

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
4430-21-71	WISC 2023006	1

# STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

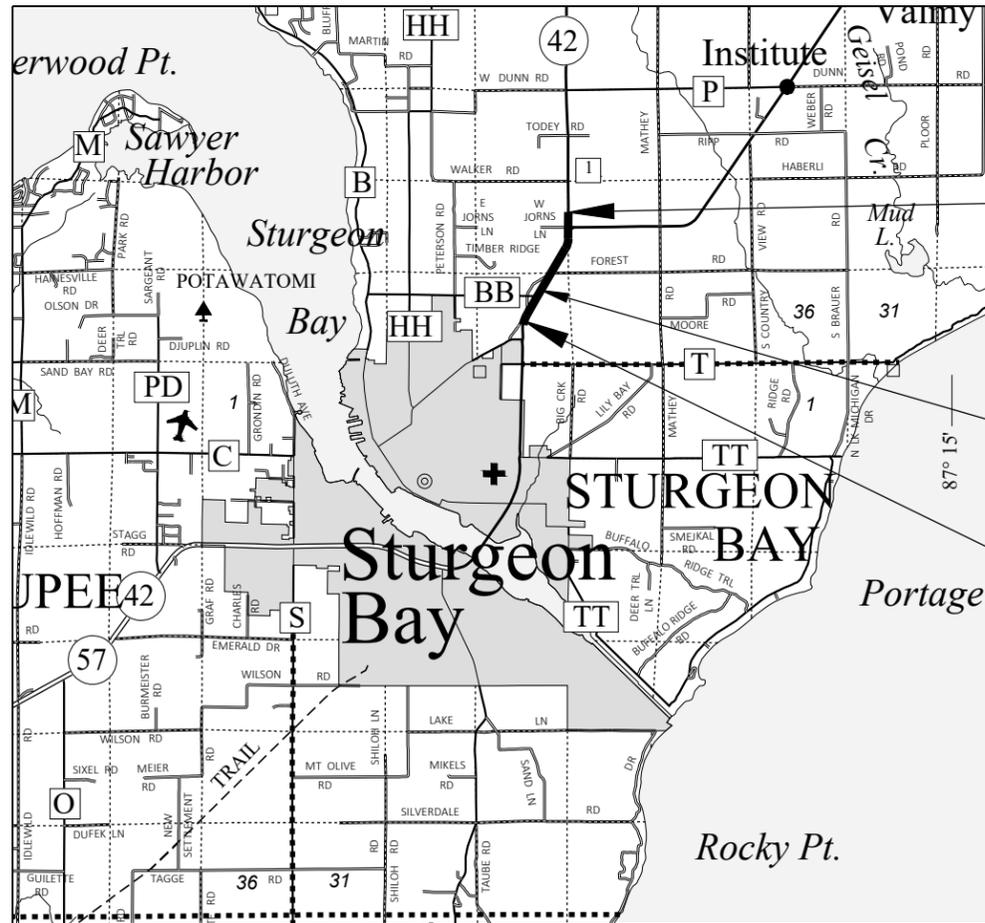
## STURGEON BAY - EGG HARBOR

EGG HARBOR ROAD - MID JUNCTION 42/57

**STH 42**  
**DOOR COUNTY**

STATE PROJECT NUMBER  
**4430-21-71**

R-26-E ← R-27-E                      R-27-E ← R-28-E



**END PROJECT**  
STA 6+37.89  
Y= 172,482.620  
X= 504,381.497

C-15-02 (TO REMAIN)  
STA 101+86

**BEGIN PROJECT**  
STA 915+03.33  
Y= 166,238.410  
X= 501,766.022

LAYOUT  
SCALE 0 2 MI  
TOTAL NET LENGTH OF CENTERLINE = 1.169 MILES

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

**ORDER OF SHEETS**

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

TOTAL SHEETS = 102



**DESIGN DESIGNATION**

A.A.D.T.	2023	=	10,110
A.A.D.T.	2043	=	10,920
D.H.V.		=	—
D.D.		=	50/50
T.		=	13.8% (AADT)
DESIGN SPEED		=	45 MPH
ESALS		=	3,600,000

**CONVENTIONAL SYMBOLS**

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

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

**STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION**

PREPARED BY

Surveyor	NER
Designer	D. SCHROEDER
Project Manager	P. BRAUER
Regional Examiner	REGIONAL EXAMINER
Regional Supervisor	D. SEGERSTROM

APPROVED FOR THE DEPARTMENT

DATE: 7/15/2022 (Signature)

PROJECT ID: 4430-21-71

COUNTY: DOOR

**E**

**GENERAL NOTES**

THE LOCATIONS OF EXISTING UTILITY FACILITIES AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY FACILITIES WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.

LOCATION OF EXISTING RIGHT-OF-WAY IS APPROXIMATE.

HMA PAVEMENT SHALL BE CONSTRUCTED WITH THE FOLLOWING LAYERS		
THICKNESS	LAYERS	ASPHALT MIX BID ITEM
2 1/2-INCHES*	1 3/4-INCH UPPER LAYER 3/4-INCH LEVELING LAYER*	4 MT 58-28 S 4 MT 58-28 S
3 1/2-INCHES	1 3/4-INCHES UPPER LAYER 1 3/4-INCHES LOWER LAYER	4 MT 58-28 S 4 MT 58-28 S

\* NOMINAL THICKNESS.

LEVELING LAYER WILL BE USED FOR CROWN CORRECTION.

SLOPE SHALL BE FROM 1.5% EXISTING TO 2% PROPOSED.

SEE TYPICAL SECTIONS FOR THICKNESS

**DNR LIAISON**

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**DOOR COUNTY HIGHWAY COMMISSIONER**

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**NE REGION SURVEY COORDINATOR**

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**NE REGION DESIGN PROJECT MANAGER**

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**UTILITIES CONTACTS**

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RICK VINCENT  
NET LEC LLC - COMMUNICATION LINE  
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STURGEON BAY UTILITIES - ELECTRICITY  
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(920) 493-6491 (MOBILE)  
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dvosberg@atcllc.com

VINCENT ALBIN  
SPECTRUM - COMMUNICATION LINE  
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APPLETON, WI 54915  
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vince.albin@charter.com

JOEL SAWICKI  
WISCONSIN PUBLIC SERVICE CORPORATION - GAS/PETROLEUM  
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P O BOX 236  
TWO RIVERS, WI 54241-0236  
(920) 657-1862  
(920) 680-3181 (MOBILE)  
joel.sawicki@wisconsinpublicservice.com

**ORDER OF SECTION 2 DETAIL SHEETS**

- GENERAL NOTES
- PROJECT OVERVIEW
- TYPICAL SECTIONS
- CONSTRUCTION DETAILS
- PLAN DETAILS
- EROSION CONTROL
- TRAFFIC CONTROL
- DETOUR PLAN

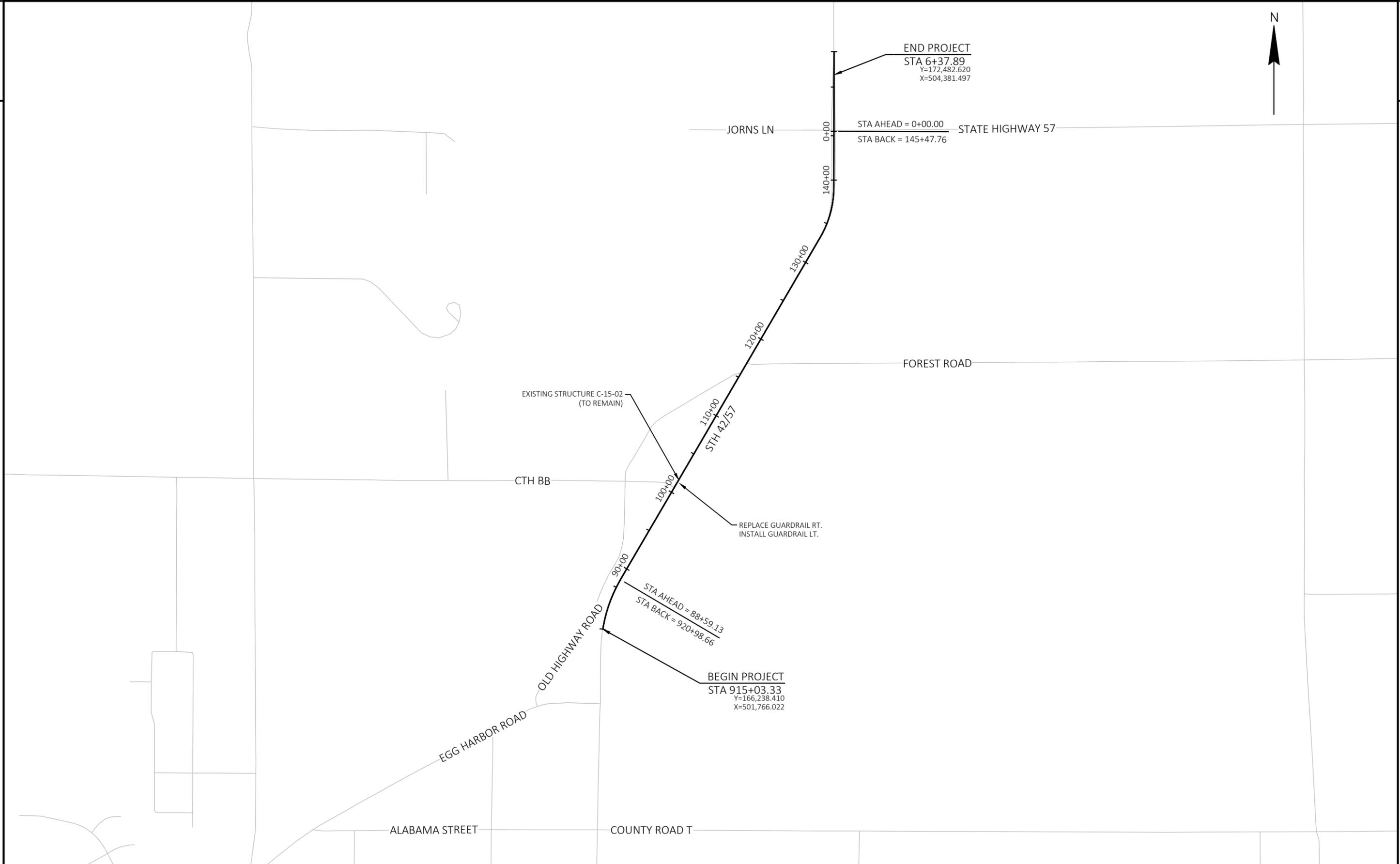
**DIGGERS HOTLINE**  
Dial  or (800)242-8511  
www.DiggersHotline.com

**RUNOFF COEFFICIENT TABLE**

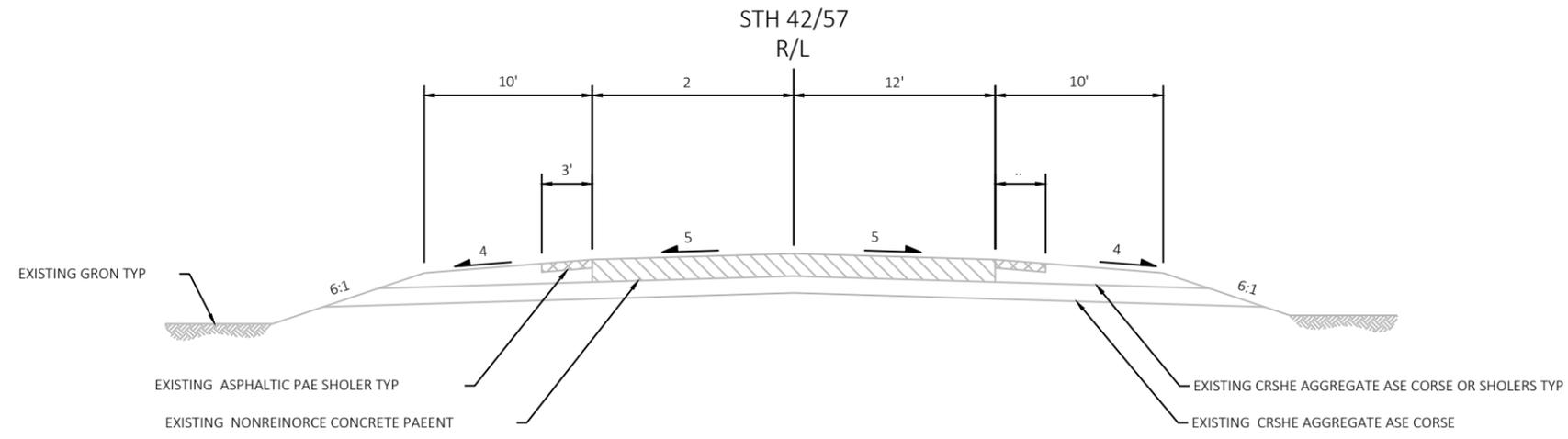
	HYDROLOGIC SOIL GROUP											
	A			B			C			D		
	SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)		
LAND USE:	0-2	2-6	6 & OVER									
ROW CROPS	.08 .22	.16 .30	.22 .38	.12 .26	.20 .34	.27 .44	.15 .30	.24 .37	.33 .50	.19 .34	.28 .41	.38 .56
MEDIAN STRIP-TURF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

TOTAL PROJECT AREA = 20 ACRES

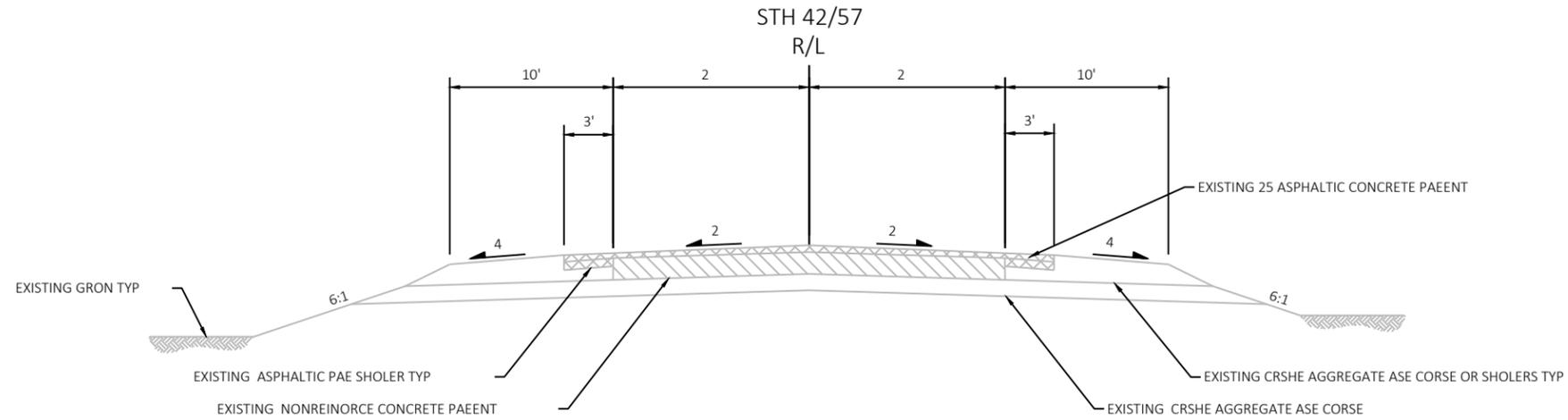
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.1 ACRES



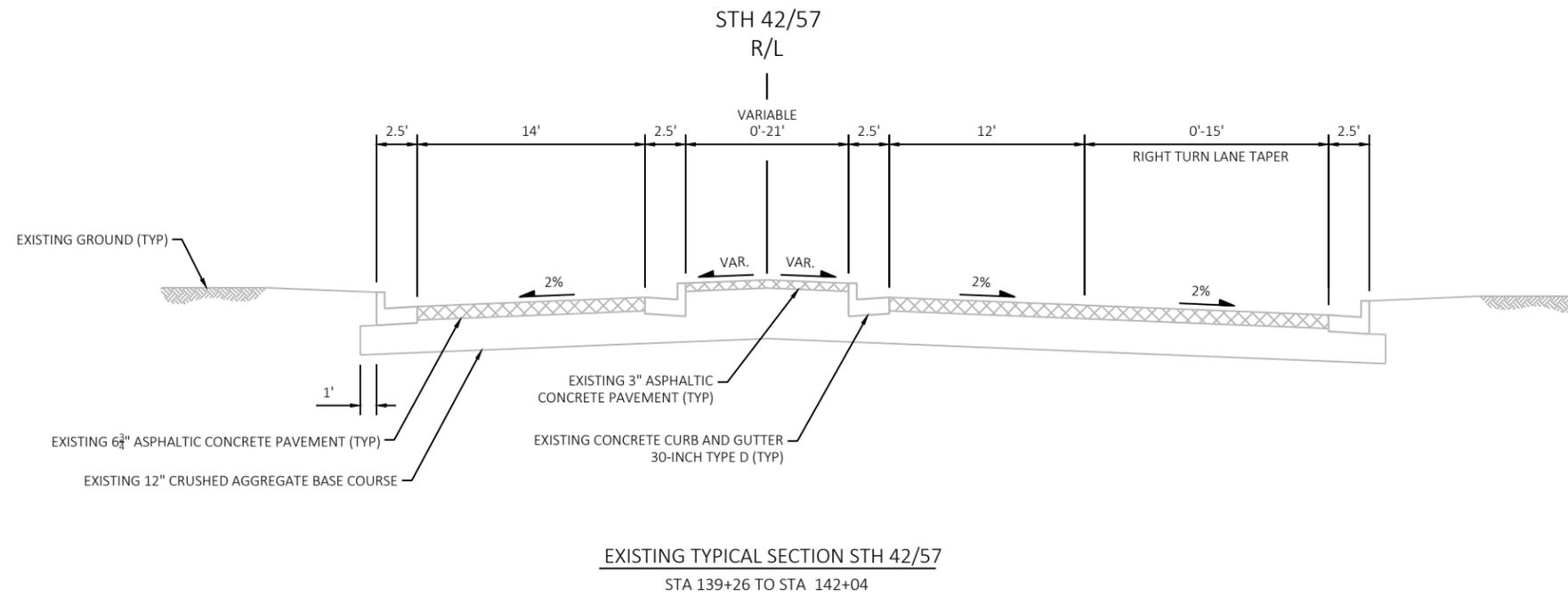
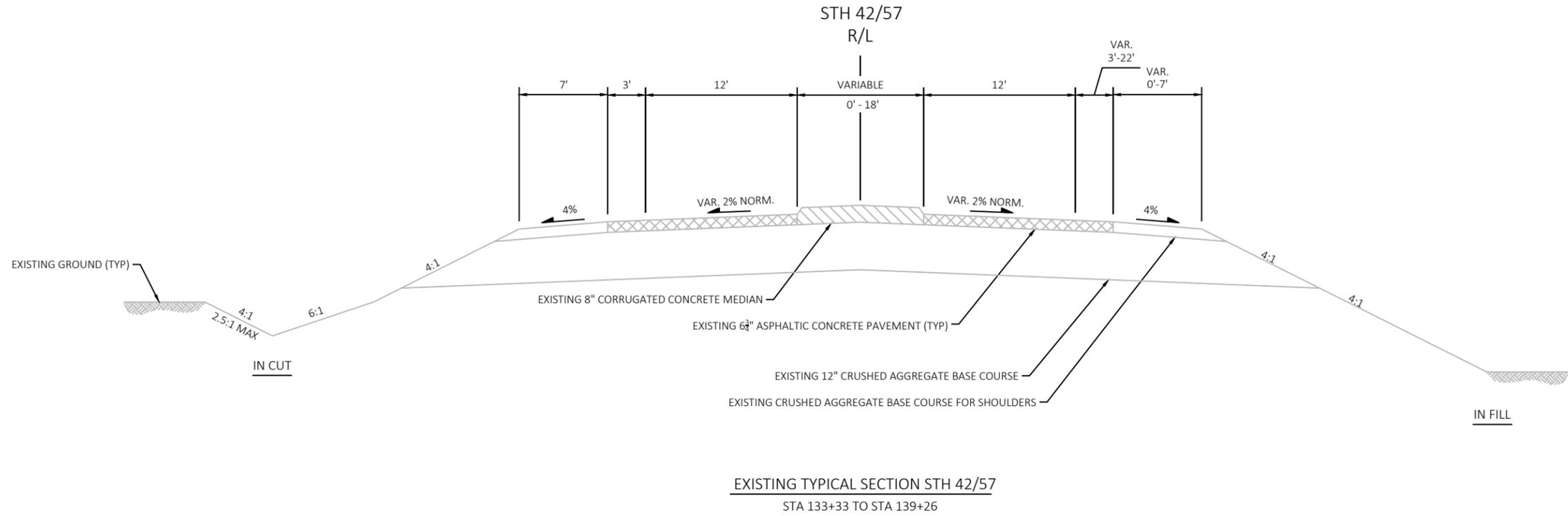
PROJECT NO: 4430-21-71	HWY: STH 42	COUNTY: DOOR	PROJECT OVERVIEW	SHEET	<b>E</b>
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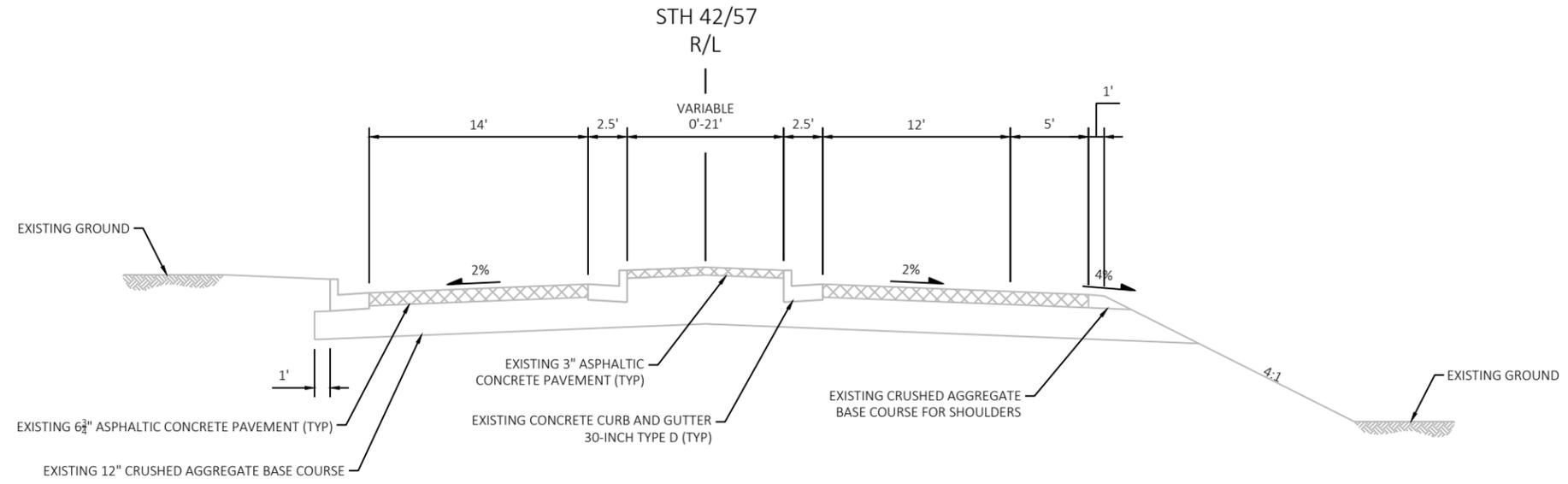


**EXISTING TYPICAL SECTION STH 42/57**  
 STA 915+03 TO STA 920+98.66  
 STA 88+59.13 TO STA 94+89

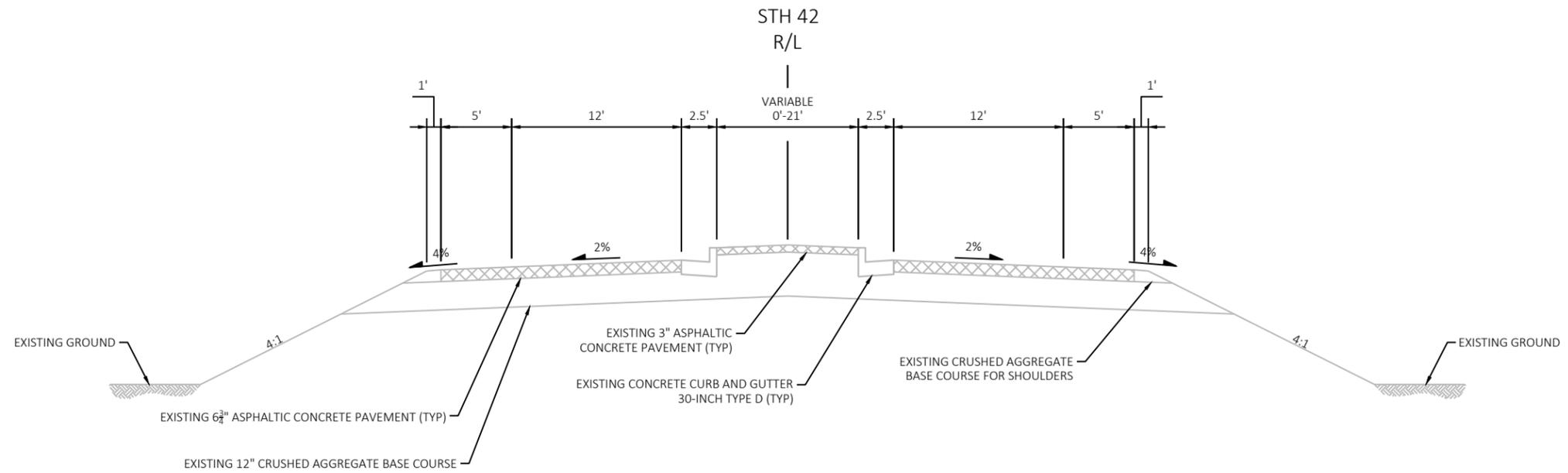


**EXISTING TYPICAL SECTION STH 42/57**  
 STA 94+89 TO STA 133+33

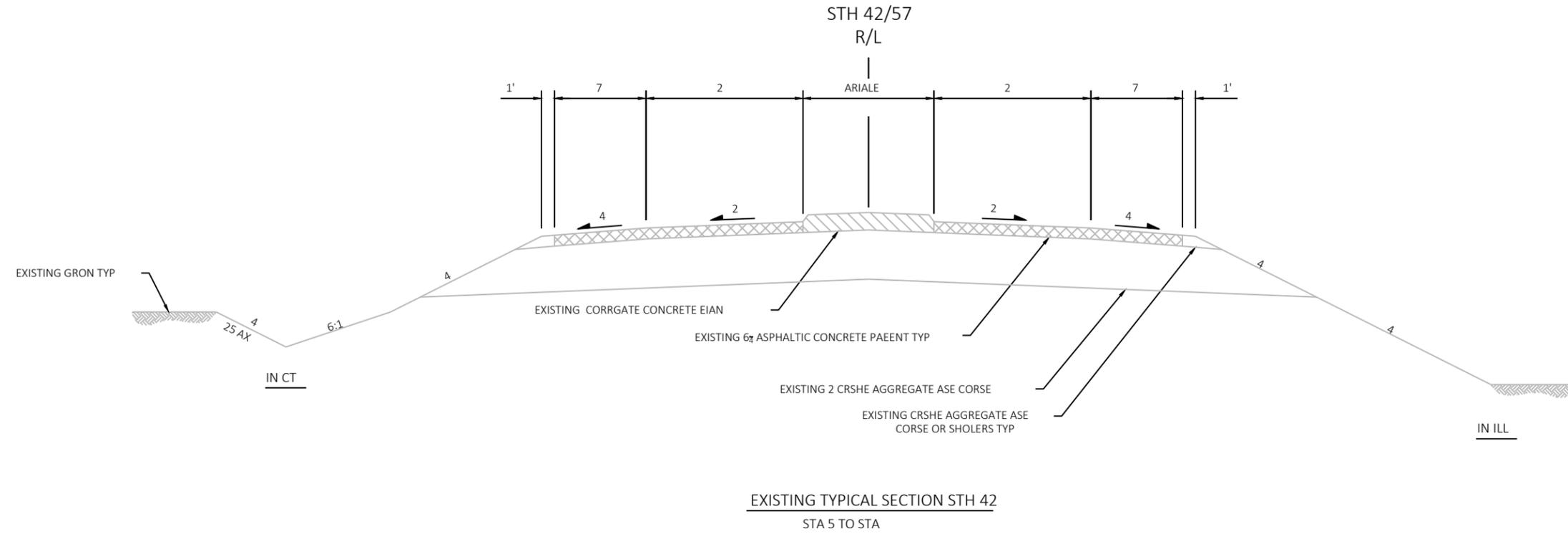


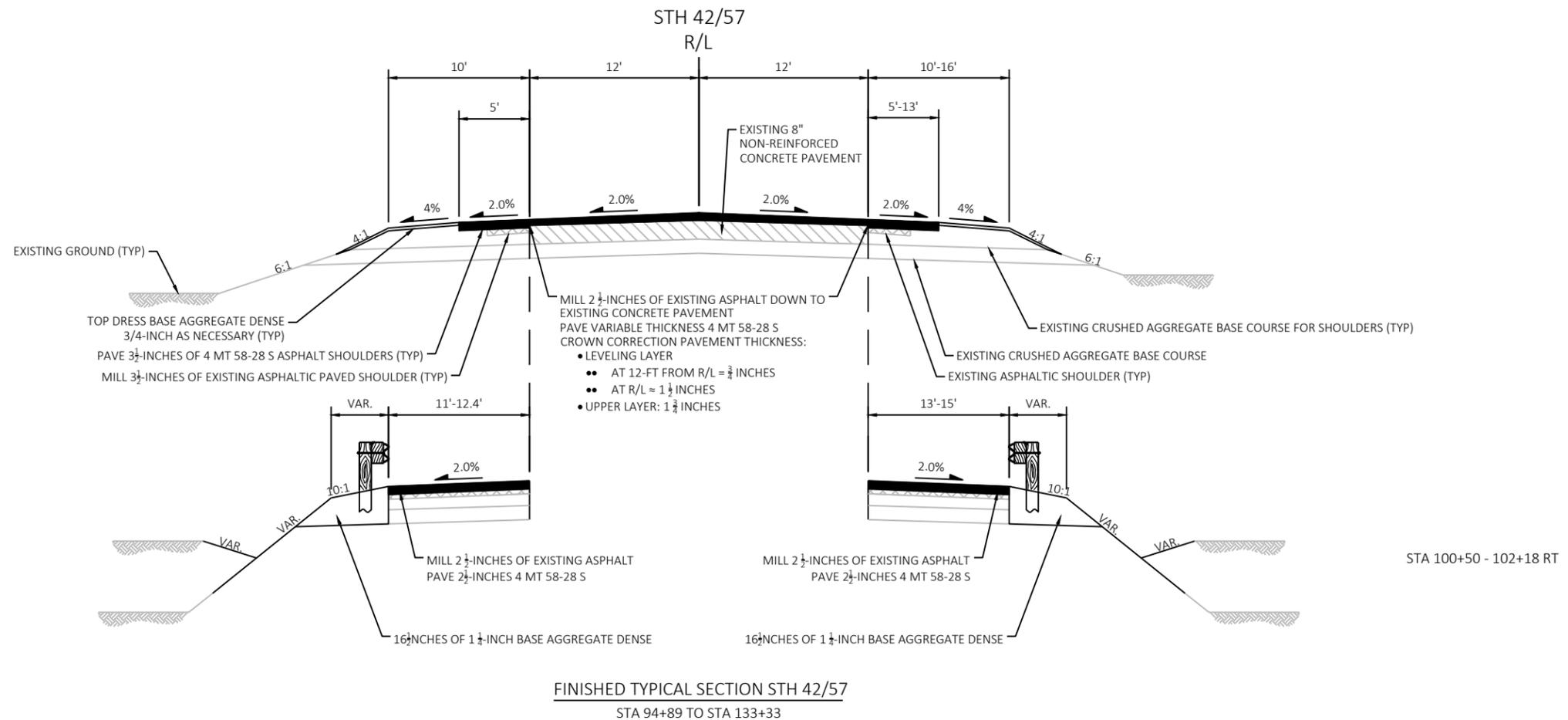
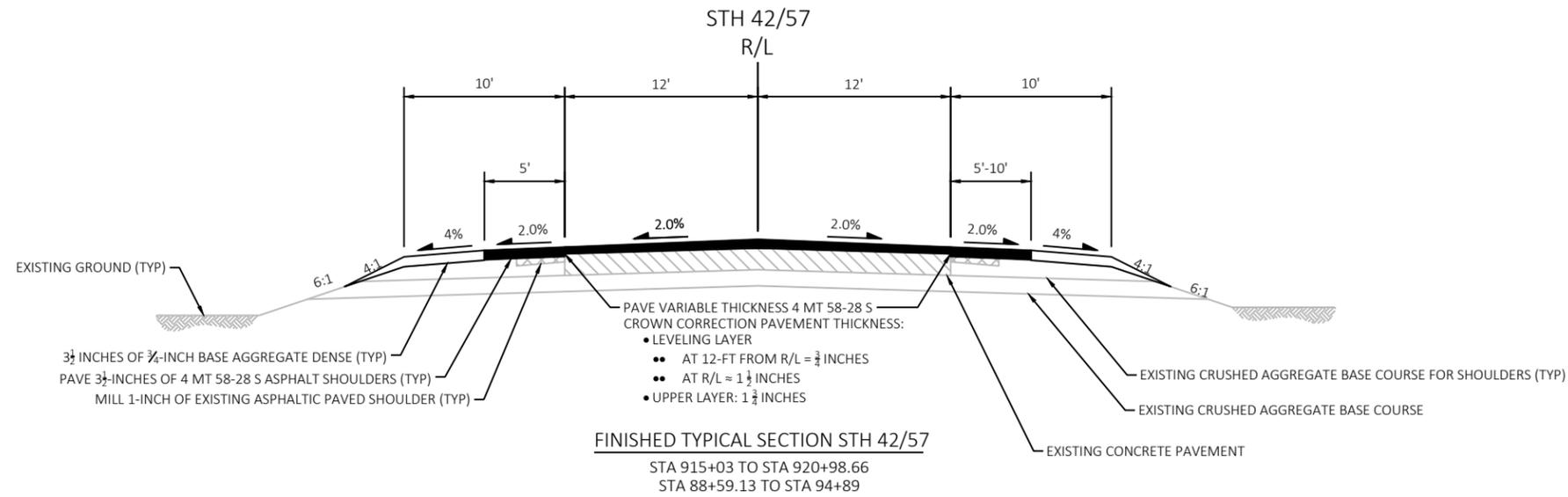


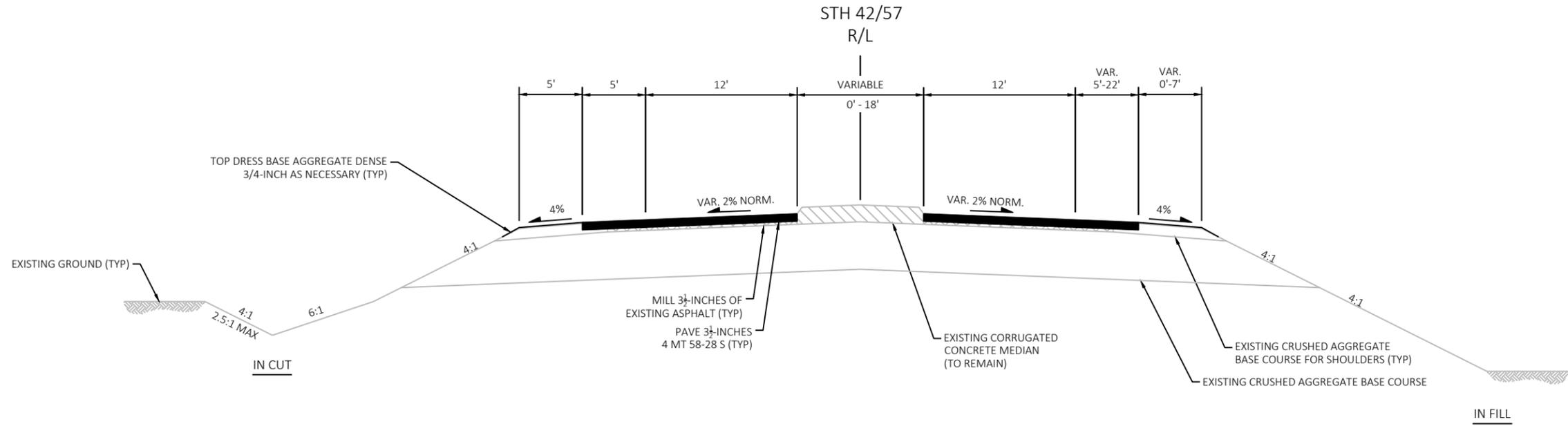
EXISTING TYPICAL SECTION STH 42/57  
STA 142+04 TO STA 145+19



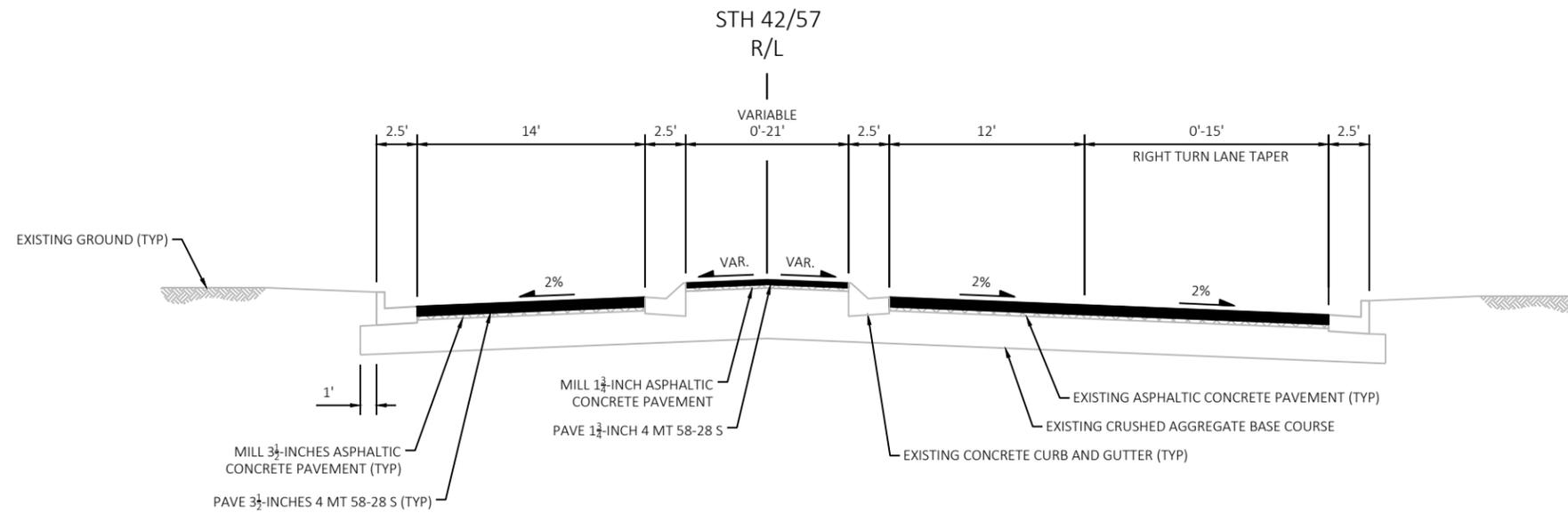
EXISTING TYPICAL SECTION STH 42  
STA 145+19 TO STA 145+47.76  
STA 0+00 TO STA 5+19



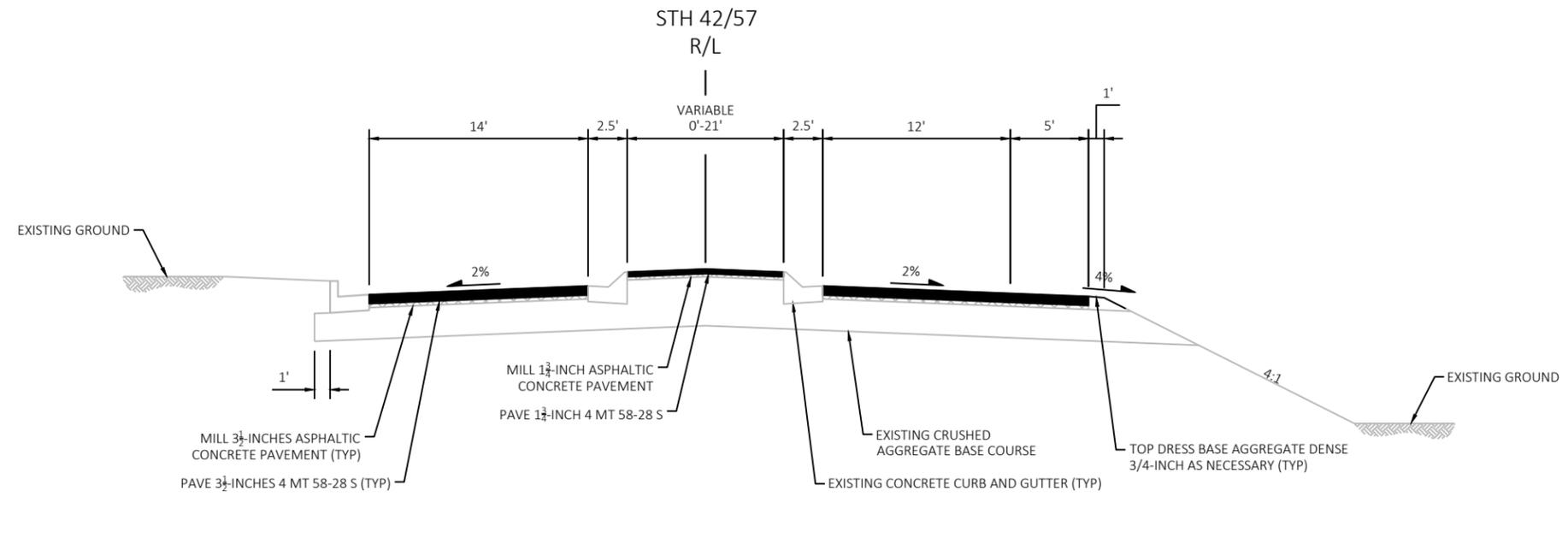




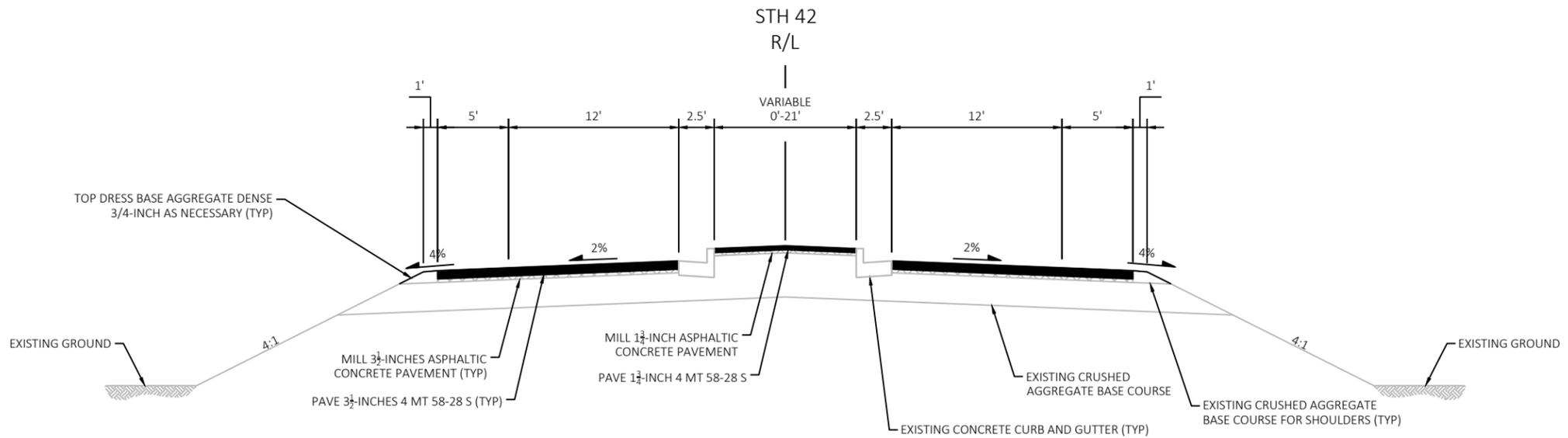
FINISHED TYPICAL SECTION STH 42/57  
STA 133+33 TO STA 139+26



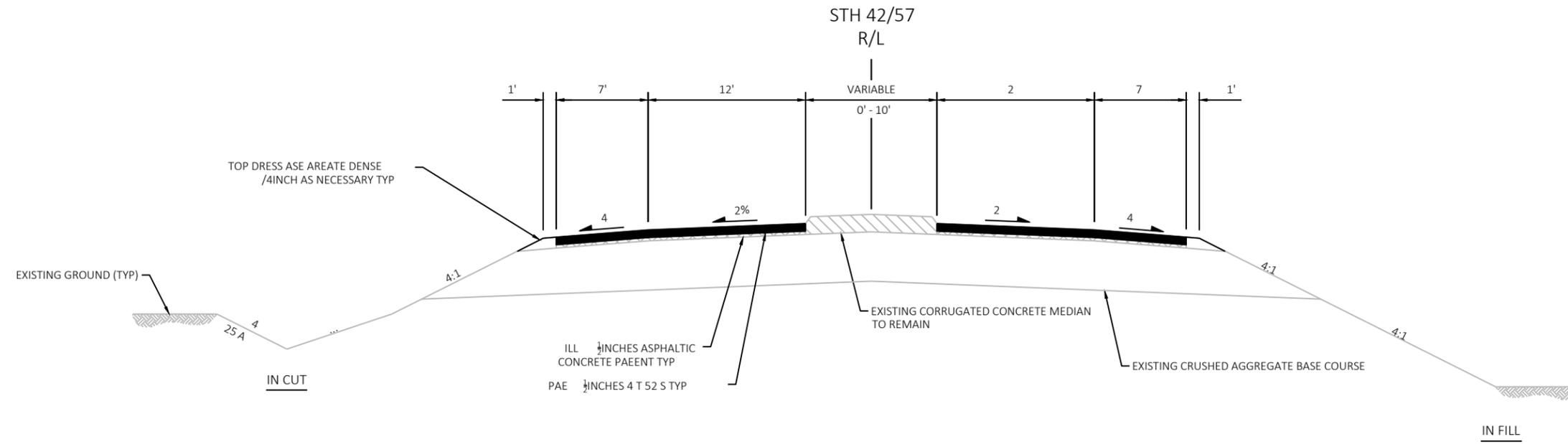
FINISHED TYPICAL SECTION STH 42/57  
STA 139+26 TO STA 142+04



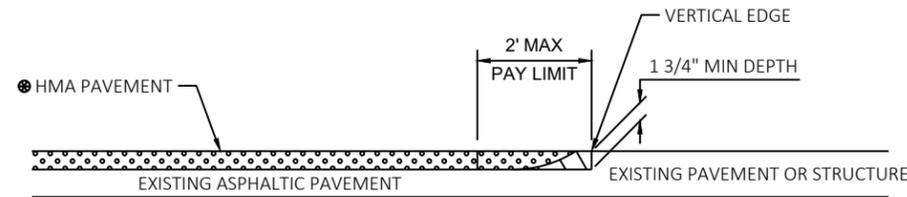
FINISHED TYPICAL SECTION STH 42/57  
STA 142+04 TO STA 145+19



FINISHED TYPICAL SECTION STH 42  
STA 145+19 TO STA 145+47.76  
STA 0+00 TO STA 5+19

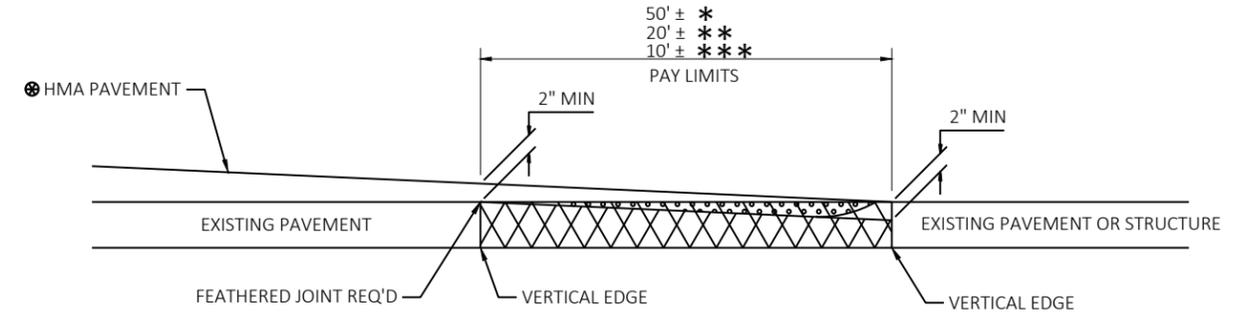


FINISHED TYPICAL SECTION STH 42  
STA 5+19 TO STA 6+38



- ⊗ SEE TYPICAL CROSS SECTION FOR PAVEMENT TYPE AND THICKNESS OF INDIVIDUAL LAYERS
- ◻ REMOVING ASPHALTIC SURFACE, MILLING
- ◻ REMOVE ASPHALTIC SURFACE WEDGE AT BUTT JOINT TO CREATE VERTICAL EDGE

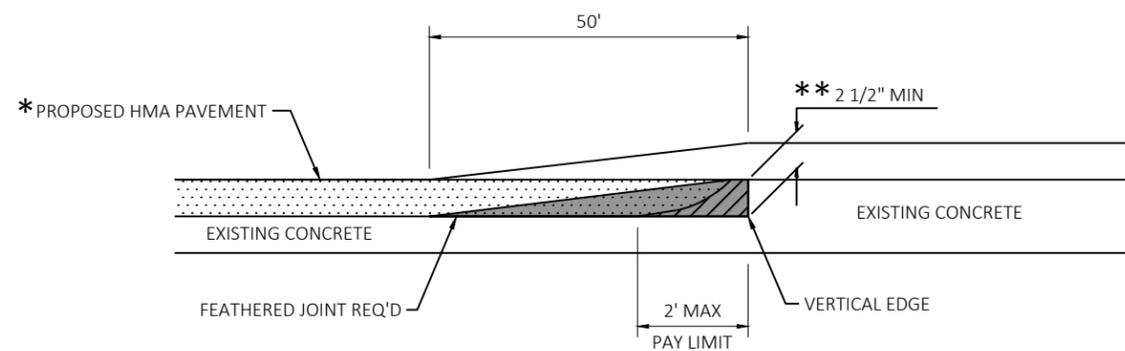
BUTT JOINT DETAIL FOR ASPHALTIC PAVEMENTS (NO PROFILE CHANGE)



- ⊗ SEE TYPICAL CROSS SECTION FOR PAVEMENT TYPE AND THICKNESS OF INDIVIDUAL LAYERS
- ◻ REMOVING PAVEMENT BUTT JOINTS (FULL DEPTH REMOVAL OPTIONAL)
- ◻ ASPHALTIC WEDGING (FULL DEPTH REMOVAL OPTION)
- ◻ REMOVING PAVEMENT BUTT JOINTS (MILLING OPTION)

BUTT JOINT DETAIL FOR PAVEMENT OVERLAY (PROFILE CHANGE)

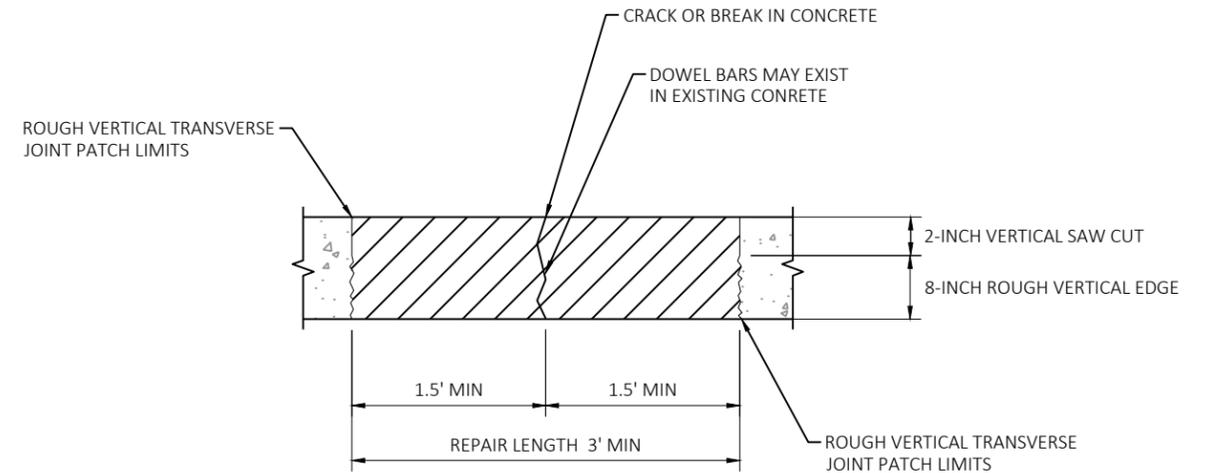
- \* MAINLINE
- \*\* SIDEROADS
- \*\*\* PRIVATE ENTRANCES



- \* SEE TYPICAL CROSS SECTION FOR PAVEMENT TYPE AND THICKNESS OF INDIVIDUAL LAYERS
- \*\* PAVE 3 1/2" FOR 5-FOOT PAVED SHOULDERS
- ◻ ASPHALTIC SURFACE
- ◻ REMOVING ASPHALTIC SURFACE, MILLING
- ◻ REMOVING ASPHALTIC SURFACE, BUTT JOINTS

BUTT JOINT DETAIL WITH PAVEMENT WEDGE FOR PROFILE CHANGE

STA 94+89 - STA 95+39, RT/LT



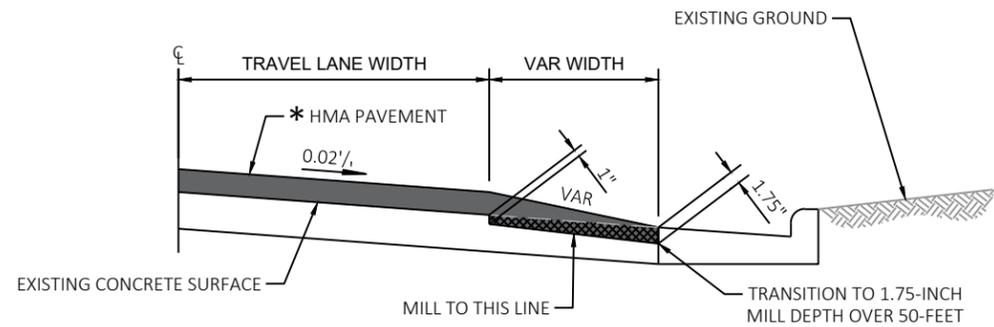
UNDOWELED BASE PATCHING CONCRETE

NOTES:

USE THIS CONSTRUCTION DETAIL IN CONJUNCTION WITH SDD 13C14 BASE PATCHING CONCRETE.

USE OF A VERMEER SAW IS ALSO AN ACCEPTABLE ALTERNATIVE TO CREATING A ROUGH VERTICAL EDGE.

PURPOSE OF THIS DETAIL IS TO MODIFY MINIMUM REPAIR LENGTH AND HIGHLIGHT THE ROUGH VERTICAL TRANSVERSE JOINT PATCH LIMITS.

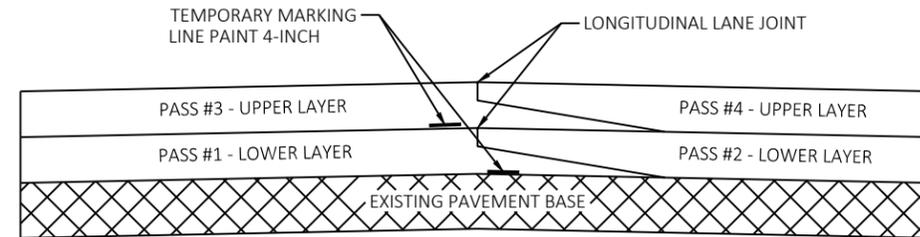


\* SEE TYPICAL CROSS SECTION FOR PAVEMENT TYPE AND THICKNESS OF INDIVIDUAL LAYERS

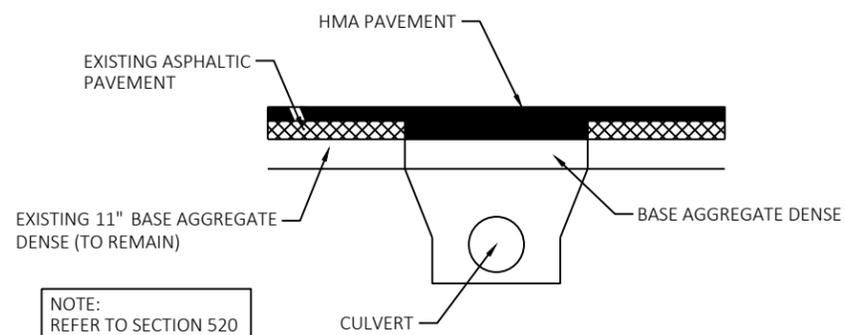
■ HMA PAVEMENT 4MT 58-28S

▨ REMOVING CONCRETE SURFACE PARTIAL DEPTH

TYPICAL CROSS SECTION WITH CURB & GUTTER (MILLED)  
STA 920+32 - STA 91+80, RT

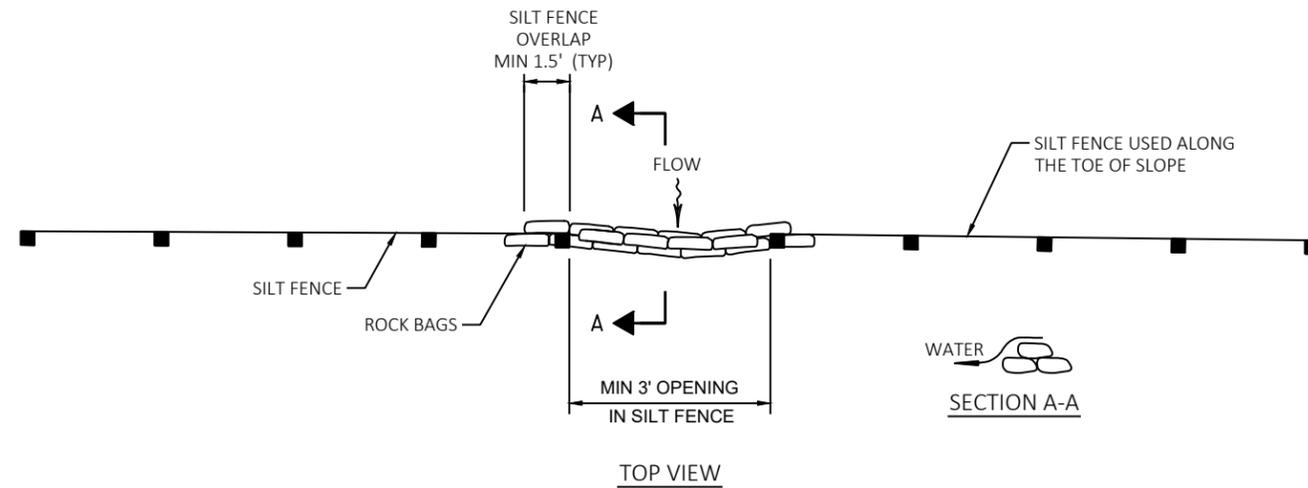


PAVEMENT MARKING DETAIL FOR TAPERED OVERLAPPING JOINTS IN HMA PAVEMENTS



NOTE:  
REFER TO SECTION 520  
FOR PIPE INSTALLATION

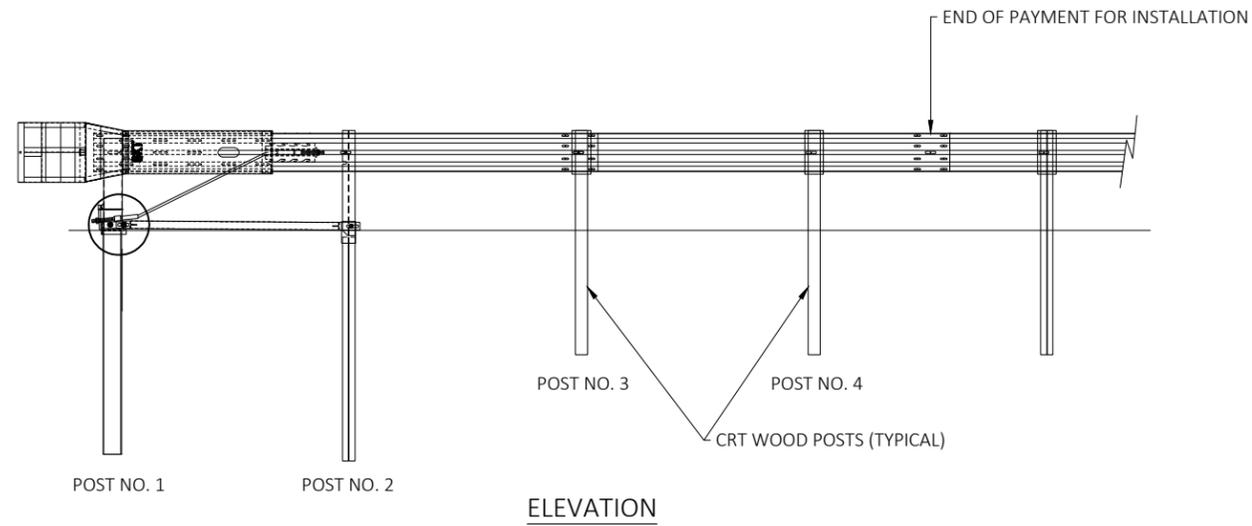
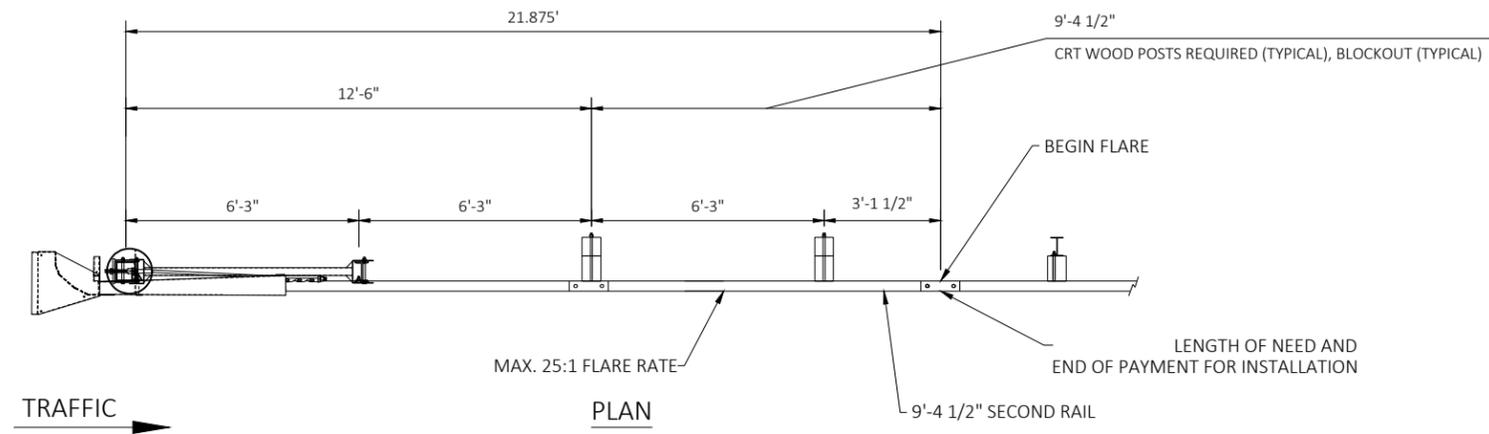
PAVEMENT AT CULVERT REPLACEMENTS  
STA 117+10, RT/LT



ROCK BAGS USED FOR SILT FENCE RELIEF DETAIL

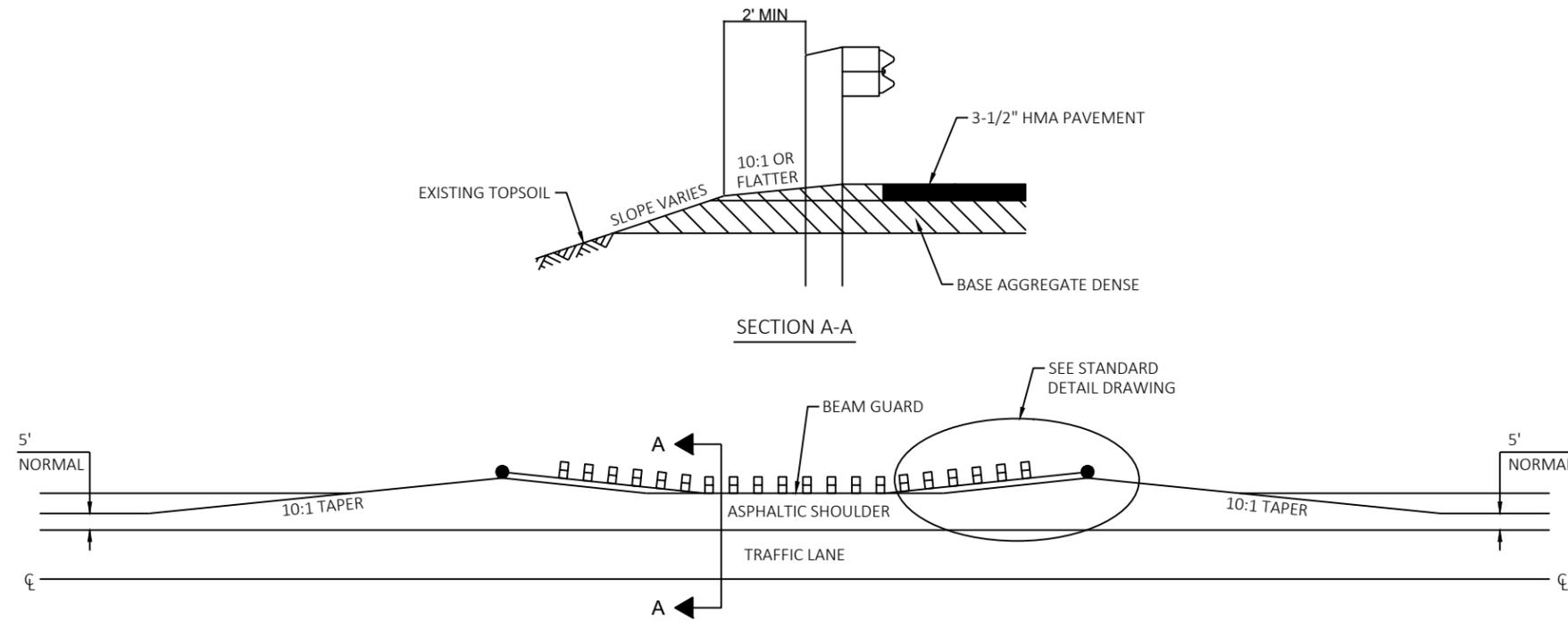
SEE EROSION CONTROL PLAN FOR VARIOUS LOCATIONS

SEE "MIDWEST GUARDRAIL SYSTEM (MGS) TERMINAL" STANDARD DETAIL DRAWING AND MANUFACTURER DRAWINGS FOR MORE DETAILS

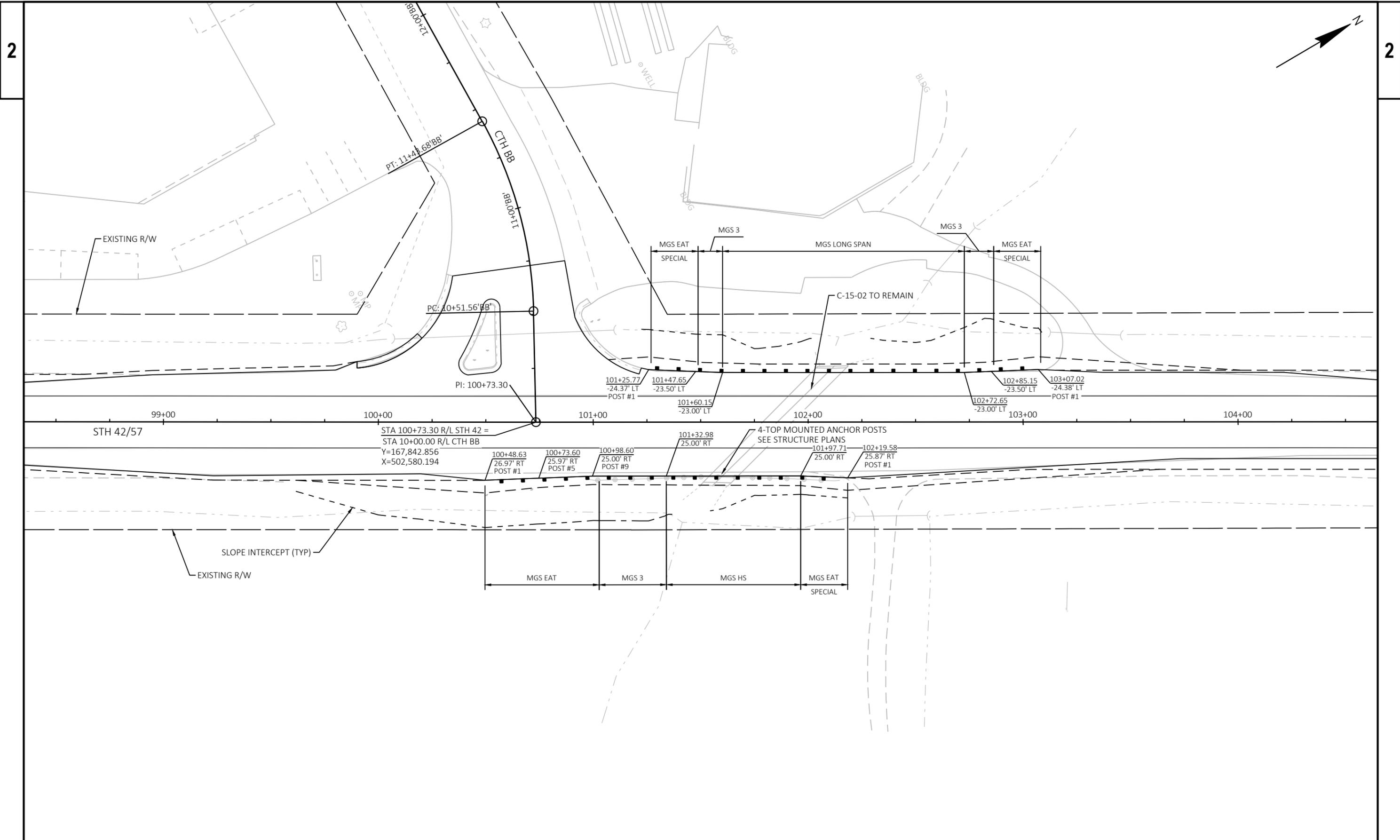


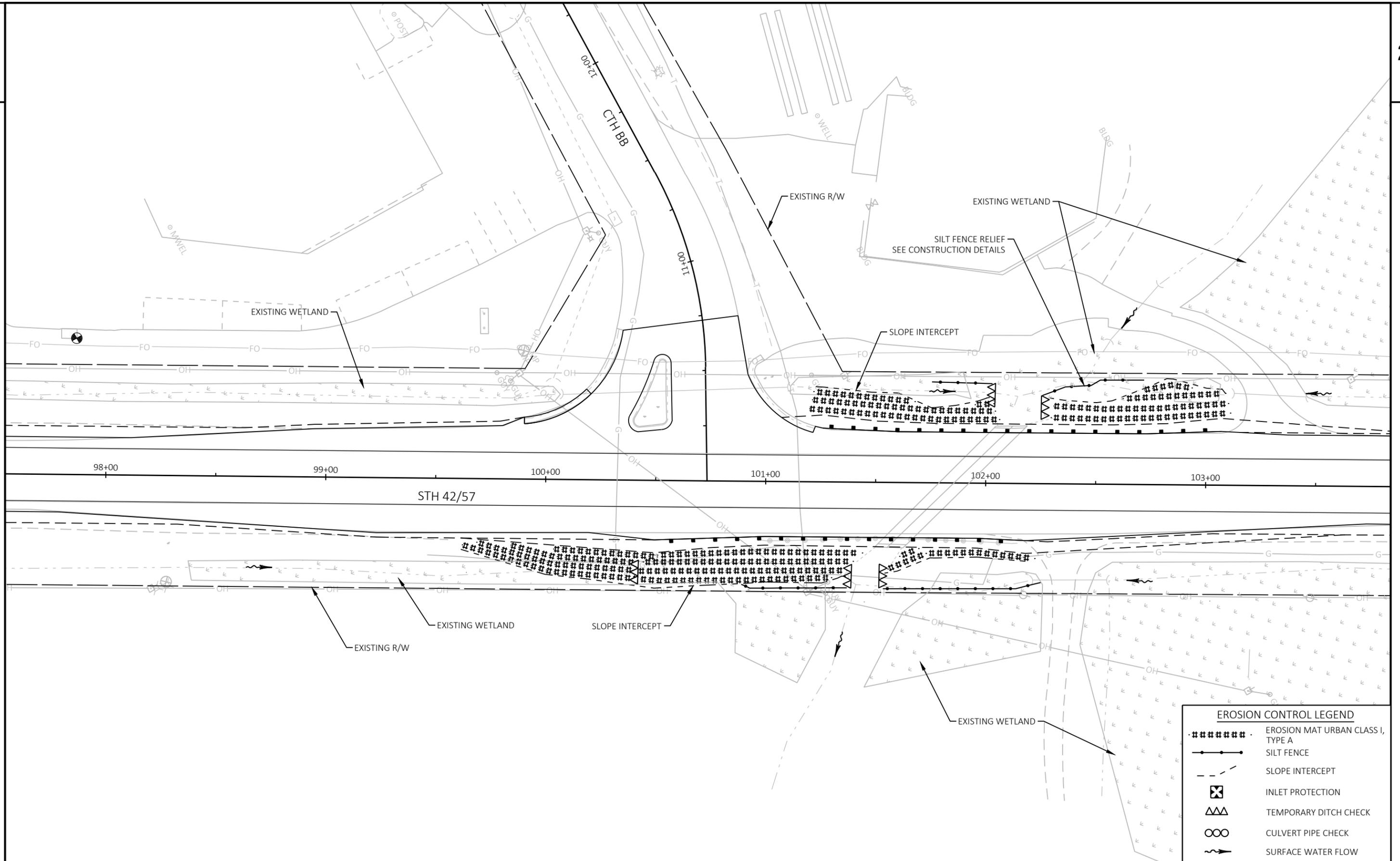
MSKT SP-MGS TL-2 TERMINAL

STA 101+25.77 - 101+47.65, LT  
STA 101+96.48 - 102+18.35, RT  
STA 102+85.15 - 103+07.02, LT

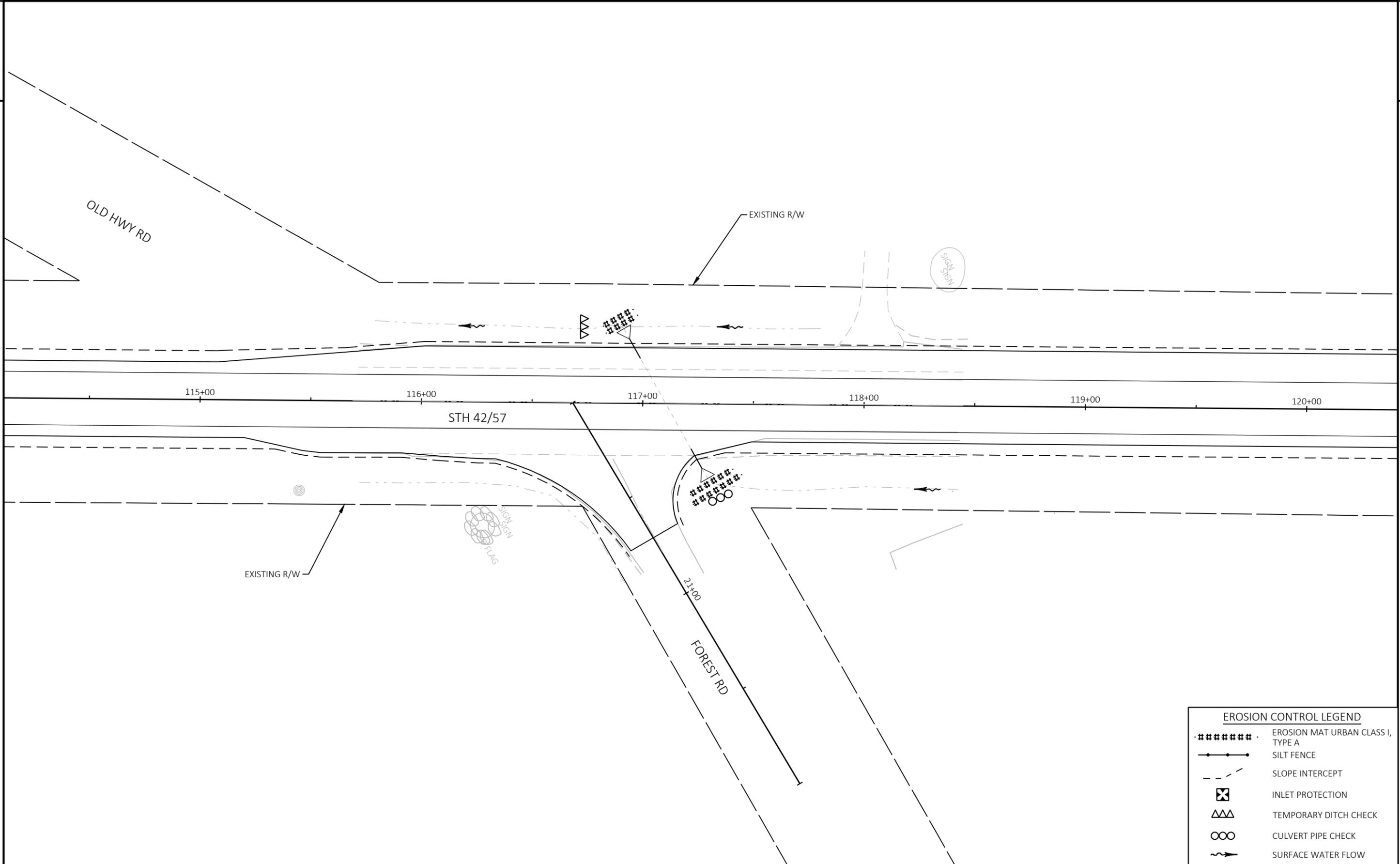


DETAIL FOR ASPHALTIC SHOULDER AT BEAM GUARD





EROSION CONTROL LEGEND	
#####	EROSION MAT URBAN CLASS I, TYPE A
—●—●—●—	SILT FENCE
- - - - -	SLOPE INTERCEPT
⊗	INLET PROTECTION
△△△	TEMPORARY DITCH CHECK
∞∞	CULVERT PIPE CHECK
~>	SURFACE WATER FLOW

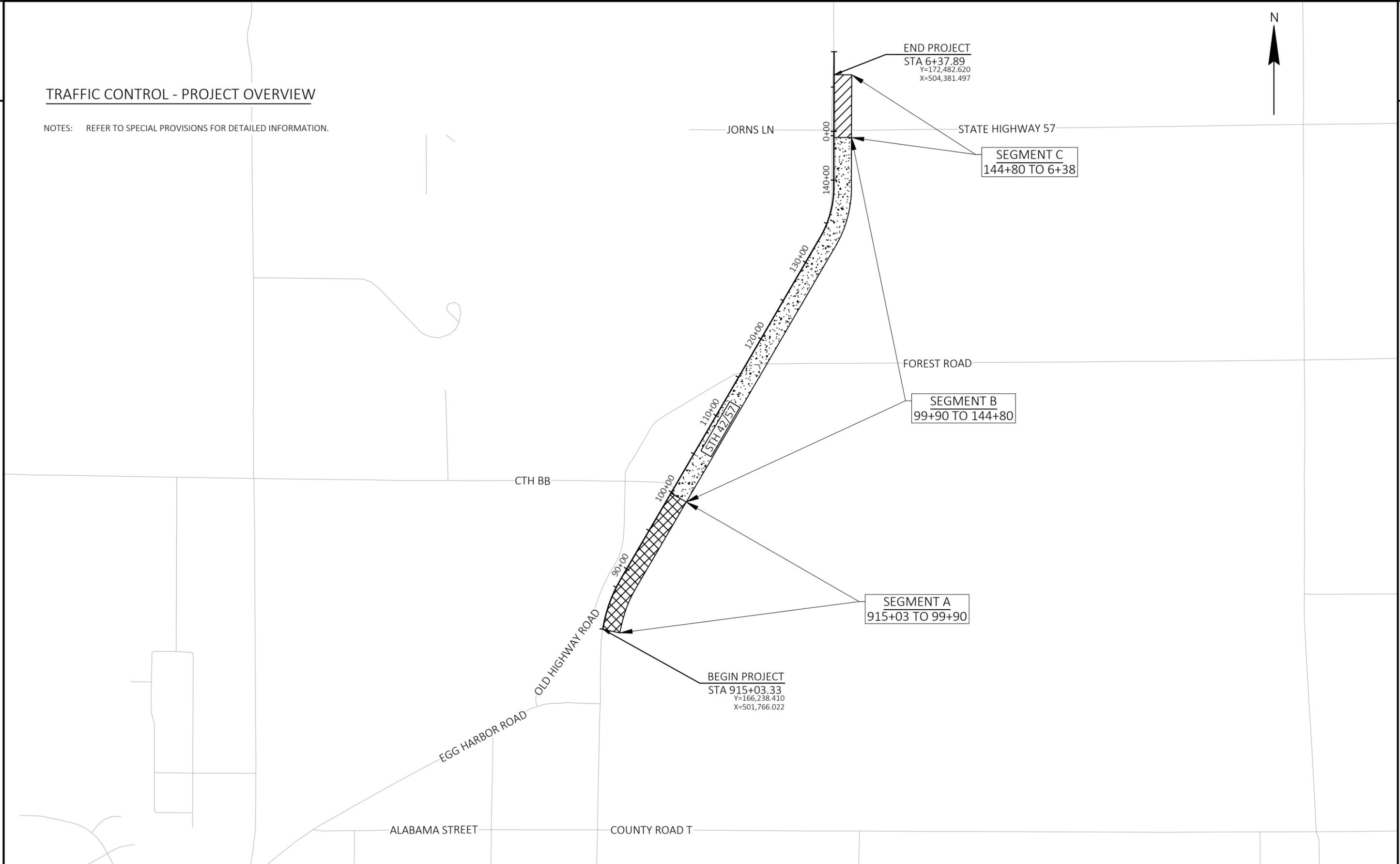


EROSION CONTROL LEGEND	
#####	EROSION MAT URBAN CLASS I, TYPE A
—●—	SILT FENCE
- - -	SLOPE INTERCEPT
⊗	INLET PROTECTION
△△△	TEMPORARY DITCH CHECK
○○	CULVERT PIPE CHECK
→	SURFACE WATER FLOW



### TRAFFIC CONTROL - PROJECT OVERVIEW

NOTES: REFER TO SPECIAL PROVISIONS FOR DETAILED INFORMATION.

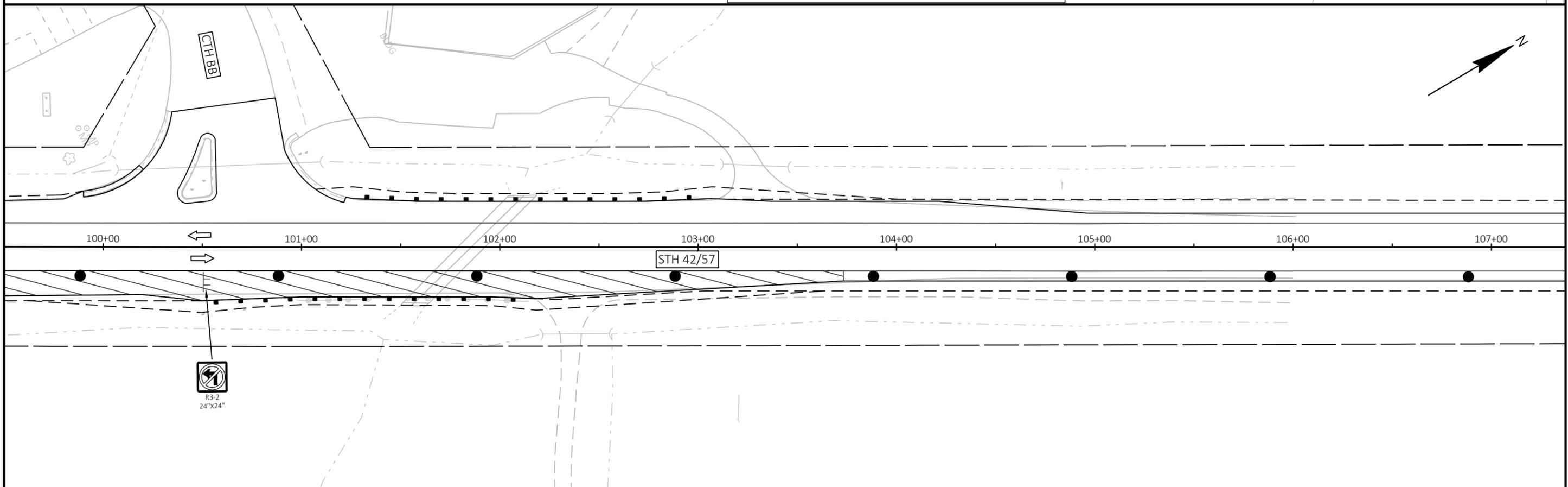
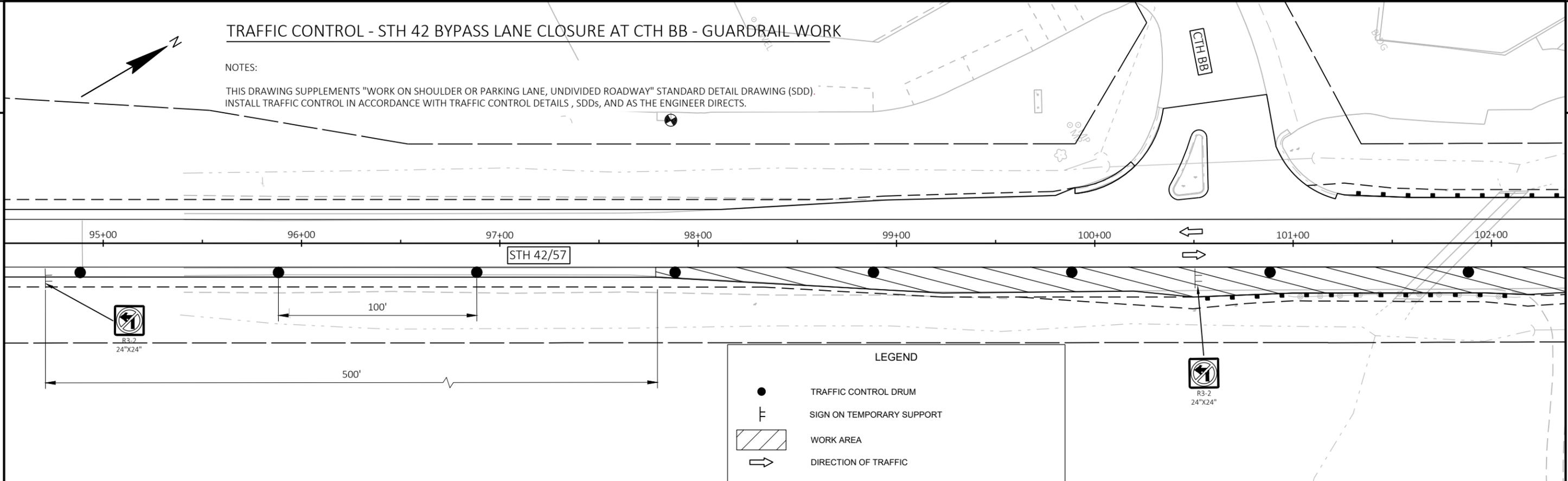


PROJECT NO: 4430-21-71	HWY: STH 42	COUNTY: DOOR	TRAFFIC CONTROL	SHEET	<b>E</b>
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# TRAFFIC CONTROL - STH 42 BYPASS LANE CLOSURE AT CTH BB - GUARDRAIL WORK

## NOTES:

THIS DRAWING SUPPLEMENTS "WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY" STANDARD DETAIL DRAWING (SDD).  
INSTALL TRAFFIC CONTROL IN ACCORDANCE WITH TRAFFIC CONTROL DETAILS, SDDs, AND AS THE ENGINEER DIRECTS.

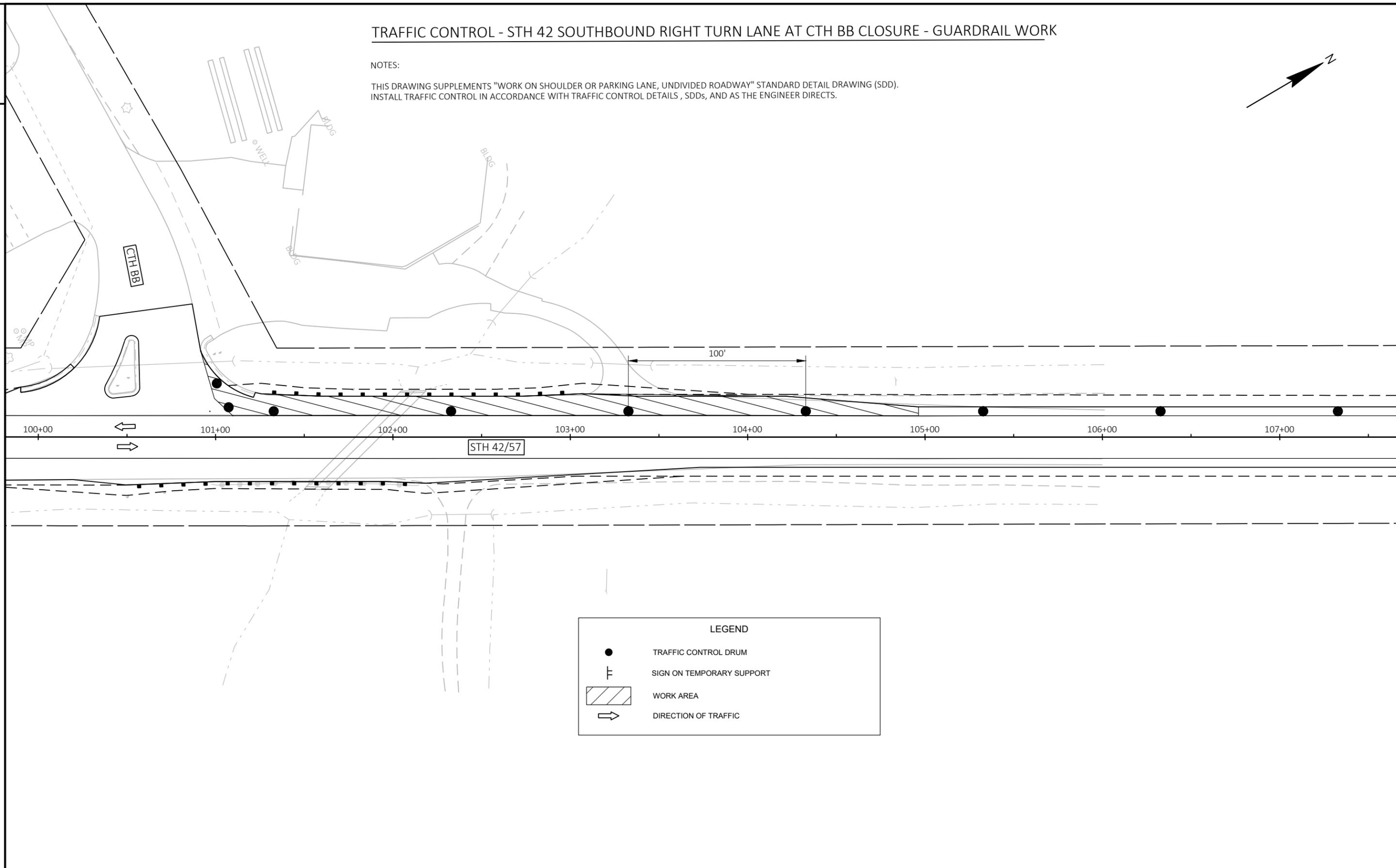


PROJECT NO: 4430-21-71	HWY: STH 42	COUNTY: DOOR	TRAFFIC CONTROL	SHEET	E
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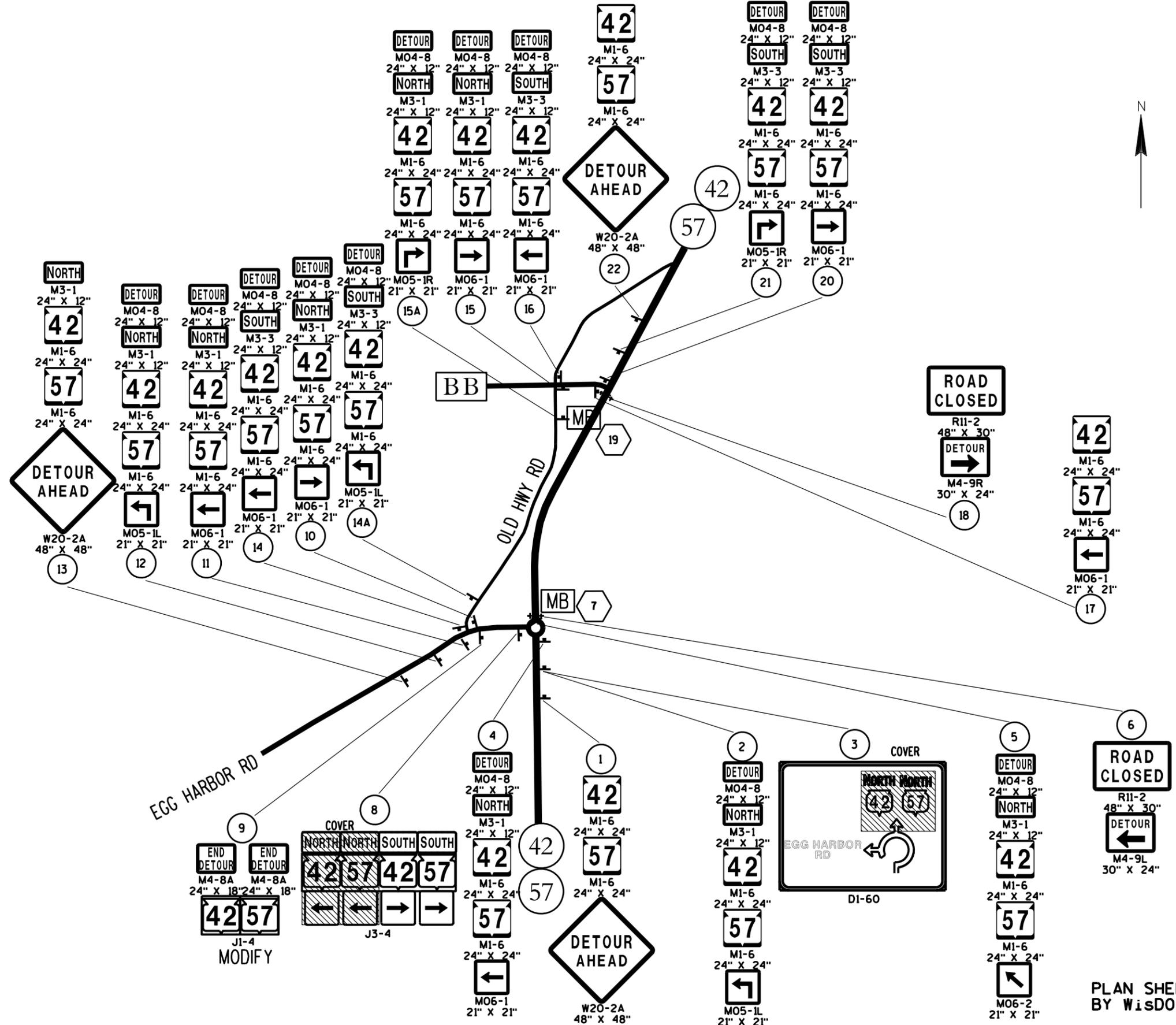
# TRAFFIC CONTROL - STH 42 SOUTHBOUND RIGHT TURN LANE AT CTH BB CLOSURE - GUARDRAIL WORK

NOTES:

THIS DRAWING SUPPLEMENTS "WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY" STANDARD DETAIL DRAWING (SDD).  
 INSTALL TRAFFIC CONTROL IN ACCORDANCE WITH TRAFFIC CONTROL DETAILS, SDDs, AND AS THE ENGINEER DIRECTS.



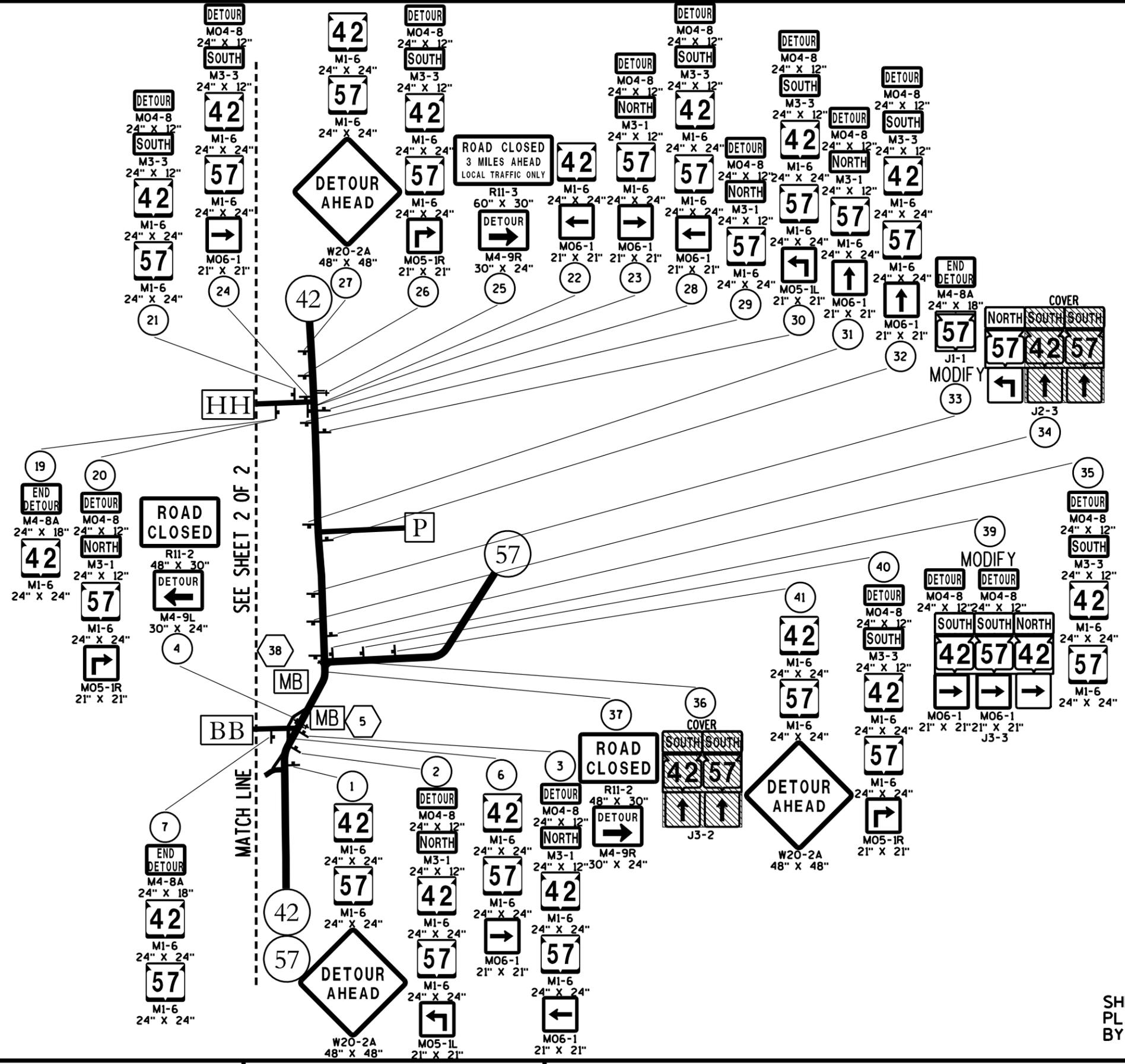
LEGEND	
●	TRAFFIC CONTROL DRUM
⊥	SIGN ON TEMPORARY SUPPORT
▨	WORK AREA
⇨	DIRECTION OF TRAFFIC



LEGEND

- (X) SIGN NUMBER. REFER TO MISCELLANEOUS QUANTITY SHEET
- MB (X) PORTABLE CHANGEABLE MESSAGE SIGN
- ⇐ SIGN MOUNTED ON TYPE III BARRICADE
- ⊥ POST MOUNTED SIGN

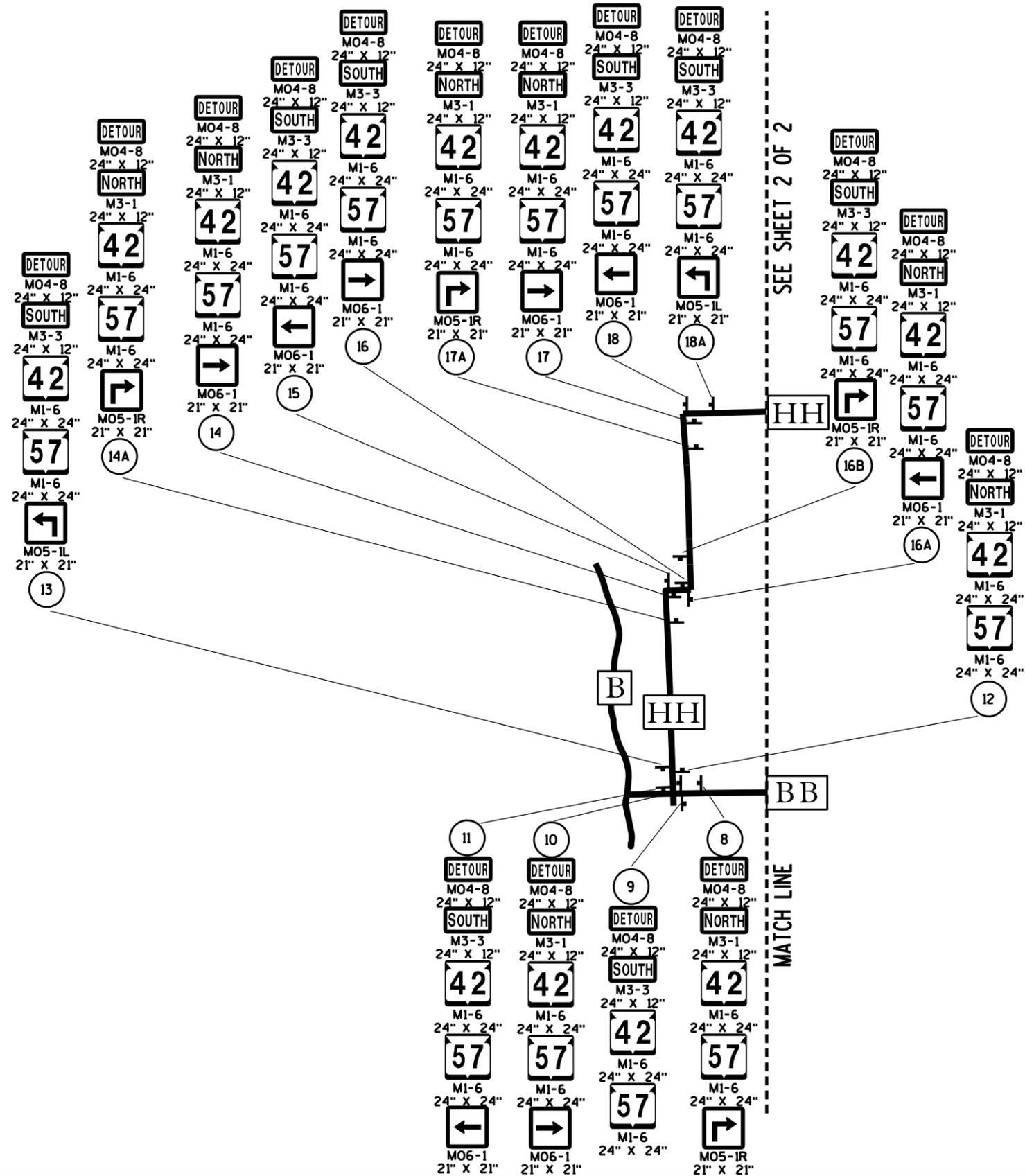
PLAN SHEET PRODUCED BY WisDOT-NE REGION



LEGEND

-  SIGN NUMBER. REFER TO MISCELLANEOUS QUANTITY SHEET
-  PORTABLE CHANGEABLE MESSAGE SIGN
-  SIGN MOUNTED ON TYPE III BARRICADE
-  POST MOUNTED SIGN

SHEET 1 OF 2  
PLAN SHEET PRODUCED  
BY WisDOT-NE REGION



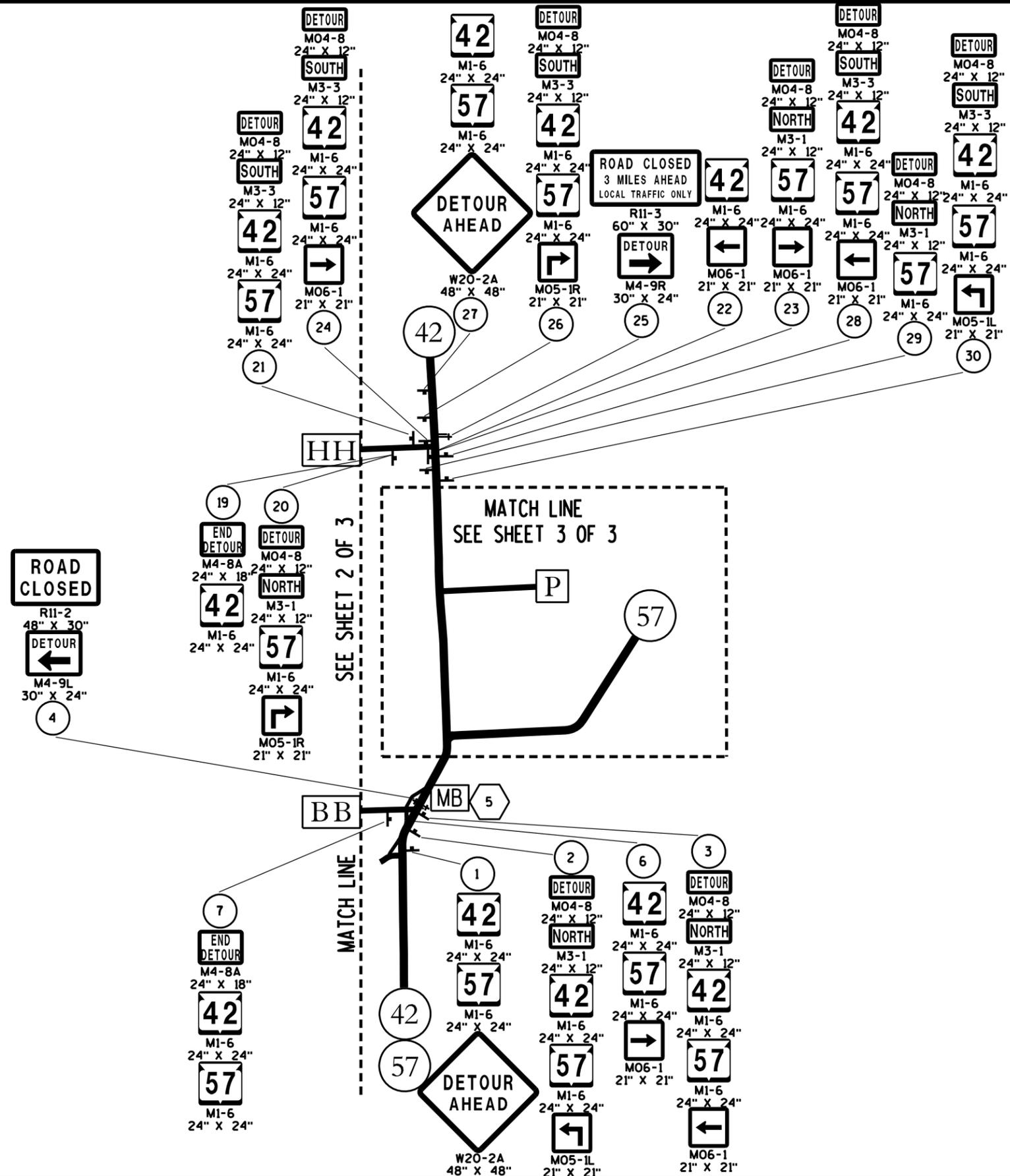
SEE SHEET 2 OF 2

MATCH LINE

LEGEND

-  SIGN NUMBER. REFER TO MISCELLANEOUS QUANTITY SHEET
-   PORTABLE CHANGEABLE MESSAGE SIGN
-  SIGN MOUNTED ON TYPE III BARRICADE
-  POST MOUNTED SIGN

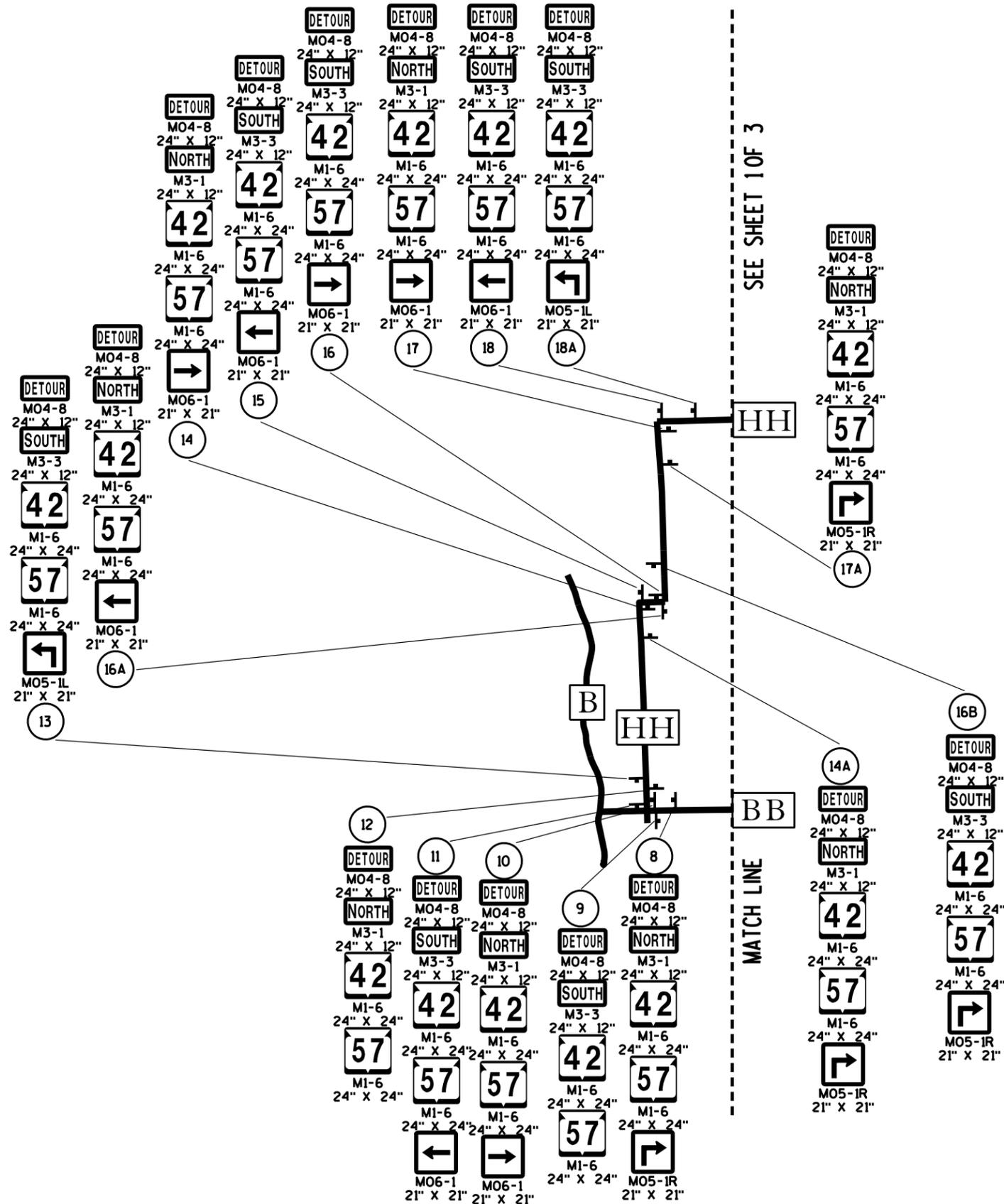
SHEET 2 OF 2  
PLAN SHEET PRODUCED  
BY WisDOT-NE REGION



LEGEND

-  SIGN NUMBER. REFER TO MISCELLANEOUS QUANTITY SHEET
-  PORTABLE CHANGEABLE MESSAGE SIGN
-  SIGN MOUNTED ON TYPE III BARRICADE
-  POST MOUNTED SIGN

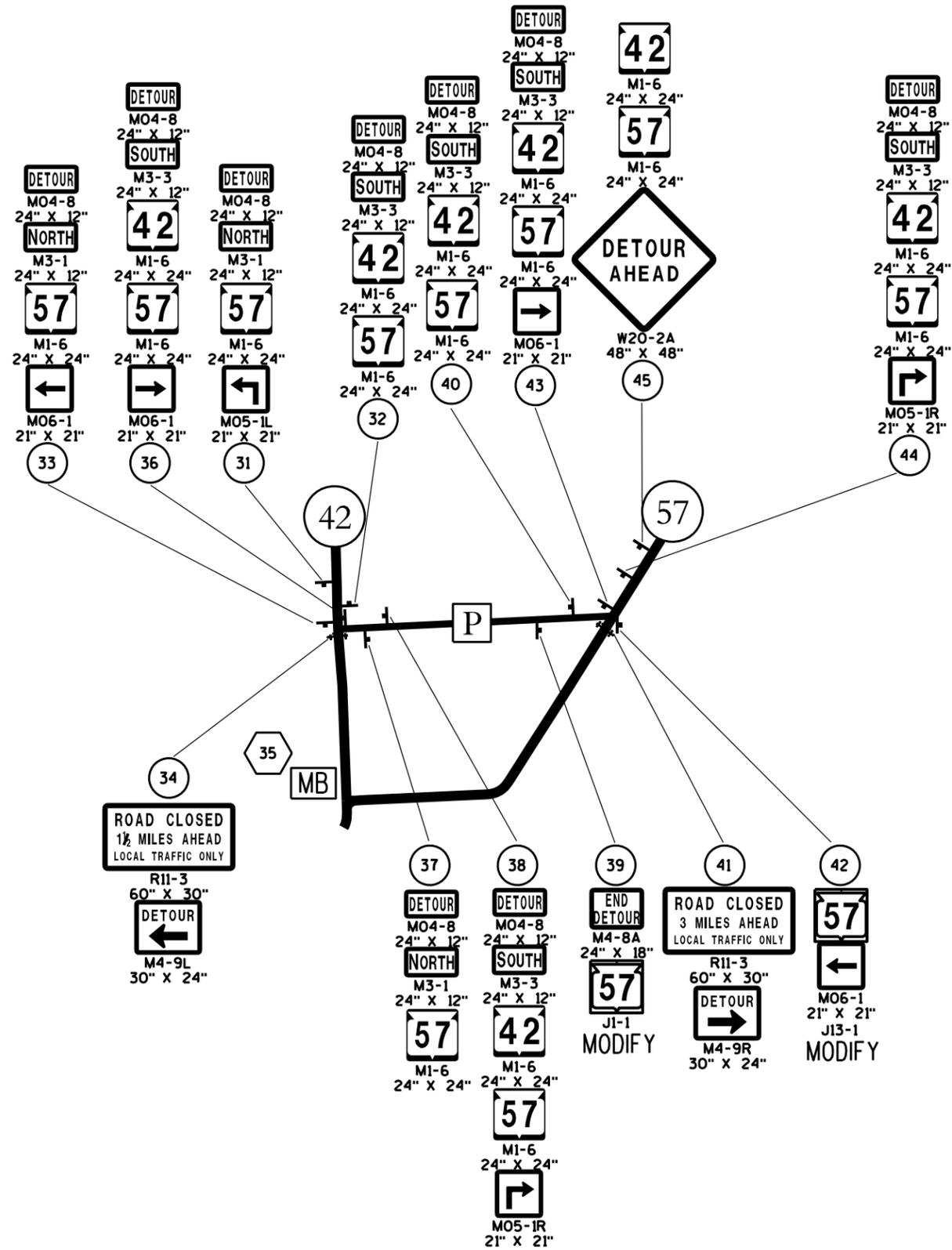
SHEET 1 OF 3  
PLAN SHEET PRODUCED  
BY WISDOT-NE REGION



LEGEND

-  SIGN NUMBER. REFER TO MISCELLANEOUS QUANTITY SHEET
-   PORTABLE CHANGEABLE MESSAGE SIGN
-  SIGN MOUNTED ON TYPE III BARRICADE
-  POST MOUNTED SIGN

SHEET 2 OF 3  
PLAN SHEET PRODUCED  
BY WISDOT-NE REGION



LEGEND

-  SIGN NUMBER. REFER TO MISCELLANEOUS QUANTITY SHEET
-   PORTABLE CHANGEABLE MESSAGE SIGN
-  SIGN MOUNTED ON TYPE III BARRICADE
-  POST MOUNTED SIGN

SHEET 3 OF 3  
PLAN SHEET PRODUCED  
BY WisDOT-NE REGION

Estimate Of Quantities

4430-21-71

Line	Item	Item Description	Unit	Total	Qty
0002	203.0100	Removing Small Pipe Culverts	EACH	2.000	2.000
0004	204.0105	Removing Concrete Pavement Butt Joints	SY	140.000	140.000
0006	204.0109.S	Removing Concrete Surface Partial Depth	SF	4,020.000	4,020.000
0008	204.0110	Removing Asphaltic Surface	SY	80.000	80.000
0010	204.0115	Removing Asphaltic Surface Butt Joints	SY	90.000	90.000
0012	204.0120	Removing Asphaltic Surface Milling	SY	26,160.000	26,160.000
0014	204.0150	Removing Curb & Gutter	LF	155.000	155.000
0016	204.0165	Removing Guardrail	LF	115.000	115.000
0018	205.0100	Excavation Common	CY	90.000	90.000
0020	206.2000	Excavation for Structures Culverts (structure) 01. C-15-02	LS	1.000	1.000
0022	208.0100	Borrow	CY	24.000	24.000
0024	211.0100	Prepare Foundation for Asphaltic Paving (project) 01. 4430-21-71	LS	1.000	1.000
0026	211.0400	Prepare Foundation for Asphaltic Shoulders	STA	85.000	85.000
0028	213.0100	Finishing Roadway (project) 01. 4430-21-71	EACH	1.000	1.000
0030	305.0110	Base Aggregate Dense 3/4-Inch	TON	685.000	685.000
0032	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	233.000	233.000
0034	416.0610	Drilled Tie Bars	EACH	289.000	289.000
0036	450.4000	HMA Cold Weather Paving	TON	758.000	758.000
0038	455.0605	Tack Coat	GAL	3,622.000	3,622.000
0040	460.2000	Incentive Density HMA Pavement	DOL	3,810.000	3,810.000
0042	460.6224	HMA Pavement 4 MT 58-28 S	TON	5,944.000	5,944.000
0044	465.0105	Asphaltic Surface	TON	33.000	33.000
0046	465.0110	Asphaltic Surface Patching	TON	70.000	70.000
0048	465.0305	Asphaltic Surface Safety Islands	TON	5.000	5.000
0050	520.1024	Apron Endwalls for Culvert Pipe 24-Inch	EACH	2.000	2.000
0052	520.8000	Concrete Collars for Pipe	EACH	2.000	2.000
0054	601.0411	Concrete Curb & Gutter 30-Inch Type D	LF	123.000	123.000
0056	601.0557	Concrete Curb & Gutter 6-Inch Sloped 36-Inch Type D	LF	32.000	32.000
0058	611.0430	Reconstructing Inlets	EACH	4.000	4.000
0060	614.2300	MGS Guardrail 3	LF	56.000	56.000
0062	614.2310	MGS Guardrail 3 HS	LF	65.000	65.000
0064	614.2340	MGS Guardrail 3 L	LF	112.500	112.500
0066	614.2610	MGS Guardrail Terminal EAT	EACH	1.000	1.000
0068	614.8010	Anchor Post Assembly Top Mount	EACH	4.000	4.000
0070	618.0100	Maintenance And Repair of Haul Roads (project) 01. 4430-21-71	EACH	1.000	1.000
0072	619.1000	Mobilization	EACH	1.000	1.000
0074	620.0300	Concrete Median Sloped Nose	SF	32.000	32.000
0076	624.0100	Water	MGAL	9.300	9.300
0078	625.0100	Topsoil	SY	68.000	68.000
0080	625.0500	Salvaged Topsoil	SY	549.000	549.000
0082	628.1504	Silt Fence	LF	245.000	245.000
0084	628.1520	Silt Fence Maintenance	LF	245.000	245.000
0086	628.1905	Mobilizations Erosion Control	EACH	5.000	5.000
0088	628.1910	Mobilizations Emergency Erosion Control	EACH	3.000	3.000
0090	628.2006	Erosion Mat Urban Class I Type A	SY	617.000	617.000
0092	628.7015	Inlet Protection Type C	EACH	6.000	6.000
0094	628.7504	Temporary Ditch Checks	LF	140.000	140.000
0096	628.7555	Culvert Pipe Checks	EACH	4.000	4.000
0098	628.7570	Rock Bags	EACH	25.000	25.000

Estimate Of Quantities

4430-21-71

Line	Item	Item Description	Unit	Total	Qty
0100	629.0210	Fertilizer Type B	CWT	0.390	0.390
0102	630.0130	Seeding Mixture No. 30	LB	10.300	10.300
0104	630.0140	Seeding Mixture No. 40	LB	1.000	1.000
0106	630.0500	Seed Water	MGAL	10.700	10.700
0108	633.5200	Markers Culvert End	EACH	2.000	2.000
0110	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	3.000	3.000
0112	638.2102	Moving Signs Type II	EACH	4.000	4.000
0114	638.3000	Removing Small Sign Supports	EACH	3.000	3.000
0116	642.5001	Field Office Type B	EACH	1.000	1.000
0118	643.0300	Traffic Control Drums	DAY	130.000	130.000
0120	643.0420	Traffic Control Barricades Type III	DAY	897.000	897.000
0122	643.0705	Traffic Control Warning Lights Type A	DAY	1,116.000	1,116.000
0124	643.0900	Traffic Control Signs	DAY	8,742.000	8,742.000
0126	643.0920	Traffic Control Covering Signs Type II	EACH	4.000	4.000
0128	643.1050	Traffic Control Signs PCMS	DAY	337.000	337.000
0130	643.5000	Traffic Control	EACH	1.000	1.000
0132	646.1020	Marking Line Epoxy 4-Inch	LF	13,605.000	13,605.000
0134	646.1040	Marking Line Grooved Wet Ref Epoxy 4-Inch	LF	13,439.000	13,439.000
0136	646.3040	Marking Line Grooved Wet Ref Epoxy 8-Inch	LF	835.000	835.000
0138	646.8020	Marking Corrugated Median Epoxy	SF	1,020.000	1,020.000
0140	646.8120	Marking Curb Epoxy	LF	220.000	220.000
0142	646.8220	Marking Island Nose Epoxy	EACH	3.000	3.000
0144	649.0105	Temporary Marking Line Paint 4-Inch	LF	22,186.000	22,186.000
0146	650.6000	Construction Staking Pipe Culverts	EACH	1.000	1.000
0148	650.8000	Construction Staking Resurfacing Reference	LF	6,923.000	6,923.000
0150	650.9910	Construction Staking Supplemental Control (project) 01. 4430-21-71	LS	1.000	1.000
0152	650.9920	Construction Staking Slope Stakes	LF	348.000	348.000
0154	690.0150	Sawing Asphalt	LF	312.000	312.000
0156	690.0250	Sawing Concrete	LF	3,470.000	3,470.000
0158	740.0440	Incentive IRI Ride	DOL	10,500.000	10,500.000
0160	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	300.000	300.000
0162	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	600.000	600.000
0164	SPV.0060	Special 01. MSKT SP-MGS End Terminal TL-2	EACH	3.000	3.000
0166	SPV.0090	Special 01. Relaid Culvert Pipe 24-INCH	LF	20.000	20.000
0168	SPV.0180	Special 01. Undoweled Base Patching Concrete SHES	SY	1,140.000	1,140.000

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REMOVING ASPHALT SURFACE ITEMS

STATION	TO	STATION	LOCATION	204.0110	204.0115	204.0120	REMARKS
				REMOVING ASPHALTIC SURFACE SY	REMOVING ASPHALTIC SURFACE BUTT JOINTS SY	REMOVING ASPHALTIC SURFACE MILLING SY	
915+03	-	915+53	STH 42 SHOULDERS	—	34	—	PROFILE TRANSITION, SHOULDERS
915+03	-	94+89	STH 42 SHOULDERS	—	—	760	MILL 1-INCH DEPTH
94+89	-	100+73	STH 42 TRAVEL LANES	—	6	1,550	MILL 2.5-INCH DEPTH, REMOVE ASPH TO CONCRETE
94+89	-	100+73	STH 42 SHOULDERS & AUX LANES	—	2	870	MILL 3.5-INCH DEPTH
100+73	-	116+68	STH 42 TRAVEL LANES	—	—	4,250	MILL 2.5-INCH DEPTH, REMOVE ASPH TO CONCRETE
100+73	-	116+68	STH 42 SHOULDERS & AUX LANES	—	—	1,960	MILL 3.5-INCH DEPTH
116+68	-	133+33	STH 42 TRAVEL LANES	—	—	4,440	MILL 2.5-INCH DEPTH, REMOVE ASPH TO CONCRETE
116+68	-	133+33	STH 42 SHOULDERS & AUX LANES	—	—	2,530	MILL 3.5-INCH DEPTH
133+33	-	6+38	STH 42 TRAVEL LANES, SHOULDERS, AND AUX	—	24	7,630	MILL 3.5-INCH DEPTH
139+26	-	3+61	STH 42 MEDIAN	—	—	1,290	MILL 1.75-INCH DEPTH
10+23'BB'	-	10+73'BB'	CTH BB	30	12	380	MILL DEPTH 3.5-INCHES; REMOVE ASPH IN SAFETY ISLAND
20+29'F'	-	20+71'F'	FOREST RD	—	6	190	MILL DEPTH 3.5-INCHES
31+00'J'	-	30+32'J'	JORNS LN	—	6	310	MILL DEPTH 3.5-INCHES
QUANTITY FROM "CURB AND GUTTER ITEMS" TABLE				38	—	—	
QUANTITY FROM "CULVERT PIPES" TABLE				12	—	—	
TOTAL 0010				80	90	26,160	

REMOVING PAVEMENT SURFACE ITEMS

STATION	TO	STATION	LOCATION	204.0105	204.0109.S	REMARKS
				REMOVING PAVEMENT BUTT JOINTS SY	REMOVING CONCRETE SURFACE PARTIAL DEPTH SF	
915+03	-	915+53	STH 42 TRAVEL LANES	140	—	PROFILE TRANSITION
919+36	-	91+80	STH 42 AUX LANE	—	4,020	SEE CONSTRUCTION DETAIL
TOTAL 0010				140	4,020	

PREPARE FOUNDATION ITEMS

STATION	TO	STATION	LOCATION	211.0100.01	211.0400
				PREPARE FOUNDATION FOR ASPHALTIC PAVING (PROJECT) (01. 4430-21-71) LS	PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS STA
PROJECT					
915+03	-	920+99	STH 42 LT/RT	1	—
88+59	-	139+71	STH 42 LT/RT	—	11
TOTAL 0010				1	85

DIVISION	FROM/TO STATION	LOCATION	205.0100	AVAILABLE MATERIAL	UNEXPANDED FILL	EXPANDED FILL	MASS ORDINATE +/-	WASTE	208.0100	EXPANDED
			COMMON EXCAVATION (1)			FACTOR (3)				BORROW
			CUT	(2)		1.15	(4)	(5)		1.15
DIVISION 1										
BEAMGUARD-LEFT	99+61.685/104+00	LT	30	30	47	54	-24	0	24	28
BEAMGUARD-RIGHT	99+61.685/104+00	RT	60	60	38	44	16	16	0	0
DIVISION 1 SUBTOTAL			90	90	85	98	-8	16	24	28
GRAND TOTAL			90	90	85	98	-8	16	24	28
TOTAL COMMON EXC			90							

NOTES:

- (1) COMMON EXCAVATION IS THE CUT COLUMN. ITEM NUMBER 205.0100
- (2) AVAILABLE MATERIAL = CUT
- (3) EXPANDED FILL FACTOR =1.15

**EXPANDED FILL = (UNEXPANDED FILL)\* FILL FACTOR**

- (4) THE MASS ORDINATE + OR - QTY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION. MINUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION.
- (5) FACTORS USED TO COMPUTE ANTICIPATED WASTE AND THE COMPUTED WASTE VOLUME IDENTIFIED ARE FOR GENERAL INFORMATION ONLY.

CONCRETE BASE

416.0610 SPV.0180.01  
SPECIAL (01.  
UNDOWELED BASE  
PATCHING  
CONCRETE SHES)  
DRILLED TIE BARS EACH SY

STATION	TO	STATION	LOCATION	DRILLED TIE BARS EACH	CONCRETE SHES) SY
915+03	-	915+21	STH 42 RT	6	25
915+41	-	915+52	STH 42 RT	4	15
916+09	-	916+15	STH 42 RT	2	8
916+21	-	916+32	STH 42 RT	4	15
916+48	-	916+54	STH 42 RT	2	9
916+68	-	916+74.	STH 42 RT	2	8
916+87	-	916+93	STH 42 RT	2	8
917+40	-	917+60	STH 42 RT	6	27
917+68	-	917+80	STH 42 RT	4	16
918+28	-	918+39	STH 42 RT	4	15
919+08	-	919+14	STH 42 RT	2	8
919+27	-	919+33	STH 42 RT	2	8
919+52	-	919+80	STH 42 RT	10	38
920+26	-	920+56	STH 42 RT	10	40
920+67	-	920+76	STH 42 RT	3	13
920+87	-	88+77	STH 42 RT	11	41
89+16	-	89+22	STH 42 RT	2	8
89+34	-	89+40	STH 42 RT	2	8
89+54	-	89+60	STH 42 RT	2	8
89+68	-	89+78	STH 42 RT	4	14
89+83.	-	89+99	STH 42 RT	2	8
90+14	-	90+20	STH 42 RT	2	8
90+34	-	90+40	STH 42 RT	2	8
91+27	-	91+42	STH 42 RT	5	21
91+38	-	91+48	STH 42 LT	4	14
91+80	-	91+90	STH 42 LT	4	15
92+16	-	92+22	STH 42 RT	2	8
92+80	-	92+90	STH 42 LT	4	14
94+58	-	94+64	STH 42 RT	2	8
94+75	-	94+81	STH 42 RT	2	8
94+79	-	95+07	STH 42 LT	10	38
94+97	-	95+03	STH 42 RT	2	8
95+18	-	95+24	STH 42 RT	2	8
95+18	-	95+24	STH 42 LT	2	8
95+38	-	95+44	STH 42 RT	2	8
95+38	-	95+44	STH 42 LT	2	8
95+58	-	95+64	STH 42 LT	2	8
95+78	-	95+84	STH 42 LT	2	8
96+58	-	96+64	STH 42 LT	2	8
96+78	-	96+84	STH 42 LT	2	8
97+99	-	98+05	STH 42 LT	2	8
99+48	-	99+54	STH 42 LT	2	8
99+68	-	99+74	STH 42 LT	2	8
99+90	-	99+96	STH 42 LT	2	8
100+20	-	100+26	STH 42 LT	2	8
101+00	-	101+06	STH 42 LT	2	8
101+41	-	101+47	STH 42 LT	2	8
102+81	-	102+87	STH 42 LT	2	8
103+81	-	103+87	STH 42 RT	2	8
105+00	-	105+06	STH 42 RT	2	8
105+21	-	105+27	STH 42 RT	2	8
107+59	-	107+65	STH 42 LT	2	8
110+66	-	110+72	STH 42 LT	2	8

SUBTOTAL 0010 167 658

QUANTITIES CONTINUED ON NEXT TABLE

CONCRETE BASE (CONTINUED)

416.0610 SPV.0180.01  
SPECIAL (01.  
UNDOWELED BASE  
PATCHING  
CONCRETE SHES)  
DRILLED TIE BARS EACH SY

STATION	TO	STATION	LOCATION	DRILLED TIE BARS EACH	CONCRETE SHES) SY
110+93	-	111+07	STH 42 RT	5	19
112+92	-	113+08	STH 42 RT	5	22
112+95	-	113+01	STH 42 LT	—	8
113+99	-	114+15	STH 42 RT	5	22
114+12	-	114+18	STH 42 LT	2	8
114+45	-	114+72	STH 42 LT	9	36
114+53	-	114+59	STH 42 RT	—	8
115+03	-	115+09	STH 42 RT	—	8
115+03	-	115+09	STH 42 LT	—	8
115+43	-	115+49	STH 42 LT	2	8
115+59	-	115+65	STH 42 RT	—	8
115+59	-	115+65	STH 42 LT	—	8
115+79	-	115+85	STH 42 LT	2	8
116+92	-	116+98	STH 42 LT	2	8
117+10	-	117+23	STH 42 LT	5	18
117+65	-	117+71	STH 42 LT	2	8
117+85	-	117+91	STH 42 LT	2	8
118+45	-	118+51	STH 42 LT	2	8
118+86	-	118+92	STH 42 LT	2	8
119+05	-	119+11	STH 42 LT	2	8
119+44	-	119+51	STH 42 LT	2	8
119+85	-	119+91	STH 42 LT	2	8
120+06	-	120+12	STH 42 LT	2	8
120+64	-	120+70	STH 42 RT	2	8
120+84	-	120+90	STH 42 RT	2	8
121+87	-	121+93	STH 42 RT	2	8
122+05	-	122+11	STH 42 LT	2	8
126+47	-	126+53	STH 42 RT	—	8
126+47	-	126+53	STH 42 LT	—	8
127+24	-	127+49	STH 42 RT	8	33
129+08	-	129+34	STH 42 RT	9	34
129+89	-	129+95	STH 42 LT	2	8
130+28	-	130+34	STH 42 RT	—	8
130+28	-	130+34	STH 42 LT	—	8
130+89	-	130+95	STH 42 RT	2	8
131+08	-	131+14	STH 42 RT	2	8
131+28	-	131+34	STH 42 RT	2	8
131+56	-	131+62	STH 42 RT	2	8
131+68	-	131+74	STH 42 RT	2	8
132+49	-	132+55	STH 42 RT	2	8
132+63	-	132+75	STH 42 RT	4	16
132+67	-	132+73	STH 42 LT	—	8
132+91	-	132+97	STH 42 RT	2	8

QUANTITY FROM "CURB AND GUTTER ITEMS" TABLE

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TOTAL 0010 289 1,140

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BASE AGGREGATE

STATION	TO	STATION	LOCATION	305.0110	305.0120	624.0100	REMARKS
				BASE AGGREGATE DENSE 3/4-INCH TON	BASE AGGREGATE DENSE 1 1/4-INCH TON	WATER MGAL	
915+03	-	94+89	STH 42 RT	140	—	1.4	SHOULDER
915+03	-	94+89	STH 42 LT	200	—	2.0	SHOULDER
94+89	-	99+62	STH 42 RT	17	—	0.2	SHOULDER
94+89	-	99+90	STH 42 LT	19	—	0.2	SHOULDER
99+62	-	102+18	STH 42 RT	—	140	1.4	BEAMGUARD GRADING
101+26	-	103+07	STH 42 LT	—	93	0.9	BEAMGUARD GRADING
102+18	-	133+33	STH 42 RT	120	—	1.2	SHOULDER
103+07	-	133+33	STH 42 LT	130	—	1.3	SHOULDER
133+33	-	139+71	STH 42 RT	21	—	0.2	SHOULDER
133+33	-	139+66	STH 42 LT	23	—	0.2	SHOULDER
142+85	-	145+19	STH 42 RT	3	—	0.1	SHOULDER
0+83	-	6+38	STH 42 LT	7	—	0.1	SHOULDER
1+10	-	6+38	STH 42 RT	6	—	0.1	SHOULDER
TOTAL 0010				685	233	9.3	

ASPHALT ITEMS

STATION	TO	STATION	OFFSET	LOCATION	450.4000	455.0605	460.6224	465.0105	465.0110	465.0305	REMARKS
					HMA COLD WEATHER PAVING TON	TACK COAT GAL	HMA PAVEMENT 4 MT 58-28 S TON*	ASPHALTIC SURFACE TON	ASPHALTIC SURFACE PATCHING TON	ASPHALTIC SURFACE SAFETY ISLANDS TON	
915+03	-	94+89	LT/RT	STH 42 TRAVEL LANES	—	230	240	—	—	—	LEVELING LAYER
915+03	-	94+89	LT/RT	STH 42 TRAVEL LANES	—	160	320	—	—	—	UPPER LAYER
915+03	-	94+89	LT/RT	STH 42 SHOULDERS	—	140	340	—	—	—	
919+36	-	91+80	RT	STH 42 AUX LANE	—	50	70	—	—	—	
94+89	-	95+39	LT/RT	STH 42 TRAVEL LANES AND SHOULDERS	—	10	—	15	—	—	ASPHALTIC WEDGE FOR PROFILE TRANSITION
94+89	-	100+73	LT/RT	STH 42 TRAVEL LANES	—	110	110	—	—	—	LEVELING LAYER
94+89	-	100+73	LT/RT	STH 42 TRAVEL LANES	—	80	150	—	—	—	UPPER LAYER
94+89	-	100+73	LT/RT	STH 42 SHOULDERS & AUX LANES	—	110	210	—	—	—	
100+73	-	116+68	LT/RT	STH 42 TRAVEL LANES	—	300	310	—	—	—	LEVELING LAYER
100+73	-	116+68	LT/RT	STH 42 TRAVEL LANES	105	210	420	—	—	—	UPPER LAYER
100+73	-	116+68	LT/RT	STH 42 SHOULDERS & AUX LANES	120	250	480	—	—	—	
116+68	-	133+33	LT/RT	STH 42 TRAVEL LANES	—	310	320	—	—	—	LEVELING LAYER
116+68	-	133+33	LT/RT	STH 42 TRAVEL LANES	108	220	430	—	—	—	UPPER LAYER
116+68	-	133+33	LT/RT	STH 42 SHOULDERS & AUX LANES	148	320	590	—	—	—	
133+33	-	144+80	LT/RT	STH 42 TRAVEL LANES AND SHOULDERS	228	500	910	—	—	—	
139+26	-	144+55	LT/RT	STH 42 MEDIAN	33	90	130	—	—	—	SOUTH LEG OF STH 42/57 MID JUNCTION
144+80	-	6+38	LT/RT	STH 42 TRAVEL LANES AND SHOULDERS	—	410	700	—	—	—	
3+39	-	3+62	LT/RT	STH 42 MEDIAN	—	2	4	—	—	—	NORTH LEG OF STH 42/57 MID JUNCTION
10+23'BB'	-	10+73'BB'	LT/RT	CTH BB	—	50	80	—	—	5	PAVE RIGHT TURN ISLAND AT 3-INCHES THICK
20+29'F'	-	20+71'F'	LT/RT	FOREST RD	18	30	70	—	—	—	
31+00'J'	-	30+32'J'	LT/RT	JORNS LN	—	40	60	—	—	—	
PROJECT					—	—	—	—	10	—	WEDGE AT BUTT JOINTS
QUANTITY FROM "CULVERT PIPES" TABLE					—	—	—	4	—	—	
QUANTITY FROM "CURB ANG GUTTER ITEMS" TABLE					—	—	—	14	—	—	
UNDISTRIBUTED					—	—	—	—	60	—	1% UNDISTRIBUTED FOR UNFORESEEN REPAIRS
TOTAL 0010					758	3,622	5,944	33	70	5	

\* TONNAGE IS ELIGIBLE FOR QMP DENSITY INCENTIVE 460.2000. WEDGING AND LEVELING LAYERS ARE EXCLUDED FROM DENSITY TESTING AND DENSITY INCENTIVE.

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CULVERT PIPES

STATION	TO	STATION	LOCATION	203.0100 REMOVING SMALL PIPE CULVERTS EACH	204.0110 REMOVING ASPHALTIC SURFACE SY	465.0105 ASPHALTIC SURFACE TON	520.1024 APRON ENDWALLS FOR CULVERT PIPE 24-INCH EACH	520.8000 CONCRETE COLLARS FOR PIPE EACH	633.5200 MARKERS CULVERT END EACH	SPV.0090.01 SPECIAL (01. RELAID CULVERT PIPE 24-INCH) LF	REMARKS
116+94	-	117+03	STH 42 LT	1	6	2	1	1	1	10	(NOTE) REMOVE 6 LF OF PIPE TO FIT AEW
117+18	-	117+27	STH 42 RT	1	6	2	1	1	1	10	(NOTE) REMOVE 6 LF OF PIPE TO FIT AEW
TOTAL 0010				2	(NOTE*)	(NOTE**)	2	2	2	20	

(NOTE) INSTALL JOINT TIES ON APRON ENDWALL AND FIRST TWO PIPES.  
 (NOTE\*) TOTAL QUANTITY SHOWN ON "REMOVING ASPHALT SURFACE ITEMS" TABLE.  
 (NOTE\*\*) TOTAL QUANTITY SHOWN ON "ASPHALT ITEMS" QUANTITY TABLE

CURB AND GUTTER ITEMS

STATION	TO	STATION	LOCATION	204.0110 REMOVING ASPHALTIC SURFACE SY	204.0150 REMOVING CURB & GUTTER LF	416.0610 DRILLED TIE BARS EACH	465.0105 ASPHALTIC SURFACE TON	601.0411 CONCRETE CURB & GUTTER 30- INCH TYPE D LF	601.0557 CONCRETE CURB & GUTTER 6-INCH SLOPED 36-INCH TYPE D LF	620.0300 CONCRETE MEDIAN SLOPED NOSE SF	REMARKS
99+90	-	100+20	STH 42 LT	4	32	2	1	—	32	—	CTH BB SW QUAD
143+40	-	143+56	STH 42 LT	4	16	4	1	16	—	—	SB TRAVEL LANE
143+45	-	143+57	STH 42 LT	3	12	4	1	12	—	—	SB TRAVEL LANE
143+45	-	143+54	STH 42 RT	2	9	4	1	9	—	—	NB TRAVEL LANE
144+40	-	144+79	STH 42 LT	9	39	4	3	39	—	—	SB TRAVEL LANE
0+38	-	0+59	STH 42	14	14	2	5	14	—	32	TYPE 2 SLOPED NOSE
0+62	-	0+95	STH 42 RT	4	33	4	1	33	—	—	NB TRAVEL LANE
TOTAL 0010				(NOTE)	155	(NOTE*)	(NOTE**)	123	32	32	

(NOTE) TOTAL QUANTITY SHOWN IN "REMOVING ASPHALTIC SURFACE ITEMS" TABLE  
 (NOTE\*) TOTAL QUANTITY SHOWN IN "CONCRETE BASE (CONTINUED)" TABLE  
 (NOTE\*\*) TOTAL QUANTITY SHOWN IN "ASPHALT ITEMS" TABLE. MATCH EXISTING PAVEMENT DEPTH

GUARDRAIL ITEMS

STATION	TO	STATION	LOCATION	204.0165 REMOVING GUARDRAIL LF	614.2300 MGS GUARDRAIL 3 LF	614.2310 MGS GUARDRAIL 3 HS LF	614.2340 MGS GUARDRAIL 3 L LF	614.2610 MGS GUARDRAIL TERMINAL EAT EACH	614.8010 ANCHOR POST ASSEMBLY TOP MOUNT EACH	SPV.0060.01 SPECIAL (01. MSKT SP-MGS TERMINAL TL-2) EACH	REMARKS
100+49	-	101+02	STH 42 RT	—	—	—	—	1	—	—	
100+97	-	102+12	STH 42 RT	115	—	—	—	—	—	—	
101+02	-	101+33	STH 42 RT	—	31	—	—	—	—	—	
101+33	-	101+98	STH 42 RT	—	—	65	—	—	4	—	SEE STRUCTURE PLANS - MODIFIED POST SPACING
101+98	-	102+20	STH 42 RT	—	—	—	—	—	—	1	
101+25	-	101+48	STH 42 LT	—	—	—	—	—	—	1	
101+48	-	101+60	STH 42 LT	—	13	—	—	—	—	—	
101+60	-	102+73	STH 42 LT	—	—	—	113	—	—	—	
102+73	-	102+85	STH 42 LT	—	13	—	—	—	—	—	
102+85	-	103+07	STH 42 LT	—	—	—	—	—	—	1	
TOTAL 0010				115	56	65	112.5	1	4	3	

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RECONSTRUCTING INLETS

611.0430 RECONSTRUCTING INLETS			
STATION	LOCATION	EACH	REMARKS
143+50	27.5' LT	1	EXISTING STRUCTURE = CONCRETE BLOCK
143+50	10.5' LT	1	EXISTING STRUCTURE = CONCRETE BLOCK
143+50	13.5' RT	1	EXISTING STRUCTURE = CONCRETE BLOCK
0+45	0' LT/RT	1	EXISTING STRUCTURE = PRECAST
TOTAL 0010		4	

EROSION CONTROL

STATION	TO	STATION	LOCATION	628.1504	628.1520	628.7015	628.7504	628.7555	628.7570
				SILT FENCE LF	SILT FENCE MAINTENANCE LF	INLET PROTECTION TYPE C EACH	TEMPORARY DITCH CHECKS LF	CULVERT PIPE CHECKS EACH	ROCK BAGS EACH
100+89	-	102+25	STH 42 RT	120	120	—	50	—	—
101+75	-	102+71	STH 42 LT	75	75	—	40	—	20
116+50	-	117+00	STH 42 LT	—	—	—	20	—	—
117+27			STH 42 RT	—	—	—	—	3	—
143+50			STH 42 RT	—	—	1	—	—	—
143+50			STH 42 LT	—	—	2	—	—	—
0+45			STH 42 RT	—	—	1	—	—	—
0+45			STH 42 LT	—	—	1	—	—	—
UNDISTRIBUTED				50	50	1	30	1	5
TOTAL 0010				245	245	6	140	4	25

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RESTORATION ITEMS

STATION	TO	STATION	LOCATION	625.0100	625.0500	628.2006	629.0210	630.0130	630.0140	630.0500	REMARKS
				TOPSOIL SY	SALVAGED TOPSOIL SY	EROSION MAT URBAN CLASS I TYPE A SY	FERTILIZER TYPE B CWT	SEEDING MIXTURE NO. 30 LB	SEEDING MIXTURE NO. 40 LB	SEED WATER MGAL	
99+61	-	101+50	STH 42 RT	—	290	290	0.19	5.4	—	5.0	GUARDRAIL
101+22	-	102+02	STH 52 LT	—	101	101	0.06	1.8	—	1.7	GUARDRAIL
101+54	-	102+18	STH 42 RT	—	36	36	0.02	0.6	—	0.6	GUARDRAIL
102+29	-	103+09	STH 42 LT	—	123	123	0.08	2.2	—	2.1	GUARDRAIL
116+84	-	117+00	STH 42 LT	23	—	23	0.01	—	0.4	0.4	CULVERT
117+19	-	117+44	STH 42 RT	32	—	32	0.02	—	0.6	0.6	CULVERT
0+38	-	0+59	STH 42 RT	4	—	4	0.002	0.1	—	0.1	CURB AND GUTTER IN MEDIAN
0+62	-	0+95	STH 42 RT	9	—	9	0.01	0.2	—	0.2	CURB AND GUTTER IN MEDIAN
TOTAL 0010				68	549	617	0.39	10.3	1	10.7	

EROSION CONTROL MOBILIZATIONS

STATION	TO	STATION	LOCATION	628.1905	628.1910
				MOBILIZATIONS EROSION CONTROL EACH	MOBILIZATIONS EMERGENCY EROSION CONTROL EACH
915+03	-	6+37	PROJECT	5	3
TOTAL 0010				5	3

PERMANENT SIGNING

SIGN NO.	LOCATION	SIGN CODE	634.0616	638.2102	638.3000	REMARKS
			POSTS WOOD 4X6-INCH X 16-FT EACH	MOVING SIGNS TYPE II EACH	REMOVING SMALL SIGN SUPPORTS EACH	
1	STH 42 RT	J13-1	1	1	1	NB BYPASS LANE AT CTH BB
1A	STH 42 RT	W14-3	—	1	—	NB BYPASS LANE AT CTH BB
2	STH 42 RT	W1-7	1	1	1	NB BYPASS LANE AT CTH BB
3	STH 42 LT	J13-1	1	1	1	SB RIGHT TURN LANE AT CTH BB
TOTAL 0010			3	4	3	

MAINLINE PAVEMENT MARKING

STATION	TO	STATION	LOCATION	646.1020		646.1040	649.0105	REMARKS
				MARKING LINE EPOXY 4-INCH		MARKING LINE GROOVED	TEMPORARY MARKING LINE	
				CENTERLINE	LANE LINE	WET REF EPOXY 4-INCH	PAINT 4-INCH	
				LF	LF	LF	LF	
914+43	-	915+03	STH 42	120	—	—	—	
915+03	-	94+89	STH 42	2,450	—	2,450	4,900	DOUBLE YELLOW
94+89	-	100+73	STH 42	1,169	—	1,169	2,337	DOUBLE YELLOW
99+23	-	102+18	STH 42; BYPASS LANE	—	75	—	—	BYPASS LANE SKIPS, WHITE
100+73	-	110+41	STH 42	242	—	1,936	155	MAINLINE SKIPS
110+41	-	117+55	STH 42	893	—	1,428	1,542	NB-SOLID, SB-SKIPS
117+55	-	133+33	STH 42	3,156	—	3,156	6,312	DOUBLE YELLOW
133+33	-	145+47	STH 42	2,290	—	1,450	4,580	DOUBLE YELLOW, MEDIAN ISLAND
143+25	-	145+20	STH 42/STH 57	—	—	290	—	BETWEEN 8-INCH CHANNELIZING MARKINGS
0+00	-	6+38	STH 42	1,180	—	1,100	2,360	MEDIAN ISLAND
0+06	-		STH 42/STH 57	825	—	460	—	STH 57 DOUBLE YELLOW
6+38	-	14+83	STH 42	1,056	—	—	—	NB-SKIPS, SB-SOLID
10+23'BB'	-	10+73'BB'	CTH BB	90	—	—	—	DOUBLE YELLOW
31+00'J'	-	30+32'J'	JORNS LN	60	—	—	—	DOUBLE YELLOW
SUBTOTAL 0010				13,530	75	—	—	
TOTAL 0010				13,605		13,439	22,186	

MEDIAN MARKING

STATION	TO	STATION	LOCATION	646.8020	646.8120	646.8220	REMARKS
				MARKING CORRUGATED MEDIAN EPOXY SF	MARKING CURB EPOXY LF	MARKING ISLAND NOSE EPOXY EACH	
136+40	-	139+31	STH 42	690	10	1	
142+25	-	142+74	STH 42/STH 57	100	—	—	STH 42 NB RIGHT TURN TO STH 57
144+54	-	145+04	STH 42	—	65	—	
0+40	-	0+95	STH 42	—	65	1	
3+24	-	3+75	STH 42	—	70	—	CURB HEAD ADJACENT TO CROSSOVER
5+18	-	6+37	STH 42	230	10	1	
TOTAL 0010				1,020	220	3	

CHANNELIZING LINES

STATION	TO	STATION	LOCATION	646.3040	REMARKS
				MARKING LINE GROOVED WET REF EPOXY 8-INCH LF	
101+20	-	103+05	STH 42 LT	185	STH 42 SB RIGHT TURN TO CTH BB
142+10	-	143+25	STH 42/STH 57	230	STH 42 NB RIGHT TURN LANE TO STH 57
145+20	-	145+41	STH 42/STH 57	145	GORE AT MERGING OF STH 42 NB AND STH 57 NB
0+19	-	0+45	STH 42/STH 57	115	STH 57 SB RIGHT TURN ISLAND TO STH 42 NB
0+55	-	0+90	STH 42	35	STH 42 SB LEFT TURN LANE TO STH 57
10+20'BB'	-	10+87'BB'	CTH BB	125	RIGHT TURN ISLAND
TOTAL 0010				835	

TEMORARY TRAFFIC CONTROL

CLOSURE	DAYS	643.0300	643.0420	643.0705	643.0900	REMARKS
		TRAFFIC CONTROL DRUMS DAY	TRAFFIC CONTROL BARRICADES TYPE III DAY	TRAFFIC CONTROL WARNING LIGHTS TYPE A DAY	TRAFFIC CONTROL SIGNS DAY	
STH 42 NB BYPASS LANE AT CTH BB	5	65	—	—	35	(1)
STH 42 SB RIGHT TURN LANE AT CTH BB	5	65	—	—	25	(1)
MILLED SURFACE ADVANCE WARNING - SEGMENT A	5	—	—	—	40	(2)
MILLED SURFACE ADVANCE WARNING - SEGMENT B	2	—	—	—	20	(2)
MILLED SURFACE ADVANCE WARNING - SEGMENT C	1	—	—	—	—	(2)
SIDEROAD CLOSURES - COMBINED SEGMENT A/B	1	—	5	6	2	(3)* CTH BB
SIDEROAD CLOSURES - SEGMENT B	34	—	68	68	102	(3) FOREST RD
SIDEROAD CLOSURES - SEGMENT C	4	—	8	8	12	(3) JORNS LN
MAINLINE CLOSURE - SEGMENT A	22	—	220	264	44	(4)
MAINLINE CLOSURE - SEGMENT B	34	—	374	374	—	(4)
MAINLINE CLOSURE - SEGMENT C	4	—	60	72	36	(4) - STH 42 AND 57 INTERSECTION LEGS
TOTAL 0010		130	735	792	316	

- (1) SEE "WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY" STANDARD DETAIL DRAWING AND TRAFFIC CONTROL PLAN.  
 (2) SEE "SIGNING ON ROADWAYS WITH MILLED SURFACES" STANDARD DETAIL DRAWING.  
 (3) SEE DETAIL 4 OF THE "BARRICADES AND SIGNS FOR SIDEROAD CLOSURES" STANDARD DETAIL DRAWING.  
 (3)\* SEE DETAIL 1 OF THE "BARRICADES AND SIGNS FOR SIDEROAD CLOSURES" STANDARD DETAIL DRAWING.  
 (4) SEE DETOUR SIGNING DETAIL AND THE FOLLOWING STANDARD DETAIL DRAWINGS:  
 - BARRICADES AND SIGNS FOR MAINLINE CLOSURES  
 - BARRICADES AND SIGNS FOR VARIOUS CLOSURES

Traffic Control Signs PCMS

DETOURS	# OF SIGNS	DAYS	643.1050	REMARKS
			DAY	
DETOUR A	2	30	60	7-DAY ADVANCE NOTICE & STH 42 NIGHTLY CLOSURES
DETOUR B	3	41	123	7-DAY ADVANCE NOTICE & STH 42 NIGHTLY CLOSURES
DETOUR C	3	11	33	7-DAY ADVANCE NOTICE & STH 42 NIGHTLY CLOSURES
TOTAL 0010			216	

CONSTRUCTION STAKING ITEMS

STATION	TO	STATION	LOCATION	650.6000	650.8000	650.9910.01	650.9920	REMARKS
				CONSTRUCTION STAKING PIPE CULVERTS EACH	CONSTRUCTION STAKING RESURFACING REFERENCE LF	CONSTRUCTION STAKING CONTROL (PROJECT) (01. 4430-21-71) LS	CONSTRUCTION STAKING SLOPE STAKES LF	
915+03	-	6+38	PROJECT	—	6,923	1	—	
99+61	-	103+09	STH 42 LT/RT	—	—	—	348	GUARDRAIL GRADING
116+94	-	117+27	STH 42 LT/RT	1	—	—	—	RELAYING PIPE CULVERT
TOTAL 0010				1	6,923	1	348	

SAWING ITEMS

STATION	TO	STATION	LOCATION	690.0150	690.0250	REMARKS
				SAWING ASPHALT LF	SAWING CONCRETE LF	
915+03	-	133+33	STH 42 TRAVEL LANES	—	3,440	CONCRETE BASE PATCHING AREAS
116+93	-	117+27	STH 42 LT/RT	60	—	CULVERT PIPE RELAY
143+40	-	0+95	STH 42 TRAVEL LANES	200	25	(NOTE)
0+37	-	0+59	STH 42 LT/RT	52	5	INLET RECONSTRUCT / MEDIAN NOSE
TOTAL 0010				312	3,470	

(NOTE) QUANTITY FOR CURB AND GUTTER REPLACEMENTS. ANY ASPHALT SURROUNDING THE CURB AND GUTTER SHALL BE CUT AT 1-FT OFFSET TO GIVE ROOM FOR FORMS.

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TRAFFIC CONTROL DETOUR SIGN SUMMARY (DETOUR A)

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 22 DAYS	643.0900 SIGNS DAYS	643.0420 BARRICADES TYPE III DAY	643.0705 WARNING LIGHTS TYPE A DAY	643.1050 SIGNS PORTABLE CHANGEABLE MESSAGE DAYS	NO. OF CYCLES	643.0920 COVERING TYPE II SIGNS EACH	REMARKS
1	STH 42/57, S. OF EGG HARBOR RD, PLACE 1000' S. OF EGG HARBOR RD RAB INTERSECTION	M 1-6	24"X24"	1	22	22						42
	"	M 1-6	24"X24"	1	22	22						57
	"	W 20-2A	48"X48"	1	22	22						
2	STH 42/57, S. OF EGG HARBOR RD, PLACE LEFT OF EXISTING TYPE II RAB SIGN	MO 4-8	24"X12"	1	22	22						
	"	M 3-1	24"X12"	1	22	22						
	"	M 1-6	24"X24"	1	22	22						42
	"	M 1-6	24"X24"	1	22	22						57
	"	MO 5-1L	21"X21"	1	22	22						
3	STH 42/57, S. OF EGG HARBOR RD, COVER EXISTING TYPE II RAB SIGN AS SHOWN									1	1	COVER "NORTH 42-57"
4	STH 42/57, S. OF EGG HARBOR RD, PLACE 100' S. OF EGG HARBOR RD RAB INTERSECTION	MO 4-8	24"X12"	1	22	22						
	"	M 3-1	24"X12"	1	22	22						
	"	M 1-6	24"X24"	1	22	22						42
	"	M 1-6	24"X24"	1	22	22						57
	"	MO 6-1	21"X21"	1	22	22						LEFT
5	STH 42/57, AT EGG HARBOR RD, PLACE ABOVE EXISTING SPLITTER ISLAND SIGN ON NORTH LEG	MO 4-8	24"X12"	1	22	22						
	"	M 3-1	24"X12"	1	22	22						
	"	M 1-6	24"X24"	1	22	22						42
	"	M 1-6	24"X24"	1	22	22						57
	"	MO 6-2	21"X21"	1	22	22						TILT LEFT
6	STH 42/57, AT EGG HARBOR RD, PLACE IN ROADWAY FOR RAB INTERSECTION NORTH LEG EXIT	R 11-2	48"X30"	1	22	22	22	44				
	"	M 4-9L	30"X24"	1	22	22						
7	STH 42/57, N. OF EGG HARBOR RD, PLACE ON RIGHT SHOULDER, FIELD DETERMINE LOCATION	PCMS		1					22			PLACE THROUGHOUT NIGHTLY CLOSURES
8	EGG HARBOR RD, W. OF STH 42/57, COVER EXISTING J3-4 SIGN AS SHOWN									1	1	COVER "NORTH 42-57"
9	EGG HARBOR RD, W. OF STH 42/57, MODIFY EXISTING J1-4 SIGN AS SHOWN	M 4-8A	24"X18"	1	22	22						
	"	M 4-8A	24"X18"	1	22	22						
10	EGG HARBOR RD, E. OF OLD HWY RD, PLACE 100' E. OF OLD HWY RD INTERSECTION	MO 4-8	24"X12"	1	22	22						
	"	M 3-1	24"X12"	1	22	22						
	"	M 1-6	24"X24"	1	22	22						42
	"	M 1-6	24"X24"	1	22	22						57
	"	MO 6-1	21"X21"	1	22	22						RIGHT
11	EGG HARBOR RD, W. OF OLD HWY RD, PLACE 100' W. OF OLD HWY RD INTERSECTION	MO 4-8	24"X12"	1	22	22						
	"	M 3-1	24"X12"	1	22	22						
	"	M 1-6	24"X24"	1	22	22						42
	"	M 1-6	24"X24"	1	22	22						57
	"	MO 6-1	21"X21"	1	22	22						LEFT
12	EGG HARBOR RD, W. OF OLD HWY RD, PLACE 600' W. OF OLD HWY RD INTERSECTION	MO 4-8	24"X12"	1	22	22						
	"	M 3-1	24"X12"	1	22	22						
	"	M 1-6	24"X24"	1	22	22						42
	"	M 1-6	24"X24"	1	22	22						57
	"	MO 5-1L	21"X21"	1	22	22						
13	EGG HARBOR RD, W. OF OLD HWY RD, PLACE 1000' W. OF OLD HWY RD INTERSECTION	M 3-1	24"X12"	1	22	22						
	"	M 1-6	24"X24"	1	22	22						42
	"	M 1-6	24"X24"	1	22	22						57
	"	W 20-2A	48"X48"	1	22	22						
14	OLD HWY RD, AT EGG HARBOR RD, PLACE RIGHT OF EXISTING R1-1 SIGN AT INTERSECTION	MO 4-8	24"X12"	1	22	22						
	"	M 3-3	24"X12"	1	22	22						
	"	M 1-6	24"X24"	1	22	22						42
	"	M 1-6	24"X24"	1	22	22						57
	"	MO 6-1	21"X21"	1	22	22						LEFT
PAGE SUBTOTALS				47		1,012	22	44	22		2	

PLAN SHEET PRODUCED  
BY WisDOT - NE REGION

TRAFFIC CONTROL DETOUR SIGN SUMMARY (DETOUR A)

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 22 DAYS	643.0900 SIGNS DAYS	643.0420 BARRICADES TYPE III DAY	643.0705 WARNING LIGHTS TYPE A DAY	643.1050 SIGNS PORTABLE CHANGEABLE MESSAGE DAYS	NO. OF CYCLES	643.0920 COVERING TYPE II SIGNS EACH	REMARKS
14A	OLD HWY RD, N. OF EGG HARBOR RD, PLACE 500' N. OF EGG HARBOR RD INTERSECTION	MO 4-8	24"x12"	1	22	22						
	"	M 3-3	24"x12"	1	22	22						
	"	M 1-6	24"x24"	1	22	22						42
	"	M 1-6	24"x24"	1	22	22						57
	"	MO 5-1L	21"x21"	1	22	22						
15	OLD HWY RD, AT CTH BB, PLACE RIGHT OF EXISTING R1-1 SIGN AT INTERSECTION	MO 4-8	24"x12"	1	22	22						
	"	M 3-1	24"x12"	1	22	22						
	"	M 1-6	24"x24"	1	22	22						42
	"	M 1-6	24"x24"	1	22	22						57
	"	MO 6-1	21"x21"	1	22	22						RIGHT
15A	OLD HWY RD, S. OF CTH BB, PLACE 500' S. OF CTH BB INTERSECTION	MO 4-8	24"x12"	1	22	22						
	"	M 3-1	24"x12"	1	22	22						
	"	M 1-6	24"x24"	1	22	22						42
	"	M 1-6	24"x24"	1	22	22						57
	"	MO 5-1R	21"x21"	1	22	22						
16	CTH BB, AT OLD HWY RD, PLACE AT OLD HWY RD INTERSECTION	MO 4-8	24"x12"	1	22	22						
	"	M 3-3	24"x12"	1	22	22						
	"	M 1-6	24"x24"	1	22	22						42
	"	M 1-6	24"x24"	1	22	22						57
	"	MO 6-1	21"x21"	1	22	22						LEFT
17	CTH BB, W. OF STH 42/57, PLACE 50' W. OF STH 42/57 INTERSECTION	M 1-6	24"x24"	1	22	22						42
	"	M 1-6	24"x24"	1	22	22						57
	"	MO 6-1	21"x21"	1	22	22						LEFT
18	STH 42/57, AT CTH BB, PLACE IN ROADWAY AT CTH BB INTERSECTION	R 11-2	48"x30"	1	22	22	22	44				
	"	M 4-9R	30"x24"	1	22	22						
19	STH 42/57, S. OF CTH BB, PLACE ON RIGHT SHOULDER, FIELD DETERMINE LOCATION	PCMS		1					22			PLACE THROUGHOUT NIGHTLY CLOSURES
20	STH 42/57, AT CTH BB, PLACE RIGHT OF EXISTING J13-1 SIGN AT CTH BB INTERSECTION	MO 4-8	24"x12"	1	22	22						
	"	M 3-3	24"x12"	1	22	22						
	"	M 1-6	24"x24"	1	22	22						42
	"	M 1-6	24"x24"	1	22	22						57
	"	MO 6-1	21"x21"	1	22	22						RIGHT
21	STH 42/57, N. OF CTH BB, PLACE 500' N. OF CTH BB INTERSECTION	MO 4-8	24"x12"	1	22	22						
	"	M 3-3	24"x12"	1	22	22						
	"	M 1-6	24"x24"	1	22	22						42
	"	M 1-6	24"x24"	1	22	22						57
	"	MO 5-1R	21"x21"	1	22	22						
22	STH 42/57, N. OF CTH BB, PLACE 1000' N. OF CTH BB INTERSECTION	M 1-6	24"x24"	1	22	22						42
	"	M 1-6	24"x24"	1	22	22						57
	"	W 20-2A	48"x48"	1	22	22						
PAGE SUBTOTALS				39		836	22	44	22		0	
DETOUR A TOTALS				86		1,848	44	88	44		2	

PLAN SHEET PRODUCED  
BY WisDOT - NE REGION

TRAFFIC CONTROL DETOUR SIGN SUMMARY (DETOUR B)

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 34 DAYS	643.0900 SIGNS DAYS	643.0420 BARRICADES TYPE III DAY	643.0705 WARNING LIGHTS TYPE A DAY	643.1050 SIGNS PORTABLE CHANGEABLE MESSAGE DAYS	NO. OF CYCLES	643.0920 COVERING TYPE II SIGNS EACH	REMARKS
1	STH 42/57, S. OF CTH BB, PLACE 1000' S. OF CTH BB INTERSECTION	M 1-6	24"X24"	1	34	34						42
	"	M 1-6	24"X24"	1	34	34						57
	"	W 20-2A	48"X48"	1	34	34						
2	STH 42/57, S. OF CTH BB, PLACE 500' S. OF CTH BB INTERSECTION	MO 4-8	24"X12"	1	34	34						
	"	M 3-1	24"X12"	1	34	34						
	"	M 1-6	24"X24"	1	34	34						42
	"	M 1-6	24"X24"	1	34	34						57
	"	MO 5-1L	21"X21"	1	34	34						
3	STH 42/57, AT CTH BB, PLACE RIGHT OF EXISTING J13-1 SIGN AT CTH BB INTERSECTION	MO 4-8	24"X12"	1	34	34						
	"	M 3-1	24"X12"	1	34	34						
	"	M 1-6	24"X24"	1	34	34						42
	"	M 1-6	24"X24"	1	34	34						57
4	STH 42/57, AT CTH BB, PLACE IN ROADWAY AT CTH BB INTERSECTION	MO 6-1	21"X21"	1	34	34						LEFT
	"	R 11-2	48"X30'	1	34	34	34	68				
	"	M 4-9L	30"X24"	1	34	34						
5	STH 42/57, N. OF CTH BB, PLACE ON RIGHT SHOULDER, FIELD DETERMINE LOCATION	PCMS		1					34			PLACE FOR NIGHTLY CLOSURES
6	CTH BB, W. OF STH 42/57, PLACE 50' W. OF STH 42/57 INTERSECTION	M 1-6	24"X24"	1	34	34						42
	"	M 1-6	24"X24"	1	34	34						57
	"	MO 6-1	21"X21"	1	34	34						RIGHT
7	CTH BB, W. OF STH 42/57, PLACE 1000' W. OF STH 42/57 INTERSECTION	M 4-8A	24"X18"	1	34	34						
	"	M 1-6	24"X24"	1	34	34						42
	"	M 1-6	24"X24"	1	34	34						57
	"	MO 5-1R	21"X21"	1	34	34						
8	CTH BB, E. OF CTH HH, PLACE 500' E. OF CTH HH INTERSECTION	MO 4-8	24"X12"	1	34	34						
	"	M 3-1	24"X12"	1	34	34						
	"	M 1-6	24"X24"	1	34	34						42
	"	M 1-6	24"X24"	1	34	34						57
	"	MO 5-1R	21"X21"	1	34	34						
9	CTH BB, E. OF CTH HH, PLACE 250' E. OF CTH HH INTERSECTION	MO 4-8	24"X12"	1	34	34						
	"	M 3-3	24"X12"	1	34	34						
	"	M 1-6	24"X24"	1	34	34						42
	"	M 1-6	24"X24"	1	34	34						57
10	CTH BB, AT CTH HH, PLACE RIGHT OF EXISTING J13-2 SIGN AT CTH HH INTERSECTION	MO 4-8	24"X12"	1	34	34						
	"	M 3-1	24"X12"	1	34	34						
	"	M 1-6	24"X24"	1	34	34						42
	"	M 1-6	24"X24"	1	34	34						57
	"	MO 6-1	21"X21"	1	34	34						RIGHT
11	CTH HH, AT CTH BB, PLACE RIGHT OF EXISTING J13-2 SIGN AT CTH BB INTERSECTION	MO 4-8	24"X12"	1	34	34						
	"	M 3-3	24"X12"	1	34	34						
	"	M 1-6	24"X24"	1	34	34						42
	"	M 1-6	24"X24"	1	34	34						57
	"	MO 6-1	21"X21"	1	34	34						LEFT
12	CTH HH, N. OF CTH BB, PLACE 250' N. OF CTH BB INTERSECTION	MO 4-8	24"X12"	1	34	34						
	"	M 3-1	24"X12"	1	34	34						
	"	M 1-6	24"X24"	1	34	34						42
	"	M 1-6	24"X24"	1	34	34						57
13	CTH HH, N. OF CTH BB, PLACE 500' N. OF CTH BB INTERSECTION	MO 4-8	24"X12"	1	34	34						
	"	M 3-3	24"X12"	1	34	34						
	"	M 1-6	24"X24"	1	34	34						42
	"	M 1-6	24"X24"	1	34	34						57
	"	MO 5-1L	21"X21"	1	34	34						

PAGE SUBTOTALS

50

1,666

34

68

34

0

PLAN SHEET PRODUCED  
BY WisDOT - NE REGION

PROJECT NUMBER: 4430-21-71

HWY: STH 42/57

COUNTY: DOOR

MISCELLANEOUS QUANTITIES

SHEET

E

**TRAFFIC CONTROL DETOUR SIGN SUMMARY (DETOUR B)**

3

3

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 34 DAYS	643.0900 SIGNS DAYS	643.0420 BARRICADES TYPE III DAY	643.0705 WARNING LIGHTS TYPE A DAY	643.1050 SIGNS PORTABLE CHANGEABLE MESSAGE DAYS	NO. OF CYCLES	643.0920 COVERING TYPE II SIGNS EACH	REMARKS
14	CTH HH, AT DUNN RD, PLACE RIGHT OF EXISTING R1-1 SIGN AT DUNN RD INTERSECTION	MO 4-8	24"X12"	1	34	34						
	"	M 3-1	24"X12"	1	34	34						
	"	M 1-6	24"X24"	1	34	34						42
	"	M 1-6	24"X24"	1	34	34						57
	"	MO 6-1	21"X21"	1	34	34						RIGHT
14A	CTH HH, S. OF DUNN RD, PLACE 500' S. OF DUNN RD INTERSECTION	MO 4-8	24"X12"	1	34	34						
	"	M 3-1	24"X12"	1	34	34						
	"	M 1-6	24"X24"	1	34	34						42
	"	M 1-6	24"X24"	1	34	34						57
	"	MO 5-1R	21"X21"	1	34	34						
15	CTH HH, AT MARTIN RD, PLACE RIGHT OF EXISTING R1-1 SIGN AT MARTIN RD INTERSECTION	MO 4-8	24"X12"	1	34	34						
	"	M 3-3	24"X12"	1	34	34						
	"	M 1-6	24"X24"	1	34	34						42
	"	M 1-6	24"X24"	1	34	34						57
	"	MO 6-1	21"X21"	1	34	34						LEFT
16	CTH HH, AT DUNN RD, PLACE RIGHT OF EXISTING R1-1 SIGN AT DUNN RD INTERSECTION	MO 4-8	24"X12"	1	34	34						
	"	M 3-3	24"X12"	1	34	34						
	"	M 1-6	24"X24"	1	34	34						42
	"	M 1-6	24"X24"	1	34	34						57
	"	MO 6-1	21"X21"	1	34	34						RIGHT
16A	CTH HH, AT WALKER RD, PLACE RIGHT OF EXISTING R1-1 SIGN AT WALKER RD INTERSECTION	MO 4-8	24"X12"	1	34	34						
	"	M 3-1	24"X12"	1	34	34						
	"	M 1-6	24"X24"	1	34	34						42
	"	M 1-6	24"X24"	1	34	34						57
	"	MO 6-1	21"X21"	1	34	34						LEFT
16B	CTH HH, N. OF DUNN RD, PLACE 500' N. OF DUNN RD INTERSECTION	MO 4-8	24"X12"	1	34	34						
	"	M 3-3	24"X12"	1	34	34						
	"	M 1-6	24"X24"	1	34	34						42
	"	M 1-6	24"X24"	1	34	34						57
	"	MO 5-1R	21"X21"	1	34	34						
17	CTH HH, AT OLD CTH OR, PLACE RIGHT OF EXISTING R1-1 SIGN AT OLD CTH OR INTERSECTION	MO 4-8	24"X12"	1	34	34						
	"	M 3-1	24"X12"	1	34	34						
	"	M 1-6	24"X24"	1	34	34						42
	"	M 1-6	24"X24"	1	34	34						57
	"	MO 6-1	21"X21"	1	34	34						RIGHT
17A	CTH HH, S. OF OLD CTH OR, PLACE 500' S. OF OLD CTH OR INTERSECTION	MO 4-8	24"X12"	1	34	34						
	"	M 3-1	24"X12"	1	34	34						
	"	M 1-6	24"X24"	1	34	34						42
	"	M 1-6	24"X24"	1	34	34						57
	"	MO 5-1R	21"X21"	1	34	34						
18	CTH HH, AT OLD CTH OR, PLACE RIGHT OF EXISTING R1-1 SIGN AT OLD CTH OR INTERSECTION	MO 4-8	24"X12"	1	34	34						
	"	M 3-3	24"X12"	1	34	34						
	"	M 1-6	24"X24"	1	34	34						42
	"	M 1-6	24"X24"	1	34	34						57
	"	MO 6-1	21"X21"	1	34	34						LEFT
PAGE SUBTOTALS				45		1,530	0	0	0		0	

PLAN SHEET PRODUCED  
BY WisDOT - NE REGION

TRAFFIC CONTROL DETOUR SIGN SUMMARY (DETOUR B)

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 34 DAYS	643.0900 SIGNS DAYS	643.0420 BARRICADES TYPE III DAY	643.0705 WARNING LIGHTS TYPE A DAY	643.1050 SIGNS PORTABLE CHANGEABLE MESSAGE DAYS	NO. OF CYCLES	643.0920 COVERING TYPE II SIGNS EACH	REMARKS
18A	CTH HH, E. OF OLD CTH OR, PLACE 500' OF OLD CTH OR INTERSECTION	MO 4-8	24"X12"	1	34	34						
	"	M 3-3	24"X12"	1	34	34						
	"	M 1-6	24"X24"	1	34	34						42
	"	M 1-6	24"X24"	1	34	34						57
	"	MO 5-1L	21"X21"	1	34	34						
19	CTH HH, W. OF STH 42, PLACE 1000' W. OF STH 42 INTERSECTION	M 4-8A	24"X18"	1	34	34						
	"	M 1-6	24"X24"	1	34	34						42
20	CTH HH, W. OF STH 42, PLACE RIGHT OF SIGN #19	MO 4-8	24"X12"	1	34	34						
	"	M 3-1	24"X12"	1	34	34						
	"	M 1-6	24"X24"	1	34	34						57
	"	MO 5-1R	21"X21"	1	34	34						
21	CTH HH, W. OF STH 42, PLACE 250' W. OF STH 42 INTERSECTION	MO 4-8	24"X12"	1	34	34						
	"	M 3-3	24"X12"	1	34	34						
	"	M 1-6	24"X24"	1	34	34						42
	"	M 1-6	24"X24"	1	34	34						57
22	CTH HH, AT STH 42, PLACE RIGHT OF EXISTING R1-1 SIGN AT STH 42 INTERSECTION	M 1-6	24"X24"	1	34	34						42
	"	MO 6-1	21"X21"	1	34	34						LEFT
23	CTH HH, AT STH 42, PLACE RIGHT OF SIGN #22	MO 4-8	24"X12"	1	34	34						
	"	M 3-1	24"X12"	1	34	34						
	"	M 1-6	24"X24"	1	34	34						57
	"	MO 6-1	21"X21"	1	34	34						RIGHT
24	STH 42, AT CTH HH, PLACE RIGHT OF EXISTING J13-1 SIGN AT CTH HH INTERSECTION	MO 4-8	24"X12"	1	34	34						
	"	M 3-3	24"X12"	1	34	34						
	"	M 1-6	24"X24"	1	34	34						42
	"	M 1-6	24"X24"	1	34	34						57
	"	MO 6-1	21"X21"	1	34	34						RIGHT
25	STH 42, AT CTH HH, PLACE ON RIGHT SHOULDER IN SW QUADRANT OF CTH HH INTERSECTION	R 11-3	60"X30"	1	34	34	34	68				3 MILES AHEAD
	"	M 4-9R	30"X24"	1	34	34						
26	STH 42, N. OF CTH HH, PLACE 500' N. OF CTH HH INTERSECTION	MO 4-8	24"X12"	1	34	34						
	"	M 3-3	24"X12"	1	34	34						
	"	M 1-6	24"X24"	1	34	34						42
	"	M 1-6	24"X24"	1	34	34						57
	"	MO 5-1R	21"X21"	1	34	34						
27	STH 42, N. OF CTH HH, PLACE 1000' N. OF CTH HH INTERSECTION	M 1-6	24"X24"	1	34	34						42
	"	M 1-6	24"X24"	1	34	34						57
	"	W 20-2A	48"X48"	1	34	34						
PAGE SUBTOTALS				36		1,224	34	68	0		0	

PLAN SHEET PRODUCED  
BY WisDOT - NE REGION

**TRAFFIC CONTROL DETOUR SIGN SUMMARY (DETOUR B)**

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 34 DAYS	643.0900 SIGNS DAYS	643.0420 BARRICADES TYPE III DAY	643.0705 WARNING LIGHTS TYPE A DAY	643.1050 SIGNS PORTABLE CHANGEABLE MESSAGE DAYS	NO. OF CYCLES	643.0920 COVERING TYPE II SIGNS EACH	REMARKS
28	STH 42, AT CTH HH, PLACE RIGHT OF EXISTING J13-1 SIGN AT CTH HH INTERSECTION	MO 4-8	24"X12"	1	34	34						
	"	M 3-3	24"X12"	1	34	34						
	"	M 1-6	24"X24"	1	34	34						42
	"	M 1-6	24"X24"	1	34	34						57
	"	MO 6-1	21"X21"	1	34	34						LEFT
29	STH 42, S. OF CTH HH, PLACE 250' S. OF CTH HH INTERSECTION	MO 4-8	24"X12"	1	34	34						
	"	M 3-1	24"X12"	1	34	34						
	"	M 1-6	24"X24"	1	34	34						57
30	STH 42, S. OF CTH HH, PLACE 500' S. OF CTH HH INTERSECTION	MO 4-8	24"X12"	1	34	34						
	"	M 3-3	24"X12"	1	34	34						
	"	M 1-6	24"X24"	1	34	34						42
	"	M 1-6	24"X24"	1	34	34						57
	"	MO 5-1L	21"X21"	1	34	34						
31	STH 42, N. OF CTH P, PLACE 150' N. OF CTH P INTERSECTION	MO 4-8	24"X12"	1	34	34						
	"	M 3-1	24"X12"	1	34	34						
	"	M 1-6	24"X24"	1	34	34						57
	"	MO 6-1	21"X21"	1	34	34						AHEAD
32	STH 42, S. OF CTH P, PLACE 150' S. OF CTH P INTERSECTION	MO 4-8	24"X12"	1	34	34						
	"	M 3-1	24"X12"	1	34	34						
	"	M 1-6	24"X24"	1	34	34						42
	"	M 1-6	24"X24"	1	34	34						57
	"	MO 6-1	21"X21"	1	34	34						AHEAD
33	STH 42, N. OF STH 57, MODIFY EXISTING J1-1 SIGN AS SHOWN	M 4-8A	24"X18"	1	34	34						
34	STH 42, N. OF STH 57, COVER EXISTING J2-3 SIGN AS SHOWN									1	1	COVER "NORTH 42-57 AHEAD"
35	STH 42, N. OF STH 57, PLACE 250' N. OF STH 57 INTERSECTION	MO 4-8	24"X12"	1	34	34						
	"	M 3-3	24"X12"	1	34	34						
	"	M 1-6	24"X24"	1	34	34						42
	"	M 1-6	24"X24"	1	34	34						57
36	STH 42, AT STH 57, COVER EXISTING J3-2 SIGN AS SHOWN									1	1	COVER ENTIRE SIGN
37	STH 42/57, AT STH 42/57 SPLIT, PLACE IN ROADWAY ON SOUTH LEG OF INTERSECTION	R 11-2	48"X30"	1	34	34	34	68				
	"	M 4-9R	30"X24"	1	34	34						
38	STH 42/57, S. OF STH 42/57 SPLIT, PLACE ON RIGHT SHOULDER, FIELD DETERMINE LOCATION	PCMS		1					34			PLACE FOR NIGHTLY CLOSURES
39	STH 57, N. OF STH 42/57 SPLIT, MODIFY EXISTING J3-3 SIGN AS SHOWN	MO 4-8	24"X12"	1	34	34						
	"	MO 6-1	21"X21"	1	34	34						RIGHT
	"	MO 4-8	24"X12"	1	34	34						
	"	MO 6-1	21"X21"	1	34	34						RIGHT
40	STH 57, N. OF STH 42/57 SPLIT, PLACE 500' N. OF STH 42/57 SPLIT INTERSECTION	MO 4-8	24"X12"	1	34	34						
	"	M 3-3	24"X12"	1	34	34						
	"	M 1-6	24"X24"	1	34	34						42
	"	M 1-6	24"X24"	1	34	34						57
	"	MO 5-1R	21"X21"	1	34	34						
41	STH 57, N. OF STH 42/57 SPLIT, PLACE 1000' N. OF STH 42/57 SPLIT INTERSECTION	M 1-6	24"X24"	1	34	34						42
	"	M 1-6	24"X24"	1	34	34						57
	"	W 20-2A	48"X48"	1	34	34						
PAGE SUBTOTALS				42		1,394	34	68	34		2	
DETOUR B TOTALS				173		5,814	102	204	68		2	

PLAN SHEET PRODUCED  
BY WisDOT - NE REGION

PROJECT NUMBER: 4430-21-71

HWY: STH 42/57

COUNTY: DOOR

MISCELLANEOUS QUANTITIES

SHEET

E

**TRAFFIC CONTROL DETOUR SIGN SUMMARY (DETOUR C)**

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 4 DAYS	643.0900 SIGNS DAYS	643.0420 BARRICADES TYPE III DAY	643.0705 WARNING LIGHTS TYPE A DAY	643.1050 SIGNS PORTABLE CHANGEABLE MESSAGE DAYS	REMARKS
1	STH 42/57, S. OF CTH BB, PLACE 1000' S. OF CTH BB INTERSECTION	M 1-6	24"X24"	1	4	4				42
	"	M 1-6	24"X24"	1	4	4				57
	"	W 20-2A	48"X48"	1	4	4				
2	STH 42/57, S. OF CTH BB, PLACE 500' S. OF CTH BB INTERSECTION	MO 4-8	24"X12"	1	4	4				
	"	M 3-1	24"X12"	1	4	4				
	"	M 1-6	24"X24"	1	4	4				42
	"	M 1-6	24"X24"	1	4	4				57
	"	MO 5-1L	21"X21"	1	4	4				
3	STH 42/57, AT CTH BB, PLACE RIGHT OF EXISTING J13-1 SIGN AT CTH BB INTERSECTION	MO 4-8	24"X12"	1	4	4				
	"	M 3-1	24"X12"	1	4	4				
	"	M 1-6	24"X24"	1	4	4				42
	"	M 1-6	24"X24"	1	4	4				57
	"	MO 6-1	21"X21"	1	4	4				LEFT
4	STH 42/57, AT CTH BB, PLACE IN ROADWAY AT CTH BB INTERSECTION	R 11-2	48"X30'	1	4	4	4	8		
	"	M 4-9L	30"X24"	1	4	4				
5	STH 42/57, N. OF CTH BB, PLACE ON RIGHT SHOULDER, FIELD DETERMINE LOCATION	PCMS		1					4	PLACE FOR NIGHTLY CLOSURES
6	CTH BB, W. OF STH 42/57, PLACE 50' W. OF STH 42/57 INTERSECTION	M 1-6	24"X24"	1	4	4				42
	"	M 1-6	24"X24"	1	4	4				57
	"	MO 6-1	21"X21"	1	4	4				RIGHT
7	CTH BB, W. OF STH 42/57, PLACE 1000' W. OF STH 42/57 INTERSECTION	M 4-8A	24"X18"	1	4	4				
	"	M 1-6	24"X24"	1	4	4				42
	"	M 1-6	24"X24"	1	4	4				57
8	CTH BB, E. OF CTH HH, PLACE 500' E. OF CTH HH INTERSECTION	MO 4-8	24"X12"	1	4	4				
	"	M 3-1	24"X12"	1	4	4				
	"	M 1-6	24"X24"	1	4	4				42
	"	M 1-6	24"X24"	1	4	4				57
	"	MO 5-1R	21"X21"	1	4	4				
9	CTH BB, E. OF CTH HH, PLACE 250' E. OF CTH HH INTERSECTION	MO 4-8	24"X12"	1	4	4				
	"	M 3-3	24"X12"	1	4	4				
	"	M 1-6	24"X24"	1	4	4				42
	"	M 1-6	24"X24"	1	4	4				57
10	CTH BB, AT CTH HH, PLACE RIGHT OF EXISTING J13-2 SIGN AT CTH HH INTERSECTION	MO 4-8	24"X12"	1	4	4				
	"	M 3-1	24"X12"	1	4	4				
	"	M 1-6	24"X24"	1	4	4				42
	"	M 1-6	24"X24"	1	4	4				57
	"	MO 6-1	21"X21"	1	4	4				RIGHT
11	CTH HH, AT CTH BB, PLACE RIGHT OF EXISTING J13-2 SIGN AT CTH BB INTERSECTION	MO 4-8	24"X12"	1	4	4				
	"	M 3-3	24"X12"	1	4	4				
	"	M 1-6	24"X24"	1	4	4				42
	"	M 1-6	24"X24"	1	4	4				57
	"	MO 6-1	21"X21"	1	4	4				LEFT
12	CTH HH, N. OF CTH BB, PLACE 250' N. OF CTH BB INTERSECTION	MO 4-8	24"X12"	1	4	4				
	"	M 3-1	24"X12"	1	4	4				
	"	M 1-6	24"X24"	1	4	4				42
13	CTH HH, N. OF CTH BB, PLACE 500' N. OF CTH BB INTERSECTION	M 1-6	24"X24"	1	4	4				57
	"	MO 4-8	24"X12"	1	4	4				
	"	M 3-3	24"X12"	1	4	4				
	"	M 1-6	24"X24"	1	4	4				42
	"	M 1-6	24"X24"	1	4	4				57
	"	MO 5-1L	21"X21"	1	4	4				
PAGE SUBTOTALS				50		196	4	8	4	

PLAN SHEET PRODUCED  
BY WisDOT - NE REGION

**TRAFFIC CONTROL DETOUR SIGN SUMMARY (DETOUR C)**

3

3

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 4 DAYS	643.0900 SIGNS DAYS	643.0420 BARRICADES TYPE III DAY	643.0705 WARNING LIGHTS TYPE A DAY	643.1050 SIGNS PORTABLE CHANGEABLE MESSAGE DAYS	REMARKS
14	CTH HH, AT DUNN RD, PLACE RIGHT OF EXISTING R1-1 SIGN AT DUNN RD INTERSECTION	MO 4-8	24"x12"	1	4	4				
	"	M 3-1	24"x12"	1	4	4				
	"	M 1-6	24"x24"	1	4	4				42
	"	M 1-6	24"x24"	1	4	4				57
	"	MO 6-1	21"x21"	1	4	4				RIGHT
14A	CTH HH, S. OF DUNN RD, PLACE 500' S. OF DUNN RD INTERSECTION	MO 4-8	24"x12"	1	4	4				
	"	M 3-1	24"x12"	1	4	4				
	"	M 1-6	24"x24"	1	4	4				42
	"	M 1-6	24"x24"	1	4	4				57
	"	MO 5-1R	21"x21"	1	4	4				
15	CTH HH, AT MARTIN RD, PLACE RIGHT OF EXISTING R1-1 SIGN AT MARTIN RD INTERSECTION	MO 4-8	24"x12"	1	4	4				
	"	M 3-3	24"x12"	1	4	4				
	"	M 1-6	24"x24"	1	4	4				42
	"	M 1-6	24"x24"	1	4	4				57
	"	MO 6-1	21"x21"	1	4	4				LEFT
16	CTH HH, AT DUNN RD, PLACE RIGHT OF EXISTING R1-1 SIGN AT DUNN RD INTERSECTION	MO 4-8	24"x12"	1	4	4				
	"	M 3-3	24"x12"	1	4	4				
	"	M 1-6	24"x24"	1	4	4				42
	"	M 1-6	24"x24"	1	4	4				57
	"	MO 6-1	21"x21"	1	4	4				RIGHT
16A	CTH HH, AT WALKER RD, PLACE RIGHT OF EXISTING R1-1 SIGN AT WALKER RD INTERSECTION	MO 4-8	24"x12"	1	4	4				
	"	M 3-1	24"x12"	1	4	4				
	"	M 1-6	24"x24"	1	4	4				42
	"	M 1-6	24"x24"	1	4	4				57
	"	MO 6-1	21"x21"	1	4	4				LEFT
16B	CTH HH, N. OF DUNN RD, PLACE 500' N. OF DUNN RD INTERSECTION	MO 4-8	24"x12"	1	4	4				
	"	M 3-3	24"x12"	1	4	4				
	"	M 1-6	24"x24"	1	4	4				42
	"	M 1-6	24"x24"	1	4	4				57
	"	MO 5-1R	21"x21"	1	4	4				
17	CTH HH, AT OLD CTH OR, PLACE RIGHT OF EXISTING R1-1 SIGN AT OLD CTH OR INTERSECTION	MO 4-8	24"x12"	1	4	4				
	"	M 3-1	24"x12"	1	4	4				
	"	M 1-6	24"x24"	1	4	4				42
	"	M 1-6	24"x24"	1	4	4				57
	"	MO 6-1	21"x21"	1	4	4				RIGHT
17A	CTH HH, S. OF OLD CTH OR, PLACE 500' S. OF OLD CTH OR INTERSECTION	MO 4-8	24"x12"	1	4	4				
	"	M 3-1	24"x12"	1	4	4				
	"	M 1-6	24"x24"	1	4	4				42
	"	M 1-6	24"x24"	1	4	4				57
	"	MO 5-1R	21"x21"	1	4	4				
18	CTH HH, AT OLD CTH OR, PLACE RIGHT OF EXISTING R1-1 SIGN AT OLD CTH OR INTERSECTION	MO 4-8	24"x12"	1	4	4				
	"	M 3-3	24"x12"	1	4	4				
	"	M 1-6	24"x24"	1	4	4				42
	"	M 1-6	24"x24"	1	4	4				57
	"	MO 6-1	21"x21"	1	4	4				LEFT
PAGE SUBTOTALS				45		180	0	0	0	

PLAN SHEET PRODUCED  
BY WisDOT - NE REGION

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 4 DAYS	643.0900 SIGNS DAYS	643.0420 BARRICADES TYPE III DAY	643.0705 WARNING LIGHTS TYPE A DAY	643.1050 SIGNS PORTABLE CHANGEABLE MESSAGE DAYS	REMARKS
18A	CTH HH, E. OF OLD CTH OR, PLACE 500' E. OF OLD CTH OR INTERSECTION	MO 4-8	24"X12"	1	4	4				
	"	M 3-3	24"X12"	1	4	4				
	"	M 1-6	24"X24"	1	4	4				42
	"	M 1-6	24"X24"	1	4	4				57
	"	MO 5-1L	21"X21"	1	4	4				
19	CTH HH, W. OF STH 42, PLACE 1000' W. OF STH 42 INTERSECTION	M 4-8A	24"X18"	1	4	4				
	"	M 1-6	24"X24"	1	4	4				42
20	CTH HH, W. OF STH 42, PLACE RIGHT OF SIGN #19	MO 4-8	24"X12"	1	4	4				
	"	M 3-1	24"X12"	1	4	4				
	"	M 1-6	24"X24"	1	4	4				57
	"	MO 5-1R	21"X21"	1	4	4				
21	CTH HH, W. OF STH 42, PLACE 250' W. OF STH 42 INTERSECTION	MO 4-8	24"X12"	1	4	4				
	"	M 3-3	24"X12"	1	4	4				
	"	M 1-6	24"X24"	1	4	4				42
	"	M 1-6	24"X24"	1	4	4				57
22	CTH HH, AT STH 42, PLACE RIGHT OF EXISTING R1-1 SIGN AT STH 42 INTERSECTION	M 1-6	24"X24"	1	4	4				42
	"	MO 6-1	21"X21"	1	4	4				LEFT
23	CTH HH, AT STH 42, PLACE RIGHT OF SIGN #22	MO 4-8	24"X12"	1	4	4				
	"	M 3-1	24"X12"	1	4	4				
	"	M 1-6	24"X24"	1	4	4				57
	"	MO 6-1	21"X21"	1	4	4				RIGHT
24	STH 42, AT CTH HH, PLACE RIGHT OF EXISTING J13-1 SIGN AT CTH HH INTERSECTION	MO 4-8	24"X12"	1	4	4				
	"	M 3-3	24"X12"	1	4	4				
	"	M 1-6	24"X24"	1	4	4				42
	"	M 1-6	24"X24"	1	4	4				57
	"	MO 6-1	21"X21"	1	4	4				RIGHT
25	STH 42, AT CTH HH, PLACE ON RIGHT SHOULDER IN SW QUADRANT OF CTH HH INTERSECTION	R 11-3	60"X30"	1	4	4	4	8		3 MILES AHEAD
	"	M 4-9R	30"X24"	1	4	4				
26	STH 42, N. OF CTH HH, PLACE 500' N. OF CTH HH INTERSECTION	MO 4-8	24"X12"	1	4	4				
	"	M 3-3	24"X12"	1	4	4				
	"	M 1-6	24"X24"	1	4	4				42
	"	M 1-6	24"X24"	1	4	4				57
	"	MO 5-1R	21"X21"	1	4	4				
27	STH 42, N. OF CTH HH, PLACE 1000' N. OF CTH HH INTERSECTION	M 1-6	24"X24"	1	4	4				42
	"	M 1-6	24"X24"	1	4	4				57
	"	W 20-2A	48"X48"	1	4	4				
28	STH 42, AT CTH HH, PLACE RIGHT OF EXISTING J13-1 SIGN AT CTH HH INTERSECTION	MO 4-8	24"X12"	1	4	4				
	"	M 3-3	24"X12"	1	4	4				
	"	M 1-6	24"X24"	1	4	4				42
	"	M 1-6	24"X24"	1	4	4				57
	"	MO 6-1	21"X21"	1	4	4				LEFT
PAGE SUBTOTALS				41		164	4	8	0	

PLAN SHEET PRODUCED  
BY WisDOT - NE REGION

TRAFFIC CONTROL DETOUR SIGN SUMMARY (DETOUR C)

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 4 DAYS	643.0900 SIGNS DAYS	643.0420 BARRICADES TYPE III DAY	643.0705 WARNING LIGHTS TYPE A DAY	643.1050 SIGNS PORTABLE CHANGEABLE MESSAGE DAYS	REMARKS
29	STH 42, S. OF CTH HH, PLACE 250' S. OF CTH HH INTERSECTION	MO 4-8	24"x12"	1	4	4				
	"	M 3-1	24"x12"	1	4	4				
	"	M 1-6	24"x24"	1	4	4				57
30	STH 42, S. OF CTH HH, PLACE 500' S. OF CTH HH INTERSECTION	MO 4-8	24"x12"	1	4	4				
	"	M 3-3	24"x12"	1	4	4				
	"	M 1-6	24"x24"	1	4	4				42
	"	M 1-6	24"x24"	1	4	4				57
	"	MO 5-1L	21"x21"	1	4	4				
31	STH 42, N. OF CTH P, PLACE 500' N. OF CTH P INTERSECTION	MO 4-8	24"x12"	1	4	4				
	"	M 3-1	24"x12"	1	4	4				
	"	M 1-6	24"x24"	1	4	4				57
	"	MO 5-1L	21"x21"	1	4	4				
32	STH 42, N. OF CTH P, PLACE RIGHT OF EXISTING J4-1 SIGN N. OF CTH P INTERSECTION	MO 4-8	24"x12"	1	4	4				
	"	M 3-3	24"x12"	1	4	4				
	"	M 1-6	24"x24"	1	4	4				42
	"	M 1-6	21"x21"	1	4	4				57
33	STH 42, N. OF CTH P, PLACE RIGHT OF EXISTING J13-1 SIGN AT CTH P INTERSECTION	MO 4-8	24"x12"	1	4	4				
	"	M 3-1	24"x12"	1	4	4				
	"	M 1-6	24"x24"	1	4	4				57
	"	MO 6-1	21"x21"	1	4	4				LEFT
34	STH 42, AT CTH P, PLACE ON RIGHT SHOULDER IN SW QUADRANT OF INTERSECTION	R 11-3	60"x30"	1	4	4	4	8		1 1/2 MILES AHEAD
	"	M 4-9L	30"x24"	1	4	4				
35	STH 42, N. OF STH 57, PLACE ON RIGHT SHOULDER, FIELD DETERMINE LOCATION	PCMS		1					5	PLACE DURING AND IN ADVANCE OF CLOSURE
36	CTH P, AT STH 42, PLACE RIGHT OF EXISTING R1-1 SIGN AT STH 42 INTERSECTION	MO 4-8	24"x12"	1	4	4				
	"	M 3-3	24"x12"	1	4	4				
	"	M 1-6	24"x24"	1	4	4				42
	"	M 1-6	24"x24"	1	4	4				57
	"	MO 6-1	21"x21"	1	4	4				RIGHT
37	CTH P, E. OF STH 42, PLACE 250' E. OF STH 42 INTERSECTION	MO 4-8	24"x12"	1	4	4				
	"	M 3-1	24"x12"	1	4	4				
	"	M 1-6	24"x24"	1	4	4				57
PAGE SUBTOTALS				31		120	4	8	5	

PLAN SHEET PRODUCED  
BY WisDOT - NE REGION

PROJECT NUMBER: 4430-21-71

HWY: STH 42/57

COUNTY: DOOR

MISCELLANEOUS QUANTITIES

SHEET

E

TRAFFIC CONTROL DETOUR SIGN SUMMARY (DETOUR C)

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 4 DAYS	643.0900 SIGNS DAYS	643.0420 BARRICADES TYPE III DAY	643.0705 WARNING LIGHTS TYPE A DAY	643.1050 SIGNS PORTABLE CHANGEABLE MESSAGE DAYS	REMARKS
38	CTH P, E. OF STH 42, PLACE 500' E. OF STH 42 INTERSECTION	MO 4-8	24"X12"	1	4	4				
	"	M 3-3	24"X12"	1	4	4				
	"	M 1-6	24"X24"	1	4	4				42
	"	M 1-6	24"X24"	1	4	4				57
	"	MO 5-1R	21"X21"	1	4	4				
39	CTH P, W. OF STH 57, MODIFY EXISTING J1-1 SIGN AS SHOWN	M 4-8A	24"X18"	1	4	4				
40	CTH P, W. OF STH 57, PLACE 250' W. OF STH 57 INTERSECTION	MO 4-8	24"X12"	1	4	4				
	"	M 3-3	24"X12"	1	4	4				
	"	M 1-6	24"X24"	1	4	4				42
	"	M 1-6	24"X24"	1	4	4				57
41	STH 57, AT CTH P, PLACE ON RIGHT SHOULDER IN SW QUADRANT OF INTERSECTION	R 11-3	60"X30"	1	4	4	4	8		3 MILES AHEAD
	"	M 4-9R	30"X24"	1	4	4				
42	STH 57, AT CTH P, MODIFY EXISTING J13-1 SIGN AS SHOWN	MO 6-1	21"X21"	1	4	4				
43	STH 57, AT CTH P, PLACE RIGHT OF EXISTING J13-1 SIGN AT CTH P INTERSECTION	MO 4-8	24"X12"	1	4	4				
	"	M 3-3	24"X12"	1	4	4				
	"	M 1-6	24"X24"	1	4	4				42
	"	M 1-6	24"X24"	1	4	4				57
	"	MO 6-1	21"X21"	1	4	4				RIGHT
44	STH 57, N. OF CTH P, PLACE 750' N. OF CTH P INTERSECTION	MO 4-8	24"X12"	1	4	4				
	"	M 3-3	24"X12"	1	4	4				
	"	M 1-6	24"X24"	1	4	4				42
	"	M 1-6	24"X24"	1	4	4				57
	"	MO 5-1R	21"X21"	1	4	4				
45	STH 57, N. OF CTH P, PLACE 1500' N. OF CTH P INTERSECTION	M 1-6	24"X24"	1	4	4				42
	"	M 1-6	24"X24"	1	4	4				57
	"	W 20-2A	48"X48"	1	4	4				
PAGE SUBTOTALS				26		104	4	8	0	
DETOUR C TOTALS				193		764	16	32	9	

PLAN SHEET PRODUCED  
BY WisDOT - NE REGION



BEGIN PROJECT  
 STA 915+03.33  
 Y=166,238.410  
 X=501,766.022

EQUATION  
 STA AHEAD = 88+59.13  
 STA BACK = 920+98.66

**CURVE 1**  
 PI STA = 918+03.70  
 Y = 166535.074  
 X = 501813.102  
 DELTA = 21°22'35"  
 D = 3°34'52"  
 T = 301.98'  
 L = 596.94'  
 R = 1600.00'  
 PC STA = 915+01.72  
 Y = 166236.823  
 X = 501765.769  
 PT STA = 88+59.13  
 Y = 166795.554  
 X = 501965.889  
 BK = N09°01'03.6"E  
 AH = N30°23'39.0"E

**LEGEND**

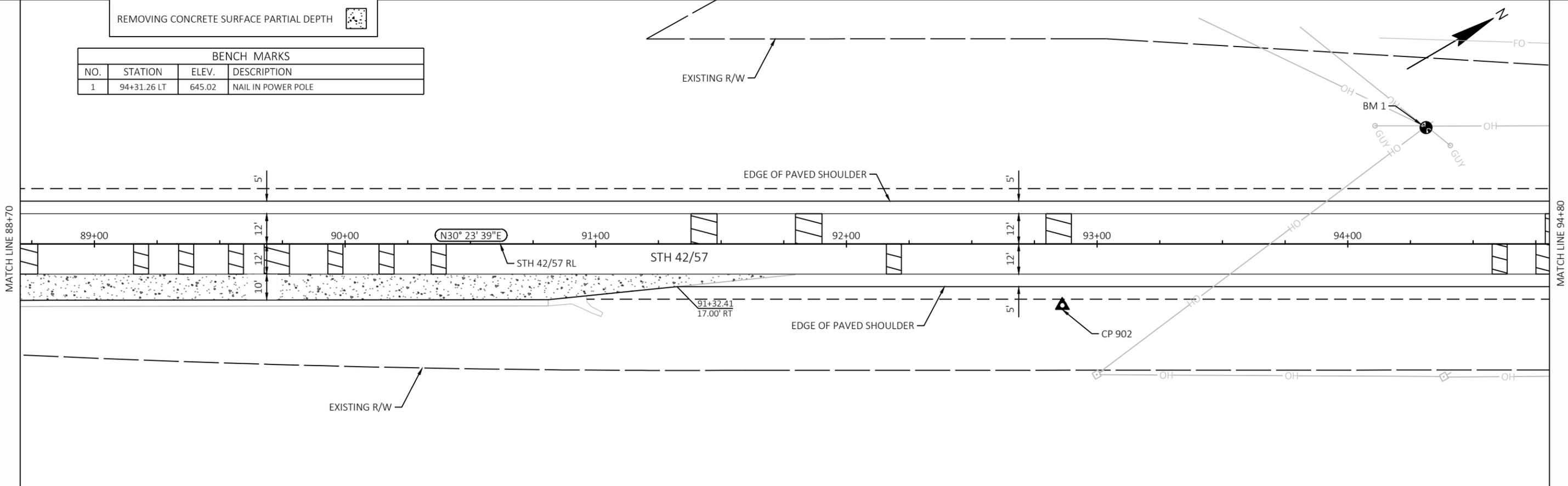
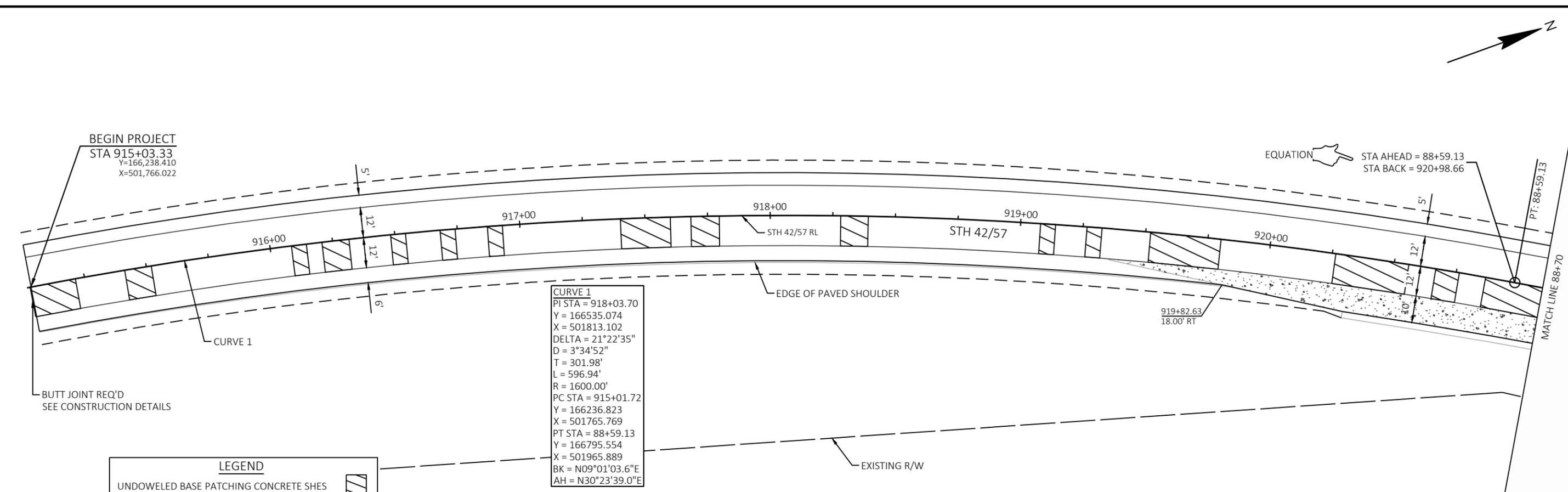
UNDOWELED BASE PATCHING CONCRETE SHES	
REMOVING CONCRETE SURFACE PARTIAL DEPTH	

**BENCH MARKS**

NO.	STATION	ELEV.	DESCRIPTION
1	94+31.26 LT	645.02	NAIL IN POWER POLE

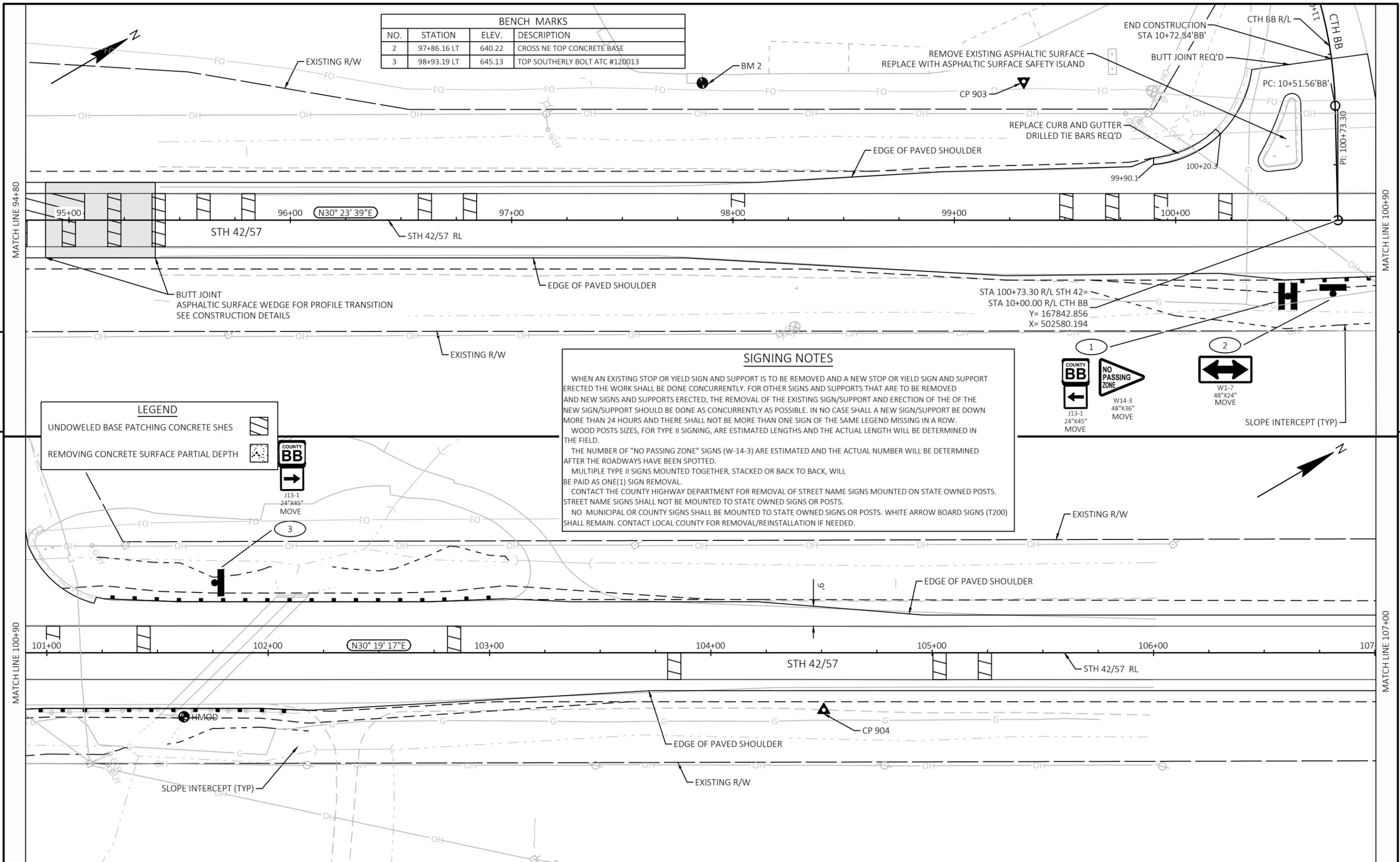
5

5



PROJECT NO: 4430-21-71	HWY: STH 42	COUNTY: DOOR	PLAN SHEETS	SHEET	<b>E</b>
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BENCH MARKS			
NO.	STATION	ELEV.	DESCRIPTION
2	97+86.16 LT	640.22	CROSS NE TOP CONCRETE BASE
3	98+93.19 LT	645.13	TOP SOUTHERLY BOLT ATC #120013



**SIGNING NOTES**

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

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

THE NUMBER OF "NO PASSING ZONE" SIGNS (W-14-3) ARE ESTIMATED AND THE ACTUAL NUMBER WILL BE DETERMINED AFTER THE ROADWAYS HAVE BEEN SPOTTED.

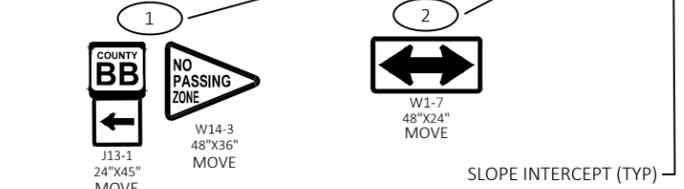
MULTIPLE TYPE II SIGNS MOUNTED TOGETHER, STACKED OR BACK TO BACK, WILL BE PAID AS ONE(1) SIGN REMOVAL.

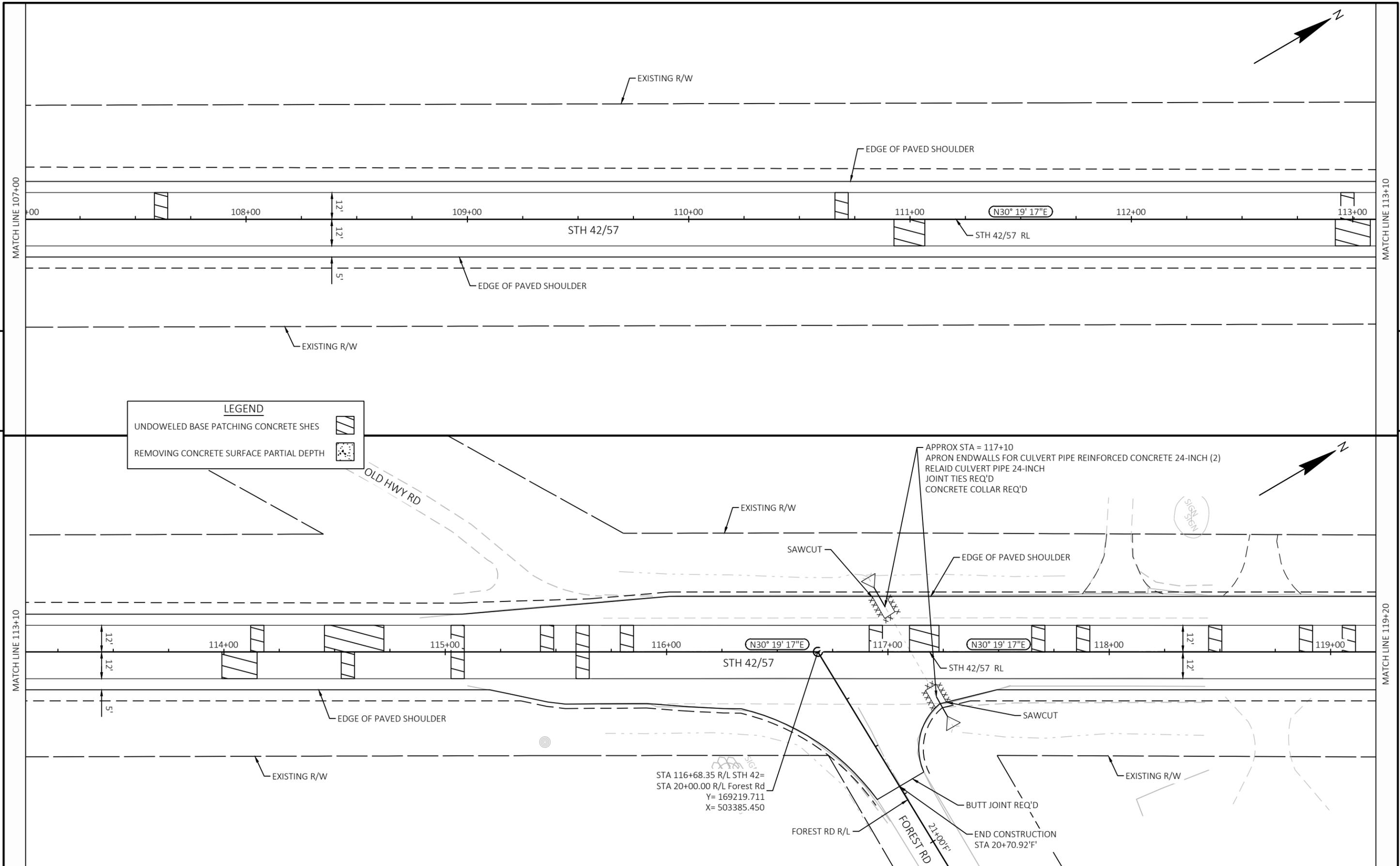
CONTACT THE COUNTY HIGHWAY DEPARTMENT FOR REMOVAL OF STREET NAME SIGNS MOUNTED ON STATE OWNED POSTS. STREET NAME SIGNS SHALL NOT BE MOUNTED TO STATE OWNED SIGNS OR POSTS.

NO MUNICIPAL OR COUNTY SIGNS SHALL BE MOUNTED TO STATE OWNED SIGNS OR POSTS. WHITE ARROW BOARD SIGNS (T200) SHALL REMAIN. CONTACT LOCAL COUNTY FOR REMOVAL/REINSTALLATION IF NEEDED.

**LEGEND**

UNDOWELED BASE PATCHING CONCRETE SHES	
REMOVING CONCRETE SURFACE PARTIAL DEPTH	

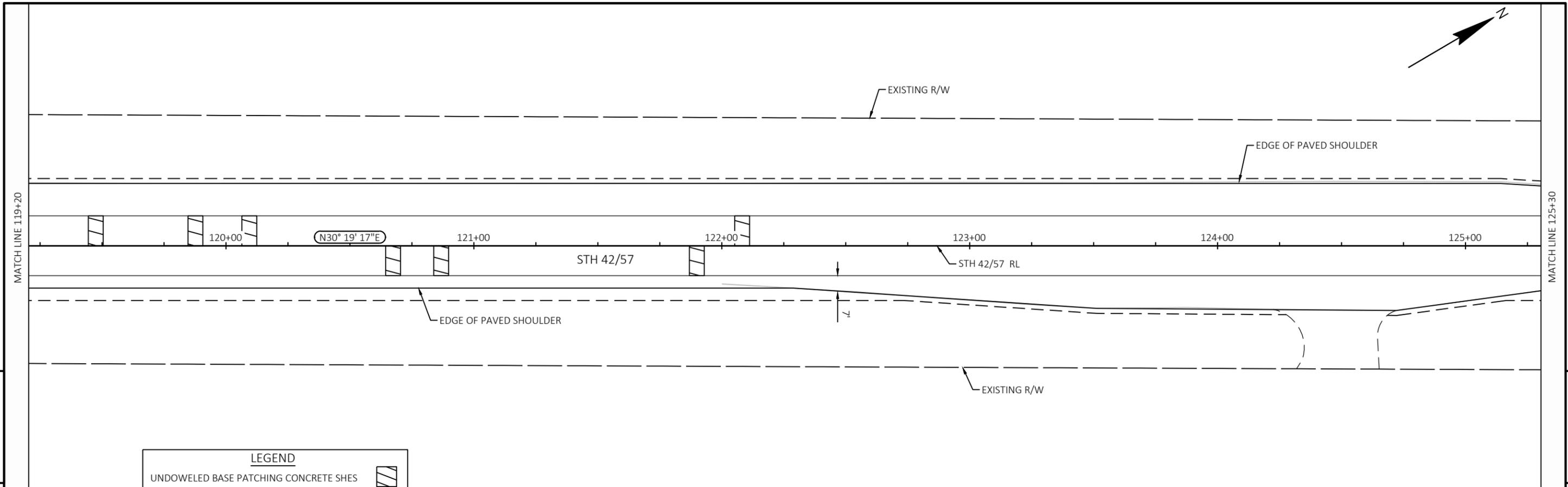




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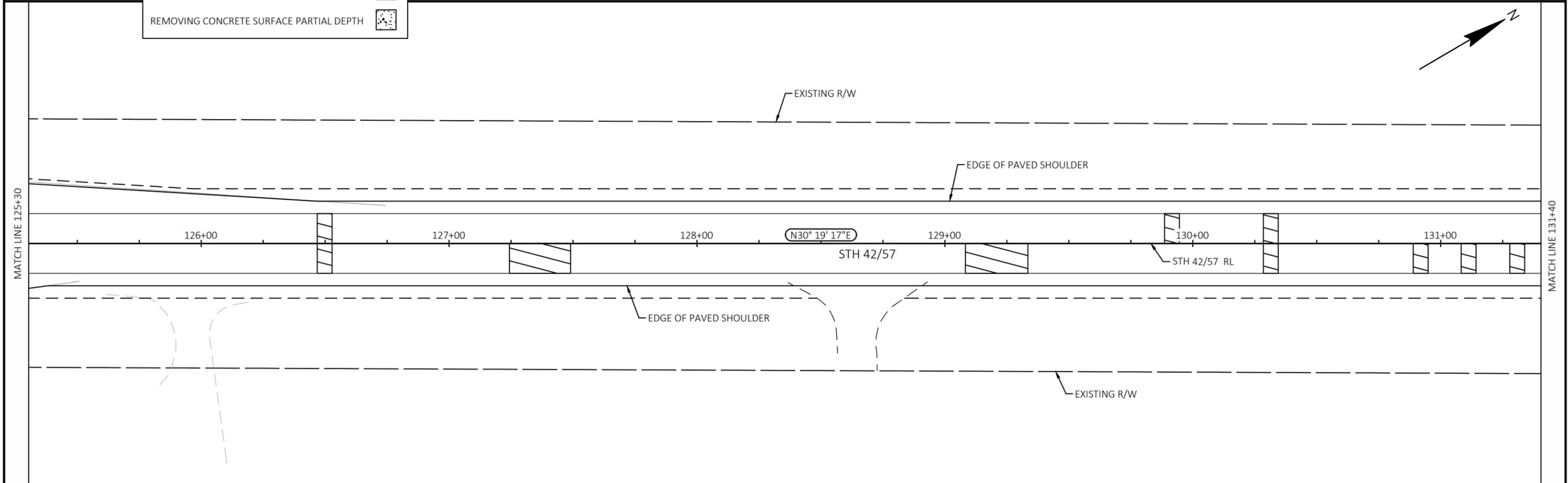
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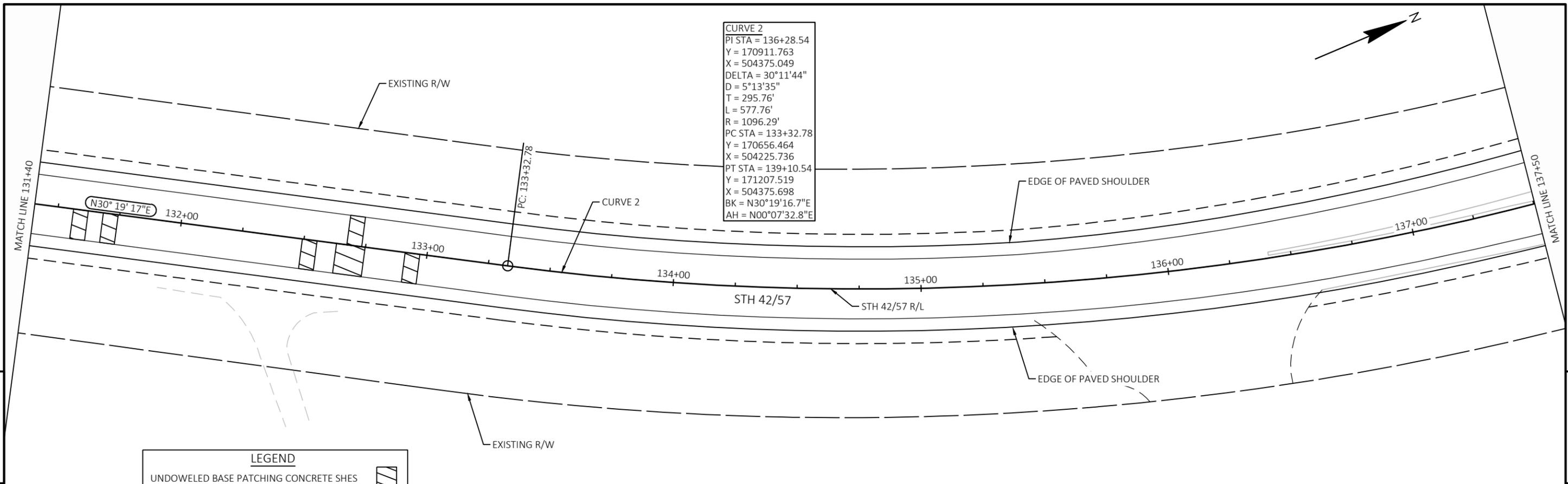
PROJECT NO: 4430-21-71	HWY: STH 42	COUNTY: DOOR	PLAN SHEETS	SHEET	E
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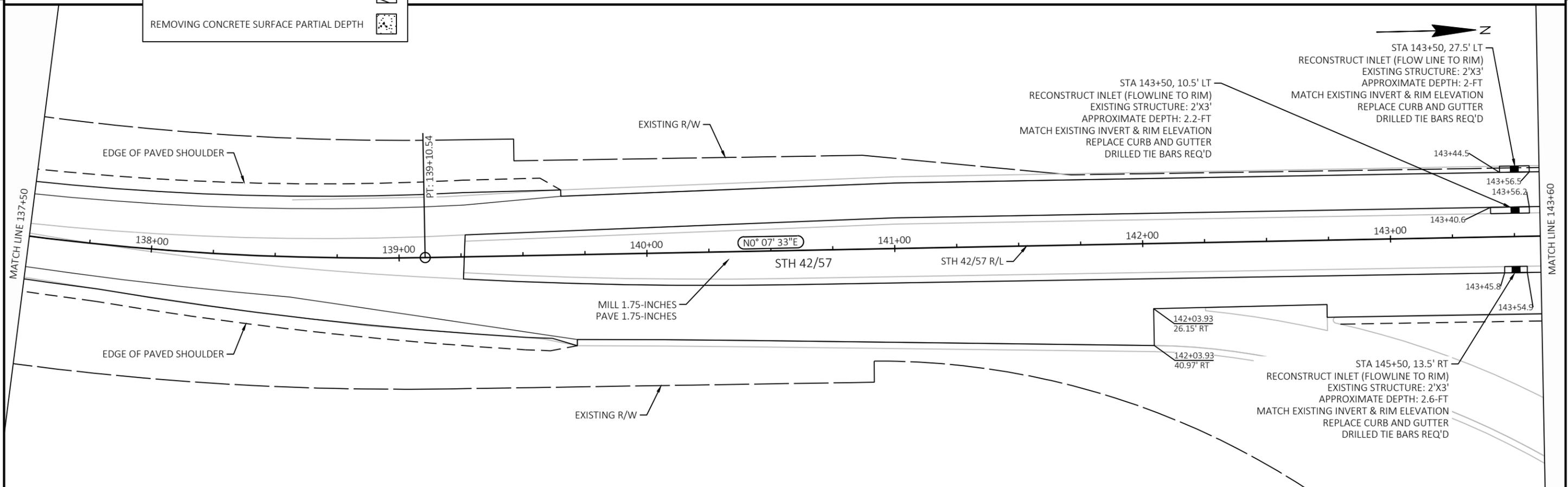
**LEGEND**

- UNDOWELED BASE PATCHING CONCRETE SHES 
- REMOVING CONCRETE SURFACE PARTIAL DEPTH 

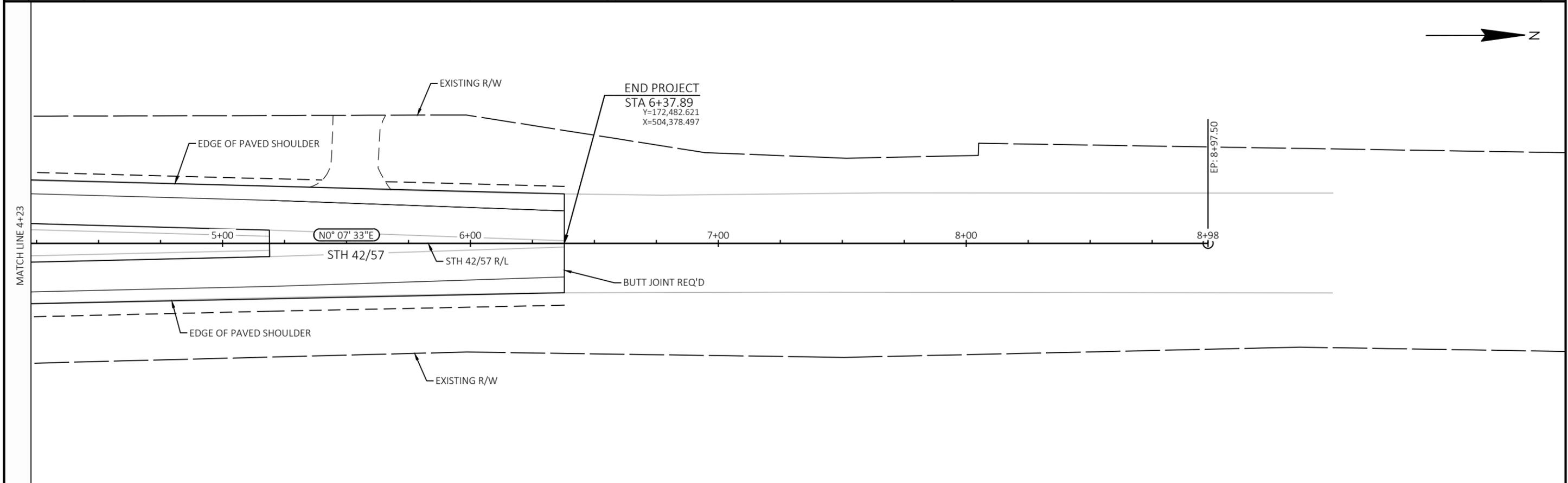
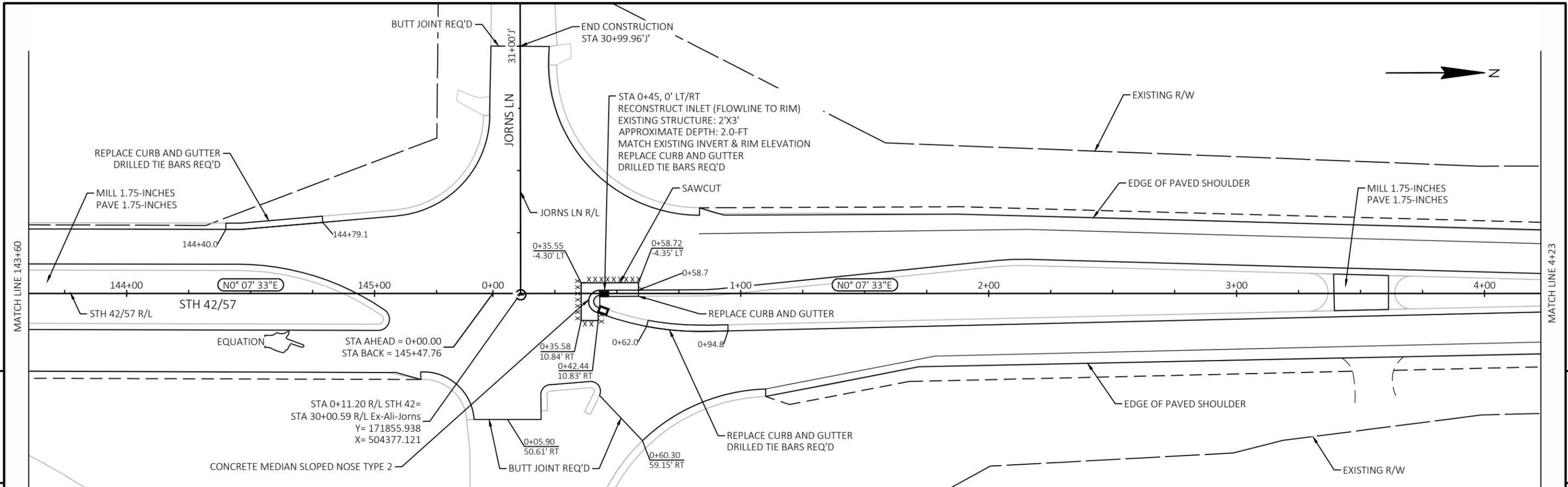




LEGEND	
UNDOWELED BASE PATCHING CONCRETE SHES	
REMOVING CONCRETE SURFACE PARTIAL DEPTH	



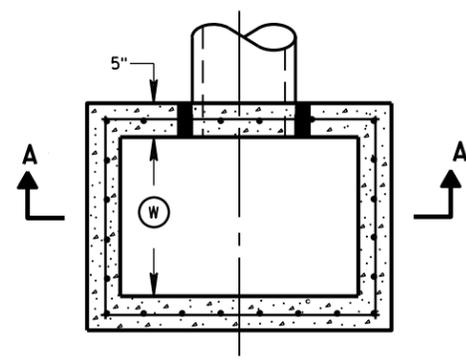
PROJECT NO: 4430-21-71	HWY: STH 42	COUNTY: DOOR	PLAN SHEETS	SHEET	<b>E</b>
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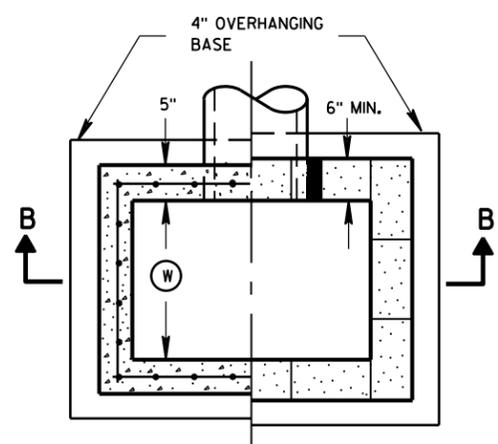
PROJECT NO: 4430-21-71	HWY: STH 42	COUNTY: DOOR	PLAN SHEETS	SHEET	<b>E</b>
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## Standard Detail Drawing List

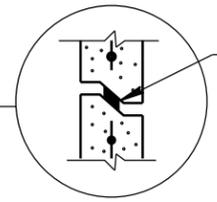
08C07-02	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT
08D01-22A	CONCRETE CURB & GUTTER
08D01-22B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08E15-01	CULVERT PIPE CHECK
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F04-08	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
11B02-02	CONCRETE MEDIAN NOSE
13C14-07A	BASE PATCHING CONCRETE
13C14-07B	BASE PATCHING CONCRETE
13C14-07C	BASE PATCHING CONCRETE
13C19-03	HMA LONGITUDINAL JOINTS
14B29-01	SAFETY EDGE
14B42-07A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07D	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B43-04A	MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L)
14B43-04C	MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L)
14B44-04A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15C02-08A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-08B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C02-08C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C03-05	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C04-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M. P. H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C08-20A	LONGITUDINAL MARKING (MAINLINE)
15C11-09B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C18-05B	MEDIAN ISLAND MARKING MEDIAN ISLAND NOSE
15C18-05C	MEDIAN PAVEMENT MARKINGS DOUBLE ARROW WARNING SIGN PLACEMENT
15C19-06A	MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY
15C35-04A	PAVEMENT MARKING (INTERSECTIONS)
15D28-04	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
15D44-02	TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH MILLED SURFACES



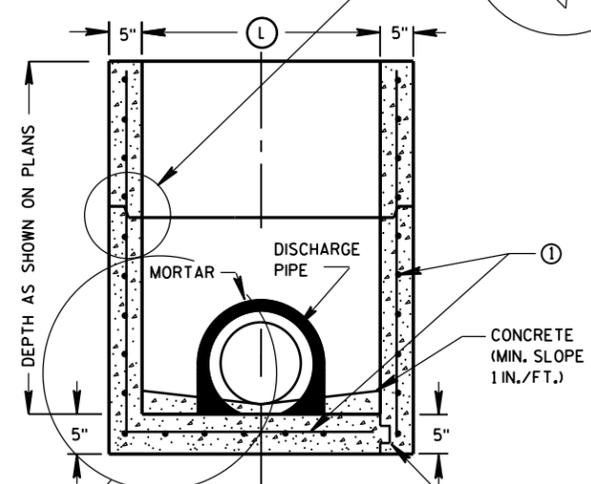
PLAN VIEW



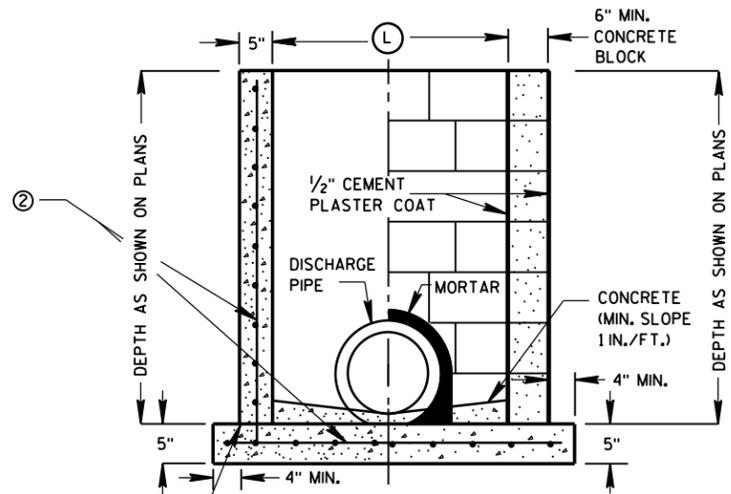
PLAN VIEW



RISER JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 (TYP)



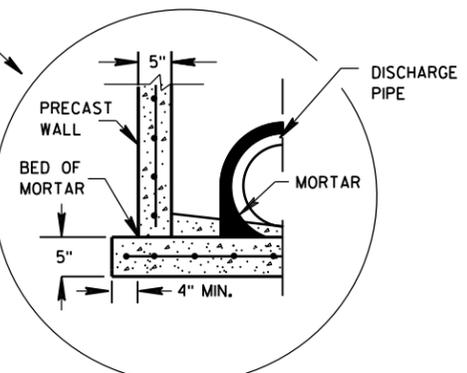
SECTION A-A



SECTION B-B

PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE  
 PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE  
 KEYWAY

CAST-IN-PLACE REINFORCED CONCRETE  
 CONCRETE BLOCK WITH CAST-IN-PLACE OR PRECAST REINFORCED CONCRETE BASE ①



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

**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.

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

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

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

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

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

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

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

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

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

① FOR PRECAST INLETS PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.

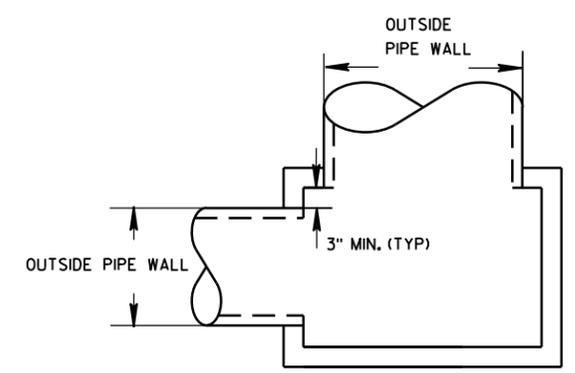
② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

**INLET COVER MATRIX**

INLET SIZE	INLET COVER TYPE		ALL A'S	ALL B'S	BW	F	ALL H'S	S	T	V	WM
	WIDTH (W) (FT)	LENGTH (L) (FT)									
2X2-FT	2	2	X	X				X		X	
2X2.5-FT	2	2.5			X			X	X	X	X
2X3-FT	2	3					X				
2.5X3-FT	2.5	3				X					

**PIPE MATRIX**

INLET SIZE	MAXIMUM INSIDE PIPE DIAMETER	
	WIDTH (IN)	LENGTH (IN)
2X2-FT	12	12
2X2.5-FT	12	18
2X3-FT	12	24
2.5X3-FT	18	24



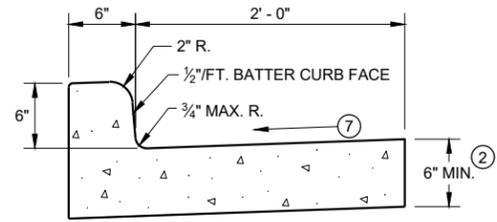
DETAIL "A"

**INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT**

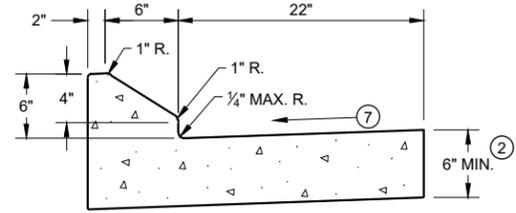
**INLETS 2X2-FT, 2X2.5-FT,  
2X3-FT AND 2.5X3-FT**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

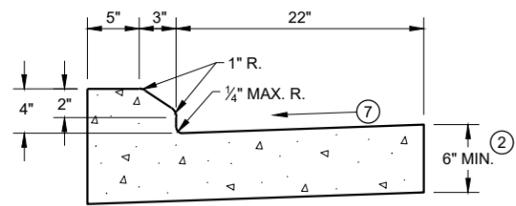
APPROVED  
 Sep 1, 2016 /S/ Rodney Taylor  
 DATE ROADWAY STANDARDS DEVELOPMENT  
 FHWA UNIT SUPERVISOR



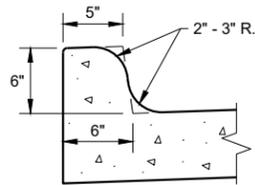
TYPES A<sup>①</sup> & D



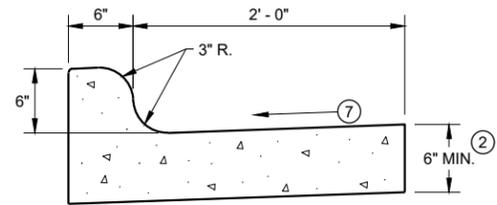
6" SLOPED CURB TYPES G<sup>①</sup> & J



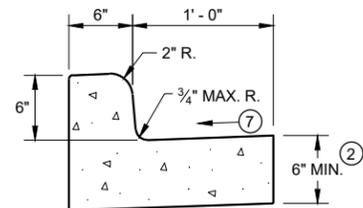
4" SLOPED CURB TYPES G<sup>①</sup> & J



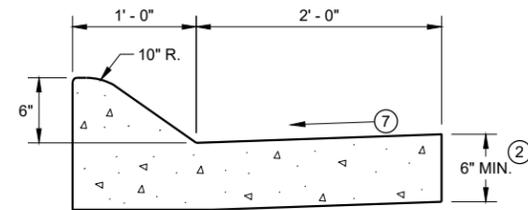
TYPES K<sup>①</sup> & L  
(OPTIONAL CURB SHAPE)



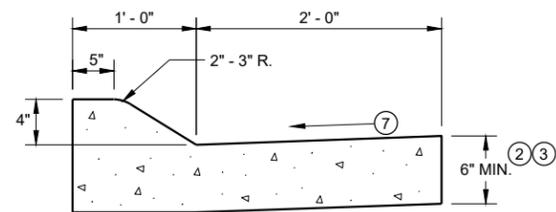
TYPES K<sup>①</sup> & L  
CONCRETE CURB AND GUTTER 30"



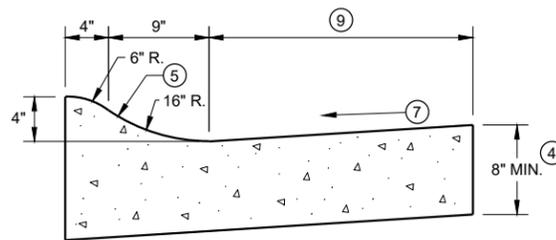
TYPES A<sup>①</sup> & D  
CONCRETE CURB AND GUTTER 18"



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

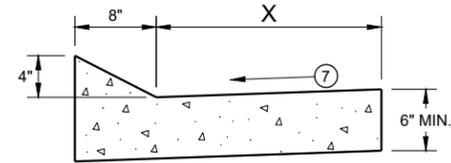


4" SLOPED CURB TYPES A<sup>①</sup> & D  
CONCRETE CURB AND GUTTER 36"



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

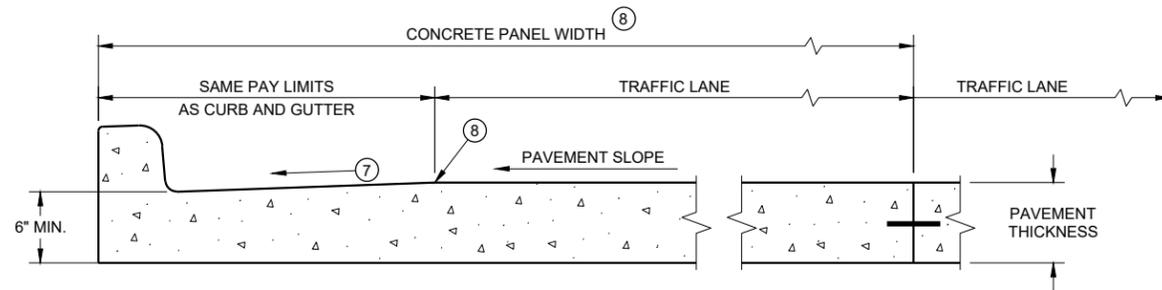
TBT & TBTT	X
30"	22"
36"	28"



TYPES TBT & TBTT<sup>①</sup>  
CONCRETE CURB AND GUTTER

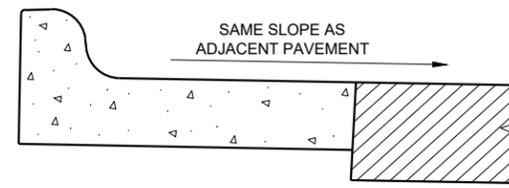
PAVEMENT THICKNESS  
AND MAXIMUM CONCRETE  
PANEL WIDTH TABLE

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



PARTIAL SECTION OF PAVEMENT \*  
WITH INTEGRAL CURB AND GUTTER

\* BIKE LANE IS NOT SHOWN



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

GENERAL NOTES

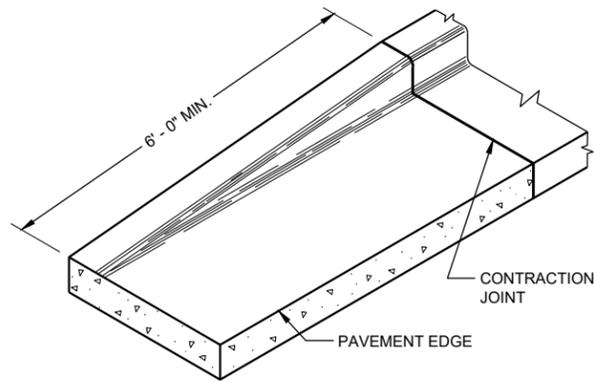
DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

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

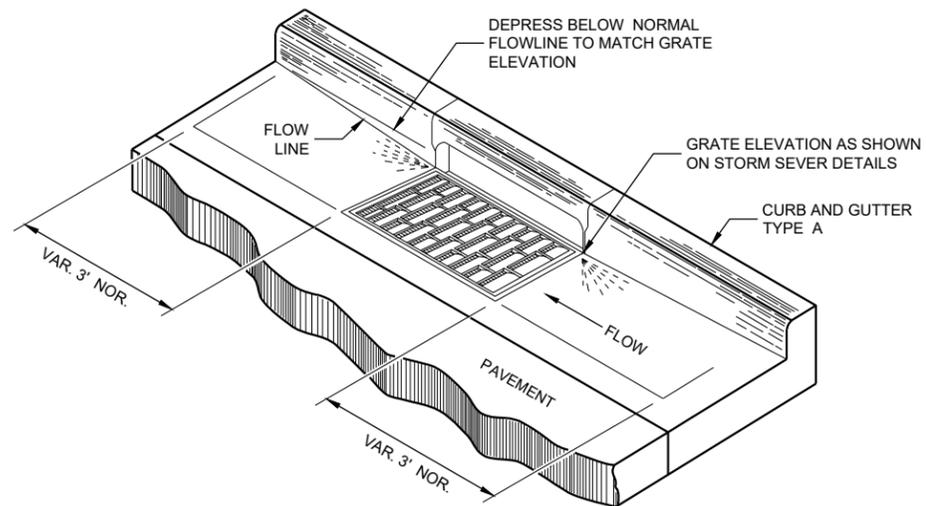
INTEGRAL CURB AND GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB AND GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE.

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

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



**END SECTION CURB AND GUTTER**



**DETAIL OF CURB AND GUTTER AT INLETS**  
(TYPICAL H INLET COVER SHOWN)

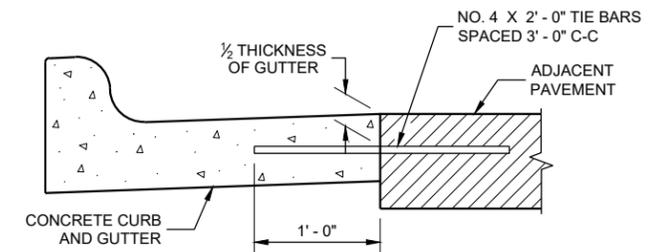
**GENERAL NOTES**

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

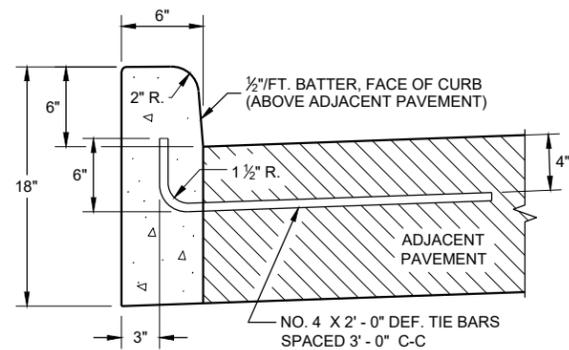
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

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

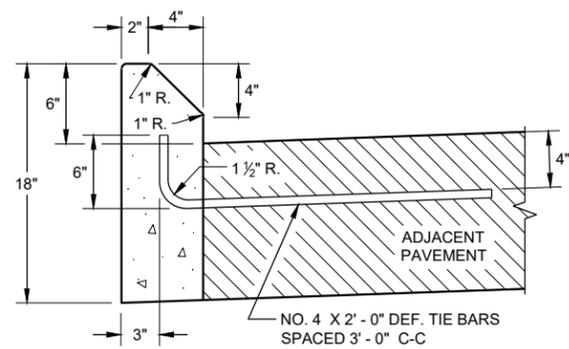
- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ⑨ REFER TO SDD 08D18 AND 08D19 FOR ADDITIONAL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



**TYPICAL TIE BAR LOCATION** ①

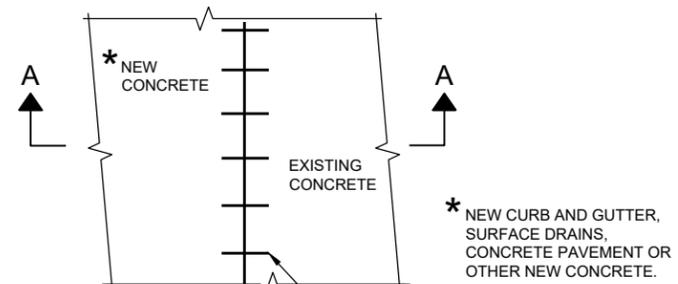


**TYPES A ① & D**

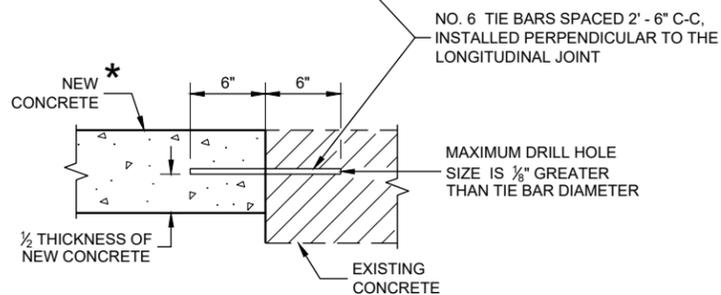


**TYPES G ① & J**

**CONCRETE CURB**

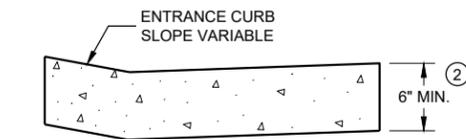


**PLAN VIEW**



**SECTION A - A**

**TIE BARS DRILLED INTO EXISTING PAVEMENT**



**DRIVEWAY ENTRANCE CURB** ⑨  
(WHEN DIRECTED BY THE ENGINEER)

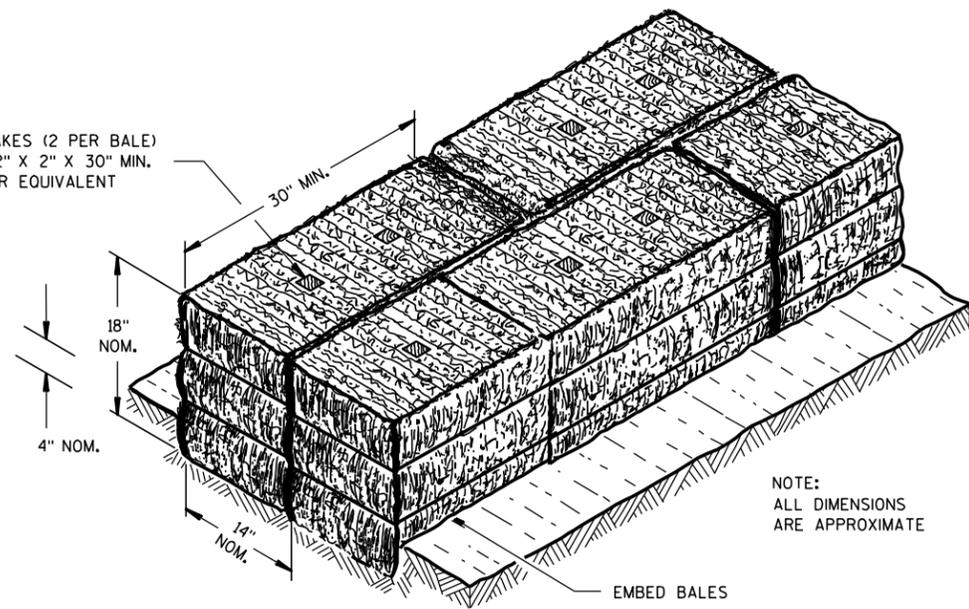
**CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

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

FHWA

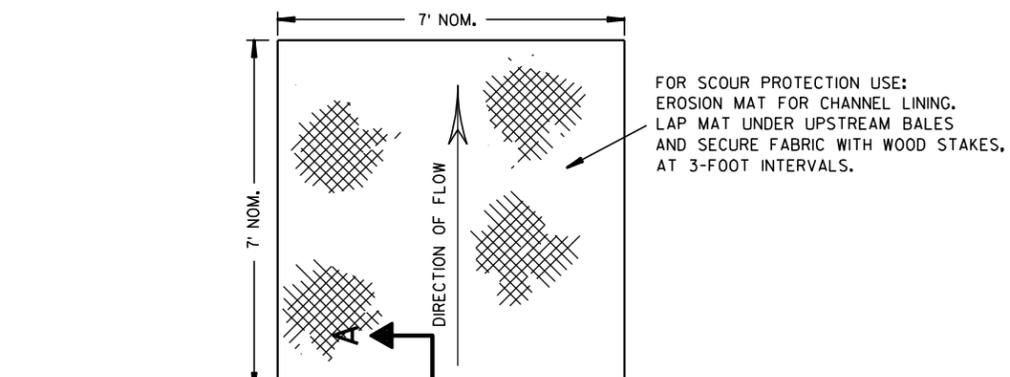
WOOD STAKES (2 PER BALE)  
NOMINAL 2" X 2" X 30" MIN.  
LENGTH OR EQUIVALENT



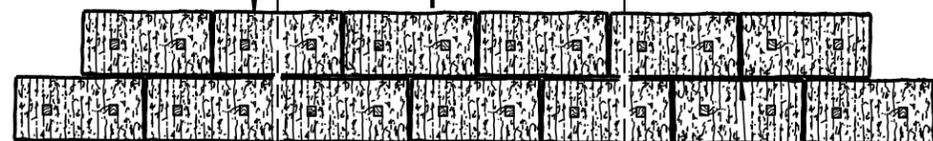
NOTE:  
ALL DIMENSIONS  
ARE APPROXIMATE

EMBED BALES

SECTION A-A



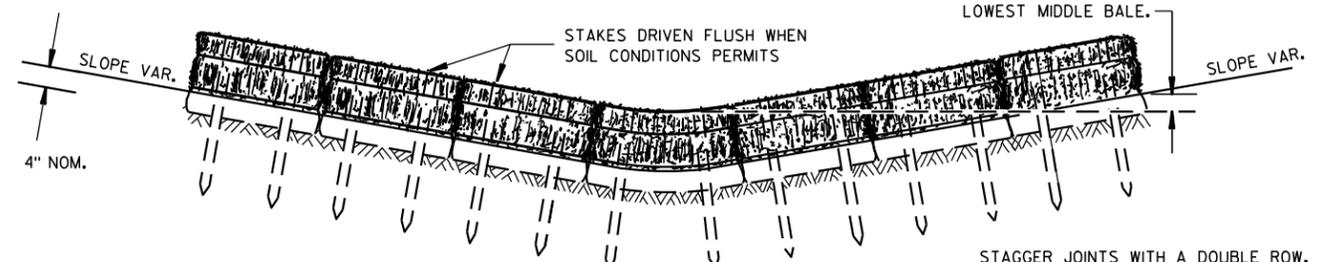
FOR SCOUR PROTECTION USE:  
EROSION MAT FOR CHANNEL LINING.  
LAP MAT UNDER UPSTREAM BALES  
AND SECURE FABRIC WITH WOOD STAKES,  
AT 3-FOOT INTERVALS.



STAGGER JOINTS BETWEEN ADJACENT  
ROWS OF BALES.

PLAN VIEW

BOTTOM ELEVATION OF END BALE SHALL  
BE EQUAL TO OR GREATER THAN TOP OF  
LOWEST MIDDLE BALE.



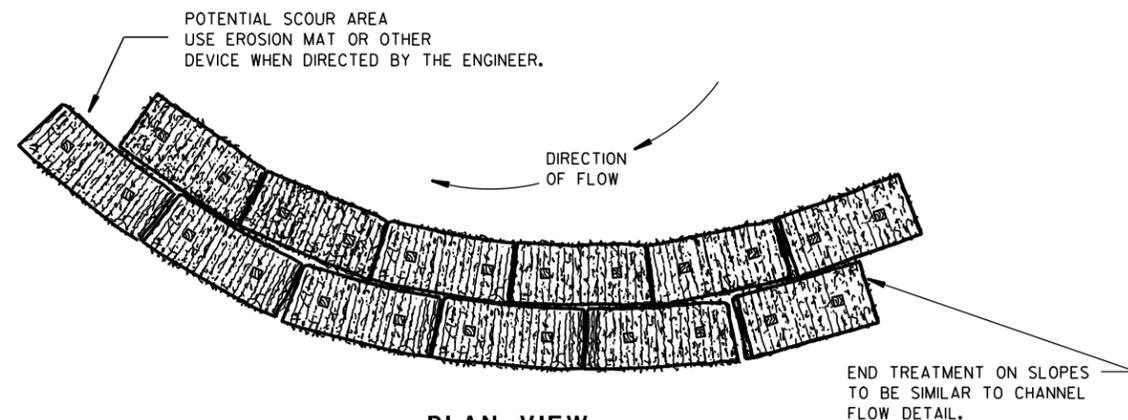
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

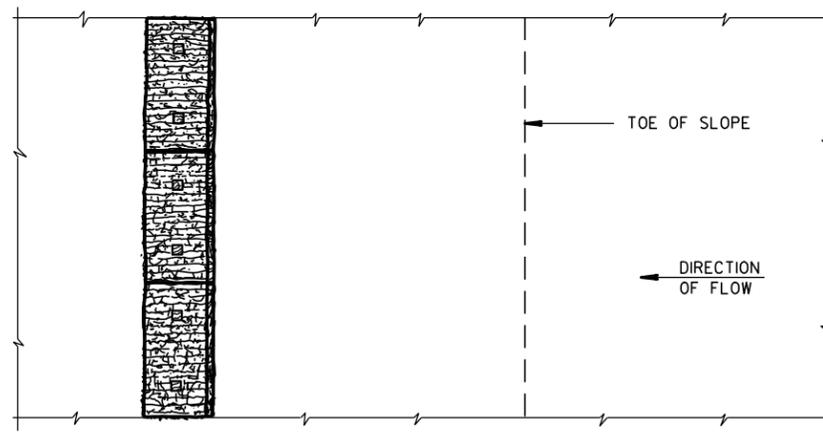
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

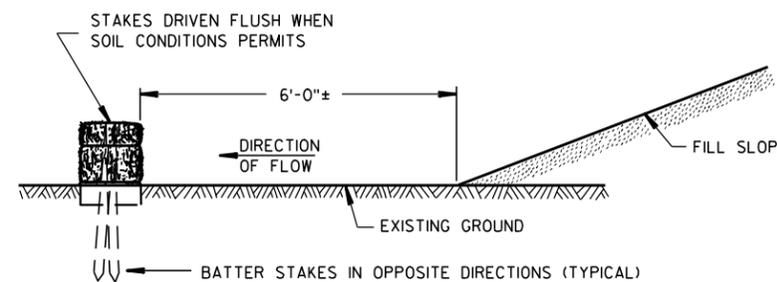


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

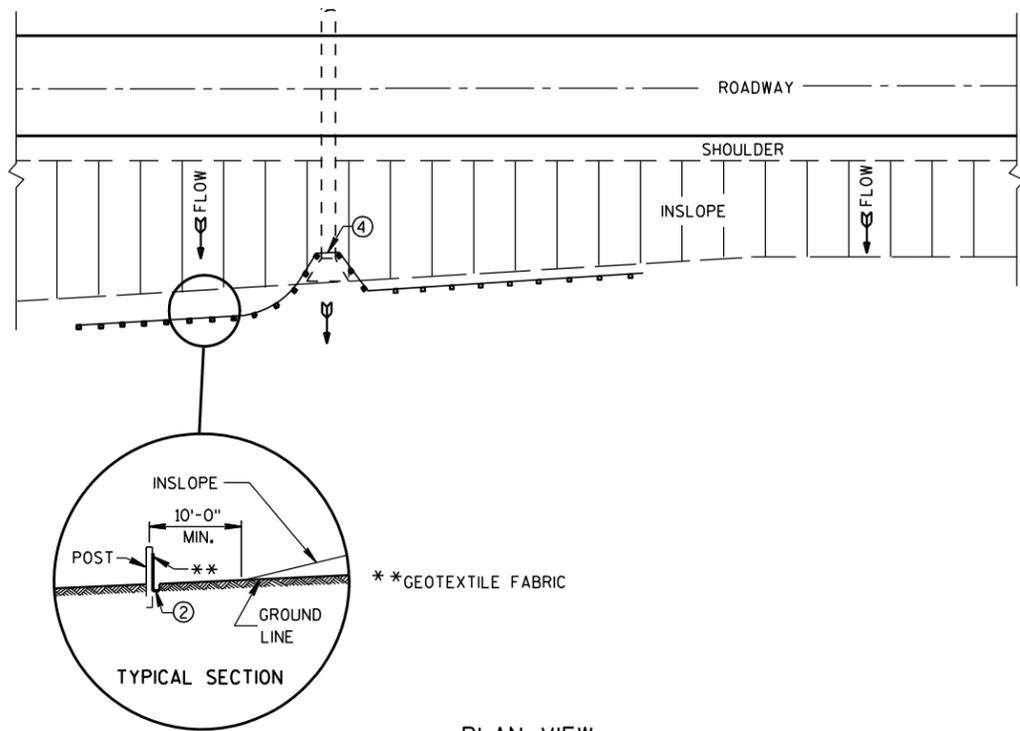
WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

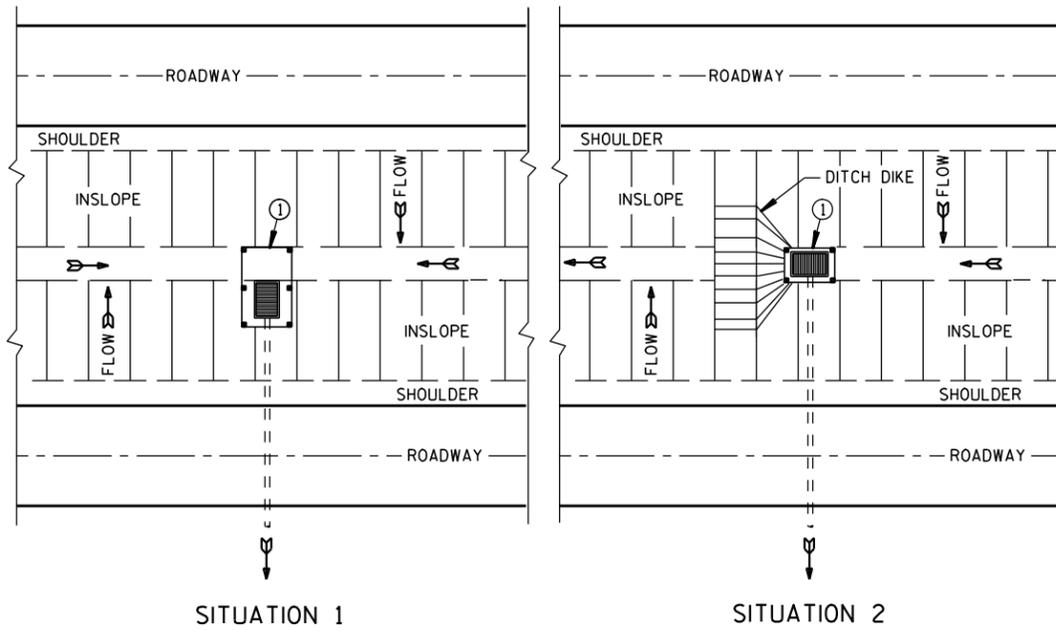
TYPICAL INSTALLATIONS OF  
EROSION BALES / TEMPORARY  
DITCH CHECKS

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

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



PLAN VIEW  
TYPICAL APPLICATION OF SILT FENCE

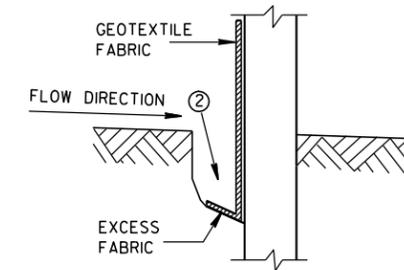


SITUATION 1 SITUATION 2  
PLAN VIEW  
SILT FENCE AT MEDIAN SURFACE DRAINS

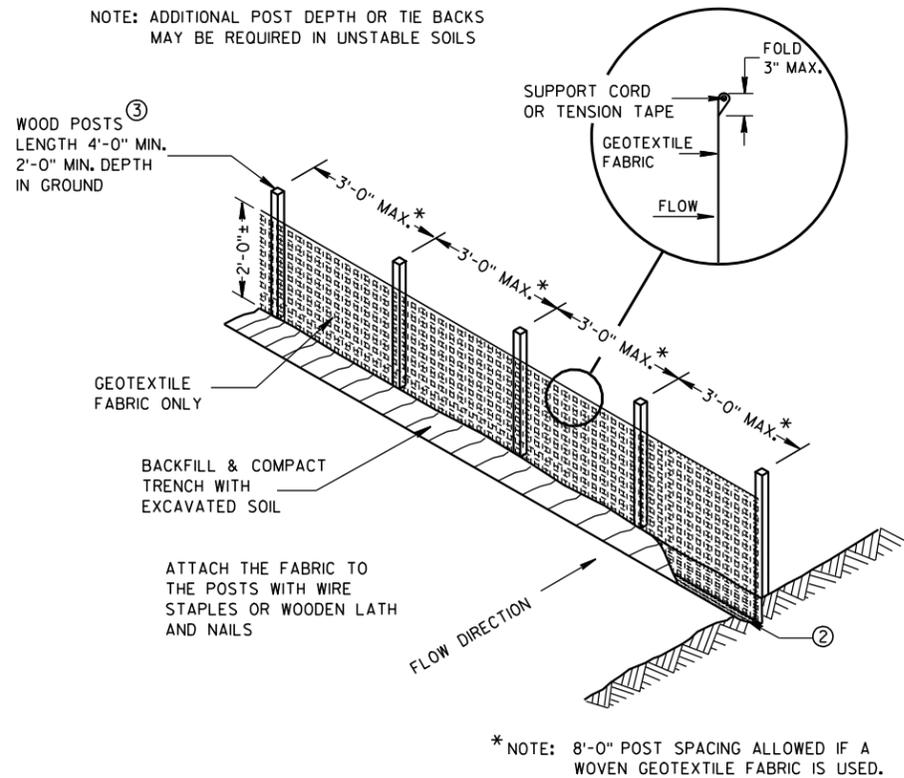
**GENERAL NOTES**

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

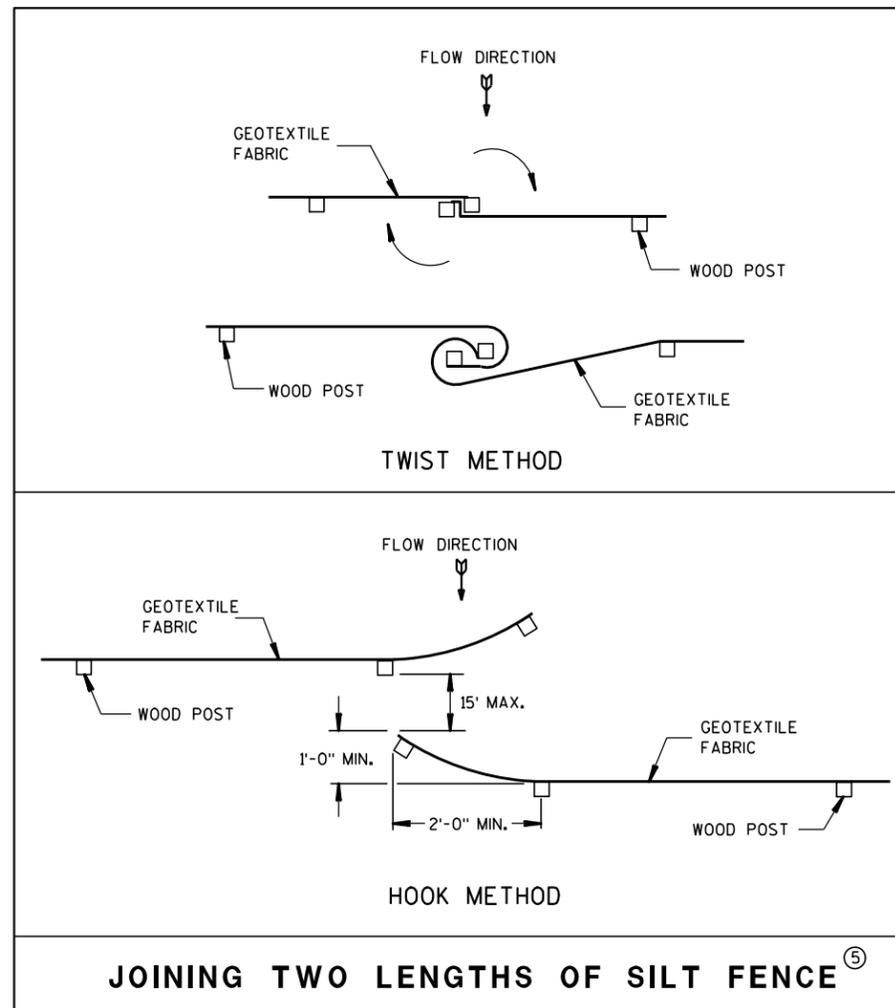
- ① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
- ② FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
- ③ WOOD POSTS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



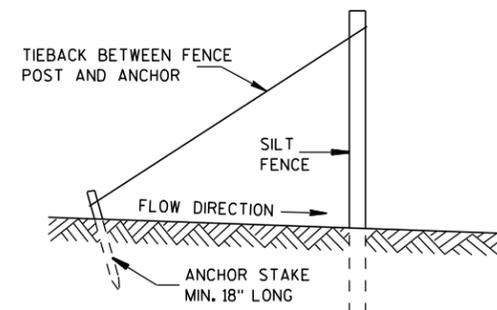
TRENCH DETAIL



SILT FENCE

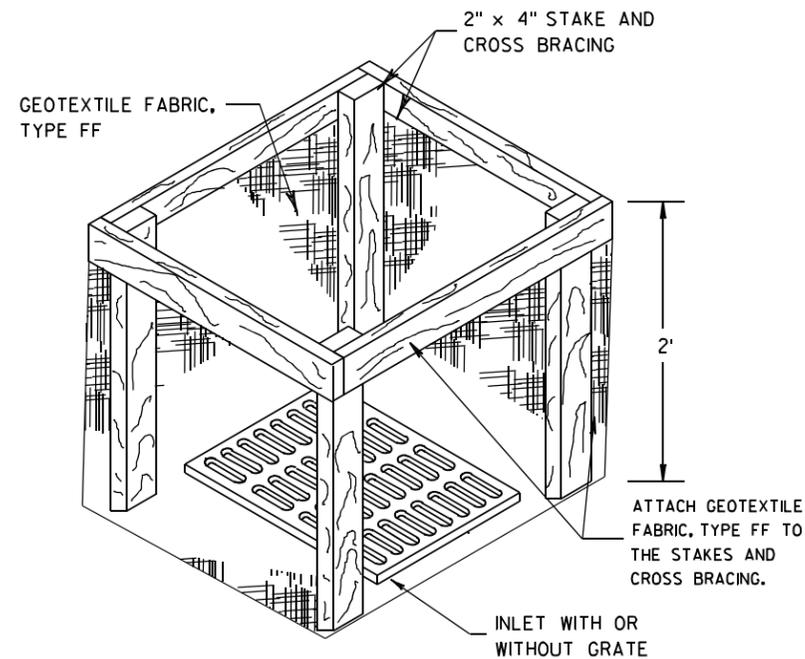
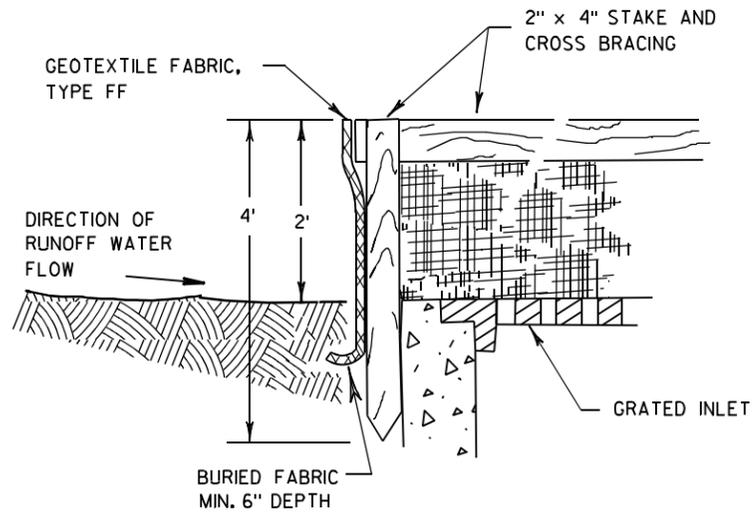


JOINING TWO LENGTHS OF SILT FENCE ⑤



SILT FENCE TIE BACK  
(WHEN REQUIRED BY THE ENGINEER)

<b>SILT FENCE</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 4-29-05 DATE	/S/ Beth Canestra CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA	



**INLET PROTECTION, TYPE A**

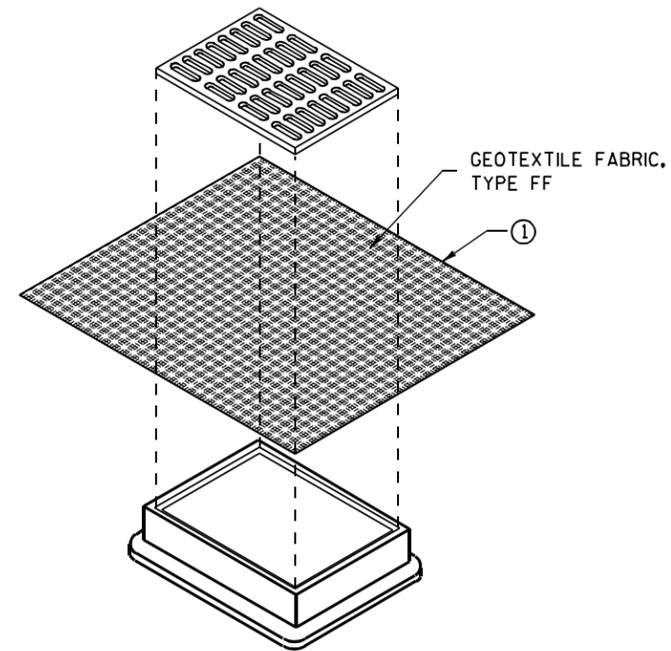
**GENERAL NOTES**

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

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

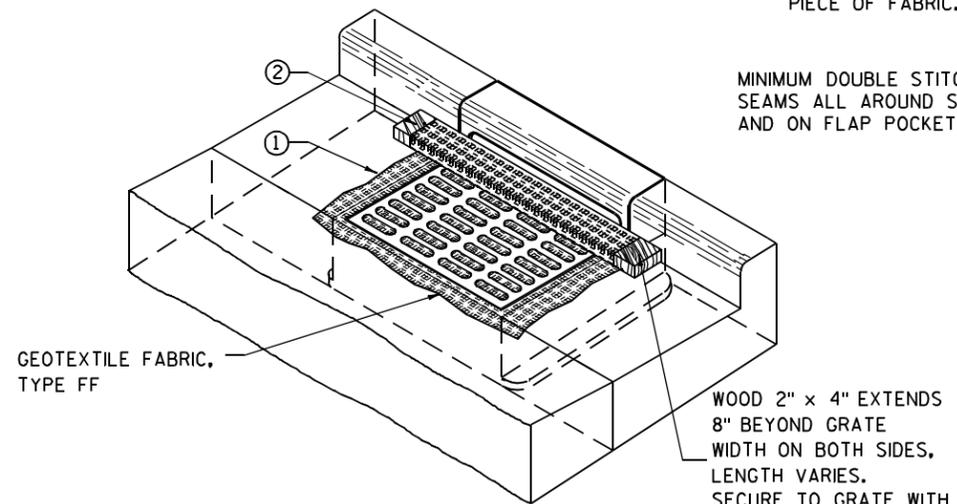
WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

- ① FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.
- ② FOR INLET PROTECTION, TYPE C (WITH CURB BOX), AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX OPENING.
- ③ FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2X4.



**INLET PROTECTION, TYPE B  
(WITHOUT CURB BOX)**

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



**INLET PROTECTION, TYPE C (WITH CURB BOX)**

**INSTALLATION NOTES**

**TYPE B & C**

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

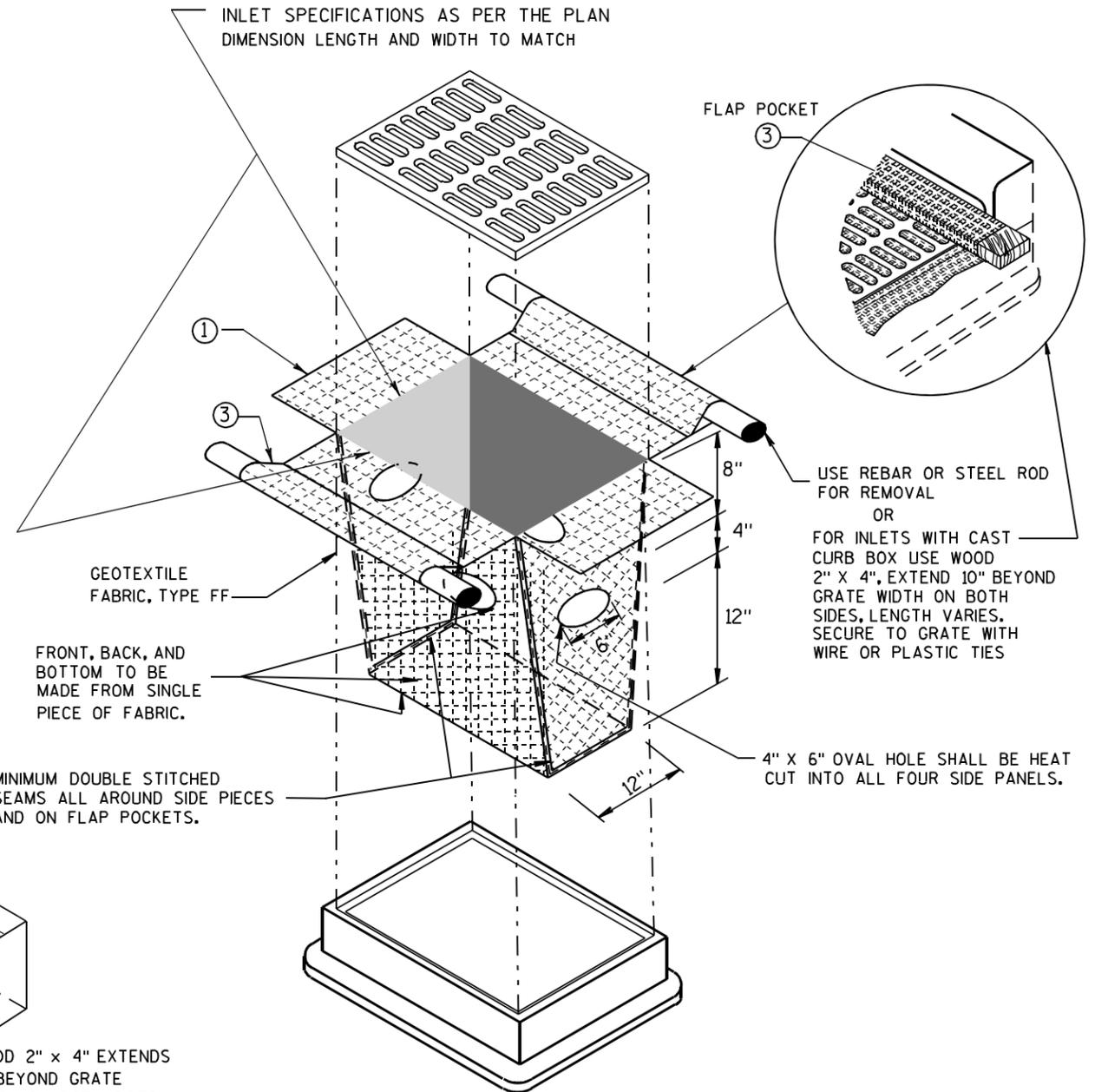
THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

**TYPE D**

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

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

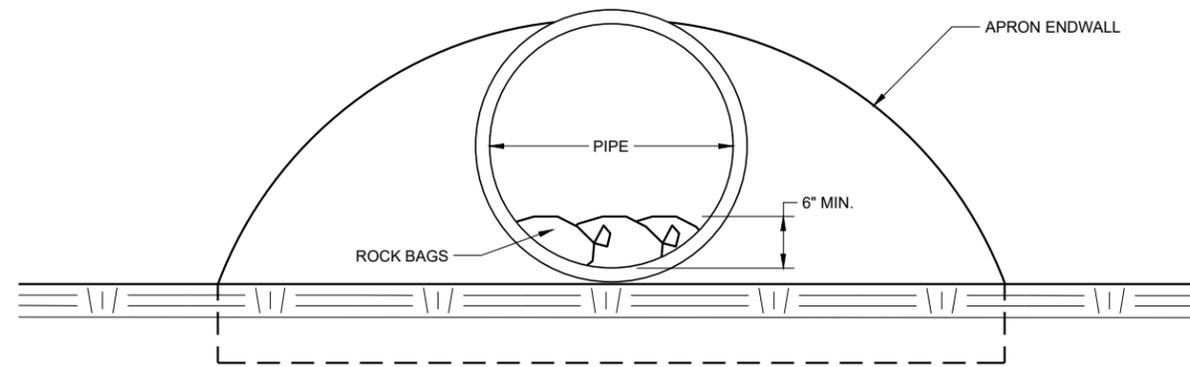
THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE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



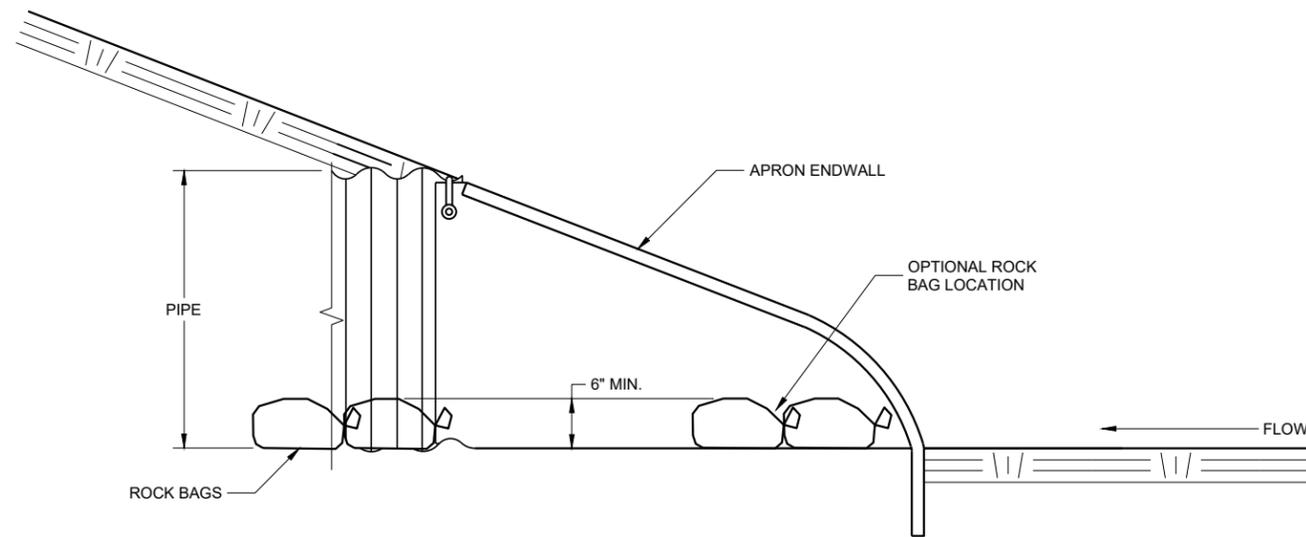
**INLET PROTECTION, TYPE D**

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

<b>INLET PROTECTION TYPE A, B, C, AND D</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 10/16/02 DATE	/s/ Beth Conestra CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA	



**END VIEW**



**SIDE VIEW**

**CULVERT PIPE CHECK**  
(INSTALL ON INLET END ONLY)

**CULVERT PIPE CHECK**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
May 2019 /S/ Daniel Schave  
DATE EROSION CONTROL ENGINEER

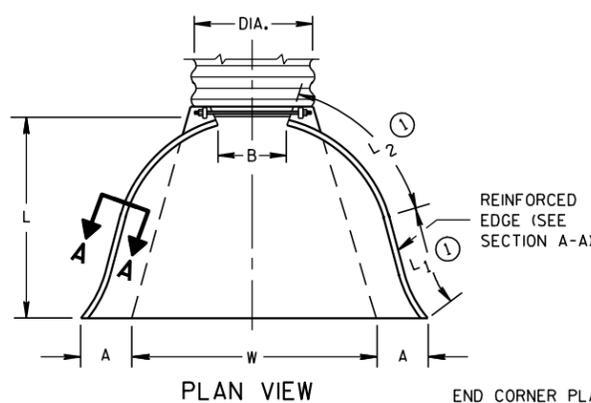
FHWA

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

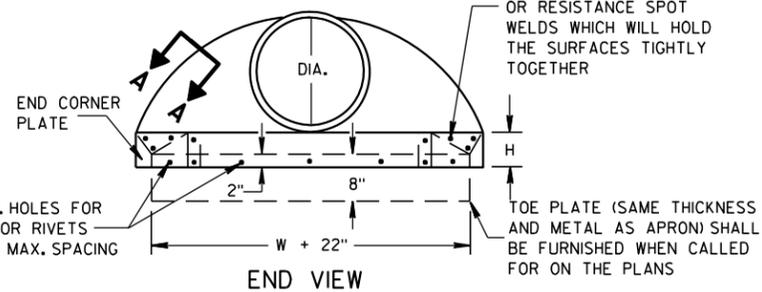
\* EXCEPT CENTER PANEL SEE GENERAL NOTES

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

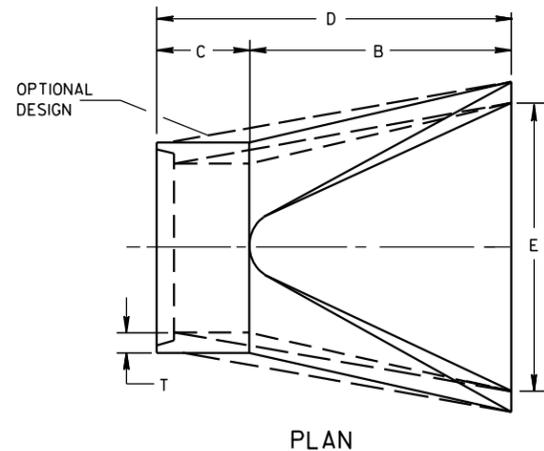
\* MINIMUM  
\*\* MAXIMUM



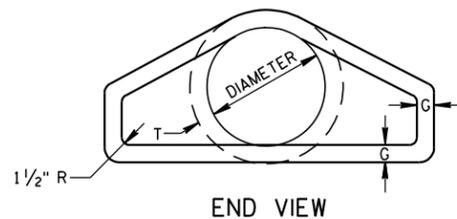
END CORNER PLATES MAY BE FASTENED TO APRON PROPER BY BOLTS, RIVETS, OR RESISTANCE SPOT WELDS WHICH WILL HOLD THE SURFACES TIGHTLY TOGETHER



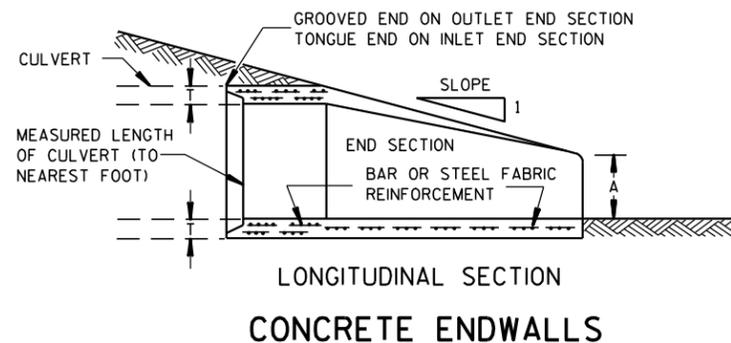
SIDE ELEVATION  
METAL ENDWALLS



PLAN

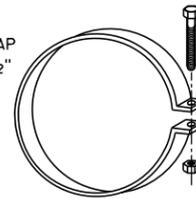


END VIEW

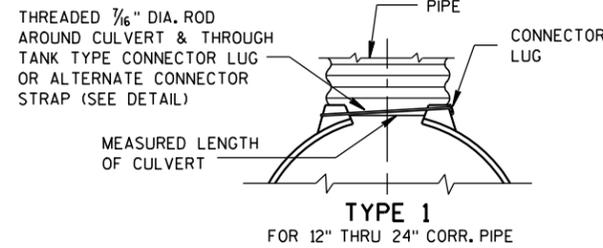


LONGITUDINAL SECTION  
CONCRETE ENDWALLS

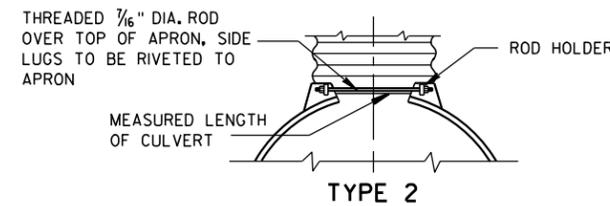
1" WIDE, 12 GA. (0.109" THICK) GALVANIZED STRAP WITH STANDARD 6" X 1/2" BAND BOLT AND NUT



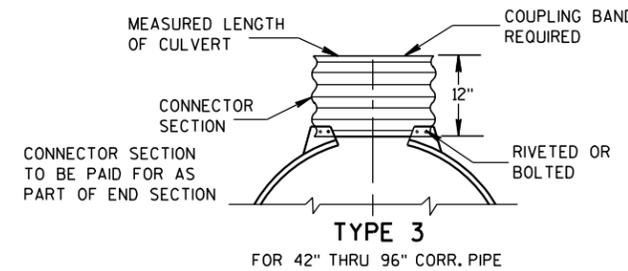
ALTERNATE FOR TYPE 1 CONNECTION  
END SECTION CONNECTOR STRAP



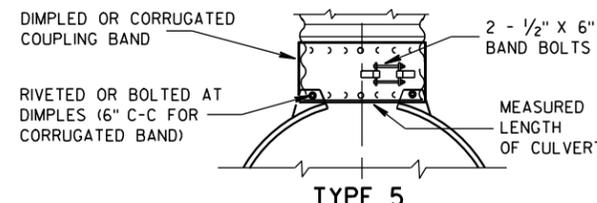
TYPE 1  
FOR 12" THRU 24" CORR. PIPE



TYPE 2  
FOR 30" THRU 96" CORR. PIPE



TYPE 3  
FOR 42" THRU 96" CORR. PIPE



TYPE 5  
ALTERNATE FOR:  
ALL SIZES CORRUGATED CIRCULAR PIPE

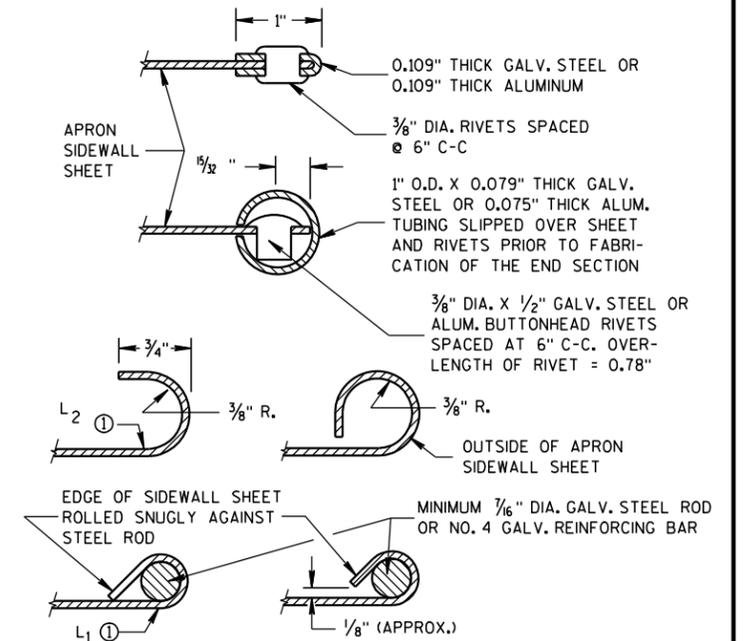
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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

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

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

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

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

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

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

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

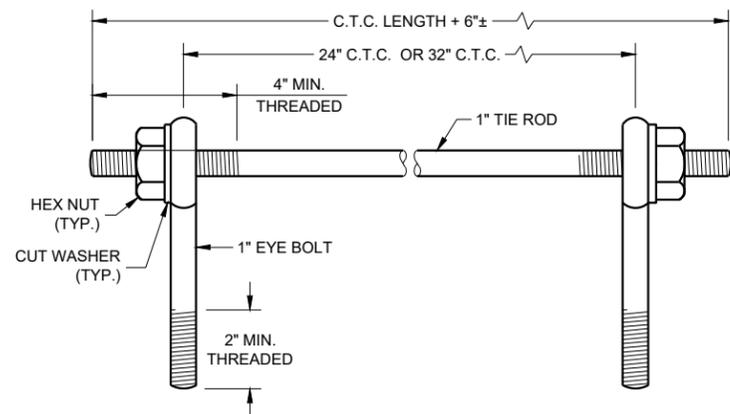
WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

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

APRON ENDWALLS FOR  
CULVERT PIPE

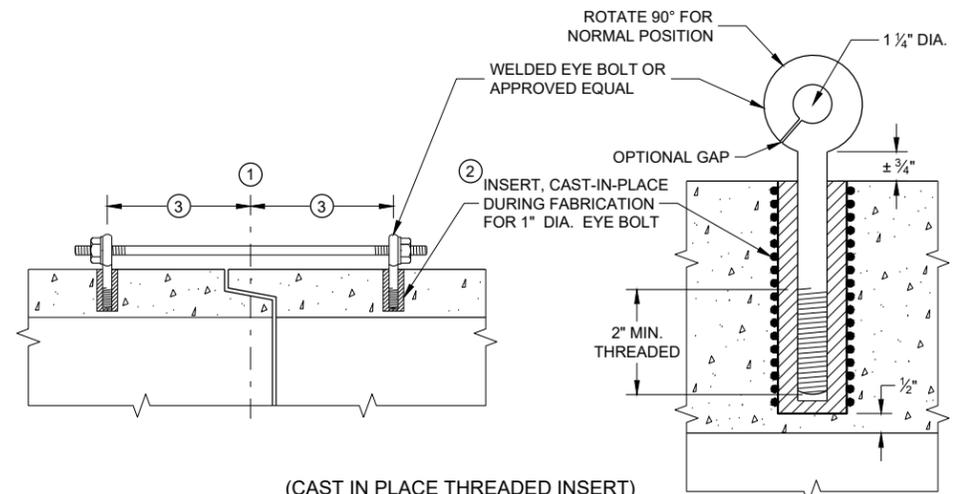
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

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



**EYE BOLTS AND TIE ROD**

**EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 1)**



(CAST IN PLACE THREADED INSERT)  
**LONGITUDINAL SECTIONS**

**GENERAL NOTES**

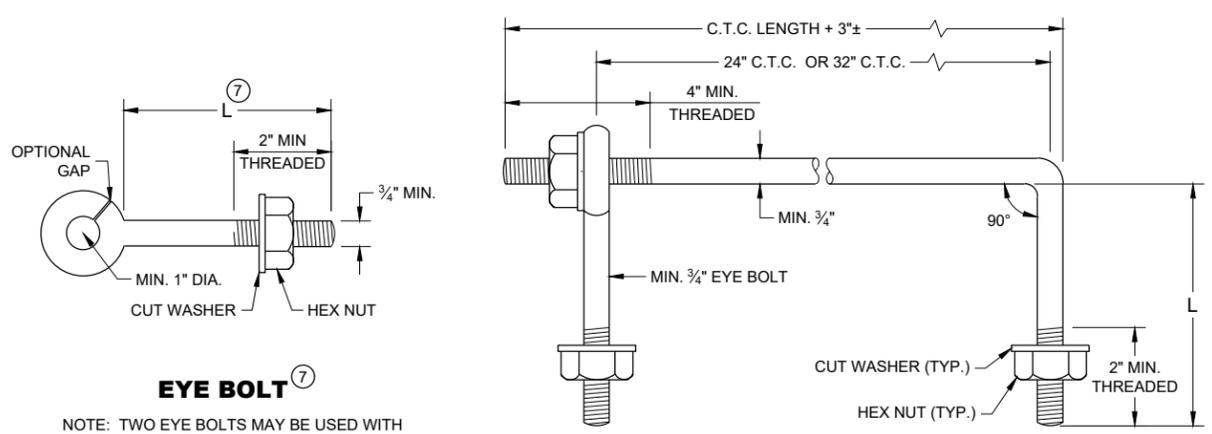
DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

CONCRETE CULVERT AND STORM SEWER PIPE SHALL BE TIED TOGETHER IN THE MANNER ILLUSTRATED BY THIS DETAIL AT LOCATIONS DESIGNATED IN THE STANDARD SPECIFICATIONS AND THE PLAN. THE CONTRACTOR MAY USE EITHER ALTERNATE 1, 2 OR 3 FOR DRAINAGE STRUCTURES. ONLY ALTERNATE 1 AND 3 MAY BE USED FOR CATTLE PASSES, UNLESS OTHERWISE STATED IN THE CONTRACT. THE MATERIALS, FABRICATION AND WORK NECESSARY TO TIE THE PIPE BY THIS DETAIL WILL BE CONSIDERED INCIDENTAL TO THE PIPE AND APRON ENDWALLS IF REQUIRED.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR JOINT TIES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

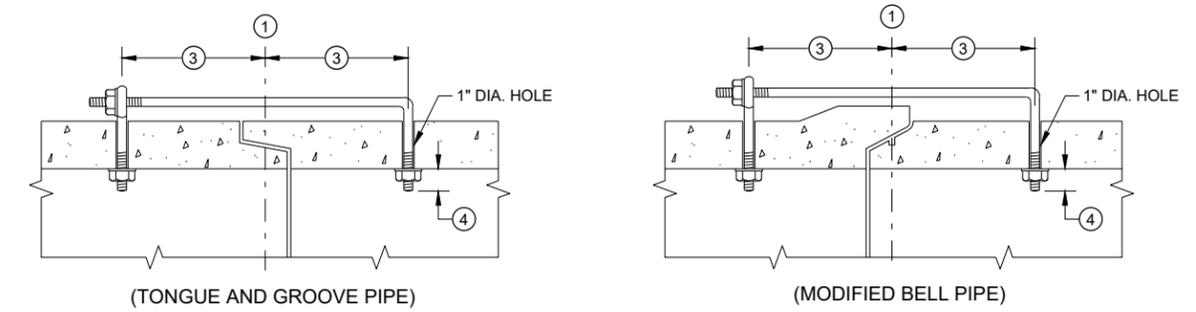
JOINT TIES TO BE HOT-DIP GALVANIZED PER ASTM A 153.

- ① CENTER LINE OF TONGUE AND GROOVE OR BELL AND SPIGOT JOINTS.
- ② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.
- ③ HOLES SHALL BE CAST-IN-PLACE OR DRILLED PER THE APPLICABLE DETAIL, AND EQUAL DISTANCE FROM THE CENTERLINE OF THE JOINT.
- ④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.
- ⑤ OPENING TO BE ROD DIAMETER PLUS 1 INCH.
- ⑥ LENGTH ADEQUATE TO EXTEND TO WITHIN 1/2 INCH OF THE INNER SURFACE OF THE PIPE.
- ⑦ EYE BOLT LENGTH DETERMINED BY WALL THICKNESS, BELL THICKNESS AND BOLT PROJECTION INSIDE PIPE.



**EYE BOLT AND TIE ROD**

**EYE BOLT**  
NOTE: TWO EYE BOLTS MAY BE USED WITH A 30" OR 38" LONG THREADED ROD IN LIEU OF THE 90° BENT TIE ROD.



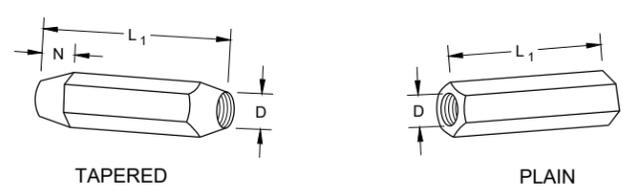
**LONGITUDINAL SECTION**  
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

**EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 2)**

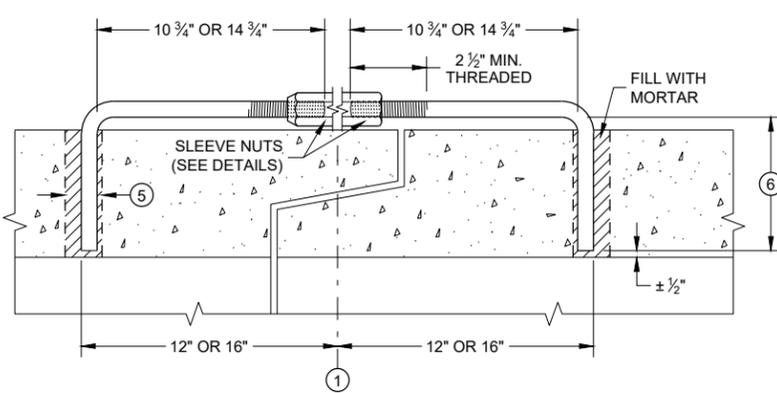
**ADJUSTABLE TIE ROD TABLE**

PIPE DIAMETER	TIE ROD DIAMETER	D	L <sub>1</sub>	N
12 - 60	5/8	5/8	5	1/2
66 - 84	3/4	3/4	5	1/2
90 - 144	1	1	7	1 1/16

DIMENSIONS SHOWN ARE IN INCHES

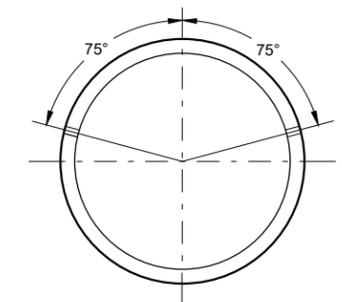


**RIGHT AND LEFT THREADS SLEEVE NUTS**



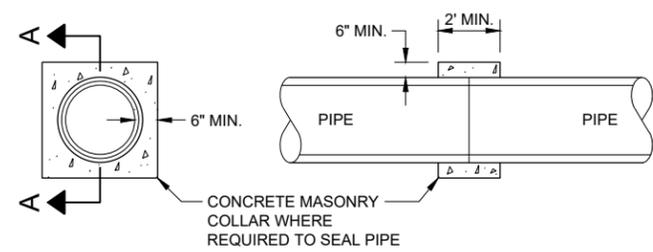
**LONGITUDINAL SECTION**

**ADJUSTABLE TIE ROD (ALTERNATE NO. 3)**



PLACEMENT OF (2) CAST-IN-PLACE INSERTS OR HOLES DURING FABRICATION FOR PIPE SECTIONS REQUIRING TIE RODS

**TRANSVERSE SECTION**

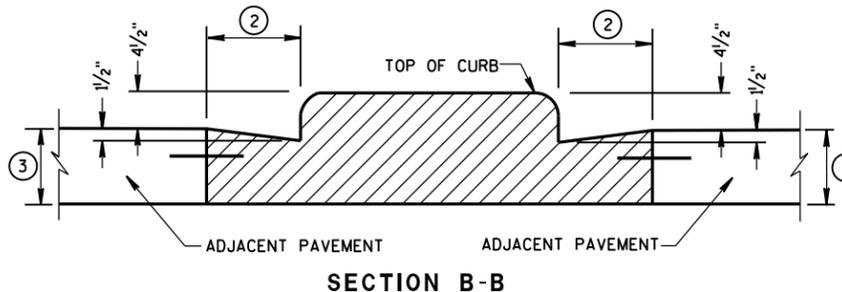
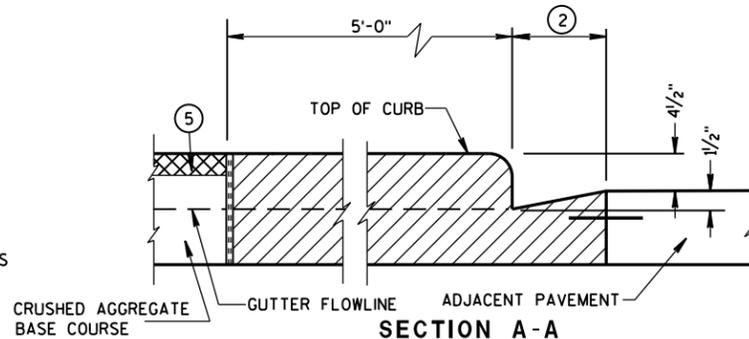
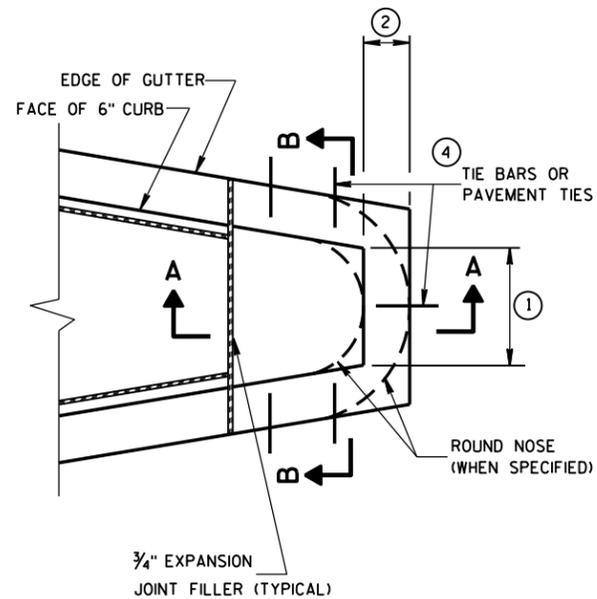
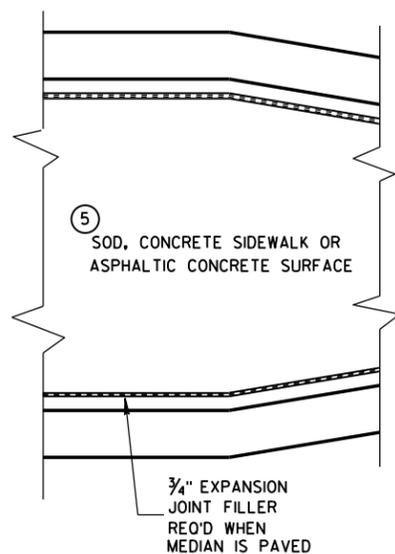


**SECTION A - A**  
**CONCRETE COLLAR DETAIL**

**JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
November 2021 /S/ Rodney Taylor  
DATE ROADWAY STANDARDS DEVELOPMENT ENGINEER  
FHWA

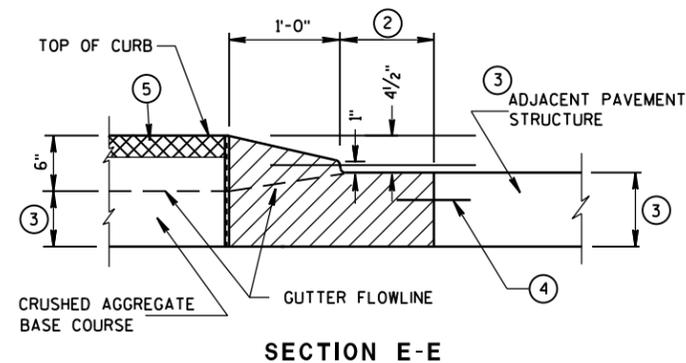
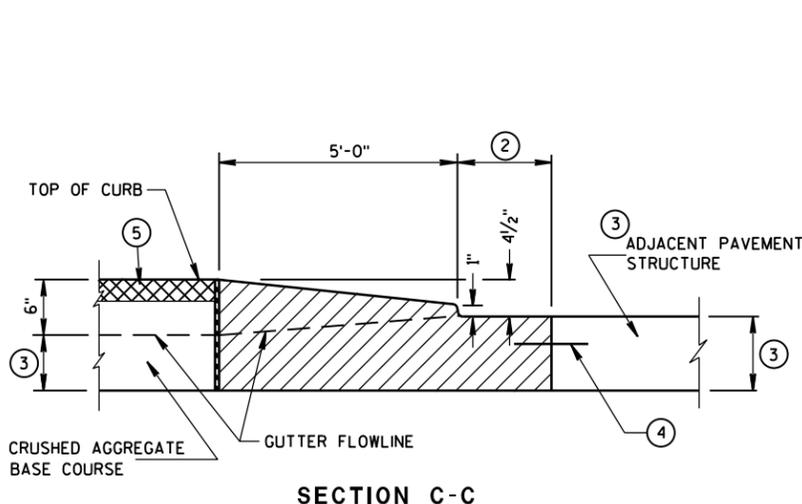
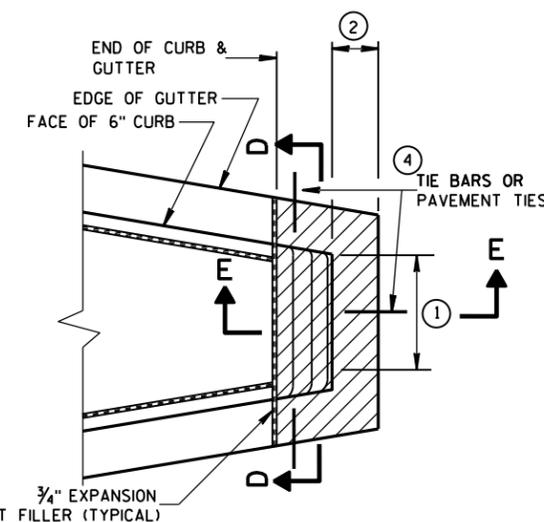


CONCRETE MEDIAN BLUNT NOSE DETAIL

**GENERAL NOTES**

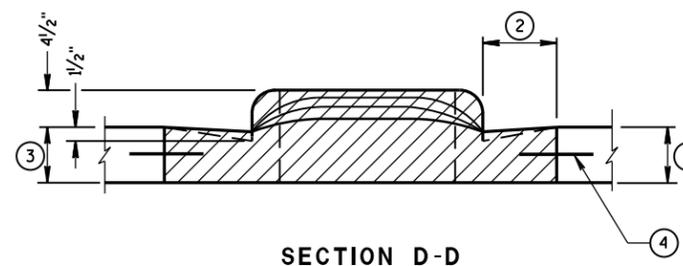
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

- ① SEE PLAN FOR MEDIAN NOSE WIDTH AND RADIUS (FOR ROUND NOSE ALTERNATE).
- ② WIDTH OF GUTTER TO MATCH EXISTING ADJACENT GUTTER OR AS SPECIFIED ELSEWHERE IN THE PLAN.
- ③ DEPTH EQUAL TO ADJACENT PAVEMENT. ADJACENT PAVEMENT STRUCTURE DETAILS ARE SHOWN ON THE PLAN. TYPICAL OPTIONS ARE:
  - (1) NEW OR EXISTING CONCRETE PAVEMENT.
  - (2) ASPHALTIC CONCRETE PAVEMENT OVER NEW OR EXISTING CONCRETE BASE COURSE.
  - (3) ASPHALTIC CONCRETE PAVEMENT OVER CRUSHED AGGREGATE BASE COURSE.
- ④ TIE BARS OR PAVEMENT TIES REQUIRED IN NEW CONCRETE PAVEMENT OR CONCRETE BASE COURSE. TIE BARS SHALL BE NO. 4 X 2'-0" SPACED AT 2'-0" C-C.
- PAVEMENT TIES REQUIRED IN EXISTING CONCRETE BASE COURSE. PAVEMENT TIES SHALL BE NO. 6 X 1'-0" SPACED AT 3'-0" C-C INSTALLED ON A HORIZONTAL SKEW OF 6:1. THE DIRECTION OF SKEW SHALL ALTERNATE AFTER EVERY ONE OR TWO BARS.
- ⑤ SURFACE TYPE AND DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.



CONCRETE MEDIAN SLOPED NOSE TYPE 2

CONCRETE MEDIAN SLOPED NOSE TYPE 1



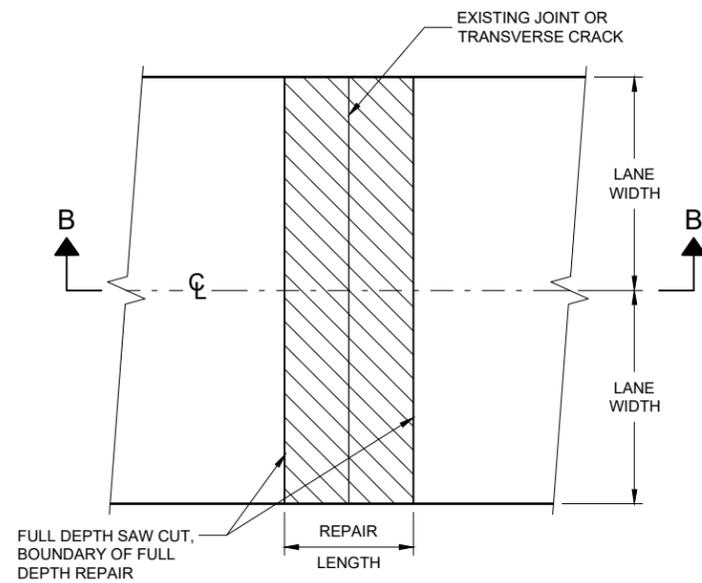
<b>CONCRETE MEDIAN NOSE</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 6/8/2006 DATE	/s/ Jerry H. Zogg ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA	

6

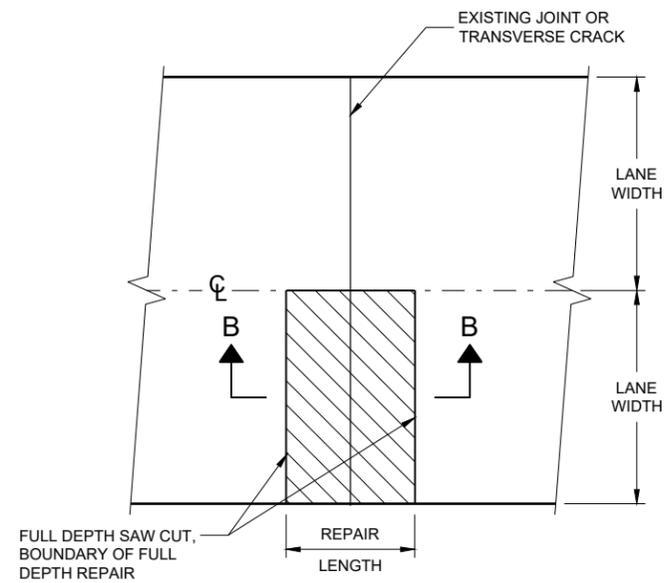
6

S.D.D. 11 B 2-2

S.D.D. 11 B 2-2

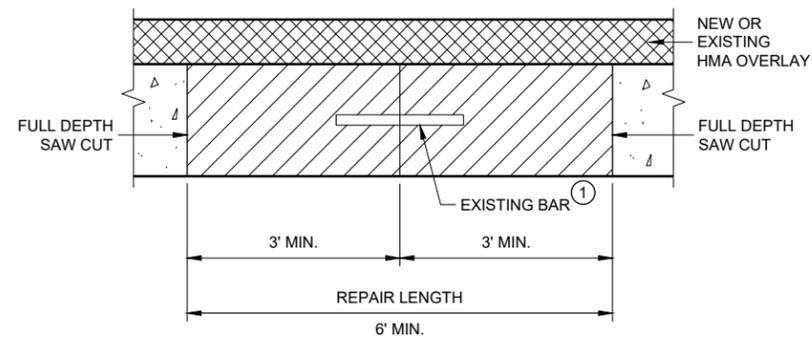


**PLAN VIEW  
DOUBLE LANE REPAIR**



**PLAN VIEW  
SINGLE LANE REPAIR**

**FULL DEPTH CONCRETE PAVEMENT REMOVAL**



**SECTION B - B  
CONCRETE REMOVAL**

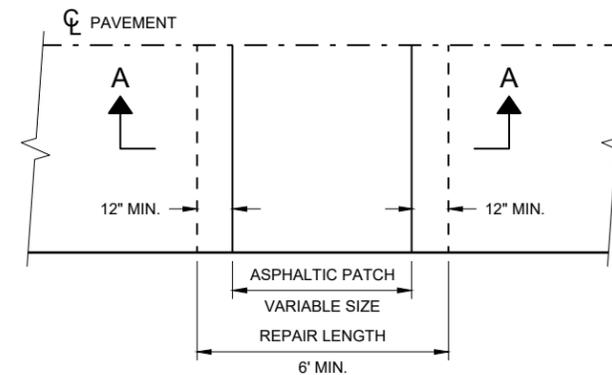
**GENERAL NOTES**

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

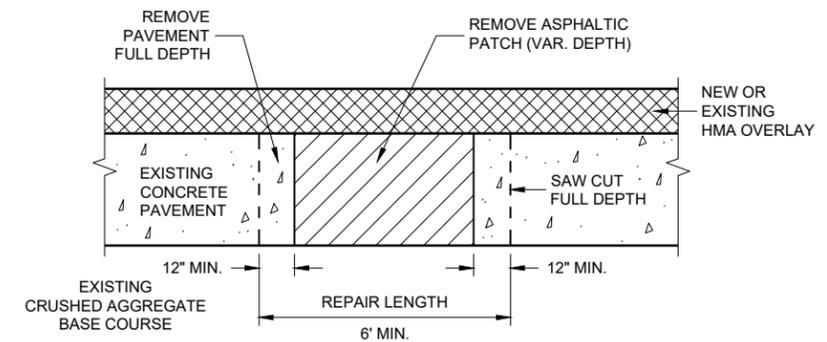
PROVIDE A 6 FOOT MINIMUM DISTANCE FROM BOUNDARIES OF CONCRETE REPAIR AREA TO ADJACENT TRANSVERSE JOINT OR CRACK.

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

① DOWEL BARS MAY NOT BE PRESENT.



**PLAN VIEW**

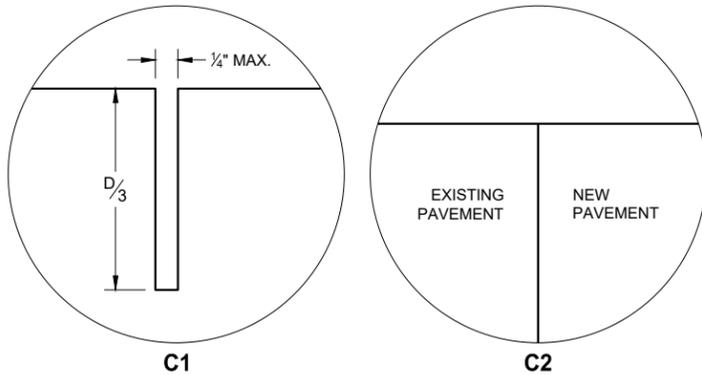


**SECTION A - A**

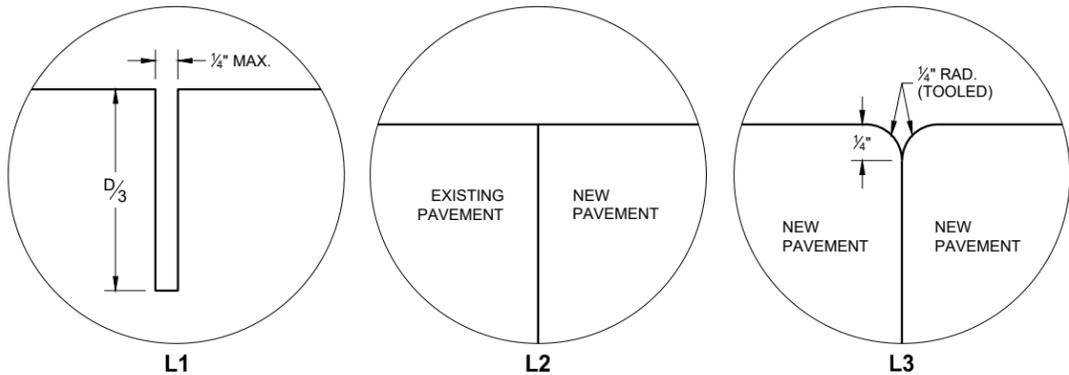
**HMA PATCH REMOVAL**

**BASE PATCHING CONCRETE**

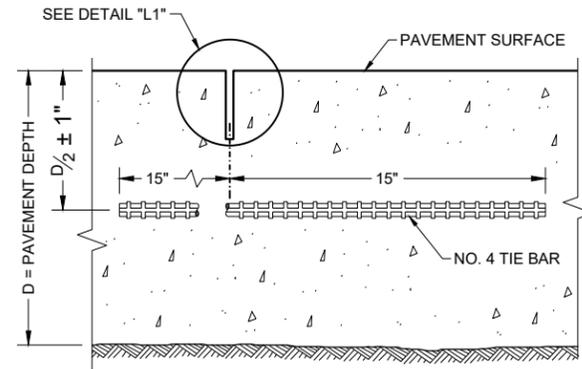
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



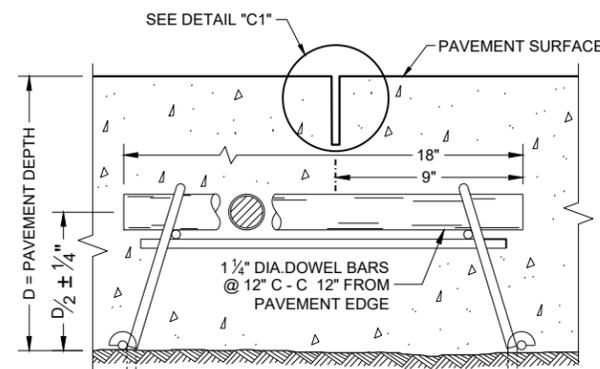
**TRANSVERSE JOINTS**



**LONGITUDINAL JOINTS**



**SECTION C - C  
SAWED LONGITUDINAL JOINT**



**SECTION F - F  
CONTRACTION JOINT**

**GENERAL NOTES**

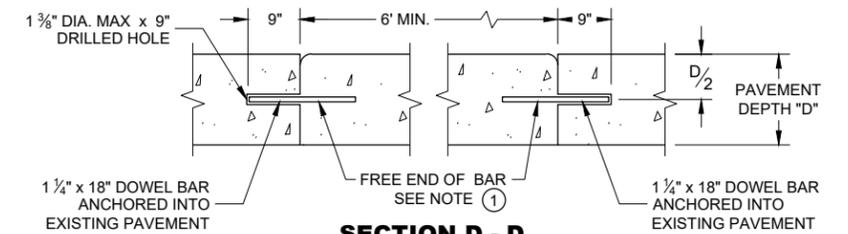
INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

CONCRETE BASE PATCHES OF EXISTING NON-DOWELED CONCRETE PAVEMENTS DO NOT NEED TO BE DOWELED.

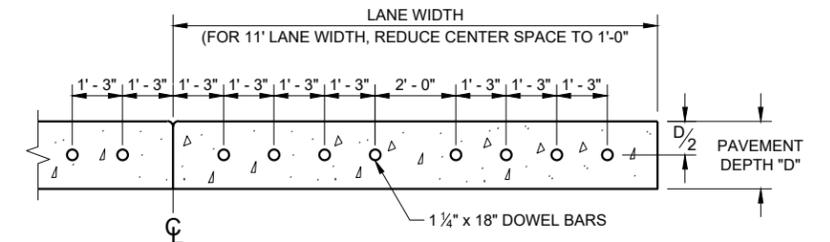
ANCHOR DOWEL BARS AND TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

PROVIDE A MINIMUM DISTANCE OF 15 INCHES FROM ALL TRANSVERSE JOINTS OR EDGES OF REPLACEMENT TO THE CENTER OF THE TIE BAR NEAREST THAT JOINT OR EDGE.

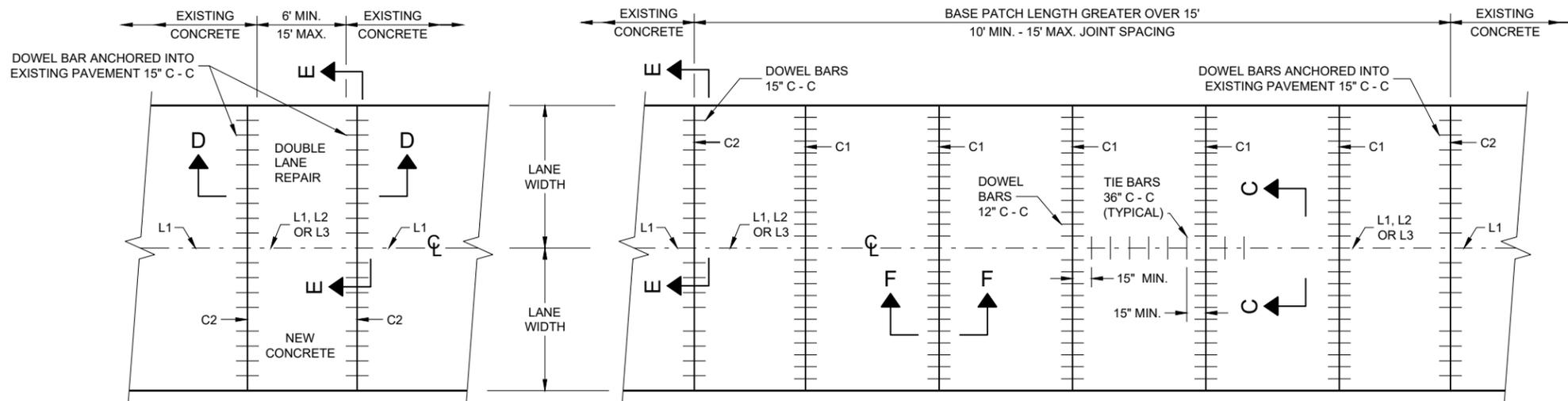
- ① APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.



**SECTION D - D**



**SECTION E - E  
SPACING OF DOWEL BARS  
ANCHORED INTO EXISTING PAVEMENT**

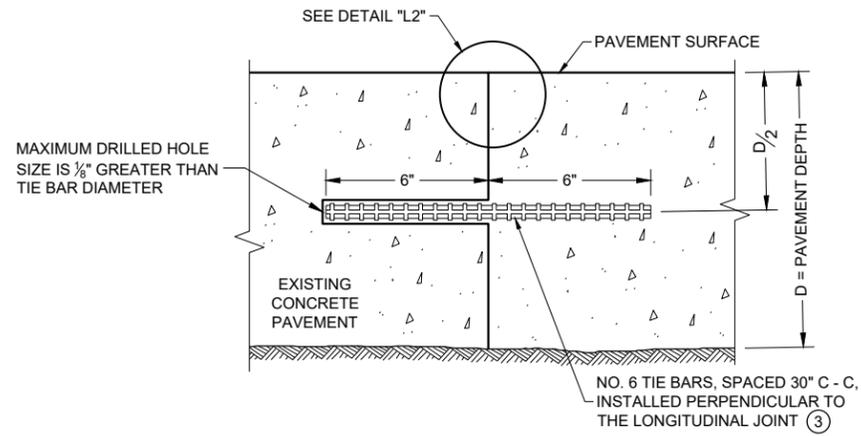


**PLAN VIEW  
MULTILANE CONCRETE BASE PATCH  
15' MAXIMUM LENGTH**

**PLAN VIEW  
MULTILANE CONCRETE BASE PATCH  
GREATER THAN 15' IN LENGTH**

**BASE PATCHING CONCRETE**

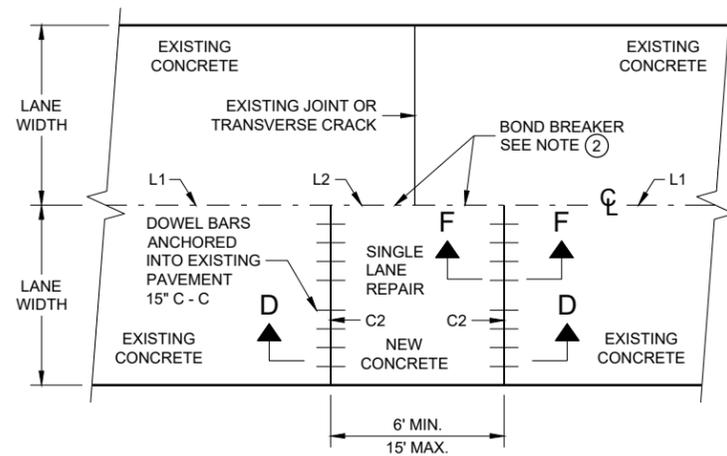
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



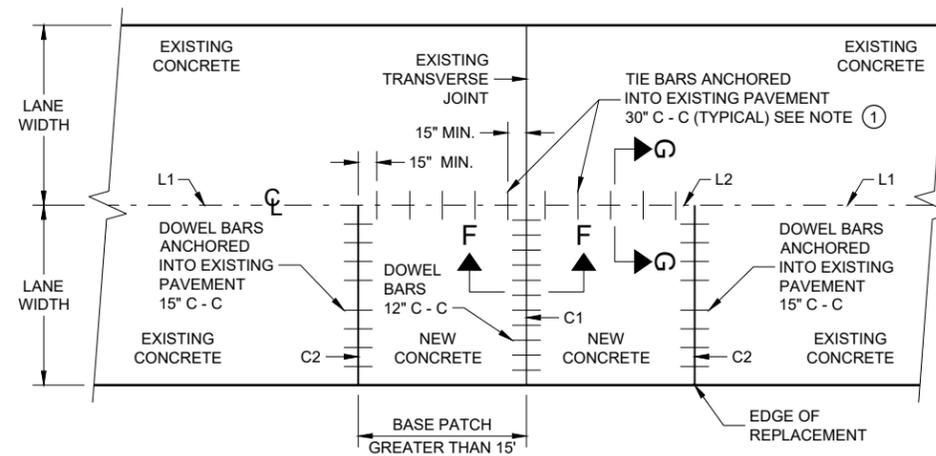
**SECTION G - G**  
**TIE BARS ANCHORED INTO EXISTING PAVEMENT**

**GENERAL NOTES**

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



**PLAN VIEW**  
**SINGLE LANE CONCRETE BASE PATCH**  
**15' MAXIMUM LENGTH**



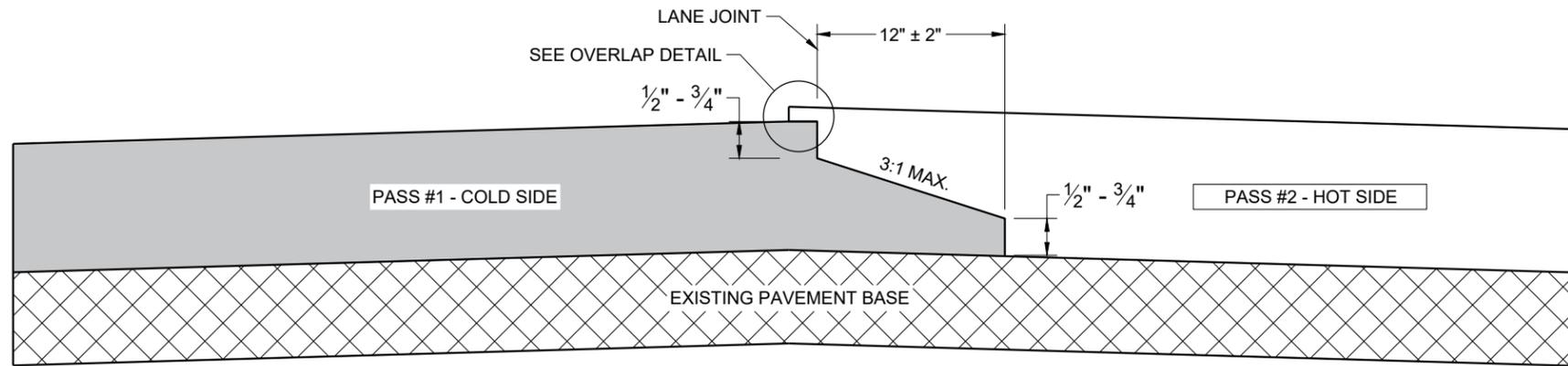
**PLAN VIEW**  
**SINGLE LANE CONCRETE BASE PATCH**  
**GREATER THAN 15' LENGTH**

**BASE PATCHING CONCRETE**

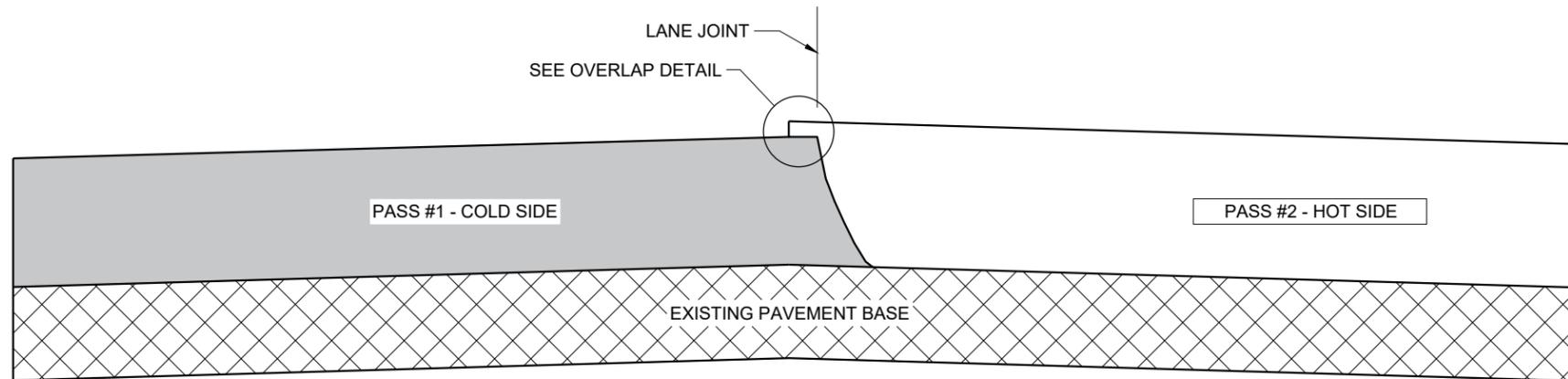
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
March 2018 /S/ Peter Kemp, P.E.  
DATE PAVEMENT SUPERVISOR

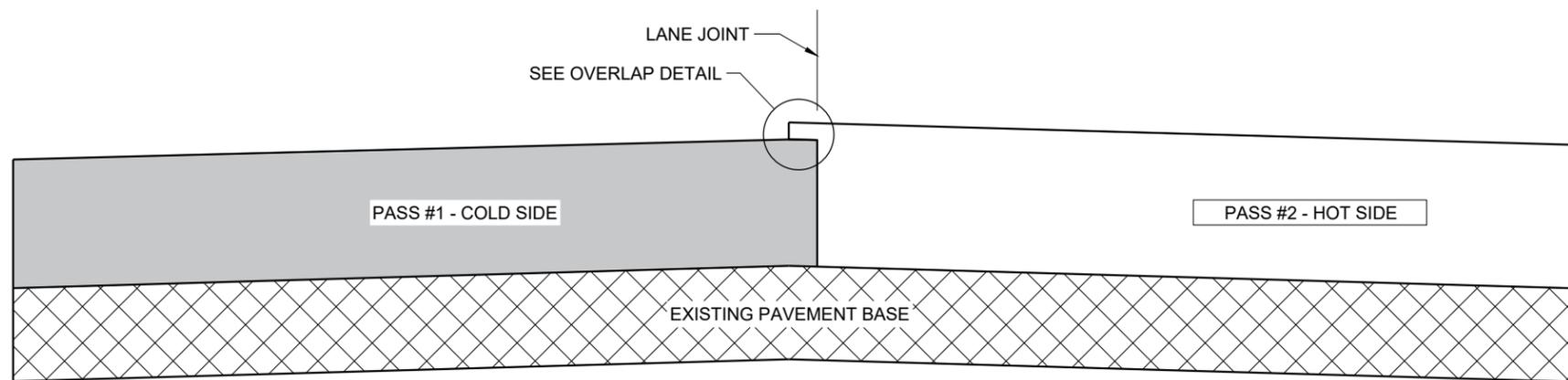
FHWA



**TYPICAL PAVEMENT CROSS SECTION NOTCHED WEDGE JOINT**



**TYPICAL PAVEMENT CROSS SECTION VERTICAL JOINT**



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

**GENERAL NOTES**

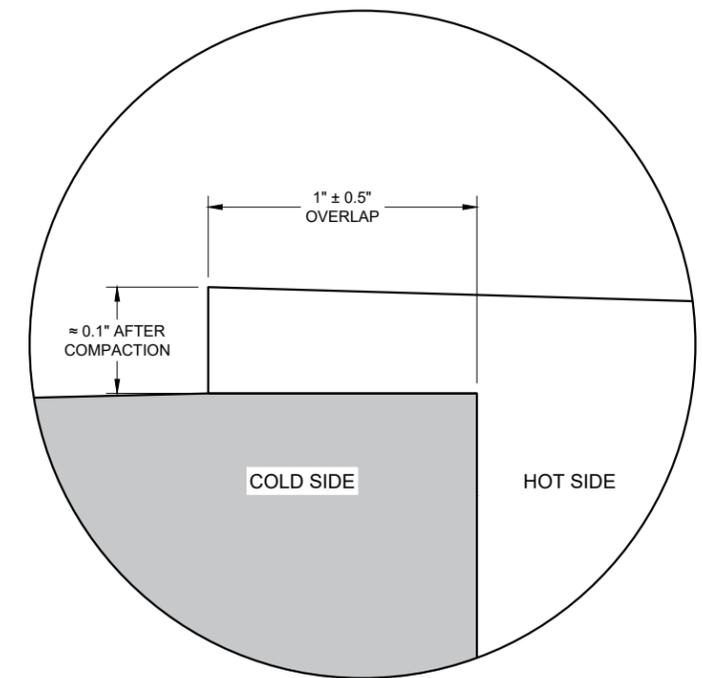
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

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)**

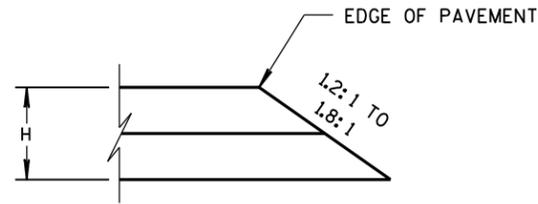
6

6

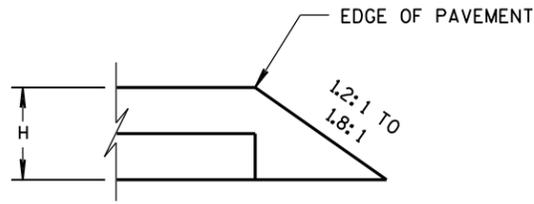
SDD 13C19 - 03

SDD 13C19 - 03

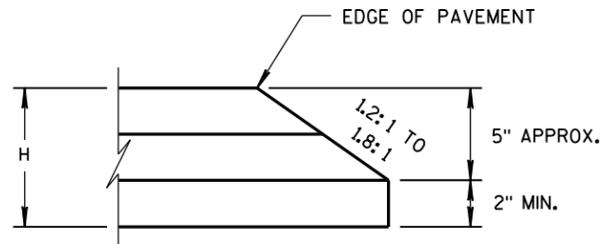
<b>HMA LONGITUDINAL JOINTS</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED November 2020 DATE	/S/ Steven Hefel HMA PAVEMENT ENGINEER
FHWA	



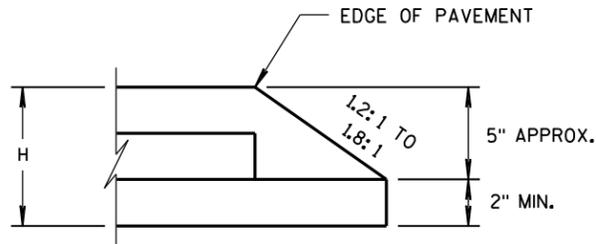
CONSTRUCTED WITH FINAL TWO LAYERS  
FOR H 5" OR LESS



CONSTRUCTED WITH FINAL LAYER  
FOR H 5" OR LESS

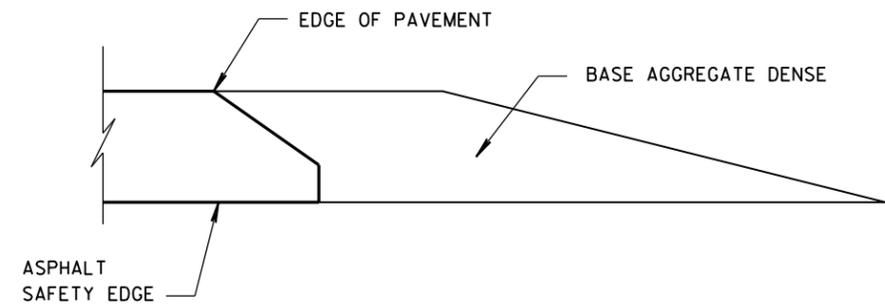


CONSTRUCTED WITH FINAL TWO LAYERS  
FOR H GREATER THAN 5"



CONSTRUCTED WITH FINAL LAYER  
FOR H GREATER THAN 5"

HMA PAVEMENT AND HMA OVERLAYS



FINISHED SHOULDER AGGREGATE PLACEMENT

6

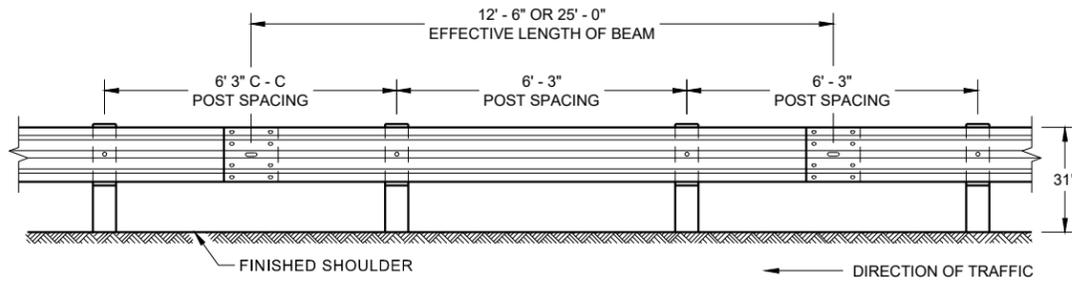
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S.D.D. 14 B 29-1

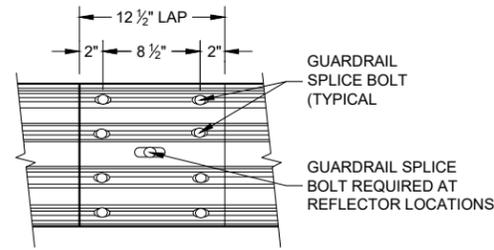
S.D.D. 14 B 29-1

SAFETY EDGE <sub>SM</sub>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED DATE 11/30/2012	/s/ Jerry H. Zogg ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA	





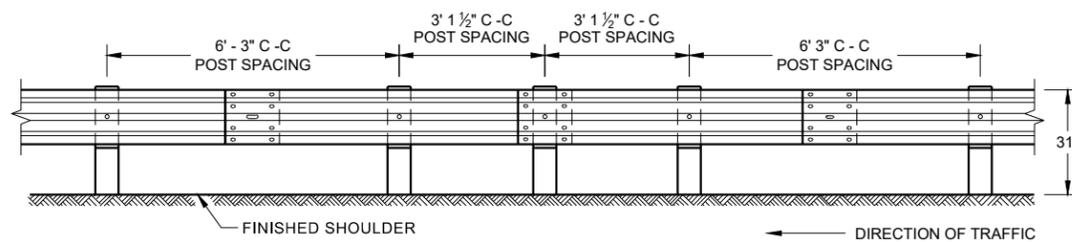
**FRONT VIEW  
POST SPACING STANDARD INSTALLATION**



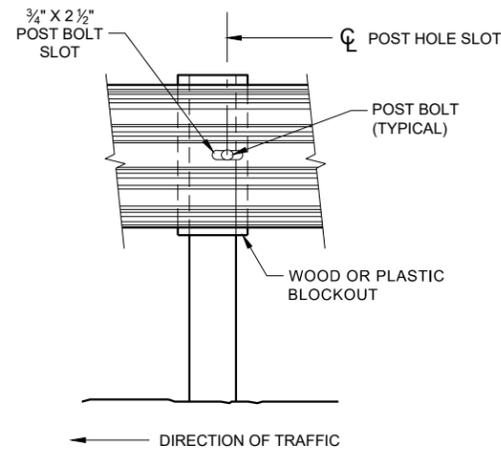
**FRONT VIEW  
MID-SPAN BEAM SPLICE**

**GENERAL NOTES**

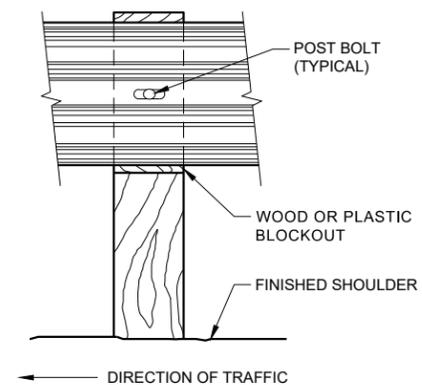
- ⑧ DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.
  - ⑨ 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.
- POST BOLTS ARE A 5/8" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES 3/4" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND 5/8" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.
- GUARD RAIL SPLICE BOLTS ARE A 5/8" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES 3/4" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.



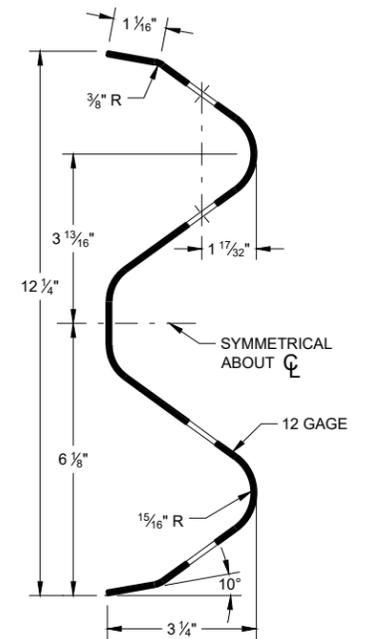
**FRONT VIEW  
HALF POST SPACING (HS) AND  
HALF POST SPACING WITH LONGER POSTS (K)**



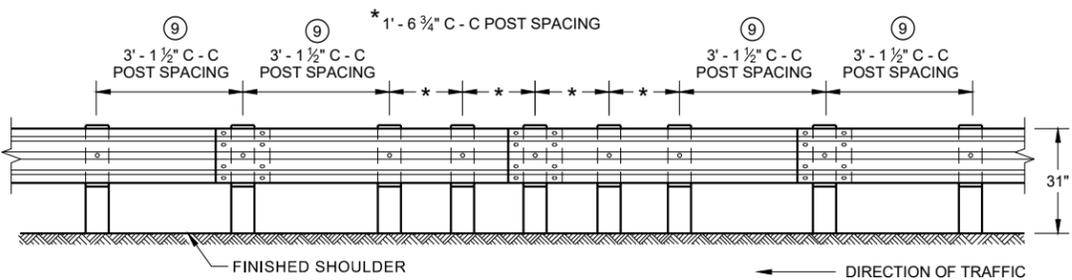
**FRONT VIEW AT STEEL POST**



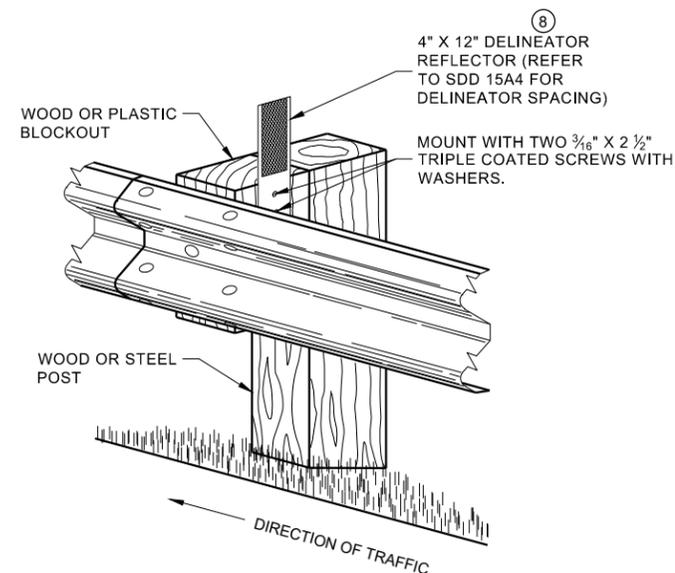
**FRONT VIEW AT WOOD POST**



**SECTION THRU W-BEAM RAIL**



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



**ONE SIDED REFLECTOR DETAIL  
AND TYPICAL INSTALLATION**

**MIDWEST GUARDRAIL SYSTEM  
(MGS) GUARDRAIL**

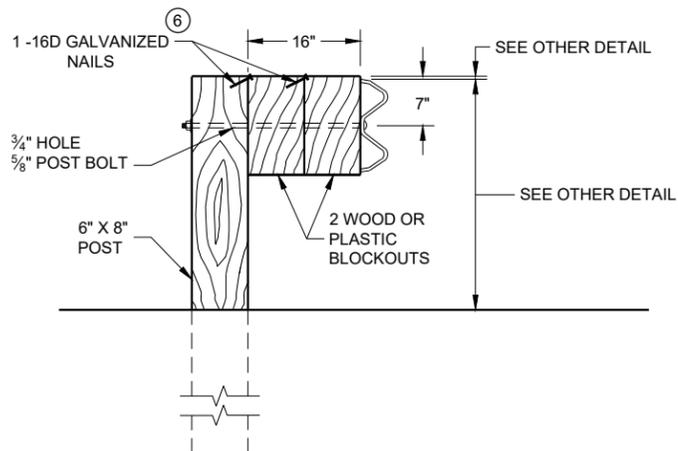
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

6

6

SDD 14B42 - 07b

SDD 14B42 - 07b

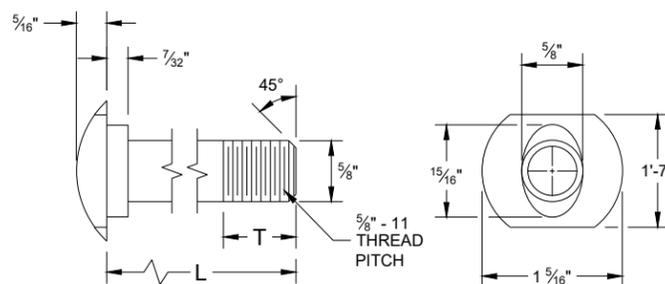


**DETAIL FOR 16" BLOCKOUT DEPTH**

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

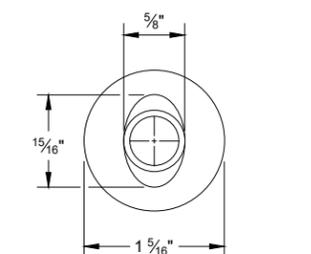
**NOTE:**

1. ALL FILLETS SHALL HAVE A MINIMUM RADIUS OF 3/16".
2. IF THE BOLT EXTENDS MORE THAN 1/4" FROM THE NUT THE BOLT SHOULD BE TRIMMED BACK.

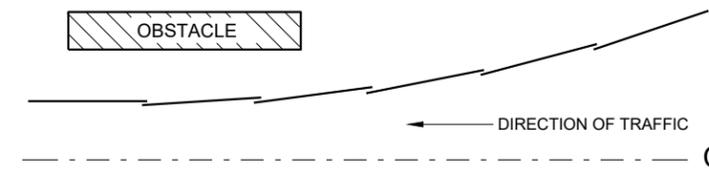


**POST BOLT TABLE**

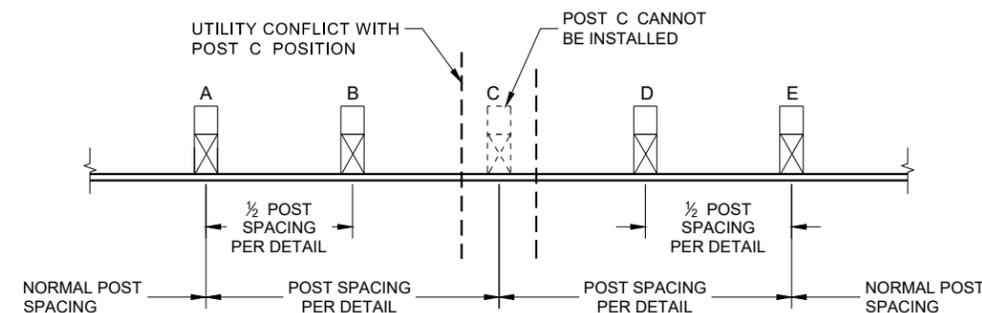
L	T (MIN.)
1 1/4"	1 1/8"
2"	1 3/4"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"



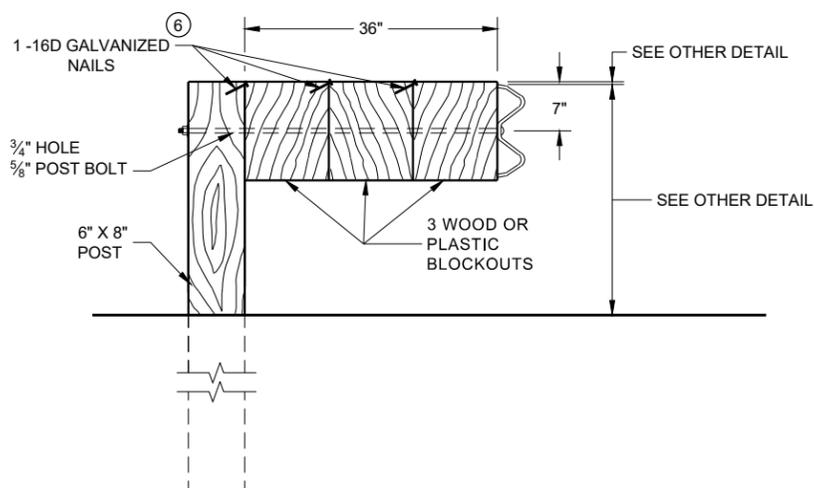
**ALTERNATE BOLT HEAD**



**PLAN VIEW  
BEAM LAPPING DETAIL**

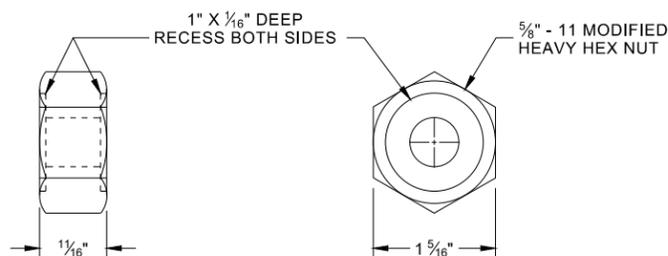


**POST DRIVING FOR CONTINUOUS  
UNDERGROUND OBSTRUCTION**

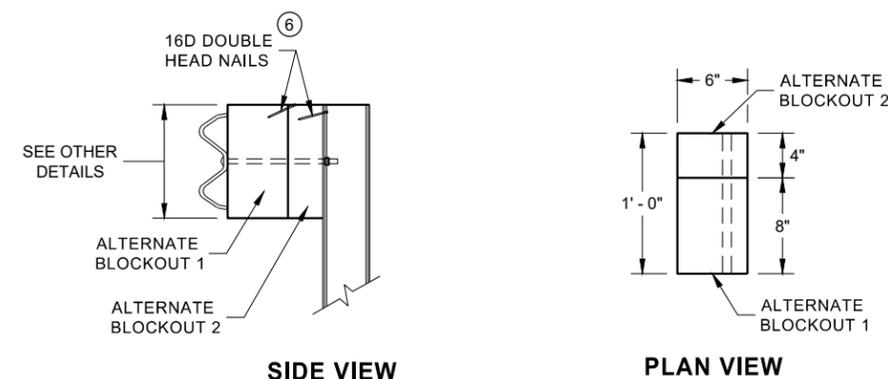


**DETAIL FOR 36" BLOCKOUT DEPTH**

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



**POST BOLT, SPLICE BOLT  
AND RECESS NUT**

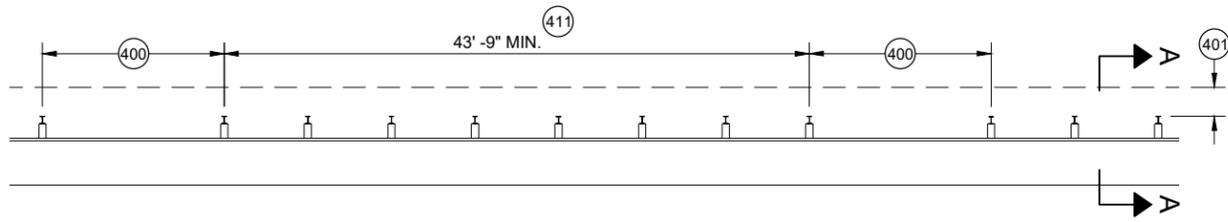


**ALTERNATE WOOD  
BLOCKOUT DETAIL**

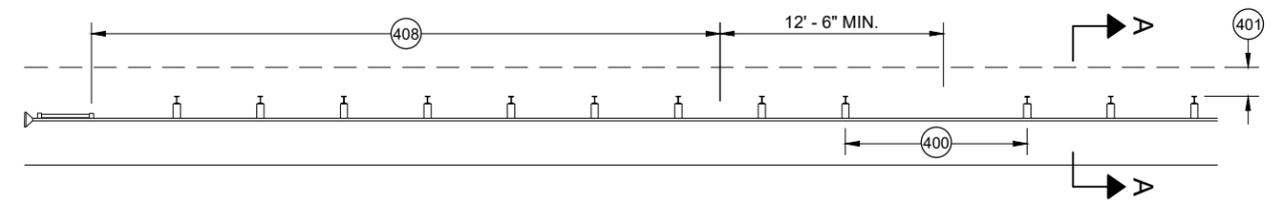
6 WHEN USING STEEL POST AND WOOD BLOCKOUTS, INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

**MIDWEST GUARDRAIL SYSTEM  
(MGS) GUARDRAIL**

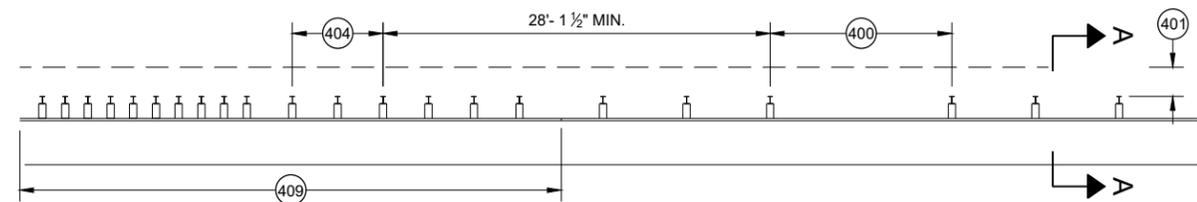
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



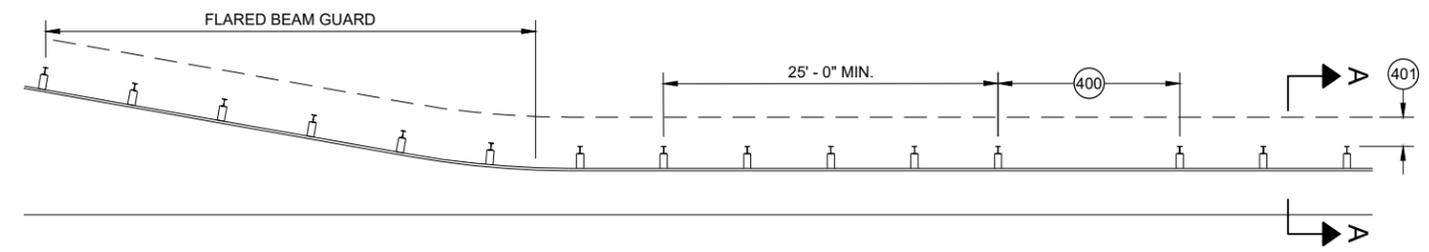
**MISSING POST IN MGS GUARDRAIL**



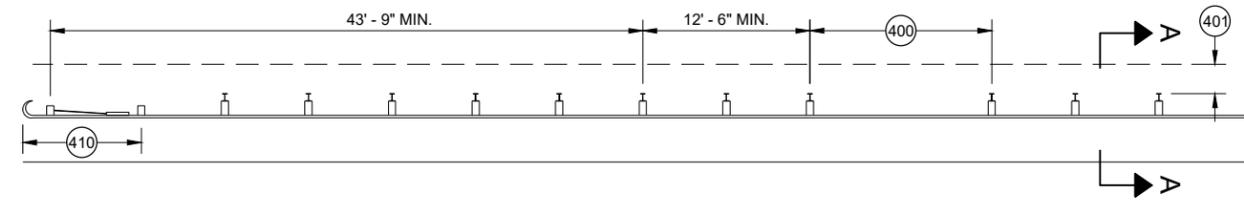
**MISSING POST IN MGS GUARDRAIL NEAR EAT**



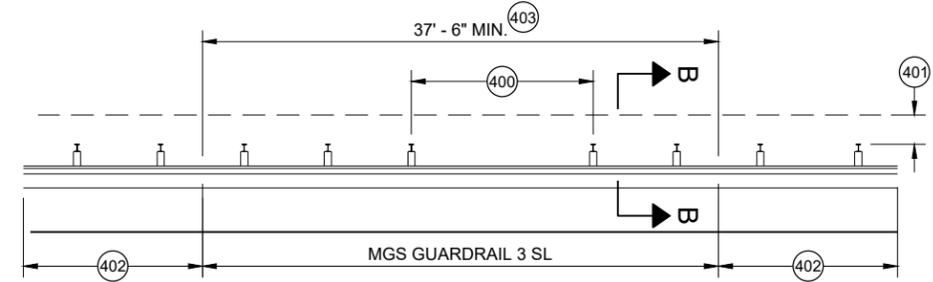
**MISSING POST IN MGS GUARDRAIL NEAR AN APPROACH TRANSITION**



**MISSING POST IN MGS GUARDRAIL NEAR FLARED BEAM GUARD**

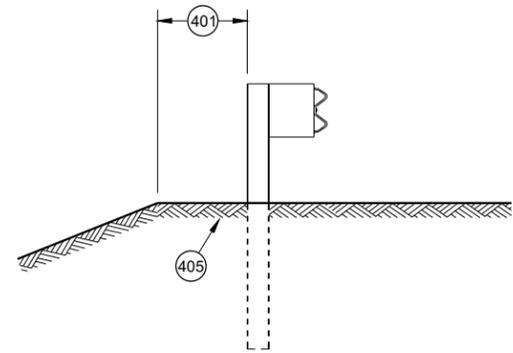


**MISSING POST IN MGS GUARDRAIL NEAR A TYPE 2 END TERMINAL**

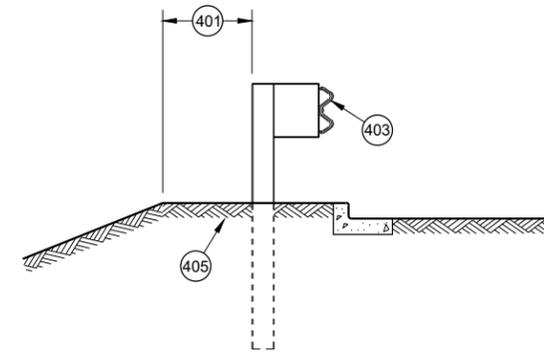


**MISSING POST IN SHORT SPAN MGS GUARDRAIL NEAR CURB (SL)**

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



**SECTION A - A**



**SECTION B - B**

<b>MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2021 DATE	/S/ Rodney Taylor ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
<small>FHWA</small>	

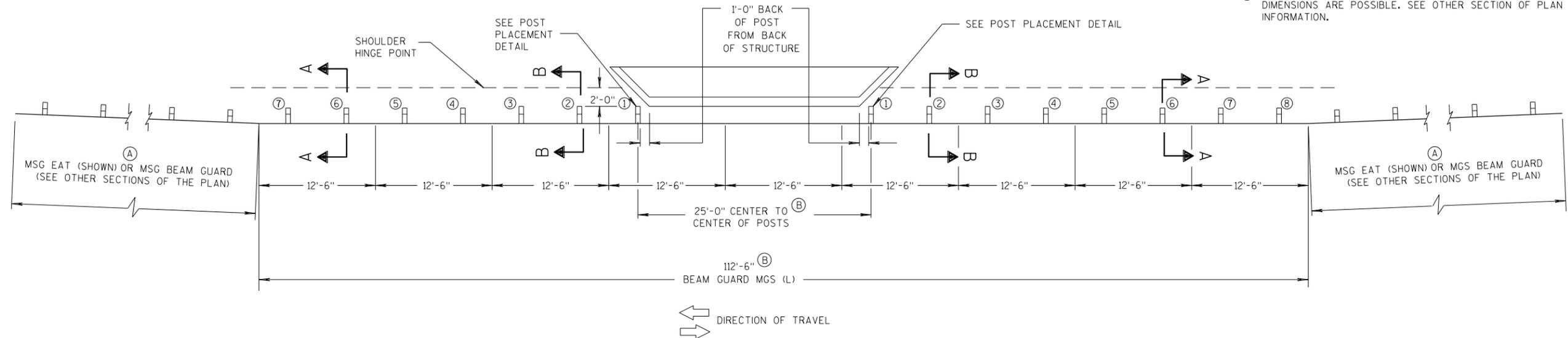
**GENERAL NOTES**

POSTS 1 THROUGH 3 ARE CRT POSTS.  
ALL OTHER POSTS SHALL BE WOOD OR STEEL.

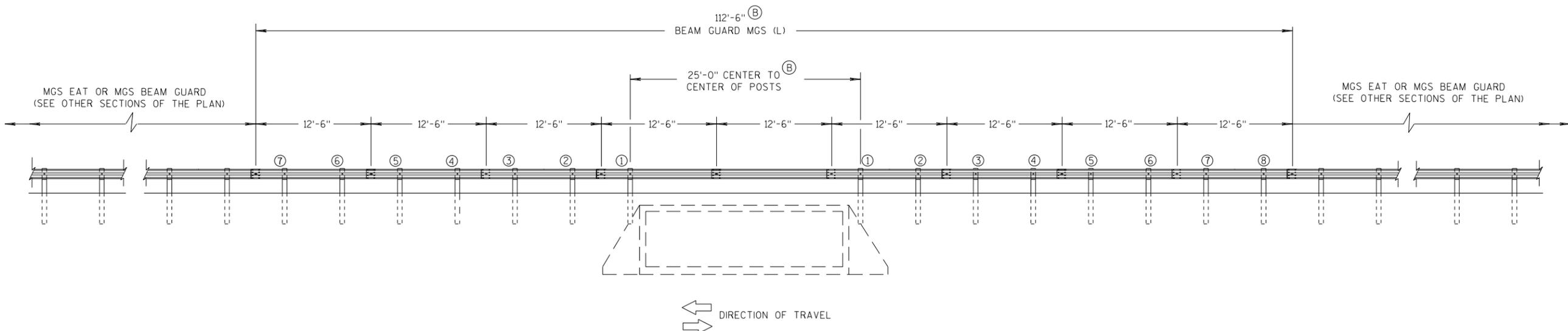
SEE SDD 14 B 42 FOR MORE DETAILS.

(A) FLARE FOR MGS EAT SHOWN, IF INSTALLING MGS NO FLARE NEEDED.

(B) VALUES SHOWN ON DRAWING REPRESENT THE MAXIMUM LENGTH. SHORTER DIMENSIONS ARE POSSIBLE. SEE OTHER SECTION OF PLAN FOR MORE INFORMATION.



**PLAN VIEW**



**ELEVATION VIEW**

**MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L) TWO-WAY TRAFFIC**

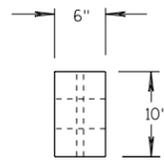
<p><b>MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L)</b></p>
<p>STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION</p>

6

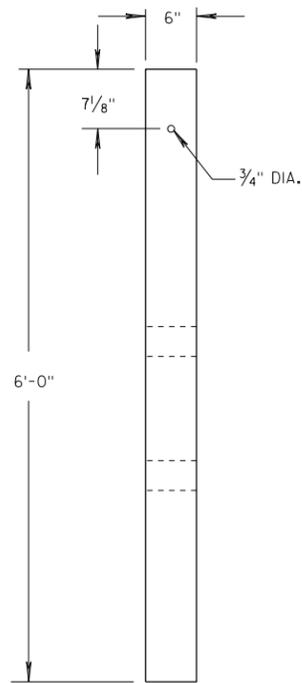
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S.D.D. 14 B 43-4a

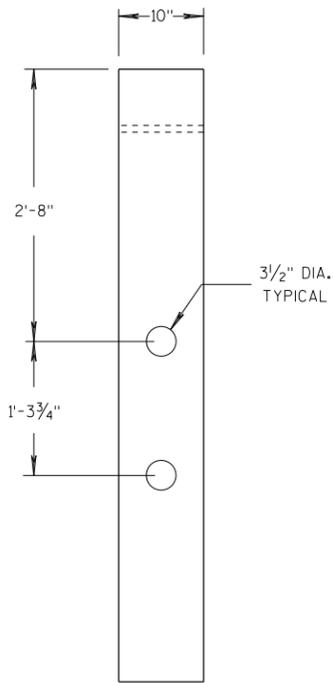
S.D.D. 14 B 43-4a



PLAN VIEW

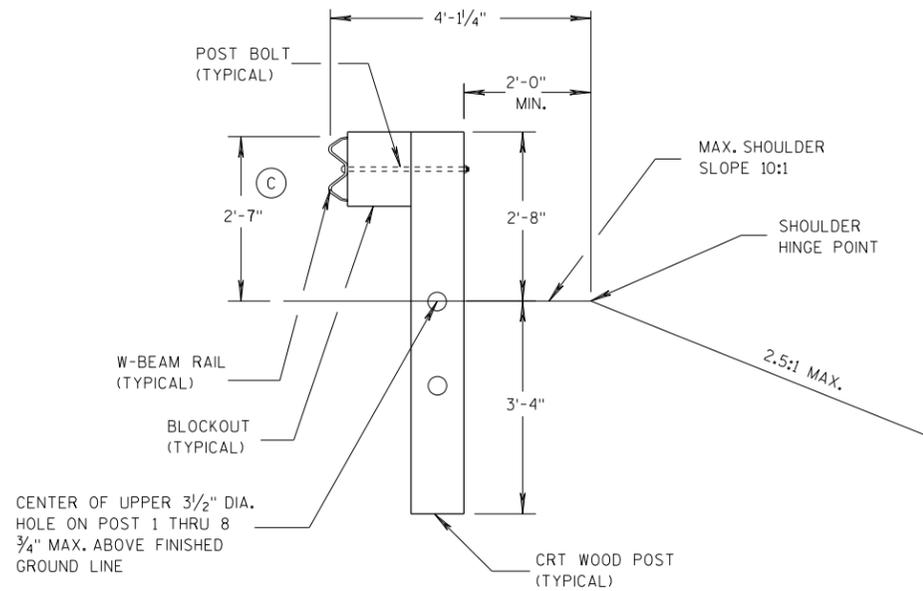


FRONT VIEW

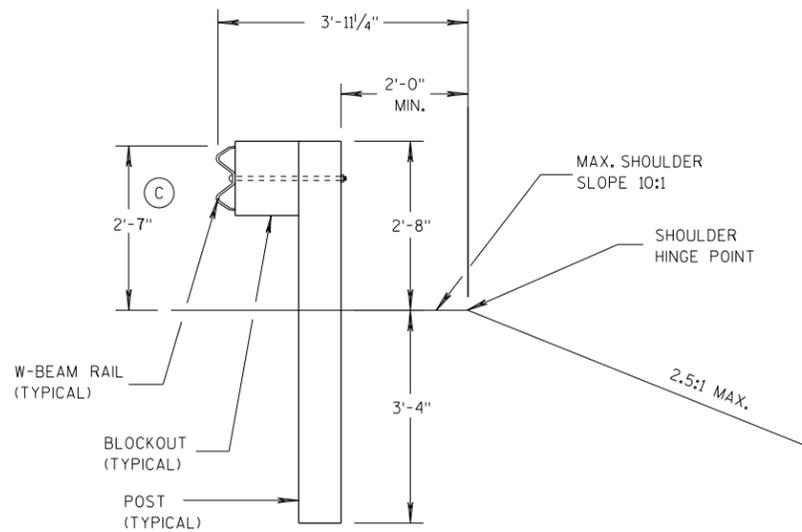


SIDE VIEW

CRT WOOD POST



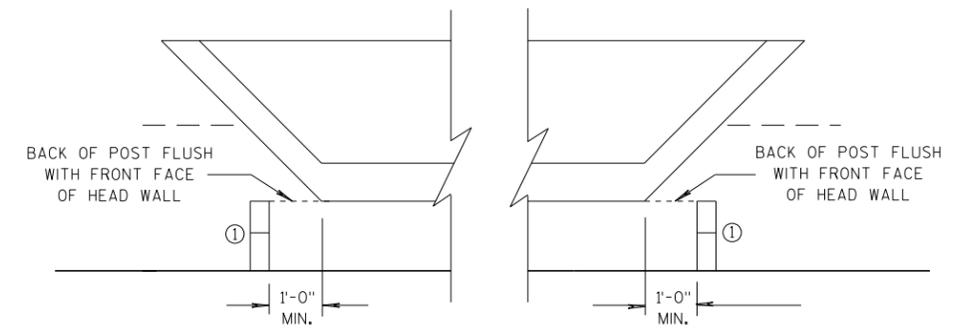
SECTION B-B  
POSTS NO. 1-3  
SEE OTHER DETAILS



SECTION A-A  
POSTS NO. 4-8  
SEE OTHER DETAILS

GENERAL NOTES

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



POST PLACEMENT DETAIL

MIDWEST GUARDRAIL SYSTEM  
LONG SPAN MGS (L)

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED	/s/ Rodney Taylor
07/2018	DATE
	ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA	

**GENERAL NOTES**

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

SEE SDD 14B42 FOR MORE INFORMATION.

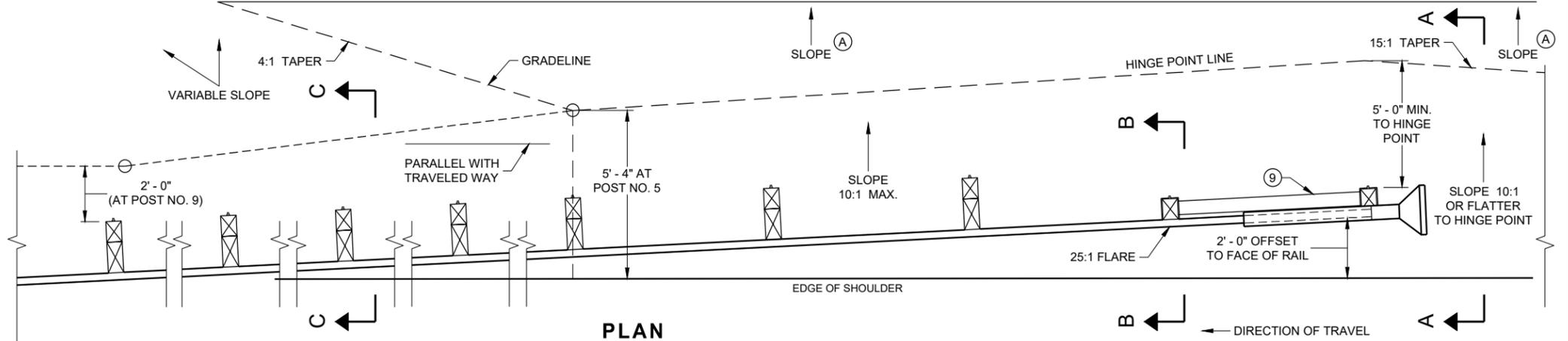
\* DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.

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

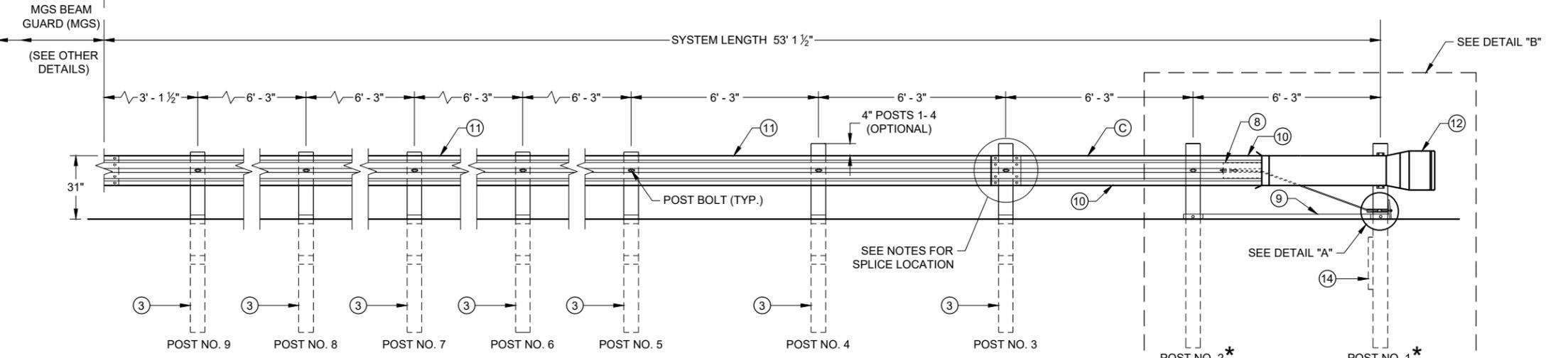
SEE MANUFACTURER'S DRAWING FOR SPLICE LOCATION, HARDWARE DIMENSIONS AND INSTALLATION INSTRUCTIONS.

THE CENTER OF THE UPPER 3 1/2" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE. WOOD BLOCKS ON POSTS NUMBERED 3 THROUGH 9 MAY BE ADJUSTED UP TO 3" ABOVE THE TOP OF POST.

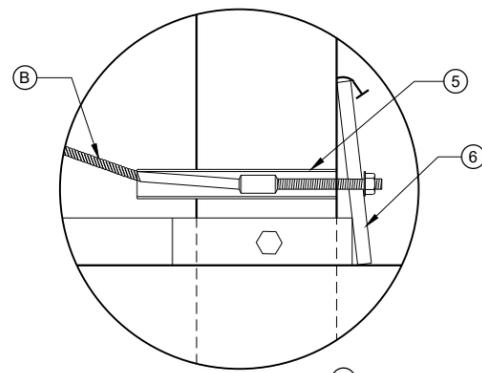
CLEAR ZONE LIMITS, EITHER AS SHOWN ELSEWHERE IN THE PLANS OR, IF NOT SHOWN ELSEWHERE IN THE PLANS, 15 FEET BEYOND THE HINGE POINT LINE



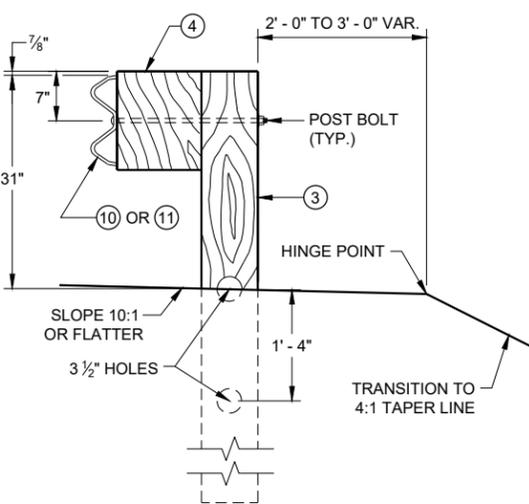
**PLAN**



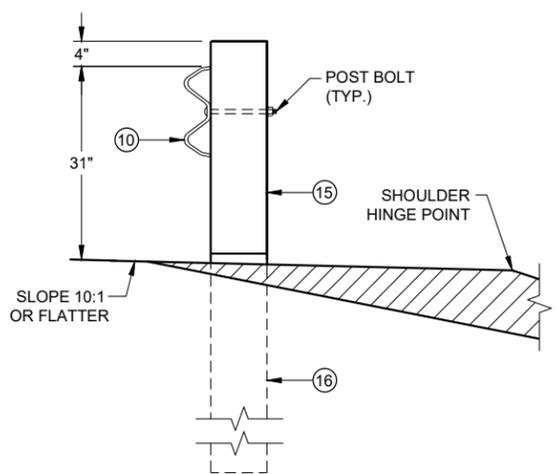
**ELEVATION**



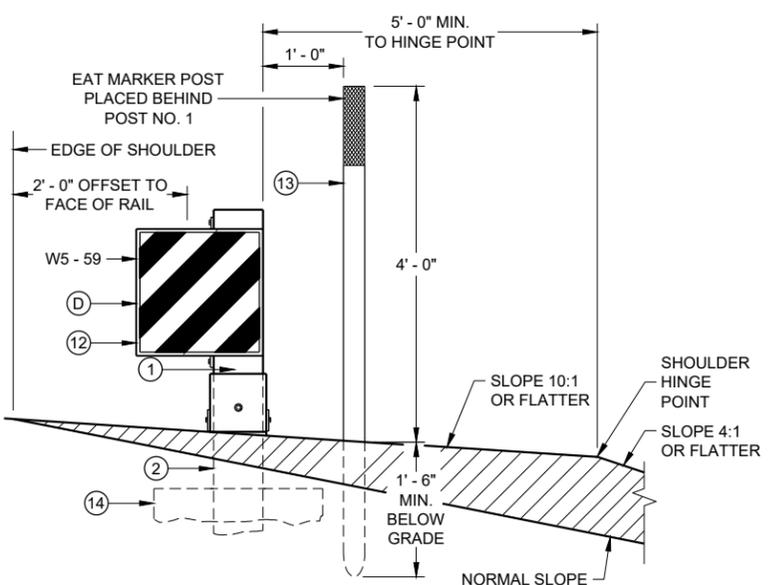
**DETAIL "A"**



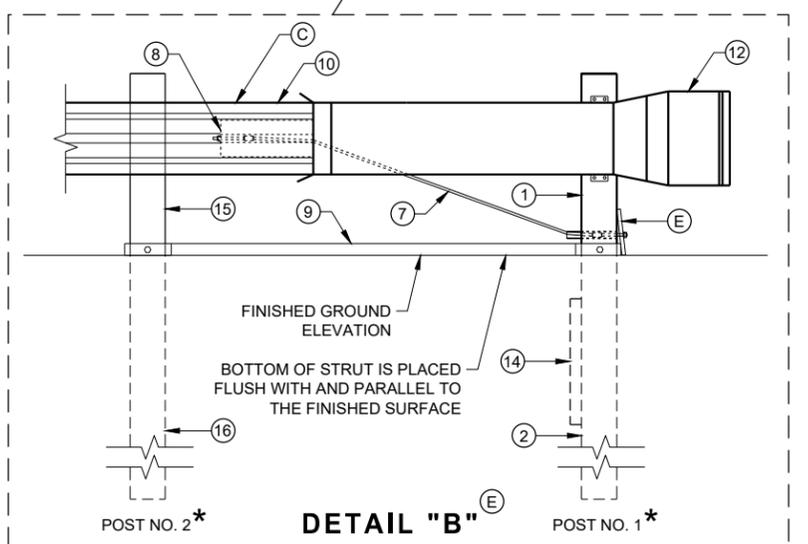
**SECTION C - C  
TYPICAL AT POST NOS. 3 - 9**



**SECTION B - B  
TYPICAL AT POST NO. 2\***



**SECTION A - A  
TYPICAL AT POST NO. 1\***



**DETAIL "B"**

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

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

6

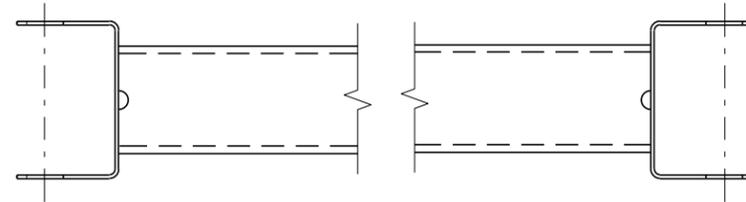
6

SDD 14B44 - 04a

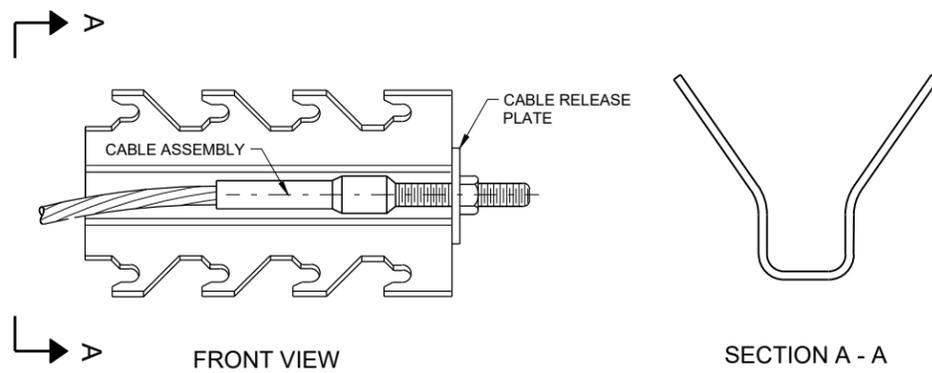
SDD 14B44 - 04a

**BILL OF MATERIALS**

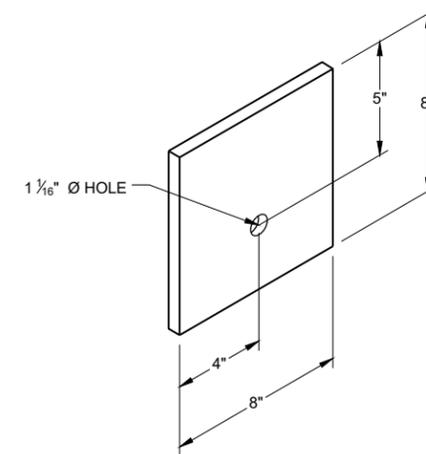
PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.
①	UPPER POST NO. 1 6" X 6" TUBE
②	LOWER POST NO. 1
③	WOOD CRT
④	WOOD BLOCKOUT
⑤	PIPE SLEEVE
⑥	BEARING PLATE
⑦	BCT CABLE ASSEMBLY
⑧	ANCHOR CABLE BOX
⑨	GROUND STRUT
⑩	PERFORATED W-BEAM RAIL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



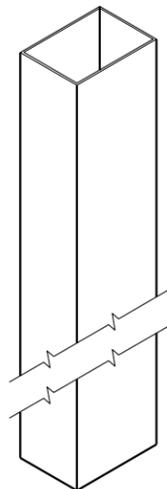
**GENERIC GROUND STRUT** ⑨ ⑤



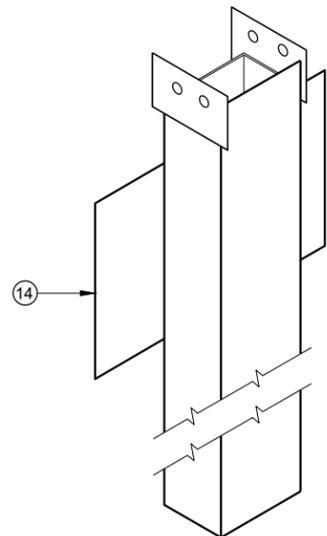
**GENERIC ANCHOR CABLE BOX** ⑨ ⑤



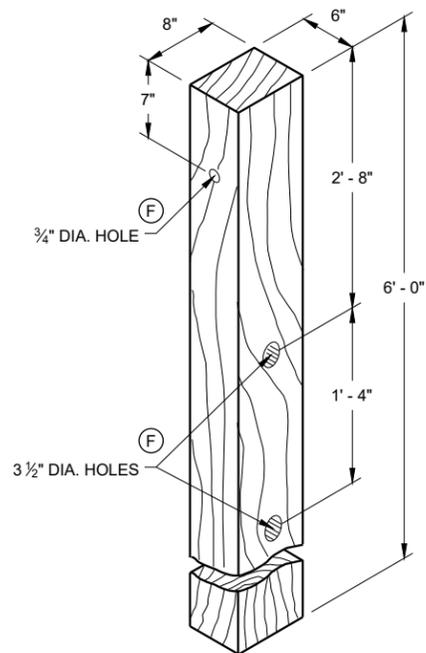
**BEARING PLATE** ⑥ ⑤



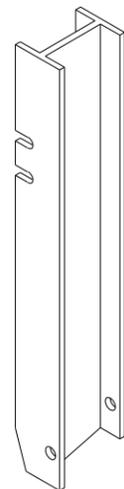
UPPER POST NO. 1 <sup>(1)</sup> (E)



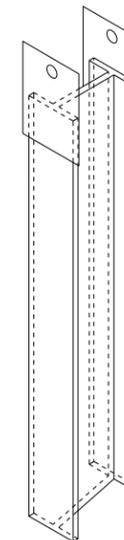
LOWER POST NO. 1 <sup>(2)</sup> (E)



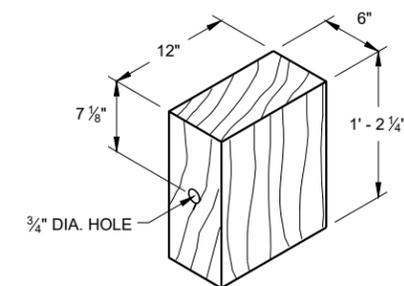
WOOD CRT POST <sup>(3)</sup> (E)  
POSTS NUMBER 3-9



UPPER POST NO. 2 <sup>(15)</sup> (E)

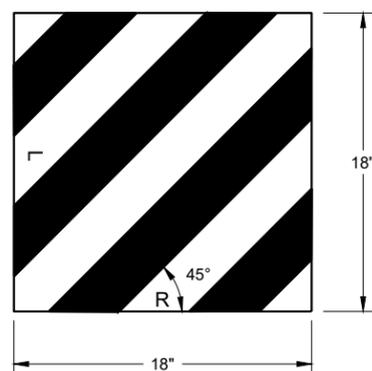


LOWER POST NO. 2 <sup>(16)</sup> (E)



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

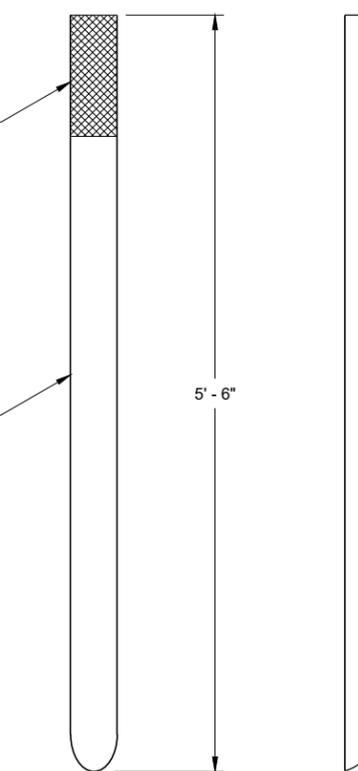
6



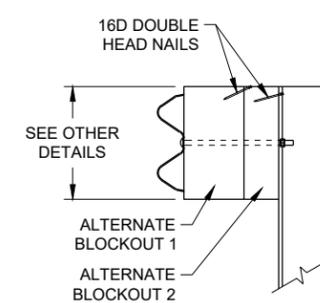
W5 - 59  
REFLECTIVE SHEETING DETAIL <sup>(E)</sup>

TYPE H  
YELLOW REFLECTIVE  
SHEETING 3" X 9".  
SEE STANDARD  
SPECIFICATION 637.

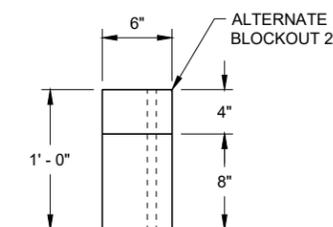
E.A.T. MARKER  
POST (YELLOW)



FRONT VIEW SIDE VIEW  
E.A.T. MARKER POST <sup>(13)</sup>



SIDE VIEW



TOP VIEW

ALTERNATE WOOD  
BLOCKOUT DETAIL

6

SDD 14B44 - 04c

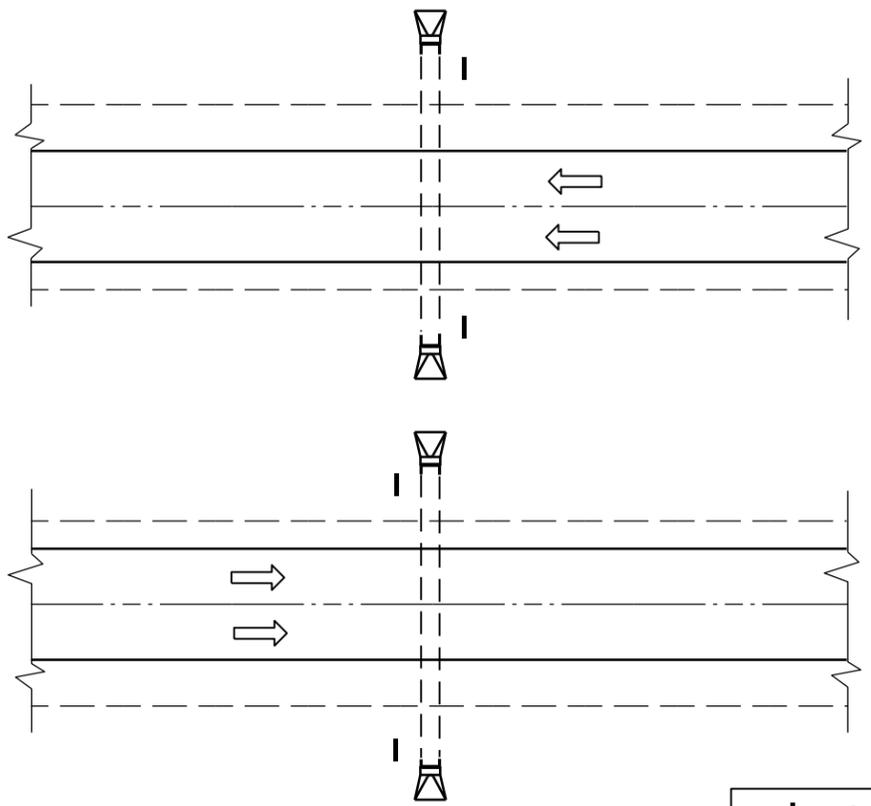
SDD 14B44 - 04c

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

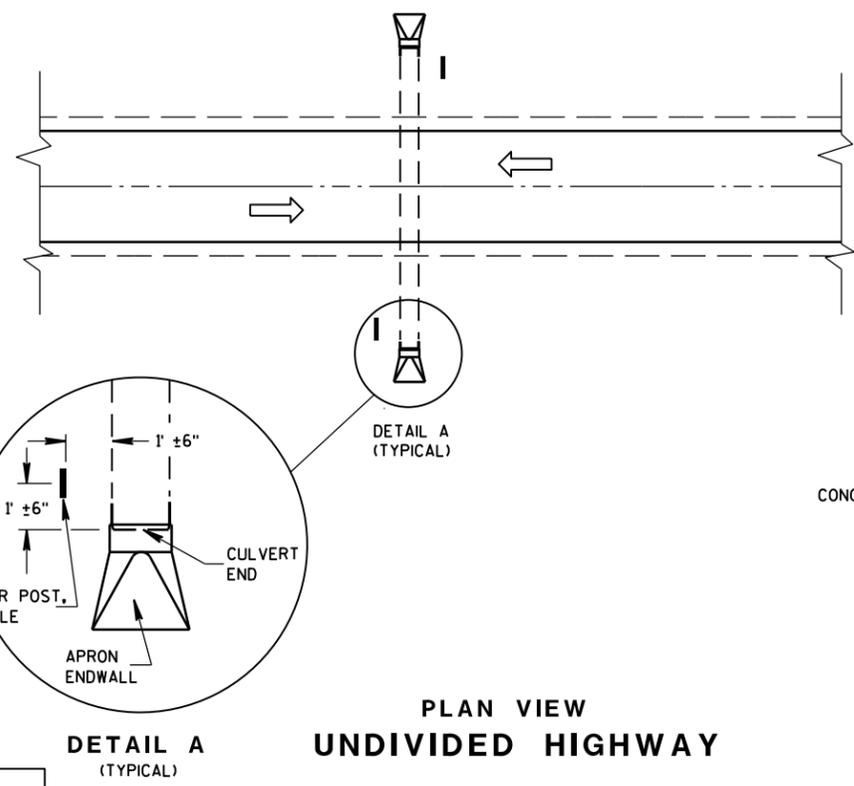
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

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

FHWA

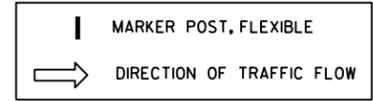


PLAN VIEW  
DIVIDED HIGHWAY



PLAN VIEW  
UNDIVIDED HIGHWAY

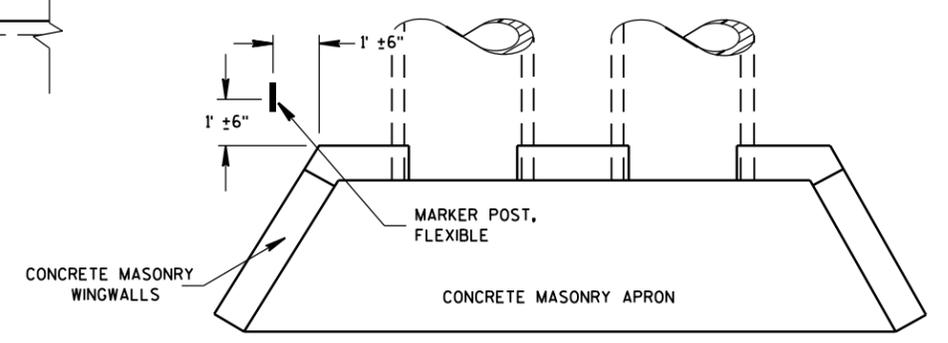
DETAIL A  
(TYPICAL)



FLEXIBLE MARKER POST LOCATION

GENERAL NOTES

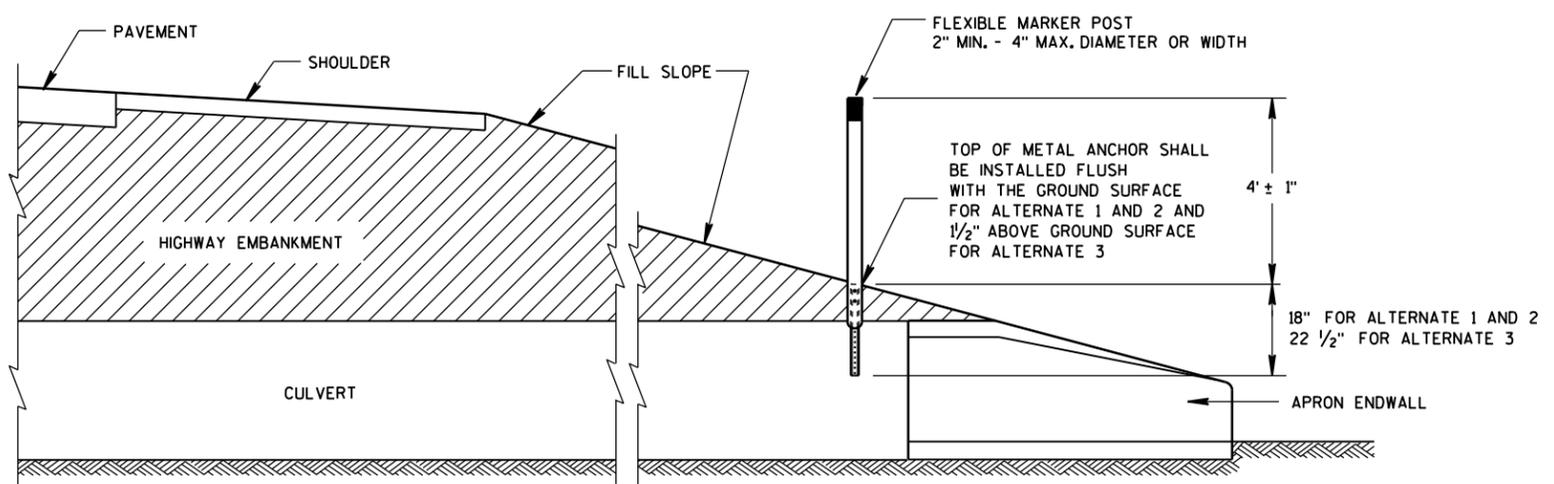
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



PLAN VIEW  
CONCRETE MASONRY ENDWALLS FOR  
CULVERT PIPE AND PIPE ARCH

6

6

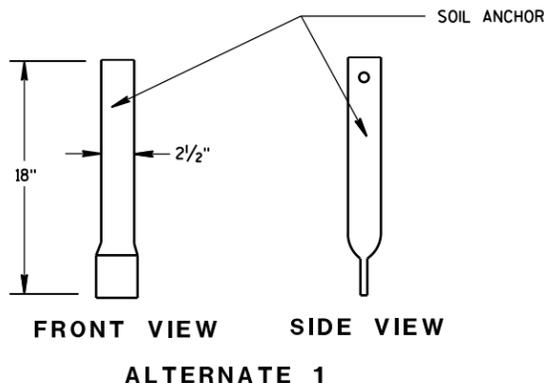
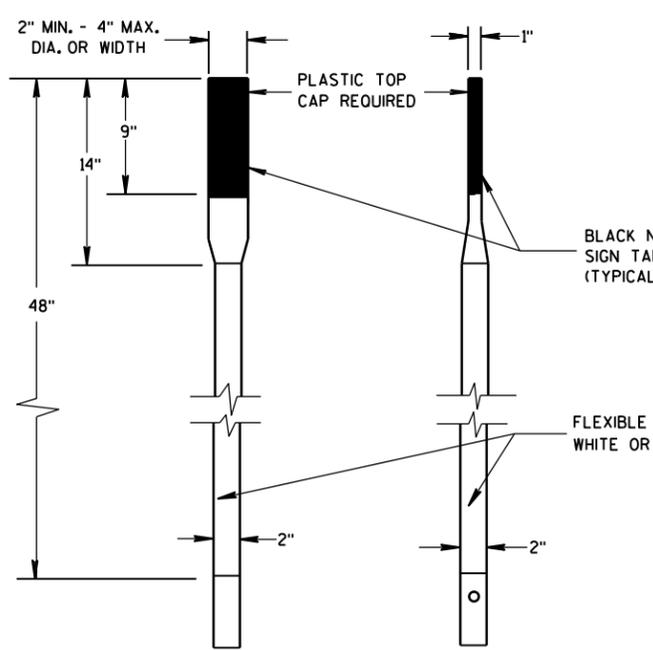


CROSS SECTION  
FLEXIBLE MARKER POST

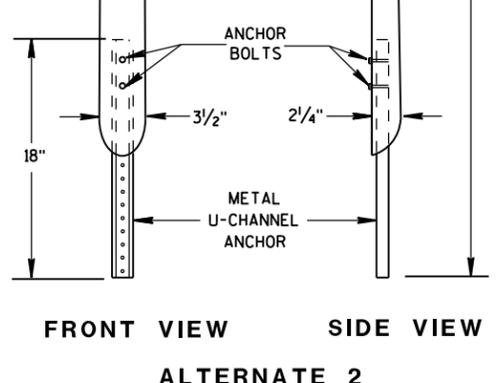
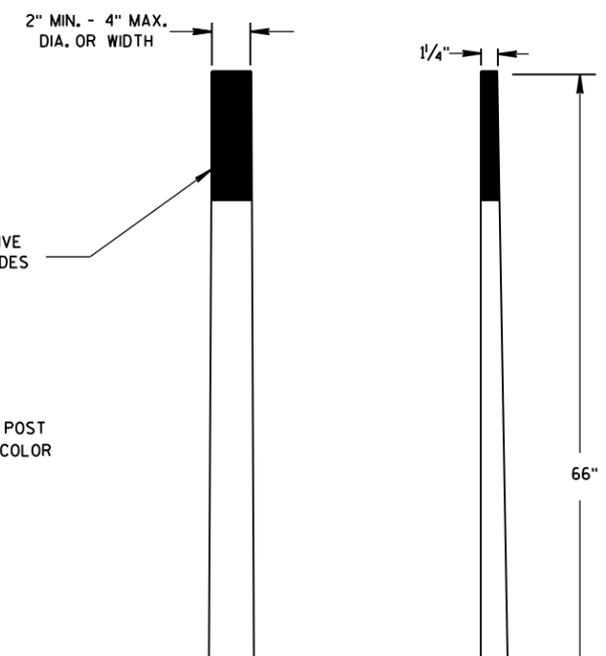
FLEXIBLE MARKER POST  
FOR CULVERT END  
  
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

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

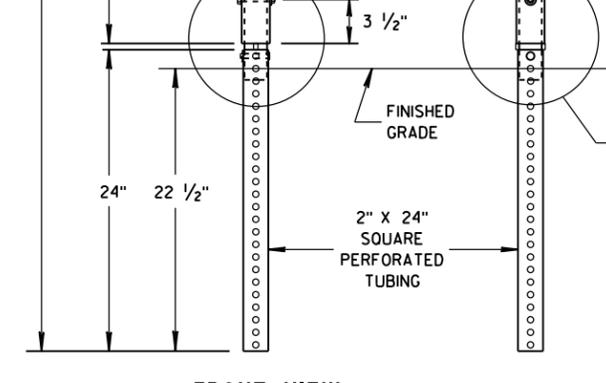
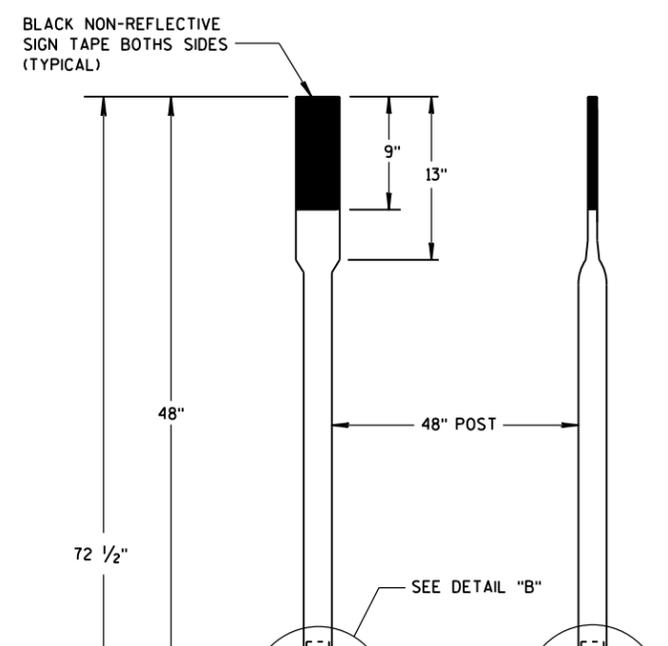
S.D.D. 15 A 3-2a



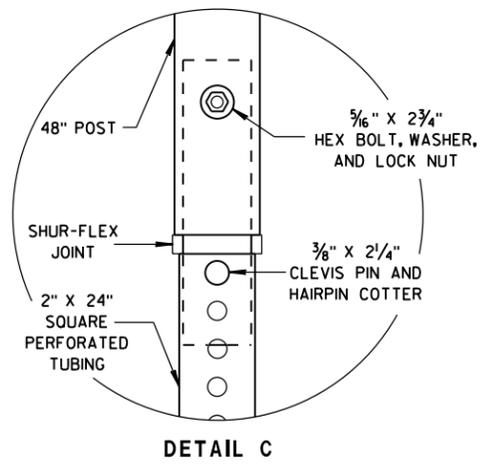
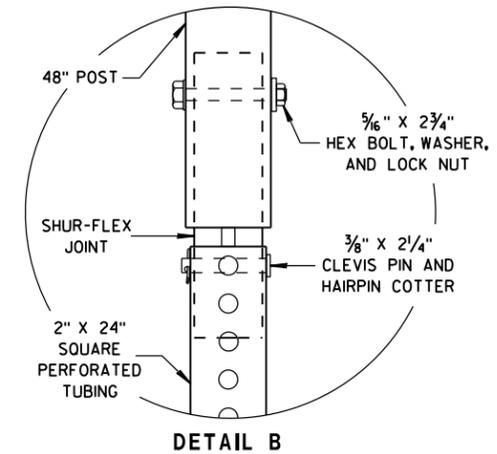
FRONT VIEW SIDE VIEW  
ALTERNATE 1



FRONT VIEW SIDE VIEW  
ALTERNATE 2

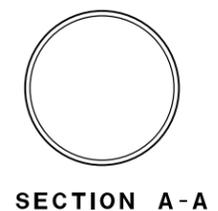


FRONT VIEW SIDE VIEW  
ALTERNATE 3

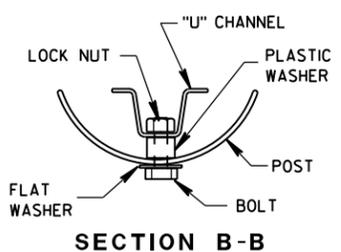


DETAIL B

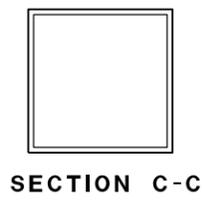
DETAIL C



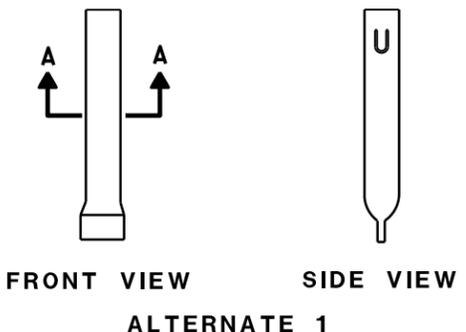
SECTION A-A



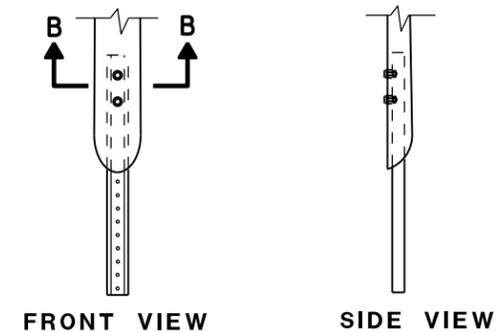
SECTION B-B



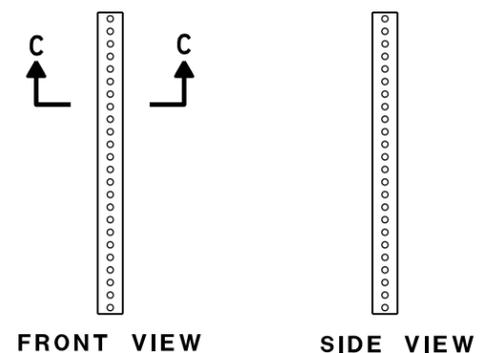
SECTION C-C



FRONT VIEW SIDE VIEW  
ALTERNATE 1



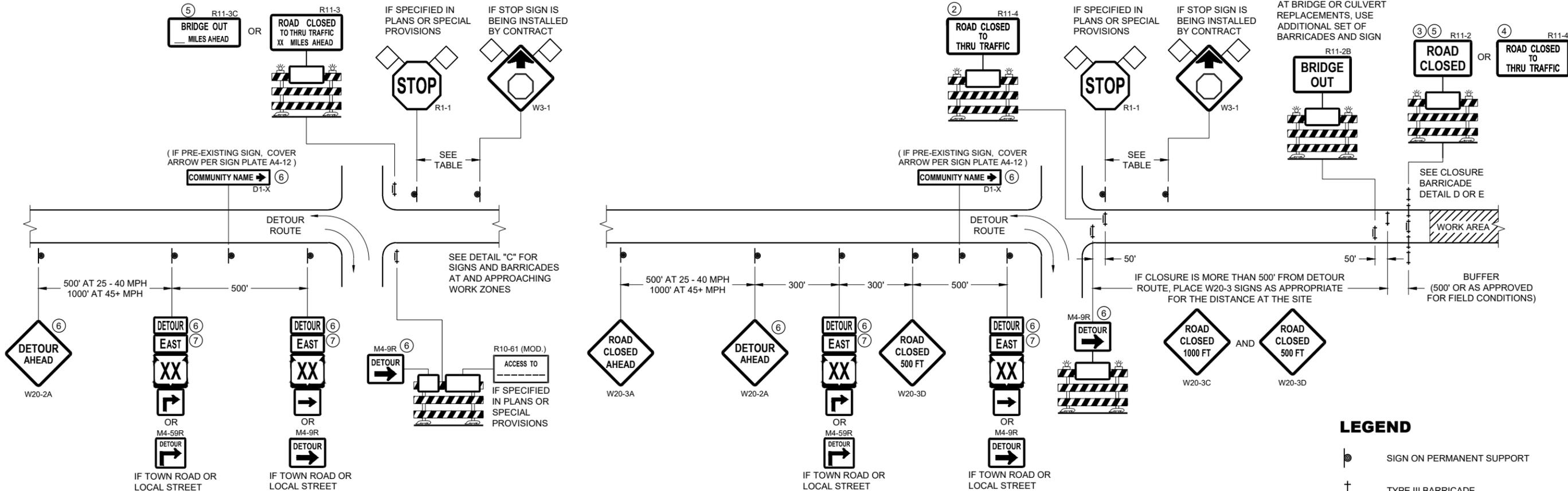
FRONT VIEW SIDE VIEW  
ALTERNATE 2



FRONT VIEW SIDE VIEW  
ALTERNATE 3

**FLEXIBLE MARKER POST ANCHORS**

<b>FLEXIBLE MARKER POST FOR CULVERT END</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 10/1/2012 DATE	/S/ Travis Feltes STATE TRAFFIC ENGINEER OF DESIGN
FHWA	



**DETAIL A  
MAINLINE CLOSURE WITH POSTED DETOUR**

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

**DETAIL B  
MAINLINE CLOSURE WITH POSTED DETOUR**

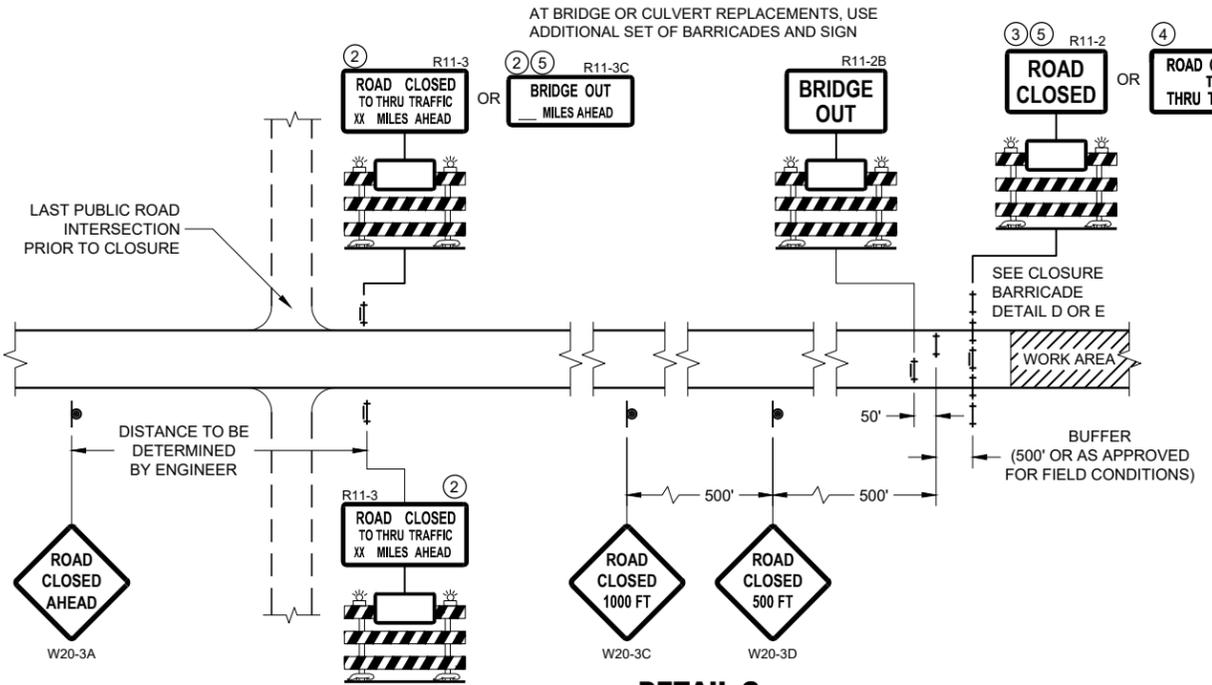
WORK ZONE LESS THAN 1/2 MILE FROM  
DETOUR ROUTE ( 1000 FEET IF URBAN )

**LEGEND**

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA
- FLAGS, 16" X 16" MIN. (ORANGE)

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

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



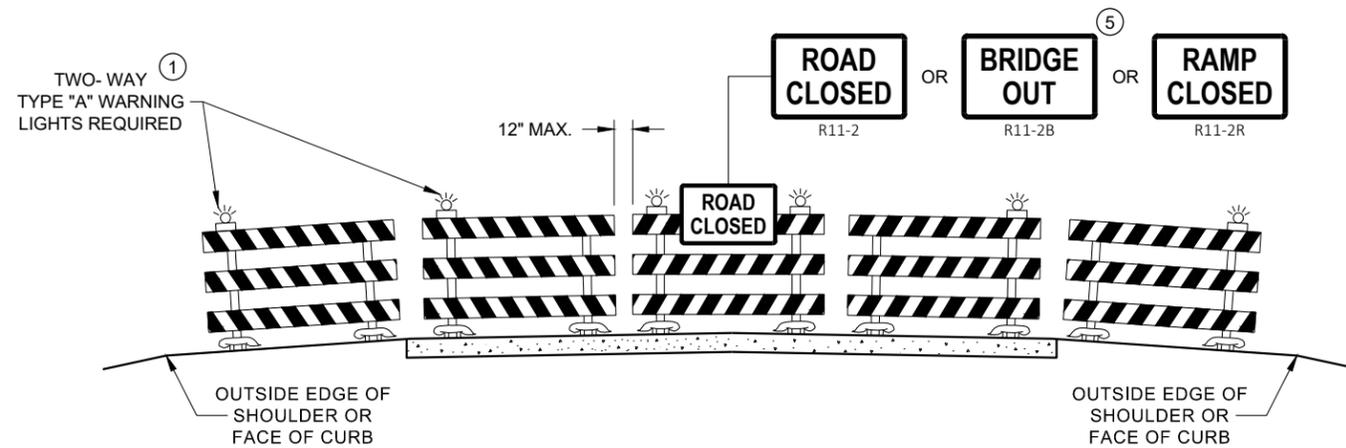
**DETAIL C  
MAINLINE CLOSURE, NO POSTED DETOUR**

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

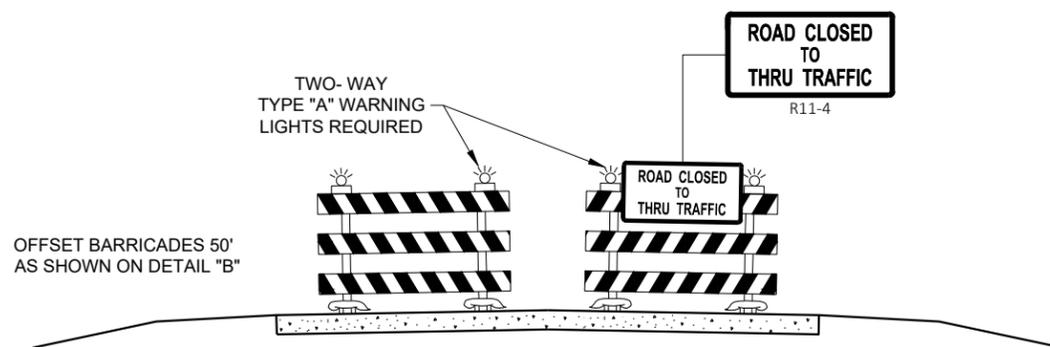
**BARRICADES AND SIGNS  
FOR MAINLINE CLOSURES**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
February 2020 /S/ Andrew Heidtke  
DATE DATE WORK ZONE ENGINEER  
FHWA



**DETAIL D  
ROAD CLOSURE BARRICADE DETAIL  
APPROACH VIEW**



**DETAIL E  
LANE CLOSURE BARRICADE DETAIL  
APPROACH VIEW**

SEE SDD 15C2 - SHEET "a" FOR LEGEND

**GENERAL NOTES**

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

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

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

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

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

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

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

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

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

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:

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

- ① TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8 FOOT LIGHT SPACING).
- ② THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT AN INTERSECTION.
- ③ FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "D".
- ④ FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "E".
- ⑤ FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11 - 2 AND R11 - 3 SIGNS.
- ⑥ INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.
- ⑦ "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

**BARRICADES AND SIGNS  
FOR  
VARIOUS CLOSURES**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
February 2020 /S/ Andrew Heidtke  
DATE WORK ZONE ENGINEER

### LEGEND

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

### GENERAL NOTES

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

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

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

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

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

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

SIGN SIZES SHALL BE AS FOLLOWS:

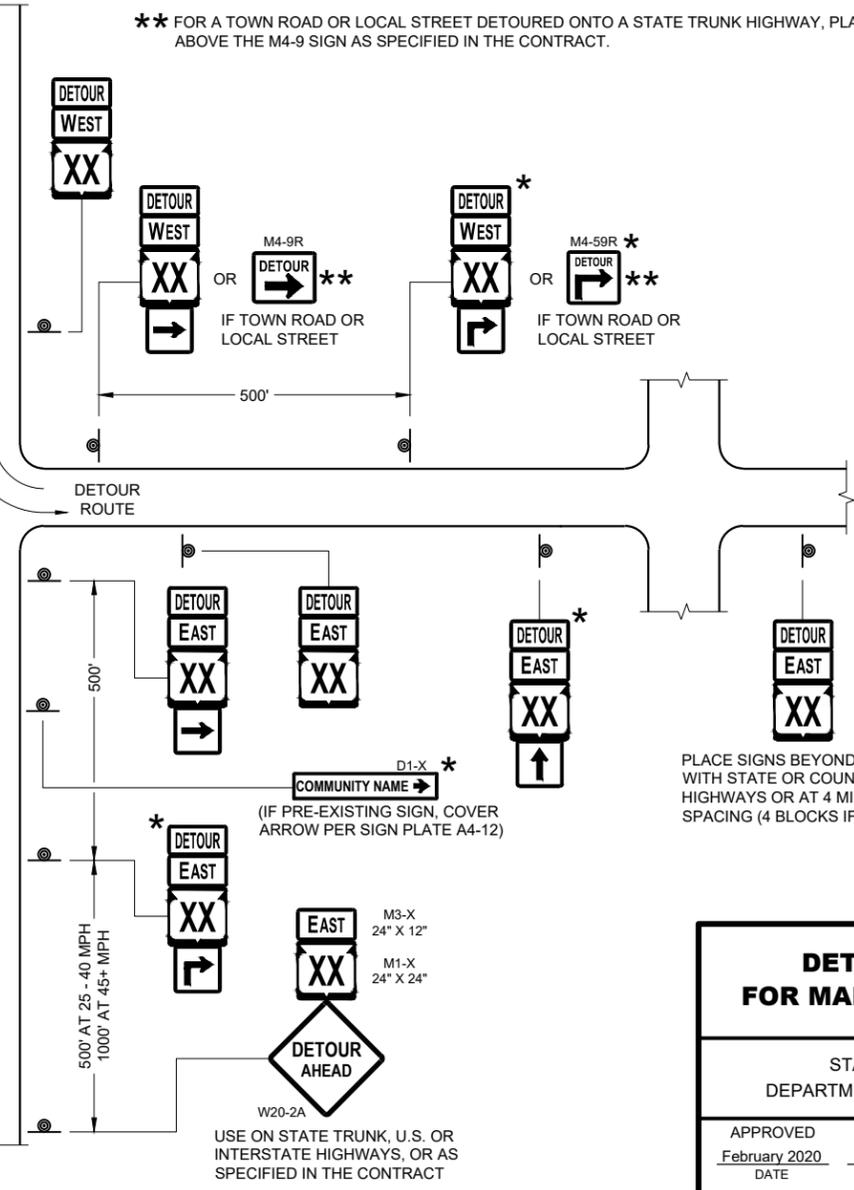
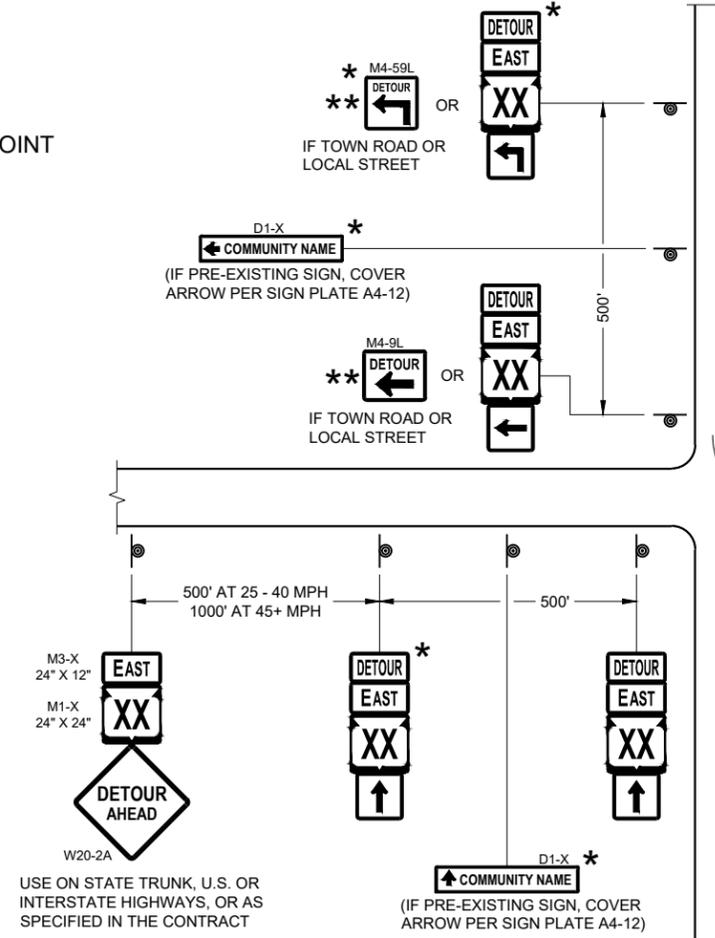
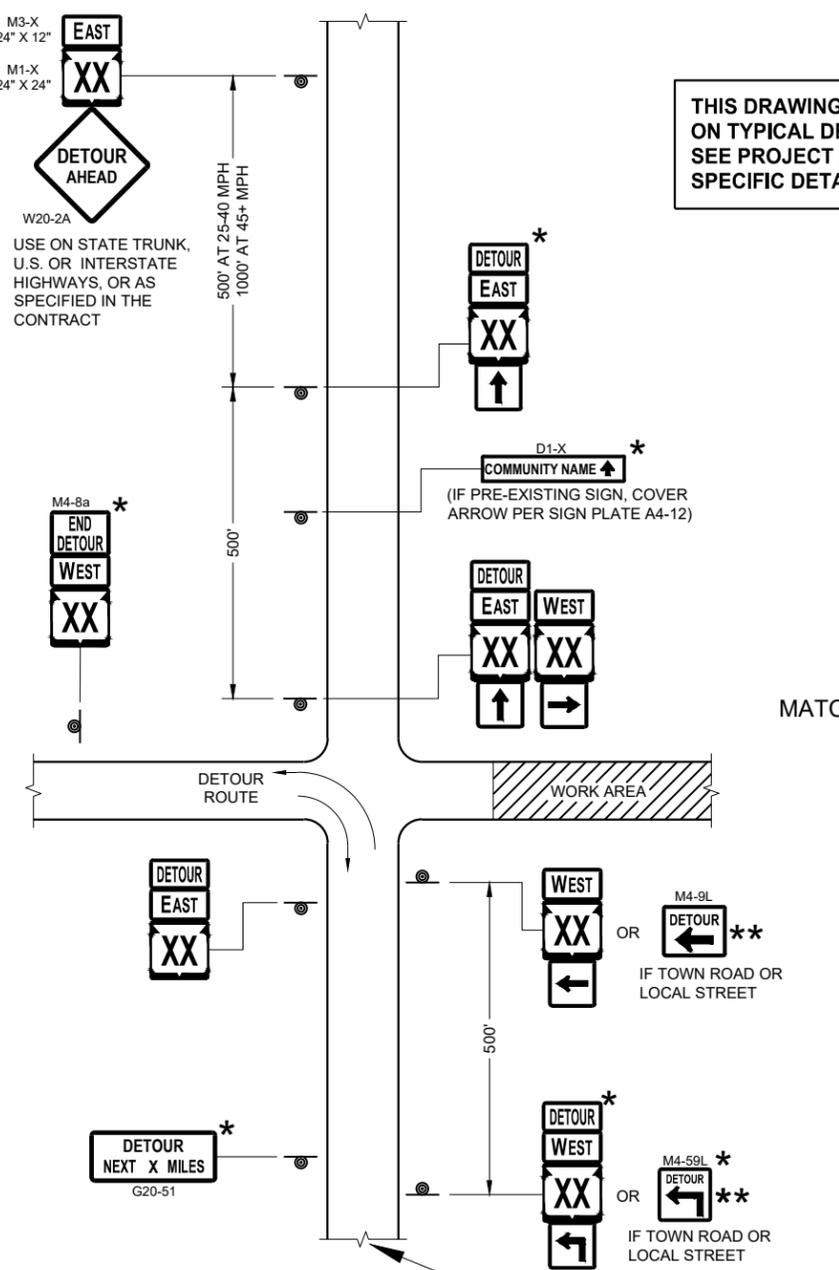
- M3-X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4-8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1-4, M1-5A AND M1-6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS)
- M05-1 AND M06-1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING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

- \* OPTIONAL SIGNS. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS.
- \*\* FOR A TOWN ROAD OR LOCAL STREET DETOURED ONTO A STATE TRUNK HIGHWAY, PLACE A ROAD NAME PLAQUE ABOVE THE M4-9 SIGN AS SPECIFIED IN THE CONTRACT.

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

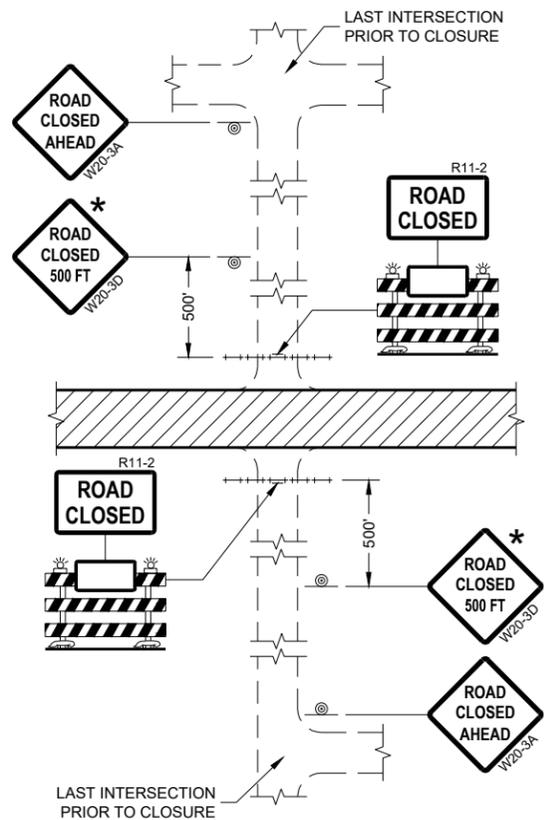
MATCH POINT

### DETAIL F DETOUR SIGNING

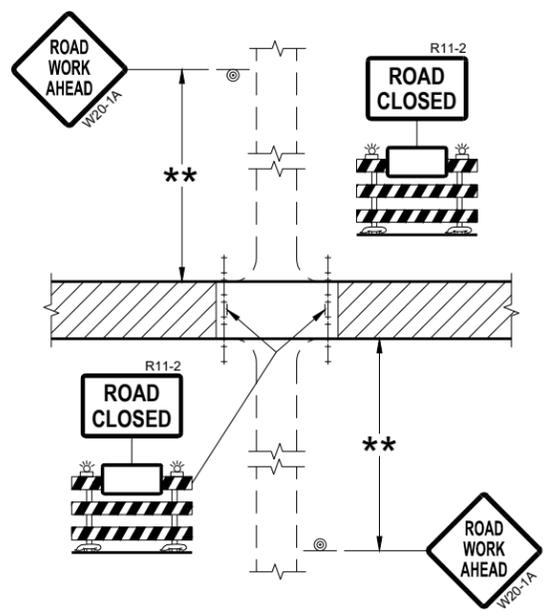


SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS AND DETAIL A OR B ON SDD SHEET 15C02 - SHEET "a"

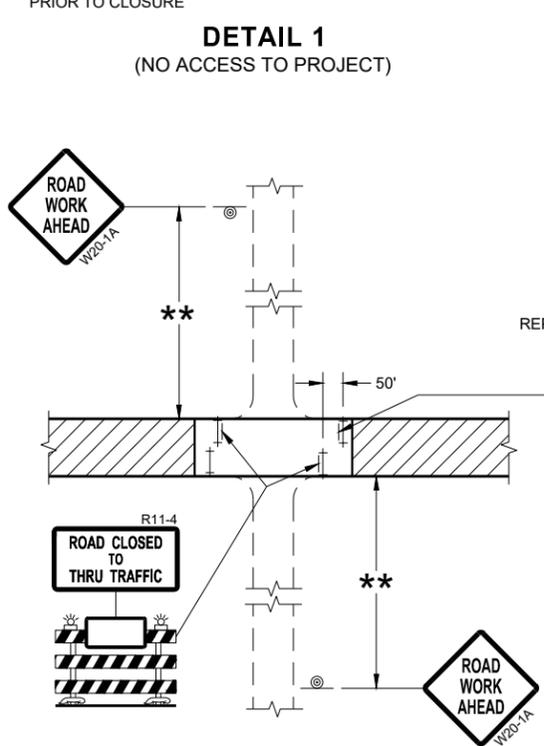
DETOUR SIGNING FOR MAINLINE CLOSURES	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED February 2020 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	



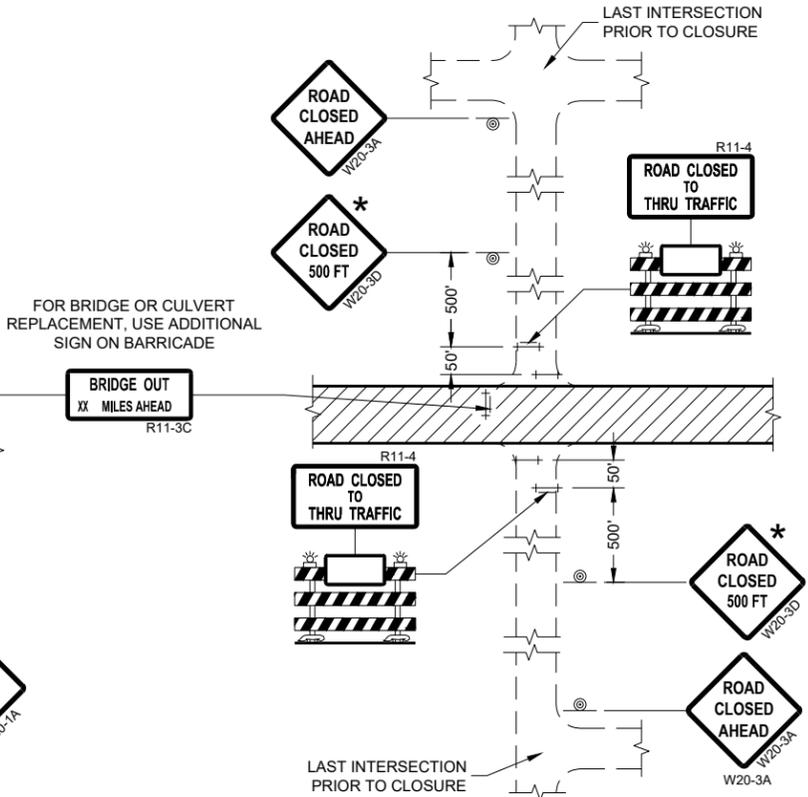
**DETAIL 1**  
(NO ACCESS TO PROJECT)



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



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



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

**GENERAL NOTES**

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

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

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

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

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

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

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

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

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

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

- \* OMIT THE "ROAD CLOSED 500 FT." SIGN IF THE LAST INTERSECTION IS 500 FEET OR LESS FROM THE WORK ZONE.
- \*\* 500' MAX. OR AT LAST INTERSECTION, WHICHEVER IS CLOSEST.

**LEGEND**

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

**BARRICADES AND SIGNS  
FOR  
SIDEROAD CLOSURES**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

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

FHWA

**GENERAL NOTES**

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

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

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

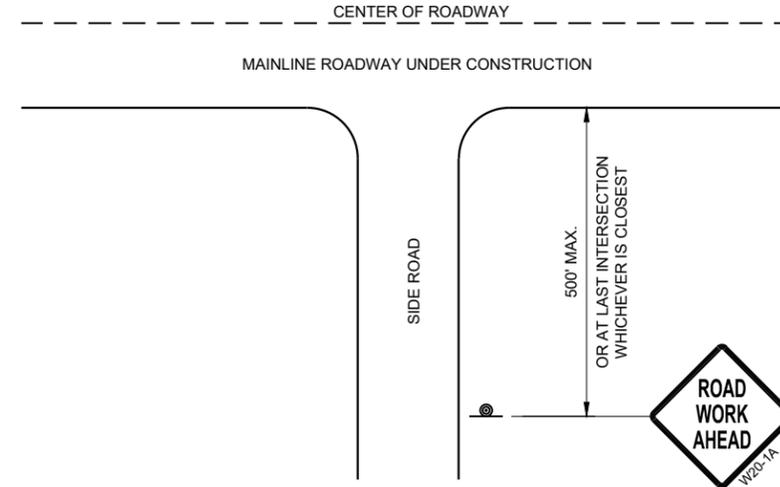
SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

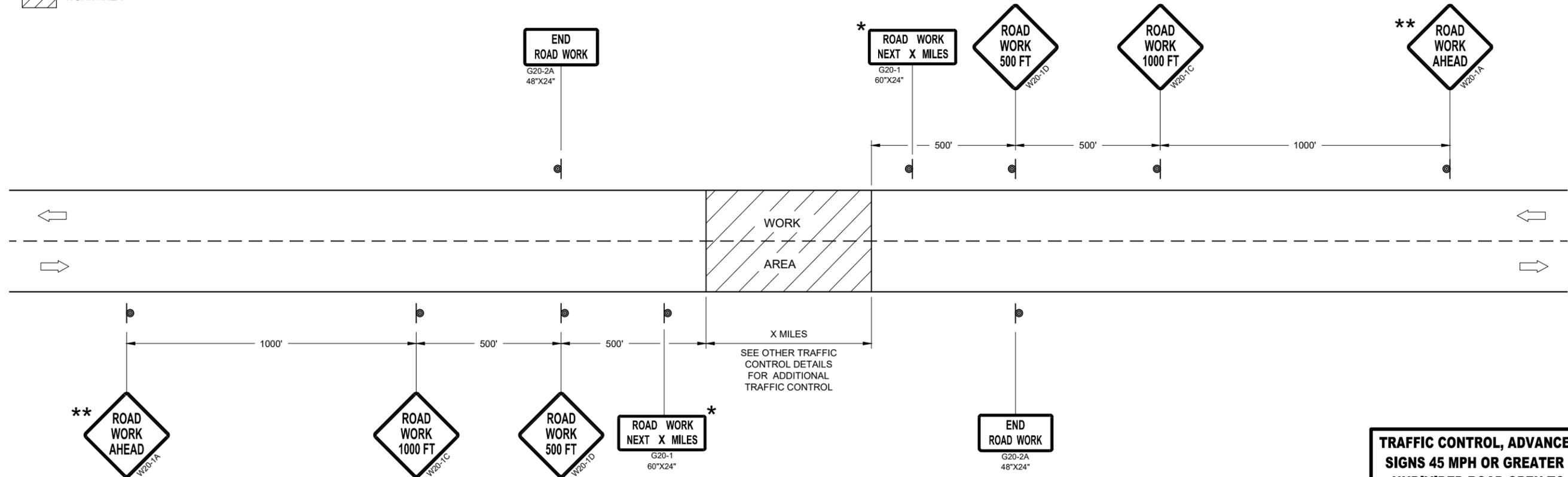
- \* OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS
- \*\* PLACE AN ADDITIONAL W20-1A "ROAD WORK AHEAD" SIGN IF WORK AREA WITHIN THE PROJECT IS SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA.

**LEGEND**

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



**TYPICAL SIDE ROAD APPROACH  
WARNING SIGN DETAIL**



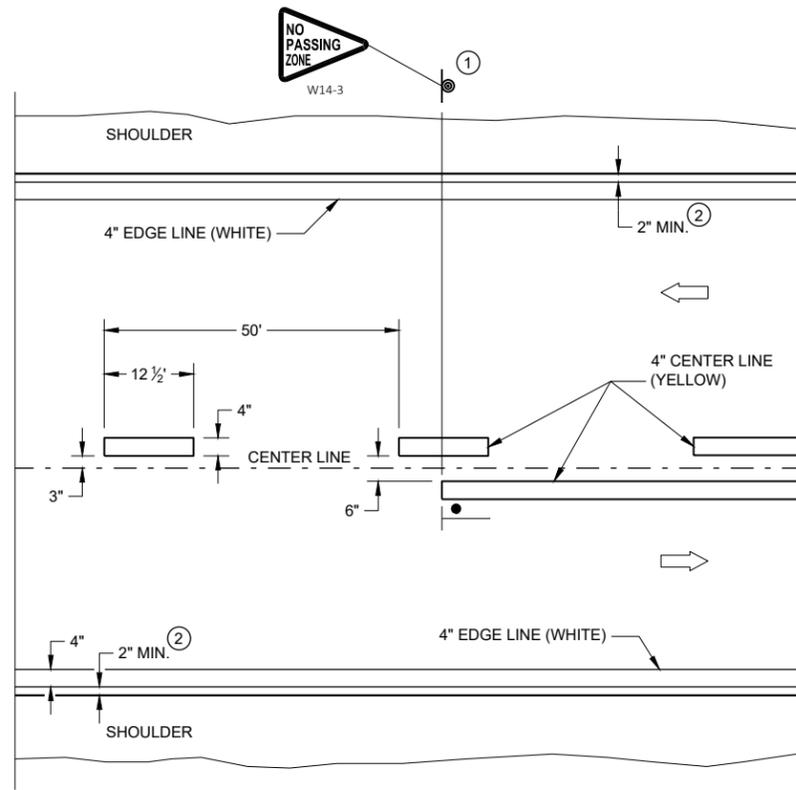
**TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45MPH OR GREATER**

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

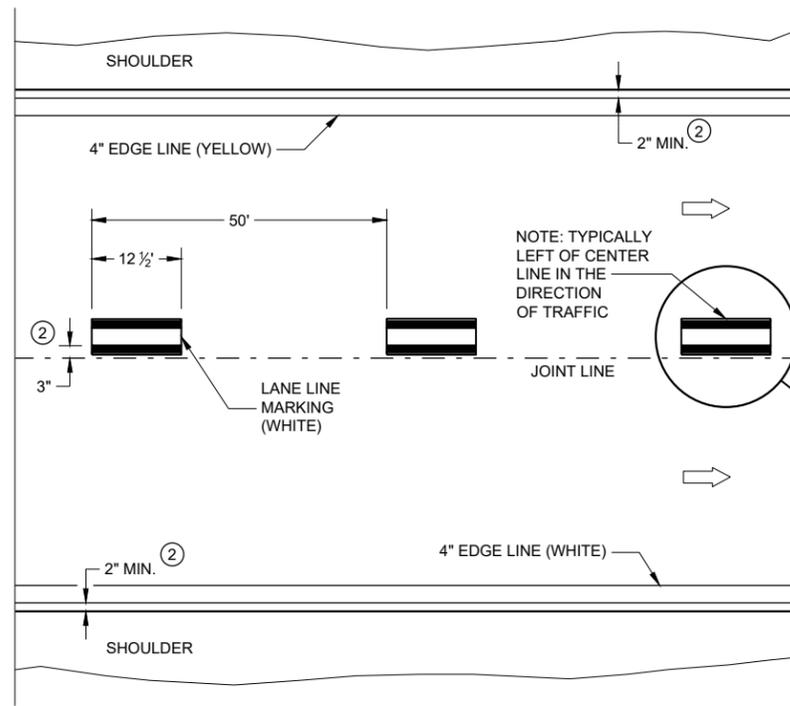
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

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

FHWA

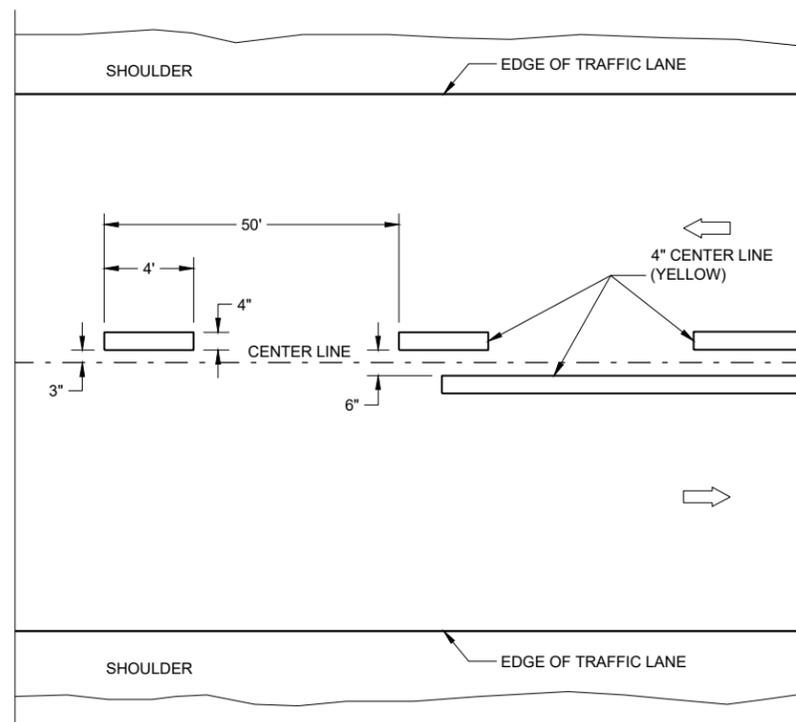


**TWO WAY TRAFFIC**

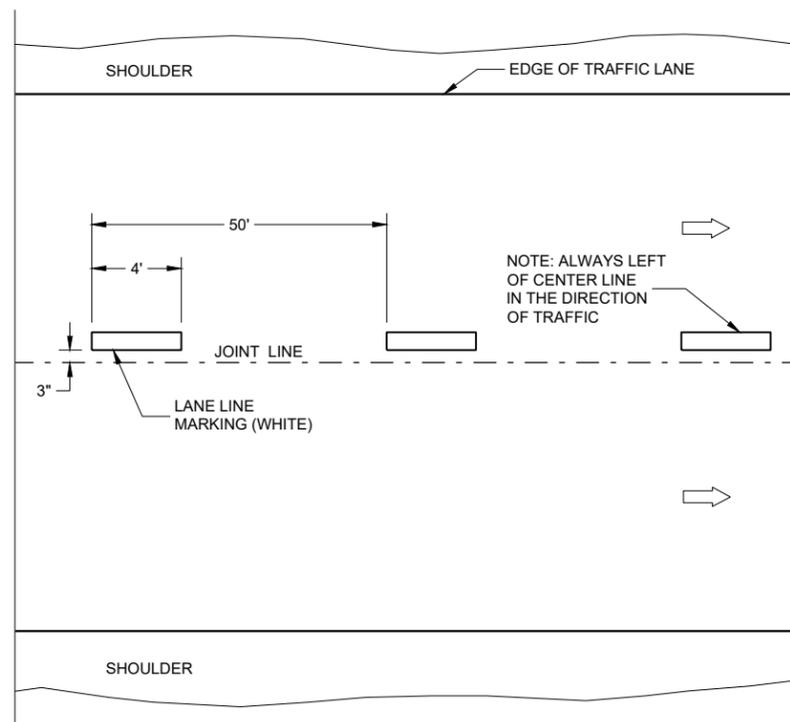


**ONE WAY TRAFFIC**

**PERMANENT PAVEMENT MARKING**



**TWO WAY TRAFFIC**



**ONE WAY TRAFFIC**

**TEMPORARY PAVEMENT MARKING**

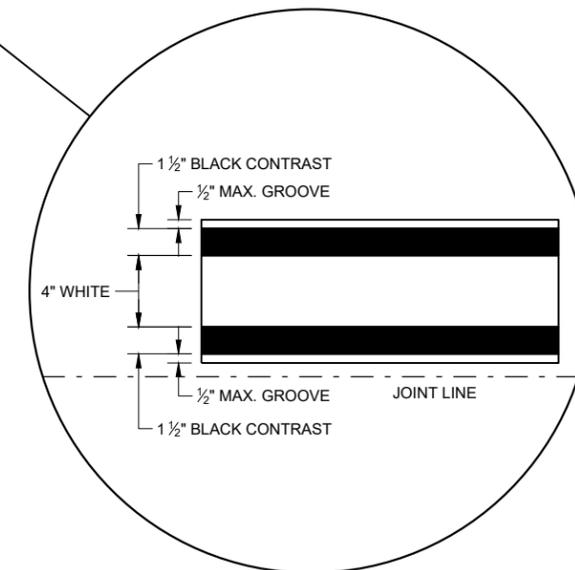
**GENERAL NOTES**

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**

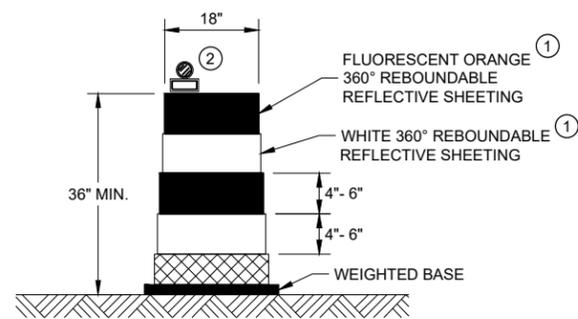
- "T" MARKING
- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC



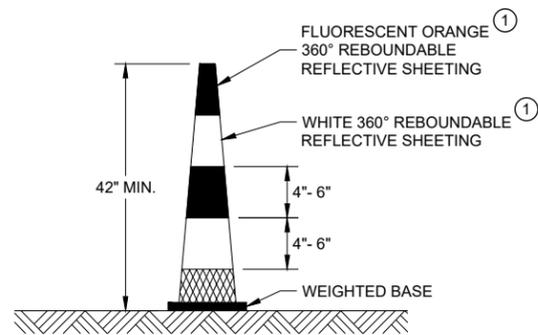
**LONGITUDINAL MARKING (MAINLINE)**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

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

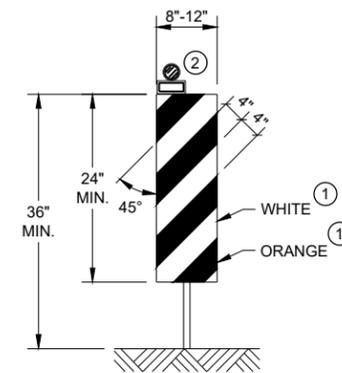


**DRUM**



**42" CONE**

DO NOT USE IN TAPERS  
 1/2 SPACING OF DRUMS

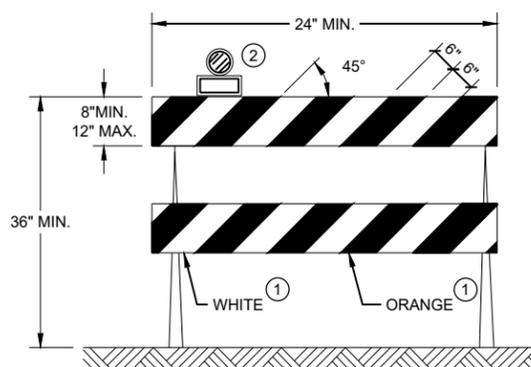


**VERTICAL PANEL**

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

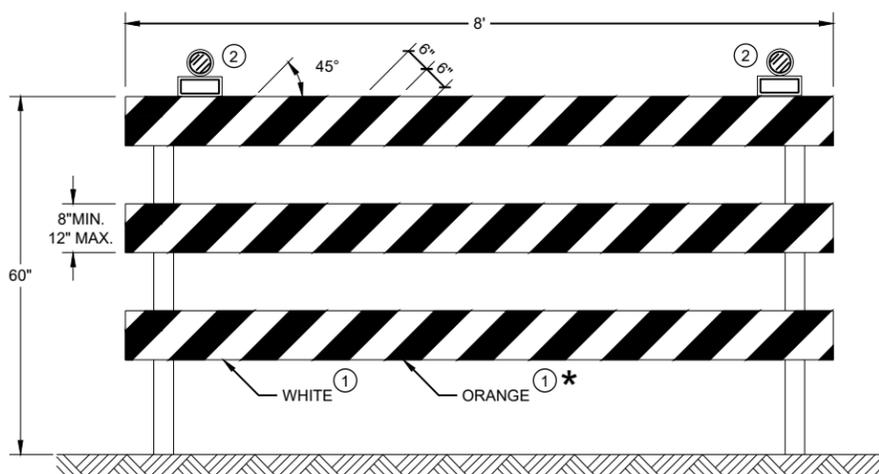
**GENERAL NOTES**

- 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.



**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.

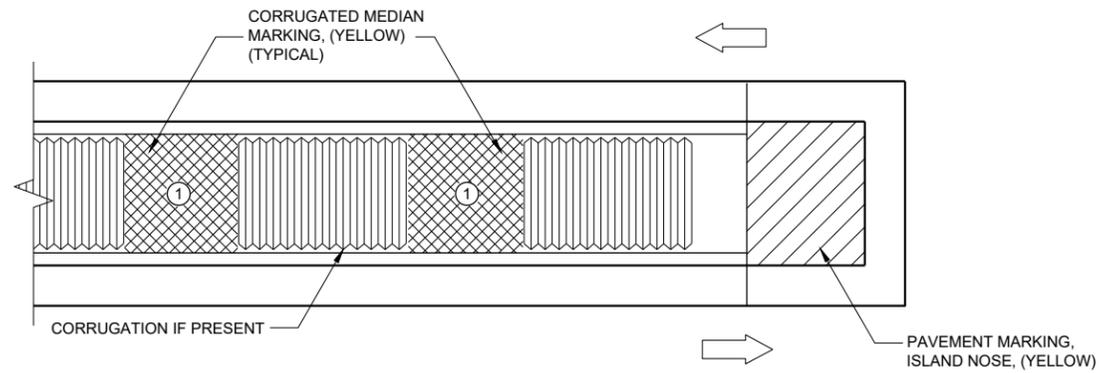


**TYPE III BARRICADE**

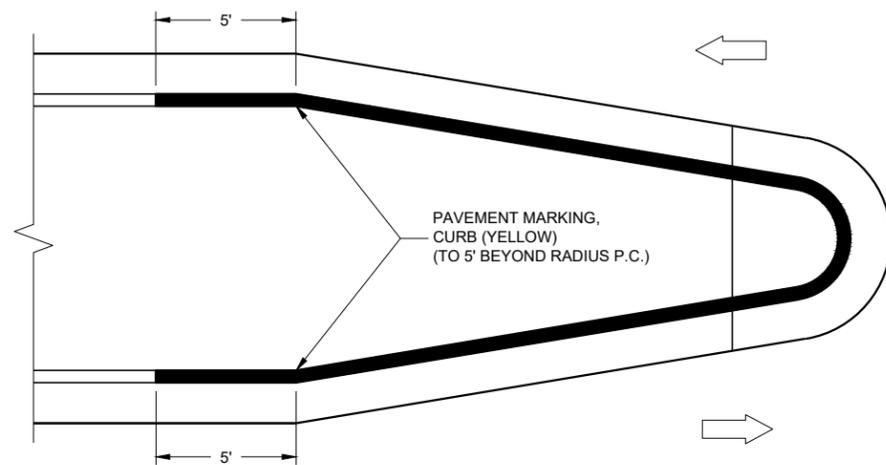
IF SIGN MOUNTED, DO NOT COVER MORE THAN 50% OF THE TOP TWO RAILS OR 33% OF THE TOTAL AREA OF THE THREE RAILS.

\* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

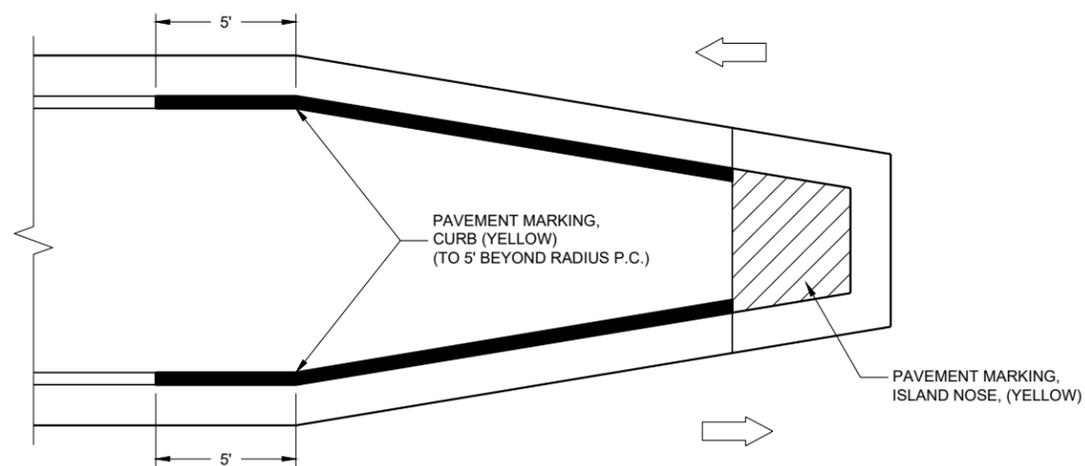
<b>CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2021 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
<small>FHWA</small>	



**MEDIAN ISLAND WITH SQUARE BLUNT NOSE**



**MEDIAN ISLAND WITH ROUND BLUNT NOSE**



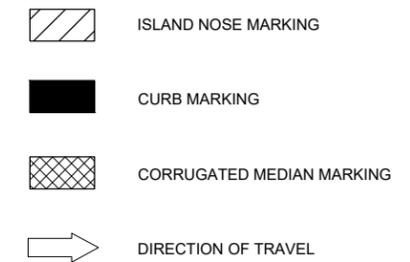
**MEDIAN ISLAND WITH SLOPED NOSE**

**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.



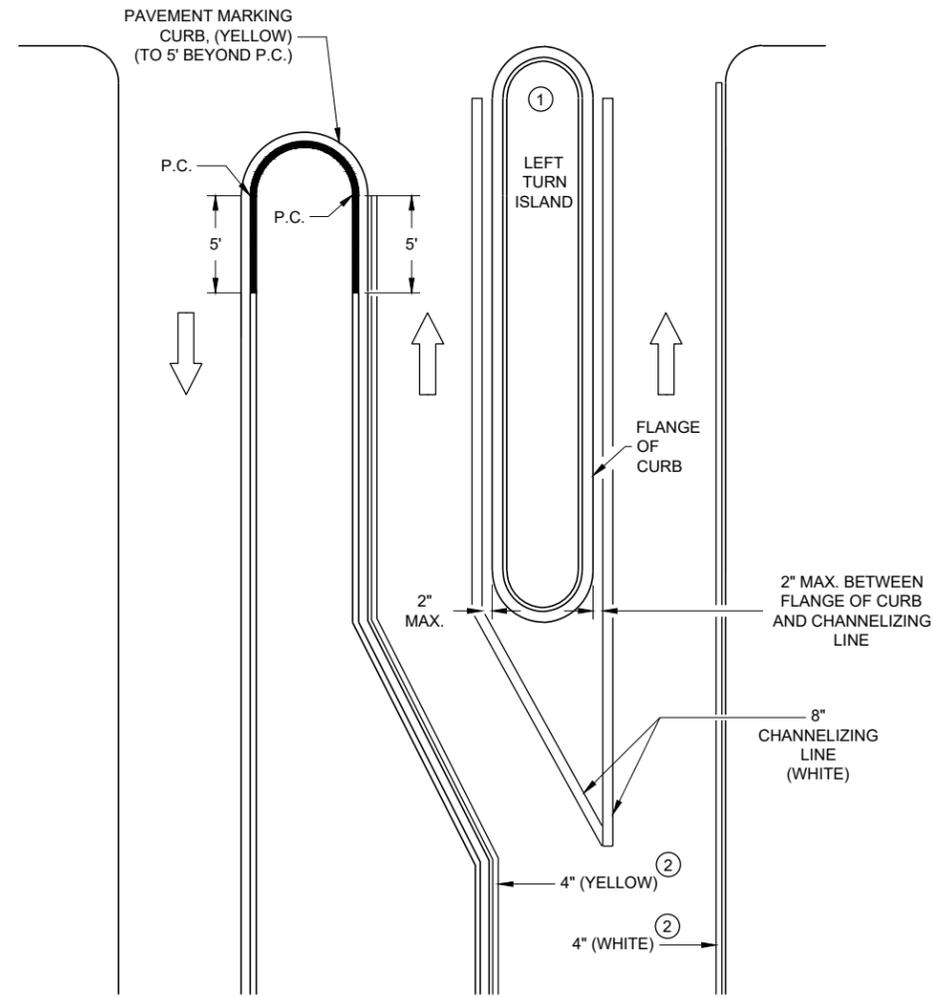
<b>PAVEMENT MARKINGS, MEDIAN ISLAND NOSE</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED February 2021 DATE	/S/ Matthew R. Rauch STATE SIGNING AND MARKING ENGINEER
<small>FHWA</small>	

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

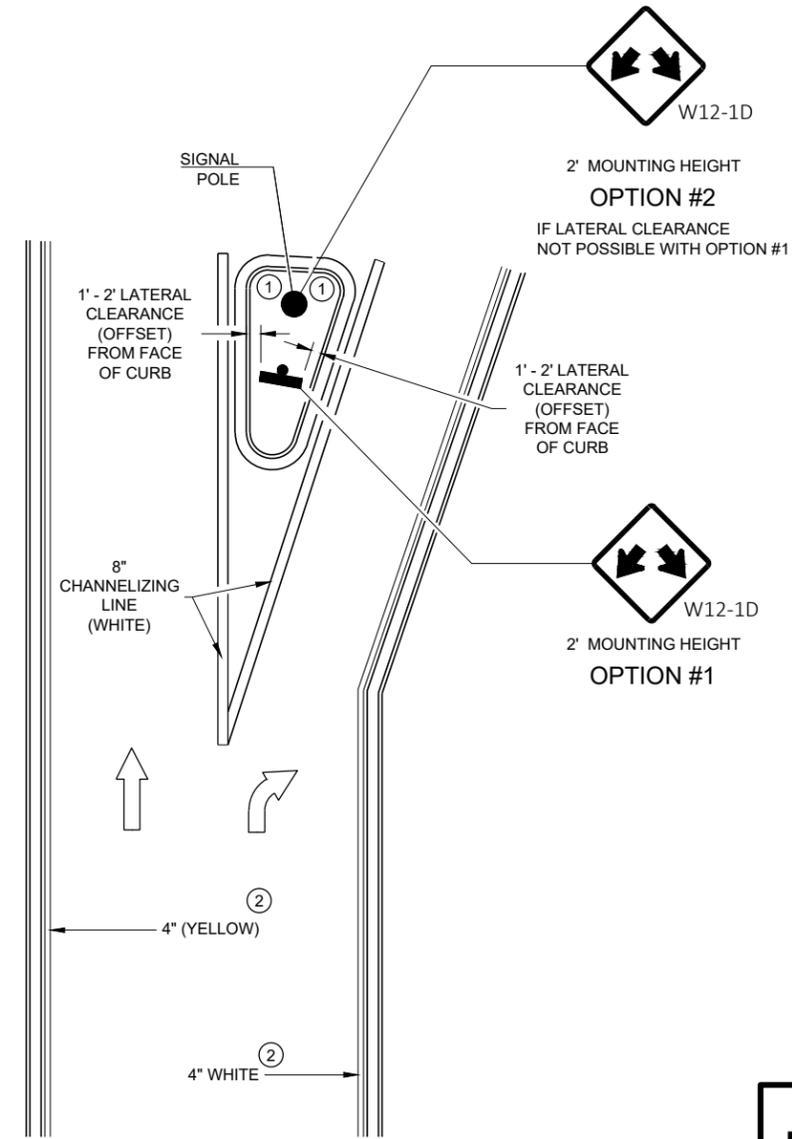
**GENERAL NOTES**

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**

6

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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	

**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.

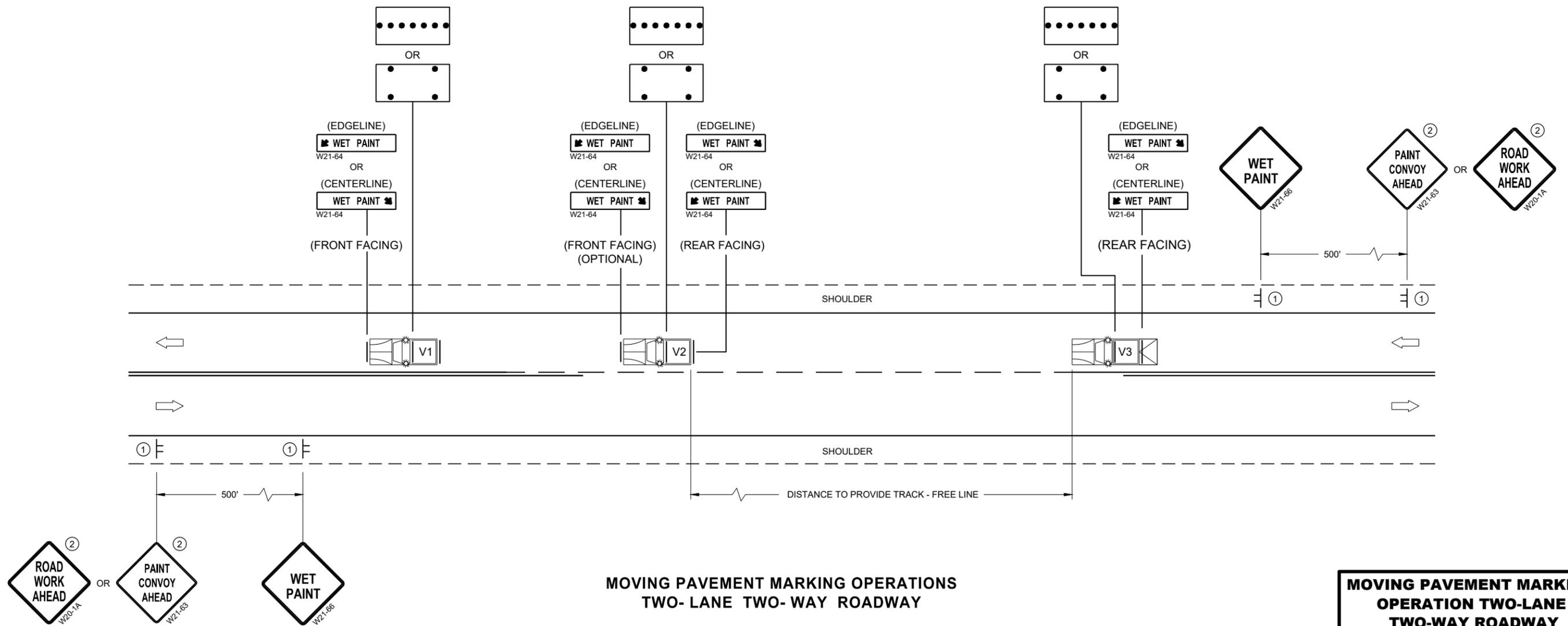
CONES SHOULD BE USED BETWEEN THE MARKING AND SHADOW VEHICLE AT 100 FOOT SPACING. CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.

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**

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

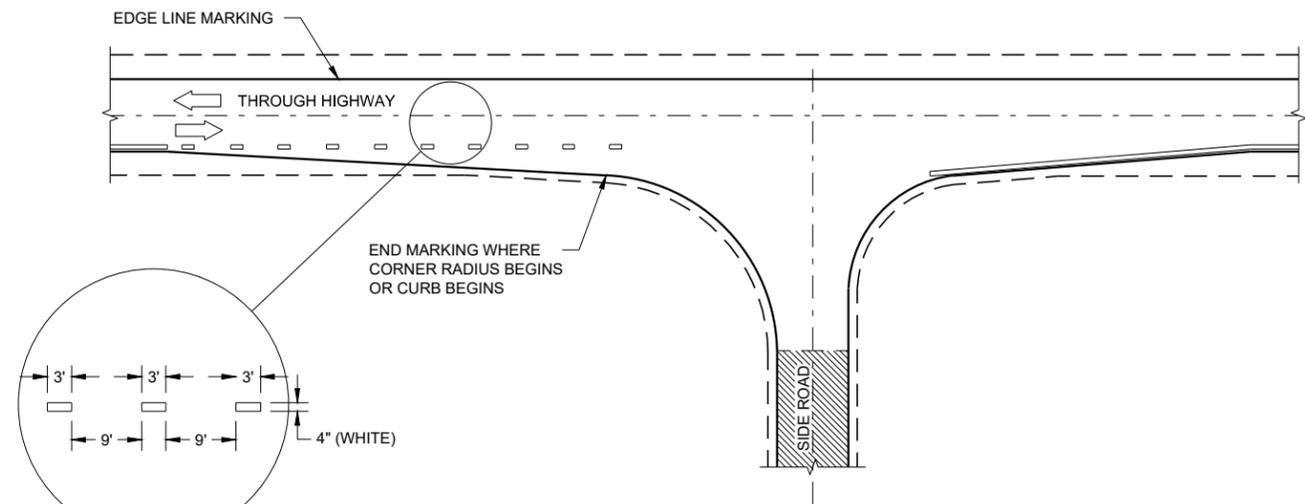
**GENERAL NOTES**

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

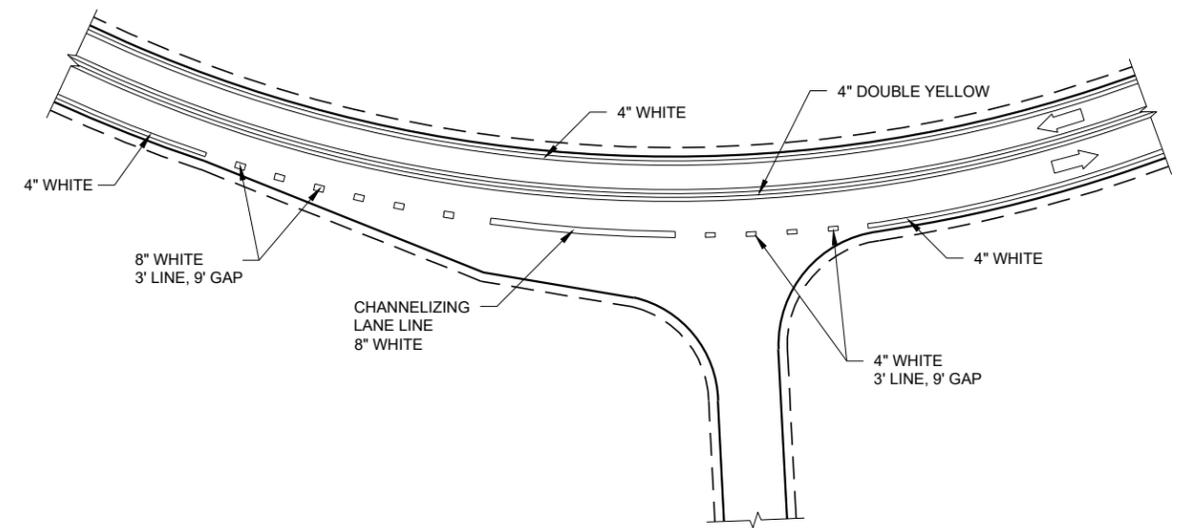
- ① WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.
- ② WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.
- ③ BARRIER LINE ENDS AT SIDE ROAD PAVEMENT / SURFACE EDGE EXTENSION.
- ④ BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.

**LEGEND**

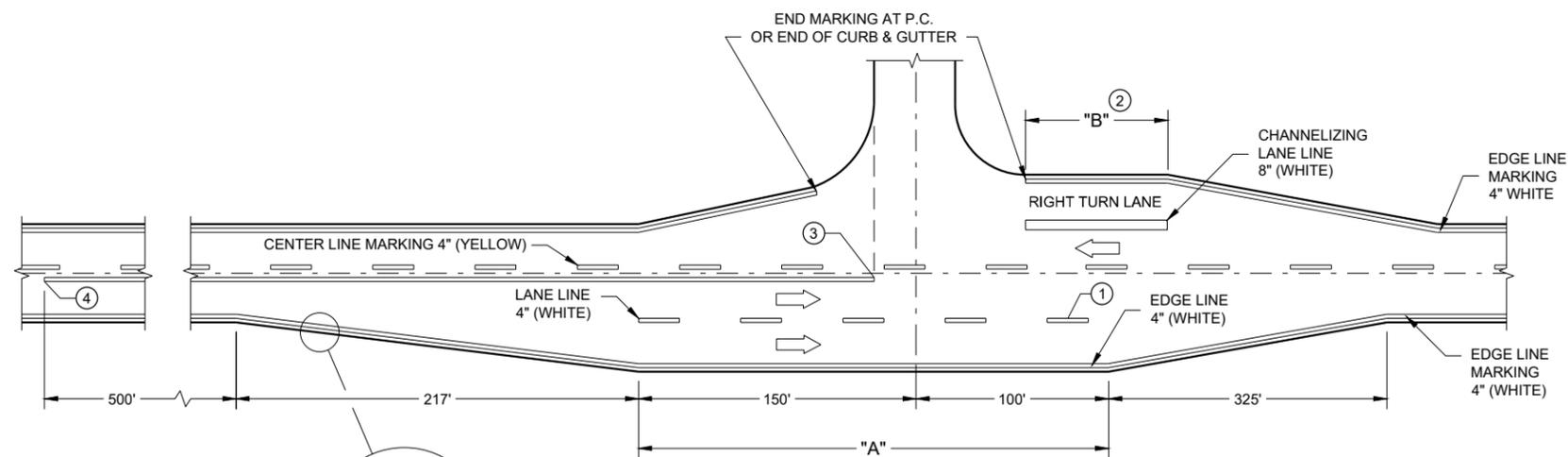
➡ DIRECTION OF TRAVEL



**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

**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.

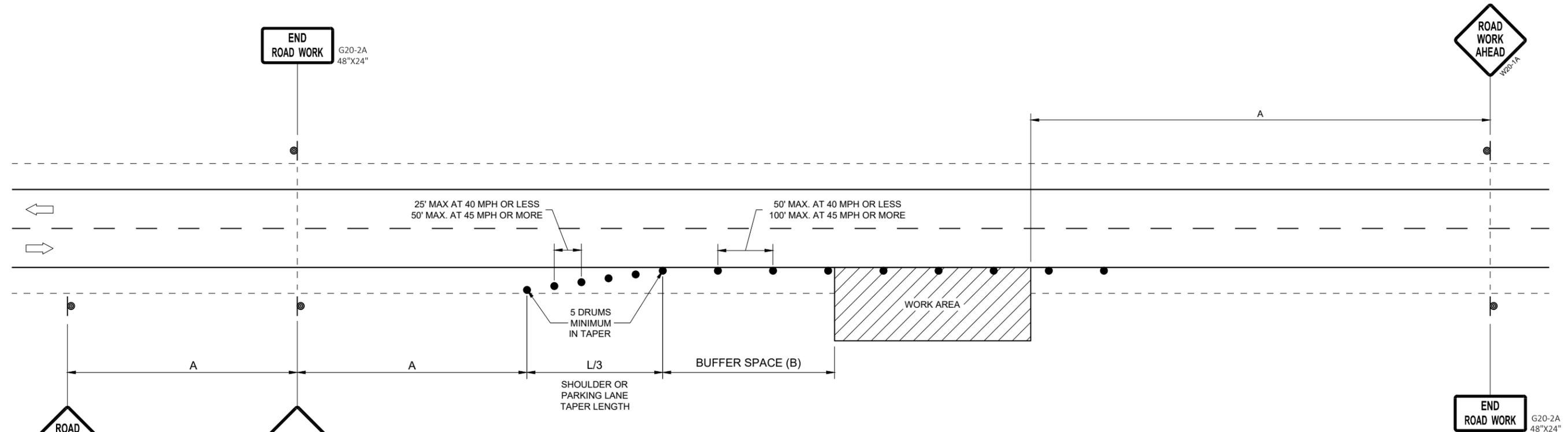
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

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.

6

6



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'

OR  
IF TRAFFIC CONTROL DEVICES  
ENCROACH ONTO TRAVELED WAY, USE



**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

**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.

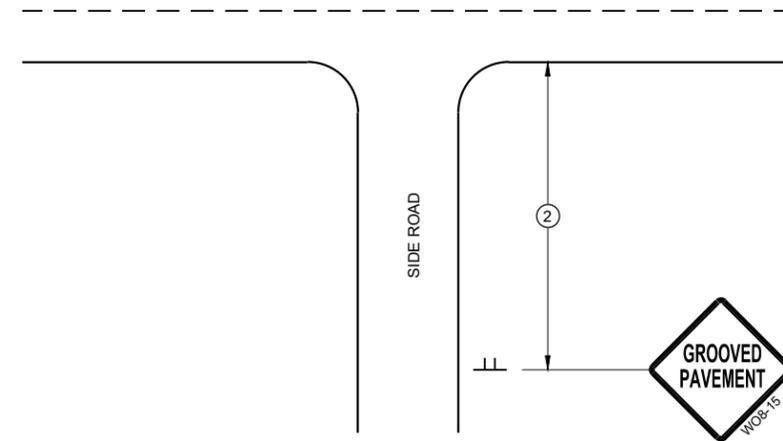
SEE 15C34 FOR ADDITIONAL TRAFFIC CONTROL SIGNING WHEN CENTERLINE PAVEMENT MAKINGS ARE MISSING. 'DO NOT PASS' SIGNS MUST BE INSTALLED ON THE SAME DAY AS MILLING OPERATIONS.

- 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.

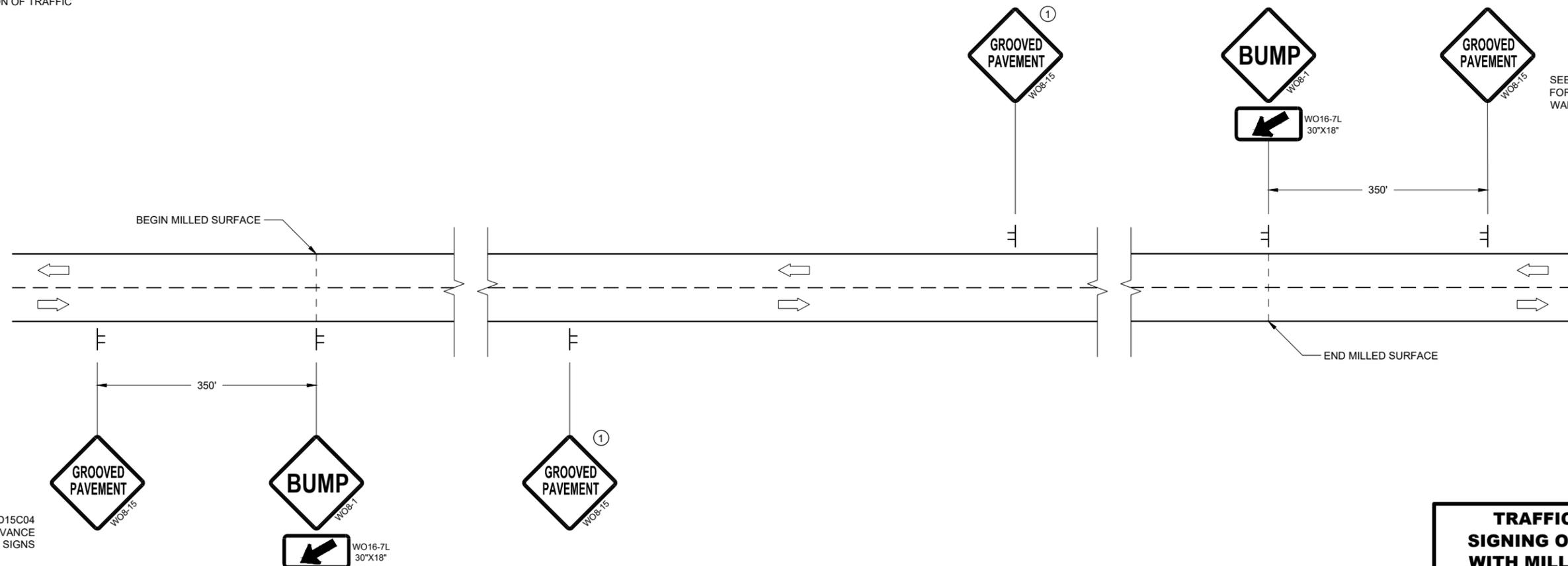
**LEGEND**

⌋ SIGN ON TEMPORARY SUPPORT

➡ DIRECTION OF TRAFFIC



**TYPICAL SIDE ROAD APPROACH SIGN DETAIL**



SEE SDD15C04 FOR ADVANCE WARNING SIGNS

SEE SDD15C04 FOR ADVANCE WARNING SIGNS

**DETAIL FOR SIGNING ON MILLED SURFACES**

**TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH MILLED SURFACES**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
February 2020 /S/ Andrew Heidtke  
DATE WORK ZONE ENGINEER

FHWA

▲ SKEW TAKEN FROM AS BUILT  
 ☆ CONTRACTOR TO FIELD VERIFY POSTS HEIGHT "H" BASED ON FIELD CONDITIONS.

**GENERAL NOTES**

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON THE EXISTING STRUCTURE PLANS (1952).

DETAILS SHOWN FOR POSTS, PLATES, ANCHORAGE SYSTEM AND INSTALLATION, BLOCKS, AND GUARD RAIL ARE NOT PART OF THE STRUCTURE CONTRACT, BUT ARE BID PER THE ROADWAY DESIGN PLANS.

POST BASE PLATES AND BOTTOM PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.

CUT BOTTOM OF POST SO THAT POST WILL BE VERTICAL WHEN POST ASSEMBLY IS PLACED ON TOP OF THE CULVERT. ALONG THE ROADWAY THE POST WILL BE NORMAL TO GRADE LINE. HEX BOLTS AND THREADED RODS ARE TO BE PLACED PERPENDICULAR TO THE BASE PLATE.

POST, BASE PLATE AND BOTTOM PLATE, AND SHIMS SHALL BE GALVANIZED AFTER FABRICATION.

PRIOR TO GALVANIZING, ALL STEEL POSTS AND PLATES SHALL BE GIVEN A NO. 6 COMMERCIAL BLAST CLEANING BY SSPC SPECS.

ALL MATERIAL USED IN POSTS AND PLATES SHALL BE MADE FROM MATERIAL CONFORMING TO ASTM DESIGNATION A709 GRADE 50 OR 50S.

HEX BOLTS, THREADED RODS, HEX NUTS AND WASHERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F1554 GRADE 36, AND SHALL BE GALVANIZED. RODS ARE TO BE FULLY THREADED AND BOLTS TO BE THREADED 3". CHAMFER TOP OF BOLTS AND RODS BEFORE THREADING.

STEEL SHIMS MAY BE USED BETWEEN PLATES AND SLAB WHERE REQUIRED FOR ALIGNMENT.

**TRAFFIC DATA**

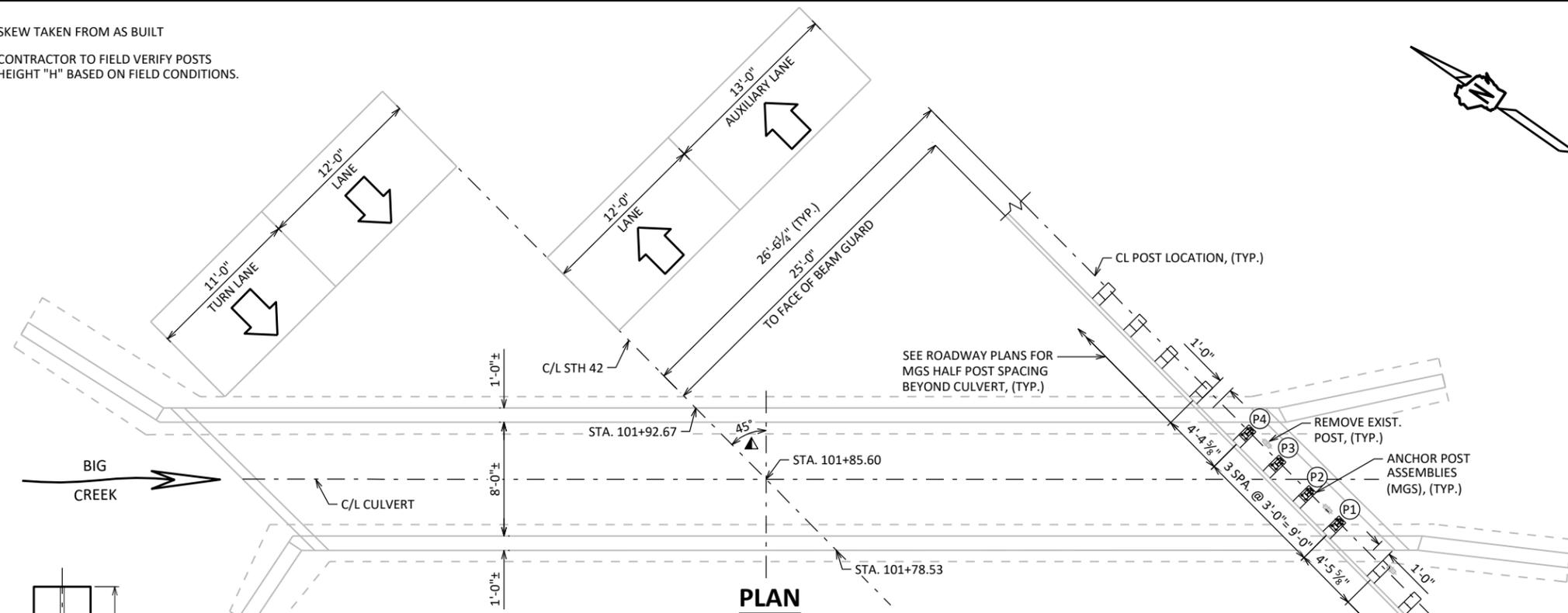
**STH 42:**  
 ADT = 10,920 (2043)  
 R.D.S. = 45 MPH

**LIST OF DRAWINGS:**

1. BEAM GUARD POST ANCHOR LAYOUT

**STRUCTURE DESIGN CONTACTS:**  
 Alexis Hanley 608-266-3350  
 Dominique Bechle 608-261-8205

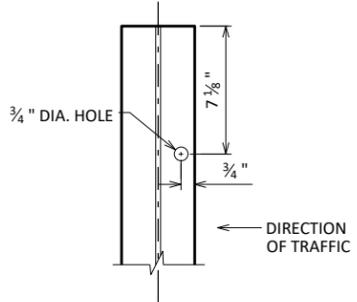
NO.	DATE	REVISION	BY
 ACCEPTED  DMB 08/01/22 CHIEF STRUCTURES DESIGN ENGINEER DATE			
<b>STRUCTURE C-15-02</b>			
STH 42 OVER BIG CREEK			
COUNTY	DOOR	TOWN	SEVASTOPOL
DESIGN SPEC. N/A REHABILITATION			
DESIGNED BY	DESIGNED CK'D	MJK	PLANS CK'D MJK
<b>BEAM GUARD POST ANCHOR LAYOUT</b>			SHEET 1 OF 1



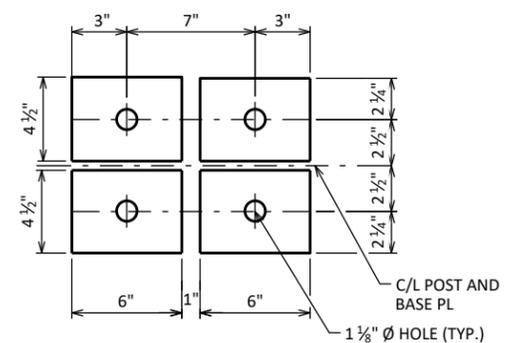
**PLAN**



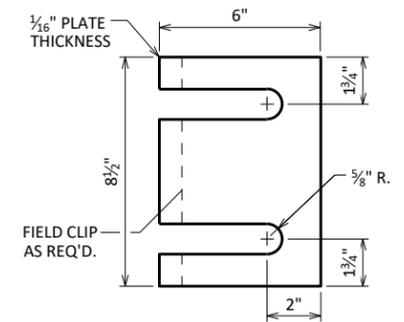
**ELEVATION**  
LOOKING NORTH



**SECTION C-C**  
HOLE IN POST FLANGE ON APPROACHING TRAFFIC SIDE



**SECTION B-B**  
(4) BOTTOM PLATES

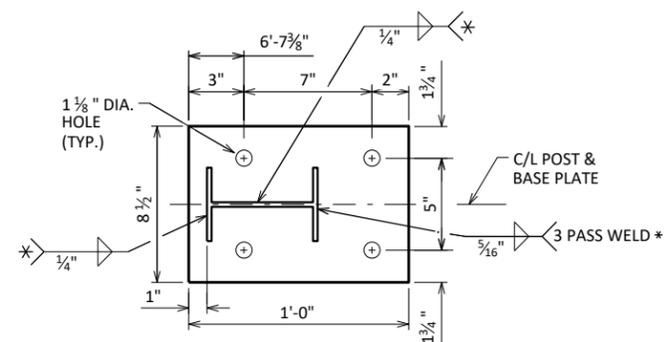


**STEEL SHIM DETAIL**  
4 PER POST

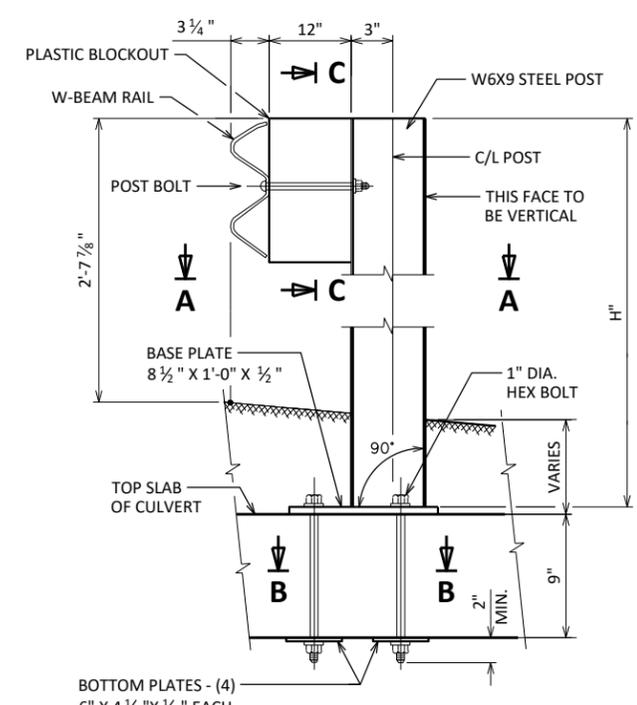
**POST HEIGHT**

POST NO.	"H"	
P1	38.75"	☆
P2	39.00"	☆
P3	39.00"	☆
P4	38.50"	☆

\* WELDING IS TO BE COMPLETED USING THE GAS-METAL ARC WELDING (GMAW) PROCESS WITH ER70S-3 WELDING WIRE AND ARGON-OXYGEN OR CO2 COVER GAS.



**SECTION A-A**  
POST & BASE PLATE



**GUARDRAIL POST ANCHOR**  
(ELEVATION VIEW)

**TOTAL ESTIMATED QUANTITIES**

BID ITEM NUMBER	BID ITEMS	UNIT	TOTALS
206.2000	EXCAVATION FOR STRUCTURES CULVERTS C-15-002	LS	1

8

8

SCALE = 10

DIVISION 1 - BEAMGUARD LEFT

STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL	MASS ORDINATE
99+61.685	93201.22	0.00	0.00	0.00	0.00	0	0	0	0	0	0
100+00	93239.53	38.31	0.00	0.00	0.00	0	0	0	0	0	0
100+49.62	93289.15	49.62	0.00	0.00	0.00	0	0	0	0	0	0
100+74.598	93314.13	24.98	0.00	0.00	0.00	0	0	0	0	0	0
100+99.595	93339.13	25.00	0.00	0.00	0.00	0	0	0	0	0	0
101+25.765	93365.30	26.17	5.39	0.00	5.95	3	0	3	3	3	0
101+47.65	93387.18	21.88	3.83	0.00	5.96	4	0	5	7	9	-2
101+60.15	93399.68	12.50	3.98	0.00	6.34	2	0	3	9	13	-4
101+75	93414.53	14.85	3.60	0.00	1.43	2	0	2	11	15	-4
101+86.343	93425.88	11.34	3.38	0.00	1.93	1	0	1	12	16	-4
101+96.475	93436.01	10.13	3.26	0.00	3.35	1	0	1	13	17	-4
102+18.35	93457.88	21.87	2.40	0.00	0.00	2	0	1	15	18	-3
102+35	93474.53	16.65	2.83	0.00	11.05	2	0	3	17	22	-5
102+50	93489.53	15.00	3.46	0.00	2.41	2	0	4	19	26	-7
102+72.65	93512.18	22.65	3.94	0.00	9.28	3	0	5	22	32	-10
102+85.15	93524.68	12.50	4.55	0.00	9.64	2	0	4	24	37	-13
103+07.035	93546.57	21.89	3.22	0.00	7.60	3	0	7	27	45	-18
103+63.565	93603.10	56.53	0.00	0.00	0.00	3	0	8	30	54	-24
104+00	93639.53	36.43	0.00	0.00	0.00	0	0	0	30	54	-24

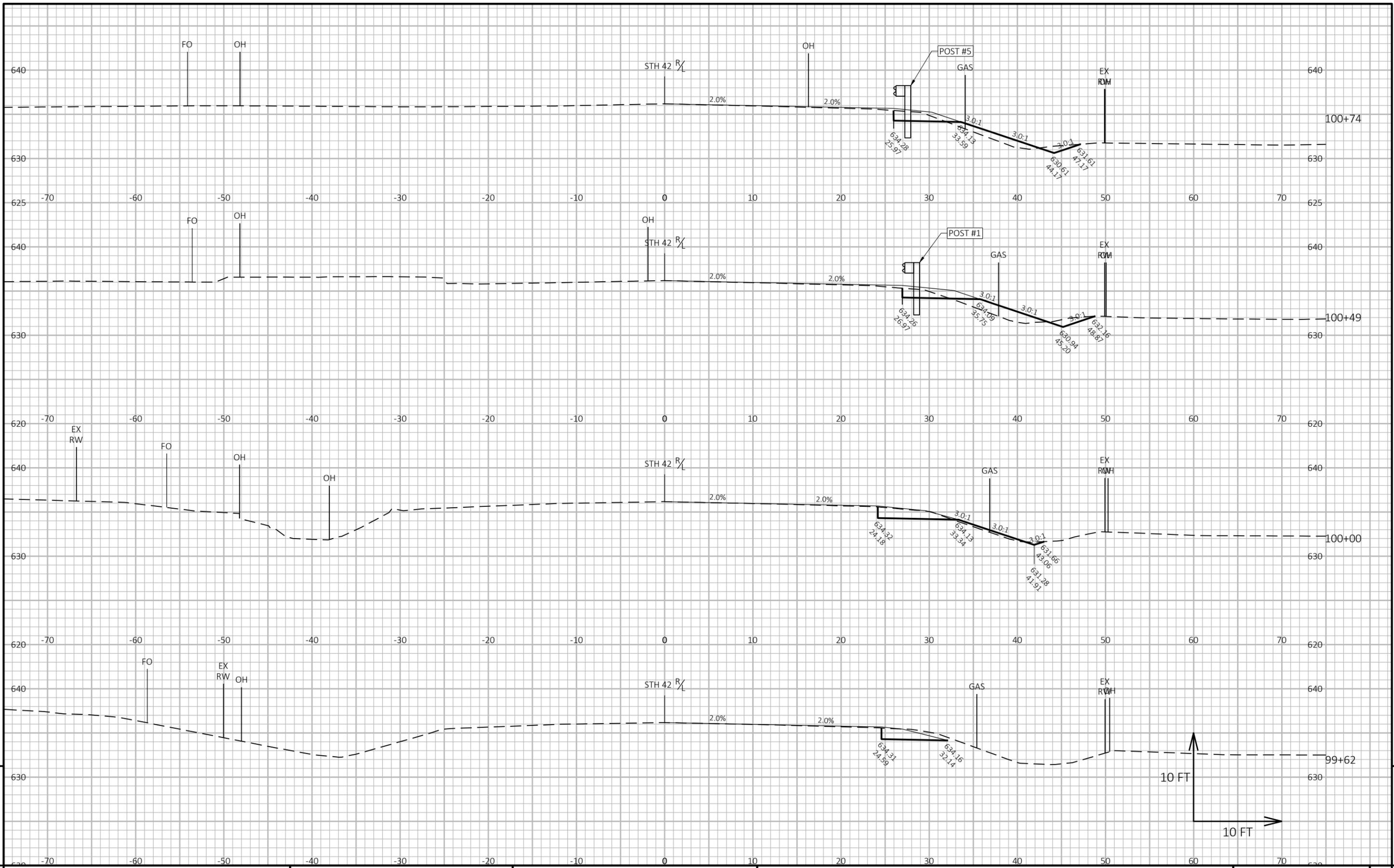
DIVISION 1 - BEAMGUARD RIGHT

STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL	MASS ORDINATE
99+61.685	93201.22	0.00	7.61	0.00	0.00	0	0	0	0	0	0
100+00	93239.53	38.31	7.77	0.00	1.78	11	0	1	11	1	10
100+49.62	93289.15	49.62	6.18	0.00	9.44	13	0	10	24	13	11
100+74.598	93314.13	24.98	6.54	0.00	6.26	6	0	7	30	21	9
100+99.595	93339.13	25.00	6.64	0.00	7.35	6	0	6	36	28	8
101+25.765	93365.30	26.17	4.31	0.00	9.00	5	0	8	41	37	4
101+47.65	93387.18	21.88	3.71	0.00	0.00	3	0	4	44	41	3
101+60.15	93399.68	12.50	3.25	0.00	2.28	2	0	1	46	43	3
101+75	93414.53	14.85	4.79	0.00	0.22	2	0	1	48	44	4
101+86.343	93425.88	11.34	6.19	0.00	0.00	2	0	0	50	44	6
101+96.475	93436.01	10.13	6.96	0.00	0.00	2	0	0	52	44	8
102+18.35	93457.88	21.87	7.09	0.00	0.00	6	0	0	58	44	14
102+35	93474.53	16.65	0.00	0.00	0.00	2	0	0	60	44	16
102+50	93489.53	15.00	0.00	0.00	0.00	0	0	0	60	44	16
102+72.65	93512.18	22.65	0.00	0.00	0.00	0	0	0	60	44	16
102+85.15	93524.68	12.50	0.00	0.00	0.00	0	0	0	60	44	16
103+07.035	93546.57	21.89	0.00	0.00	0.00	0	0	0	60	44	16
103+63.565	93603.10	56.53	0.00	0.00	0.00	0	0	0	60	44	16
104+00	93639.53	36.43	0.00	0.00	0.00	0	0	0	60	44	16

Notes:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	THIS DOES NOT SHOW UP IN CROSS SECTIONS
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
8 - MASS ORDINATE	[CUT - SALVAGED PAVT - (FILL * FILL FACTOR)]

9

9



PROJECT NO: 4430-21-71

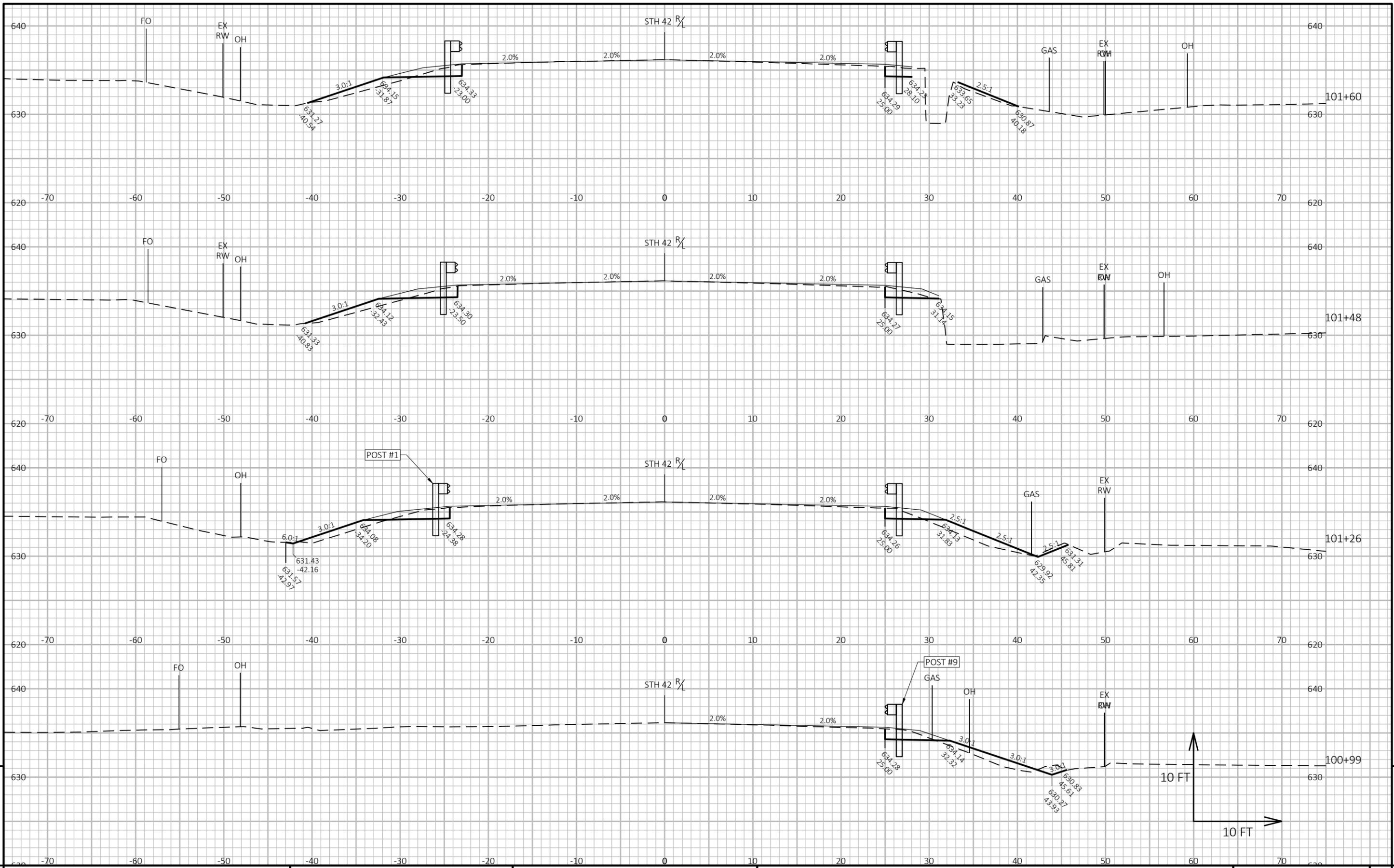
HWY: STH 42

COUNTY: DOOR

CROSS SECTIONS: STH 42

SHEET

E



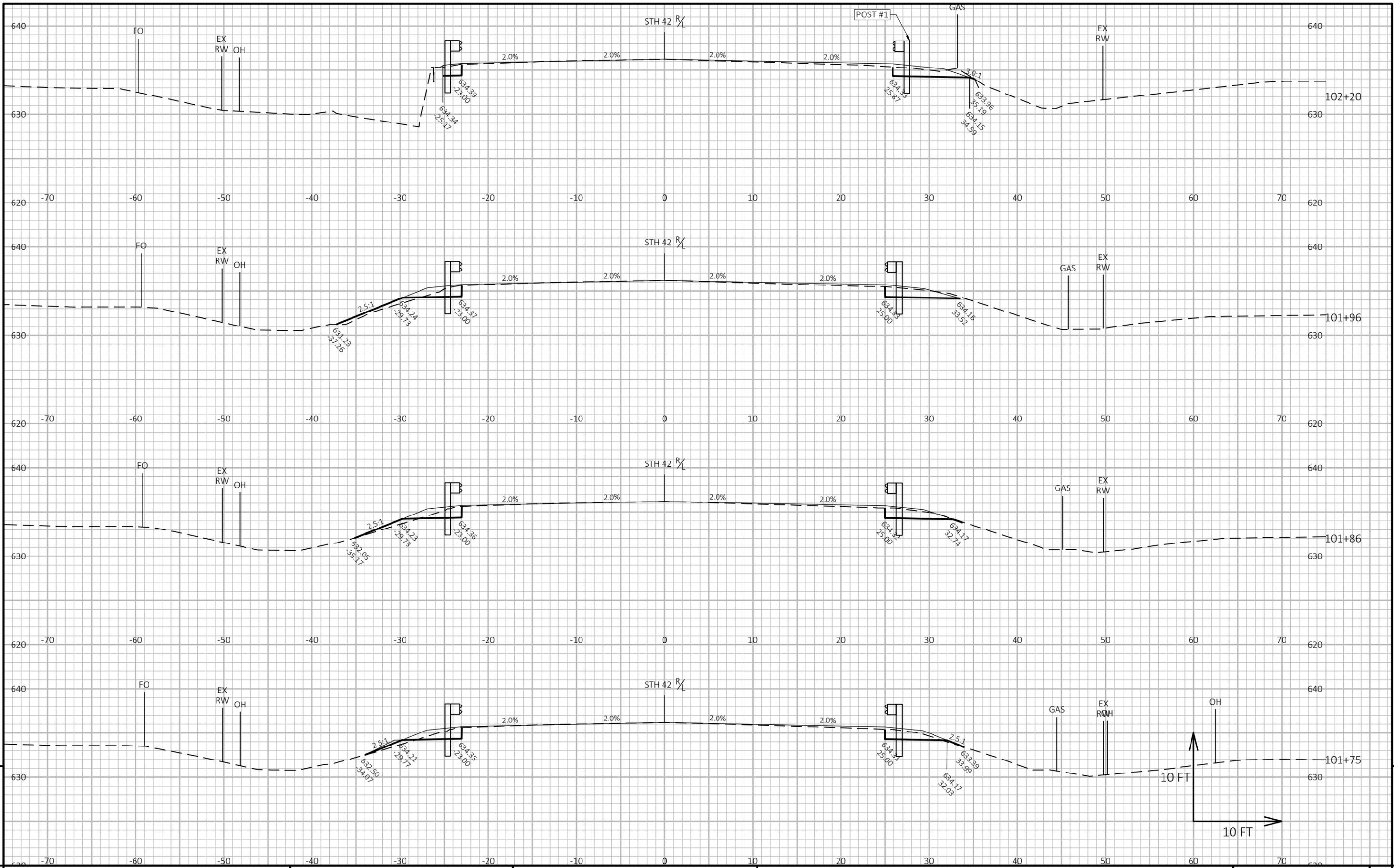
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10 FT

10 FT

9

PROJECT NO: 4430-21-71	HWY: STH 42	COUNTY: DOOR	CROSS SECTIONS: STH 42	SHEET E
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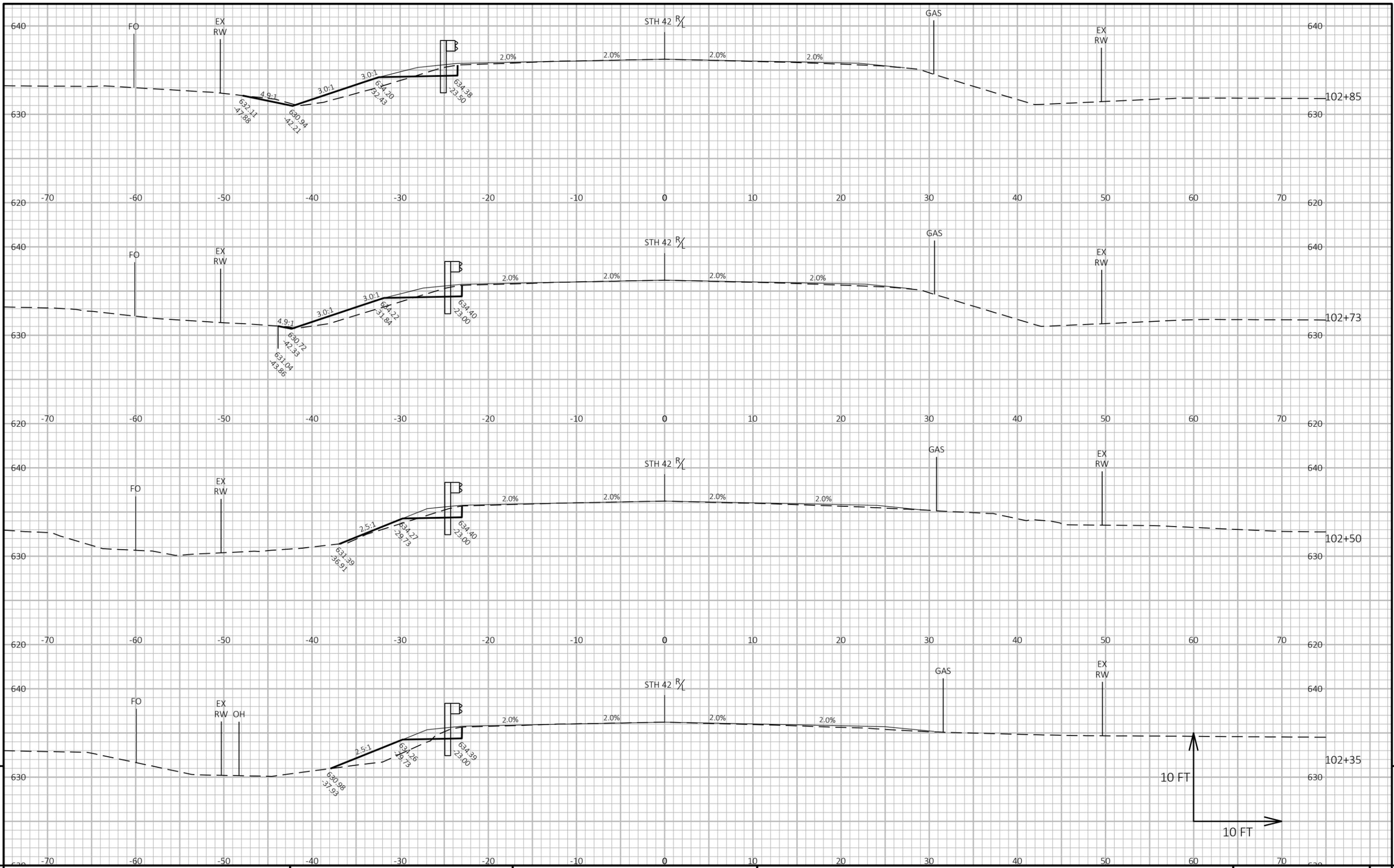
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9

PROJECT NO: 4430-21-71 HWY: STH 42 COUNTY: DOOR CROSS SECTIONS: STH 42 SHEET E

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LAYOUT NAME: - 3



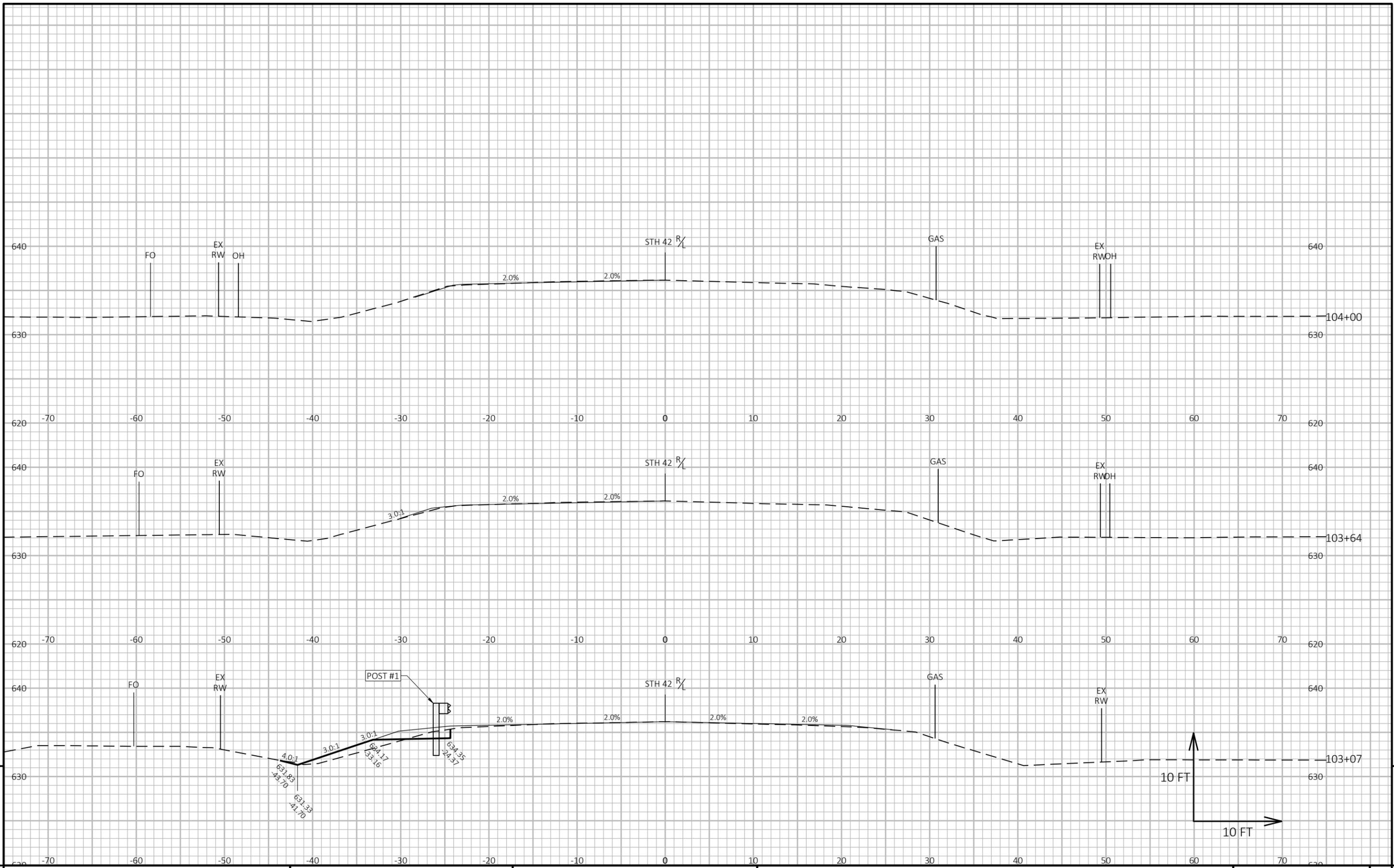
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9

PROJECT NO: 4430-21-71      HWY: STH 42      COUNTY: DOOR      CROSS SECTIONS: STH 42      SHEET      E

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LAYOUT NAME - 4



9

9

PROJECT NO: 4430-21-71	HWY: STH 42	COUNTY: DOOR	CROSS SECTIONS: STH 42	SHEET	E
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LAYOUT NAME - 5

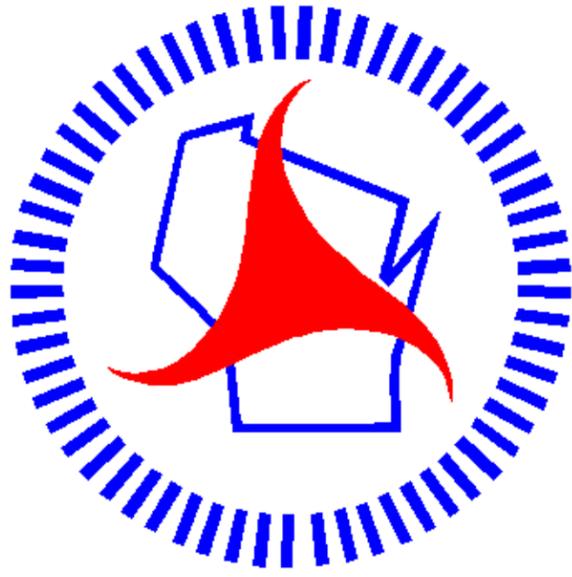
PLOT DATE : 8/3/2022 2:29 PM

PLOT BY : SCHROEDER, DEREK W

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADD SHEET 49



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

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