

WKE

WITH:

PROJECT ID:

1040-00-70

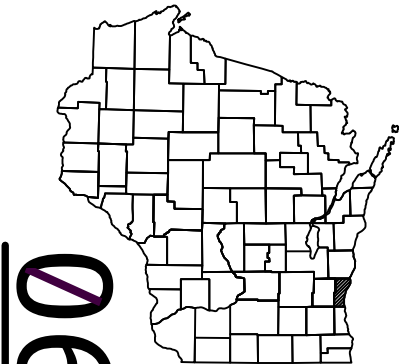
COUNTY:

OZAUKEE

SEPTEMBER 2021
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 = 136



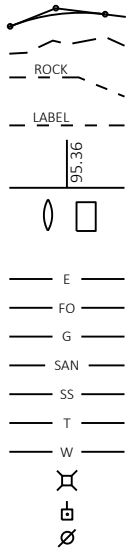
DESIGN DESIGNATION 1040-00-00

A.A.D.T.	2015	=	12,000
A.A.D.T.	2029	=	13,700
D.H.V.		=	12,850
D.D.		=	0.60
T.		=	11.9
DESIGN SPEED		=	65 MPH
ESALS		=	5,100,000

CONVENTIONAL SYMBOLS

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

<u>PROFILE</u>	
GRADE LINE	
ORIGINAL GROUND	
MARSH OR ROCK PROFILE (To be noted as such)	
SPECIAL DITCH	
GRADE ELEVATION	
CULVERT (Profile View)	
<u>UTILITIES</u>	
ELECTRIC	
FIBER OPTIC	
GAS	
SANITARY SEWER	
STORM SEWER	
TELEPHONE	
WATER	
UTILITY PEDESTAL	
POWER POLE	
TELEPHONE POLE	



STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

SAUKVILLE - WALDO

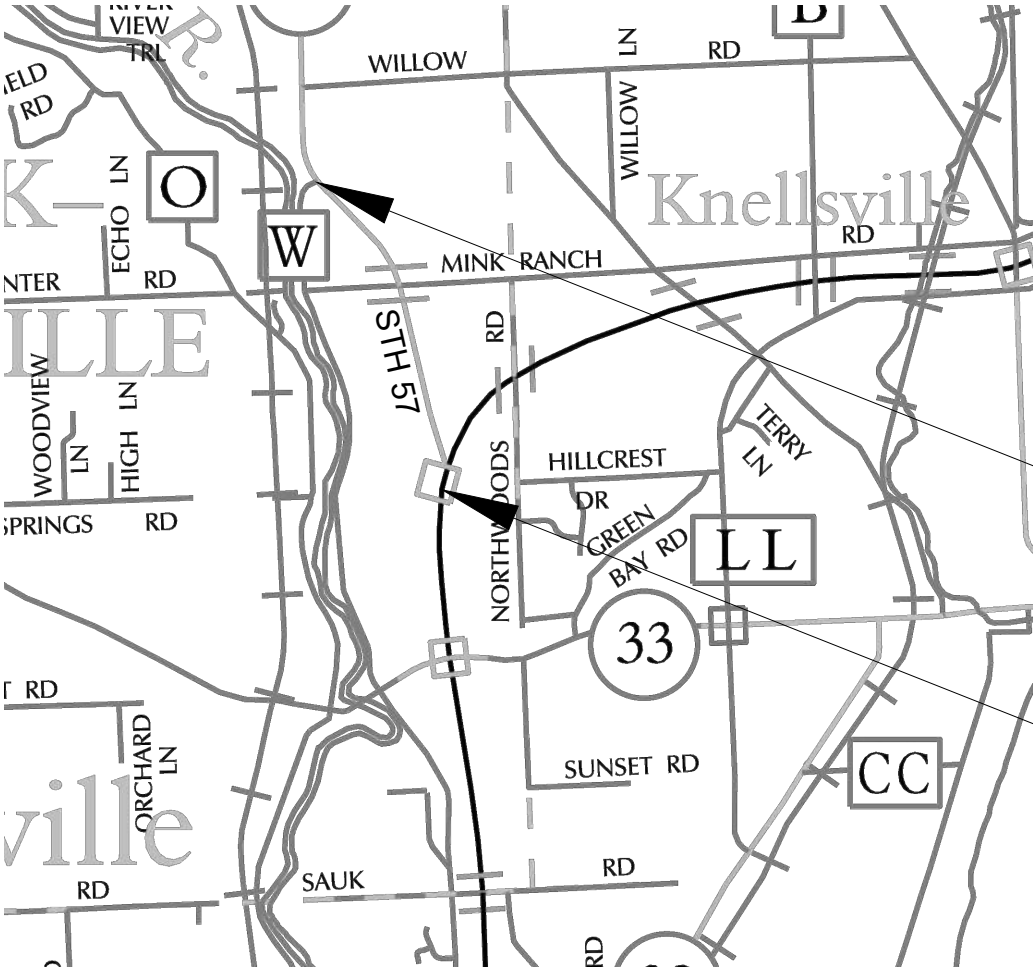
IH-43 TO CTH W

STH 57

OZAUKEE COUNTY

STATE PROJECT NUMBER
1040-00-70

R-21-E
T-11-N



LAYOUT
SCALE 0 1 MI

TOTAL NET LENGTH OF CENTERLINE = 1.735

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), OZAUKEE COUNTY, NAD83 (2007), 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 (2007). GPS DERIVED ELEVATIONS ARE BASED ON GEOID 12A.

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1040-00-70		

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
PREPARED BY	
Surveyor	SURVEYOR
Designer	BHUVAN MANANDHAR
Project Manager	DAVID PITTMAN
Regional Examiner	REGIONAL EXAMINER
Regional Supervisor	JOE GALLAMORE
APPROVED FOR THE DEPARTMENT	
DATE: 6/12/21	(Signature)

GENERAL NOTES

THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN. COORDINATE CONSTRUCTION ACTIVITIES WITH A CALL TO DIGGERS HOTLINE AND/OR A DIRECT CALL TO THE UTILITIES THAT HAVE FACILITIES IN THE AREA. NOT ALL UTILITIES ARE MEMBERS OF DIGGERS HOTLINE.

CONTACT THE PROJECT ENGINEER, THE COUNTY SURVEYOR, AND THE SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION (SEWRPC) AT LEAST TWO WEEKS BEFORE WORKING NEAR ANY SECTION CORNER MONUMENT.

VERIFY EXISTING PAVEMENT ELEVATIONS AT ALL TIE-INS TO EXISTING PAVEMENT PRIOR TO CONSTRUCTION. NOTIFY ENGINEER IF A DISCREPANCY IS FOUND BETWEEN PROPOSED PLAN ELEVATIONS AND EXISTING PAVEMENT ELEVATIONS.

DO NOT REMOVE ANY TREES OR SHRUBS WITHOUT APPROVAL OF THE ENGINEER.

ALL SIGN LOCATIONS SHALL BE REVIEWED BY THE ENGINEER PRIOR TO INSTALLATION.

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

REMOVAL OF EROSION CONTROL DEVICES IS INCLUDED IN THE COST OF THEIR RESPECTIVE BID ITEMS.

ALL PRIVATE EXISTING UTILITIES ARE TO BE ADJUSTED BY THE UTILITIES CONCERNED.

ALL HOLES OR OPENINGS BELOW SUBGRADE RESULTING FROM ABANDONMENT OR REMOVAL OF EXISTING STRUCTURES SHALL BE FILLED WITH COMPACTED BACKFILL GRANULAR UNLESS REGULATIONS REQUIRE OTHERWISE. BACKFILL GRANULAR MATERIAL IS INCIDENTAL TO THE REMOVAL ITEM.

STANDARD ABBREVIATIONS

AEW	APRON ENDWALL
AGG	AGGREGATE
ASPH	ASPHALTIC
BAD	BASE AGGREGATE DENSE
BM	BENCHMARK
C&G	CURB AND GUTTER
CL OR ^C _L	CENTER LINE OR CONSTRUCTION LINE
CONC	CONCRETE
CPRCHE	CULVERT PIPE REINFORCED CONCRETE
CY	CUBIC YARD
DISCH	DISCHARGE
EB	EASTBOUND
FE	FIELD ENTRANCE
FL	FLOW LINE
HMA	HOT MIX ASPHALTIC
INV	INVERT
LT	LEFT
MIN	MINIMUM
M/L	MATCHLINE
NB	NORTHBOUND
NC	NORMAL CROWN
PAVT	PAVEMENT
PE	PRIVATE ENTRANCE
REQD	REQUIRED
RT	RIGHT
SALV	SALVAGED
	SALVAGED ASPHALTIC PAVEMENT
SAPBC	BASE COURSE
SB	SOUTHBOUND
SDD	STANDARD DETAIL DRAWING
SE	SUPER ELEVATION
SF	SQUARE FOOT
SI	SLOPE INTERCEPT
	STORM SEWER PIPE REINFORCED
SSPRC	CONCRETE
STA	STATION
SY	SQUARE YARD
TLE	TEMPORARY LIMITED EASEMENT
WB	WESTBOUND

STATE AGENCIES

WISDOT SE REGION
DAVID PITTMAN - PROJECT MANAGER
141 NW BARSTOW STREET
WAUKESHA, WI 53187
262-548-6439
DAVID.PITTMAN@DOT.WI.GOV

WISDOT SE REGION
BHUVAN MANANDHAR -
LEAD DESIGNER
141 NW BARSTOW STREET
WAUKESHA, WI 53187
262-548-5953
BHUVAN.MANANDHAR@DOT.WI.GOV

WISCONSIN DNR
KRISTINA BETZOLD - ENVIRONMENTAL
ANALYSIS AND REVIEW SPECIALIST
2300 N DR. MARTIN LUTHER KING JR. DRIVE
MILWAUKEE, WI 53212
414-507-4946
KRISTINA.BETZOLD@WISCONSIN.GOV

ORDER OF SHEETS

TITLE SHEET
GENERAL NOTES
PROJECT OVERVIEW
TYPICAL SECTIONS
PLAN DETAILS
PAVEMENT MARKING
STAGE CONSTRUCTION
TRAFFIC CONTROL
PERMANENT SIGNING PLAN
ALIGNMENT DETAILS

UTILITY LIST:

TRANS 220 MAILBOX
ATC MANAGEMENT, INC. - ELECTRICITY-
TRANSMISSION
801 O'KEEFE ROAD
DE PERE, WI 54115
(920) 338-6582
DL-ATCDOTNOTIFICATIONS@ATCLLC.COM

JEFF OLDENBURG
AT&T WISCONSIN - COMMUNICATION LINE
2005 PEWAUKEE ROAD
WAUKESHA, WI 53188
(262) 896-7522
JO2376@ATT.COM

GENERAL MAILBOX CENTURYLINK
NATIONAL OSP RELOC
CENTURYLINK COMMUNICATIONS, LLC -
COMMUNICATION LINE
CENTURYLINKNATIONALOSPLOCATIONS@
CENTURYLINK.COM

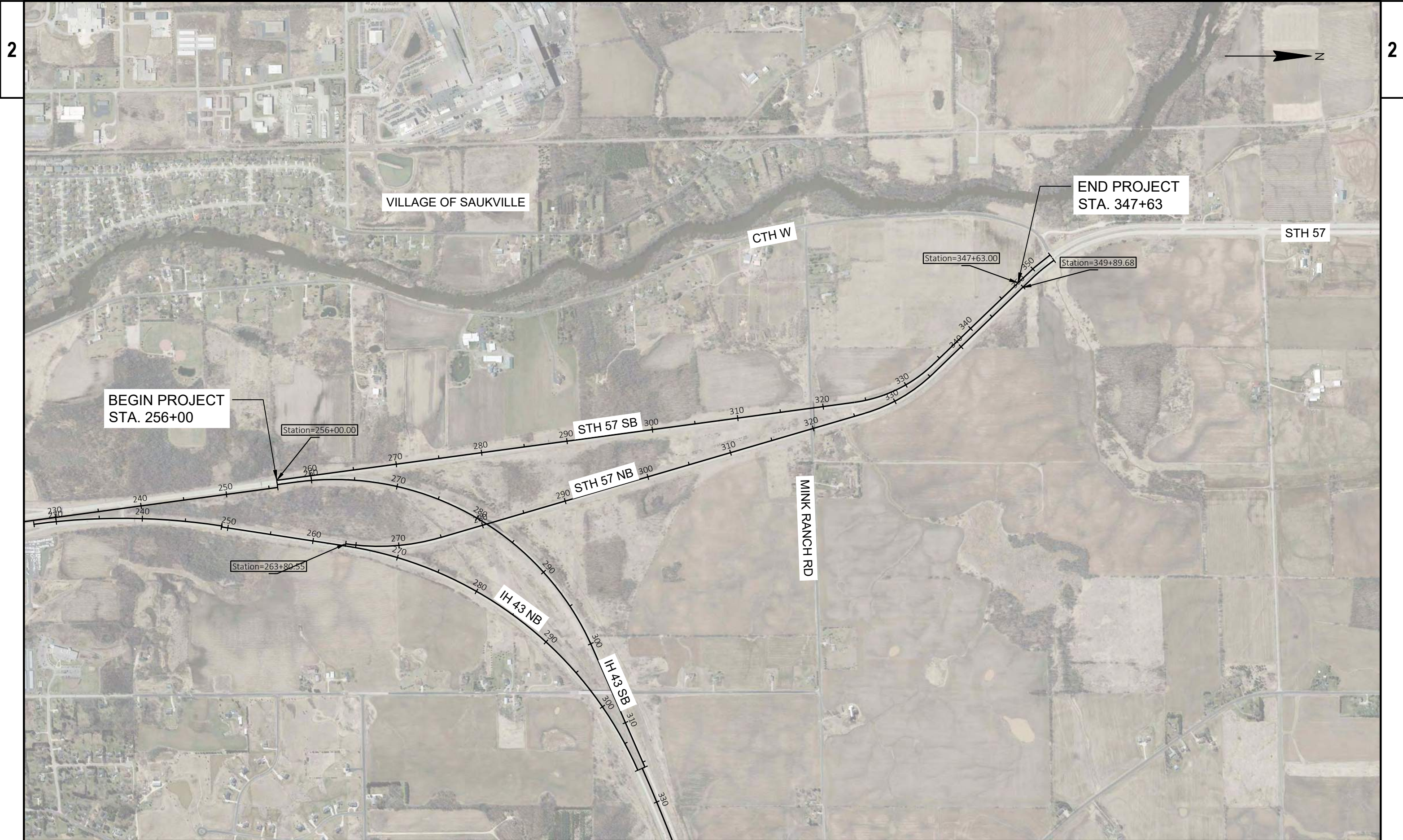
GREGORY BOERNER
WE ENERGIES – ELECTRICITY
500 S 116TH ST
WEST ALLIS, WI
618-409-5861
GREGORY.BOERNER@WE-ENERGIES.COM

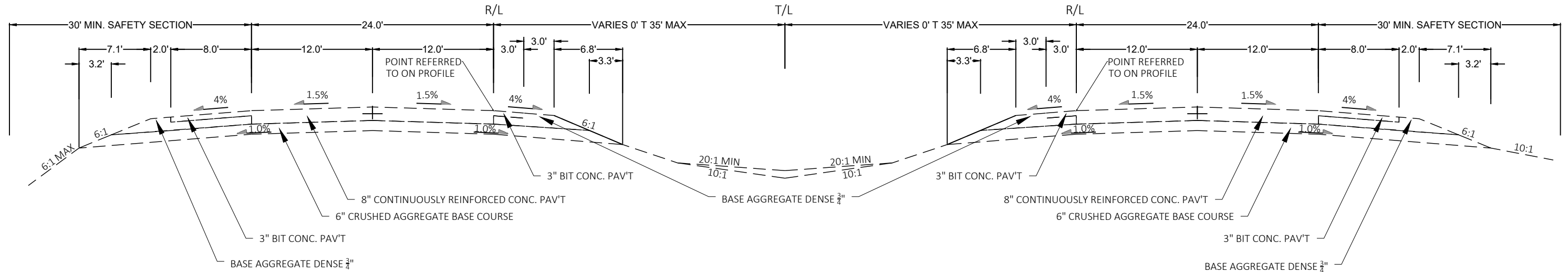
JACOB HULBERT
WE ENERGIES - GAS/PETROLEUM
500 S 116TH ST
WEST ALLIS, WI
414-944-5575
JACOB.HULBERT@WE-ENERGIES.COM

DIGGERSHOTLINE

Dial 811 or (800) 242-8511

www.DiggersHotline.com





EXISTING TYPICAL SECTION

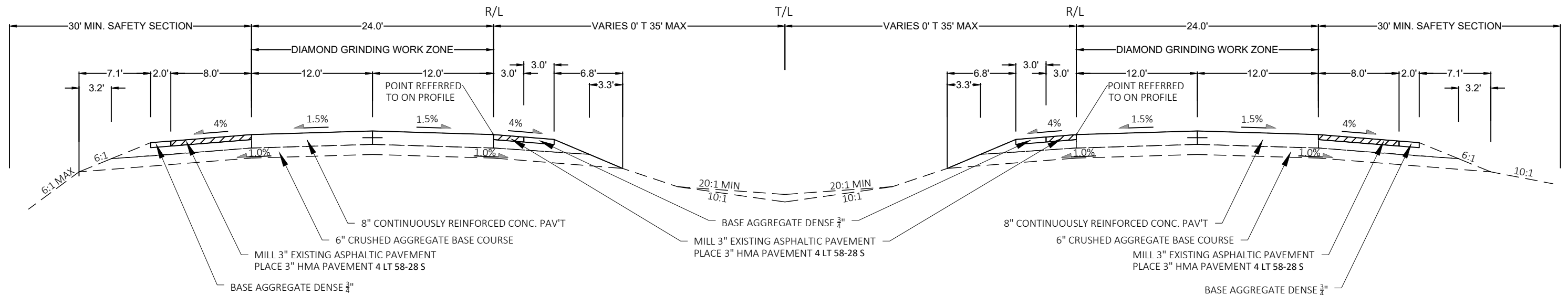
STH 57 SB

256+00 TO 347+63

EXISTING TYPICAL SECTION

STH 57 NB

263+80.55 TO 349+89.68



FINISHED TYPICAL SECTION

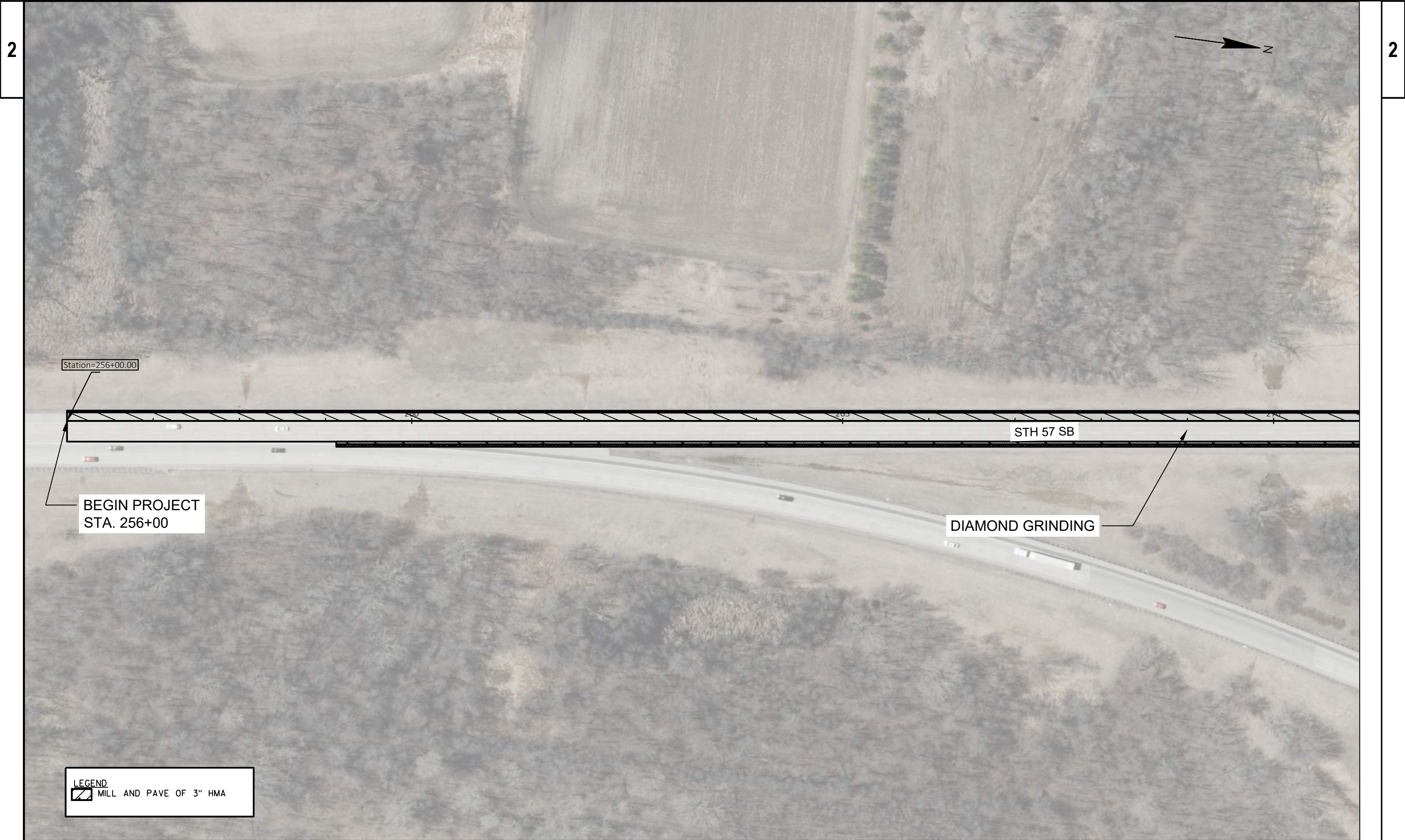
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256+00 TO 347+63

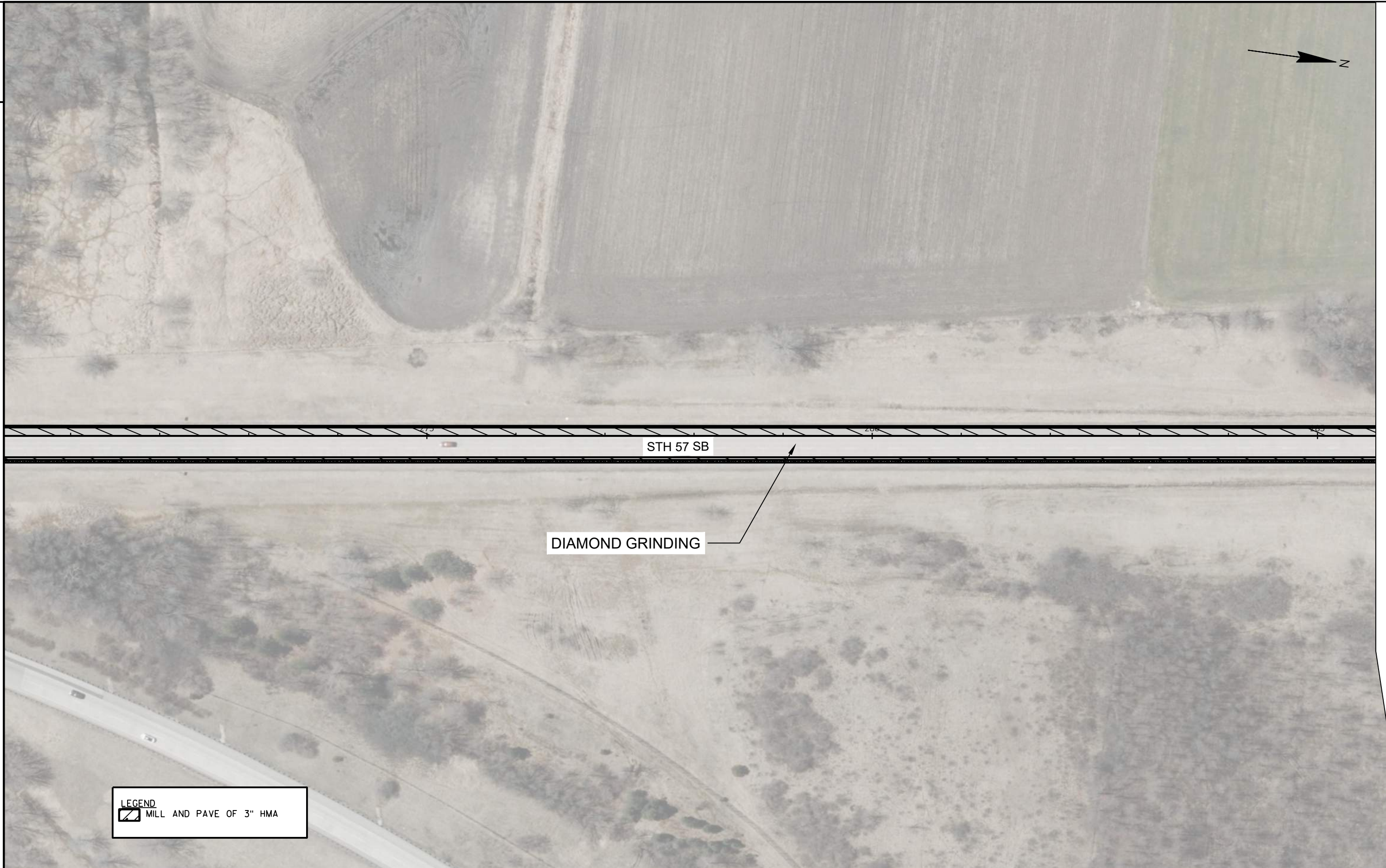
FINISHED TYPICAL SECTION

STH 57 NB

263+80.55 TO 349+89.68







PROJECT NO: 1040-00-70

HWY: STH 57

COUNTY: OZAUKEE

PLAN DETAILS

SHEET

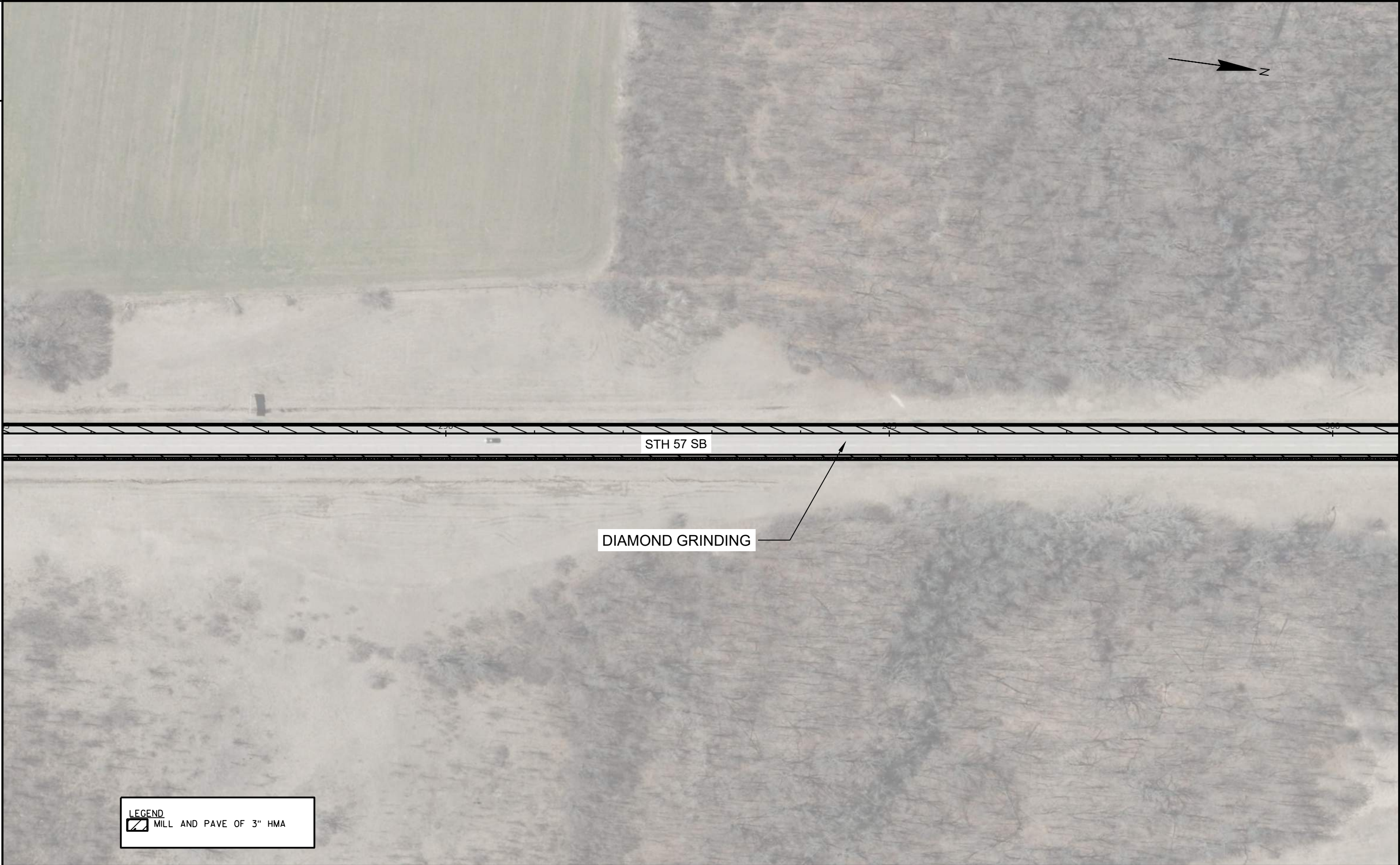
8

E



2

2



LEGEND
[Hatched Box] MILL AND PAVE OF 3" HMA



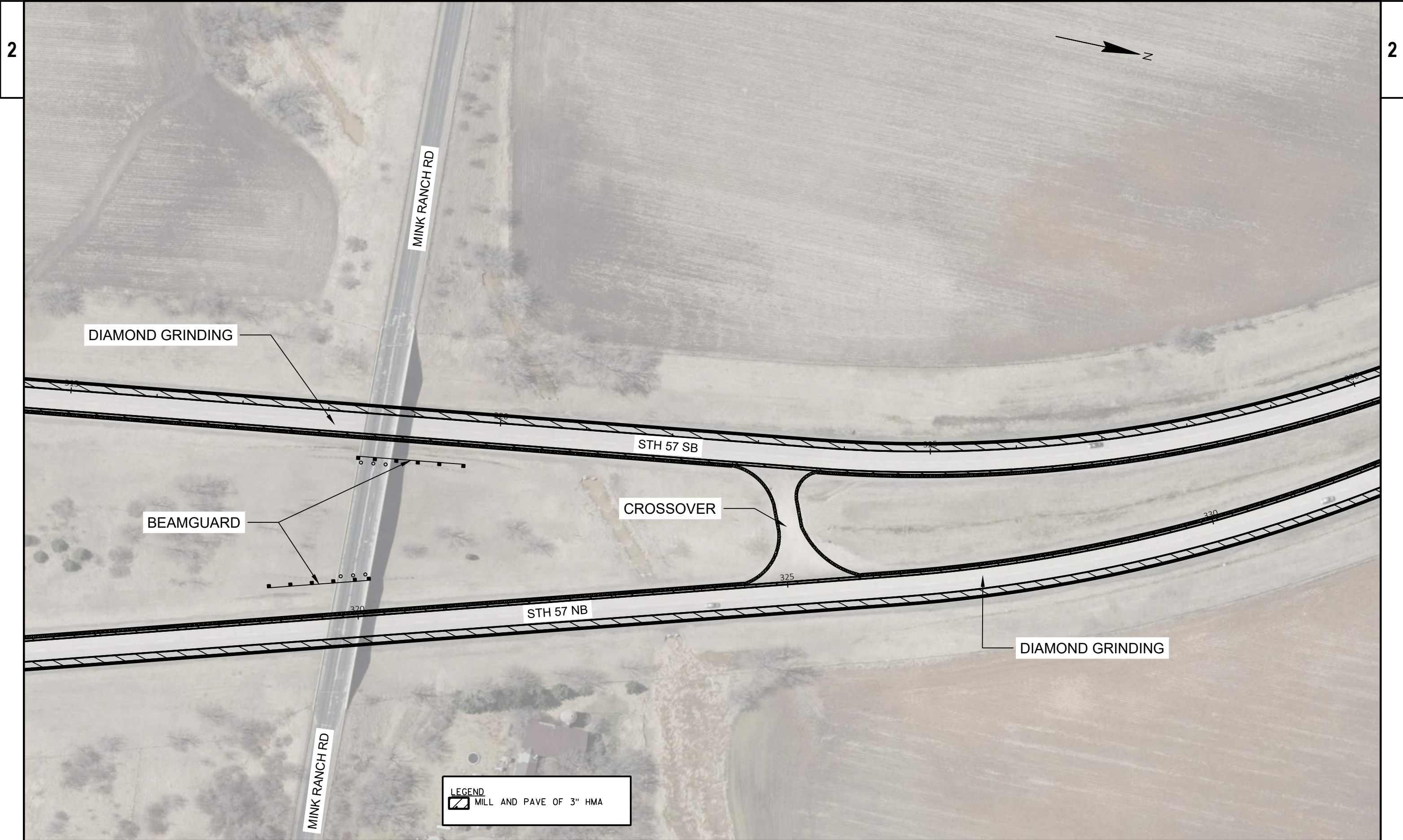
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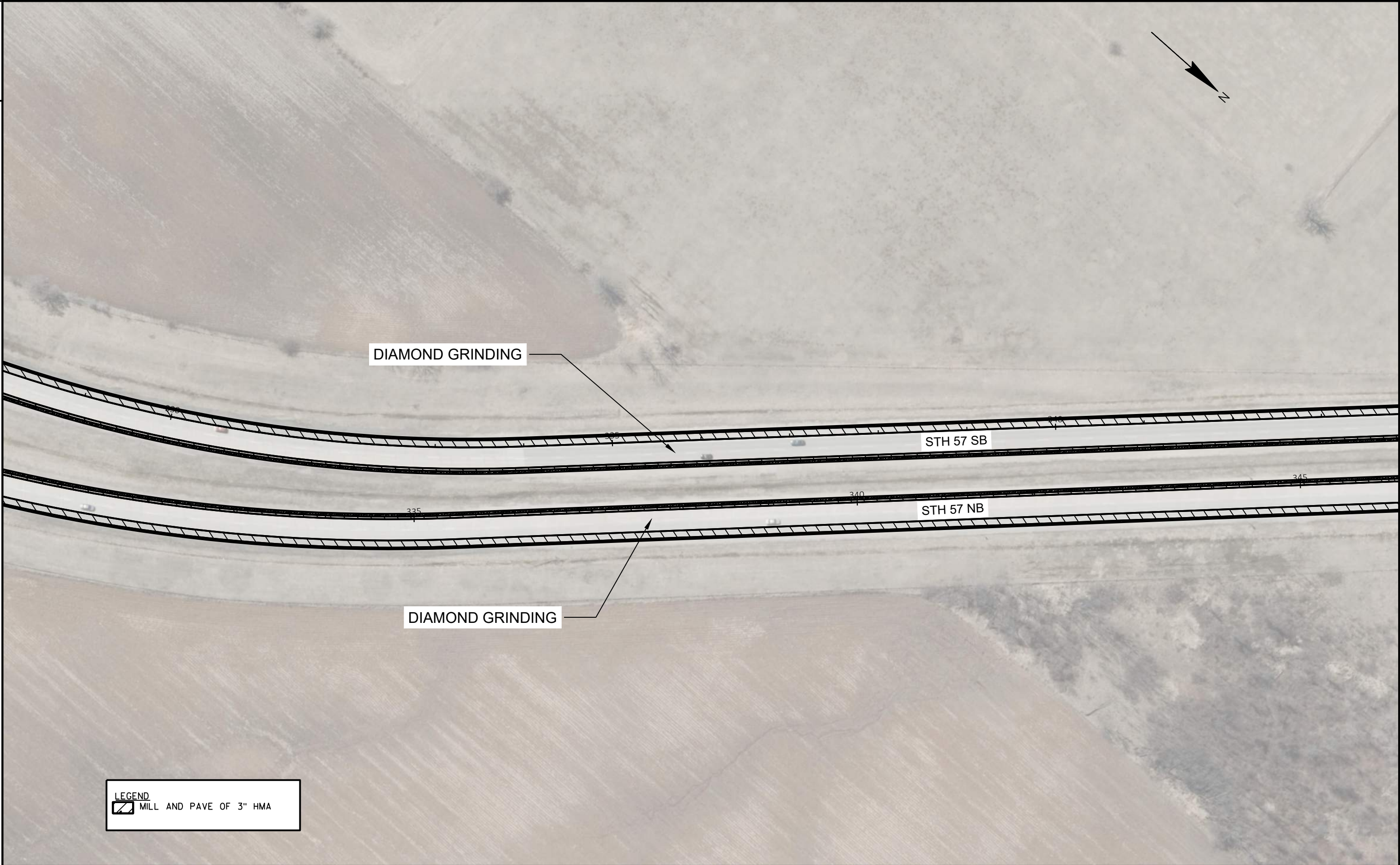
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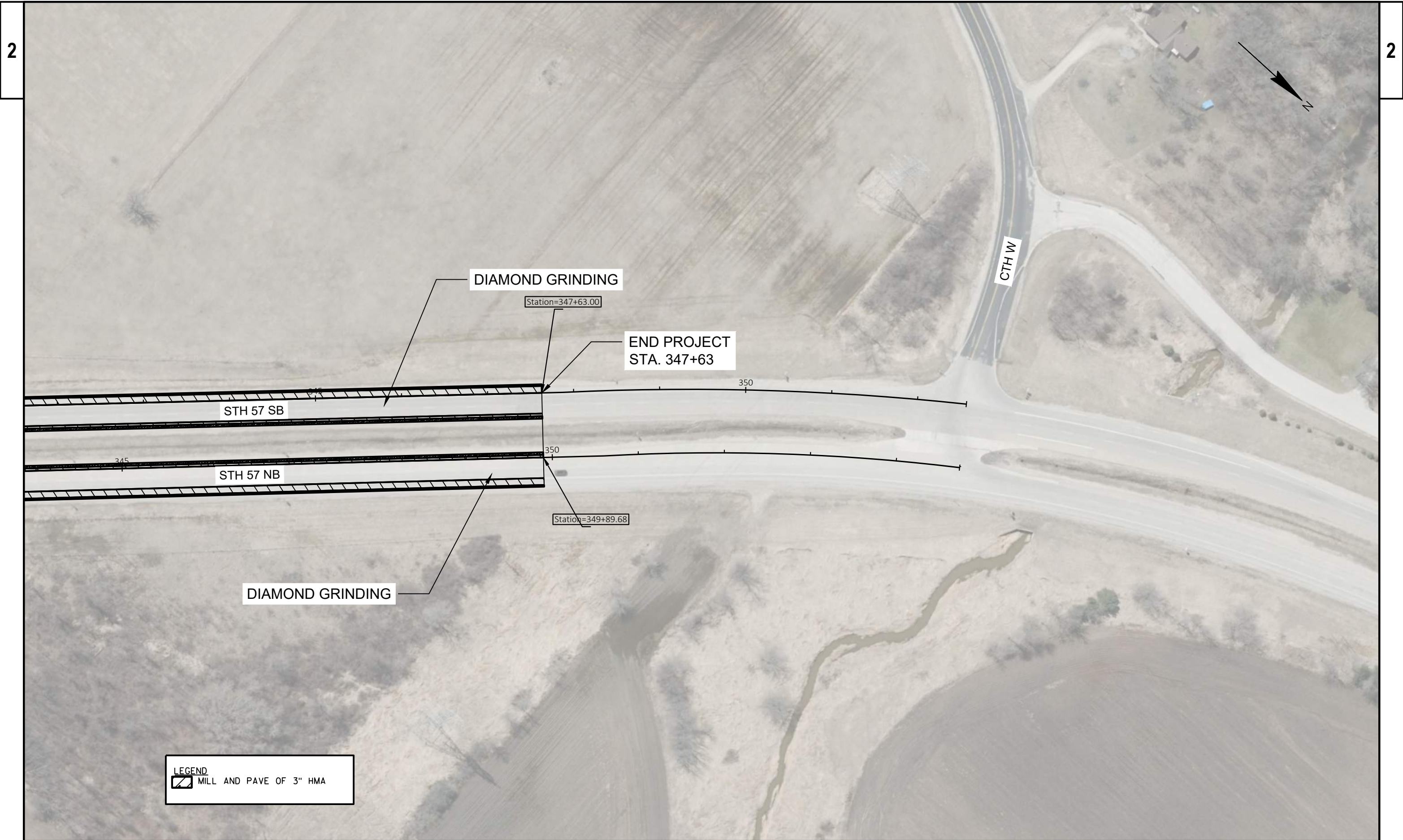


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2

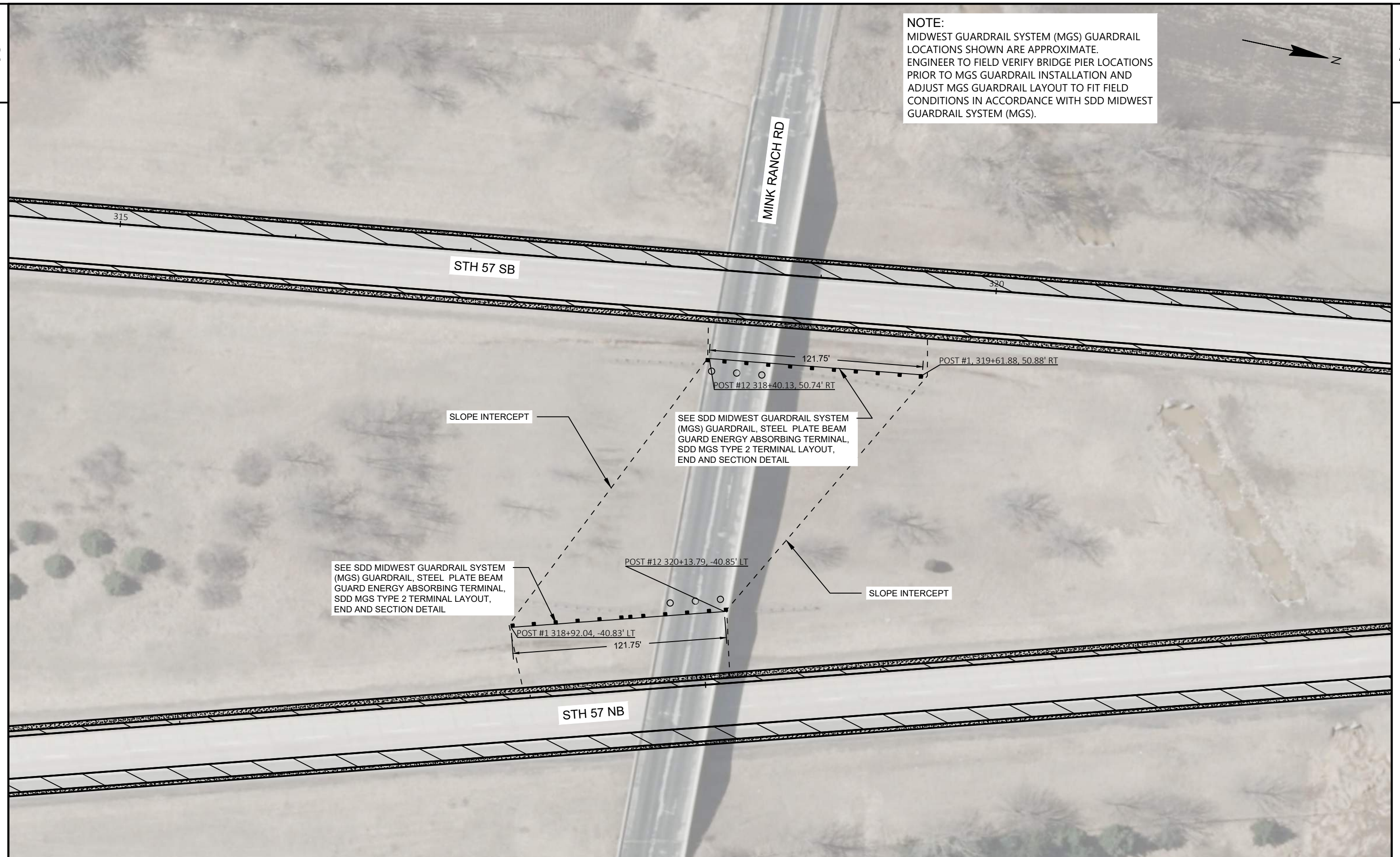






NOTE:

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL LOCATIONS SHOWN ARE APPROXIMATE. ENGINEER TO FIELD VERIFY BRIDGE PIER LOCATIONS PRIOR TO MGS GUARDRAIL INSTALLATION AND ADJUST MGS GUARDRAIL LAYOUT TO FIT FIELD CONDITIONS IN ACCORDANCE WITH SDD MIDWEST GUARDRAIL SYSTEM (MGS).



PROJECT NO: 1040-00-70

HWY: STH 57

COUNTY: OZAUCKEE

BEAMGUARD

SHEET

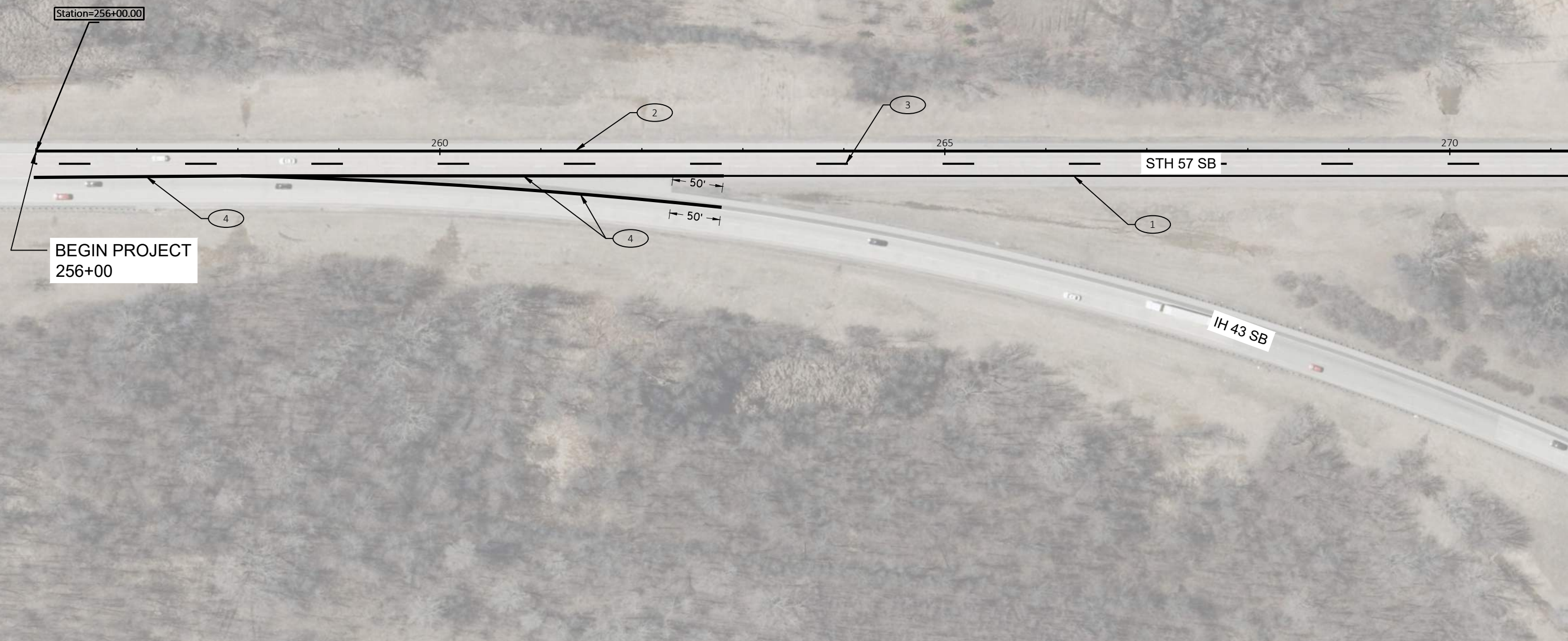
16

E



LEGEND

- ① MARKING LINE EPOXY 4-INCH (YELLOW)
- ② MARKING LINE EPOXY 4-INCH (WHITE)
- ③ MARKING LINE GROOVED WET REFLECTIVE EPOXY CONTRAST 4-INCH (WHITE), (12.5 FT LINE 37.5 FT SKIP)
- ④ MARKING LINE GROOVED CONTRAST PERMANENT TAPE 8-INCH (WHITE)
- ⑤ MARKING CHEVRON EPOXY 24-INCH (WHITE)



PROJECT NO: 1040-00-70

HWY: STH 57

COUNTY: OZAUCKEE

PAVEMENT MARKING

SHEET

18

E

LEGEND

- ① MARKING LINE EPOXY 4-INCH (YELLOW)
- ② MARKING LINE EPOXY 4-INCH (WHITE)
- ③ MARKING LINE GROOVED WET REFLECTIVE EPOXY CONTRAST 4-INCH (WHITE), (12.5 FT LINE 37.5 FT SKIP)
- ④ MARKING LINE GROOVED CONTRAST PERMANENT TAPE 8-INCH (WHITE)
- ⑤ MARKING CHEVRON EPOXY 24-INCH (WHITE)

BEGIN PROJECT

Station=263+80.55

265

50'

50'

50'

①

③

270

STH 57 NB

②

IH 43 NB

LEGEND

- ① MARKING LINE EPOXY 4-INCH (YELLOW)
- ② MARKING LINE EPOXY 4-INCH (WHITE)
- ③ MARKING LINE GROOVED WET REFLECTIVE EPOXY CONTRAST 4-INCH (WHITE), (12.5 FT LINE 37.5 FT SKIP)
- ④ MARKING LINE GROOVED CONTRAST PERMANENT TAPE 8-INCH (WHITE)
- ⑤ MARKING CHEVRON EPOXY 24-INCH (WHITE)



275

2

280

STH 57 SB

3

285

1

IH 43 SB

0+00.00

PROJECT NO: 1040-00-70

HWY: STH 57

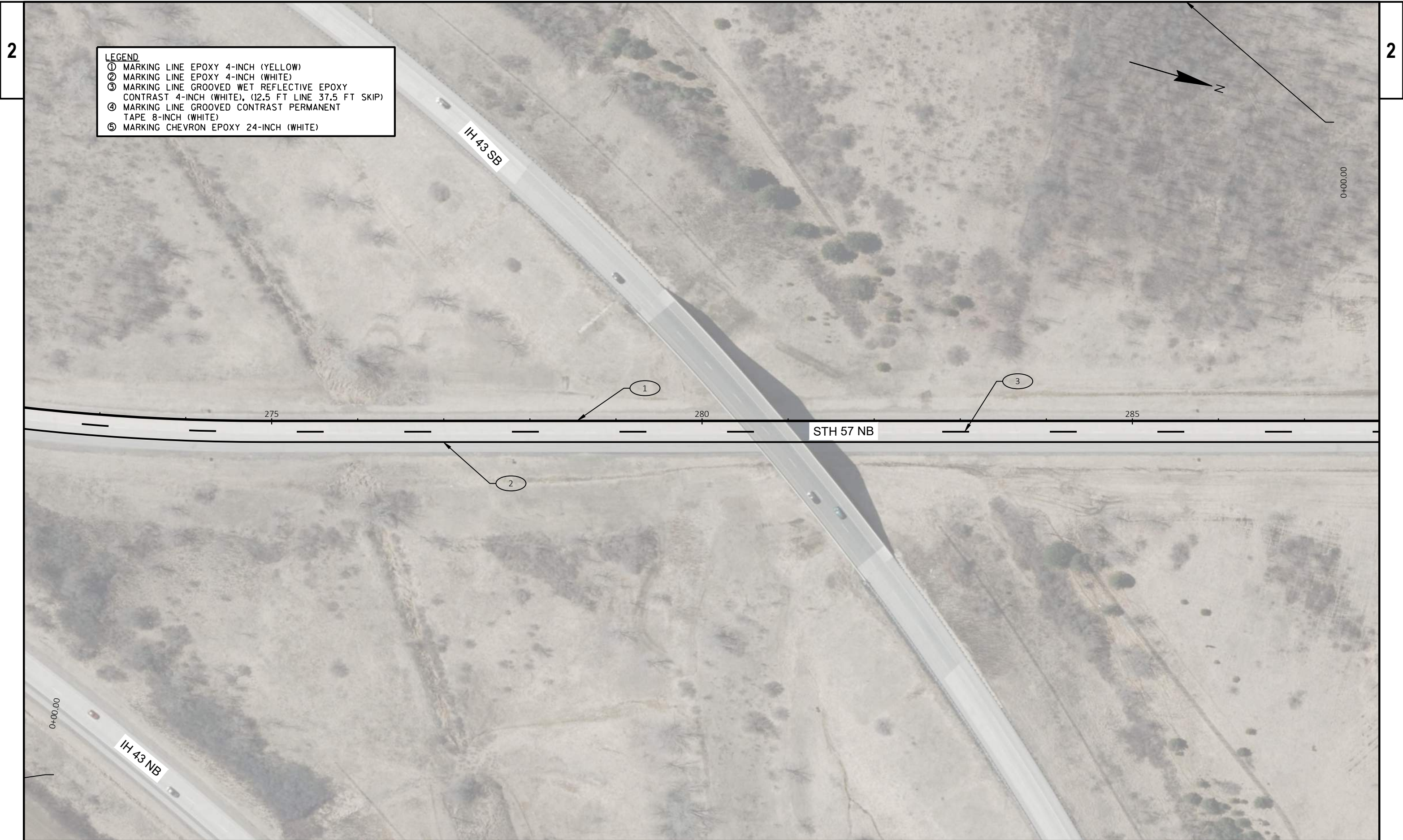
COUNTY: OZAUKEE

PAVEMENT MARKING

SHEET

20

E



- LEGEND
- ① MARKING LINE EPOXY 4-INCH (YELLOW)
 - ② MARKING LINE EPOXY 4-INCH (WHITE)
 - ③ MARKING LINE GROOVED WET REFLECTIVE EPOXY CONTRAST 4-INCH (WHITE), (12.5 FT LINE 37.5 FT SKIP)
 - ④ MARKING LINE GROOVED CONTRAST PERMANENT TAPE 8-INCH (WHITE)
 - ⑤ MARKING CHEVRON EPOXY 24-INCH (WHITE)

LEGEND

- ① MARKING LINE EPOXY 4-INCH (YELLOW)
- ② MARKING LINE EPOXY 4-INCH (WHITE)
- ③ MARKING LINE GROOVED WET REFLECTIVE EPOXY CONTRAST 4-INCH (WHITE), (12.5 FT LINE 37.5 FT SKIP)
- ④ MARKING LINE GROOVED CONTRAST PERMANENT TAPE 8-INCH (WHITE)
- ⑤ MARKING CHEVRON EPOXY 24-INCH (WHITE)

25

290

STH 57 SB

295

300

2

3

1



0+00.00

PROJECT NO: 1040-00-70

HWY: STH 57

COUNTY: OZAUKEE

PAVEMENT MARKING

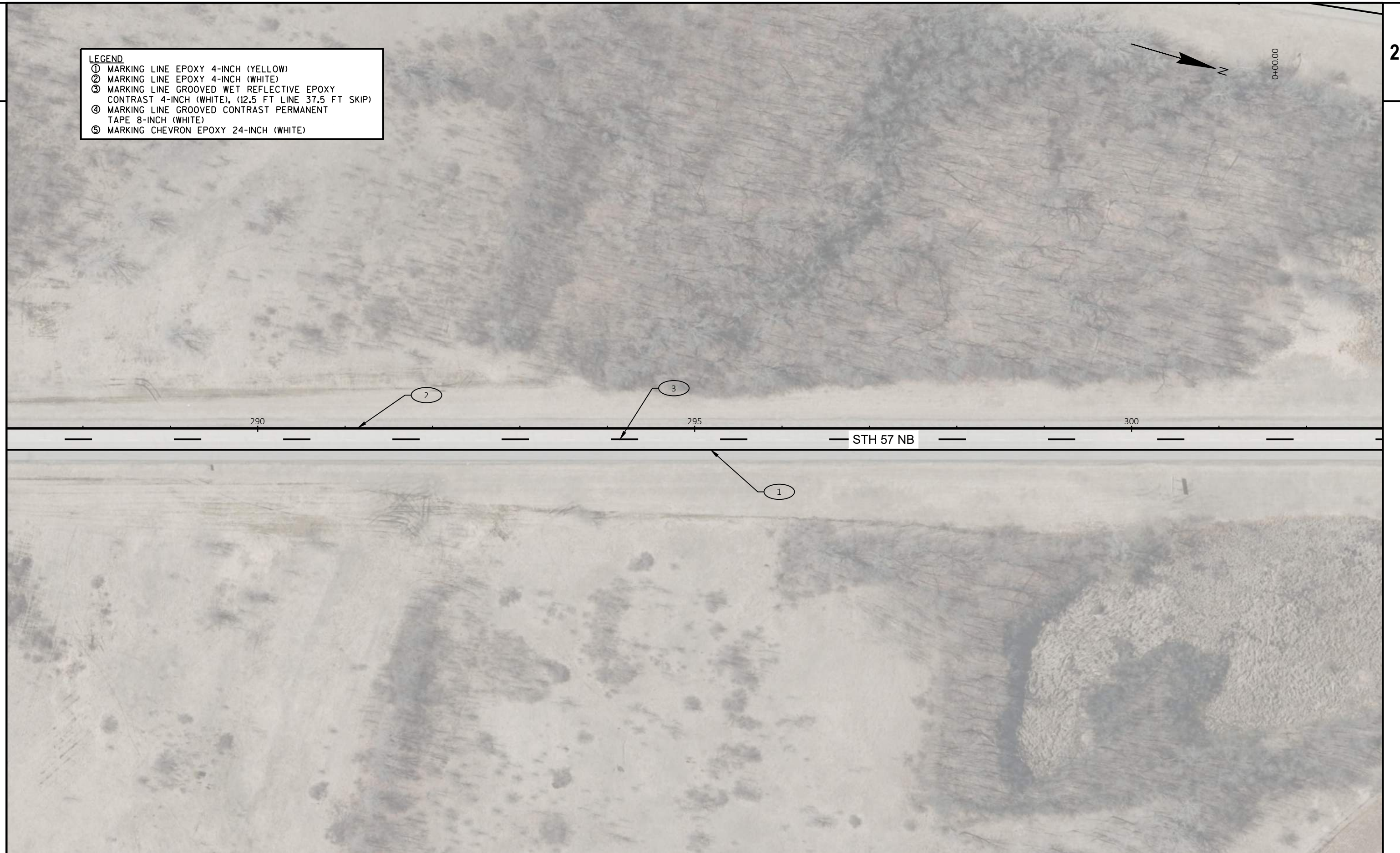
SHEET

22

E

LEGEND

- ① MARKING LINE EPOXY 4-INCH (YELLOW)
- ② MARKING LINE EPOXY 4-INCH (WHITE)
- ③ MARKING LINE GROOVED WET REFLECTIVE EPOXY CONTRAST 4-INCH (WHITE), (12.5 FT LINE 37.5 FT SKIP)
- ④ MARKING LINE GROOVED CONTRAST PERMANENT TAPE 8-INCH (WHITE)
- ⑤ MARKING CHEVRON EPOXY 24-INCH (WHITE)



PROJECT NO: 1040-00-70

HWY: STH 57

COUNTY: OZAUKEE

PAVEMENT MARKING

SHEET

23

E

LEGEND

- ① MARKING LINE EPOXY 4-INCH (YELLOW)
- ② MARKING LINE EPOXY 4-INCH (WHITE)
- ③ MARKING LINE GROOVED WET REFLECTIVE EPOXY CONTRAST 4-INCH (WHITE), (12.5 FT LINE 37.5 FT SKIP)
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- ⑤ MARKING CHEVRON EPOXY 24-INCH (WHITE)



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PAVEMENT MARKING

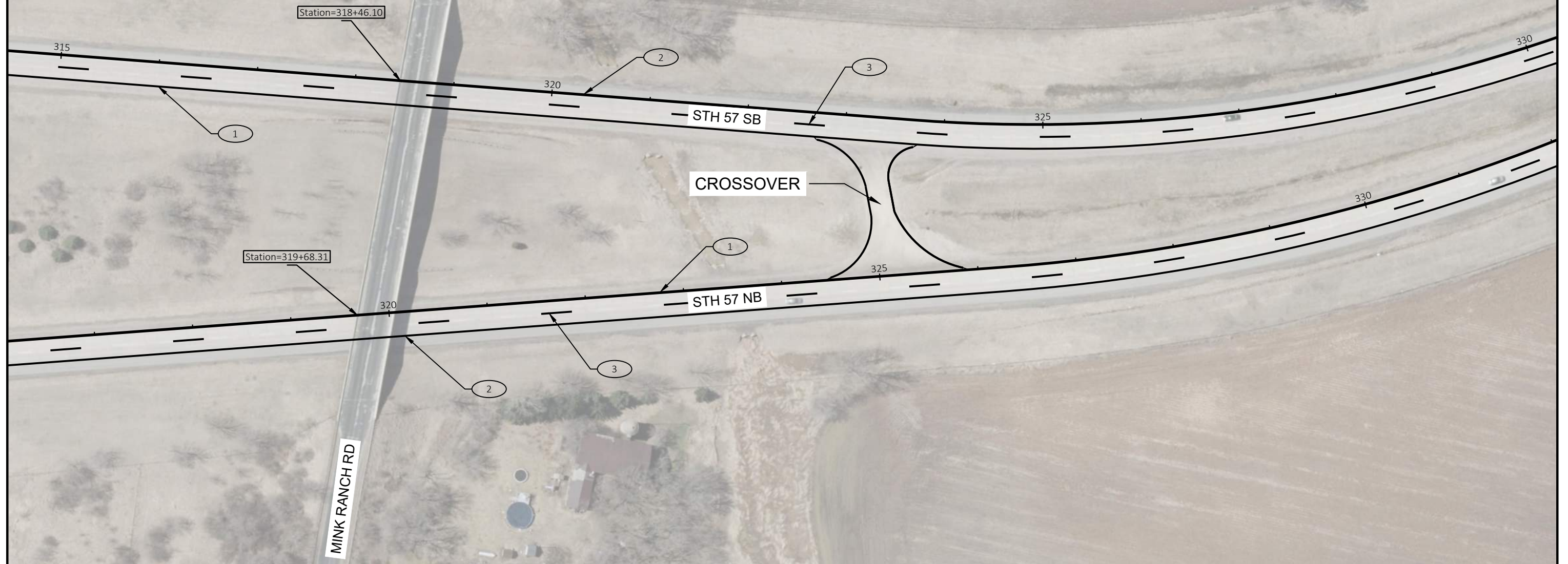
SHEET

24

E

LEGEND

- ① MARKING LINE EPOXY 4-INCH (YELLOW)
- ② MARKING LINE EPOXY 4-INCH (WHITE)
- ③ MARKING LINE GROOVED WET REFLECTIVE EPOXY CONTRAST 4-INCH (WHITE), (12.5 FT LINE 37.5 FT SKIP)
- ④ MARKING LINE GROOVED CONTRAST PERMANENT TAPE 8-INCH (WHITE)
- ⑤ MARKING CHEVRON EPOXY 24-INCH (WHITE)



PROJECT NO: 1040-00-70

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PAVEMENT MARKING

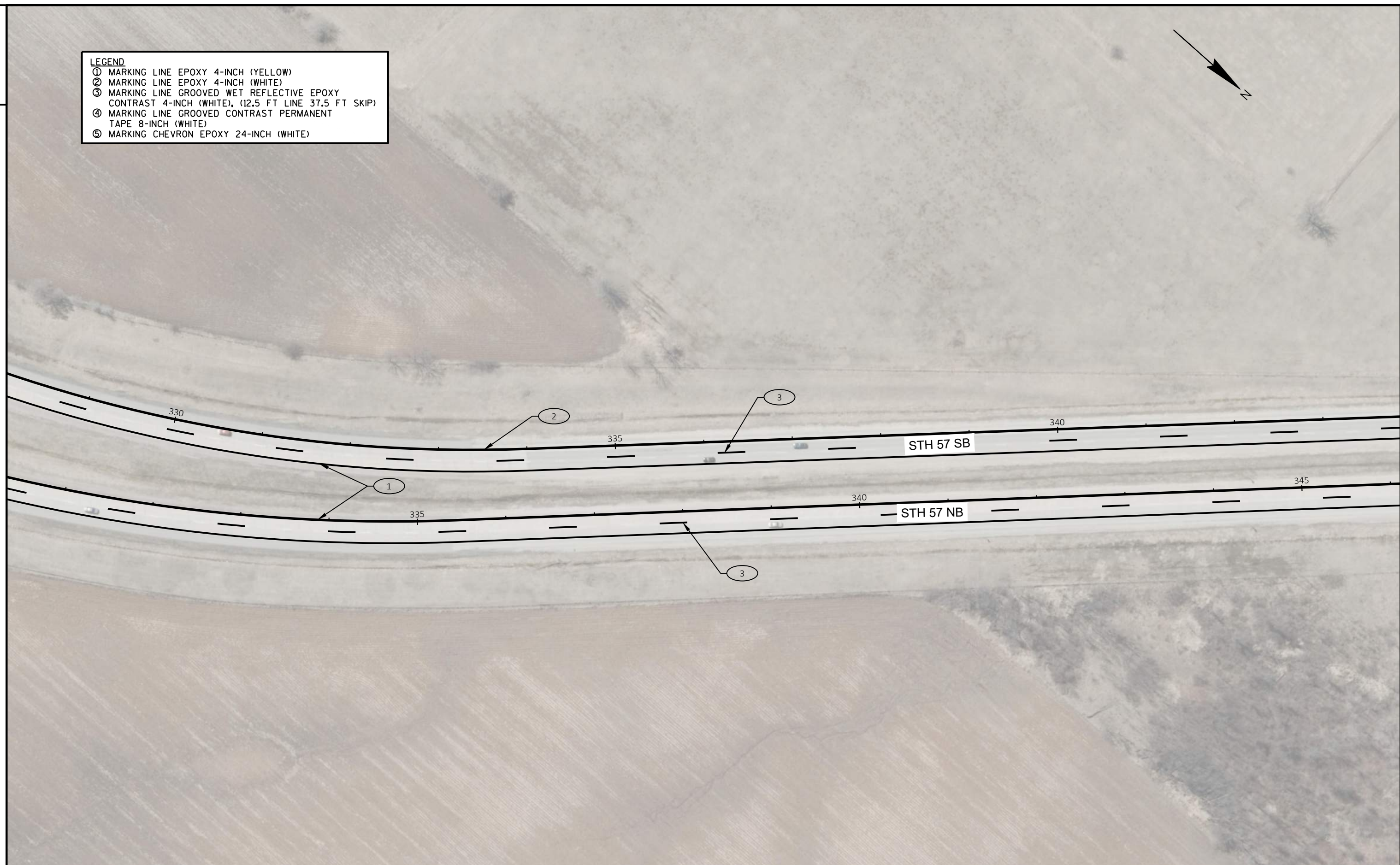
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25

E

LEGEND

- ① MARKING LINE EPOXY 4-INCH (YELLOW)
- ② MARKING LINE EPOXY 4-INCH (WHITE)
- ③ MARKING LINE GROOVED WET REFLECTIVE EPOXY CONTRAST 4-INCH (WHITE), (12.5 FT LINE 37.5 FT SKIP)
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- ⑤ MARKING CHEVRON EPOXY 24-INCH (WHITE)



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PAVEMENT MARKING

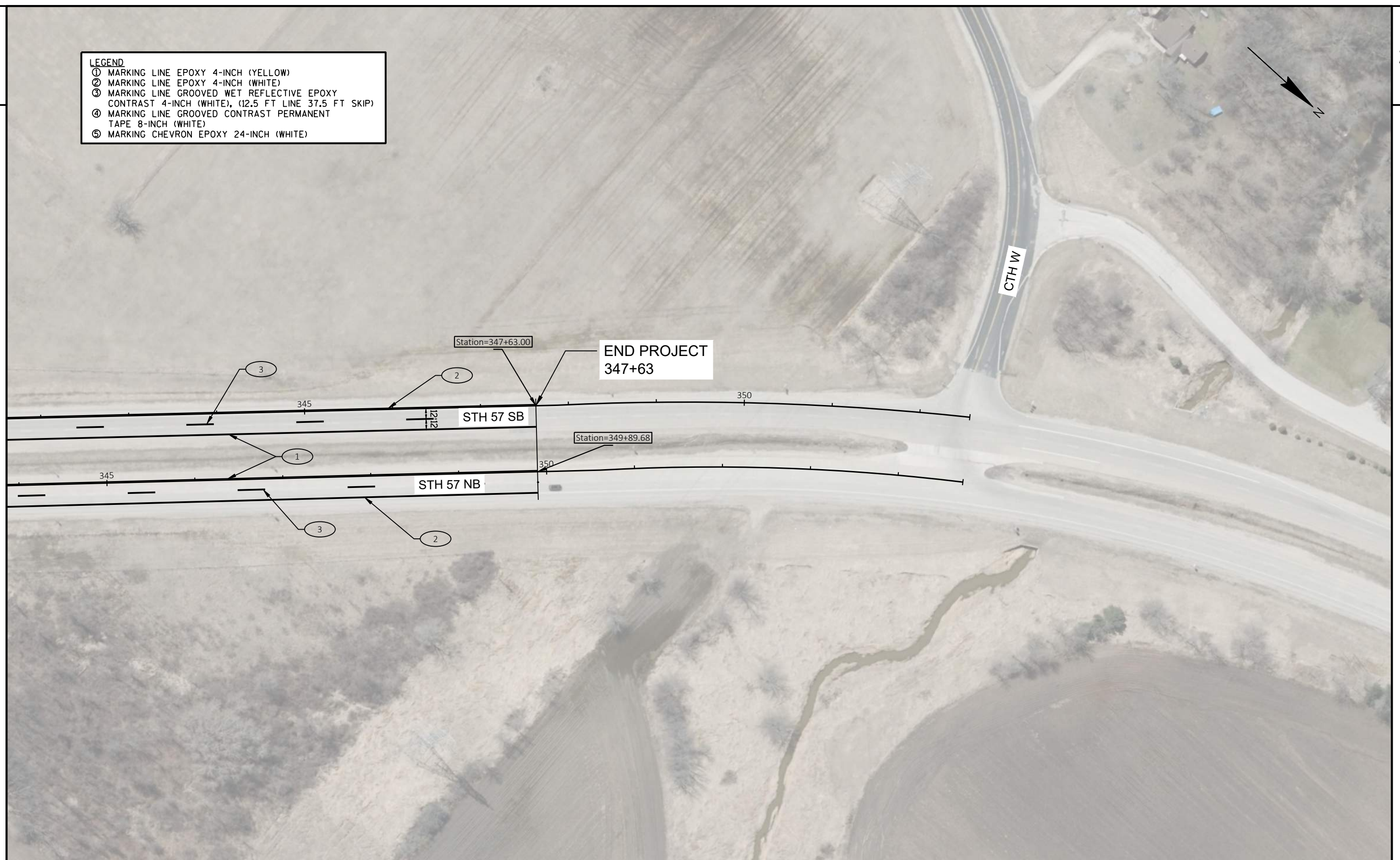
SHEET

26

E

LEGEND

- ① MARKING LINE EPOXY 4-INCH (YELLOW)
- ② MARKING LINE EPOXY 4-INCH (WHITE)
- ③ MARKING LINE GROOVED WET REFLECTIVE EPOXY CONTRAST 4-INCH (WHITE), (12.5 FT LINE 37.5 FT SKIP)
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- ⑤ MARKING CHEVRON EPOXY 24-INCH (WHITE)



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HWY: STH 57

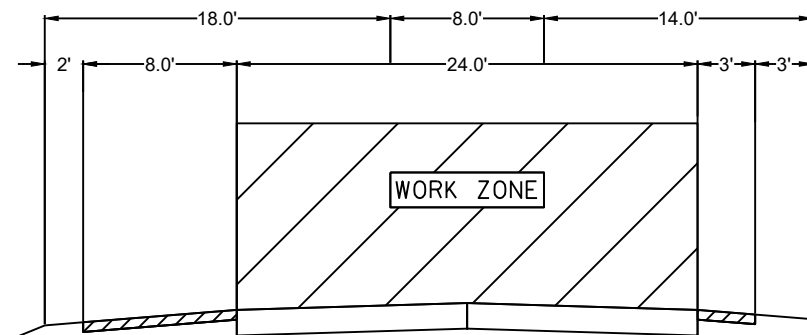
COUNTY: OZAUKEE

PAVEMENT MARKING

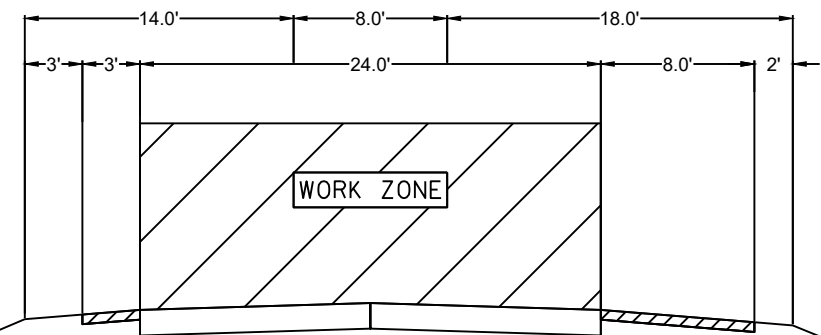
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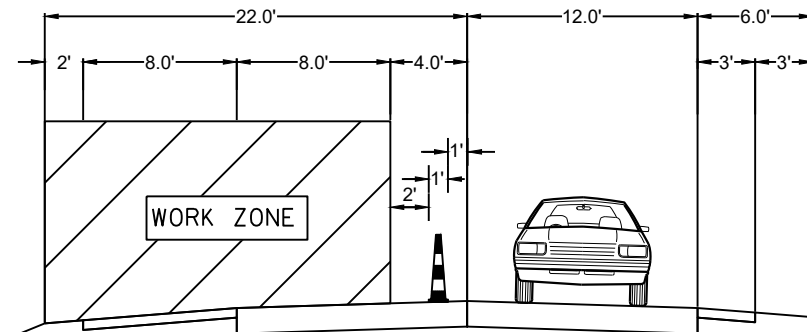
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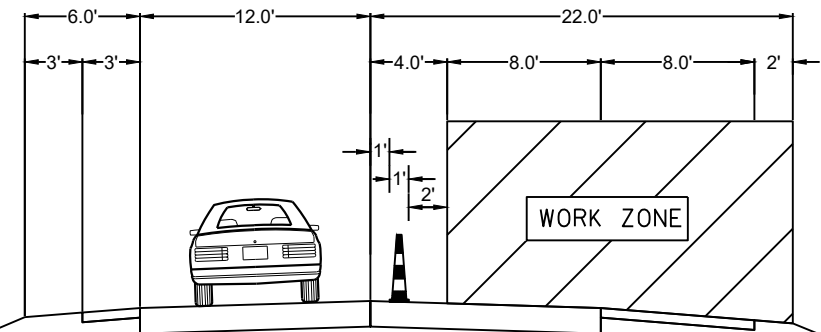
STH 57 SB FULL CLOSURE



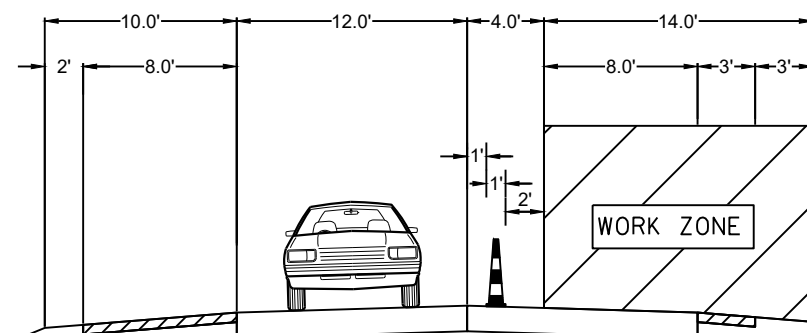
STH 57 NB FULL CLOSURE



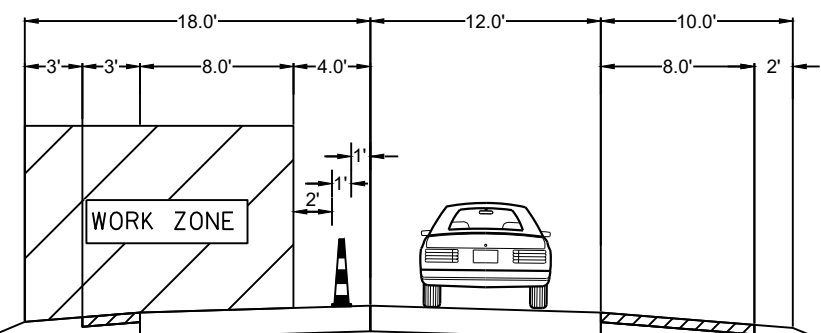
STH 57 SB STAGE 1



STH 57 NB STAGE 1



STH 57 SB STAGE 2



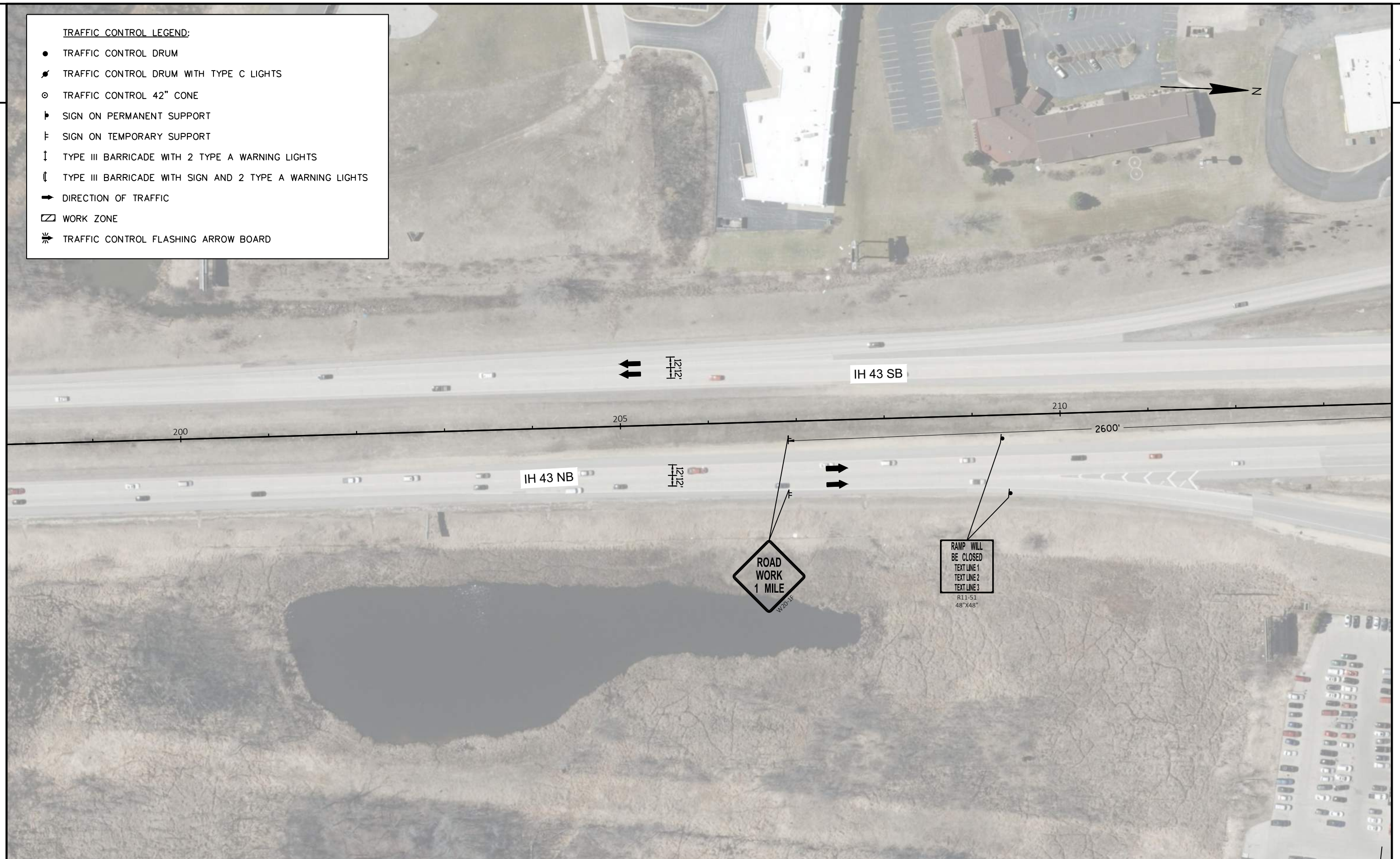
STH 57 NB STAGE 2

2

TRAFFIC CONTROL LEGEND:

- TRAFFIC CONTROL DRUM
- ⬮ TRAFFIC CONTROL DRUM WITH TYPE C LIGHTS
- ⊙ TRAFFIC CONTROL 42" CONE
- ⬮ SIGN ON PERMANENT SUPPORT
- ⬮ SIGN ON TEMPORARY SUPPORT
- ⬮ TYPE III BARRICADE WITH 2 TYPE A WARNING LIGHTS
- ⬮ TYPE III BARRICADE WITH SIGN AND 2 TYPE A WARNING LIGHTS
- ➡ DIRECTION OF TRAFFIC
- ▭ WORK ZONE
- ➡ TRAFFIC CONTROL FLASHING ARROW BOARD

2 |



PROJECT NO: 1040-00-70

HWY: STH 57

COUNTY: OZAUKEE

TRAFFIC CONTROL STAGE 1

SHEET

29

11

FILE NAME : C:\CIVIL 3D PROJECTS\10400000\SHEETSP\PLAN\025001-TC_STAGE1.DWG
LAYOUT NAME - STH 57 - 1

PLOT DATE : 4/22/2021 1:48 PM

PLOT BY : MANANDHAR, BHUVAN K

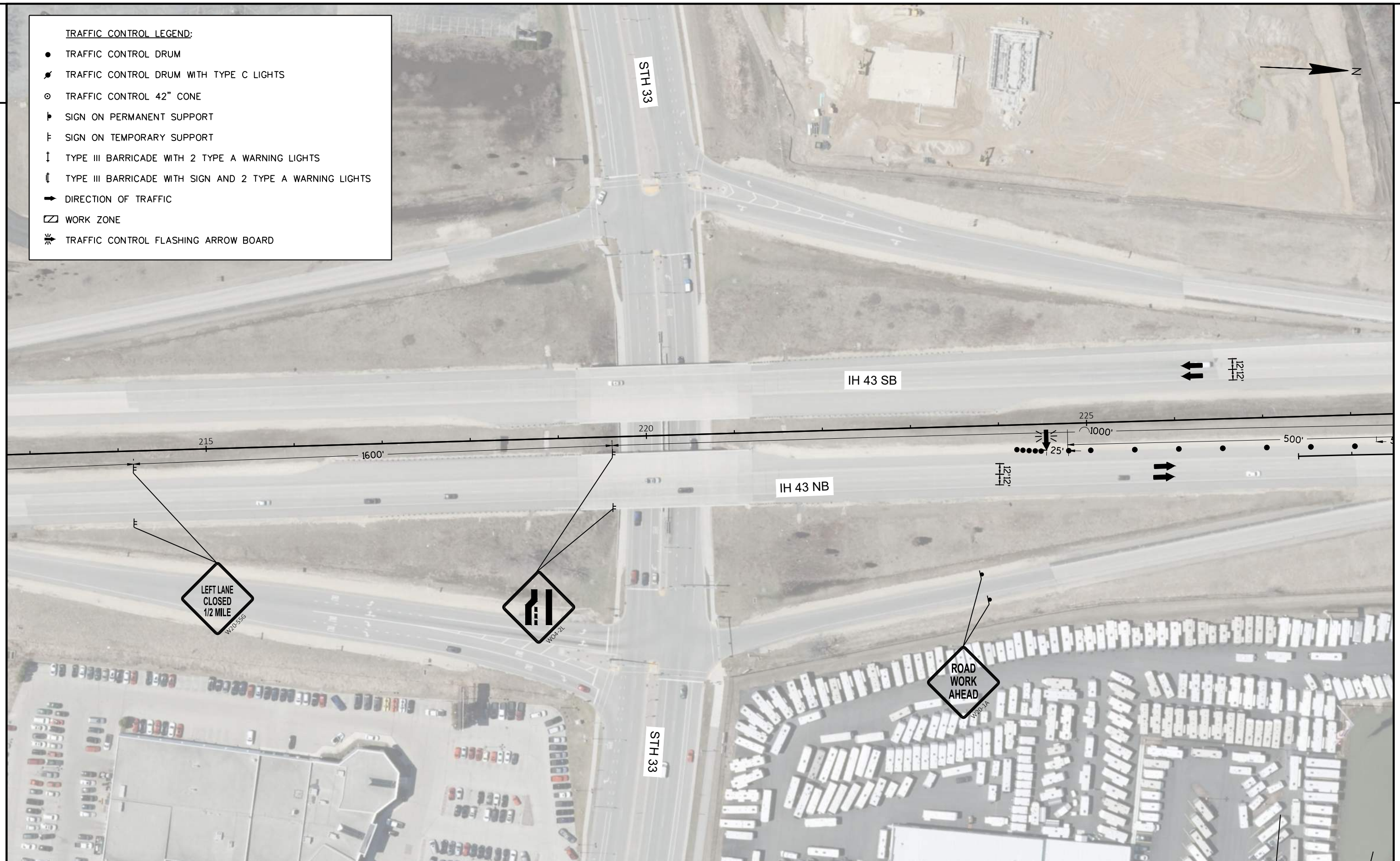
PLOT NAME :

PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

TRAFFIC CONTROL LEGEND:

- TRAFFIC CONTROL DRUM
- ⚡ TRAFFIC CONTROL DRUM WITH TYPE C LIGHTS
- TRAFFIC CONTROL 42" CONE
- ▤ SIGN ON PERMANENT SUPPORT
- ⌵ SIGN ON TEMPORARY SUPPORT
- ⌵ TYPE III BARRICADE WITH 2 TYPE A WARNING LIGHTS
- ⌵ TYPE III BARRICADE WITH SIGN AND 2 TYPE A WARNING LIGHTS
- ➡ DIRECTION OF TRAFFIC
- ▭ WORK ZONE
- ⚡ TRAFFIC CONTROL FLASHING ARROW BOARD



PROJECT NO: 1040-00-70

HWY: STH 57

COUNTY: OZAUKEE

TRAFFIC CONTROL STAGE 1

SHEET

30

E

2

2

TRAFFIC CONTROL LEGEND:

- TRAFFIC CONTROL DRUM
- ⦿ TRAFFIC CONTROL DRUM WITH TYPE C LIGHTS
- ⊙ TRAFFIC CONTROL 42" CONE
- ‡ SIGN ON PERMANENT SUPPORT
- ⌦ SIGN ON TEMPORARY SUPPORT
- ↓ TYPE III BARRICADE WITH 2 TYPE A WARNING LIGHTS
- ⬇ TYPE III BARRICADE WITH SIGN AND 2 TYPE A WARNING LIGHTS
- ➡ DIRECTION OF TRAFFIC
- ◻ WORK ZONE
- ➡ TRAFFIC CONTROL FLASHING ARROW BOARD

- ### TRAFFIC CONTROL LEGEND:
- TRAFFIC CONTROL DRUM
 - ⦿ TRAFFIC CONTROL DRUM WITH TYPE C LIGHTS
 - ⊙ TRAFFIC CONTROL 42" CONE
 - ‡ SIGN ON PERMANENT SUPPORT
 - ⌦ SIGN ON TEMPORARY SUPPORT
 - ↓ TYPE III BARRICADE WITH 2 TYPE A WARNING LIGHTS
 - ⬇ TYPE III BARRICADE WITH SIGN AND 2 TYPE A WARNING LIGHTS
 - ➡ DIRECTION OF TRAFFIC
 - ◻ WORK ZONE
 - ➡ TRAFFIC CONTROL FLASHING ARROW BOARD



PROJECT NO:	1040-00-70
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HWY: STH 57

COUNTY: OZAUKEE

TRAFFIC CONTROL STAGE 1

SHEET 31

E

FILE NAME : C:\CIVIL 3D PROJECTS\10400000\SHEETSPLAN\025001-TC_STAGE1.DWG
LAYOUT NAME - STH 57 - 3

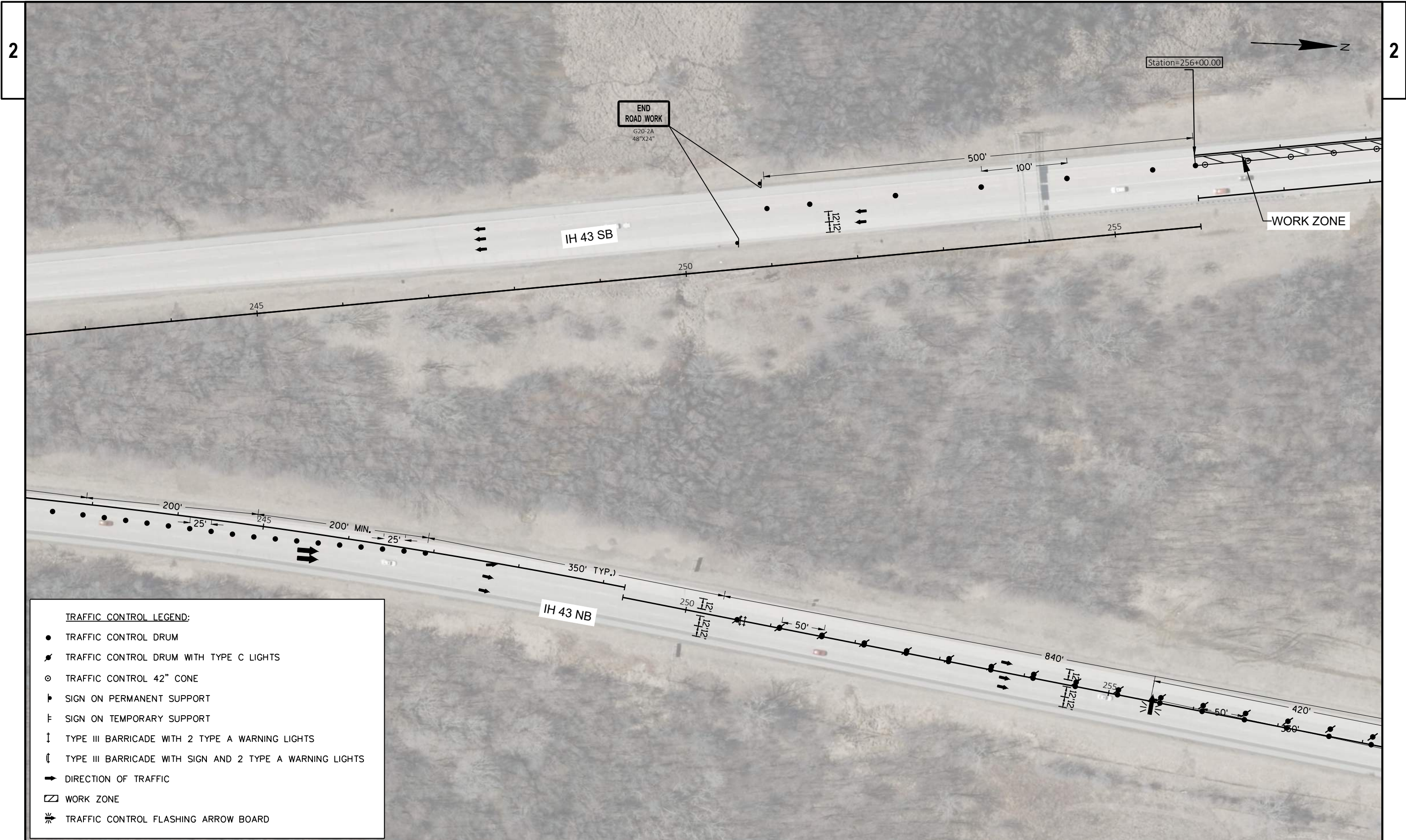
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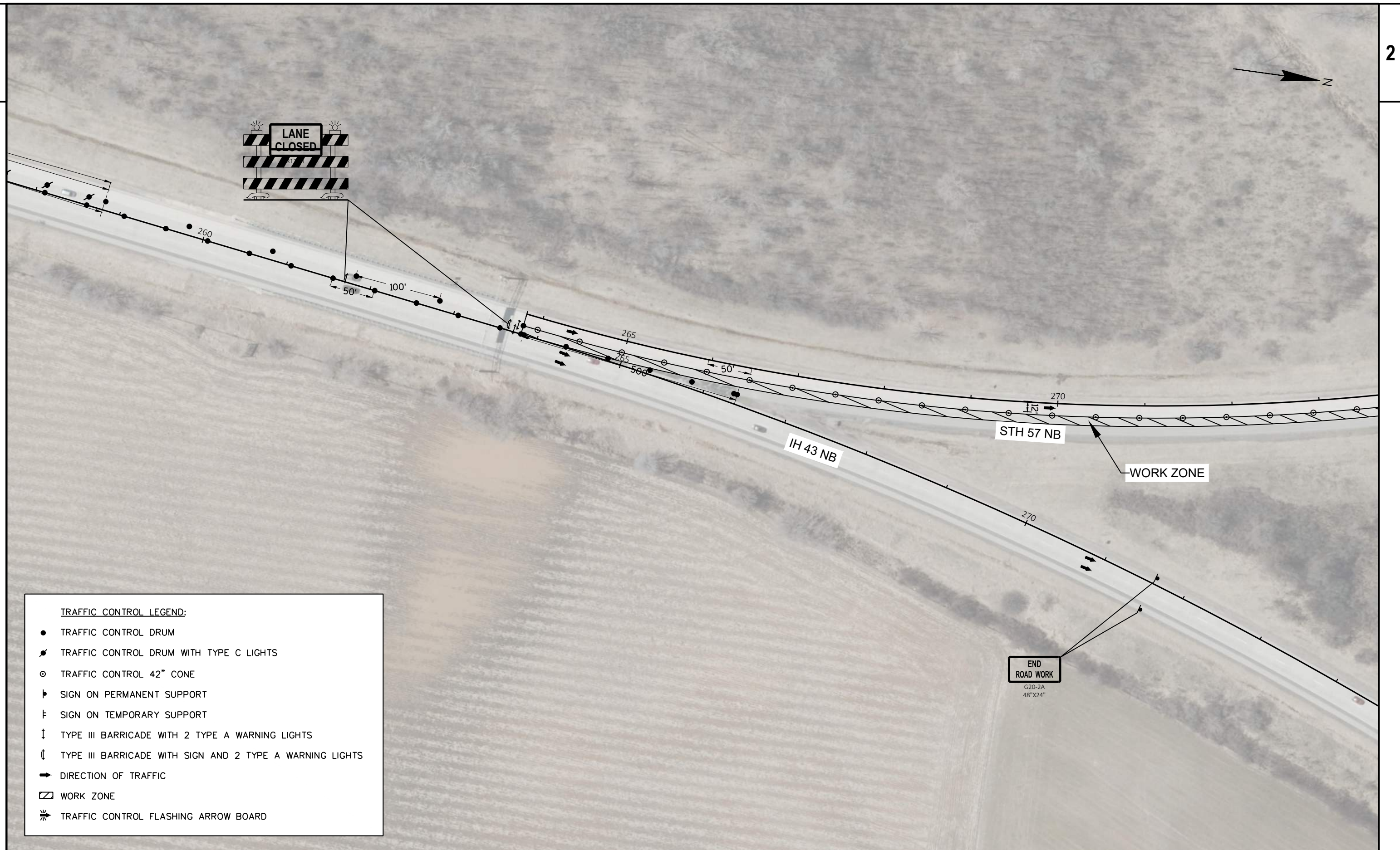
PLOT BY : MANANDHAR, BHUVAN K

PLOT NAME :

PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42





TRAFFIC CONTROL LEGEND:

- TRAFFIC CONTROL DRUM
- ⦿ TRAFFIC CONTROL DRUM WITH TYPE C LIGHTS
- TRAFFIC CONTROL 42" CONE
- ▤ SIGN ON PERMANENT SUPPORT
- ▥ SIGN ON TEMPORARY SUPPORT
- ↑ TYPE III BARRICADE WITH 2 TYPE A WARNING LIGHTS
- ⌄ TYPE III BARRICADE WITH SIGN AND 2 TYPE A WARNING LIGHTS
- ➡ DIRECTION OF TRAFFIC
- ▨ WORK ZONE
- ➡ TRAFFIC CONTROL FLASHING ARROW BOARD

Station=256+00.00

WORK ZONE

STH 57 SB

IH 43 SB

ROAD
WORK
AHEAD

PROJECT NO: 1040-00-70

HWY: STH 57

COUNTY: OZAUKEE

TRAFFIC CONTROL STAGE 1

SHEET

34

E

FILE NAME : C:\CIVIL 3D PROJECTS\104000000\SHEETSPLAN\025001-TC_STAGE1.DWG
LAYOUT NAME - STH 57 - 5

PLOT DATE : 4/22/2021 1:48 PM

PLOT BY : MANANDHAR, BHUVAN K

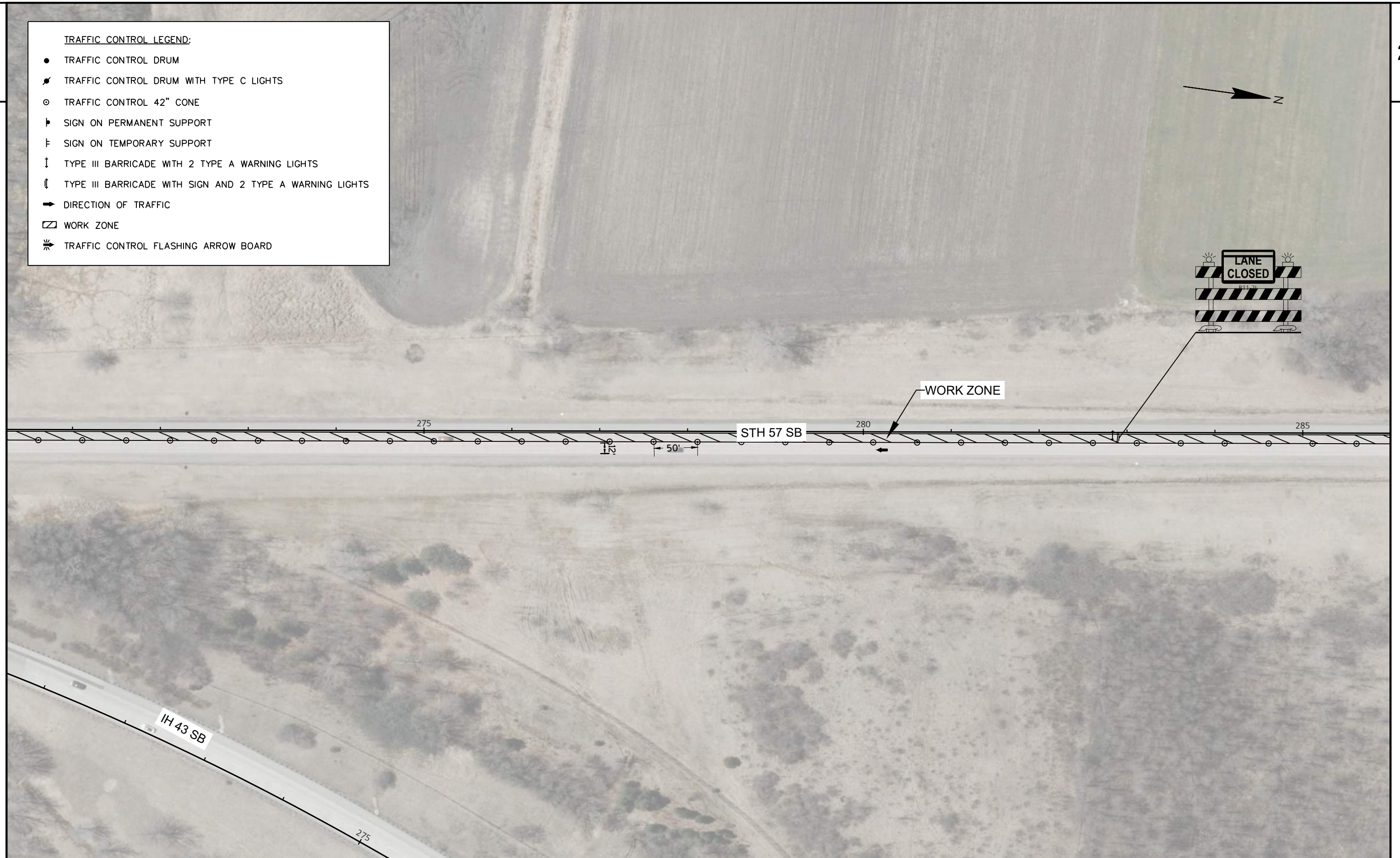
PLOT NAME :

PLOT SCALE : 1 IN:100 FT

WISDOT/CADDs SHEET 42

TRAFFIC CONTROL LEGEND:

- TRAFFIC CONTROL DRUM
- ⚡ TRAFFIC CONTROL DRUM WITH TYPE C LIGHTS
- TRAFFIC CONTROL 42" CONE
- └ SIGN ON PERMANENT SUPPORT
- └ SIGN ON TEMPORARY SUPPORT
- ↓ TYPE III BARRICADE WITH 2 TYPE A WARNING LIGHTS
- ↓ TYPE III BARRICADE WITH SIGN AND 2 TYPE A WARNING LIGHTS
- ➡ DIRECTION OF TRAFFIC
- ▨ WORK ZONE
- ⚡ TRAFFIC CONTROL FLASHING ARROW BOARD



PROJECT NO: 1040-00-70

HWY: STH 57

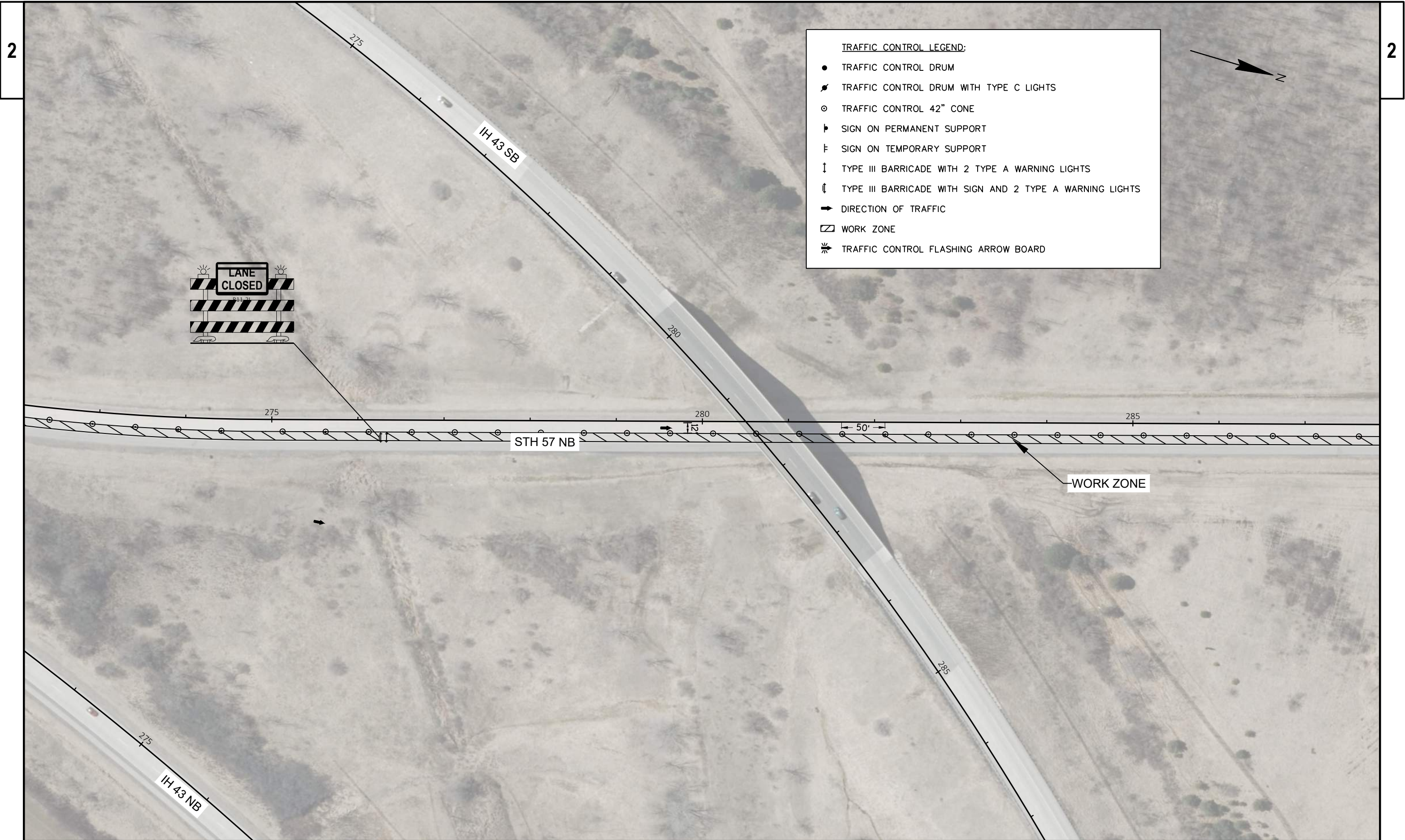
COUNTY: OZAUKEE

TRAFFIC CONTROL STAGE 1

SHEET

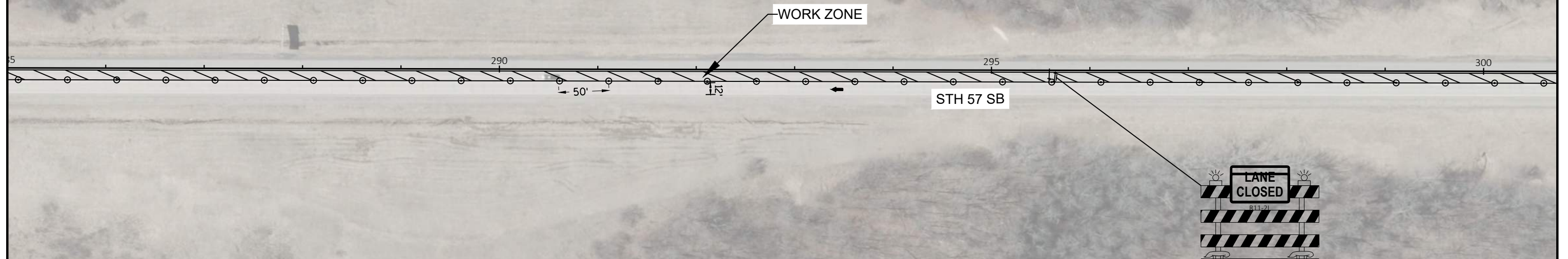
35

E



TRAFFIC CONTROL LEGEND:

- TRAFFIC CONTROL DRUM
- ✱ TRAFFIC CONTROL DRUM WITH TYPE C LIGHTS
- TRAFFIC CONTROL 42" CONE
- └ SIGN ON PERMANENT SUPPORT
- └ SIGN ON TEMPORARY SUPPORT
- ↓ TYPE III BARRICADE WITH 2 TYPE A WARNING LIGHTS
- ⌄ TYPE III BARRICADE WITH SIGN AND 2 TYPE A WARNING LIGHTS
- ➡ DIRECTION OF TRAFFIC
- ▤ WORK ZONE
- ⚡➡ TRAFFIC CONTROL FLASHING ARROW BOARD



TRAFFIC CONTROL LEGEND:

- TRAFFIC CONTROL DRUM
- ⚡ TRAFFIC CONTROL DRUM WITH TYPE C LIGHTS
- TRAFFIC CONTROL 42" CONE
- ▤ SIGN ON PERMANENT SUPPORT
- ▥ SIGN ON TEMPORARY SUPPORT
- ↑ TYPE III BARRICADE WITH 2 TYPE A WARNING LIGHTS
- ↓ TYPE III BARRICADE WITH SIGN AND 2 TYPE A WARNING LIGHTS
- ➡ DIRECTION OF TRAFFIC
- ▨ WORK ZONE
- ⚡ TRAFFIC CONTROL FLASHING ARROW BOARD



PROJECT NO: 1040-00-70

HWY: STH 57

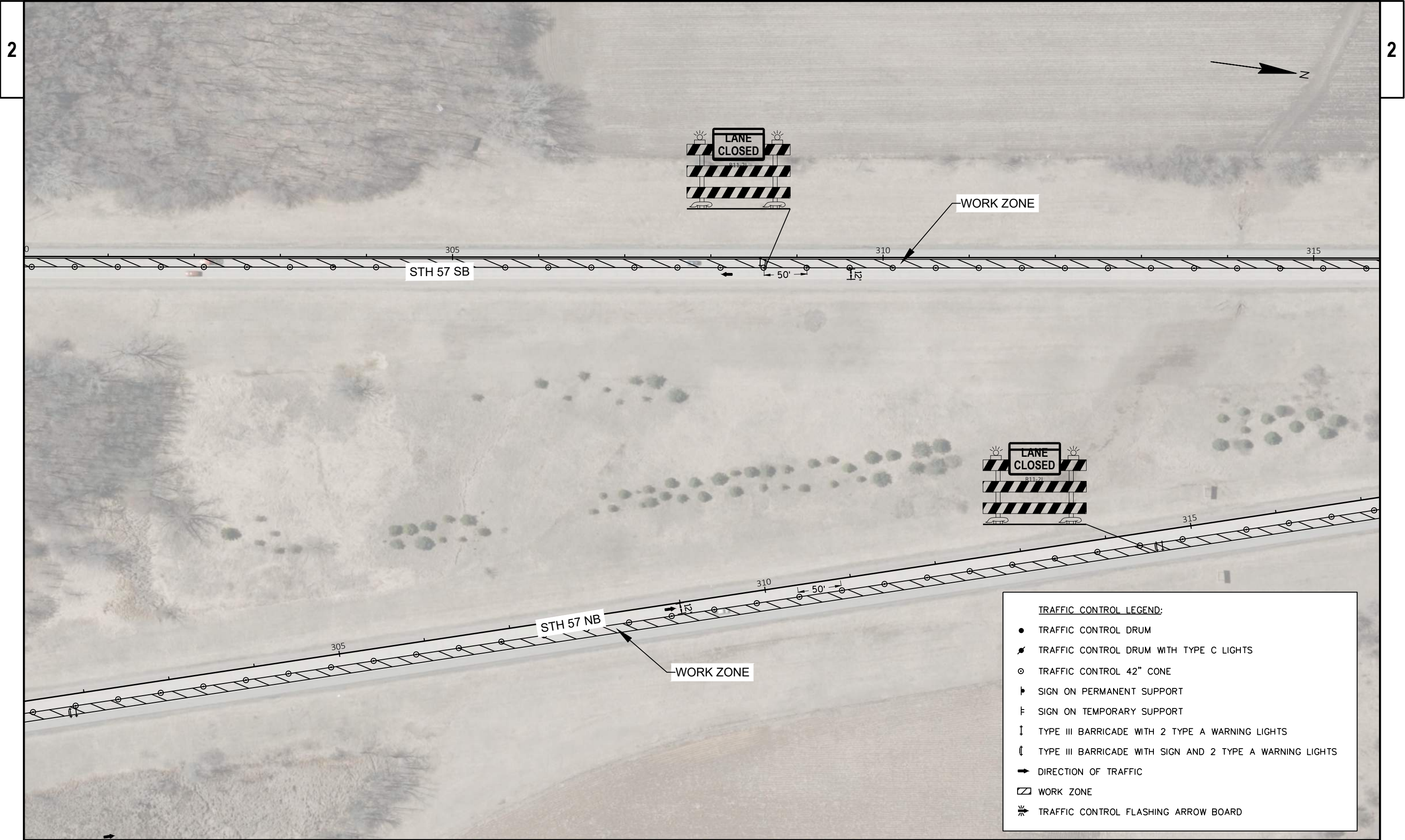
COUNTY: OZAUKEE

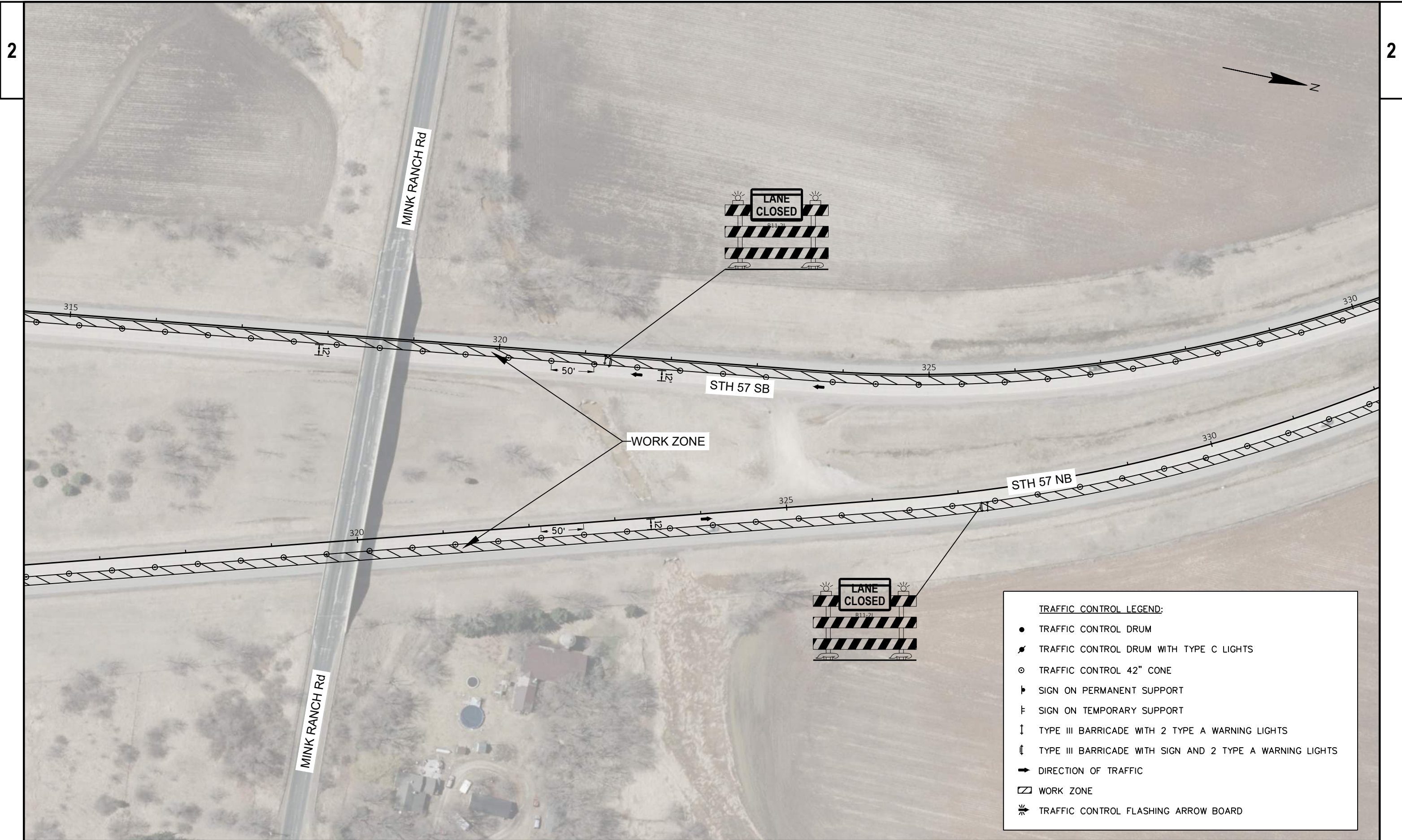
TRAFFIC CONTROL STAGE 1

SHEET

38

E

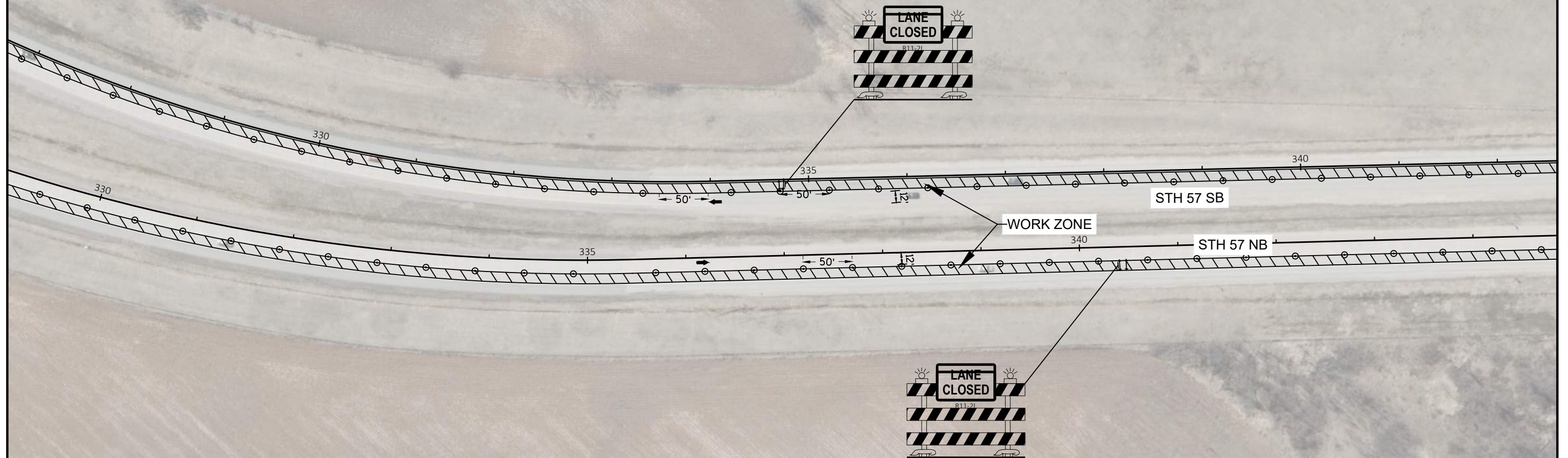




TRAFFIC CONTROL LEGEND:	
●	TRAFFIC CONTROL DRUM
⦿	TRAFFIC CONTROL DRUM WITH TYPE C LIGHTS
○	TRAFFIC CONTROL 42" CONE
└	SIGN ON PERMANENT SUPPORT
├	SIGN ON TEMPORARY SUPPORT
⏏	TYPE III BARRICADE WITH 2 TYPE A WARNING LIGHTS
⏏	TYPE III BARRICADE WITH SIGN AND 2 TYPE A WARNING LIGHTS
➡	DIRECTION OF TRAFFIC
▨	WORK ZONE
⚡	TRAFFIC CONTROL FLASHING ARROW BOARD

TRAFFIC CONTROL LEGEND:

- TRAFFIC CONTROL DRUM
- ⚡ TRAFFIC CONTROL DRUM WITH TYPE C LIGHTS
- TRAFFIC CONTROL 42" CONE
- ▮ SIGN ON PERMANENT SUPPORT
- ⌵ SIGN ON TEMPORARY SUPPORT
- ↓ TYPE III BARRICADE WITH 2 TYPE A WARNING LIGHTS
- ⌵ TYPE III BARRICADE WITH SIGN AND 2 TYPE A WARNING LIGHTS
- ➡ DIRECTION OF TRAFFIC
- ▨ WORK ZONE
- ⚡ TRAFFIC CONTROL FLASHING ARROW BOARD



PROJECT NO: 1040-00-70

HWY: STH 57

COUNTY: OZAUKEE

TRAFFIC CONTROL STAGE 1

SHEET

41

E

TRAFFIC CONTROL LEGEND:

- TRAFFIC CONTROL DRUM
- ⚡ TRAFFIC CONTROL DRUM WITH TYPE C LIGHTS
- ⊙ TRAFFIC CONTROL 42" CONE
- └ SIGN ON PERMANENT SUPPORT
- └ SIGN ON TEMPORARY SUPPORT
- ↓ TYPE III BARRICADE WITH 2 TYPE A WARNING LIGHTS
- ⬇ TYPE III BARRICADE WITH SIGN AND 2 TYPE A WARNING LIGHTS
- ➡ DIRECTION OF TRAFFIC
- ▨ WORK ZONE
- ⚡ TRAFFIC CONTROL FLASHING ARROW BOARD



PROJECT NO: 1040-00-70

HWY: STH 57

COUNTY: OZAUKEE

TRAFFIC CONTROL STAGE 1

SHEET

42

E

2

TRAFFIC CONTROL LEGEND:

- TRAFFIC CONTROL DRUM
- ✱ TRAFFIC CONTROL DRUM WITH TYPE C LIGHTS
- TRAFFIC CONTROL 42" CONE
- ‡ SIGN ON PERMANENT SUPPORT
- ‡ SIGN ON TEMPORARY SUPPORT
- ‡ TYPE III BARRICADE WITH 2 TYPE A WARNING LIGHTS
- ‡ TYPE III BARRICADE WITH SIGN AND 2 TYPE A WARNING LIGHTS
- ➡ DIRECTION OF TRAFFIC
- ▭ WORK ZONE
- ➡ TRAFFIC CONTROL FLASHING ARROW BOARD

2



PROJECT NO:	1040-00-70
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HWY: STH 57

COUNTY: OZAUKEE

TRAFFIC CONTROL STAGE 1

SHEET

43

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FILE NAME : C:\CIVIL 3D PROJECTS\10400000\SHEETSP\PLAN\025001-TC_STAGE1.DWG
LAYOUT NAME - STH 57 - 15

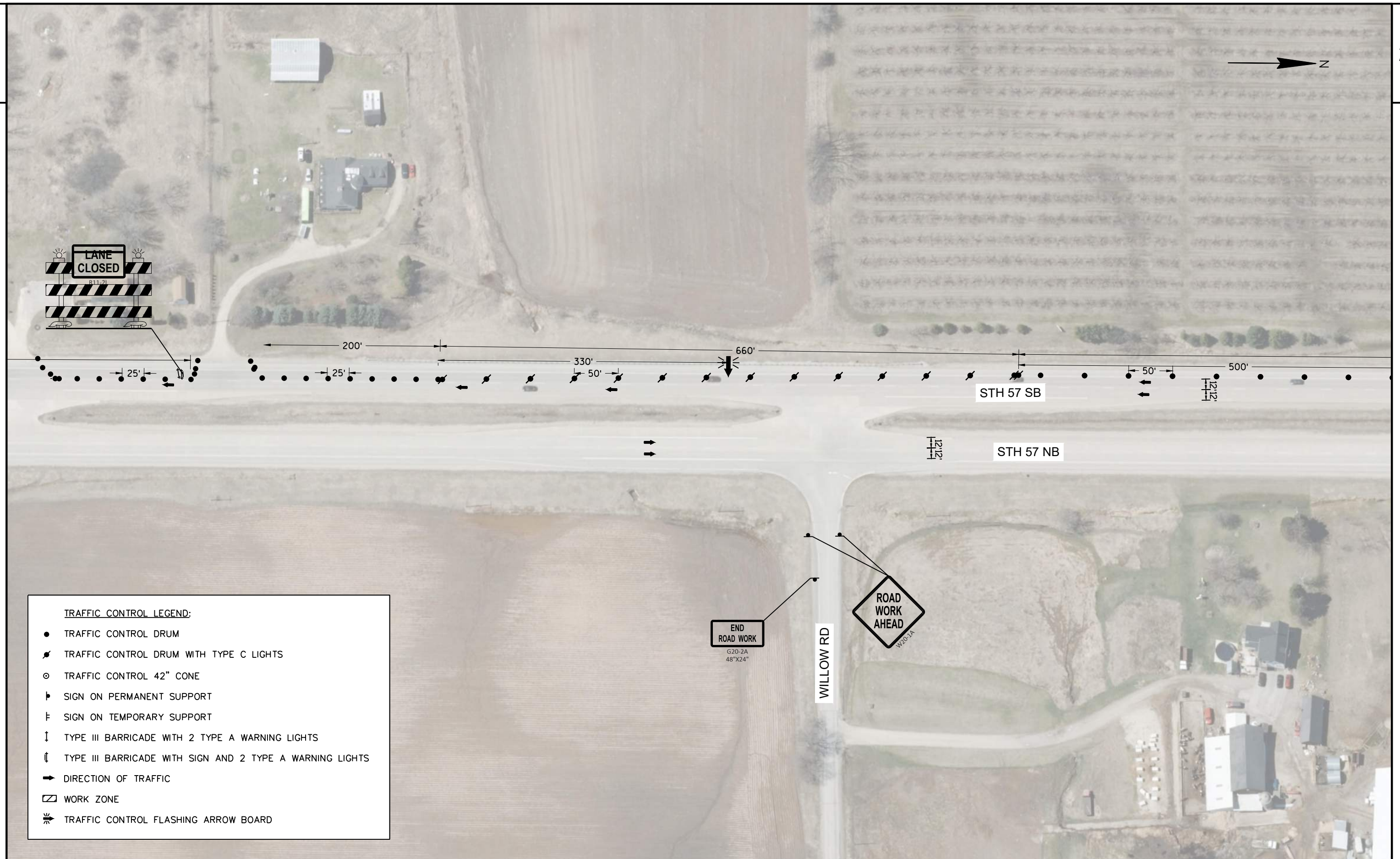
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PLOT BY : MANANDHAR, BHUVAN K

PLOT NAME :

PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42



PROJECT NO: 1040-00-70

HWY: STH 57

COUNTY: OZAUKEE

TRAFFIC CONTROL STAGE 1

SHEET

44

E

FILE NAME : C:\CIVIL 3D PROJECTS\104000000\SHEETSPLAN\025001-TC_STAGE1.DWG
LAYOUT NAME - STH 57 - 16

PLOT DATE : 4/22/2021 1:48 PM

PLOT BY : MANANDHAR, BHUVAN K

PLOT NAME :

PLOT SCALE : 1 IN:100 FT

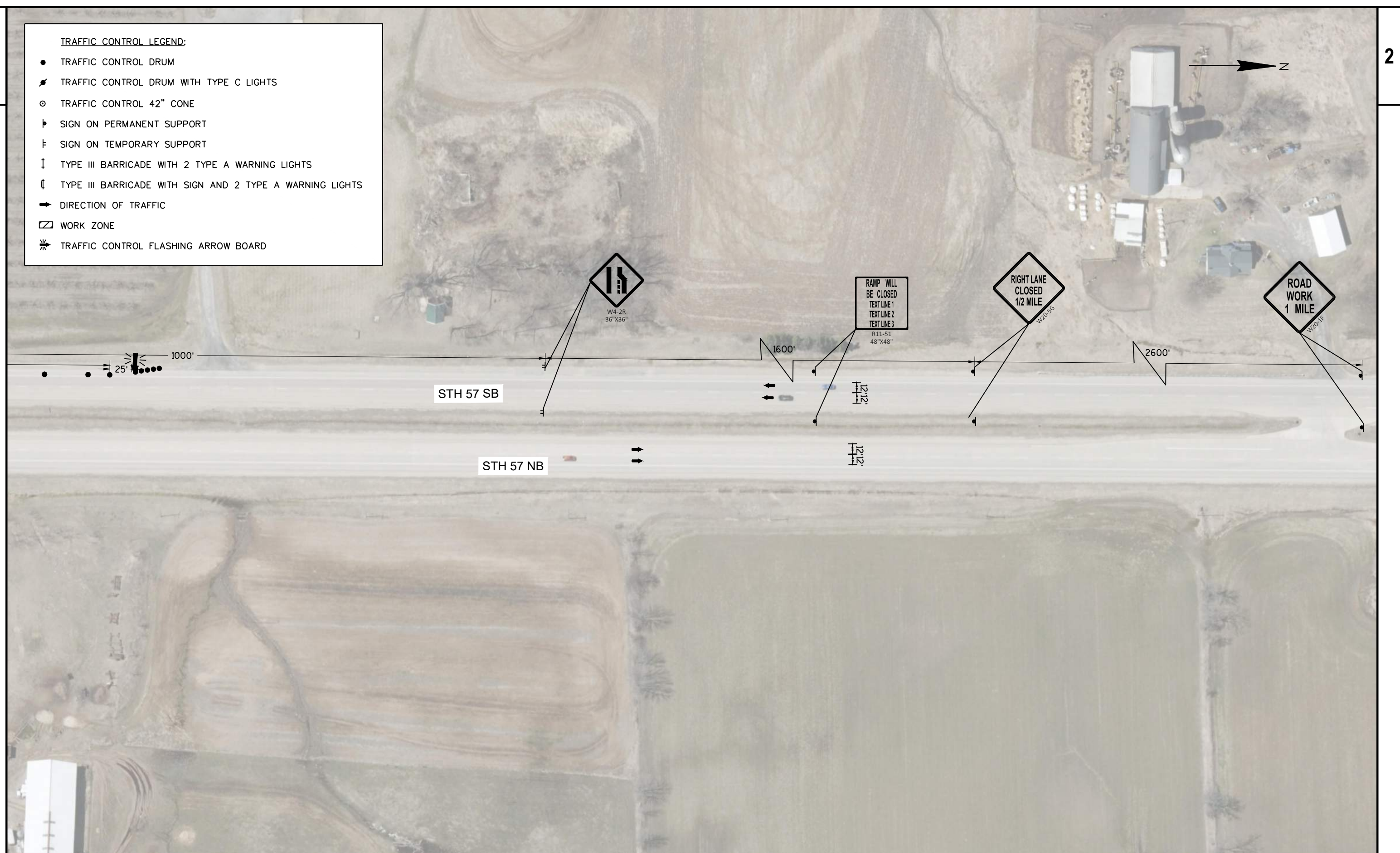
WISDOT/CADDs SHEET 42

2

TRAFFIC CONTROL LEGEND:

- TRAFFIC CONTROL DRUM
- ⚡ TRAFFIC CONTROL DRUM WITH TYPE C LIGHTS
- ⊙ TRAFFIC CONTROL 42" CONE
- ♣ SIGN ON PERMANENT SUPPORT
- ♠ SIGN ON TEMPORARY SUPPORT
- ⬇ TYPE III BARRICADE WITH 2 TYPE A WARNING LIGHTS
- ⬇ TYPE III BARRICADE WITH SIGN AND 2 TYPE A WARNING LIGHTS
- ➡ DIRECTION OF TRAFFIC
- ▭ WORK ZONE
- ➡ TRAFFIC CONTROL FLASHING ARROW BOARD

2 |



PROJECT NO: 1040-00-70

HWY: STH 57

COUNTY: OZAUKEE

TRAFFIC CONTROL STAGE 1

SHEET

45

11

FILE NAME : C:\CIVIL 3D PROJECTS\10400000\SHEETSP\PLAN\025001-TC_STAGE1.DWG
LAYOUT NAME - STH 57 - 17

PLOT DATE : 4/22/2021 1:48 PM

PLOT BY : MANANDHAR, BHUVAN K

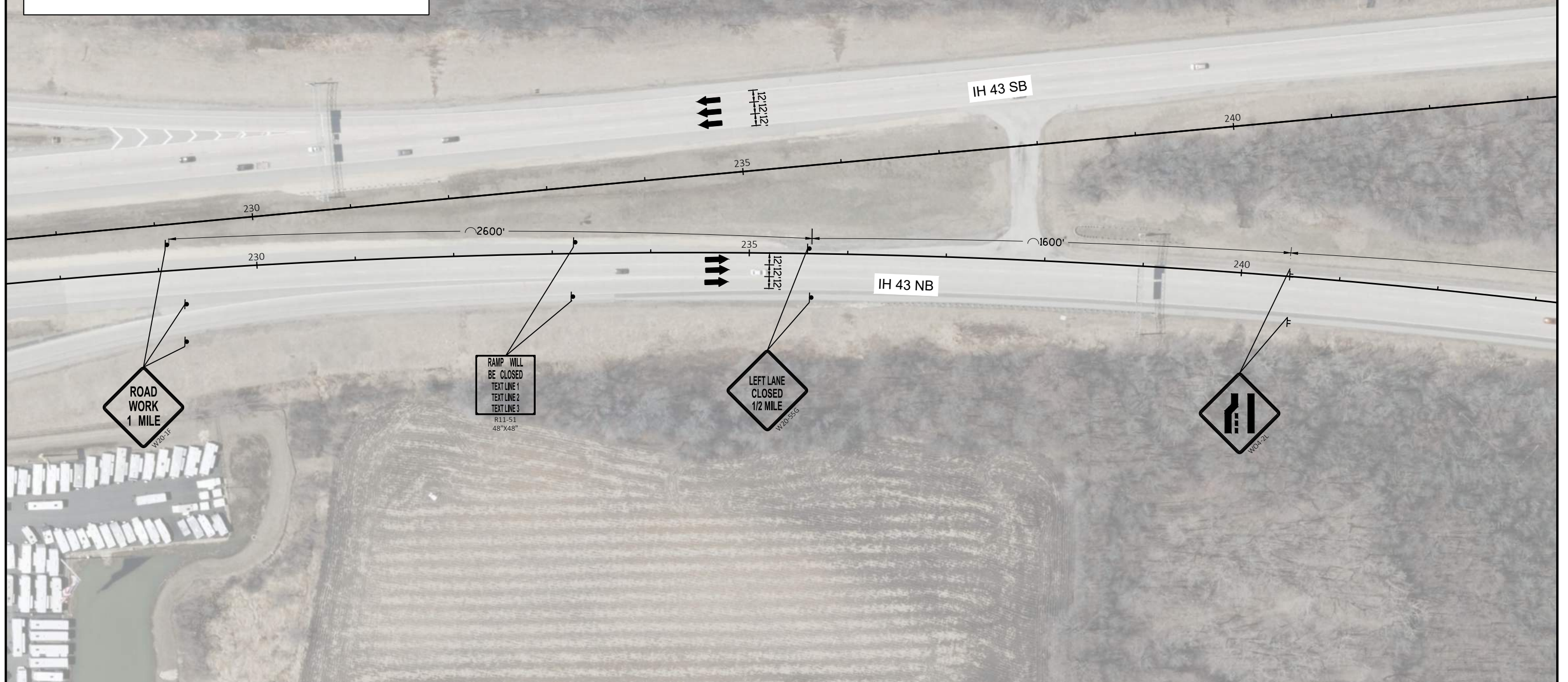
PLOT NAME :

PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

TRAFFIC CONTROL LEGEND:

- TRAFFIC CONTROL DRUM
- ✂ TRAFFIC CONTROL DRUM WITH TYPE C LIGHTS
- ⊙ TRAFFIC CONTROL 42" CONE
- ▮ SIGN ON PERMANENT SUPPORT
- ▮ SIGN ON TEMPORARY SUPPORT
- ↓ TYPE III BARRICADE WITH 2 TYPE A WARNING LIGHTS
- ⇅ TYPE III BARRICADE WITH SIGN AND 2 TYPE A WARNING LIGHTS
- ➡ DIRECTION OF TRAFFIC
- ▭ WORK ZONE
- ➡ TRAFFIC CONTROL FLASHING ARROW BOARD



PROJECT NO: 1040-00-70

HWY: STH 57

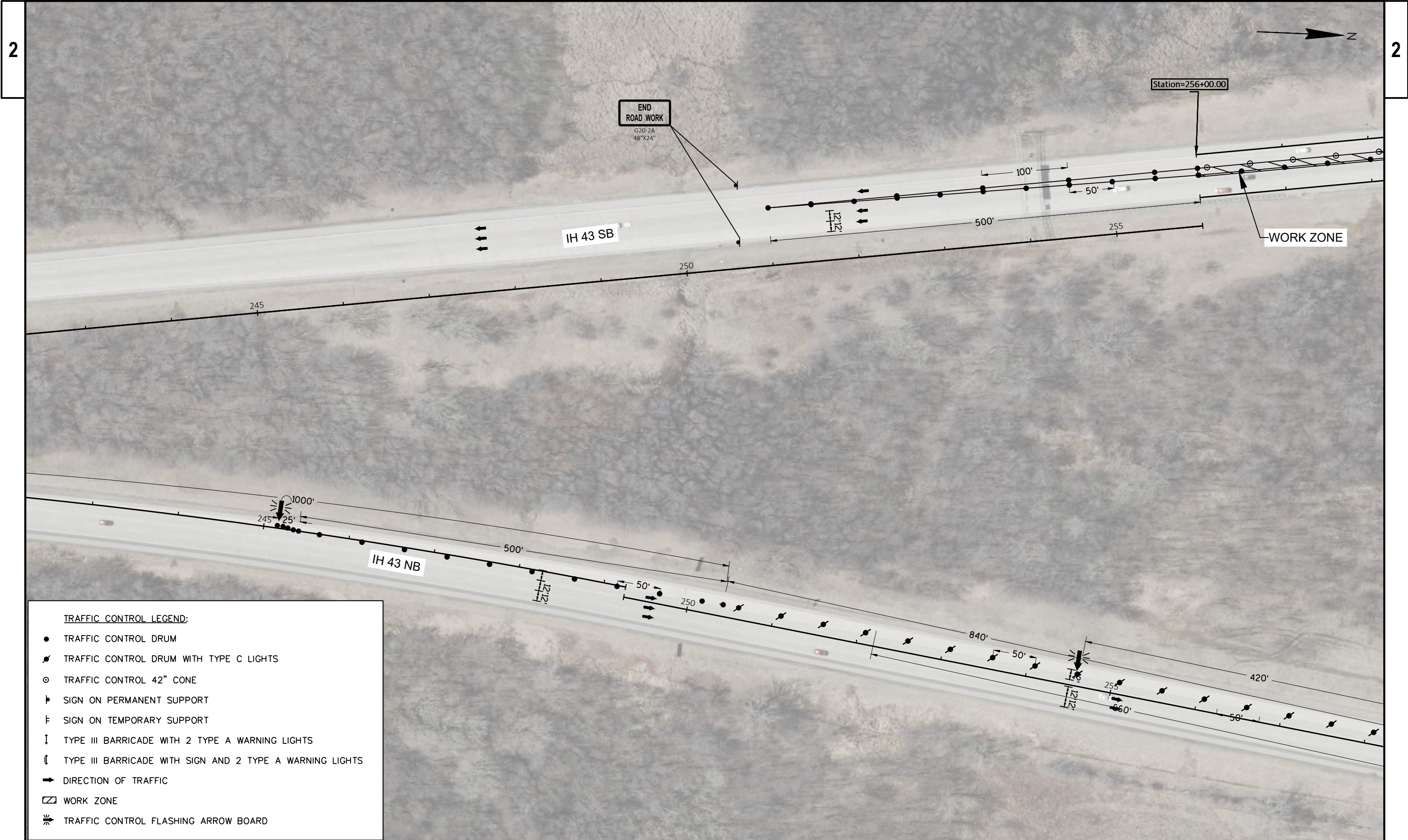
COUNTY: OZAUCKEE

TRAFFIC CONTROL STAGE 2

SHEET

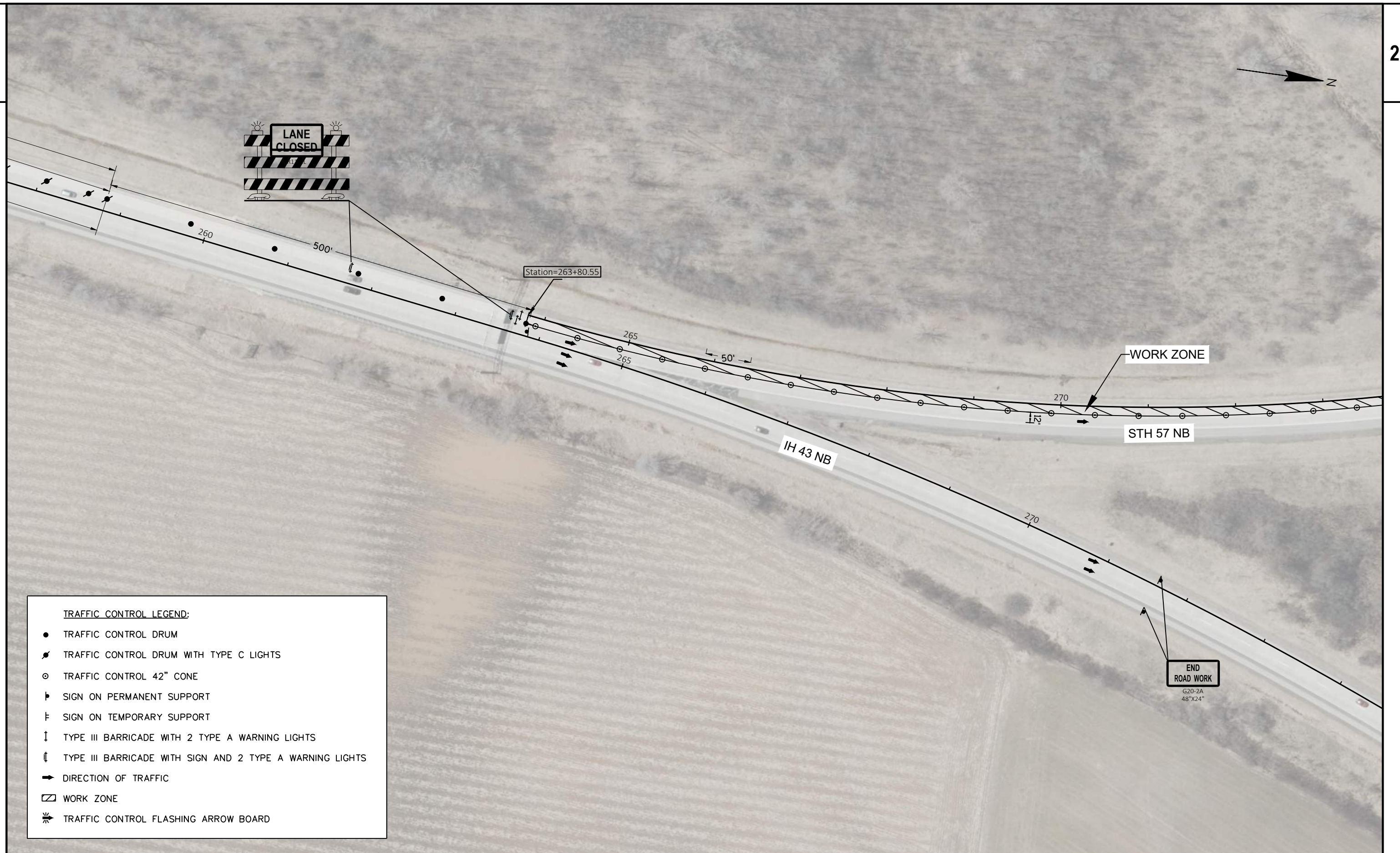
46

E



TRAFFIC CONTROL LEGEND:

- TRAFFIC CONTROL DRUM
- ⦿ TRAFFIC CONTROL DRUM WITH TYPE C LIGHTS
- ⊙ TRAFFIC CONTROL 42" CONE
- ┆ SIGN ON PERMANENT SUPPORT
- ┆ SIGN ON TEMPORARY SUPPORT
- ⏏ TYPE III BARRICADE WITH 2 TYPE A WARNING LIGHTS
- ⏏ TYPE III BARRICADE WITH SIGN AND 2 TYPE A WARNING LIGHTS
- ➡ DIRECTION OF TRAFFIC
- ▨ WORK ZONE
- ⚡ TRAFFIC CONTROL FLASHING ARROW BOARD



PROJECT NO: 1040-00-70

HWY: STH 57

COUNTY: OZAUKEE

TRAFFIC CONTROL STAGE 2

SHEET

48

E

FILE NAME : C:\CIVIL 3D PROJECTS\10400000\025001-TC_STAGE2.DWG
LAYOUT NAME - STH 57 - 3

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PLOT BY : MANANDHAR, BHUVAN K

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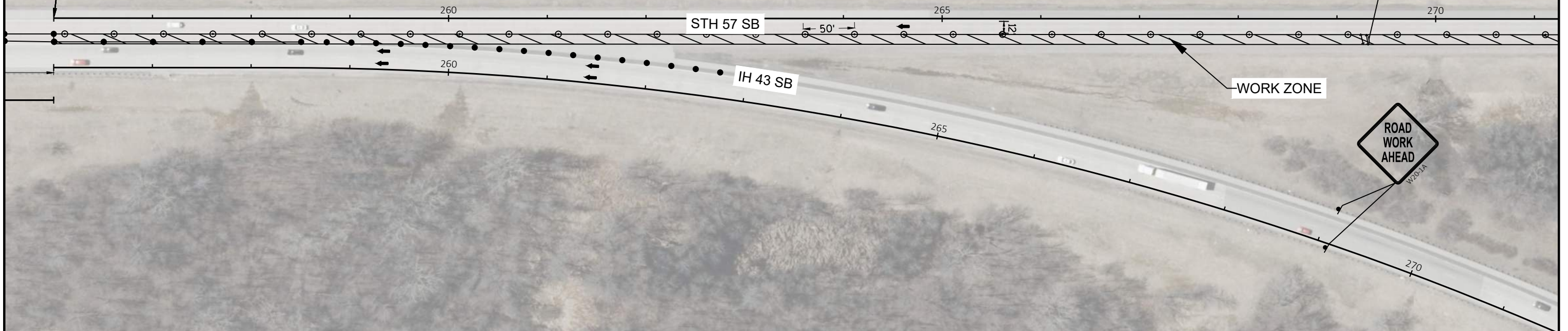
PLOT SCALE : 1 IN:100 FT

WISDOT/CADDs SHEET 42

TRAFFIC CONTROL LEGEND:

- TRAFFIC CONTROL DRUM
- ⦿ TRAFFIC CONTROL DRUM WITH TYPE C LIGHTS
- TRAFFIC CONTROL 42" CONE
- ▮ SIGN ON PERMANENT SUPPORT
- ⌄ SIGN ON TEMPORARY SUPPORT
- ↑ TYPE III BARRICADE WITH 2 TYPE A WARNING LIGHTS
- ↓ TYPE III BARRICADE WITH SIGN AND 2 TYPE A WARNING LIGHTS
- ➔ DIRECTION OF TRAFFIC
- ▨ WORK ZONE
- ⚡ TRAFFIC CONTROL FLASHING ARROW BOARD

Station=256+00.00



PROJECT NO: 1040-00-70

HWY: STH 57

COUNTY: OZAUKEE

TRAFFIC CONTROL STAGE 2

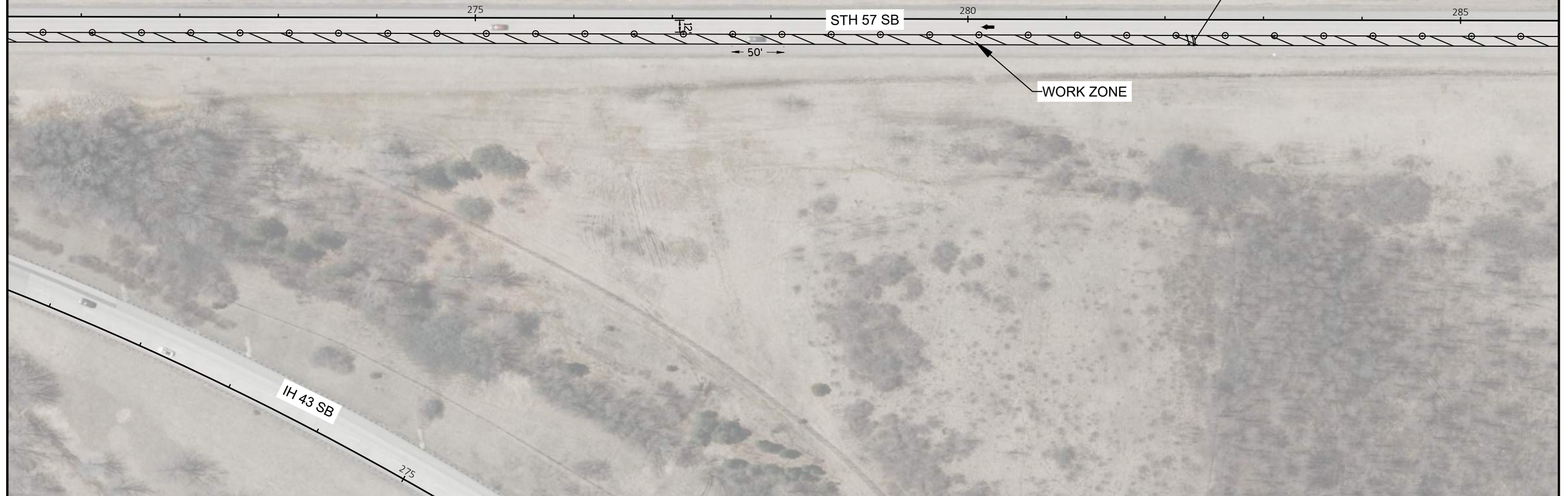
SHEET

49

E

TRAFFIC CONTROL LEGEND:

- TRAFFIC CONTROL DRUM
- ⚡ TRAFFIC CONTROL DRUM WITH TYPE C LIGHTS
- ⊙ TRAFFIC CONTROL 42" CONE
- ┆ SIGN ON PERMANENT SUPPORT
- ┆ SIGN ON TEMPORARY SUPPORT
- ↓ TYPE III BARRICADE WITH 2 TYPE A WARNING LIGHTS
- ⚡ TYPE III BARRICADE WITH SIGN AND 2 TYPE A WARNING LIGHTS
- ➡ DIRECTION OF TRAFFIC
- ▨ WORK ZONE
- ⚡ TRAFFIC CONTROL FLASHING ARROW BOARD



PROJECT NO: 1040-00-70

HWY: STH 57

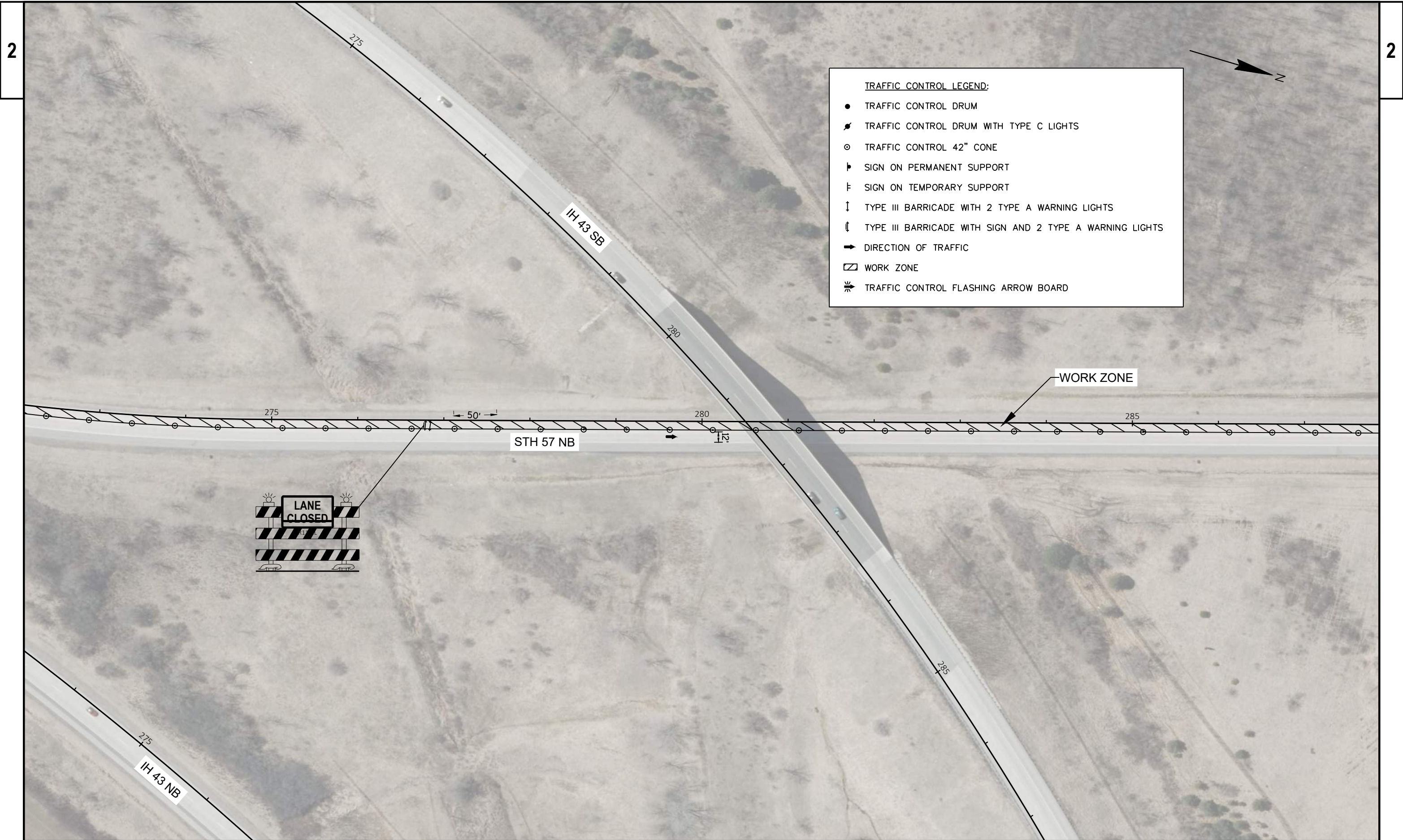
COUNTY: OZAUKEE

TRAFFIC CONTROL STAGE 2

SHEET

50

E

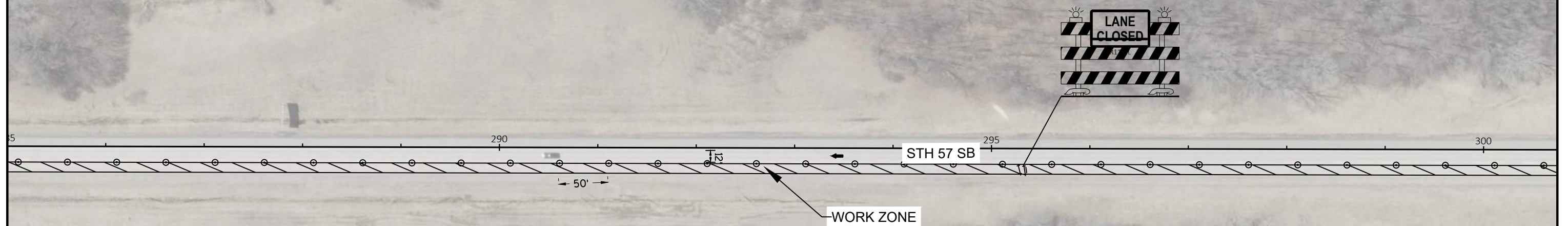


2

2

TRAFFIC CONTROL LEGEND:

- TRAFFIC CONTROL DRUM
- ⚡ TRAFFIC CONTROL DRUM WITH TYPE C LIGHTS
- ⊙ TRAFFIC CONTROL 42" CONE
- ▤ SIGN ON PERMANENT SUPPORT
- ▥ SIGN ON TEMPORARY SUPPORT
- ↓ TYPE III BARRICADE WITH 2 TYPE A WARNING LIGHTS
- ⬇ TYPE III BARRICADE WITH SIGN AND 2 TYPE A WARNING LIGHTS
- ➡ DIRECTION OF TRAFFIC
- ▭ WORK ZONE
- ⚡➡ TRAFFIC CONTROL FLASHING ARROW BOARD



PROJECT NO: 1040-00-70

HWY: STH 57

COUNTY: OZAUKEE

TRAFFIC CONTROL STAGE 2

SHEET

52

E

TRAFFIC CONTROL LEGEND:

- TRAFFIC CONTROL DRUM
- ⦿ TRAFFIC CONTROL DRUM WITH TYPE C LIGHTS
- ⊙ TRAFFIC CONTROL 42" CONE
- ▤ SIGN ON PERMANENT SUPPORT
- ▥ SIGN ON TEMPORARY SUPPORT
- ⬇ TYPE III BARRICADE WITH 2 TYPE A WARNING LIGHTS
- ⬇ TYPE III BARRICADE WITH SIGN AND 2 TYPE A WARNING LIGHTS
- ➡ DIRECTION OF TRAFFIC
- ▨ WORK ZONE
- ➡ TRAFFIC CONTROL FLASHING ARROW BOARD



TRAFFIC CONTROL LEGEND:

- TRAFFIC CONTROL DRUM
- ⚡ TRAFFIC CONTROL DRUM WITH TYPE C LIGHTS
- TRAFFIC CONTROL 42" CONE
- ▤ SIGN ON PERMANENT SUPPORT
- ▥ SIGN ON TEMPORARY SUPPORT
- ⏏ TYPE III BARRICADE WITH 2 TYPE A WARNING LIGHTS
- ⏏ TYPE III BARRICADE WITH SIGN AND 2 TYPE A WARNING LIGHTS
- ➡ DIRECTION OF TRAFFIC
- ▨ WORK ZONE
- ⚡ TRAFFIC CONTROL FLASHING ARROW BOARD



PROJECT NO: 1040-00-70

HWY: STH 57

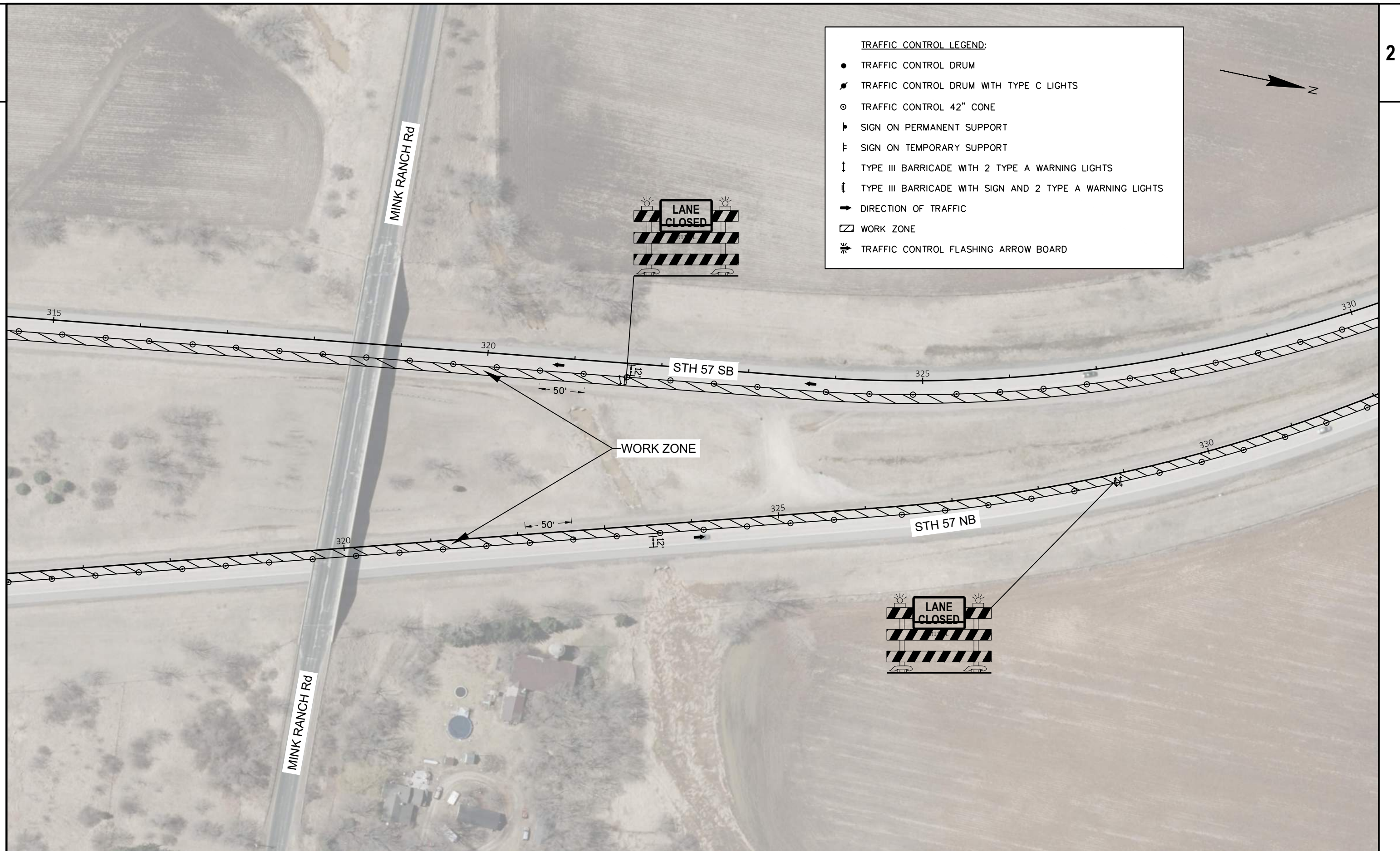
COUNTY: OZAUKEE

TRAFFIC CONTROL STAGE 2

SHEET

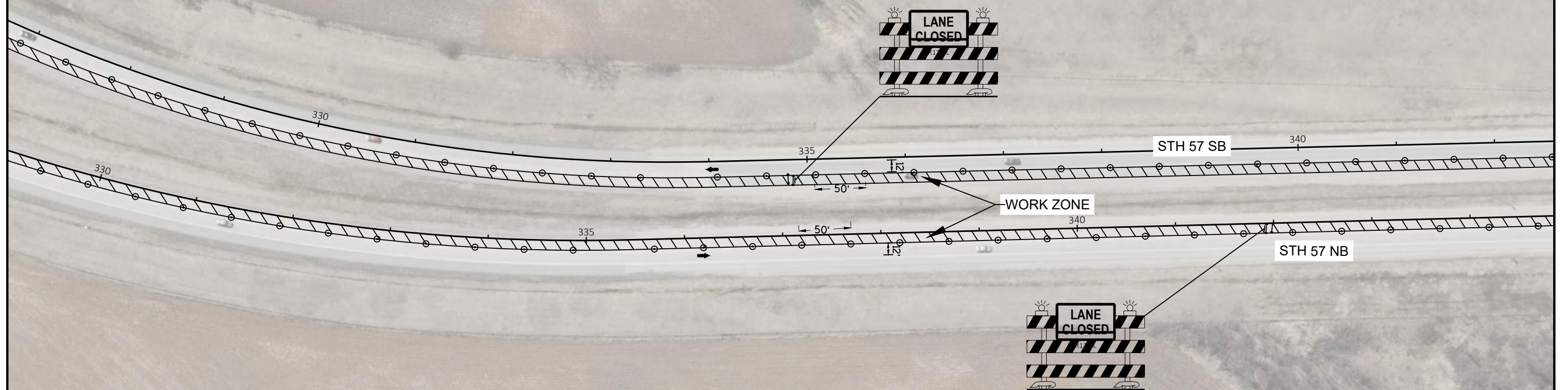
54

E



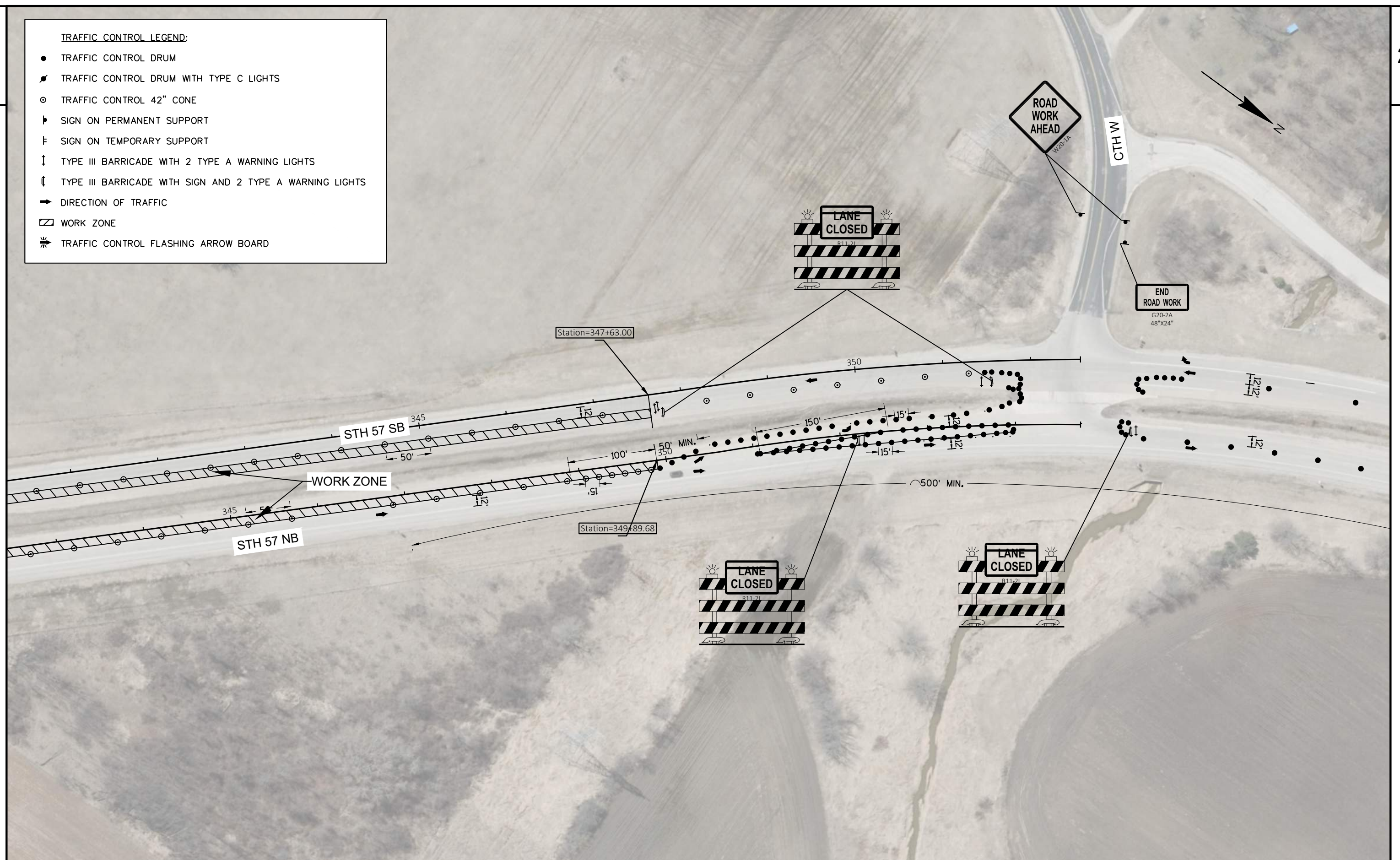
TRAFFIC CONTROL LEGEND:

- TRAFFIC CONTROL DRUM
- ⚡ TRAFFIC CONTROL DRUM WITH TYPE C LIGHTS
- ⊙ TRAFFIC CONTROL 42" CONE
- ┆ SIGN ON PERMANENT SUPPORT
- ┆ SIGN ON TEMPORARY SUPPORT
- ↓ TYPE III BARRICADE WITH 2 TYPE A WARNING LIGHTS
- ⬇ TYPE III BARRICADE WITH SIGN AND 2 TYPE A WARNING LIGHTS
- ➡ DIRECTION OF TRAFFIC
- ▨ WORK ZONE
- ⚡ TRAFFIC CONTROL FLASHING ARROW BOARD



TRAFFIC CONTROL LEGEND:

- TRAFFIC CONTROL DRUM
- ⦿ TRAFFIC CONTROL DRUM WITH TYPE C LIGHTS
- ⊙ TRAFFIC CONTROL 42" CONE
- ▮ SIGN ON PERMANENT SUPPORT
- ▮ SIGN ON TEMPORARY SUPPORT
- ⌄ TYPE III BARRICADE WITH 2 TYPE A WARNING LIGHTS
- ⌄ TYPE III BARRICADE WITH SIGN AND 2 TYPE A WARNING LIGHTS
- ➔ DIRECTION OF TRAFFIC
- ▨ WORK ZONE
- ➔ TRAFFIC CONTROL FLASHING ARROW BOARD



PROJECT NO: 1040-00-70

HWY: STH 57

COUNTY: OZAUKEE

TRAFFIC CONTROL STAGE 2

SHEET

57

E

TRAFFIC CONTROL LEGEND:

- TRAFFIC CONTROL DRUM
- ⚡ TRAFFIC CONTROL DRUM WITH TYPE C LIGHTS
- ⊙ TRAFFIC CONTROL 42" CONE
- ┆ SIGN ON PERMANENT SUPPORT
- ┆ SIGN ON TEMPORARY SUPPORT
- ↓ TYPE III BARRICADE WITH 2 TYPE A WARNING LIGHTS
- ⬇ TYPE III BARRICADE WITH SIGN AND 2 TYPE A WARNING LIGHTS
- ➡ DIRECTION OF TRAFFIC
- ▭ WORK ZONE
- ⚡ TRAFFIC CONTROL FLASHING ARROW BOARD



PROJECT NO: 1040-00-70

HWY: STH 57

COUNTY: OZAUKEE

TRAFFIC CONTROL STAGE 2

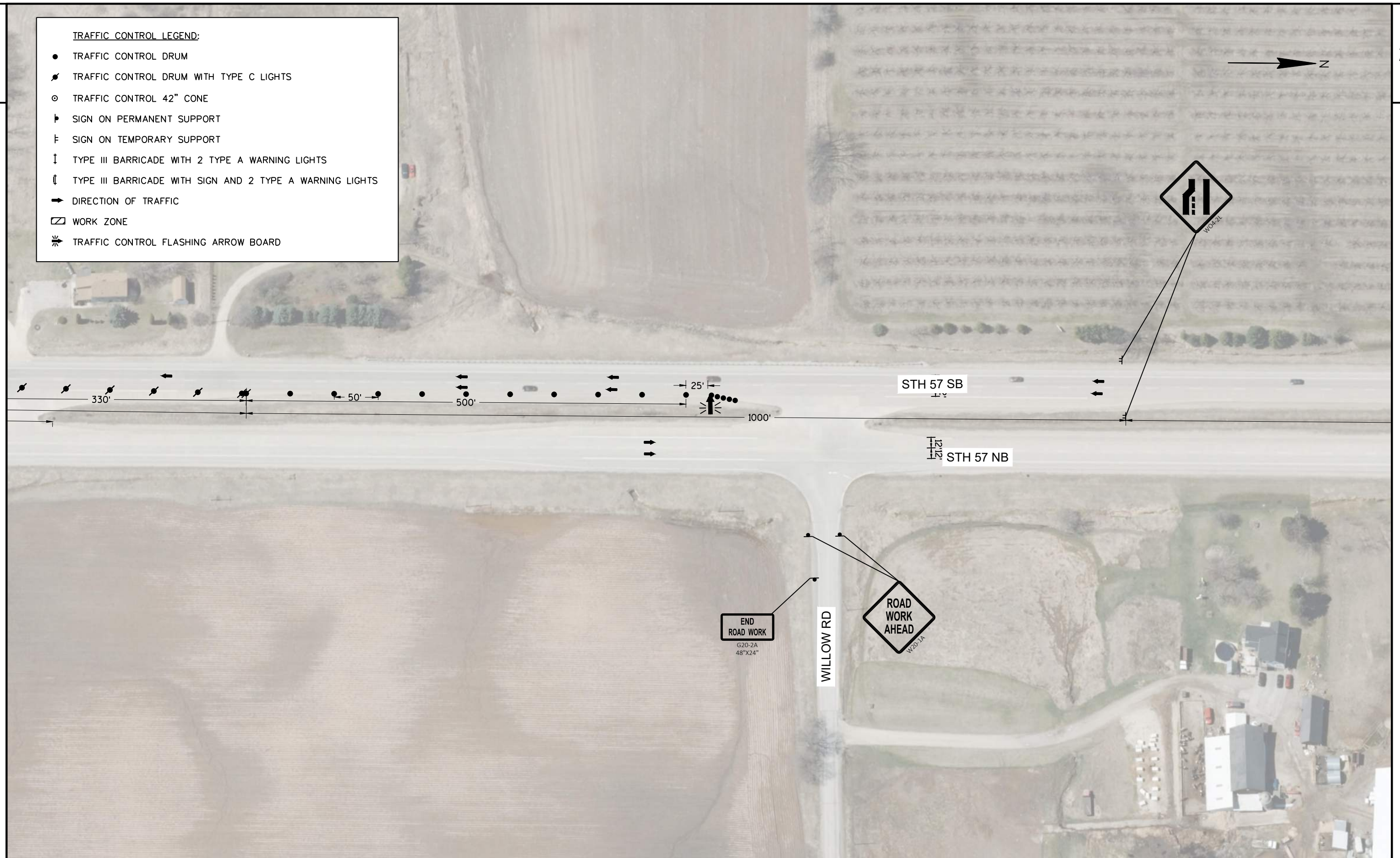
SHEET

58

E

TRAFFIC CONTROL LEGEND:

- TRAFFIC CONTROL DRUM
- ⦿ TRAFFIC CONTROL DRUM WITH TYPE C LIGHTS
- TRAFFIC CONTROL 42" CONE
- ▮ SIGN ON PERMANENT SUPPORT
- ▮ SIGN ON TEMPORARY SUPPORT
- ⬆ TYPE III BARRICADE WITH 2 TYPE A WARNING LIGHTS
- ⬆ TYPE III BARRICADE WITH SIGN AND 2 TYPE A WARNING LIGHTS
- ➔ DIRECTION OF TRAFFIC
- ▭ WORK ZONE
- ⚡ TRAFFIC CONTROL FLASHING ARROW BOARD



PROJECT NO: 1040-00-70

HWY: STH 57

COUNTY: OZAUKEE

TRAFFIC CONTROL STAGE 2

SHEET

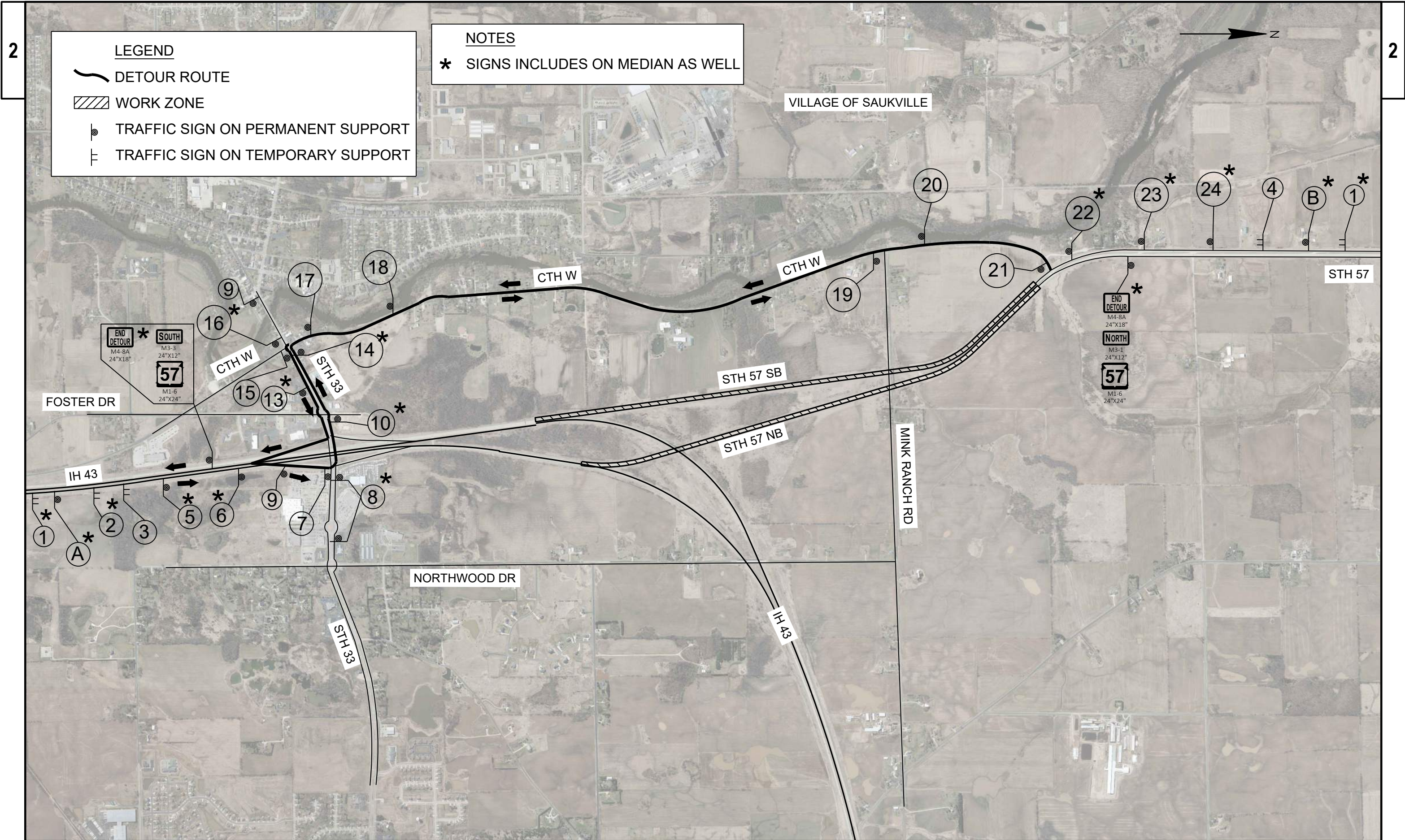
59

E



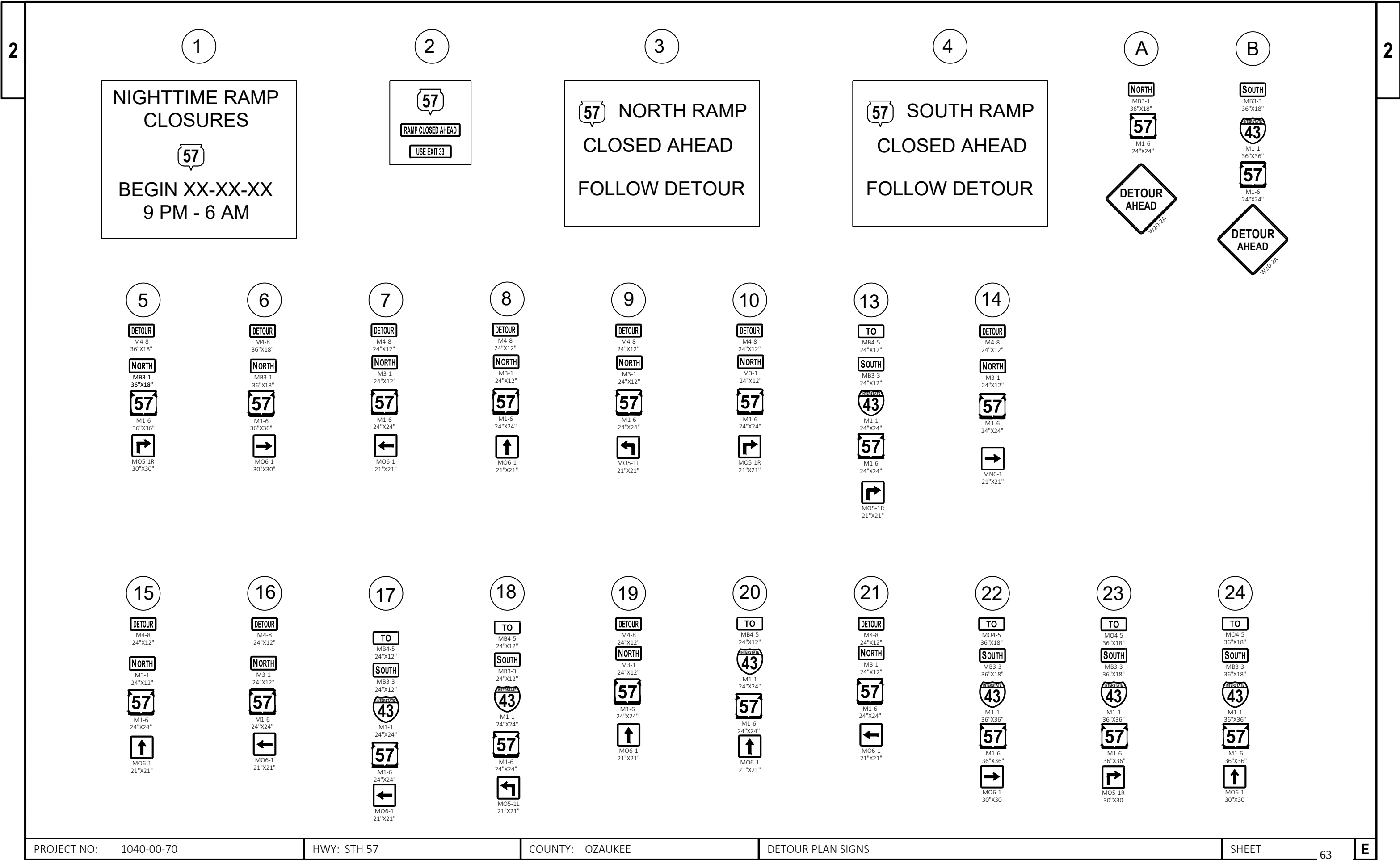
TRAFFIC CONTROL LEGEND:	
●	TRAFFIC CONTROL DRUM
⚡	TRAFFIC CONTROL DRUM WITH TYPE C LIGHTS
⊙	TRAFFIC CONTROL 42" CONE
▮	SIGN ON PERMANENT SUPPORT
⌵	SIGN ON TEMPORARY SUPPORT
⏏	TYPE III BARRICADE WITH 2 TYPE A WARNING LIGHTS
⏏	TYPE III BARRICADE WITH SIGN AND 2 TYPE A WARNING LIGHTS
➡	DIRECTION OF TRAFFIC
▭	WORK ZONE
⚡	TRAFFIC CONTROL FLASHING ARROW BOARD

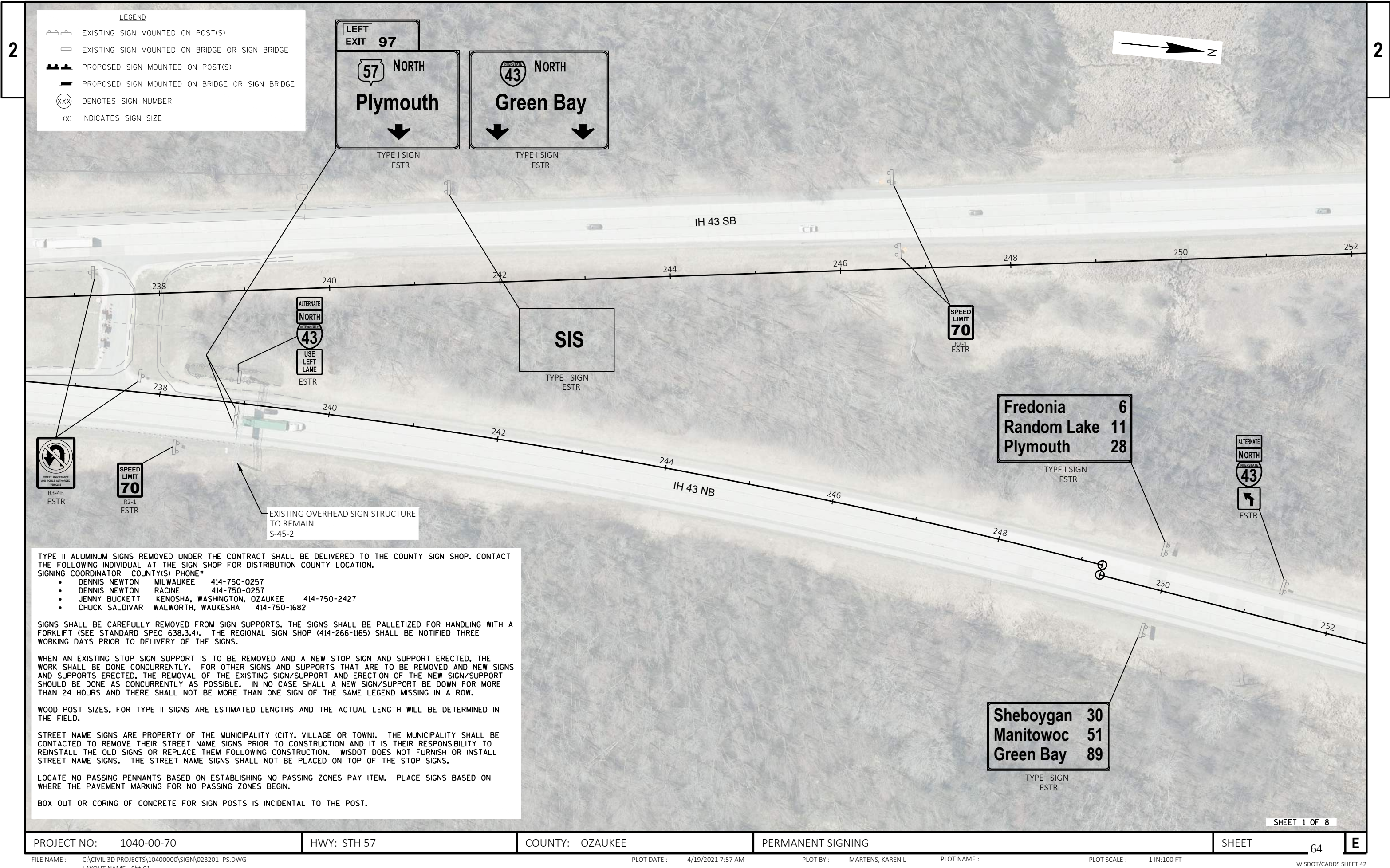




NOTES
* SIGNS INCLUDES ON MEDIAN AS WELL

LEGEND
— DETOUR ROUTE
▨ WORK ZONE
● TRAFFIC SIGN ON PERMANENT SUPPORT
┌ TRAFFIC SIGN ON TEMPORARY SUPPORT





LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- DENOTES SIGN NUMBER
- INDICATES SIGN SIZE

TYPE II ALUMINUM SIGNS REMOVED UNDER THE CONTRACT SHALL BE DELIVERED TO THE COUNTY SIGN SHOP. CONTACT THE FOLLOWING INDIVIDUAL AT THE SIGN SHOP FOR DISTRIBUTION COUNTY LOCATION.

SIGNING COORDINATOR COUNTY(S) PHONE*

- DENNIS NEWTON MILWAUKEE 414-750-0257
- DENNIS NEWTON RACINE 414-750-0257
- JENNY BUCKETT KENOSHA, WASHINGTON, OZAUKEE 414-750-2427
- CHUCK SALDIVAR WALWORTH, WAUKESHA 414-750-1682

SIGNS SHALL BE CAREFULLY REMOVED FROM SIGN SUPPORTS. THE SIGNS SHALL BE PALLETIZED FOR HANDLING WITH A FORKLIFT (SEE STANDARD SPEC 638.3.4). THE REGIONAL SIGN SHOP (414-266-1165) SHALL BE NOTIFIED THREE WORKING DAYS PRIOR TO DELIVERY OF THE SIGNS.

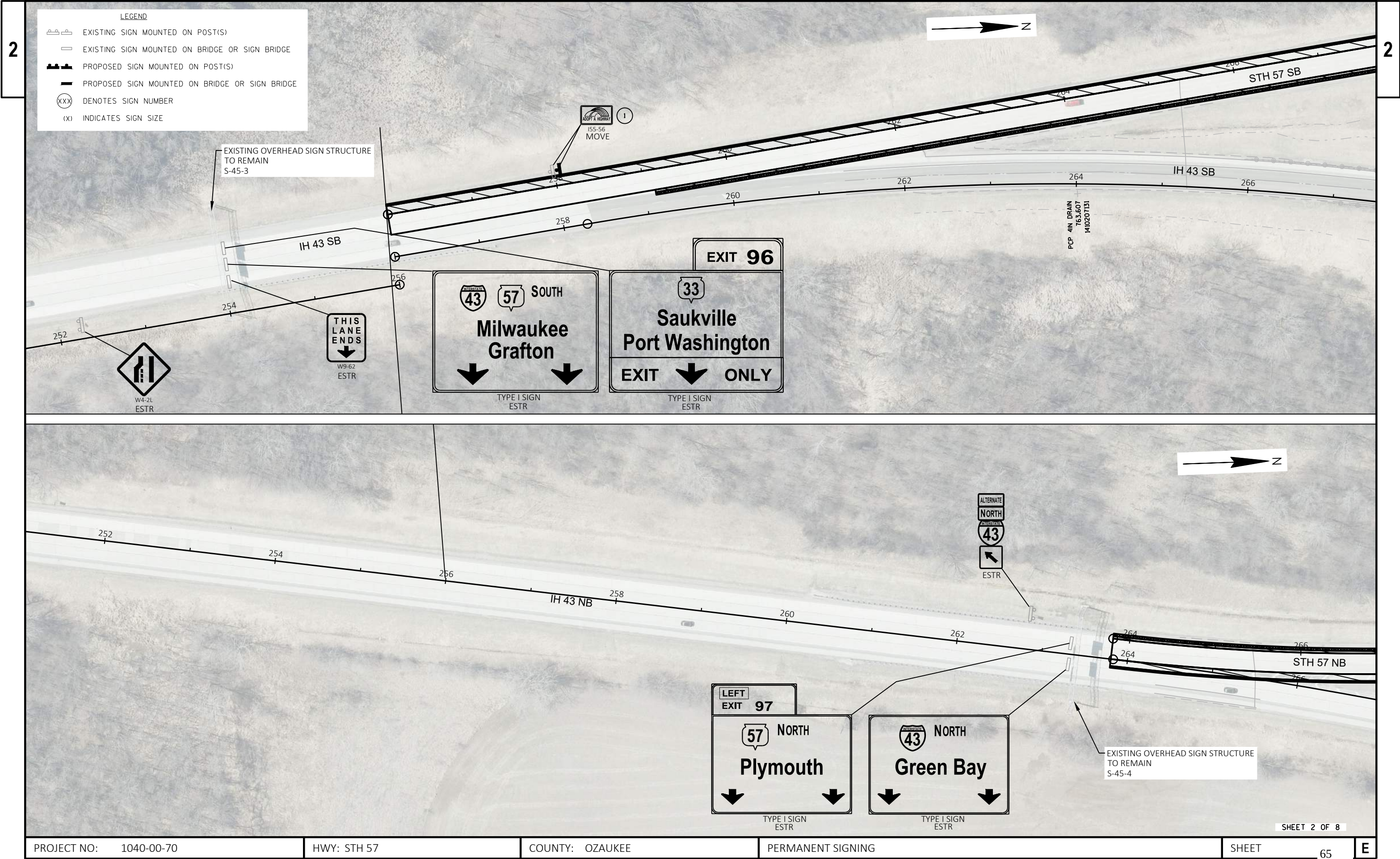
WHEN AN EXISTING STOP SIGN SUPPORT IS TO BE REMOVED AND A NEW STOP SIGN AND SUPPORT ERECTED, THE WORK SHALL BE DONE CONCURRENTLY. FOR OTHER SIGNS AND SUPPORTS THAT ARE TO BE REMOVED AND NEW SIGNS AND SUPPORTS ERECTED, THE REMOVAL OF THE EXISTING SIGN/SUPPORT AND ERECTION OF THE NEW SIGN/SUPPORT SHOULD BE DONE AS CONCURRENTLY AS POSSIBLE. IN NO CASE SHALL A NEW SIGN/SUPPORT BE DOWN FOR MORE THAN 24 HOURS AND THERE SHALL NOT BE MORE THAN ONE SIGN OF THE SAME LEGEND MISSING IN A ROW.

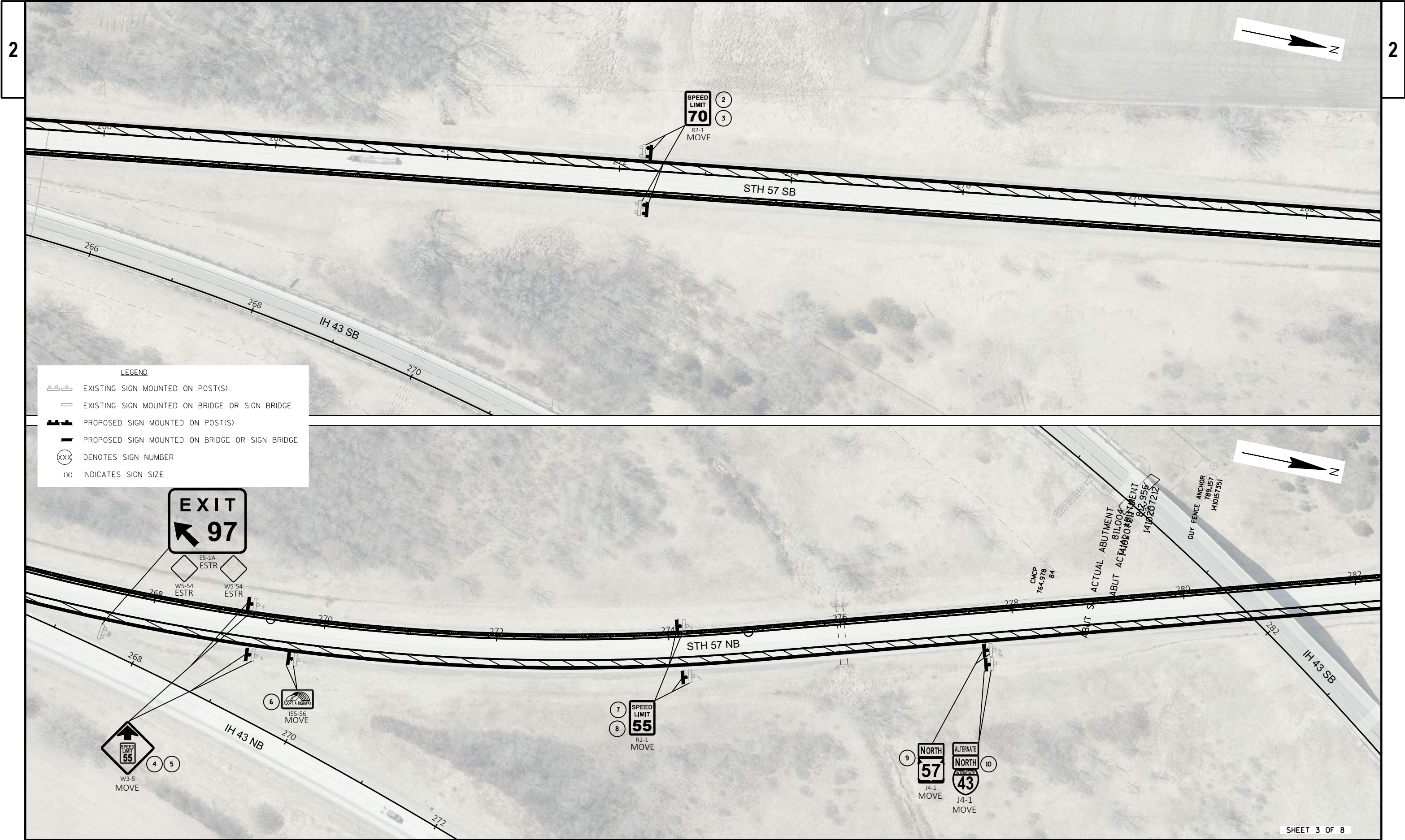
WOOD POST SIZES, FOR TYPE II SIGNS ARE ESTIMATED LENGTHS AND THE ACTUAL LENGTH WILL BE DETERMINED IN THE FIELD.

STREET NAME SIGNS ARE PROPERTY OF THE MUNICIPALITY (CITY, VILLAGE OR TOWN). THE MUNICIPALITY SHALL BE CONTACTED TO REMOVE THEIR STREET NAME SIGNS PRIOR TO CONSTRUCTION AND IT IS THEIR RESPONSIBILITY TO REINSTALL THE OLD SIGNS OR REPLACE THEM FOLLOWING CONSTRUCTION. WISDOT DOES NOT FURNISH OR INSTALL STREET NAME SIGNS. THE STREET NAME SIGNS SHALL NOT BE PLACED ON TOP OF THE STOP SIGNS.

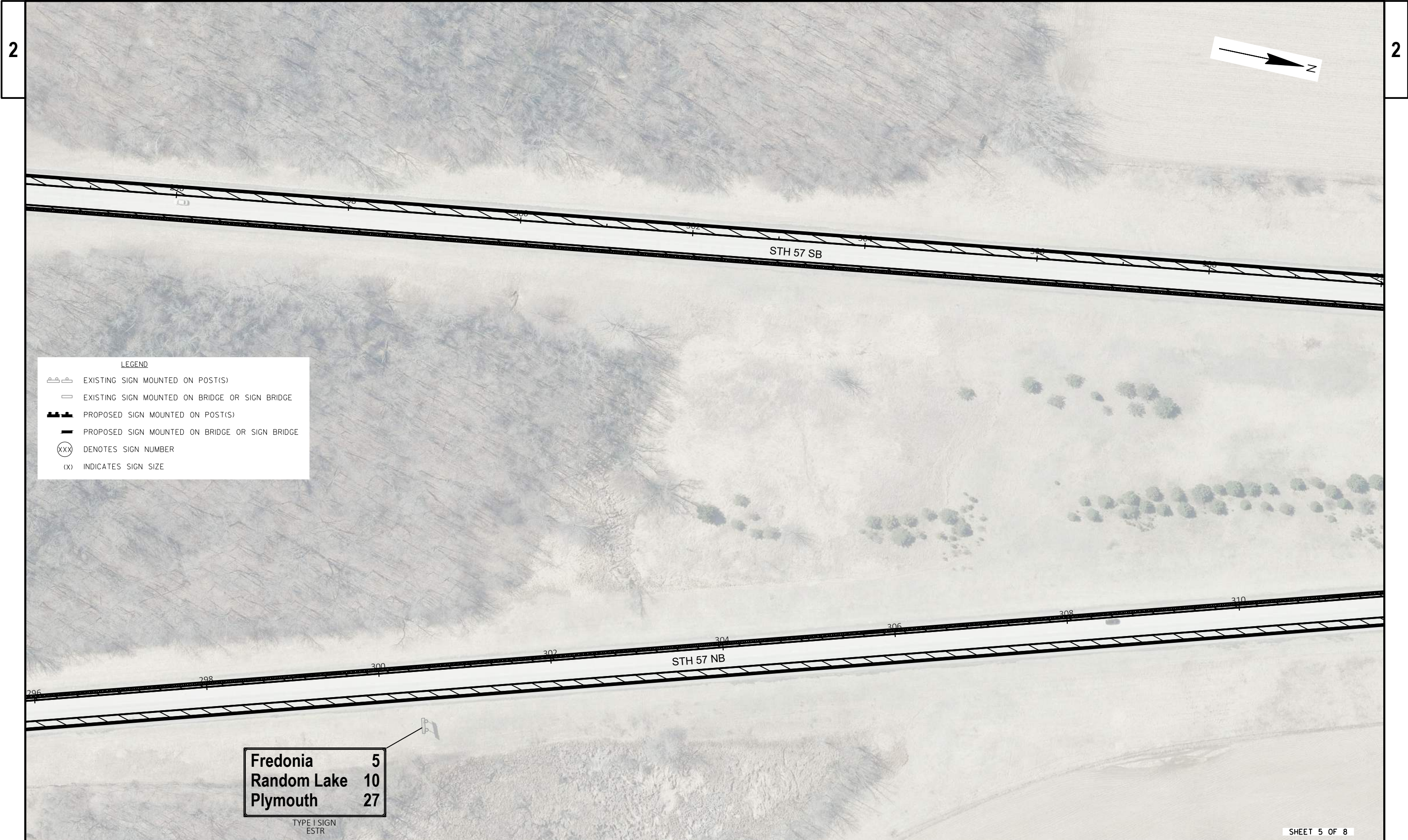
LOCATE NO PASSING PENNANTS BASED ON ESTABLISHING NO PASSING ZONES PAY ITEM. PLACE SIGNS BASED ON WHERE THE PAVEMENT MARKING FOR NO PASSING ZONES BEGIN.

BOX OUT OR CORING OF CONCRETE FOR SIGN POSTS IS INCIDENTAL TO THE POST.







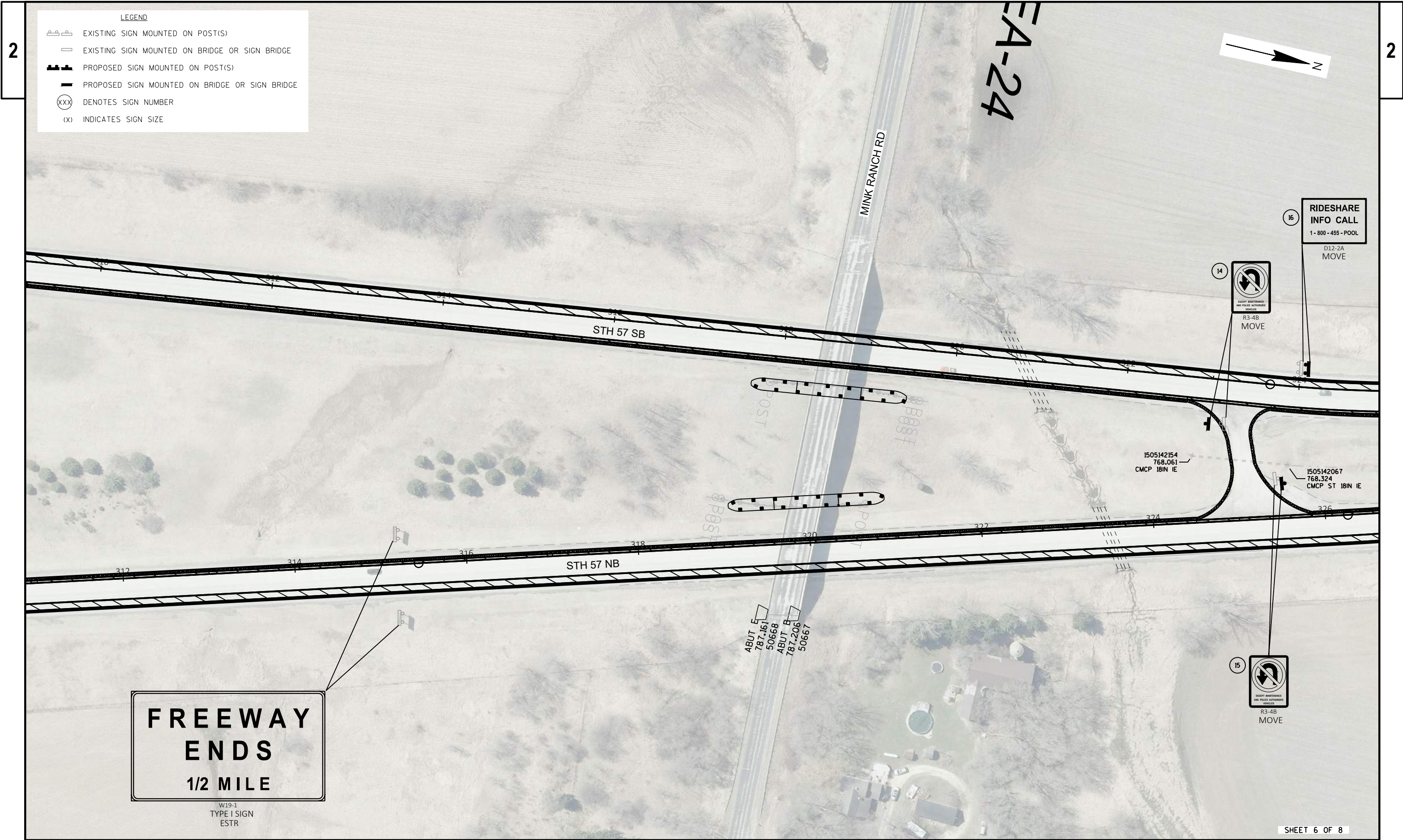


LEGEND

-  EXISTING SIGN MOUNTED ON POST(S)
-  EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
-  PROPOSED SIGN MOUNTED ON POST(S)
-  PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
-  DENOTES SIGN NUMBER
-  INDICATES SIGN SIZE

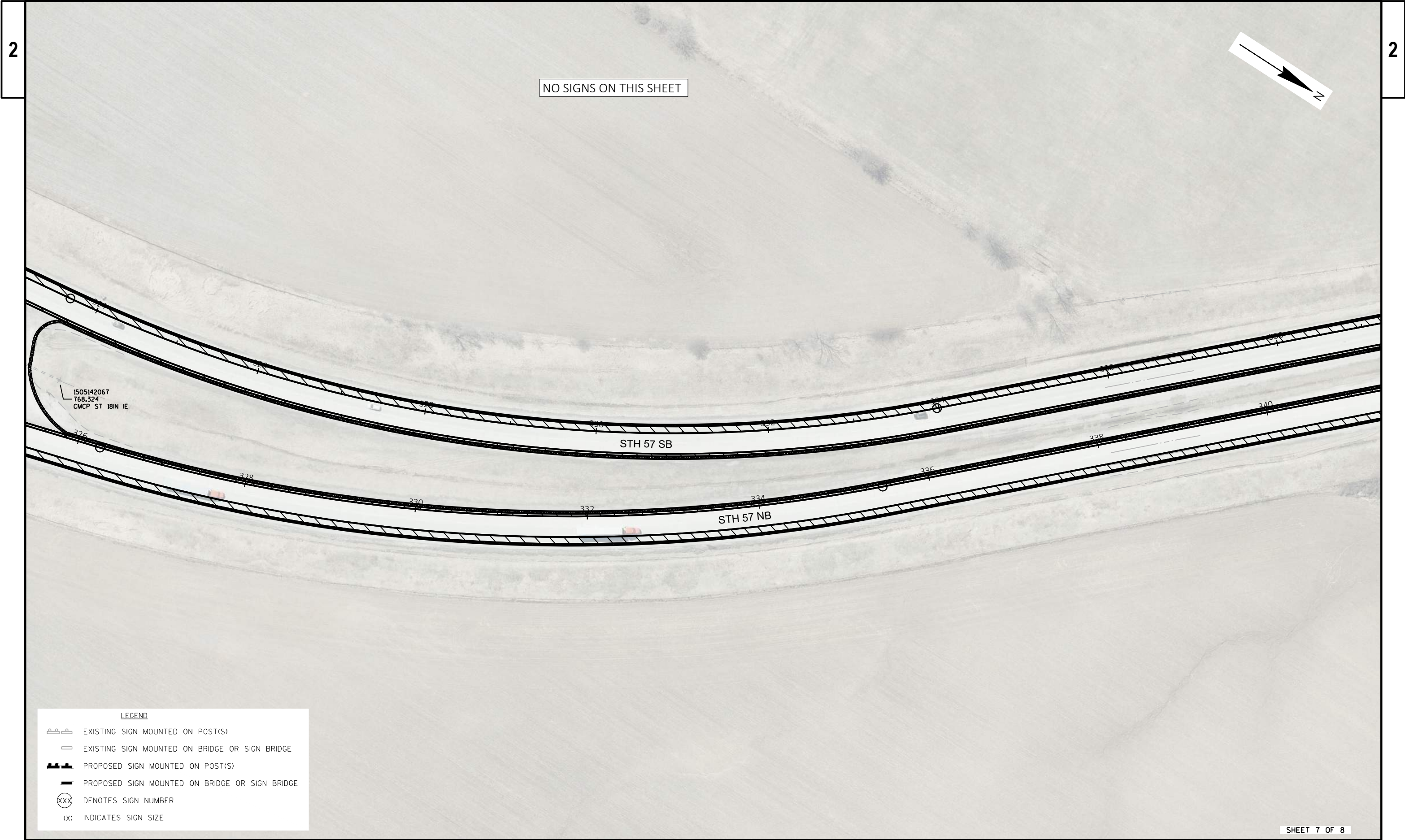
Fredonia	5
Random Lake	10
Plymouth	27

TYPE I SIGN
ESTR



LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- DENOTES SIGN NUMBER
- INDICATES SIGN SIZE



NO SIGNS ON THIS SHEET

LEGEND

 EXISTING SIGN MOUNTED ON POST(S)

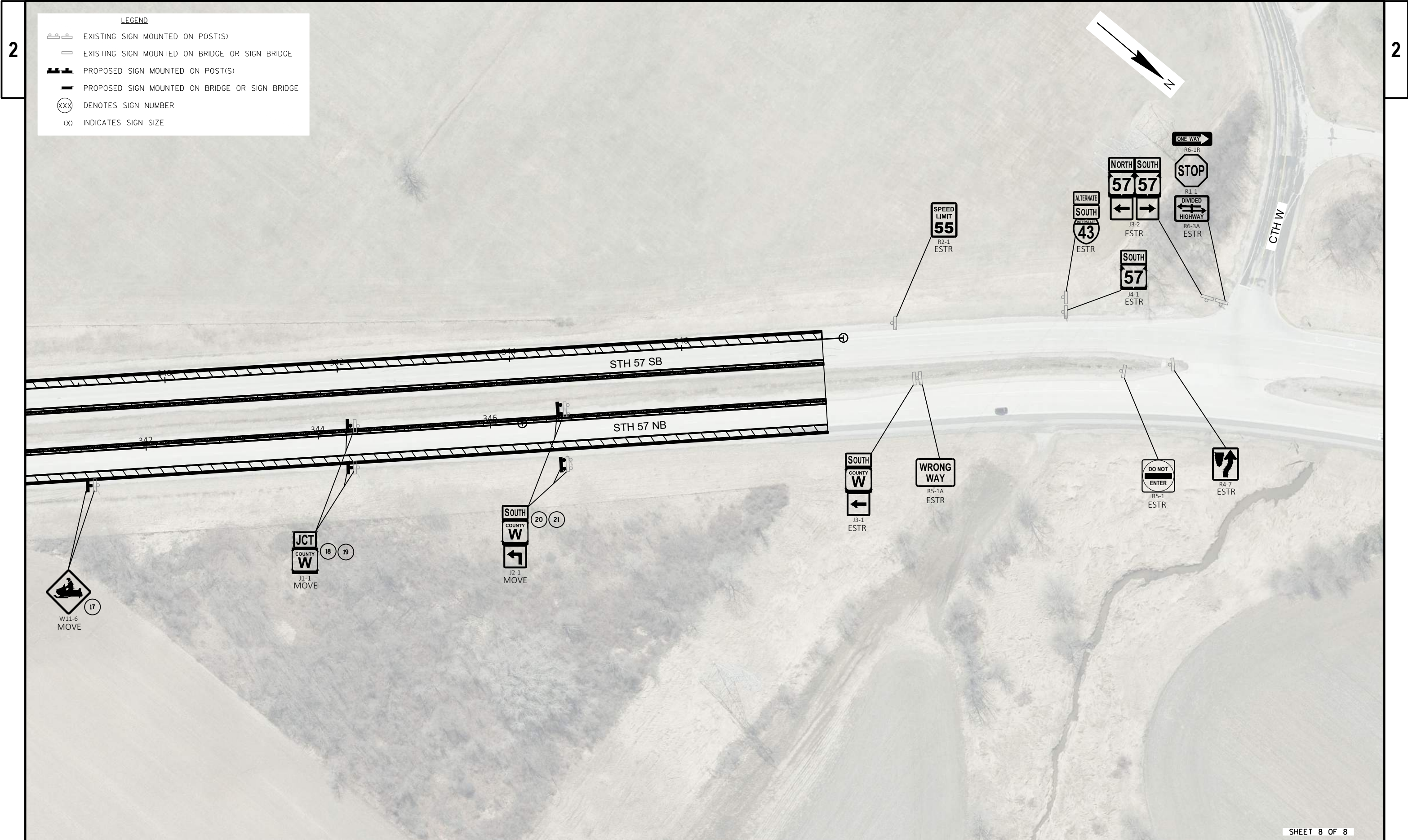
 EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE

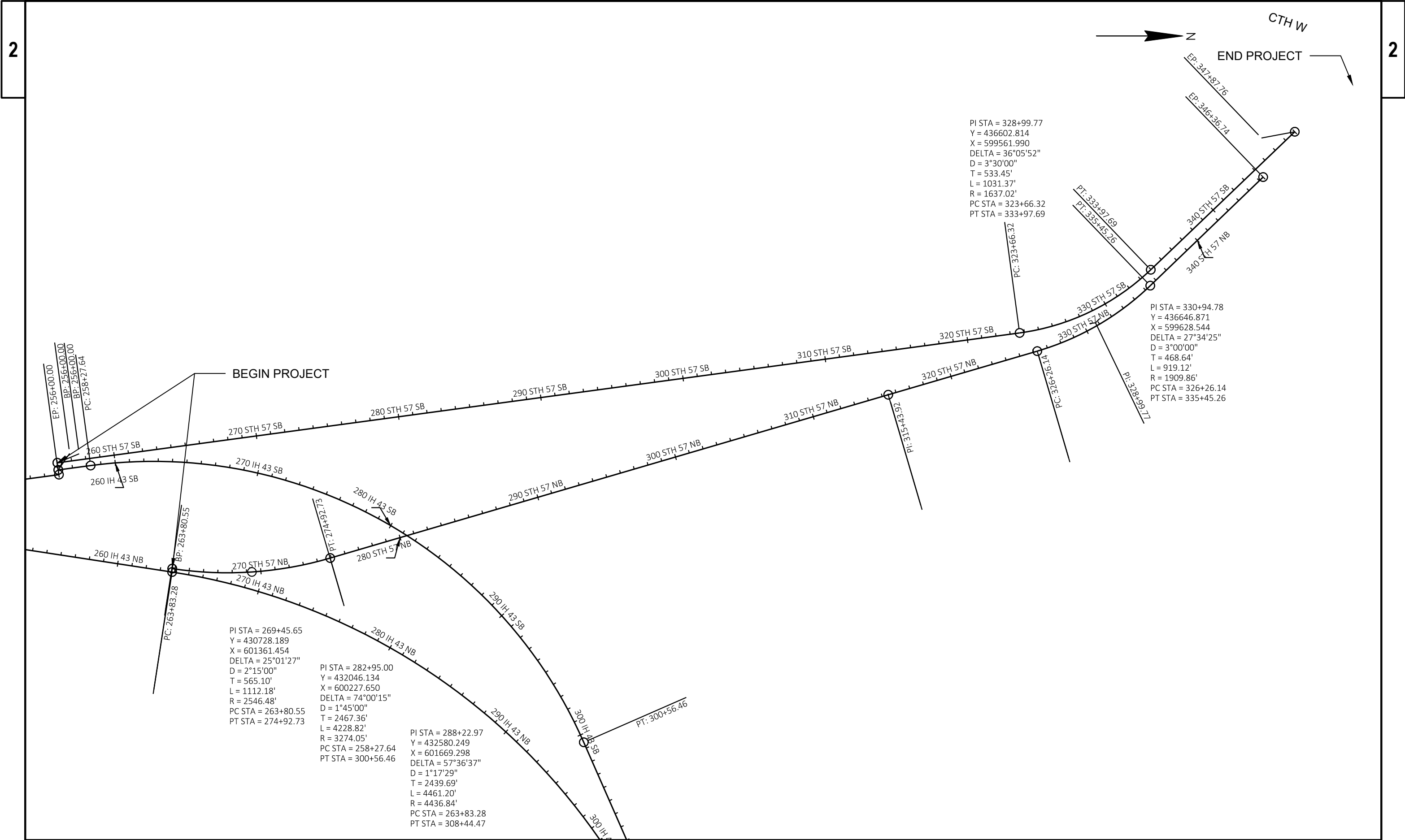
 PROPOSED SIGN MOUNTED ON POST(S)

 PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE

 DENOTES SIGN NUMBER

 INDICATES SIGN SIZE





Estimate Of Quantities

1040-00-70

Line	Item	Item Description	Unit	Total	Qty
0002	204.0120	Removing Asphaltic Surface Milling	SY	22,420.000	22,420.000
0004	204.0165	Removing Guardrail	LF	395.000	395.000
0006	211.0100	Prepare Foundation for Asphaltic Paving (project) 0001. 1040-00-70	LS	1.000	1.000
0008	213.0100	Finishing Roadway (project) 0001. 1040-00-70	EACH	1.000	1.000
0010	305.0110	Base Aggregate Dense 3/4-Inch	TON	590.000	590.000
0012	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	510.000	510.000
0014	416.0610	Drilled Tie Bars	EACH	1,656.000	1,656.000
0016	416.0620	Drilled Dowel Bars	EACH	4,560.000	4,560.000
0018	416.1715	Concrete Pavement Repair SHES	SY	1,440.000	1,440.000
0020	416.1725	Concrete Pavement Replacement SHES	SY	960.000	960.000
0022	420.1000	Continuous Diamond Grinding Concrete Pavement	SY	47,556.000	47,556.000
0024	455.0605	Tack Coat	GAL	1,696.000	1,696.000
0026	460.2000	Incentive Density HMA Pavement	DOL	2,810.000	2,810.000
0028	460.5224	HMA Pavement 4 LT 58-28 S	TON	4,369.000	4,369.000
0030	614.0010	Barrier System Grading Shaping Finishing	EACH	2.000	2.000
0032	614.2300	MGS Guardrail 3	LF	137.500	137.500
0034	614.2610	MGS Guardrail Terminal EAT	EACH	2.000	2.000
0036	614.2620	MGS Guardrail Terminal Type 2	EACH	2.000	2.000
0038	619.1000	Mobilization 0001. 1040-00-70	EACH	1.000	1.000
0040	624.0100	Water	MGAL	100.000	100.000
0042	625.0100	Topsoil	SY	1,060.000	1,060.000
0044	627.0200	Mulching	SY	1,060.000	1,060.000
0046	628.1504	Silt Fence	LF	2,300.000	2,300.000
0048	628.1520	Silt Fence Maintenance	LF	2,000.000	2,000.000
0050	628.1905	Mobilizations Erosion Control	EACH	2.000	2.000
0052	628.1910	Mobilizations Emergency Erosion Control	EACH	1.000	1.000
0054	629.0210	Fertilizer Type B	CWT	2.000	2.000
0056	634.0618	Posts Wood 4x6-Inch X 18-FT	EACH	27.000	27.000
0058	637.2210	Signs Type II Reflective H	SF	100.000	100.000
0060	637.2230	Signs Type II Reflective F	SF	100.000	100.000
0062	638.2102	Moving Signs Type II	EACH	21.000	21.000
0064	638.3000	Removing Small Sign Supports	EACH	27.000	27.000
0066	642.5001	Field Office Type B	EACH	1.000	1.000
0068	643.0300	Traffic Control Drums	DAY	4,452.000	4,452.000
0070	643.0420	Traffic Control Barricades Type III	DAY	844.000	844.000
0072	643.0705	Traffic Control Warning Lights Type A	DAY	916.000	916.000
0074	643.0715	Traffic Control Warning Lights Type C	DAY	628.000	628.000
0076	643.0800	Traffic Control Arrow Boards	DAY	84.000	84.000
0078	643.0900	Traffic Control Signs	DAY	1,568.000	1,568.000
0080	643.1000	Traffic Control Signs Fixed Message	SF	534.000	534.000
0082	643.1050	Traffic Control Signs PCMS	DAY	40.000	40.000
0084	643.1070	Traffic Control Cones 42-Inch	DAY	6,088.000	6,088.000
0086	643.4100.S	Traffic Control Interim Lane Closure	EACH	16.000	16.000
0088	643.5000	Traffic Control	EACH	1.000	1.000
0090	646.1020	Marking Line Epoxy 4-Inch	LF	35,800.000	35,800.000
0092	646.1545	Marking Line Grooved Wet Ref Contrast Epoxy 4-Inch	LF	4,980.000	4,980.000
0094	646.3555	Marking Line Grooved Contrast Permanent Tape 8-Inch	LF	1,870.000	1,870.000
0096	646.7220	Marking Chevron Epoxy 24-Inch	LF	115.000	115.000
0098	646.9210	Marking Removal Line Water Blasting Wide	LF	115.000	115.000

Estimate Of Quantities

1040-00-70					
Line	Item	Item Description	Unit	Total	Qty
0100	650.8000	Construction Staking Resurfacing Reference	LF	17,773.000	17,773.000
0102	650.9910	Construction Staking Supplemental Control (project) 0001. 1040-00-70	LS	1.000	1.000
0104	690.0150	Sawing Asphalt	LF	270.000	270.000
0106	690.0250	Sawing Concrete	LF	9,072.000	9,072.000
0108	740.0440	Incentive IRI Ride	DOL	1,540.000	1,540.000
0110	SPV.0035	Special 0001. Backfill Slurry (1040-00-70)	CY	12.000	12.000
0112	SPV.0075	Special 0001. Pavement Cleanup Project (1040-00-70)	HRS	100.000	100.000
0114	SPV.0090	Special 0001. Removing Pavement Marking Grooved Contrast Tape 8-Inch (1040-00-70)	LF	1,870.000	1,870.000

REMOVAL AND DIAMOND GRINDING						
				204.0120	420.1000	650.8000
				REMOVING ASPHALTIC SURFACE MILLING	CONTINUOUS DIAMOND GRINDING CONCRETE PAVEMENT	CONSTRUCTION STAKING RESURFACING REFERENCE
CATEGORY	ROADWAY	STATION	LOCATION	SY	SY	LF
1000	STH 57 NB	263+80.55 NB-349+89.68 NB	MAIN LINE	10,560	23,000	8,610
	STH 57 SB	256+00.00 SB-347+63.00 SB	MAIN LINE	11,860	24,556	9,163
			TOTAL	22,420	47,556	17,773

ASPHALTIC PAVEMENT								
				455.0605	460.5224	690.0150	460.2000	211.0100
				TACK COAT	HMA PAVEMENT 4 LT 58-28 S	SAWING ASPHALT	INCENTIVE DENSITY HMA PAVEMENT	PREPARE FOUNDATION FOR ASPHALTIC PAVING 0001. 1040-00-70
CATEGORY	ROADWAY	STATION	LOCATION	GAL	TON	LF	DOL	EACH
1000	STH 57 NB	263+80.55 NB-349+89.68 NB	MAIN LINE	740	1,870	110	1,200	-
	STH 57 SB	256+00.00 SB-347+63.00 SB	MAIN LINE	831	2,100	110	1,350	-
	STH 57	325+00 NB	CROSSOVER	55	231		150	1
	UNDISTRIBUTED			70	168	50	110	-
			TOTAL	1,696	4,369	270	2,810	1

BASE AGGREGATE DENSE						
				305.0110	305.0120	624.0100**
				BASE AGGREGATE DENSE 3/4-INCH	BASE AGGREGATE DENSE 1 1/4-INCH	WATER
CATEGORY	ROADWAY	STATION	LOCATION	TON	TON	MGAL
1000	STH 57 NB	263+80.55 NB-349+89.68 NB	UNPAVED SHOULDER	280	-	10
	STH 57 SB	256+00.00 SB-347+63.00 SB	UNPAVED SHOULDER	280	-	10
	STH 57	325+00 NB	CROSSOVER	-	510	20
			CROSSOVER	30	-	10
			TOTAL	590	510	50

** THIS ITEM IS SHOWN ELSEWHERE

CONCRETE PAVEMENT									
				416.0610	416.0620	416.1715	416.1725	690.0250	740.0440
				DRILLED TIE BARS	DRILLED DOWEL BARS	CONCRETE PAVEMENT REPAIR SHES	CONCRETE PAVEMENT REPLACEMENT SHES	SAWING CONCRETE	INCENTIVE IRI RIDE
CATEGORY	ROADWAY	STATION	LOCATION	EACH	EACH	SY	SY	LF	DOL
1000	STH 57 NB	263+80.55 NB-349+89.68 NB	MAIN LINE	828	2,280	720	480	4,536	770
	STH 57 SB	256+00.00 SB-347+63.00 SB	MAIN LINE	828	2,280	720	480	4,536	770
			TOTAL	1,656	4,560	1,440	960	9,072	1,540

BEAMGUARD									
				614.0010	614.2300	614.2610	614.2620	204.0165	SPV.0035.0001****
				BARRIER SYSTEM GRADING SHAPING FINISHING	MGS GUARDRAIL 3	MGS GUARDRAIL TERMINAL EAT	MGS GUARDRAIL TERMINAL TYPE 2	REMOVING GUARDRAIL	BACKFILL SLURRY
CATEGORY	ROADWAY	STATION	LOCATION	EACH	LF	EACH	EACH	LF	CU
1000	STH 57 NB	318+80NB-320+85NB	BRIDGE ON MINK RANCH RD OVER STH 57	1	68.75	1	1	205	6
	STH 57 SB	318+75SB-319+65SB		1	68.75	1	1	190	6
			TOTAL	2	137.50	2	2	395	12

**** FOR MGS GUARDRAIL POST

EROSION CONTROL										
			624.0100**	625.0100	627.0200	628.1504	628.1520	628.1905	628.1910	629.0210
			WATER	TOPSOIL	MULCHING	SILT FENCE	SILT FENCE MAINTENANCE	MOBILIZATIONS EROSION CONTROL	MOBILIZATIONS EMERGENCY EROSION CONTROL	FERTILIZER TYPE B
CATEGORY	ROADWAY	LOCATION	MGAL	SY	SY	FT	FT	EACH	EACH	CWT
1000	STH 57 NB	BEAMGUARD	-	-	-	600	-	1	1	-
	STH 57 SB	BEAMGUARD	-	-	-	600	-	-		-
	CROSSOVER	NORTH	-	560	560	400		1		1
	CROSSOVER	SOUTH	-	500	500	400		-		1
	UNDISTRIBUTED		50	-	-	300	2,000	-	-	-
	TOTAL		50	1,060	1,060	2,300	2,000	2	1	2

** THIS ITEM IS SHOWN ELSEWHERE

ROADWAY						
			213.0100	642.5001	650.9910	SPV.0075.0001
			FINISHING ROADWAY (PROJECT) 0001. 1040-00-70	FIELD OFFICE TYPE B	CONSTRUCTION STAKING SUPPLEMENTAL CONTROL PROJECT 1040- 00-70	PAVEMENT CLEANUP PROJECT 1040-00-70
CATEGORY	ROADWAY	STATION	EACH	EACH	LS	HRS
1000	STH 57		1	1	1	100
		TOTAL	1	1	1	100

TRAFFIC CONTROL ITEMS																		
			643.0300		643.0420		643.0705		643.0715		643.0800		643.0900		643.1050		643.1070	
			TRAFFIC CONTROL DRUMS		TRAFFIC CONTROL BARRICADE TYPE III		TRAFFIC CONTROL WARNING LIGHTS TYPE A		TRAFFIC CONTROL WARNING LIGHTS TYPE C		TRAFFIC CONTROL ARROW BOARDS		TRAFFIC CONTROL SIGNS		TRAFFIC CONTROL SIGNS PCMS		TRAFFIC CONTROL CONES 42-INCH	
CATEGORY	ROADWAY	DURATION*	EACH*	DAY	EACH*	DAY	EACH*	DAY	EACH*	DAY	EACH*	DAY	EACH*	DAY	EACH*	DAY	EACH*	DAY
1000	STH 57 NB STAGE 1	8	105	840	22	176	24	192	18	144	2	16	25	200	-	-	194	1,552
	STH 57 NB STAGE 2	8	140	1,120	22	176	24	192	18	144	2	16	26	208	-	-	181	1,448
	STH 57 SB STAGE 1	8	164	1,312	22	176	24	192	15	120	2	16	24	192	-	-	194	1,552
	STH 57 SB STAGE 2	8	85	680	22	176	24	192	15	120	2	16	24	192	-	-	192	1,536
	STH 57 NB DETOUR	4	-	-	10	40	12	48	-	-	-	-	101	404	-	-	-	-
	STH 57 SB DETOUR		-	-					-	-	-	-	68	272	-	-	-	-
	UNDISTRIBUTED	-	-	500	-	100	-	100	-	100	-	20	-	100	-	40	-	-
	TOTAL			4,452		844		916		628		84		1,568		40		6,088

NOTE:

*=FOR INFORMATION ONLY

TRAFFIC CONTROL CLOSURES			
			643.4100.S TRAFFIC CONTROL INTERIM LANE CLOSURE
CATEGORY	ROADWAY	LOCATION	EACH
1000	STH 57 NB	MAIN LINE	8
	STH 57 SB	MAIN LINE	8
	TOTAL		16

TRAFFIC CONTROL		
		643.5000 TRAFFIC CONTROL
CATEGORY	ROADWAY	EACH*
1000	STH 57	1
	TOTAL	1

PAVEMENT MARKING									
			646.1020		646.1545	646.3555	646.7220	646.9210***	SPV.0090.0001
			MARKING LINE EPOXY 4-INCH		MARKING LINE GROOVED WET REFLECTIVE CONTRAST EPOXY 4-INCH	MARKING LINE GROOVED CONTRAST PERMANENT TAPE 8-INCH	MARKING CHEVRON EPOXY 24-INCH	MARKING REMOVAL LINE WATER BLASTING WIDE	REMOVING PAVEMENT MARKING GROOVED CONTRAST TAPE 8 INCH
			WHITE	YELLOW	WHITE	WHITE	WHITE		
CATEGORY	ROADWAY	STATION	LF	LF	LF	LF	LF	LF	LF
1000	STH 57 NB	263+80.55-349+89.68	8,400	8,700	2,180	570	115	115	570
	STH 57 SB	256+00-347+63.00	9,200	8,500	2,300	1,300	-	-	1,300
	CROSSOVER	325+00 NB	-	-	-	-	-	-	-
	UNDISTRIBUTED		500	500	500	-	-	-	-
		SUB-TOTAL	18100	17700	4,980	1,870	115	115	1,870
		TOTAL	35,800						

*** THE GORE ON STH 57 NB WITH IH 43 NB

TRAFFIC CONTROL SIGNS FIXED MESSAGES			
			643.1000
			TRAFFIC CONTROL SIGNS FIXED MESSAGES
CATEGORY	ROADWAY	SIGN # & SIZE	SF
1000	IH 43, STH 33, CTH W AND STH 57	FMS (11'x7.5')	165.00
		FMS (9'x6')	108.00
		FMS (10'x4.5')	90.00
		FMS (11'x4.5')	99.00
		FMS (9'x4')	72.00
			534.00

BARRIER SYSTEM GRADING SHAPING FINISHING								
FOR INFROMATION PURPOSE ONLY								
			EXCAVATION COMMON	TOPSOIL	MULCHING	FERTILIZER TYPE B	SEEDING	CONSTRUCTION STAKING SLOPE STAKES
CATEGORY	ROADWAY	LOCATION	CY	SY	SY	CWT	LB	LF
1000	STH 57 NB	BEAMGUARD	324	1250	1250	2	60	350
	STH 57 SB	BEAMGUARD	200	1010	1010	1	60	350
		TOTAL	524	2260	2260	3	120	700

3

TYPE II PERMANENT SIGNING -

1040-00-70 STH 57

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	SIGN SIZE W x H [IN.] x [IN.]			637.2210 SIGNS TYPE II REFLC H [SF]	637.2230 SIGNS TYPE II REFLC F [SF]	638.3000 REMOVING SMALL SIGN SUPPORTS [EA]	634.0618 WOOD POSTS 4"X6"x18' [EA]	638.2102 MOVE SIGNS TYPE II [EA]	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION
1	I55-56	--	--	X	--	--	--	1	1	1	--	--
2	R2-1	--	--	X	--	--	--	2	2	1	--	--
3	R2-1	--	--	X	--	--	--	2	2	1	--	--
4	W3-5	--	--	X	--	--	--	1	1	1	--	--
5	W3-5	--	--	X	--	--	--	1	1	1	--	--
6	I55-56	--	--	X	--	--	--	1	1	1	--	--
7	R2-1	--	--	X	--	--	--	1	1	1	--	--
8	R2-1	--	--	X	--	--	--	1	1	1	--	--
9	J4-1	--	--	X	--	--	--	1	1	1	--	--
10	J4-1	--	--	X	--	--	--	1	1	1	--	--
11	R2-1	--	--	X	--	--	--	1	1	1	--	--
12	R2-1	--	--	X	--	--	--	1	1	1	--	--
13	D12-2A	--	--	X	--	--	--	2	2	1	--	--
14	R3-4B	--	--	X	--	--	--	1	1	1	--	--
15	R3-4B	--	--	X	--	--	--	1	1	1	--	--
16	D12-2A	--	--	X	--	--	--	2	2	1	--	--
17	W11-6	--	--	X	--	--	--	1	1	1	--	--
18	J1-1	--	--	X	--	--	--	1	1	1	--	--
19	J1-1	--	--	X	--	--	--	1	1	1	--	--
20	J2-1	--	--	X	--	--	--	2	2	1	--	--
21	J2-1	--	--	X	--	--	--	2	2	1	--	--
--	--	--	--	X	--	--	--	--	--	--	--	--
UNDISTRIBUTED						100.000	100.000	--	--	--		--
TOTALS						100.000	100.000	27	27	21		

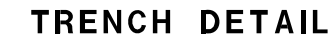
3

Standard Detail Drawing List

08E09-06	SILT FENCE
11A01-06	MAINTENANCE CROSSOVER FOR FREEWAYS
13A07-02	CONTINUOUSLY REINFORCED CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C09-15A	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C09-15B	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C09-15C	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
14B42-06A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-06B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-06C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-06D	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-04A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B47-02A	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-02B	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-02C	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
15C08-20A	LONGITUDINAL MARKING (MAINLINE)
15C11-08B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C31-03B	PAVEMENT MARKING MAJOR SPLIT FREEWAY TO FREEWAY
15D12-09A	TRAFFIC CONTROL, LANE CLOSURE
15D14-04	TRAFFIC CONTROL, TWO LANE CLOSURE ON FREEWAY OR EXPRESSWAY, SHORT-TERM (LESS THAN 24 HOURS)
15D38-02A	TEMPORARY TRAFFIC CONTROL SIGN MOUNTING
15D38-02B	ATTACHMENT OF SIGNS TO POSTS



- 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 1½" X 1½" 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.



SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

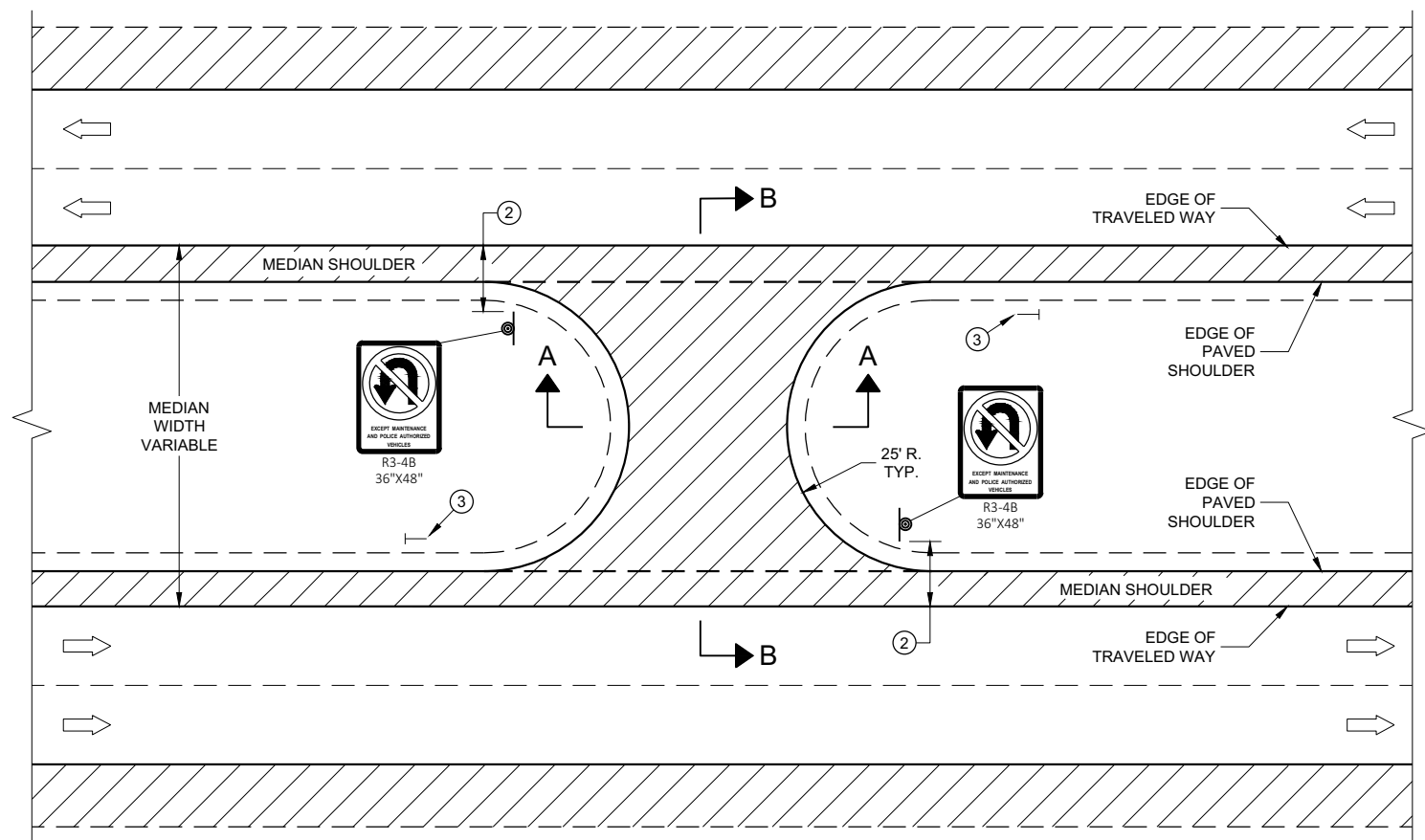
APPROVED
4-29-05
DATE

/S/ Beth Cannata
CHIEF ROADWAY DEVELOPMENT

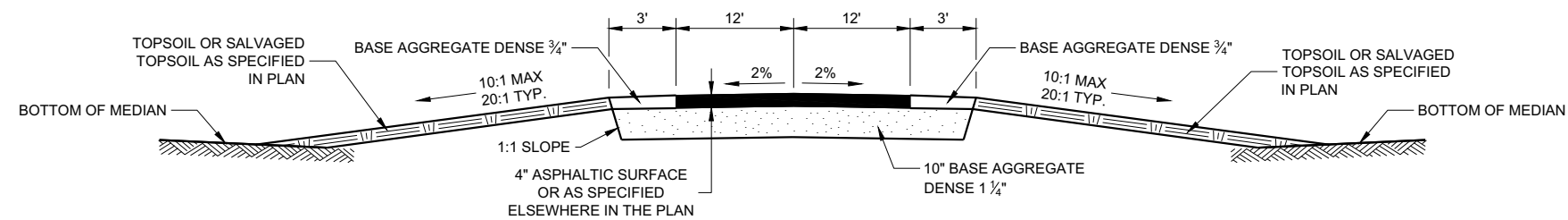
81

ENGINEER

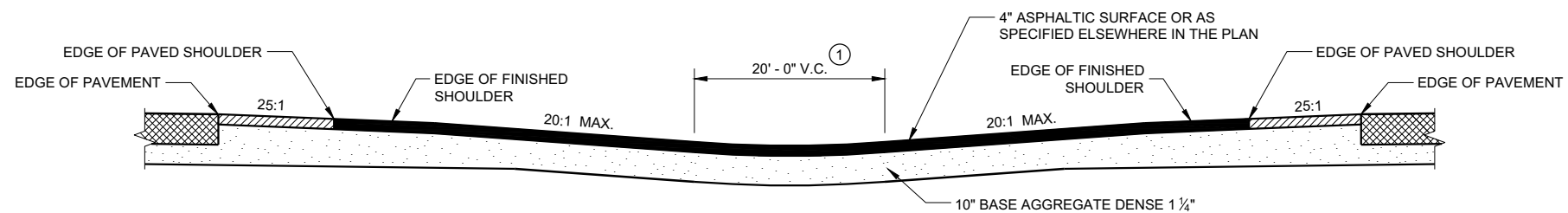
FHWA



PLAN VIEW



SECTION A-A



SECTION B-B

GENERAL NOTES

- 1 ADJUST VERTICAL CURVE LOCATION LATERALLY TO MAINTAIN 20:1 MAX.
- 2 SIGNING DETAILS AND SPECIFICATIONS ARE PROVIDED ELSEWHERE IN THE CONTRACT.
- 3 INSTALL DELINEATOR. SEE STANDARD DETAIL DRAWING 15A4.

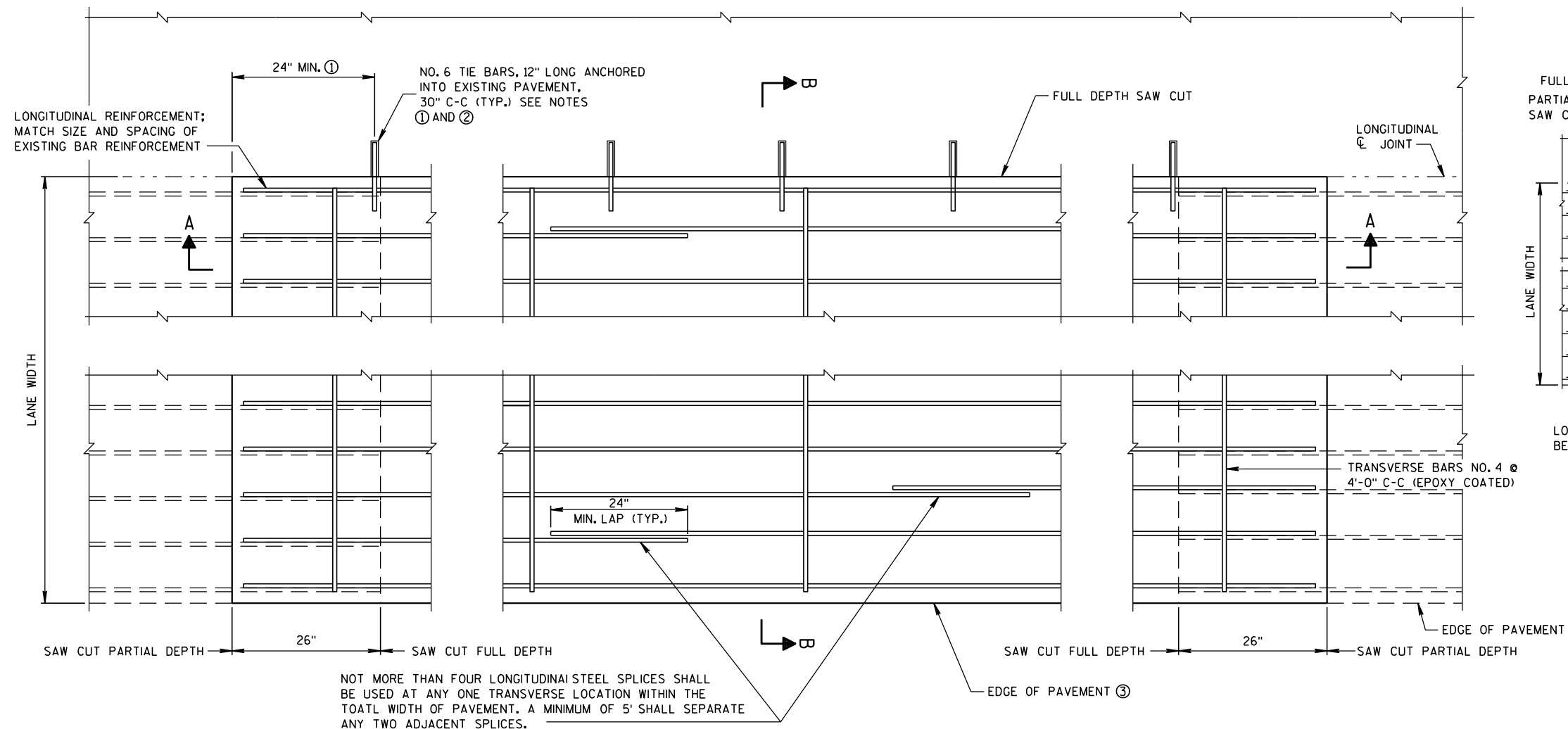
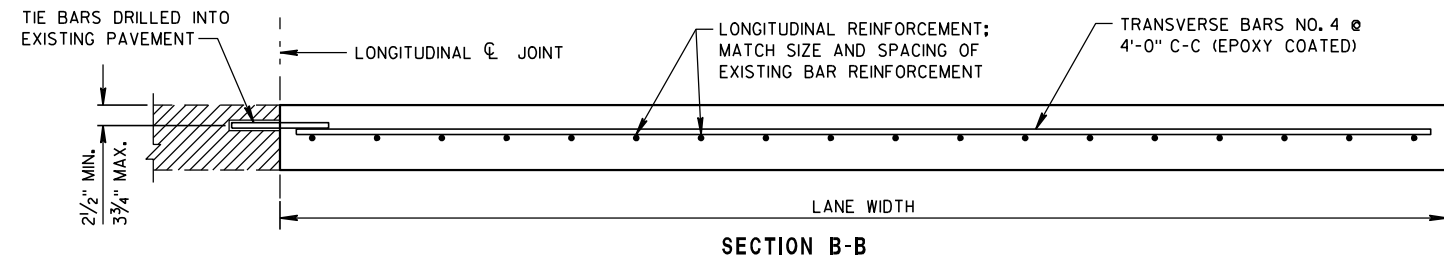
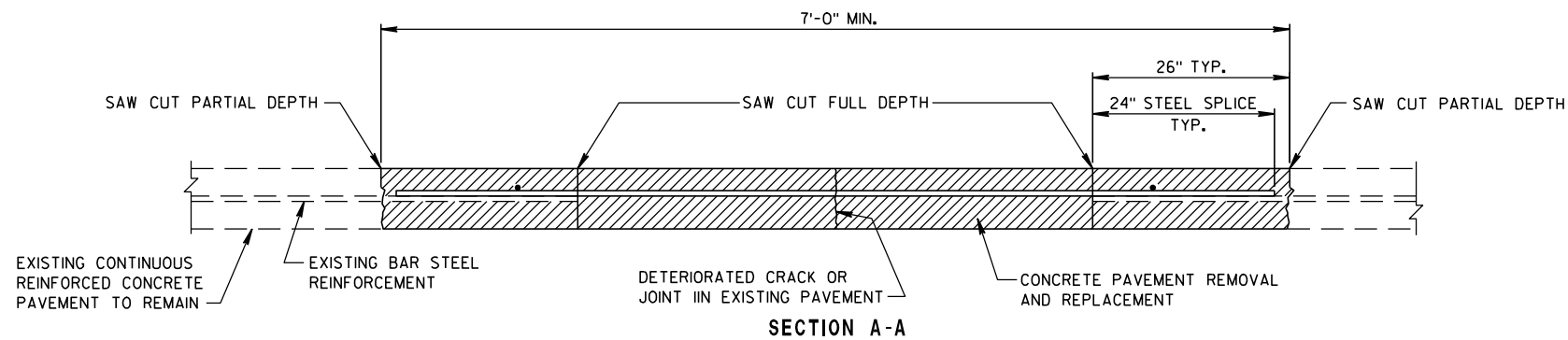
LEGEND

-  SIGN ON PERMANENT SUPPORT
-  DELINEATOR
-  DIRECTION OF TRAFFIC

MAINTENANCE CROSSOVER
FOR FREEWAYS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2019 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT ENGINEER 82
FHWA



NOT MORE THAN FOUR LONGITUDINAL STEEL SPLICES SHALL BE USED AT ANY ONE TRANSVERSE LOCATION WITHIN THE TOTAL WIDTH OF PAVEMENT. A MINIMUM OF 5' SHALL SEPARATE ANY TWO ADJACENT SPLICES.

REINFORCEMENT STEEL PLACEMENT IN CONTINUOUSLY REINFORCED CONCRETE PAVEMENT REPLACEMENT

GENERAL NOTES

PLACE ALL BAR STEEL REINFORCEMENT AT MID PAVEMENT DEPTH UNLESS OTHERWISE NOTED.

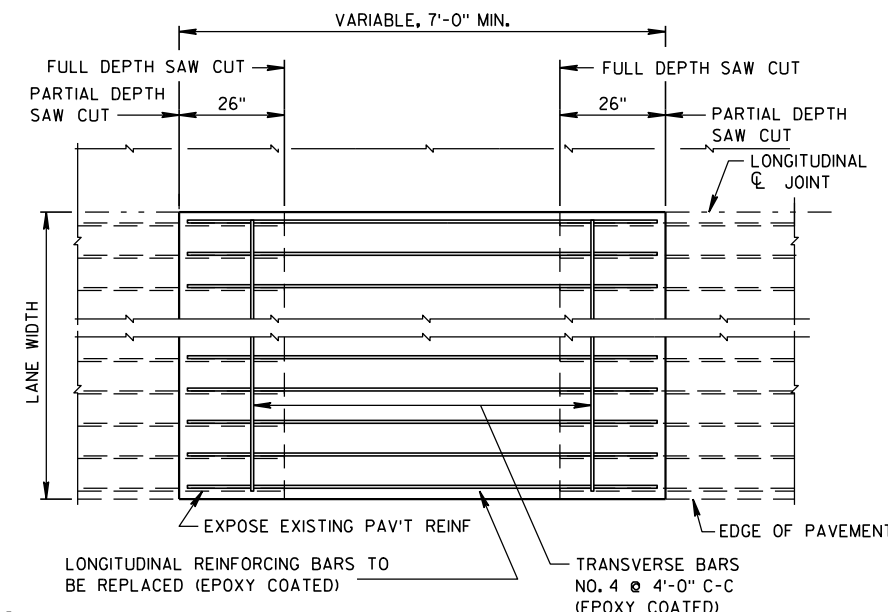
PAY FOR THE TRANSVERSE AND LONGITUDINAL JOINT SAW CUT AS LINEAR FEET OF "SAWING CONCRETE".

WHEN THE PASSING AND TRAVELING LANES ARE TO BE REPLACED, REPLACE THE PASSING LANE FIRST.

ADD TRANSVERSE STEEL BARS TO REPAIRS GREATER THAN 6' IN LENGTH, USE NO. 4 BARS PLACED TRANSVERSELY AND SPACED 4' C-C. PAYMENT SHALL BE INCIDENTAL TO "CONCRETE PAVEMENT CONTINUOUS REINFORCEMENT".

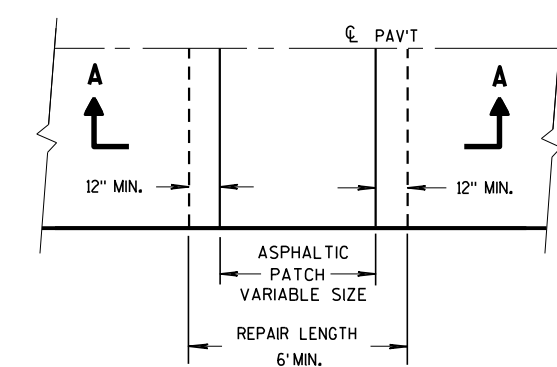
TIE ALL CONCRETE PAVEMENT REPAIRS WHICH ARE GREATER THAN 15' IN LENGTH, AND ARE ADJACENT TO EXISTING CONCRETE PAVEMENT, TO THE EXISTING PAVEMENT USING TIE BARS. DETAILS FOR TIE BAR CONSTRUCTION SHALL CONFORM TO THE STANDARD SPECIFICATIONS AND STANDARD DETAIL DRAWINGS.

- ① PROVIDE A MINIMUM DISTANCE OF 24 INCHES FROM AN EXISTING TRANSVERSE JOINT OR THE EDGE OF REPLACEMENT TO THE CENTER OF THE TIE BAR NEAREST THAT JOINT OR EDGE.
- ② ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.
- ③ SAW CUT THE LONGITUDINAL EDGE JOINT IF THE ADJACENT SHOULDER IS CONCRETE.

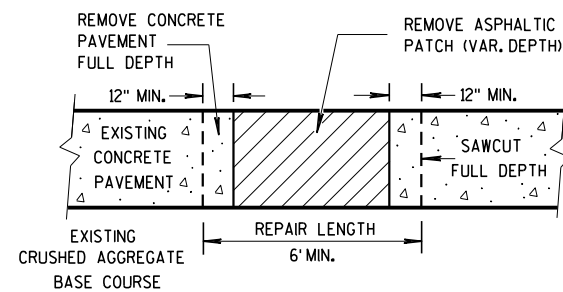


LONGITUDINAL STEEL PLACEMENT IN CRCP REPAIRS
PLAN VIEW

CONTINUOUSLY REINFORCED CONCRETE PAVEMENT REPAIR AND REPLACEMENT	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED DATE 11/1/2011	/S/ Deb Bischoff PAVEMENT POLICY & DESIGN 83 NEER
FHWA	

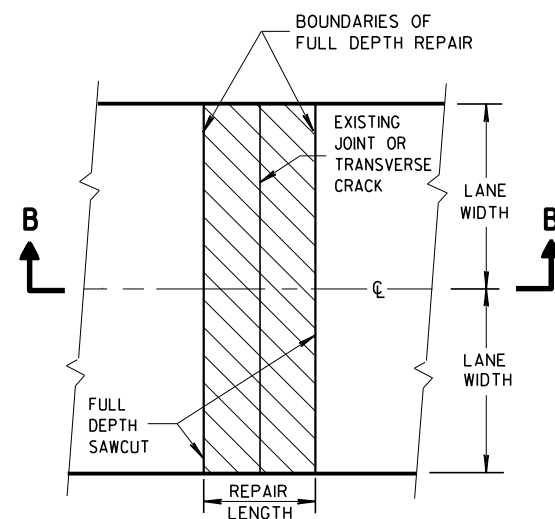
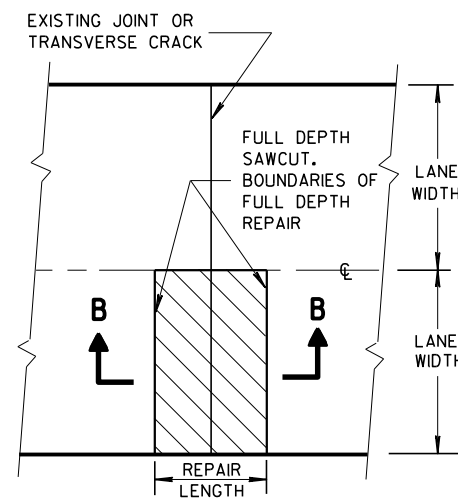


PLAN VIEW



SECTION A-A

HMA PATCH REMOVAL

PLAN VIEW
(DOUBLE LANE REPAIR)PLAN VIEW
(SINGLE LANE REPAIR)

FULL DEPTH CONCRETE PAVEMENT REMOVAL

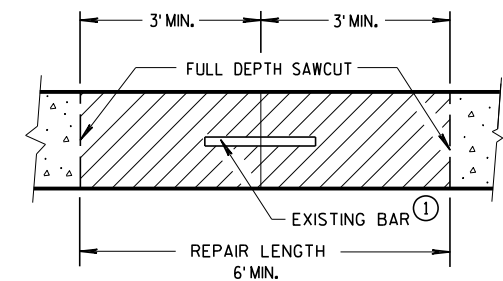
GENERAL NOTES

SAW CUT, DRILL, AND LIFT OUT EXISTING CONCRETE PAVEMENT WITHIN THE BOUNDARIES OF CONCRETE REPAIR AREAS. THE CONTRACTOR MAY MAKE ADDITIONAL SAW CUTS INSIDE THE REPAIR LIMITS TO REDUCE WEIGHT AND SIZE OF CONCRETE PIECES.

PROVIDE A 6-FOOT MINIMUM DISTANCE FROM BOUNDARIES OF CONCRETE REPAIR AREAS TO ADJACENT TRANSVERSE JOINT OR CRACK IN THE SAME LANE.

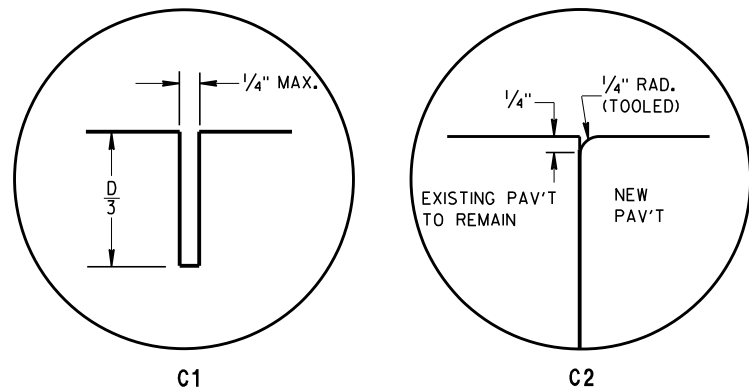
THE LENGTH OF THE REPAIRS MAY VARY FROM THE DIMENSIONS SHOWN IF THE EXISTING CONCRETE PAVEMENT IS NONDOWELED AND THE PAVEMENT IS TO BE OVERLAID AFTER REPAIRING.

① DOWEL BARS MIGHT NOT EXIST.

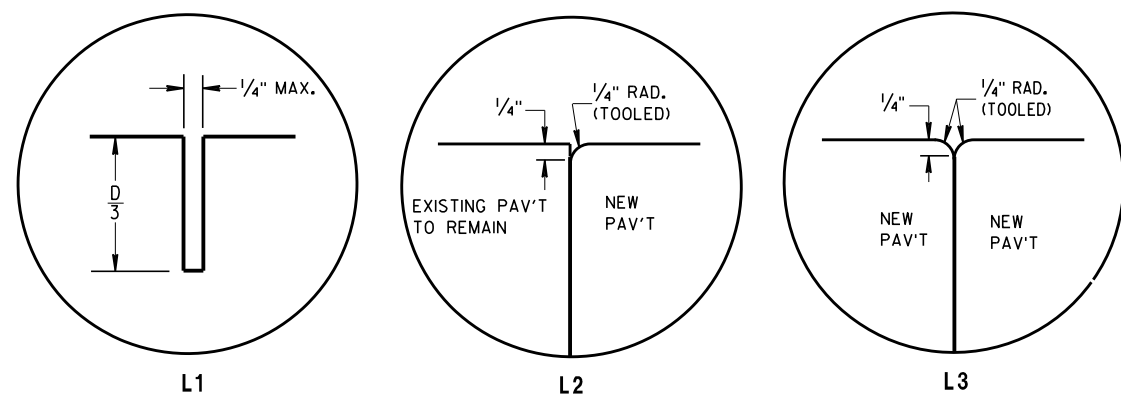
SECTION B-B
CONCRETE REMOVAL

CONCRETE PAVEMENT REPAIR
AND REPLACEMENT

STATE OF WISCONSIN⁸⁴
DEPARTMENT OF TRANSPORTATION



TRANSVERSE JOINTS

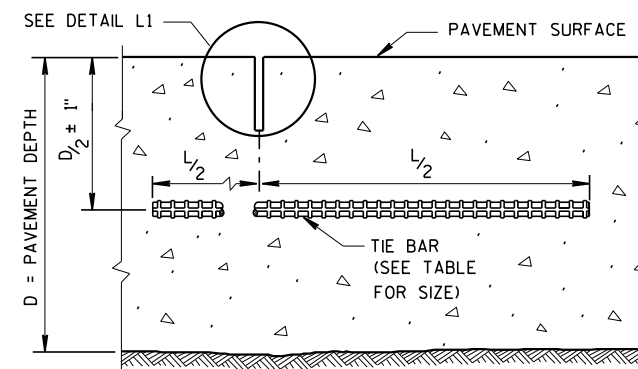


LONGITUDINAL JOINTS

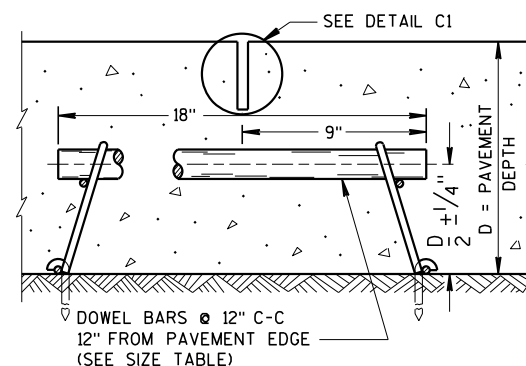
TIE BAR TABLE			
PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 1/2"	NO. 4	30"	36"
≥ 10 1/2"	NO. 5	36"	36"
	NO. 4 *	30"	24" **

* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

** CONFORM TO 15" MINIMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.



SECTION C-C
SAWED LONGITUDINAL JOINT



SECTION F-F
CONTRACTION JOINT

GENERAL NOTES

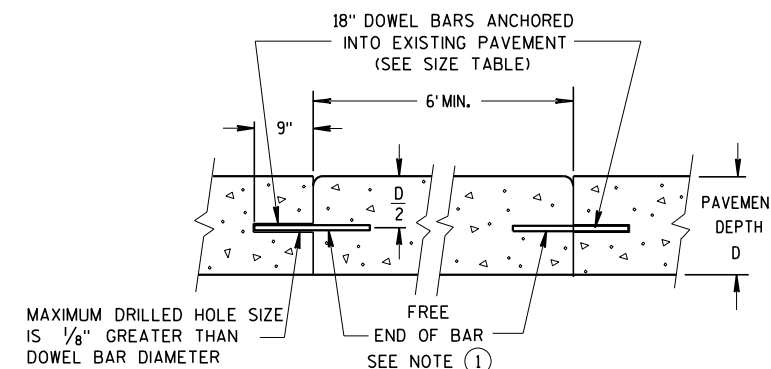
INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

CONCRETE PAVEMENT REPAIRS OF EXISTING NONDOWELED CONCRETE PAVEMENTS DO NOT NEED TO BE DOWELED.

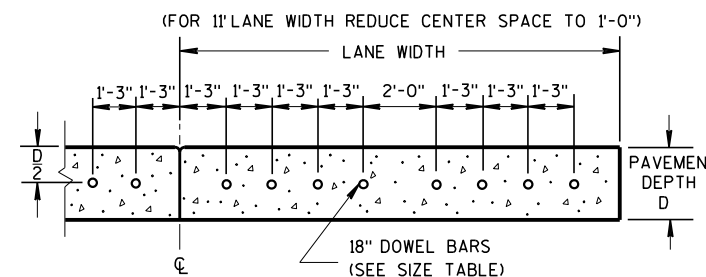
ANCHOR DOWEL BARS AND TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

FOR MULTI-LANE CONCRETE PAVEMENT REPLACEMENTS, PROVIDE A MINIMUM DISTANCE OF 15 INCHES FROM ALL TRANSVERSE JOINTS OR EDGES OF REPLACEMENT TO THE CENTER OF THE TIE BAR NEAREST THAT JOINT OR EDGE.

- ① APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.



SECTION D-D



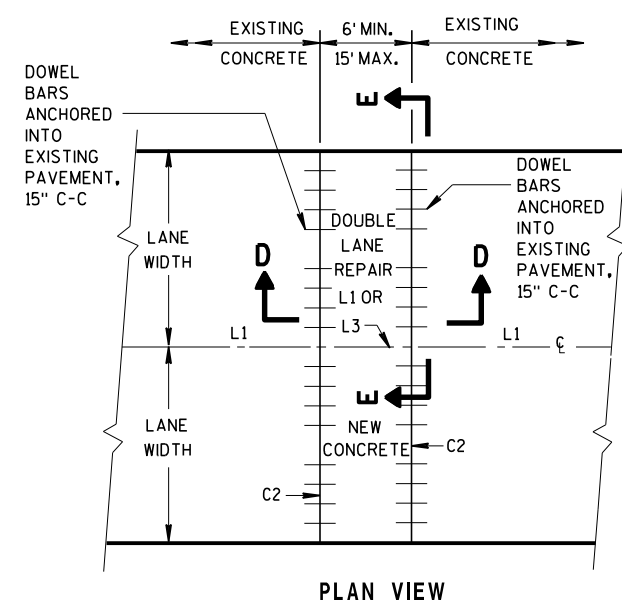
SECTION E-E
DRILLED DOWEL BAR CONSTRUCTION JOINT

PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

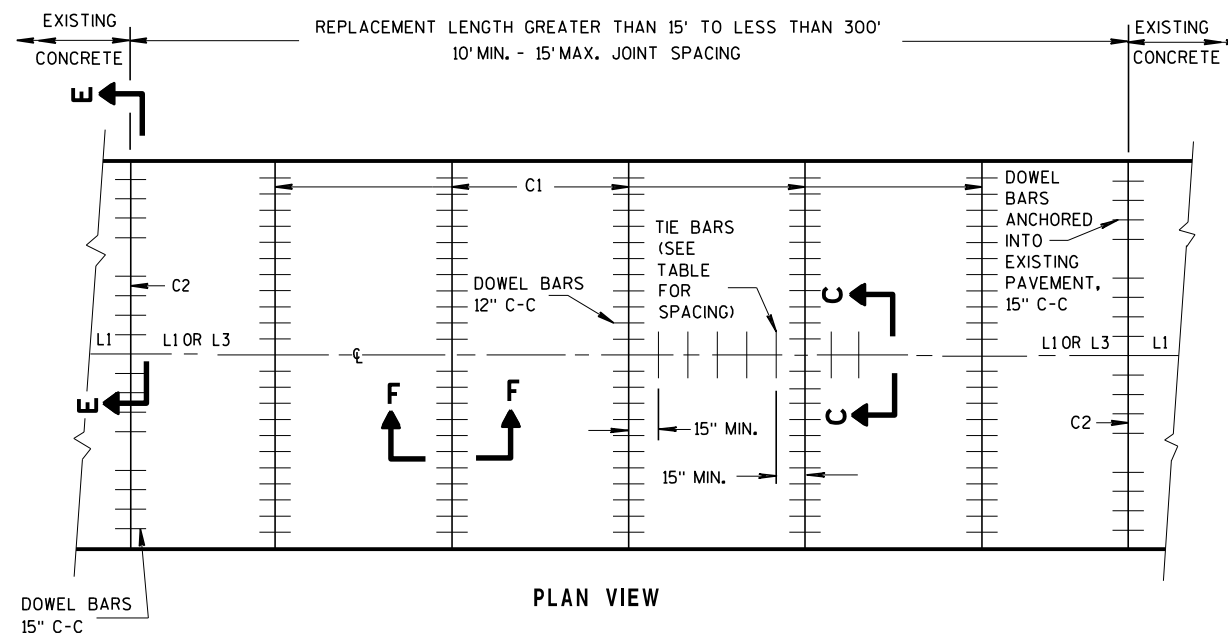
PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	DRILLED DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
5 1/2", 6", 6 1/2"	NONE	NONE	12'
7", 7 1/2"	1"	1"	14'
8", 8 1/2"	1 1/4"	1 1/4"	15'
9", 9 1/2"	1 1/4"	1 1/4"	15'
10" & ABOVE	1 1/2"	1 1/4"	15'

CONCRETE PAVEMENT
REPAIR AND REPLACEMENT

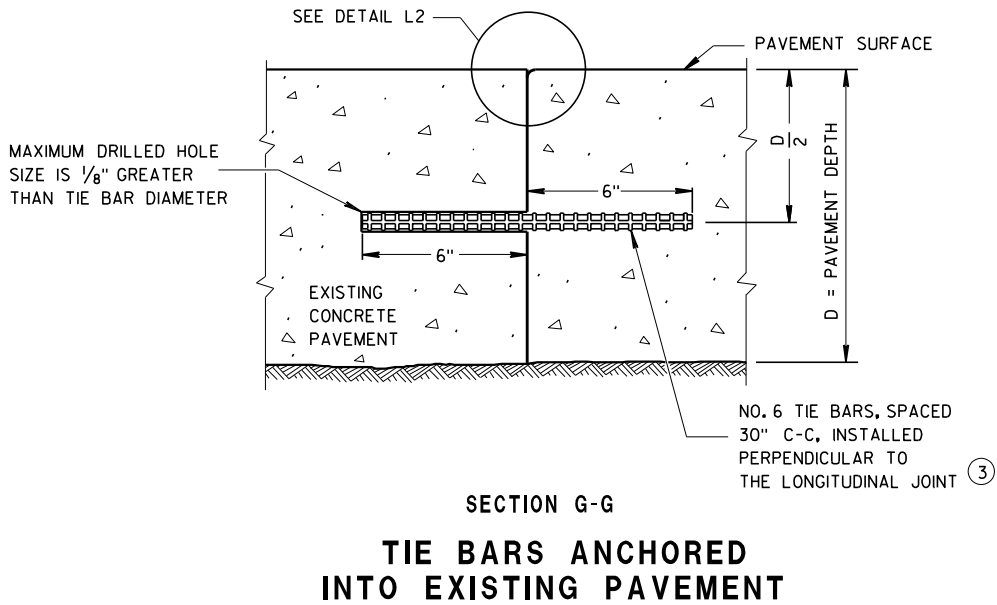
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



MULTI-LANE CONCRETE PAVEMENT REPAIR

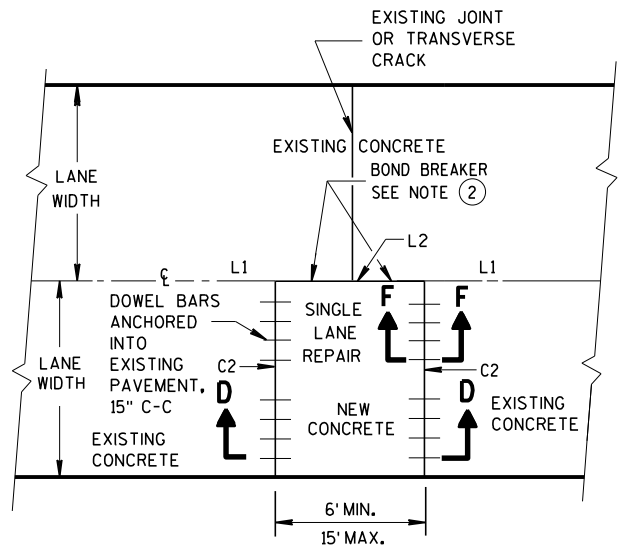


MULTI-LANE CONCRETE PAVEMENT REPLACEMENT

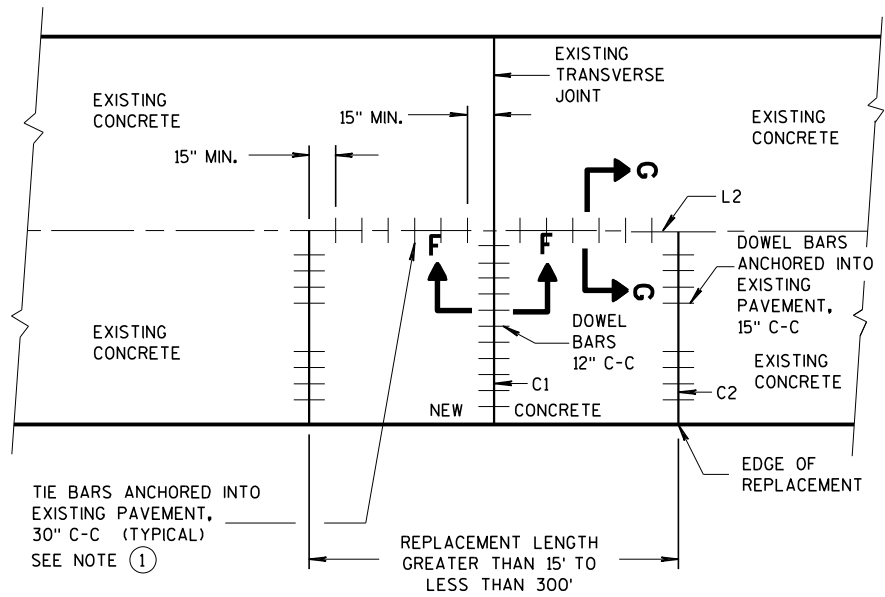


GENERAL NOTES

- ① WITH THE APPROVAL OF THE ENGINEER, FOR SINGLE LANE PAVEMENT REPLACEMENTS LESS THAN 30 FEET IN LENGTH, THE CONTRACTOR MAY INSTALL DRILLED TIE BARS ON 6:1 SKEW HORIZONTALLY, DIRECTION OF SKEW ALTERNATING WITH EACH SUCCESSIVE BAR. DRIVE SKEWED TIE BARS TO A DEPTH OF 6 INCHES IN A HOLE OF SUCH A DIAMETER AS TO PROVIDE A TIGHT DRIVEN FIT.
- ② USE AN ENGINEER-APPROVED BOND BREAKER (E.G. RELEASE AGENT, CURING COMPOUND) FOR SINGLE LANE REPAIRS UP TO 15 FEET IN LENGTH.
- ③ ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.



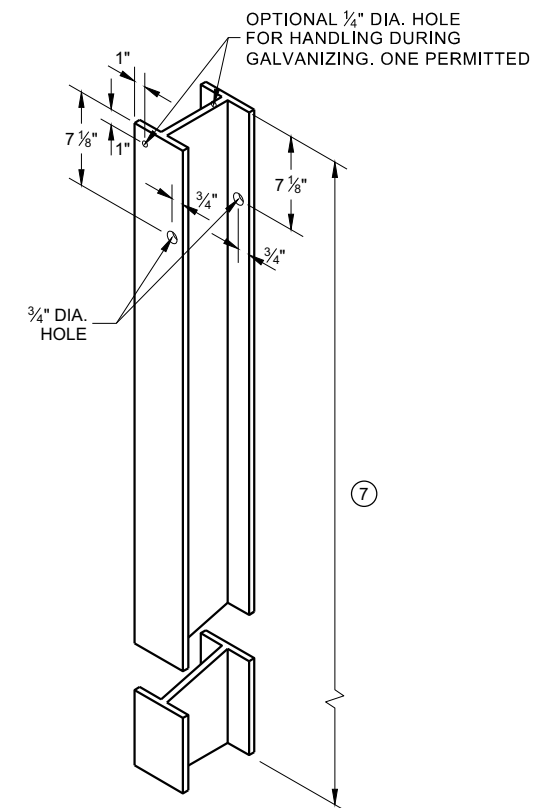
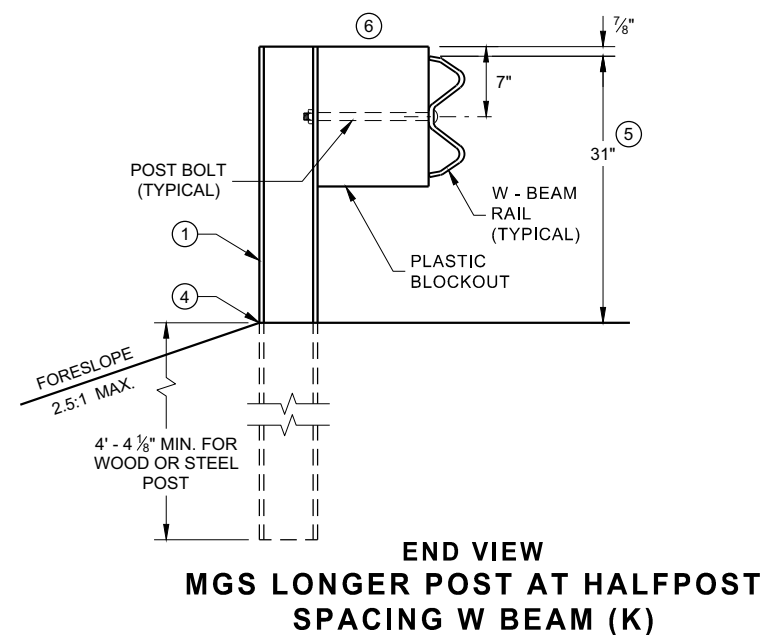
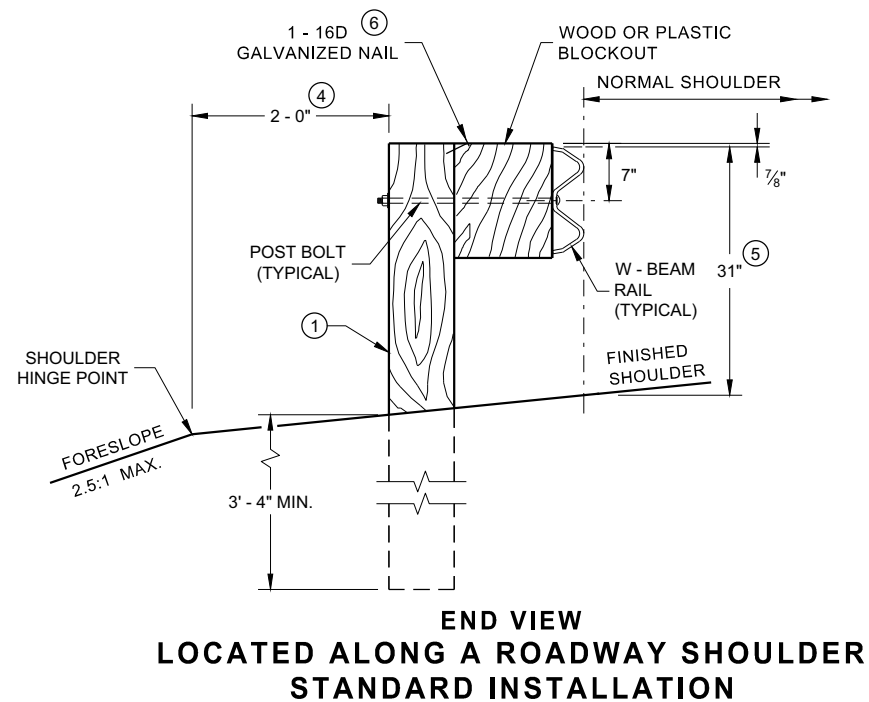
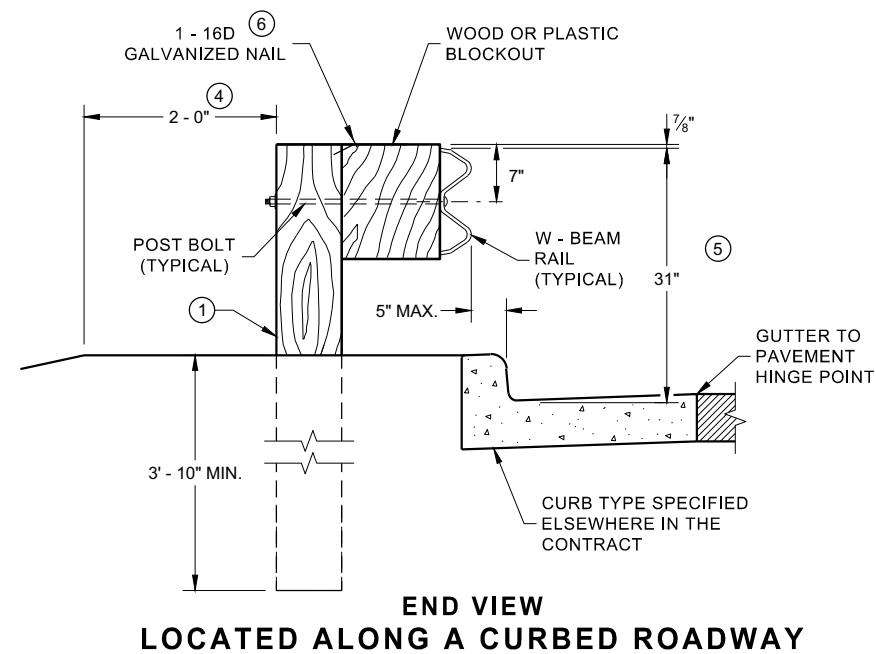
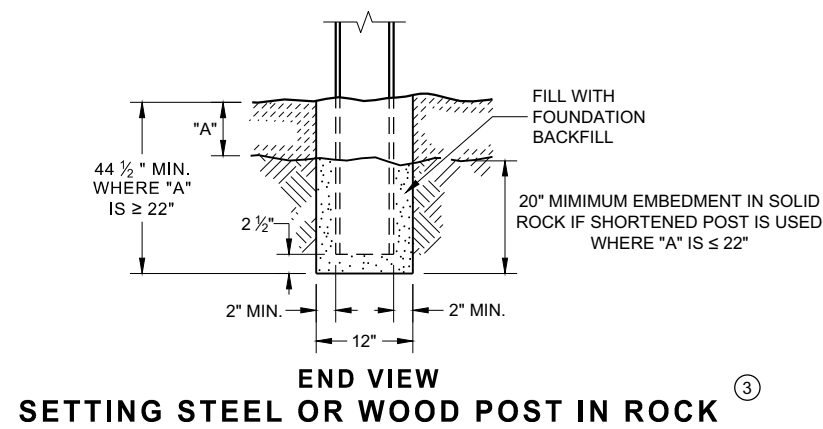
PLAN VIEW
SINGLE LANE
CONCRETE PAVEMENT REPAIR



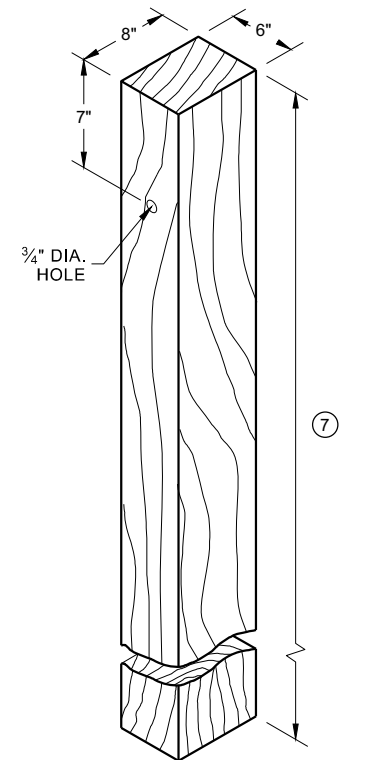
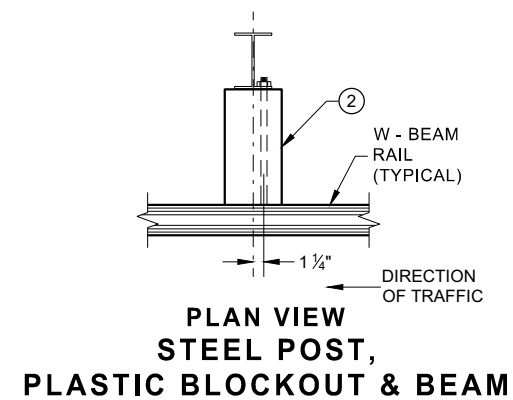
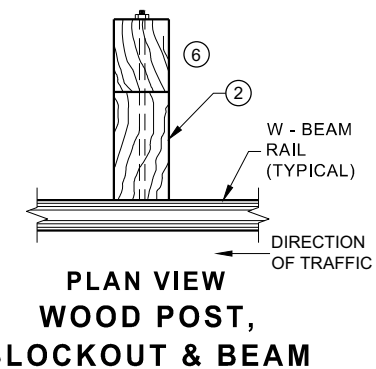
PLAN VIEW
SINGLE LANE
CONCRETE PAVEMENT REPLACEMENT

CONCRETE PAVEMENT REPAIR AND REPLACEMENT	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
March 2018 DATE	/S/ Peter Kenney PAVEMENT SUPERVISOR
FHWA	

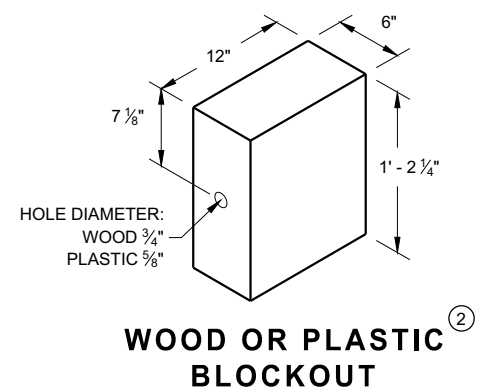
- ① WOOD OR STEEL POSTS (w6X9 OR w6X8.5) MAY BE USED. DO NOT INTERMIX WOOD AND STEEL POSTS. INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.
- ② USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL. DIMENSIONS OF APPROVED PLASTIC BLOCKOUTS MAY VARY.
- ③ IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AND INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL IS TO BE FREE OF LARGE ROCKS.
- ④ WHEN THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING (K).
- ⑤ FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS +1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 3/4" TO 32".
- ⑥ WHEN USING STEEL POST AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.
- ⑦ TOTAL POST LENGTH FOR TYPE K IS 7' - 0".
TOTAL POST LENGTH FOR OTHER MGS TYPES IS 6' - 0".



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

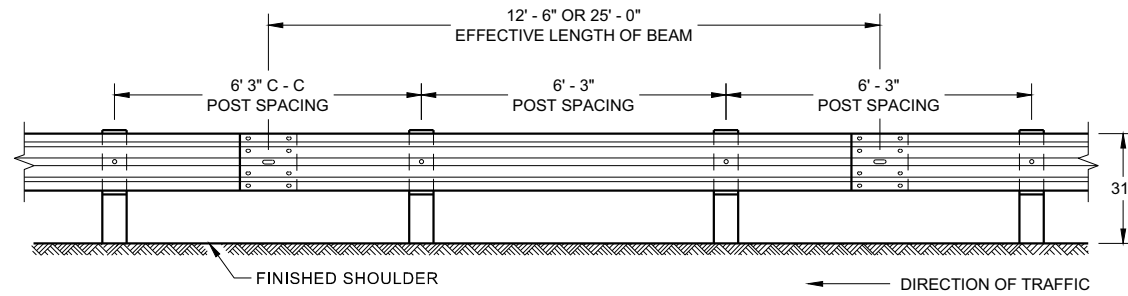


WOOD POST (6" X 8") NOMINAL ^①

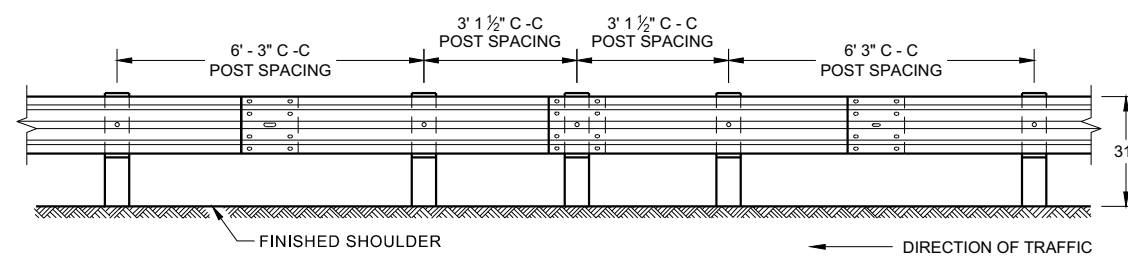


MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

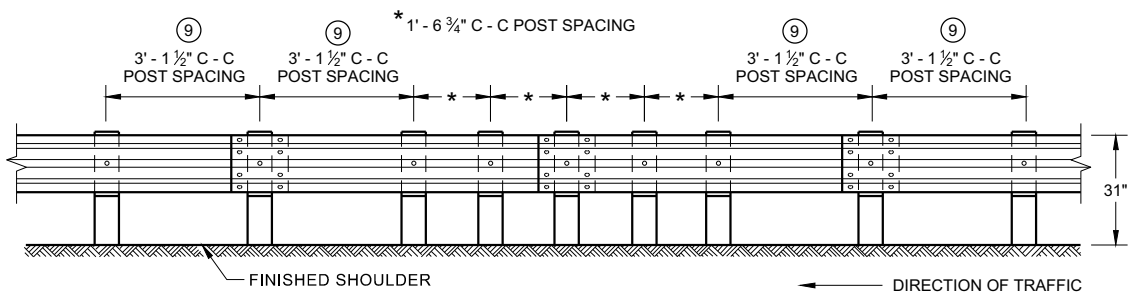
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 87



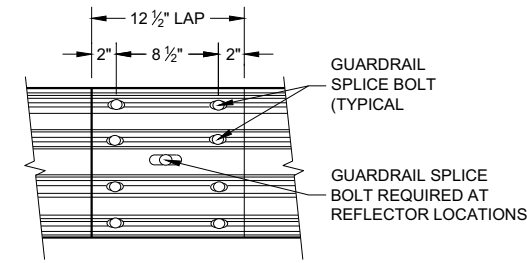
**FRONT VIEW
POST SPACING STANDARD INSTALLATION**



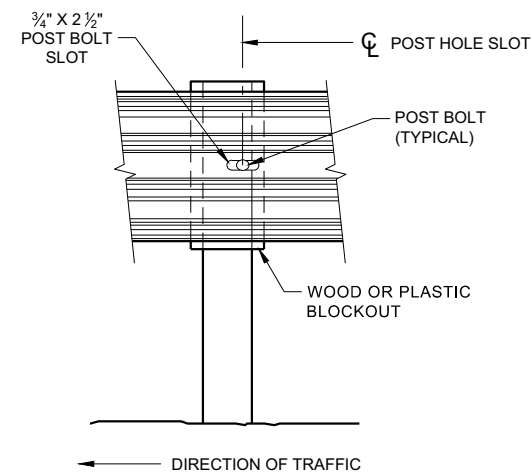
**FRONT VIEW
HALF POST SPACING (HS) AND
HALF POST SPACING WITH LONGER POSTS (K)**



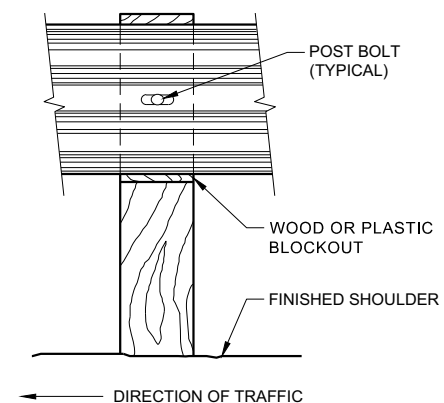
**FRONT VIEW
QUARTER POST SPACING (QS)**



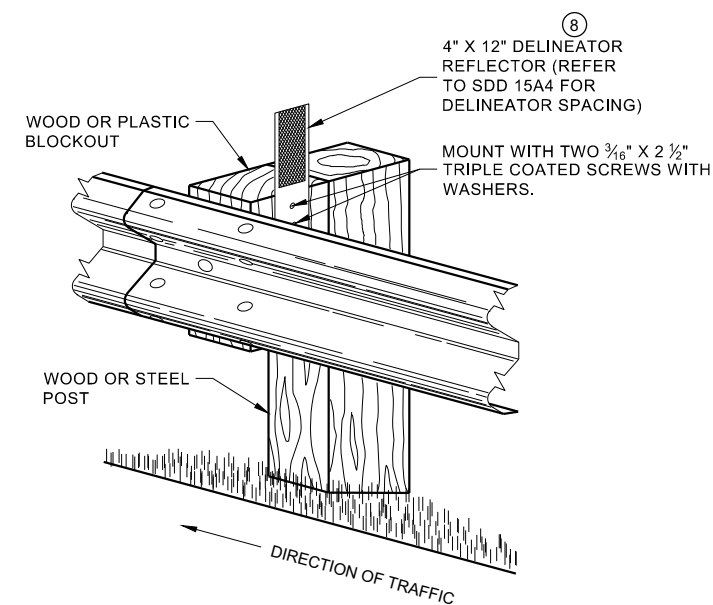
**FRONT VIEW
MID-SPAN BEAM SPLICE**



FRONT VIEW AT STEEL POST



FRONT VIEW AT WOOD POST



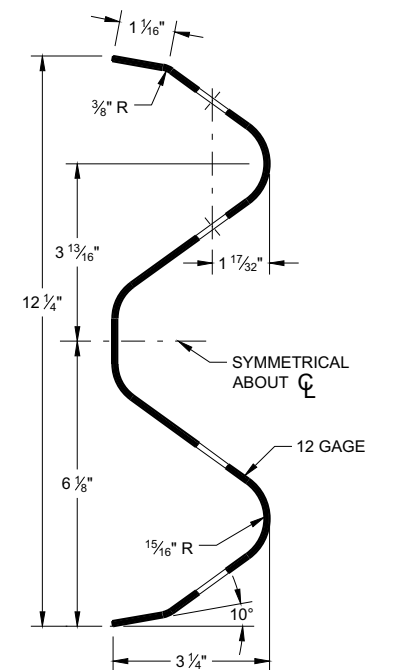
**ONE SIDED REFLECTOR DETAIL
AND TYPICAL INSTALLATION**

GENERAL NOTES

- 8 DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.
- 9 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

POST BOLTS ARE A $\frac{3}{4}$ " DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES $\frac{3}{4}$ " DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND $\frac{3}{4}$ " DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

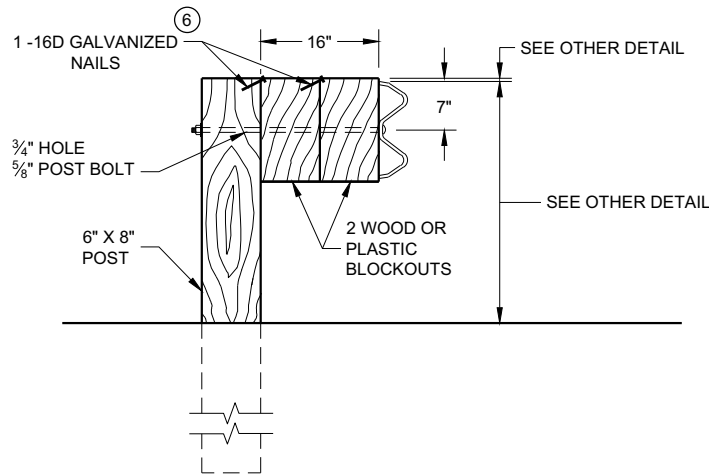
GUARD RAIL SPLICE BOLTS ARE A $\frac{3}{4}$ " DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES $\frac{3}{4}$ " DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.



SECTION THRU W-BEAM RAIL

**MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL**

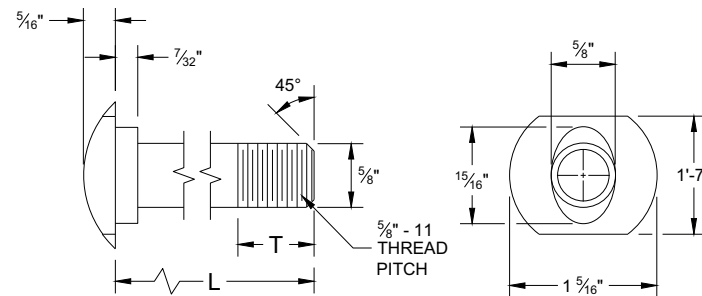
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



DETAIL FOR 16" BLOCKOUT DEPTH

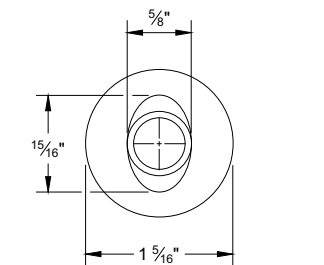
IT IS ACCEPTABLE TO USE BLOCKOUTS UP TO 16" DEEP TO INCREASE THE POST OFFSET TO AVOID UNDERGROUND OBSTACLES. THERE IS NO LIMIT TO THE NUMBER OF POSTS THAT CAN HAVE ADDITIONAL BLOCKOUTS UP TO 16" DEEP.

- NOTE:
1. ALL FILLETS SHALL HAVE A MINIMUM RADIUS OF $\frac{3}{16}$ ".
 2. IF THE BOLT EXTENDS MORE THAN $\frac{1}{4}$ " FROM THE NUT THE BOLT SHOULD BE TRIMMED BACK.

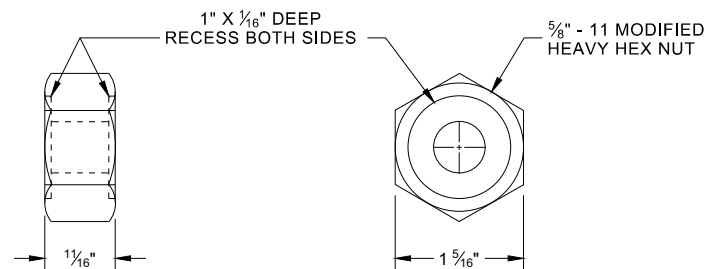


POST BOLT TABLE

L	T (MIN.)
1 1/4"	1 1/8"
2"	1 3/4"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"

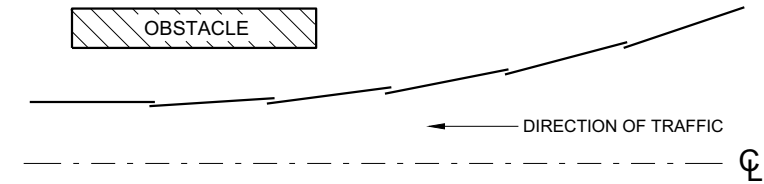


ALTERNATE BOLT HEAD

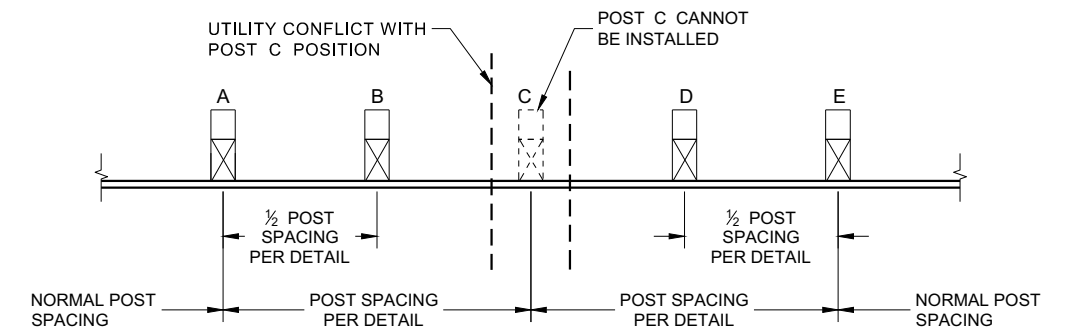


POST BOLT, SPLICE BOLT
AND RECESS NUT

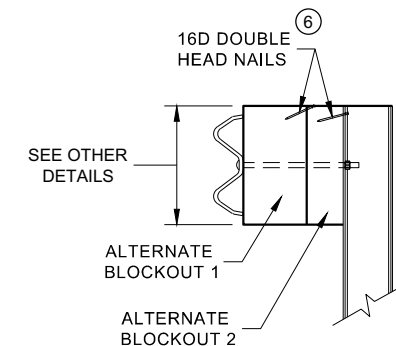
- 6 WHEN USING STEEL POST AD WOOD BLOCKOUTS, INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.



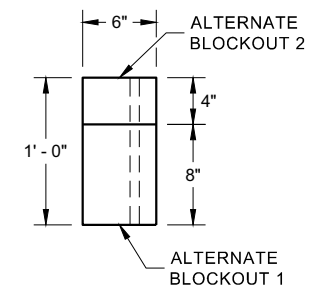
PLAN VIEW
BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS
UNDERGROUND OBSTRUCTION



SIDE VIEW



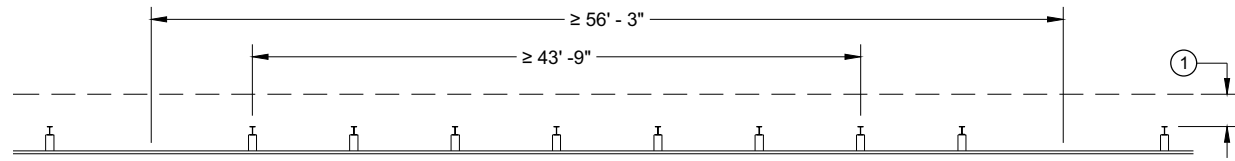
PLAN VIEW

ALTERNATE WOOD
BLOCKOUT DETAIL

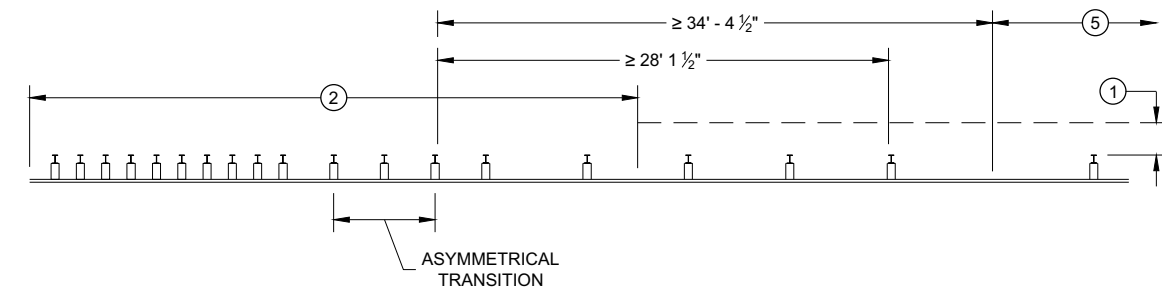
- NOTES: UNDER SPECIAL CIRCUMSTANCES, SUCH AS AVOIDING OBSTACLES THAT ARE NOT RELOCATED, IT IS ACCEPTABLE TO INSTALL ADDITIONAL BLOCKOUTS TO OBTAIN UP TO 36" DEPTH FOR ONE OR TWO POSTS IN A SECTION OF GUARDRAIL.
- DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

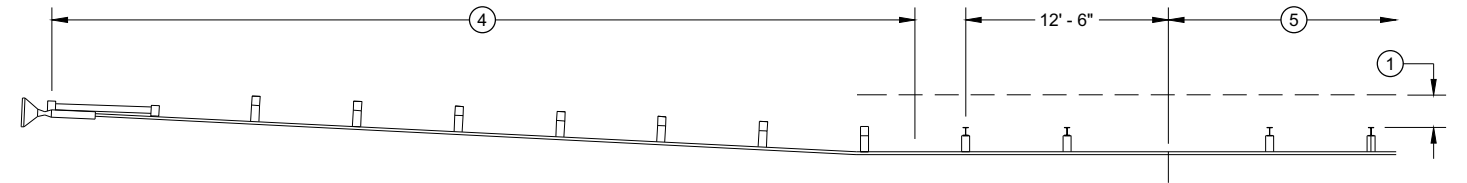
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 89



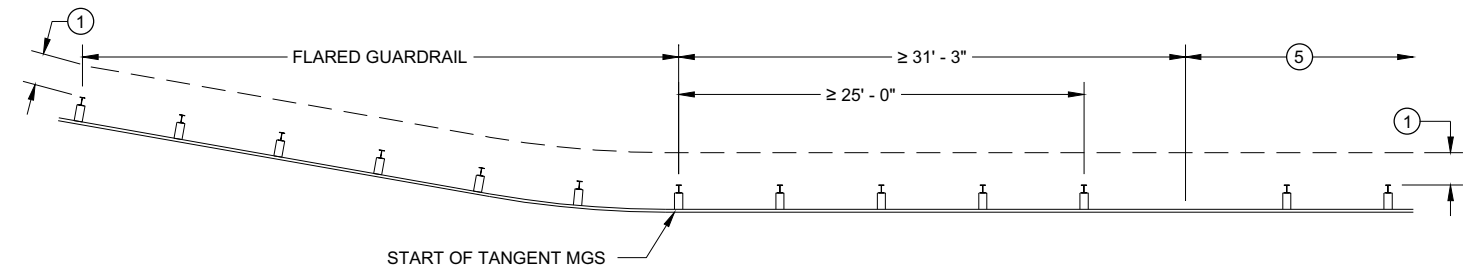
MISSING POST IN NORMAL BEAM GUARD RUN



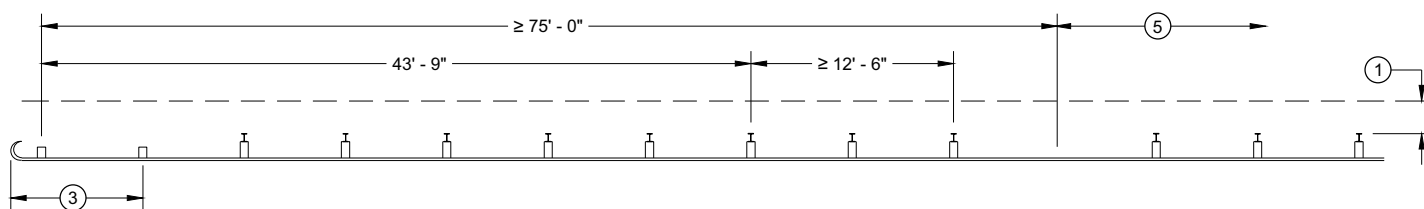
MISSING POST NEAR APPROACH THRIE BEAM TRANSITION



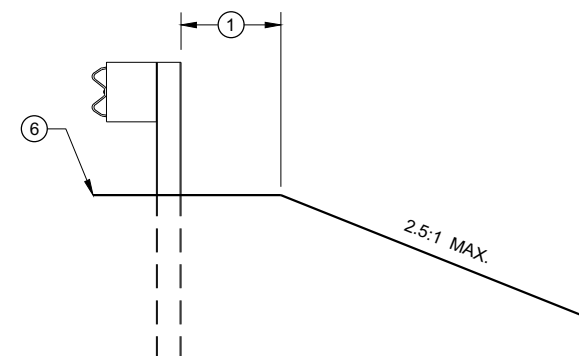
MISSING POST IN NORMAL BEAM GUARD RUN NEAR EAT



MISSING POST IN NORMAL BEAM GUARD RUN
NEAR FLARED BEAM GUARD



MISSING POST IN NORMAL BEAM GUARD RUN
NEAR TYPE 2 TERMINAL



CROSS SECTION VIEW

- (1) MINIMUM OF 2 FEET OF GRADING BEHIND POST.
- (2) SEE SDD 14B45 FOR MORE DETAILS.
- (3) SEE SDD 14B47 FOR MORE DETAILS.
- (4) SEE SDD 14B44 FOR MORE DETAILS.
- (5) SEE MISSING POST IN NORMAL BEAM GUARD RUN FOR DISTANCE TO NEXT MISSING POST AND AREA FOR WELL DRAINED, COMPACTED SOILS.
- (6) SEE PLAN FOR SHOULDER DESIGN.

**MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

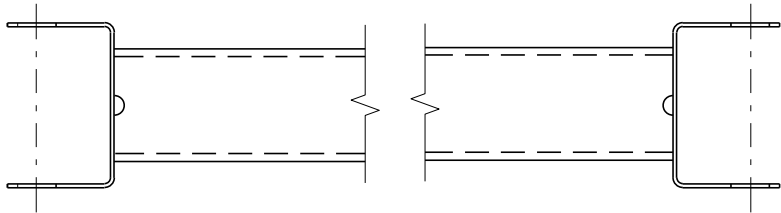
- (A) THE SLOPE IN THE AREA BOUNDED BY THE GRADELINE, THE HINGE POINT LINE (HPL) AND THE CLEAR ZONE LIMITS (CZL) SHALL BE 4:1 OR FLATTER.
- (B) AFTER FINAL ASSEMBLY, RECHECK CABLE TO BE SURE IT IS TAUT AND HAS NOT RELAXED
- (C) DIFFERENT MANUFACTURERS REQUIRE DIFFERENT PERFORATED W - BEAM RAIL END PANELS. SEE MANUFACTURER'S INFORMATION.
- (D) ATTACH ALUMINUM SHEET TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF - TAPPING SCREWS. ONE SCREW PER CORNER.
- (E) HARDWARE MAY VARY BETWEEN MANUFACTURER. SEE MANUFACTURER'S DRAWING FOR INFORMATION.

DIMENSIONS MAY VARY, MANUFACTURER'S INFORMATION.

THE CENTER OF THE UPPER 3½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE. WOOD BLOCKS ON POSTS NUMBERED 3 THROUGH 9 MAY BE ADJUSTED UP TO 3" ABOVE THE TOP OF POST.

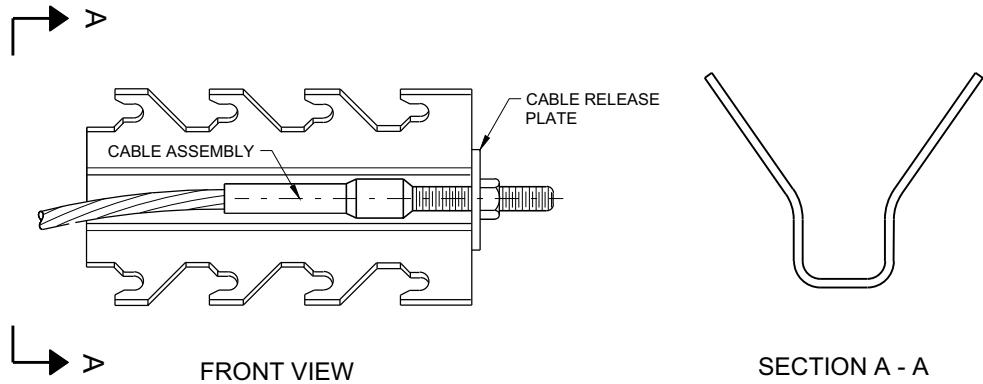


STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 91

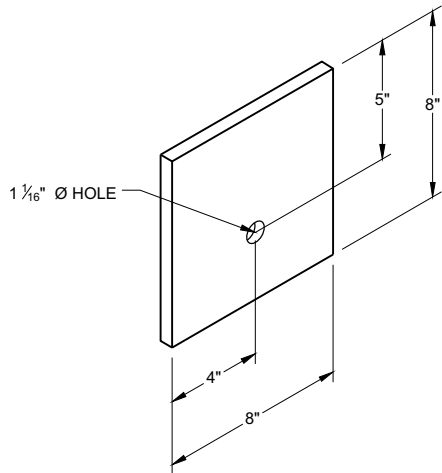


GENERIC GROUND STRUT⁹ ^E

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



GENERIC ANCHOR CABLE BOX⁹ ^E

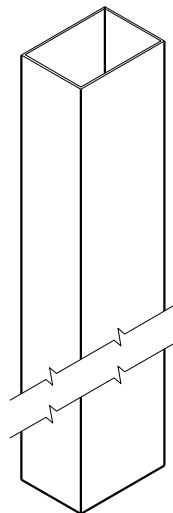


BEARING PLATE⁶ ^E

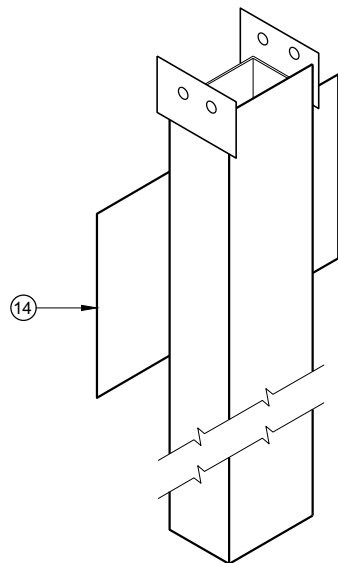
MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

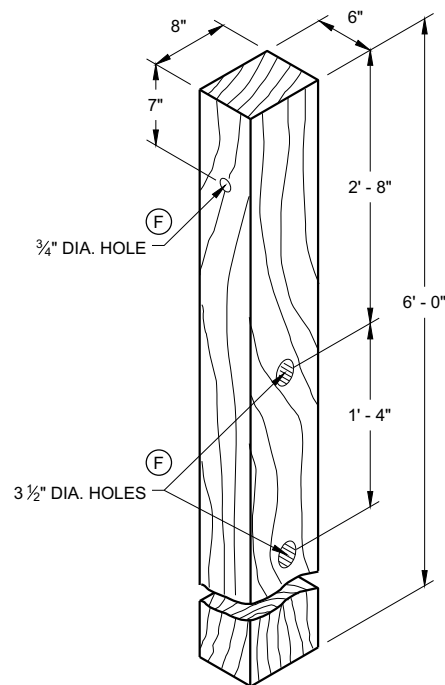
192



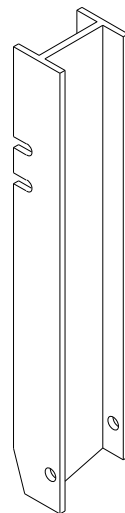
UPPER POST NO. 1 ⁽¹⁾ (E)



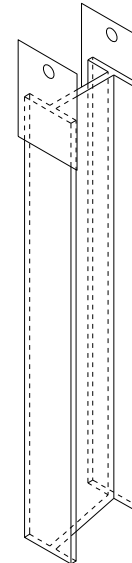
LOWER POST NO. 1 ⁽²⁾ (E)



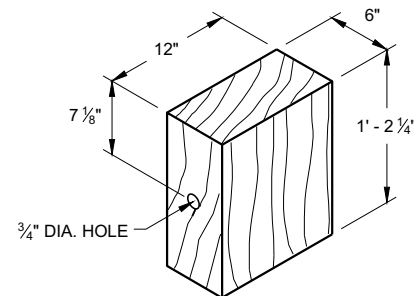
WOOD CRT POST ⁽³⁾ (E)
POSTS NUMBER 3-9



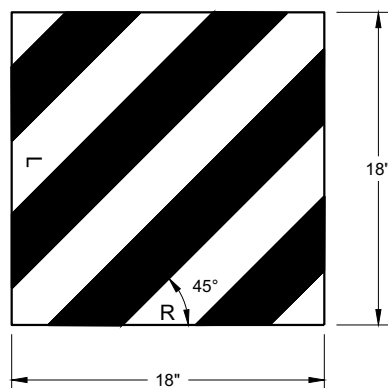
UPPER POST NO. 2 ⁽¹⁵⁾ (E)



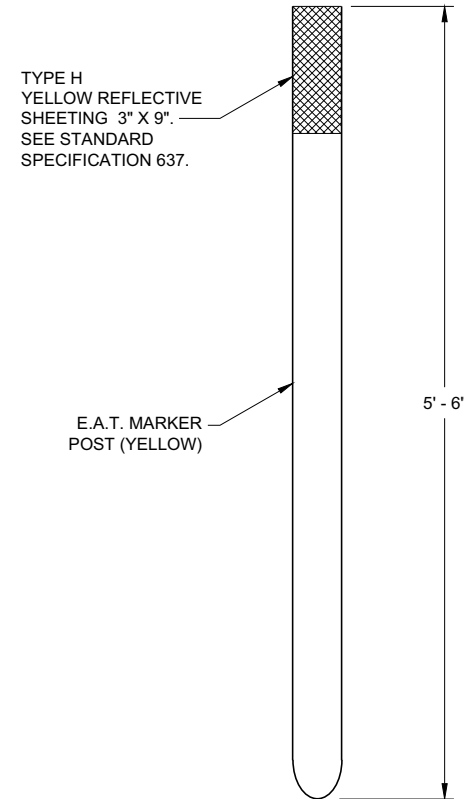
LOWER POST NO. 2 ⁽¹⁶⁾ (E)



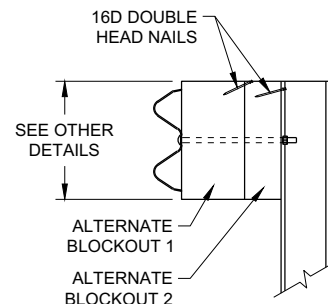
WOOD BLOCKOUT ⁽⁴⁾
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



REFLECTIVE SHEETING DETAIL ^(E)

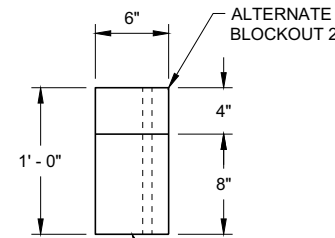


E.A.T. MARKER POST ⁽¹³⁾



SIDE VIEW

ALTERNATE WOOD
BLOCKOUT DETAIL

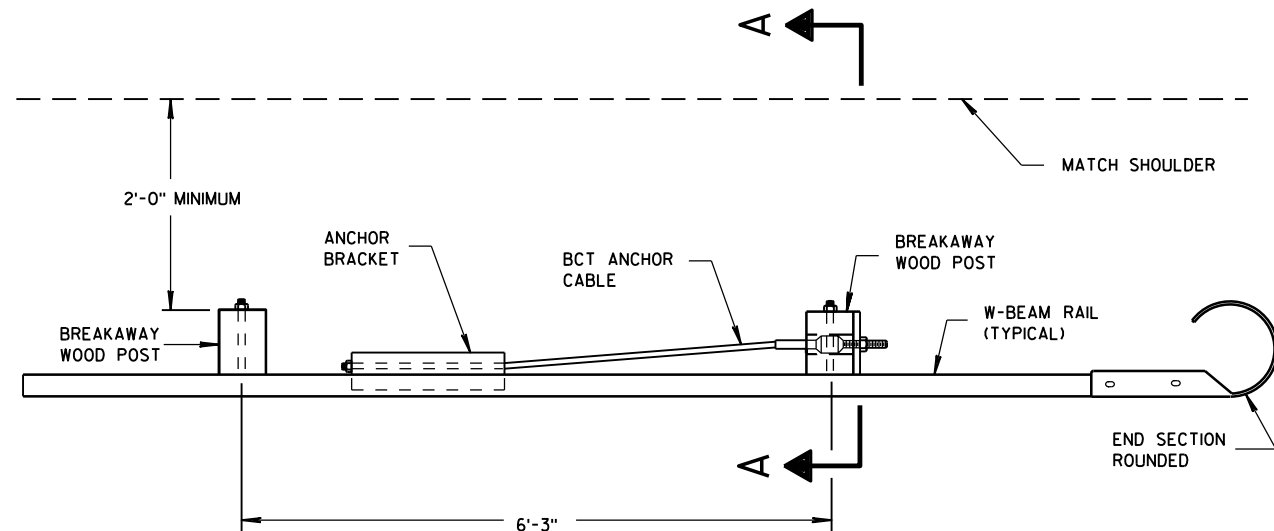


TOP VIEW

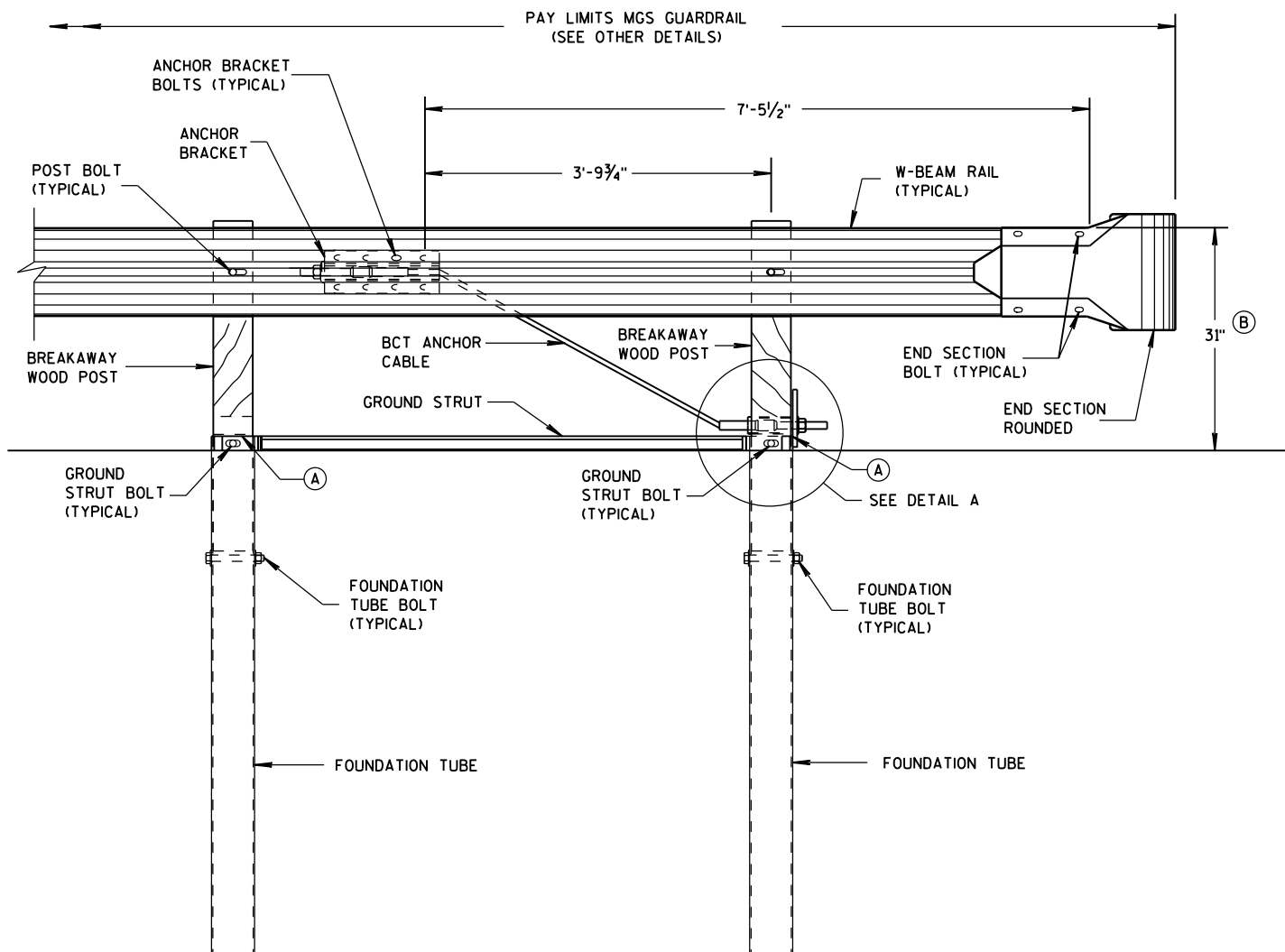
**MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018 DATE /S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
FHWA

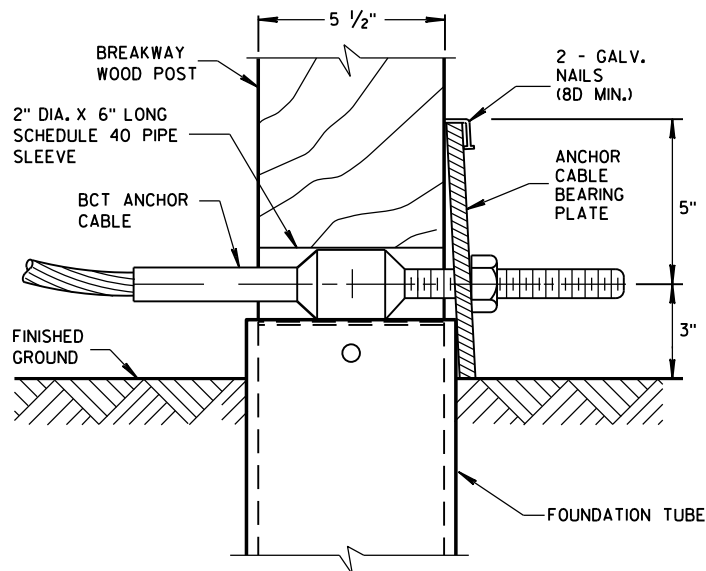


PLAN VIEW



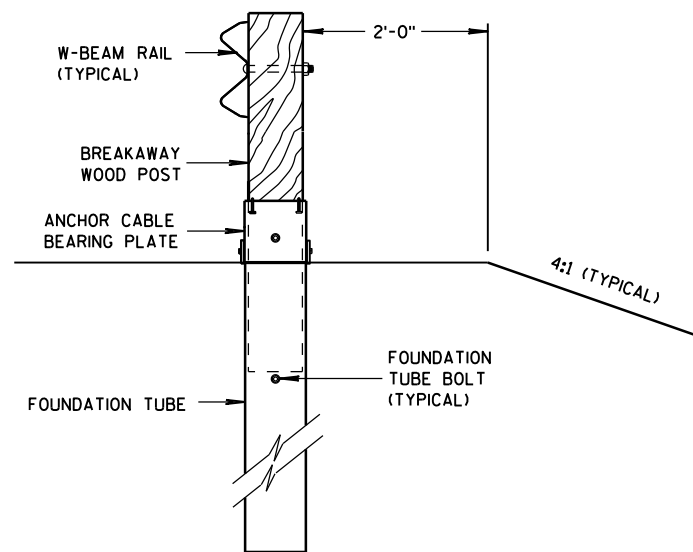
FRONT VIEW

END RAIL DETAIL



DETAIL A

POST NO. 1
GROUND STRUT NOT SHOWN FOR CLARITY.



SECTION A-A

GENERAL NOTES

SEE SDD 14 B 42 FOR MORE INFORMATION.

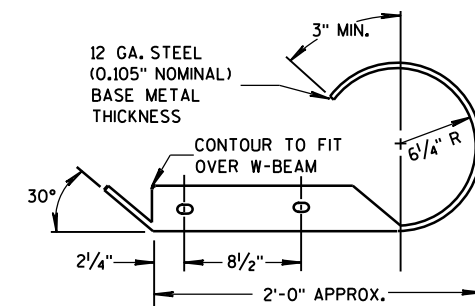
END SECTION BOLTS AND NUTS HAVE THE SAME MATERIAL REQUIREMENTS AS SPLICE BOLTS.

FOUNDATION TUBE BOLTS ARE $\frac{7}{8}$ " DIAMETER ASTM A307 HEX HEAD BOLT. FOUNDATION TUBE BOLTS REQUIRE ASTM A563 A NUT AND TWO ASTM F844 $\frac{7}{8}$ " DIAMETER FLAT WASHERS. INSTALL ONE WASHER UNDER BOLT HEAD AND ONE WASHER UNDER NUT.

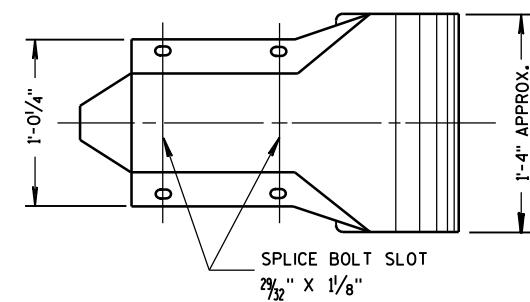
ANCHOR BRACKET AND GROUND STRUT BOLTS ARE A $\frac{5}{8}$ " DIAMETER ASTM A307 HEX HEAD BOLT. ANCHOR BRACKET BOLTS REQUIRE ASTM A563 A NUT AND TWO ASTM F844 $\frac{5}{8}$ " DIAMETER FLAT WASHERS. INSTALL ONE WASHER UNDER BOLT HEAD AND ONE WASHER UNDER NUT.

W-BEAM END SECTION ROUNDED HAS THE SAME MATERIAL PROPERTIES AS STANDARD STEEL RAIL.

- (A) TOP OF FOUNDATION TUBE SHALL BE NO MORE THAN 3" ABOVE FINISHED GROUND.
- (B) FOR NEW CONSTRUCTION TOP OF RAIL IS $31" \pm 1"$.
FOR EXISTING INSTALLATIONS TOP OF RAIL IS BETWEEN $27\frac{3}{4}"$ TO $32" \pm 1"$.



PLAN VIEW

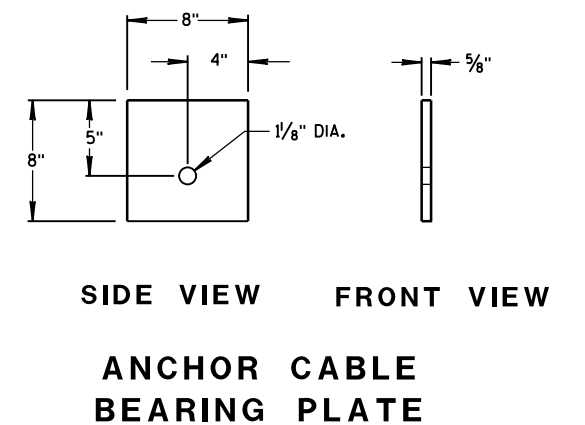
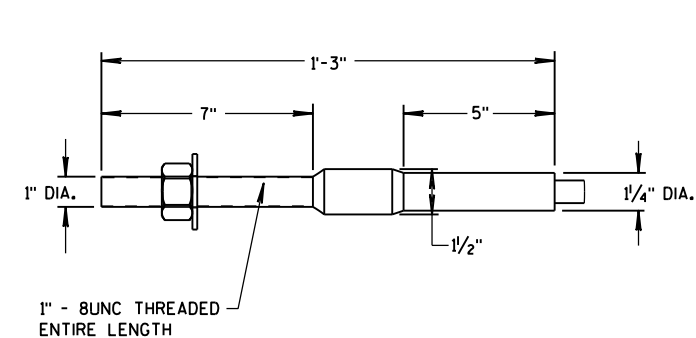
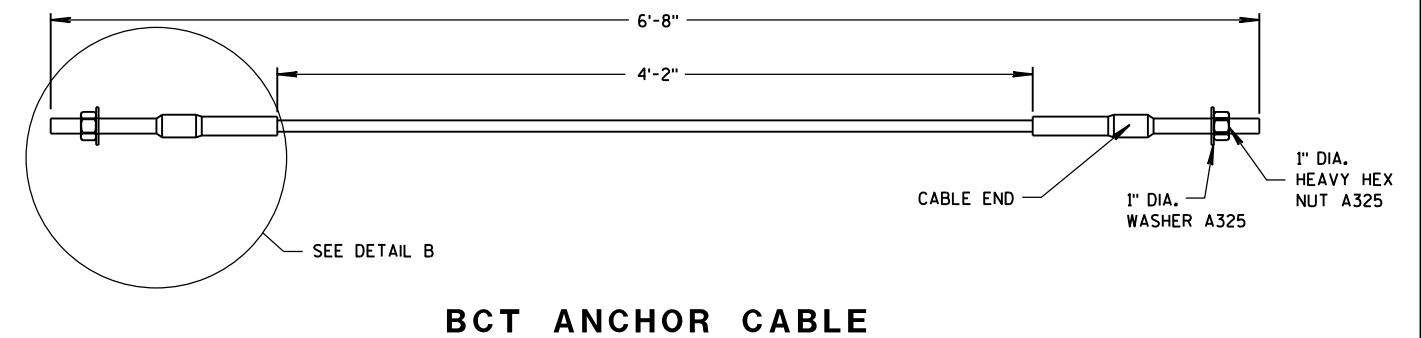
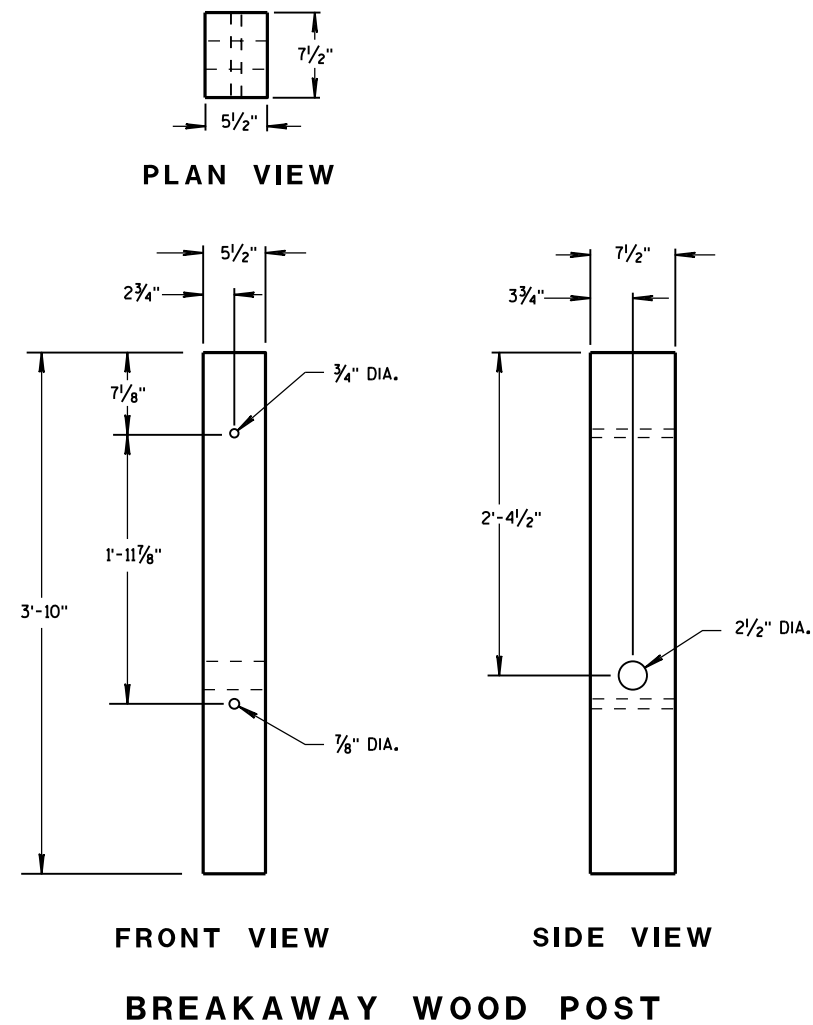
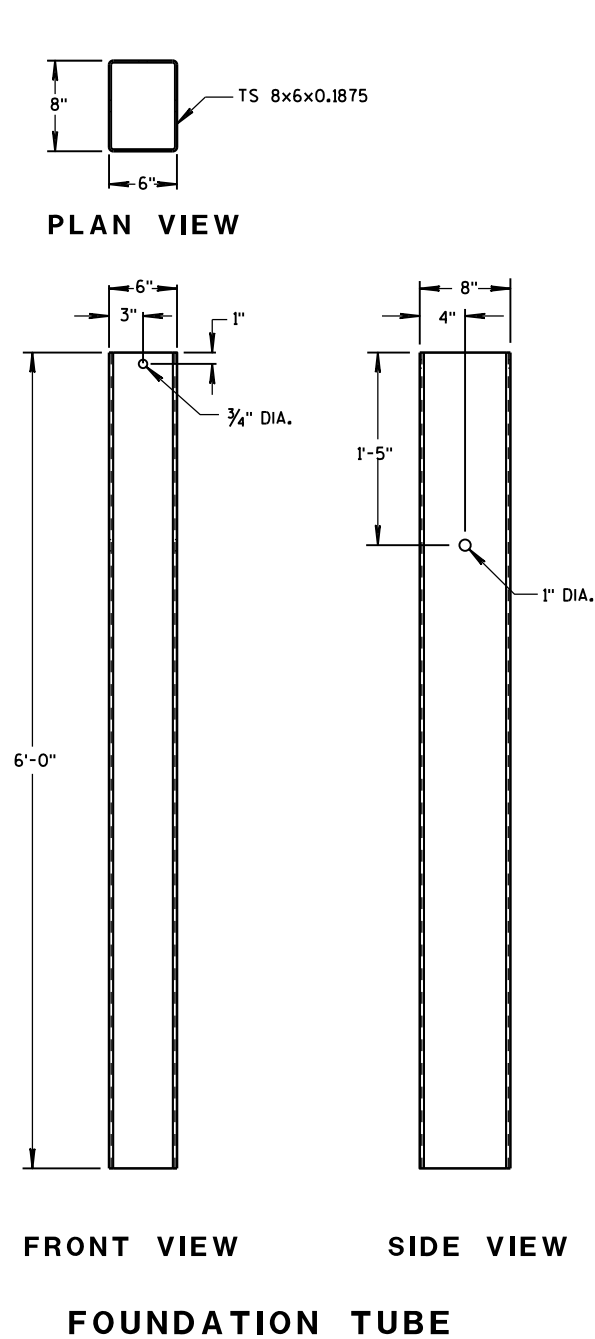


FRONT VIEW

W BEAM END
SECTION ROUNDED

MIDWEST GUARDRAIL
SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

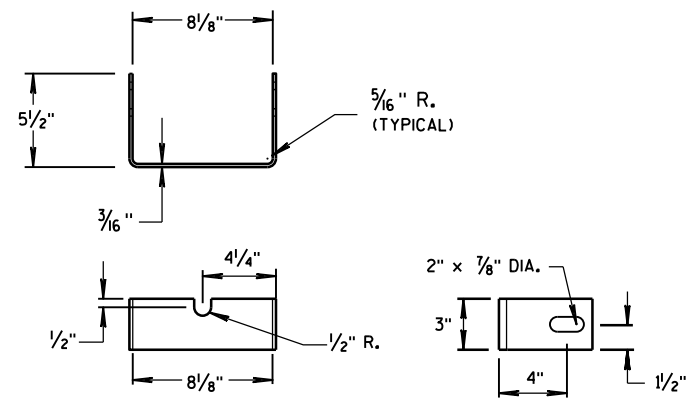


MIDWEST GUARDRAIL
SYSTEM (MGS) TYPE 2 TERMINAL

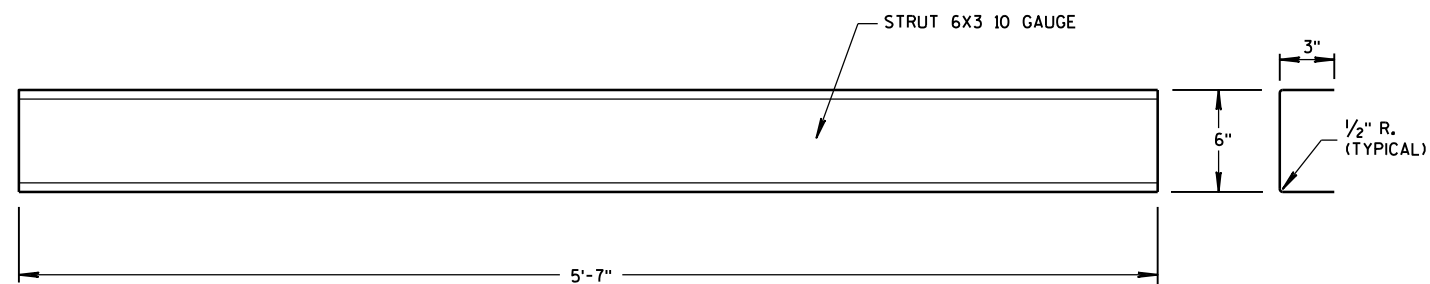
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

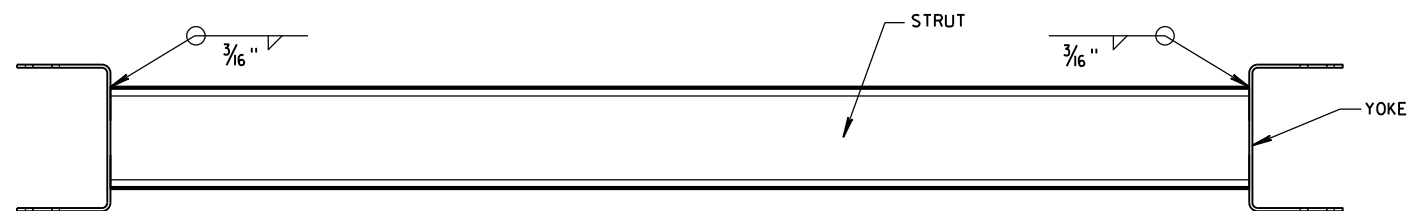
BCT ANCHOR CABLE IS A 3/4" DIAMETER 6X19 IWRC IPS GALVANIZED WIRE ROPE. THE SWAGED FITTINGS AND STUD ARE REQUIRED. END FITTING SHALL BE MACHINED FROM HOT-ROLLED CARBON STEEL CONFORMING TO ASTM A576 GRADE 1035 AND GALVANIZED ACCORDING TO ASTM A123. TREADED STUD SHALL CONFORM TO ASTM A325 OR SAE GRADE 5. MINIMUM BREAKING STRENGTH OF WIRE ROPE IS 43,000 LB. WIRE ROPE IS TO BE TAUT.



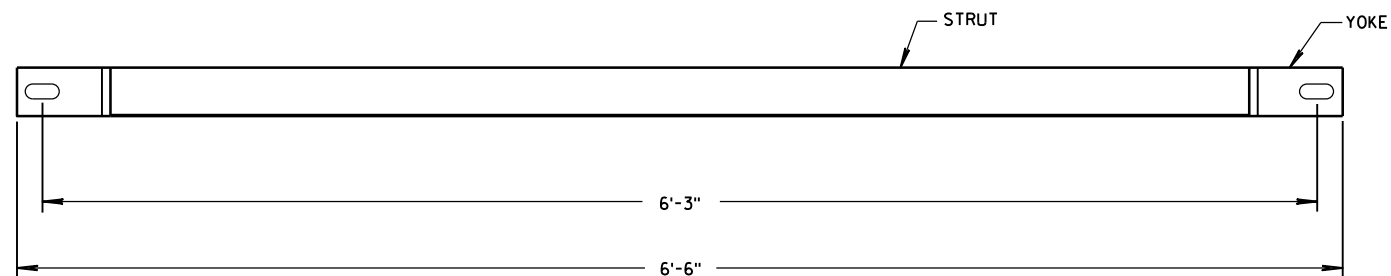
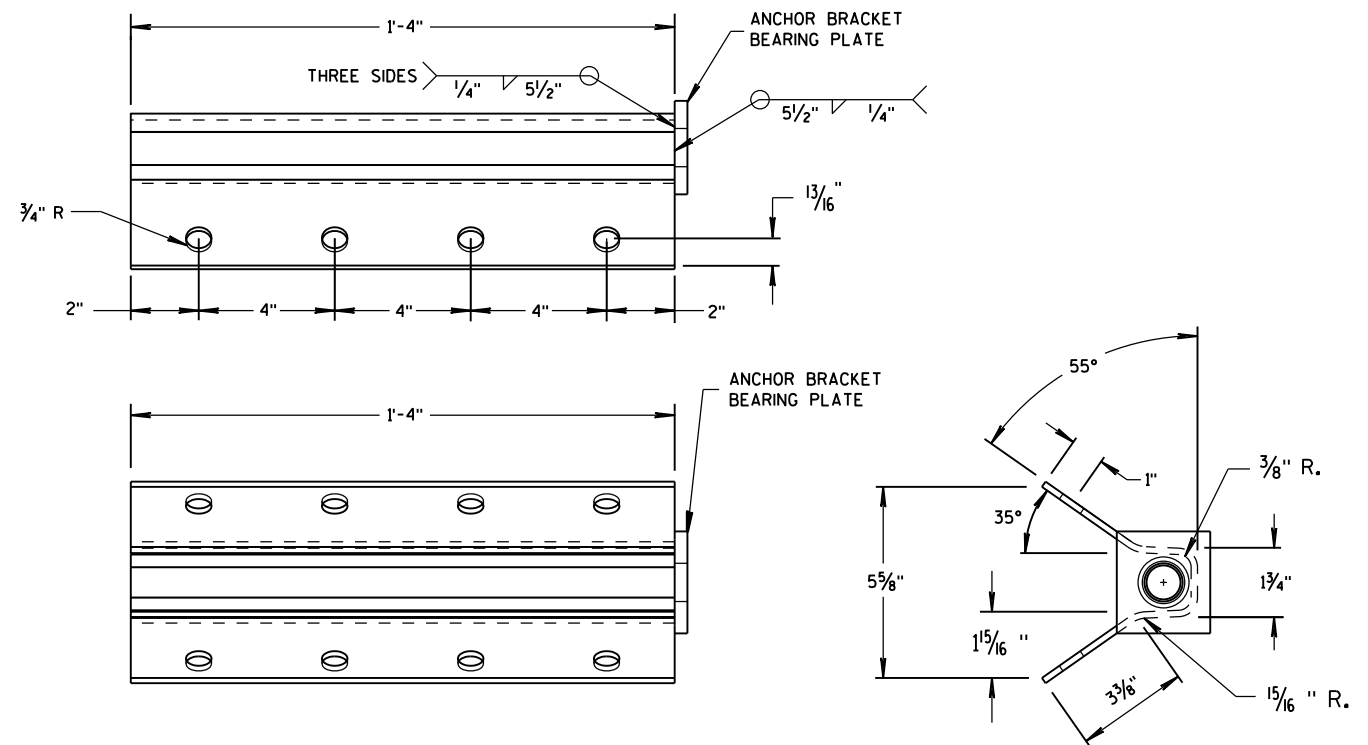
YOKE DETAIL



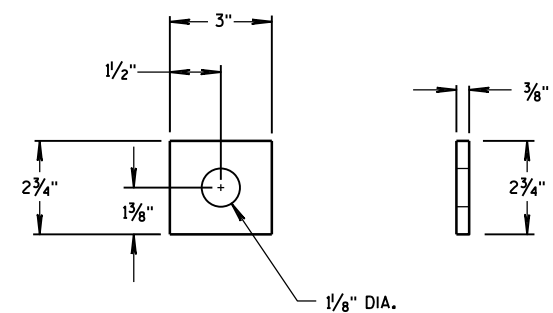
STRUT DETAIL

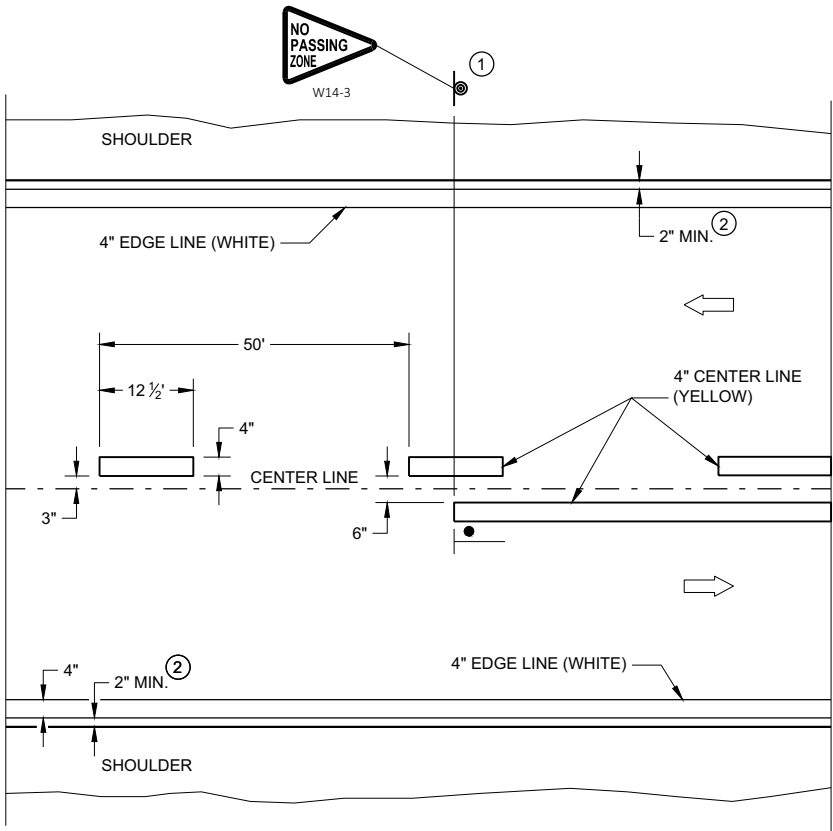


PLAN VIEW

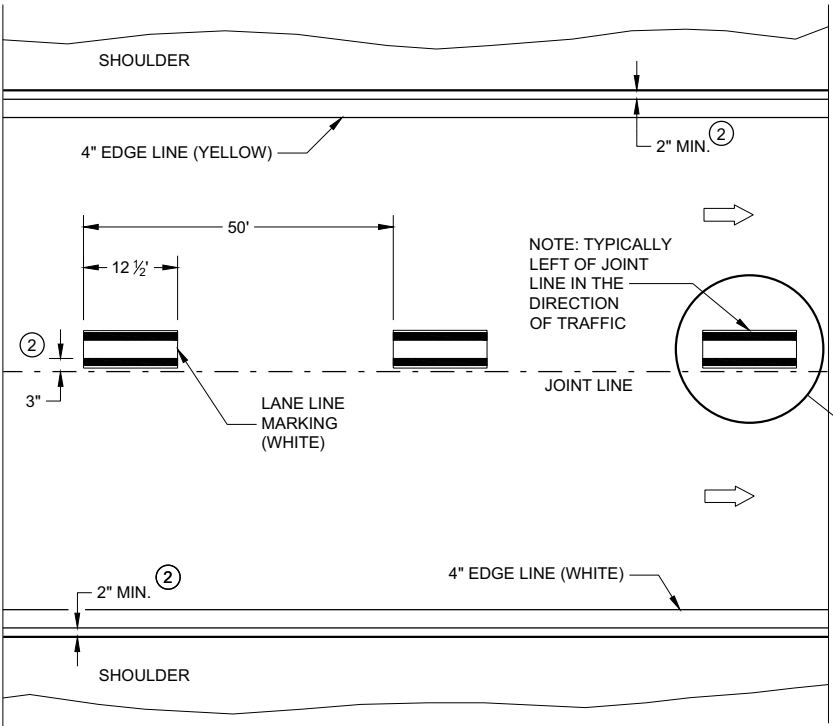
FRONT VIEW
GROUND STRUT DETAIL

ANCHOR BRACKET

ANCHOR BRACKET
BEARING PLATEMIDWEST GUARDRAIL
SYSTEM (MGS) TYPE 2 TERMINALSTATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATIONAPPROVED
June 2014 /S/ Jerry H. Zogg
DATE ROADWAY STANDARDS ENGINEER 96 ENT
FHWA

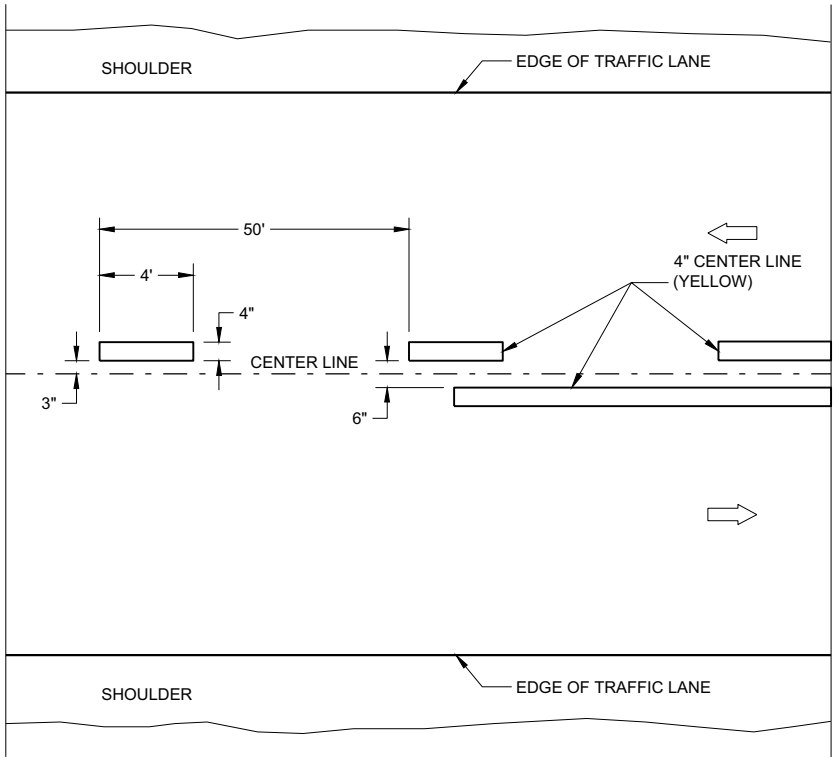


TWO WAY TRAFFIC

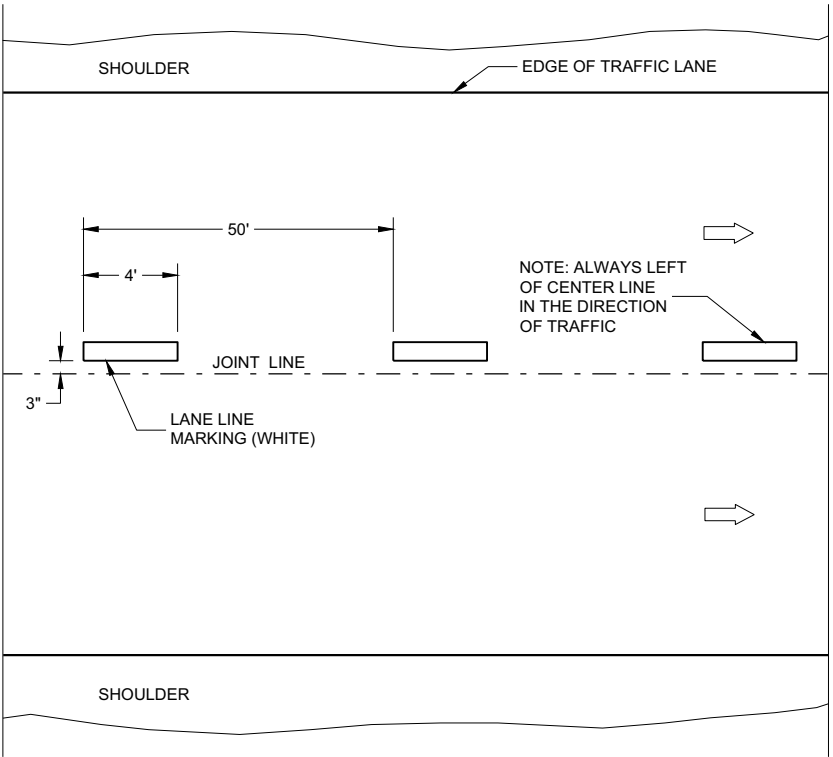


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

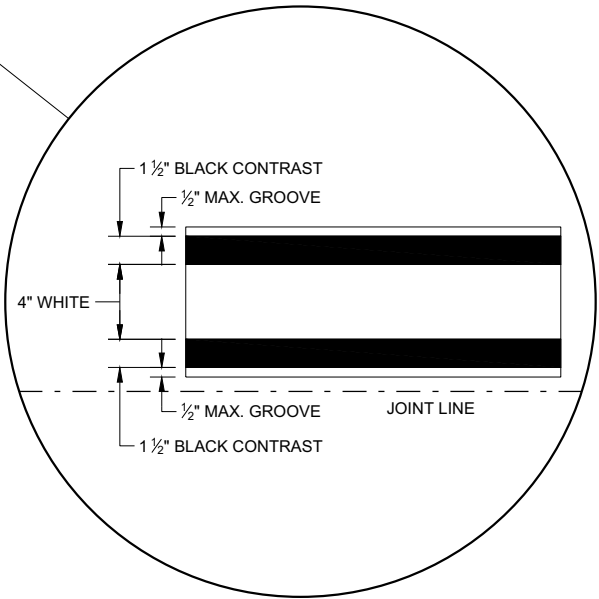
GENERAL NOTES

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 WITH 50 FEET OF THE "T" MARKING
- ② MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

LEGEND

- "T" MARKING
- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC

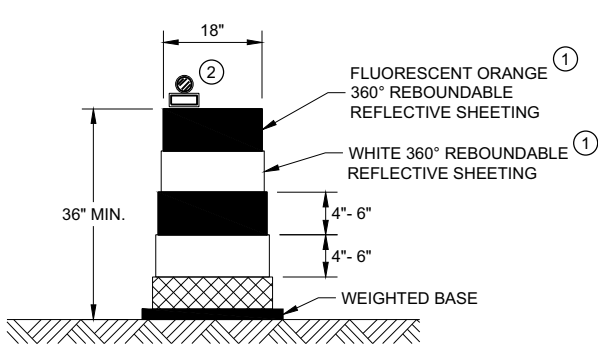


LONGITUDINAL MARKING (MAINLINE)

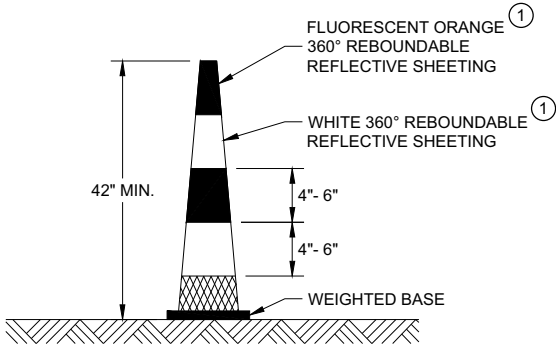
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020
DATE
/S/ Matthew Rauch
STATEWIDE SIGNING AND MARKING
ENGINEER

FHWA

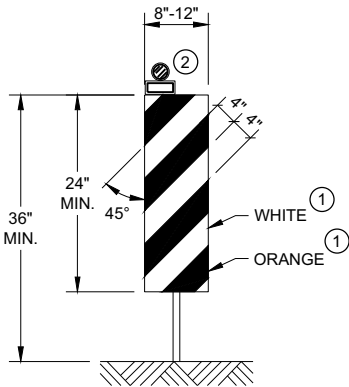


DRUM



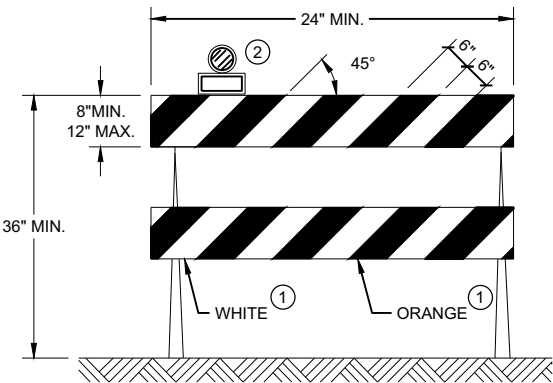
42" CONE

DO NOT USE IN TAPERS
½ SPACING OF DRUMS



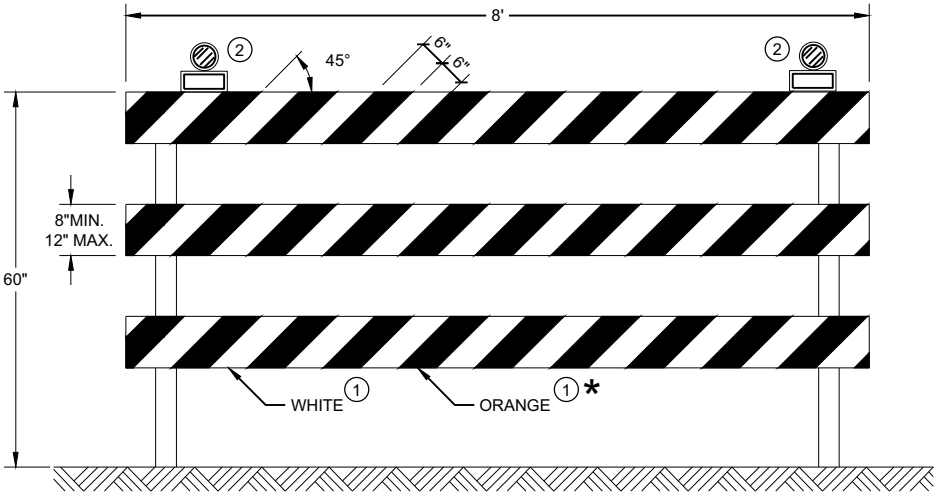
VERTICAL PANEL

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



TYPE II BARRICADE

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



TYPE III BARRICADE

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

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

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.

CHANNELIZING DEVICES
DRUMS, CONES, BARRICADES
AND VERTICAL PANELS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

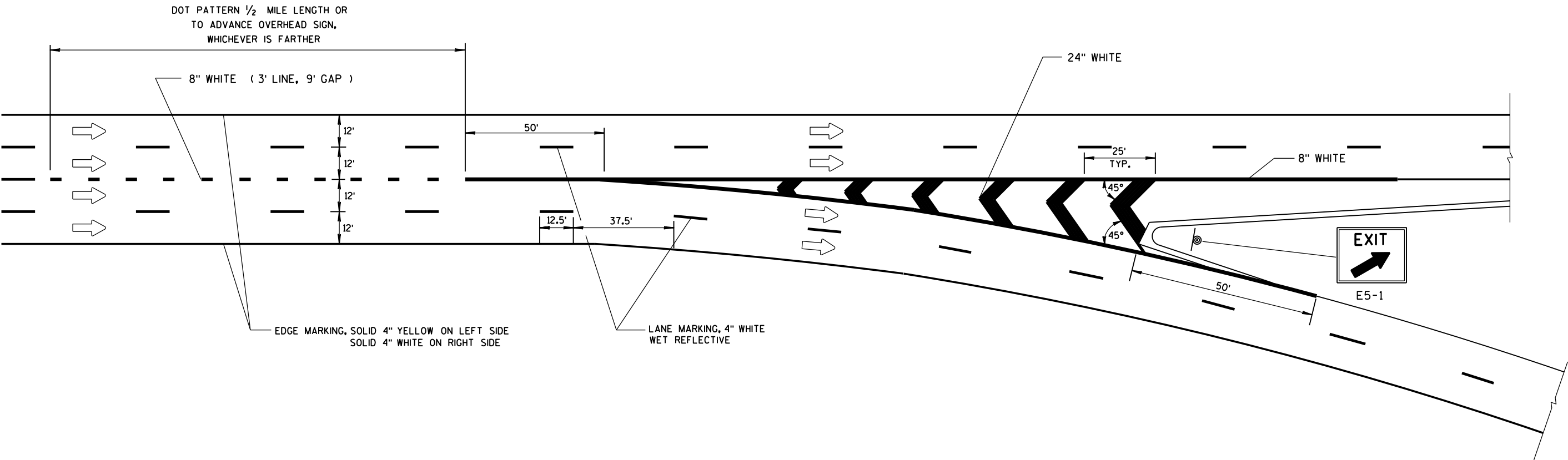
APPROVED
November 2020 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER 98
FHWA

GENERAL NOTES

PLACE GROOVE 3 INCHES LEFT OF JOINT.

LEGEND

- ➡ DIRECTION OF TRAVEL
- ⊙ SIGN ON PERMANENT SUPPORT



PAVEMENT MARKING
MAJOR SPLIT
FREEWAY TO FREEWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

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

THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS.

THIS LANE CLOSURE IS TYPICAL FOR CLOSING RIGHT LANE - REVERSE FOR CLOSING LEFT LANE.

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

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

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

FOR A LANE CLOSURE THAT IS IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

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

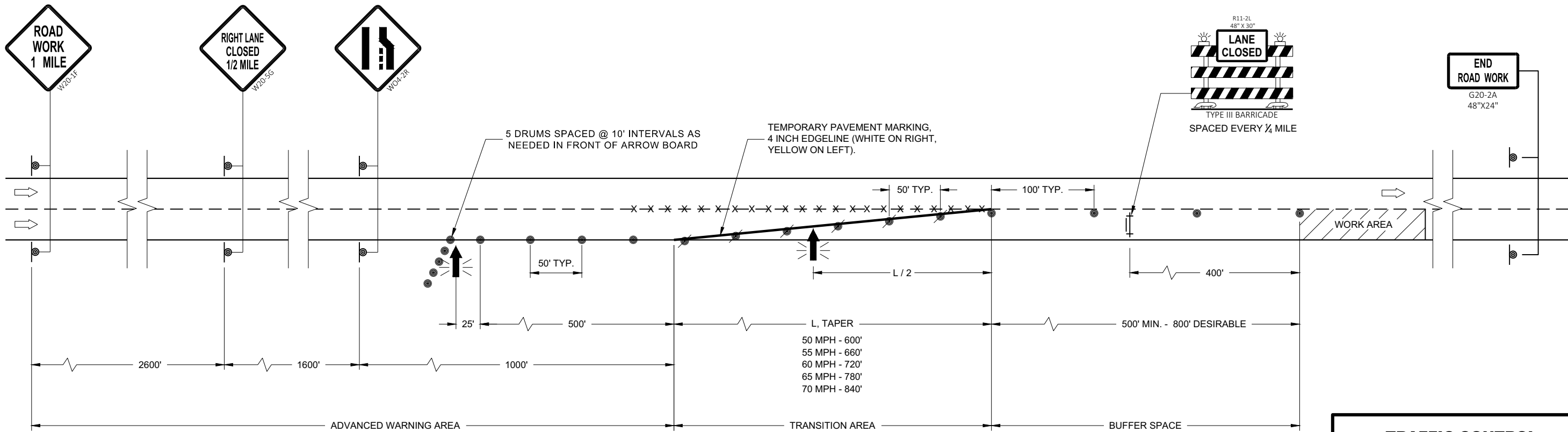
ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS

NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP OR INTERSECTION. THE LANE CLOSURE MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE ONE HALF THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.

CONSIDER ROADWAY GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS.

LEGEND

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



TRAFFIC CONTROL LANE CLOSURE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED August 2020 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER 100

	SIGN ON TEMPORARY SUPPORT
	TRAFFIC CONTROL DRUM
	TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
	TYPE III BARRICADE
	TYPE III BARRICADE WITH ATTACHED SIGN
	TYPE "A" WARNING LIGHT (FLASHING)
	FLASHING ARROW BOARD
	DIRECTION OF TRAFFIC
	WORK AREA

THIS DETAIL IS TYPICAL FOR CLOSING THE RIGHT TWO LANES. FOR CLOSING THE LEFT TWO LANES, REVERSE THE TRAFFIC CONTROL.

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.

"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

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

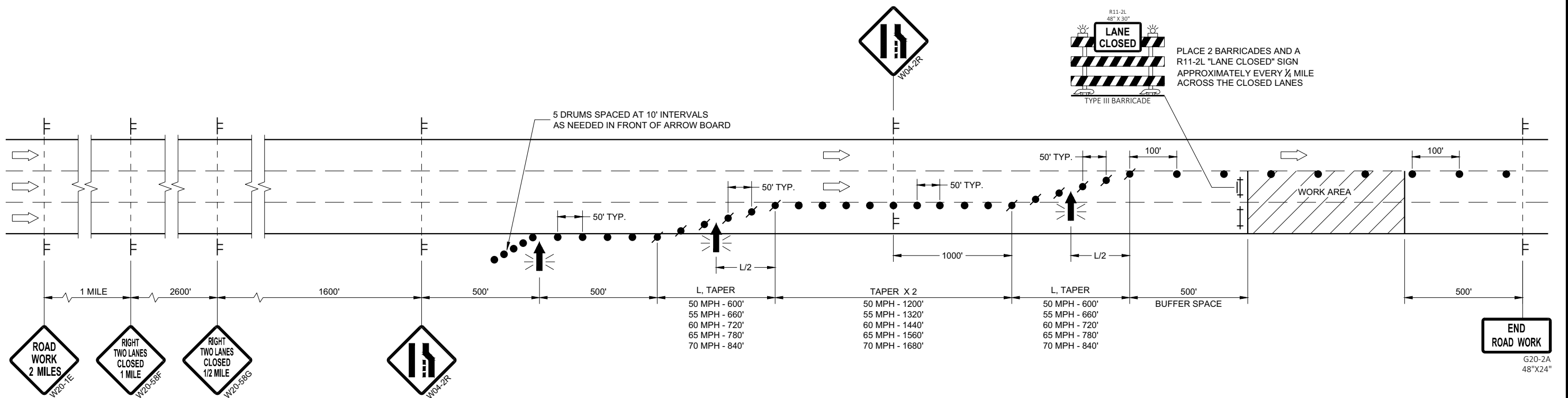
CONSIDER ROADWAY GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARDS SO THE APPROACHING DRIVER HAS A CLEAR VIEW OF THE ARROW BOARDS AND LANE CLOSURE DRUMS.

WHEN A RAMP OR SIDE ROAD INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

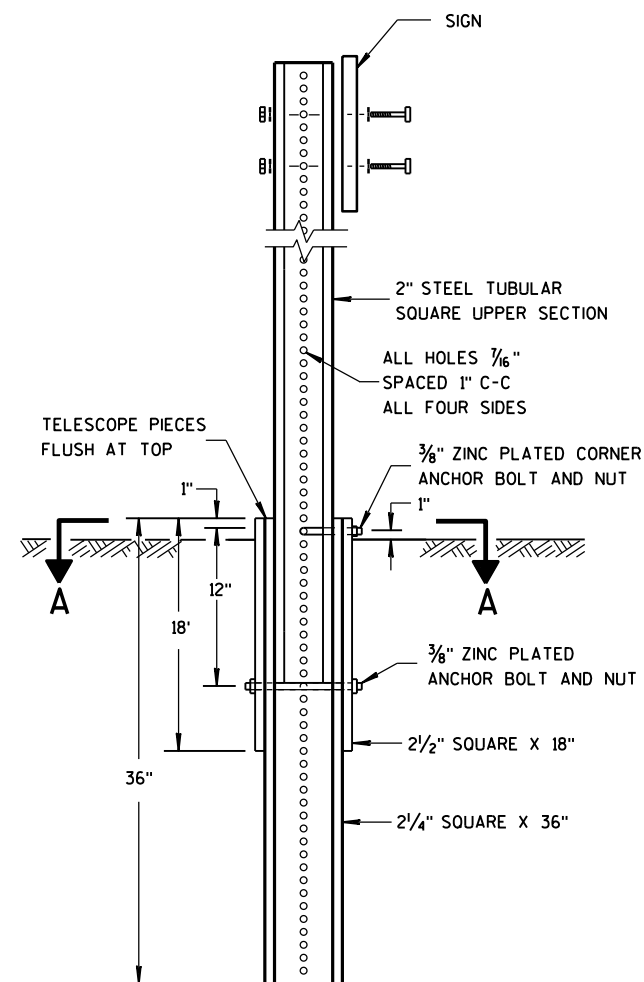
BARRICADES IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY REESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

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

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



APPROVED
May 2020 /S/ Andrew Heidtke
DATE STATEWIDE WORK ZONE T SAFETY ENGINEER 101



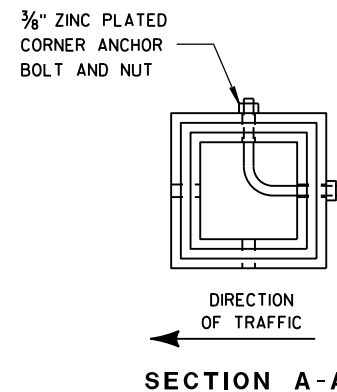
DETAIL OF TUBULAR
STEEL SIGN POST

TUBULAR STEEL POSTS

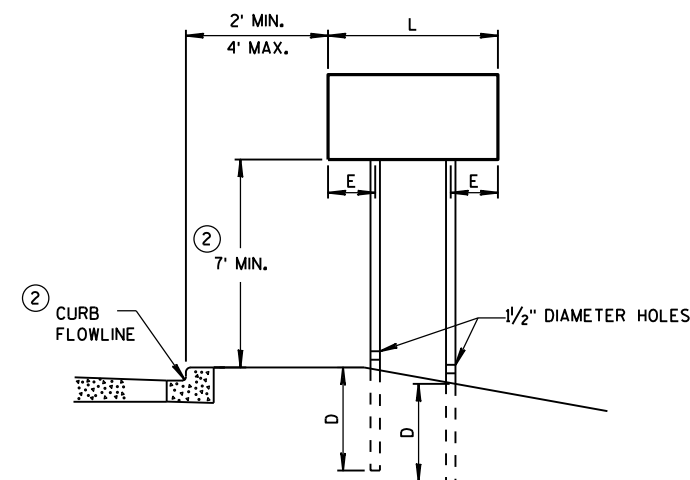
AREA OF SIGN INSTALLATION (SQ. FT.)	NUMBER OF REQUIRED TUBULAR STEEL POSTS
9 OR LESS	1
GREATER THAN 9 LESS THAN OR EQUAL TO 18	2
GREATER THAN 18 LESS THAN OR EQUAL TO 27	3

SIGNS WIDER THAN 3 FEET OR LARGER THAN 9 SQ. FT. SHALL
BE MOUNTED ON MULTIPLE POSTS (SEE ABOVE TABLE).

SIGNS LARGER THAN 27 SQ. FT. SHALL NOT BE MOUNTED
ON TUBULAR STEEL POSTS.



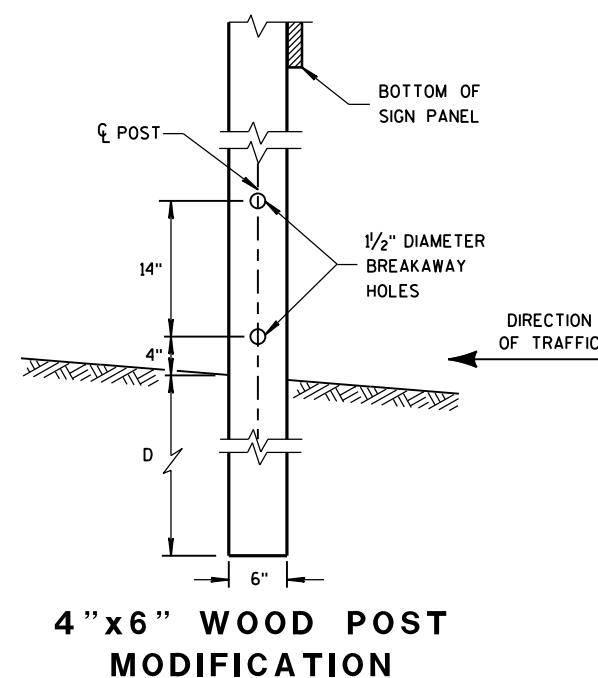
SECTION A-A



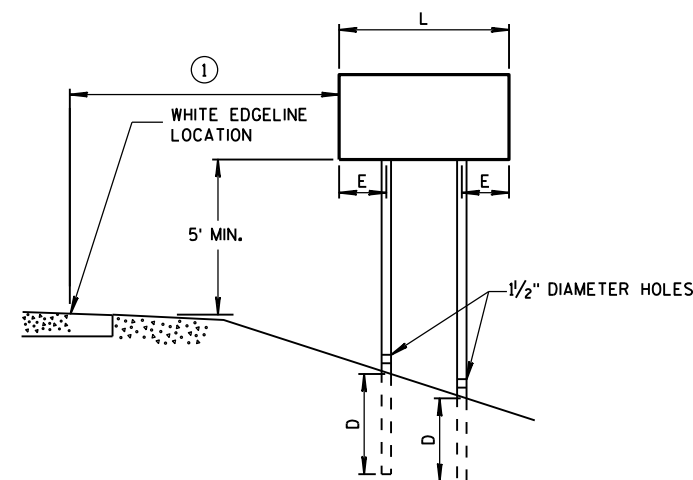
URBAN AREA

POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

WOOD POST EMBEDMENT DEPTH	
AREA OF SIGN INSTALLATION (SQ. FT.)	D (MIN)
20 OR LESS	4'
GREATER THAN 20	5'



4"X6" WOOD POST
MODIFICATION



RURAL AREA

POST SPACING REQUIREMENTS		NUMBER OF WOOD POSTS REQUIRED
L	E	
48" OR LESS AND LESS THAN 20 SQ. FT.	-	1
LESS THAN 60"	12"	2
60" TO 120"	L/5	2
GREATER THAN 120" LESS THAN 168"	12"	3
168" AND GREATER	12"	4

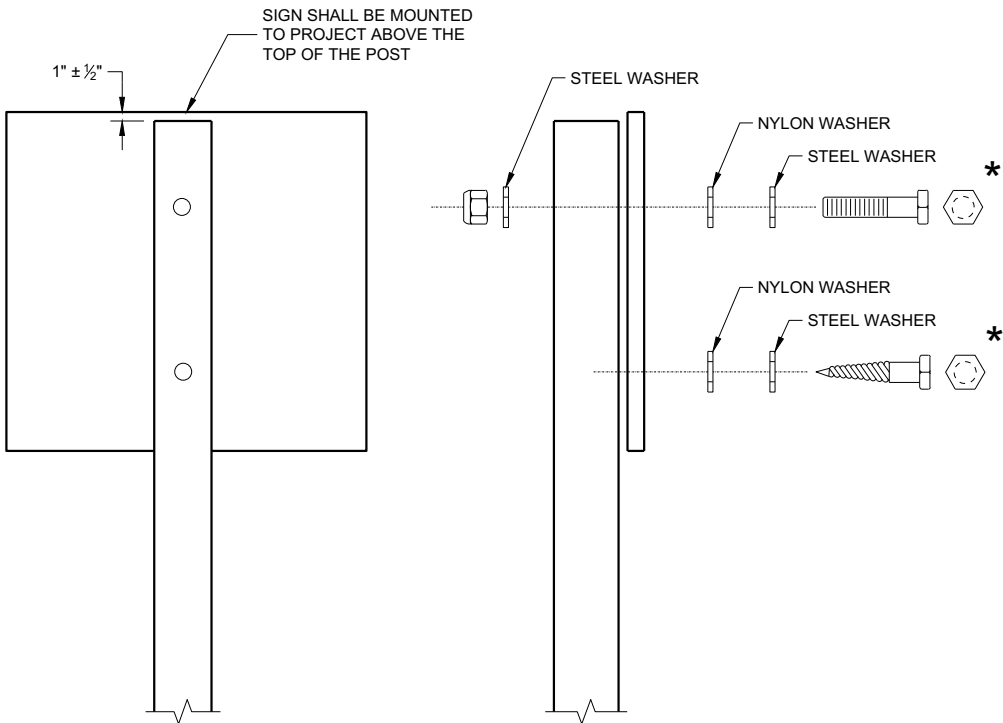
SEE NOTE ③

GENERAL NOTES

- ① 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.
- 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. IF NO SIDEWALK AND NO PARKING, VERTICAL CLEARANCE MAY BE REDUCED TO 5 FOOT MINIMUM. OFFSET OF SIGNS IS MEASURED FROM THE CURB FLOWLINE.
- ③ FOR SIGNS REQUIRING 4 POSTS, SPACE INTERMEDIATE POSTS EVENLY.

TEMPORARY TRAFFIC CONTROL
SIGN MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



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.

WOOD POST (4" x 6")
LAG SCREWS - ¾" x 3"
MACHINE BOLTS - ⅝" x 6 ½" OR 7" LENGTH W/NUTS

SQUARE STEEL POST (2" x 2")
MACHINE BOLTS - ¾" x 3 ¼" LENGTH W/NUTS
RIVETS - ⅝" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM
BODY/MANDREL O.D. FLANGE 0.720 - 0.765 INCH,
GRIP RANGE 0.042 - 0.375 INCH

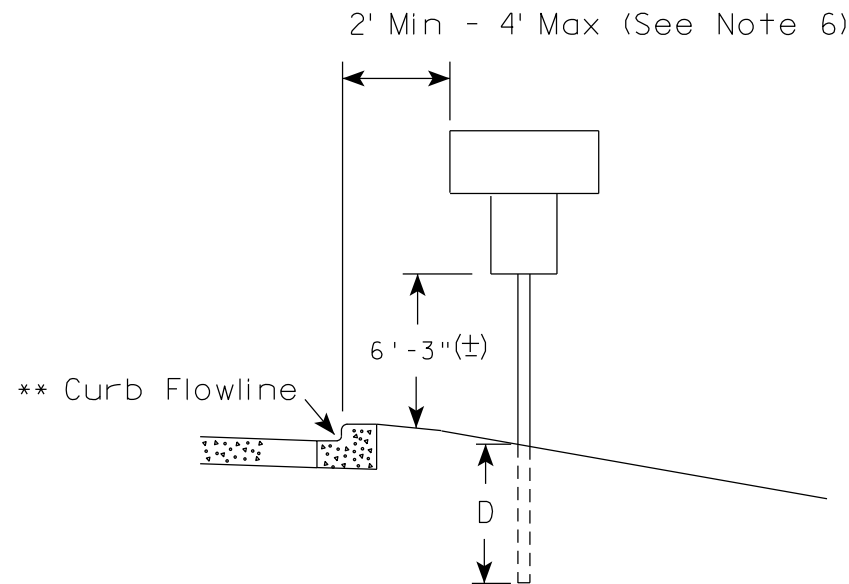
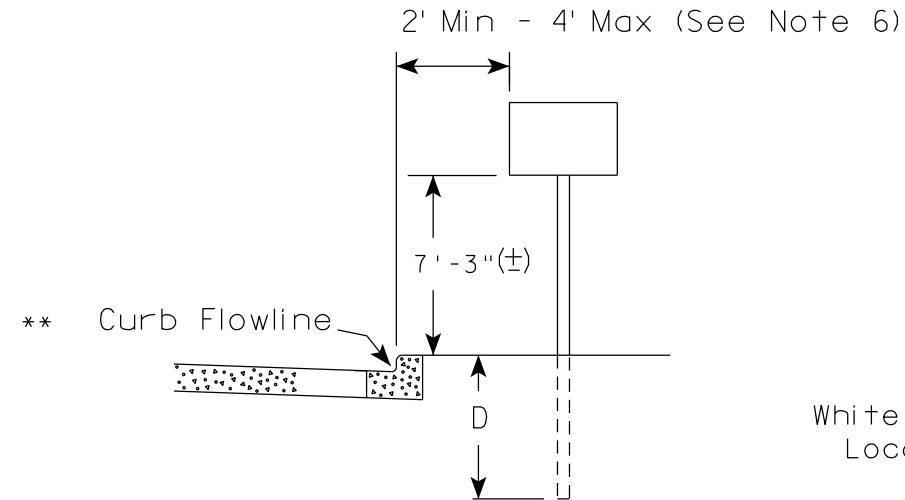
WASHERS (ALL POSTS) -
1 ¼" O.D. x ⅜" I.D. x ⅛" STEEL
1 ¼" O.D. x ⅜" I.D. x 0.080 NYLON

* 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. FOR A SINGLE POST INSTALLATION, ALL SIGNS GREATER THAN 9 SQ. FT. REQUIRE THE USE OF 3 FASTENERS.

ATTACHMENT OF SIGNS TO POSTS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June 2017 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER 103

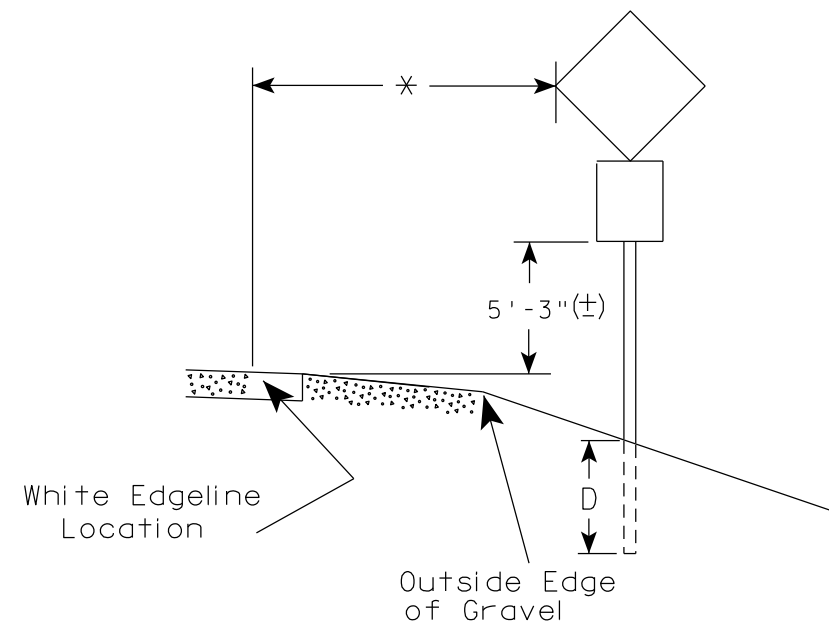
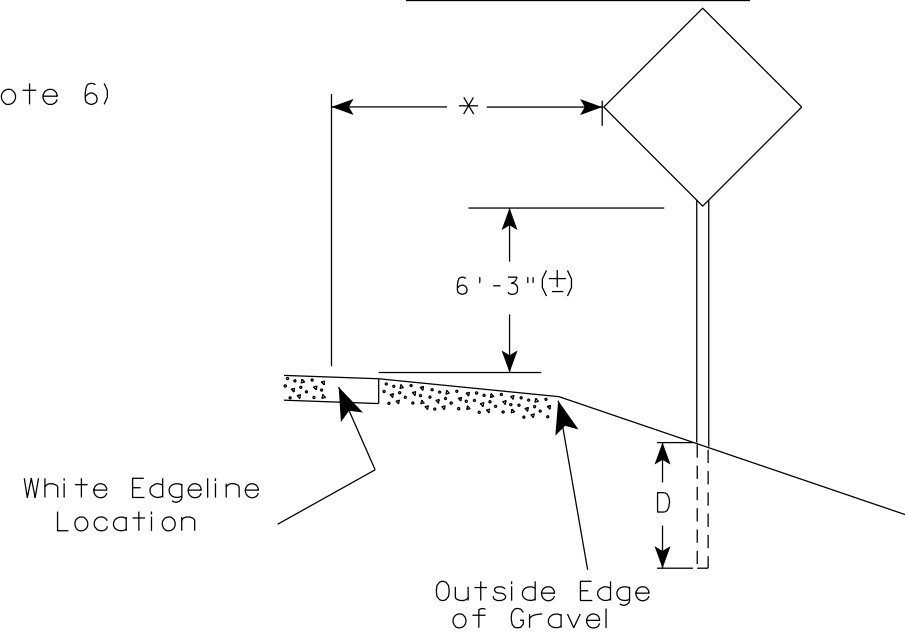
FHWA

URBAN AREA



✱✱ 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.

RURAL AREA (See Note 2)



✱ 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

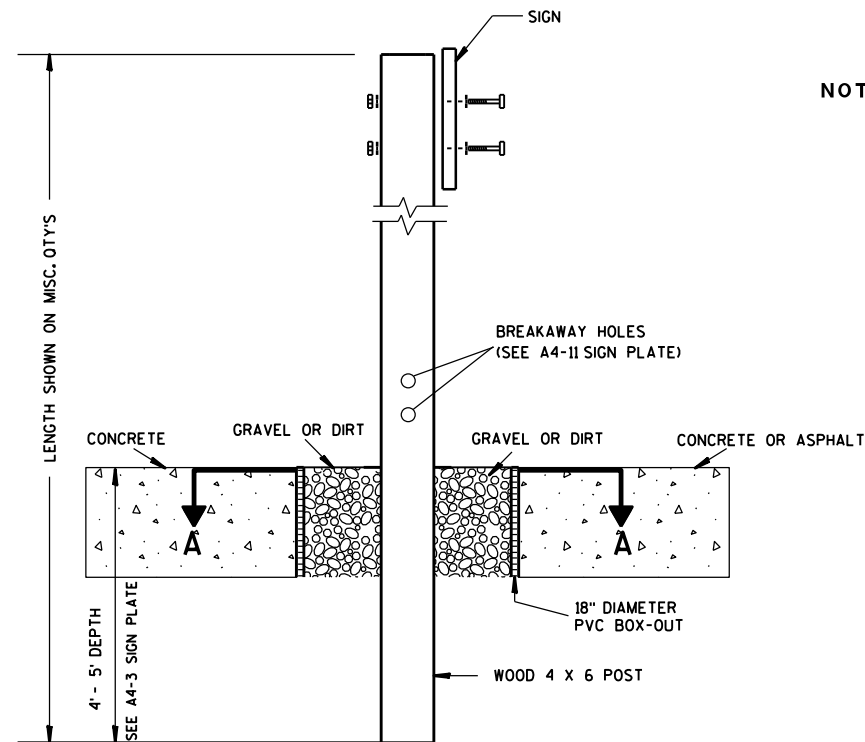
- Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
- If signs are mounted on or behind barrier wall, see A4-10 sign plate.
The Double Arrow sign (W12-1D) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (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" (±).
- For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
- Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
- Offset distance shall be consistent with existing signs or consistent throughout length of project.
- The (±) tolerance for mounting height is 3 inches.
- Folding signs shall be mounted at a height of 5'-3" (±) or as directed 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

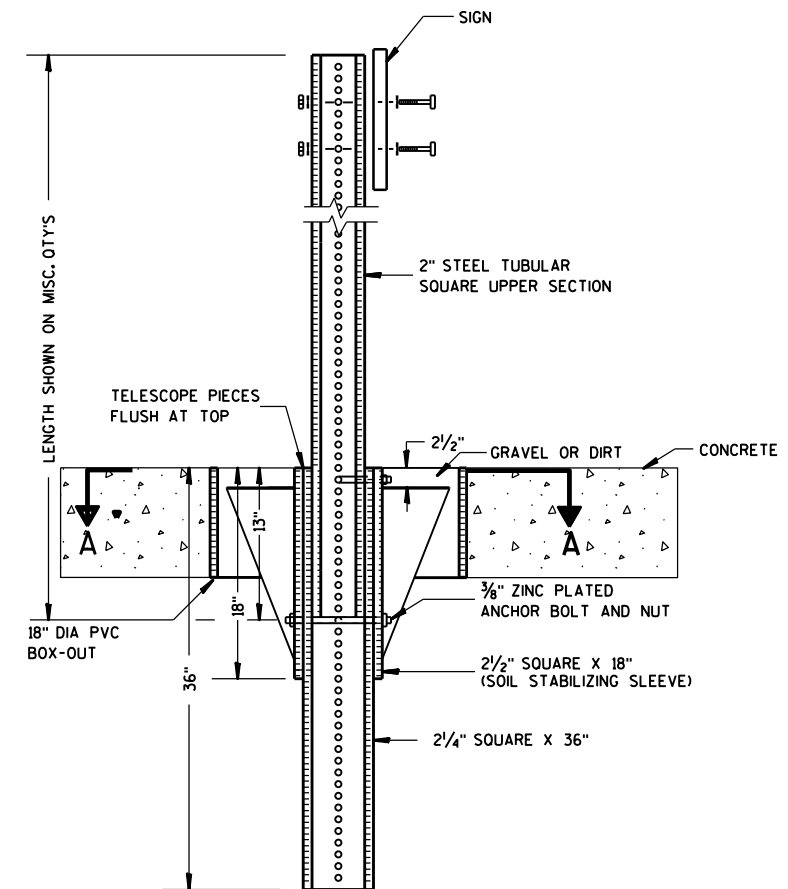
DATE 5/13/2020 PLATE NO. A4-3.22



ELEVATION VIEW

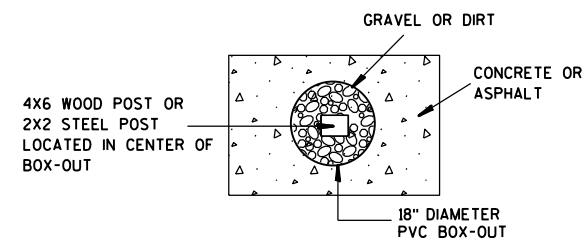
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

- 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 PLAT 106 A4-3B.1

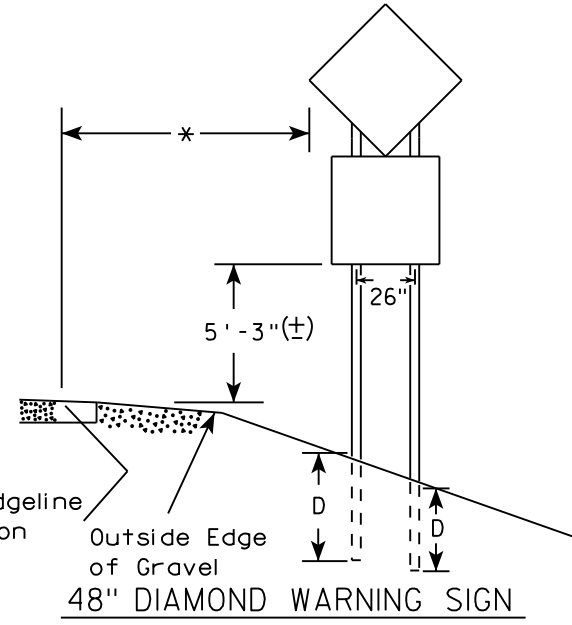
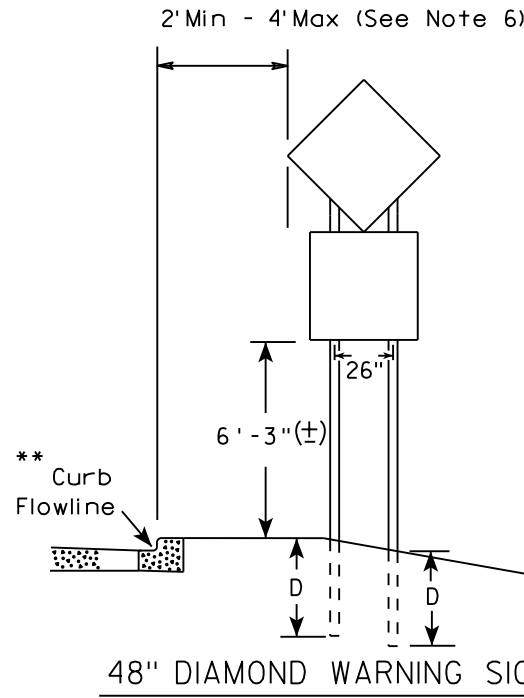
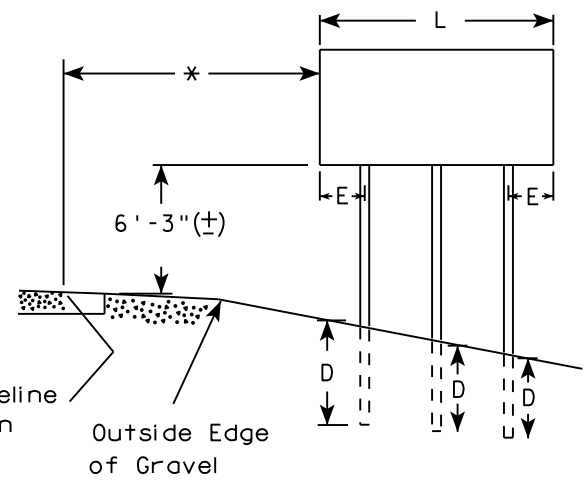
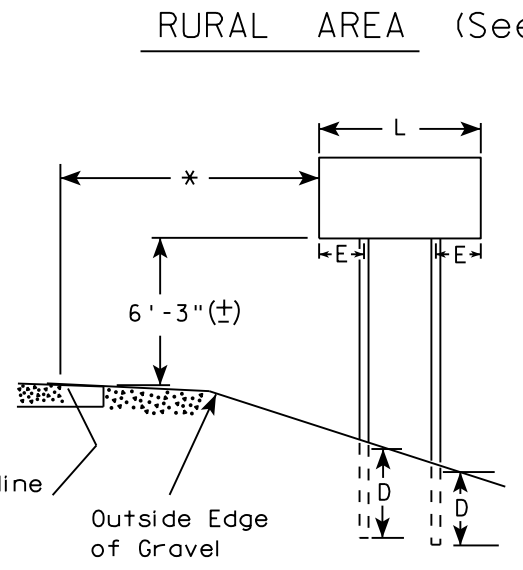
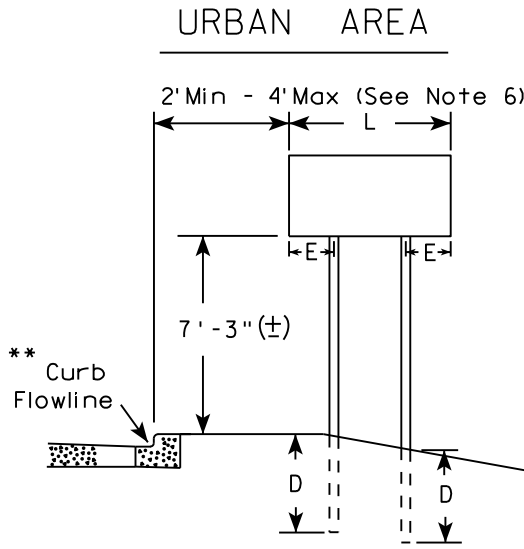
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



- 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" (±) or 6'-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" (±) or as directed by the engineer.
 8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-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" (±).

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

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

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

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

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

POST EMBEDMENT DEPTH

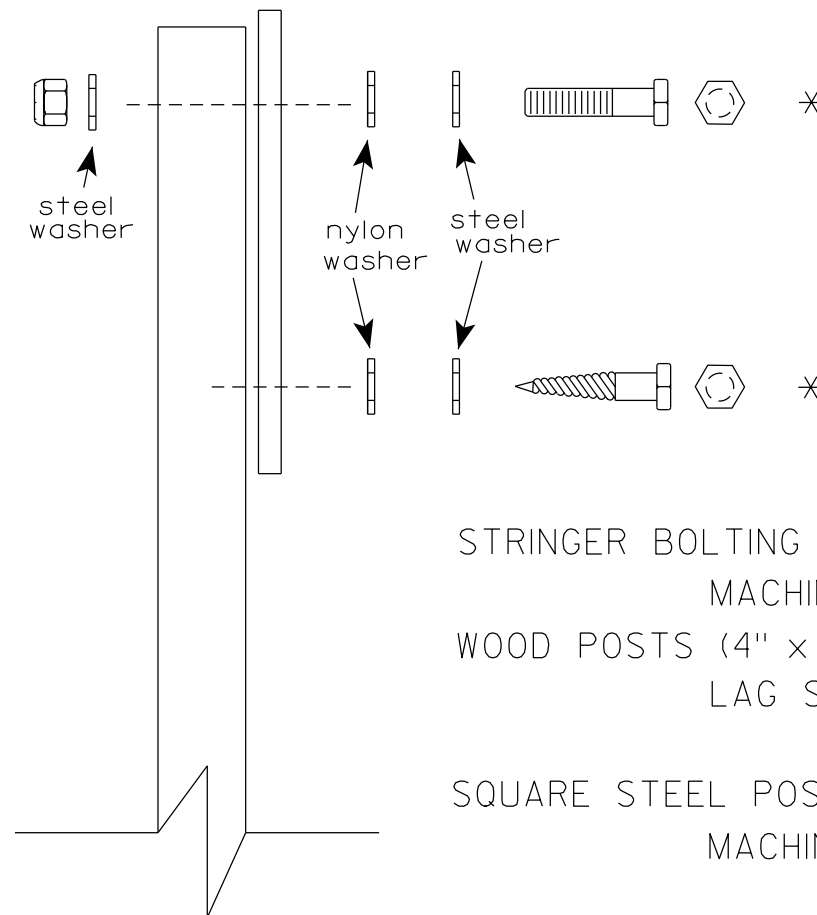
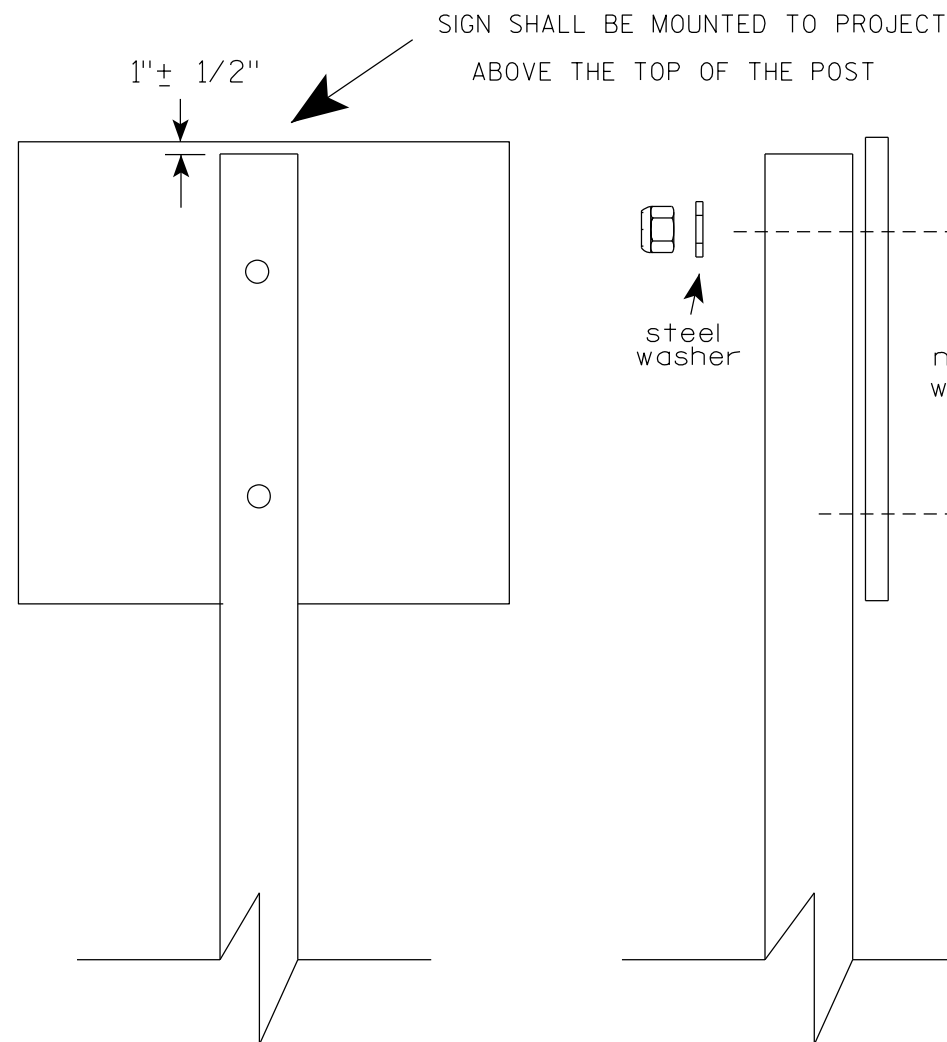
Area of Sign Installation (Sq. Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

TYPICAL INSTALLATION
OF TYPE II SIGNS
ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 8/21/17 PLATE NO. A4-4.15



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.

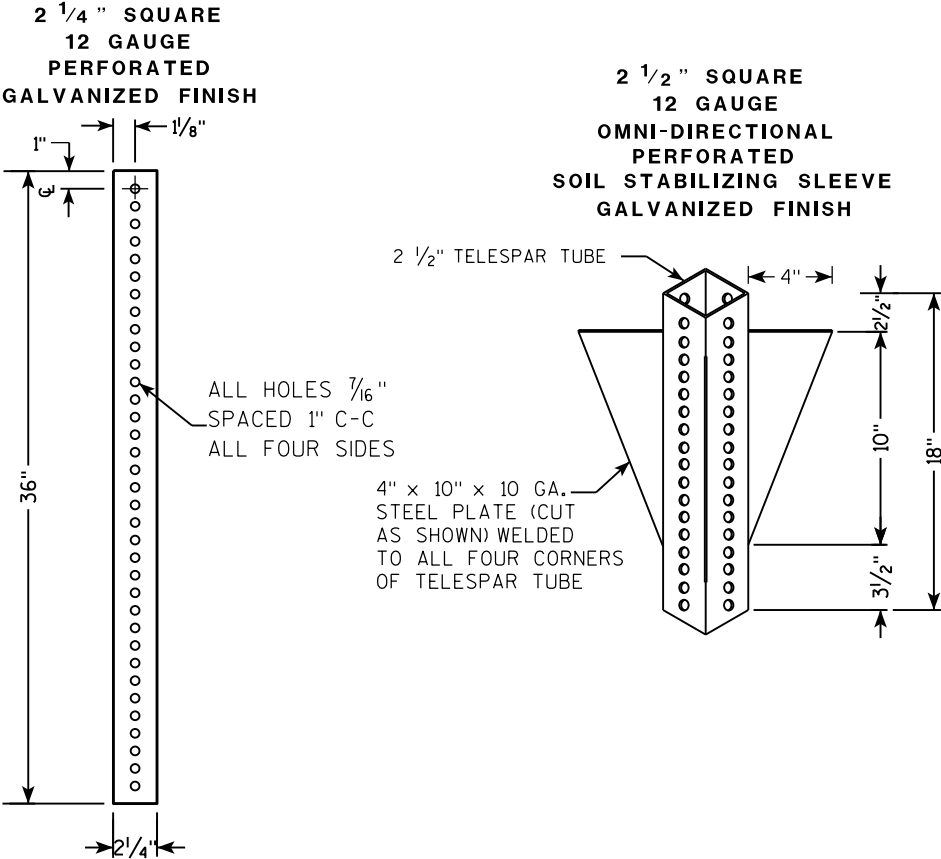
Threads on bolts and nuts shall be manufactured with sufficient allowance for the cadmium plate or galvanized coating to permit the nuts to run freely on the bolts.

- STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)
- MACHINE BOLTS - $\frac{5}{16}$ " X 1-3/4" Length w/ lock nuts
- WOOD POSTS (4" x 6")
- LAG SCREWS - $\frac{3}{8}$ " X 3" (NO STRINGERS ON BACK OF SIGN)
 $\frac{3}{8}$ " X 4" (STRINGERS ON BACK OF SIGN)
- SQUARE STEEL POSTS (2" x 2")
- MACHINE BOLTS - $\frac{3}{8}$ " X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)
 $\frac{3}{8}$ " X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)
- RIVETS - $\frac{9}{32}$ " (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 $\frac{3}{8}$ " I.D. X $\frac{1}{16}$ " STEEL
 - 1-1/4" O.D. X $\frac{3}{8}$ " I.D. X .080 NYLON

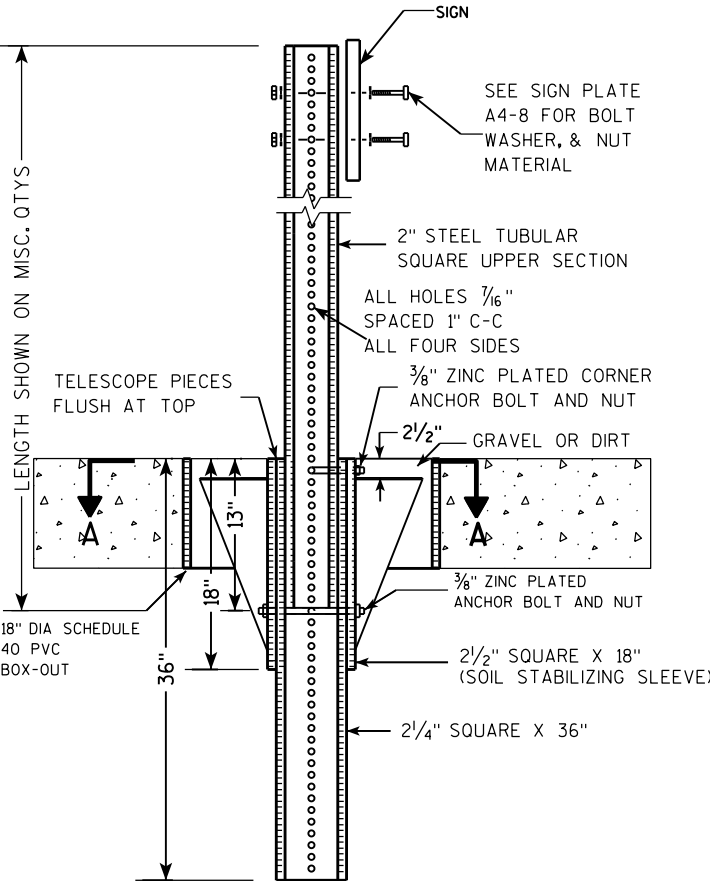
* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require the use of 3 fasteners.

ATTACHMENT OF SIGNS TO POSTS	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> For State Traffic Engineer
DATE 4/1/2020	PLATE NO. A4-8.9

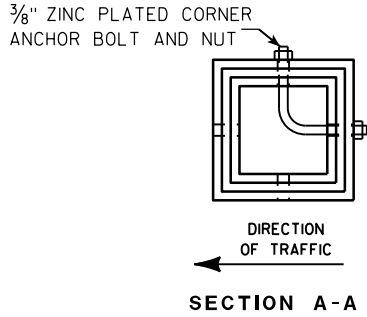
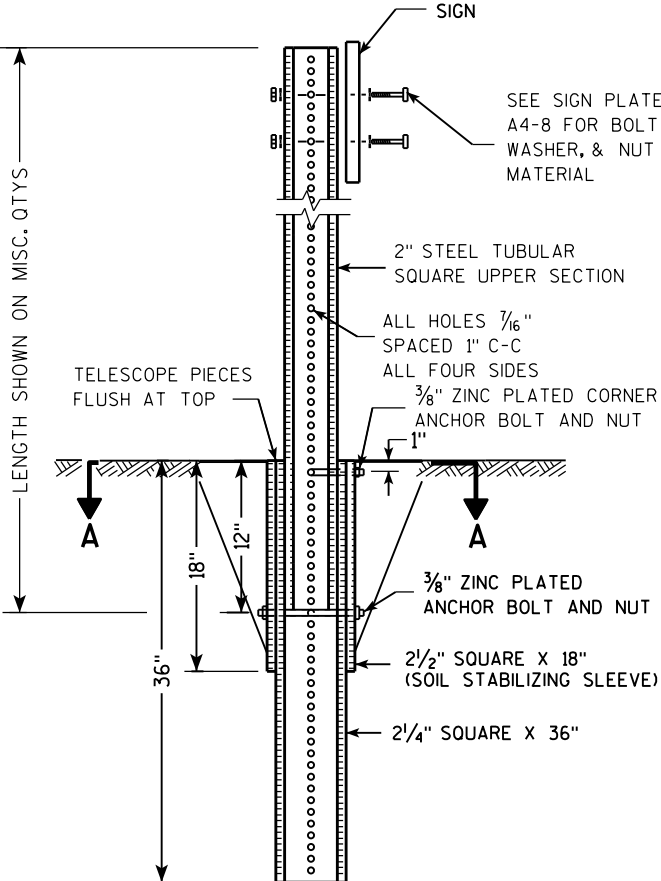
TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM



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)



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

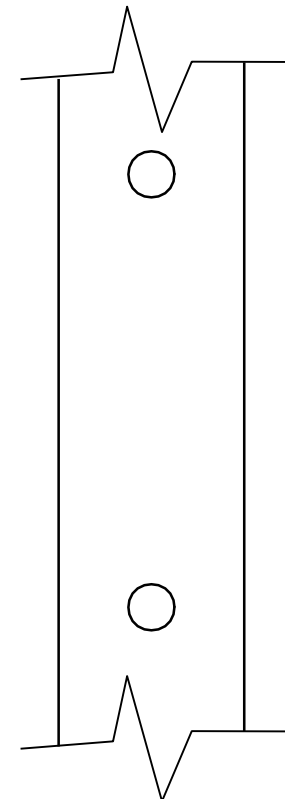
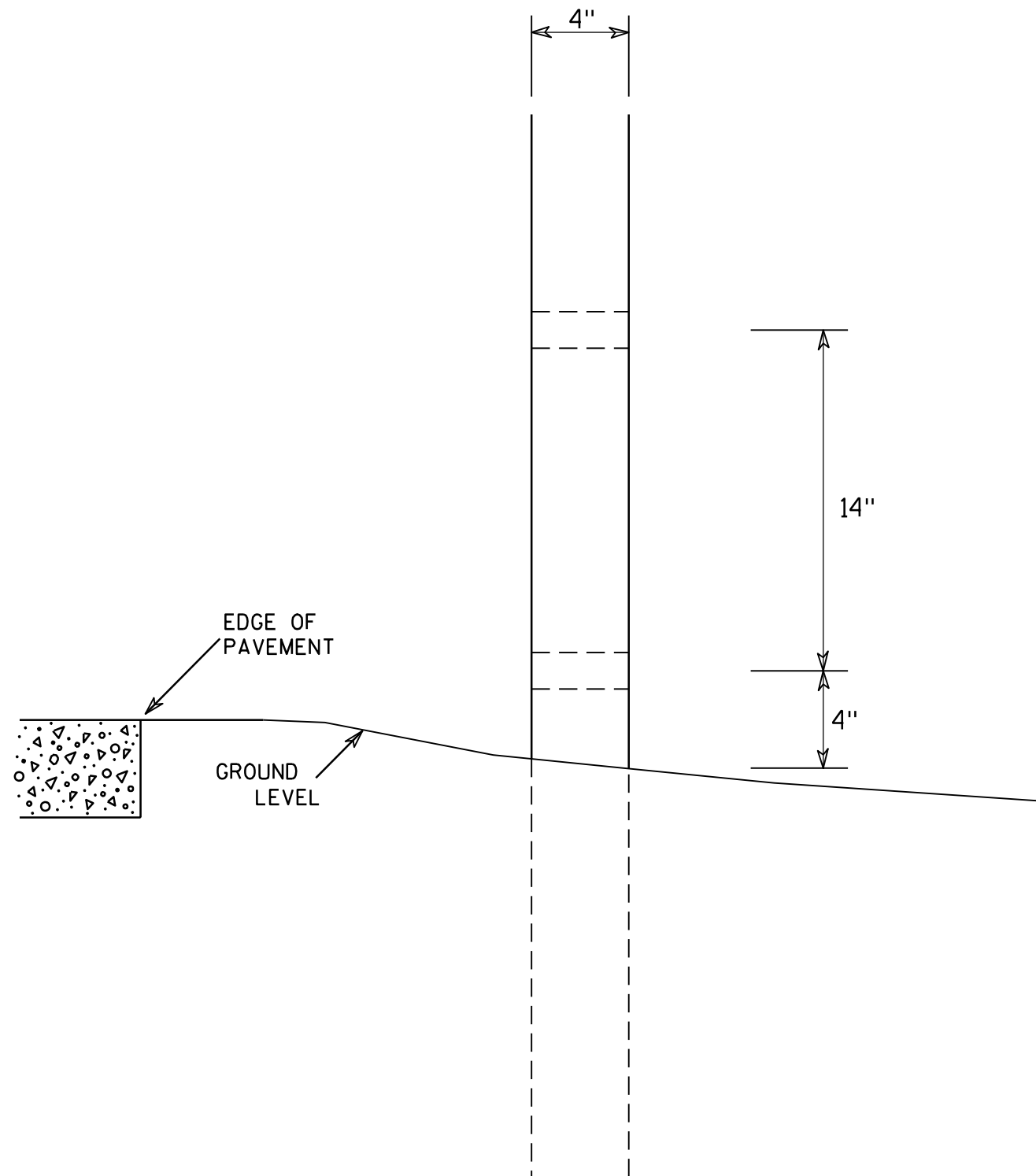
Signs wider than 3 feet or larger than 9 sq. ft shall be mounted on multiple posts (see above table).

TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 2/05/15 PLAT 109 14-9.9



SIDE VIEW

GENERAL NOTES

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

4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Chester J. Spang
for State Traffic Engineer

DATE 3/27/97

PLATE NO. A4-11.2

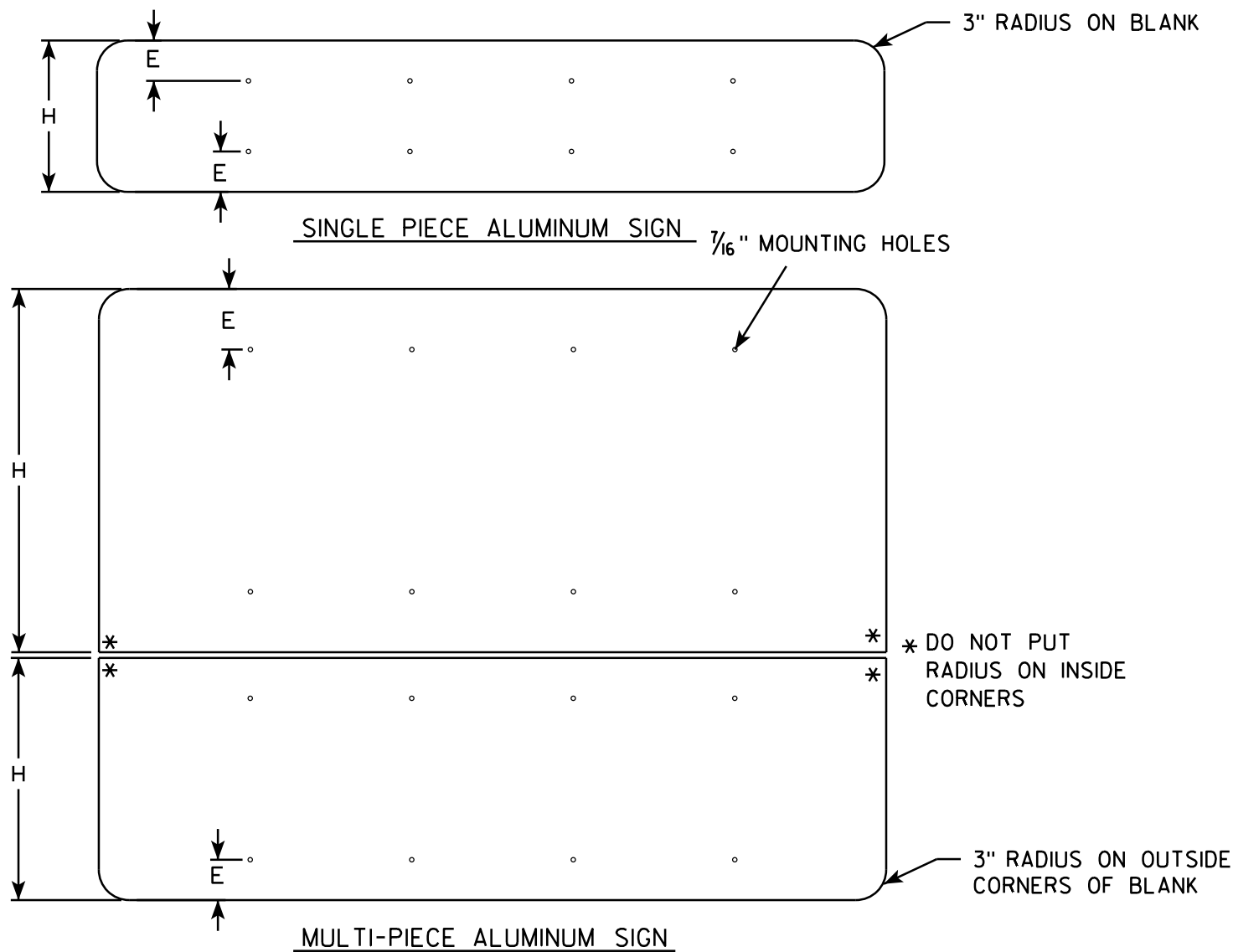
PROJECT NO:

HWY:

COUNTY:

SHEET NO: 110

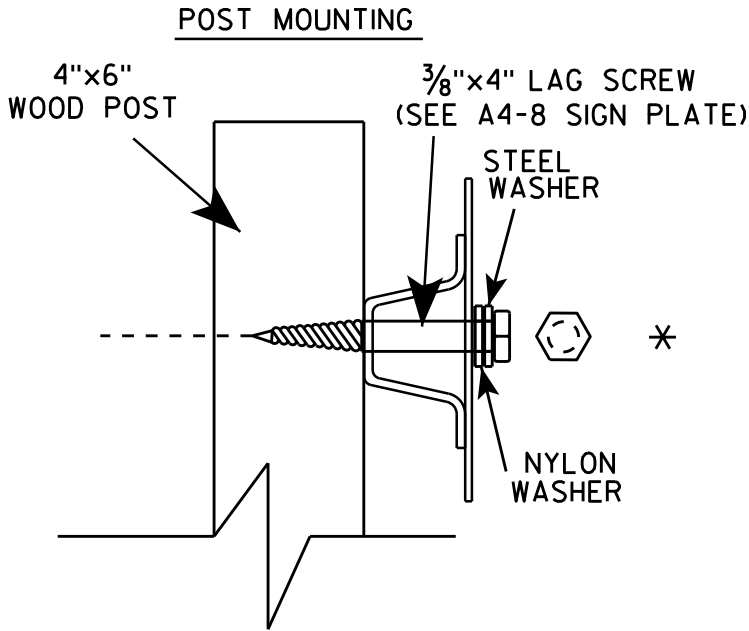
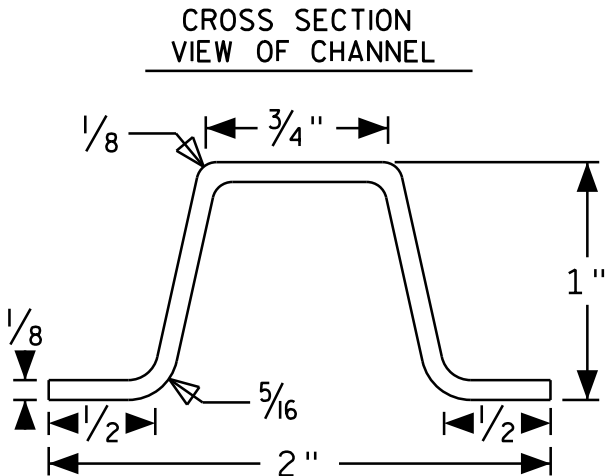
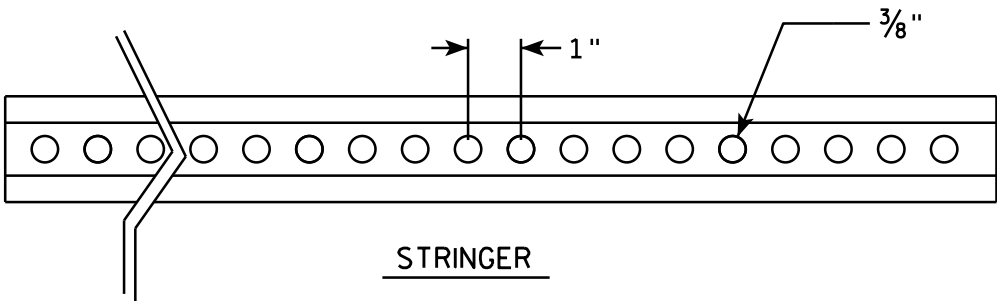
E



GENERAL NOTES

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

SIGN WIDTH	STRINGER WIDTH	POSTS	HOLE SPACING	MOUNTING HOLES			
78"	72"	2	16"	15"	31"	47"	63"
84"	72"	2	17"	16 1/2"	33 1/2"	50 1/2"	67 1/2"
90"	72"	2	18"	18"	36"	54"	72"
96"	90"	2	19"	19 1/2"	38 1/2"	57 1/2"	76 1/2"
102"	90"	2	20"	21"	41"	61"	81"
108"	90"	2	21"	22 1/2"	43 1/2"	64 1/2"	85 1/2"
114"	108"	3	15"	12"	27"	42"	57" 72" 87" 102"
120"	108"	3	16"	12"	28"	44"	60" 76" 92" 108"
126"	108"	3	17"	12"	29"	46"	63" 80" 97" 114"
132"	126"	3	18"	12"	30"	48"	66" 84" 102" 120"
138"	126"	3	19"	12"	31"	50"	69" 88" 107" 126"
144"	126"	3	20"	12"	32"	52"	72" 92" 112" 132"



SIGN STRINGER
MOUNTING REQUIREMENTS

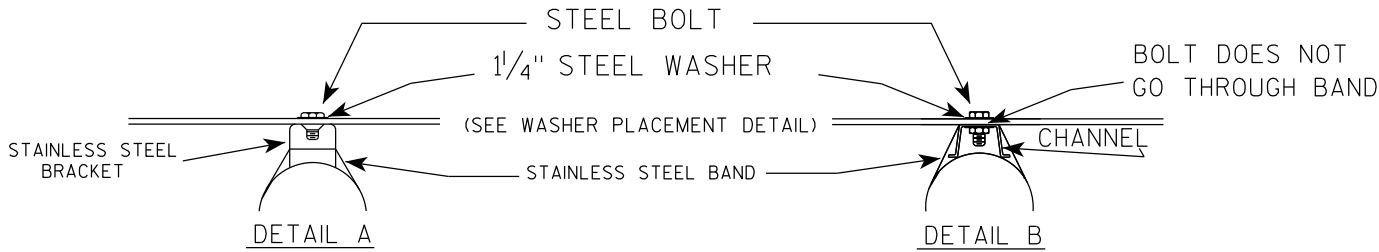
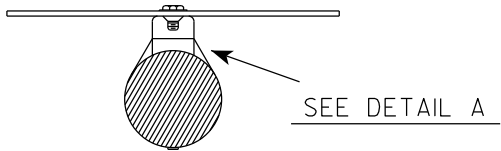
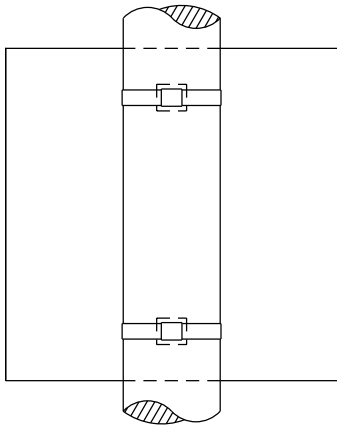
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

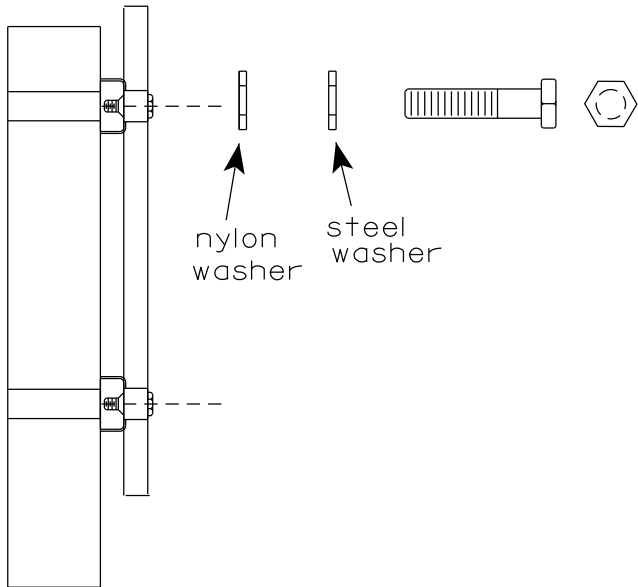
DATE 4/26/16 PLATE No A4-18.1
111

BANDING

SINGLE SIGN



WASHER PLACEMENT

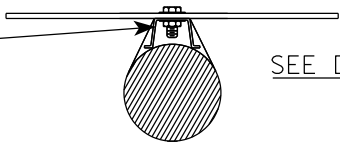
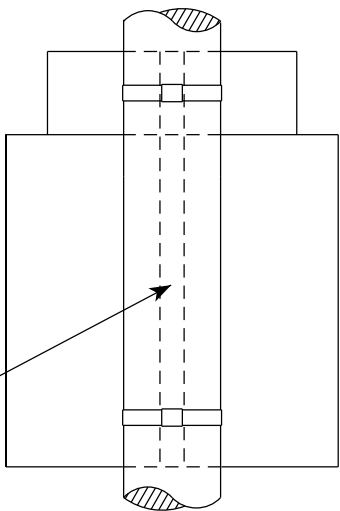


WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

GENERAL NOTES

1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be 3/4" in width and 0.025" thickness.
4. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
 - a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
 - b. Electro-galvanized in accordance with ASTM designation: B 633, Type III, SC 3

"J" ASSEMBLY

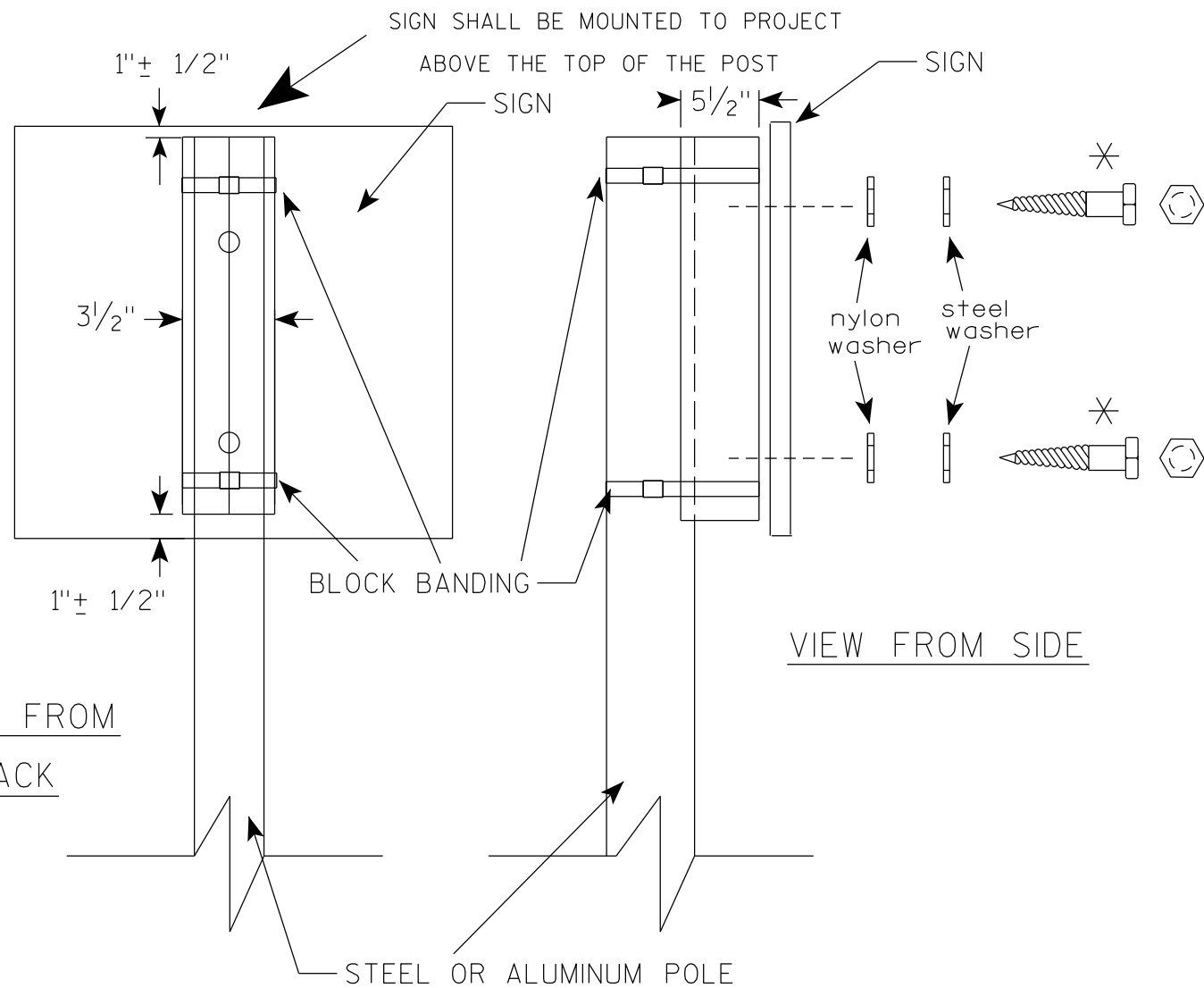


STANDARD SIGN
SIGN BANDING DETAILS

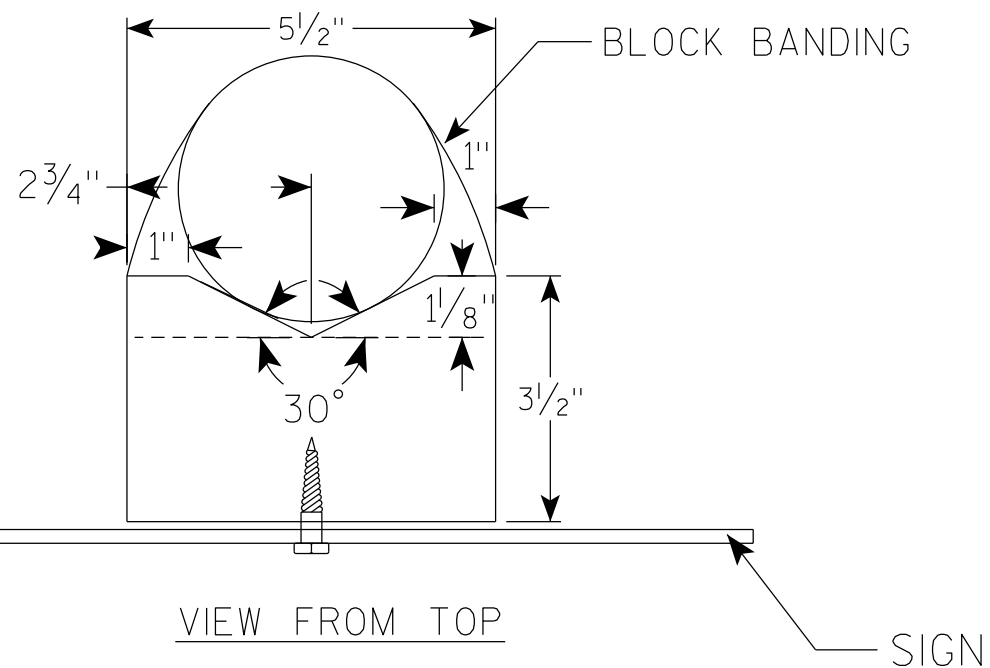
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer
DATE 6/10/19 PLATE NO. A5-9.4

VIEW FROM
BACK



VIEW FROM SIDE



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, $\frac{3}{4}$ " 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 NORMALLY 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 $1\frac{1}{4}$ " O.D. X $\frac{3}{8}$ " I.D. X $\frac{1}{16}$ "
8. NYLON WASHERS SHALL BE $1\frac{1}{4}$ " O.D. X $\frac{3}{8}$ " I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

✱ LAG BOLTS SHALL BE $\frac{3}{8}$ " X $2\frac{1}{2}$ "

BLOCK BANDING DETAIL
(V-BLOCK OPTION)

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

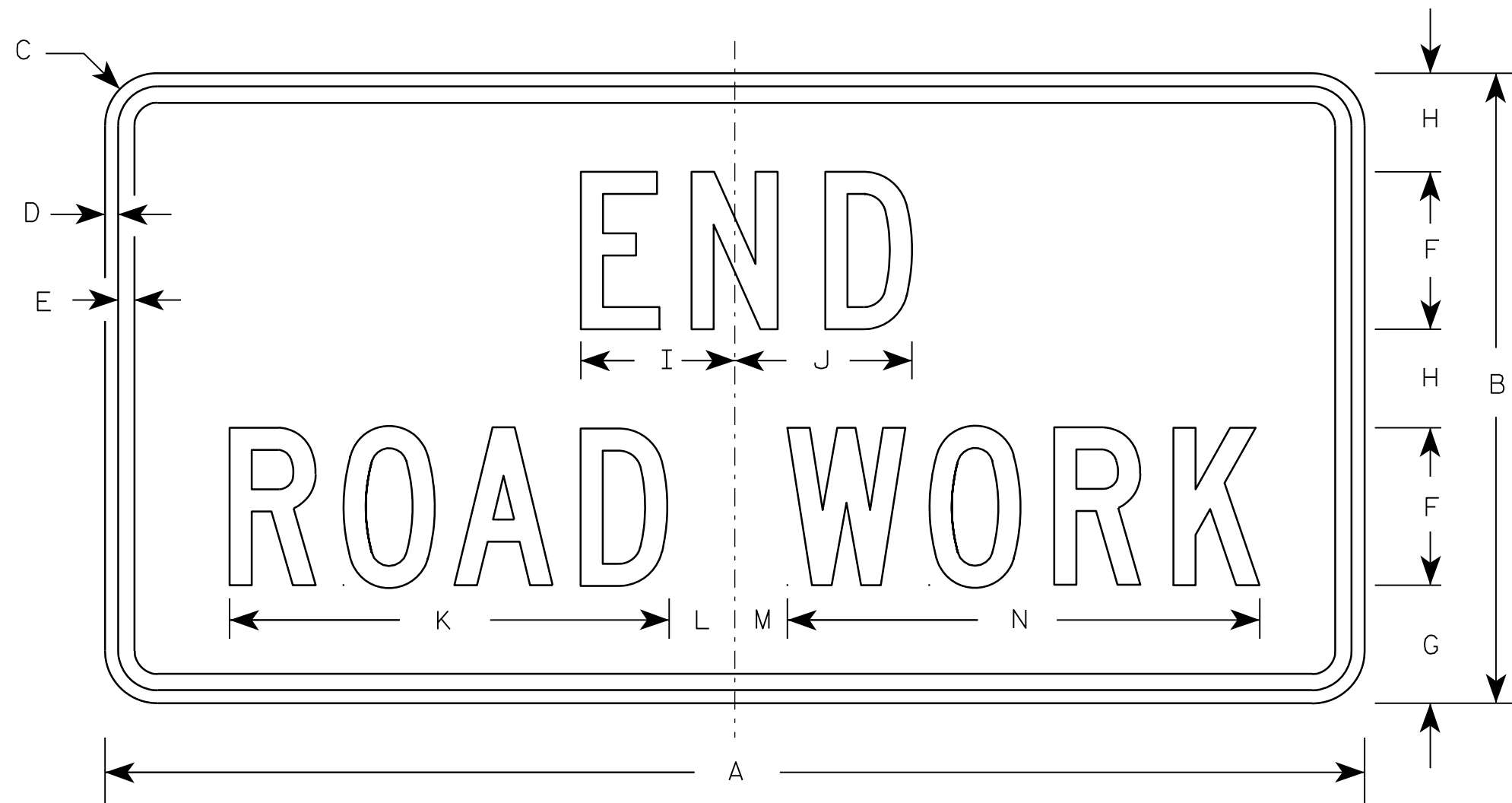
DATE 6/10/19 PLATE NO. A5-10.2

PROJECT NO:

SHEET NO: 113

E

7



G20-2A

Metric equivalent
for this sign is:

SIZE	
1	900 mm X 450 mm
2	1200 mm X 600 mm
3	1200 mm X 600 mm
4	1200 mm X 600 mm
5	1200 mm X 600 mm

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.	Area m ²
1	36	18	1 1/8	3/8	1/2	4	3 3/4	2 1/2	4 1/8	4 1/8	11 1/8	2	1	12 1/8													4.5	0.41
2	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
3	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
4	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
5	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72

NOTES

- Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- Color:
Background - Orange
Message - Black
- Message Series - C
- 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.

7

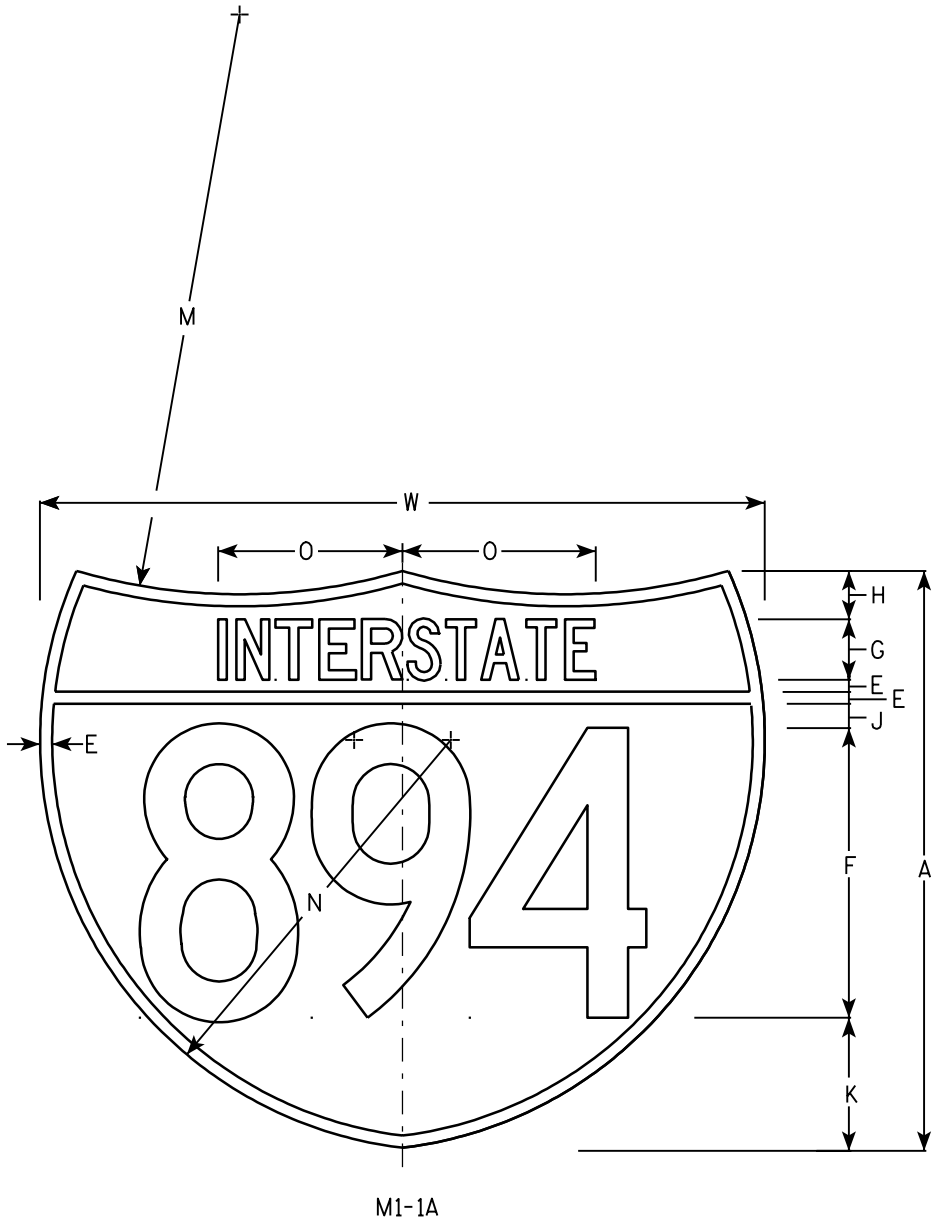
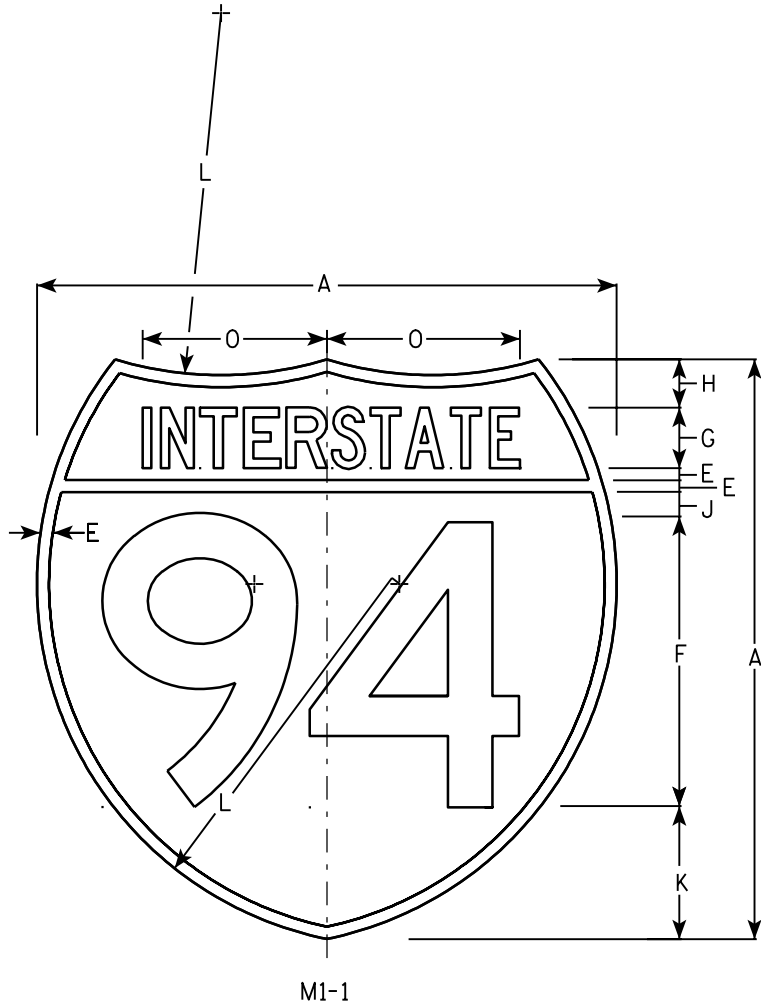
PROJECT NO:

HWY:

COUNTY:

SHEET NO: 114

E



NOTES

- 1. Sign is Type II - See Note 6 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:
Background - Top Red - Bottom Blue (See Note 6)
Message - White - See Note 6
- 3. Message Series - See note 5
- 4. Substitute appropriate numerals & adjust spacing as per plate A10-1.
- 5. M1-1 - Numerals - D
Interstate - C
M1-1A - All copy - C
- 6. Permanent Signs
Message - Type H Reflective
Detour or other temporary signs
Background - Reflective
Message - Reflective

Metric equivalent for these signs are:

SIZE	M1 - 1	SIZE	M1 - 1A
1			
2	600 mm X 600 mm	2	600 mm X 750 mm
3	900 mm X 900 mm	3	900 mm X 1125 mm
4	900 mm X 900 mm	4	900 mm X 1125 mm
5	900 mm X 900 mm	5	900 mm X 1125 mm

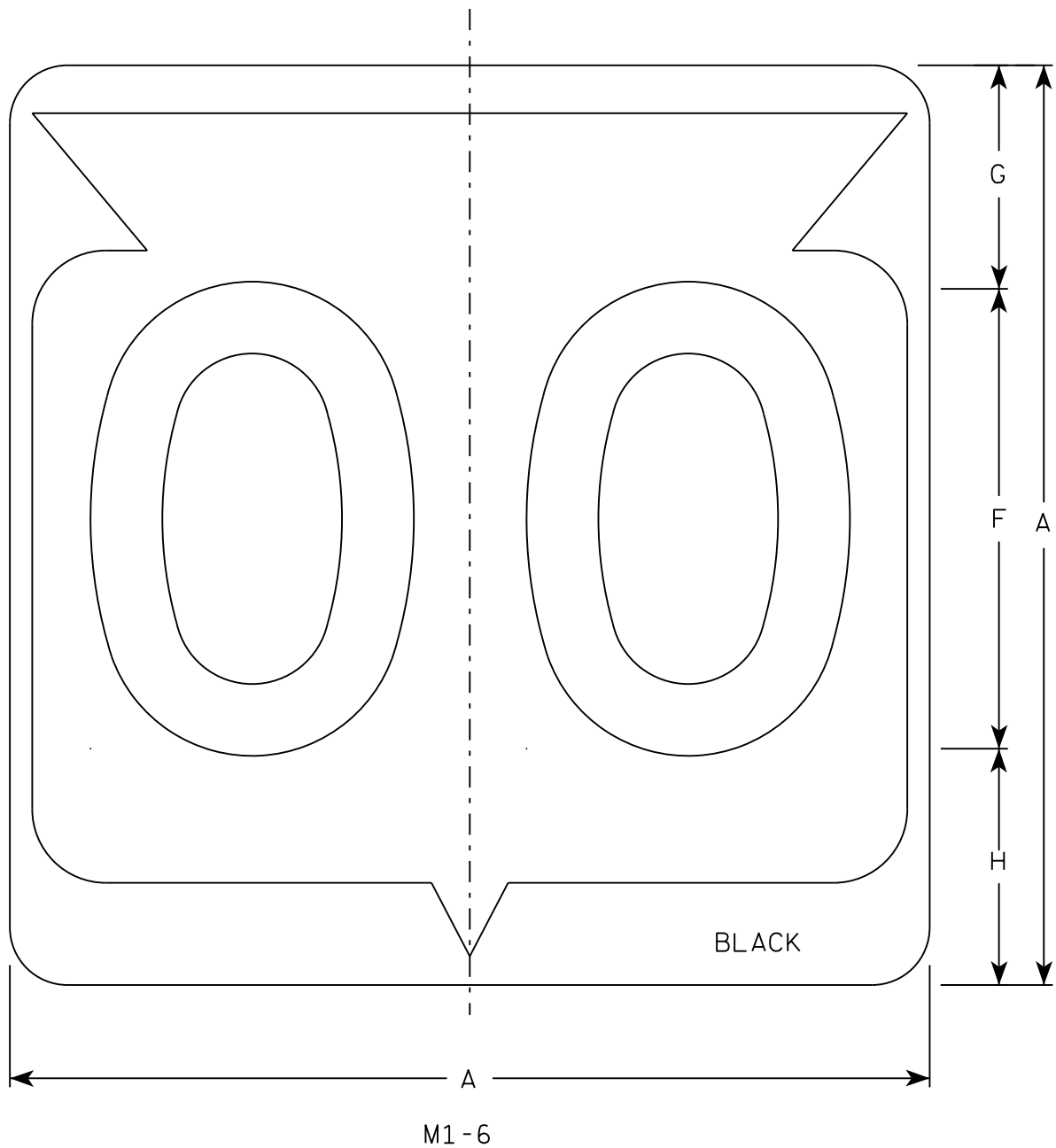
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Area sq. ft.	Area sq. ft.	Area m ²	Area m ²
1																													
2	24				1/2	12	2 1/2	2		1	5 1/2	15	24	17	7 7/8								30			3.13	3.91	.36	.46
3	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79	.81	1.05
4	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79	.81	1.05
5	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79	.81	1.05

INTERSTATE ROUTE MARKER
M1-1 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

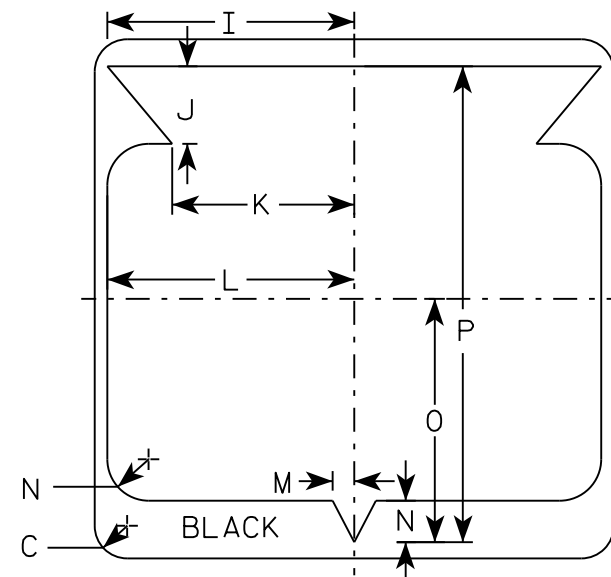
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 08/23/05 PLATE NO. M1-1.8



NOTES

1. Sign is Type II - Type H Reflective
2. Color:
Background - White
Message - Black
3. Message Series - D except 3 number signs Series C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



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

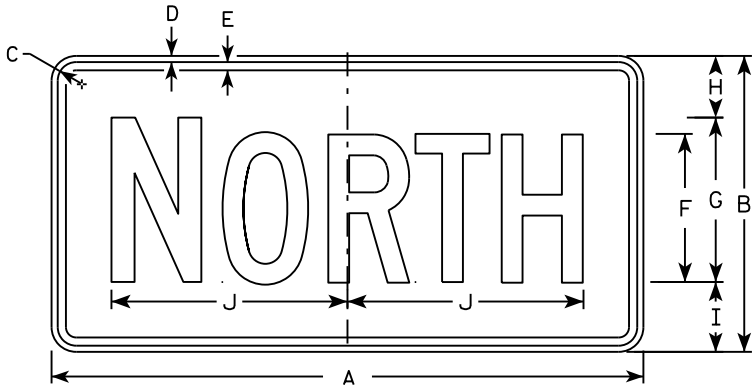
PROJECT NO:	HWY:	COUNTY:	SHEET NO: 116	E
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STATE ROUTE MARKER
M1-6 FOR ASSEMBLIES

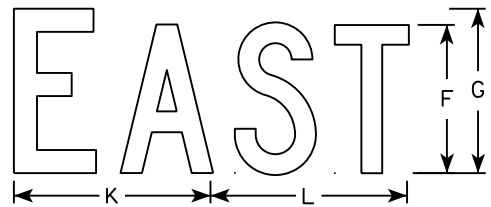
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

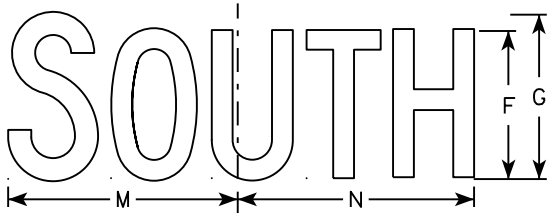
DATE 3/16/18 PLATE NO. M1-6.10



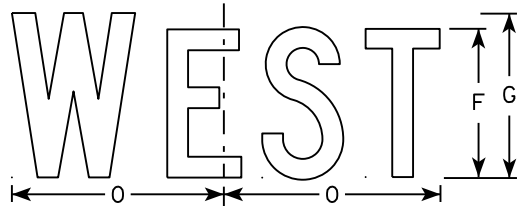
M3-1
MM3-1
MP3-1



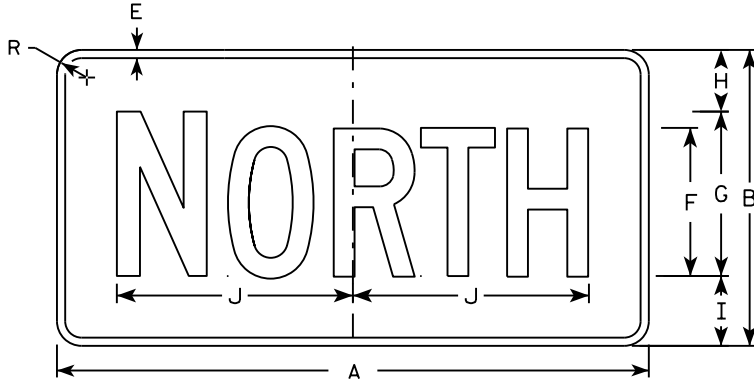
M3-2
MM3-2
MP3-2



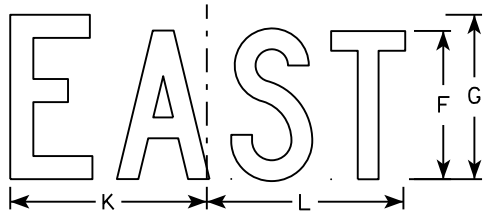
M3-3
MM3-3
MP3-3



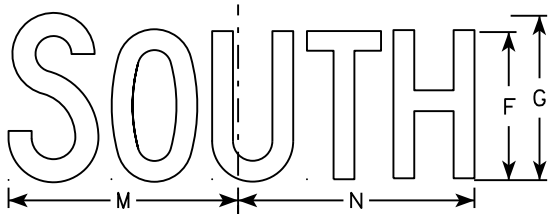
M3-4
MM3-4
MP3-4



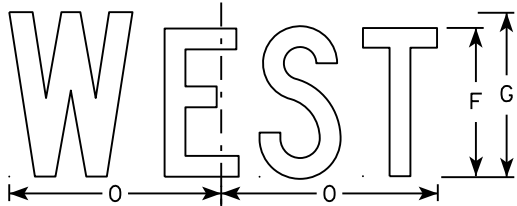
MB3-1
MK3-1
MN3-1



MB3-2
MK3-2
MN3-2



MB3-3
MK3-3
MN3-3



MB3-4
MK3-4
MN3-4

NOTES

1. All Signs Type II - Type H
2. Color:
Background - See note 5
Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M3-1 thru M3-4 Background - White
Message - Black
MB3-1 thru MB3-4 Background - Blue
Message - White
MK3-1 thru MK3-4 Background - Green
Message - White
MM3-1 thru MM3-4 Background - White
Message - Green
MN3-1 thru MN3-4 Background - Brown
Message - White
MP3-1 thru MP3-4 Background - White
Message - Blue
6. Note the first letter of each direction is larger than the remainder of the message.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	7	2 1/4	2 3/4	10 1/4	7 7/8	8 3/8	10 1/4	9 3/4	8 3/4			1 1/2									2.00
3	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
4	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
5	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5

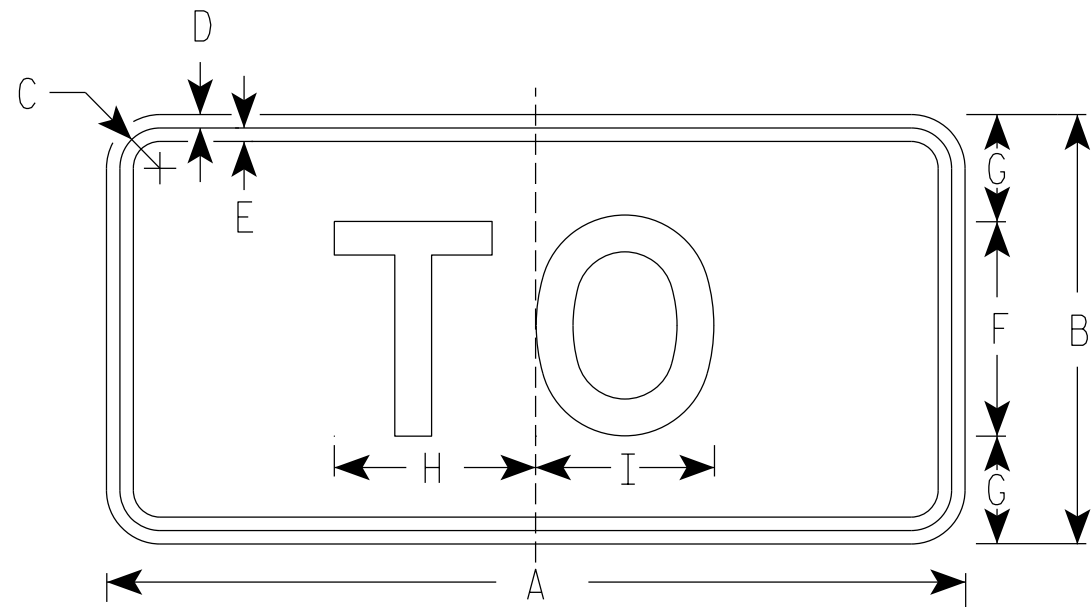
STANDARD SIGNS
M3-1 thru M3-4
SERIES

WISCONSIN DEPT OF TRANSPORTATION

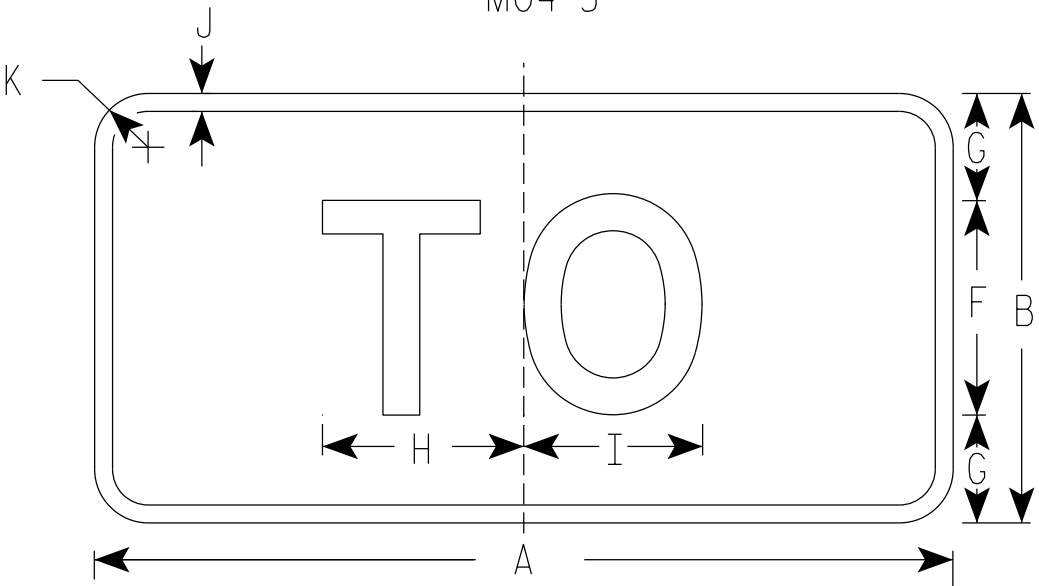
APPROVED
Matthew R. Rauch
for State Traffic Engineer

DATE 10/15/15 PLATE NO. 117 M3-1.14

7



M4-5
MM4-5
MP4-5
M04-5



MB4-5
MK4-5
MN4-5

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
Background - See note 5
Message - See note 5
3. Message Series - E
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M4-5 Background - White
Message - Black
MB4-5 Background - Blue
Message - White
MK4-5 Background - Green
Message - White
MM4-5 Background - White
Message - Green
MN4-5 Background - Brown
Message - White
MP4-5 Background - White
Message - Blue
M04-5 Background - Orange Type F Reflective
Message - Black

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	3	5 3/8	5 1/4	1/2	1 1/2																2.00
3	36	18	1 3/8	3/8	1/2	9	4 1/2	8 1/4	8 3/8	1/2	1 1/2																4.5
4	36	18	1 3/8	3/8	1/2	9	4 1/2	8 1/4	8 3/8	1/2	1 1/2																4.5
5	36	18	1 3/8	3/8	1/2	9	4 1/2	8 1/4	8 3/8	1/2	1 1/2																4.5

PROJECT NO:

HWY:

COUNTY:

SHEET NO: 118

E

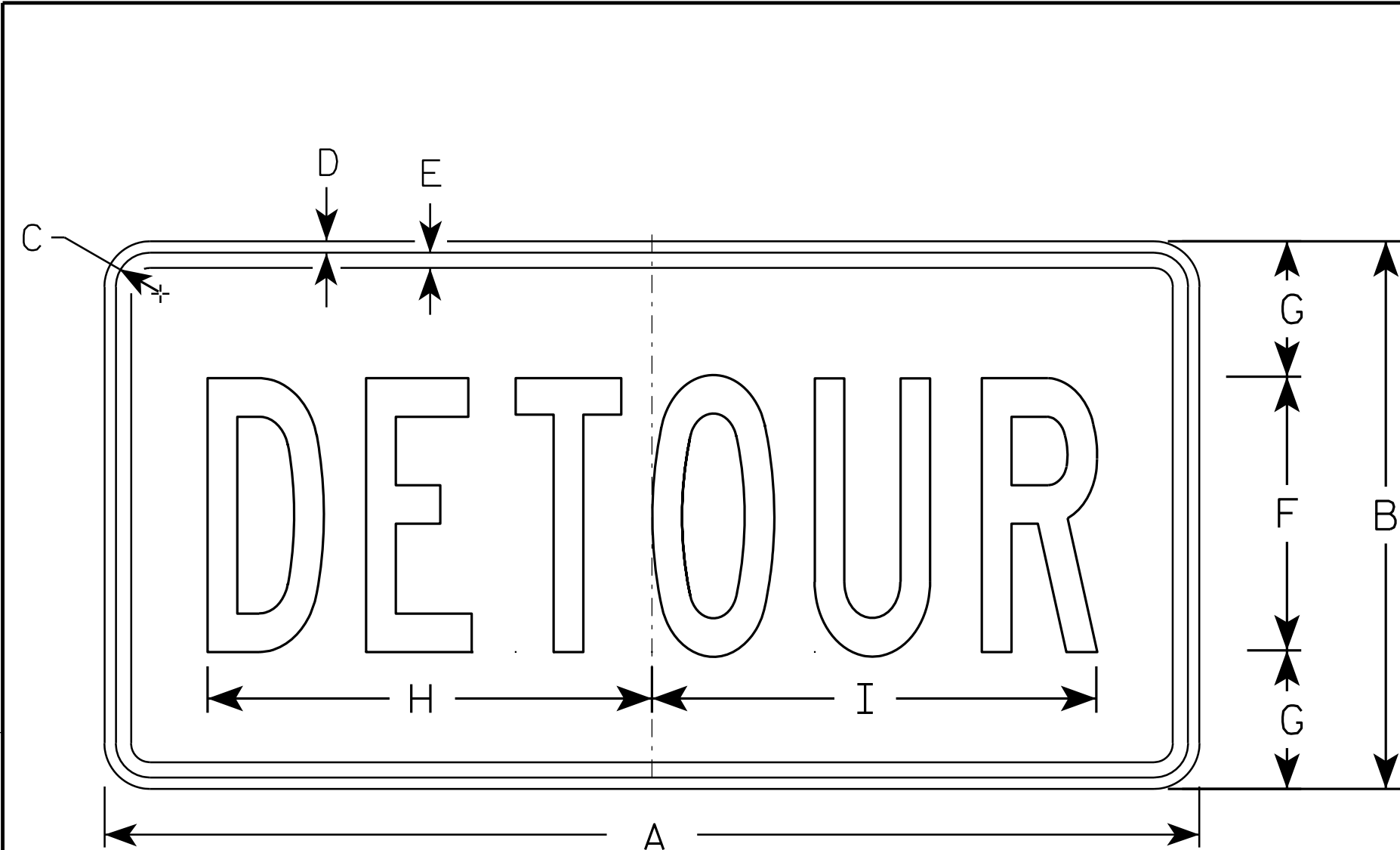
STANDARD SIGN
M4-5

WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
State Traffic Engineer

DATE 03/7/19 PLATE NO. M4-5.9

7



M4 - 8

NOTES

- 1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:
 - Background - Orange
 - Message - Black
- 3. Message Series - B
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

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

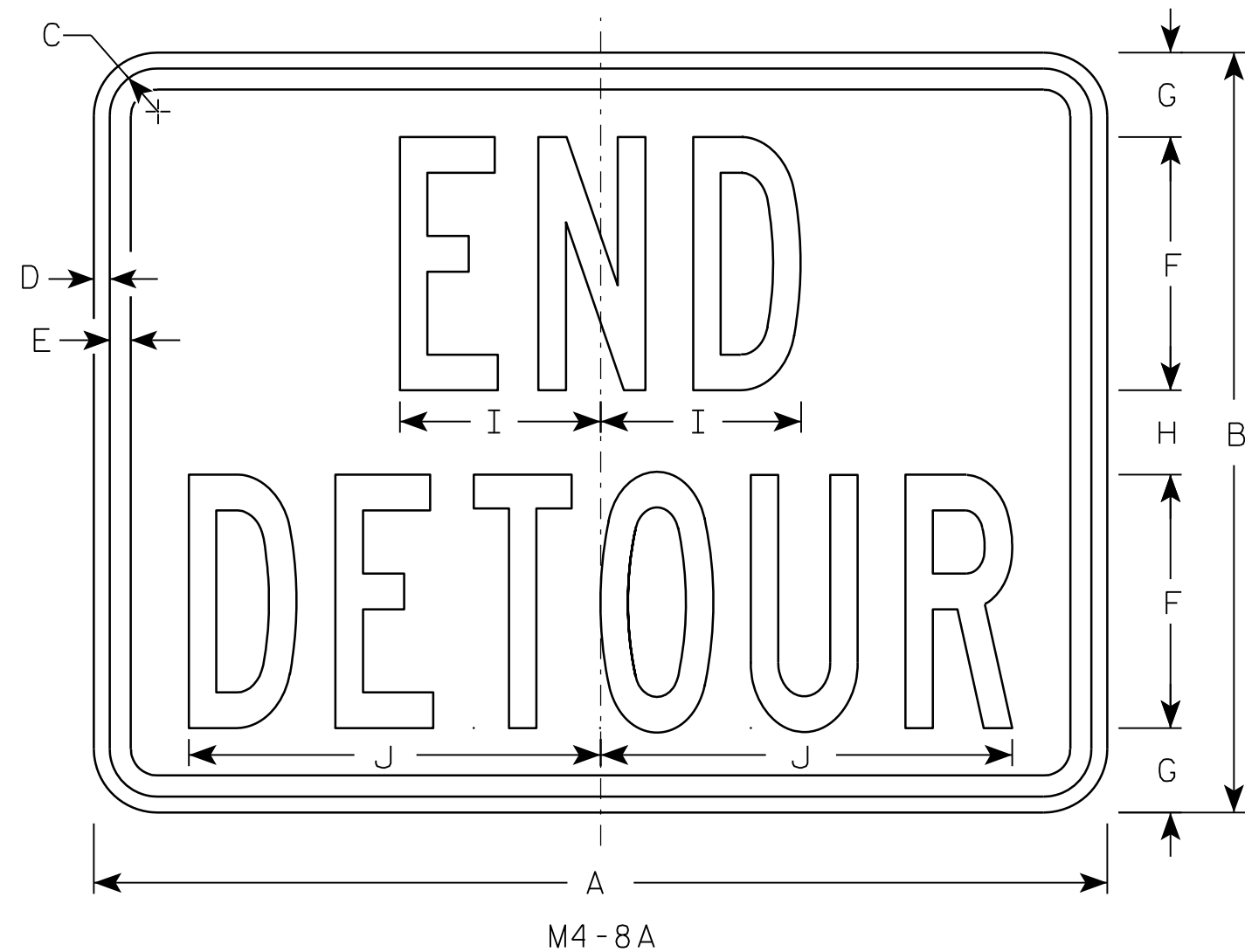
STANDARD SIGN

M4 - 8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 11/10/10 PLATE NO. M4-8.2



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Orange
Message - Black
3. Message Series - B
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	18	1 1/8	3/8	1/2	6	2	2	4 3/4	9 3/4																	3.0
3	30	24	1 1/8	3/8	1/2	8	2 1/2	3	6 3/4	13																	5.0
4																											
5																											

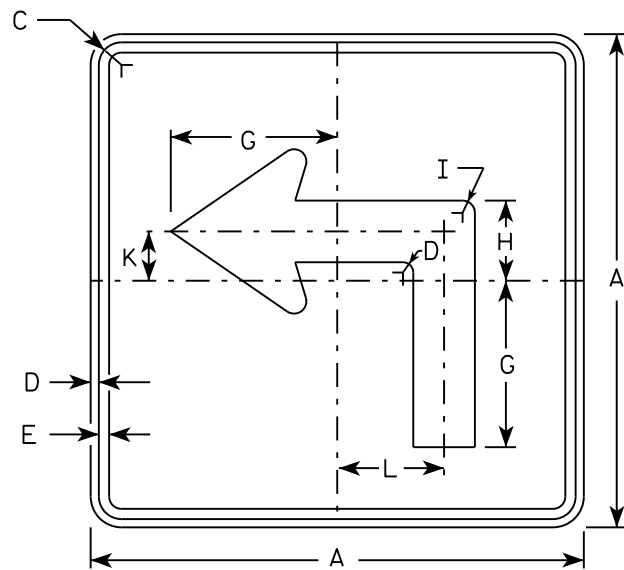
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 120	E
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STANDARD SIGN
M4-8A

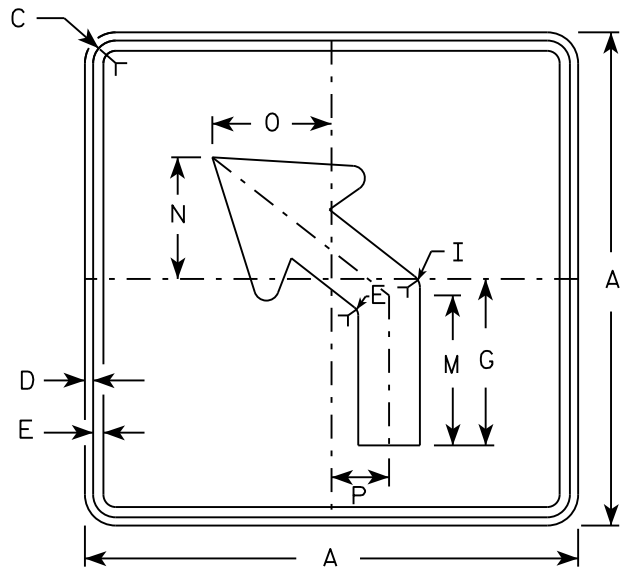
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

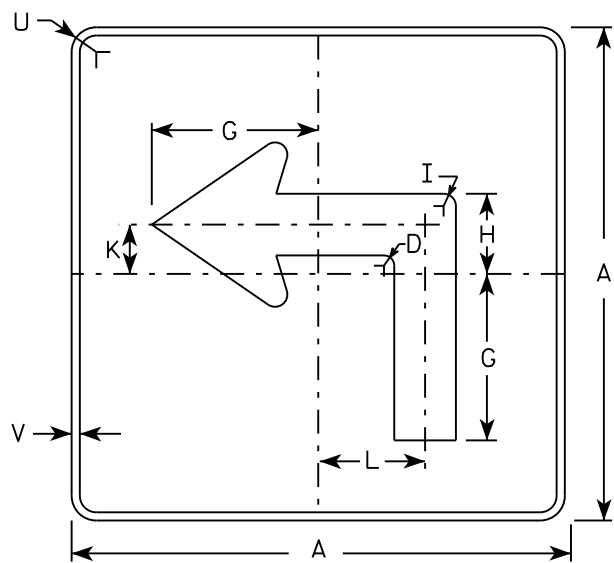
DATE 3/9/11 PLATE NO. M4-8A.2



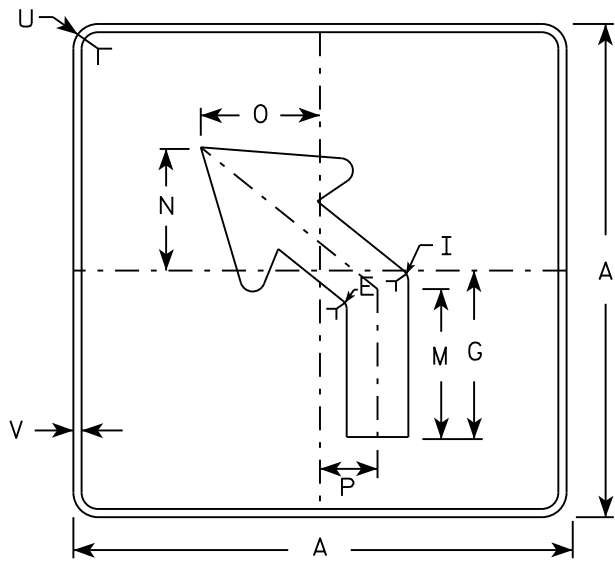
M5-1L
MM5-1L
M05-1L
MP5-1L



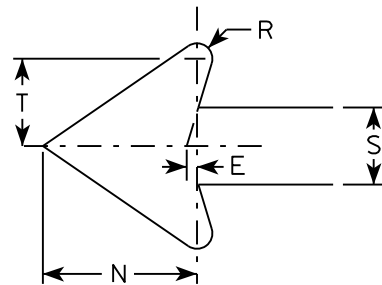
M5-2L
MM5-2L
M05-2L
MP5-2L



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



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



NOTES

- Signs are Type II - Type H reflective except as shown
- Color:
Background - See note 4
Message - See note 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.
- | | |
|-----------------|---|
| M5-1 and M5-2 | Background - White |
| | Message - Black |
| MB5-1 and MB5-2 | Background - Blue |
| | Message - White |
| MK5-1 and MK5-2 | Background - Green |
| | Message - White |
| MM5-1 and MM5-2 | Background - White |
| | Message - Green |
| MN5-1 and MN5-2 | Background - Brown |
| | Message - White |
| M05-1 and M05-2 | Background - Orange - Type F Reflective |
| | Message - Black |
| MP5-1 and MP5-2 | Background - White - Type H Reflective |
| | Message - Blue |
| MR5-1 and MR5-2 | Background - Brown |
| | Message - Yellow |
- M5-1R same as M5-1L except arrow points right.
- M5-2R same as M5-2L except arrow tilts right.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7	3 3/8	5/8		2 1/8	4 1/2	6 3/8	5 1/4	5	2 1/2		1/2	2 5/8	3	1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25
4	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25
5	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25

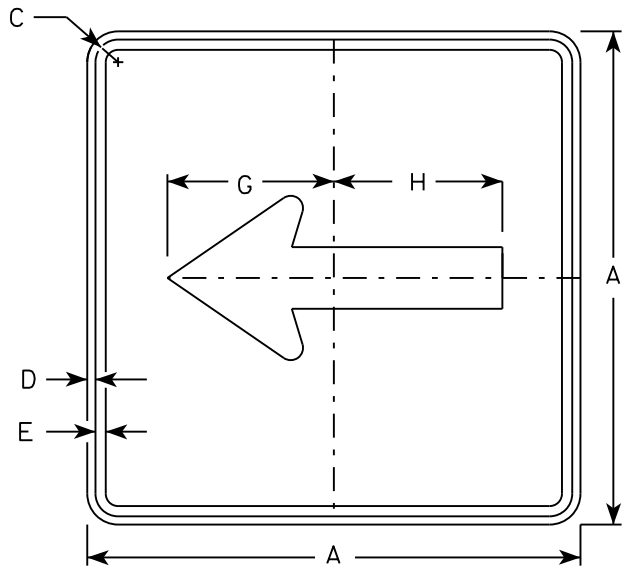
PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
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STANDARD SIGN
M5-1 & M5-2

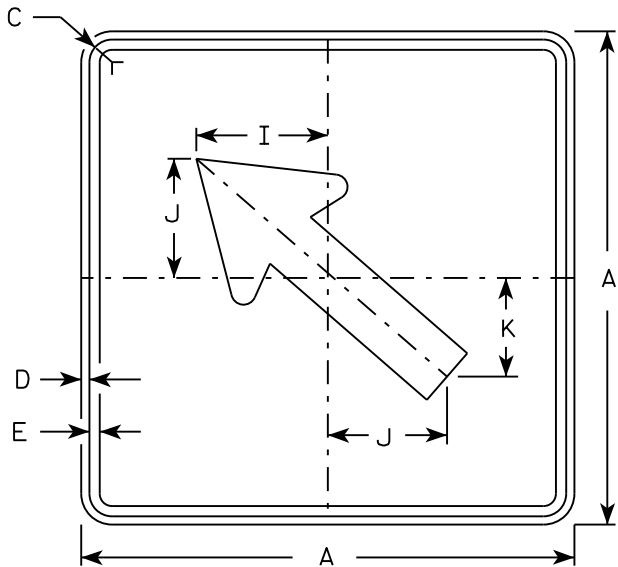
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

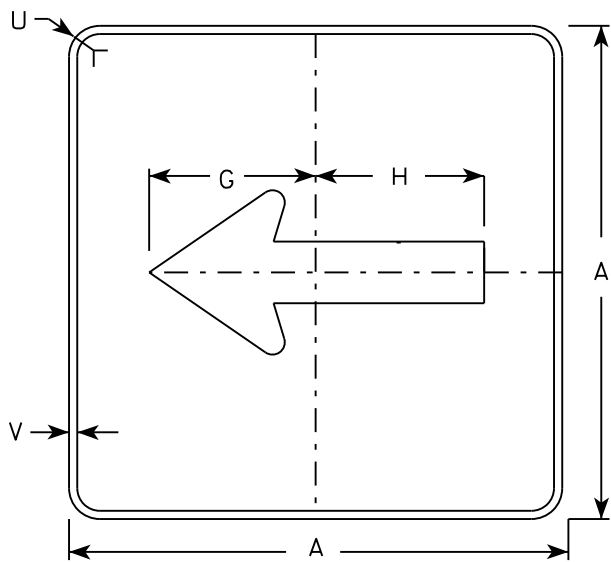
DATE 10/15/15 PLATE 121 M5-1.13



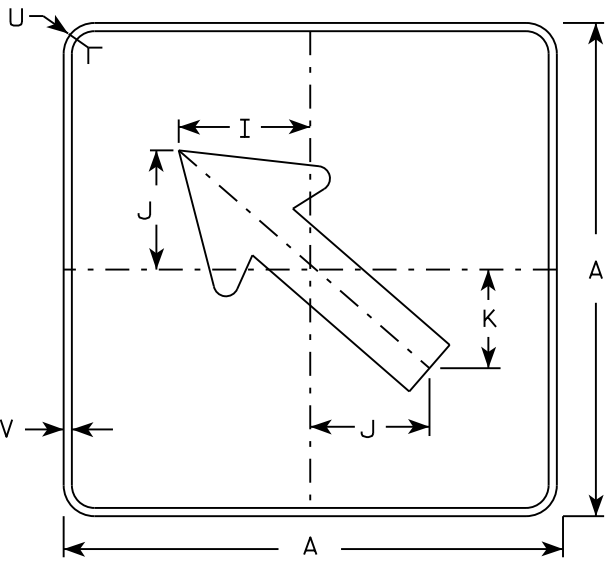
M6 - 1
MM6 - 1
M06 - 1
MP6 - 1



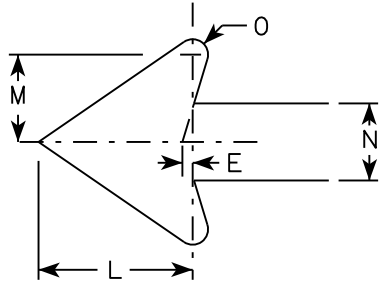
M6 - 2
MM6 - 2
M06 - 2
MP6 - 2



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



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



NOTES

- 1. Signs are Type II - Type H except as Shown
- 2. Color:
Background - See note 4
Message - See note 4
- 3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- 4. M6-1 and M6-2 Background - White
Message - Black
MB6-1 and MB6-2 Background - Blue
Message - White
MK6-1 and MK6-2 Background - Green
Message - White
MM6-1 and MM6-2 Background - White
Message - Green
MN6-1 and MN6-2 Background - Brown
Message - White
M06-1 and M06-2 Background - Orange - Type F Reflective
Message - Black
MP6-1 and MP6-2 Background - White
Message - Blue
MR6-1 and MR6-2 Background - Brown
Message - Yellow

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7 1/2	7 1/8	5 5/8	5	4 1/4	5 1/4	3	2 5/8	1/2						1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25
4	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25
5	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

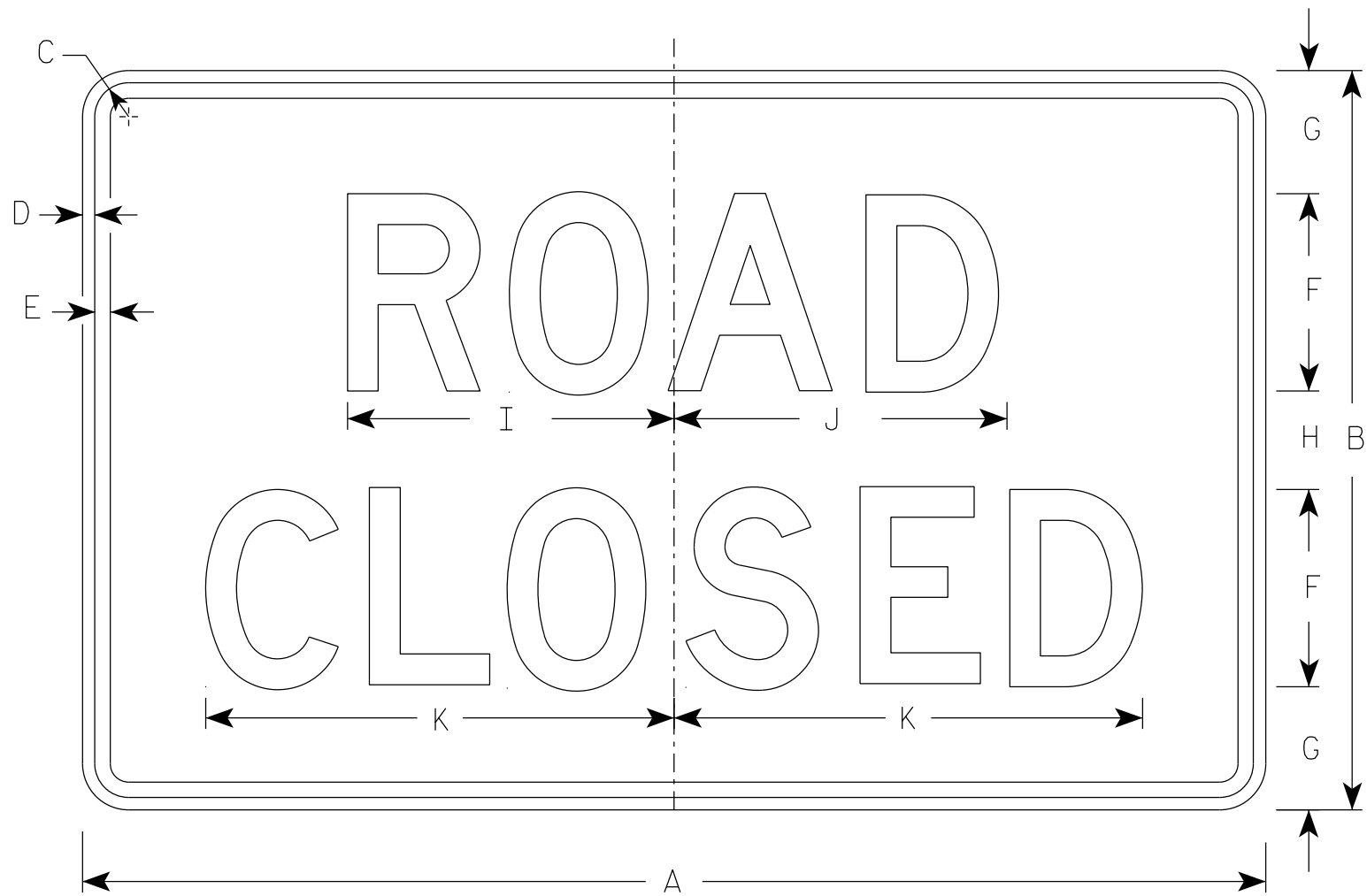
E

STANDARD SIGN
M6 - 1 & M6 - 2
SERIES

WISCONSIN DEPT OF TRANSPORTATION

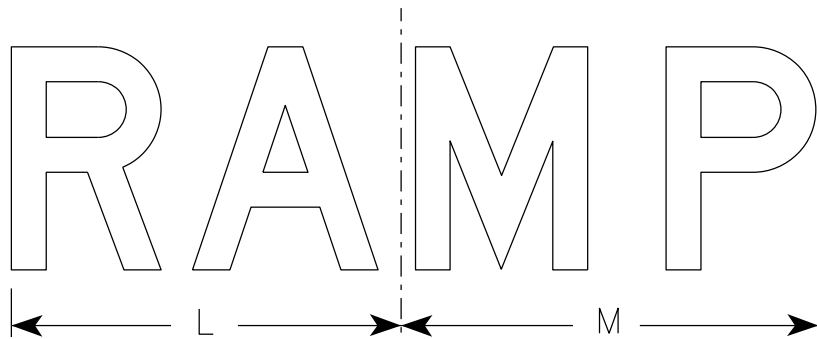
APPROVED
Matthew R. Rauch
for State Traffic Engineer

DATE 10/15/15 PLAT 122 M6-1.15

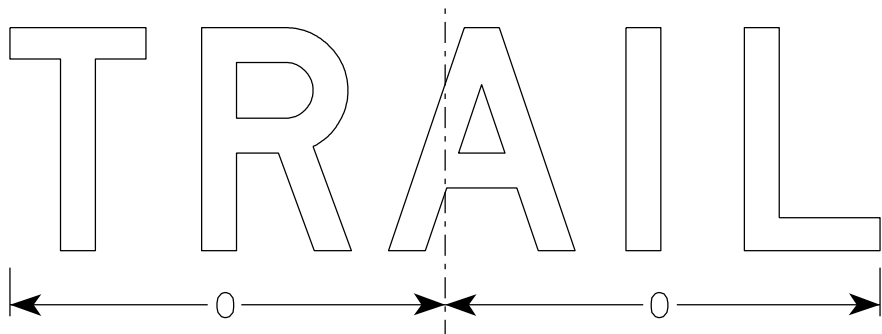


R11-2

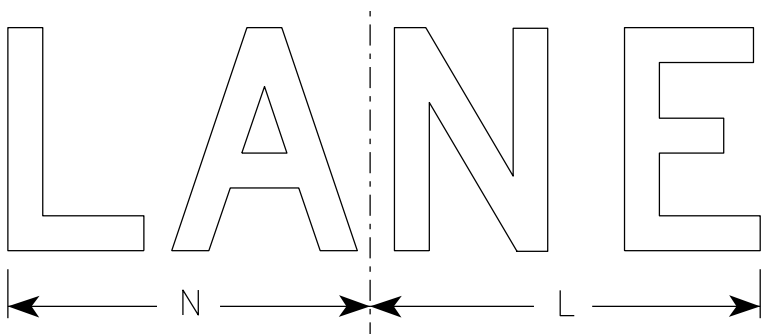
- NOTES
1. Sign is Type II - Type H Reflective
 2. Color:
Background - White
Message - Black
 3. Message Series - D
 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
 5. Modify the message as required.



R11-2R



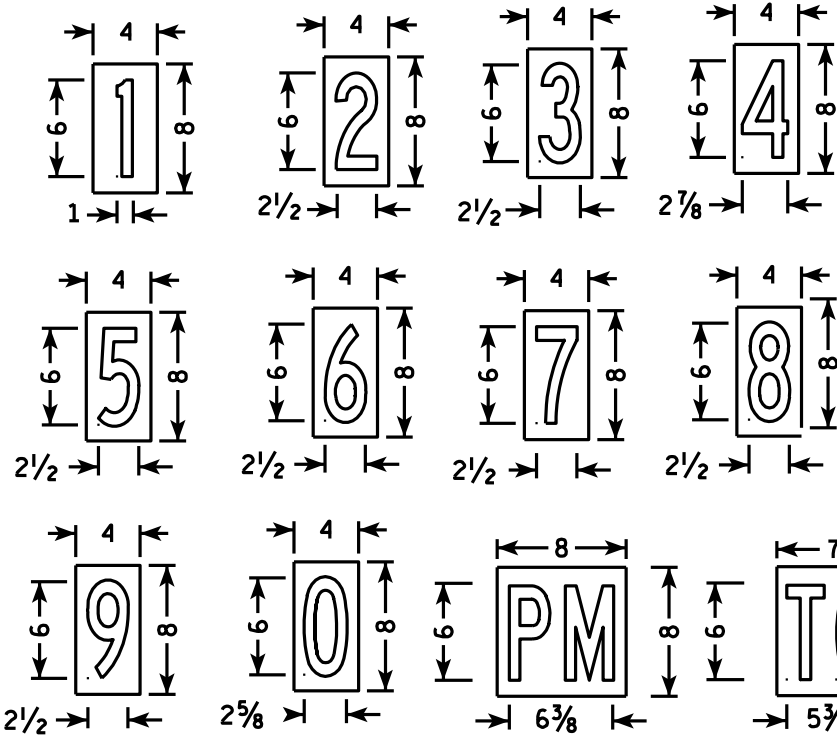
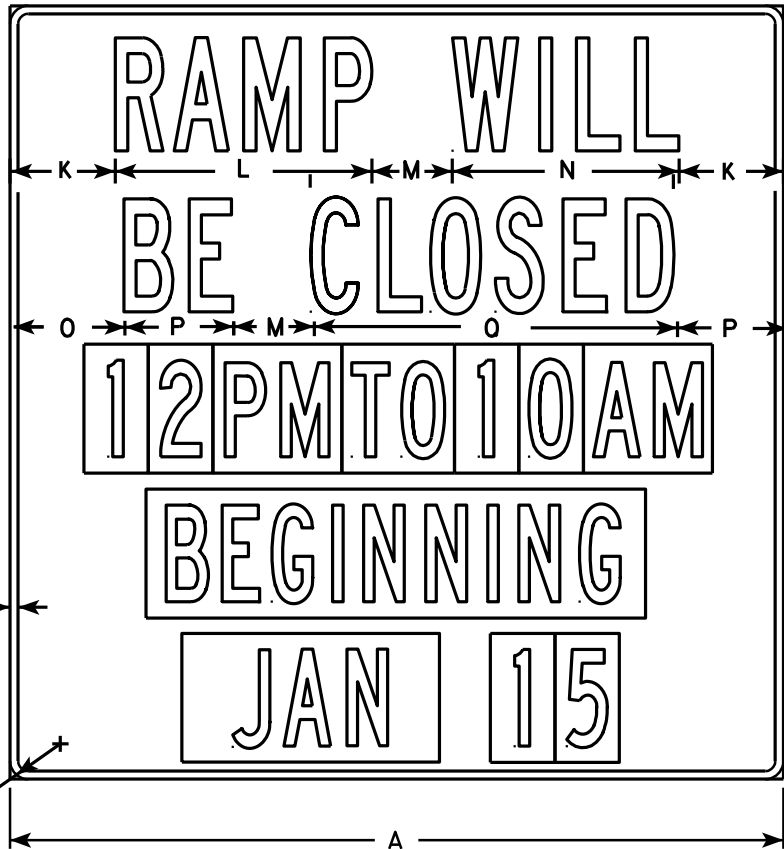
R11-2T



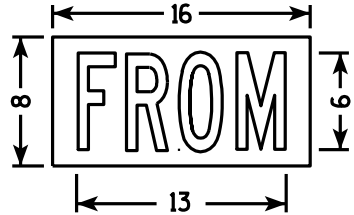
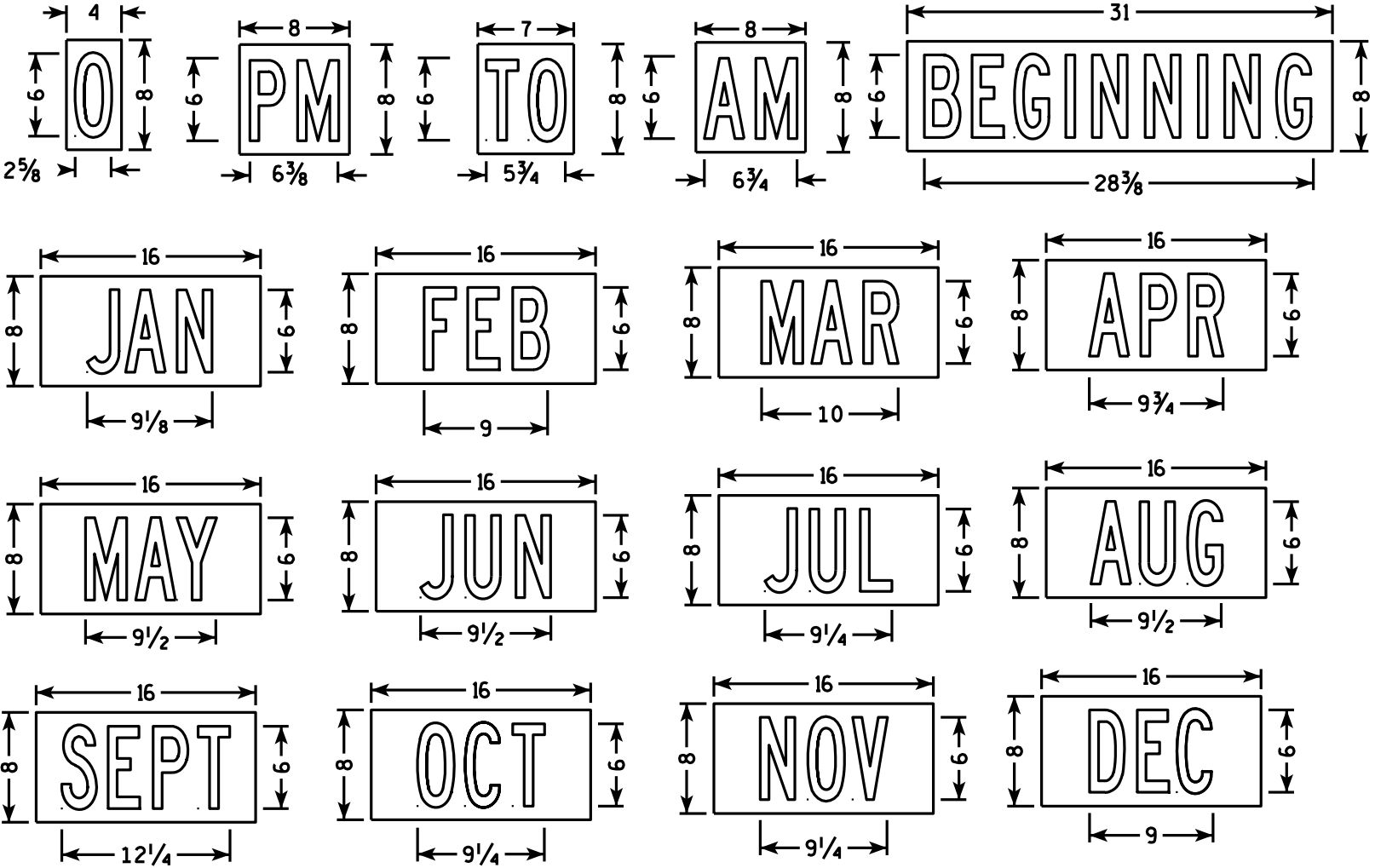
R11-2L

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	
1																												
2S	48	30	1 3⁄8	1⁄2	5⁄8	8	5	4	13 1⁄4	13 1⁄2	19	14	15	13	15 5⁄8													10.0
2M	48	30	1 3⁄8	1⁄2	5⁄8	8	5	4	13 1⁄4	13 1⁄2	19	14	15	13	15 5⁄8													10.0
3	48	30	1 3⁄8	1⁄2	5⁄8	8	5	4	13 1⁄4	13 1⁄2	19	14	15	13	15 5⁄8													10.0
4	48	30	1 3⁄8	1⁄2	5⁄8	8	5	4	13 1⁄4	13 1⁄2	19	14	15	13	15 5⁄8													10.0
5	48	30	1 3⁄8	1⁄2	5⁄8	8	5	4	13 1⁄4	13 1⁄2	19	14	15	13	15 5⁄8													10.0

STANDARD SIGN R11-2	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> For State Traffic Engineer
DATE 3/29/2021	PLATE NO. R11-2.11



- NOTES
1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
 2. Color:
Background - White
Message - Black
 3. Message Series - B
 4. Message plaques consist of Type H Reflective sheeting with the appropriate non-reflective black message applied to .040 aluminum and screwed to the base sign.



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		2 1/4	1/2		2	6	7	3		6 1/2	15 7/8	5	14 1/8	6 7/8	6 3/4	22 1/2										16.0
2M	48		2 1/4	1/2		2	6	7	3		6 1/2	15 7/8	5	14 1/8	6 7/8	6 3/4	22 1/2										16.0
3																											
4																											
5																											

STANDARD SIGN
R11-51

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 4/1/11 PLATE NO. R11-51.4

PROJECT NO:

HWY:

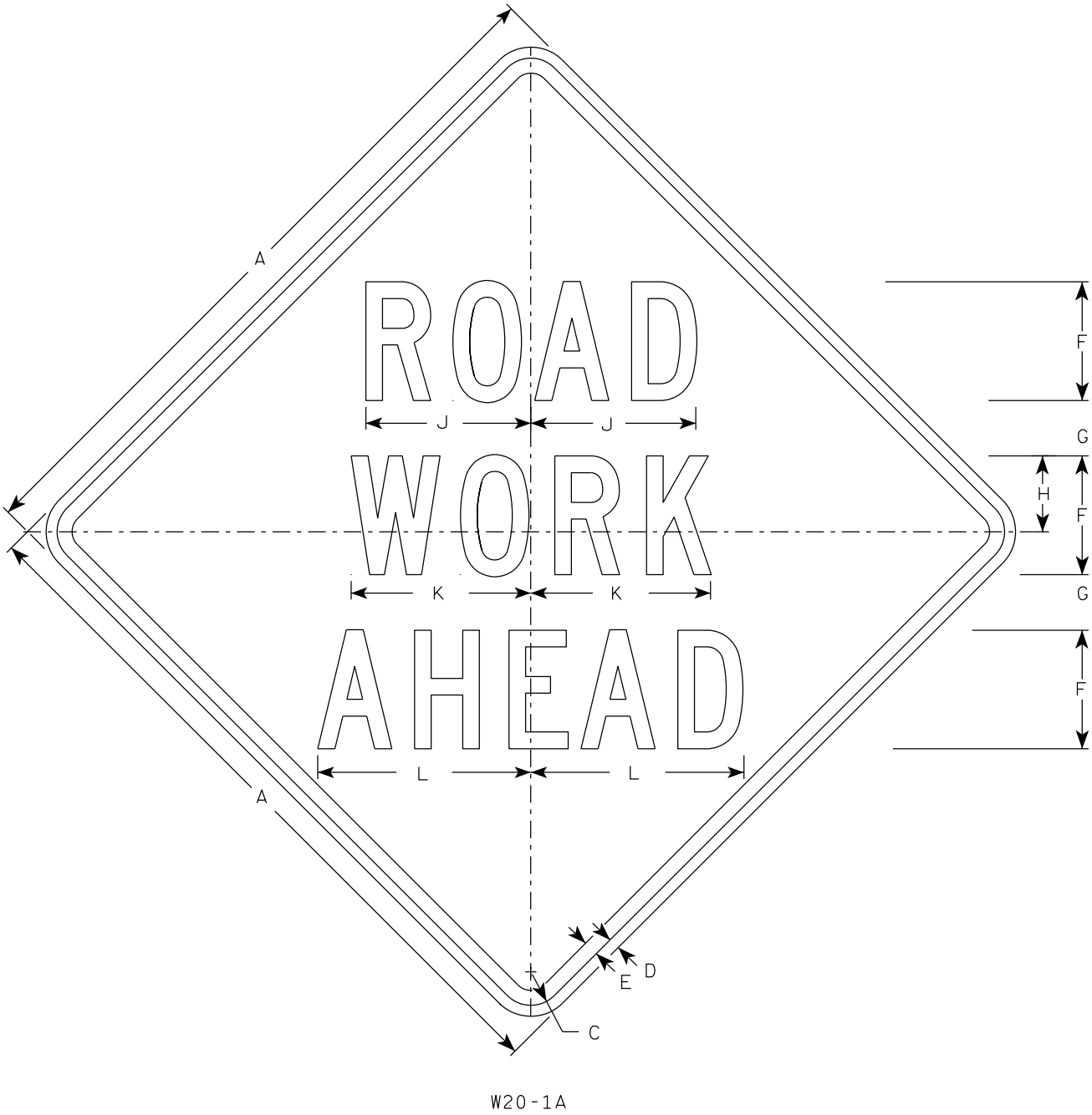
COUNTY:

SHEET NO: 124

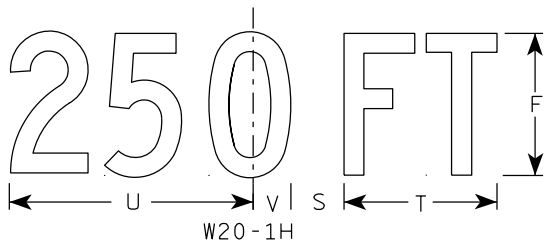
E

NOTES

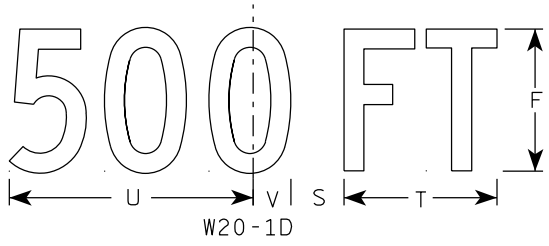
1. Sign is Type II - Type F Reflective
2. Color:
Background - Orange
Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



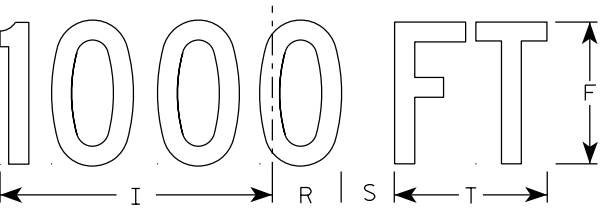
W20-1A



W20-1H



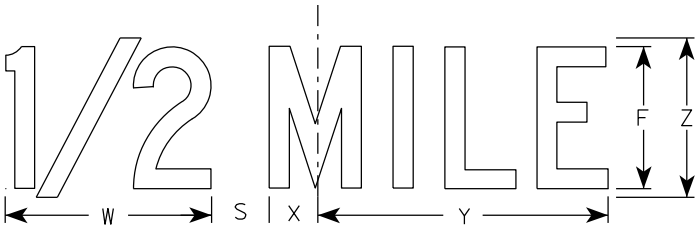
W20-1D



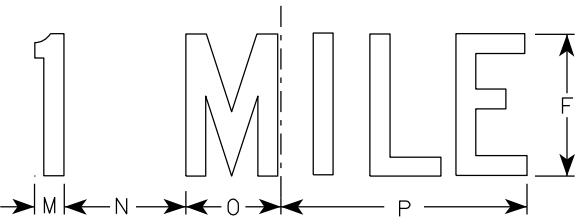
W20-1C



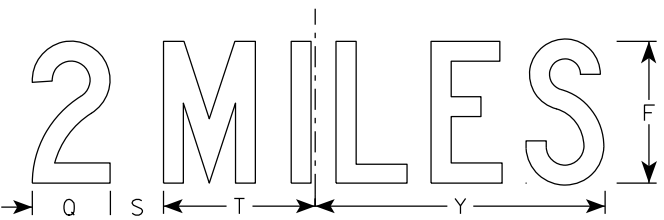
W20-1B



W20-1G



W20-1F



W20-1E

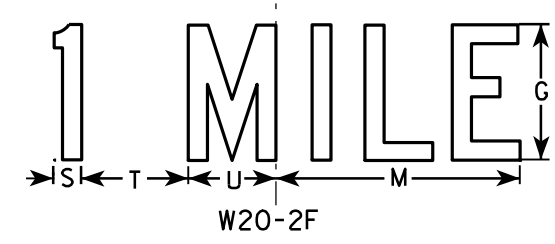
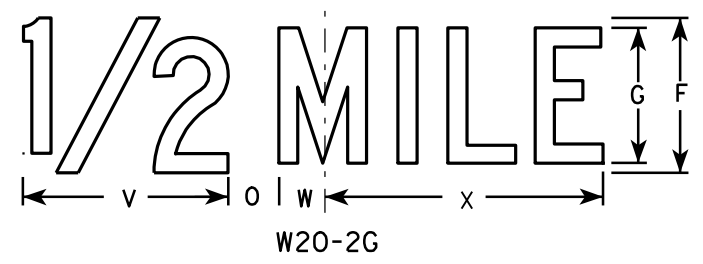
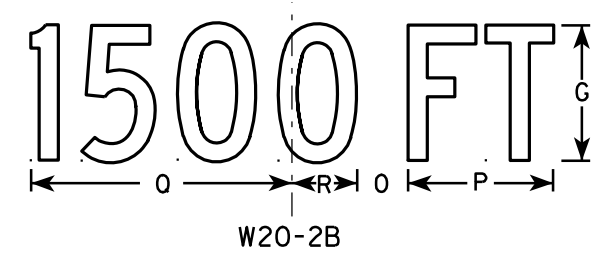
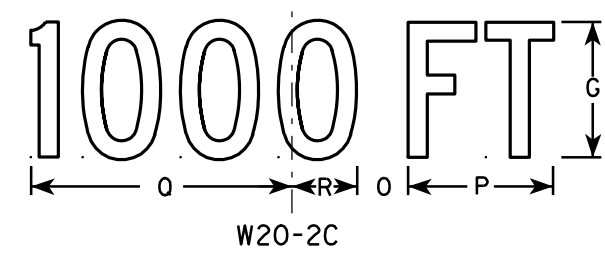
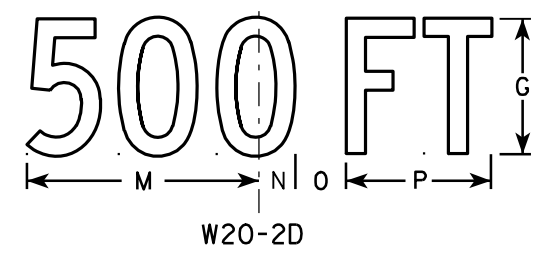
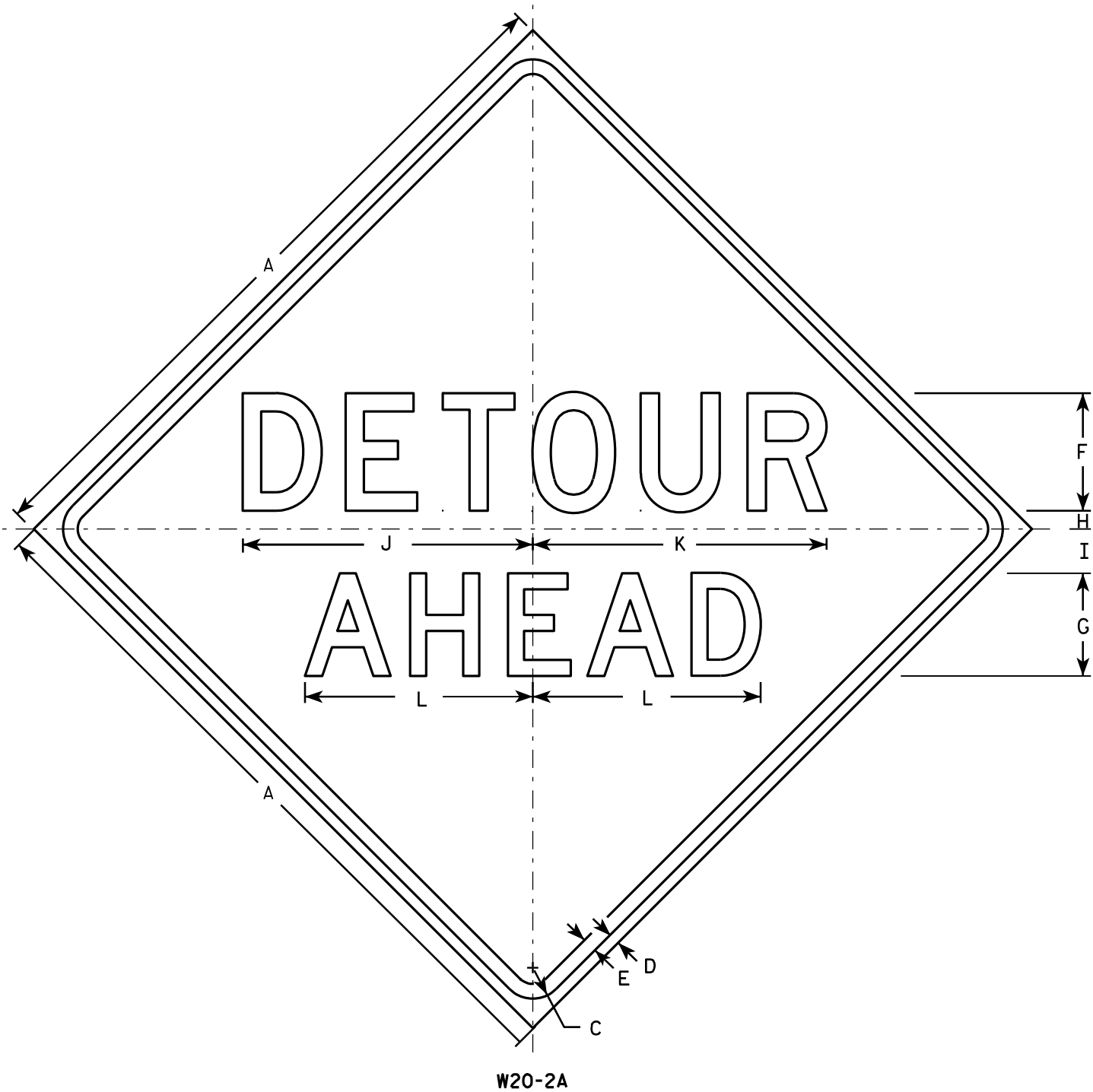
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	A _{req} sq. ft.
1	36		1 5/8	5/8	3/4	5	2 5/8	3 1/4	10 1/8	7	7 5/8	8 7/8	1 1/8	4 1/2	3 1/2	9	3 1/4	2 1/2	2 1/4	5 5/8	9	1 3/8	8	1 3/4	10 3/4	6	9.0
2S	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
2M	48		2 1/4	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		2 1/4	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		2 1/4	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		2 1/4	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 3/25/2020 PLATE NO. W20-1.11



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Orange
Message - Black
3. Message Series - See note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Line 1 is Series D.
Line 2 is Series D for AHEAD and Series C for all other distances.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	6	5	1	2 1/4	14 3/4	15	11 5/8	9	1 3/8	1 7/8	5 5/8	10 1/8	2 1/2	1 1/8	4 1/2	3 1/2	8	1 3/4	10 3/4			9.0
2S	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
2M	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
3	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
4	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
5	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0

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

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-2.6

PROJECT NO:

HWY:

COUNTY:

SHEET NO: 126

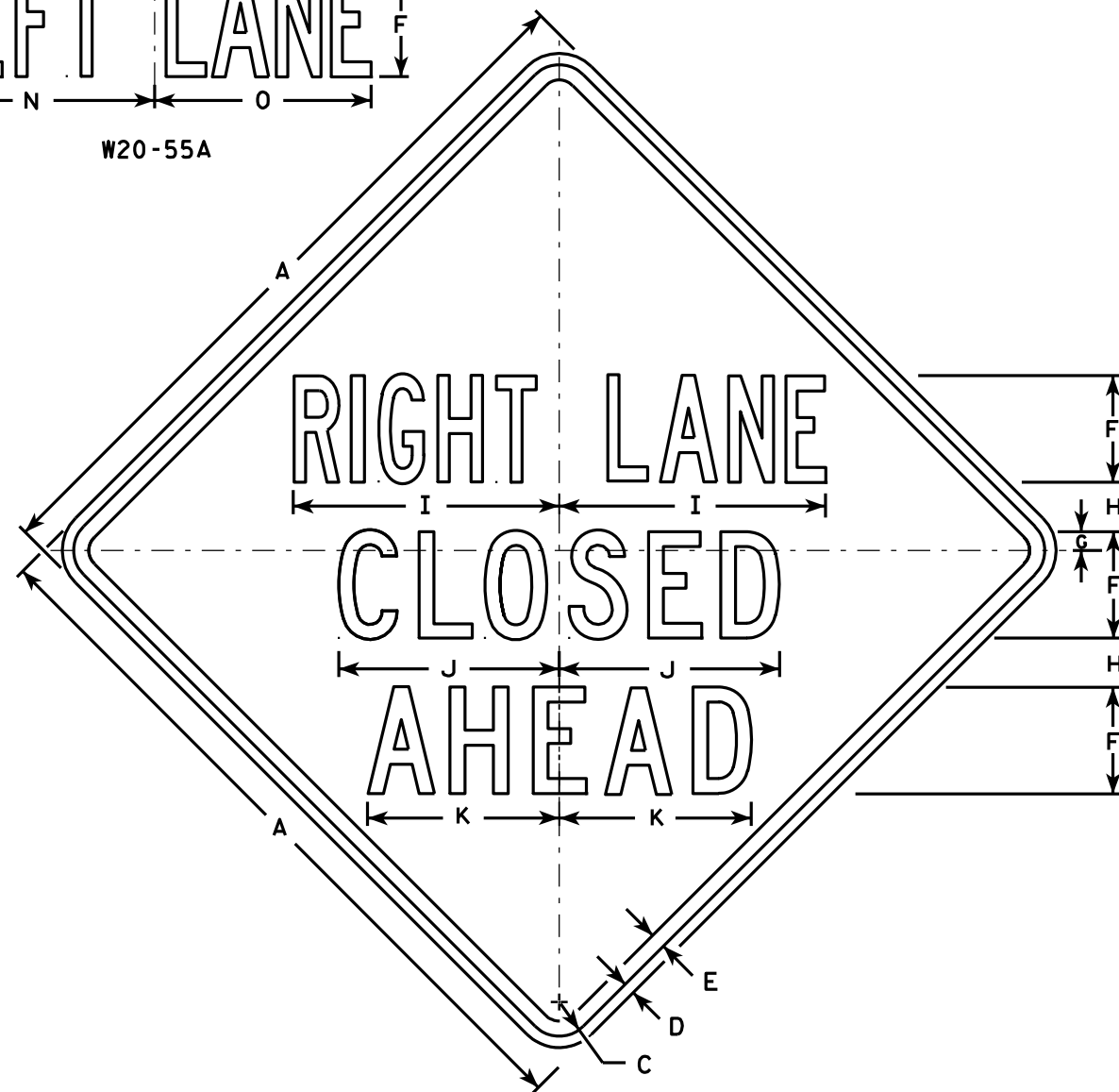
E

CENTER LANE

W20-56A

LEFT LANE

W20-55A



W20-5A

500 FT

W20-5D

1000 FT

W20-5C

1500 FT

W20-5B

1/2 MILE

W20-5G

1 MILE

W20-5F

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Orange
Message - Black
3. Message Series - See Note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. "-----LANE" is Series B.
All other copy is Series C.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	6	1 5/8	5/8	3/4	5	7/8	2 1/2	13 1/8	10 3/4	9 1/2	14 1/4	13 5/8	12	12	1 3/8	1 1/8	4 1/2	3 1/2	9	1 7/8	5 5/8	10 1/8	2 1/2	1 3/4	8	9.0
2S	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
2M	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
3	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
4	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
5	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0

PROJECT NO:

HWY:

COUNTY:

STANDARD SIGN
W20-5A, B, C, D, F & G

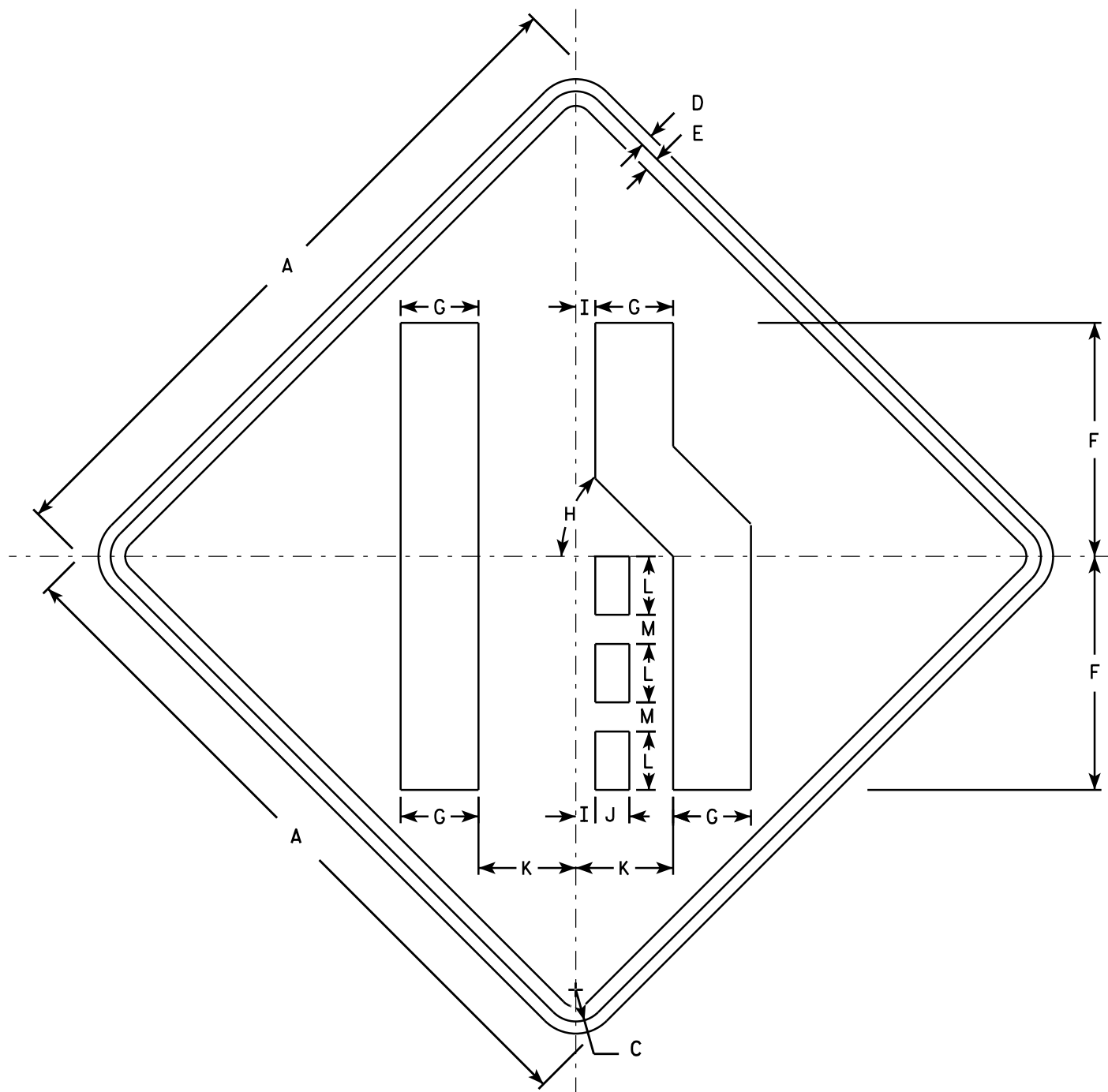
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-5.11

SHEET NO: 127

E



W04-2R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Orange
Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W04-2L is the same as W04-2R except the symbol is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	12	4	45°	1	1 3/4	5	3	1 1/2														9.0
2S	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
2M	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
3	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
4	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
5	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0

STANDARD SIGN

W04-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Matthew R. Rauch
For State Traffic Engineer

DATE 11/20/13

PLATE 128

104-2.1

SHEET NO:

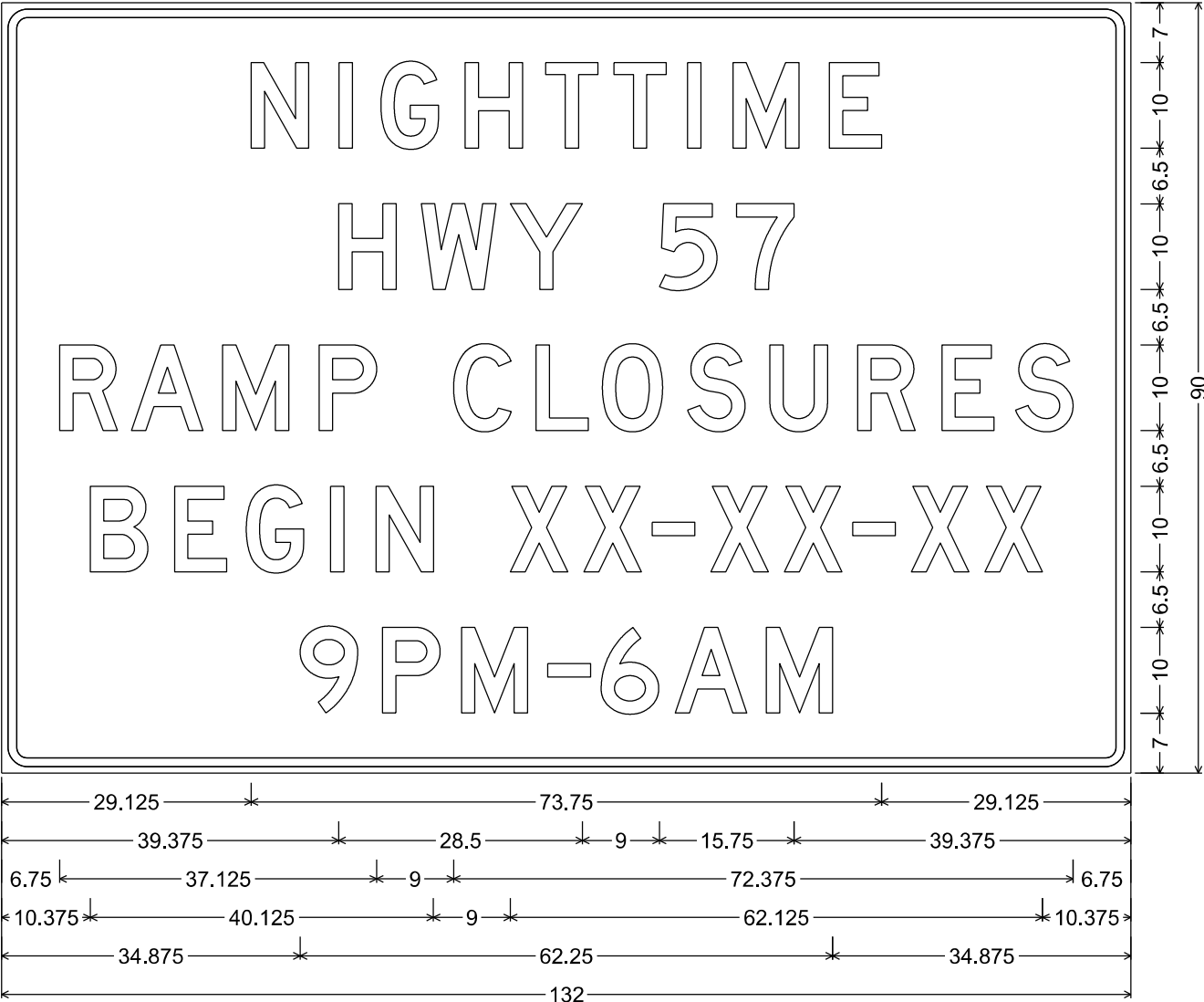
E

NOTES

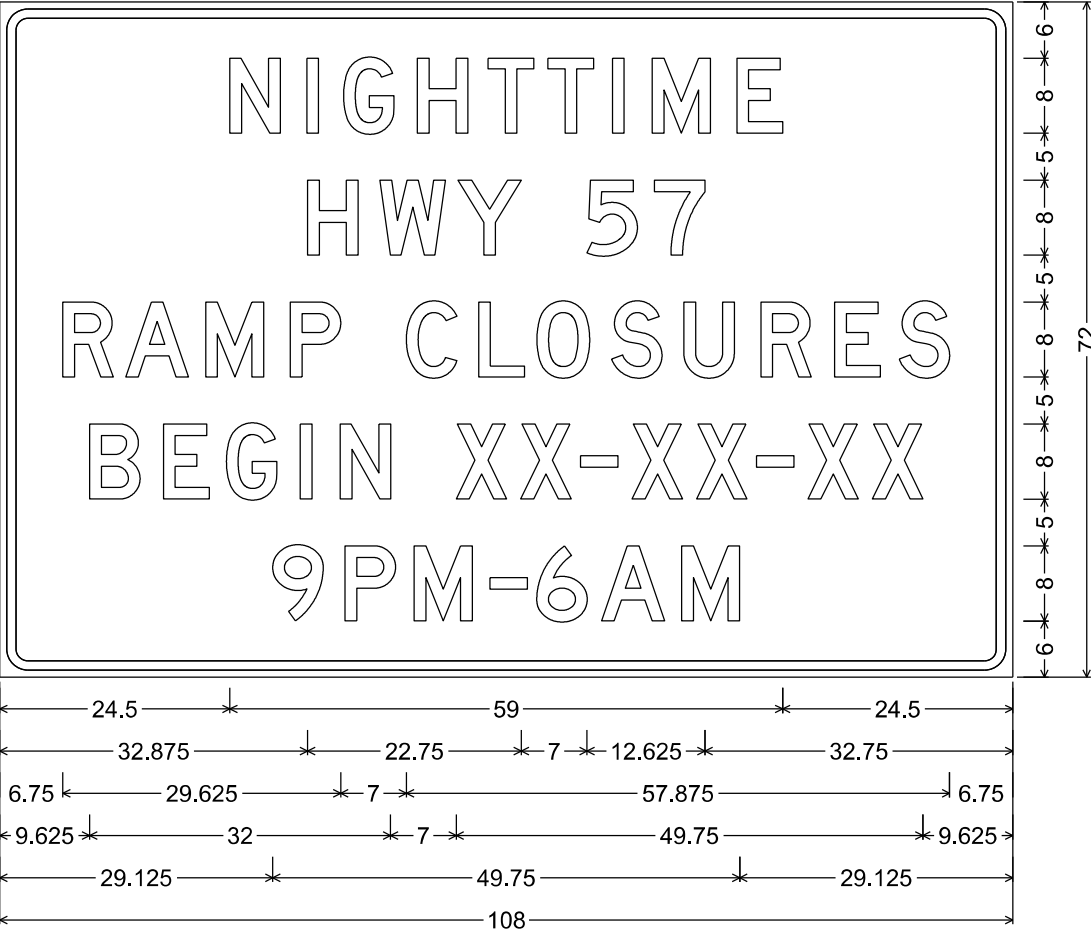
1. Fixed Message Signs are Type II - Type F Reflective
2. Color:

Background - Orange

Message - Black
3. Message Series - D



3.000" Radius, 1.000" Border, 0.750" Indent



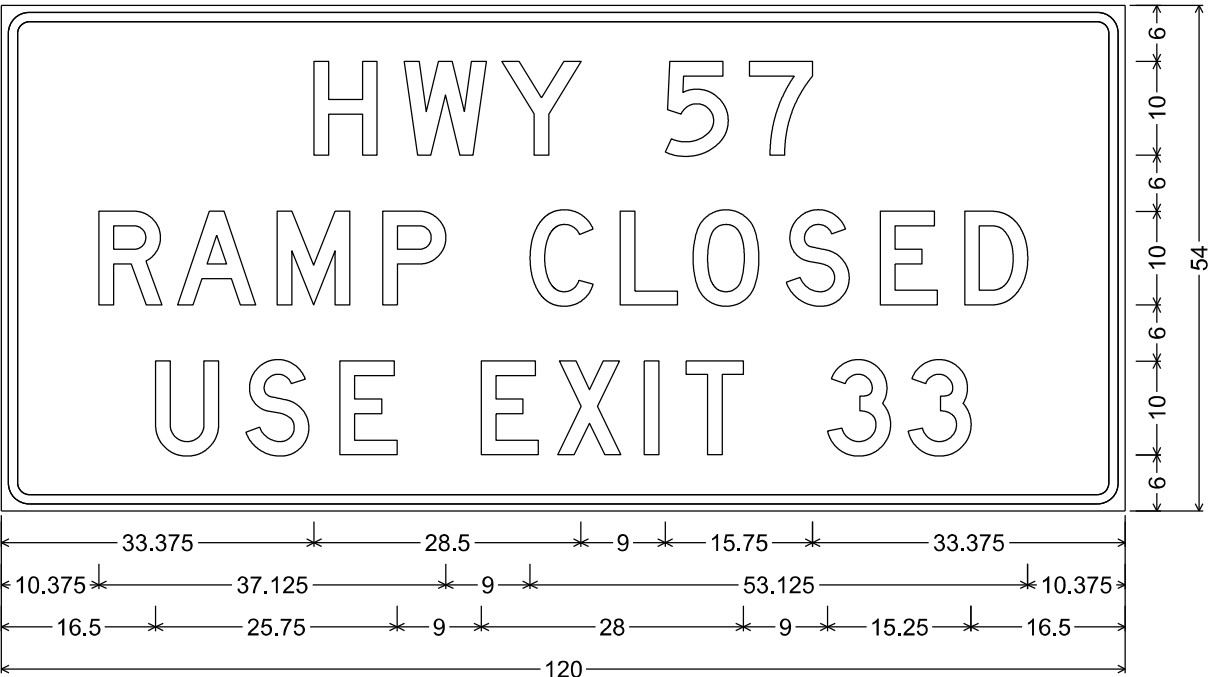
3.000" Radius, 1.000" Border, 0.750" Indent

NOTES

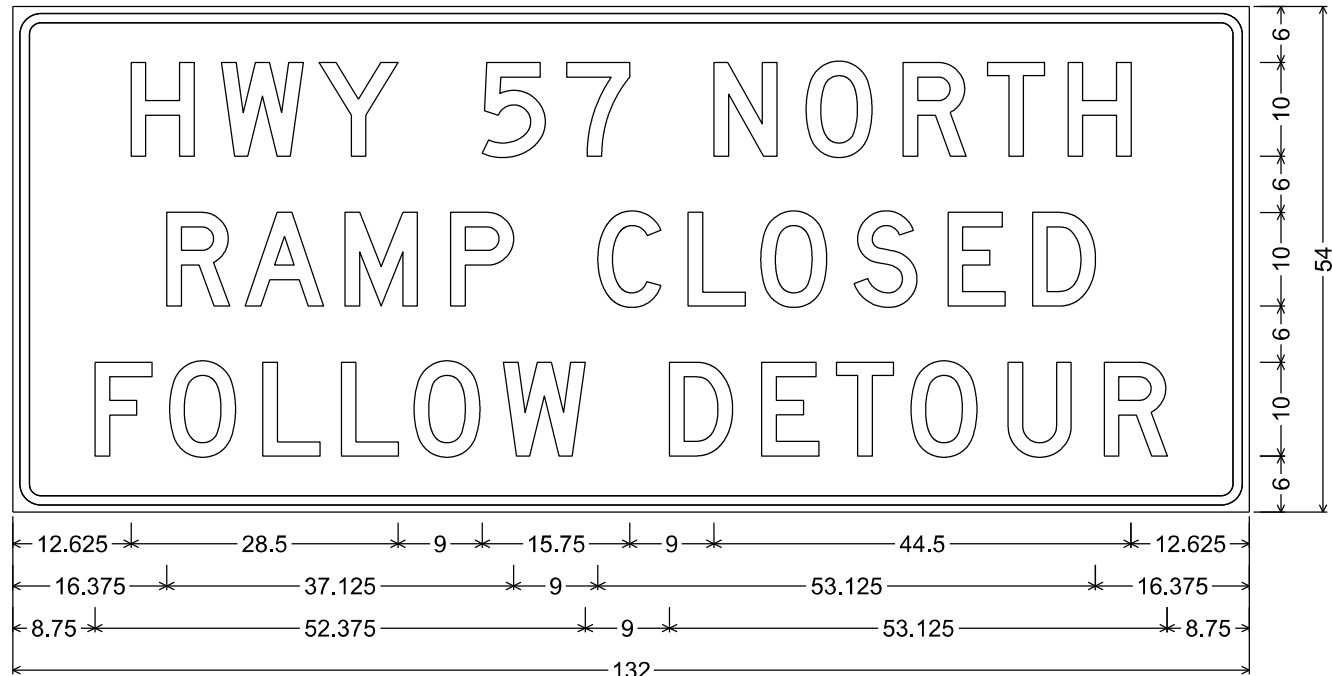
1. Fixed Message Signs are Type II - Type F Reflective
2. Color:

Background - Orange

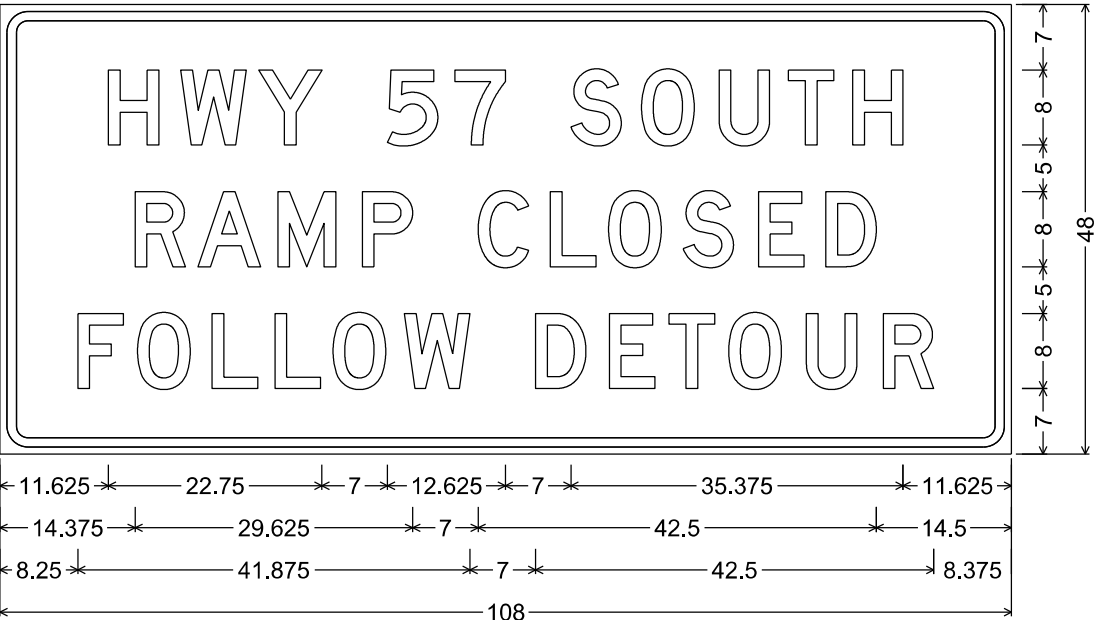
Message - Black
3. Message Series - D



3.000" Radius, 1.000" Border, 0.750" Indent



3.000" Radius, 1.000" Border, 0.750" Indent



3.000" Radius, 1.000" Border, 0.750" Indent

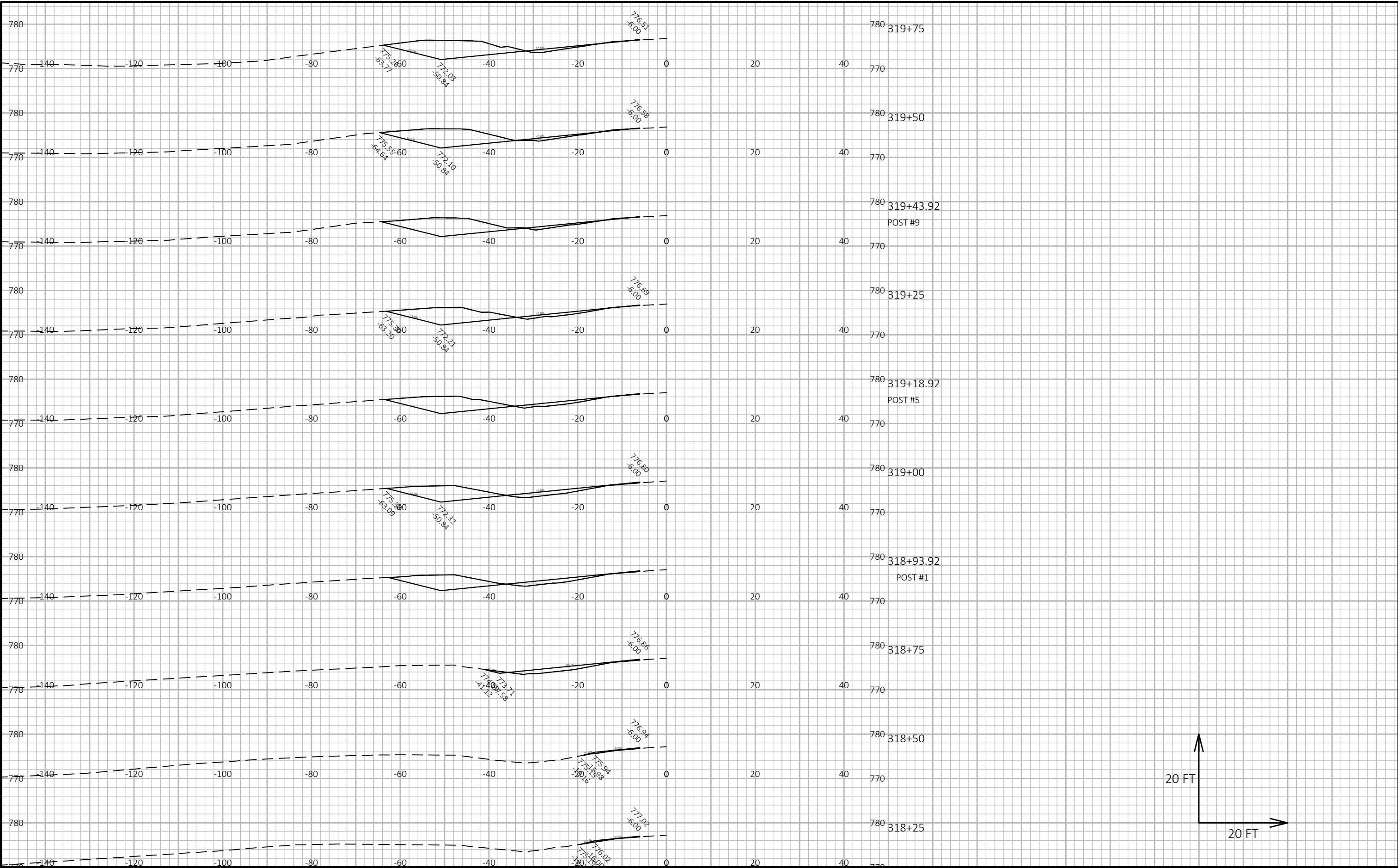
DIVISION – 57NB1 *										
STATION	REAL STATION	DISTANCE	AREA (SF)		INCREMENTAL VOL (CY) (UNADJUSTED)		CUMULATIVE VOL (CY)			
			CUT	FILL	CUT	FILL	CUT	EXPANDED FILL	MASS ORDINATE	
							1.00	1.00		
					NOTE 1	NOTE 3	NOTE 1		NOTE 8	
318+25	31825.00	0.00	0.00	1.82	0	0	0	0	0	
318+50	31850.00	25.00	0.00	1.88	0	2	0	2	-2	
318+75	31875.00	25.00	1.17	15.86	1	8	1	10	-9	
319+00	31900.00	25.00	53.75	15.46	25	15	26	25	1	
319+25	31925.00	25.00	63.12	9.22	54	11	80	36	44	
319+50	31950.00	25.00	75.32	6.25	64	7	144	43	101	
319+75	31975.00	25.00	80.23	6.39	72	6	216	49	167	
320+00	32000.00	25.00	80.37	7.98	74	7	290	56	234	
320+25	32025.00	25.00	73.21	9.86	71	8	361	64	297	
320+50	32050.00	25.00	0.00	1.44	34	5	395	69	326	
320+75	32075.00	25.00	0.00	1.09	0	1	395	70	325	
321+00	32100.00	25.00	0.00	1.00	0	1	395	71	324	

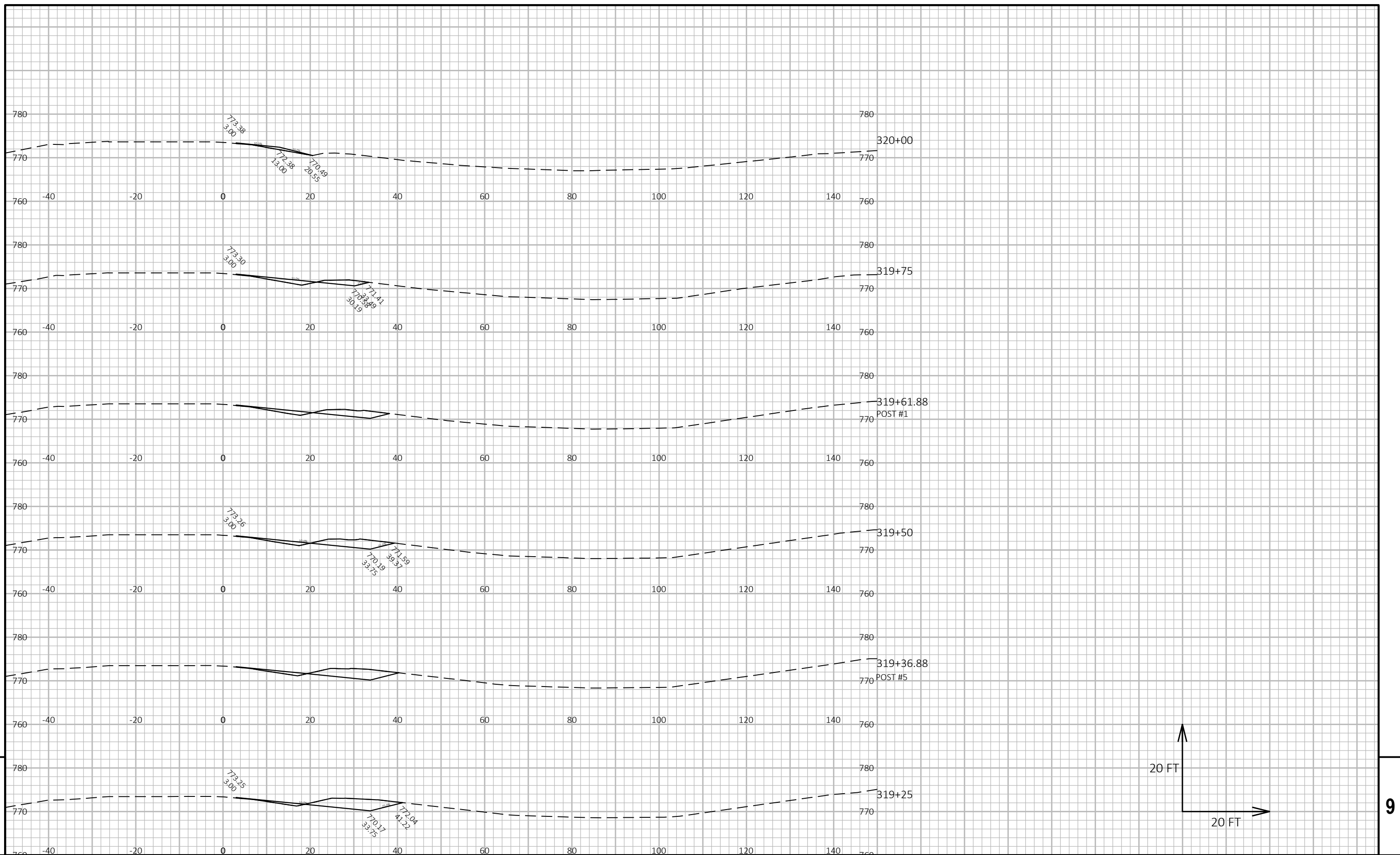
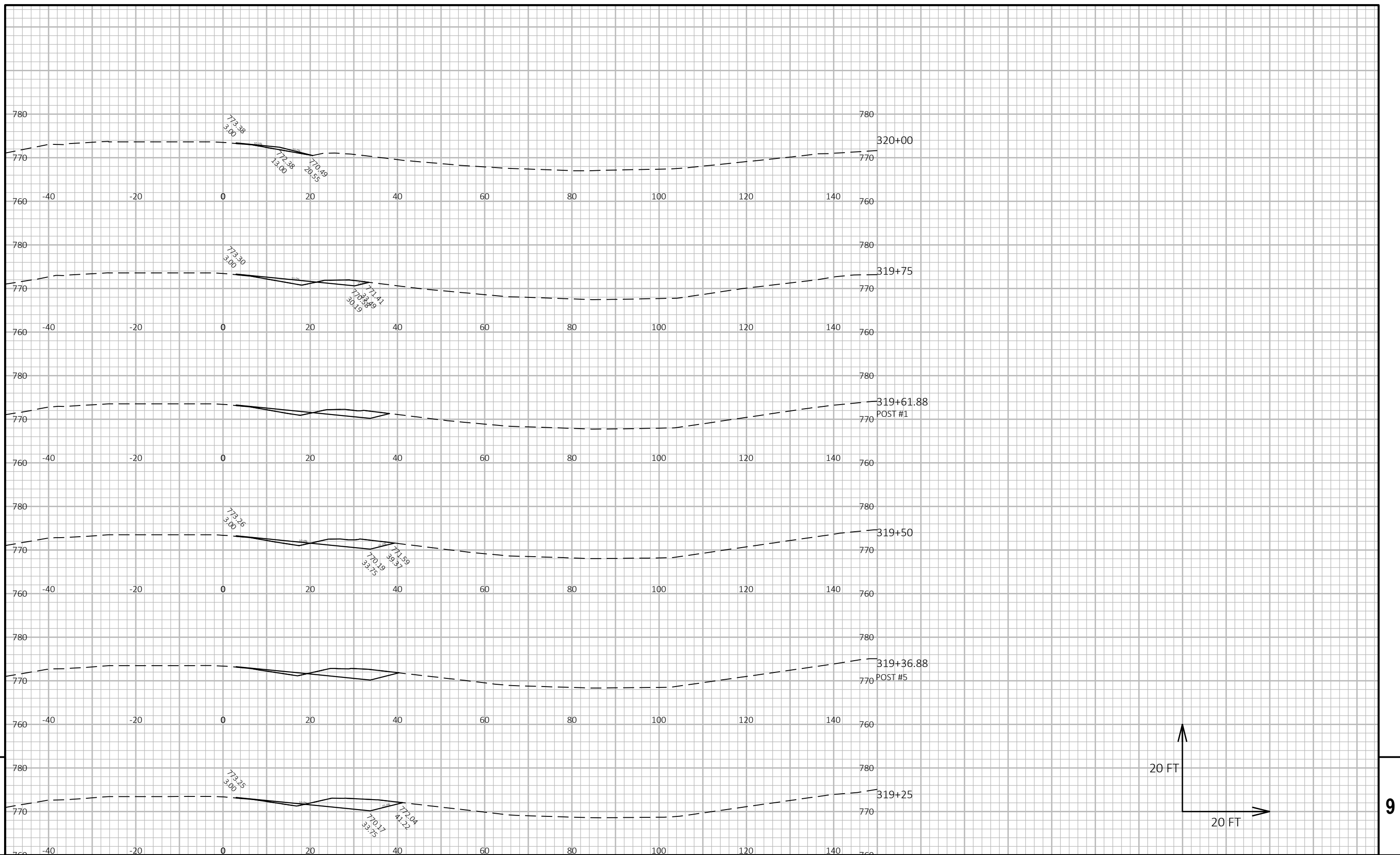
* FOR INFORMATION ONLY

DIVISION – STH 57 SB EPS *										
STATION	REAL STATION	DISTANCE	AREA (SF)		INCREMENTAL VOL (CY) (UNADJUSTED)		CUMULATIVE VOL (CY)			
			CUT	FILL	CUT	FILL	CUT	EXPANDED FILL	MASS ORDINATE	
							1.00	1.00		
					NOTE 1	NOTE 3	NOTE 1		NOTE 8	
317+75	31775.00	0.00	0.00	0.87	0	0	0	0	0	
318+00	31800.00	25.00	0.01	0.70	0	1	0	1	-1	
318+25	31825.00	25.00	38.61	1.06	18	1	18	2	16	
318+50	31850.00	25.00	50.10	1.47	41	1	59	3	56	
318+75	31875.00	25.00	49.83	1.35	46	1	105	4	101	
319+00	31900.00	25.00	43.71	2.14	43	2	148	6	142	
319+25	31925.00	25.00	37.26	4.27	37	3	185	9	176	
319+50	31950.00	25.00	25.53	6.86	29	5	214	14	200	
319+75	31975.00	25.00	9.26	9.23	16	7	230	21	209	
320+00	32000.00	25.00	0.00	4.80	4	6	234	27	207	
320+25	32025.00	25.00	0.00	3.06	0	4	234	31	203	
320+50	32050.00	25.00	0.00	1.60	0	2	234	33	201	
320+75	32075.00	25.00	0.00	1.58	0	1	234	34	200	

* FOR INFORMATION ONLY

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	
4 - EXPANDED MARSH BACKFILL	WILL BE BACKFILLED WITH GRANULAR BACKFILL (OR CUT, OR BORROW)	NOTE 4 - SELECT ONE BASED ON INPUT DIALOG SELECTION
5 - EXPANDED EBS	WILL BE BACKFILLED WITH GRANULAR BACKFILL (OR CUT, OR BORROW)	NOTE 5 - SELECT ONE BASED ON INPUT DIALOG SELECTION
6 - REDUCED MARSH IN FILL	REDUCED MARSH EXCAVATION THAT CAN BE USED IN FILL	NOTE 6 - IF EXCAVATED MARSH CAN BE USED IN FILL
7 - REDUCED EBS IN FILL	REDUCED EBS EXCAVATION THAT CAN BE USED IN FILL	NOTE 7 - IF EXCAVATED EBS CAN BE USED IN FILL
8 - MASS ORDINATE	IF MARSH OR EBS TO BE BACKFILLED WITH COMMON OR BORROW: [(CUT - SALVAGED PAVT - EXPANDED MARSH EXC - EXPANDED EBS) - ((FILL - REDUCED MARSH IN FILL - REDUCED EBS IN FILL - EXPANDED ROCK) * FILL FACTOR)]	NOTE 8 - SELECT ONE BASED ON MASS HAUL INPUT DIALOG SELECTION. EBS AND MARSH EXC USED OUTSIDE 1:1 IN FILL SLOPES
8 - MASS ORDINATE	IF MARSH AND EBS TO BE BACKFILLED WITH GRANULAR: [CUT - SALVAGED PAVT - ((FILL - REDUCED MARSH IN FILL - REDUCED EBS IN FILL - EXPANDED ROCK) * FILL FACTOR)]	EBS AND MARSH EXC USED OUTSIDE 1:1 IN FILL SLOPES
8 - MASS ORDINATE	IF MARSH AND EBS TO BE BACKFILLED WITH COMMON OR BORROW: [(CUT - SALVAGED PAVT - EXPANDED MARSH EXC - EXPANDED EBS) - ((FILL - EXPANDED ROCK) * FILL FACTOR)]	MARSH AND EBS ARE NOT USABLE OUTSIDE THE 1:1 SLOPES
8 - MASS ORDINATE	IF MARSH AND EBS TO BE BACKFILLED WITH GRANULAR: [CUT - SALVAGED PAVT - ((FILL - EXPANDED ROCK) * FILL FACTOR)]	MARSH AND EBS ARE NOT USABLE OUTSIDE THE 1:1 SLOPES





PROJECT NO: 1040-00-70	HWY: STH 57	COUNTY: OZAUKEE	CROSS SECTIONS: EARTHWORK SB	SHEET 134	E
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LAYOUT NAME - STH 57 SB 02

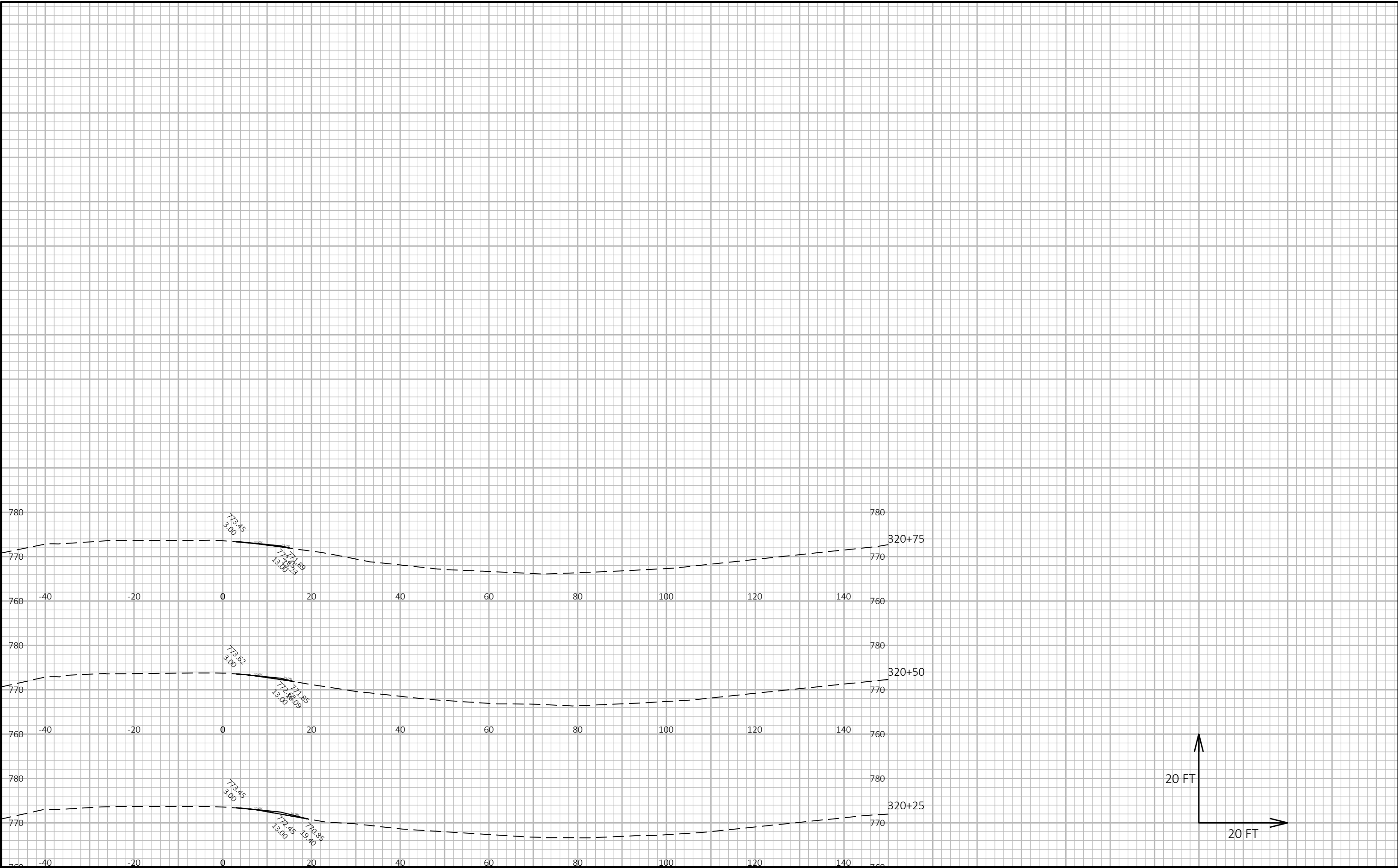
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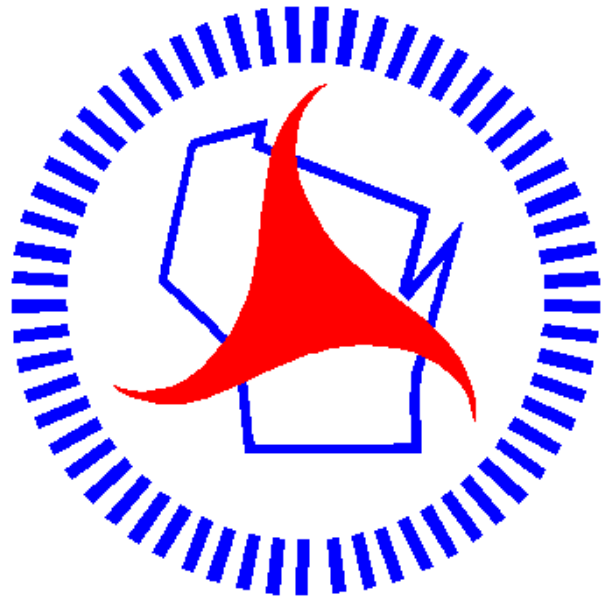
PLOT BY : MANANDHAR, BHUVAN K

PLOT NAME :

PLOT SCALE : 1 IN=20 FT HORZ. / 1 IN=20 FT VERT.

WISDOT/CADDS SHEET 49





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