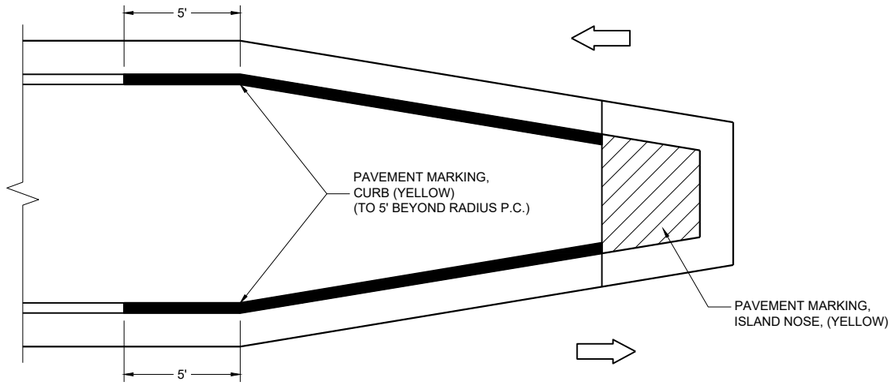
SDD 15C18-09a



MEDIAN ISLAND WITH SQUARE BLUNT NOSE



MEDIAN ISLAND WITH ROUND BLUNT NOSE



MEDIAN ISLAND WITH SLOPED NOSE

**TYPICAL PLACEMENT OF
PAVEMENT MARKING ON MEDIAN ISLANDS**

GENERAL NOTES

WHEN CONCRETE CORRUGATED MEDIAN IS CONSTRUCTED TO SEPARATE TRAFFIC OPERATING IN THE OPPOSING DIRECTION, YELLOW PAVEMENT MARKING SHALL BE APPLIED TO THE FLAT PORTION OF THE CONCRETE CORRUGATED MEDIAN. THE ITEM OF PAVEMENT MARKING, CONCRETE CORRUGATED MEDIAN, WILL BE MEASURED IN PLACE AND ACCEPTED IN ACCORDANCE WITH THE CONTRACT AND PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE FOOT.

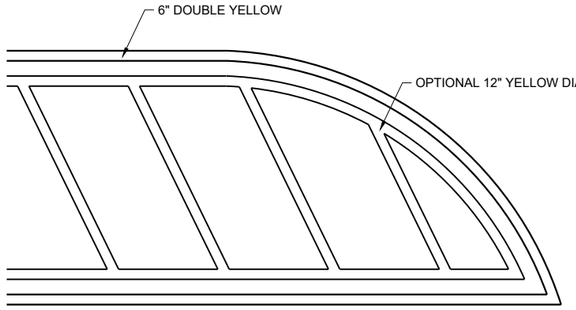
(1) APPLY PAVEMENT MARKING TO THE FLAT PORTION OF CORRUGATED MEDIAN.

ISLAND NOSE MARKING

CURB MARKING

CORRUGATED MEDIAN MARKING

DIRECTION OF TRAVEL



FLUSH MEDIAN ISLAND NOSE

**PAVEMENT MARKINGS,
MEDIAN ISLAND NOSE**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
August 2024
DATE

/S/ Jeannie Silver
Statewide Pavement Marking Engineer

FHWA

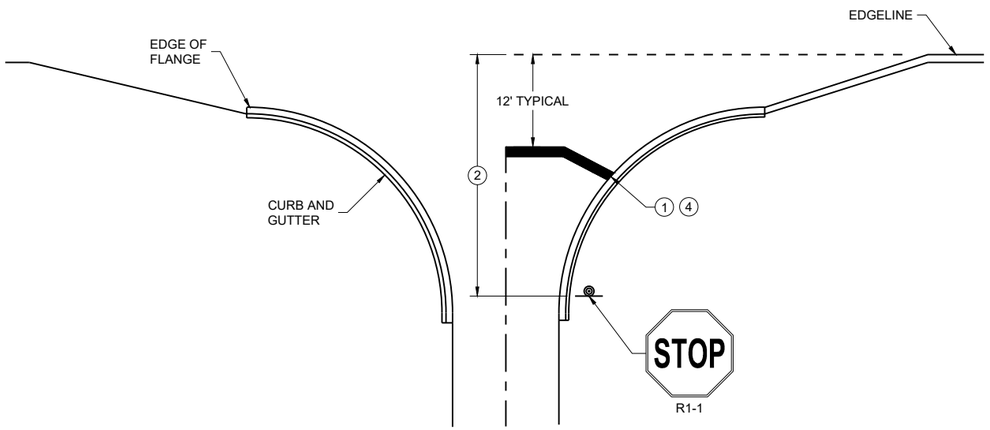
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SDD 15C18-09b

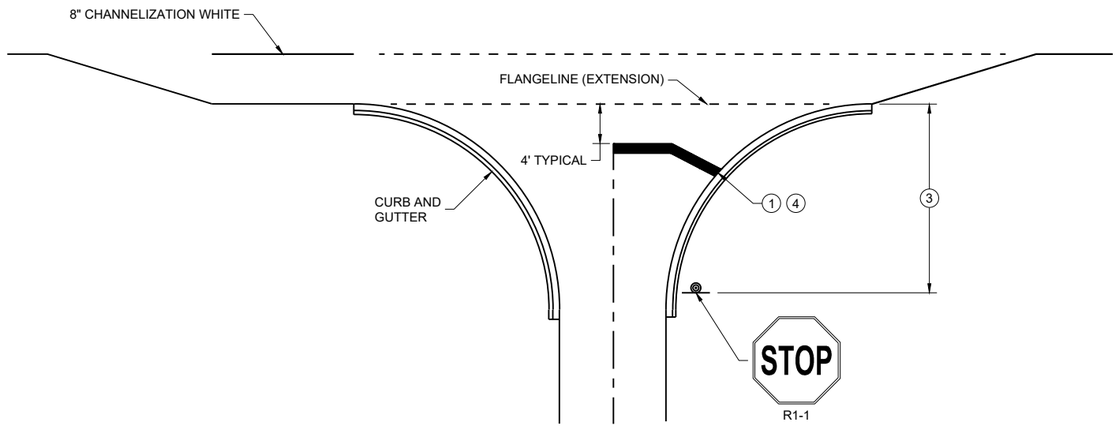
GENERAL NOTES

STOP SIGN SHALL BE PLACED A MINIMUM OF 6 FEET TO A MAXIMUM OF 50 FEET FROM THE EDGELINE LOCATION.

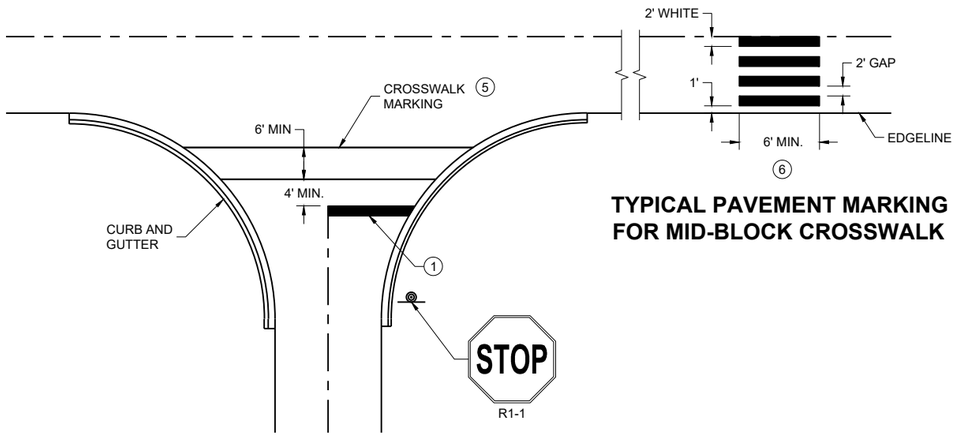
1. 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE REGION MARKING ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
2. NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE.
3. NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGE LINE EXTENSION.
4. MOVE CLOSER TO THE EDGE OF TRAVEL LINE AS NEEDED FOR VISIBILITY AND SIGHT LINES (NO CLOSER THAN 4 FEET).
5. LADDER BAR CROSSWALKS SHOULD ONLY BE USED FOR MID BLOCK CROSSINGS. USE 2 - 6" TRANSVERSE LINES.
6. POSTED SPEED LIMITS OF 40 MPH OR GREATER USE A MINIMUM WIDTH OF 8' FOR MIDBLOCK CROSSWALKS



TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER

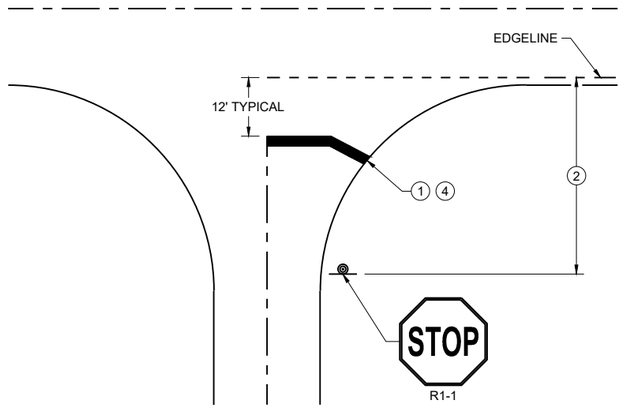


TYPICAL STOP LINE PAVEMENT MARKING FOR SIDE ROADS WITH RIGHT TURN LANE



TYPICAL PAVEMENT MARKING FOR MID-BLOCK CROSSWALK (5)

TYPICAL STOP LINE PAVEMENT MARKING FOR SIDE ROADS WITH CROSSWALK MARKING



TYPICAL STOP LINE PAVEMENT MARKING WITHOUT CURB AND GUTTER

STOP LINE AND CROSSWALK PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

March 2024 — DATE

/S/ Matthew Rauch — STATE SIGNING AND MARKING ENGINEER

FHWA

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SDD 15C33-05

LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- REMOVING PAVEMENT MARKINGS
- DIRECTION OF TRAFFIC
- WORK AREA
- CONNECTED ARROW BOARD
- WZ START LOCATION MARKER
- WZ END LOCATION MARKER

GENERAL NOTES

THIS DETAIL MAY BE USED FOR ROADWAYS WITH EITHER TWO OR THREE LANES IN EACH DIRECTION.

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

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON COVERED OR "DOWNED" SIGNS.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE MAY BE MOUNTED ON TEMPORARY SUPPORTS.

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

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500' DESIRABLE) DISTANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE

W20-1A, G20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE LANE CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING LINE IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARDS SO THE APPROACHING DRIVER HAS A CLEAR VIEW OF THE ARROW BOARDS AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUMS.

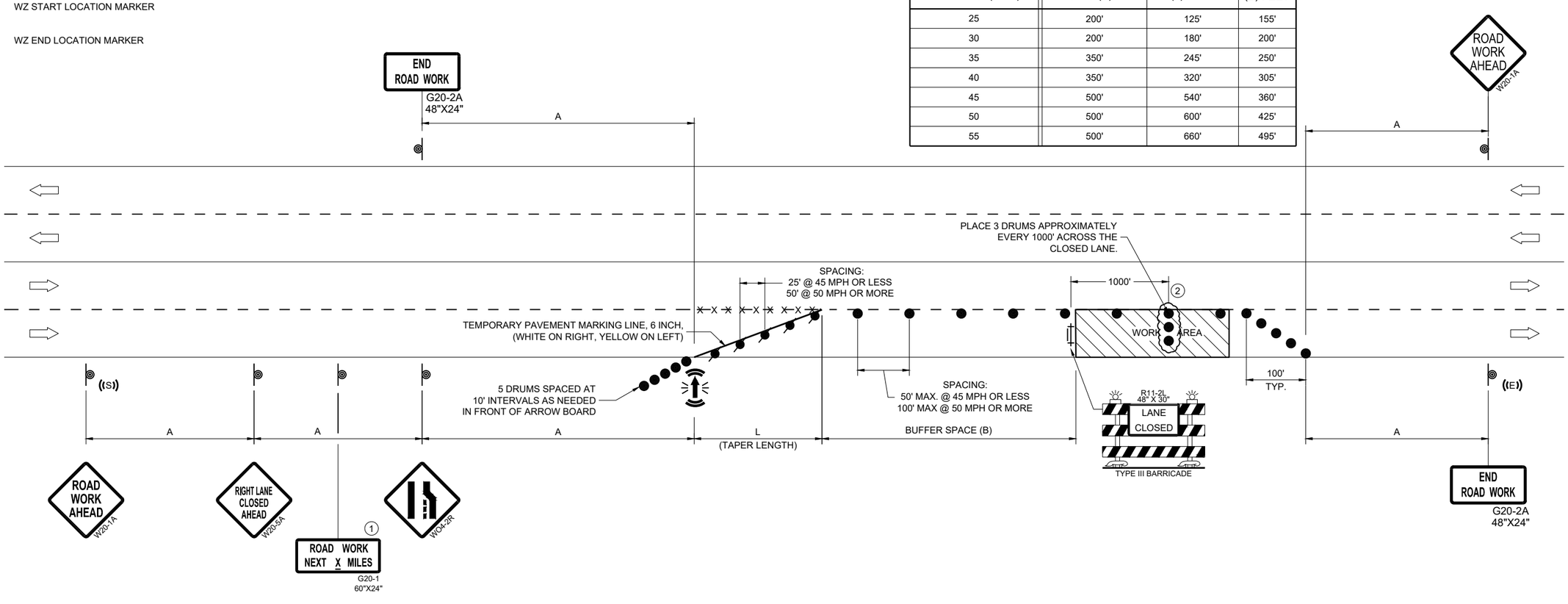
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

(1) OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.

(2) DRUMS IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY REESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

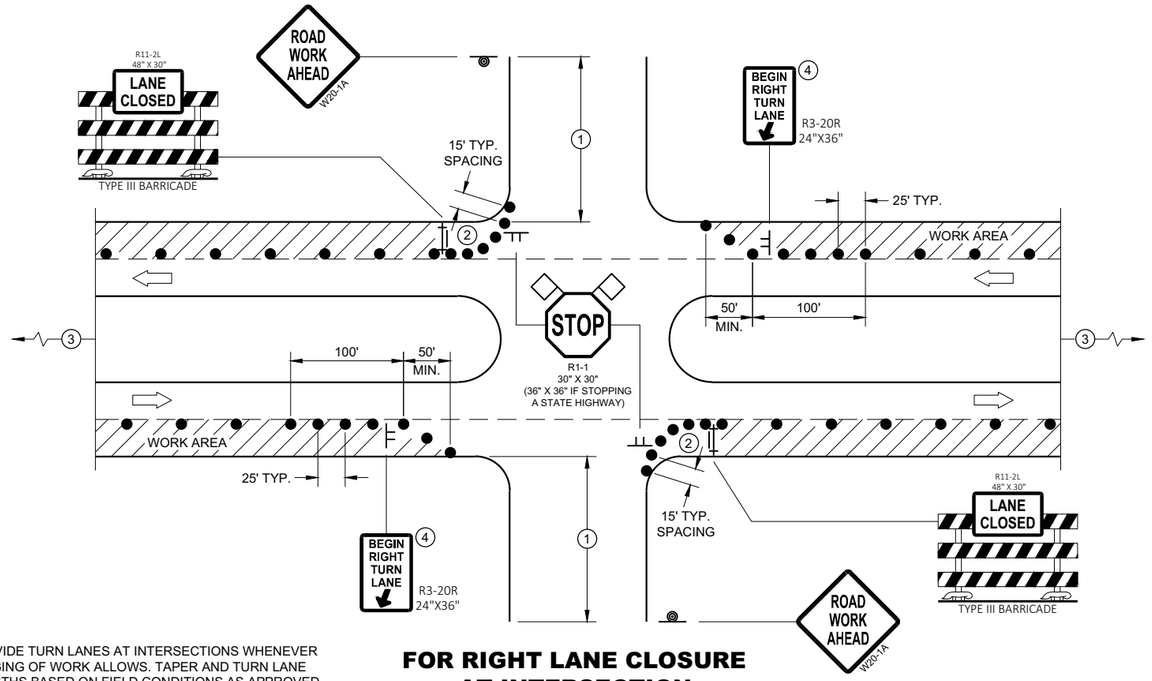
POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	TAPER LENGTH (12 FT. LANE) (L) FEET	BUFFER SPACE (B) FEET
25	200'	125'	155'
30	200'	180'	200'
35	350'	245'	250'
40	350'	320'	305'
45	500'	540'	360'
50	500'	600'	425'
55	500'	660'	495'



TRAFFIC CONTROL, SINGLE RIGHT LANE CLOSURE, UNDIVIDED NON-FREEWAY/EXPRESSWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 15D20-12b



FOR RIGHT LANE CLOSURE AT INTERSECTION

PROVIDE TURN LANES AT INTERSECTIONS WHENEVER STAGING OF WORK ALLOWS. TAPER AND TURN LANE LENGTHS BASED ON FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

GENERAL NOTES

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

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON COVERED OR "DOWNED" SIGNS.

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

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500' DESIRABLE) DISTANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

SIGNS THAT WILL REMAIN IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

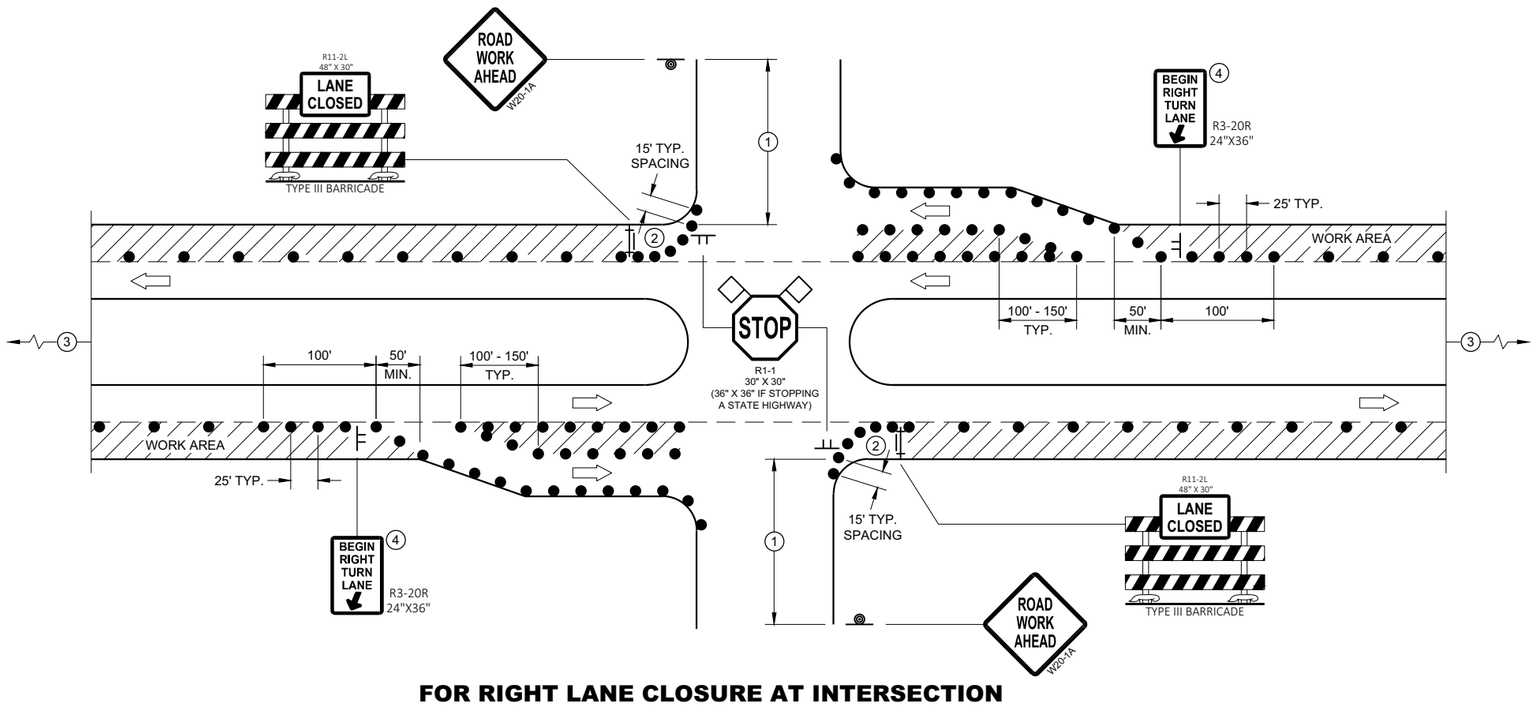
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

(1) 500' TYPICAL OR AT LAST INTERSECTION, WHICHEVER IS CLOSER.
350' IF 35 - 40 MPH.
200' IF 25 - 30 MPH.

(2) ALSO USE BARRICADE AND 15 FOOT TYPICAL DRUM SPACING AT COMMERCIAL DRIVEWAYS

(3) SEE SEPARATE LANE CLOSURE DETAIL FOR ADDITIONAL TRAFFIC CONTROL.

(4) MINIMUM MOUNTING HEIGHT OF 5 FEET FROM EDGE OF PAVEMENT (AT EDGE LINE LOCATION) TO BOTTOM OF SIGN.



FOR RIGHT LANE CLOSURE AT INTERSECTION (WITH RIGHT TURN BAY OPEN)

LEGEND

- SIGN ON TEMPORARY SUPPORT
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TYPE III BARRICADE WITH ATTACHED SIGN
- DIRECTION OF TRAFFIC
- FLAGS, 16" X 16" MIN., ORANGE
- WORK AREA

TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE RIGHT LANE CLOSURE

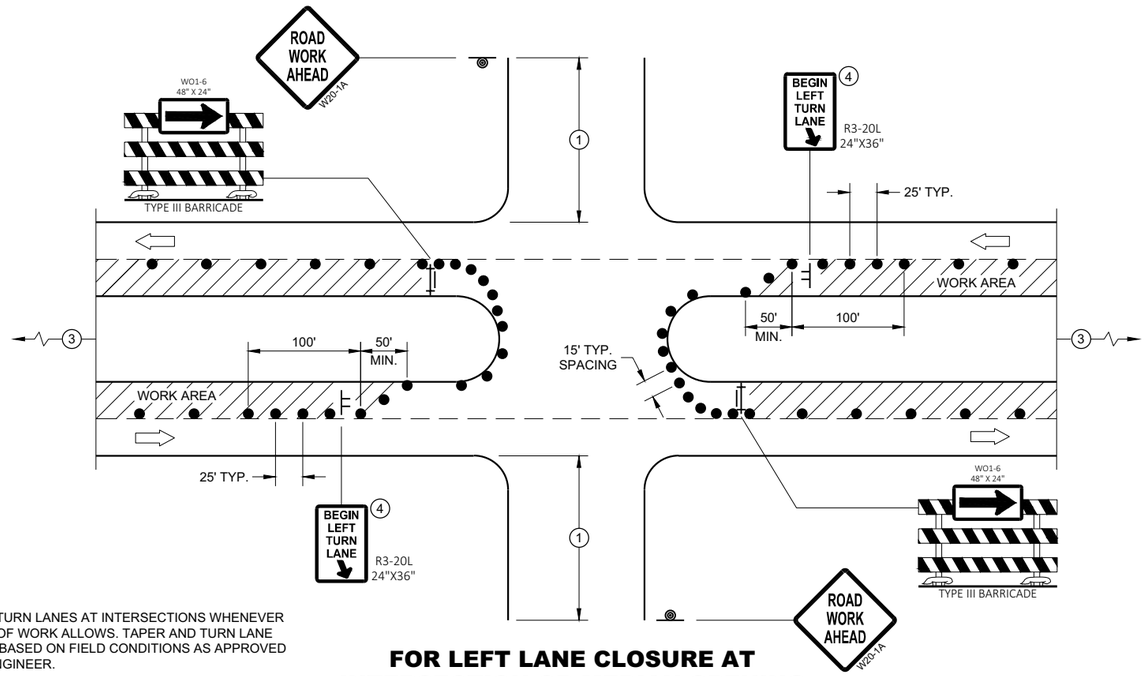
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 15D21 - 07a

6

SDD 15D21 - 07a



PROVIDE TURN LANES AT INTERSECTIONS WHENEVER STAGING OF WORK ALLOWS. TAPER AND TURN LANE LENGTHS BASED ON FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

FOR LEFT LANE CLOSURE AT INTERSECTION OR MEDIAN OPENING

GENERAL NOTES

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

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON COVERED OR "DOWNED" SIGNS.

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

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500' DESIRABLE) DISTANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

SIGNS THAT WILL REMAIN IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

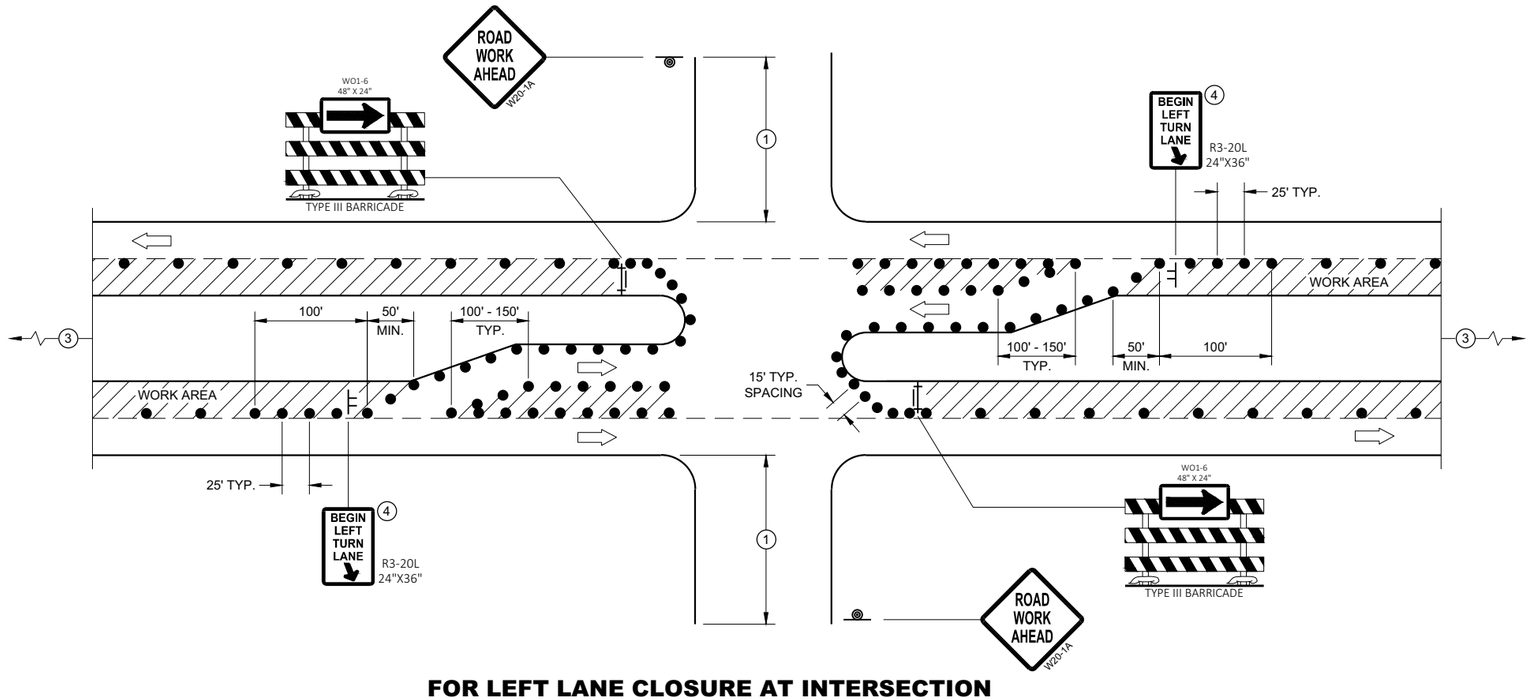
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

(1) 500' TYPICAL OR AT LAST INTERSECTION, WHICHEVER IS CLOSER.
350' IF 35 - 40 MPH.
200' IF 25 - 30 MPH.

(2) ALSO USE BARRICADE AND 15 FOOT TYPICAL DRUM SPACING AT COMMERCIAL DRIVEWAYS

(3) SEE SEPARATE LANE CLOSURE DETAIL FOR ADDITIONAL TRAFFIC CONTROL.

(4) MINIMUM MOUNTING HEIGHT OF 5 FEET FROM EDGE OF PAVEMENT (AT EDGE LINE LOCATION) TO BOTTOM OF SIGN.



FOR LEFT LANE CLOSURE AT INTERSECTION OR MEDIAN OPENING (WITH LEFT TURN BAY OPEN)

LEGEND

- SIGN ON TEMPORARY SUPPORT
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TYPE III BARRICADE WITH ATTACHED SIGN
- DIRECTION OF TRAFFIC
- FLAGS, 16" X 16" MIN., ORANGE
- WORK AREA

TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LEFT LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
August 2020
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

6

SDD 15D21 - 07b

6

SDD 15D21 - 07b

LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- DIRECTION OF TRAFFIC
- 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.

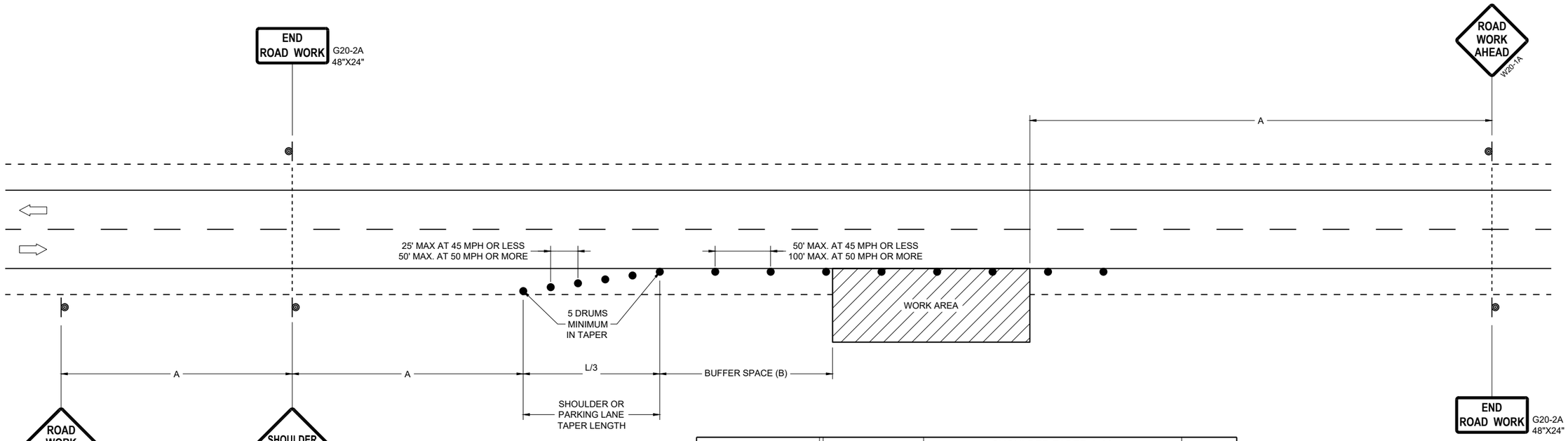
ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

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.



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	155
30	200'	15	20	25	30	35	40	200
35	350'	20	27	34	40	47	54	250
40	350'	26	35	44	53	62	70	305
45	500'	45	59	74	89	104	119	360
50	500'	50	66	83	99	116	132	425
55	500'	54	73	91	109	127	145	495

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2026
DATE

/S/ ANDREW HEIDTKE
STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER

FHWA

6
SDD 15D28-06

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

POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	SHIFTING TAPER L/2 W, LATERAL OFFSET (FT)					
		3	4	5	6	7	8
25	200	10	14	17	21	24	28
30	200	15	20	25	30	35	40
35	350	20	27	34	40	47	54
40	350	26	35	44	53	62	70
45	500	45	59	74	89	104	119
50	500	50	66	83	99	116	132
55	500	54	73	91	109	127	145

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.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36"x36" SIGNS MAY BE USED IF APPROVED BY THE REGIONAL TRAFFIC UNIT.

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

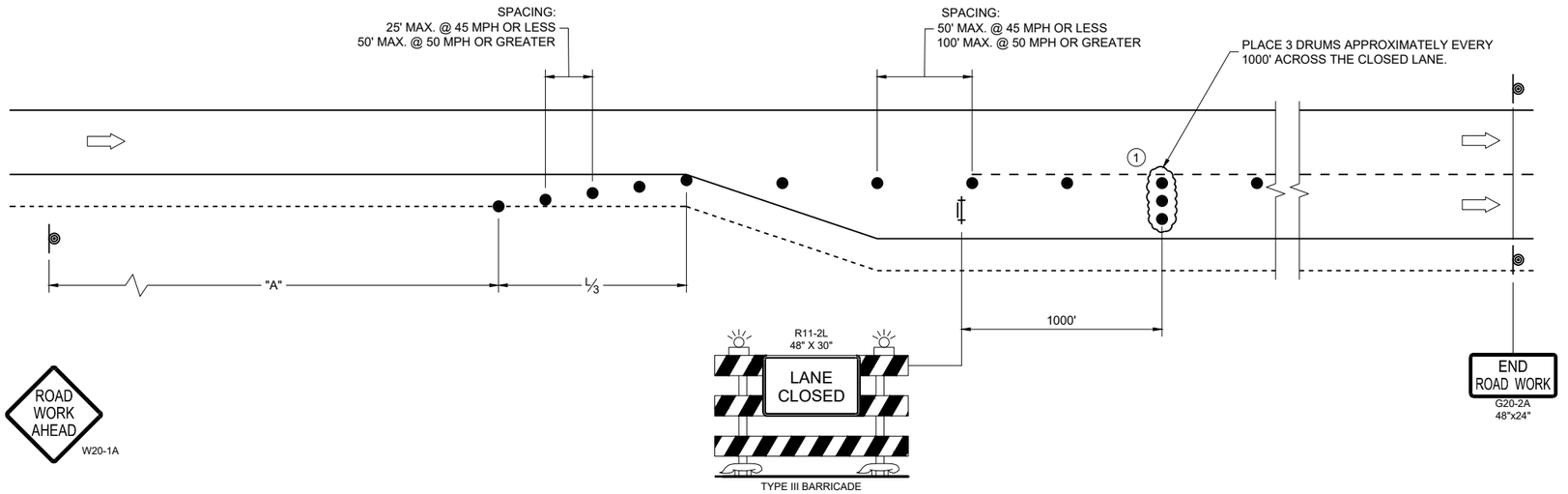
ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

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.

W20-1 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 WORK IS LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS.

(1) DRUMS IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY REESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.



6

SDD 15D50-05a

TRAFFIC CONTROL
ADDED LANE CLOSURE
WITHOUT LANE SHIFT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 15D50-05a

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

POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	SHIFTING TAPER (L/2) FEET
25	200	60
30	200	90
35	350	120
40	350	160
45	500	270
50	500	300
55	500	330

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.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36"x36" SIGNS MAY BE USED IF APPROVED BY THE REGIONAL TRAFFIC UNIT.

"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.

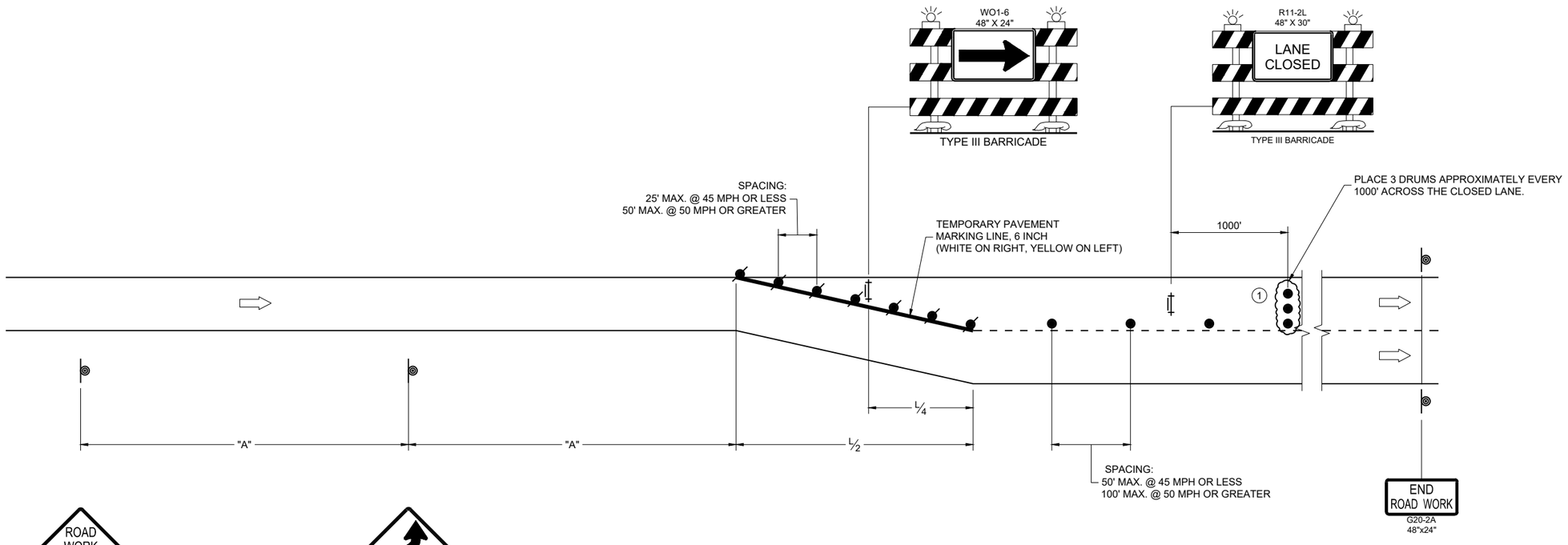
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

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

W20-1 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 WORK IS LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS.

PLACE TEMPORARY PAVEMENT MARKING AND PLACE TEMPORARY PAVEMENT LINE IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

(1) DRUMS IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY REESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.



TRAFFIC CONTROL, ADDED LANE CLOSURE WITH LANE SHIFT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2026 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINEER
FHWA

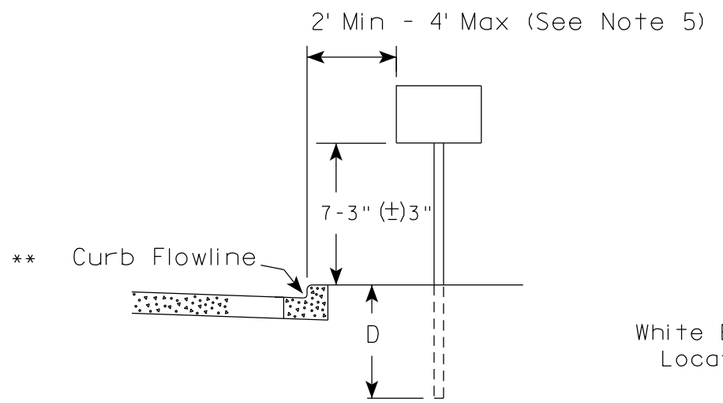
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SDD 15D50-05b

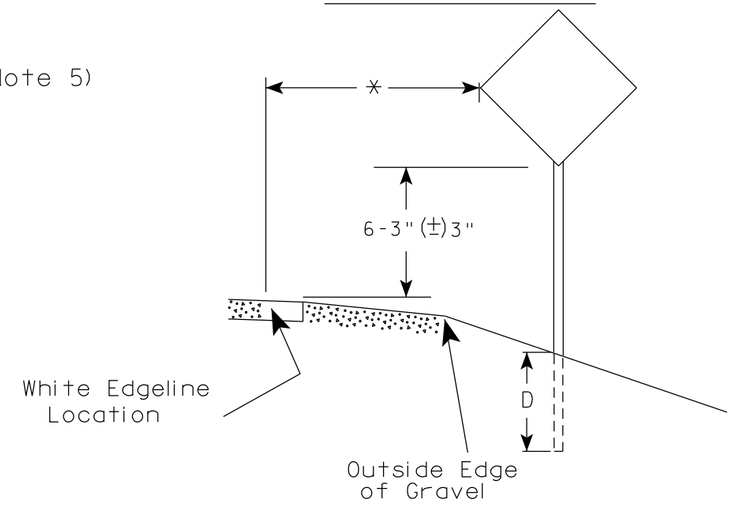
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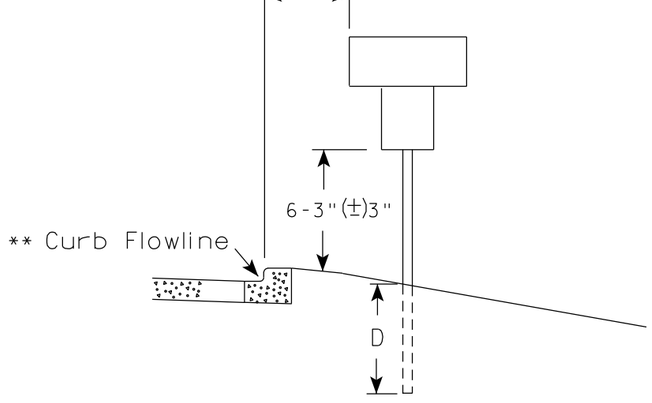
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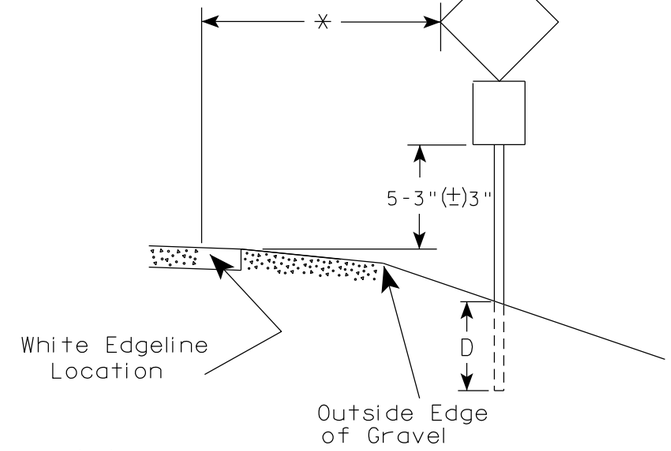
URBAN AREA



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.

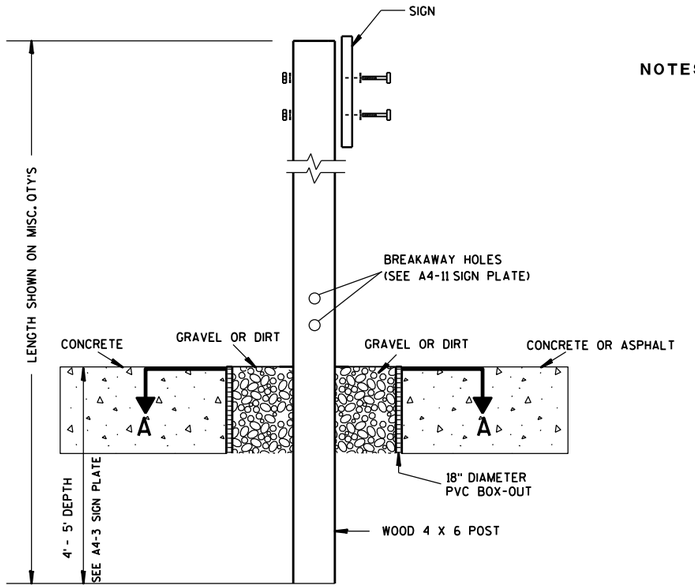
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

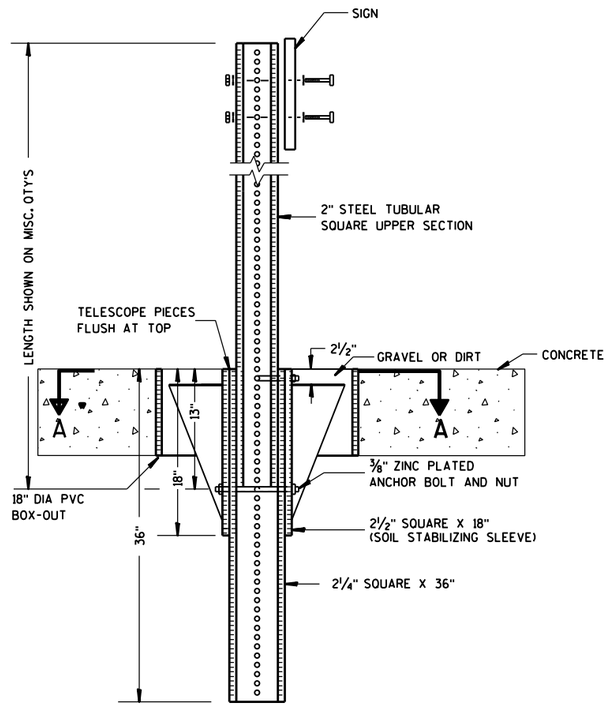
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 107	E



ELEVATION VIEW

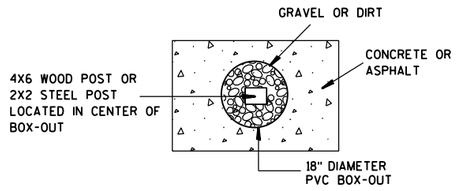
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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

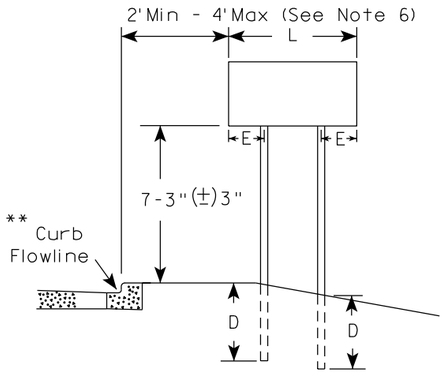
APPROVED Matthew R Rauch
for State Traffic Engineer

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

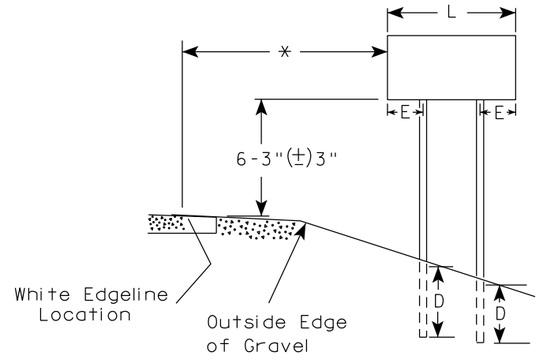
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

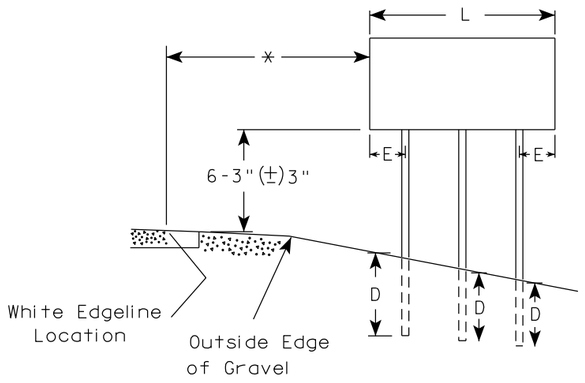
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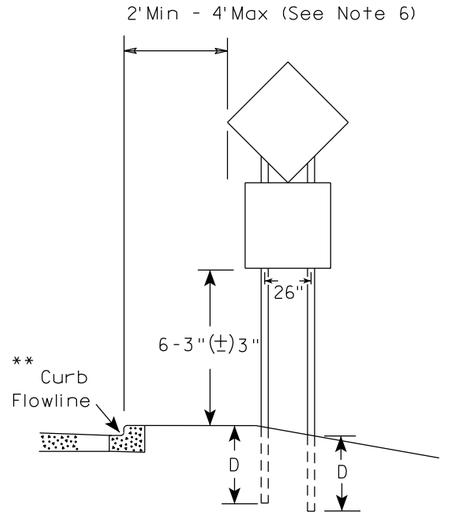
URBAN AREA



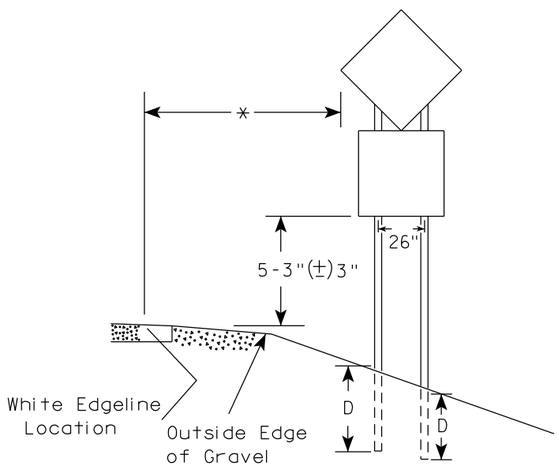
RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

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

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

GENERAL NOTES

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

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

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

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

POST EMBEDMENT DEPTH

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

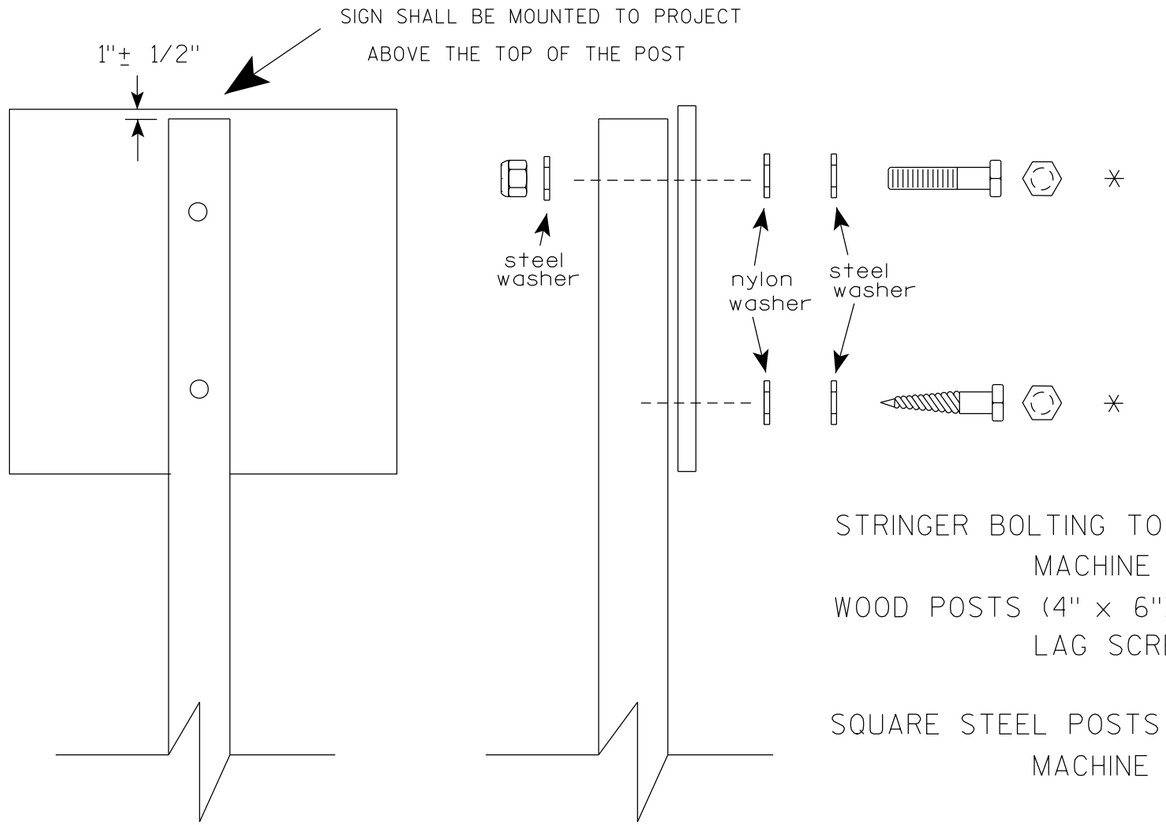
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 109	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

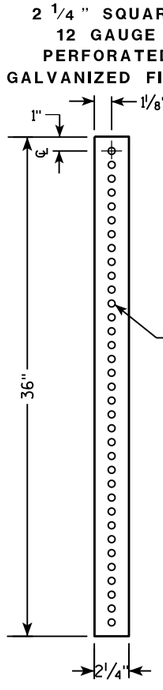
DATE 4/1/2020 PLATE NO. A4-8.9

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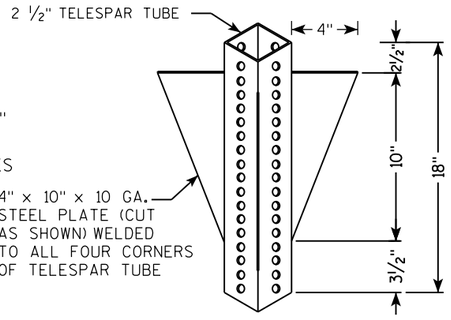
SHEET NO: 110 E

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

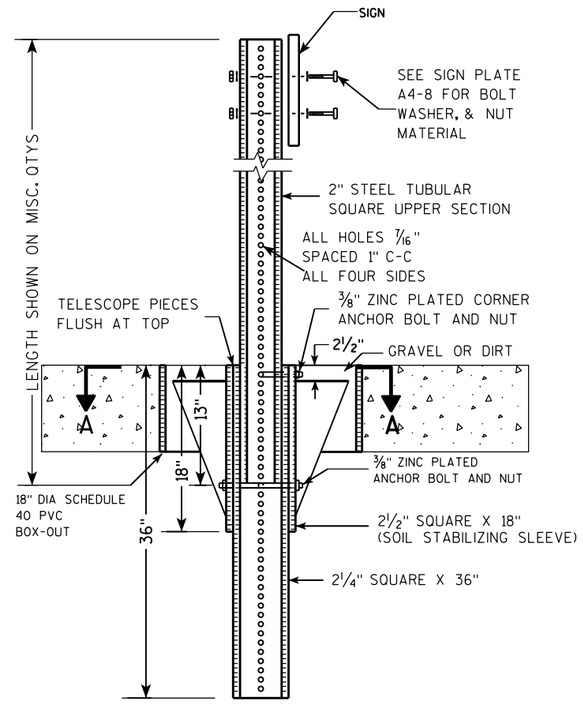
2 ¼ " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



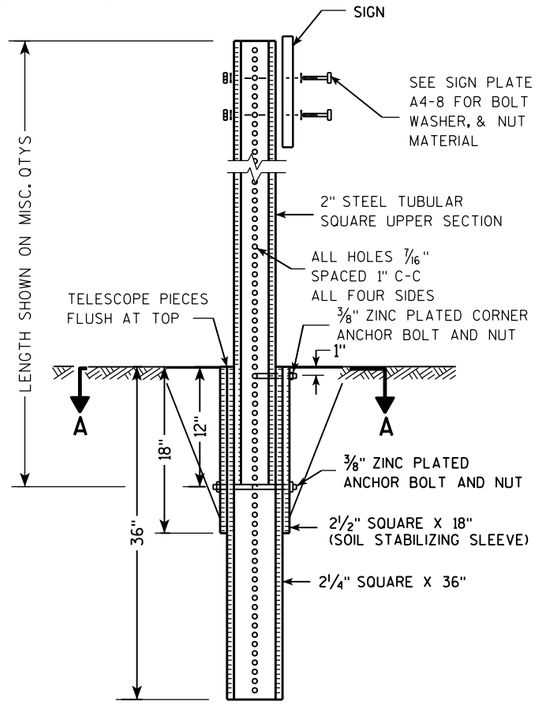
2 ½ " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

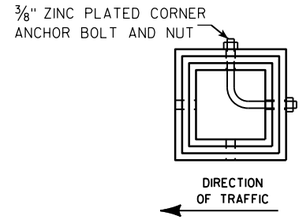


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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





SECTION A-A

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

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

TUBULAR STEEL
SIGN POST
A4-9

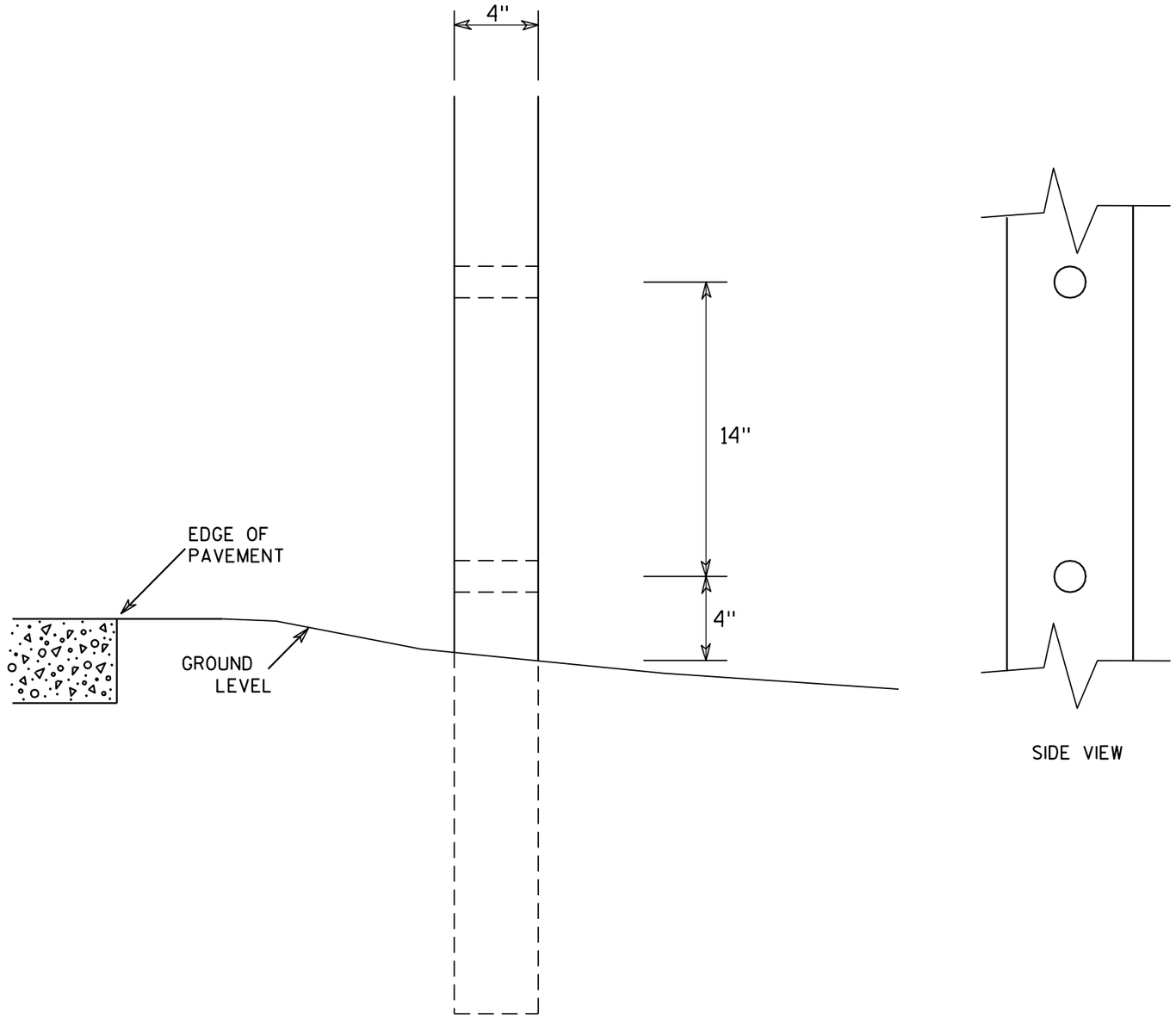
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE A4-9.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

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



SIDE VIEW

GENERAL NOTES

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

7

7

4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

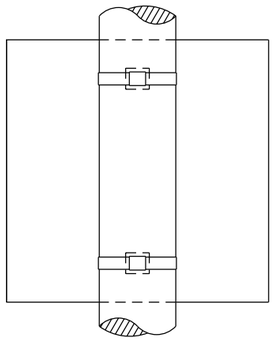
APPROVED Chester J Spang for State Traffic Engineer

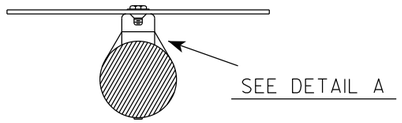
DATE 3/27/97 PLATE NO. A4-11.2

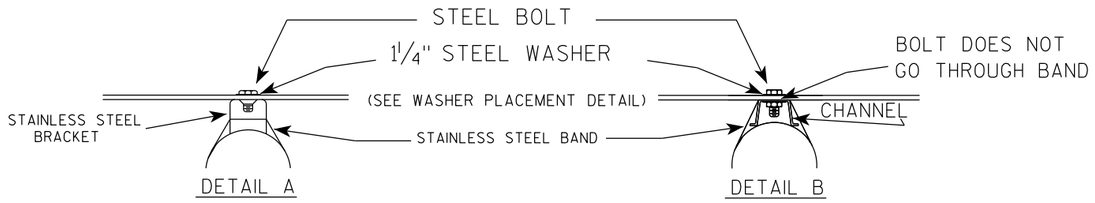
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 112	E

BANDING

SINGLE SIGN



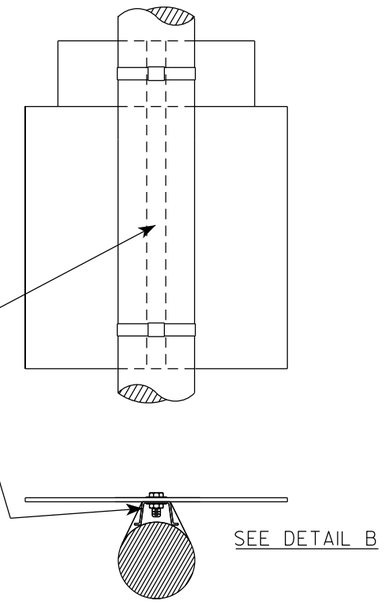




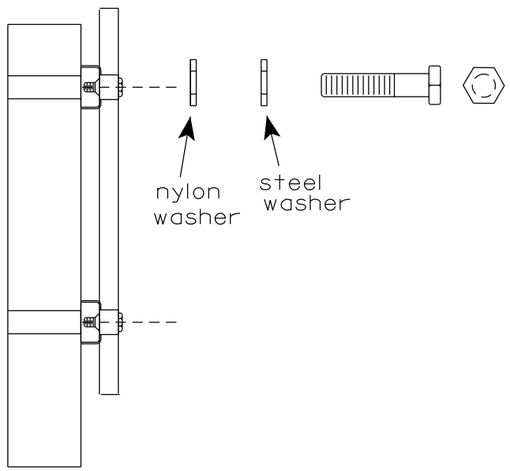
GENERAL NOTES

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

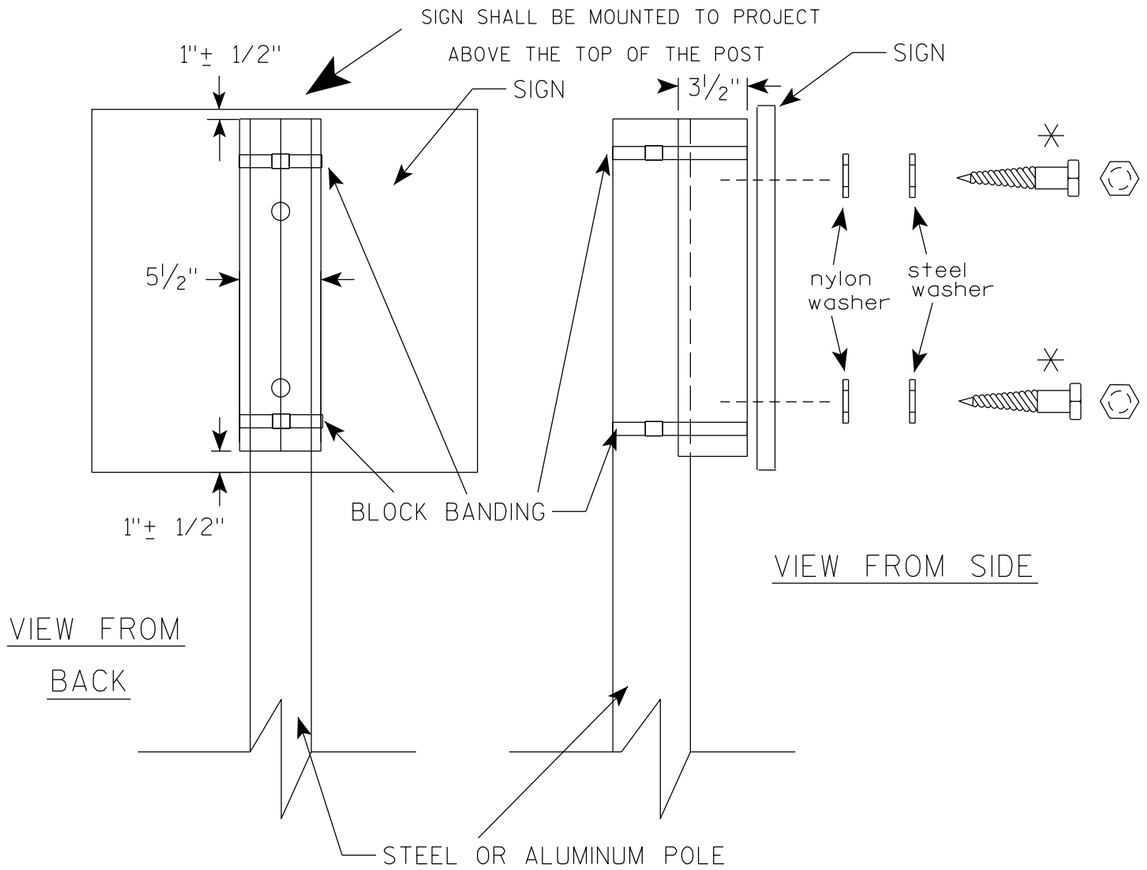
DATE 6/10/19 PLATE NO. A5-9.4

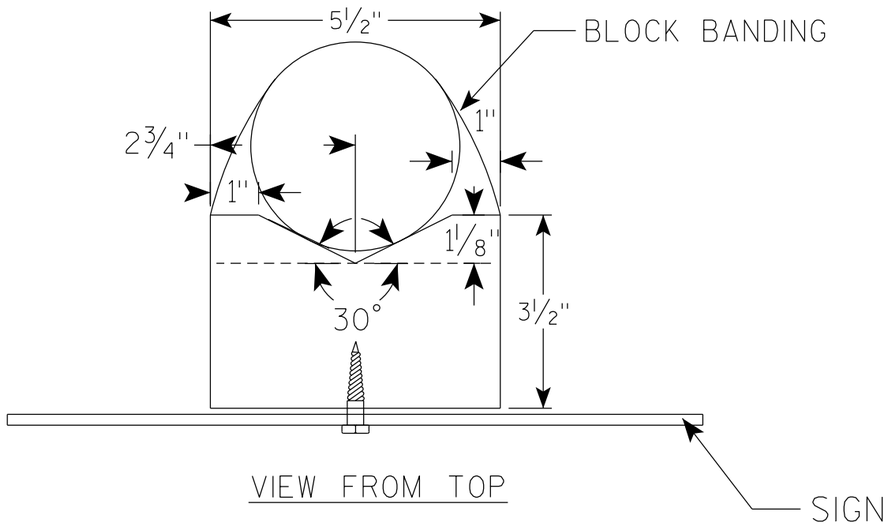
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 113	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A59.dgn PLOT DATE : 10-JUN 2019 4:10 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42

7

7





GENERAL NOTES

1. WOOD 4"X6" POST MATERIAL SHALL CONFORM TO 507.2.2 OF THE WisDOT STANDARD SPECIFICATIONS
2. BLOCK BANDING AND CLIPS SHALL BE STAINLESS STEEL, ¾" WIDTH AND 0.025" THICKNESS
3. SIGNS 3' OR GREATER IN HEIGHT SHALL UTILIZE 3 BLOCK BANDS. SIGNS UNDER 3' IN HEIGHT SHALL UTILIZE 2 BLOCK BANDS
4. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA, BUT NORNALLY THERE ARE TWO. FOR SIGNS GREATER THAN 9 S.F. 3 FASTENERS SHALL BE USED.
5. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
   a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
   b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3
6. ALL BOLTS SHALL HAVE HEXAGONAL HEADS.
7. STEEL WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X 1/16"
8. NYLON WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

✳ LAG BOLTS SHALL BE ⅜" X 2½"

BLOCK BANDING DETAIL (V-BLOCK OPTION)

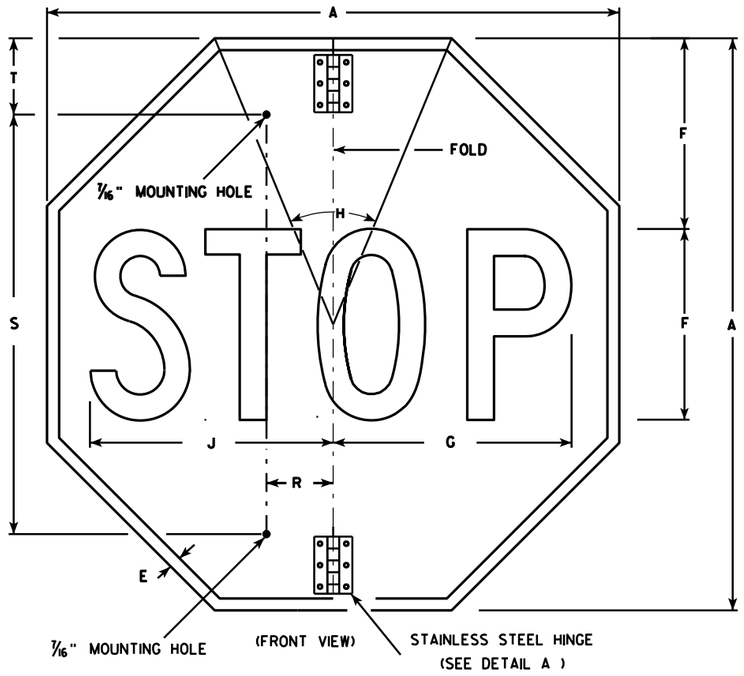
WISCONSIN DEPT OF TRANSPORTATION

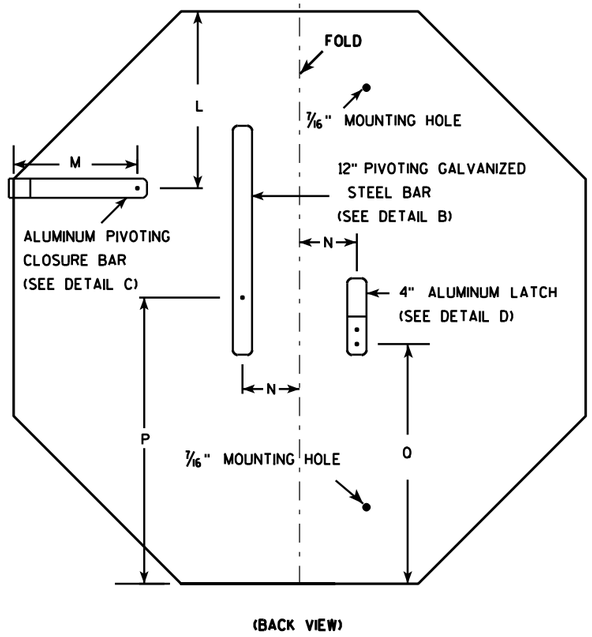
APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:

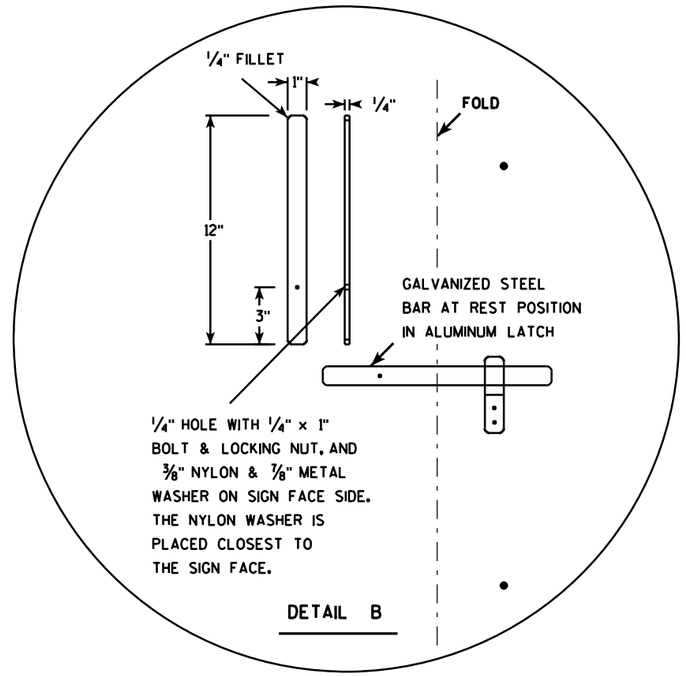
SHEET NO: 114 E

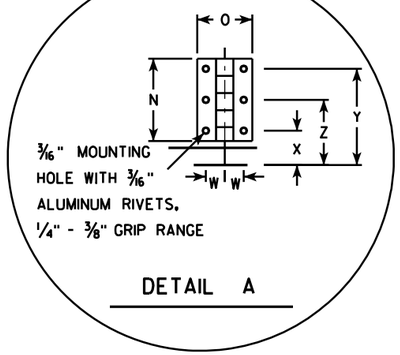


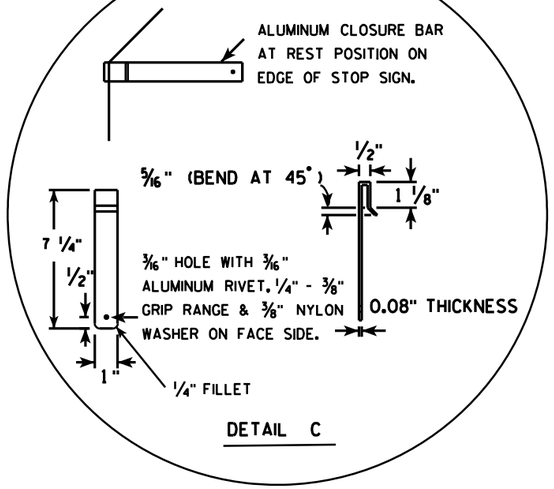


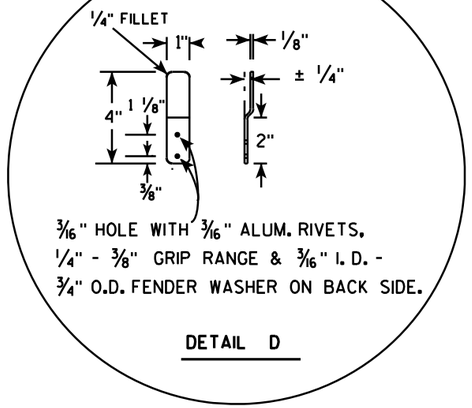
NOTES

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
4. All hardware used on the folding STOP sign installation shall conform to 637.2.4 of the WIS DOT Standard Specification.









SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30				5/8	10	12 1/2	45		12 3/4		9 1/4	6 1/2	3	2	15	12 3/8	2 1/2	22	5			11/16	1 1/4	3 1/2	2 3/8	5.18
2M	36				3/4	12	15	45		15 3/8		11	6 1/2	3	2	18	15 3/8	2 1/2	26	5			11/16	1 1/4	3 1/2	2 3/8	7.46
3	36				3/4	12	15	45		15 3/8		11	6 1/2	3	2	18	15 3/8	2 1/2	26	5			11/16	1 1/4	3 1/2	2 3/8	7.46
4																											
5																											

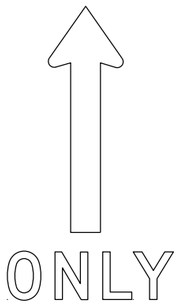
STANDARD SIGN
R1-1F

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/03/10 PLATE NO. R1-1F.3

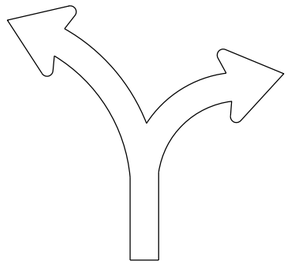
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 115 | E

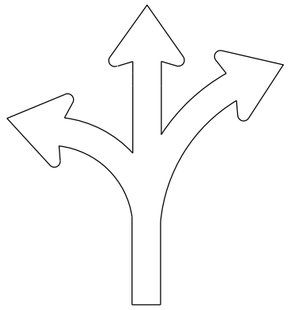


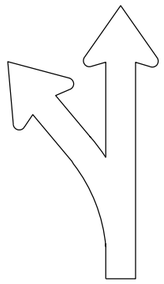
(A)

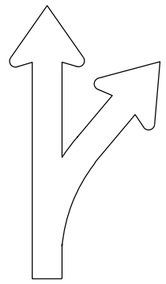


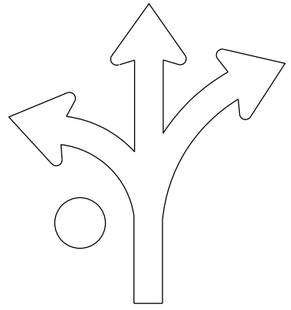
(B)

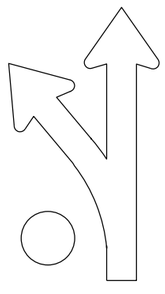

(C)

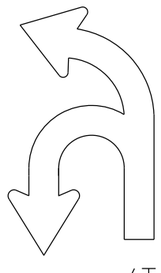

(D)

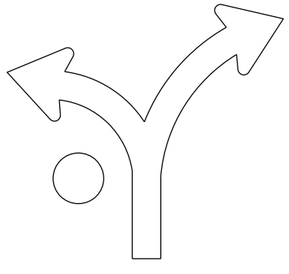

(E)

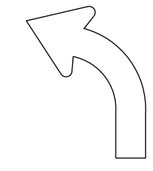

(F)


(G)

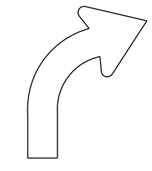

(H)


(I)


(J)



(L)



(R)

NOTES

1. Sigs are Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Use appropriate Letter for Sign Code
   Each letter added makes sign wider. Example R3-8EAR
5. Square footage of sign varies by letters

1	Letter =	3.75 sq ft for Size 2
		6.0 sq ft for Size 3
		10.0 sq ft for Size 4 or 5
2	Letters =	7.5 sq ft for Size 2
		12.0 sq ft for Size 3
		20.0 sq ft for Size 4 or 5
3	Letters =	11.25 sq ft for Size 2
		18.0 sq ft for Size 3
		30.0 sq ft for Size 4 or 5
4	Letters =	15.0 sq ft for Size 2
		24.0 sq ft for Size 3
		40.0 sq ft for Size 4 or 5
5	Letters =	18.75 sq ft for Size 2
		30.0 sq ft for Size 3
		50.0 sq ft for Size 4 or 5
6	Letters =	22.5 sq ft for Size 2
		36.0 sq ft for Size 3
		60.0 sq ft for Size 4 or 5

6. When letters C,D,G,J are used on the Left or Right end of the sign the Sq. Ft. changes.
   Add the amounts when these letters are used:
   1.25 sq ft for Size 2
   1.5 sq ft for Size 3
   2.0 sq ft for Size 4 or 5

STANDARD SIGN
R3-8 Series

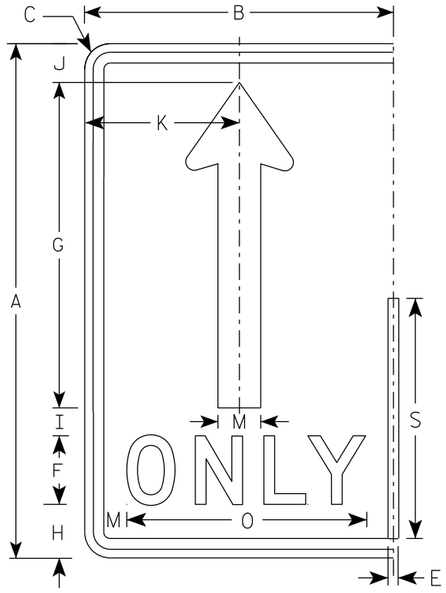
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

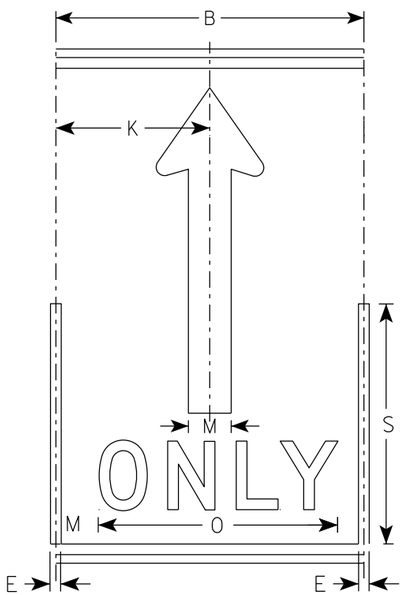
DATE 2/14/23 PLATE NO. R3-8.2

NOTES

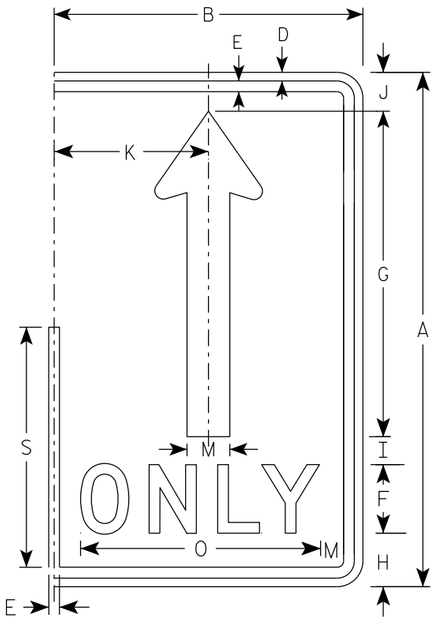
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D



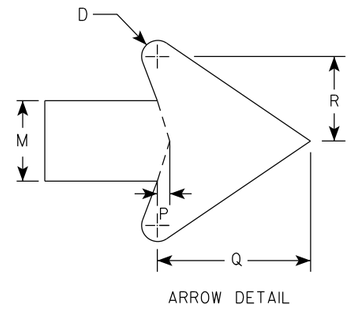
(A)



(A)



(A)



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	18	1 1/2	1/2	5/8	4	19	3 1/8	1 5/8	2 1/4	9		2 1/2		14	3/8	4 3/4	2 5/8	14								3.75
2M	30	18	1 1/2	1/2	5/8	4	19	3 1/8	1 5/8	2 1/4	9		2 1/2		14	3/8	4 3/4	2 5/8	14								3.75
3	36	24	1 1/2	1/2	5/8	5	22 3/4	3 3/4	1 3/4	2 3/4	12		3		17 5/8	1/2	5 3/4	3 1/8	16 3/4								6.0
4	48	30	2 1/4	3/4	1	6	30 3/8	5 1/8	2 7/8	3 5/8	15		4		21 3/4	5/8	7 5/8	4 1/4	22 3/8								10.0
5	48	30	2 1/4	3/4	1	6	30 3/8	5 1/8	2 7/8	3 5/8	15		4		21 3/4	5/8	7 5/8	4 1/4	22 3/8								10.0

STANDARD SIGN
R3-8 (A) Arrow

WISCONSIN DEPT OF TRANSPORTATION

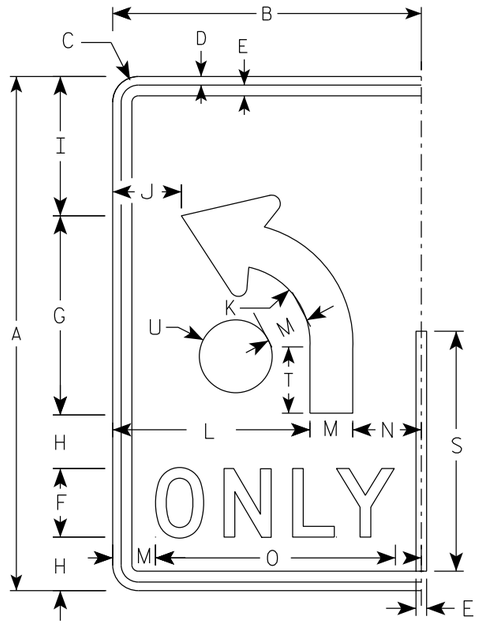
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/14/23 PLATE NO. R3-8.2

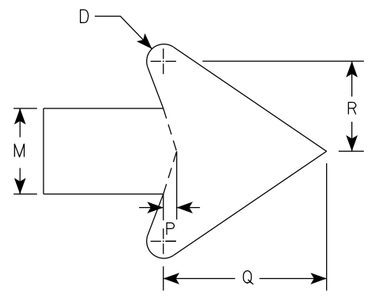
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 117 | E

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
   Message Series - D



(B)



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	18	1 1/2	1/2	5/8	4	11 5/8	3 1/8	8 1/8	4	4 1/2	11 1/2	2 1/2	4	14	3/8	4 3/4	2 5/8	14	3 7/8	2 1/8						3.75
2M	30	18	1 1/2	1/2	5/8	4	11 5/8	3 1/8	8 1/8	4	4 1/2	11 1/2	2 1/2	4	14	3/8	4 3/4	2 5/8	14	3 7/8	2 1/8						3.75
3	36	24	1 1/2	1/2	5/8	5	14	3 1/2	9 3/4	6	5 3/8	15	3	6	17 5/8	1/2	5 3/4	3 1/8	16 3/4	4 5/8	2 1/2						6.0
4	48	30	2 1/4	3/4	1	6	18 5/8	5 1/8	13 1/8	6 1/8	7 1/4	18	4	8	21 3/4	5/8	7 5/8	4 1/4	22 3/8	6 1/4	3 3/8						10.0
5	48	30	2 1/4	3/4	1	6	18 5/8	5 1/8	13 1/8	6 1/8	7 1/4	18	4	8	21 3/4	5/8	7 5/8	4 1/4	22 3/8	6 1/4	3 3/8						10.0

STANDARD SIGN

R3-8 (B) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

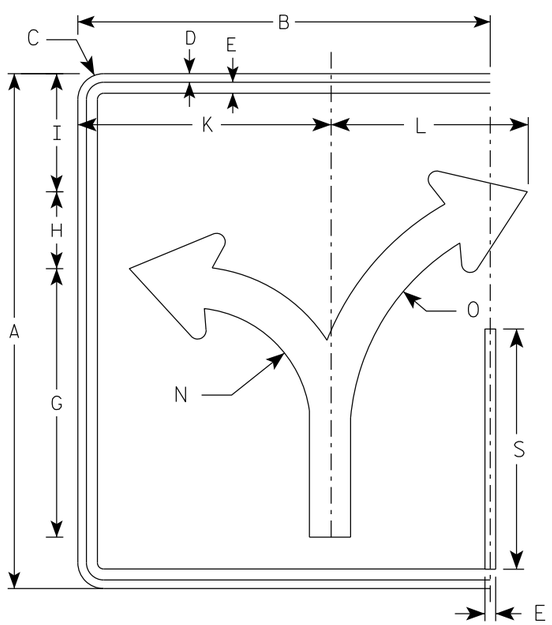
DATE 2/14/23 PLATE NO. R3-8.2

PROJECT NO:

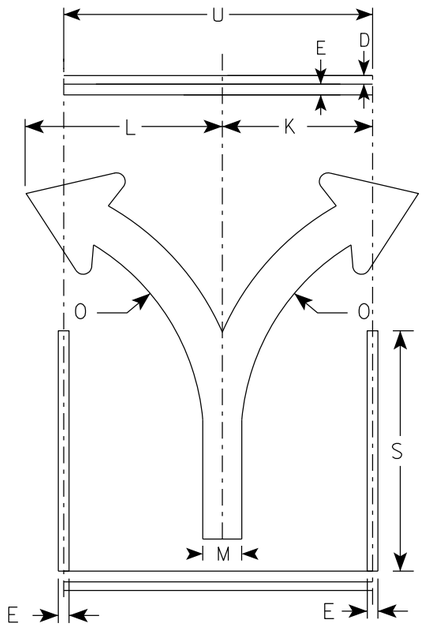
SHEET NO: 118 E

NOTES

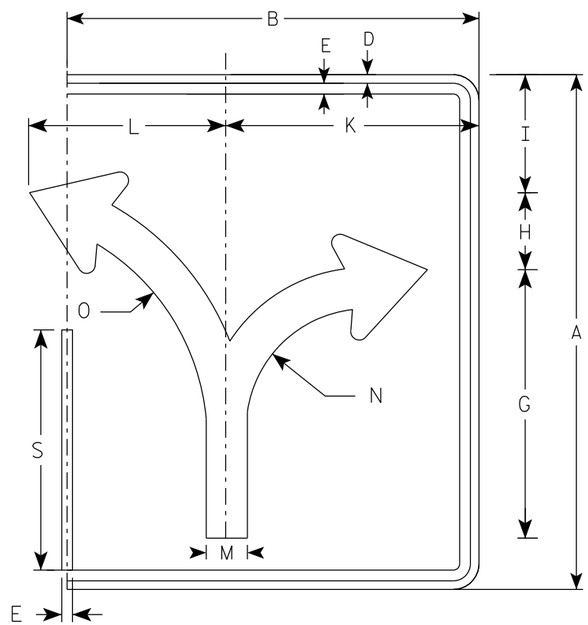
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - None



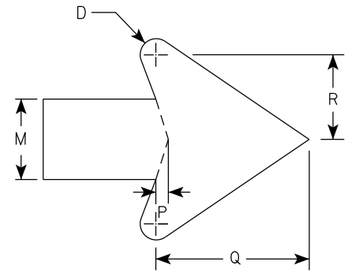
(C)



(C)



(C)



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	ENDS Area sq. ft.	MIDDLE Area sq. ft.
1																												
2S	30	24	1 1/2	1/2	5/8		15 5/8	4 1/2	6 7/8		14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		18						5.0	3.75
2M	30	24	1 1/2	1/2	5/8		15 5/8	4 1/2	6 7/8		14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		18						5.0	3.75
3	36	30	1 1/2	1/2	5/8		18 3/4	5 1/2	8 1/4		17 1/4	17 1/4	2 7/8	8 3/8	16	1/2	5 1/2	3	16 3/4		24						7.5	6.0
4	48	36	2 1/4	3/4	1		24 7/8	7 1/4	11		23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		30						12.0	10.0
5	48	36	2 1/4	3/4	1		24 7/8	7 1/4	11		23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		30						12.0	10.0

STANDARD SIGN
R3-8 (C) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/14/23 PLATE NO. R3-8.2

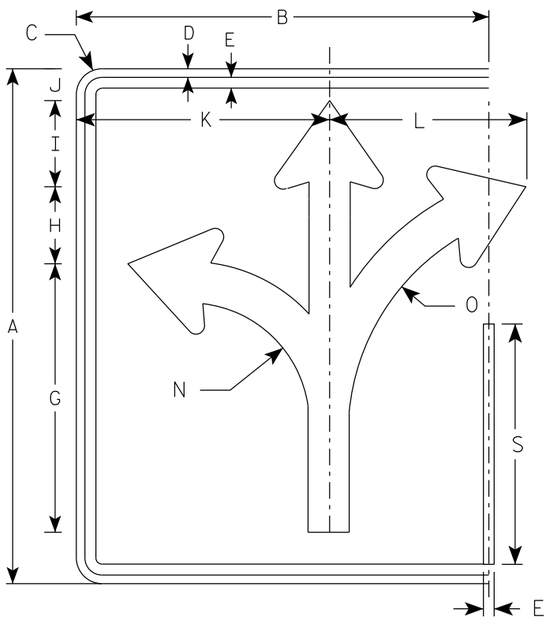
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 119 | E

7

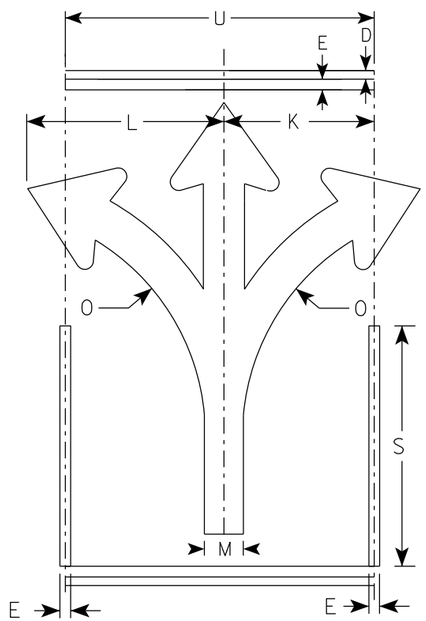
7

NOTES

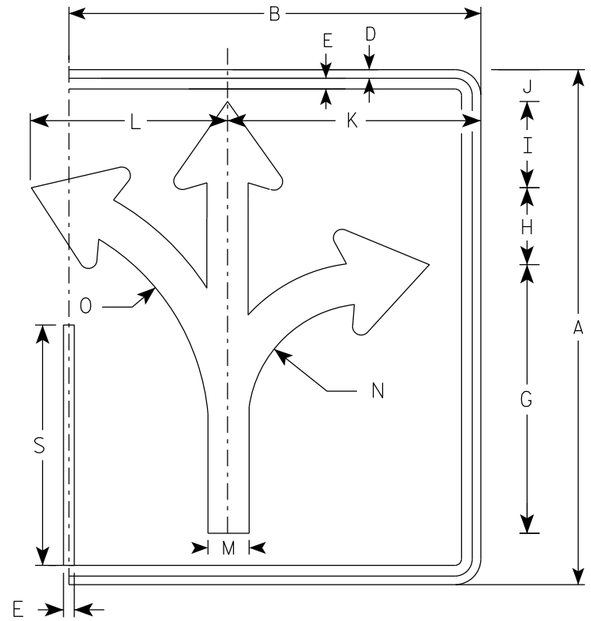
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - None



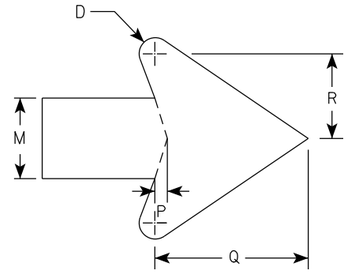
(D)



(D)



(D)



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	ENDS Area sq. ft.	MIDDLE Area sq. ft.
1																												
2S	30	24	1 1/2	1/2	5/8		15 5/8	4 1/2	5	1 7/8	14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		18						5.0	3.75
2M	30	24	1 1/2	1/2	5/8		15 5/8	4 1/2	5	1 7/8	14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		18						5.0	3.75
3	36	30	1 1/2	1/2	5/8		18 3/4	5 1/2	6	2 1/4	17 1/4	17 1/4	2 7/8	8 3/8	16	1/2	5 1/2	3	16 3/4		24						7.5	6.0
4	48	36	2 1/4	3/4	1		24 7/8	7 1/4	7 7/8	3 1/8	23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		30						12.0	10.0
5	48	36	2 1/4	3/4	1		24 7/8	7 1/4	7 7/8	3 1/8	23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		30						12.0	10.0

STANDARD SIGN
R3-8 (D) Arrow

WISCONSIN DEPT OF TRANSPORTATION

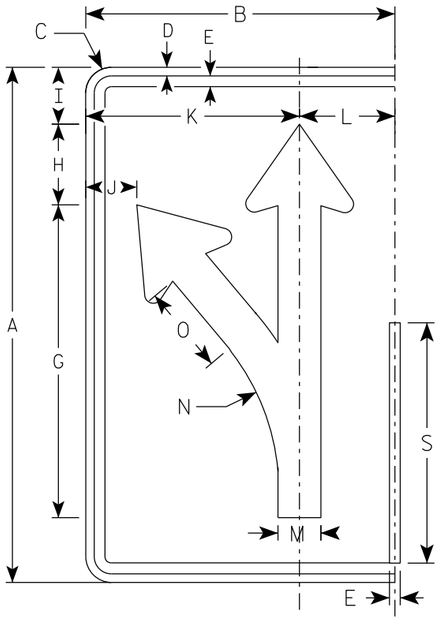
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/14/23 PLATE NO. R3-8.2

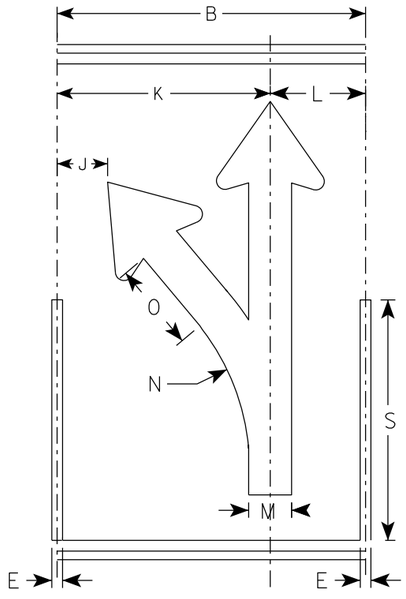
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 120 | E

NOTES

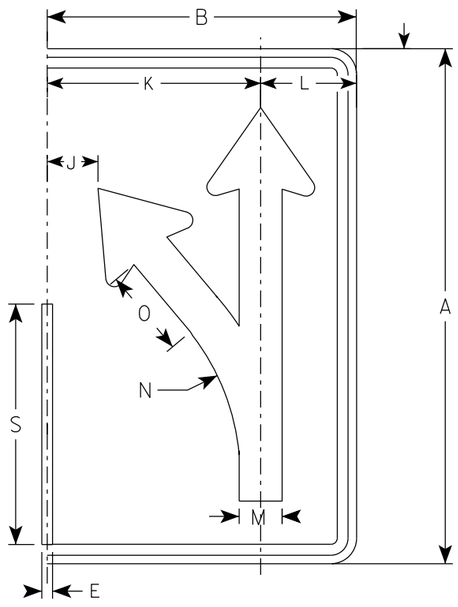
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - None



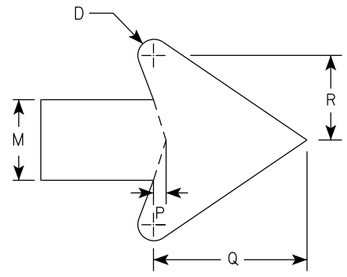
(E)



(E)



(E)



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	18	1 1/2	1/2	5/8		18 1/4	4 3/4	3 1/4	3	12 1/2	5 1/2	2 1/2	13 1/4	5 1/8	3/8	4 3/4	2 5/8	14								3.75
2M	30	18	1 1/2	1/2	5/8		18 1/4	4 3/4	3 1/4	3	12 1/2	5 1/2	2 1/2	13 1/4	5 1/8	3/8	4 3/4	2 5/8	14								3.75
3	36	24	1 1/2	1/2	5/8		21 7/8	5 5/8	4	4 7/8	16 1/8	7 3/4	3	15 7/8	6 1/8	1/2	5 3/4	3 1/8	16 3/4								6.0
4	48	30	2 1/4	3/4	1		29 1/8	7 1/2	5 1/4	5 3/8	20 1/2	9 1/2	4	21 1/4	8 1/4	5/8	7 5/8	4 1/4	22 3/8								10.0
5	48	30	2 1/4	3/4	1		29 1/8	7 1/2	5 1/4	5 3/8	20 1/2	9 1/2	4	21 1/4	8 1/4	5/8	7 5/8	4 1/4	22 3/8								10.0

STANDARD SIGN
R3-8 (E) Arrow

WISCONSIN DEPT OF TRANSPORTATION

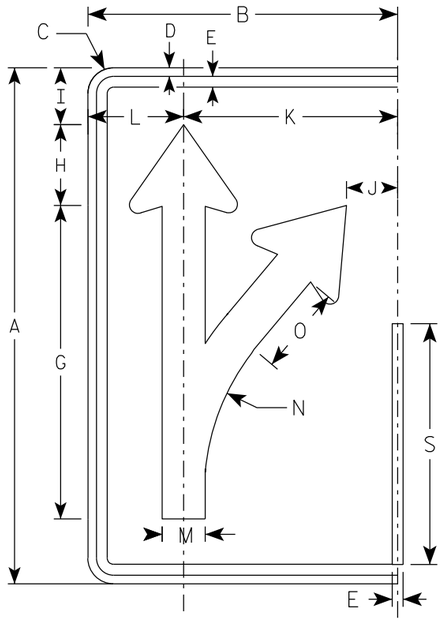
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/14/23 PLATE NO. R3-8.2

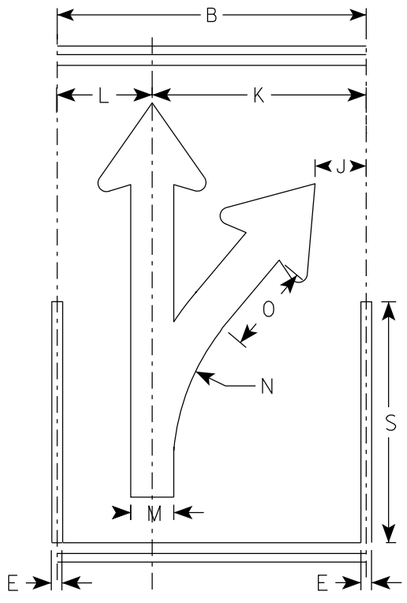
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 121 | E

NOTES

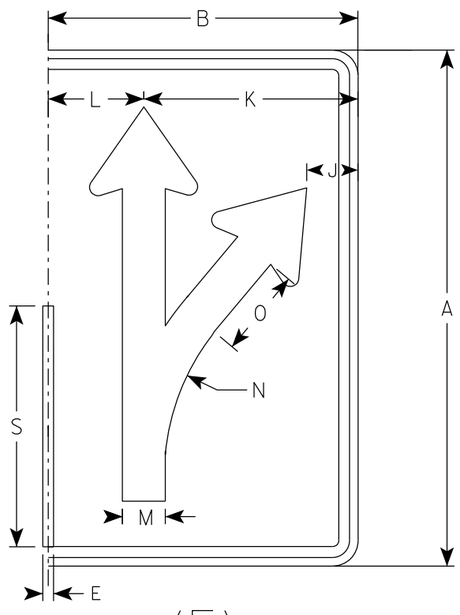
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - None



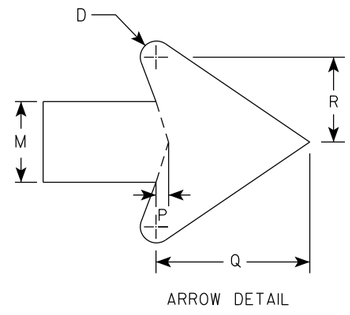
(F)



(F)



(F)



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	18	1 1/2	1/2	5/8		18 1/4	4 3/4	3 1/4	3	12 1/2	5 1/2	2 1/2	13 1/4	5 1/8	3/8	4 3/4	2 5/8	14								3.75
2M	30	18	1 1/2	1/2	5/8		18 1/4	4 3/4	3 1/4	3	12 1/2	5 1/2	2 1/2	13 1/4	5 1/8	3/8	4 3/4	2 5/8	14								3.75
3	36	24	1 1/2	1/2	5/8		21 7/8	5 5/8	4	4 7/8	16 1/8	7 3/4	3	15 7/8	6 1/8	1/2	5 3/4	3 1/8	16 3/4								6.0
4	48	30	2 1/4	3/4	1		29 1/8	7 1/2	5 1/4	5 3/8	20 1/2	9 1/2	4	21 1/4	8 1/4	5/8	7 5/8	4 1/4	22 3/8								10.0
5	48	30	2 1/4	3/4	1		29 1/8	7 1/2	5 1/4	5 3/8	20 1/2	9 1/2	4	21 1/4	8 1/4	5/8	7 5/8	4 1/4	22 3/8								10.0

STANDARD SIGN
R3-8 (F) Arrow

WISCONSIN DEPT OF TRANSPORTATION

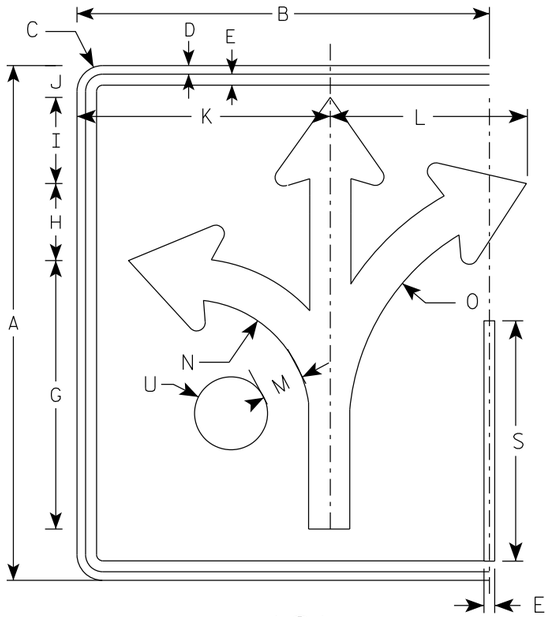
APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 2/14/23 PLATE NO. R3-8.2

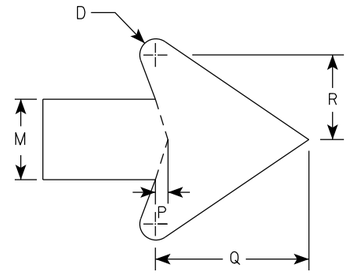
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 122 | E

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - None



(G)



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	24	1 1/2	1/2	5/8		15 5/8	4 1/2	5	1 7/8	14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		2 1/8						5.0
2M	30	24	1 1/2	1/2	5/8		15 5/8	4 1/2	5	1 7/8	14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		2 1/8						5.0
3	36	30	1 1/2	1/2	5/8		18 3/4	5 1/2	6	3 1/8	17 1/4	17 1/4	2 7/8	8 3/8	16	1/2	5 1/2	3	16 3/4		2 1/2						7.5
4	48	36	2 1/4	3/4	1		24 7/8	7 1/4	7 7/8	3 1/8	23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		3 3/8						12.0
5	48	36	2 1/4	3/4	1		24 7/8	7 1/4	7 7/8	3 1/8	23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		3 3/8						12.0

STANDARD SIGN
R3-8 (G) Arrow

WISCONSIN DEPT OF TRANSPORTATION

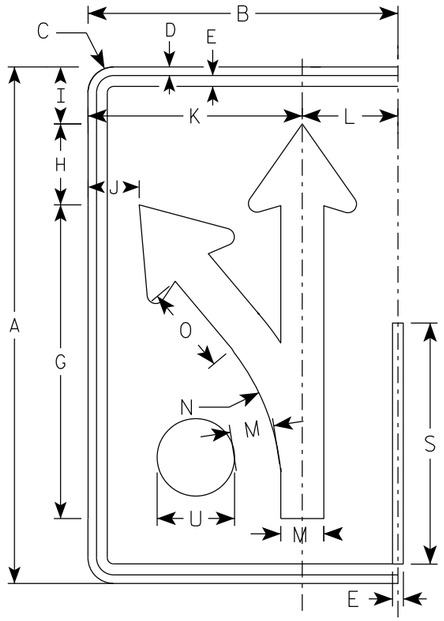
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/14/23 PLATE NO. R3-8.2

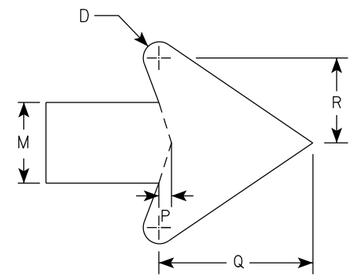
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 123	E

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - None



(H)



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	18	1 1/2	1/2	5/8		18 1/4	4 3/4	3 1/4	3	12 1/2	5 1/2	2 1/2	13 1/4	5 1/8	3/8	4 3/4	2 5/8	14		2 1/8						3.75
2M	30	18	1 1/2	1/2	5/8		18 1/4	4 3/4	3 1/4	3	12 1/2	5 1/2	2 1/2	13 1/4	5 1/8	3/8	4 3/4	2 5/8	14		2 1/8						3.75
3	36	24	1 1/2	1/2	5/8		21 7/8	5 5/8	4	4 7/8	16 1/8	7 3/4	3	15 7/8	6 1/8	1/2	5 3/4	3 1/8	16 3/4		2 1/2						6.0
4	48	30	2 1/4	3/4	1		29 1/8	7 1/2	5 1/4	5 3/8	20 1/2	9 1/2	4	21 1/4	8 1/4	5/8	7 5/8	4 1/4	22 3/8		3 3/8						10.0
5	48	30	2 1/4	3/4	1		29 1/8	7 1/2	5 1/4	5 3/8	20 1/2	9 1/2	4	21 1/4	8 1/4	5/8	7 5/8	4 1/4	22 3/8		3 3/8						10.0

STANDARD SIGN
R3-8 (H) Arrow

WISCONSIN DEPT OF TRANSPORTATION

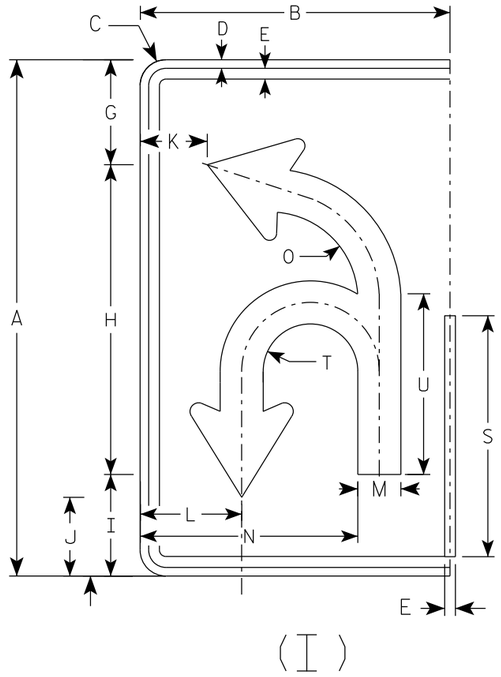
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/14/23 PLATE NO. R3-8.2

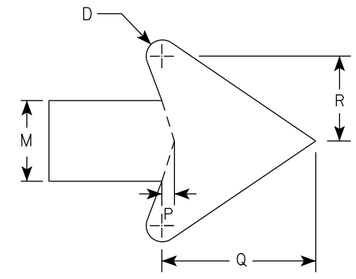
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 124 | E

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - None



(I)



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	18	1 1/2	1/2	5/8		6 1/8	18	5 7/8	4 5/8	3 7/8	5 7/8	2 1/2	12 5/8	5 1/8	3/8	4 3/4	2 5/8	14	2 3/4	10 1/2						3.75
2M	30	18	1 1/2	1/2	5/8		6 1/8	18	5 7/8	4 5/8	3 7/8	5 7/8	2 1/2	12 5/8	5 1/8	3/8	4 3/4	2 5/8	14	2 3/4	10 1/2						3.75
3	36	24	1 1/2	1/2	5/8		21 7/8	21 5/8	7 1/8	5 1/2	5 7/8	8 1/4	3	16 3/8	6 1/8	1/2	5 3/4	3 1/8	16 3/4	3 1/4	12 5/8						6.0
4	48	30	2 1/4	3/4	1		29 1/8	28 3/4	9 3/8	7 1/4	6 7/8	10	4	20 7/8	8 1/8	5/8	7 5/8	4 1/4	22 3/8	4 3/8	16 3/4						10.0
5	48	30	2 1/4	3/4	1		29 1/8	28 3/4	9 3/8	7 1/4	6 7/8	10	4	20 7/8	8 1/8	5/8	7 5/8	4 1/4	22 3/8	4 3/8	16 3/4						10.0

STANDARD SIGN
R3-8 (I) Arrow

WISCONSIN DEPT OF TRANSPORTATION

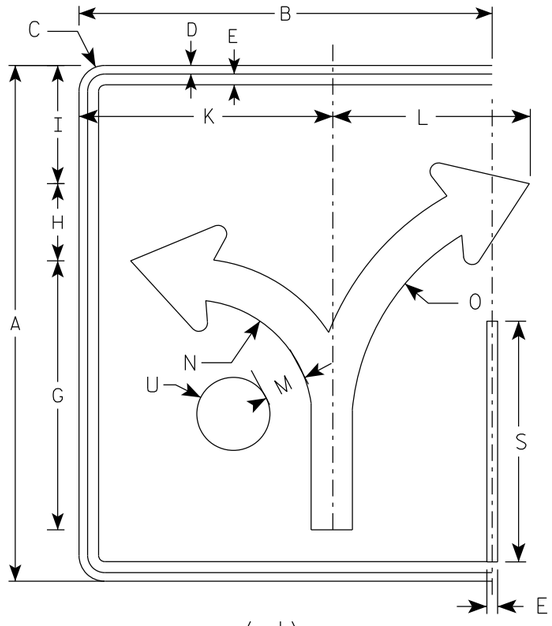
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/14/23 PLATE NO. R3-8.2

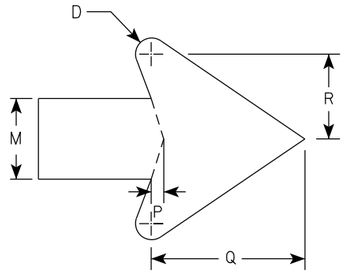
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 125 | E

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - None



(J)



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	24	1 1/2	1/2	5/8		15 5/8	4 1/2	6 7/8		14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		2 1/8						5.0
2M	30	24	1 1/2	1/2	5/8		15 5/8	4 1/2	6 7/8		14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		2 1/8						5.0
3	36	30	1 1/2	1/2	5/8		18 3/4	5 1/2	8 1/4		17 1/4	17 1/4	2 7/8	8 3/8	16	1/2	5 1/2	3	16 3/4		2 1/2						7.5
4	48	36	2 1/4	3/4	1		24 7/8	7 1/4	11		23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		3 3/8						12.0
5	48	36	2 1/4	3/4	1		24 7/8	7 1/4	11		23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		3 3/8						12.0

STANDARD SIGN
R3-8 (J) Arrow

WISCONSIN DEPT OF TRANSPORTATION

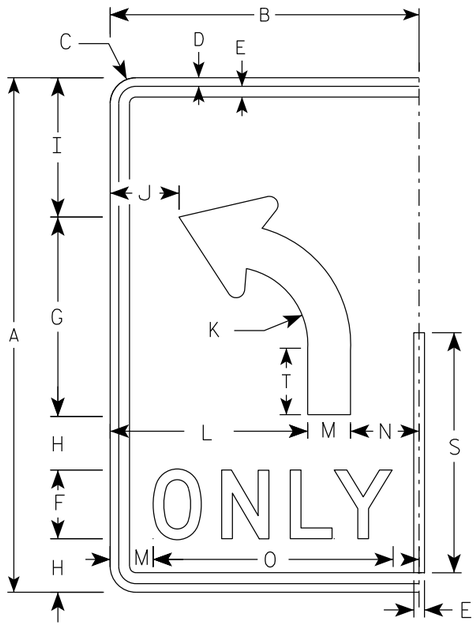
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/14/23 PLATE NO. R3-8.2

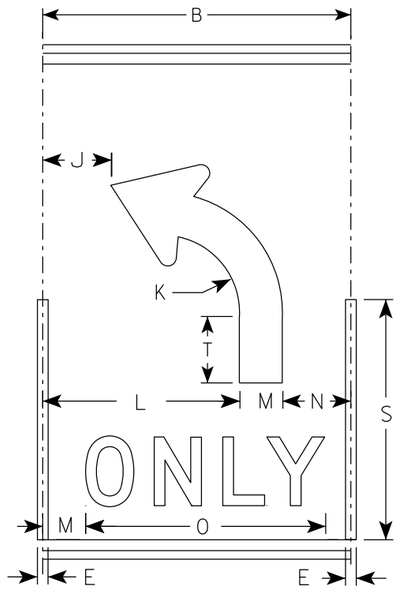
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 126 | E

NOTES

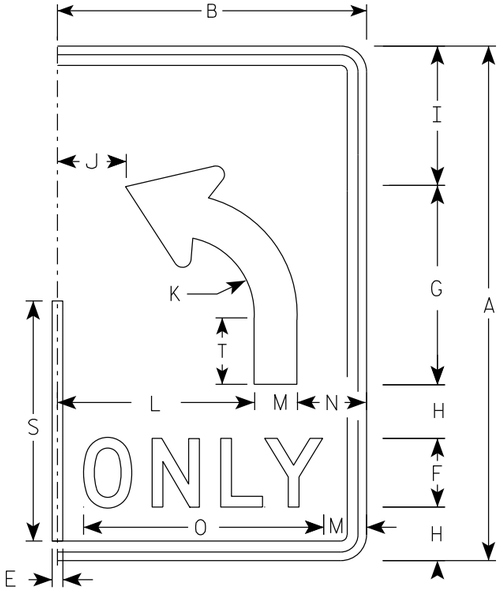
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D



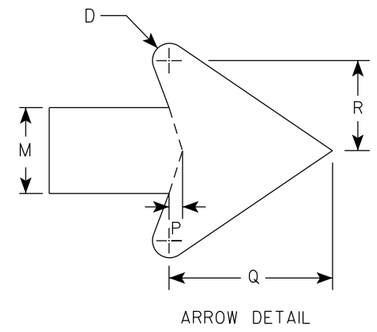
(L)



(L)



(L)



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	18	1 1/2	1/2	5/8	4	11 5/8	3 1/8	8 1/8	4	4 1/2	11 1/2	2 1/2	4	14	3/8	4 3/4	2 5/8	14	3 7/8							3.75
2M	30	18	1 1/2	1/2	5/8	4	11 5/8	3 1/8	8 1/8	4	4 1/2	11 1/2	2 1/2	4	14	3/8	4 3/4	2 5/8	14	3 7/8							3.75
3	36	24	1 1/2	1/2	5/8	5	14	3 1/2	9 3/4	6	5 3/8	15	3	6	17 5/8	1/2	5 3/4	3 1/8	16 3/4	4 5/8							6.0
4	48	30	2 1/4	3/4	1	6	18 5/8	5 1/8	13 1/8	6 1/8	7 1/4	18	4	8	21 3/4	5/8	7 5/8	4 1/4	22 3/8	6 1/4							10.0
5	48	30	2 1/4	3/4	1	6	18 5/8	5 1/8	13 1/8	6 1/8	7 1/4	18	4	8	21 3/4	5/8	7 5/8	4 1/4	22 3/8	6 1/4							10.0

STANDARD SIGN

R3-8 (L) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/14/23 PLATE NO. R3-8.2

PROJECT NO:

SHEET NO: 127 E

FILE NAME : C:\CAEfiles\Projects\stdplate_R38.dgn PLOT DATE : 14-FEB 2023 3:02 PLOT BY : mscj9h PLOT NAME :

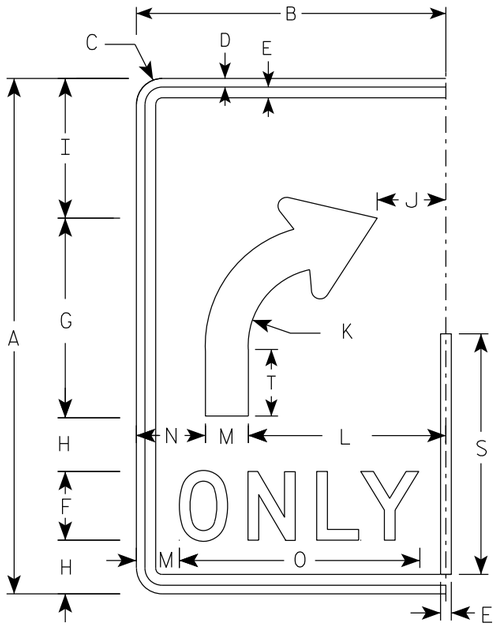
WISDOT/CADDS SHEET 42

7

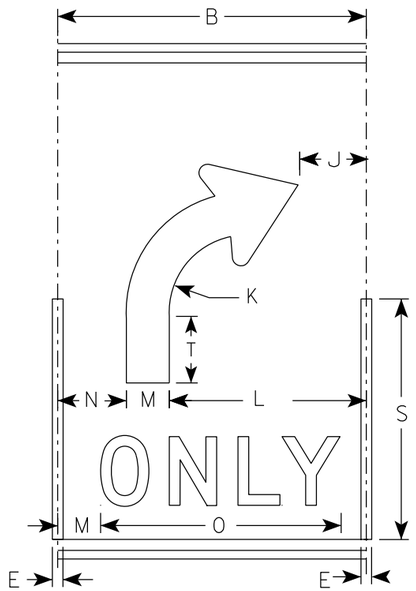
7

NOTES

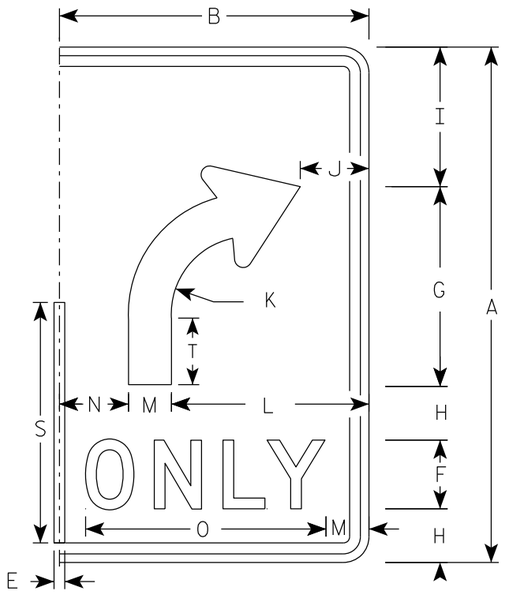
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D



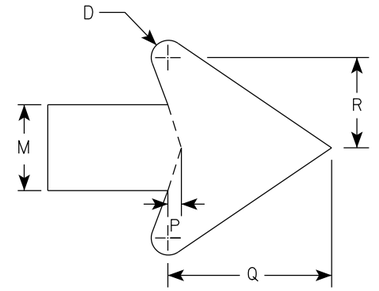
(R)



(R)



(R)



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	18	1 1/2	1/2	5/8	4	11 5/8	3 1/8	8 1/8	4	4 1/2	11 1/2	2 1/2	4	14	3/8	4 3/4	2 5/8	14	3 7/8							3.75
2M	30	18	1 1/2	1/2	5/8	4	11 5/8	3 1/8	8 1/8	4	4 1/2	11 1/2	2 1/2	4	14	3/8	4 3/4	2 5/8	14	3 7/8							3.75
3	36	24	1 1/2	1/2	5/8	5	14	3 1/2	9 3/4	6	5 3/8	15	3	6	17 5/8	1/2	5 3/4	3 1/8	16 3/4	4 5/8							6.0
4	48	30	2 1/4	3/4	1	6	18 5/8	5 1/8	13 1/8	6 1/8	7 1/4	18	4	8	21 3/4	5/8	7 5/8	4 1/4	22 3/8	6 1/4							10.0
5	48	30	2 1/4	3/4	1	6	18 5/8	5 1/8	13 1/8	6 1/8	7 1/4	18	4	8	21 3/4	5/8	7 5/8	4 1/4	22 3/8	6 1/4							10.0

STANDARD SIGN

R3-8 (R) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/14/23 PLATE NO. R3-8.2

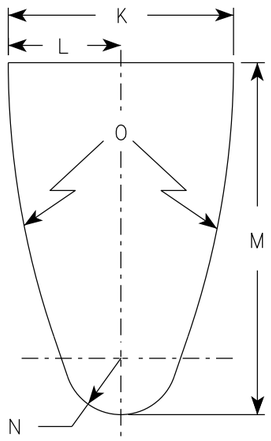
PROJECT NO:

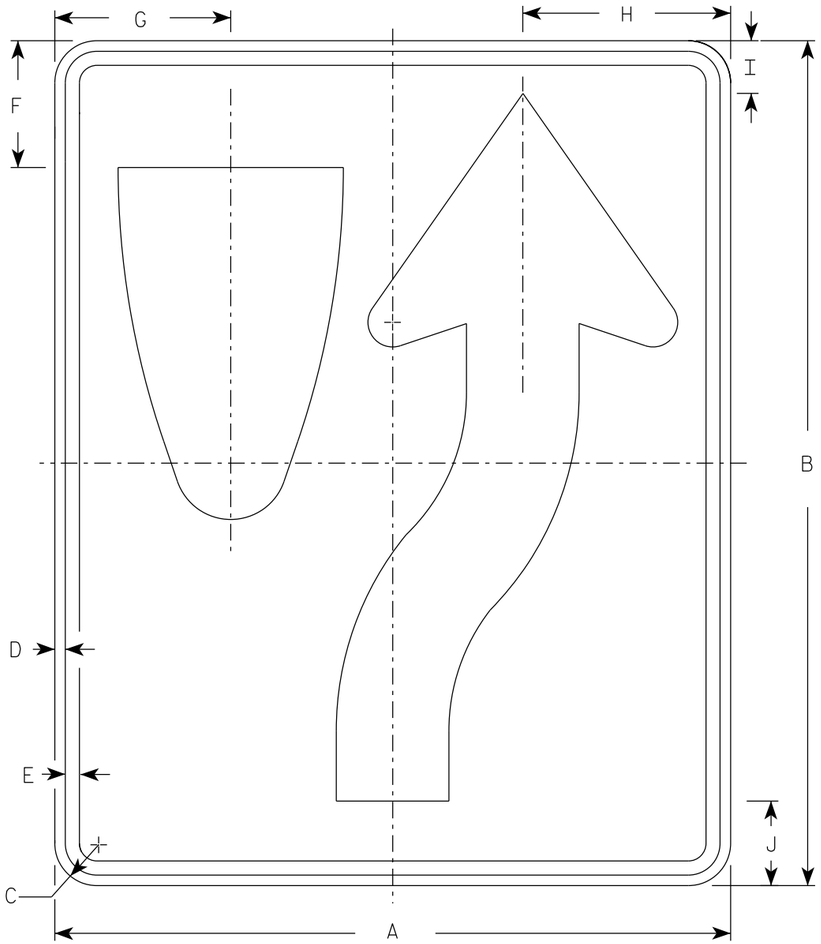
SHEET NO: 128 **E**

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. R4-8 is the same as R4-7 except Legend is reversed.

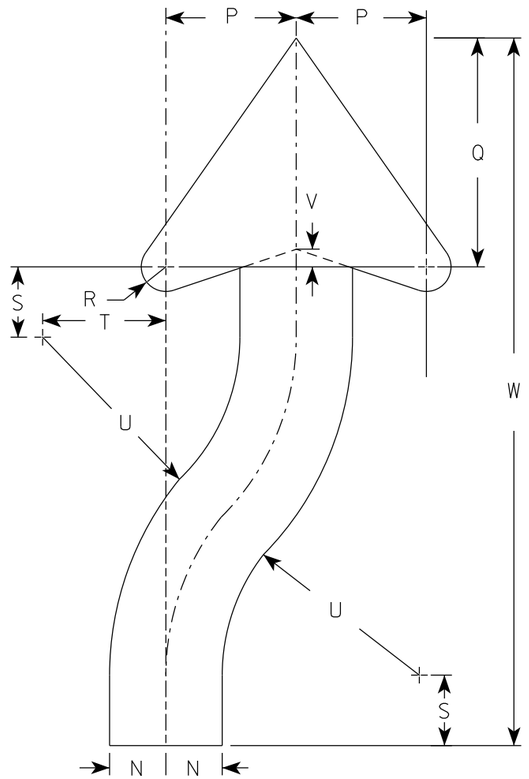
DIVIDER DETAIL





R4-7

ARROW DETAIL



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18	24	1 1/2	3/8	1/2	3 3/8	4 3/4	5 1/2	1 3/8	2 1/4	6	3	9 3/8	1 1/2	22 1/2	3 1/2	6 1/8	5/8	1 7/8	3 1/4	6 3/4	1/2	20 3/8				3.0
2S	24	30	1 1/2	3/8	1/2	4 1/2	6 1/4	7 3/8	1 7/8	3	8	4	12 1/2	2	30	4 5/8	8 1/8	7/8	2 1/2	4 3/8	9	5/8	25 1/8				5.0
2M	24	30	1 1/2	3/8	1/2	4 1/2	6 1/4	7 3/8	1 7/8	3	8	4	12 1/2	2	30	4 5/8	8 1/8	7/8	2 1/2	4 3/8	9	5/8	25 1/8				5.0
3	36	48	1 7/8	1/2	5/8	6 3/4	9 3/8	11 1/8	2 7/8	4 1/2	12	6	18 3/4	3	45	6 7/8	12 1/4	1 1/4	3 3/4	6 5/8	13 1/2	1	40 3/4				12.0
4	36	48	1 7/8	1/2	5/8	6 3/4	9 3/8	11 1/8	2 7/8	4 1/2	12	6	18 3/4	3	45	6 7/8	12 1/4	1 1/4	3 3/4	6 5/8	13 1/2	1	40 3/4				12.0
5	48	60	3	3/4	1	9	12 1/2	14 3/4	3 3/4	6	16	8	25	4	60	9 1/4	16 1/4	1 5/8	5	8 3/4	18	1 1/4	50 1/4				20.0

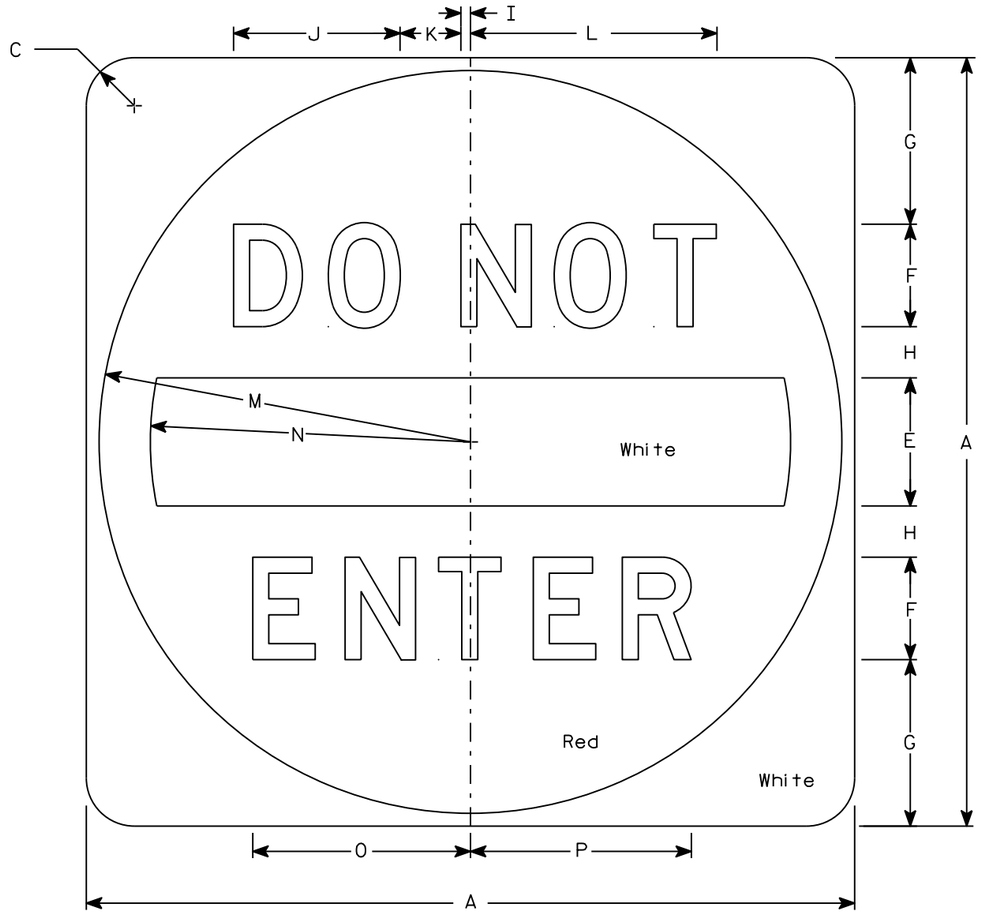
STANDARD SIGN
R4-7 & R4-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 8/17/23 PLATE NO. R4-7.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 129	E



R5-1

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - See detail
   Message - White
3. Message Series - D

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30		1 7/8		5	4	6 1/2	2	3/8	6 1/2	2 3/8	9 5/8	14 1/2	12 1/2	8 1/2	8 5/8											6.25
2M	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
3	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
4	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
5	48		3		8	6	11	3	5/8	9 3/4	3 5/8	14 1/2	23 1/2	20	12 3/4	12 7/8											16.0

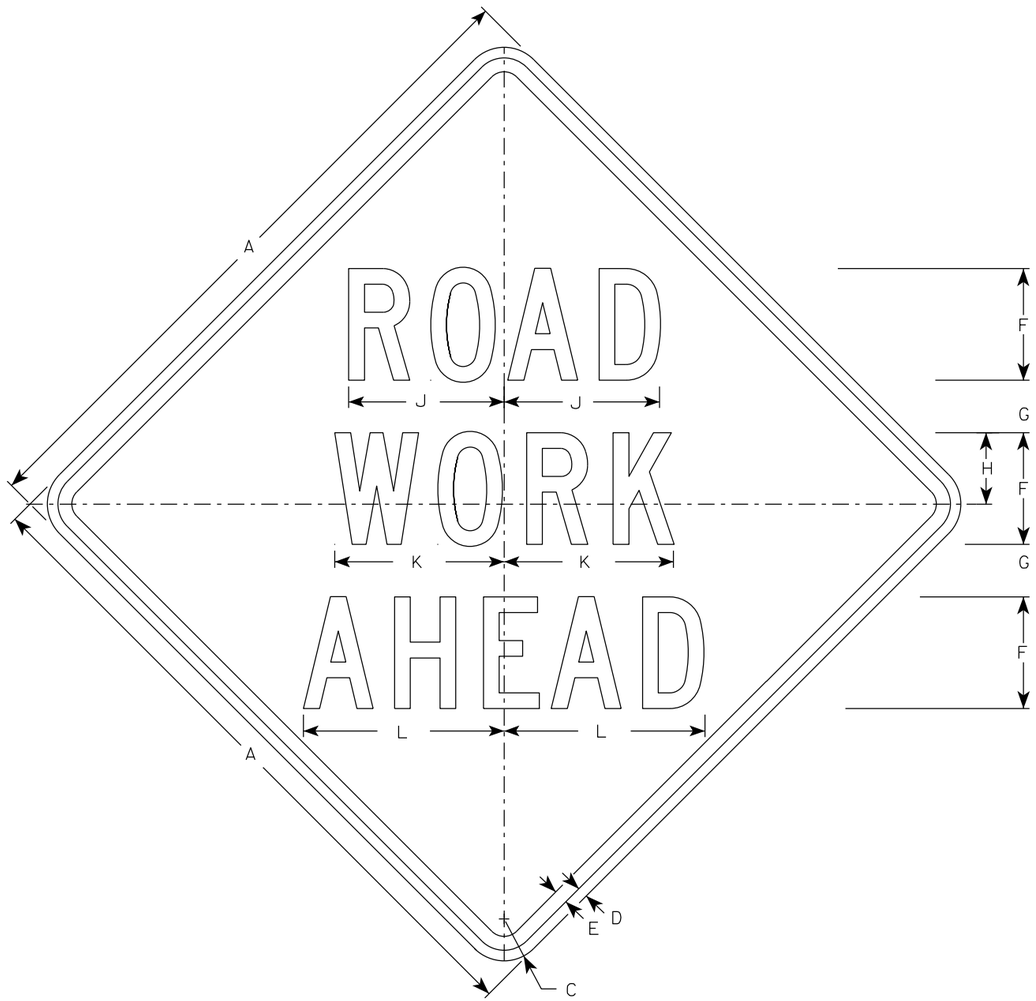
STANDARD SIGN
R5-1

WISCONSIN DEPT OF TRANSPORTATION

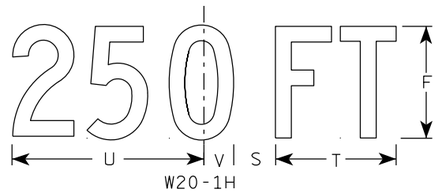
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/15/18 PLATE NO. R5-1.16

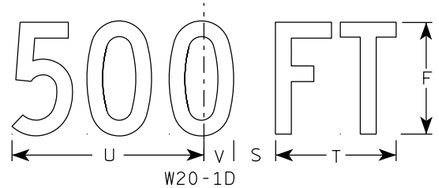
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 130 | E



W20-1A



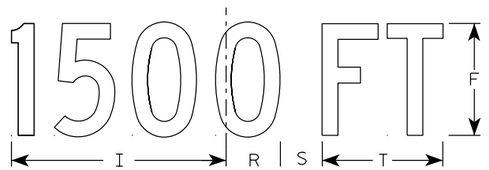
W20-1H



W20-1D



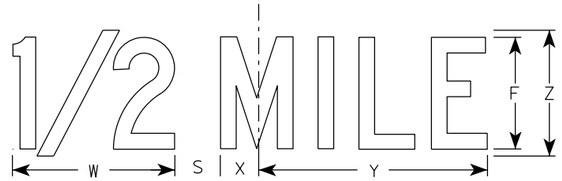
W20-1C



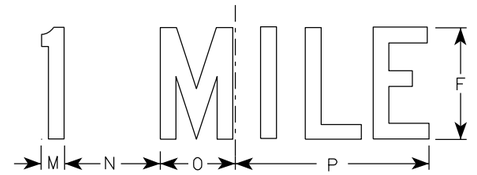
W20-1B

NOTES

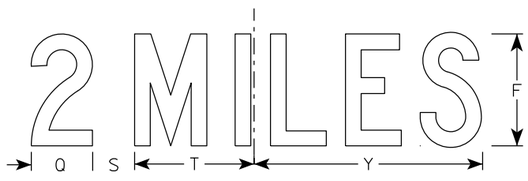
1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



W20-1G



W20-1F



W20-1E

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		2 1/4	5/8	3/4	5	2 5/8	3 1/4	10 1/8	7	7 5/8	8 7/8	1 1/8	4 1/2	3 1/2	9	3 1/4	2 1/2	2 1/4	5 5/8	9	1 3/8	8	1 3/4	10 3/4	6	9.0
2S	48		3	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
2M	48		3	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
3	48		3	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
4	48		3	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
5	48		3	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0

STANDARD SIGN
W20-1A, B, C, D, E, F, G & H

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/10/2024 PLATE NO. W20-1.12

PROJECT NO:

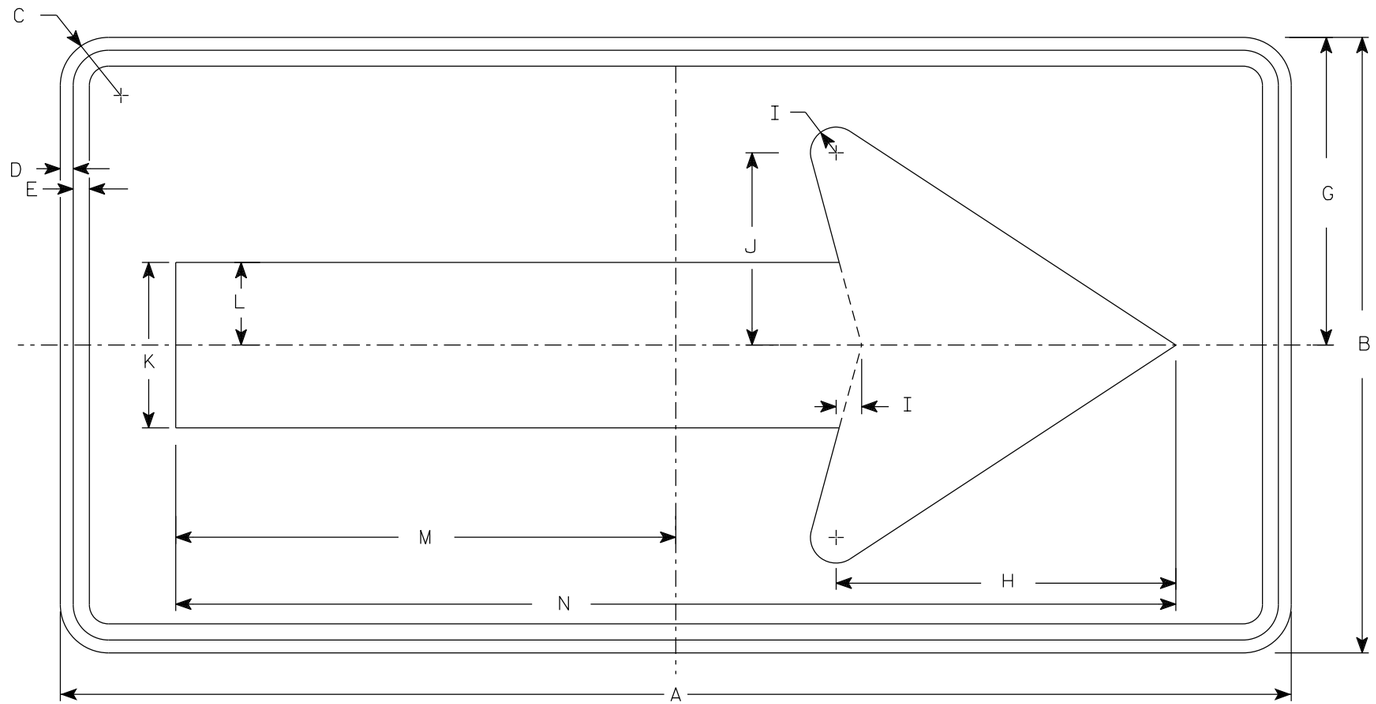
SHEET NO: 131 E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W201.DGN PLOT DATE : 10-JAN 2024 11:16 PLOT BY : dotc4c

WISDOT/CADDS SHEET 42

7

7



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

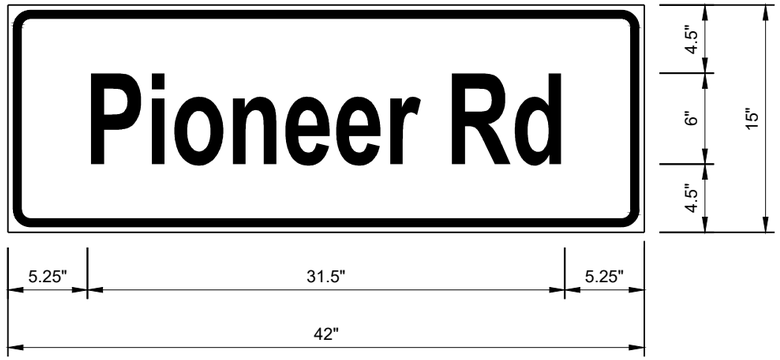
STANDARD SIGN
WO1-6

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

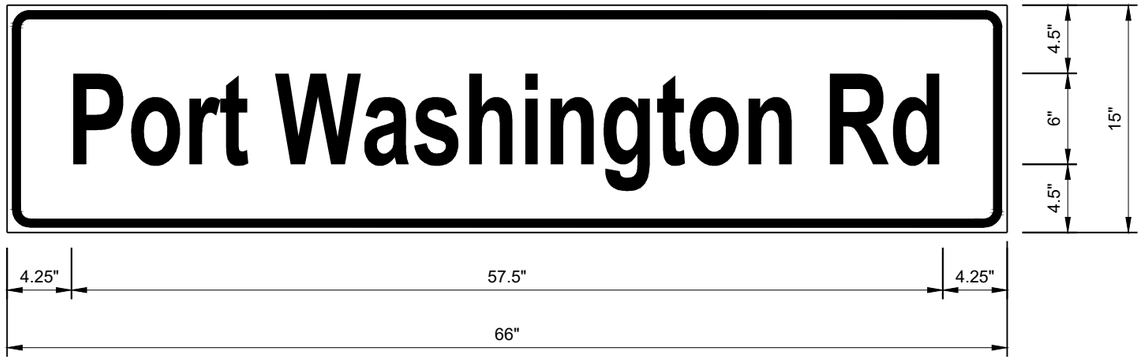
DATE 1/24/2024 PLATE NO. WO1-6.2

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



1.125" Radius, 0.50" Boarder, 0.375" Indent

NOTES:
1. ALL SIGNS TYPE II - TYPE F REFLECTIVE
2. COLOR:
   BACKGROUND - GREEN
   MESSAGE - WHITE
3. MESSAGE SERIES - C



1.125" Radius, 0.50" Boarder, 0.375" Indent

7

7

PROJECT NO: 2695-05-72	HWY: CTH C	COUNTY: OZAUKEE	SIGNING DETAIL	SHEET 133	E

DIVISION - CTY-C

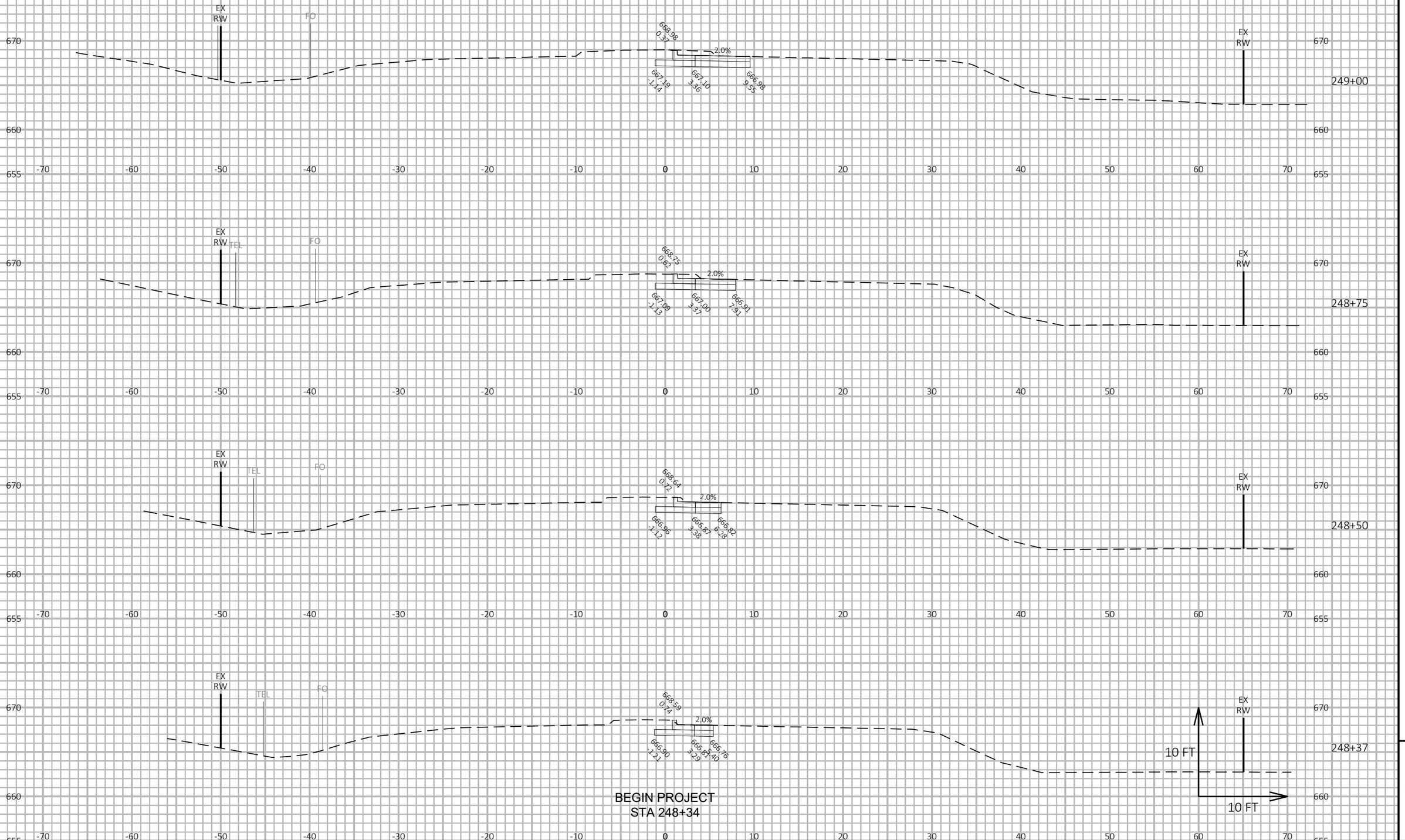
STATION	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT 1.00	EXPANDED FILL 1.30	MASS ORDINATE
				NOTE 1	NOTE 2	NOTE 3	NOTE 1		NOTE 8
248+36.65	9	0	0	0	0	0	0	0	0
248+50.00	11	0	0	5	0	0	5	0	5
248+75.00	14	0	0	11	0	0	16	0	16
249+00.00	17	0	0	14	0	0	30	0	30
249+25.00	20	0	0	17	0	0	47	0	47
249+50.00	23	0	0	20	0	0	67	0	67
249+75.00	26	0	0	23	0	0	90	0	90
250+00.00	28	0	0	25	0	0	115	0	115
250+25.00	34	3	0	29	1	0	144	0	143
250+50.00	33	4	0	31	3	0	175	0	171
250+75.00	34	6	0	31	5	0	206	0	197
251+00.00	34	7	0	31	6	0	237	0	222
251+25.00	29	6	0	29	6	0	266	0	245
251+50.00	30	5	0	27	5	0	293	0	267
251+75.00	36	4	0	30	4	0	323	0	293
252+00.00	34	3	6	32	3	3	355	4	318
252+25.00	36	2	2	33	2	3	388	8	345
252+41.12	28	13	0	19	5	1	407	9	358
253+41.59	19	0	0	0	0	0	407	9	358
253+50.00	20	0	0	6	0	0	413	9	364
253+75.00	20	0	0	18	0	0	431	9	382
254+00.00	19	0	0	18	0	0	449	9	400
254+25.00	20	0	0	18	0	0	467	9	418
254+50.00	20	0	0	18	0	0	485	9	436
254+75.00	20	0	0	18	0	0	503	9	454
254+79.00	20	0	0	3	0	0	506	9	457
				506	40	7			

NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	THIS DOES NOT SHOW UP IN CROSS SECTIONS
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
8 - MASS ORDINATE	CUT - SALVAGED PAVT - (FILL * FILL FACTOR)

DIVISION - CTY-W

STATION	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	
				NOTE 1	NOTE 2	NOTE 3	NOTE 1		NOTE 8
13+25.00	3	0	0	0	0	0	0	0	0
13+50.00	3	0	0	3	0	0	3	0	3
13+75.00	4	0	0	3	0	0	6	0	6
14+00.00	4	0	0	4	0	0	10	0	10
14+25.00	10	0	0	6	0	0	16	0	16
14+50.00	11	0	0	10	0	0	26	0	26
14+75.00	13	0	0	11	0	0	37	0	37
15+00.00	15	0	0	13	0	0	50	0	50
15+25.00	25	0	0	19	0	0	69	0	69
15+50.00	21	0	0	22	0	0	91	0	91
15+75.00	21	0	0	19	0	0	110	0	110
16+00.00	22	0	0	20	0	0	130	0	130
16+25.00	26	3	0	22	1	0	152	0	151
16+50.00	27	0	0	24	1	0	176	0	174
16+75.00	21	0	0	22	0	0	198	0	196
17+00.00	19	0	0	19	0	0	217	0	215
17+25.00	20	2	1	18	1	0	235	0	232
17+50.00	40	6	6	28	4	3	263	4	252
18+75.00	40	0	2	0	0	0	263	4	252
19+00.00	28	0	2	32	0	1	295	5	283
19+25.00	29	0	1	27	0	1	322	7	309
19+50.00	31	0	0	28	0	1	350	8	335
19+75.00	28	0	2	27	0	1	377	9	361
20+00.00	26	0	2	25	0	2	402	12	383
20+25.00	20	0	3	21	0	2	423	14	402
20+50.00	14	0	0	16	0	1	439	16	416
20+66.86	7	0	0	7	0	0	446	16	423
				446	7	12			

NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	THIS DOES NOT SHOW UP IN CROSS SECTIONS
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
8 - MASS ORDINATE	CUT - SALVAGED PAVT - (FILL * FILL FACTOR)



9

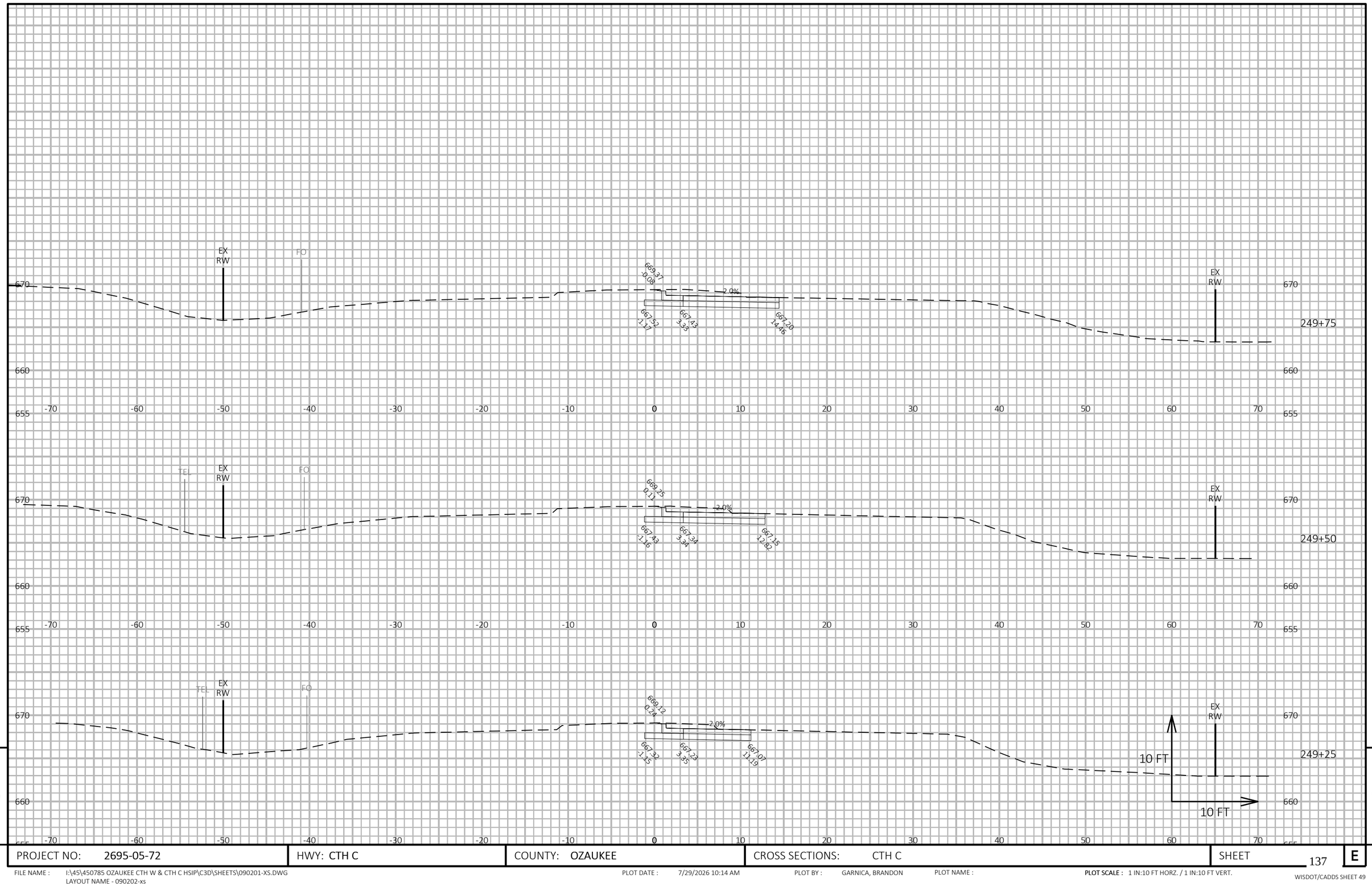
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PROJECT NO: 2695-05-72	HWY: CTH C	COUNTY: OZAUKEE	CROSS SECTIONS: CTH C	SHEET 136	E

FILE NAME : I:\45\450785 OZAUKEE CTH W & CTH C HSIP\C3D\SHEETS\090201-XS.DWG
LAYOUT NAME - 090201-xs

PLOT DATE : 7/29/2026 10:17 AM PLOT BY : GARNICA, BRANDON PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

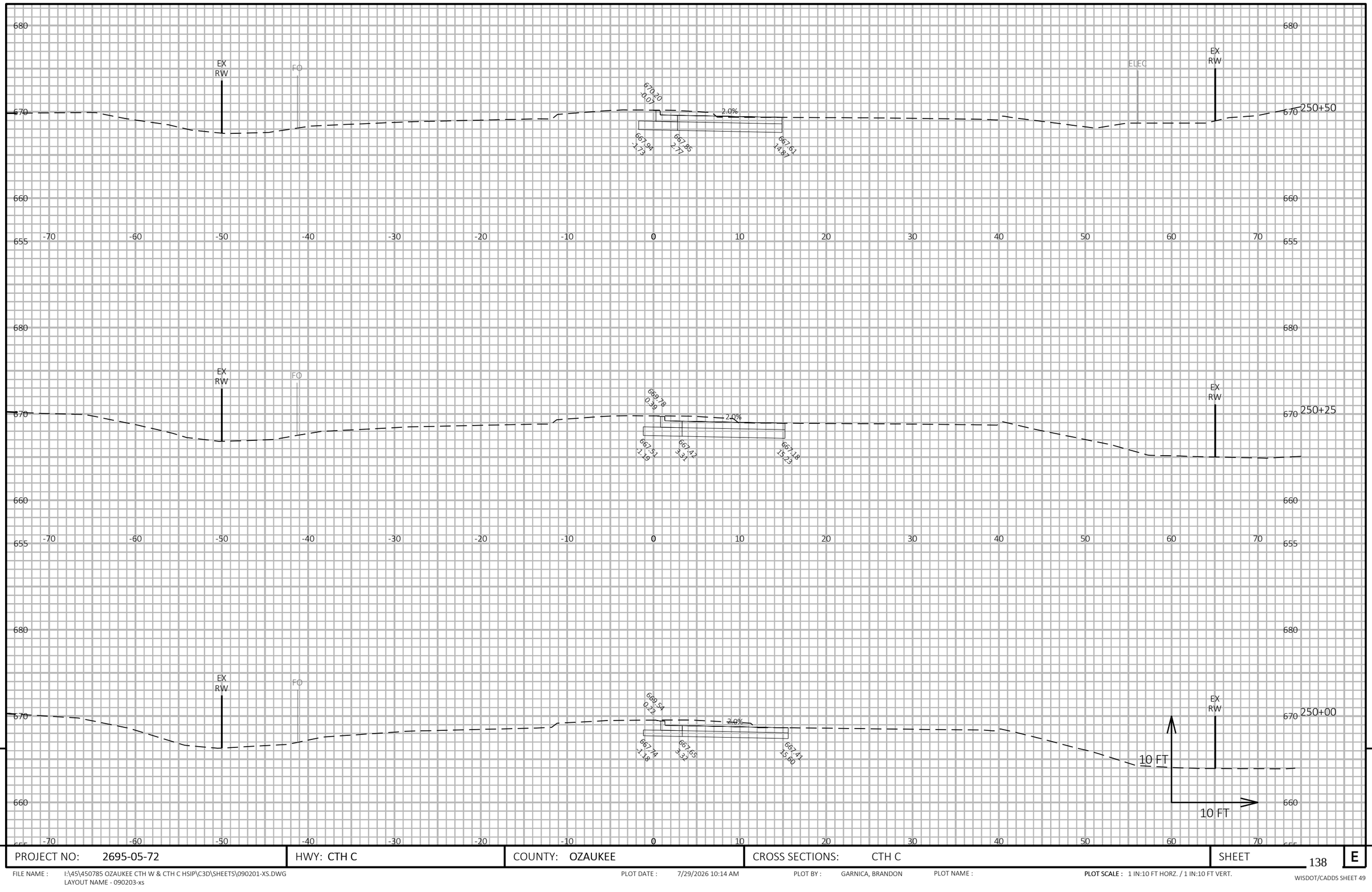
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PROJECT NO: 2695-05-72	HWY: CTH C	COUNTY: OZAUKEE	CROSS SECTIONS: CTH C	SHEET 137	E

FILE NAME : I:\45\450785 OZAUKEE CTH W & CTH C HSIP\C3D\SHEETS\090201-XS.DWG
LAYOUT NAME - 090202-xs

PLOT DATE : 7/29/2026 10:14 AM PLOT BY : GARNICA, BRANDON PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

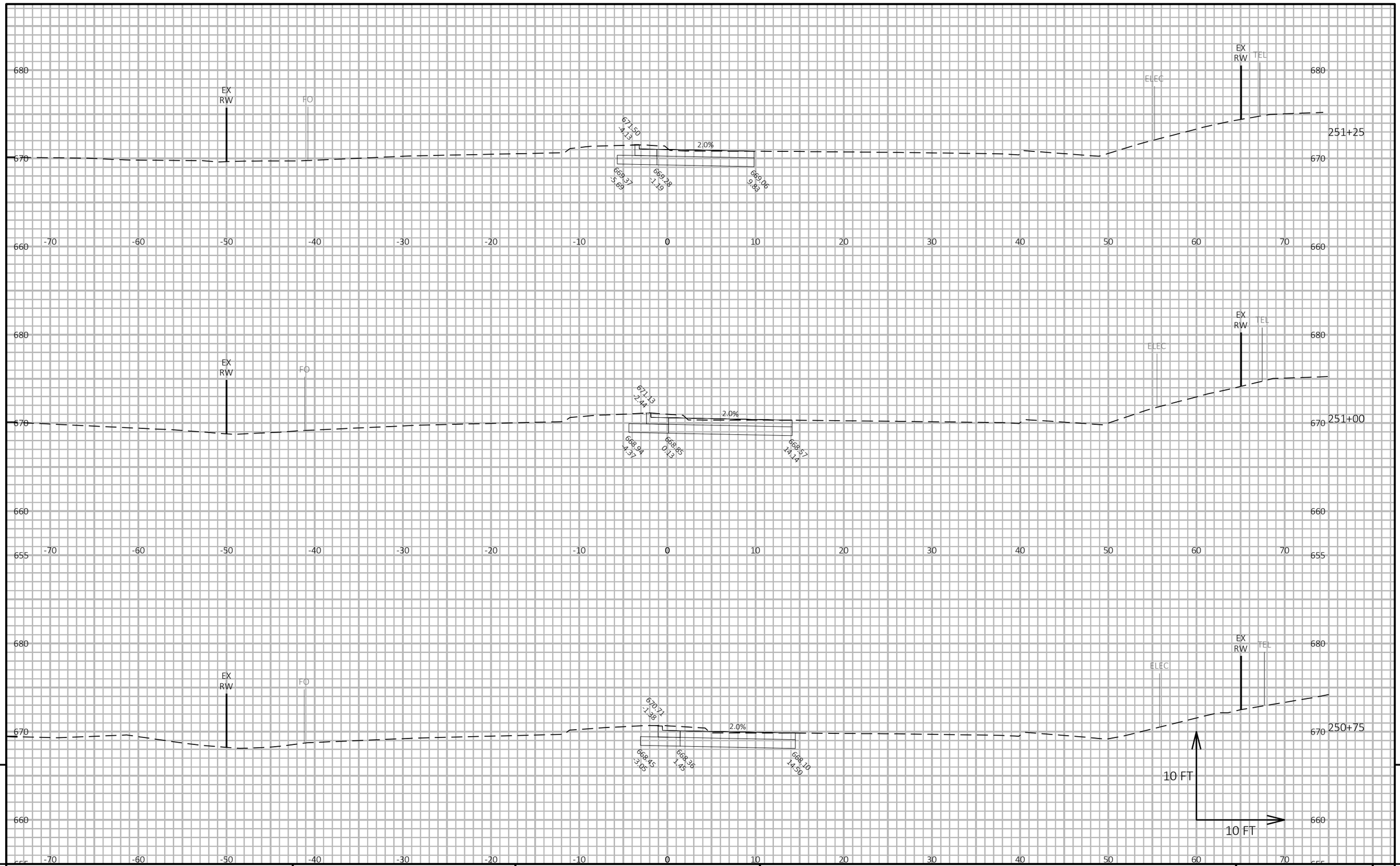
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PROJECT NO: 2695-05-72	HWY: CTH C	COUNTY: OZAUKEE	CROSS SECTIONS: CTH C	SHEET 138	E

FILE NAME : I:\45\450785 OZAUKEE CTH W & CTH C HSIP\C3D\SHEETS\090201-XS.DWG
LAYOUT NAME - 090203-xs

PLOT DATE : 7/29/2026 10:14 AM PLOT BY : GARNICA, BRANDON PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

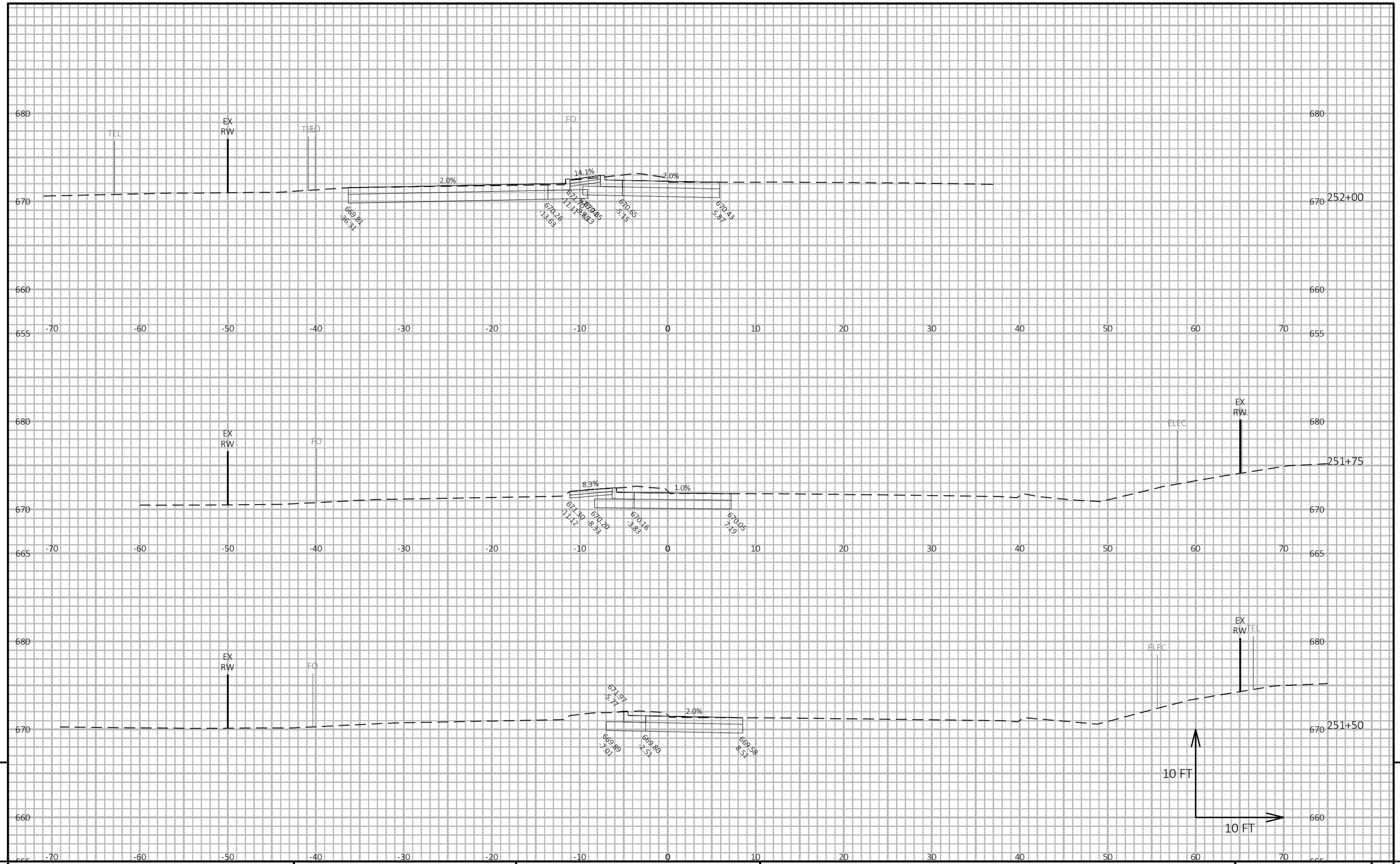
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PROJECT NO: 2695-05-72	HWY: CTH C	COUNTY: OZAUKEE	CROSS SECTIONS: CTH C	SHEET 139	E

FILE NAME : I:\45\450785 OZAUKEE CTH W & CTH C HSIP\C3D\SHEETS\090201-XS.DWG
LAYOUT NAME - 090204-xs

PLOT DATE : 7/29/2026 10:14 AM PLOT BY : GARNICA, BRANDON PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

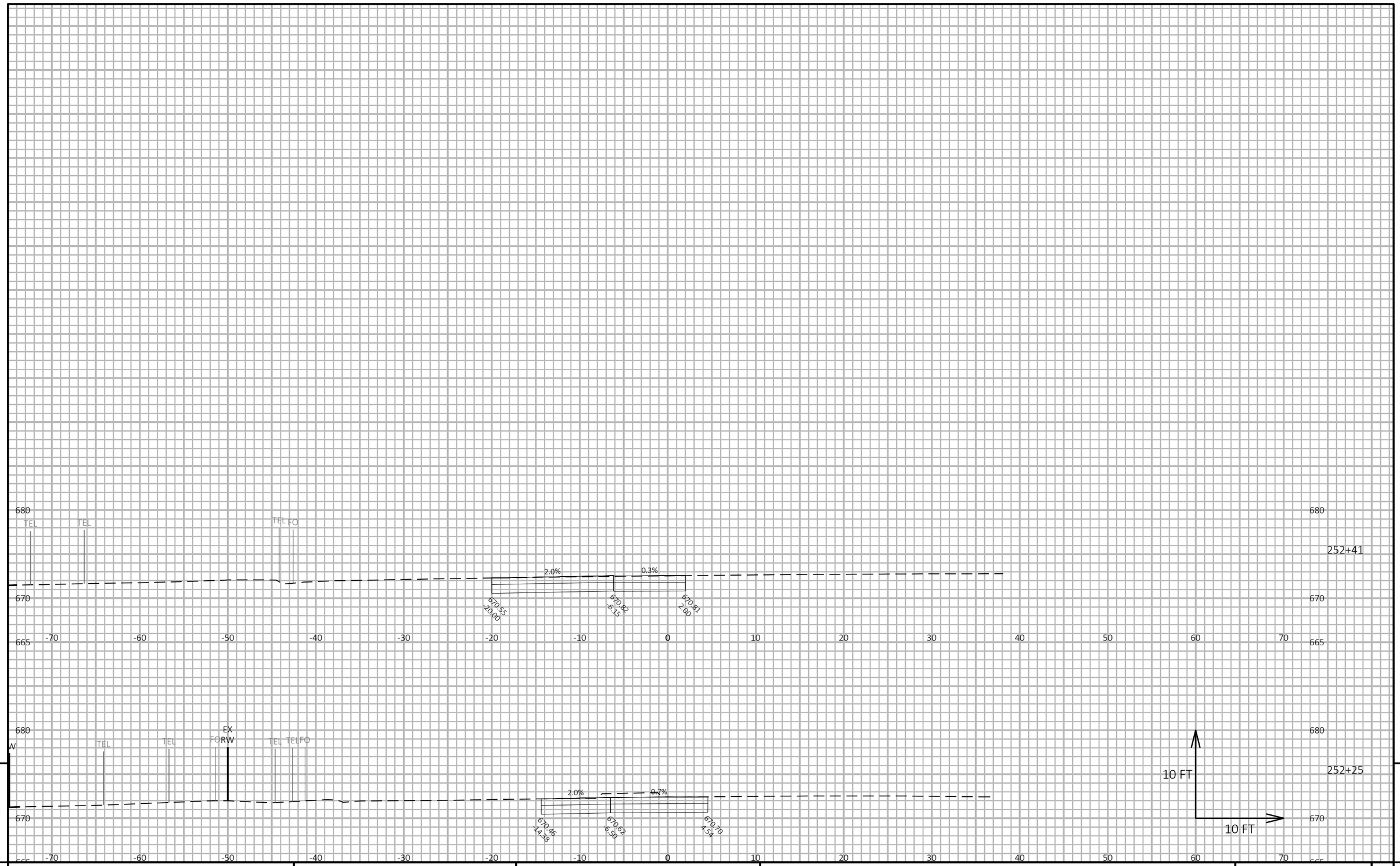
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FILE NAME : I:\45\450785 OZAUKEE CTH W & CTH C HSIP\C3D\SHEETS\090201-XS.DWG
LAYOUT NAME - 090205-xs

PLOT DATE : 7/29/2026 10:14 AM PLOT BY : GARNICA, BRANDON PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

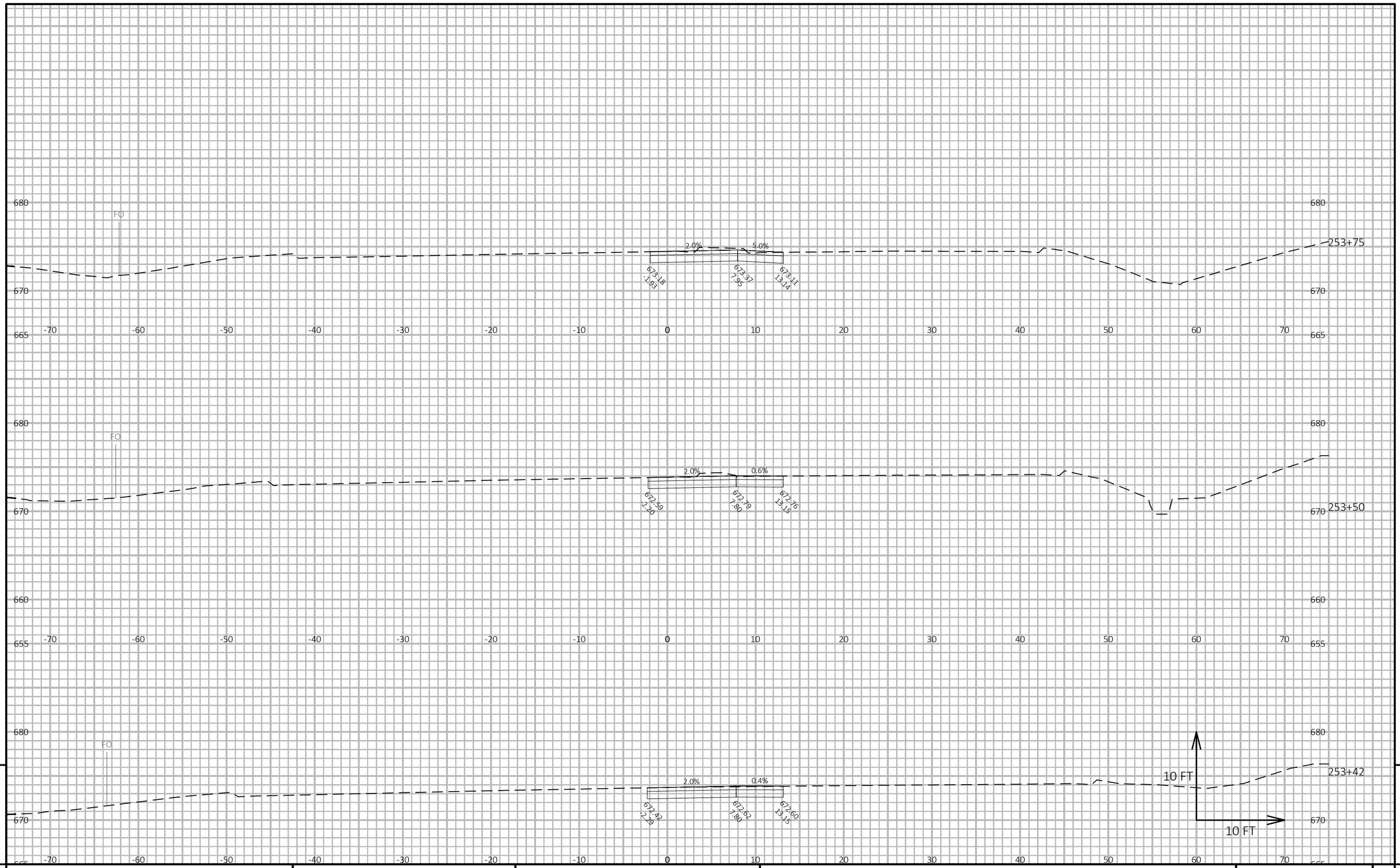
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PROJECT NO: 2695-05-72	HWY: CTH C	COUNTY: OZAUKEE	CROSS SECTIONS: CTH C	SHEET 141	E

FILE NAME : I:\45\450785 OZAUKEE CTH W & CTH C HSIP\C3D\SHEETS\090201-XS.DWG
LAYOUT NAME - 090206-xs

PLOT DATE : 7/29/2026 10:13 AM PLOT BY : GARNICA, BRANDON PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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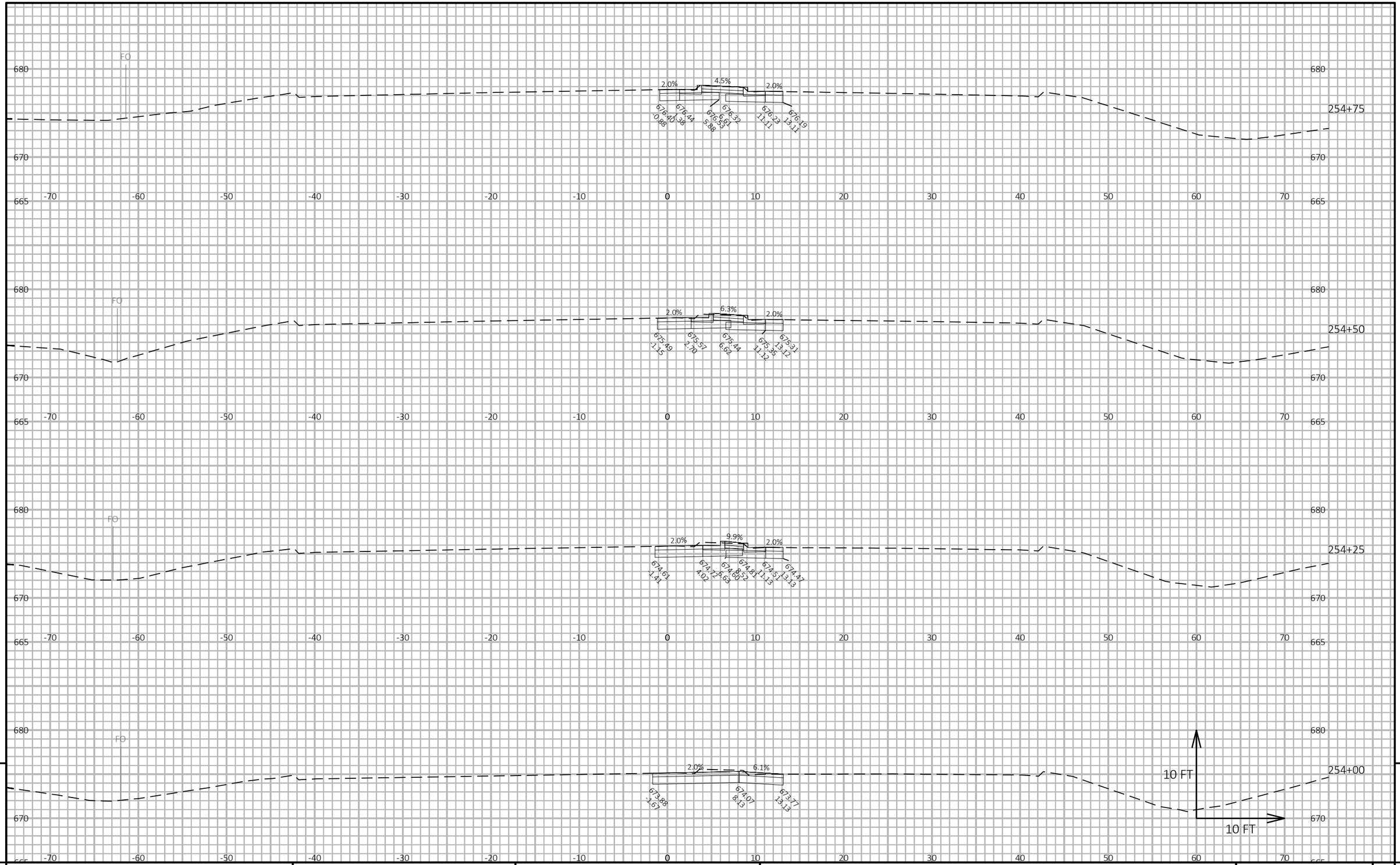
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FILE NAME : I:\45\450785 OZAUKEE CTH W & CTH C HSIP\C3D\SHEETS\090201-XS.DWG
LAYOUT NAME - 090207-xs

PLOT DATE : 7/29/2026 10:13 AM PLOT BY : GARNICA, BRANDON PLOT NAME :

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

WISDOT/CADDS SHEET 49



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PROJECT NO: 2695-05-72	HWY: CTH C	COUNTY: OZAUKEE	CROSS SECTIONS: CTH C	SHEET 143	E

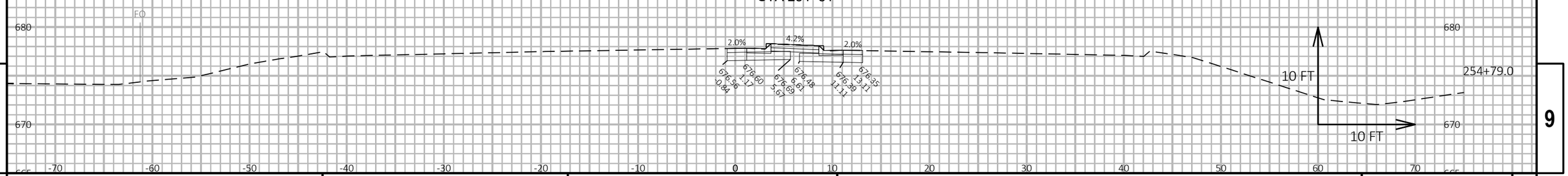
FILE NAME : I:\45\450785 OZAUKEE CTH W & CTH C HSIP\C3D\SHEETS\090201-XS.DWG
LAYOUT NAME - 090208-xs

PLOT DATE : 7/29/2026 10:18 AM PLOT BY : GARNICA, BRANDON PLOT NAME :

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

WISDOT/CADDS SHEET 49

END PROJECT
STA 254+81



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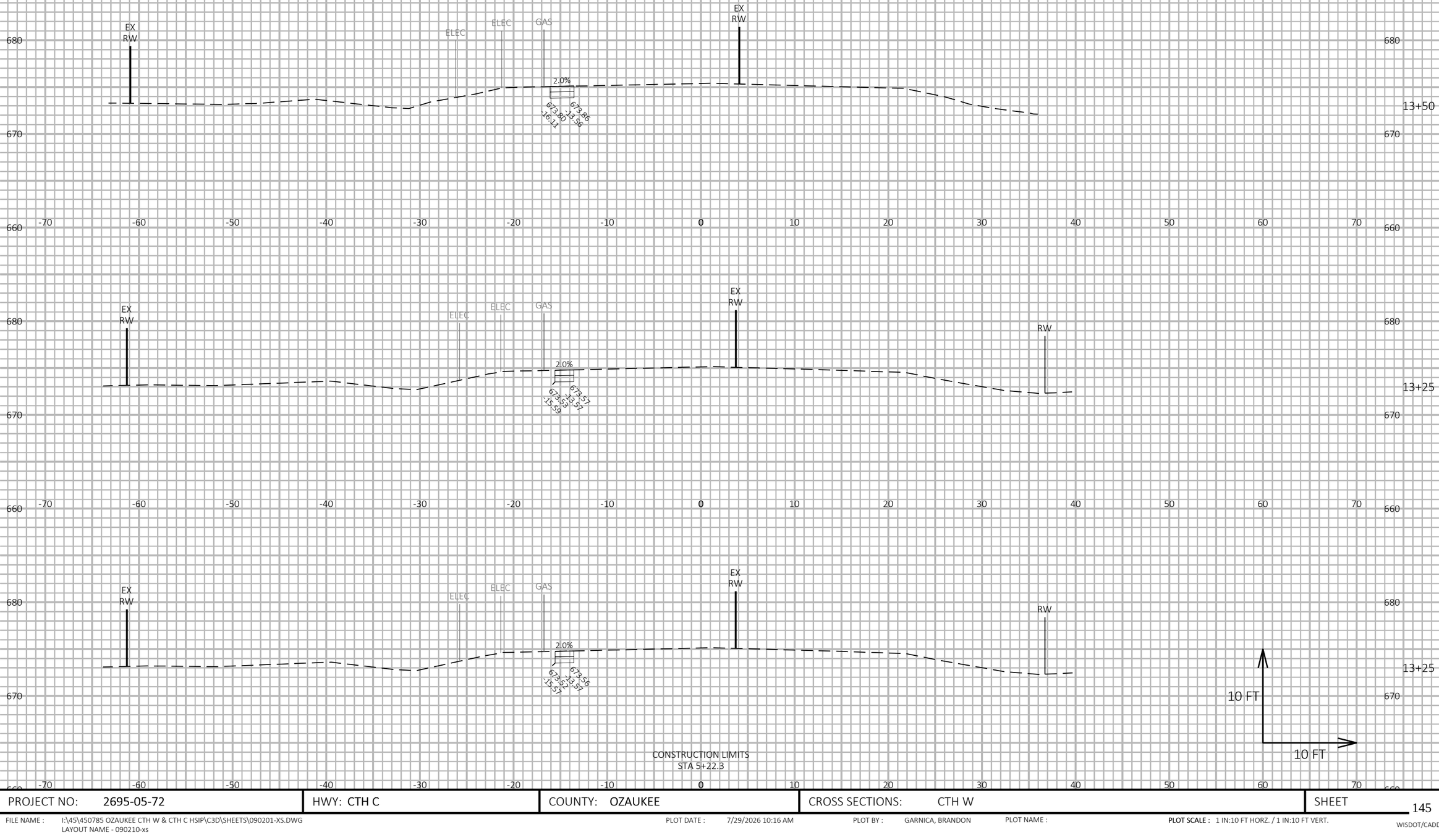
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PROJECT NO: 2695-05-72	HWY: CTH C	COUNTY: OZAUKEE	CROSS SECTIONS: CTH C	SHEET 144	E

FILE NAME : I:\45\450785 OZAUKEE CTH W & CTH C HSIP\C3D\SHEETS\090201-XS.DWG
LAYOUT NAME - 090209-xs

PLOT DATE : 7/29/2026 10:15 AM PLOT BY : GARNICA, BRANDON PLOT NAME :

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



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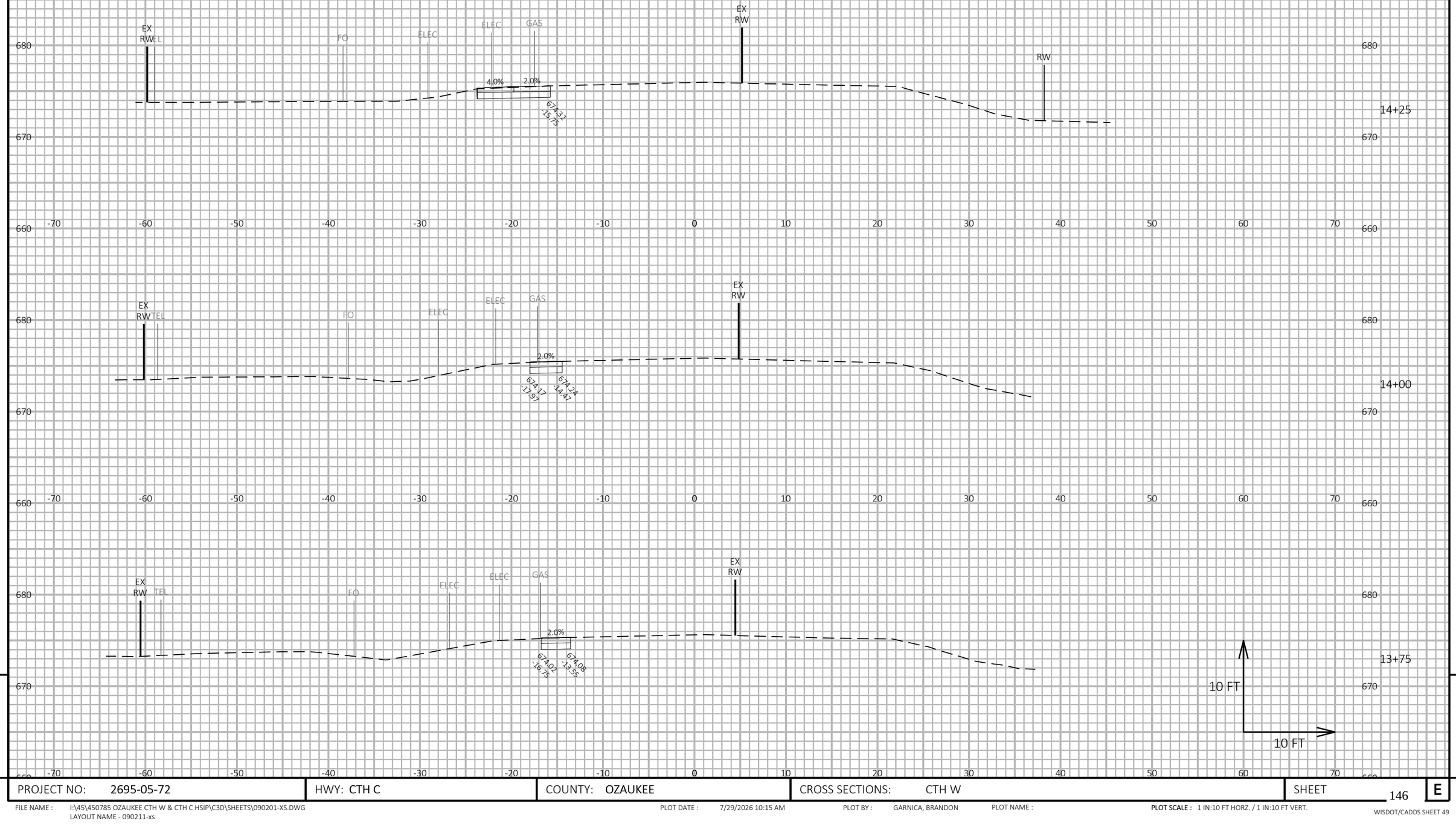
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FILE NAME : I:\45\450785 OZAUKEE CTH W & CTH C HSIP\C3D\SHEETS\090201-XS.DWG
LAYOUT NAME - 090210-xs

PLOT DATE : 7/29/2026 10:16 AM PLOT BY : GARNICA, BRANDON PLOT NAME :

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

WISDOT/CADDS SHEET 49



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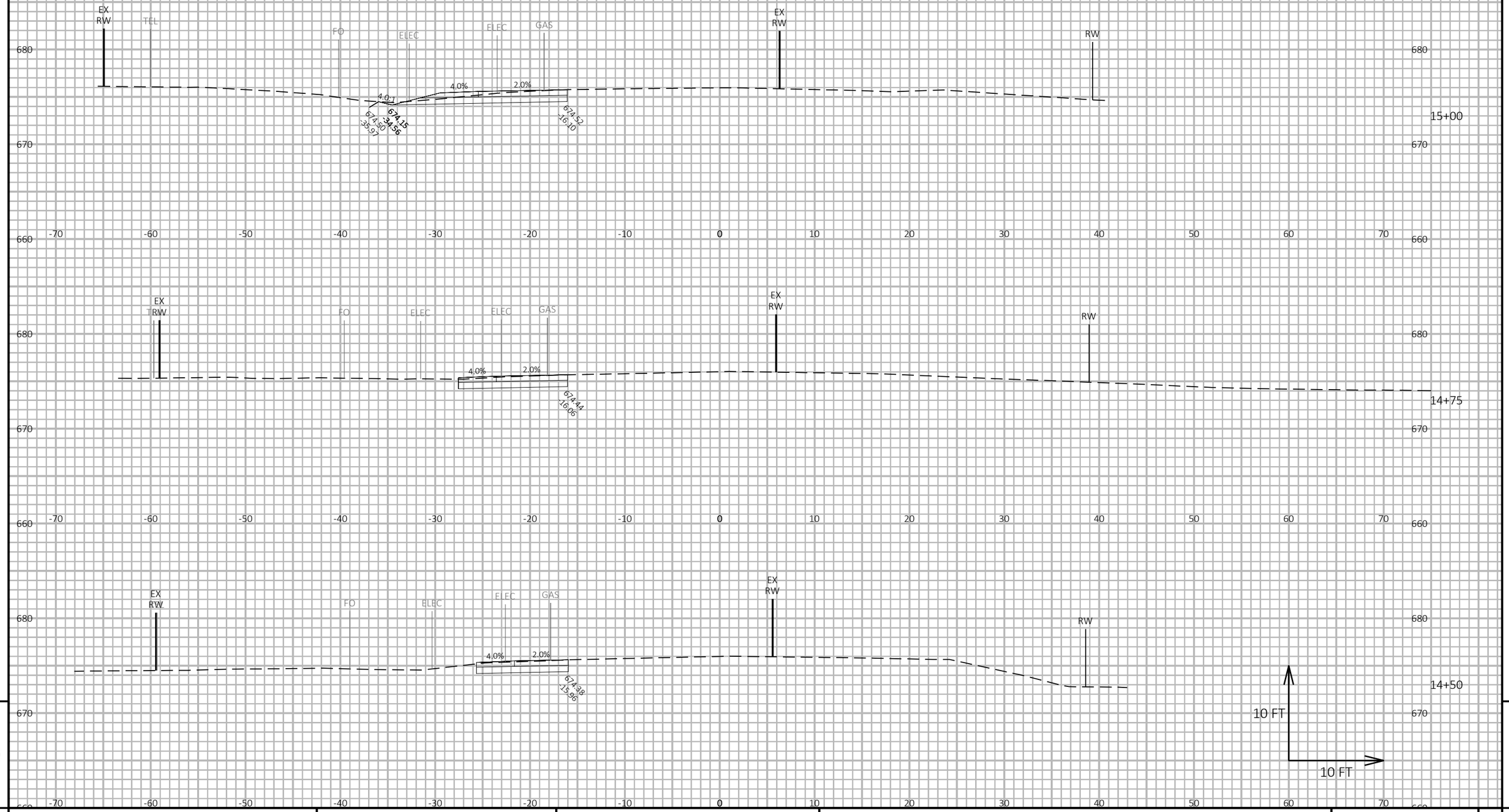
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FILE NAME : I:\45\450785 OZAUKEE CTH W & CTH C HSIP\C3D\SHEETS\090201-XS.DWG
LAYOUT NAME - 090211-xs

PLOT DATE : 7/29/2026 10:15 AM PLOT BY : GARNICA, BRANDON PLOT NAME :

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

WISDOT/CADDS SHEET 49



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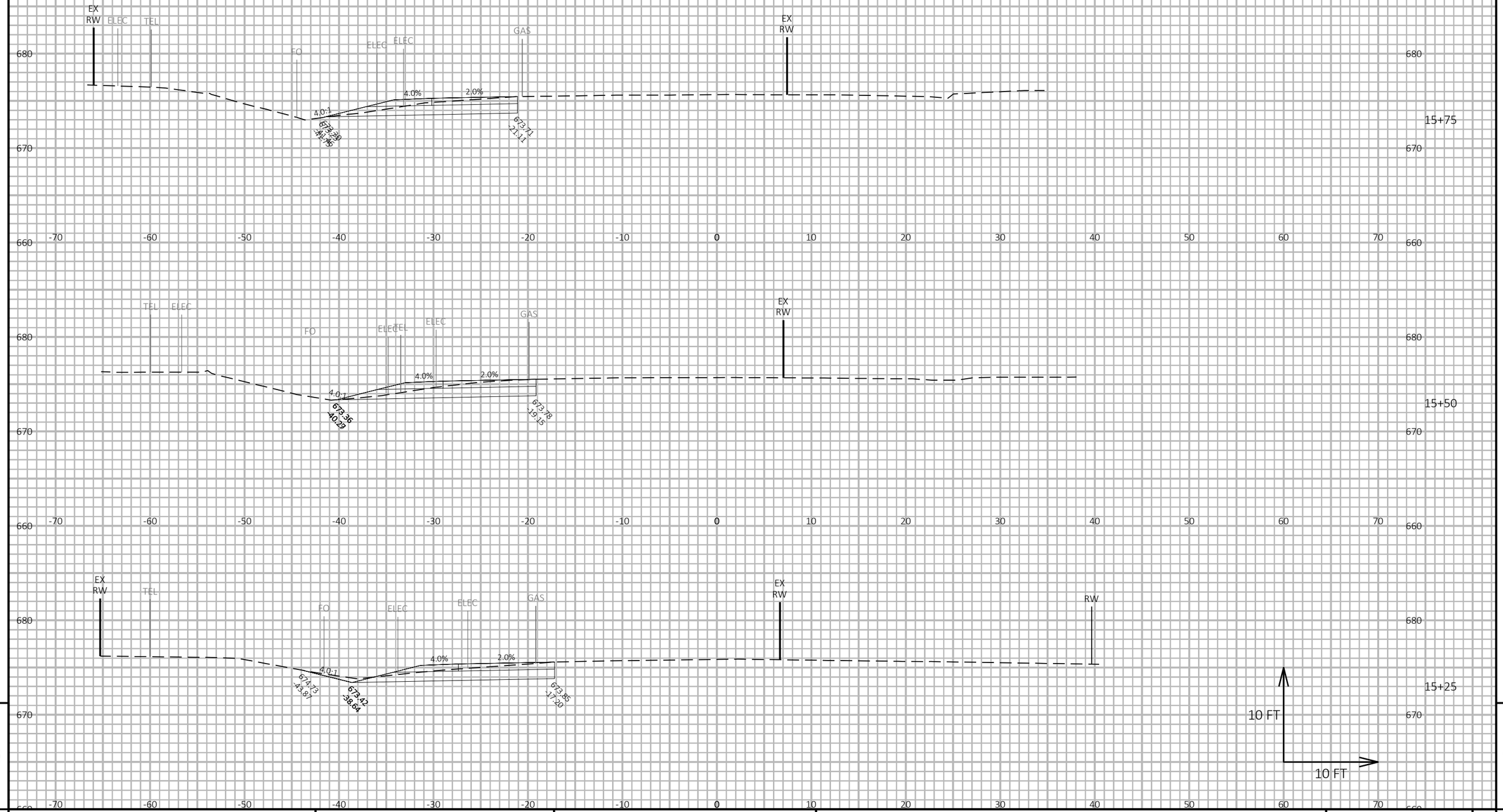
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FILE NAME : I:\45\450785 OZAUKEE CTH W & CTH C HSIP\C3D\SHEETS\090201-XS.DWG
LAYOUT NAME - 090212-xs

PLOT DATE : 7/29/2026 10:18 AM PLOT BY : GARNICA, BRANDON PLOT NAME :

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

WISDOT/CADDS SHEET 49



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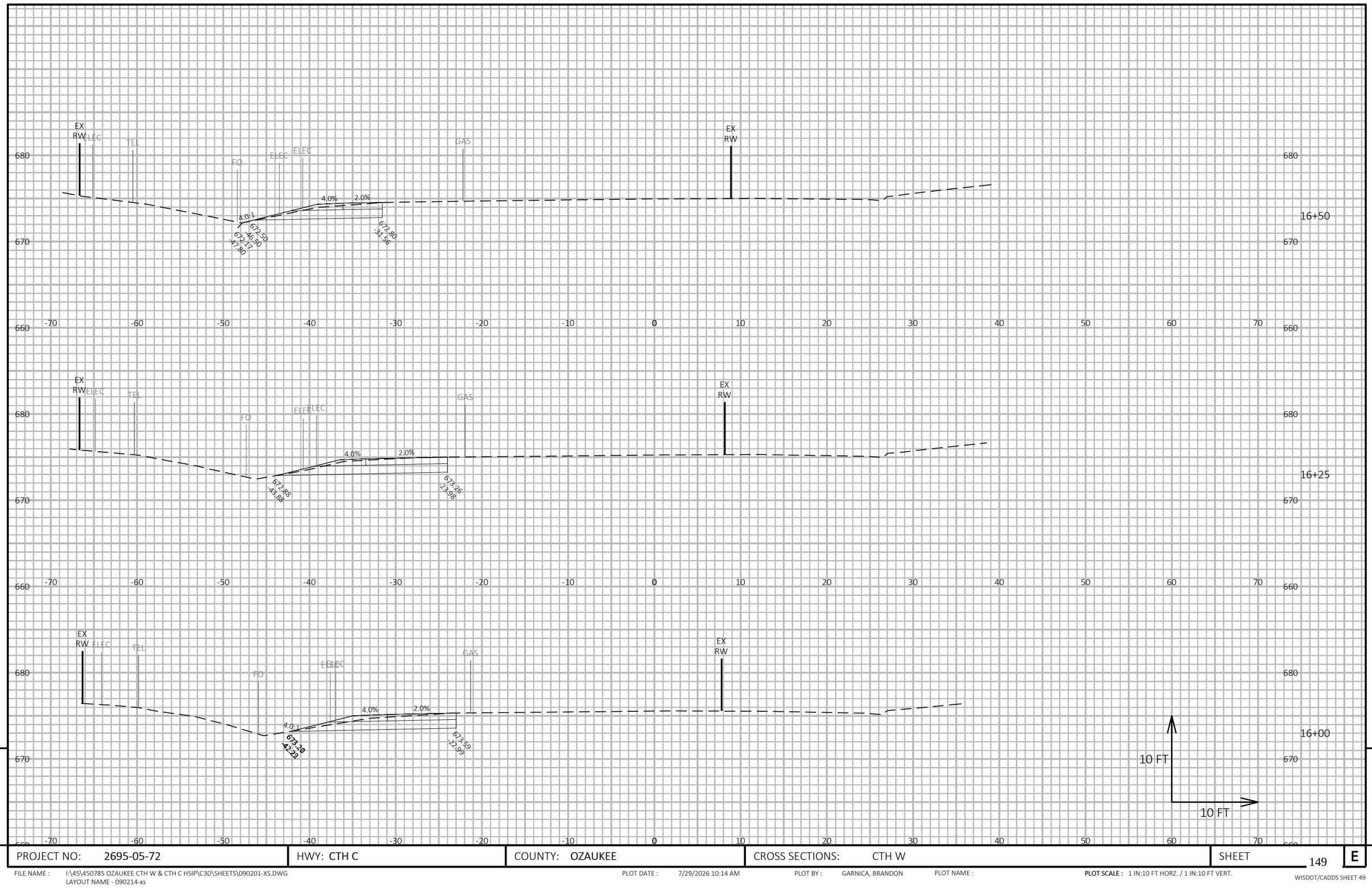
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FILE NAME : I:\45\450785 OZAUKEE CTH W & CTH C HSIP\C3D\SHEETS\090201-XS.DWG
LAYOUT NAME - 090213-xs

PLOT DATE : 7/29/2026 10:16 AM PLOT BY : GARNICA, BRANDON PLOT NAME :

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

WISDOT/CADDS SHEET 49



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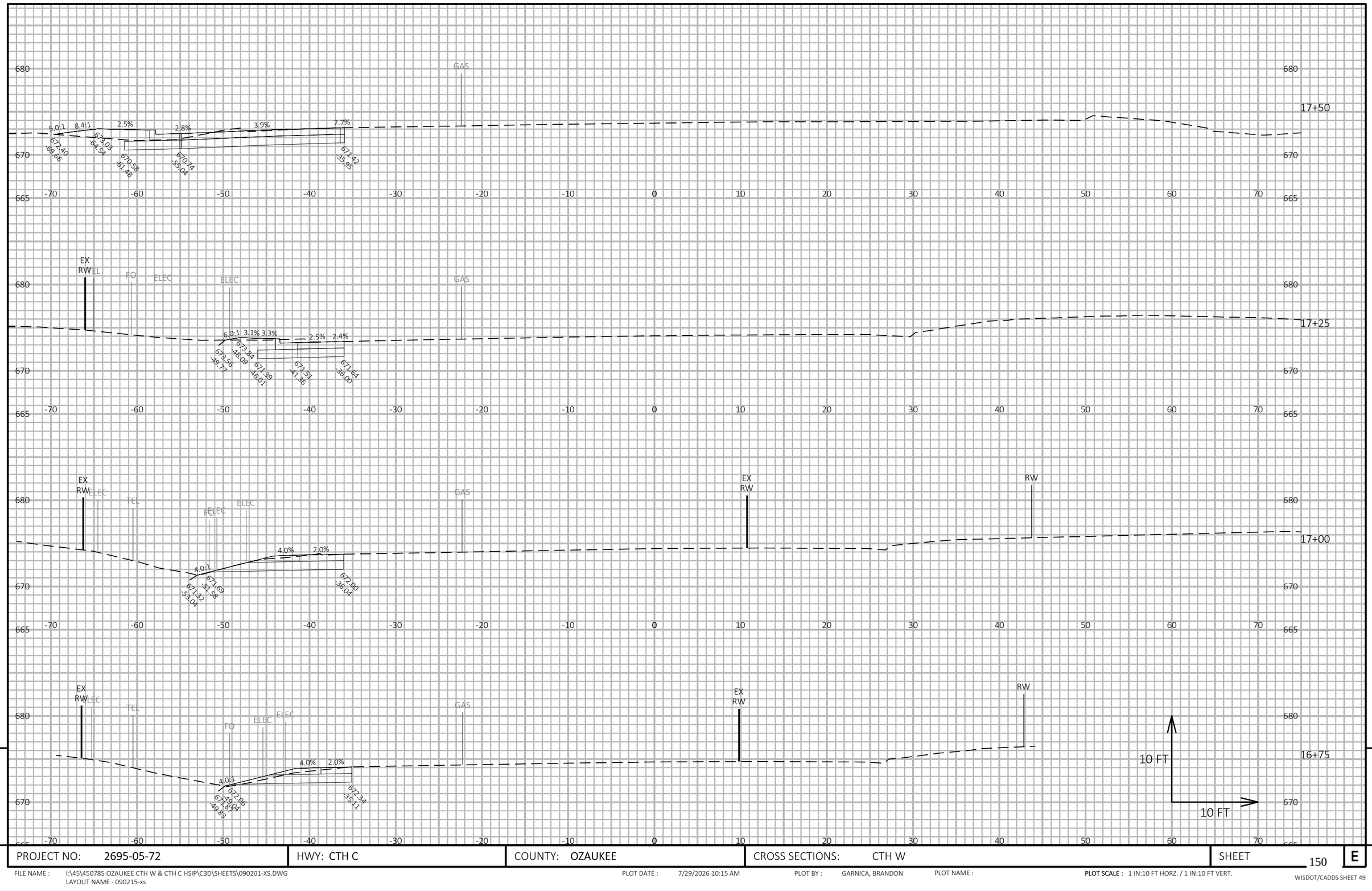
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PROJECT NO: 2695-05-72	HWY: CTH C	COUNTY: OZAUKEE	CROSS SECTIONS: CTH W	SHEET 149	E

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LAYOUT NAME - 090214-xs

PLOT DATE : 7/29/2026 10:14 AM PLOT BY : GARNICA, BRANDON PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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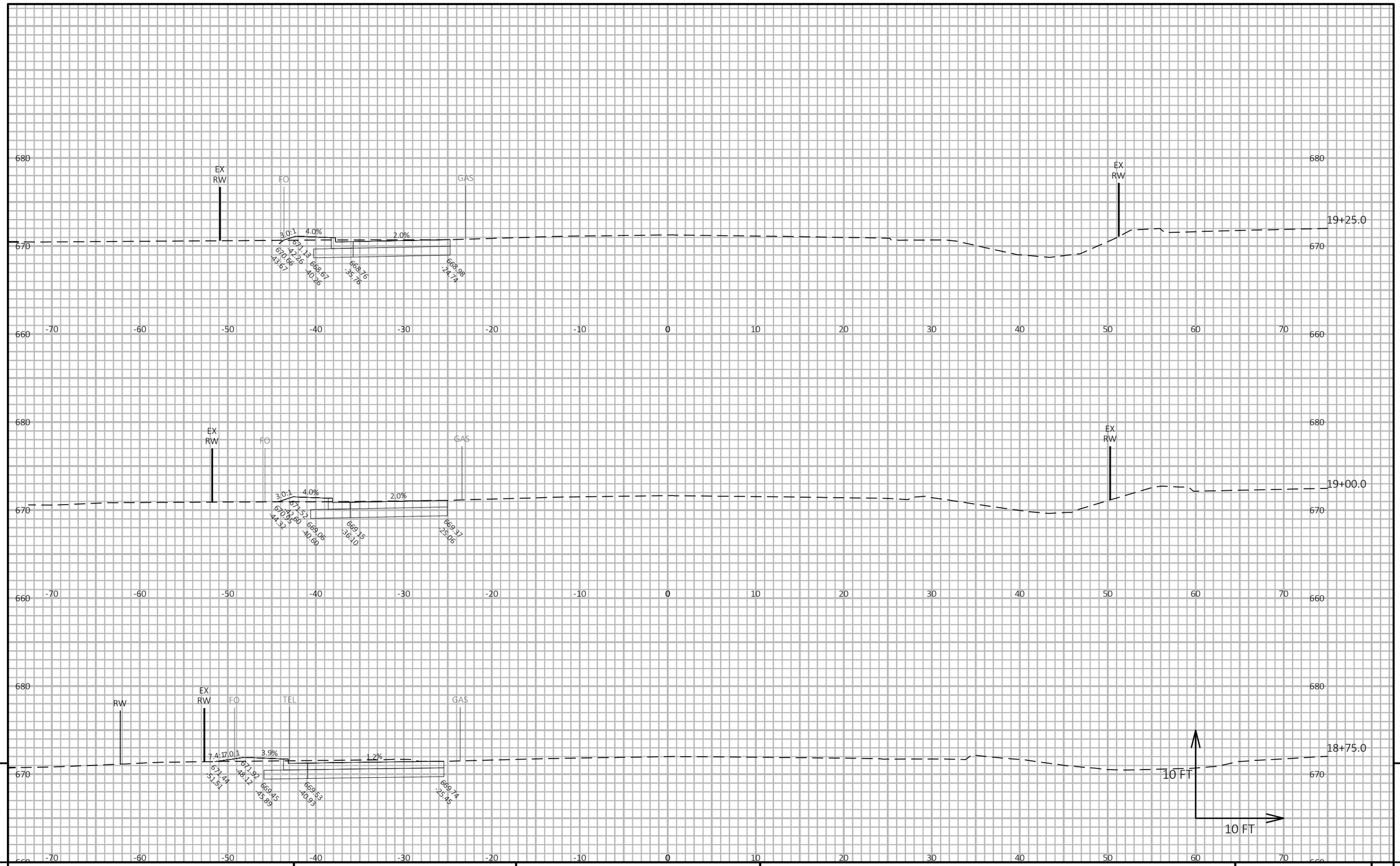
PROJECT NO: 2695-05-72	HWY: CTH C	COUNTY: OZAUKEE	CROSS SECTIONS: CTH W	SHEET 150	E

FILE NAME : I:\45\450785 OZAUKEE CTH W & CTH C HSIP\C3D\SHEETS\090201-XS.DWG
LAYOUT NAME - 090215-xs

PLOT DATE : 7/29/2026 10:15 AM PLOT BY : GARNICA, BRANDON PLOT NAME :

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

WISDOT/CADDS SHEET 49



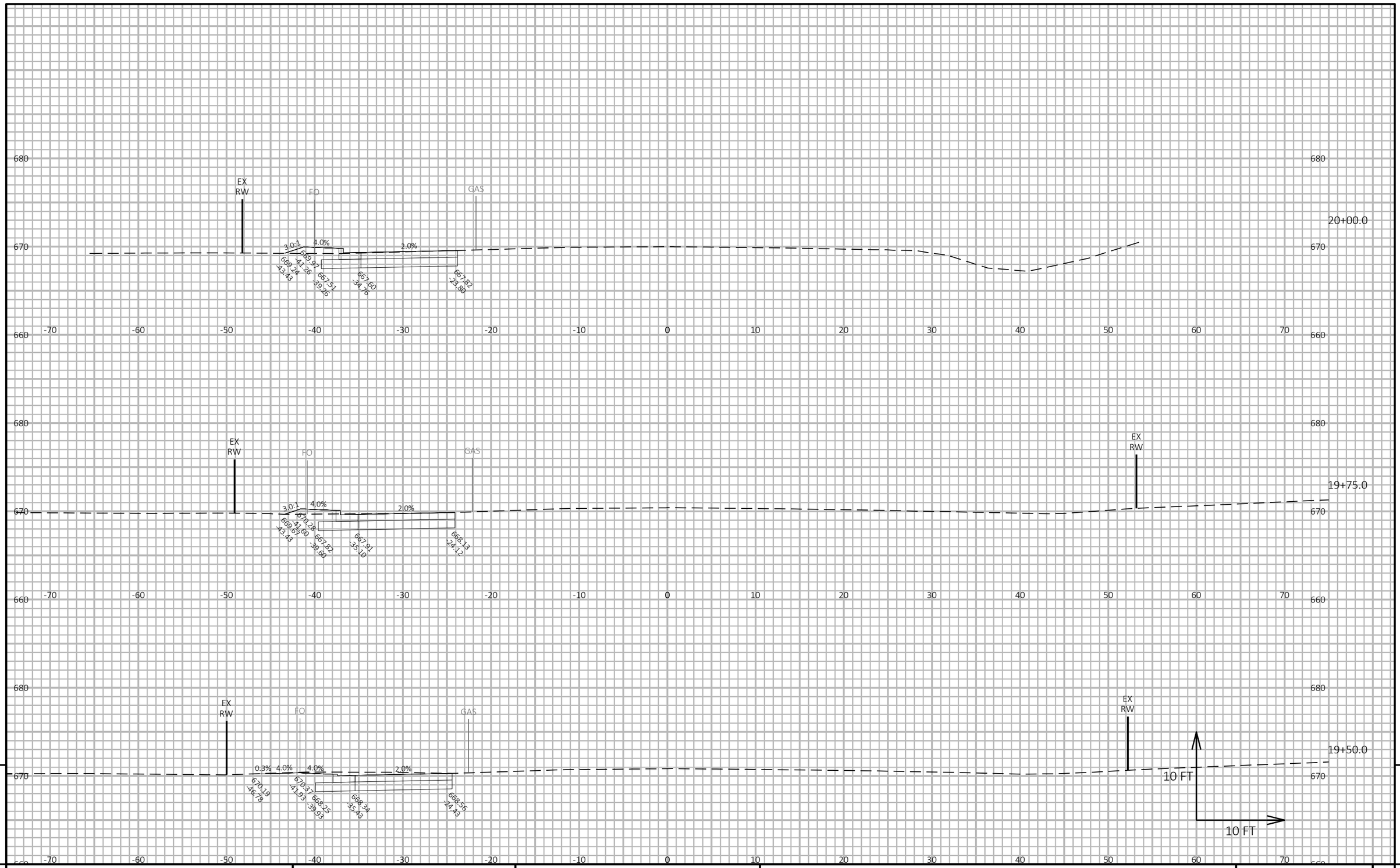
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LAYOUT NAME - 090216-xs

PLOT DATE : 7/29/2026 10:15 AM PLOT BY : GARNICA, BRANDON PLOT NAME :

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

WISDOT/CADDS SHEET 49



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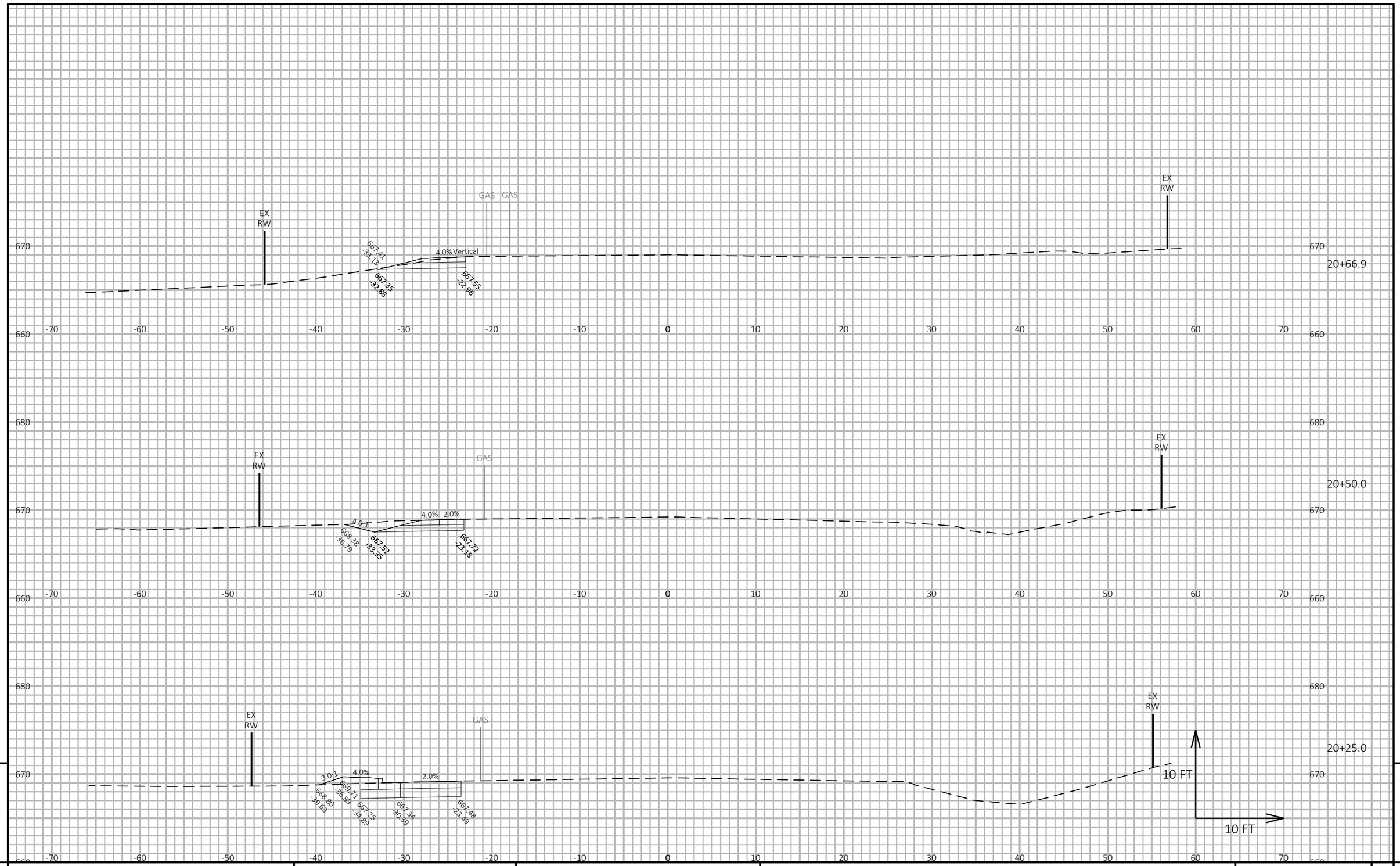
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PROJECT NO: 2695-05-72	HWY: CTH C	COUNTY: OZAUKEE	CROSS SECTIONS: CTH W	SHEET 152	E

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LAYOUT NAME - 090217-xs

PLOT DATE : 7/29/2026 10:16 AM PLOT BY : GARNICA, BRANDON PLOT NAME :

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



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9

PROJECT NO: 2695-05-72	HWY: CTH C	COUNTY: OZAUKEE	CROSS SECTIONS: CTH W	SHEET 153	E

FILE NAME : I:\45\450785 OZAUKEE CTH W & CTH C HSIP\C3D\SHEETS\090201-XS.DWG
LAYOUT NAME - 090218-xs

PLOT DATE : 7/29/2026 10:14 AM PLOT BY : GARNICA, BRANDON PLOT NAME :

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

WISDOT/CADDS SHEET 49

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

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