

# STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

## PLAN OF PROPOSED IMPROVEMENT

### STH 153 - WESTON

(STH 153 TO STH 29)

CTH J  
MARATHON COUNTY

STATE PROJECT NUMBER  
**6656-00-73**

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
6656-00-73	WISC 2024029	1

ORDER OF SHEETS

Section No. 1	Title
Section No. 2	Typical Sections and Details (Includes Erosion Control)
Section No. 3	Estimate of Quantities
Section No. 3	Miscellaneous Quantities
<del>Section No. 4</del>	<del>Right of Way Plat</del>
Section No. 5	Plan and Profile
Section No. 6	Standard Detail Drawings
<del>Section No. 7</del>	<del>Sign Plates</del>
<del>Section No. 8</del>	<del>Structure Plans</del>
<del>Section No. 9</del>	<del>Computer Earthwork Data</del>
<del>Section No. 9</del>	<del>Cross Sections</del>

TOTAL SHEETS = 44



30

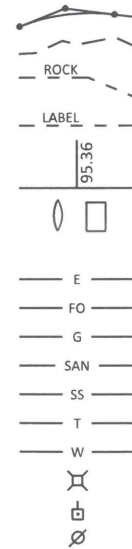
#### DESIGN DESIGNATION

A.A.D.T. (2024)	=	2200
A.A.D.T. (2044)	=	3300
D.H.V. (2044)	=	390
D.D.	=	60/40
T.	=	10%
DESIGN SPEED	=	55 MPH
ESALS	=	650,000

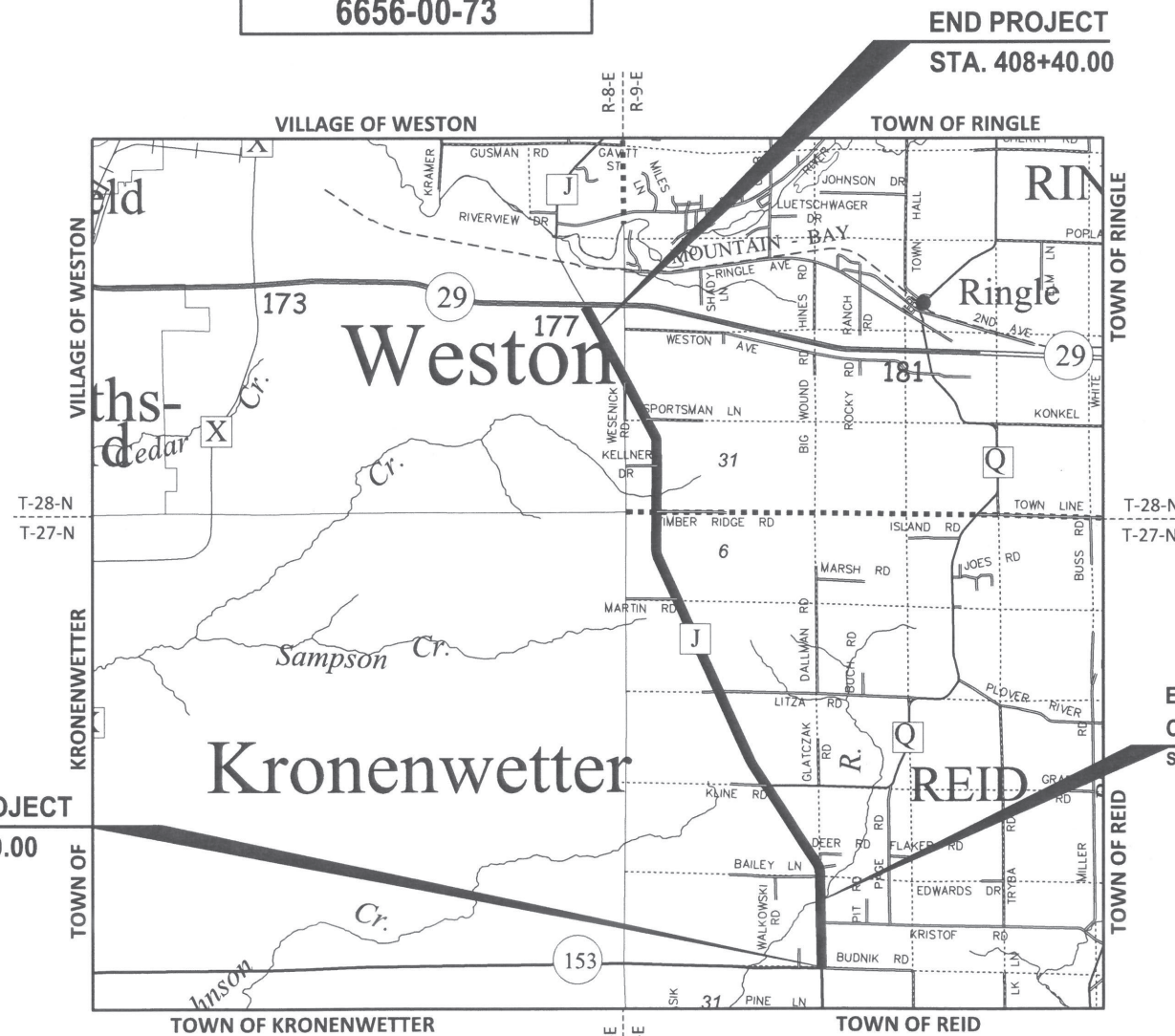
#### CONVENTIONAL SYMBOLS

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

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



**BEGIN PROJECT**  
**STA. 10+00.00**  
Y = 139,089.00  
X = 328,740.10



**END PROJECT**  
**STA. 408+40.00**

**EXCEPTION TO CENTERLINE LENGTH**  
STA. 46+61.08 - STA. 49+28.85

LAYOUT  
SCALE 0 2 MI  
TOTAL NET LENGTH OF CENTERLINE = 7.495 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATES, MARATHON COUNTY, NAD83 (2011), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCE MAY BE USED AS GROUND DISTANCES.

ELEVATION SHOWN ON THIS PLAN ARE REFERENCE TO THE NORTH AMERICAN VERTICAL DATUM OF 1988, NAVD (2012).

#### ACCEPTED FOR

COUNTY of MARATHON

7/28/23 *James Griesbach*  
(Date) (Highway Commissioner)

ORIGINAL PLANS PREPARED BY

**JEWELL**  
associates engineers, inc  
Engineers - Architects - Surveyors



#### STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

PREPARED BY	
Surveyor	JEWELL ASSOCIATES ENGINEERS, INC.
Designer	JEWELL ASSOCIATES ENGINEERS, INC.
Project Manager	MICHAEL GRAGE, P.E.
Regional Examiner	NC REGION
Regional Supervisor	DAN ERVA, P.E.

APPROVED FOR THE DEPARTMENT  
DATE: 8/29/2023 *Nick Pehler*  
(Signature)

E

**GENERAL NOTES**

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.

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

THE EXACT LOCATIONS AND LIMITS OF PRIVATE ENTRANCES, COMMERCIAL, AND FIELD ENTRANCES SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

APPLY TACK COAT AT A RATE OF 0.06 GAL/SY BETWEEN LAYERS OF HMA PAVEMENT.

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

CURVE DATA IS BASED ON THE ARC DEFINITION.

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, ALL SIGNS RELATING TO THIS OPERATION SHALL BE COVERED OR REMOVED AND FACILITY RESTORED TO NORMAL OPERATIONS.

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

IF THERE ARE CONFLICTS WITH SIGNS OR OTHER WORK UNDER THIS PROJECT, THE CONTRACTOR WILL WORK AROUND THE UTILITY FACILITIES.

ALL RADII DIMENSIONS ON THE PLAN FOR CURB AND GUTTER ARE TO THE FLANGE OF THE CURB & GUTTER UNLESS OTHERWISE NOTED. DOCUMENT CONCRETE CURB AND GUTTER FLANGE LINE ELEVATION PRIOR TO CURB AND GUTTER REMOVAL. MATCH EXISTING FLANGE LINE ELEVATIONS IN AREAS OF CONCRETE CURB AND GUTTER REPLACEMENT.

COORDINATES AND BEARINGS ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), MARATHON COUNTY.

FERTILIZER, SEED, TOPSOIL, EROSION MAT, AND SILT FENCE SHALL BE PLACED AS SHOWN ON THE PLAN OR AS DIRECTED BY THE ENGINEER IN THE FIELD. SILT FENCE SHALL BE PLACED PRIOR TO CONSTRUCTION AND IN PLACE PRIOR TO STRUCTURE REMOVAL.

**CONTACTS**

**WISCONSIN DEPARTMENT OF TRANSPORTATION:**  
 WisDOT LOCAL PROGRAM PROJECT MANAGER  
 210 HANSON LAKE ROAD  
 RHINELANDER, WI 54501  
 ATTN: MICHAEL GRAGE, P.E.  
 PH: (715) 365-5705  
 EMAIL: MICHAEL.GRAGE@DOT.WI.GOV

**DESIGN CONSULTANT:**  
 JEWELL ASSOCIATES ENGINEERS, INC.  
 310 EAST JACKSON STREET  
 WISCONSIN RAPIDS, WI 54494  
 ATTN: NICK PEHLER, P.E.  
 PH: (715) 318-8565  
 EMAIL: NICK.PEHLER@JEWELASSOC.COM

**WDNR LIAISON:**  
 STATE OF WISCONSIN  
 DNR CENTRAL REGION  
 625 EAST COUNTY ROAD Y, SUITE 700  
 OSHKOSH, WI 54901  
 ATTN: CASEY JONES  
 PH: (715) 213-6571  
 EMAIL: CASEY.JONES@WISCONSIN.GOV

**UTILITIES**

**ELECTRICITY**  
 WISCONSIN PUBLIC SERVICE CORPORATION  
 ATTN: JESSE PATTEN  
 PO BOX 166  
 WAUSAU, WI 54402-1166  
 PH: (715) 848-7405  
 CELL: (715) 573-0349  
 EMAIL: JESSE.PATTEN@WISCONSINPUBLICSERVICE.COM

**NATURAL GAS**  
 TC ENERGY/ATTN: TODD BRISTER  
 W3925 PIPELINE LANE  
 EDEN, WI 53019  
 PH: (920) 477-2235  
 CELL: (920) 979-0060  
 EMAIL: TODD\_BRISTER@TCENERGY.COM

**WISCONSIN PUBLIC SERVICE CORPORATION**  
 ATTN: TYLER DAHLSTROM  
 PO BOX 1166  
 WAUSAU, WI 54402  
 PH: (715) 848-7387  
 CELL: (715) 432-9212

**COMMUNICATIONS**  
**ASTREA**  
 ATTN: ANDY HEIGL  
 105 KENT ST  
 IRON MOUNTAIN, MI 49801  
 CELL: (906) 221-7536  
 EMAIL: ANDY.HEIGL@ASTREACONNECT.COM

**CHARTER COMMUNICATIONS**  
 ATTN: JOE HANSON  
 7575 BOMBARDIER CT  
 WAUSAU, WI 54401  
 PH: (715) 492-9331  
 EMAIL: JHANSON@PUSH.US

**FRONTIER COMMUNICATIONS**  
 ATTN: CHAD SCHMIDT  
 330 BLACKBURN STREET  
 RIPON, WI 54971  
 PH: (920) 872-2902  
 CELL: (715) 571-6901  
 EMAIL: CHAD.SCHMIDT@JSITEL.COM

**TDS TELECOM**  
 ATTN: ROD HEINZ  
 525 JUNCTION RD  
 MADISON, WI 53717  
 PH: (608) 664-4971  
 EMAIL: ROD.HEINZ@TDSTELECOM.COM



**LIST OF STANDARD ABBREVIATIONS**

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

**ORDER OF SECTION 2 SHEETS:**

- GENERAL NOTES, UTILITIES, & ABBREVIATIONS
- PROJECT OVERVIEW
- TYPICAL SECTIONS
- CONSTRUCTION DETAILS
- INTERSECTION DETAILS
- EROSION CONTROL DETAILS
- TRAFFIC CONTROL PLAN

	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	.16	.22	.12	.20	.27	.15	.24	.33	.19	.28	.38
	.22	.30	.38	.26	.34	.44	.30	.37	.50	.34	.41	.56
MEDIAN STRIP TURF	.19	.20	.24	.19	.22	.26	.20	.23	.30	.20	.25	.30
	.24	.26	.30	.25	.28	.33	.26	.30	.37	.27	.32	.40
SIDE SLOPE TURF			.25			.27			.28			.30
			.32			.34			.36			.38
PAVEMENT												
ASPHALT	.70 - .95											
CONCRETE	.80 - .95											
BRICK	.70 - .80											
DRIVES, WALKS	.75 - .85											
ROOFS	.75 - .95											
GRAVEL ROADS, SHOULDERS	.40 - .60											

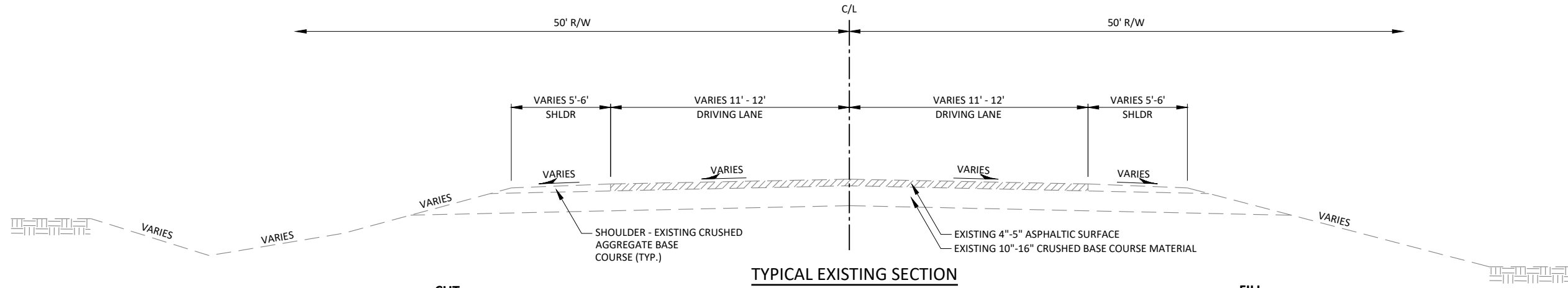
TOTAL PROJECT AREA= 91.6 ACRES  
 TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.01 ACRES





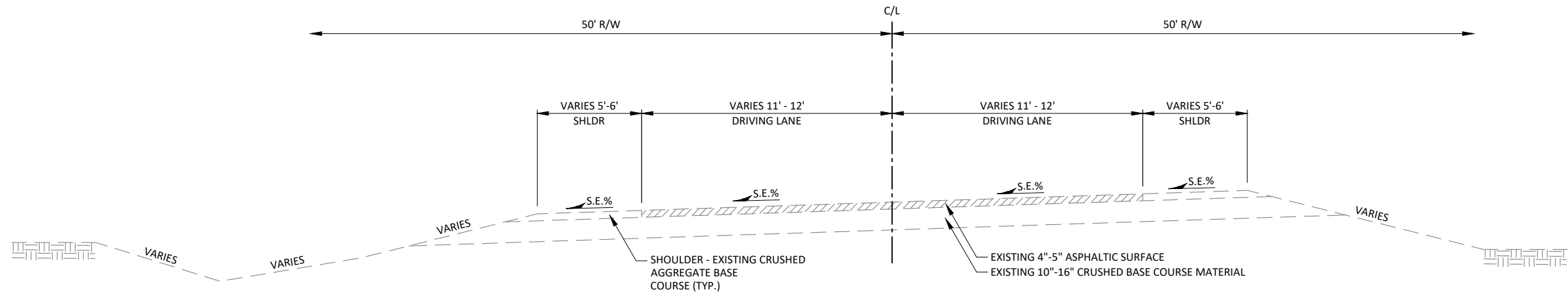
PROJECT NO: 6656-00-73	HWY: CTH J	COUNTY: MARATHON	PROJECT OVERVIEW	SHEET	E
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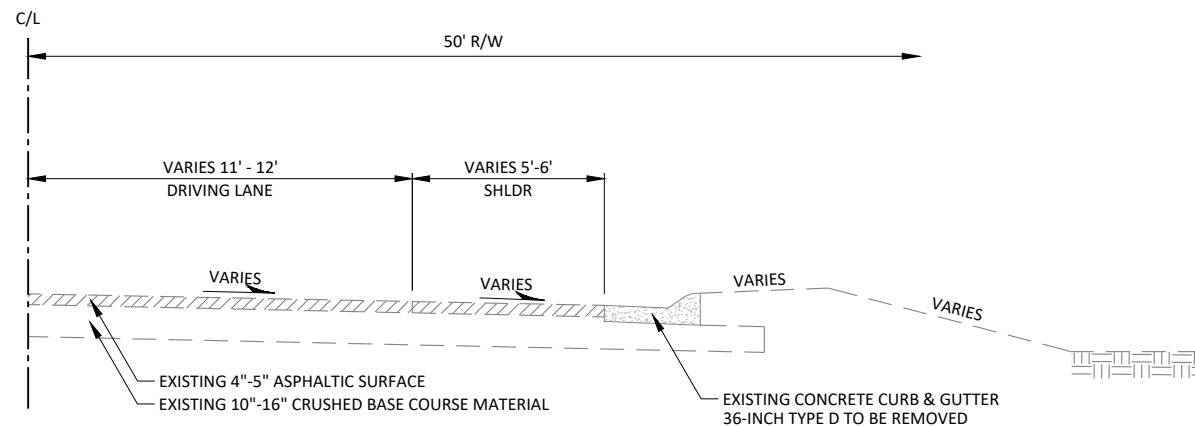
**TYPICAL EXISTING SECTION**

CTH J  
 STA. 10+00 - STA. 62+34  
 STA. 70+91 - STA. 137+66  
 STA. 143+18 - STA. 268+55  
 STA. 273+25 - STA. 334+60  
 STA. 339+47 - STA. 408+40.00



**TYPICAL EXISTING SUPERELEVATED SECTION**

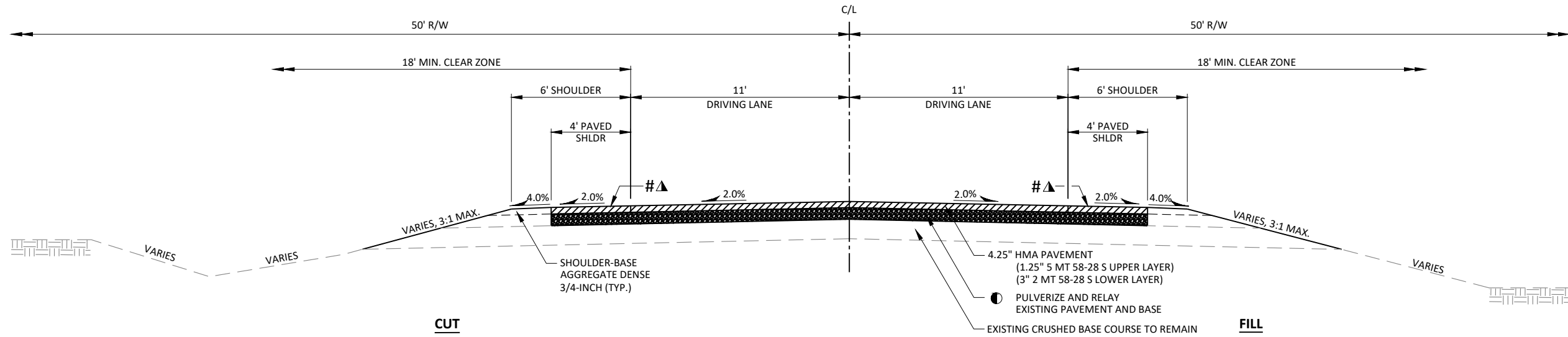
CTH J  
 STA. 62+34 - STA. 70+91  
 STA. 137+66 - STA. 143+18  
 STA. 268+55 - STA. 273+25  
 STA. 334+60 - STA. 339+47



**TYPICAL EXISTING HALF SECTION**

CTH J  
 STA. 122+45 - STA. 123+80, RT.



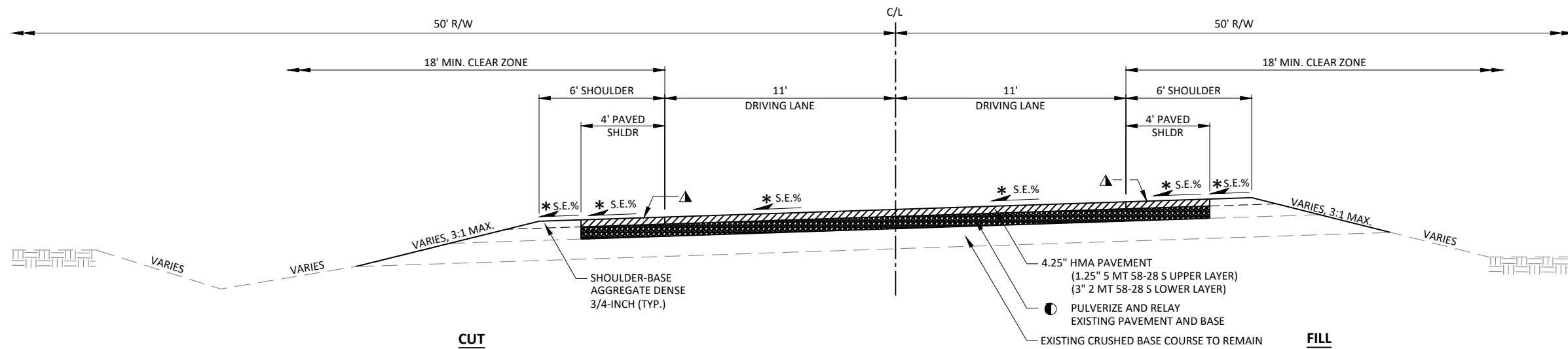


TYPICAL FINISHED SECTION

CTH J

STA. 10+00	-	STA. 36+38#
STA. 36+38	-	STA. 46+61.08
STA. 49+28.85	-	STA. 60+88
STA. 72+37	-	STA. 136+61
STA. 144+24	-	STA. 182+35
STA. 182+35	-	STA. 243+03#
STA. 243+03	-	STA. 267+02
STA. 274+78	-	STA. 333+04
STA. 341+03	-	STA. 408+40.00

- # DO NOT INSTALL RUMBLE STRIPS IN THE NOTED STATION RANGE
- ▲ ASPHALTIC SHOULDER RUMBLE STRIPS SHOULDER SINUSOIDAL REQ'D.
- PULVERIZE TO 7" DEPTH OR TO EXISTING BASE MATERIAL WHICHEVER IS GREATER

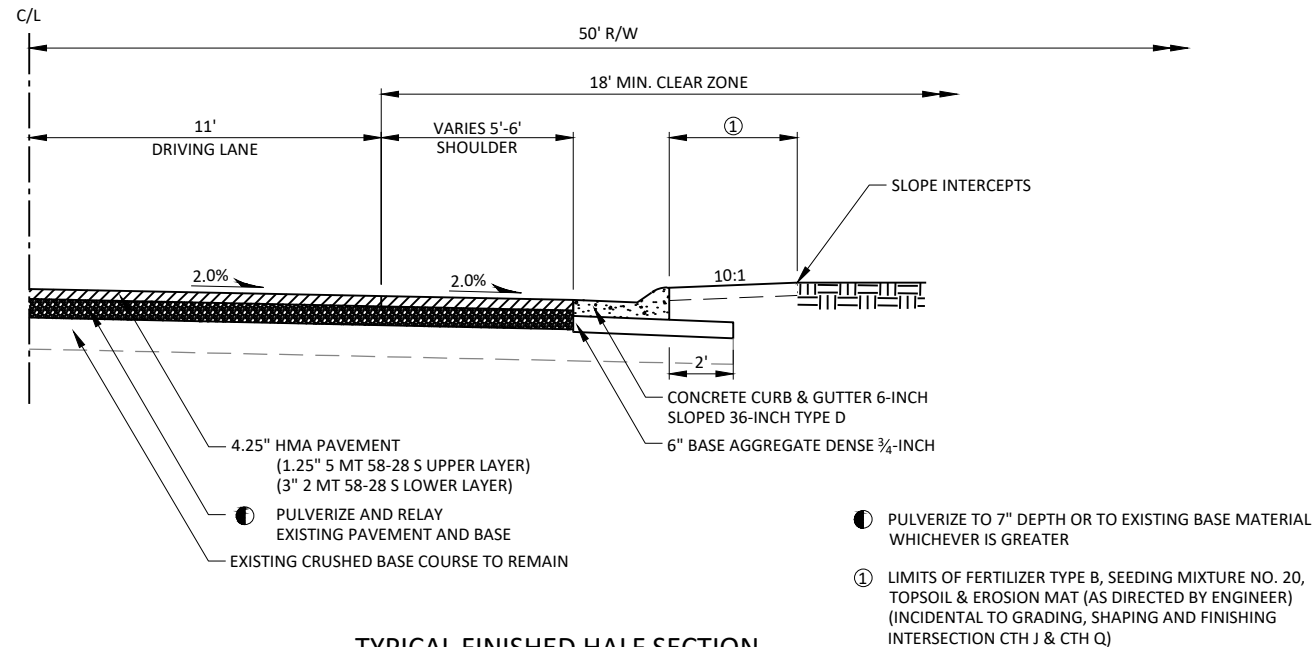


TYPICAL FINISHED SUPERELEVATED SECTION

CTH J

STA. 60+88	-	STA. 72+37
STA. 136+61	-	STA. 144+24
STA. 267+02	-	STA. 274+78
STA. 333+04	-	STA. 341+03

- \* SEE SUPERELEVATION TABLE
- ▲ ASPHALTIC SHOULDER RUMBLE STRIPS SHOULDER SINUSOIDAL REQ'D.
- PULVERIZE TO 7" DEPTH OR TO EXISTING BASE MATERIAL WHICHEVER IS GREATER



**SUPERELEVATION TABLE-CURVE 1**

STATION	LEFT(%)	RIGHT(%)	COMMENT
60+88	2.0	2.0	END NORMAL CROWN - BEGIN SUPER
61+00	2.0	1.5	
61+39	2.0	0.0	
61+50	2.0	0.4	
61+90	2.0	2.0	R.C.
62+00	2.4	2.4	
62+34	3.7	3.7	P.C. STATION
62+50	4.4	4.4	
62+82	5.6	5.6	BEGIN FULL SUPER
FULL SUPERELEVATION			
70+43	5.6	5.6	END FULL SUPER
70+50	5.3	5.3	
70+91	3.7	3.7	P.T. STATION
71+00	3.4	3.4	
71+35	2.0	2.0	R.C.
71+50	2.0	1.4	
71+86	2.0	0.0	
72+00	2.0	0.5	
72+37	2.0	2.0	BEGIN NORMAL CROWN - END SUPER

**SUPERELEVATION TABLE-CURVE 2**

STATION	LEFT(%)	RIGHT(%)	COMMENT
136+61	2.0	2.0	END NORMAL CROWN - BEGIN SUPER
137+00	0.5	2.0	
137+12	0.0	2.0	
137+50	1.5	2.0	
137+63	2.0	2.0	R.C.
137+66	2.1	2.1	P.C. STATION
137+94	3.2	3.2	BEGIN FULL SUPER
FULL SUPERELEVATION			
142+91	3.2	3.2	END FULL SUPER
143+00	2.8	2.8	
143+18	2.1	2.1	P.T. STATION
143+21	2.0	2.0	R.C.
143+50	0.9	2.0	
143+73	0.0	2.0	
144+00	1.1	2.0	
144+24	2.0	2.0	BEGIN NORMAL CROWN - END SUPER

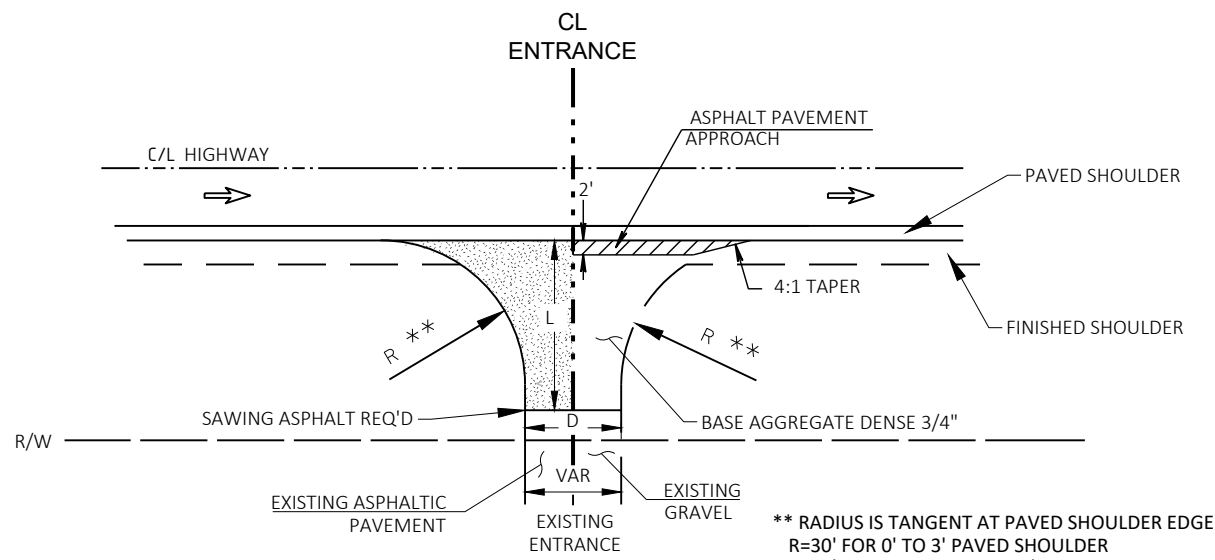
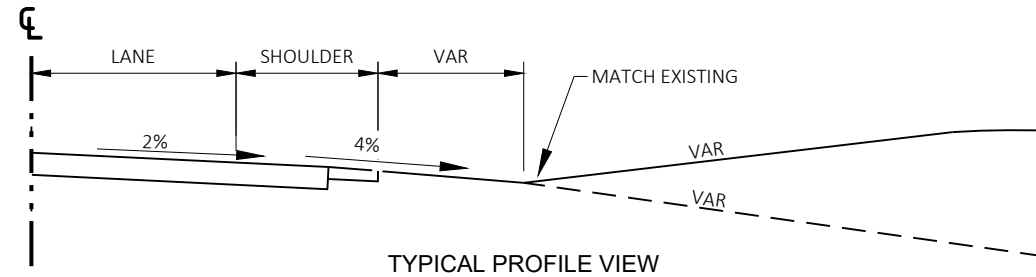
**SUPERELEVATION TABLE-CURVE 3**

STATION	LEFT(%)	RIGHT(%)	COMMENT
267+02	2.0	2.0	END NORMAL CROWN - BEGIN SUPER
267+50	0.0	2.0	
267+53	0.0	2.0	
268+00	1.9	2.0	
268+04	2.0	2.0	R.C.
268+50	3.8	3.8	
268+55	4.0	4.0	P.C. STATION
269+00	5.8	5.8	
269+06	6.0	6.0	BEGIN FULL SUPER
FULL SUPERELEVATION			
272+74	6.0	6.0	END FULL SUPER
273+00	5.0	5.0	
273+25	4.0	4.0	P.T. STATION
273+50	3.0	3.0	
273+76	2.0	2.0	R.C.
274+00	1.1	2.0	
274+27	0.0	2.0	
274+50	0.9	2.0	
274+78	2.0	2.0	BEGIN NORMAL CROWN - END SUPER

**SUPERELEVATION TABLE-CURVE 4**

STATION	LEFT(%)	RIGHT(%)	COMMENT
333+04	2.0	2.0	END NORMAL CROWN - BEGIN SUPER
333+50	2.0	0.2	
333+55	2.0	0.0	
334+00	2.0	1.8	
334+06	2.0	2.0	R.C.
334+50	3.7	3.7	
334+57	4.0	4.0	P.C. STATION
335+00	5.7	5.7	
335+08	6.0	6.0	BEGIN FULL SUPER
FULL SUPERELEVATION			
338+99	6.0	6.0	END FULL SUPER
339+00	6.0	6.0	
339+50	4.0	4.0	P.T. STATION
340+00	2.0	2.0	
340+01	2.0	2.0	R.C.
340+50	2.0	0.0	
340+52	2.0	0.0	
341+00	2.0	1.9	
341+03	2.0	2.0	BEGIN NORMAL CROWN - END SUPER





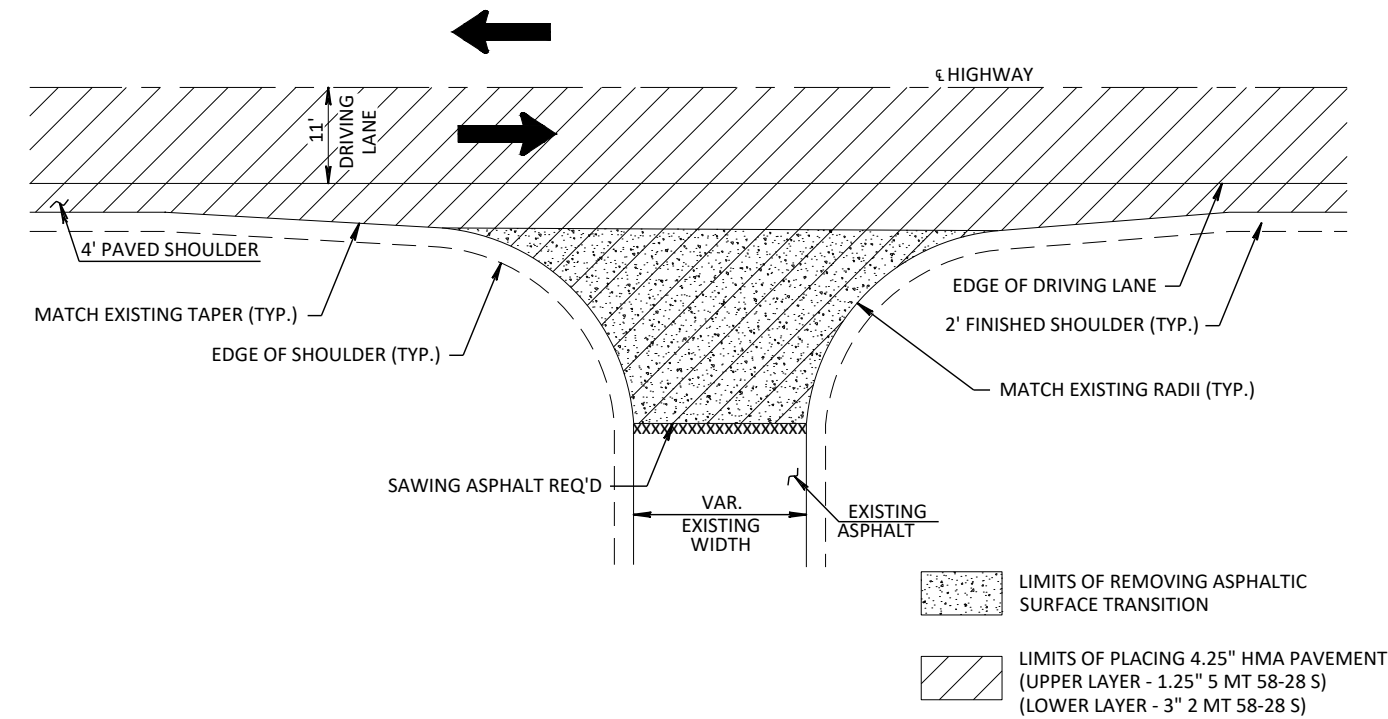
L=VARIABLE, EXACT LENGTH TO BE DETERMINED IN THE FIELD BY THE ENGINEER  
 D=DRIVEWAY WIDTH  
 D=20'TYP(PE & FE) (16'MIN-24'MAX)  
 D=28'TYP(CE & FARM ENT) (24'MIN-35'MAX)

\*\* RADIUS IS TANGENT AT PAVED SHOULDER EDGE  
 R=30' FOR 0' TO 3' PAVED SHOULDER  
 R=25' FOR GREATER THAN 3' PAVED SHOULDER

**RURAL DRIVEWAY INTERSECTION (PE, FE & CE)**  
 (FOR RESURFACING PROJECTS WITH PROFILE CHANGE)

**RURAL PAVED SIDEROAD INTERSECTION PAVING DETAIL**

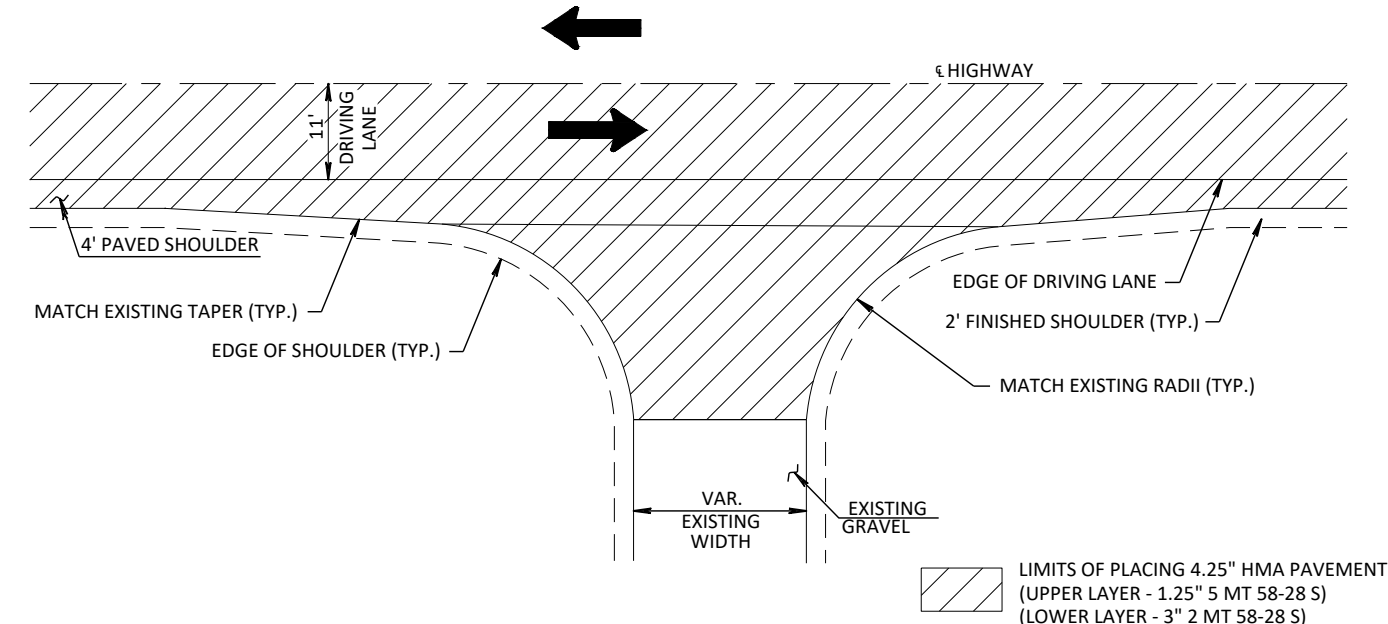
BUICK ST KRISTOF RD BAILEY LN  
 LITZA RD (EAST) MARTIN RD



LIMITS OF REMOVING ASPHALTIC SURFACE TRANSITION  
 LIMITS OF PLACING 4.25" HMA PAVEMENT (UPPER LAYER - 1.25" 5 MT 58-28 S) (LOWER LAYER - 3" 2 MT 58-28 S)

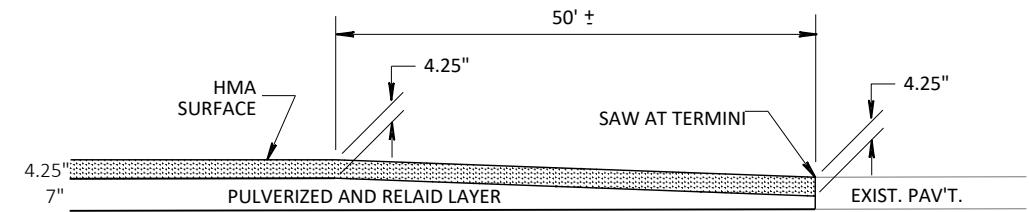
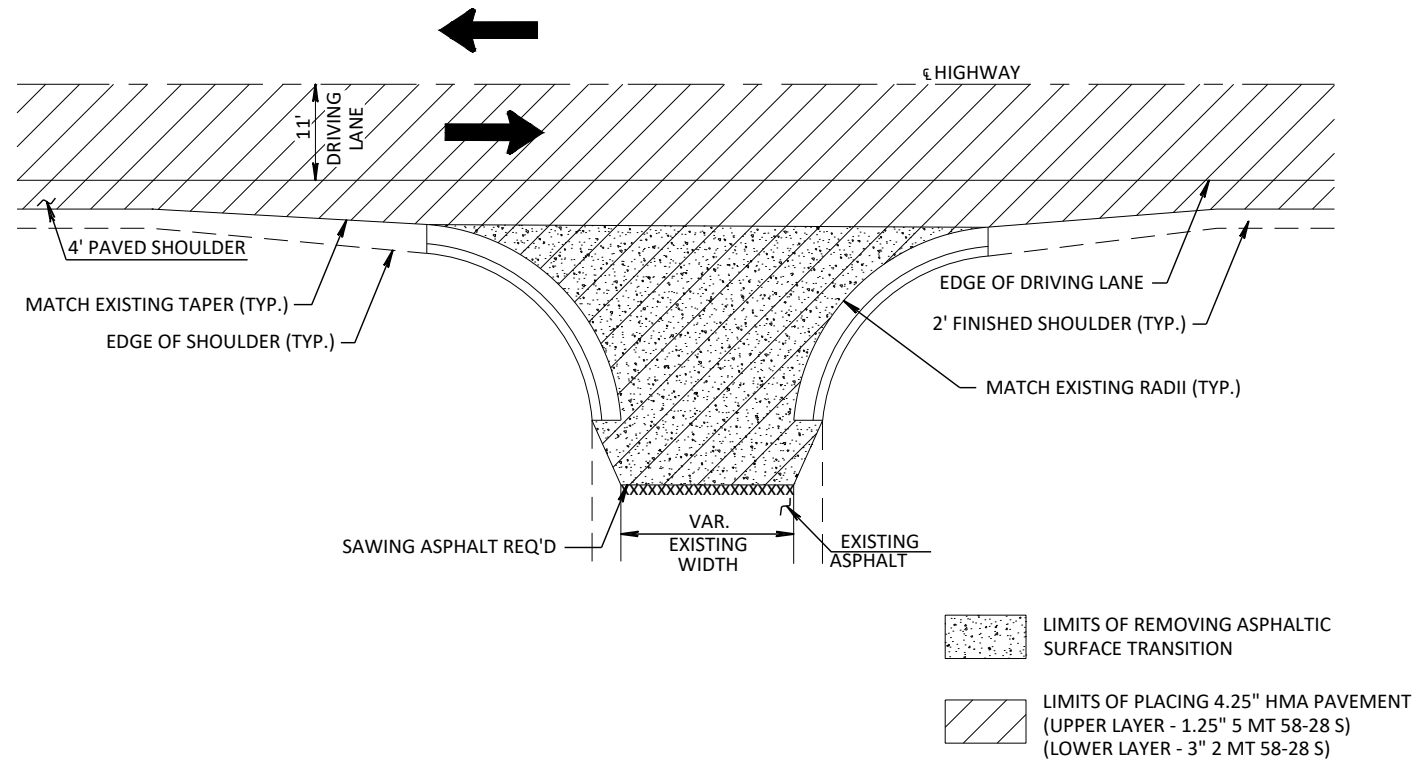
**RURAL UNPAVED SIDEROAD INTERSECTION PAVING DETAIL**

LITTLE RD KLINE RD LITZA RD (WEST)  
 WESENICK ST TIMBER RIDGE LN KELLNER DR  
 WHITE HORSE LN



LIMITS OF PLACING 4.25" HMA PAVEMENT (UPPER LAYER - 1.25" 5 MT 58-28 S) (LOWER LAYER - 3" 2 MT 58-28 S)

### RURAL SIDEROAD INTERSECTION WITH CURB & GUTTER PAVING DETAIL CTH Q

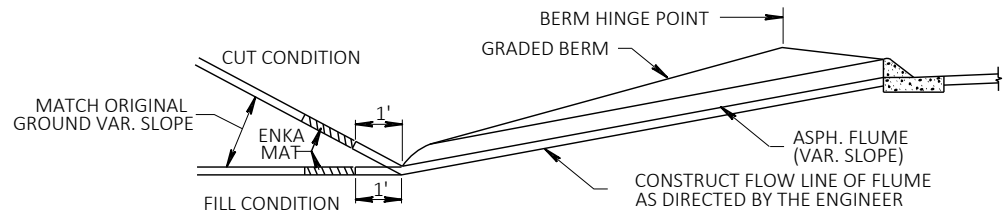
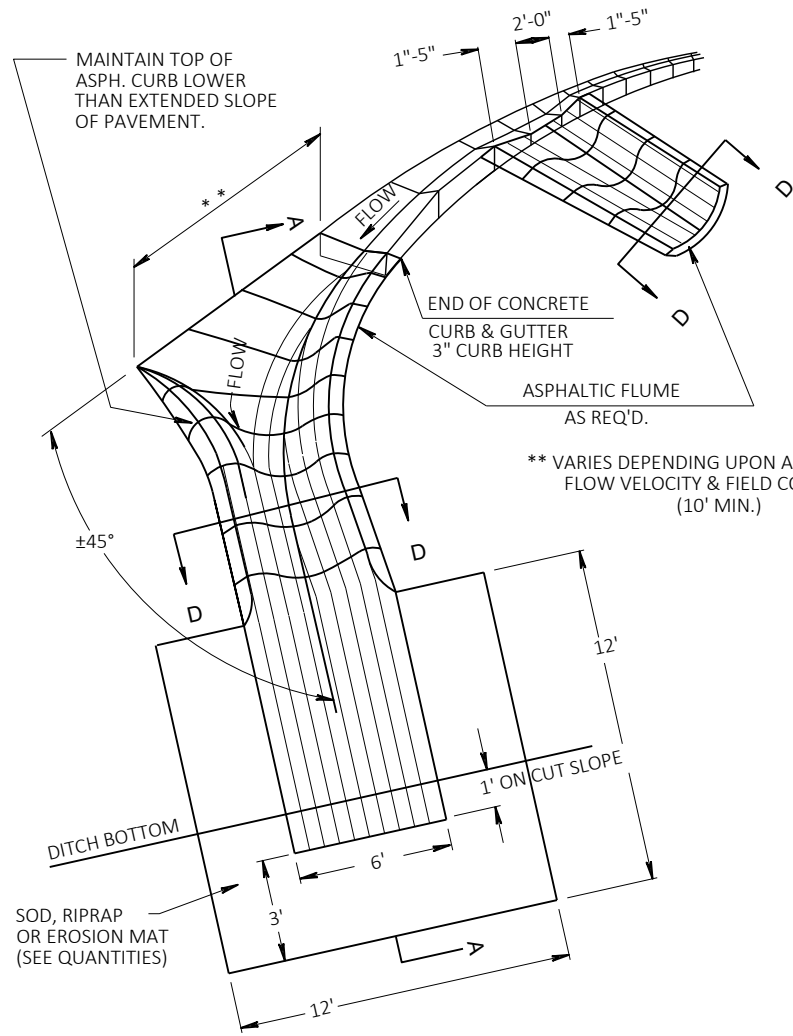


**NOTE:**  
 PULVERIZE EXISTING ASPHALT AT FULL DEPTH TO TERMINI. REMOVE PULVERIZED MATERIAL TO CREATE TRANSITION TO MATCH EXISTING PAVEMENT. PULVERIZED MATERIAL REMOVAL TO BE PAID AS REMOVING ASPHALTIC SURFACE. PAVE HMA AT CONSISTENT DEPTH THROUGHOUT TRANSITION AREA.

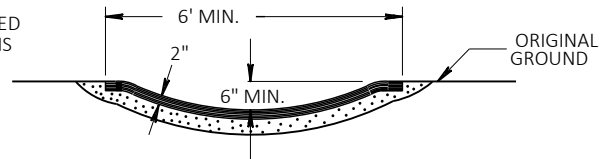
#### REMOVING ASPHALTIC SURFACE TRANSITION

- STA. 10+00
- BUICK ST
- KRISTOF RD
- BAILEY RD
- STA. 46+61
- STA. 49+29
- CTH Q
- LITZA RD (EAST)
- MARTIN RD
- STA. 408+40



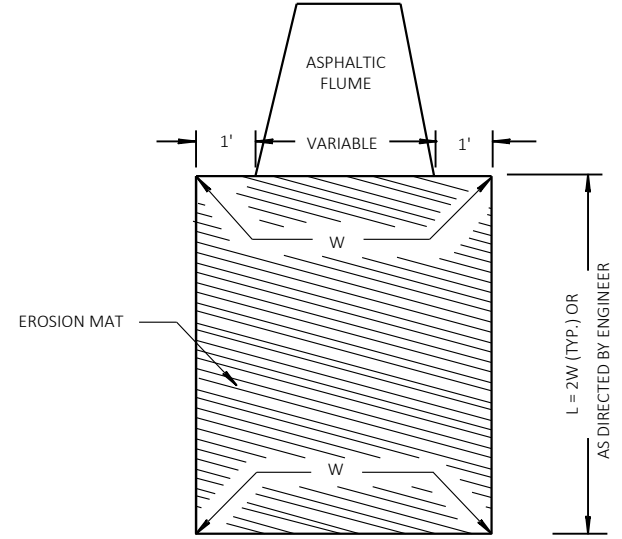


SECTION A-A

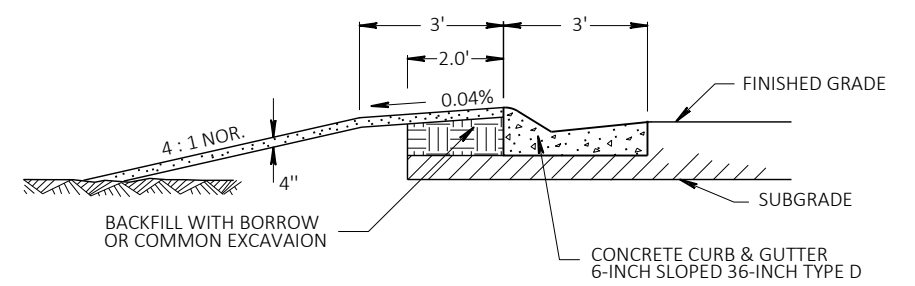


SECTION D-D

ASPHALTIC FLUME DETAIL AT RURAL INTERSECTIONS



EROSION MAT TREATMENT AT ASPHALTIC FLUMES



BERM DETAIL BEHIND 36" MOUNTABLE CURB & GUTTER



CURVE 5  
 PI STA. = 100+58.52  
 Y = 149,518.55  
 X = 325,595.52  
 R = 150.00  
 D = 38°11'50"  
 DELTA = 15°18'40"  
 L = 40.08  
 T = 20.16  
 C = 39.97  
 PC STA. = 100+38.35  
 Y = 149,513.30  
 X = 325,576.06  
 PT STA. = 100+78.44  
 Y = 149,518.47  
 X = 325,615.69  
 S.E. = NORMAL CROWN  
 R.O. = N/A  
 TRANS. = N/A

MATCH LINE STA. 125+00

DALLMAN DAIRY  
 FARM INC

DALLMAN DAIRY  
 FARM INC

LOUISE WILLIAMS  
 BEAVER SWAMP LLP

SHARON M KLINE

C/L STA. 123+21.54 (CTH J) =  
 C/L STA. 100'A+00.00 (CTH Q)  
 INTERSECTION TYPE D REQ'D.

STA. 123+74.71 - 100'A+49.77  
 CONCRETE CURB AND GUTTER 6-INCH  
 SLOPED 36-INCH TYPE D REQ'D.

STA. 123+74.71, 76.0' RT (CTH J) =  
 STA. 100'A+49.77, 75.0' LT (CTH Q)  
 Y = 149,589.54  
 X = 325,573.23

STA. 100'A+50, LT  
 ASPHALTIC FLUME REQ'D.

STA. 101'A+00 - STA. 101'A+50  
 REMOVING ASPHALTIC SURFACE  
 TRANSITION REQ'D.

PROPOSED C/L 'A'-LINE  
 (CTH Q)

KLINE RD

CTH Q

STA. 122+27.50 - 101'A+04.69  
 CONCRETE CURB AND GUTTER 6-INCH  
 SLOPED 36-INCH TYPE D REQ'D.

STA. 122+27.50, 61.0' RT (CTH J) =  
 STA. 101'A+04.69, 60.0' RT (CTH Q)  
 Y = 149,458.36  
 X = 325,641.70

STA. 122+27, RT  
 ASPHALTIC FLUME REQ'D.

POINT TABLE			
POINT NUMBER	Y	X	ELEVATION
101	149449.182	325593.857	1304.55
102	149485.099	325592.304	1304.99
103	149503.438	325623.220	1305.43
104	149530.591	325584.391	1305.59
105	149534.293	325549.835	1305.84
106	149556.533	325523.129	1306.09

LEGEND

DIRECTION OF TRAVEL

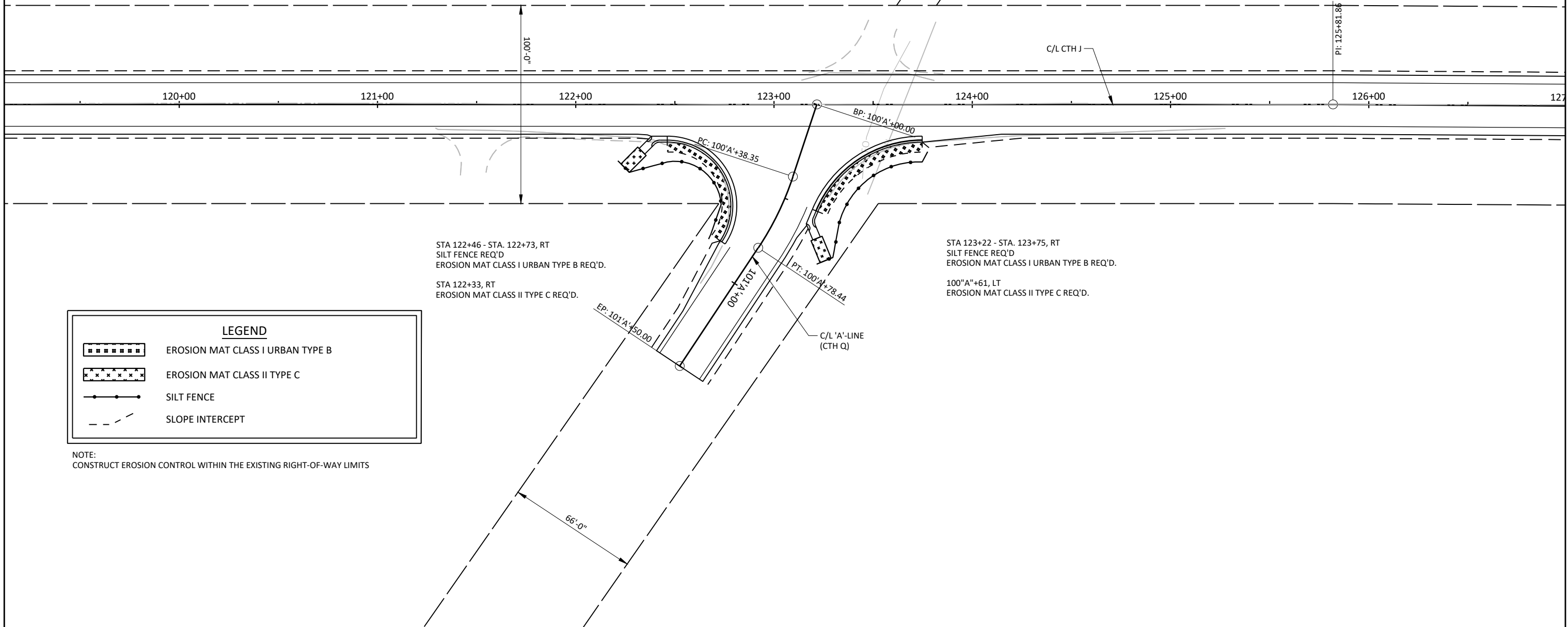
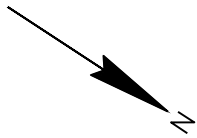
DIRECTION OF FLOW

XXXXXXXX SAWING ASPHALT

PROPOSED C/L CTH J

MATCH LINE STA. 121+50





**LEGEND**

*****	EROSION MAT CLASS I URBAN TYPE B
*****	EROSION MAT CLASS II TYPE C
—●—	SILT FENCE
- - -	SLOPE INTERCEPT

NOTE:  
CONSTRUCT EROSION CONTROL WITHIN THE EXISTING RIGHT-OF-WAY LIMITS

**GENERAL NOTES FOR TRAFFIC CONTROL**

THE EXACT 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 SIGNING IN THE VICINITY, SHALL BE COVERED OR REMOVED AS DIRECTED BY THE ENGINEER.

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

ALL "W" AND "WO" SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED.

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 WISCONSIN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE AND MAINTAIN ACCESS TO ALL PROPERTY ABUTTING THE ROADWAY CONSTRUCTION WORK THROUGHOUT THE LIFE OF THE PROJECT.

THE CONTRACTOR SHALL PROVIDE AND MAINTAIN ALL NECESSARY BARRICADES, SIGNS, LIGHTS, FLAGGERS, AND SUCH OTHER SAFETY DEVICES AS CALLED FOR ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200' CLEARANCE TO EXISTING SIGNS.

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

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.

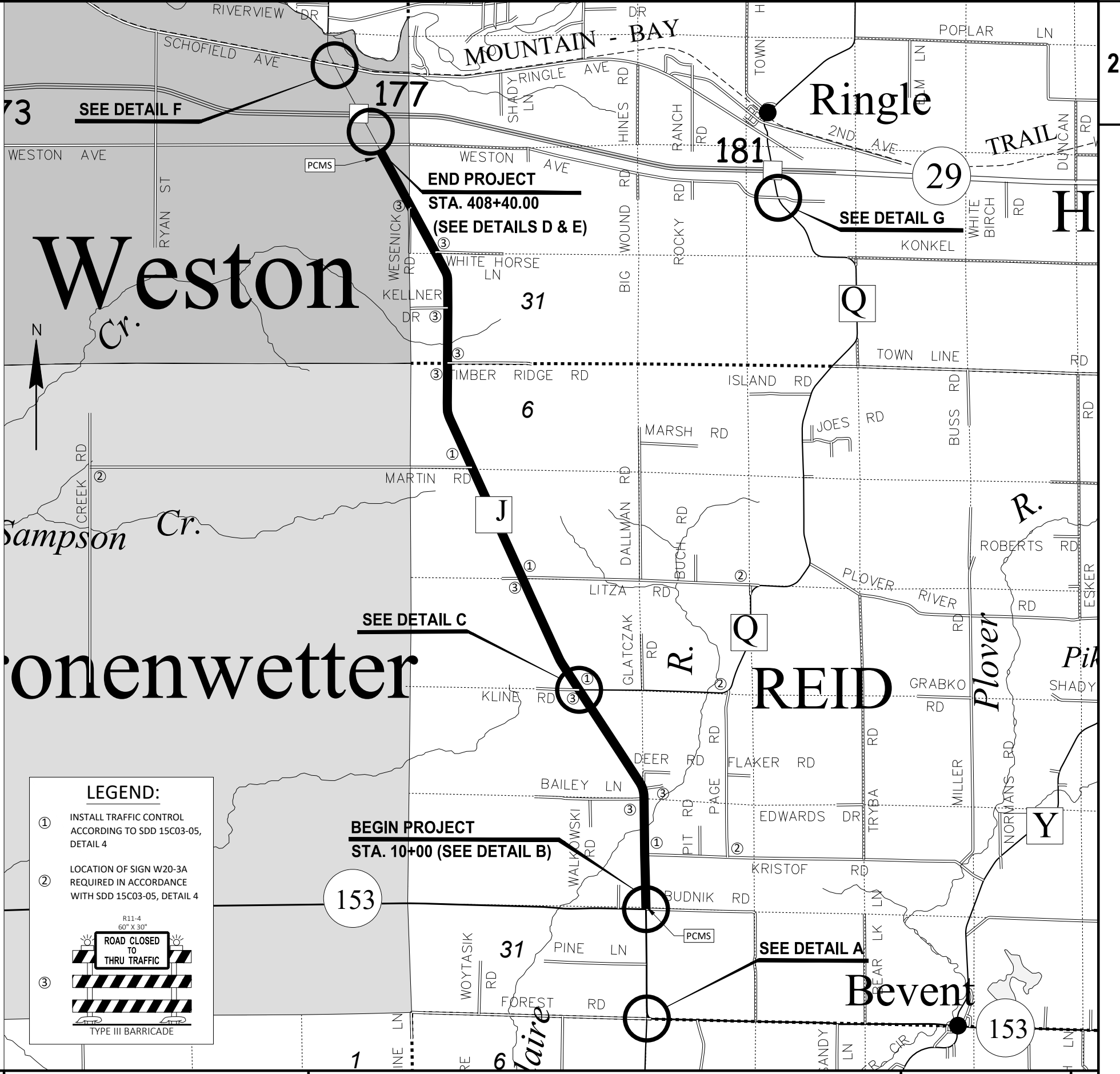
ROAD MACHINERY, FLAGGERS AHEAD, ETC. SIGNS SHALL BE USED AS NEEDED AND SHALL BE REMOVED OR COVERED AT NIGHTS, ON WEEKENDS OR WHEN THE ACTIVITY DOES NOT EXIST.

ADDITIONAL DRUMS OR TYPE III BARRICADES MAY BE REQUIRED ADJACENT TO DROP-OFFS, OPEN TRENCHES, OR PROTRUSIONS. COST TO BE INCLUDED WITH OPERATION WHICH CREATES THE HAZARD.

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

PORTABLE CHANGEABLE MESSAGE BOARD TO BE PLACED TWO WEEKS PRIOR TO CONSTRUCTION STARTING. PCMS MESSAGE TO INCLUDE:

FIRST FRAME	SECOND FRAME
ROAD	XXXXDAY
TO	XX/XX
CLOSE	



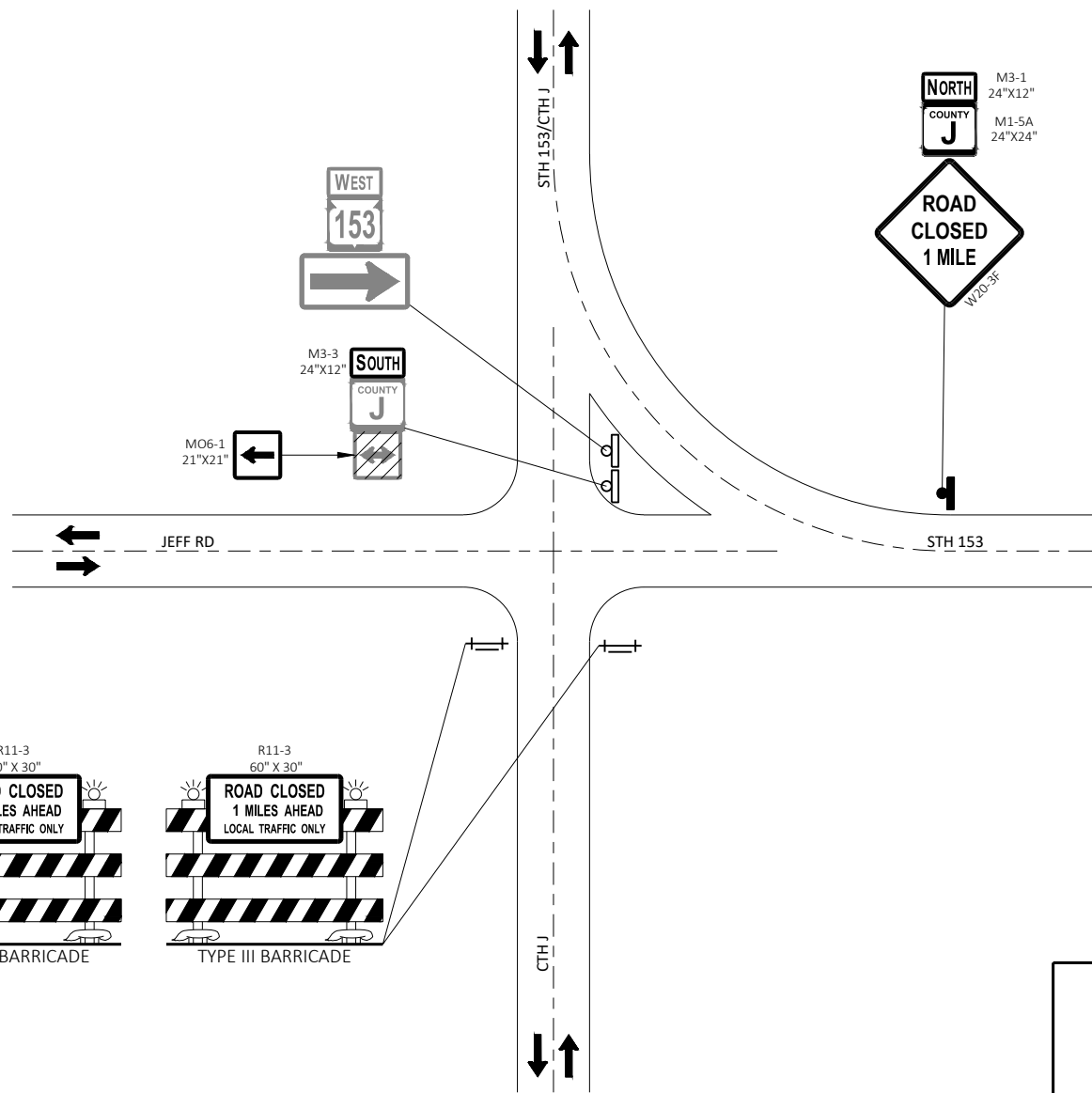
**LEGEND:**

- ① INSTALL TRAFFIC CONTROL ACCORDING TO SDD 15C03-05, DETAIL 4
- ② LOCATION OF SIGN W20-3A REQUIRED IN ACCORDANCE WITH SDD 15C03-05, DETAIL 4
- ③

R11-4  
60" X 30"

ROAD CLOSED TO THRU TRAFFIC

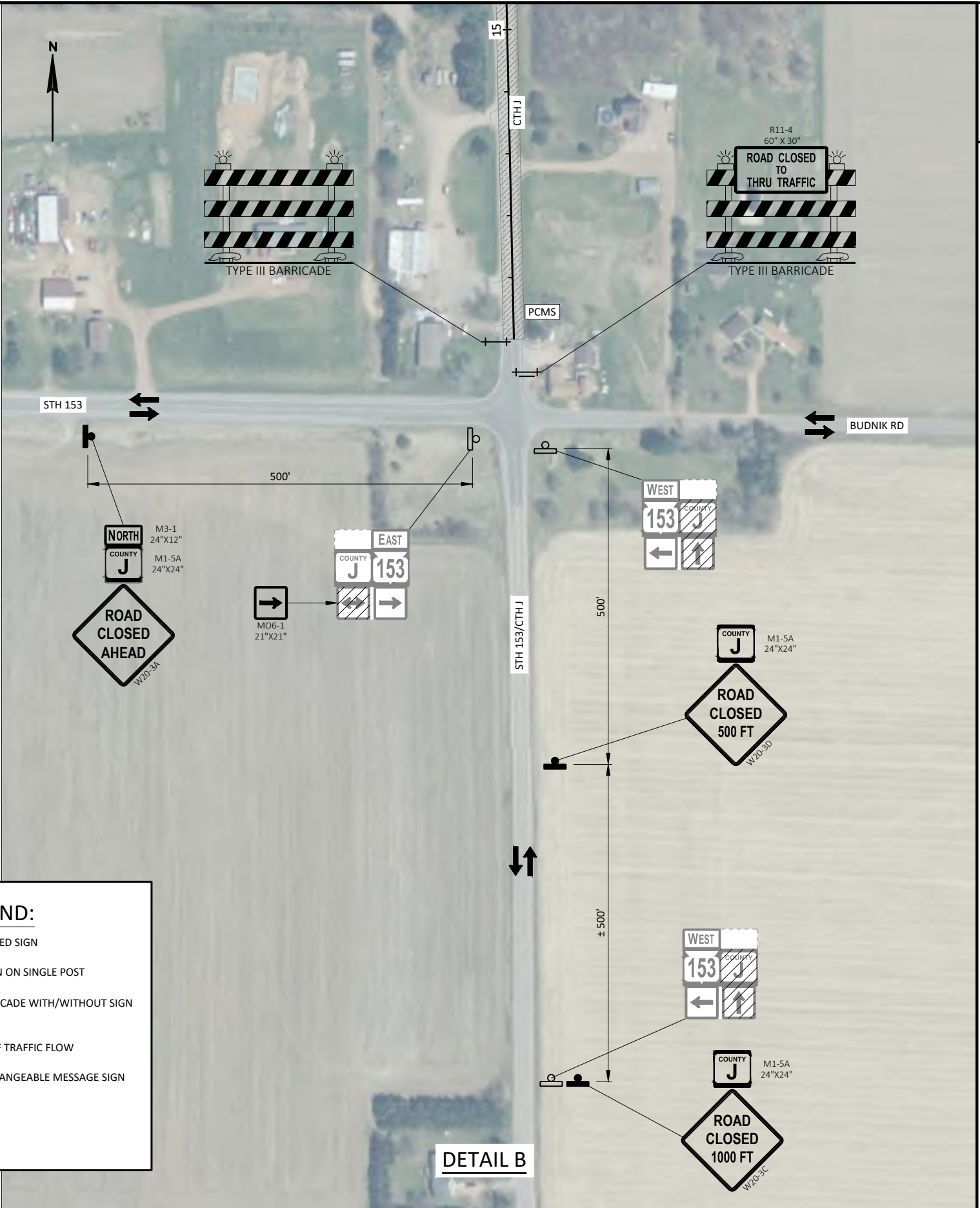
TYPE III BARRICADE



DETAIL A

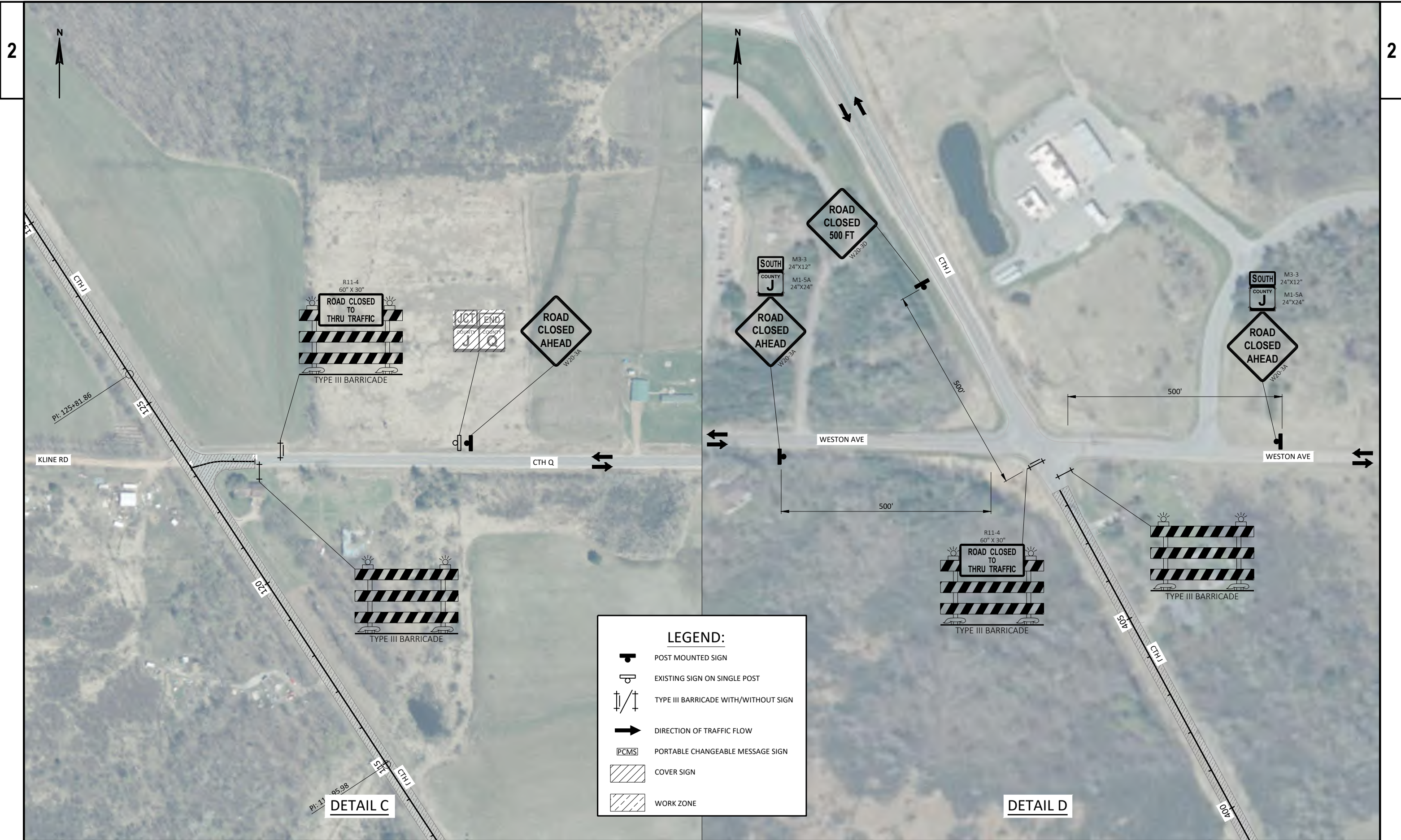
**LEGEND:**

- POST MOUNTED SIGN
- EXISTING SIGN ON SINGLE POST
- TYPE III BARRICADE WITH/WITHOUT SIGN
- DIRECTION OF TRAFFIC FLOW
- PORTABLE CHANGEABLE MESSAGE SIGN
- COVER SIGN
- WORK ZONE



DETAIL B

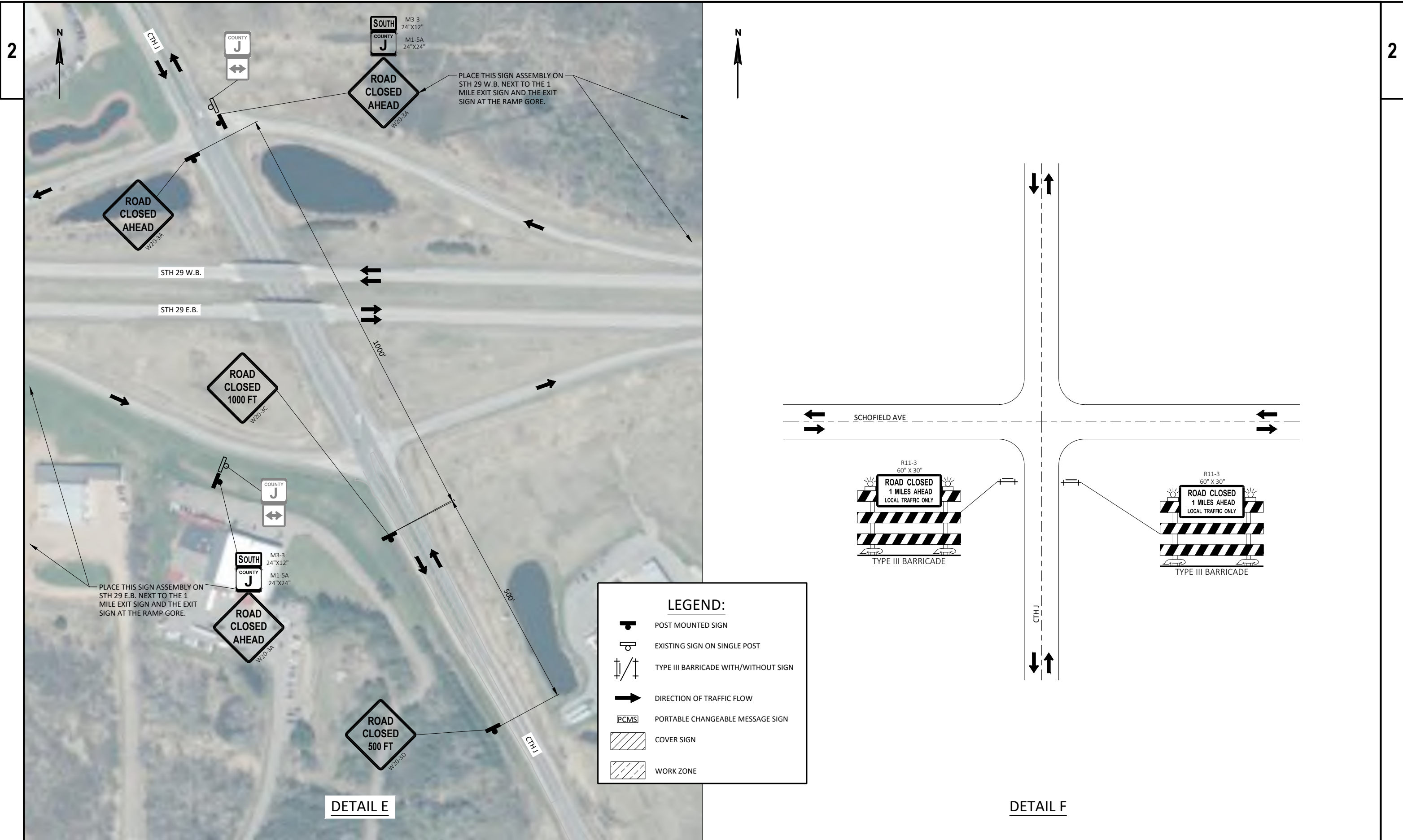




2

2





**DETAIL E**

**DETAIL F**

PROJECT NO: 6656-00-73

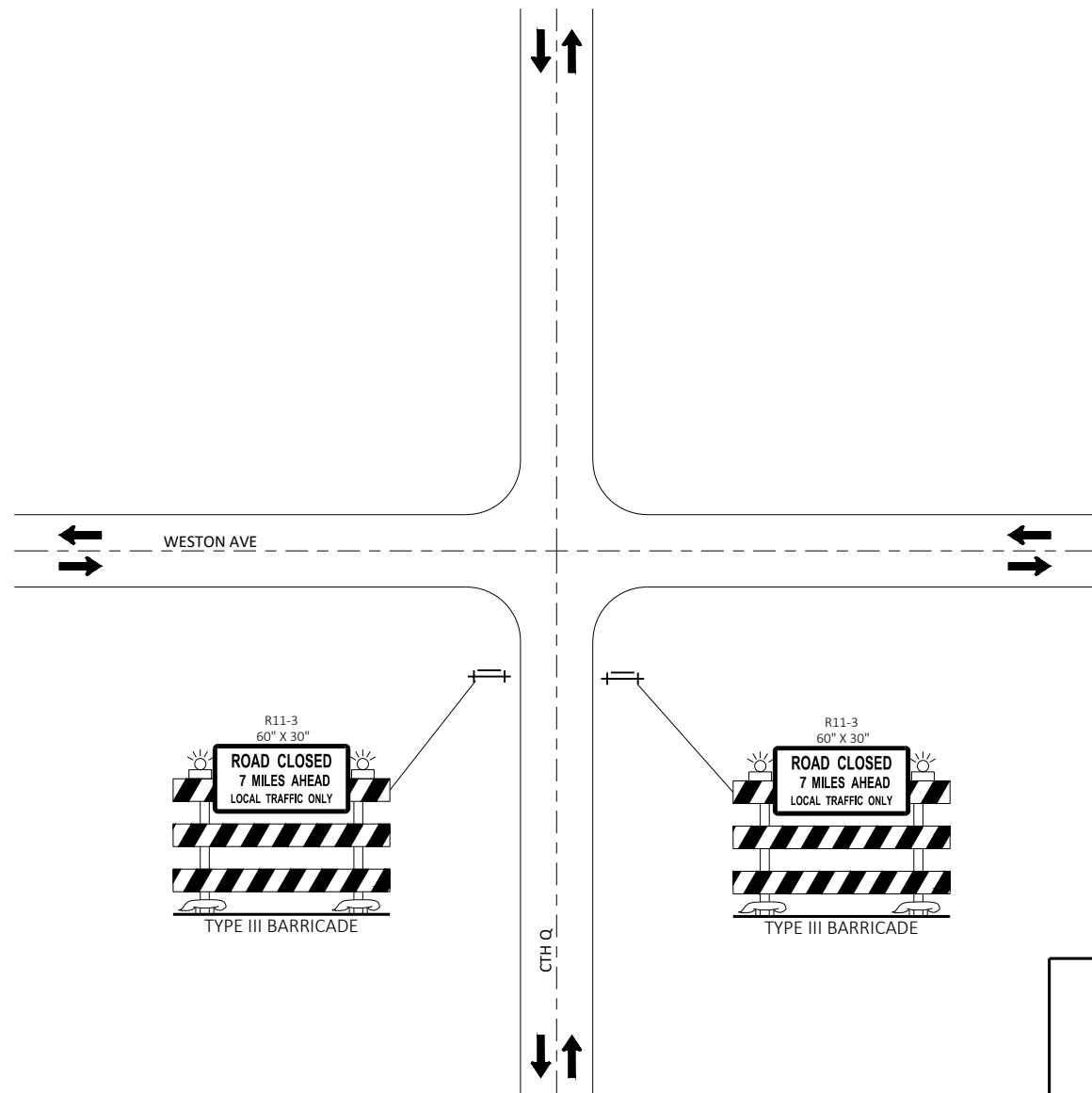
HWY: CTH J

COUNTY: MARATHON

TRAFFIC CONTROL








SHEET

**E**



**DETAIL G**

**LEGEND:**

-  POST MOUNTED SIGN
-  EXISTING SIGN ON SINGLE POST
-  TYPE III BARRICADE WITH/WITHOUT SIGN
-  DIRECTION OF TRAFFIC FLOW
-  PORTABLE CHANGEABLE MESSAGE SIGN
-  COVER SIGN
-  WORK ZONE

Estimate Of Quantities

6656-00-73

Line	Item	Item Description	Unit	Total	Qty
0002	204.0110	Removing Asphaltic Surface	SY	3,100.000	3,100.000
0004	204.0150	Removing Curb & Gutter	LF	134.000	134.000
0006	205.9016.S	Grading Shaping and Finishing Intersection (location) 01. CTH J & CTH Q	EACH	1.000	1.000
0008	213.0100	Finishing Roadway (project) 01. 6656-00-73	EACH	1.000	1.000
0010	305.0110	Base Aggregate Dense 3/4-Inch	TON	6,630.000	6,630.000
0012	325.0100	Pulverize and Relay	SY	133,900.000	133,900.000
0014	374.1020.S	QMP Pulverize and Relay Compaction	SY	133,900.000	133,900.000
0016	455.0605	Tack Coat	GAL	8,300.000	8,300.000
0018	460.2000	Incentive Density HMA Pavement	DOL	21,000.000	21,000.000
0020	460.6222	HMA Pavement 2 MT 58-28 S	TON	23,150.000	23,150.000
0022	460.6225	HMA Pavement 5 MT 58-28 S	TON	9,650.000	9,650.000
0024	465.0120	Asphaltic Surface Driveways and Field Entrances	TON	160.000	160.000
0026	465.0315	Asphaltic Flumes	SY	12.000	12.000
0028	465.0525	Asphaltic Rumble Strips, Shoulder Sinusoidal	LF	58,300.000	58,300.000
0030	601.0557	Concrete Curb & Gutter 6-Inch Sloped 36-Inch Type D	LF	139.000	139.000
0032	618.0100	Maintenance And Repair of Haul Roads (project) 01. 6656-00-73	EACH	1.000	1.000
0034	619.1000	Mobilization	EACH	1.000	1.000
0036	624.0100	Water	MGAL	650.000	650.000
0038	628.1504	Silt Fence	LF	225.000	225.000
0040	628.1520	Silt Fence Maintenance	LF	450.000	450.000
0042	628.1905	Mobilizations Erosion Control	EACH	3.000	3.000
0044	628.1910	Mobilizations Emergency Erosion Control	EACH	3.000	3.000
0046	628.2027	Erosion Mat Class II Type C	SY	30.000	30.000
0048	642.5001	Field Office Type B	EACH	1.000	1.000
0050	643.0420	Traffic Control Barricades Type III	DAY	1,488.000	1,488.000
0052	643.0705	Traffic Control Warning Lights Type A	DAY	2,976.000	2,976.000
0054	643.0900	Traffic Control Signs	DAY	4,340.000	4,340.000
0056	643.0920	Traffic Control Covering Signs Type II	EACH	5.000	5.000
0058	643.1050	Traffic Control Signs PCMS	DAY	28.000	28.000
0060	643.5000	Traffic Control	EACH	1.000	1.000
0062	646.1020	Marking Line Epoxy 4-Inch	LF	113,857.000	113,857.000
0064	646.6120	Marking Stop Line Epoxy 18-Inch	LF	22.000	22.000
0066	648.0100	Locating No-Passing Zones	MI	7.500	7.500
0068	650.8000	Construction Staking Resurfacing Reference	LF	39,570.000	39,570.000
0070	650.9911	Construction Staking Supplemental Control (project) 01. 6656-00-73	EACH	1.000	1.000
0072	690.0150	Sawing Asphalt	LF	730.000	730.000
0074	740.0440	Incentive IRI Ride	DOL	30,000.000	30,000.000
0076	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	2,400.000	2,400.000
0078	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	1,980.000	1,980.000

3

REMOVING ASPHALTIC SURFACE

Table with columns: STATION - STATION, LOCATION, 204.0110 (SY). Includes rows for stations 10+00-10+50, 23+93, 46+10-46+60, 321+67, 407+90-408+40, and a total of 3100.

BASE AGGREGATE DENSE 3/4-INCH

Table with columns: STATION - STATION, LOCATION, 305.0110 (TON). Includes rows for stations 10+00-408+40, 100'A'+50-101'A'+50, and a total of 6630.

PULVERIZE AND RELAY

Table with columns: STATION - STATION, LOCATION, 325.0100 (SY). Includes rows for stations 10+00-46+60, 49+30-408+40, 296+19, 321+67, 349+66, 100'A'+16-101'A'+50, and a total of 133900.

ASPHALTIC FLUMES

Table with columns: STATION, LOCATION, 465.0315 (SY). Includes rows for stations 122+27 and 100'A'+50, with a total of 12.

3

HMA PAVEMENT

Table with columns: STATION - STATION, LOCATION, TACK COAT (GAL), HMA PAVEMENT 2 MT 58-28 S (TON), HMA PAVEMENT 5 MT 58-28 S (TON), ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES (TON). Includes rows for stations 10+00-46+60, 49+30-408+40, 35+05, 61+68, 242+46, 295+19, 321+67, 349+66, 374+36, 100'A'+17-101'A'+50, and a total of 8300.

ASPHALTIC RUMBLE STRIPS SHOULDER SINUSOIDAL

Table with columns: STATION - STATION, LOCATION, 465.0525 (LF). Includes rows for stations 36+00-46+60, 36+00-46+60, 49+30-183+15, 49+30-121+25, 124+75-183+15, 243+00-407+40, 243+75-408+10, and a total of 58300.

REMOVING CURB & GUTTER

Table with columns: STATION - STATION, LOCATION, 204.0150 (LF). Includes rows for stations 122+45-100'A'+87 and 100'A'+42-123+80, with a total of 134.

GRADING, SHAPING, AND FINISHING INTERSECTION

Table with columns: STATION - STATION, LOCATION, 205.9016.S (EACH), EXCAVATION COMMON (CY), TOPSOIL (SY), EROSION MAT CLASS I URBAN TYPE B (SY), FERTILIZER TYPE B (CWT), SEEDING MIXTURE NO. 20 (LB), CONSTRUCTION STAKING SUBGRADE (LF), CONSTRUCTION STAKING BASE (LF), CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER (LF). Includes rows for station 100'A'+17-101'A'+00 and a total of 1.



**CONCRETE CURB & GUTTER  
6-INCH SLOPED 36-INCH TYPE D**

STATION - STATION	LOCATION	601.0557 (LF)
122+27.50 - 101'A'+04.69	CTH Q, RT	71
123+74.71 - 100'A'+49.77	CTH Q, LT	68
TOTAL =		139

**SILT FENCE**

STATION - STATION	LOCATION	628.1504 SILT FENCE (LF)	628.152 SILT FENCE MAINTENANCE (LF)
100'A'+05 - 100'A'+53	CTH Q, LT	65	130
100'A'+55 - 100'A'+89	CTH Q, RT	60	120
-	UNDISTRIBUTED	100	200
TOTALS =		225	450

**MOBILIZATIONS EROSION CONTROL AND  
MOBILIZATIONS EMERGENCY EROSION CONTROL**

STATION - STATION	LOCATION	628.1905 MOB E.C. (EACH)	628.1910 MOB EMERG E.C. (EACH)
10+00 - 408+40	CTH J	3	3
TOTALS =		3	3

**EROSION MAT CLASS II TYPE C**

STATION	LOCATION	L X W (FT X FT)	628.2027 (SY)
122+15	CTH J, RT	12 X 6	8
100'A'+63	CTH Q, LT	12 X 6	8
-	UNDISTRIBUTED	-	14
TOTAL =			30

**TRAFFIC CONTROL**

LOCATION	643.0420 TRAFFIC CONTROL BARRICADES TYPE III (DAY)	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A (DAY)	643.0900 TRAFFIC CONTROL SIGNS (DAY)	643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II (EACH)	643.1050 SIGNS PCMS (DAYS)	643.5000 TRAFFIC CONTROL (EACH)	COMMENT
CTH J	-	-	-	-	28	1	
STH 153 W.B.	-	-	186	-	-	-	<b>STH 153 &amp; CTH J (SOUTH)</b>
STH 153 W.B.	-	-	124	1*	-	-	(1 EA) M3-1, M1-5A, W20-3; NORTH, J, 1 MILE
CTH J, N.B.	124	248	124	-	-	-	(1 EA) M3-3, M6-1; SOUTH, LA (2) R11-3; 1 MILE
STH 153 E.B.	-	-	186	-	-	-	<b>STH 153 &amp; CTH J (NORTH)</b>
STH 153 E.B.	-	-	62	1*	-	-	(1 EA) M3-1, M1-5A, W20-3; NORTH, J, AHEAD
STH 153 W.B.	-	-	124	1*	-	-	(1) M6-1; RA
STH 153 W.B.	-	-	124	-	-	-	(1 EA) M1-5A, W20-3; J, 1000 FT
STH 153 W.B.	-	-	-	1*	-	-	(1 EA) M1-5A, W20-3; J, 500 FT
CTH J, N.B.	124	248	62	-	-	-	(1) R11-4
CTH Q, S.B.	124	248	62	-	-	-	<b>CTH J &amp; CTH Q</b>
CTH Q, S.B.	-	-	62	1*	-	-	(1) R11-4 (1) W20-3; AHEAD
WESTON AVE E.B.	-	-	186	-	-	-	<b>CTH J &amp; WESTON AVE</b>
WESTON AVE W.B.	-	-	186	-	-	-	(1 EA) M3-3, M1-5A, W20-3; SOUTH, J, AHEAD
CTH J S.B.	124	248	62	-	-	-	(1) R11-4
CTH J S.B.	-	-	62	-	-	-	(1) W20-3; 500 FT
CTH J, S.B.	-	-	62	-	-	-	<b>STH 29 &amp; CTH J</b>
CTH J, S.B.	-	-	62	-	-	-	(1) W20-3; 1000 FT
STH 29 E.B. (1 MI FROM RAMP)	-	-	186	-	-	-	(1) W20-3; AHEAD
STH 29 E.B. (AT RAMP GORE)	-	-	186	-	-	-	(1 EA) M3-3, M1-5A, W20-3; SOUTH, J, AHEAD
STH 29 E.B. EXIT RAMP	-	-	186	-	-	-	(1 EA) M3-3, M1-5A, W20-3; SOUTH, J, AHEAD
STH 29 W.B. (1 MI FROM RAMP)	-	-	186	-	-	-	(1 EA) M3-3, M1-5A, W20-3; SOUTH, J, AHEAD
STH 29 W.B. (AT RAMP GORE)	-	-	186	-	-	-	(1 EA) M3-3, M1-5A, W20-3; SOUTH, J, AHEAD
STH 29 W.B. EXIT RAMP	-	-	186	-	-	-	(1 EA) M3-3, M1-5A, W20-3; SOUTH, J, AHEAD
CTH J S.B.	124	248	124	-	-	-	<b>CTH J &amp; SCHOFIELD AVE</b>
							(2) R11-3; 1 MILE
CTH Q S.B.	124	248	124	-	-	-	<b>CTH Q &amp; WESTON AVE</b>
							(2) R11-3; 7 MILES
KRISTOF RD & PAGE RD	62	124	186	-	-	-	<b>ADVANCED WARNING</b>
CTH Q & PAGE RD	62	124	186	-	-	-	(1) W20-3; AHEAD, 500 FT, (1) R11-4
LITZA RD (EAST) & CTH Q	62	124	186	-	-	-	(1) W20-3; AHEAD, 500 FT, (1) R11-4
MARTIN RD & CREEK RD	62	124	186	-	-	-	(1) W20-3; AHEAD, 500 FT, (1) R11-4
BAILEY LN	62	124	62	-	-	-	<b>DEAD END ROAD BARRICADES</b>
DEER RD	62	124	62	-	-	-	(1) R11-4
KLINE RD	62	124	62	-	-	-	(1) R11-4
LITZA RD (WEST)	62	124	62	-	-	-	(1) R11-4
TIMBER RIDGE RD	62	124	62	-	-	-	(1) R11-4
KELLNER DR	62	124	62	-	-	-	(1) R11-4
WHITE HORSE LANE	62	124	62	-	-	-	(1) R11-4
WESENICK RD	62	124	62	-	-	-	(1) R11-4
TOTALS =	1488	2976	4340	5	28	1	

\*COVERING QUANTITY IS FOR ONE SIGN TO BE COVERED FOR ONE CYCLE AS LONG AS THE ROAD IS CLOSED

**MARKING LINE EPOXY 4-INCH**

STATION - STATION	LOCATION	646.1020			
		SOLID WHITE (LF)	DOTTED WHITE (LF)	SOLID YELLOW (LF)	DASHED YELLOW (LF)
10+00 - 15+00	CTH J, C/L	--	--	500	125
15+00 - 46+60	CTH J, C/L	--	--	--	788
49+30 - 52+80	CTH J, C/L	--	--	--	88
52+80 - 65+00	CTH J, C/L	--	--	1220	305
65+00 - 95+30	CTH J, C/L	--	--	6060	--
95+30 - 106+25	CTH J, C/L	--	--	1095	275
106+25 - 117+85	CTH J, C/L	--	--	--	290
117+85 - 123+40	CTH J, C/L	--	--	555	138
123+40 - 128+80	CTH J, C/L	--	--	540	135
128+80 - 240+45	CTH J, C/L	--	--	--	2790
240+45 - 248+90	CTH J, C/L	--	--	845	213
248+90 - 251+40	CTH J, C/L	--	--	--	63
251+40 - 259+65	CTH J, C/L	--	--	825	213
259+65 - 270+85	CTH J, C/L	--	--	1120	275
270+85 - 280+00	CTH J, C/L	--	--	1830	--
280+00 - 290+60	CTH J, C/L	--	--	1060	263
290+60 - 307+70	CTH J, C/L	--	--	--	425
307+70 - 319+00	CTH J, C/L	--	--	1130	288
319+00 - 348+40	CTH J, C/L	--	--	5880	--
348+40 - 359+40	CTH J, C/L	--	--	1100	275
359+40 - 374+00	CTH J, C/L	--	--	--	363
374+00 - 384+90	CTH J, C/L	--	--	1090	275
384+90 - 408+40	CTH J, C/L	--	--	2350	--
10+00 - 123+15	CTH J, LT	11310	--	--	--
123+85 - 183+75	CTH J, LT	5990	--	--	--
184+35 - 241+75	CTH J, LT	5740	--	--	--
243+00 - 321+30	CTH J, LT	7830	--	--	--
321+05 - 373+95	CTH J, LT	5290	--	--	--
374+80 - 408+40	CTH J, LT	3360	--	--	--
10+00 - 34+35	CTH J, RT	2435	--	--	--
35+55 - 66+35	CTH J, RT	3080	--	--	--
67+05 - 122+10	CTH J, RT	5505	--	--	--
123+75 - 183+65	CTH J, RT	5990	--	--	--
184+55 - 294+80	CTH J, RT	11025	--	--	--
295+60 - 349+30	CTH J, RT	5370	--	--	--
350+05 - 408+40	CTH J, RT	5835	15	--	--
100'A'+25 - 101'A'+50	CTH Q, C/L	--	--	125	25
100'A'+50 - 101'A'+50	CTH Q, LT	100	--	--	--
101'A'+05 - 101'A'+50	CTH Q, RT	45	--	--	--
SUBTOTALS =		78905	15	27325	7612
TOTAL =		113857			

**WATER**

STATION - STATION	LOCATION	624.0100 (MGAL)
10+00 - 408+40	PULVERIZED MATERIAL	550
10+00 - 408+40	CTH J, LT	46
10+00 - 408+40	CTH J, RT	47
100'A'+50 - 101'A'+50	CTH Q, LT	0.5
101'A'+05 - 101'A'+50	CTH Q, RT	0.5
--	DRIVEWAYS	6
TOTAL =		650

**MARKING STOP LINE EPOXY 18-INCH**

STATION	LOCATION	646.6120 (LF)
101'A'+25	CTH Q, LT	22
TOTAL =		22

**LOCATING NO-PASSING ZONES**

STATION - STATION	LOCATION	648.0100 (MI)
10+00 - 408+43	CTH J	7.50
TOTAL =		7.50

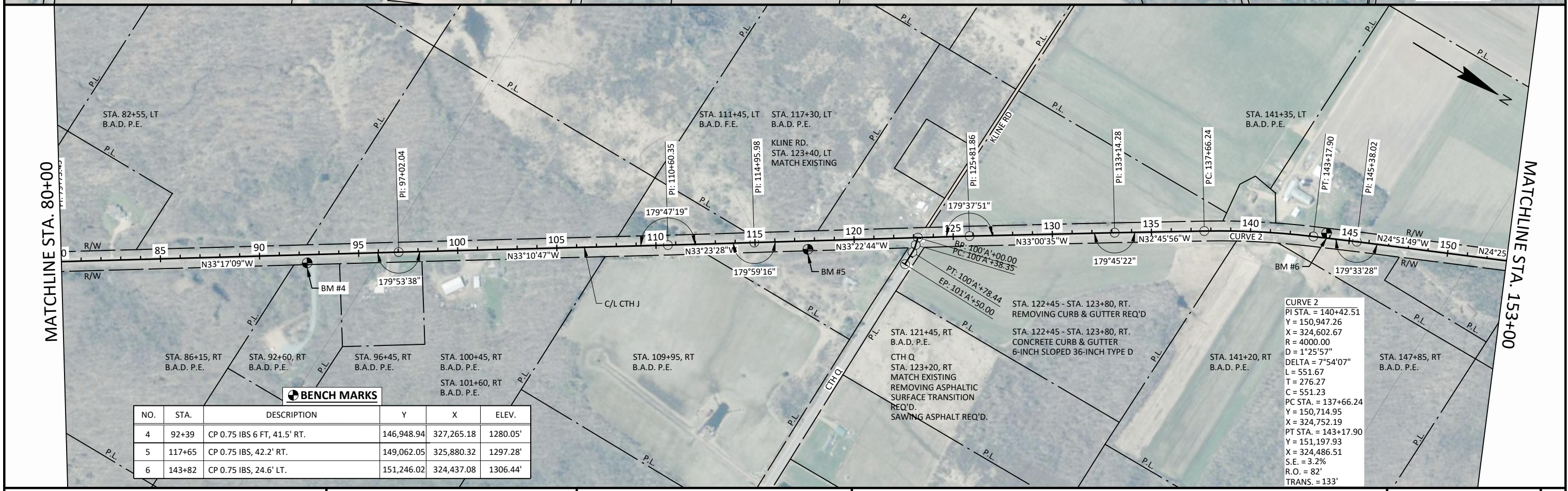
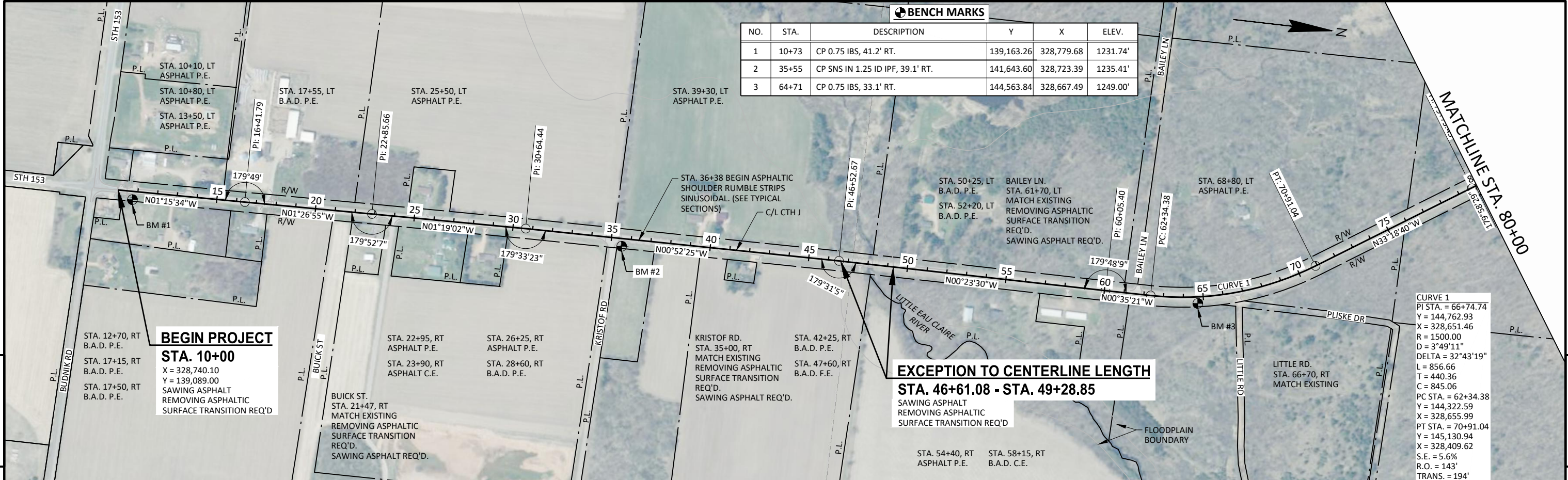
**CONSTRUCTION STAKING**

STATION - STATION	LOCATION	650.8000 RESURFACING REFERENCE (LF)	650.9911 01. 6656-00-73 SUPPLEMENTAL CONTROL (EACH)
10+00 - 408+40	CTH J	--	1
10+00 - 46+60	CTH J	3660	--
49+30 - 408+40	CTH J	35910	--
TOTALS =		39570	1

**SAWING ASPHALT**

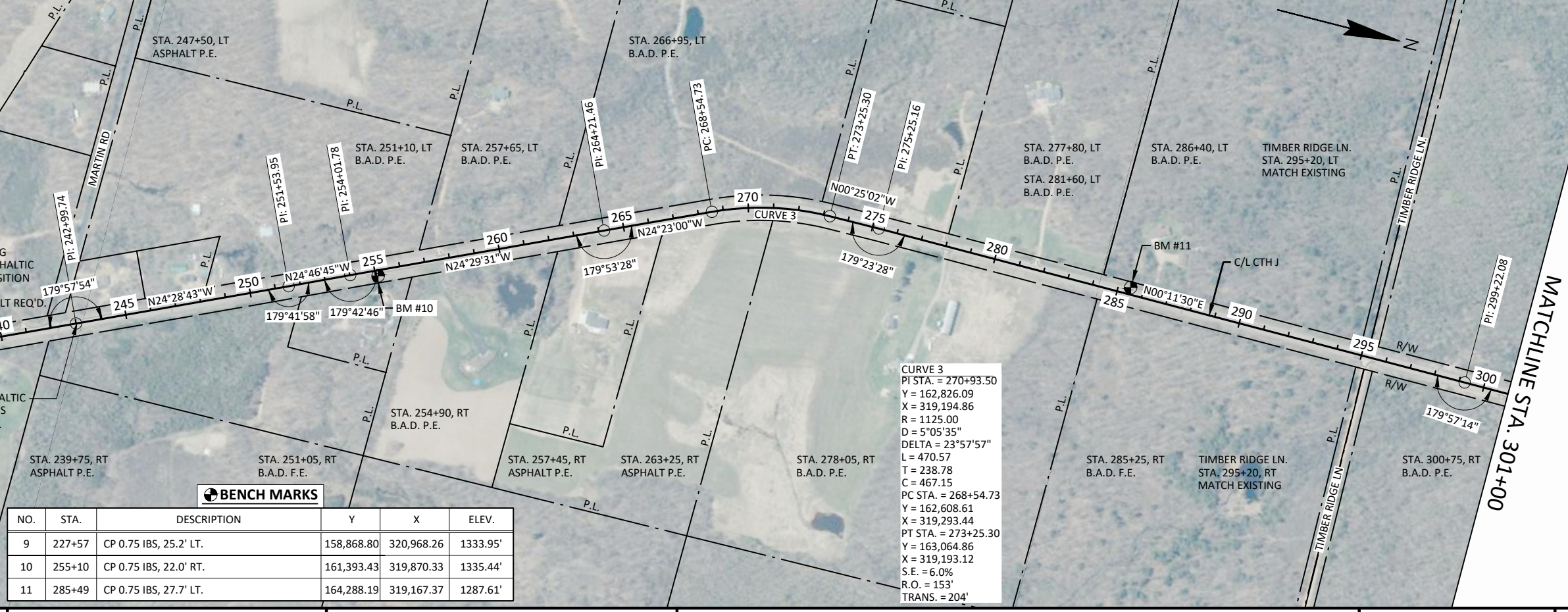
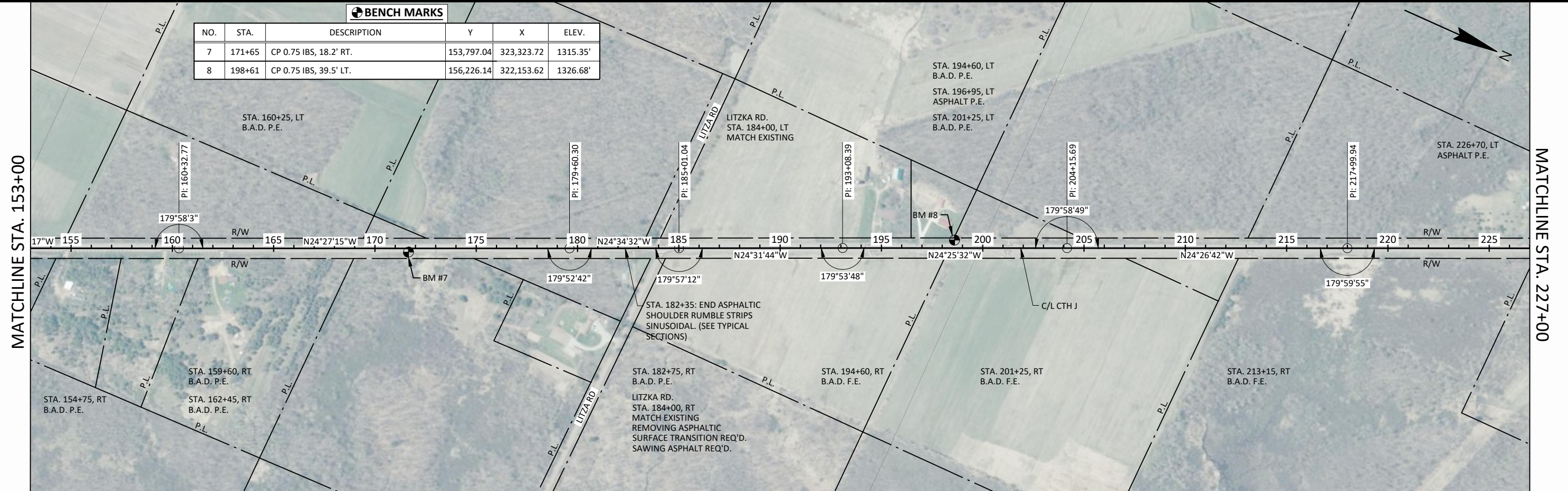
STATION	LOCATION	690.0150 (LF)
10+00	CTH J	28
10+15	CTH J, LT (P.E.)	14
10+30	CTH J, LT (P.E.)	22
13+53	CTH J, LT (P.E.)	27
22+96	CTH J, RT (P.E.)	25
23+93	CTH J, RT (P.E.)	23
25+52	CTH J, LT (P.E.)	19
26+26	CTH J, RT (P.E.)	14
35+05	CTH J, LT (KRISTOF RD)	25
39+33	CTH J, LT (P.E.)	19
46+60	CTH J	24
49+30	CTH J	24
54+43	CTH J, RT (P.E.)	20
61+68	CTH J, LT (BAILEY LN)	23
68+82	CTH J, LT (P.E.)	12
196+95	CTH J, LT (P.E.)	19
226+73	CTH J, LT (P.E.)	20
239+72	CTH J, LT (P.E.)	12
242+46	CTH J, RT (MARTIN RD)	37
247+54	CTH J, LT (P.E.)	19
257+43	CTH J, RT (P.E.)	13
263+26	CTH J, RT (P.E.)	13
295+19	CTH J, RT (TIMBER RIDGE LN)	19
309+44	CTH J, LT (P.E.)	14
317+52	CTH J, RT (P.E.)	20
321+67	CTH J, LT (KELLNER RD)	20
322+82	CTH J, LT (P.E.)	14
325+12	CTH J, LT (P.E.)	13
327+84	CTH J, RT (P.E.)	10
330+32	CTH J, LT (P.E.)	14
346+07	CTH J, LT (P.E.)	18
349+66	CTH J, RT (WHITEHORSE LN)	22
367+37	CTH J, LT (P.E.)	16
404+67	CTH J, RT (P.E.)	20
407+15	CTH J, RT (P.E.)	16
408+40	CTH J	32
101'A'+00	CTH Q	30
TOTAL =		730







BENCH MARKS					
NO.	STA.	DESCRIPTION	Y	X	ELEV.
7	171+65	CP 0.75 IBS, 18.2' RT.	153,797.04	323,323.72	1315.35'
8	198+61	CP 0.75 IBS, 39.5' LT.	156,226.14	322,153.62	1326.68'



BENCH MARKS					
NO.	STA.	DESCRIPTION	Y	X	ELEV.
9	227+57	CP 0.75 IBS, 25.2' LT.	158,868.80	320,968.26	1333.95'
10	255+10	CP 0.75 IBS, 22.0' RT.	161,393.43	319,870.33	1335.44'
11	285+49	CP 0.75 IBS, 27.7' LT.	164,288.19	319,167.37	1287.61'

**CURVE 3**  
 PT STA. = 270+93.50  
 Y = 162,826.09  
 X = 319,194.86  
 R = 1125.00  
 D = 5°05'35"  
 DELTA = 23°57'57"  
 L = 470.57  
 T = 238.78  
 C = 467.15  
 PC STA. = 268+54.73  
 Y = 162,608.61  
 X = 319,293.44  
 PT STA. = 273+25.30  
 Y = 163,064.86  
 X = 319,193.12  
 S.E. = 6.0%  
 R.O. = 153'  
 TRANS. = 204'





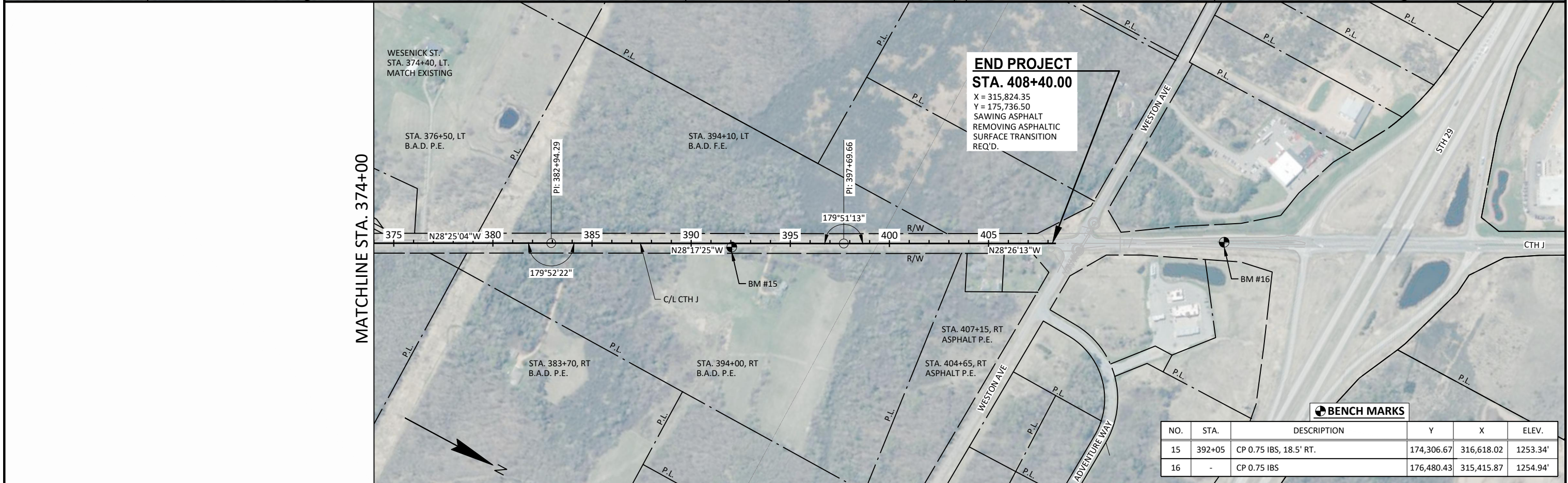
**CURVE 4**  
 PI STA. = 337+08.10  
 Y = 169,447.61  
 X = 319,206.84  
 R = 1060.00  
 D = 5°24'19"  
 DELTA = 26°36'47"  
 L = 492.35  
 T = 250.70  
 C = 487.94  
 PC STA. = 334+57.40  
 Y = 169,196.92  
 X = 319,208.40  
 PT STA. = 339+49.75  
 Y = 169,671.05  
 X = 319,093.14  
 S.E. = 6.0%  
 R.O. = 153'  
 TRANS. = 204'

**BENCH MARKS**

NO.	STA.	DESCRIPTION	Y	X	ELEV.
12	310+41	CP 0.75 IBS, 16.5' RT.	166,780.19	319,220.84	1264.19'
13	337+20	CP 0.75 IBS, 23.2' RT.	169,462.74	319,197.04	1291.05'
14	364+72	CP 0.75 IBS, 19.2' LT.	171,883.23	317,882.57	1282.64'

5

5



**END PROJECT**  
**STA. 408+40.00**  
 X = 315,824.35  
 Y = 175,736.50  
 SAWING ASPHALT  
 REMOVING ASPHALTIC  
 SURFACE TRANSITION  
 REQ'D.

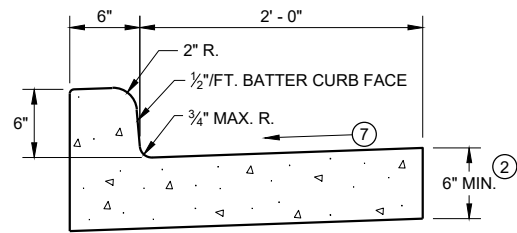
**BENCH MARKS**

NO.	STA.	DESCRIPTION	Y	X	ELEV.
15	392+05	CP 0.75 IBS, 18.5' RT.	174,306.67	316,618.02	1253.34'
16	-	CP 0.75 IBS	176,480.43	315,415.87	1254.94'

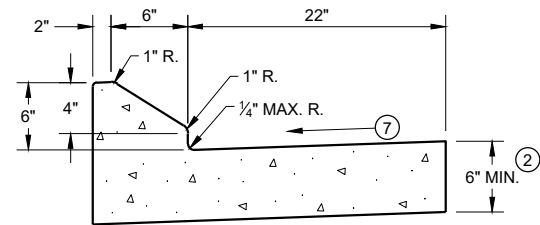


## Standard Detail Drawing List

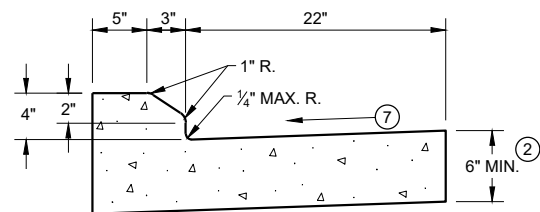
08D01-23A	CONCRETE CURB & GUTTER
08D01-23B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D04-07	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08D22-01	DRIVEWAYS WITHOUT CURB & GUTTER RESURFACING PROJECTS RURAL
08E09-06	SILT FENCE
13A10-03C	SHOULDER RUMBLE STRIPS - ASPHALT SINUSOIDAL
13A10-03G	SHOULDER AND EDGE LINE RUMBLE STRIPS - CROSSINGS, INTERSECTIONS, BRIDGES, DRIVEWAYS
13A10-03H	SHOULDER AND EDGE LINE RUMBLE STRIPS - RAILROAD, PASSING, CLIMBING AND BYPASS LANES
13C19-03	HMA LONGITUDINAL JOINTS
15C02-09A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-09B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C03-05	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C04-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C08-23A	PERMANENT LONGITUDINAL PAVEMENT MARKINGS
15C12-09A	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15C12-09B	TRAFFIC CONTROL, LANE CLOSURE WITH AUTOMATED FLAGGER ASSISTANCE DEVICE
15C19-08A	MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY
15C33-04	STOP LINE AND CROSSWALK PAVEMENT MARKING
15C35-06A	PAVEMENT MARKING (INTERSECTIONS)



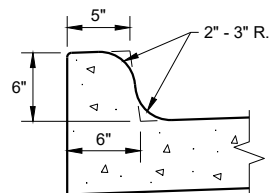
**TYPES A<sup>1</sup> & D**



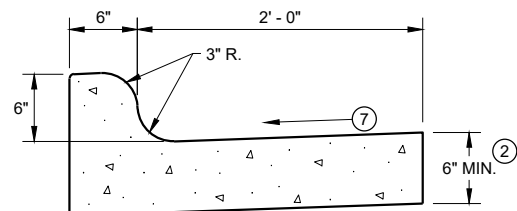
**6" SLOPED CURB TYPES G<sup>1</sup> & J**



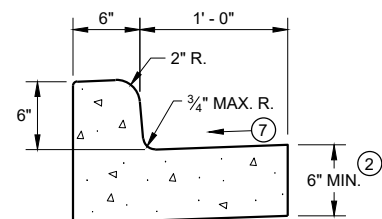
**4" SLOPED CURB TYPES G<sup>1</sup> & J**



**TYPES K<sup>1</sup> & L**  
(OPTIONAL CURB SHAPE)

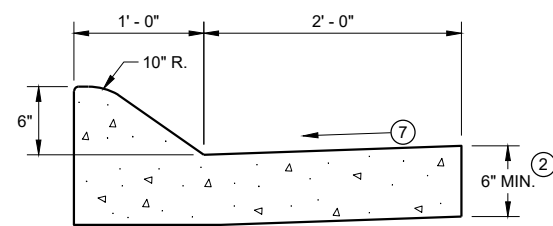


**TYPES K<sup>1</sup> & L**  
**CONCRETE CURB AND GUTTER 30"**

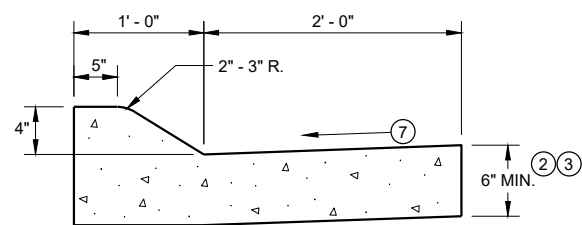


**TYPES A<sup>1</sup> & D**

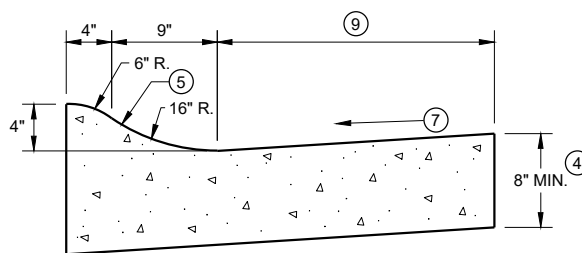
**CONCRETE CURB AND GUTTER 18"**



**6" SLOPED CURB TYPES A<sup>1</sup> & D**

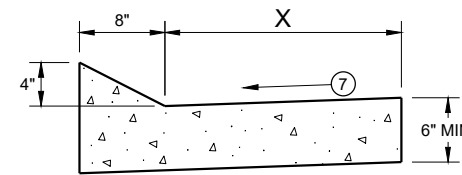


**4" SLOPED CURB TYPES A<sup>1</sup> & D**  
**CONCRETE CURB AND GUTTER 36"**



**4" SLOPED CURB TYPES R<sup>1</sup> & T**

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

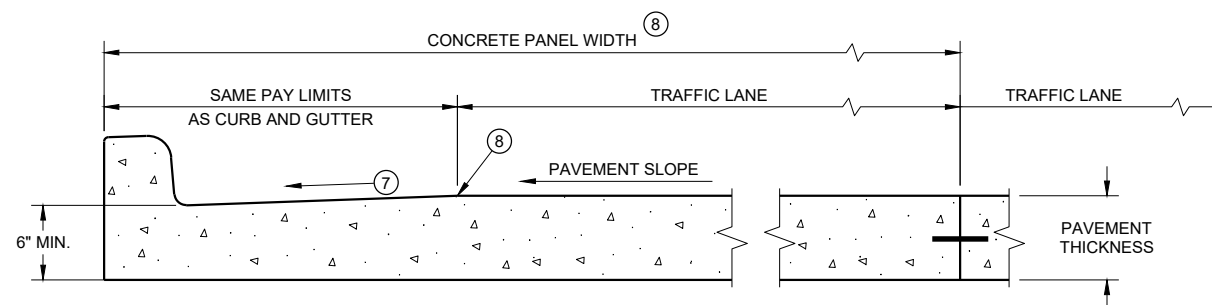


**TYPES TBT & TBTT<sup>1</sup>**

**CONCRETE CURB AND GUTTER**

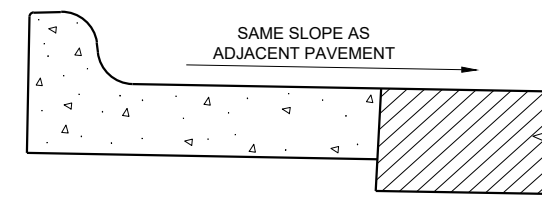
**PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE**

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



**PARTIAL SECTION OF PAVEMENT\* WITH INTEGRAL CURB AND GUTTER**

\* BIKE LANE IS NOT SHOWN



**REVERSE SLOPE GUTTER<sup>6</sup>**  
(TYPICAL FOR ALL CURB & GUTTER TYPES)

**GENERAL NOTES**

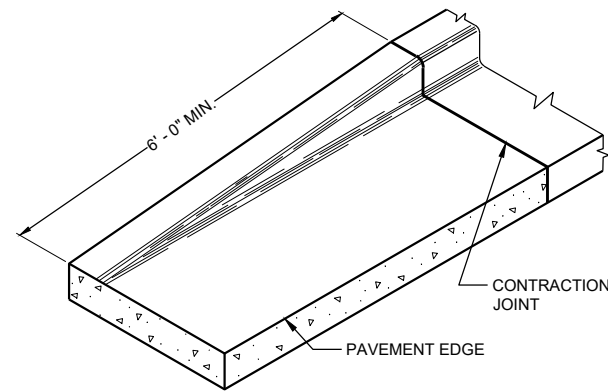
DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

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

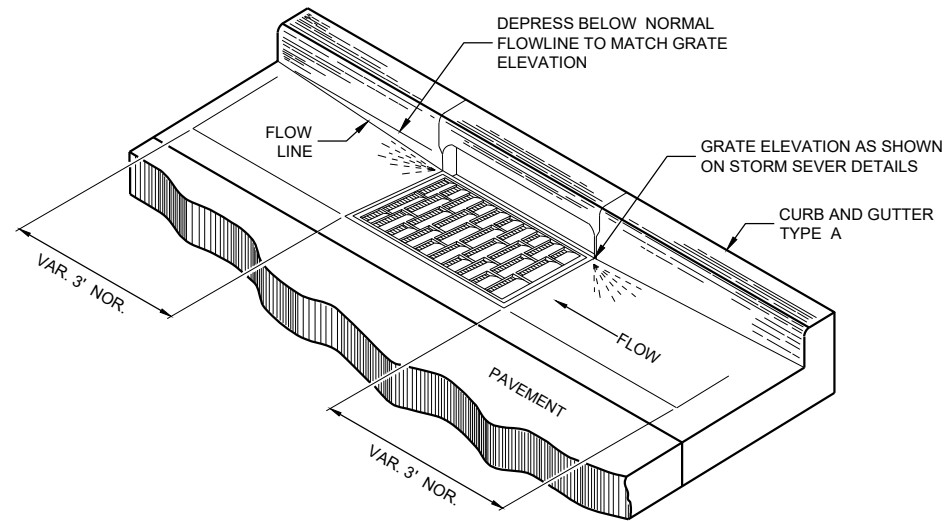
INTEGRAL CURB AND GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB AND GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE.

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

- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ③ USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH AN ADJACENT CONCRETE TRUCK APRON PLACED BEHIND BACK OF CURB.
- ④ THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ⑤ UNLESS OTHERWISE NOTED, FOR STAKING PURPOSES THE FACE OF CURB IS 6" FROM THE BACK OF CURB.
- ⑥ WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.
- ⑦ USE 4% GUTTER CROSS SLOPE UNLESS OTHERWISE NOTED IN THE PLANS.
- ⑧ INCLUDE LONGITUDINAL JOINT AND TIE BARS ALONG LANE EDGE WHEN CONCRETE PANEL WIDTH EXCEEDS THE MAXIMUM WIDTH PER TABLE BELOW. LONGITUDINAL JOINT(S) ARE NOT ALLOWED WITHIN TRAFFIC LANES AND BIKE LANES. LONGITUDINAL JOINT MAY BE SAWED.
- ⑨ CONCRETE CURB AND GUTTER 4-INCH SLOPED 30-INCH TYPE "R" AND "T" = 17 INCHES  
CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE "R" AND "T" = 23 INCHES



**END SECTION CURB AND GUTTER**



**DETAIL OF CURB AND GUTTER AT INLETS**

(TYPICAL H INLET COVER SHOWN)

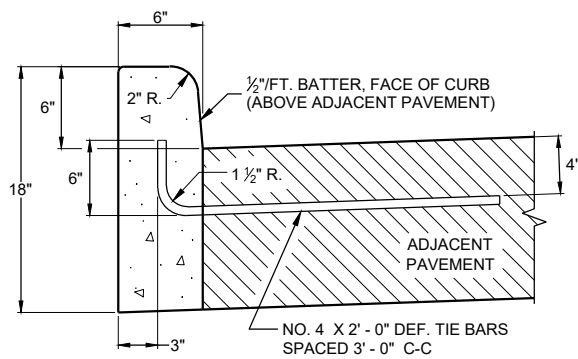
**GENERAL NOTES**

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

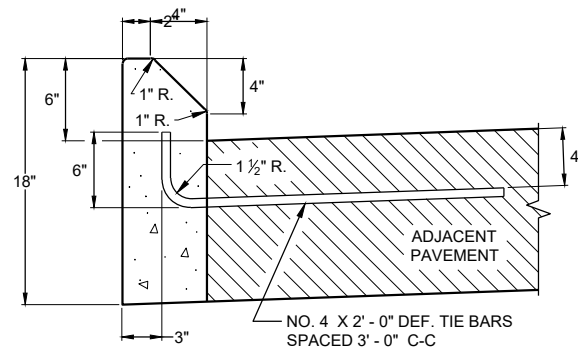
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

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

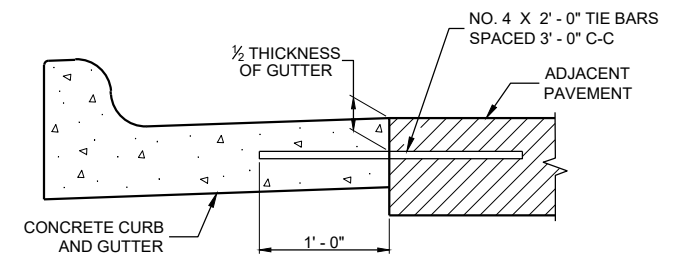
- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ⑩ REFER TO SDD 08D18 AND 08D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.
- ⑪ PLACE 1" THICK EXPANSION JOINT MATERIAL BETWEEN VERTICAL FACE CURB TYPES EXTENDING FROM THE TOP OF CURB TO 1 INCH BELOW THE ADJOINING CONCRETE SURFACE. RIGID CONCRETE STRUCTURES INCLUDE RAISED CONCRETE MEDIANS, CONCRETE SAFETY ISLANDS, SPLITTER ISLANDS, OR LOCATIONS IDENTIFIED ON THE PLANS.



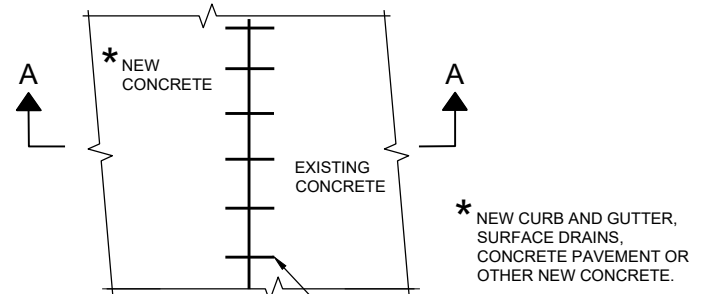
**TYPES A<sup>①</sup> & D**



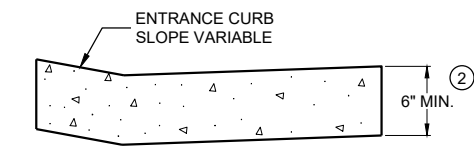
**TYPES G<sup>①</sup> & J  
CONCRETE CURB**



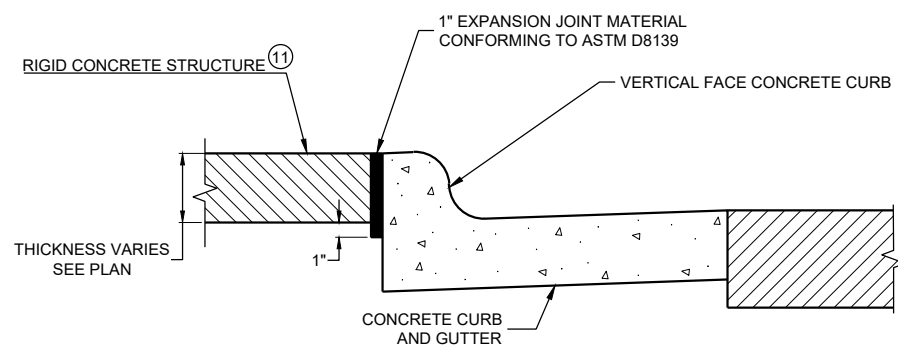
**TYPICAL TIE BAR LOCATION<sup>①</sup>**



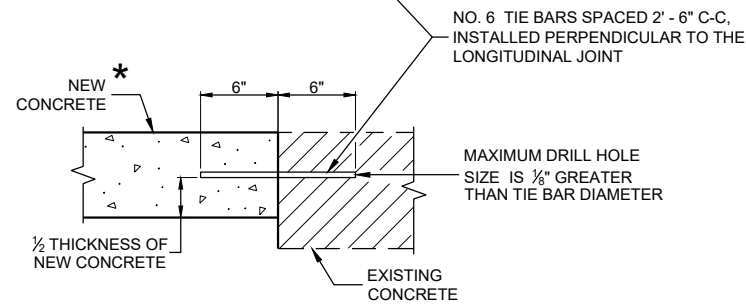
**PLAN VIEW**



**DRIVEWAY ENTRANCE CURB<sup>⑩</sup>  
(WHEN DIRECTED BY THE ENGINEER)**



**EXPANSION JOINT DETAIL FOR VERTICAL CURB ABUTTING A RIGID STRUCTURE<sup>⑪</sup>**



**SECTION A - A  
TIE BARS DRILLED INTO EXISTING PAVEMENT**

**CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

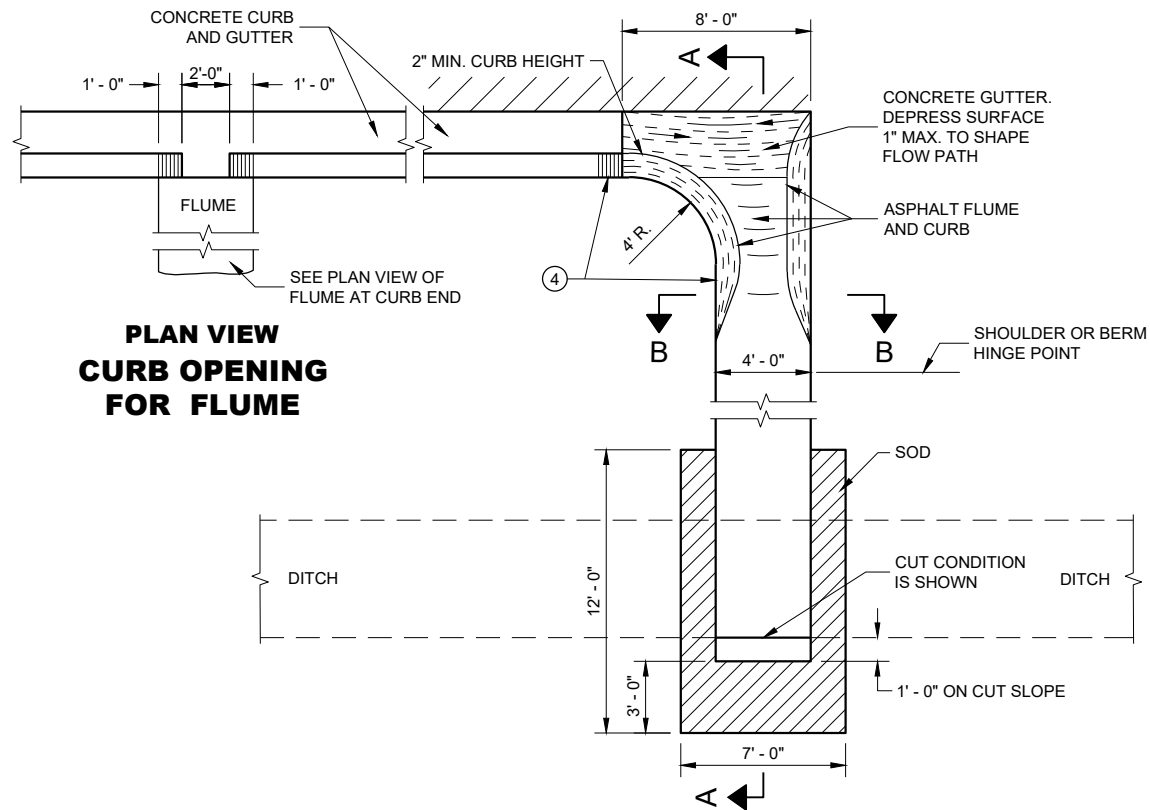
APPROVED  
DATE May 2023 /S/ Rodney Taylor  
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA



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

### ASPHALTIC FLUME



**PLAN VIEW  
CURB OPENING  
FOR FLUME**

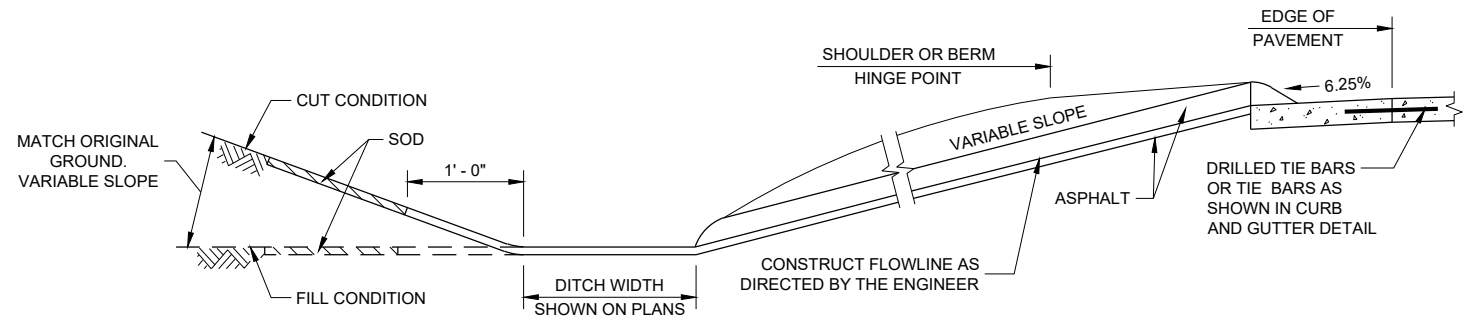
**PLAN VIEW  
FLUME AT CURB END**

### GENERAL NOTES

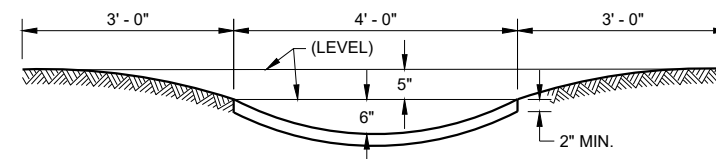
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

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

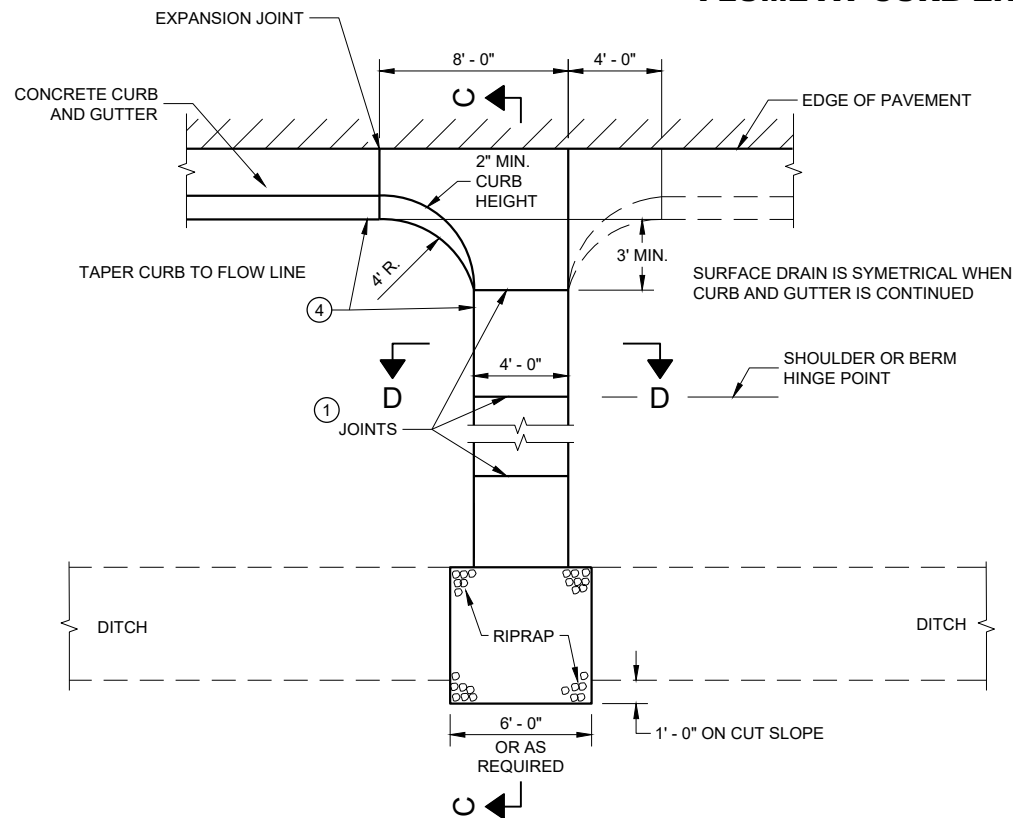
- ① JOINTS SHALL BE 1/8" TO 1/4" WIDE BY 1 1/2" DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.
- ② GEOTEXTILE TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.
- ③ CONCRETE SURFACE DRAIN WITHOUT CURB AND GUTTER MAY BE USED ON BACKSLOPES WHEN SPECIFIED.
- ④ ANGLE OF FLUME IN RELATION TO BACK OF CURB TO BE CONSTRUCTED PER THE PLAN DETAILS OR AS DIRECTED BY THE ENGINEER. ANGLE OF FLUME MAY BE OTHER THAN 90 DEGREES AS SHOWN.



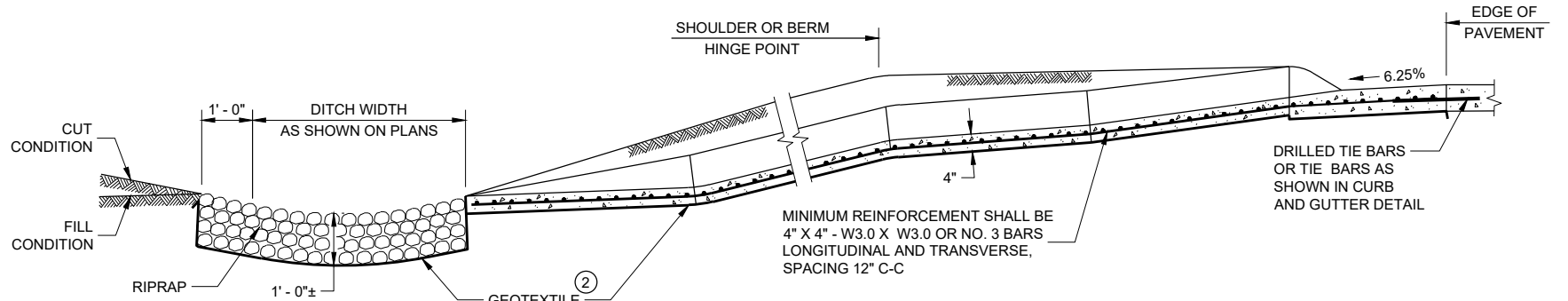
**SECTION A - A**



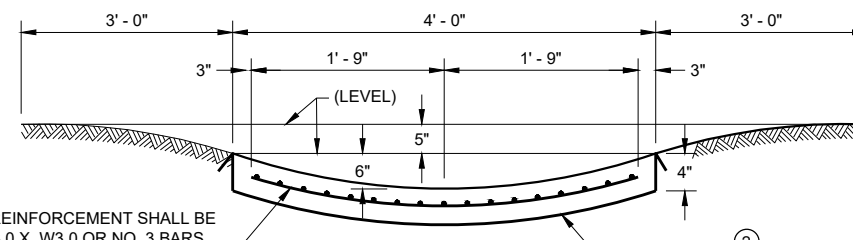
**SECTION B - B**



**PLAN VIEW  
CONCRETE SURFACE DRAIN**



**SECTION C - C**



**SECTION D - D**

MINIMUM REINFORCEMENT SHALL BE 4" X 4" - W3.0 X W3.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE, SPACING 12" C-C

### CONCRETE SURFACE DRAINS AND ASPHALTIC FLUMES

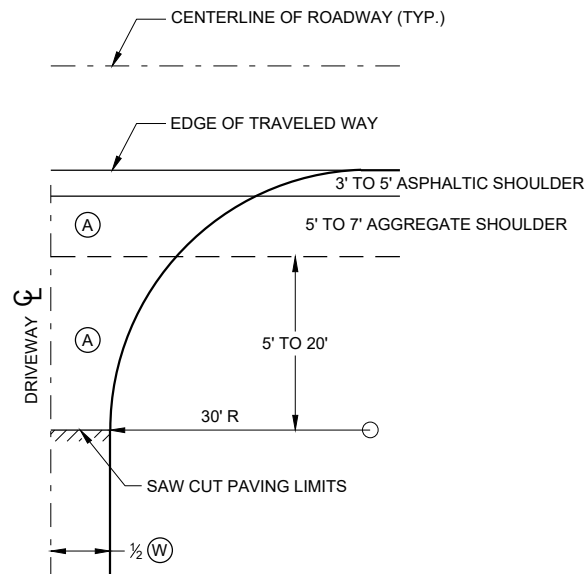
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
May 2023 /S/ Rodney Taylor  
DATE ROADWAY STANDARDS DEVELOPMENT  
ENGINEER

FHWA

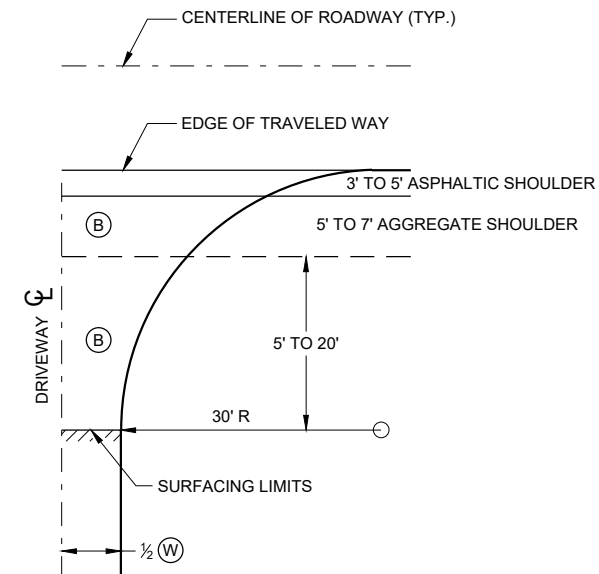
**GENERAL NOTES**

- ① DESIGN WILL DETERMINE FINAL DRIVEWAY ASPHALTIC THICKNESS BASED ON TYPE OF USAGE AND LOADINGS.

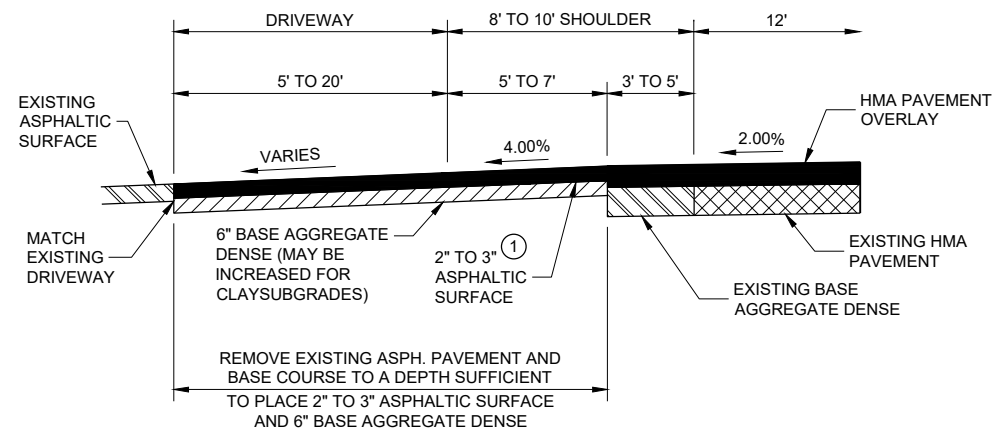


- Ⓐ : PAID FOR AS ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES. (TON)
- Ⓑ : PAID FOR AS BASE AGGREGATE DENSE 1 1/4" (TON)
- ⒲ : DRIVEWAY WIDTH 16' MIN. - 24' MAX.

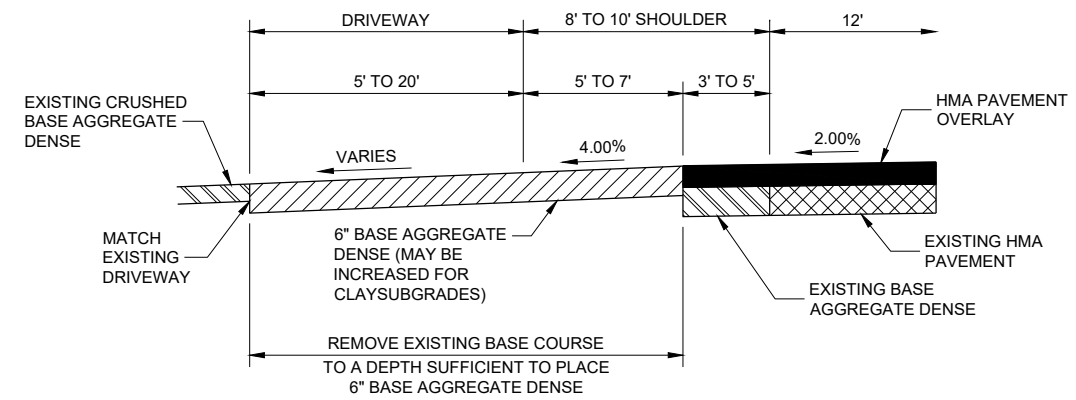
**PLAN VIEW  
HALF SECTION**



**PLAN VIEW  
HALF SECTION**



**PROFILE VIEW  
RURAL ENTRANCE  
WITH ASPHALTIC SURFACE  
RESURFACING PROJECTS**



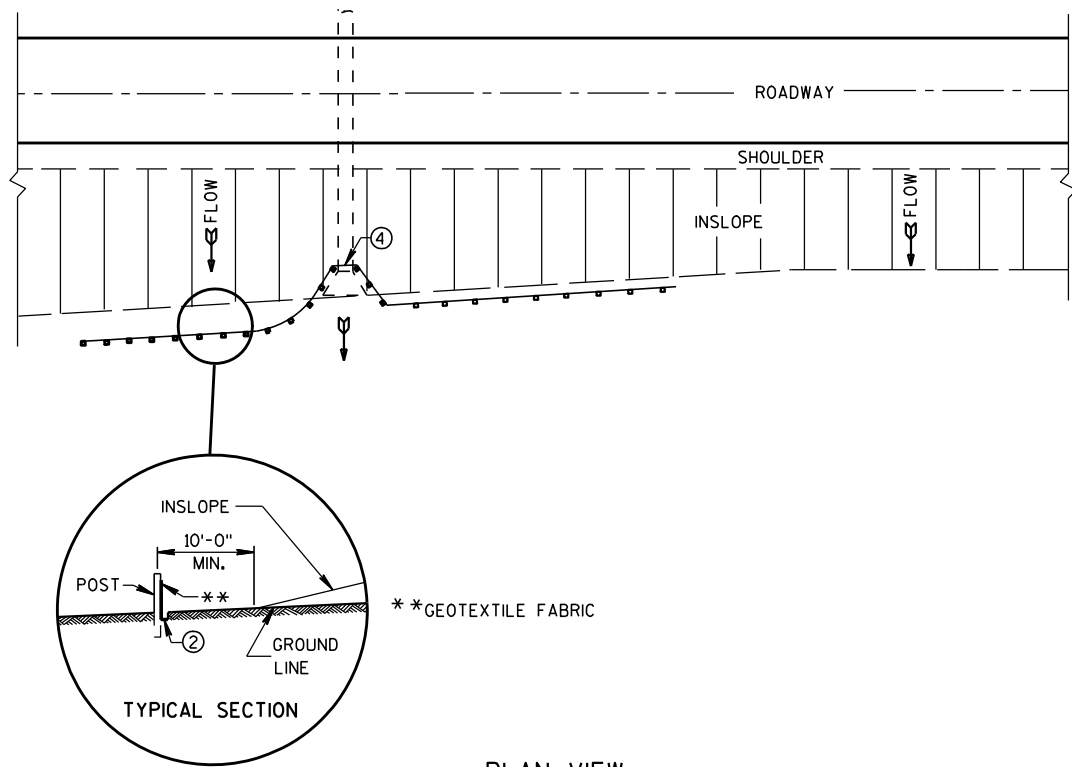
**PROFILE VIEW  
RURAL ENTRANCE  
WITH AGGREGATE SURFACE  
6" BASE AGGREGATE DENSE  
RESURFACING PROJECTS**

**DRIVEWAYS WITHOUT CURB  
AND GUTTER RESURFACING  
PROJECTS RURAL**

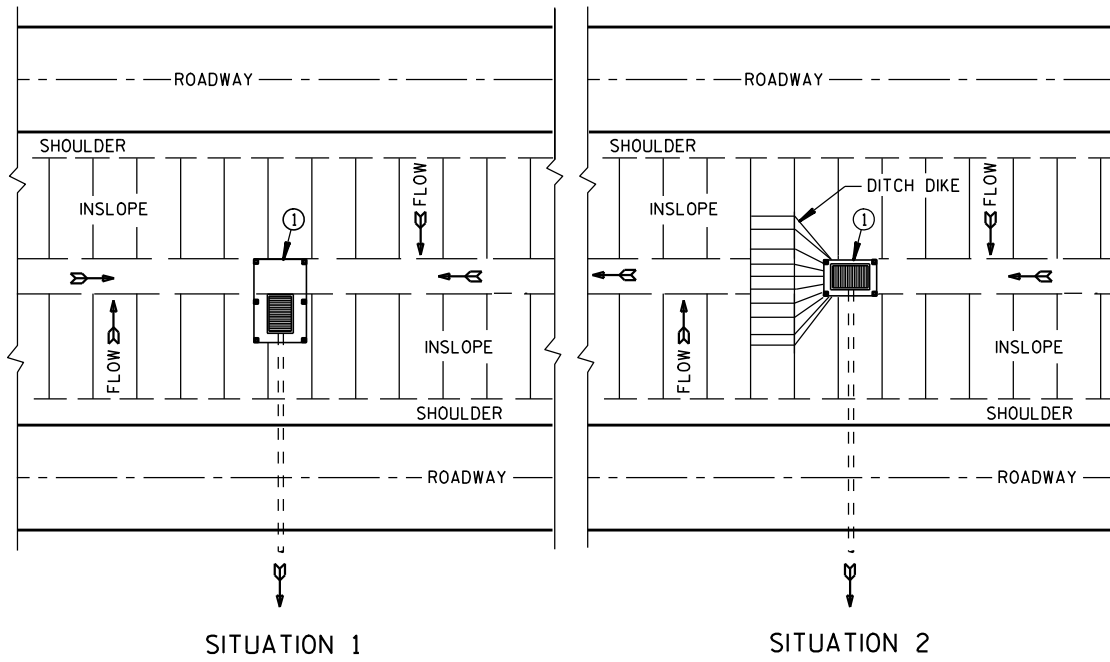
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
December 2016 /S/ Rodney Taylor  
DATE ROADWAY STANDARDS DEVELOPMENT  
ENGINEER

FHWA



PLAN VIEW  
TYPICAL APPLICATION OF SILT FENCE

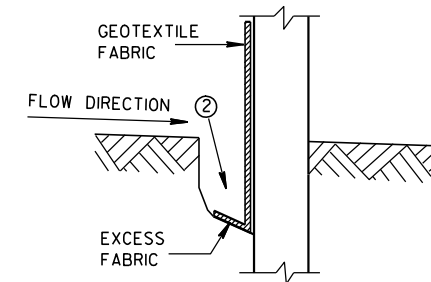


SITUATION 1 SITUATION 2  
PLAN VIEW  
SILT FENCE AT MEDIAN SURFACE DRAINS

**GENERAL NOTES**

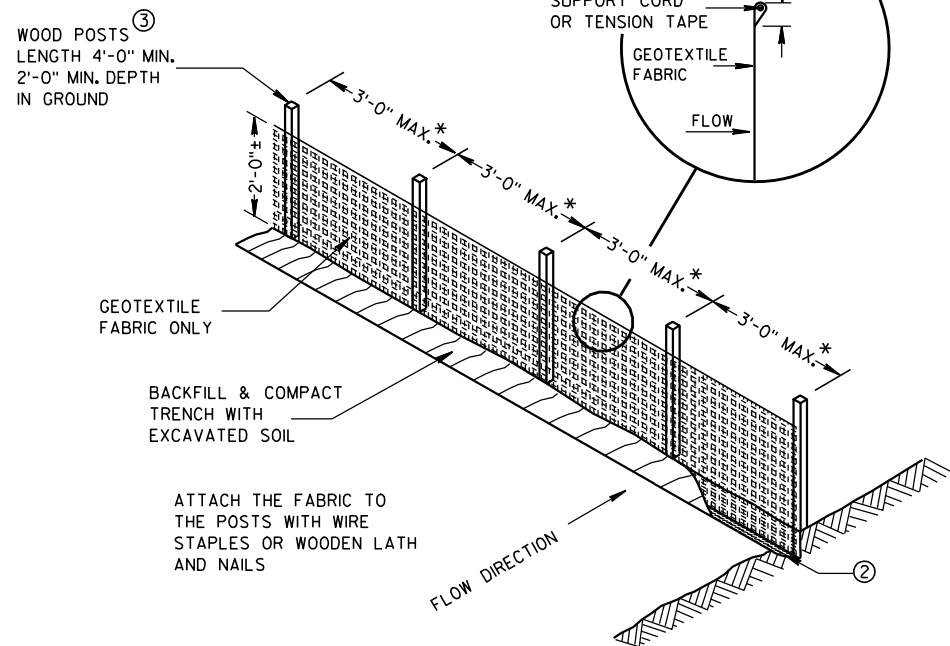
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

- ① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
- ② FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
- ③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1 1/8" X 1 1/8" OF OAK OR HICKORY.
- ④ SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
- ⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.

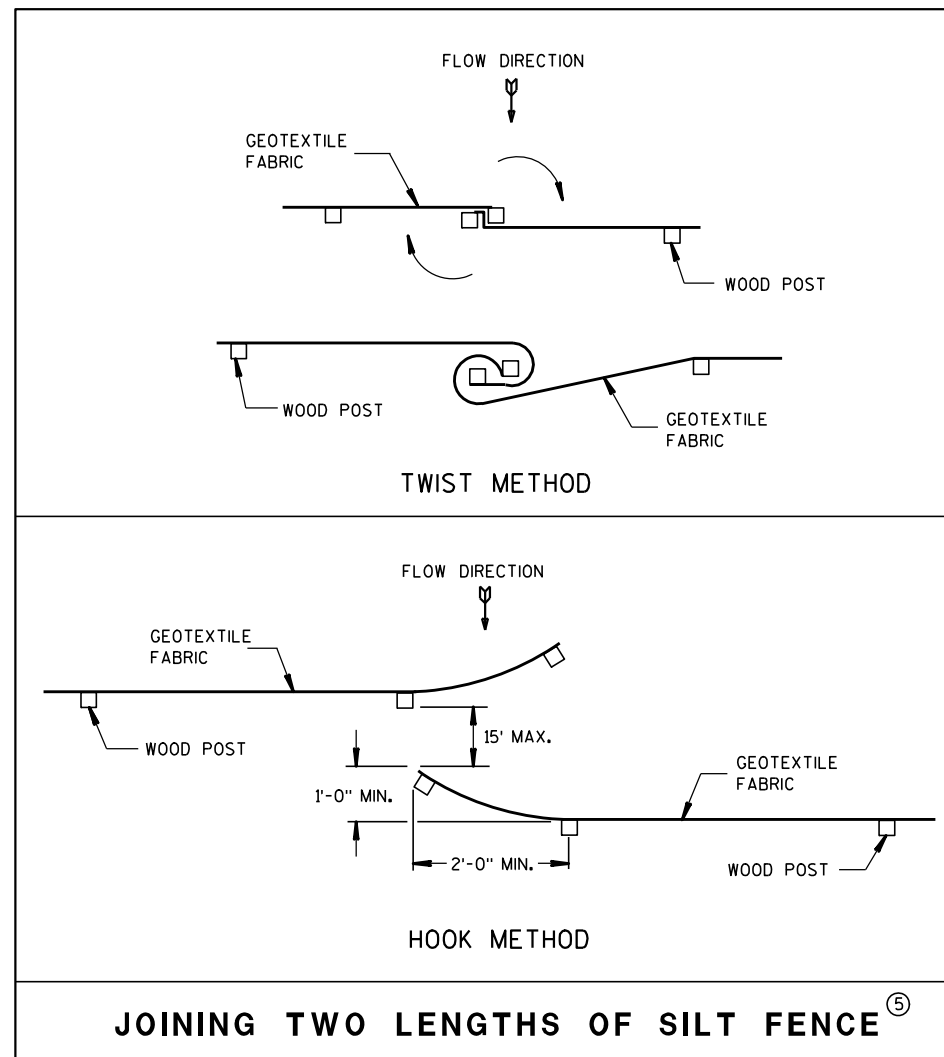


TRENCH DETAIL

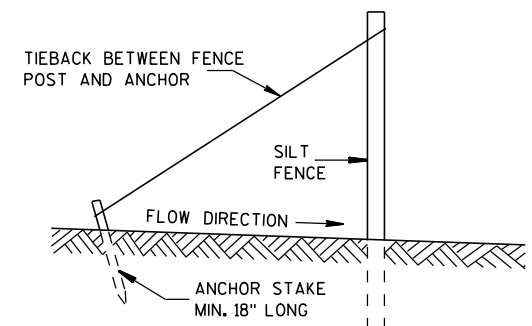
NOTE: ADDITIONAL POST DEPTH OR TIE BACKS MAY BE REQUIRED IN UNSTABLE SOILS



SILT FENCE



JOINING TWO LENGTHS OF SILT FENCE ⑤

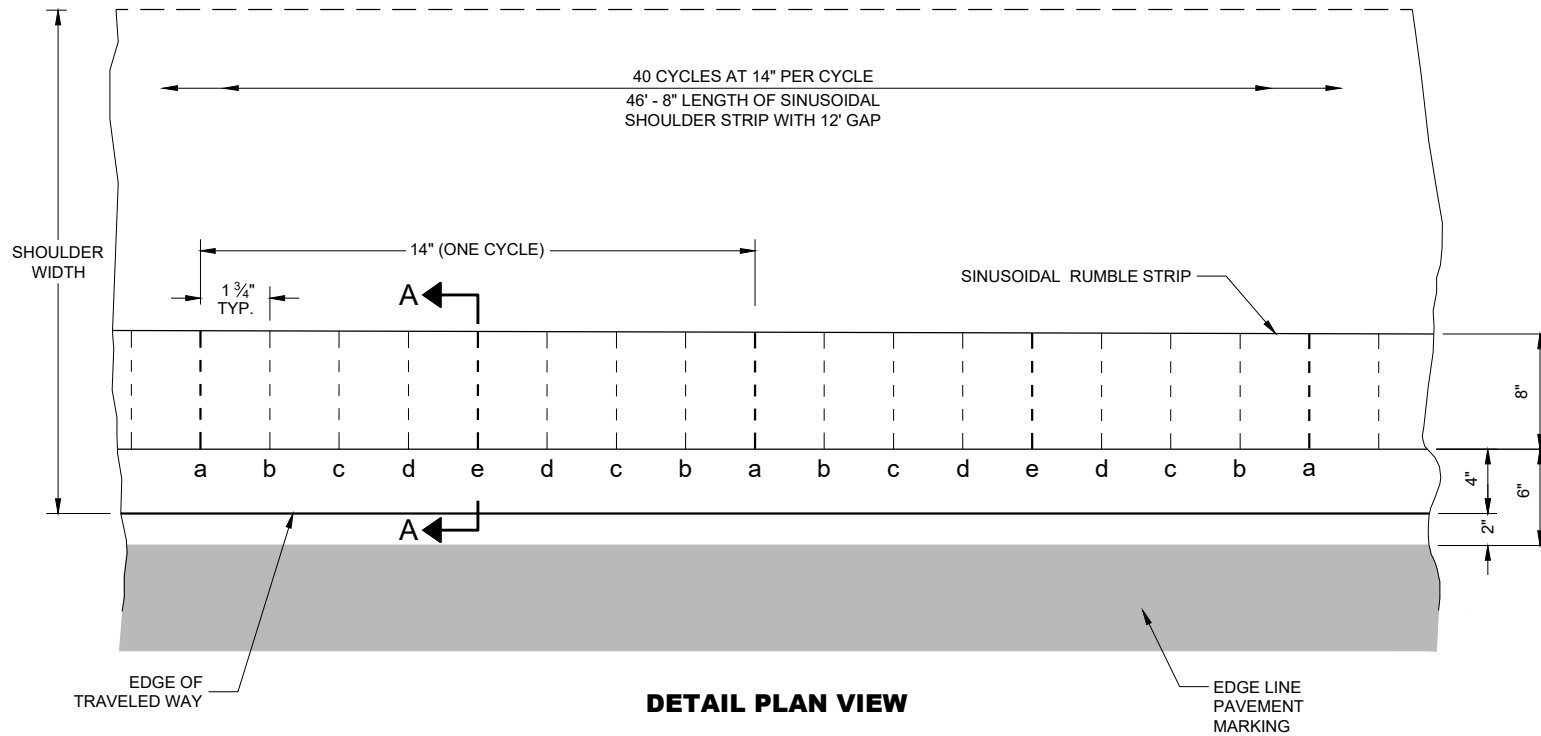


SILT FENCE TIE BACK  
(WHEN REQUIRED BY THE ENGINEER)

**SILT FENCE**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

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

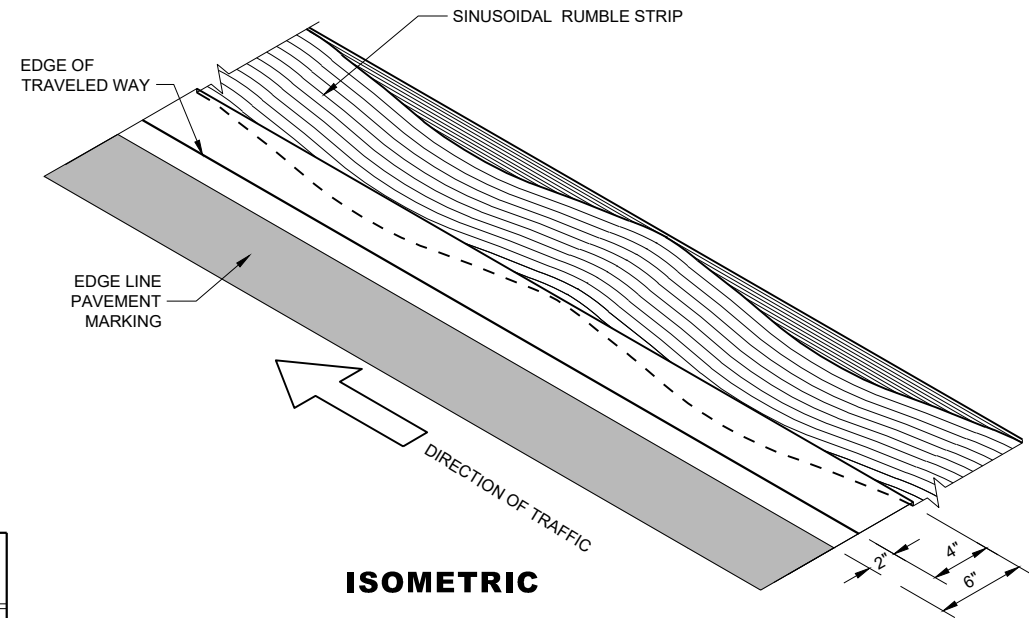


**DETAIL PLAN VIEW**

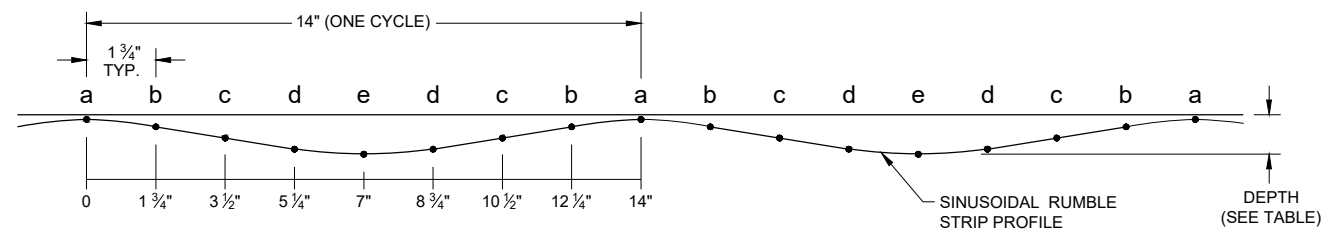
**GENERAL NOTES**

DO NOT MILL SHOULDER GROOVES THROUGH INTERSECTIONS, MARKED CROSSWALKS, NON-MOTORIZED PATH CROSSINGS, ETC. REFER TO SDD 13A10 SHEETS "g" AND "h".

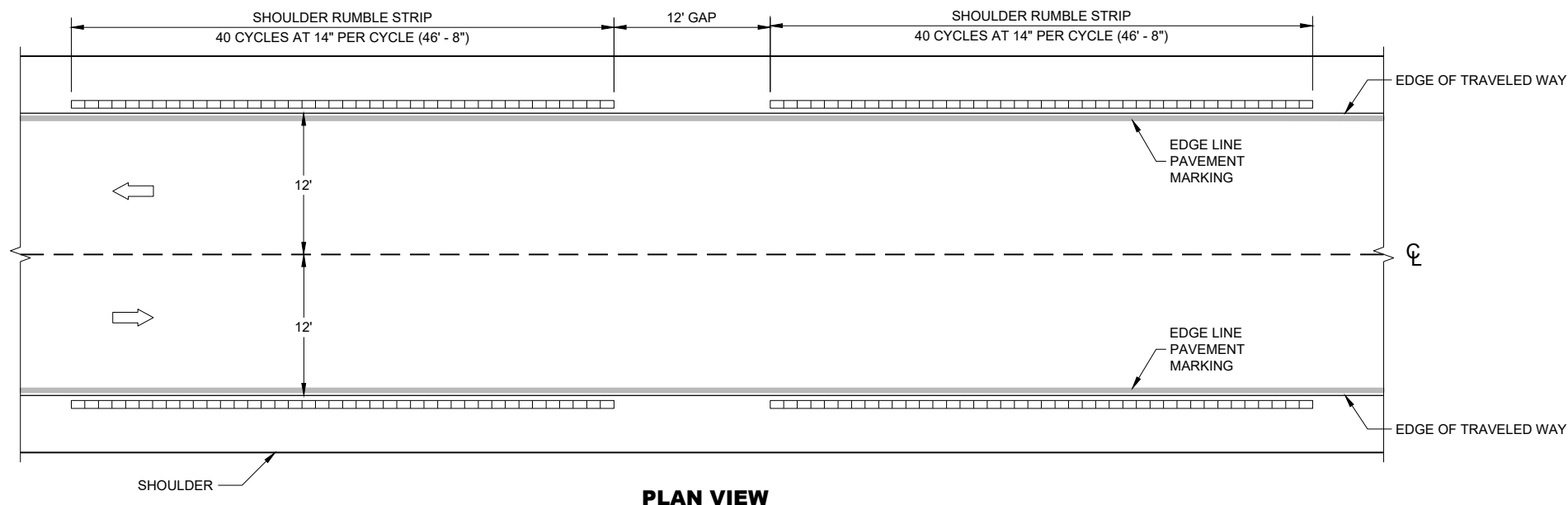
SHOULDER RUMBLE STRIPS MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS WHEN DIRECTED BY THE ENGINEER.



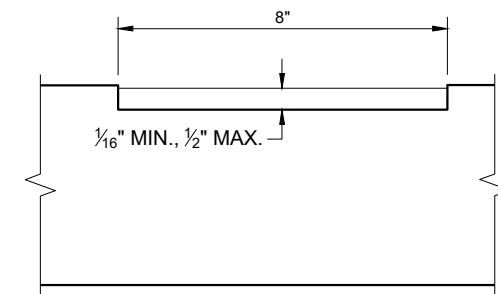
**ISOMETRIC**



**PROFILE VIEW**



**PLAN VIEW**



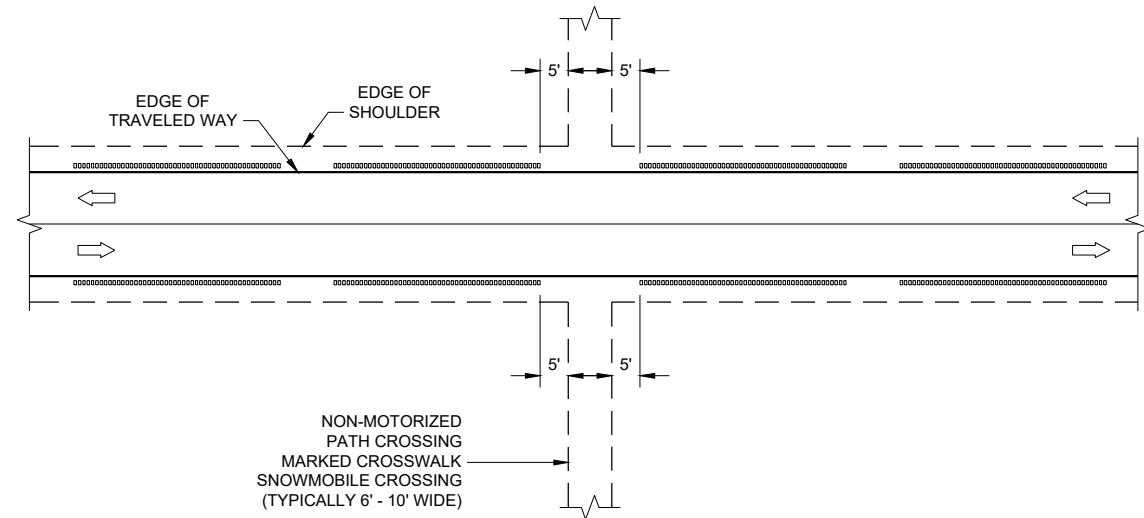
**SECTION A - A**

**SHOULDER RUMBLE STRIPS - ASPHALT, SINUSOIDAL**

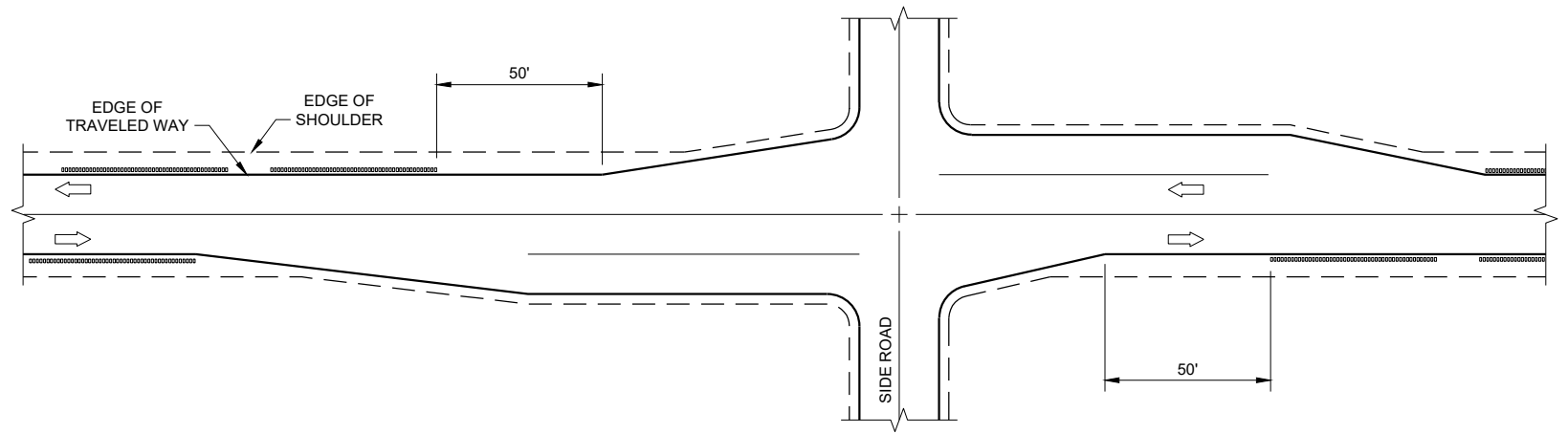
**SHOULDER RUMBLE STRIPS - ASPHALT, SINUSOIDAL**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

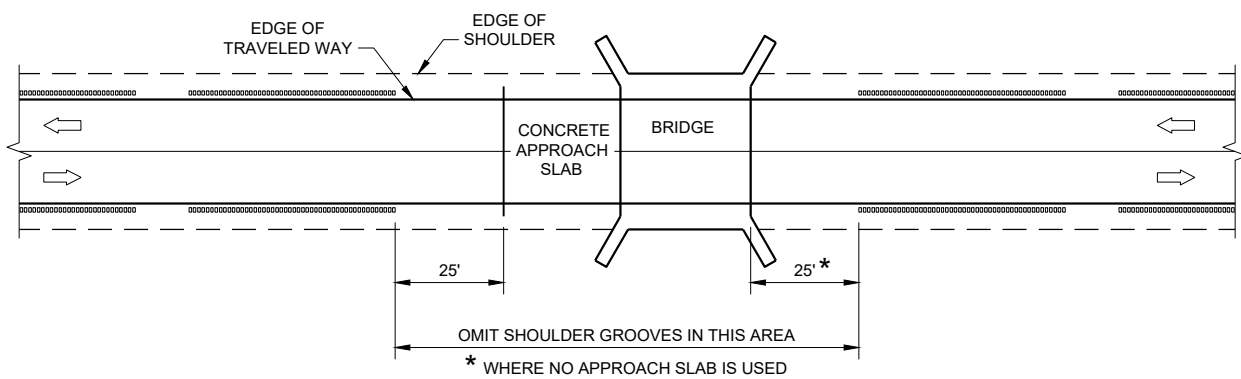




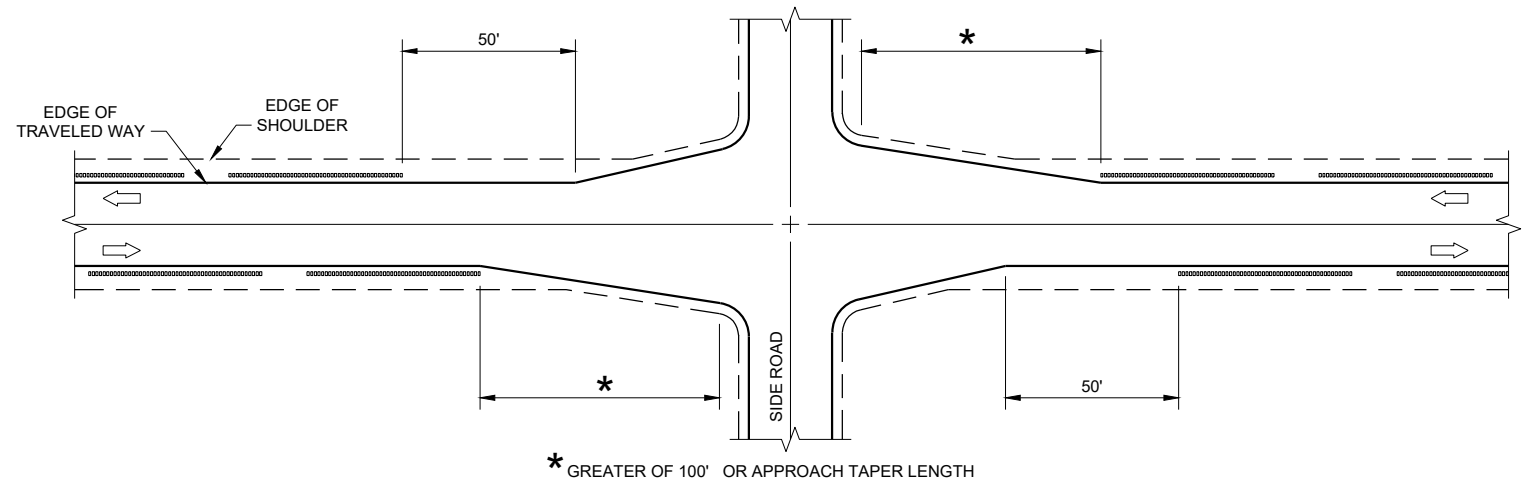
**GROOVES AT MISCELLANEOUS CROSSINGS**



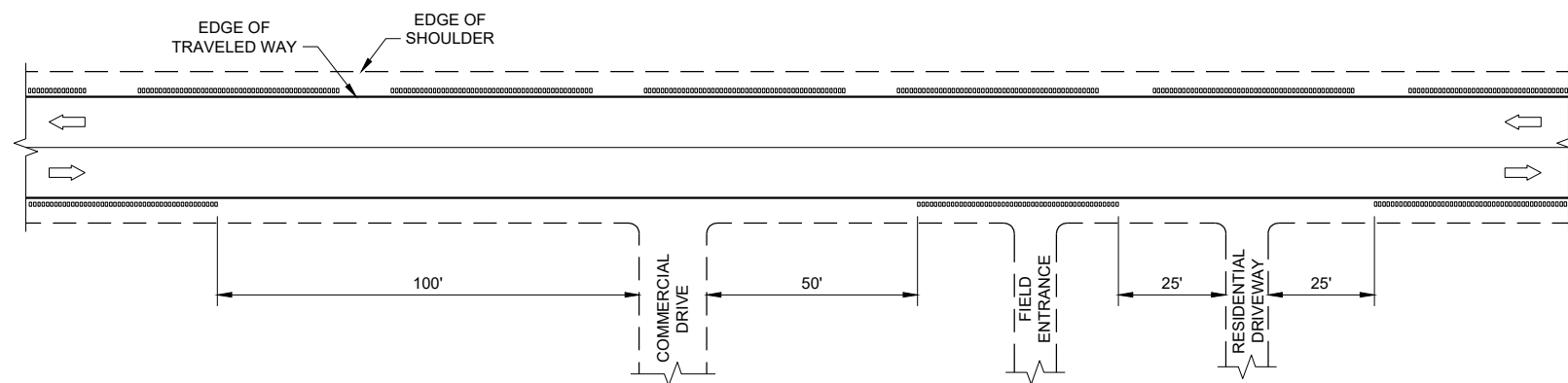
**GROOVES AT RIGHT TURN LANE**



**GROOVES AT BRIDGES**



**GROOVES AT INTERSECTIONS WITH APPROACH TAPER**



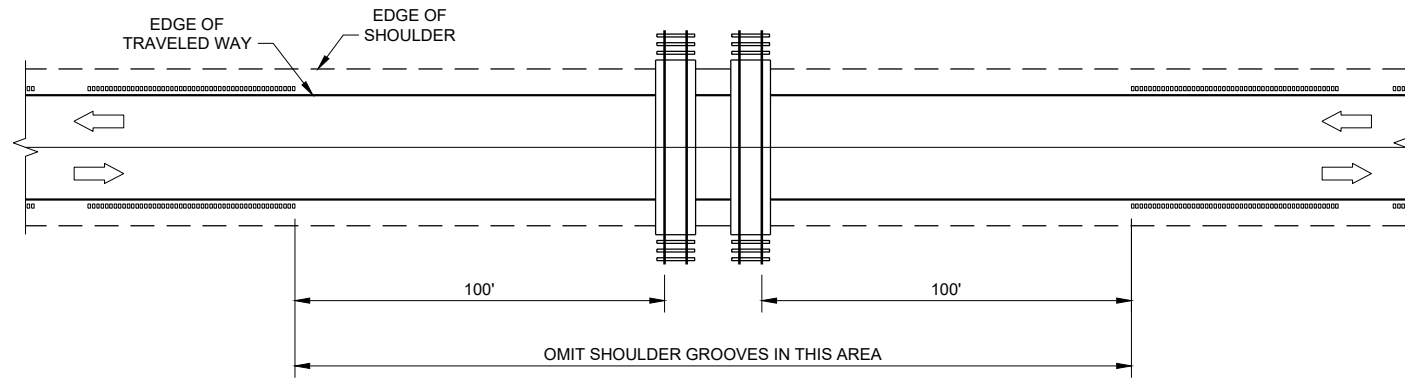
**GROOVES AT DRIVEWAYS**

**GENERAL NOTES**

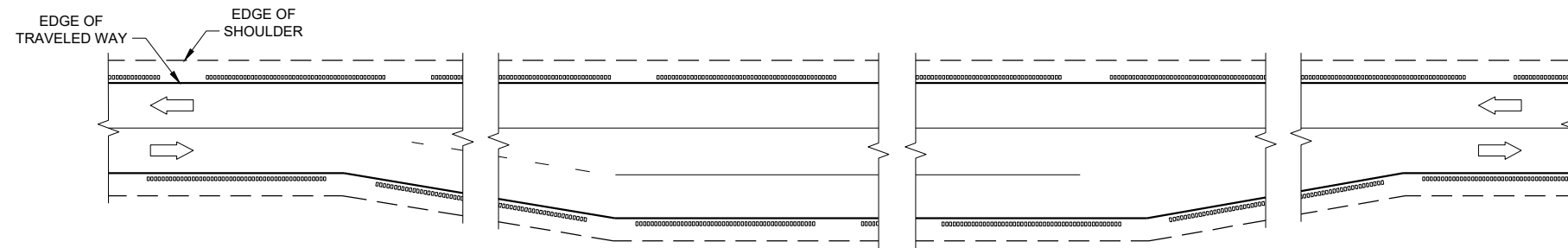
- ① SHOULDER GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS. WHEN DIRECTED BY THE ENGINEER.

**SHOULDER AND EDGE LINE  
RUMBLE STRIPS  
CROSSINGS, INTERSECTIONS,  
BRIDGES, DRIVEWAYS**

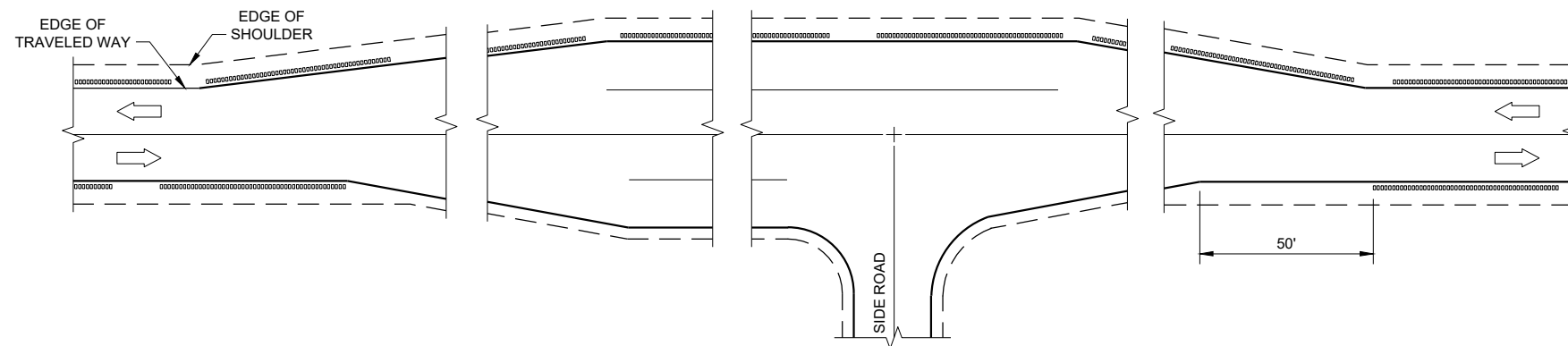
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



**GROOVES AT RAILROADS**

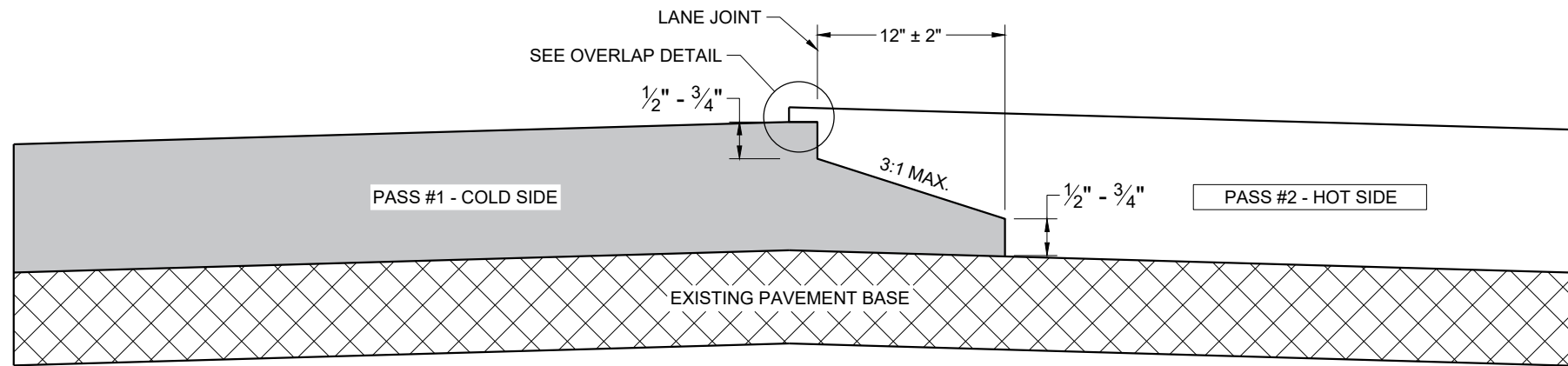


**GROOVES AT PASSING AND CLIMBING LANES**

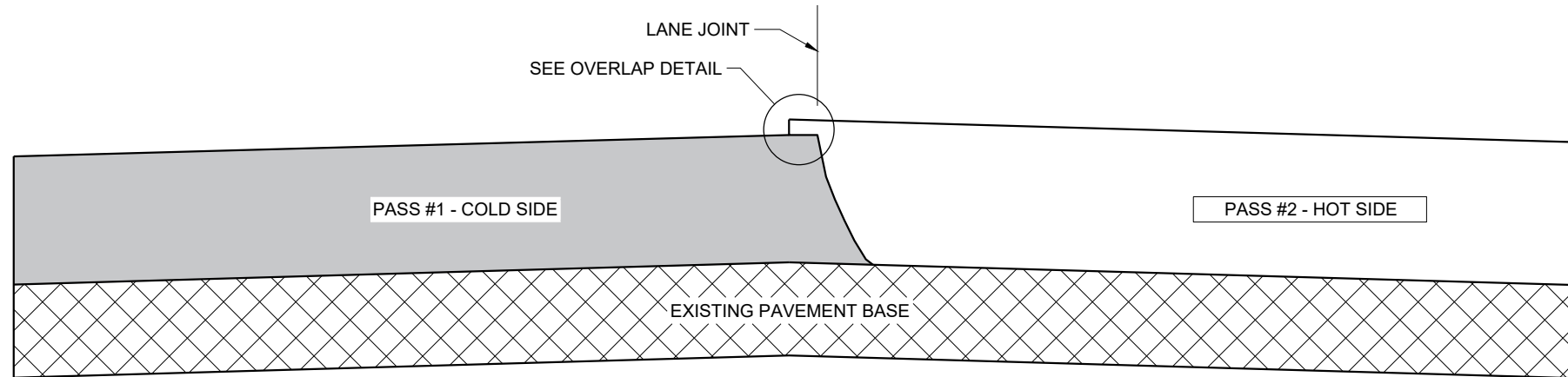


**GROOVES AT BYPASS LANES**

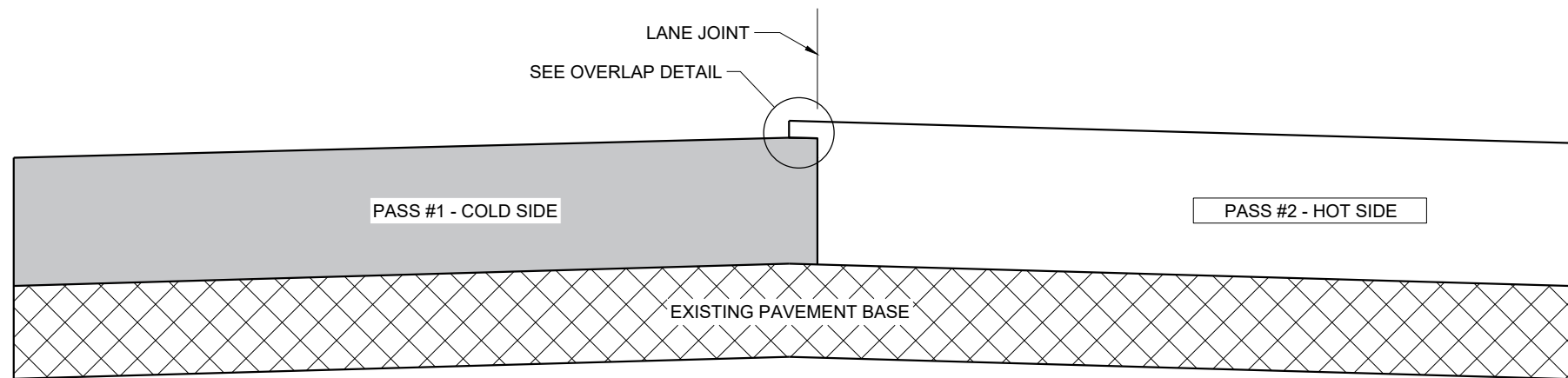
<b>SHOULDER AND EDGE LINE RUMBLE STRIPS - RAILROAD, PASSING, CLIMBING AND BYPASS LANES</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2023 DATE	/S/ John Jenkins ROADWAY STANDARDS DEVELOPMENT ENGINEER
<small>FHWA</small>	



**TYPICAL PAVEMENT CROSS SECTION  
NOTCHED WEDGE JOINT**



**TYPICAL PAVEMENT CROSS SECTION  
VERTICAL JOINT**



**TYPICAL PAVEMENT CROSS SECTION  
VERTICAL JOINT (MILLED)**

**GENERAL NOTES**

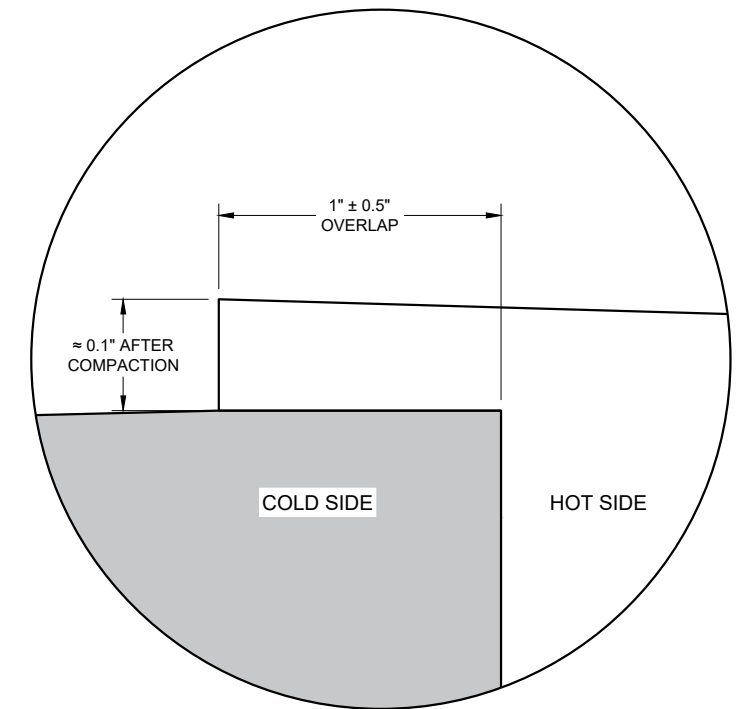
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

FOR ALL LONGITUDINAL JOINTS, ENSURE THE PAVER SCREED OVERLAPS THE PREVIOUSLY PLACED PAVEMENT BY  $1" \pm 0.5"$  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

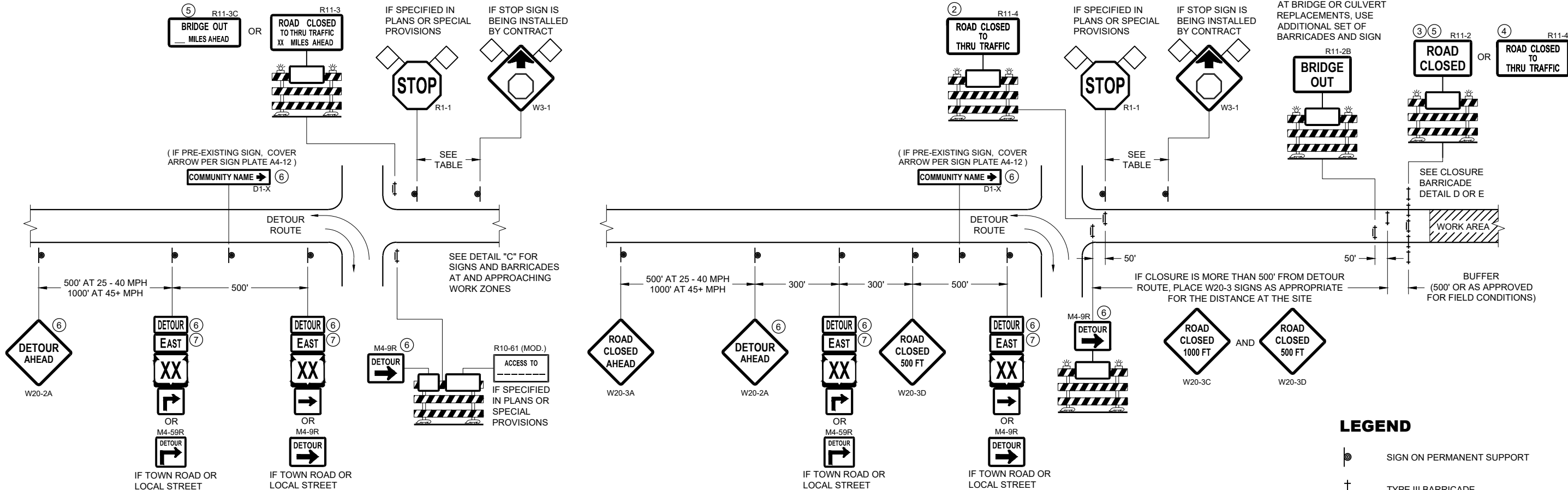
SDD 13C19 - 03

**HMA LONGITUDINAL JOINTS**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
November 2020 /S/ Steven Hefel  
DATE HMA PAVEMENT ENGINEER  
FHWA





**DETAIL A  
MAINLINE CLOSURE WITH POSTED DETOUR**

WORK ZONE GREATER THAN OR EQUAL TO 1/2 MILE FROM  
DETOUR ROUTE ( 1000 FEET IF URBAN )

**DETAIL B  
MAINLINE CLOSURE WITH POSTED DETOUR**

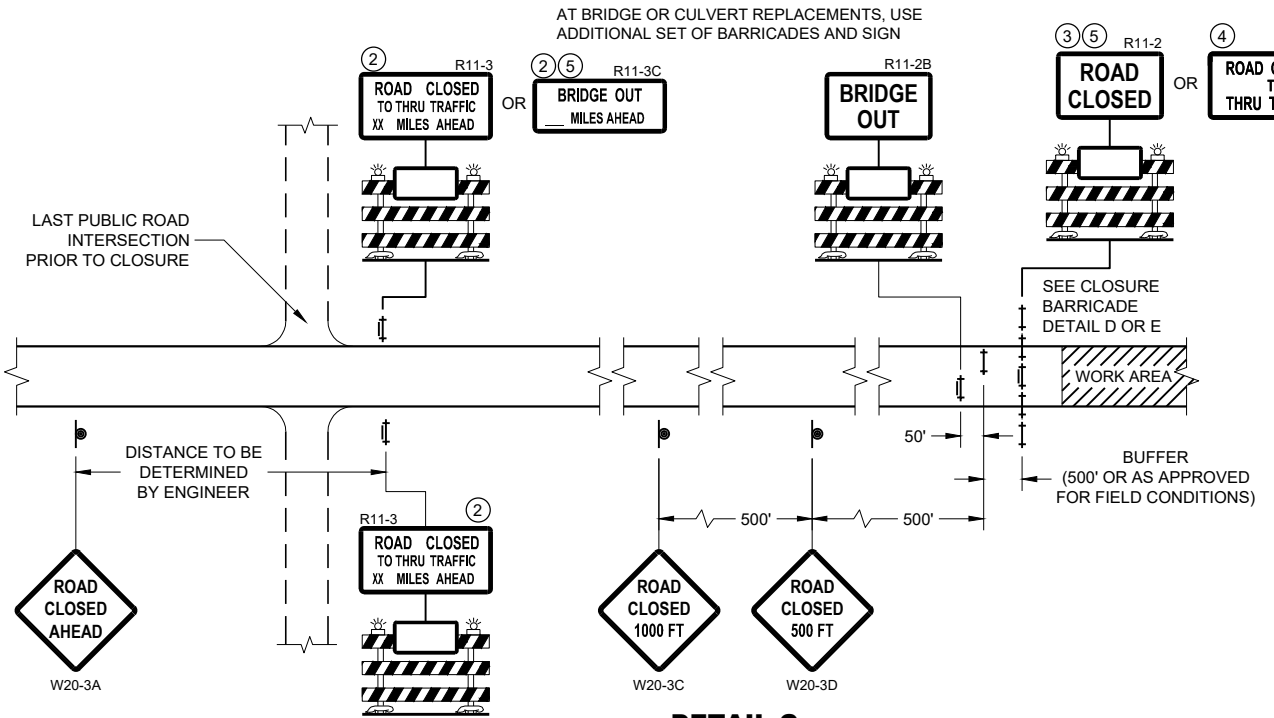
WORK ZONE LESS THAN 1/2 MILE FROM  
DETOUR ROUTE ( 1000 FEET IF URBAN )

**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)
- M4 - 8
- M3 - X
- M1 - 4 OR M1 - 6 OR M1 - 5A
- M05 - 1 OR M06 - 1

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

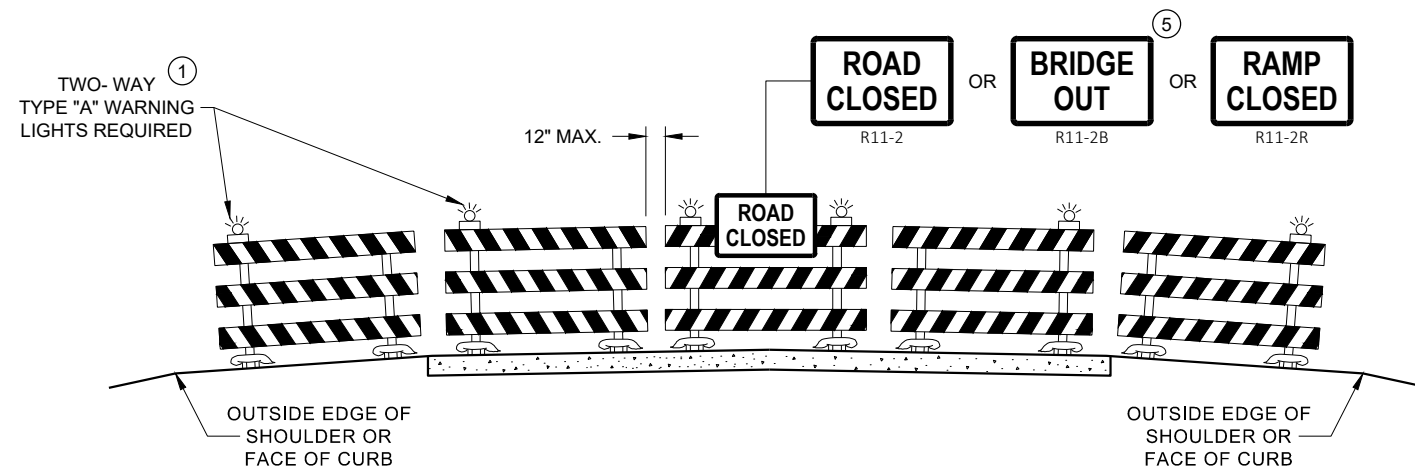


**DETAIL C  
MAINLINE CLOSURE, NO POSTED DETOUR**

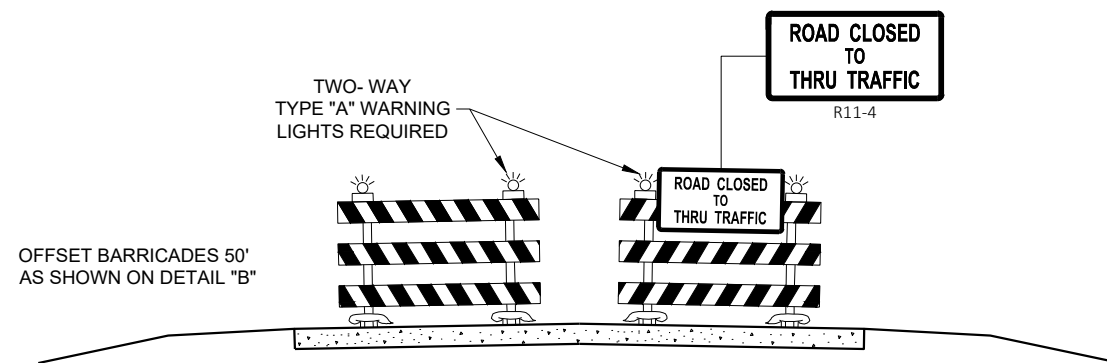
**BARRICADES AND SIGNS  
FOR MAINLINE CLOSURES**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

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



**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:

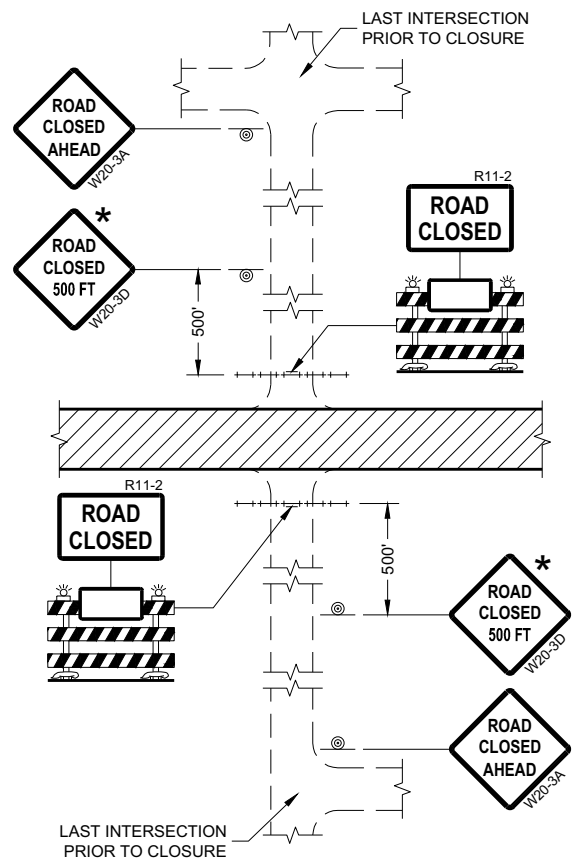
- R11 - 2 SHALL BE 48" X 30"
- R11 - 3 SHALL, R11 - 4 AND R10 - 61 SHALL BE 60" X 30"
- M4 - 9 SHALL BE 30" X 24"
- M3 - X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4 - 8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1 - 4, M1 - 5A AND M1 - 6 SHALL BE 24" 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.

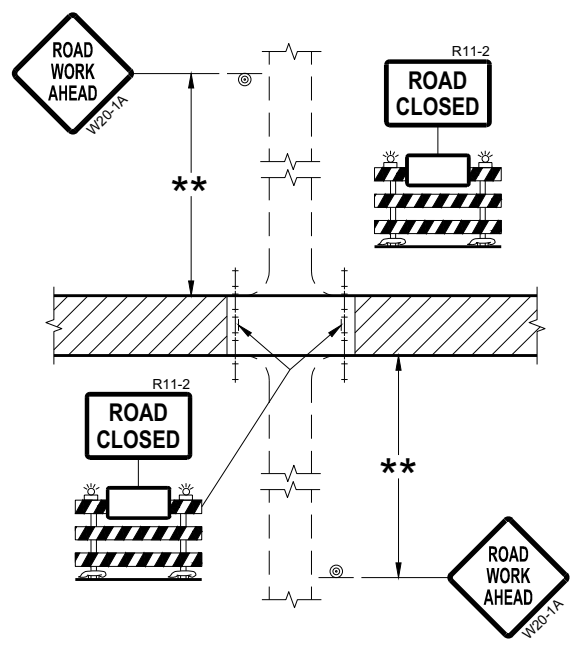
**BARRICADES AND SIGNS  
FOR  
VARIOUS CLOSURES**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

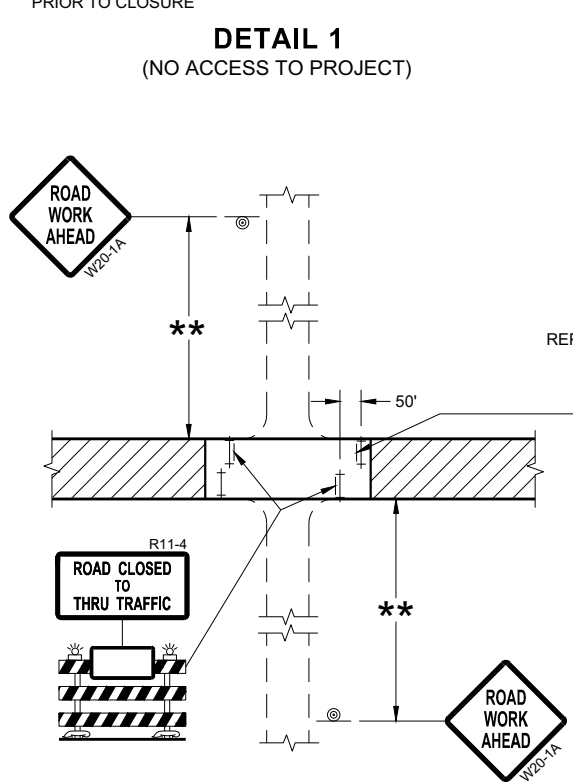
APPROVED  
May 2023 /S/ Andrew Heidtke  
DATE WORK ZONE ENGINEER



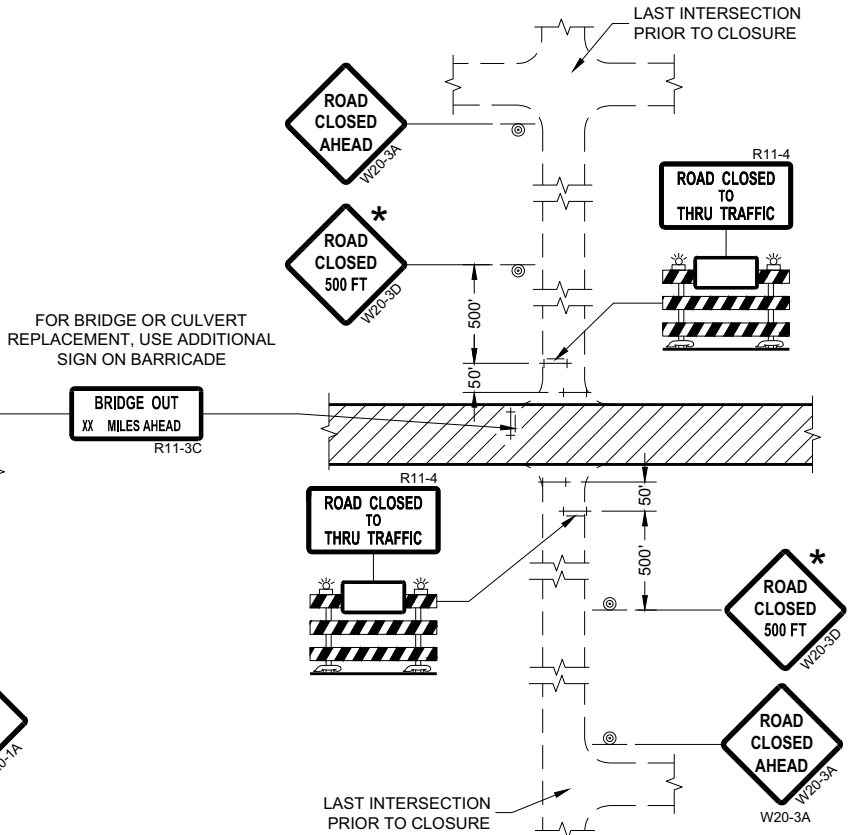
**DETAIL 1**  
(NO ACCESS TO PROJECT)



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



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



**DETAIL 4**  
(CONTRACTOR, LOCAL BUSINESS AND  
RESIDENT 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.

**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 /S/ Andrew Heidtke  
DATE WORK ZONE ENGINEER

FHWA



**GENERAL NOTES**

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

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




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

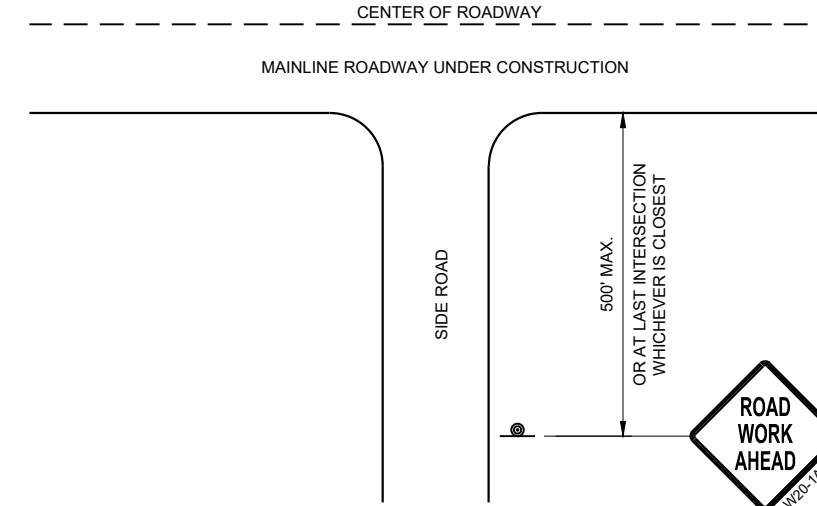
SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

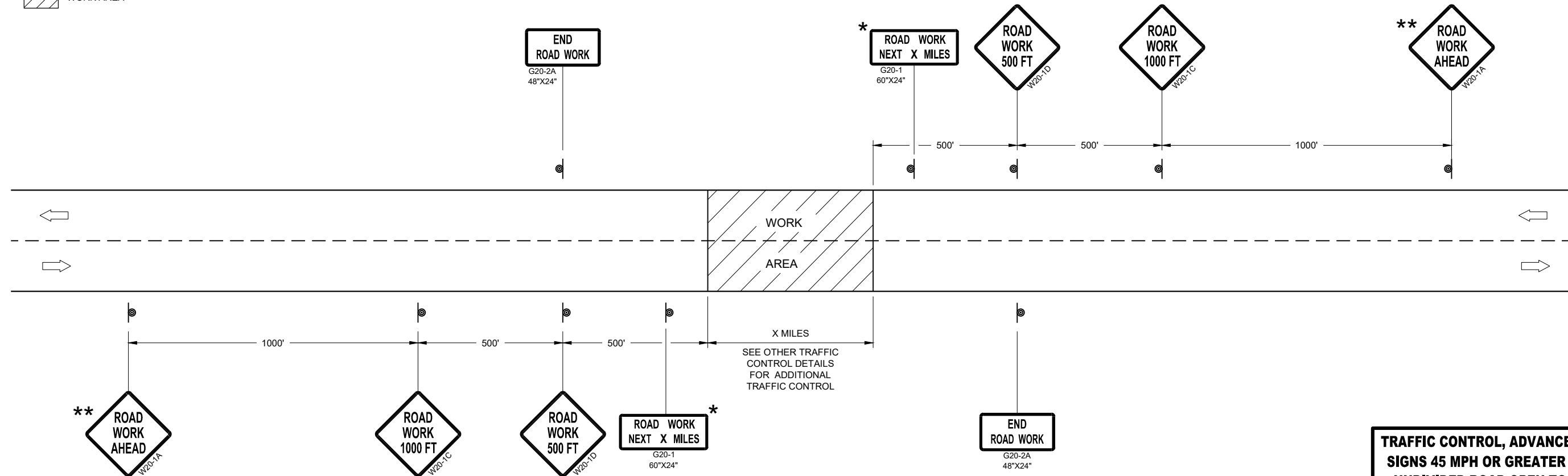
- \* OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS
- \*\* PLACE AN ADDITIONAL W20-1A "ROAD WORK AHEAD" SIGN IF WORK AREA WITHIN THE PROJECT IS SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA.

**LEGEND**

-  SIGN ON PERMANENT SUPPORT
-  DIRECTION OF TRAFFIC
-  WORK AREA



**TYPICAL SIDE ROAD APPROACH  
WARNING SIGN DETAIL**



**TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45MPH OR GREATER**

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

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED \_\_\_\_\_ /S/ Andrew Heidtke  
DATE July 2018 WORK ZONE ENGINEER




FHWA

**GENERAL NOTES**

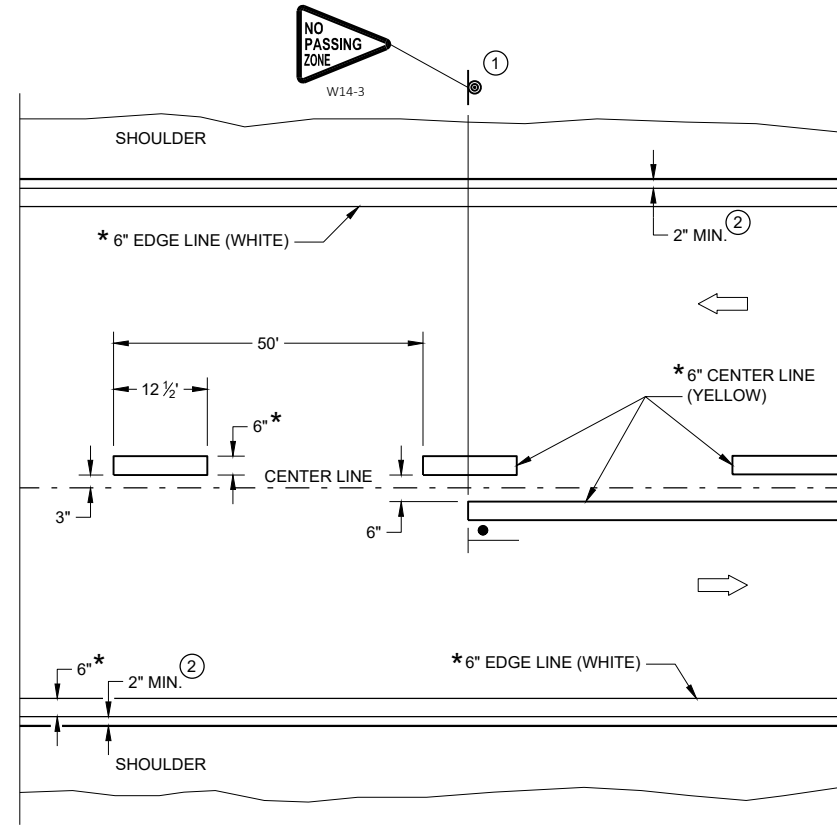
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

- 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.

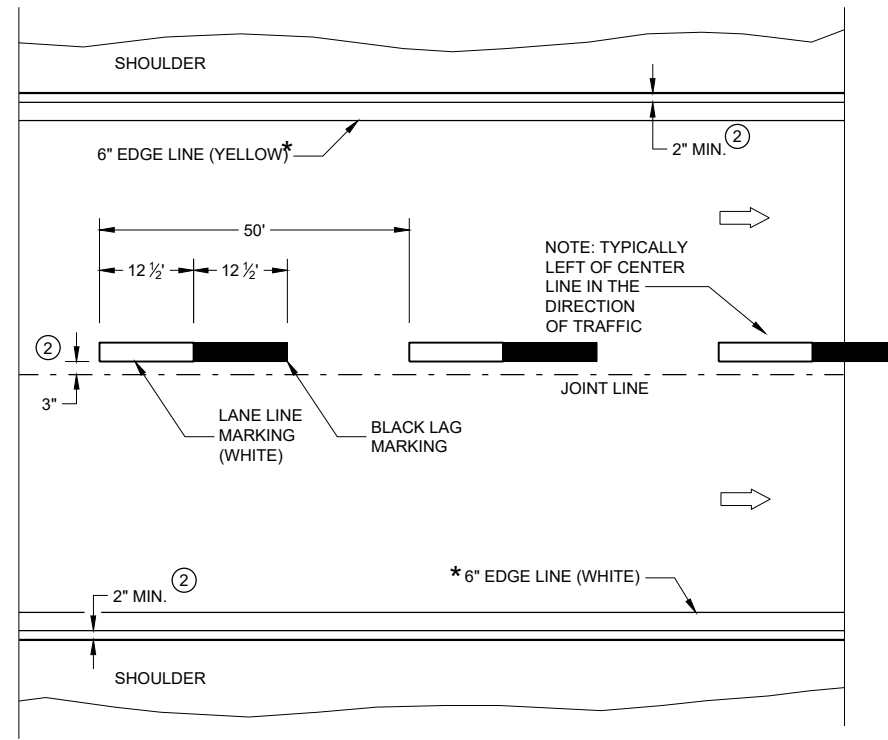
**LEGEND**

-  "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 /S/ Jeannie Silver  
DATE STATEWIDE SIGNING AND MARKING ENGINEER

**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.

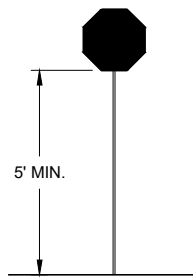
- ③ EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS PLACED TRANSVERSE ACROSS THE LANE AT THE LOCATIONS SHOWN. WITHIN EACH ARRAY, SPACING BETWEEN RUMBLE STRIPS SHALL BE 15 FEET ON CENTER

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.



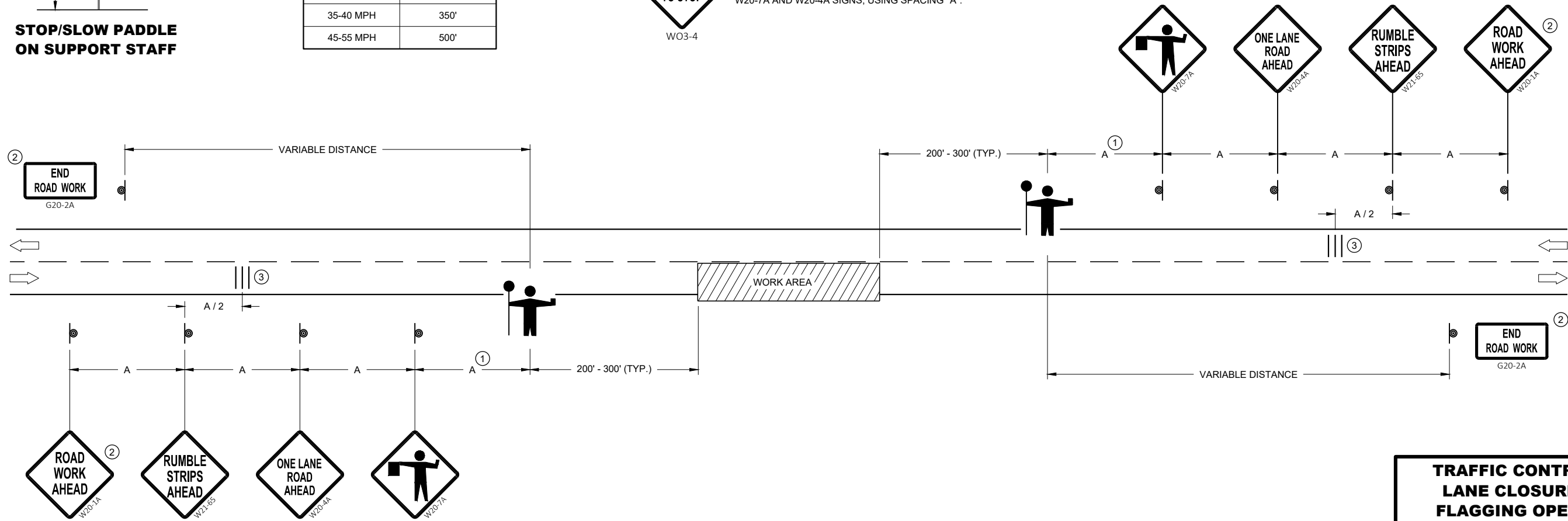
**STOP/SLOW PADDLE ON SUPPORT STAFF**

**SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE**

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



USE OF W03-4 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  
DATE: May 2022 /S/ Andrew Heidtke  
WORK ZONE ENGINEER

FHWA

**GENERAL NOTES**

-  SIGN ON PERMANENT SUPPORT
-  TRAFFIC CONTROL CONE 42-INCH
-  TRAFFIC CONTROL DRUM
-  TEMPORARY PORTABLE RUMBLE STRIP ARRAY
-  DIRECTION OF TRAFFIC
-  WORK AREA
-  AUTOMATED FLAGGER ASSISTANCE DEVICE (AFAD)

**GENERAL NOTES**

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

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

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

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

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

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

**FLAGGING**

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

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

- ① SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.
- ② IF FLAGGERS ARE PHYSICALLY NEEDED TO FLAG, REPLACE WO3-4 SIGNS WITH W20-7A SIGNS.

**TEMPORARY PORTABLE RUMBLE STRIPS**

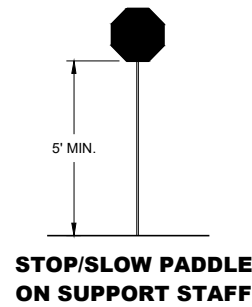
UTILIZE TEMPORARY PORTABLE RUMBLE STRIPS ON ALL FLAGGING OPERATIONS.

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

PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.

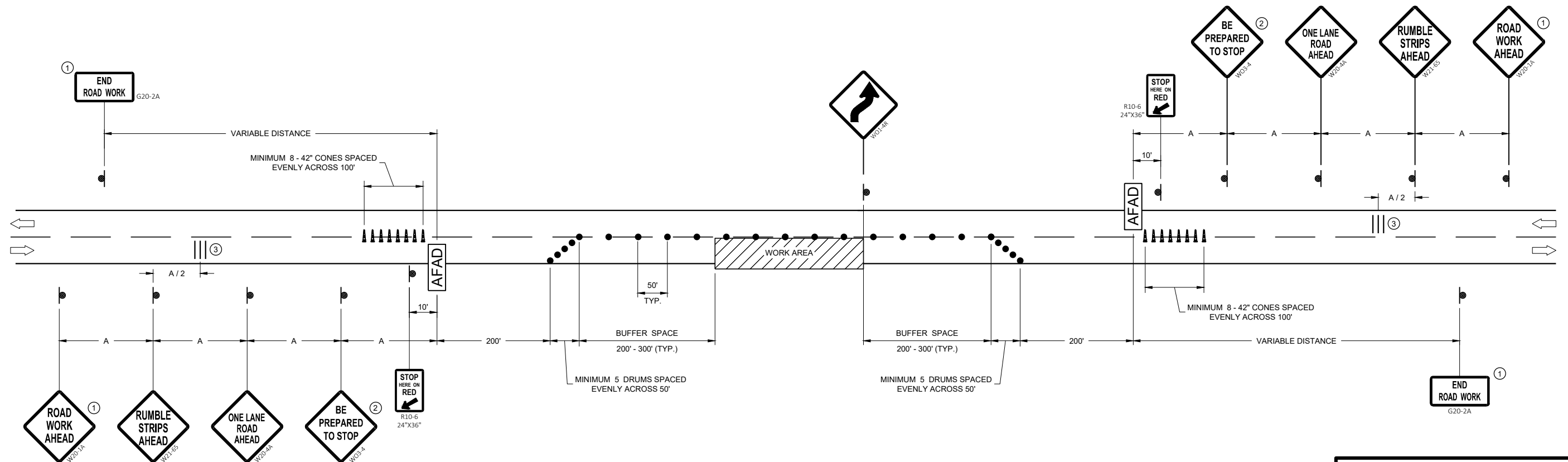
DO NOT INSTALL TEMPORARY PORTABLE RUMBLE STRIPS ON GRAVEL, MILLED SURFACES, OR ASPHALT THAT HAS BEEN PAVED LESS THAN 12 HOURS.

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



**SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE**

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



**TRAFFIC CONTROL, LANE CLOSURE WITH AUTOMATED FLAGGER ASSISTANCE DEVICE**





STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

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

FHWA



**LEGEND**

- V1 LEAD VEHICLE
- V2 MARKING VEHICLE
- V3 SHADOW VEHICLE
-  TRUCK MOUNTED ATTENUATOR (TMA)
-  SIGN ON TEMPORARY SUPPORT
-  DIRECTION OF TRAFFIC
-  FLASHING ARROW PANEL (CAUTION)

**GENERAL NOTES**

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

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

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

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

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

WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR LAY STATIONARY SIGNS AND SUPPORTS FLAT ON THE GRADE WITH UPRIGHTS ORIENTED PARALLEL TO AND DOWNSTREAM FROM TRAFFIC.

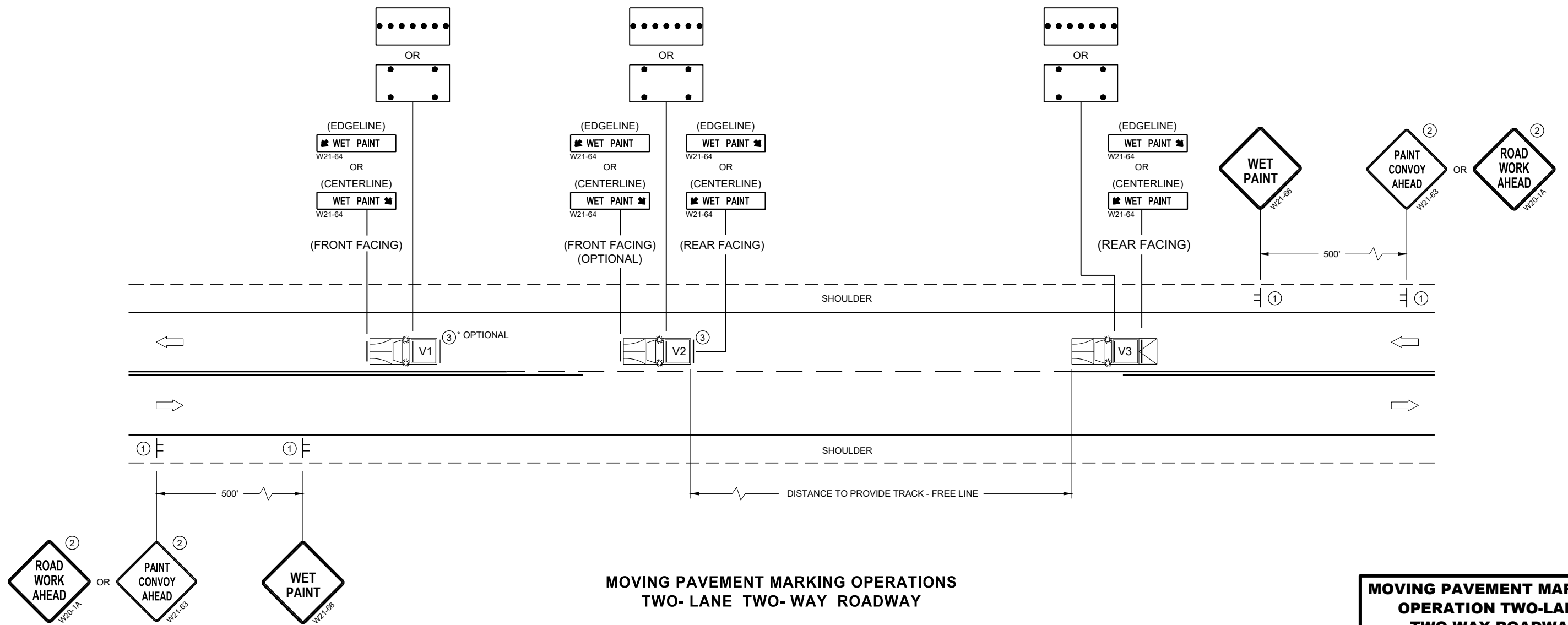
CONES SHOULD BE USED BETWEEN THE MARKING AND SHADOW VEHICLE AT 100 FOOT SPACING. CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.

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

- ① SIGNS SHALL BE REPEATED APPROXIMATELY EVERY THREE MILES.
- ② IF CONSTRUCTION WORK ZONE SIGNS ARE IN PLACE, W20-1A OR W21-63 ARE NOT REQUIRED.
- ③ V1 AND V2 CAN BE SWITCHED SO THAT THE MARKER IS THE LEAD VEHICLE.

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**MOVING PAVEMENT MARKING OPERATIONS  
TWO-LANE TWO-WAY ROADWAY**

SDD 15C19-08a

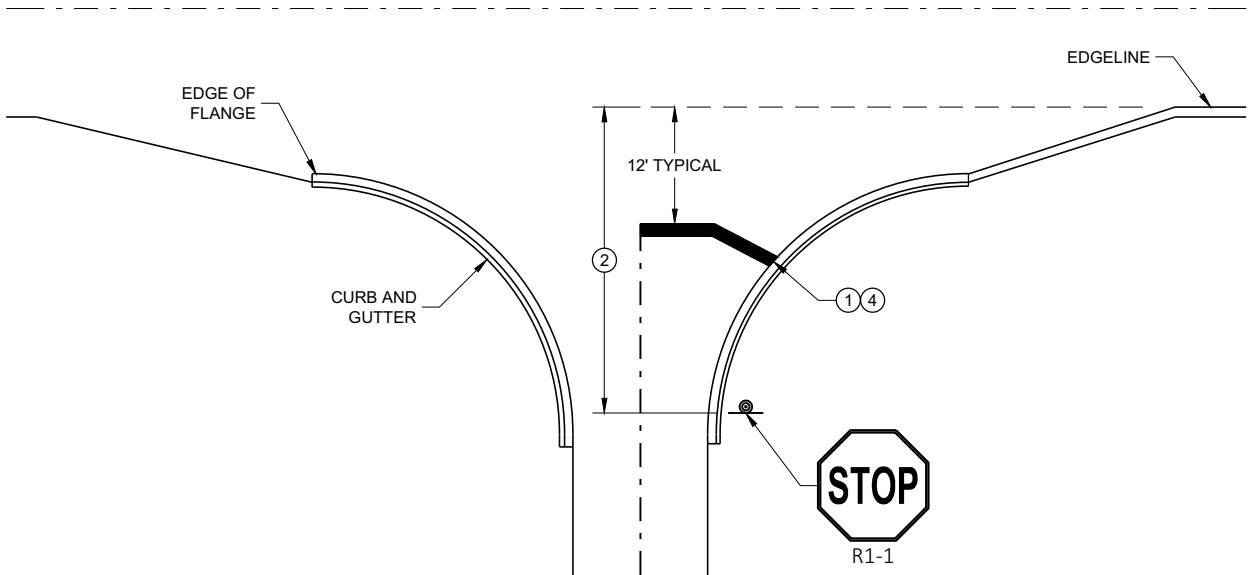
SDD 15C19-08a

<b>MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED February 2023 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	

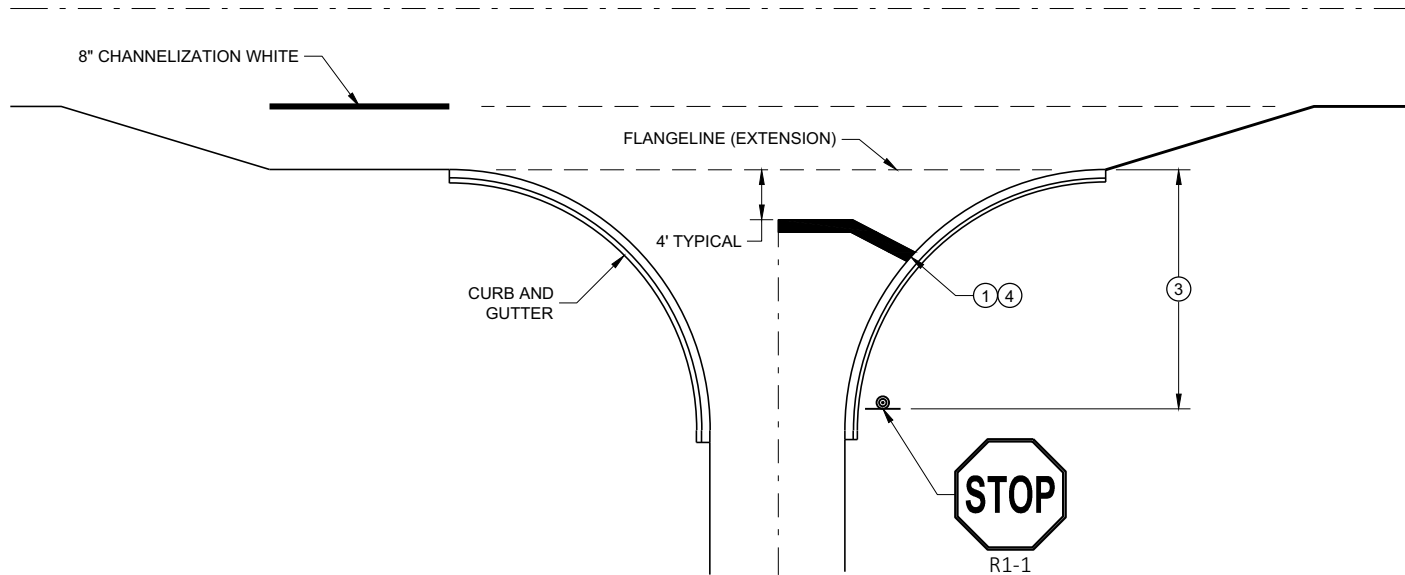
**GENERAL NOTES**

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

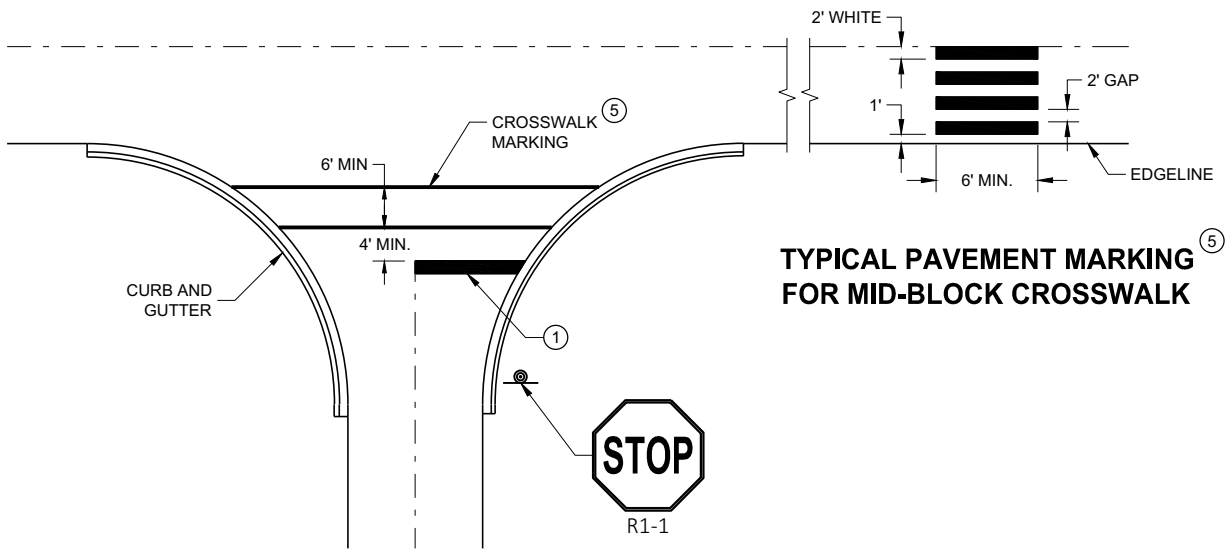
- ① 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE REGION MARKING ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
- ② NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE.
- ③ NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE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



**TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER**

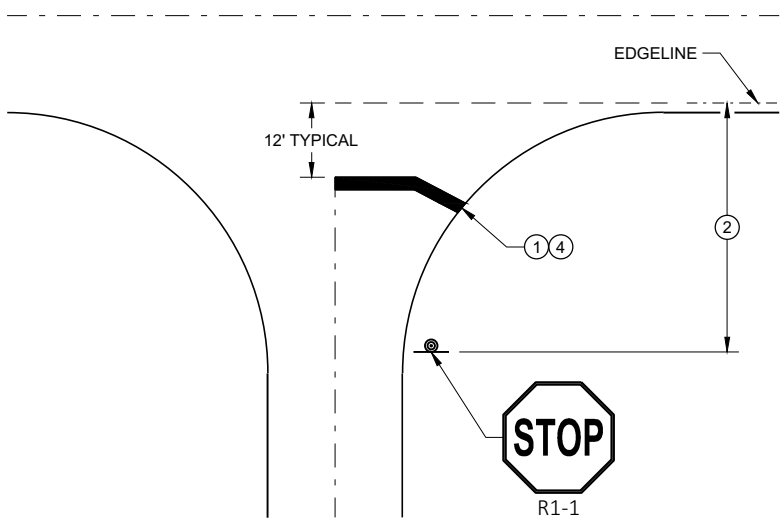


**TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH RIGHT TURN LANE**



**TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH CROSSWALK MARKING**

**TYPICAL PAVEMENT MARKING FOR MID-BLOCK CROSSWALK**



**TYPICAL STOP LINE PAVEMENT MARKING WITHOUT CURB AND GUTTER**

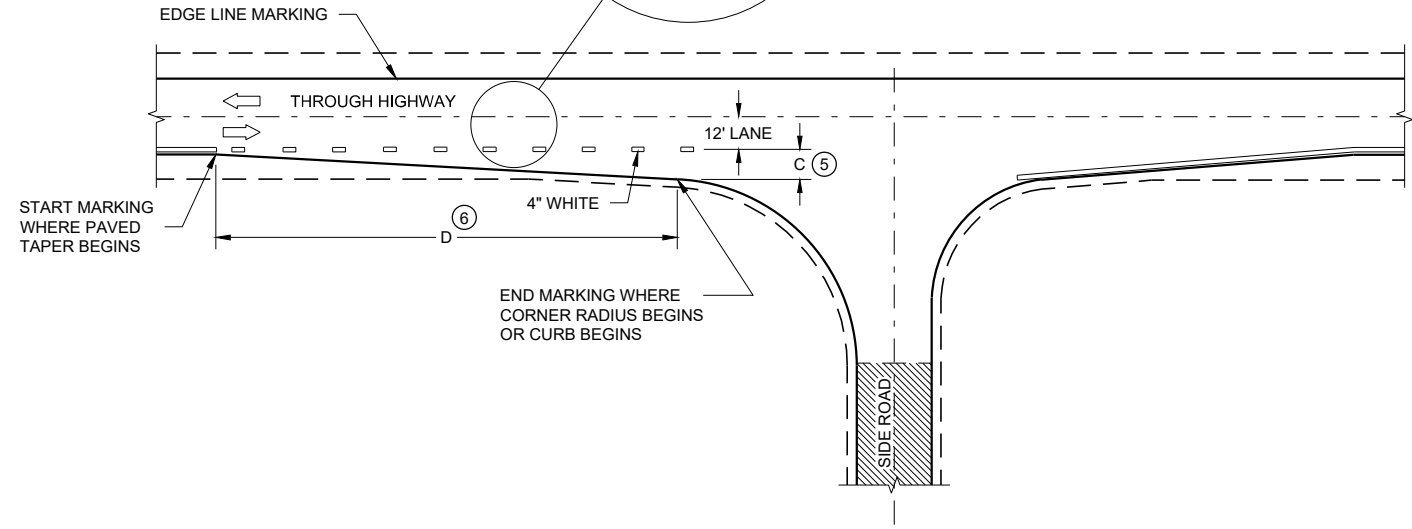
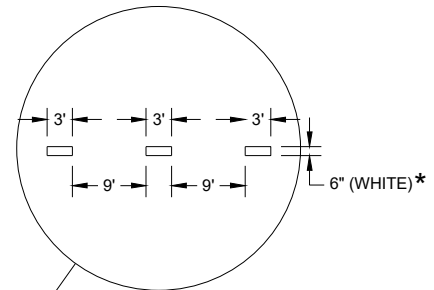
<b>STOP LINE AND CROSSWALK PAVEMENT MARKING</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED November 2019 DATE	/S/ Matthew Rauch STATE SIGNING AND MARKING ENGINEER
<small>FHWA</small>	

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SDD 15C33 - 04

SDD 15C33 - 04



**MINOR INTERSECTION**

\* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

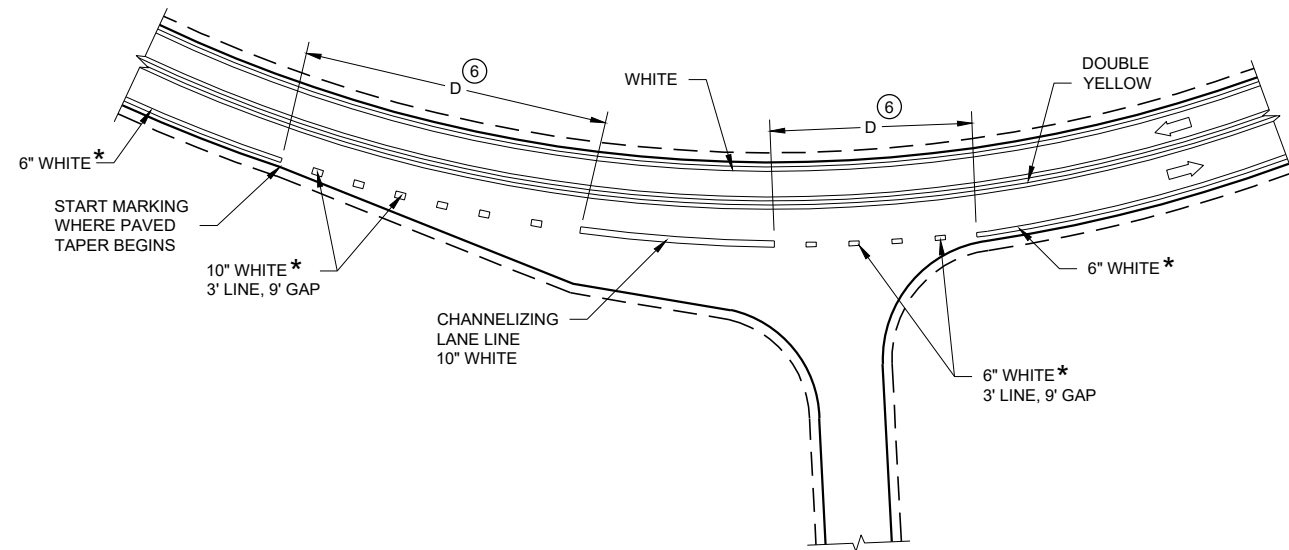
**GENERAL NOTES**

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

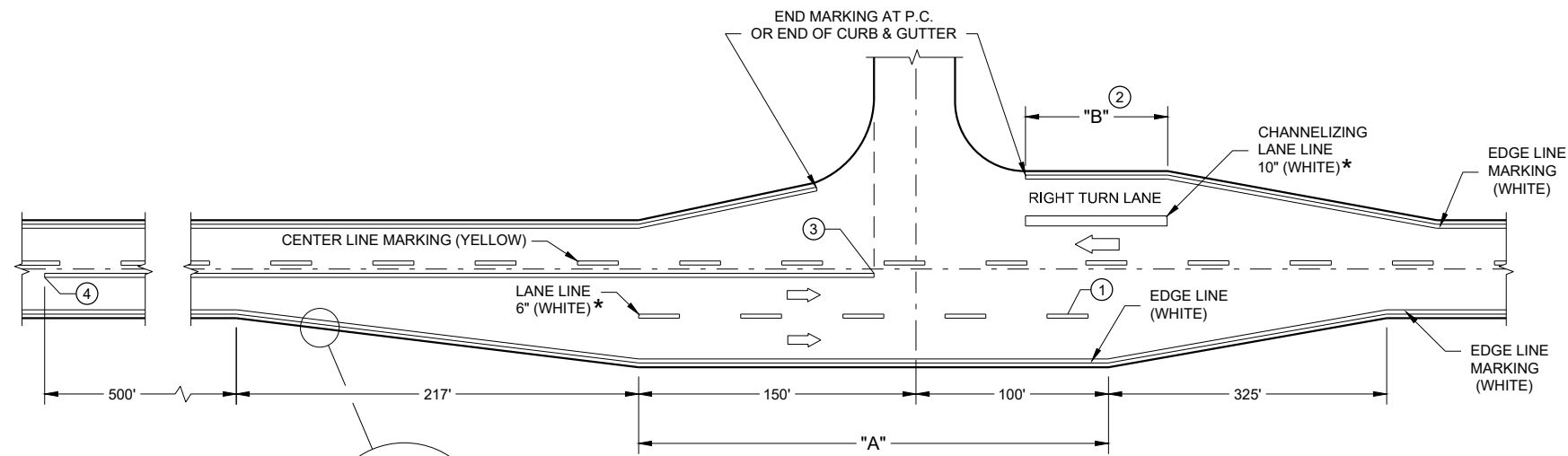
- ① WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.
- ② WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.
- ③ BARRIER LINE ENDS AT SIDE ROAD PAVEMENT / SURFACE EDGE EXTENSION.
- ④ BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.
- ⑤ WHEN DISTANCE "C" IS LESS THAN 4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

**LEGEND**

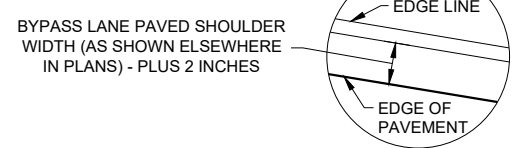
➔ DIRECTION OF TRAVEL



**INTERSECTION ON OUTSIDE OF CURVE**



**MAJOR INTERSECTIONS  
(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANE)**



BYPASS LANE PAVED SHOULDER WIDTH (AS SHOWN ELSEWHERE IN PLANS) - PLUS 2 INCHES

**PAVEMENT MARKING  
(INTERSECTIONS)**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



## ***Wisconsin Department of Transportation***

Dedicated people creating transportation solutions through innovation and exceptional service.

<http://www.dot.wisconsin.gov>