RHI

PROJECT ID: **1170-16-64**

WITH: N/A

COUNTY: **ONEIDA & LINCOLN**

JANUARY 2026

ORDER OF SHEETS

Section No.	1	Title
Section No.	2	Typical Sections and Details
Section No.	3	Estimate of Quantities
Section No.	3	Miscellaneous Quantities
~~Section No.~~	~~4~~	~~Right of Way Plat~~
Section No.	5	Plan and Profile
Section No.	6	Standard Detail Drawings
Section No.	7	Sign Plates
Section No.	8	Structure Plans
Section No.	9	Computer Earthwork Data
Section No.	9	Cross Sections

TOTAL SHEETS = 188

25

DESIGN DESIGNATION

A.A.D.T.	2027	=	6,220
A.A.D.T.	2047	=	7,150
D.H.V.		=	878
D.D.		=	0.5
T.		=	16.1%
DESIGN SPEED		=	55 MPH
ESALS		=	2,130,000

CONVENTIONAL SYMBOLS

PLAN

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

PROFILE

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

UTILITIES

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
PROJECT ID	WISC 2026148	1
1170-16-64		

TOMAHAWK - MINOQUA

USH 8 TO BEARSKIN BRIDGE

USH 51

ONEIDA & LINCOLN COUNTIES

STATE PROJECT NUMBER

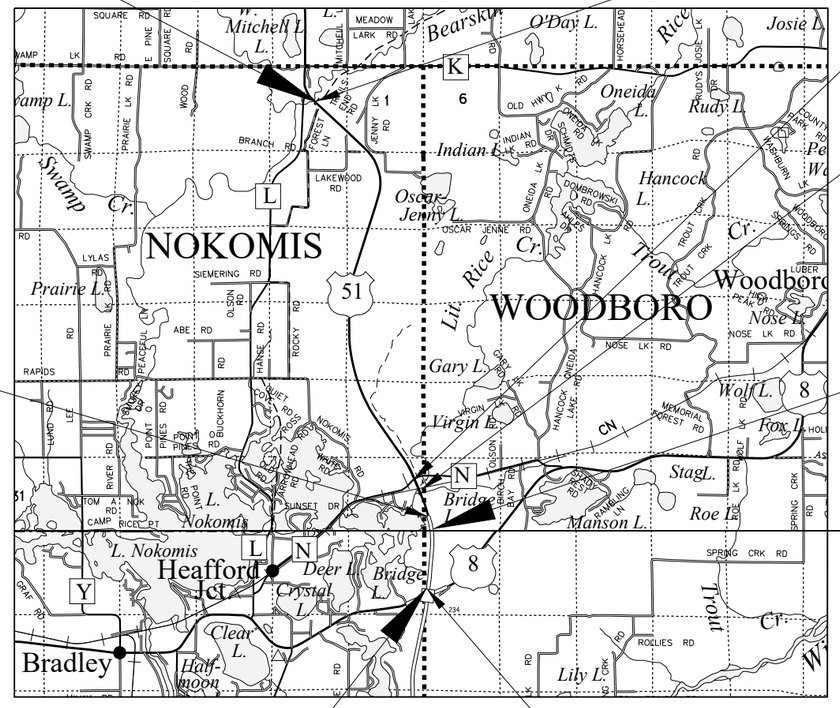
1170-16-64

END PROJECT
STA 2144+67

B-43-28 BEARSKI CREEK
STA 2142+85 - STA 2144+37 (152')

B-43-20 CTH N
STA 1847+21 - STA 1848+18 (97')

B-43-18 RR, LITTLE RICK CREEK
STA 1839+63 - STA 1842+29 (266')



USH 51 STATION EQUATION
STA 820+00.88 SB =
STA 1820+00.88

BEGIN CONSTRUCTION
STA 82+00 NB

ONEIDA COUNTY
LINCOLN COUNTY

BEGIN PROJECT
STA 763+62.94 SB
X= 197427.8860
Y= 130406.9295

B-35-70 51 NB (NO WORK)
B-35-71 51 SB (WORK) L=234'
STA 761+29 - STA 763+63 SB

LAYOUT
SCALE 0 2 MI

TOTAL NET LENGTH OF CENTERLINE = 7.217 MILES

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), ONEIDA COUNTY, NAD83 (2011), IN U.S. SURVEY FEET. POSITIONS SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES ARE THE SAME AS GROUND DISTANCES.

ELEVATIONS ARE REFERENCED TO NAVD 88 (2012). GPS DERIVED ELEVATIONS ARE BASED ON GEOID 18.

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	EMCS
Designer	BARBARA HETH
Project Manager	MICHELLE M GUOIN
Regional Examiner	FREDERICK SCHUNKE
Regional Supervisor	DANIEL ERVA

APPROVED FOR THE DEPARTMENT

DATE: 11/17/2025 Michelle Guoin (Signature)

E

FILE NAME : N:\PDS\C3D\11701634\SHEETS\010101-TI.DWG PLOT DATE : 11/13/2025 4:17 PM PLOT BY : HETH, BARBARA L PLOT NAME :

GENERAL NOTES

THE LOCATION OF EXISTING UTILITIES AS SHOWN ON THE PLAN ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT THAT ARE NOT SHOWN.

USH 51 REFERENCE LINE AND CENTERLINE ALIGNMENTS ARE A BEST FIT OF THE EXISTING ALIGNMENTS.

BEAM GUARD AND GUARDRAIL STA/OFFSETS ARE MEASURED TO FACE OF RAIL.

USH 51 EXISTING CONCRETE PAVEMENT IS DOWELED NON-REINFORCED WITH A RANDOM JOINT SPACING OF 17'-20'-18'-19'.

B-35-71: BRIDGE ROADWAY WIDTH IS 40' at 1.5% CROSS SLOPE.
B-43-18, B-43-20 AND B-43-28: BRIDGE ROADWAY WIDTH IS 44' AT 2% CROSS SLOPE.

RUNOFF COEFFICIENT TABLE

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

TOTAL PROJECT AREA = 361 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.2 ACRES

UTILITY CONTACTS

FRONTIER COMMUNICATIONS OF WI LLC - COMMUNICATION LINE
521 N 4th ST
WAUSAU WI 54403
CHRISTOPHER POLLACK
715-847-1240
715-297-4773 (MOBILE)
christopher.pollack@ftr.com

WISCONSIN PUBLIC SERVICE CORPORATION - ELECTRICITY
PO BOX 19001
GREEN BAY, WI 54307-9001
DON LUTZOW
715-848-7487
507-848-4211 (MOBILE)
donald.lutzow@wisconsinpublicservice.com

WISCONSIN PUBLIC SERVICE CORPORATION - GAS, PETROLEUM
1700 SHERMAN ST
WAUSAU WI 54401
SHANE SARKKINEN
715-369-7133
715-966-1040 (MOBILE)
shane.sarkkinen@wisconsinpublicservice.com

OTHER CONTACTS

DEPT OF NATURAL RESOURCES
107 SUTLIFF AVE
RHINELANDER, WI 54501-0818
WENDY HENNIGES
715-365-8916
wendy.henniges@wisconsin.gov

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

END PROJECT 1170-16-34

B-43-28 STA 2142+85
BEARSKIN CREEK

NB PASSING LANE
STA 2036+00 - 2130+00

B-43-20 STA 1847+21
CTH N

B-43-18 STA 1839+63
RR & LITTLE RICE CREEK

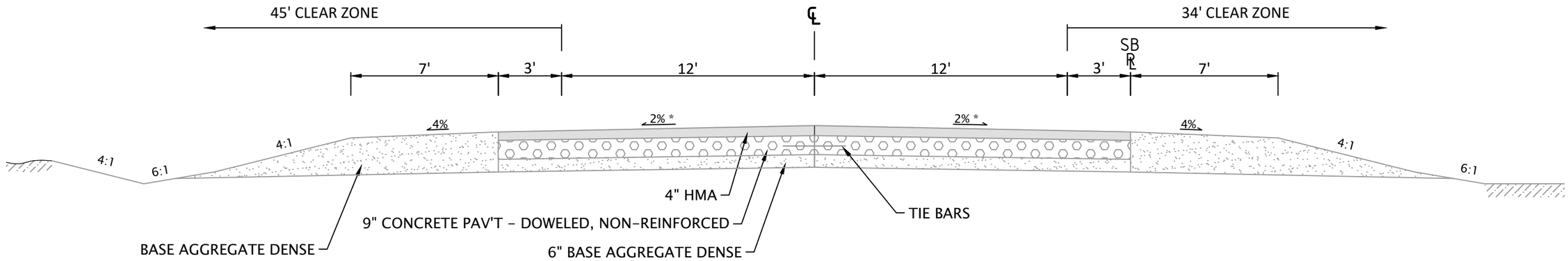
B-35-71 SB STA 763+63
B-35-70 NB - NO WORK

BEGIN PROJECT 1170-16-34

N

PROJECT NO: 1170-16-64	HWY: USH 51	COUNTY: ONEIDA & LINCOLN	PROJECT OVERVIEW MAP	SHEET 3 E

FILE NAME : N:\PDS\C3D\11701634\SHEETS\020201-PO-64-PROJECTLOCATION.DWG
LAYOUT NAME - 020201-po-plan
PLOT DATE : 11/13/2025 4:42 PM PLOT BY : HETH, BARBARA L PLOT NAME : PLOT SCALE : 1 IN:1 MI

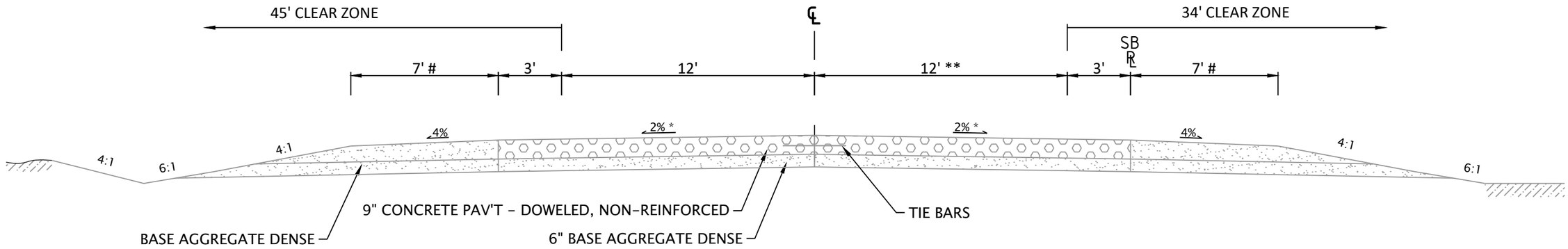


EXISTING TYPICAL SECTION

STA 788+14 - 820+00 SB
STA 1820+00 - 1825+95
STA 1916+92 - 1941+69

* EXISTING CROSS SLOPE VARIES ON USH 51
MATCH EXISTING SUPERELEVATION

USE CL FOR UNDIVIDED HIGHWAY REFERENCE LINE
USE SB RL FOR DIVIDED HIGHWAY REFERENCE LINE
DIVIDED HIGHWAY NORTHBOUND LANES NOT SHOWN



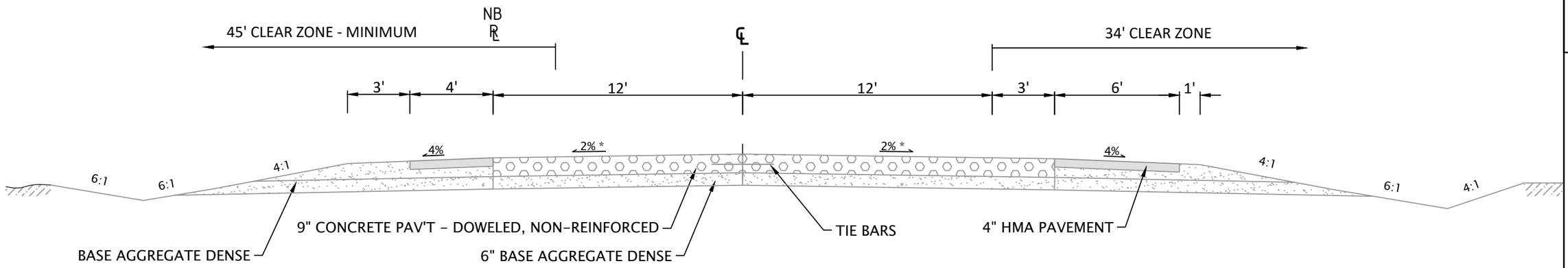
EXISTING TYPICAL SECTION

STA 763+63 - 788+14 SB
STA 1825+95 - 1916+42
STA 1941+69 - 2036+00
STA 2036+00 - 2130+00**
STA 2130+00 - 2144+57

\# B-35-71 SB CLEAR BRIDGE WIDTH = 40'
SHOULDER WIDTH = 5'

** NB PASSING LANE WITH TIE BARS
TAPER 0-12' IN 700'
BEGIN FULL WIDTH = STA 2043+00
END FULL WIDTH = STA 2123+00

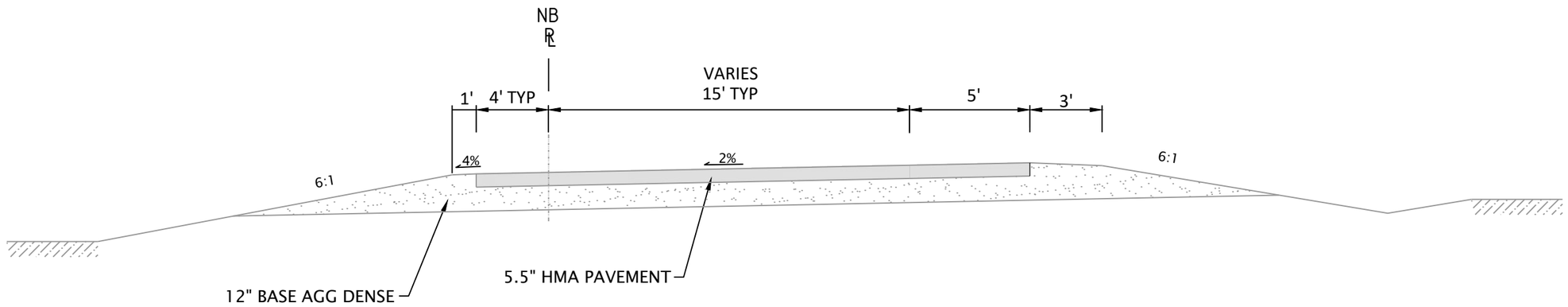
PROJECT NO:1170-16-64	HWY: USH 51	COUNTY: ONEIDA & LINCOLN	TYPICAL SECTIONS	SHEET 4	E



EXISTING TYPICAL SECTION

STA 82+00 - 104+75 NB

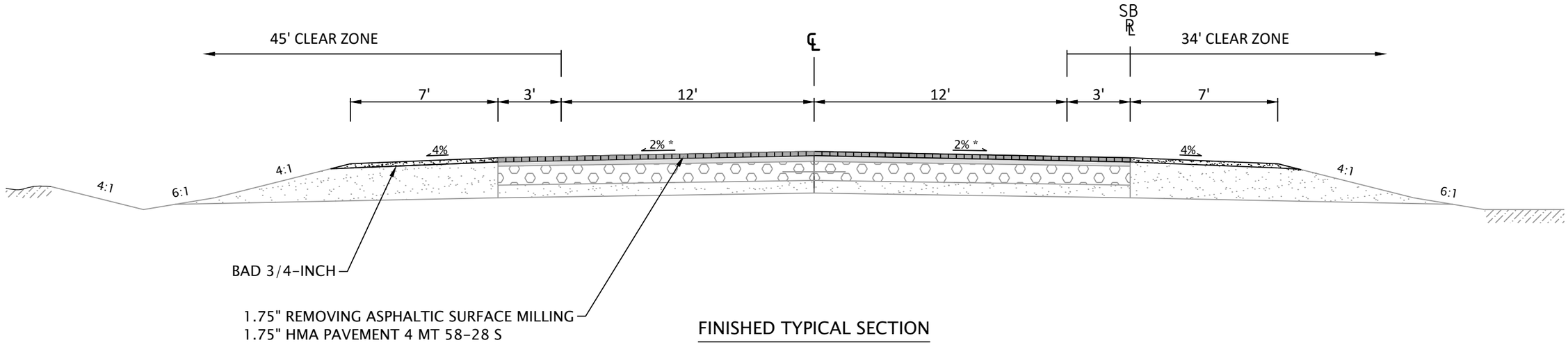
* EXISTING CROSS SLOPE VARIES ON USH 51
MATCH EXISTING SUPERELEVATION



EXISTING TYPICAL SECTION

STA 104+75 - 124+45 NB XO

PROJECT NO:1170-16-64	HWY:USH 51	COUNTY:ONEIDA & LINCOLN	TYPICAL SECTIONS	SHEET 5

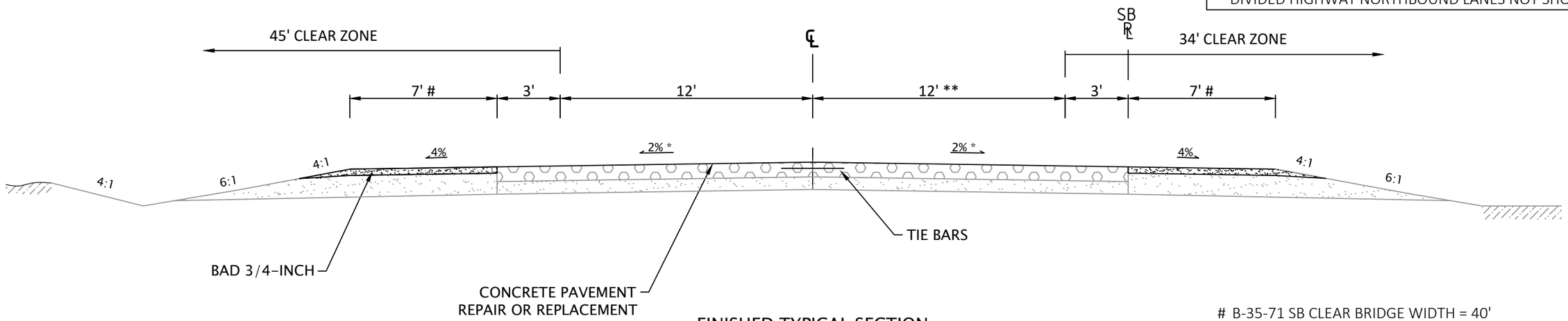


FINISHED TYPICAL SECTION

STA 788+14 - 820+00 SB
STA 1820+00 - 1825+95 CL
STA 1916+92 - 1941+69 CL

* EXISTING CROSS SLOPE VARIES ON USH 51
MATCH EXISTING SUPERELEVATION

USE CL FOR UNDIVIDED HIGHWAY REFERENCE LINE
USE SB RL FOR DIVIDED HIGHWAY REFERENCE LINE
DIVIDED HIGHWAY NORTHBOUND LANES NOT SHOWN



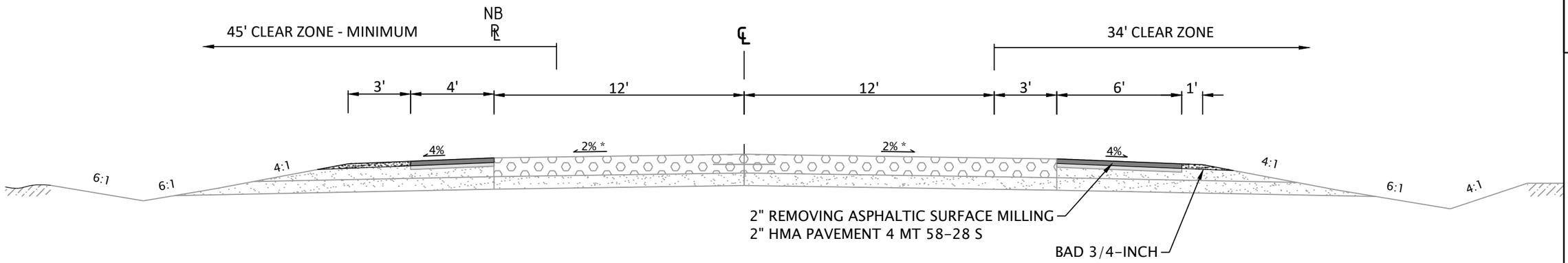
FINISHED TYPICAL SECTION

STA 763+63 - 788+14 SB
STA 1825+95 - 1916+42
STA 1941+69 - 2036+00
STA 2036+00 - 2130+00 **
STA 2130+00 - 2144+57

B-35-71 SB CLEAR BRIDGE WIDTH = 40'
SHOULDER WIDTH = 5'
SEE FINISHED TYPICAL SECTION - GUARDRAIL

** NB PASSING LANE
TAPER 0-12' IN 700'
BEGIN FULL WIDTH = STA 2043+00
END FULL WIDTH = STA 2123+00

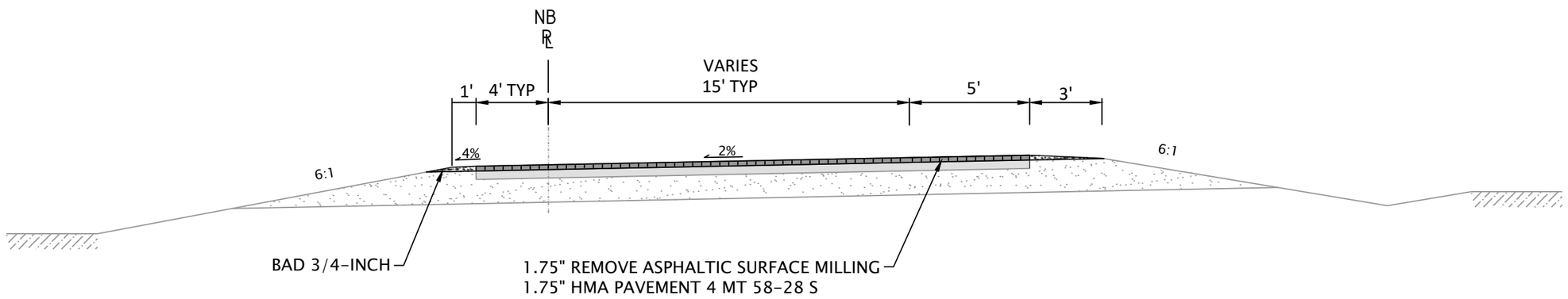
PROJECT NO:1170-16-64	HWY: USH 51	COUNTY: ONEIDA & LINCOLN	TYPICAL SECTIONS	SHEET 6



FINISHED TYPICAL SECTION

STA 82+00 - 104+75 NB LT SHOULDER
STA 84+56 - 104+75 NB RT SHOULDER

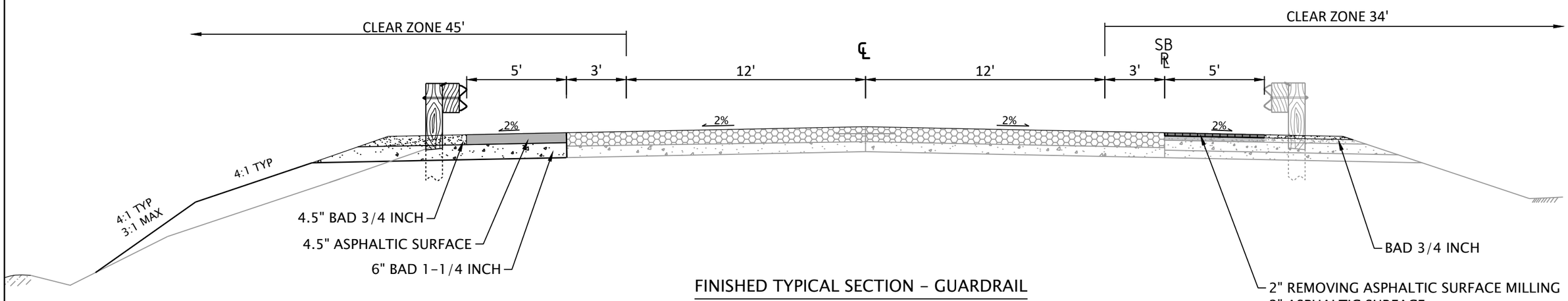
* EXISTING CROSS SLOPE VARIES ON USH 51
MATCH EXISTING SUPERELEVATION



FINISHED TYPICAL SECTION

STA 104+75 - 124+45 NB XO

PROJECT NO:1170-16-64	HWY:USH 51	COUNTY:ONEIDA & LINCOLN	TYPICAL SECTIONS	SHEET 7

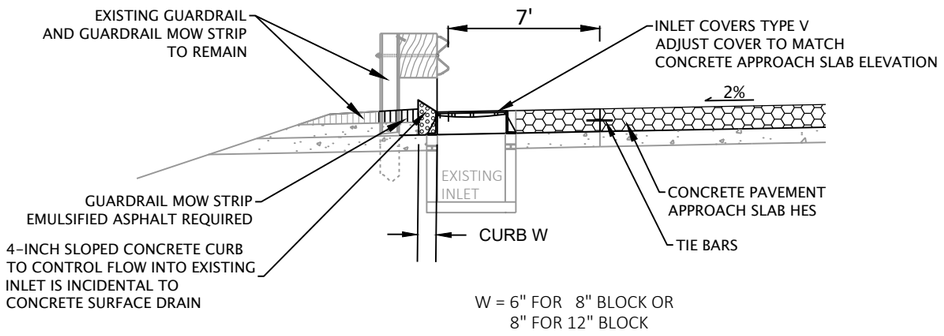


FINISHED TYPICAL SECTION - GUARDRAIL

STA 763+70 - 766+28 SB B-35-71

STA 763+54 - 764+11 LT
CONCRETE CURB AND GUTTER 4-INCH SLOPED
36-INCH TYPE TBT AND TBTT

PROJECT NO:1170-16-64	HWY:USH 51	COUNTY:ONEIDA & LINCOLN	TYPICAL SECTIONS	SHEET 8 F



W = 6" FOR 8" BLOCK OR
8" FOR 12" BLOCK

CONCRETE SURFACE DRAINS HES

STA 1842+26 - 1842+35 RT B-43-18 NORTH SIDE
STA 1842+35 - 1842+43 LT B-43-18 NORTH SIDE

REMOVING ASPHALTIC SURFACE MILLING
2" ASPHALTIC SURFACE

B-43-18
STA 1836+14 - 1839+39 LT SHLD
STA 1835+34 - 1839+39 RT SHLD

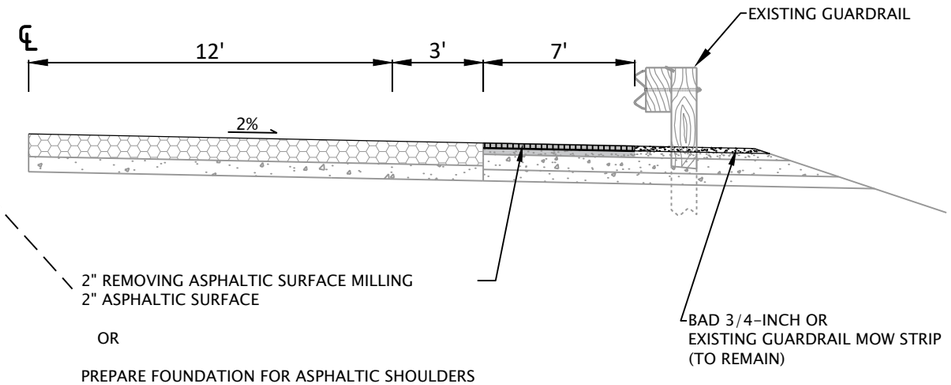
B43-18 TO B-43-20
STA 1842+43 - 1846+95 LT SHLD
STA 1842+35 - 1846+98 RT SHLD

B-43-20
STA 1848+44 - 1851+89 LT SHLD
STA 1848+40 - 1851+77 RT SHLD

B-43-28
STA 2141+40 - 2142+65 LT SHLD
STA 2140+18 - 2142+65 RT SHLD
STA 2144+37 - 2144+57 LT & RT SHLD

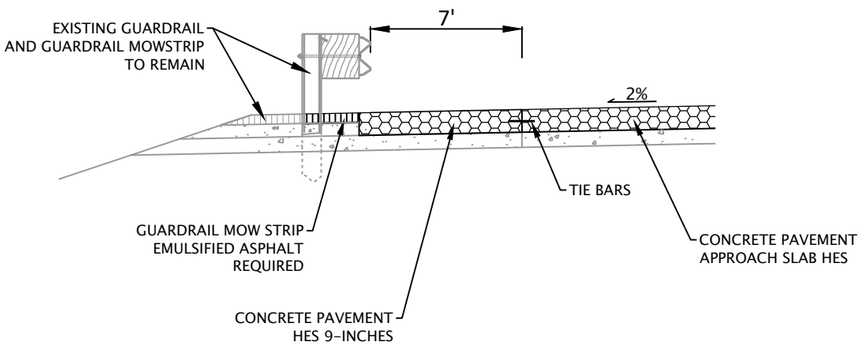
PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS
4" ASPHALTIC SURFACE

B-43-28
STA 2139+81 - 2141+59 LT
STA 2138+13 - 2140+57 RT



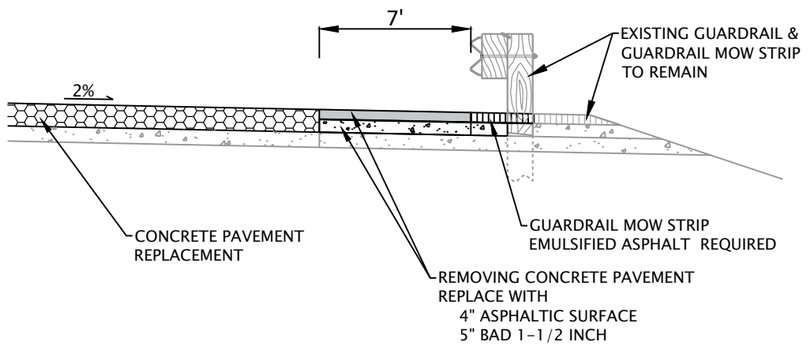
GUARDRAIL DETAIL

B-43-18 LT & RT
B-43-20 LT & RT
B-43-28 LT & RT



CONCRETE PAVEMENT SHOULDER

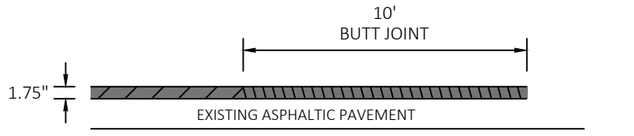
STA 1839+45 - 1839+60 RT B-43-18 SOUTH SIDE
STA 1839+45 - 1839+67 LT B-43-18 SOUTH SIDE

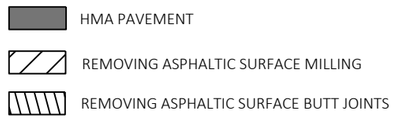


ASPHALTIC SURFACE SHOULDER

STA 1839 + 39 - 1839+45 LT & RT B-43-18 SOUTH SIDE

2





BUTT JOINT

STA 788+14 - 788+24 SB
STA 1825+87 - 1825+97
STA 82+00 - 82+10 NB LT
STA 84+56 - 84+66 NB RT
STA 97+90 - 98+00 NB RT
STA 1826+58 - 1826+68 RT
STA 1916+90 - 1917+00
STA 1941+61 - 1941+71
STA 2144+57 - 2144+67

GENERAL NOTES:

1. WHERE SILT FENCE IS REQUIRED, IT SHALL BE PLACED ON THE CONSTRUCTION SIDE OF THE EXCLUSION FENCING, OR COMBINED WITH THE EXCLUSION FENCING AS ALLOWED IN THE SPECIFICATIONS. STAKES ON THIS DETAIL ARE OPPOSITE OF STANDARD SILT FENCE FOR SEDIMENT CONTROL.

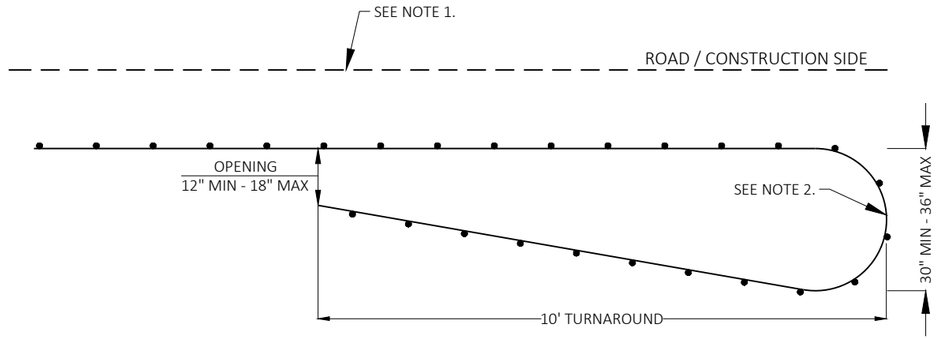
2. PLACE TURNAROUNDS AT ALL TERMINI ENDS OF THE EXCLUSION FENCING.

3. IF TEMPORARY ACCESS POINTS ARE NEEDED DURING CONSTRUCTION THAT REQUIRE OPENINGS IN THE EXCLUSION FENCING, ACCESS OPENINGS SHOULD BE TIGHTLY SECURED WITH BALES OF HAY OR STRAW WHENEVER CONSTRUCTION RELATED ACTIVITIES ARE NOT OCCURRING. REINSTALL EXCLUSION FENCING WHEN THE WORK REQUIRING THE TEMPORARY ACCESS OPENING IS COMPLETED.

4. THE FENCE CAP MAY BE A 6" UNDER DRAIN PIPE, SLIT DOWN THE CENTER AND PLACED OVER THE FENCE. COMMERCIALLY AVAILABLE SAFETY CAPS WITH A LIP MAY BE USED. OTHER DNR APPROVED METHODS TO PREVENT TURTLES FROM PASSING OVER THE TOP OF THE FENCE MAY BE USED.

   SECURELY FASTEN THE CAP TO PREVENT IT FROM BEING DISLODGED.

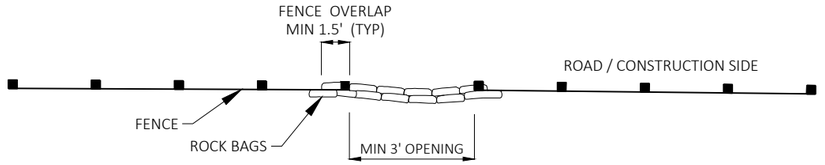
5. CLIMBING TURTLE FENCE RELIEF IS INCIDENTAL TO CLIMBING TURTLE EXCLUSION FENCE. DETERMINE RELIEF LOCATIONS IN THE FIELD.



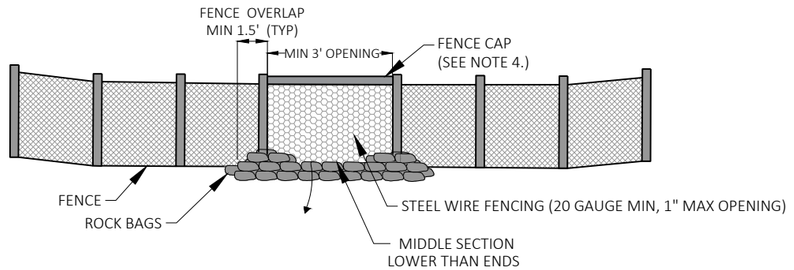
PLAN VIEW

CLIMBING TURTLE EXCLUSION FENCE DETAIL

B-43-28 BEARSKIN CREEK



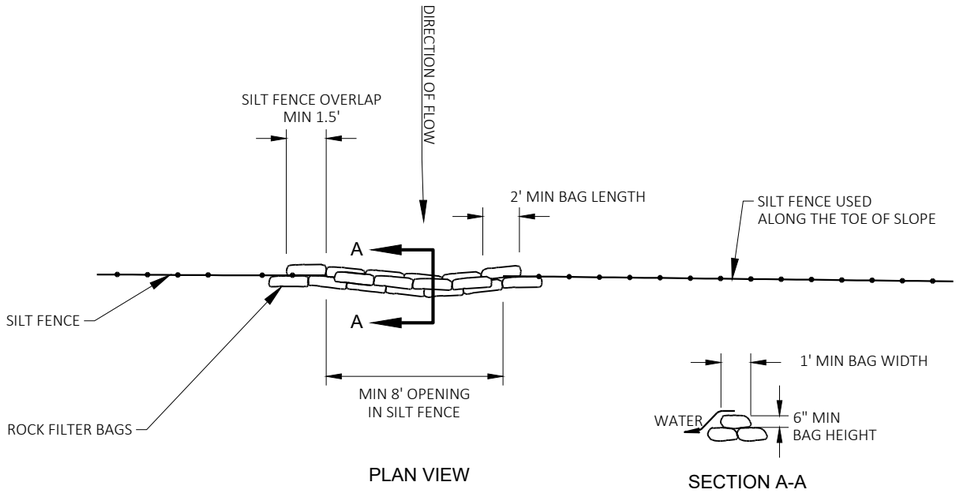
PLAN VIEW



FRONT VIEW

CLIMBING TURTLE FENCE RELIEF DETAIL

B-43-28 BEARSKIN CREEK



ROCK BAGS USED FOR SILT FENCE RELIEF

B-35-71 USH 8
B-43-28 BEARSKIN CREEK

PROJECT NO: 1170-16-64	HWY: USH 51	COUNTY: ONEIDA & LINCOLN	CONSTRUCTION DETAILS	SHEET 11	E

GENERAL NOTES

See plan detail and cross section sheets for for more details.
Offset is to structure center.
Grate elevation is to curb flow line and **includes depression of 0.1' below normal flow line.**
Structure depth is from grate elevation to lowest pipe flowline. Depth includes six inches of adjusting rings.
Final inlet placement must maintain the minium post speration distances in the SDD Concrete Surface Drains Drop Inlet Type at Structures.

CODE	STATION	GRATE ELEV	DEPTH	STRUCTURE TYPE INL	ENDWALL	COVER	COMMENTS
S1	764+00.6 34.4' LT	1501.24	3.9	2X2-FT		V	
S2	764+00.6 36.6' LT	--	--	--		--	COUPLING
S3	764+00.6 74.0' LT	--	--	--		--	COUPLING
S4	764+00.6 80.0' LT	--	--	--	12" STEEL	--	
S5	1842+29.7 21.1' RT	--	--	EXISTING		V	USE EXISTING STRUCTURE MATCH APPROACH SLAB ELEV
S6	1842+38.3 20.1' LT	--	--	EXISTING		V	USE EXISTING STRUCTURE MATCH APPROACH SLAB ELEV

CODE	FROM	TO	SIZE INCH	LENGTH FT	SLOPE %	INLET ELV (FT)	DISCH ELV (FT)	TYPE OF PIPE
P1	S1	S2	12	5.00	5.40	1497.30	1497.03	CPCPP
P2	S2	S3	12	34.0	19.79	1497.03	1490.30	CPCPP
P3	S3	S4	12	6.0	5.00	1490.30	1490.00	CPCPP

ITEM #	SUMMARY	EACH	LF
521.1012	APRON ENDWALLS FOR CULVERT PIPE STEEL 12-INCH	1	
530.0112	CULVERT PIPE CORRUGATED POLYETHYLENE 12-INCH		45
611.0654	INLET COVERS TYPE V	3	
611.3220	INLETS 2X2-FT	1	

2

2

N

USH 51 SB
EXIT RAMP

ROAD INFORMATION
WEATHER STATION

607

513

P9 P5 P1

B-35-71 SB

763SB RL 764SB RL 765SB RL 766SB RL 767SB RL 768SB RL

ASPH / BAD

POST POST POST

E E E E

B-35-70 NB
NO WORK

USH 8 EB

USH 8 WB

LEGEND

- EROSION MAT CLASS I TYPE B
- SILT FENCE
- SLOPE INTERCEPT
- SURFACE WATER FLOW
- ROCK BAGS (AS NEEDED)
- RIP RAP
- INLET PROTECTION TYPE A AND C

PROJECT NO: 1170-16-64	HWY: USH 51	COUNTY: ONEIDA & LINCOLN	EROSION CONTROL B-35-71 SB	SHEET 13	E

FILE NAME : N:\PDS\C3D\11701634\SHEETS\022001-EC.DWG
LAYOUT NAME - 022001-ec

PLOT DATE : 11/13/2025 6:19 PM PLOT BY : HETH, BARBARA L PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

2

BEARSKIN TRAIL

CHAIN LINK FENCE

LEGEND

CLIMBING TURTLE EXCLUSION FENCE

SILT FENCE

REPLACING GUARDRAIL POST & BLOCKS

ROCK BAGS (AS NEEDED FOR SILT FENCE)

ROCK OR SAND BAGS (AS NEEDED FOR CLIMBING TURTLE EXCLUSION FENCE)

TIE FENCE INTO CHAIN LINK FENCE NEAR BRIDGE IN SW, SE QUADRANTS

CP

CHAIN LINK FENCE

B-43-28

2138 2139 2140 2141 2142 2143 2144

+65.33 +86.19

600

CP

CHAIN LINK FENCE

STA 2142+76 - 2142+85 LT & RT (THRIE BEAM SW & SE)
REPLACING GUARDRAIL POSTS & BLOCKS

BEARSKIN TRAIL

PROJECT NO: 1170-16-64	HWY: USH 51	COUNTY: ONEIDA & LINCOLN	EROSION CONTROL	SHEET 14	E

FILE NAME : N:\PDS\C3D\11701634\SHEETS\022001-EC.DWG
LAYOUT NAME - 021208-ec

PLOT DATE : 11/17/2025 3:08 PM PLOT BY : HETH, BARBARA L PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

PROJECT NO: 1170-16-64	HWY: USH 51	COUNTY: ONEIDA & LINCOLN	EROSION CONTROL	SHEET 15	E

STA 1820+00 - 1823+24 LT
MARKING DIAGONAL EPOXY 12-INCH

SEE SDD FOR MARKING
SIGNING AND MARKING TWO LANE TO FOUR LANE DIVIDED TRANSITIONS

PROJECT NO: 1170-16-64	HWY: USH 51	COUNTY: ONEIDA & LINCOLN	PAVEMENT MARKING - CROSS OVER	SHEET 16	E

USE SIGNS FIXED MESSAGES
FOR 10 DAYS BEFORE START OF DETOUR

FM1

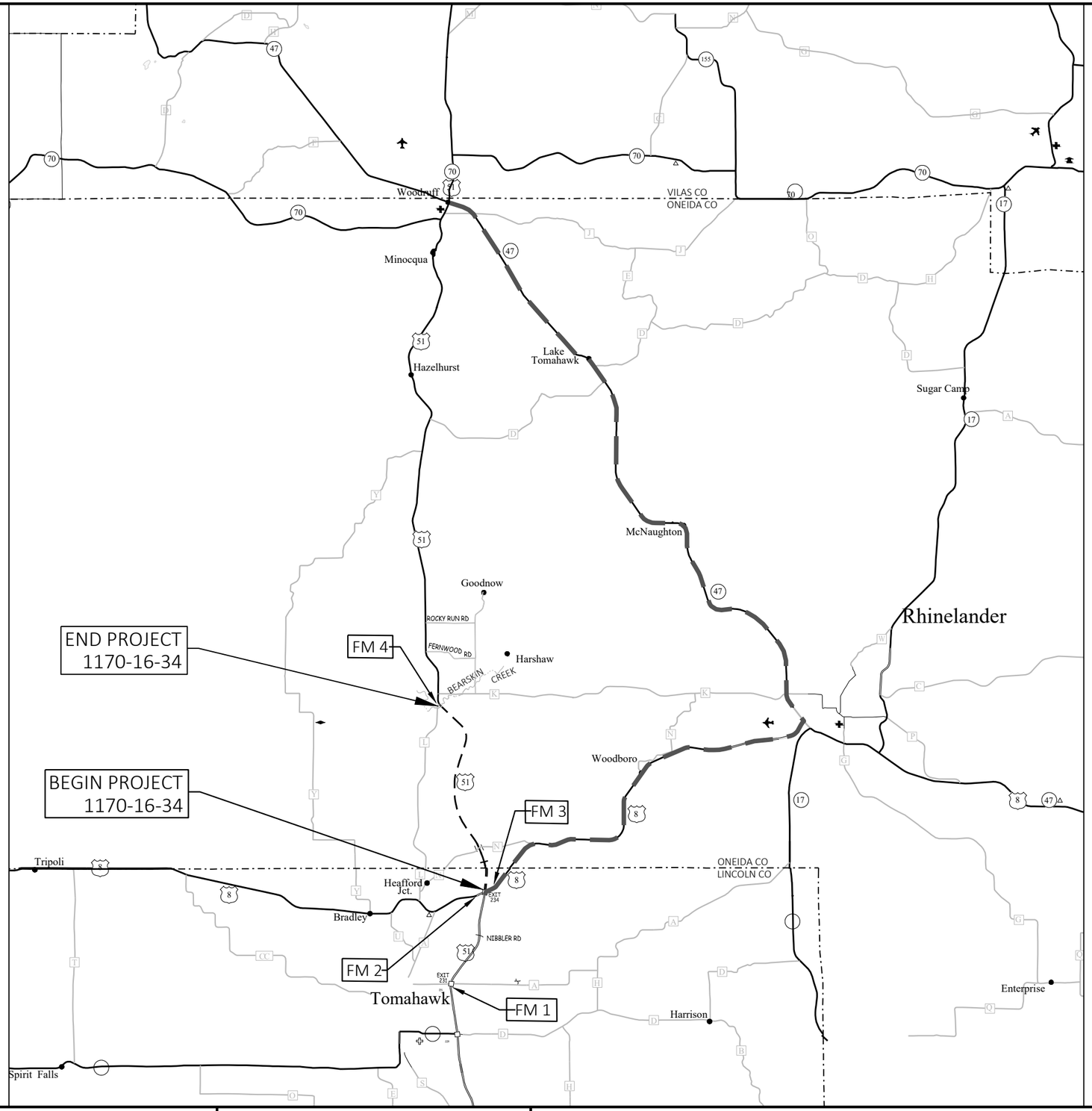
HWY 51
ROAD CLOSED
BEGINS XXX-XX

G20-57C
96"X48"

FM 2-4

HWY 51
ROAD CLOSED
BEGINS XXX-XX

G20-57C
72"X36"



N

LEGEND

- PROJECT WORK ZONE
- DETOUR ROUTE
- FM # TRAFFIC CONTROL SIGNS FIXED MESSAGE

SCALE, MILES 0 2 MI 4 MI

2

PROJECT NO: 1170-16-64	HWY: USH 51	COUNTY: ONEIDA & LINCOLN	TRAFFIC CONTROL BEFORE DETOUR	SHEET 17	E

2

TRAFFIC CONTROL NOTES

SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED

SEE SDD FOR MORE INFORMATION:
DETOUR SIGNING FOR MAINLINE CLOSURE

4

SOUTH
M3-3
24"X12"

51
M1-4
24"X24"

DETOUR AHEAD
W20-2A

5

DETOUR
M4-8
24"X12"

NORTH
M3-1
24"X12"

51
M1-4
24"X24"

6

DETOUR
M4-8
24"X12"

SOUTH
M3-3
24"X12"

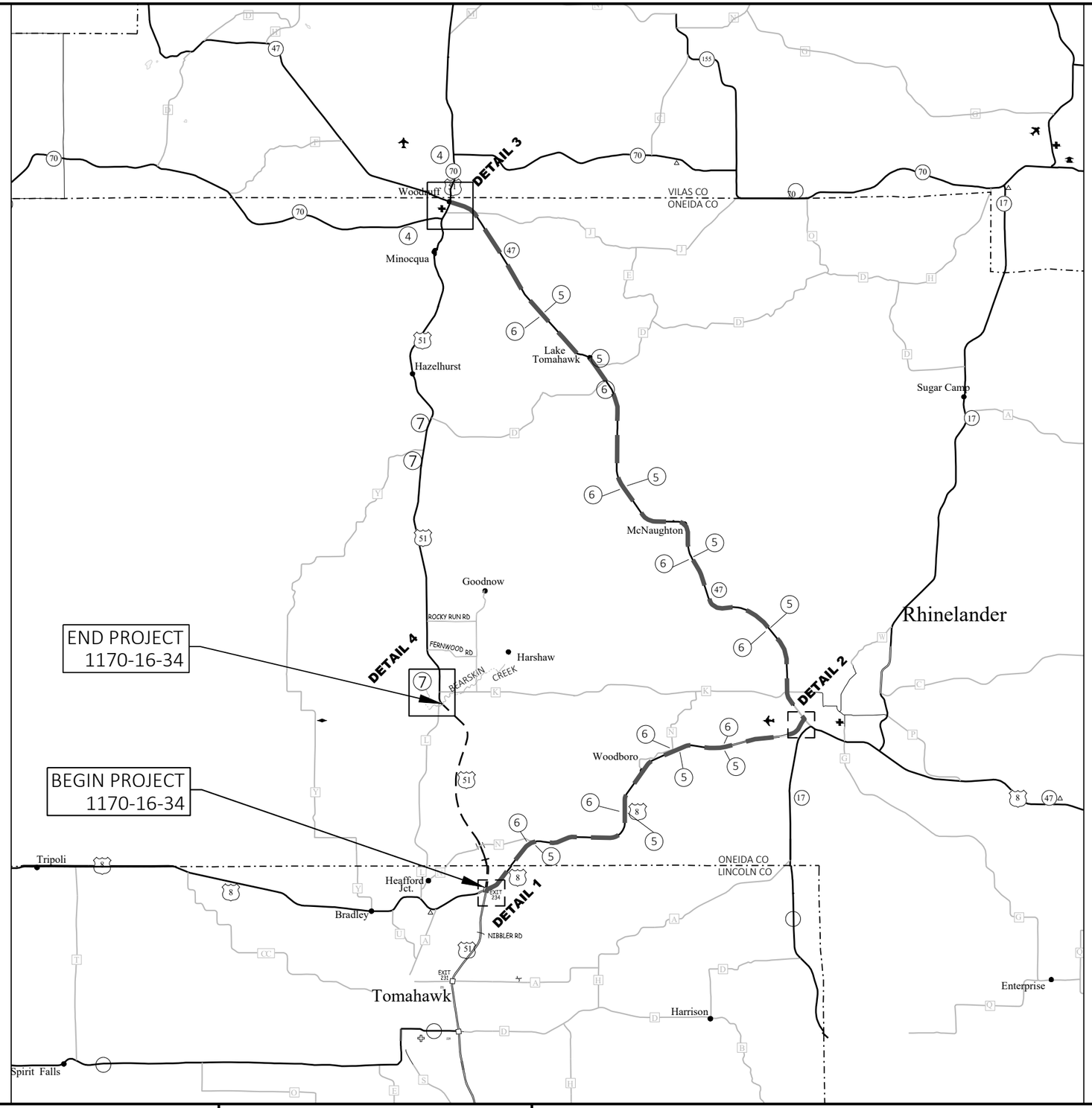
51
M1-4
24"X24"

7

R11-3
60" X 30"
ROAD CLOSED
TO THRU TRAFFIC
00 MILES AHEAD

TYPE III BARRICADE

00 MILES = 10 1/2 CTH D
9 1/4 CTH Y
1/2 CTH K



N

LEGEND

PROJECT WORK ZONE

DETOUR ROUTE

SCALE, MILES 0 2 MI 4 MI

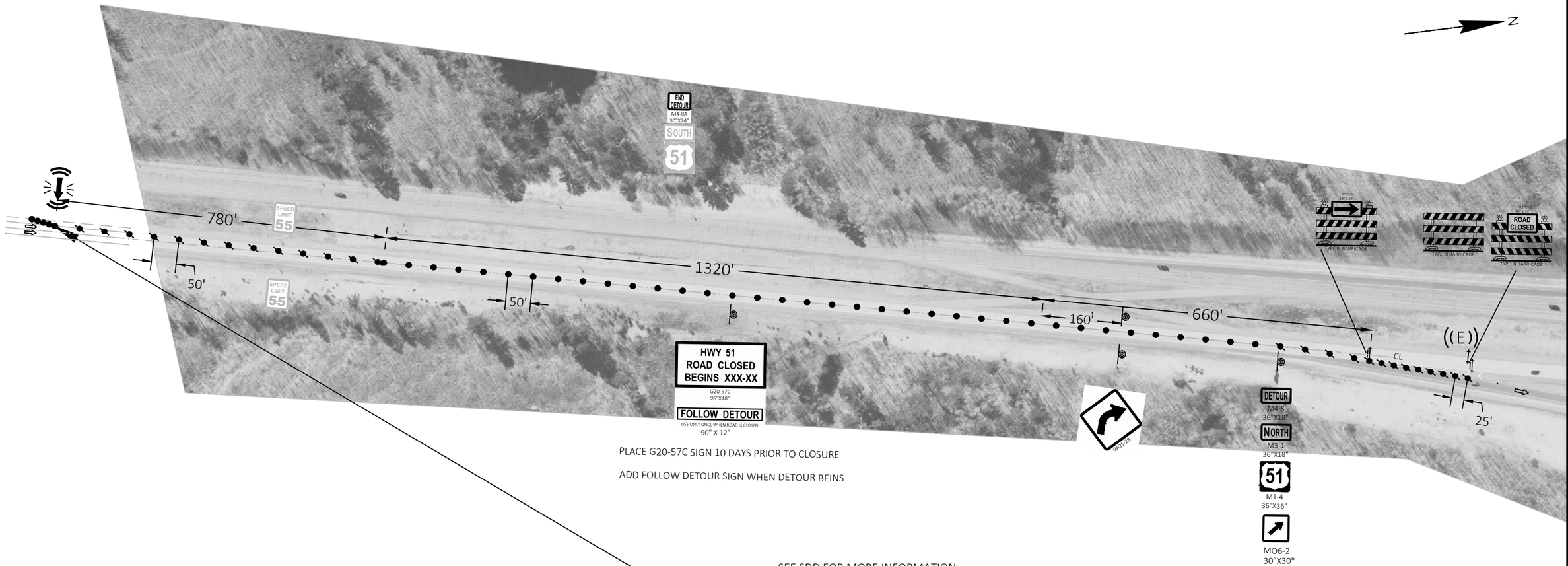
2

PROJECT NO: 1170-16-64	HWY: USH 51	COUNTY: ONEIDA & LINCOLN	DETOUR MAP OVERVIEW	SHEET 18	E

FILE NAME : N:\PDS\C3D\117016341\SHEETS\027201-DT-DETOUR2024-SIGNS_OVERVIEW_FIXEDMESSAGES.DWG
LAYOUT NAME - detour signs

PLOT DATE : 11/14/2025 10:44 AM PLOT BY : HETH, BARBARA L PLOT NAME : PLOT SCALE : 1 IN:4 MI

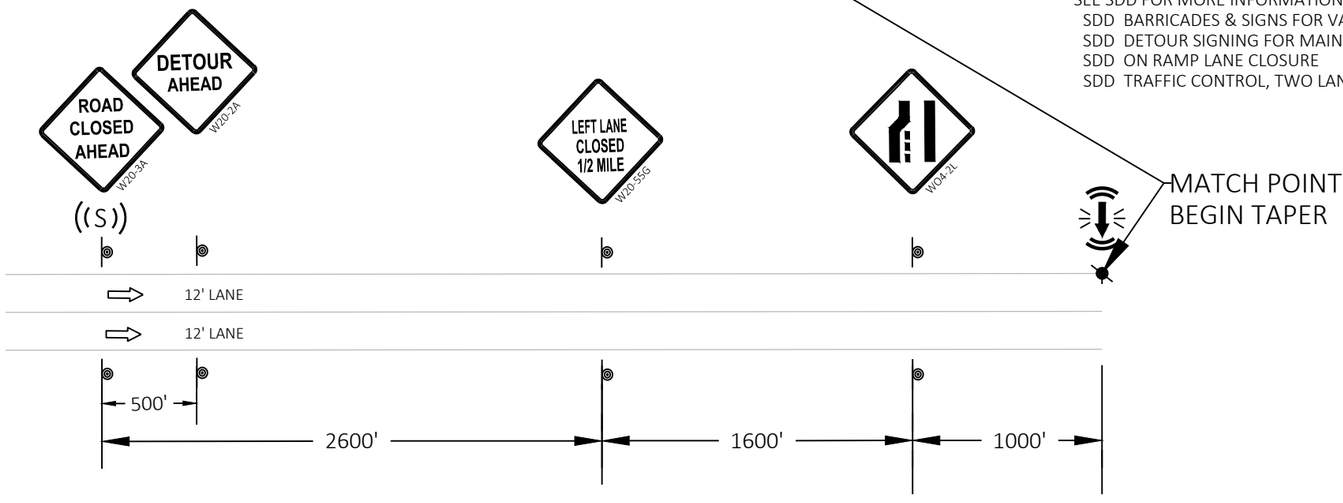
WISDOT/CADDS SHEET 42



PLACE G20-57C SIGN 10 DAYS PRIOR TO CLOSURE

ADD FOLLOW DETOUR SIGN WHEN DETOUR BEINS

SEE SDD FOR MORE INFORMATION:
- SDD BARRICADES & SIGNS FOR VARIOUS CLOSURES
- SDD DETOUR SIGNING FOR MAINLINE CLOSURES
- SDD ON RAMP LANE CLOSURE
- SDD TRAFFIC CONTROL, TWO LANE FULL FREEWAY CLOSURE



LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- SIGN ON PERMANENT SUPPORT
- CONNECTED ARROW BOARD
- ((S)) ((E)) CONNECTED WORK ZONE START AND END LOCATIN MARKERS
- COVERING SIGNS TYPE II

PROJECT NO: 1170-16-64	HWY: USH 51	COUNTY: ONEIDA & LINCOLN	DETOUR MAP DETAIL 0 USH 51/USH 8 INTERCHANGE	SHEET 19	E

FILE NAME : N:\PDS\C3D\11701634\SHEETS\027201-DT-DETOUR DETAIL1-MAPPING.DWG
LAYOUT NAME - 027003-dt adv warning
PLOT DATE : 11/14/2025 2:54 PM PLOT BY : HETH, BARBARA L PLOT NAME : PLOT SCALE : 1 IN:200 FT
WISDOT/CADDS SHEET 42

2

N

USH 51 SB

USH 51 NB

660'

CL

((E))

25'

B-35-71 SB

USH 8 WB

USH 8 EB

1

2

DETOUR AHEAD

PEDESTRIANS
BICYCLES
NON MOTORIZED TRAFFIC
MOTOR BICYCLES
PROHIBITED

RAMP CLOSED BEGINNING XXX-XX
G20-5S
72"X36"

ROAD CLOSED

TYPE III BARRICADE

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- SIGN ON PERMANENT SUPPORT
- CONNECTED ARROW BOARD
- ((S)) ((E)) CONNECTED WORK ZONE START AND END LOCATIN MARKERS
- COVERING SIGNS TYPE II

COVER LT ARROW WITH UP ARROW
SEE SIGN PLATE A4-12
8" x 8" ARROW

SEE SDD FOR MORE INFORMATION:
- SDD BARRICADES & SIGNS FOR VARIOUS CLOSURES
- SDD DETOUR SIGNING FOR MANLINE CLOSURES
- SDD ON RAMP LANE CLOSURE
- SDD TRAFFIC CONTROL FOR ENTRANCE RAMP CLOSURE
- SDD TRAFFIC CONTROL, TWO LANE FULL FREEWAY CLOSURE

PROJECT NO: 1170-16-64	HWY: USH 51	COUNTY: ONEIDA & LINCOLN	DETOUR MAP DETAIL 1 USH 51/USH 8 INTERCHANGE	SHEET 20	E

FILE NAME : N:\PDS\C3D\11701634\SHEETS\027201-DT-DETOUR DETAIL1-MAPPING.DWG
LAYOUT NAME - 027003-dt
PLOT DATE : 11/14/2025 2:50 PM
PLOT BY : HETH, BARBARA L
PLOT NAME :
PLOT SCALE : 1 IN:200 FT
WISDOT/CADDS SHEET 42

2

SIGN LOCATED 300'
NORTH OF RIVER RD

DETOUR M4-8 24"X12"
SOUTH M3-3 24"X12"
51 M1-4 24"X24"
MO5-2R 21"X21"

NORTH 47 | EAST 8 | WEST 8

DETOUR M4-8 24"X12"
NORTH M3-1 24"X12"
51 M1-4 24"X24"

INSTALL ON
TEMPORARY
STAND

DETOUR M4-8 24"X12"
NORTH M3-1 24"X12"
51 M1-4 24"X24"
MO6-2R 21"X21"

NORTH 47

INSTALL ADJACENT
TO INSIDE OF NORTH
SIGN BRIDGE POLE

DETOUR M4-8 24"X12"
NORTH M3-1 24"X12"
51 M1-4 24"X24"
MO6-1R 21"X21"

DETOUR M4-8 24"X12"
NORTH M3-1 24"X12"
51 M1-4 24"X24"

DETOUR AHEAD W20-2A

INSTALL ON
TEMPORARY
STAND

DETOUR M4-8 24"X12"
SOUTH M3-3 24"X12"
51 M1-4 24"X24"
MO6-2R 21"X21"

WEST 8

DETOUR M4-8 24"X12"
SOUTH M3-3 24"X12"
51 M1-4 24"X24"

DETOUR M4-8 24"X12"
NORTH M3-1 24"X12"
51 M1-4 24"X24"
MO6-1 21"X21"

ATTACH TO SIGNBIRDGE
ON NORTH POLE
ABOVE EXISTING SIGNS

DETOUR M4-8 24"X12"
NORTH M3-1 24"X12"
51 M1-4 24"X24"
USE LEFT LANE MO4-20L 24"X24"

DETOUR M4-8 24"X12"
NORTH M3-1 24"X12"
51 M1-4 24"X24"
USE LEFT LANE MO4-20L 24"X24"

DETOUR M4-8 24"X12"
NORTH M3-1 24"X12"
51 M1-4 24"X24"

DETOUR AHEAD W20-2A

SEE SDD FOR MORE INFORMATION:
SDD BARRICADES AND SIGNS FOR MAINLINE CLOSURES

LEGEND
SIGN ON PERMANENT SUPPORT
SIGN ON TEMPORARY STAND
EXISTING SIGN SUPPORT

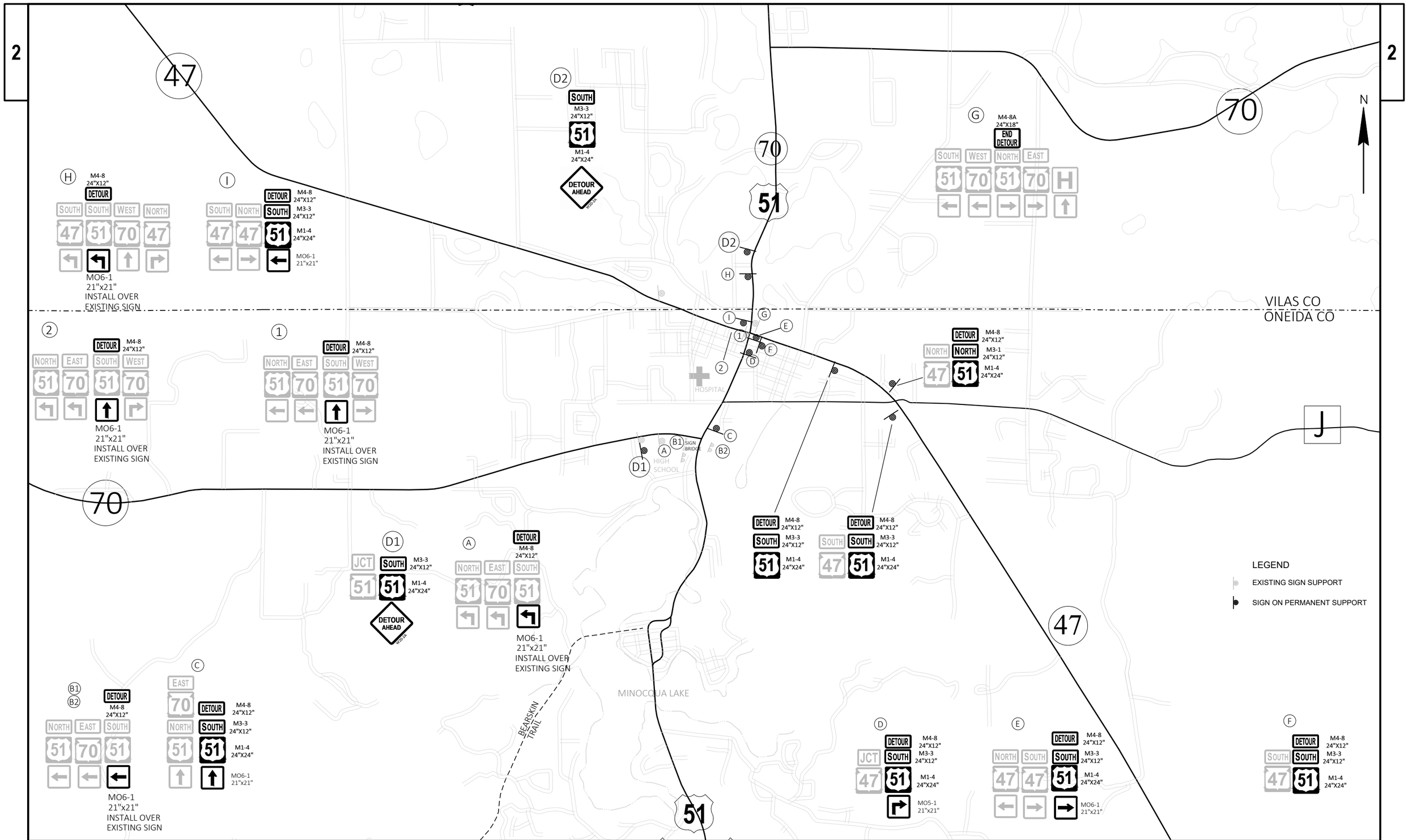
N

RIVER RD
STH 47
SHIMKUS AUTO BODY
ONEIDA COUNTY HIGHWAY DEPT
SIGNBRIDGE
KEMP ST
KEMP ST
QUALITY INN
AMERIC INN
CULVER'S
SUBSTATION
WISCONSIN RIVER
USH 8 WB
USH 8 EB
USH 8 - STH 47

2

PROJECT NO: 1170-16-64	HWY: USH 51	COUNTY: ONEIDA & LINCOLN	DETOUR MAP DETAIL 2 USH 8/STH 47	SHEET 21	E

FILE NAME : N:\PDS\C3D\11701634\SHEETS\027201-DT-DETOUR2024-DETAIL234_COUNTYMAPS.DWG
LAYOUT NAME - 8-47
PLOT DATE : 11/14/2025 3:10 PM
PLOT BY : HETH, BARBARA L
PLOT NAME :
PLOT SCALE : 1 IN:200 FT
WISDOT/CADDS SHEET 42



PROJECT NO: 1170-16-64	HWY: USH 51	COUNTY: ONEIDA & LINCOLN	DETOUR MAP DETAIL 3 STH 70/ STH 47	SHEET 22	E

FILE NAME : N:\PDS\C3D\11701634\SHEETS\027201-DT-DETOUR2024-DETAIL3_COUNTYMAPS.DWG
LAYOUT NAME - detail3

PLOT DATE : 11/14/2025 3:14 PM PLOT BY : HETH, BARBARA L PLOT NAME : PLOT SCALE : 1 IN:0.5 MI

WISDOT/CADDS SHEET 42

2

2

N

TRAIL

CREEK

R11-3
60" X 30"
ROAD CLOSED
TO THRU TRAFFIC
1/4 MILES AHEAD

TYPE III BARRICADE

K

USE SIGN DURING ROAD CLOSURE

ROAD
CLOSED
R11-2
48"X30"

END PROJECT

PLACE G20-57C SIGN 10 DAYS PRIOR TO CLOSURE
REMOVE SIGN WHEN CLOSURE BEGINS

HWY 51
ROAD CLOSED
BEGINS XXX-XX
G20-57C
72"X36"

L

PROJECT NO: 1170-16-64	HWY: USH 51	COUNTY: ONEIDA & LINCOLN	DETOUR MAP DETAIL 4 CTH L	SHEET 23	E

FILE NAME : N:\PDS\C3D\11701634\SHEETS\027201-DT-DETOUR2024-DETAIL3_COUNTYMAPS.DWG
LAYOUT NAME - detail4

PLOT DATE : 11/14/2025 3:15 PM PLOT BY : HETH, BARBARA L PLOT NAME : PLOT SCALE : 1 IN:0.5 MI

W12-52
48"X48"

WO57-52
48"X36"

W12-52
48"X48"

WO57-52
36"X24"

3

M3-3
24"X12"

M1-6
24"X24"

W12-52
48"X48"

WO57-52
36"X24"

4

M3-1
24"X12"

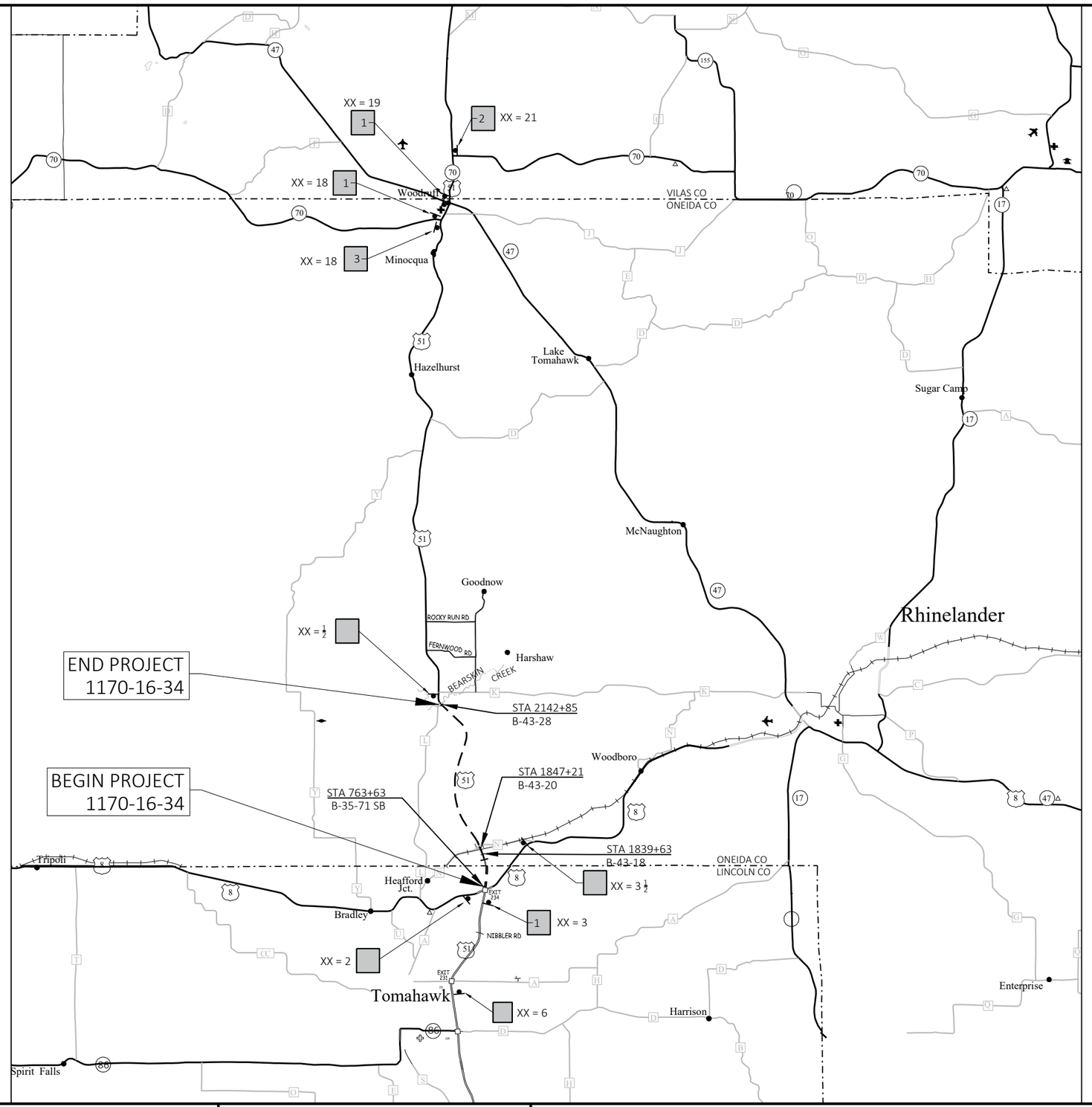
M1-6
24"X24"

W12-52
48"X48"

WO57-52
36"X24"

NOTE

SEE SDD ADVANCED WIDTH RESTRICTION FOR ADDITIONAL DETAILS



2

PROJECT NO: 1170-16-64	HWY: USH 51	COUNTY: ONEIDA & LINCOLN	TRAFFIC CONTROL ADVANCED WARNING SIGNS - STAGES 2, 3	SHEET 24	E

CURB AND GUTTER FLOWLINE GRADES				
NO.	STATION	ELEV	EASTING	NORTHING
1	763+58 35.58 LT	1502.00	130,406.3996	197,391.9732
2	763+75 35.42 LT	1501.72	130,423.2518	197,394.2155
3	764+00 35.27 LT	1501.34	130,448.6176	197,397.5085
4	764+11 35.27 LT	1501.20	130,457.9772	197,398.6665

BEGIN PROJECT
STA 763+62.94 SB
MATCH EXISTING

STA 763+35 SB 74' RT
ROAD WEATHER
INFOMRATION SYSTEM

USH 51 SB
EXIT RAMP

B-35-71 SB

STA/OFF TO BACK OF RAIL

#1sb seal
#2sb rh +97.44 -35.39' P9
+22.42 -36.33' P5
+47.40 -37.27' P1
#3sb rh
#4sb
#5sb rh

607
513

763SB 764SB 765SB 766SB 767SB 768SB

SEAL

STA 763+62 SB LT
REMOVING SURFACE DRAINS (FLUME)
REMOVING SMALL PIPE CULVERTS
1-12" x 37' CPCM

B-35-71 - SEE STRUCTURE PLAN

STA 764+00.6 LT
SEE XS FOR DROP INLET

STA 763+63 - 763+83 SB
SAWCUT REQUIRED
REMOVING CONCRETE PAVEMENT
CONCRETE PAVEMENT HES 9-INCH
CONCRETE PAVEMENT APPROACH SLAB

STA 763+54 - 763+83 SB LT -TBTT
STA 763+83 - 764+11 SB LT -TBT
CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE TBTT, TBT

63NB 64NB 65NB 66NB 67NB 68NB

B-35-70 NB
NO WORK

USH 8 EB

USH 8 WB

BENCH MARKS			
NO.	STATION	ELEV.	DESCRIPTION
606	761+23	1507.78	BRASS DISC 6' RT
607	763+53	1505.07	CAP WITH CUT "X" 37' LT

STA 763+83 - 765+25 SB RT
REMOVING ASPHALTIC SURFACE MILLING

STA 765+98 - 767+54 SB LT
STA 765+25 - 767+64 SB RT
PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS

STA 763+53 - 766+50 SB LT
REMOVING GUARD RAIL
MGS GUARD RAIL 3

LEGEND
- BASE AGGREGATE SHOULDER
- CLEANING AND SEALING CRACKS AND JOINTS WITH HOT-APPLIED SEALANT
- CONCETE PAVEMENT APPROACH SLAB HES
- CONCRETE PAVEMENT HES 9-INCH
- PARTIAL DEPTH SURFACE REPAIR

PROJECT NO: 1170-16-64	HWY: USH 51	COUNTY: ONEIDA & LINCOLN	PLAN DETAILS B-35-71 SB	SHEET 25	E

2

PROJECT NO: 1170-16-64	HWY: USH 51	COUNTY: ONEIDA & LINCOLN	PLAN DETAILS USH 51 SB, NB	SHEET 26	E

2

2

N

#8sb

#9sb

#10sb

#11sb

USH 51 SB
EXIT RAMP

USH 51 SB

777SB

USH 51 SB

778SB

779SB

780SB

781SB

782SB

77NB

USH 51 NB

78NB

79NB

80NB

81NB

82NB

PAVED SHLD

SEAL

USH 51NB
ENTRANCE RAMP

PT: 78+41.05

#1nb

LEGEND

BASE AGGREATE DENSE SHOULDER

CONCRETE PAVEMENT REPAIR

CONCRETE PAVEMENT REPLACEMENT

CLEANING AND SEALING CRACKS AND JOINTS WITH HOT-APPLIED SEALANT

SEAL

REMOVING RAISED PAVEMENT MARKERS AND FILLING VOIDS

BEGIN CONSTRUCTION NB
STA 82+00 NB
MATCH EXISTING
BUTT JOINT REQUIRED

PROJECT NO: 1170-16-64	HWY: USH 51	COUNTY: ONEIDA & LINCOLN	PLAN DETAILS USH 51 NB, SB	SHEET 27	E

2

PROJECT NO: 1170-16-64	HWY: USH 51	COUNTY: ONEIDA & LINCOLN	PLAN DETAILS USH 51 NB, SB	SHEET 28	E

2

2

STA 788+14 - 788+24 SB
REMOVING ASPHALTIC SURFACE BUTT JOINTS

CONCRETE

ASPHALT

788SB 789SB 790SB 791SB 792SB 793SB 794SB

88NB 89NB 90NB 91NB 92NB 93NB 94NB

PAVED SHLD

SEAL

SEAL

PC: 93+79.63

#9nb

LEGEND

BASE AGGREATE DENSE SHOULDER

CONCRETE PAVEMENT REPAIR

CONCRETE PAVEMENT REPLACEMENT

CLEANING AND SEALING CRACKS AND JOINTS WITH HOT-APPLIED SEALANT

SEAL

REMOVING RAISED PAVEMENT MARKERS AND FILLING VOIDS

PROJECT NO: 1170-16-64	HWY: USH 51	COUNTY: ONEIDA & LINCOLN	PLAN DETAILS USH 51 NB, SB	SHEET 29	E

FILE NAME : N:\PDS\C3D\11701634\SHEETS\021021-PD.DWG
LAYOUT NAME - 021201-pd (6r)

PLOT DATE : 11/14/2025 4:07 PM PLOT BY : HETH, BARBARA L PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

LEGEND
- BASE AGGREATE DENSE SHOULDER
- CONCRETE PAVEMENT REPAIR
- CONCRETE PAVEMENT REPLACEMENT
- CLEANING AND SEALING CRACKS AND JOINTS WITH HOT-APPLIED SEALANT
- SEAL JOINT
- REMOVING RAISED PAVEMENT MARKERS AND FILLING VOIDS
- CONCRETE PAVEMENT PARTIAL DEPTH REPAIR

N

USH 51 SB EXIT RAMP

#6sb a b

#7-sb-a

#7-sb-b

#8sb

#9sb

#10sb

#11sb

770SB

772SB

774SB

776SB

778SB

780SB

782SB

784SB

USH 51 SB

PAVED SHLD

70NB

72NB

74NB

76NB

USH 51 NB

78NB

80NB

82NB

84NB

STA

#1nb

#2nb

#3nb

#4nb

#5nb

USH 51NB ENTRANCE RAMP

PT: 78+41.05

BEGIN CONSTRUCTION
STA 82+00 NB
MATCH EXISTING
BUTT JOINT REQUIRED

BUTT JOINT REQUIRED

STA 82+00 - 104+75 NB LT SHLD
STA 84+56 - 98+00 NB RT SHLD

REMOVING ASPHALTIC SURFACE MILLING
REMOVING ASPHALTIC SURFACE BUTT JOINTS

2

PROJECT NO: 1170-16-64	HWY: USH 51	COUNTY: ONEIDA & LINCOLN	PLAN DETAILS USH 51 RAMP	SHEET 30	E

FILE NAME : N:\PDS\C3D\11701634\SHEETS\021021-PD_100SCALE.DWG
LAYOUT NAME - 021201-pd (3r_100)

PLOT DATE : 11/14/2025 5:35 PM PLOT BY : HETH, BARBARA L PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

2

LEGEND
- BASE AGGREATE DENSE SHOULDER
- CONCRETE PAVEMENT REPAIR
- CONCRETE PAVEMENT REPLACEMENT
- CLEANING AND SEALING CRACKS AND JOINTS WITH HOT-APPLIED SEALANT
- SEAL JOINT
- REMOVING RAISED PAVEMENT MARKERS AND FILLING VOIDS
- CONCRETE PAVEMENT PARTIAL DEPTH REPAIR

N

STA 788+14 - 820+00 SB
STA 794+80 RT MAINTENANCE XO

STA 82+00 - 104+75 NB LT SHLD
STA 84+56 - 98+00 NB RT SHLD
STA 104+75 - 121+75 NB XO

REMOVING ASPHALTIC SURFACE MILLING
REMOVING ASPHALTIC SURFACE BUTT JOINTS

ASPHALT
CONCRETE

BUTT JOINT REQUIRED

#12sb
#13sb
#14sb

786SB
788SB
790SB
792SB
794SB
796SB
798SB
800SB

+14.00
0.00

86NB
88NB
90NB
92NB
94NB
96NB
98NB
100NB

SEAL

#5nb
#6nb rh
#7nb
#9nb
#10nb seal
#11nb

PC: 93+79.63
PCC: 98+30.34

12' LANE LINE
15' EDGE OF CONC PAVEMENT
EDGE OF ASPHALT SHOULDER

BUTT JOINT REQUIRED
LANE LINE
EDGE OF CONC PAVEMENT

PROJECT NO: 1170-16-64	HWY: USH 51	COUNTY: ONEIDA & LINCOLN	PLAN DETAILS USH 51 RAMP	SHEET 31	E

2

STA 788+14 - 820+00 SB

REMOVING ASPHALTIC SURFACE MILLING
REMOVING ASPHALTIC SURFACE BUTT JOINTS

N

Lincoln County

802SB
804SB
806SB
808SB
810SB
812SB
814SB
816
102NB
104NB
106NB
108NB
110NB
112NB
114NB
116NB

SEAL
SEAL

PCC: 107+02.21

PCC: 109+

#12nb seal

#13nb seal

Oneida County

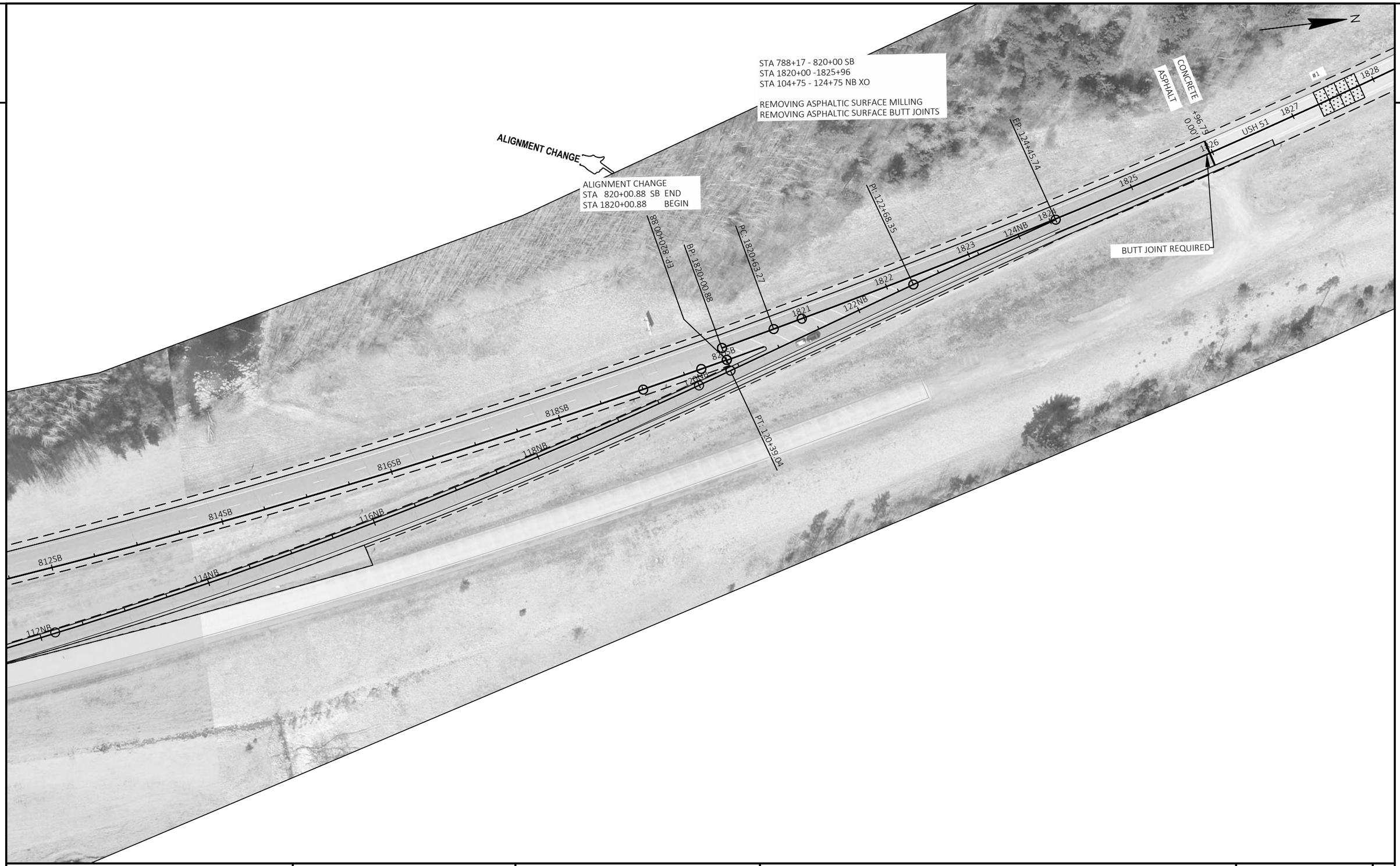
LANE LINE

EDGE OF CONC PAVEMENT

PROJECT NO: 1170-16-64	HWY: USH 51	COUNTY: ONEIDA & LINCOLN	PLAN DETAILS USH 51 XO	SHEET 32	E

FILE NAME : N:\PDS\C3D\11701634\SHEETS\021021-PD_100SCALE.DWG
LAYOUT NAME - 021201-pd (5r_100)
PLOT DATE : 11/14/2025 4:59 PM
PLOT BY : HETH, BARBARA L
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

2



PROJECT NO: 1170-16-64	HWY: USH 51	COUNTY: ONEIDA & LINCOLN	PLAN DETAILS USH 51 XO	SHEET 33 E

FILE NAME : N:\PDS\C3D\11701634\SHEETS\021021-PD_100SCALE.DWG
LAYOUT NAME - 021201-pd (6r_100)

PLOT DATE : 11/14/2025 4:55 PM PLOT BY : HETH, BARBARA L PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

2

LEGEND

BASE AGGREATE DENSE SHOULDER

CONCRETE PAVEMENT REPLACEMENT

CLEANING AND SEALING CRACKS AND JOINTS WITH HOT-APPLIED SEALANT

CONCRETE PAVEMENT PARTIAL DEPTH REPAIR

STA 1836+14 - 1839+39 LT SHLD
STA 1835+34 - 1839+39 RT SHLD
REMOVING ASPHALTIC SURFACE MILLING

EXISTING MOW STRIP

EXISTING MOW STRIP
TO REMAIN

PT: 1836+20.32

#7a

1833 1834 1835 1836 1837 1838 1839

#4 #6

509

EXISTING MOW STRIP
TO REMAIN

EXISTING MOW STRIP
TO REMAIN

STA 1836+89
5'x5' BOX CULV
MASON CREEK
NO WORK

BOX CULVERT

PROJECT NO: 1170-16-64	HWY: USH 51	COUNTY: ONEIDA & LINCOLN	PLAN DETAILS B-43-18 AND B-43-20	SHEET 34	E

FILE NAME : N:\PDS\C3D\11701634\SHEETS\021021-PD.DWG
LAYOUT NAME - 021203-pd

PLOT DATE : 11/14/2025 6:36 PM PLOT BY : HETH, BARBARA L PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

2

B-43-18 SEE STRUCTURE PLAN

STA 1839+39 - 1839+63
STA 1842+29 - 1842+53
REMOVING CONCRETE PAVEMENT

STA 1839+45 - 1839+63
STA 1842+29 - 1842+53
CONCRETE PAVEMENT APPROACH SLAB HES
CONCRETE PAVEMENT 9-INCH HES - SHLD SOUTH SIDE - SEE DETAIL
CONCRETE SURFACE DRAINS HES - SHLD NORTH SIDE - SEE DETAIL

STA 1836+14 - 1839+39 LT SHLD
STA 1835+34 - 1839+39 RT SHLD

STA 1842+43 - 1846+95 LT SHLD
STA 1842+35 - 1846+98 RT SHLD

REMOVING ASPHALTIC SURFACE MILLING

N

APPROX 78' HE

APPROX 50' HE

LITTLE RICE CREEK

FV & LS
RR

EXISTING MOW STRIP
TO REMAIN

605

515

#7b

#8b

#9

#8a

#10

1839

1840

1841

1842

1843

1844

B-43-18

+44.90

+63.31

+38.97

+29.11

+37.43

+53.56

604

EXISTING MOW STRIP
TO REMAIN

EXISTING MOW STRIP
TO REMAIN

APPROX 78' HE

APPROX 50' HE

LITTLE RICE CREEK

LEGEND

- BASE AGGREATE DENSE SHOULDER
- CONCRETE PAVEMENT REPAIR
- CONCRETE PAVEMENT REPLACEMENT
- CLEANING AND SEALING CRACKS AND JOINTS WITH HOT-APPLIED SEALANT
- CONCRETE PAVEMENT APPROACH SLAB HES
- CONCRETE PAVEMENT HES 9-INCH OR CONCRETE SURFACE DRAINS HES - SEE DETAIL
- CONCRETE PAVEMENT PARTIAL DEPTH REPAIR
- ASPHALTIC SURFACE SHOULDER - SEE DETAIL

BENCH MARKS			
NO.	STATION	ELEV.	DESCRIPTION
604	1839+64	1535.78	BRASS DISK 23' RT
605	1842+30	1534.65	CUT "X" 24' LT

PROJECT NO: 1170-16-64	HWY: USH 51	COUNTY: ONEIDA & LINCOLN	PLAN DETAILS B-43-18 AND B-43-20	SHEET 35	E

2

2

B-43-20 SEE STRUCTURE PLAN

STA 1842+43 - 1846+95 LT SHLD
STA 1842+35 - 1846+98 RT SHLD

STA 1848+44 - 1851+89 LT SHLD
STA 1848+40 - 1851+77 RT SHLD

REMOVING ASPHALTIC SURFACE MILLING

LEGEND

- BASE AGGREATE DENSE SHOULDER
- CONCRETE PAVEMENT REPAIR
- CONCRETE PAVEMENT REPLACEMENT
- CLEANING AND SEALING CRACKS AND JOINTS WITH HOT-APPLIED SEALANT
- CONCRETE PAVEMENT PARTIAL DEPTH REPAIR

EXISTING MOW STRIP
TO REMIAN

#11

#11a

#12a

#12b

#12c

#10

1845

1846

1847

1848

1849

1850

+98.23

+17.22

+40.44

B-43-20

602

603

516

EXISTING MOW STRIP
TO REMAIN

CAUTION

CTH N

BENCH MARKS			
NO.	STATION	ELEV.	DESCRIPTION
603	1847+31	1532.36	BRASS DISK 23' RT
602	1848+09	1532.03	CUT "X" 24' LT

PROJECT NO: 1170-16-64	HWY: USH 51	COUNTY: ONEIDA & LINCOLN	PLAN DETAILS B-43-18 AND B-43-20	SHEET 36	E

FILE NAME : N:\PDS\C3D\11701634\SHEETS\021021-PD.DWG
LAYOUT NAME - 021205-pd

PLOT DATE : 11/14/2025 7:20 PM PLOT BY : HETH, BARBARA L PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

2

STA 1848+44 - 1851+89 LT SHLD
STA 1848+40 - 1851+77 RT SHLD

REMOVING ASPHALTIC SURFACE MILLING

N

POST
POST
POST
POST
POST
POST

#13
#14
#15
#16
#17
#18
#19

PC: 1852+67.97

508

1851
1852
1853
1854
1855
1856

USH 51

PROJECT NO: 1170-16-64	HWY: USH 51	COUNTY: ONEIDA & LINCOLN	PLAN DETAILS B-43-18 AND B-43-20	SHEET 37 E

FILE NAME : N:\PDS\C3D\11701634\SHEETS\021021-PD.DWG
LAYOUT NAME - 021206-pd

PLOT DATE : 11/14/2025 6:43 PM PLOT BY : HETH, BARBARA L PLOT NAME : PLOT SCALE : 1 IN:40 FT

2 2

BEARSKIN TRAIL

N

506

#220

#221a,b

2139+81.48
-15.18'

#225

+40.44
-15.16'

#226

2141+59.19
-22.00'

2137 2138 2139 2140 2141 2142

+85.28

+86.19

2138+13.44
15.00'

2140+17.84
15.00'

2140+56.94
21.34'

600

LEGEND

CONCRETE PAVEMENT REPAIR

CONCRETE PAVEMENT REPLACEMENT

CLEANING AND SEALING CRACKS AND JOINTS WITH HOT-APPLIED SEALANT

CONCRETE PAVEMENT PARTIAL DEPTH REPAIR

STA 2139+42 - 2142+65 RT
REMOVING EXCESS SHOULDER MATERIAL

STA 2140+40 - 2142+65 LT SHLD
STA 2140+18 - 2142+65 RT SHLD
REMOVING ASPHALTIC SURFACE MILLING
ASPHALTIC SURFACE

STA 2139+81 - 2141+59 LT
STA 2138+13 - 2140+57 RT
PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS
ASPHALTIC SURFACE

BEARSKIN TRAIL

PROJECT NO: 1170-16-64	HWY: USH 51	COUNTY: ONEIDA & LINCOLN	PLAN DETAILS B-43-28	SHEET 38	E

FILE NAME : N:\PDS\C3D\11701634\SHEETS\021021-PD.DWG
LAYOUT NAME - 021207-pd

PLOT DATE : 11/17/2025 2:00 PM PLOT BY : HETH, BARBARA L PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

2

B-43-28 SEE STRUCTURE PLAN

BEARSKIN CREEK

SOUTH 51

℄ 2146+58.90

601

B-43-28

2143 2144 2145 2146 2147 2148

+86.19

+57.06

600

STA2146+02.31
24' RT P1

END PROJECT
STA 2144+67
BUTT JOINT REQUIRED

STA 2144+37 - STA 2144+57 LT & RT SHLD
REMOVING ASPHALTIC SURFACE MILLING
ASPAHLTIC SURFACE

STA 2142+75 - 2142+85 LT & RT (THRIE BEAM SW & SE- STEEL PLATE)
STA 2144+50 - 2145+00 RT (STEEL PLATE BEAM GUARD EAT)
REPLACING GUARDRAIL POSTS & BLOCKS

STA 2145+00 - 2147+00 LT
STA 2144+00 - 2145+50 RT
ADJUSTING STEEL PLATE BEAM GUARD

BEARSKIN TRAIL

BENCH MARKS

NO.	STATION	ELEV.	DESCRIPTION
600	2142+90	1512.78	BRASS DISK 23' LT
601	2144+53	1514.01	CUT "X" 23' RT

PROJECT NO: 1170-16-64	HWY: USH 51	COUNTY: ONEIDA & LINCOLN	PLAN DETAILS CTH L	SHEET 39	E

FILE NAME : N:\PDS\C3D\11701634\SHEETS\021021-PD.DWG
LAYOUT NAME - 021208-pd

PLOT DATE : 11/17/2025 2:03 PM PLOT BY : HETH, BARBARA L PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

Estimate Of Quantities

1170-16-64

Line	Item	Item Description	Unit	Total	Qty
0002	203.0100	Removing Small Pipe Culverts	EACH	1.000	1.000
0004	203.0220	Removing Structure (structure) 01. B-35-0071	EACH	1.000	1.000
0006	204.0100	Removing Concrete Pavement	SY	300.000	300.000
0008	204.0115	Removing Asphaltic Surface Butt Joints	SY	210.000	210.000
0010	204.0120	Removing Asphaltic Surface Milling	SY	27,000.000	27,000.000
0012	204.0165	Removing Guardrail	LF	300.000	300.000
0014	204.0180	Removing Delineators and Markers	EACH	1.000	1.000
0016	204.0190	Removing Surface Drains	EACH	3.000	3.000
0018	205.0100	Excavation Common	CY	175.000	175.000
0020	206.1001	Excavation for Structures Bridges (structure) 01. B-35-0071	EACH	1.000	1.000
0022	210.1500	Backfill Structure Type A	TON	83.000	83.000
0024	211.0101	Prepare Foundation for Asphaltic Paving (project) 01. 1170-16-64	EACH	1.000	1.000
0026	211.0400	Prepare Foundation for Asphaltic Shoulders	STA	9.000	9.000
0028	213.0100	Finishing Roadway (project) 01. 1170-16-64	EACH	1.000	1.000
0030	305.0110	Base Aggregate Dense 3/4-Inch	TON	3,900.000	3,900.000
0032	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	280.000	280.000
0034	415.1090	Concrete Pavement HES 9-Inch	SY	75.000	75.000
0036	415.1410	Concrete Pavement Approach Slab HES	SY	216.000	216.000
0038	416.0610	Drilled Tie Bars	EACH	800.000	800.000
0040	416.0620	Drilled Dowel Bars	EACH	6,400.000	6,400.000
0042	416.0754.S	Concrete Pavement Partial Depth Repair Surface Repair	SF	55.000	55.000
0044	416.0758.S	Concrete Pavement Partial Depth Repair Full Depth Adjustment	SF	10.000	10.000
0046	416.1710	Concrete Pavement Repair	SY	3,135.000	3,135.000
0048	416.1720	Concrete Pavement Replacement	SY	10,465.000	10,465.000
0050	455.0605	Tack Coat	GAL	1,120.000	1,120.000
0052	460.2000	Incentive Density HMA Pavement	DOL	1,800.000	1,800.000
0054	460.6224	HMA Pavement 4 MT 58-28 S	TON	2,800.000	2,800.000
0056	465.0105	Asphaltic Surface	TON	330.000	330.000
0058	465.0110	Asphaltic Surface Patching	TON	100.000	100.000
0060	465.0520	Asphaltic Rumble Strips, Shoulder	LF	1,345.000	1,345.000
0062	502.0100	Concrete Masonry Bridges	CY	4.000	4.000
0064	502.3205	Pigmented Surface Sealer Reseal	SY	622.000	622.000
0066	502.3210	Pigmented Surface Sealer	SY	6.000	6.000
0068	502.4205	Adhesive Anchors No. 5 Bar	EACH	5.000	5.000
0070	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	670.000	670.000
0072	509.0301	Preparation Decks Type 1	SY	26.000	26.000
0074	509.0310.S	Sawing Pavement Deck Preparation Areas	LF	248.000	248.000
0076	509.1500	Concrete Surface Repair	SF	53.000	53.000
0078	509.2100.S	Concrete Masonry Deck Repair	CY	4.000	4.000
0080	509.5100.S	Polymer Overlay	SY	135.000	135.000
0082	509.9015.S	Removing Polymer Overlay (structure) 01. B-35-0071	SY	30.000	30.000
0084	509.9015.S	Removing Polymer Overlay (structure) 02. B-43-0018	SY	37.000	37.000
0086	509.9015.S	Removing Polymer Overlay (structure) 03. B-43-0020	SY	36.000	36.000
0088	509.9015.S	Removing Polymer Overlay (structure) 04. B-43-0028	SY	32.000	32.000
0090	516.0500	Rubberized Membrane Waterproofing	SY	4.000	4.000
0092	521.1012	Apron Endwalls for Culvert Pipe Steel 12-Inch	EACH	1.000	1.000
0094	530.0112	Culvert Pipe Corrugated Polyethylene 12-Inch	LF	45.000	45.000
0096	601.0588	Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type TBT	LF	28.000	28.000
0098	601.0590	Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type TBTT	LF	29.000	29.000

1170-16-64

Line	Item	Item Description	Unit	Total	Qty
0100	602.3015	Concrete Surface Drains HES	CY	4.000	4.000
0102	606.0200	Riprap Medium	CY	6.000	6.000
0104	611.0654	Inlet Covers Type V	EACH	3.000	3.000
0106	611.3220	Inlets 2x2-FT	EACH	1.000	1.000
0108	614.0150	Anchor Assemblies for Steel Plate Beam Guard	EACH	1.000	1.000
0110	614.0397	Guardrail Mow Strip Emulsified Asphalt	SY	10.000	10.000
0112	614.0400	Adjusting Steel Plate Beam Guard	LF	250.000	250.000
0114	614.0950	Replacing Guardrail Posts and Blocks	EACH	20.000	20.000
0116	614.2300	MGS Guardrail 3	LF	213.000	213.000
0118	614.2500	MGS Thrie Beam Transition	LF	39.000	39.000
0120	614.2610	MGS Guardrail Terminal EAT	EACH	1.000	1.000
0122	618.0100	Maintenance and Repair of Haul Roads (project) 01. 1170-16-64	EACH	1.000	1.000
0124	619.1000	Mobilization	EACH	1.000	1.000
0126	624.0100	Water	MGAL	84.000	84.000
0128	625.0100	Topsoil	SY	900.000	900.000
0130	628.1504	Silt Fence	LF	1,800.000	1,800.000
0132	628.1520	Silt Fence Maintenance	LF	1,800.000	1,800.000
0134	628.1905	Mobilizations Erosion Control	EACH	3.000	3.000
0136	628.1910	Mobilizations Emergency Erosion Control	EACH	3.000	3.000
0138	628.2004	Erosion Mat Class I Type B	SY	900.000	900.000
0140	628.7005	Inlet Protection Type A	EACH	1.000	1.000
0142	628.7015	Inlet Protection Type C	EACH	1.000	1.000
0144	628.7504	Temporary Ditch Checks	LF	30.000	30.000
0146	628.7570	Rock Bags	EACH	150.000	150.000
0148	629.0210	Fertilizer Type B	CWT	34.000	34.000
0150	630.0120	Seeding Mixture No. 20	LB	2,300.000	2,300.000
0152	630.0500	Seed Water	MGAL	70.000	70.000
0154	633.0100	Delineator Posts Steel	EACH	1.000	1.000
0156	633.0500	Delineator Reflectors	EACH	1.000	1.000
0158	633.5200	Markers Culvert End	EACH	13.000	13.000
0160	638.2102	Moving Signs Type II	EACH	5.000	5.000
0162	642.5201	Field Office Type C	EACH	1.000	1.000
0164	643.0300	Traffic Control Drums	DAY	6,100.000	6,100.000
0166	643.0420	Traffic Control Barricades Type III	DAY	500.000	500.000
0168	643.0705	Traffic Control Warning Lights Type A	DAY	600.000	600.000
0170	643.0715	Traffic Control Warning Lights Type C	DAY	4,820.000	4,820.000
0172	643.0810	Traffic Control Connected Arrow Boards	DAY	90.000	90.000
0174	643.0900	Traffic Control Signs	DAY	9,180.000	9,180.000
0176	643.0920	Traffic Control Covering Signs Type II	EACH	8.000	8.000
0178	643.1000	Traffic Control Signs Fixed Message	SF	126.000	126.000
0180	643.1220	Traffic Control Connected Work Zone Start and End Location Markers	DAY	46.000	46.000
0182	643.3165	Temporary Marking Line Paint 6-Inch	LF	4,040.000	4,040.000
0184	643.5000	Traffic Control	EACH	1.000	1.000
0186	645.0120	Geotextile Type HR	SY	14.000	14.000
0188	646.2040	Marking Line Grooved Wet Ref Epoxy 6-Inch	LF	113,030.000	113,030.000
0190	646.4040	Marking Line Grooved Wet Ref Epoxy 10-Inch	LF	1,100.000	1,100.000
0192	646.5420	Marking Aerial Enforcement Bar Epoxy	EACH	10.000	10.000
0194	646.7120	Marking Diagonal Epoxy 12-Inch	LF	250.000	250.000
0196	648.0100	Locating No-Passing Zones	MI	6.070	6.070

Estimate Of Quantities

1170-16-64

Line	Item	Item Description	Unit	Total	Qty
0198	650.4000	Construction Staking Storm Sewer	EACH	2.000	2.000
0200	650.4500	Construction Staking Subgrade	LF	235.000	235.000
0202	650.5000	Construction Staking Base	LF	235.000	235.000
0204	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	28.000	28.000
0206	650.6501	Construction Staking Structure Layout (structure) 01. B-35-0071	EACH	1.000	1.000
0208	650.8000	Construction Staking Resurfacing Reference	LF	38,950.000	38,950.000
0210	650.9911	Construction Staking Supplemental Control (project) 01. 1170-16-64	EACH	1.000	1.000
0212	650.9920	Construction Staking Slope Stakes	LF	235.000	235.000
0214	690.0250	Sawing Concrete	LF	14,500.000	14,500.000
0216	715.0502	Incentive Strength Concrete Structures	DOL	500.000	500.000
0218	740.0440	Incentive IRI Ride	DOL	4,750.000	4,750.000
0220	999.2100.S	Installing and Maintaining Climbing Turtle Exclusion Fence	LF	1,300.000	1,300.000
0222	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	2,000.000	2,000.000
0224	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	1,260.000	1,260.000
0226	SPV.0035	Special 01. Removing Excess Shoulder Material	CY	20.000	20.000
0228	SPV.0060	Special 01. Removing Raised Pavement Markers and Filling Voids	EACH	41.000	41.000
0230	SPV.0090	Special 01. Marking Diagonal Epoxy 24-Inch	LF	180.000	180.000
0232	SPV.0090	Special 02. Cleaning and Sealing Cracks and Joints with Hot-Applied Sealant	LF	5,700.000	5,700.000

DIVISION	FROM/TO STATION	LOCATION	205.0100 EXCAVATION COMMON (1) CUT (2)	205.0100 EXCAVATION COMMON (1) EBS EXCAVATION (3)	SALVAGED/UNUSABLE PAVEMENT MATERIAL (4)	AVAILABLE MATERIAL (5)	UNEXPANDED FILL	EXPANDED FILL (13) FACTOR 1.25	MASS ORDINATE +/- (14)	WASTE	208.0100 BORROW	COMMENT
DIVISION 1												
51-SB-BG2	763+65.11/765+97.00	B-35-71 SB guard rail	71	0	16	55	22	28	28			
	3 CONC APPROACH SLABS*	B-35-71, B-43-18	104	0	100	0	0	0	100			
DIVISION 1 SUBTOTAL			175	0	116	55	22	28	128	128	0	
GRAND TOTAL			175	0	116	55	22	28	128	**128**	0	
	TOTAL EXCAVATION COMMON		**175**									

NOTES:

* CONCRETE APPROACH SLABS ARE NOT SHOWN IN CROSS SECTIONS. MATCH EXISTING ELEVATIONS.

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

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

(4) SALVAGED/UNUSABLE PAVEMENT MATERIAL

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

(13) EXPANDED FILL FACTOR = 1.25

EXPANDED FILL = (UNEXPANDED FILL - REDUCED EBS) * FILL FACTOR

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

(15) FACTORS USED TO COMPUTE ANTICIPATED WASTE AND THE COMPUTED WASTE VOLUME IDENTIFIED ARE FOR GENERAL INFORMATION ONLY.

3

REMOVING SMALL PIPE CULVERTS

LOCATION	203.0100 EACH
763+62 45' LT 12" x 37' CPCM	1

REMOVING CONCRETE PAVEMENT

LOCATION			204.0100 SY
763+63 - 763+83 SB	B-35-71	NORTH - USH 8	117
1839+39 - 1839+63	B-43-18	SOUTH - RR	121
1842+29 - 1842+53	B-43-18	NORTH - RR	62
TOTAL			300

REMOVING ASPHALTIC SURFACE BUTT JOINTS

LOCATION	DIMENSIONS FT	204.0115 SY	COMMENT
788+14 - 788+24 SB	10 x 30	33	CONC/ASPH
1825+87 - 1825+97	10 x 30	33	ASPH/CONC
82+00 - 82+10 NB LT	10 x 4	4	BEGIN NB LT SHLD
84+56 - 84+66 NB RT	10 x 7	8	BEGIN NB RT SHLD
97+90 - 98+00 NB RT	10 X 6	7	END NB RT SHLD
1826+58 - 1826+68 RT	10 X 7	8	END LT SHLD
1916+90 - 1917+00	10 x 30	33	CONC/ASPH
1941+61 - 1941+71	10 x 30	33	ASPH/CONC
2144+57 - 2144+67	10 x 44	50	END PROJECT
TOTAL		210	

REMOVING GUARDRAIL

LOCATION	204.0165 LF
763+50 - 766+50 SB LT B-35-71 NW QUAD	300

REMOVING ASPHALTIC SURFACE MILLING

LOCATION	204.0120 SY
82+10 - 104+75 NB LT SHLD	1,010
84+66 - 98+00 NB RT SHLD	890
104+75 - 124+45 NB XO	1,640
794+80 RT MAINTENANCE XO	345
788+24 - 820+00	10,590
1820+00 - 1825+86	1,970
1916+90 - 1941+71	8,270
763+83 - 765+24 SB RT SHLD B-35-71	75
1836+14 - 1839+39 LT SHLD B-43-18	250
1835+34 - 1839+39 RT SHLD B-43-18	414
1842+43 - 1846+95 LT SHLD B-43-18 to B-43-20	370
1842+35 - 1846+98 RT SHLD B-43-18 to B-43-20	385
1848+44 - 1851+89 LT SHLD B-43-20	245
1848+40 - 1851+77 RT SHLD B-43-20	260
2141+40 - 2142+65 LT SHLD B-43-28	90
2140+18 - 2142+65 RT SHLD B-43-28	180
2144+37 - 2144+57 LT & RT SHLD	16
TOTAL	27,000

REMOVING DELINEATORS AND MARKERS

LOCATION	204.0180 EACH
765+65 SB LT	1

REMOVING SURFACE DRAINS

LOCATION	204.0190 EACH
763+62 36' LT CONC FLUME	1
1842+30 RT	1
1842+39 LT	1
TOTAL	3

PREPARE FOUNDATION FOR ASPHALTIC PAVING

LOCATION	211.0101 EACH
PROJECT 1170-16-64	1

ITEMS IN CATEGORY 0010 UNLESS NOTED OTHERWISE

PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS

LOCATION		211.0400 STA
765+98 - 767+54 SB LT	B-35-71	2
765+25 - 767+64 SB RT	B-35-71	2
2139+81 - 2141+59 LT	B-43-28	2
2138+13 - 2140+57 RT	B-43-28	3
TOTAL		9

BASE AGGREGATE DENSE 3/4-INCH
BASE AGGREGATE DENSE 1 1/4-INCH

LOCATION		305.0110 BAD 3/4" TON	305.0120 BAD 1 1/4" TON
82+00 - 104+75 NB	LT SHLD	90	
84+56 - 104+75 NB	RT SHLD	110	
104+75 - 124+45 NB	XO	90	
763+63 - 766+47 SB LT	GUARD RAIL	--	105
763+83 - 784+14 SB		165	
788+14 - 820+00 SB		585	
1820+00 - 1826+00		100	
1826+00 - 1916+92		675	
1916+92 - 1941+69		405	
1941+69 - 2148+50		1,680	
CONC REPAIR/REPLACEMENT/APPR SLAB		--	175
TOTAL		3,900	280

CONCRETE PAVMENT HES 9-INCH
CONCRETE PAVMENT APPROACH SLAB HES

LOCATION		415.1090 PAV'T 9-INCH HES SY	415.1410 APPROACH SLAB HES SY
763+63 - 764+83 SB	B-35-71 NORTH USH 8	28	94
1839+45.0 - 1849+63.4	B-43-18 RR SOUTH	30	62
1842+29.1 - 1842+47.4	B-43-18 RR NORTH	17	60
TOTAL		75	216

ITEMS IN CATEGORY 0010 UNLESS NOTED OTHERWISE

CONCRETE

RH = REFLECTOR HOLE
J = JOINT
PD = PARTIAL DEPTH

NUMBER	BEGIN STA	END STA	TYPE	L	R	Out	WIDTH	LENGTH	diagonal 416.1710 REPAIR SY	dots 416.1720 REPLACE SY	416.0754.S PARTIAL DEPTH SURFACE REPAIR LT	RT	SF	COUNT #	416.0758.S PARTIAL DEPTH REPAIR FULL DEPTH ADJUSTMENT L	LT	W	RT	SF	COUNT #	690.0250 SAWING CONCRETE LENGTH	WIDTH	LF	JOINT SPACING 10' - 15' spacing	END JOINTS	416.0620 DRILLED DOWEL BARS EACH	INCIDENTAL* EACH	416.0610 DRILLED TIE BARS EACH	INCIDENTAL* EACH
																										11			
																										*INCIDENTAL TO ITEM 416.1710 OR 416.1720			
SOUTHBOUND DIVIDED																													
--	763+83		APPROACH SLAB	L	R																	35	35					Use tie bars for	
2sb	765+75		RH		R																							lengths greater than 15'	
3sb	766+76		RH		R																								
4sb	767+26		PD - FULL DEPTH ADJ		R		1	4							1.5		1.0		1.5	1									
5sb	768+78		RH		R																								
6sb a	769+76	770+10	SLAB		L		15	34		56.7														2x11, 1x12	2	22	22		
6sb b	769+93	769+99.5	J			R	15	6.5	10.8															end joints only	2	22	0		
7sb-a	770+69	770+84	SLAB		L	R	30	15	50.0															end joints only	2	22	0		
7sb-b	771+93		SLAB		L	**RAMP**	23	64.5		164.8														2x15,2x12,10.5	1	11	0	23	
8sb	778+07	778+15	J		L		8	10	8.9												16	20	36	end joints only	2	10	0	0	
9sb	78052		pd asph			R								0															
10sb	781+43		**PD-SURFACE**			R					2.0	1.0	2.0	1															
11sb	781+99		**PD-SURFACE**			R					2.0	1.0	2.0	1															
12sb	785+31		**PD-SURFACE**		L						2.0	6.0	12.0	1															
13sb	785+85		**PD FULL DEPTH ADJ**								3.5	2.0	7.0	1															
14sb	787+29		**PD-SURFACE**	L							2.0	1.6	3.2	1															
NORTHBOUND DIVIDED																													
1nb	82+22		**PD SURF CL**	L							2	1	2.0	1															
2nb	83+23		**PD SURF CL**	L							2	1	2.0	1															
3nb	84+23		**PD SURF CL**	L							2	1	2.0	1															
4nb	84+82	84+97	SLAB	L	R		30	15	50.0															end joints only	2	22	0		
5nb	85+23		**PD - SURFACE**	L							2	1	2.0	1															
6nb	86+22		RH	L																									
7nb	87+23		**PD SURF CL**	L							2	1	2.0	1															
9nb	88+21	88+36	SLAB	L	R		30	15	50.0															end joints only	2	22	0	0	0
10nb	96+42		**SEAL**		R																								
11nb	97+51		J		R		8	6	5.3																				
12nb	105+12		**SEAL**		R																								
2-LANE USH 51																													
1	1827+32	1827+83	SLAB	L	R		30	51		170.0											51	60	111	3x13, 1x12	4	44	66	19	19
2	1828+85		**PD-SURFACE**		R						1.0	1.5	1.5	1															
3	1830+46	1831+44.5	SLAB	L			15	98.5		164.2											98.5	30	129	1x12, 5x15, 1x11.5	2	22	66	38	
4	1833+33		**PD-FULL DEPTH ADJ**		R										1.0		1.0		1.0	1								2	
5	1831+92.5	1834+47.5		L			15	255.0		425.0											255	30	285	17x15	2	22	176	90	12
6	1834+16	1834+98.5	SLAB		R		15	82.5		137.5											82.5	30	113	1x16.5, 1x15, 3x13, 1x12	2	22	55	19	0
7a	1836+67	1839+45	SLAB	L			15	278.0		463.3											278	30	308	2x11, 14x15, 1x10, 3x12	1	11	209	92	0
7b	1838+99	1839+45	SLAB		R		15	46.0		76.7											46	44	90	1x10, 3x12	1	11	33	0	0
B-43-18 RR, LITTLE RICE																													
	1842+26	1842+35	APP SLAB SHLD		R																9	0	9						
	1842+32	1842+43	APP SLAB SHLD	L	R																11	0	11						
8a	1842+53	1742+83	SLAB		R		15	35.5		59.2											36	30	66	2x12, 11.5	1	11	22	8	4
8b	1842+53	1842+61	SLAB	L			15	13.5	22.5												14	30	44	end joints only	1	11	0	0	0
9	1842+90	1842+98.5	J	L			15	8.5	14.2												8.5	30	39	end joints only	2	22	0	0	0
10	1844+75.5	1844+84	J		R		15	8.5	14.2												8.5	30	39	end joints only	2	22	0	0	0
11	1846+88	1846+98	SLAB	L	R		30	10.0	33.3												10	60	70	end joints only	2	44	0	0	0
11a	1847+20		**PD-SURFACE**	L							4	1	4.0	1															
B-43-20 CTH N																													
12a	1848+40	1848+94	SLAB	L	R		30	54.0		180.0											54	60	114	2x15, 2x12	4	44	66	0	20
12b	1848+94	1849+42	SLAB		R		15	48.0		80.0											48	0	48	4x12	0	0		16	0
12c	1849+42	1850+74	SLAB	L	R		30	132.0		440.0											132	60	192	8x15, 1x12	2	22	198	0	94
13	1850+74	1851+29	SLAB	L			15	55.0		91.7											55	0	55	2x15,1x13, 1x12	0	0	33	21	
14	1851+29	1851+61	SLAB	L	R		30	32.0		106.7											32	60	92	2x11, 1x10	2	22	44	0	11
15	1851+71	1852+04	SLAB	L			15	33.0		55.0											33	30	63	1x13, 2x10	2	22	44	11	0
16	1852+04	1852+48	SLAB	L	R		30	44.0		146.7											44	45	89	2x15, 1x14	2	22	44	0	17
17	1852+48	1852+94	SLAB	L			15	46.0		76.7											46	15	61	3x12, 1x10	1	11	33	15	0
18	1852+94	1854+72	SLAB	L	R		30	178.0		593.3											178	45	223	11x15, 1x13	3	33	242		71
19	1855+87	1856+04	J	L	R		30	17.0		56.7											17	60	77	end joints only	4	44	0	6	0
20	1856+82	1856+91	J	L			15	9.0		15.0											9	30	39	end joints only	2	22	0	0	0
21	1857+49	1857+55	J		R		15	6.0	10.0												6	30	36	end joints only	2	22	0	0	0
22	1858+08	1859+13	SLAB	L	R		30	105		350.0											105	60	165	7x15	3	33	132	0	42
23	1859+13	1859+50	SLAB		R		15	37		61.7											37	15	52	2x12, 1x13	1	11	22	13	0
24	1860+44	1860+79	SLAB	L	R		30	35		116.7											35	60	95	2x12, 1x11	4	44	44	0	12
25	1861+05	1861+14	J	L	R		30	9	30.0												9	60	69	end joints only	4	44	0	0	0

ITEMS IN CATEGORY 0010 UNLESS NOTED OTHERWISE

CONCRETE

RH = REFLECTOR HOLE
J = JOINT
PD = PARTIAL DEPTH

NUMBER	BEGIN STA	END STA	TYPE	L	R	Out	WIDTH	LENGTH	diagonal 416.1710 REPAIR SY	dots 416.1720 REPLACE SY	416.0754.S PARTIAL DEPTH SURFACE REPAIR LT	RT	SF	COUNT #	416.0758.S PARTIAL DEPTH REPAIR FULL DEPTH ADJUSTMENT L	LT	W	RT	SF	COUNT #	690.0250 SAWING CONCRETE LENGTH	WIDTH	LF	JOINT SPACING	END JOINTS	11 416.0620 DRILLED DOWEL BARS EACH	INCIDENTAL* EACH	416.0610 DRILLED TIE BARS EACH	INCIDENTAL* EACH
																										*INCIDENTAL TO ITEM 416.1710 OR 416.1720			
26a	1862+16	1863+56	SLAB	L	R		30	140		466.7											140	60	200	8x15, 2x10	4	44	198	0	54
26b	1864+33	1864+66	J		R		15	33		55.0											33	30	63	1x18, 1x15	2	22	22	0	12
26c	1864+37	1864+66	SLAB	L			15	29		48.3											0	30	30	1x14, 1x15	2	22	11	0	0
27	1864+97		**PD-SURFACE**		R	cl					2.0	1.7	3.4	1															
28	1865+48	1865+56	J	L	R		30	8	26.7												8	30	38	end joints only	4	44	0	0	
29	1865+90		**PD-FULL DEPTH ADJ**		R	cl	1	1							0.6		0.7	0.4	1										
30	1866+19		**PD-SURFACE**		R	cl	1	1			1.5	0.5	0.8	1															
31	1866+45		**PD-SURFACE**		R	cl	1	1			1.5	0.6	0.9	1															
32	1866+78	1866+87	J		R		15	9	15.0												9	30	39	end joints only	2	22	0		
33	1867+71	1867+93	SLAB		R		15	22		36.7											22	30	52	2x11	2	22	11	8	
34	1868+42	1868+50	J		R		15	8.0	13.3												8	30	38	end joints only	2	22	0		
35a	1870+28	1870+64	SLAB		R		15	36.0		60.0											36	30	66	3x12	1	11	22	12	
35b	1870+64	1871+27	SLAB	L	R		30	63.0		210.0											63	45	108	2x15, 3x11	2	22	88		24
36	1871+38	1871+52	J		R		15	14.0	23.3												14	30	44	end joints only	2	22	0		
37	1871+73.5	1871+83	J	L	R		30	9.5	31.7												10	60	70	end joints only	4	44	0		
38	1872+66	1872+76	J	L	R		30	10.0	33.3												10	30	40	end joints only	4	44	0		
39	1873+58.5	1873+67	J		R		15	8.5	14.2												9	30	39	end joints only	2	22	0		
40	1874+15	1874+23.5	J		R		15	8.5	14.2												9	30	39	end joints only	2	22	0		
41	1874+52.5	1874+61	J		R		15	8.5	14.2												9	30	39	end joints only	2	22	0		
42a	1874+67.5	1874+77	J	L			15	9.5	15.8												10	30	40	end joints only	2	22	0		
42b	1874+69	1874+77	J		R		15	8.0	13.3												8	30	38	end joints only	2	22	0		
43a	1875+32	1875+68	SLAB	L	R		30	36.0		120.0											36	60	96	3x12	3	33	44		12
43b	1875+68	1876+26	SLAB		R		15	58.0		96.7											58	15	73	3x12, 2x11	1	11	44	20	0
44a	1876+52	1876+92.5	SLAB		R		15	40.5		67.5											41	30	71	1x15, 1x14, 1x11.5	2	22	22	15	0
44b	1876+70	1876+76	J	L			15	6.0	10.0												6	30	36	end joints only	2	22	0	0	0
45	1877+81	1877+95	J	L	R		30	14.0	46.7												14	60	74	end joints only	4	44	0		
46	1878+12	1878+68	SLAB	L	R		30	56.0		186.7											56	60	116	3x15, 1x11	4	44	66	0	22
47a	1878+93	1878+99	J	L			15	6.0	10.0												6	30	36	end joints only	2	0 22	0		
47b	1878+95	1879+54.5	SLAB		R		15	59.5		99.2											60	30	90	3x15, 1x14.5	2	22	33	24	0
48	1879+10	1879+18	J	L			15	8.0	13.3												8	30	38	end joints only	2	22	0		
48a	1879+67	1880+01	SLAB		R		15	34.0		56.7											34	30	64	2x12, 1x10		0	33	11	0
49	1880+39	1180+49	J	L	R		30	10.0	33.3												10	60	70	end joints only	4	44	0		
50	1880+57.5	1880+65	J	L			15	7.5	12.5												8	30	38	end joints only	2	22	0		
51	1180+78	1880+86	J		R		15	8.0	13.3												8	30	38	end joints only	2	22	0		
52	1881+14	181+58	SLAB	L	R		30	44.0		146.7											44	60	104	2x15, 1x14	4	44	44		
56	1882+45		**PD-SURFACE CL**		R	1x1					0.5	1.0		1												0			
57	1882+79	1882+87	J		R		15	8.0	13.3												8	30	38	end joints only	2	22	0		
58	1883+30	1883+36	J	L			15	6.0	10.0												6	30	36	end joints only	2	22	0		
59	1883+60		**PD-SURFACE**		R	cl					1.5	0.8	1.2	1												0		0	17
60	1883+76	1883+85	J		R		15	9.0	15.0												9	30	39	end joints only	2	22	0		
61	1884+43	1884+49	J	L	R		30	6.0	20.0												6	60	66	end joints only	4	44	0		
62a	1884+84	1884+92	J	L			15	8.0	13.3												8	30	38	end joints only	2	22	0		
62b	1884+87	1885+12	SLAB		R		15	25.0		41.7											25	30	55	1x13, 1x12	2	22	11	9	0
63	1885+59	1885+70	J	L	R		30	11.0	36.7												11	60	71	end joints only	4	44	0		
64	1885+90	1886+05.5	SLAB	L	R		30	15.5		51.7											16	60	76	end joints only	4	44	0		
65	1886+38		**PD-SURFACE**		R	cl	1.5	1.5			3.0	3.0	9.0	1									0						
66	1887+04	1887+17	SLAB		R		15	13.0	21.7												13	30	43	end joints only	4	44	22		
67	1888+33	1888+41	J		R		15	8.0	13.3												8	30	38	end joints only	2	22	0		
68	1888+50	1888+77	SLAB	L	R		30	27.0		90.0											27	60	87	1x14, 1x13	4	44	22	11	0
69	1890+02	1890+02	**PD-SURFACE**		R						1.0	2.0	2.0	1												0			
70	1890+21	1890+51	**PD-SURFACE**		R						2.0	1.0	2.0	1												0			
71	1890+55	1890+63					15	8.0	13.3												8	30	38	end joints only	2	22	0		
72a	1890+82	1891+00	J		R		15	8.0	13.3												8	30	38	end joints only	2	22	0		
72b	1891+81	1891+89	J	L			15	8.0	13.3												8	30	38	end joints only	2	22	0		
72c	1892+50	1892+83	SLAB		R		15	33.0		55.0											33	30	63	3x11	2	22	22	12	
73	1893+10	1893+19	J	L			15	9.0	15.0												9	30	39	end joints only	2	22	0		
74a	1895+15	1895+59.5	SLAB		R		15	44.5		74.2											45	30	75	2x15,1x14.5	2	22	22	14	
74b	1895+50	1895+59.5	J	L			15	9.5	15.8												10	30	40	end joints only	2	22	0	0	0
75	1895+85	1895+96	J	L	R		30	11.0	36.7												11	60	71	end joints only	4	44	0	0	0
76	1896+07.5	1896+16	J		R		15	8.5	14.2												9	30	39	end joints only	2	22	0	0	0
77	1896+25.5	1896+32.5	J		R		15	7.0	11.7												7	30	37	end joints only	2	22	0	0	0

ITEMS IN CATEGORY 0010 UNLESS NOTED OTHERWISE

RH = REFLECTOR HOLE
J = JOINT
PD = PARTIAL DEPTH

CONCRETE NUMBER	BEGIN STA	END STA	TYPE	L	R	Out	WIDTH	LENGTH	diagonal 416.1710 REPAIR SY	dots 416.1720 REPLACE SY	416.0754.S PARTIAL DEPTH SURFACE REPAIR LT	RT	SF	COUNT #	416.0758.S PARTIAL DEPTH REPAIR FULL DEPTH ADJUSTMENT L LT	W	RT	SF	COUNT #	SAWING CONCRETE LENGTH	WIDTH	690.0250 LF	JOINT SPACING 10' - 15' spacing	END JOINTS	11 416.0620 DRILLED DOWEL BARS EACH	INCIDENTAL* EACH	416.0610 DRILLED TIE BARS EACH	INCIDENTAL* EACH
																									*INCIDENTAL TO ITEM 416.1710 OR 416.1720			
78	1896+65	1896+86	SLAB		R		7.5	21.0	17.5											21	15	36	1x11, 1x10	2	10	11	7	
79	1897+33	1897+41	J	L			15	8.0	13.3											8	30	38	end joints only	2	22	0	0	0
80	1897+53	1897+80	SLAB	L	R		30	27.0		90.0										27	60	87	1x15, 1x12	4	44	22		10
81	1898+08	1896+36	SLAB	L	R		30	28.0		93.3										28	60	88	1x15, 1x13	4	44	22		11
82	1898+46	1898+91	SLAB	L	R		30	45.0		150.0										45	60	105	3x15	4	44	44		18
83	1899+00	1899+08.5	J	L			15	8.5	14.2											9	30	39	end joints only	2	22	0	0	0
84	1899+20.5	1899+28.5	J		R		15	8.0	13.3											8	30	38	end joints only	2	22	0	0	0
85	1899+37	1899+46	J	L			15	9.0	15.0											9	30	39	end joints only	2	22	0	0	0
86	1899+76	1899+85	J		R		15	9.0	15.0											9	30	39	end joints only	2	22	0	0	0
87	1900+30	1900+38.5	J		R		15	8.5	14.2											9	30	39	end joints only	2	22	0	0	0
88	1900+68	1900+76.5	J		R		15	8.5	14.2											9	30	39	end joints only	2	22	0	0	0
89	1902+13	1902+22	J	L			15	9.0	15.0											9	30	39	end joints only	2	22	0		
																									0			
90	1903+0.7	1903+16.5	J		R		15	9.5	15.8											10	30	40	end joints only	2	22	0	0	0
91	1903+63	1903+90	SLAB		R		15	27.0		45.0										27	30	57	1x15, 1x12	2	22	11	10	0
92a	1903+97	1904+27		L			15	30.0		50.0										30	30	60	2x15	2	22	11	0	16
92b	1903+99	1904+27	SLAB		R		30	28.0		93.3										0	30	30	1x13, 1x15	2	22	11	0	0
93	1904+90	1905+01	J	L	R		30	11.0	36.7											11	60	71	end joints only	4	44	0	0	0
94	1905+27	190537.5	J	L	R		30	10.5	35.0											11	60	71	end joints only	4	44	0	0	0
95	1905+44	1905+52	J	L			15	8.0	13.3											8	30	38	end joints only	2	22	0	0	0
96	1905+83	1905+89	J		R		15	6.0	10.0											6	30	36	end joints only	2	22	0	0	0
97	1906+55	1906+64	J	L			15	9.0	15.0											9	30	39	end joints only	2	22	0	0	0
98	1906+76	1906+85	J		R		15	9.0	15.0											9	30	39	end joints only	2	22	0	0	0
99	1908+60.5	1908+69	J		R		15	8.5	14.2											9	30	39	end joints only	2	22	0	0	0
100	1910+58	1910+78	SLAB	L	R		15	20.0		33.3										18	45	63	2x10	4	33	22	0	6
101	1910+78	1911+10	SLAB	L			15	32.0		53.3										32	15	47	2x12, 1x10	2	11	22	8	0
102	1912+31.5	1912+37.5	J		R		15	6.0	10.0											6	30	36	end joints only	2	22	0	0	0
103a	1912+84	1913+15	SLAB		R		15	31.0		51.7										31	30	61	1x11, 2x10	2	22	22	10	0
103b	1913+15	1913+28	SLAB	L			15	13.0	21.7											13	30	43	end joints only	2	22	0	0	0
104	1914+40.5	1914+57.5	SLAB	L	R		30	17.0		56.7										17	60	77	end joints only	4	44	0	0	0
105	1915-40	1915+49.5	J	L	R		30	9.5	31.7											10	60	70	end joints only	4	44	0	0	0
106	1915+75	1915+83	J	L			15	8.0	13.3											8	30	38	end joints only	2	22	0	0	0
107	1916+49	1916+60	J		R		15	11.0	18.3											11	30	41	end joints only	2	22	0	0	0
																											0	0
108	1841+82	1941+90.5	J		R		15	8.5	14.2											9	30	39	end joints only	2	22	0	0	0
109	1943+85	1944+31	SLAB		R		15	46.0		76.7										46	30	76	2x15, 1x16	2	22	22	18	0
110	1945+32	1945+42	J		R		15	10	16.7											10	30	40	end joints only	2	22	0	0	0
111	1945+99	1946+16	SLAB		R		7.5	17	14.2											17	15	32	end joints only	2	10	0	0	0
112	1947+73	1947+81.5	J		R		15	8.5	14.2											9	30	39	end joints only	2	22	0	0	0
113	1948+29	1948+37.5	J		R		15	8.5	14.2											9	30	39	end joints only	2	22	0	0	0
114	1949+54	1949+65.5	J	L	R		30	11.5	38.3											12	60	72	end joints only	4	44	0	0	0
115a	1950+50.5	1950+96	SLAB		R		15	45.5		75.8										46	15	61	1x15.5, 2x15	2	22	22	18	0
115b	1950+66	1950+96	SLAB	L			30	30.0		100.0										30	45	75	2x15	2	22	11	0	12
116	1951+79	1951+87.5	J		R		15	8.5	14.2											9	30	39	end joints only	2	22	0	0	0
117	1954+01	1954+10	J		R		15	9.0	15.0											9	30	39	end joints only	2	22	0	0	0
118	1954+20.5	1954+29	J		R		15	8.5	14.2											9	30	39	end joints only	2	22	0	0	0
119	1954+94	1955+03	J		R		15	9.0	15.0											9	30	39	end joints only	2	22	0	0	0
120	1955+48.5	1955+95	SLAB		R		15	46.5		77.5										47	30	77	2x15, 1x16.5	2	22	22	18	0
121	1956+22	1956+31	J		R		15	9	15.0											9	30	39	end joints only	2	22	0	0	0
122	1956+42	1956+51	J		R		15	9	15.0											9	30	39	end joints only	2	22	0	0	0
123	1956+58	1956+69	J	L	R		30	11	36.7											11	60	71	end joints only	4	44	0	0	0
124	1957+91	1958+50	SLAB		R		15	59		98.3										59	15	74	1x14, 2x15	1	11	33	17	0
125	1958+24.5	1958+33.5	J	L			15	9	15.0											9	30	39	end joints only	2	22	0	0	0
126	1958+50	1958+95	SLAB	L	R		30	45		150.0										45	45	90	3x15	3	33	44	0	18
127	1959+15.5	1960+00	SLAB	L	R		30	84.5		281.7										85	60	145	1x12, 1x12.5, 4x15	4	44	110	0	34
128	1960+63	196094	SLAB	L	R		30	31		103.3										31	60	91	1x15, 1x16	4	44	22	0	12
129	1961+04	1961+12	J		R		15	8	13.3											8	30	38	end joints only	2	22	0	0	0
130	1961+60	1961+68.5	J		R		18	8.5	17.0											9	30	39	end joints only	2	22	0	0	0

ITEMS IN CATEGORY 0010 UNLESS NOTED OTHERWISE

CONCRETE

RH = REFLECTOR HOLE
J = JOINT
PD = PARTIAL DEPTH

NUMBER	BEGIN STA	END STA	TYPE	L	R	Out	WIDTH	LENGTH	diagonal 416.1710 REPAIR SY	dots 416.1720 REPLACE SY	416.0754.S PARTIAL DEPTH SURFACE REPAIR LT	RT	SF	COUNT #	416.0758.S PARTIAL DEPTH REPAIR FULL DEPTH ADJUSTMENT L	LT	W	RT	SF	COUNT #	SAWING CONCRETE LENGTH	WIDTH	690.0250 LF	JOINT SPACING 10' - 15' spacing	END JOINTS	11 416.0620 DRILLED DOWEL BARS EACH	INCIDENTAL* EACH	416.0610 DRILLED TIE BARS EACH	INCIDENTAL* EACH
																											*INCIDENTAL TO ITEM 416.1710 OR 416.1720			
131	1962+68	1963+16	SLAB	L	R		30	48		160.0											48	60	108	4x12	4	44	66	0	16
132	1963+81	1963+90	J		R		15	9	15.0												9	30	39	end joints only	2	22	0	0	0
133	1964+38		**PD-SURF REPAIR**	L							1.3	1.0	1.3	1												0			
133a	1964+38		**PD-SURF REPAIR**		R						1.2	0.6	0.7	1												0			
134	1966+03	1966+30	SLAB		R		15	27		45.0											27	30	57	1x14, 1x13	2	22	11	0	10
135	1966+30	1966+39	J	L			15	9	15.0												9	30	39	end joints only	2	22	0	0	0
136	1967+49	1967+60	J	L	R		30	11	36.7												11	60	71	end joints only	4	44	0	0	0
137	1969+03		**PD-SURF REPAIR**		R						1.5	1.3	2.0	1												0			
138	1971+18	1971+26.5	J	L			15	8.5	14.2												9	30	39	end joints only	2	22	0	0	0
139	1972+83	1972+92	J	L			15	9	15.0												9	30	39	end joints only	2	22	0	0	0
140	1974+37	1974+37	**PD-SURF REPAIR**		R						1.0	1.0	1.0	1												0			
141	1974+87	1974+96	J	L			15	9	15.0												9	30	39	end joints only	2	22	0	0	0
142	1975+95	1976+07	J	L			15	12	20.0												12	30	42	end joints only	2	22	0	0	0
143	1976+89	1976+97.5	J	L			15	8.5	14.2												9	30	39	end joints only	2	22	0	0	0
144	1976+95		**PD-SURF REPAIR**		R						1.5	0.7	1.1	1												0			
145	1980+43	1980+52	J		R		15	9	15.0												9	30	39	end joints only	2	22	0	0	0
146	1983+00	1983+09	J		R		15	9	15.0												9	30	39	end joints only	2	22	0	0	0
147	1985+56.5	1985+68	J	L	R		30	11.5	38.3												12	60	72	end joints only	4	44	0	0	0
148	1985+93	1986+76	SLAB	L			15	83		138.3											83	30	113	4x15, 1x12, 1x11	2	22	55	28	0
149	1987+81	1987+87	J		R		15	6	10.0												6	30	36	end joints only	2	22	0	0	0
150	1988+15	1988+26	J	L	R		30	11	36.7												11	60	71	end joints only	4	44	0	0	0
151	1988+58		**PD-SURF REPAIR**		R						1.0	0.5	0.5	1												0			
152	1988+89	1989+00	J	L	R		30	11	36.7												11	60	71	end joints only	4	44	0	0	0
153	1889+95		**PD-FULL DEPTH ADJ**	L											1.2		1.6		1.9	1						0			
154	1999+02	1990+10.5	J		R		15	8.5	14.2												9	30	39	end joints only	2	22	0	0	0
155	1992+38	1992+77	SLAB	L	R		30	39		130.0											39	60	99	1x15, 2x12	4	44	22	0	14
156	1997+44		**PD-SURF REPAIR**		R						1.2	0.6	0.7																
157	1997+72	1997+96	SLAB	L	R		30	24		80.0											24	60	84	2x12	4	44	22	0	8
158	1998+43	1998+52	J		R		15	9	15.0												9	30	39	end joints only	2	22	0	0	0
159	1998+79	1998+89	J		R		15	10	16.7												10	30	40	end joints only	2	22	0	0	0
160	2008+08		**PD-SURF REPAIR**	L							1.0	1.0	1.0	1															
161	2012+33		**PD-SURF REPAIR**		R						1.3	1.0	1.3	1															
162	2026+98.5	2027+09	J	L	R		15	11	17.5												11	60	71	end joints only	4	44	0	0	0
163	2028+78		**PD-SURF REPAIR**		R						1.0	0.8	0.8	1									0						
164	2036+49	2036+57	J		R		15	8.0	13.3												8	30	38	end joints only	2	22	0	0	0
PASSING LANE START																										0			
165	2046+98	2047+12	J	L	R		27	14	42.0												14	54	68	end joints only	4	40	0	0	0
166	2048+86	2048+94.5	J	L			15	8.5	14.2												9	30	39	end joints only	2	22	0	0	0
167	2049+22	2049+31.5	J		R		15	9.5	15.8												10	30	40	end joints only	2	22	0	0	0
169 N&S	2052+49	2052+89.5	J	L	R		30	40.5		135.0											82	54	136	2x15, 1x10.5	4	40	44	0	16
170	2054+83		**PD-SURF REPAIR**		R						0.7	0.7	0.5	1															
171	2056+29	2056+89	SLAB			O	15	60.0		100.0											120	54	174	4x15	2	22	33	24	0
																							0						
172	2061+35	2061+52	J	L	R		27	17		51.0											34	54	88	end joints only	4	40	0	0	0
173	2064+17	2064+47.5	SLAB	L	R		27	30.5		91.5											62	54	116	1x15, 1x15.5	4	40	22		
174	2071+19.5	2071+28	J	L			15	8.5	14.2												9	30	39	end joints only	2	22	0	0	0
175	2071+67	2071+84	J	L			15	17		28.3											17	30	47	end joints only	2	22	0	0	0
BILLBOARDS LT																													
176	2079+35		**PD-SURF REPAIR**		R						1.0	1.2	1.2	1															
177a	2049+80.5	2049+97	J	L			15	16.5		27.5											17	45	62	end joints only	2	22	0	0	0
177b	2079+80.5	2079+88	J		R		12	7.5	10.0												8	15	23	end joints only	2	18	0	0	0
177 j1	2080+78	2080+89		L	R		27	11.0	33.0												22	54	76	end joints only	4	40	0	0	0
177 j2	2080+98	2081+08		L	R		27	10.0	30.0												20	54	74	end joints only	4	40	0	0	0
177 j3	2081+14.5	2081+25		L	R		27	10.5	31.5												22	54	76	end joints only	4	40	0	0	0
177 j4	2081+34	2081+44.5		L	R		27	10.5	31.5												22	54	76	end joints only	4	40	0	0	0
177 j5	2081+52	2081+62		L	R		27	10.0	30.0												20	54	74	end joints only	4	40	0	0	0
177 j6	2081+72	2081+81.5		L	R		27	9.5	28.5												20	54	74	end joints only	4	40	0	0	0
177 j7	2081+88	2081+98		L	R		27	10.0	30.0												20	54	74	end joints only	4	40	0	0	0
177 j8	2081+08	2081+18		L	R		27	10.0	30.0												20	54	74	end joints only	4	40	0	0	0
177 j9	2081+26	2081+36		L	R		27	10.0	30.0												20	54	74	end joints only	4	40	0	0	0
177 j10	2082+45	2082+55		L	R		27	10.0	30.0												20	54	74	end joints only	4	40	0	0	0
177 j11	2082+62.5	2082+72		L	R		27	9.5	28.5												20	54	74	end joints only	4	40	0	0	0
177 j12	2082+81.5	2082+92		L	R		27	10.5	31.5												22	54	76	end joints only	4	40	0	0	0
177 j13	2083+00	2083+10		L	R		27	10.0	30.0												20	54	74	end joints only	4	40	0	0	0
177 j14	2083+18	2083+29		L	R		27	11.0	33.0												22	54	76	end joints only	4	40	0	0	0
177 J15	2083+36	2083+45.5	152	L	R		27	9.5	28.5												20	54	74	end joints only	4	40	0	0	0

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ITEMS IN CATEGORY 0010 UNLESS NOTED OTHERWISE

CONCRETE

RH = REFLECTOR HOLE
J = JOINT
PD = PARTIAL DEPTH

NUMBER	BEGIN STA	END STA	TYPE	L	R	Out	WIDTH	LENGTH	diagonal 416.1710 REPAIR SY	dots 416.1720 REPLACE SY	416.0754.S PARTIAL DEPTH SURFACE REPAIR LT	RT	SF	COUNT #	416.0758.S PARTIAL DEPTH REPAIR FULL DEPTH ADJUSTMENT L	LT	W	RT	SF	COUNT #	690.0250 SAWING CONCRETE LENGTH	WIDTH	LF	JOINT SPACING	END JOINTS	11 416.0620 DRILLED DOWEL BARS EACH	INCIDENTAL* EACH	416.0610 DRILLED TIE BARS EACH	INCIDENTAL* EACH
																										*INCIDENTAL TO ITEM 416.1710 OR 416.1720					
178	2084+09.5	2084+26.5	J	L	R		27	17.0		51.0											34	54	88	end joints only	4	40	0	0	0
179a	2086+05	2086+29	J	L			15	24.0		40.0											24	30	54	2x12	2	22	11	0	8
179b	2086+05	2086+17	J		R		12	12.0	16.0												12	24	36	end joints only	2	18	0	0	0
180	2086+38.5	2086+47	J	L			15	8.5	14.2												9	30	39	end joints only	2	22	0	0	0
181	2086+92.5	2087+01	J	L			15	8.5	14.2												9	30	39	end joints only	2	22	0	0	0
182	2089+78		PD-SURF REPAIR		R						2.0	2.0	4.0	1															
183	2090+79	2090+94	J	L	R		27	15.0	45.0												30	54	84	end joints only	4	40	0	0	0
184	2093+81	2093+89.5	J	L			15	8.5	14.2												9	30	39	end joints only	2	22	0	0	0
185	2095+09	2095+40	J	L	R		27	31.0		93.0											62	54	116	1x15, 1x16	4	40	0	0	12
188	2095+65	2095+75	J	L			15	10.0	16.7												10	30	40	end joints only	2	22	0	0	0
189	2096+03	2096+12	J	L			15	9.0	15.0												9	30	39	end joints only	2	22	0	0	0
190	2096+21	2096+30	J	L			15	9.0	15.0												9	30	39	end joints only	2	22	0	0	0
191	2098+18	2098+35	J	L			15	17.0		28.3											17	30	47	end joints only	2	22	0	0	0
192	2101+15	2101+21	J		R		12	6.0	8.0												6	30	36	end joints only	2	18	0	0	0
193	2109+19.5	2109+25.5	J			O	15	6.0	10.0												6	30	36	end joints only	2	22	0	0	0
194	2112+26	2112+38.5	J	L			15	12.5	20.8												13	30	43	end joints only	2	22	0	0	0
195	2112+48	2112+56.5	J	L			15	8.5	14.2												9	30	39	end joints only	2	22	0	0	0
196	2113+04	2113+12.5	J	L			15	8.5	14.2												9	30	39	end joints only	2	22	0	0	0
197	2115+11		J PD-SURF REPAIR	L							1.0	0.5	0.5	1															
198	2115+26	2115+54	J	L			27	28.0		84.0											56	54	110	2x14	4	40	22	0	10
199	2116+55.5	2116+72	J		R		12	16.5		22.0											33	24	57	end joints only	2	18	0	0	0
200	2118+39	2118+48	J	L			15	9.0	15.0												9	30	39	end joints only	2	22	0	0	0
201	2118+95	2119+40	J	L			15	45.0		75.0											45	30	75	3x15	2	22	22	18	0
204	2119+63	2119+79	J		R		12	16		21.3											32	24	56	end joints only	2	18	0	0	0
205	2121+69	2121+86.5	SLAB	L			15	17.5		29.2											18	30	48	end joints only	2	22	0	0	0
206a	2122+55	2122+72	J	L			15	17		28.3											17	30	47	end joints only	2	22	0	0	0
206b	2122+58	2122+64	J		R		15	6	10.0												6	24	30	end joints only	2	18	0	0	0
207	2125+39	2125+56		L	R		27	17		51.0											34	54	88	end joints only	4	40	0	0	0
208	2125+89		PD-SURF REPAIR	L							2.0	0.7	1.4	1															
209	2126+43		PD-SURF REPAIR	L							1.5	1.5	2.3	1															
210	2127+42	2127+58		L			15	16		26.7											16	30	46	end joints only	2	22	0	0	0
211a	2128+43	2128+58			R		17.5	15	29.2												15	30	45	end joints only	2	22	0	0	0
211b	2128+52	2128+58		L			15	6	10.0												6	30	36	end joints only	2	26	0	0	0
PASSING LANE END																													
212	2130+11.5	2130+20			R		15	8.5	14.2												9	30	39	end joints only	2	22	0	0	0
213	2130+68		PD-SURF REPAIR	L							1.0	1.0	1.0	1															
214	2131+58	2131+66		L			15	8	13.3												8	30	38	end joints only	2	22	0	0	0
215	2133+11		PD-SURF REPAIR	L	R	CL	1	1			1.0	1.0	1.0	1															
217	2135+48	2135+75.5		L			15	27.5		45.8											28	30	58	1x16, 1x11.5	4	44	0	3	5
218	2135+48	2135+64			R		15	16.0		26.7											16	30	46	1x16 end joints only	2	22	0	0	0
219	2136+60		PD-SURF REPAIR	L							0.8	0.7	0.6	1															
220	2136+99		PD-SURF REPAIR	L							0.7	1.2	0.8	1															
221a	2138+06	2138+95		R			15	89		148.3											89	30	119	10.5x1,11.5x1, 2x11, 3x15		22	66	4	0
221b	2138+16.5	2138+95					15	78.5		130.8											79	30	109	11.5x1, 2x11, 3x15		22	55	0	30
225	2139+83	2140+22		L			15	39		65.0											39	30	69	1x15, 2x12	2	22	22	14	0
226	2141+56	2141+62	J	L	R		30	6	20.0												6	30	36	end joints only	2	22	0	0	0
B-43-28 BEARSKIN																													
UNDISTRIBUTED									287	782			6.7						5	7	UNDISTRIBUTED		320	UNDISTRIBUTED		238	5	117	6
			TOTALS				13,600		**3,135**	**10,465**			**55.0**	39					**10.0**	11			**14,500**			**6,400**	3,250	**800**	715
														COUNT						COUNT									
									416.1710 REPAIR	**416.1720 REPLACE**	**416.0754.S PARTIAL DEPTH REPAIR SURFACE REPAIR**				**416.0758.S PARTIAL DEPTH REPAIR FULL DEPTH ADJUSTMENT**						**690.0250 SAWING CONCRETE**					**416.0620 DRILLED DOWEL BARS**	INCIDENTAL	**416.0610 DRILLED TIE BARS**	INCIDENTAL

TACK COAT
HMA PAVEMENT 4 MT 58-34 S
ASPHALTIC SURFACE

LOCATION	455.0605 TACK COAT GAL	460.6224 HMA 4 MT 58-28 S TON	465.0105 ASPH SURFACE TON
763+83 - 2144+66	800	2,100	---
82+00 - 104+75 NB SHLD	80	250	---
104+75 - 124+45 NB XO	150	450	---
GUARDRAILS (11)	75	---	310
794+80 SB RT MAINT XO	15	---	20
TOTAL	1,120	2,800	330

CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBT
CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBTT

LOCATION		601.0588 TBT LF	601.0590 TBTT LF
763+54.29 - 763+83.28 LT	B-35-71 NW QUAD	--	29
763+83.28 - 764+11.00 LT	B-35-71 NW QUAD	28	--
TOTAL		28	29

ITEMS IN CATEGORY 0010 UNLESS NOTED OTHERWISE

BEAM GUARD

LOCATION		614.0400 ADJUSTING STEEL PLATE BEAM GUARD LF	614.0950 REPLACING GUARDRAIL POSTS & BLOCKS EACH	POST #
2142+76 - 2142+80 LT	B-43-28 SW	--	3	13,14,15
2142+82 - 2142+85 RT	B-43-28 SE	--	2	15,17
2145+00 - 2147+00 LT	B-43-28 NW	200	--	
2145+02 - 2145+52 RT	B-43-28 NE	50	--	
2145+52 - 2146+02 RT	B-43-28 NE	--	9	
UNDISTRIBUTED		--	6	
TOTAL		250	20	

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ASPHALTIC SURFACE PATCHING

LOCATION	465.0110 TON
UNDISTRIBUTED	100

CONCRETE SURFACE DRAINS HES

LOCATION		602.3015 CY
1839+45.0 - 1849+63.4 LT	B-43-18 RR SOUTH	2
1842+29.1 - 1842+47.4 RT	B-43-18 RR NORTH	2
TOTAL		4

MGS GUARDRAIL

LOCATION		614.2300 MGS GUARDRAIL 3 LF	614.2500 MGS THRIE BEAM TRANSITION LF	614.2610 MGS GUARDRAIL TERMINAL EAT EACH
763+53 - 766+48 LT	B-35-71 NW QUAD	213	39	1

ASPAHLTIC RUMBLE STRIPS, SHOULDER

LOCATION	465.0520 LF
84+55 - 98+00 NB RT	1,345

RIPRAP MEDIUM
GEOTEXTILE TYPE HR

LOCATION	606.0200 RIPRAP MEDIUM CY	645.0120 GEOTEXTILE TYPE HR SY
764+00 LT 13' x 6'	6	14

WATER

LOCATION	624.0100 MGAL
CONC REPAIR/REPLACEMENT/APPR SLAB	6
SHOULDERS LT & RT	78
TOTAL	84

CULVERT PIPE
STORM SEWER

LOCATION	521.1012 APRON ENDWALL STEEL 12-INCH EACH	530.0112 CPCPP 12-INCH LF	611.0654 INLET COVERS TYPE V EACH	611.3220 INLETS 2x2-FT EACH
764+00.6 LT	1	45	1	1
1842+29.7 RT			1	
1842+38.3 LT	—	—	1	—
TOTAL	1	45	3	1

GUARDRAIL MOW STRIP EMULSIFIED ASPHALT

LOCATION	614.0397 SY
1839+39 - 1839+60 RT	3
1839+45 - 1839+67 LT	4
1842+26 - 1842+35 RT	1
1842+35 - 1842+43 RT	2
TOTAL	10

ITEMS IN CATEGORY 0010 UNLESS NOTED OTHERWISE

3

SILT FENCE
SILT FENCE MAINTENANCE

LOCATION		628.1504 SILT FENCE LF	628.1520 MAINT LF
763+10 - 766+64 LT	B-35-71 SB	380	380
2139+00 - 2142+86 RT	B-43-28 SE	385	385
2140+75 - 2142+85 LT	B-43-28 SW	215	215
2144+36 - 2146+48 RT	B-43-28 NE	210	210
2144+62 - 2148+24 LT	B-43-28 NW	370	370
UNDISTRIBUTED		240	240
TOTAL		1,800	1,800

LANDSCAPING

LOCATION	625.0100 TOPSOIL SY	628.2004 E-MAT CLASS I TYPE B SY	629.0210 FERT TYPE B CWT	630.0120 SEEDING MIX NO. 20 LB	630.0500 SEED WATER MGAL
763+10 - 766+64 SB LT B-35-71	850	850	1	40	20
SHOULDERS	0	0	32	2,250	50
B-43-28 - SILT FENCE REMOVAL	0	0	0	10	0
UNDISTRIBUTED	50	50	1	0	0
TOTAL	900	900	34	2,300	70

3

MOBILIZATIONS EROSION CONTROL
MOBILIZATIONS EMERGENCY EROSION CONTROL

LOCATION	628.1905 MOB EACH	628.1910 EMERGENCY EACH
PROJECT 1170-16-64	3	3

DELINEATORS POSTS STEEL
DELINEATORS REFLECTORS

LOCATION	633.0100 POSTS STEEL EACH	633.0500 REFLECTORS EACH
765+65 SB LT	1	1

MARKERS CULVERT END

LOCATION		CULVERT ID	633.5200 EACH
814+06	SB LT	#3403	1
1831+18	LT & RT	# no id	2
1856+03	RT	#3404	1
1922+58	LT & RT	#3406	2
1941+52	RT	#3407	1
1982+36	RT	#3408	1
1987+96	RT	#3409	1
2025+71	LT	#3410	1
2026+42	LT	#3412	1
2131+29	LT & RT	#3416	2
TOTAL			13

INLET PROTECTION

LOCATION	628.7005 TYPE A EACH	628.7015 TYPE C EACH
764+00 LT	1	1

TEMPORARY DITCH CHECKS

LOCATION	628.7504 LF
UNDISTRIBUTED	30

ROCK BAGS

LOCATION*	628.7570 EACH
B-35-71 SB LT	30
B-43-28 SE	30
B-43-28 SW	30
B-43-28 NE	30
B-43-28 NW	30
TOTAL	150

*USE FOR SILT FENCE RELIEF
DETERMINE LOCATIONS IN THE FIELD
ESTIMATE 15 ROCK BAGS FOR EACH LOCATION

MOVING SIGNS TYPE II*

EXISTING LOCATION	638.2102 EACH
1850+35 RT	1
2000+10 LT	1
2019+27 RT	1
2031+00 LT	1
2100+15 RT	1
TOTAL	5

*USE FOR NO PASSING ZONE SIGNS
DETERMINE SIGN LOCATONS AFTER ZONES ARE SPOTTED
SIGN LOCATIONS ARE SHOWN ON PLAN SHEETS

3

TRAFFIC CONTROL

LOCATION	643.0300 DRUMS DAY	643.0420 BARRICADES TYPE III DAY	643.0705 WARNING LIGHTS TYPE A DAY	643.0715 WARNING LIGHTS TYPE C DAY	643.0900 SIGNS DAY	643.1000 SIGNS FIXED MESSAGE SF
DETOUR	5,020	476	600	4,820	7,680	126
STAGE 2	950	16	0	0	1,100	0
STAGE 3 (POLYMER OVERLAYS)	130	8	0	0	400	0
TOTAL	6,100	500	600	4,820	9,180	126

TRAFFIC CONTROL CONNECTED ARROW BOARDS
TRAFFIC CONTROL CONNECTED WORK ZONE START AND END LOCATION MARKERS

LOCATION	STAGE	# BOARDS	DAYS IN USE	643.0810 CONNECTED ARROW BOARDS DAY	643.1220 LOCATION MARKERS DAY
USH 51 NB - DIVIDED HIGHWAY	DETOUR	2	40	80	40
USH 51 NB AND SB - DIVIDED HIGHWAY	STAGE 2	2	4	8	4
USH 51 SB (POLYMER OVERLAY AT B-35-71)	STAGE 3	1	2	2	2
TOTAL				90	46

TRAFFIC CONTROL COVERING SIGNS TYPE II

LOCATION	643.0920 EACH	MESSAGE	*NUMBER OF CYCLES	SIZE	CODE
USH 8 W EAST OF USH 51 NB RAMP	3	NORTH 51 RA	1	24"x57"	J3-3
USH 8 WB EAST OF USH 51 NB RAMP	1	Minocqua ==>	1	72"x12"	D1-3
USH 8 WB AT USH 51 NB RAMP	3	NORTH 51 ==>	1	24"x57"	J3-1
USH 8 EB BETWEEN USH 51 BRIDGES	1	UA Rhinelander <= Minocqua Woodruff	1	8"x8"	ARROW CHANGE LA TO UA
TOTAL	**8**				

*COVER SIGNS DURING DETOUR
SEE DETOUR MAP DETAIL 1

MARKING SUMMARY

LOCATION	646.2040 GROOVED WET REFLECTIVE EPOXY 6-INCH YELLOW CL LF	YELLOW EDGELINE LF	WHITE LANELINE LF	WHITE EDGELINE LF	646.4040 GROOVED WET REFLECTIVE EPOXY 10-INCH WHITE LF
82+00 - 124+45 NB	635	105	370	4,230	
771+43 - 776+78 SB LT RAMP					537
771+63 - 776+78 SB 27' LT					563
763+83 SB - 1824+00 (END GORE)	805	5,745	1,405	7,490	
1824+00 - 2147+00	27,900	____	2,065	62,280	0
SUBTOTAL	29,340	5,850	3,840	74,000	1,100
TOTAL		**113,030**			**1,100**

TEMPORARY MARKING LINE PAINT 6-INCH

LOCATION*	643.3165 WHITE LANELINE LF	YELLOW CL LF
788+14 - 820+00 SB ASPH	800	0
1820+00 - 1825+96 ASPH	0	600
1916+90 - 1941+69 ASPH	0	620
subtotal	800	1,220
x 2 layers	1,600	2,440
TOTAL	**4,040**	

*USE AFTER:
(1) REMOVING MILLING APSHALT SURFACE
(2) HMA PAVEMENTE AND BEFORE GROOVED WET REFLECTIVE MARKING

ITEMS IN CATEGORY 0010 UNLESS NOTED OTHERWISE

MARKING AERIAL ENFORCEMENT BAR EPOXY

EXISTING LOCATION*	646.5420 EACH
2108+92 #1 LT & RT	2
2115+52 #2 LT & RT	2
2122+12 #3 LT & RT	2
2128+72 #4 LT & RT	2
2135+32 #5 LT & RT	2
TOTAL	10

*FINAL LOCATIONS WILL BE DETERMINED BY STATE PATROL

3

MARKING DIAGONAL EPOXY 12-INCH
MARKING DIAGONAL EPOXY 24-INCH

LOCATION	646.7120 12-INCH LF	SPV.0090.01 24-INCH* LF	COMMENT
772+08 - 775+60 LT SB (15)	--	180	USH 51 SB OFF RAMP TO USH 8
1820+00 - 1823+24 LT (14)	250	--	USH 51 NB/SB MERGE TO 2-LANE
TOTAL	250	180	

*FOLLOW EXISTING MARKIINGS. USE DIAGONAL MARKINGS IN PLACE OF SDD CHEVRON MARKINGS.

LOCATING NO-PASSING ZONES

LOCATION	648.0100 MI
1824+06 - 1244+67	6.07

CONSTRUCTION STAKING STRUCTURE LAYOUT

LOCATION	650.6501.01 B-35-0071 EACH
763+53 SB NW WING WALL	1

CONSTRUCTION STAKING

LOCATION	650.4000 STORM SEWER EACH	650.4500 SUBGRADE LF	650.5000 BASE LF	650.5500 CURB & GUTTER LF	650.8000 RESURFACING REFERENCE LF	650.9920 SLOPE STAKES LF
82+00 - 107+02 NB					2,509	
107+02 - 120+39 NB					1,337	
763+63 - 820+00 SB					5,637	
1820+00 - 2114+67					29,467	
763+63 - 766+00 SB LT		235	235			235
763+83 - 764+11 SB LT	2	____	____	28	____	____
TOTAL	2	235	235	28	38,950	235

3

INSTALLING & MAINTAINING CLIMBING TURTLE EXCLUSION FENCE

LOCATION		999.2100.S LF
2140+05 - 2142+86 RT	B-43-28 SE	300
2140+75 - 2142+86 LT	B-43-28 SW	230
2144+36 - 2146+48 RT	B-43-28 NE	225
2144+59 - 2148+27 LT	B-43-28 NW	405
UNDISTRIBUTED		140
TOTAL		1,300

REMOVING EXCESS SHOULDER MATERIAL

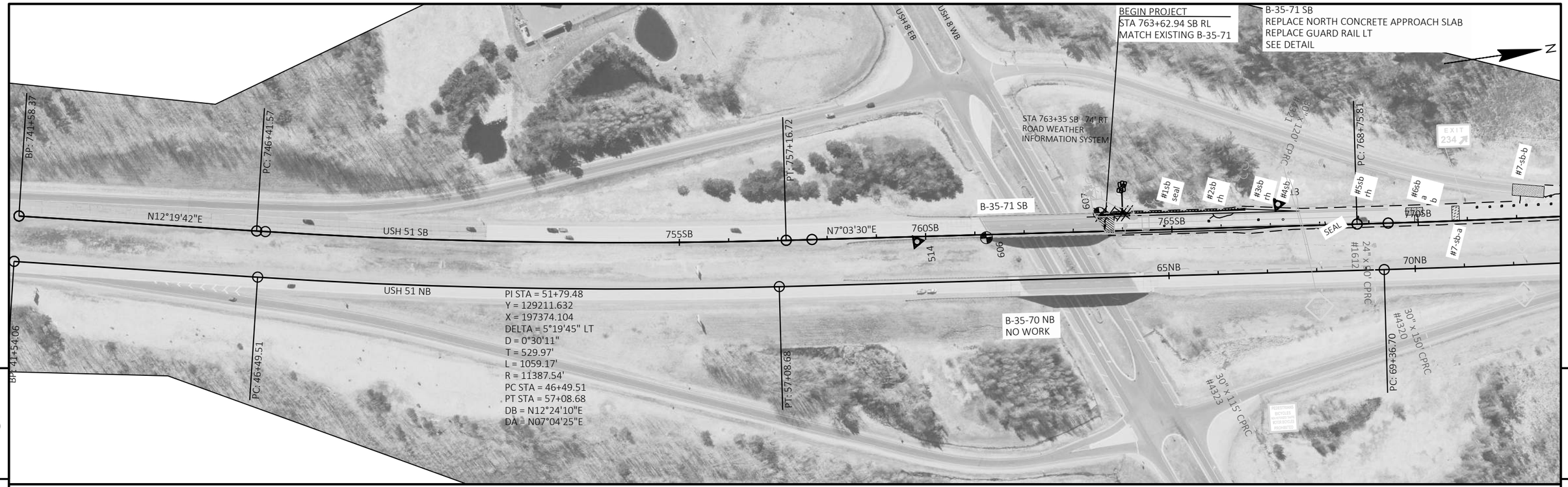
LOCATION	SPV.0035.01 CY
2139+42 - 2142+65 RT	20

REMOVING RAISED PAVEMENT MARKERS AND FILLING VOIDS

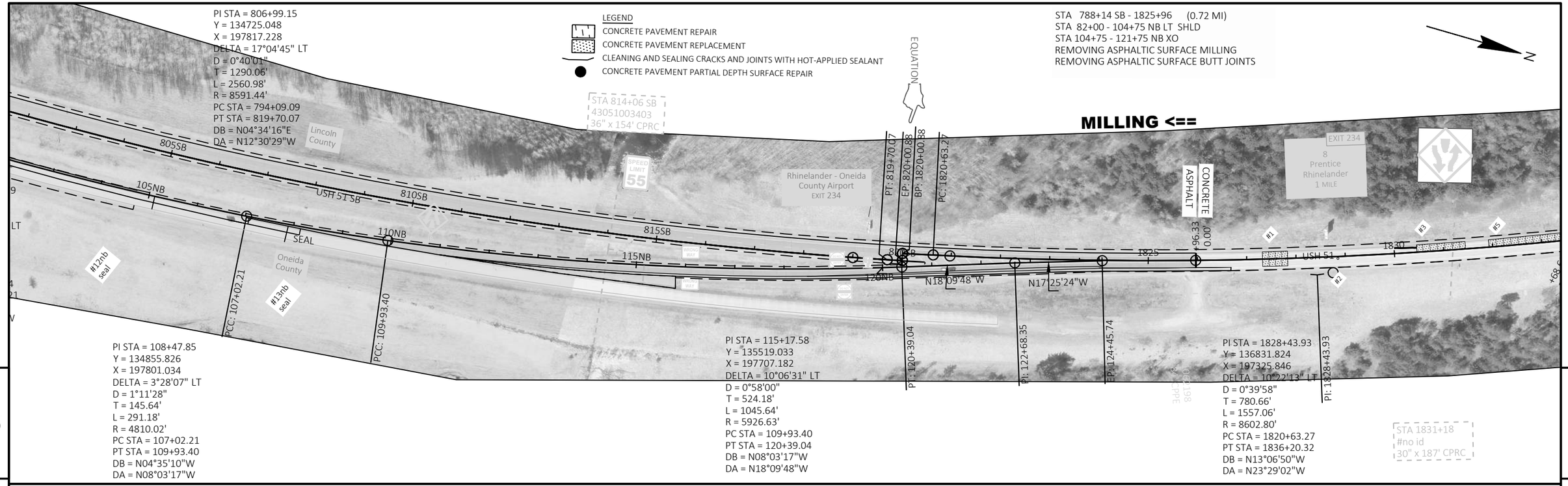
LOCATION	SPV.0060.01 EACH
765+75 - 776+78 SB LT/RAMP	40
86+22 NB 12' RT	1
TOTAL	41

CLEANING AND SEALING CRACKS AND JOINTS WITH HOT-APPLIED SEALANT

LOCATION	LOCTION	SPV.0090.02 LF
JOINTS (43)	INTSECTION LONG/TRANSV	100
765+85 7' RT	LONGITUDINAL CRACK	2
765+77 - 766+26 LT	LONGITUDINAL CRACK	58
772+57 - 775+87 RAMP	LONGITUDINAL CRACK	384
776+08 - 779+21 LT	LONGITUDINAL CRACK	142
768+12 LT	TRANSV CRACK	7
779+40 - 783+27 LT	LONGITUDINAL CRACK	391
81+88 NB	TRANSV JOINT	41
89+66 NB	TRANSV JOINT	26
90+20	TRANSV JOINT	26
91+97 - 108+15 NB	LONGITUDINAL CRACK CL	1,618
105+18	TRANSV JOINT	27
108+14	TRANSV JOINT	1,605
107+88	TRANSV JOINT	32
JOINTS (28)	INTSECTION LONG/TRANSV	40
1830+01 LT EDGE	LONGITUDINAL CRACK	46
1869+50 RT	TRANSV CRACK	7
1872+23 RT SHLD	TRANSV CRACK	4
1873+81 RT	TRANSV JOINT	15
1942+04 RT	TRANSV JOINT	18
1952+22 RT SHLD	TRANSV CRACK	3
1986+93 - 1887+81	TRANSV CRACK RT	90
2120+00		200
2139+00		200
UNDISTRIBUTED		618
TOTAL		5,700



PROJECT NO: 1170-16-64	HWY: USH 51	COUNTY: ONEIDA & LINCOLN	PLAN	SHEET 54	E



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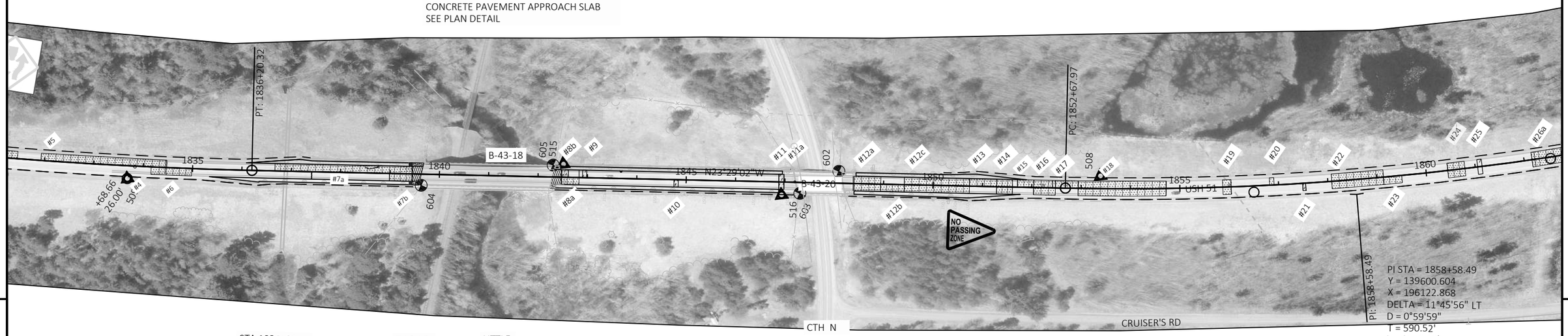
PROJECT NO: 1170-16-64	HWY: USH 51	COUNTY: ONEIDA & LINCOLN	PLAN	SHEET 55	E

B-43-18
SEE BRIDGE PLAN

STA 1839+39 - 1839+63
STA 1842+ 29 - 1842+53
CONCRETE PAVEMENT APPROACH SLAB
SEE PLAN DETAIL

B-43-20
SEE BRIDGE PLAN



STA 1836+89
5'x5' BOX CULV
MASON CREEK
NO WORK

FV & LS
RR

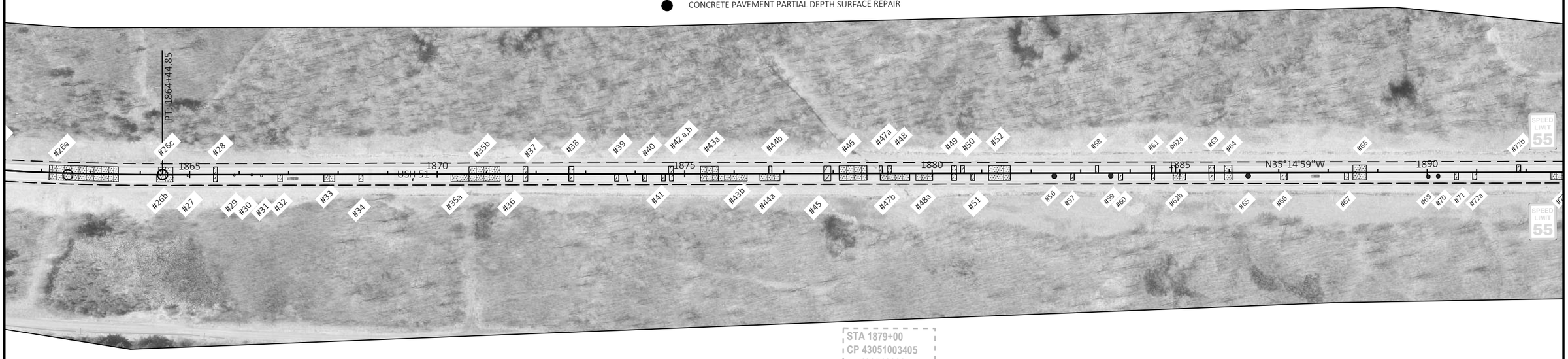
LITTLE
RICE
CREEK

MOVING SIGNS TYPE II
STA 1850+35 RT

STA 1856+03
CP 43051003404
CP 430510020 old #
30" x 214' CPRC

PI STA = 1858+58.49
Y = 139600.604
X = 196122.868
DELTA = 11°45'56" LT
D = 0°59'59"
T = 590.52'
L = 1176.88'
R = 5731.09'
PC STA = 1852+67.97
PT STA = 1864+44.85
DB = N23°29'02"W
DA = N35°14'59"W

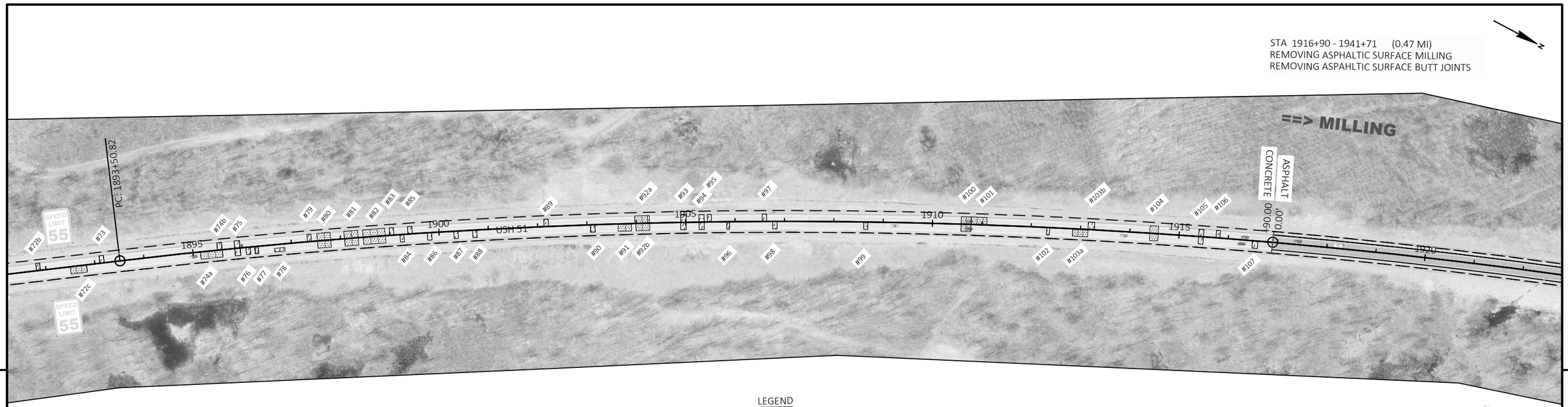
LEGEND
CONCRETE PAVEMENT REPAIR
CONCRETE PAVEMENT REPLACEMENT
CLEANING AND SEALING CRACKS AND JOINTS WITH HOT-APPLIED SEALANT
CONCRETE PAVEMENT PARTIAL DEPTH SURFACE REPAIR



STA 1879+00
CP 43051003405
cp 430510030 old#
30" x 120' CPRC
SKEW 41°30' RHF

PROJECT NO: 1170-16-64	HWY: USH 51	COUNTY: ONEIDA & LINCOLN	PLAN	SHEET 56	E

FILE NAME : N:\PDS\C3D\11701634\SHEETS\050200-PN.DWG
LAYOUT NAME - 050203-pn
PLOT DATE : 11/15/2025 8:14 PM
PLOT BY : HETH, BARBARA L
PLOT NAME :
PLOT SCALE : 1 IN:200 FT



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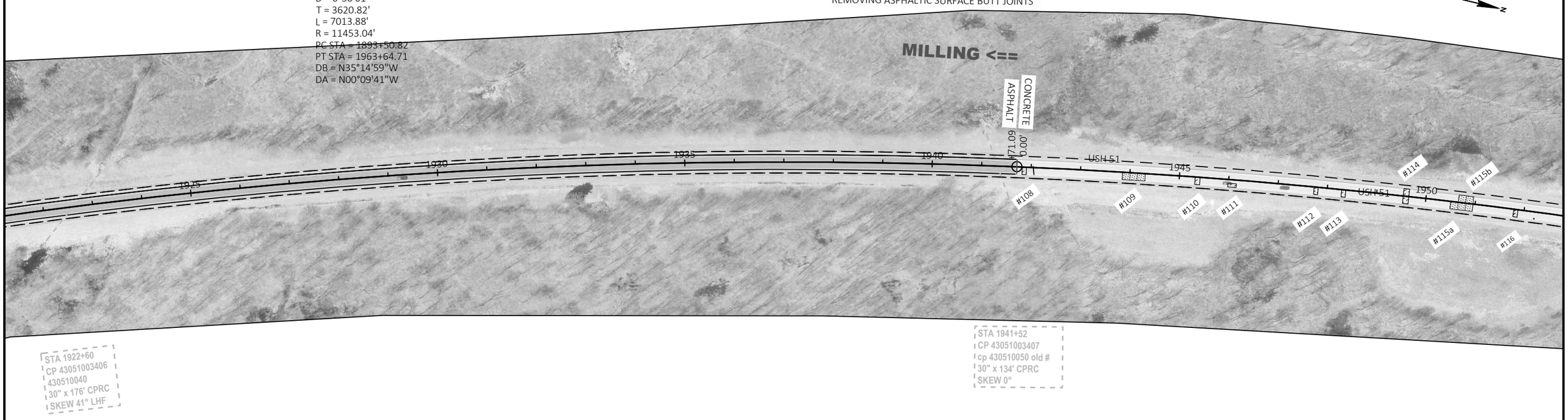
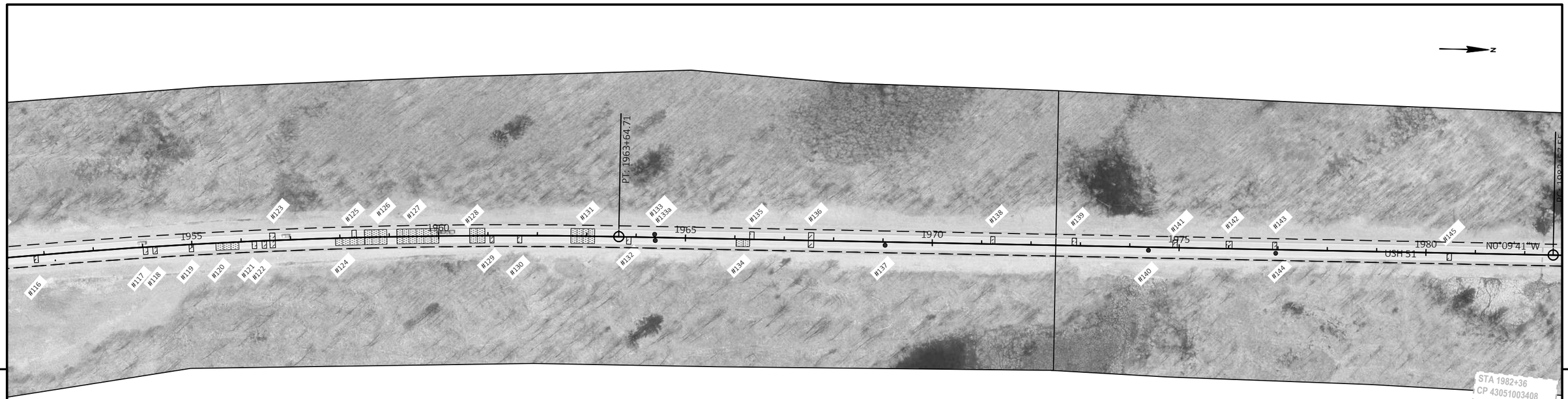
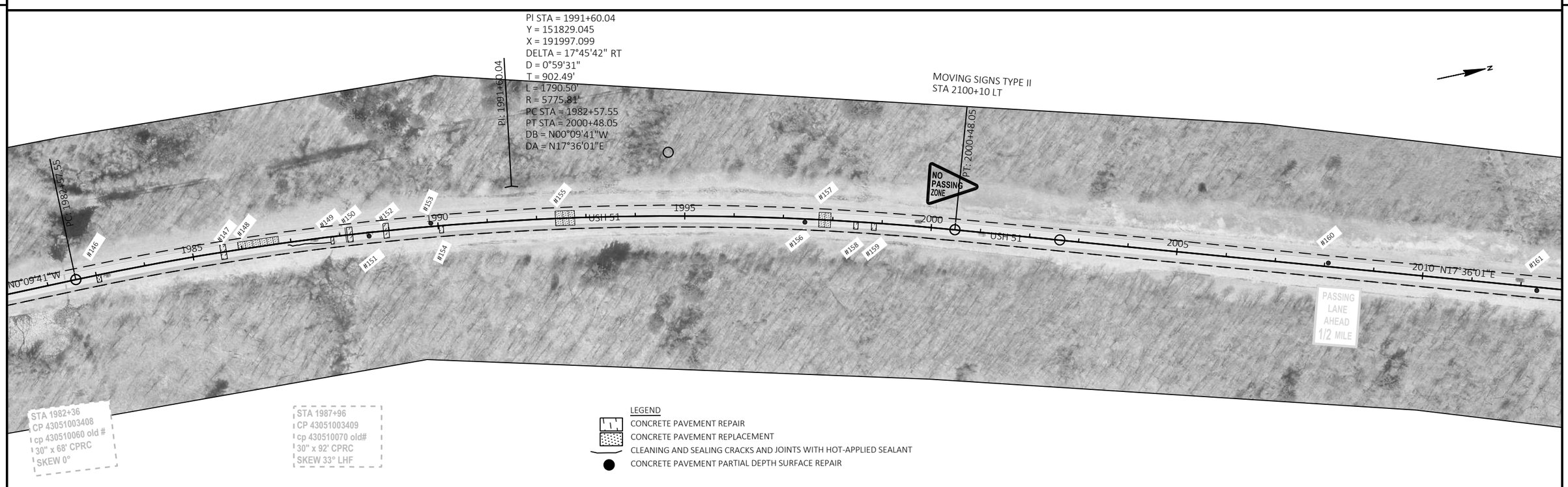
5

PI STA = 1929+71.64
Y = 145412.920
X = 192015.183
DELTA = 35°05'17" RT
D = 0°30'01"
T = 3620.82'
L = 7013.88'
R = 11453.04'
PC STA = 1893+50.82
PT STA = 1963+64.71
DB = N35°14'59"W
DA = N00°09'41"W



PROJECT NO: 1170-16-64	HWY: USH 51	COUNTY: ONEIDA & LINCOLN	PLAN	SHEET 57	E





PROJECT NO: 1170-16-64	HWY: USH 51	COUNTY: ONEIDA & LINCOLN	PLAN	SHEET 58	E

STA 2025+71
CP 43051003410
cp 430510080 old#
30" x 118' CPRC
SKEW 48° LHF

MOVING SIGNS TYPE II
STA 2031+00 LT

N

"E

#161

2015

2020

USH 51

2025

#162

N17°36'01"E

2030

N17°33'45"E

2035

2040

NO PASSING ZONE

NO PASSING ZONE

#163

PI: 2030+79.12

SLOWER TRAFFIC KEEP RIGHT

+00.00
12.00

#164

STA 2036+00 - 2043+00 RT
BEGIN TAPER 12 - 24' 700'
PASSING LANE = 1.78 MILES

MOVING SIGNS TYPE II
STA 2019+27 RT

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LEGEND
CONCRETE PAVEMENT REPAIR
CONCRETE PAVEMENT REPLACEMENT
CLEANING AND SEALING CRACKS AND JOINTS WITH HOT-APPLIED SEALANT
CONCRETE PAVEMENT PARTIAL DEPTH SURFACE REPAIR

N

BILLBOARDS

#165

#166

#167

2045

2050

#169

#170

2055

N17°33'45"E

PC: 2058+53.56

2060

#171

#172

#173

2065

2070

#174

#175

DO NOT PASS WHEN ONCOMING TRAFFIC IN EITHER LANE

+00.00
24.00

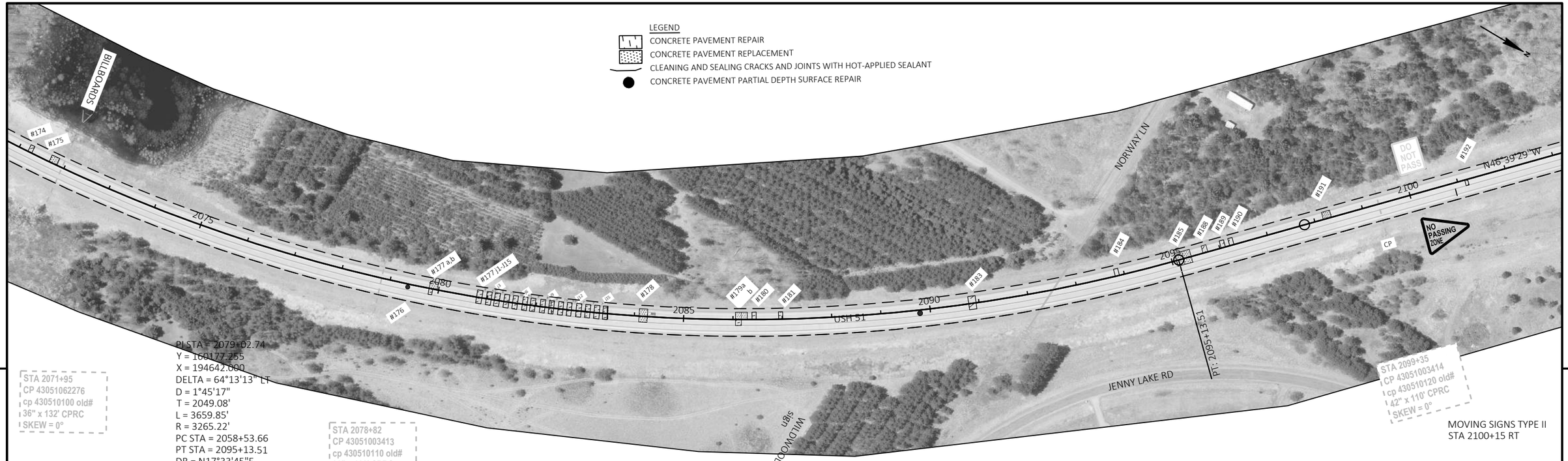
STA 2043+00 RT
PASSING LANE
BEGIN FULL WIDTH 24'

STA 2045+31
CP 43051003411
cp 430510090 old#
42" x 120' CPRC
SKEW 17-30° LHF

STA 2062+46
CP 43051003412
cp 430510091 old#
42" x 130' CPRC
SKEW 30° 30' LHF

STA 2071+95
CP 43051062276
cp 430510100 old#
36" x 132' CPRC
SKEW = 0°

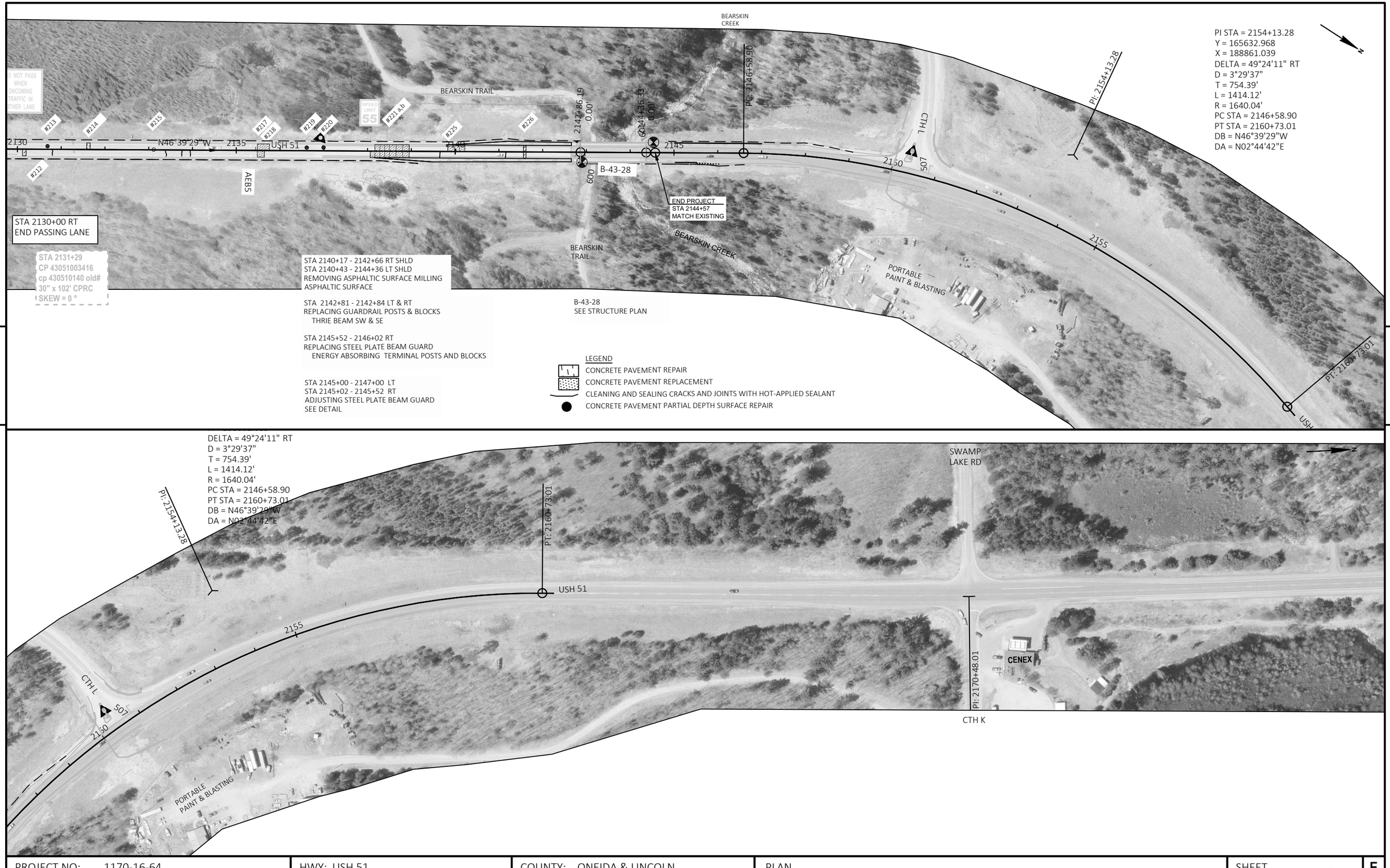
PROJECT NO: 1170-16-64	HWY: USH 51	COUNTY: ONEIDA & LINCOLN	PLAN	SHEET 59	E



AEB = AERIAL ENFORCEMENT BAR (EXISTING LOCATIONS)

STA 2108+92 - 2135+32
MARKING AERIAL ENFORCEMENT BAR EPOXY

PROJECT NO: 1170-16-64	HWY: USH 51	COUNTY: ONEIDA & LINCOLN	PLAN	SHEET 60	E



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PROJECT NO: 1170-16-64	HWY: USH 51	COUNTY: ONEIDA & LINCOLN	PLAN	SHEET 61	E

FILE NAME : N:\PDS\C3D\11701634\SHEETS\050200-PN.DWG
LAYOUT NAME - 050208-pn

PLOT DATE : 11/15/2025 8:02 PM PLOT BY : HETH, BARBARA L PLOT NAME : PLOT SCALE : 1 IN:200 FT

Standard Detail Drawing List

08A05-22D	INLET COVERS TYPE V, V-B, & VV-B
08C07-03	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT, 2.5X3-FT & 2X3.5-FT
08D01-24A	CONCRETE CURB & GUTTER
08D01-24B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D03-09A	CONCRETE SURFACE DRAINS DROP INLET TYPE AT STRUCTURES
08D03-09B	CONCRETE SURFACE DRAINS DROP INLET TYPE AT STRUCTURES
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
09G02-05A	BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION
09G02-05B	BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION
09G02-05C	BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION
13A03-07	CONCRETE PAVEMENT SHOULDERS
13A05-06A	SHOULDER RUMBLE STRIPS, DIVIDED ROADWAY
13A05-06B	SHOULDER RUMBLE STRIPS, DIVIDED ROADWAY
13B02-09A	CONCRETE PAVEMENT APPROACH SLAB
13C01-19	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
13C08-02	CONCRETE PAVEMENT PARTIAL DEPTH REPAIR
13C09-17A	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C09-17B	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C09-17C	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C19-03	HMA LONGITUDINAL JOINTS
14B15-11A	STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS
14B15-11B	STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS
14B15-11C	STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS
14B20-12A	STEEL THRIE BEAM STRUCTURE APPROACH
14B28-04A	GUARDRAIL MOW STRIP
14B42-07A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07D	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B45-05A	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05B	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05C	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15A04-08C	DELINEATOR POST WITH REFLECTIVE SHEETING
15C02-09A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-09B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C02-09C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C02-09D	ON RAMP LANE CLOSURE
15C02-09E	OFF RAMP LANE CLOSURE
15C02-09F	ADVANCED WIDTH RESTRICTION SIGNING
15C02-09G	TRAFFIC CONTROL FOR ENTRANCE RAMP CLOSURE
15C02-09H	MODIFIED ROUTE ASSEMBLY FOR DETOUR SIGNING
15C04-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C08-24A	PERMANENT LONGITUDINAL PAVEMENT MARKINGS
15C08-24B	TEMPORARY LONGITUDINAL PAVEMENT MARKING
15C11-10B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C12-09A	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15C12-09B	TRAFFIC CONTROL, LANE CLOSURE WITH AUTOMATED FLAGGER ASSISTANCE DEVICE
15C14-05	AERIAL ENFORCEMENT BARS PAVEMENT MARKING DETAILS
15C19-10A	MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY
15C21-11	SIGNING AND MARKING FOR TWO LANE TO FOUR LANE DIVIDED TRANSITIONS
15C31-08A	PAVEMENT MARKING EXIT RAMP AND PARALLEL EXIT RAMP
15C31-08C	PAVEMENT MARKING ENTRANCE RAMP AND PARALLEL ENTRANCE RAMP
15D12-15A	TRAFFIC CONTROL, VEHICLE ENTRANCE/EXIT OR HAUL ROAD
15D33-09	TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS
15D42-04	TRAFFIC CONTROL, TWO LANE FULL FREEWAY CLOSURE
15D50-04A	TRAFFIC CONTROL, ADDED LANE CLOSURE WITHOUT LANE SHIFT
15D50-04B	TRAFFIC CONTROL, ADDED LANE CLOSURE WITH LANE SHIFT
15D51-01	TRAFFIC CONTROL, MOBILE OPERATIONS ON AN UNDIVIDED ROADWAY

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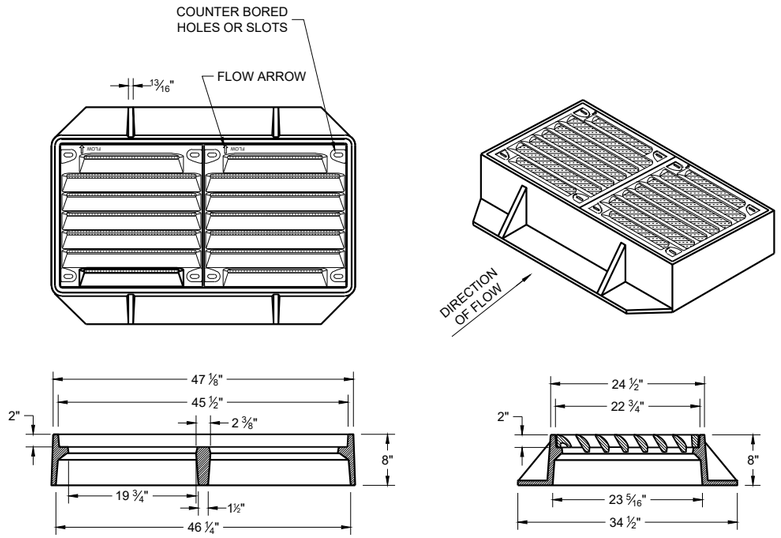
GENERAL NOTES

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

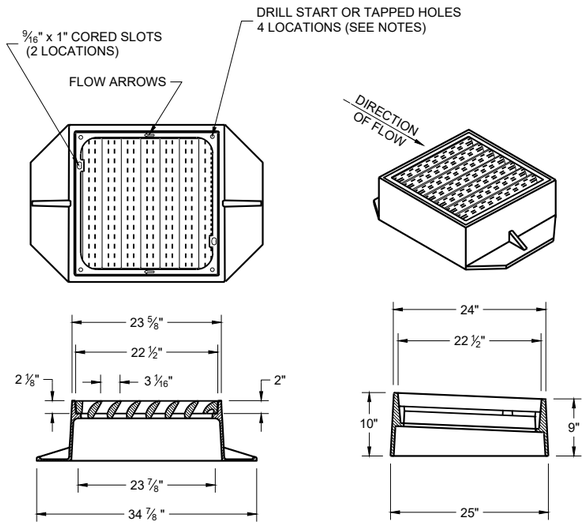
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.



TYPE "VV-B"

NOTES: ALL HARDWARE TO BE SUPPLIED BY CASTING MANUFACTURER
ALL DRILLING AND TAPPING GRATES AND FRAMES BY CASTING MANUFACTURER

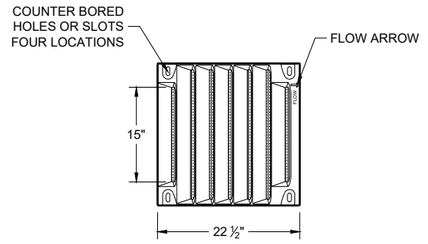
TYPE V
FRAME - CAST GRAY IRON ASTM A48 CLASS 35B
⅜" DIA. X 1/16" DRILL START IN 8 LOCATIONS
GRATE - CAST GRAY IRON ASTM A-48, CLASS 35B



TYPE "V"

NOTES: ALL HARDWARE TO BE SUPPLIED BY CASTING MANUFACTURER ALL DRILLING AND TAPPING GRATES AND FRAMES BY CASTING MANUFACTURER

TYPE V
FRAME - CAST GRAY IRON ASTM A48 CLASS 40A
⅜" DIA. X 1/16" DRILL START IN 4 LOCATIONS
GRATE - CAST GRAY IRON ASTM A-48, CLASS 35B



BOLT DOWN GRATE FOR TYPE "V" AND "VV-B" COVER

NOTES: ALL HARDWARE TO BE SUPPLIED BY CASTING MANUFACTURER NOTED AS TYPE "V-B" OR "VV-B" (FOR DOUBLE GRATE) ON DRAINAGE TABLE

TAP ½" -13 HOLES IN FOUR LOCATIONS PER GRATE IN FRAME TO BOLT GRATE(S).
FRAME - CAST GRAY IRON ASTM A48 CLASS 40A

GRATE - CAST DUCTILE IRON ASTM A536, 55+KSI YIELD
BOLTS - ½" -13 STAINLESS STEEL BOLTS WITH WASHERS
TORQUE BOLTS TO MANUFACTURER SPECIFICATION DO NOT OVERTIGHTEN.

INLET COVERS
TYPES V, V-B, AND VV-B

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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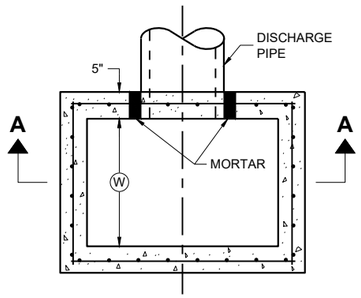
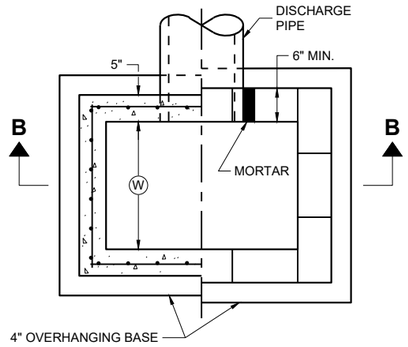
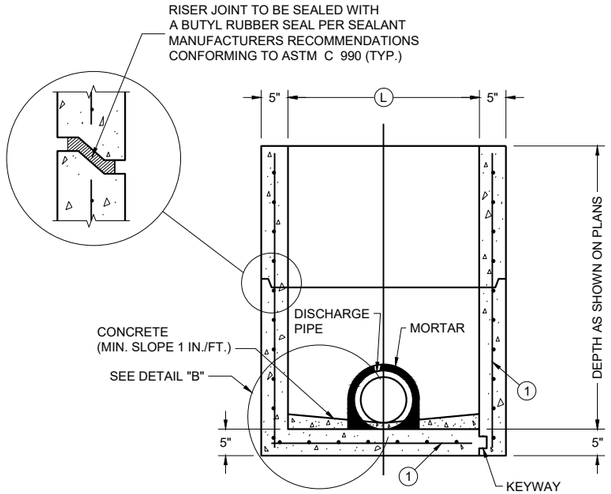
SDD 08A05-22d



PLAN VIEW



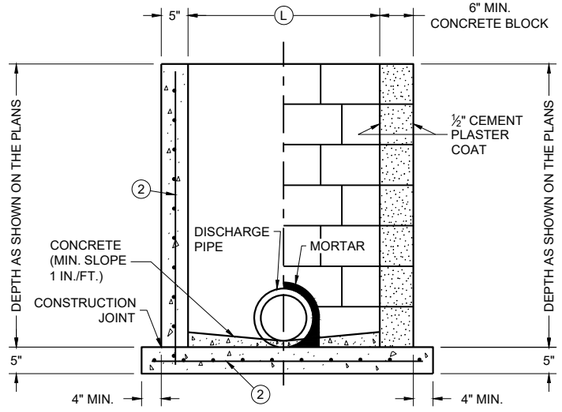
PLAN VIEW



PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE

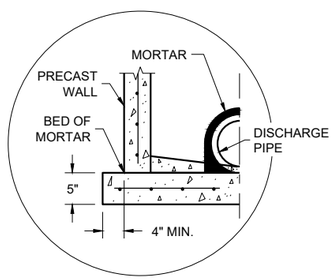
SECTION A - A



CAST IN PLACE REINFORCED CONCRETE

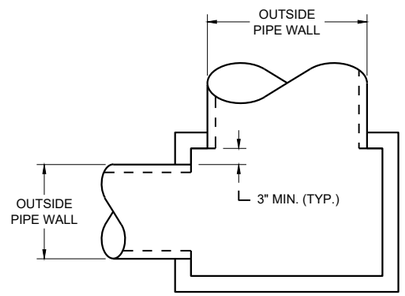
CONCRETE BLOCK WITH CAST IN PLACE OR PRECAST REINFORCED CONCRETE BASE (1)

SECTION B - B



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "B"



DETAIL "A"

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

CATCH BASIN COVER MATRIX

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

PIPE MATRIX

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

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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
December 2023
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

FHWA

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SDD 08C07-03

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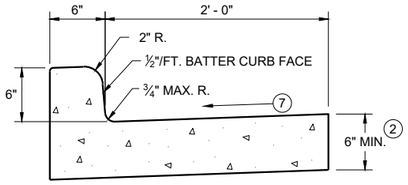
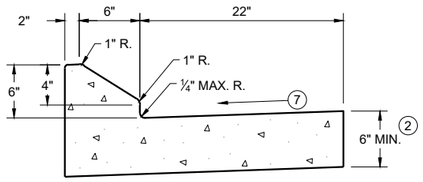
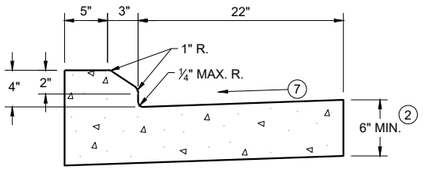
SDD 08C07-03



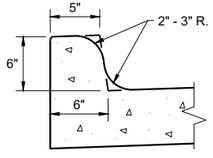
TYPES A (1) & D



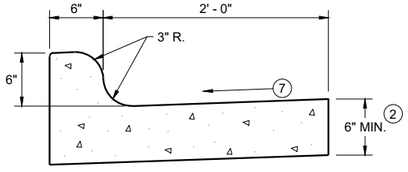
6" SLOPED CURB TYPES G (1) & J



4" SLOPED CURB TYPES G (1) & J

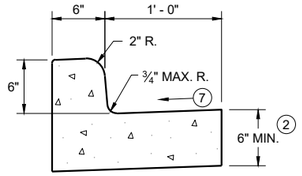


TYPES K (1) & L
(OPTIONAL CURB SHAPE)



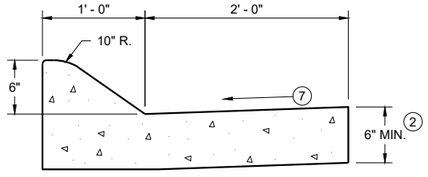
TYPES K (1) & L

CONCRETE CURB AND GUTTER 30"

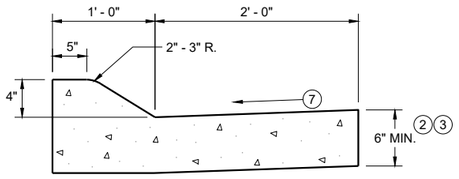


TYPES A (1) & D

CONCRETE CURB AND GUTTER 18"

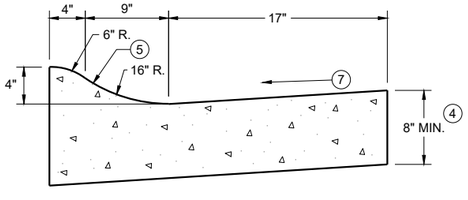


6" SLOPED CURB TYPES A (1) & D



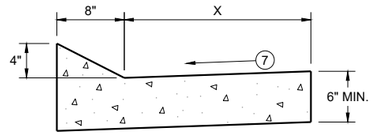
4" SLOPED CURB TYPES A (1) & D

CONCRETE CURB AND GUTTER 36"



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

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

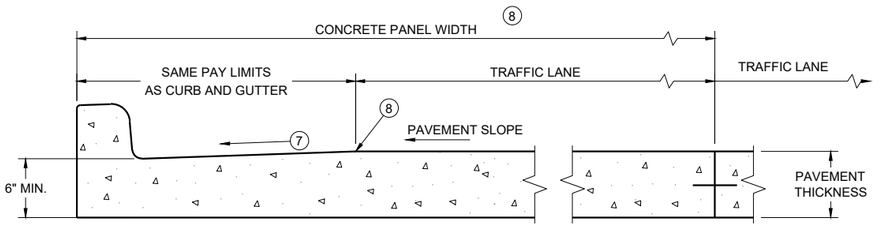


TYPES TBT & TBTT (1)

CONCRETE CURB AND GUTTER

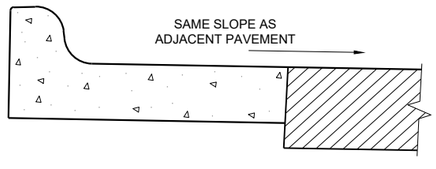
PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE

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



PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB AND GUTTER *

* BIKE LANE IS NOT SHOWN



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

GENERAL NOTES

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

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

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

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

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

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

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

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

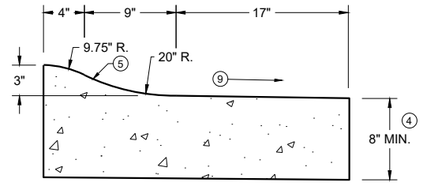
(5) UNLESS OTHERWISE NOTED, FOR STAKING PURPOSES THE FACE OF CURB IS 6" FROM THE BACK OF CURB.

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

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

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

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



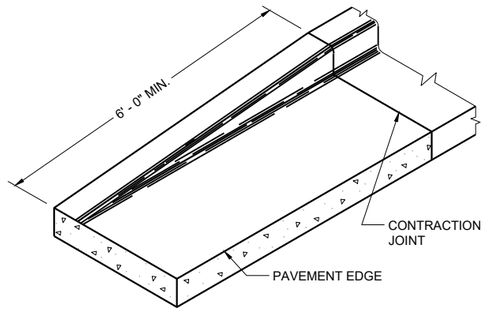
3" SLOPED CURB TYPES R (1) & T

CONCRETE CURB AND GUTTER

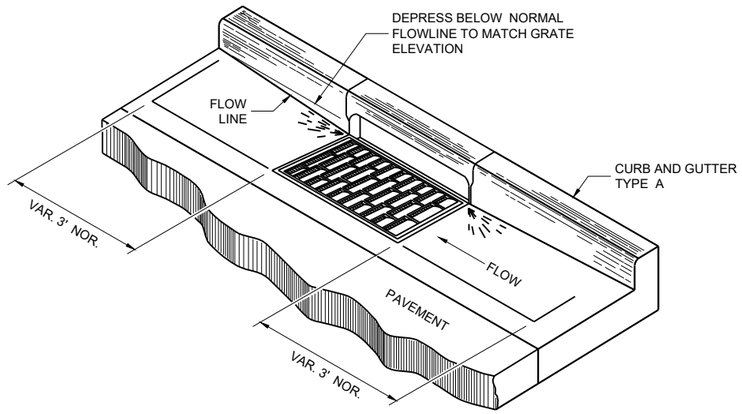
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 08D01-24a



END SECTION CURB AND GUTTER



DETAIL OF CURB AND GUTTER AT INLETS

(TYPICAL H INLET COVER SHOWN)

GENERAL NOTES

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

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

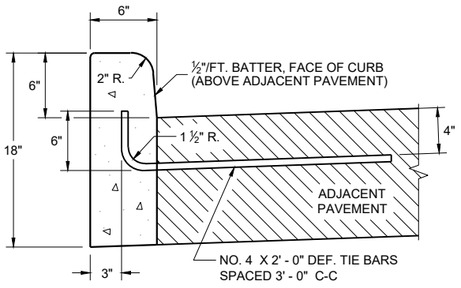
UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2' - 0" BEHIND THE BACK OF CURBS.

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

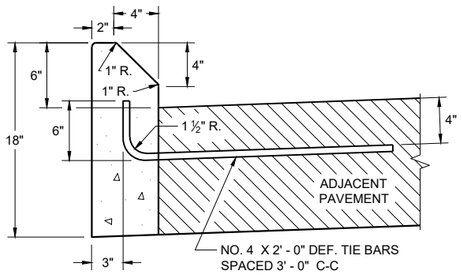
(2) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

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

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

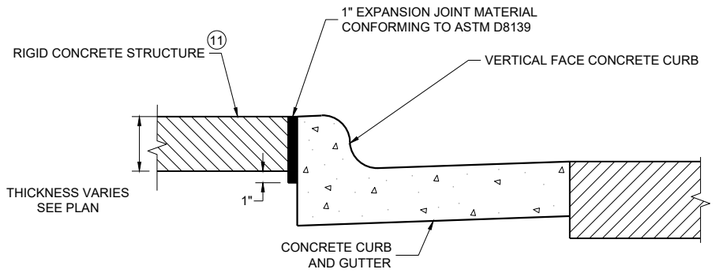


TYPES A (1) & D

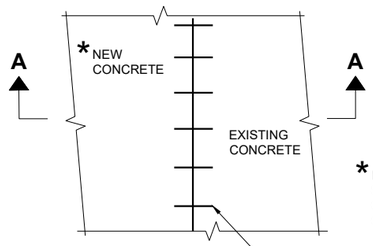


TYPES G (1) & J

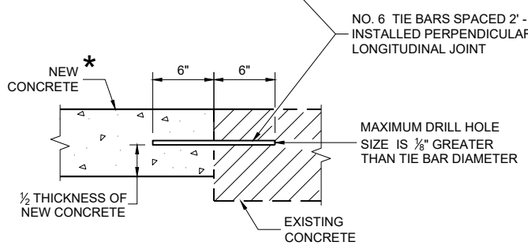
CONCRETE CURB



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

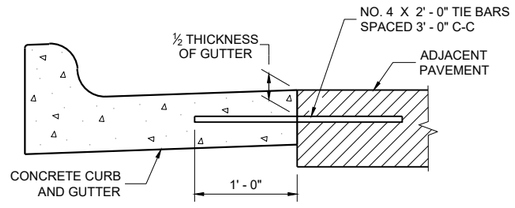


PLAN VIEW

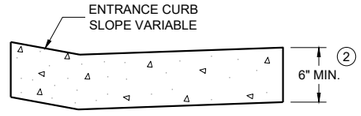


SECTION A - A

TIE BARS DRILLED INTO EXISTING PAVEMENT



TYPICAL TIE BAR LOCATION (1)



DRIVEWAY ENTRANCE CURB (10)

(WHEN DIRECTED BY THE ENGINEER)

CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

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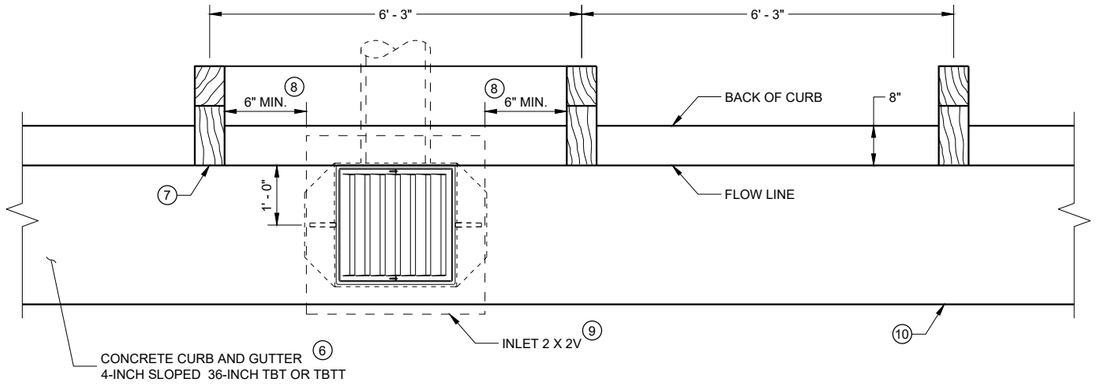
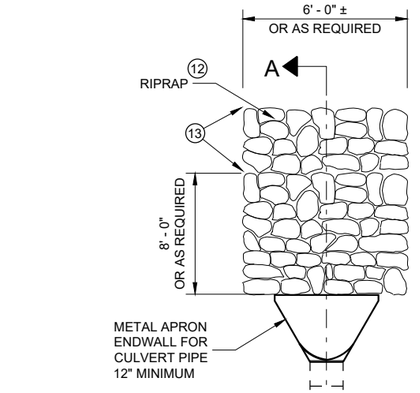
SDD 08D01-24b



INLET PLAN VIEW

(NOTE: RAIL NOT SHOWN FOR CLARITY)



GENERAL NOTES

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

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

(1) USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.

(2) NO. 4 X 2' - 0" TIE BARS SPACED AT 12" C-C TO BE PLACED BY BRIDGE CONTRACTOR OR DRILLED TIE BARS PLACED AS DIRECTED BY THE ENGINEER.

(3) PAVED CONCRETE SHOULDER (SDD 13A03) OR CONCRETE DRAINAGE SLAB.

(4) CONCRETE PAVEMENT APPROACH SLAB (SHOWN) OR STRUCTURE APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB. SEE SDD 13B02.

(5) PAVED CONCRETE SHOULDER (SDD 13A03) OR ASPHALT SHOULDER.

(6) CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE TBT OR TBTT. USE TYPE TBTT CURB WITH NO. 4 X 2' -0" TIE BARS SPACED AT 3' - 0" C-C ONLY WHEN ADJACENT TO CONCRETE PAVEMENTS.

(7) PLACE DRAINAGE STRUCTURE BEFORE MSG THRIE BEAM TRANSITION POST 1 (SEE SDD 14B45)

(8) CENTER DRAINAGE STRUCTURE BETWEEN POSTS. 6-INCH MINIMUM SEPARATION FROM OUTSIDE WALL OF DRAINAGE STRUCTURE TO POSTS.

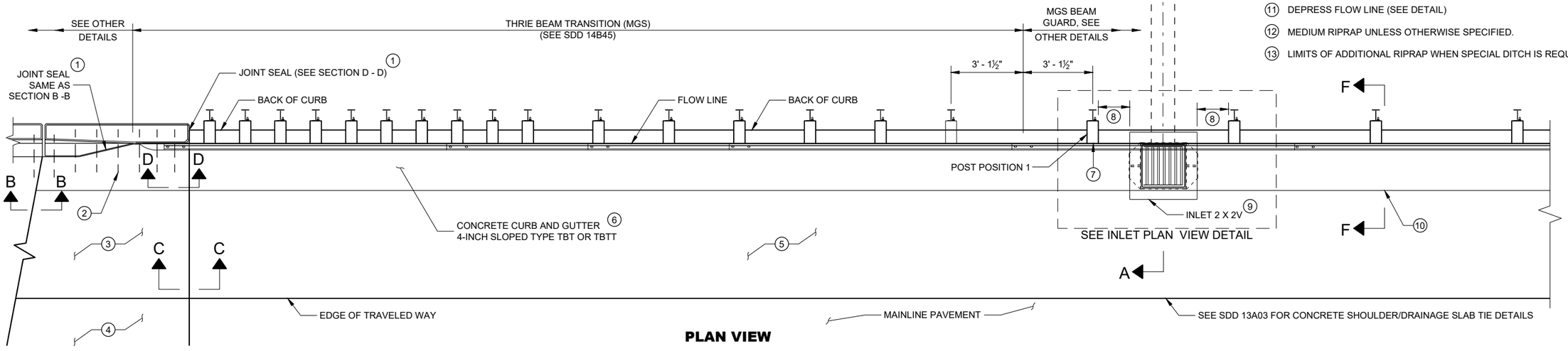
(9) SEE SDD 08A05 AND 08C07 FOR DETAILS. SEE ROADWAY PLANS FOR LOCATION.

(10) START CURB AND GUTTER TRANSITION OR END SECTION.

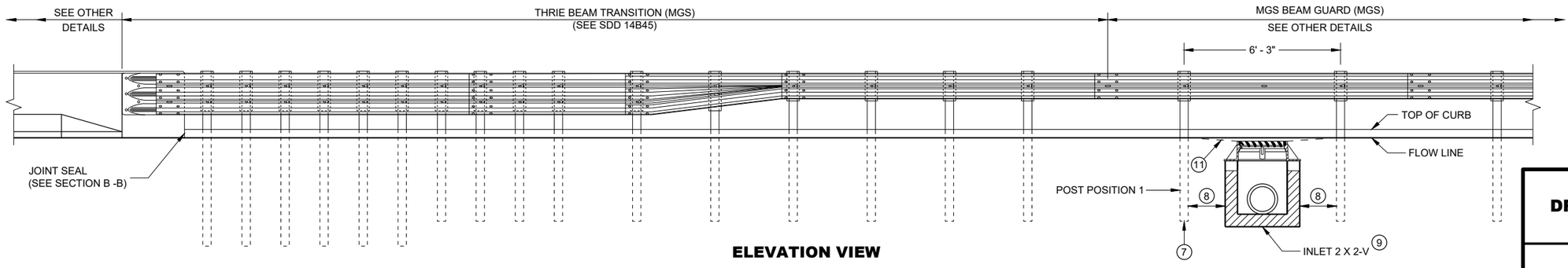
(11) DEPRESS FLOW LINE (SEE DETAIL)

(12) MEDIUM RIPRAP UNLESS OTHERWISE SPECIFIED.

(13) LIMITS OF ADDITIONAL RIPRAP WHEN SPECIAL DITCH IS REQUIRED.



PLAN VIEW



ELEVATION VIEW

CONCRETE SURFACE DRAINS DROP INLET TYPE AT STRUCTURES

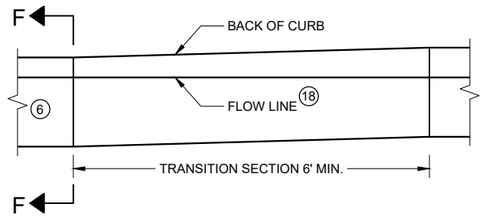
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

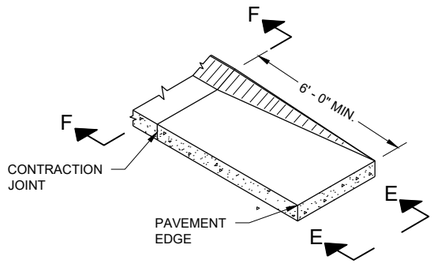
SDD 08D03 - 09a

6

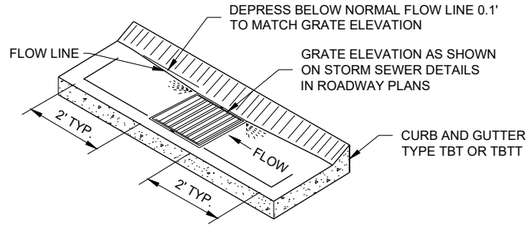
SDD 08D03 - 09a



CURB AND GUTTER TRANSITION SECTION CONCRETE CURB AND GUTTER 4-INCH SLOPED 36 INCH TYPE TBT OR TBTT



CURB AND GUTTER END SECTION CONCRETE CURB AND GUTTER 4-INCH SLOPED 36 INCH TYPE TBT OR TBTT



CURB AND GUTTER FLOW LINE DEPRESSION AT INLETS CONCRETE CURB AND GUTTER 4-INCH SLOPED 36 INCH TYPE TBT OR TBTT

GENERAL NOTES

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

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

(1) USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.

(2) NO. 4 X 2' - 0" TIE BARS SPACED AT 12" C-C TO BE PLACED BY BRIDGE CONTRACTOR OR DRILLED TIE BARS PLACED AS DIRECTED BY THE ENGINEER.

(3) PAVED CONCRETE SHOULDER (SDD 13A03) OR CONCRETE DRAINAGE SLAB.

(4) CONCRETE PAVEMENT APPROACH SLAB (SHOWN) OR STRUCTURE APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB. SEE SDD 13B02 AND STRUCTURE PLANS.

(5) PAVED CONCRETE SHOULDER (SDD 13A03) OR ASPHALT SHOULDER.

(6) CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE TBT OR TBTT. USE TYPE TBTT CURB WITH NO. 4 X 2' -0" TIE BARS SPACED AT 3' - 0" C-C ONLY WHEN ADJACENT TO CONCRETE PAVEMENTS.

(7) PLACE DRAINAGE STRUCTURE BEFORE MSG THRIE BEAM TRANSITION POST 1 (SEE SDD 14B45)

(8) CENTER DRAINAGE STRUCTURE BETWEEN POSTS. 6-INCH MINIMUM SEPARATION FROM OUTSIDE WALL OF DRAINAGE STRUCTURE TO POSTS.

(9) SEE SDD 08A05 AND 08C07 FOR DETAILS. SEE ROADWAY PLANS FOR LOCATION.

(10) START CURB AND GUTTER TRANSITION OR END SECTION.

(11) DEPRESS FLOW LINE (SEE DETAIL)

(12) MEDIUM RIPRAP UNLESS OTHERWISE SPECIFIED.

(13) LIMITS OF ADDITIONAL RIPRAP WHEN SPECIAL DITCH IS REQUIRED.

(14) GEOTEXTILE TYPE HR.

(15) MSG THRIE BEAM TRANSITION POST 1. SEE SDD 14B45 FOR ADDITIONAL CONSTRUCTION DETAILS AND ACCEPTABLE MATERIALS.

(16) MAINTAIN WIDTH, THICKNESS AND CROSS SLOPE OF ADJACENT TYPE TBT OR TBTT CURB. SEE NOTE 6 FOR TIE BAR SPACING.

(17) ALIGN FACE OF POST BLOCK WITH FLOW LINE.

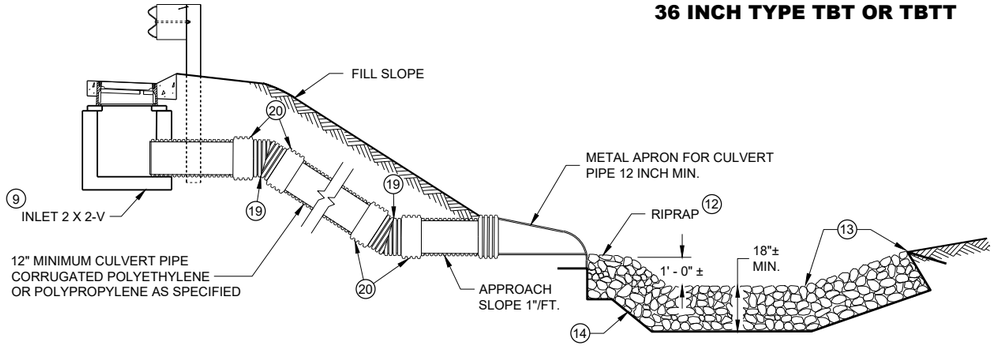
(18) MAINTAIN FLOW LINE AT EDGE OF PAVEMENT/FACE OF BEAM GUARD AS APPLICABLE.

(19) MANUFACTURER SUPPLIED BEND.

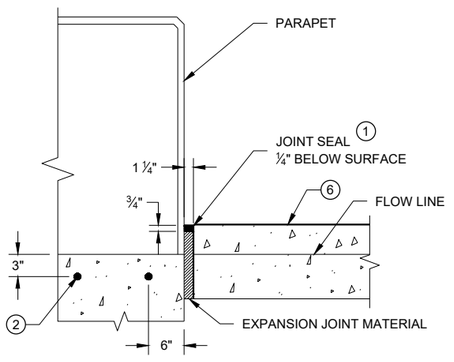
(20) MANUFACTURER SUPPLIED EXTERNAL MECHANICAL COUPLING OR A MANUFACTURER RECOMMENDED COUPLING WITH A MASTIC IMPREGNATED GEOTEXTILE WRAP AND MECHANICAL FASTENING BANDS.

(21) MINIMUM REINFORCEMENT SHALL BE 6" X 6" - W4.0 X W4.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C - C.

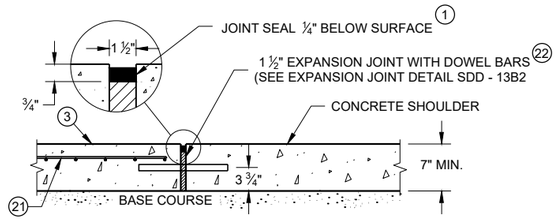
(22) DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING HMA PAVEMENTS.



SECTION A - A

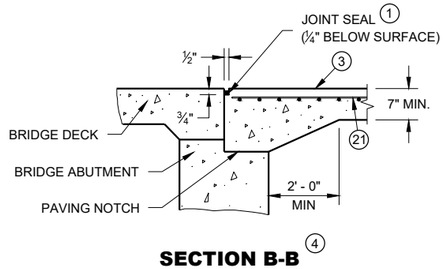


SECTION D - D

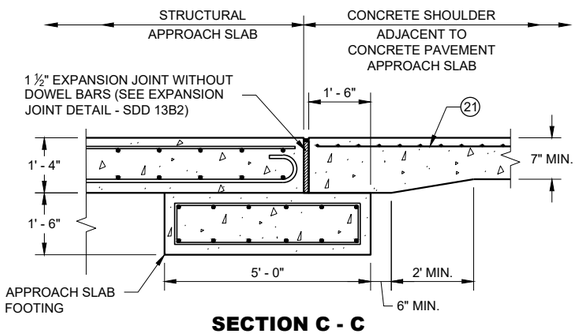


SECTION C - C

JOINT DETAIL FOR BRIDGE APPROACH WITH CONCRETE SHOULDERS

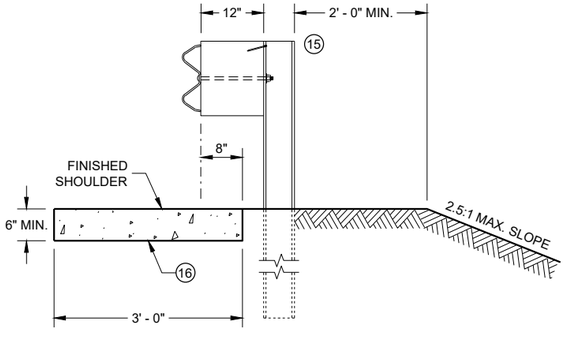


SECTION B-B (4)

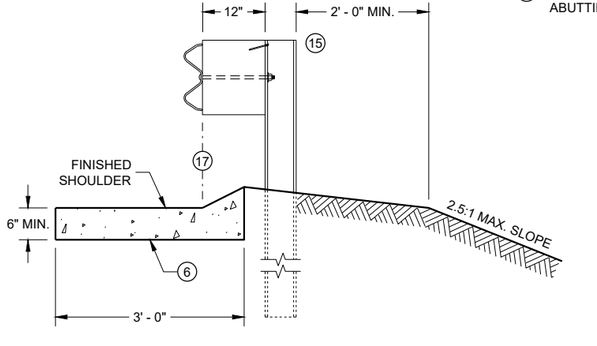


SECTION C - C

JOINT DETAIL FOR BRIDGE WITH STRUCTURAL APPROACH SLAB AND CONCRETE APPROACH SLAB



SECTION E - E



SECTION F - F

CONCRETE SURFACE DRAINS DROP INLET TYPE AT STRUCTURES

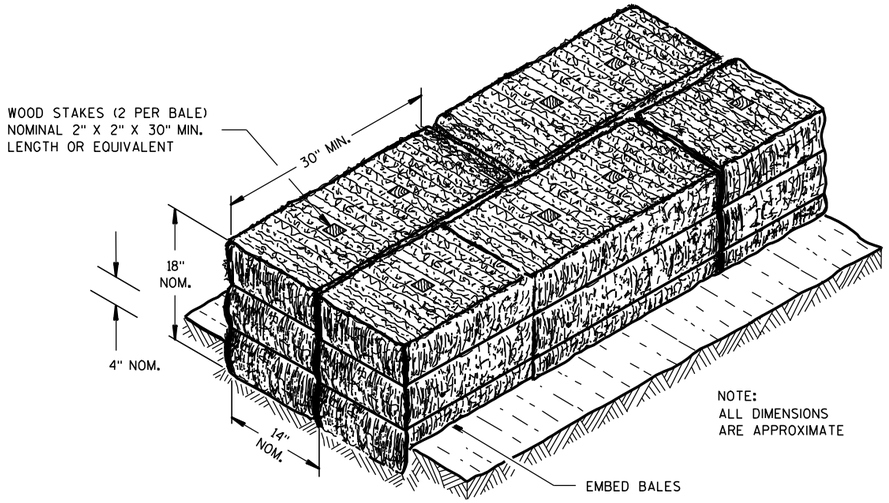
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE ENGINEER

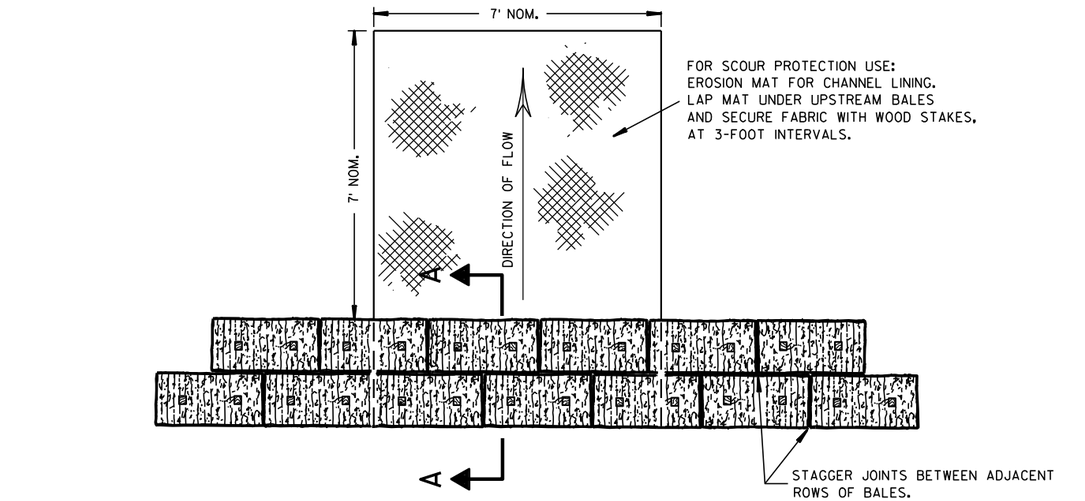
FHWA

6

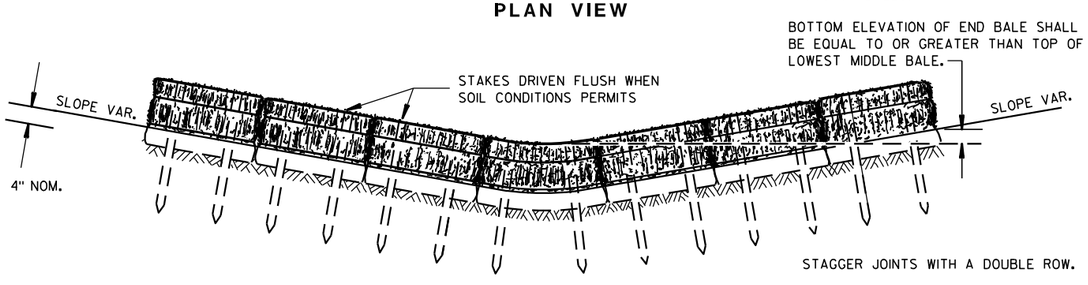
SDD 08D03 - 09b



SECTION A-A



PLAN VIEW



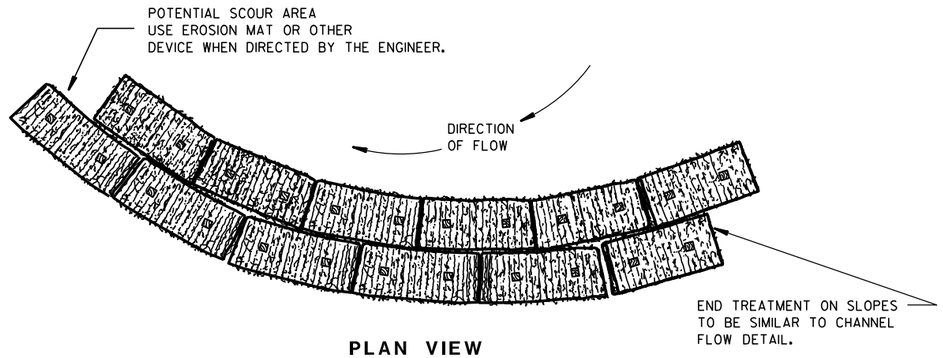
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

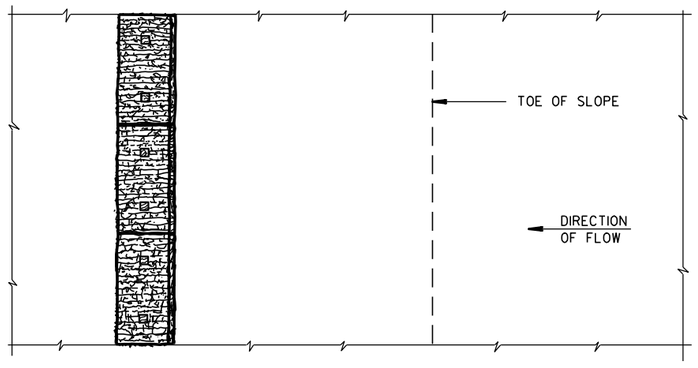
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

① TEMPORARY DITCH CHECKS EITHER EROSION BALES OR MANUFACTURED SHALL BE PAID FOR UNDER THE BID ITEM OF TEMPORARY DITCH CHECK. THE DEPARTMENT WILL NOT PAY FOR TEMPORARY DITCH CHECKS CONSTRUCTED OF A SINGLE ROW OF EROSION BALES.

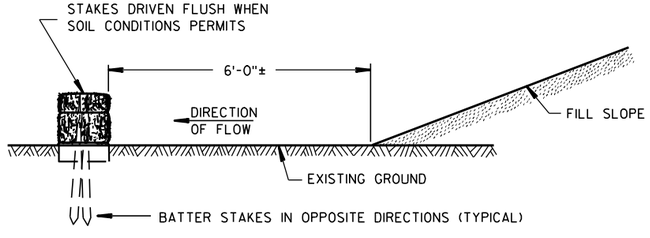


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

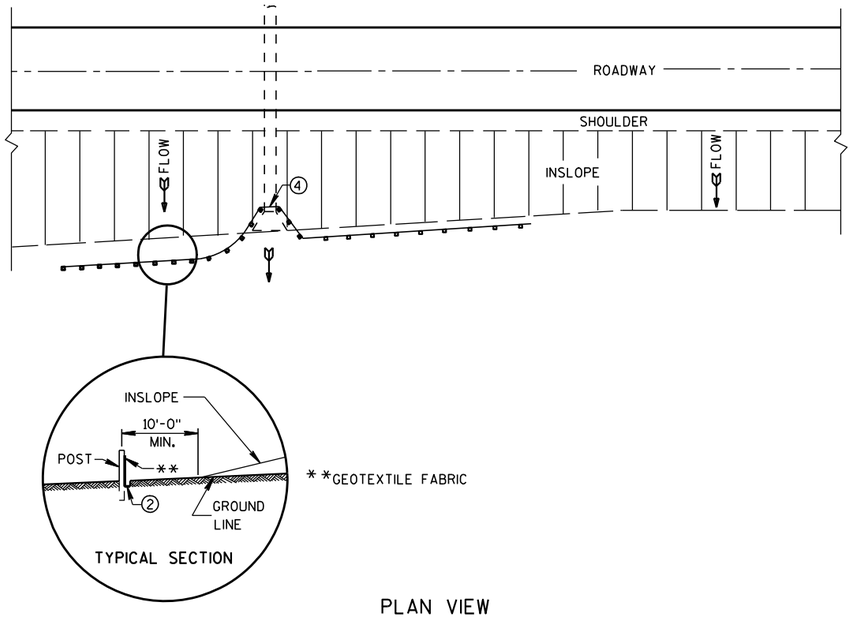
WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

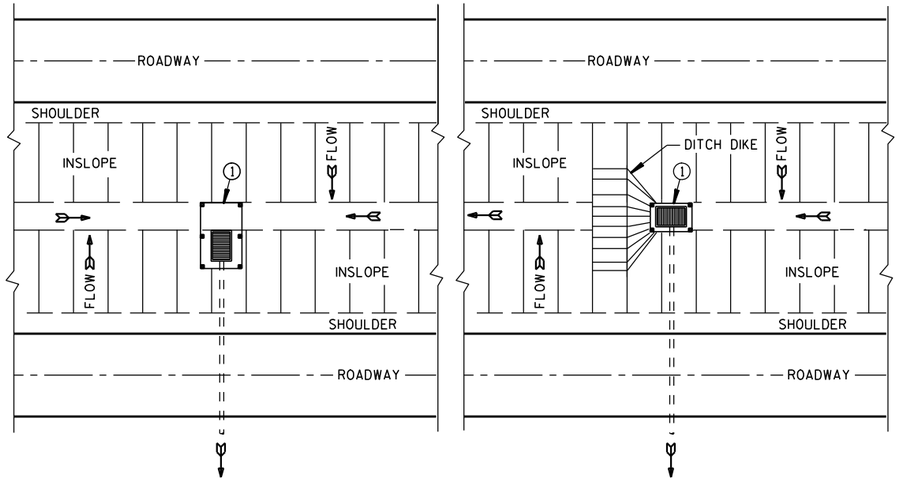
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



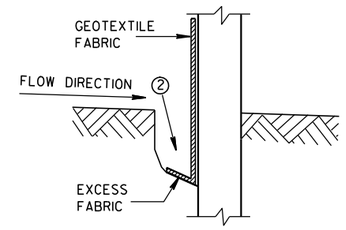
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

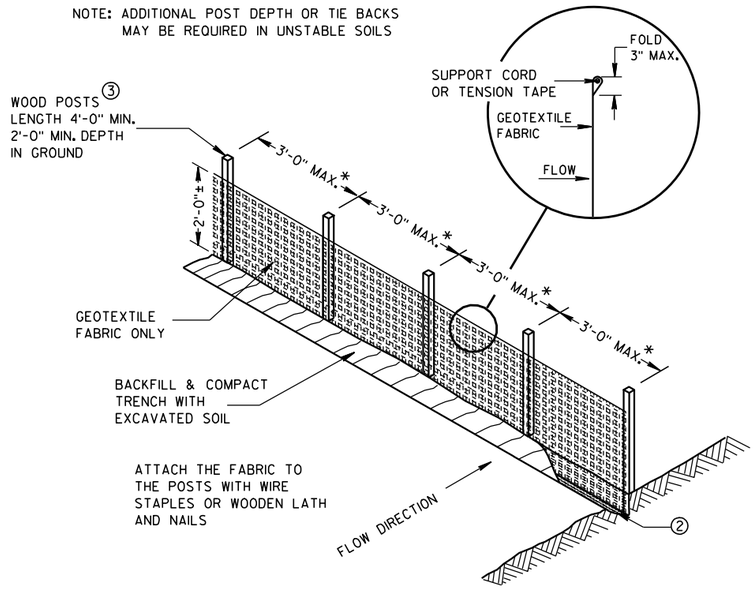
GENERAL NOTES

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

1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.
4. SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
5. CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.

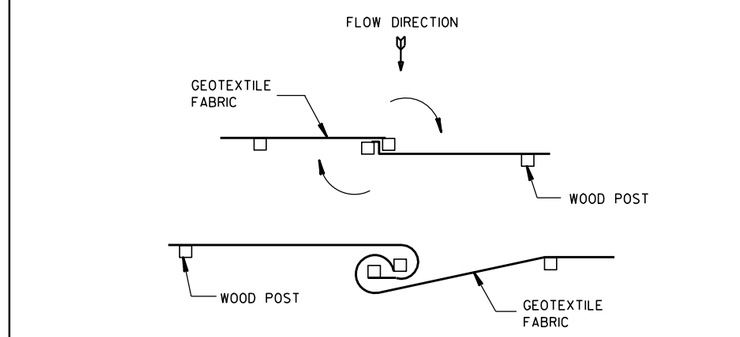


TRENCH DETAIL

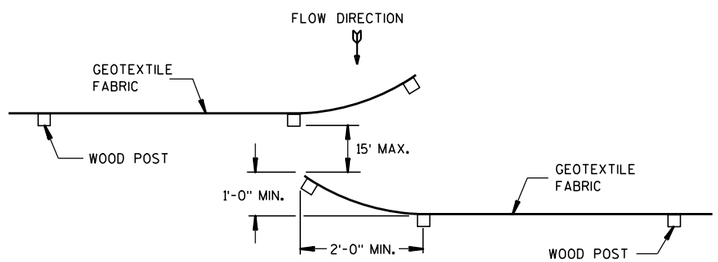


*NOTE: 8'-0" POST SPACING ALLOWED IF A WOVEN GEOTEXTILE FABRIC IS USED.

SILT FENCE

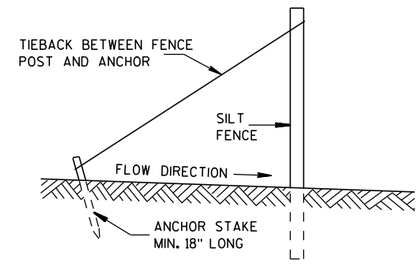


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE 5



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

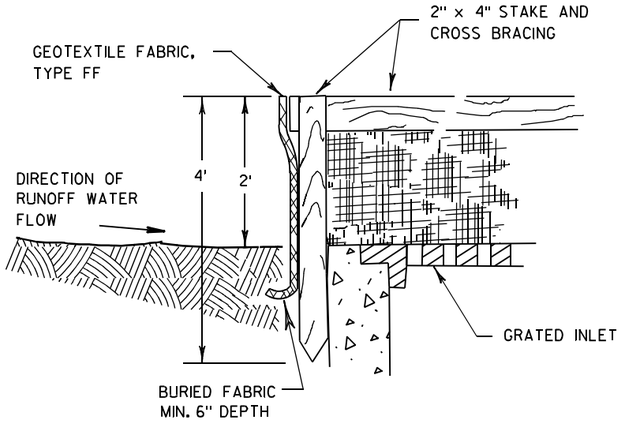
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

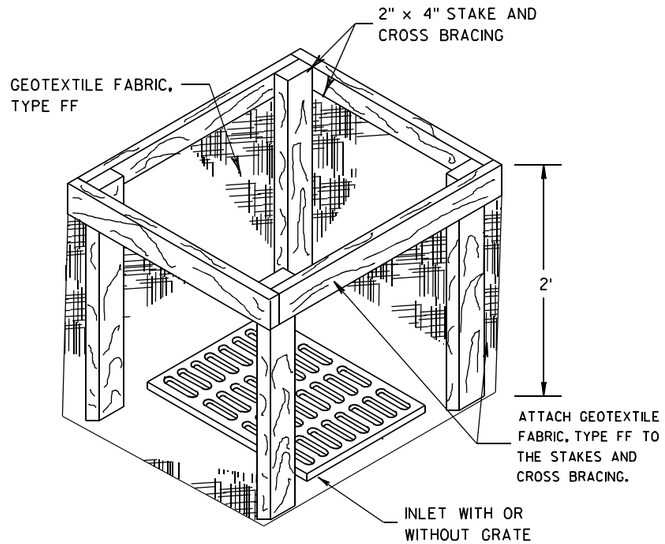
6

S.D.D. 8 E 9-6

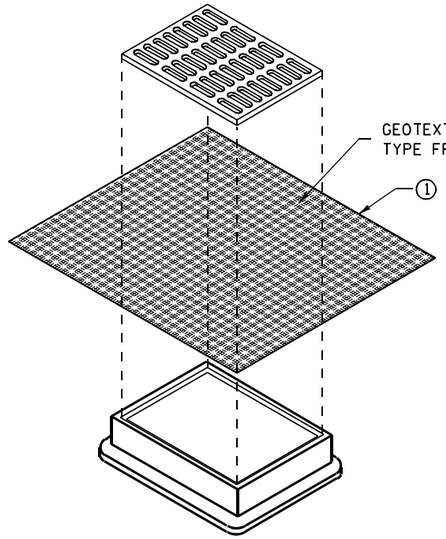
6

S.D.D. 8 E 9-6



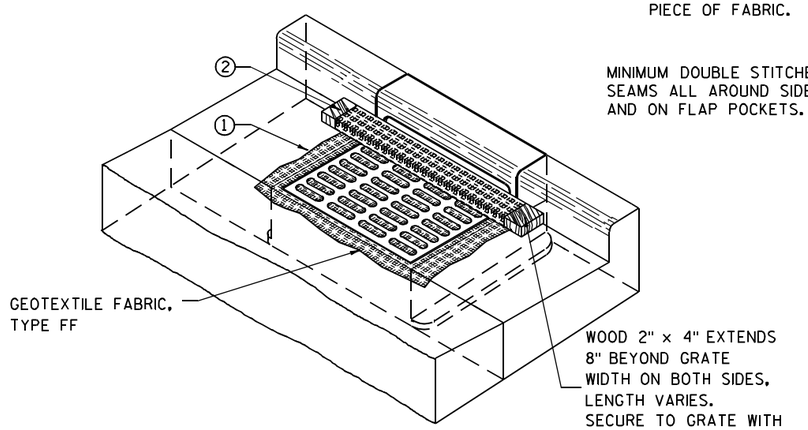


INLET PROTECTION, TYPE A

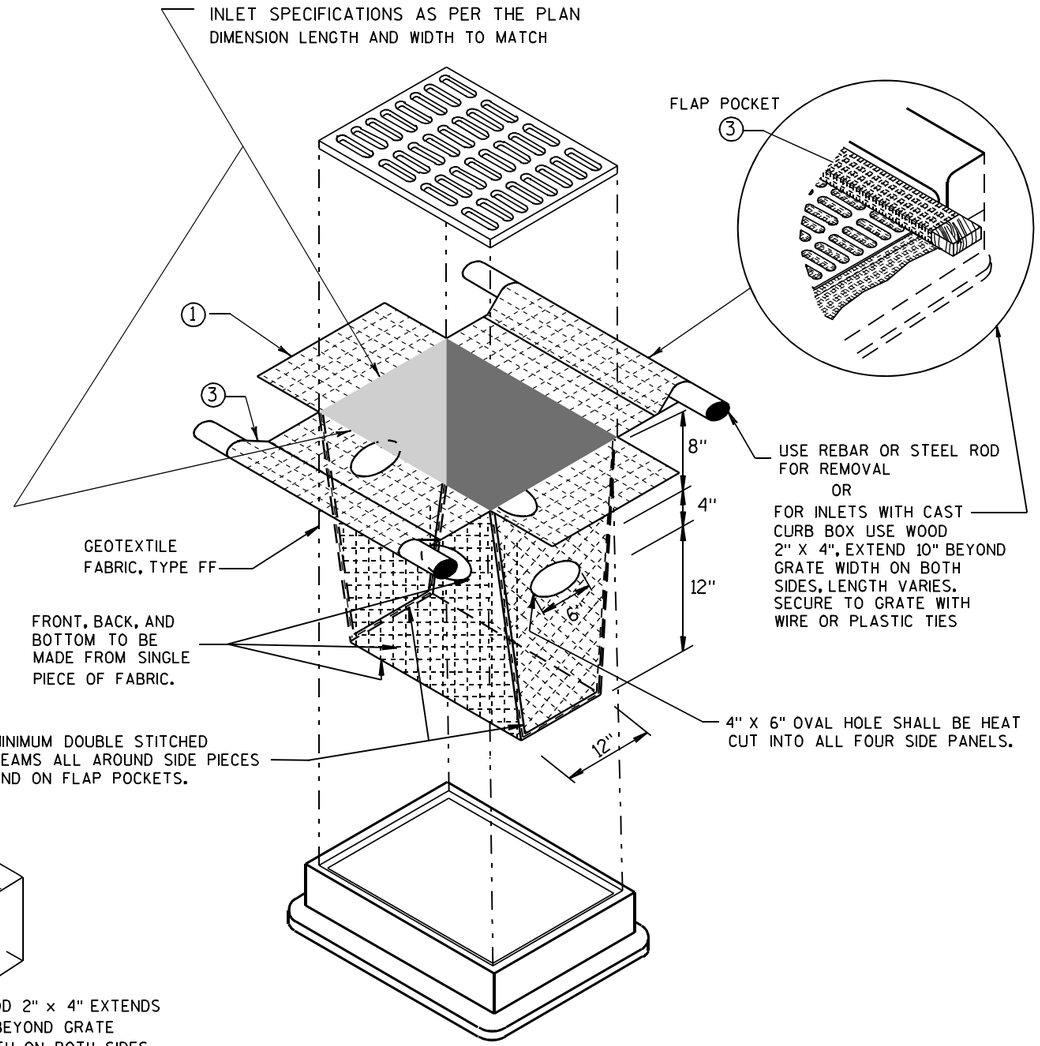


INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

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



INLET PROTECTION, TYPE C (WITH CURB BOX)



INLET PROTECTION, TYPE D

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

GENERAL NOTES

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

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

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

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

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

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

INSTALLATION NOTES

TYPE B & C

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

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

TYPE D

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

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

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

INLET PROTECTION
TYPE A, B, C, AND D

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

10/16/02
DATE

/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

6

S.D.D. 8 E 10-2

METAL APRON ENDWALLS

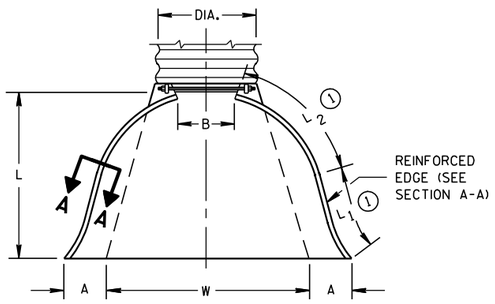
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4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

× EXCEPT CENTER PANEL SEE GENERAL NOTES

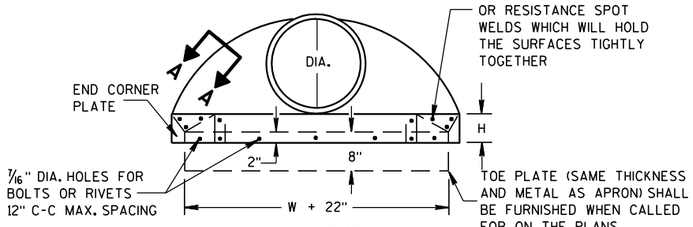
REINFORCED CONCRETE APRON ENDWALLS

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

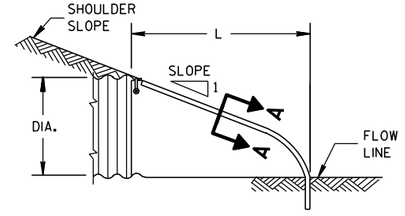
*MINIMUM
**MAXIMUM



PLAN VIEW

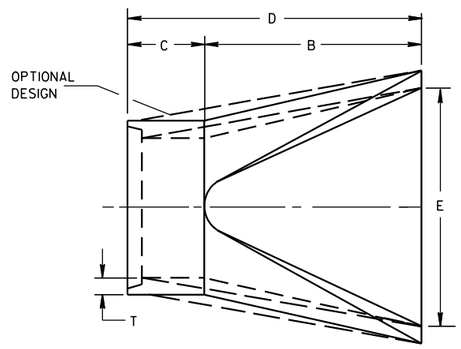


END VIEW

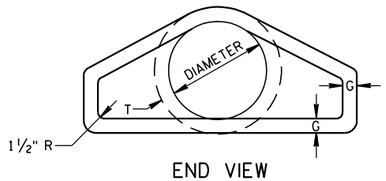


SIDE ELEVATION

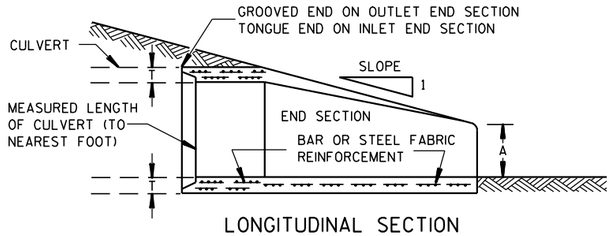
METAL ENDWALLS



PLAN

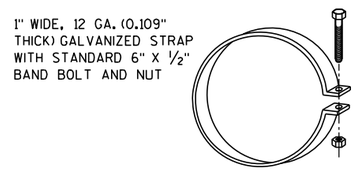


END VIEW



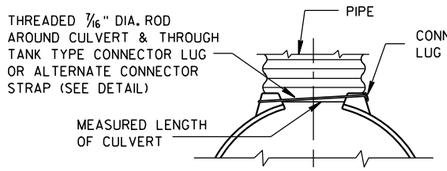
LONGITUDINAL SECTION

CONCRETE ENDWALLS

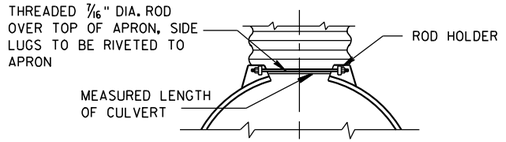


ALTERNATE FOR TYPE 1 CONNECTION

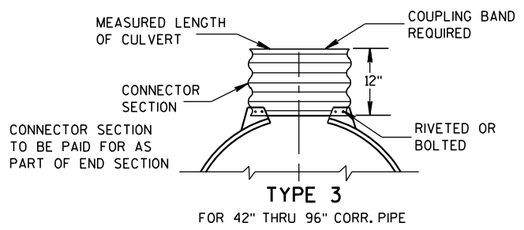
END SECTION CONNECTOR STRAP



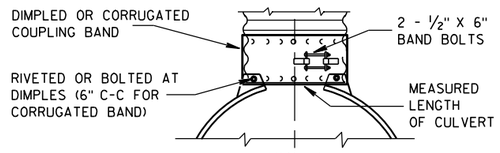
TYPE 1
FOR 12" THRU 24" CORR. PIPE



TYPE 2
FOR 30" THRU 96" CORR. PIPE



TYPE 3
FOR 42" THRU 96" CORR. PIPE



TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

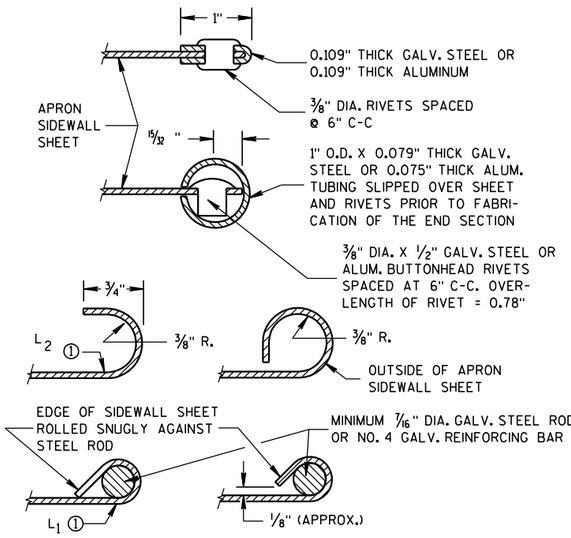
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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

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

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

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

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

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

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

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

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

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

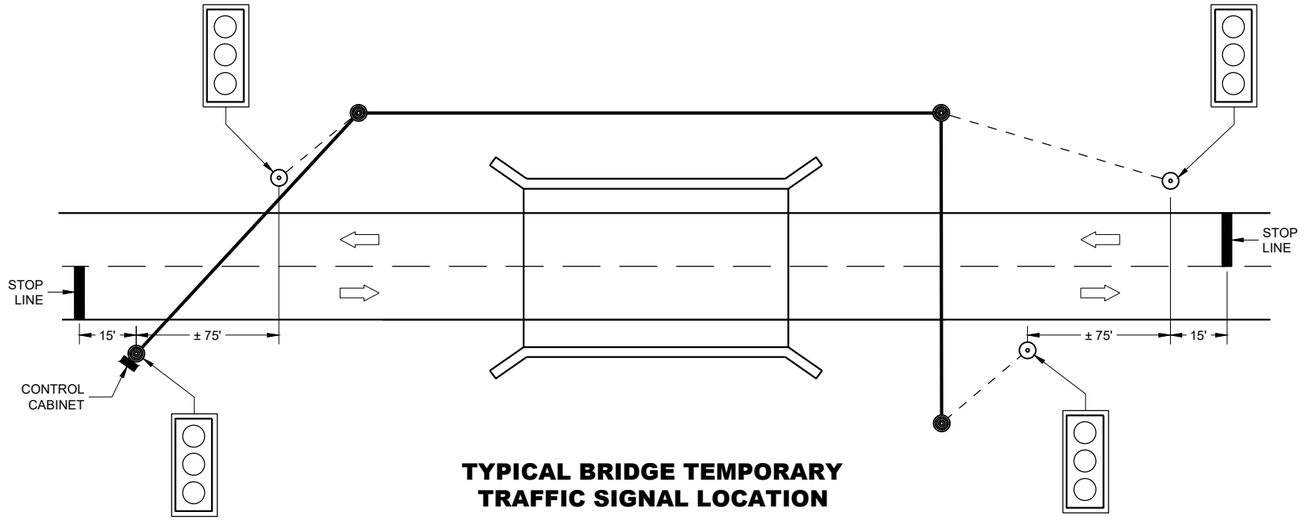
APRON ENDWALLS FOR CULVERT PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

S.D.D. 8 F 1-11



TYPICAL BRIDGE TEMPORARY TRAFFIC SIGNAL LOCATION

LEGEND

- WOOD POLE (NON-BREAKAWAY)
- WOOD POST (BREADAWAY)
- SIGNAL CABLE
- SIGNAL CABLE W/MESSENGER
- DIRECTION OF TRAFFIC
- LED TRAFFIC SIGNAL WITH BACKPLATE (3-12")

GENERAL NOTES

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

POLE MOUNTED TRAFFIC SIGNAL CONTROL CABINET MAY BE MOUNTED ON THE SERVICE POLE IF THE ELECTRICAL UTILITY ALLOWS THE INSTALLATION.

WHEN UTILITY POLES ARE USED TO SPAN THE TEMPORARY OVERHEAD CABLE, WRITTEN PERMISSION MUST BE OBTAINED FROM THE OWNER OF THE POLES AND GIVEN TO THE PROJECT MANAGER. ALL PERTINENT UTILITY AND CODE CLEARANCES SHALL BE MAINTAINED.

WOOD POLES (NON-BREAKAWAY) SHALL BE NO CLOSER TO EDGE OF PAVEMENT THAN OFFSET DISTANCE CHART ALLOWS OR 4 FEET BEHIND PROTECTIVE BARRIER (BEAM GUARD, ETC.).

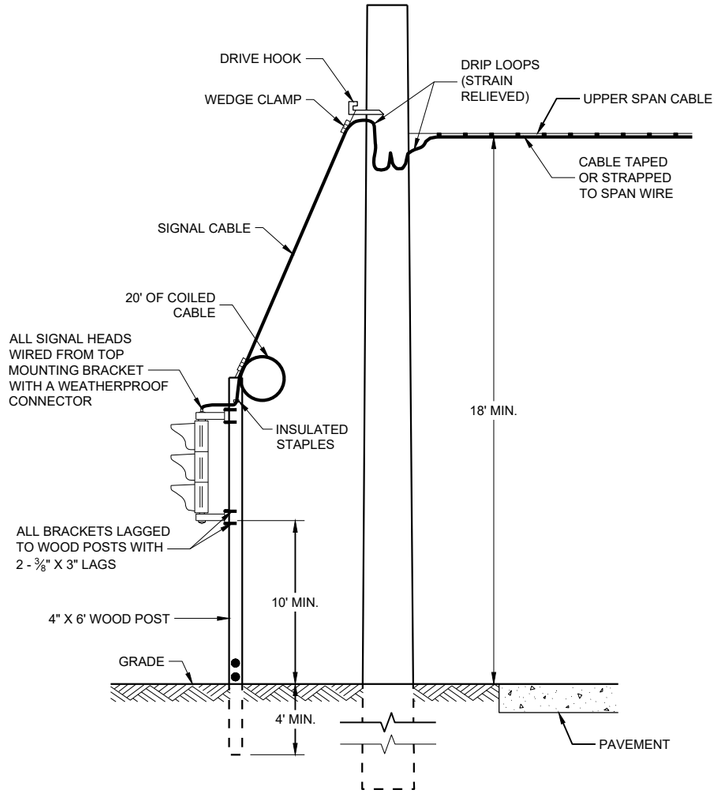
WOOD POSTS (BREAKAWAY) SHALL BE NO CLOSER THAN 2 FEET OUTSIDE OF SHOULDER.

VERTICAL CLEARANCE ETC. PER NEC.

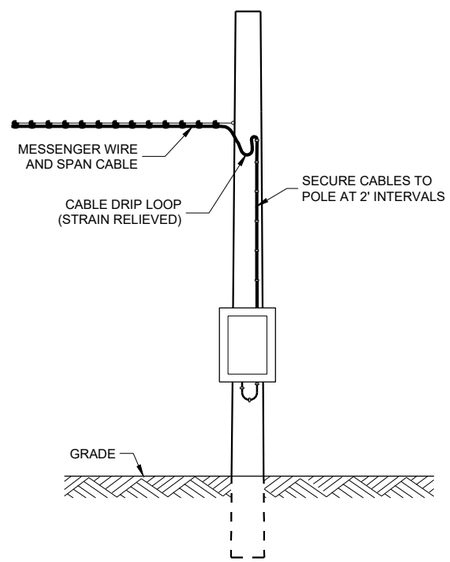
TRAFFIC SIGNAL FACES SHALL BE TYPICALLY PLACED 12 FEET FROM EDGE OF PAVEMENT.

EACH TRAFFIC SIGNAL SHALL HAVE A BACKPLATE.

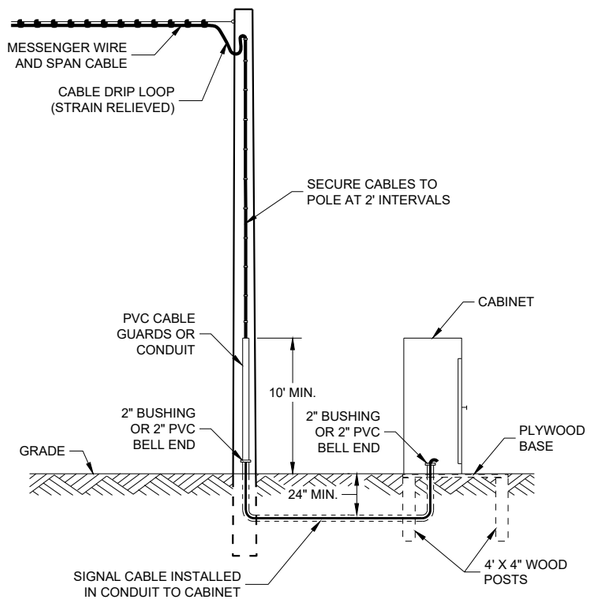
SIGNING, PAVEMENT MARKING AND LANE CONTROL REQUIREMENTS SHALL CONFORM TO STANDARD DETAIL DRAWING 15D33.



TYPICAL DROP TO TRAFFIC SIGNAL FACE



POLE MOUNT CABINET INSTALLATION



GROUND MOUNT CABINET INSTALLATION

MINIMUM POLE LENGTHS	CLASS	POLE BURIAL DEPTHS
25'	V	5'
30'	V	6'
35'	IV	7'
40'	IV	8'
45'	IV	9'

OFFSET DISTANCES FOR TEMPORARY NON-BREAKAWAY POLES	
SPEED LIMIT	OFFSET DISTANCE*
GREATER THAN 45 MPH	18 FT
45 MPH OR LESS	12 FT
45 MPH OR LESS W/CURBS	2 FT

* NOTE: OFFSET MEASURED FROM OUTER EDGE OF OUTSIDE THRU LANE.

BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018 — DATE
/S/ Ahmet Demirbilek — ROADWAY STANDARDS DEVE ENGINEER

FHWA

SDD09G02 - 05a

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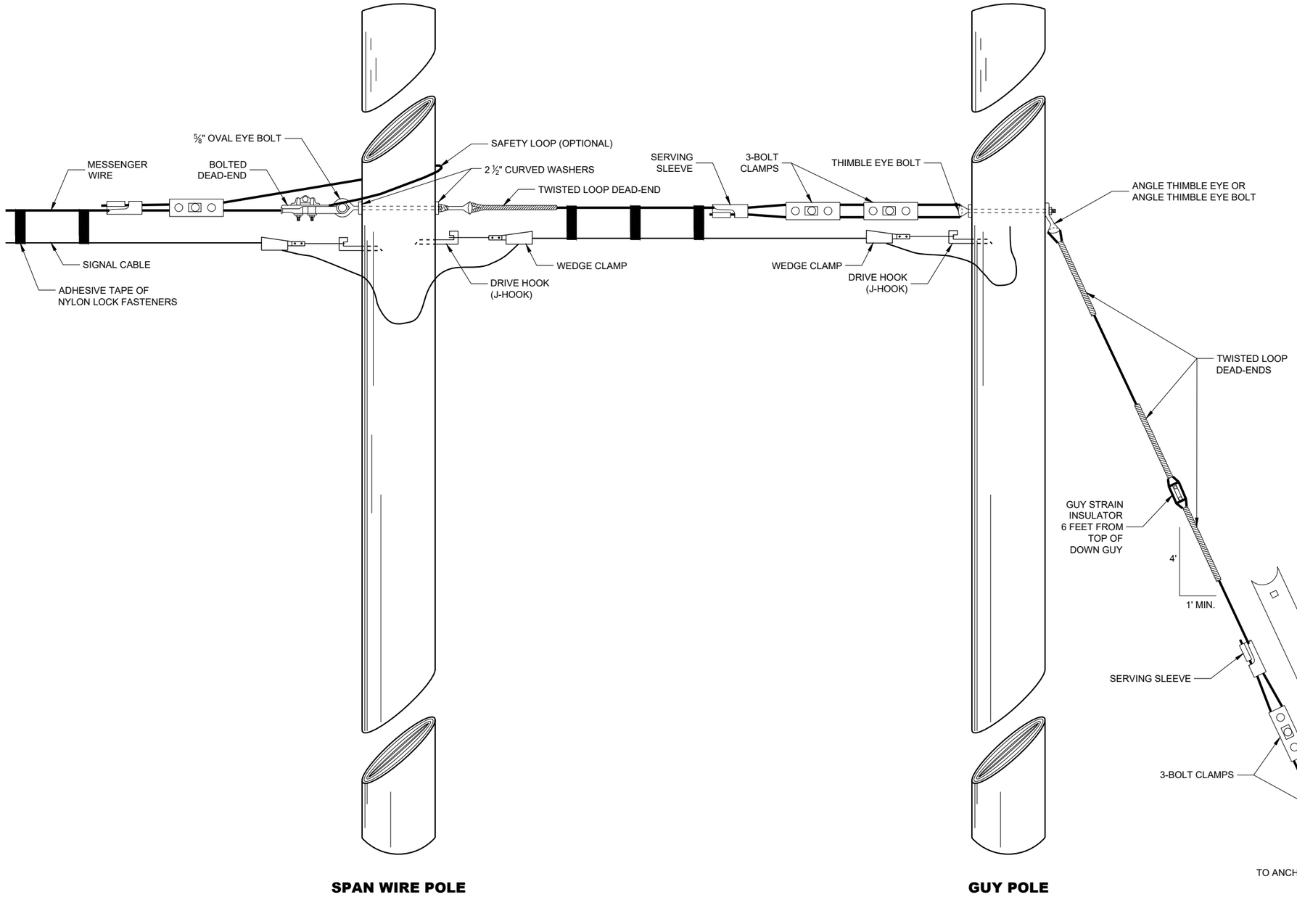
SDD09G02 - 05a

GENERAL NOTES

USE ¾" DRILL IN WOOD POLE TO PROVIDE FOR ⅝" BOLTS.



SPAN WIRE POLE

GUY POLE

TYPICAL DEAD-ENDINGS OR GUYING

BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June 2015
DATE

/S/ Ahmet Demerbilek
ROADWAY STANDARDS DEVE ENGINEER

FHWA

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SDD09G02 - 05b

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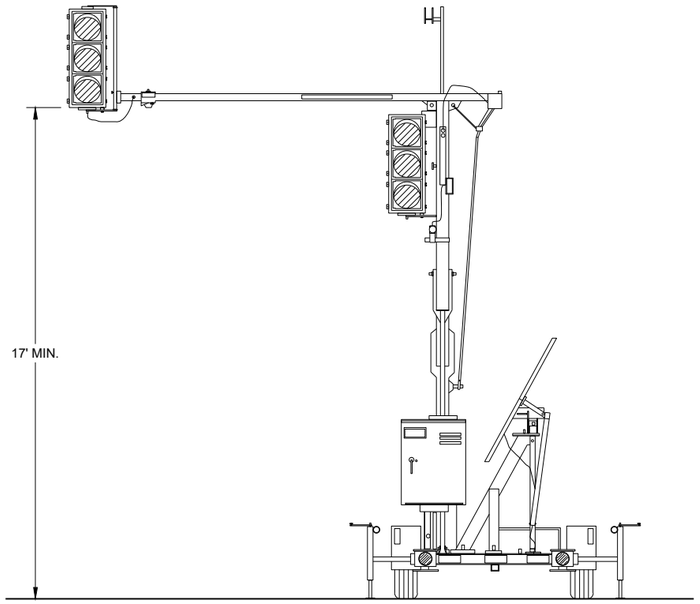
SDD09G02 - 05b

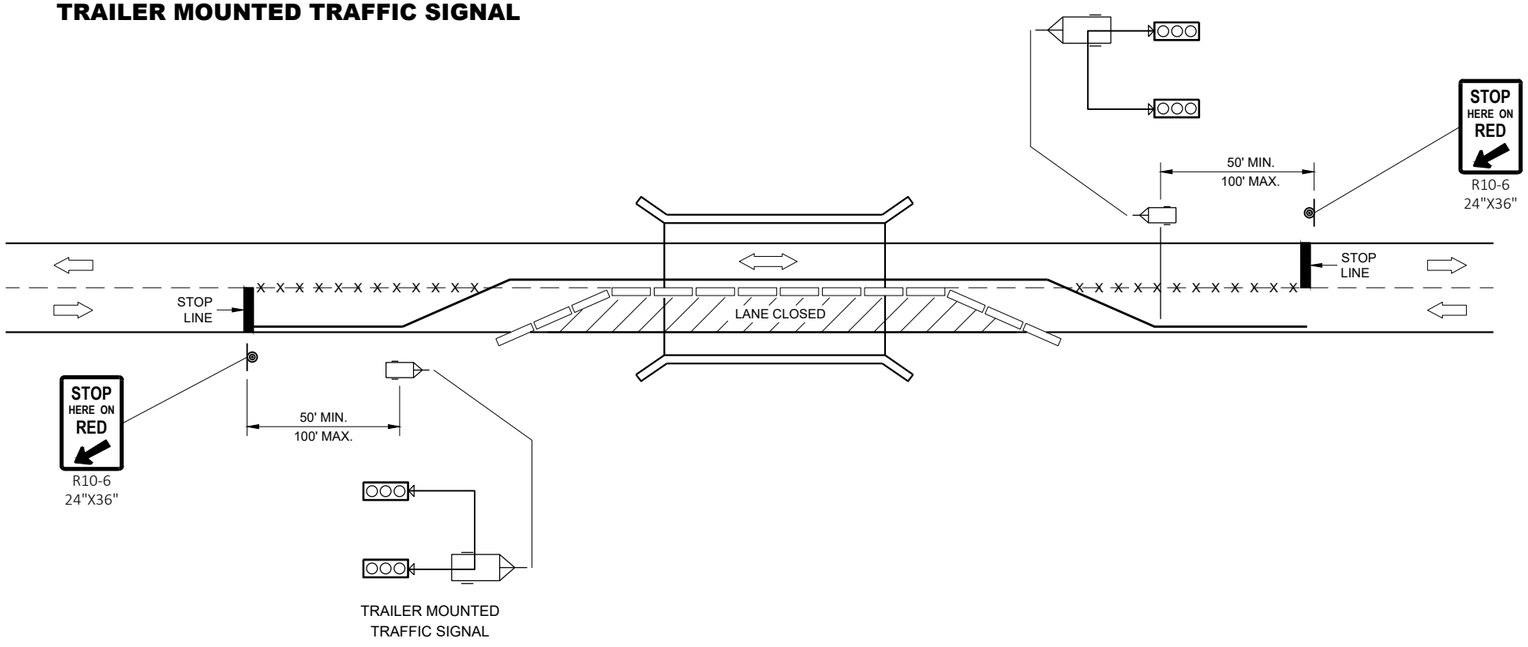


TRAILER MOUNTED TRAFFIC SIGNAL

GENERAL NOTES

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

SIGNING, PAVEMENT MARKING AND LANE CONTROL REQUIREMENTS SHALL CONFORM TO STANDARD DETAIL DRAWING 15D33.



TYPICAL TRAILER MOUNTED TRAFFIC SIGNAL LOCATION

LEGEND

- POST MOUNTED SIGN
- TEMPORARY PRECAST CONCRETE BARRIER
- TRAILER MOUNTED TRAFFIC SIGNAL
- REMOVE PAVEMENT MARKINGS
- DIRECTION OF TRAFFIC

BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

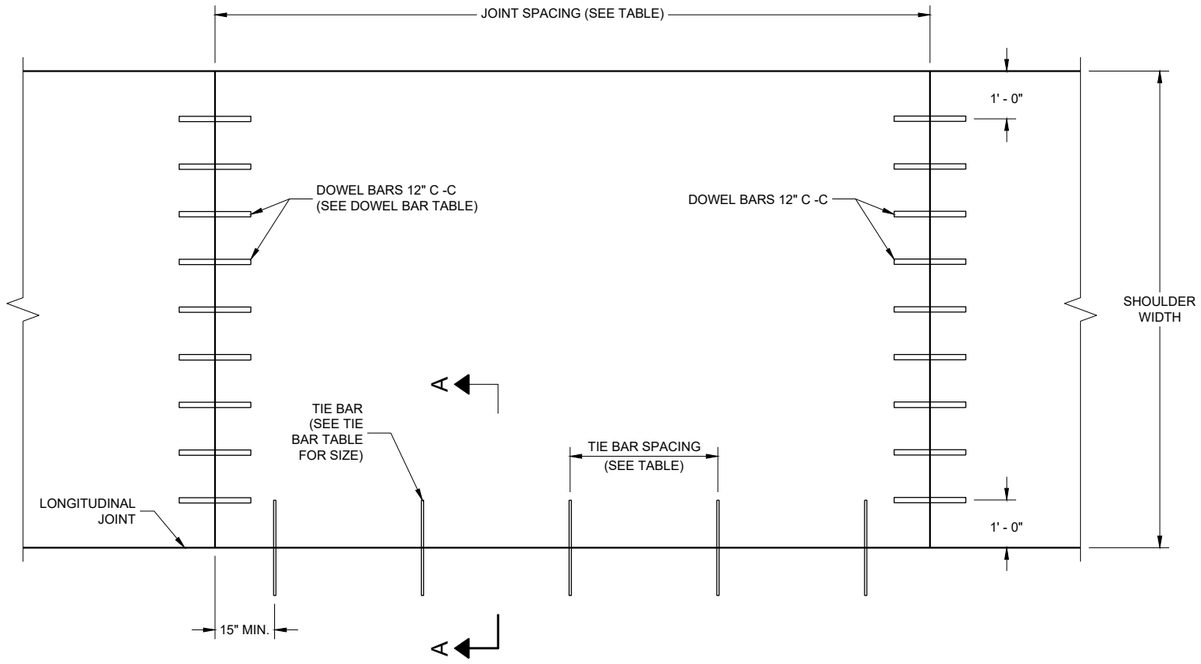
June 2015
DATE

/S/ Ahmet Demerbilek
ROADWAY STANDARDS DEVE ENGINEER

FHWA

SDD09G02 - 05c

SDD09G02 - 05c



PLAN VIEW

CONCRETE PAVEMENT SHOULDER

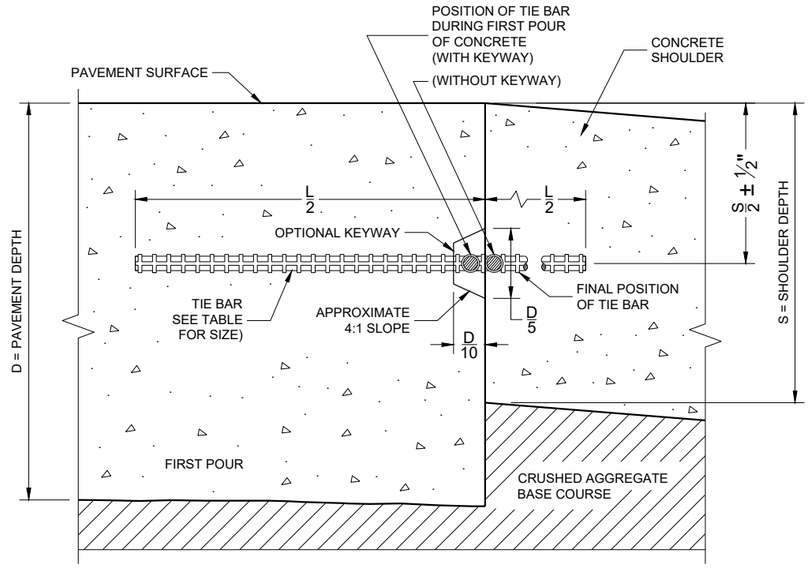
GENERAL NOTES

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

TRANSVERSE JOINT DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.

FINISH THE SHOULDER PAVEMENT CONFORMING TO SUBSECTION 415.3.8 OF THE STANDARD SPECIFICATIONS.

TIE BARS SHALL CONFORM TO SUBSECTION 505.2.4 OF THE STANDARD SPECIFICATIONS.



SECTION A - A

LONGITUDINAL CONSTRUCTION JOINT

TIE BAR TABLE

PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
<10 ½"	NO. 4	30"	36"
>10 ½"	NO. 5	36"	36"
	NO. 4*	30"	24"**

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

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

PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER ***	CONTRACTION JOINT SPACING
6", 6 ½"	NONE	12"
7", 7 ½"	1"	14"
8" & ABOVE	1 ¼"	15"

*** FOR DOWELED CONCRETE SHOULDERS WITH TRAPEZOIDAL CROSS SECTIONS, CHOSE THE APPROPRIATE DOWEL BAR DIAMETER BASED ON THE SMALLER PAVEMENT DEPTH (LIKELY THE OUTSIDE EDGE OF THE SHOULDER). IF USING BASKETS, USE BASKETS FRO THE AVERAGE THICKNESS OF THE CROSS SECTION.

CONCRETE PAVEMENT SHOULDERS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2022 — DATE
/S/ Peter Kemp — PAVEMENT SUPERVISOR

FHWA

6

SDD 13A03 - 07

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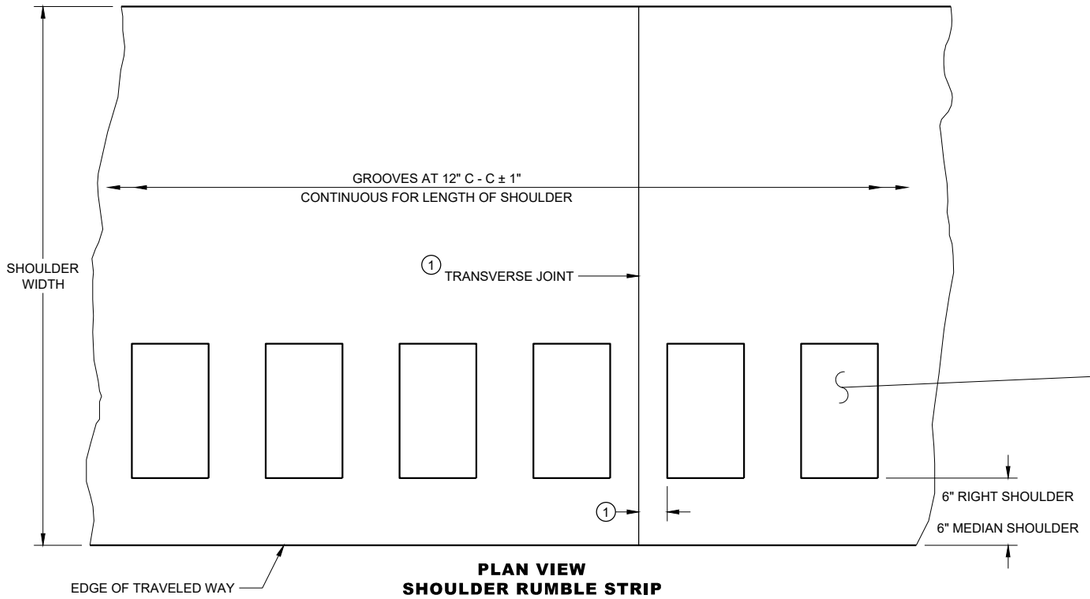
SDD 13A03 - 07

GENERAL NOTES

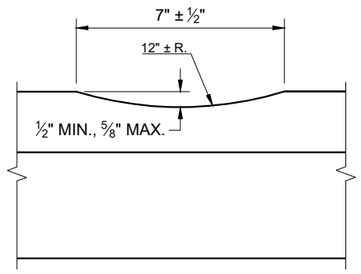
SDD 13A5, SHEET "b" SHOWS THE LOCATION OF THE RUMBLE STRIPS AT RAMP AND GORE LOCATIONS.

RUMBLE STRIPS ON EXPRESSWAYS:
DO NOT INSTALL SHOULDER RUMBLE STRIPS ACROSS SIDE ROAD INTERSECTIONS, COMMERCIAL AND PRIVATE DRIVEWAYS, ADJACENT TO RIGHT TURN LANES, LEFT TURN LANES, TURN LANE TAPERS, 25' IN ADVANCE OF BRIDGE DECKS, 25' IN ADVANCE OF BRIDGE APPROACHES, OR 100 FEET IN ADVANCE OF RAILROAD CROSSINGS.

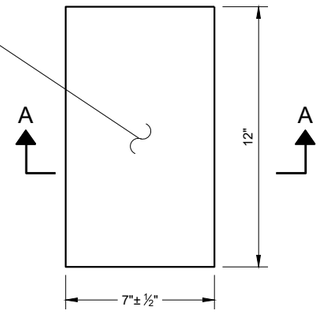
(1) CONCRETE PAVEMENT - RUMBLE STRIPS SHALL BE A MINIMUM OF 6 INCHES AWAY FROM TRANSVERSE JOINTS.



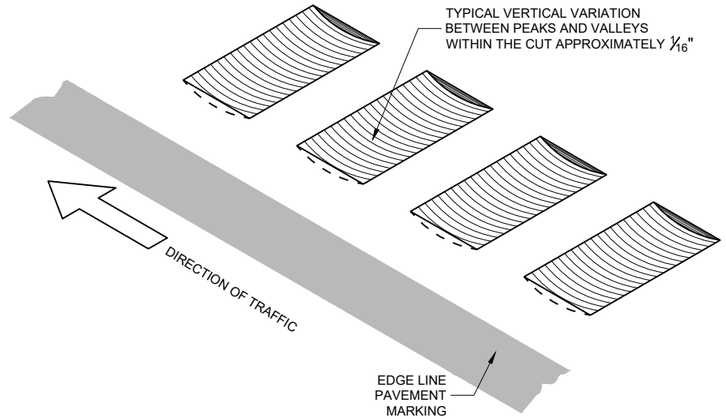
PLAN VIEW
SHOULDER RUMBLE STRIP



SECTION A - A

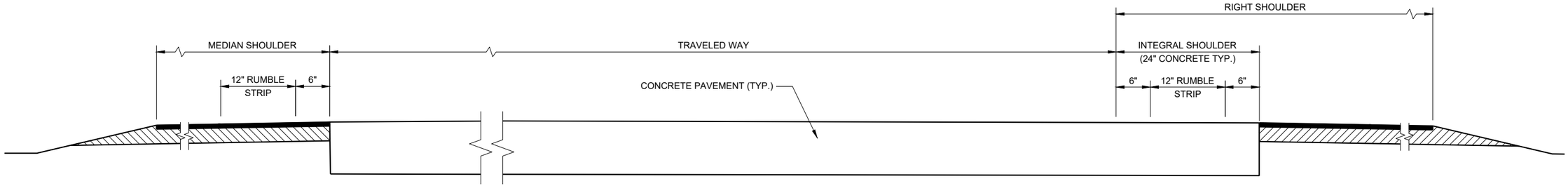


PLAN VIEW
(SINGLE GROOVE)



ISOMETRIC

PLACEMENT DETAIL FOR RUMBLE STRIP



SECTION VIEW

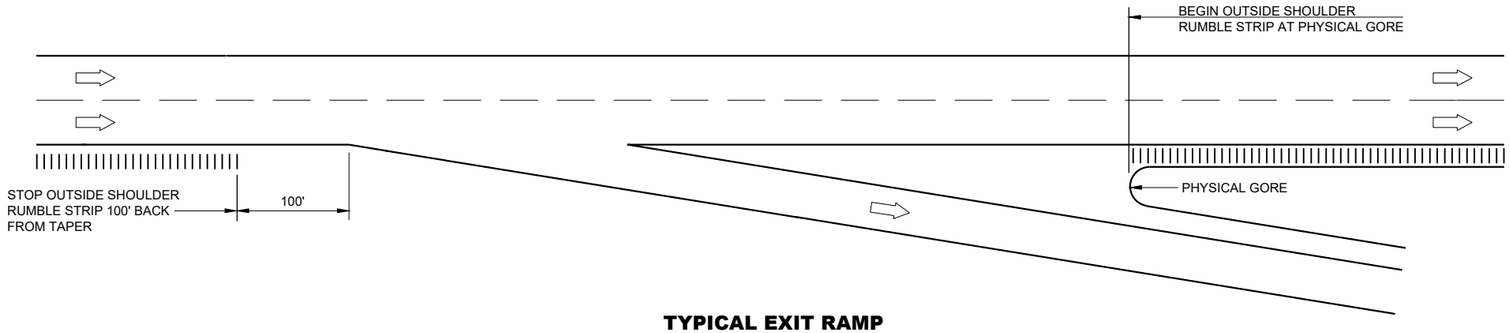
TYPICAL SHOULDER RUMBLE STRIPS
(ONE ROADWAY IS SHOWN)

SHOULDER RUMBLE STRIPS, DIVIDED ROADWAY

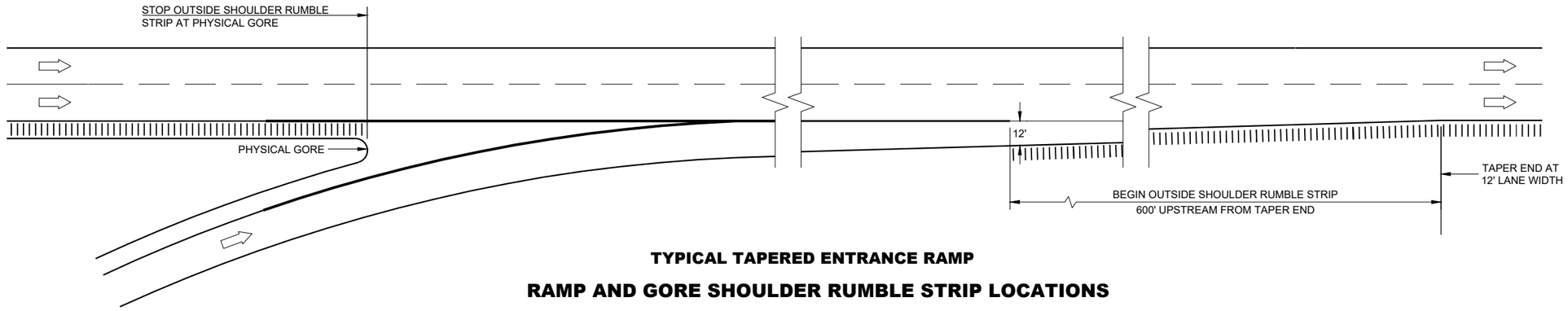
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 13A05-06a

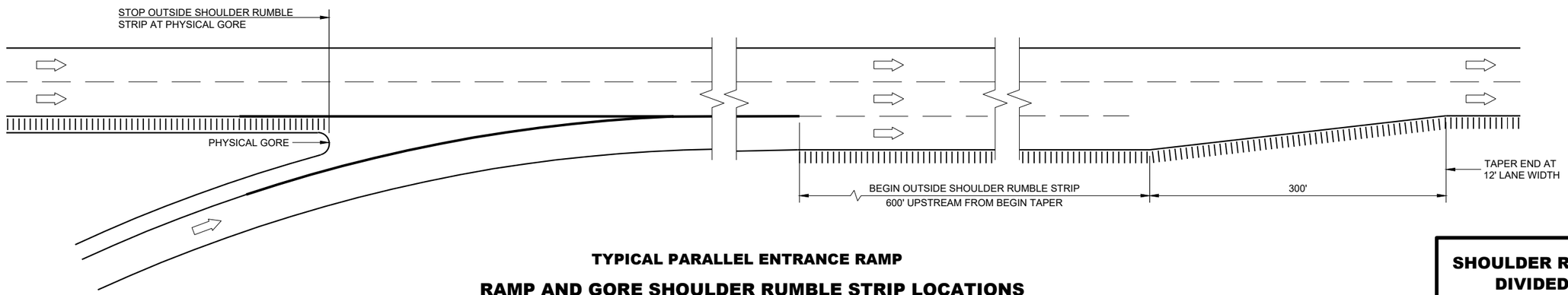


TYPICAL EXIT RAMP



TYPICAL TAPERED ENTRANCE RAMP

RAMP AND GORE SHOULDER RUMBLE STRIP LOCATIONS



TYPICAL PARALLEL ENTRANCE RAMP

RAMP AND GORE SHOULDER RUMBLE STRIP LOCATIONS

GENERAL NOTES

NO RUMBLE STRIP ON EXIT, DIRECTIONAL OR ENTRANCE RAMPS, EXCEPT NEAR THE ENTRANCE TAPER END AND ALONG THE PARALLEL RAMP AREA AS SHOWN.

RUMBLE STRIPS ON EXPRESSWAYS:
DO NOT INSTALL SHOULDER RUMBLE STRIPS ACROSS SIDE ROAD INTERSECTIONS, COMMERCIALAND PRIVATE DRIVEWAYS, ADJACENT TO RIGHT TURN LANES, LEFT TURN LANES, TURN LANE TAPERS, 25' IN ADVANCE OF BRIDGE DECKS, 25' IN ADVANCE OF BRIDGE APPROACHES, OR 100 FEET IN ADVANCE OF RAILROAD CROSSINGS.

LEGEND

DIRECTION OF TRAFFIC

SHOULDER RUMBLE STRIPS, DIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

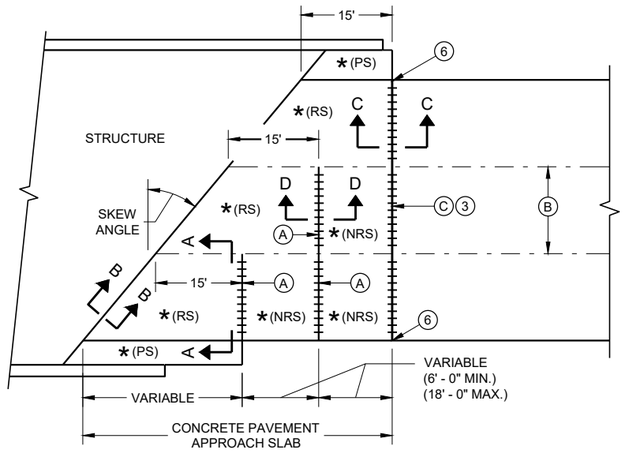
APPROVED
May 2023 — DATE
/S/ Rodney Taylor — ROADWAY DESIGN STANDARDS UNIT SUPERVISOR

FHWA

6

SDD 13A05-06b

SDD 13A05-06b



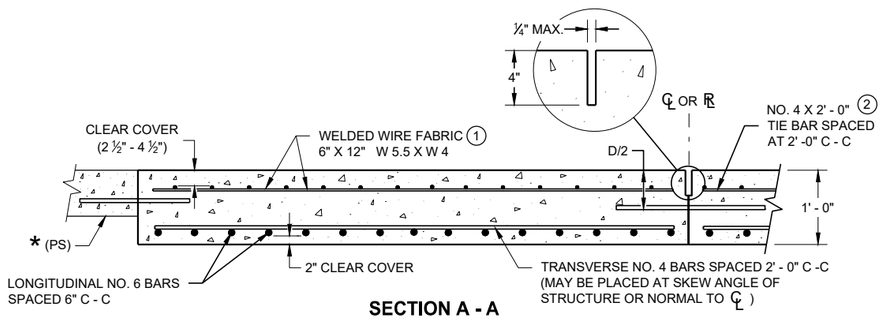
SKEWED APPROACH
(PAVEMENT MORE THAN TWO LANES)

(RS) = REINFORCED CONCRETE SLAB

(PS) = PAVED CONCRETE SHOULDER OR CONCRETE DRAINAGE SLAB

(NRS) - NON - REINFORCED CONCRETE SLAB

*** STANDARD DOWEL BAR DIAMETER (SEE SDD 13C11 AND SDD 13C13)



SECTION A - A
REINFORCEMENT POSITIONING DETAIL

GENERAL NOTES

THE CONTRACTOR MAY SPLICE NO. 6 BARS IN THE APPROACH SLAB FOR SKEWED STRUCTURES ONLY. STAGGER SPLICES WITH A MAXIMUM OF ONE SPLICE PER BAR. THE LENGTH OF LAP IS 20 INCHES.

TACK WELD DOWEL BARS TO THE BASKETS ON ALTERNATE ENDS.

(1) THE CONTRACTOR MAY USE NO. 4 BARS SPACED AT 2' - 0 " C - C IN BOTH THE LONGITUDINAL AND TRANSVERSE DIRECTIONS FOR TOP REINFORCEMENT AS AN ALTERNATIVE TO THE WELDED WIRE FABRIC.

(2) THE CONTRACTOR MAY OMIT THE BARS BETWEEN REINFORCED SLABS WHERE SLAB REINFORCEMENT BARS EXTEND ACROSS THE CENTERLINE OR REFERENCE LINE.

(3) DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING AN HMA PAVEMENT.

(4) USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.

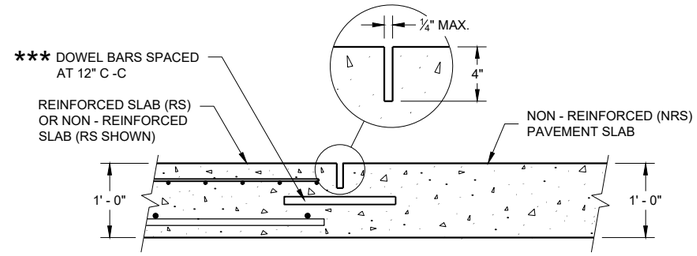
(5) PLACE EXPANSION CAP ON THE END OF THE DOWEL THAT IS NOT TACK WELDED TO THE BASKET. DO NOT FORCE DOWEL BAR PAST THE DOWEL STOP.

(6) EXTEND EXPANSION JOINT THROUGH ANY ADJACENT TIED CONCRETE.

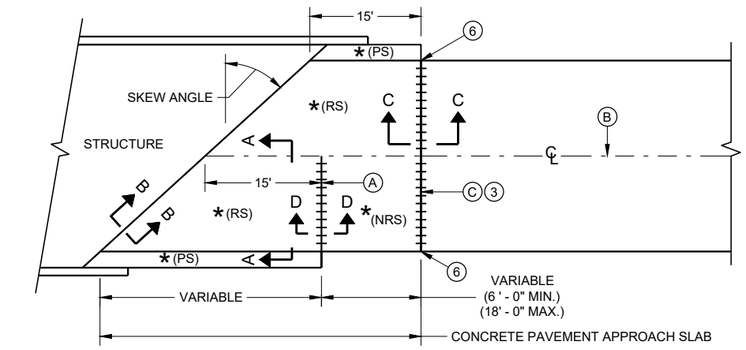
(A) STANDARD CONTRACTION JOINT NORMAL TO ℄ OR ℞.

(B) STANDARD LONGITUDINAL JOINT WITH TIE BARS.

(C) 1 ½" EXPANSION JOINT WITH DOWEL BARS NORMAL TO ℄ OR ℞ .

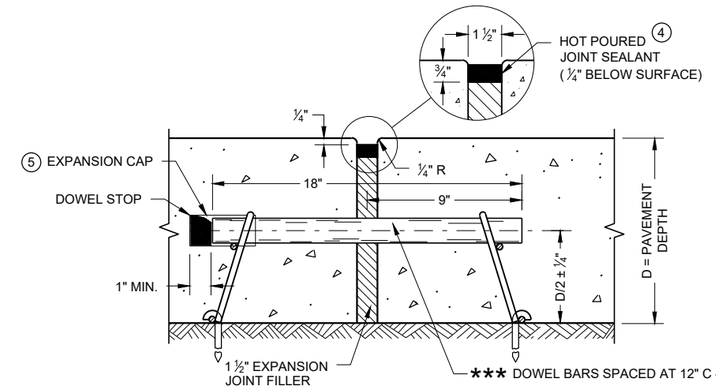


SECTION D - D
CONTRACTION JOINT

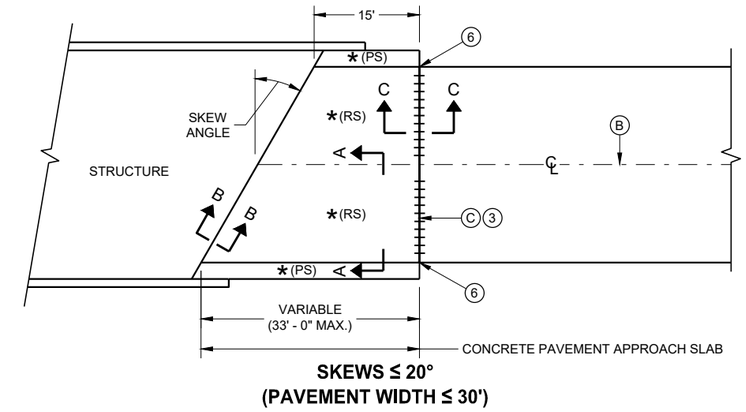


SKEWS > 20°
(PAVEMENT WIDTH ≤ 30')

SECTION B - B
BEND DETAIL
BOTTOM REINFORCEMENT

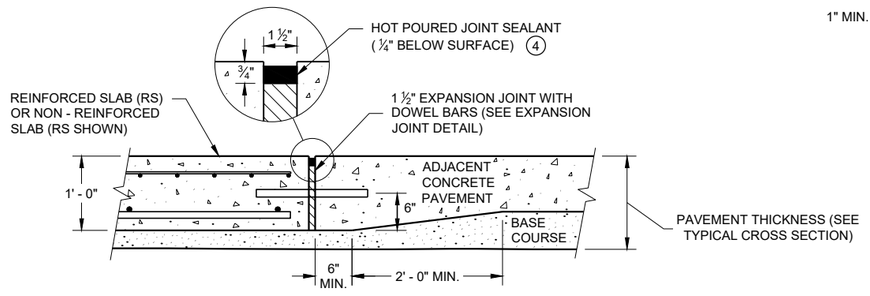


EXPANSION JOINT DETAIL



SKEWS ≤ 20°
(PAVEMENT WIDTH ≤ 30')

APPROACH SLAB AND ADJACENT PAVEMENT



SECTION C - C
TRANSITION DETAIL
APPROACH SLAB TO ADJACENT PAVEMENT

CONCRETE PAVEMENT APPROACH SLAB

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE

/S/ Peter Kemp, P.E.
PAVEMENT SUPERVISO

FHWA

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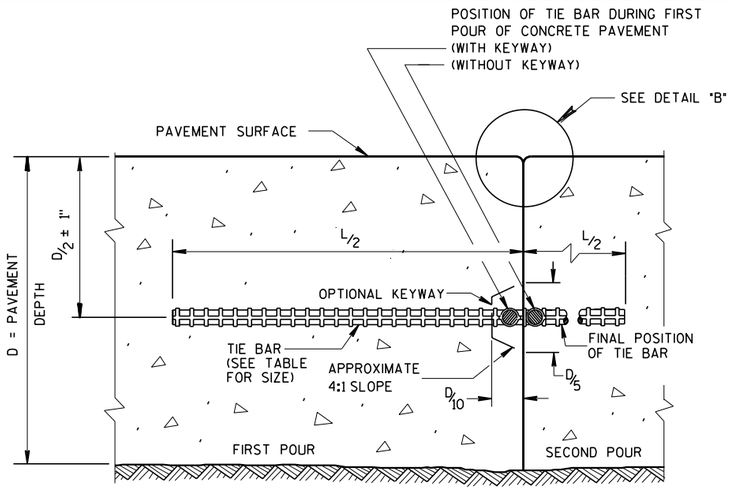
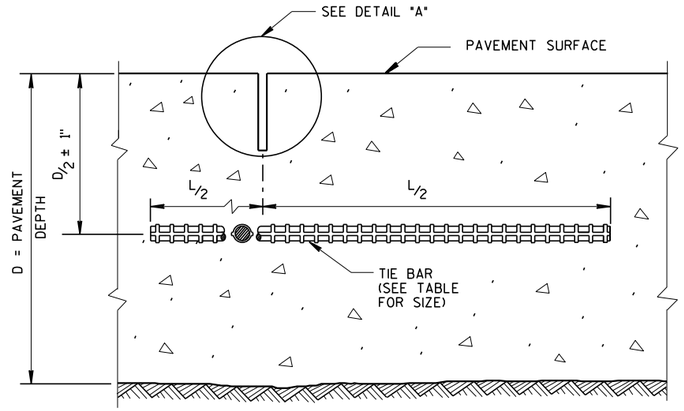
SDD 13B02 - 09a

SDD 13B02 - 09a



CONSTRUCTION JOINT



SAWED JOINT

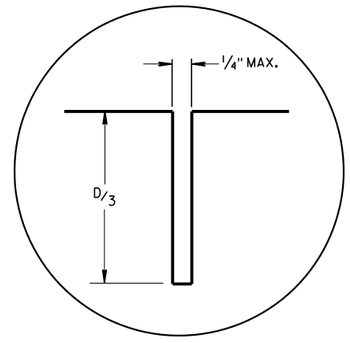
GENERAL NOTES

CREATE A LONGITUDINAL JOINT FOR PAVEMENT WIDTHS GREATER THAN 15 FEET.

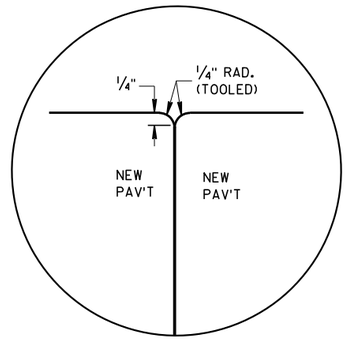
CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

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

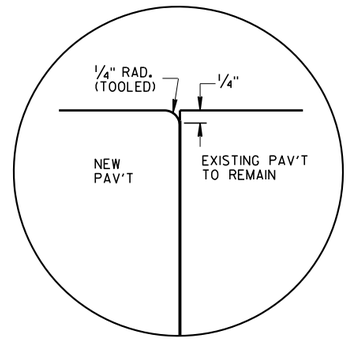
(2) PAVEMENT THAT WAS IN PLACE PRIOR TO THE CONTRACT.



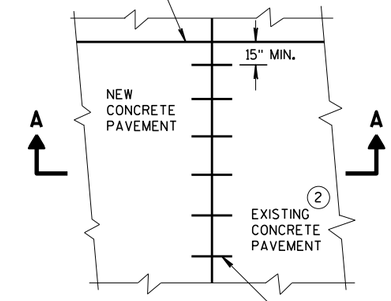
DETAIL "A"



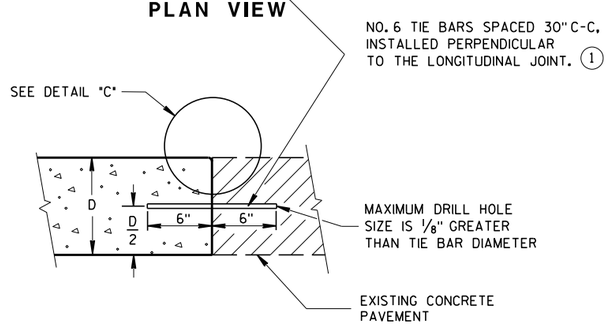
DETAIL "B"



DETAIL "C"



PLAN VIEW



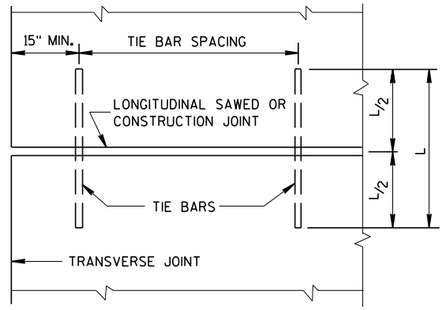
SECTION A-A
LONGITUDINAL CONSTRUCTION JOINT TIE BARS ANCHORED INTO EXISTING PAVEMENT

TIE BAR TABLE

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

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

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



PLAN VIEW
SHOWING LOCATION OF TIE BARS

CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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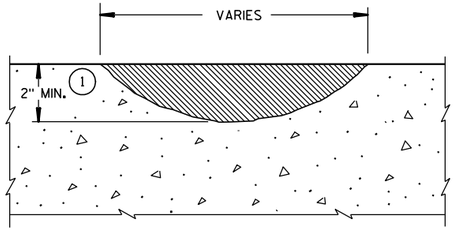
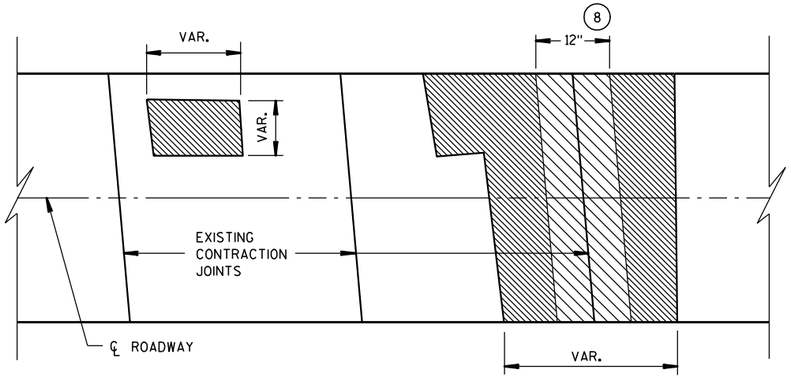
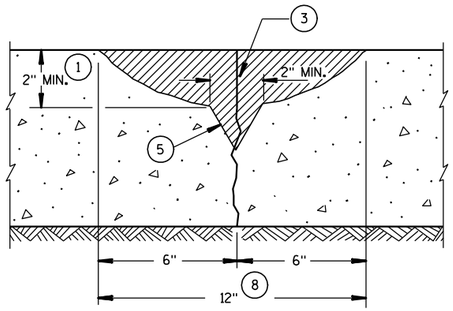


PROFILE VIEW

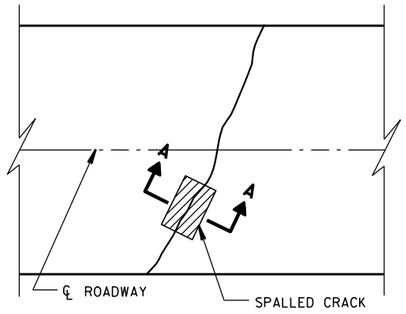


PLAN VIEW

SURFACE REPAIR



SECTION A-A

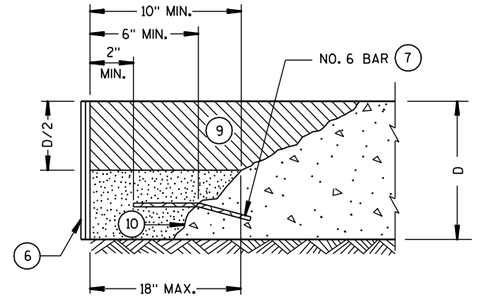


PLAN VIEW

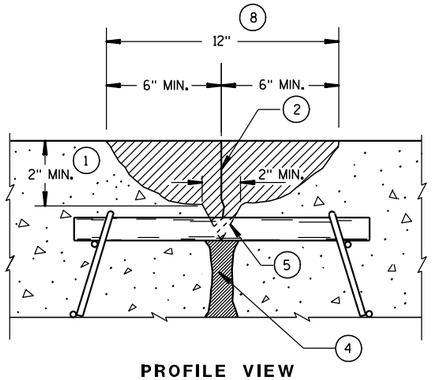
CRACK REPAIR

GENERAL NOTES

1. REMOVE ALL CONCRETE, TO LIMITS SHOWN, TO A MAXIMUM OF ½ THE PAVEMENT DEPTH OR TOP OF DOWELS.
2. IF REPAIR IS DEEPER THAN ANTICIPATED SAWCUT, COMPRESSION RELIEF MATERIAL MUST BE USED. THE THICKNESS OF COMPRESSION RELIEF MATERIAL MUST BE EQUAL TO OR GREATER THAN THE WIDTH OF THE JOINT OR CRACK (1/4"). THIS MATERIAL SHOULD EXTEND FULL DEPTH OF THE REPAIR.
3. COMPRESSION RELIEF MATERIAL MUST BE USED. THE THICKNESS OF COMPRESSION RELIEF MATERIAL MUST BE EQUAL TO OR GREATER THAN THE WIDTH OF THE JOINT OR CRACK (1/4"). THIS MATERIAL SHOULD EXTEND FULL DEPTH OF THE REPAIR.
4. CLEAN, DRY SAND WHEN NECESSARY.
5. REMOVE UNSOUND MATERIAL BY CHIPPING AT 1:1 SLOPE.
6. ¼" MINIMUM PREFORMED JOINT FILLER IF ADJACENT TO CONCRETE. EDGING REQUIRED. FULLY FORMED EDGE IF ADJACENT TO SHOULDER.
7. PAVEMENT TIES AS SHOWN. ALL EMBEDMENTS 6" MINIMUM AND INSTALLED WITH GROUT.
8. OVER 12" (NOMINAL WIDTH) WILL BE PAID AS SURFACE REPAIR.
9. PAID AS JOINT OR CRACK REPAIR.
10. FULL-DEPTH ADJUSTMENT SHALL BE CHIPPED TO BOTTOM OF PCC PAVEMENT AT 1:1 SLOPE.
11. BEYOND 18" WILL BE PAID AS SURFACE REPAIR.

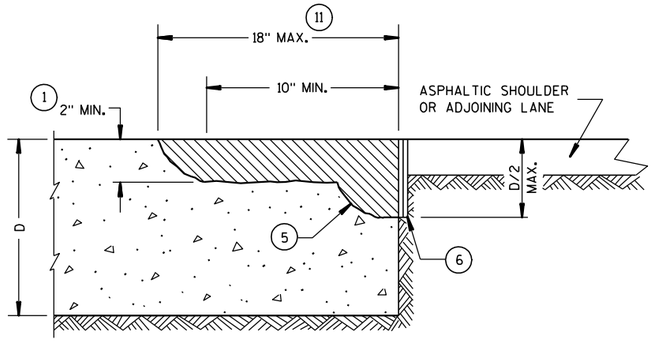


PROFILE VIEW

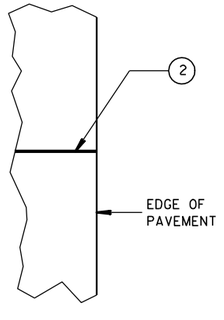


PROFILE VIEW

JOINT REPAIR

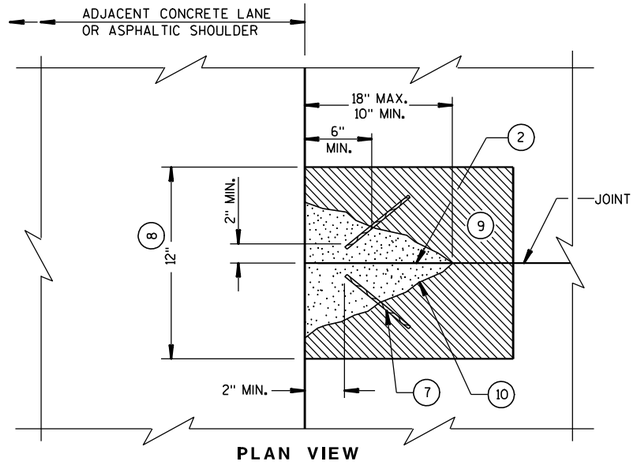


PROFILE VIEW



PLAN VIEW

EDGE REPAIR



PLAN VIEW

FULL DEPTH REPAIR ADJUSTMENT

CONCRETE PAVEMENT PARTIAL DEPTH REPAIR

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
3/21/03 DATE
/S/ Bill Ducker PAVEMENT ENGR
FHWA

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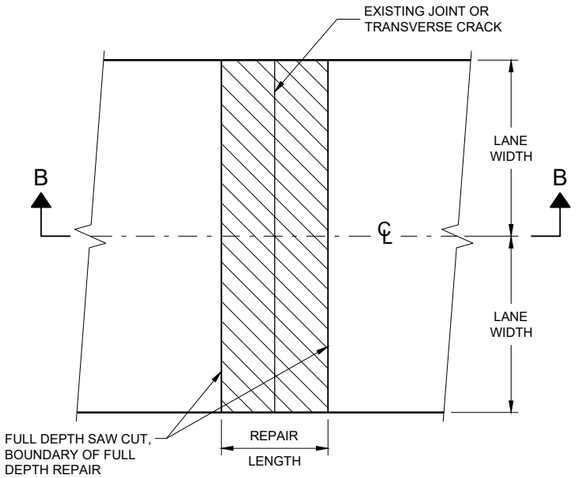
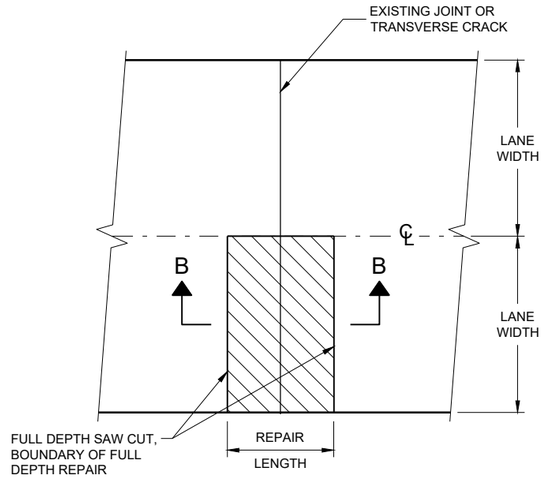


PLAN VIEW
(DOUBLE LANE REPAIR)



PLAN VIEW
(SINGLE LANE REPAIR)

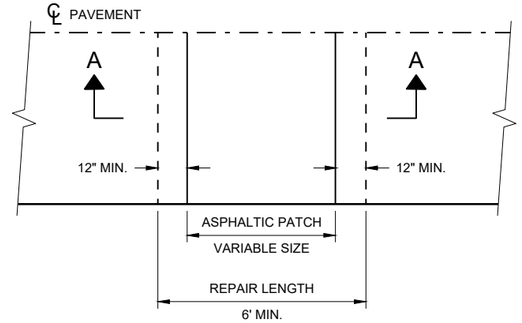
GENERAL NOTES

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

PROVIDE A 6 FOOT MINIMUM DISTANCE FROM BOUNDARIES OF CONCRETE REPAIR AREA TO ADJACENT TRANSVERSE JOINT OR CRACK.

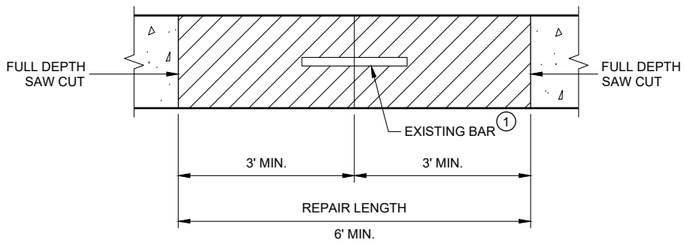
THE LENGTH OF THE REPAIRS MAY VARY FROM THE DIMENSIONS SHOWN IF THE EXISTING CONCRETE PAVEMENT IS NON-DOWELED AND THE PAVEMENT IS TO BE OVERLAID AFTER REPAIRING.

(1) DOWEL BARS MAY NOT BE PRESENT.



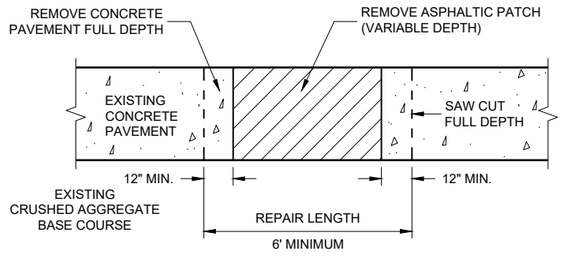
PLAN VIEW

FULL DEPTH CONCRETE PAVEMENT REMOVAL



SECTION B - B

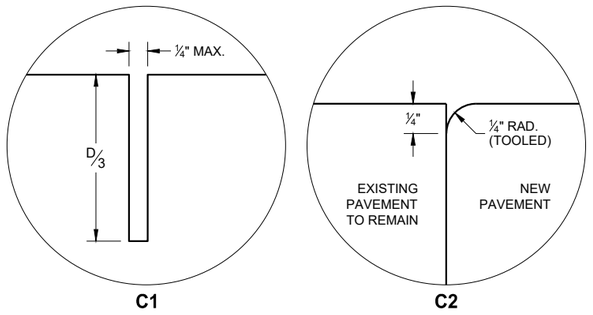
CONCRETE REMOVAL



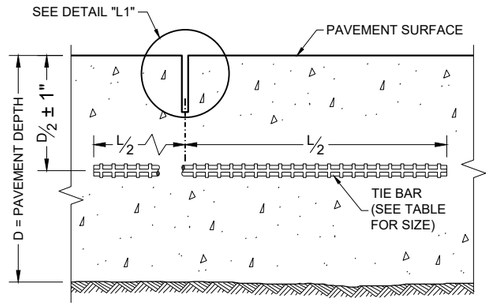
SECTION A - A

HMA PATCH REMOVAL

CONCRETE PAVEMENT REPAIR AND REPLACEMENT

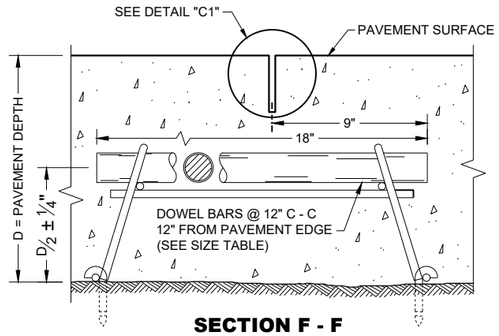


TRANSVERSE JOINTS



SECTION C - C

SAWED LONGITUDINAL JOINT



SECTION F - F

DOWELED CONTRACTION JOINT

GENERAL NOTES

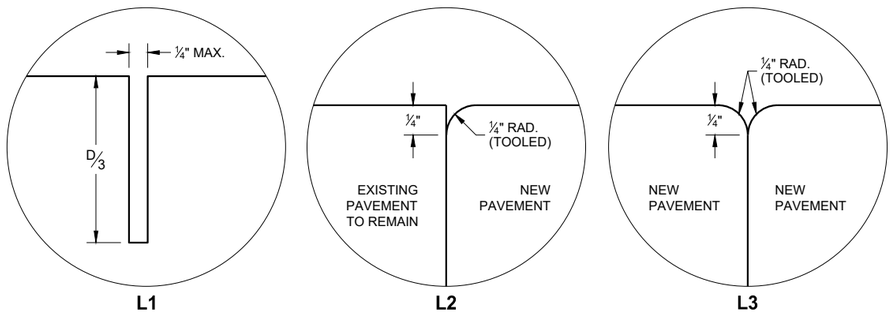
INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

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

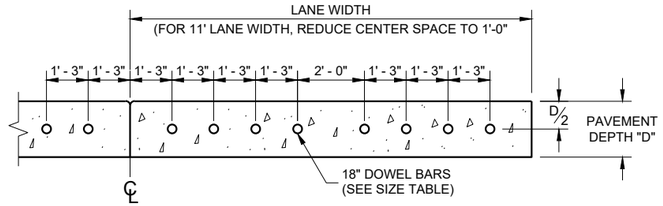
ANCHOR DOWEL BARS AND TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

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

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

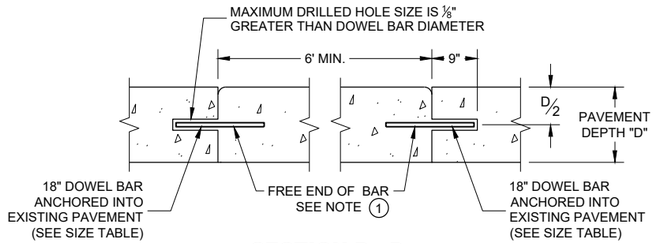


LONGITUDINAL JOINTS



SECTION E - E

DRILLED DOWEL BAR CONSTRUCTION JOINT



SECTION D - D

TIE BAR TABLE

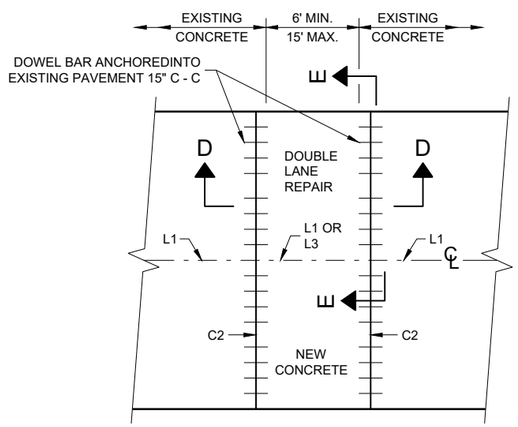
PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 ½"	NO. 4	30"	36"
≥ 10 ½"	NO. 5	36"	36"
	NO. 4 *	30"	24" **

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

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

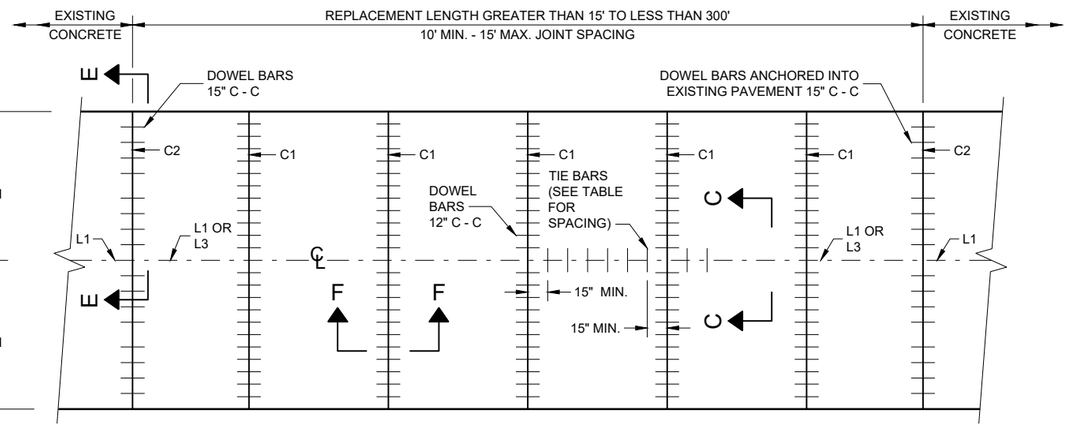
PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	DRILLED DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
6", 6 ½"	NONE	NONE	12'
7", 7 ½"	1"	1"	14'
8" & ABOVE	1 ¼"	1 ¼"	15'



PLAN VIEW

MULTILANE CONCRETE PAVEMENT REPAIR



PLAN VIEW

MULTILANE CONCRETE PAVEMENT REPLACEMENT

SDD 13C09 - 17b

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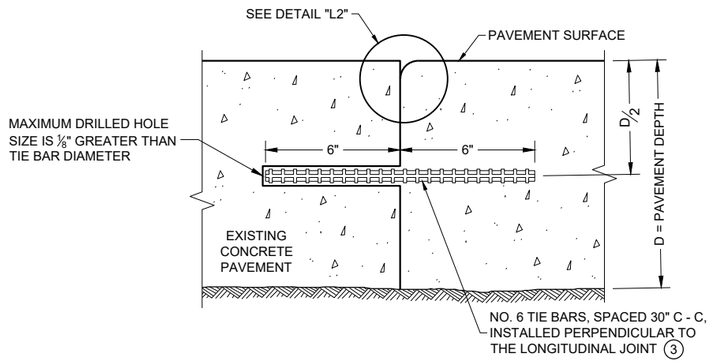
SDD 13C09 - 17b

6

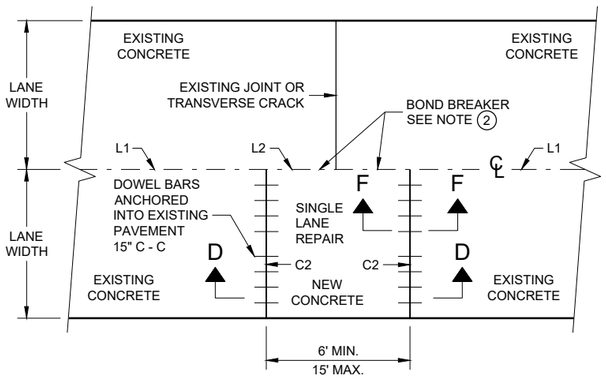


SECTION G - G

TIE BARS ANCHORED INTO EXISTING PAVEMENT

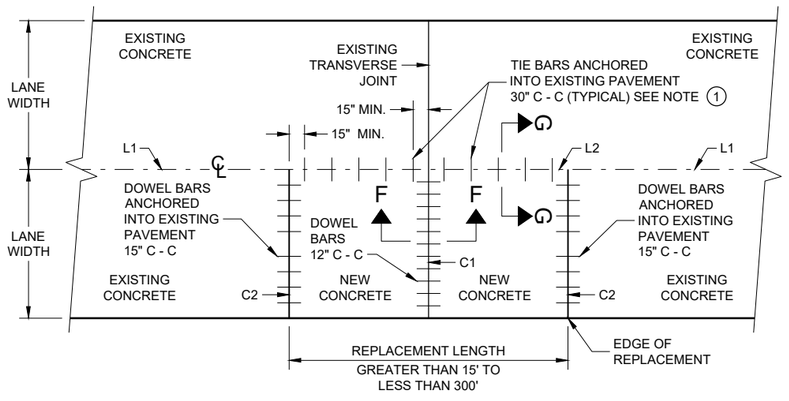
GENERAL NOTES

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



PLAN VIEW

SINGLE LANE CONCRETE PAVEMENT REPAIR



PLAN VIEW

SINGLE LANE CONCRETE PAVEMENT REPLACEMENT

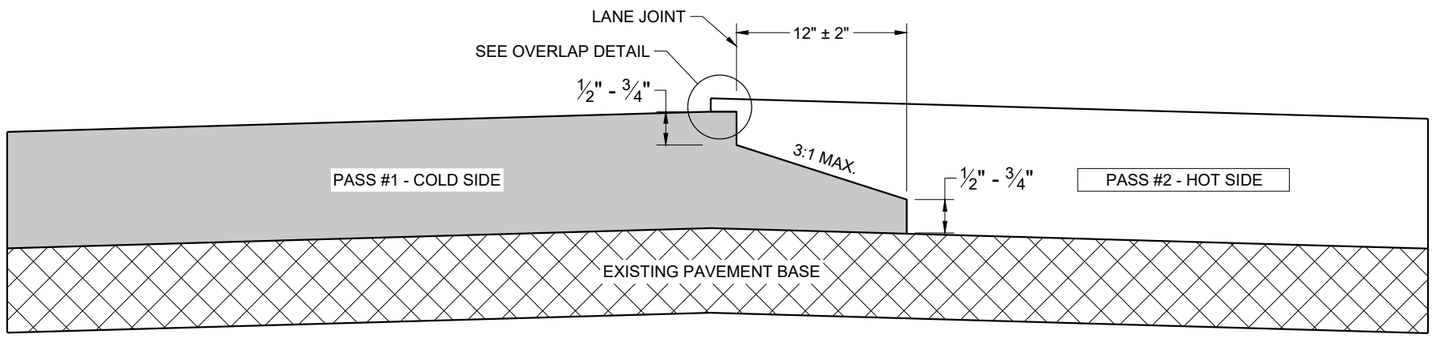
CONCRETE REPAIR AND REPLACEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

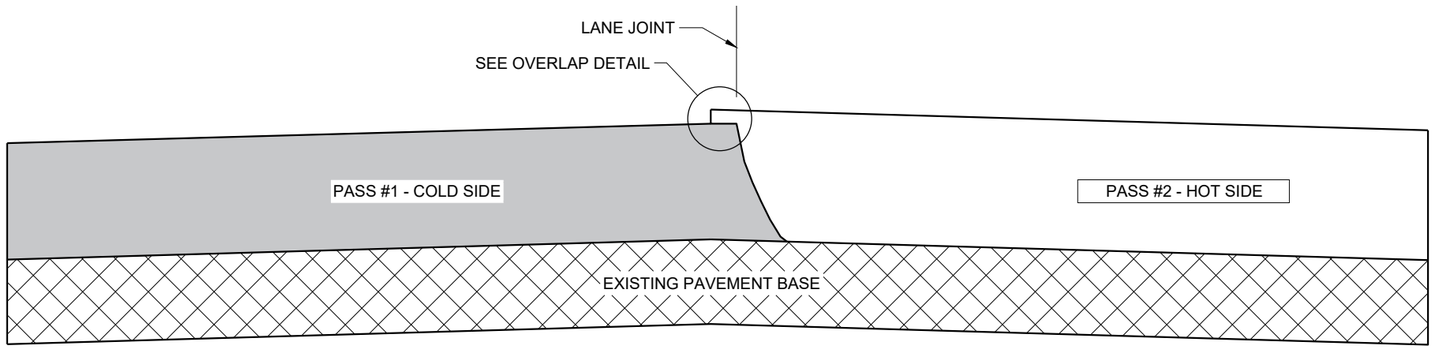
APPROVED
November 2022
DATE
/S/ Peter Kemp P.E.
PAVEMENT SUPERVISOR
FHWA

6

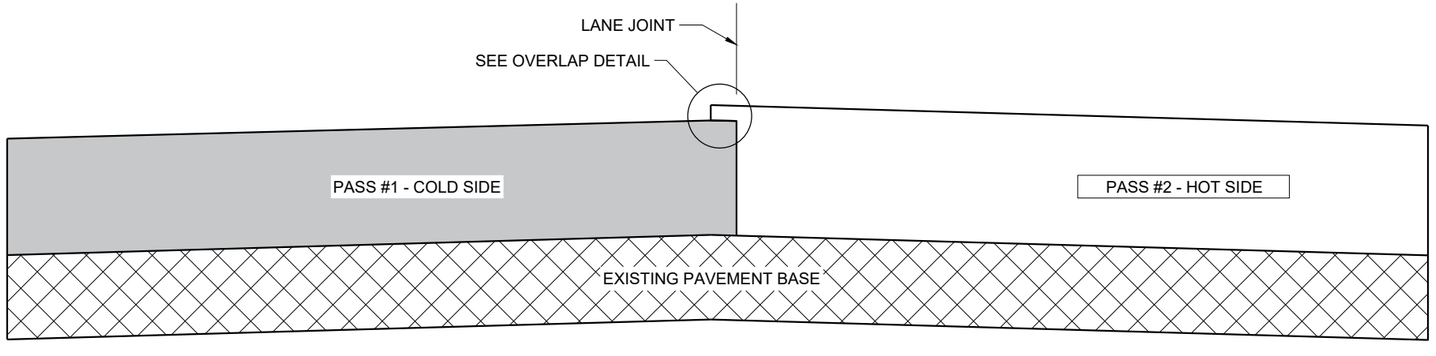
SDD 13C09 - 17c



TYPICAL PAVEMENT CROSS SECTION
NOTCHED WEDGE JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT (MILLED)

GENERAL NOTES

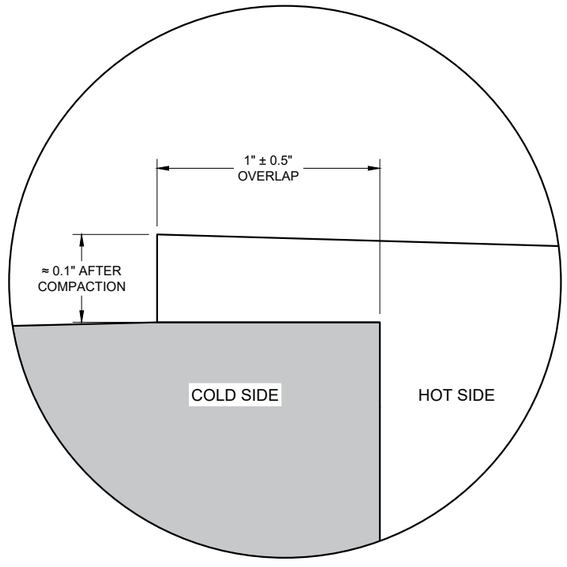
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

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

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

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

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



OVERLAP DETAIL (TYPICAL)

HMA LONGITUDINAL JOINTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2020
DATE
/S/ Steven Hefel
HMA PAVEMENT ENGIN

FHWA

6

SDD 13C19 - 03

SDD 14B15a Steel Plate Beam Guard, Class "A", Installation and Elements

GENERAL NOTES

1. WOOD OR STEEL POSTS (w6X9 OR w6X8.5) AND NOTCHED PLASTIC BLOCKOUTS ARE ACCEPTABLE ALTERNATIVES FOR 6"X8" WOOD POSTS WITH WOOD OR PLASTIC BLOCKOUTS. USE APPROVED NOTCHED PLASTIC BLOCKOUTS WITH STEEL POSTS. APPROVED PLASTIC BLOCKOUT DESIGNS MAY VARY FROM THIS TYPICAL DETAIL WHEN USED IN CONJUNCTION WITH STEEL POSTS. DO NOT MIX STEEL AND WOOD POSTS IN A SINGLE INSTALLATION.

2. USE STRUCTURAL STEEL POSTS CONFORMING TO ASTM A 36. GALVANIZED POSTS ACCORDING TO AASHTO M 111. EITHER SET THE POSTS IN DRILLED HOLES OR DRIVE TO GRADE. REMOVE MUSHROOMING CAUSED BY DRIVING AND REPAIR DAMAGE SPELTER COATING ON GALVANIZED POSTS.

3. INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.

4. USE EITHER WOOD OR APPROVED PLASTIC BLOCKOUTS ON WOOD POSTS.

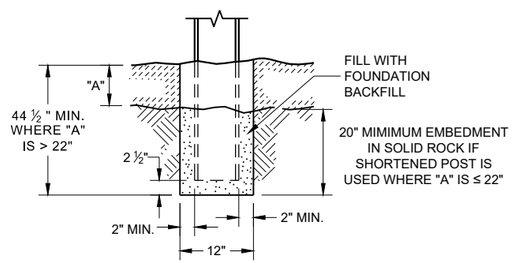
5. IF THE DISTACE FROM BACK OF POST TO SHOULDER HIGHE POINT IS LESS THAN 2 FEET, INSTALL LONGER POST AT HALF POST SPACING, W BEAM (LHW).

6. IF ROCK IS ENCOUNTERED DURING EXCAVATION, THE ENGINEER MAY APPROVE USING A 12 INCHES IN DIAMETER POST HOLE EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT ADEQUATELY.

7. WHEN USING STEEL POSTS AND WOOD BLOCKOUTS, INSTALL FOUR 16d GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

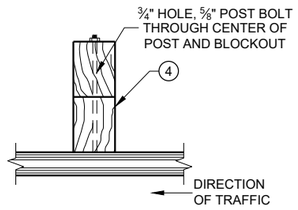
INSTALL BEAM GUARD SECTIONS AND ALL NECESSARY HARDWARE ACCORDING TO THE APPLICABLE PLAN AND CURRENT STANDARD AND SUPPLEMENTAL SPECIFICATIONS.

ALL DIMENSIONS ARE SUBJECT TO MANUFACTURER'S TOLERANCES EXCEPT WHERE ALLOWABLE TOLERANCES ARE SHOWN.



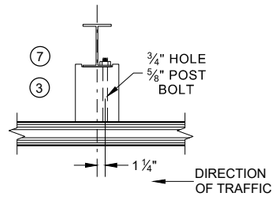
END VIEW

SETTING STEEL OR WOOD POST IN ROCK (6)



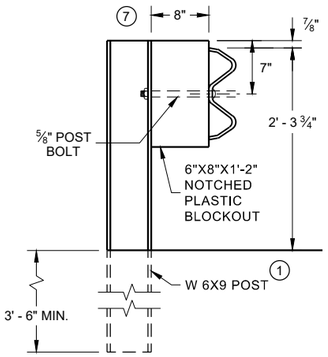
PLAN VIEW

WOOD POST, BLOCKOUT AND BEAM



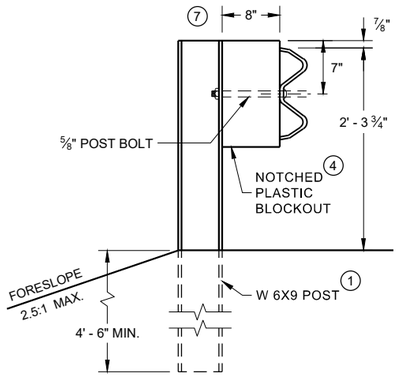
PLAN VIEW

WOOD POST, BLOCKOUT AND BEAM



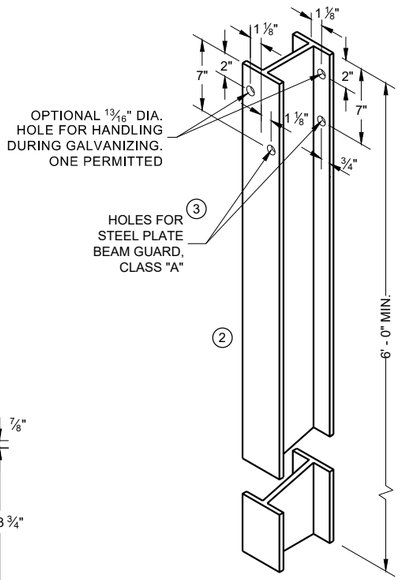
END VIEW

STEEL POST AND NOTCHED PLASTIC BLOCKOUT ALTERNATIVE STANDARD INSTALLATION



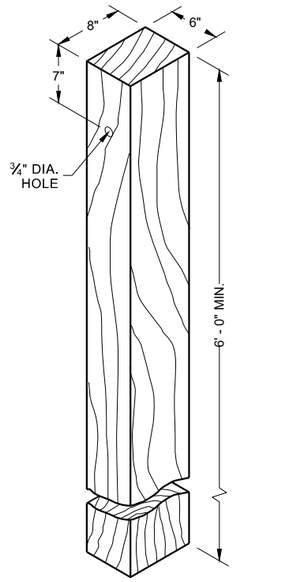
END VIEW

LONGER POST AT HALF POST SPACING W BEAM (LHW)

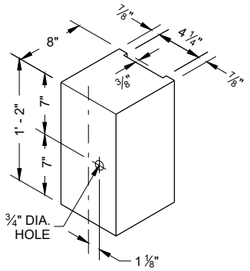


STEEL POST & HOLE PUNCHING DETAIL (W 6 X 9) (1)

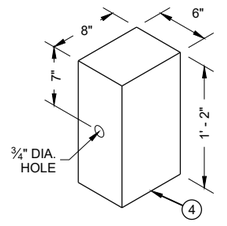
ALL HOLES 13/16" DIAMETER EXCEPT AS NOTED



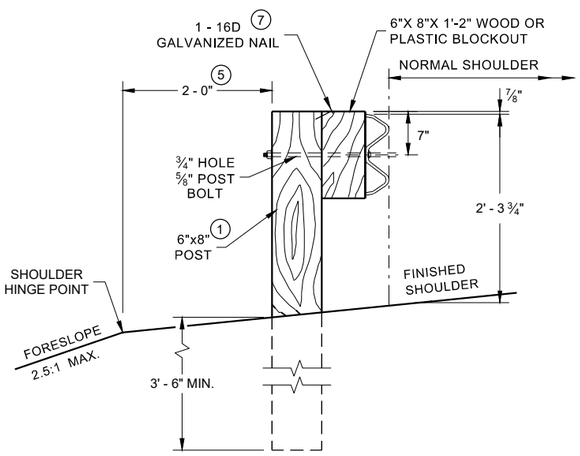
WOOD POST (6" X 8") NOMINAL (1)



TYPICAL NOTCHED PLASTIC BLOCKOUT FOR STEEL POSTS

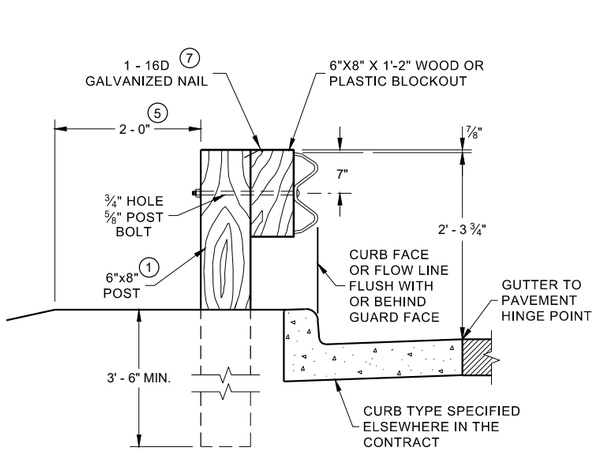


WOOD OR PLASTIC BLOCKOUT FOR WOOD POSTS



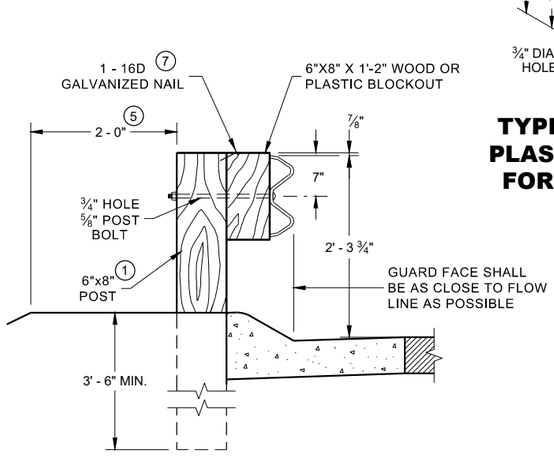
END VIEW

LOCATED ALONG A ROADWAY SHOULDER STANDARD INSTALLATION



END VIEW

LOCATED ALONG A CURBED ROADWAY



END VIEW

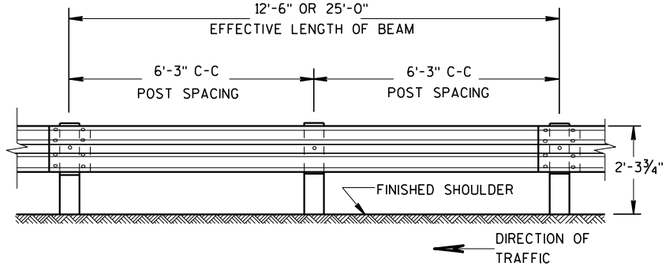
LOCATED ALONG A MOUNTABLE CURBED ROADWAY

STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION AND ELEMENTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

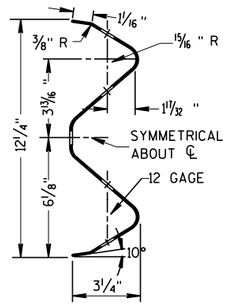
6

SDD 14B15 -11a

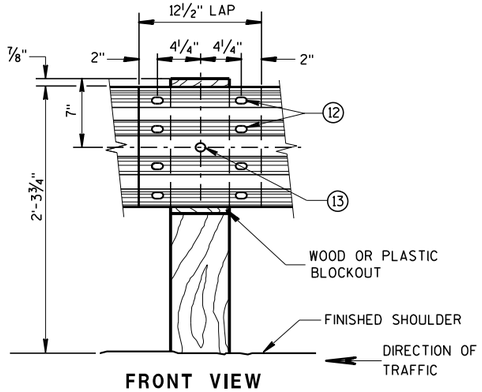


FRONT VIEW

POST SPACING STANDARD INSTALLATION



SECTION THRU W BEAM



FRONT VIEW

BEAM SPLICE AT WOOD POST AND POST MOUNTING DETAIL

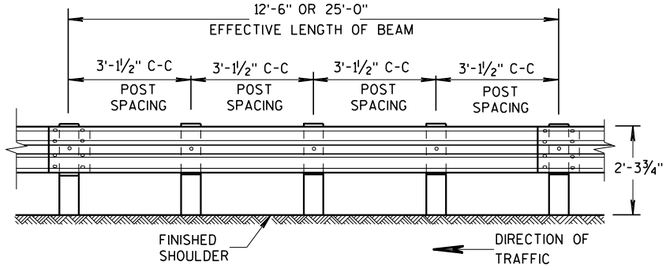
GENERAL NOTES

FURNISH GUARDRAIL DEFLECTORS FROM APPROVED PRODUCTS LIST.

(9) DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINA. START REFLECTORS AT POST #9 AND SPACE EVENLY EVERY 100 FEET (MAX.) TO THE END OF GUARDRAIL RUN, USING A MINIMUM OF 3 REFLECTORS.

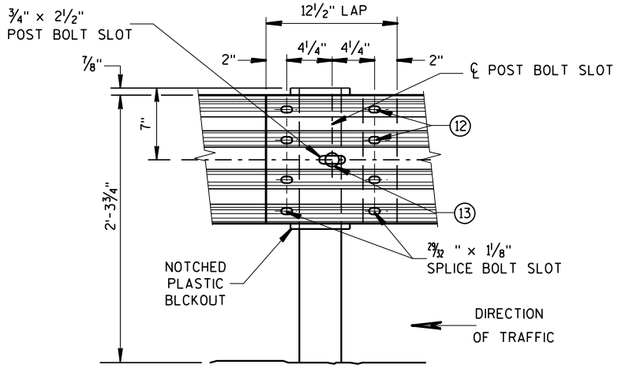
(12) 8 -⅝" ϕ X 2" BUTTON HEAD BOLTS WITH OVAL SHOULDERS & RECESS NUTS.

(13) ⅝" DIA. BUTTON HEAD BOLT AND RECESS NUT WITH ⅝" DIA. F844 FLAT WASHER UNDER NUT.



FRONT VIEW

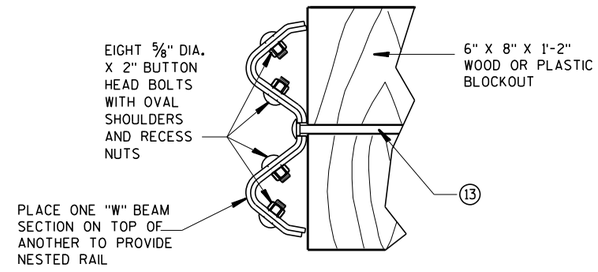
POST SPACING FOR LONGER POST AT HALF POST SPACING W BEAM (LHW)



FRONT VIEW

BEAM SPLICE AT STEEL POST

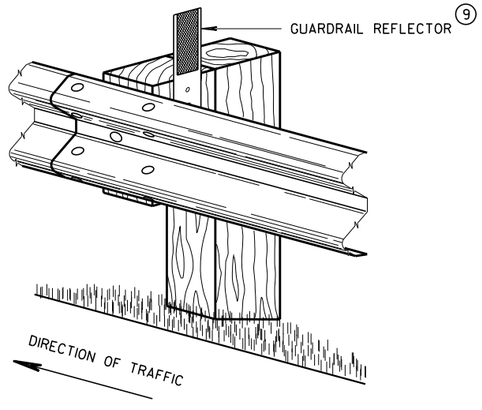
TYPICAL SPLICING DETAILS OF STEEL PLATE BEAM GUARD



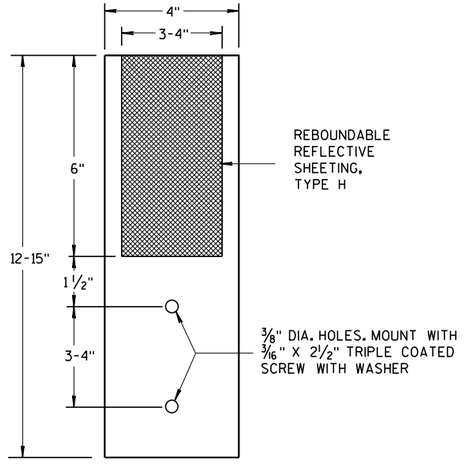
NESTED W BEAM (NW)

USE ALL OTHER STANDARD BEAM GUARD DETAILS FOR CONSTRUCTING NESTED W BEAM (NW)

* USE DOUBLE SIDED WHITE GUADRAIL REFLECTORS ON ROADWAYS WITH BI-DIRECTIONAL TRAFFIC (NO MEDIAN). USE SINGLE SIDED WHITE (RIGHT SIDE) AND SINGLE SIDED YELLOW (LEFT SIDE) ON ROADWAYS WITH MEDIAN SEPARATION.



4" X 12" GUARDRAIL REFLECTOR DETAIL AND TYPICAL INSTALLATION *



4"x 12" GUARDRAIL REFLECTOR

STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS

STATE OF WISCO 87
DEPARTMENT OF TRANSPORTATION

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S.D.D. 14 B 15-11b

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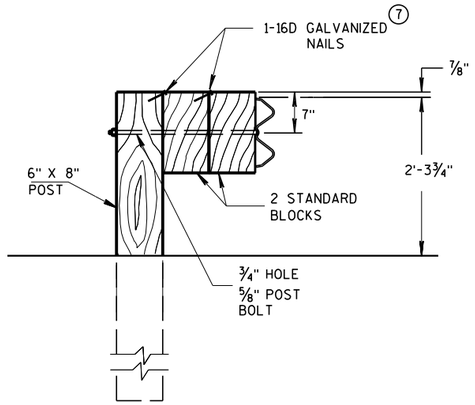
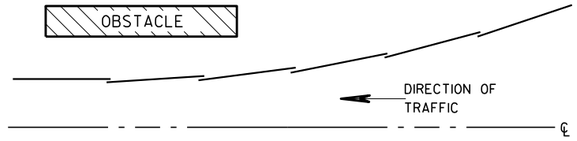
S.D.D. 14 B 15-11b



DETAIL FOR DOUBLE BLOCKS

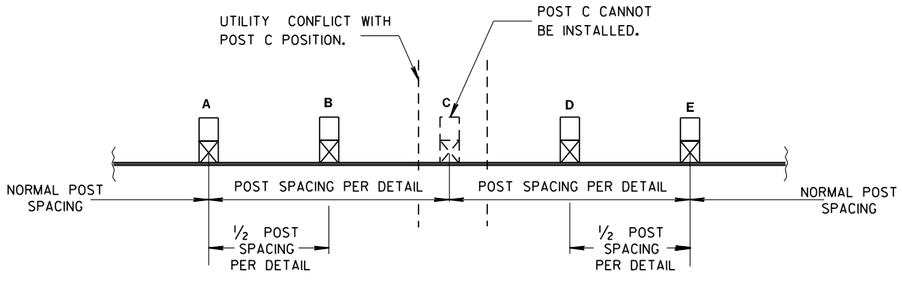
THE NUMBER OF DOUBLE BLOCK POSTS WITHIN A BARRIER RUN IS UNLIMITED



PLAN VIEW
BEAM LAPPING DETAIL

DETAIL FOR TRIPLE BLOCKS

TRIPLE BLOCK DETAIL IS LIMITED TO ONE LOCATION WITHIN A BEAM GUARD RUN.



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION

NOTES: USE DOUBLE OR TRIPLE BLOCKS WHEN UNDERGROUND OBSTACLES PREVENT THE POST FROM BEING INSTALLED.

DO NOT USE EXTRA 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.

STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017 — DATE
/S/ Rodney Taylor
ROADWAY STANDARDS 88 UNIT SUPERVISOR
FHWA

6

S.D.D. 14 B 15-11c

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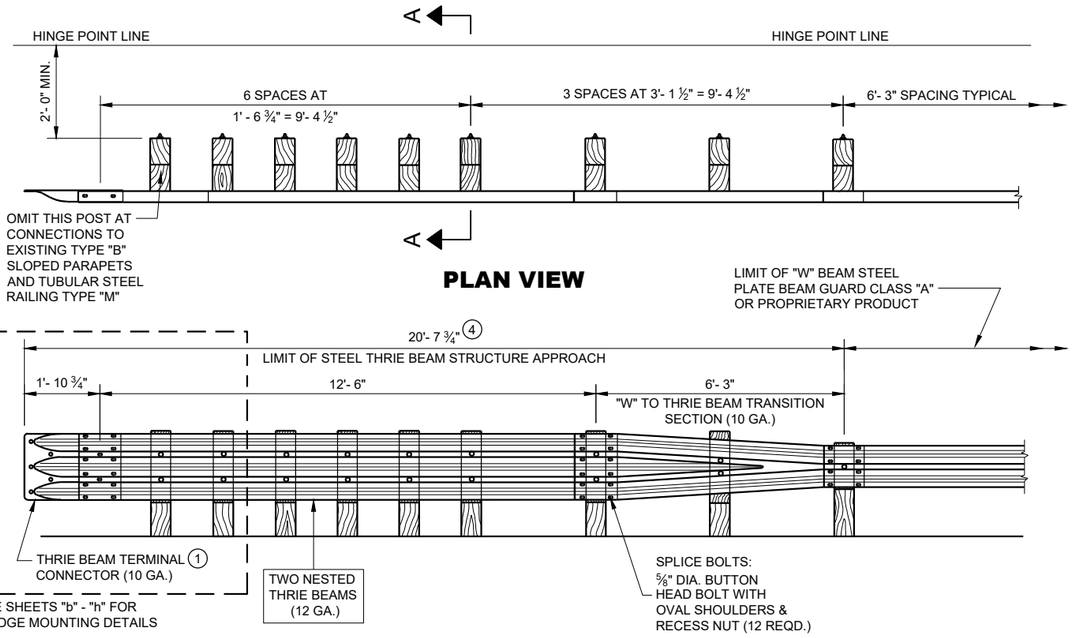
S.D.D. 14 B 15-11c



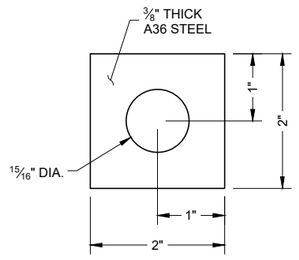


PLATE WASHER DETAIL

GENERAL NOTES

BOLT THE THRIE BEAM TO ALL POSTS AND BLOCKOUTS. DRILL OR PUNCH BOLT HOLES IN THE BEAM IF THE POST SPACING IS LESS THAN 6'-3".

DO NOT USE STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS IN THE STEEL THRIE BEAM STRUCTURAL APPROACH AND THE TRANSITION SECTION OF STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATIONS.

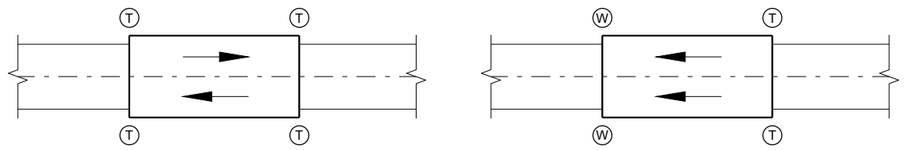
IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2 ½" , AND 12" DIAMETER AROUND POST. SEE 14B15 FOR MORE DETAILS.

(1) BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.

(2) MINIMUM EMBEDMENT SHALL BE 4'- 0".

(3) POST BOLTS ARE ⅝" DIAMETER ASTM A307 BUTTON HEAD BOLT. A POST BOLT REQUIRES A ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX AND A ⅝" DIAMETER F844 FLAT WASHER. LENGTH OF POST BOLT MAY VARY.

(4) ALL WOOD POSTS MUST BE 6" X 8" AND AT LEAST 7'-0" LONG.



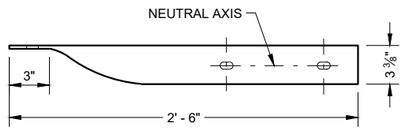
TWO WAY TRAFFIC

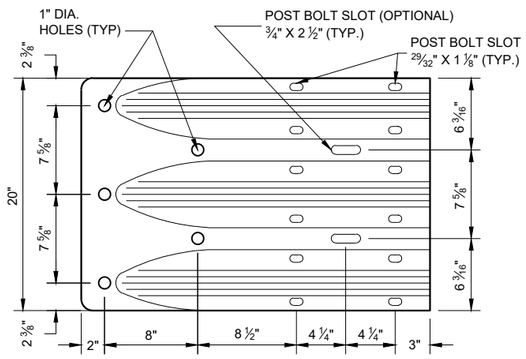
ONE WAY TRAFFIC

(T) THRIE BEAM CONNECTION

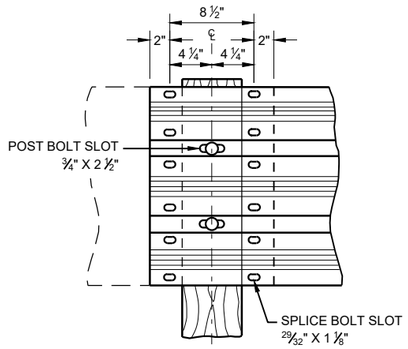
(W) W-BEAM CONNECTION WHEN REQUIRED

TYPICAL LOCATIONS OF THRIE BEAM AND W-BEAM CONNECTIONS TO BRIDGE

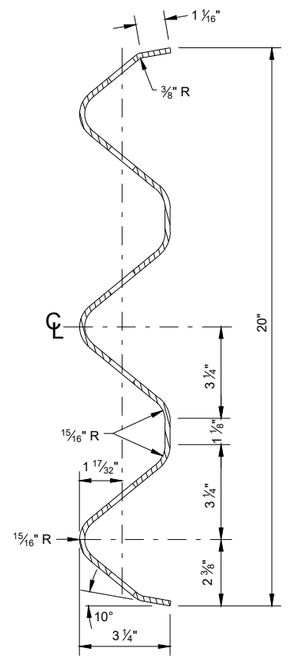




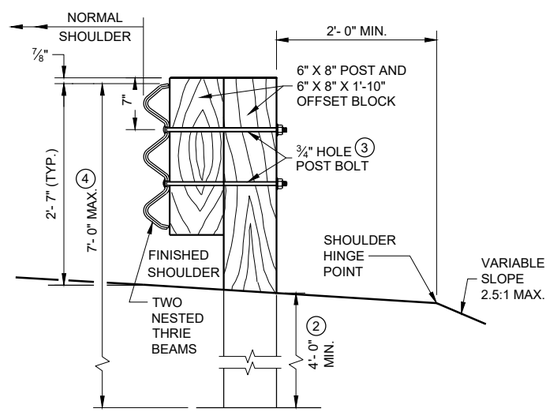
THRIE BEAM TERMINAL CONNECTOR



THRIE BEAM SPLICE



SECTION THRU BEAM RAIL ELEMENT



SECTION A-A

STEEL THRIE BEAM STRUCTURE APPROACH

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

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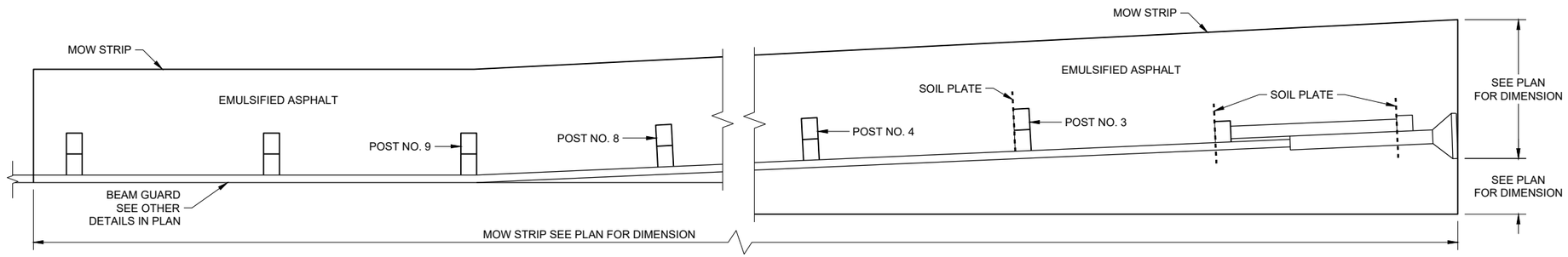
SDD 14B20 - 12a

SDD 14B20 - 12a



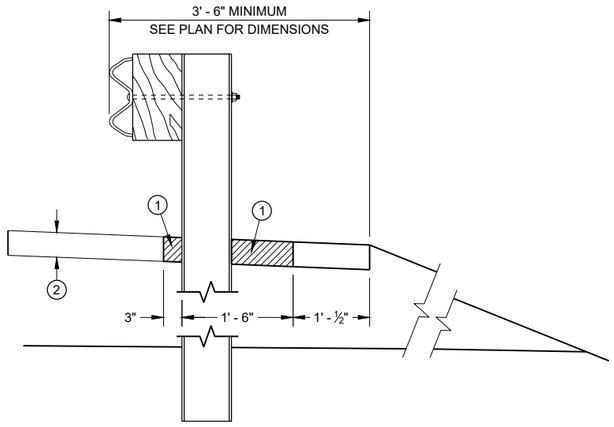
PLAN VIEW

MOW STRIP LAYOUT FOR ENERGY ABSORBING TERMINAL

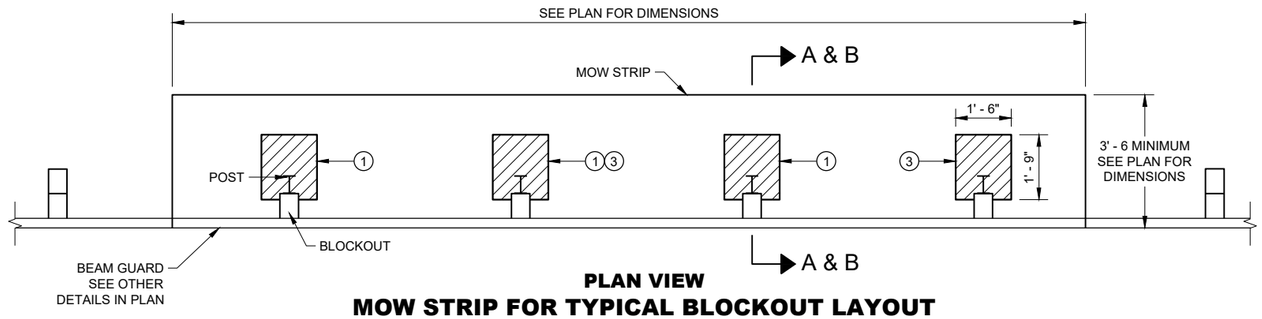
GENERAL NOTES

ONLY USE STEEL POSTS IN CONCRETE AND ASPHALT MOW STRIPS.

1. CONTROLLED LOW-STRENGTH BACKFILL OR EMULSIFIED ASPHALT.
2. DEPTH OF MOW STRIP:
   ASPHALT - 4"
   CONCRETE - 4"
   EMULSIFIED ASPHALT - 1" OR LESS
3. FOR EMULSIFIED ASPHALT, MOW STRIP STRIP LEAVE OUTS NOT REQUIRED. (TYPICAL FOR ALL POSTS)

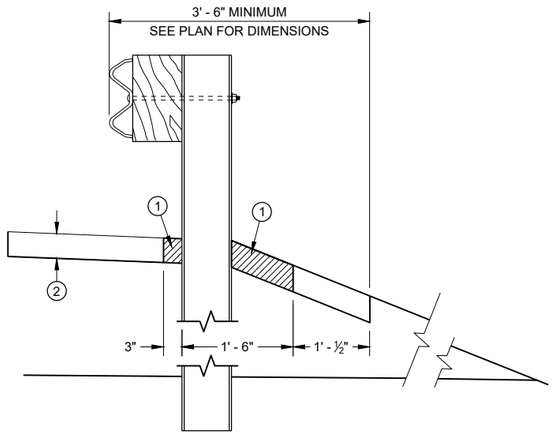


SECTION A - A

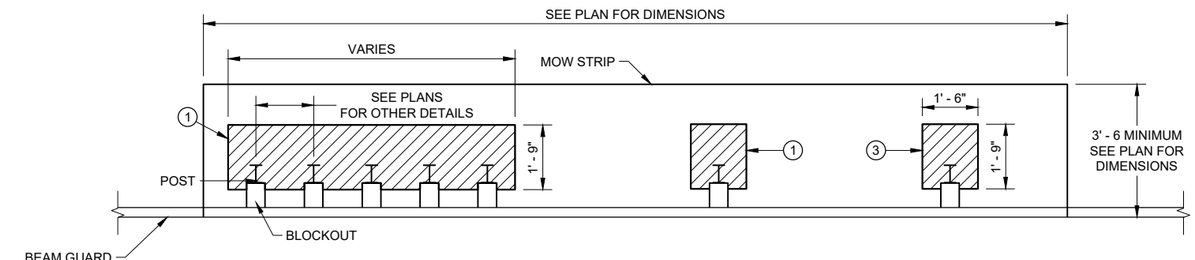


PLAN VIEW

MOW STRIP FOR TYPICAL BLOCKOUT LAYOUT

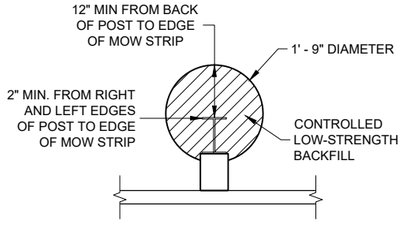


SECTION B - B

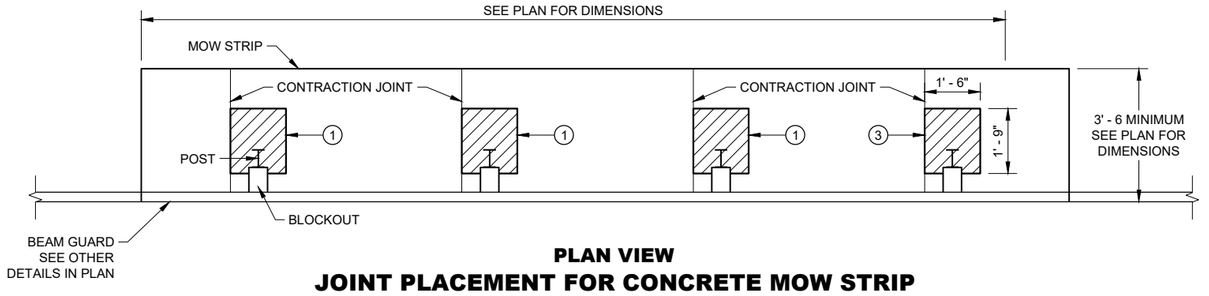


PLAN VIEW

MOW STRIP FOR TIGHT SPACING LAYOUT



ALTERNATIVE HMA MOW STRIP DESIGN



PLAN VIEW

JOINT PLACEMENT FOR CONCRETE MOW STRIP

GUARDRAIL MOW STRIP

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 14B28 - 04a
SDD 14B28 - 04a

(1) WOOD OR STEEL POSTS (w6X9 OR w6X8.5) MAY BE USED. DO NOT INTERMIX WOOD AND STEEL POSTS. INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.

(2) USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL. DIMENSIONS OF APPROVED PLASTIC BLOCKOUTS MAY VARY.

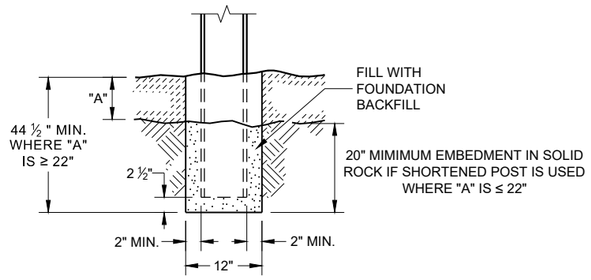
(3) IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL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

(4) WHEN THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING (K).

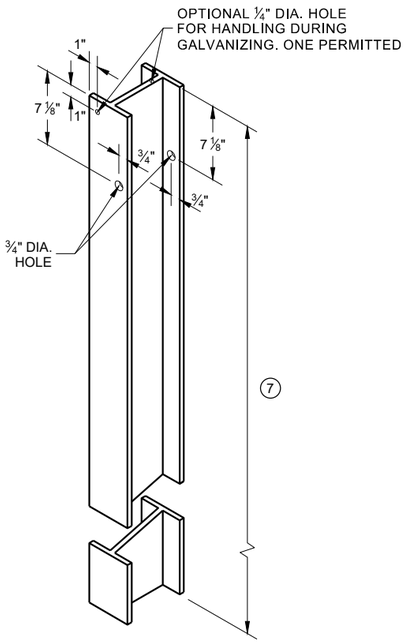
(5) FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ±1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 ¾" TO 32".

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

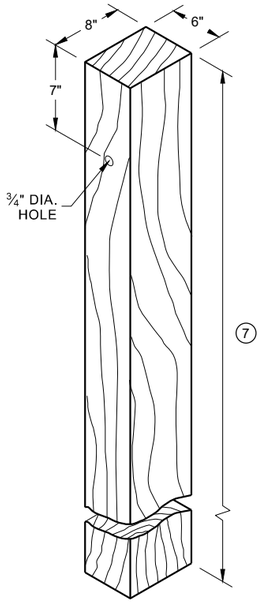
(7) TOTAL POST LENGTH FOR TYPE K IS 7' - 0".
TOTAL POST LENGTH FOR OTHER MGS TYPES IS 6' - 0".



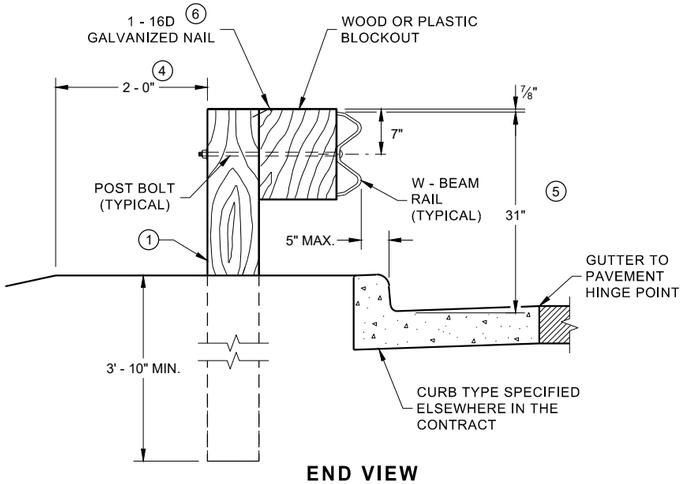
END VIEW
SETTING STEEL OR WOOD POST IN ROCK (3)



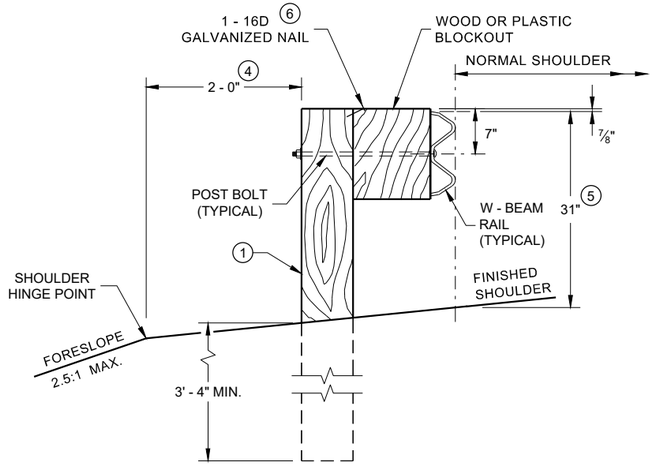
STEEL POST & HOLE PUNCHING DETAIL (W 6 X 9) (1)



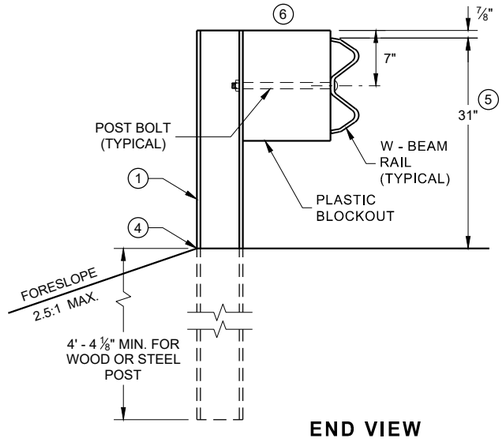
WOOD POST (6" X 8") NOMINAL (1)



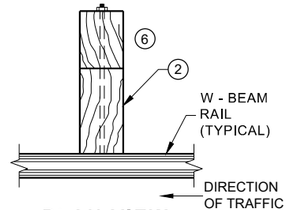
END VIEW
LOCATED ALONG A CURBED ROADWAY



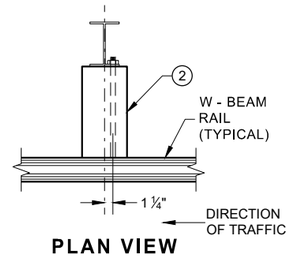
END VIEW
LOCATED ALONG A ROADWAY SHOULDER STANDARD INSTALLATION



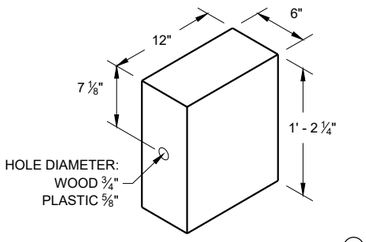
END VIEW
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



PLAN VIEW
WOOD POST, BLOCKOUT & BEAM



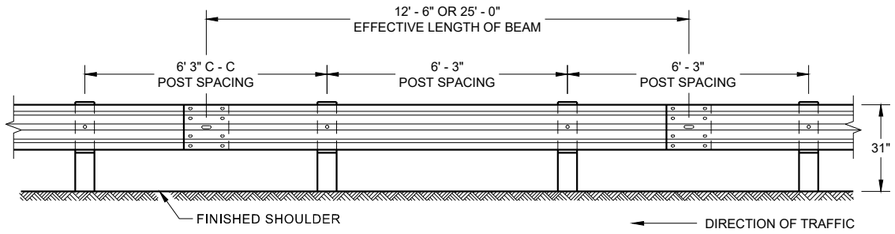
PLAN VIEW
STEEL POST, PLASTIC BLOCKOUT & BEAM



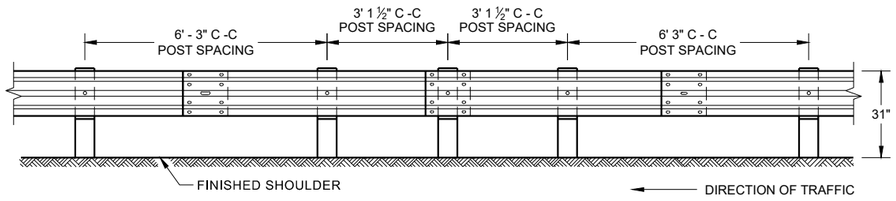
WOOD OR PLASTIC BLOCKOUT (2)

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

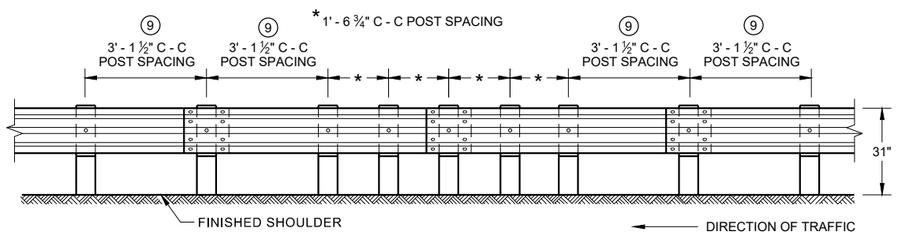
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



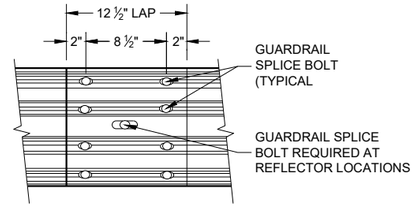
FRONT VIEW
POST SPACING STANDARD INSTALLATION



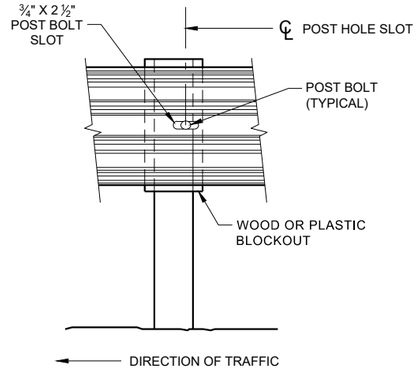
FRONT VIEW
HALF POST SPACING (HS) AND HALF POST SPACING WITH LONGER POSTS (K)



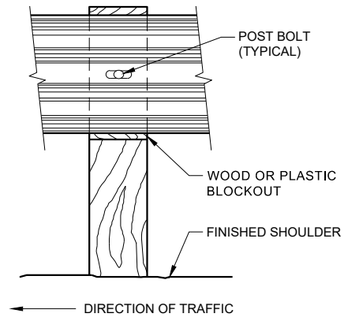
FRONT VIEW
QUARTER POST SPACING (QS)



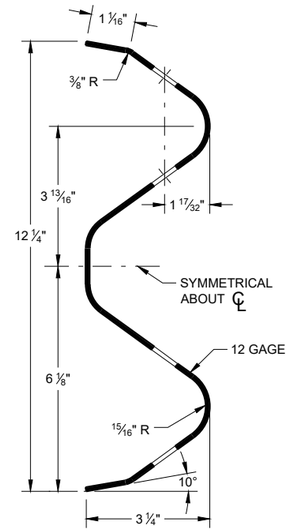
FRONT VIEW
MID-SPAN BEAM SPLICE



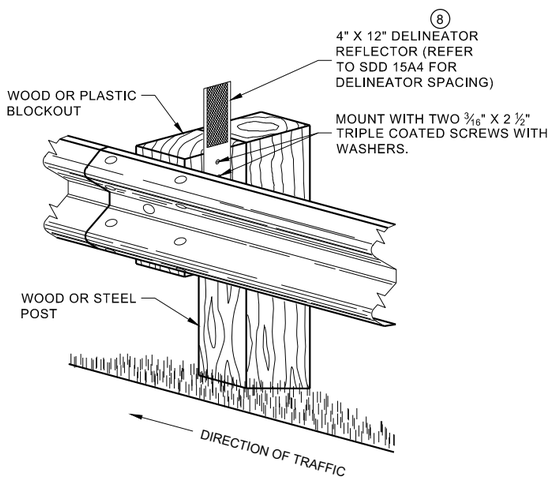
FRONT VIEW AT STEEL POST



FRONT VIEW AT WOOD POST



SECTION THRU W-BEAM RAIL



ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION

GENERAL NOTES

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

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

POST BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND ⅝" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

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

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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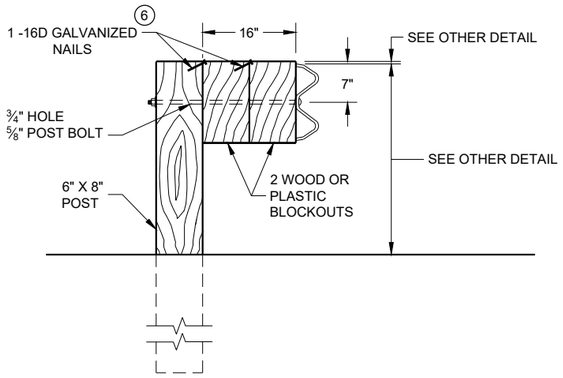
SDD 14B42 - 07b
SDD 14B42 - 07b

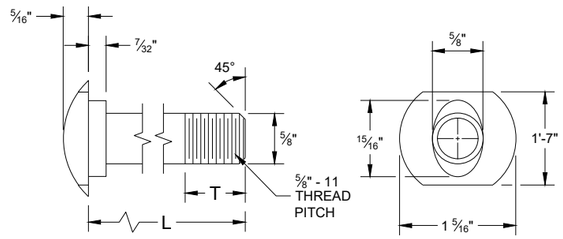


DETAIL FOR 16" BLOCKOUT DEPTH

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

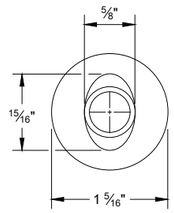
NOTE:

1. ALL FILLETS SHALL HAVE A MINIMUM RADIUS OF 3⁄16".
2. IF THE BOLT EXTENDS MORE THAN ¼" FROM THE NUT THE BOLT SHOULD BE TRIMMED BACK.

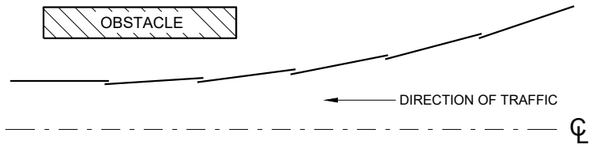


POST BOLT TABLE

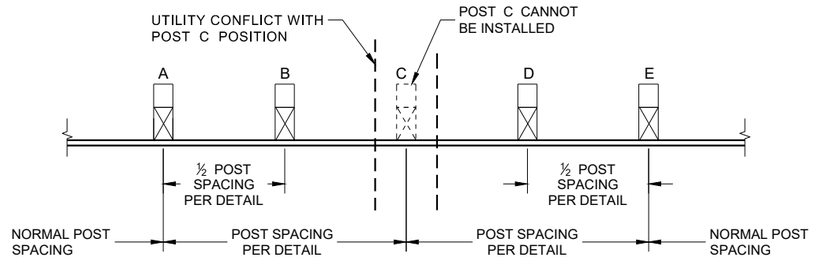
L	T (MIN.)
1 ¼"	1 ⅛"
2"	1 ¾"
10"	4"
14"	4 1⁄16"
18"	4"
21"	4 1⁄16"
25"	4"



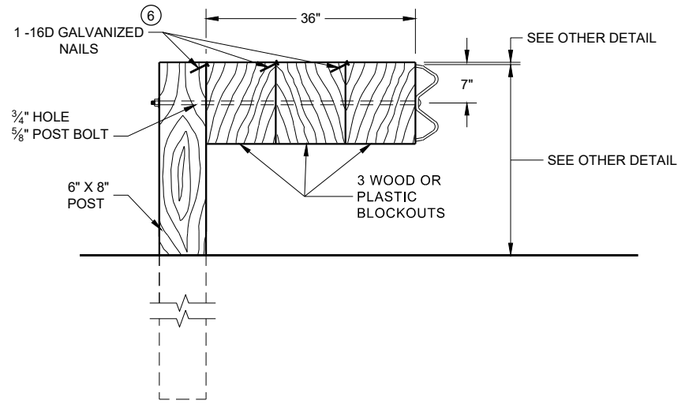
ALTERNATE BOLT HEAD



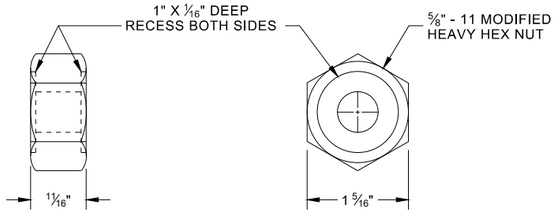
PLAN VIEW
BEAM LAPPING DETAIL



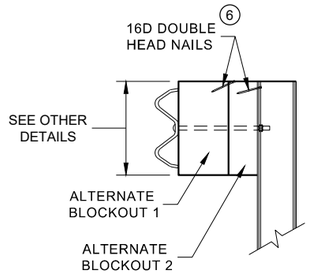
POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



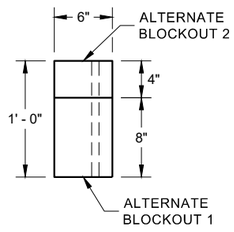
DETAIL FOR 36" BLOCKOUT DEPTH



POST BOLT, SPLICE BOLT AND RECESS NUT



SIDE VIEW



PLAN VIEW

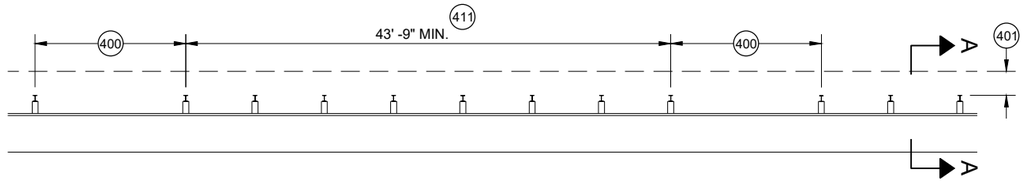
ALTERNATE WOOD BLOCKOUT DETAIL

NOTES: UNDER SPECIAL CIRCUMSTANCES, SUCH AS AVOIDING OBSTACLES THAT ARE NOT RELOCATED, IT IS ACCEPTABLE TO INSTALL ADDITIONAL BLOCKOUTS TO OBTAIN UP TO 36" DEPTH FOR ONE OR TWO POSTS IN A SECTION OF GUARDRAIL.

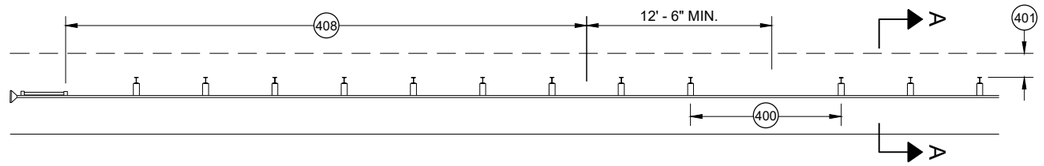
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

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

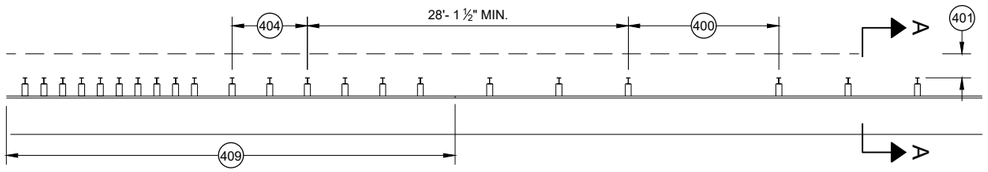
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL



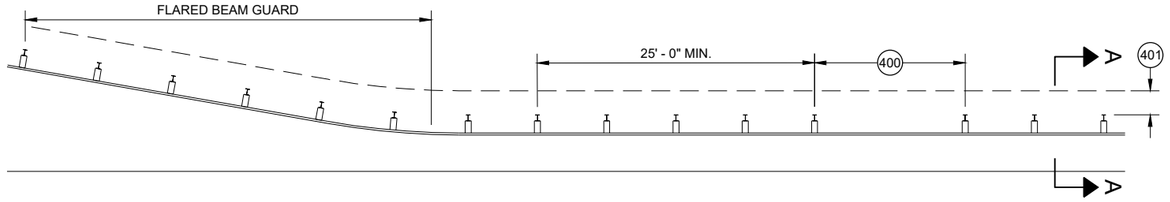
MISSING POST IN MGS GUARDRAIL



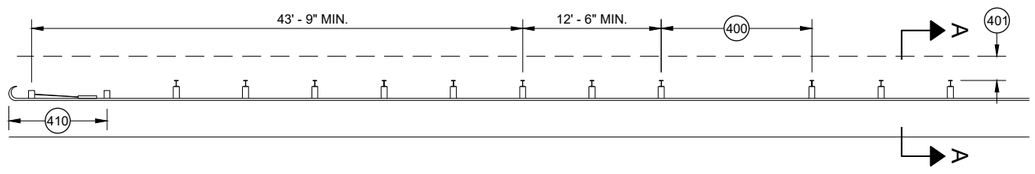
MISSING POST IN MGS GUARDRAIL NEAR EAT



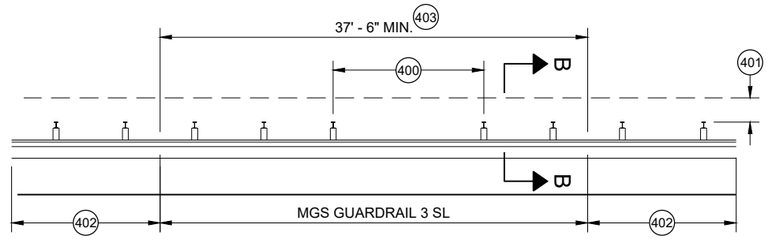
MISSING POST IN MGS GUARDRAIL NEAR AN APPROACH TRANSITION



MISSING POST IN MGS GUARDRAIL NEAR FLARED BEAM GUARD

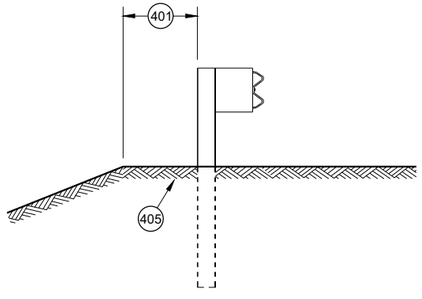


MISSING POST IN MGS GUARDRAIL NEAR A TYPE 2 END TERMINAL

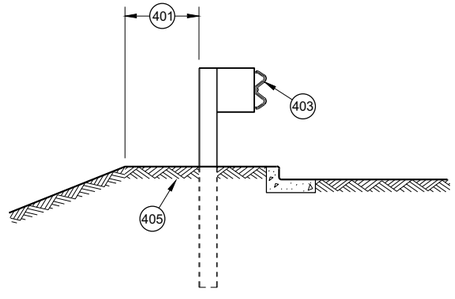


MISSING POST IN SHORT SPAN MGS GUARDRAIL NEAR CURB (SL) 407

(400) MAX SPAN 12' - 6"
(401) 2' MIN.
(402) MGS GUARDRAIL 3
(403) NESTING BEAM GUARD
(404) ASYMMETRIC TRANSITION
(405) SOIL WELL DRAINED AND COMPACTED
(406) SEE OTHER DRAWINGS IN THIS SDD
(407) SEE OTHER DRAWINGS FOR MIN. SPACING BETWEEN SPANS
(408) SEE SDD 14B44
(409) SEE SDD 14B45
(410) SEE SDD 14B47
(411) MINIMUM DISTANCE BETWEEN MISSING POST SPANS.



SECTION A - A 406



SECTION B - B 406

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2021
DATE

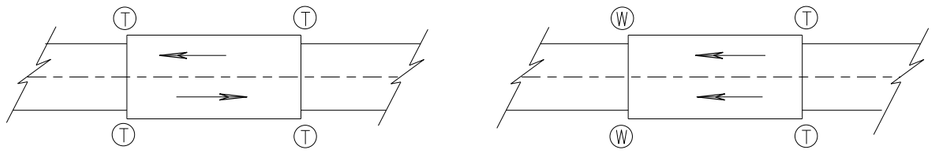
/S/ Rodney Taylor
ROADWAY STANDARDS DEVE
UNIT SUPERVISOR

FHWA

6

SDD 14B42 - 07d

SDD 14B42 - 07d



TWO WAY TRAFFIC

ONE WAY TRAFFIC

(T) THRIE BEAM CONNECTION

(W) W-BEAM CONNECTION WHEN REQUIRED

TYPICAL LOCATIONS OF THRIE BEAM AND W-BEAM CONNECTIONS TO BRIDGE

GENERAL NOTES

IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2½", AND 12" DIAMETER AROUND POST. SEE 14B42 FOR MORE DETAILS.

TRANSITION USES STEEL POSTS ONLY.

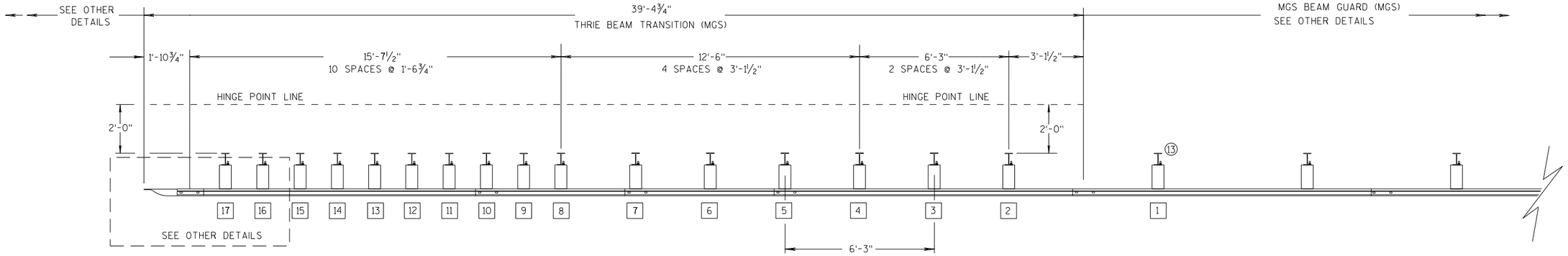
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

POST 2 THROUGH 17 USES STEEL POST ONLY

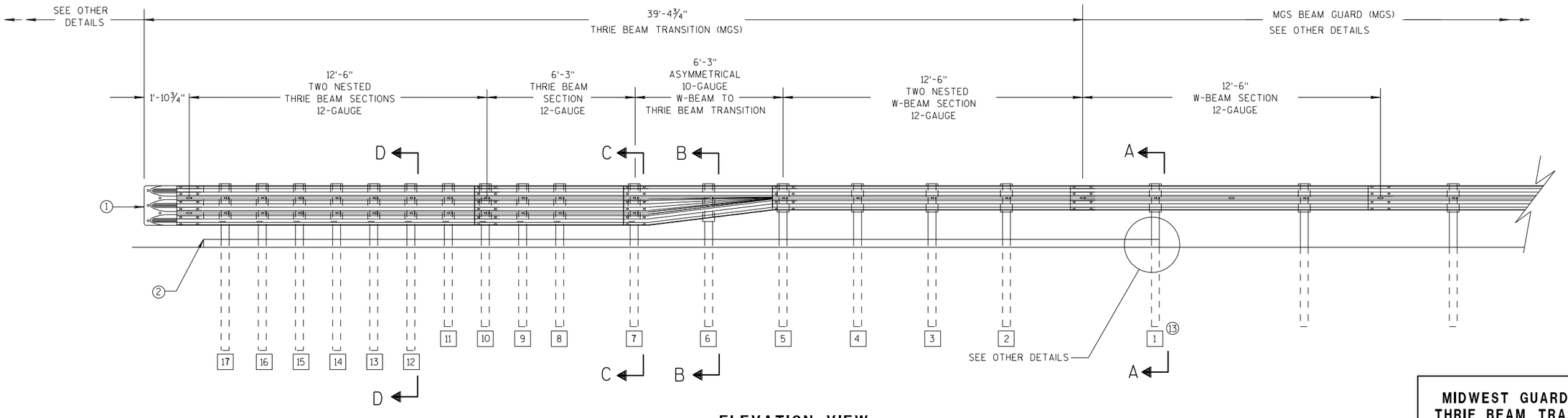
(1) BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.

(2) OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

(13) STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD14B42



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOF 95

6

S.D.D. 14 B 45-5a

6

S.D.D. 14 B 45-5a

GENERAL NOTES

(2) OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

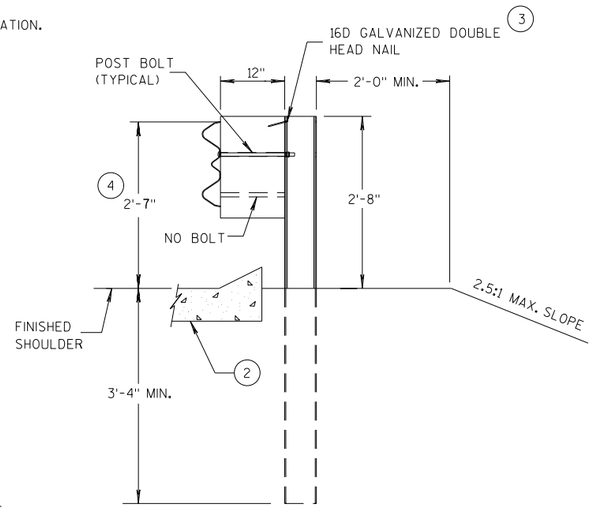
(3) WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 10D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

(4) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".

(13) STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD 14B42

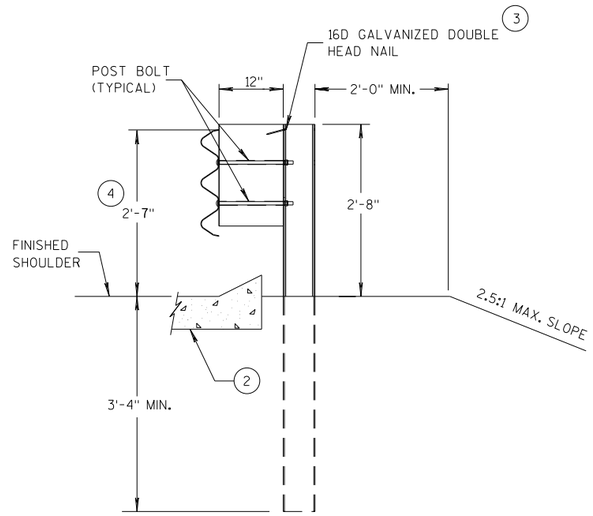
SECTION A-A (13)

POSTS 1-5



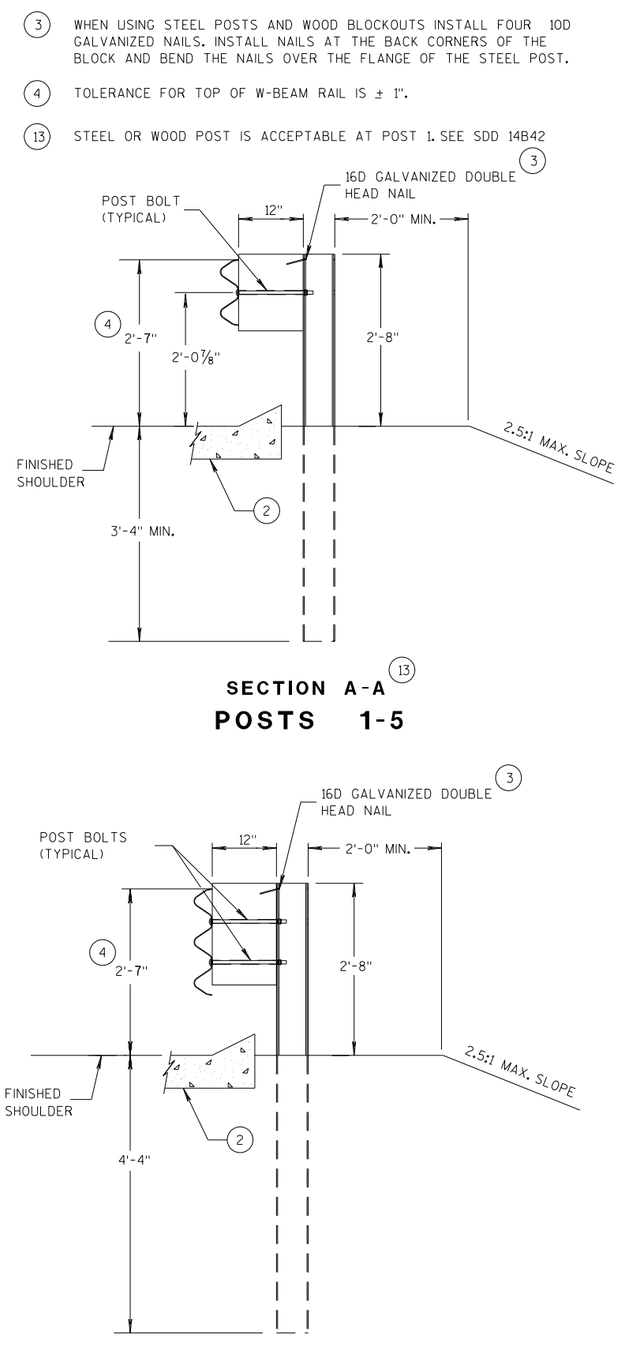
SECTION B-B

POST 6



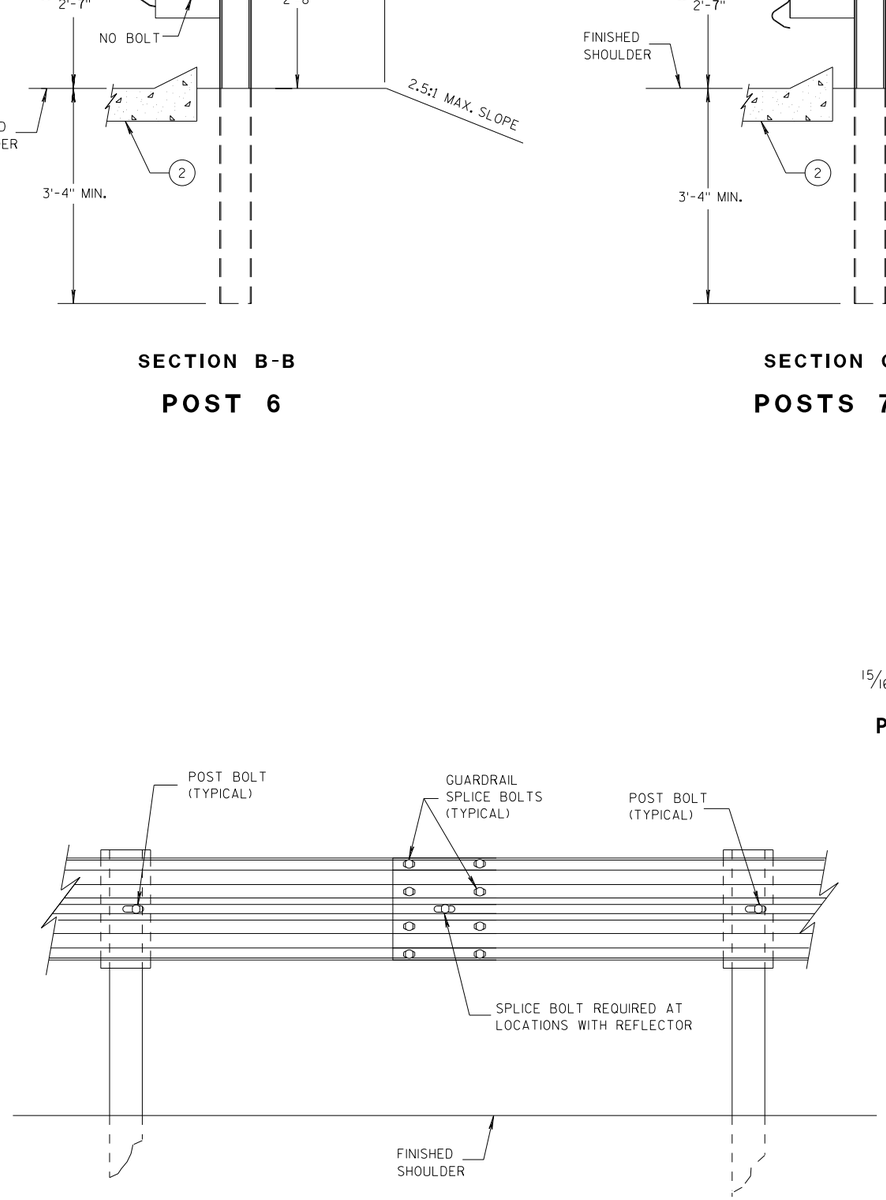
SECTION C-C

POSTS 7-11



SECTION D-D

POSTS 12-17



SPLICE DETAIL

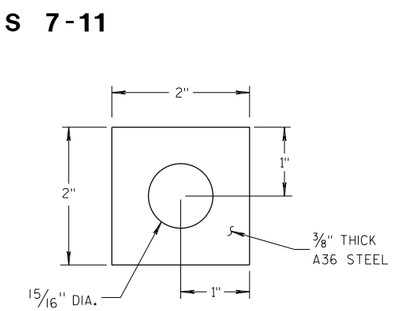
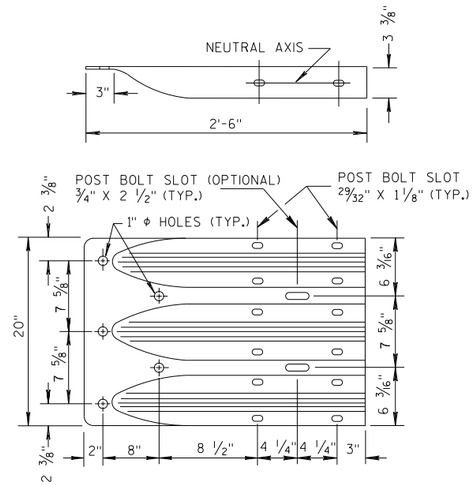
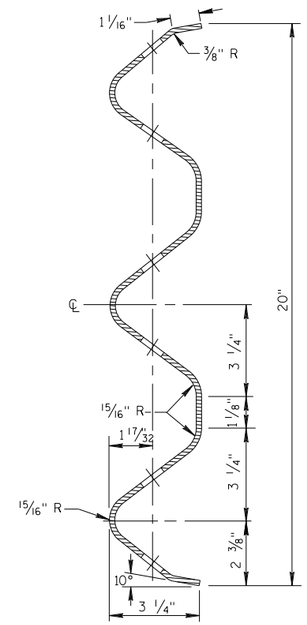


PLATE WASHER DETAIL



THRIE BEAM TERMINAL CONNECTOR



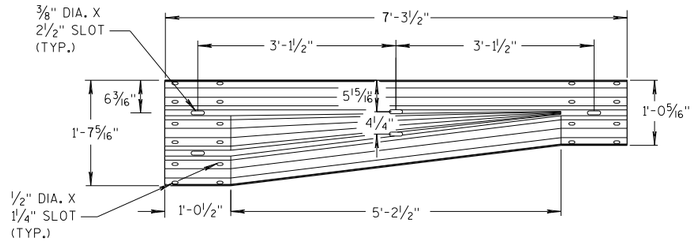
SECTION THRU THRIE BEAM RAIL ELEMENT

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

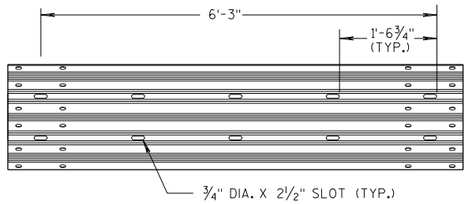
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORT

6

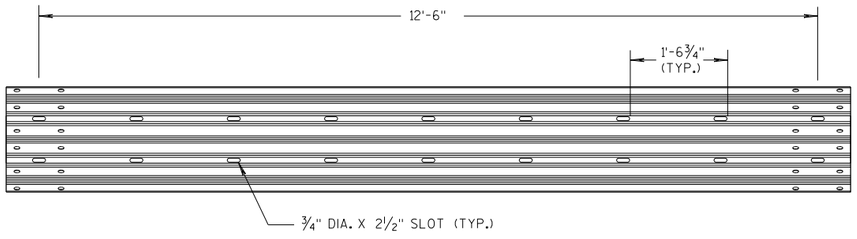
S.D.D. 14 B 45-5b



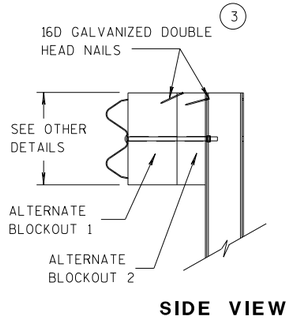
W-BEAM TO THRIE BEAM TRANSITION SECTION



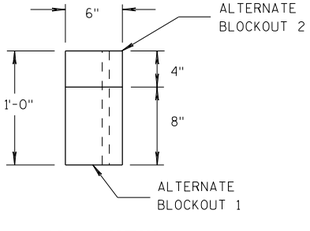
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

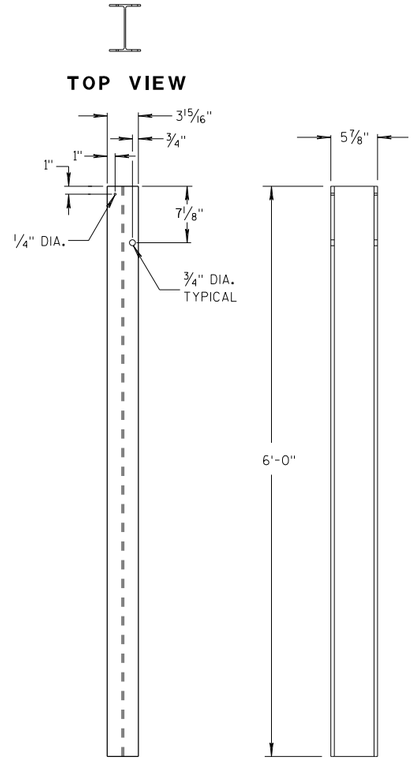


SIDE VIEW



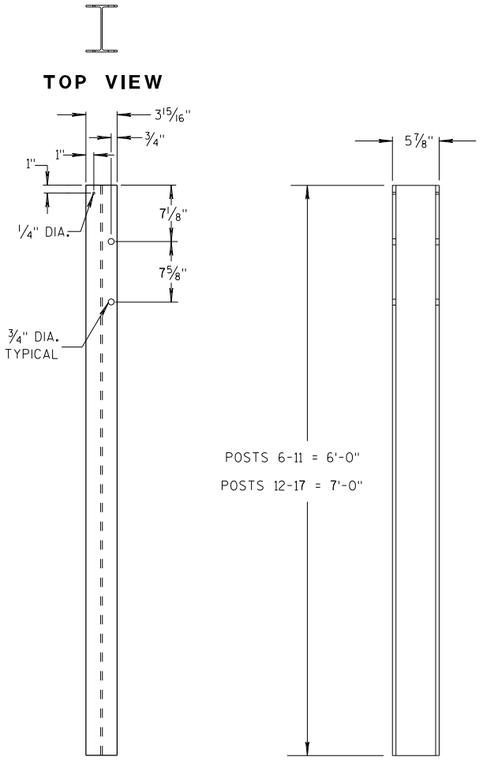
TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL



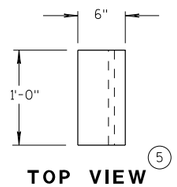
FRONT VIEW SIDE VIEW

STEEL POSTS 1-5 (13)

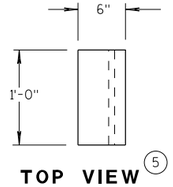


FRONT VIEW SIDE VIEW

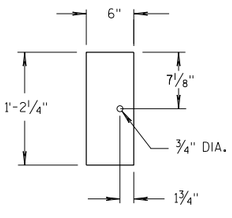
STEEL POSTS 6-17



TOP VIEW (5)

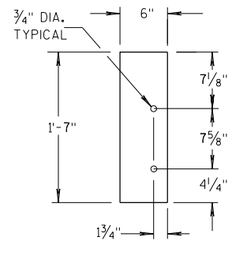


TOP VIEW (5)



FRONT VIEW

BLOCKOUT POSTS 1-5



FRONT VIEW

BLOCKOUT POSTS 6-17

GENERAL NOTES

STEEL POSTS ARE W6X9 OR W6X8.5.

BOLT HOLES FOR POST ARE ON FRONT AND OF SIDE OF POST.

(3) WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

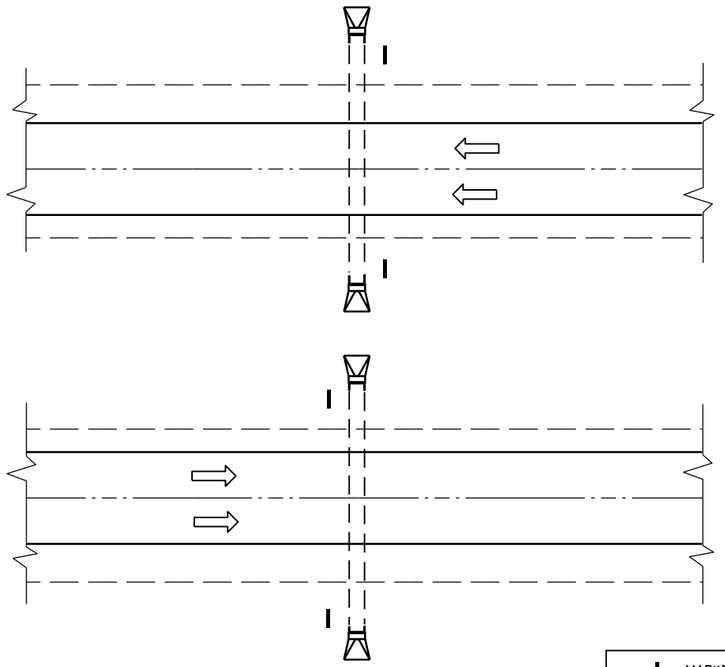
(5) WOOD BLOCKS MAY BE CONSTRUCTED OUT OF 2 WOOD BLOCKS. SEE ALTERNATE WOOD BLOCK DETAIL.

(13) STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD 14B42.

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

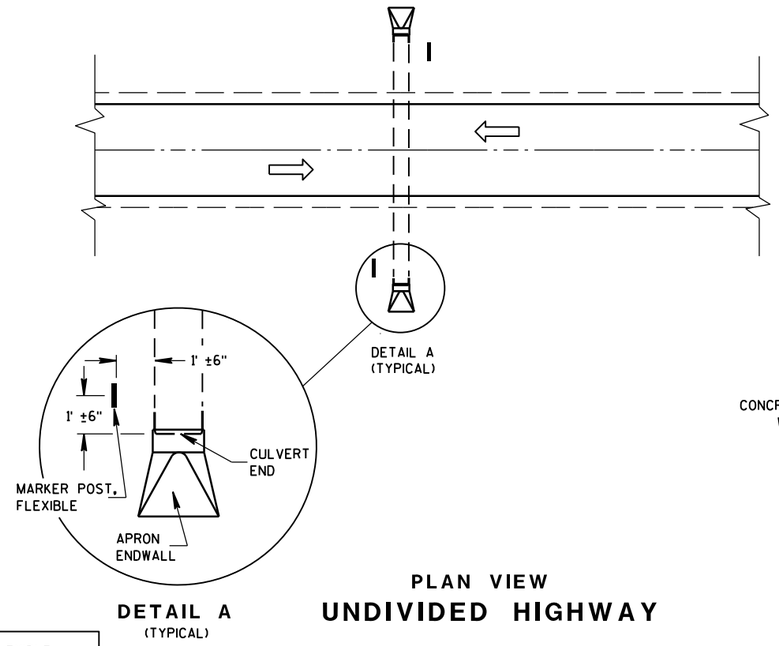
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOF 97

6
S.D.D. 14 B 45-5c



PLAN VIEW

DIVIDED HIGHWAY



DETAIL A
(TYPICAL)

PLAN VIEW

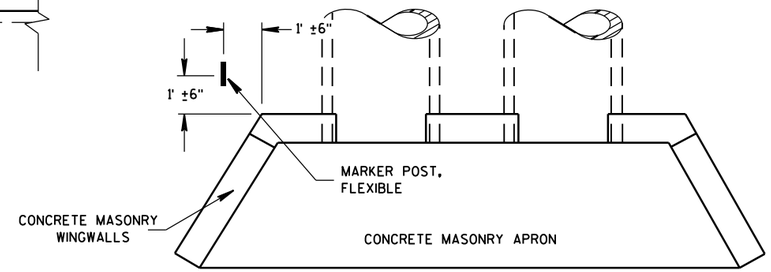
UNDIVIDED HIGHWAY

MARKER POST, FLEXIBLE

DIRECTION OF TRAFFIC FLOW

GENERAL NOTES

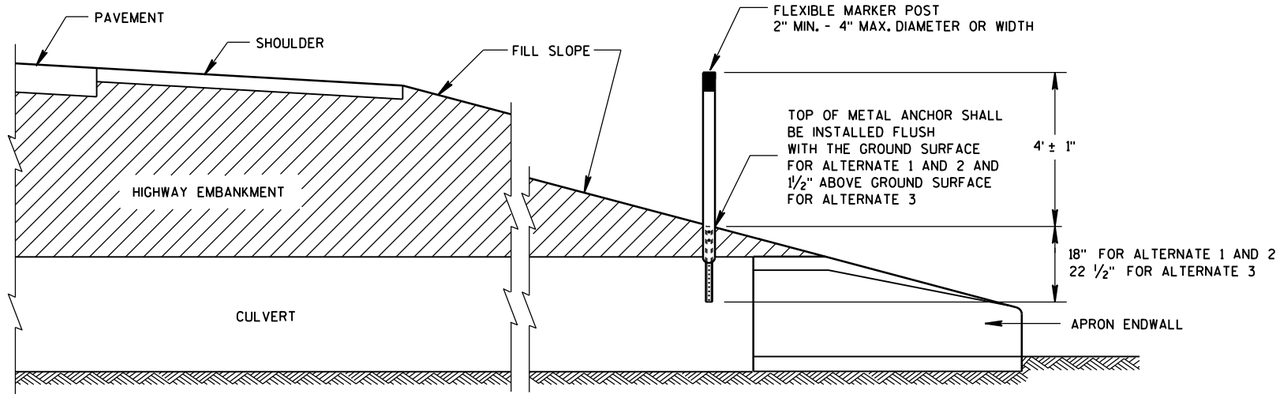
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



PLAN VIEW

CONCRETE MASONRY ENDWALLS FOR CULVERT PIPE AND PIPE ARCH

FLEXIBLE MARKER POST LOCATION



CROSS SECTION

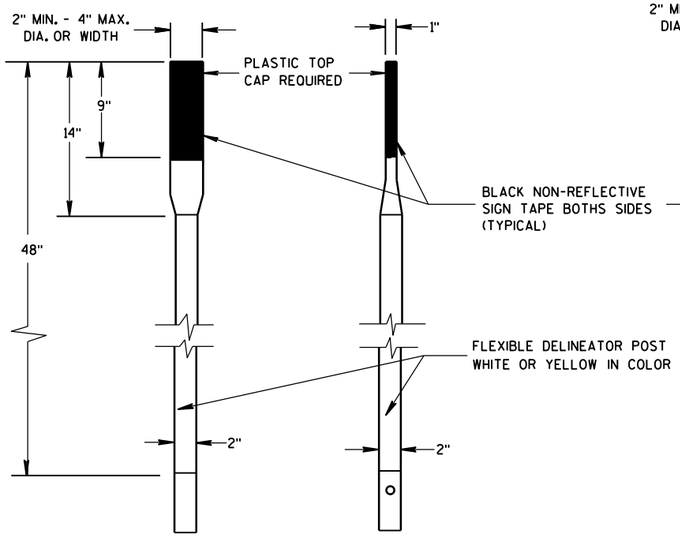
FLEXIBLE MARKER POST

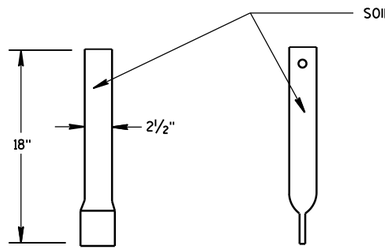
FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

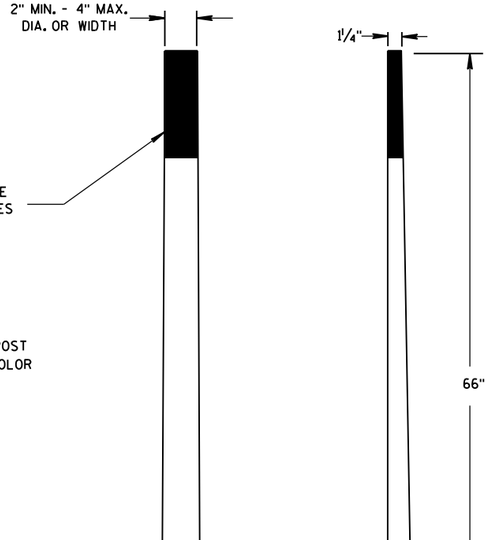
S.D.D. 15 A 3-2a





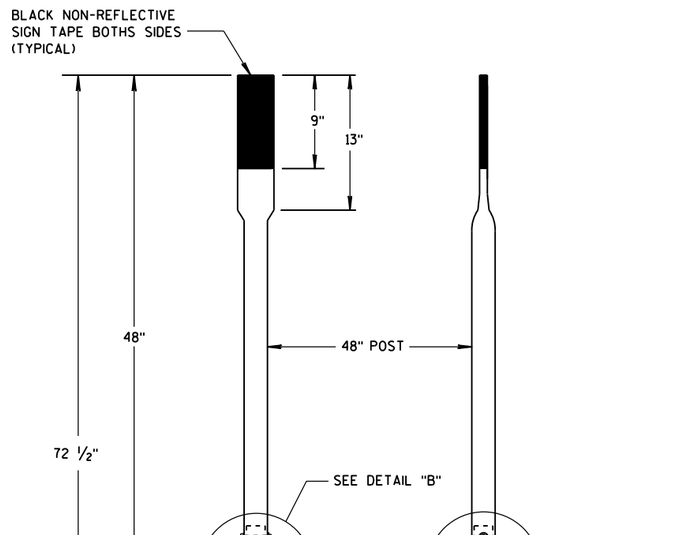
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

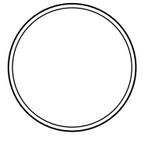
ALTERNATE 2



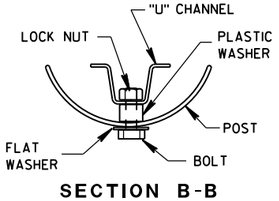
FRONT VIEW SIDE VIEW

ALTERNATE 3

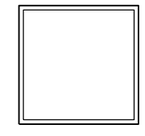
FLEXIBLE MARKER POSTS



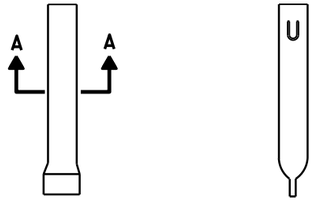
SECTION A-A



SECTION B-B

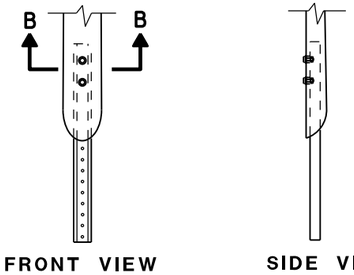


SECTION C-C



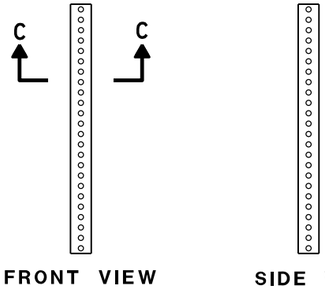
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

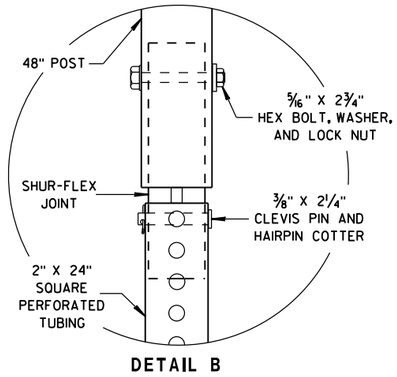
ALTERNATE 2



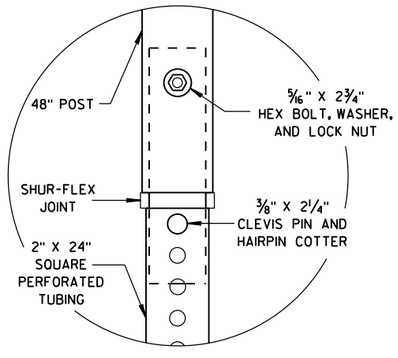
FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POST ANCHORS



DETAIL B



DETAIL C

FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

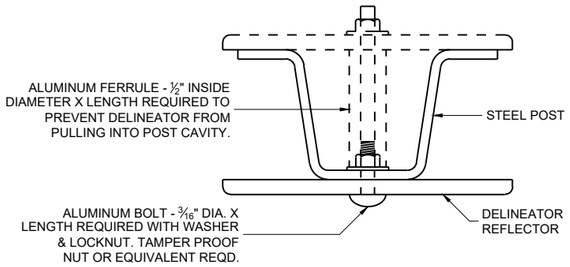
APPROVED
10/1/2012 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

6

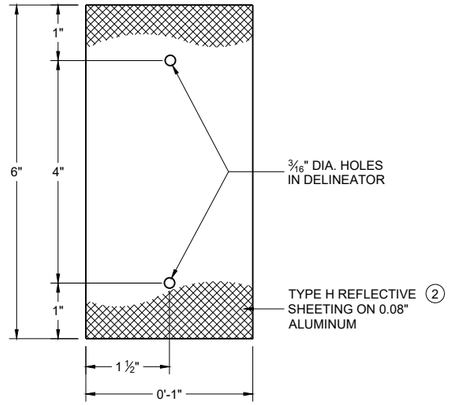
S.D.D. 15 A 3-2b

6

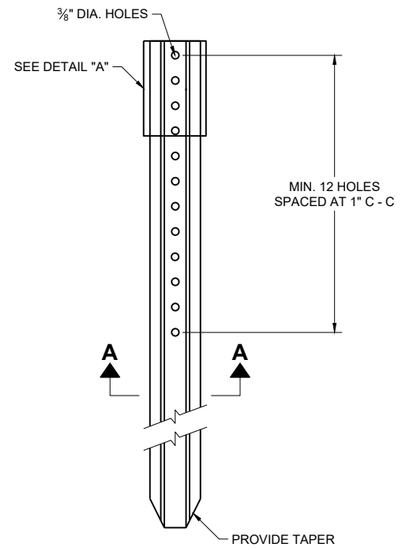
S.D.D. 15 A 3-2b



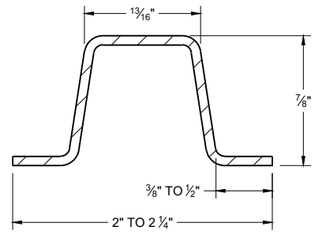
MOUNTING DETAIL FOR DELINEATOR REFLECTOR



DETAIL "A" 3" X 6" DELINEATOR REFLECTOR



DELINEATOR POST



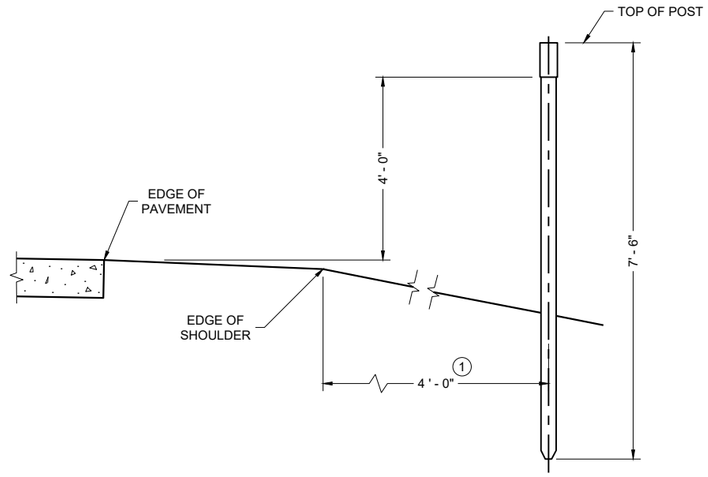
SECTION A - A

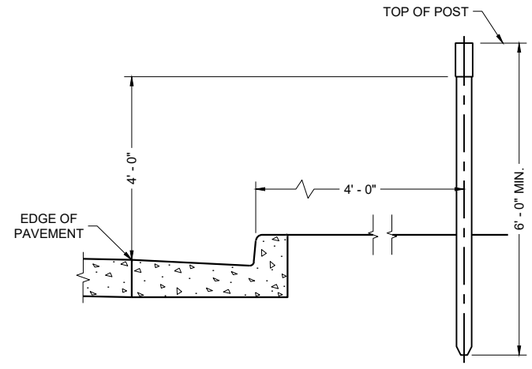
WEIGHT 1.12 LBS PER FT. \ 0.1 LB.

REFLECTOR SPACING TABLE

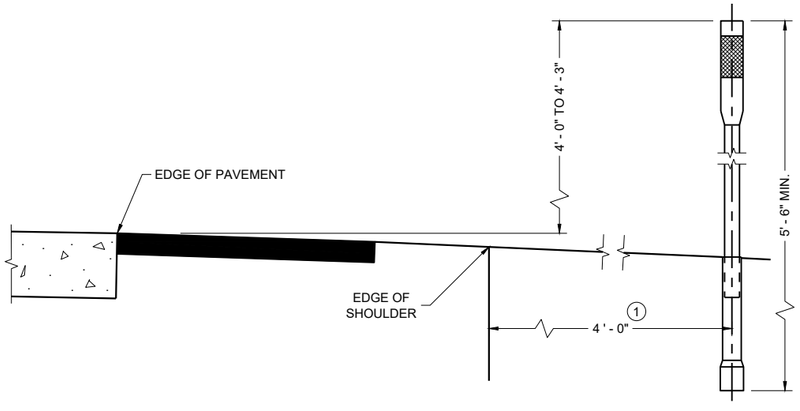
REFLECTOR SPACING	LOCATION
* 100' C-C	RAMPS
400' C-C	MAINLINE

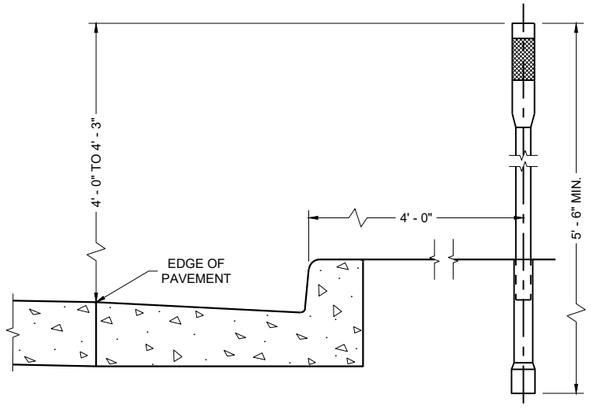
* START AT BEGINNING OF RAMP TAPER AND END AT END OF RAMP TAPER





TYPICAL INSTALLATIONS OF DELINEATOR POSTS





TYPICAL INSTALLATIONS OF FLEXIBLE DELINEATOR POSTS

GENERAL NOTES

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

(1) DELINEATORS SHALL BE PLACED AT A CONSTANT DISTANCE FROM THE EDGE OF THE SHOULDER FOR THE LENGTH OF THE INSTALLATION.

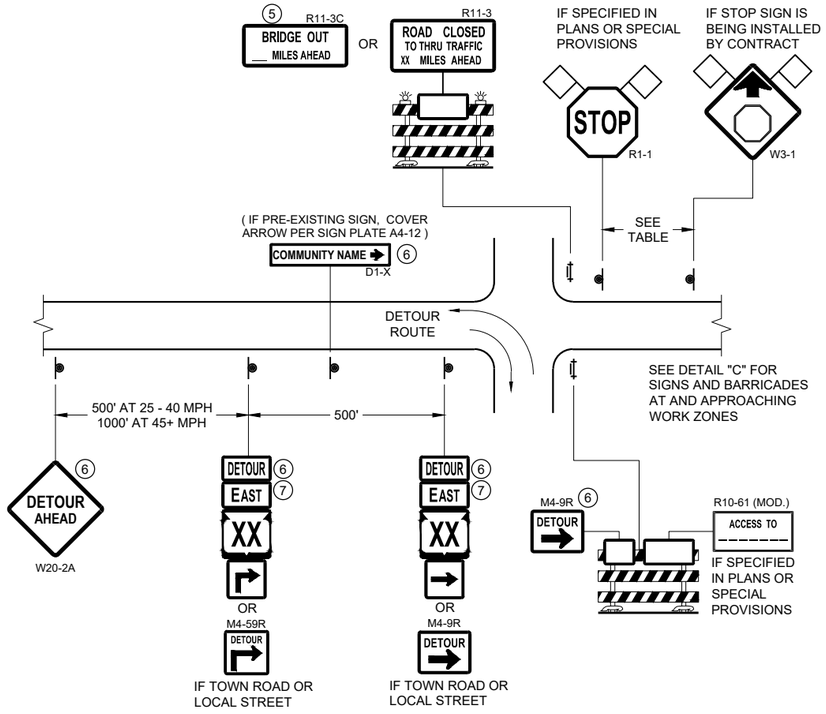
(2) FURNISH TYPE H SHEETING FROM THE APPROVED PRODUCTS LIST.

DELINEATOR POST WITH REFLECTIVE SHEETING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

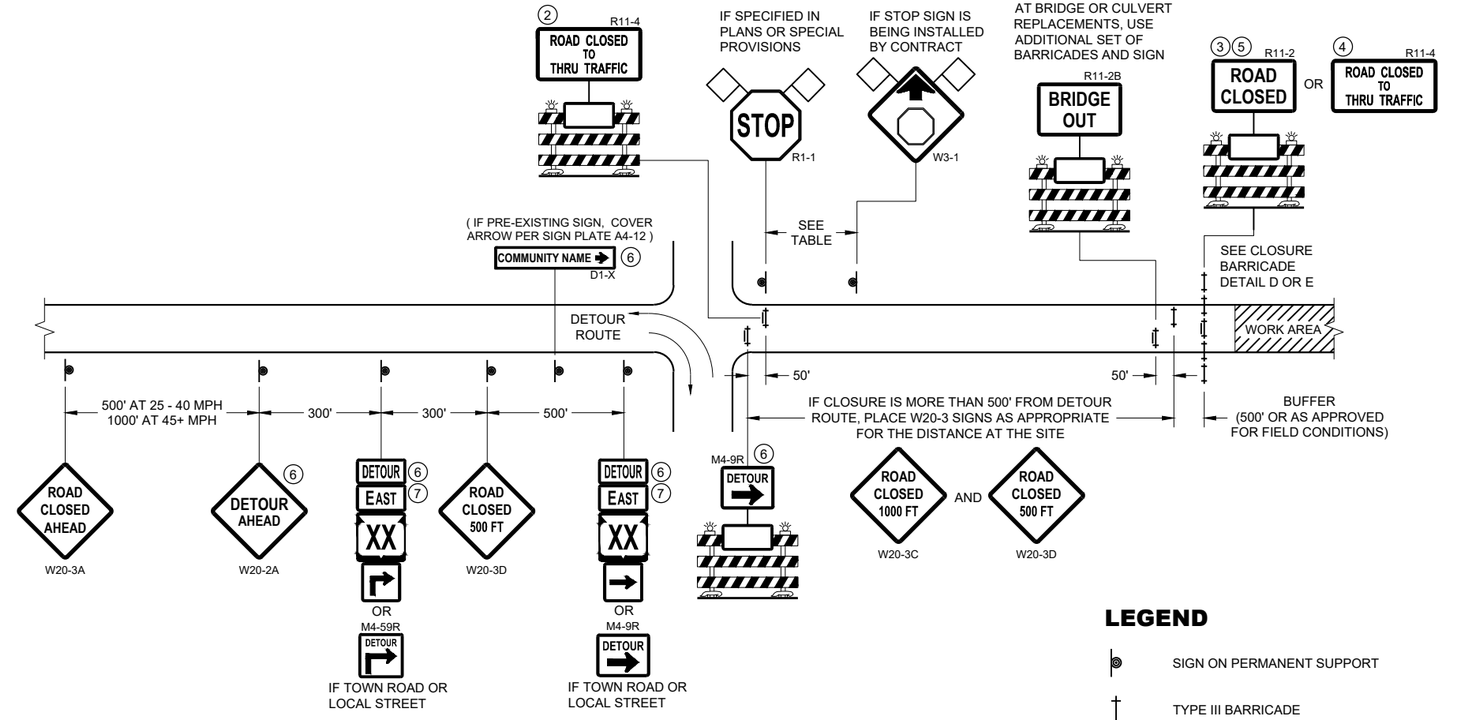
APPROVED
March 2024
DATE
/S/ Jeannie Silver
Statewide Pavement Marking Engineer

FHWA



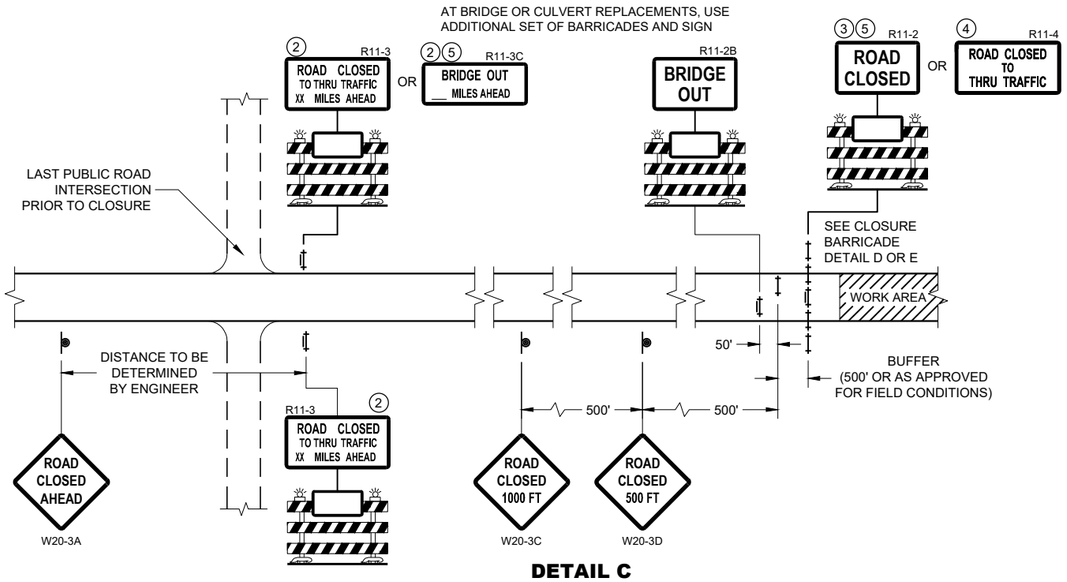
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

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



DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

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



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

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

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

LEGEND

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

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

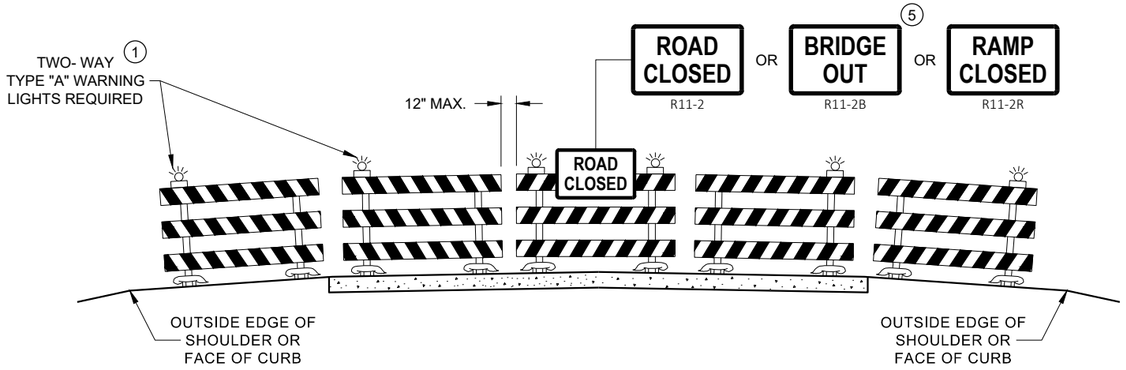
APPROVED
May 2023
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

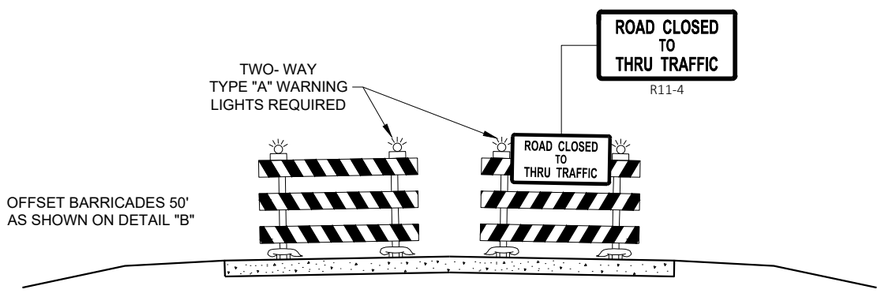
6

SDD 15C02 - 09a

SDD 15C02 - 09a



DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW



DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW

SEE SDD 15C2 - SHEET "a" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

BARRICADES AND SIGNS FOR VARIOUS CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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SDD 15C02 - 09b

THIS DRAWING PROVIDES GENERAL GUIDANCE ON TYPICAL DETOUR SIGN LAYOUT AND SPACING. SEE PROJECT DETOUR SIGNING SHEETS FOR SPECIFIC DETAILS FOR EACH PROJECT.

LEGEND

- SIGN ON PERMANENT SUPPORT
- WORK AREA
- DETOUR / EAST — M4 - 8, M3 - X
- XX — M1 - 4
- OR XX — M1 - 6
- OR COUNTY X — M1 - 5A
- M05 - 1
- OR M06 - 1
- OR M06 - 1

GENERAL NOTES

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

IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. MODIFY EXISTING SIGNS WHERE POSSIBLE.

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

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

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

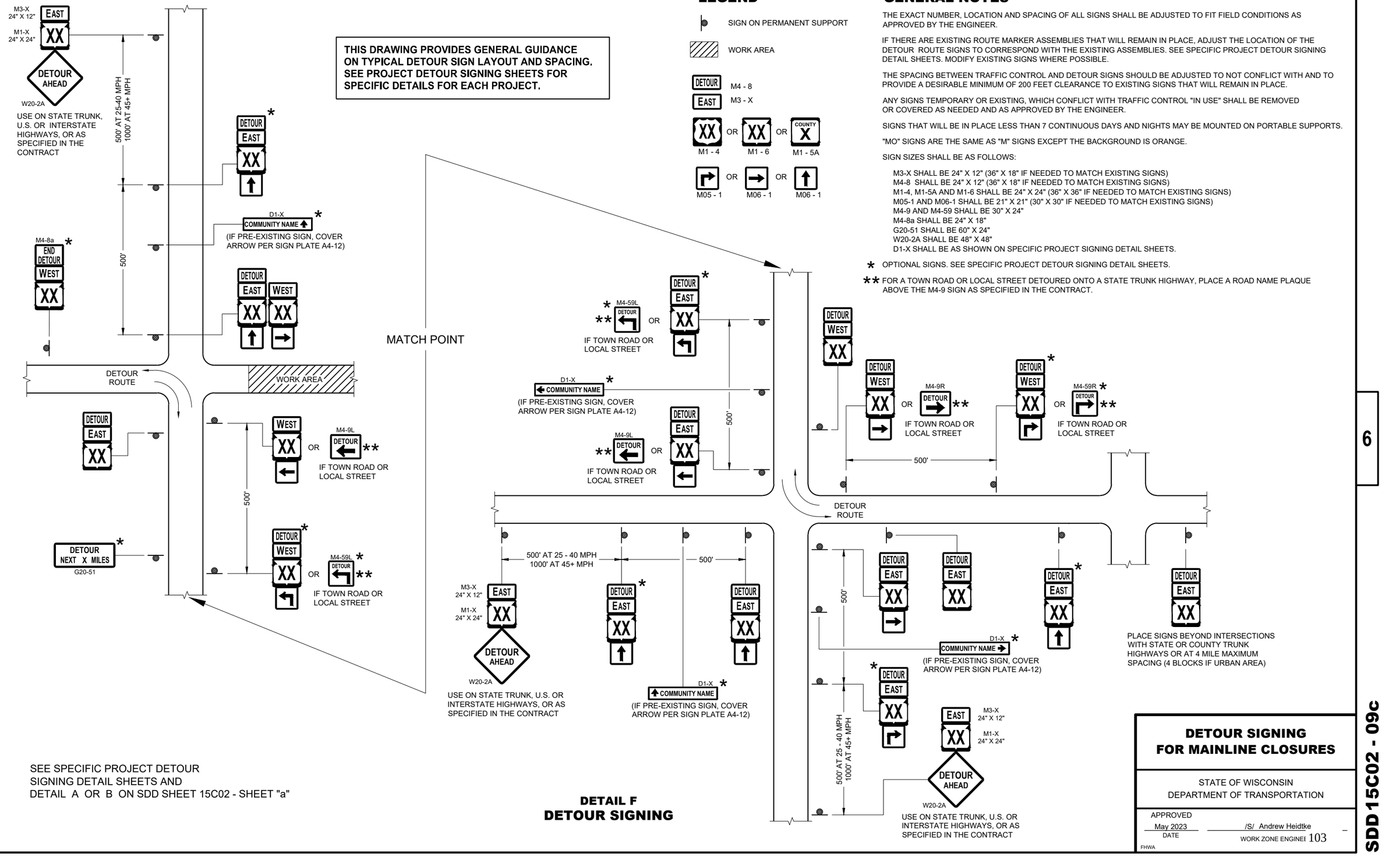
"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGN SIZES SHALL BE AS FOLLOWS:

- M3-X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4-8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1-4, M1-5A AND M1-6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS)
- M05-1 AND M06-1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
- M4-9 AND M4-59 SHALL BE 30" X 24"
- M4-8a SHALL BE 24" X 18"
- G20-51 SHALL BE 60" X 24"
- W20-2A SHALL BE 48" X 48"
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.

* OPTIONAL SIGNS. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS.

** FOR A TOWN ROAD OR LOCAL STREET DETOURED ONTO A STATE TRUNK HIGHWAY, PLACE A ROAD NAME PLAQUE ABOVE THE M4-9 SIGN AS SPECIFIED IN THE CONTRACT.



SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS AND DETAIL A OR B ON SDD SHEET 15C02 - SHEET "a"

DETAIL F
DETOUR SIGNING

DETOUR SIGNING FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

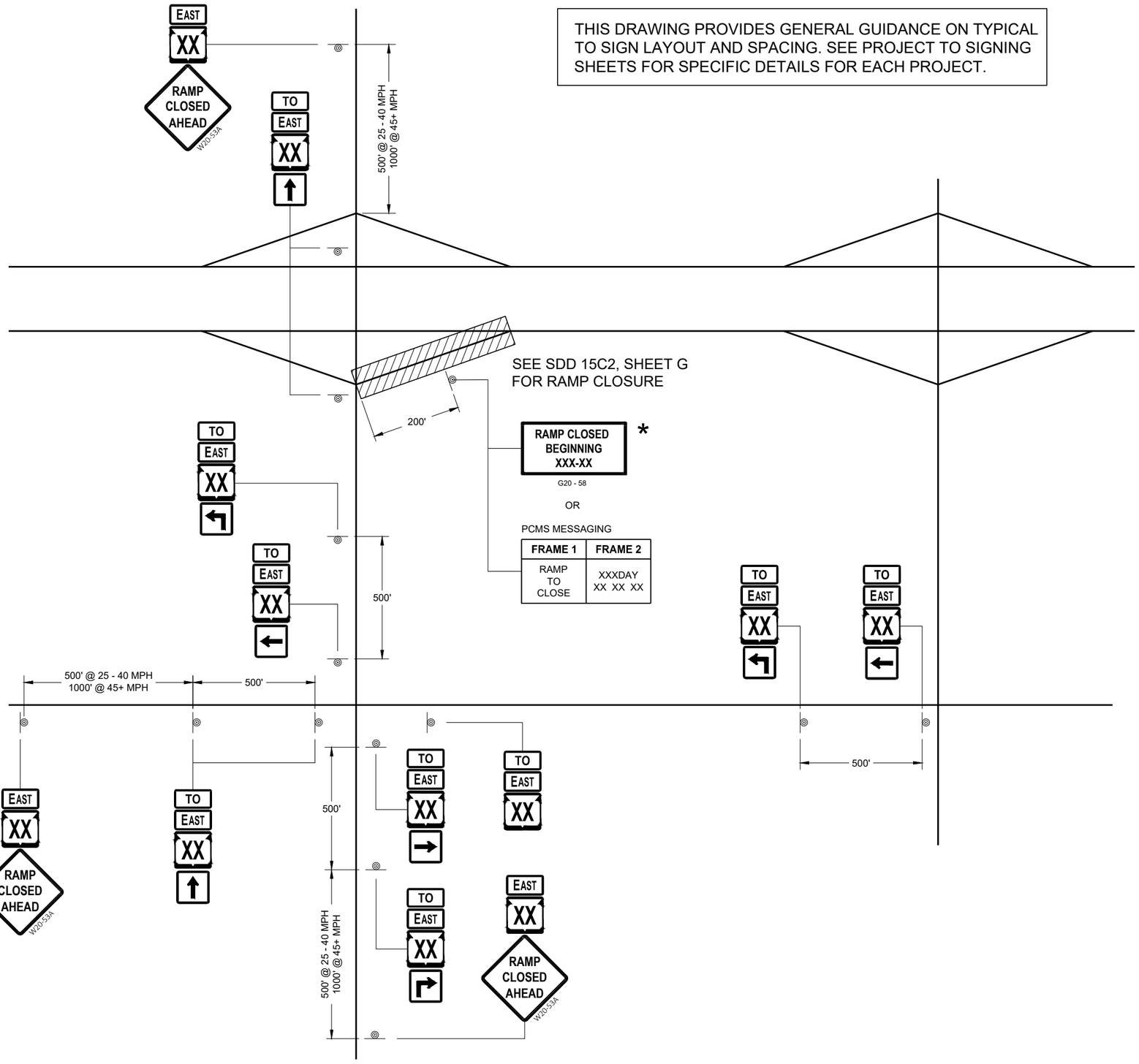
APPROVED
May 2023
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

6

SDD 15C02 - 09c



THIS DRAWING PROVIDES GENERAL GUIDANCE ON TYPICAL TO SIGN LAYOUT AND SPACING. SEE PROJECT TO SIGNING SHEETS FOR SPECIFIC DETAILS FOR EACH PROJECT.

LEGEND

SIGN ON PERMANENT SUPPORT

TO EAST — MO4 - 5, M3 - X

XX M1 - 6 OR XX M1 - 4 OR INTERSTATE XX M1 - 1

M05 - 1 OR M06 - 1 OR M06 - 1

GENERAL NOTES

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

IF THERE ARE ANY ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE TO ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. SEE SPECIFIC PROJECT TO SIGNING DETAIL SHEETS. MODIFY EXISTING SIGNS WHERE POSSIBLE.

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

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

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

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

SIGN SIZES SHALL BE AS FOLLOW:
- M3 - X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS).
- MO4 - 5 SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS).
- M1 - 1, M1 - 4, AND M1 - 6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS).
- MO5 - 1, MO5 - 2, AND MO6 - 1, SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS).
- W20 - 53A SHALL BE 48" X 48"

* PLACE "RAMP CLOSED BEGINNING" SIGN 7 CALENDAR DAYS PRIOR TO CLOSURE OR AS DIRECTED BY THE ENGINEER. SEE WISCONSIN STANDARD SIGN PLATES FOR LAYOUT.

ON RAMP LANE CLOSURE

STATE OF WISCONSIN
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SDD 15C02 - 09d

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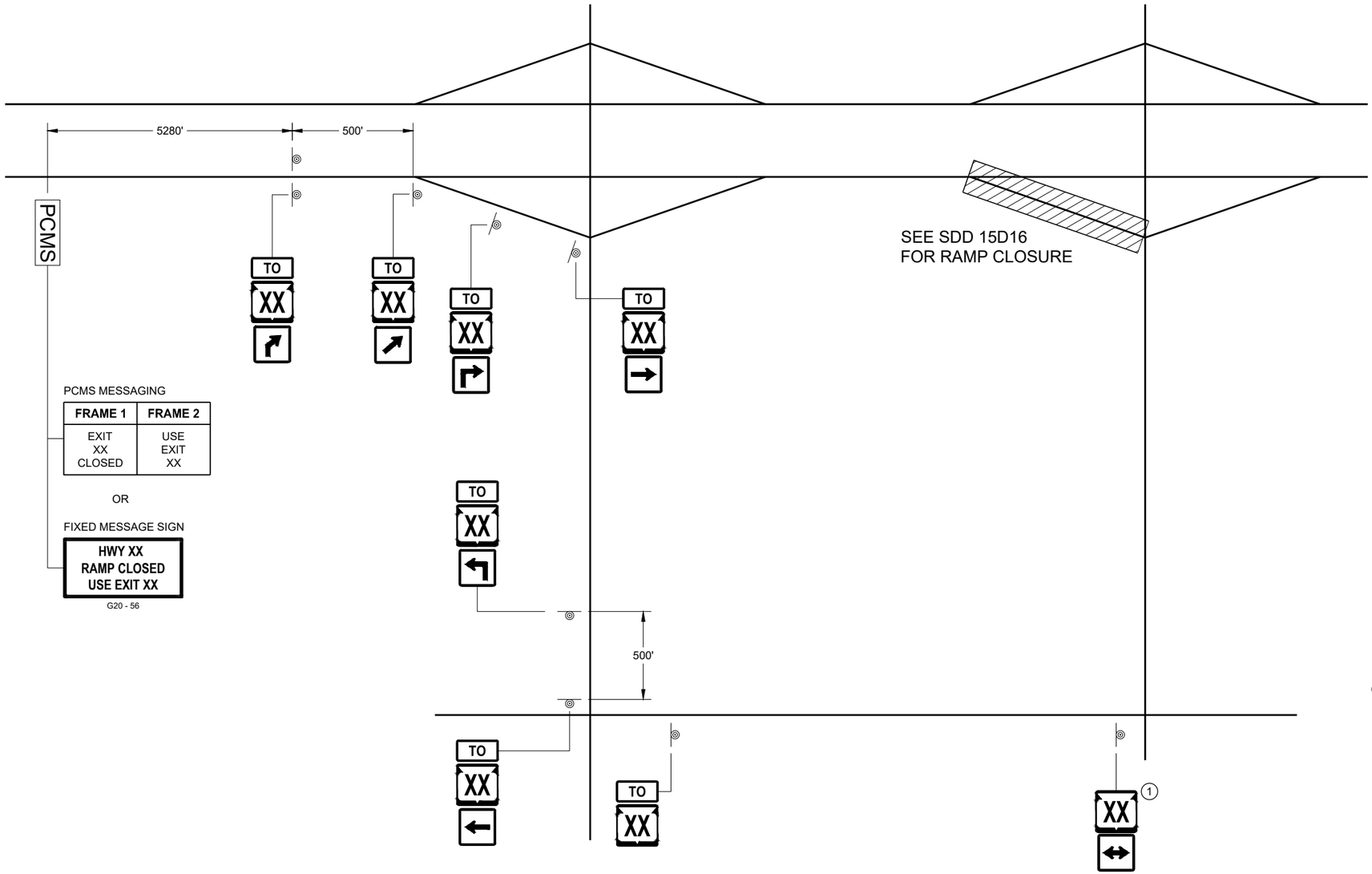
THIS DRAWING PROVIDES GENERAL GUIDANCE ON TYPICAL "TO" MO-4 SIGN LAYOUT AND SPACING. SEE PROJECT TO SIGNING SHEETS FOR SPECIFIC DETAILS FOR EACH PROJECT.



PCMS MESSAGING

FRAME 1	FRAME 2
EXIT XX CLOSED	USE EXIT XX

OR

FIXED MESSAGE SIGN

HWY XX
RAMP CLOSED
USE EXIT XX

G20 - 56

LEGEND

SIGN ON PERMANENT SUPPORT

PCMS PORTABLE CHANGEABLE MESSAGE SIGN

TO MO4 - 5

XX M1 - 4 OR XX M1 - 6 OR COUNTY X M1 - 5A

M05 - 1 OR M05 - 2 OR M06 - 1 OR M06 - 2 OR M06 - 4

GENERAL NOTES

SEE SDD 15D16 "TRAFFIC CONTROL, EXIT RAMP CLOSURE" DETAIL FOR TRAFFIC CONTROL AT EXIT RAMP CLOSURE.

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

IF THERE ARE ANY ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE "TO" MO-4 ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. SEE SPECIFIC PROJECT TO SIGNING DETAIL SHEETS. MODIFY EXISTING SIGNS WHERE POSSIBLE.

THE SPACING BETWEEN TRAFFIC CONTROL AND "TO" MO-4 SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

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

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

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

SIGN SIZES SHALL BE AS FOLLOW:
- MO4 - 5 SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS).
- M1 - 4, M1 - 5A, AND M1 - 6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS).
- MO5 - 1, MO5 - 2, AND MO6 - 1, SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS).

(1) ONLY ADD IF THERE ARE NO EXISTING ROUTE MARKERS FOR THE INTERSECTING ROADWAY.

OFF RAMP
LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

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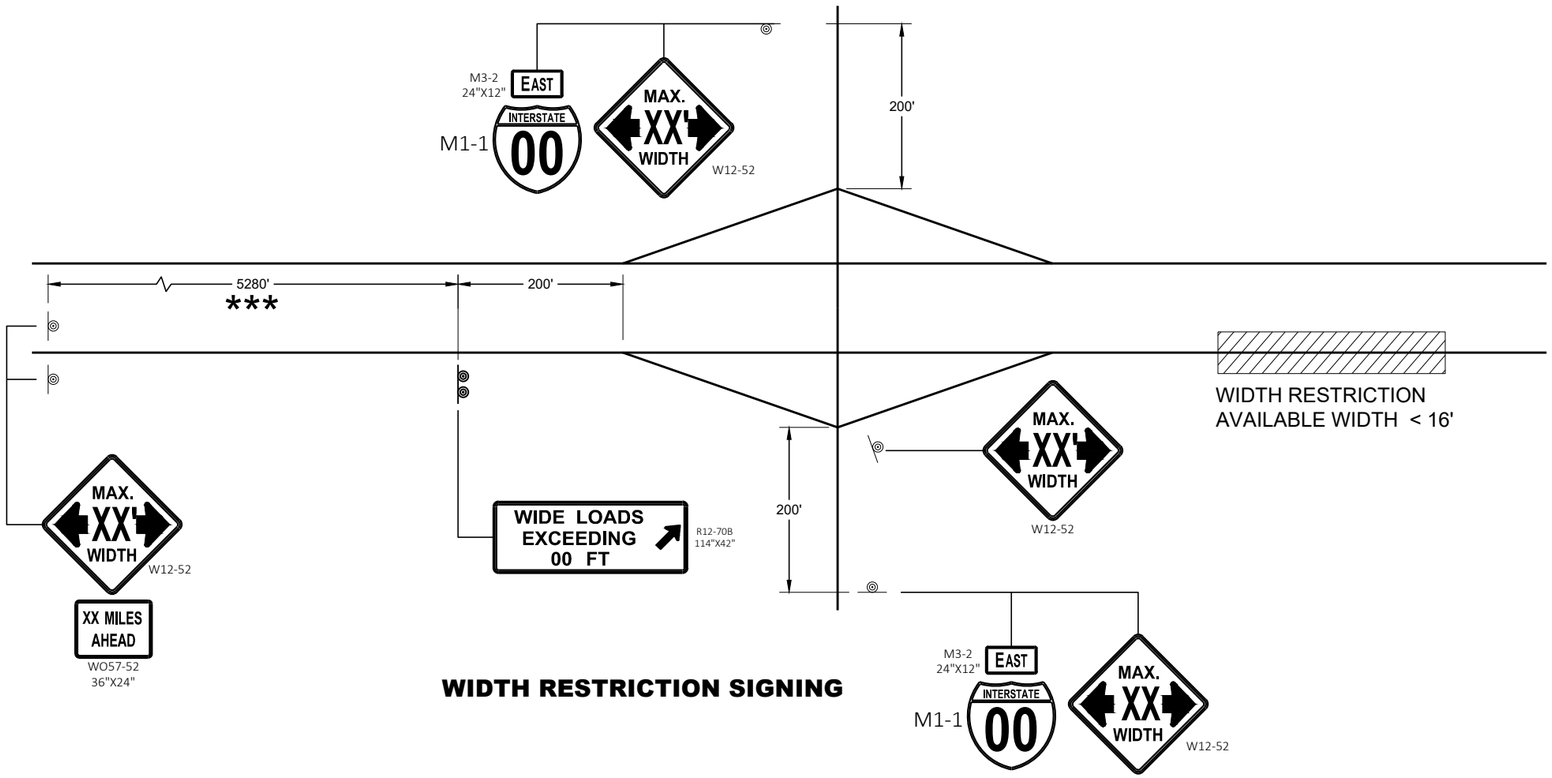
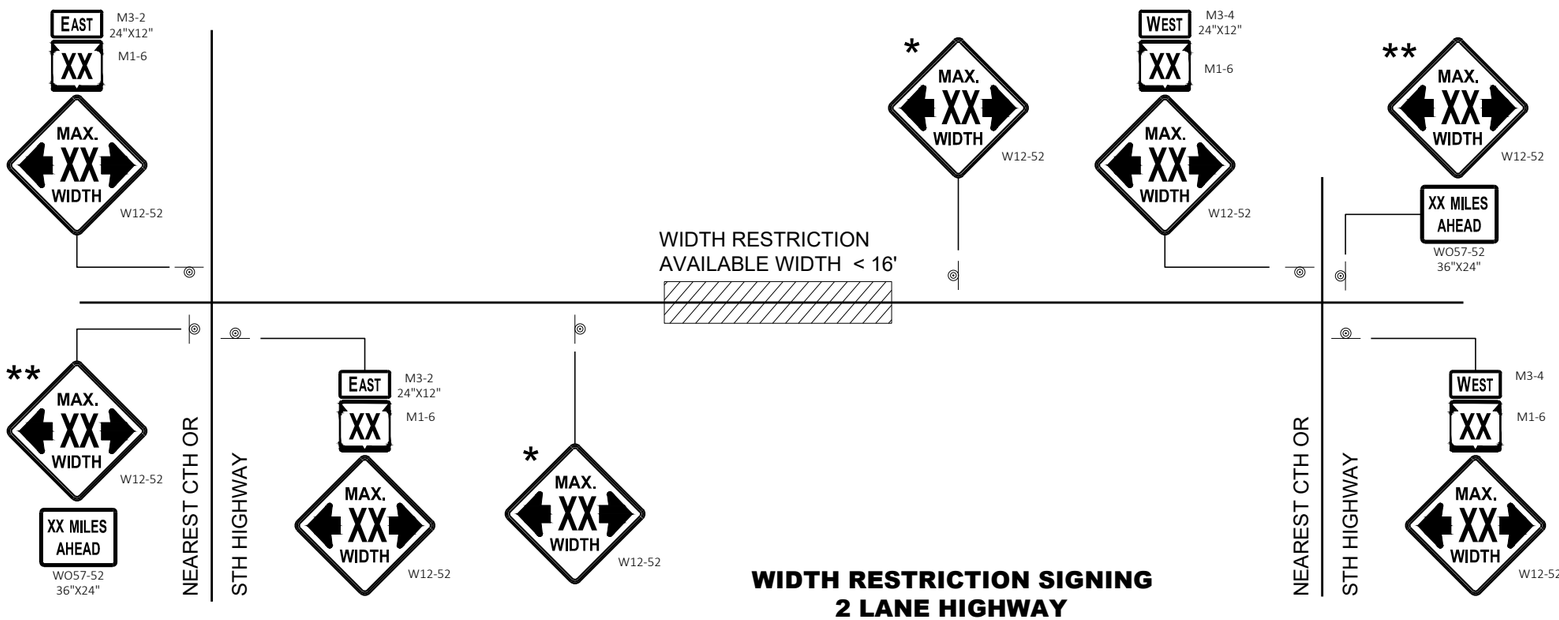
SDD 15C02 - 09e

6

SDD 15C02 - 09e



WIDTH RESTRICTION SIGNING



WIDTH RESTRICTION SIGNING
2 LANE HIGHWAY

LEGEND

SIGN ON PERMANENT SUPPORT

GENERAL NOTES

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

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

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

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

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

WIDTH ON SIGN TO BE APPROXIMATELY ONE FOOT LESS THAN AVAILABLE WIDTH.

* PLACE 500 FEET AFTER THE W20 - 1A AND 500 FEET BEFORE ADDITIONAL SIGNS FOR ROADWAYS WITH A PRE - CONSTRUCTION SPEED LIMIT OF 45 MPH OR MORE. FOR 35-40 MPH, USE 350 FOOT TYPICAL SPACING. FOR 25-30 MPH, USE 200 FOOT TYPICAL SPACING.

** SIGN SHALL BE VISIBLE FROM ROADWAY.

*** ADDITIONAL SIGNS NEEDED IF THERE IS AN ON RAMP BETWEEN SIGNS.

WIDTH ON SIGN TO BE APPROX. 1 - FOOT LESS THAN AVAILABLE WIDTH

ADVANCED WIDTH RESTRICTION SIGNING

STATE OF WISCONSIN
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APPROVED
May 2023 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINEER

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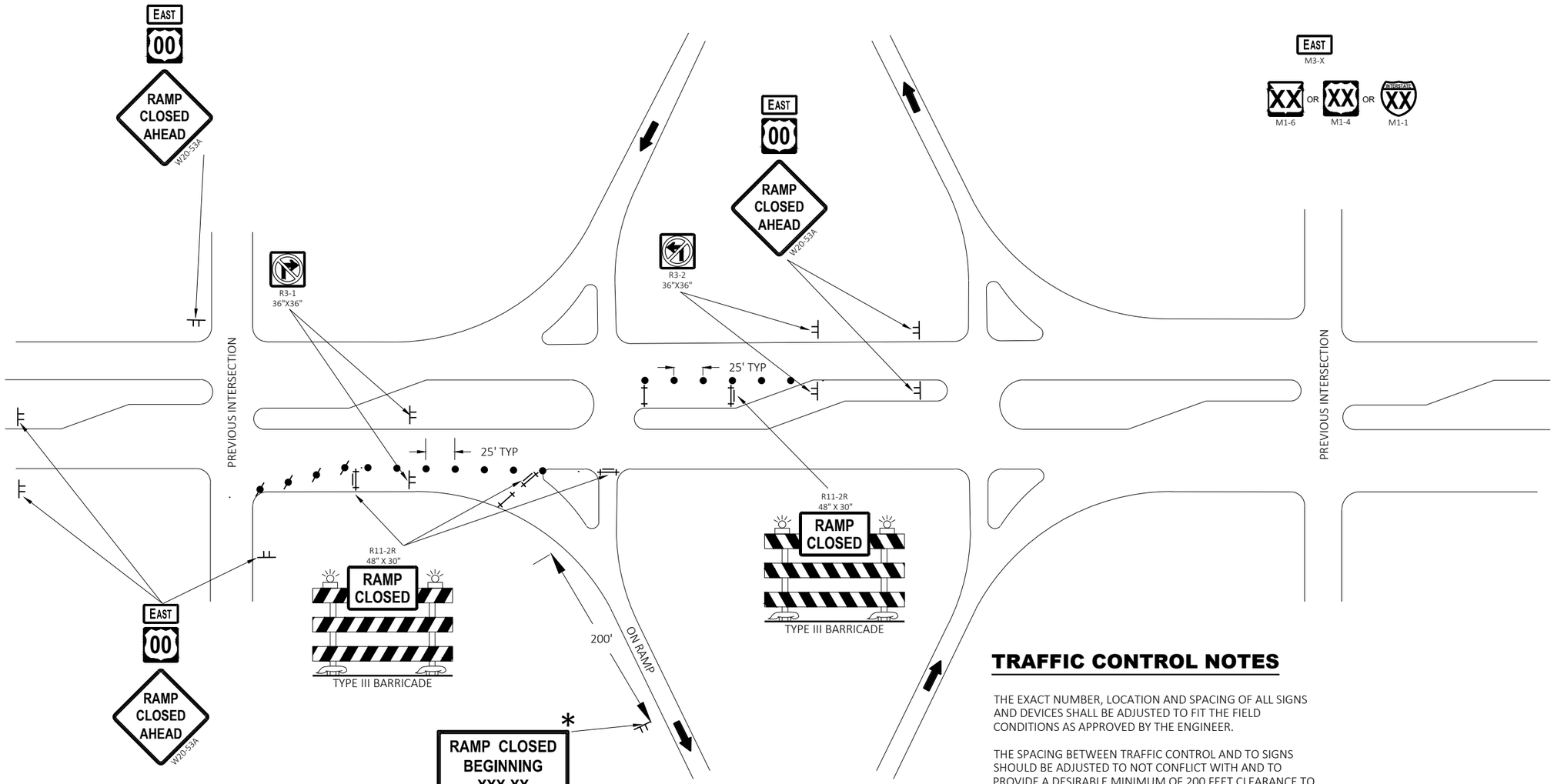
6

SDD 15C02 - 09f



LEGEND

- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC

TRAFFIC CONTROL NOTES

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

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

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

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

SIGN SIZES SHALL BE AS FOLLOWS:

- M3-X SHALL BE 24"x24" (36" x18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1-1, M1-4, AND M1-6 SHALL BE 24"x24" (36"x36" IF NEEDED TO MATCH EXISTING SIGNS)
- W20-53A SHALL BE 48"X48"

* PLACE "RAMP CLOSED BEGINNING" SIGN 7 CALENDAR DAYS PRIOR TO CLOSURE OR AS DIRECTED BY THE ENGINEER. SEE WISCONSIN STANDARD SIGN PLATES FOR LAYOUT.

TRAFFIC CONTROL FOR ENTRANCE RAMP CLOSURE

TRAFFIC CONTROL FOR ENTRANCE RAMP CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

6

SDD 15C02-09g

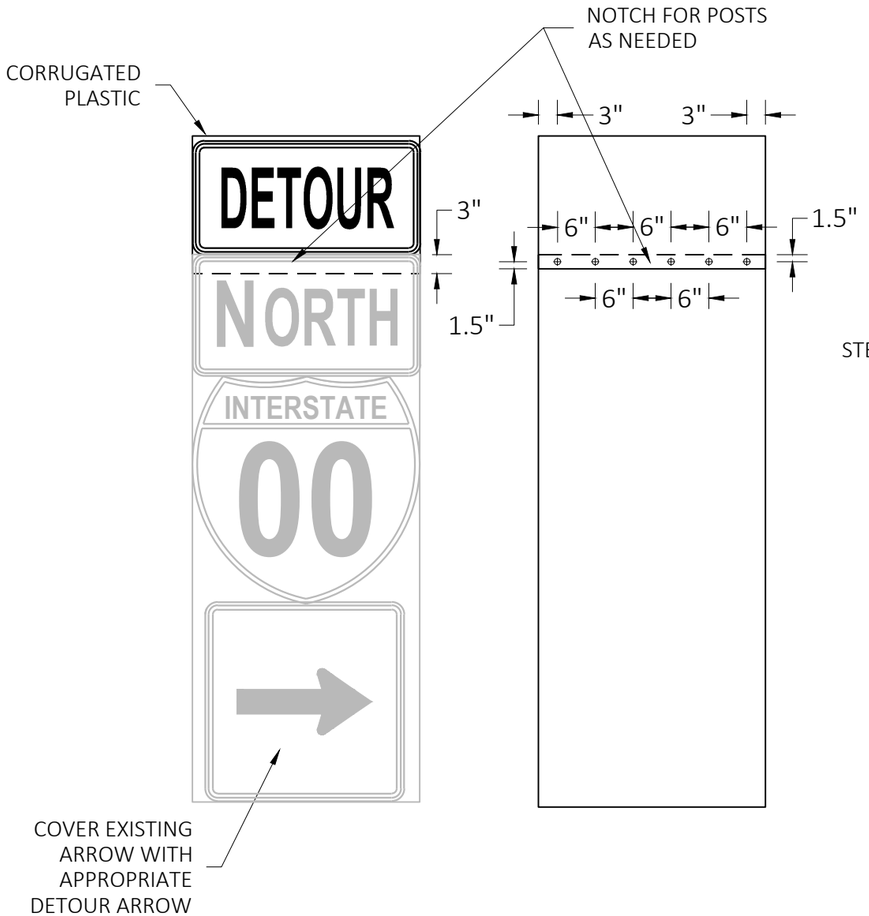
6

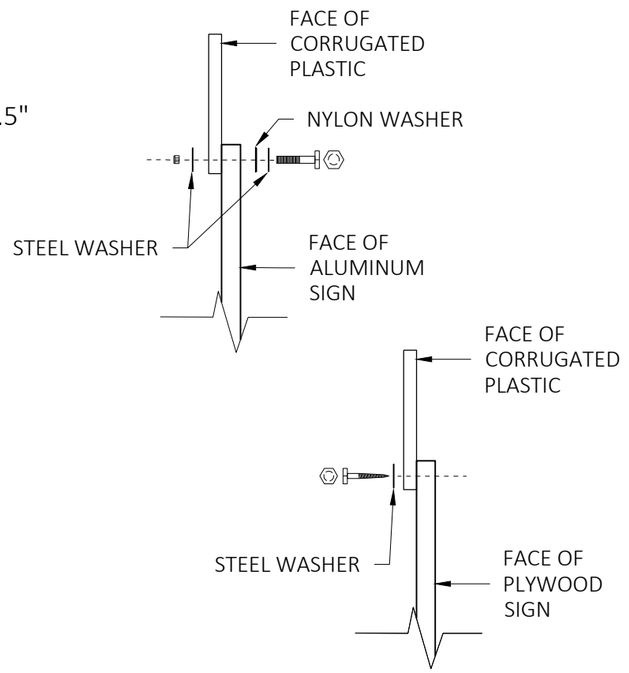
SDD 15C02-09g

FRONT SIDE

BACK SIDE

SIDE VIEW





GENERAL NOTES

CELLS OF CORRUGATED PLASTIC SHALL BE VERTICALLY ORIENTED.

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

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

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

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

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

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

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

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

MODIFIED ROUTE ASSEMBLY FOR DETOUR SIGNING

MODIFIED ROUTE ASSEMBLY FOR DETOUR SIGNING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6
SDD 15C02-09h

GENERAL NOTES

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

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

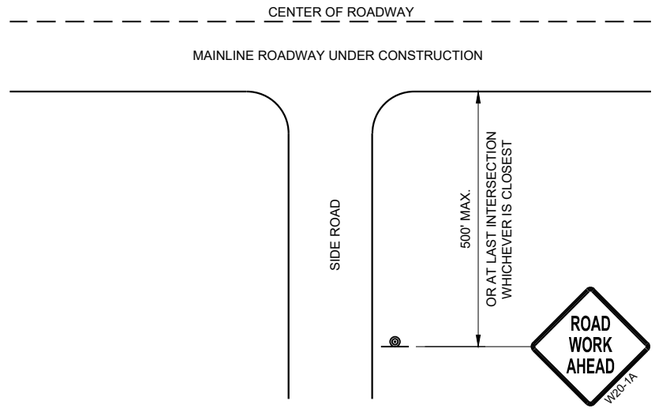
ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

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

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

* OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS

** PLACE AN ADDITIONAL W20-1A "ROAD WORK AHEAD" SIGN IF WORK AREA WITHIN THE PROJECT IS SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA.



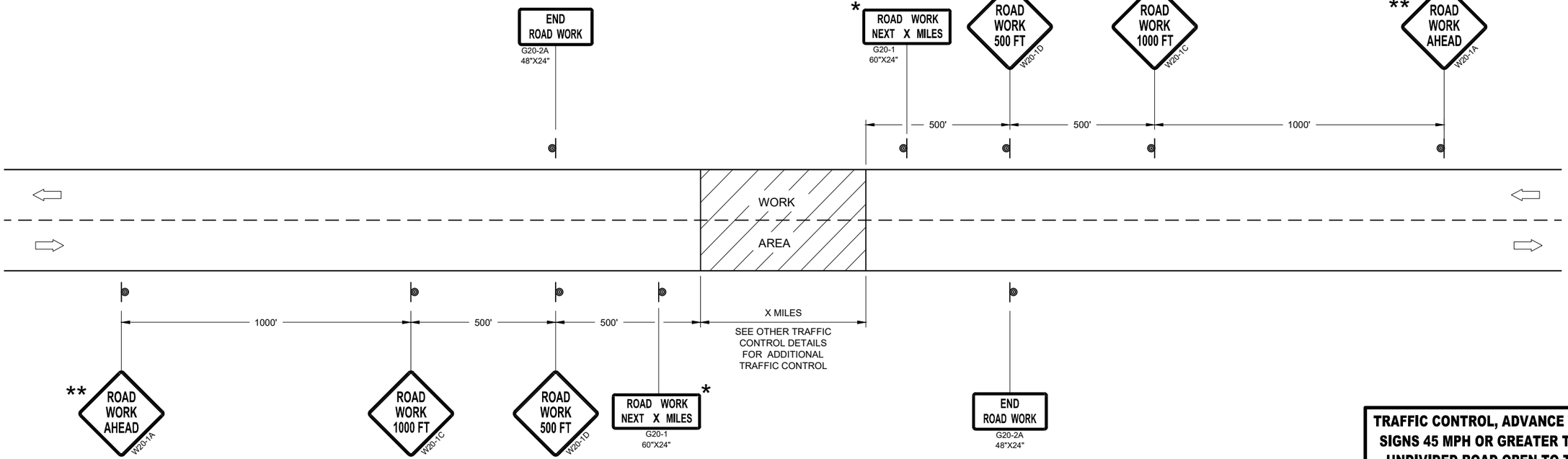
TYPICAL SIDE ROAD APPROACH WARNING SIGN DETAIL

LEGEND

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC

WORK AREA



TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45MPH OR GREATER

TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 MPH OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15C04 - 05

GENERAL NOTES

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

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

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

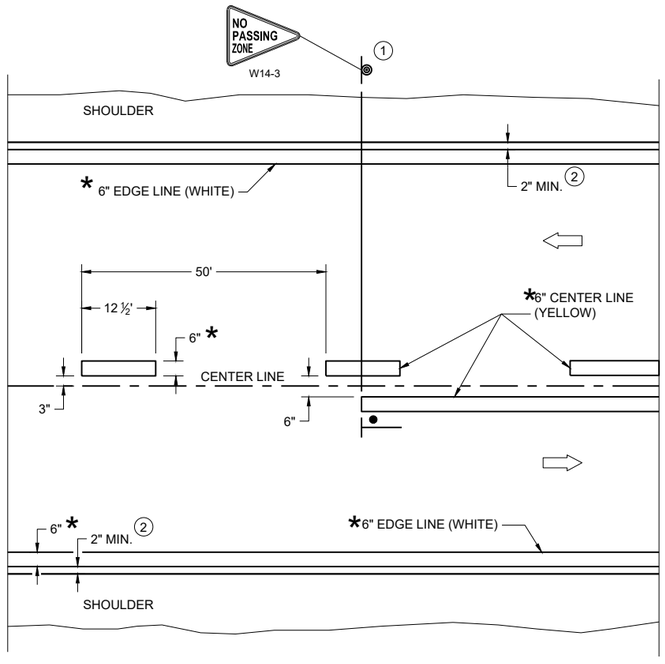
LEGEND

"T" MARKING

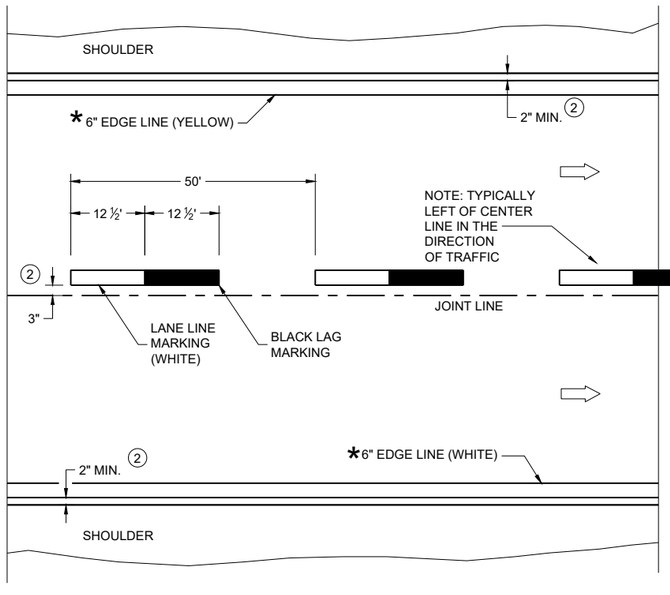
SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC

*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

6

SDD 15C08-24a

PERMANENT LONGITUDINAL PAVEMENT MARKINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
December 2024
DATE

/S/ Jeannie Silver
Statewide Pavement Marking Engineer

FHWA

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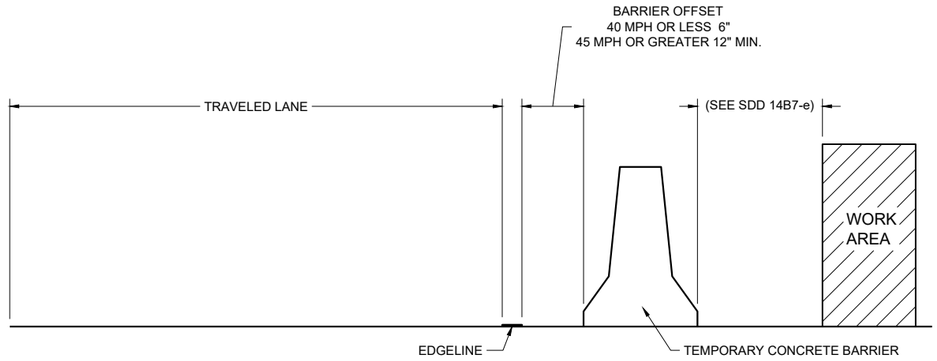
SDD 15C08-24a



TEMPORARY BARRIER OFFSET FROM EDGELINE

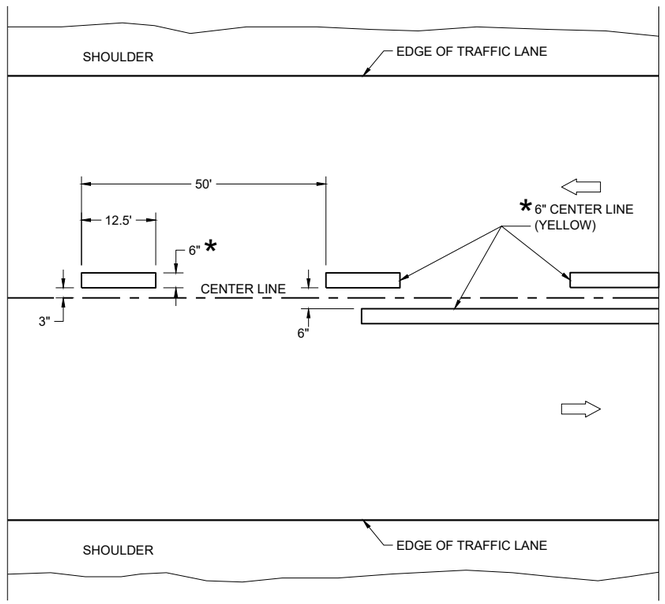
GENERAL NOTES

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

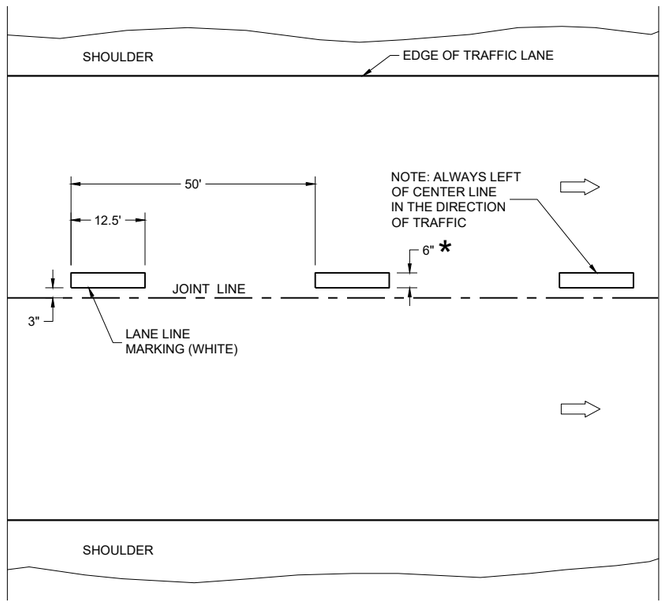
LEGEND

DIRECTION OF TRAFFIC

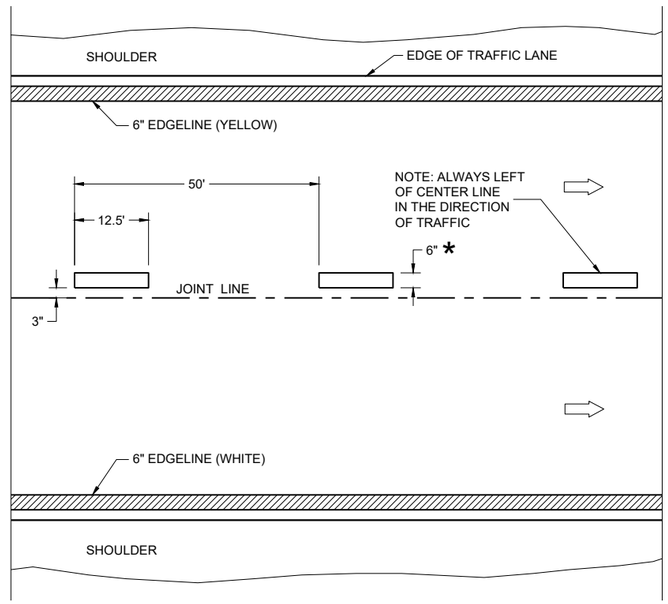
*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



TWO WAY TRAFFIC



ONE WAY TRAFFIC



FREEWAYS AND EXPRESSWAYS

TEMPORARY PAVEMENT MARKING

TEMPORARY LONGITUDINAL PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

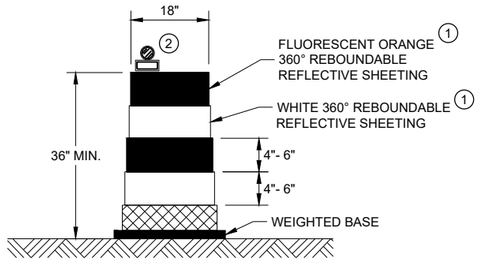
SDD 15C08-24b

6

SDD 15C08-24b

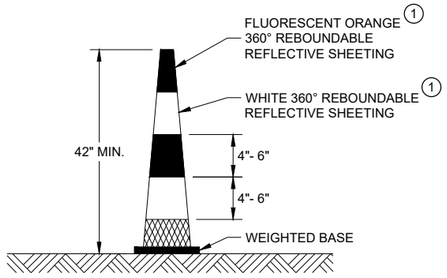
GENERAL NOTES

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



DRUM

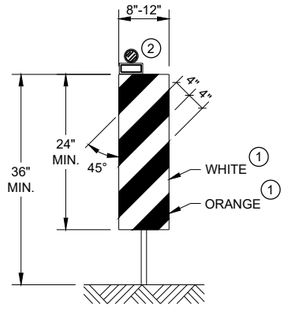
BALLAST WIDTHS
RANGE FROM 24"-36"



42" CONE

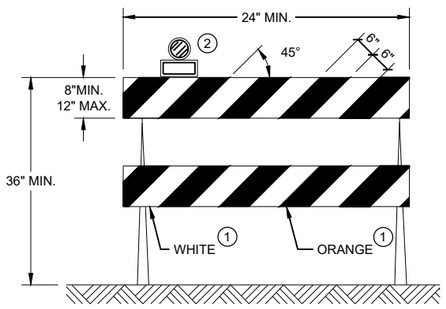
DO NOT USE IN TAPERS
½ SPACING OF DRUMS

BALLAST WIDTHS
RANGE FROM 14"-20"



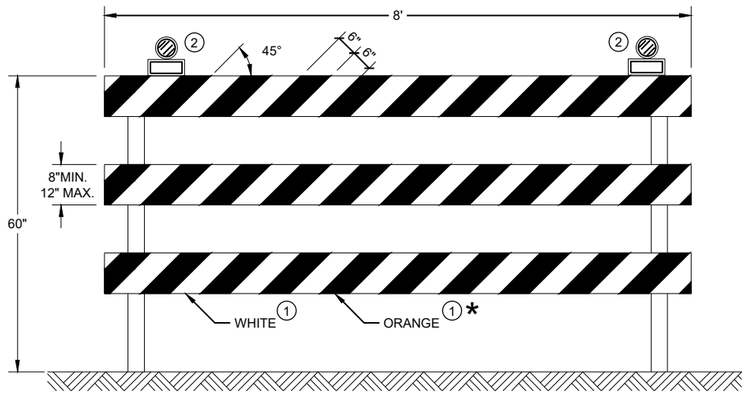
VERTICAL PANEL

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



TYPE II BARRICADE

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



TYPE III BARRICADE

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

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

CHANNELIZING DEVICES
DRUMS, CONES, BARRICADES
AND VERTICAL PANELS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2022 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINEE
FHWA

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SDD 15C11 - 10b

6

SDD 15C11 - 10b

LEGEND

SIGN ON PORTABLE OR PERMANENT SUPPORT

TEMPORARY PORTABLE RUMBLE STRIP ARRAY

DIRECTION OF TRAFFIC

WORK AREA

FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

GENERAL NOTES

DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

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

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

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

THE FIRST ADVANCE WARNING SIGN SHOULD TYPICALLY BE LOCATED IN ADVANCE OF THE ANTICIPATED TRAFFIC BACKUP OR QUEUE.

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

FLAGGING

FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT REMOVE TEMPORARY PORTABLE RUMBLE STRIPS PRIOR TO COVERING OR REMOVING ALL ADVANCE SIGNING.

(1) FOR MOVING WORK OPERATIONS, POST ADDITIONAL W20-7A FLAGGER SIGNS AT APPROXIMATELY 3,500' INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.

(2) SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

WHEN THE DISTANCE BETWEEN FLAGGERS EXCEEDS 2 MILES, A PILOT CAR IS REQUIRED. WHEN CURVES REDUCE SIGHT DISTANCE BELOW 400', A PILOT CAR IS REQUIRED.

TEMPORARY PORTABLE RUMBLE STRIPS

UTILIZE TEMPORARY PORTABLE RUMBLE STRIPS ON ALL FLAGGING OPERATIONS.

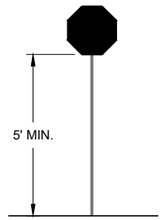
(3) EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS PLACED TRANSVERSE ACROSS THE LANE AT THE LOCATIONS SHOWN. WITHIN EACH ARRAY, SPACING BETWEEN RUMBLE STRIPS SHALL BE 15 FEET ON CENTER

ONLY USE TEMPORARY PORTABLE RUMBLE STRIPS FROM THE APPROVED PRODUCTS LIST.

INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS.

PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.

DO NOT INSTALL TEMPORARY PORTABLE RUMBLE STRIPS ON GRAVEL, MILLED SURFACES, OR ASPHALT THAT HAS BEEN PAVED LESS THAN 12 HOURS.



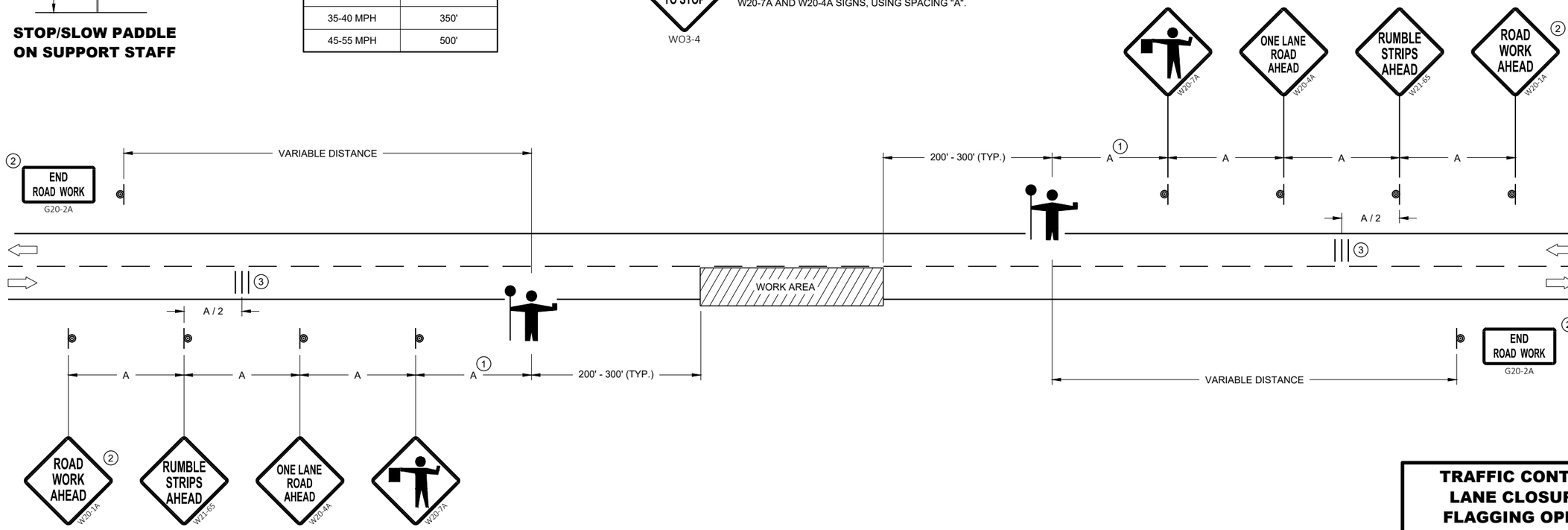
STOP/SLOW PADDLE ON SUPPORT STAFF

SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

SPEED LIMIT	SPACING "A"
25-30 MPH	200'
35-40 MPH	350'
45-55 MPH	500'

WO3-4

USE OF WO3-4 SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7A AND W20-4A SIGNS, USING SPACING "A".



TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2022
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

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SDD 15C12 - 09a

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SDD 15C12 - 09a

GENERAL NOTES

SIGN ON PERMANENT SUPPORT

TRAFFIC CONTROL CONE 42-INCH

TRAFFIC CONTROL DRUM

TEMPORARY PORTABLE RUMBLE STRIP ARRAY

DIRECTION OF TRAFFIC

WORK AREA

AFAD — AUTOMATED FLAGGER ASSISTANCE DEVICE (AFAD)

GENERAL NOTES

DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

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

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

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

THE FIRST ADVANCE WARNING SIGN SHOULD TYPICALLY BE LOCATED IN ADVANCE OF THE ANTICIPATED TRAFFIC BACKUP OR QUEUE.

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

FLAGGING

IF THE AUTOMATED FLAGGER ASSISTANCE DEVICE (AFAD) STOPS WORKING, FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT REMOVE TEMPORARY PORTABLE RUMBLE STRIPS PRIOR TO COVERING OR REMOVING ALL ADVANCE SIGNING.

WHEN THE DISTANCE BETWEEN FLAGGERS EXCEEDS 2 MILES, A PILOT CAR IS REQUIRED. WHEN CURVES REDUCE SIGHT DISTANCE BELOW 400', A PILOT CAR IS REQUIRED.

(1) SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

(2) IF FLAGGERS ARE PHYSICALLY NEEDED TO FLAG, REPLACE WO3-4 SIGNS WITH W20-7A SIGNS.

TEMPORARY PORTABLE RUMBLE STRIPS

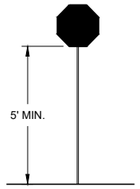
UTILIZE TEMPORARY PORTABLE RUMBLE STRIPS ON ALL FLAGGING OPERATIONS.

ONLY USE TEMPORARY PORTABLE RUMBLE STRIPS FROM THE APPROVED PRODUCTS LIST.

PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.

DO NOT INSTALL TEMPORARY PORTABLE RUMBLE STRIPS ON GRAVEL, MILLED SURFACES, OR ASPHALT THAT HAS BEEN PAVED LESS THAN 12 HOURS.

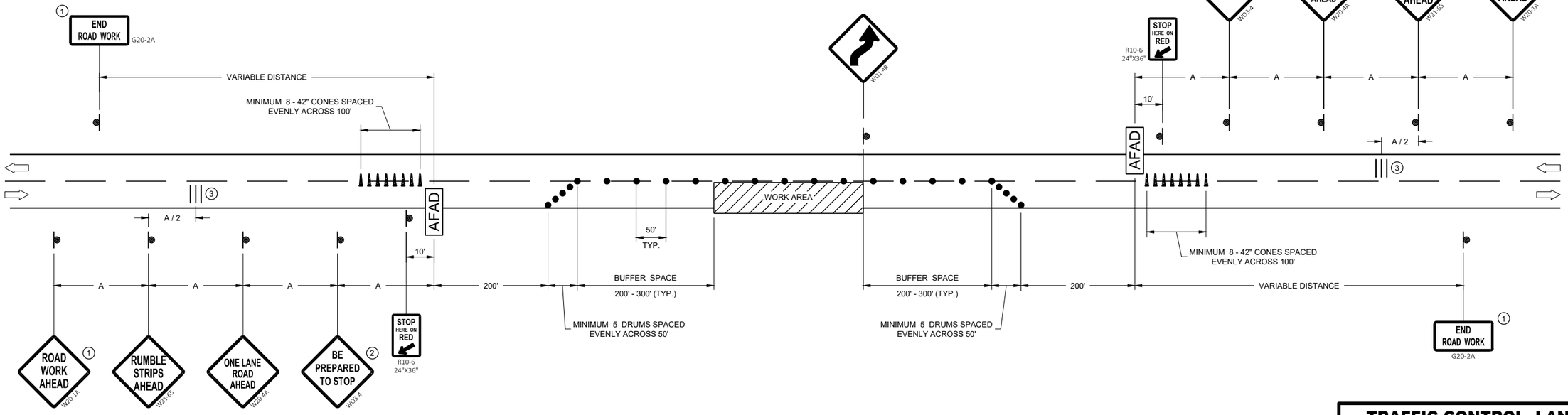
(3) EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS PLACED TRANSVERSELY AT THE LOCATIONS SHOWN. WITHIN EACH ARRAY, SPACING BETWEEN RUMBLE STRIPS SHALL BE 15 FEET ON CENTER.



STOP/SLOW PADDLE ON SUPPORT STAFF

SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

SPEED LIMIT	SPACING "A"
25-30 MPH	200'
35-40 MPH	350'
45-55 MPH	500'



TRAFFIC CONTROL, LANE CLOSURE WITH AUTOMATED FLAGGER ASSISTANCE DEVICE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

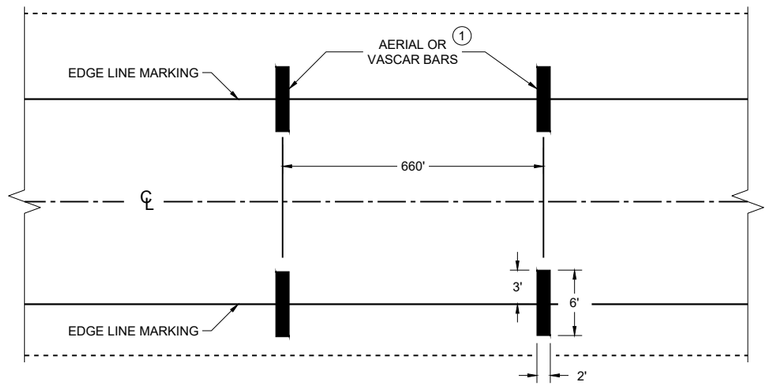
APPROVED
May 2022 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINEER
FHWA

SDD 15C12 - 09b

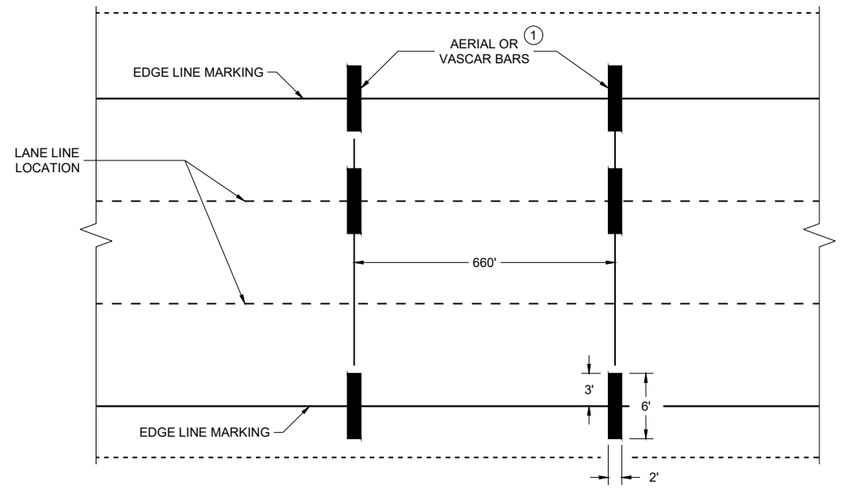
SDD 15C12 - 09b

GENERAL NOTES

(1) PLACE TWO TO FIVE AERIAL OR VASCAR BARS AT 660 FOOT SPACING.



TYPICAL FOR TWO WAY OR ONE WAY TRAFFIC



TYPICAL FOR MULTILANE TRAFFIC

SPEED ENFORCEMENT ZONE WITH AERIAL OR VASCAR BARS

AERIAL ENFORCEMENT BARS PAVEMENT MARKING DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2025 — DATE
/S/ Matthew R. Rauch — STATE SIGNING AND MARKING ENGINEER

FHWA

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SDD 15C14-05

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SDD 15C14-05

LEGEND

V1 LEAD VEHICLE

V2 MARKING VEHICLE

V3 SHADOW VEHICLE

TRUCK MOUNTED ATTENUATOR (TMA)

SIGN ON TEMPORARY SUPPORT

DIRECTION OF TRAFFIC

GENERAL NOTES

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

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

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

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

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

WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR LAY STATIONARY SIGNS AND SUPPORTS FLAT ON THE GRADE WITH

WORKERS SHALL NOT PERFORM WORK FROM ANY SHADOW OR PROTECTION VEHICLES.

UPRIGHTS ORIENTED PARALLEL TO AND DOWNSTREAM FROM TRAFFIC.

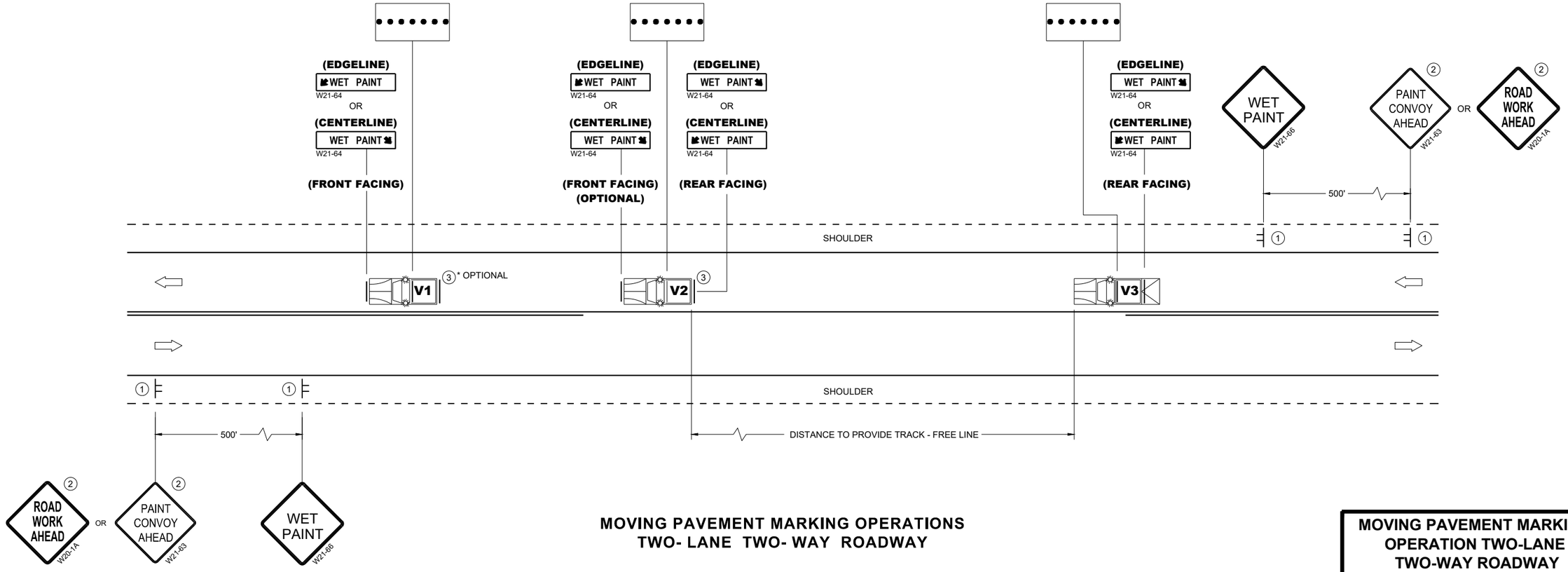
CONES SHOULD BE USED BETWEEN THE MARKING AND SHADOW VEHICLE AT 100 FOOT SPACING. CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.

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

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

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

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



MOVING PAVEMENT MARKING OPERATIONS
TWO- LANE TWO- WAY ROADWAY

MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

6

SDD 15C19-11a

SDD 15C19-11a

GENERAL NOTES

SIGNING AND MARKING IS SHOWN AS TYPICAL PLACEMENT. FIELD CONDITIONS MAY DICTATE CHANGES IN SIGNING AND MARKING PLACEMENT.

(1) USED ONLY WHEN APPROVED BY REGION TRAFFIC ENGINEER.

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

** SIGNS MAY BE OMITTED IF SPACE DOES NOT PERMIT PLACEMENT.

*** IF POSTED SPEED IS 45 MPH OR GREATER, PLACE W5-54 SIGN UNDER R4-7 SIGN. MOUNT W5-54 SIGN AT 4' MOUNTING HEIGHT (TOP OF ROADWAY TO BOTTOM OF SIGN).

LEGEND

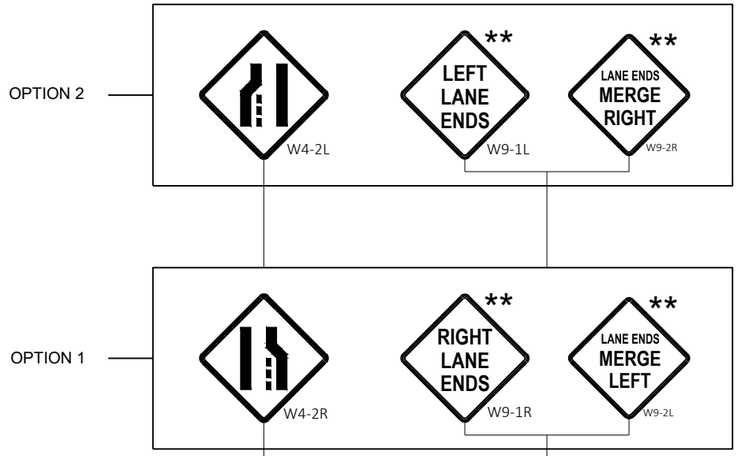
A DISTANCE DEPENDENT ON SPEED (SEE TABLE)

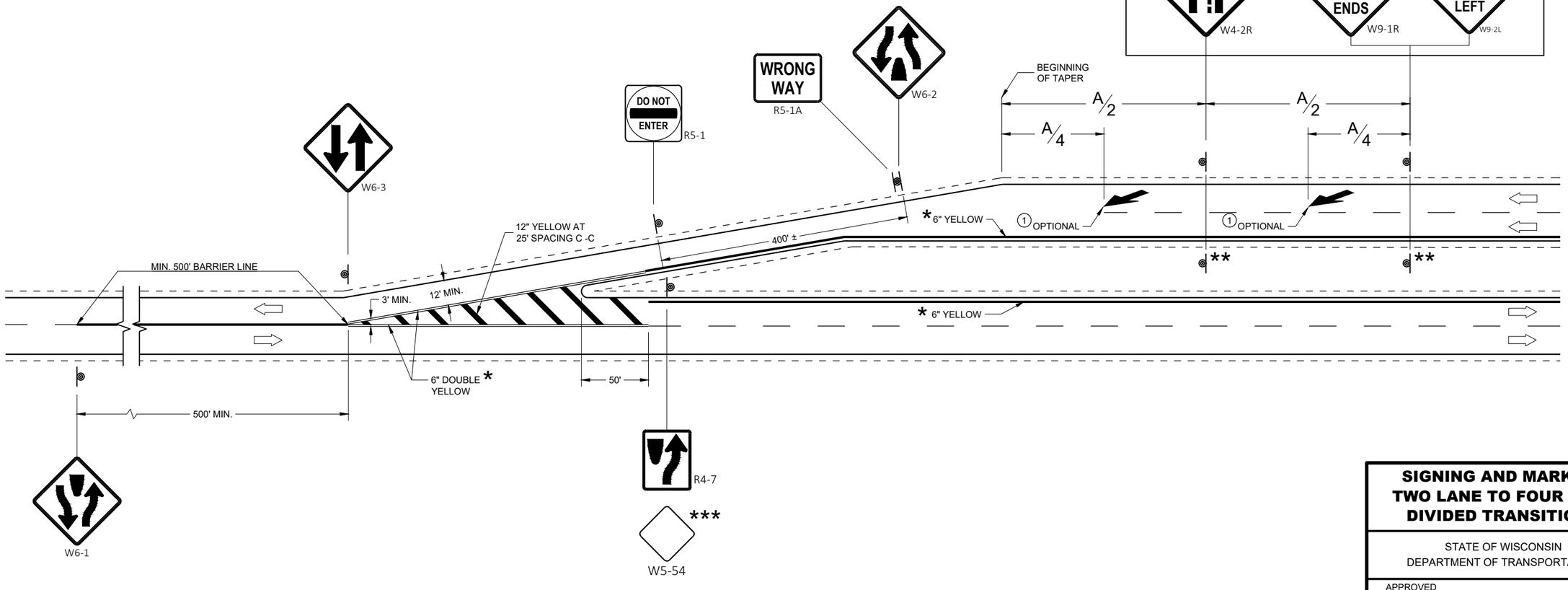
SIGN MOUNTED ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC

DISTANCE TABLE

POSTED OR 85TH PERCENTILE SPEED	DISTANCE "A"
25	325'
30	460'
35	565'
40	670'
45	775'
50	885'
55	990'
65	1200'
70	1250'





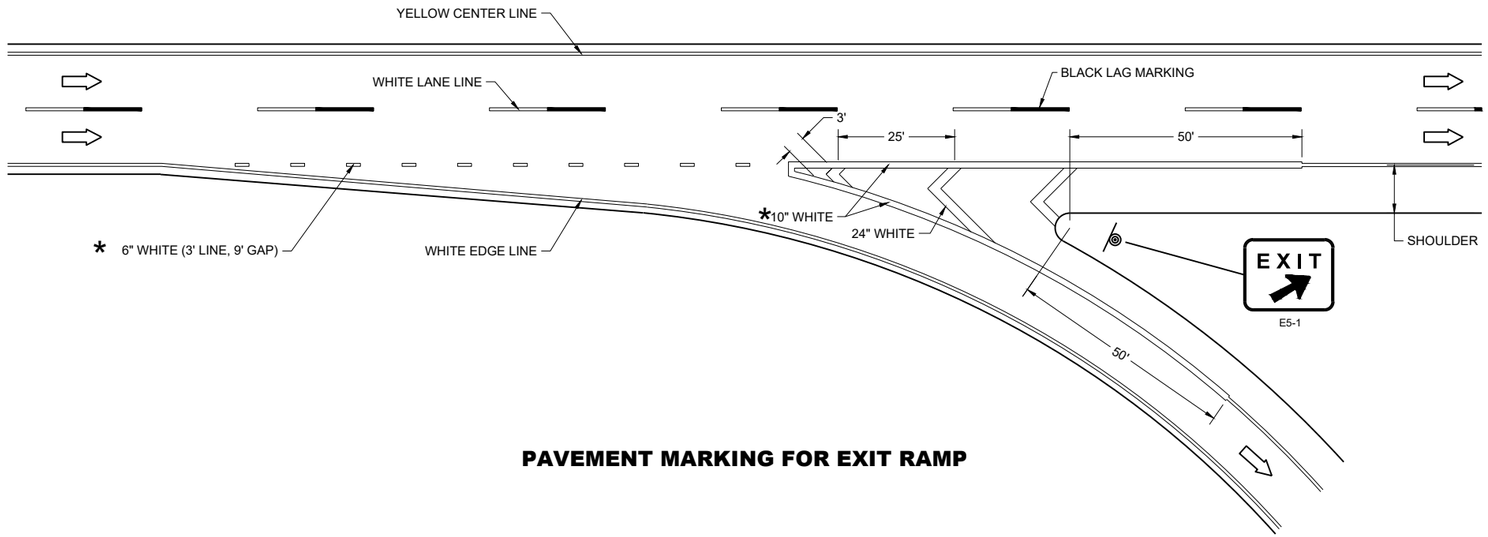
SIGNING AND MARKING TWO LANE TO FOUR LANE DIVIDED TRANSITIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

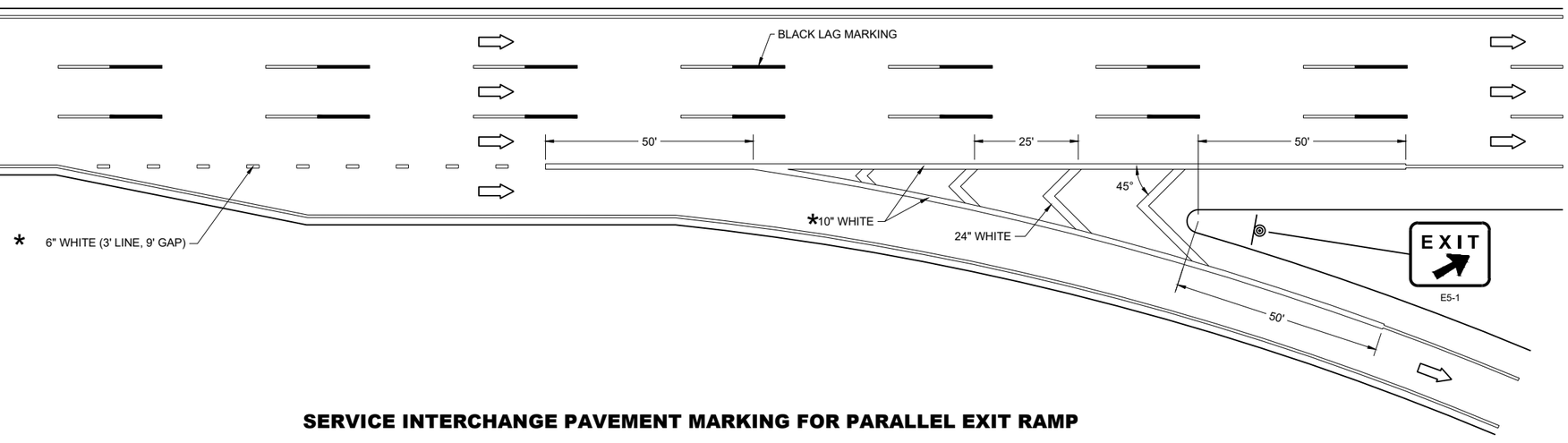
APPROVED
May 2023 — DATE
/S/ Matthew Rauch — STATE SIGNING AND MARKING ENGINEER

FHWA

6
SDD 15C21-11



PAVEMENT MARKING FOR EXIT RAMP



SERVICE INTERCHANGE PAVEMENT MARKING FOR PARALLEL EXIT RAMP

GENERAL NOTES

PLACE GROOVE 3 INCHES LEFT OF JOINT.

LEGEND

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAVEL

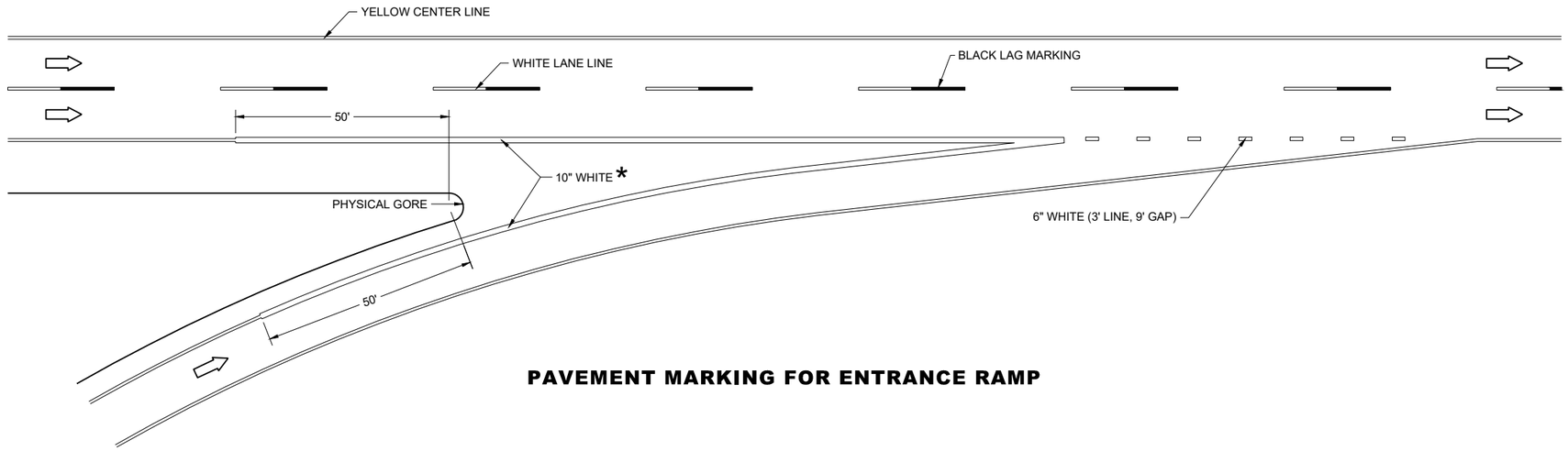
*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

PAVEMENT MARKING, EXIT RAMP AND PARALLEL EXIT RAMP

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

PLACE GROOVE 3 INCHES LEFT OF JOINT.

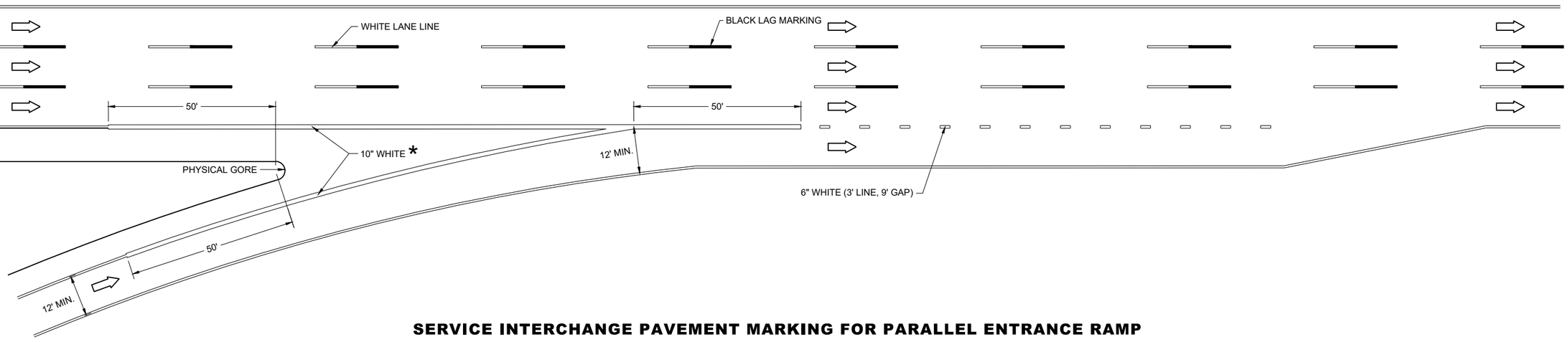


PAVEMENT MARKING FOR ENTRANCE RAMP

LEGEND

DIRECTION OF TRAVEL

*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



SERVICE INTERCHANGE PAVEMENT MARKING FOR PARALLEL ENTRANCE RAMP

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SDD 15C31-08c

SDD 15C31-08c

PAVEMENT MARKING, ENTRANCE RAMP AND PARALLEL ENTRANCE RAMP

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

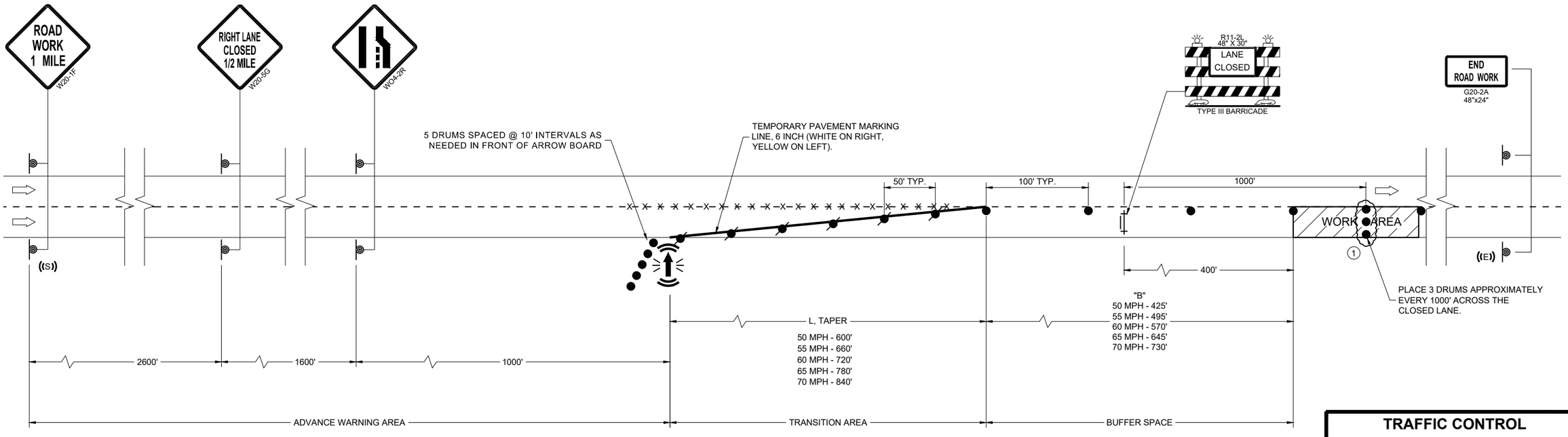
ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP OR INTERSECTION. THE LANE CLOSURE MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE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

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

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

LEGEND

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



TRAFFIC CONTROL LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

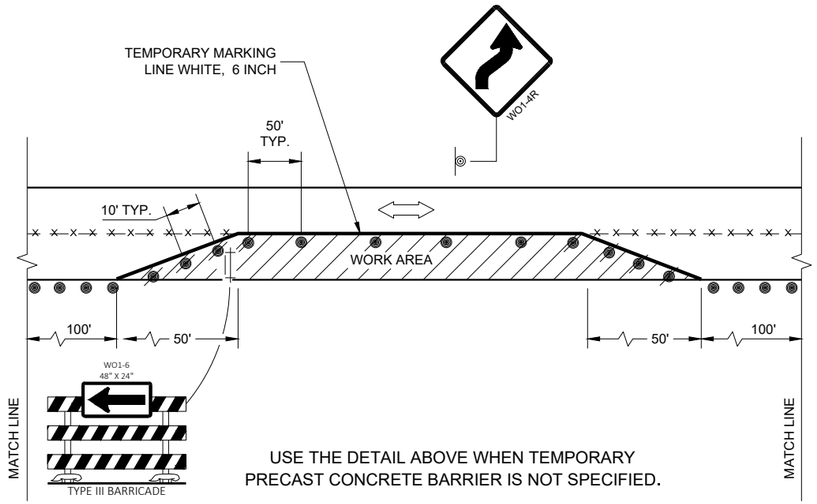
APPROVED
November 2025 — DATE
/S/ Andrew Heidtke — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

FHWA

6
SDD 15D12-16a

LEGEND

- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- FLAGS, 16" X 16" MIN. (ORANGE)
- REMOVING PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- ASPHALTIC PAVEMENT WIDENING
- CONCRETE BARRIER TEMPORARY PRECAST
- TEMPORARY SIGNAL. SEE SDD 09G02 FOR EXACT PLACEMENT



USE THE DETAIL ABOVE WHEN TEMPORARY PRECAST CONCRETE BARRIER IS NOT SPECIFIED.

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 TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE..

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

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

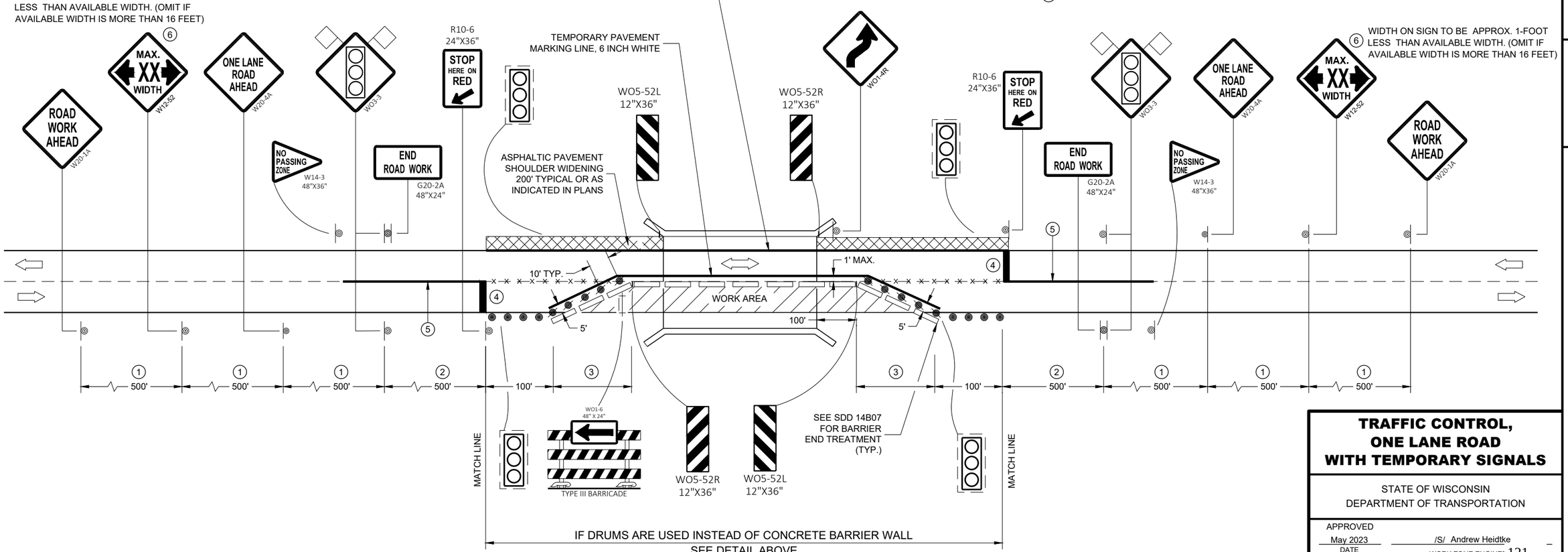
"WO" IS THE SAME AS "W" EXCEPT THE BACKGROUND IS ORANGE.

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.

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

INSTALL OVERHEAD TEMPORARY SIGNAL HEADS ABOVE THE MIDDLE OF THE TRAVEL LANE THEY ARE CONTROLLING.

1. 500 FOOT SPACING SHOWN IS FOR ROADWAYS WITH A PRE-CONSTRUCTION REGULATORY SPEED LIMIT OF 45 MPH OR MORE. FOR 35 - 40 MPH, USE 350 FOOT TYPICAL SPACING. FOR 25 - 30 MPH, USE 200 FOOT TYPICAL SPACING.
2. USE 300 FOOT SPACING IF THE PRE - CONSTRUCTION REGULATORY SPEED IS 35 MPH OR LESS.
3. DIMENSION DETERMINED BY CBTP TAPER FROM EDGE LINE TO TANGENT SECTION OF THE ROAD.
4. TEMPORARY PAVEMENT MARKING LINE, 18 INCH WHITE STOP LINE.
5. 700 FOOT TEMPORARY PAVEMENT MARKING LINE, 6 INCH DOUBLE YELLOW . WHEN THE DISTANCE FOR THE PRECEDING NO - PASSING ZONE IS LESS THAN THE MINIMUM DISTANCE BETWEEN ZONES AS INDICATED IN THE SPECIFICATIONS, THE TWO ZONES SHALL BE CONNECTED.
6. SEE SDD 15C02 - SHEET "F" FOR ADVANCED WIDTH RESTRICTION SIGNING.



TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6
SDD 15D33-09

LEGEND

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

GENERAL NOTES

RIGHT CLOSURE SHOWN (LEFT LANE CLOSURE SIMILAR)

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

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

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

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

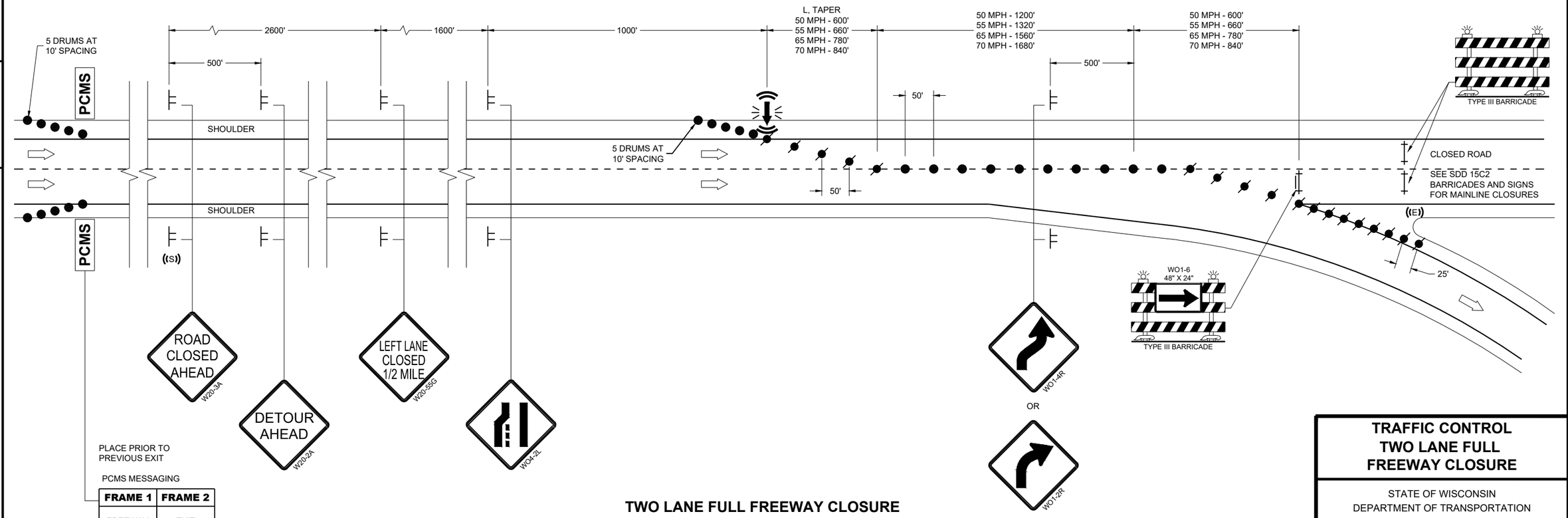
WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROL SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND / OR THE SPECIAL PROVISIONS OR AS DIRECTED BY THE ENGINEER.

PLACE A TYPE III BARRICADE APPROXIMATELY EVERY 1000' ACROSS EACH CLOSED LANE TO HELP REINFORCE THE DRUM LINE.

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

REFER TO DETOUR ROUTES FOR TRAFFIC GUIDANCE SIGNING.

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



PLACE PRIOR TO PREVIOUS EXIT

PCMS MESSAGING

FRAME 1	FRAME 2
FREEWAY CLOSED	EXIT AHEAD

TWO LANE FULL FREEWAY CLOSURE

TRAFFIC CONTROL
TWO LANE FULL
FREEWAY CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2025 — DATE
/S/ Andrew Heidtke
FHWA

6
SDD 15D42-04

LEGEND

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

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

GENERAL NOTES

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

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

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

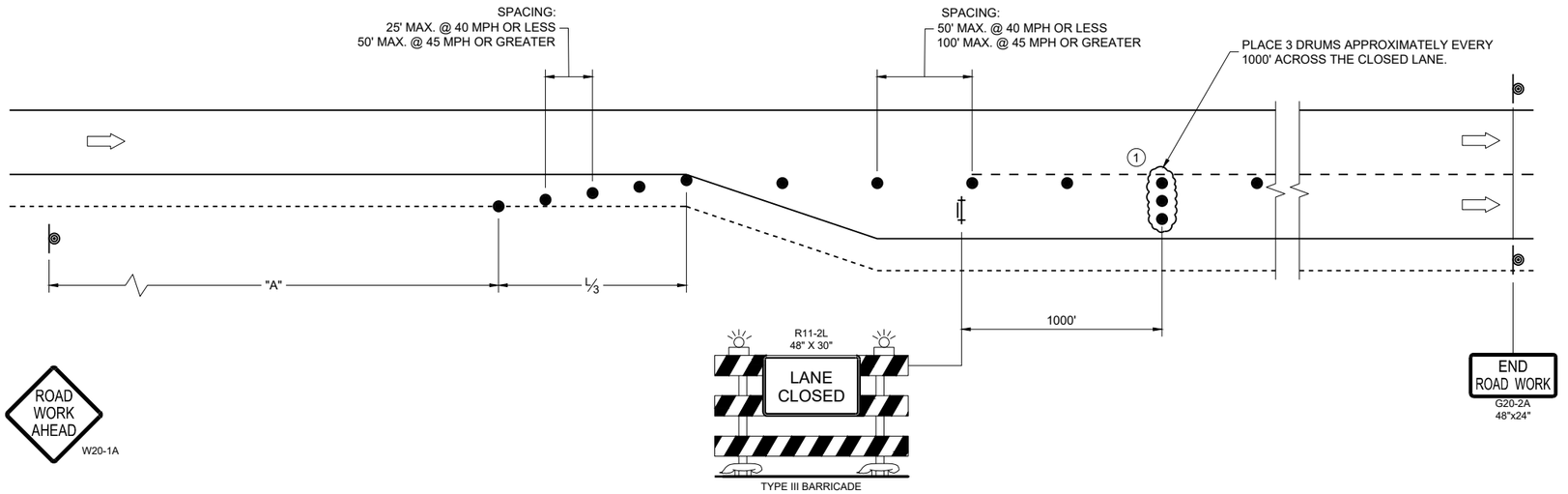
ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

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

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

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

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



TRAFFIC CONTROL
ADDED LANE CLOSURE
WITHOUT LANE SHIFT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2025 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINEER

FHWA

6
SDD 15D50-04a

LEGEND

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

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

GENERAL NOTES

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

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

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

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

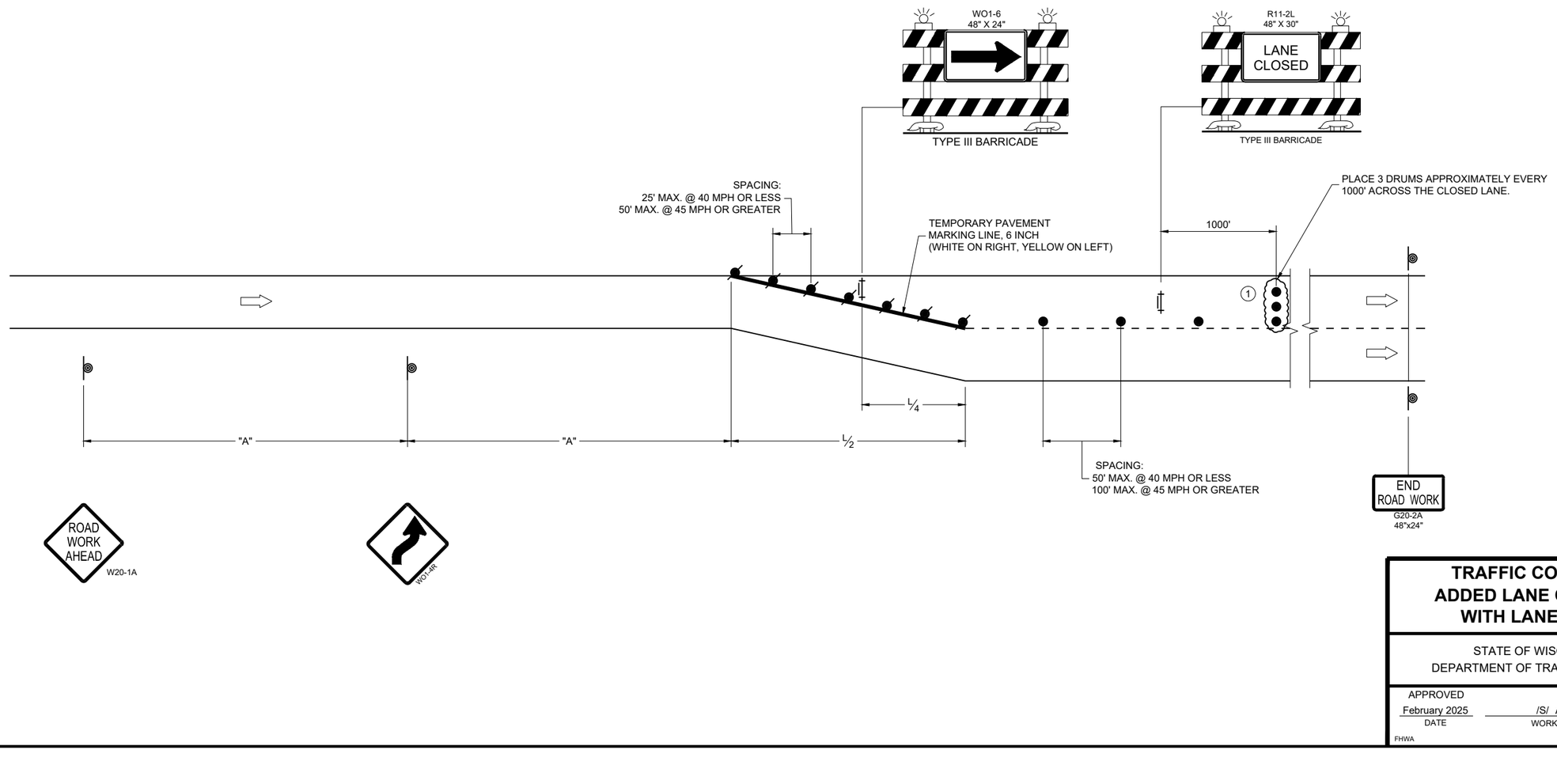
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

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

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

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

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



TRAFFIC CONTROL, ADDED LANE CLOSURE WITH LANE SHIFT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2025 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINEER
FHWA

6
SDD 15D50-04b

LEGEND

V1 WORK VEHICLE

V2 SHADOW VEHICLE

TRUCK MOUNTED ATTENUATOR (TMA)

FLASHING ARROW PANEL (CAUTION)

WORK AREA

DIRECTION OF TRAFFIC

POSTED SPEED PRIOR TO WORK STARTING (MPH)	DECISION SIGHT DISTANCE (D)
0 - 25	550'
30	550'
35	700'
40	700'
45	900'
50	900'
55	1200'

GENERAL NOTES

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.

MOBILE IS WORK THAT MOVES CONTINUOUSLY OR MOVES AT LEAST THE DECISION SIGHT DISTANCE EVERY 15 MINUTES.

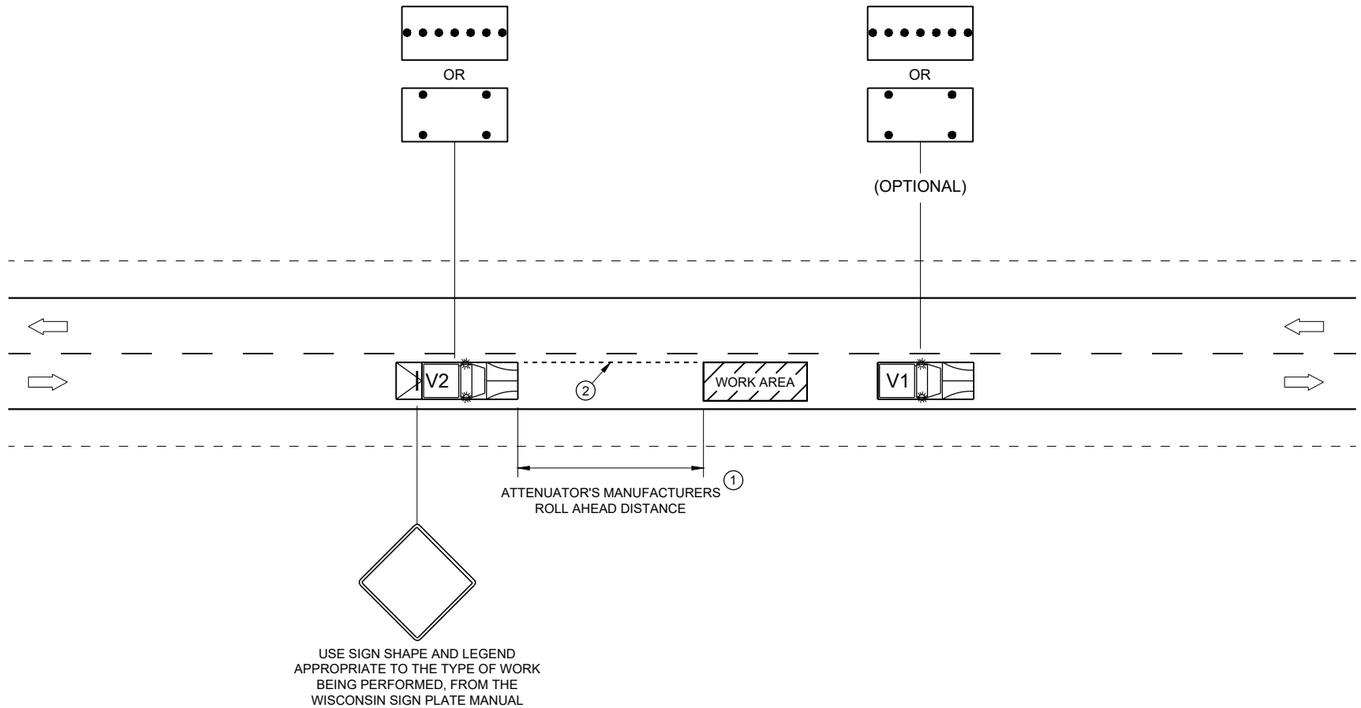
ALL VEHICLES SHALL BE EQUIPPED WITH TWO 360 DEGREE HIGH INTENSITY YELLOW FLASHING LIGHTS OR STROBE LIGHTS AND OPERATED WITH HEADLIGHTS TURNED ON.

ALL ARROW PANELS SHALL BE REAR FACING, TYPE "B" OR "C", AND DISPLAYING THE FLASHING CAUTION MODE. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE ARROW PANEL.

USE AN ATTENUATOR ON THE REARMOST VEHICLE THAT BLOCKS ALL OR PART OF THE TRAFFIC LANE.

(1) DISTANCE BETWEEN VEHICLES MAY INCREASE FROM THE ATTENUATOR'S ROLL AHEAD BASED ON TERRAIN, SIGHT DISTANCE, AND OTHER FACTORS. WHENEVER ADEQUATE STOPPING SIGHT DISTANCE EXISTS TO THE REAR, SHADOW VEHICLES SHOULD MAINTAIN THE MINIMUM DISTANCE FROM THE WORK VEHICLE AND PROCEED AT THE SAME SPEED AS THE WORK VEHICLE. SHADOW VEHICLES SHOULD SLOW DOWN IN ADVANCE OF VERTICAL OR HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.

(2) ALIGN LEFT SIDE OF SHADOW VEHICLE WITH EDGE OF WORK AREA.



TRAFFIC CONTROL, MOBILE OPERATIONS ON AN UNDIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

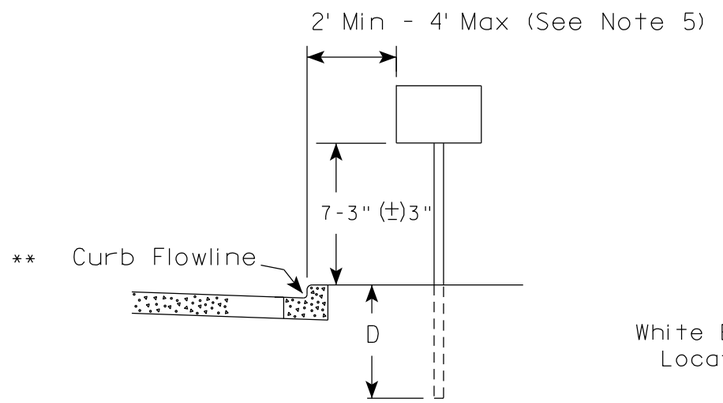
APPROVED
February 2021 — DATE
/S/ Andrew Heidtke — STATEWIDE WORK ZONE T SAFETY ENGINEER

FHWA

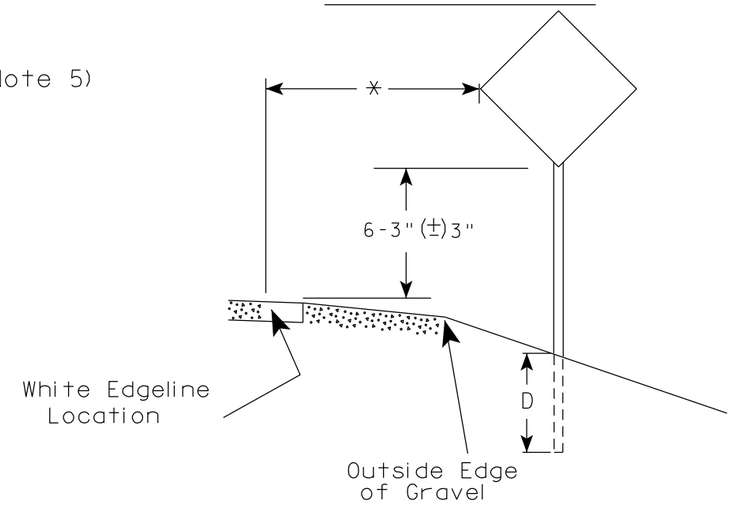
6

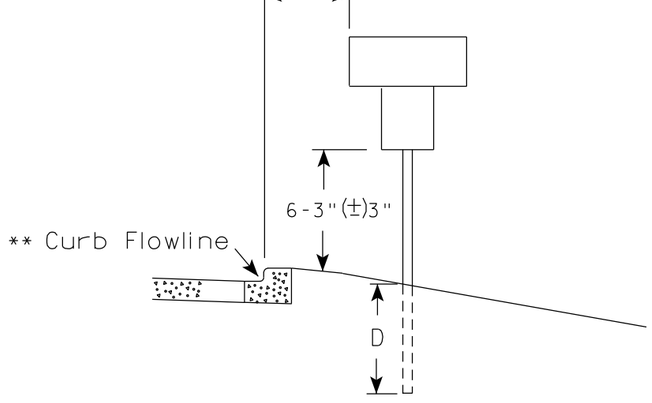
SDD 15D51 - 01

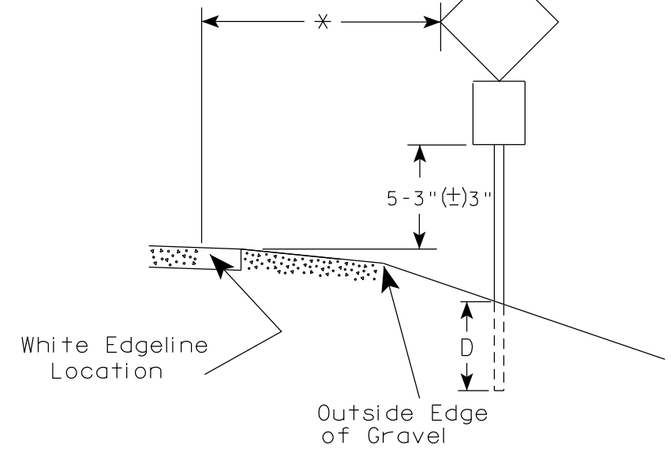
URBAN AREA



RURAL AREA (See Note 2)







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

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

POST EMBEDMENT DEPTH

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

GENERAL NOTES

1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on or behind barrier wall, see A4-10 sign plate.
   The Double Arrow sign (W12-1D) shall be mounted at a height of 2'-3" (±) 3". The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±) 3".
3. For expressways and freeways, mounting height is 7'- 3" (±) 3" or 6'-3" (±) 3" depending upon existence of a sub-sign.
4. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±) 3".
5. Offset distance shall be consistent with existing signs or consistent throughout length of project.
6. Folding signs shall be mounted at a height of 5'-3" (±) 3" or as directd by the Engineer.

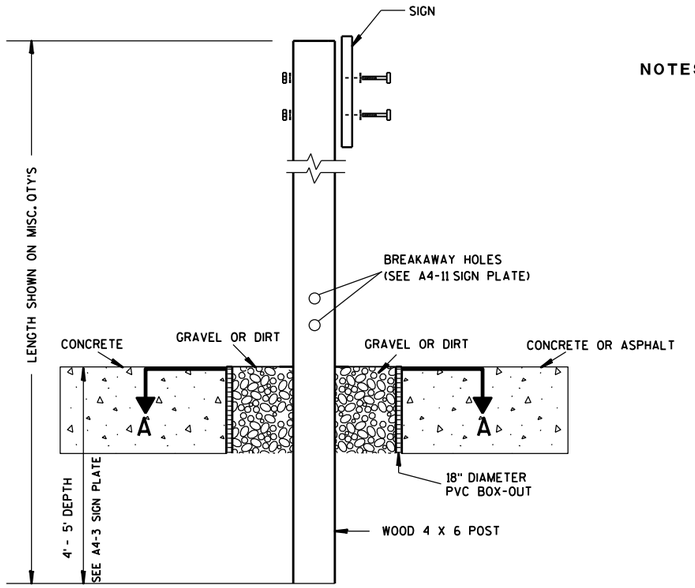
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

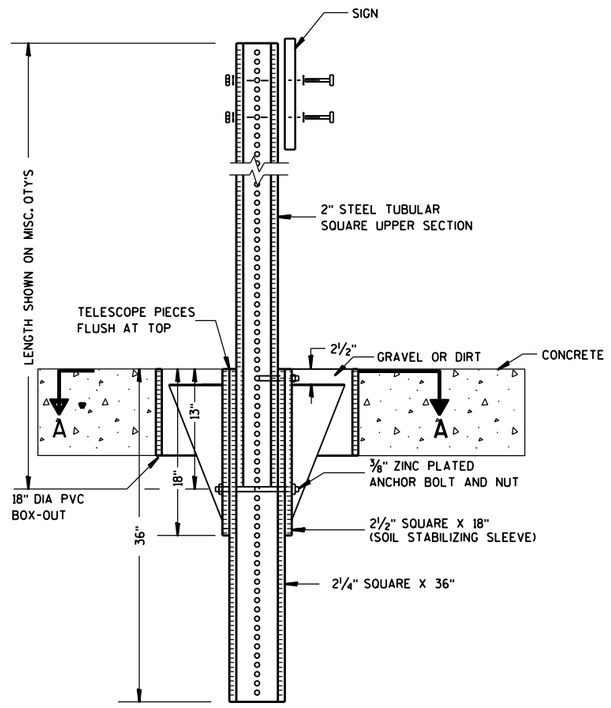
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 126	E



ELEVATION VIEW

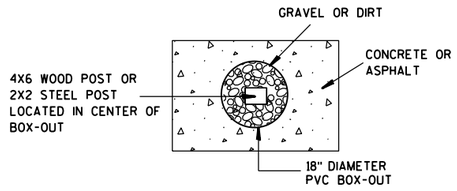
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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



ELEVATION VIEW

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



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B

WISCONSIN DEPT OF TRANSPORTATION

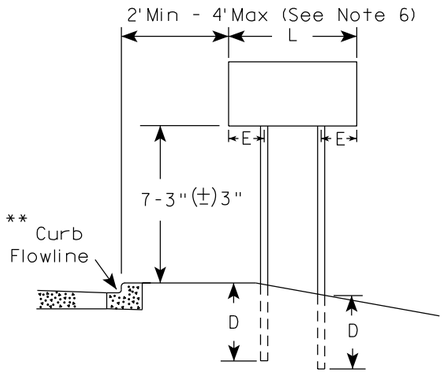
APPROVED Matthew R Rauch
for State Traffic Engineer

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

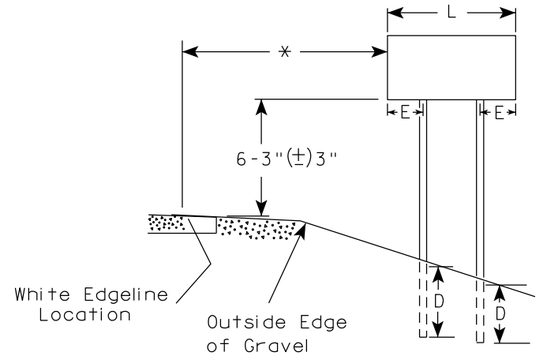
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

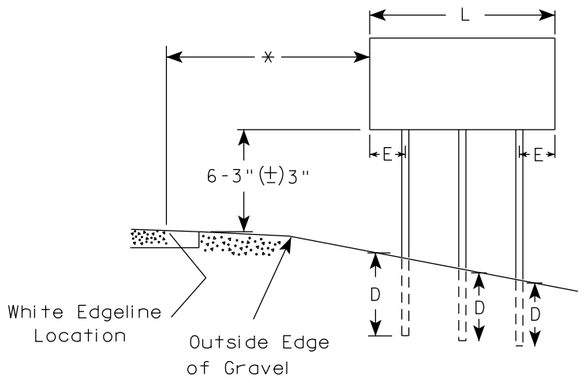
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

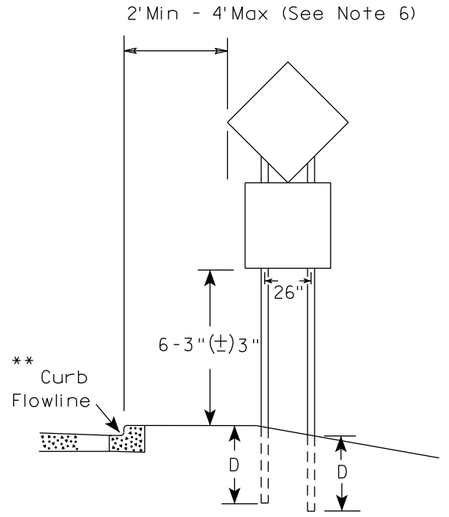
URBAN AREA



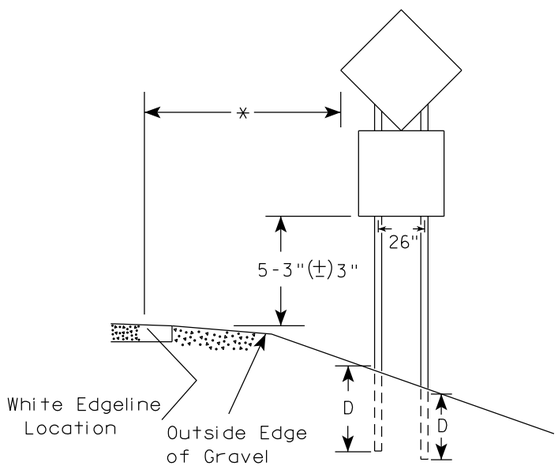
RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

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

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

GENERAL NOTES

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

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

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

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

POST EMBEDMENT DEPTH

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

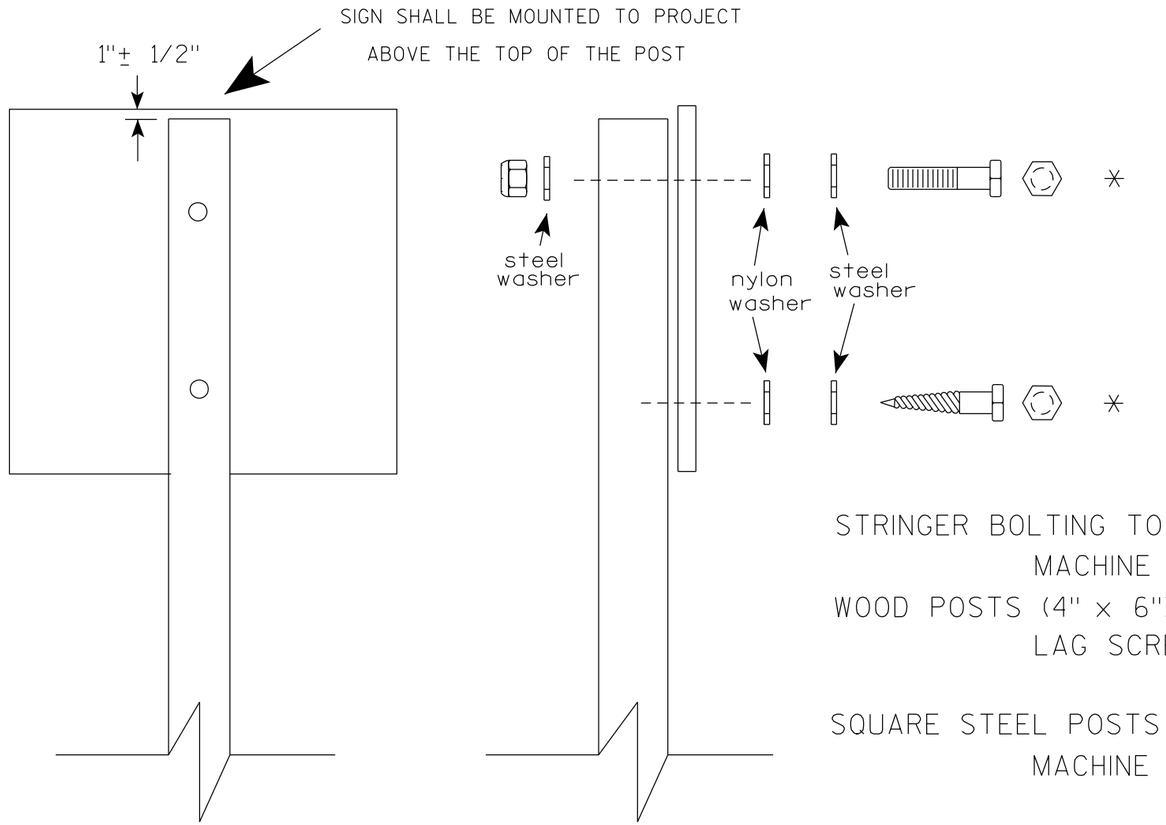
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 128	E



Nuts, bolts and lags used for mounting signs shall have hexagonal heads and shall be either :

a. Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3

b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

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

STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)

MACHINE BOLTS - 5/16" X 1-3/4" Length w/ lock nuts

WOOD POSTS (4" x 6")

LAG SCREWS - 3/8" X 3" (NO STRINGERS ON BACK OF SIGN)
3/8" X 4" (STRINGERS ON BACK OF SIGN)

SQUARE STEEL POSTS (2" x 2")

MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)
3/8" X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)

RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL
O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

WASHERS (ALL POSTS) -

1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON

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

ATTACHMENT OF SIGNS TO POSTS

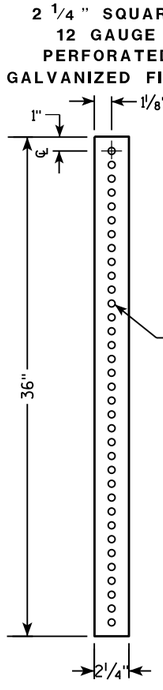
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

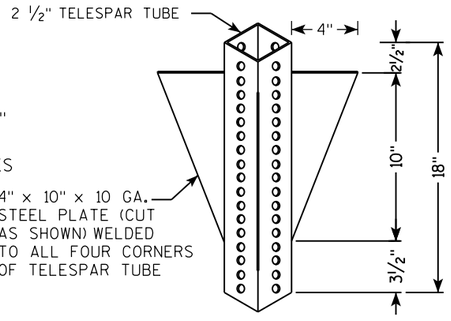
DATE 4/1/2020 PLATE NO. A4-8.9

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

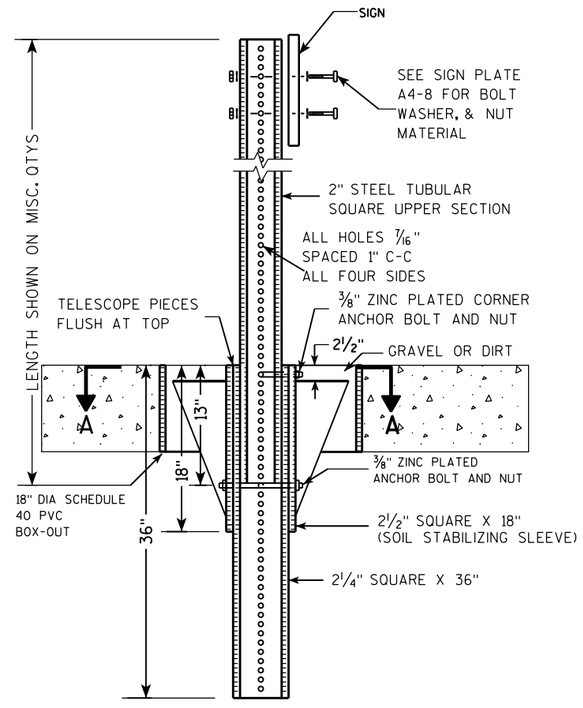
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



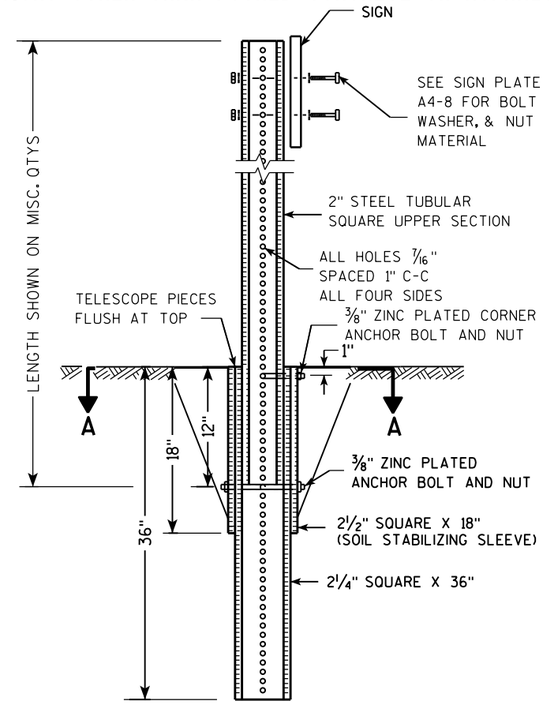
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

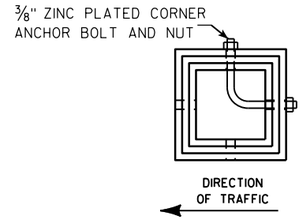


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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





SECTION A-A

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

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

TUBULAR STEEL
SIGN POST
A4-9

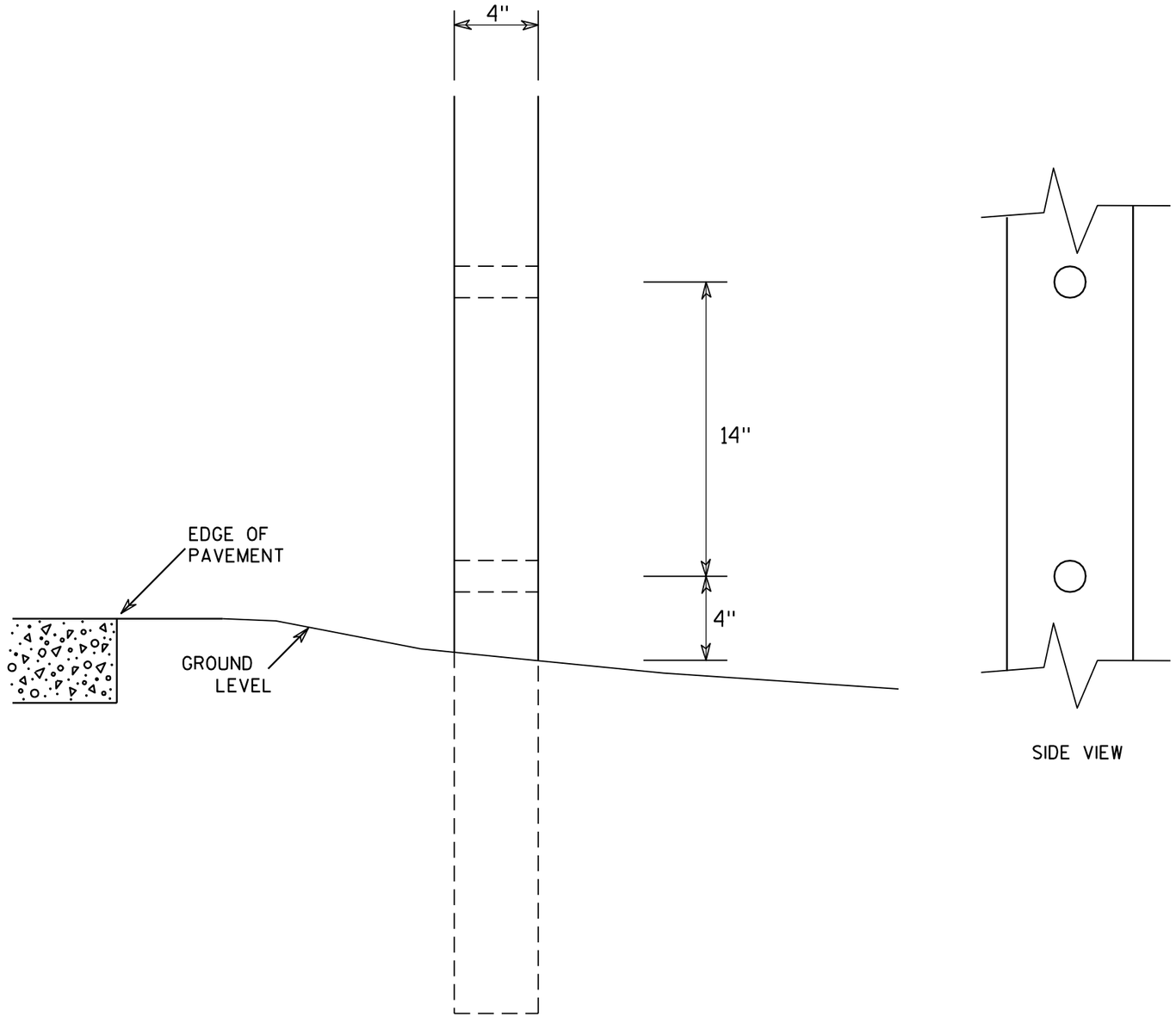
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE A4-9.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

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



SIDE VIEW

GENERAL NOTES

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

7

7

4 X 6 WOOD POST MODIFICATIONS

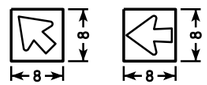
WISCONSIN DEPT OF TRANSPORTATION

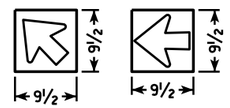
APPROVED Chester J Spang for State Traffic Engineer

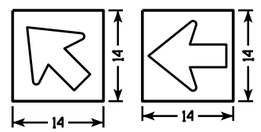
DATE 3/27/97 PLATE NO. A4-11.2

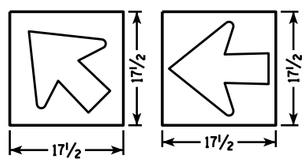
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 131	E

SIGN LAYOUT WITH VARIOUS SIZED MESSAGES







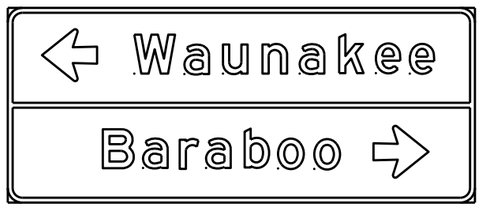


GENERAL NOTES

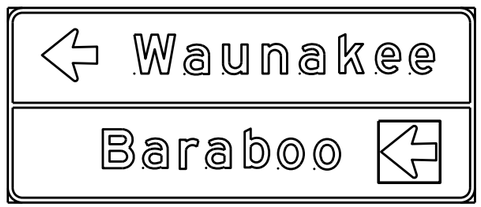
1. Materials shall conform to Standard Specification Section 637.
   Base - Sheet Aluminum 0.040" Thickness
   Sheeting - Orange Type F Reflective
   Arrow - Black Non-Reflective
2. Arrow signs shall be fastened to permanent sign by either aluminum rivets or aluminum self-tapping sheet metal screws. There shall be a minmum of 2 fasteners used per arrow sign.
3. There shall be a spacer consisting of a 0.08" nylon washer between the back of the arrow sign and the face of the permanent sign.
4. Arrows are per standard plate A1-2
5. Use separate arrow sign for each destination
6. Tilt arrow is always at 45 degrees
7. Arrow is centered on arrow sign

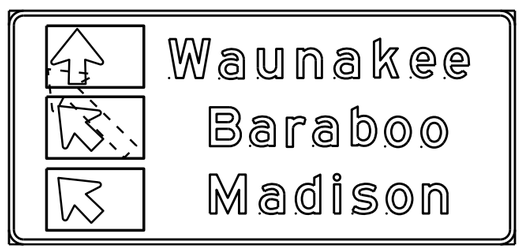
Lower Case Copy Size	Standard Width (Single Arrow)	2 Line Tilt Arrow Cover Width	3 Line Tilt Arrow Cover Width	Height
3¾" Series C	8	9 ½	14 ½	8
4½" Series D & E	9 ½	10	15	9 ½
6" Series D & E	14	16	20 ½	14
8" Series E	17 ½	20 ½	25	17 ½

BEFORE



AFTER





DESTINATION DIRECTIONAL ARROW FOR DETOUR SIGNS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/08/14

A4-12.2

PROJECT NO:

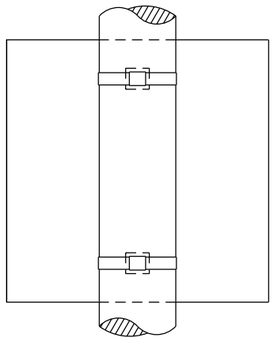
SHEET NO: E

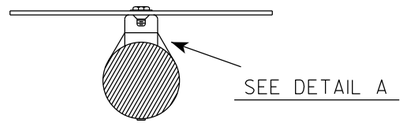
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A412.DGN PLOT DATE : 08-OCT-2014 11:50 PLOT BY : mscsja

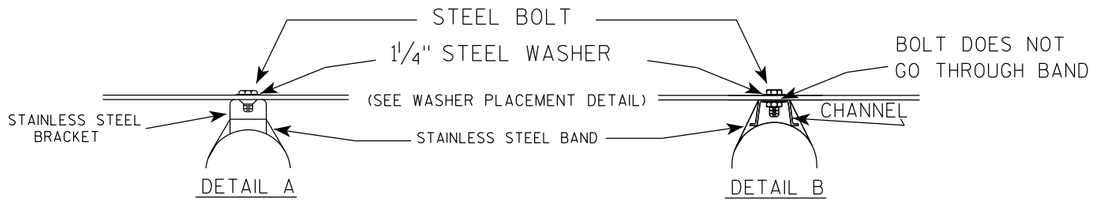
WISDOT/CADDS SHEET 42

BANDING

SINGLE SIGN



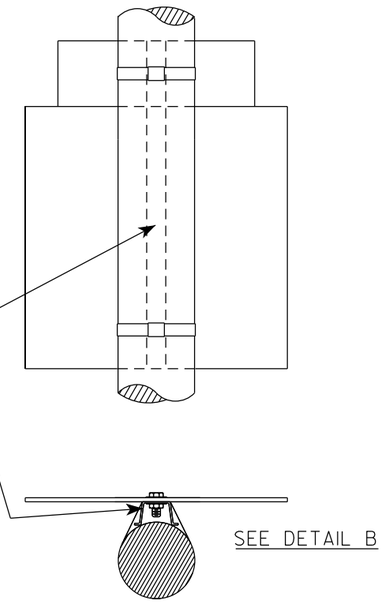




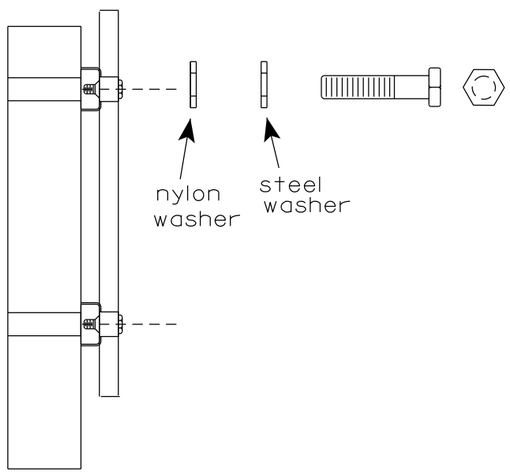
GENERAL NOTES

1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be ¾" in width and 0.025" thickness.
4. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
   a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
   b. Electro-galvanized in accordance with ASTM designation: B 633, Type III, SC 3

"J" ASSEMBLY



WASHER PLACEMENT



WASHERS (ALL POSTS) -
1-1/4" O.D. X ⅜" I.D. X 1/16" STEEL
1-1/4" O.D. X ⅜" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

STANDARD SIGN
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

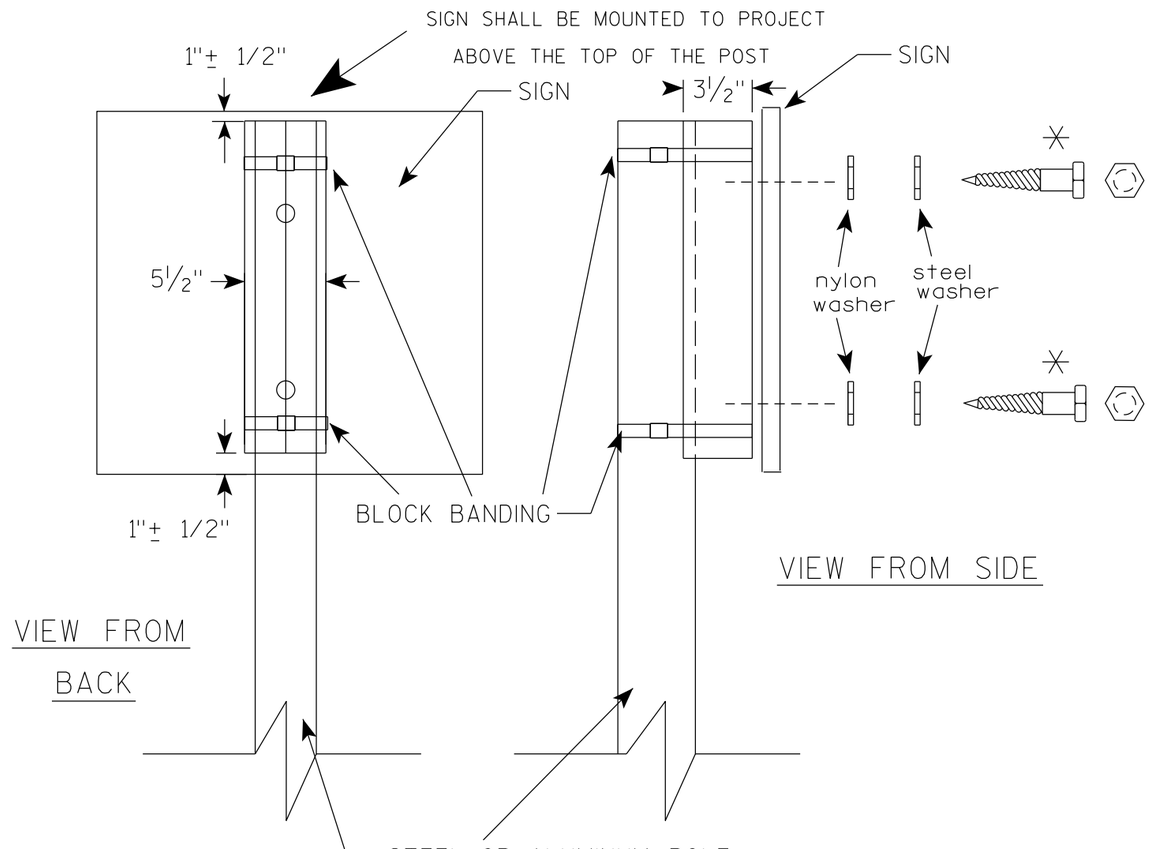
DATE 6/10/19 PLATE NO. A5-9.4

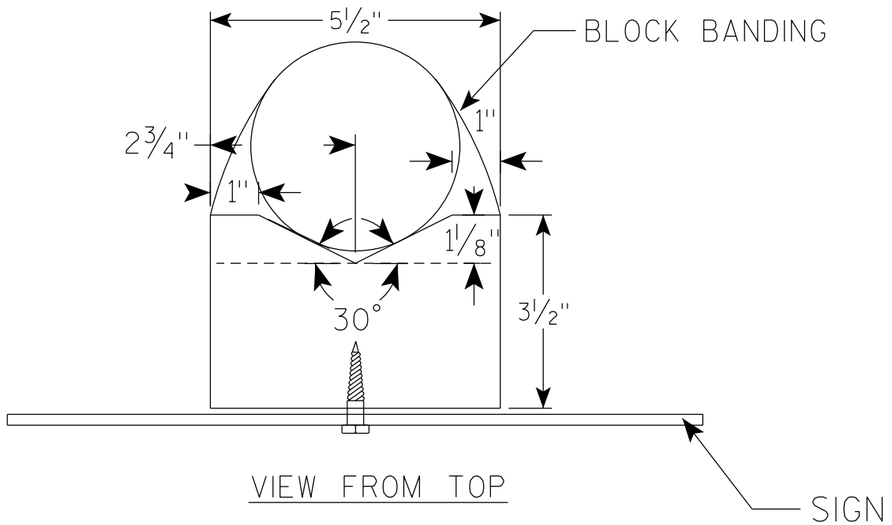
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 133	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A59.dgn PLOT DATE : 10-JUN 2019 4:10 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42

7

7





GENERAL NOTES

1. WOOD 4"X6" POST MATERIAL SHALL CONFORM TO 507.2.2 OF THE WisDOT STANDARD SPECIFICATIONS
2. BLOCK BANDING AND CLIPS SHALL BE STAINLESS STEEL, ¾" WIDTH AND 0.025" THICKNESS
3. SIGNS 3' OR GREATER IN HEIGHT SHALL UTILIZE 3 BLOCK BANDS. SIGNS UNDER 3' IN HEIGHT SHALL UTILIZE 2 BLOCK BANDS
4. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA, BUT NORNALLY THERE ARE TWO. FOR SIGNS GREATER THAN 9 S.F. 3 FASTENERS SHALL BE USED.
5. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
   a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
   b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3
6. ALL BOLTS SHALL HAVE HEXAGONAL HEADS.
7. STEEL WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X 1/16"
8. NYLON WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

✳ LAG BOLTS SHALL BE ⅜" X 2½"

BLOCK BANDING DETAIL (V-BLOCK OPTION)

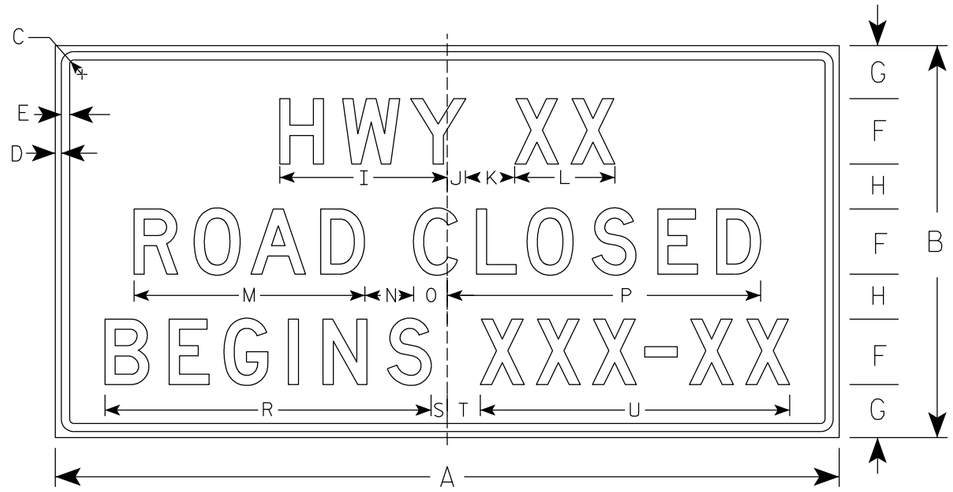
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

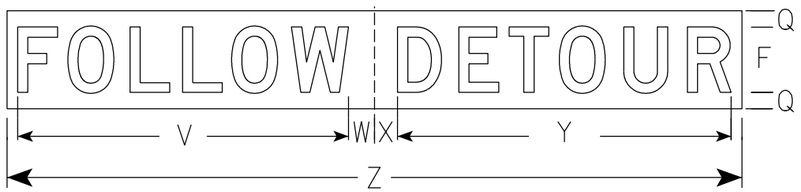
PROJECT NO:

SHEET NO: 134 E



G20-57C

PLAQUE ON .040" ALUMINUM



USE ONLY ONCE WHEN ROAD IS CLOSED

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - D
4. Substitute appropriate numeral and adjust spacing to achieve proper balance.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2																											
3	72	36	1 1/8	1/2	5/8	6	5	4	15 5/8	1 5/8	5	9 1/4	21 1/8	5	2 7/8	29	2	30	1 3/4	3 1/4	28 3/8	40 1/2	2	2	29 3/4	66	18.0
4	96	48	2 1/4	3/4	1	8	6 1/2	5 1/2	20 5/8	2 1/4	6	12 1/4	28 1/4	6	4 1/8	38 3/8	2	39 7/8	2	4	37 7/8	29 3/4	3 1/8	2 7/8	40 7/8	90	32.0
5																											

STANDARD SIGN
G20-57C

WISCONSIN DEPT OF TRANSPORTATION

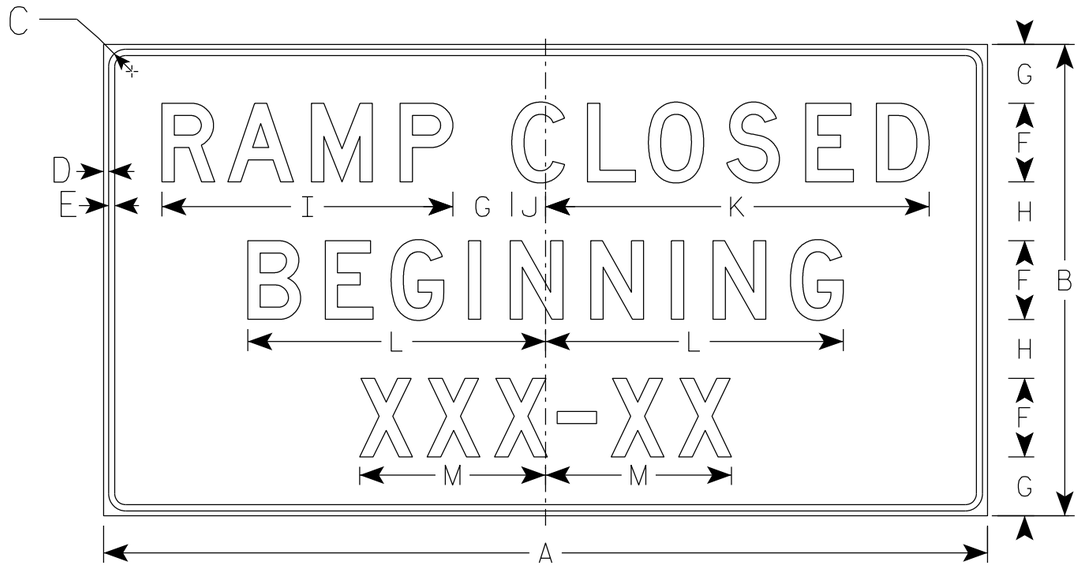
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/25/19 PLATE NO. G20-57C.1

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 135 E

NOTES

1. Sign is Type II- Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - D



G20-58

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	72	36	1 5/8	5/8	3/4	6	5	4	22 1/4	2 3/8	29 1/2	22 3/4	14 1/4														18.0
3	90	48	1 5/8	5/8	3/4	8	6	6	29 5/8	3 3/8	39	30 3/8	19														30.0
4																											
5																											

STANDARD SIGN
G20-58

WISCONSIN DEPT OF TRANSPORTATION

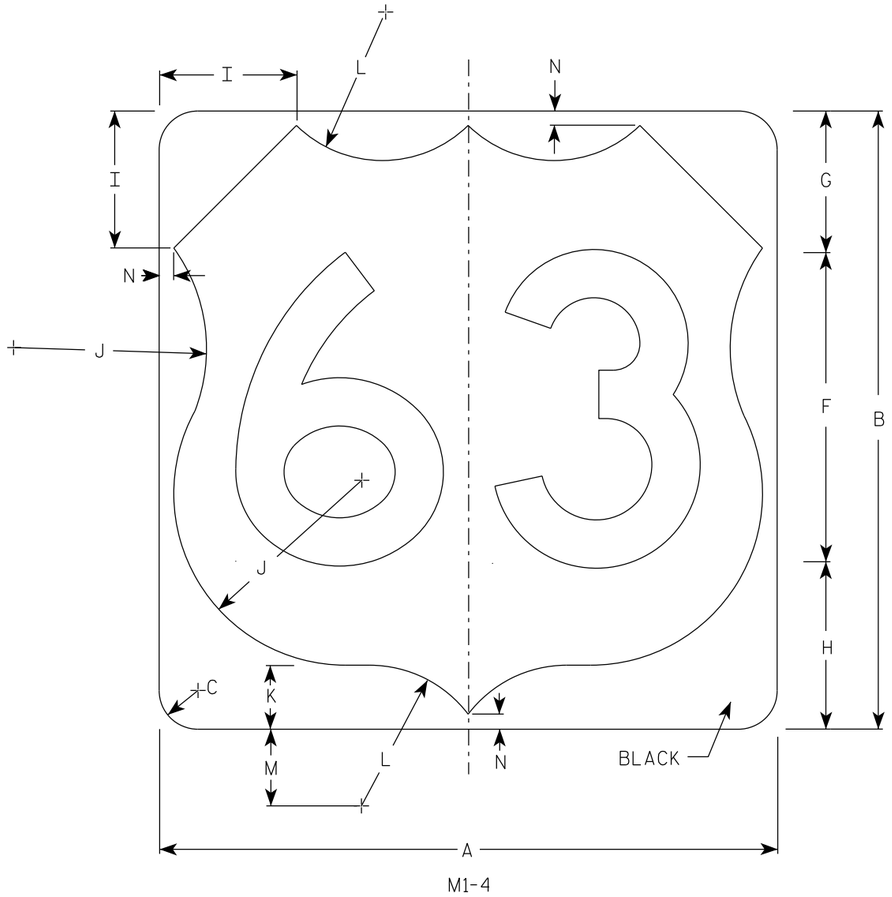
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/19/2020 PLATE NO. G20-58.2

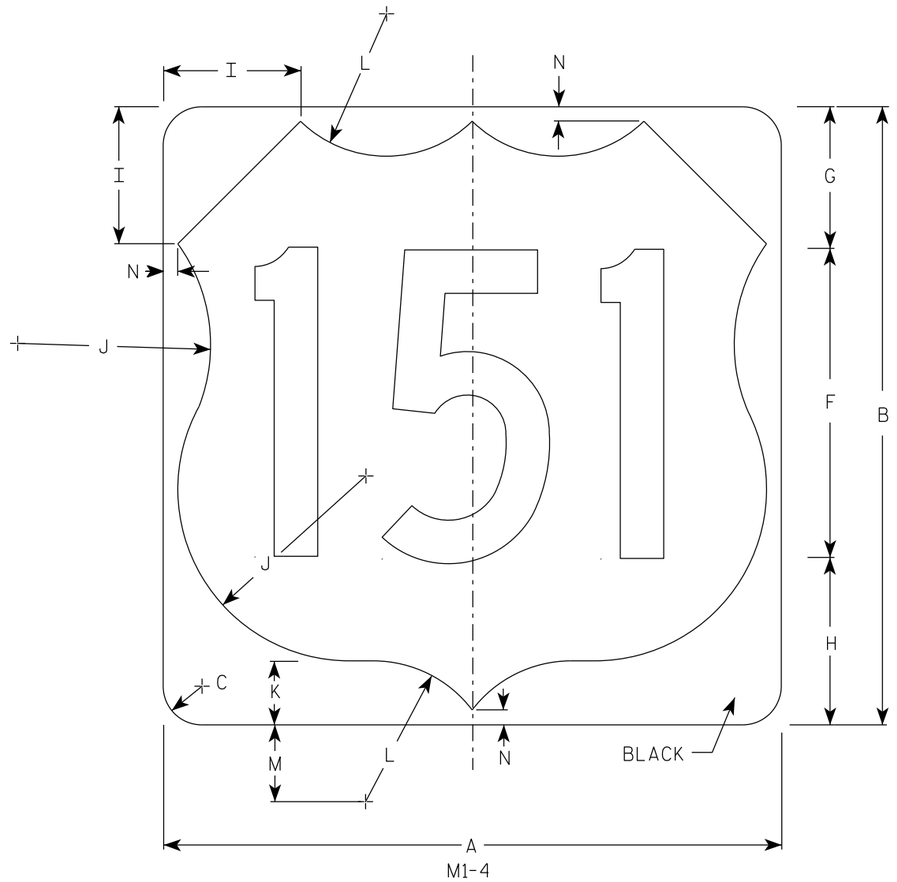
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 136 | E

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



M1-4



M1-4

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	24	1 1/2			12	5 1/2	6 1/2	5	7 1/2	2 1/2	5 1/2	3	1/2													4.0
2M	24	24	1 1/2			12	5 1/2	6 1/2	5	7 1/2	2 1/2	5 1/2	3	1/2													4.0
3	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0
4	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0
5	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0

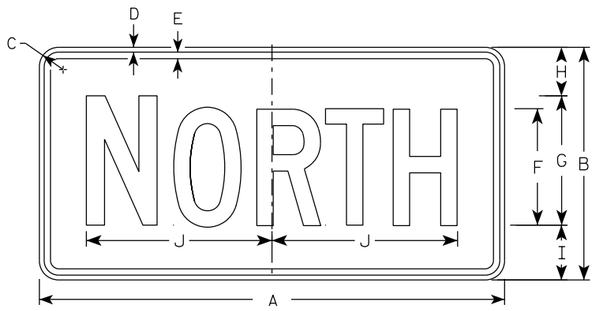
USH MARKER
M1-4 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

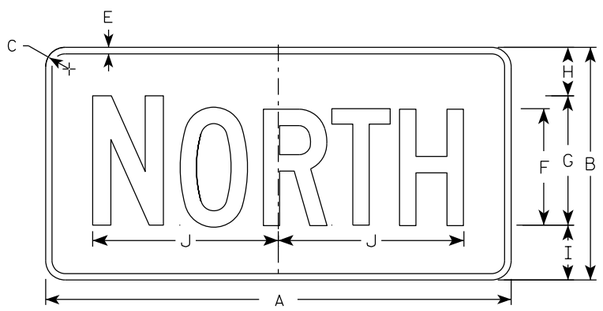
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/20/22 PLATE NO. M1-4.11

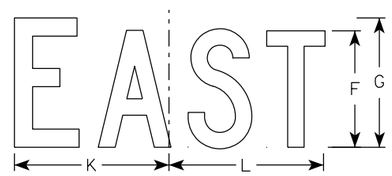
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 137 E



M3-1
MM3-1
MP3-1

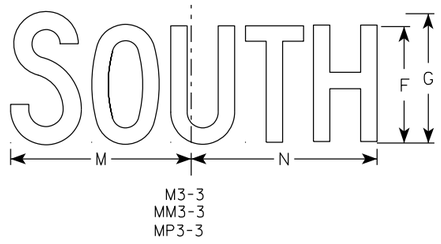


MB3-1
MK3-1
MN3-1

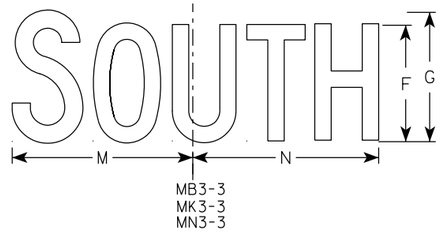


M3-2
MM3-2
MP3-2

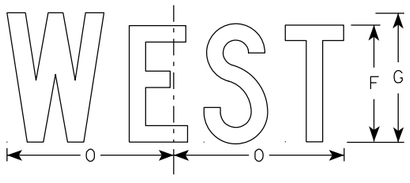
MB3-2
MK3-2
MN3-2



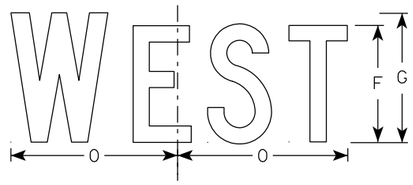
M3-3
MM3-3
MP3-3



MB3-3
MK3-3
MN3-3



M3-4
MM3-4
MP3-4



MB3-4
MK3-4
MN3-4

NOTES

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

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

STANDARD SIGNS
M3-1 THRU M3-4
SERIES

WISCONSIN DEPT OF TRANSPORTATION

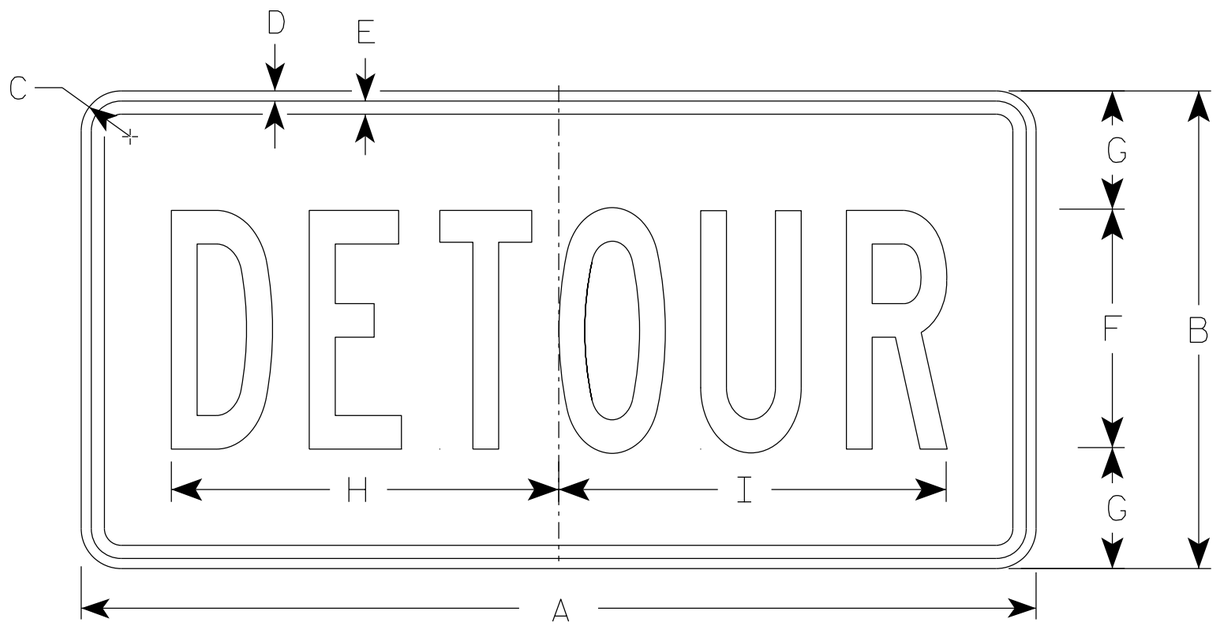
APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 2/8/2023 PLATE NO. M3-1.15

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 138 | E

NOTES

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



M4-8

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

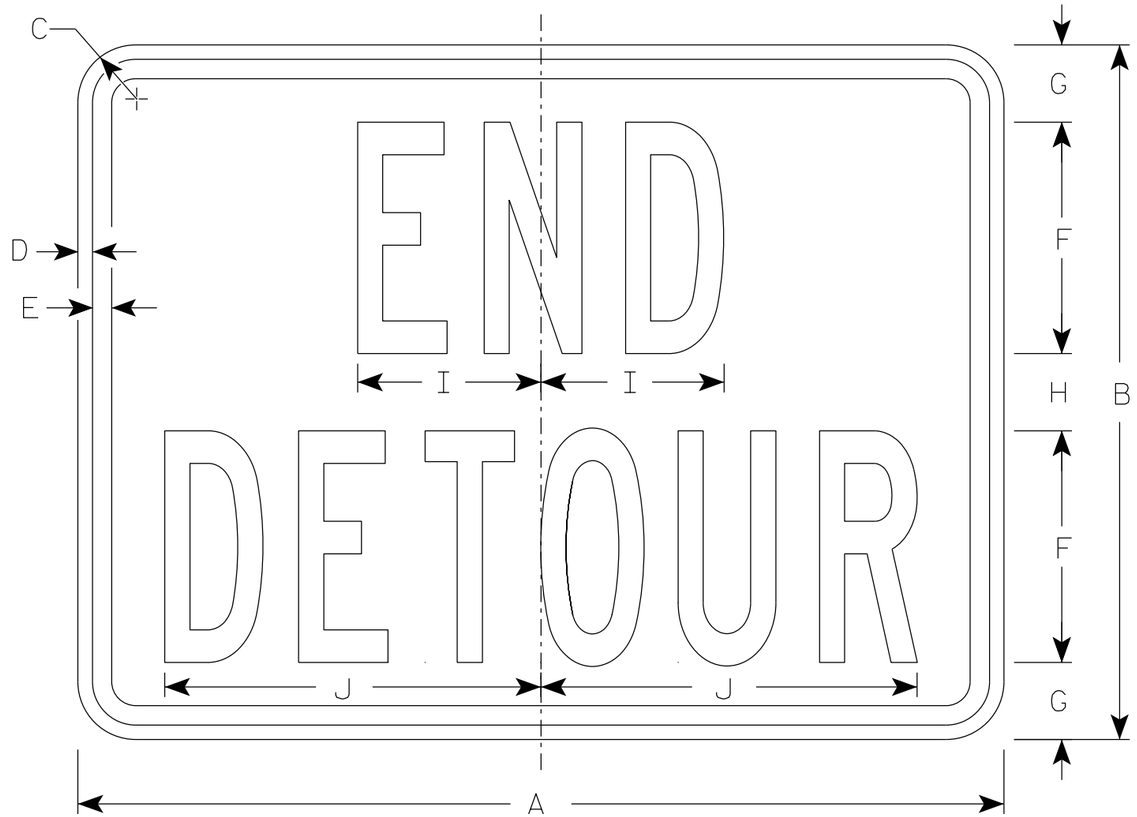
STANDARD SIGN
M4-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 139	E



M4-8A

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	18	1 ½	⅜	½	6	2	2	4 ¾	9 ¾																	3.0
2M	24	18	1 ½	⅜	½	6	2	2	4 ¾	9 ¾																	3.0
3	30	24	1 ½	⅜	½	8	2 ½	3	6 ¾	13																	5.0
4	30	24	1 ½	⅜	½	8	2 ½	3	6 ¾	13																	5.0
5	30	24	1 ½	⅜	½	8	2 ½	3	6 ¾	13																	5.0

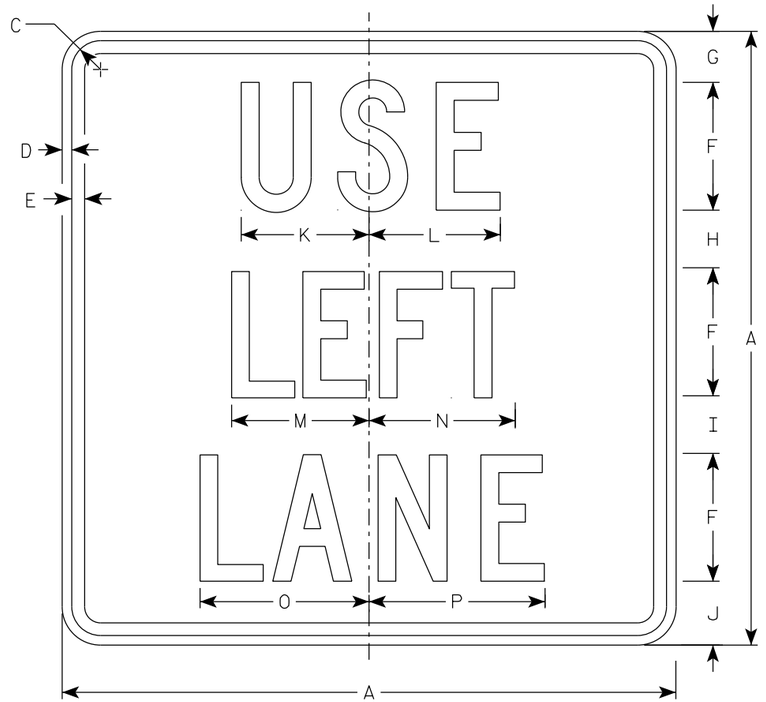
STANDARD SIGN
M4-8A

WISCONSIN DEPT OF TRANSPORTATION

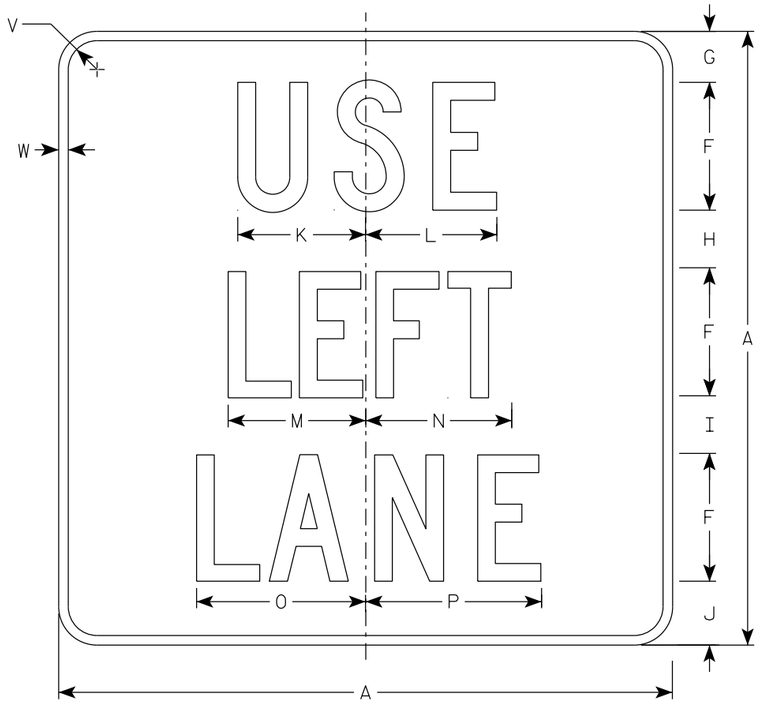
APPROVED Matthew R Rauch
for State Traffic Engineer

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

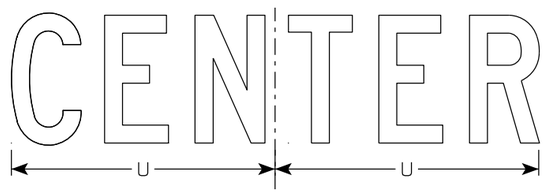
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 140 | E



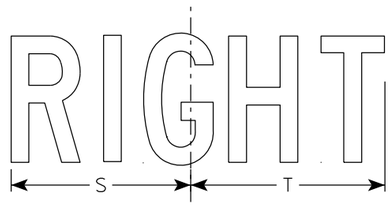
M4-20L
MM4-20L
MO4-20L
MP4-20L



MB4-20L
MK4-20L
MN4-20L
MR4-20L



M4-20C
MB4-20C
MK4-20C
MM4-20C
MN4-20C
MO4-20C
MP4-20C
MR4-20C



M4-20R
MB4-20R
MK4-20R
MM4-20R
MN4-20R
MO4-20R
MP4-20R
MR4-20R

NOTES

1. Sign is Type II - Type H except as Shown
2. Color:
   Background - See note 5
   Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M4-20 Background - White
   Message - Black
   MB4-20 Background - Blue
   Message - White
   MK4-20 Background - Green
   Message - White
   MM4-20 Background - White
   Message - Green
   MN4-20 Background - Brown
   Message - White
   MO4-20 Background - Orange - Type F Reflective
   Message - Black
   MP4-20 Background - White
   Message - Blue
   MR4-20 Background - Brown
   Message - Yellow

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24		1 1/2	3/8	1/2	5	2	2 1/4	2 1/4	2 1/2	5	5 1/8	5 3/8	5 3/4	6 5/8	6 7/8			7	7 5/8	10 1/4	1 1/2	1/2				4.0
2M	24		1 1/2	3/8	1/2	5	2	2 1/4	2 1/4	2 1/2	5	5 1/8	5 3/8	5 3/4	6 5/8	6 7/8			7	7 5/8	10 1/4	1 1/2	1/2				4.0
3	36		2 1/4	5/8	3/4	7	4	3	3 1/2	4 1/2	7 1/2	7 3/4	8	8 5/8	9 7/8	10 1/4			10 3/8	11 3/8	14 3/8	1 7/8	1/2				9.0
4	36		2 1/4	5/8	3/4	7	4	3	3 1/2	4 1/2	7 1/2	7 3/4	8	8 5/8	9 7/8	10 1/4			10 3/8	11 3/8	14 3/8	1 7/8	1/2				9.0
5	36		2 1/4	5/8	3/4	7	4	3	3 1/2	4 1/2	7 1/2	7 3/4	8	8 5/8	9 7/8	10 1/4			10 3/8	11 3/8	14 3/8	1 7/8	1/2				9.0

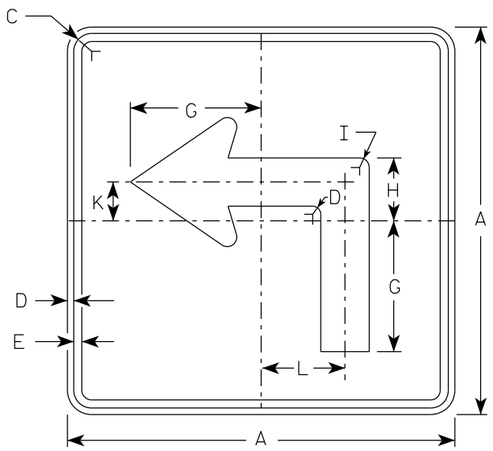
STANDARD SIGN
M4-20

WISCONSIN DEPT OF TRANSPORTATION

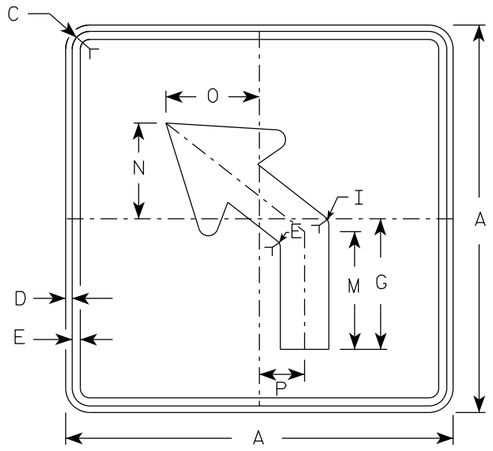
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/13/2023 PLATE NO. M4-20.6

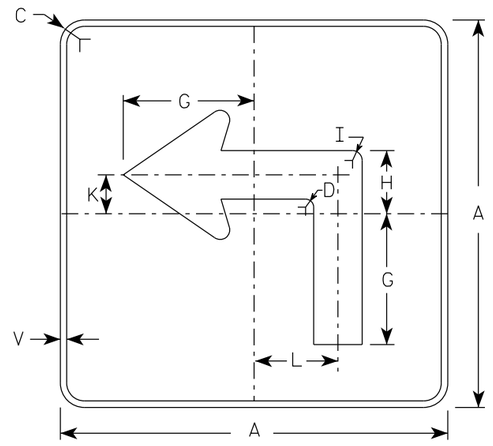
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



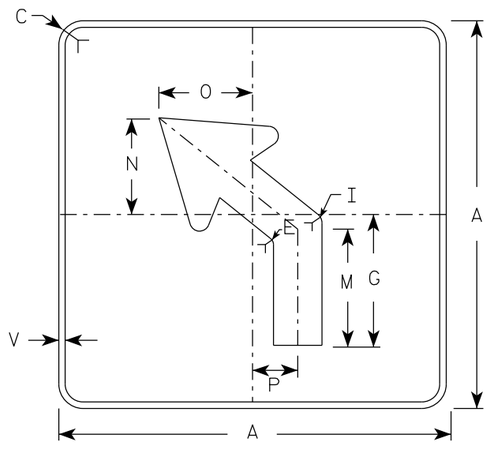
M5-1L
MM5-1L
MO5-1L
MP5-1L



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



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

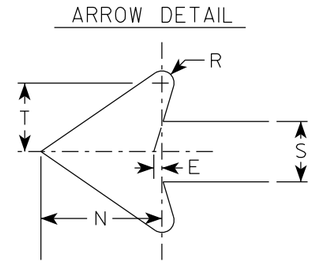


MB5-2L
MK5-2L
MN5-2L
MR5-2L

NOTES

1. Signs are Type II - Type H reflective except as shown
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M5-1 and M5-2 Background - White
   Message - Black
   MB5-1 and MB5-2 Background - Blue
   Message - White
   MK5-1 and MK5-2 Background - Green
   Message - White
   MM5-1 and MM5-2 Background - White
   Message - Green
   MN5-1 and MN5-2 Background - Brown
   Message - White
   MO5-1 and MO5-2 Background - Orange - Type F Reflective
   Message - Black
   MP5-1 and MP5-2 Background - White
   Message - Blue
   MR5-1 and MR5-2 Background - Brown
   Message - Yellow
5. M5-1R same as M5-1L except arrow points right.
6. M5-2R same as M5-2L except arrow tilts right.

ARROW DETAIL



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

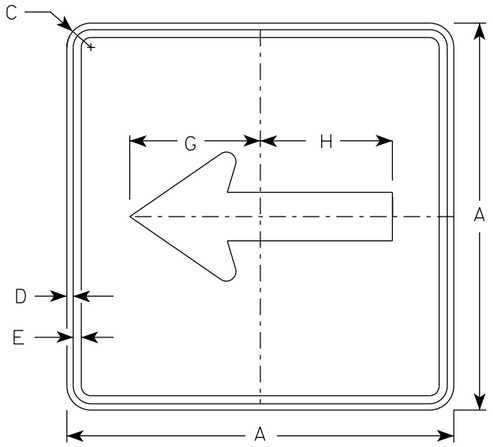
STANDARD SIGN
M5-1 & M5-2

WISCONSIN DEPT OF TRANSPORTATION

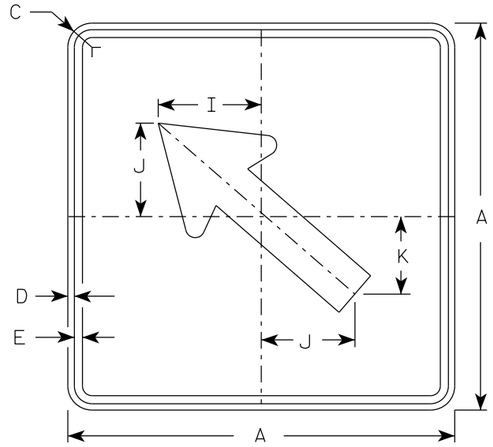
APPROVED Matthew R Rauch
for State Traffic Engineer

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

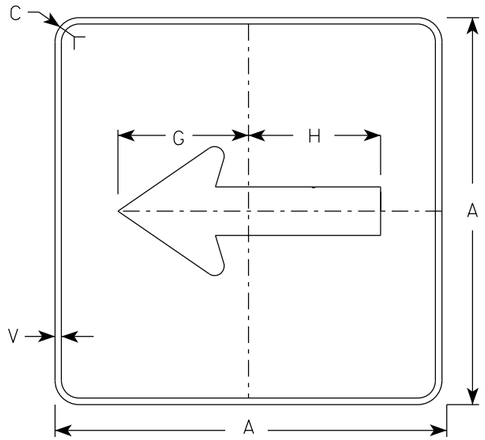
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 142 | E



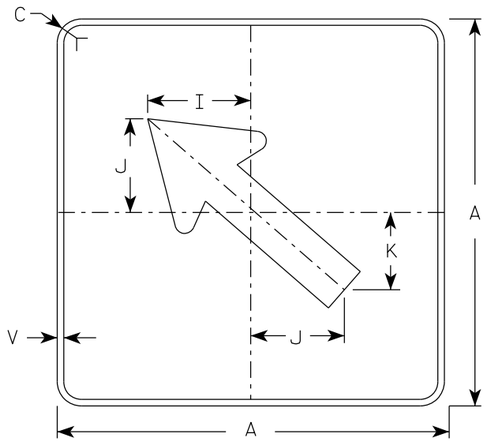
M6-1
MM6-1
MO6-1
MP6-1



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



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

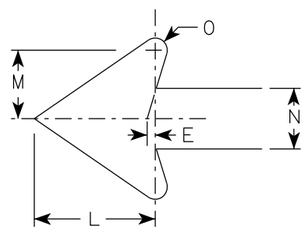


MB6-2
MK6-2
MN6-2
MR6-2

NOTES

1. Signs are Type II - Type H Reflective except as Shown
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-1 and M6-2 Background - White
   Message - Black
   MB6-1 and MB6-2 Background - Blue
   Message - White
   MK6-1 and MK6-2 Background - Green
   Message - White
   MM6-1 and MM6-2 Background - White
   Message - Green
   MN6-1 and MN6-2 Background - Brown
   Message - White
   MO6-1 and MO6-2 Background - Orange - Type F Reflective
   Message - Black
   MP6-1 and MP6-2 Background - White
   Message - Blue
   MR6-1 and MR6-2 Background - Brown
   Message - Yellow

ARROW DETAIL



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

STANDARD SIGN
M6-1 & M6-2
SERIES

WISCONSIN DEPT OF TRANSPORTATION

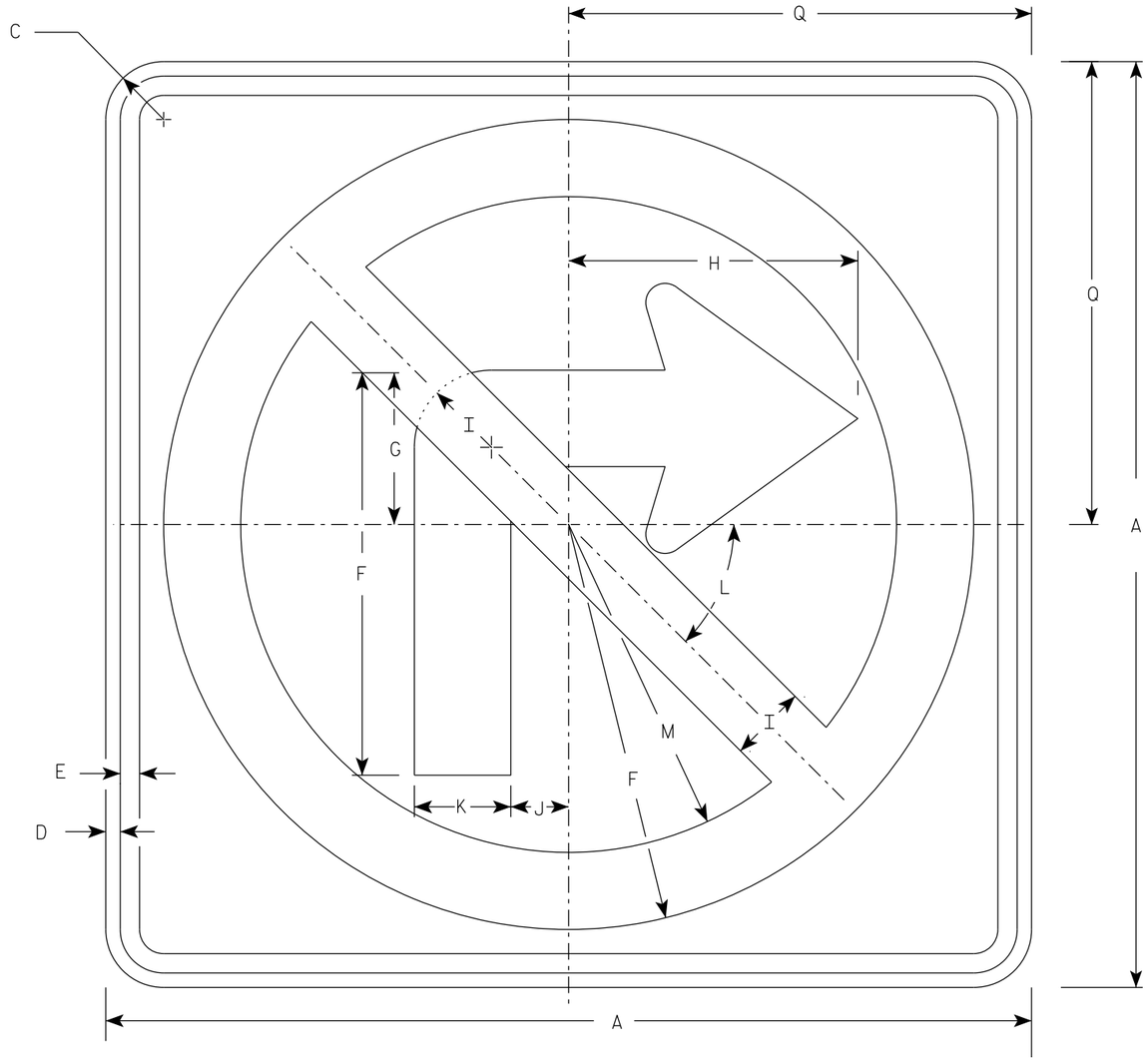
APPROVED Matthew R Rauch
For State Traffic Engineer

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

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 143 | E

7

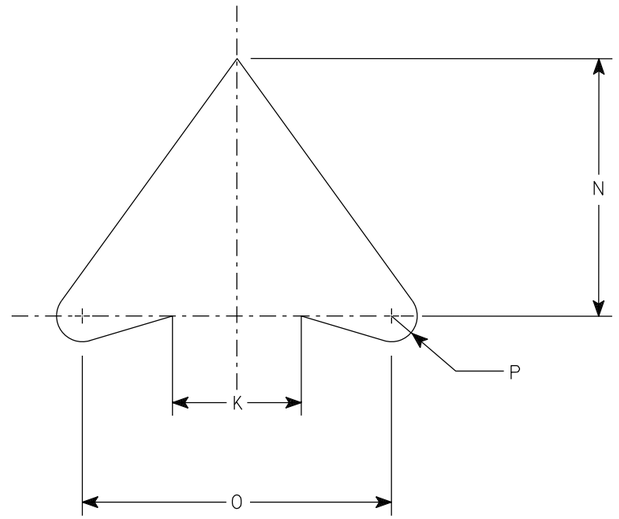
7



R3-1

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - See note 3
3. Border & Arrow are non reflective black, the circle with diagonal bar is reflective red.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 ½	⅜	½	10 ½	4	7 ½	2	1 ½	2 ½	45	8 ½	5	6	½	12										4.0
2S	24		1 ½	⅜	½	10 ½	4	7 ½	2	1 ½	2 ½	45°	8 ½	5	6	½	12										4.0
2M	36		2 ¼	⅝	¾	15 ¾	6	11 ¼	3	2 ¼	3 ¾	45	12 ¾	7 ½	9	¾	18										9.0
3	36		2 ¼	⅝	¾	15 ¾	6	11 ¼	3	2 ¼	3 ¾	45	12 ¾	7 ½	9	¾	18										9.0
4	36		2 ¼	⅝	¾	15 ¾	6	11 ¼	3	2 ¼	3 ¾	45°	12 ¾	7 ½	9	¾	18										9.0
5	48		2 ¼	¾	1	21	8	15	4	3	5	45°	17	10	12	1	24										16.0

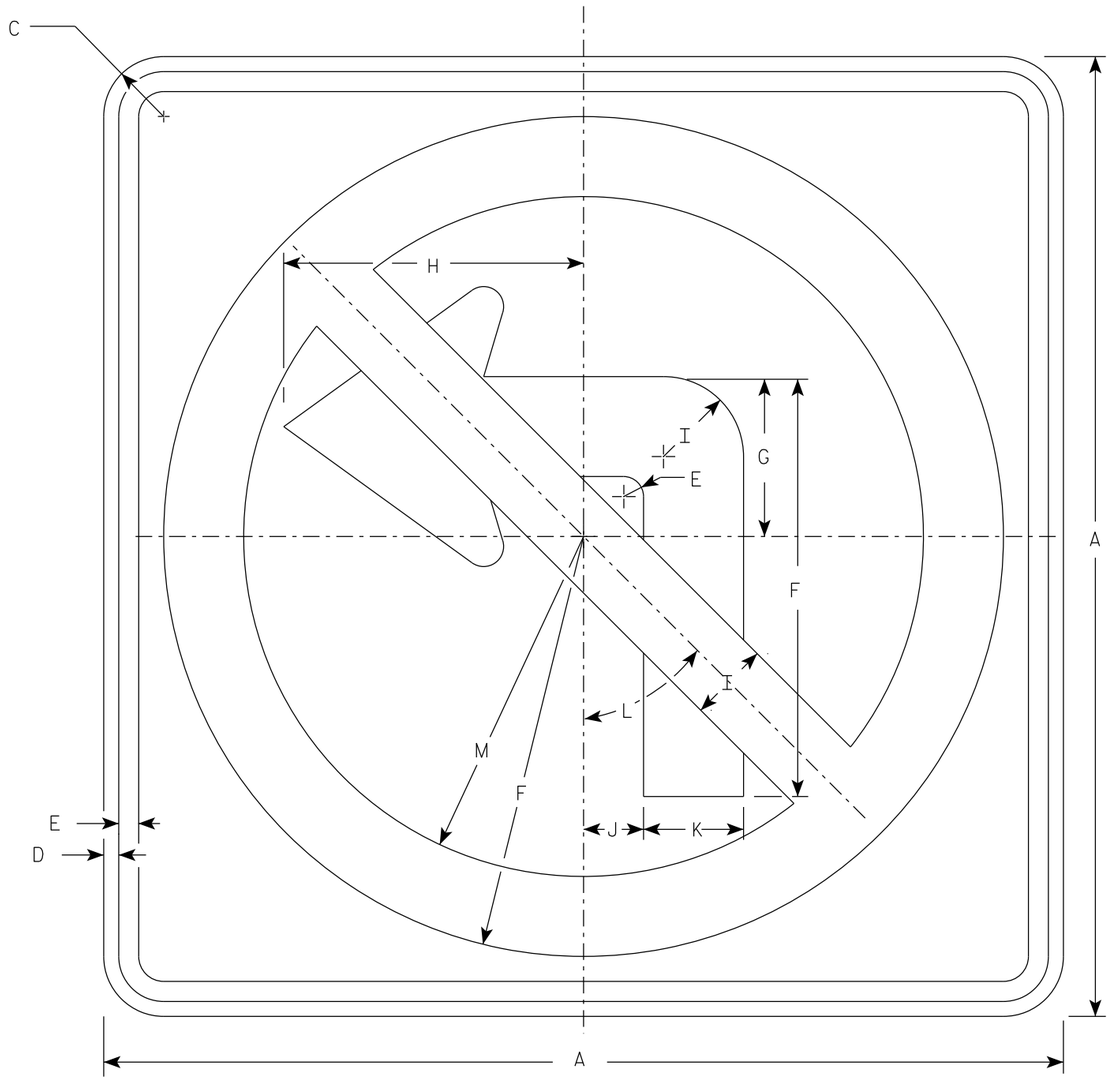
STANDARD SIGN
R3-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/2/23 PLATE NO. R3-1.6

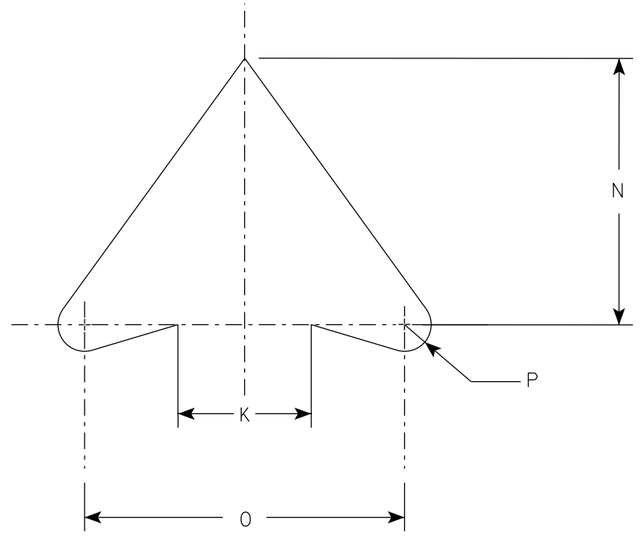
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 144 | E



R3-2

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - See note 3
3. Border & Arrow are non reflective black, the circle with diagonal bar is reflective red.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 ½	⅜	½	10 ½	4	7 ½	2	1 ½	2 ½	45°	8 ½	5	6	½											4.0
2S	24		1 ½	⅜	½	10 ½	4	7 ½	2	1 ½	2 ½	45°	8 ½	5	6	½											4.0
2M	36		2 ¼	⅝	¾	15 ¾	6	11 ¼	3	2 ¼	3 ¾	45°	12 ¾	7 ½	9	¾											9.0
3	36		2 ¼	⅝	¾	15 ¾	6	11 ¼	3	2 ¼	3 ¾	45°	12 ¾	7 ½	9	¾											9.0
4	36		2 ¼	⅝	¾	15 ¾	6	11 ¼	3	2 ¼	3 ¾	45°	12 ¾	7 ½	9	¾											9.0
5	48		2 ¼	¾	1	21	8	15	4	3	5	45°	17	10	12	1											16.0

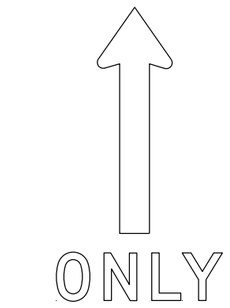
STANDARD SIGN
R3-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

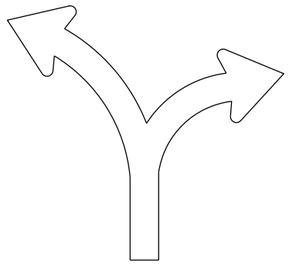
DATE 2/2/23 PLATE NO. R3-2.11

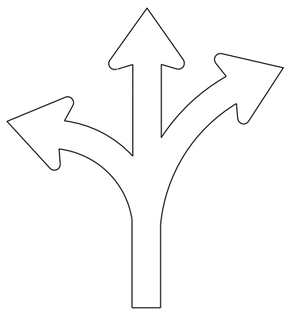
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 145 | E

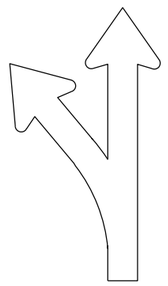


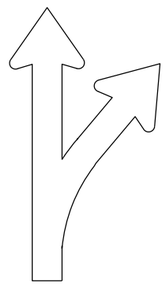
(A)

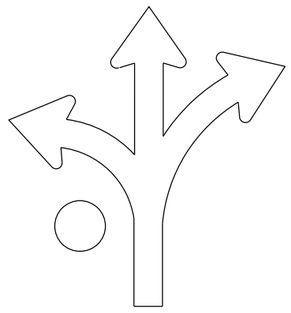
(B)

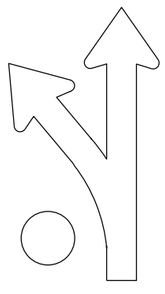

(C)

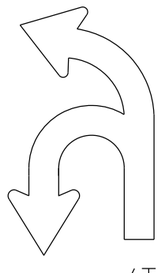

(D)

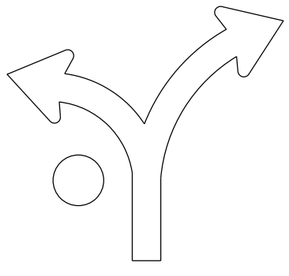

(E)

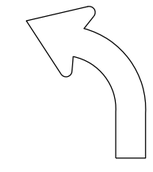

(F)


(G)

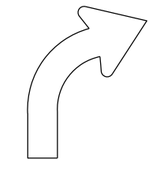

(H)


(I)


(J)



(L)



(R)

NOTES

1. Sigs are Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Use appropriate Letter for Sign Code
   Each letter added makes sign wider. Example R3-8EAR
5. Square footage of sign varies by letters

1	Letter =	3.75 sq ft for Size 2
		6.0 sq ft for Size 3
		10.0 sq ft for Size 4 or 5
2	Letters =	7.5 sq ft for Size 2
		12.0 sq ft for Size 3
		20.0 sq ft for Size 4 or 5
3	Letters =	11.25 sq ft for Size 2
		18.0 sq ft for Size 3
		30.0 sq ft for Size 4 or 5
4	Letters =	15.0 sq ft for Size 2
		24.0 sq ft for Size 3
		40.0 sq ft for Size 4 or 5
5	Letters =	18.75 sq ft for Size 2
		30.0 sq ft for Size 3
		50.0 sq ft for Size 4 or 5
6	Letters =	22.5 sq ft for Size 2
		36.0 sq ft for Size 3
		60.0 sq ft for Size 4 or 5

6. When letters C,D,G,J are used on the Left or Right end of the sign the Sq. Ft. changes.
   Add the amounts when these letters are used:
   1.25 sq ft for Size 2
   1.5 sq ft for Size 3
   2.0 sq ft for Size 4 or 5

STANDARD SIGN
R3-8 Series

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/14/23 PLATE NO. R3-8.2

PROJECT NO:

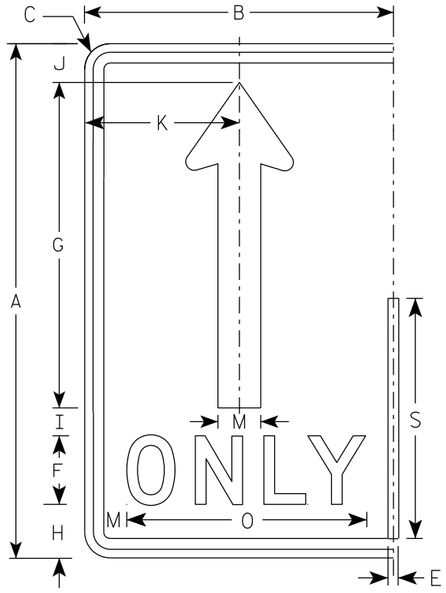
SHEET NO: 146 E

FILE NAME : C:\CAEfiles\Projects\stdplate_R38.dgn PLOT DATE : 14-FEB 2023 3:01 PLOT BY : mscj9h PLOT NAME :

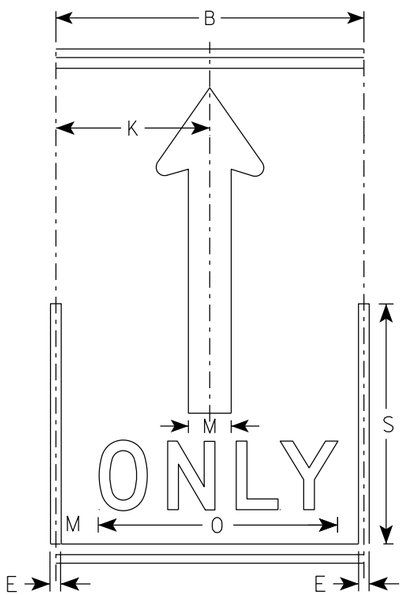
WISDOT/CADDS SHEET 42

NOTES

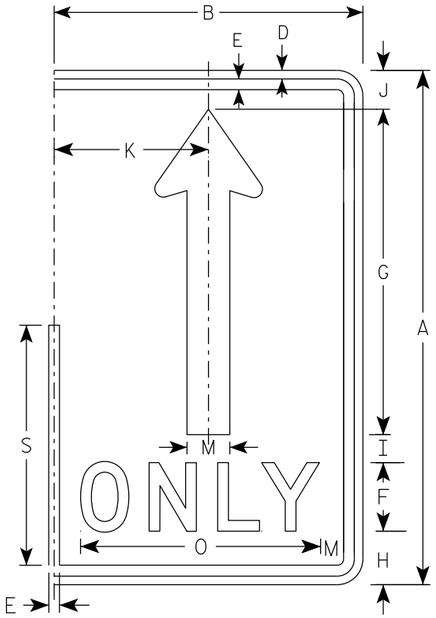
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D



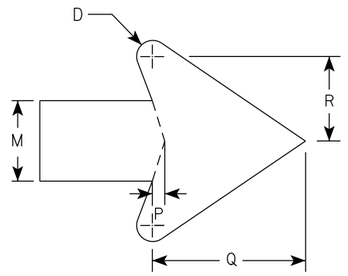
(A)



(A)



(A)



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	18	1 1/2	1/2	5/8	4	19	3 1/8	1 5/8	2 1/4	9		2 1/2		14	3/8	4 3/4	2 5/8	14								3.75
2M	30	18	1 1/2	1/2	5/8	4	19	3 1/8	1 5/8	2 1/4	9		2 1/2		14	3/8	4 3/4	2 5/8	14								3.75
3	36	24	1 1/2	1/2	5/8	5	22 3/4	3 3/4	1 3/4	2 3/4	12		3		17 5/8	1/2	5 3/4	3 1/8	16 3/4								6.0
4	48	30	2 1/4	3/4	1	6	30 3/8	5 1/8	2 7/8	3 5/8	15		4		21 3/4	5/8	7 5/8	4 1/4	22 3/8								10.0
5	48	30	2 1/4	3/4	1	6	30 3/8	5 1/8	2 7/8	3 5/8	15		4		21 3/4	5/8	7 5/8	4 1/4	22 3/8								10.0

STANDARD SIGN
R3-8 (A) Arrow

WISCONSIN DEPT OF TRANSPORTATION

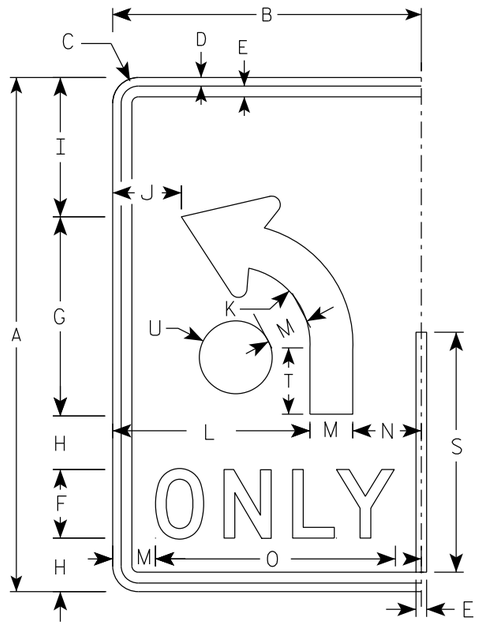
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/14/23 PLATE NO. R3-8.2

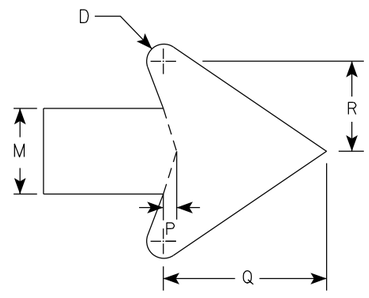
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 147 | E

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
   Message Series - D



(B)



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	18	1 1/2	1/2	5/8	4	11 5/8	3 1/8	8 1/8	4	4 1/2	11 1/2	2 1/2	4	14	3/8	4 3/4	2 5/8	14	3 7/8	2 1/8						3.75
2M	30	18	1 1/2	1/2	5/8	4	11 5/8	3 1/8	8 1/8	4	4 1/2	11 1/2	2 1/2	4	14	3/8	4 3/4	2 5/8	14	3 7/8	2 1/8						3.75
3	36	24	1 1/2	1/2	5/8	5	14	3 1/2	9 3/4	6	5 3/8	15	3	6	17 5/8	1/2	5 3/4	3 1/8	16 3/4	4 5/8	2 1/2						6.0
4	48	30	2 1/4	3/4	1	6	18 5/8	5 1/8	13 1/8	6 1/8	7 1/4	18	4	8	21 3/4	5/8	7 5/8	4 1/4	22 3/8	6 1/4	3 3/8						10.0
5	48	30	2 1/4	3/4	1	6	18 5/8	5 1/8	13 1/8	6 1/8	7 1/4	18	4	8	21 3/4	5/8	7 5/8	4 1/4	22 3/8	6 1/4	3 3/8						10.0

STANDARD SIGN

R3-8 (B) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

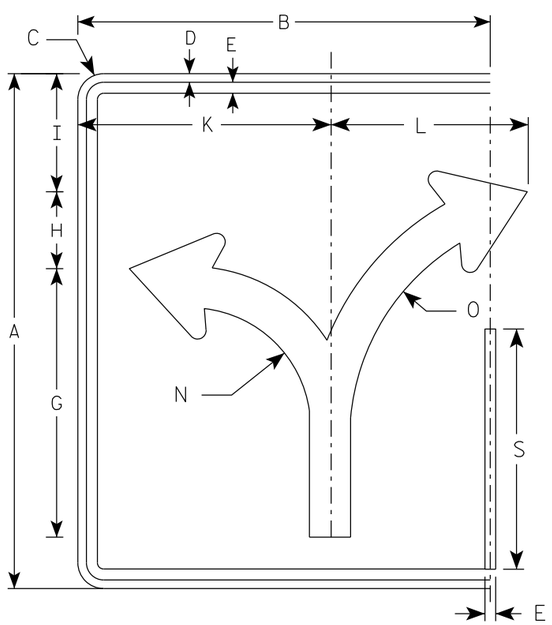
DATE 2/14/23 PLATE NO. R3-8.2

PROJECT NO:

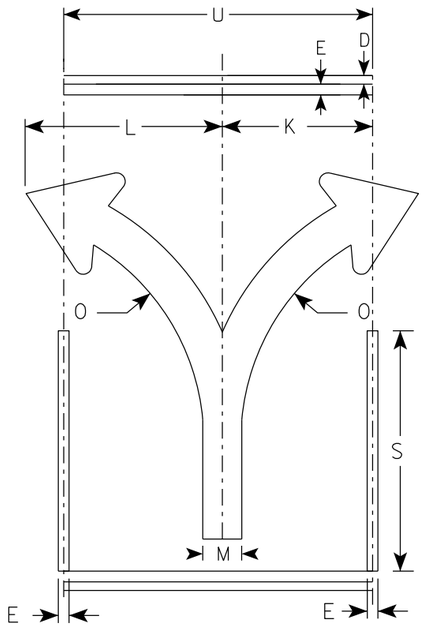
SHEET NO: 148 E

NOTES

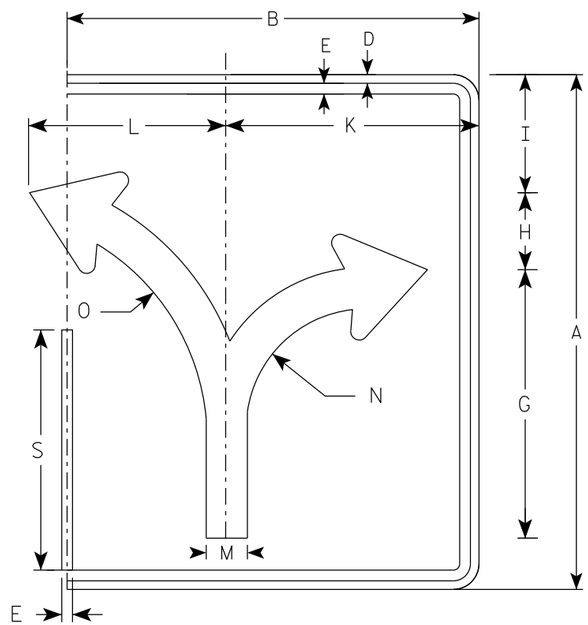
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - None



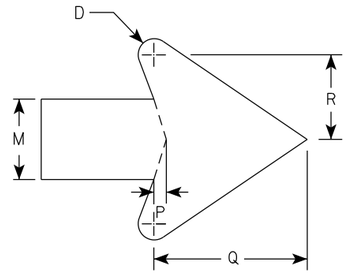
(C)



(C)



(C)



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	ENDS Area sq. ft.	MIDDLE Area sq. ft.
1																												
2S	30	24	1 1/2	1/2	5/8		15 5/8	4 1/2	6 7/8		14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		18						5.0	3.75
2M	30	24	1 1/2	1/2	5/8		15 5/8	4 1/2	6 7/8		14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		18						5.0	3.75
3	36	30	1 1/2	1/2	5/8		18 3/4	5 1/2	8 1/4		17 1/4	17 1/4	2 7/8	8 3/8	16	1/2	5 1/2	3	16 3/4		24						7.5	6.0
4	48	36	2 1/4	3/4	1		24 7/8	7 1/4	11		23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		30						12.0	10.0
5	48	36	2 1/4	3/4	1		24 7/8	7 1/4	11		23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		30						12.0	10.0

STANDARD SIGN
R3-8 (C) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/14/23 PLATE NO. R3-8.2

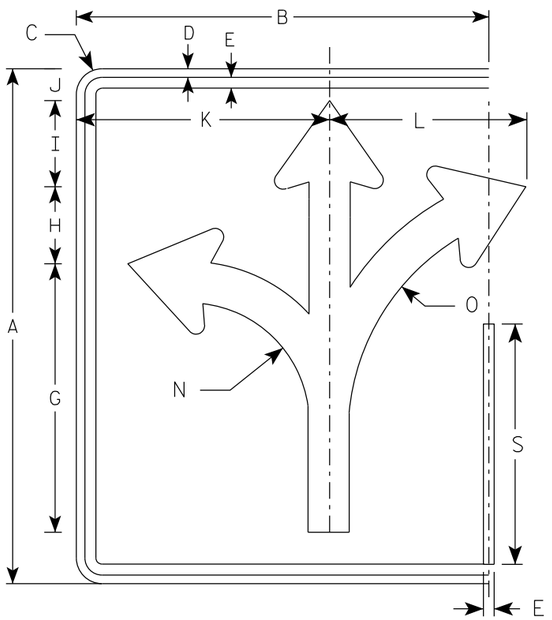
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 149 | E

7

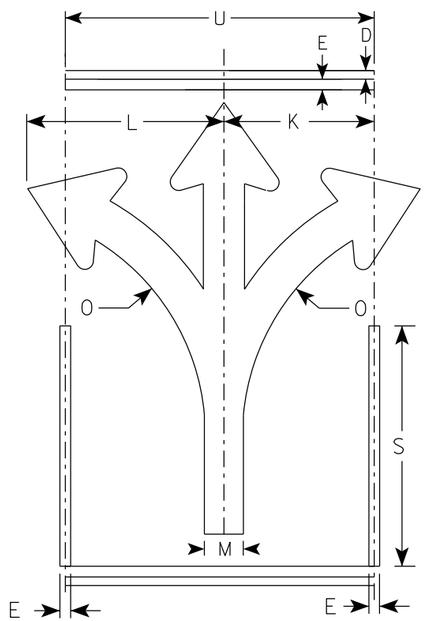
7

NOTES

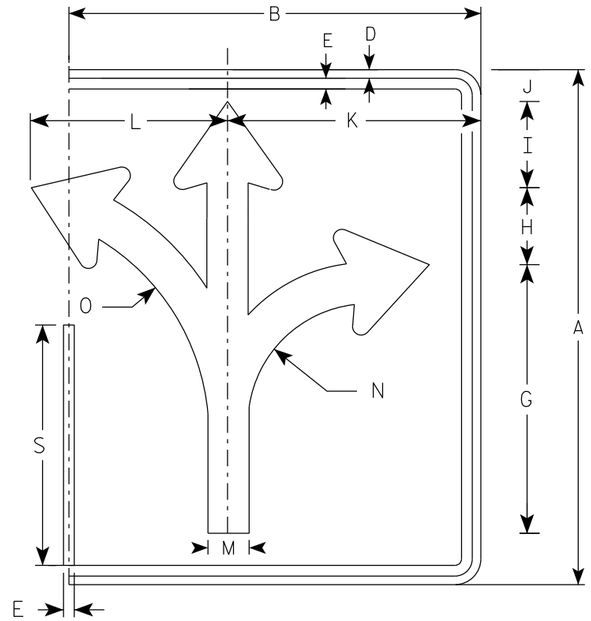
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - None



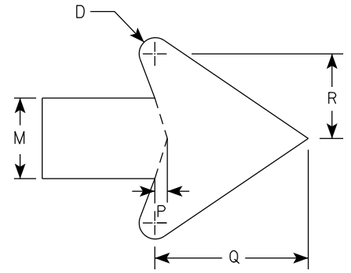
(D)



(D)



(D)



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	ENDS Area sq. ft.	MIDDLE Area sq. ft.
1																												
2S	30	24	1 1/2	1/2	5/8		15 5/8	4 1/2	5	1 7/8	14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		18						5.0	3.75
2M	30	24	1 1/2	1/2	5/8		15 5/8	4 1/2	5	1 7/8	14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		18						5.0	3.75
3	36	30	1 1/2	1/2	5/8		18 3/4	5 1/2	6	2 1/4	17 1/4	17 1/4	2 7/8	8 3/8	16	1/2	5 1/2	3	16 3/4		24						7.5	6.0
4	48	36	2 1/4	3/4	1		24 7/8	7 1/4	7 7/8	3 1/8	23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		30						12.0	10.0
5	48	36	2 1/4	3/4	1		24 7/8	7 1/4	7 7/8	3 1/8	23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		30						12.0	10.0

STANDARD SIGN
R3-8 (D) Arrow

WISCONSIN DEPT OF TRANSPORTATION

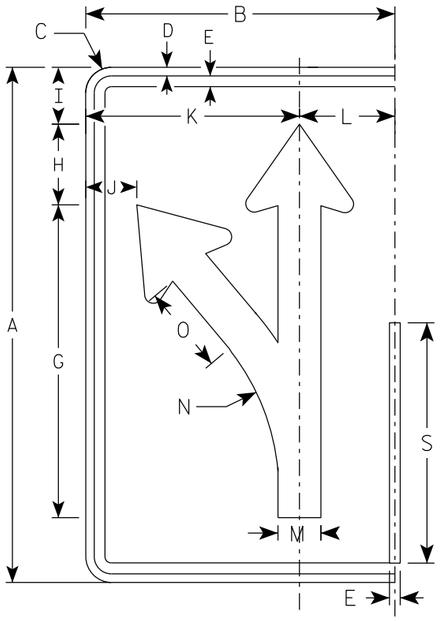
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/14/23 PLATE NO. R3-8.2

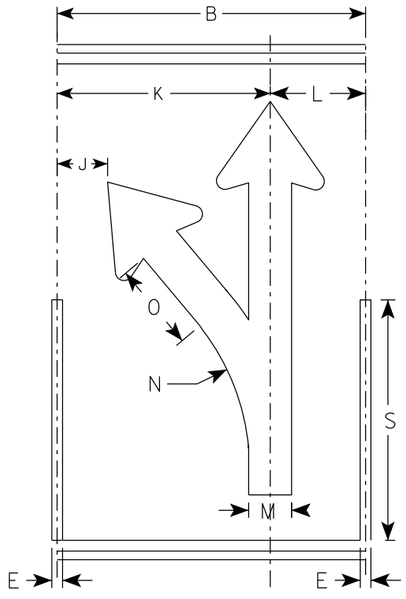
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 150 E

NOTES

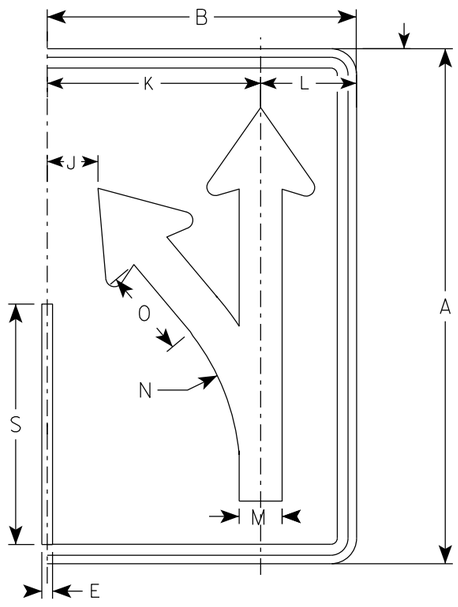
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - None



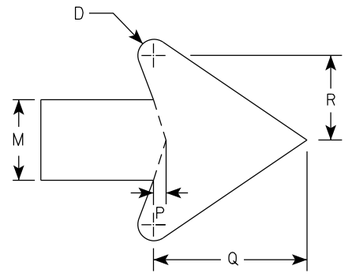
(E)



(E)



(E)



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	18	1 1/2	1/2	5/8		18 1/4	4 3/4	3 1/4	3	12 1/2	5 1/2	2 1/2	13 1/4	5 1/8	3/8	4 3/4	2 5/8	14								3.75
2M	30	18	1 1/2	1/2	5/8		18 1/4	4 3/4	3 1/4	3	12 1/2	5 1/2	2 1/2	13 1/4	5 1/8	3/8	4 3/4	2 5/8	14								3.75
3	36	24	1 1/2	1/2	5/8		21 7/8	5 5/8	4	4 7/8	16 1/8	7 3/4	3	15 7/8	6 1/8	1/2	5 3/4	3 1/8	16 3/4								6.0
4	48	30	2 1/4	3/4	1		29 1/8	7 1/2	5 1/4	5 3/8	20 1/2	9 1/2	4	21 1/4	8 1/4	5/8	7 5/8	4 1/4	22 3/8								10.0
5	48	30	2 1/4	3/4	1		29 1/8	7 1/2	5 1/4	5 3/8	20 1/2	9 1/2	4	21 1/4	8 1/4	5/8	7 5/8	4 1/4	22 3/8								10.0

STANDARD SIGN
R3-8 (E) Arrow

WISCONSIN DEPT OF TRANSPORTATION

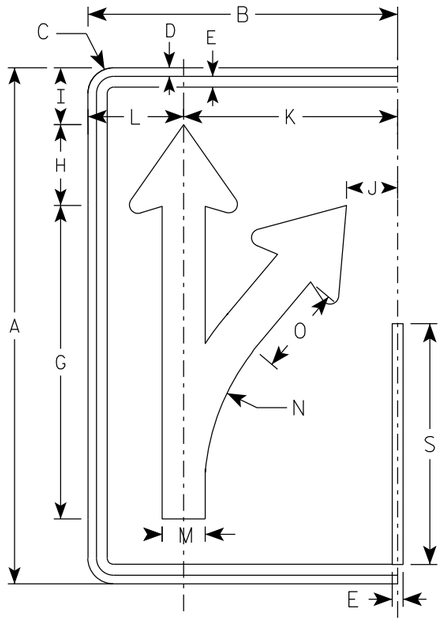
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/14/23 PLATE NO. R3-8.2

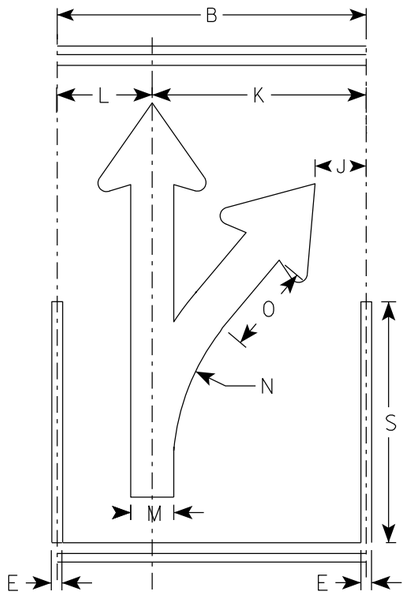
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 151 | E

NOTES

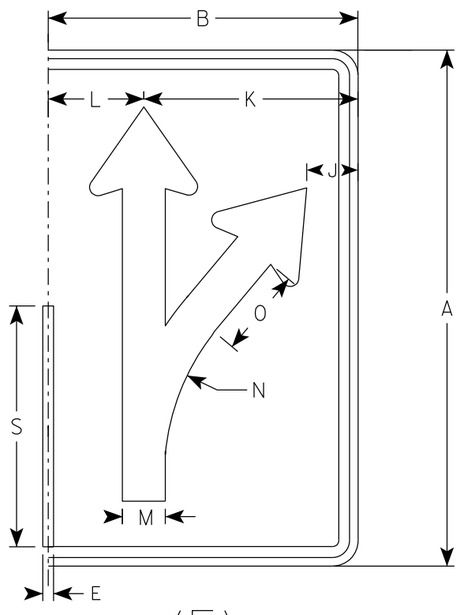
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - None



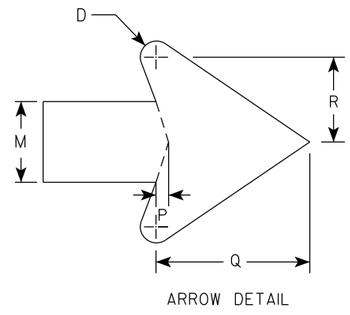
(F)



(F)



(F)



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	18	1 1/2	1/2	5/8		18 1/4	4 3/4	3 1/4	3	12 1/2	5 1/2	2 1/2	13 1/4	5 1/8	3/8	4 3/4	2 5/8	14								3.75
2M	30	18	1 1/2	1/2	5/8		18 1/4	4 3/4	3 1/4	3	12 1/2	5 1/2	2 1/2	13 1/4	5 1/8	3/8	4 3/4	2 5/8	14								3.75
3	36	24	1 1/2	1/2	5/8		21 7/8	5 5/8	4	4 7/8	16 1/8	7 3/4	3	15 7/8	6 1/8	1/2	5 3/4	3 1/8	16 3/4								6.0
4	48	30	2 1/4	3/4	1		29 1/8	7 1/2	5 1/4	5 3/8	20 1/2	9 1/2	4	21 1/4	8 1/4	5/8	7 5/8	4 1/4	22 3/8								10.0
5	48	30	2 1/4	3/4	1		29 1/8	7 1/2	5 1/4	5 3/8	20 1/2	9 1/2	4	21 1/4	8 1/4	5/8	7 5/8	4 1/4	22 3/8								10.0

STANDARD SIGN
R3-8 (F) Arrow

WISCONSIN DEPT OF TRANSPORTATION

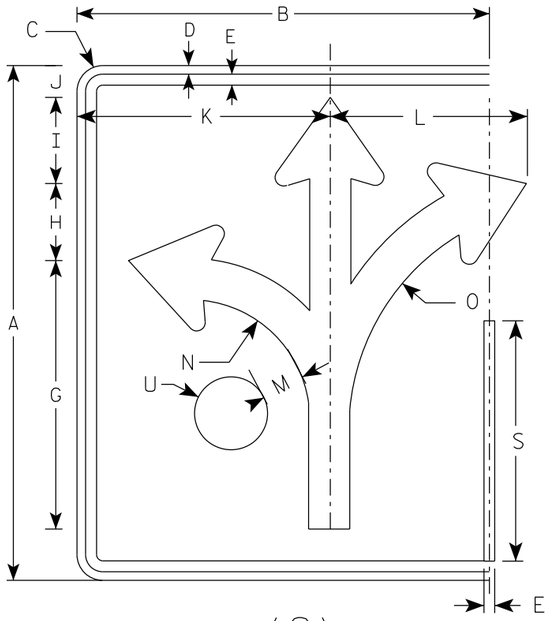
APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 2/14/23 PLATE NO. R3-8.2

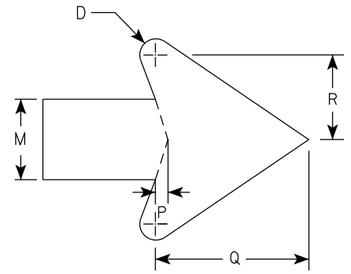
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 152 | E

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - None



(G)



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	24	1 1/2	1/2	5/8		15 5/8	4 1/2	5	1 7/8	14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		2 1/8						5.0
2M	30	24	1 1/2	1/2	5/8		15 5/8	4 1/2	5	1 7/8	14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		2 1/8						5.0
3	36	30	1 1/2	1/2	5/8		18 3/4	5 1/2	6	3 1/8	17 1/4	17 1/4	2 7/8	8 3/8	16	1/2	5 1/2	3	16 3/4		2 1/2						7.5
4	48	36	2 1/4	3/4	1		24 7/8	7 1/4	7 7/8	3 1/8	23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		3 3/8						12.0
5	48	36	2 1/4	3/4	1		24 7/8	7 1/4	7 7/8	3 1/8	23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		3 3/8						12.0

STANDARD SIGN
R3-8 (G) Arrow

WISCONSIN DEPT OF TRANSPORTATION

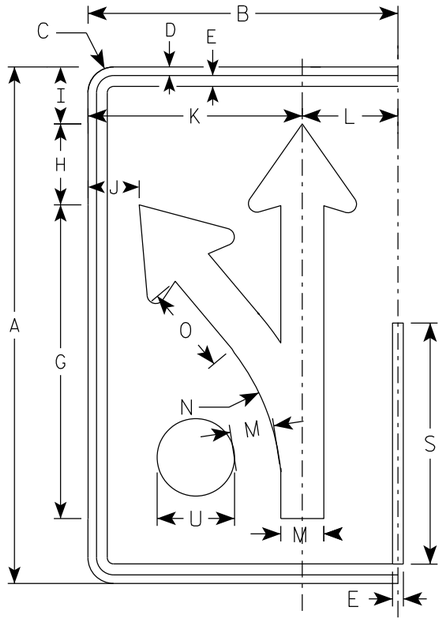
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/14/23 PLATE NO. R3-8.2

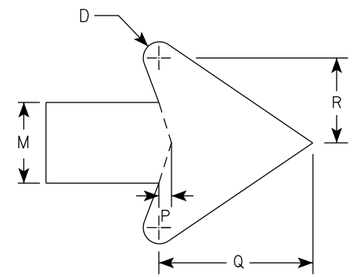
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 153	E

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - None



(H)



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	18	1 1/2	1/2	5/8		18 1/4	4 3/4	3 1/4	3	12 1/2	5 1/2	2 1/2	13 1/4	5 1/8	3/8	4 3/4	2 5/8	14		2 1/8						3.75
2M	30	18	1 1/2	1/2	5/8		18 1/4	4 3/4	3 1/4	3	12 1/2	5 1/2	2 1/2	13 1/4	5 1/8	3/8	4 3/4	2 5/8	14		2 1/8						3.75
3	36	24	1 1/2	1/2	5/8		21 7/8	5 5/8	4	4 7/8	16 1/8	7 3/4	3	15 7/8	6 1/8	1/2	5 3/4	3 1/8	16 3/4		2 1/2						6.0
4	48	30	2 1/4	3/4	1		29 1/8	7 1/2	5 1/4	5 3/8	20 1/2	9 1/2	4	21 1/4	8 1/4	5/8	7 5/8	4 1/4	22 3/8		3 3/8						10.0
5	48	30	2 1/4	3/4	1		29 1/8	7 1/2	5 1/4	5 3/8	20 1/2	9 1/2	4	21 1/4	8 1/4	5/8	7 5/8	4 1/4	22 3/8		3 3/8						10.0

STANDARD SIGN
R3-8 (H) Arrow

WISCONSIN DEPT OF TRANSPORTATION

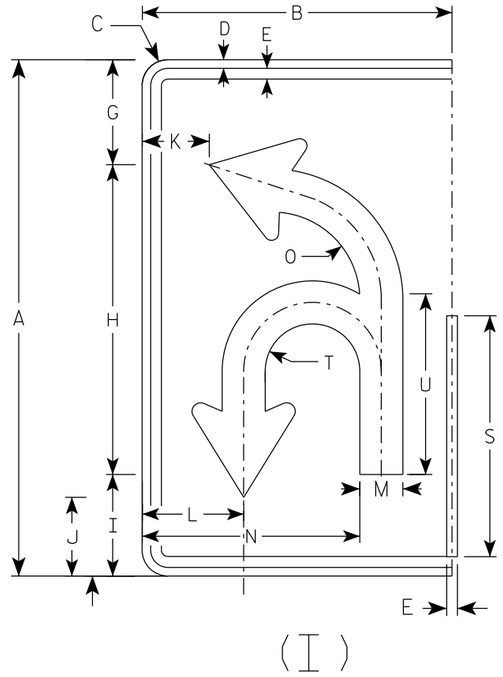
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/14/23 PLATE NO. R3-8.2

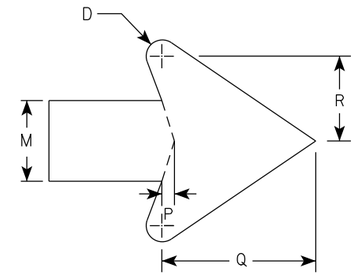
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 154 | E

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - None



(I)



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	18	1 1/2	1/2	5/8		6 1/8	18	5 7/8	4 5/8	3 7/8	5 7/8	2 1/2	12 5/8	5 1/8	3/8	4 3/4	2 5/8	14	2 3/4	10 1/2						3.75
2M	30	18	1 1/2	1/2	5/8		6 1/8	18	5 7/8	4 5/8	3 7/8	5 7/8	2 1/2	12 5/8	5 1/8	3/8	4 3/4	2 5/8	14	2 3/4	10 1/2						3.75
3	36	24	1 1/2	1/2	5/8		21 7/8	21 5/8	7 1/8	5 1/2	5 7/8	8 1/4	3	16 3/8	6 1/8	1/2	5 3/4	3 1/8	16 3/4	3 1/4	12 5/8						6.0
4	48	30	2 1/4	3/4	1		29 1/8	28 3/4	9 3/8	7 1/4	6 7/8	10	4	20 7/8	8 1/8	5/8	7 5/8	4 1/4	22 3/8	4 3/8	16 3/4						10.0
5	48	30	2 1/4	3/4	1		29 1/8	28 3/4	9 3/8	7 1/4	6 7/8	10	4	20 7/8	8 1/8	5/8	7 5/8	4 1/4	22 3/8	4 3/8	16 3/4						10.0

STANDARD SIGN
R3-8 (I) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/14/23 PLATE NO. R3-8.2

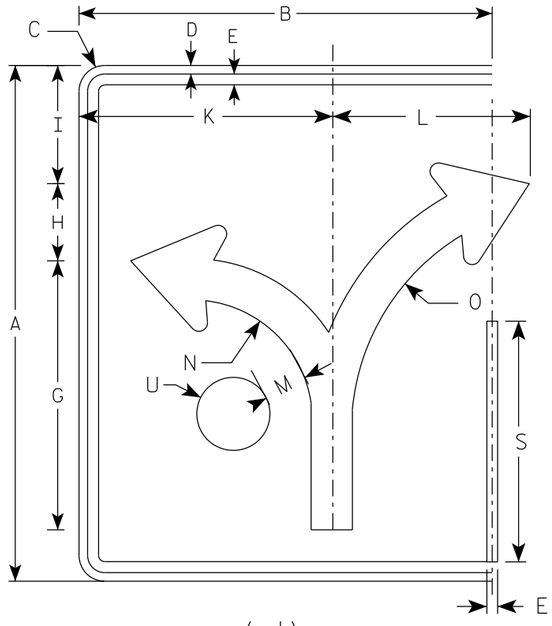
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 155 | E

7

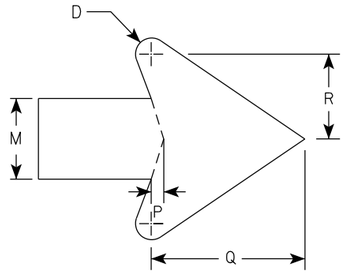
7

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - None



(J)



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	24	1 1/2	1/2	5/8		15 5/8	4 1/2	6 7/8		14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		2 1/8						5.0
2M	30	24	1 1/2	1/2	5/8		15 5/8	4 1/2	6 7/8		14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		2 1/8						5.0
3	36	30	1 1/2	1/2	5/8		18 3/4	5 1/2	8 1/4		17 1/4	17 1/4	2 7/8	8 3/8	16	1/2	5 1/2	3	16 3/4		2 1/2						7.5
4	48	36	2 1/4	3/4	1		24 7/8	7 1/4	11		23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		3 3/8						12.0
5	48	36	2 1/4	3/4	1		24 7/8	7 1/4	11		23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		3 3/8						12.0

STANDARD SIGN
R3-8 (J) Arrow

WISCONSIN DEPT OF TRANSPORTATION

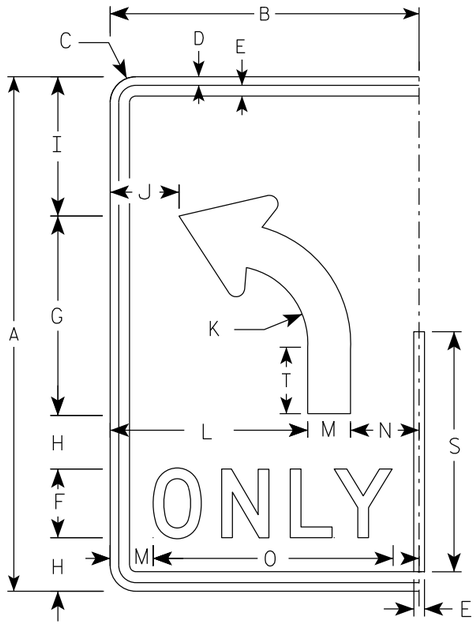
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/14/23 PLATE NO. R3-8.2

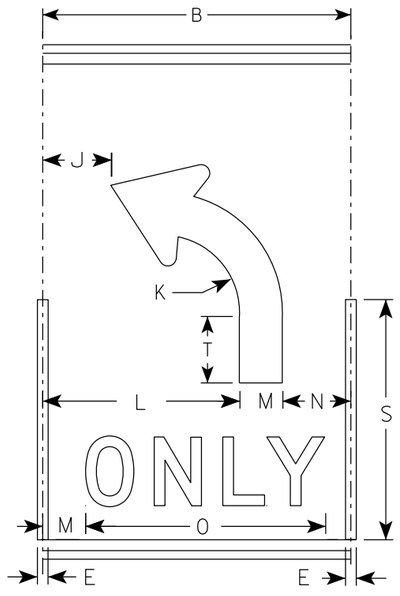
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 156 | E

NOTES

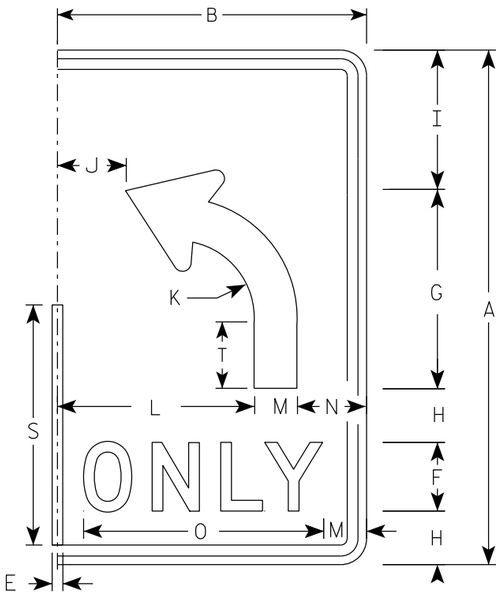
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D



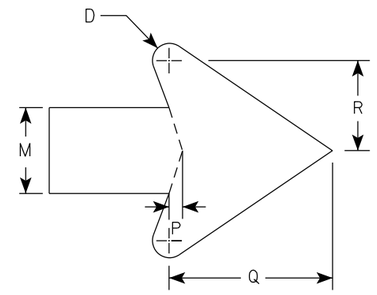
(L)



(L)



(L)



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	18	1 1/2	1/2	5/8	4	11 5/8	3 1/8	8 1/8	4	4 1/2	11 1/2	2 1/2	4	14	3/8	4 3/4	2 5/8	14	3 7/8							3.75
2M	30	18	1 1/2	1/2	5/8	4	11 5/8	3 1/8	8 1/8	4	4 1/2	11 1/2	2 1/2	4	14	3/8	4 3/4	2 5/8	14	3 7/8							3.75
3	36	24	1 1/2	1/2	5/8	5	14	3 1/2	9 3/4	6	5 3/8	15	3	6	17 5/8	1/2	5 3/4	3 1/8	16 3/4	4 5/8							6.0
4	48	30	2 1/4	3/4	1	6	18 5/8	5 1/8	13 1/8	6 1/8	7 1/4	18	4	8	21 3/4	5/8	7 5/8	4 1/4	22 3/8	6 1/4							10.0
5	48	30	2 1/4	3/4	1	6	18 5/8	5 1/8	13 1/8	6 1/8	7 1/4	18	4	8	21 3/4	5/8	7 5/8	4 1/4	22 3/8	6 1/4							10.0

STANDARD SIGN
R3-8 (L) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

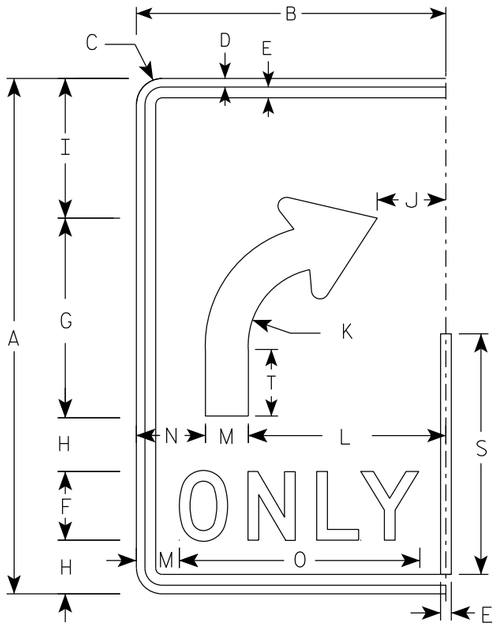
DATE 2/14/23 PLATE NO. R3-8.2

PROJECT NO:

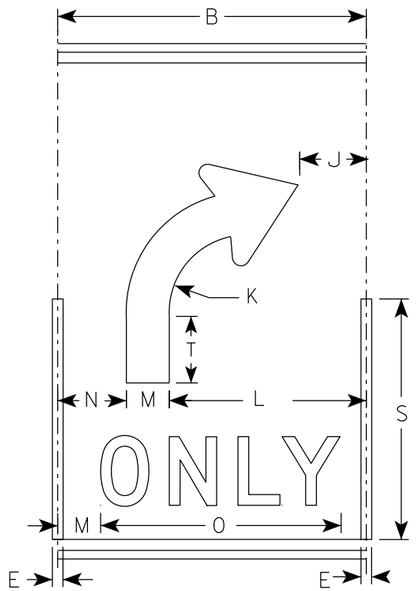
SHEET NO: 157 E

NOTES

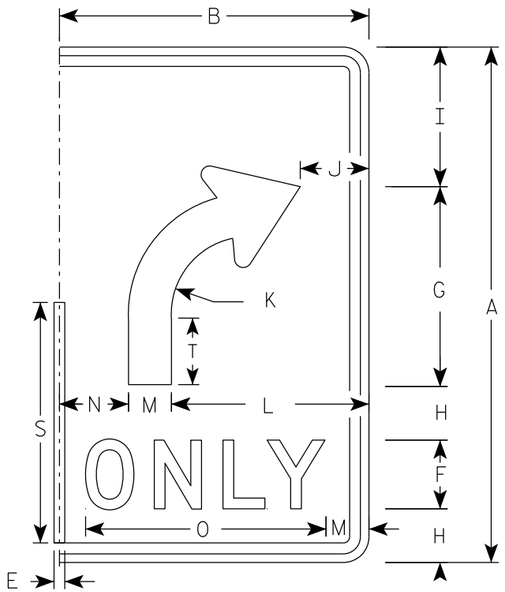
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D



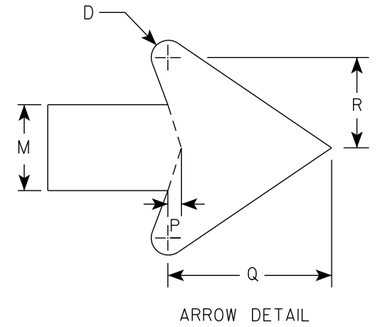
(R)



(R)



(R)



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	18	1 1/2	1/2	5/8	4	11 5/8	3 1/8	8 1/8	4	4 1/2	11 1/2	2 1/2	4	14	3/8	4 3/4	2 5/8	14	3 7/8							3.75
2M	30	18	1 1/2	1/2	5/8	4	11 5/8	3 1/8	8 1/8	4	4 1/2	11 1/2	2 1/2	4	14	3/8	4 3/4	2 5/8	14	3 7/8							3.75
3	36	24	1 1/2	1/2	5/8	5	14	3 1/2	9 3/4	6	5 3/8	15	3	6	17 5/8	1/2	5 3/4	3 1/8	16 3/4	4 5/8							6.0
4	48	30	2 1/4	3/4	1	6	18 5/8	5 1/8	13 1/8	6 1/8	7 1/4	18	4	8	21 3/4	5/8	7 5/8	4 1/4	22 3/8	6 1/4							10.0
5	48	30	2 1/4	3/4	1	6	18 5/8	5 1/8	13 1/8	6 1/8	7 1/4	18	4	8	21 3/4	5/8	7 5/8	4 1/4	22 3/8	6 1/4							10.0

STANDARD SIGN

R3-8 (R) Arrow

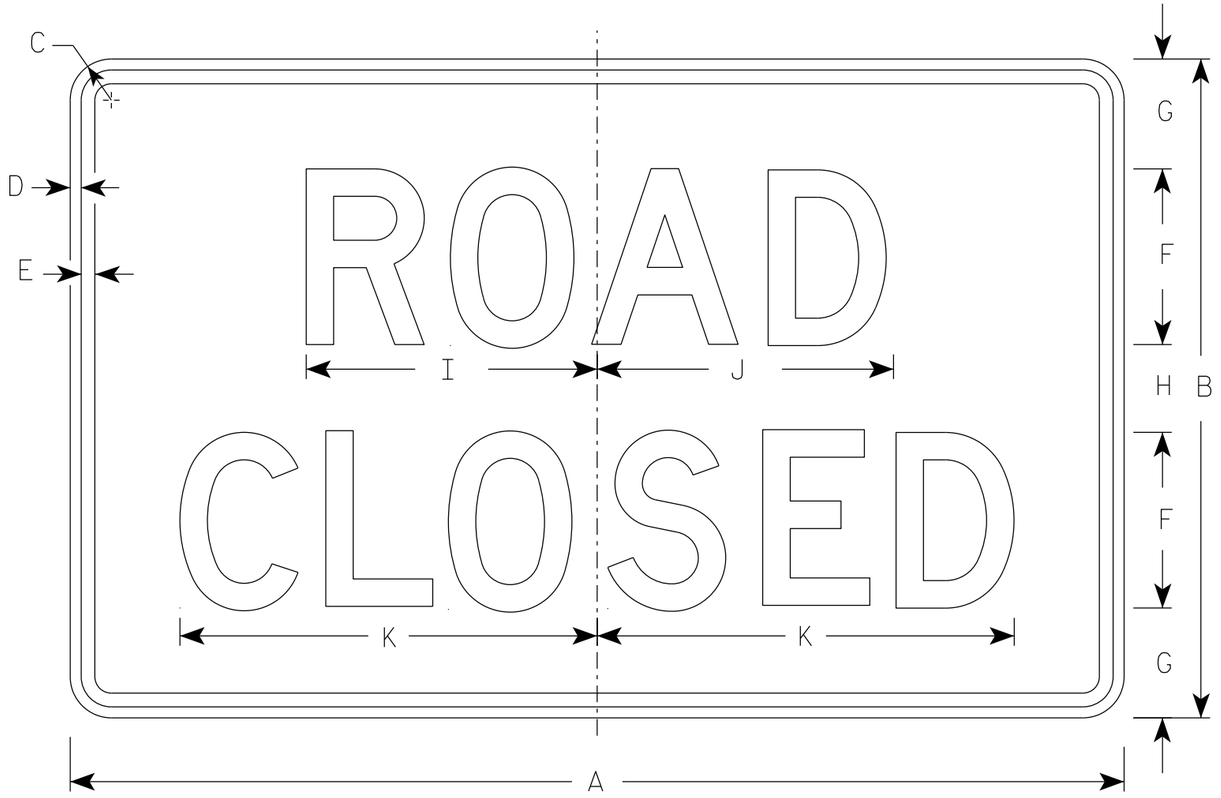
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/14/23 PLATE NO. R3-8.2

PROJECT NO:

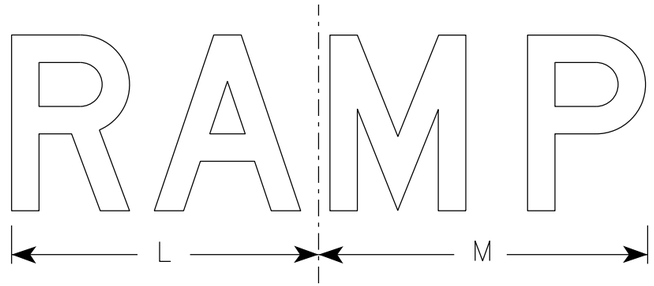
SHEET NO: 158 E



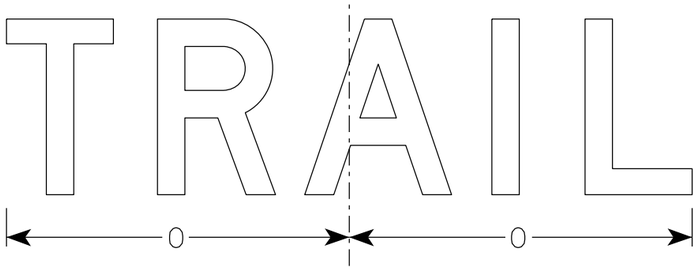
R11-2

NOTES

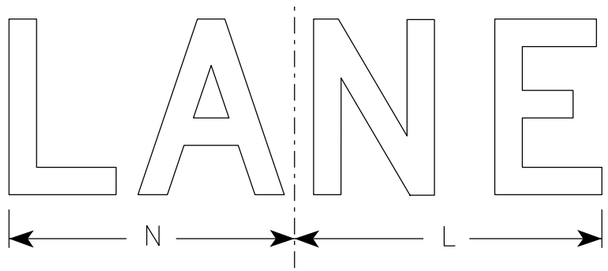
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Modify the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



R11-2R



R11-2T



R11-2L

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	30	1 7/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0
2M	48	30	1 7/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0
3	48	30	1 7/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0
4	48	30	1 7/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0
5	48	30	1 7/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0

STANDARD SIGN
R11-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

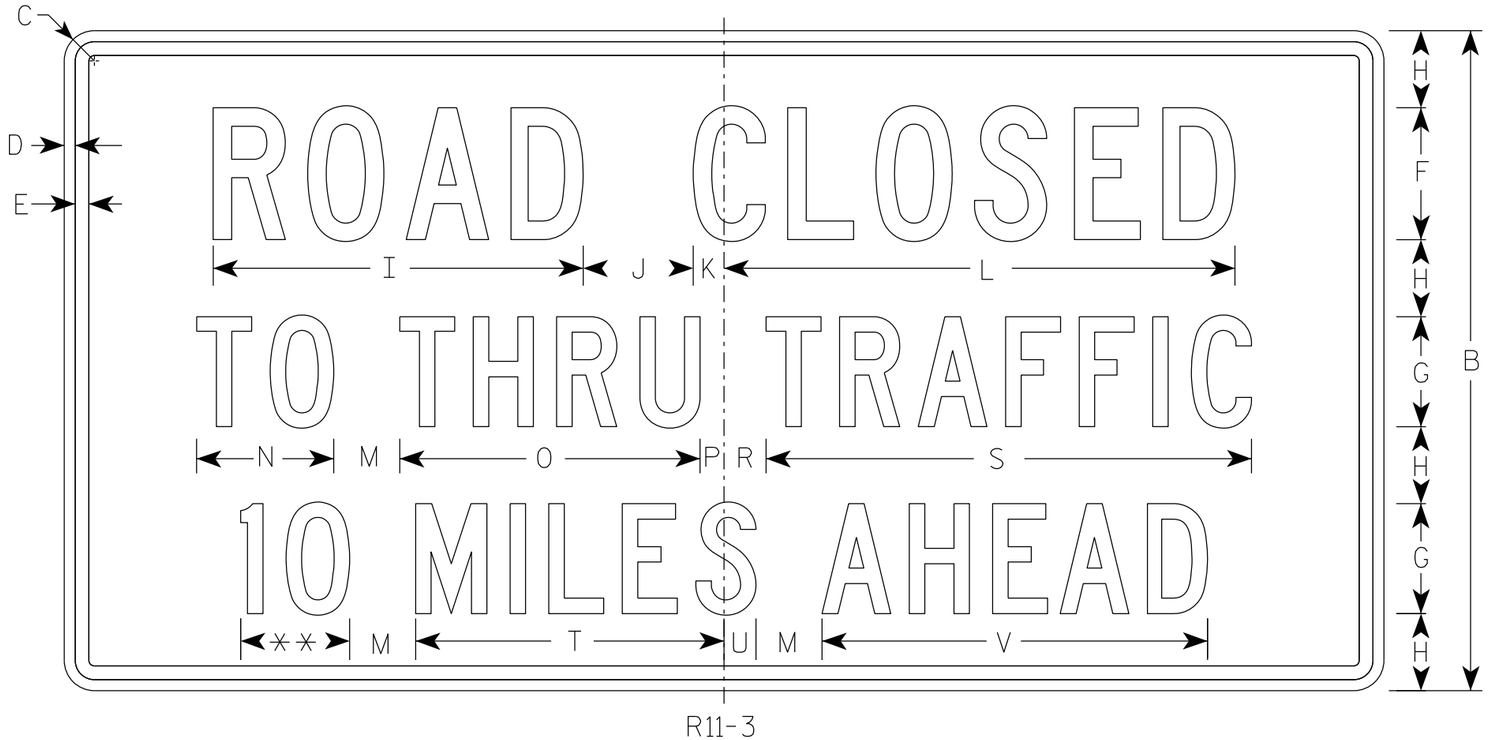
DATE 2/5/24 PLATE NO. R11-2.12

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R112.dgn PLOT DATE : 5-FEB 2024 2:10 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42

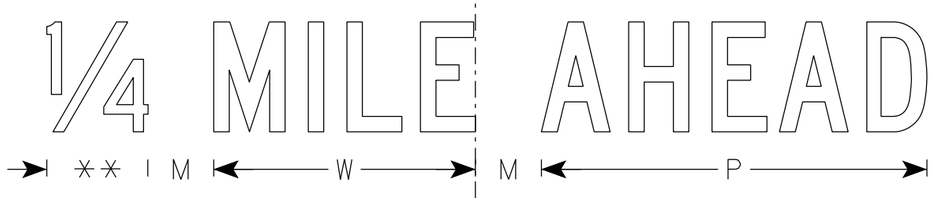
NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals to nearest quarter mile and optically adjust spacing to achieve proper balance.



R11-3

** See Note 5



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	18	1 1/2	3/8	3/8	4	3	2	11 1/4	3	1 1/8	15 3/8	2	3 3/4	8 1/4	5/8		1 3/8	13 1/4	8 3/8	7/8	10 1/2	7 1/8				4.5
2S	60	30	1 7/8	1/2	5/8	6	5	3 1/2	16 7/8	5	1 3/8	23 1/4	3	6 1/4	13 5/8	1 1/8		1 7/8	22 1/8	14	1 1/2	17 1/2	11 7/8				12.5
2M	60	30	1 7/8	1/2	5/8	6	5	3 1/2	16 7/8	5	1 3/8	23 1/4	3	6 1/4	13 5/8	1 1/8		1 7/8	22 1/8	14	1 1/2	17 1/2	11 7/8				12.5
3																											
4																											
5																											

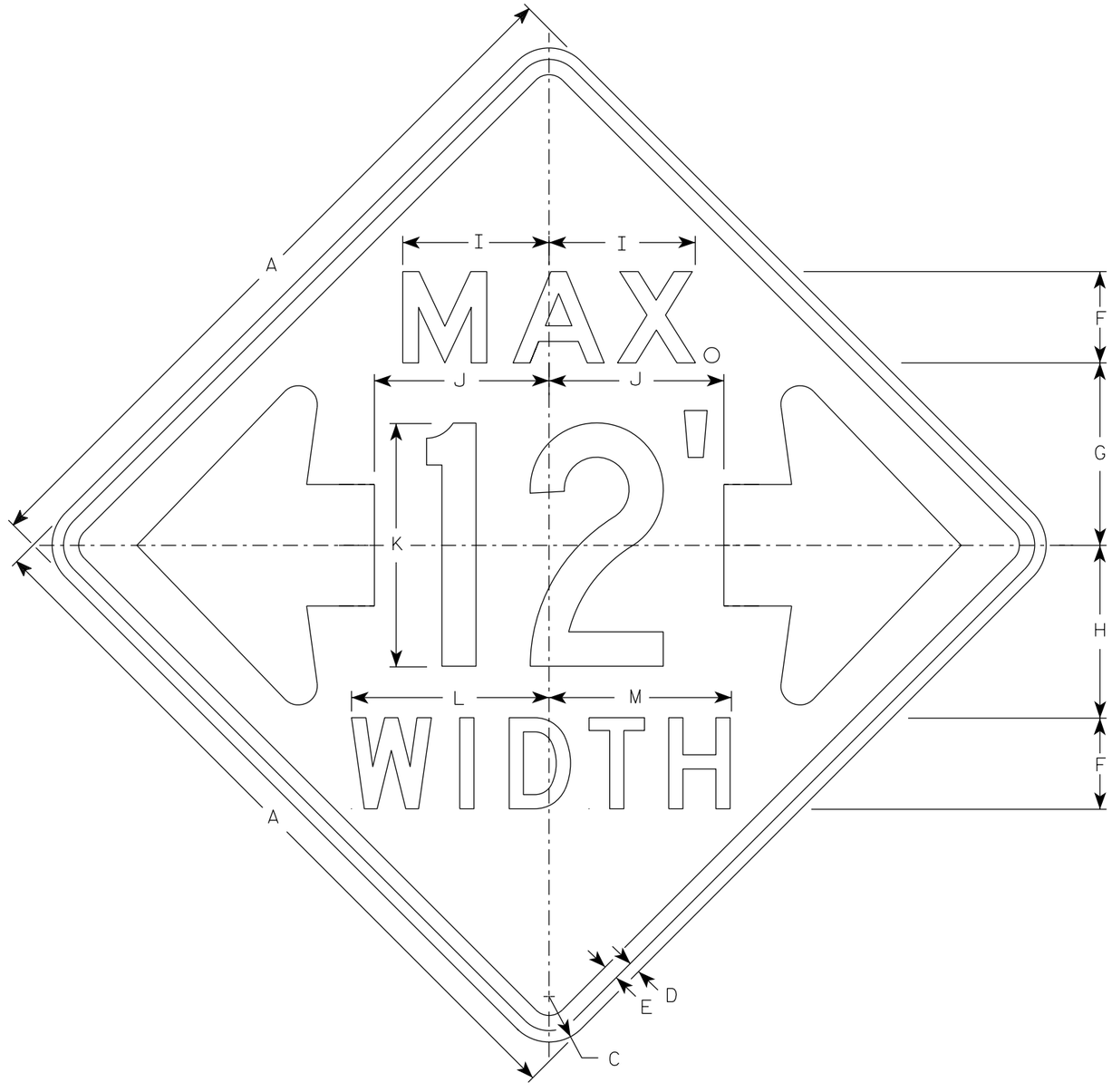
STANDARD SIGN
R11-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

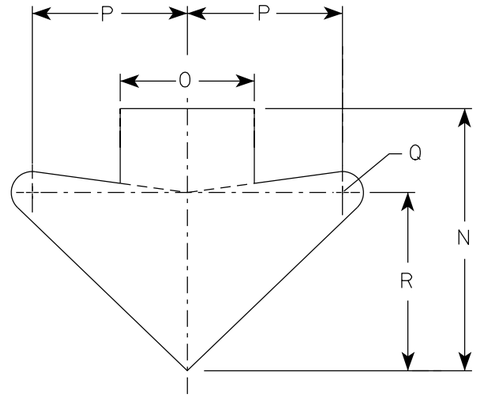
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 160	E



W12-52

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - See note 5
4. The top line is series E, the numerals are series C, and the bottom line is series D.
5. Substitute appropriate numerals and adjust spacing as required.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48		3	¾	1	6	12	11 ⅜	9 ⅝	11 ½	16	13	12	15 ⅝	8	9 ¼	1 ¼	10 ⅝									16.0
2M	48		3	¾	1	6	12	11 ⅜	9 ⅝	11 ½	16	13	12	15 ⅝	8	9 ¼	1 ¼	10 ⅝									16.0
3																											
4																											
5																											

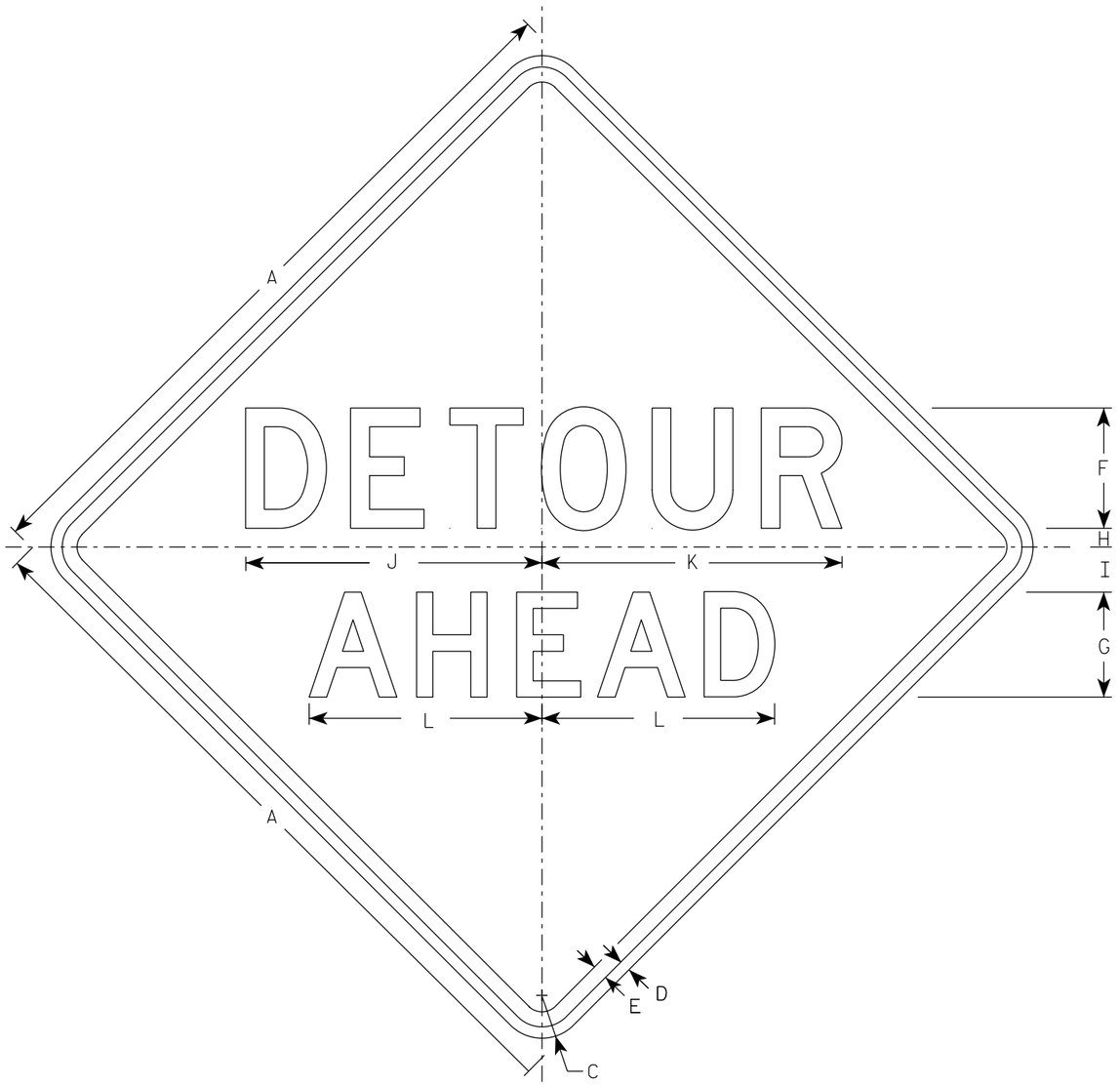
STANDARD SIGN
W12-52

WISCONSIN DEPT OF TRANSPORTATION

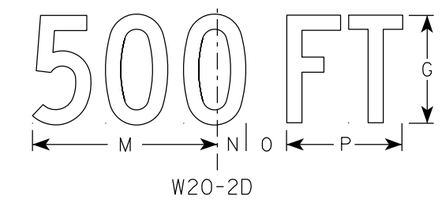
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/10/2024 PLATE NO. W12-52.8

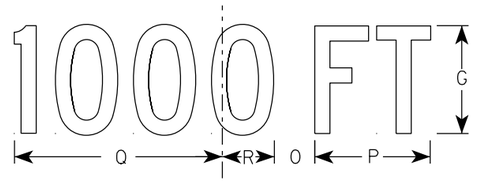
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 161 E



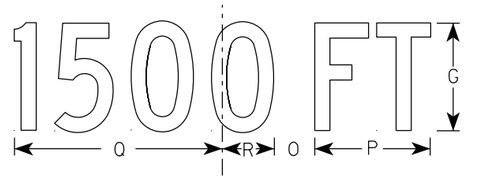
W20-2A



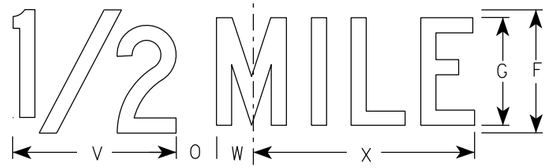
W20-2D



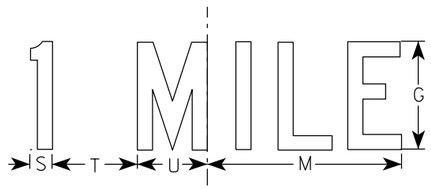
W20-2C



W20-2B



W20-2G



W20-2F

NOTES

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

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

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

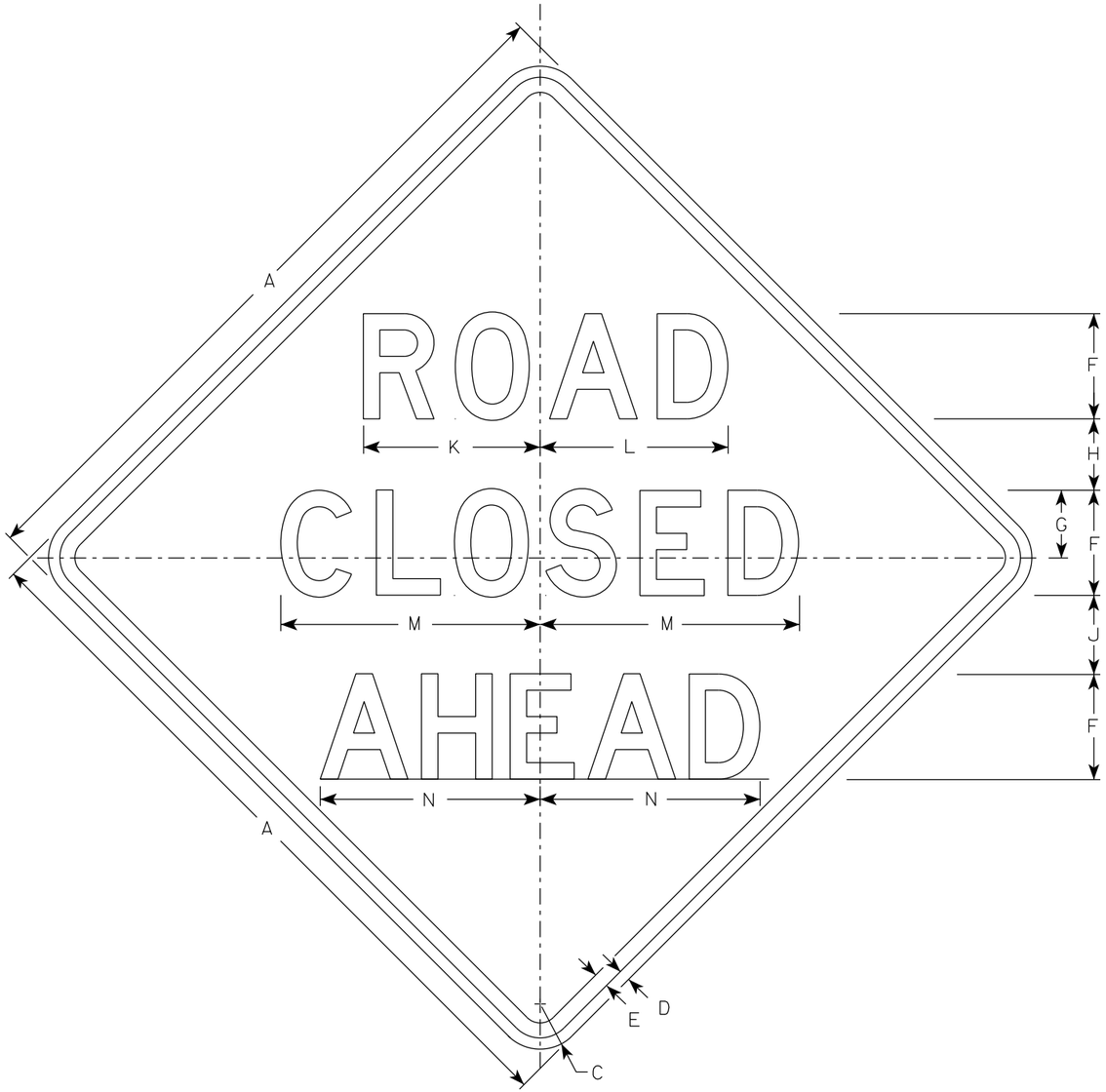
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

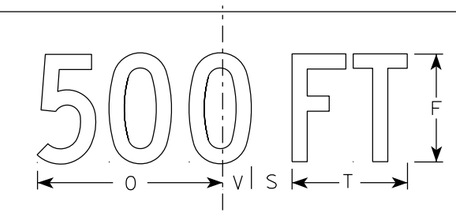
DATE 1/10/2024 PLATE NO. W20-2.7

PROJECT NO:	HWY:	COUNTY:		SHEET NO: E

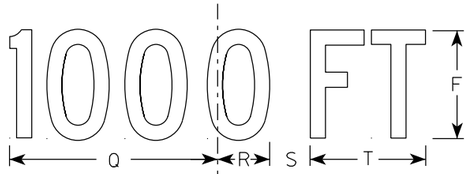
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W202.DGN PLOT DATE : 10-JAN 2024 11:36 PLOT BY : dotc4c PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42



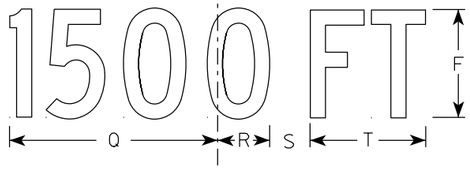
W20-3A



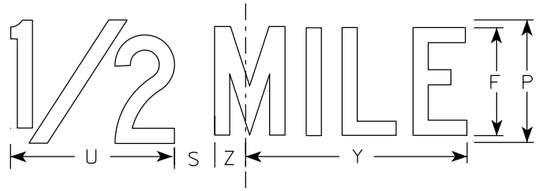
W20-3D



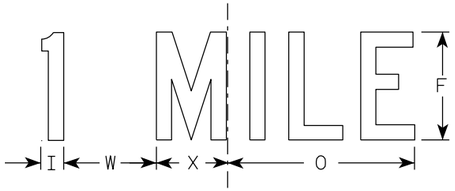
W20-3C



W20-3B



W20-3G



W20-3F

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - see note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Lines 1 and 2 are Series D.
   Line 3 is Series D for AHEAD and Series C for all other distances.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		2 1/4	5/8	3/4	5	3 3/8	3 1/2	1 1/8	4	8 3/8	8 7/8	12 1/2	11	9	6	10 1/8	2 1/2	1 7/8	5 5/8	8	1 3/8	4 1/2	3 1/2	10 3/4	1 3/4	9.0
2S	48		3	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
2M	48		3	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
3	48		3	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
4	48		3	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
5	48		3	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0

STANDARD SIGN
W20-3A, B, C, D, F & G

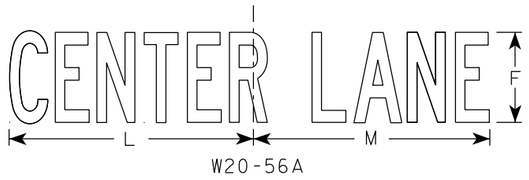
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/10/2024 PLATE NO. W20-3.8

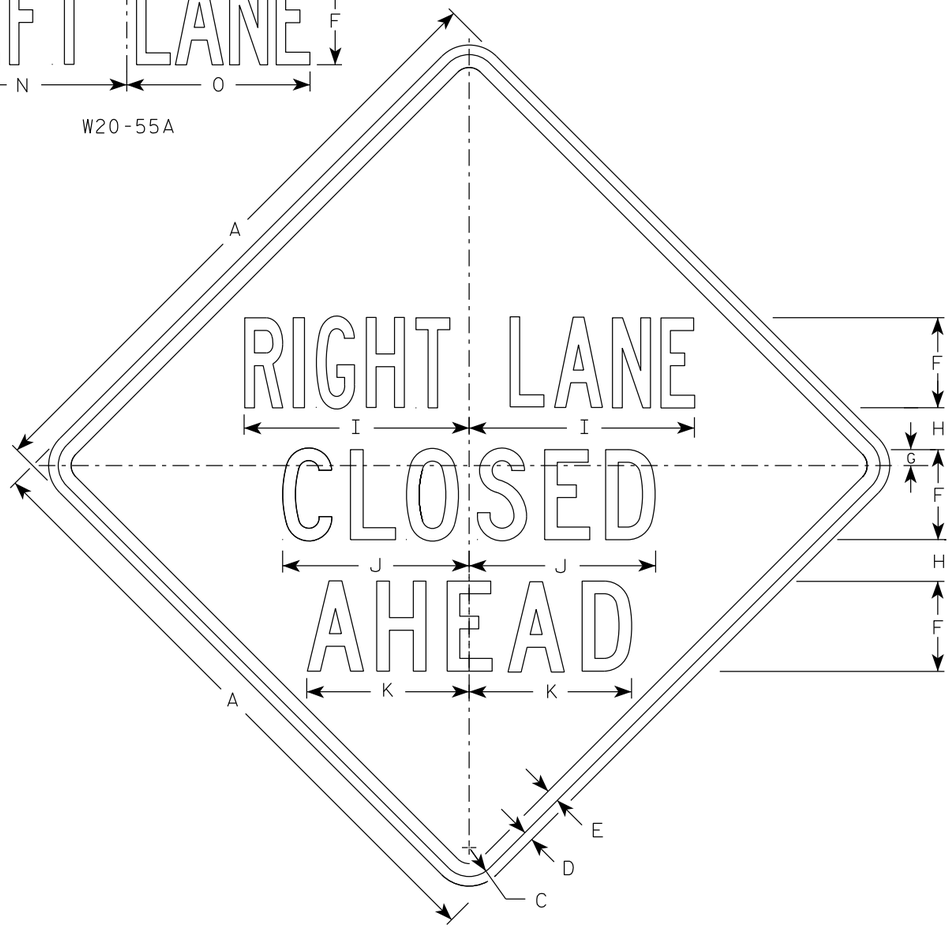
PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W203.DGN PLOT DATE : 10-JAN 2024 12:02 PLOT BY : dotc4c PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42

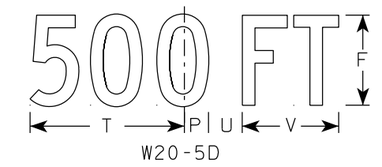


W20-56A

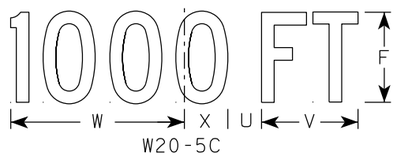
W20-55A



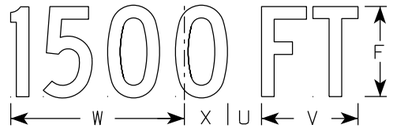
W20-5A



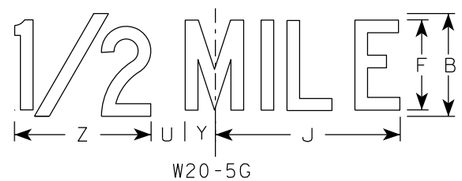
W20-5D



W20-5C



W20-5B



W20-5G

W20-5F

NOTES

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

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

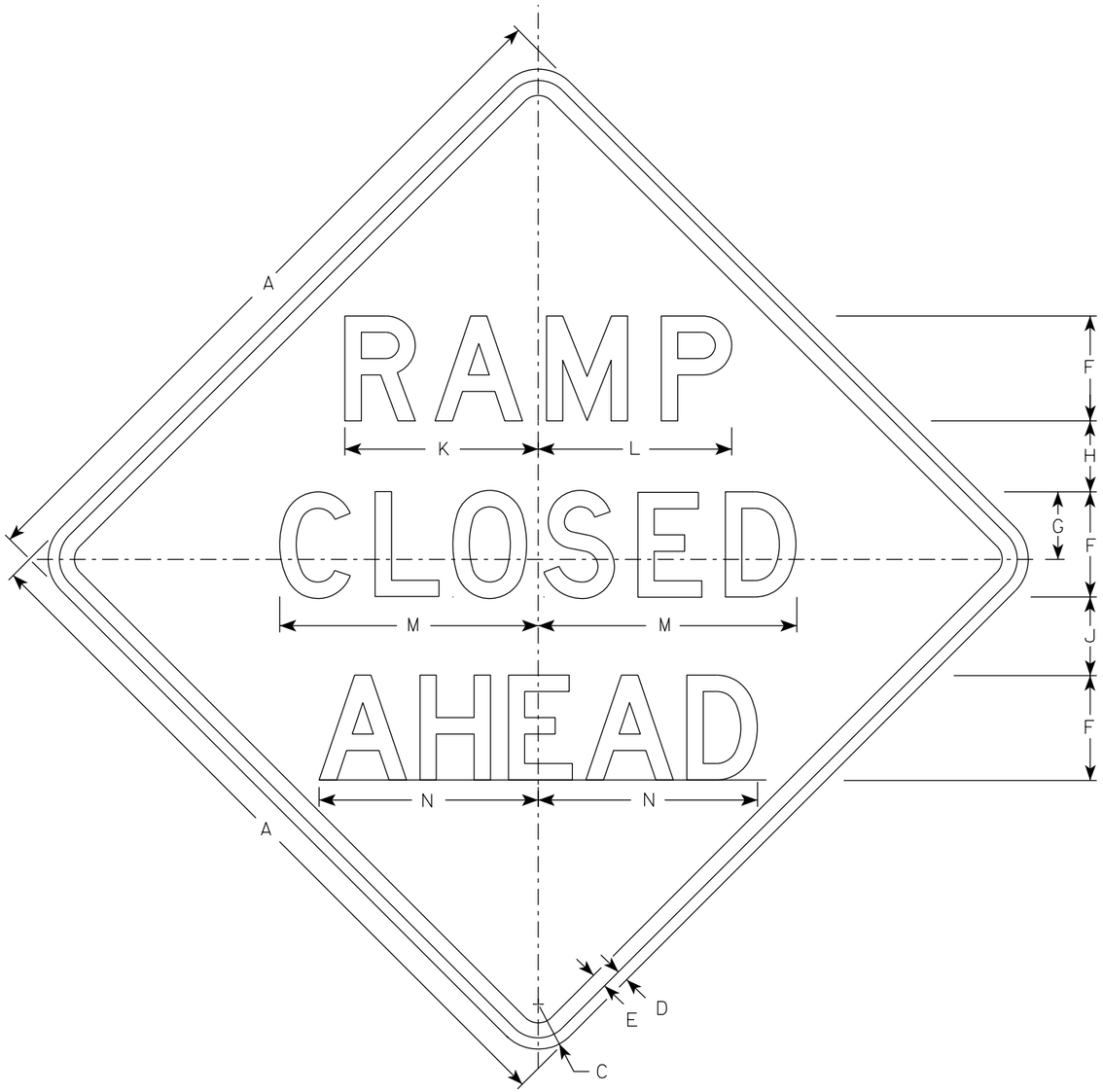
STANDARD SIGN
W20-5A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

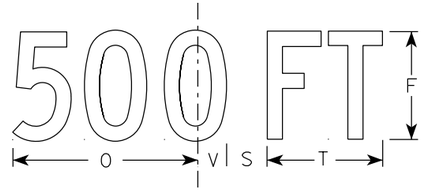
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/27/24 PLATE NO. W20-5.12

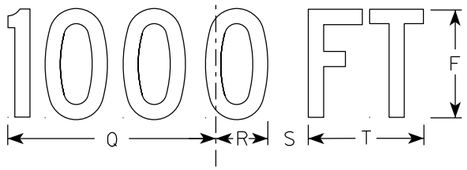
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 164 | E



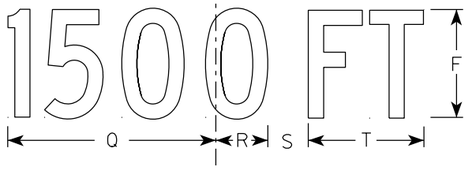
W20-53A



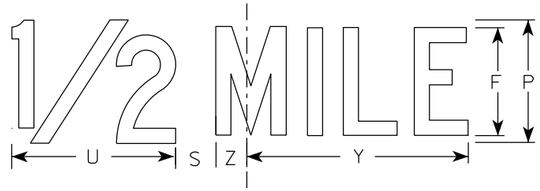
W20-53D



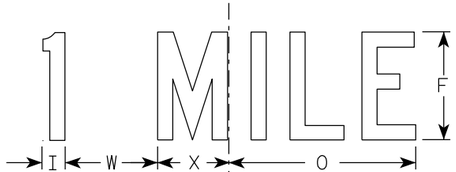
W20-53C



W20-53B



W20-53G



W20-53F

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - see note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Lines 1 and 2 are Series D.
   Line 3 is Series D for AHEAD and Series C for all other distances.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		2 1/4	5/8	3/4	5	3 3/8	3 1/2	1 1/8	4	9 1/4	9 1/4	12 1/2	11	9	6	10 1/8	2 1/2	1 7/8	5 5/8	8	1 3/8	4 1/2	3 1/2	10 3/4	1 3/4	9.0
2S	48		3	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	12 7/8	12 7/8	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
2M	48		3	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	12 7/8	12 7/8	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
3	48		3	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	12 7/8	12 7/8	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
4	48		3	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	12 7/8	12 7/8	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
5	48		3	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	12 7/8	12 7/8	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0

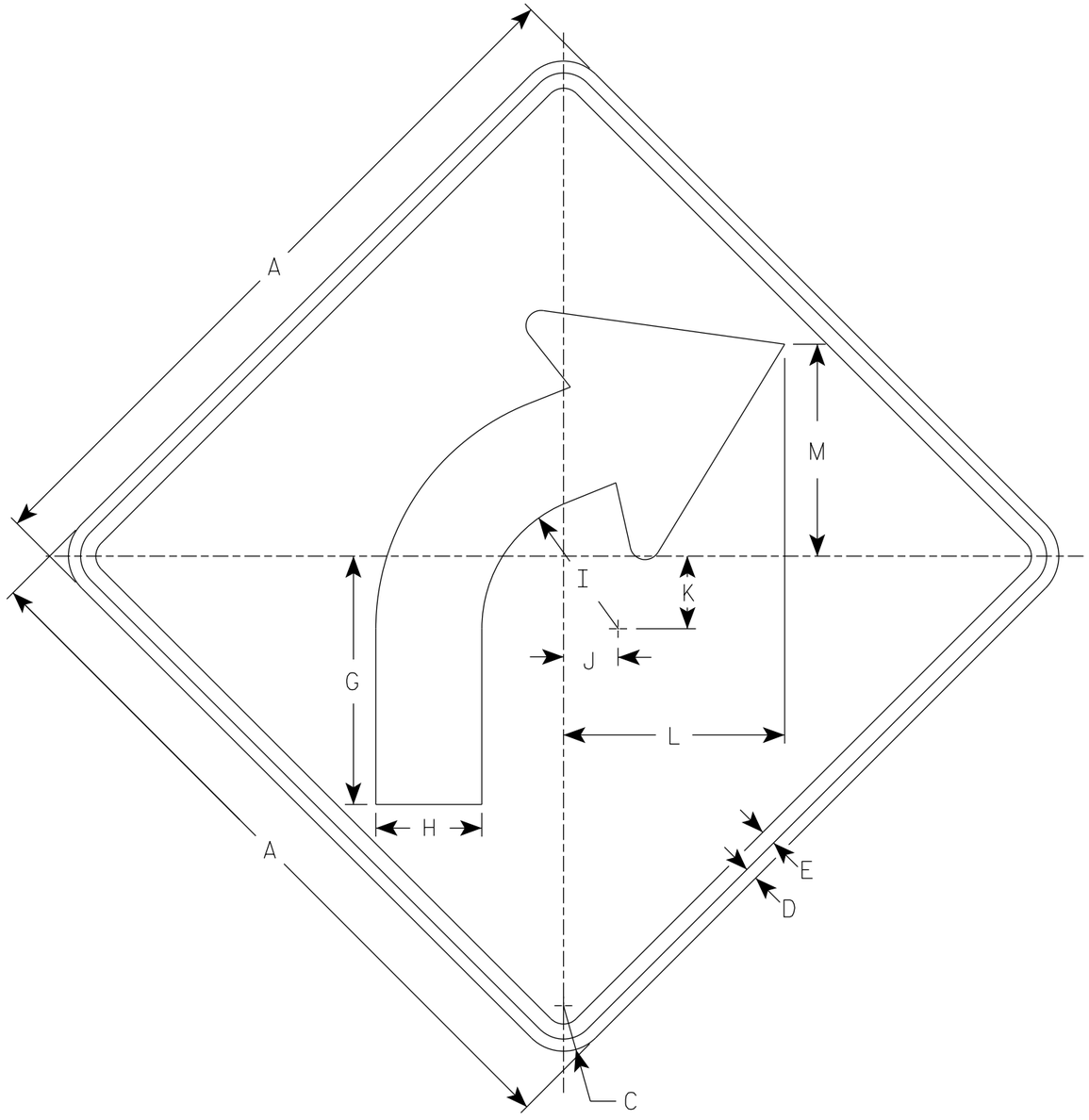
STANDARD SIGN
W20-53A,B,C,D,F,G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/10/2024 PLATE NO. W20-53.2

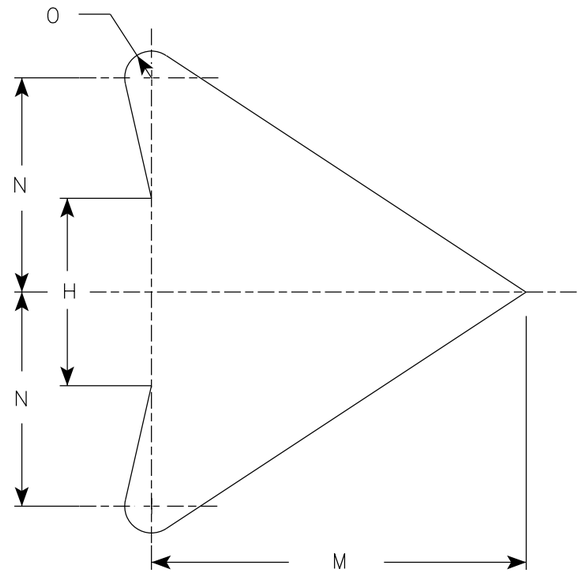
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



W01-2R

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W01-2L is the same as W01-2R except the arrow is reversed along the vertical centerline.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		2 1/4	5/8	3/4		12 3/8	5 1/4	6 3/4	2 5/8	3 1/2	10 7/8	10 1/2	6	3/4												4.0
2S	48		3	3/4	1		16 1/2	7	9	3 1/2	4 5/8	14 1/2	14	8	1												16.0
2M	48		3	3/4	1		16 1/2	7	9	3 1/2	4 5/8	14 1/2	14	8	1												16.0
3	48		3	3/4	1		16 1/2	7	9	3 1/2	4 5/8	14 1/2	14	8	1												16.0
4	48		3	3/4	1		16 1/2	7	9	3 1/2	4 5/8	14 1/2	14	8	1												16.0
5	48		3	3/4	1		16 1/2	7	9	3 1/2	4 5/8	14 1/2	14	8	1												16.0

STANDARD SIGN
W01-2

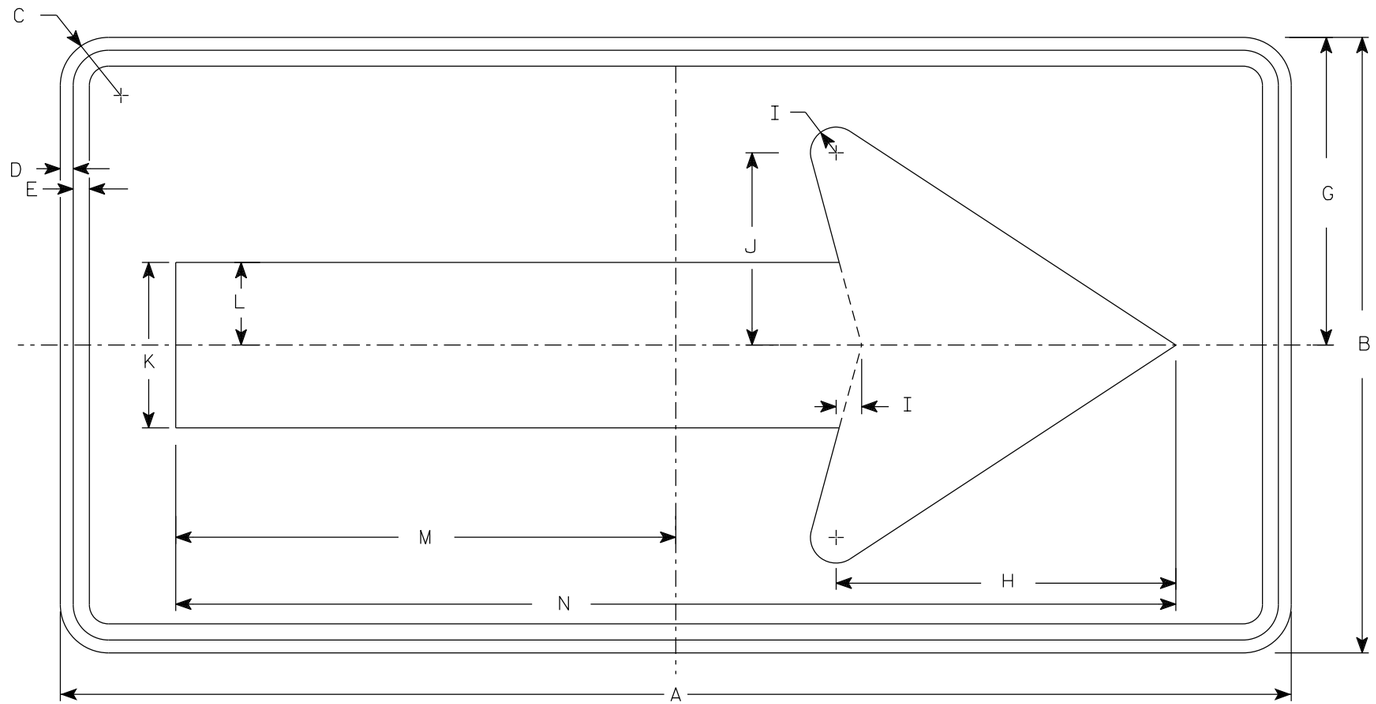
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/24/2024 PLATE NO. W01-2.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W012.dgn PLOT DATE : 24-JAN 2024 10:17 PLOT BY : dotc4c PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42



WO1-6

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	24	1 7/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
2M	48	24	1 7/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
3	60	30	1 7/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
4	60	30	1 7/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
5	60	30	1 7/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5

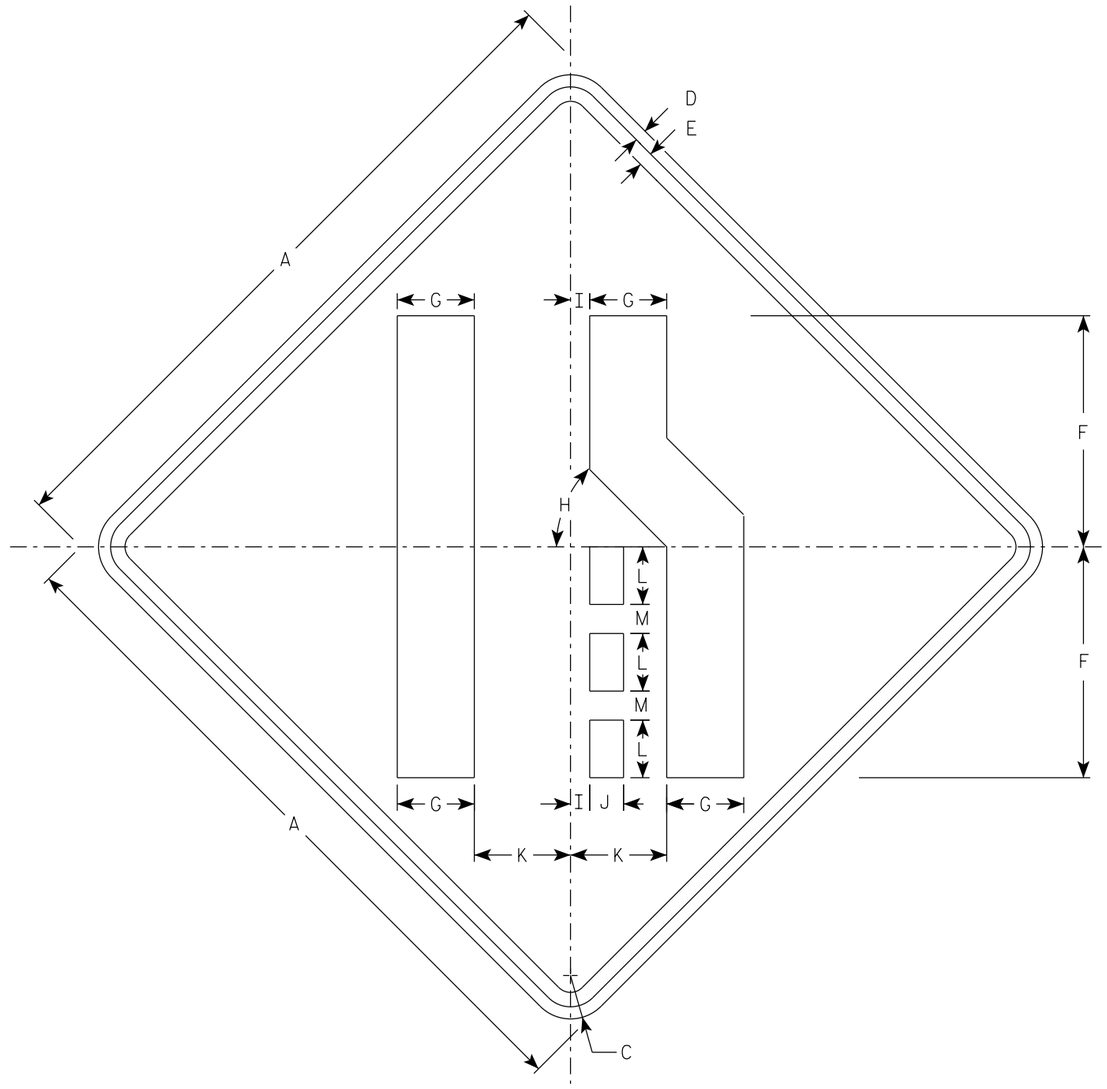
STANDARD SIGN
WO1-6

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/24/2024 PLATE NO. WO1-6.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



W04-2R

NOTES

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

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

STANDARD SIGN
W04-2

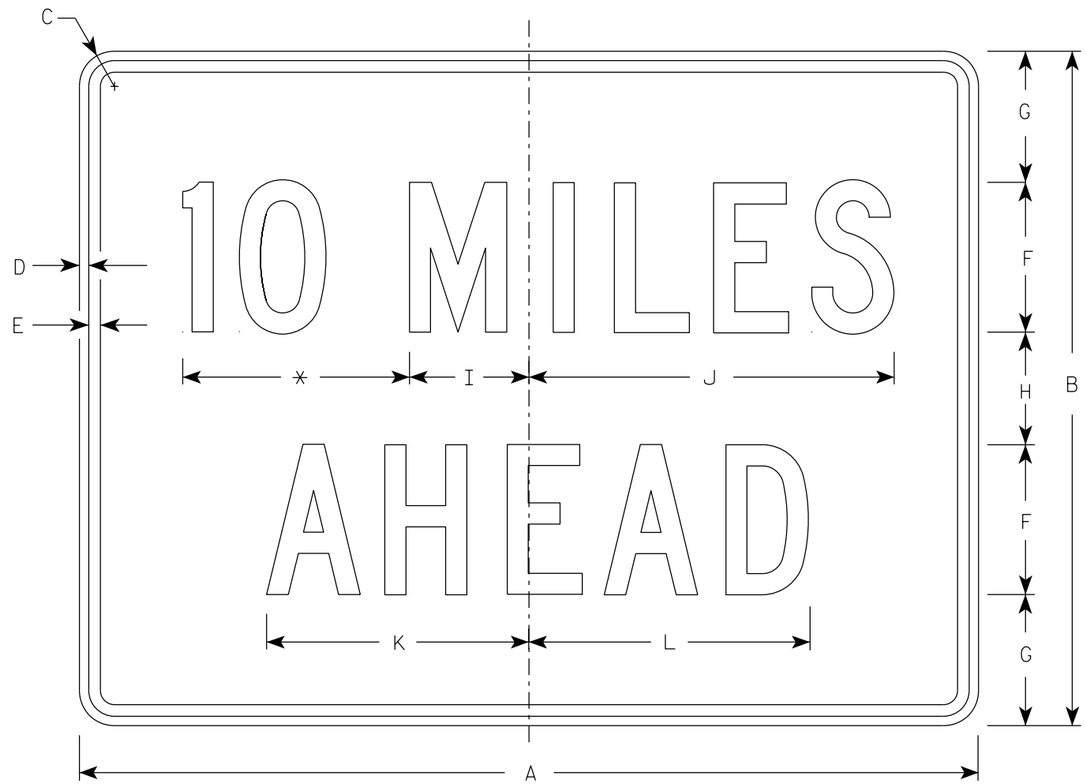
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

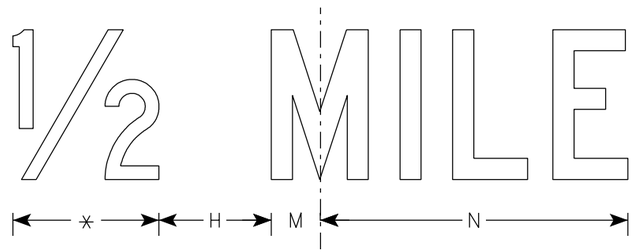
DATE 1/25/2024 PLATE NO. W04-2.2

PROJECT NO:

SHEET NO: E



W057-52



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.
5. Substitute appropriate numerals to the nearest quarter mile and optically adjust spacing to achieve proper balance.

* See note 5

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	24	1 1/2	3/8	1/2	6	4 1/2	3	4 3/4	14 5/8	10 5/8	11 3/8	2	12													6.0
2S	48	36	2 1/4	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	16 3/8													12.0
2M	48	36	2 1/4	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	16 3/8													12.0
3	48	36	2 1/4	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	16 3/8													12.0
4	48	36	2 1/4	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	16 3/8													12.0
5	48	36	2 1/4	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	16 3/8													12.0

STANDARD SIGN
W057-52

WISCONSIN DEPT OF TRANSPORTATION

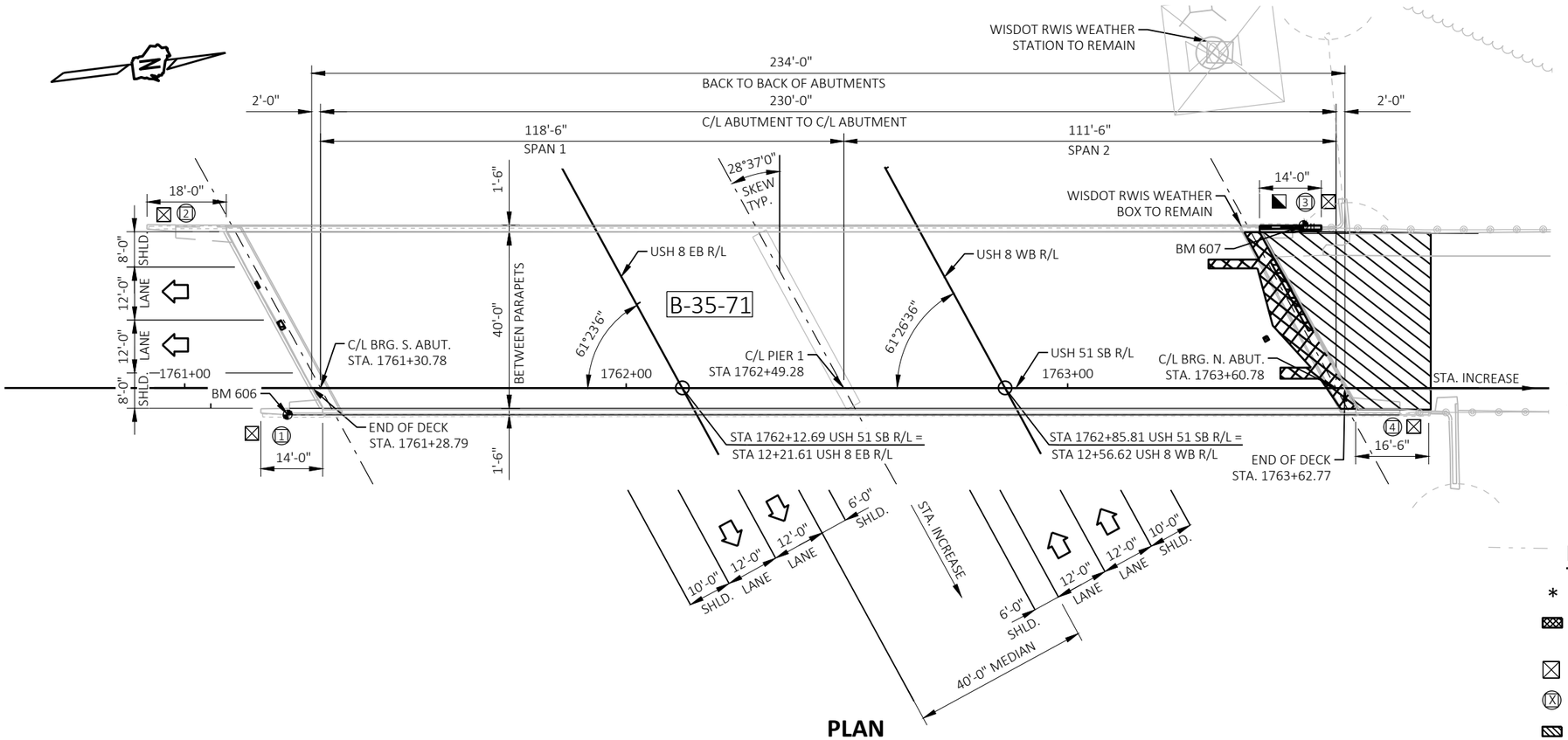
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/1/2024 PLATE NO. W057-52.3

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 169 E

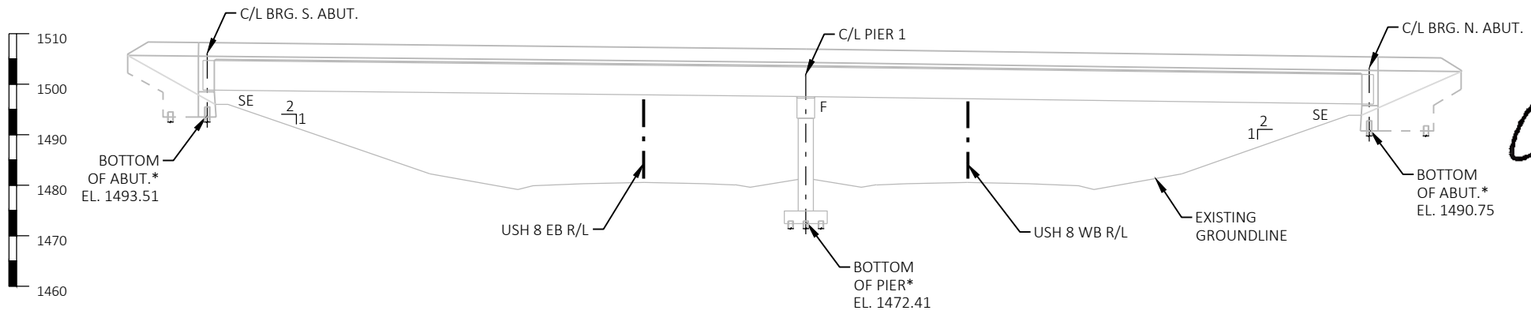
STATE PROJECT NUMBER

1170-16-64



PLAN

2 SPAN 70" PRESTRESSED GIRDER BRIDGE



ELEVATION

(LOOKING WEST)

BENCH MARK

NO.	STATION	DESCRIPTION	ELEV.
606	1761+23.16	BM BRASS DISK FND	1507.78
607	1763+53.37	BM CUT "X"	1505.07

DESIGN DATA

MATERIAL PROPERTIES:

CONCRETE MASONRY:
- DECK REPAIR — f'_c = 4,000 PSI
- SUPERSTRUCTURE — f'_c = 4,000 PSI
- OTHER — f'_c = 3,500 PSI

BAR STEEL REINFORCEMENT
- GRADE 60 — f_y = 60,000 PSI

LIVE LOAD:

TAKEN FROM HSI, 04/04/2025
DESIGN LOADING: HS-20
INVENTORY RATING: HS-21
OPERATION RATING: HS-33
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV): 250 (KIPS)

TRAFFIC DATA

USH 51:

ADT = 7,100 (2022)
R. D. S. = 70 MPH

USH 8:

ADT = 6,300 (2022)
R. D. S. = 70 MPH

LEGEND:

- ∗ ELEVATIONS FROM 1983 AS BUILT PLANS
- AREAS OF THIN POLYMER OVERLAY REPAIR. SEE "REPAIR DETAIL" ON SHEET 2 FOR DETAILS
- GUARD RAIL CONNECTION LOCATION
- (X) WING WALL NUMBER
- APPROACH SLAB REPLACEMENT, SEE ROADWAY PLANS
- PREPARATION DECKS TYPE 1 AND CONCRETE MASONRY DECK REPAIR AREAS
- REMOVE AND REPLACE WINGWALL TO BRIDGE SEAT ELEVATION AT ABUTMENT

WISCONSIN
ANTHONY J. CASTLE
E-43345
OAK CREEK
WI
PROFESSIONAL ENGINEER

5/30/25

SCOPE OF WORK

1. REPAIRING EXISTING POLYMER OVERLAY
2. DECK SURFACE REPAIRS
3. PARTIAL WINGWALL REPLACEMENT
4. PIGMENTED SURFACE RESEALER ON PARAPETS

STRUCTURE DESIGN CONTACTS

TONY CASTLE (EMCS)	414-935-5740
AARON BONK (WISDOT)	608-261-0261

LIST OF DRAWINGS

NO.	DATE	REVISION	BY

emcs

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED JLR 08/20/25
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-35-71

USH 51 SB OVER USH 8

COUNTY	TOWN
LINCOLN	KING

DESIGN SPEC.
N/A REHABILITATION

DESIGNED BY	DESIGNED CK'D	DRAWN BY	PLANS CK'D
AMR	AJC	KRW	AJC

GENERAL PLAN & ELEVATION

SHEET 1 OF 5
170

I.D. DATE:

8 8

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STATE PROJECT NUMBER
1170-16-64

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

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

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

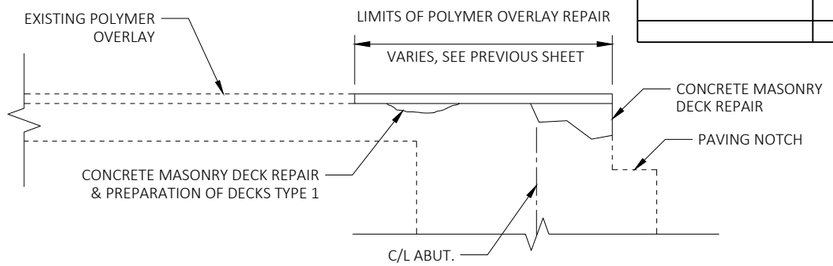
LIMITS OF POLYMER OVERLAY REPAIR DETAILED ON THE PLANS ARE AN APPROXIMATION ONLY, FINAL AREAS TO BE DETERMINED IN THE FIELD BY THE ENGINEER.

USH 8 AND USH 51 SB REFERENCE LINES ARE A BEST FIT OF THE EXISTING REFERENCE LINE. STATIONS MAY NOT MATCH THE ORIGINAL STRUCTURE PLANS.

QUANTITIES FOR PREPARATION DECKS TYPE 1, SAWING PAVEMENT DECK PREPARATION AREAS, AND CONCRETE MASONRY DECK REPAIR ARE AN APPROXIMATION ONLY, FINAL AREAS TO BE DETERMINED IN THE FIELD BY THE ENGINEER.

PIGMENTED SURFACE SEALER RESEAL TO BE APPLIED TO THE ROADWAY FACE AND THE TOP OF THE EXISTING PARAPETS. PIGMENTED SURFACE SEALER SHALL BE APPLIED TO THE ROADWAY FACE AND TOP OF NEW PARAPET.

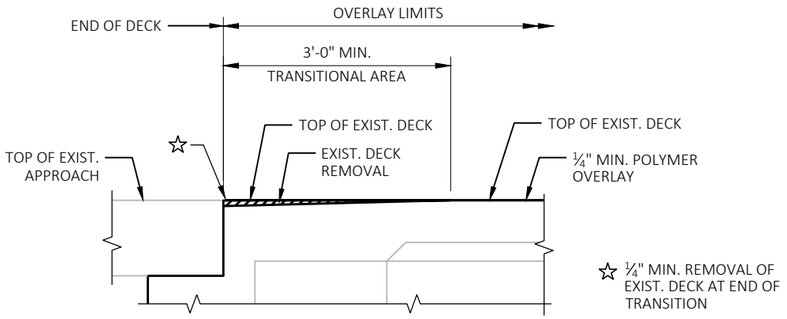
REMOVE THE POLYMER OVERLAY BY SCRAPING, GRINDING, MILLING, OR OTHER APPROVED METHOD WITHOUT DAMAGING UNDERLYING CONCRETE. DO NOT REMOVE MORE THAN ¼" OF THE EXISTING CONCRETE DECK SURFACE AS PART OF POLYMER OVERLAY REMOVAL. ¼" MAXIMUM REMOVAL OF EXISTING DECK AS NEEDED IS INCLUDED IN BID ITEM "REMOVING POLYMER OVERLAY B-35-71".



REPAIR DETAILS

TOTAL ESTIMATED QUANTITIES

BID ITEM NO.	BID ITEMS	UNIT	TOTAL
203.0220	REMOVING STRUCTURE B-35-71	EACH	1
206.1001	EXCAVATION FOR STRUCTURES BRIDGES B-35-71	EACH	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	83
502.0100	CONCRETE MASONRY BRIDGES	CY	4
502.3205	PIGMENTED SURFACE SEALER RESEAL	SY	208
502.3210	PIGMENTED SURFACE SEALER	SY	6
502.4205	ADHESIVE ANCHORS NO. 5 BAR	EACH	5
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	670
509.0301	PREPARATION DECKS TYPE 1	SY	2
509.0310.S	SAWING PAVEMENT DECK PREPARATION AREAS	LF	38
509.2100.S	CONCRETE MASONRY DECK REPAIR	CY	1
509.5100.S	POLYMER OVERLAY	SY	30
509.9015.S.01	REMOVING POLYMER OVERLAY B-35-71	SY	30
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	4
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	1
	NON-BID ITEMS		
	FILLER	SIZE	1/2"



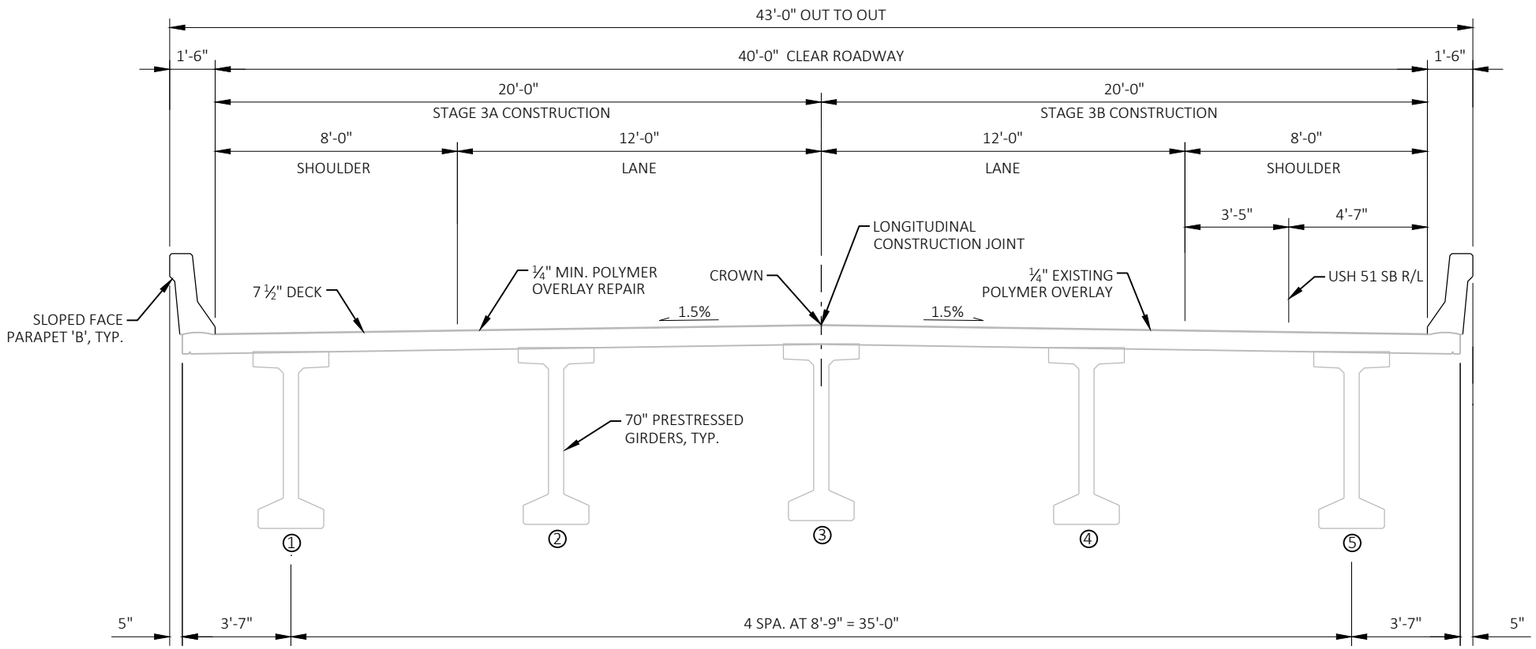
SECTION THRU ABUTMENT TRANSITIONAL AREA ON DECK

(REMOVAL AND OVERLAY THICKNESS NOT TO SCALE)

NOTE: TRANSITIONAL AREA REQUIRED WHEN APPROACH PAVEMENT HAS BEEN PLACED PRIOR TO OVERLAY PLACEMENT

TYPICAL SECTION THRU ABUTMENT

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



TYPICAL CROSS SECTION

(LOOKING UPSTATION)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-35-71

DRAWN BY KRW | PLANS CK'D AJC

TYPICAL SECTION & QUANTITIES

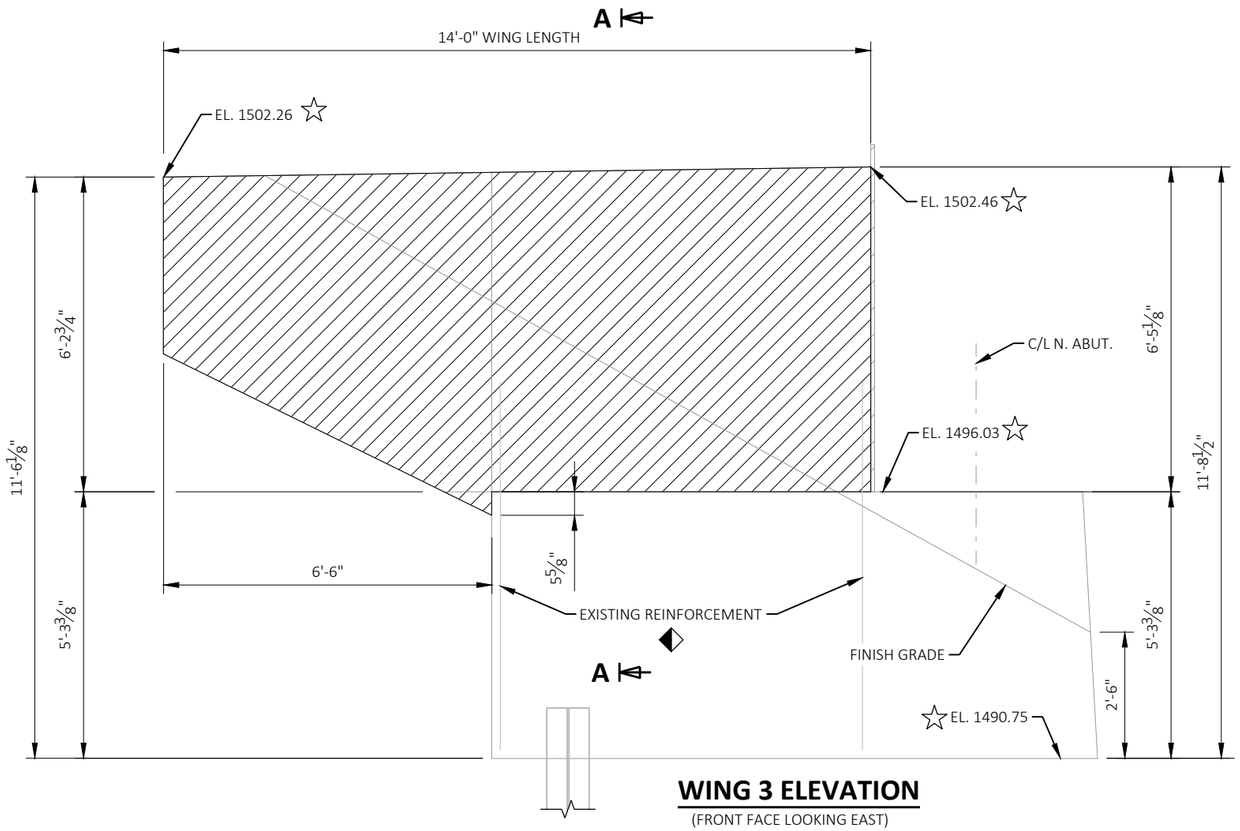
SHEET 2 OF 5

171

8

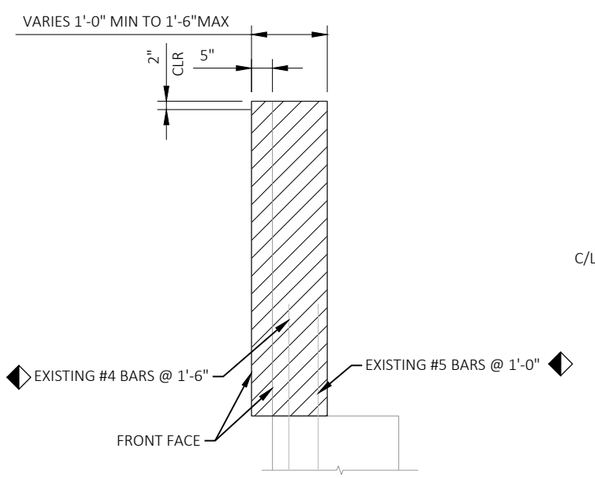
8

STATE PROJECT NUMBER
1170-16-64

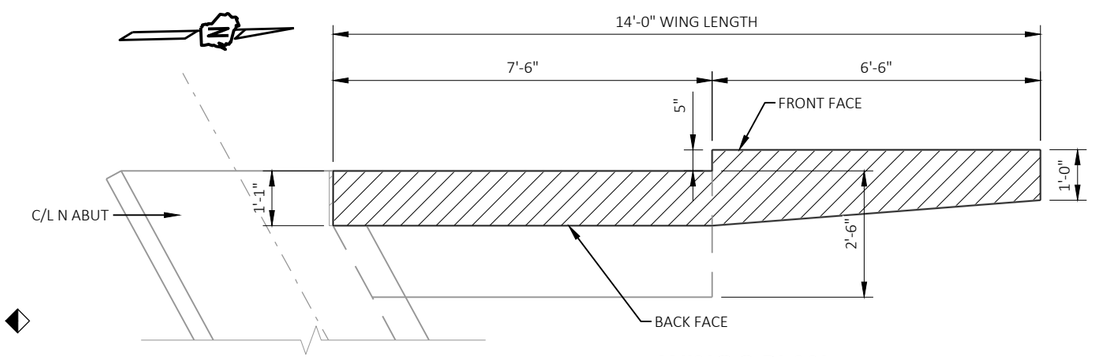


WING 3 ELEVATION

(FRONT FACE LOOKING EAST)



SECTION A-A



WING 3 PLAN

LEGEND

- ELEVATIONS FROM 1983 AS-BUILT PLANS.
- LIMITS OF REMOVAL
- THE CONTRACTOR MUST PROTECT THE EXISTING REINFORCEMENT DURING DEMOLITION. REPLACEMENT OF ABUTMENT COMPONENTS DAMAGED DURING THE REMOVAL OF THE EXISTING WING WILL BE THE CONTRACTORS RESPONSIBILITY AND REPLACED AT NO ADDITIONAL COST TO THE DEPARTMENT.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-35-71

DRAWN BY EMM | PLANS CK'D AJC

WING 3 REMOVAL DETAILS

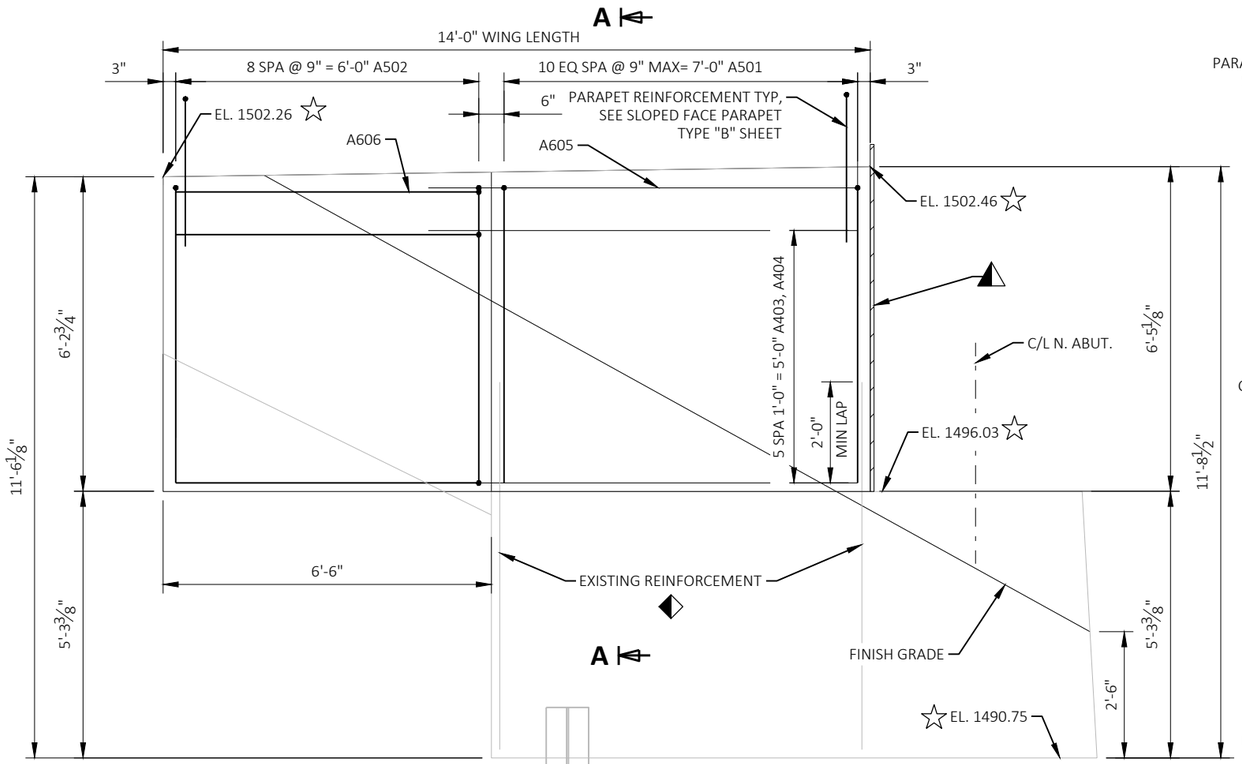
SHEET 3 OF 5
172

8

8

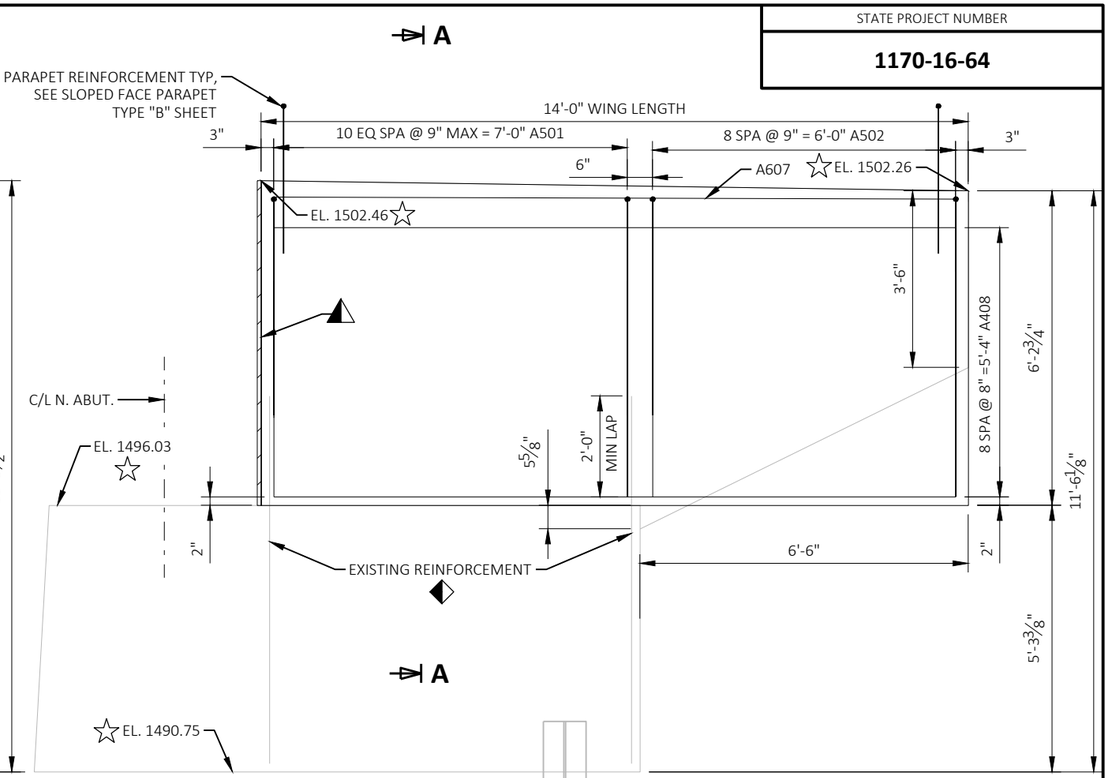
STATE PROJECT NUMBER

1170-16-64



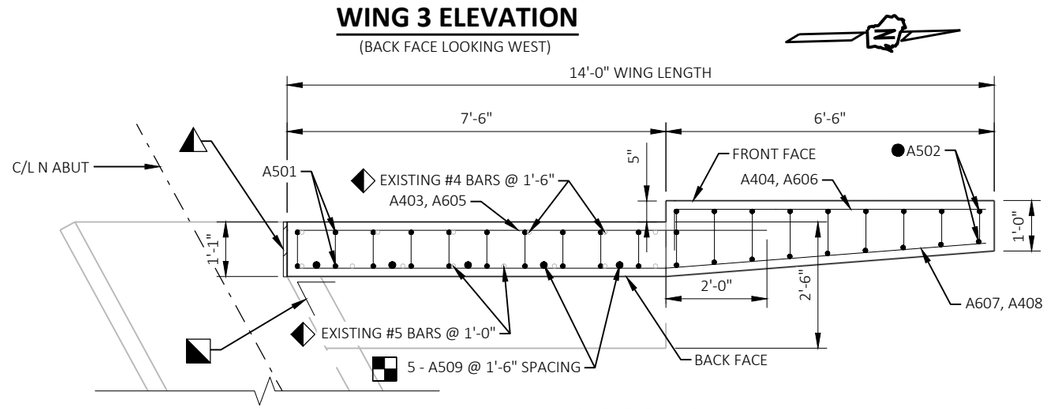
WING 3 ELEVATION

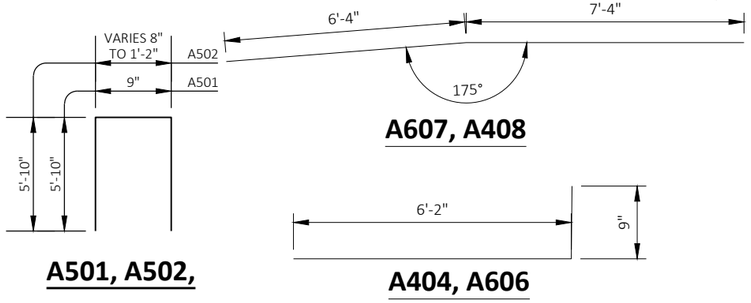
(FRONT FACE LOOKING EAST)



WING 3 ELEVATION

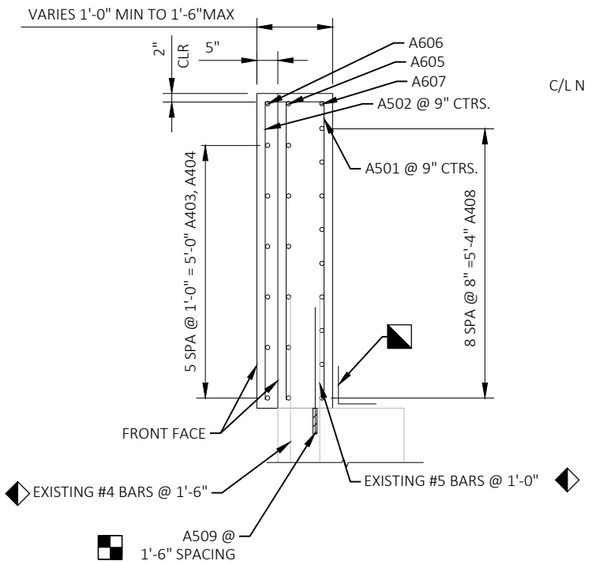
(BACK FACE LOOKING WEST)





A607, A408

A404, A606



A501, A502,

BILL OF BARS

BAR MARK	COAT	NO.	LENGTH	BENT	BAR SERIES	LOCATION
A501	X	11	12'-2"	X		WING - VERT
A502	X	9	12'-4"	X	●	WING - VERT
A403	X	6	8'-9"			WING - HORIZONTAL FF
A404	X	6	6'-10"	X		WING - HORIZONTAL FF
A605	X	1	9'-3"			WING - HORIZONTAL FF TOP
A606	X	1	6'-9"	X		WING - HORIZONTAL FF
A607	X	1	13'-8"	X		WING - HORIZONTAL BF TOP
A408	X	9	13'-8"	X		WING - HORIZONTAL BF
A509	X	5	2'-6"			WING - ADH. ANC.

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

BAR SERIES TABLE

BAR MARK	NO. REQ'D.	LENGTH
A502	1 SERIES OF 9	12'-1" TO 12'-7"

BUNDLE AND TAG BARS SEPARATELY.

SECTION A-A

LEGEND

- 18" RUBBERIZED MEMBRANE WATERPROOFING, SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE.
- ½" FILLER. EXTEND FROM BRIDGE SEAT TO TOP OF CONRETE PARAPET. FILLER INCLUDED IN WING LENGTH.
- ☆ ELEVATIONS FROM 1983 AS-BUILT PLANS. IF ELEVATIONS VARY, MATCH FLOW LINE ELEVATION ON THE DECK AND SLOPE AS SHOWN
- ADHESIVE ANCHORS NO. 5 BAR. EMBED 6" INTO CONCRETE. ANCHORS SHALL BE APPROVED FOR USE IN CRACKED CONCRETE.
- THE CONTRACTOR MUST PROTECT THE EXISTING REINFORCEMENT DURING DEMOLITION. REPLACEMENT OF ABUTMENT COMPONENTS DAMAGED DURING THE REMOVAL OF THE EXISTING WING WILL BE THE CONTRACTORS RESPONSIBILITY AND REPLACED AT NO ADDITIONAL COST TO THE DEPARTMENT.

WING 3 PLAN

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-35-71

DRAWN BY AMR | PLANS CK'D AJC

WING 3 REPLACEMENT DETAILS

SHEET 4 OF 5
173

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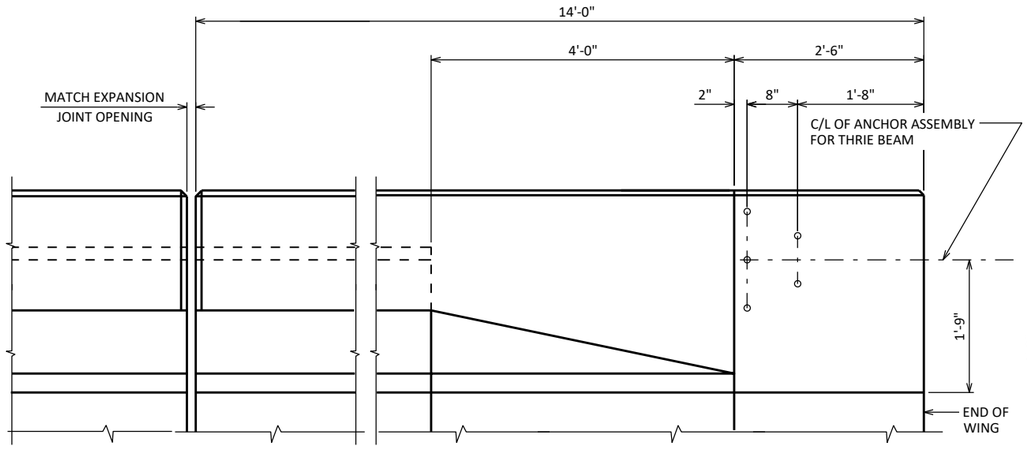
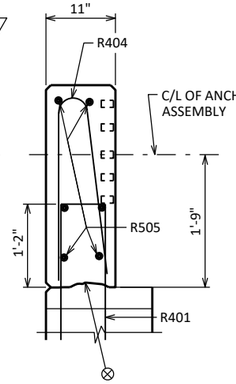
STATE PROJECT NUMBER

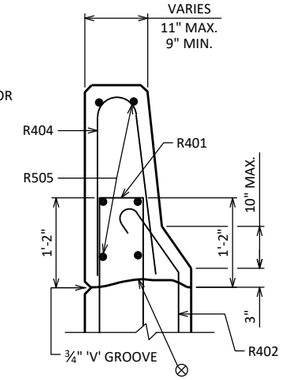
1170-16-64



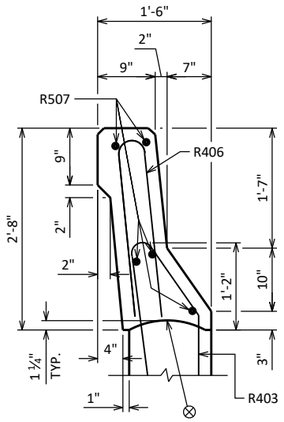
INSIDE ELEVATION



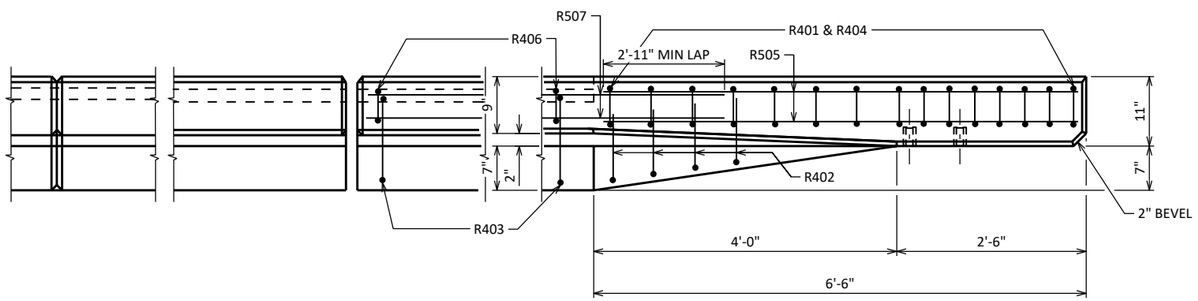
SECTION A-A



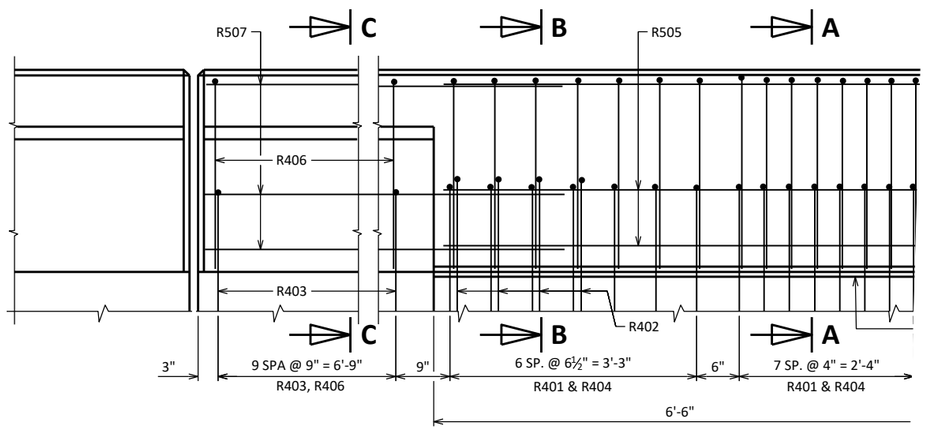
SECTION B-B



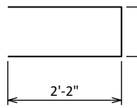
SECTION C-C



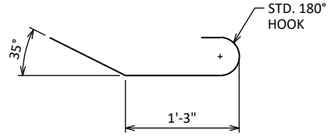
PLAN



OUTSIDE ELEVATION



R401



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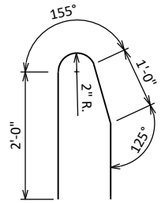

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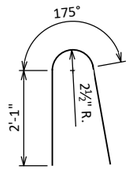

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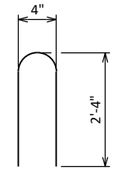
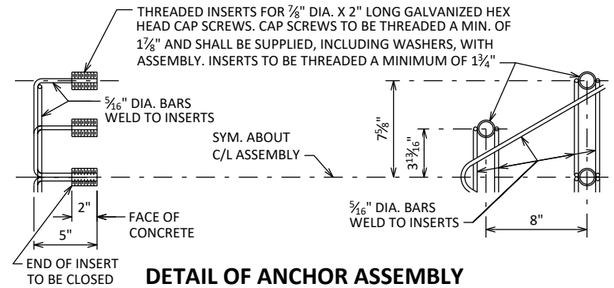


R406

BILL OF BARS

BAR MARK	COAT	NO.	LENGTH	BENT	LOCATION
R401	X	15	4'-9"	X	PARAPET STIRRUPS
R402	X	4	3'-1"	X	PARAPET
R403	X	10	4'-7"	X	PARAPET STIRRUPS
R404	X	15	4'-9"	X	PARAPET
R505	X	6	6'-2"		PARAPET
R406	X	10	4'-10"	X	PARAPET
R507	X	5	9'-6"		PARAPET

⊗ CONST. JOINT - STRIKE OFF AS SHOWN



DETAIL OF ANCHOR ASSEMBLY

NOTE: HEX HEAD CAP SCREWS & WASHERS TO BE GALVANIZED IN ACCORDANCE WITH ASTM F2329.

ASSEMBLY SHALL BE BID ITEM "ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD", EACH.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-35-71

DRAWN BY JRM | PLANS CK'D VJD

SLOPED FACE PARAPET "B"

SHEET 5 OF 5
174

SCALE = 2.00

8

8

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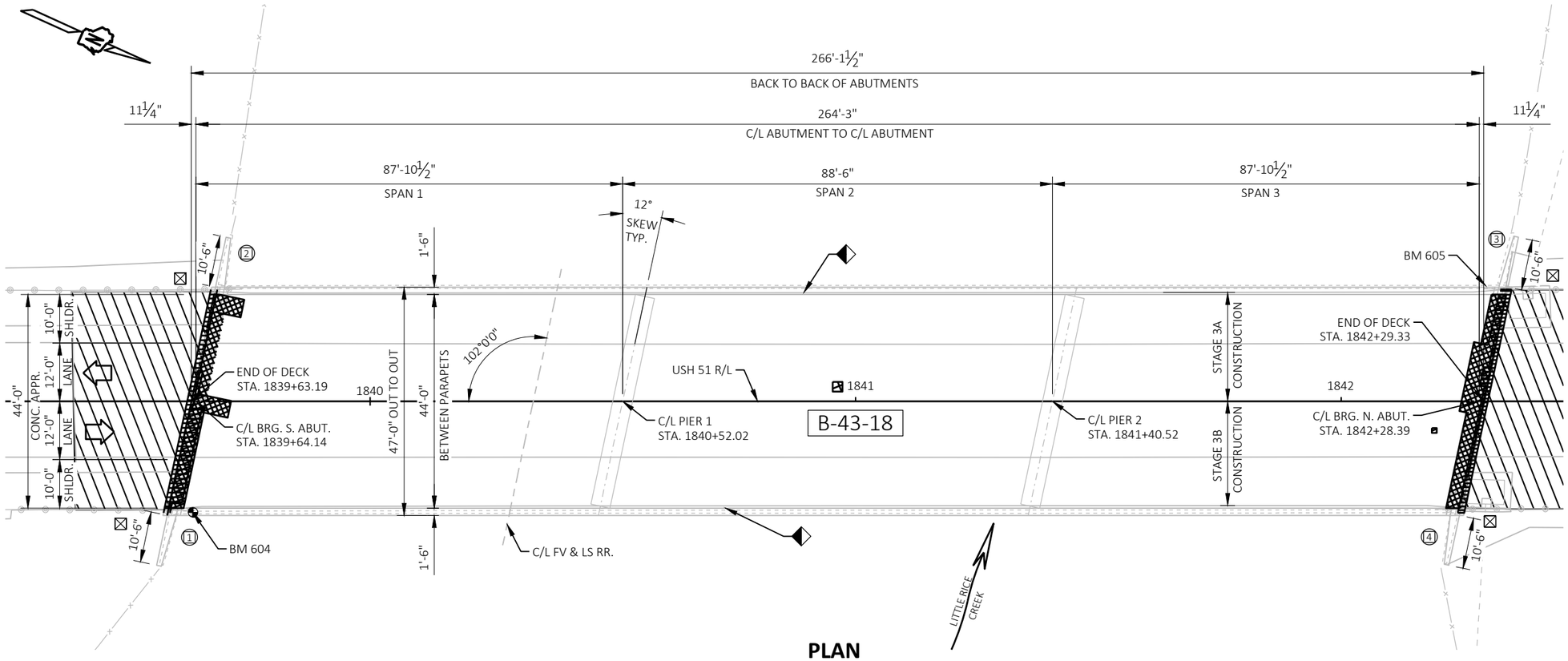
STATE PROJECT NUMBER

1170-16-64



PLAN

3 SPAN 54" PRESTRESSED GIRDER BRIDGE

DESIGN DATA

MATERIAL PROPERTIES:

CONCRETE MASONRY:
DECK REPAIR —— f'_c = 4,000 PSI
SURFACE REPAIR —— f'_c = 3,500 PSI

LIVE LOAD:

TAKEN FROM HSI, 04/04/2024
DESIGN LOADING: HS-20
INVENTORY RATING: HS-19
OPERATION RATING: HS-32
WISCONSIN STANDARD PERMIT VEHICLE
(WIS-SPV): 240 (KIPS)

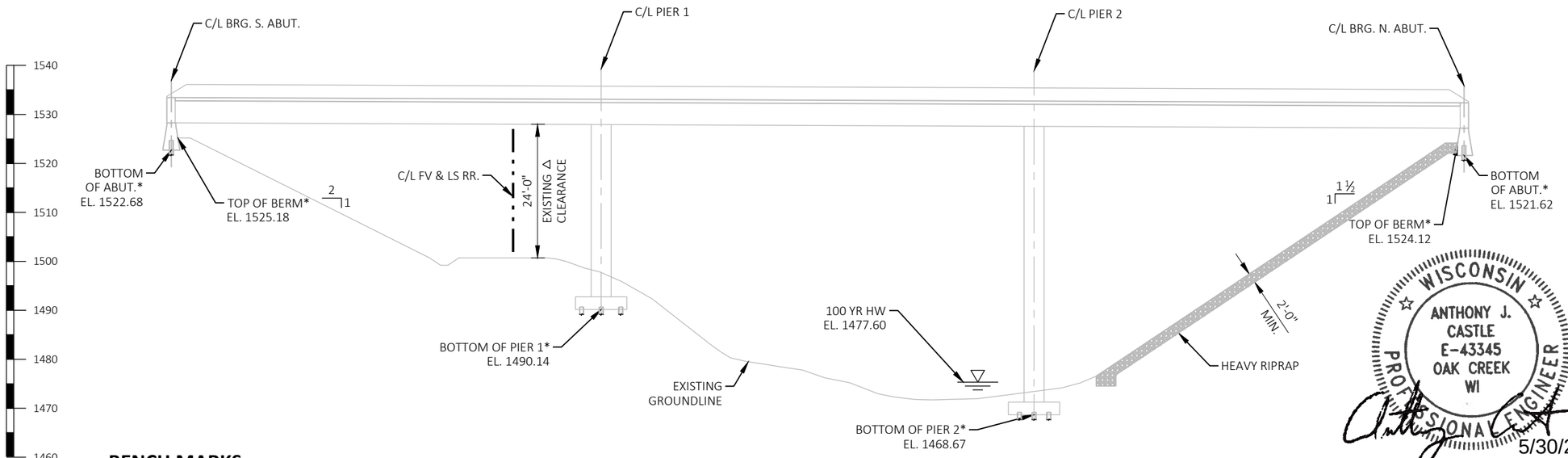
TRAFFIC DATA

USH 51:

ADT = 7,100 (2022)
R. D. S. = 70 MPH

LEGEND:

- ∗ ELEVATIONS FROM 1992 AS BUILT PLANS
- △ TAKEN FROM 7/11/23 INSPECTION REPORT
- AREAS OF THIN POLYMER OVERLAY REPAIR
- GUARD RAIL CONNECTION LOCATION
- WING WALL NUMBER
- APPROACH SLAB REPLACEMENT, SEE ROADWAY PLANS
- PREPARATION DECKS TYPE 1, CONCRETE MASONRY DECK REPAIR, AND SURFACE REPAIR AREAS
- PIGMENTED SURFACE SEALER RESEAL, SEE "TYPICAL SECTION & QUANTITIES" SHEET FOR DETAILS



ELEVATION

LOOKING DOWNSTREAM (WEST)

BENCH MARKS

NO.	STATION	DESCRIPTION	ELEV.
604	1839+63.53	BM BRASS DISK	1535.78
605	1842+29.79	BM CUT "X"	1534.65

STRUCTURE DESIGN CONTACTS:

TONY CASTLE (EMCS) 414-935-5740
AARON BONK (WISDOT) 608-261-0261

LIST OF DRAWINGS:

1. GENERAL PLAN & ELEVATION
2. TYPICAL SECTION & QUANTITIES

WISCONSIN
ANTHONY J. CASTLE
E-43345
OAK CREEK
WI
PROFESSIONAL ENGINEER
5/30/25

NO.	DATE	REVISION	BY

emcs

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED JLR 08/22/25
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-43-18

USH 51 OVER LITTLE RICE CR & FV & LS RR.

COUNTY	TOWN
ONEIDA	NOKOMIS

DESIGN SPEC.
N/A REHABILITATION

DESIGNED BY	DESIGN CK'D	DRAWN BY	PLANS CK'D
AMR	AJC	AMR	AJC

GENERAL PLAN & ELEVATION

SHEET 1 OF 2
175

I.D. 1170-16-34 DATE: 4/4/2025

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STATE PROJECT NUMBER
1170-16-64

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

C/L FV & LS RR AND USH 51 REFERENCE LINES ARE A BEST FIT OF THE EXISTING REFERENCE LINE. STATIONS MAY NOT MATCH THE ORIGINAL STRUCTURE PLANS.

LIMITS OF POLYMER OVERLAY REPAIR DETAILED ON THE PLANS ARE AN APPROXIMATION ONLY. FINAL AREAS TO BE DETERMINED IN THE FIELD BY THE ENGINEER.

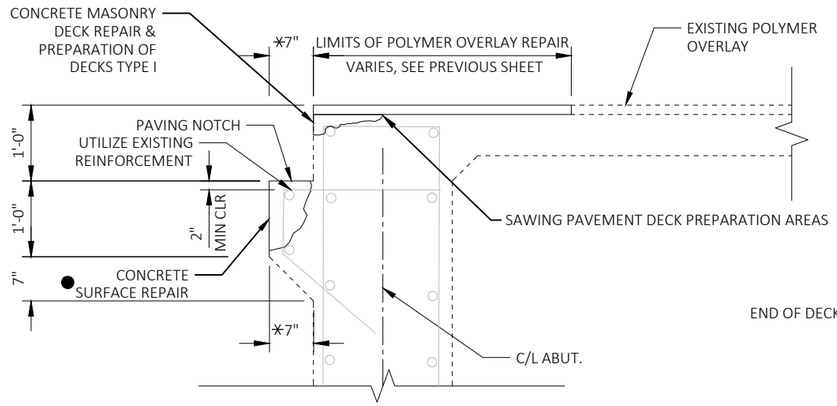
QUANTITIES FOR CONCRETE SURFACE REPAIR, PREPARATIONS DECK TYPE 1, SAWING PAVEMENT DECK PREPARATION AREAS, AND CONCRETE MASONRY DECK REPAIR ARE AN APPROXIMATION ONLY. FINAL AREAS TO BE DETERMINED IN THE FIELD BY THE ENGINEER. WORK FOR BID ITEM "CONCRETE SURFACE REPAIR" TO BE APPLIED AT PAVING BLOCK ONLY. WORK FOR BID ITEMS "PREPARATIONS DECK TYPE 1," "SAWING PAVEMENT DECK PREPARATION AREAS," AND "CONCRETE MASONRY DECK REPAIR" TO BE APPLIED TO REPAIRS AT TOP OF DECK SURFACE ONLY.

APPLY PIGMENTED SURFACE SEALER RESEAL TO THE FRONT AND TOP FACES OF THE EXISTING PARAPET.

REMOVE THE POLYMER OVERLAY BY SCRAPING, GRINDING, MILLING, OR OTHER APPROVED METHOD WITHOUT DAMAGING UNDERLYING CONCRETE. DO NOT REMOVE MORE THAN 1/4" OF THE EXISTING CONCRETE DECK SURFACE AS PART OF POLYMER OVERLAY REMOVAL. 1/4" MAXIMUM REMOVAL OF EXISTING DECK AS NEEDED IS INCLUDED IN BID ITEM "REMOVING POLYMER OVERLAY B-43-18".

TOTAL ESTIMATED QUANTITIES

BID ITEM NO.	BID ITEMS	UNIT	TOTAL
502.3205	PIGMENTED SURFACE SEALER RESEAL	SY	214
509.0301	PREPARATION DECKS TYPE 1	SY	12
509.0310.S	SAWING PAVEMENT DECK PREPARATION AREAS	LF	99
509.1500	CONCRETE SURFACE REPAIR	SF	53
509.2100.S	CONCRETE MASONRY DECK REPAIR	CY	1
509.5100.S	POLYMER OVERLAY	SY	37
509.9015.S.02	REMOVING POLYMER OVERLAY B-43-18	SY	37

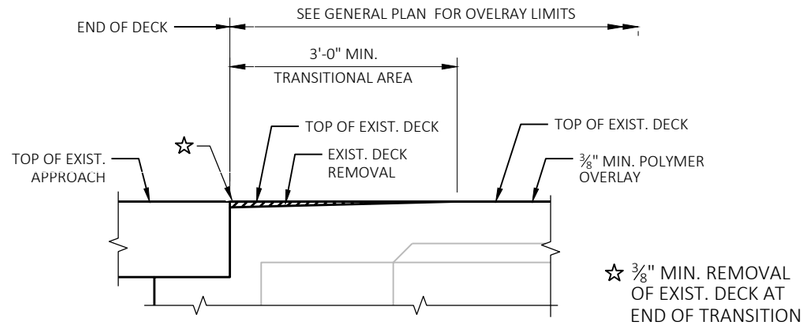


SECTION THRU PAVING NOTCH

(SHOWING REPAIR LIMITS)

⚹ DIMENSION IS TAKEN AS NORMAL TO THE C/L SUBSTRUCTURE UNITS

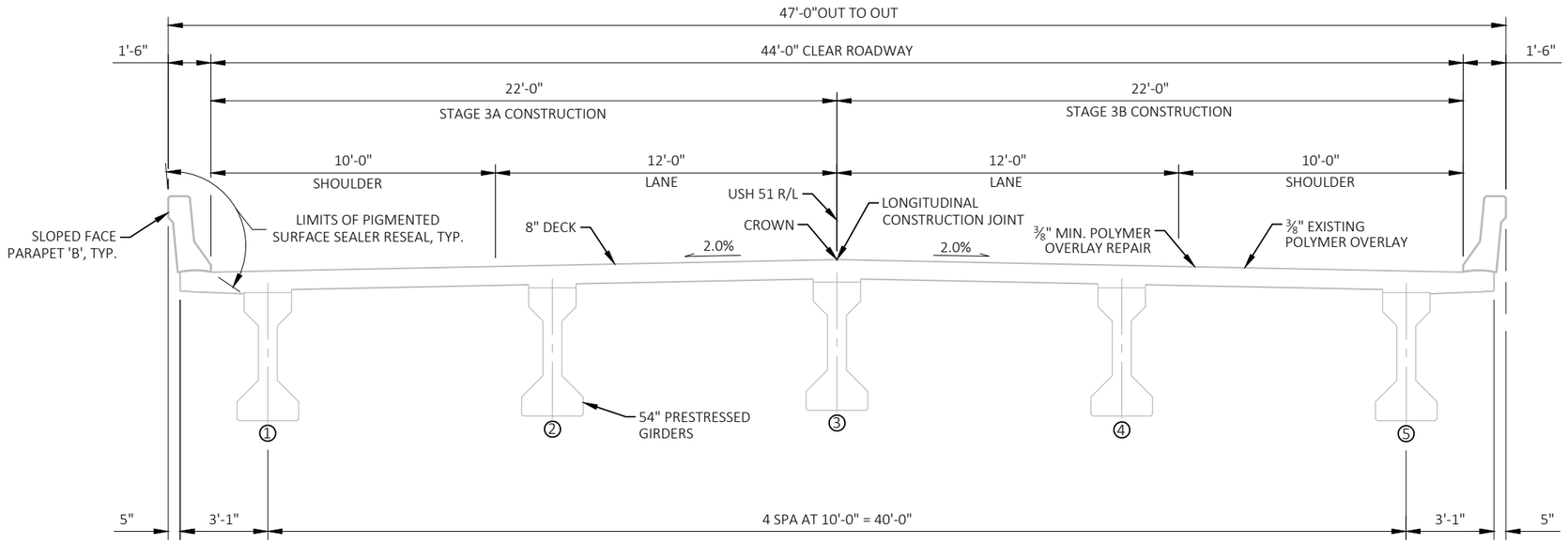
● REMOVE UNSOUND CONCRETE TO AT LEAST 1" BEHIND EXISTING REINFORCEMENT



SECTION THRU ABUTMENT TRANSITIONAL AREA ON DECK

(REMOVAL AND OVERLAY THICKNESS NOT TO SCALE)

NOTE: TRANSITIONAL AREA REQUIRED WHEN APPROACH PAVEMENT HAS BEEN PLACED PRIOR TO OVERLAY PLACEMENT



TYPICAL CROSS SECTION THRU BRIDGE

(LOOKING UPSTATION)

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-43-18

DRAWN BY AMR | PLANS CK'D AJC

TYPICAL SECTION & QUANTITIES

SHEET 2 OF 2
176

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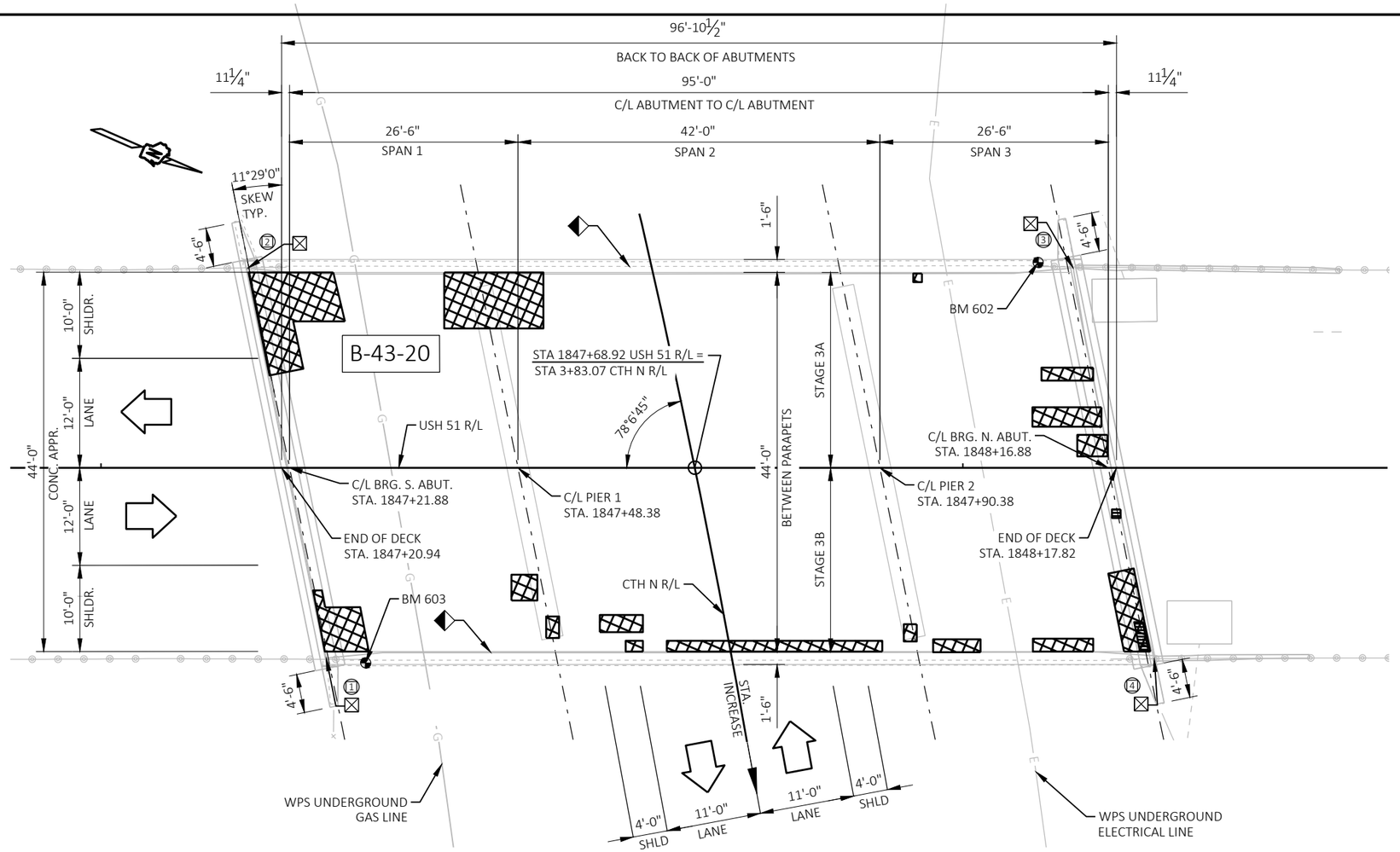
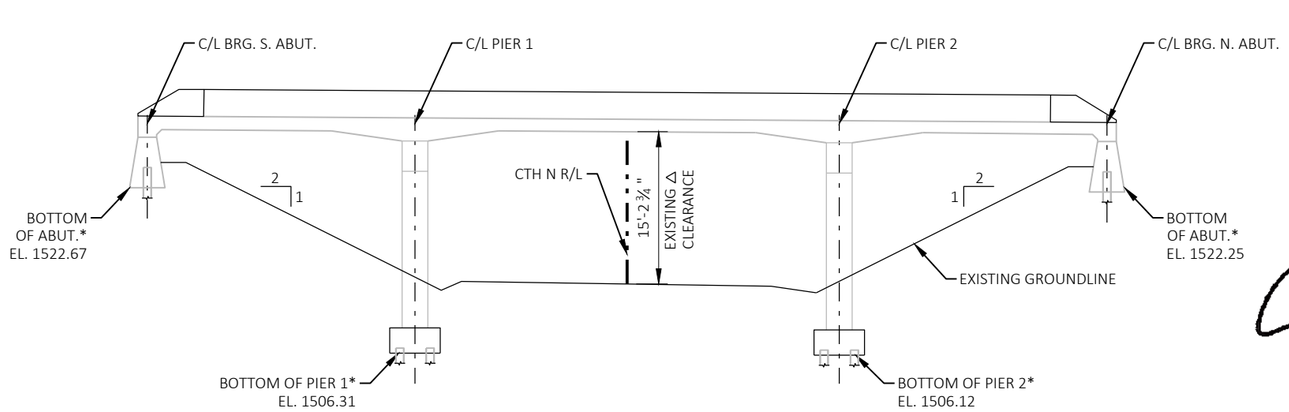


PLAN

3 SPAN HAUNCHED SLAB BRIDGE



ELEVATION

(LOOKING WEST)
NOR. TO CTH N R/L

BENCH MARKS

NO.	STATION	DESCRIPTION	ELEV.
602	1848+08.73	BM CUT "X"	1532.03
603	1847+30.71	BM BRASS DISK	1532.36

DESIGN DATA

MATERIAL PROPERTIES:

CONCRETE MASONRY:
DECK REPAIR——— f'_c = 4,000 PSI

LIVE LOAD:

TAKEN FROM HSI, 03/05/2024
DESIGN LOADING: HS-20
INVENTORY RATING: HS-26
OPERATION RATING: HS-43
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV): 250 (KIPS)

TRAFFIC DATA

USH 51:
ADT = 7,100 (2022)
R. D. S. = 70 MPH

CTH N:
ADT = 640 (2019)
R. D. S. = 70 MPH

LEGEND:

- ∗ ELEVATIONS FROM 1992 AS BUILT PLANS
- △ TAKEN FROM 7/26/23 INSPECTION REPORT
- AREAS OF THIN POLYMER OVERLAY REPAIR, SEE "REPAIR DETAIL" ON SHEET 2
- ⊠ GUARD RAIL CONNECTION LOCATION
- (X) WING WALL NUMBER
- PREPARATION DECKS TYPE 1 AND CONCRETE MASONRY DECK REPAIR AREAS
- PIGMENTED SURFACE SEALER RESEAL, SEE " TYPICAL SECTION & QUANTITIES" SHEET FOR DETAILS

STRUCTURE DESIGN CONTACTS:

TONY CASTLE (EMCS) 414-935-5740
AARON BONK (WISDOT) 608-261-0261

LIST OF DRAWINGS:

1. GENERAL PLAN & ELEVATION
2. TYPICAL SECTION & QUANTITIES

ANTHONY J. CASTLE E-43345 OAK CREEK WI
PROFESSIONAL ENGINEER
5/30/25

NO.	DATE	REVISION	BY

STATE PROJECT NUMBER
1170-16-64

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
ACCEPTED JLR 08/22/25
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-43-20

USH 51 OVER CTH N

COUNTY	TOWN
ONEIDA	NOKOMIS

DESIGN SPEC.
N/A REHABILITATION

DESIGNED BY	DESIGNED CK'D	DRAWN BY	PLANS CK'D
AMR	AJC	KRW	AJC

GENERAL PLAN & ELEVATION

SHEET 1 OF 2
177

I.D. 1170-16-34 DATE: 4/4/2025

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STATE PROJECT NUMBER
1170-16-64

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

LIMITS OF POLYMER OVERLAY REPAIR DETAILED ON THE PLANS ARE AND APPROXIMATION ONLY. FINAL AREAS TO BE DETERMINED IN THE FIELD BY THE ENGINEER.

QUANTITIES FOR PREPARATIONS DECK TYPE 1, SAWING PAVEMENT DECK PREPARATIONS AREAS, AND CONCRETE MASONRY DECK REPAIR ARE AN APPROXIMATION ONLY. FINAL AREAS TO BE DETERMINED IN THE FIELD BY THE ENGINEER.

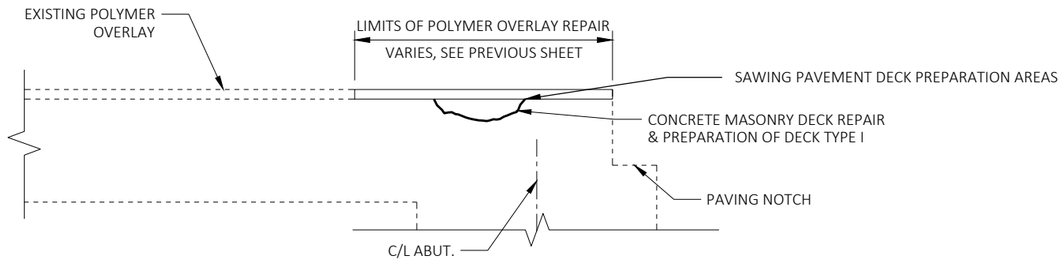
APPLY PIGMENTED SURFACE SEALER RESEAL TO THE EXPOSED TOP AND ROADWAY FACES OF THE EXISTING PARAPET.

CTH N AND USH 51 REFERENCE LINES ARE A BEST FIT OF THE EXISTING REFERENCE LINE. STATIONS MAY NOT MATCH THE ORIGINAL STRUCTURE PLANS.

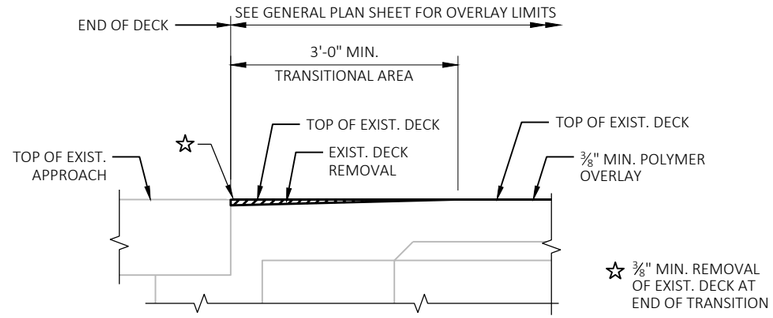
REMOVE THE POLYMER OVERLAY BY SCRAPING, GRINDING, MILLING, OR OTHER APPROVED METHOD WITHOUT DAMAGING UNDERLYING CONCRETE. DO NOT REMOVE MORE THAN 1/4" OF THE EXISTING CONCRETE DECK SURFACE AS PART OF POLYMER OVERLAY REMOVAL. 1/4 " MAXIMUM REMOVAL OF EXISTING DECK AS NEEDED IS INCLUDED IN BID ITEM "REMOVING POLYMER OVERLAY B-43-20".

TOTAL ESTIMATED QUANTITIES

BID ITEM NO.	BID ITEMS	UNIT	TOTAL
502.3205	PIGMENTED SURFACE SEALER RESEAL	SY	78
509.0301	PREPARATION DECKS TYPE 1	SY	1
509.0310.S	SAWING PAVEMENT DECK PREPARATION AREAS	LF	13
509.2100.S	CONCRETE MASONRY DECK REPAIR	CY	1
509.5100.S	POLYMER OVERLAY	SY	36
509.9015.S.03	REMOVING POLYMER OVERLAY B-43-20	SY	36



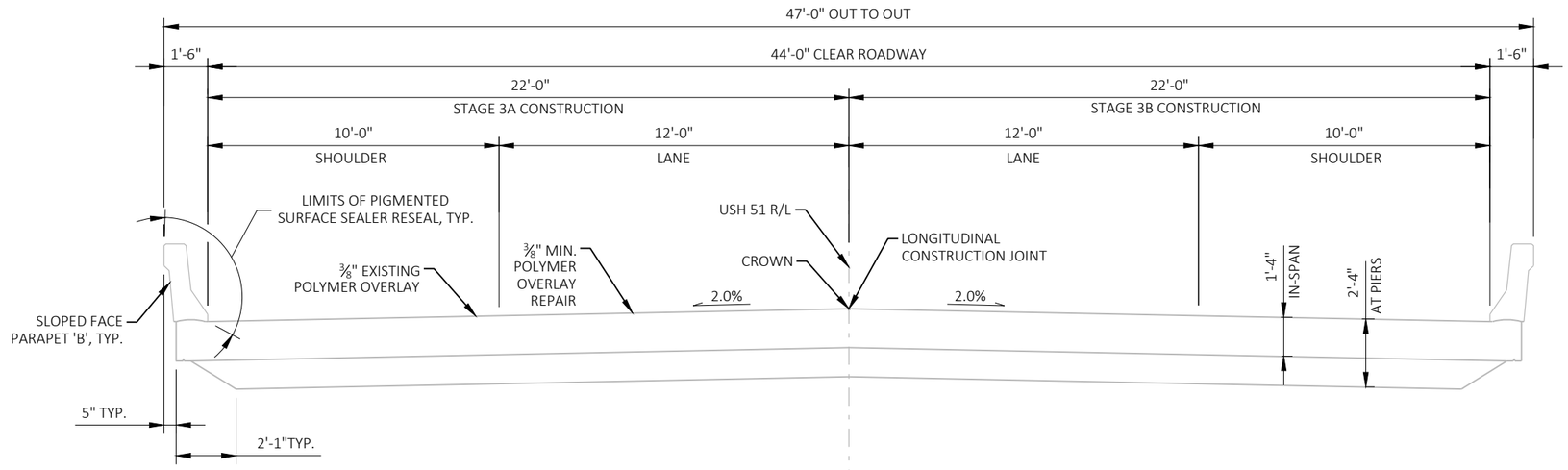
DECK REPAIR DETAILS



SECTION THRU ABUTMENT TRANSITIONAL AREA ON DECK

(REMOVAL AND OVERLAY THICKNESS NOT TO SCALE)

NOTE: TRANSITIONAL AREA REQUIRED WHEN APPROACH PAVEMENT HAS BEEN PLACED PRIOR TO OVERLAY PLACEMENT



TYPICAL CROSS SECTION THRU BRIDGE

(LOOKING UPSTATION)

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-43-20

DRAWN BY KRW | PLANS CK'D AJC

TYPICAL SECTION & QUANTITIES

SHEET 2 OF 2

178

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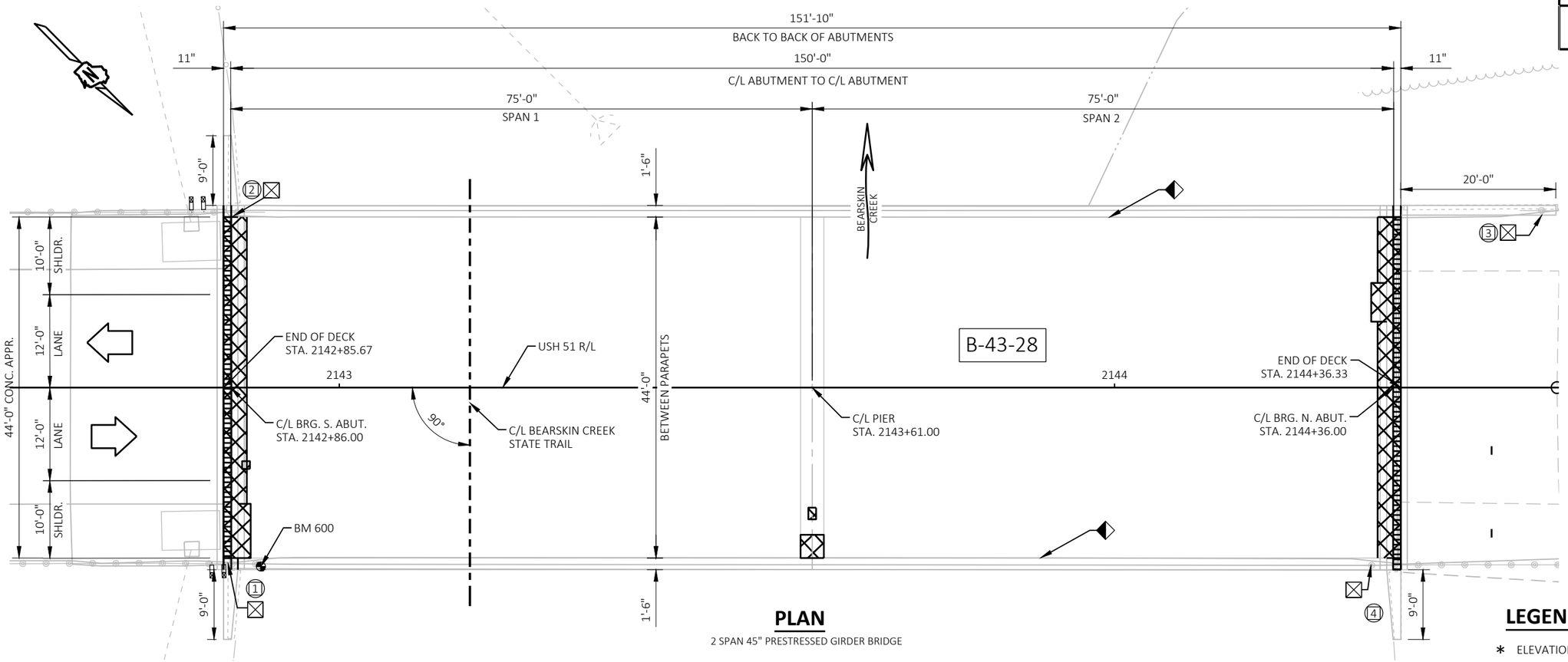
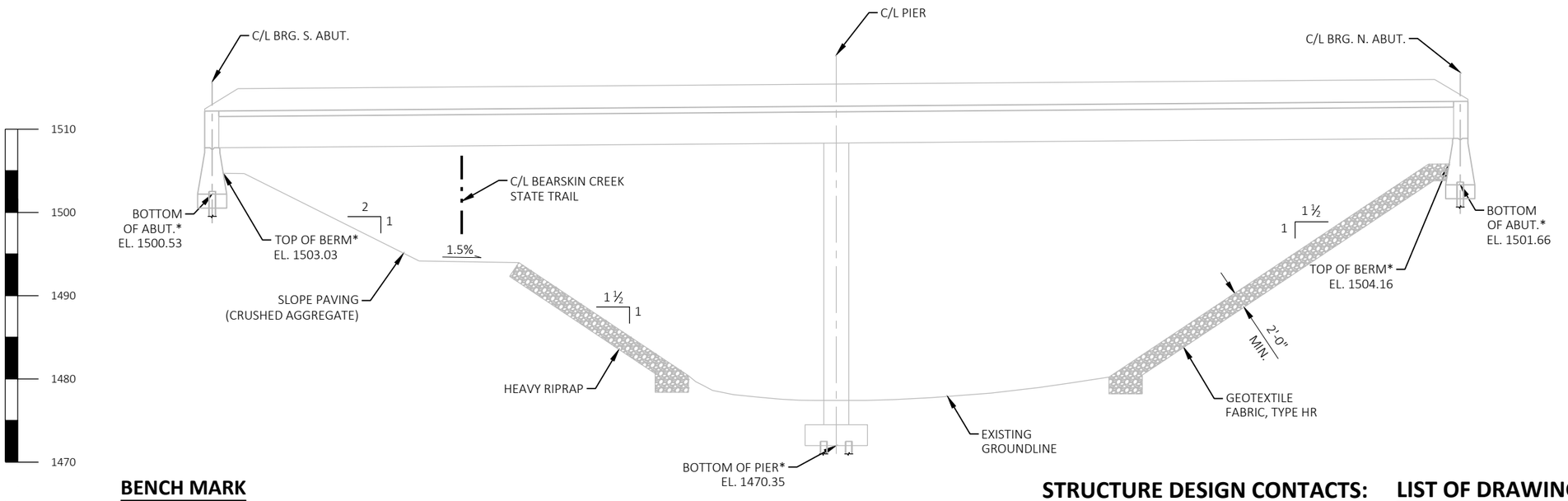
STATE PROJECT NUMBER

1170-16-64



PLAN

2 SPAN 45" PRESTRESSED GIRDER BRIDGE



ELEVATION

(LOOKING WEST)

BENCH MARK

NO.	STATION	DESCRIPTION	ELEV.
600	2142+89.87	BM BRASS DISK	1512.78

DESIGN DATA

MATERIAL PROPERTIES:

CONCRETE MASONRY:
DECK REPAIR—— f'_c = 4,000 PSI

LIVE LOAD:

TAKEN FROM HSI, 04/04/2025
DESIGN LOADING: HS-20
INVENTORY RATING: HS-22
OPERATION RATING: HS-44
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV): 250 (KIPS)

TRAFFIC DATA

USH 51:

ADT = 7,100 (2022)
R. D. S. = 70 MPH

WISCONSIN
ANTHONY J. CASTLE
E-43345
OAK CREEK
WI
PROFESSIONAL ENGINEER

5/30/25

LEGEND

- ✱ ELEVATIONS FROM 1992 AS BUILT PLANS
- AREAS OF THIN POLYMER OVERLAY REPAIR
- GUARD RAIL CONNECTION LOCATION
- (X) WING WALL NUMBER
- PREPARATION DECKS TYPE 1 AND CONCRETE MASONRY DECK REPAIR AREAS
- PIGMENTED SURFACE SEALER RESEAL, SEE "TYPICAL SECTION & QUANTITIES" SHEET FOR DETAILS

NO.	DATE	REVISION	BY

emcs

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED JLR 08/22/25
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-43-28

USH 51 OVER BEARSKIN CREEK

COUNTY	TOWN
ONEIDA	NOKOMIS

DESIGN SPEC.
N/A REHABILITATION

DESIGNED BY	AMR	DESIGN CK'D	AJC	DRAWN BY	AMR	PLANS CK'D	AJC

GENERAL PLAN & ELEVATION

SHEET 1 OF 2
179

I.D. 1170-16-34 DATE: 4/4/2025

STRUCTURE DESIGN CONTACTS:

TONY CASTLE (EMCS) 414-935-5740
AARON BONK (WISDOT) 608-261-0261

LIST OF DRAWINGS:

1. GENERAL PLAN & ELEVATION
2. TYPICAL SECTION & QUANTITIES

8

8

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STATE PROJECT NUMBER
1170-16-64

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

LIMITS OF POLYMER OVERLAY REPAIR DETAILED ON THE PLANS ARE AN APPROXIMATION ONLY, FINAL AREAS TO BE DETERMINED IN THE FIELD BY THE ENGINEER.

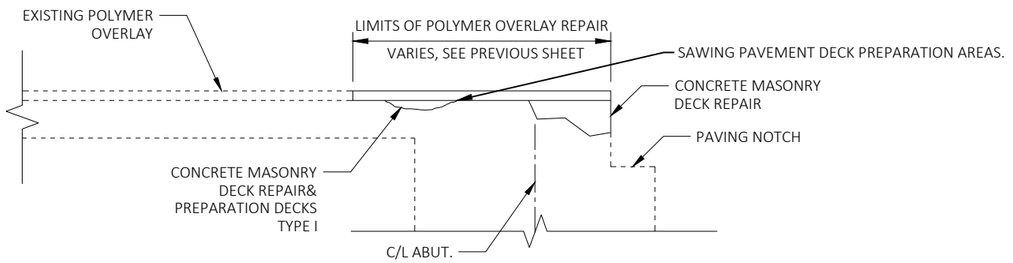
QUANTITIES FOR PREPARATION DECKS TYPE 1, SAWING PAVEMENT DECK PREPARATION AREAS, AND CONCRETE MASONRY DECK REPAIR ARE AN APPROXIMATION ONLY, FINAL AREAS TO BE DETERMINED IN THE FIELD BY THE ENGINEER.

APPLY PIGMENTED SURFACE SEALER RESEAL TO THE FRONT AND TOP ROADWAY FACES OF THE EXISTING PARAPET.

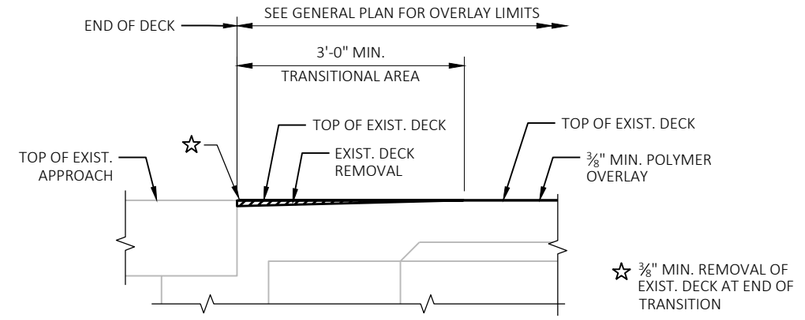
REMOVE THE POLYMER OVERLAY BY SCRAPING, GRINDING, MILLING, OR OTHER APPROVED METHOD WITHOUT DAMAGING UNDERLYING CONCRETE. DO NOT REMOVE MORE THAN 1/4" OF THE EXISTING CONCRETE DECK SURFACE AS PART OF POLYMER OVERLAY REMOVAL. 1/4" MAXIMUM REMOVAL OF EXISTING DECK AS NEEDED IS INCLUDED IN BID ITEM "REMOVING POLYMER OVERLAY B-43-28".

TOTAL ESTIMATED QUANTITIES

BID ITEM NO.	BID ITEMS	UNIT	TOTAL
502.3205	PIGMENTED SURFACE SEALER RESEAL	SY	122
509.0301	PREPARATION DECKS TYPE 1	SY	11
509.0310.S	SAWING PAVEMENT DECK PREPARATION AREAS	LF	98
509.2100.S	CONCRETE MASONRY DECK REPAIR	CY	1
509.5100.S	POLYMER OVERLAY	SY	32
509.9015.S.04	REMOVING POLYMER OVERLAY B-43-28	SY	32



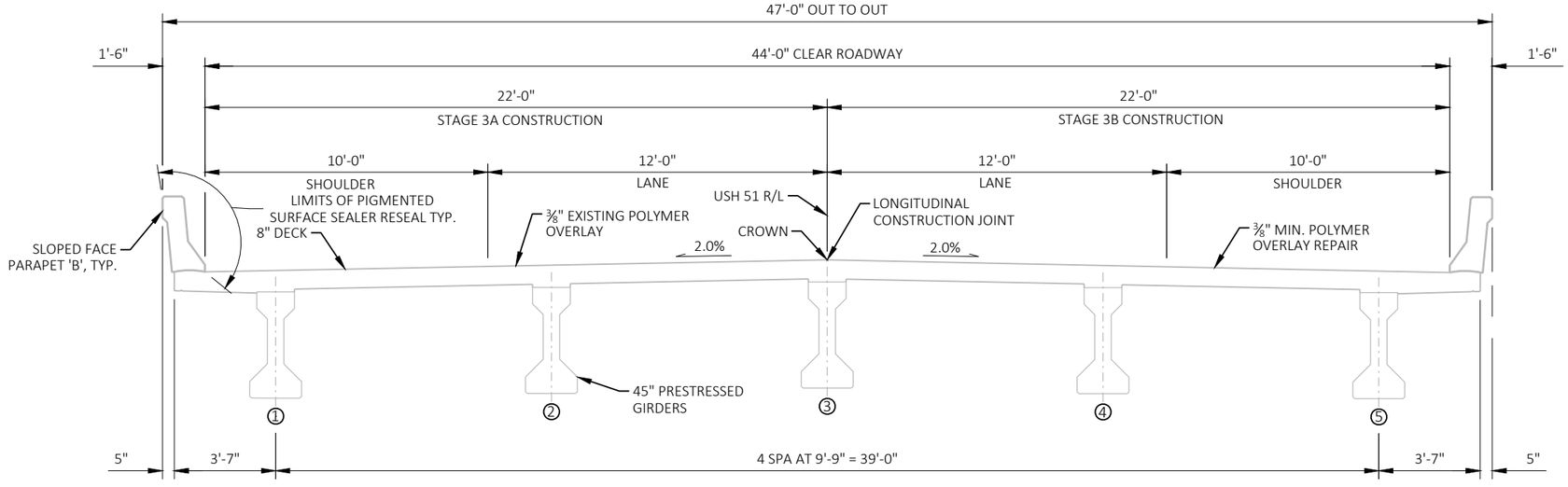
DECK REPAIR DETAILS



SECTION THRU ABUTMENT TRANSITIONAL AREA ON DECK

(REMOVAL AND OVERLAY THICKNESS NOT TO SCALE)

NOTE: TRANSITIONAL AREA REQUIRED WHEN APPROACH PAVEMENT HAS BEEN PLACED PRIOR TO OVERLAY PLACEMENT



TYPICAL CROSS SECTION THRU BRIDGE

(LOOKING UPSTATION)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-43-28

DRAWN BY AMR | PLANS CK'D AJC

TYPICAL SECTION & QUANTITIES

SHEET 2 OF 2

180

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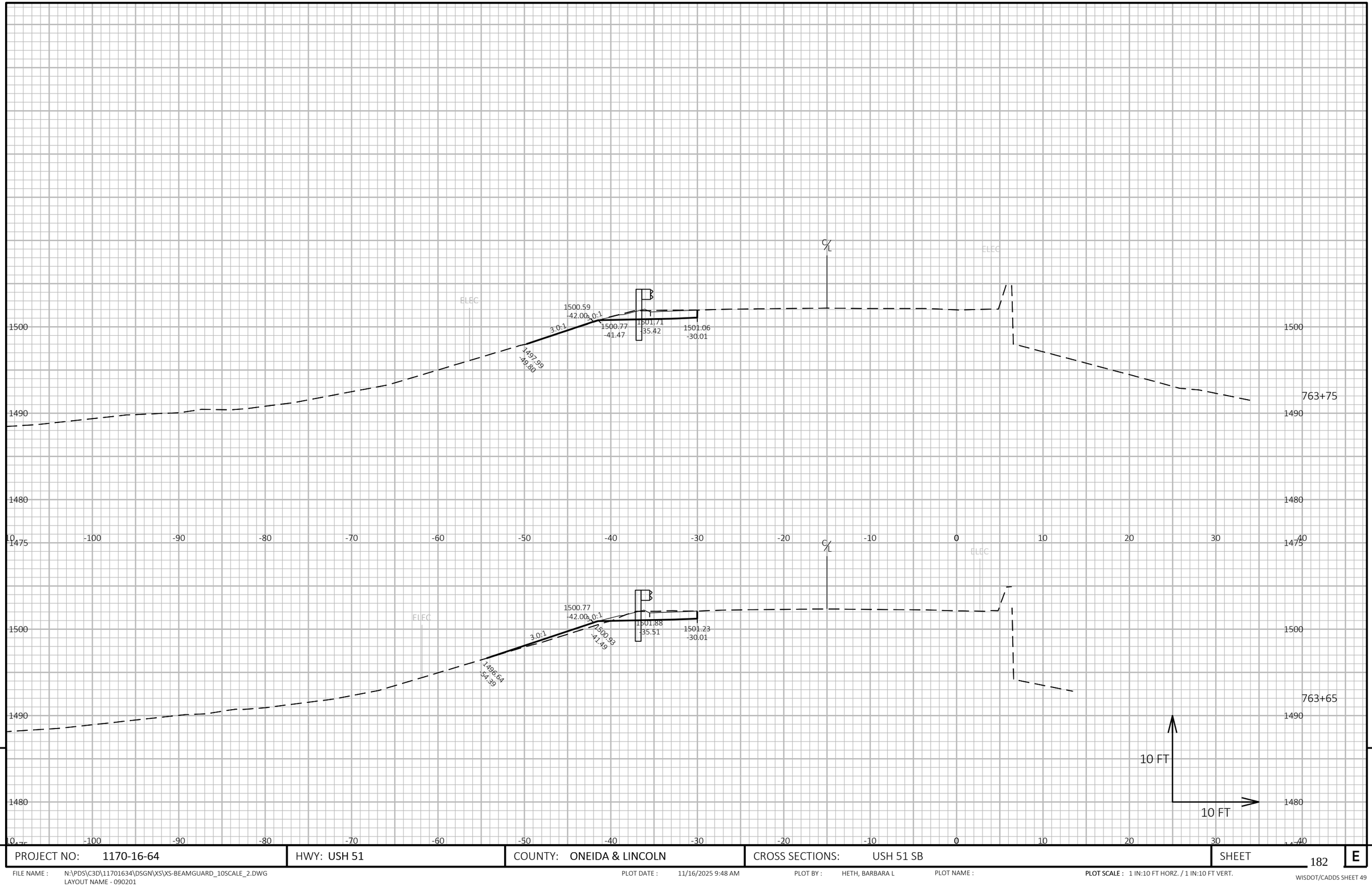
DIVISION 1 - 51 SB

STATION	REAL STATION	DISTANCE	AREA (SF)				INCREMENTAL VOL (CY) (UNADJUSTED)				CUMULATIVE VOL (CY)			
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	EBS	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	EBS	CUT	EXPANDED FILL	REDUCED EBS IN FILL	MASS ORDINATE
											1.00	1.25	1.00	
							NOTE 1	NOTE 2	NOTE 3		NOTE 1		NOTE 7	NOTE 8
763+65.11	76365.11	0.00	8.59	1.88	3.32	0.00	0	0	0	0	0	0	0	0
763+75.00	76375.00	9.89	9.20	1.88	0.31	0.00	3	1	1	0	3	1	0	1
764+00.60	76400.60	25.60	9.03	1.88	0.58	0.00	9	2	0	0	12	1	0	8
764+10.00	76410.00	9.40	8.77	1.88	0.24	0.00	3	1	0	0	15	1	0	10
764+50.00	76450.00	40.00	6.96	1.88	2.19	0.00	12	3	2	0	27	4	0	16
765+00.00	76500.00	50.00	7.57	1.88	5.58	0.00	13	3	7	0	40	13	0	18
765+50.00	76550.00	50.00	8.55	1.88	3.76	0.00	15	3	9	0	55	24	0	18
765+97.00	76597.00	47.00	10.23	1.88	0.00	0.00	16	3	3	0	71	28	0	28
							71							

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
5 - EXPANDED EBS	WILL BE BACKFILLED WITH CUT
8 - MASS ORDINATE	IF EBS TO BE BACKFILLED WITH COMMON: [(CUT - SALVAGED PAVT - EXPANDED EBS) - ((FILL) * FILL FACTOR)]



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9

PROJECT NO: 1170-16-64	HWY: USH 51	COUNTY: ONEIDA & LINCOLN	CROSS SECTIONS: USH 51 SB	SHEET 182	E

FILE NAME : N:\PDS\C3D\11701634\DSGN\XS\XS-BEAMGUARD_10SCALE_2.DWG
LAYOUT NAME - 090201

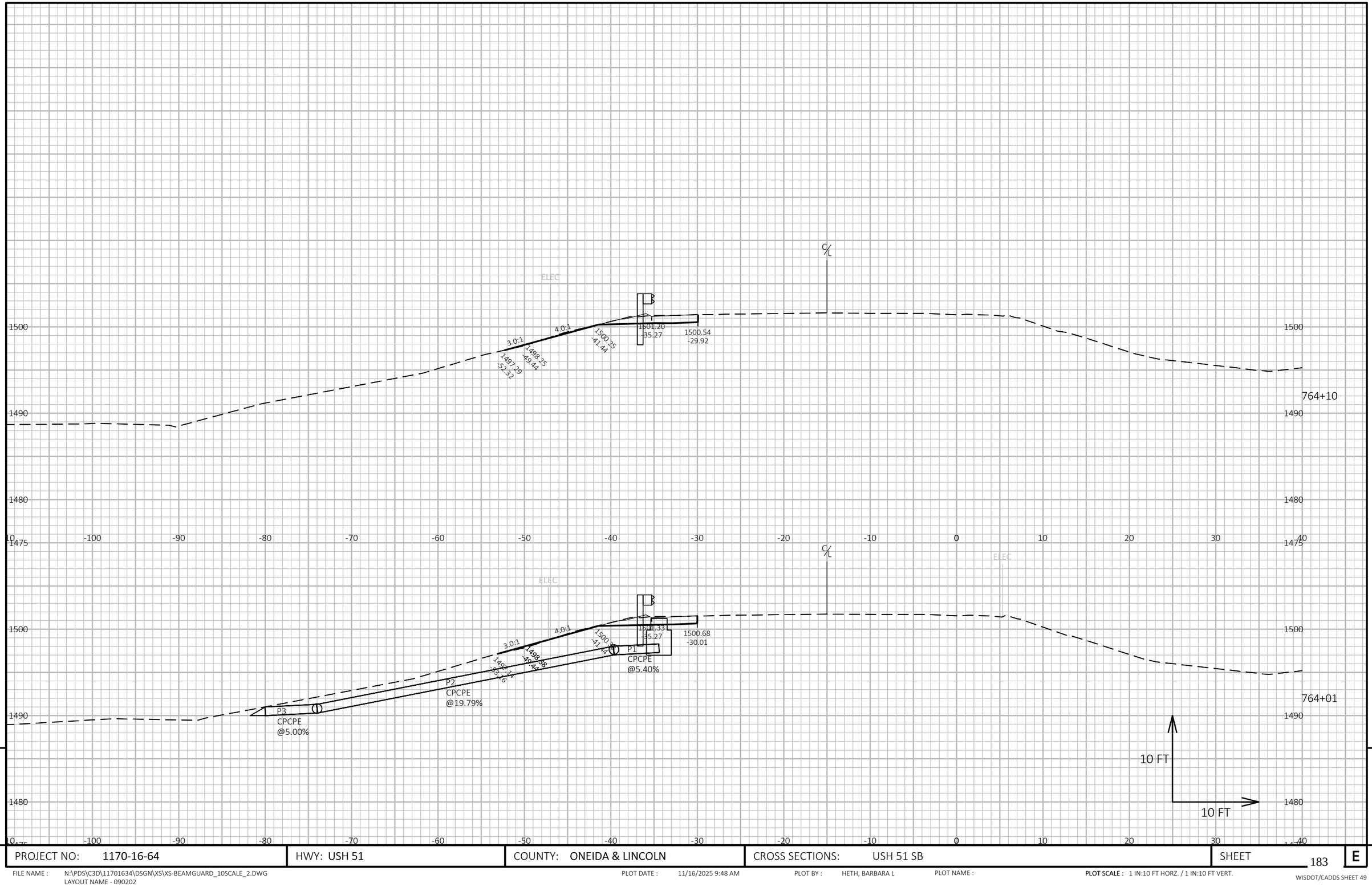
PLOT DATE : 11/16/2025 9:48 AM

PLOT BY : HETH, BARBARA L

PLOT NAME :

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

WISDOT/CADDS SHEET 49



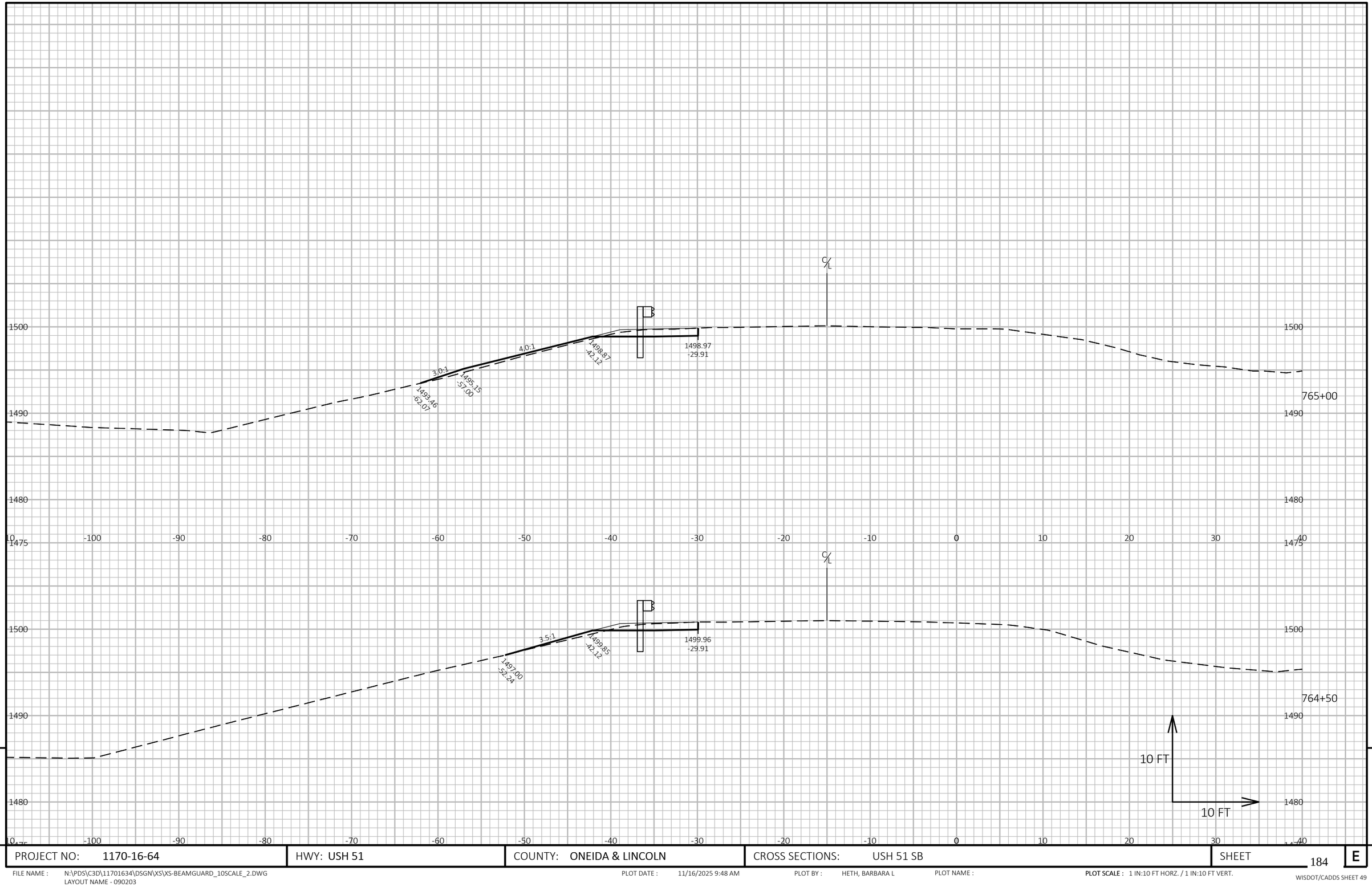
PROJECT NO: 1170-16-64	HWY: USH 51	COUNTY: ONEIDA & LINCOLN	CROSS SECTIONS: USH 51 SB	SHEET 183	E

FILE NAME : N:\PDS\C3D\11701634\DSGN\XS\XS-BEAMGUARD_10SCALE_2.DWG
LAYOUT NAME - 090202

PLOT DATE : 11/16/2025 9:48 AM PLOT BY : HETH, BARBARA L PLOT NAME :

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

WISDOT/CADDS SHEET 49



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9

PROJECT NO: 1170-16-64	HWY: USH 51	COUNTY: ONEIDA & LINCOLN	CROSS SECTIONS: USH 51 SB	SHEET 184	E

FILE NAME : N:\PDS\C3D\11701634\DSGN\XS\XS-BEAMGUARD_10SCALE_2.DWG
LAYOUT NAME - 090203

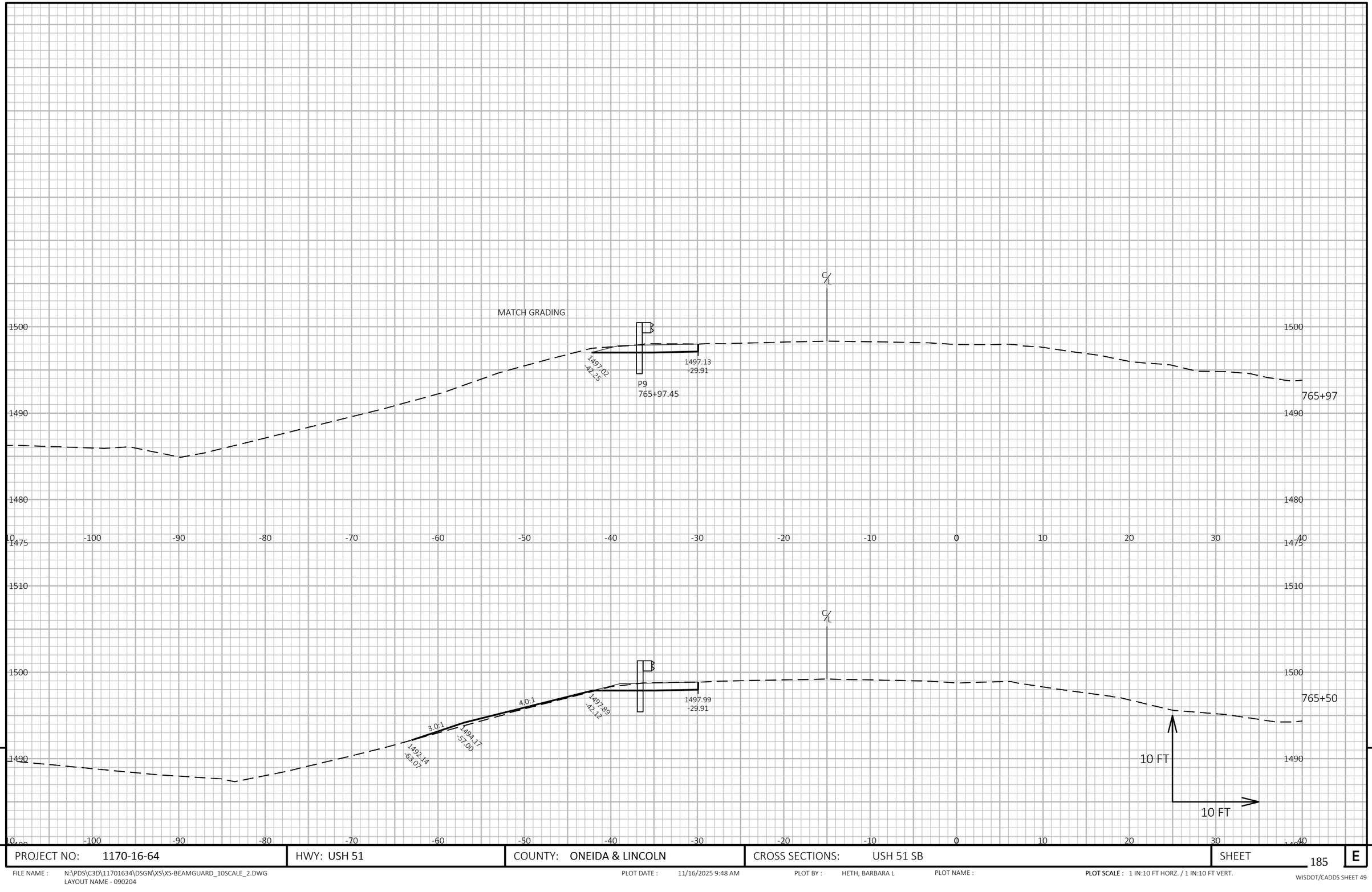
PLOT DATE : 11/16/2025 9:48 AM

PLOT BY : HETH, BARBARA L

PLOT NAME :

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

WISDOT/CADDS SHEET 49



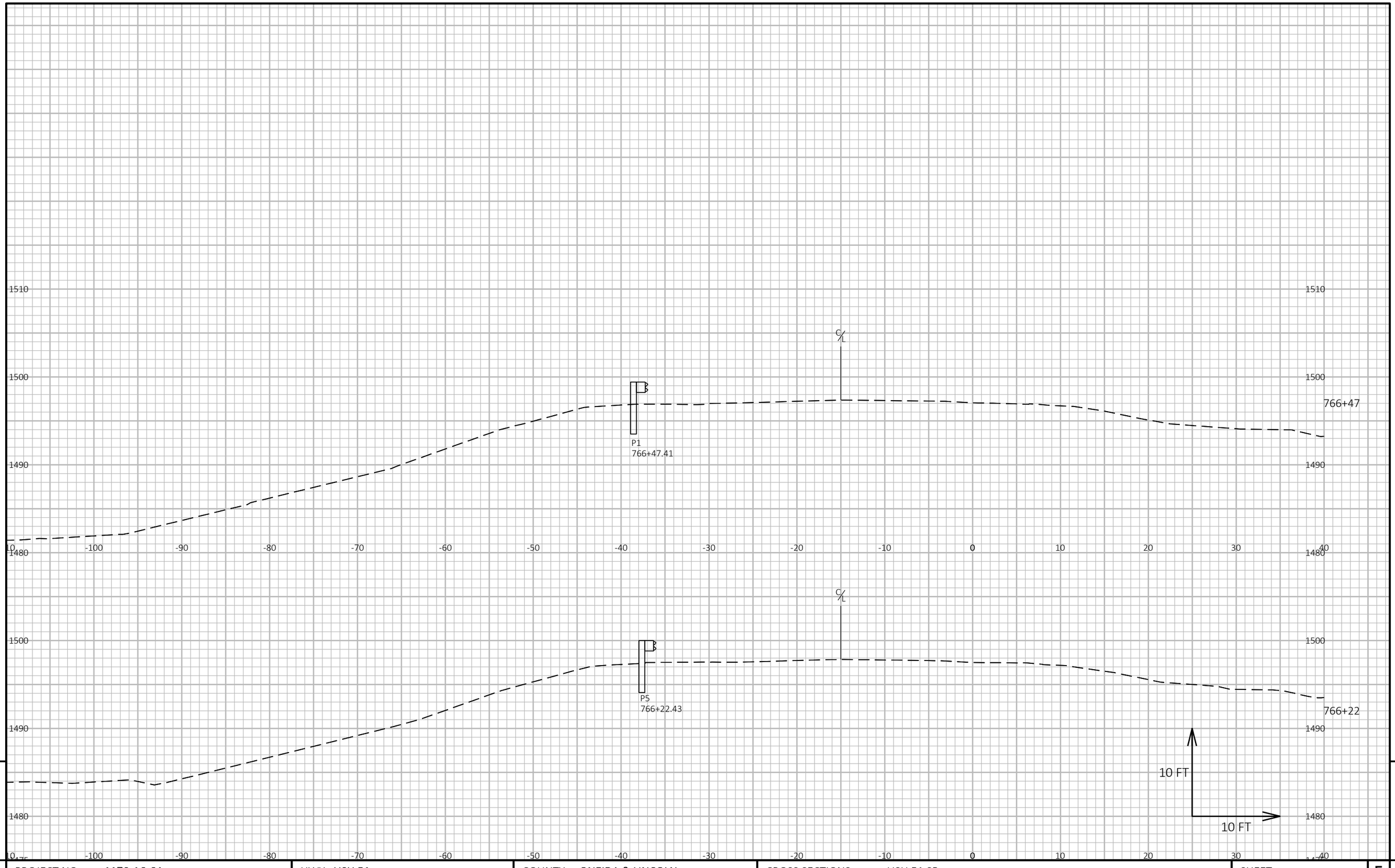
9

9

PROJECT NO: 1170-16-64	HWY: USH 51	COUNTY: ONEIDA & LINCOLN	CROSS SECTIONS: USH 51 SB	SHEET 185	E

FILE NAME : N:\PDS\C3D\11701634\DSGN\XS\XS-BEAMGUARD_10SCALE_2.DWG
LAYOUT NAME - 090204

PLOT DATE : 11/16/2025 9:48 AM PLOT BY : HETH, BARBARA L PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



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9

PROJECT NO: 1170-16-64	HWY: USH 51	COUNTY: ONEIDA & LINCOLN	CROSS SECTIONS: USH 51 SB	SHEET 186	E

FILE NAME : N:\PDS\C3D\11701634\DSGN\XS\XS-BEAMGUARD_10SCALE_2.DWG
LAYOUT NAME - 090205

PLOT DATE : 11/16/2025 9:49 AM PLOT BY : HETH, BARBARA L PLOT NAME :

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

WISDOT/CADDS SHEET 49

Notes

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

http://www.dot.wisconsin.gov