

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
7010-01-63	WISC 2023096	1

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

TOMAH - NECEDAH

0.15M E EATON AVE TO JUNEAU CO LINE

STH 21 MONROE COUNTY

STATE PROJECT NUMBER
7010-01-63

ORDER OF SHEETS

Section No.	1	Title
Section No.	2	Typical Sections and Details
Section No.	3	Estimate of Quantities
Section No.	3	Miscellaneous Quantities
Section No.	4	Right-of-Way Plat
Section No.	5	Plan and Profile
Section No.	6	Standard Detail Drawings
Section No.	7	Sign Plates
Section No.	8	Structure Plans
Section No.	9	Computer Earthwork Data
Section No.	0	Cross Sections

TOTAL SHEETS = **110**

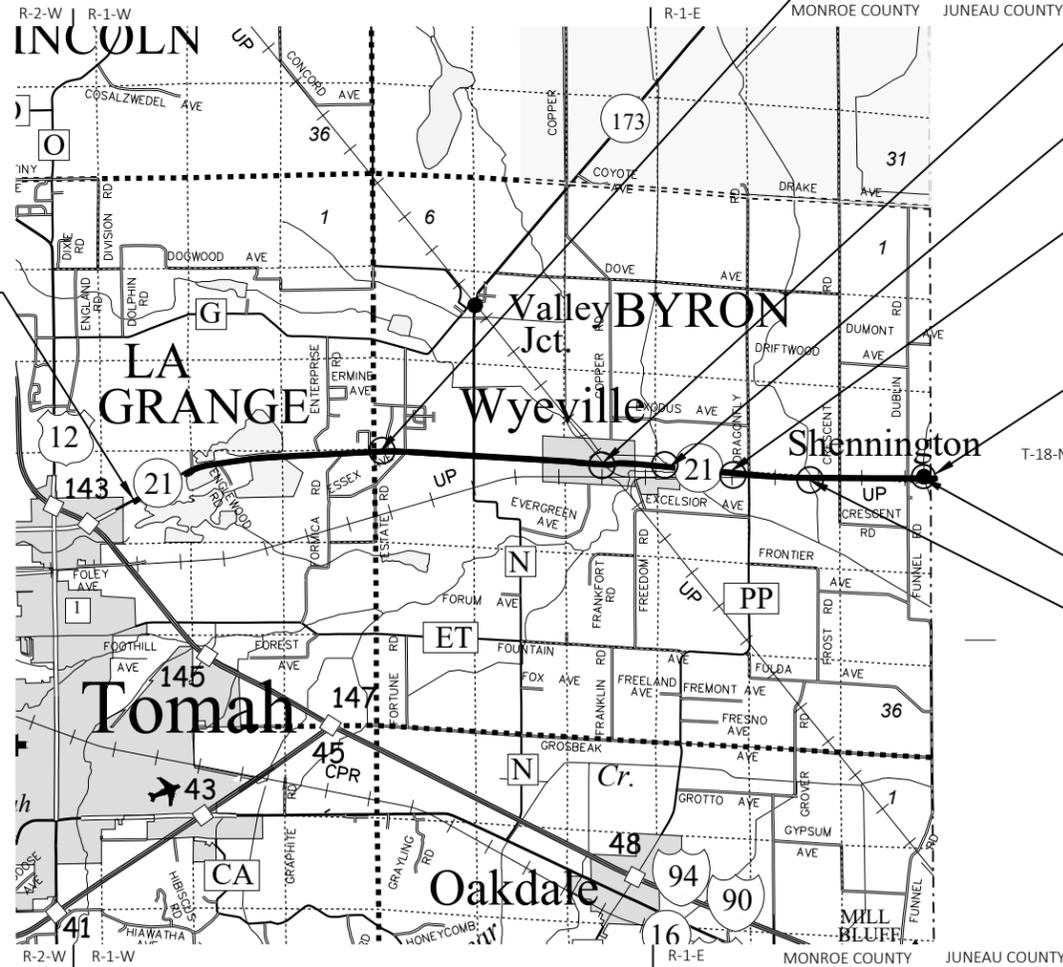


14

DESIGN DESIGNATION 7010-01-33

A.A.D.T.	2026	=	6,400
A.A.D.T.	2046	=	7,200
D.H.V.		=	10.8%
D.D.		=	60/40
T.		=	23.2%
DESIGN SPEED		=	60 MPH
ESALS		=	3,500,000

BEGIN PROJECT
STA. 16+75
X: 710627.9533
Y: 407717.5447



NET EXCEPTION TO CL LENGTH
STA. 168+93 - STA. 206+56

NET EXCEPTION TO CL LENGTH
Union Pacific Railroad Crossing 184072L
STA. 303+75 - STA. 303+90

NET EXCEPTION TO CL LENGTH
B-41-283
STA. 341+11 - STA. 342+73

NET EXCEPTION TO CL LENGTH
B-41-222
STA. 368+35 - STA. 369+29

END PROJECT
STA. 493+21

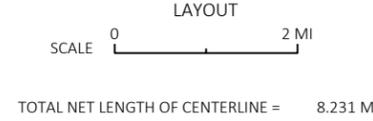
NET EXCEPTION TO CL LENGTH
B-41-223
STA. 488+79 - STA. 489+57

NET EXCEPTION TO CL LENGTH
B-41-205
STA. 423+84 - STA. 424+27

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	



HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATE SYSTEM, MONROE COUNTY, NAD83 (2011), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES. ELEVATION SHOWN ON THIS PLAN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988, NAVD 88 (2012).

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY: Surveyor _____ WISDOT
Designer: _____ KATHLEEN KLUDY P.E.
Project Manager: _____ PAUL M VALENTI P.E.
Regional Examiner: _____ SW REGION
Regional Supervisor: _____ REINY YAHNKE P.E.

APPROVED FOR THE DEPARTMENT: _____
DATE: 7/28/22 _____ Paul M Valenti (Signature)

PROJECT ID: 7010-01-63
WITH: N/A

COUNTY: MONROE

GENERAL NOTES

- THERE ARE UTILITY FACILITIES WITHIN THE PROJECT AREA THAT ARE NOT SHOWN ON THE PLANS. 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. NOT ALL UTILITIES ARE MEMBERS OF DIGGERS HOTLINE.
- APPLY TACK COAT AT A RATE OF 0.07 GAL/SY TO MILLED PAVEMENT SURFACES AND 0.05 GAL/SY BETWEEN LAYERS OF HMA
- HMA PAVEMENT WEIGHT CALCULATIONS ARE BASED ON 112 LB/SY/IN.
- 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, PASSING OR PARKING LANE
- CONTRACTOR TO PROTECT GEODETIC SURVEY CONTROL STATIONS AND KEEP CONSTRUCTION EQUIPMENT AT LEAST 10 FEET AWAY FROM GEODETIC SURVEY CONTROL STATIONS.
- ENSURE THAT GEODETIC SURVEY CONTROL STATIONS ARE NOT DISTURBED, BUMPED OR MOVED DURING THE DURATION OF THE PROJECT. NOTIFY JACOB ROCKWEILER IMMEDIATELY IF GEODETIC SURVEY CONTROL STATIONS ARE DISTURBED, BUMPED OR MOVED DURING CONSTRUCTION OPERATIONS.
JACOB ROCKWEILER, P.E., WISCONSIN HEIGHT MODERNIZATION PROGRAM MANAGER WITH WISCONSIN DEPARTMENT OF TRANSPORTATION WHOSE PHONE NUMBER IS (608) 516-6362 AND EMAIL IS JACOB.ROCKWEILER@DOT.WI.GOV.
- EXACT LOCATIONS FOR REMOVING DISTRESSED PAVEMENT MILLING SHALL BE DETERMINED BY ENGINEER IN THE FIELD.

ORDER OF SECTION 2 SHEETS

- GENERAL NOTES/WRITTEN MATERIAL
 PROJECT OVERVIEW
 TYPICAL SECTIONS
 CONSTRUCTION DETAILS
 INTERSECTION DETAILS
 PAVEMENT MARKING

STANDARD ABBREVIATIONS

AC	ACRE	LC.	LONG CHORD
AGG	AGGREGATE	LS	LUMP SUM
<	ANGLE	M.P.	MARKER POST
AE, AEW	APRON ENDWALL	MGAL	1000 GALLONS
ASPH.	ASPHALTIC	N.C.	NORMAL CROWN
A.D.T.	AVERAGE DAILY TRAFFIC	N	NORTH
A.A.D.T.	ANNUAL AVERAGE DAILY TRAFFIC	NB	NORTHBOUND
B.F.	BACK FACE	NOR	NORMAL
BM	BENCHMARK	NO.	NUMBER
BTWN	BETWEEN	PAV'T	PAVEMENT
CTR.	CENTER	P.L.E.	PERMANENT LIMITED EASEMENT
CL	CENTER LINE	P.C.	POINT OF CURVATURE
Δ	CENTRAL ANGLE OR DELTA	P.I.	POINT OF INTERSECTION
C.E.	COMMERCIAL ENTRANCE	P.T.	POINT OF TANGENCY
CONST.	CONSTRUCTION	PCC	PORTLAND CEMENT CONCRETE
CMCP	CORRUGATED METAL CULVERT PIPE	P.E.	PRIVATE ENTRANCE
CMP	CORRUGATED METAL PIPE	PGL	PROFILE GRADE LINE
CO.	COUNTY	P.L.	PROPERTY LINE
CTH	COUNTY TRUNK HIGHWAY	R	RADIUS OR RANGE
CR.	CREEK	R/L	REFERENCE LINE
CABC	CRUSHED AGGREGATE BASE COURSE	R.C.C.P.	REINFORCED CONCRETE CULVERT PIPE
CY	CUBIC YARD	REQ'D	REQUIRED
CP	CONTROL POINT OR CULVERT PIPE	RT	RIGHT
C&G	CURB AND GUTTER	R.H.F.	RIGHT HAND FORWARD
D	DEGREE OF CURVE	R/W	RIGHT OF WAY
D.H.V.	DESIGN HOURLY VOLUME	RD.	ROAD
DIA.	DIAMETER	SHLD.	SHOULDER(S)
D.D.	DIRECTIONAL DISTRIBUTION	SHR.	SHRINKAGE
DISCH.	DISCHARGE	S	SOUTH
DMS	DYNAMIC MESSAGE SIGN	SB	SOUTHBOUND
EA	EACH	S.F.	SQUARE FOOT (FEET)
E	EAST	SDD	STANDARD DETAIL DRAWING(S)
EB	EASTBOUND	STH	STATE TRUNK HIGHWAY
ELEC.	ELECTRIC(A.L), ELEC. CABLE	STA.	STATION
EL., ELEV.	ELEVATION	S.E.	SUPERELEVATION
ESALS	EQUIVALENT SINGLE AXLE LOADS	S/L	SURVEY LINE
EXC.	EXCAVATION	SYM	SYMMETRICAL
EXIST	EXISTING	T.	PERCENT TRUCKS
F.F.	FACE TO FACE	TEL.	TELEPHONE
FERT.	FERTILIZER	TEMP.	TEMPORARY
F.E.	FIELD ENTRANCE	T.L.E.	TEMPORARY LIMITED EASEMENT
F/L, F.L.	FLOW LINE	T.O.C.	TOP OF CURB
GALV.	GALVANIZE	TYP	TYPICAL
H.S.	HIGH STRENGTH	UNCL.	UNCLASSIFIED
CWT	HUNDRED WEIGHT	U.G.	UNDERGROUND (CABLE)
INL	INLET	VAR	VARIABLE
INTER.	INTERSECTION	V.C.	VERTICAL CURVE
IH	INTERSTATE HIGHWAY	V.P.C.	VERTICAL POINT OF CURVATURE
JT.	JOINT	V.P.I.	VERTICAL POINT OF INTERSECTION
LT	LEFT	V.P.T.	VERTICAL POINT OF TANGENCY
L.H.F.	LEFT HAND FORWARD	Wt.	WEIGHT
L.	LENGTH OF CURVE	W	WEST
L.F.	LINEAR FOOT(FEET)	WB	WESTBOUND

DNR LIAISON

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LEGEND

MB TRAFFIC CONTROL SIGNS PCMS

ROADWORK STARTING XX/XX/XX

MB

BEGIN PROJECT
 STA 16+75
 MATCH EXISTING
 SAWING ASPHALT REQ'D - INCIDENTAL TO REMOVING ASPHALTIC SURFACE BUTT JOINTS
 REMOVING ASPHALTIC SURFACE BUTT JOINTS REQ'D

BEGIN 2.25" REMOVING ASPHALTIC SURFACE MILLING
 AND PAVING 2.25" HMA 4MT58-28S PLACED IN A SINGLE LIFT

BEGIN 4.5" PAVING
 STA. 150+00
 END 2.25" REMOVING ASPHALTIC SURFACE MILLING
 AND PAVING 2.25" HMA PAVEMENT 4 MT 58-28 S
 IN SINGLE LIFT

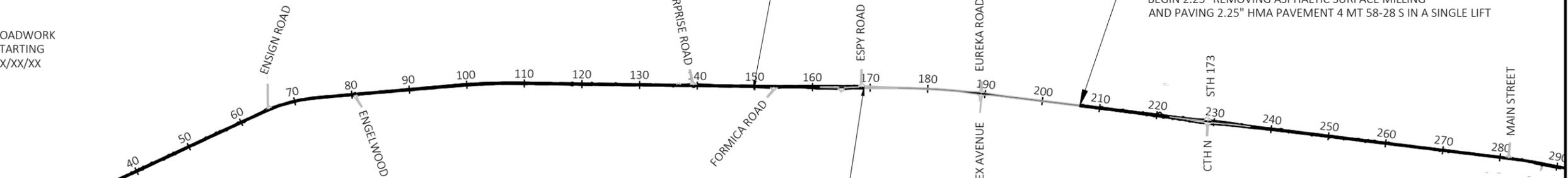
BEGIN 4.5" REMOVING ASPHALTIC SURFACE MILLING
 AND PAVING 4.5" HMA PAVEMENT 4 MT 58-28 S PLACED
 IN A 2.25" UPPER LIFT AND A 2.25" LOWER LIFT.

END EXCEPTION TO NET CENTERLINE
 STA 209+60
 MATCH EXISTING
 SAWING ASPHALT REQ'D

BEGIN 2.25" REMOVING ASPHALTIC SURFACE MILLING
 AND PAVING 2.25" HMA PAVEMENT 4 MT 58-28 S IN A SINGLE LIFT

END FULL DEPTH PAVING / BEGIN NET EXCEPTION TO CL LENGTH
 STA 169+14
 MATCH EXISTING
 SAWING ASPHALT REQ'D

END 4.5" REMOVING ASPHALTIC SURFACE MILLING
 AND PAVING 4.5" HMA PAVEMENT 4 MT 58-28 S PLACED IN A 2.25" UPPER LIFT AND A 2.25" LOWER LIFT.



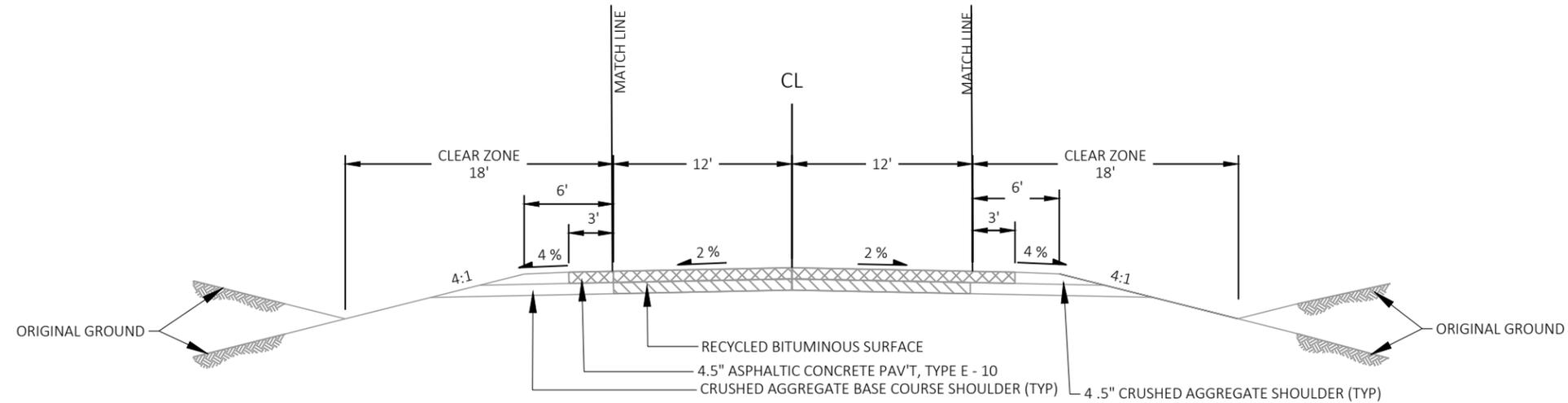
ROADWORK STARTING XX/XX/XX

MB

ENVIRONMENTALLY SENSITIVE AREA.
 UN-CATALOGUED BURIAL SITES. THIS ARE SHOULD NOT
 BE USED FOR BORROW OR WASTE DISPOSAL, OR FOR
 THE USE OF STAGING OF PERSONNEL, EQUIPMENT
 AND/OR SUPPLIES.

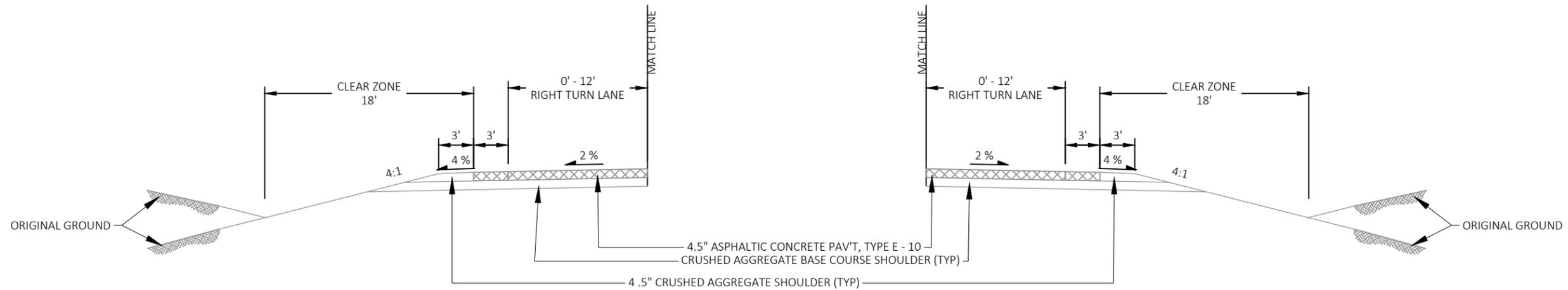
END PROJECT
 STA 493+21
 MATCH EXISTING
 SAWING ASPHALT REQ'D - INCIDENTAL TO REMOVING ASPHALTIC SURFACE BUTT JOINTS
 REMOVING ASPHALTIC SURFACE BUTT JOINTS REQ'D

END 2.25" REMOVING ASPHALTIC SURFACE MILLING
 AND PAVING 2.25" HMA 4 MT58-28S PLACED IN A SINGLE LIFT



EXISTING TYPICAL SECTION MAINLINE STH 21

STA 16+75 - 64+31
 STA 74+15 - 158+00
 STA 240+75 - 283+00
 STA 325+00 - 341+11
 STA 342+73 - 368+35
 STA 369+29 - 392+50

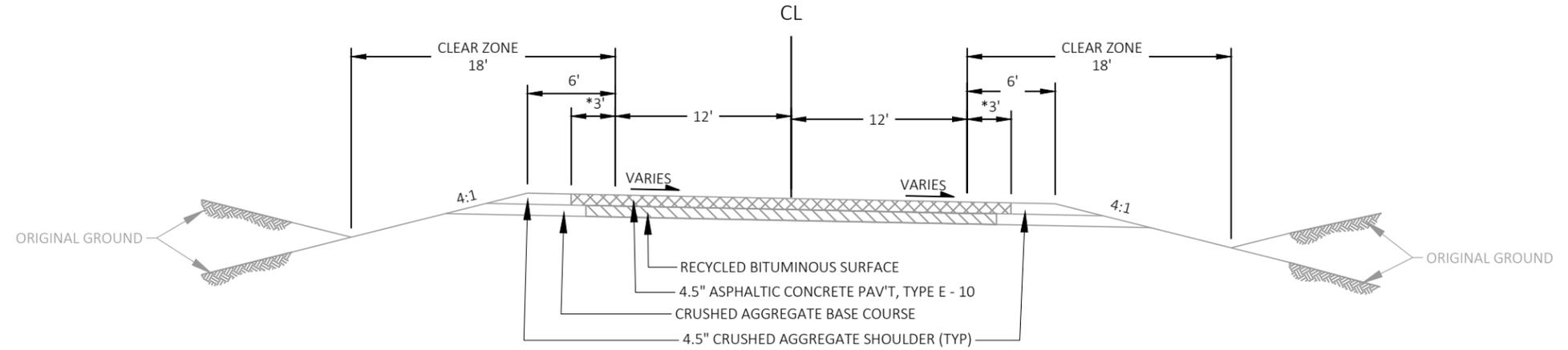


EXISTING TYPICAL SECTION RIGHT TURN LANE LT

STA 16+75 - 20+50
 STA 389+00 - 392+25

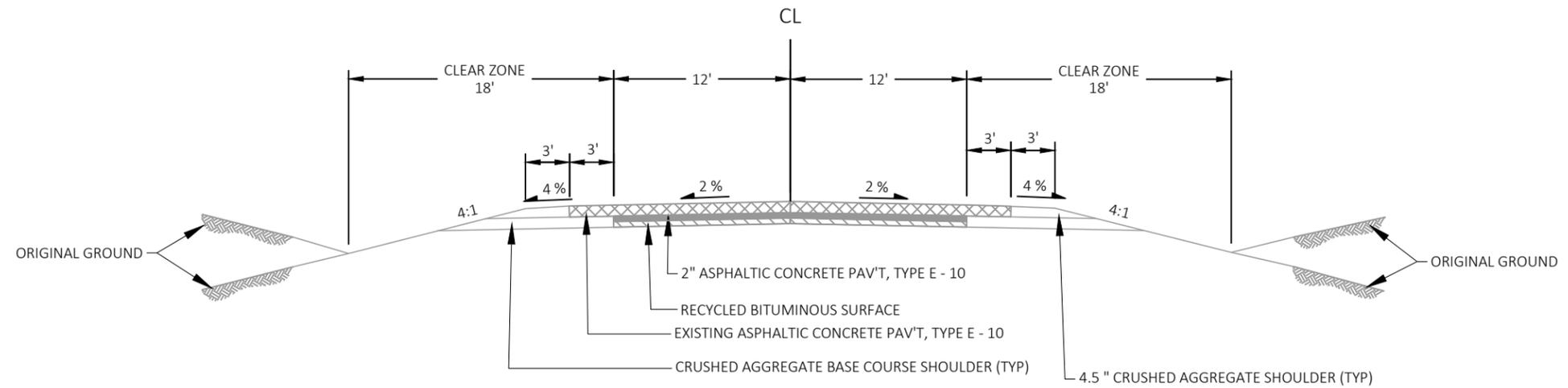
EXISTING TYPICAL SECTION RIGHT TURN LANE RT

STA 150+00 - 153+00
 STA 382+50 - 388+00



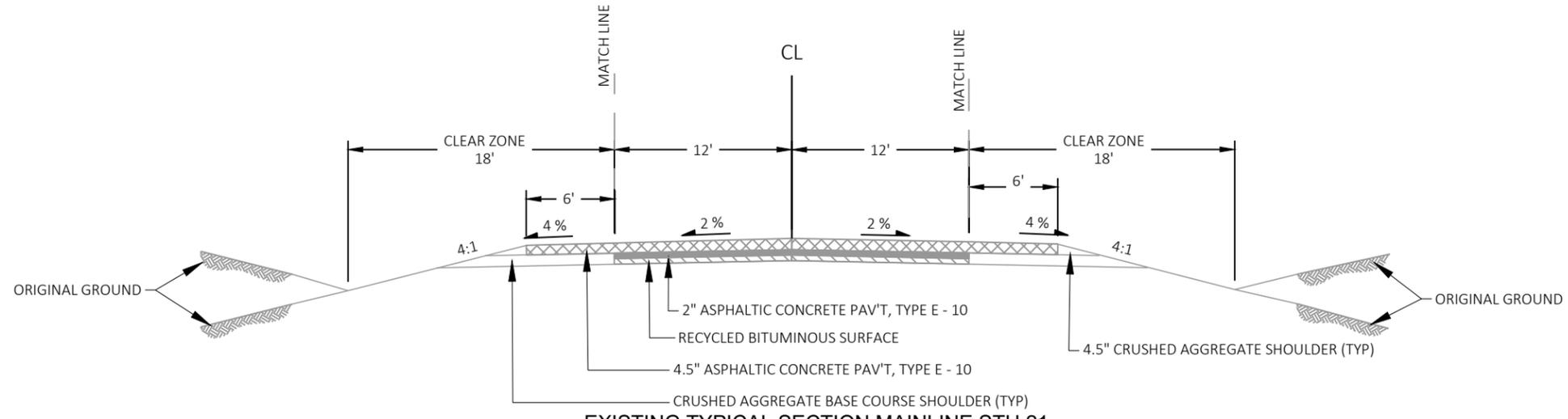
EXISTING SUPERELEVATED TYPICAL SECTION MAINLINE STH 21

- STA 64+31 - 74+15 3' PAVED SHOULDER
- *STA 291+77 - 294+75 6' PAVED SHOULDER
- *STA 306+85 - 310+60 6' PAVED SHOULDER
- *STA 311+00 - 315+84 6' PAVED SHOULDER



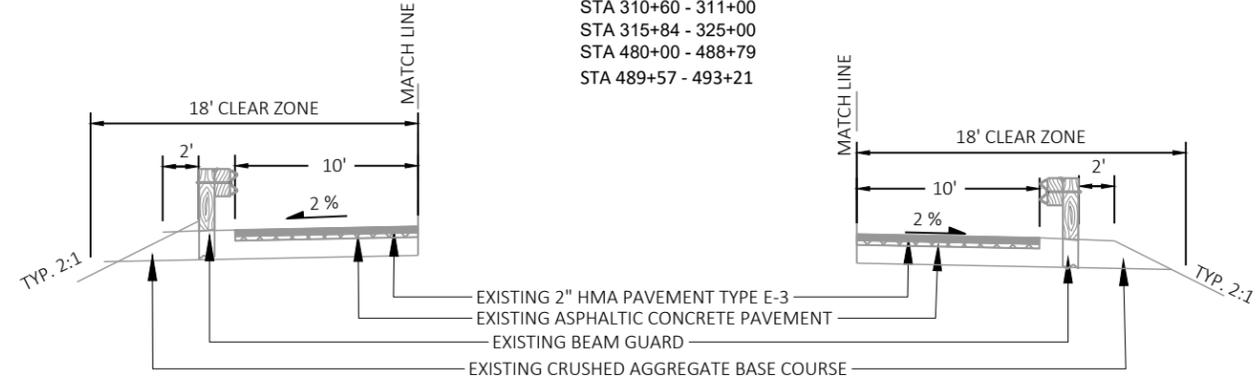
EXISTING TYPICAL SECTION MAINLINE STH 21

- STA 175+00 - 214+25
- STA 392+50 - 423+84
- STA 424+27 - 480+00



EXISTING TYPICAL SECTION MAINLINE STH 21

- STA 283+00 - 291+77
- STA 294+75 - 306+85
- STA 310+60 - 311+00
- STA 315+84 - 325+00
- STA 480+00 - 488+79
- STA 489+57 - 493+21

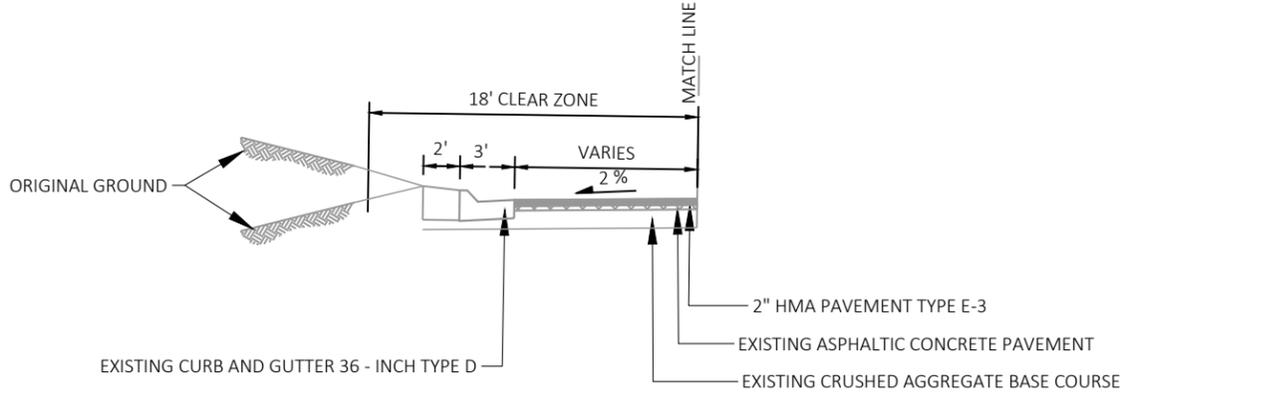


EXISTING TYPICAL SECTION BEAM GUARD LT SECTIONS

- STA 339+69 - 340+83 B-41-283
- STA 342+50 - 343+52 B-41-283
- STA 367+02 - 368+35 B-41-222
- STA 369+29 - 270+63 B-41-222
- STA 422+81 - 423+84 B-41-205
- STA 424+27 - 425+29 B-41-205
- STA 486+14 - 488+79 B-41-223
- STA 489+52 - 490+62 B-41-223

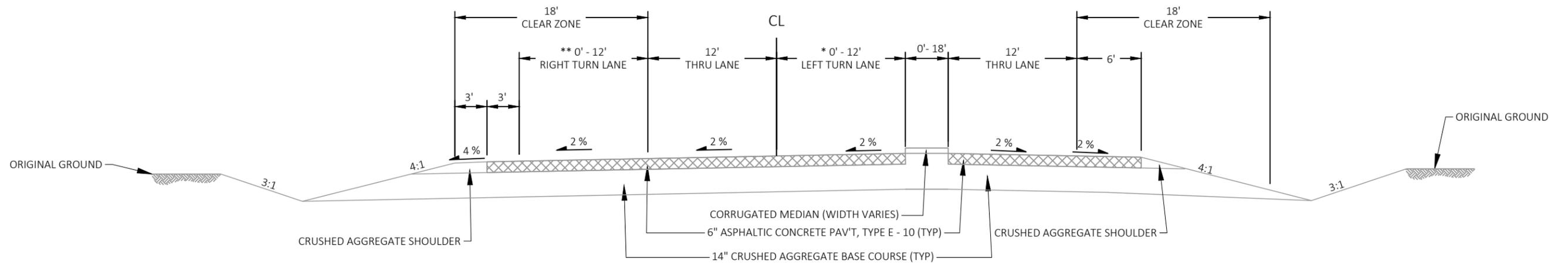
EXISTING TYPICAL SECTION BEAM GUARD RT SECTIONS

- STA 340+39 - 341+39 B-41-283
- STA 342+99 - 344+23 B-41-283
- STA 367+02 - 368+35 B-41-222
- STA 369+29 - 370+60 B-41-222
- STA 422+80 - 423+84 B-41-205
- STA 424+27 - 425+24 B-41-205
- STA 487+72 - 488+79 B-41-223
- STA 489+57 - 490+57 B-41-223



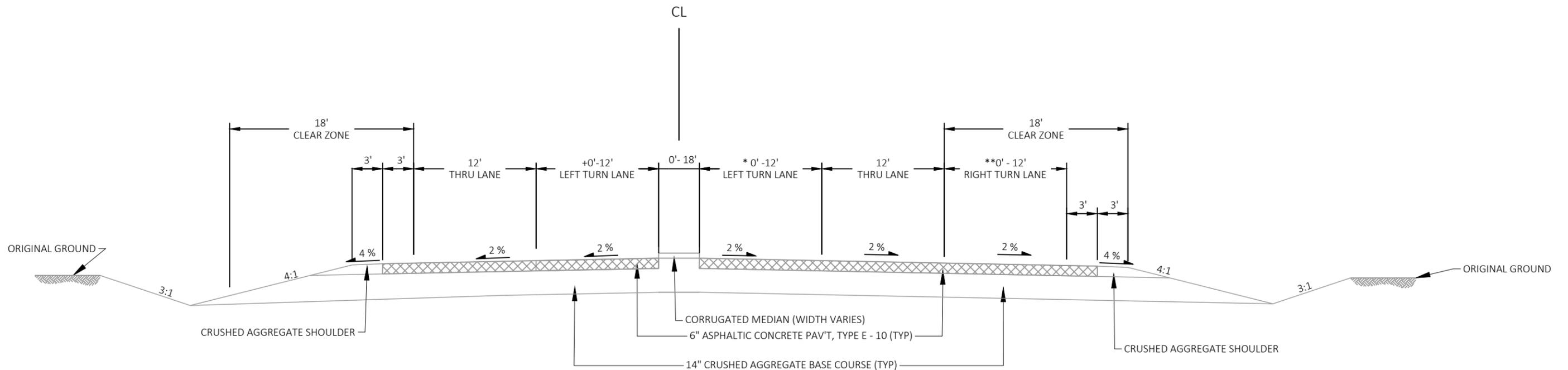
EXISTING TYPICAL SECTION CURB AND GUTTER SECTIONS

STA 485+12 - 485+53 LT



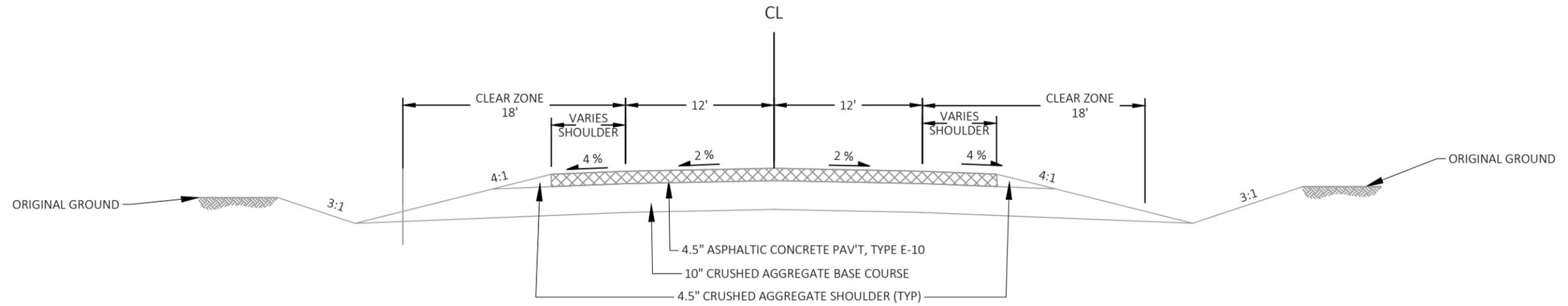
EXISTING TYPICAL SECTION MAINLINE STH 21

STA 229+00 - 240+75
* STA 229+00 - 233+42
** STA 229+00 - 235+11

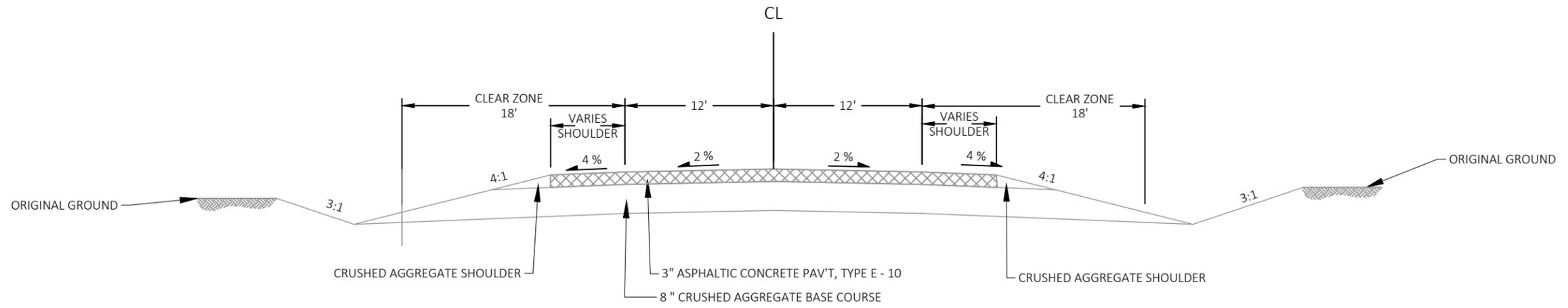


EXISTING TYPICAL SECTION MAINLINE STH 21

STA 158+00 - 169+14 & STA 214+25 - 229+00
** STA 158+70 - 166+92 & STA 223+84 - 229+00
* STA 166+07 - 168+93 & STA 223+84 - 229+00
+ STA 165+67 - 167+57

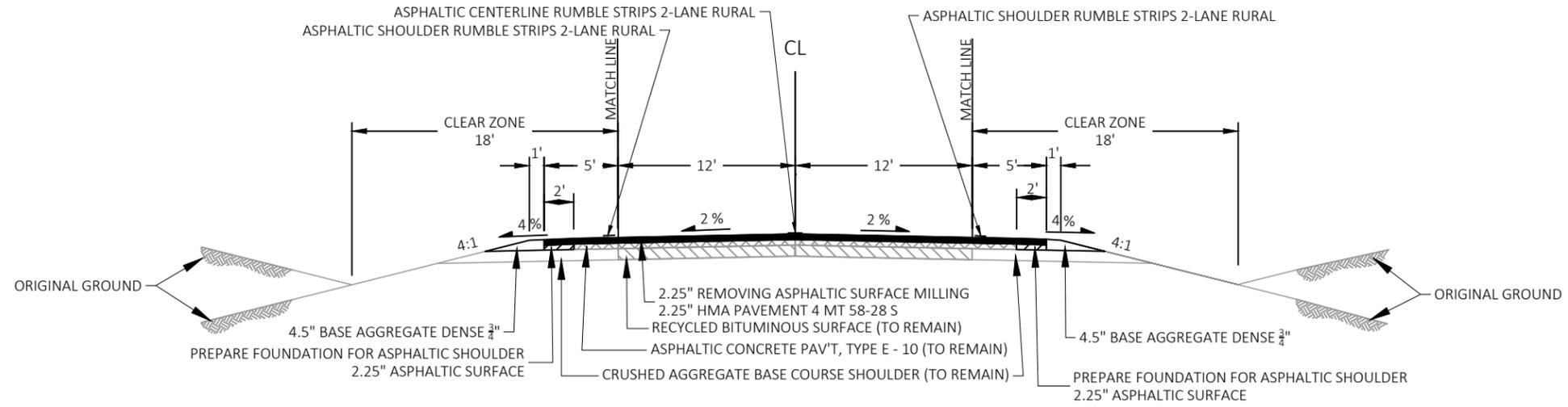


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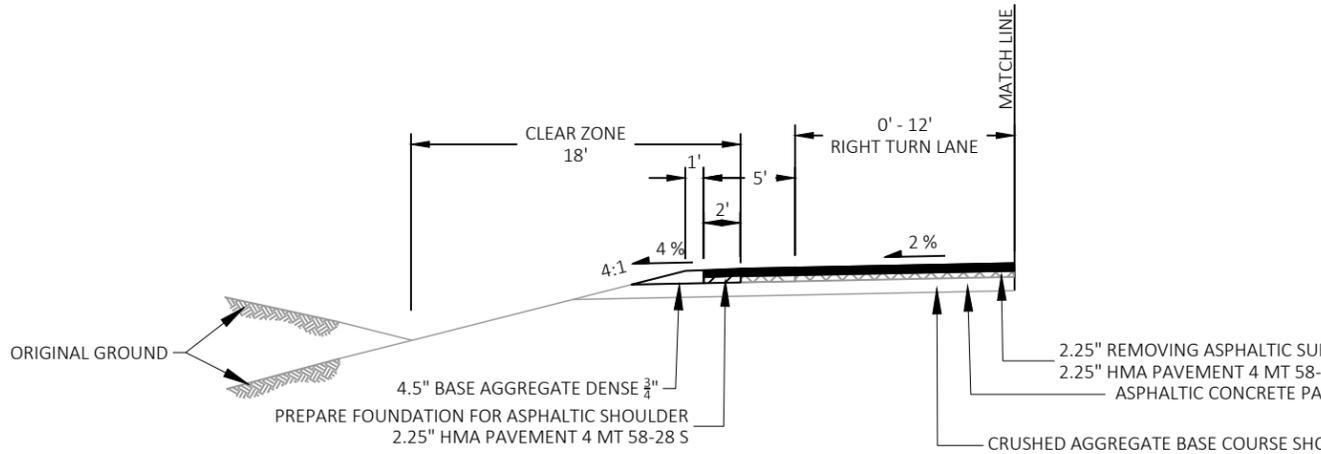


EXISTING TYPICAL SECTION FOR SIDEROADS

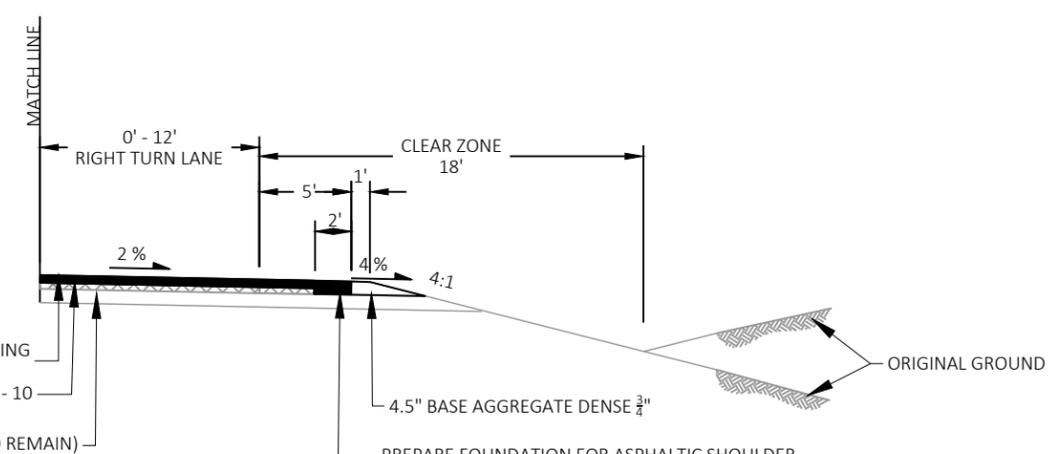
- | | | | |
|-----------------|------------------|------------------|------------------|
| ENSIGN ROAD | EUREKA ROAD | MAIN STREET | 1ST STREET |
| ENGELWOOD ROAD | ESSEX AVENUE | YARD STREET | 2ND STREET |
| ENTERPRISE ROAD | CTH N | WISCONSIN STREET | 3RD STREET |
| FORMICA ROAD | EVERGREEN AVENUE | COPPR ROAD | EXCELSIOR AVENUE |
| ESPY ROAD | | RAILROAD STREET | CRESCENT ROAD |



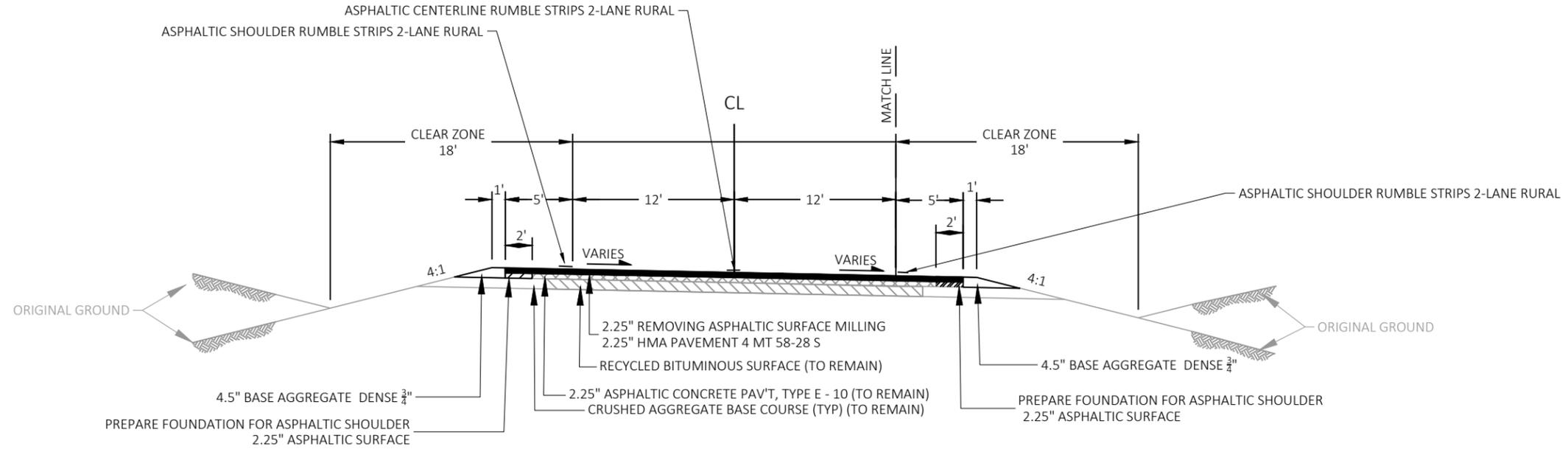
PROPOSED TYPICAL SECTION MAINLINE STH 21
 STA 16+75 - 64+31 STA 325+00 - 341+11
 STA 74+15 - 150+00 STA 342+73 - 368+35
 STA 240+75 - 283+00 STA 369+29 - 392+50



PROPOSED TYPICAL SECTION RIGHT TURN LANE LT
 STA 16+75 - 20+50
 STA 389+00 - 392+25

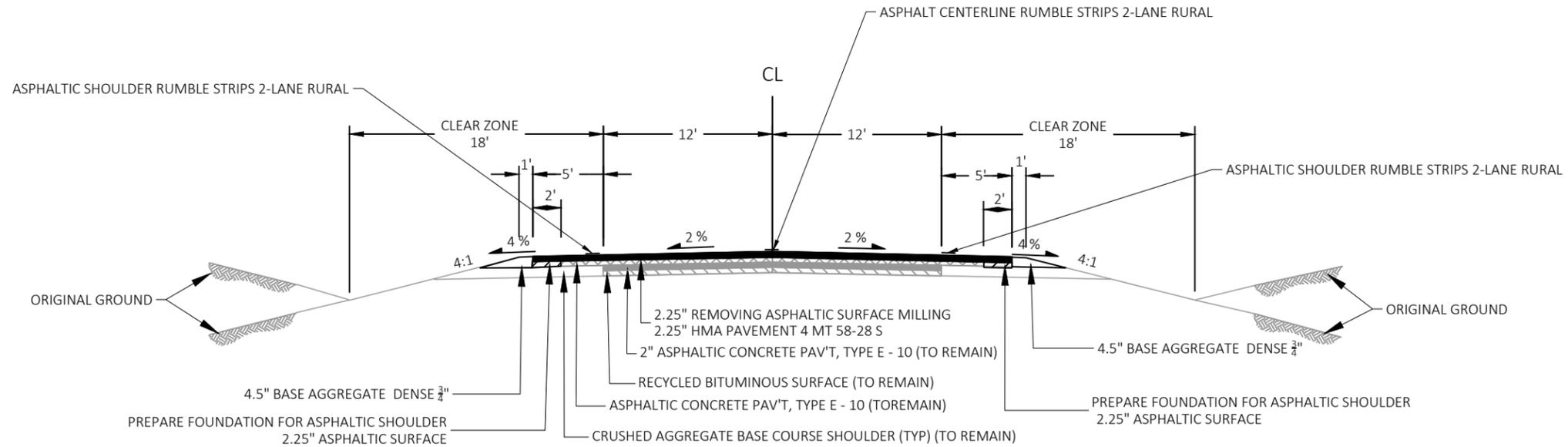


PROPOSED TYPICAL SECTION RIGHT TURN LANE RT
 STA 382+50 - 388+00



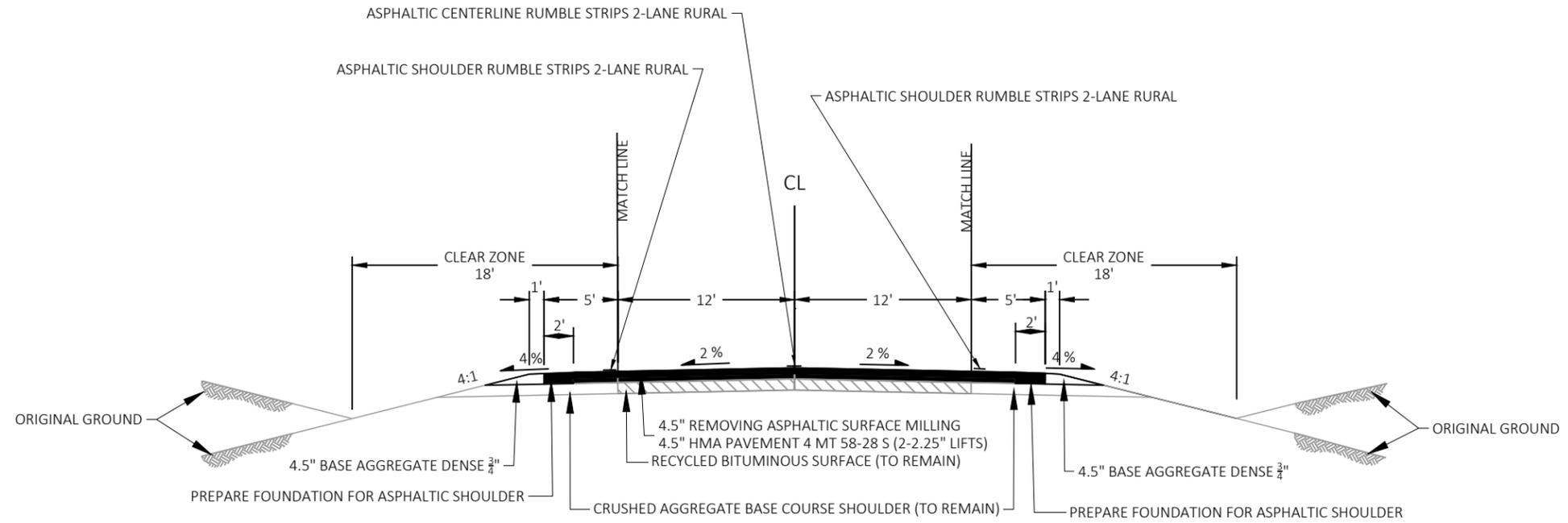
PROPOSED SUPERELEVATED TYPICAL SECTION MAINLINE STH 21

STA 64+31 - 74+15
 STA 291+77 - 294+75
 STA 306+85 - 310+60
 STA 311+00 - 315+84



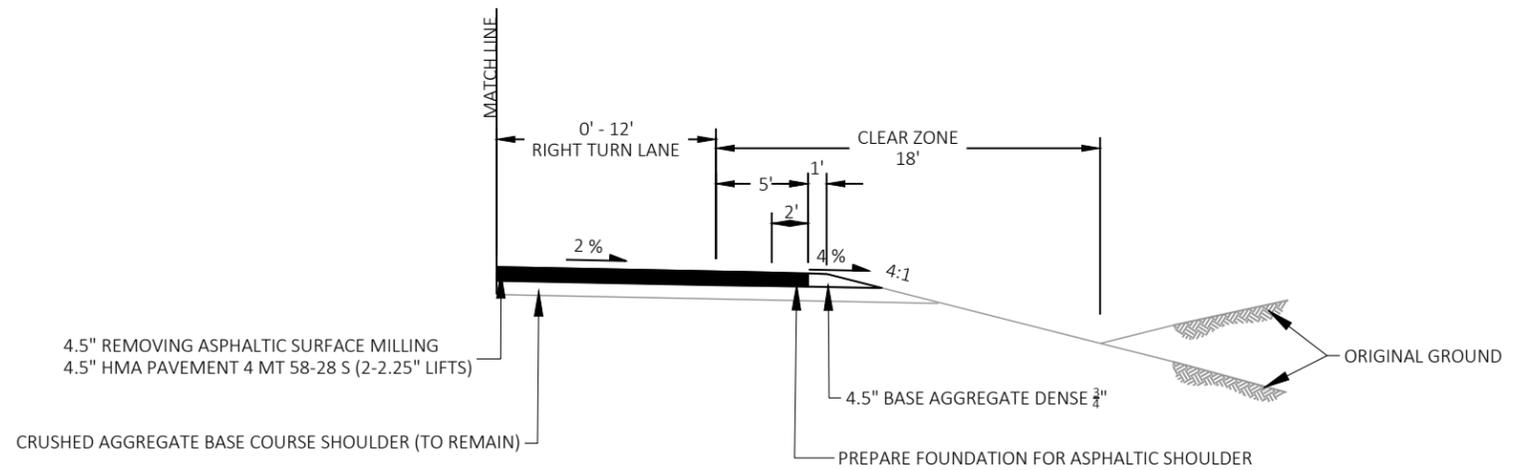
PROPOSED TYPICAL SECTION MAINLINE STH 21

STA 206+77 - 214+25
 STA 392+50 - 423+84
 STA 424+27 - 480+00



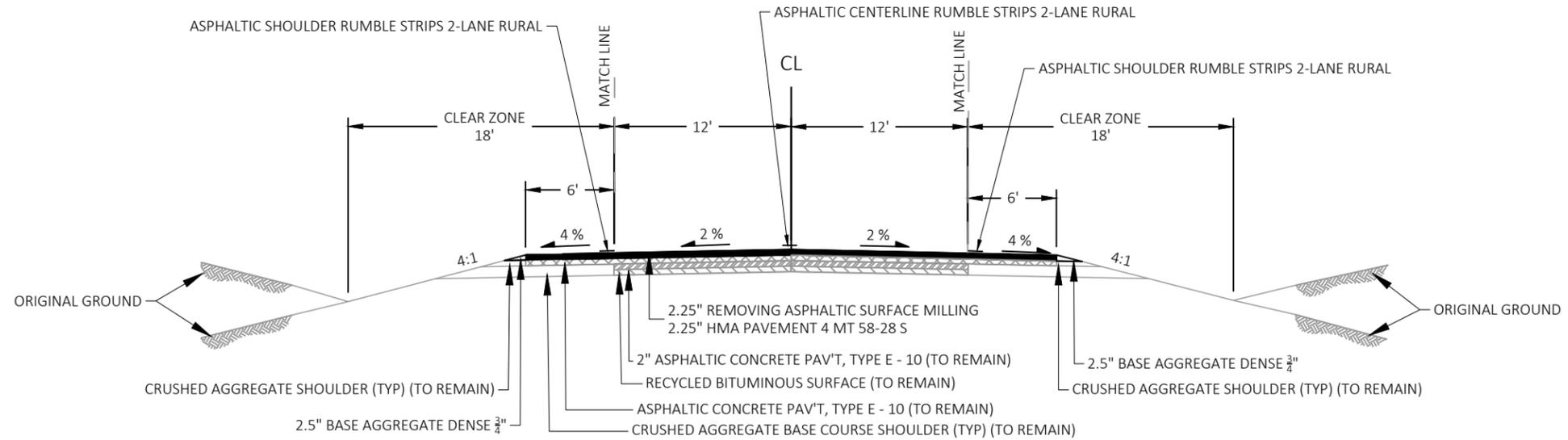
PROPOSED TYPICAL SECTION MAINLINE STH 21

STA 150+00 - 158+00



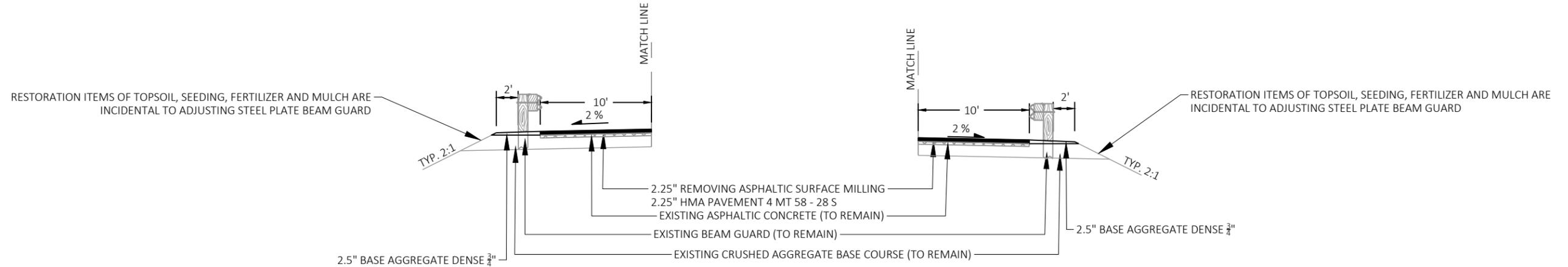
PROPOSED TYPICAL SECTION RIGHT TURN LANE RT

STA 150+00 - 153+00



PROPOSED TYPICAL SECTION MAINLINE STH 21

STA 283+00 - 291+77 STA 315+84 - 325+00
 STA 294+75 - 306+85 STA 480+00 - 488+79
 STA 310+60 - 311+00 STA 489+57 - 493+21

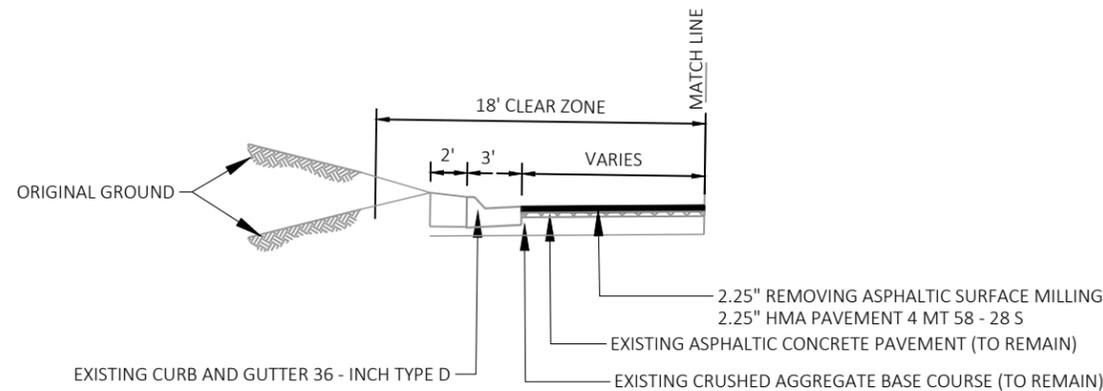


PROPOSED TYPICAL SECTION BEAM GUARD LT SECTIONS

STA 339+69 - 340+83 B-41-283 STA 342+50 - 343+52 B-41-283
 STA 367+02 - 368+35 B-41-222 STA 369+29 - 370+63 B-41-222
 STA 422+81 - 423+84 B-41-205 STA 424+27 - 425+29 B-41-205
 STA 486+14 - 488+79 B-41-223 STA 489+52 - 490+62 B-41-223

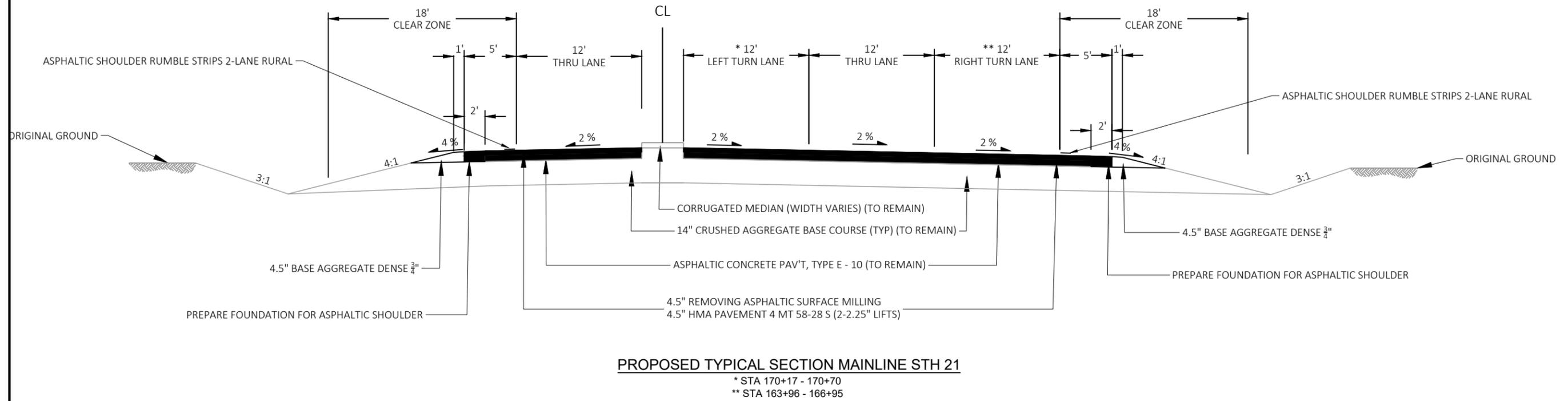
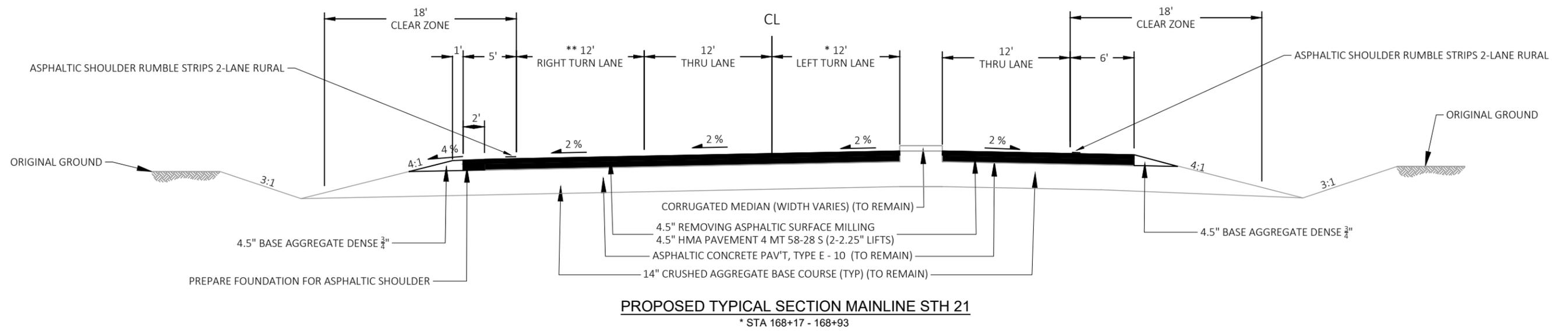
PROPOSED TYPICAL SECTION BEAM GUARD RT SECTIONS

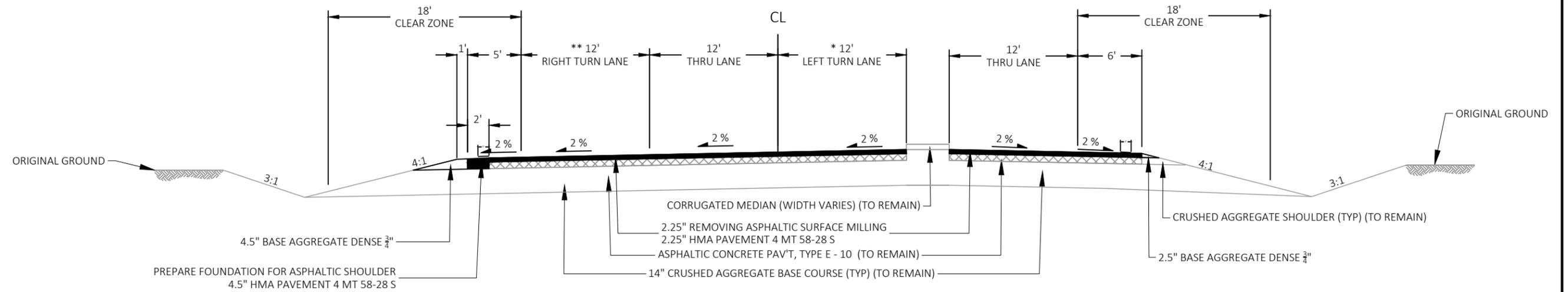
STA 340+39 - 341+39 B-41-283 STA 342+99 - 344+23 B-41-283
 STA 367+02 - 368+35 B-41-222 STA 369+29 - 370+60 B-41-222
 STA 423+80 - 423+84 B-41-205 STA 424+27 - 425+24 B-41-205
 STA 487+72 - 488+79 B-41-223 STA 489+57 - 490+57 B-41-223



PROPOSED TYPICAL SECTION CURB AND GUTTER SECTIONS

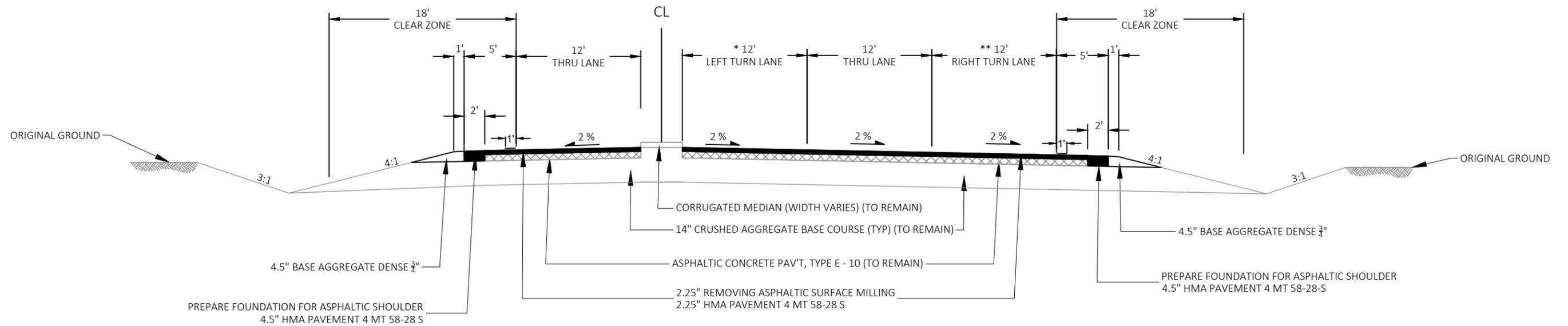
STA 485+12 - 485+53 LT





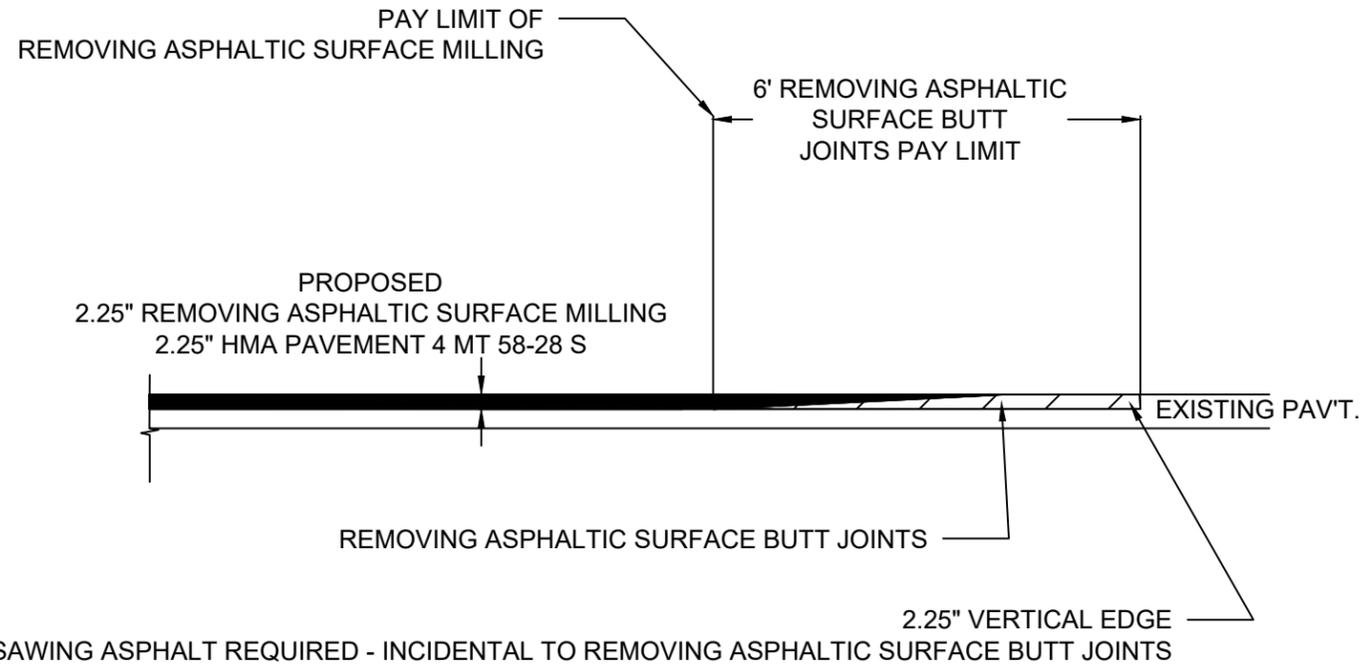
PROPOSED TYPICAL SECTION MAINLINE STH 21

* STA 232+23 - 234+23
** STA 232+23 - 235+73

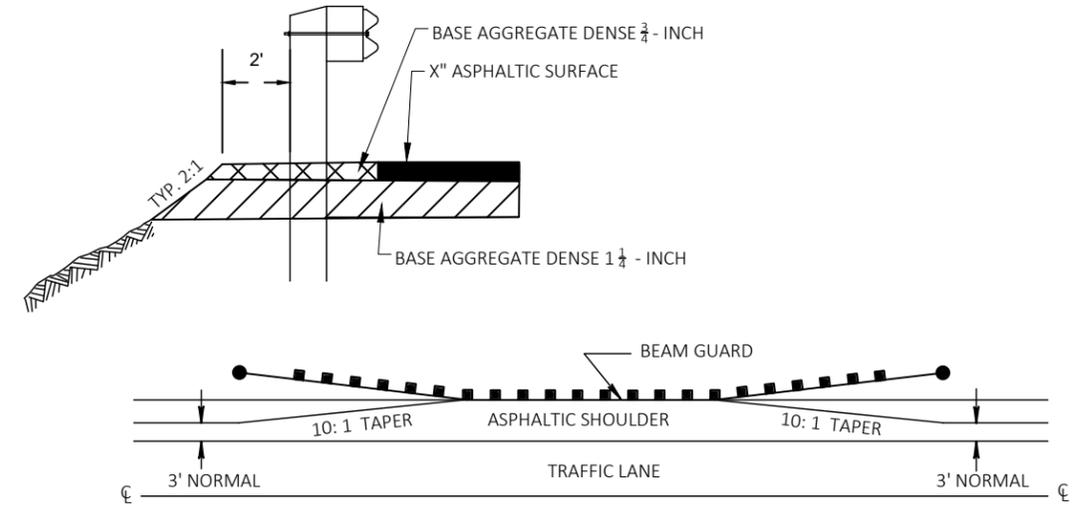


PROPOSED TYPICAL SECTION MAINLINE STH 21

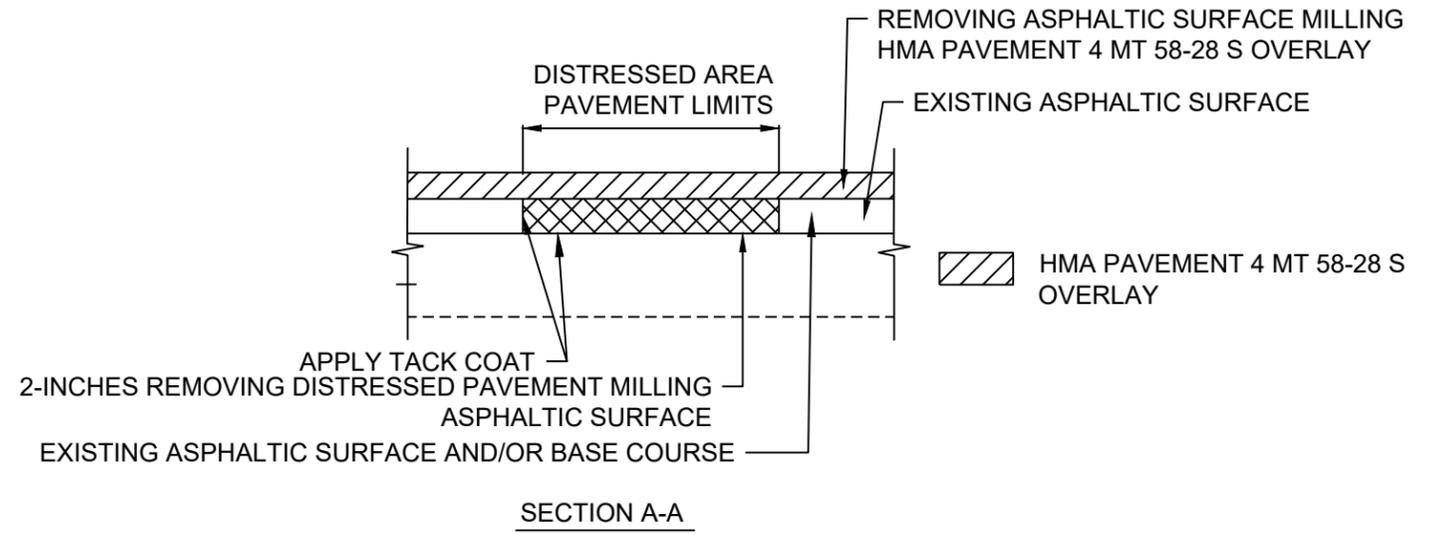
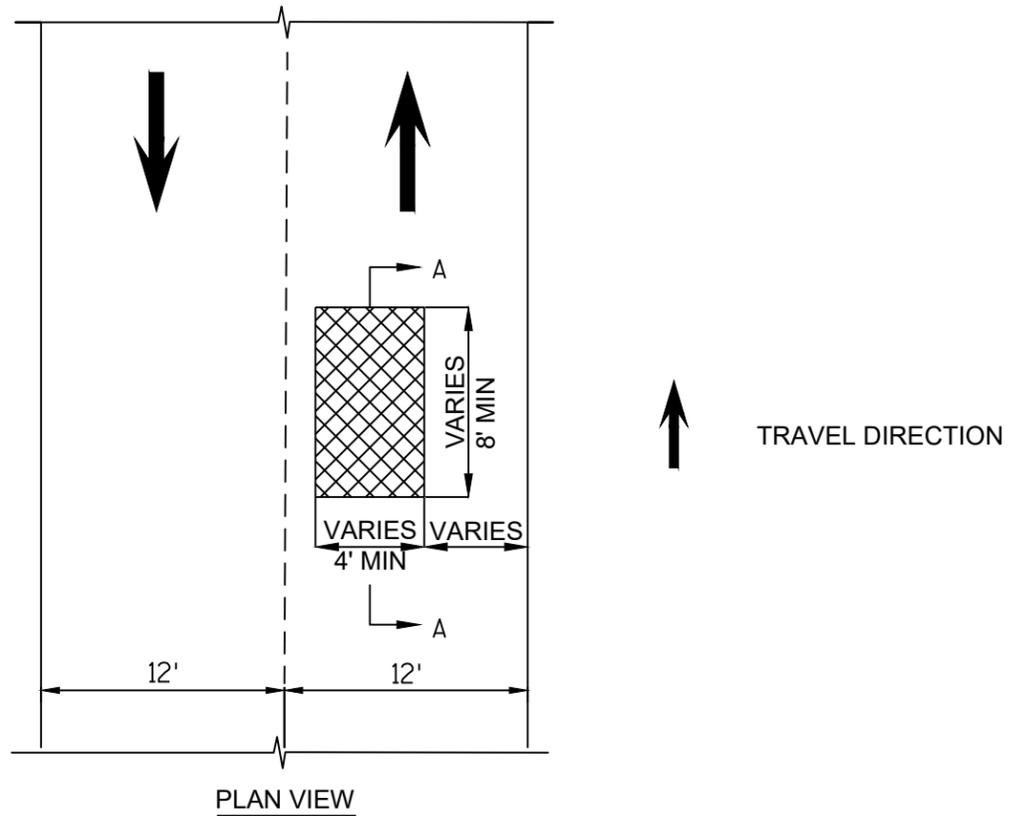
* STA STA 227+56 - 231+04
** STA STA 229+64 - 231+04



REMOVING ASPHALTIC SURFACE BUTT JOINTS DETAIL

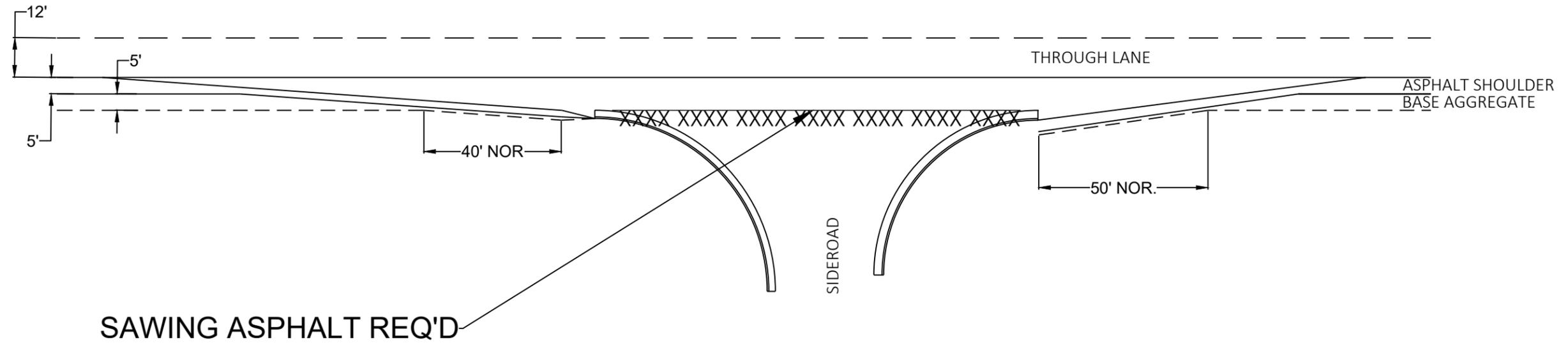


DETAIL FOR ASPHALTIC SHOULDER AT BEAM GUARD

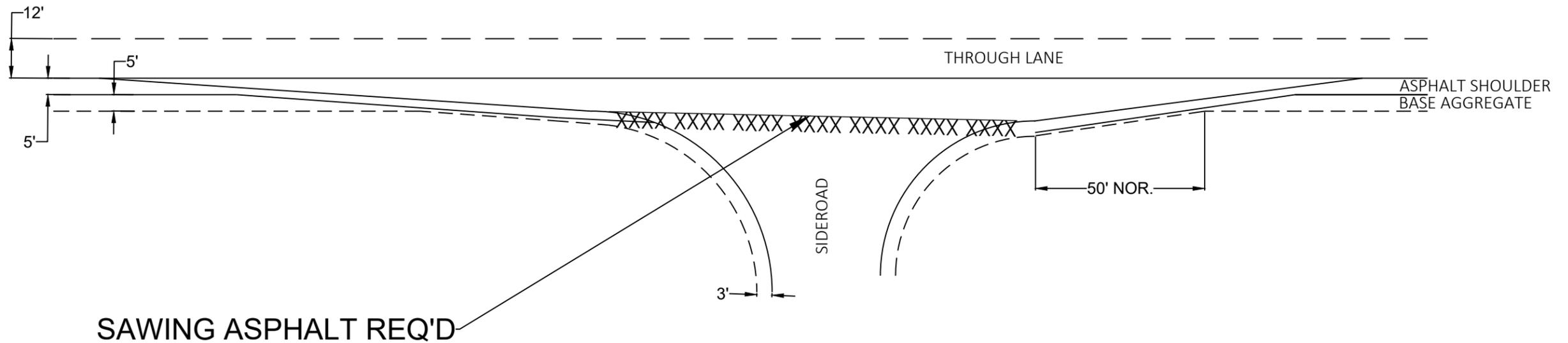


EXACT LOCATION AND LIMITS OF REMOVING DISTRESSED PAVEMENT MILLING TO BE DETERMINED BY THE ENGINEER IN THE FIELD

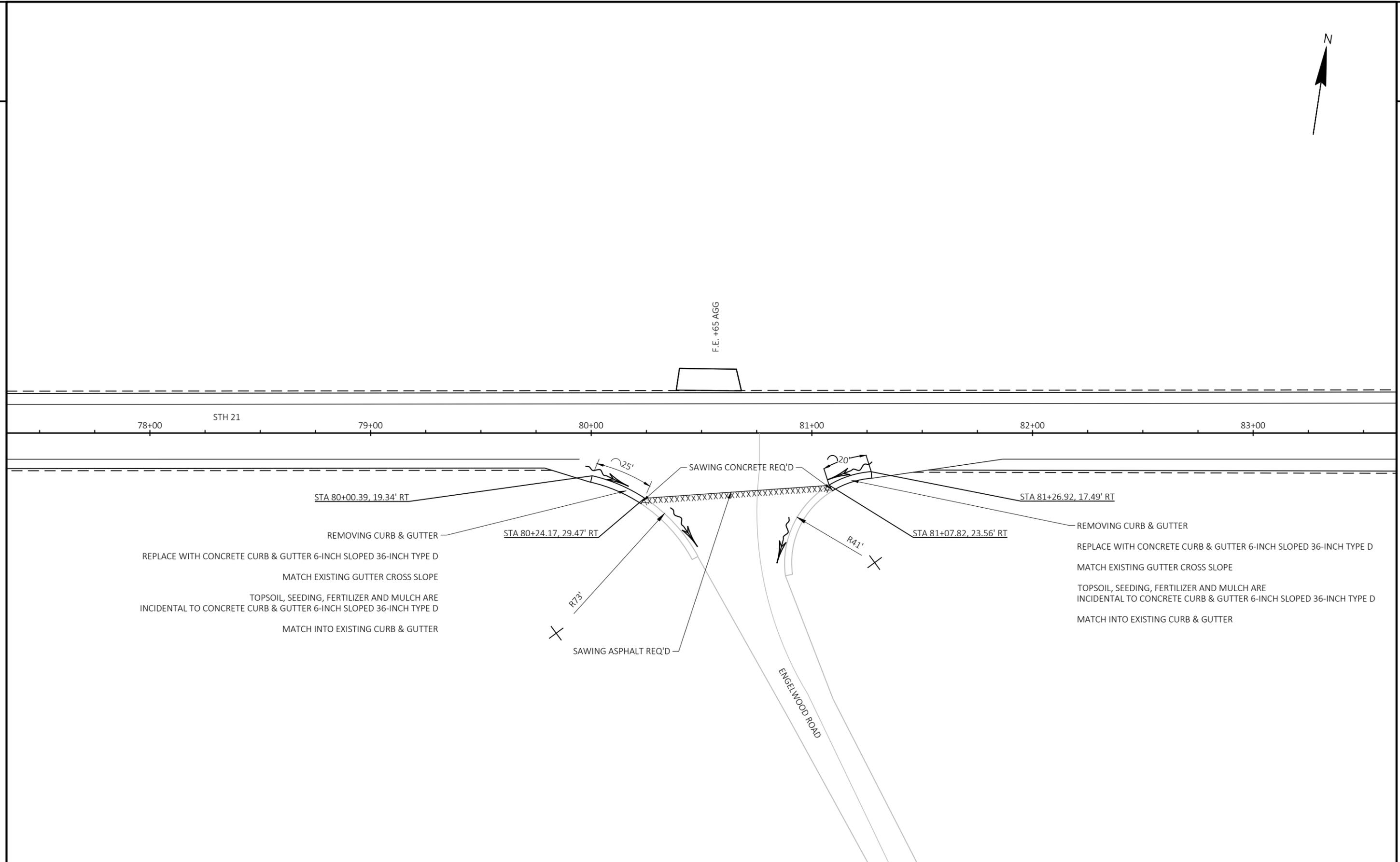
REMOVING DISTRESSED PAVEMENT MILLING



SIDEROAD WITH CURB AND GUTTER DETAIL



SIDEROAD WITHOUT CURB AND GUTTER DETAIL



PROJECT NO: 7010-01-63	HWY: STH 21	COUNTY: MONROE	ENGELWOOD ROAD INTERSECTION DETAIL	SHEET	E
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STANDARD DETAIL DRAWING LIST

PAVEMENT MARKING

- 15C8-A PAVEMENT MARKING, LONGITUDINAL MARKING (MAINLINE)
- 15C8-C PAVEMENT MARKING (TURN LANES)
- 15C18-A PAVEMENT MARKINGS, MEDIAN ISLANDS
- 15C18-B PAVEMENT MARKINGS, MEDIAN ISLAND NOSE
- 15C18-C MEDIAN PAVEMENT MARKINGS, DOUBLE ARROW WARNING SIGN PLACEMENT
- 15C35 PAVEMENT MARKING

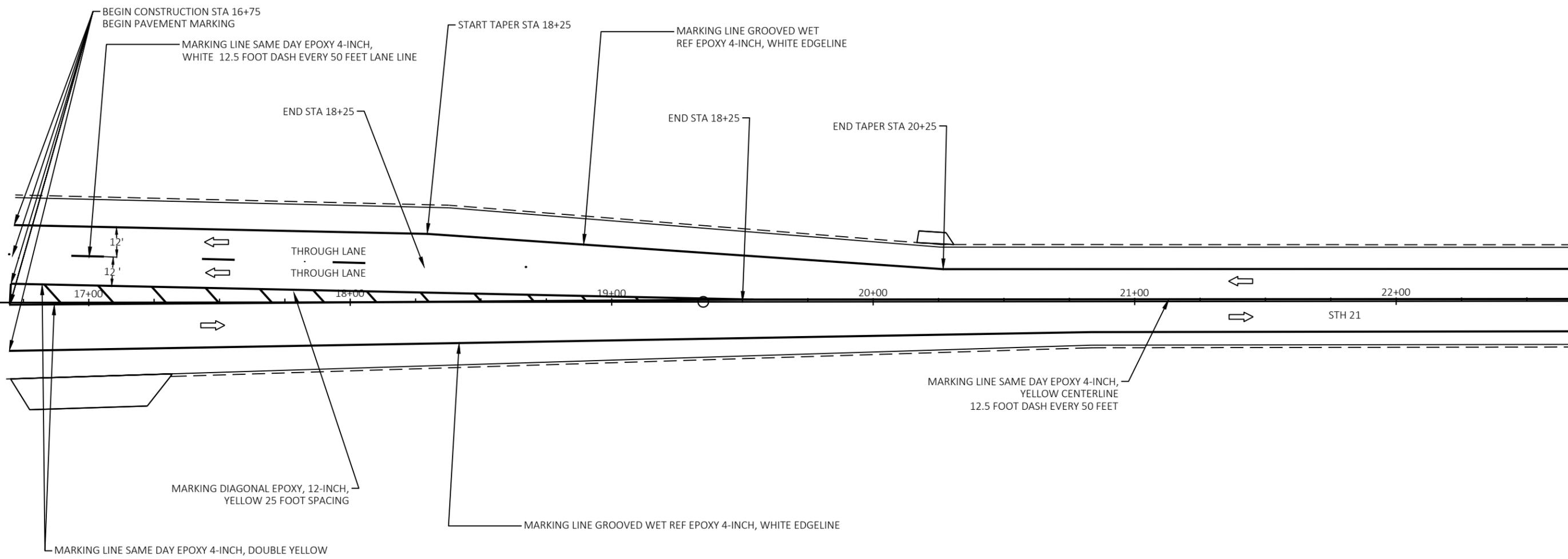
LEGEND

-  DIRECTION OF TRAFFIC
-  MARKING CORRUGATED MEDIAN EPOXY, YELLOW
-  EXISTING CORRUGATED
-  MARKING ISLAND NOSE EPOXY, YELLOW



2

2



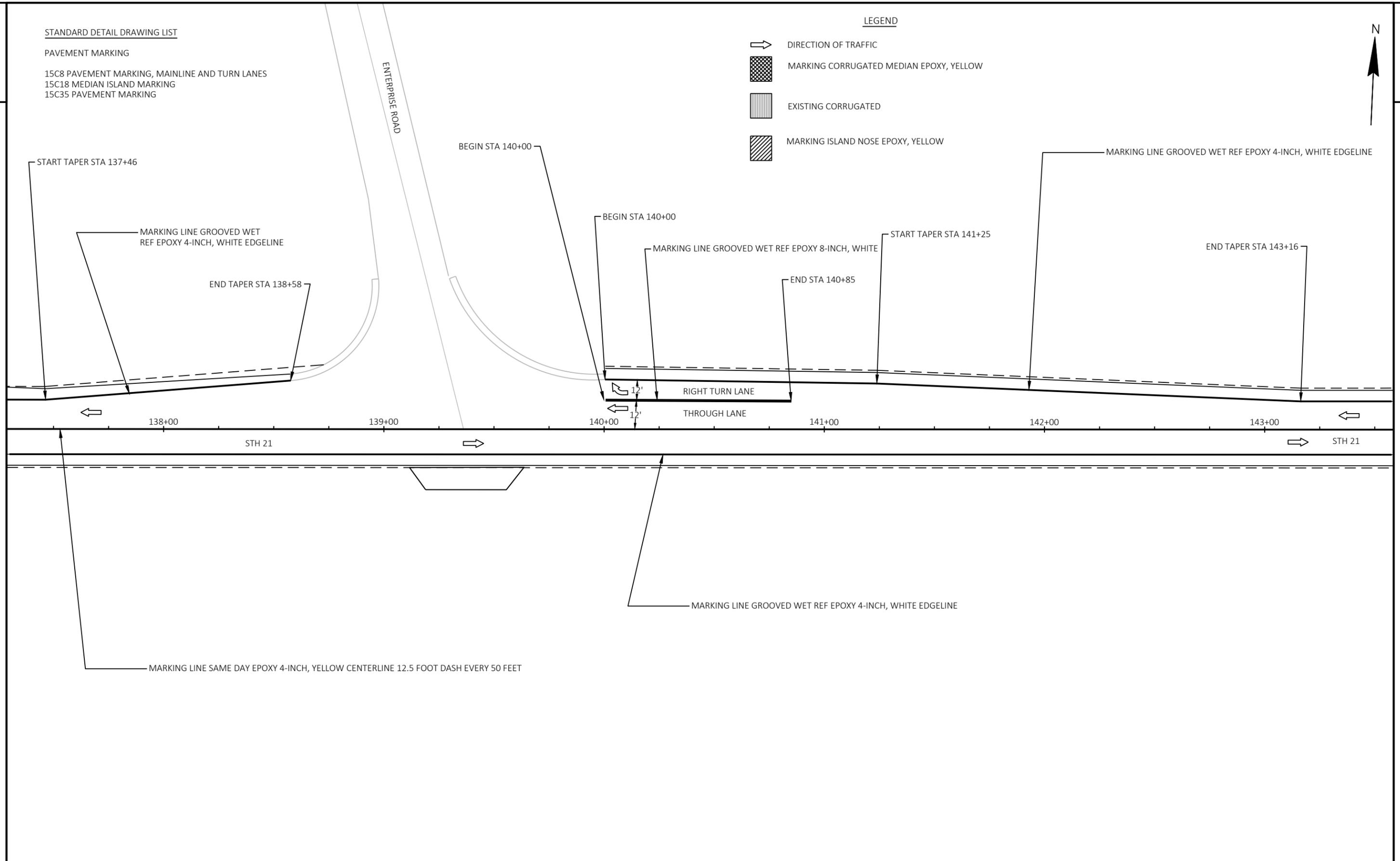
STANDARD DETAIL DRAWING LIST

PAVEMENT MARKING

- 15C8 PAVEMENT MARKING, MAINLINE AND TURN LANES
- 15C18 MEDIAN ISLAND MARKING
- 15C35 PAVEMENT MARKING

LEGEND

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- MARKING CORRUGATED MEDIAN EPOXY, YELLOW
- EXISTING CORRUGATED
- MARKING ISLAND NOSE EPOXY, YELLOW



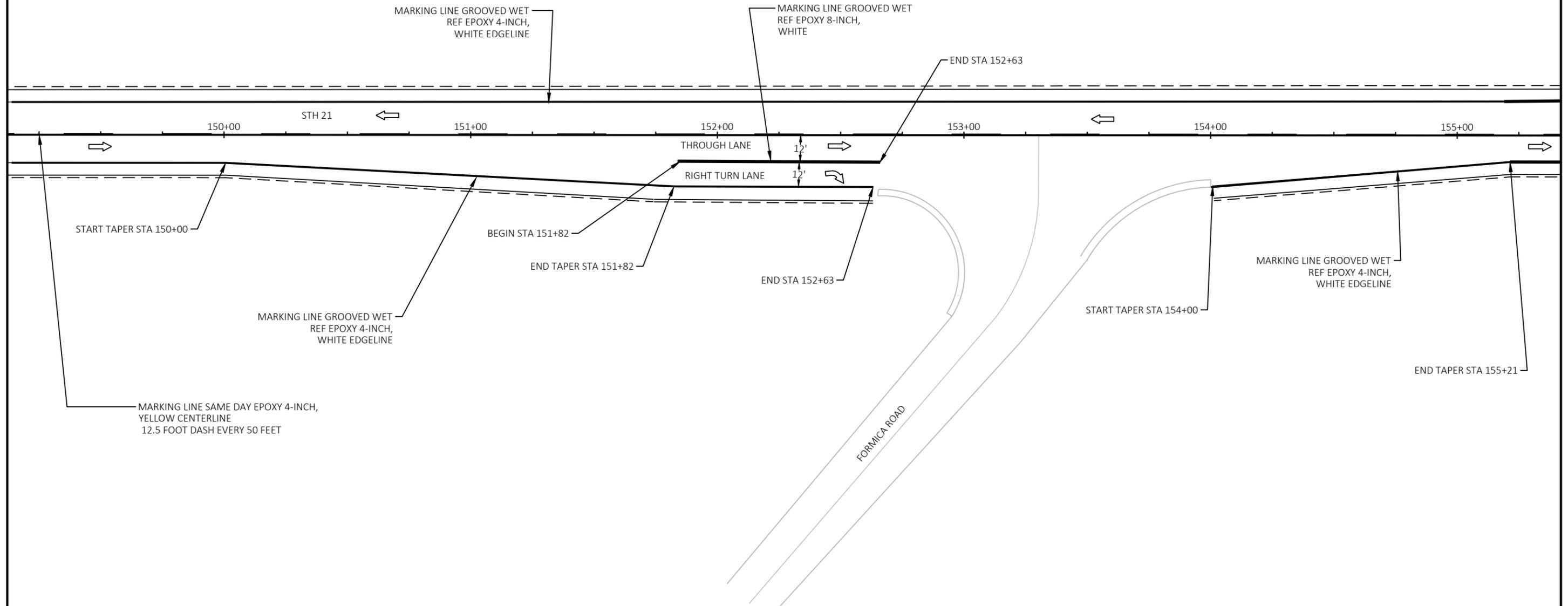
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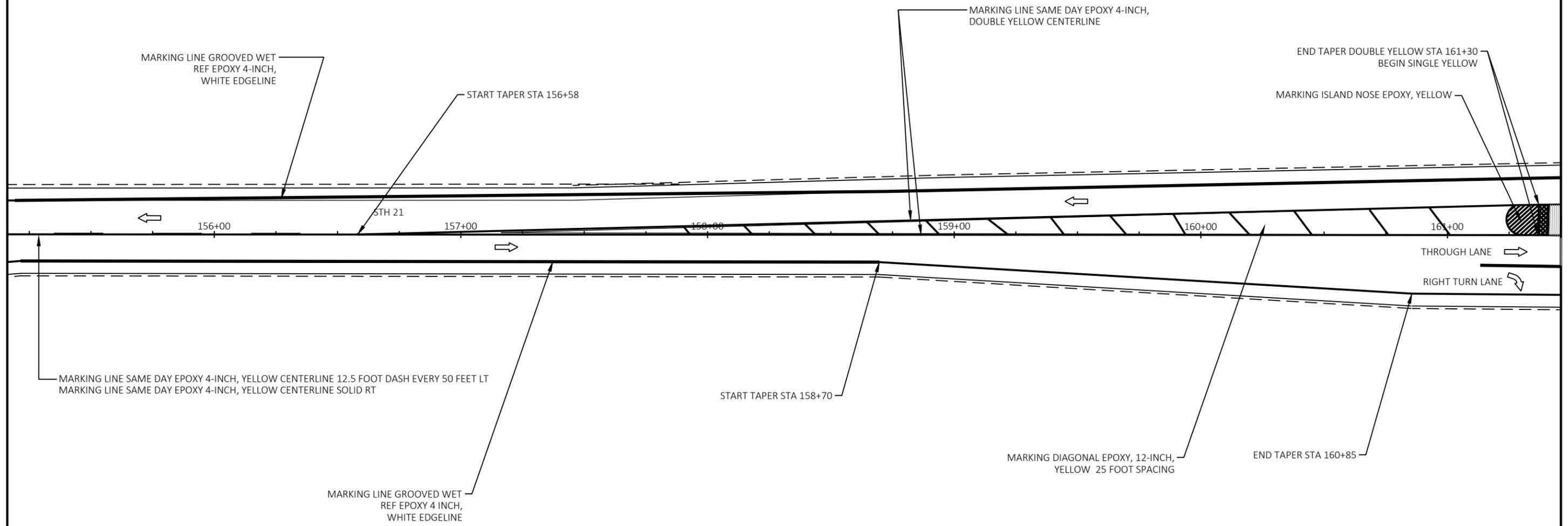
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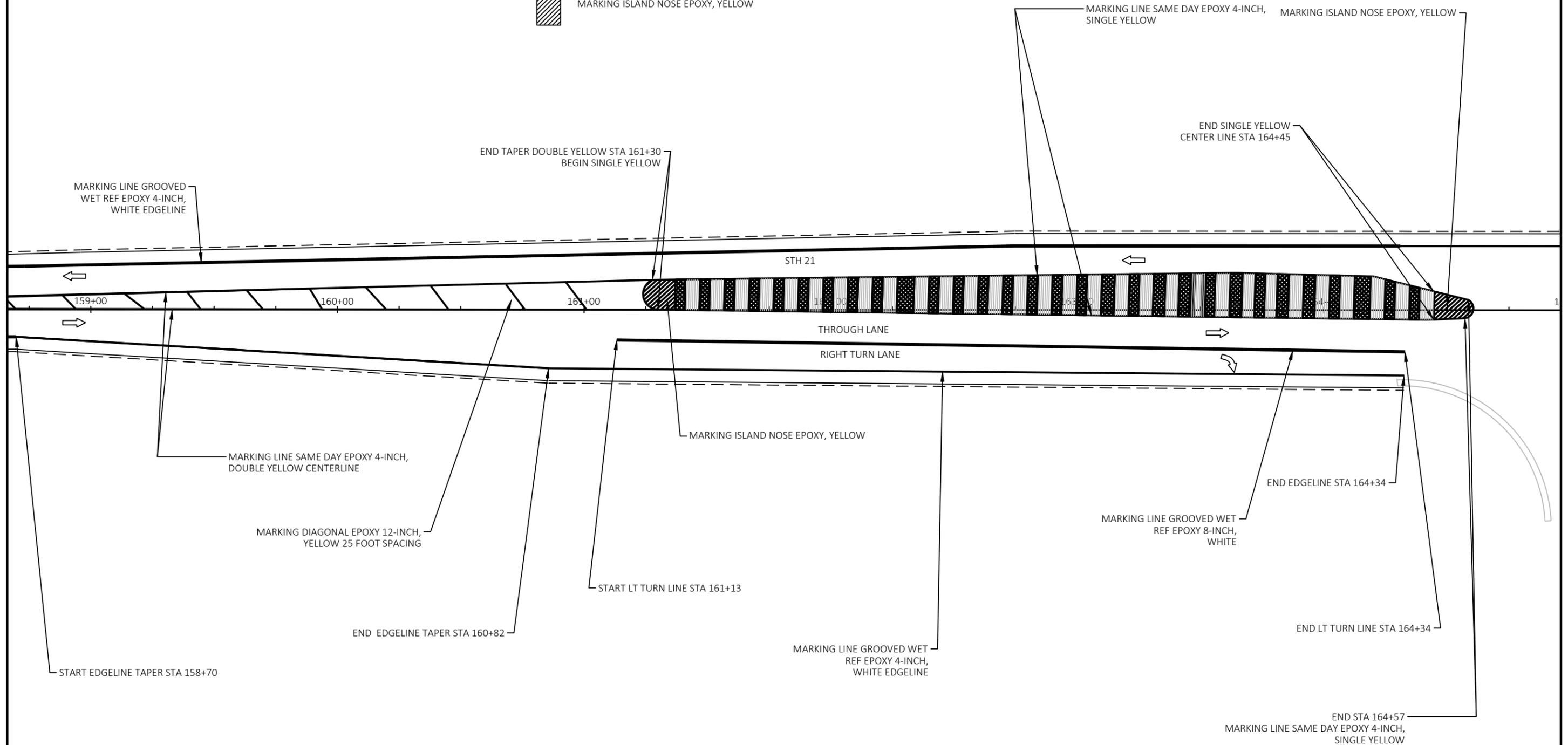
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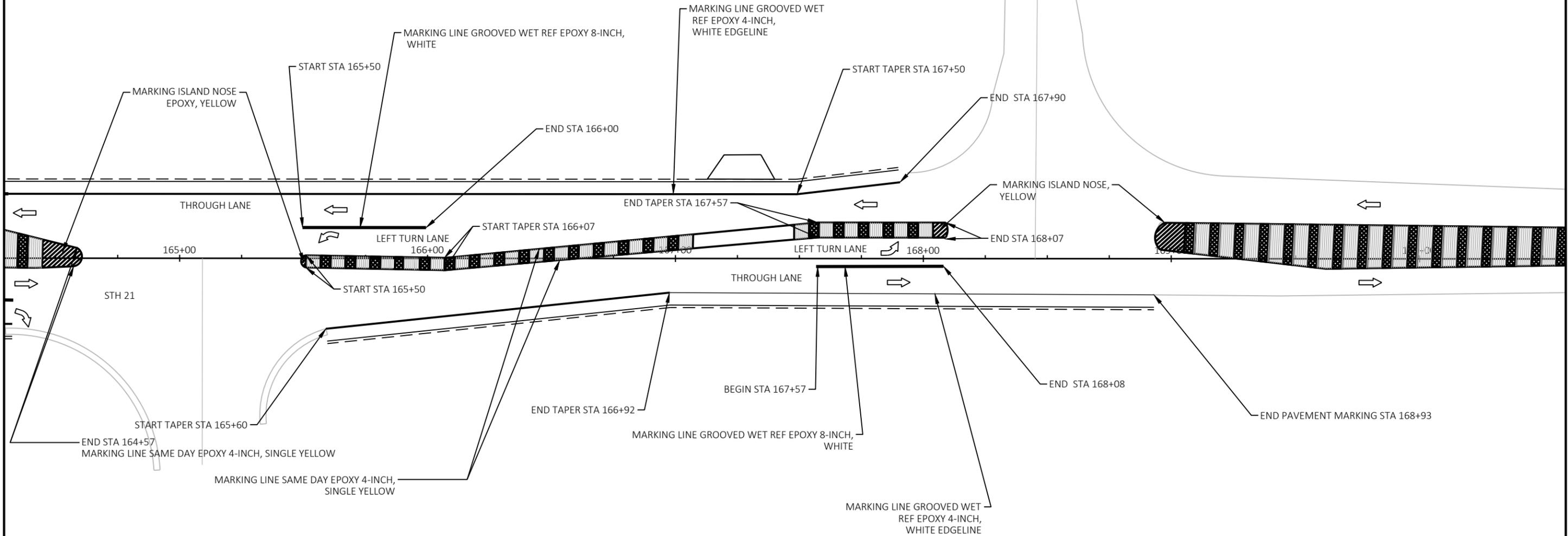
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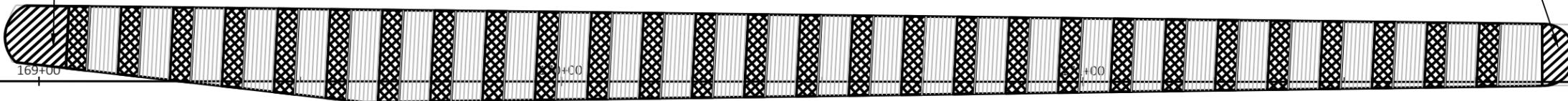
ESPY ROAD

MARKING ISLAND NOSE EPOXY, YELLOW

MARKING ISLAND NOSE EPOXY, YELLOW



THROUGH LANE



169+00 STH 21

+00

+00

172+00



THROUGH LANE



END PAVEMENT MARKING STA 168+93

MARKING LINE GROOVED WET REF EPOXY 4-INCH, WHITE EDGELINE

STANDARD DETAIL DRAWING LIST

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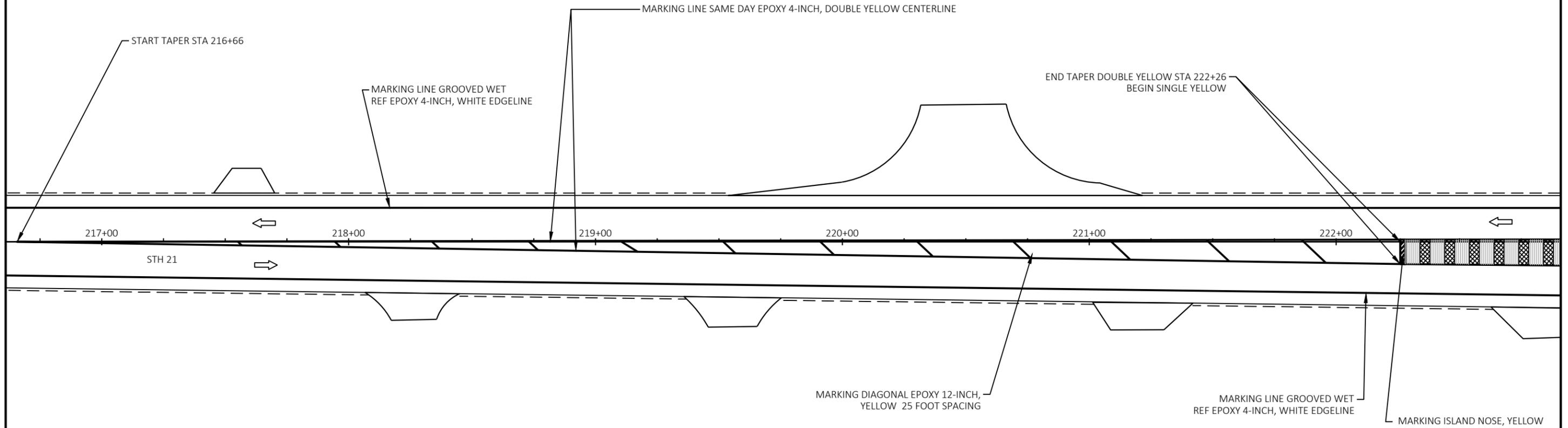
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2

2



PROJECT NO: 7010-01-63

HWY: STH 21

COUNTY: MONROE

PAVEMENT MARKING

SHEET

E

STANDARD DETAIL DRAWING LIST

PAVEMENT MARKING

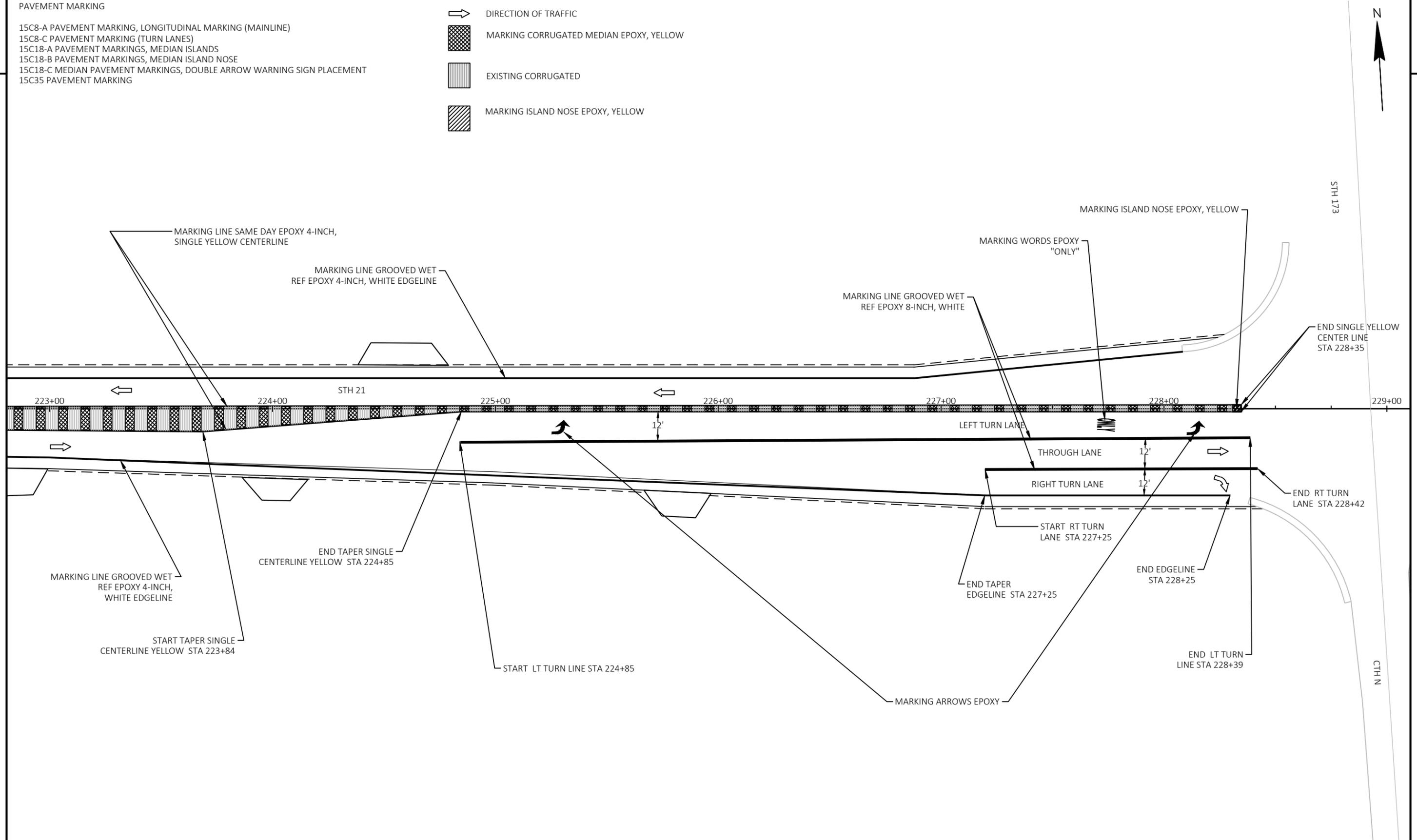
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PROJECT NO: 7010-01-63

HWY: STH 21

COUNTY: MONROE

PAVEMENT MARKING

SHEET

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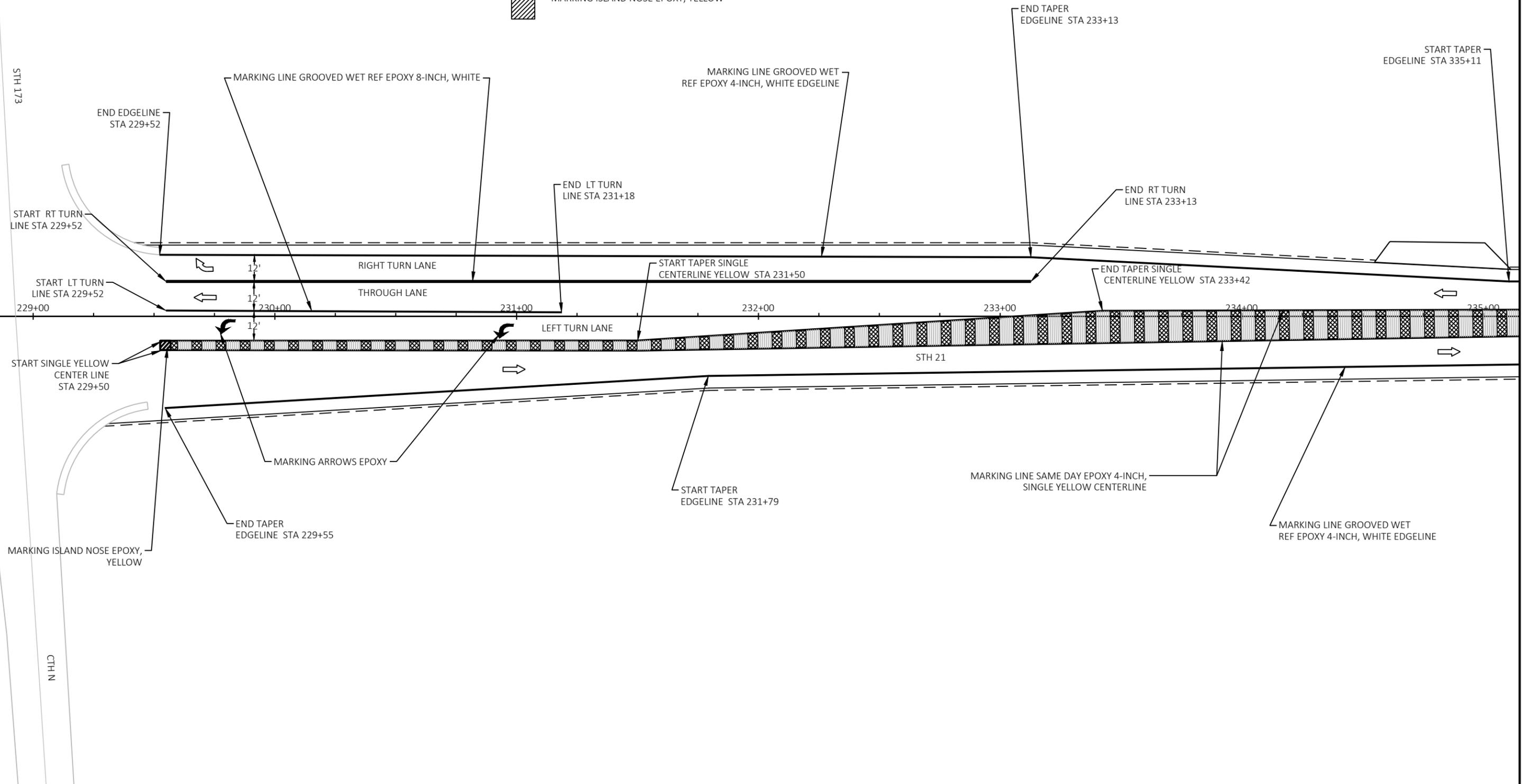
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PROJECT NO: 7010-01-63

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PAVEMENT MARKING

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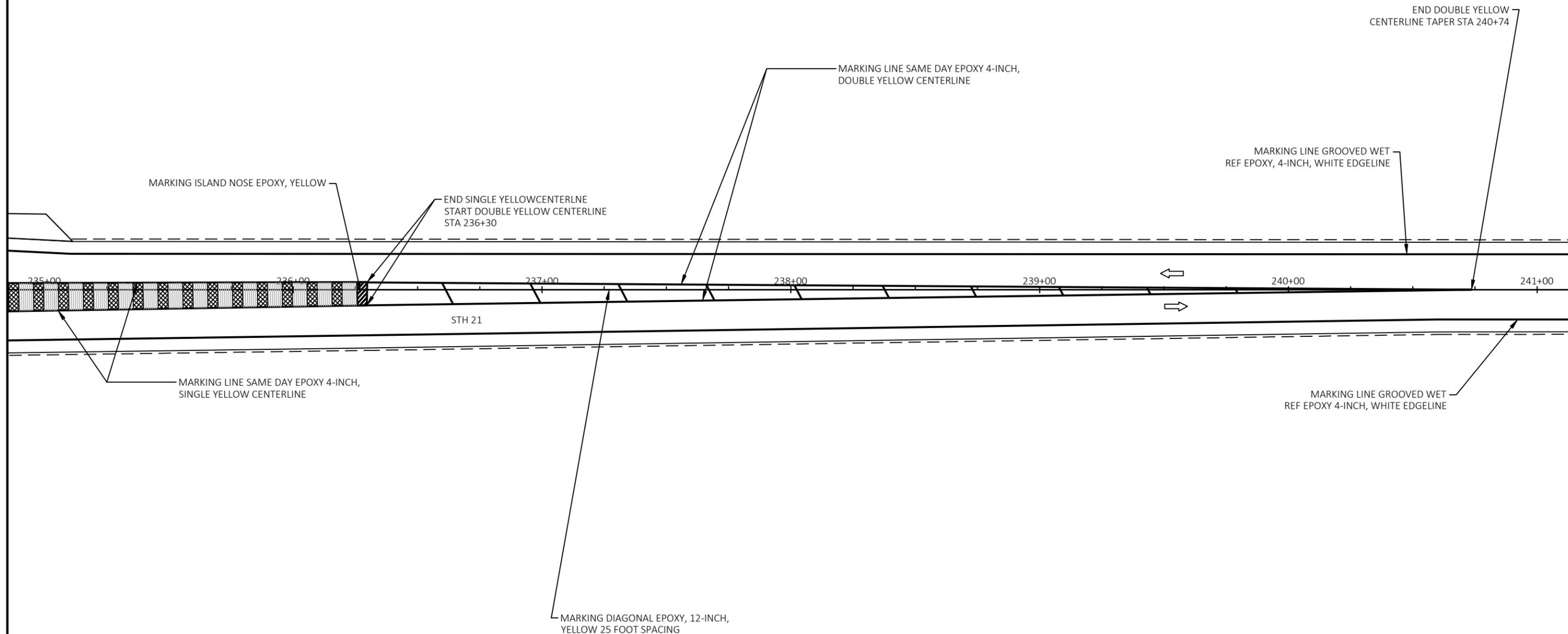
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2

2



PROJECT NO: 7010-01-63

HWY: STH 21

COUNTY: MONROE

PAVEMENT MARKING

SHEET

E

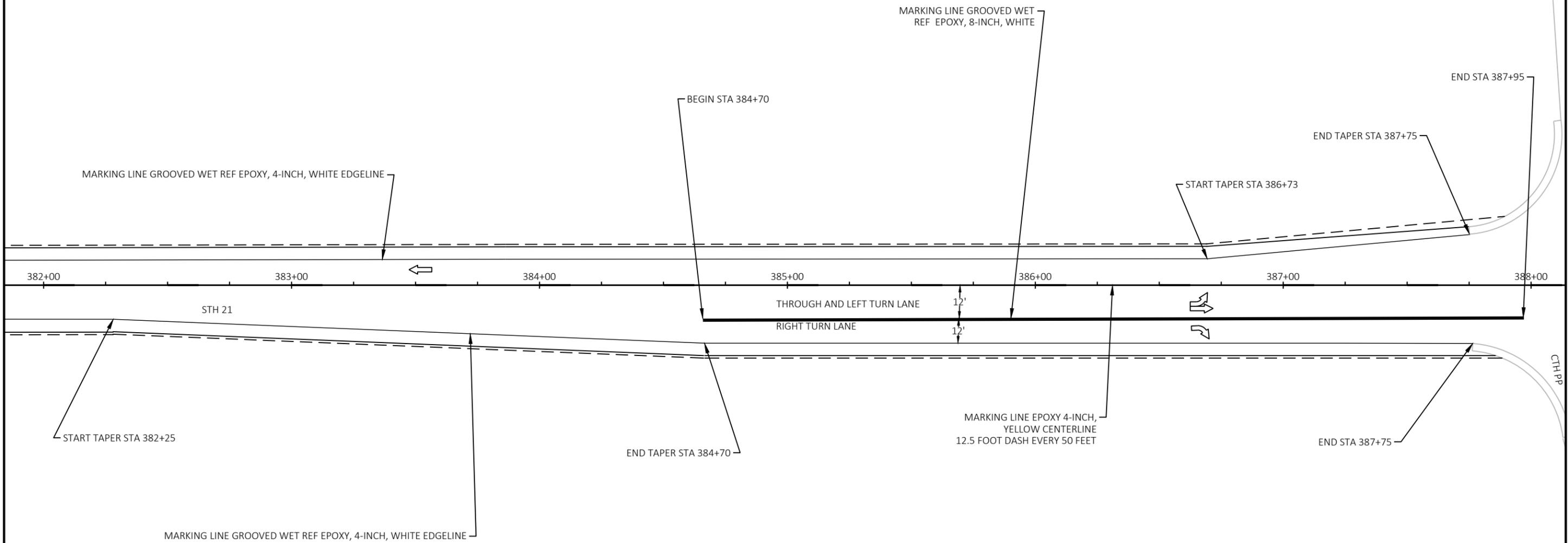
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- MARKING ISLAND NOSE EPOXY, YELLOW



PROJECT NO: 7010-01-63	HWY: STH 21	COUNTY: MONROE	PAVEMENT MARKING	SHEET	E
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STANDARD DETAIL DRAWING LIST

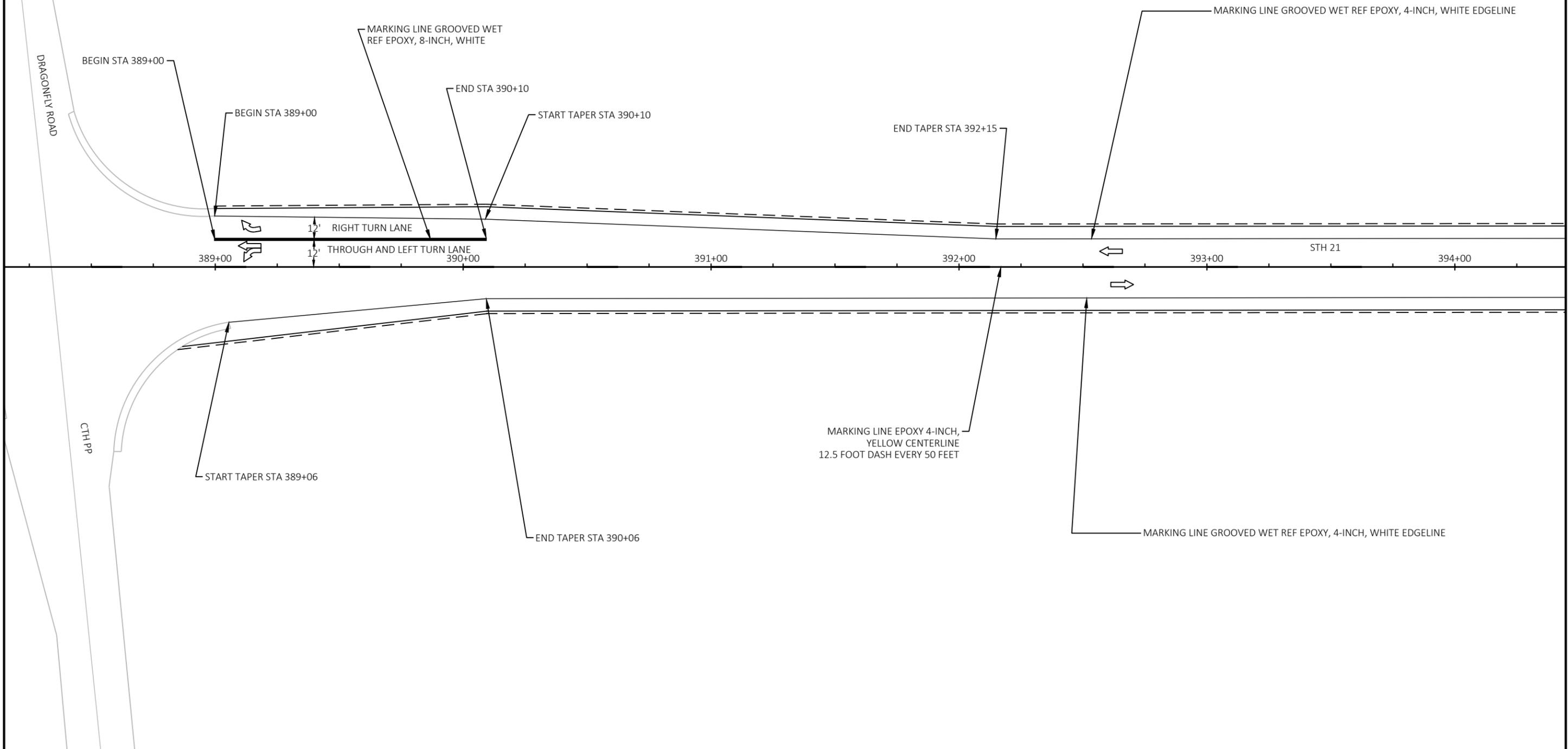
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PROJECT NO: 7010-01-63

HWY: STH 21

COUNTY: MONROE

PAVEMENT MARKING

SHEET

E

Estimate Of Quantities

7010-01-63

Line	Item	Item Description	Unit	Total	Qty
0002	204.0110	Removing Asphaltic Surface	SY	1,444.000	1,444.000
0004	204.0115	Removing Asphaltic Surface Butt Joints	SY	127.000	127.000
0006	204.0120	Removing Asphaltic Surface Milling	SY	214,970.000	214,970.000
0008	204.0150	Removing Curb & Gutter	LF	45.000	45.000
0010	211.0101	Prepare Foundation for Asphaltic Paving (project) 01. 7010-01-63	EACH	1.000	1.000
0012	211.0400	Prepare Foundation for Asphaltic Shoulders	STA	748.000	748.000
0014	213.0100	Finishing Roadway (project) 01. 7010-01-63	EACH	1.000	1.000
0016	305.0110	Base Aggregate Dense 3/4-Inch	TON	3,977.000	3,977.000
0018	455.0605	Tack Coat	GAL	14,249.000	14,249.000
0020	460.0105.S	HMA Percent Within Limits (PWL) Test Strip Volumetrics	EACH	1.000	1.000
0022	460.0110.S	HMA Percent Within Limits (PWL) Test Strip Density	EACH	2.000	2.000
0024	460.2005	Incentive Density PWL HMA Pavement	DOL	14,602.000	14,602.000
0026	460.2007	Incentive Density HMA Pavement Longitudinal Joints	DOL	18,902.000	18,902.000
0028	460.2010	Incentive Air Voids HMA Pavement	DOL	29,180.000	29,180.000
0030	460.6224	HMA Pavement 4 MT 58-28 S	TON	23,011.000	23,011.000
0032	465.0105	Asphaltic Surface	TON	3,078.000	3,078.000
0034	465.0120	Asphaltic Surface Driveways and Field Entrances	TON	187.000	187.000
0036	465.0425	Asphaltic Shoulder Rumble Strips 2-Lane Rural	LF	50,617.000	50,617.000
0038	465.0475	Asphalt Centerline Rumble Strips 2-Lane Rural	LF	32,883.000	32,883.000
0040	601.0557	Concrete Curb & Gutter 6-Inch Sloped 36-Inch Type D	LF	45.000	45.000
0042	614.0400	Adjusting Steel Plate Beam Guard	LF	2,699.000	2,699.000
0044	614.0950	Replacing Guardrail Posts and Blocks	EACH	32.000	32.000
0046	618.0100	Maintenance And Repair of Haul Roads (project) 01. 7010-01-63	EACH	1.000	1.000
0048	619.1000	Mobilization	EACH	1.000	1.000
0050	624.0100	Water	MGAL	26.000	26.000
0052	634.0618	Posts Wood 4x6-Inch X 18-FT	EACH	11.000	11.000
0054	638.2102	Moving Signs Type II	EACH	11.000	11.000
0056	638.3000	Removing Small Sign Supports	EACH	11.000	11.000
0058	642.5001	Field Office Type B	EACH	1.000	1.000
0060	643.0300	Traffic Control Drums	DAY	1,820.000	1,820.000
0062	643.0900	Traffic Control Signs	DAY	1,050.000	1,050.000
0064	643.1050	Traffic Control Signs PCMS	DAY	14.000	14.000
0066	643.3120	Temporary Marking Line Epoxy 4-Inch	LF	73,646.000	73,646.000
0068	643.5000	Traffic Control	EACH	1.000	1.000
0070	646.1020	Marking Line Epoxy 4-Inch	LF	36,823.000	36,823.000
0072	646.1040	Marking Line Grooved Wet Ref Epoxy 4-Inch	LF	77,877.000	77,877.000
0074	646.3040	Marking Line Grooved Wet Ref Epoxy 8-Inch	LF	2,032.000	2,032.000
0076	646.4520	Marking Line Same Day Epoxy 4-Inch	LF	36,823.000	36,823.000
0078	646.5020	Marking Arrow Epoxy	EACH	4.000	4.000
0080	646.5120	Marking Word Epoxy	EACH	1.000	1.000
0082	646.5320	Marking Railroad Crossings Epoxy	EACH	2.000	2.000
0084	646.7120	Marking Diagonal Epoxy 12-Inch	LF	356.000	356.000
0086	646.8020	Marking Corrugated Median Epoxy	SF	7,217.000	7,217.000
0088	646.8220	Marking Island Nose Epoxy	EACH	10.000	10.000
0090	648.0100	Locating No-Passing Zones	MI	8.210	8.210
0092	650.8000	Construction Staking Resurfacing Reference	LF	47,646.000	47,646.000
0094	650.9910	Construction Staking Supplemental Control (project) 01. 7010-01-63	LS	1.000	1.000
0096	690.0150	Sawing Asphalt	LF	3,507.000	3,507.000
0098	690.0250	Sawing Concrete	LF	6.000	6.000

Estimate Of Quantities

7010-01-63

Line	Item	Item Description	Unit	Total	Qty
0100	740.0440	Incentive IRI Ride	DOL	17,200.000	17,200.000
0102	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	900.000	900.000
0104	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	1,200.000	1,200.000
0106	SPV.0060	Special 01. VERIFY LANDMARK REFERENCE MONUMENTS	EACH	3.000	3.000
0108	SPV.0060	Special 02. LANDMARK REFERENCE MONUMENTS MODIFIED	EACH	1.000	1.000
0110	SPV.0180	Special 01. REMOVING DISTRESSED PAVEMENT MILLING	SY	17,286.000	17,286.000

DRIVEWAY SUMMARY

CATEGORY	STATION	LOCATION	204.0110	305.0110	465.0120	REMARKS	EIRE #
			REMOVING ASPHALTIC SURFACE SY	BASE AGGREGATE DENSE 3/4-INCH TON	ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES TON		
0010	17+25	RT	70		9	P.E. ASPH.	1111
0010	20+25	RT		7		F.E. AGG	
0010	20+50	LT		5		F.E. AGG	
0010	28+15	LT		26		F.E. AGG	
0010	28+25	RT		6		F.E. AGG	
0010	39+30	LT		22		P.E. AGG	25574
0010	40+75	LT		19		P.E. AGG	25600
0010	41+25	RT	25		3	P.E. ASPH.	25611
0010	41+50	LT		23		F.E. AGG	
0010	43+25	LT	49		6	P.E. ASPH.	25638
0010	45+30	RT		21		P.E. AGG	25673
0010	46+50	LT	26		3	P.E. ASPH.	25692
0010	47+40	LT	28		5	P.E. ASPH.	25700
0010	47+60	RT	25		3	P.E. ASPH.	25721
0010	50+25	LT	34		4	P.E. ASPH.	25754
0010	53+50	LT	30		4	P.E. ASPH.	25822
0010	55+50	LT	44		6	P.E. ASPH.	25860
0010	56+25	LT		24		P.E. AGG	25872
0010	57+30	RT		27		P.E. AGG	25885
0010	59+75	LT		39		P.E. AGG	25926
0010	60+75	RT		21		F.E. AGG	
0010	80+65	LT		34		F.E. AGG	
0010	118+50	LT	30		4	P.E. ASPH.	27042
0010	118+50	RT		46		F.E. AGG	
0010	121+90	LT		35		P.E. AGG	27102
0010	126+10	LT	34		4	P.E. ASPH.	27138
0010	136+00	RT		23		F.E. AGG	
0010	139+65	RT		56		P.E. AGG	27373
0010	167+50	LT		26		P.E. AGG	27878
0010	207+71	LT		29		P.E. AGG	28632
0010	210+50	LT		49		C.E. AGG	28690
0010	214+35	LT		33		P.E. AGG	28810
0010	217+85	LT		23		C.E. AGG	28858
0010	218+50	RT	32		4	C.E. ASPH.	28843
0010	219+75	RT	38		5	C.E. ASPH.	28843
0010	220+75	LT	267		34	C.E. ASPH.	28888
0010	221+40	RT	38		5	P.E. ASPH.	28897
0010	223+00	RT	37		5	P.E. ASPH.	28925
0010	224+25	RT		26		P.E. AGG	28929
0010	224+75	LT		42		P.E. AGG	28930
0010	226+00	RT		32		P.E. AGG	28951
0010	235+15	LT	51		6	P.E. ASPH.	29048
0010	241+91	LT		57		C.E. AGG	29244
0010	243+25	RT		19		P.E. AGG	29353
0010	247+40	RT		36		P.E. AGG	29455
0010	250+38	RT		24		P.E. AGG	29463
0010	252+93	RT		24		P.E. AGG	29505
0010	255+46	LT		26		P.E. AGG	29506
0010	256+75	RT	22		3	P.E. ASPH.	29537
0010	257+20	LT	30		4	P.E. ASPH.	29542
SUBTOTAL 1			910	880	117		

NOTE: ADDITIONAL AMOUNTS OF ITEM 305.0110 BASE AGGREGATE DENSE 3/4- INCH FOUND UNDER ITEM 305.0110 BASE AGGREGATE DENSE 3/4- INCH SUMMARY.

DRIVEWAY SUMMARY CONTINUED

CATEGORY	STATION	LOCATION	204.0110	305.0110	465.0120	REMARKS	FIRE #
			REMOVING ASPHALTIC SURFACE SY	BASE AGGREGATE DENSE 3/4-INCH TON	ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES TON		
0010	258+40	LT	22		3	P.E. ASPH.	29560
0010	260+78	LT		30		P.E. AGG	29610
0010	269+50	RT		25		P.E. AGG	408
0010	271+40	RT		26		P.E. AGG	711
0010	284+00	LT		16		F.E. AGG	
0010	286+30	RT	30		4	P.E. ASPH.	311
0010	287+70	RT	83		10	C.E. ASPH.	225
0010	305+76	LT		26		P.E. AGG	
0010	306+48	RT		27		P.E. AGG	
0010	307+00	RT		27		P.E. AGG	
0010	313+60	LT		23		P.E. AGG	620
0010	314+49	LT	101		13	P.E. ASPH.	680
0010	315+35	LT	68		9	P.E. ASPH.	700
0010	318+65	LT				P.E. ASPH.	714
0010	319+70	LT				C.E. ASPH.	
0010	321+50	LT	50		6	C.E. ASPH.	832
0010	397+00	LT	33		6	P.E. ASPH.	
0010	402+45	LT	47		6	C.E. ASPH.	32386
0010	414+80	LT		55		P.E. AGG	32508
0010	417+80	LT		29		F.E. AGG	
0010	419+65	RT		20		F.E. AGG	
0010	420+48	LT		27		P.E. AGG	32626
0010	427+92	LT		19		P.E. AGG	
0010	435+50	LT		21		P.E. AGG	32876
0010	452+50	LT		29		P.E. AGG	33204
0010	458+86	RT		18		P.E. AGG	33333
0010	459+00	LT		19		P.E. AGG	33324
0010	467+75	LT		19		P.E. AGG	33506
0010	469+15	LT	38		5	C.E. ASPH.	33450
0010	471+35	LT		15		P.E. AGG	33564
0010	477+85	LT	18		2	P.E. ASPH.	33692
0010	482+75	LT				P.E. PCC	33794
0010	484+00	LT		17		P.E. AGG	33810
0010	484+80	LT		13		P.E. AGG	33824
0010	485+15	LT	22		3	P.E. ASPH.	
0010	485+85	LT	22		3	P.E. ASPH.	33842
SUBTOTAL 2			534	501	70		

NOTE: ADDITIONAL AMOUNTS OF ITEM 305.0110 BASE AGGREGATE DENSE 3/4- INCH FOUND UNDER ITEM 305.0110 BASE AGGREGATE DENSE 3/4- INCH SUMMARY.

SUBTOTAL 1	910	880	117
SUBTOTAL 2	534	501	70
1,444	1,444	1,381	

204.0115

204.0115
REMOVING
ASPHALTIC
SURFACE BUTT
JOINTS

CATEGORY	STATION	TO	STATION	LOCATION	SY	REMARKS
0010	16+75	-	16+81	CL	47	
0010	168+87	-	168+93	CL	34	
0010	206+56	-	206+62	CL	23	
0010	493+15	-	493+21	CL	23	
TOTAL 0010					127	

CURB AND GUTTER SUMMARY

204.0150 601.0557
CONCRETE CURB
& GUTTER 6-INCH
SLOPED 36-INCH
REMOVING
CURB & GUTTER
TYPE D

CATEGORY	STATION	TO	STATION	LOCATION	LF	LF	REMARKS
0010	80+00	-	80+24	RT	25	25	
0010	81+07	-	81+27	RT	20	20	
TOTAL 0010					45	45	

211.0400

211.0400
PREPARE
FOUNDATION
FOR ASPHALTIC
SHOULDERS

CATEGORY	STATION	TO	STATION	LOCATION	STA	REMARKS
0010	19+35	-	64+92	LT	46	
0010	19+35	-	80+45	RT	62	
0010	66+16	-	138+78	LT	73	
0010	81+29	-	152+86	RT	72	
0010	140+21	-	168+14	LT	28	
0010	154+21	-	169+14	RT	15	
0010	165+81	-	169+14	RT	4	
0010	206+77	-	228+29	LT	22	
0010	206+77	-	228+59	RT	22	
0010	229+73	-	281+13	LT	52	
0010	243+23	-	281+13	LT	38	
0010	229+69	-	295+06	RT	66	
0010	322+15	-	387+96	RT	66	
0010	389+20	-	440+54	LT	52	
0010	389+27	-	440+46	RT	52	
0010	441+45	-	479+86	RT	39	
0010	441+66	-	480+00	LT	39	
TOTAL 0010					748	

ASPHALT SUMMARY

204.0120 455.0605 460.6224 465.0105
REMOVING
ASPHALTIC
SURFACE

CATEGORY	STATION	TO	STATION	LOCATION	SY	TACK COAT GAL	HMA PAVEMENT 4 MT 58-28 S TON	ASPHALTIC SURFACE TON	REMARKS
0010	16+75	-	150+00	CL	35,534	2,488	4,478		THROUGH LANES
0010	150+00	-	168+93	CL	5,048	354	1,273		THROUGH LANES
0010	206+60	-	303+89	CL	25,944	1,817	3,269		THROUGH LANES
0010	304+14	-	341+26	CL	9,899	693	1,248		THROUGH LANES
0010	342+90	-	368+55	CL	6,840	479	862		THROUGH LANES
0010	369+79	-	424+04	CL	14,467	1,013	1,823		THROUGH LANES
0010	424+46	-	489+00	CL	17,211	1,205	2,169		THROUGH LANES
0010	489+76	-	493+21	CL	920	65	116		THROUGH LANES
0010	16+97	-	64+92	LT	1,599	166	202		SHOULDER
0010	16+97	-	80+45	RT	2,116	220	267		SHOULDER
0010	66+00	-	137+78	LT	2,393	248	302		SHOULDER
0010	81+29	-	152+86	RT	2,386	247	301		SHOULDER
0010	150+00	-	152+86	RT	96	11	25		SHOULDER
0010	140+21	-	150+00	LT	327	34	42		SHOULDER
0010	150+00	-	168+14	LT	605	64	153		SHOULDER
0010	154+21	-	164+53	RT	344	37	87		SHOULDER
0010	165+68	-	168+93	RT	109	12	28		SHOULDER
0010	209+60	-	228+59	RT	633	67	80		SHOULDER
0010	209+60	-	228+29	LT	623	65	79		SHOULDER
0010	229+73	-	281+13	LT	1,714	178	216		SHOULDER
0010	229+69	-	295+06	RT	2,179	153	275		SHOULDER
0010	16+97	-	64+92	LT		129	135	135	SHOULDER WIDENING
0010	16+97	-	80+45	RT		170	178	178	SHOULDER WIDENING
0010	66+00	-	137+78	LT		192	201	201	SHOULDER WIDENING
0010	81+29	-	150+00	RT		184	193	193	SHOULDER WIDENING
0010	150+00	-	152+86	RT		9	17		SHOULDER WIDENING
0010	140+21	-	150+00	LT		27	28		SHOULDER WIDENING
0010	150+00	-	168+14	LT		50	102		SHOULDER WIDENING
0010	154+21	-	164+53	RT		29	58		SHOULDER WIDENING
0010	165+68	-	168+93	RT		10	19		SHOULDER WIDENING
0010	209+60	-	228+59	RT		52	54	54	SHOULDER WIDENING
0010	209+60	-	228+29	LT		51	53	53	SHOULDER WIDENING
0010	229+73	-	281+13	LT		138	144	144	SHOULDER WIDENING
0010	229+69	-	295+06	RT		102	184	184	SHOULDER WIDENING
0010	282+23	-	303+95	LT	1,448	102	183		SHOULDER
0010	295+60	-	298+48	RT	192	14	25		SHOULDER
0010	299+13	-	302+02	RT	193	14	25		SHOULDER
0010	302+55	-	303+95	RT	94	7	12		SHOULDER
0010	304+09	-	307+92	LT	256	18	33		SHOULDER
0010	304+09	-	308+10	RT	268	19	34		SHOULDER
0010	308+75	-	311+42	RT	178	13	23		SHOULDER
0010	309+36	-	318+26	LT	594	42	75		SHOULDER
0010	318+26	-	322+10	LT	288	21	37		SHOULDER
0010	312+04	-	314+47	RT	162	12	21		SHOULDER
0010	315+12	-	317+38	RT	151	11	19		SHOULDER
SUBTOTAL 1					134,811	11,032	19,148	1,142	

ASPHALT SUMMARY CONTINUED

204.0120 455.0605 460.6224 465.0105

REMOVING
ASPHALTIC
SURFACE

HMA PAVEMENT
4 MT 58-28 S

ASPHALTIC
SURFACE

CATEGORY	STATION	TO	STATION	LOCATION	SY	TACK COAT GAL	TON	TON	REMARKS
0010	318+05	-	320+97	RT STH 21	195	14	25		SHOULDER
0010	322+15	-	325+00	RT STH 21	190	14	24		SHOULDER
0010	325+00	-	339+45	RT STH 21	482	34	61		SHOULDER
0010	325+00	-	339+45	RT STH 21		40	41		SHOULDER WIDENING
0010	339+10	-	341+09	LT STH 21	178	13	23		SHOULDER B-41-283
0010	339+45	-	341+44	RT STH 21	150	11	19		SHOULDER B-41-283
0010	342+82	-	345+05	LT STH 21	214	15	27		SHOULDER B-41-283
0010	342+91	-	345+00	RT STH 21	176	13	23		SHOULDER B-41-283
0010	345+00	-	367+15	RT STH 21	1,477	104	187		SHOULDER
0010	345+05	-	367+15	LT STH 21	1,474	104	186		SHOULDER
0010	367+00	-	368+55	LT STH 21	160	12	21		SHOULDER B-41-222
0010	367+00	-	368+55	RT STH 21	124	9	16		SHOULDER B-41-222
0010	369+49	-	370+75	LT STH 21	168	12	22		SHOULDER B-41-222
0010	369+49	-	370+75	RT STH 21	139	10	18		SHOULDER B-41-222
0010	370+83	-	387+96	RT STH 21	1,142	80	144		SHOULDER
0010	389+20	-	422+85	LT STH 21	2,244	158	283		SHOULDER
0010	389+27	-	422+85	RT STH 21	2,239	157	283		SHOULDER
0010	422+85	-	423+96	LT STH 21	142	10	18		SHOULDER B-41-205
0010	422+85	-	423+96	RT STH 21	115	9	15		SHOULDER B-41-205
0010	424+37	-	425+41	LT STH 21	144	11	19		SHOULDER B-41-205
0010	424+37	-	425+41	RT STH 21	84	6	11		SHOULDER B-41-205
0010	425+41	-	440+46	RT STH 21	1,004	71	127		SHOULDER
0010	425+41	-	440+54	LT STH 21	1,009	71	128		SHOULDER
0010	441+45	-	479+86	RT STH 21	2,561	180	323		SHOULDER
0010	441+66	-	480+00	LT STH 21	2,556	179	323		SHOULDER
0010	480+71	-	487+72	RT STH 21	468	33	59		SHOULDER
0010	480+81	-	486+10	LT STH 21	353	25	45		SHOULDER
0010	484+83	-	486+10	LT STH 21	105	8	14		SHOULDER BY C&G
0010	486+10	-	488+92	LT STH 21	288	21	37		SHOULDER B-41-223
0010	487+72	-	488+92	RT STH 21	113	8	15		SHOULDER B-41-223
0010	488+90	-	490+90	LT STH 21	150	11	19		SHOULDER B-41-223
0010	488+90	-	490+90	RT STH 21	119	9	15		SHOULDER B-41-223
0010	490+90	-	493+21	LT STH 21	26,348	8	14		SHOULDER
0010	490+90	-	493+21	RT STH 21	26,348	8	14		SHOULDER
0010	16+97	-	20+50	LT RT TURN LN	371	26	47		
SUBTOTAL 2					73,030	1,494	2,646	0	

ASPHALT SUMMARY CONTINUED

204.0120 455.0605 460.6224 465.0105

REMOVING
ASPHALTIC
SURFACE

HMA PAVEMENT
4 MT 58-28 S

ASPHALTIC
SURFACE

CATEGORY	STATION	TO	STATION	LOCATION	SY	TACK COAT GAL	TON	TON	REMARKS	
0010	64+31	-	66+00	LT ENSIGN RD	195	14	25			
0010	80+00	-	82+00	RT ENGELWOOD RD	235	17	30			
0010	137+60	-	140+16	LT ENTERPRISE RD	235	17	30			
0010	140+16	-	145+10	LT ENTERPRISE RD	294	21	37		RT TURN LN WB	
0010	150+14	-	152+77	RT FORMICA RD	224	16	57		RT TURN LN EB	
0010	152+77	-	155+34	RT FORMICA RD	251	18	64			
0010	158+00	-	161+42	CL GORE AREA	229	17	58			
0010	161+42	-	164+46	RT RT TURN LN EB	607	43	153			
0010	164+46	-	167+50	LT LT TURN LN WB	384	27	97			
0010	164+46	-	167+00	RT HO CHUNK GAS STATION	294	21	75			
0010	166+50	-	168+21	RT ESPY RD	140	10	36		LT TURN LN EB	
0010	168+21	-	168+93	LT AREA BETWEEN MEDIANS	156	11	40			
0010	167+50	-	168+93	LT ESPY RD	123	9	31			
0010	214+24	-	222+42	CL GORE AREA	452	32	57			
0010	223+75	-	228+50	RT STH 173	481	34	61		LT TURN LN EB	
0010	229+67	-	233+55	LT STH 173	529	37	67		RT TURN LN WB	
0010	236+44	-	240+65	CL GORE AREA	217	16	28			
0010	280+50	-	282+46	LT MAIN ST	132	10	17			
0010	295+00	-	298+91	RT EVERGREEN AVE	39	3	5			
0010	298+43	-	299+38	RT YARD ST	49	4	7			
0010	302+00	-	302+50	RT WISCONSIN ST	31	3	4			
0010	306+97	-	309+50	LT COPPER RD	171	12	22			
0010	308+00	-	308+67	RT RAILROAD ST	41	3	6			
0010	310+34	-	310+96	RT 1ST ST	35	3	5			
0010	314+47	-	315+12	RT 2ND ST	27	2	4			
0010	317+38	-	318+05	RT 3RD ST	51	4	7			
0010	320+97	-	322+00	RT EXCELSIOR AVE	96	7	13			
0010	385+90	-	390+40	RT CTH PP	485	34	62		RT TURN LN EB	
0010	386+82	-	389+00	LT DRAGONFLY RD	175	13	22			
0010	387+90	-	390+25	RT CTH PP	205	15	26			
0010	389+00	-	392+25	LT DRAGONFLY RD	195	14	25		RT TURN LN WB	
0010	439+41	-	441+66	LT CRESCENT RD	154	11	20			
0010	440+40	-	441+45	RT CRESCENT RD	68	5	9			
0010	479+86	-	480+71	RT FUNNEL RD	61	5	8			
0010	379+90	-	480+81	LT DUBLIN RD	68	5	9			
0010	STH 21						1,210		1936	**DISTRESSED PAVEMENT AREAS
SUBTOTAL 3					7,129	1,723	1,217	1,936		

**PAVEMENT AREAS TO BE DETERMINED BY ENGINEER IN THE FIELD.

SUBTOTAL 1	134,811	11,032	19,148	1,142
SUBTOTAL 2	73,030	1,494	2,646	0
SUBTOTAL 3	7,129	1,723	1,217	1,936
TOTAL 0010	214,970	14,249	23,011	3,078

3

3

PROJECT NO: 7010-01-63

HWY: STH 21

COUNTY: MONROE

MISCELLANEOUS QUANTITIES

SHEET

E

BASE AGGREGATE DENSE 3/4 - INCH SUMMARY

*
305.0110 624.0100
BASE
AGGREGATE
DENSE 3/4-INCH WATER

CATEGORY	STATION	TO	STATION	LOCATION	TON	MGAL	REMARKS
0010	19+35	-	118+27	LT	308	3.08	SHOULDER
0010	19+35	-	79+92	RT	189	1.88	SHOULDER
0010	81+59	-	135+86	RT	169	1.69	SHOULDER
0010	118+61	-	125+81	LT	23	0.22	SHOULDER
0010	126+17	-	132+34	LT	19	0.19	SHOULDER
0010	132+77	-	136+47	LT	19	0.12	SHOULDER
0010	136+08	-	152+86	RT	52	0.52	SHOULDER
0010	137+28	-	138+78	LT	5	0.05	SHOULDER
0010	140+21	-	168+14	LT	87	0.87	SHOULDER
0010	154+21	-	164+46	RT	32	0.32	SHOULDER
0010	165+81	-	169+14	RT	10	0.10	SHOULDER
0010	206+77	-	219+67	LT	40	0.40	SHOULDER
0010	206+77	-	218+20	RT	36	0.36	SHOULDER
0010	218+58	-	219+49	RT	3	0.03	SHOULDER
0010	219+89	-	221+15	RT	4	0.04	SHOULDER
0010	221+35	-	228+29	LT	22	0.22	SHOULDER
0010	221+55	-	222+76	RT	4	0.04	SHOULDER
0010	223+12	-	225+80	RT	8	0.08	SHOULDER
0010	226+10	-	228+59	RT	8	0.08	SHOULDER
0010	229+69	-	256+47	RT	83	0.83	SHOULDER
0010	229+73	-	234+68	LT	16	0.15	SHOULDER
0010	235+25	-	256+91	LT	67	0.67	SHOULDER
0010	256+68	-	286+08	RT	91	0.91	SHOULDER
0010	257+25	-	258+02	LT	3	0.02	SHOULDER
0010	258+35	-	280+81	LT	140	1.40	SHOULDER
0010	282+43	-	303+89	LT	67	0.67	SHOULDER
0010	286+40	-	287+30	RT	3	0.03	SHOULDER
0010	287+56	-	295+06	RT	23	0.23	SHOULDER
0010	295+60	-	298+48	RT	18	0.18	SHOULDER
0010	299+13	-	302+02	RT	9	0.09	SHOULDER
0010	302+55	-	303+89	RT	4	0.04	SHOULDER
0010	304+14	-	307+92	LT	12	0.12	SHOULDER
0010	304+14	-	308+10	RT	12	0.12	SHOULDER
0010	308+75	-	310+34	RT	5	0.05	SHOULDER
0010	309+36	-	313+96	LT	14	0.14	SHOULDER
0010	321+95	-	341+45	RT	57	0.61	SHOULDER
0010	321+85	-	340+85	LT	73	0.59	SHOULDER
0010	342+98	-	368+35	RT	71	0.79	SHOULDER
0010	342+50	-	368+35	LT	54	0.80	SHOULDER
0010	369+29	-	387+75	RT	54	0.57	SHOULDER
0010	369+29	-	387+75	LT	58	0.57	SHOULDER
0010	389+08	-	419+31	RT	95	0.94	SHOULDER
0010	389+00	-	396+66	LT	24	0.24	SHOULDER
0010	397+07	-	401+92	LT	16	0.15	SHOULDER
0010	402+44	-	414+39	LT	38	0.37	SHOULDER
SUBTOTAL 1					2,145	21.59	

NOTE: ADDITIONAL AMOUNTS OF ITEM 305.0110 BASE AGGREGATE DENSE 3/4-INCH FOUND UNDER DRIVEWAY SUMMARY.

BASE AGGREGATE DENSE 3/4-INCH SUMMARY CONTINUED

*
305.0110 624.0100
BASE
AGGREGATE
DENSE 3/4-INCH WATER

CATEGORY	STATION	TO	STATION	LOCATION	TON	MGAL	REMARKS
0010	414+87	-	417+50	LT	9	0.08	SHOULDER
0010	417+80	-	420+14	LT	8	0.07	SHOULDER
0010	419+54	-	423+84	RT	14	0.13	SHOULDER
0010	417+82	-	420+11	LT	8	0.07	SHOULDER
0010	420+40	-	423+84	LT	11	0.11	SHOULDER
0010	424+27	-	440+25	RT	50	0.50	SHOULDER
0010	424+27	-	435+17	LT	34	0.34	SHOULDER
0010	435+40	-	440+25	LT	16	0.15	SHOULDER
0010	441+23	-	458+55	RT	54	0.54	SHOULDER
0010	441+48	-	452+13	LT	34	0.33	SHOULDER
0010	452+43	-	458+70	LT	20	0.20	SHOULDER
0010	458+85	-	479+65	RT	65	0.65	SHOULDER
0010	458+89	-	467+44	LT	27	0.27	SHOULDER
0010	467+64	-	468+80	LT	4	0.04	SHOULDER
0010	469+13	-	471+09	LT	7	0.06	SHOULDER
0010	471+17	-	477+59	LT	20	0.20	SHOULDER
0010	477+92	-	480+00	LT	7	0.06	SHOULDER
0010	480+51	-	488+79	RT	26	0.26	SHOULDER
0010	480+61	-	482+50	LT	6	0.06	SHOULDER
0010	482+65	-	483+70	LT	4	0.03	SHOULDER
0010	483+91	-	484+30	LT	2	0.02	SHOULDER
0010	484+45	-	484+70	LT	1	0.02	SHOULDER
0010	489+56	-	493+21	RT	12	0.11	SHOULDER
0010	489+56	-	493+21	LT	12	0.11	SHOULDER
SUBTOTAL 2					451	4.41	

NOTE: ADDITIONAL AMOUNTS OF ITEM 305.0110 BASE AGGREGATE DENSE 3/4-INCH FOUND UNDER DRIVEWAY SUMMARY.

SUBTOTAL 1	2,145	21.59
SUBTOTAL 2	451	4.41
TOTAL 0010	2,596	26

PERCENT WITHIN LIMITS SUMMARY

460.0105.S 460.0110.S
HMA PERCENT WITHIN LIMITS (PWL) TEST STRIP VOLUMETRICS EACH
HMA PERCENT WITHIN LIMITS (PWL) TEST STRIP DENSITY EACH

CATEGORY	STATION	TO	STATION	LOCATION	EACH	EACH	REMARKS
0010	16+75	-	493+21	STH 21	1	2	
TOTAL 0010					1	2	

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LOCATION	STATION	TO	STATION	LOCATION	MIXTURE USE:	UNDERLYING SURFACE	BID ITEM	TONS	THICKNESS	QUALITY MANAGEMENT PROGRAM TO BE USED FOR:		COMMENTS
										MIXTURE ACCEPTANCE	DENSITY ACCEPTANCE	
DRIVING LANE	16+75	-	150+00	CL	UPPER LAYER	MILLED EXISTING HMA SURFACE	4 MT 58-28 S	14,602	2 1/4"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT 460.2005	
	150+00	-	168+93	CL								
	206+60	-	303+89	CL								
	304+14	-	341+26	CL								
	342+90	-	368+55	CL								
	369+79	-	424+04	CL								
	424+46	-	489+00	CL								
	489+76	-	493+21	CL								
DRIVING LANE	150+00	-	168+93	CL	LOWER LAYER	SE AGGREGA	4 MT 58-28 S	637	2 1/4"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPARTMENT; NOT ELIGIBLE FOR INCENTIVE	
3 FOOT SHOULDER	TOTAL LENGTH 48,249 FT				UPPER LAYER	MILLED EXISTING	4 MT 58-28 S	2,033	2 1/4"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT 460.2005	
3 FOOT SHOULDER	TOTAL LENGTH 3,457 FT				LOWER LAYER	SE AGGREGA	4 MT 58-28 S	147	2 1/4"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPARTMENT; NOT ELIGIBLE FOR INCENTIVE	
SHOULDER WIDENING	TOTAL LENGTH 45,073 FT				UPPER LAYER	ASPHALTIC SURFACE	4 MT 58-28 S	6,590	2 1/4"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPARTMENT; NOT ELIGIBLE FOR INCENTIVE	
SHOULDER WIDENING	TOTAL LENGTH 4,902 FT				LOWER LAYER	SE AGGREGA	4 MT 58-28 S	139	2 1/4"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPARTMENT; NOT ELIGIBLE FOR INCENTIVE	
6 FOOT SHOULDER	TOTAL LENGTH 31,506 FT				UPPER LAYER	MILLED EXISTING	4 MT 58-28 S	2,652	2 1/4"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPARTMENT; NOT ELIGIBLE FOR INCENTIVE	
BEAMGUARD SHOULDER AREA	TOTAL LENGTH 2,624 FT				UPPER LAYER	MILLED EXISTING HMA	4 MT 58-28 S	318	2 1/4"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPARTMENT; NOT ELIGIBLE FOR INCENTIVE	

PROJECT NO: 7010-01-63

HWY: STH 21

COUNTY: MONROE

MISCELLANEOUS QUANTITIES

SHEET

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LOCATION	STATION	TO	STATION	LOCATION	MIXTURE USE:	UNDERLYING SURFACE	BID ITEM	TONS	THICKNESS	QUALITY MANAGEMENT PROGRAM TO BE USED EOR:		COMMENTS
										MIXTURE ACCEPTANCE	DENSITY ACCEPTANCE	
SIDELINE INTERSECTIONS	16+75	-	20+50	LT	UPPER LAYER	MILLED EXISTING HMA SUREACE	4 MT 58-28 S	912	2 1/4"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPARTMENT; NOT ELIGIBLE EOR INCENTIVE	RT TURN LANE STH 21 / ENSIGN RD INT STH 21 / ENGELWOOD RD INT STH 21/ENTERPRISE RD ENTERPRISE RD RIGHT TURN LANE WEST BOUND EORMICA RD RIGHT TURN LANE EAST BOUND STH 21/EORMICA RD GORE AREA HO CHUNK GAS STATION RIGHT TURN LANE EAST BOUND AREA BETWEEN MEDIAN HO CHUNK GAS STATION ESPY RD LEET TURN LANE EAST BOUND AREA BETWEEN MEDIANS STH 21 / ESPY RD GORE AREA STH 173 LEET TURN LANE EAST BOUND STH 173 RIGHT TURN LANE WEST BOUND GORE AREA STH 21 / MAIN ST STH 21 / EVERGREEN AVE STH 21 / YARD ST STH 21 / WISCONSIN STH 21 / COPPER RD STH 21 RAILROAD ST STH 21 / 1RST ST STH 21 / 2ND ST STH 21 / 3RD ST STH 21 EXCELSIOR AVE CTH PP RIGHT TURN LANE EAST BOUND STH 21 / DRAGONELY RD STH 21 / CTH PP DRAGONELY RD RIGHT TURN LANE WEST BOUND STH 21 / CRESCENT RD STH 21 / CRESCENT RD STH 21 / EUNNEL RD STH 21 / DUBLIN RD
	64+31	-	66+00	LT								
	80+00	-	82+00	RT								
	137+60	-	140+16	LT								
	140+16	-	145+10	LT								
	150+14	-	152+77	RT								
	152+77	-	155+34	RT								
	158+00	-	161+42	CL								
	161+42	-	164+46	RT								
	164+46	-	167+50	LT								
	164+46	-	167+00	RT								
	166+50	-	168+21	RT								
	168+21	-	169+06	LT								
	167+50	-	169+06	LT								
	214+24	-	222+42	CL								
	223+75	-	228+50	RT								
	229+67	-	233+55	LT								
	236+44	-	240+65	CL								
	280+50	-	282+46	LT								
	295+00	-	298+91	RT								
	298+43	-	299+38	RT								
	302+00	-	302+50	RT								
	306+97	-	309+50	LT								
	308+00	-	308+67	RT								
	310+34	-	310+96	RT								
	314+47	-	315+12	RT								
	317+38	-	318+05	RT								
	320+97	-	322+00	RT								
385+90	-	390+40	RT									
386+82	-	389+00	LT									
387+90	-	390+25	RT									
389+00	-	392+25	LT									
439+41	-	441+66	LT									
440+40	-	441+45	RT									
479+86	-	480+71	RT									
379+90	-	480+81	LT									
SHOULDER WIDENING	TOTAL LENGTH 40,637 ET				LOWER LAYER	BASE COURSE	ASPHALTIC SURFACE	1,142	2 1/4"	QMP PER SS 465	ACCEPTANCE BY ORDINARY COMPACTION	

RUMBLE STRIP SUMMARY

CATEGORY	STATION TO	STATION	LOCATION	465.0425	465.0475	REMARKS
				ASPHALTIC SHOULDER RUMBLE STRIPS 2-LANE RURAL	ASPHALT CENTERLINE RUMBLE STRIPS 2-LANE RURAL	
				LF	LF	
0010	18+50	- 63+38	CL		4,488	
0010	16+95	- 19+92	LT	238		
0010	16+95	- 40+50	RT	1,884		
0010	20+50	- 38+75	LT	1,460		
0010	39+50	- 40+00	LT	40		
0010	41+00	- 42+50	LT	120		
0010	41+50	- 44+75	RT	260		
0010	43+50	- 45+90	LT	192		
0010	45+50	- 47+00	RT	120		
0010	50+50	- 53+00	LT	200		
0010	53+75	- 54+75	LT	80		
0010	56+50	- 59+00	RT	200		
0010	60+00	- 63+50	LT	280		
0010	66+25	- 117+75	LT	4,120		
0010	67+38	- 78+75	CL		1,137	
0010	82+25	- 138+75	RT	4,520		
0010	82+75	- 137+30	CL		5,455	
0010	118+75	- 121+25	LT	200		
0010	122+25	- 125+50	LT	260		
0010	126+25	- 132+00	LT	460		
0010	132+75	- 135+25	LT	200		
0010	140+00	- 150+00	RT	800		
0010	141+30	- 151+25	CL		995	
0010	143+25	- 166+75	LT	1,880		
0010	155+75	- 156+25	CL		50	
0010	155+75	- 158+75	RT	240		
0010	167+00	- 169+14	RT	171		
0010	206+60	- 216+40	CL		980	
0010	206+60	- 217+00	RT	832		
0010	207+50	- 209+00	LT	120		
0010	211+25	- 213+75	LT	200		
0010	214+50	- 216+50	LT	160		
0010	220+25	- 220+75	RT	40		
0010	221+75	- 224+00	LT	180		
0010	221+75	- 222+25	RT	40		
0010	225+00	- 226+25	LT	100		
0010	230+00	- 242+50	RT	1,000		
0010	235+50	- 240+25	LT	380		
0010	241+00	- 279+50	CL		3,850	
0010	243+00	- 254+75	LT	940		
0010	243+50	- 246+50	RT	240		
0010	247+50	- 252+25	RT	380		
0010	253+00	- 256+00	RT	240		
0010	255+75	- 256+50	LT	60		
0010	256+75	- 269+00	RT	980		
0010	258+50	- 260+00	LT	120		
0010	261+00	- 280+00	LT	1,520		
0010	271+25	- 285+65	RT	1,152		
0010	282+25	- 293+75	LT	920		
PAGE 1 SUBTOTAL				27,529	16,955	

RUMBLE STRIP SUMMARY CONTINUED

CATEGORY	STATION TO	STATION	LOCATION	465.0425	465.0475	REMARKS
				ASPHALTIC SHOULDER RUMBLE STRIPS 2-LANE RURAL	ASPHALT CENTERLINE RUMBLE STRIPS 2-LANE RURAL	
				LF	LF	
0010	283+50	- 293+12	CL		962	
0010	288+25	- 293+75	RT	440		
0010	322+25	- 340+40	LT	1,452		
0010	323+50	- 340+40	RT	1,352		
0010	323+50	- 340+40	CL		1,690	
0010	343+54	- 367+90	RT	1,949		
0010	343+54	- 367+90	LT	1,949		
0010	343+54	- 367+90	CL		2,436	
0010	369+75	- 386+25	LT	1,320		
0010	369+75	- 386+75	RT	1,360		
0010	369+75	- 386+34	CL		1,659	
0010	390+34	- 423+36	CL		3,302	
0010	390+75	- 423+36	RT	2,609		
0010	392+00	- 396+50	LT	360		
0010	397+25	- 401+00	LT	300		
0010	403+00	- 414+00	LT	880		
0010	415+25	- 419+75	LT	360		
0010	420+75	- 423+36	LT	209		
0010	424+73	- 438+75	CL		1,402	
0010	424+73	- 427+00	LT	182		
0010	424+73	- 439+25	RT	1,162		
0010	427+75	- 435+00	LT	580		
0010	442+00	- 451+75	LT	780		
0010	442+75	- 478+25	CL		3,550	
0010	443+00	- 458+25	RT	1,220		
0010	452+75	- 458+50	LT	460		
0010	459+00	- 478+50	RT	1,560		
0010	459+00	- 467+25	LT	660		
0010	469+75	- 470+75	LT	80		
0010	471+50	- 477+25	LT	460		
0010	478+00	- 479+00	LT	80		
0010	481+64	- 482+25	LT	49		
0010	481+43	- 488+34	RT	553		
0010	482+25	- 488+34	CL		609	
0010	483+00	- 483+50	LT	40		
0010	486+15	- 488+34	LT	175		
0010	490+03	- 493+21	CL		318	
0010	490+03	- 493+21	LT	254		
0010	490+03	- 493+21	RT	254		
PAGE 2 SUBTOTAL				23,088	15,928	
PAGE 1 SUBTOTAL				27,529	16,955	
PAGE 2 SUBTOTAL				23,088	15,928	
TOTAL 0010				50,617	32,883	

PROJECT NO: 7010-01-63

HWY: STH 21

COUNTY: MONROE

MISCELLANEOUS QUANTITIES

SHEET

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ADJUSTING STEEL PLATE BEAM GUARD SUMMARY

CATEGORY	STATION	TO	STATION	LOCATION	614.0400		REMARKS
					ADJUSTING STEEL PLATE BEAM GUARD LF	REPLACING GUARDRAIL POSTS AND BLOCKS EACH	
0010	339+81	-	343+65	LT	384	4	B-41-283
0010	340+52	-	344+36	RT	384	4	B-41-283
0010	367+14	-	370+73	LT	359	4	B-41-222
0010	367+16	-	370+74	RT	358	4	B-41-222
0010	422+93	-	425+35	LT	242	4	B-41-205
0010	422+93	-	425+35	RT	242	4	B-41-205
0010	486+25	-	490+73	LT	448	4	B-41-223
0010	487+87	-	490+69	RT	282	4	B-41-223
TOTAL 0010					2,699	32	

MOVING SIGNS SUMMARY

CATEGORY	STATION	TO	STATION	LOCATION	634.0618			REMARKS
					POSTS WOOD 4X6-INCH X 18-FT EACH	MOVING SIGNS TYPE II EACH	REMOVING SMALL SIGN SUPPORTS EACH	
0010	16+75	-	493+21	CL	11	11	11	NO PASSING SIGNS
TOTAL 0010					11	11	11	

643.0300 TRAFFIC CONTROL DRUMS

CATEGORY	LOCATION	NO. DRUMS	NO. DAY	DAY	REMARKS
0010	ENSIGN RD	10	14	140	C&G PROTECTION
0010	ENGELWOOD RD	10	14	140	C&G PROTECTION
0010	ENTERPRISE RD	10	14	140	C&G PROTECTION
0010	FORMICA RD	10	14	140	C&G PROTECTION
0010	HO CHUNK GAS STATION	10	14	140	C&G PROTECTION
0010	ESPY RD INT	10	14	140	C&G PROTECTION
0010	MAIN ST	10	14	140	C&G PROTECTION
0010	WYEVILLE SCHOOL	10	14	140	C&G PROTECTION
0010	COPPER RD	10	14	140	C&G PROTECTION
0010	STH 173	10	14	140	C&G PROTECTION
0010	CTH N	10	14	140	C&G PROTECTION
0010	CTH PP	10	14	140	C&G PROTECTION
0010	DRAGONFLY RD	10	14	140	C&G PROTECTION
TOTAL 0010				1,820	

643.0900 TRAFFIC CONTROL SIGNS

CATEGORY	STATION	LOCATION	NO. SIGN	NO. DAY	DAY	REMARKS
0010			5	30	150	BEGIN PROJECT
0010	65+51	LT	1	30	30	ENSIGN RD
0010	80+89	RT	1	30	30	ENGELWOOD RD
0010	139+49	LT	1	30	30	ENTERPRISE RD
0010	153+43	RT	1	30	30	FORMICA RD
0010	168+58	LT	1	30	30	ESPY RD INT
0010	189+45	LT	1	30	30	EUREKA RD
0010	189+45	RT	1	30	30	ESSEX AVE
0010	229+06	LT	1	30	30	STH 173
0010	229+06	RT	1	30	30	CTH N
0010	281+59	LT	1	30	30	MAIN ST
0010	295+23	RT	1	30	30	EVERGREEN
0010	298+75	RT	1	30	30	YARD ST
0010	302+24	RT	1	30	30	WISCONSIN ST
0010	308+52	LT	1	30	30	COPPER RD
0010	308+49	RT	1	30	30	RAILROAD ST
0010	310+68	RT	1	30	30	1ST ST
0010	314+75	RT	1	30	30	2ND ST
0010	317+68	RT	1	30	30	3RD ST
0010	321+59	RT	1	30	30	EXCELSIOR AVE
0010	388+45	RT	1	30	30	CTH PP
0010	388+45	LT	1	30	30	DRAGONFLY RD
0010	440+92	RT	1	30	30	CRESCENT RD
0010	440+99	LT	1	30	30	CRESCENT RD
0010	480+34	RT	1	30	30	FUNNEL RD
0010	480+34	LT	1	30	30	DUBLIN RD
TOTAL 0010					1,050	

643.1050 TRAFFIC CONTROL SIGNS PCMS

CATEGORY	LOCATION	DAY	REMARKS
0010	BEGINNING OF PROJECT	7	
0010	END OF PROJECT	7	
TOTAL 0010		14	

MARKING LINE EPOXY 4-INCH SUMMARY

CATEGORY	STATION	TO	STATION	LOCATION	643.3120 TEMPORARY MARKING LINE EPOXY 4-INCH LF	646.1020 MARKING LINE EPOXY 4-INCH LF	646.1040 MARKING LINE GROOVED WET REF EPOXY 4- INCH LF	646.4520 MARKING LINE SAME DAY EPOXY 4-INCH LF	REMARKS
0010	19+35	-	493+21	CL			77,877		WHITE EDGELINE
0010	19+35	-	493+21	CL	73,646	36,823		36,823	YELLOW CL
				TOTAL 0010	73,646	36,823	77,877	36,823	

646.3040 MARKING LINE GROOVED WET REF EPOXY 8-INCH

CATEGORY	STATION	TO	STATION	LOCATION	LF	REMARKS
0010	140+00	-	141+22	ENTERPRISE RD INT	122	RT TURN LANE WB
0010	151+82	-	152+63	FORMICA RD INT	81	RT TURN LANE EB
0010	161+13	-	164+34	HO CHUNK GAS STATION	321	RT TURN LANE EB
0010	165+50	-	166+00	HO CHUNK GAS STATION	50	LT TURN LANE WB
0010	167+52	-	168+08	ESPY RD INT	56	LT TURN LANE EB
0010	224+85	-	228+25	STH 173 INT	340	LT TURN LANE EB
0010	227+25	-	228+25	CTH N INT	100	RT TURN LANE EB
0010	229+52	-	231+18	CTH N INT	166	LT TURN LANE WB
0010	229+52	-	233+13	STH 173 INT	361	RT TURN LANE WB
0010	384+70	-	387+95	CTH PP INT	325	RT TURN LANE EB
0010	389+00	-	390+10	DRAGONFLY RD INT	110	RT TURN LANE WB
				TOTAL 0010	2,032	

646.5020 MARKING ARROW EPOXY

CATEGORY	STATION	LOCATION	EACH	REMARKS
0010	225+25	RT	1	LT TURN LANE ONTO STH 173
0010	228+10	RT	1	LT TURN LANE ONTO STH 173
0010	229+75	LT	1	LT TURN LANE ONTO CTH N
0010	230+98	LT	1	LT TURN LANE ONTO CTH N
		TOTAL 0010	4	

646.5120 MARKING WORD EPOXY

CATEGORY	STATION	LOCATION	EACH	REMARKS
0010	227+70	RT	1	ONLY
		TOTAL 0010	1	

646.5320 MARKING RAILROAD CROSSINGS EPOXY

CATEGORY	STATION	LOCATION	EACH	REMARKS
0010	300+69	RT	1	
0010	306+94	LT	1	
		TOTAL 0010	2	

646.7120 MARKING DIAGONAL EPOXY 12-INCH

CATEGORY	STATION	TO	STATION	LOCATION	LF	REMARKS
0010	16+75	-	18+25	CL	73	GORE
0010	156+58	-	161+30	CL	125	GORE
0010	216+66	-	222+25	CL	98	GORE
0010	236+30	-	240+74	CL	60	GORE
				TOTAL 0010	356	

646.8020 MARKING CORRUGATED MEDIAN EPOXY

CATEGORY	STATION	TO	STATION	LOCATION	SF	REMARKS
0010	161+30	-	164+45	CL	1,932	
0010	165+50	-	168+00	CL	445	STH 21/ESPY RD INTERSECTION
0010	169+00	-	171+85	CL	1,730	STH 21/ESPY RD INTERSECTION
0010	222+32	-	228+00	CL	1,168	STH 21/STH 173 INTERSECTION
0010	229+55	-	236+25	CL	1,942	STH 21/STH 173 INTERSECTION
				TOTAL 0010	7,217	

646.8220 MARKING ISLAND NOSE EPOXY

CATEGORY	STATION	LOCATION	YELLOW EACH	REMARKS
0010	161+25	LT	1	
0010	164+50	LT	1	
0010	165+50	LT	1	
0010	168+07	LT	1	
0010	168+93	LT	1	
0010	171+92	LT	1	
0010	222+25	RT	1	
0010	228+35	RT	1	
0010	229+50	RT	1	
0010	236+30	RT	1	
		TOTAL 0010	10	

648.0100 LOCATING NO-PASSING ZONES

CATEGORY	STATION	TO	STATION	LOCATION	MI	REMARKS
0010	16+75	-	493+21	CL	8.21	
				TOTAL 0010	8.21	

650.8000 CONSTRUCTION STAKING RESUREACING REFERENCE

CATEGORY	STATION	TO	STATION	LOCATION	LE	REMARKS
0010	16+75	-	493+21	CL	47,646	
				TOTAL 0010	47,646	

690.0150 SAWING ASPHALT

CATEGORY	STATION	TO	STATION	LOCATION	LE	REMARKS	EIRE NUMBER
0010	17+25			RT	45	P.E. ASPH.	1111
0010	41+18			RT	16	P.E. ASPH.	25611
0010	43+04			LT	34	P.E. ASPH.	25638
0010	46+39			LT	16	P.E. ASPH.	25692
0010	47+28			LT	18	P.E. ASPH.	25700
0010	47+47			RT	18	P.E. ASPH.	25721
0010	50+20			LT	20	P.E. ASPH.	25754
0010	53+48			LT	19	P.E. ASPH.	25822
0010	55+38			LT	26	P.E. ASPH.	25860
0010	64+92	-	66+16	LT	124	ENSIGN RD	
0010	80+45	-	81+29	RT	84	ENGELWOOD RD	
0010	118+42			LT	19	P.E. ASPH.	27042
0010	126+10			LT	18	P.E. ASPH.	27138
0010	132+41			LT	38	C.E. ASPH.	28843
0010	136+00			RT	12	C.E. ASPH.	28843
0010	136+54			LT	81	P.E. ASPH.	
0010	138+78	-	140+21	LT	143	ENTERPRISE RD	
0010	152+86	-	154+21	RT	135	FORMICARD	
0010	164+53	-	165+81	RT	128	GAS STATION	
0010	168+14	-	169+41	LT	127	ESPY RD INT	
0010	168+93			CL	51		
0010	206+77			CL	36		
0010	218+50			RT	18	C.E. ASPH.	28843
0010	219+75			RT	20	C.E. ASPH.	28843
0010	220+75			LT	35	C.E. ASPH.	28888
0010	221+40			RT	22	P.E. ASPH.	28897
0010	223+00			RT	17	P.E. ASPH.	28925
0010	228+29	-	229+73	LT	144	STH 173	
0010	228+59	-	229+69	RT	110	CTH N	
0010	235+15			LT	39	P.E. ASPH.	29537
0010	256+75			RT	14	P.E. ASPH.	29542
0010	257+20			LT	16	P.E. ASPH.	
0010	258+40			LT	17	P.E. ASPH.	
0010	281+13	-	282+23	LT	110	MAIN ST	
0010	286+30			RT	12	P.E. ASPH.	311
0010	287+70			RT	23	C.E. ASPH.	225
0010	295+06	-	295+60	RT	54	EVERGREEN AVE	
0010	298+48	-	299+13	RT	65	YARD ST	
0010	302+02	-	302+55	RT	53	WISCONSIN ST	
0010	307+92	-	309+36	LT	144	COPPER RD	
0010	308+10	-	308+75	RT	65	RAILROAD ST	
0010	311+42	-	312+04	RT	62	EIRST ST	
0010	314+49			LT	45	P.E. ASPH.	680
0010	314+47	-	315+12	RT	65	SECOND ST	
0010	315+35			LT	40	P.E. ASPH.	700
0010	317+38	-	318+05	RT	67	THIRD ST	
0010	318+65			LT	46	P.E. ASPH.	714
0010	319+70			LT	36	C.E. ASPH.	
0010	320+97	-	322+15	RT	118	EXCELSIOR AVE	
0010	321+50			LT	51	C.E. ASPH.	832
SUBTOTAL 1					2,716		

690.0150 SAWING ASPHALT CONTINUED

CATEGORY	STATION	TO	STATION	LOCATION	LF	REMARKS	FIRE NUMBER
0010	387+95	-	389+20	LT	125	DRAGONFLY RD INT	
0010	387+96	-	389+27	RT	131	CTH PP	
0010	397+00			LT	20	P.E. ASPH.	
0010	402+45			LT	32	C.E. ASPH.	32386
0010	440+54	-	441+66	LT	112	CRESCENT RD	
0010	440+46	-	441+45	RT	99	CRESCENT RD	
0010	469+15			LT	20	C.E. ASPH.	33450
0010	477+85			LT	10	P.E. ASPH.	33692
0010	479+86	-	480+71	RT	85	FUNNEL RD	
0010	480+00	-	480+81	LT	81	DUBLIN RD	
0010	485+15			LT	35	P.E. ASPH.	
0010	485+85			LT	41	P.E. ASPH.	33842
SUBTOTAL 2					791		
SUBTOTAL 1					2,716		
SUBTOTAL 2					791		
TOTAL 0010					3,507		

690.0250 SAWING CONCRETE

CATEGORY	STATION	TO	STATION	LOCATION	LF	REMARKS
0010	80+00	-	80+23	RT	3	C&G
0010	81+09	-	81+27	RT	3	C&G
TOTAL 0010					6	

SPV.0060.01 SPECIAL (01. VERIFY LANDMARK REFERENCE MONUMENTS)

CATEGORY	STATION	LOCATION	EACH	REMARKS
0010	49+00	RT 49 FT	1	
0010	152+75	RT 148 FT	1	
0010	229+12	LT 103 FT	1	
TOTAL 0010			3	

NOTE: IF THE LANDMARK REFERENCE MONUMENT CANNOT BE FOUND OR IS DAMAGED DO NOT USE THIS ITEM.

SPV.0060.02 SPECIAL (02. LANDMARK REFERENCE MONUMENTS MODIFIED)

CATEGORY	LOCATION	EACH	REMARKS
0010		1	UNDISTRIBUTED
TOTAL 0010		1	

NOTE: USE THIS ITEM IF LANDMARK REFERENCE MONUMENT CANNOT BE FOUND OR IS DAMAGED.

SPV.0180.01 SPECIAL (01. REMOVING DISTRESSED PAVEMENT MILLING)

CATEGORY	LOCATION	SY	REMARKS
0010	STH 21	17,286	UNDISTRIBUTED
TOTAL 0010		17,286	

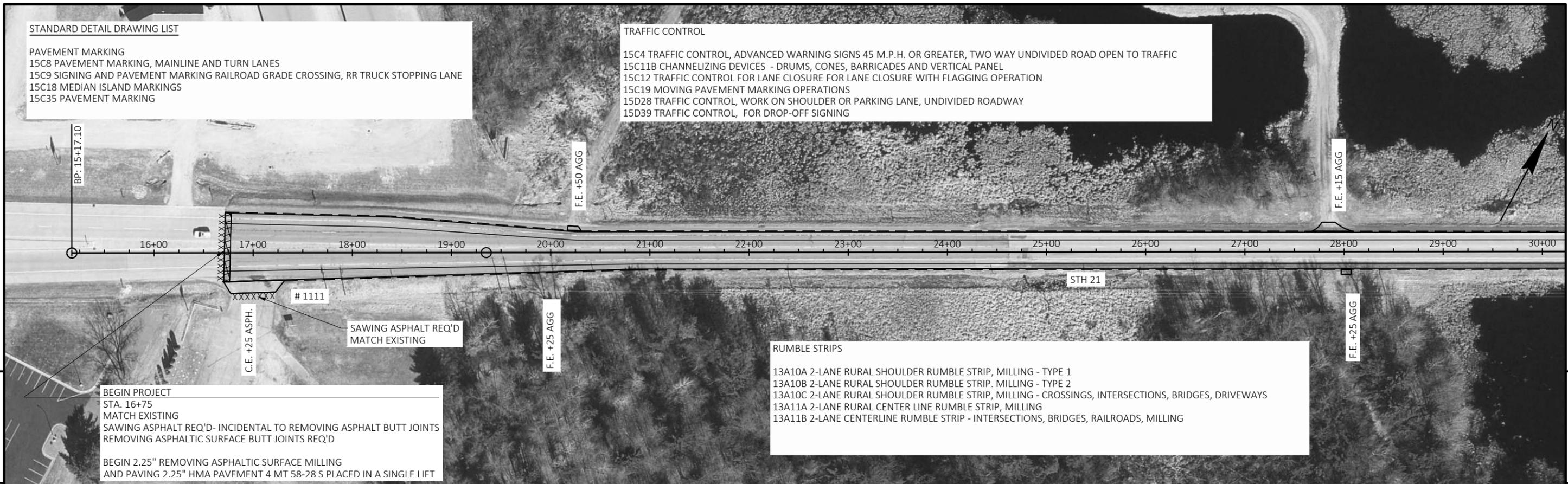
NOTE: PAVEMENT AREAS TO BE DETERMINED BY ENGINEER IN THE FIELD.

STANDARD DETAIL DRAWING LIST

PAVEMENT MARKING
 15C8 PAVEMENT MARKING, MAINLINE AND TURN LANES
 15C9 SIGNING AND PAVEMENT MARKING RAILROAD GRADE CROSSING, RR TRUCK STOPPING LANE
 15C18 MEDIAN ISLAND MARKINGS
 15C35 PAVEMENT MARKING

TRAFFIC CONTROL

15C4 TRAFFIC CONTROL, ADVANCED WARNING SIGNS 45 M.P.H. OR GREATER, TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC
 15C11B CHANNELIZING DEVICES - DRUMS, CONES, BARRICADES AND VERTICAL PANEL
 15C12 TRAFFIC CONTROL FOR LANE CLOSURE FOR LANE CLOSURE WITH FLAGGING OPERATION
 15C19 MOVING PAVEMENT MARKING OPERATIONS
 15D28 TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
 15D39 TRAFFIC CONTROL, FOR DROP-OFF SIGNING



PROJECT NO: 7010-01-63	HWY: STH 21	COUNTY: MONROE	PLAN SHEETS	SHEET	E
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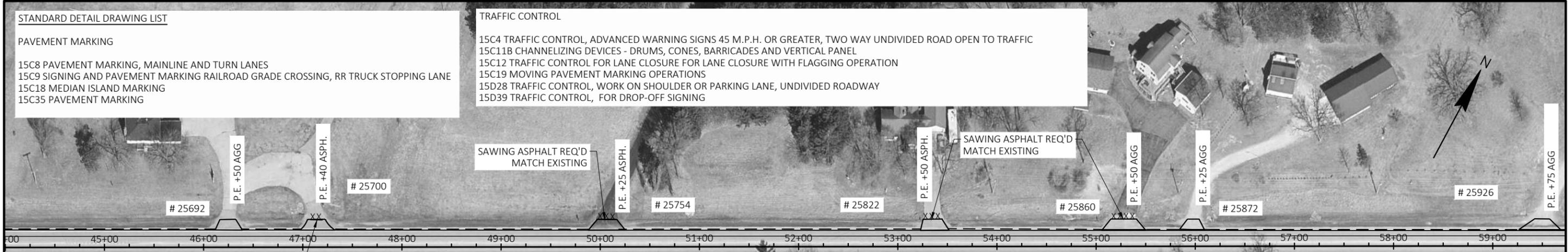
STANDARD DETAIL DRAWING LIST

PAVEMENT MARKING

- 15C8 PAVEMENT MARKING, MAINLINE AND TURN LANES
- 15C9 SIGNING AND PAVEMENT MARKING RAILROAD GRADE CROSSING, RR TRUCK STOPPING LANE
- 15C18 MEDIAN ISLAND MARKING
- 15C35 PAVEMENT MARKING

TRAFFIC CONTROL

- 15C4 TRAFFIC CONTROL, ADVANCED WARNING SIGNS 45 M.P.H. OR GREATER, TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC
- 15C11B CHANNELIZING DEVICES - DRUMS, CONES, BARRICADES AND VERTICAL PANEL
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- 15C19 MOVING PAVEMENT MARKING OPERATIONS
- 15D28 TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
- 15D39 TRAFFIC CONTROL, FOR DROP-OFF SIGNING



PROJECT NO: 7010-01-63	HWY: STH 21	COUNTY: MONROE	PLAN SHEETS	SHEET	E
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STANDARD DETAIL DRAWING LIST

PAVEMENT MARKING

15C8 PAVEMENT MARKING, MAINLINE AND TURN LANES
 15C9 SIGNING AND PAVEMENT MARKING RAILROAD GRADE CROSSING, RR TRUCK STOPPING LANE
 15C18 MEDIAN ISLAND MARKING
 15C35 PAVEMENT MARKING

TRAFFIC CONTROL

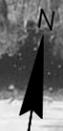
15C4 TRAFFIC CONTROL, ADVANCED WARNING SIGNS 45 M.P.H. OR GREATER, TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC
 15C11B CHANNELIZING DEVICES - DRUMS, CONES, BARRICADES AND VERTICAL PANEL
 15C12 TRAFFIC CONTROL FOR LANE CLOSURE FOR LANE CLOSURE WITH FLAGGING OPERATION
 15C19 MOVING PAVEMENT MARKING OPERATIONS
 15D28 TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
 15D39 TRAFFIC CONTROL, FOR DROP-OFF SIGNING

RUMBLE STRIPS

13A10A 2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING - TYPE 1
 13A10B 2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING - TYPE 2
 13A10C 2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING - CROSSINGS, INTERSECTIONS, BRIDGES, DRIVEWAYS
 13A11A 2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING
 13A11B 2-LANE CENTERLINE RUMBLE STRIP - INTERSECTIONS, BRIDGES, RAILROADS, MILLING

F.E. +65 AGG

SAWING ASPHALT REQ'D
MATCH EXISTING



PT: 73+91.78

74+00 75+00 76+00 77+00 78+00 79+00 80+00 81+00 82+00 83+00 84+00 85+00 86+00 87+00 88+00 89+00

N81° 25' 00.12" E
2382.929

REMOVING CURB & GUTTER
 REPLACE WITH CONCRETE CURB & GUTTER 6-INCH SLOPED 36-INCH TYPE D
 TOPSOIL SEEDING, FERTILIZER AND MULCH INCIDENTAL TO CONCRETE CURB & GUTTER 6-INCH SLOPED 36-INCH TYPE D
 SAWING CONCRETE REQ'D
 MATCH INTO EXISTING CURB & GUTTER

ENGELWOOD RD

STH 21

5

5

89+00 90+00 91+00 92+00 93+00 94+00 95+00 96+00 97+00 98+00 99+00 100+00 101+00 102+00 103+00 104+00

PC: 97+74.71

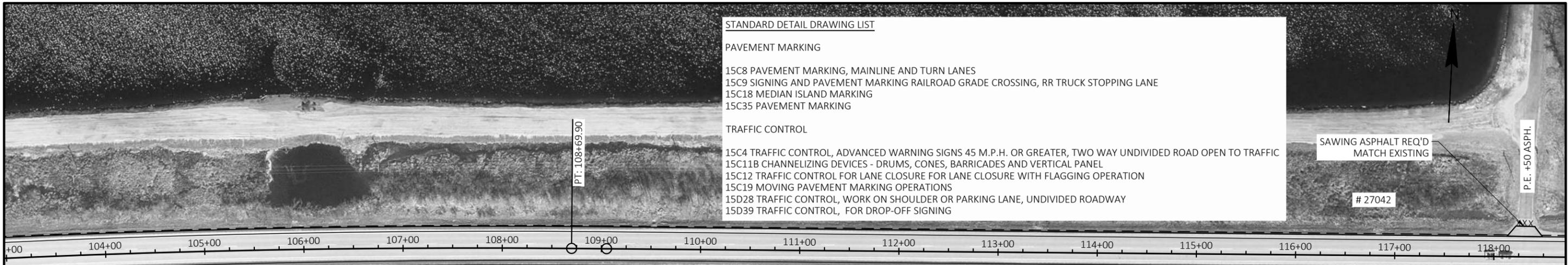


STH 21

PI STA = 103+22.76
 Y = 410732.992
 X = 718614.941
 DELTA = 5°42'47"
 D = 0°31'18"
 T = 548.05'
 L = 1095.20'
 R = 10983.38'
 PC STA = 97+74.71
 PT STA = 108+69.90

PROJECT NO: 7010-01-63 HWY: STH 21 COUNTY: MONROE PLAN SHEETS SHEET E

FILE NAME: N:\PDS\C3D\70100133\SHEETSPLAN\050201-PN.DWG PLOT DATE: 7/28/2022 10:58 AM PLOT BY: KLUDY, KATHLEEN M PLOT NAME: PLOT SCALE: 1 IN:100 FT WISDOT/CADD SHEET 44



STANDARD DETAIL DRAWING LIST

PAVEMENT MARKING

- 15C8 PAVEMENT MARKING, MAINLINE AND TURN LANES
- 15C9 SIGNING AND PAVEMENT MARKING RAILROAD GRADE CROSSING, RR TRUCK STOPPING LANE
- 15C18 MEDIAN ISLAND MARKING
- 15C35 PAVEMENT MARKING

TRAFFIC CONTROL

- 15C4 TRAFFIC CONTROL, ADVANCED WARNING SIGNS 45 M.P.H. OR GREATER, TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC
- 15C11B CHANNELIZING DEVICES - DRUMS, CONES, BARRICADES AND VERTICAL PANEL
- 15C12 TRAFFIC CONTROL FOR LANE CLOSURE FOR LANE CLOSURE WITH FLAGGING OPERATION
- 15C19 MOVING PAVEMENT MARKING OPERATIONS
- 15D28 TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
- 15D39 TRAFFIC CONTROL, FOR DROP-OFF SIGNING

SAWING ASPHALT REQ'D
MATCH EXISTING

27042

PT: 108+69.90

P.E. +50 ASPH.



RUMBLE STRIPS

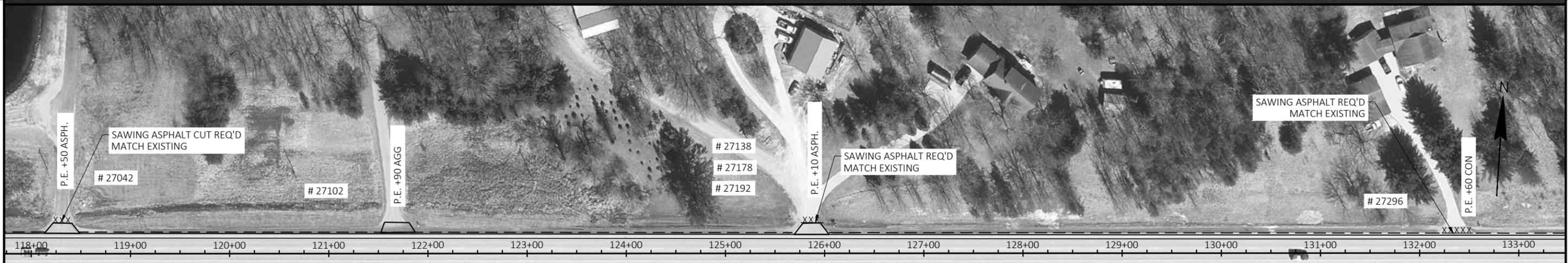
- 13A10A 2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING - TYPE 1
- 13A10B 2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING - TYPE 2
- 13A10C 2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING - CROSSINGS, INTERSECTIONS, BRIDGES, DRIVEWAYS
- 13A11A 2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING
- 13A11B 2-LANE CENTERLINE RUMBLE STRIP - INTERSECTIONS, BRIDGES, RAILROADS, MILLING

STH 21

F.E. +50 AGG

5

5



SAWING ASPHALT REQ'D
MATCH EXISTING

SAWING ASPHALT CUT REQ'D
MATCH EXISTING

SAWING ASPHALT REQ'D
MATCH EXISTING

27296

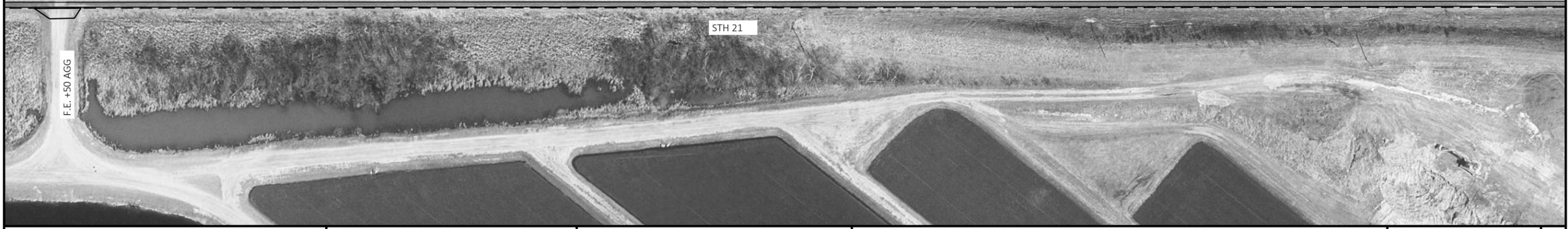
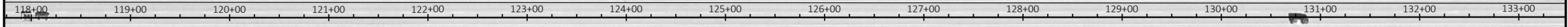
27138
27178
27192

P.E. +50 ASPH.

P.E. +90 AGG.

P.E. +10 ASPH.

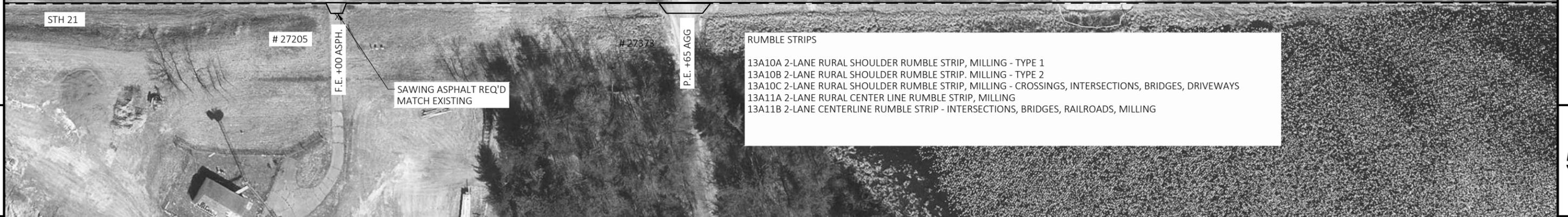
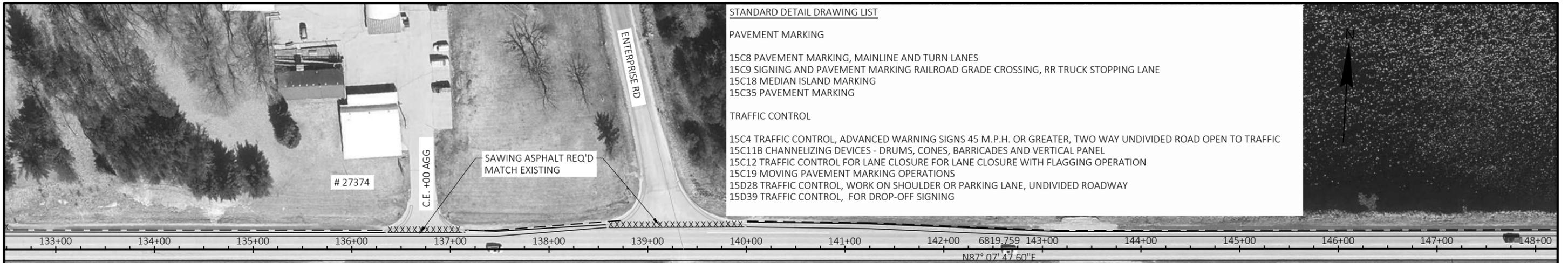
P.E. +60 CON



STH 21

F.E. +50 AGG

PROJECT NO: 7010-01-63	HWY: STH 21	COUNTY: MONROE	PLAN SHEETS	SHEET	E
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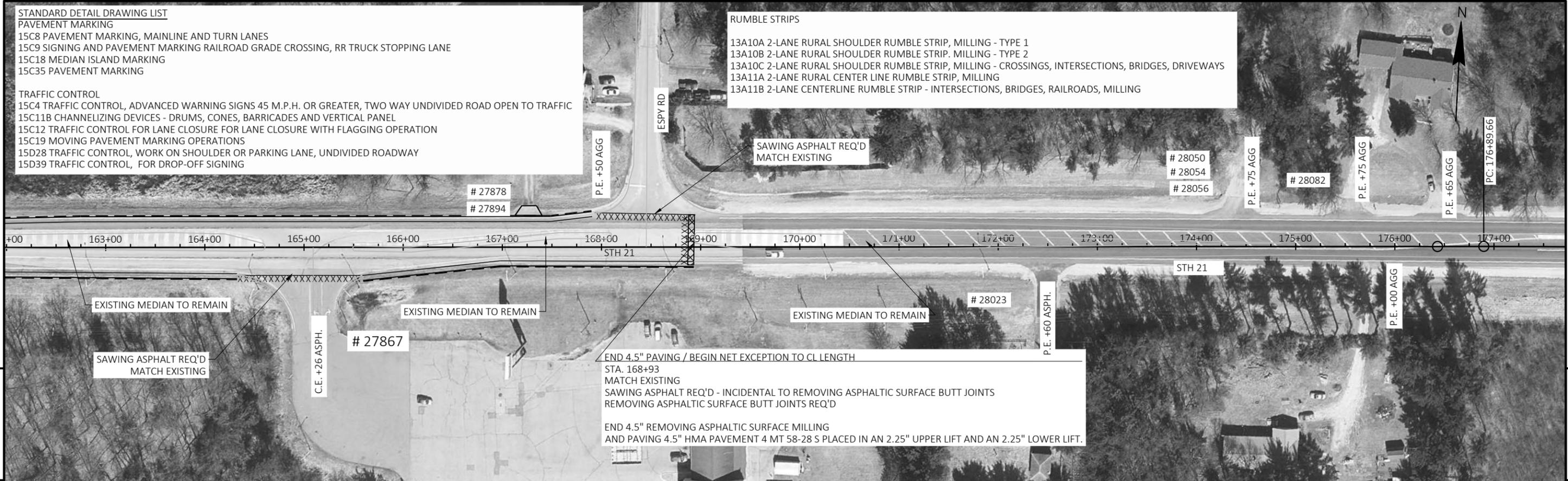


PROJECT NO: 7010-01-63	HWY: STH 21	COUNTY: MONROE	PLAN SHEETS	SHEET	E
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STANDARD DETAIL DRAWING LIST
PAVEMENT MARKING
 15C8 PAVEMENT MARKING, MAINLINE AND TURN LANES
 15C9 SIGNING AND PAVEMENT MARKING RAILROAD GRADE CROSSING, RR TRUCK STOPPING LANE
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 15C35 PAVEMENT MARKING

TRAFFIC CONTROL
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 15C19 MOVING PAVEMENT MARKING OPERATIONS
 15D28 TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
 15D39 TRAFFIC CONTROL, FOR DROP-OFF SIGNING

RUMBLE STRIPS
 13A10A 2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING - TYPE 1
 13A10B 2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING - TYPE 2
 13A10C 2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING - CROSSINGS, INTERSECTIONS, BRIDGES, DRIVEWAYS
 13A11A 2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING
 13A11B 2-LANE CENTERLINE RUMBLE STRIP - INTERSECTIONS, BRIDGES, RAILROADS, MILLING



5

5



PROJECT NO: 7010-01-63 HWY: STH 21 COUNTY: MONROE PLAN SHEETS SHEET E

FILE NAME : N:\PDS\C3D\70100133\SHEETS\PLAN\050201-PN.DWG PLOT DATE : 7/28/2022 10:58 AM PLOT BY : KLUDY, KATHLEEN M PLOT NAME : PLOT SCALE : 1 IN:100 FT WISDOT/CADD SHEET 44

STANDARD DETAIL DRAWING LIST

PAVEMENT MARKING

- 15C8 PAVEMENT MARKING, MAINLINE AND TURN LANES
- 15C9 SIGNING AND PAVEMENT MARKING RAILROAD GRADE CROSSING, RR TRUCK STOPPING LANE
- 15C18 MEDIAN ISLAND MARKING
- 15C35 PAVEMENT MARKING

TRAFFIC CONTROL

- 15C4 TRAFFIC CONTROL, ADVANCED WARNING SIGNS 45 M.P.H. OR GREATER, TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC
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- 15D39 TRAFFIC CONTROL, FOR DROP-OFF SIGNING

RUMBLE STRIPS

- 13A10A 2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING - TYPE 1
- 13A10B 2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING - TYPE 2
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- 13A11A 2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING
- 13A11B 2-LANE CENTERLINE RUMBLE STRIP - INTERSECTIONS, BRIDGES, RAILROADS, MILLING



END EXCEPTION TO NET CENTERLINE
 STA. 206+56
 MATCH EXISTING
 SAWING ASPHALT REQ'D - INCIDENTAL TO REMOVING ASPHALTIC SURFACE BUTT JOINTS
 REMOVING ASPHALTIC SURFACE BUTT JOINTS REQ'D

 BEGIN 2.25" REMOVING ASPHALTIC SURFACE MILLING
 AND PAVING 2.25" HMA PAVEMENT 4 MT 58-28 S PLACED IN A SINGLE LIFT

PROJECT NO: 7010-01-63	HWY: STH 21	COUNTY: MONROE	PLAN SHEETS	SHEET	E
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STANDARD DETAIL DRAWING LIST

PAVEMENT MARKING

- 15C8 PAVEMENT MARKING, MAINLINE AND TURN LANES
- 15C9 SIGNING AND PAVEMENT MARKING RAILROAD GRADE CROSSING, RR TRUCK STOPPING LANE
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RUMBLE STRIPS

- 13A10A 2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING - TYPE 1
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- 13A10C 2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING - CROSSINGS, INTERSECTIONS, BRIDGES, DRIVEWAYS
- 13A11A 2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING
- 13A11B 2-LANE CENTERLINE RUMBLE STRIP - INTERSECTIONS, BRIDGES, RAILROADS, MILLING

PROJECT NO: 7010-01-63

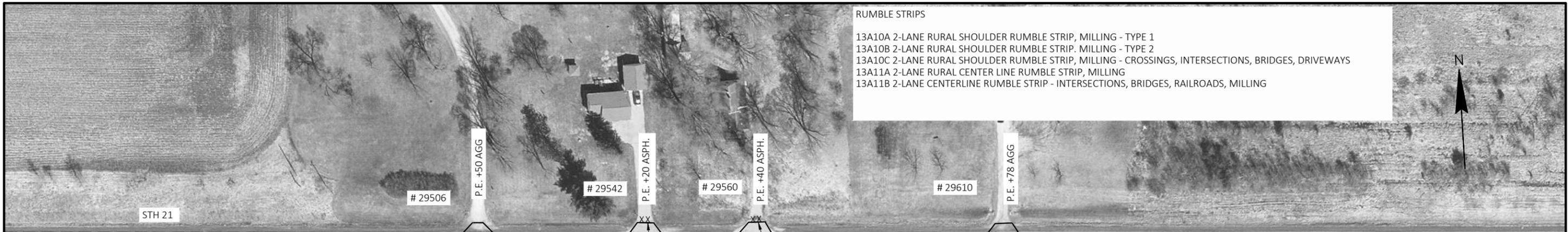
HWY: STH 21

COUNTY: MONROE

PLAN SHEETS

SHEET

E



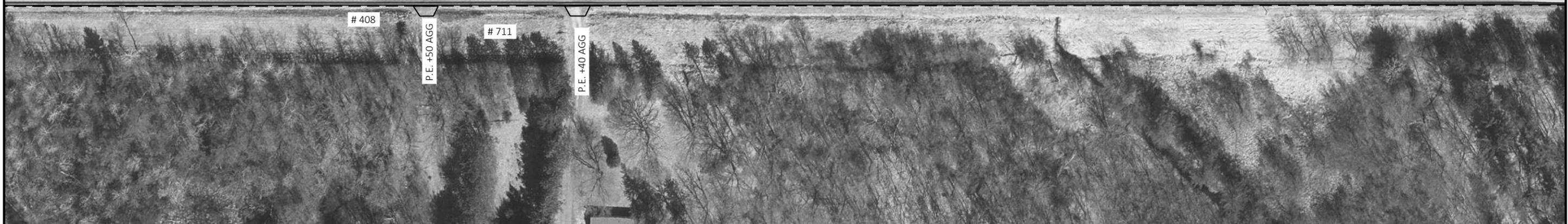
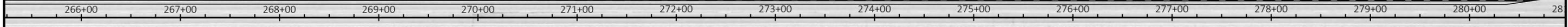
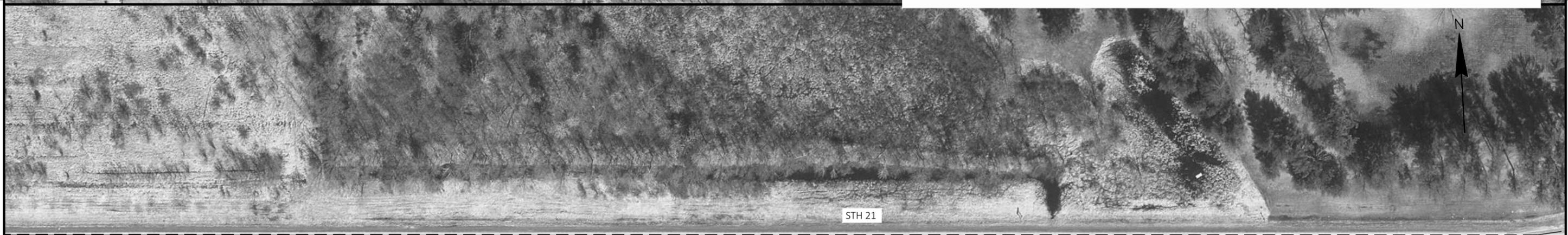
RUMBLE STRIPS
 13A10A 2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING - TYPE 1
 13A10B 2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING - TYPE 2
 13A10C 2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING - CROSSINGS, INTERSECTIONS, BRIDGES, DRIVEWAYS
 13A11A 2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING
 13A11B 2-LANE CENTERLINE RUMBLE STRIP - INTERSECTIONS, BRIDGES, RAILROADS, MILLING



STANDARD DETAIL DRAWING LIST

PAVEMENT MARKING
 15C8 PAVEMENT MARKING, MAINLINE AND TURN LANES
 15C9 SIGNING AND PAVEMENT MARKING RAILROAD GRADE CROSSING, RR TRUCK STOPPING LANE
 15C18 MEDIAN ISLAND MARKING
 15C35 PAVEMENT MARKING

TRAFFIC CONTROL
 15C4 TRAFFIC CONTROL, ADVANCED WARNING SIGNS 45 M.P.H. OR GREATER, TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC
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 15C19 MOVING PAVEMENT MARKING OPERATIONS
 15D28 TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
 15D39 TRAFFIC CONTROL, FOR DROP-OFF SIGNING



PROJECT NO: 7010-01-63	HWY: STH 21	COUNTY: MONROE	PLAN SHEETS	SHEET	E
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STANDARD DETAIL DRAWING LIST

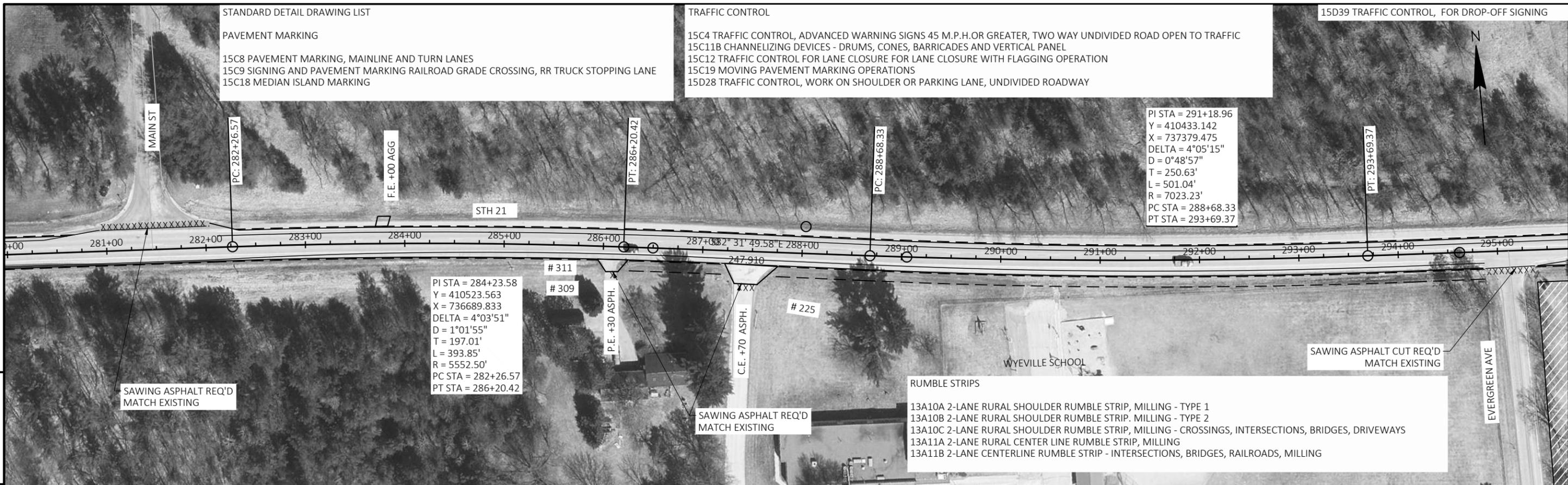
PAVEMENT MARKING

- 15C8 PAVEMENT MARKING, MAINLINE AND TURN LANES
- 15C9 SIGNING AND PAVEMENT MARKING RAILROAD GRADE CROSSING, RR TRUCK STOPPING LANE
- 15C18 MEDIAN ISLAND MARKING

TRAFFIC CONTROL

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15D39 TRAFFIC CONTROL, FOR DROP-OFF SIGNING



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PROJECT NO: 7010-01-63	HWY: STH 21	COUNTY: MONROE	PLAN SHEETS	SHEET	E
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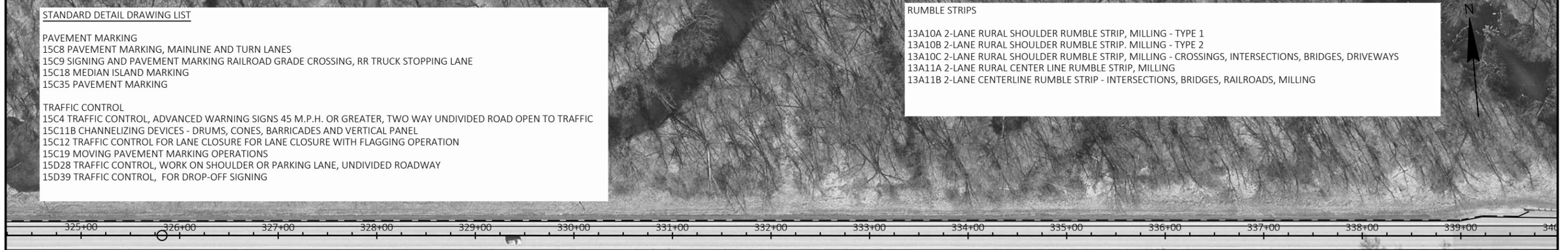
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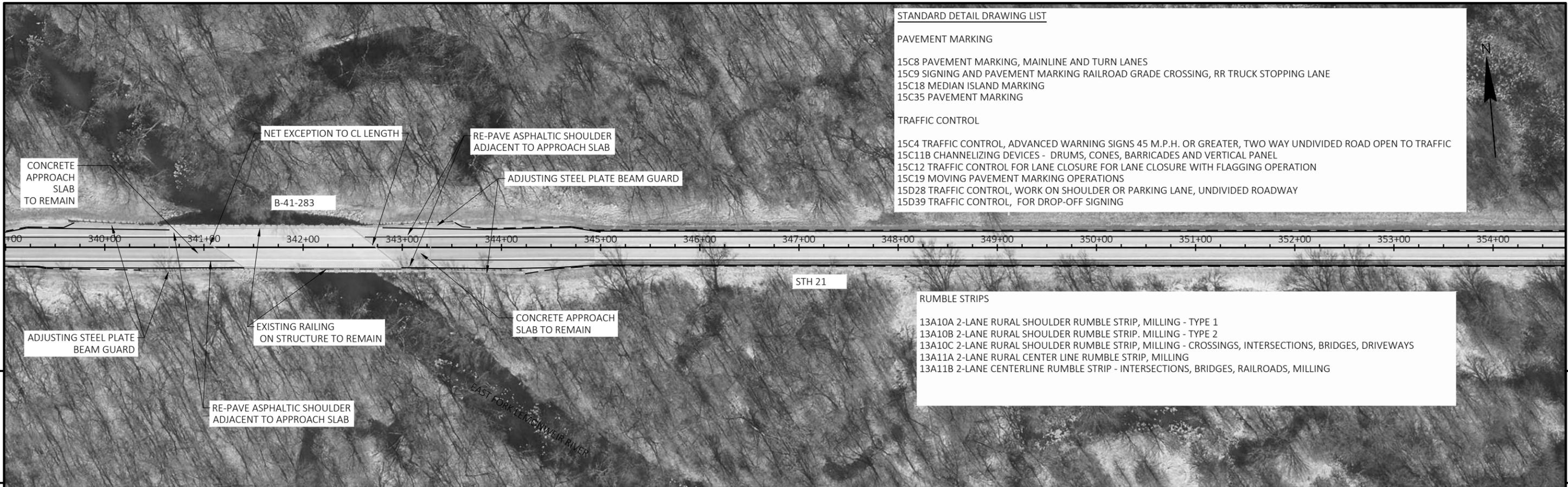
- PAVEMENT MARKING
 15C8 PAVEMENT MARKING, MAINLINE AND TURN LANES
 15C9 SIGNING AND PAVEMENT MARKING RAILROAD GRADE CROSSING, RR TRUCK STOPPING LANE
 15C18 MEDIAN ISLAND MARKING
 15C35 PAVEMENT MARKING

- TRAFFIC CONTROL
 15C4 TRAFFIC CONTROL, ADVANCED WARNING SIGNS 45 M.P.H. OR GREATER, TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC
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 15D28 TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
 15D39 TRAFFIC CONTROL, FOR DROP-OFF SIGNING

RUMBLE STRIPS

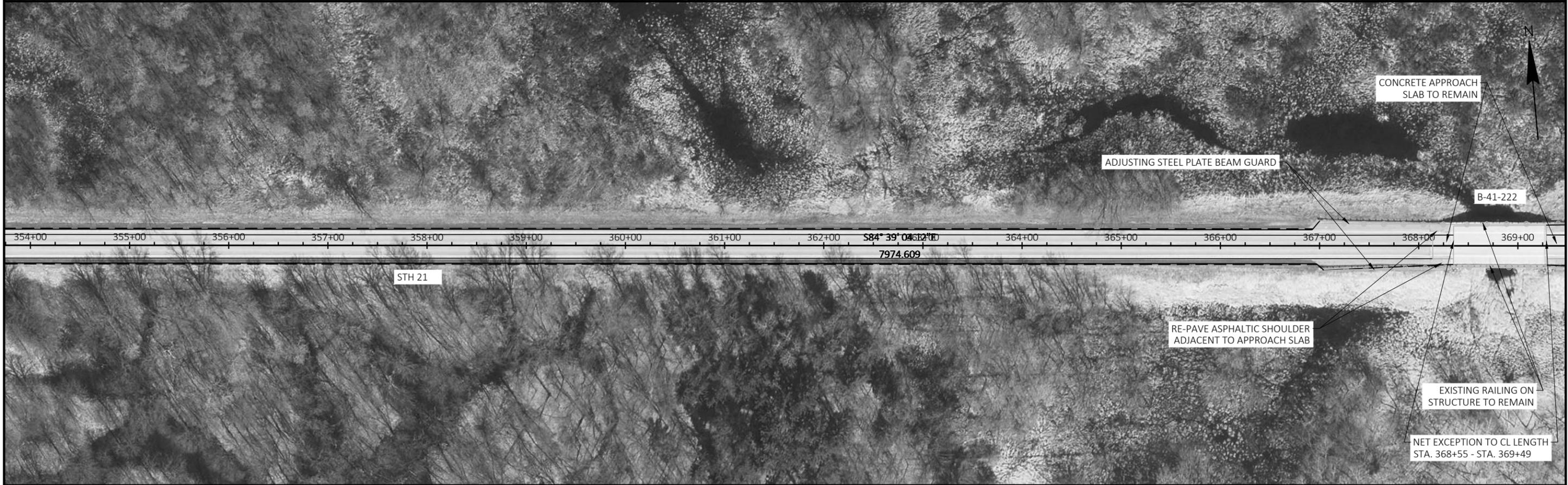
- 13A10A 2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING - TYPE 1
 13A10B 2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING - TYPE 2
 13A10C 2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING - CROSSINGS, INTERSECTIONS, BRIDGES, DRIVEWAYS
 13A11A 2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING
 13A11B 2-LANE CENTERLINE RUMBLE STRIP - INTERSECTIONS, BRIDGES, RAILROADS, MILLING



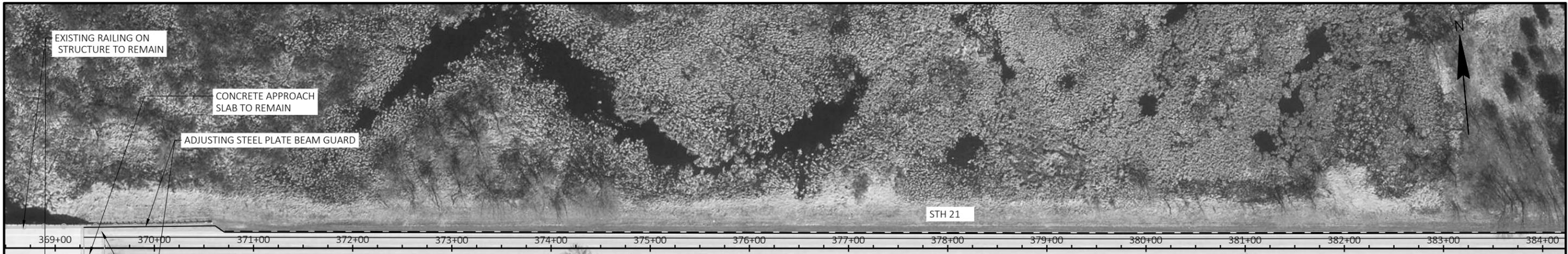


STANDARD DETAIL DRAWING LIST	
PAVEMENT MARKING	
15C8	PAVEMENT MARKING, MAINLINE AND TURN LANES
15C9	SIGNING AND PAVEMENT MARKING RAILROAD GRADE CROSSING, RR TRUCK STOPPING LANE
15C18	MEDIAN ISLAND MARKING
15C35	PAVEMENT MARKING
TRAFFIC CONTROL	
15C4	TRAFFIC CONTROL, ADVANCED WARNING SIGNS 45 M.P.H. OR GREATER, TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C11B	CHANNELIZING DEVICES - DRUMS, CONES, BARRICADES AND VERTICAL PANEL
15C12	TRAFFIC CONTROL FOR LANE CLOSURE FOR LANE CLOSURE WITH FLAGGING OPERATION
15C19	MOVING PAVEMENT MARKING OPERATIONS
15D28	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
15D39	TRAFFIC CONTROL, FOR DROP-OFF SIGNING

RUMBLE STRIPS	
13A10A	2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING - TYPE 1
13A10B	2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING - TYPE 2
13A10C	2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING - CROSSINGS, INTERSECTIONS, BRIDGES, DRIVEWAYS
13A11A	2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING
13A11B	2-LANE CENTERLINE RUMBLE STRIP - INTERSECTIONS, BRIDGES, RAILROADS, MILLING



PROJECT NO: 7010-01-63	HWY: STH 21	COUNTY: MONROE	PLAN SHEETS	SHEET	E
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STANDARD DETAIL DRAWING LIST

PAVEMENT MARKING

- 15C8 PAVEMENT MARKING, MAINLINE AND TURN LANES
- 15C9 SIGNING AND PAVEMENT MARKING RAILROAD GRADE CROSSING, RR TRUCK STOPPING LANE
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- 15D28 TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY

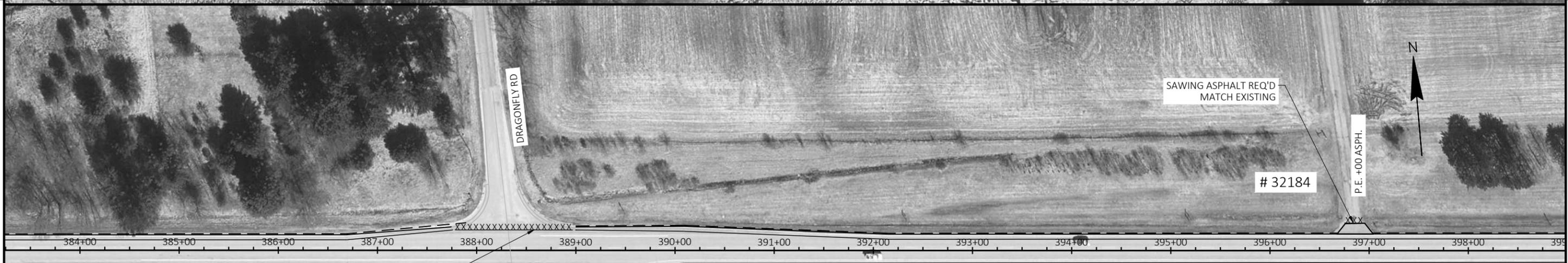
15D39 TRAFFIC CONTROL, FOR DROP-OFF SIGNING

RUMBLE STRIPS

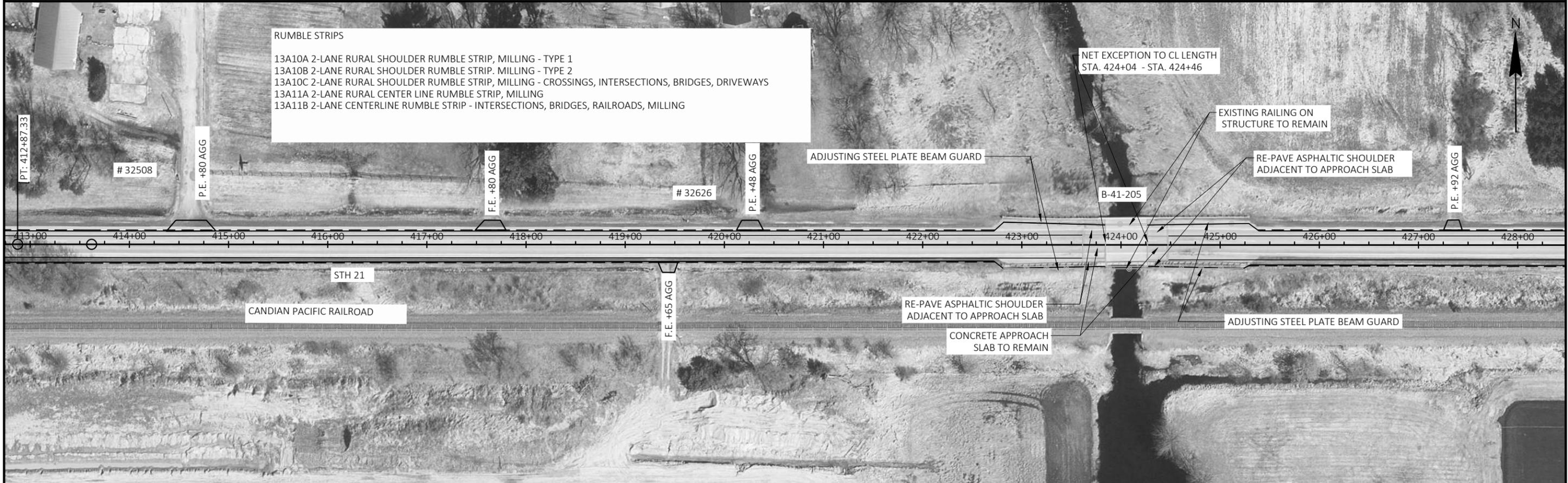
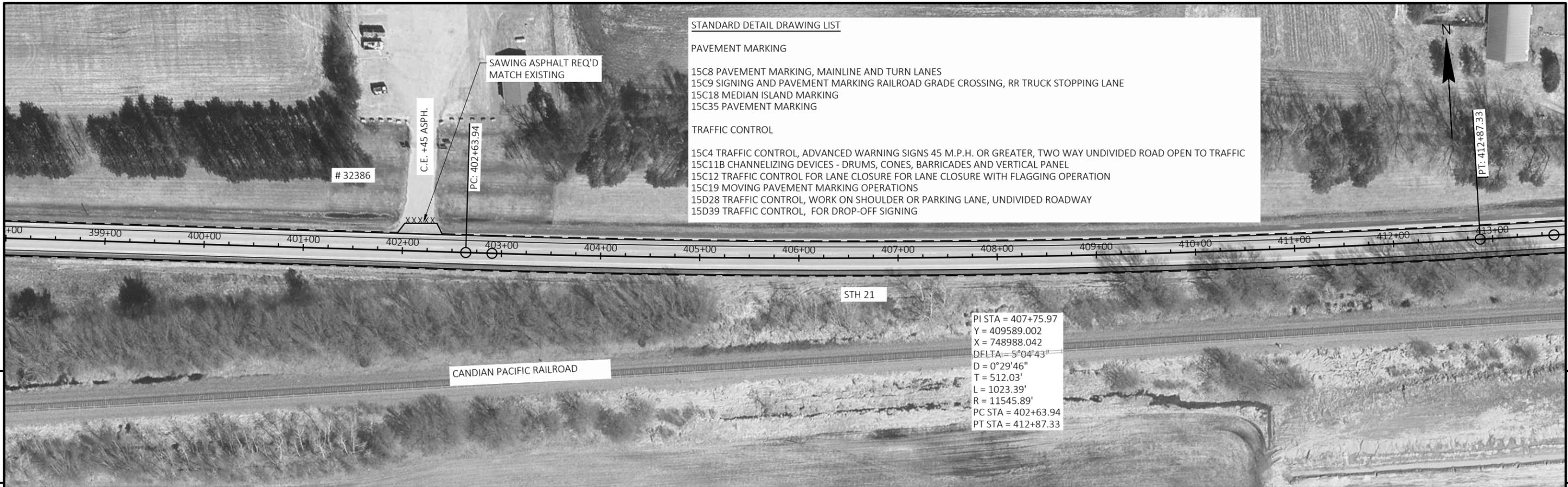
- 13A10A 2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING - TYPE 1
- 13A10B 2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING - TYPE 2
- 13A10C 2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING - CROSSINGS, INTERSECTIONS, BRIDGES, DRIVEWAYS
- 13A11A 2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING
- 13A11B 2-LANE CENTERLINE RUMBLE STRIP - INTERSECTIONS, BRIDGES, RAILROADS, MILLING

5

5



PROJECT NO: 7010-01-63	HWY: STH 21	COUNTY: MONROE	PLAN SHEETS	SHEET	E
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PROJECT NO: 7010-01-63	HWY: STH 21	COUNTY: MONROE	PLAN SHEETS	SHEET	E
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STANDARD DETAIL DRAWING LIST

PAVEMENT MARKING

- 15C8 PAVEMENT MARKING, MAINLINE AND TURN LANES
- 15C9 SIGNING AND PAVEMENT MARKING RAILROAD GRADE CROSSING, RR TRUCK STOPPING LANE
- 15C18 MEDIAN ISLAND MARKING
- 15C35 PAVEMENT MARKING

TRAFFIC CONTROL

- 15C4 TRAFFIC CONTROL, ADVANCED WARNING SIGNS 45 M.P.H. OR GREATER, TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC
- 15C11B CHANNELIZING DEVICES - DRUMS, CONES, BARRICADES AND VERTICAL PANEL
- 15C12 TRAFFIC CONTROL FOR LANE CLOSURE FOR LANE CLOSURE WITH FLAGGING OPERATION
- 15C19 MOVING PAVEMENT MARKING OPERATIONS
- 15D28 TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
- 15D39 TRAFFIC CONTROL, FOR DROP-OFF SIGNING

RUMBLE STRIPS

- 13A10A 2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING - TYPE 1
- 13A10B 2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING - TYPE 2
- 13A10C 2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING - CROSSINGS, INTERSECTIONS, BRIDGES, DRIVEWAYS
- 13A11A 2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING
- 13A11B 2-LANE CENTERLINE RUMBLE STRIP - INTERSECTIONS, BRIDGES, RAILROADS, MILLING



PROJECT NO: 7010-01-63	HWY: STH 21	COUNTY: MONROE	PLAN SHEETS	SHEET	E
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STANDARD DETAIL DRAWING LIST

PAVEMENT MARKING

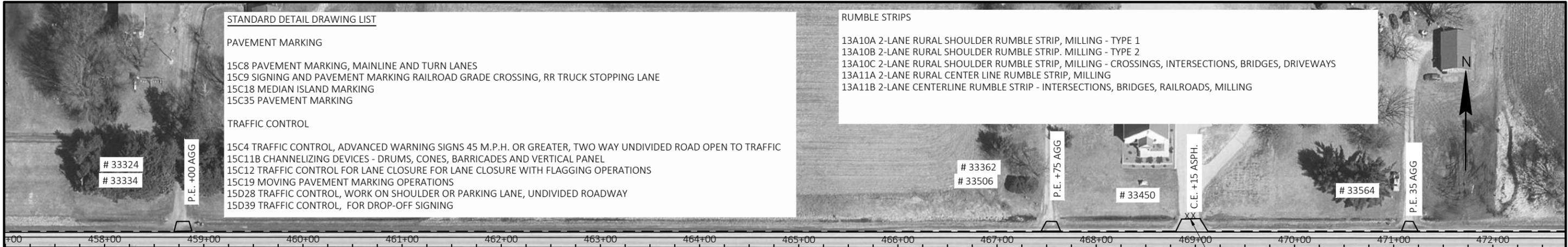
15C8 PAVEMENT MARKING, MAINLINE AND TURN LANES
 15C9 SIGNING AND PAVEMENT MARKING RAILROAD GRADE CROSSING, RR TRUCK STOPPING LANE
 15C18 MEDIAN ISLAND MARKING
 15C35 PAVEMENT MARKING

TRAFFIC CONTROL

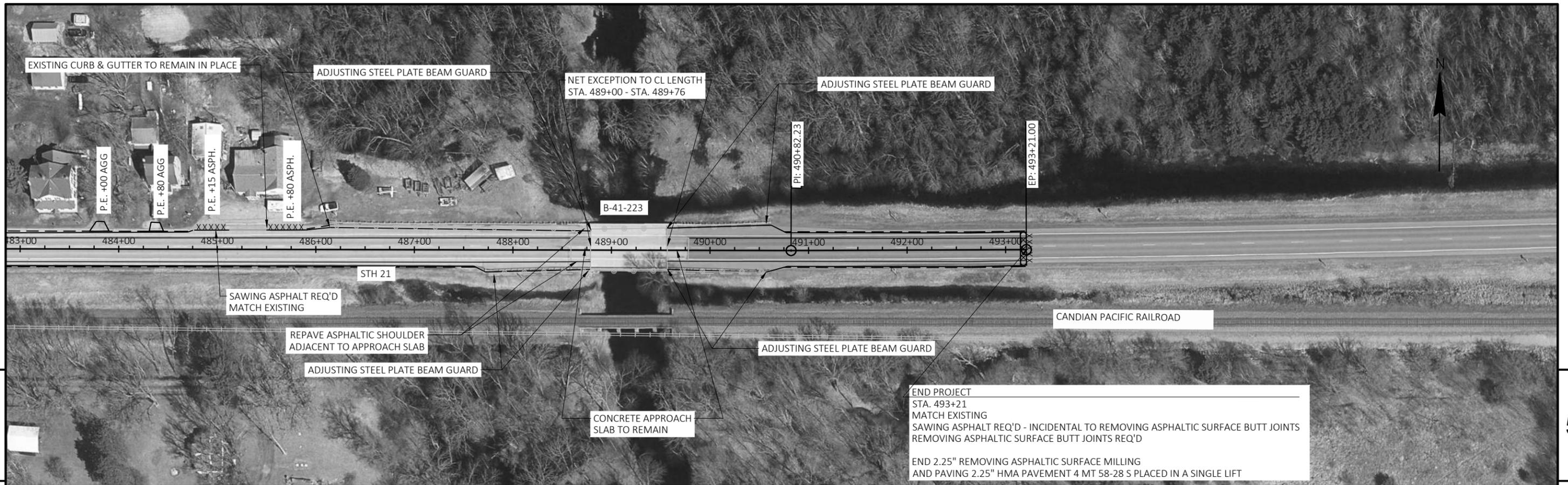
15C4 TRAFFIC CONTROL, ADVANCED WARNING SIGNS 45 M.P.H. OR GREATER, TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC
 15C11B CHANNELIZING DEVICES - DRUMS, CONES, BARRICADES AND VERTICAL PANEL
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 15D28 TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
 15D39 TRAFFIC CONTROL, FOR DROP-OFF SIGNING

RUMBLE STRIPS

13A10A 2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING - TYPE 1
 13A10B 2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING - TYPE 2
 13A10C 2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING - CROSSINGS, INTERSECTIONS, BRIDGES, DRIVEWAYS
 13A11A 2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING
 13A11B 2-LANE CENTERLINE RUMBLE STRIP - INTERSECTIONS, BRIDGES, RAILROADS, MILLING



PROJECT NO: 7010-01-63 HWY: STH 21 COUNTY: MONROE PLAN SHEETS SHEET E



5

5

STANDARD DETAIL DRAWING LIST

PAVEMENT MARKING

- 15C8 PAVEMENT MARKING, MAINLINE AND TURN LANES
- 15C9 SIGNING AND PAVEMENT MARKING RAILROAD GRADE CROSSING, RR TRUCK STOPPING LANE
- 15C18 MEDIAN ISLAND MARKING
- 15C35 PAVEMENT MARKING

TRAFFIC CONTROL

- 15C4 TRAFFIC CONTROL, ADVANCED WARNING SIGNS 45 M.P.H. OR GREATER, TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC
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- 13A10C 2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING - CROSSINGS, INTERSECTIONS, BRIDGES, DRIVEWAYS
- 13A11A 2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING
- 13A11B 2-LANE CENTERLINE RUMBLE STRIP - INTERSECTIONS, BRIDGES, RAILROADS, MILLING

PROJECT NO: 7010-01-63

HWY: STH 21

COUNTY: MONROE

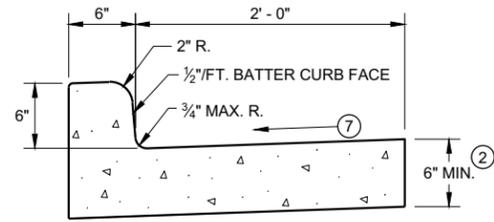
PLAN SHEETS

SHEET

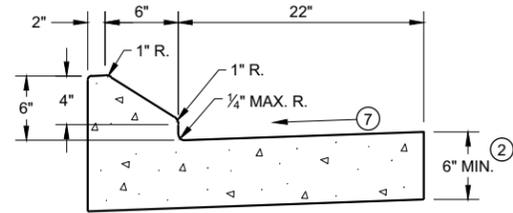
E

Standard Detail Drawing List

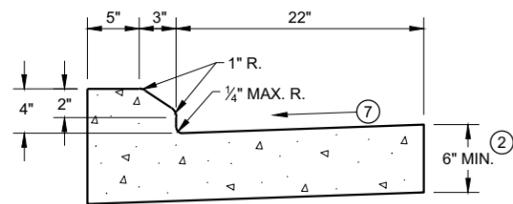
08D01-22A	CONCRETE CURB & GUTTER
08D01-22B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D22-01	DRIVEWAYS WITHOUT CURB & GUTTER RESURFACING PROJECTS RURAL
13A10-02A	2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING
13A10-02B	2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING
13A10-02C	2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING
13A10-02D	2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING
13A11-03A	2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING
13A11-03B	2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING
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
14B18-06A	STEEL PLATE BEAM GUARD, CLASS "A" (AT BRIDGES, OBSTACLES AND SIDEROADS/DRIVEWAYS)
14B20-11A	STEEL THRIE BEAM STRUCTURE APPROACH
14B20-11E	STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO BRIDGE RAILING TYPES "F" AND "W"
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
15C04-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C07-15B	PAVEMENT MARKING WORDS
15C07-15C	PAVEMENT MARKING ARROWS
15C08-20A	LONGITUDINAL MARKING (MAINLINE)
15C08-20B	PAVEMENT MARKING (TURN LANES)
15C08-20C	PAVEMENT MARKING (TURN LANES)
15C09-12A	SIGNING AND PAVEMENT MARKING DETAILS FOR RAILROAD-HIGHWAY GRADE CROSSINGS
15C11-09B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C12-08	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15C18-05A	MEDIAN ISLAND MARKING PAVEMENT MARKINGS
15C18-05B	MEDIAN ISLAND MARKING MEDIAN ISLAND NOSE
15C18-05C	MEDIAN PAVEMENT MARKINGS DOUBLE ARROW WARNING SIGN PLACEMENT
15C18-06A	MEDIAN ISLAND MARKING PAVEMENT MARKINGS
15C19-06A	MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY
15C35-04A	PAVEMENT MARKING (INTERSECTIONS)
15C35-04B	PAVEMENT MARKING AND SIGNING (CLIMBING LANE & PASSING LANE)
15C35-04C	PAVEMENT MARKING AND SIGNING (CLIMBING LANE & PASSING LANE)
15D28-04	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
15D39-02	TRAFFIC CONTROL, DROP-OFF SIGNING
15D44-02	TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH MILLED SURFACES
15D51-01	TRAFFIC CONTROL, MOBILE OPERATIONS ON AN UNDIVIDED ROADWAY
16A01-07	LANDMARK REFERENCE MONUMENTS AND COVERS



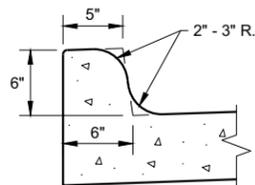
TYPES A¹ & D



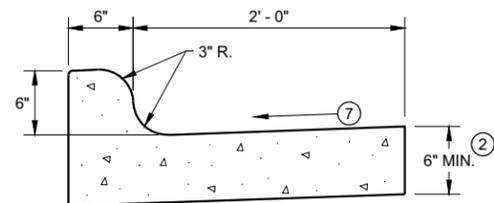
6" SLOPED CURB TYPES G¹ & J



4" SLOPED CURB TYPES G¹ & J

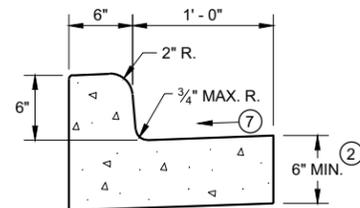


TYPES K¹ & L
(OPTIONAL CURB SHAPE)



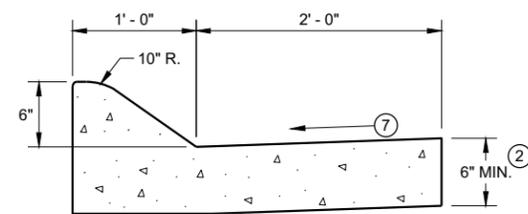
TYPES K¹ & L

CONCRETE CURB AND GUTTER 30"

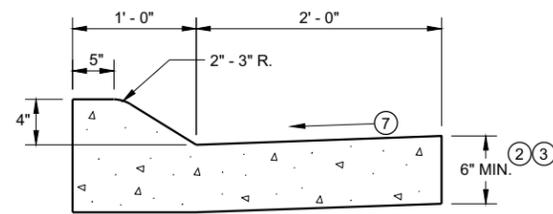


TYPES A¹ & D

CONCRETE CURB AND GUTTER 18"

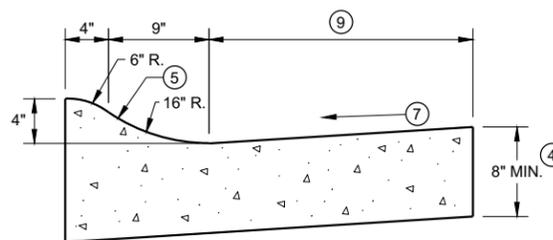


6" SLOPED CURB TYPES A¹ & D



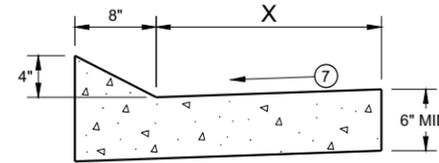
4" SLOPED CURB TYPES A¹ & D

CONCRETE CURB AND GUTTER 36"



4" SLOPED CURB TYPES R¹ & T

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

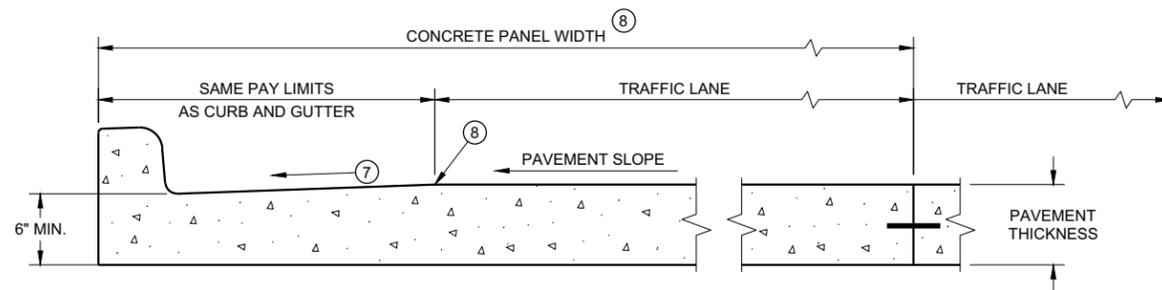


TYPES TBT & TBTT¹

CONCRETE CURB AND GUTTER

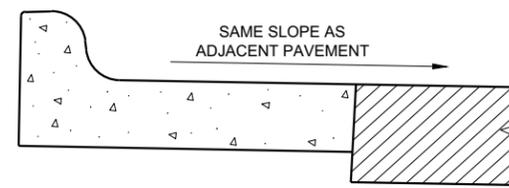
PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE

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 GUTTER⁶
(TYPICAL FOR ALL CURB & GUTTER TYPES)

GENERAL NOTES

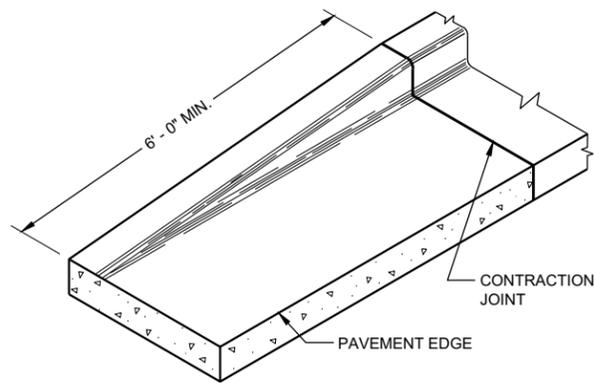
DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

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

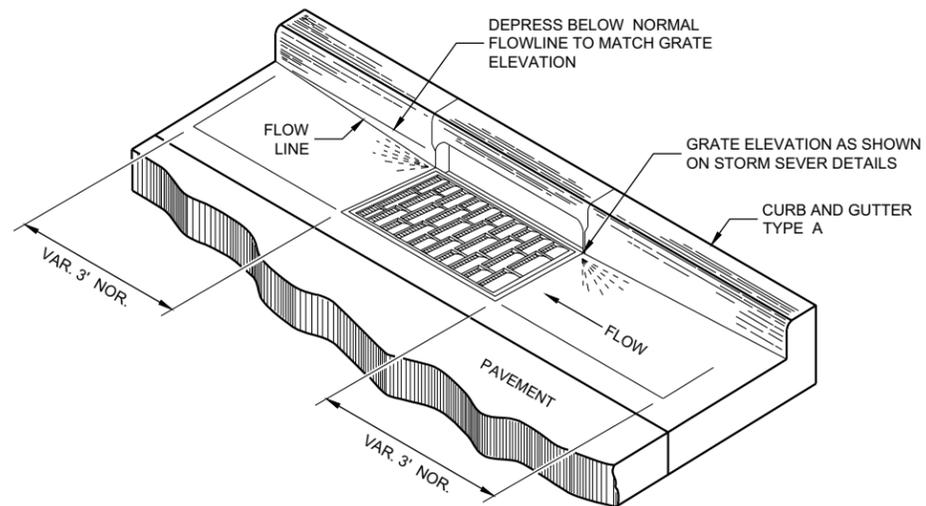
INTEGRAL CURB AND GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB AND GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE.

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)

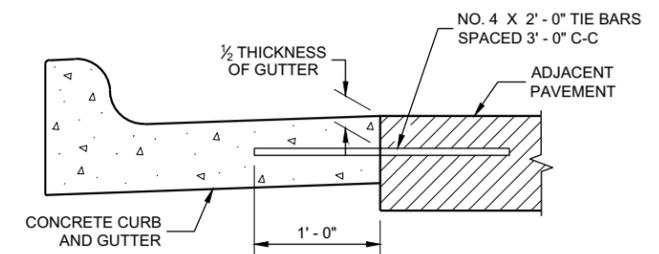
GENERAL NOTES

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

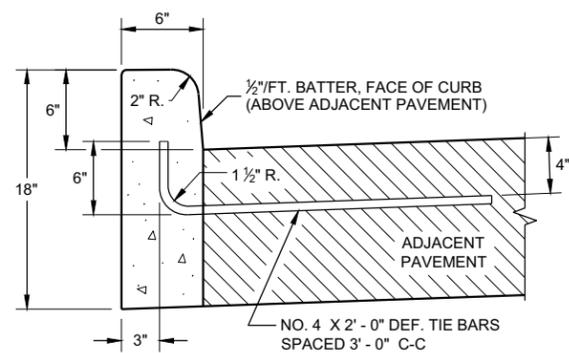
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

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

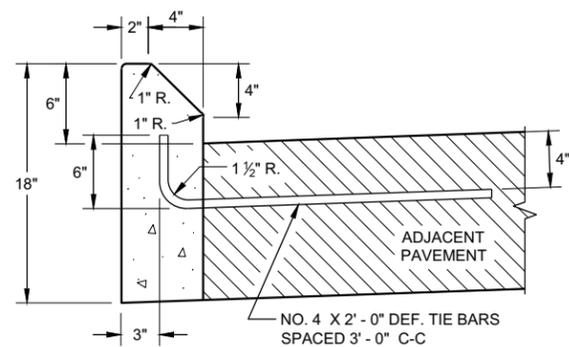
- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ⑨ REFER TO SDD 08D18 AND 08D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.



TYPICAL TIE BAR LOCATION ①

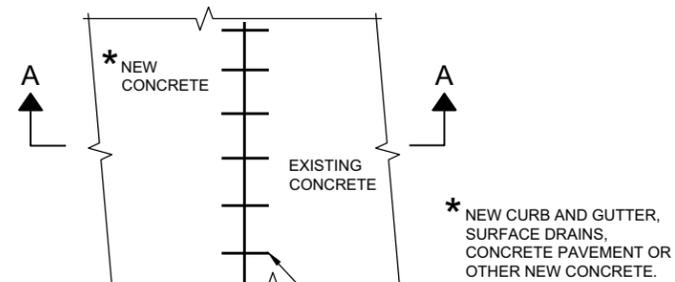


TYPES A ① & D

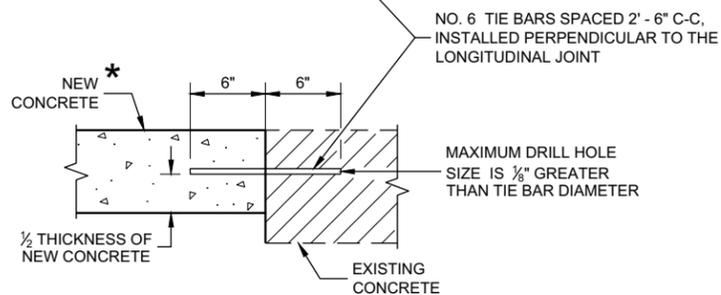


TYPES G ① & J

CONCRETE CURB

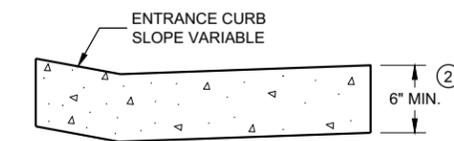


PLAN VIEW



SECTION A - A

TIE BARS DRILLED INTO EXISTING PAVEMENT



DRIVEWAY ENTRANCE CURB ⑨
(WHEN DIRECTED BY THE ENGINEER)

CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

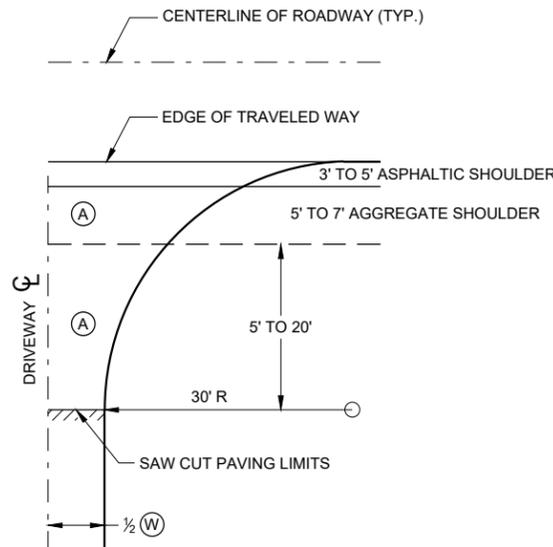
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2021 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT
ENGINEER

FHWA

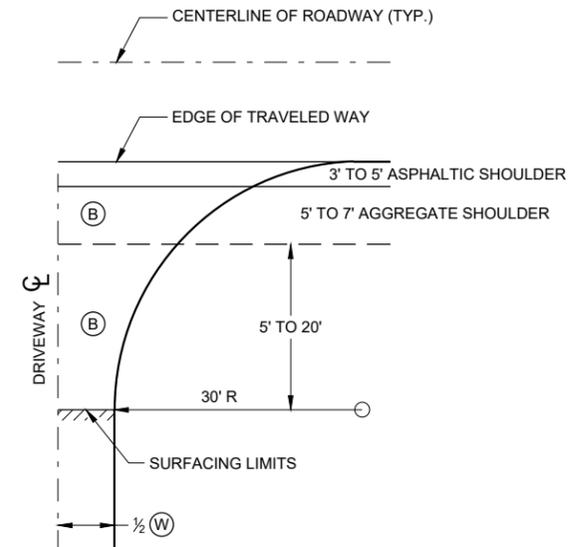
GENERAL NOTES

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

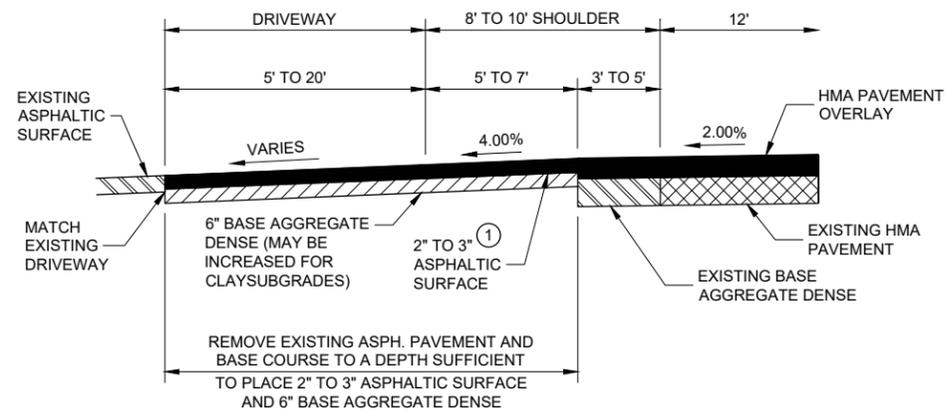


- (A) : PAID FOR AS ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES. (TON)
- (B) : PAID FOR AS BASE AGGREGATE DENSE 1 1/4" (TON)
- (W) : DRIVEWAY WIDTH 16' MIN. - 24' MAX.

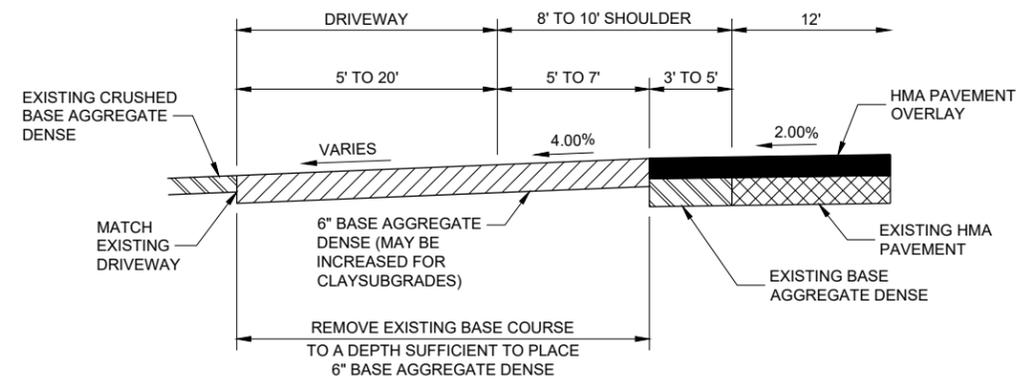
**PLAN VIEW
HALF SECTION**



**PLAN VIEW
HALF SECTION**



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



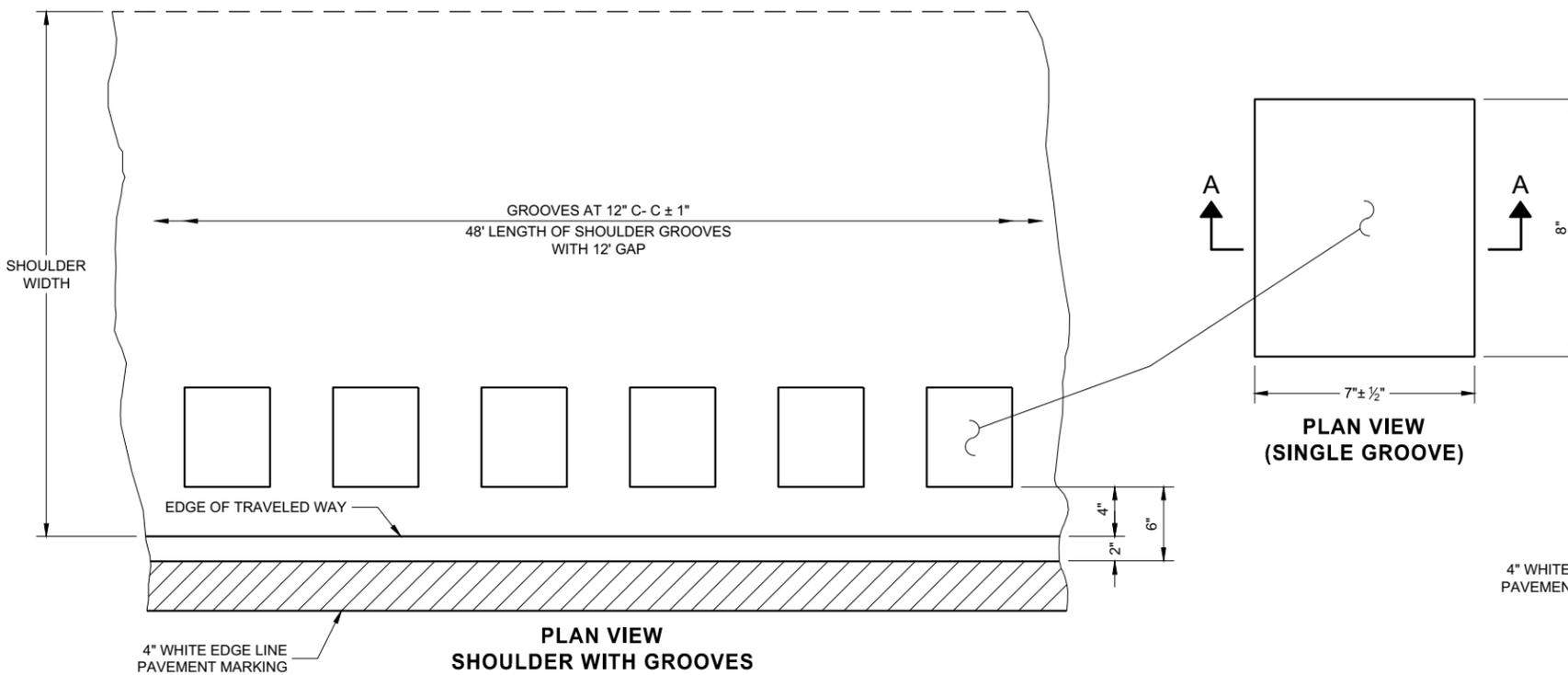
**PROFILE VIEW
RURAL ENTRANCE
WITH AGGREGATE SURFACE
6" BASE AGGREGATE DENSE
RESURFACING PROJECTS**

**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



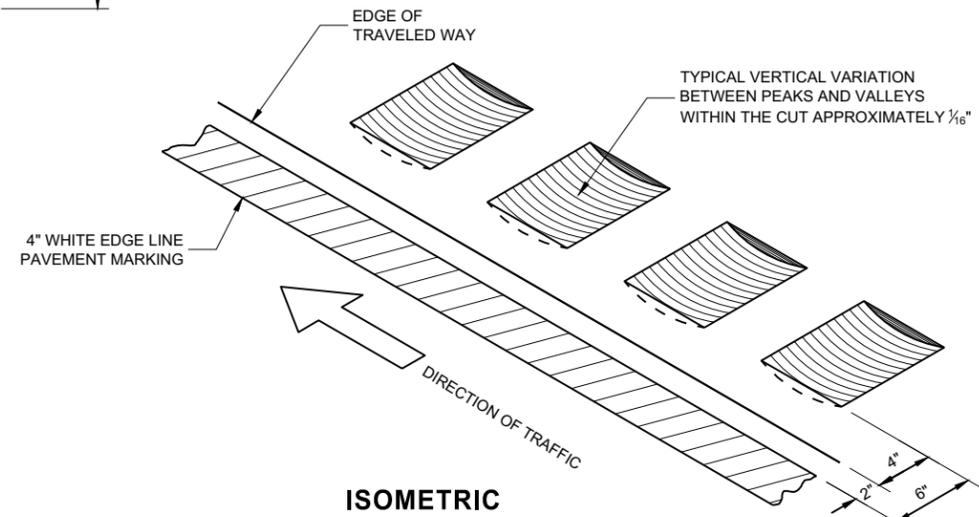
PLAN VIEW SHOULDER WITH GROOVES
 PLAN VIEW (SINGLE GROOVE)

GENERAL NOTES

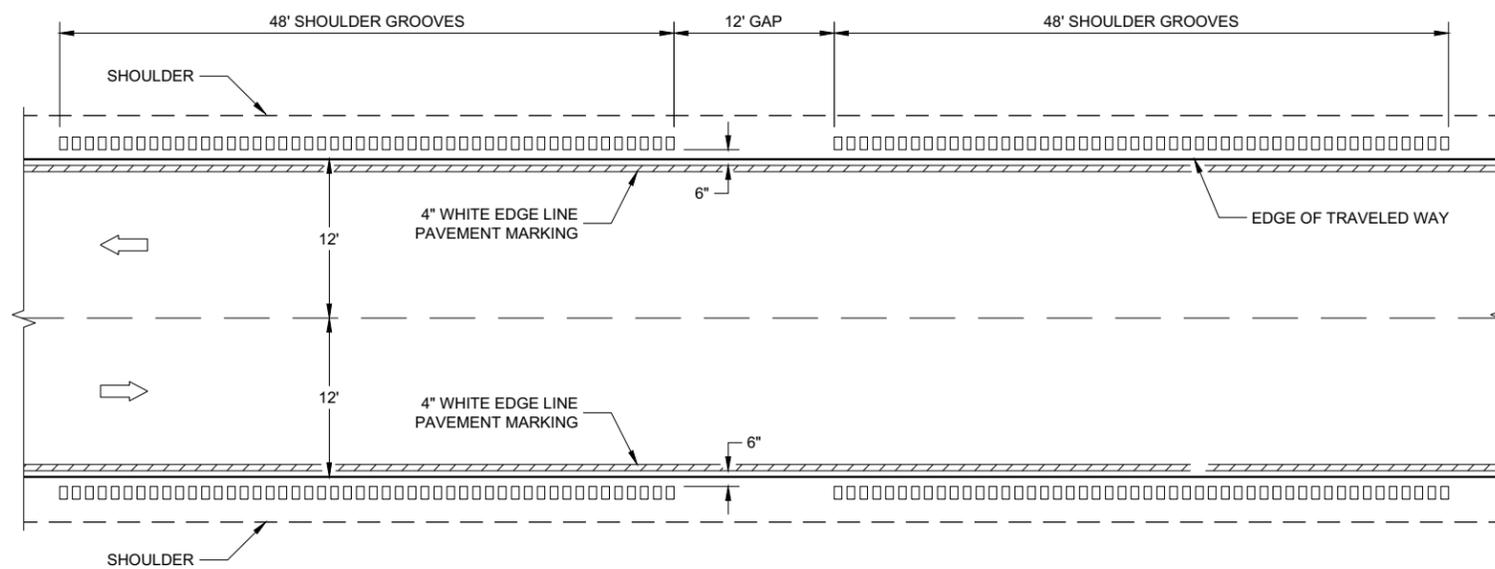
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

DO NOT MILL SHOULDER GROOVES THROUGH ANY INTERSECTION, MARKED CROSSWALK, NON-MOTORIZED PATH CROSSING, OR SNOWMOBILE CROSSING.

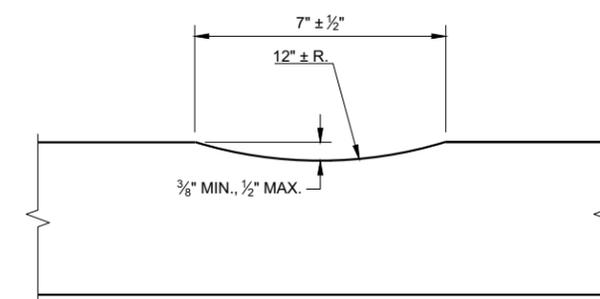
- ① SHOULDER GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS. WHEN DIRECTED BY THE ENGINEER.



ISOMETRIC



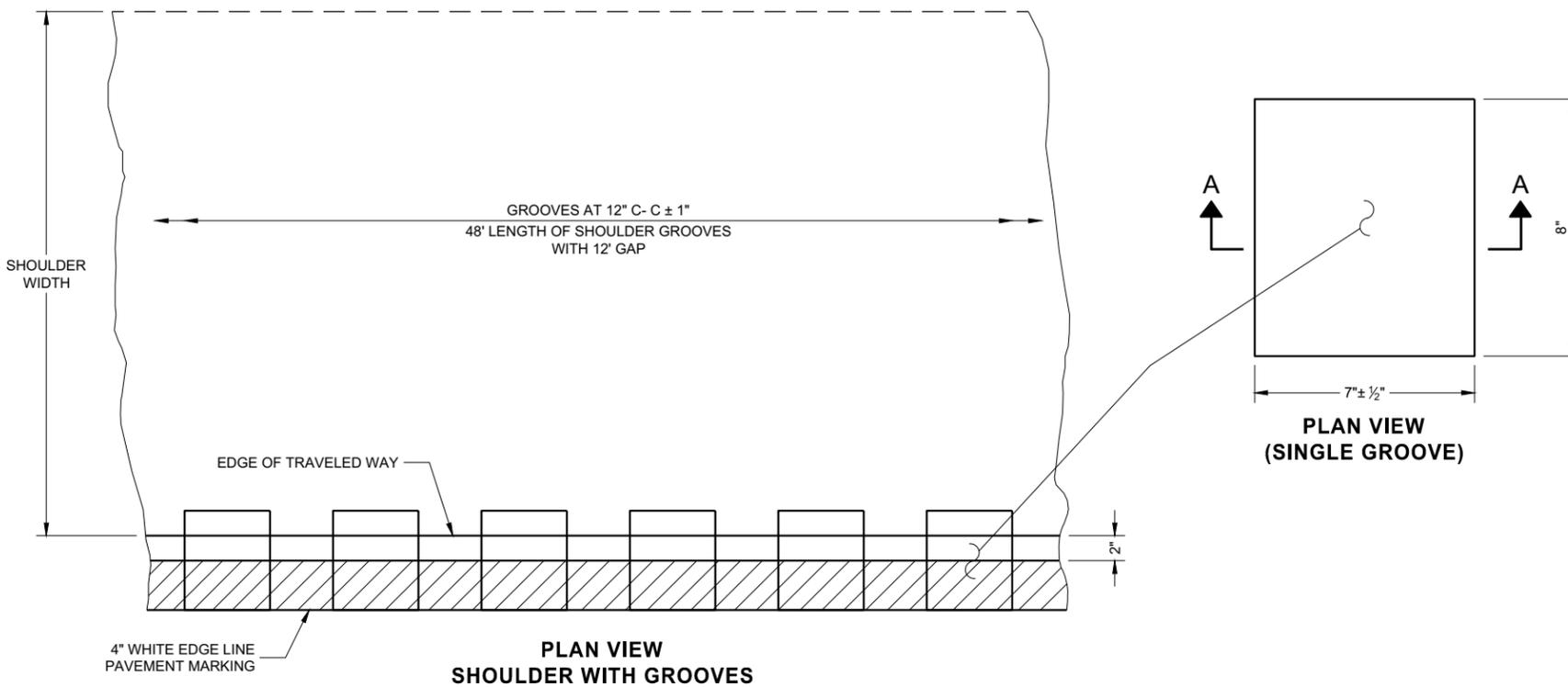
TYPE 1
 2 - LANE SHOULDER RUMBLE STRIP



SECTION A - A

**2-LANE RURAL SHOULDER
 RUMBLE STRIP, MILLING**

STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION



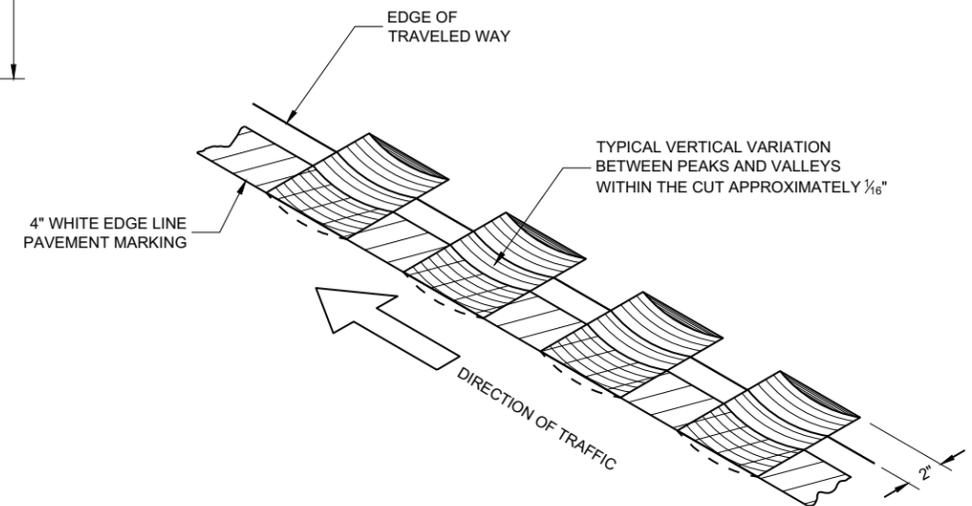
PLACEMENT DETAIL FOR TYPE 2 MILLED RUMBLE STRIP

GENERAL NOTES

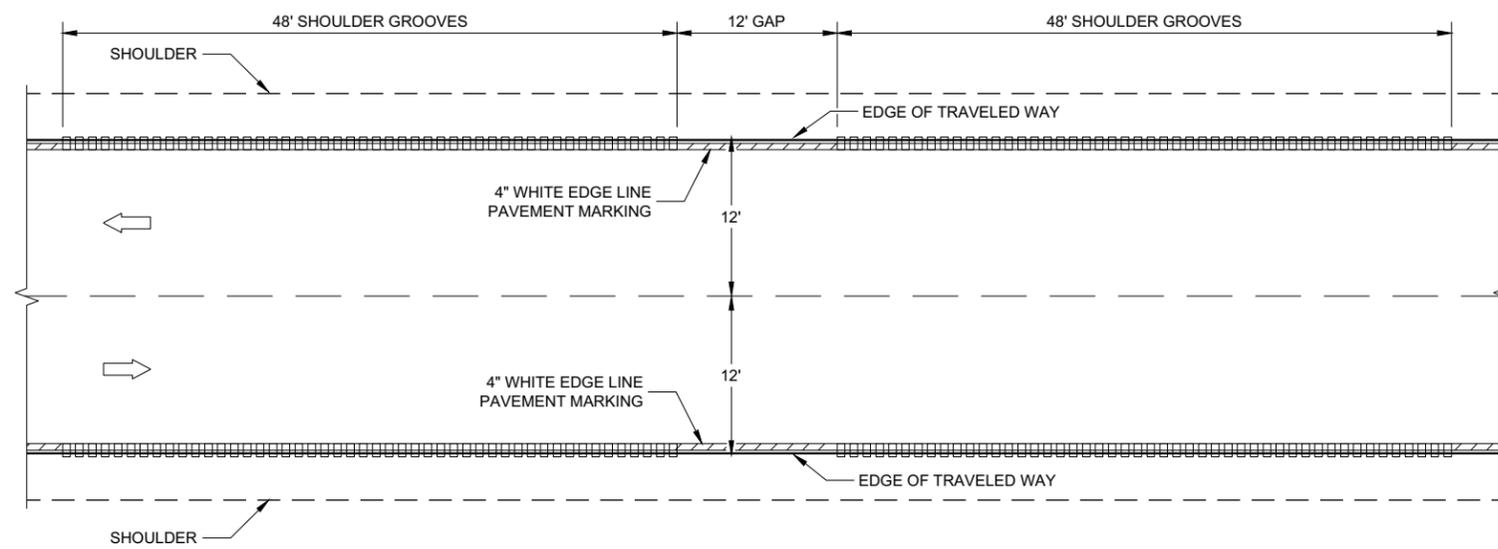
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

DO NOT MILL SHOULDER GROOVES THROUGH ANY INTERSECTION, MARKED CROSSWALK, NON-MOTORIZED PATH CROSSING, OR SNOWMOBILE CROSSING.

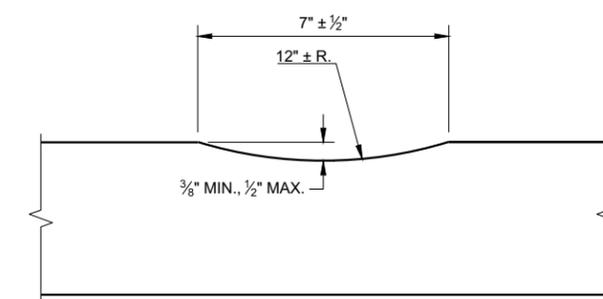
- ① SHOULDER GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS. WHEN DIRECTED BY THE ENGINEER.



ISOMETRIC



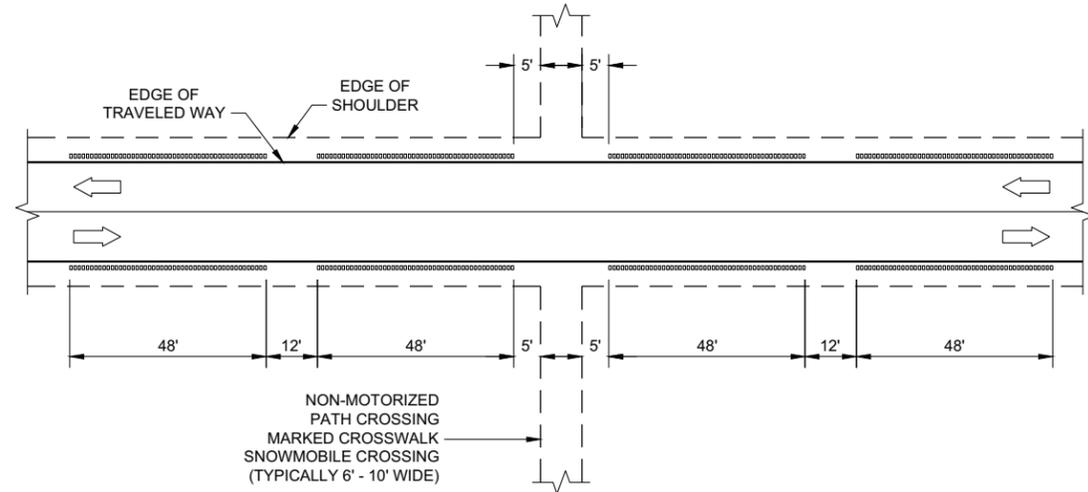
TYPE 2
2 - LANE SHOULDER RUMBLE STRIP



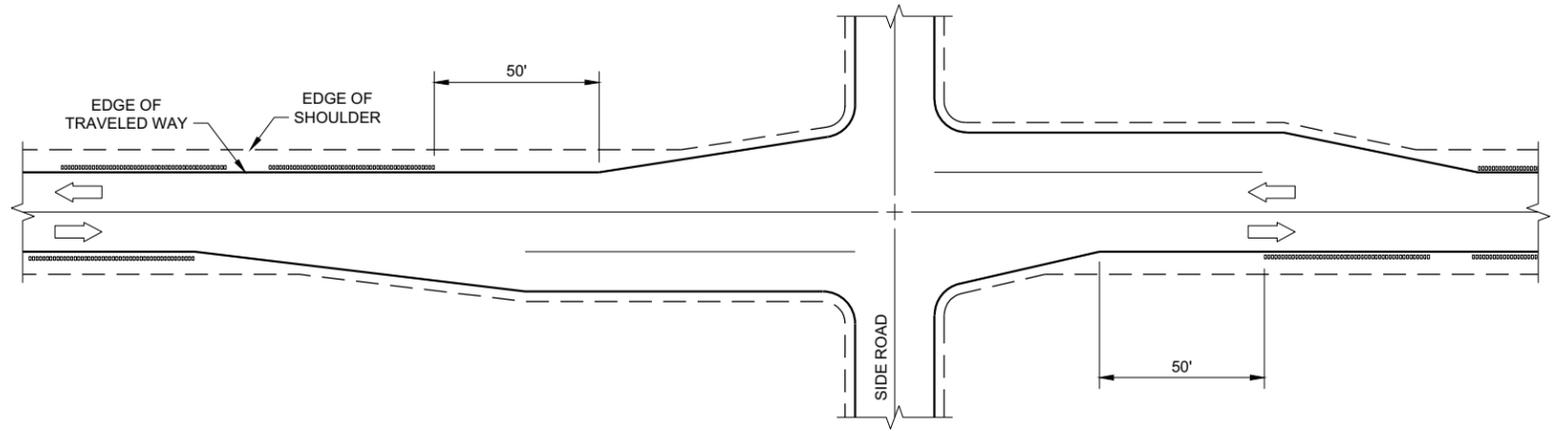
SECTION A - A

**2-LANE RURAL SHOULDER
RUMBLE STRIP, MILLING**

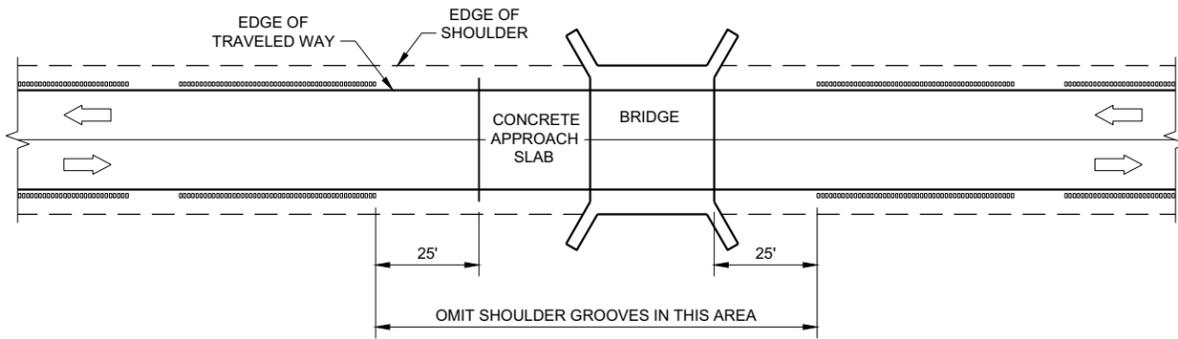
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



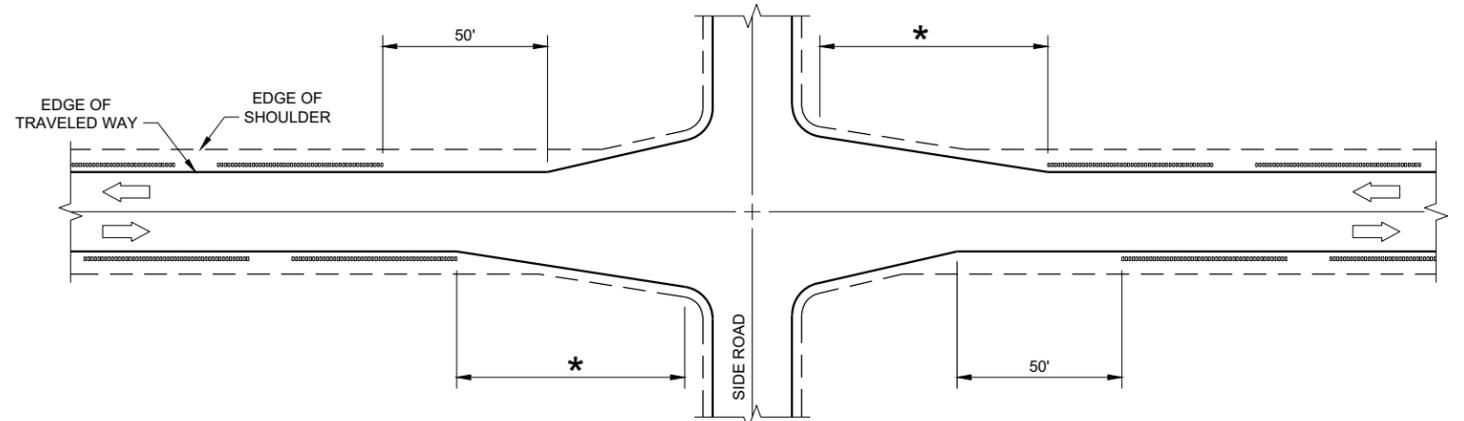
SHOULDER GROOVES AT MISCELLANEOUS CROSSINGS



SHOULDER GROOVES AT RIGHT TURN LANE

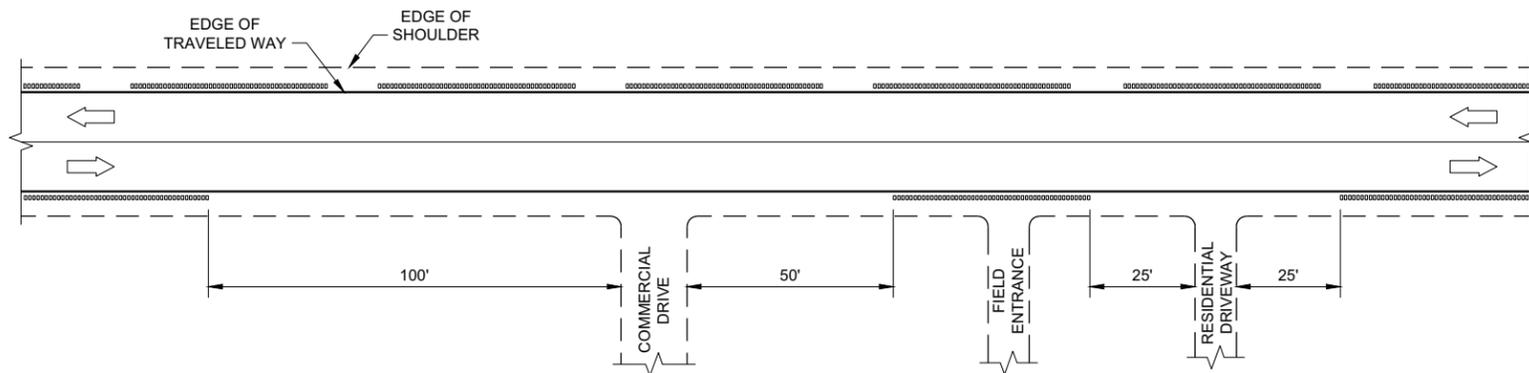


SHOULDER GROOVES AT BRIDGES



* GREATER OF 100' OR APPROACH TAPER LENGTH

SHOULDER GROOVES AT INTERSECTIONS WITH APPROACH TAPER



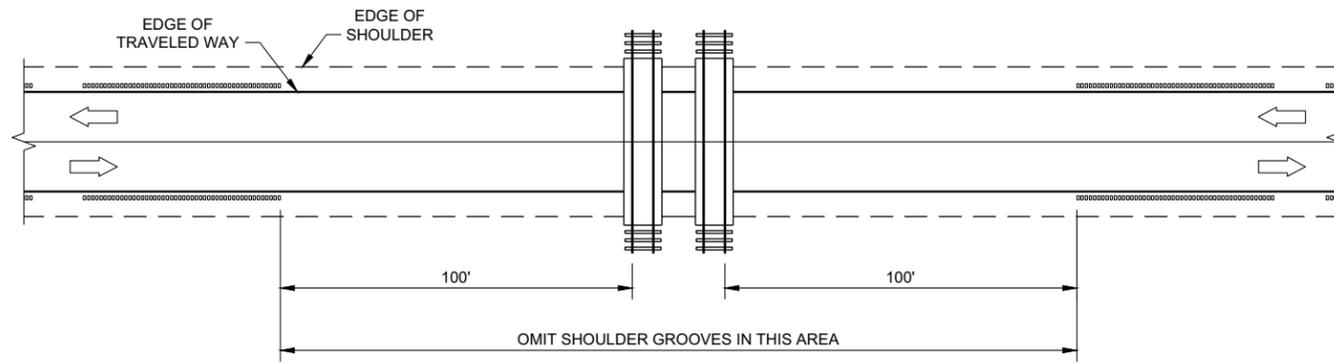
SHOULDER GROOVES AT DRIVEWAYS^①

GENERAL NOTES

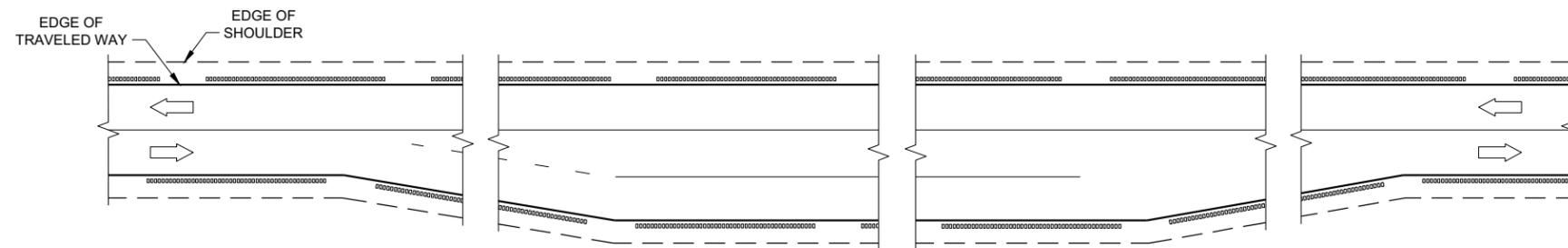
- ① SHOULDER GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS. WHEN DIRECTED BY THE ENGINEER.

**2-LANE RURAL SHOULDER
RUMBLE STRIP, MILLING**

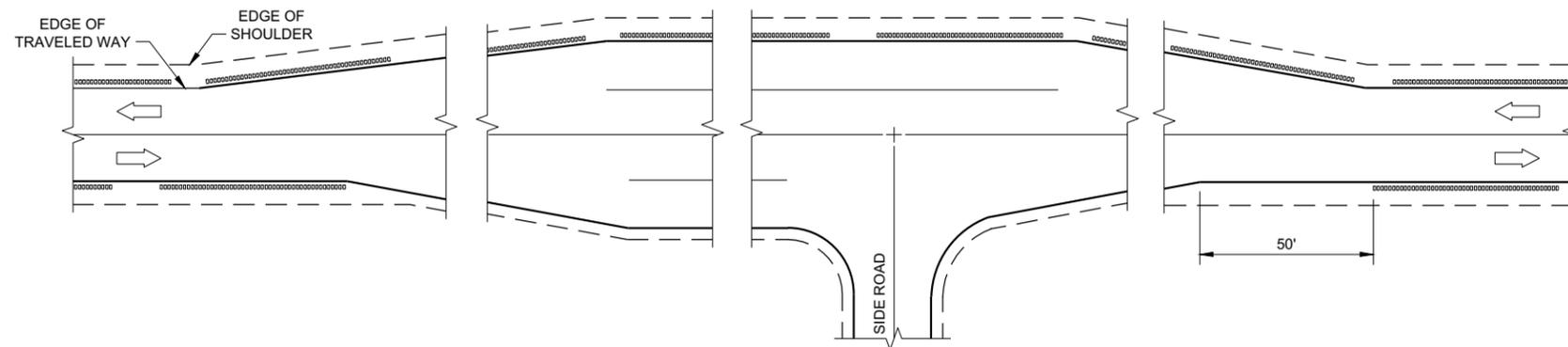
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



SHOULDER GROOVES AT RAILROADS



SHOULDER GROOVES AT PASSING AND CLIMBING LANES



SHOULDER GROOVES AT BYPASS LANES

**2-LANE RURAL SHOULDER
RUMBLE STRIP, MILLING**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018 DATE /S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
ENGINEER

FHWA

GENERAL NOTES

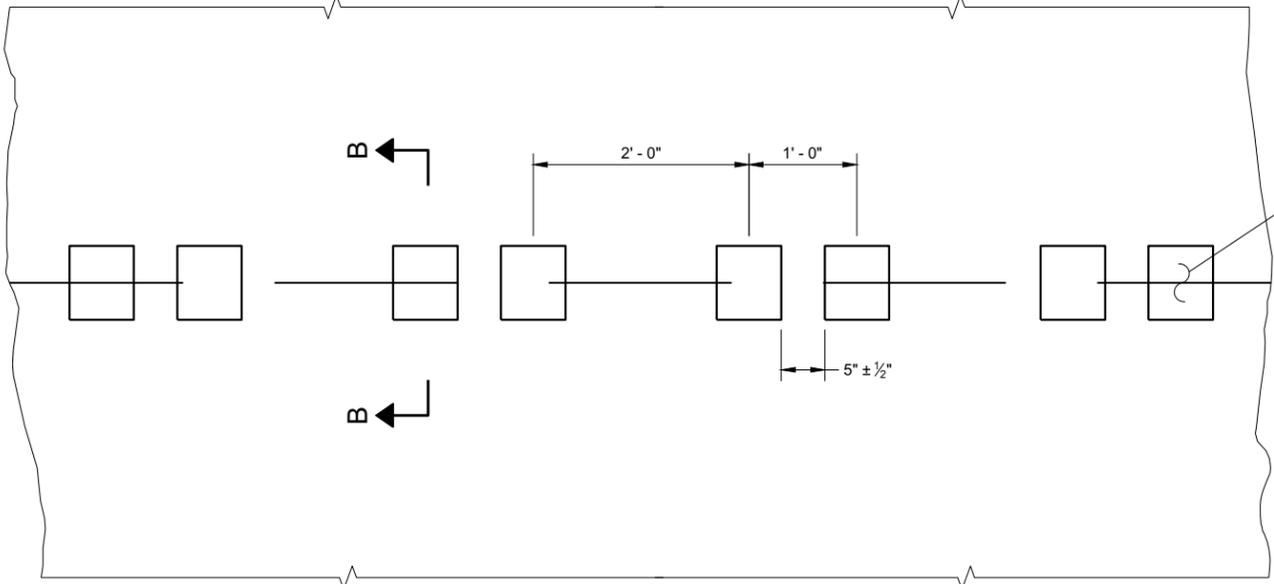
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

DO NOT MILL CENTERLINE GROOVES THROUGH ANY INTERSECTION, MARKED CROSSWALK, NON-MOTORIZED PATH CROSSING, OR SNOWMOBILE CROSSING.

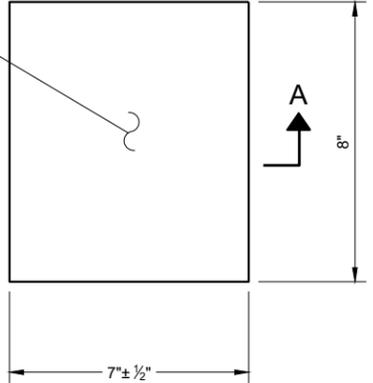
INSTALL PAVEMENT MARKING AFTER THE GROOVES ARE INSTALLED.

SEE SIGNING PLAN FOR SIGN REQUIREMENTS THAT MAY BE NEEDED.

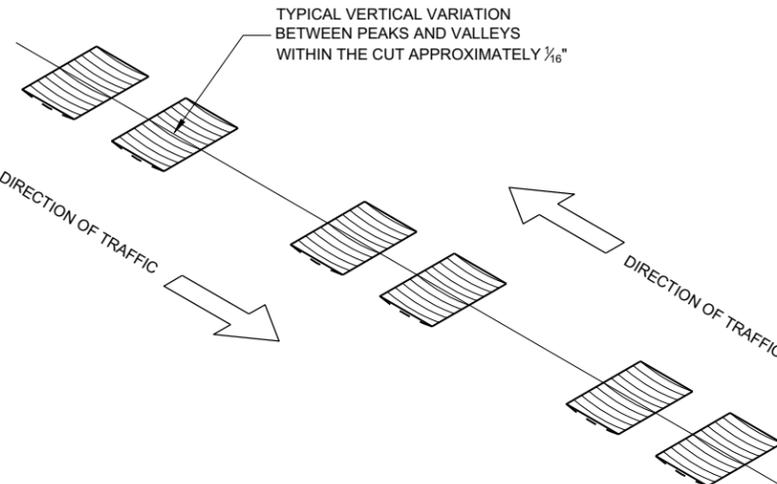
- ① CENTERLINE GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS. WHEN DIRECTED BY THE ENGINEER.



**PLAN VIEW
SHOULDER WITH GROOVES**

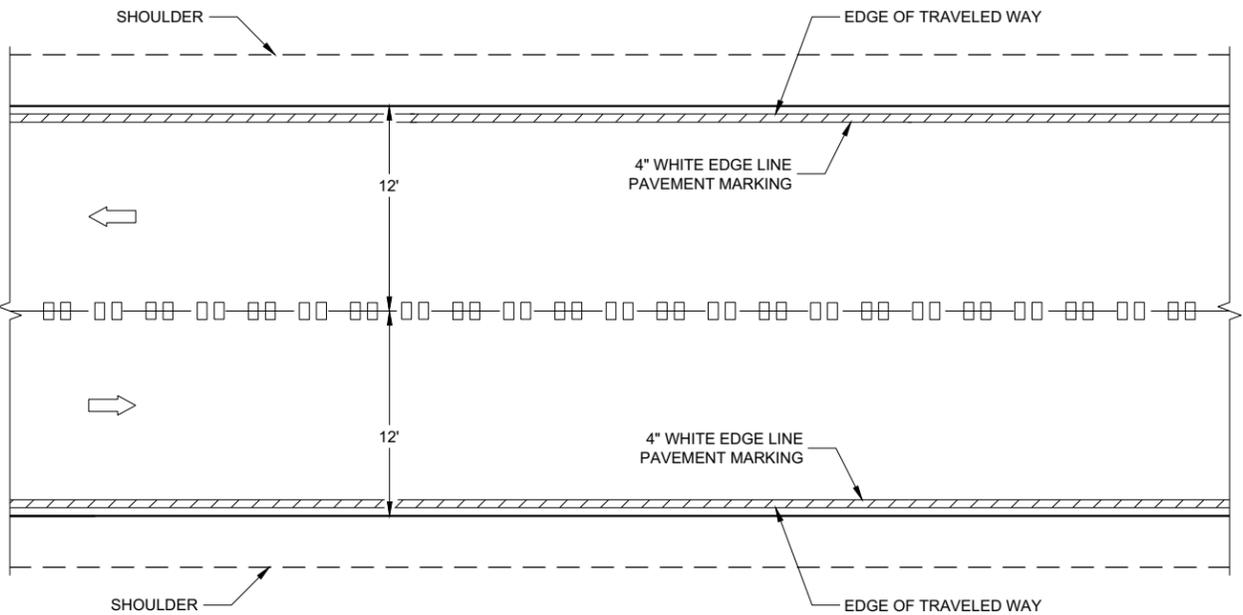


**PLAN VIEW
(SINGLE GROOVE)**

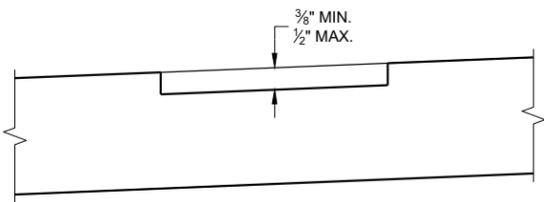


ISOMETRIC

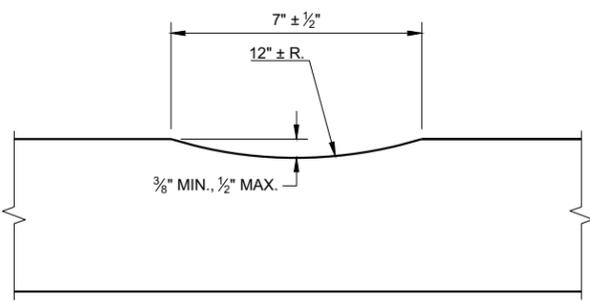
PLACEMENT DETAIL FOR TYPE 1 MILLED RUMBLE STRIP



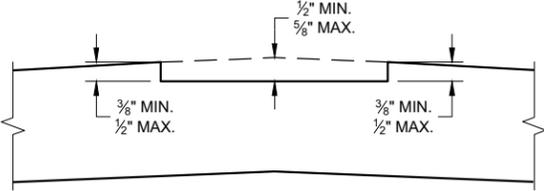
CENTERLINE GROOVES ON TWO-WAY ROADWAYS



**SECTION B - B
SUPERELEVATED ROADWAY**



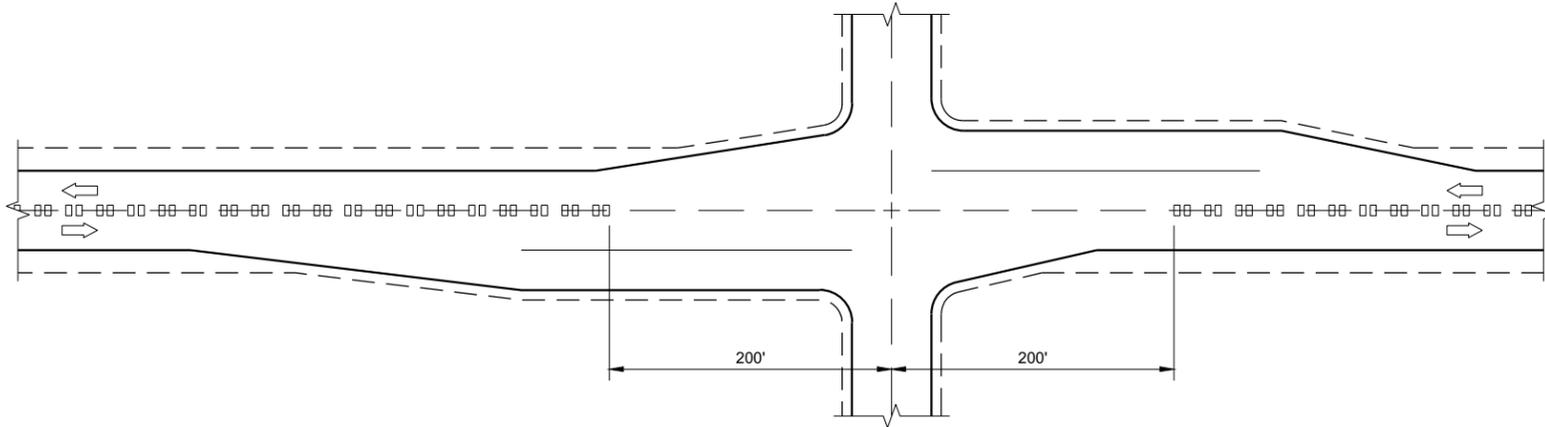
SECTION A - A



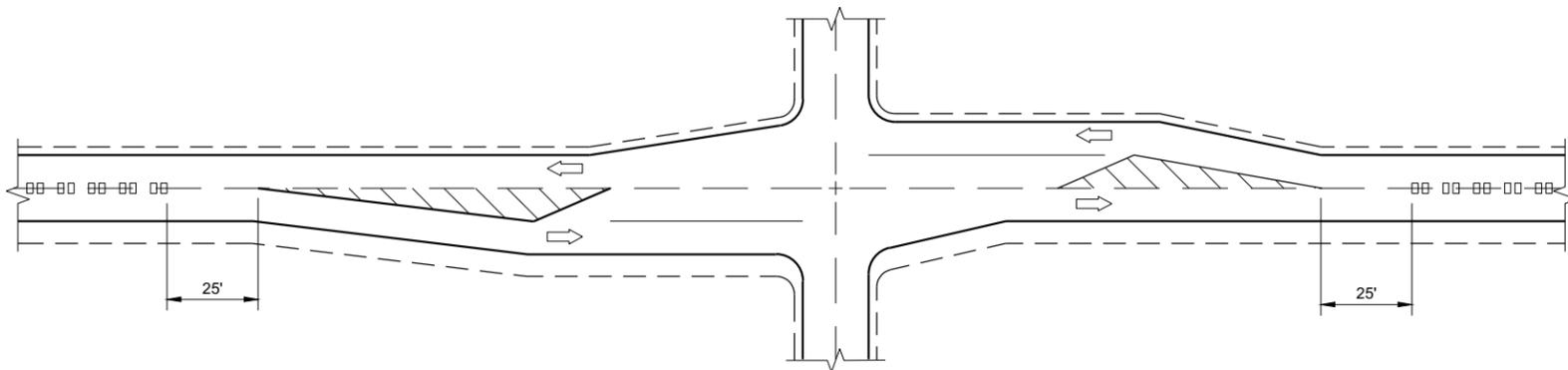
**SECTION B - B
CROWNED ROADWAY**

**2-LANE RURAL
CENTER LINE RUMBLE STRIP,
MILLING**

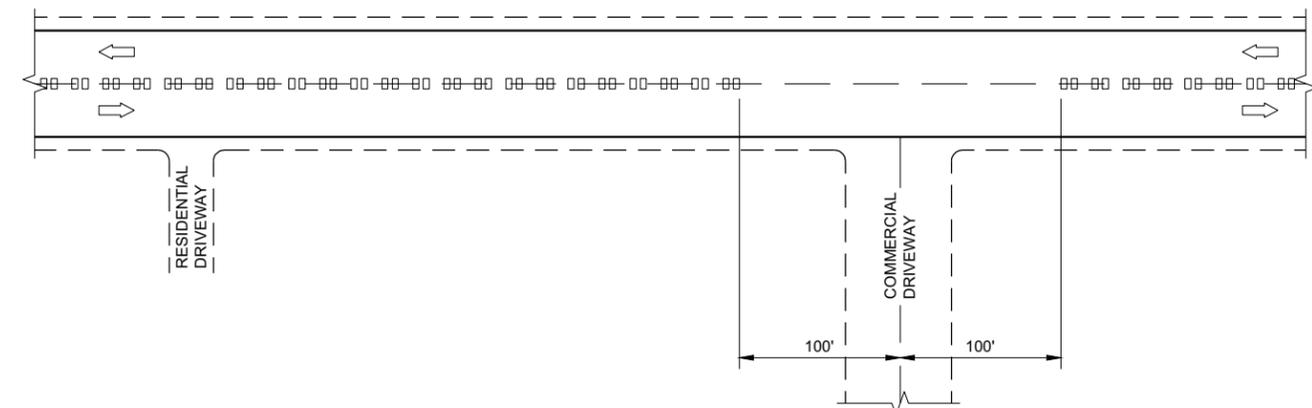
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



CENTERLINE GROOVES AT INTERSECTIONS



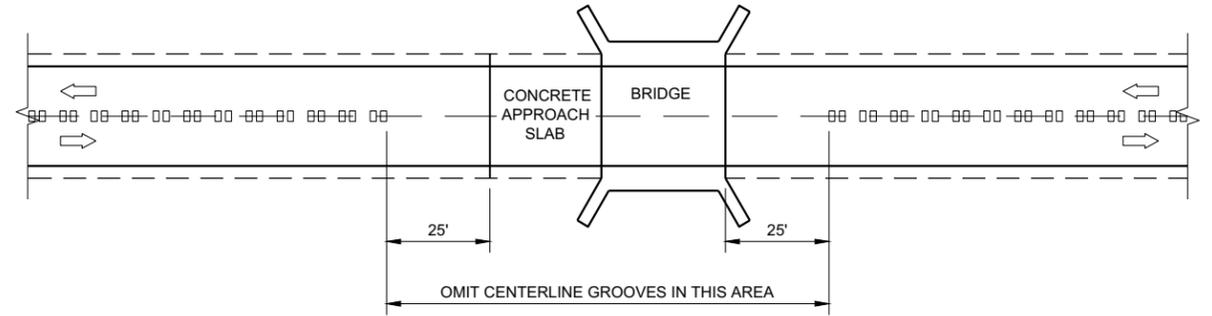
**CENTERLINE GROOVES AT INTERSECTIONS
(WITH LEFT TURN LANES)**



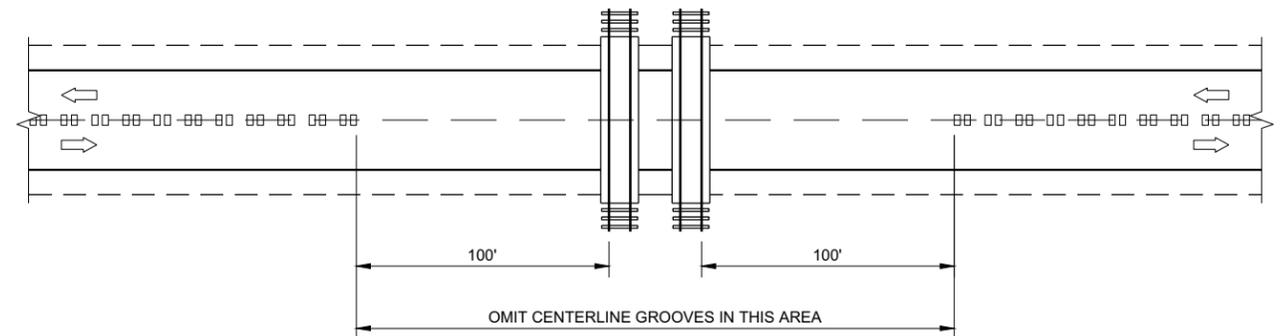
CENTERLINE GROOVES AT DRIVEWAYS^①

GENERAL NOTES

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



CENTERLINE GROOVES AT BRIDGES



CENTERLINE GROOVES AT RAILROADS

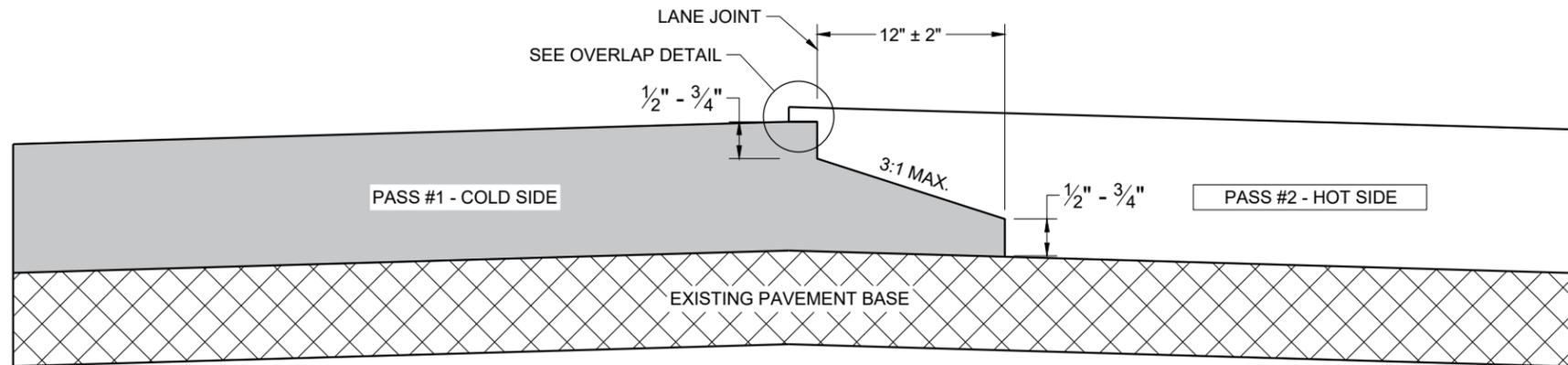
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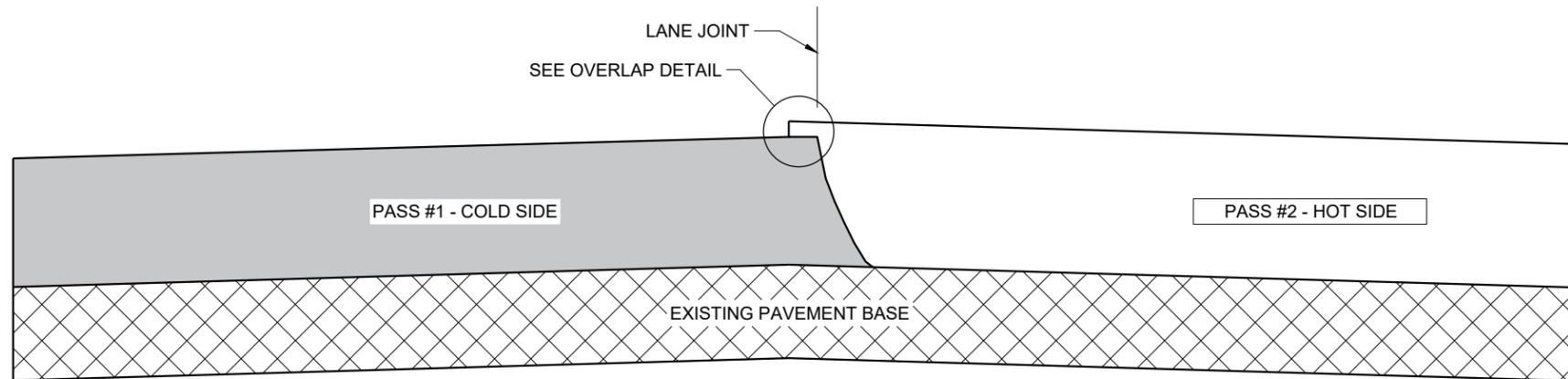
SDD 13A11 - 03b

SDD 13A11 - 03b

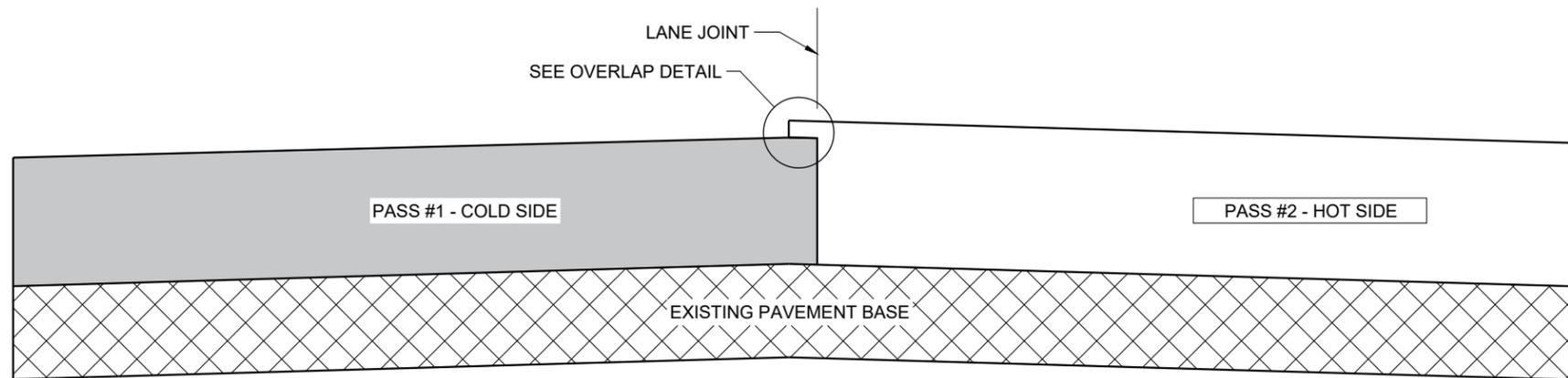
2-LANE RURAL CENTERLINE RUMBLE STRIP, MILLING	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 7/2018 DATE	/S/ Rodney Taylor ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA	



**TYPICAL PAVEMENT CROSS SECTION
NOTCHED WEDGE JOINT**



**TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT**



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

GENERAL NOTES

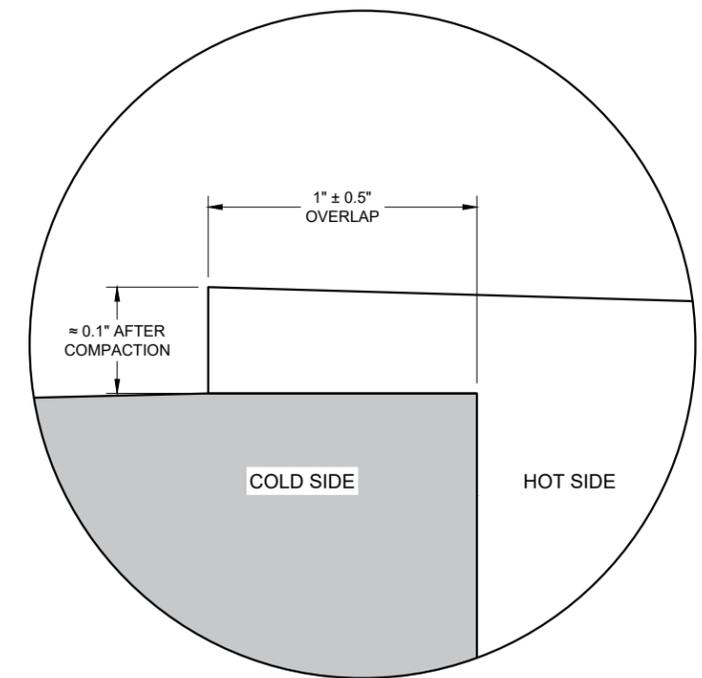
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

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

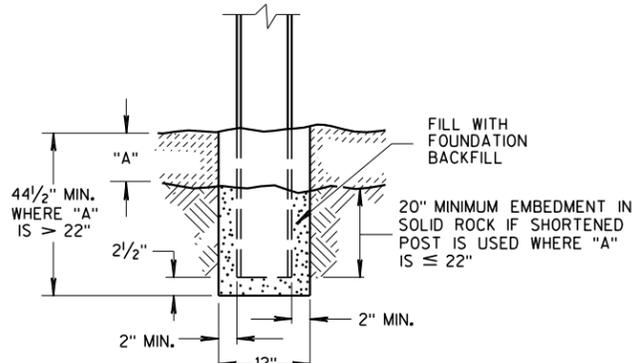
SDD 13C19 - 03

HMA LONGITUDINAL JOINTS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED November 2020 DATE	/S/ Steven Hefel HMA PAVEMENT ENGINEER
FHWA	

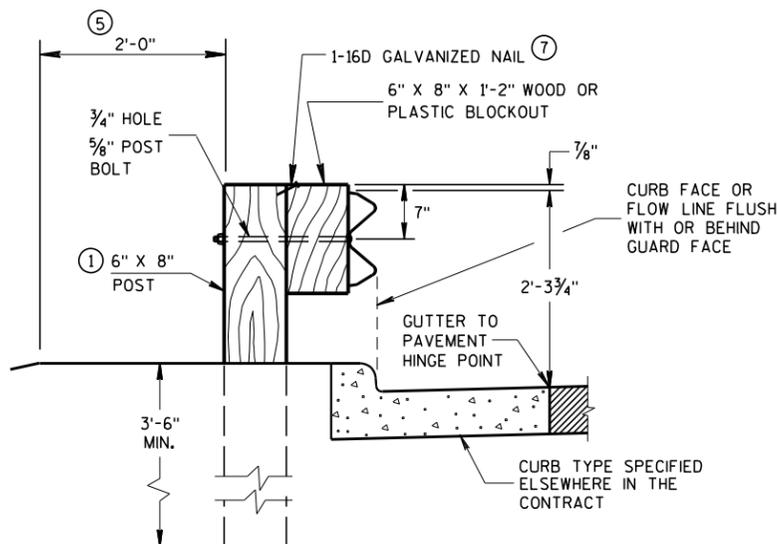
GENERAL NOTES

- ① W6 X 9 OR W6 X 8.5 STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS ARE ACCEPTABLE ALTERNATIVES FOR 6" X 8" 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 POSTS 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 DAMAGED 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 DISTANCE FROM BACK OF POST TO SHOULDER HINGE 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 INCH DIAMETER POST HOLE EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE APPROXIMATELY 2 1/2 INCHES DEEP. CUT THE POSTS TO LENGTH AND PLACE IN THE HOLE. BACKFILL WITH MATERIAL EXCAVATED FROM THE HOLE 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.

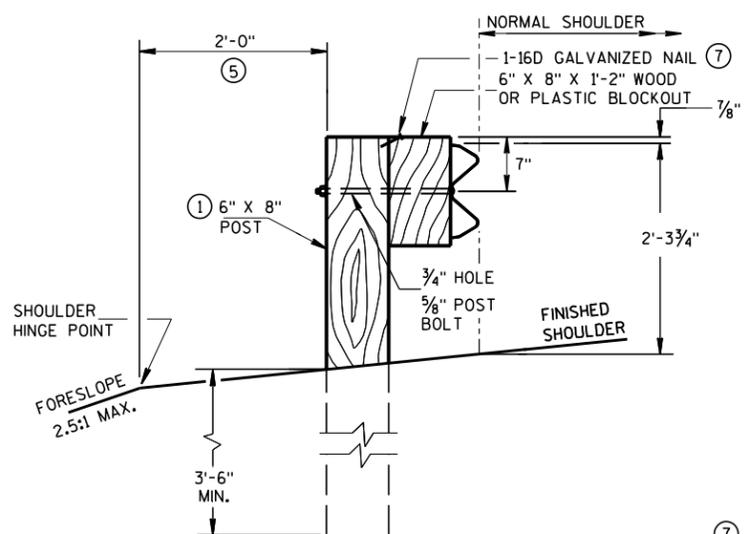
INSTALL BEAM GUARD SECTIONS AND ALL NECESSARY HARDWARE ACCORDING TO THE APPLICABLE PLAN AND CURRENT STANDARD AND SUPPLEMENTAL SPECIFICATIONS. ALL DIMENSIONS ARE SUBJECT TO MANUFACTURER'S TOLERANCES EXCEPT WHERE ALLOWABLE TOLERANCES ARE SHOWN.



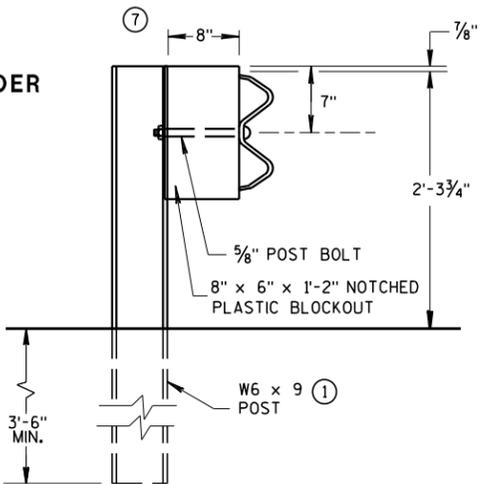
END VIEW SETTING STEEL OR WOOD POST IN ROCK ⑥



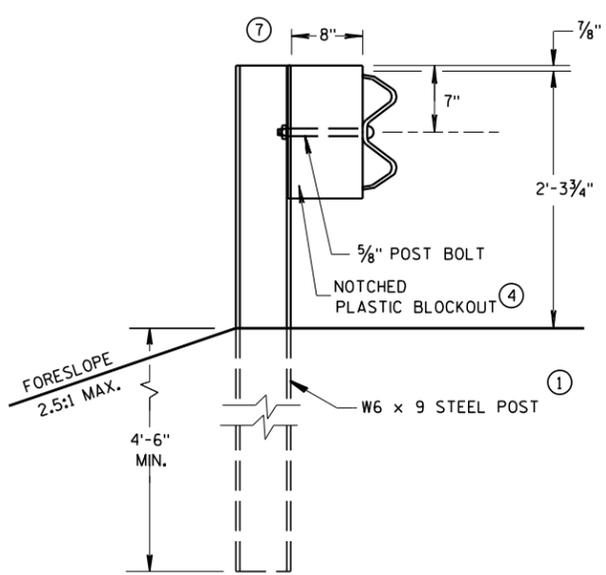
END VIEW LOCATED ALONG A CURBED ROADWAY



END VIEW LOCATED ALONG A ROADWAY SHOULDER STANDARD INSTALLATION

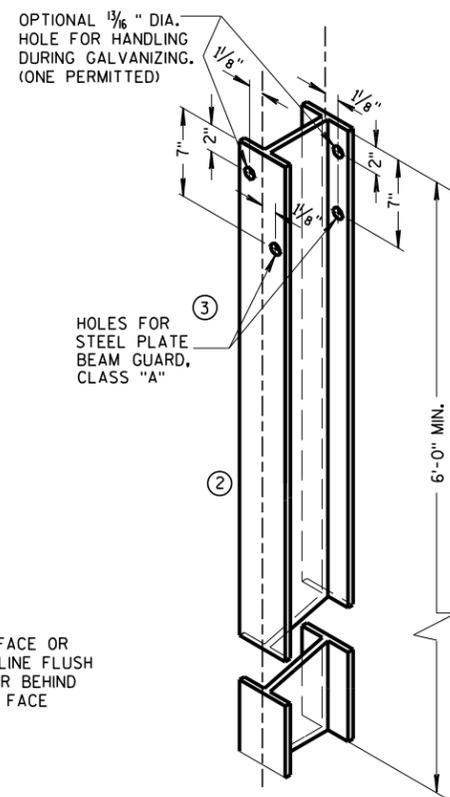


END VIEW STEEL POST & NOTCHED PLASTIC BLOCKOUT ALTERNATIVE STANDARD INSTALLATION



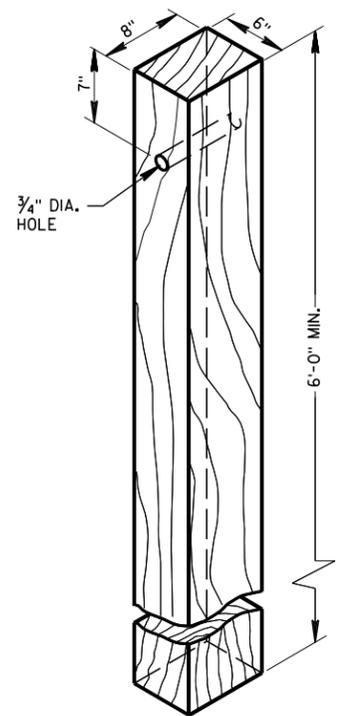
END VIEW LONGER POST AT HALF POST SPACING W BEAM (LHW)

TYPICAL INSTALLATION OF STEEL PLATE BEAM GUARD

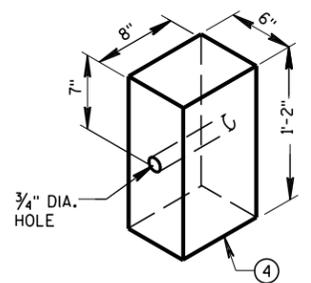


STEEL POST & HOLE PUNCHING DETAIL (W6 X 9) ①

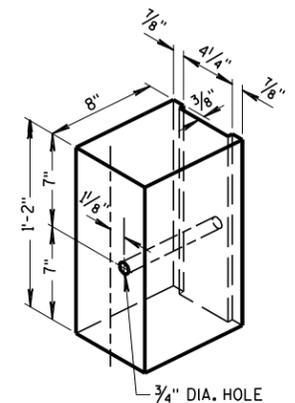
ALL HOLES 3/8" DIAMETER EXCEPT AS NOTED



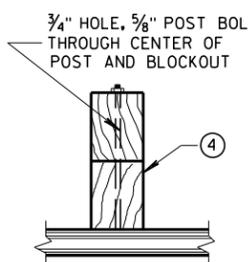
WOOD POST (6" X 8") NOMINAL



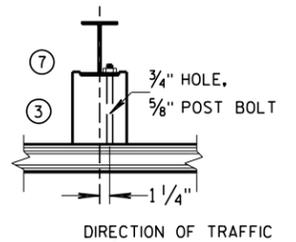
WOOD OR PLASTIC BLOCKOUT FOR WOOD POSTS



TYPICAL NOTCHED PLASTIC BLOCKOUT FOR STEEL POSTS ①



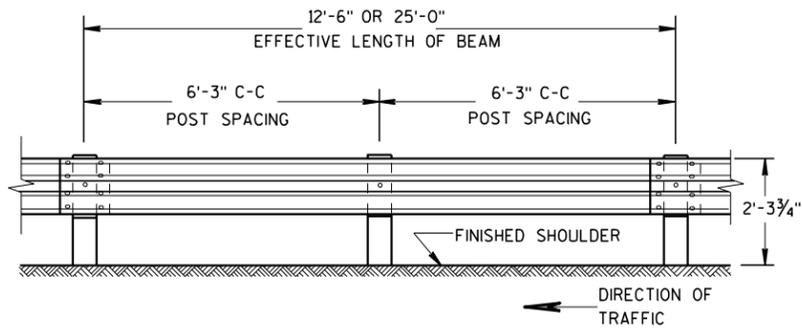
PLAN VIEW WOOD POST, BLOCKOUT & BEAM



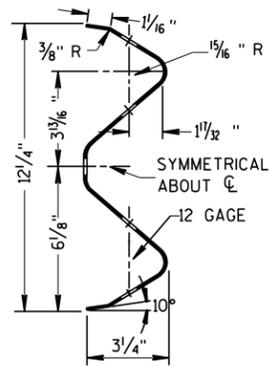
PLAN VIEW STEEL POST, NOTCHED PLASTIC BLOCKOUT & BEAM

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

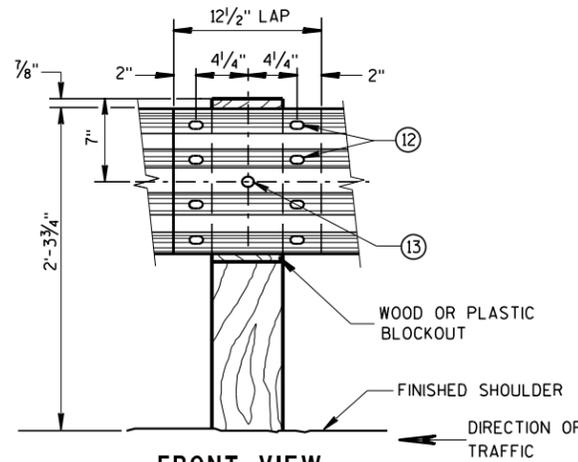
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION



**FRONT VIEW
POST SPACING STANDARD INSTALLATION**



SECTION THRU W BEAM

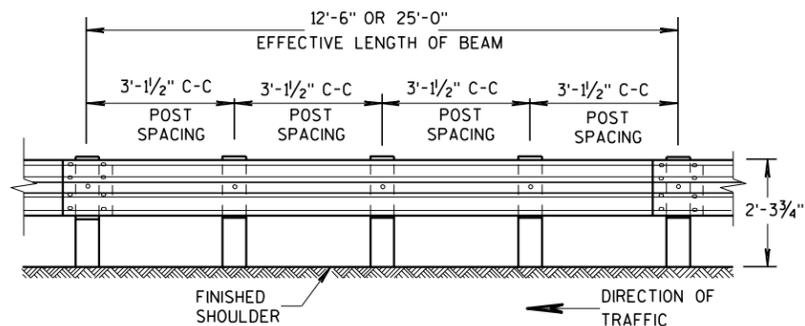


**FRONT VIEW
BEAM SPLICE AT WOOD POST
AND POST MOUNTING DETAIL**

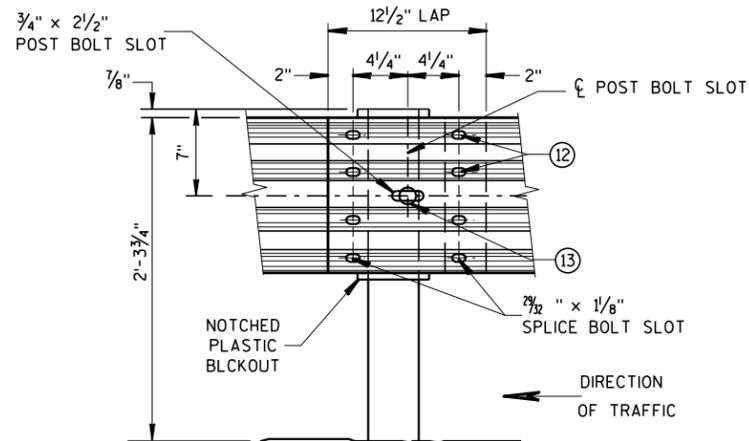
GENERAL NOTES

FURNISH GUARDRAIL DEFLECTORS FROM APPROVED PRODUCTS LIST.

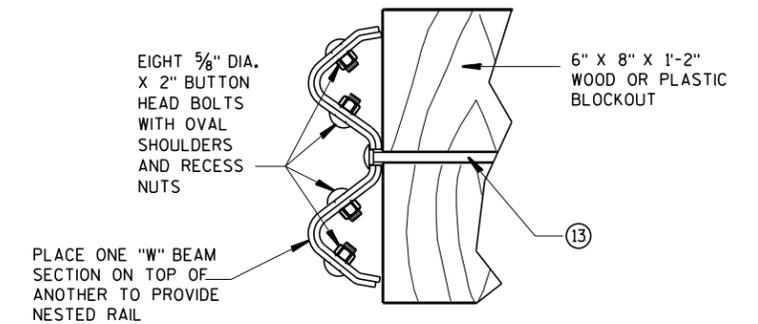
- ⑨ DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINA. START REFLECTORS AT POST #9 AND SPACE EVENLY EVERY 100 FEET (MAX.) TO THE END OF GUARDRAIL RUN, USING A MINIMUM OF 3 REFLECTORS.
- ⑫ 8 - 5/8" ϕ X 2" BUTTON HEAD BOLTS WITH OVAL SHOULDERS & RECESS NUTS.
- 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**

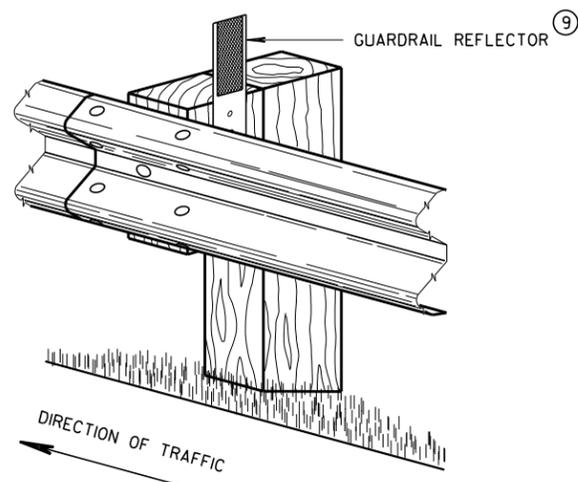


NESTED W BEAM (NW)
USE ALL OTHER STANDARD BEAM GUARD DETAILS FOR
CONSTRUCTING NESTED W BEAM (NW)

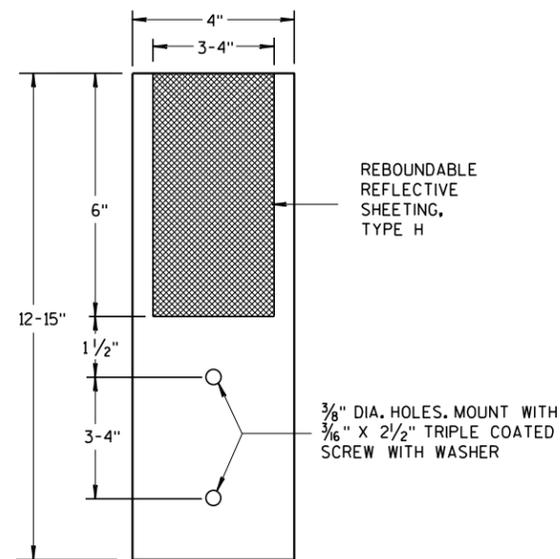
6

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* USE DOUBLE SIDED WHITE GUARDRAIL 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.



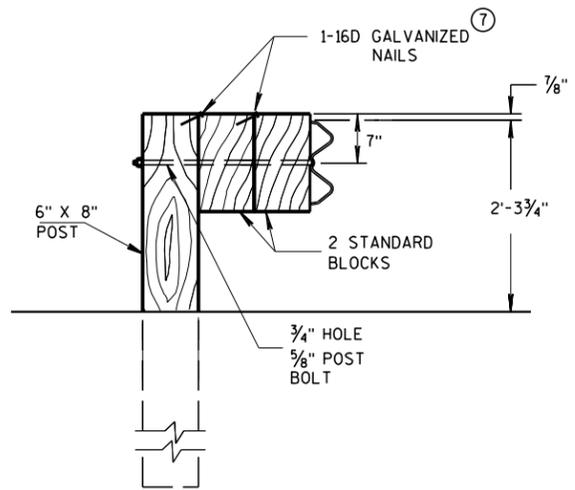
**4" X 12" GUARDRAIL REFLECTOR DETAIL
AND TYPICAL INSTALLATION ***



4" x 12" GUARDRAIL REFLECTOR

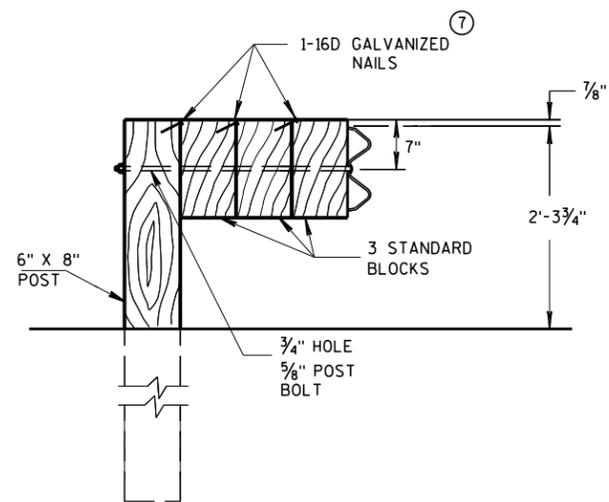
**STEEL PLATE BEAM GUARD,
CLASS "A",
INSTALLATION & ELEMENTS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



DETAIL FOR DOUBLE BLOCKS

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

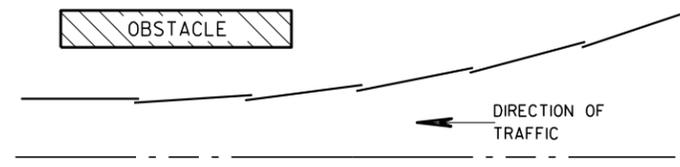


DETAIL FOR TRIPLE BLOCKS

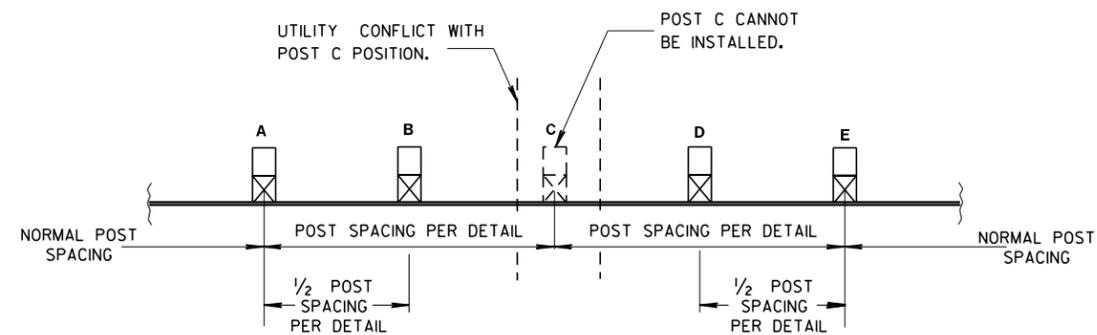
TRIPLE BLOCK DETAIL IS LIMITED TO ONE LOCATION WITHIN A BEAM GUARD RUN.

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**

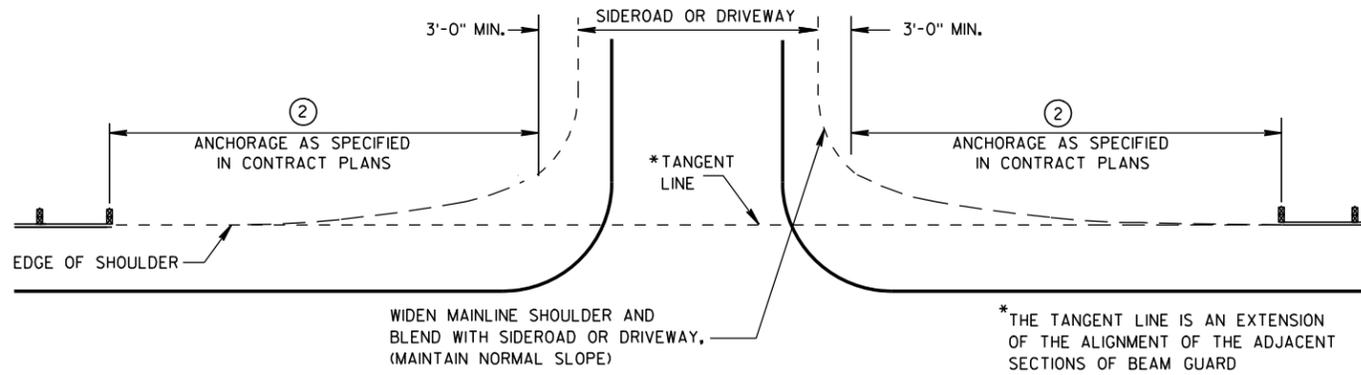


**POST DRIVING FOR CONTINUOUS
UNDERGROUND OBSTRUCTION**

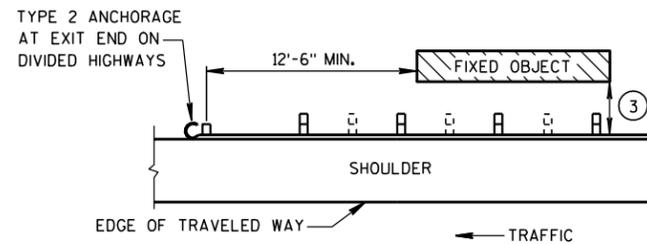
**STEEL PLATE BEAM GUARD,
CLASS "A",
INSTALLATION & ELEMENTS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



BEAM GUARD AT SIDEROADS OR DRIVEWAYS



**BEAM GUARD AT OBSTACLES
EXIT END - ONE WAY TRAFFIC**

GENERAL NOTES

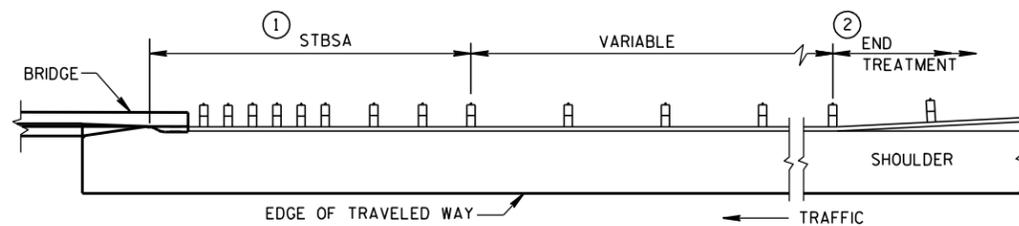
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE PERTINENT STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

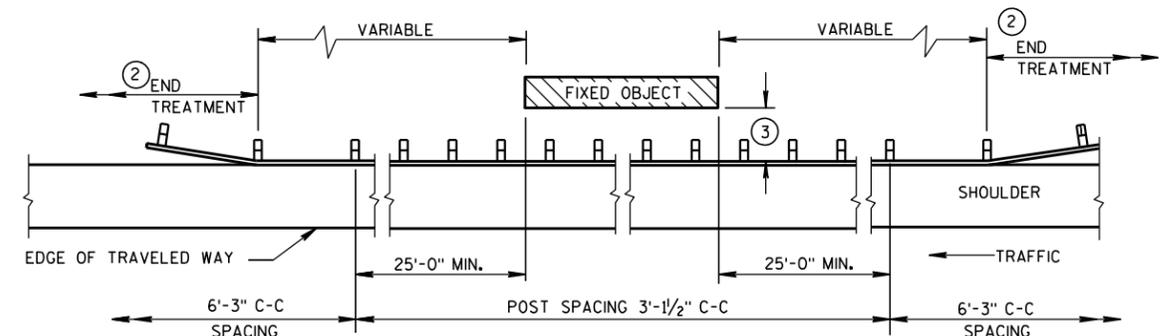
THE LOCATIONS AND LENGTHS OF BEAM GUARD ARE SHOWN ELSEWHERE IN THE PLAN.

- ① STEEL THRIE BEAM STRUCTURAL APPROACH (STBSA) - SEE CURRENT SDD 14B20.
- ② USE AN APPROVED END TREATMENT FOR THE TRAFFIC APPROACH SIDE OF BRIDGE/OBSTACLES. USE TYPE 2 ANCHORAGE ONLY AT THE DOWNSTREAM ENDS OF BEAM GUARD LOCATED ALONG ROADWAYS WITH ONE WAY TRAFFIC.

MINIMUM LATERAL DISTANCE FROM FACE OF BEAM GUARD TO FIXED OBJECT	POST SPACING
3'-6"	3' - 1 1/2"
4'-6"	6' - 3"



BEAM GUARD AT FULL WIDTH BRIDGES

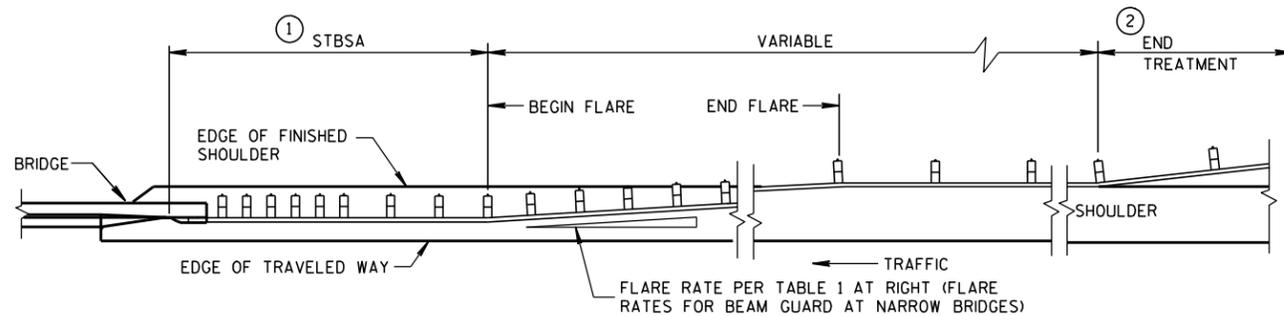


BEAM GUARD AT OBSTACLES - TWO WAY TRAFFIC

(RAIL TO OBSTACLE CLEARANCE 3'-6" TO 4'-6")

**TABLE 1
FLARE RATES FOR BEAM
GUARD AT NARROW BRIDGES**

POSTED SPEED (MPH)	FLARE RATE
25	13:1
30	15:1
35	16:1
40	18:1
45	21:1
50	24:1
55	26:1
65	30:1

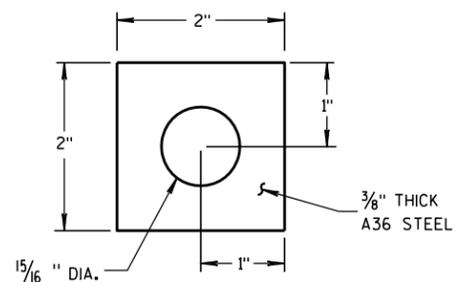
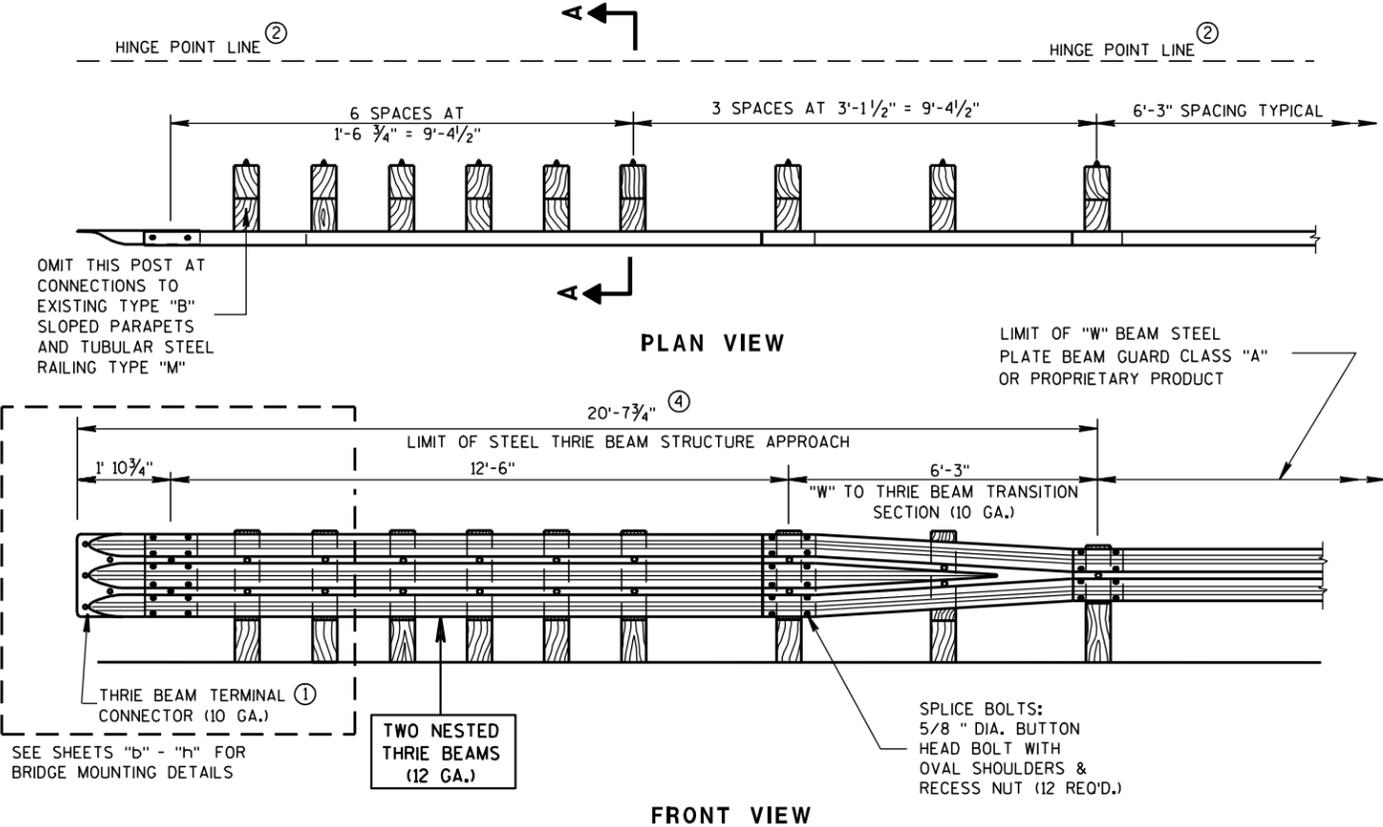


**BEAM GUARD AT NARROW BRIDGES
(FLARED TO SHOULDER EDGE, THEN PARALLEL TO ROADWAY)**

**STEEL PLATE BEAM GUARD
CLASS "A"
AT BRIDGES, OBSTACLES
AND SIDEROADS/DRIVEWAYS**

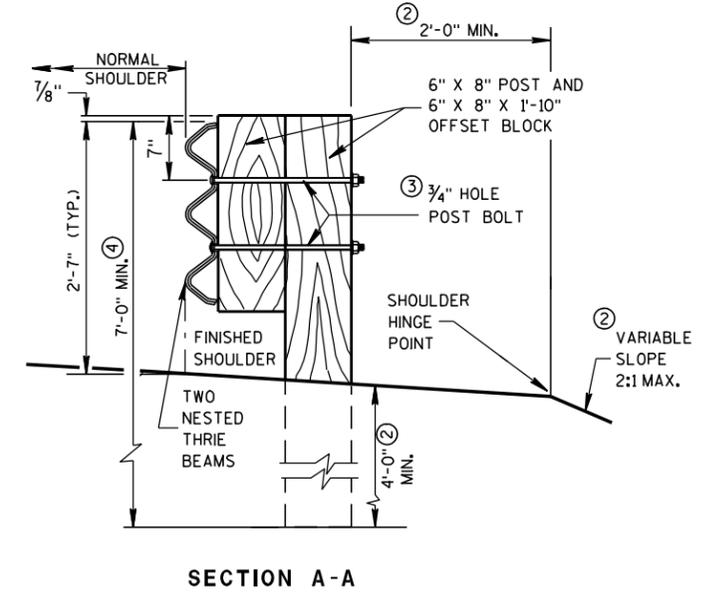
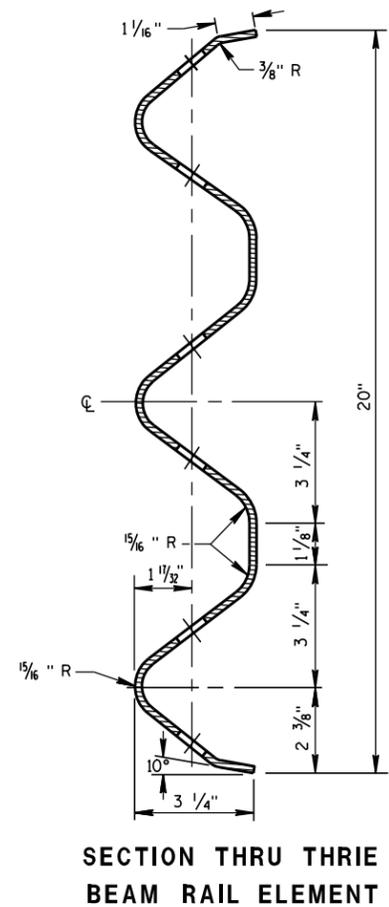
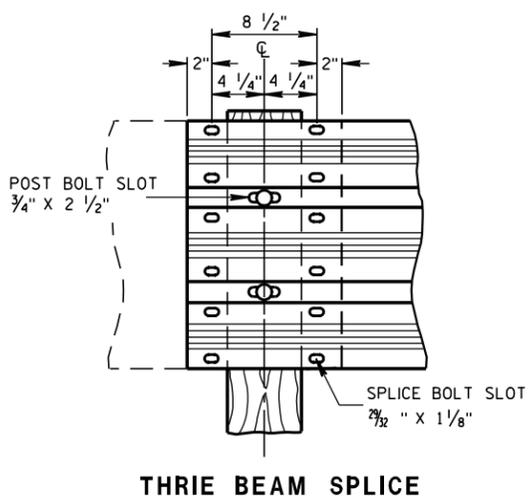
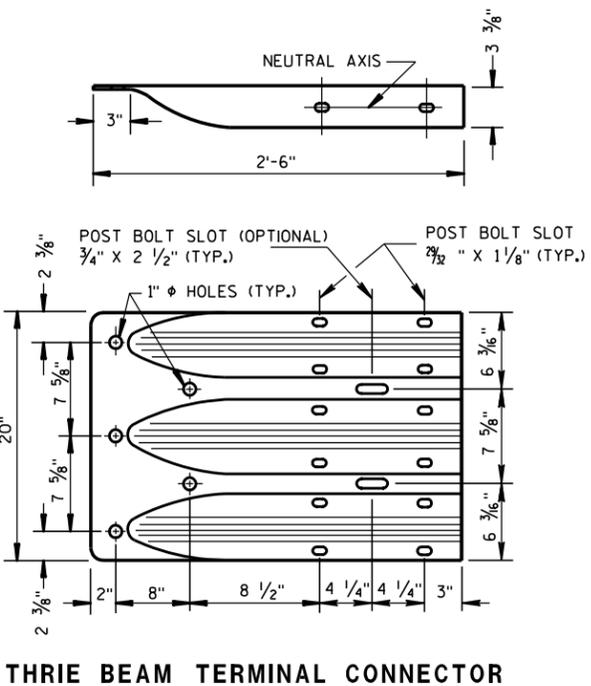
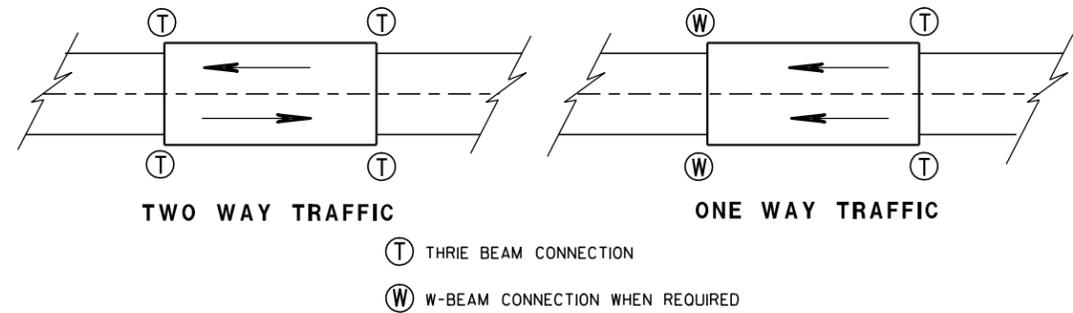
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8-21-07 /s/ Jerry H. Zogg
DATE ROADWAY STANDARDS DEVELOPMENT
ENGINEER
FHWA



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 1/2", AND 12" DIAMETER AROUND POST. SEE 14B15 FOR MORE DETAILS.
- BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.
 - MINIMUM EMBEDMENT SHALL BE 4'-0". WHERE EXISTING CONDITIONS DO NOT PERMIT THE APPROPRIATE EARTHWORK SHOWN ON THE PLAN TYPICAL SECTIONS OR DETAILS, THE ENGINEER MAY ALLOW THE REDUCTION OR ELIMINATION OF THE 2 FOOT DISTANCE TO THE HINGE POINT. OTHERWISE BUILD AS THE PLAN SHOWS OR AS THE ENGINEER DIRECTS. IF THE 2 FOOT DISTANCE TO THE HINGE POINT IS REDUCED OR ELIMINATED, INCREASE THE POST EMBEDMENT DEPTH TO 4'-6" OR MORE.
 - POST BOLTS ARE 5/8" DIAMETER ASTM A307 BUTTON HEAD BOLT. A POST BOLT REQUIRES A 5/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX AND A 5/8" DIAMETER F844 FLAT WASHER. LENGTH OF POST BOLT MAY VARY.
 - ALL WOOD POSTS MUST BE 6" X 8" AND AT LEAST 7'-0" LONG.

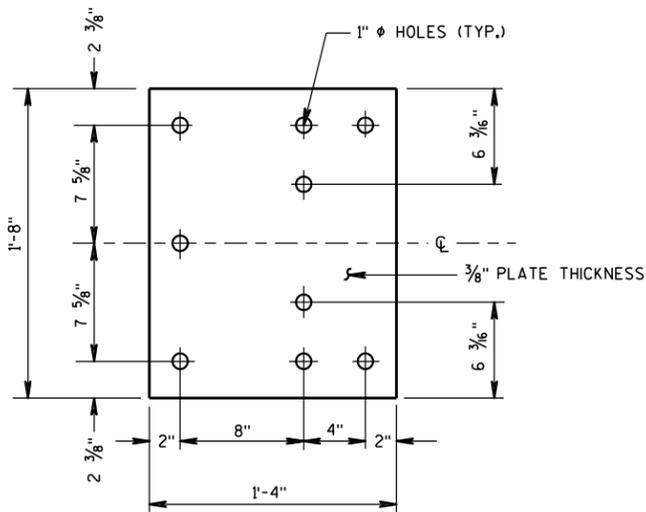


STEEL THRIE BEAM STRUCTURE APPROACH

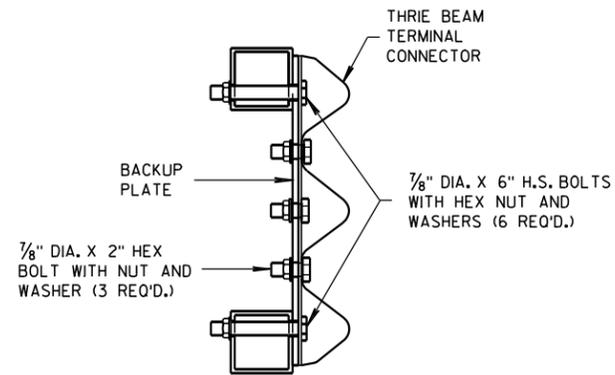
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/31/2012 DATE /S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA



BACK-UP PLATE DETAIL

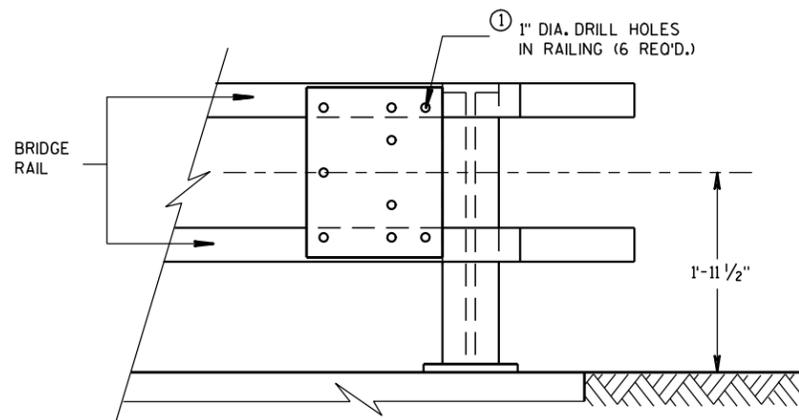


SECTION G-G

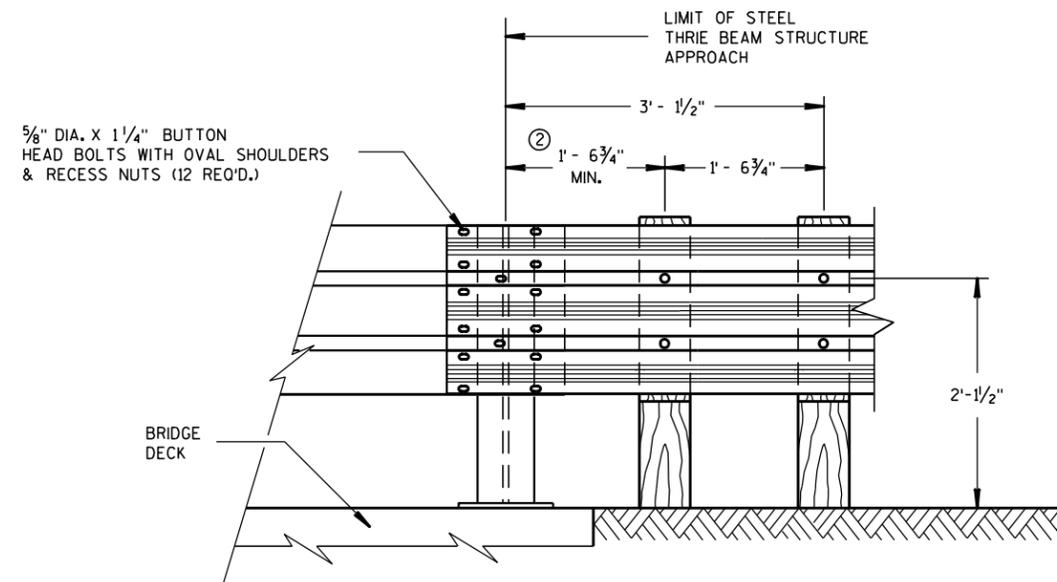
GENERAL NOTES

BOLTS, PLATES, NUTS AND WASHERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM SPECIFICATION A 325 AND BE GALVANIZED IN ACCORDANCE WITH ASTM A 153.

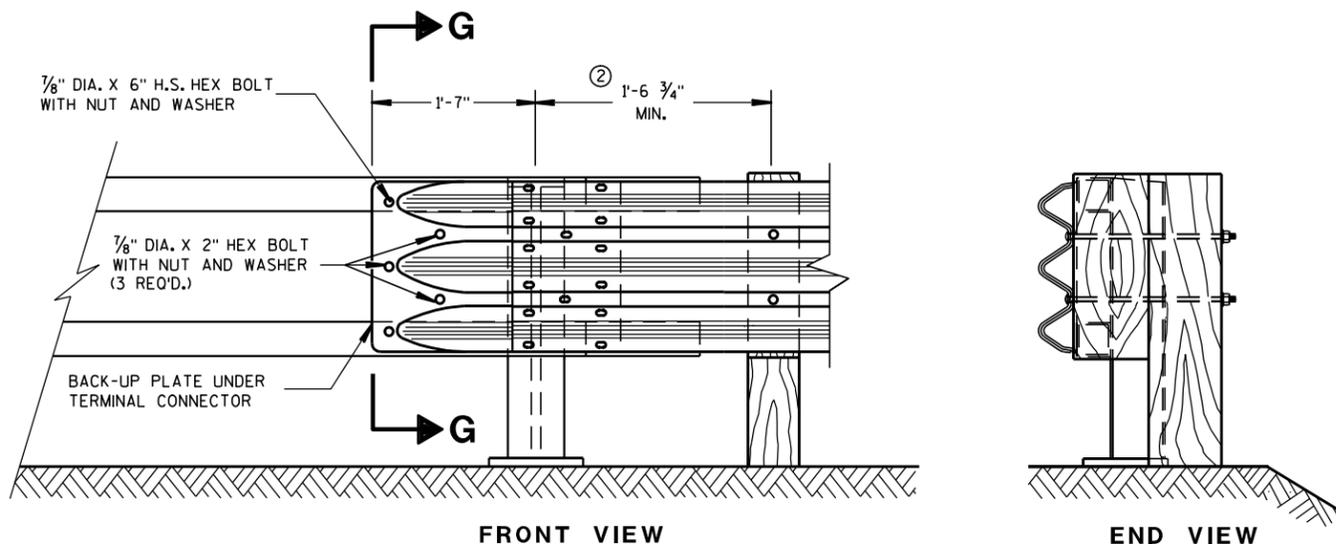
- ① DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.
- ② VARY THIS DIMENSION DEPENDING ON ABUTMENT TYPE, WINGWALL DETAILS, AND ANGLE OF SKEW. PLACE THE FIRST WOOD POST OFF THE BRIDGE SHALL AS CLOSE AS FEASIBLE TO THE STEEL END POST.



BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING



**FRONT VIEW
THRIE BEAM CONNECTION TO
STEEL RAILING TYPE "W"**



FRONT VIEW

END VIEW

**THRIE BEAM CONNECTION TO
TUBULAR RAILING TYPE "F"**

STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO BRIDGE RAILING TYPES "F" AND "W"	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 8/31/2012 DATE	/s/ Jerry H. Zogg ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA	

BILL OF MATERIALS

NOTE NO.	DESCRIPTION
①	WOOD BREAKAWAY TERMINAL POST: 5 1/2" X 7 1/2" 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 1/2" 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'-6 1/2"
⑬	IMPACT HEAD
⑭	0.040" ALUMINUM SHEET WITH REFLECTIVE SHEETING TYPE F PER SECTION 637 OF THE STANDARD SPECIFICATIONS

GENERAL NOTES

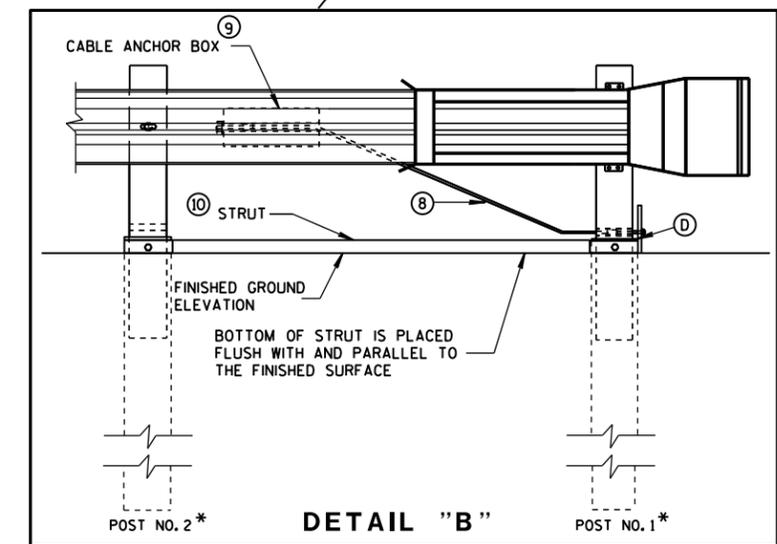
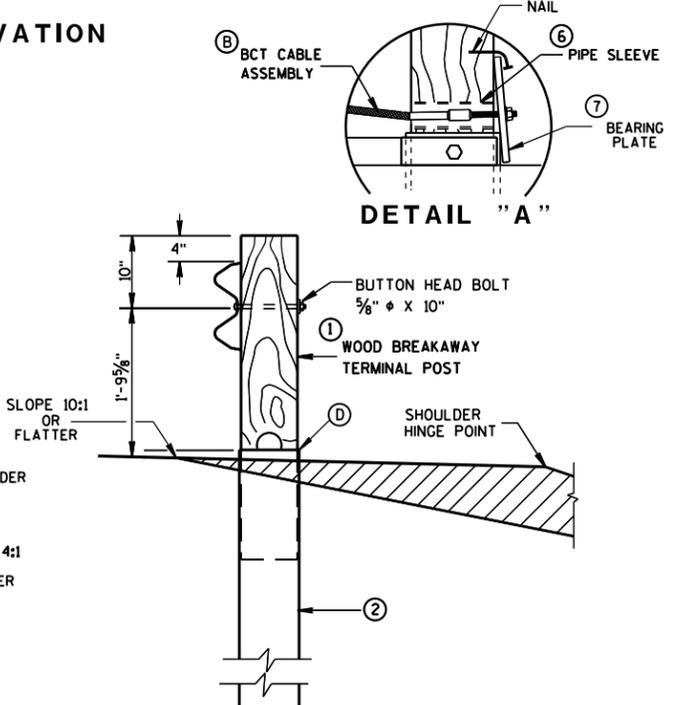
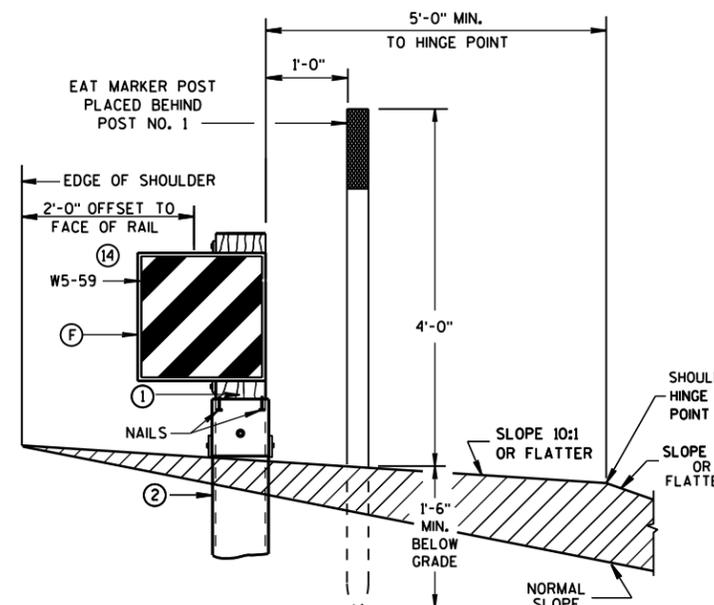
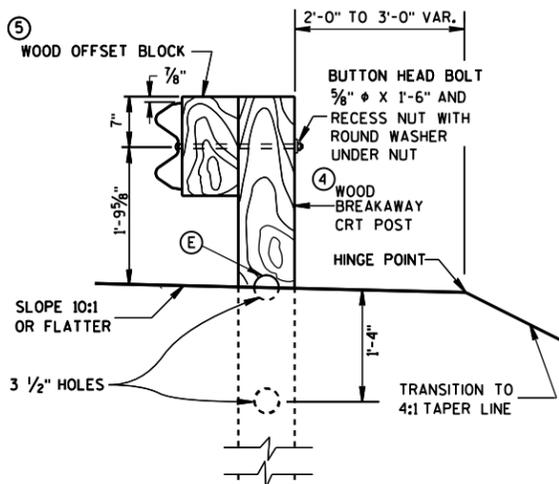
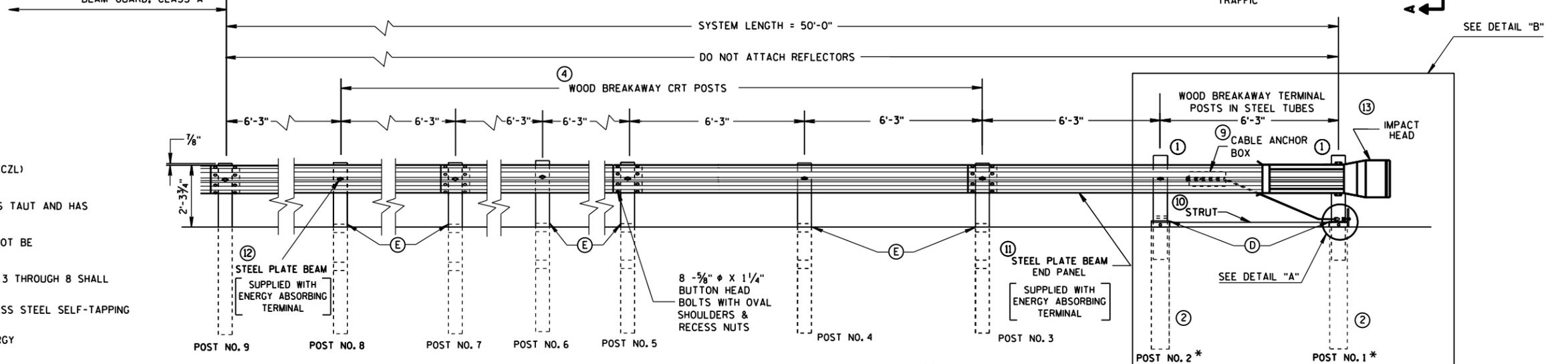
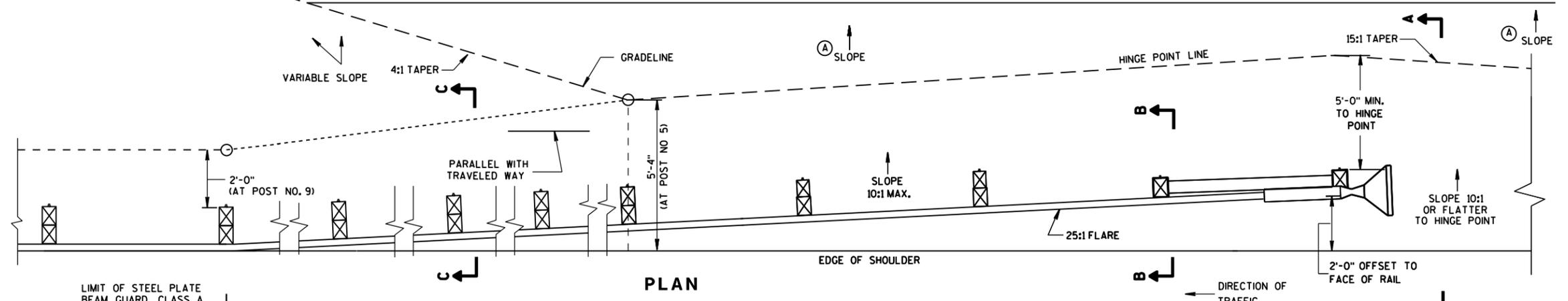
FOLLOW MANUFACTURE'S BOLTING RECOMMENDATIONS.

- (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 3 1/2" DIAMETER HOLE ON POST 3 THROUGH 8 SHALL BE 3/4" 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.

CLEAR ZONE LIMITS, EITHER AS SHOWN ELSEWHERE IN THE PLANS OR, IF NOT SHOWN ELSEWHERE IN THE PLANS, 15 FEET BEYOND THE HINGE POINT LINE



**STEEL PLATE BEAM GUARD
ENERGY ABSORBING TERMINAL**

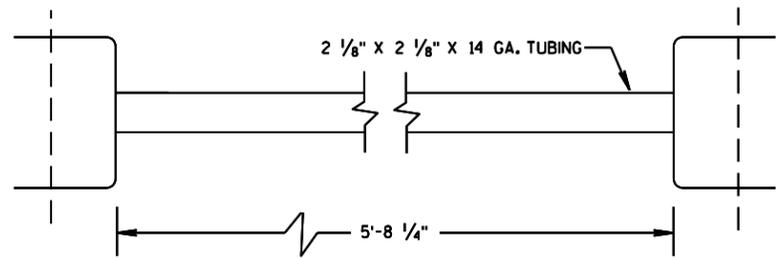
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

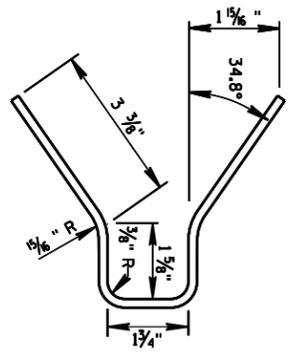
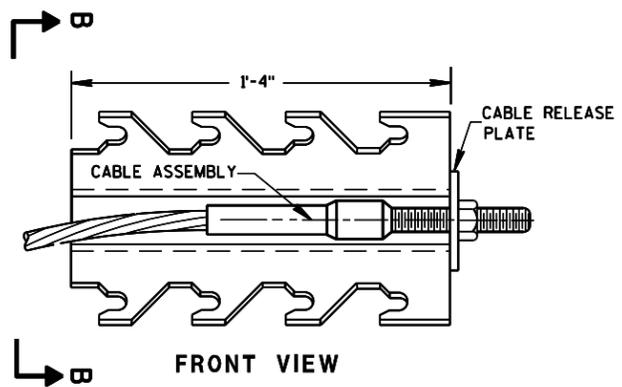
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S.D.D. 14 B 24-9a

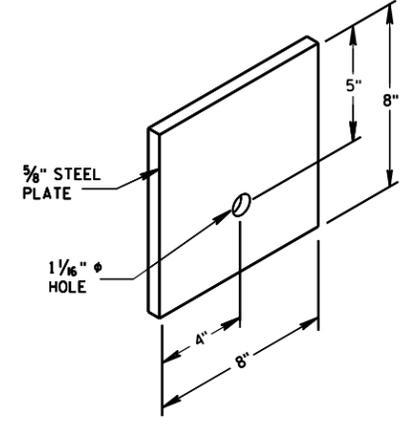
S.D.D. 14 B 24-9a



⑩ STRUT DETAIL



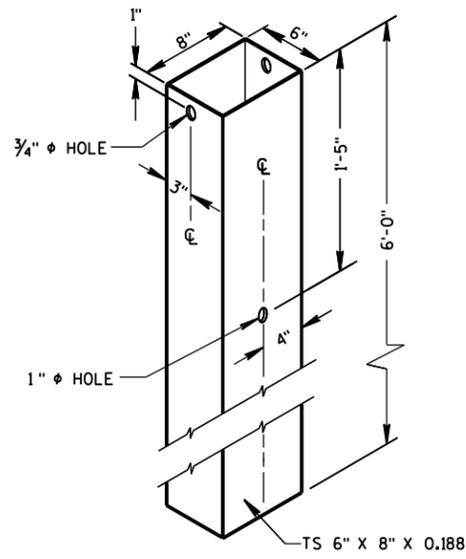
⑨ CABLE ANCHOR BOX



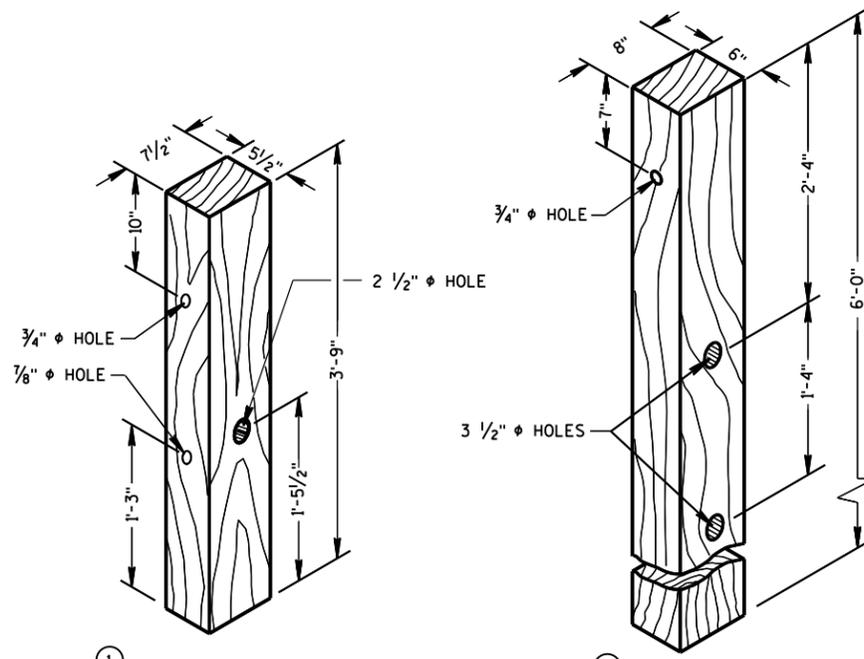
⑦ STEEL BEARING PLATE

6

6



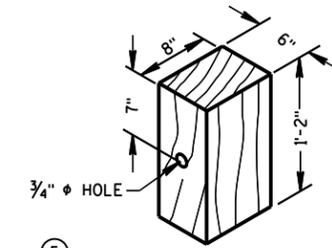
② **72" STEEL TUBE**
(POSTS NO. 1-2)



① **TERMINAL POST**

④ **CRT POST**
(POSTS NO'S 5-8)

WOOD BREAKAWAY POSTS



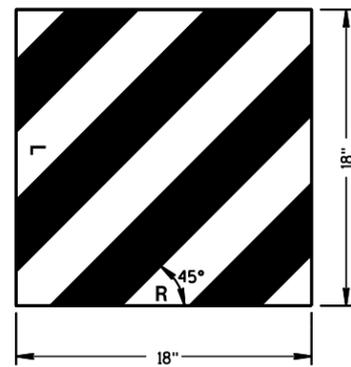
⑤ **WOOD OFFSET BLOCK**
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2

GENERAL NOTES

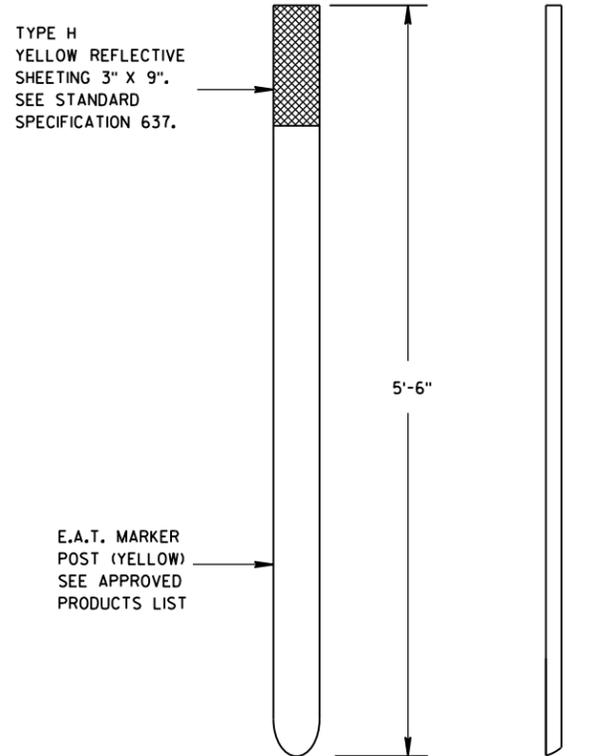
WHEN ROCK IS ENCOUNTERED DURING EXCAVATION, A 12 INCH DIA. POST HOLE EXTENDING 20 INCHES DEEP INTO THE ROCK MAY BE USED IF APPROVED BY THE ENGINEER. GRANULAR MATERIAL SHALL BE PLACED IN THE BOTTOM OF THE HOLE APPROXIMATELY 2 1/2" INCHES DEEP TO PROVIDE DRAINAGE. THE SOIL TUBES SHALL BE FIELD CUT TO LENGTH, PLACED IN THE HOLE AND BACKFILLED WITH ADEQUATELY COMPACTED MATERIAL EXCAVATED FROM THE HOLE.

6

6



⑭ **REFLECTIVE SHEETING DETAILS**



FRONT VIEW **SIDE VIEW**

E.A.T. MARKER POST

STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June 2017 DATE	/S/ Rodney Taylor ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
FHWA	

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

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

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.

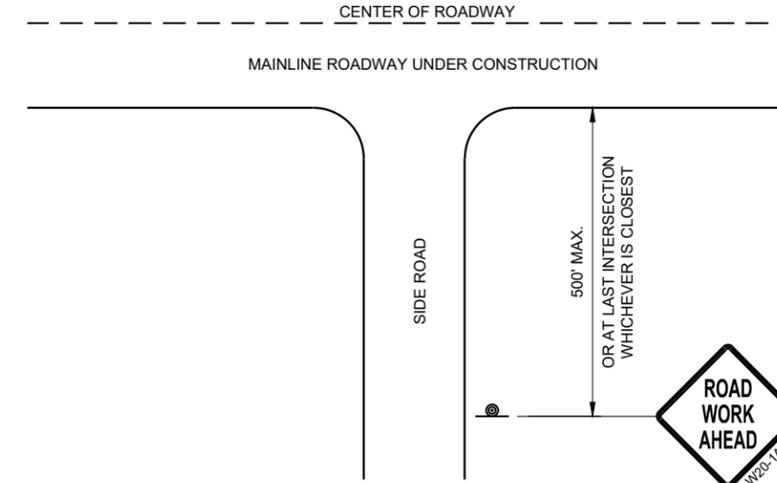
SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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.

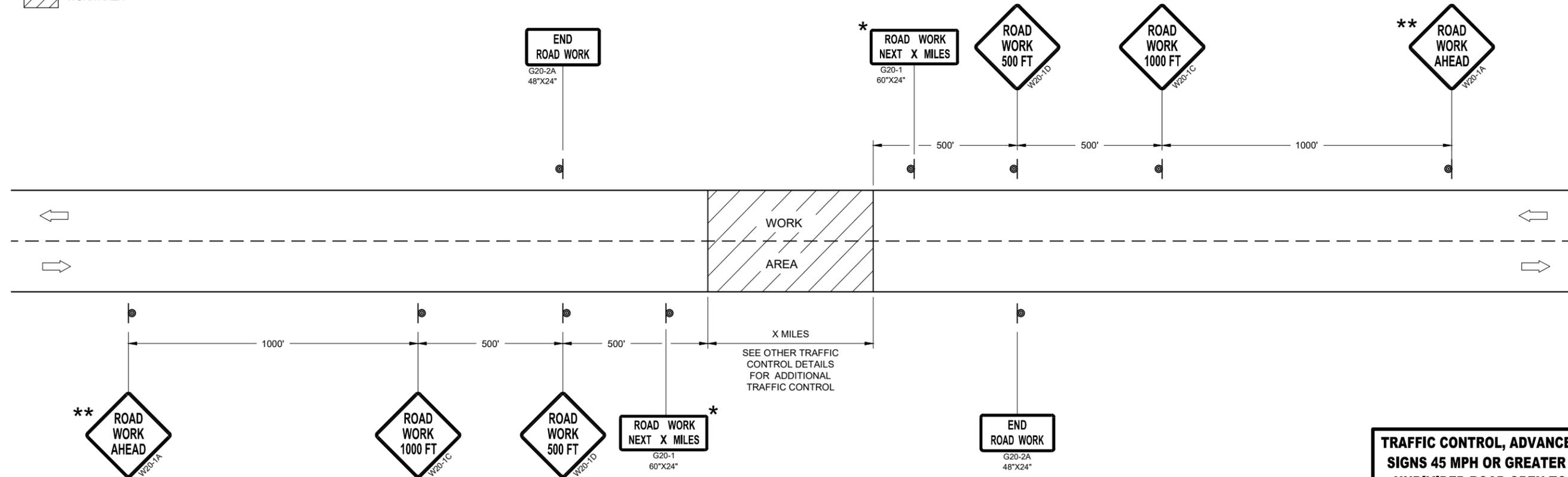
- * OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS
- ** PLACE AN ADDITIONAL W20-1A "ROAD WORK AHEAD" SIGN IF WORK AREA WITHIN THE PROJECT IS SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA.

LEGEND

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



**TYPICAL SIDE ROAD APPROACH
WARNING SIGN DETAIL**



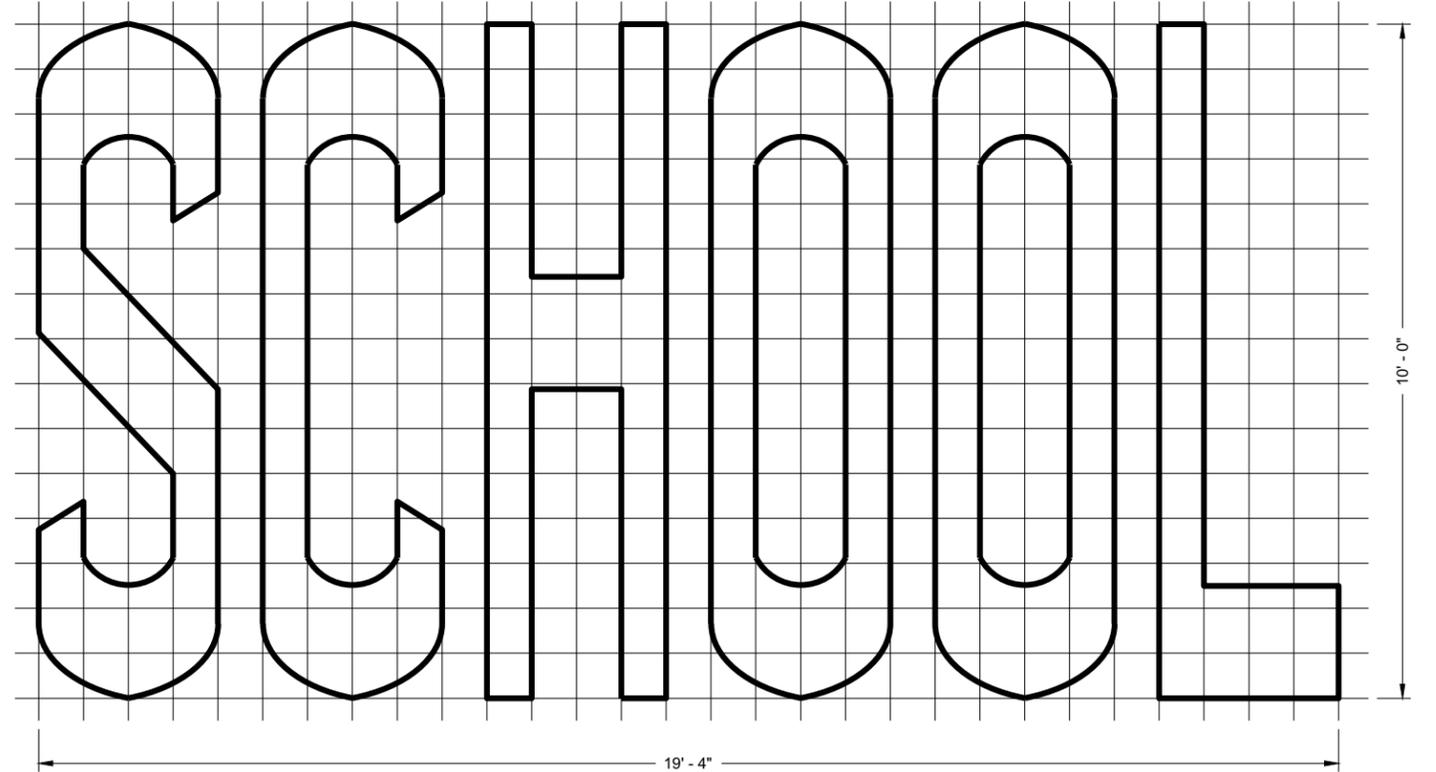
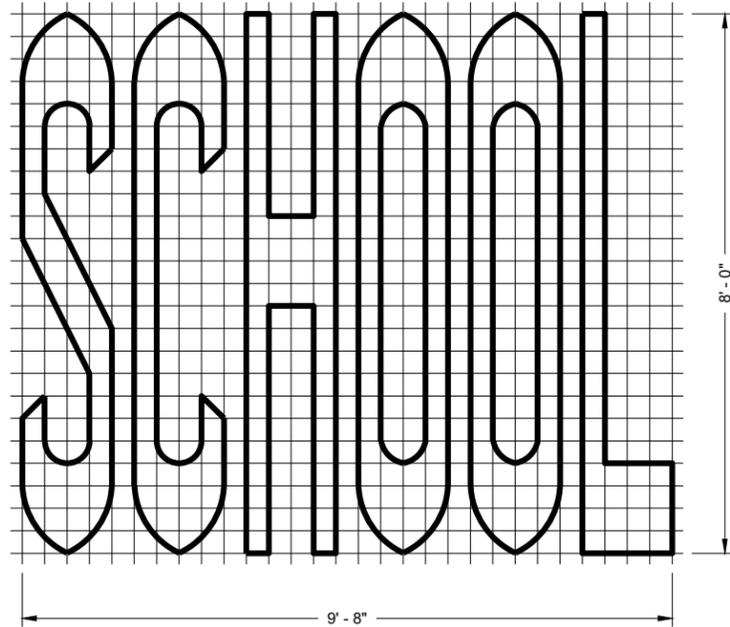
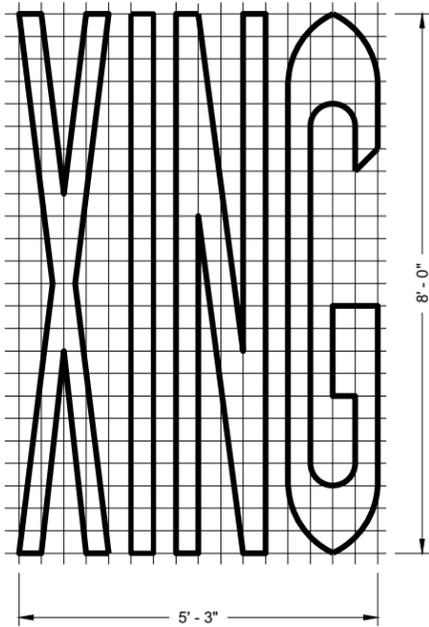
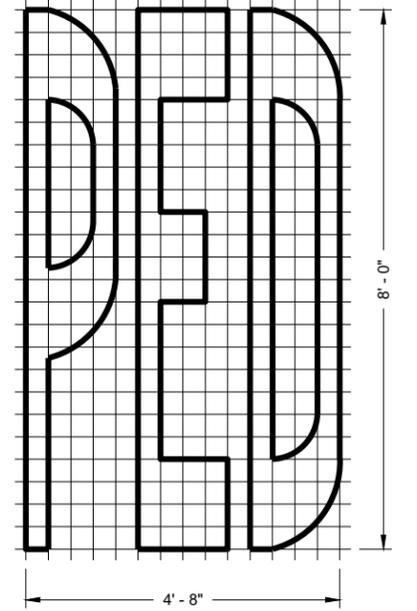
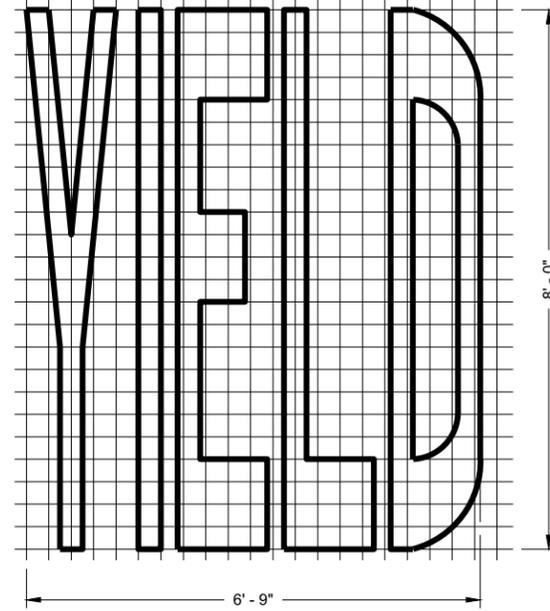
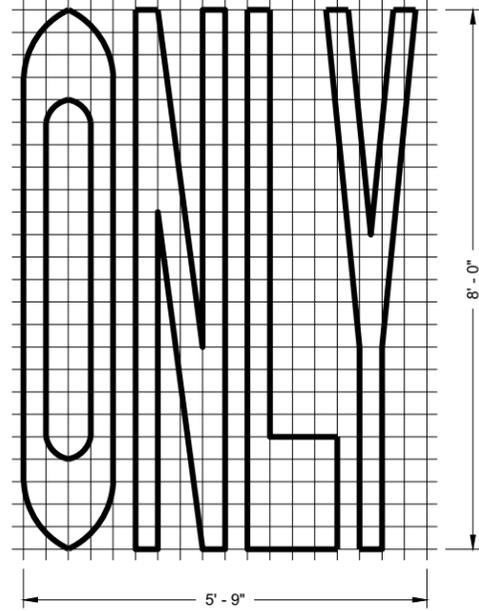
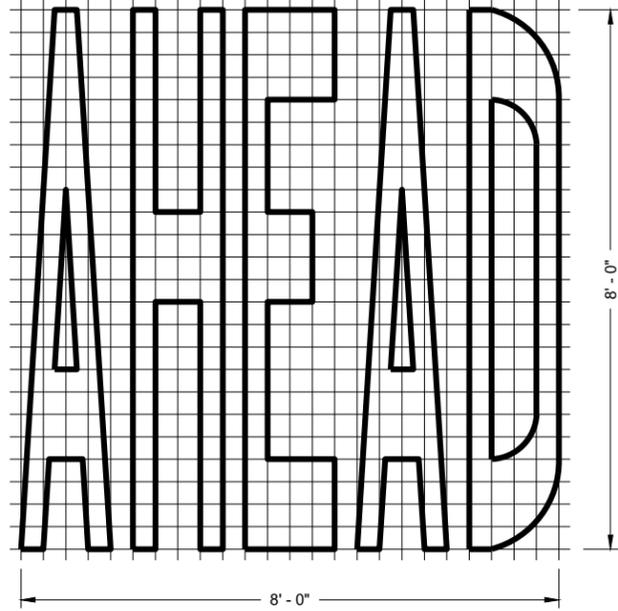
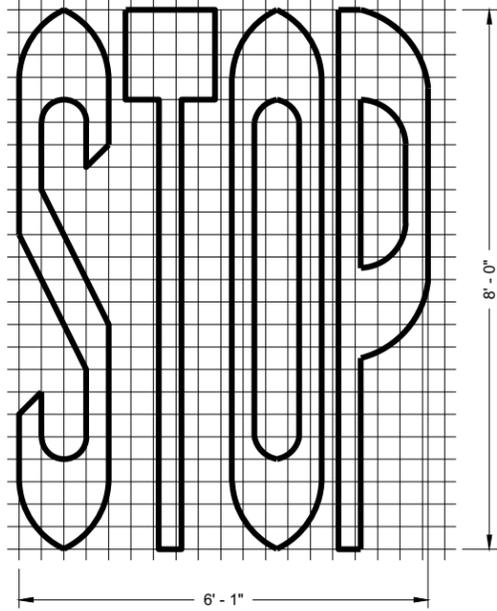
TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45MPH OR GREATER

**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



SINGLE LANE

TWO - LANE

GENERAL NOTES

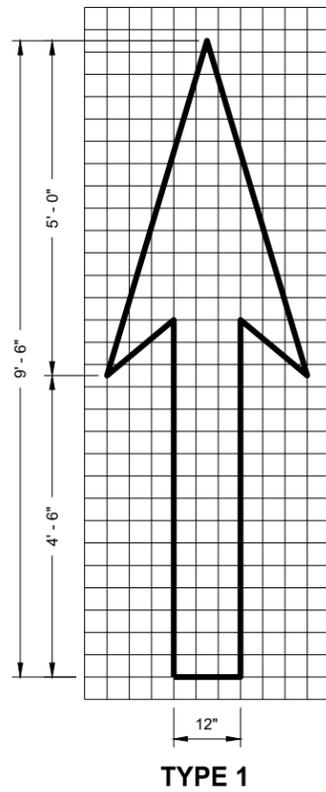
DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

PAVEMENT MARKING WORDS

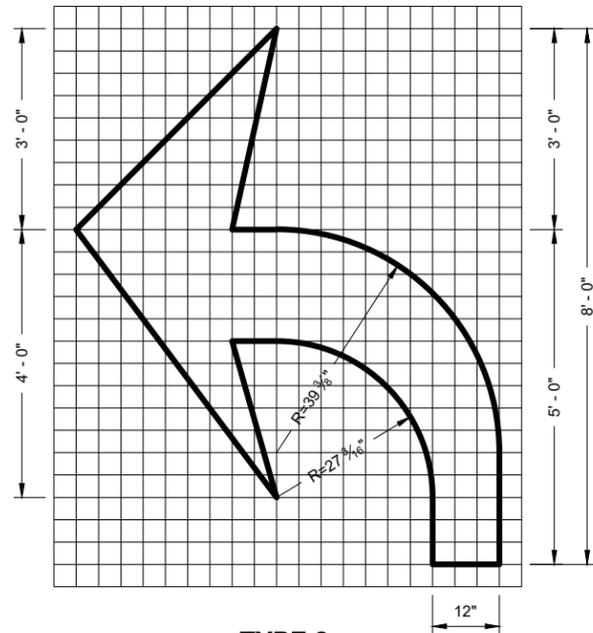
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2019 /S/ Matthew Rauch
DATE STATE SIGNING AND MARKING
ENGINEER

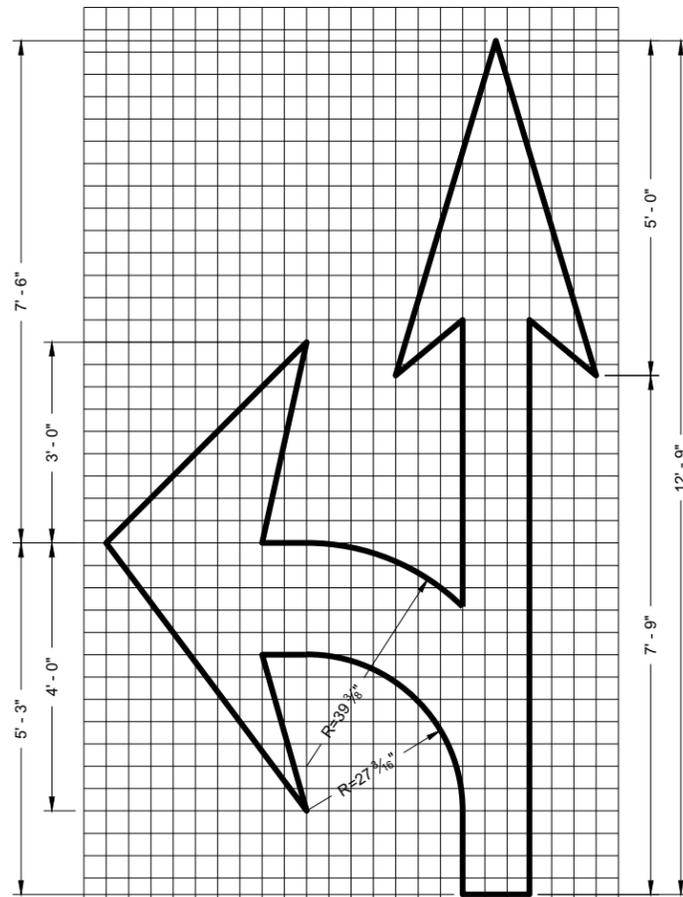
FHWA



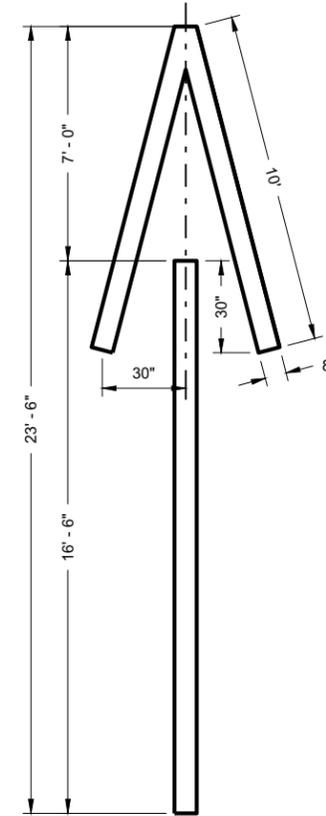
TYPE 1



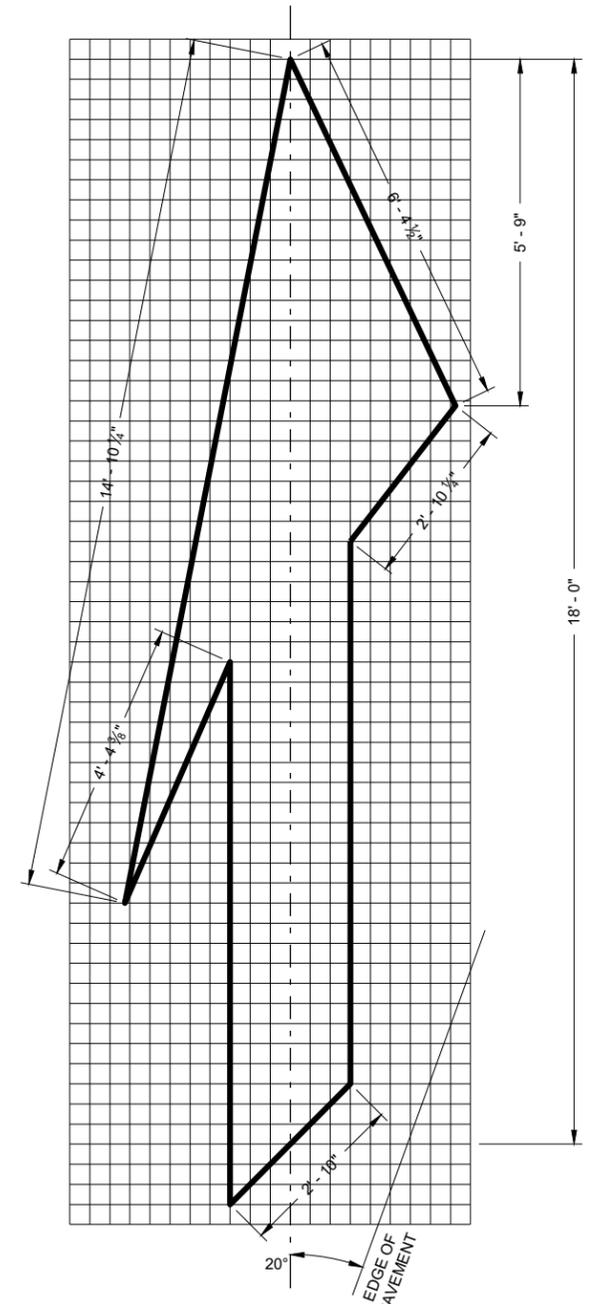
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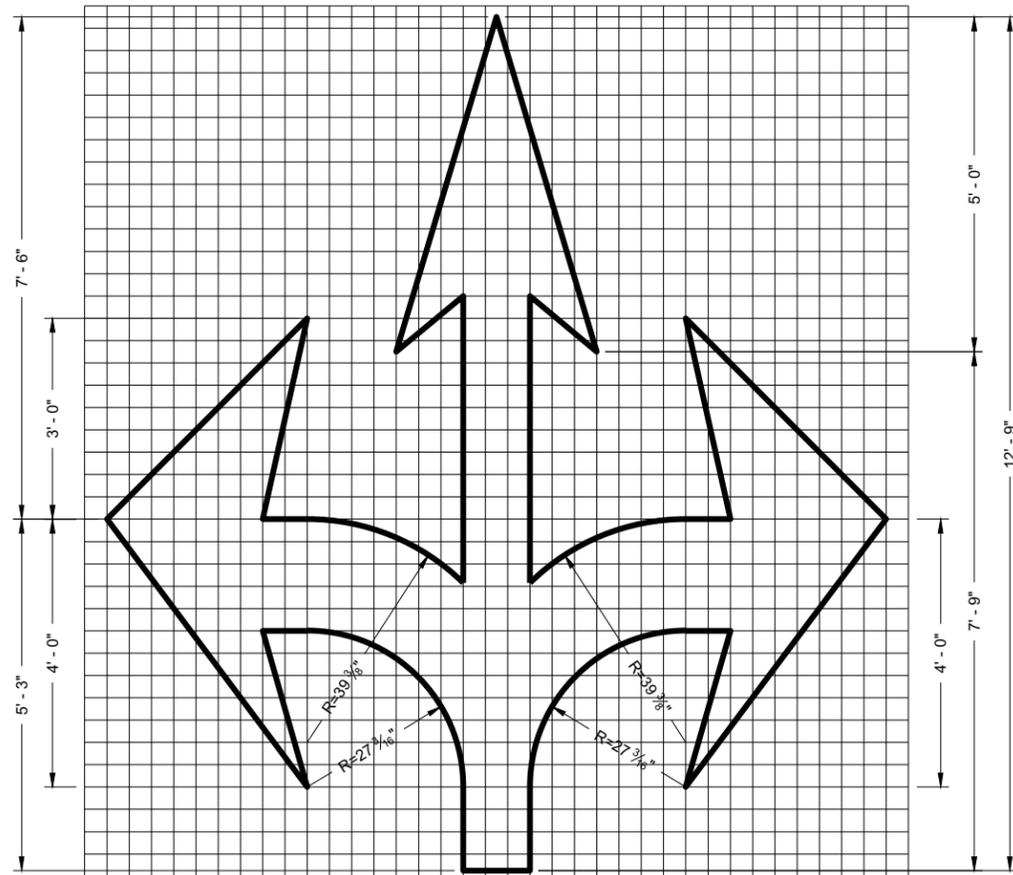
TYPE 3



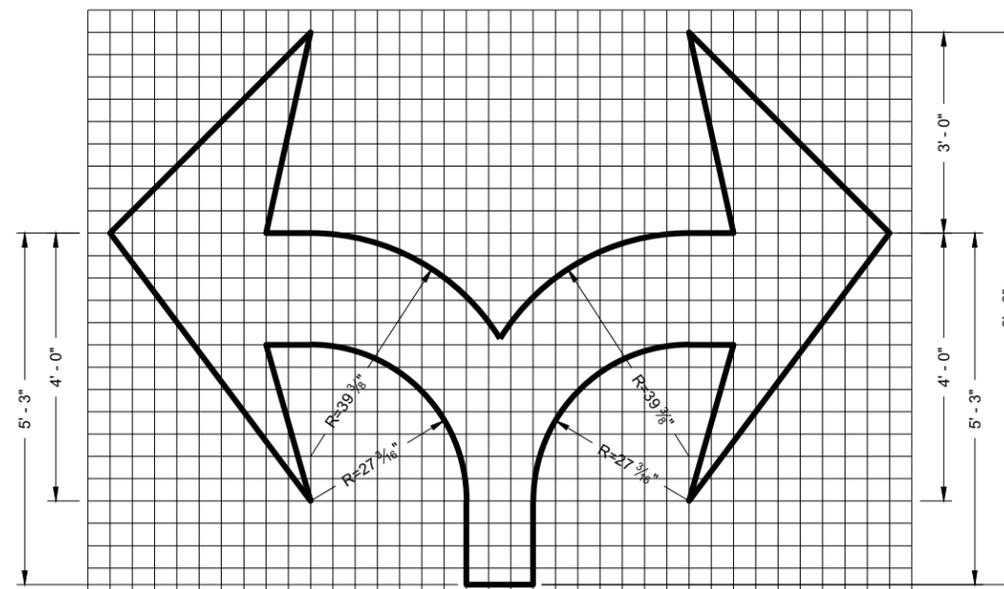
TYPE 4



TYPE 5 LANE DROP ARROW



TYPE 6



TYPE 7

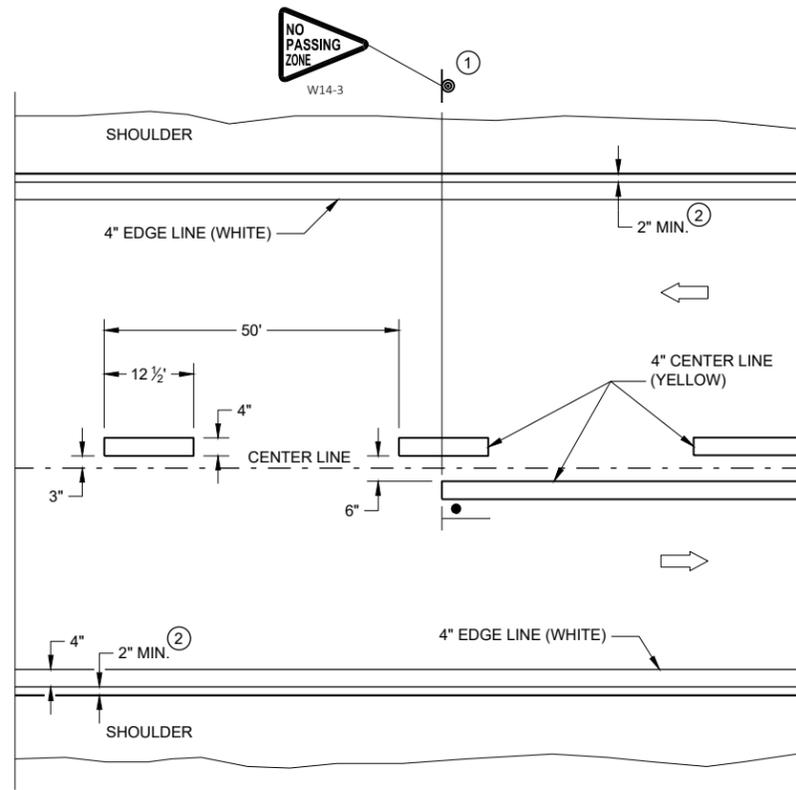
GENERAL NOTES

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

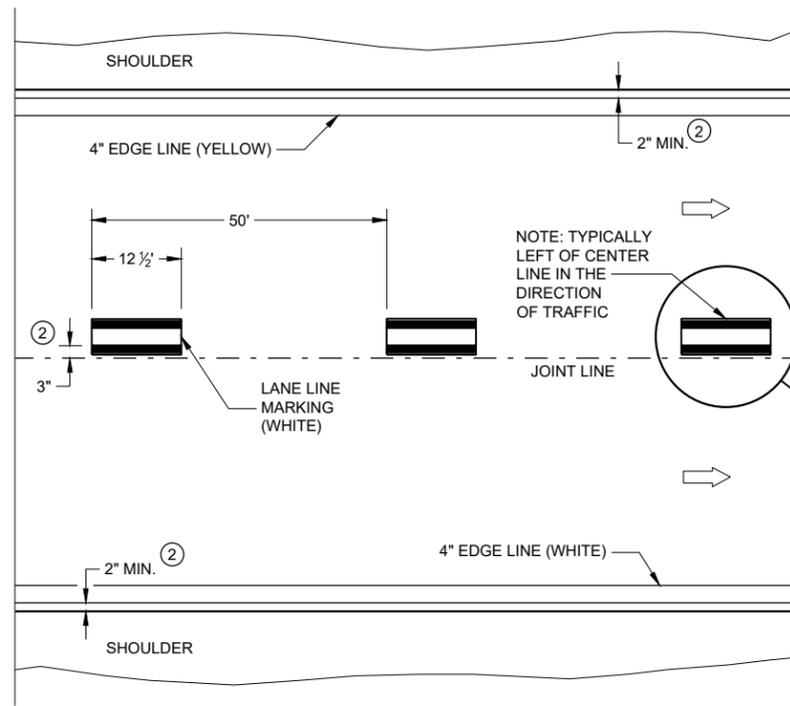
PAVEMENT MARKING ARROWS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2019
DATE /S/ Matthew Rauch
STATE SIGNING AND MARKING
ENGINEER
FHWA

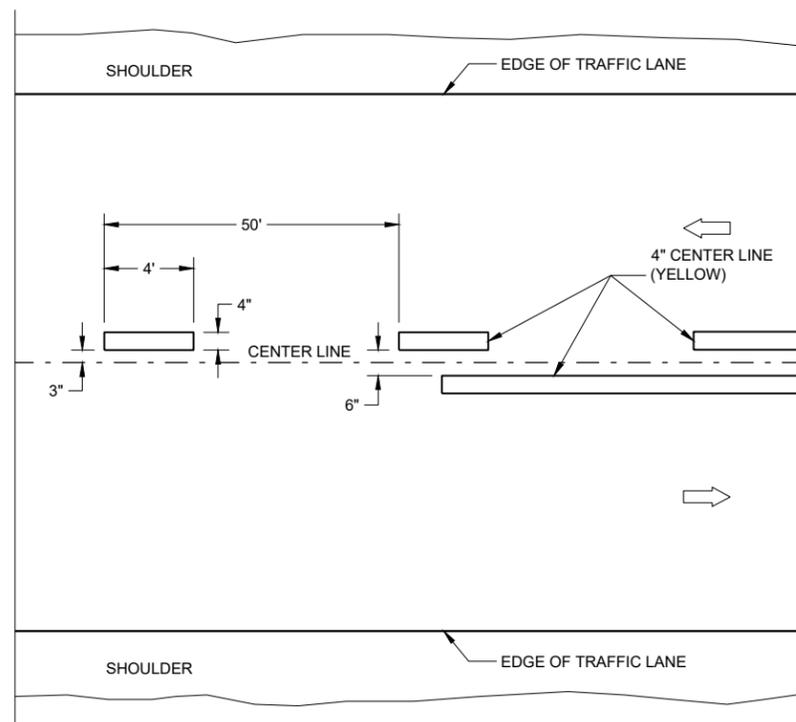


TWO WAY TRAFFIC

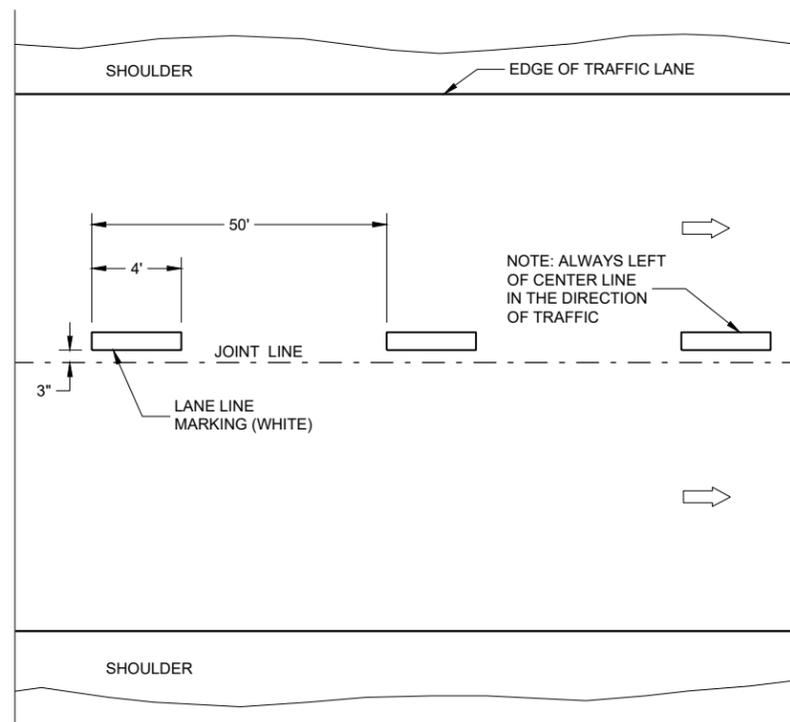


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

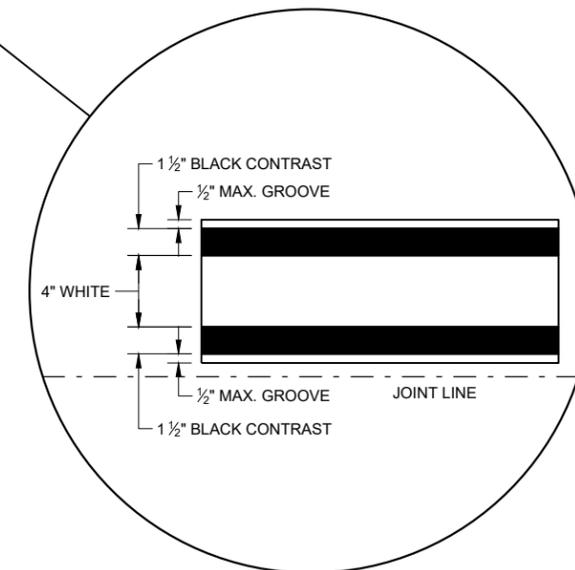
GENERAL NOTES

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

- ① LOCATE THE NO PASSING ZONE W14-3 SIGN 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



**LONGITUDINAL MARKING
(MAINLINE)**

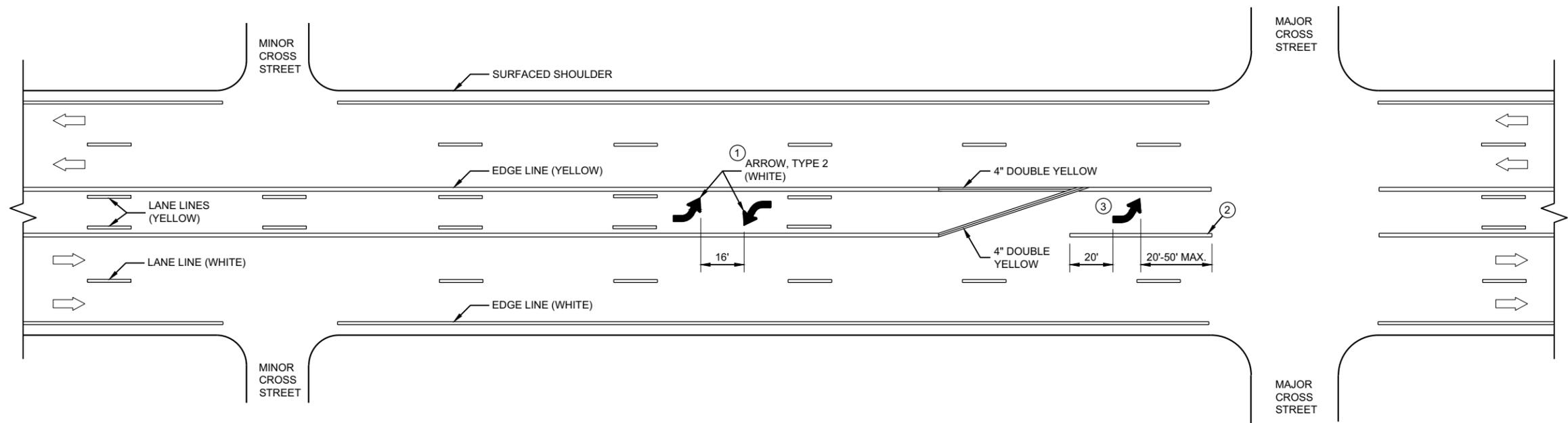
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

GENERAL NOTES

- ① A SET OF ARROWS IS REQUIRED EVERY 400 FEET OR NEAR INTERSECTIONS OR DRIVEWAYS WITH TURNING TRAFFIC.
- ② 8" WHITE
- ③ TURN BAY LENGTH OF LESS THAN 48' DOES NOT REQUIRE PAVEMENT ARROWS OR TEXT.

➡ DIRECTION OF TRAFFIC



TWO WAY LEFT TURN LANE

6

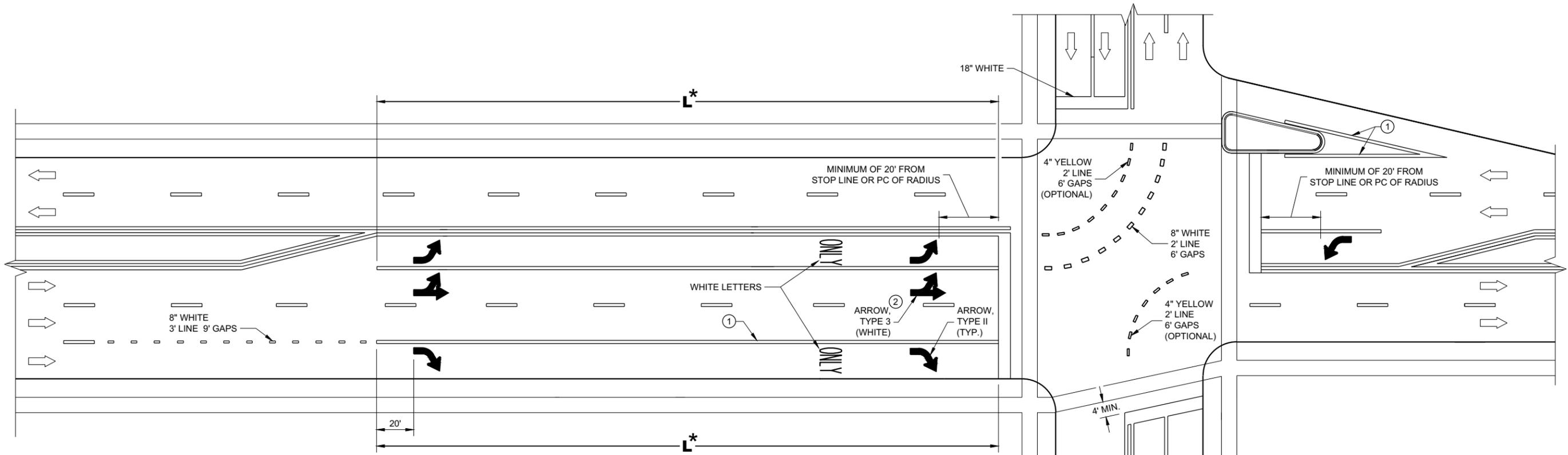
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SDD 15C08 - 20b

SDD 15C08 - 20b

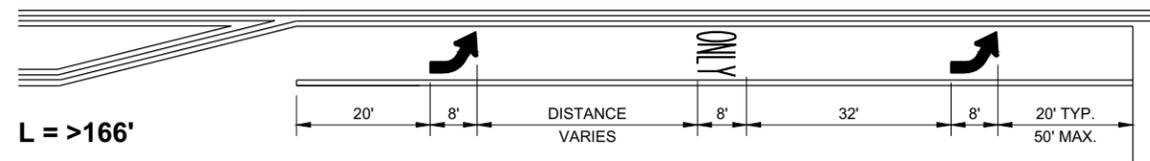
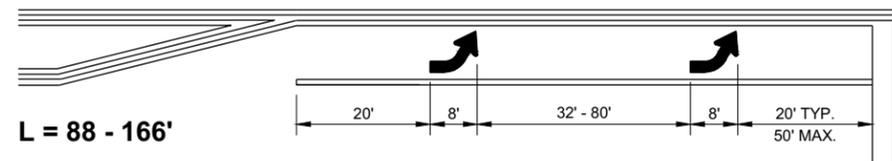
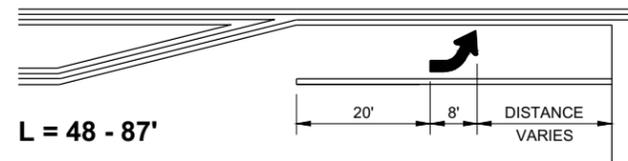
**PAVEMENT MARKING
(TURN LANES)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



TURN LANE OPTIONS

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



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

GENERAL NOTES

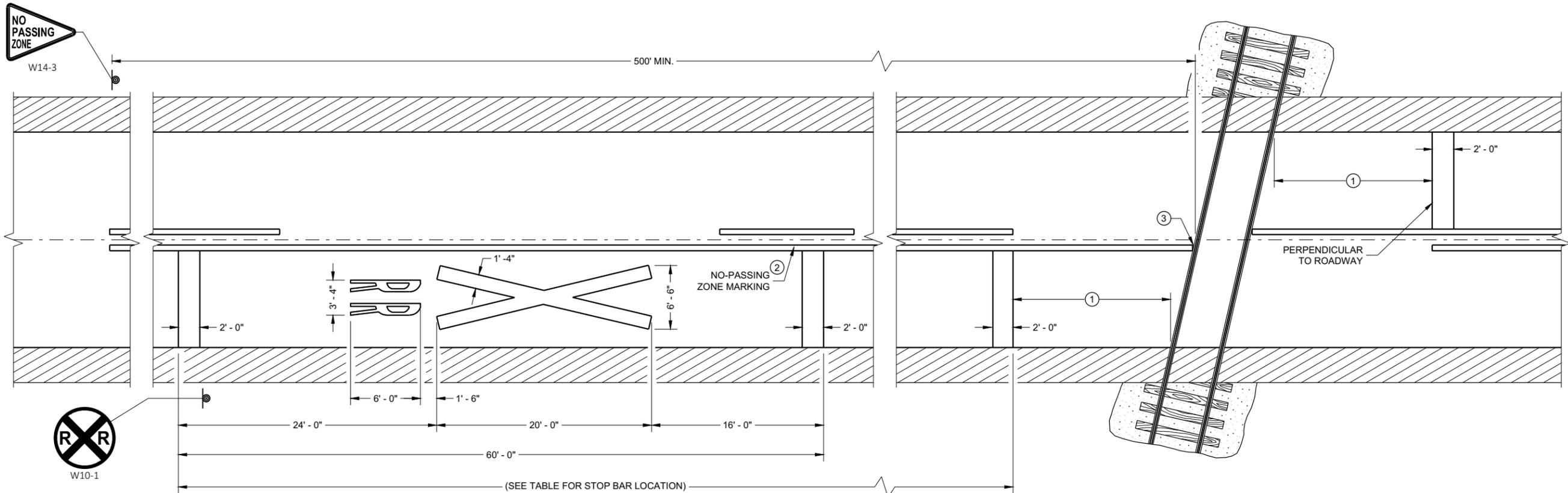
- ① 8" WHITE
- ② QUANTITY AND LOCATION OF TYPE 3 ARROWS ARE THE SAME AS THE TYPE II ARROWS IN THE ADJACENT TURN LANE. FOR TURN LANES WITH A PHYSICAL SEPARATION IN THE SAME DIRECTION OF TRAVEL, THE ARROWS AND "ONLY" MARKING MAY BE ELIMINATED.

➡ DIRECTION OF TRAFFIC

L = LENGTH OF TURN BAY

PAVEMENT MARKING (TURN LANES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



PAVEMENT MARKING

LEGEND

⊙ SIGN ON PERMANENT SUPPORT

GENERAL NOTES

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

ON MULTI-LANE ROADS THE TRANSVERSE BANDS SHOULD EXTEND ACROSS ALL APPROACH LANES, AND INDIVIDUAL R X R SYMBOLS SHOULD BE USED IN EACH APPROACH LANE.

CENTER OR LANE LINES AND NO-PASSING ZONE MARKINGS SHOWN ON THIS DRAWING ARE REQUIRED AND PAID FOR UNDER OTHER ITEMS IN THE CONTRACT.

TRACE EXISTING SYMBOL WHERE EXISTING SYMBOLS ARE PLACED.

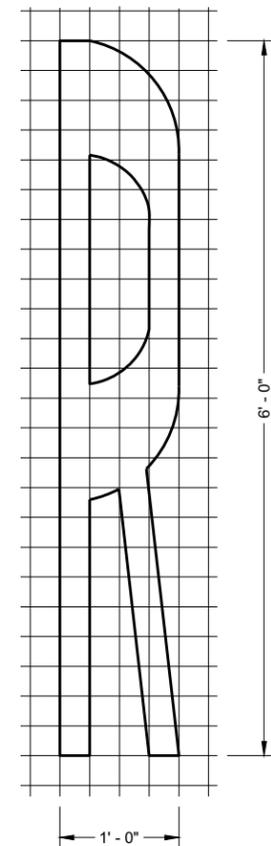
- ① MINIMUM 8' FROM ANY RAILROAD WARNING DEVICES (SIGNAL, GATES, ETC.) OR 25' FROM THE NEAREST RAIL, WHICHEVER DISTANCE IS GREATER.
- ② 500' MINIMUM. MARKING LIMITS MAY BE EXTENDED AS DIRECTED BY THE ENGINEER TO MEET ADJACENT NO-PASSING ZONE MARKINGS.
- ③ FOR MULTIPLE TRACK CROSSINGS, THE BARRIER LINE SHALL EXTEND TO THE NEAR RAIL OF THE FURTHEST TRACK IN THE DIRECTION OF HIGHWAY TRAVEL.

DISTANCE TABLE

TABLE BASED UPON 2C-4 WISCONSIN SUPPLEMENT OF MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

POSTED SPEED (M.P.H.)	DIMENSION RANGE (FEET)
25	150* - 250'
30	200* - 300'
35	250* - 450'
40	300* - 500'
45	400* - 650'
50	550* - 800'
55	750* - 1000'
60	1000* - 1250'
65	1000* - 1250'

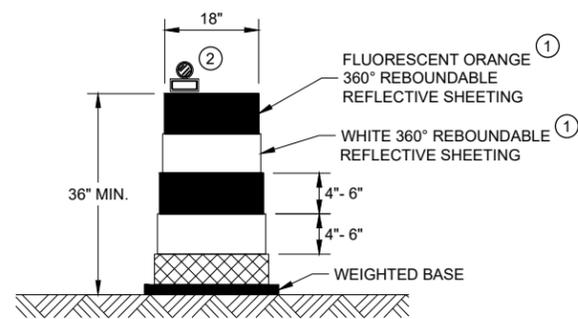
* THE MINIMUM DISTANCES IN THE TABLE ARE DESIRABLE AND SHOULD BE USED. THE DISTANCES MAY BE INCREASED UP TO THE MAXIMUM TO ALLOW FOR FIELD CONDITIONS SUCH AS THE CLOSED PROXIMITY OF DRIVEWAYS, BRIDGES, SIDE ROADS OR OTHER FEATURES THAT WOULD PROHIBIT THE MINIMUM DISTANCES FROM BEING USED.



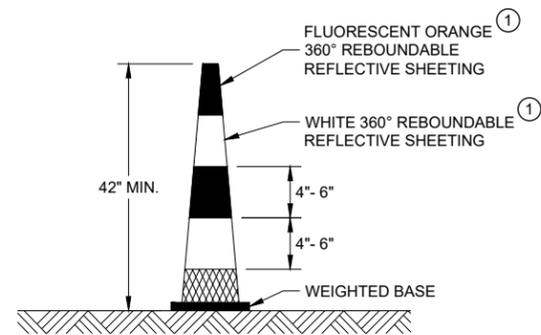
SIGNING AND PAVEMENT MARKING DETAILS FOR RAILROAD - HIGHWAY GRADE CROSSINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2021 DATE /S/ Matthew R. Rauch
STATE SIGNING AND MARKING ENGINEER

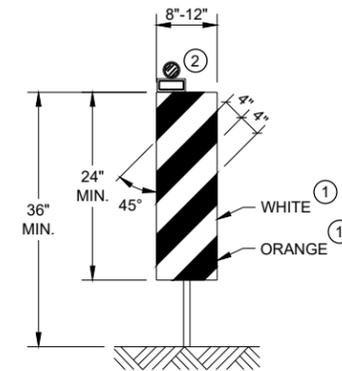


DRUM



42" CONE

DO NOT USE IN TAPERS
 1/2 SPACING OF DRUMS



VERTICAL PANEL

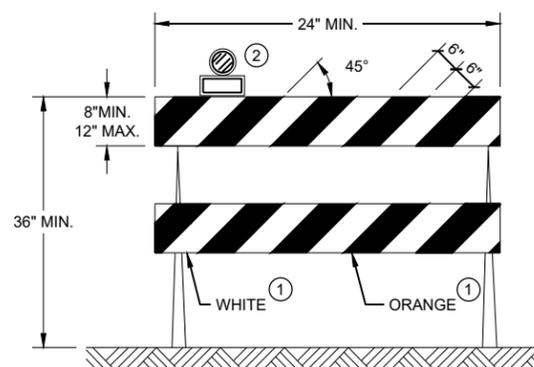
THE STRIPES SHALL SLOPE DOWNWARD TO
 THE TRAFFIC SIDE FOR CHANNELIZATION.

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.

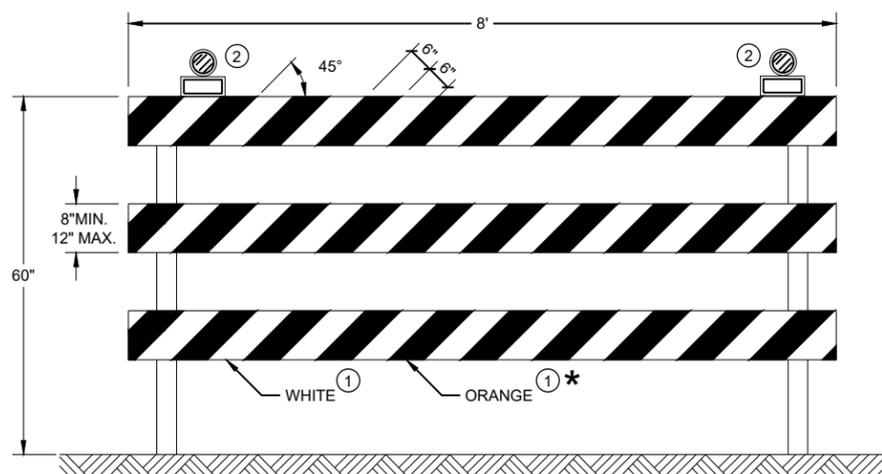
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TYPE II BARRICADE

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.

SDD 15C11 - 09b

SDD 15C11 - 09b

CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2021 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
<small>FHWA</small>	

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.

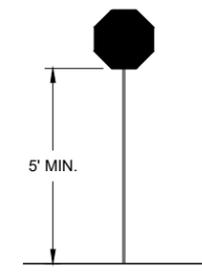
- ③ EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS PLACED TRANSVERSE ACROSS THE LANE AT THE LOCATIONS SHOWN. WITHIN EACH ARRAY, SPACING BETWEEN RUMBLE STRIPS SHALL BE 15 FEET ON CENTER

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.



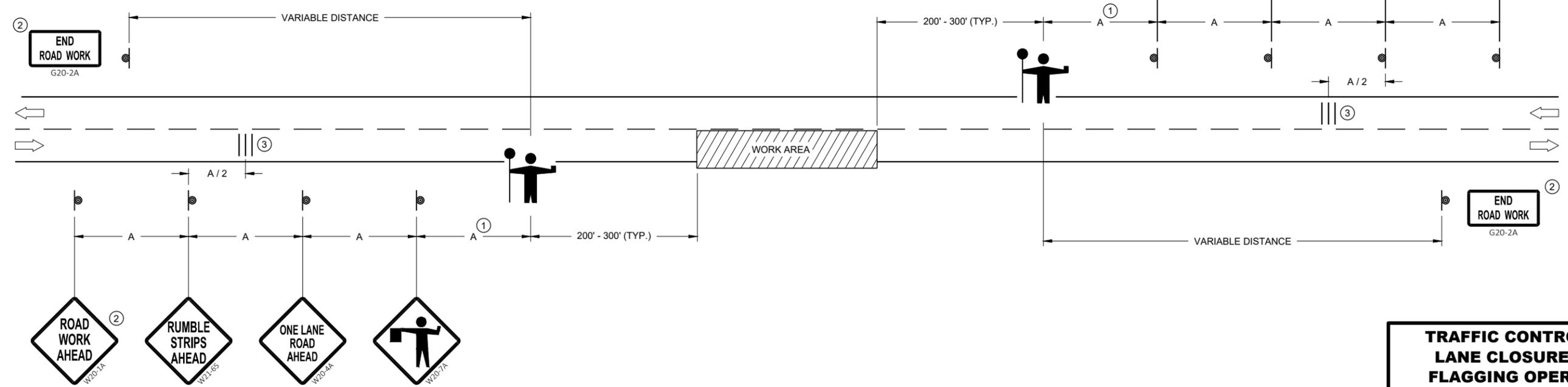
STOP/SLOW PADDLE ON SUPPORT STAFF

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
November 2021 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER

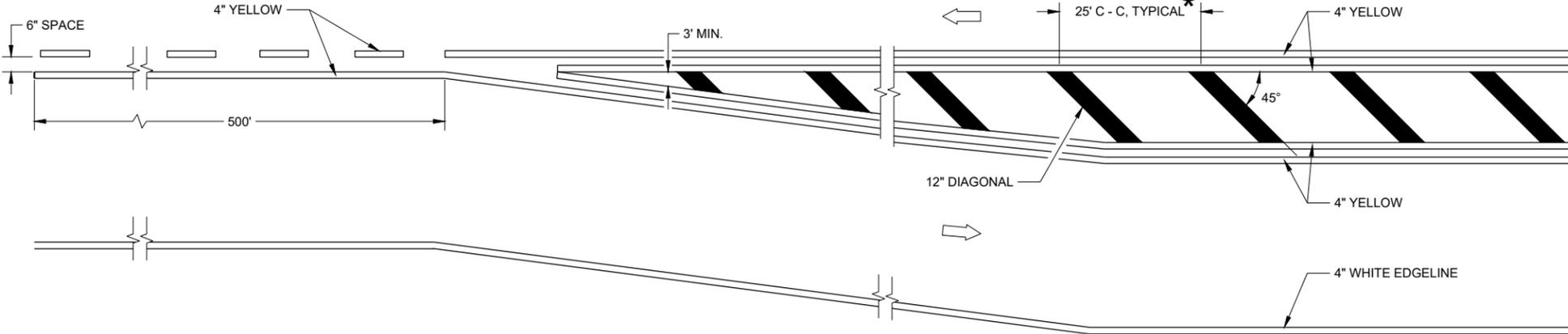
FHWA

GENERAL NOTES

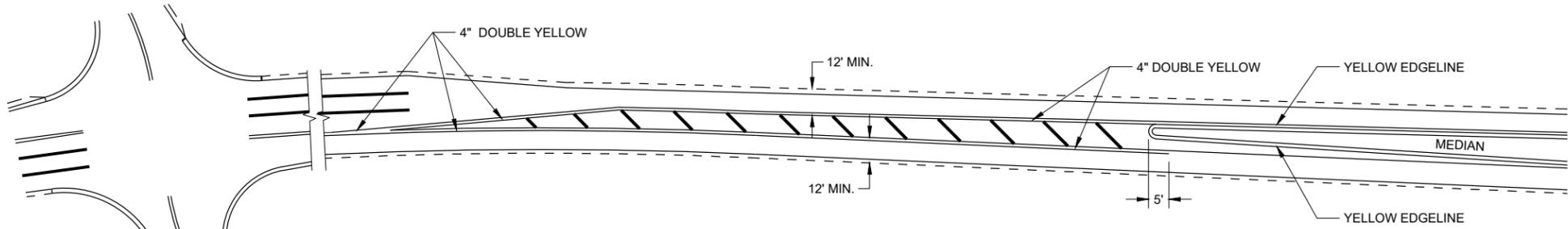
DIAGONALS ARE OPTIONAL WHEN PAINTED ISLAND IS LESS THAN 6 FEET AT WIDEST POINT.

➡ DIRECTION OF TRAVEL

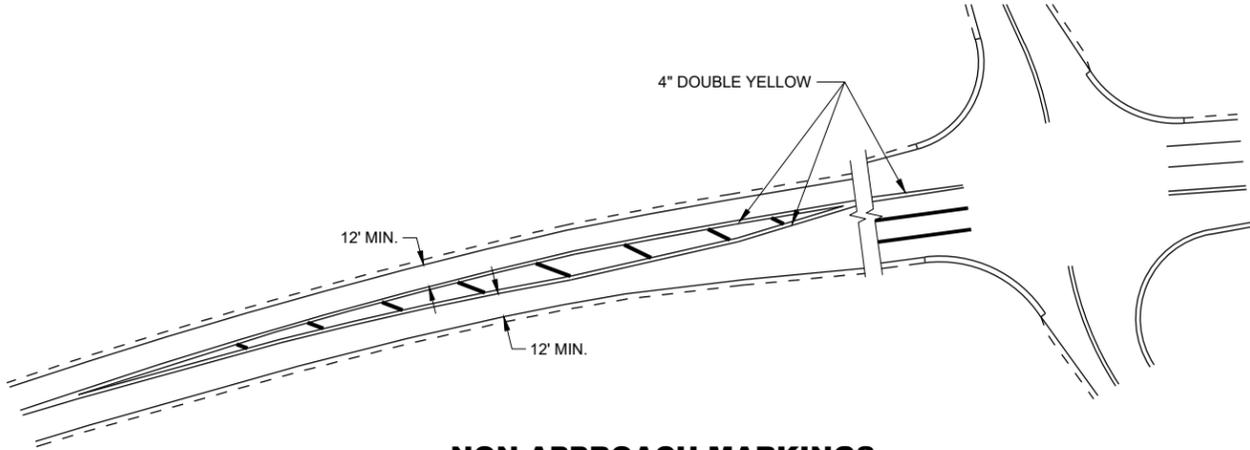
* WHEN THE PAINTED MEDIAN LENGTH IS LESS THAN 50 FEET THE SPACING IS 10'.



MEDIAN ISLAND DETAIL



APPROACH MARKINGS FOR OTHER MEDIAN TYPES



NON-APPROACH MARKINGS

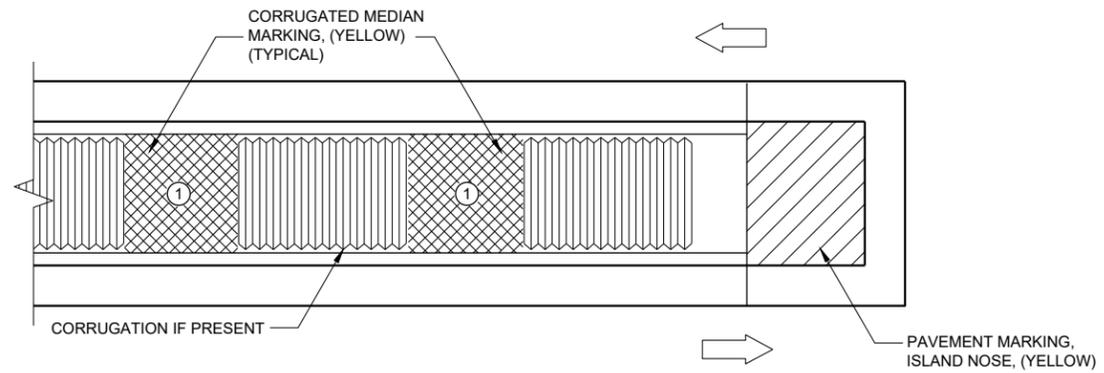
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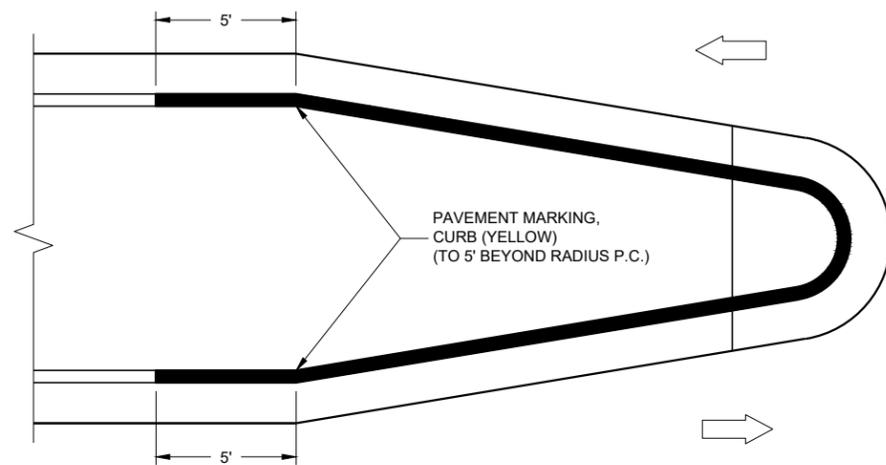
SDD 15C18 - 05a

SDD 15C18 - 05a

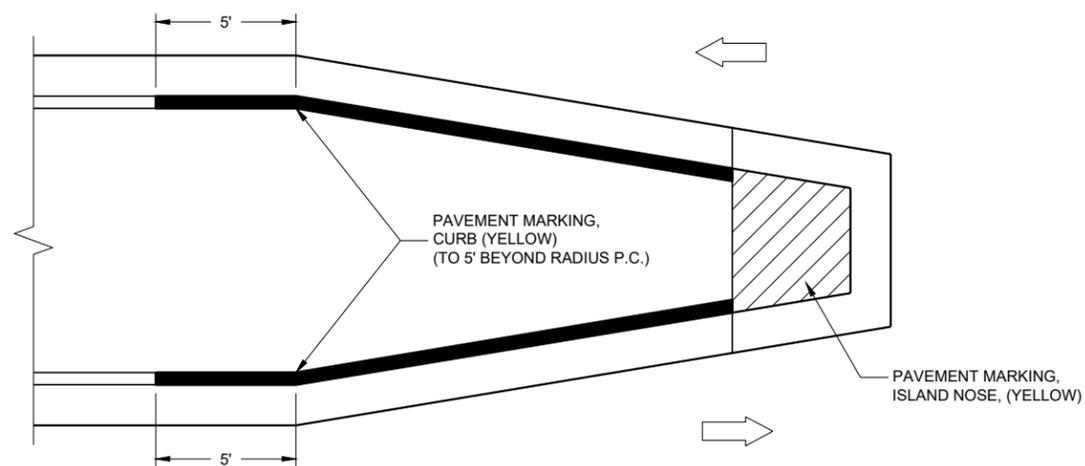
MEDIAN ISLAND PAVEMENT MARKINGS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED February 2021 DATE	/S/ Matthew R. Rauch STATE SIGNING AND MARKING ENGINEER
FHWA	



MEDIAN ISLAND WITH SQUARE BLUNT NOSE



MEDIAN ISLAND WITH ROUND BLUNT NOSE



MEDIAN ISLAND WITH SLOPED NOSE

TYPICAL PLACEMENT OF PAVEMENT MARKING ON MEDIAN ISLANDS

GENERAL NOTES

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

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

-  ISLAND NOSE MARKING
-  CURB MARKING
-  CORRUGATED MEDIAN MARKING
-  DIRECTION OF TRAVEL

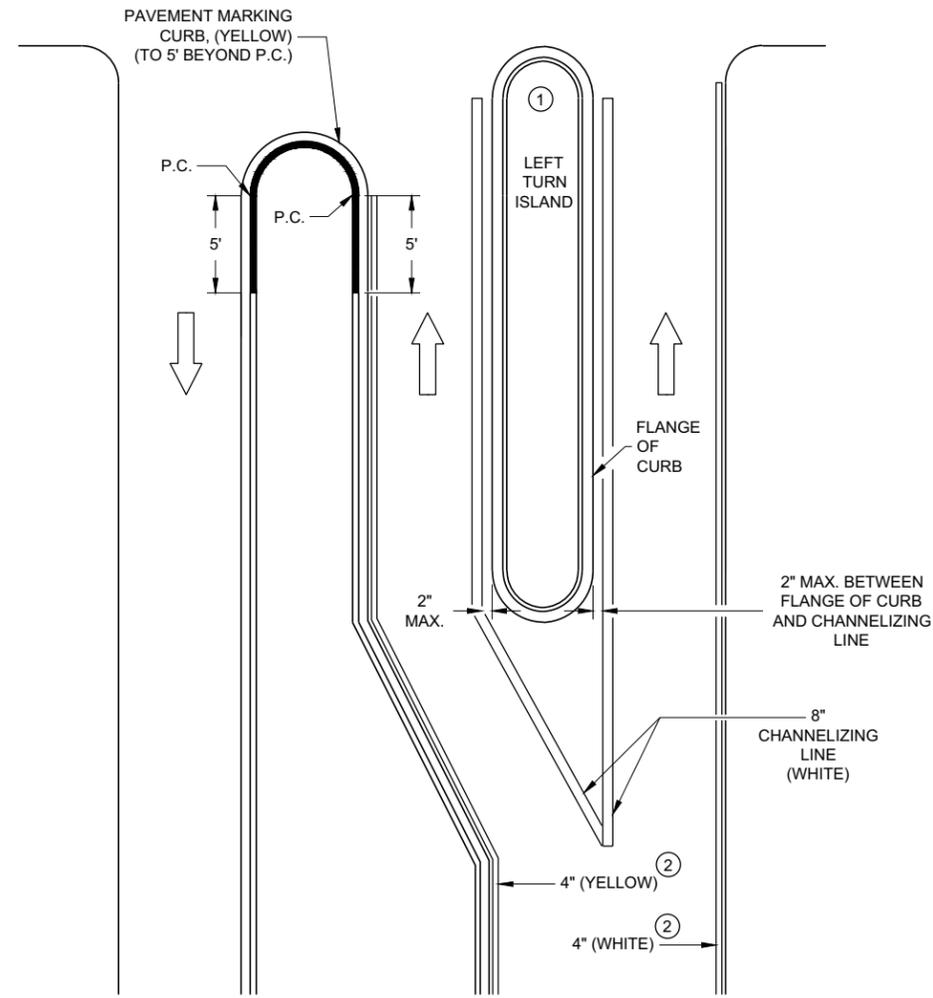
PAVEMENT MARKINGS, MEDIAN ISLAND NOSE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED February 2021 DATE	/S/ Matthew R. Rauch STATE SIGNING AND MARKING ENGINEER
<small>FHWA</small>	

REQUIREMENTS FOR EDGE LINES		
POSTED SPEED	IS THERE CONTINUOUS LIGHTING?	
	YES	NO
≤ 30 MPH	NO	OPTIONAL
35 OR 40 MPH	OPTIONAL	RECOMMENDED
≥ 45 MPH	RECOMMENDED	REQUIRED

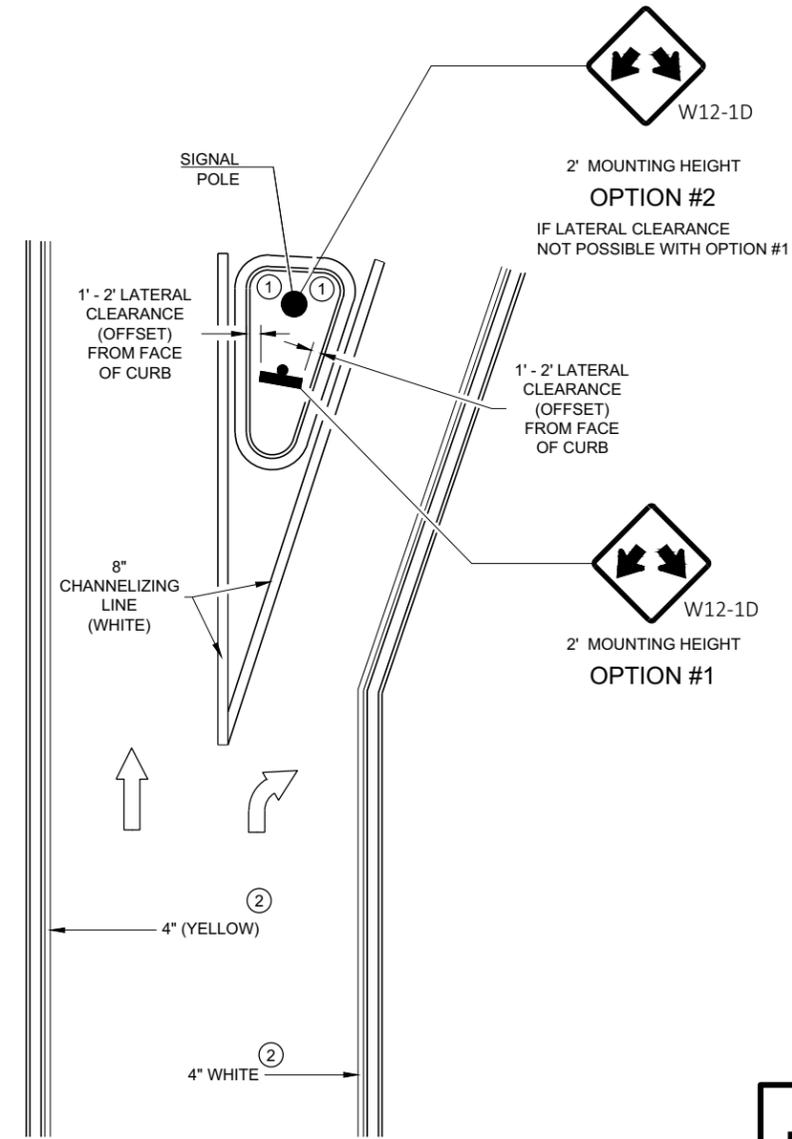
GENERAL NOTES

APPLIES TO ISLANDS AT LEFT TURNS AT ONE WAY ROADWAYS AS WELL.
SEE MISCELLANEOUS QUANTITIES FOR SIGN SIZE.

- ① MARK CURB NOSES YELLOW.
- ② MARK ACCORDING TO TABLE.



LEFT TURN & MEDIAN ISLAND



RIGHT TURN ISLAND

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SDD 15C18 - 05C

SDD 15C18 - 05C

MEDIAN PAVEMENT MARKINGS, DOUBLE ARROW WARNING SIGN PLACEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2021 DATE /S/ Matthew R. Rauch
STATE SIGNING AND MARKING ENGINEER

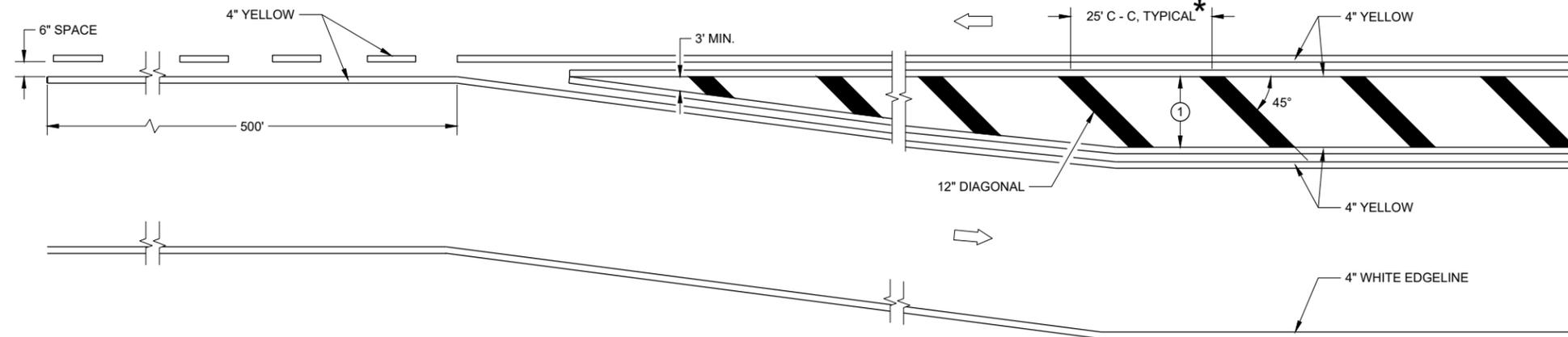
FHWA

GENERAL NOTES

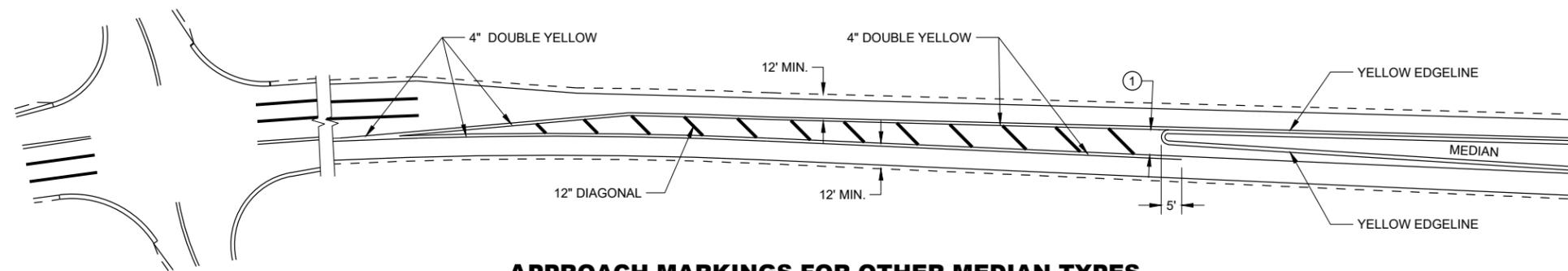
- ① DIAGONALS ARE OPTIONAL WHEN PAINTED ISLAND IS LESS THAN 6 FEET AT THE WIDEST POINT. OMIT DIAGONALS IF WIDTH IS LESS THAN 4 FEET.

➡ DIRECTION OF TRAVEL

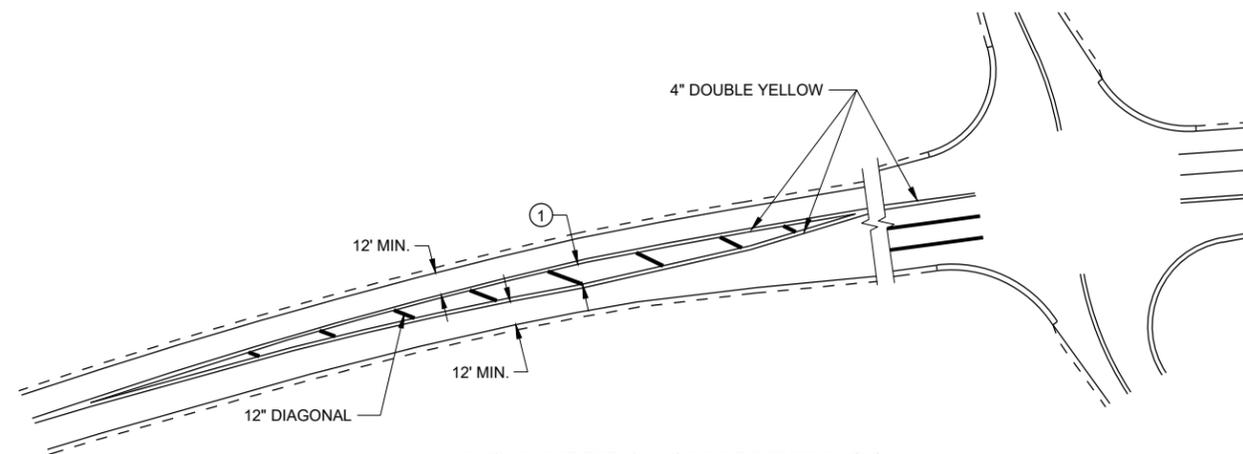
* WHEN THE PAINTED MEDIAN LENGTH IS LESS THAN 50 FEET THE SPACING IS 10'.



MEDIAN ISLAND DETAIL



APPROACH MARKINGS FOR OTHER MEDIAN TYPES



NON-APPROACH MARKINGS

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SDD 15C18 - 06a

SDD 15C18 - 06a

**MEDIAN ISLAND
PAVEMENT MARKINGS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2022 DATE /S/ Jeannie Silver
STATE SIGNING AND MARKING 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.

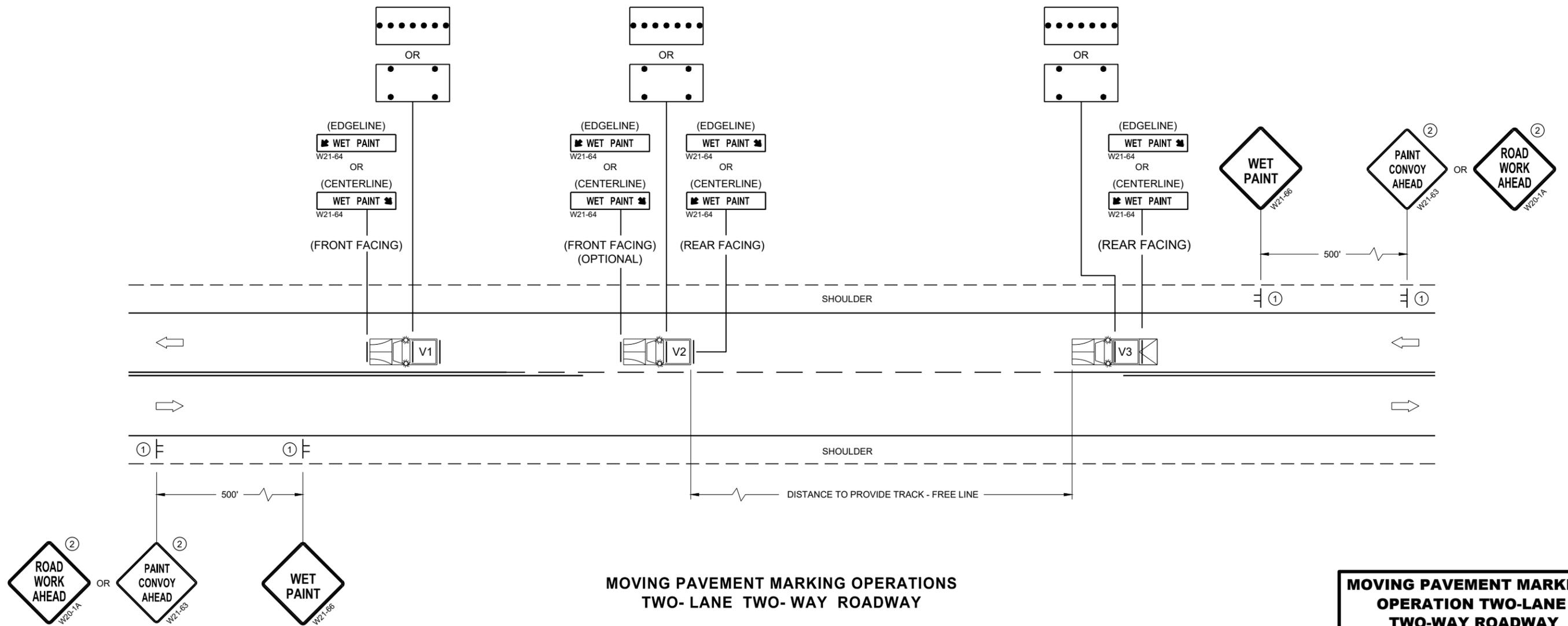
CONES SHOULD BE USED BETWEEN THE MARKING AND SHADOW VEHICLE AT 100 FOOT SPACING. CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.

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.

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

SDD 15C19 - 06a

SDD 15C19 - 06a

MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED November 2019 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	

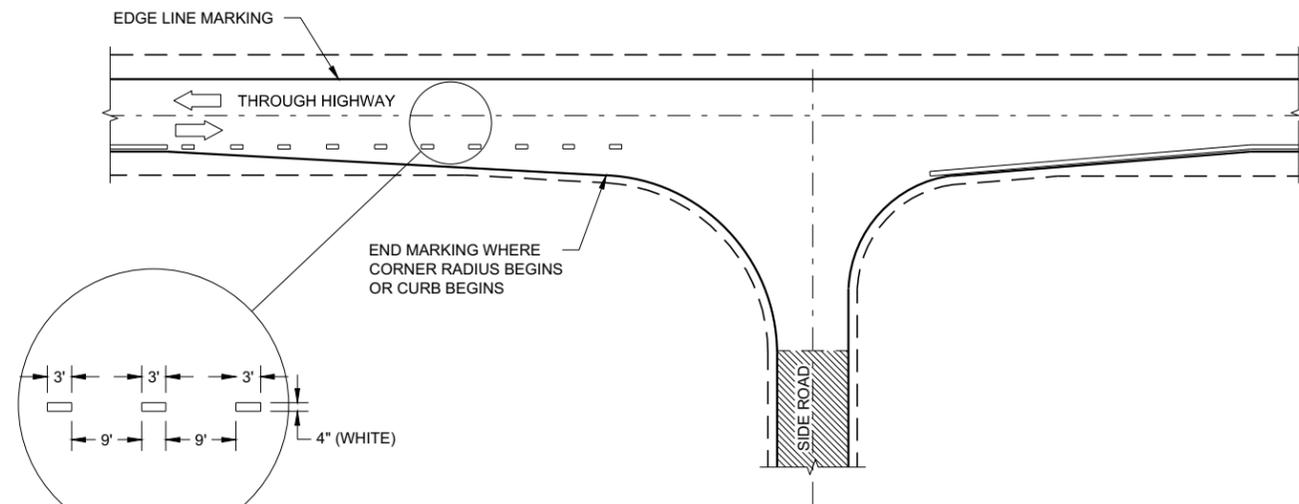
GENERAL NOTES

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

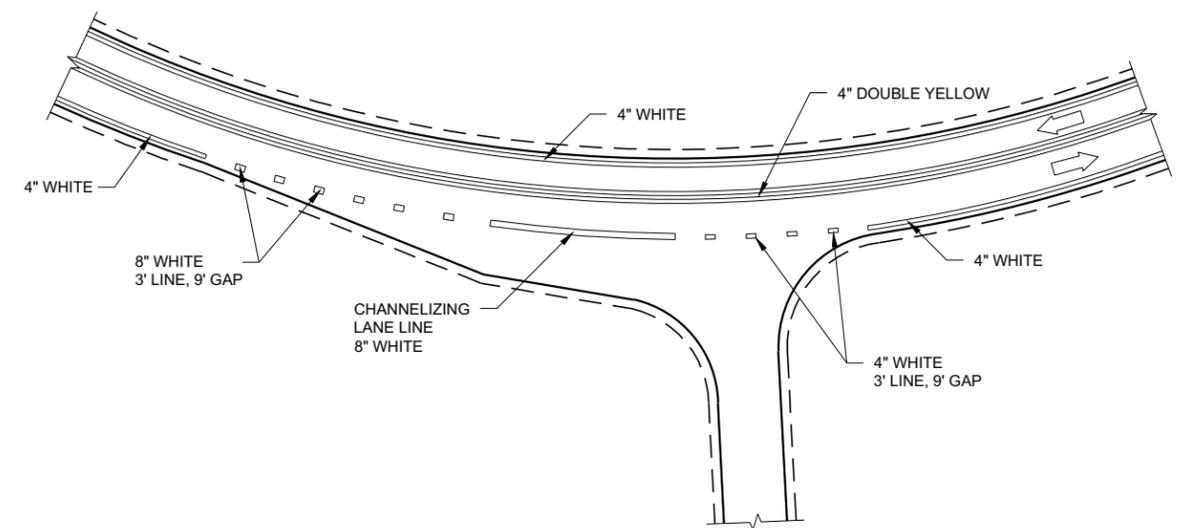
- ① WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.
- ② WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.
- ③ BARRIER LINE ENDS AT SIDE ROAD PAVEMENT / SURFACE EDGE EXTENSION.
- ④ BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.

LEGEND

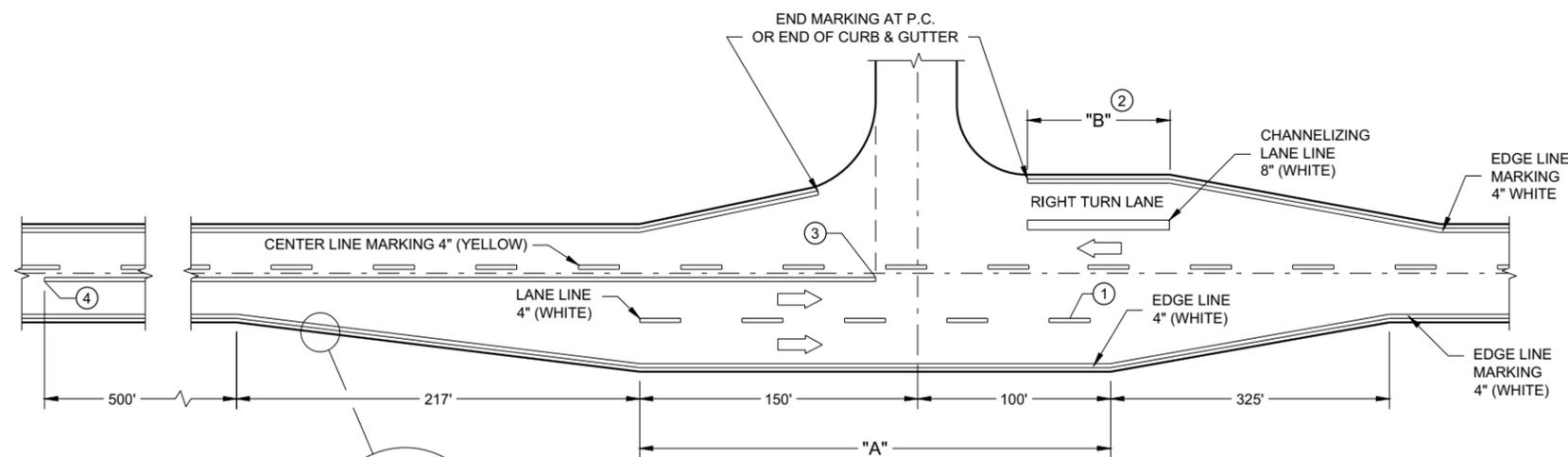
➡ DIRECTION OF TRAVEL



MINOR INTERSECTION



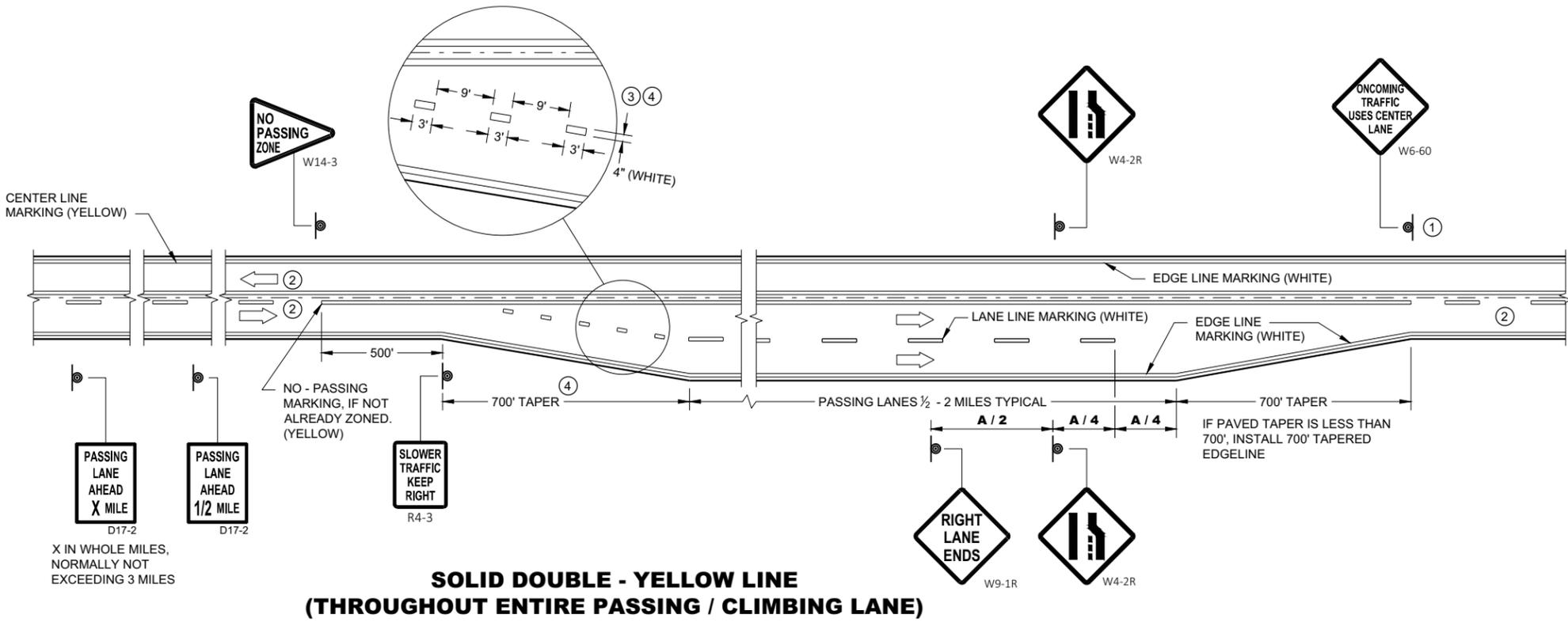
INTERSECTION ON OUTSIDE OF CURVE



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

**PAVEMENT MARKING
(INTERSECTIONS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



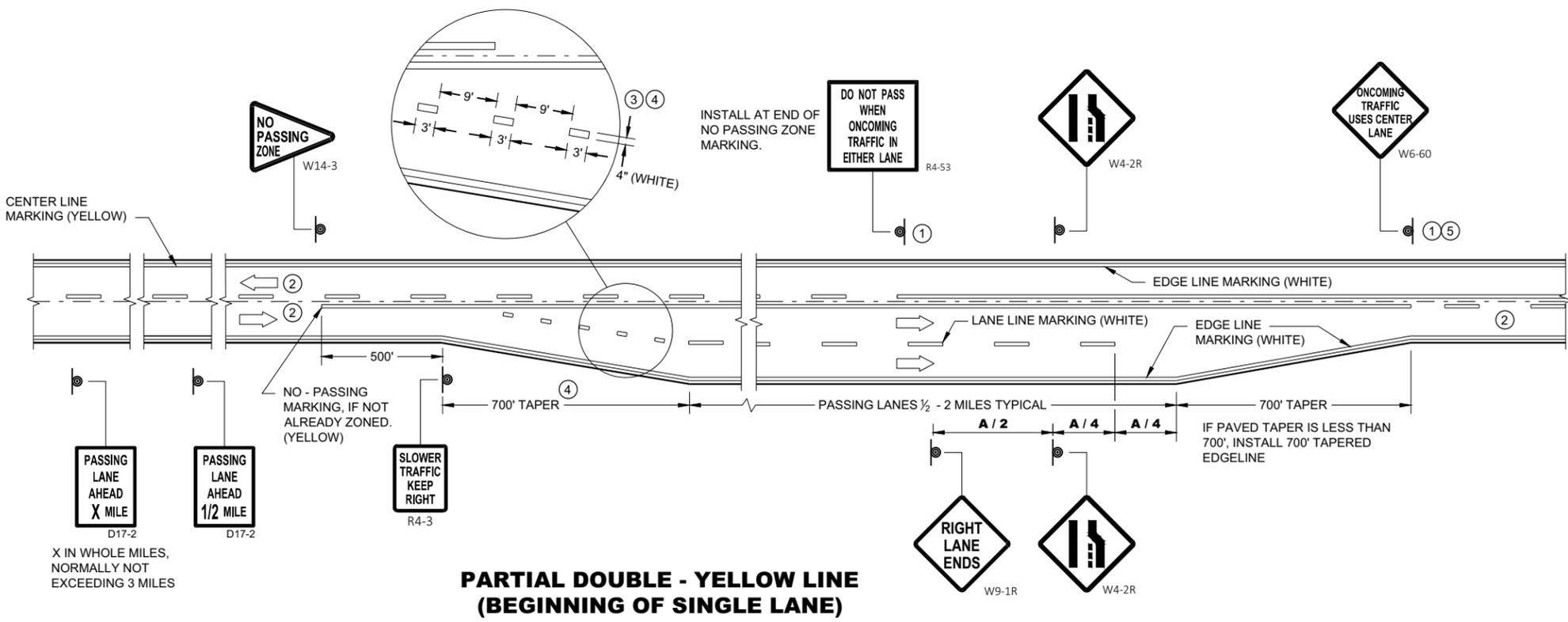
GENERAL NOTES

- ① SIGN SHALL BE REPEATED AT 1 MILE INCREMENTS OR AT THE DISCRETION OF THE REGIONAL TRAFFIC ENGINEER.
- ② THERE MAY BE SOLID YELLOW ON THE CENTERLINE DUE TO SIGHT CONDITIONS.
- ③ THE TAPER LENGTH OF THE DOTTED LINE PAVEMENT MARKING SHALL BE 700 FEET, 3' LINE, 9' GAP, EXCEPT RETRACE THE EXISTING LINE - GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.
- ④ WHEN THE ENTRANCE TAPER IS LESS THAN 700 FEET OR THE SHOULDER WIDTH IN THE PASSING / CLIMBING LANE IS LESS THAN THE ADJACENT HIGHWAY, DO NOT INSTALL DOTTED LINE PAVEMENT MARKING.
- ⑤ REPEAT EVERY 1 MILE UP UNTIL R4-53.

ARROW SYMBOL () SHOWS DIRECTION OF TRAVEL

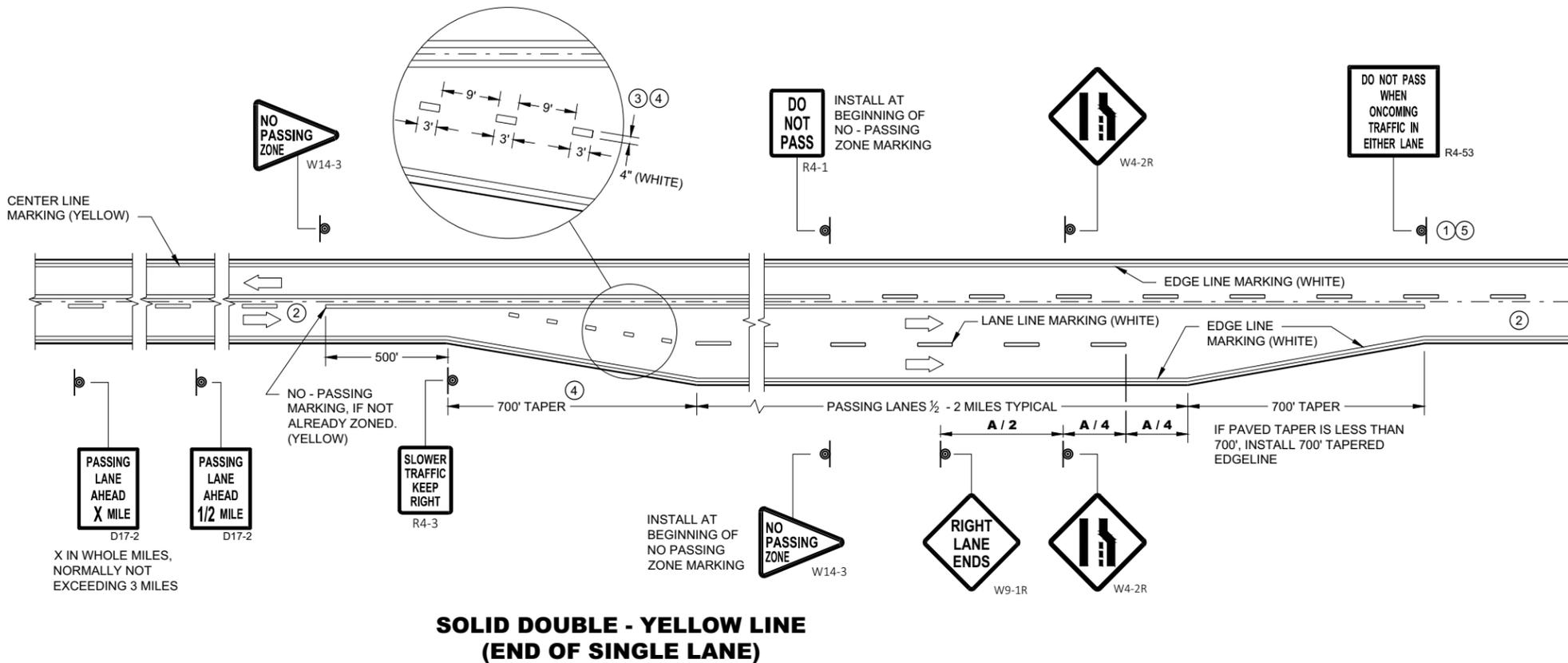
DISTANCE TABLE

POSTED OR 85th PERCENTILE SPEED	DISTANCE "A"
45	775
50	885
55	990



**PAVEMENT MARKING & SIGNING
(CLIMBING LANE & PASSING LANE)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



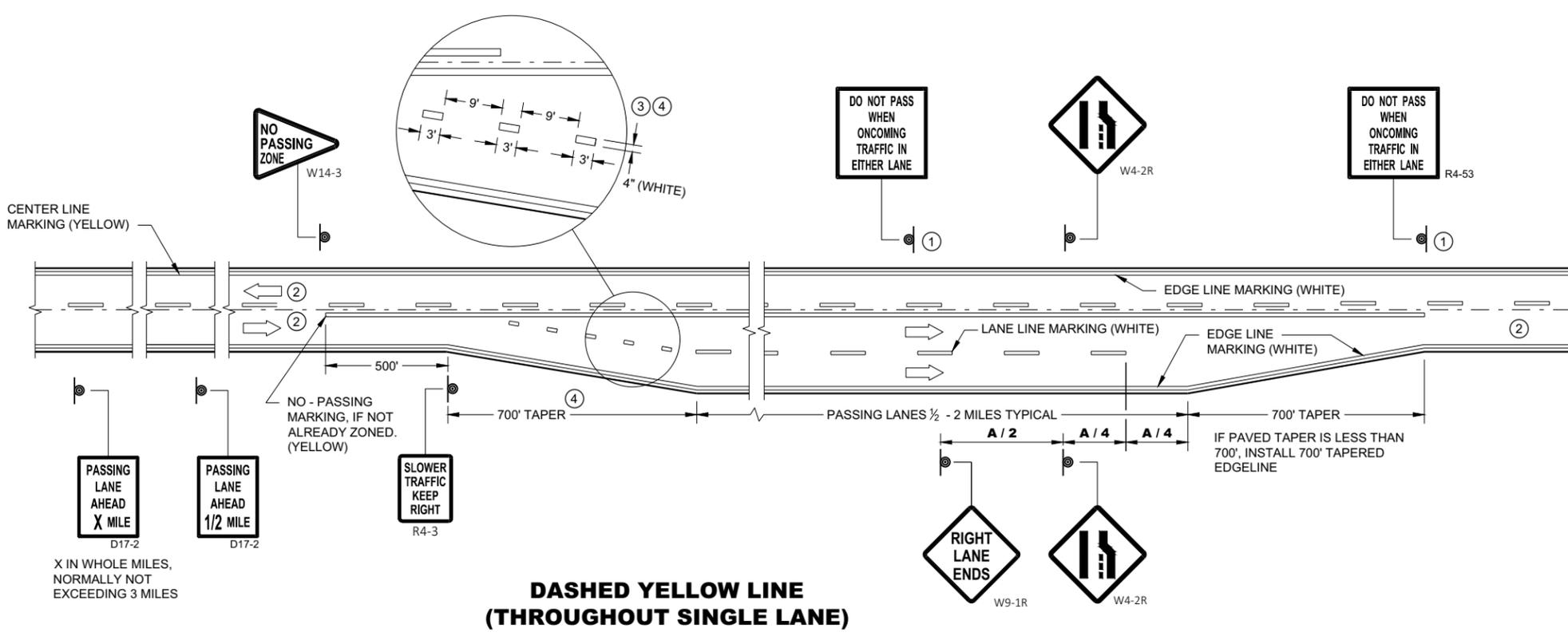
GENERAL NOTES

- ① SIGN SHALL BE REPEATED AT 1 MILE INCREMENTS OR AT THE DISCRETION OF THE REGIONAL TRAFFIC ENGINEER.
- ② THERE MAY BE SOLID YELLOW ON THE CENTERLINE DUE TO SIGHT CONDITIONS.
- ③ THE TAPER LENGTH OF THE DOTTED LINE PAVEMENT MARKING SHALL BE 700 FEET, 3' LINE, 9' GAP, EXCEPT RETRACE THE EXISTING LINE - GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.
- ④ WHEN THE ENTRANCE TAPER IS LESS THAN 700 FEET OR THE SHOULDER WIDTH IN THE PASSING / CLIMBING LANE IS LESS THAN THE ADJACENT HIGHWAY, DO NOT INSTALL DOTTED LINE PAVEMENT MARKING.
- ⑤ REPEAT EVERY ONE MILE UP UNTIL NO PASSING ZONE.

ARROW SYMBOL () SHOWS DIRECTION OF TRAVEL

DISTANCE TABLE

POSTED OR 85th PERCENTILE SPEED	DISTANCE "A"
45	775
50	885
55	990



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SDD 15C35 - 04C

SDD 15C35 - 04C

PAVEMNET MARKING & SIGNING (CLIMBING LANE & PASSING LANE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2019 /S/ Matthew Rauch
DATE STATE SIGNING AND MARKING ENGINEER

FHWA

LEGEND

-  SIGN ON PERMANENT SUPPORT
-  TRAFFIC CONTROL DRUM
-  DIRECTION OF TRAFFIC
-  WORK ZONE

GENERAL NOTES

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

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

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

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

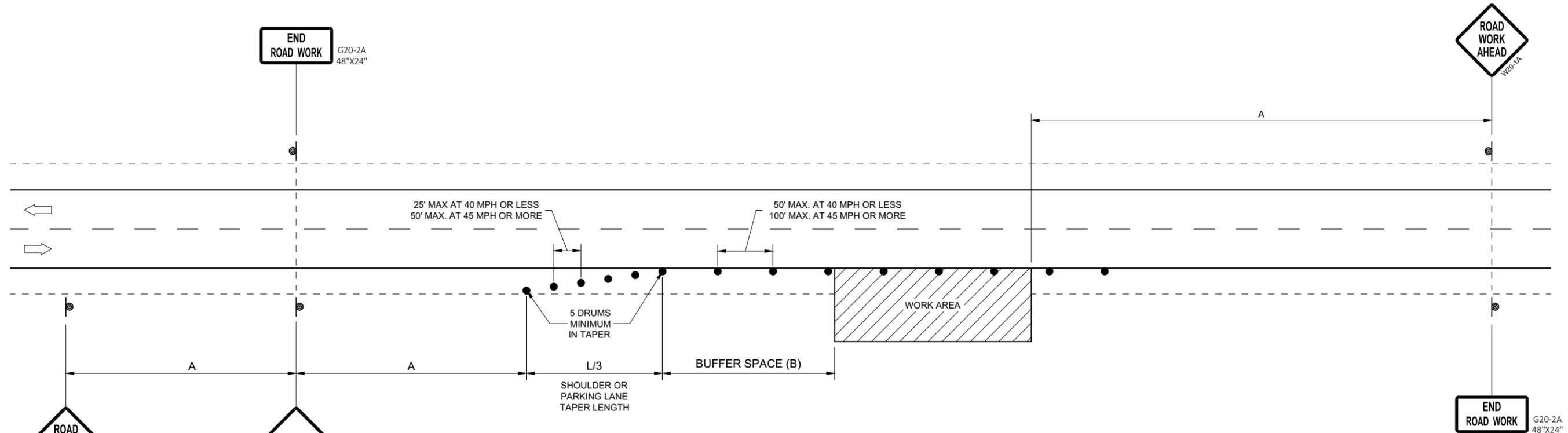
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

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

W20-1A AND G20-2A SIGNS ARE NOT REQUIRED IF THE WORK AREA IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT. G20-2A SIGNS MAY ALSO BE OMITTED IF DURATION OF WORK IS LESS THAN 7 CONTINUOUS DAYS AND NIGHTS.

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OR
IF TRAFFIC CONTROL DEVICES
ENCROACH ONTO TRAVELED WAY, USE

POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	SHOULDER TAPER L / 3 W, LATERAL OFFSET (FT)						BUFFER SPACE (B) FEET
		3	4	5	6	7	8	
25	200'	10	14	17	21	24	28	55
30	200'	15	20	25	30	35	40	85
35	350'	20	27	34	40	47	54	120
40	350'	26	35	44	53	62	70	170
45	500'	45	59	74	89	104	119	220
50	500'	50	66	83	99	116	132	280
55	500'	54	73	91	109	127	145	335'

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

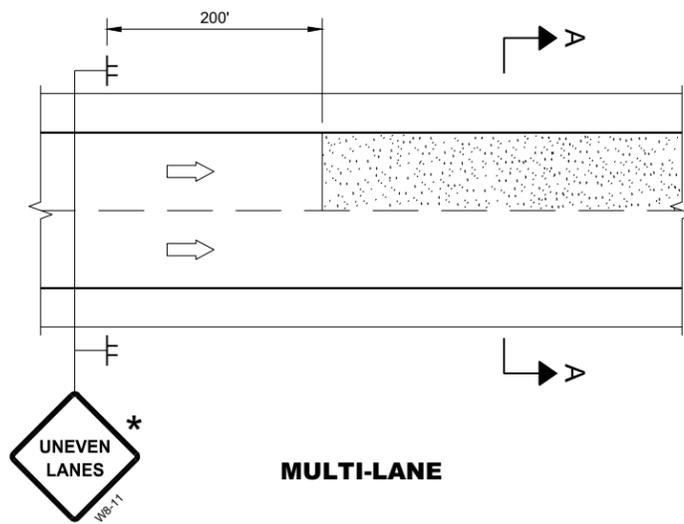
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

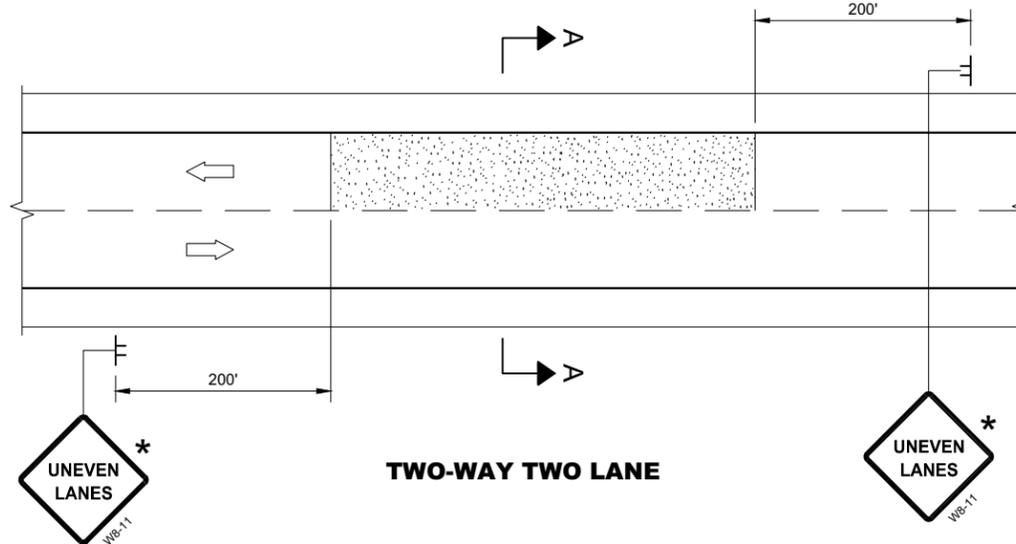
FHWA

SDD 15D28 - 04

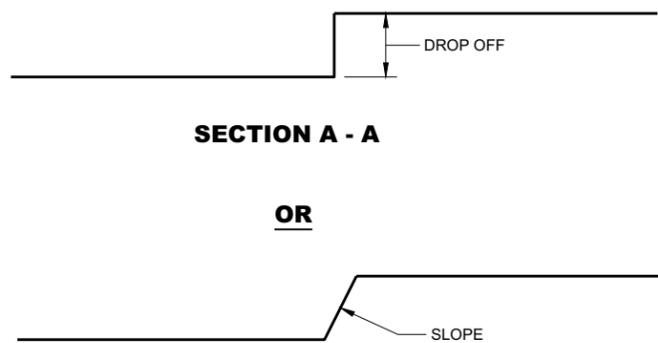
SDD 15D28 - 04



MULTI-LANE



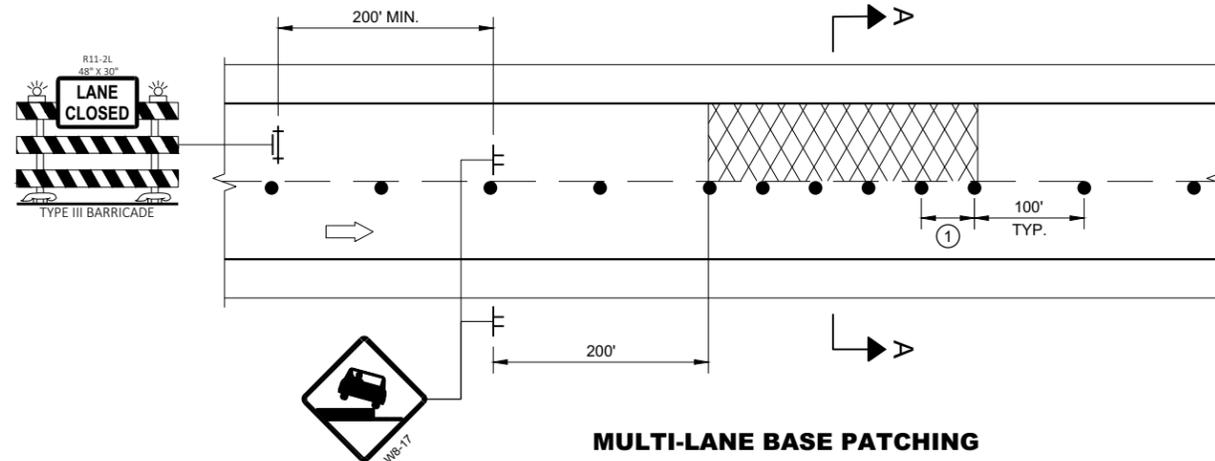
TWO-WAY TWO LANE



SECTION A - A

OR

SECTION A - A



MULTI-LANE BASE PATCHING

ADJACENT LANE DROP-OFFS

GENERAL NOTES

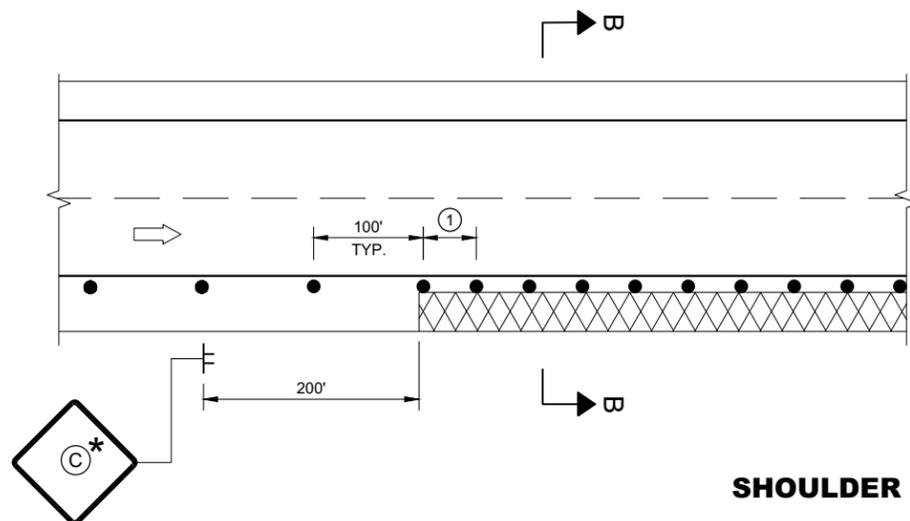
- FOR SPOT LOCATIONS USE ENGINEERING JUDGEMENT WHEN PLACING ADDITIONAL SIGNS.
- ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.
- "WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.
- WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.
- * IF THE DROP-OFF 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

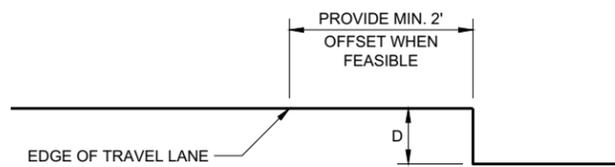
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC
- WORK AREA WITH DROP-OFF
- MILLED SURFACE

6

6



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

SDD 15D39 - 02

SDD 15D39 - 02

**TRAFFIC CONTROL,
DROP-OFF SIGNING**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018 /S/ Andrew Heidtke
DATE DATE WORK ZONE ENGINEER

FHWA

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.

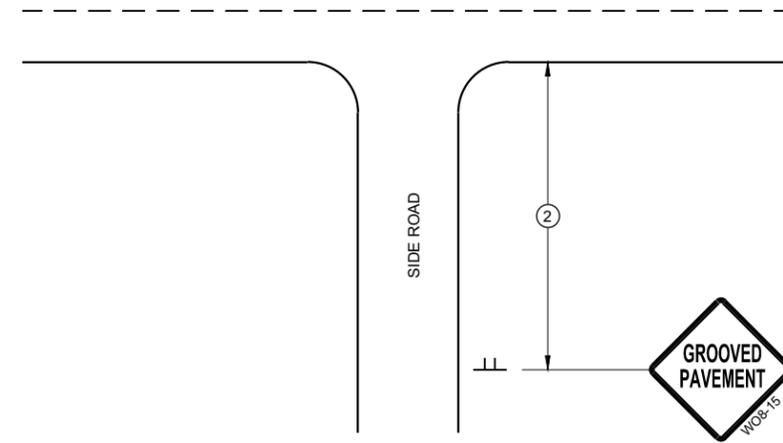
ALL SIGNS INAPPROPRIATE TO THE STATUS OF THE CONTROL ZONE, INCLUDING PRE-EXISTING SIGNS IN THE VICINITY, SHALL BE COVERED OR REMOVED AS DIRECTED BY THE ENGINEER.

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.

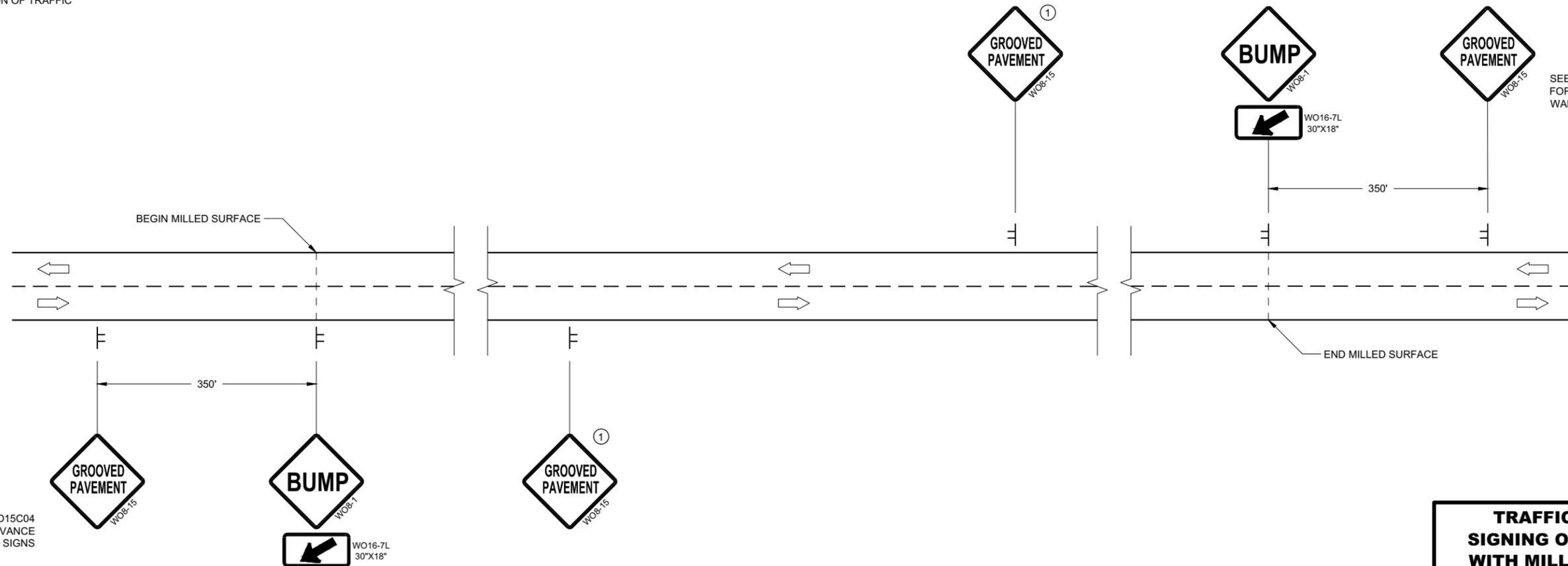
- ① PLACE SIGNS 350' IN ADVANCE OF MILLED SURFACES AND AT 1 MILE INTERVALS, OR AS DIRECTED BY THE ENGINEER.
- ② PLACE SIGN 200' MIN. FROM INTERSECTION AND 200' MIN. AFTER ADVANCE WARNING SIGN SHOWN IN SDD 15C04.

LEGEND

-  SIGN ON TEMPORARY SUPPORT
-  DIRECTION OF TRAFFIC



TYPICAL SIDE ROAD APPROACH SIGN DETAIL



DETAIL FOR SIGNING ON MILLED SURFACES

TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH MILLED SURFACES	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED February 2020 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	

6

6

SDD 15D44 - 02

SDD 15D44 - 02

LEGEND

- V1 WORK VEHICLE
- V2 SHADOW VEHICLE
-  TRUCK MOUNTED ATTENUATOR (TMA)
-  FLASHING ARROW PANEL (CAUTION)
-  WORK AREA
-  DIRECTION OF TRAFFIC

POSTED SPEED PRIOR TO WORK STARTING (MPH)	DECISION SIGHT DISTANCE (D)
0 - 25	550'
30	550'
35	700'
40	700'
45	900'
50	900'
55	1200'

GENERAL NOTES

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.

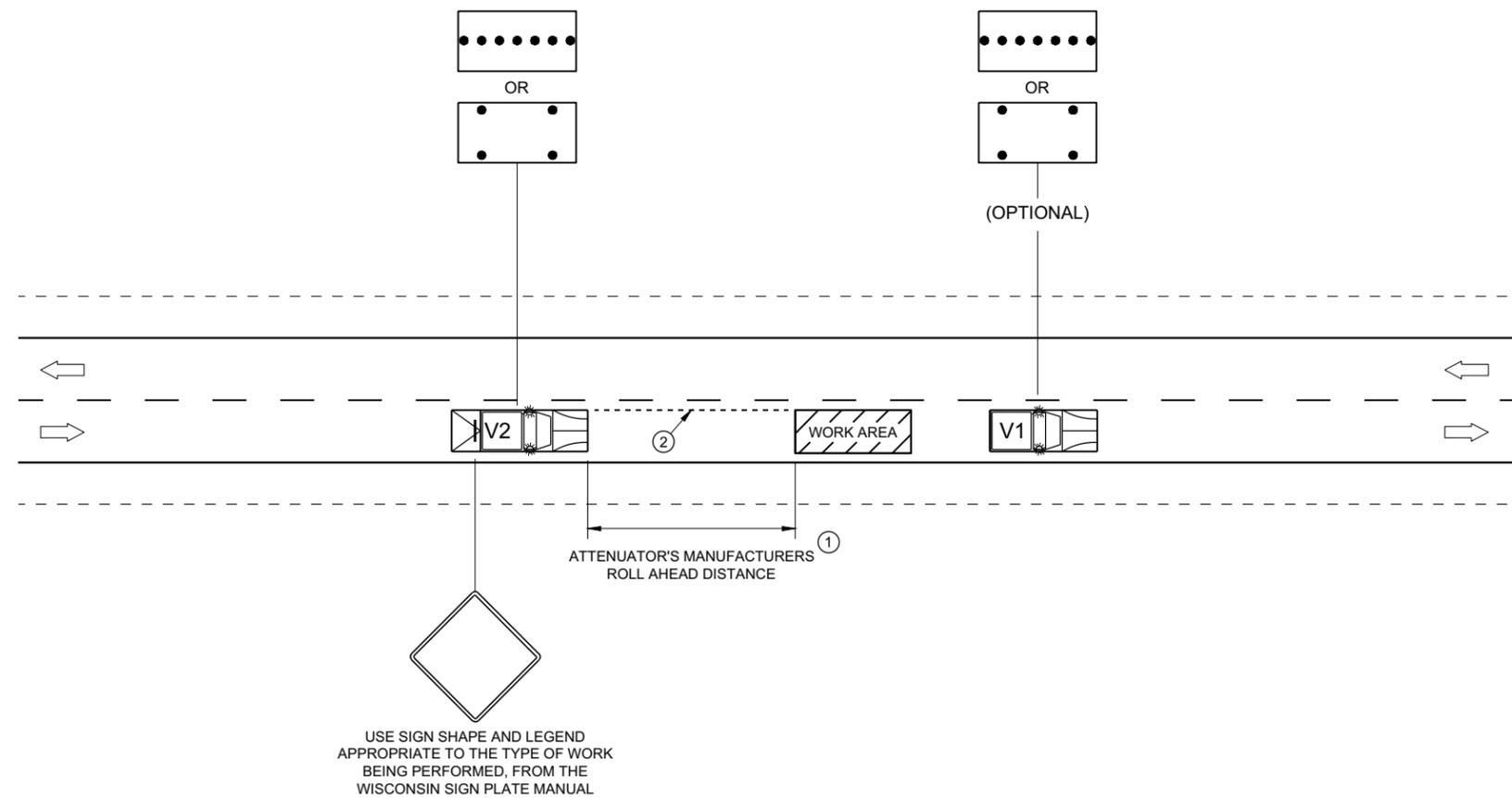
MOBILE IS WORK THAT MOVES CONTINUOUSLY OR MOVES AT LEAST THE DECISION SIGHT DISTANCE EVERY 15 MINUTES.

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

ALL ARROW PANELS SHALL BE REAR FACING, TYPE "B" OR "C", AND DISPLAYING THE FLASHING CAUTION MODE. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE ARROW PANEL.

USE AN ATTENUATOR ON THE REARMOST VEHICLE THAT BLOCKS ALL OR PART OF THE TRAFFIC LANE.

- ① DISTANCE BETWEEN VEHICLES MAY INCREASE FROM THE ATTENUATOR'S ROLL AHEAD BASED ON TERRAIN, SIGHT DISTANCE, AND OTHER FACTORS. WHENEVER ADEQUATE STOPPING SIGHT DISTANCE EXISTS TO THE REAR, SHADOW VEHICLES SHOULD MAINTAIN THE MINIMUM DISTANCE FROM THE WORK VEHICLE AND PROCEED AT THE SAME SPEED AS THE WORK VEHICLE. SHADOW VEHICLES SHOULD SLOW DOWN IN ADVANCE OF VERTICAL OR HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.
- ② ALIGN LEFT SIDE OF SHADOW VEHICLE WITH EDGE OF WORK AREA.



6

6

SDD 15D51 - 01

SDD 15D51 - 01

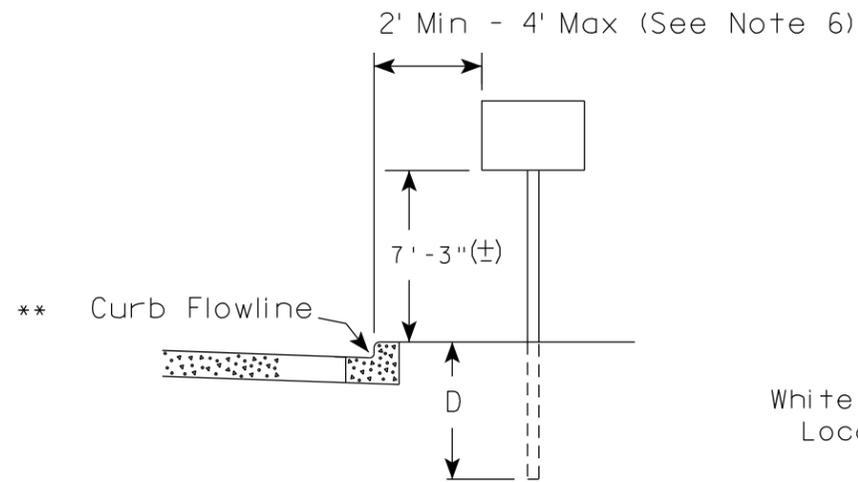
**TRAFFIC CONTROL,
MOBILE OPERATIONS ON
AN UNDIVIDED ROADWAY**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

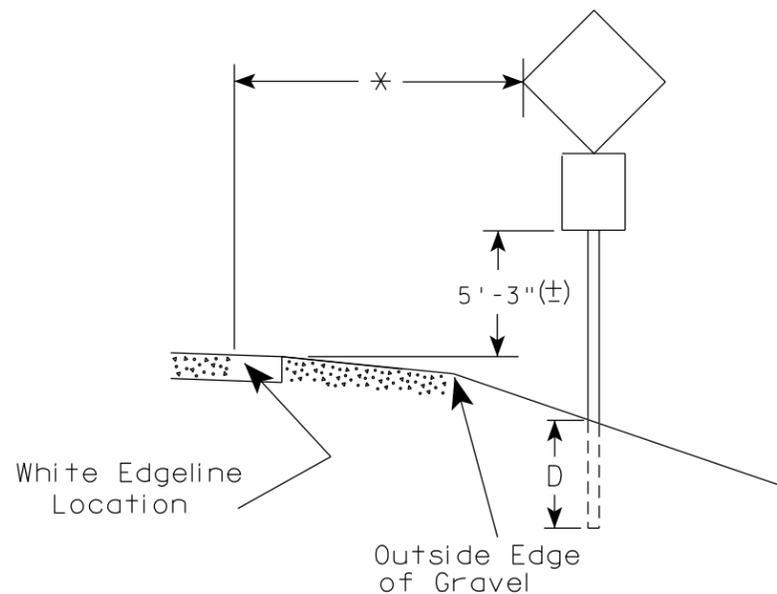
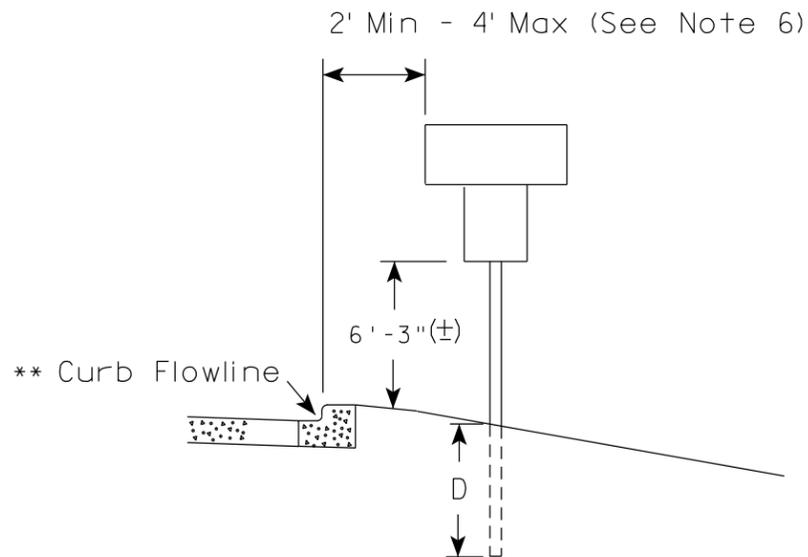
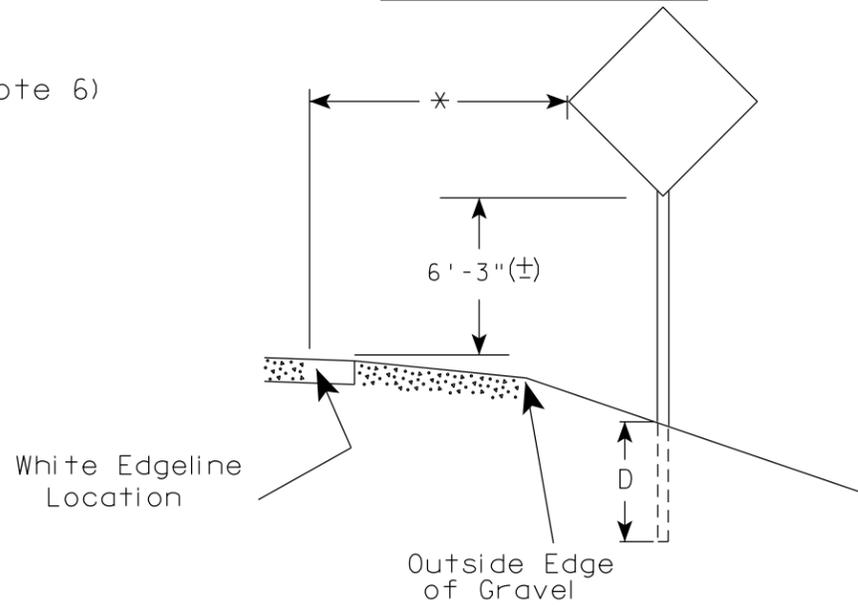
APPROVED
February 2021 /S/ Andrew Heidtke
DATE STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER

FHWA

URBAN AREA



RURAL AREA (See Note 2)



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" (±). 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. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
5. Offset distance shall be consistent with existing signs or consistent throughout length of project.
6. The (±) tolerance for mounting height is 3 inches.
7. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the 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.

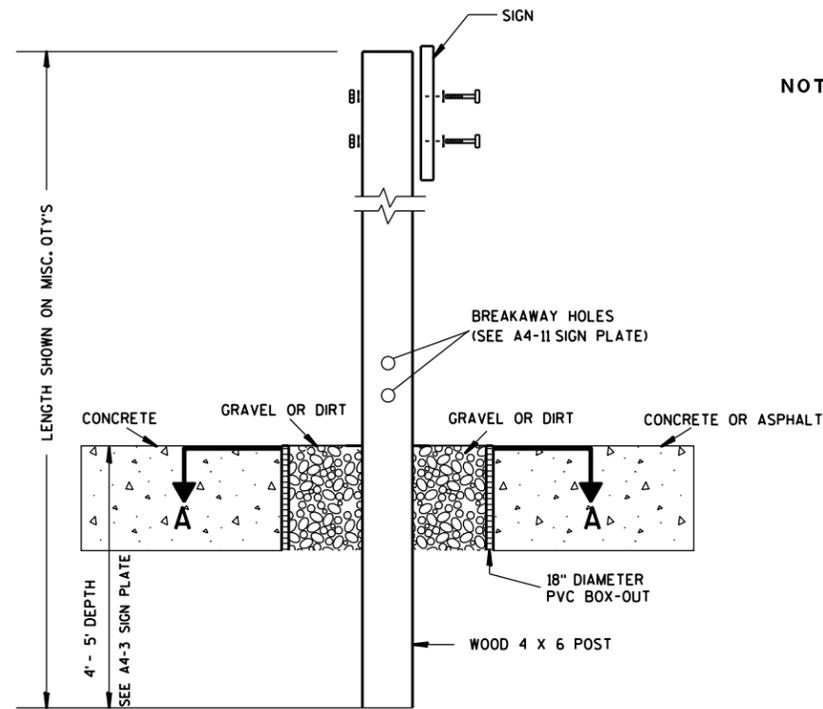
* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

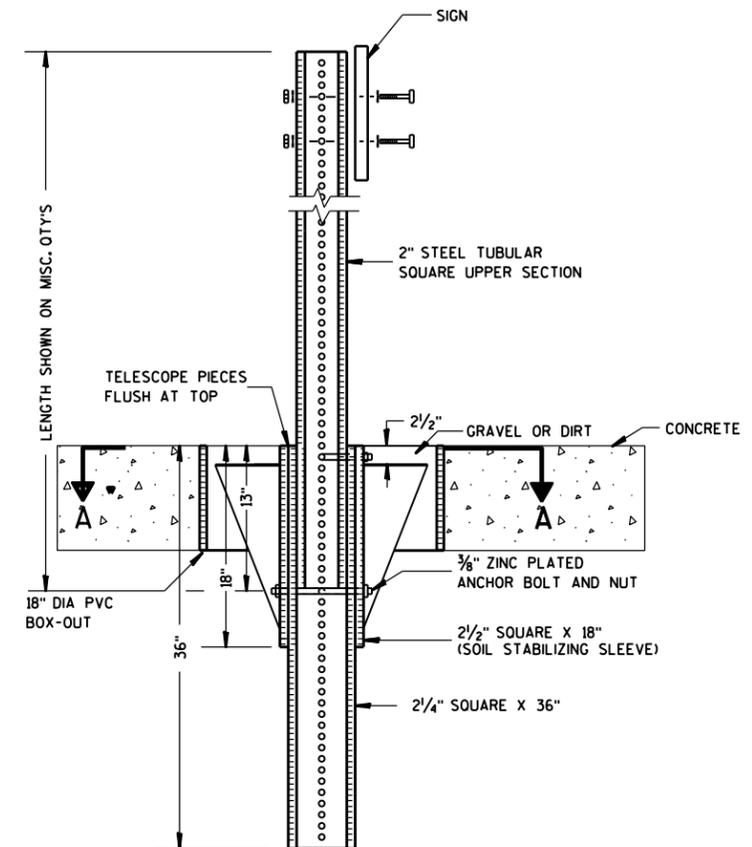
DATE 5/13/2020 PLATE NO. A4-3.22



ELEVATION VIEW

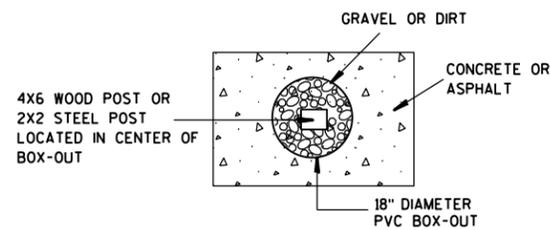
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

- NOTES:**
1. ALL MATERIAL TO BE APPROVED BY ENGINEER PRIOR TO INSTALLATION
 2. SEE SIGN PLATE A4-8 FOR SIGN HARDWARE REQUIREMENTS
 3. 18 INCH X 18 INCH SQUARE BOX-OUTS MAY BE USED FOR INSTALLATIONS IN EXISTING CONCRETE OR ASPHALT LOCATIONS.



ELEVATION VIEW

DETAIL OF STEEL 2 X 2 SIGN POST IN BOX-OUT



PLAN VIEW

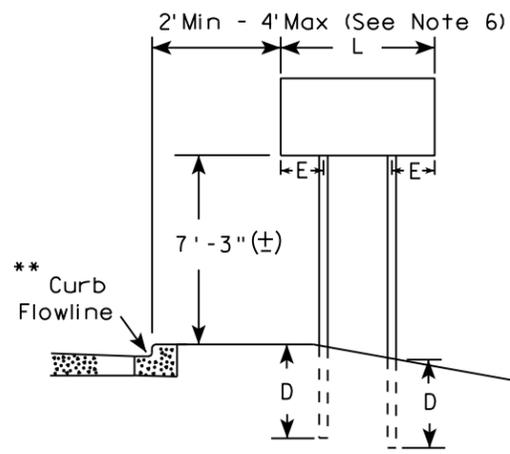
FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B	
<small>WISCONSIN DEPT OF TRANSPORTATION</small>	
APPROVED <i>Matthew R Rauch</i> <small>for State Traffic Engineer</small>	
<small>DATE 1/27/14</small>	<small>PLATE NO. A4-3B.1</small>

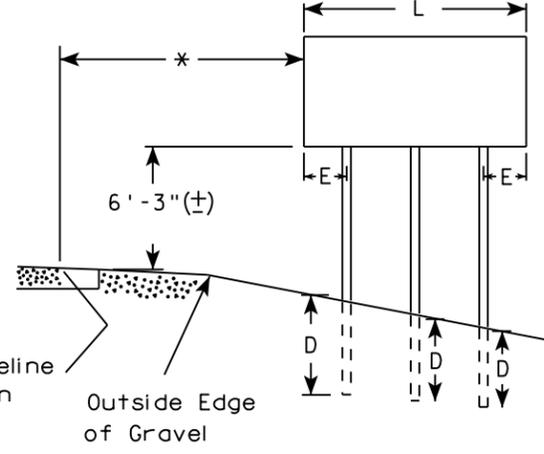
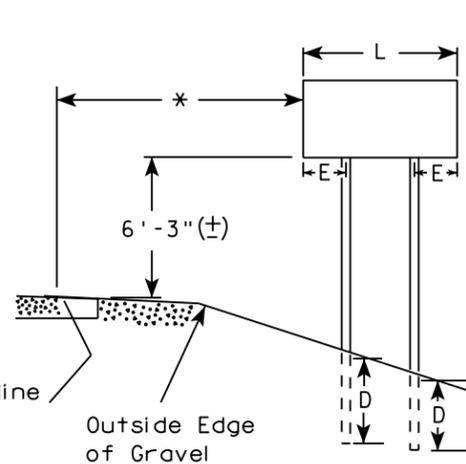
GENERAL NOTES

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

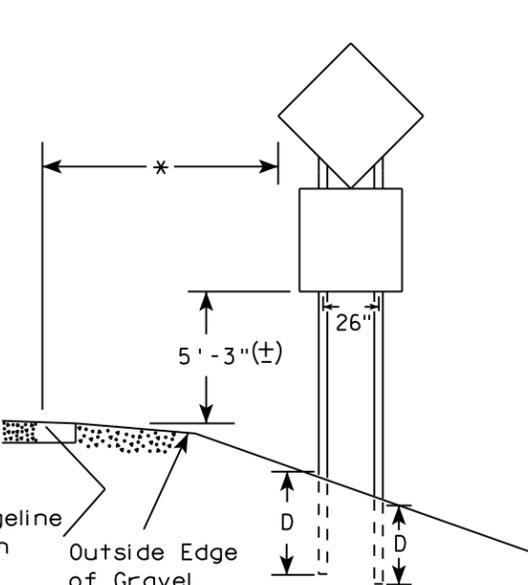
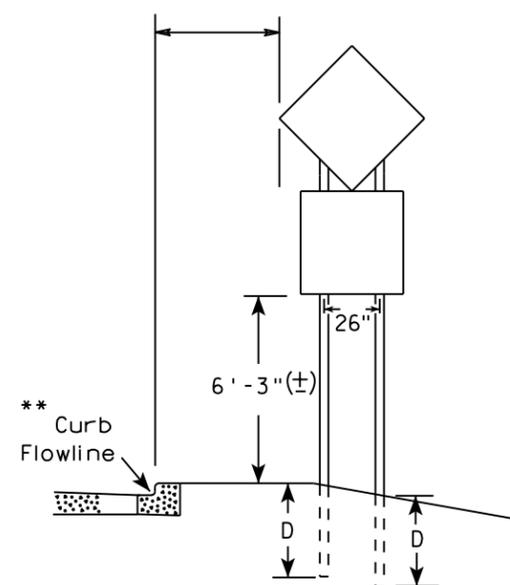
URBAN AREA



RURAL AREA (See Note 3)



URBAN AREA



48" DIAMOND WARNING SIGN

48" DIAMOND WARNING SIGN

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

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

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

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

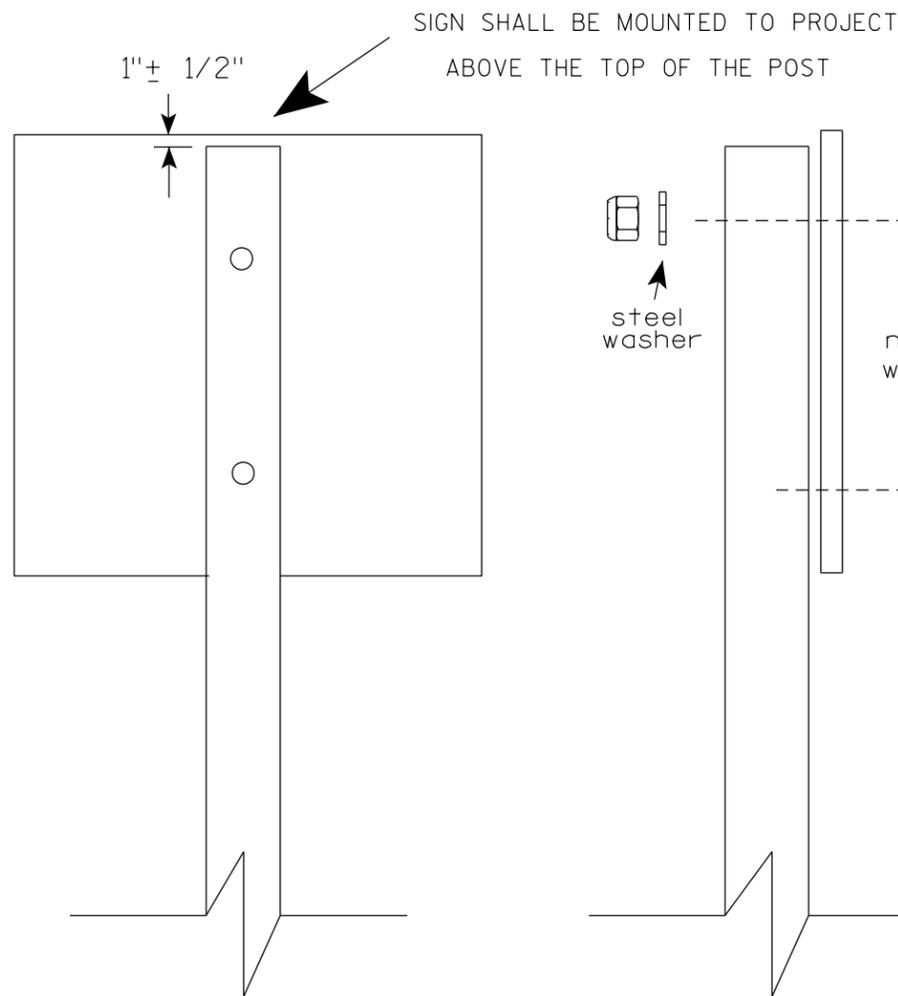
SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 108" to 144"	12"

POST EMBEDMENT DEPTH

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

TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION
 APPROVED *Matthew R. Rauch*
 For State Traffic Engineer
 DATE 8/21/17 PLATE NO. A4-4.15



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

- a. Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3
- b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

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

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

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

WOOD POSTS (4" x 6")

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

SQUARE STEEL POSTS (2" x 2")

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

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

WASHERS (ALL POSTS) -

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

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

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

ATTACHMENT OF SIGNS
TO POSTS

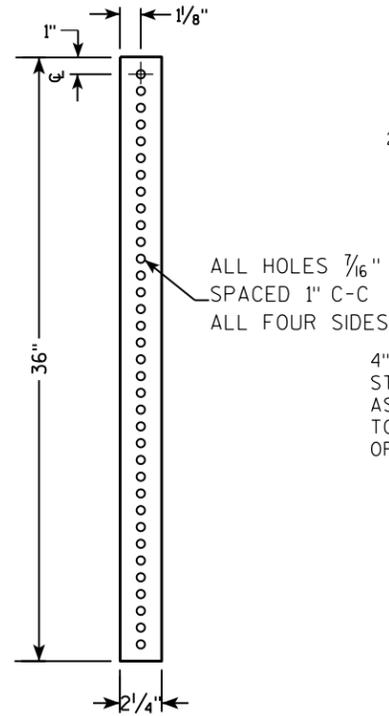
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R Rauch*
For State Traffic Engineer

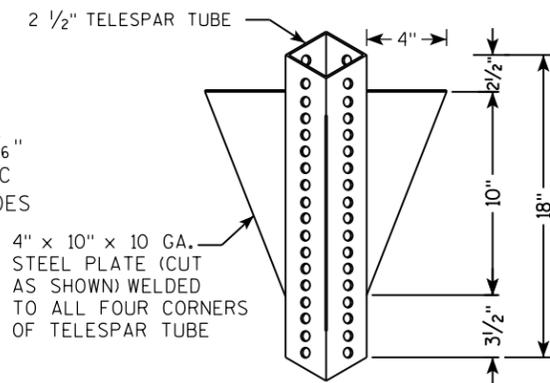
DATE 4/1/2020 PLATE NO. A4-8.9

**TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM**

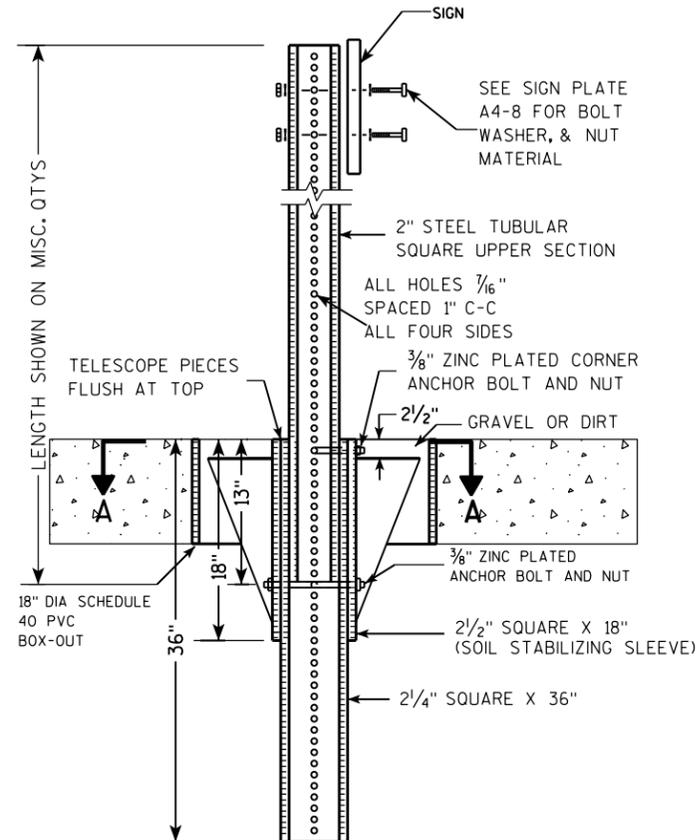
2 1/4" SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



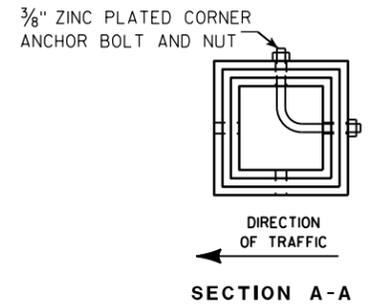
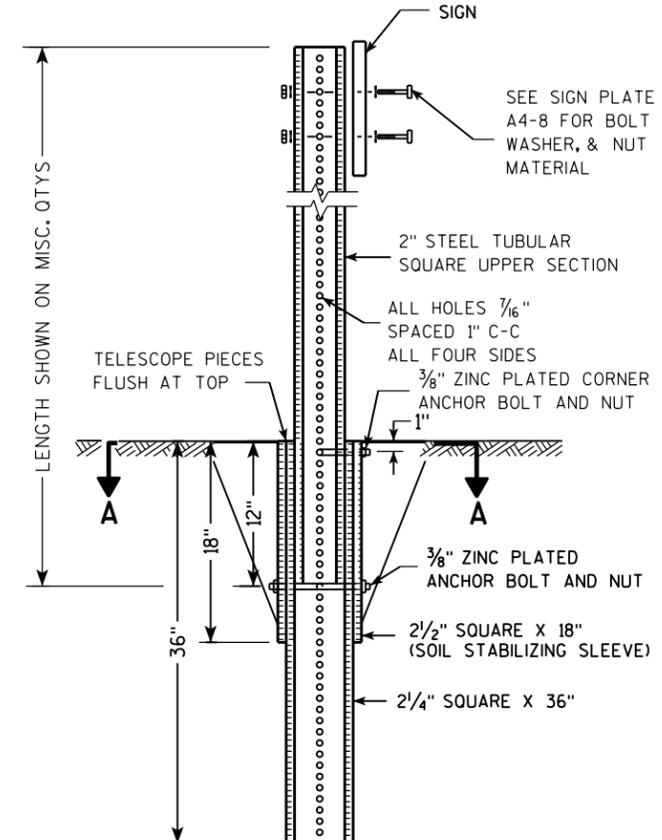
2 1/2" SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH



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



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



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 NO. A4-9.9

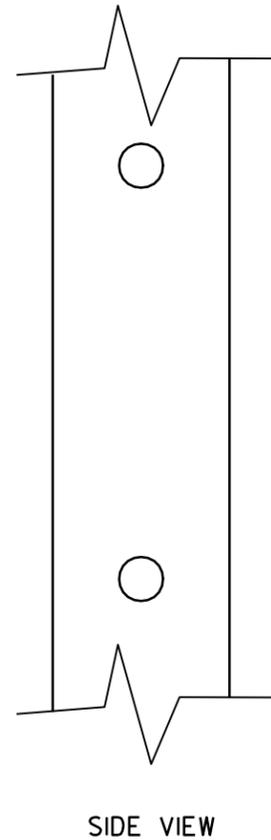
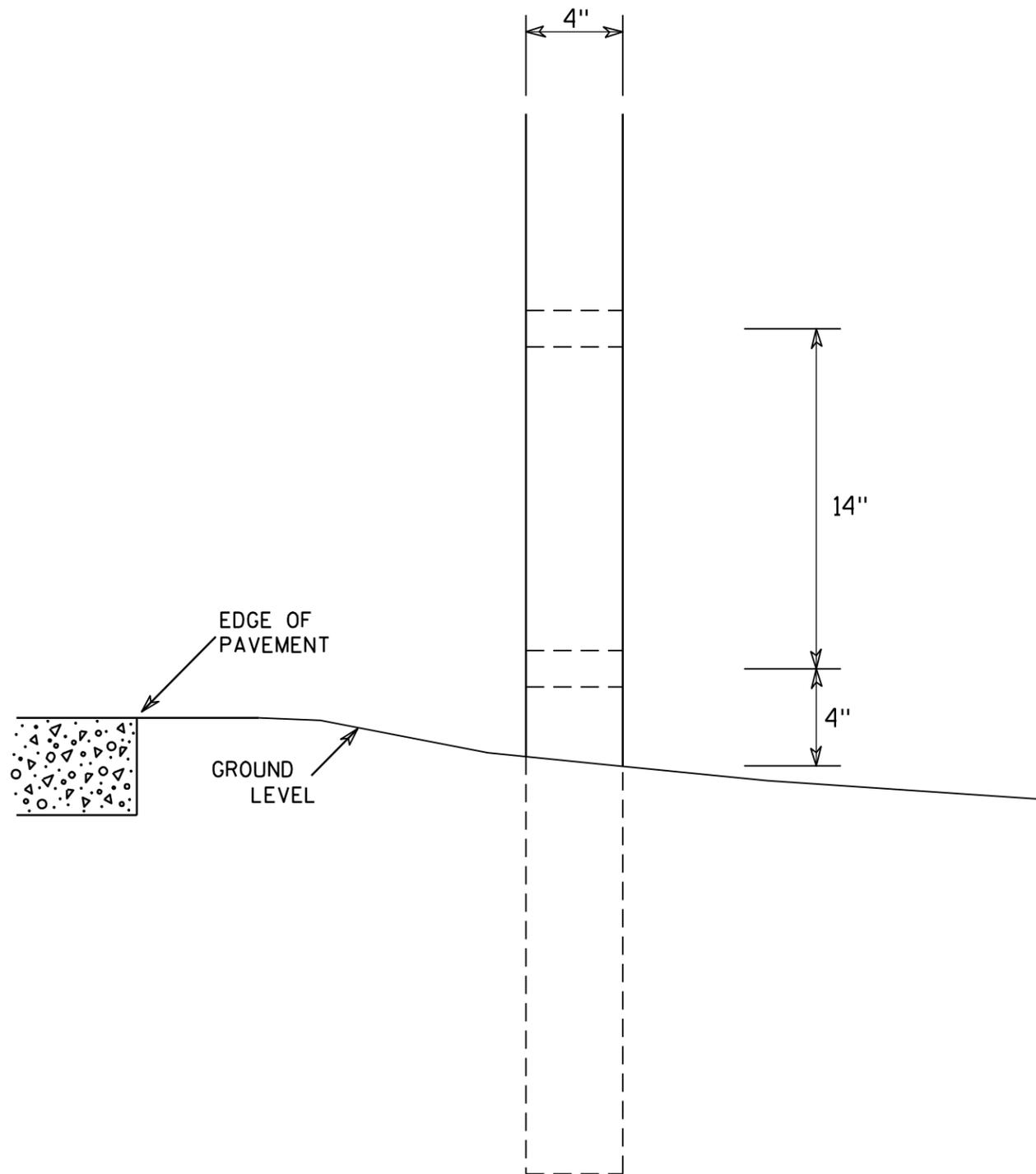
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



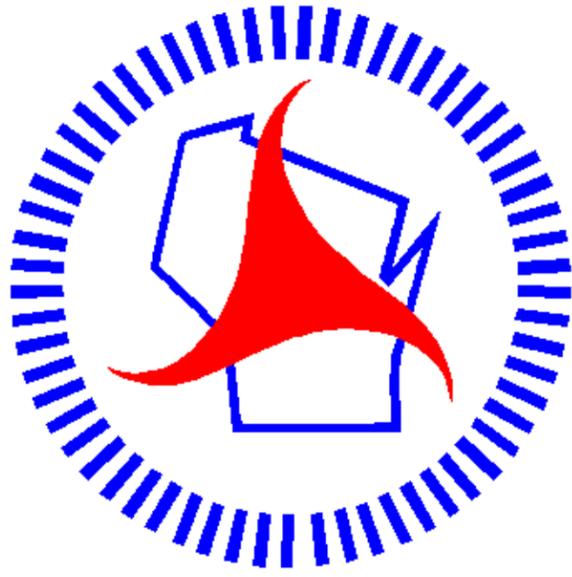
GENERAL NOTES

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	<i>Chester J Spang</i> for State Traffic Engineer
DATE 3/27/97	PLATE NO. A4-11.2



Wisconsin Department of Transportation

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