EAU

PROJECT ID: 7899-03-72

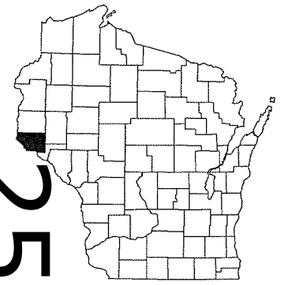
WITH: N/A

COUNTY: PIERCE

APRIL 2025

ORDER OF SHEETS

TOTAL SHEETS = 84



25

N

DESIGN DESIGNATION 7899-03-72

A.A.D.T.	(2025)	=	370
A.A.D.T.	(2045)	=	550
D.H.V.		=	74
D.D.		=	62/38
T.		=	10% (ASSUMED)
DESIGN SPEED		=	40 MPH
ESALS		=	88,000

CONVENTIONAL SYMBOLS

PLAN		PROFILE	
CORPORATE LIMITS		GRADE LINE	
PROPERTY LINE		ORIGINAL GROUND	
LOT LINE		MARSH OR ROCK PROFILE (To be noted as such)	ROCK
LIMITED HIGHWAY EASEMENT		SPECIAL DITCH	LABEL
EXISTING RIGHT OF WAY		GRADE ELEVATION	95.36
PROPOSED OR NEW R/W LINE			
SLOPE INTERCEPT		CULVERT (Profile View)	
REFERENCE LINE	300'E8'	UTILITIES	
EXISTING CULVERT		ELECTRIC	E
PROPOSED CULVERT (Box or Pipe)		FIBER OPTIC	FO
COMBUSTIBLE FLUIDS	CAUTION	GAS	G
		SANITARY SEWER	SAN
		STORM SEWER	SS
		TELEPHONE	T
MARSH AREA		WATER	W
		UTILITY PEDESTAL	
		POWER POLE	
WOODED OR SHRUB AREA		TELEPHONE POLE	

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

CTH CC - PLUM CITY

CTH CC TO 145TH AVENUE

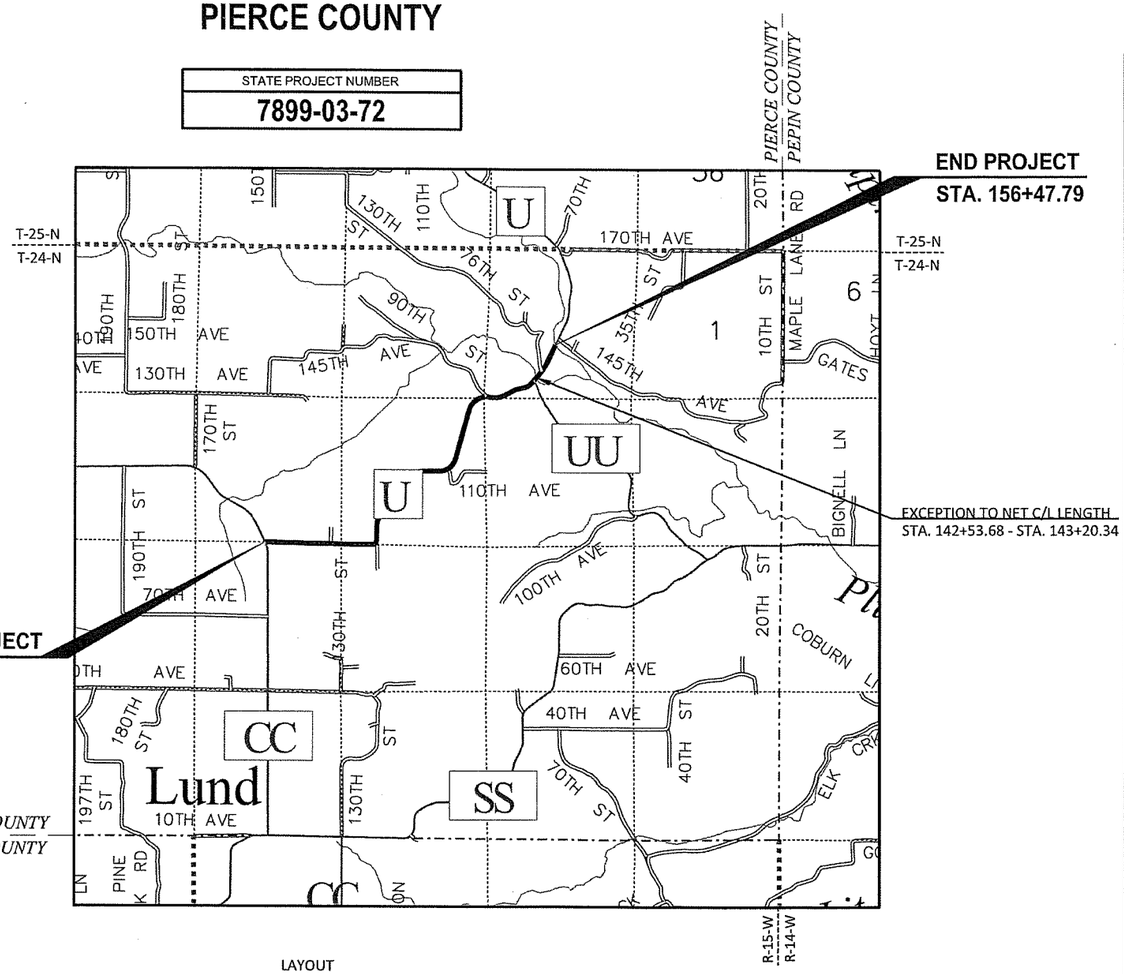
CTH U

PIERCE COUNTY

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
7899-03-72	WISC 2025431	1

STATE PROJECT NUMBER

7899-03-72



LAYOUT

SCALE 0 1 MI

TOTAL NET LENGTH OF CENTERLINE = 2.760 MI

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

ACCEPTED FOR

COUNTY of PIERCE

2-13-25 (Date) (Highway Commissioner)

ORIGINAL PLANS PREPARED BY

JEWELL associates engineers, inc

Engineers - Architects - Surveyors

WISCONSIN
DANIEL J. GERLING
E-45025
EAU CLAIRE
WIS.
PROFESSIONAL ENGINEER

2-13-25

DATE: (Professional Engineer Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	JEWELL ASSOCIATES ENGINEERS, INC.
Designer	JEWELL ASSOCIATES ENGINEERS, INC.
Project Manager	MATTHEW BERG, P.E.
Regional Examiner	NW REGION
Regional Supervisor	TOU YANG, P.E.

APPROVED FOR THE DEPARTMENT

DATE: 2/17/2025 (Signature)

E

FILE NAME : S:\PROJECTS\P94010 PIERCE CO HWY - CTH U RECONDITIONING\SHEETSPLAN\P94010_TITLE.DWG

PLOT DATE : 2/12/2025 12:05:59 PM PLOT BY : DANIEL GERLING PLOT SCALE : 1" = 1'

LAYOUT : TITLE SHEET 1 IN EQ 1 MI

GENERAL NOTES

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

NO TREES OR SHRUBS ARE TO BE REMOVED UNLESS SUCH TREES OR SHRUBS HAVE FIRST BEEN INDICATED FOR REMOVAL BY THE ENGINEER IN THE FIELD.

EXISTING DRIVEWAYS SHALL BE RESTORED IN KIND AND THEIR LOCATION VERIFIED BY THE ENGINEER IN THE FIELD.

HMA PAVEMENT QUANTITIES WERE CALCULATED USING 112 LB/SY/IN.

PAVING LIMITS AT INTERSECTIONS ARE TO BE DETERMINED IN THE FIELD BY THE ENGINEER.

APPLY TACK COAT AT A RATE OF 0.05 GAL/SY BETWEEN LAYERS OF HMA PAVEMENT.

CURVE DATA IS BASED ON THE ARC DEFINITION.

THE CONTRACTOR'S PAVING OPERATIONS SHALL BE CONSISTENT WITH THE PLAN TYPICAL SECTIONS AND CONSTRUCTED TO PREVENT HMA LONGITUDINAL JOINTS FROM BEING LOCATED WITHIN A DRIVING , TURNING, BIKE, OR PASSING LANE.

CONTROL POINT TABLE

POINT NO.	STA.	OFFSET	Y	X	ELEV.
1	11+27.43	40.58' RT.	257,581.17	555,684.51	1125.11
2	37+21.21	40.66' LT.	257,605.66	558,279.31	1145.63
3	64+92.16	44.71' RT.	258,888.38	560,093.73	1129.82
4	91+30.73	53.28' RT.	260,202.65	562,097.93	1064.38
5	122+38.36	30.72' LT.	262,886.66	563,444.82	842.75
6	150+88.15	37.37' RT.	264,171.51	565,769.89	774.82

NOTE: ALL CONTROL POINTS ARE 3/4" REBAR.

ORDER OF SECTION 2 SHEETS:

CONTACTS

DESIGN CONSULTANT

JEWELL ASSOCIATES ENGINEERS, INC.
3406 OAKWOOD HILLS PARKWAY, SUITE 300
EAU CLAIRE, WI 54701
ATTN: DAN GERLING, P.E.
PH: (715) 900-2602
EMAIL: daniel.gerling@jewellassoc.com

WISDOT LOCAL PROGRAM PROJECT MANAGER

944 VANDERPERREN WAY
GREEN BAY, WI 54304
ATTN: MATTHEW BERG, P.E.
PH: (920) 492-4147
EMAIL: matthew.berg@dot.wi.gov

PIERCE COUNTY HIGHWAY DEPARTMENT

CHAD JOHNSON, P.E., COMMISSIONER
621 W. CAIRNS STREET
ELLSWORTH, WI 54011
PH: (715) 273-5096 EXT. 6791
EMAIL: chad.johnson@co.pierce.wi.us

WDNR LIAISON

STATE OF WISCONSIN
DNR WEST CENTRAL REGION HQ
1300 WEST CLAIREMONT AVENUE
EAU CLAIRE, WI 54701
ATTN: AMY LESIK
PH: (715) 836-6571
CELL: (715) 495-1903
EMAIL: amyL.lesik@wisconsin.gov

UTILITIES

ELECTRICITY

PIERCE-PEPIN COOPERATIVE SERVICES
ATTN: BRAD RISTOW
W7725 US HIGHWAY 10 P.O. BOX 420
ELLSWORTH, WI 54011
OFFICE: (715) 273-2473
EMAIL: bristow@piercepepin.coop

COMMUNICATION LINE

LUMEN
ATTN: KYLE SCHLAMPP
20 S WILSON AVENUE
RICE LAKE, WI 54868
OFFICE: (715) 475-2029
CELL: (715) 292-0082
EMAIL: kyle.schlampp@lumen.com

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

* DENOTES UTILITY IS NOT A MEMBER OF DIGGERS HOTLINE

LIST OF STANDARD ABBREVIATIONS

ABUT	Abutment
AC	Acre
AGG	Aggregate
AH	Ahead
<	Angle
ASPH	Asphaltic
AVG	Average
ADT	Average Daily Traffic
BAD	Base Aggregate Dense
BK	Back
BF	Back Face
BM	Bench Mark
BR	Bridge
C or C/L	Center Line
CC	Center to Center
C.E.	Commercial Entrance
CTH	County Trunk Highway
CR	Creek
CR	Crushed
CY or CU YD	Cubic Yard
CP	Culvert Pipe
C & G	Curb and Gutter
D	Degree of Curve
DHV	Design Hour Volume
DIA	Diameter
E	East
X	East Grid Coordinate
ELEC	Electric (al)
EL or ELEV	Elevation
ESALS	Equivalent Single Axle Loads
EBS	Excavation Below Subgrade
FF	Face to Face
F.E.	Field Entrance
F	Fill
FG	Finished Grade
FL or F/L	Flow Line
FT	Foot
FTG	Footing
GN	Grid North
HT	Height
CWT	Hundredweight
HYD	Hydrant
INL	Inlet
ID	Inside Diameter
INV	Invert
IP	Iron Pipe or Pin
IRS	Iron Rod Set
JT	Joint
JCT	Junction
LHF	Left-Hand Forward
L	Length of Curve
LIN FT or LF	Linear Foot
LC	Long Chord of Curve
MH	Manhole
MB	Mailbox
ML or M/L	Match Line
N	North
Y	North Grid Coordinate
OD	Outside Diameter
PLE	Permanent Limited Easement
PT	Point
PC	Point of Curvature
PI	Point of Intersection
PRC	Point of Reverse Curvature
PT	Point of Tangency
POC	Point On Curve
POT	Point on Tangent
PVC	Polyvinyl Chloride
PCC	Portland Cement Concrete
LB	Pound
PSI	Pounds Per Square Inch
P.E.	Private Entrance
R	Radius
RR	Railroad
R	Range
RL or R/L	Reference Line
RP	Reference Point
RCCP	Reinforced Concrete Culvert Pipe
REQD	Required
RES	Residence or Residential
RW	Retaining Wall
RT	Right
RHF	Right-Hand Forward
R/W	Right-of-Way
RD	Road
R	River
RDWY	Roadway
SALV	Salvaged
SAN S	Sanitary Sewer
SEC	Section
SHLDR	Shoulder
SHR	Shrinkage
SW	Sidewalk
S	South
SQ	Square
SF or SQ FT	Square Feet
SY or SQ YD	Square Yard
STD	Standard
SDD	Standard Detail Drawings
STH	State Trunk Highways
STA	Station
SS	Storm Sewer
SG	Subgrade
SE	Superelevation
SL or S/L	Survey Line
SV	Septic Vent
T	Tangent
TEL	Telephone
TEMP	Temporary
TI	Temporary Interest
TLE	Temporary Limited Easement
t	Ton
T or TN	Town
TRANS	Transition
TL or T/L	Transit Line
T	Trucks (percent of)
TYP	Typical
UNCL	Unclassified
UG	Underground Cable
USH	United States Highway
VAR	Variable
V	Velocity or Design Speed
VERT	Vertical
VC	Vertical Curve
VOL	Volume
WM	Water Main
WV	Water Valve
W	West
WB	Westbound
YD	Yard

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

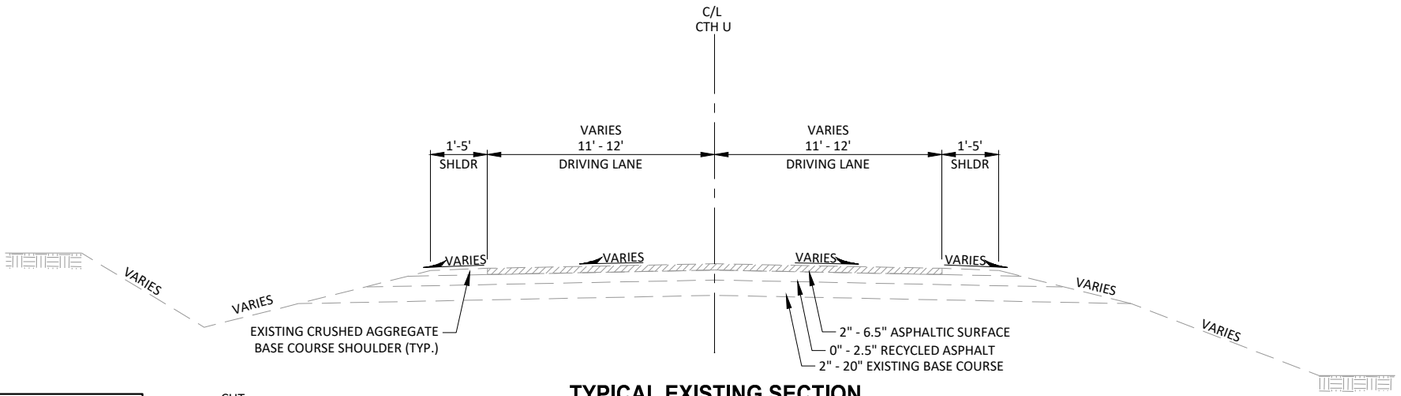
TOTAL PROJECT AREA = 9.40 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.00 ACRES

2

PROJECT NO: 7899-03-72	HWY: CTH U	COUNTY: PIERCE	PROJECT OVERVIEW	SHEET 3	E

FILE NAME : S:\PROJECTS\P94010 PIERCE CO HWY - CTH U RECONDITIONING\SHEETSPLAN\DETAILS\P94010_PROJECT OVERVIEW.DWG PLOT DATE : 10/22/2024 10:53:20 AM PLOT BY : LOGAN BETTHAUSER PLOT SCALE : 1" = 1' LAYOUT : LAYOUT1

2

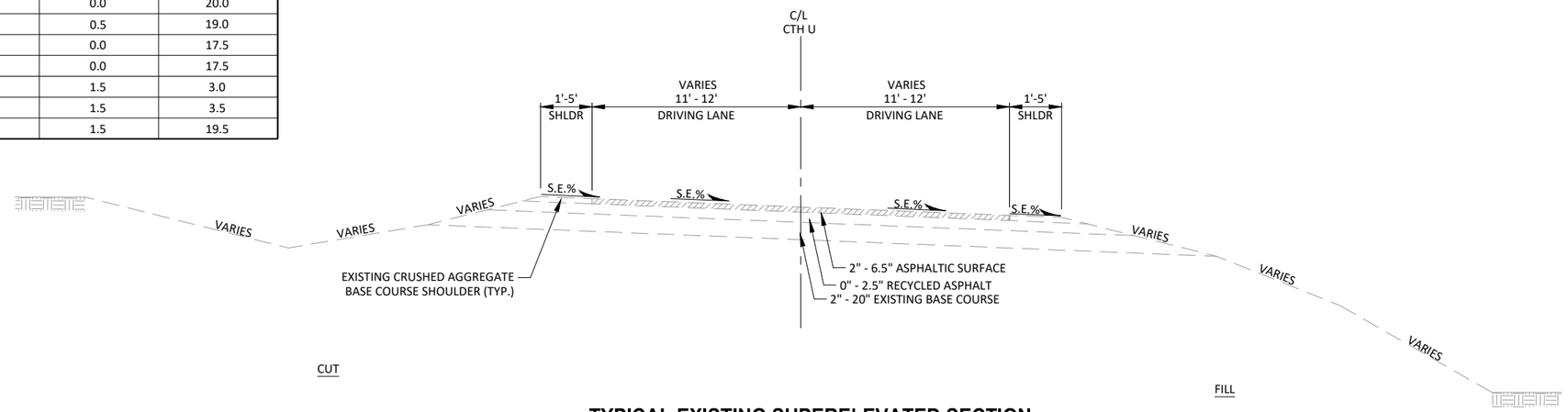


TYPICAL EXISTING SECTION

CTH U
STA. 10+09 - STA. 48+50.44
STA. 50+78.19 - STA. 56+78.19
STA. 59+84.57 - STA. 67+63.05
STA. 72+01.77 - STA. 76+16.27
STA. 83+27.79 - STA. 88+07.15
STA. 96+50.89 - STA. 114+52.89
STA. 120+44.34 - STA. 121+05.68
STA. 123+82.51 - STA. 124+92.52
STA. 129+31.42 - STA. 129+39.42
STA. 132+27.72 - STA. 133+26.55
STA. 136+33.10 - STA. 137+32.42
STA. 140+62.79 - STA. 145+68.72
STA. 149+68.41 - STA. 156+47.79

FOR INFORMATION ONLY
BORING LOG

NO.	STATION/OFFSET (+/-)	EXISTING ASPHALTIC SURFACE THICKNESS (IN.)	EXISTING BASE	
			RECYCLED ASPHALT (IN.)	BASE COURSE MATERIAL (IN.)
1	10+95, 6.5' LT.	6.5	2.5	3.0
2	24+76, 0.7' RT.	4.5	0.0	2.0
3	38+36, 5.9' LT.	6.0	1.0	4.0
4	49+97, 9.9' RT.	4.5	1.0	7.5
5	65+39, 6.4' LT.	4.5	2.0	3.5
6	78+91, 2.8' RT.	4.0	0.0	20.0
7	92+53, 5.6' LT.	4.5	0.5	19.0
8	106+05, 2.4' RT.	3.5	0.0	17.5
9	119+64, 8.4' LT.	3.5	0.0	17.5
10	133+20, 6.7' RT.	3.0	1.5	3.0
11	146+85, 6.7' LT.	2.0	1.5	3.5
12	159+63, 7.7' LT.	2.0	1.5	19.5

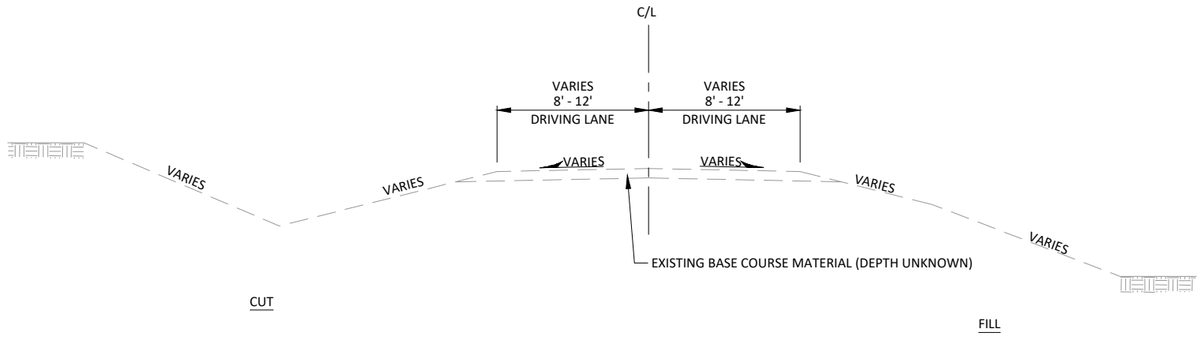


TYPICAL EXISTING SUPERELEVATED SECTION

CTH U
STA. 48+50.44 - STA. 50+78.19
STA. 56+69.59 - STA. 59+84.57
STA. 67+63.05 - STA. 72+01.77
STA. 76+16.27 - STA. 83+27.79
STA. 88+07.15 - STA. 96+50.89
STA. 114+52.89 - STA. 120+44.34
STA. 121+05.68 - STA. 123+82.51
STA. 124+92.52 - STA. 129+31.42
STA. 129+39.42 - STA. 132+27.72
STA. 133+26.55 - STA. 136+33.10
STA. 137+32.42 - STA. 140+62.79
STA. 145+68.72 - STA. 149+68.41

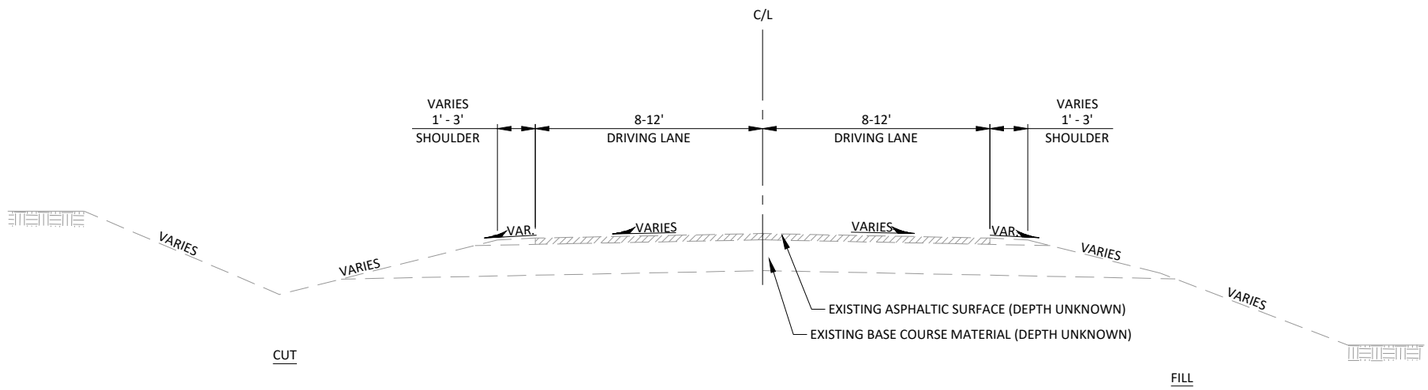
PROJECT NO: 7899-03-72	HWY: CTH U	COUNTY: PIERCE	TYPICAL EXISTING SECTIONS	SHEET 4	E

2



TYPICAL EXISTING SECTION

133RD ST.
120TH ST.
90TH ST.

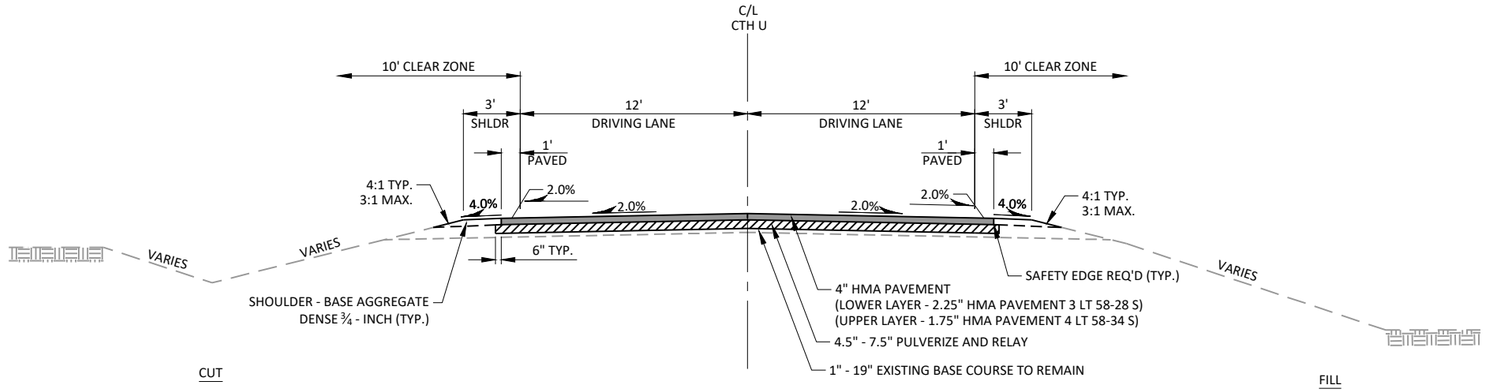


TYPICAL EXISTING SECTION

110TH AVE.
CTH UU
76TH ST.

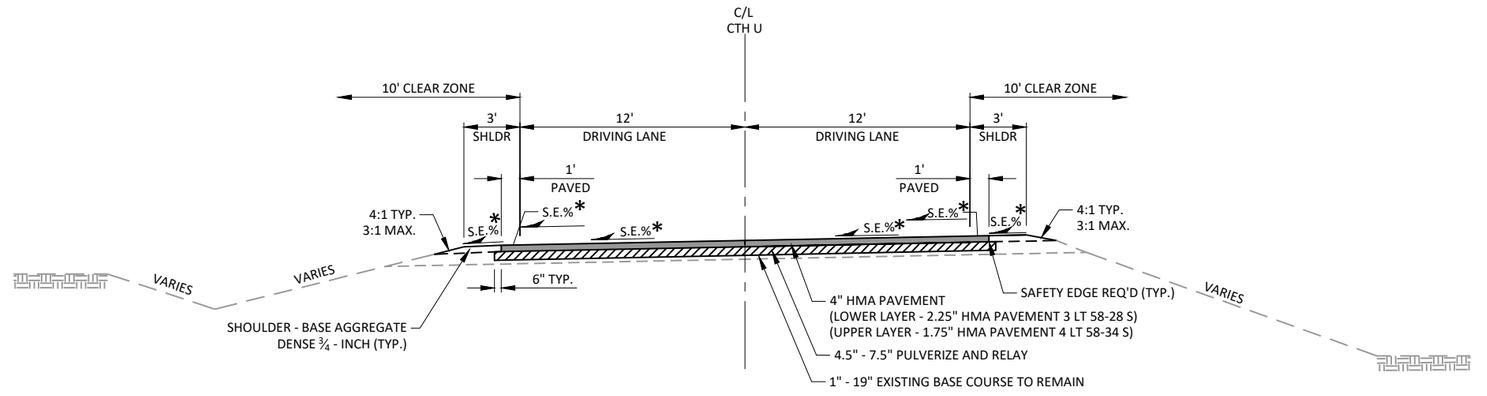
PROJECT NO: 7899-03-72	HWY: CTH U	COUNTY: PIERCE	TYPICAL EXISTING SECTIONS	SHEET 5	E

2



TYPICAL FINISHED SECTION

CTH U
STA. 10+09 - STA. 48+50.44
STA. 50+78.19 - STA. 56+78.19
STA. 59+84.57 - STA. 67+63.05
STA. 72+01.77 - STA. 76+16.27
STA. 83+27.79 - STA. 88+07.15
STA. 96+50.89 - STA. 114+52.89
STA. 120+44.34 - STA. 121+05.68
STA. 123+82.51 - STA. 124+92.52
STA. 129+31.42 - STA. 129+39.42



TYPICAL FINISHED SUPERELEVATED SECTION

CTH U
STA. 48+50.44 - STA. 50+78.19
STA. 56+69.59 - STA. 59+84.57
STA. 67+63.05 - STA. 72+01.77
STA. 76+16.27 - STA. 83+27.79
STA. 88+07.15 - STA. 96+50.89
STA. 114+52.89 - STA. 120+44.34
STA. 121+05.68 - STA.123+82.51
STA. 124+92.52 - STA. 129+31.42
STA. 129+39.42 - STA. 131+00

* SEE SUPERELEVATION TABLES FOR MORE INFORMATION.

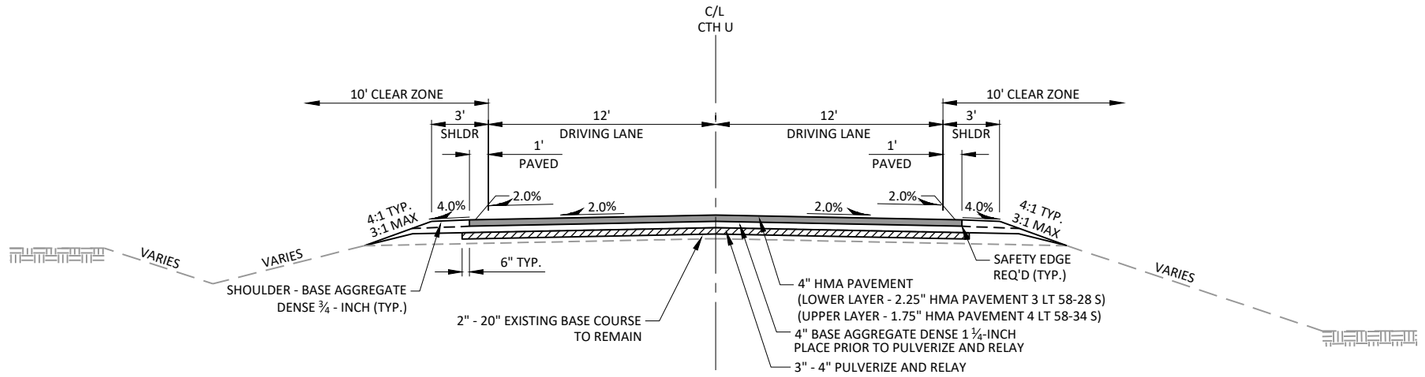
THE LOW SIDE SHOULDER SLOPE ON THE SUPERELEVATED SECTIONS EQUALS THE SUPERELEVATION WHEN THE SUPERELEVATION IS GREATER THAN 0.04 FT./FT. IF THE SUPERELEVATIONS IS LESS THAN OR EQUALS 0.04 FT./FT., THEN THE LOW SIDE SHOULDERSLOPE IS 0.04 FT./FT. THE HIGH SIDE SHOULDER SLOPE ON THE SUPERELEVATED SECTIONS EQUALS THE SUPERELEVATION.

GRADING OF PULVERIZED MATERIAL TO MEET PROPOSED SUPERELEVATION SHALL BE INCIDENTAL TO THE "PREPARE FOUNDATION FOR ASPHALTIC PAVING" BID ITEM.

PROJECT NO: 7899-03-72	HWY: CTH U	COUNTY: PIERCE	TYPICAL FINISHED SECTIONS	SHEET	E

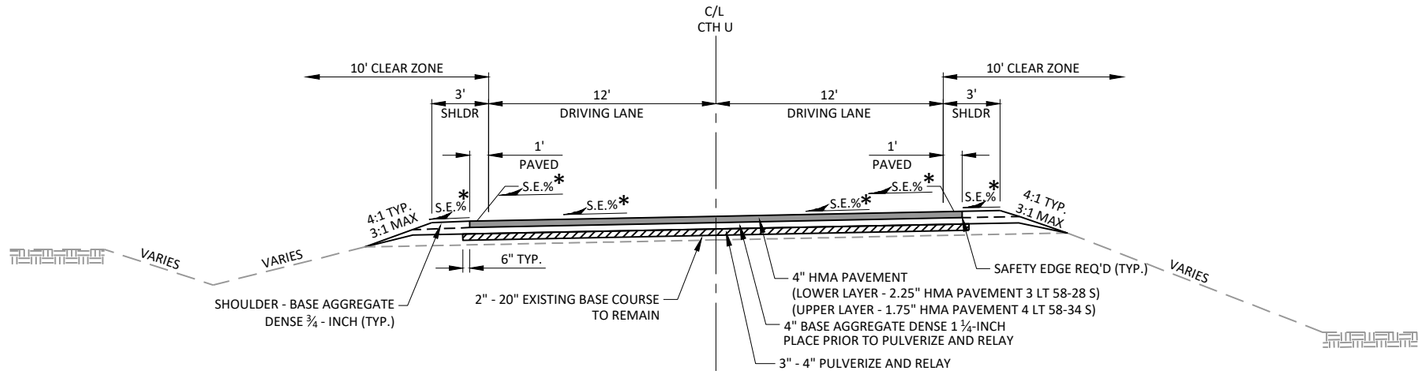
FILE NAME : S:\PROJECTS\P94010 PIERCE CO HWY - CTH U RECONDITIONING\SHEETSPLAN\TYPICALS\P94010_TYPICALS.DWG
PLOT DATE : 10/24/2024 4:29:18 PM
PLOT BY : DANIEL GERLING
PLOT SCALE : 1" = 1'
LAYOUT : PROPOSED1

2



TYPICAL FINISHED SECTION

CTH U
STA. 132+27.72 - STA. 133+26.55
STA. 136+33.10 - STA. 137+32.42
STA. 140+62.79 - STA. 145+68.72
STA. 149+68.41 - STA. 156+47.79



TYPICAL FINISHED SUPERELEVATED SECTION

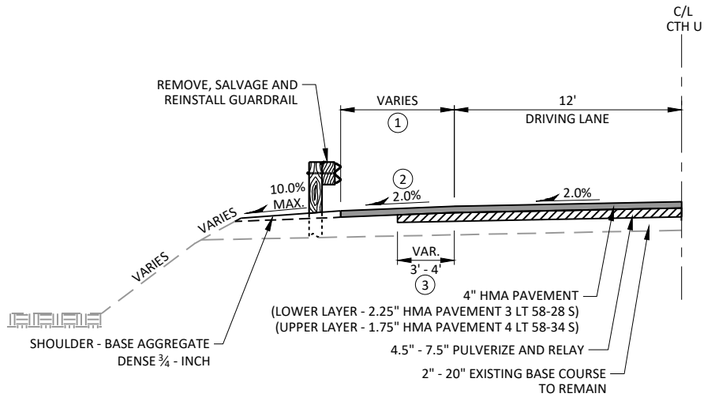
CTH U
STA. 131+00 - STA. 132+27.72
STA. 133+26.55 - STA. 136+33.10
STA. 137+32.42 - STA. 140+62.79
STA. 145+68.72 - STA. 149+68.41

* SEE SUPERELEVATION TABLES FOR MORE INFORMATION.

THE LOW SIDE SHOULDER SLOPE ON THE SUPERELEVATED SECTIONS EQUALS THE SUPERELEVATION WHEN THE SUPERELEVATION IS GREATER THAN 0.04 FT./FT. IF THE SUPERELEVATIONS IS LESS THAN OR EQUALS 0.04 FT./FT., THEN THE LOW SIDE SHOULDERSLOPE IS 0.04 FT./FT. THE HIGH SIDE SHOULDER SLOPE ON THE SUPERELEVATED SECTIONS EQUALS THE SUPERELEVATION.

GRADING OF PULVERIZED MATERIAL TO MEET PROPOSED SUPERELEVATION SHALL BE INCIDENTAL TO THE "PREPARE FOUNDATION FOR ASPHALTIC PAVING" BID ITEM.

PROJECT NO: 7899-03-72	HWY: CTH U	COUNTY: PIERCE	TYPICAL FINISHED SECTIONS	SHEET 7	E



NOTES:
BEAM GUARD ON LEFT IS SHOWN. BEAM GUARD ON RIGHT IS MIRRORED.

(1) LIMITS OF PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS.

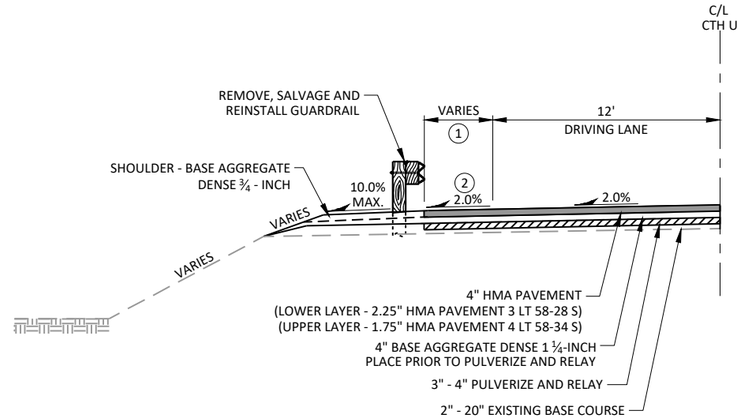
WIDTH VARIES:
6' - 8' (STA. 96+92 - STA. 104+52, RT.)
8' - 10' (STA. 102+15 - STA. 108+52, LT.)

(2) PAVED SHOULDER CROSS SLOPE VARIES FROM A MINIMUM OF 2.0% TO A MAXIMUM OF 4.0%.

(3) PULVERIZE AND RELAY FULL WIDTH OF EXISTING PAVED SHOULDER.

TYPICAL HALF FINISHED BEAM GUARD SECTION

CTH U
STA. 96+92 - STA. 104+52, RT.
STA. 102+15 - STA. 108+52, LT.



NOTES:
BEAM GUARD ON LEFT IS SHOWN. BEAM GUARD ON RIGHT IS MIRRORED.

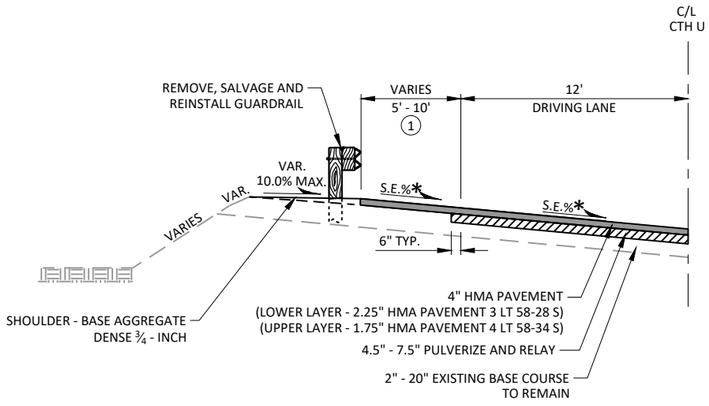
(1) WIDTH VARIES:
4' - 7' (STA. 141+51 - STA. 144+06, LT.)
5' - 8' (STA. 141+80 - STA. 144+06, RT.)
3' - 5' (STA. 155+14 - STA. 156+48, RT.)
3' - 5' (STA. 155+71 - STA. 156+56, LT.)

(2) PAVED SHOULDER CROSS SLOPE VARIES FROM A MINIMUM OF 2.0% TO A MAXIMUM OF 4.0%.

TYPICAL HALF FINISHED BEAM GUARD SECTION

CTH U
STA. 141+50 - STA. 144+06, LT.
STA. 141+80 - STA. 144+06, RT.
STA. 155+14 + STA. 156+47.79, RT.
STA. 155+71 - STA. 156+47.79, LT.

2



NOTES:
BEAM GUARD ON LEFT IS SHOWN. BEAM GUARD ON RIGHT IS MIRRORED.

(1) LIMITS OF PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS.

* SEE SUPERELEVATION TABLES FOR MORE INFORMATION.

TYPICAL HALF FINISHED SUPERELEVATED BEAM GUARD SECTION

CTH U
STA. 114+30 - STA. 122+23, LT.

PROJECT NO: 7899-03-72	HWY: CTH U	COUNTY: PIERCE	TYPICAL FINISHED SECTIONS	SHEET 8	E

SUPERELEVATION TABLE-CURVE 1

STATION	LEFT(%)	RIGHT(%)
47+48	2.0	2.0
47+50	2.0	1.9
47+82	2.0	0.0
48+00	2.0	1.1
48+16	2.0	2.0
48+50	4.0	4.0
48+85	6.0	6.0
FULL SUPERELEVATION		
50+44	6.0	6.0
50+50	5.6	5.6
50+80	4.0	4.0
51+00	2.7	2.7
51+13	2.0	2.0
51+47	2.0	0.0
51+50	2.0	0.2
51+81	2.0	2.0

SUPERELEVATION TABLE-CURVE 2

STATION	LEFT(%)	RIGHT(%)
55+55	2.0	2.0
55+94	0.0	2.0
56+00	0.3	2.0
56+32	2.0	2.0
56+50	2.9	2.9
56+70	3.9	3.9
57+00	5.5	5.5
57+08	5.9	5.9
FULL SUPERELEVATION		
59+47	5.9	5.9
59+50	5.7	5.7
59+85	3.9	3.9
60+00	3.1	3.1
60+22	2.0	2.0
60+50	0.6	2.0
60+61	0.0	2.0
61+00	2.0	2.0

SUPERELEVATION TABLE-CURVE 3

STATION	LEFT(%)	RIGHT(%)
66+15	2.0	2.0
66+50	2.0	0.6
66+66	2.0	0.0
67+00	2.0	1.3
67+17	2.0	2.0
67+50	3.3	3.3
67+63	3.8	3.8
68+00	5.2	5.2
68+12	5.7	5.7
FULL SUPERELEVATION		
71+53	5.7	5.7
72+00	3.9	3.9
72+01	3.8	3.8
72+48	2.0	2.0
72+50	2.0	1.9
73+00	2.0	0.0
73+50	2.0	2.0

SUPERELEVATION TABLE-CURVE 4

STATION	LEFT(%)	RIGHT(%)
74+84	2.0	2.0
75+00	1.6	2.0
75+28	0.0	2.0
75+50	1.0	2.0
75+72	2.0	2.0
76+00	3.3	3.3
76+16	4.0	4.0
76+50	5.5	5.5
76+61	6.0	6.0
FULL SUPERELEVATION		
82+83	6.0	6.0
83+00	5.3	5.3
83+28	4.0	4.0
83+50	3.0	3.0
83+72	2.0	2.0
84+00	0.7	2.0
84+16	0.0	2.0
84+50	1.5	2.0
84+60	2.0	2.0

SUPERELEVATION TABLE-CURVE 5

STATION	LEFT(%)	RIGHT(%)
86+74	2.0	2.0
87+00	2.0	0.8
87+18	2.0	0.0
87+50	2.0	1.4
87+63	2.0	2.0
88+00	3.7	3.7
88+07	4.0	4.0
88+50	5.9	5.9
88+51	6.0	6.0
FULL SUPERELEVATION		
96+07	6.0	6.0
96+50	4.0	4.0
96+95	2.0	2.0
97+00	2.0	1.8
97+40	2.0	0.0
97+50	2.0	0.5
97+84	2.0	2.0

SUPERELEVATION TABLE-CURVE 6

STATION	LEFT(%)	RIGHT(%)
113+30	2.0	2.0
113+50	1.0	2.0
113+71	0.0	2.0
114+00	1.4	2.0
114+12	2.0	2.0
114+50	3.8	3.8
114+52	3.9	3.9
114+93	5.9	5.9
FULL SUPERELEVATION		
115+02	5.9	5.9
115+50	6.0	6.0

SUPERELEVATION TABLE-CURVE 7

STATION	LEFT(%)	RIGHT(%)
115+50	6.0	6.0
115+87	6.0	6.0
FULL SUPERELEVATION		
120+00	6.0	6.0
120+44	4.0	4.0
120+50	4.0	4.0

SUPERELEVATION TABLE-CURVE 8

STATION	LEFT(%)	RIGHT(%)
120+50	4.0	4.0
121+00	4.0	4.0
121+05	4.0	4.0
121+47	6.0	6.0
FULL SUPERELEVATION		
123+41	6.0	6.0
123+50	5.4	5.4
124+00	2.4	2.4
124+39	0.0	0.0

SUPERELEVATION TABLE-CURVE 9

STATION	LEFT(%)	RIGHT(%)
124+39	0.0	0.0
124+50	0.7	0.7
125+00	3.7	3.7
125+37	6.0	6.0
FULL SUPERELEVATION		
128+87	6.0	6.0
129+00	5.4	5.4
129+50	3.2	3.2
129+69	2.3	2.3

SUPERELEVATION TABLE-CURVE 10

STATION	LEFT(%)	RIGHT(%)
129+69	2.3	2.3
FULL SUPERELEVATION		
132+08	2.3	2.3
132+50	0.2	0.2
132+55	0.0	0.0

SUPERELEVATION TABLE-CURVE 11

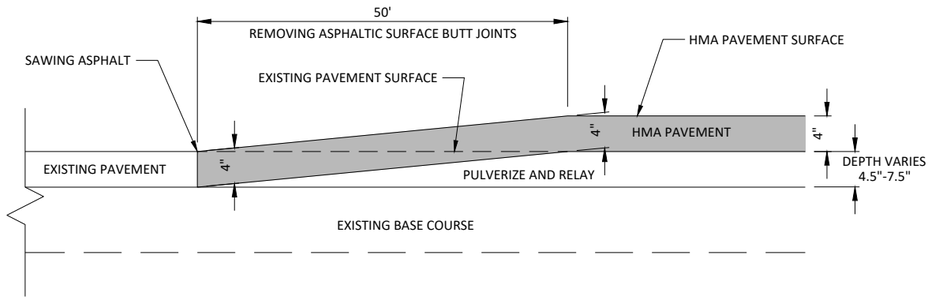
STATION	LEFT(%)	RIGHT(%)
132+55	0.0	0.0
133+00	2.2	2.2
133+50	4.6	4.6
133+78	6.0	6.0
FULL SUPERELEVATION		
135+82	6.0	6.0
136+00	4.9	4.9
136+50	2.0	2.0
136+83	0.0	0.0

SUPERELEVATION TABLE-CURVE 12

STATION	LEFT(%)	RIGHT(%)
136+83	0.0	0.0
137+00	1.0	1.0
137+50	4.0	4.0
137+74	6.0	6.0
FULL SUPERELEVATION		
140+21	6.0	6.0
140+50	4.6	4.6
140+63	4.0	4.0
141+00	2.2	2.2
141+04	2.0	2.0
141+45	2.0	0.0
141+50	2.0	0.2
141+86	2.0	2.0

SUPERELEVATION TABLE-CURVE 13

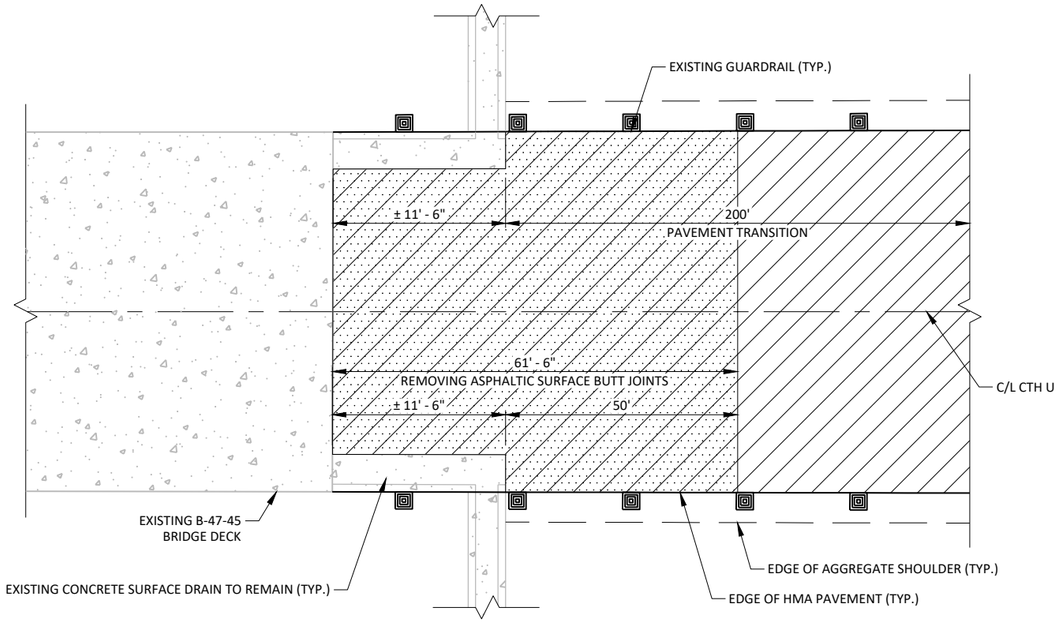
STATION	LEFT(%)	RIGHT(%)
144+26	2.0	2.0
144+50	2.0	1.1
144+77	2.0	0.0
145+00	2.0	0.9
145+28	2.0	2.0
145+50	2.9	2.9
145+69	3.6	3.6
146+00	4.8	4.8
146+15	5.4	5.4
FULL SUPERELEVATION		
149+22	5.4	5.4
149+50	4.3	4.3
149+68	3.6	3.6
150+00	2.4	2.4
150+09	2.0	2.0
150+50	2.0	0.4
150+60	2.0	0.0
151+00	2.0	1.6
151+11	2.0	2.0

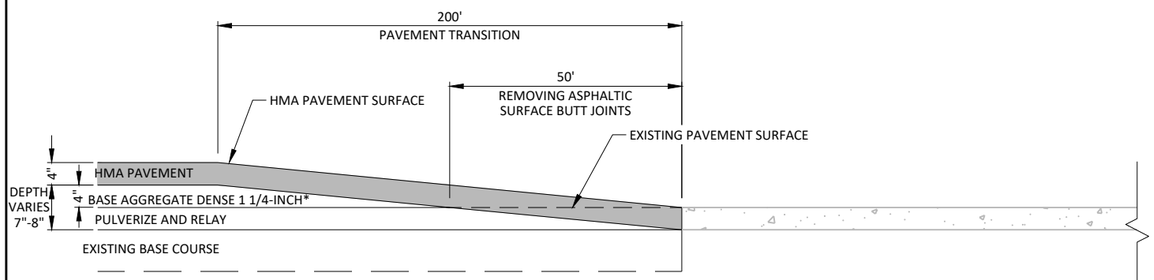


LOCATION

BEGINNING OF PROJECT
STA. 10+09 - STA. 10+59

REMOVING ASPHALTIC SURFACE BUTT JOINTS





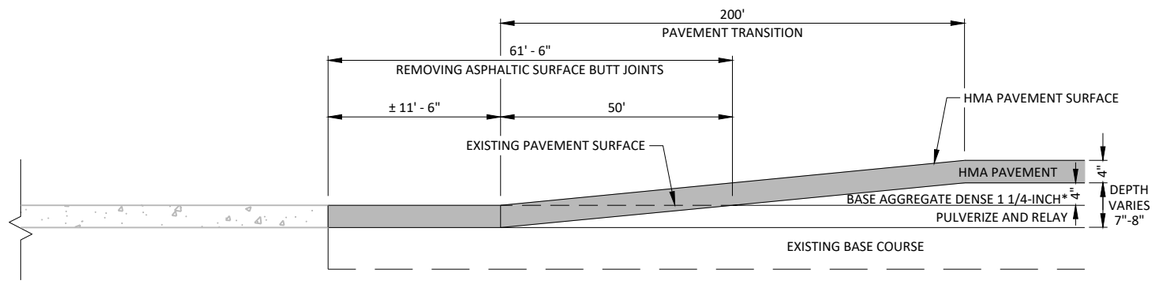
*PLACE 4-INCHES OF BASE AGGREGATE DENSE 1 1/4-INCH
PRIOR TO PULVERIZE AND RELAY OPERATIONS

LOCATIONS

STA. 142+03.68 - STA. 142+53.68
STA. 155+97.79 - STA. 156+47.79 (END OF PROJECT)

EXISTING STRUCTURE TO REMAIN

DETAIL OF MAINLINE BUTT JOINT AT STRUCTURES



*PLACE 4-INCHES OF BASE AGGREGATE DENSE 1 1/4-INCH
PRIOR TO PULVERIZE AND RELAY OPERATIONS

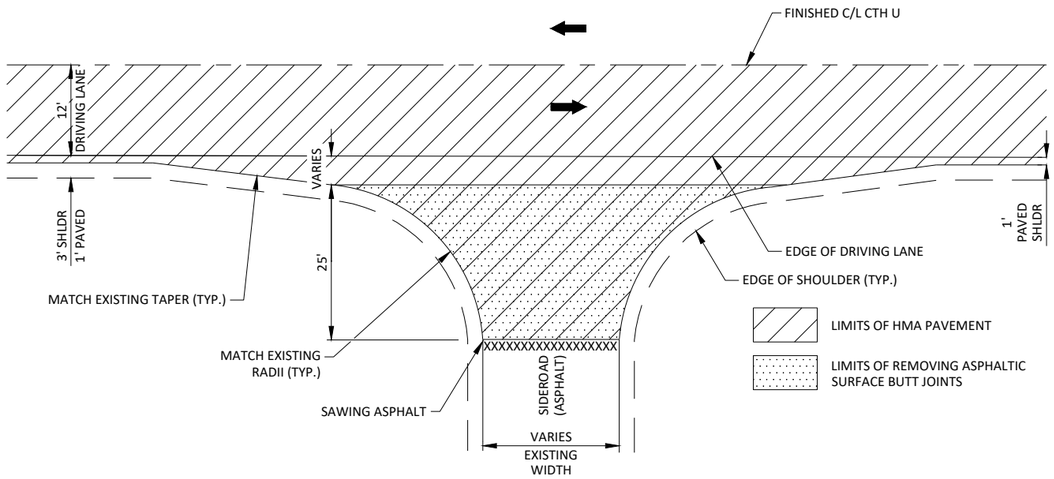
LOCATION

STA. 143+20.34 - STA. 143+81.84

EXISTING STRUCTURE TO REMAIN

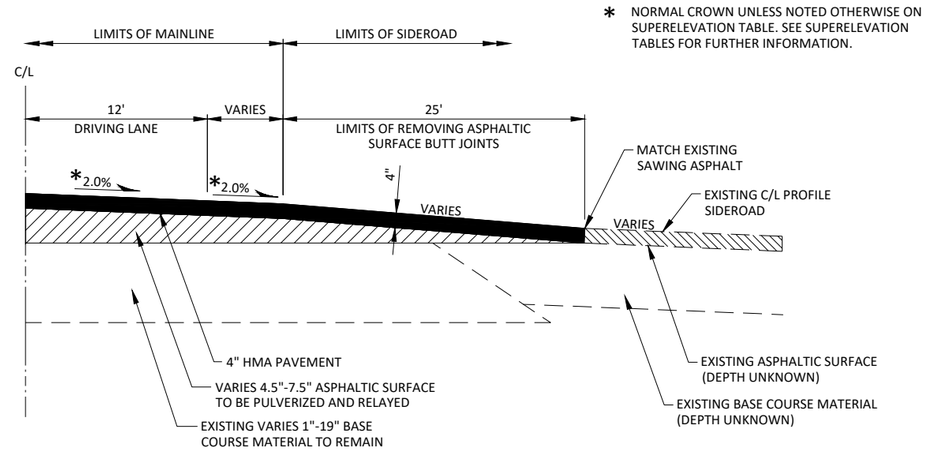
DETAIL OF MAINLINE BUTT JOINT AT STRUCTURE WITH CONCRETE SURFACE DRAINS

PROJECT NO: 7899-03-72	HWY: CTH U	COUNTY: PIERCE	CONSTRUCTION DETAILS	SHEET 10	E



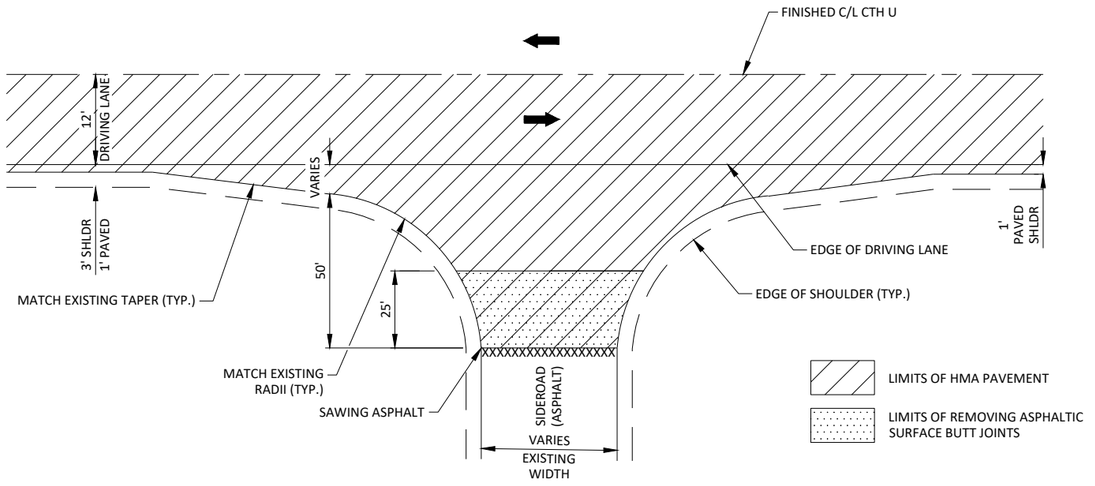
TYPICAL PAVED SIDEROAD DETAIL

110TH AVENUE



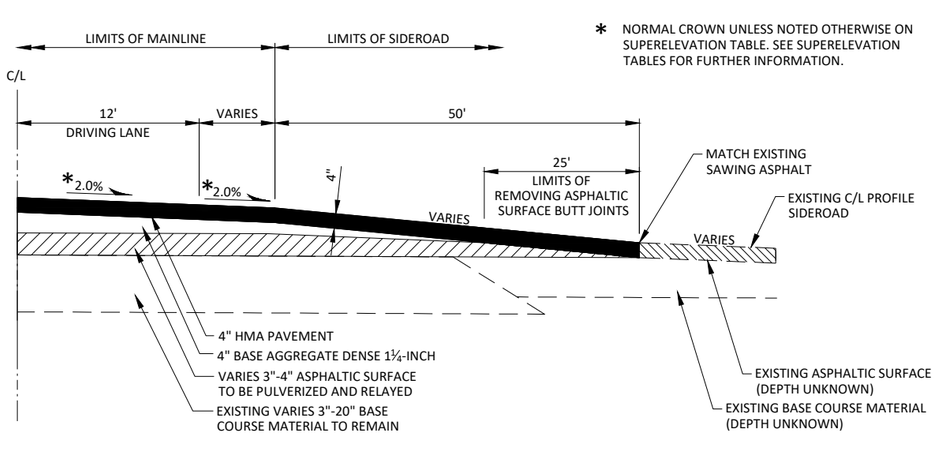
TYPICAL SIDEROAD PROFILE

110TH AVENUE



TYPICAL PAVED SIDEROAD DETAIL

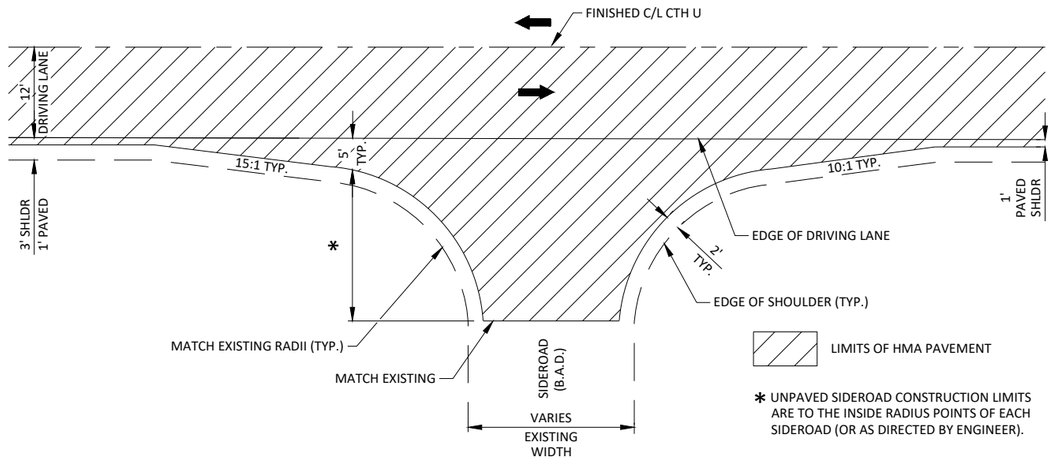
CTH UU
76TH STREET



TYPICAL SIDEROAD PROFILE

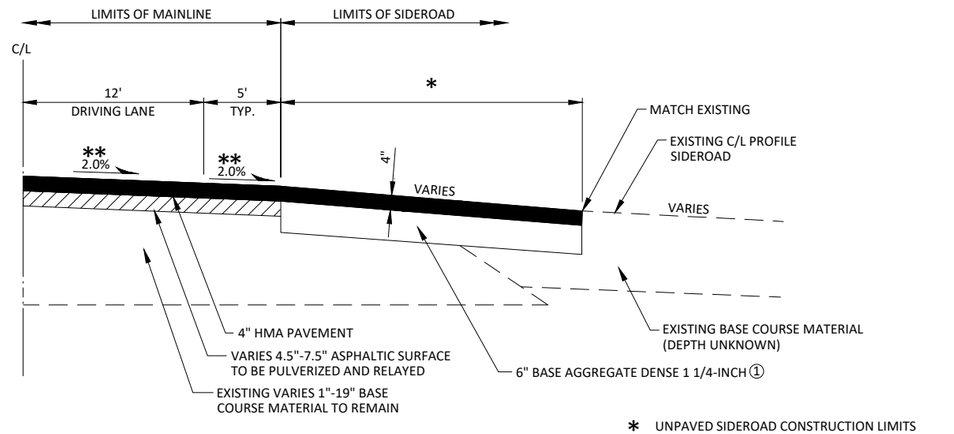
CTH UU
76TH STREET

2



TYPICAL UNPAVED SIDEROAD DETAIL

133RD STREET
120TH STREET
90TH STREET



* UNPAVED SIDEROAD CONSTRUCTION LIMITS ARE TO THE INSIDE RADIUS POINTS OF EACH SIDEROAD (OR AS DIRECTED BY ENGINEER).

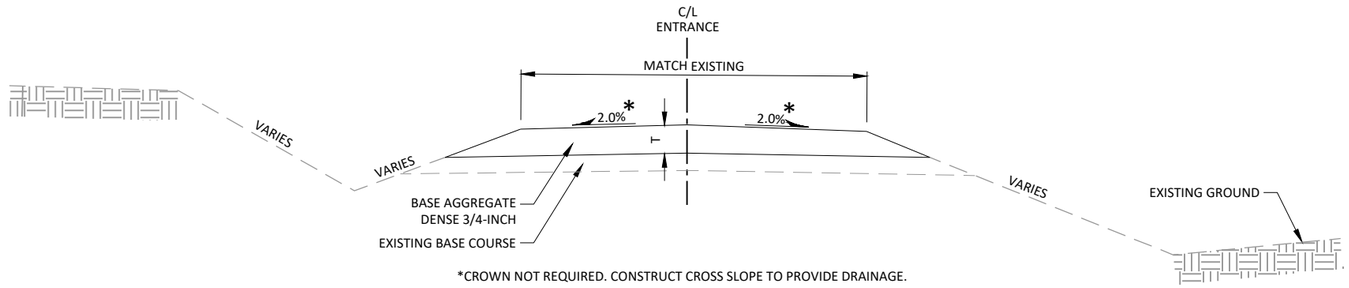
** NORMAL CROWN UNLESS NOTED OTHERWISE ON SUPERELEVATION TABLE. SEE SUPERELEVATION TABLES FOR FURTHER INFORMATION.

① EXCAVATION COMMON, GRADING, AND SHAPING REQ'D FOR PLACEMENT OF BASE AGGREGATE DENSE TO BE PAID FOR UNDER GRADING AND SHAPING INTERSECTION BID ITEMS.

TYPICAL SIDEROAD PROFILE

133RD STREET
120TH STREET
90TH STREET

PROJECT NO: 7899-03-72	HWY: CTH U	COUNTY: PIERCE	CONSTRUCTION DETAILS	SHEET 12	E

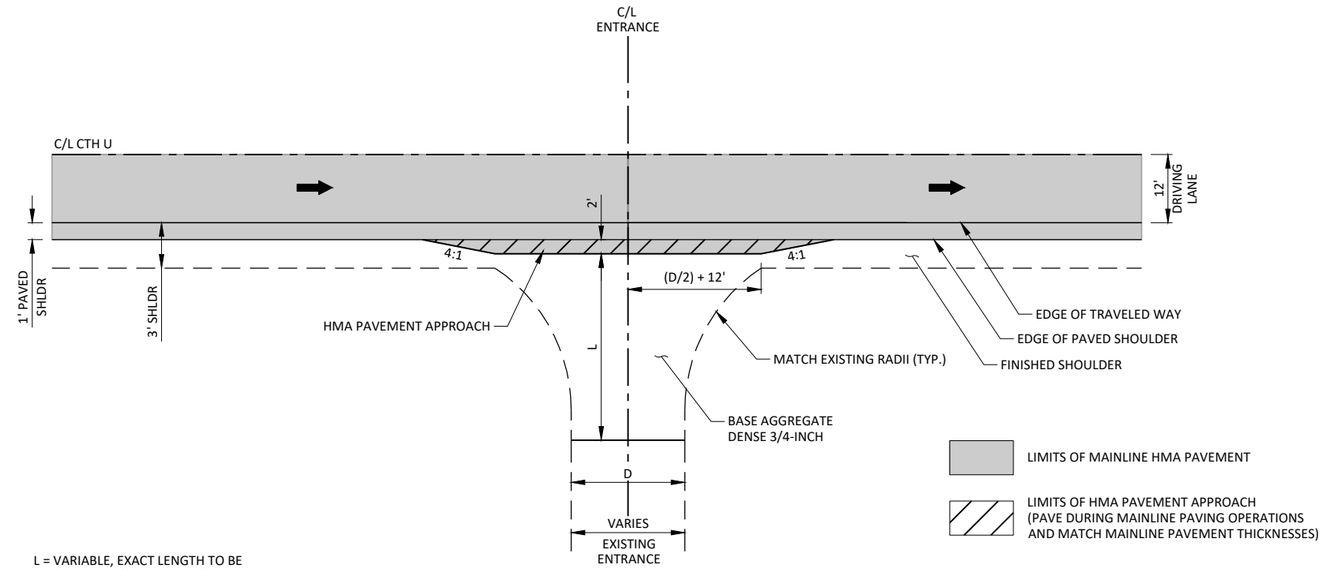


*CROWN NOT REQUIRED. CONSTRUCT CROSS SLOPE TO PROVIDE DRAINAGE.

TYPICAL DRIVEWAY CROSS SECTION

STATION	T
21+15,LT.	4.0"
34+75, RT.	4.0"
38+65, LT.	4.0"
38+65, RT.	4.0"
45+50, LT.	4.0"
64+00, LT.	4.0"
64+50, RT.	4.0"
78+20, RT.	4.0"
80+75, LT.	4.0"
84+60, RT.	4.0"
84+90, LT.	4.0"
128+50, RT.	4.0"
129+50, RT.	4.0"
129+90, LT.	4.0"
144+25, RT.	4.0"
145+00, RT.	8.0"

NOTE:
THICKNESS VARIES, GRADE TO MATCH EXISTING ENTRANCES. SHAPING OF SURFACES IS INCIDENTAL TO THE BASE AGGREGATE DENSE 3/4-INCH BID ITEM.

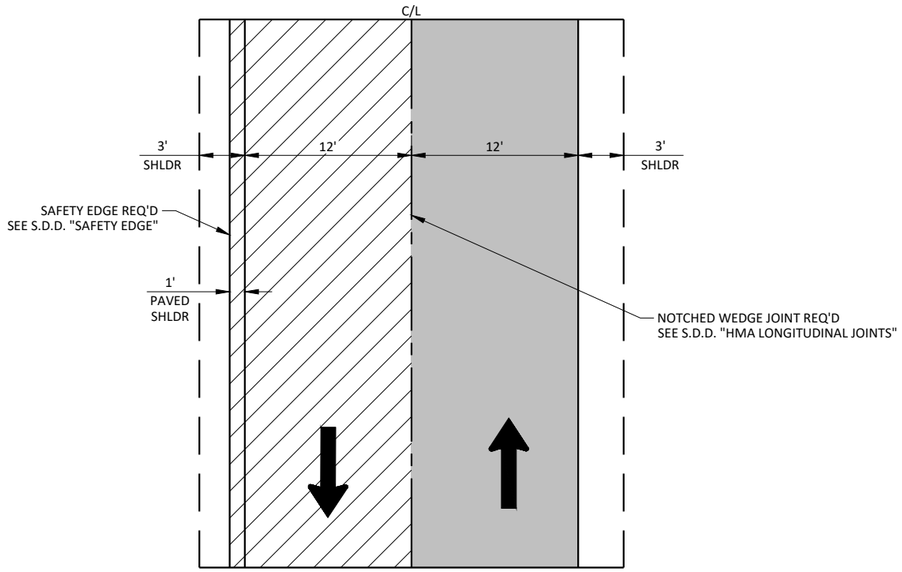


L = VARIABLE, EXACT LENGTH TO BE DETERMINED IN THE FIELD BY THE ENGINEER. BLEND BACK ON THE ENTRANCE FAR ENOUGH TO PROVIDE A SMOOTH PROFILE.

D = DRIVEWAY WIDTH (MATCH EXISTING)

PLAN VIEW

TYPICAL P.E. & F.E. ENTRANCE DETAIL



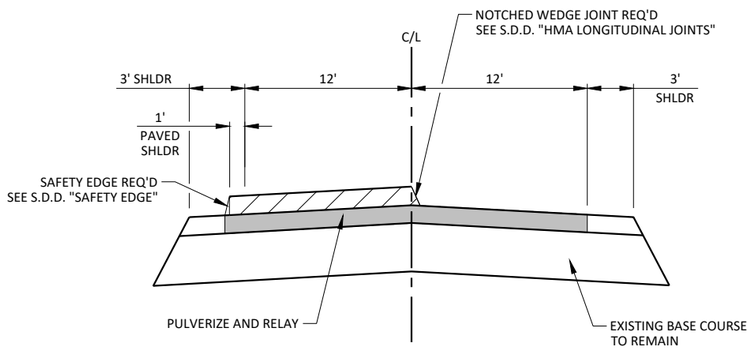
PLAN VIEW

NOTES:
DOCUMENT AND MARK THE LOCATIONS OF EXISTING MARKING LINE PASSING ZONES PRIOR TO PULVERIZE AND RELAY OPERATION.

PLACE "NO CENTERLINE" (W8-12, 36" X 36")AT EACH END OF THE PROJECT AND AFTER EACH SIDE OF THE ROAD PRIOR TO PULVERIZE AND RELAY.

PLACE "NO PASSING ZONE (R4-1, 24"x30"), "UNEVEN LANES" (W8-11, 36"x36"), "LOW SHOULDER" (W8-9, 36"x36"), OR "SHOULDER DROPOFF" (W8-9A, 36"x36") EVERY 2 MILES ALONG THE PROJECT LENGTH.

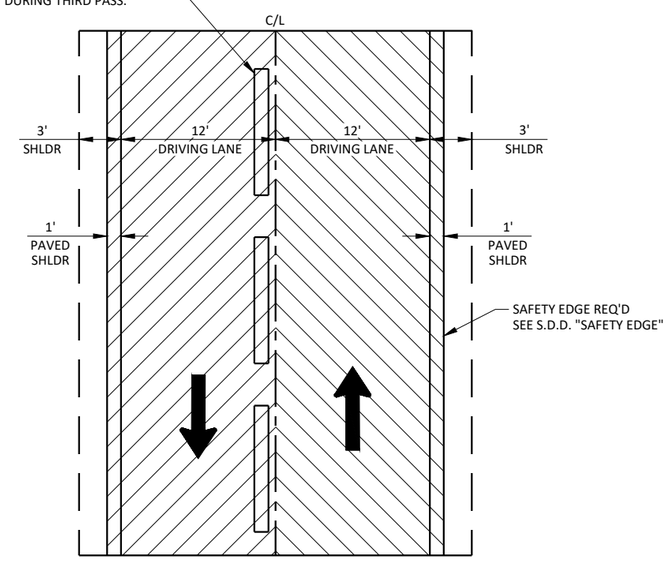
REFER TO STANDARD DETAIL DRAWING "TEMPORARY LONGITUDINAL PAVEMENT MARKING" FOR ADDITIONAL INFORMATION



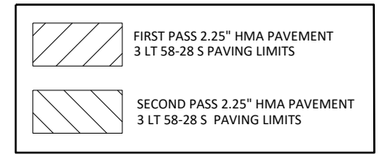
CROSS SECTION VIEW

FIRST PASS DETAIL

TEMPORARY MARKING LINE PAINT 4-INCH (SINGLE LINE 4' SKIPS) PLACED AFTER FIRST PASS AND TO REMAIN FOR SECOND AND THIRD PASS. PLACE PAINT SO AS NOT TO BE COVERED UP BY PAVING NOTCH DURING THIRD PASS.

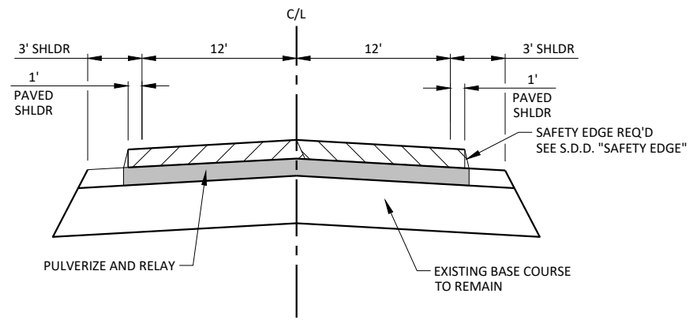


PLAN VIEW



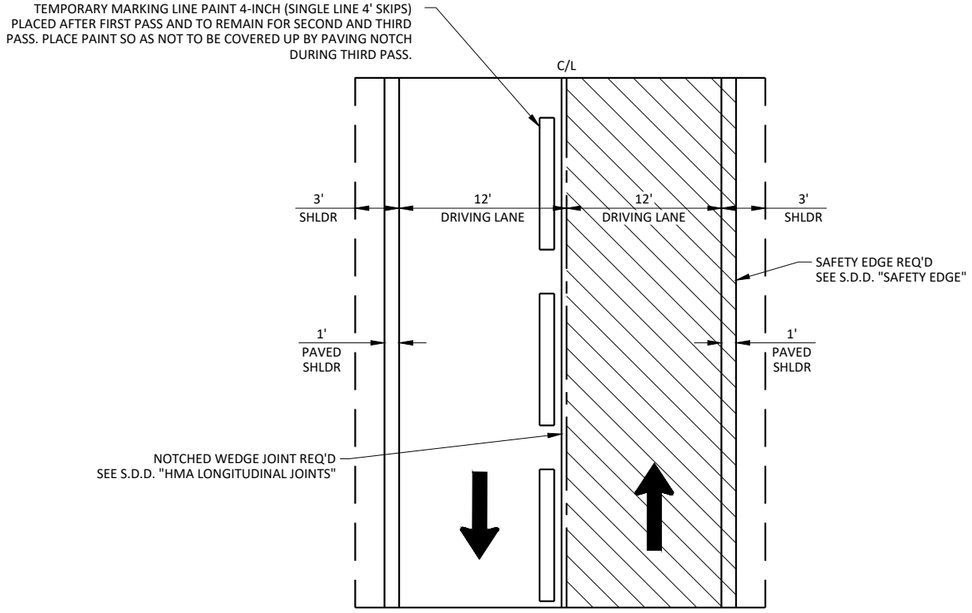
NOTES:
PLACE "NO PASSING ZONE (R4-1, 24"x30"), "UNEVEN LANES" (W8-11, 36"x36"), "LOW SHOULDER" (W8-9, 36"x36"), OR "SHOULDER DROPOFF" (W8-9A, 36"x36") EVERY 2 MILES ALONG THE PROJECT LENGTH.

REFER TO STANDARD DETAIL DRAWING "TEMPORARY LONGITUDINAL PAVEMENT MARKING" FOR ADDITIONAL INFORMATION



CROSS SECTION VIEW

SECOND PASS DETAIL



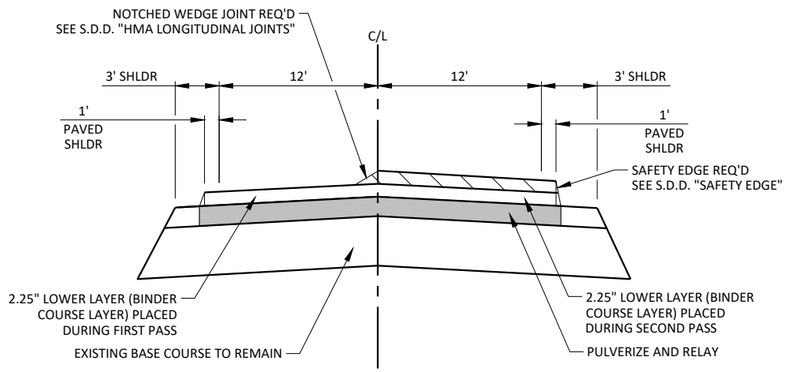
PLAN VIEW

THIRD PASS 1.75" HMA PAVEMENT 4 LT 58-34 S (SURFACE LAYER) PAVING LIMITS

2.25" LOWER LAYER (BINDER COURSE LAYER) PLACED DURING FIRST AND SECOND PASS

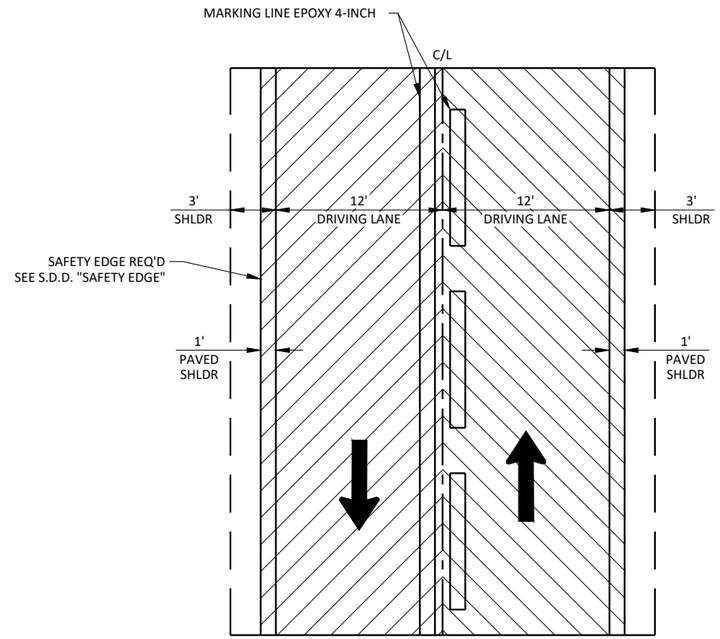
NOTES:
PLACE "NO PASSING ZONE (R4-1, 24"x30"), "UNEVEN LANES" (W8-11, 36"x36"), "LOW SHOULDER" (W8-9, 36"x36"), OR "SHOULDER DROPOFF" (W8-9A, 36"x36") EVERY 2 MILES ALONG THE PROJECT LENGTH.

REFER TO STANDARD DETAIL DRAWING "TEMPORARY LONGITUDINAL PAVEMENT MARKING" FOR ADDITIONAL INFORMATION



CROSS SECTION VIEW

THIRD PASS DETAIL



PLAN VIEW

THIRD PASS 1.75" HMA PAVEMENT 4 LT 58-34 S PAVING LIMITS

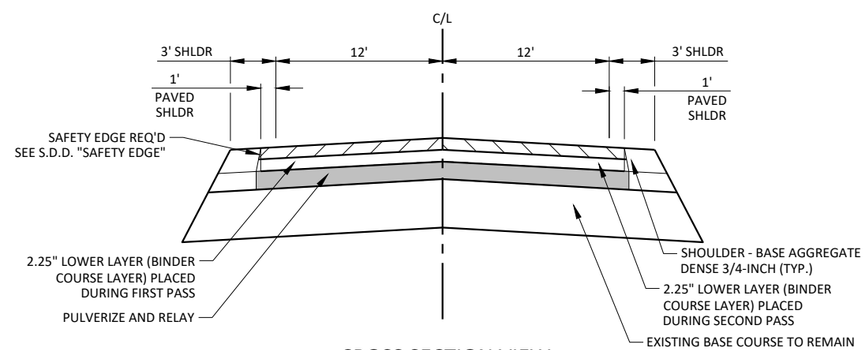
FOURTH PASS 1.75" HMA PAVEMENT 4 LT 58-34 S PAVING LIMITS

NOTE: REFER TO STANDARD DETAIL DRAWING "LONGITUDINAL MARKING (MAINLINE)" FOR ADDITIONAL INFORMATION

NOTES:
PLACE "NO CENTERLINE" (W8-12, 48"x48"), AT THE BEGINNING OF THE PROJECT, AT TWO MILE INTERVALS, AND AFTER COUNTY HIGHWAY INTERSECTIONS.

PLACE "DO NOT PASS" (R4-1, 24"x30") AT THE BEGINNING OF THE PROJECT, AT ONE MILE INTERVALS, AND AFTER COUNTY HIGHWAY INTERSECTIONS.

LEAVE SIGNS IN PLACE UNTIL CENTERLINE PAVEMENT MARKINGS ARE PLACED.



CROSS SECTION VIEW

FOURTH PASS DETAIL

PROJECT NO: 7899-03-72	HWY: CTH U	COUNTY: PIERCE	CONSTRUCTION DETAILS: PAVING SEQUENCE OF OPERATIONS	SHEET 15	E

GENERAL NOTES FOR TRAFFIC CONTROL

ALL ROADS AND STREETS WITHIN THE WORK ZONES SHALL BE KEPT ACCESSIBLE FOR EMERGENCY VEHICLES, RESIDENTS AND BUSINESSES.

ANY STOP SIGNS WHICH ARE REMOVED FOR A CONSTRUCTION OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED.

ALL SIGN LAYOUT SHALL BE IN ACCORDANCE WITH THE STANDARD DETAIL DRAWINGS AND WISCONSIN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

PROVIDE AND MAINTAIN ACCESS TO ALL PROPERTY ABUTTING THE ROADWAY CONSTRUCTION WORK THROUGHOUT THE DURATION OF THE PROJECT.

DURING NIGHT SHUTDOWN, ONE LANE IN EACH DIRECTION MUST REMAIN OPEN.

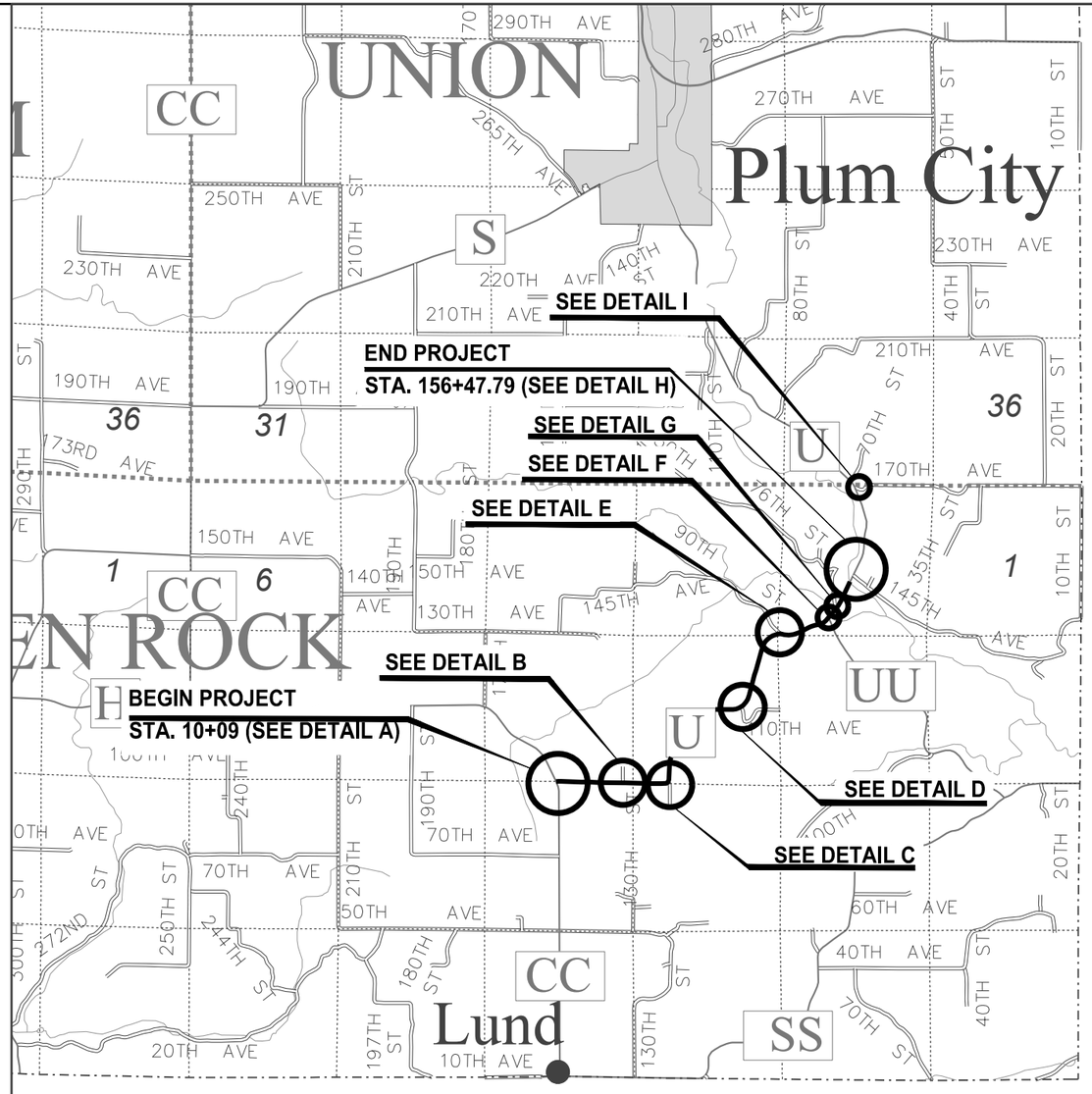
DURING HOURS OF DARKNESS, ALL BARRICADES USED TO SHIELD A HAZARD SHALL BE EQUIPPED WITH TYPE "A" (LOW INTENSITY FLASHING) LIGHTS.

DRAWINGS SHOW TRAFFIC CONTROL FOR A TYPICAL SITUATION. ADDITIONAL TRAFFIC CONTROL DEVICES MAY BE REQUIRED AND/OR LAYOUT DETAILS MODIFIED DEPENDING ON CONTRACTOR'S METHODS OR SEQUENCES OF OPERATION.

ROAD MACHINERY, FLAGGERS AHEAD, ETC. SIGNS SHALL BE USED AS NEEDED AND SHALL BE REMOVED OR COVERED AT NIGHTS, ON WEEKENDS OR WHEN THE ACTIVITY DOES NOT EXIST.

DRUMS PLACED ADJACENT TO WORK AREAS SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

FIXED MESSAGE SIGNS (G20-57C) TO BE PLACED 14 DAYS PRIOR TO CONSTRUCTION STARTING. THE "XXX-XX" IN THE FIXED MESSAGE SHALL BE THE DATE OF THE ROAD CLOSURE. FOR EXAMPLE, JUNE 24TH WOULD BE "JUN 24".



2

M1-5A
24"X24"

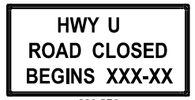
①

②

③

G20-2A
48"X24"

④



G20-57C
72"X36"

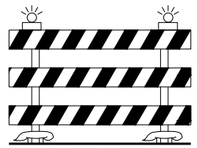
Ⓐ

PLACE G20-57C FOR 14 DAYS PRIOR TO ROAD CLOSURE. REMOVE WHEN CONSTRUCTION BEGINS.

R11-4
60" X 30"

TYPE III BARRICADE

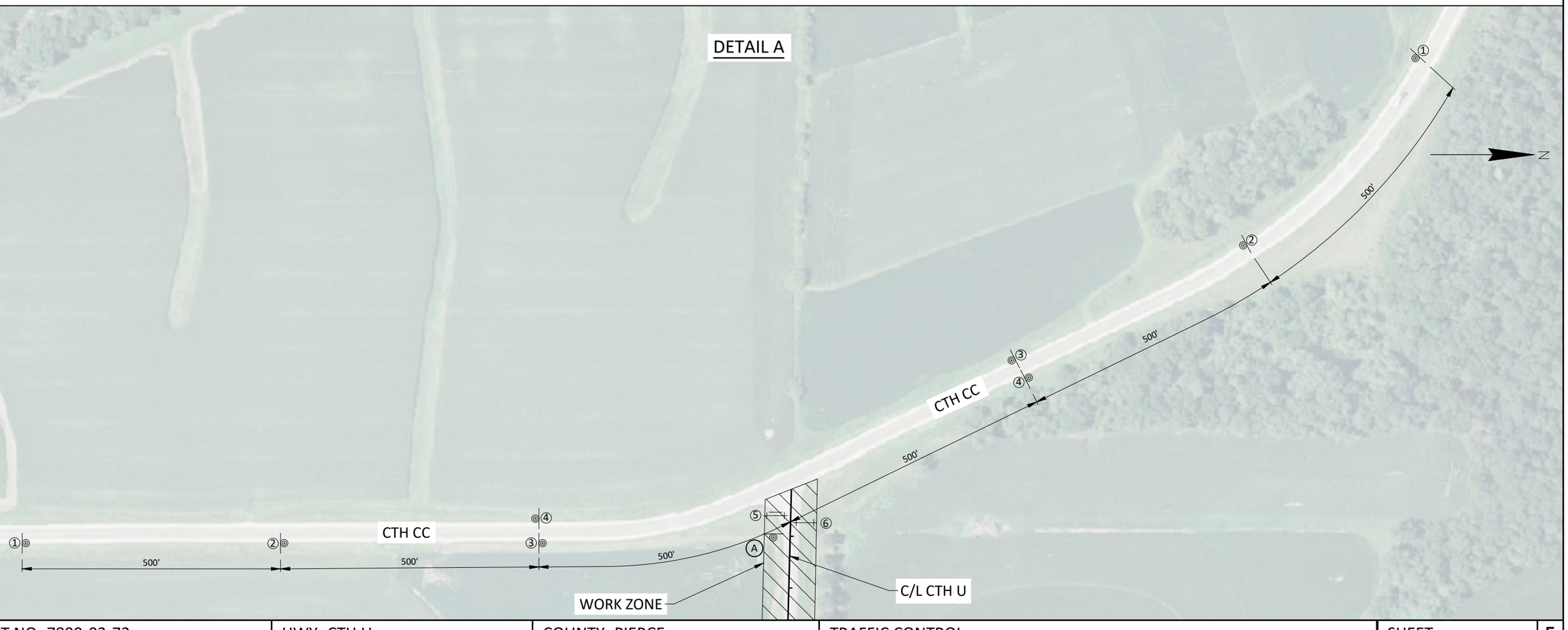
⑤



TYPE III BARRICADE

⑥

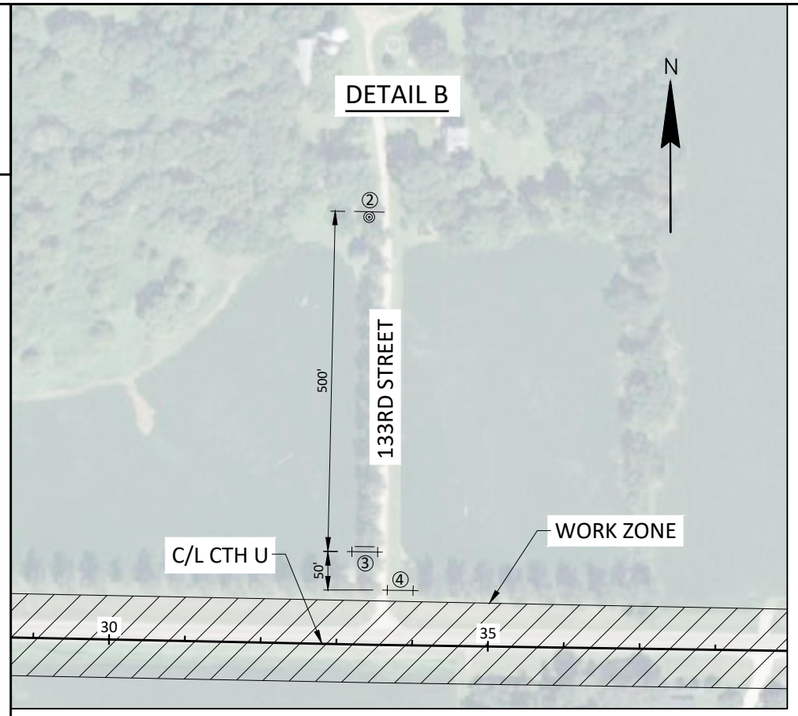
DETAIL A



PROJECT NO: 7899-03-72	HWY: CTH U	COUNTY: PIERCE	TRAFFIC CONTROL	SHEET	E

FILE NAME : S:\PROJECTS\P94010 PIERCE CO HWY - CTH U RECONDITIONING\SHEETSPLAN\DETAILS\P94010_TRAFFIC CONTROL.DWG PLOT DATE : 2/14/2025 10:24:01 AM PLOT BY : DANIEL GERLING PLOT SCALE : 1" = 1' LAYOUT : SHEET - 1

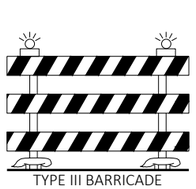
2



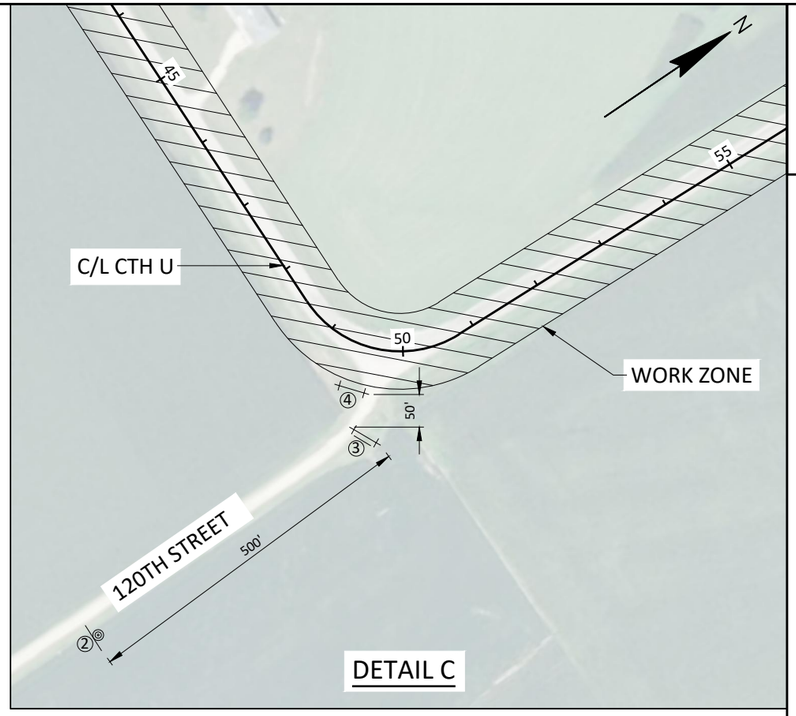
①

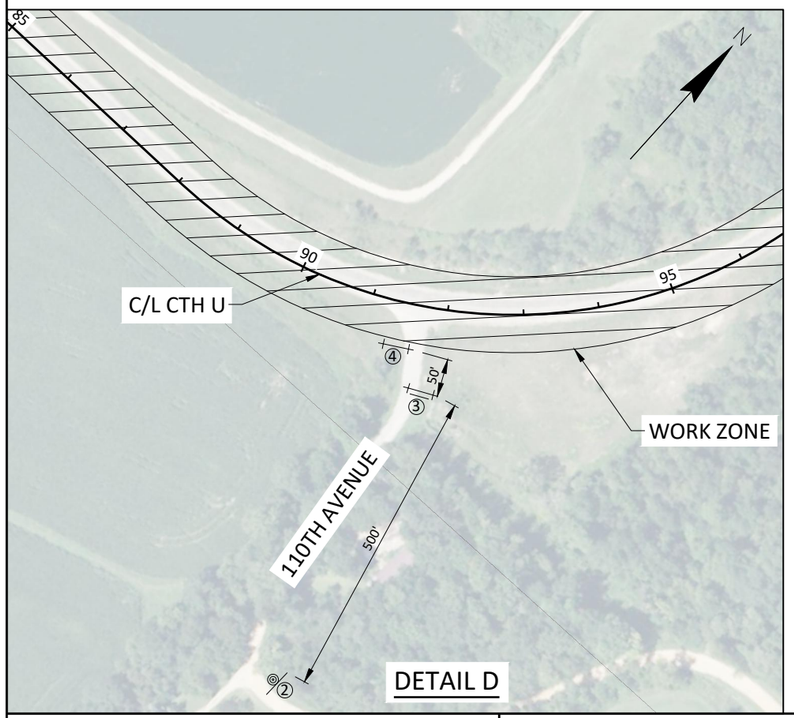
②

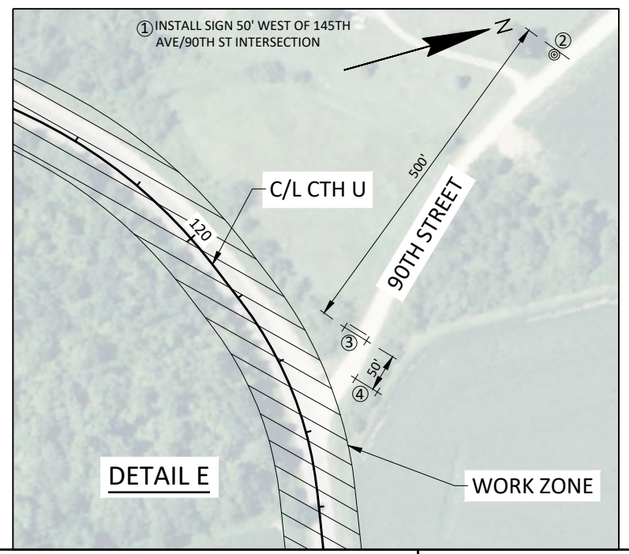
③

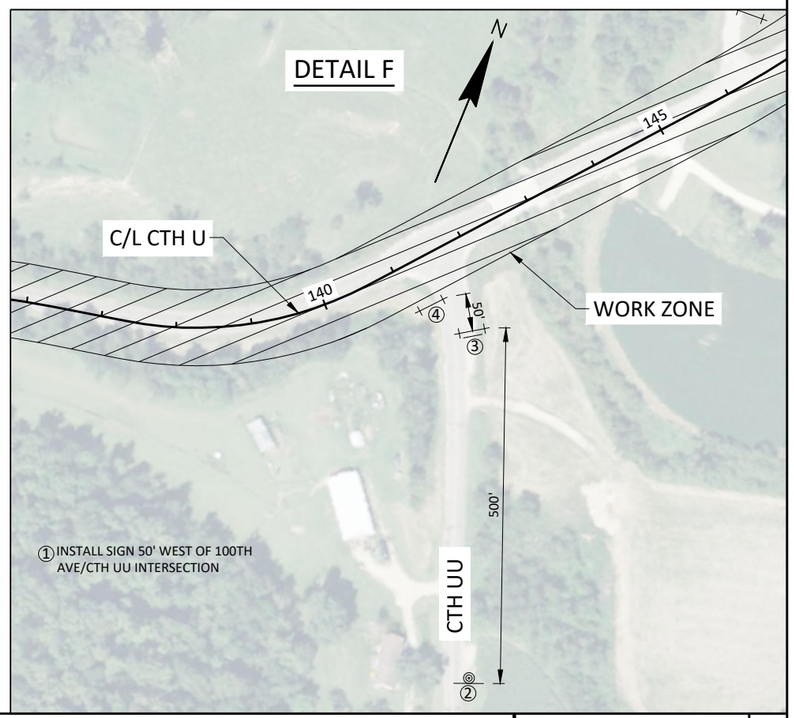


④





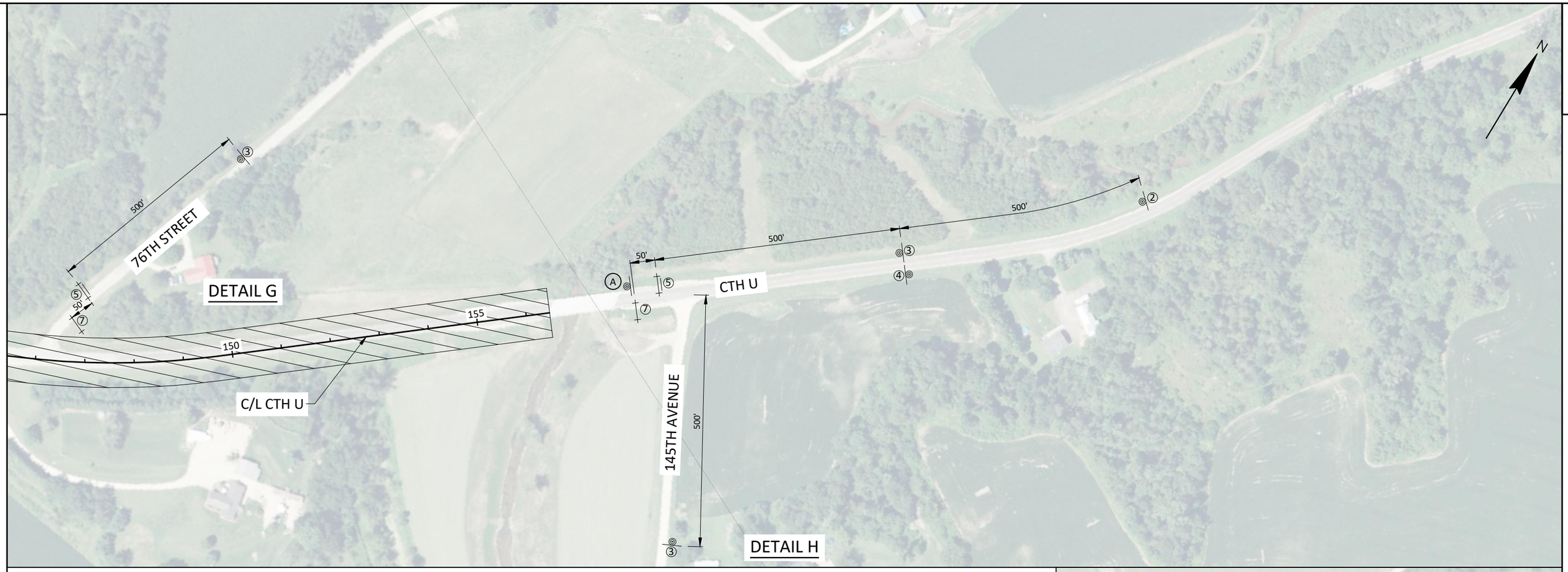


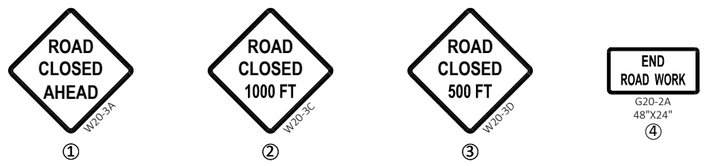


PROJECT NO: 7899-03-72	HWY: CTH U	COUNTY: PIERCE	TRAFFIC CONTROL	SHEET 18	E

2

2



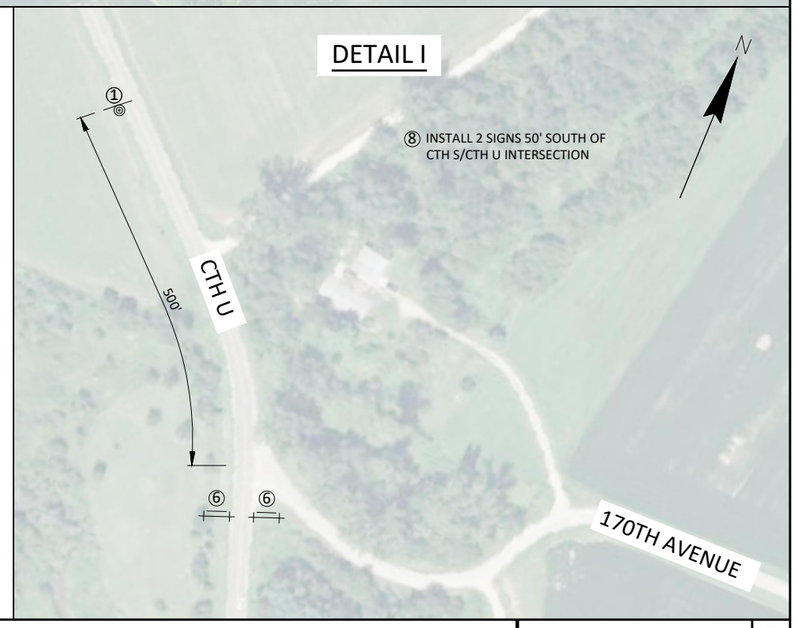


HWY U
ROAD CLOSED
BEGINS XXX-XX

G20-57C
72"X36"

Ⓐ

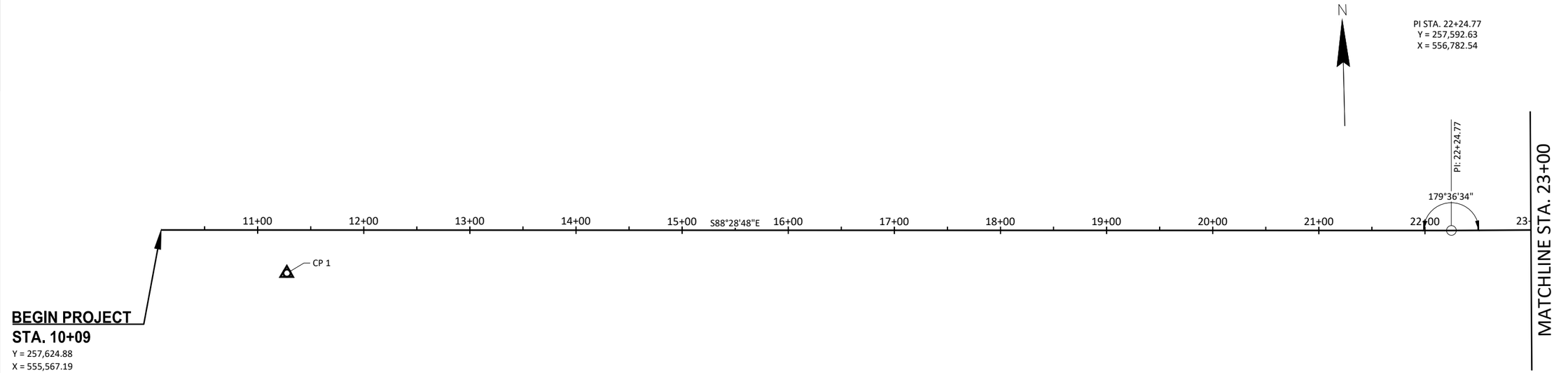
PLACE G20-57C FOR 14 DAYS PRIOR TO ROAD CLOSURE. REMOVE WHEN CONSTRUCTION BEGINS.

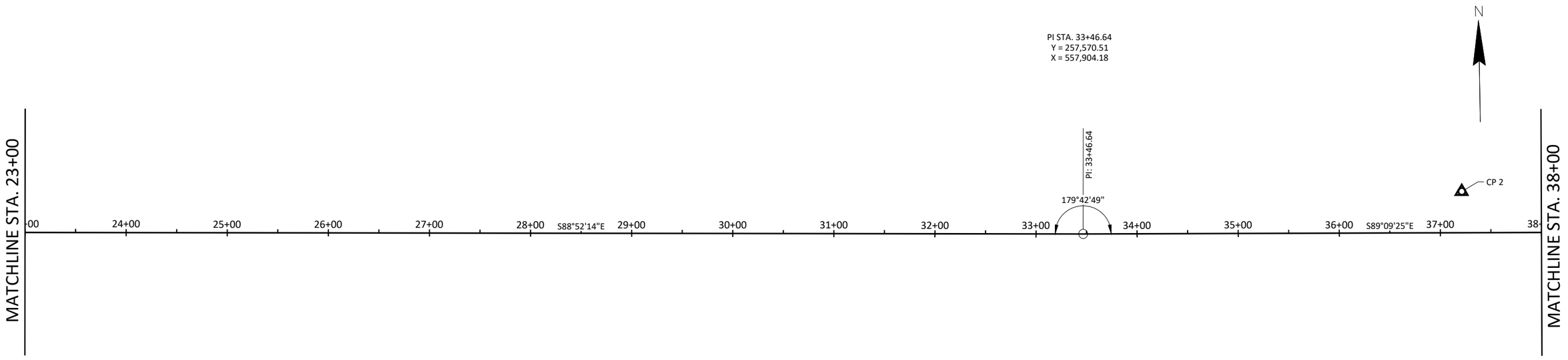


PROJECT NO: 7899-03-72	HWY: CTH U	COUNTY: PIERCE	TRAFFIC CONTROL	SHEET 19	E

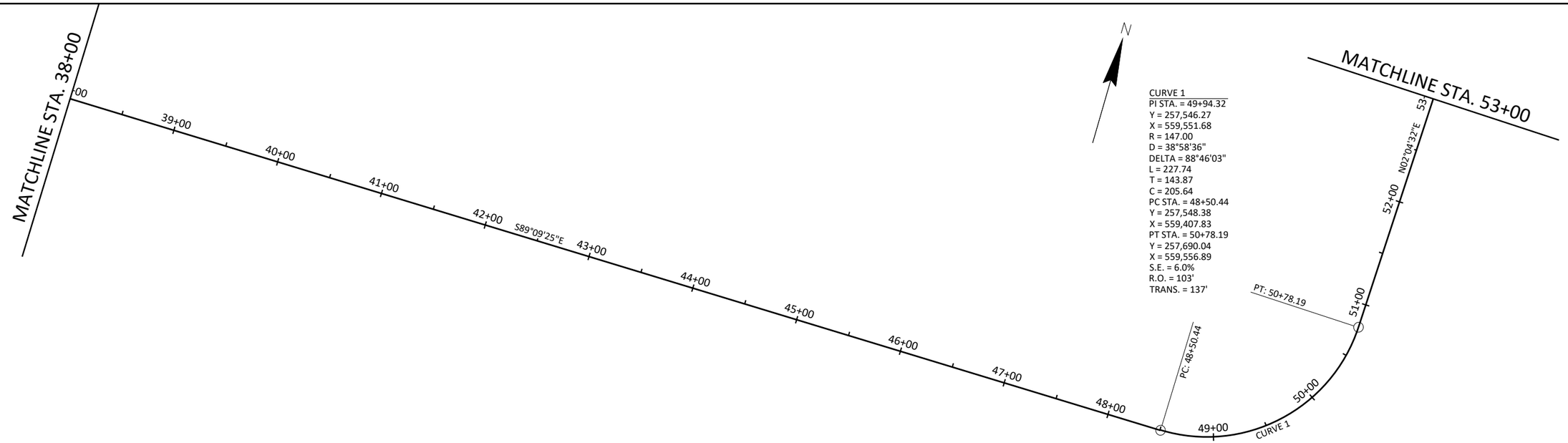
FILE NAME : S:\PROJECTS\P94010 PIERCE CO HWY - CTH U RECONDITIONING\SHEETSPLAN\DETAILS\P94010_TRAFFIC CONTROL.DWG PLOT DATE : 2/14/2025 10:24:06 AM PLOT BY : DANIEL GERLING PLOT SCALE : 1" = 1' LAYOUT : SHEET - 3

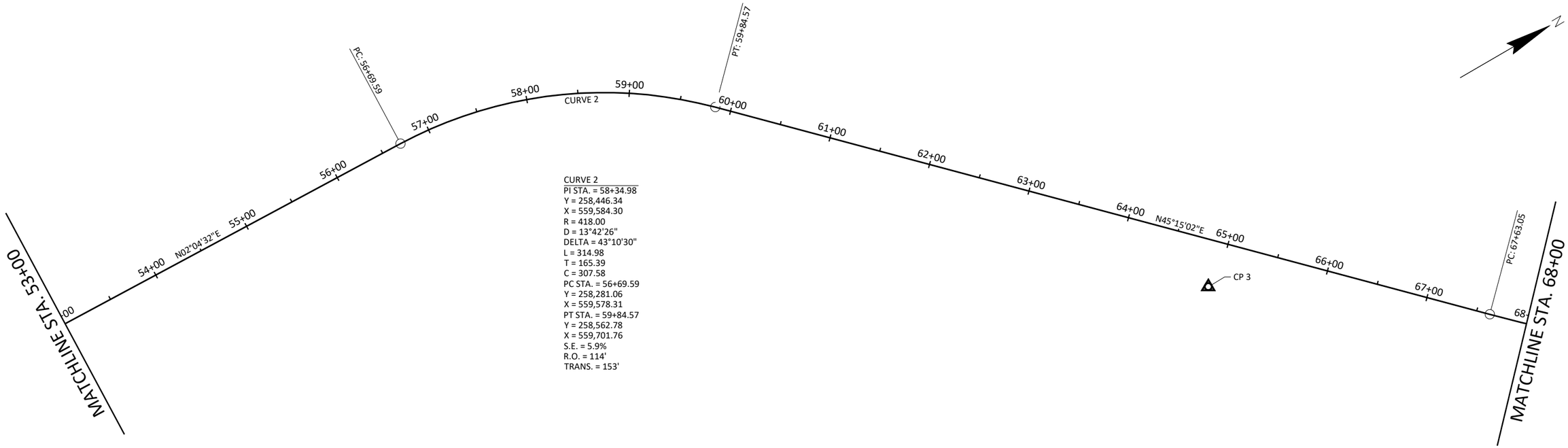
2





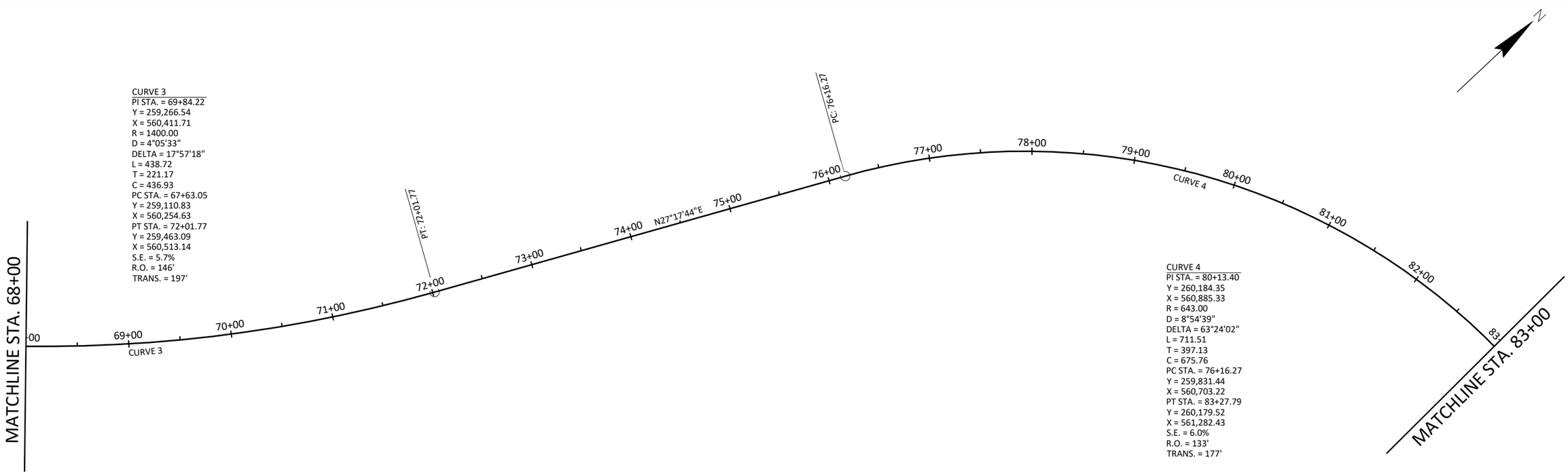
PROJECT NO: 7899-03-72	HWY: CTH U	COUNTY: PIERCE	ALIGNMENT DETAILS	SHEET 20	E





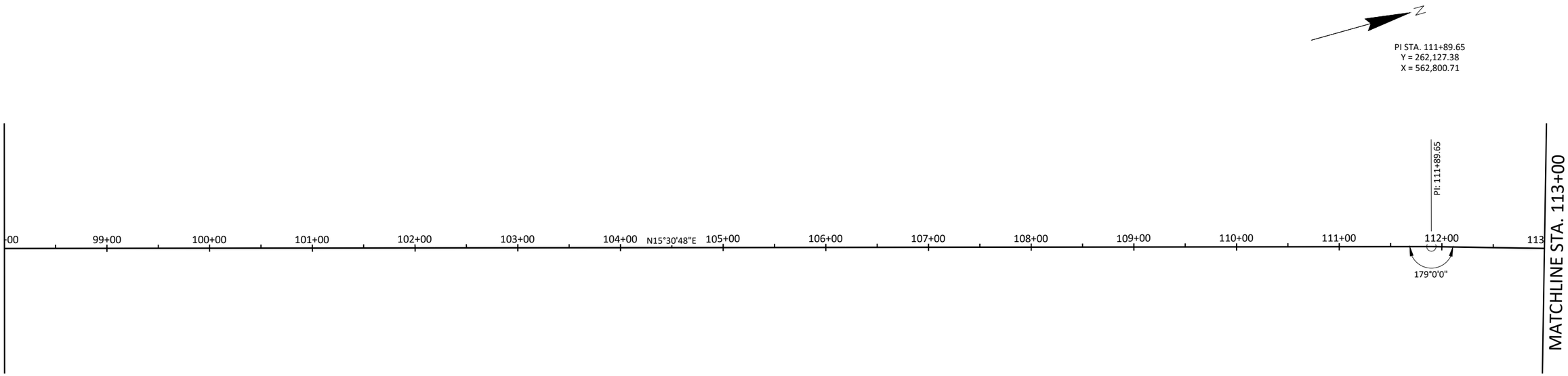
PROJECT NO: 7899-03-72	HWY: CTH U	COUNTY: PIERCE	ALIGNMENT DETAILS	SHEET 21	E

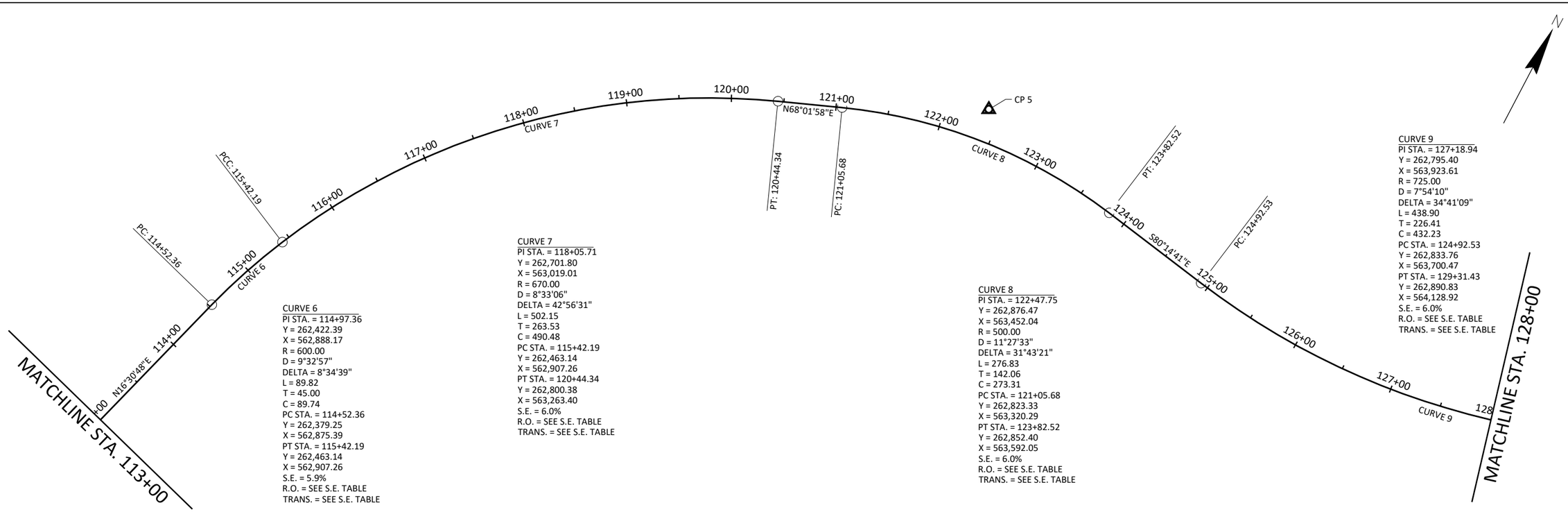
2



PROJECT NO: 7899-03-72	HWY: CTH U	COUNTY: PIERCE	ALIGNMENT DETAILS	SHEET 22	E

2





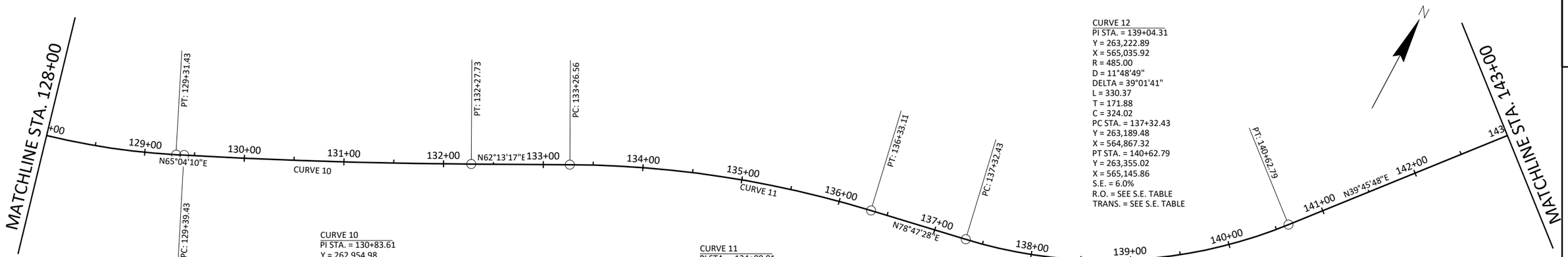
CURVE 6
PI STA. = 114+97.36
Y = 262,422.39
X = 562,888.17
R = 600.00
D = 9°32'57"
DELTA = 8°34'39"
L = 89.82
T = 45.00
C = 89.74
PC STA. = 114+52.36
Y = 262,379.25
X = 562,875.39
PT STA. = 115+42.19
Y = 262,463.14
X = 562,907.26
S.E. = 5.9%
R.O. = SEE S.E. TABLE
TRANS. = SEE S.E. TABLE

CURVE 7
PI STA. = 118+05.71
Y = 262,701.80
X = 563,019.01
R = 670.00
D = 8°33'06"
DELTA = 42°56'31"
L = 502.15
T = 263.53
C = 490.48
PC STA. = 115+42.19
Y = 262,463.14
X = 562,907.26
PT STA. = 120+44.34
Y = 262,800.38
X = 563,263.40
S.E. = 6.0%
R.O. = SEE S.E. TABLE
TRANS. = SEE S.E. TABLE

CURVE 8
PI STA. = 122+47.75
Y = 262,876.47
X = 563,452.04
R = 500.00
D = 11°27'33"
DELTA = 31°43'21"
L = 276.83
T = 142.06
C = 273.31
PC STA. = 121+05.68
Y = 262,823.33
X = 563,320.29
PT STA. = 123+82.52
Y = 262,852.40
X = 563,592.05
S.E. = 6.0%
R.O. = SEE S.E. TABLE
TRANS. = SEE S.E. TABLE

CURVE 9
PI STA. = 127+18.94
Y = 262,795.40
X = 563,923.61
R = 725.00
D = 7°54'10"
DELTA = 34°41'09"
L = 438.90
T = 226.41
C = 432.23
PC STA. = 124+92.53
Y = 262,833.76
X = 563,700.47
PT STA. = 129+31.43
Y = 262,890.83
X = 564,128.92
S.E. = 6.0%
R.O. = SEE S.E. TABLE
TRANS. = SEE S.E. TABLE

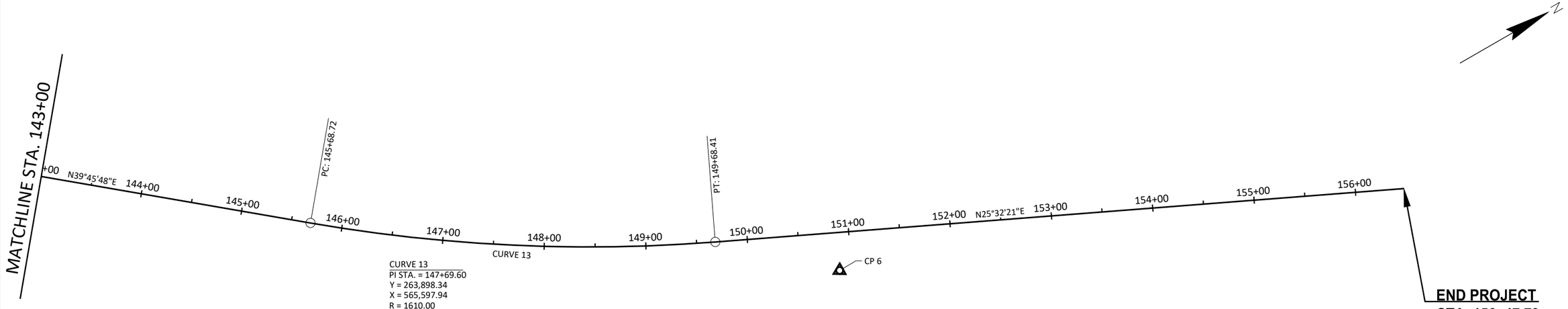
PROJECT NO: 7899-03-72	HWY: CTH U	COUNTY: PIERCE	ALIGNMENT DETAILS	SHEET 23	E



CURVE 10
PI STA. = 130+83.61
Y = 262,954.98
X = 564,266.92
R = 5800.00
D = 0°59'16"
DELTA = 2°50'53"
L = 288.30
T = 144.18
C = 288.27
PC STA. = 129+39.43
Y = 262,894.20
X = 564,136.17
PT STA. = 132+27.73
Y = 263,022.17
X = 564,394.48
S.E. = 2.3%
R.O. = SEE S.E. TABLE
TRANS. = SEE S.E. TABLE

CURVE 11
PI STA. = 134+80.91
Y = 263,140.17
X = 564,618.49
R = 1060.00
D = 5°24'19"
DELTA = 16°34'11"
L = 306.55
T = 154.35
C = 305.48
PC STA. = 133+26.56
Y = 263,068.24
X = 564,481.92
PT STA. = 136+33.11
Y = 263,170.17
X = 564,769.89
S.E. = 6.0%
R.O. = SEE S.E. TABLE
TRANS. = SEE S.E. TABLE

CURVE 12
PI STA. = 139+04.31
Y = 263,222.89
X = 565,035.92
R = 485.00
D = 11°48'49"
DELTA = 39°01'41"
L = 330.37
T = 171.88
C = 324.02
PC STA. = 137+32.43
Y = 263,189.48
X = 564,867.32
PT STA. = 140+62.79
Y = 263,355.02
X = 565,145.86
S.E. = 6.0%
R.O. = SEE S.E. TABLE
TRANS. = SEE S.E. TABLE



CURVE 13
PI STA. = 147+69.60
Y = 263,898.34
X = 565,597.94
R = 1610.00
D = 3°33'31"
DELTA = 14°13'26"
L = 399.69
T = 200.88
C = 398.67
PC STA. = 145+68.72
Y = 263,743.92
X = 565,469.46
PT STA. = 149+68.41
Y = 264,079.59
X = 565,684.55
S.E. = 5.4%
R.O. = 138'
TRANS. = 189'

PROJECT NO: 7899-03-72	HWY: CTH U	COUNTY: PIERCE	ALIGNMENT DETAILS	SHEET 24	E

Estimate Of Quantities

7899-03-72

Line	Item	Item Description	Unit	Total	Qty
0002	204.0115	Removing Asphaltic Surface Butt Joints	SY	1,423.000	1,423.000
0004	205.9011.S	Grading and Shaping Intersection (location) 01. 133rd Street	EACH	1.000	1.000
0006	205.9011.S	Grading and Shaping Intersection (location) 02. 120th Street	EACH	1.000	1.000
0008	205.9011.S	Grading and Shaping Intersection (location) 03. 90th Street	EACH	1.000	1.000
0010	211.0101	Prepare Foundation for Asphaltic Paving (project) 01. 7899-03-72	EACH	1.000	1.000
0012	211.0400	Prepare Foundation for Asphaltic Shoulders	STA	30.000	30.000
0014	213.0100	Finishing Roadway (project) 01. 7899-03-72	EACH	1.000	1.000
0016	305.0110	Base Aggregate Dense 3/4-Inch	TON	2,625.000	2,625.000
0018	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	2,415.000	2,415.000
0020	325.0100	Pulverize and Relay	SY	44,380.000	44,380.000
0022	374.1020.S	QMP Pulverize and Relay Compaction	SY	43,800.000	43,800.000
0024	455.0605	Tack Coat	GAL	2,265.000	2,265.000
0026	460.2000	Incentive Density HMA Pavement	DOL	6,880.000	6,880.000
0028	460.5223	HMA Pavement 3 LT 58-28 S	TON	6,075.000	6,075.000
0030	460.5244	HMA Pavement 4 LT 58-34 S	TON	4,675.000	4,675.000
0032	614.0925	Salvaged Guardrail End Treatments	EACH	12.000	12.000
0034	618.0100	Maintenance and Repair of Haul Roads (project) 01. 7899-03-72	EACH	1.000	1.000
0036	619.1000	Mobilization	EACH	1.000	1.000
0038	624.0100	Water	MGAL	230.000	230.000
0040	642.5001	Field Office Type B	EACH	1.000	1.000
0042	643.0300	Traffic Control Drums	DAY	7,400.000	7,400.000
0044	643.0420	Traffic Control Barricades Type III	DAY	1,480.000	1,480.000
0046	643.0705	Traffic Control Warning Lights Type A	DAY	2,960.000	2,960.000
0048	643.0900	Traffic Control Signs	DAY	3,614.000	3,614.000
0050	643.1000	Traffic Control Signs Fixed Message	SF	36.000	36.000
0052	643.3105	Temporary Marking Line Paint 4-Inch	LF	1,175.000	1,175.000
0054	643.5000	Traffic Control	EACH	1.000	1.000
0056	646.1020	Marking Line Epoxy 4-Inch	LF	57,901.000	57,901.000
0058	646.6120	Marking Stop Line Epoxy 18-Inch	LF	56.000	56.000
0060	648.0100	Locating No-Passing Zones	MI	2.780	2.780
0062	650.8000	Construction Staking Resurfacing Reference	LF	14,640.000	14,640.000
0064	650.9911	Construction Staking Supplemental Control (project) 01. 7899-03-72	EACH	1.000	1.000
0066	690.0150	Sawing Asphalt	LF	127.000	127.000
0068	740.0440	Incentive IRI Ride	DOL	11,040.000	11,040.000
0070	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	300.000	300.000
0072	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	300.000	300.000
0074	SPV.0060	Special 01. Reestablishing Section Corner Monuments	EACH	2.000	2.000
0076	SPV.0060	Special 02. Installing Salvaged Guardrail End Treatments	EACH	12.000	12.000
0078	SPV.0090	Special 01. Remove, Salvage, and Reinstall Guardrail	LF	2,169.000	2,169.000

REMOVING ASPHALTIC SURFACE BUTT JOINTS

STATION - STATION	LOCATION	204.0115 (SY)
10+09 - 10+59	MAINLINE	321
91+55	110TH AVE	120
141+60	CTH UU	289
142+03.68 - 142+53.68	MAINLINE	186
143+20.34 - 143+81.84	MAINLINE	229
146+30	76TH ST	108
155+97.79 - 156+47.79	MAINLINE	170
	TOTAL =	1,423

GRADING AND SHAPING INTERSECTION

LOCATION	205.9011.S.01 (EACH)	205.9011.S.02 (EACH)	205.9011.S.03 (EACH)	EXCAVATION COMMON* (CY)
133RD STREET	1	-	-	15
120TH STREET	-	1	-	30
90TH STREET	-	-	1	25
TOTALS =	1	1	1	

*QUANTITIES SHOWN ARE FOR INFORMATION ONLY AND ARE INCIDENTAL TO THE 205.9011 BID ITEMS

PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS

STATION - STATION	LOCATION	211.0400 (STA)
96+63 - 101+75	MAINLINE, RT.	6
101+75 - 104+77	MAINLINE	3
104+77 - 108+86	MAINLINE, LT.	4
114+06 - 122+23	MAINLINE, LT.	9
141+03 - 141+73	MAINLINE, LT.	1
141+73 - 144+66	MAINLINE	3
154+79 - 155+32	MAINLINE, RT.	2
155+32 - 156+38	MAINLINE	1
156+38 - 156+56	MAINLINE, LT.	1
	TOTAL =	30

BASE AGGREGATE DENSE

STATION - STATION	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH (TON)	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH (TON)	624.0100 WATER* (MGAL)
10+09 - 156+47.79	SHOULDERS	2,390	-	36
131+00 - 156+47.79	MAINLINE	-	2,280	34
33+50, LT.	133RD STREET	-	30	1
49+70, RT.	120TH STREET	-	55	1
122+80, LT.	90TH STREET	-	50	1
-	P.E. / F.E.	235	-	2
	TOTALS =	2,625	2,415	75

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

PULVERIZE AND RELAY

STATION - STATION	LOCATION	325.0100 PULVERIZE AND RELAY (SY)	374.1020.S QMP PULVERIZE AND RELAY COMPACTION (SY)	624.0100 WATER* (MGAL)
10+59 - 142+03.68	MAINLINE	40,150	40,150	135
143+81.84 - 155+97.79	MAINLINE	3,650	3,650	15
91+55	110TH AVE	115	-	1
141+60	CTH UU	310	-	3
146+30	76TH ST	155	-	1
	TOTALS =	44,380	43,800	155

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

HMA PAVEMENT

STATION - STATION	LOCATION	211.0101 PREPARE FOUNDATION FOR ASPHALTIC PAVING (01. 7899-03-72) (EACH)	455.0605 TACK COAT (GAL)	460.5223 HMA PAVEMENT 3 LT 58-28 S (TON)	460.5244 HMA PAVEMENT 4 LT 58-34 S (TON)
10+09 - 142+53.68	MAINLINE	-	2,000	5,405	4,155
143+20.34 - 156+47.79	MAINLINE	-	200	545	420
33+50, LT.	133RD STREET	-	5	10	10
49+70, RT.	120TH STREET	-	10	20	15
91+55, RT.	110TH AVENUE	-	10	15	15
122+80, LT.	90TH STREET	-	10	20	15
141+60, RT.	CTH UU	-	20	40	30
146+30, LT.	76TH STREET	-	10	20	15
PROJECT		1	-	-	-
	TOTALS =	1	2,265	6,075	4,675

3

MGS GUARDRAIL

STATION - STATION	LOCATION	614.0925 SALVAGED GUARDRAIL END TREATMENTS (EACH)	SPV.0060.02 INSTALLING SALVAGED GUARDRAIL END TREATMENTS (EACH)	SPV.0090.01 REMOVE, SALVAGE, AND REINSTALL GUARDRAIL (LF)	COMMENTS
96+93 - 97+46	MAINLINE, RT.	1	1	-	
97+46 - 103+99	MAINLINE, RT.	-	-	653	MGS GUARDRAIL 3K
102+12 - 102+66	MAINLINE, LT.	1	1	-	
102+65 - 107+99	MAINLINE, LT.	-	-	533	MGS GUARDRAIL 3K
103+99 - 104+52	MAINLINE, RT.	1	1	-	
107+99 - 108+52	MAINLINE, LT.	1	1	-	
114+31 - 114+84	MAINLINE, LT.	1	1	-	
114+84 - 121+70	MAINLINE, LT.	-	-	686	MGS GUARDRAIL 3K
121+70 - 122+23	MAINLINE, LT.	1	1	-	
141+51 - 142+04	MAINLINE, LT.	1	1	-	
141+61 - 141+73	MAINLINE, RT./ CTH UU	1	1	-	
142+04 - 142+53	MAINLINE, LT.	-	-	49	MGS THRIE BEAM TRANSITION
141+73 - 142+54	MAINLINE, RT.	-	-	81	STEEL PLATE BEAM GUARD CLASS A
143+20 - 143+52	MAINLINE, LT.	-	-	32	MGS THRIE BEAM TRANSITION
143+20 - 143+53	MAINLINE, RT.	-	-	33	MGS THRIE BEAM TRANSITION
143+52 - 144+06	MAINLINE, LT.	1	1	-	
143+53 - 144+06	MAINLINE, RT.	1	1	-	
155+16 - 155+69	MAINLINE, RT.	1	1	-	
155+69 - 156+38	MAINLINE, RT.	-	-	69	MGS GUARDRAIL 3/MGS THRIE BEAM TRANSITION
155+71 - 156+24	MAINLINE, LT.	1	1	-	
156+24 - 156+56	MAINLINE, LT.	-	-	32	MGS THRIE BEAM TRANSITION
TOTALS =		12	12	2,169	

TRAFFIC CONTROL

LOCATION	*CALENDAR DAY DURATION*	643.0300 TRAFFIC CONTROL DRUMS (COUNT)	(DAY)	643.0420 TRAFFIC CONTROL BARRICADES TYPE III (COUNT)	(DAY)	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A (COUNT)	(DAY)	643.0900 TRAFFIC CONTROL SIGNS (COUNT)	(DAY)	643.1000 TRAFFIC CONTROL SIGNS FIXED MESSAGE (SF)	643.5000 TRAFFIC CONTROL (EACH)	COMMENTS
CTH U	*74*	-	-	8	592	16	1,184	10	740	-	-	DETAIL A, H, & I
CTH U (PULVERIZE & RELAY/PAVING OPERATIONS)	*32*	-	-	-	-	-	-	32	1,024	-	-	(14 EA) W8-12; (6 EA) R4-1; W8-11; W8-9A
CTH CC	*74*	-	-	-	-	-	-	10	740	-	-	DETAIL A
133RD STREET	*74*	-	-	2	148	4	296	2	148	-	-	DETAIL B
120TH STREET	*74*	-	-	2	148	4	296	2	148	-	-	DETAIL C
110TH AVENUE	*74*	-	-	2	148	4	296	2	148	-	-	DETAIL D
90TH STREET	*74*	-	-	2	148	4	296	3	222	-	-	DETAIL E
CTH UU	*74*	-	-	2	148	4	296	3	222	-	-	DETAIL F
76TH STREET	*74*	-	-	2	148	4	296	2	148	-	-	DETAIL G
145TH AVENUE	*74*	-	-	-	-	-	-	1	74	-	-	DETAIL H
PROJECT	*74*	100	7,400	-	-	-	-	-	-	36	1	
TOTALS =			7,400		1,480		2,960		3,614	36	1	

3

PAVEMENT MARKING

STATION - STATION	LOCATION	DESCRIPTION	643.3105 TEMPORARY MARKING LINE PAINT 4-INCH (LF)	646.1020 MARKING LINE EPOXY 4-INCH YELLOW SOLID (LF)	646.1020 MARKING LINE EPOXY 4-INCH WHITE SOLID (LF)	646.1020 MARKING LINE EPOXY 4-INCH YELLOW DASHED (LF)	646.6120 MARKING STOP LINE EPOXY 18-INCH (LF)
10+09	MAINLINE	STOP LINE	-	-	-	-	28
10+09 - 156+47.79	MAINLINE	CENTERLINE	1,175	-	-	-	-
10+09 - 147+75	MAINLINE	DOUBLE YELLOW	-	27,532	-	-	-
10+09 - 147+75	MAINLINE	EDGE LINE LT. & RT.	-	-	27,532	-	-
141+50 - 141+78	CTH UU	STOP LINE	-	-	-	-	28
147+75 - 156+47.79	MAINLINE	DASHED YELLOW NB, SOLID YELLOW SB	-	873	-	218	-
147+75 - 156+38.70	MAINLINE	EDGE LINE RT.	-	-	864	-	-
147+75 - 156+56.5	MAINLINE	EDGE LINE LT.	-	-	882	-	-
		SUBTOTALS =	1,175	28,405	29,278	218	56
		TOTALS =	1,175		57,901		56

3

CONSTRUCTION STAKING

STATION - STATION	LOCATION	650.8000 CONSTRUCTION STAKING RESURFACING REFERENCE (LF)	650.9911 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (01. 7899-03-72) (EACH)
10+09 - 156+47.79	MAINLINE	14,640	1
	TOTALS =	14,640	1

SAWING ASPHALT

STATION - STATION	LOCATION	690.0150 (LF)
10+09	MAINLINE	35
91+70	110TH AVE	28
141+50	CTH UU	40
146+25	76TH ST	24
	TOTAL =	127

REESTABLISH SECTION CORNER MONUMENT

STATION	LOCATION	SPV.0060.01 (EACH)
10+89.85	0.401', RT	1
37+10.08	0.334', LT	1
	TOTAL =	2

KENNETH PETERSON
MARIAN PETERSON
TRUST AGREEMENT

RANDAHL POMMERENING

ROSS MARCKS

RANDAHL
POMMERENING

BEGIN PROJECT
STA. 10+09
Y = 257,624.88
X = 555,567.19
MATCH EXISTING
SAWING ASPHALT REQ'D
REMOVING ASPHALTIC SURFACE BUTT JOINTS

PI STA. 22+24.77
Y = 257,592.63
X = 556,782.54

P.L.

LUMEN

C/L CTH U

STA. 21+15, LT
B.A.D. P.E.

PI: 22+24.77

179°36'34"

SB-01

R/W

S88°28'48"E

S88°52'14"E

PIERCE-PEPIN ELECTRIC COOP

MATCHLINE STA. 24+50

CTH CC

REESTABLISH SECTION CORNER MONUMENT
STA. 10+89.85, 0.401' RT.

NOTE:
EXISTING R/W IS BASED ON INFORMATION OBTAINED FROM PIERCE COUNTY GIS AND IS SHOWN FOR INFORMATION ONLY.

BRUCE MAHLE

RANDAHL POMMERENING

RONALD POMMERENING
GAIL POMMERENING

RANDALL LARSON

PI STA. 33+46.64
Y = 257,570.51
X = 557,904.18

STA. 33+65, LT.
GRADING AND SHAPING INTERSECTION REQ'D

133RD STREET

PI: 33+46.64

179°42'49"

STA. 38+65, LT
B.A.D. F.E.

SB-03

SB-02

STA. 34+75, RT
B.A.D. F.E.

STA. 38+65, RT
B.A.D. P.E.

MATCHLINE STA. 39+50

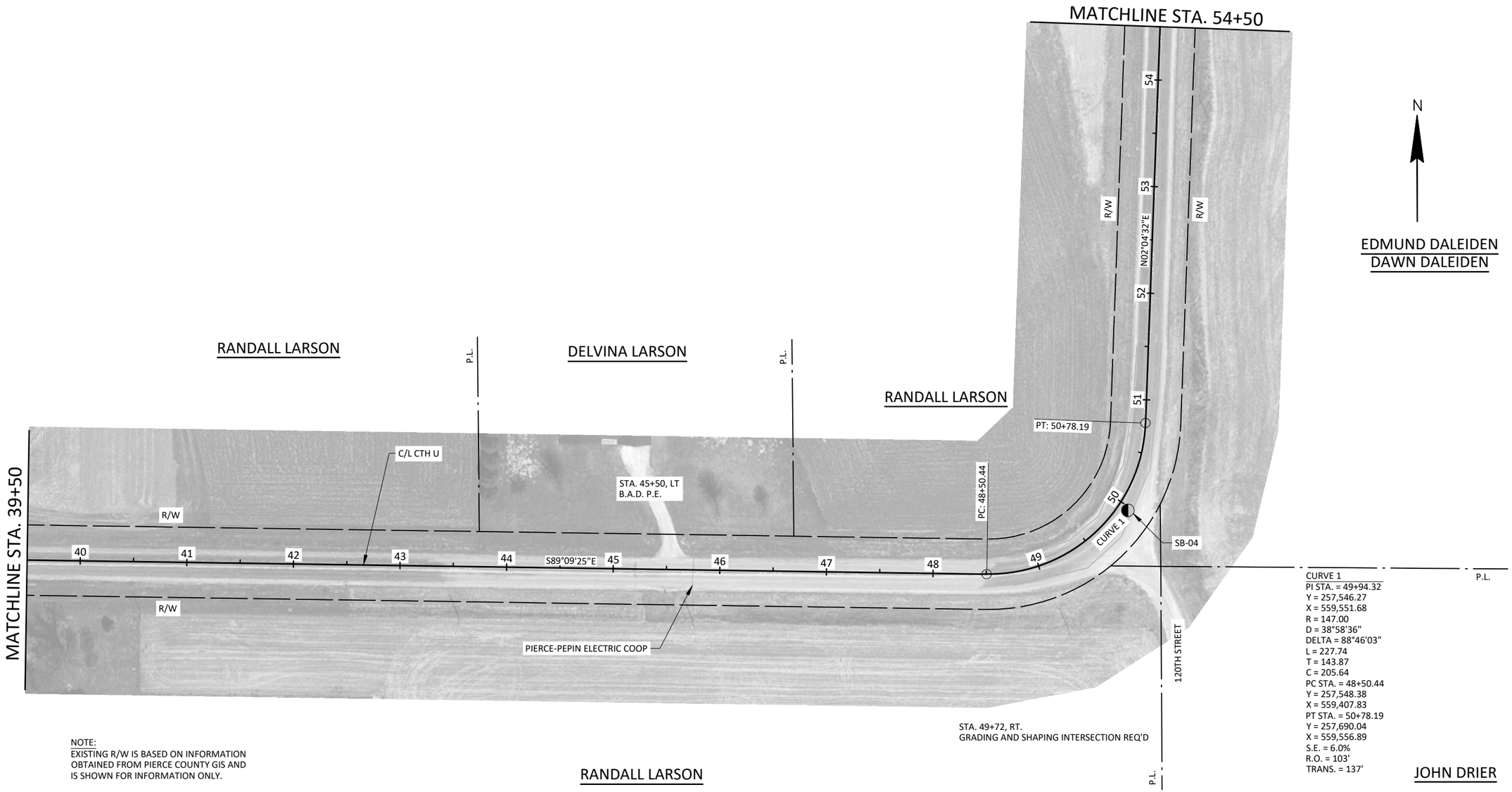
REESTABLISH SECTION CORNER MONUMENT
STA. 37+10.08, 0.334' LT.

NOTE:
EXISTING R/W IS BASED ON INFORMATION OBTAINED FROM PIERCE COUNTY GIS AND IS SHOWN FOR INFORMATION ONLY.

RANDALL LARSON

PROJECT NO: 7899-03-72	HWY: CTH U	COUNTY: PIERCE	PLAN	SHEET 29	E

FILE NAME : S:\PROJECTS\P94010 PIERCE CO HWY - CTH U RECONDITIONING\SHEETSPLAN\PLAN & PROFILE SHEETS\P94010_PLAN DETAILS.DWG
PLOT DATE : 2/14/2025 9:45:56 AM
PLOT BY : DANIEL GERLING
PLOT SCALE : 1" = 1'
LAYOUT : SHEET - 1



NOTE:
EXISTING R/W IS BASED ON INFORMATION OBTAINED FROM PIERCE COUNTY GIS AND IS SHOWN FOR INFORMATION ONLY.

5

5

PROJECT NO: 7899-03-72	HWY: CTH U	COUNTY: PIERCE	PLAN	SHEET 30	E

FILE NAME : S:\PROJECTS\P94010 PIERCE CO HWY - CTH U RECONDITIONING\SHEETSPLAN\PLAN & PROFILE SHEETS\P94010_PLAN DETAILS.DWG PLOT DATE : 2/14/2025 9:45:57 AM PLOT BY : DANIEL GERLING PLOT SCALE : 1" = 1' LAYOUT : SHEET - 2

RANDALL LARSON

BENJAMIN SOUSTER

EDMUND DALEIDEN
DAWN DALEIDEN

JOHN THUERAUF
ADRIANA THUERAUF

AMY RITCHIE

MATCHLINE STA. 54+50

MATCHLINE STA. 69+50

MATCHLINE STA. 84+50

P.L.

R/W

C/L CTH U

PC: 56+69.59

PT: 59+84.57

PC: 67+63.05

PC: 76+16.27

PT: 72+01.77

PT: 83+27.79

CURVE 2

CURVE 3

CURVE 4

N02°04'32"E

N45°15'02"E

N27°17'44"E

S89°18'14"E

LUMEN

SB-05

SB-06

STA. 64+00, LT
B.A.D. P.E.

STA. 64+50, RT
B.A.D. F.E.

STA. 72+00, LT
B.A.D. F.E.

STA. 78+20, RT
B.A.D. P.E.

STA. 80+75, LT
B.A.D. P.E.

CURVE 2
PI STA. = 58+34.98
Y = 258,446.34
X = 559,584.30
R = 418.00
D = 13°42'26"
DELTA = 43°10'30"
L = 314.98
T = 165.39
C = 307.58
PC STA. = 56+69.59
Y = 258,281.06
X = 559,578.31
PT STA. = 59+84.57
Y = 258,562.78
X = 559,701.76
S.E. = 5.9%
R.O. = 114'
TRANS. = 153

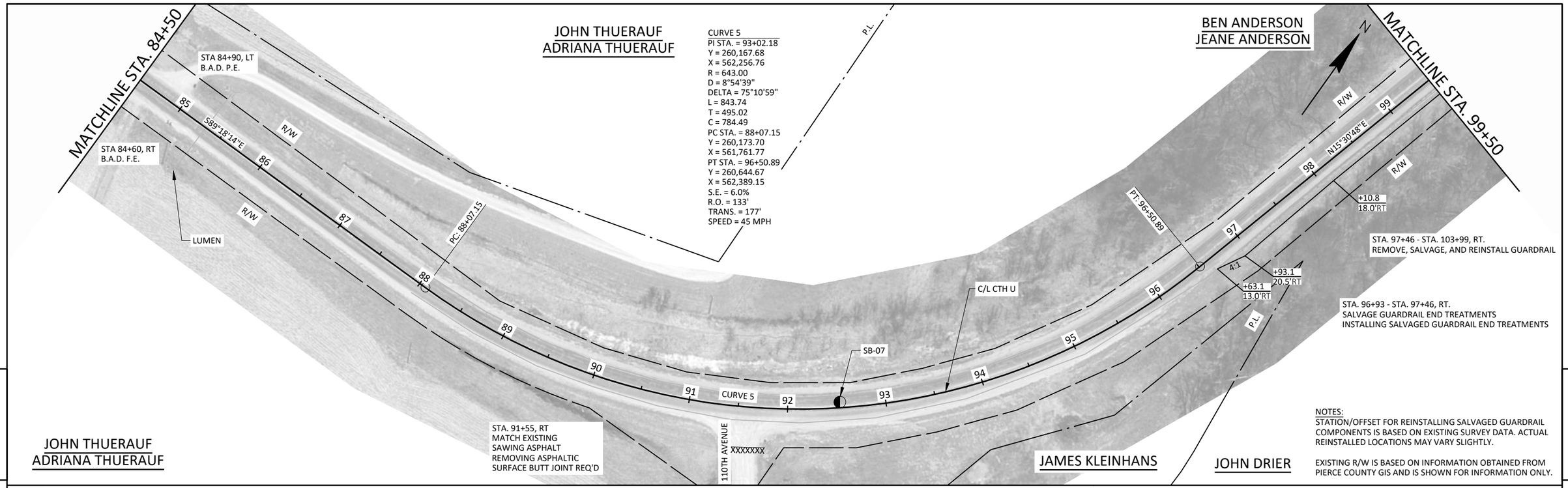
CURVE 3
PI STA. = 69+84.22
Y = 259,266.54
X = 560,411.71
R = 1400.00
D = 4°05'33"
DELTA = 17°57'18"
L = 438.72
T = 221.17
C = 436.93
PC STA. = 67+63.05
Y = 259,110.83
X = 560,254.63
PT STA. = 72+01.77
Y = 259,463.09
X = 560,513.14
S.E. = 5.7%
R.O. = 146'
TRANS. = 197'

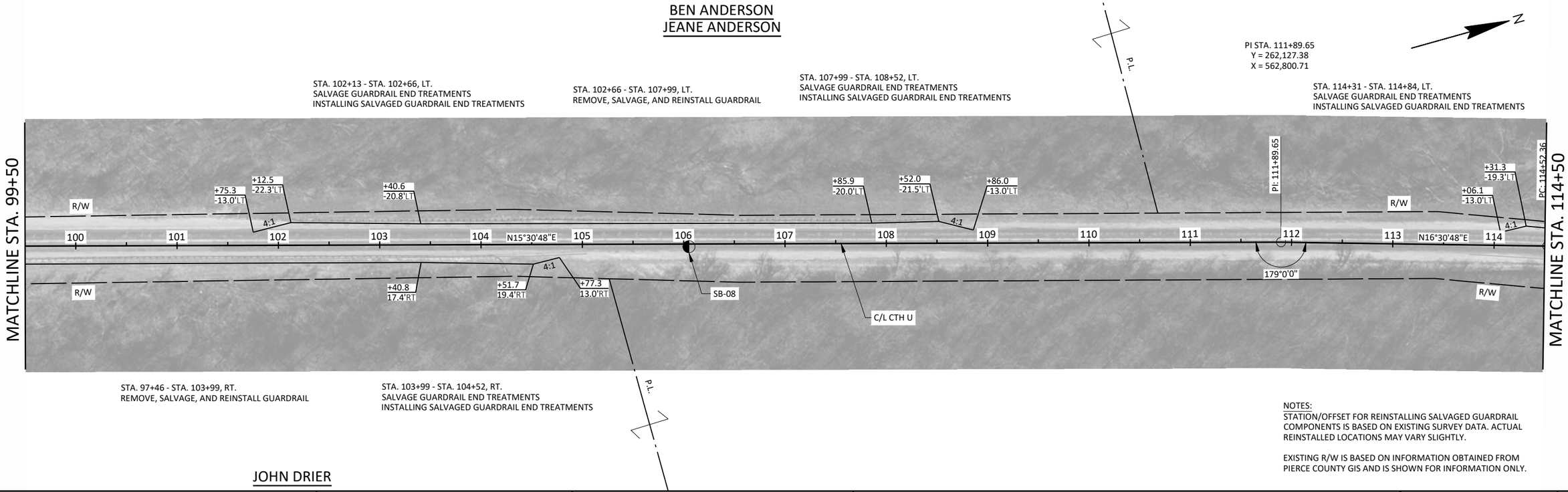
CURVE 4
PI STA. = 80+13.40
Y = 260,184.35
X = 560,885.33
R = 643.00
D = 8°54'39"
DELTA = 63°24'02"
L = 711.51
T = 397.13
C = 675.76
PC STA. = 76+16.27
Y = 259,831.44
X = 560,703.22
PT STA. = 83+27.79
Y = 260,179.52
X = 561,282.43
S.E. = 6.0%
R.O. = 133'
TRANS. = 177'

NOTE:
EXISTING R/W IS BASED ON INFORMATION OBTAINED FROM PIERCE COUNTY GIS AND IS SHOWN FOR INFORMATION ONLY.

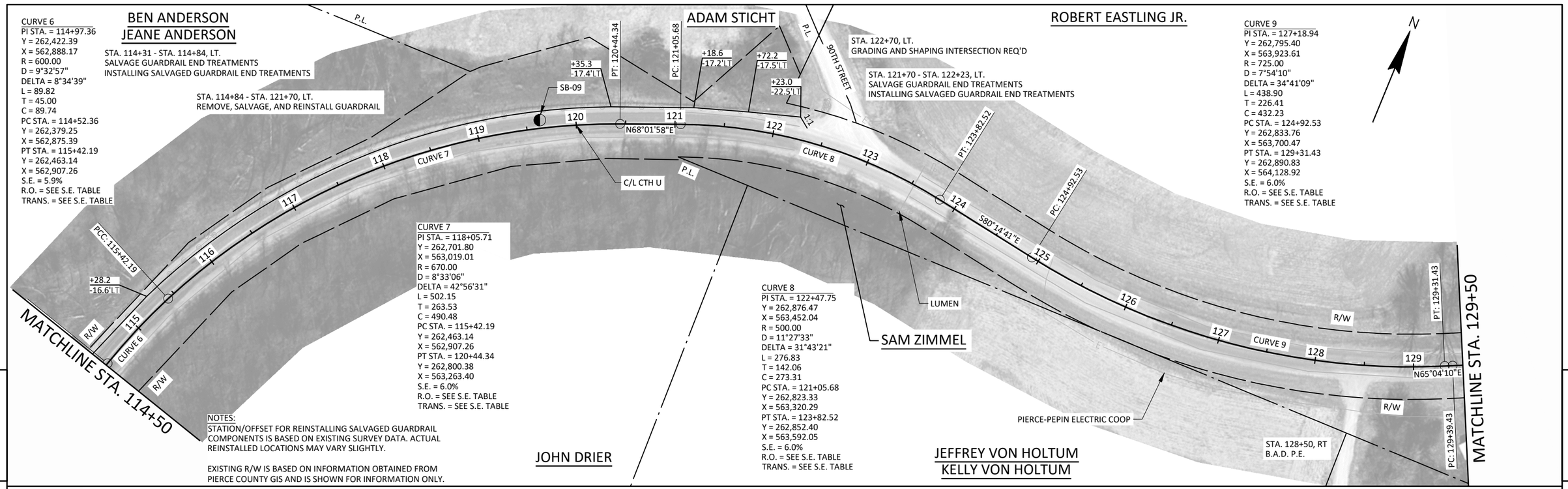
PROJECT NO: 7899-03-72	HWY: CTH U	COUNTY: PIERCE	PLAN	SHEET	E

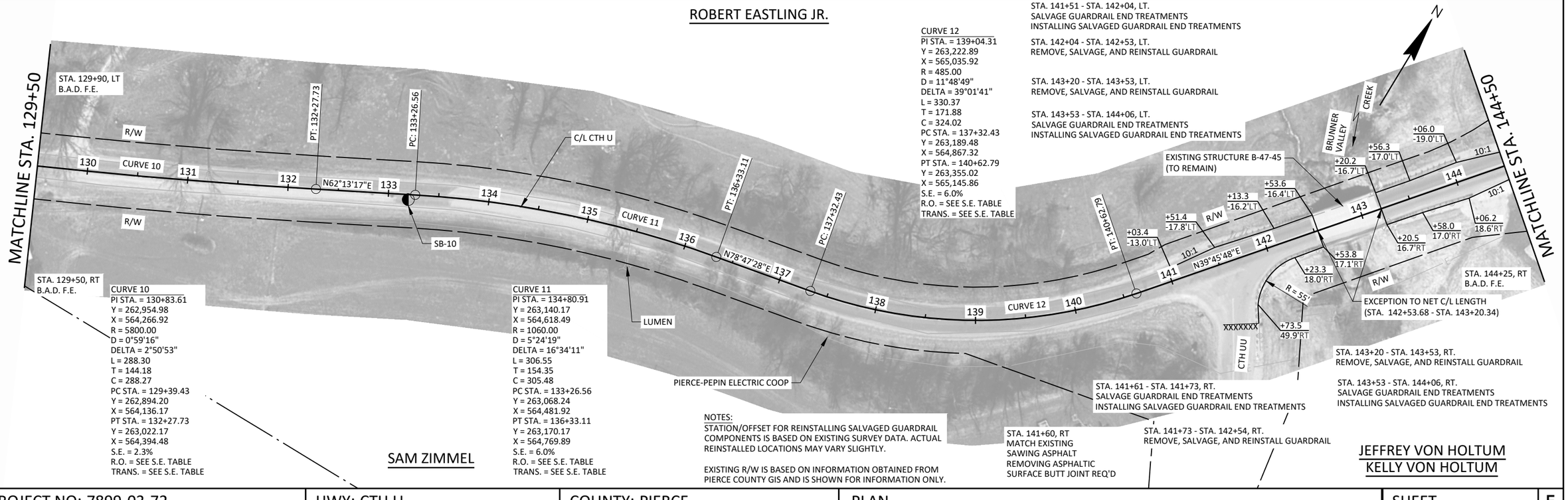
FILE NAME : S:\PROJECTS\P94010 PIERCE CO HWY - CTH U RECONDITIONING\SHEETSPLAN\PLAN & PROFILE SHEETS\P94010_PLAN DETAILS.DWG
PLOT DATE : 2/14/2025 9:46:01 AM
PLOT BY : DANIEL GERLING
PLOT SCALE : 1" = 1'
LAYOUT : SHEET - 3





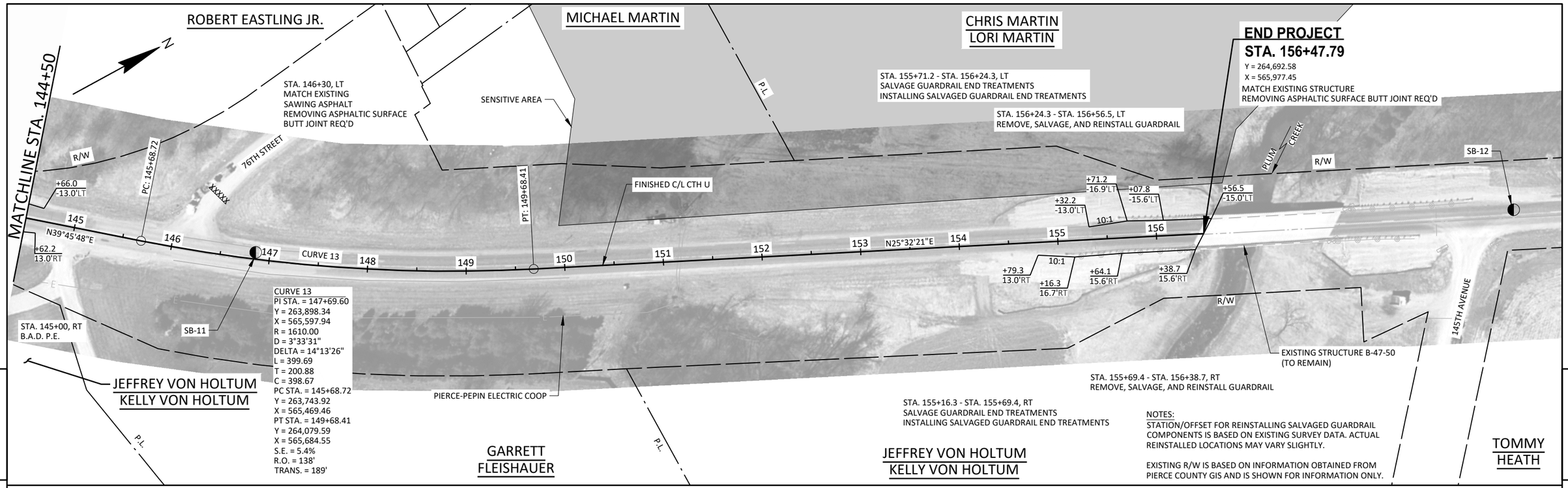
PROJECT NO: 7899-03-72	HWY: CTH U	COUNTY: PIERCE	PLAN	SHEET 32	E





PROJECT NO: 7899-03-72	HWY: CTH U	COUNTY: PIERCE	PLAN	SHEET	E

FILE NAME : S:\PROJECTS\P94010 PIERCE CO HWY - CTH U RECONDITIONING\SHEETSPLAN\PLAN & PROFILE SHEETS\P94010_PLAN DETAILS.DWG
PLOT DATE : 2/14/2025 9:46:08 AM
PLOT BY : DANIEL GERLING
PLOT SCALE : 1" = 1'
LAYOUT : SHEET - 5

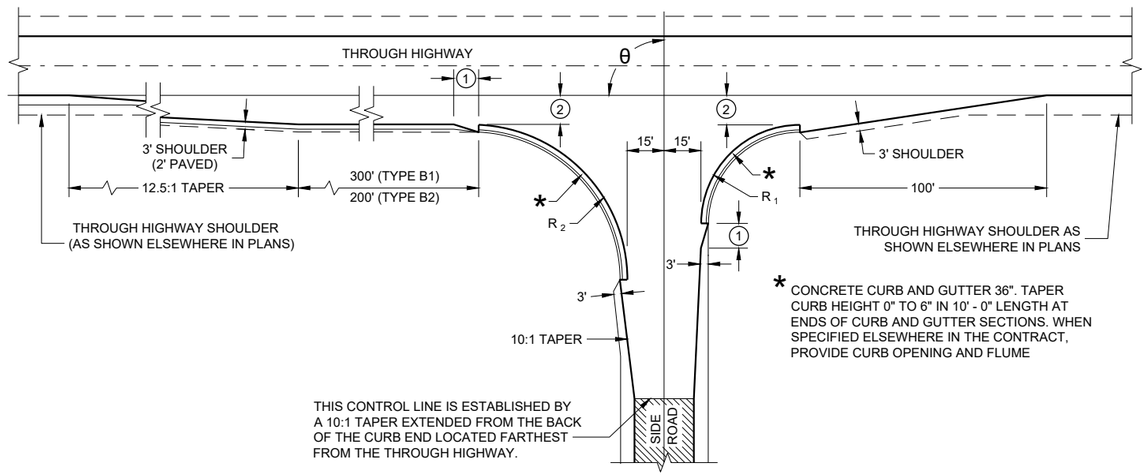


THIS FRAME LEFT INTENTIONALLY BLANK

PROJECT NO: 7899-03-72	HWY: CTH U	COUNTY: PIERCE	PLAN	SHEET 34	E

Standard Detail Drawing List

09A01-14A	AT-GRADE SIDE ROAD INTERSECTION, TYPES "B1", "B2", "C" AND D AND TEE INTERSECTION BYPASS LANE
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
14B20-12B	STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO SQUARE END PARAPETS
14B24-09A	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
14B24-09B	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
14B24-09C	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
14B29-01	SAFETY EDGE
14B42-07A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07D	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-04A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B45-05A	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05B	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05C	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05D	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
15C02-09A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-09B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C03-05	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C08-23A	PERMANENT LONGITUDINAL PAVEMENT MARKINGS
15C08-23B	TEMPORARY LONGITUDINAL PAVEMENT MARKING
15C11-10B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C12-09A	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15C19-09A	MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY
15C33-05	STOP LINE AND CROSSWALK PAVEMENT MARKING
15C35-06A	PAVEMENT MARKING (INTERSECTIONS)
15D39-02	TRAFFIC CONTROL, DROP-OFF SIGNING
15D45-03	TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH LOOSE GRAVEL



* CONCRETE CURB AND GUTTER 36". TAPER CURB HEIGHT 0" TO 6" IN 10' - 0" LENGTH AT ENDS OF CURB AND GUTTER SECTIONS. WHEN SPECIFIED ELSEWHERE IN THE CONTRACT, PROVIDE CURB OPENING AND FLUME

TYPE "B1" AND "B2"

RADII DIMENSIONS FOR TYPES "B1", "B2", "C" AND "D" INTERSECTIONS

θ	R_1	R_2
65 - 70	35	70
71 - 80	40	70
81 - 90	40	60
91 - 100	50	55
101 - 110	60	45

GENERAL NOTES

DESIGNS MAY BE USED INTERCHANGEABLY IN COMBINATION OR SEPARATELY FOR ANY ONE COMPLETE INTERSECTION DEPENDING UPON INTERSECTION ANGLE AND SURFACING OF EACH APPROACH ROADWAY.

SIDE ROAD SURFACING NOTE

WHEN THE SIDE ROAD IS NOT PRESENTLY PAVED, PAVEMENT SHALL BE PLACED TO THE LIMITS SHOWN UNLESS OTHERWISE PROVIDED IN THE CONTRACT. WHERE THE CONSTRUCTION LIMITS ARE BEYOND THE PAVING LIMITS, CRUSHED AGGREGATE SURFACING SHALL BE PLACED BETWEEN THE PAVING LIMITS AND CONSTRUCTION LIMITS.

WHEN THE SIDE ROAD IS PRESENTLY PAVED, NEW PAVEMENT SHALL BE PLACED TO THE LIMITS OF DESIGN AS SHOWN AND BEYOND, IF NECESSARY, TO MEET EXISTING PAVEMENT.

WHEN THE SIDE ROAD IS THE CONSTRUCTION PROJECT, THE INTERSECTION SURFACING SHALL BE THE SAME AS FOR THE PROJECT.

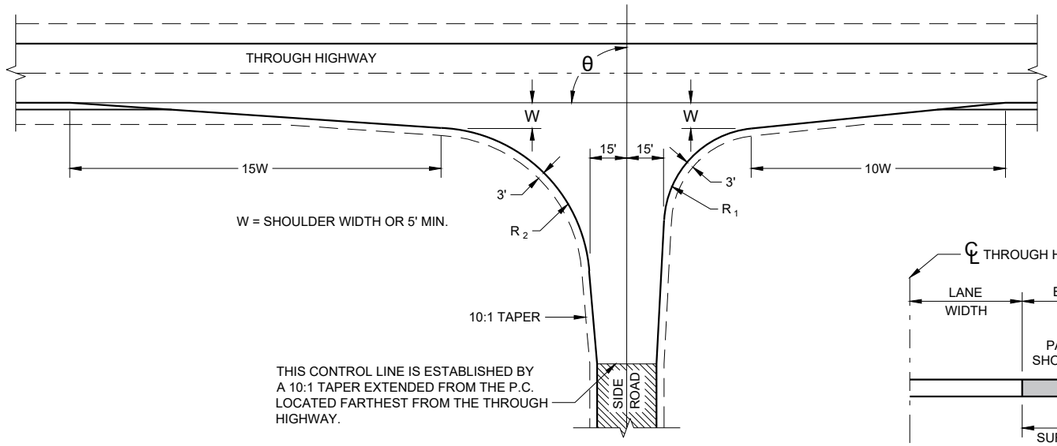
(1) 10-FT TYPICAL.

(2) 12-FT** PLUS ADDITIONAL WIDTH FOR BIKE LANE IF SHOWN ELSEWHERE IN THE PLAN.

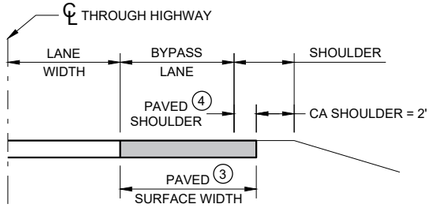
**10-FT MAY BE USED ON TYPE B2 ON RESURFACING PROJECTS IF SPECIFIED IN THE CONTRACT.

(3) BYPASS LANE PAVED SURFACE WIDTH OUTSIDE OF TRAVEL LANE
- ASPHALT = 12-FT PLUS PAVED SHOULDER WIDTH
- PC CONCRETE = 13-FT PLUS PAVED SHOULDER WIDTH

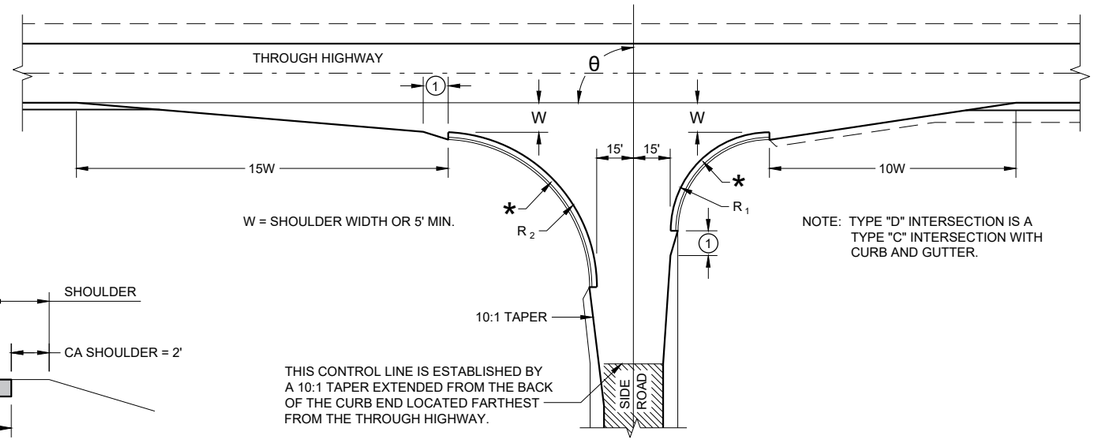
(4) BYPASS LANE PAVED SHOULDER WIDTH = THE GREATER OF 1-FT OR THE PAVED SHOULDER WIDTH OF THE THROUGH HIGHWAY.



TYPE "C"

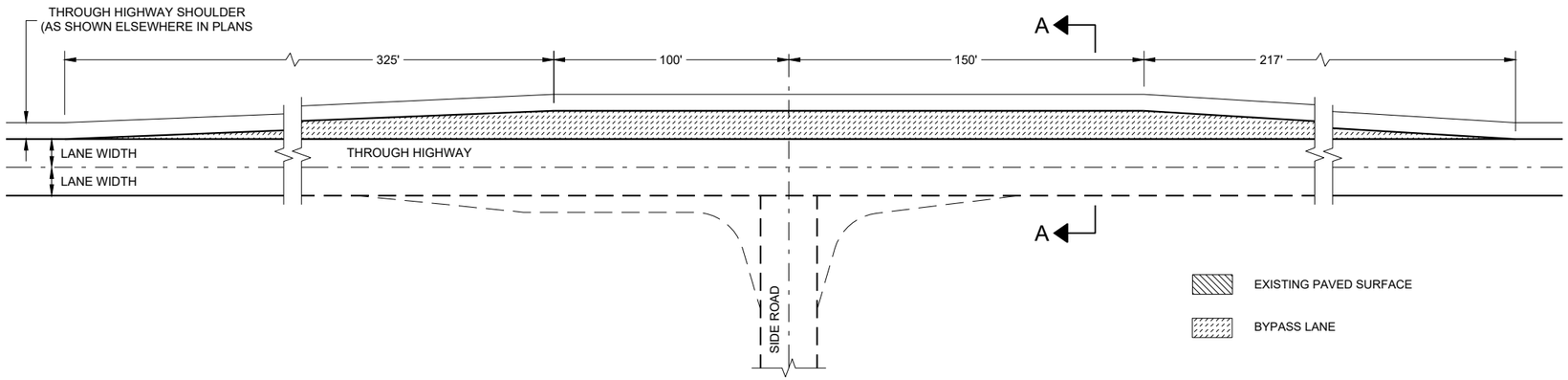


SECTION A - A
(SHOWING BYPASS LANE AND SHOULDER)



NOTE: TYPE "D" INTERSECTION IS A TYPE "C" INTERSECTION WITH CURB AND GUTTER.

TYPE "D"



TEE INTERSECTION BYPASS LANE DETAIL

AT GRADE SIDE ROAD INTERSECTION TYPES "B1", "B2", "C", "D" AND TEE INTERSECTION BYPASS LANE

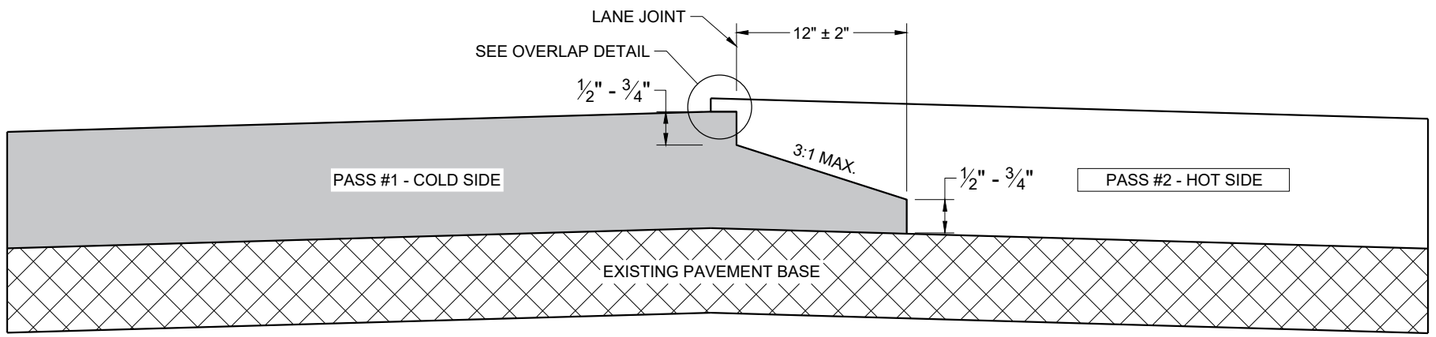
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

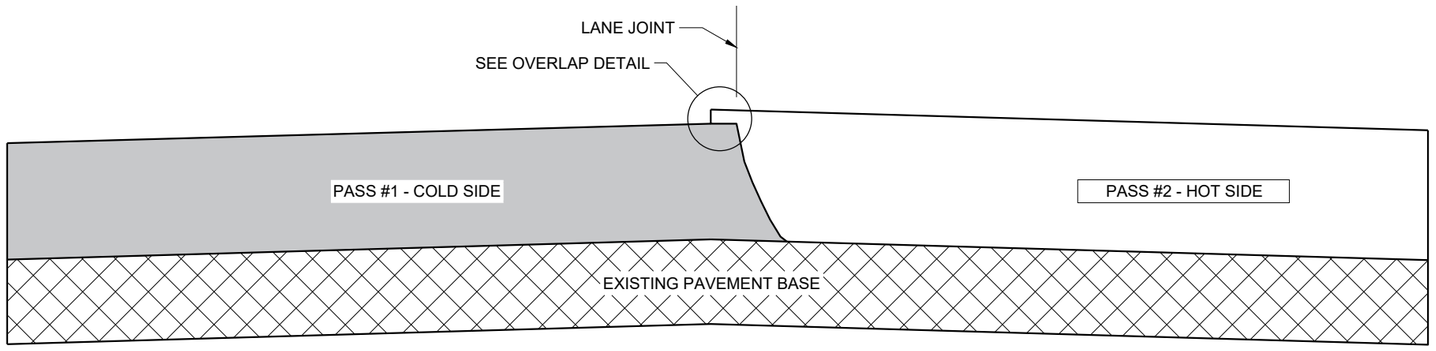
SDD 09A01 - 14a

6

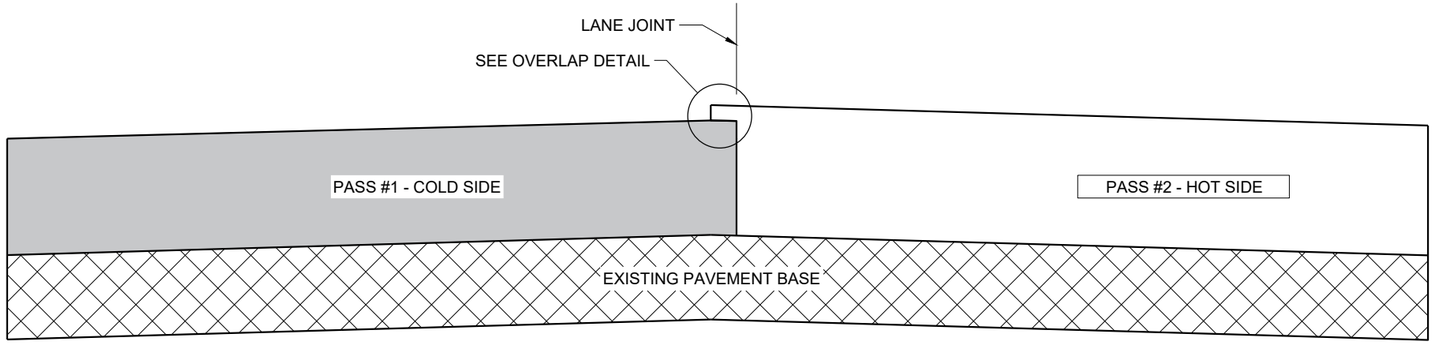
SDD 09A01 - 14a



TYPICAL PAVEMENT CROSS SECTION
NOTCHED WEDGE JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT (MILLED)

GENERAL NOTES

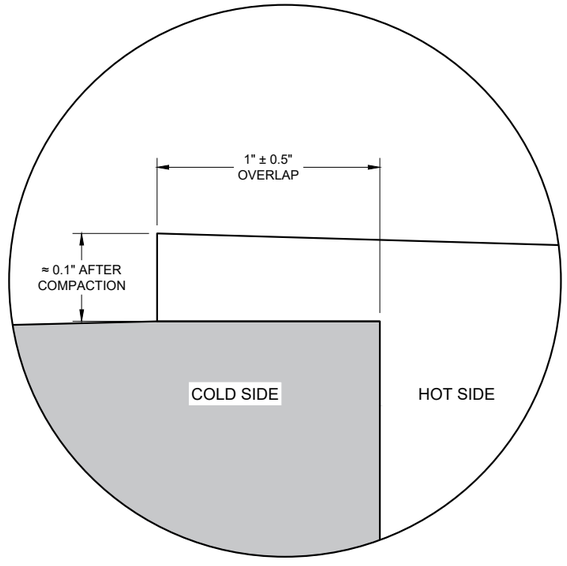
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

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

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

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

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



OVERLAP DETAIL (TYPICAL)

6

6

SDD 13C19 - 03

SDD 13C19 - 03

HMA LONGITUDINAL JOINTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2020
DATE

/S/ Steven Hefel
HMA PAVEMENT ENGIN

FHWA

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.

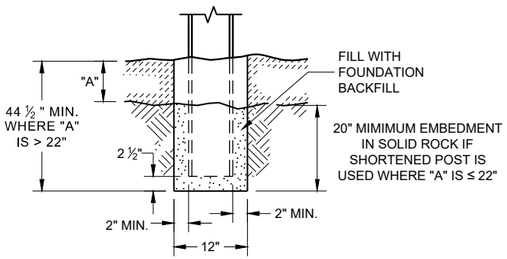
5. IF THE DISTACE FROM BACK OF POST TO SHOULDER HIGHE POINT IS LESS THAN 2 FEET, INSTALL LONGER POST AT HALF POST SPACING, W BEAM (LHW).

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.

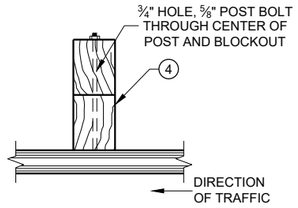
INSTALL BEAM GUARD SECTIONS AND ALL NECESSARY HARDWARE ACCORDING TO THE APPLICABLE PLAN AND CURRENT STANDARD AND SUPPLEMENTAL SPECIFICATIONS.

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



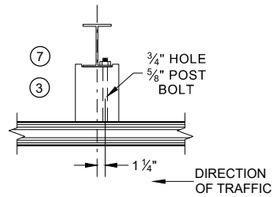
END VIEW

SETTING STEEL OR WOOD POST IN ROCK (6)



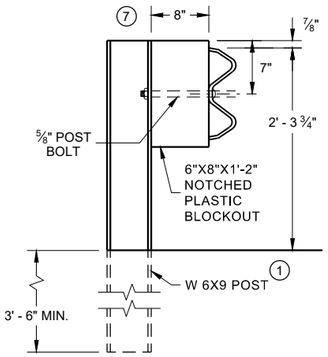
PLAN VIEW

WOOD POST, BLOCKOUT AND BEAM



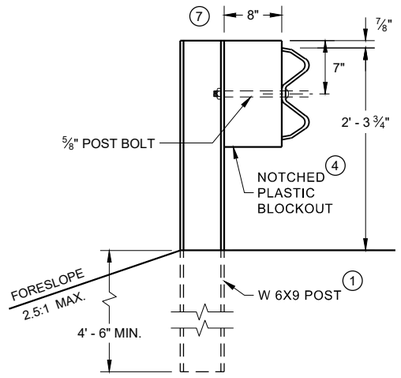
PLAN VIEW

WOOD POST, BLOCKOUT AND BEAM



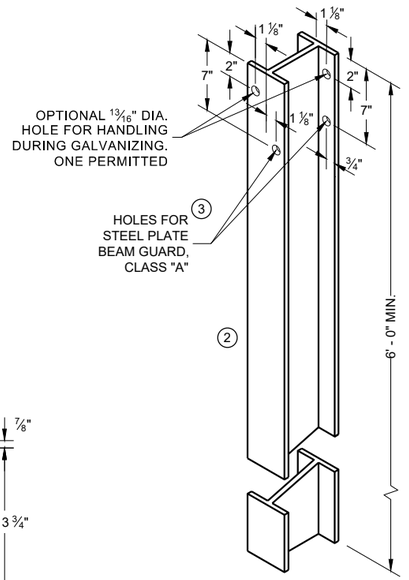
END VIEW

STEEL POST AND NOTCHED PLASTIC BLOCKOUT ALTERNATIVE STANDARD INSTALLATION



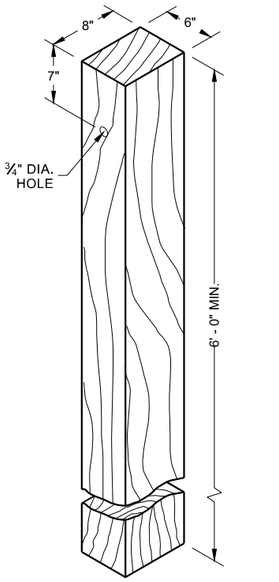
END VIEW

LONGER POST AT HALF POST SPACING W BEAM (LHW)

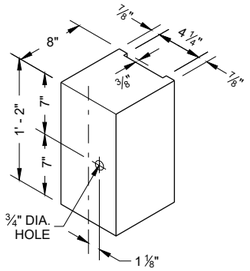


STEEL POST & HOLE PUNCHING DETAIL (W 6 X 9) (1)

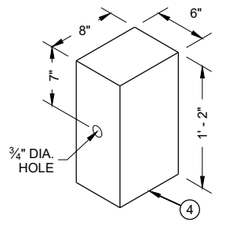
ALL HOLES 13/16" DIAMETER EXCEPT AS NOTED



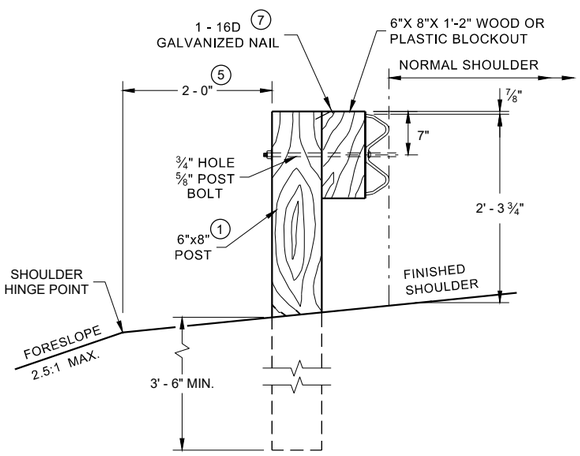
WOOD POST (6" X 8") NOMINAL (1)



TYPICAL NOTCHED PLASTIC BLOCKOUT FOR STEEL POSTS

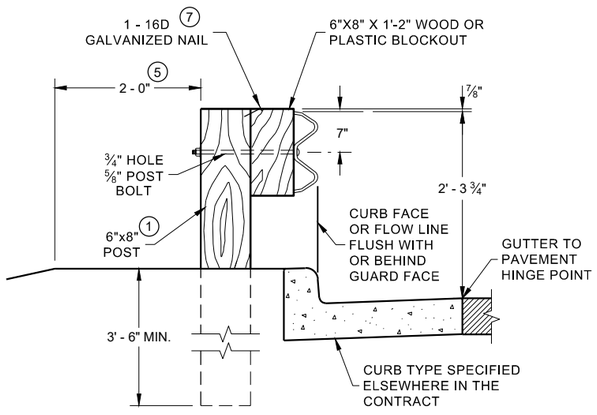


WOOD OR PLASTIC BLOCKOUT FOR WOOD POSTS



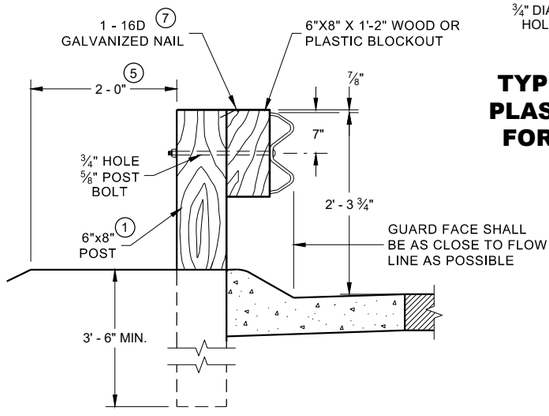
END VIEW

LOCATED ALONG A ROADWAY SHOULDER STANDARD INSTALLATION



END VIEW

LOCATED ALONG A CURBED ROADWAY



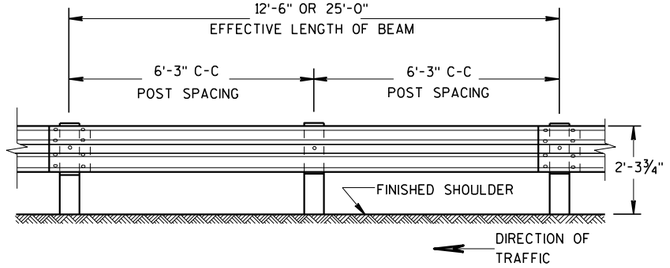
END VIEW

LOCATED ALONG A MOUNTABLE CURBED ROADWAY

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

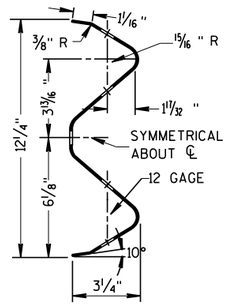
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
SDD 14B15 -11a

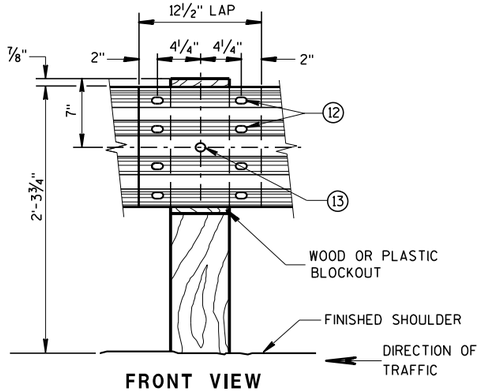


FRONT VIEW

POST SPACING STANDARD INSTALLATION



SECTION THRU W BEAM



FRONT VIEW

BEAM SPLICE AT WOOD POST AND POST MOUNTING DETAIL

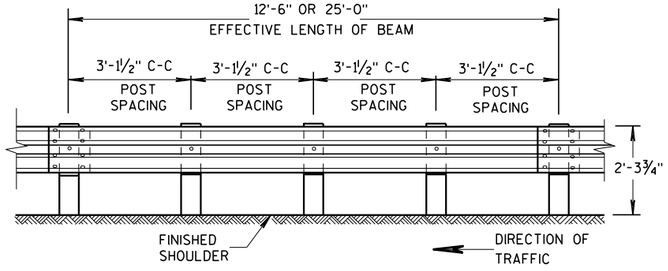
GENERAL NOTES

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.

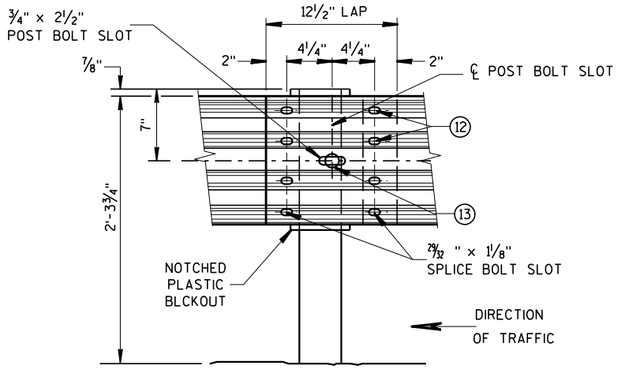
(12) 8 -5/8" ϕ X 2" BUTTON HEAD BOLTS WITH OVAL SHOULDERS & RECESS NUTS.

(13) 5/8" DIA. BUTTON HEAD BOLT AND RECESS NUT WITH 5/8" DIA. F844 FLAT WASHER UNDER NUT.



FRONT VIEW

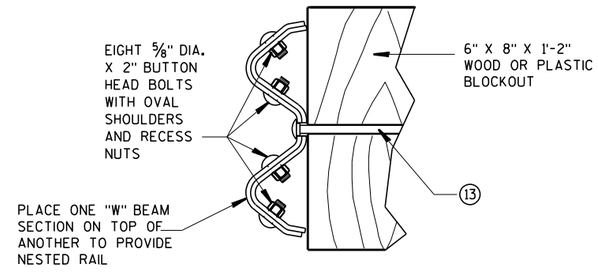
POST SPACING FOR LONGER POST AT HALF POST SPACING W BEAM (LHW)



FRONT VIEW

BEAM SPLICE AT STEEL POST

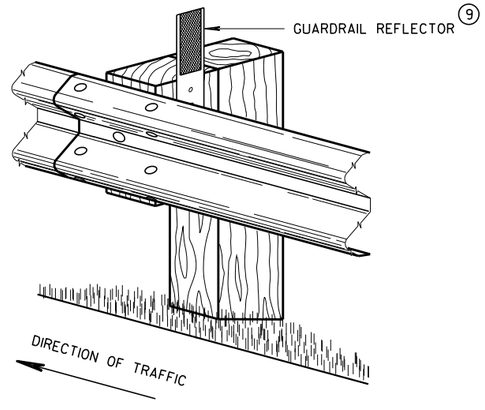
TYPICAL SPLICING DETAILS OF STEEL PLATE BEAM GUARD



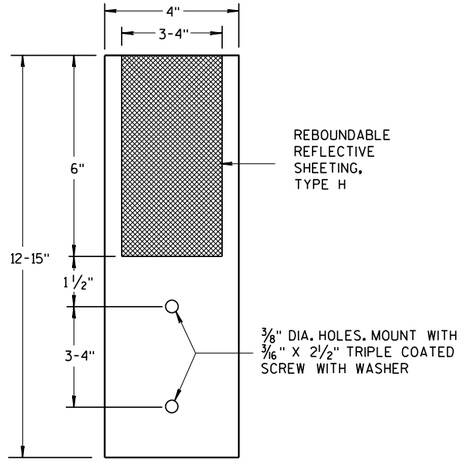
NESTED W BEAM (NW)

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

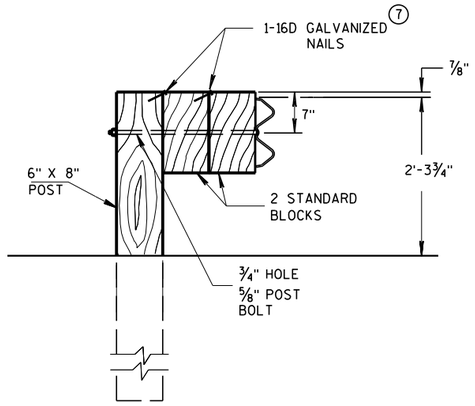
STATE OF WISCO 39
DEPARTMENT OF TRANSPORTATION

6

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

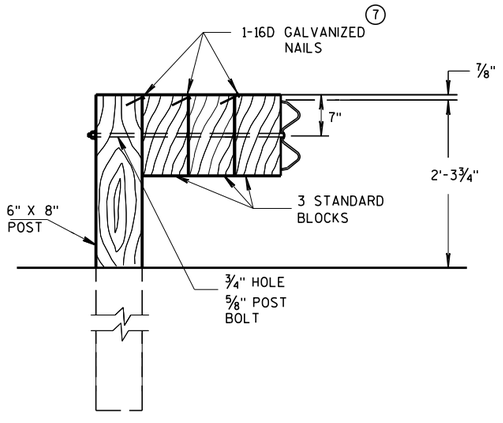
6

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



DETAIL FOR DOUBLE BLOCKS

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

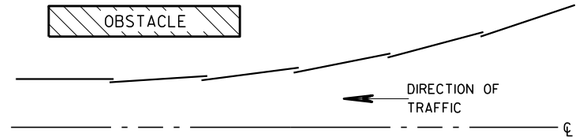


DETAIL FOR TRIPLE BLOCKS

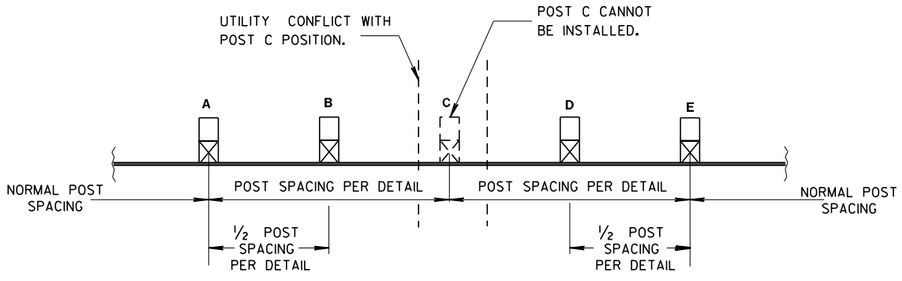
TRIPLE BLOCK DETAIL IS LIMITED TO ONE LOCATION WITHIN A BEAM GUARD RUN.

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.



PLAN VIEW
BEAM LAPPING DETAIL



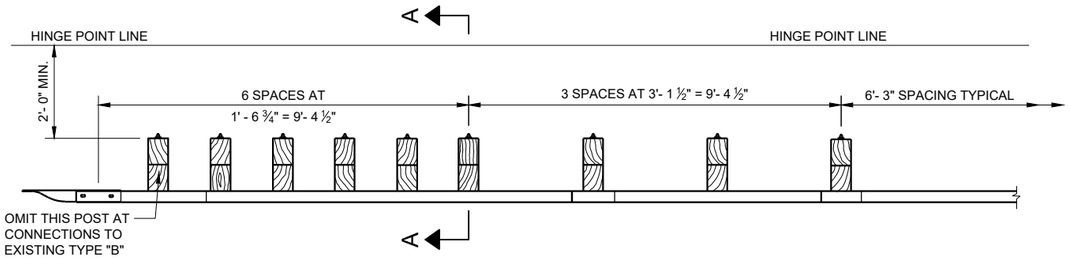
POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION

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

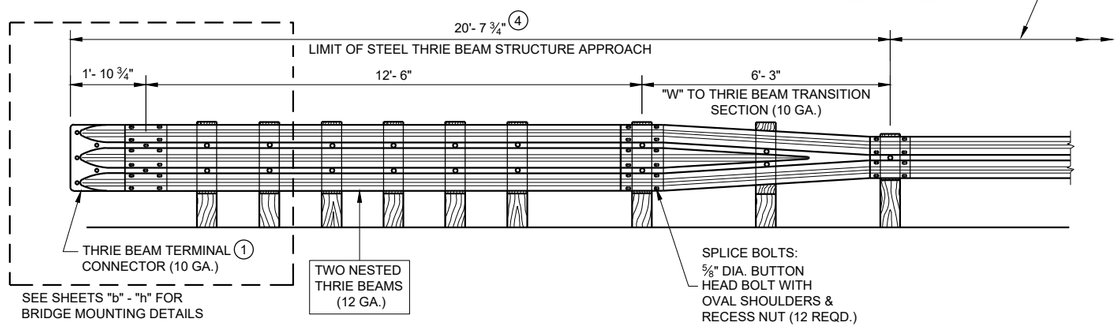
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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



PLAN VIEW



FRONT VIEW

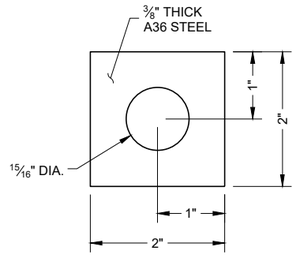


PLATE WASHER DETAIL

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.

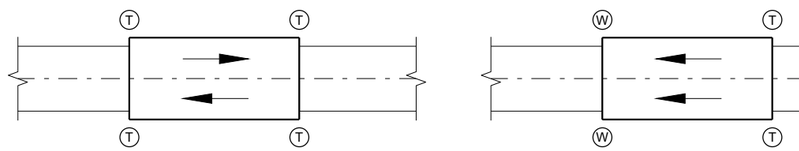
IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2 ½" , AND 12" DIAMETER AROUND POST. SEE 14B15 FOR MORE DETAILS.

(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.



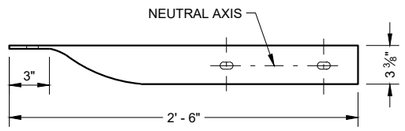
TWO WAY TRAFFIC

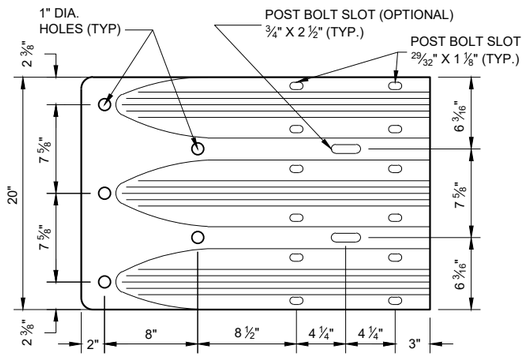
ONE WAY TRAFFIC

(T) THRIE BEAM CONNECTION

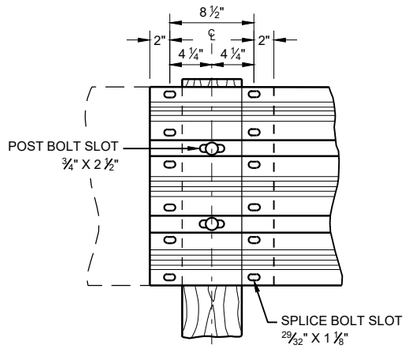
(W) W-BEAM CONNECTION WHEN REQUIRED

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

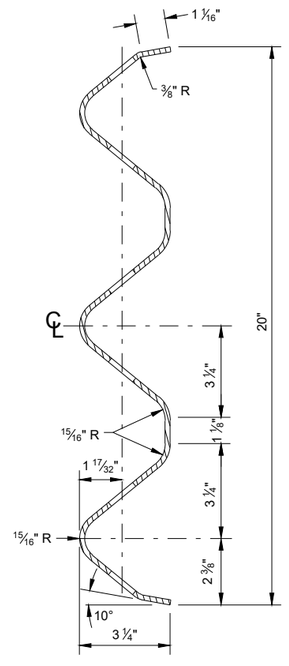




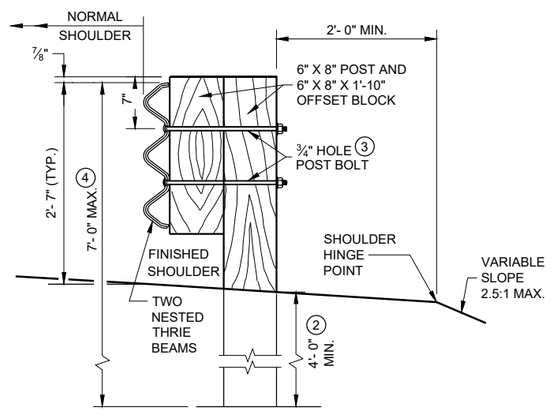
THRIE BEAM TERMINAL CONNECTOR



THRIE BEAM SPLICE



SECTION THRU BEAM RAIL ELEMENT



SECTION A-A

STEEL THRIE BEAM STRUCTURE APPROACH

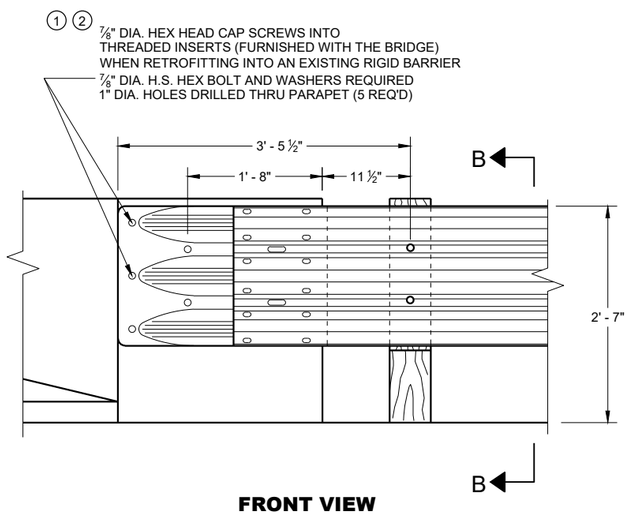
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

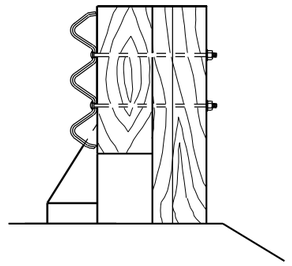
FHWA

SDD 14B20 - 12a

6
SDD 14B20 - 12a



FRONT VIEW



SECTION B - B

THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS

GENERAL NOTES

THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSITION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.

BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A325, A449 AND GALVANIZED PER STANDARD SPECIFICATIONS 614.

① DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

② BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM TERMINAL CONNECTOR. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

③ THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 ½".

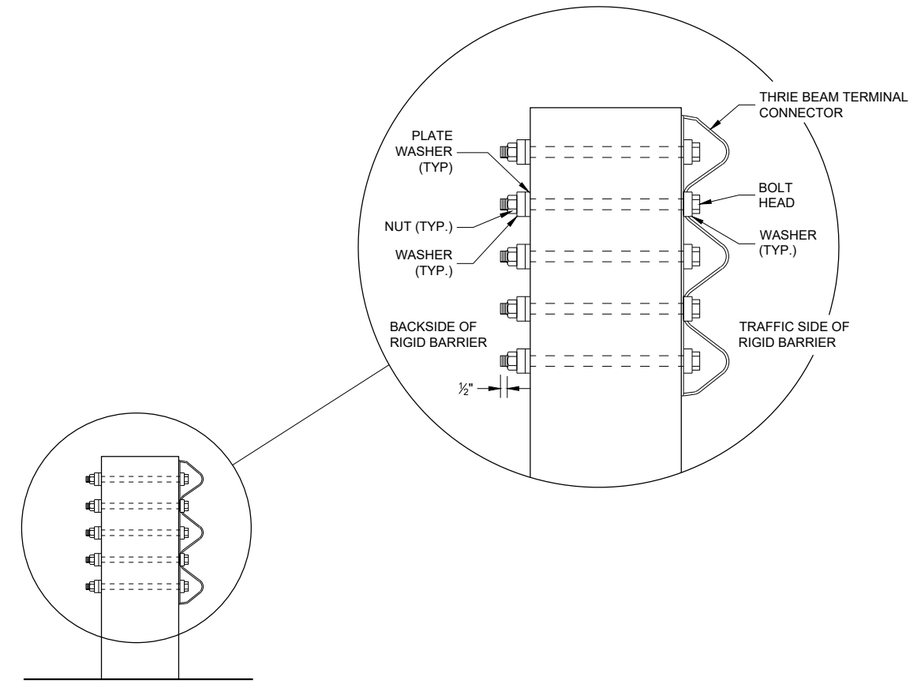
④ W6 X 9 OR W6 X 8.5 STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS ARE ACCEPTABLE ALTERNATIVES FOR 6" X 8" WOOD POST WITH WOOD OR PLASTIC BLOCKOUTS. USE APPROVED NOTCHED PLASTIC BLOCKOUTS WITH STEEL POSTS.

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.

FRONT VIEW

W BEAM TRANSITION AND CONNECTION TO BRIDGE PARAPETS WITH SQUARE ENDS

(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGE)



SECTION C - C

STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO SQUARE END PARAPETS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2022
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS DEVE ENGINEER

FHWA

6

SDD 14B20 - 12b

6

SDD 14B20 - 12b

BILL OF MATERIALS

NOTE NO.	DESCRIPTION
①	WOOD BREAKAWAY TERMINAL POST: 5½" X 7½" X 3'-9"
②	STEEL TUBE TS 8" X 6" X 0.188", 6'-0"
④	WOOD BREAKAWAY CRT POST: 6" X 8" X 6'-0"
⑤	WOOD OFFSET BLOCKS: 6' X 8" X 1'-2"
⑥	PIPE SLEEVE: 2" X 5 ½" STANDARD PIPE
⑦	BEARING PLATE
⑧	BCT CABLE ASSEMBLY
⑨	CABLE ANCHOR BOX
⑩	STRUT & YOKE
⑪	STEEL PLATE BEAM, END PANEL 12 GA.
⑫	STEEL PLATE BEAM: 12 GA. 13'-6½"
⑬	IMPACT HEAD
⑭	0.040" ALUMINUM SHEET WITH REFLECTIVE SHEETING TYPE F PER SECTION 637 OF THE STANDARD SPECIFICATIONS

GENERAL NOTES

FOLLOW MANUFACTURE'S BOLTING RECOMMENDATIONS.

(A) THE SLOPE IN THE AREA BOUNDED BY THE GRADELINE, THE HINGE POINT LINE (HPL), AND THE CLEAR ZONE LIMITS (CZL) SHALL BE 4:1 OR FLATTER.

(B) AFTER FINAL ASSEMBLY, RECHECK CABLE TO BE SURE IT IS TAUT AND HAS NOT RELAXED.

(D) THE TOP OF THE STEEL TUBE ON POSTS 1 AND 2 SHALL NOT BE MORE THAN 3" ABOVE THE FINISH GROUND ELEVATION.

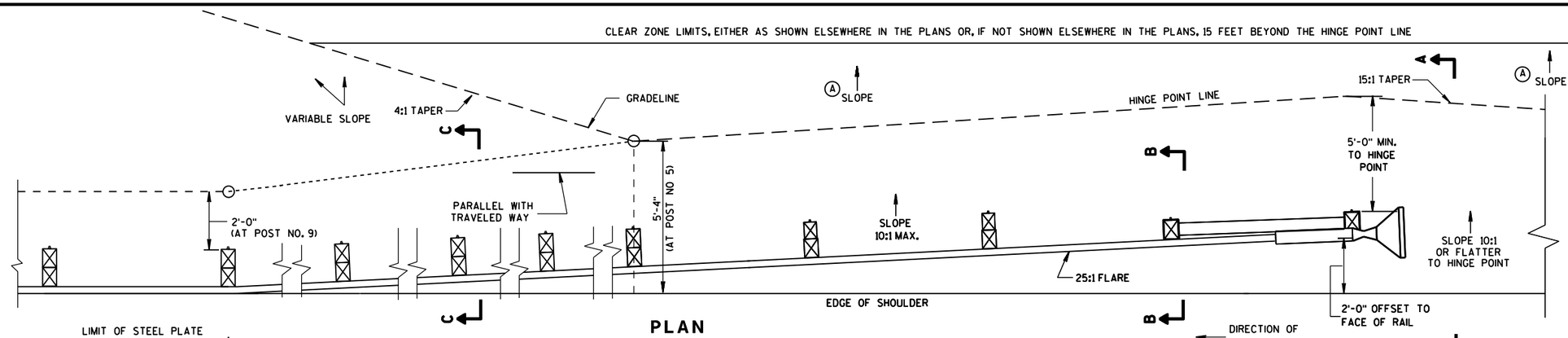
(E) THE CENTER OF THE UPPER 3½" DIAMETER HOLE ON POST 3 THROUGH 8 SHALL BE ¾" ABOVE THE FINISHED GROUND LINE.

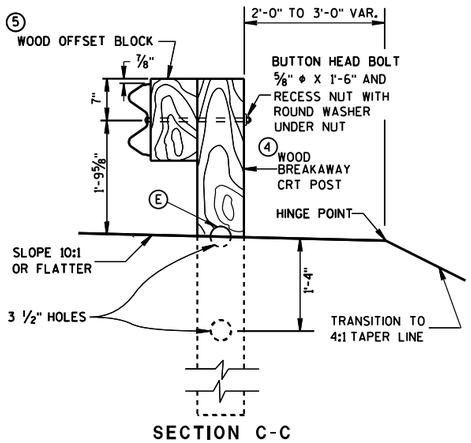
(F) ATTACH ALUMINUM SHEET TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF-TAPPING SCREWS. ONE SCREW PER CORNER.

STEEL POSTS SHALL NOT BE ALLOWED FOR USE WITH ENERGY ABSORBING TERMINALS.

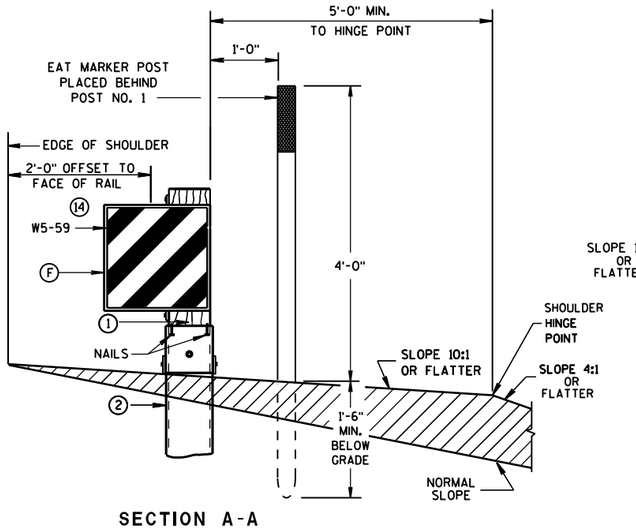
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

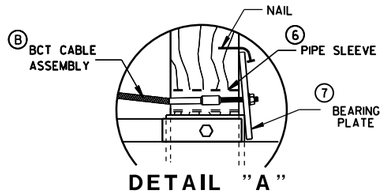




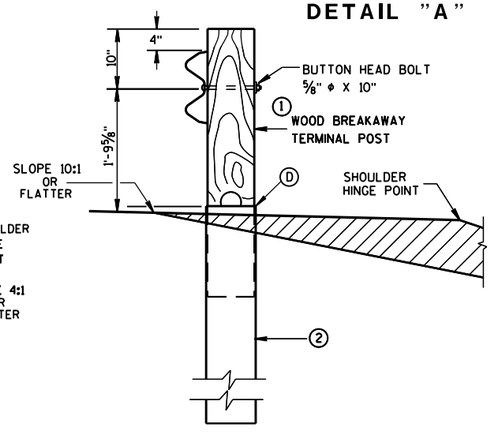
SECTION C-C
TYPICAL AT POST NOS. 6, 8



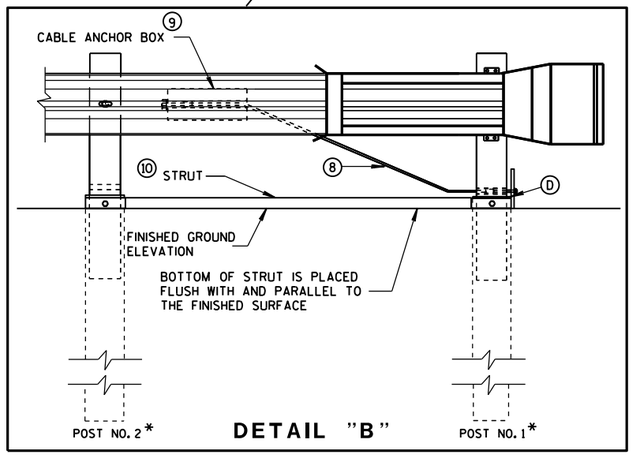
SECTION A-A
TYPICAL AT POST NO. 1*



DETAIL "A"



SECTION B-B
TYPICAL AT POST NO. 2*



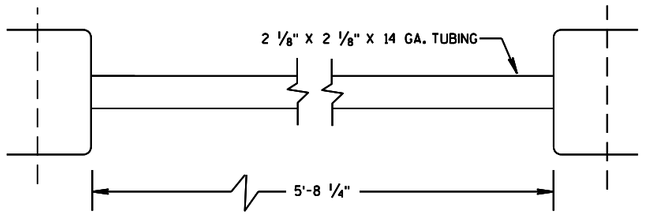
DETAIL "B"

STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL

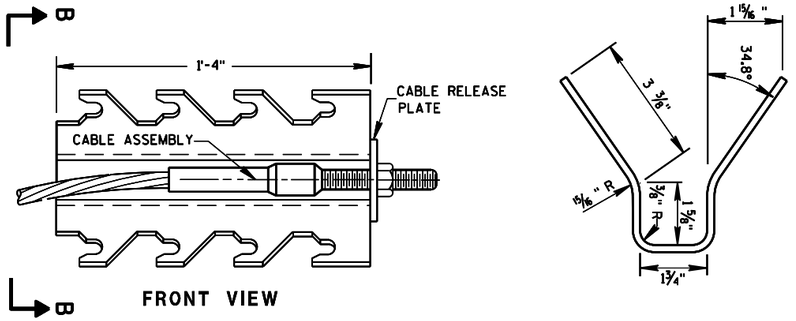
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

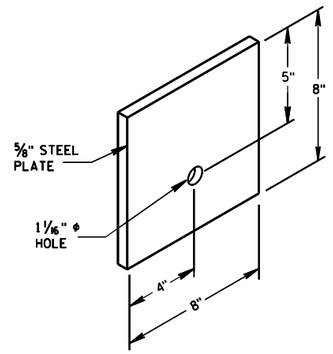
S.D.D. 14 B 24-9a



⑩ STRUT DETAIL



⑨ CABLE ANCHOR BOX



⑦ STEEL BEARING PLATE

6

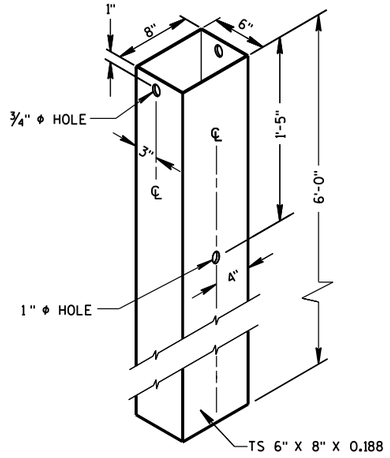
6

S.D.D. 14 B 24-9b

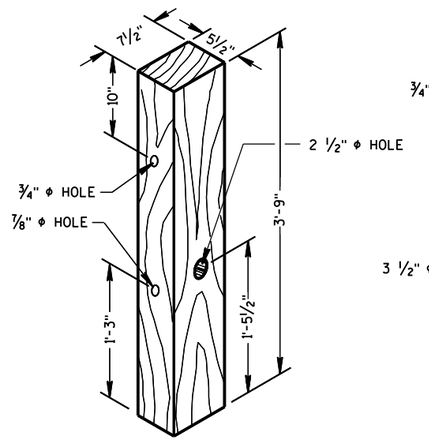
S.D.D. 14 B 24-9b

STEEL PLATE BEAM GUARD
ENERGY ABSORBING TERMINAL

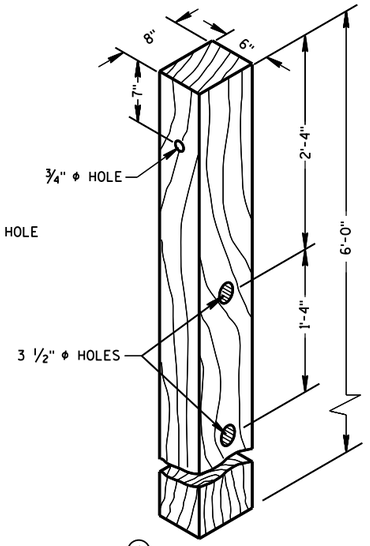
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI



② 72" STEEL TUBE
(POSTS NO. 1-2



① TERMINAL POST

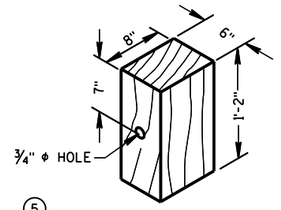


④ CRT POST
(POSTS NO'S 5-8

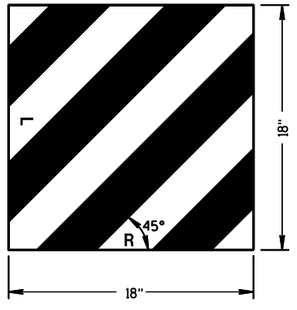
WOOD BREAKAWAY POSTS

GENERAL NOTES

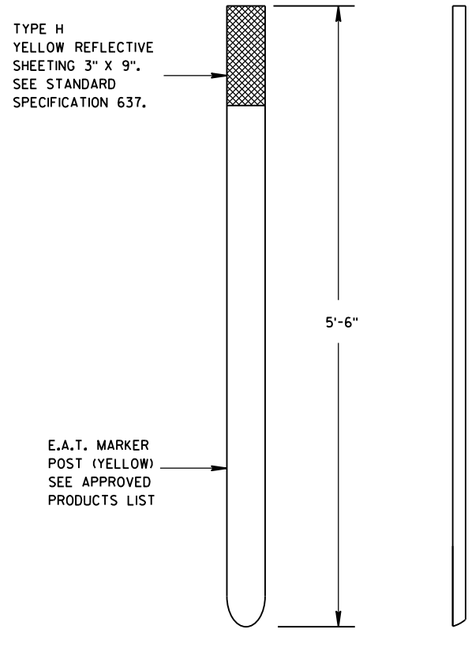
WHEN ROCK IS ENCOUNTERED DURING EXCAVATION, A 12 INCH DIA. POST HOLE EXTENDING 20 INCHES DEEP INTO THE ROCK MAY BE USED IF APPROVED BY THE ENGINEER. GRANULAR MATERIAL SHALL BE PLACED IN THE BOTTOM OF THE HOLE APPROXIMATELY 2 ½" INCHES DEEP TO PROVIDE DRAINAGE. THE SOIL TUBES SHALL BE FIELD CUT TO LENGTH, PLACED IN THE HOLE AND BACKFILLED WITH ADEQUATELY COMPACTED MATERIAL EXCAVATED FROM THE HOLE.



⑤ WOOD OFFSET BLOCK
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



⑭ REFLECTIVE SHEETING DETAILS



E.A.T. MARKER POST

STEEL PLATE BEAM GUARD
ENERGY ABSORBING TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017
DATE
FHWA

/S/ Rodney Taylor
ROADWAY STANDARDS UNIT SUPERV...

45

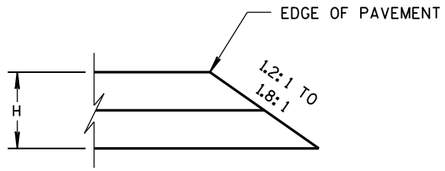
ENT

6

S.D.D. 14 B 24-9c

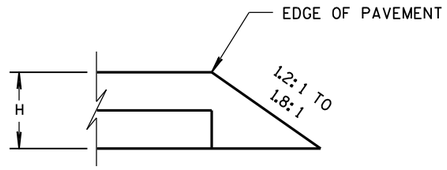
6

S.D.D. 14 B 24-9c



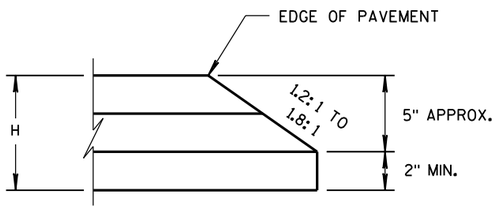
CONSTRUCTED WITH FINAL TWO LAYERS

FOR H 5" OR LESS



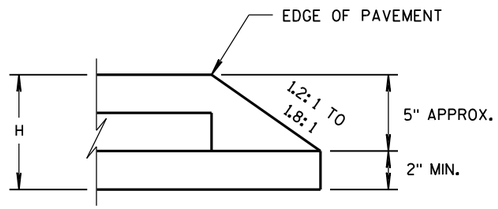
CONSTRUCTED WITH FINAL LAYER

FOR H 5" OR LESS



CONSTRUCTED WITH FINAL TWO LAYERS

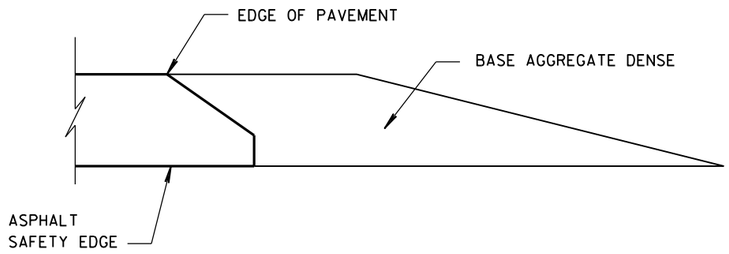
FOR H GREATER THAN 5"



CONSTRUCTED WITH FINAL LAYER

FOR H GREATER THAN 5"

HMA PAVEMENT AND HMA OVERLAYS



FINISHED SHOULDER AGGREGATE PLACEMENT

6

6

S.D.D. 14 B 29-1

S.D.D. 14 B 29-1

SAFETY EDGE SM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

11/30/2012
DATE

/S/ Jerry H. Zoda
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

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

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

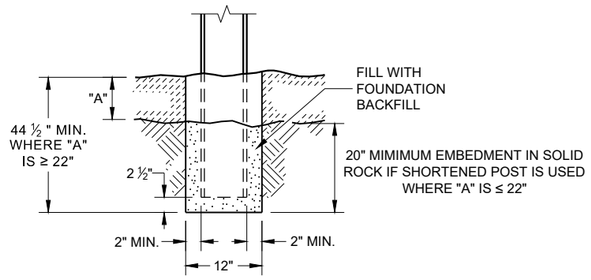
(3) IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL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

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

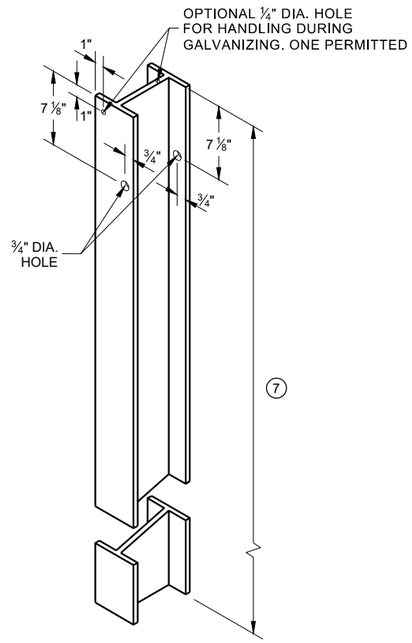
(5) FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ±1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 ¾" TO 32".

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

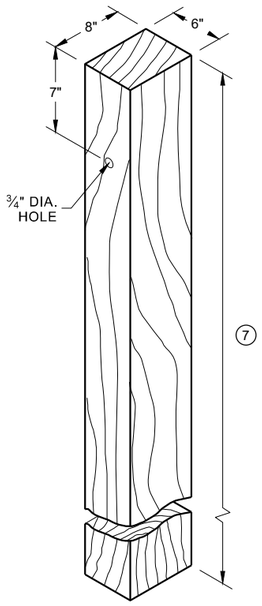
(7) TOTAL POST LENGTH FOR TYPE K IS 7' - 0".
TOTAL POST LENGTH FOR OTHER MGS TYPES IS 6' - 0".



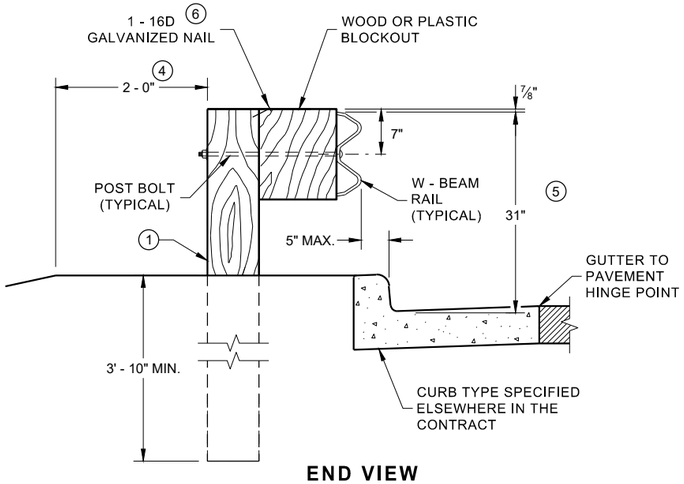
END VIEW
SETTING STEEL OR WOOD POST IN ROCK (3)



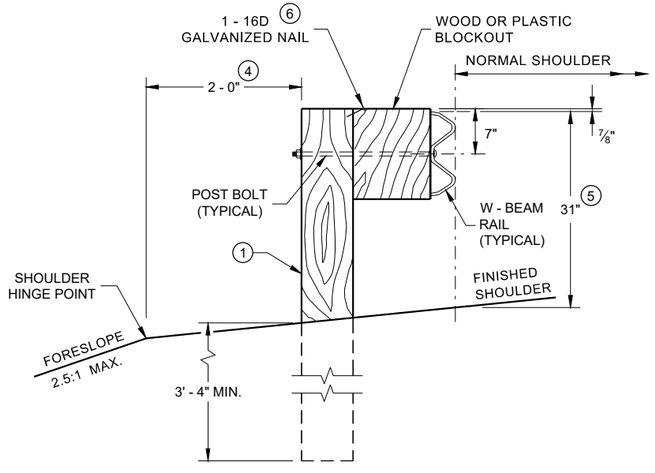
STEEL POST & HOLE PUNCHING DETAIL (W 6 X 9) (1)



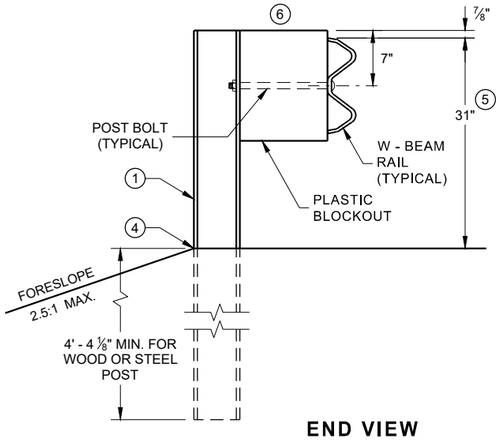
WOOD POST (6" X 8") NOMINAL (1)



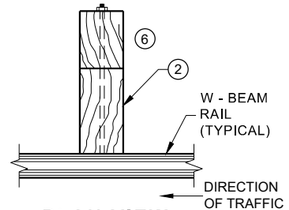
END VIEW
LOCATED ALONG A CURBED ROADWAY



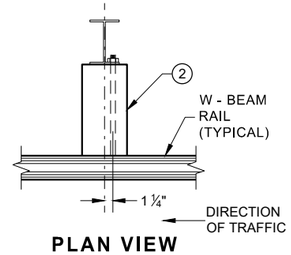
END VIEW
LOCATED ALONG A ROADWAY SHOULDER STANDARD INSTALLATION



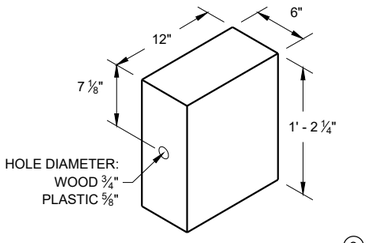
END VIEW
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



PLAN VIEW
WOOD POST, BLOCKOUT & BEAM



PLAN VIEW
STEEL POST, PLASTIC BLOCKOUT & BEAM



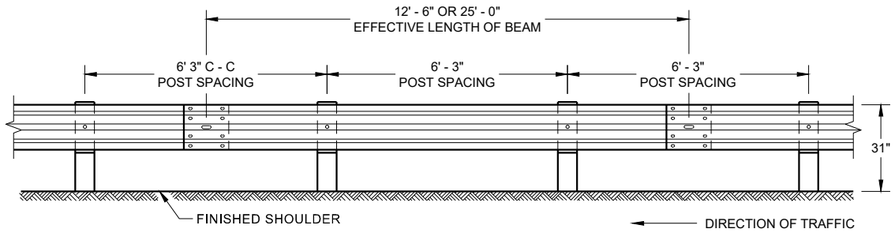
WOOD OR PLASTIC BLOCKOUT (2)

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

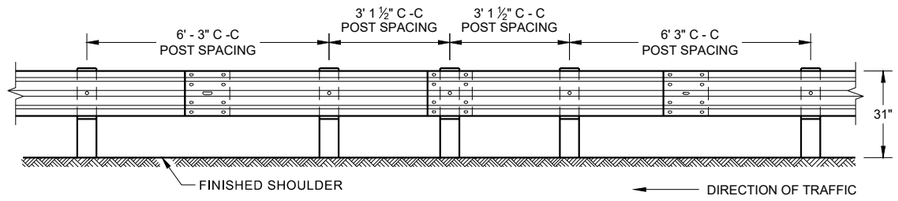
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B42 - 07a

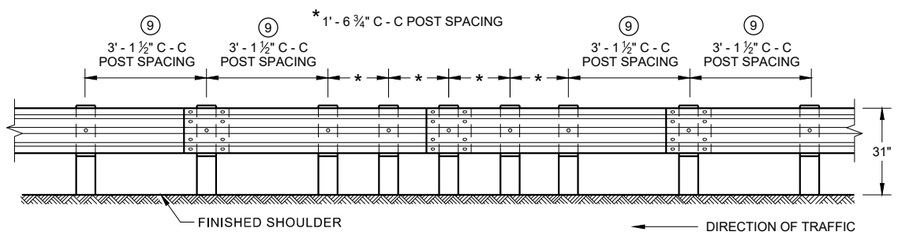
SDD 14B42 - 07a



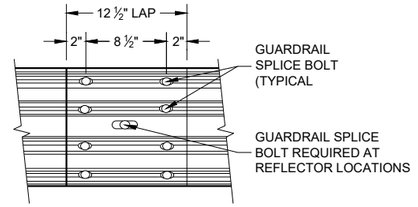
FRONT VIEW
POST SPACING STANDARD INSTALLATION



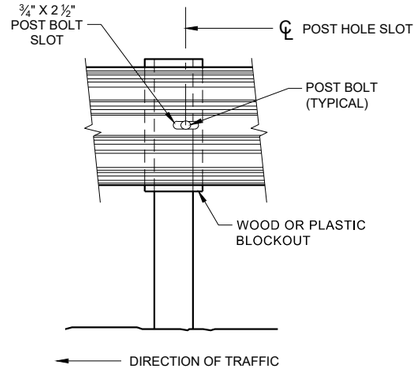
FRONT VIEW
HALF POST SPACING (HS) AND HALF POST SPACING WITH LONGER POSTS (K)



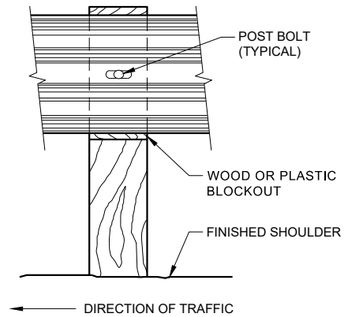
FRONT VIEW
QUARTER POST SPACING (QS)



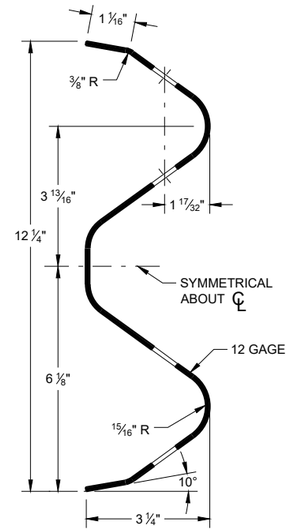
FRONT VIEW
MID-SPAN BEAM SPLICE



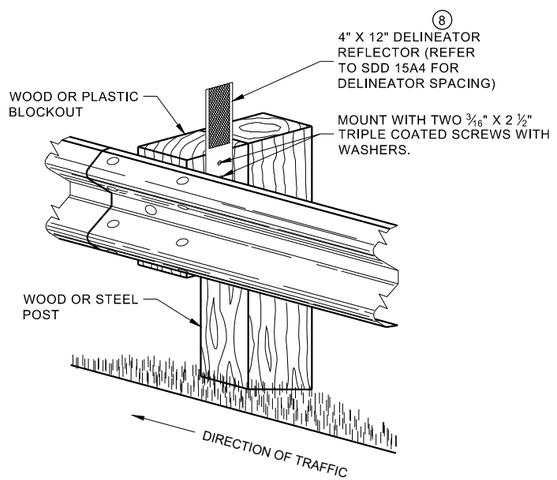
FRONT VIEW AT STEEL POST



FRONT VIEW AT WOOD POST



SECTION THRU W-BEAM RAIL



ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION

GENERAL NOTES

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

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

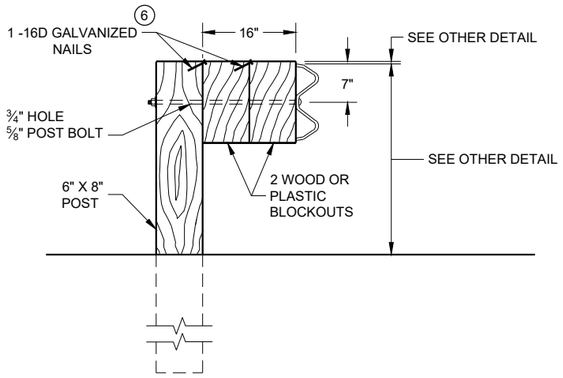
POST BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND ⅝" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

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

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
SDD 14B42 - 07b

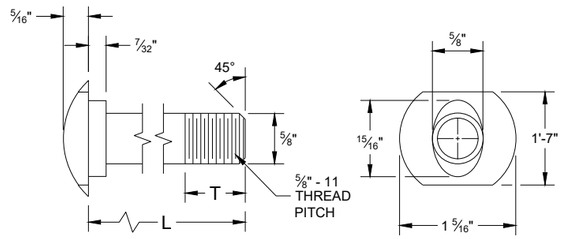


DETAIL FOR 16" BLOCKOUT DEPTH

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

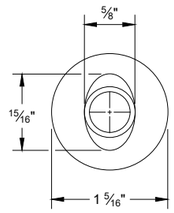
NOTE:

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

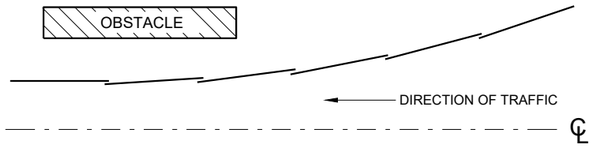


POST BOLT TABLE

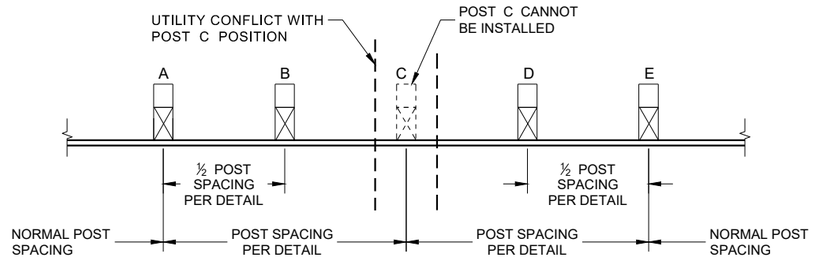
L	T (MIN.)
1 ¼"	1 ⅛"
2"	1 ¾"
10"	4"
14"	4 1⁄16"
18"	4"
21"	4 1⁄16"
25"	4"



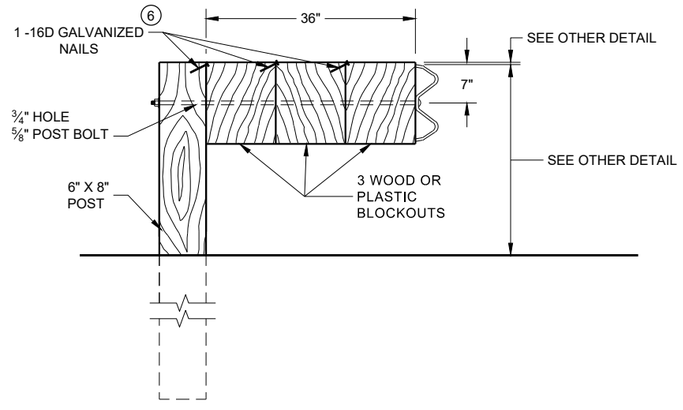
ALTERNATE BOLT HEAD



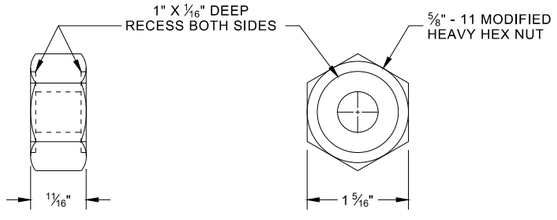
PLAN VIEW
BEAM LAPPING DETAIL



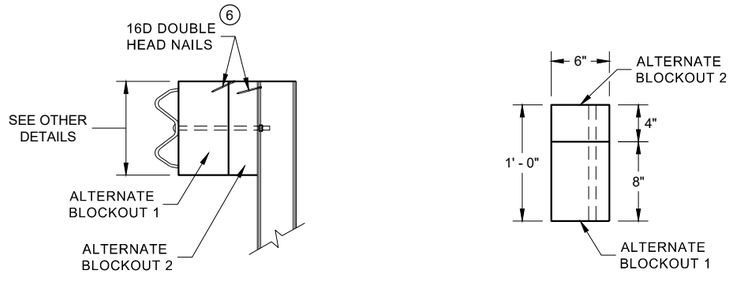
POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



DETAIL FOR 36" BLOCKOUT DEPTH



POST BOLT, SPLICE BOLT AND RECESS NUT



SIDE VIEW

PLAN VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

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

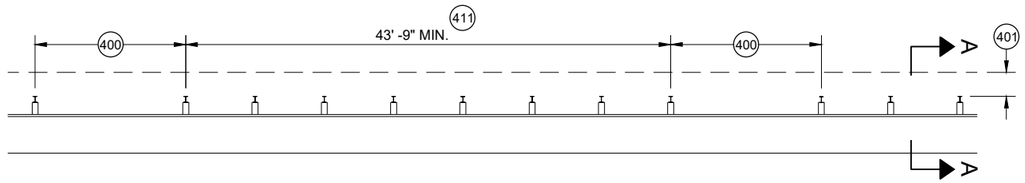
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

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

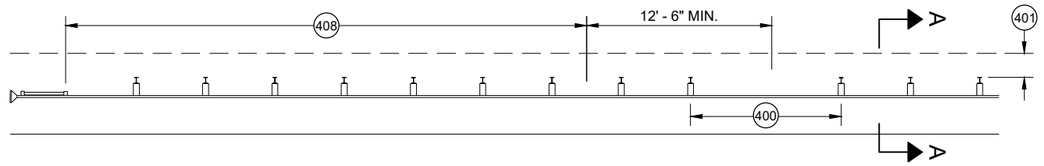
6

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

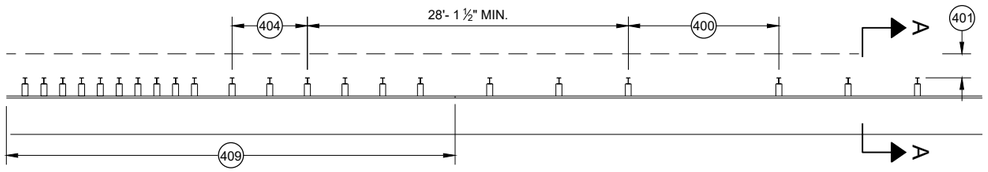
SDD 14B42 - 07c



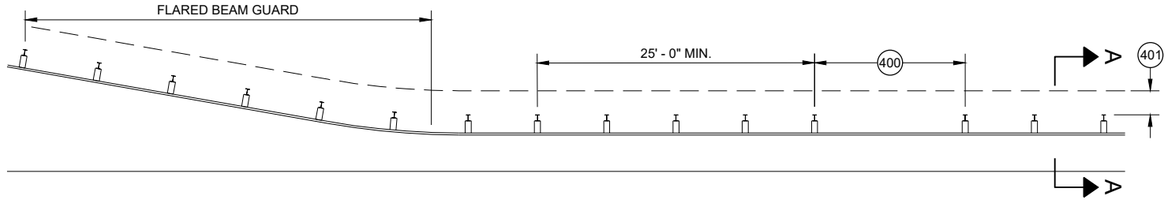
MISSING POST IN MGS GUARDRAIL



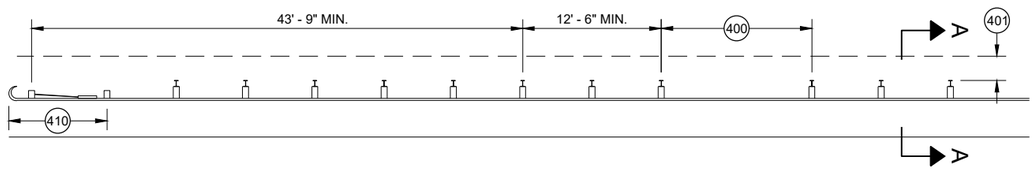
MISSING POST IN MGS GUARDRAIL NEAR EAT



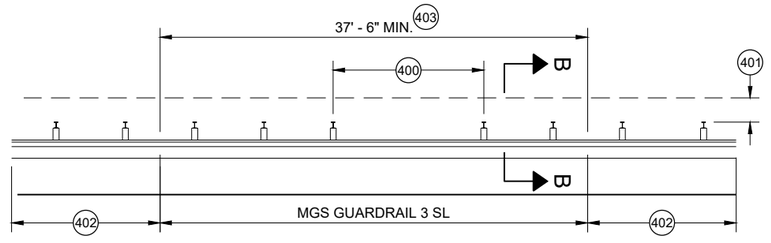
MISSING POST IN MGS GUARDRAIL NEAR AN APPROACH TRANSITION



MISSING POST IN MGS GUARDRAIL NEAR FLARED BEAM GUARD

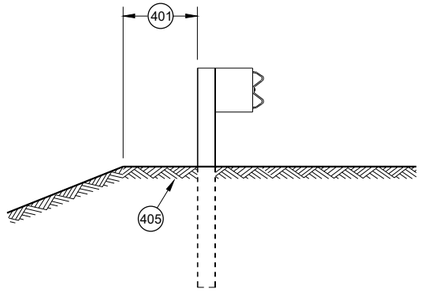


MISSING POST IN MGS GUARDRAIL NEAR A TYPE 2 END TERMINAL

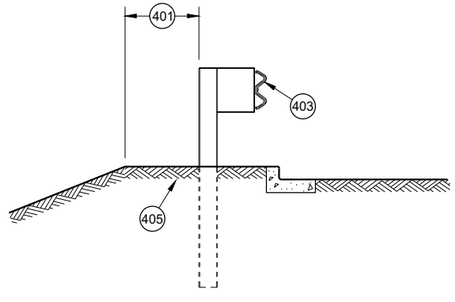


MISSING POST IN SHORT SPAN MGS GUARDRAIL NEAR CURB (SL) 407

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



SECTION A - A 406



SECTION B - B 406

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2021
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS DEVE
UNIT SUPERVISOR

FHWA

6

SDD 14B42 - 07d

GENERAL NOTES

(A) THE SLOPE IN THE AREA BOUNDED BY THE GRADELINE, THE HINGE POINT LINE (HPL) AND THE CLEAR ZONE LIMITS (CZL) SHALL BE 4:1 OR FLATTER.

(B) AFTER FINAL ASSEMBLY, RECHECK CABLE TO BE SURE IT IS TAUT AND HAS NOT RELAXED

(C) DIFFERENT MANUFACTURERS REQUIRE DIFFERENT PERFORATED W - BEAM RAIL END PANELS. SEE MANUFACTURER'S INFORMATION.

(D) ATTACH ALUMINUM SHEET TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF - TAPPING SCREWS. ONE SCREW PER CORNER.

(E) HARDWARE MAY VARY BETWEEN MANUFACTURER. SEE MANUFACTURER'S DRAWING FOR INFORMATION.

DIMENSIONS MAY VARY, MANUFACTURER'S INFORMATION.

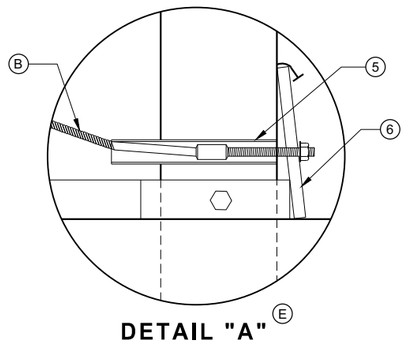
SEE SDD 14B42 FOR MORE INFORMATION.

* DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.

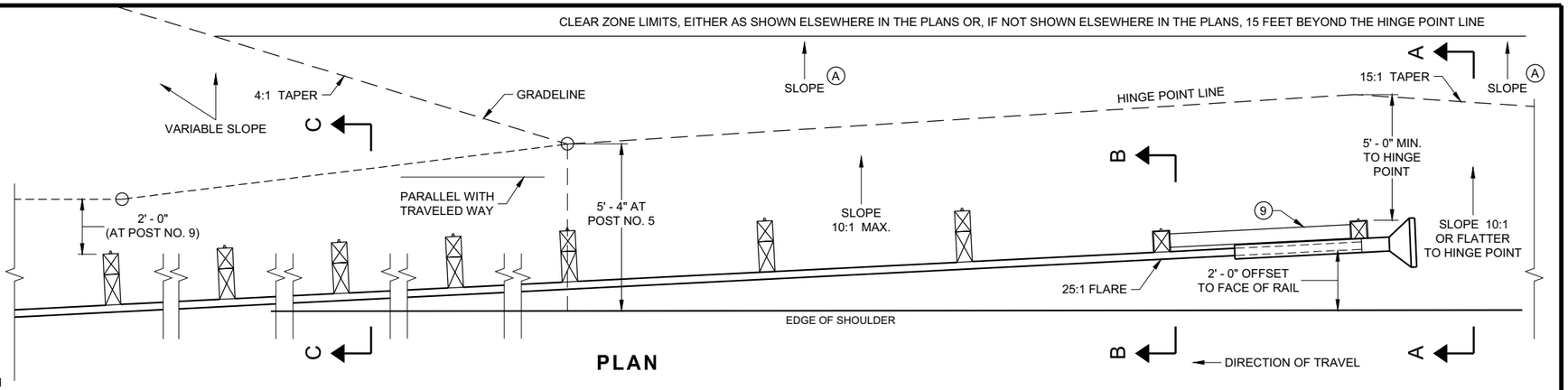
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

SEE MANUFACTURER'S DRAWING FOR SPLICE LOCATION, HARDWARE DIMENSIONS AND INSTALLATION INSTRUCTIONS.

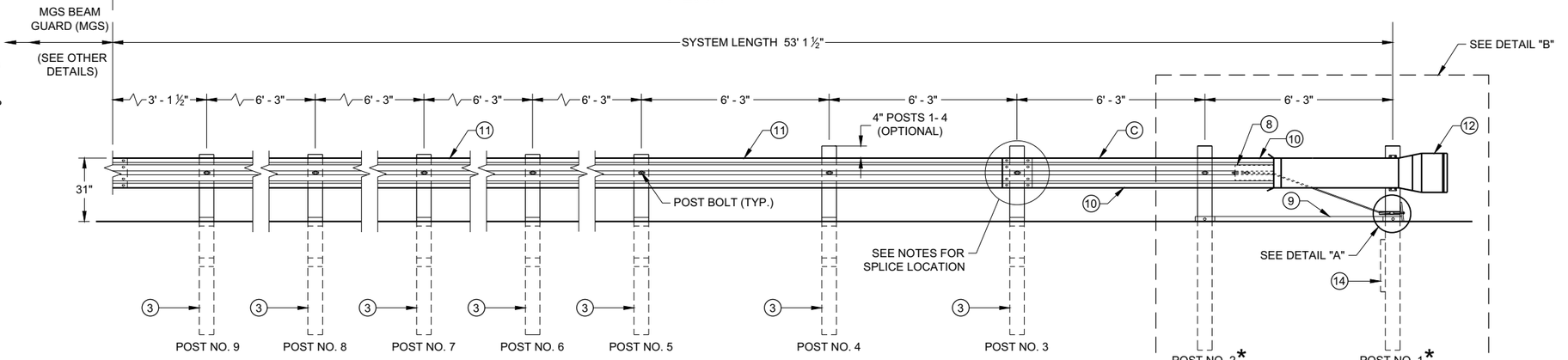
THE CENTER OF THE UPPER 3 ½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE. WOOD BLOCKS ON POSTS NUMBERED 3 THROUGH 9 MAY BE ADJUSTED UP TO 3" ABOVE THE TOP OF POST.



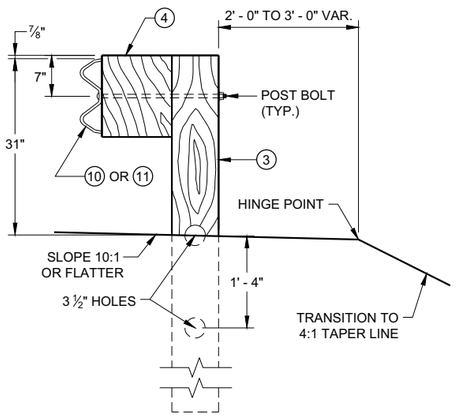
DETAIL "A" (E)



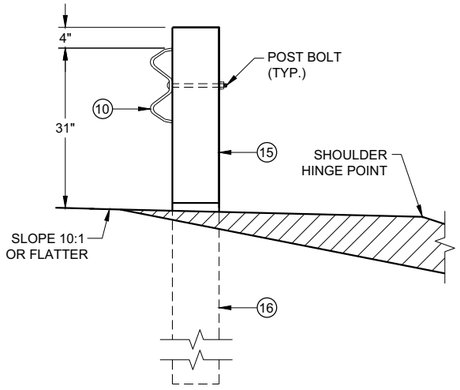
PLAN



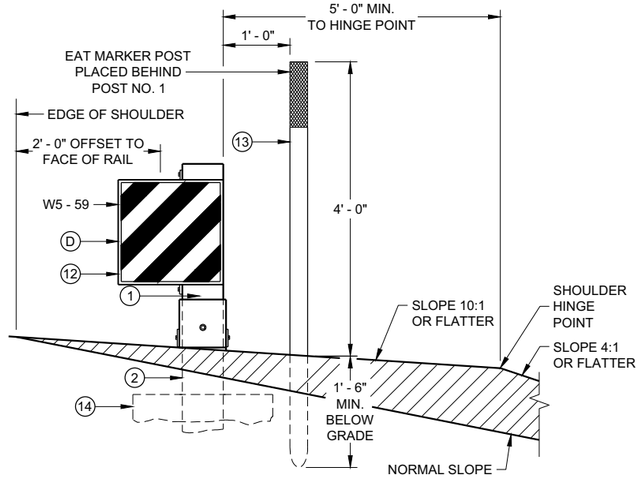
ELEVATION



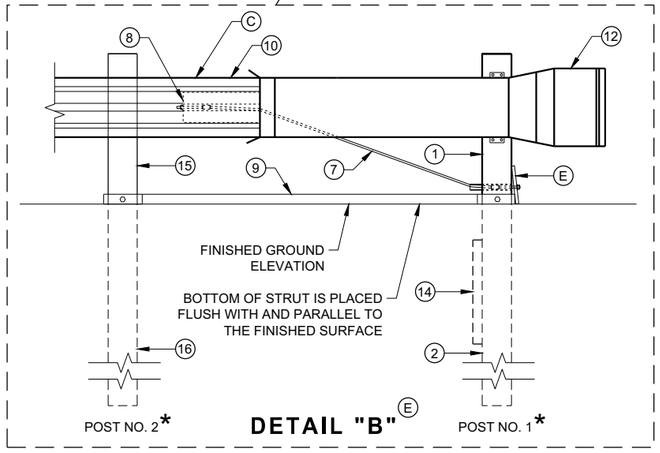
SECTION C - C
TYPICAL AT POST NOS. 3 - 9



SECTION B - B
TYPICAL AT POST NO. 2*



SECTION A - A
TYPICAL AT POST NO. 1*



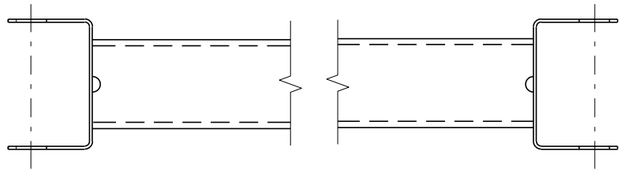
DETAIL "B" (E)

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B44 - 04a

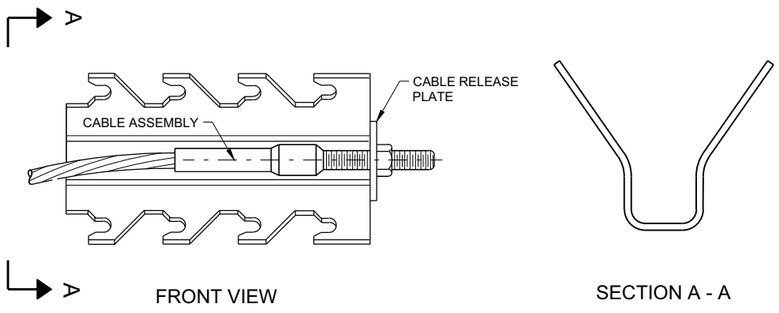
SDD 14B44 - 04a



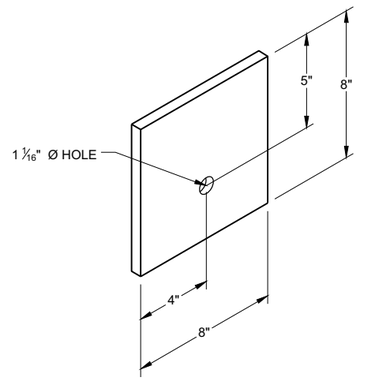
GENERIC GROUND STRUT ⑨ Ⓔ

BILL OF MATERIALS

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



GENERIC ANCHOR CABLE BOX ⑨ Ⓔ



BEARING PLATE ⑥ Ⓔ

6

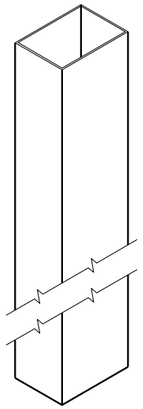
6

SDD 14B44 - 04b

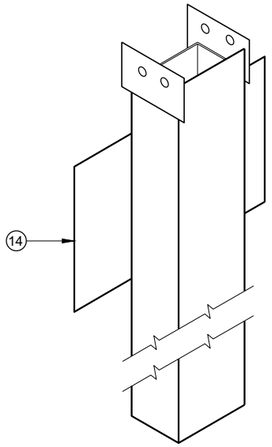
SDD 14B44 - 04b

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

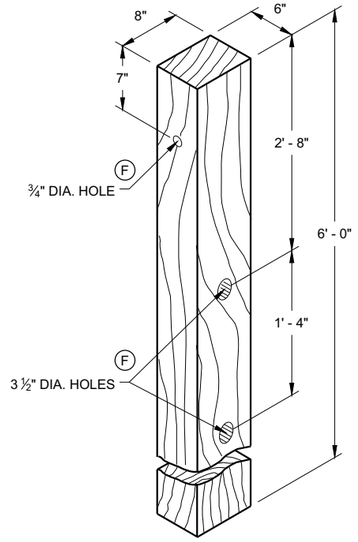
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



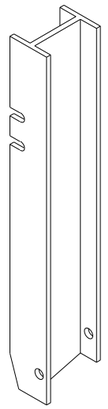
UPPER POST NO. 1 (1) (E)



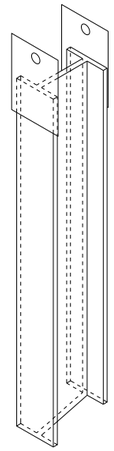
LOWER POST NO. 1 (2) (E)



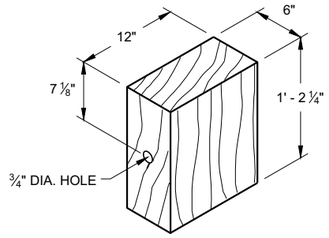
WOOD CRT POST (3) (E)
POSTS NUMBER 3-9



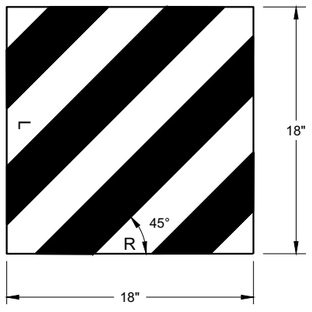
UPPER POST NO. 2 (15) (E)



LOWER POST NO. 2 (16) (E)

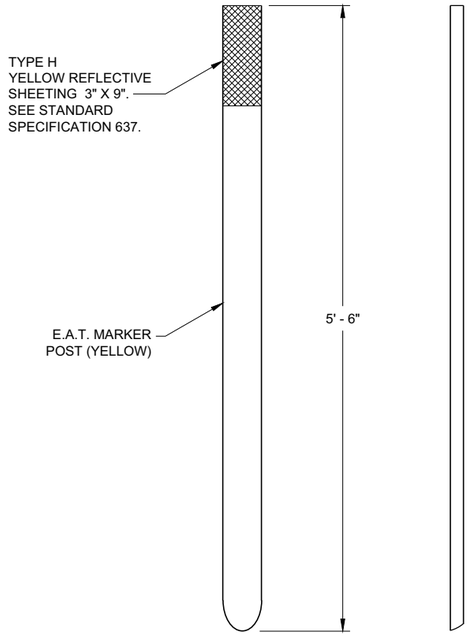


WOOD BLOCKOUT (4)
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



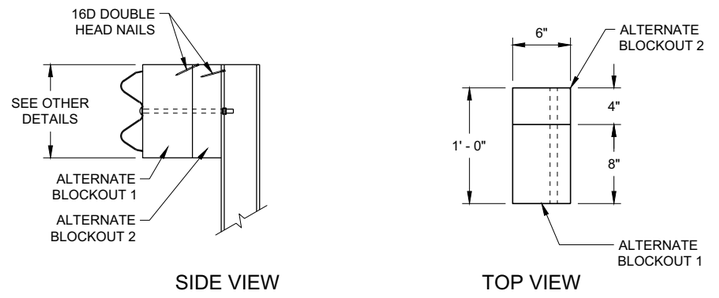
W5 - 59

REFLECTIVE SHEETING DETAIL (E)



FRONT VIEW SIDE VIEW

E.A.T. MARKER POST (13)



SIDE VIEW TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

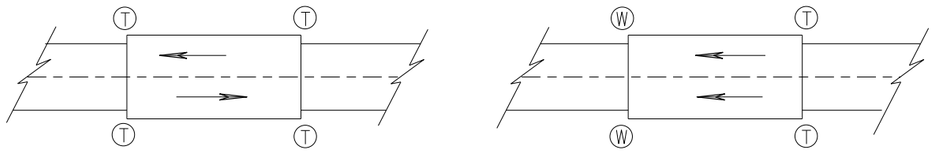
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

6

SDD 14B44 - 04c



TWO WAY TRAFFIC

ONE WAY TRAFFIC

(T) THRIE BEAM CONNECTION

(W) W-BEAM CONNECTION WHEN REQUIRED

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

GENERAL NOTES

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

TRANSITION USES STEEL POSTS ONLY.

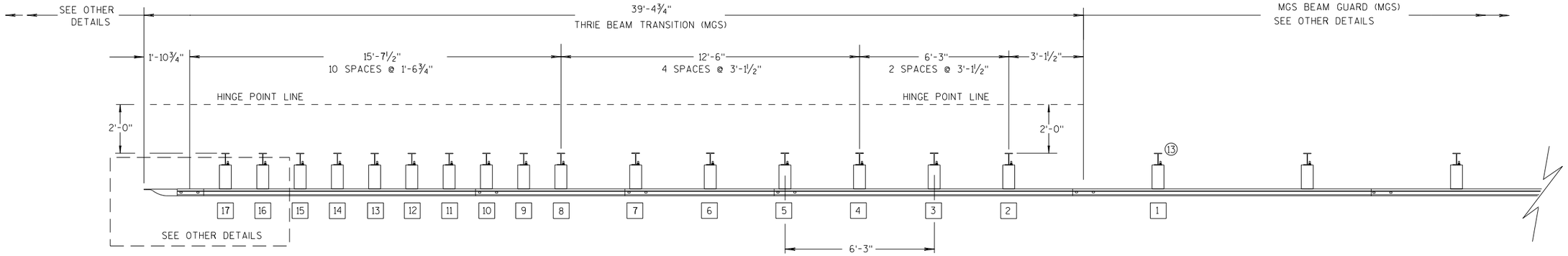
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

POST 2 THROUGH 17 USES STEEL POST ONLY

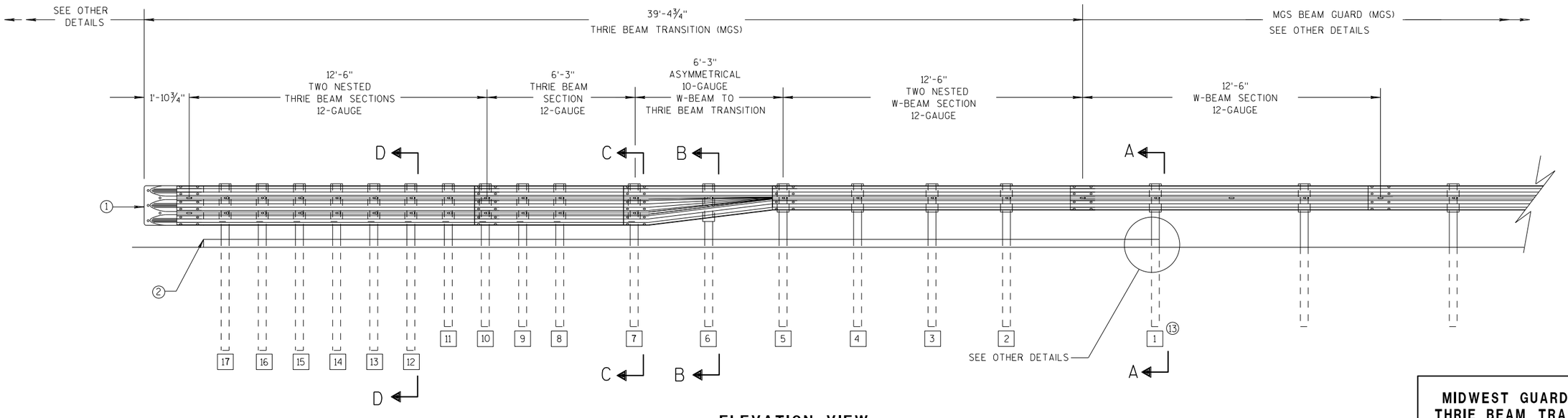
(1) BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.

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

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



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

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

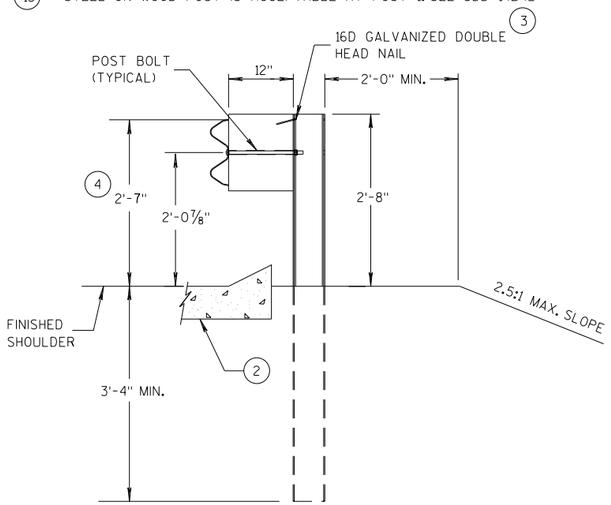
GENERAL NOTES

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

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

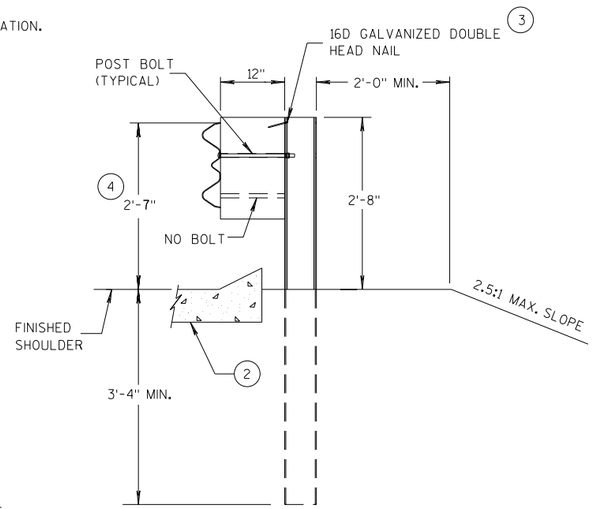
(4) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".

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



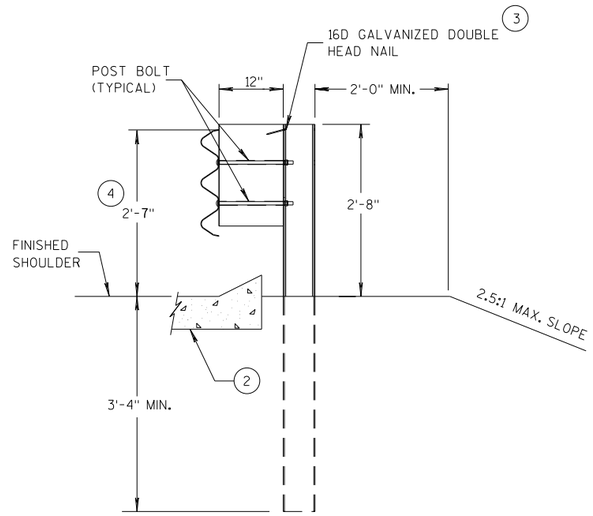
SECTION A-A (13)

POSTS 1-5



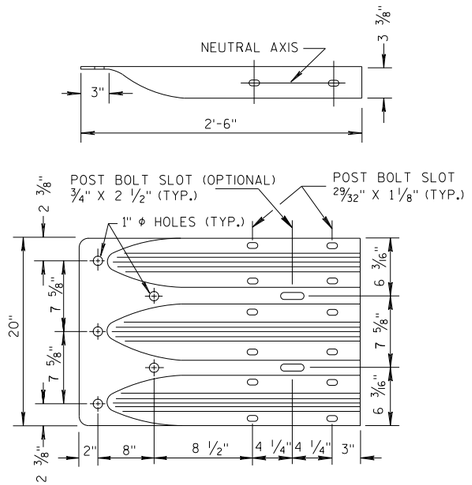
SECTION B-B

POST 6

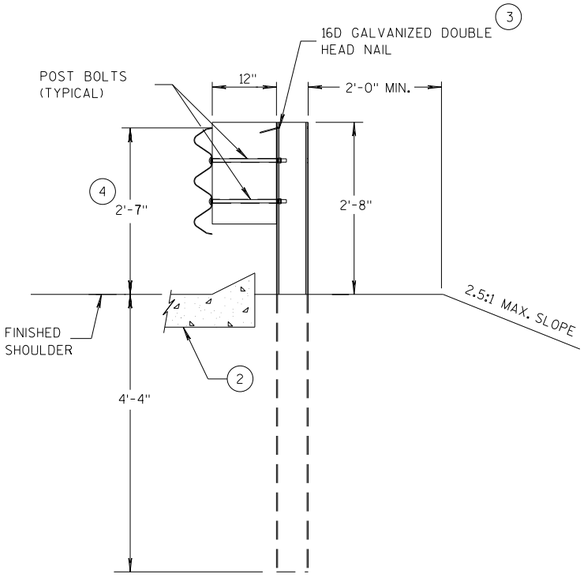


SECTION C-C

POSTS 7-11

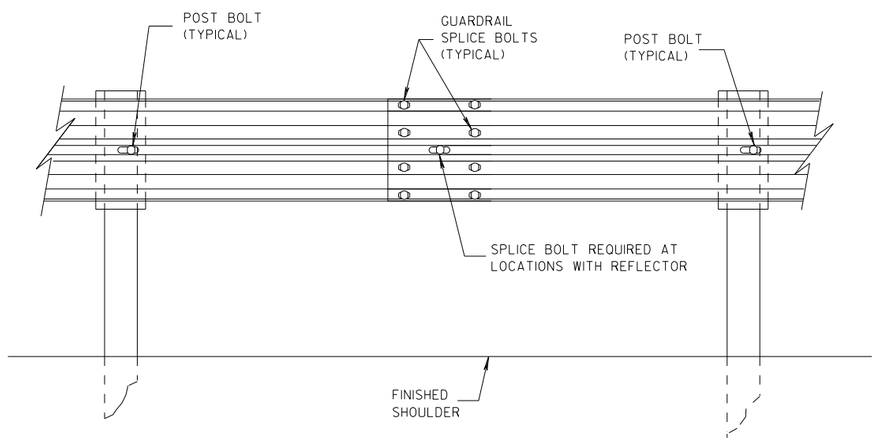


THRIE BEAM TERMINAL CONNECTOR



SECTION D-D

POSTS 12-17



SPLICE DETAIL

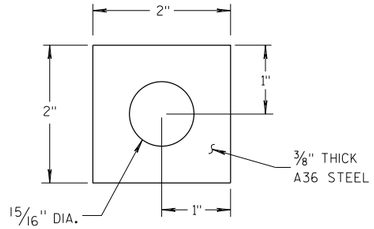
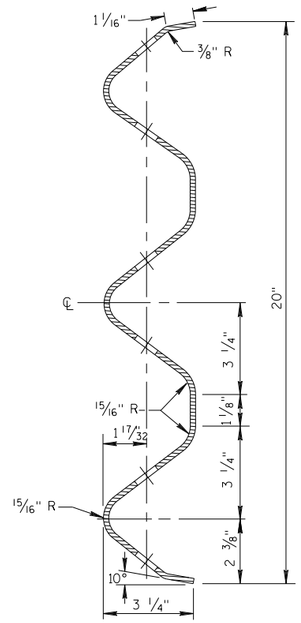


PLATE WASHER DETAIL



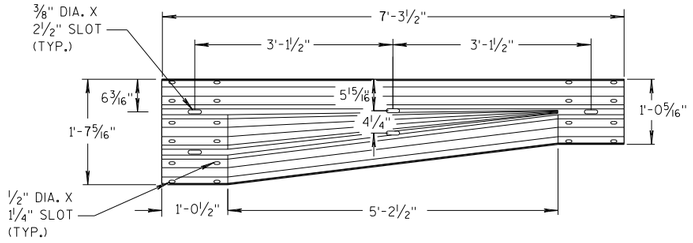
SECTION THRU THRIE BEAM RAIL ELEMENT

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

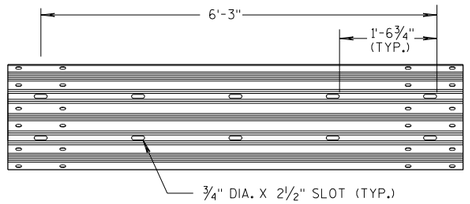
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOF

6

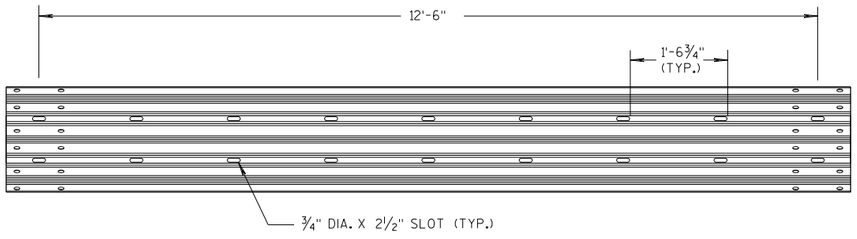
S.D.D. 14 B 45-5b



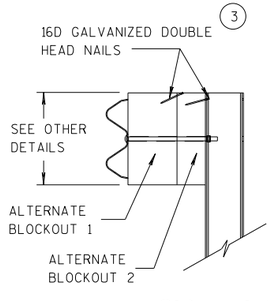
W-BEAM TO THRIE BEAM TRANSITION SECTION



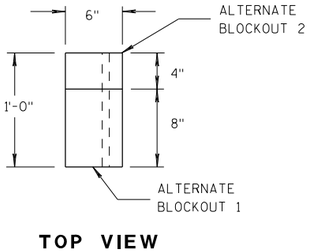
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

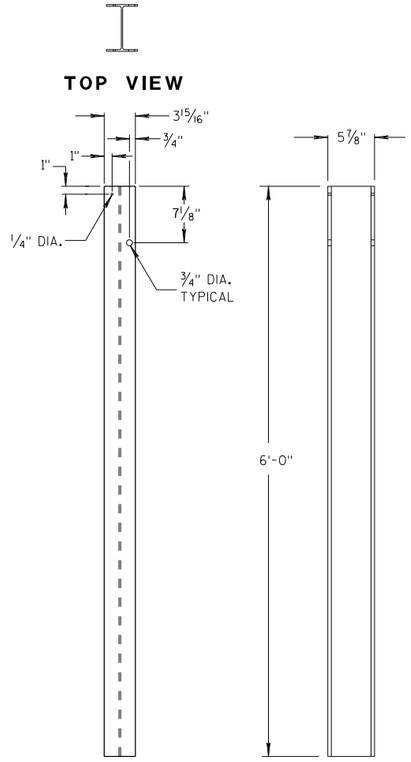


SIDE VIEW



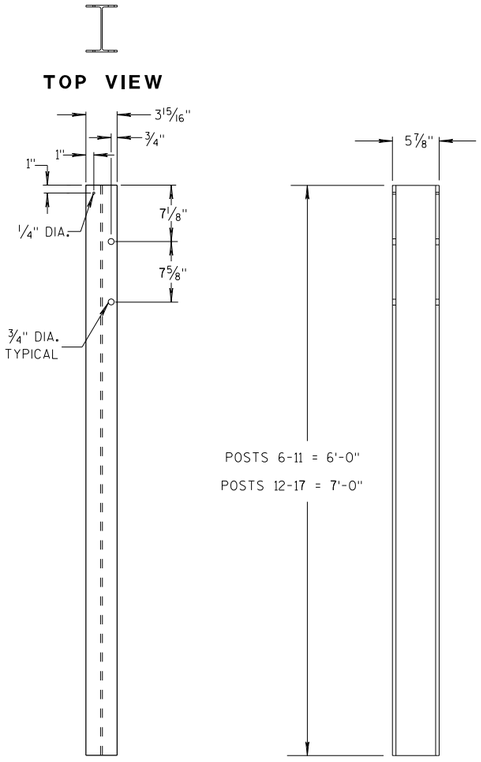
TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL



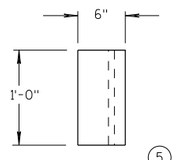
FRONT VIEW SIDE VIEW

STEEL POSTS 1-5 (13)

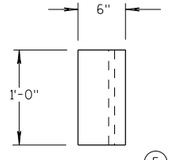


FRONT VIEW SIDE VIEW

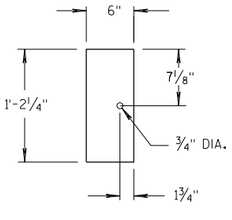
STEEL POSTS 6-17



TOP VIEW (5)

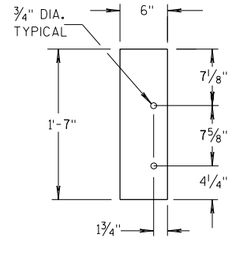


TOP VIEW (5)



FRONT VIEW

BLOCKOUT POSTS 1-5



FRONT VIEW

BLOCKOUT POSTS 6-17

GENERAL NOTES

STEEL POSTS ARE W6X9 OR W6X8.5.

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

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

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

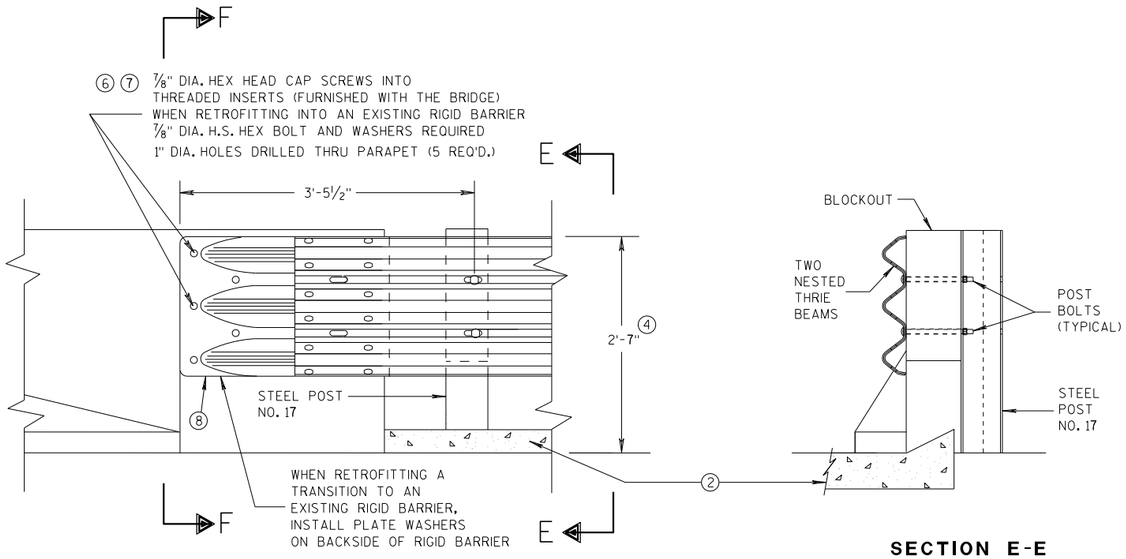
(13) STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD 14B42.

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

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



FRONT VIEW

SECTION E-E

THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS

GENERAL NOTES

THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSTION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.

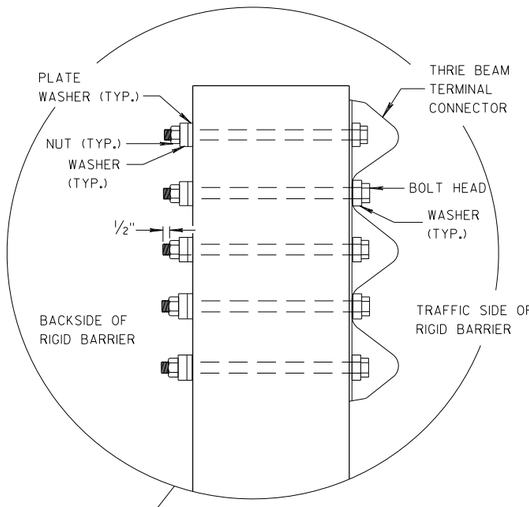
② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

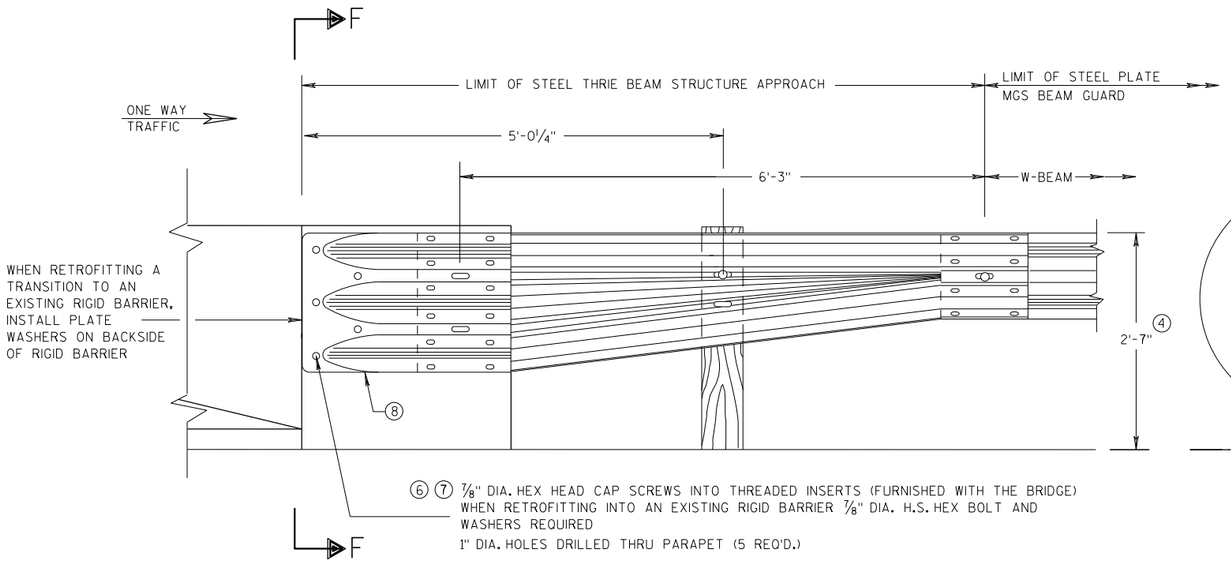
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

⑥ DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

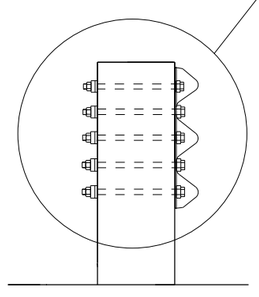
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/32" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

⑧ THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2".

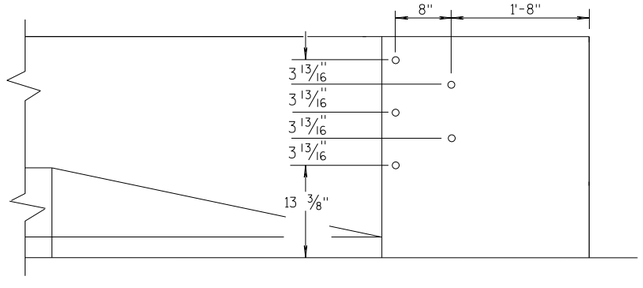




FRONT VIEW



SECTION F-F



DRILL HOLE LOCATION

W BEAM TRANSITION AND CONNECTION TO BRIDGE PARAPETS WITH SQUARE ENDS

(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

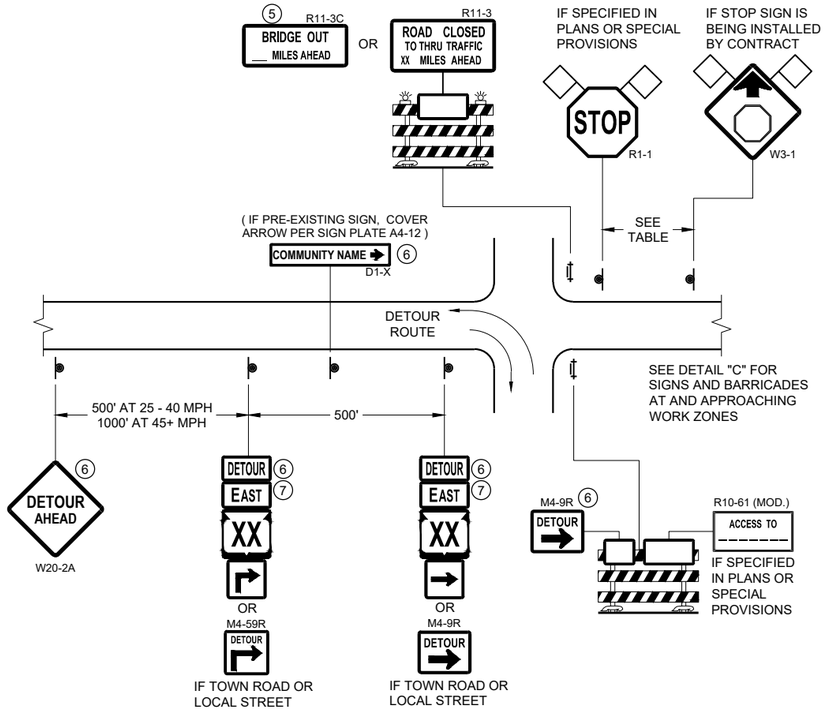
APPROVED
07/2018 DATE
/S/ Rodney Taylor
ROADWAY STANDARDS D UNIT SUPERVI
NT
FHWA

6

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

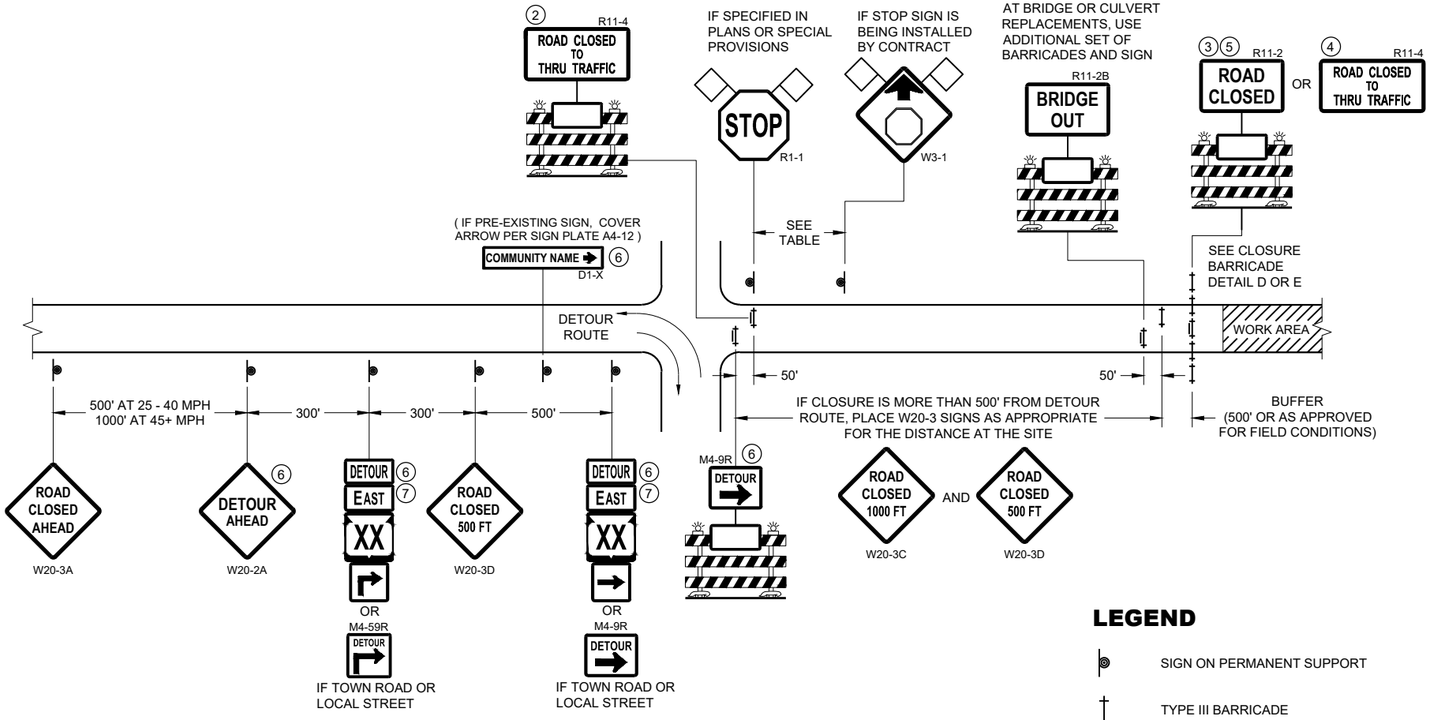
6

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



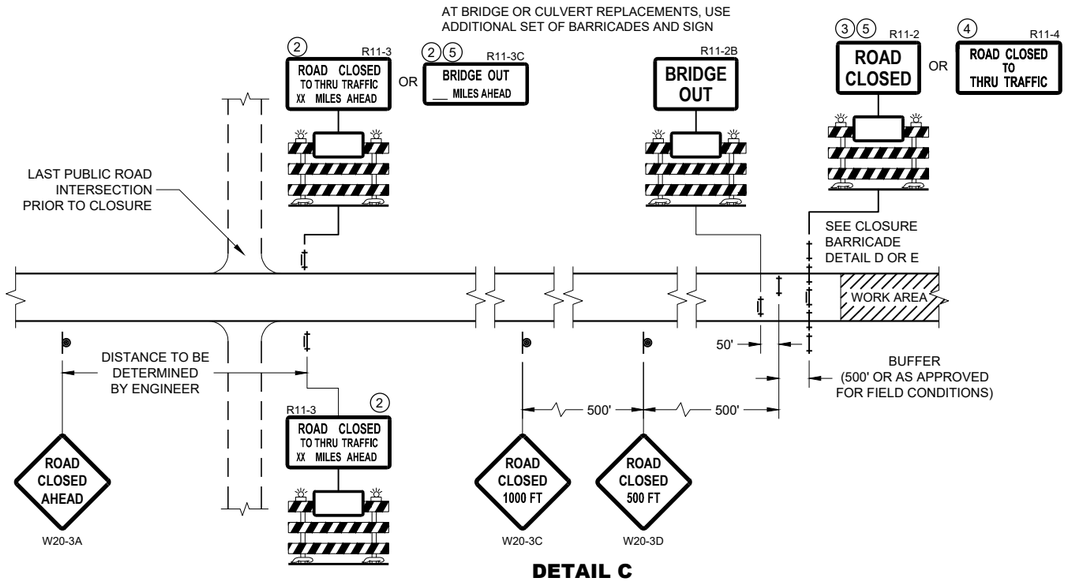
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

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

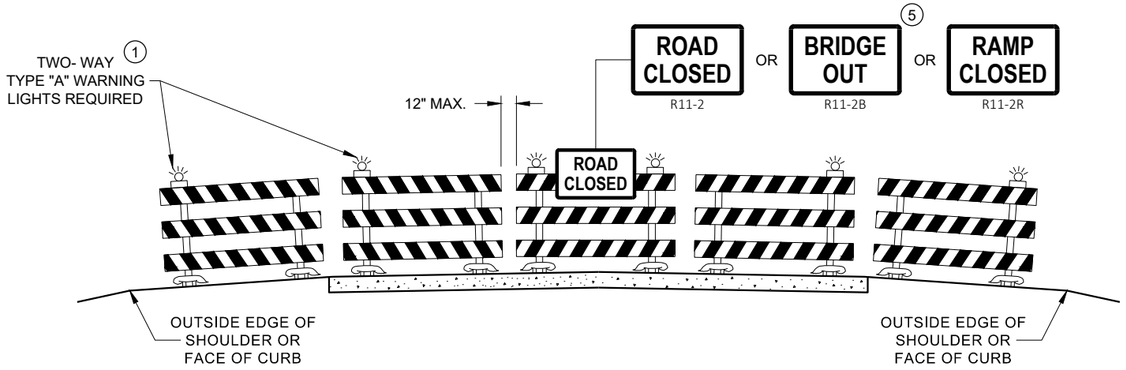
APPROVED
May 2023
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

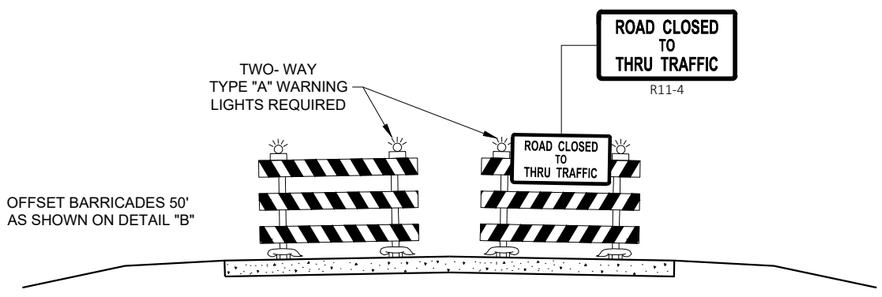
6

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

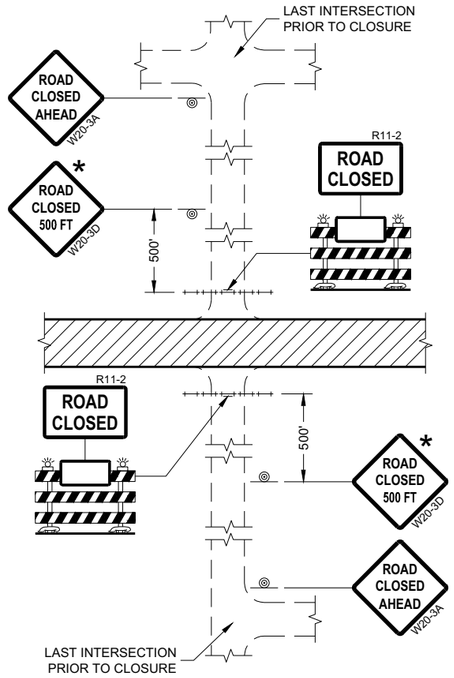
APPROVED
May 2023 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINEER
FHWA

6

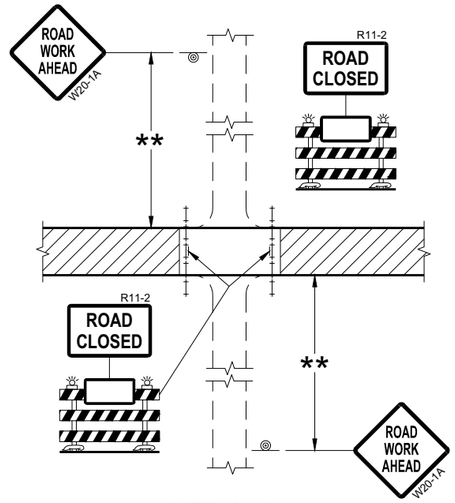
SDD 15C02 - 09b

6

SDD 15C02 - 09b



DETAIL 1
(NO ACCESS TO PROJECT)



DETAIL 2
(PUBLIC CROSS-TRAFFIC MAINTAINED.
NO ACCESS TO PROJECT)

GENERAL NOTES

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

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

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

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

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

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

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

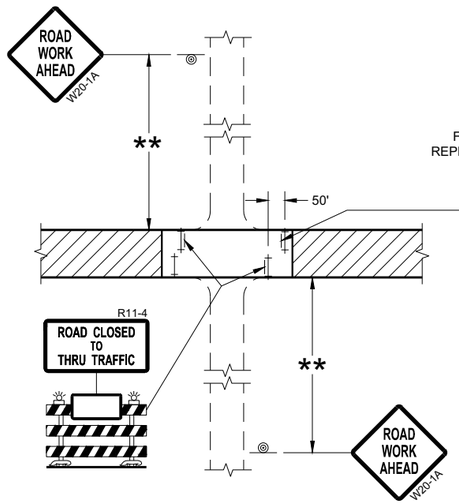
TYPE "A" LOW-INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

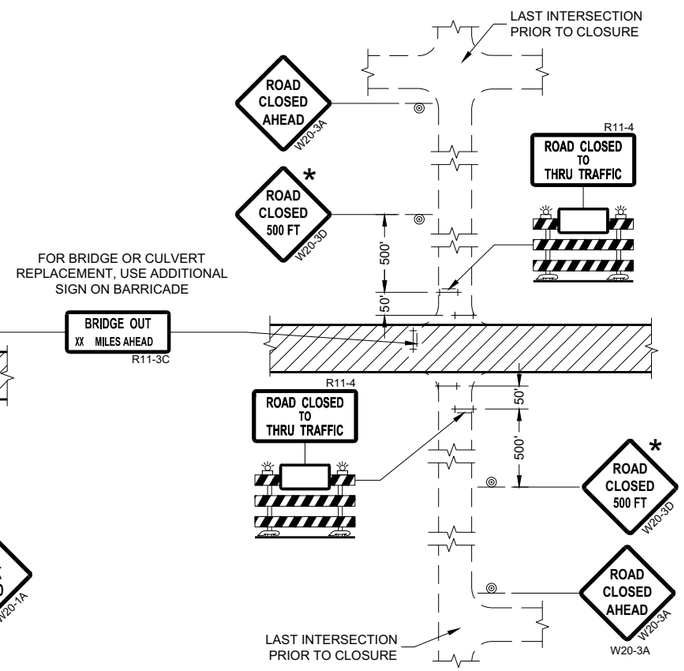
THE R11-2, R11-3, AND R11-4 SIGNS PLACED ON BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE OR BOTTOM RAILS.

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
R11-2 SHALL BE 48" X 30".
R11-4 AND R11-3 SHALL BE 60" X 30".

* OMIT THE "ROAD CLOSED 500 FT." SIGN IF THE LAST INTERSECTION IS 500 FEET OR LESS FROM THE WORK ZONE.

** 500' MAX. OR AT LAST INTERSECTION, WHICHEVER IS CLOSEST.





DETAIL 3
(PUBLIC CROSS-TRAFFIC MAINTAINED.
CONTRACTOR, LOCAL BUSINESS AND
RESIDENT ACCESS TO PROJECT)

DETAIL 4
(CONTRACTOR, LOCAL BUSINESS AND
RESIDENT ACCESS TO PROJECT)

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA

BARRICADES AND SIGNS FOR SIDEROAD CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2018
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6
SDD 15C03 - 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.

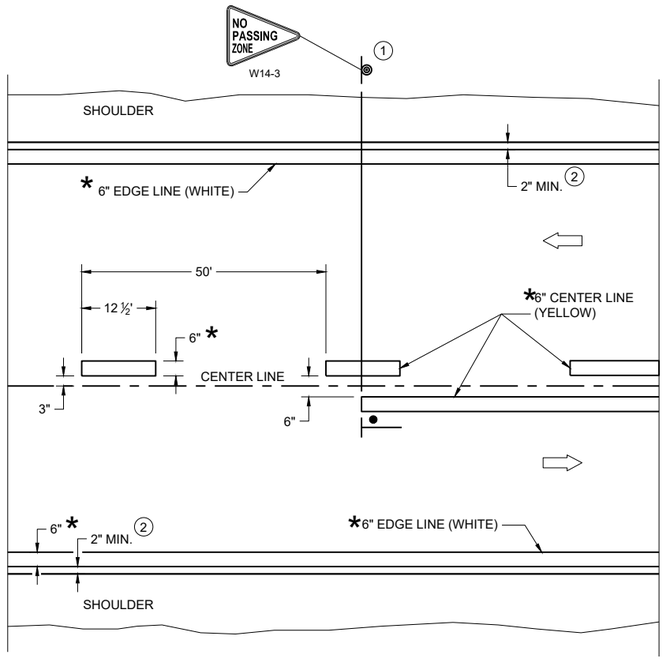
LEGEND

"T" MARKING

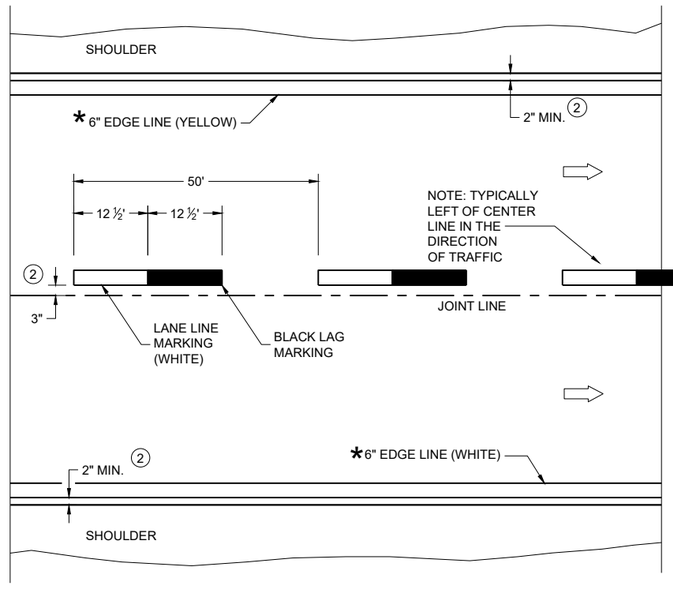
SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC

*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

PERMANENT LONGITUDINAL PAVEMENT MARKINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE

/S/ Jeannie Silver
Statewide Pavement Marking Engineer

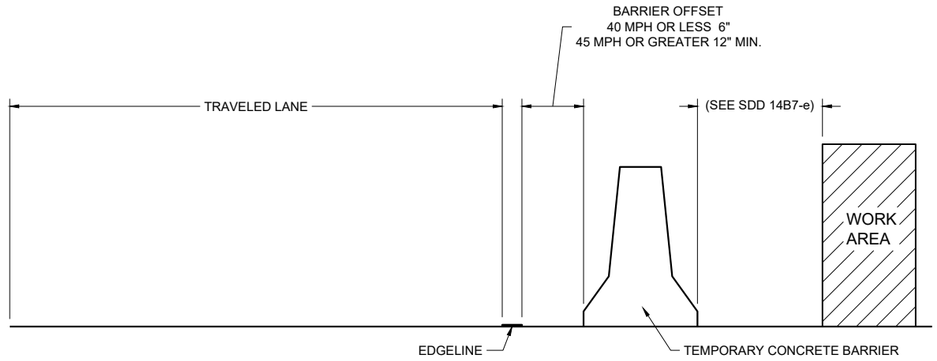
FHWA

6

SDD 15C08-23a

6

SDD 15C08-23a



TEMPORARY BARRIER OFFSET FROM EDGELINE

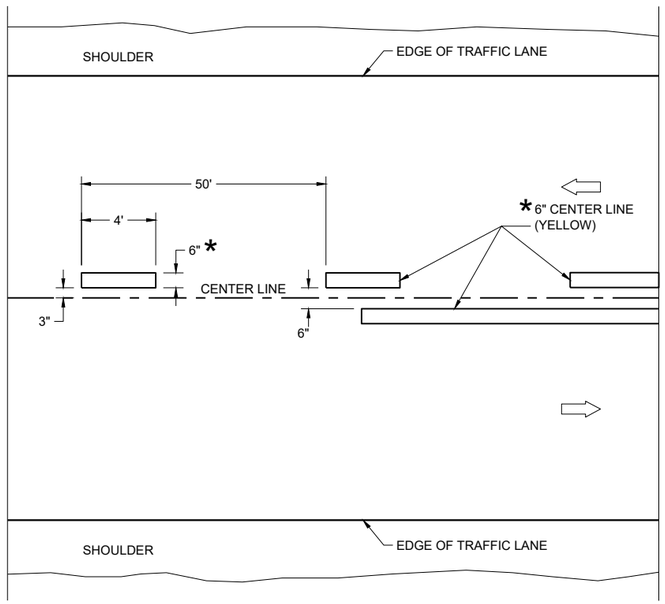
GENERAL NOTES

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

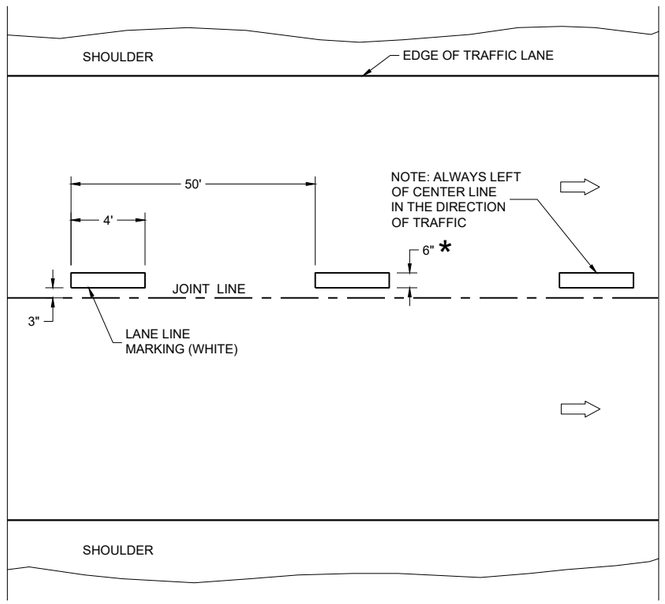
LEGEND

DIRECTION OF TRAFFIC

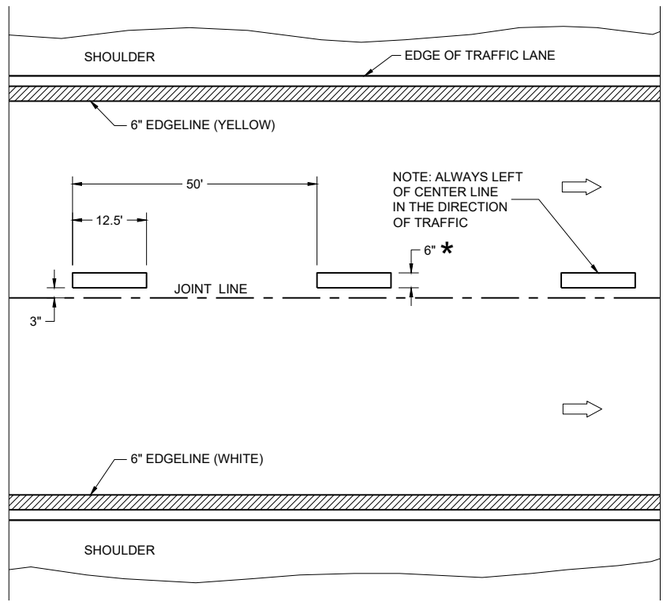
*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



TWO WAY TRAFFIC



ONE WAY TRAFFIC



FREEWAYS AND EXPRESSWAYS

TEMPORARY PAVEMENT MARKING

TEMPORARY LONGITUDINAL PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 — DATE
/S/ Jeannie Silver — Statewide Pavement Marking Engineer
FHWA

6

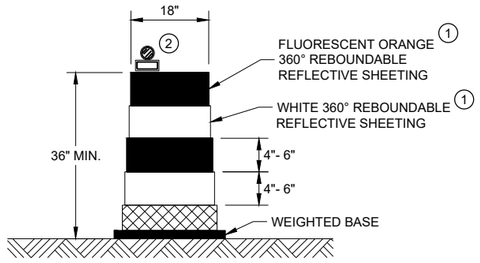
SDD 15C08-23b

6

SDD 15C08-23b

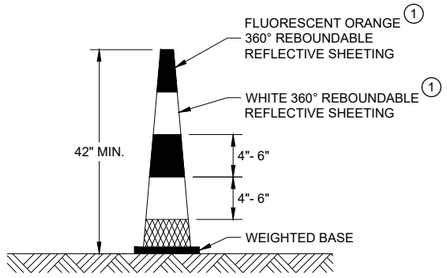
GENERAL NOTES

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



DRUM

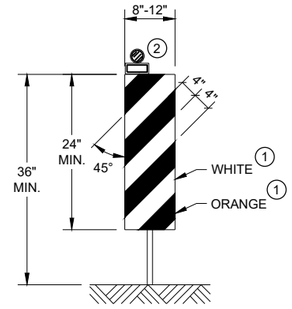
BALLAST WIDTHS
RANGE FROM 24"-36"



42" CONE

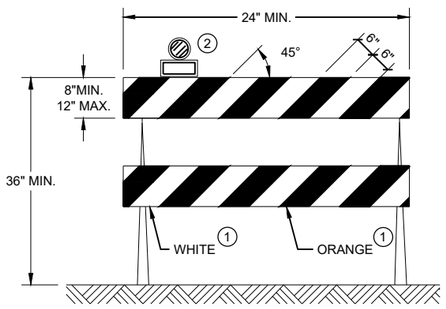
DO NOT USE IN TAPERS
½ SPACING OF DRUMS

BALLAST WIDTHS
RANGE FROM 14"-20"



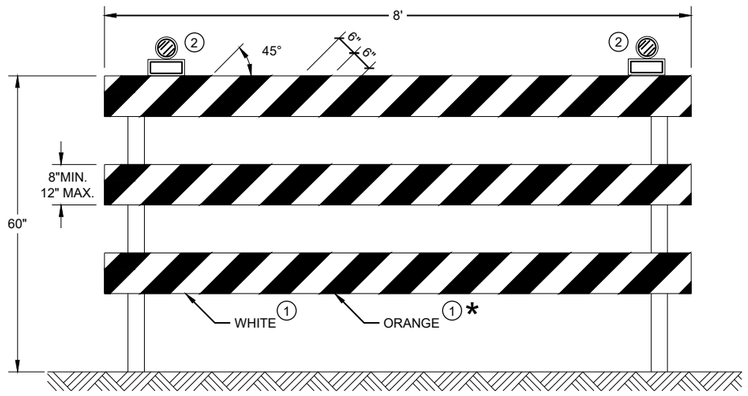
VERTICAL PANEL

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



TYPE II BARRICADE

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



TYPE III BARRICADE

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

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2022
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15C11 - 10b

6

SDD 15C11 - 10b

LEGEND

SIGN ON PORTABLE OR PERMANENT SUPPORT

TEMPORARY PORTABLE RUMBLE STRIP ARRAY

DIRECTION OF TRAFFIC

WORK AREA

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

GENERAL NOTES

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

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

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

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

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

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

FLAGGING

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

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

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

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

TEMPORARY PORTABLE RUMBLE STRIPS

UTILIZE TEMPORARY PORTABLE RUMBLE STRIPS ON ALL FLAGGING OPERATIONS.

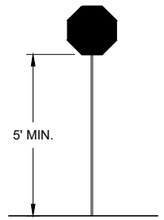
(3) EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS PLACED TRANSVERSE ACROSS THE LANE AT THE LOCATIONS SHOWN. WITHIN EACH ARRAY, SPACING BETWEEN RUMBLE STRIPS SHALL BE 15 FEET ON CENTER

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

INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS.

PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.

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



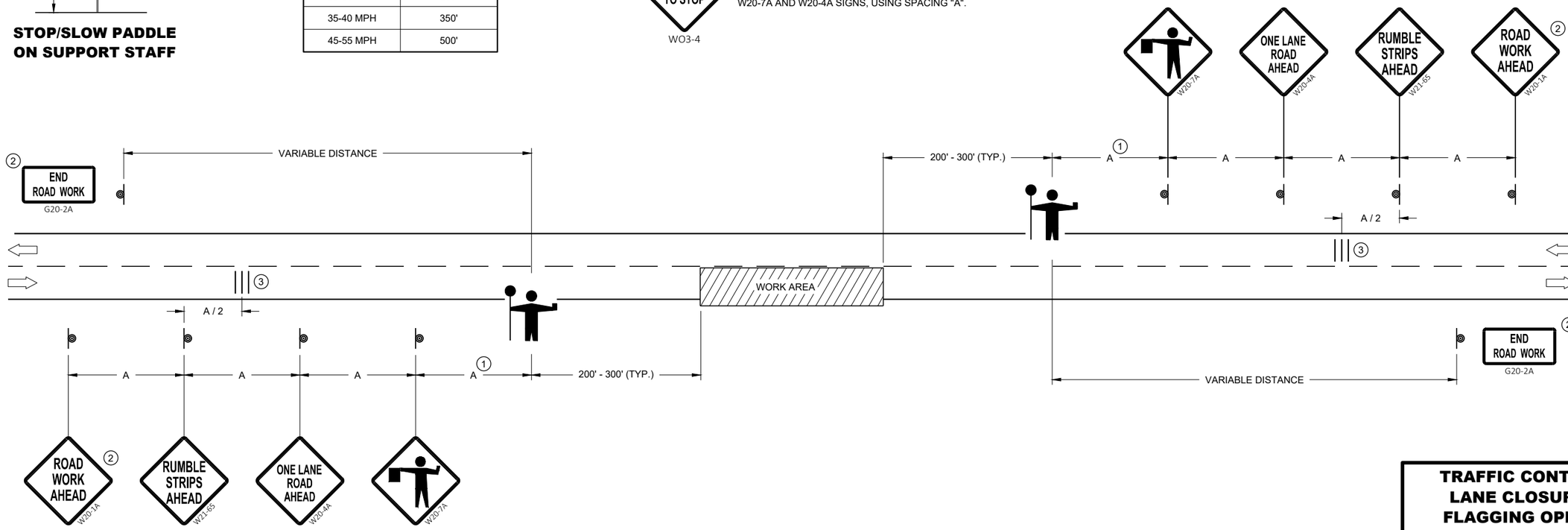
STOP/SLOW PADDLE ON SUPPORT STAFF

SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

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

WO3-4

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



TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2022
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15C12 - 09a

6

SDD 15C12 - 09a

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 UPRIGHTS ORIENTED PARALLEL TO AND DOWNSTREAM FROM TRAFFIC.

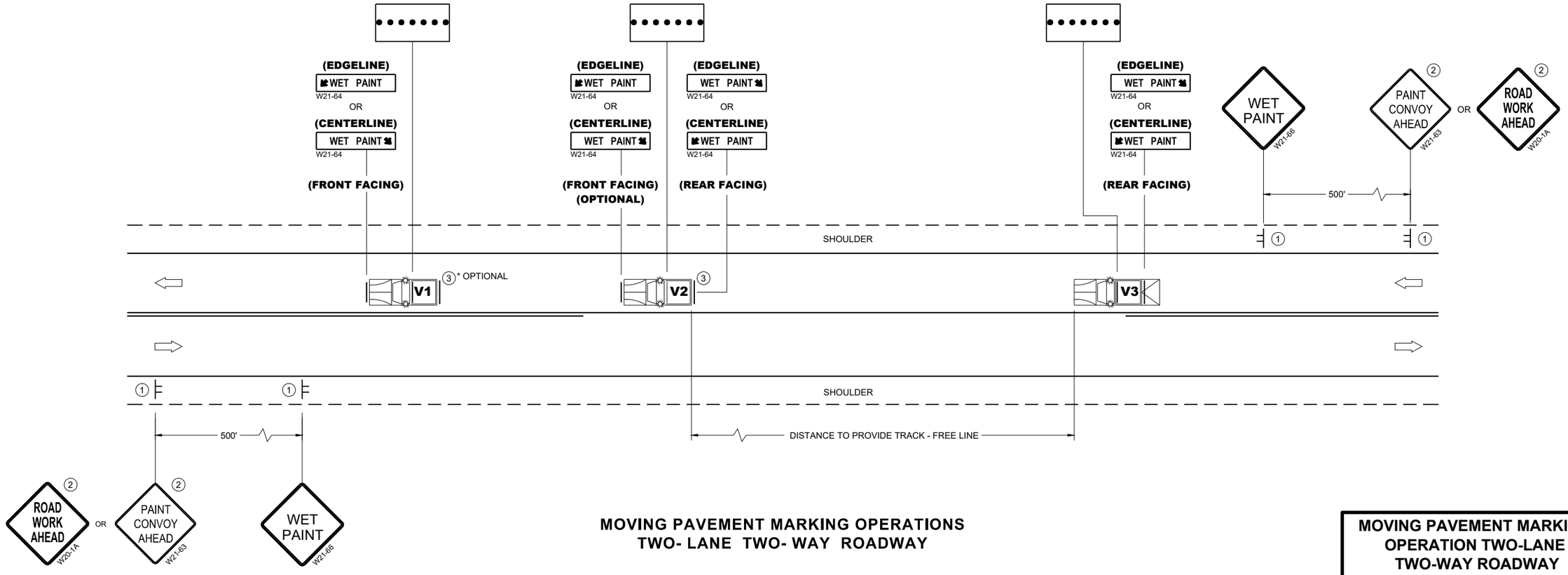
CONES SHOULD BE USED BETWEEN THE MARKING AND SHADOW VEHICLE AT 100 FOOT SPACING. CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.

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

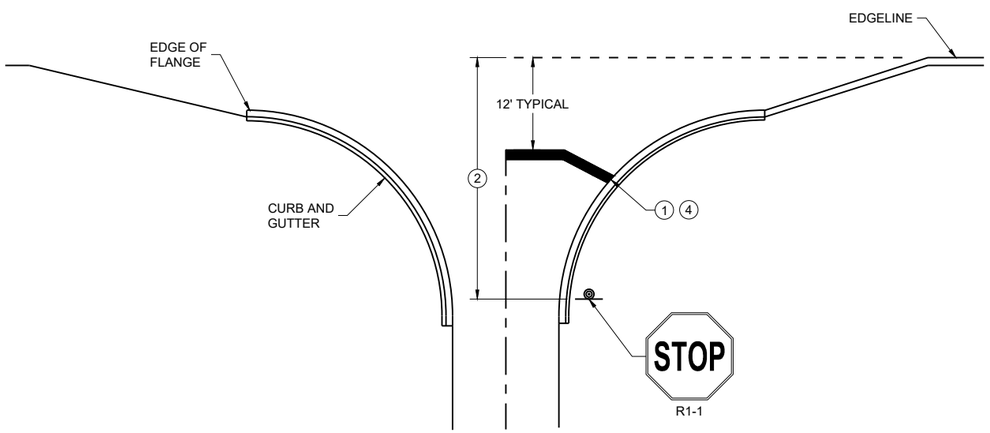
APPROVED
March 2024
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEER
FHWA

6
SDD 15C19-9a

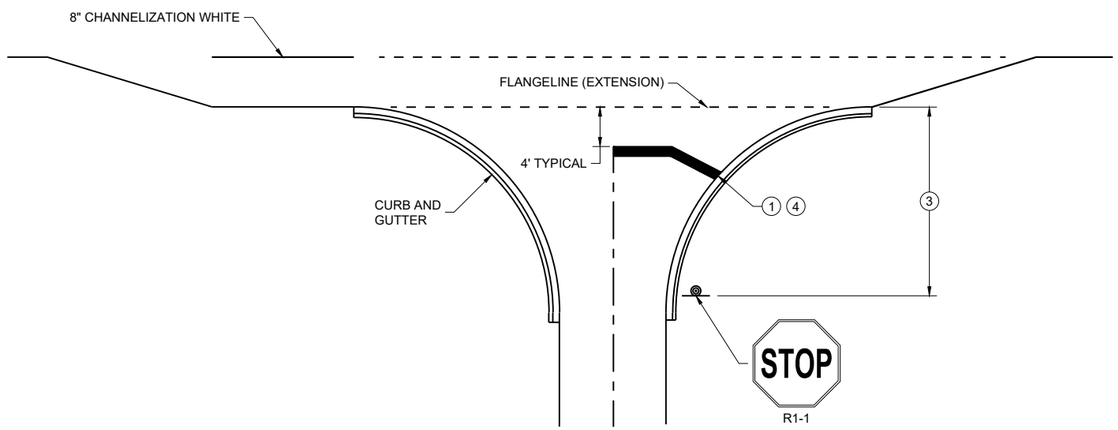
GENERAL NOTES

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

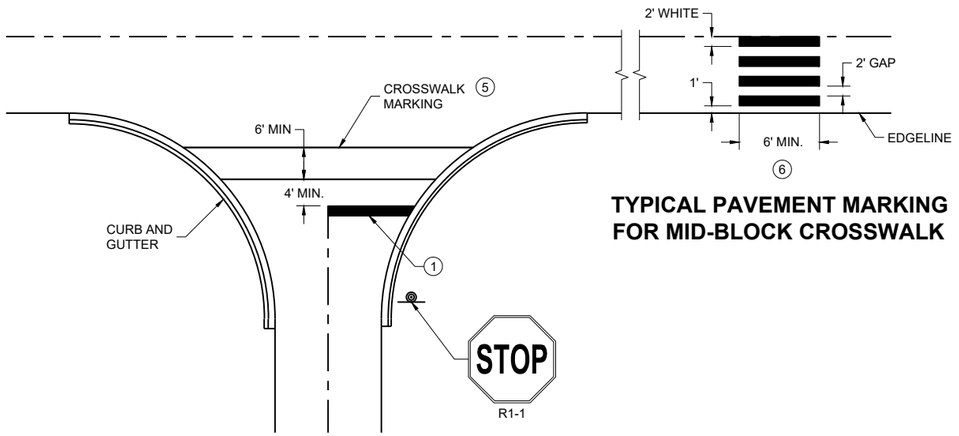
1. 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE REGION MARKING ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
2. NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE.
3. NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGE LINE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



TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER

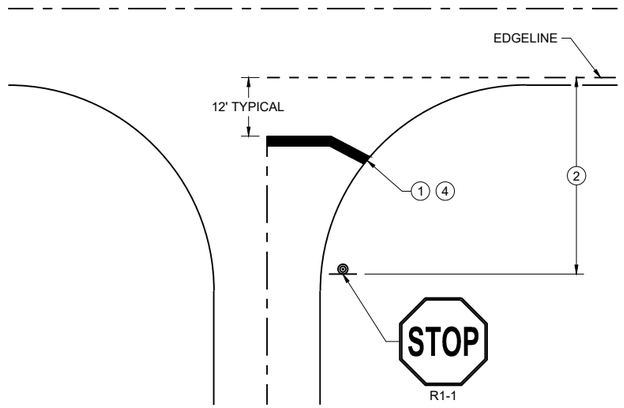


TYPICAL STOP LINE PAVEMENT MARKING FOR SIDE ROADS WITH RIGHT TURN LANE



TYPICAL PAVEMENT MARKING FOR MID-BLOCK CROSSWALK (5)

TYPICAL STOP LINE PAVEMENT MARKING FOR SIDE ROADS WITH CROSSWALK MARKING



TYPICAL STOP LINE PAVEMENT MARKING WITHOUT CURB AND GUTTER

STOP LINE AND CROSSWALK PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

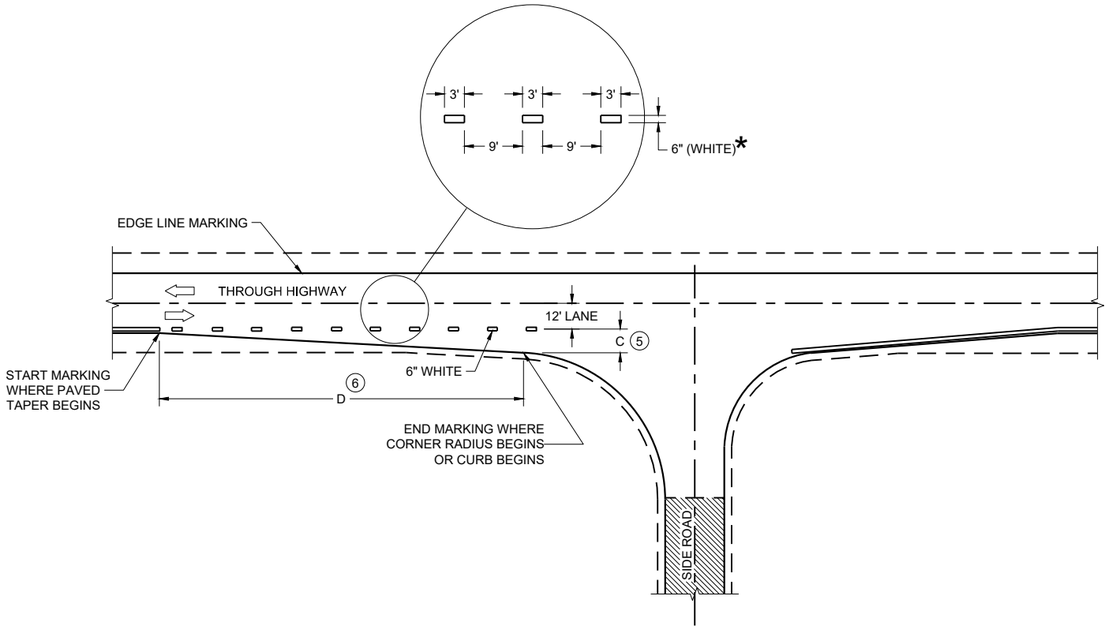
March 2024 — DATE

/S/ Matthew Rauch — STATE SIGNING AND MARKING ENGINEER

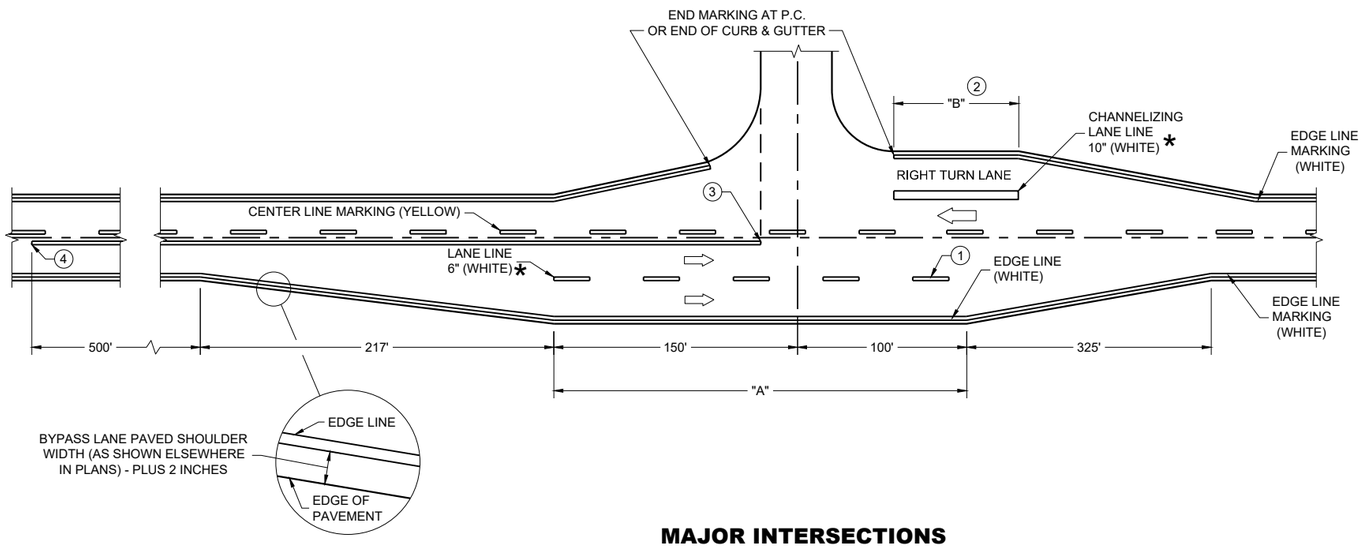
FHWA

6

SDD 15C33-05



MINOR INTERSECTION



MAJOR INTERSECTIONS

(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANE)

*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

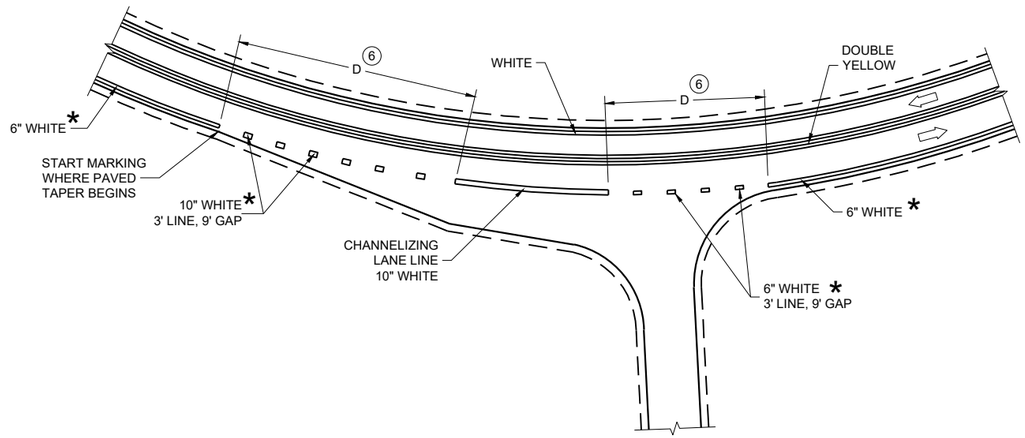
GENERAL NOTES

OMIT EDGE LINES THROUGH INTERSECTIONS. CONTINUE EDGE LINES THROUGH DRIVEWAYS.

1. WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.
2. WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.
3. BARRIER LINE ENDS AT SIDE ROAD PAVEMENT / SURFACE EDGE EXTENSION.
4. BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.
5. WHEN DISTANCE "C" IS LESS THAN 4 FEET, OMIT DOTTED EXTENSION.
6. WHEN DISTANCE "D" IS LESS THAN 50 FEET, OMIT DOTTED EXTENSION.

LEGEND

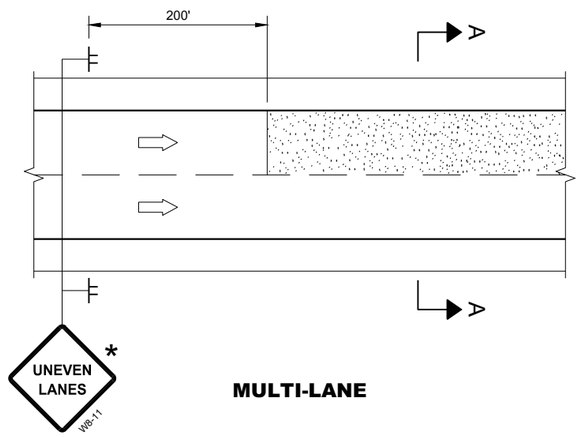
DIRECTION OF TRAVEL



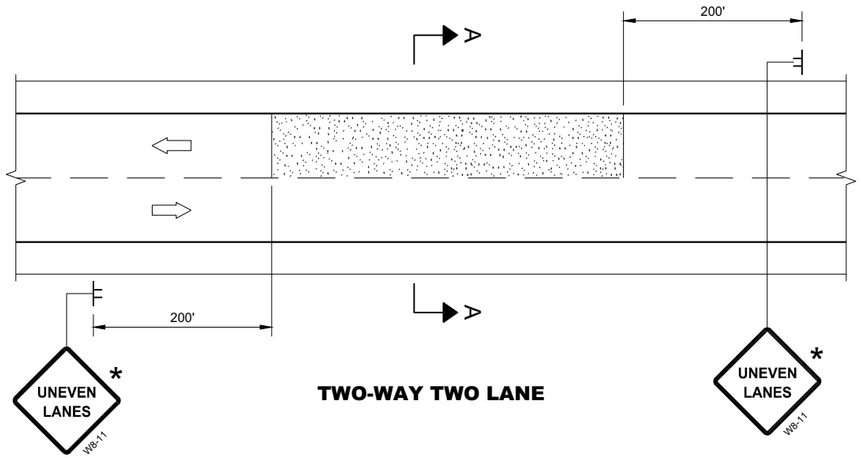
INTERSECTION ON OUTSIDE OF CURVE

PAVEMENT MARKING (INTERSECTIONS)

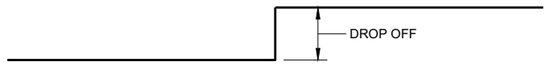
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



MULTI-LANE

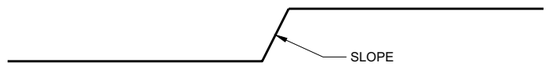


TWO-WAY TWO LANE

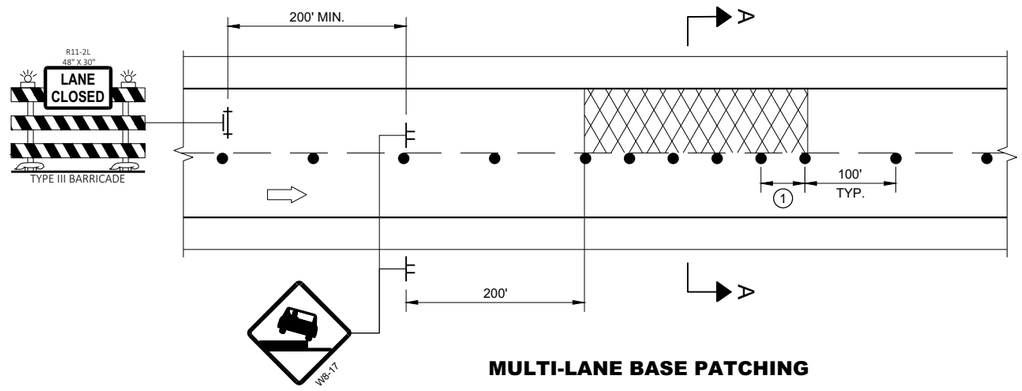


SECTION A - A

OR

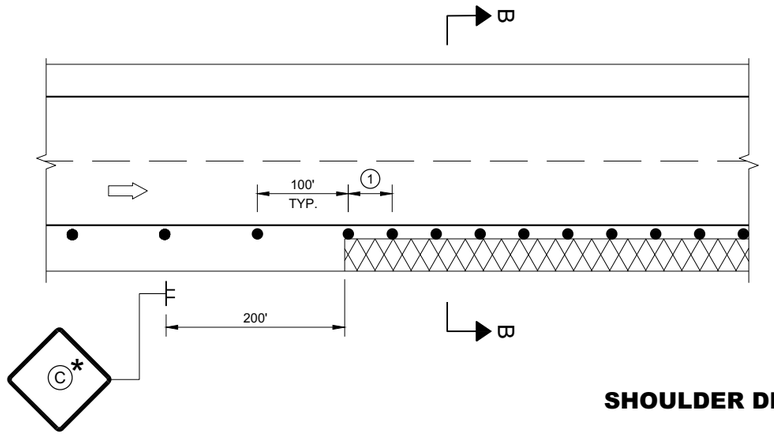


SECTION A - A

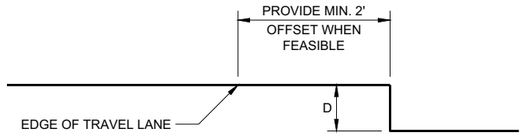


MULTI-LANE BASE PATCHING

ADJACENT LANE DROP-OFFS



SHOULDER DROP-OFFS



SECTION B - B

D	SIGN (C)
< 2" WITH A SLOPE STEEPER THAN 3:1	LOW SHOULDER WO8-9
2" < 6" WITH A SLOPE STEEPER THAN 3:1	SHOULDER DROP - OFF W8-9A PROVIDE A 3:1 OR FLATTER SLOPE OF MATERIAL ADJACENT TO THE PAVEMENT

GENERAL NOTES

FOR SPOT LOCATIONS USE ENGINEERING JUDGEMENT WHEN PLACING ADDITIONAL SIGNS.

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

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

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

* IF THE DROP-OFF IS CONTINUOUS ALONG THE PROJECT, PLACE ADDITIONAL SIGNS EVERY 1 MILE AND AFTER EVERY ENTRANCE RAMP.

(1) USE CLOSER SPACING WHEN DELINEATING DROP-OFF.

LEGEND

- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC
- WORK AREA WITH DROP-OFF
- MILLED SURFACE

TRAFFIC CONTROL, DROP-OFF SIGNING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINEE

FHWA

6

SDD 15D39 - 02

GENERAL NOTES

DRAWING NOT TO SCALE. ALL SIGNS AND POSTS ON THIS SHEET SHALL BE PAID FOR WITH 'TRAFFIC CONTROL SIGNS' BID ITEM. ALL SIDE ROADS WHICH ARE UNDER CONSTRUCTION OF CURB AND GUTTER AND/OR GRADING SHALL BE ADEQUATELY SIGNED.

ALL SIGNS AND DEVICES SHALL BE IN CONFORMANCE WITH THE WISCONSIN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (WMUTCD). SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE WISDOT STANDARD SIGN PLATES.

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

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

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

ALL SIGNS INAPPROPRIATE TO THE STATUS OF THE CONTROL ZONE, INCLUDING PRE-EXISTING SIGNS IN THE VICINITY, SHALL BE COVERED OR REMOVED AS DIRECTED BY THE ENGINEER.

SEE 15C34 FOR ADDITIONAL TRAFFIC CONTROL SIGNING WHEN CENTERLINE PAVEMENT MAKINGS ARE MISSING. 'DO NOT PASS' SIGNS MUST BE INSTALLED ON THE SAME DAY AS MILLING OPERATIONS.

(1) PLACE SIGNS 350' IN ADVANCE OF CHIP SEALED OR LOOSE GRAVEL SURFACES AND AT 1 MILE INTERVALS, OR AS DIRECTED BY THE ENGINEER.

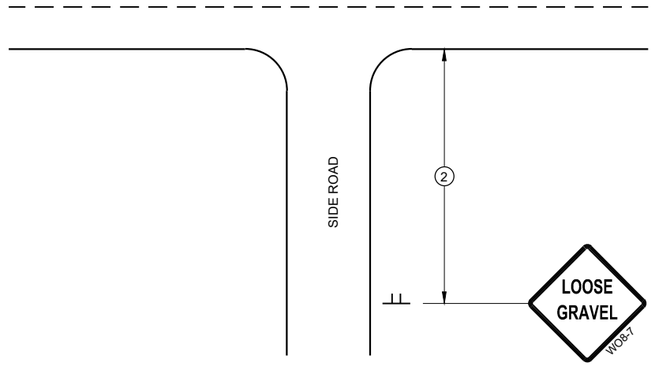
(2) PLACE SIGN 200' MIN. FROM INTERSECTION AND 200' MIN. AFTER ADVANCE WARNING SIGN SHOWN IN SDD 15C04.

(3) ADD WO8-1 OR WO8-2 SIGN WHEN THE CONDITION IS PRESENT.

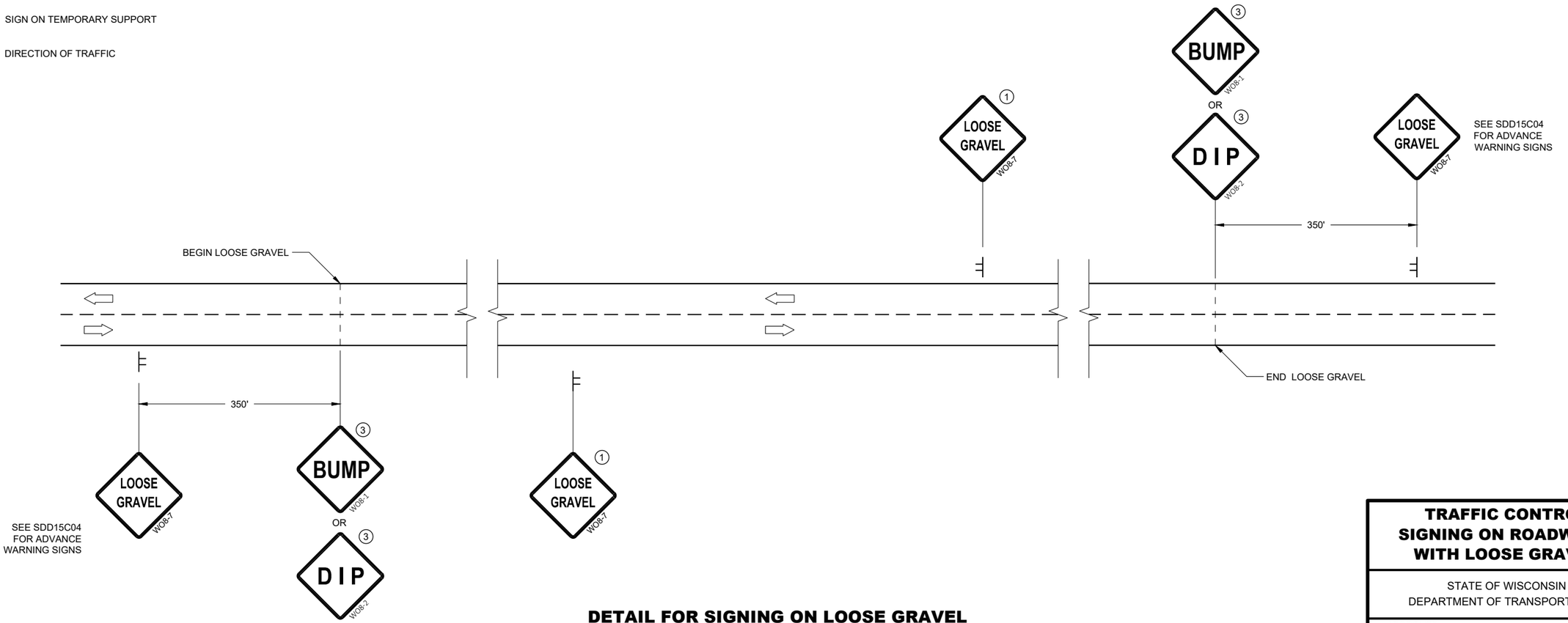
LEGEND

SIGN ON TEMPORARY SUPPORT

DIRECTION OF TRAFFIC



TYPICAL SIDE ROAD APPROACH SIGN DETAIL



DETAIL FOR SIGNING ON LOOSE GRAVEL OR CHIP SEALED SURFACES

TRAFFIC CONTROL SIGNING ON ROADWAYS WITH LOOSE GRAVEL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2021
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

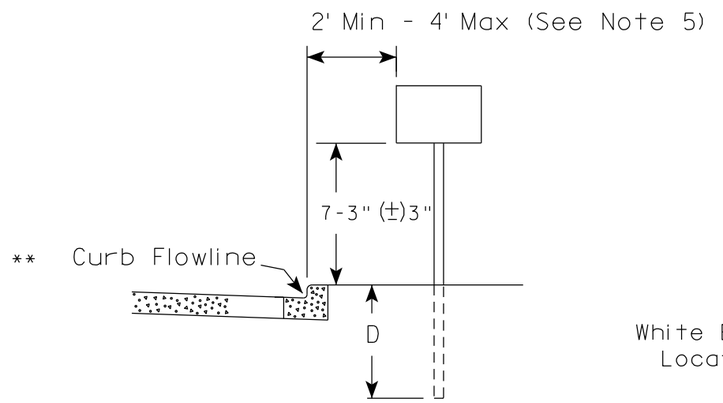
6

SDD 15D45 - 03

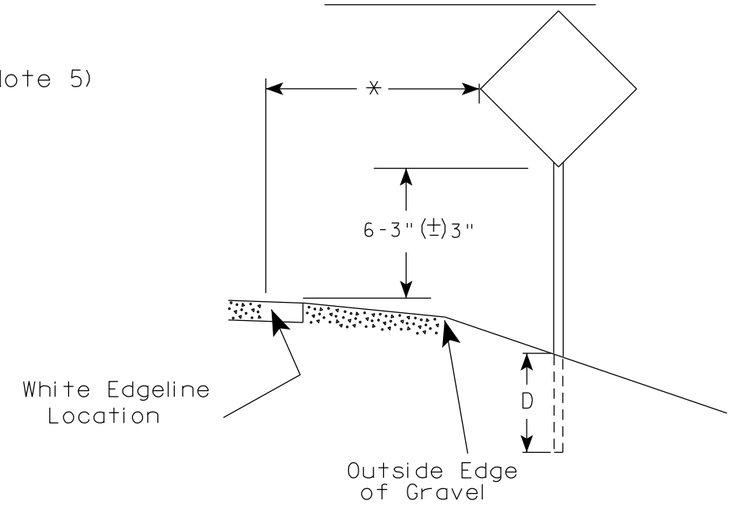
6

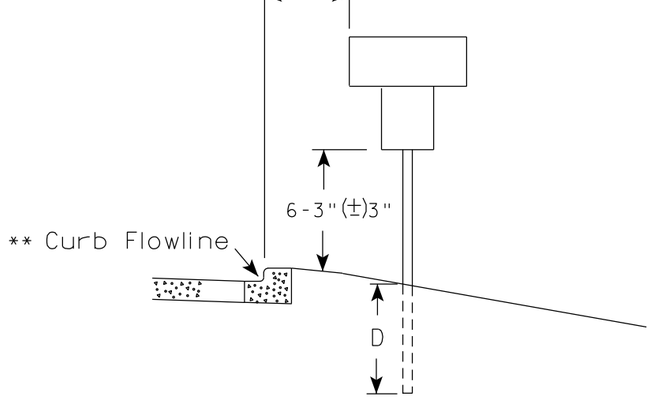
SDD 15D45 - 03

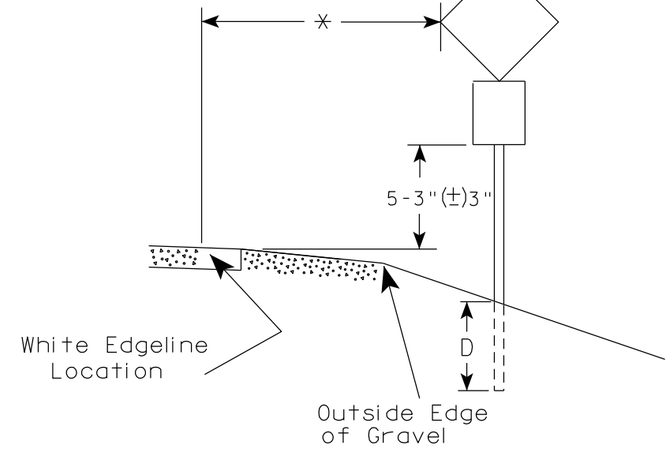
URBAN AREA



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.

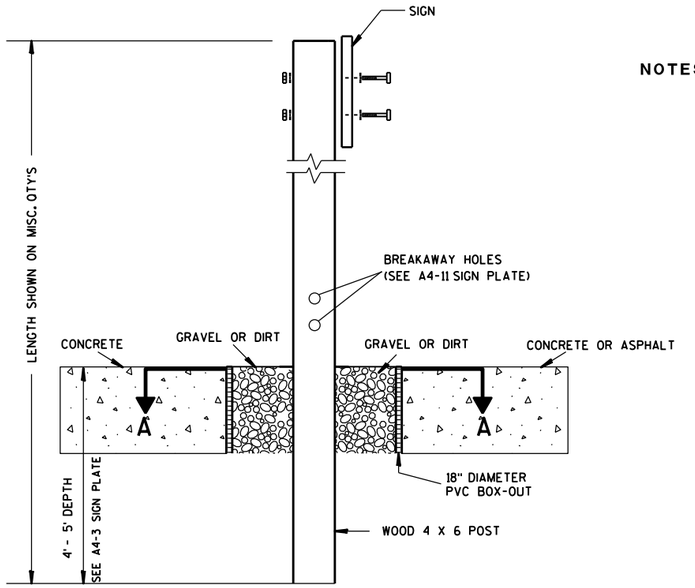
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

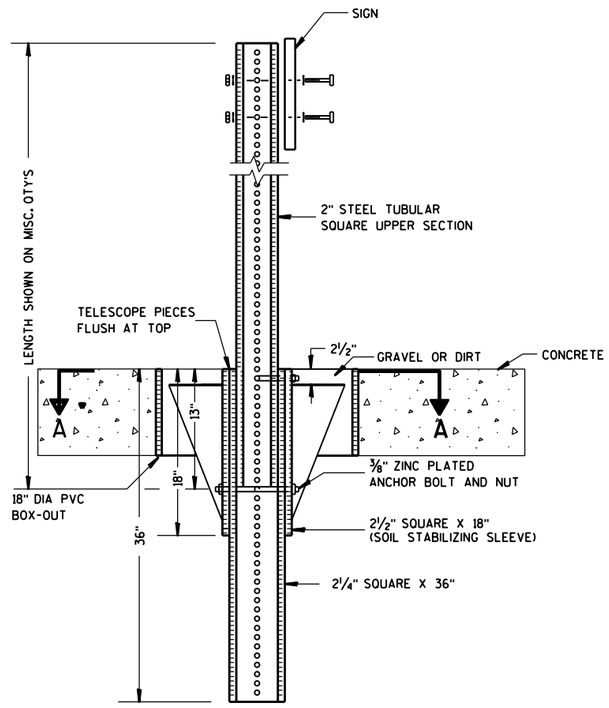
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 70	E



ELEVATION VIEW

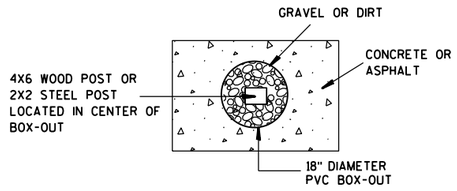
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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

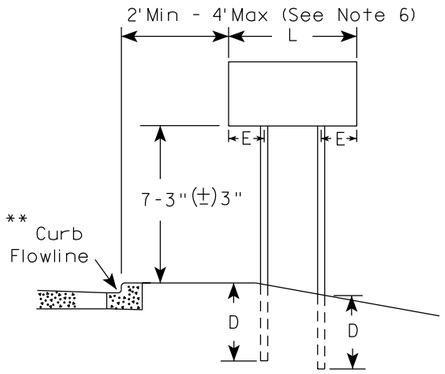
APPROVED Matthew R Rauch
for State Traffic Engineer

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

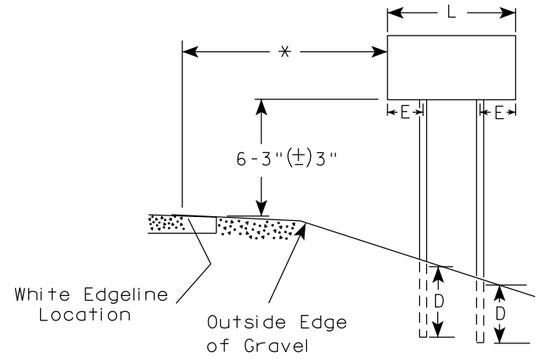
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

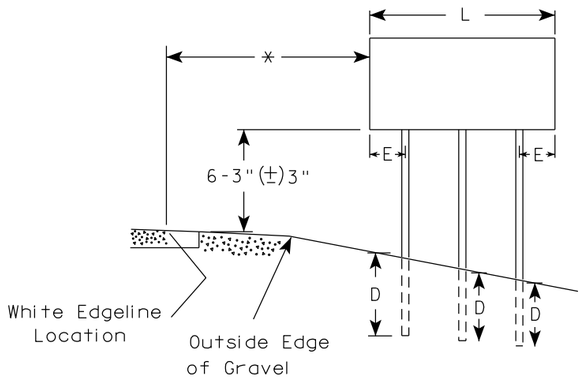
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

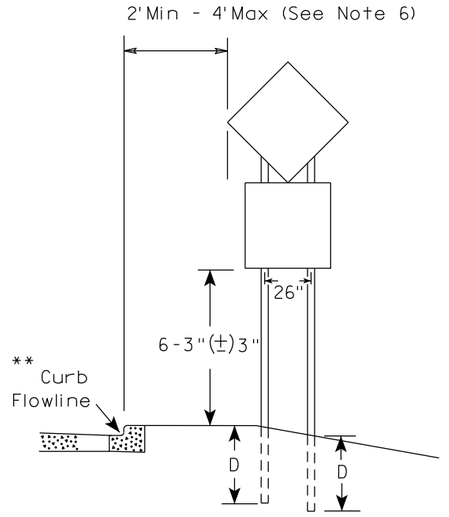
URBAN AREA



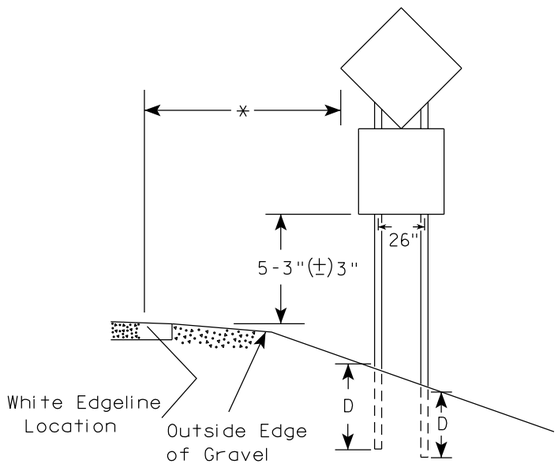
RURAL AREA (See Note 3)







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'

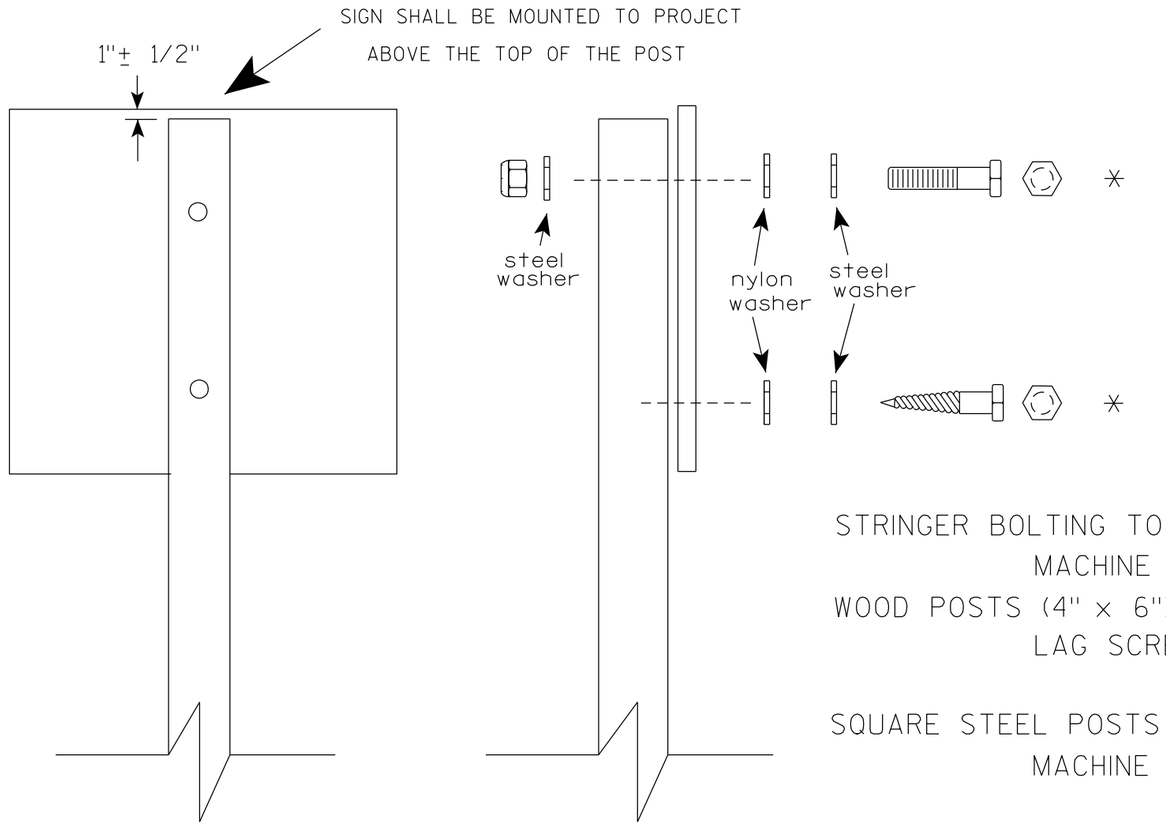
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

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: 72	E



Nuts, bolts and lags used for mounting signs shall have hexagonal heads and shall be either :

a. Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3

b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

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

STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)

MACHINE BOLTS - 5/16" X 1-3/4" Length w/ lock nuts

WOOD POSTS (4" x 6")

LAG SCREWS - 3/8" X 3" (NO STRINGERS ON BACK OF SIGN)
3/8" X 4" (STRINGERS ON BACK OF SIGN)

SQUARE STEEL POSTS (2" x 2")

MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)
3/8" X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)

RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL
O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

WASHERS (ALL POSTS) -

1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON

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

ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

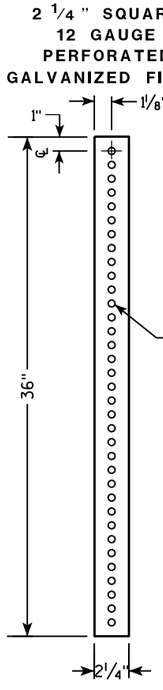
DATE 4/1/2020 PLATE NO. A4-8.9

PROJECT NO:

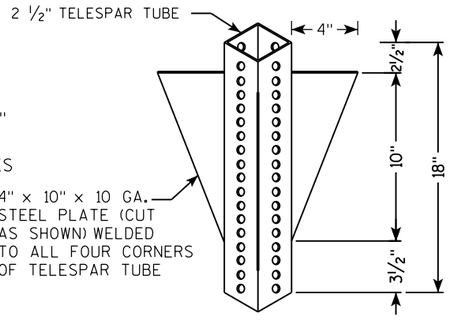
SHEET NO: 73 E

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

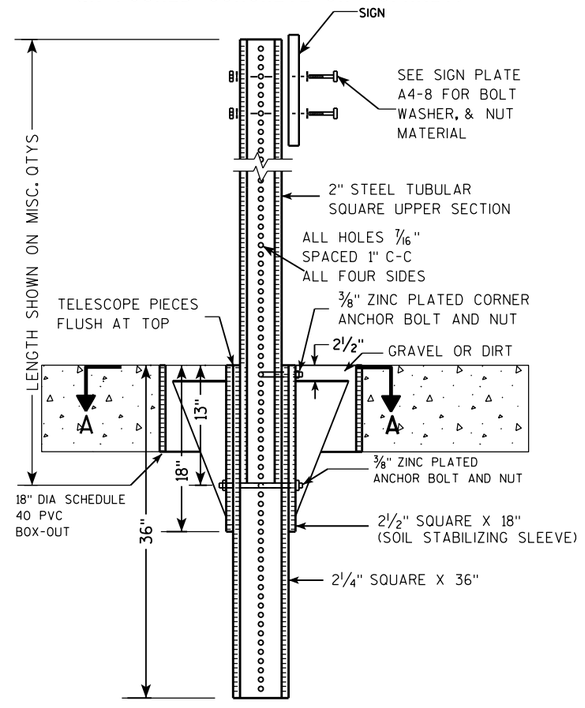
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



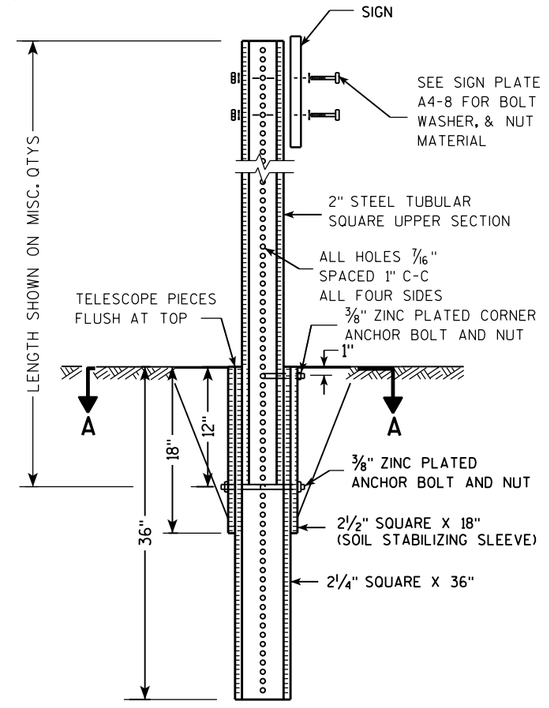
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

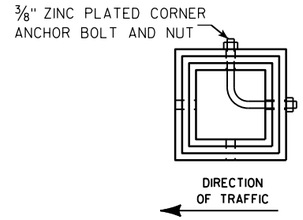


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



DETAIL OF TUBULAR STEEL SIGN POST
(IN LOCATIONS OTHER THAN POURED CONCRETE OR ASPHALT)





SECTION A-A

Area of Sign Installation (Sq. Ft.)	Number of Required Posts
9 or less	1
Greater than 9 less than or equal to 18	2
Greater than 18 less than or equal to 27	3

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

TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

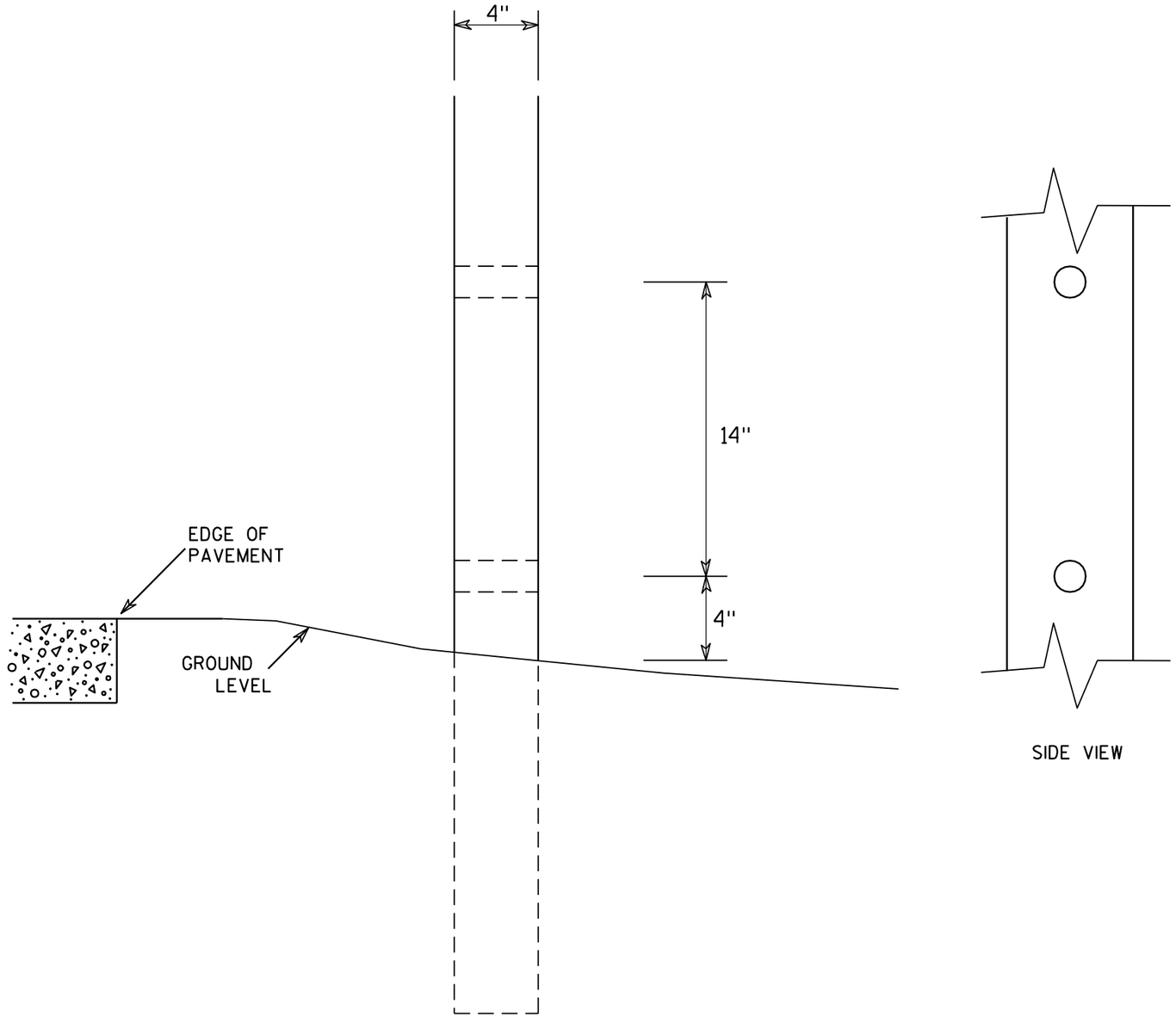
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE 74 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

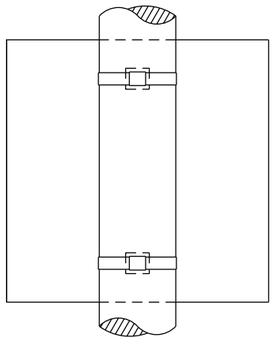
APPROVED Chester J Spang
for State Traffic Engineer

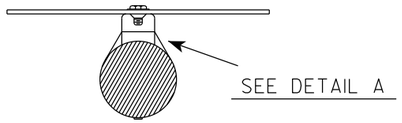
DATE 3/27/97 PLATE NO. A4-11.2

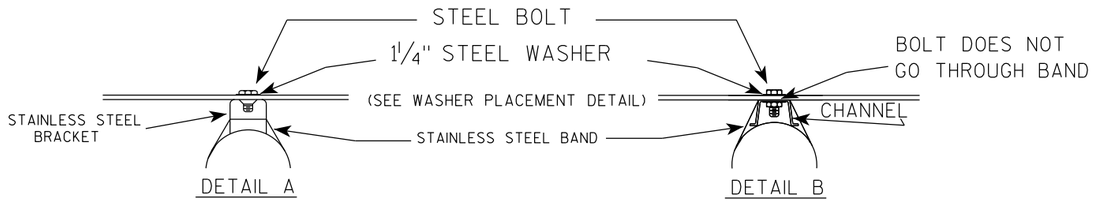
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 75	E

BANDING

SINGLE SIGN



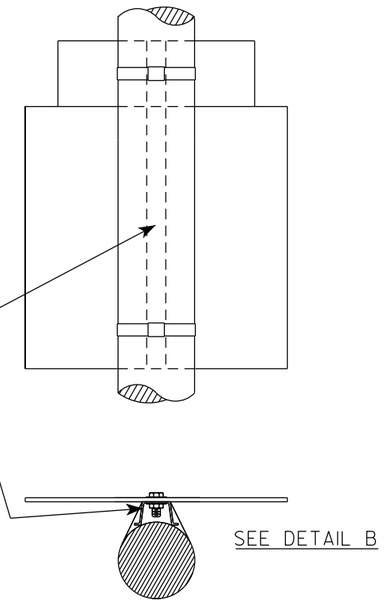




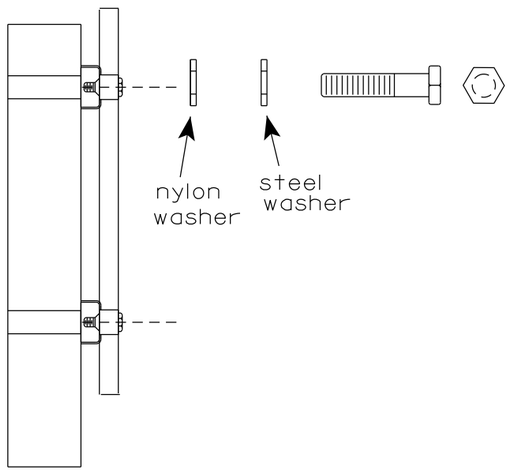
GENERAL NOTES

1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be ¾" in width and 0.025" thickness.
4. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
   a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
   b. Electro-galvanized in accordance with ASTM designation: B 633, Type III, SC 3

"J" ASSEMBLY



WASHER PLACEMENT



WASHERS (ALL POSTS) -
1-1/4" O.D. X ⅜" I.D. X 1/16" STEEL
1-1/4" O.D. X ⅜" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

STANDARD SIGN
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

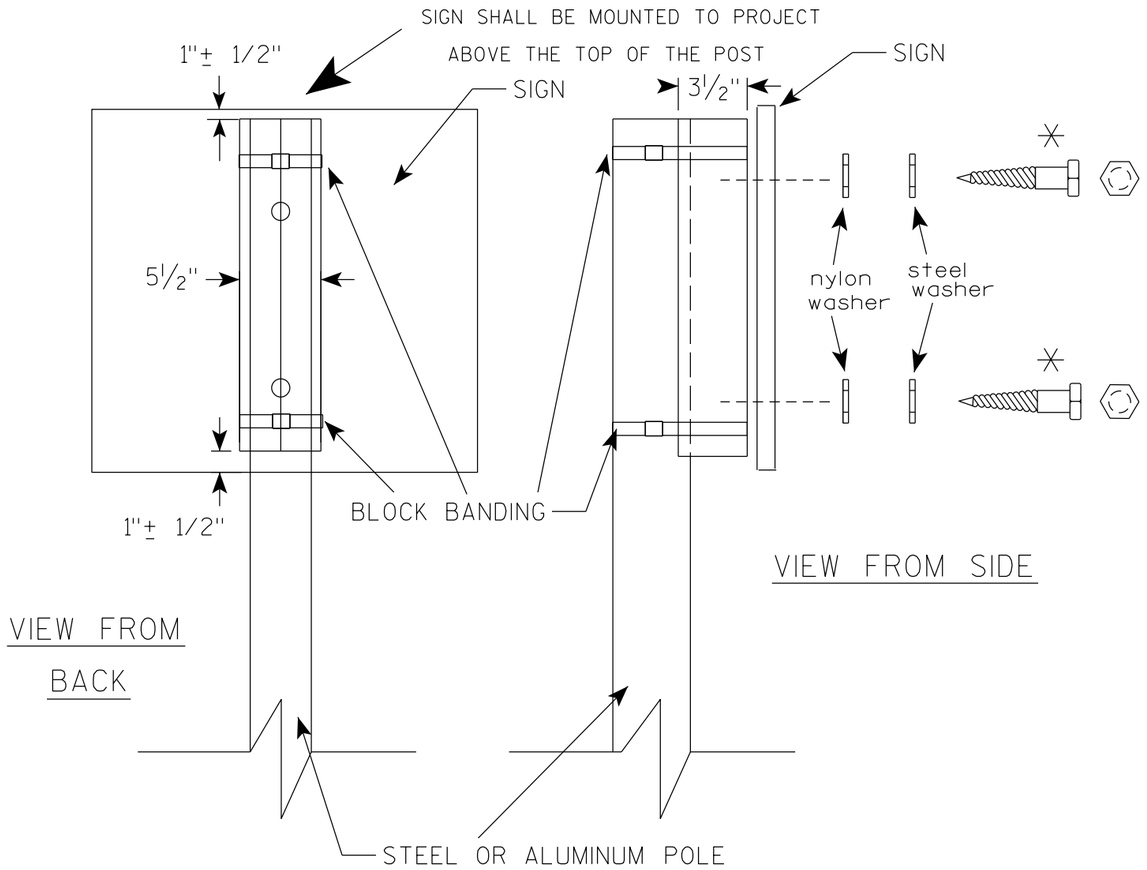
DATE 6/10/19 PLATE NO. A5-9.4

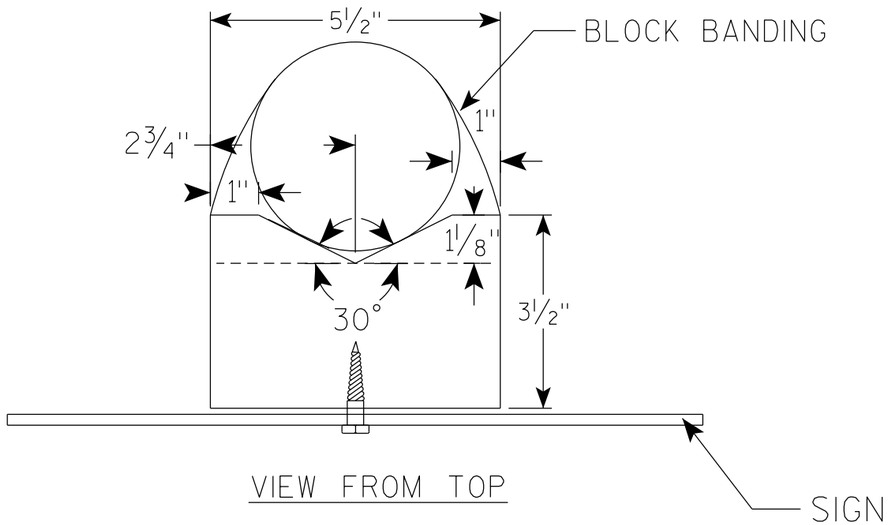
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 76	E

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)

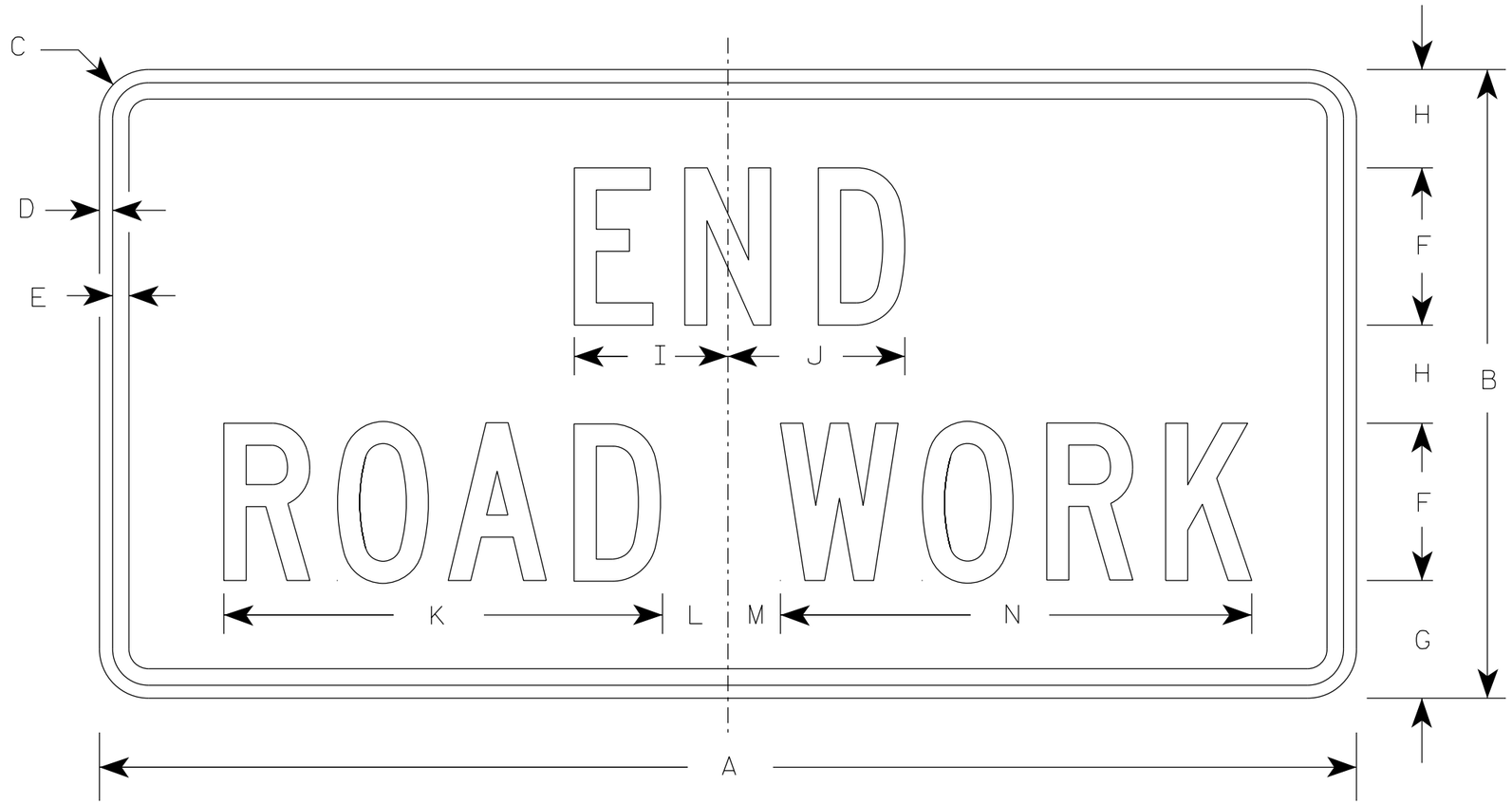
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/19/2022 PLATE NO. A5-10.3

PROJECT NO:

SHEET NO: 77 E



G20-2A

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.

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	1/2	4	3 3/4	2 1/2	4 1/8	4 1/8	11 1/8	2	1	12 1/8													4.5
2	48	24	1 7/8	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0
2M	48	24	1 7/8	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0
3	48	24	1 7/8	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0
4	48	24	1 7/8	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0
5	48	24	1 7/8	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0

STANDARD SIGN

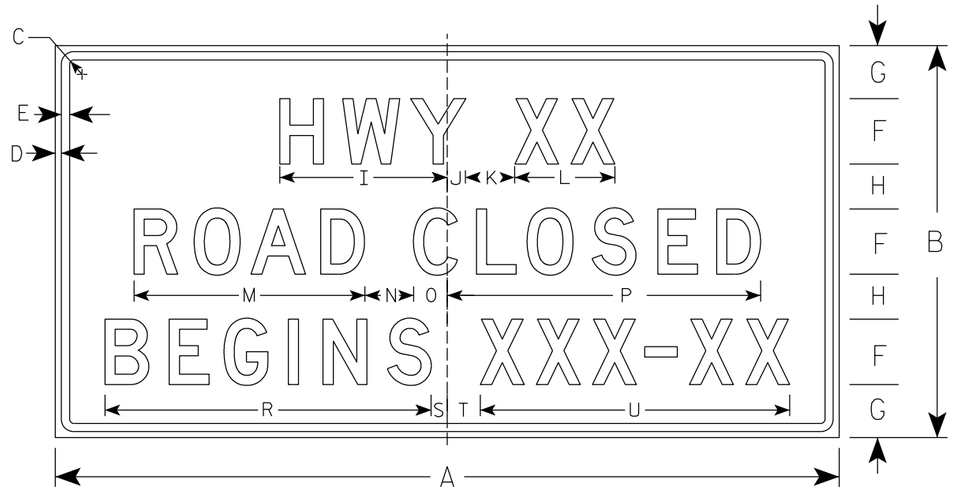
G20-2A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

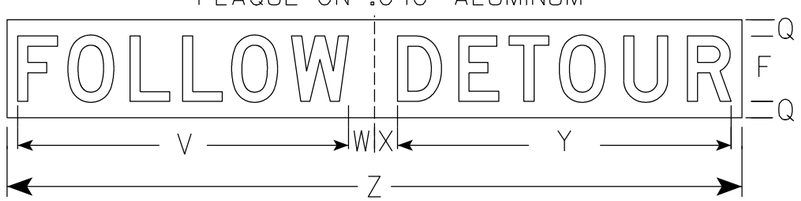
DATE 1/26/2023 PLATE NO. G20-2A.10

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 78 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																											

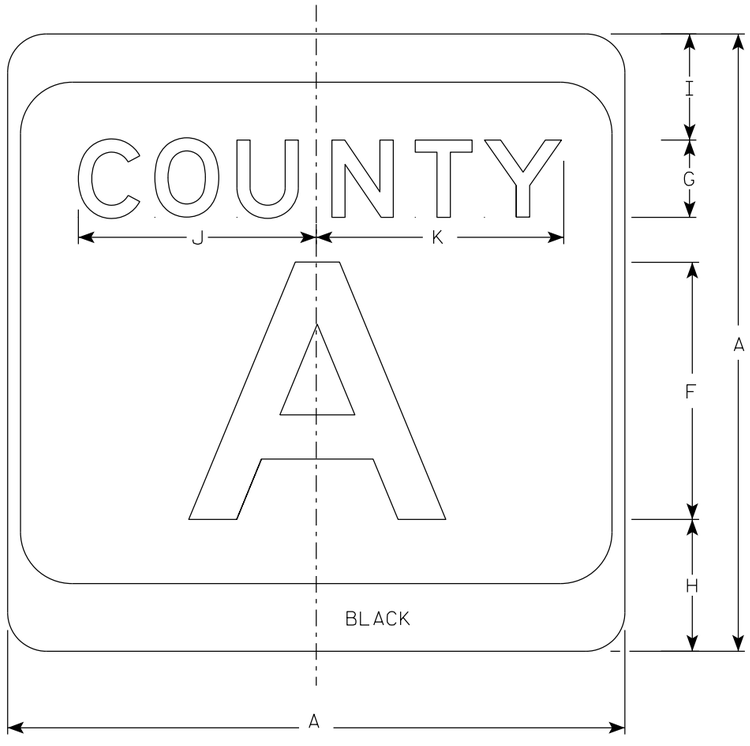
STANDARD SIGN
G20-57C

WISCONSIN DEPT OF TRANSPORTATION

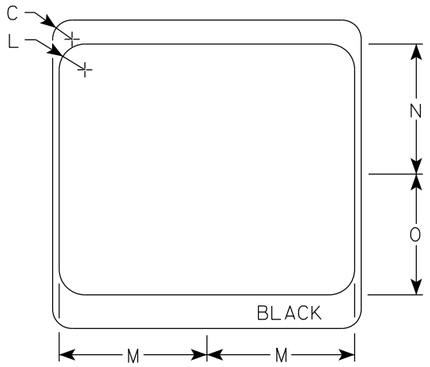
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/25/19 PLATE NO. G20-57C.1

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 79 E

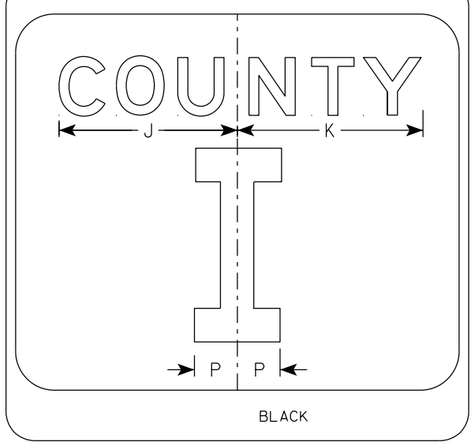


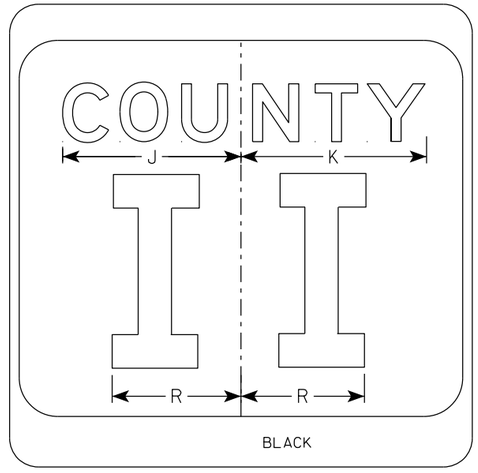
M1-5A



NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White & Black
   Message - Black
3. Message Series - see Note 4
4. Message Series E for 1 letter.
   Message Series D for 2 letters unless message is too big then Series C.
   Message Series C for 3 letters unless message is too big then Series B.
5. Substitute appropriate letters & optically center to achieve proper balance.





SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24		1 1/2			10	3	5 1/8	4 1/8	9 1/4	9 5/8	2	11 1/2	10 1/8	9 3/8	2 1/4		6 5/8									4.0
2M	24		1 1/2			10	3	5 1/8	4 1/8	9 1/4	9 5/8	2	11 1/2	10 1/8	9 3/8	2 1/4		6 5/8									4.0
3	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
4	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
5	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0

CTH MARKER
M1-5A FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/8/2022 PLATE NO. M1-5A.9

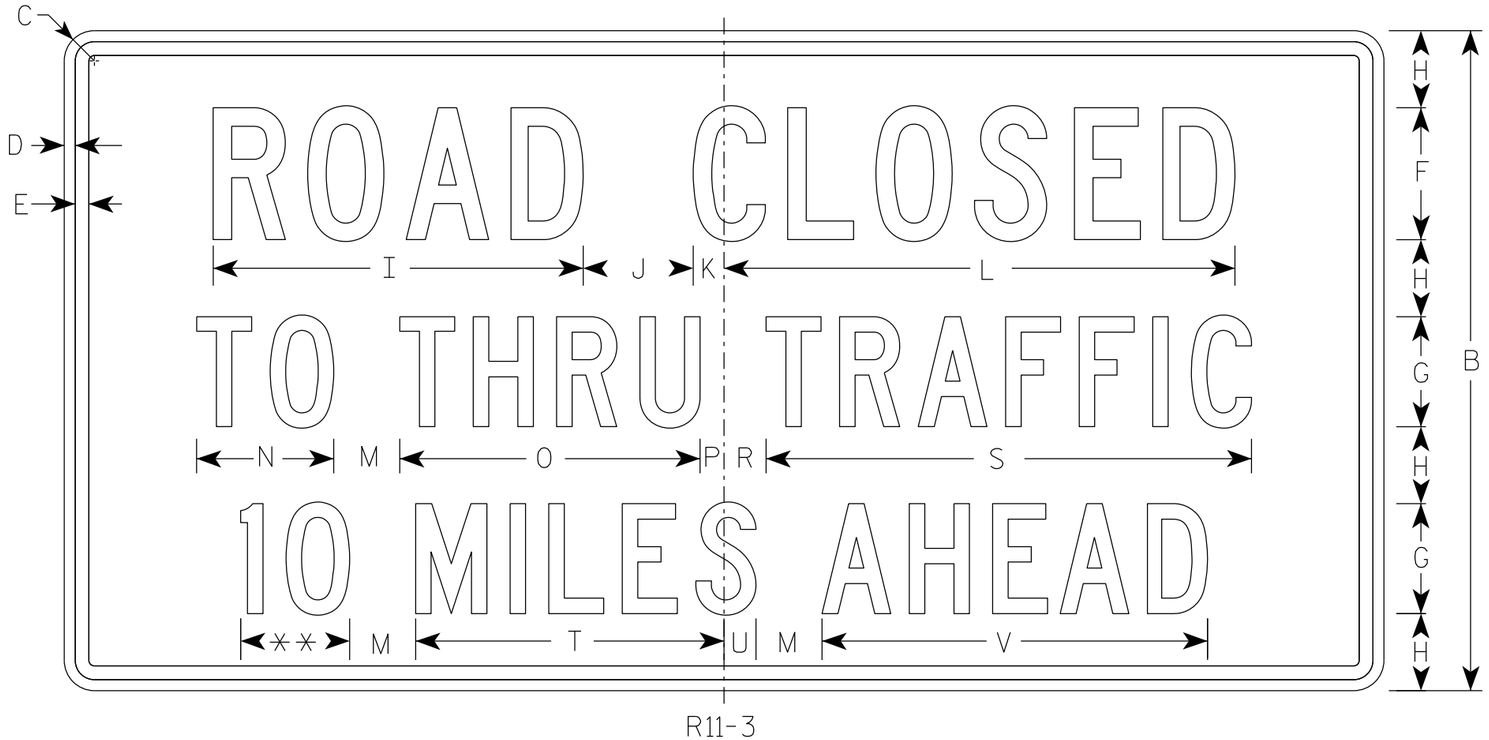
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M15A.dgn PLOT DATE : 8-NOV 2022 8:26 PLOT BY : dotc4c PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42

7

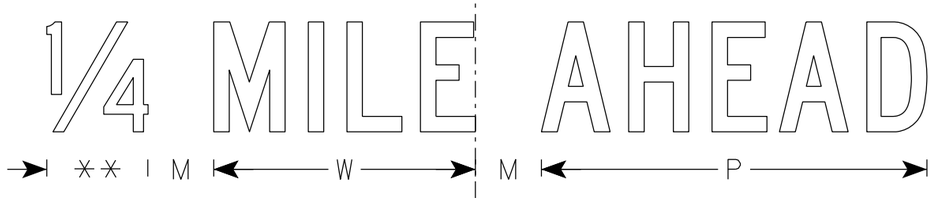
NOTES

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																											

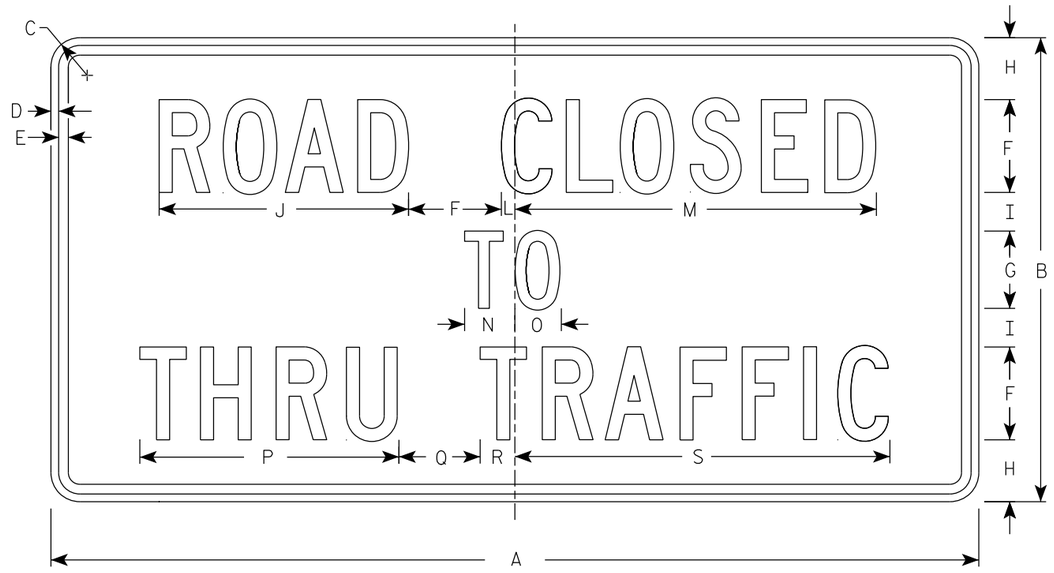
STANDARD SIGN
R11-3

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: 81 | E



R11-4

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.

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	60	30	1 7/8	1/2	5/8	6	5	4	2 1/2	16 1/8		7/8	23 3/8	3 1/4	3	16 3/4	5 1/4	2 1/4	24 1/4								12.5
2M	60	30	1 7/8	1/2	5/8	6	5	4	2 1/2	16 1/8		7/8	23 3/8	3 1/4	3	16 3/4	5 1/4	2 1/4	24 1/4								12.5
3																											
4																											
5																											

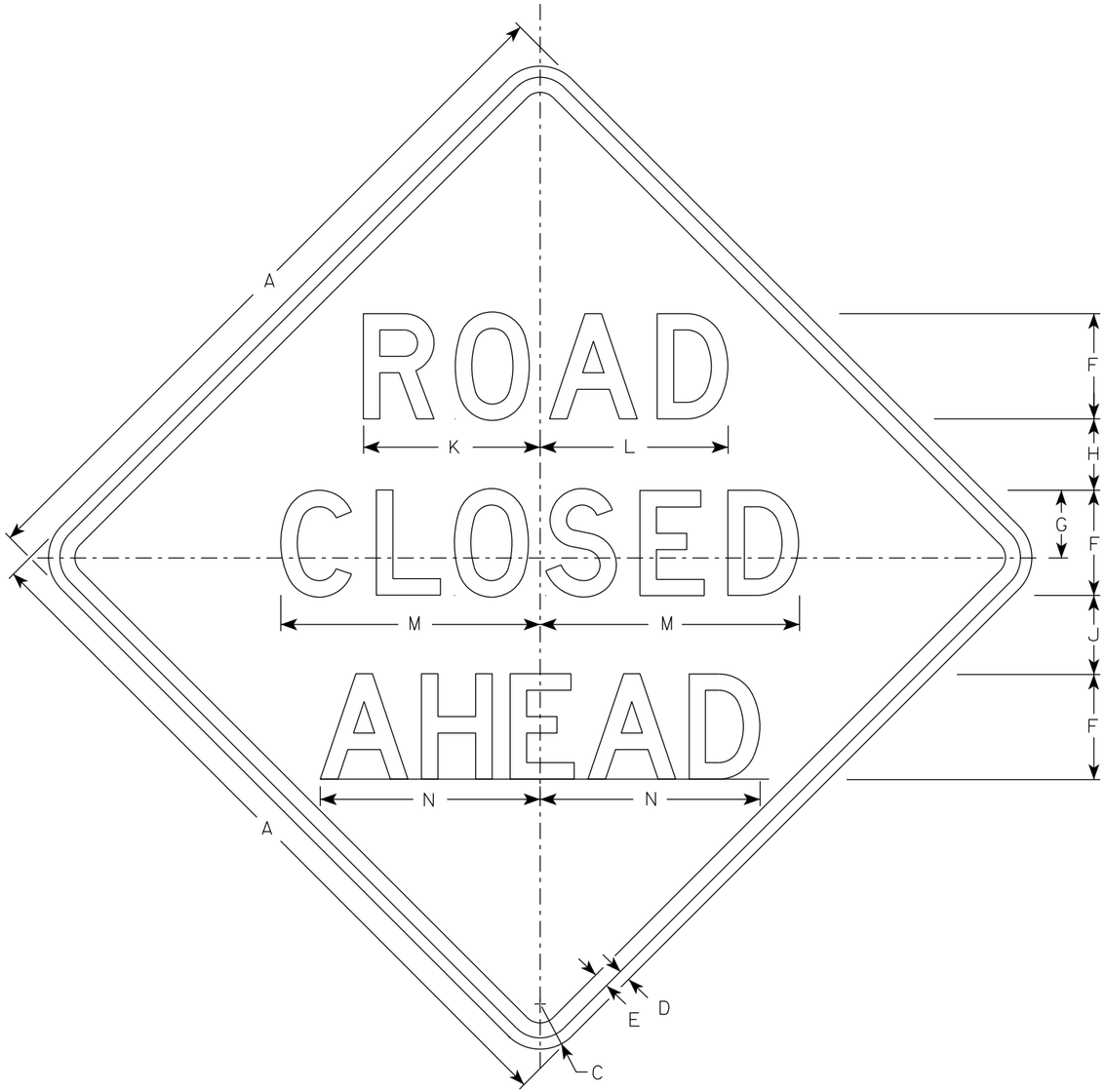
STANDARD SIGN
R11 - 4

WISCONSIN DEPT OF TRANSPORTATION

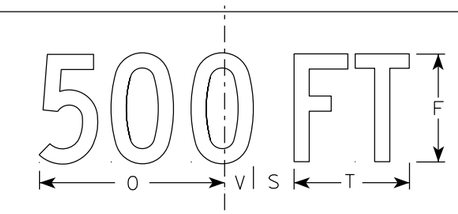
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/5/24 PLATE NO. R11-4.4

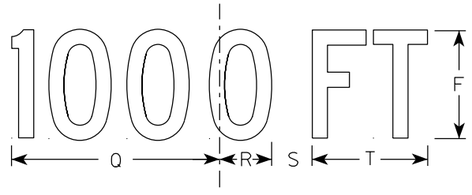
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 82 | E



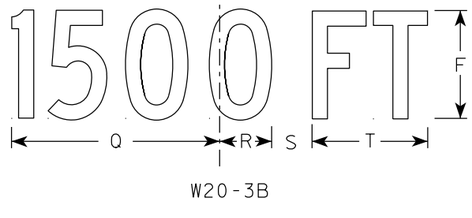
W20-3A



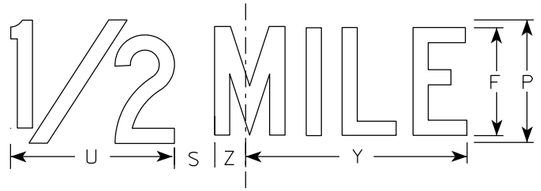
W20-3D



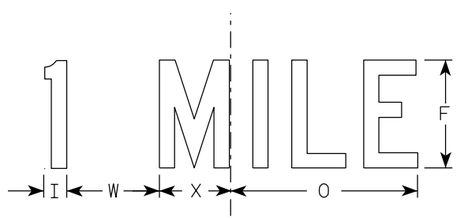
W20-3C



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

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

http://www.dot.wisconsin.gov