

ORDER OF SHEETS

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

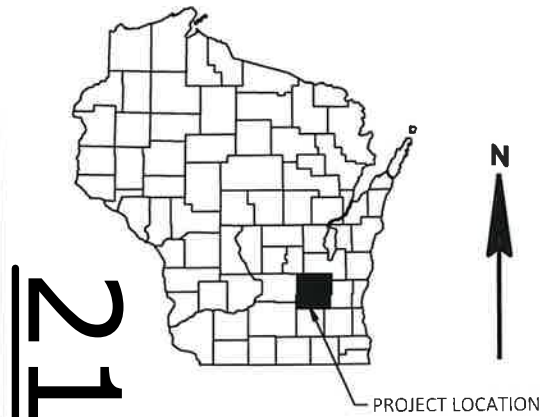
TOTAL SHEETS = 38

STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION
 PLAN OF PROPOSED IMPROVEMENT

CITY OF BEAVER DAM, FRANCES LANE
 (GATEWAY DR TO N CRYSTAL LAKE RD)
 LOCAL STREET
 DODGE COUNTY

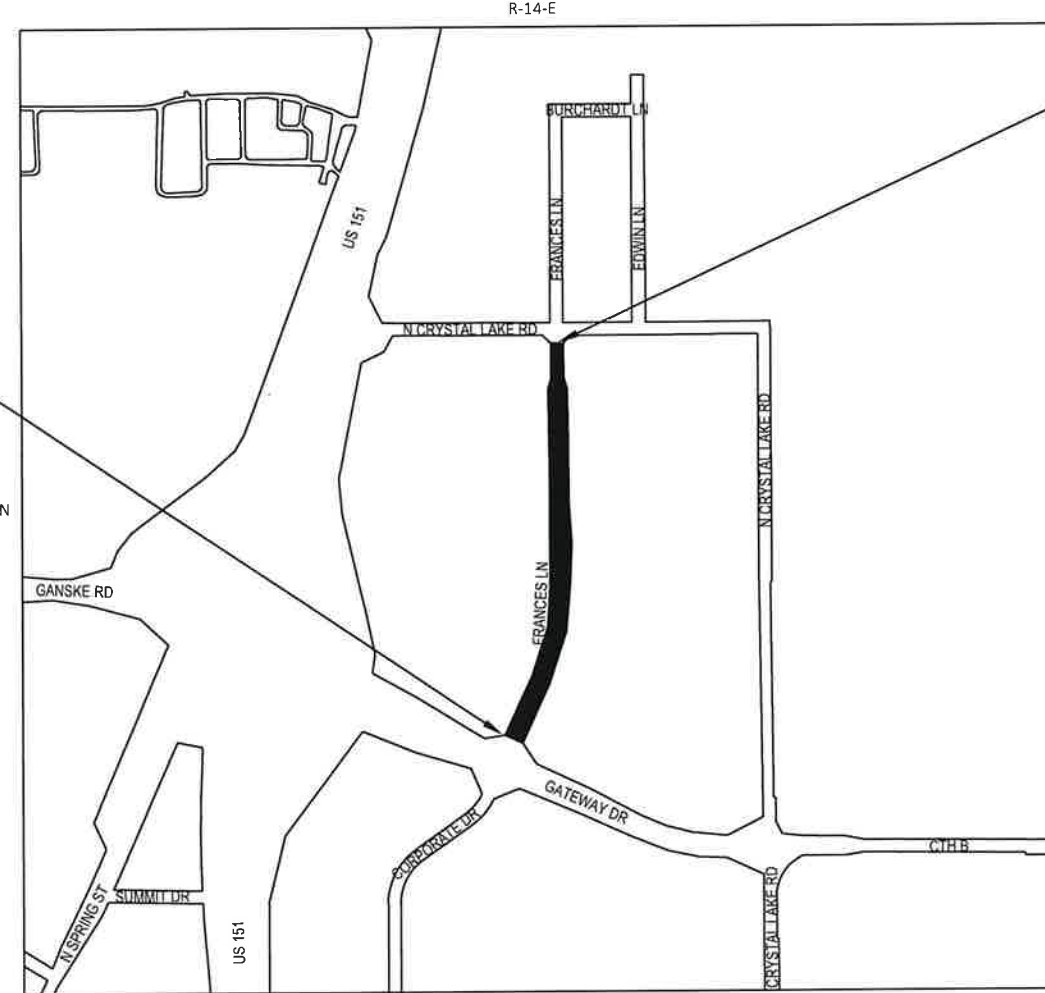
STATE PROJECT		FEDERAL PROJECT	
5995-04-71		PROJECT	CONTRACT
		WISC 2023071	1

PROJECT ID: 5995-04-71



COUNTY: DODGE COUNTY

STATE PROJECT NUMBER
5995-04-71



BEGIN PROJECT 5995-04-71
 STA 76+43.28
 Y = 733,889.54
 X = 854,668.74

END PROJECT 5995-04-71
 STA. 98+22.00
 Y = 736,018.71
 X = 854,917.28

DESIGN DESIGNATION

A.A.D.T. (2023)	=	14,060
A.A.D.T. (2043)	=	16,650
D.H.V.	=	1,898
D.D.	=	59/41
T.	=	1.4%
DESIGN SPEED	=	30 MPH
ESALS	=	

CONVENTIONAL SYMBOLS

PLAN	PROFILE
CORPORATE LIMITS	GRADE LINE
PROPERTY LINE	ORIGINAL GROUND
LOT LINE	MARSH OR ROCK PROFILE (To be noted as such)
LIMITED HIGHWAY EASEMENT	SPECIAL DITCH
EXISTING RIGHT OF WAY	GRADE ELEVATION
PROPOSED OR NEW R/W LINE	CULVERT (Profile View)
SLOPE INTERCEPT	UTILITIES
REFERENCE LINE	ELECTRIC
EXISTING CULVERT	FIBER OPTIC
PROPOSED CULVERT (Box or Pipe)	GAS
COMBUSTIBLE FLUIDS	SANITARY SEWER
MARSH AREA	STORM SEWER
WOODED OR SHRUB AREA	TELEPHONE
	WATER
	UTILITY PEDESTAL
	POWER POLE
	TELEPHONE POLE

LAYOUT
 SCALE 0 1000 FT
 TOTAL NET LENGTH OF CENTERLINE = 0.413 MILE

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

ACCEPTED FOR
 CITY OF BEAVER DAM
 7/31/2022 [Signature]
 (Date) (Director of Engineering)

ORIGINAL PLANS PREPARED BY
MSA
 1702 Pankratz Street, Madison, WI 53704
 608-242-7779 1-800-446-0679 Fax: 608-242-5664

WISCONSIN
 ANNE M. HOLZEM
 E-43226
 SHEBOYGAN, WI
 PROFESSIONAL ENGINEER
 DATE: 7-25-22 [Signature]
 (Professional Engineer)

STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION
 PREPARED BY
 Surveyor: N/A
 Designer: MSA PROFESSIONAL SERVICES, INC.
 Project Manager: DELLA KOENIG
 Regional Examiner: SW REGION
 Regional Supervisor: KYLE HEMP

APPROVED FOR THE DEPARTMENT
 DATE: 7/26/2022 [Signature]
 (Signature)

GENERAL NOTES

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

WHEN THE QUANTITY OF THE ITEM OF BASE AGGREGATE IS MEASURED FOR PAYMENT BY THE TON OR CUBIC YARD, THE DEPTH OR THICKNESS OF THE COURSE SHOWN ON THE PLANS IS APPROXIMATE, AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER.

THE EROSION CONTROL ITEMS SHOWN ON THE PLANS ARE AT SUGGESTED LOCATIONS. THE ENGINEER SHALL DETERMINE THE EXACT LOCATIONS OF EROSION CONTROL ITEMS. ALL EROSION CONTROL ITEMS SHALL BE MAINTAINED UNTIL SUCH TIME AS THE ENGINEER DETERMINES THE MEASURE IS NO LONGER NECESSARY. THE CONTRACTOR WILL REMOVE ITEMS AT THE ENGINEERS DIRECTION.

PLACE EROSION CONTROL DEVICES IN SEQUENCE WITH CONSTRUCTION OPERATIONS AND MAINTAIN AS DETERMINED BY THE ENGINEER.

ADJUST THE NUMBER, LOCATION, AND SPACING OF TRAFFIC CONTROL SIGNS AND DEVICES, AS SHOWN ON THE PLANS, TO FIT FIELD CONDITIONS.

NO TREES OR SHRUBS SHALL BE REMOVED WITHOUT APPROVAL OF THE ENGINEER.

THE CONTRACTOR SHALL NOTIFY DIGGERS HOTLINE AND AFFECTED UTILITIES PRIOR TO THE START OF WORK. ANY LOCAL MUNICIPAL UTILITY THAT IS NOT A MEMBER OF THE DIGGERS HOTLINE MUST BE CONTACTED SEPARATELY.

A CONVERSION FACTOR OF 2.0 TONS/CY IS USED TO ESTIMATE QUANTITIES FOR BASE AGGREGATE DENSE.

APPLY TACK COAT AT A RATE OF 0.07 GAL/SY TO MILLED SURFACE AND 0.05 GA/SY BETWEEN LAYERS OF HMA PAVEMENT.

HMA PAVEMENT WEIGHT CALCULATIONS ARE BASED ON 112 LB/SY/IN.

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

DESIGN CONTACTS

MSA PROFESSIONAL SERVICES, INC.
ATTN: ANNE HOLZEM, P.E.
116 FREMONT ST
KIEL, WI 53042
TELEPHONE: (608) 354-6161
EMAIL: AHOLZEM@MSA-PS.COM

MSA PROFESSIONAL SERVICES, INC.
ATTN: BRIAN HUIBREGTSE, P.E.
1702 PANKRATZ STREET
MADISON, WI 53704
TELEPHONE: (608) 242-6650
EMAIL: BHUIBREGTSE@MSA-PS.COM

CITY OF BEAVER DAM CONTACTS

DIRECTOR OF ENGINEERING
TODD JANSEN
205 S. LINCOLN AVENUE
BEAVER DAM, WI 53916
TELEPHONE: (920) 356-2543
EMAIL: TJANSEN@CI.BEAVERDAM.WI.GOV

DIRECTOR OF UTILITIES
JEREMY KLUG
108 MYRTLE ROAD
BEAVER DAM, WI 53916
TELEPHONE: (920) 887-4625
EMAIL: JKLUG@CI.BEAVERDAM.WI.GOV

WISCONSIN DEPT OF TRANSPORTATION

SW REGION
DELLA KOENIG
2101 WRIGHT STREET
MADISON, WI 53704
(608) 246-7963
DELLA.KOENIG@DOT.WI.GOV

SECTION 2 ORDER OF SHEETS

GENERAL NOTES & CONSTRUCTION DETAILS
TYPICAL SECTIONS
TRAFFIC CONTROL

UTILITIES

TELEPHONE & FIBER OPTIC
AT&T WISCONSIN
ATTN: CHUCK BARTELT
70 E. DIVISION STREET
FOND DU LAC, WI 54935
TELEPHONE: (920) 929-1013
EMAIL: CB1461@ATT.COM

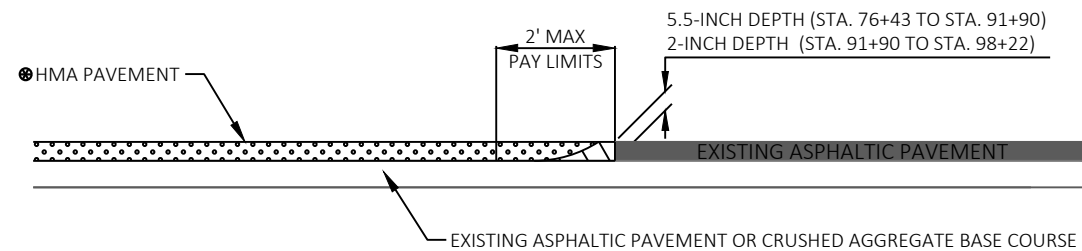
GAS & ELECTRIC
ALLIANT ENERGY
ATTN: PERRY BOECK
120 E. MAPLE AVENUE
BEAVER DAM, WI 53916
TELEPHONE: (920) 887-6061
EMAIL: PERRYBOECK@ALLIANTENERGY.COM

CABLE
CHARTER SPECTRUM
ATTN: NICK FRASE
1515 W. WASHINGTON ST.
WEST BEND, WI 53095
TELEPHONE: (920) 304-6797
EMAIL: NICK.FRASE@CHARTER.COM

SANITARY SEWER & WATERMAIN
BEAVER DAM UTILITIES
ATTN: JEREMY KLUG
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TELEPHONE: (920) 887-4625
EMAIL: JKLUG@CI.BEAVERDAM.WI.GOV

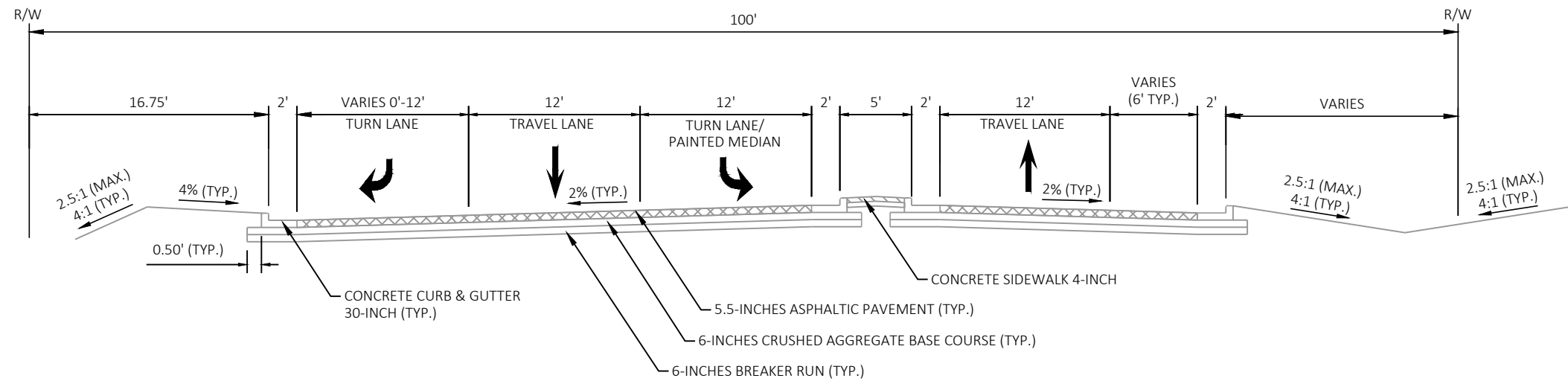
STANDARD ABBREVIATIONS

Table with 2 columns: Abbreviation and Full Name. Includes BP (BEGIN PROJECT), Δ (CENTRAL ANGLE or DELTA), CY (CUBIC YARDS), DOL (DOLLARS), D (DEGREE OF CURVE), E (EAST), L (LENGTH OF CURVE), LF (LINEAL FEET), LS (LUMPSUM), LT (LEFT), N (NORTH), NB (NORTHBOUND), PC (POINT OF CURVATURE), PI (POINT OF INTERSECTION), PT (POINT OF TANGENCY), R (RADIUS), RL or R/L (REFERENCE LINE), RT (RIGHT), R/W (RIGHT-OF-WAY), SB (SOUTHBOUND), STA (STATION), SY (SQUARE YARDS), T (TANGENT), TYP (TYPICAL), W (WEST), X (EAST GRID COORDINATE), Y (NORTH GRID COORDINATE).



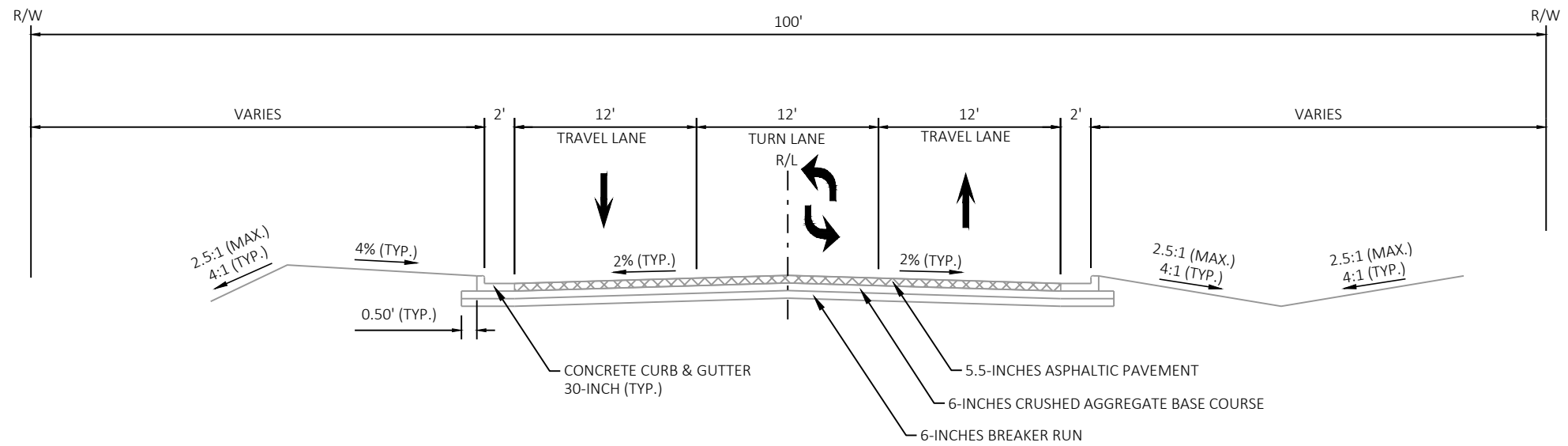
- SEE TYPICAL CROSS SECTION FOR PAVEMENT TYPE AND THICKNESS OF INDIVIDUAL LAYERS
- REMOVING ASPHALTIC SURFACE MILLING
- REMOVE ASPHALTIC SURFACE WEDGE AT BUTT JOINT TO CREATE VERTICAL EDGE

BUTT JOINT DETAIL FOR ASPHALTIC PAVEMENTS (NO PROFILE CHANGE)



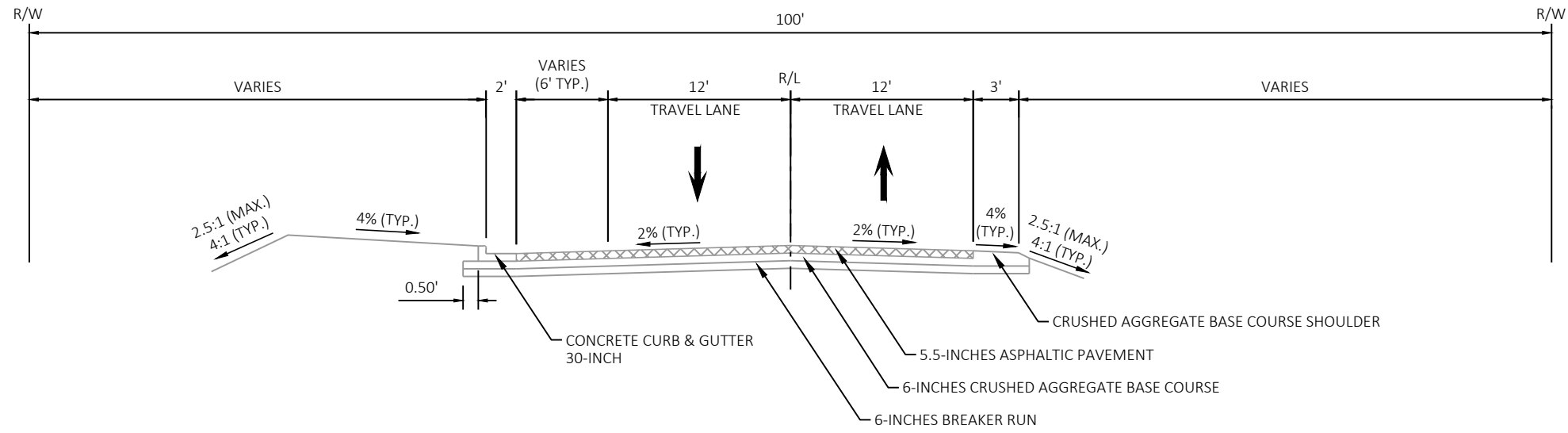
EXISTING TYPICAL SECTION - FRANCES LANE

STA. 76+43 TO STA. 77+75



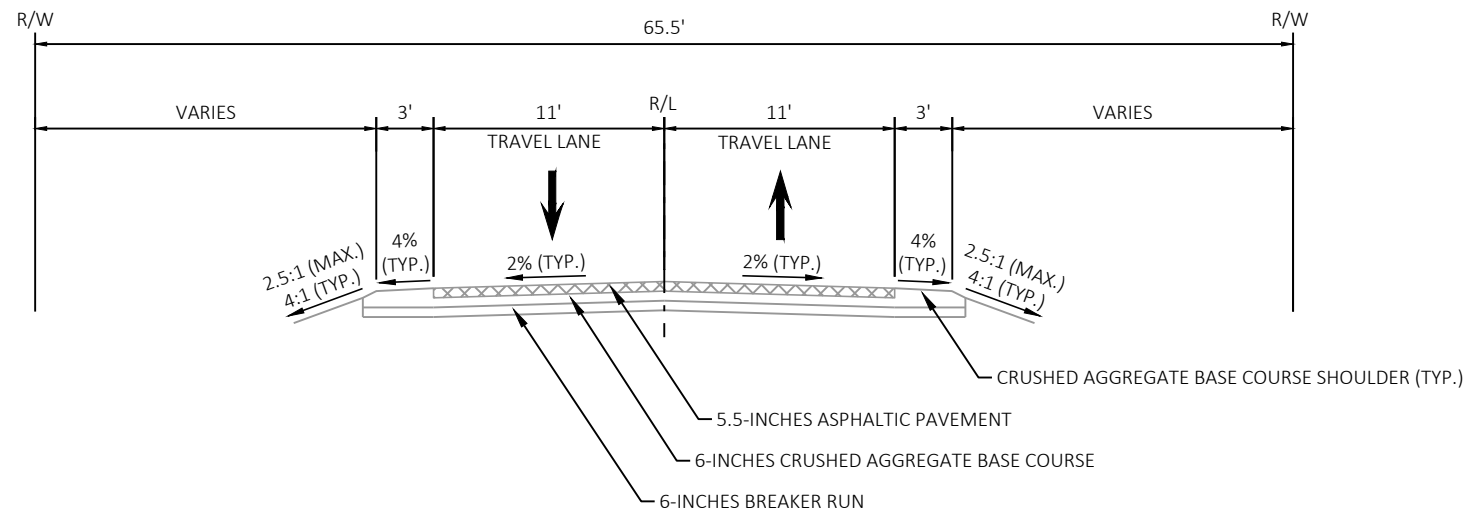
EXISTING TYPICAL SECTION - FRANCES LANE

STA. 78+77 TO STA. 91+90



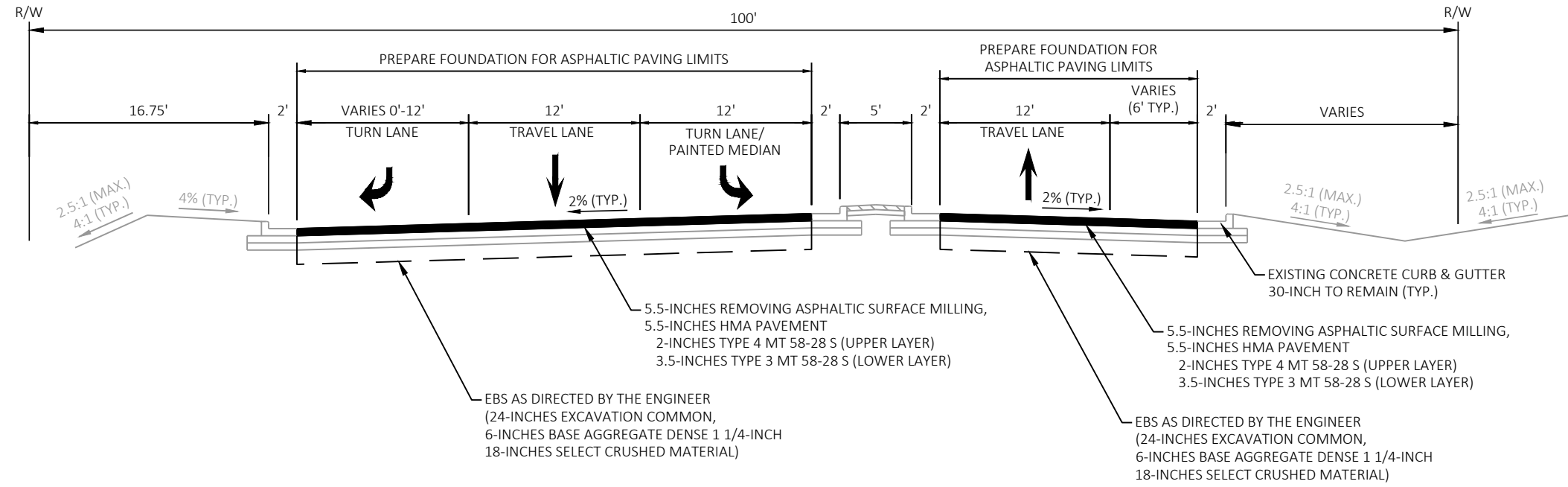
EXISTING TYPICAL SECTION - FRANCES LANE

STA. 91+90 TO STA. 96+00

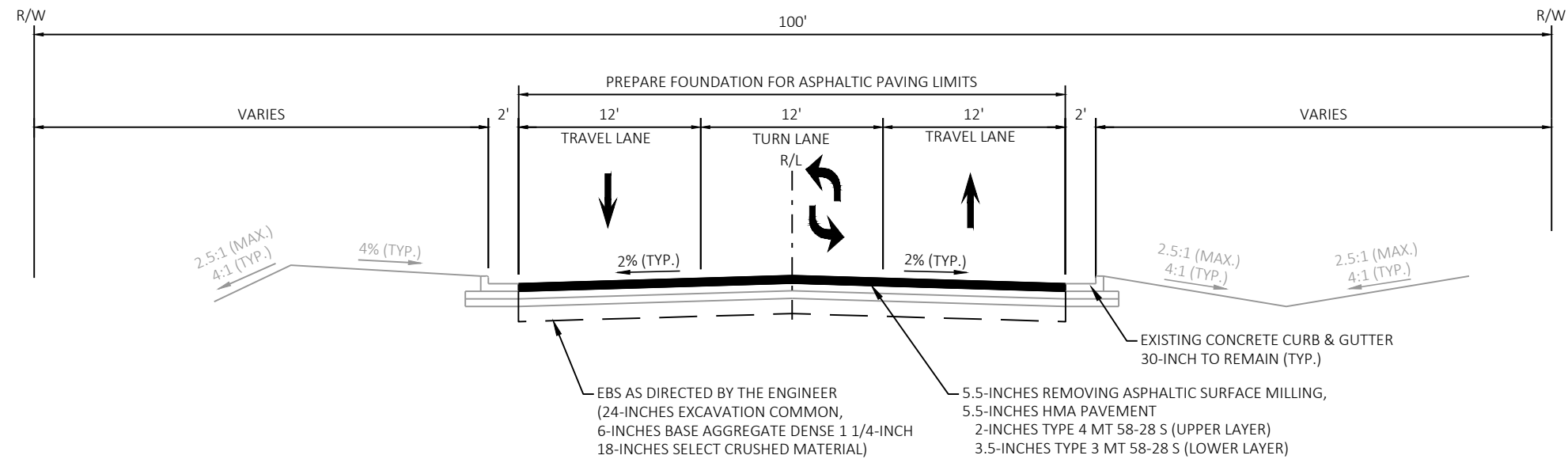


EXISTING TYPICAL SECTION - FRANCES LANE

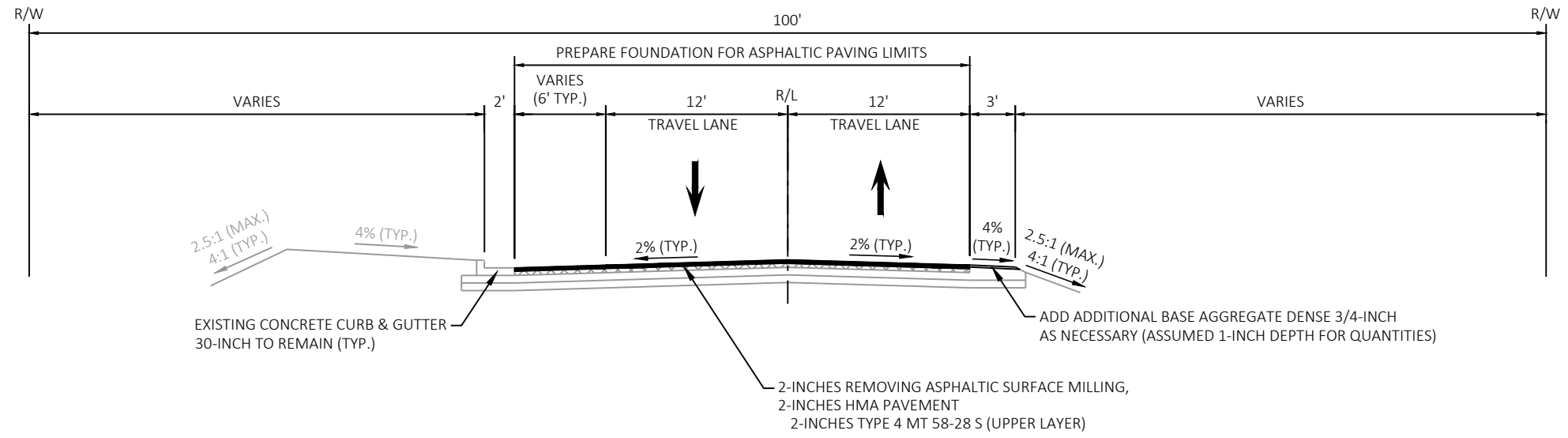
STA. 96+00 TO STA. 98+22



FINISHED TYPICAL SECTION - FRANCES LANE
STA. 76+43 TO STA. 77+75

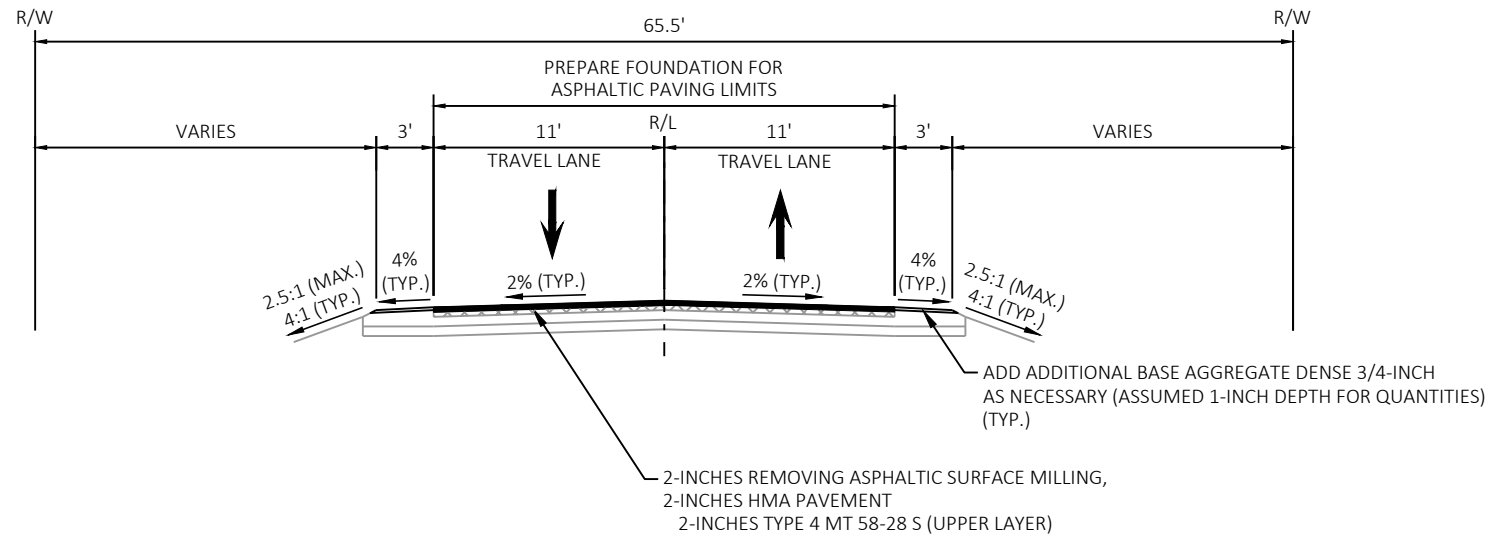


FINISHED TYPICAL SECTION - FRANCES LANE
STA. 78+77 TO STA. 91+90



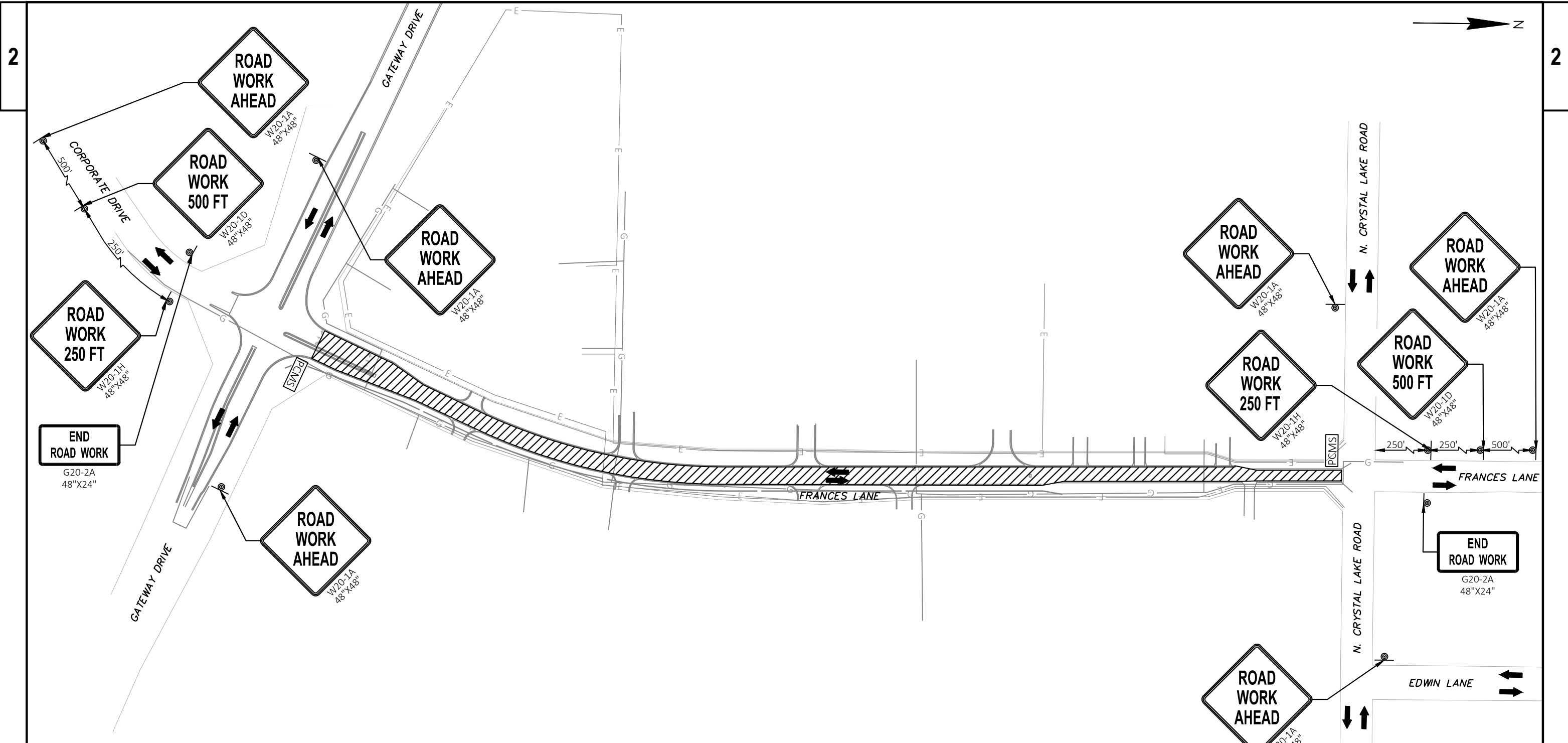
FINISHED TYPICAL SECTION - FRANCES LANE

STA. 91+90 TO STA. 96+00



FINISHED TYPICAL SECTION - FRANCES LANE

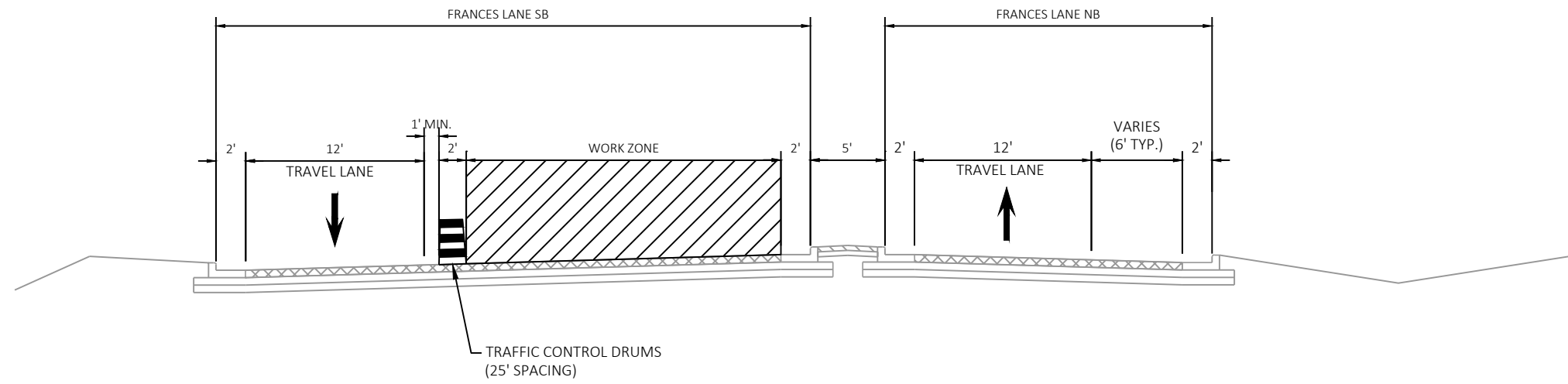
STA. 96+00 TO STA. 98+22



TRAFFIC CONTROL NOTES:

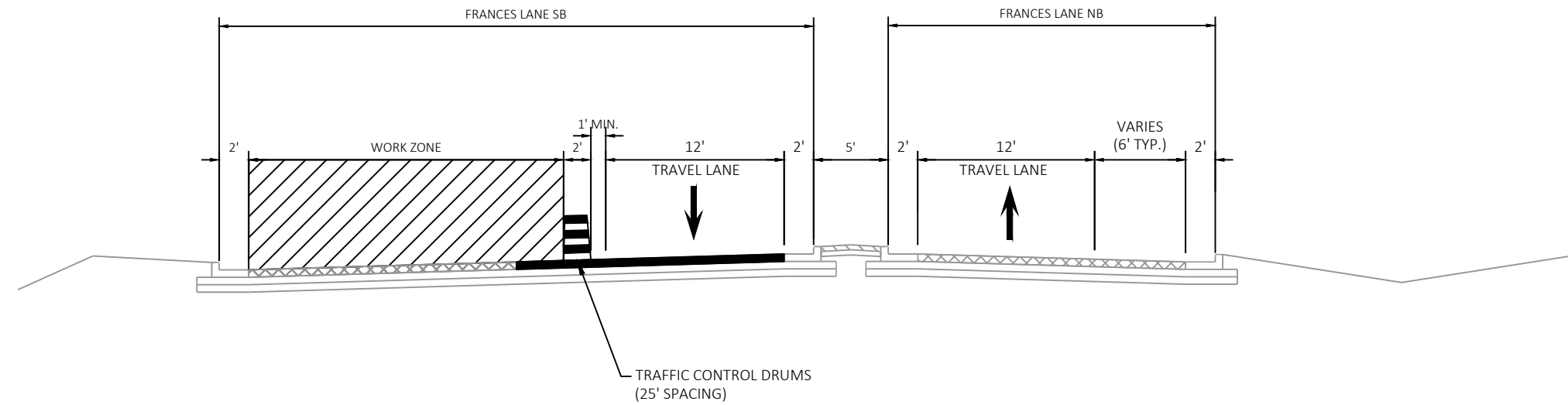
1. SEE S.D.D. "TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 MPH OR LESS TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC."
2. INSTALL ALL TRAFFIC CONTROL SIGNS PCMS ONE WEEK PRIOR TO THE START OF CONSTRUCTION WITH THE MESSAGE:
ROAD WORK
BEGINS
X-XX-XX
3. BI-DIRECTIONAL TRAFFIC TO BE MAINTAINED ON FRANCES LANE DURING CONSTRUCTION.
4. IF ONLY A SINGLE LANE OF TRAFFIC CAN BE MAINTAINED, COMPLETE WORK WITH FLAGGING OPERATIONS. SEE S.D.D. "TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION."

LEGEND	
	WORK AREA
	SIGN ON PERMANENT SUPPORT
	TRAFFIC CONTROL SIGNS PCMS
	TRAFFIC FLOW ARROW



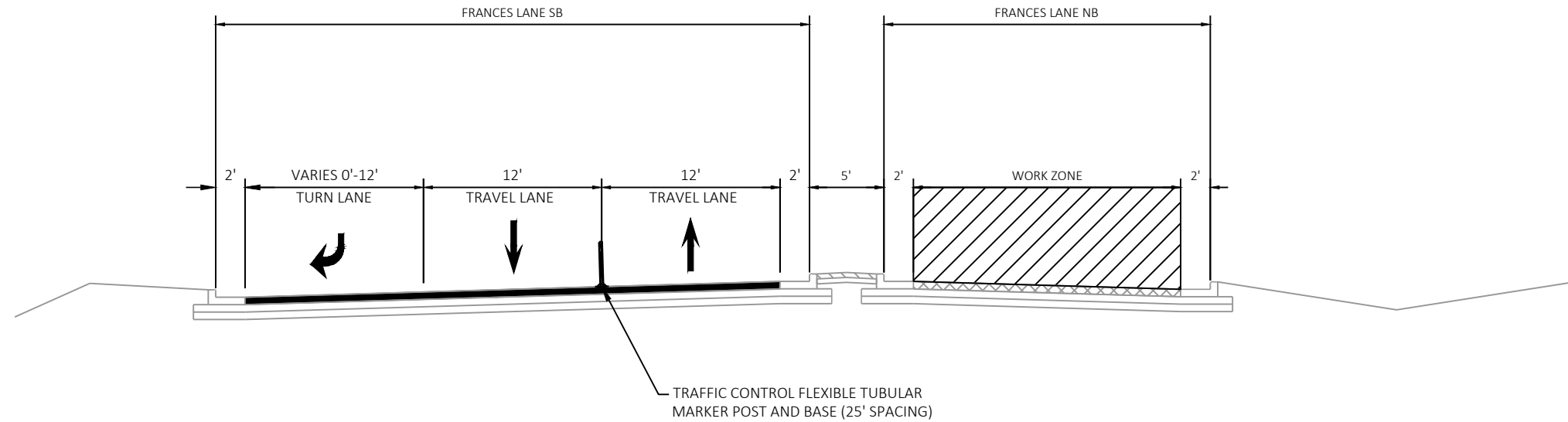
TRAFFIC CONTROL (FRANCES LN APPROACH TO GATEWAY DR) - STAGE 1

STA. 76+43 TO STA. 79+00



TRAFFIC CONTROL (FRANCES LN APPROACH TO GATEWAY DR)- STAGE 2

STA. 76+43 TO STA. 79+00

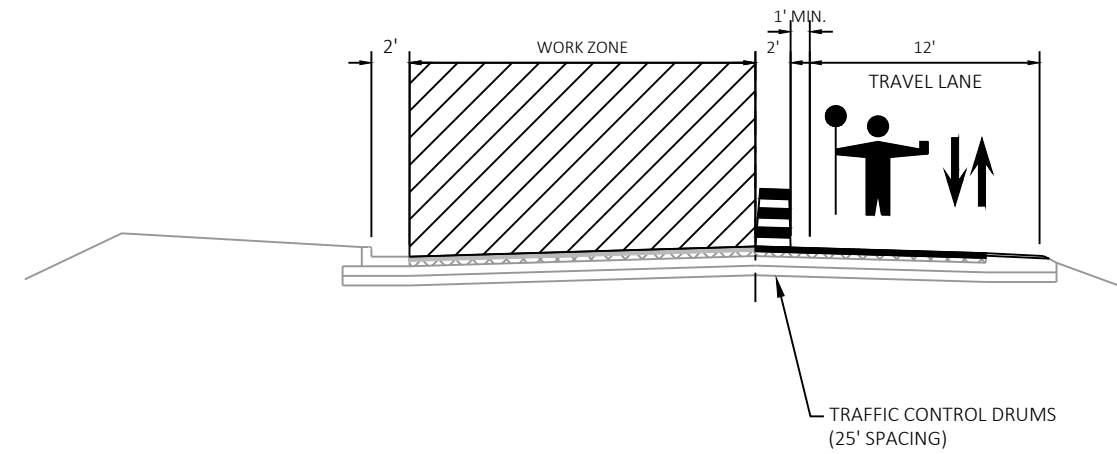
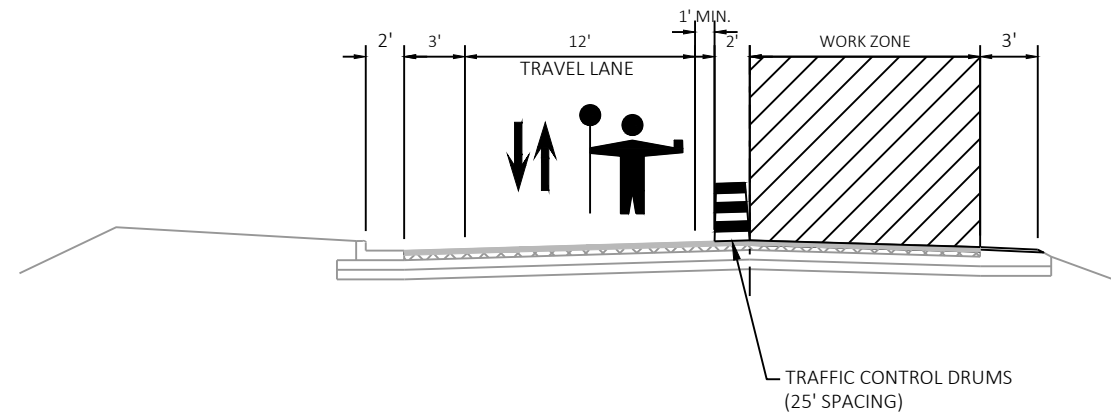


TRAFFIC CONTROL (FRANCES LN APPROACH TO GATEWAY DR) - STAGE 3
 STA. 76+43 TO STA. 79+00



TRAFFIC CONTROL TYPICAL SECTION - MAINLINE
 STA. 79+00 TO STA. 91+90

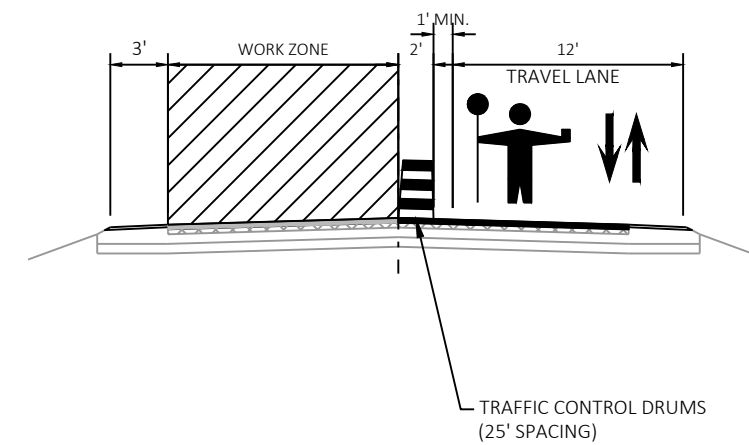
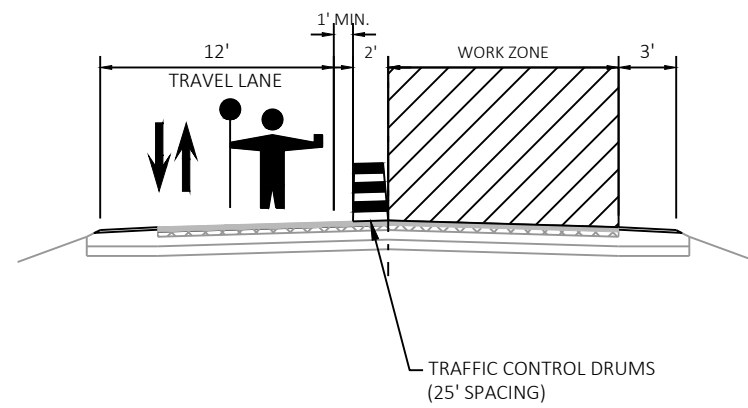
NOTE: WORK SHOWN IN TYPICAL SECTIONS CAN BE COMPLETED IN ANY ORDER



TRAFFIC CONTROL TYPICAL SECTION - MAINLINE

STA. 91+90 TO STA. 96+00

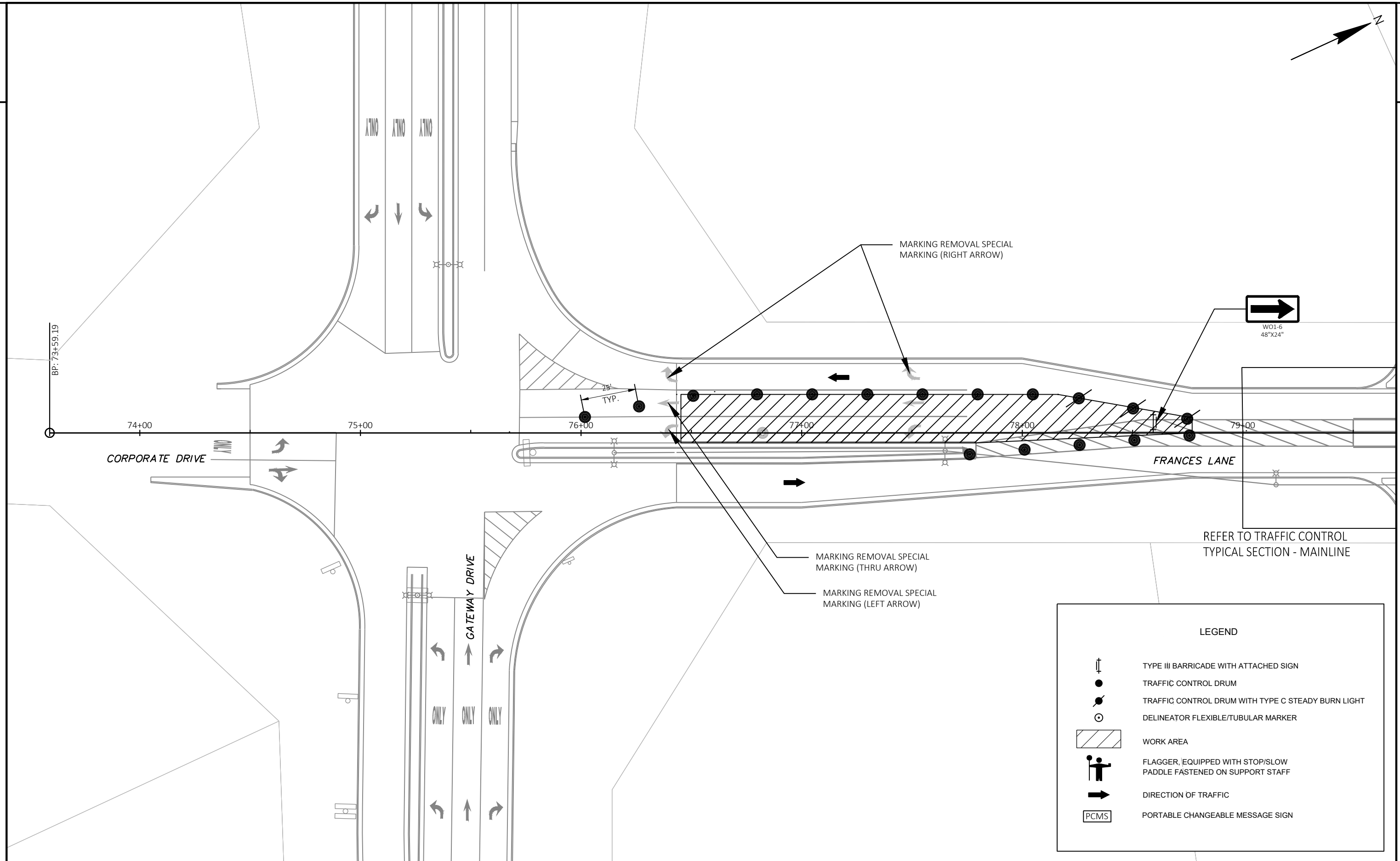
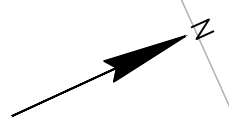
NOTE: WORK SHOWN IN TYPICAL SECTIONS CAN BE COMPLETED IN ANY ORDER



TRAFFIC CONTROL TYPICAL SECTION - MAINLINE

STA. 96+00 TO STA. 98+22

NOTE: WORK SHOWN IN TYPICAL SECTIONS CAN BE COMPLETED IN ANY ORDER



LEGEND	
	TYPE III BARRICADE WITH ATTACHED SIGN
	TRAFFIC CONTROL DRUM
	TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
	DELINEATOR FLEXIBLE/TUBULAR MARKER
	WORK AREA
	FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
	DIRECTION OF TRAFFIC
	PORTABLE CHANGEABLE MESSAGE SIGN

PROJECT NO: 5995-04-71

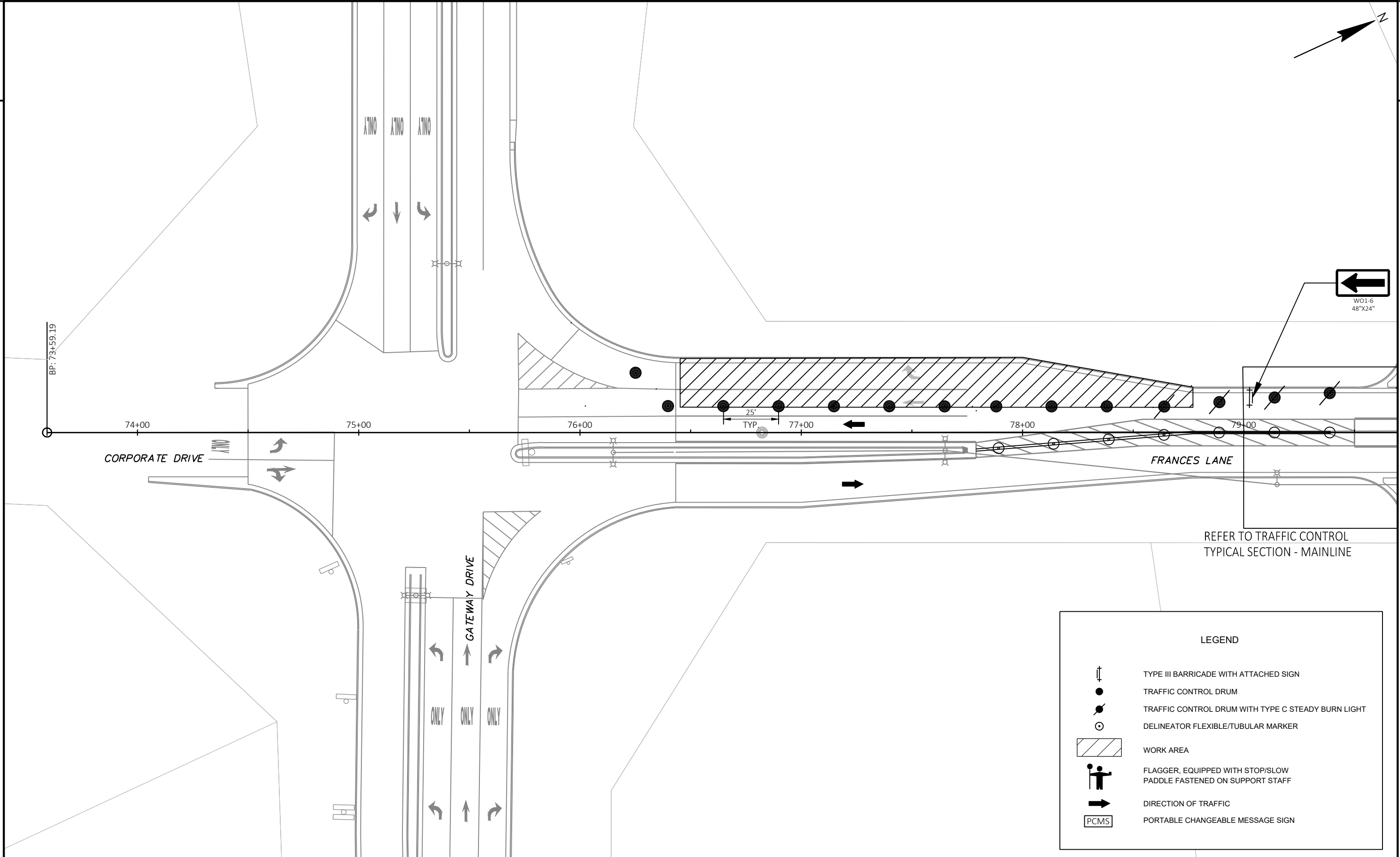
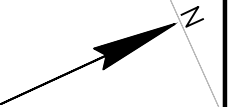
HWY: FRANCES LANE

COUNTY: DODGE

TRAFFIC CONTROL - STAGE 1 - FRANCES LANE

SHEET

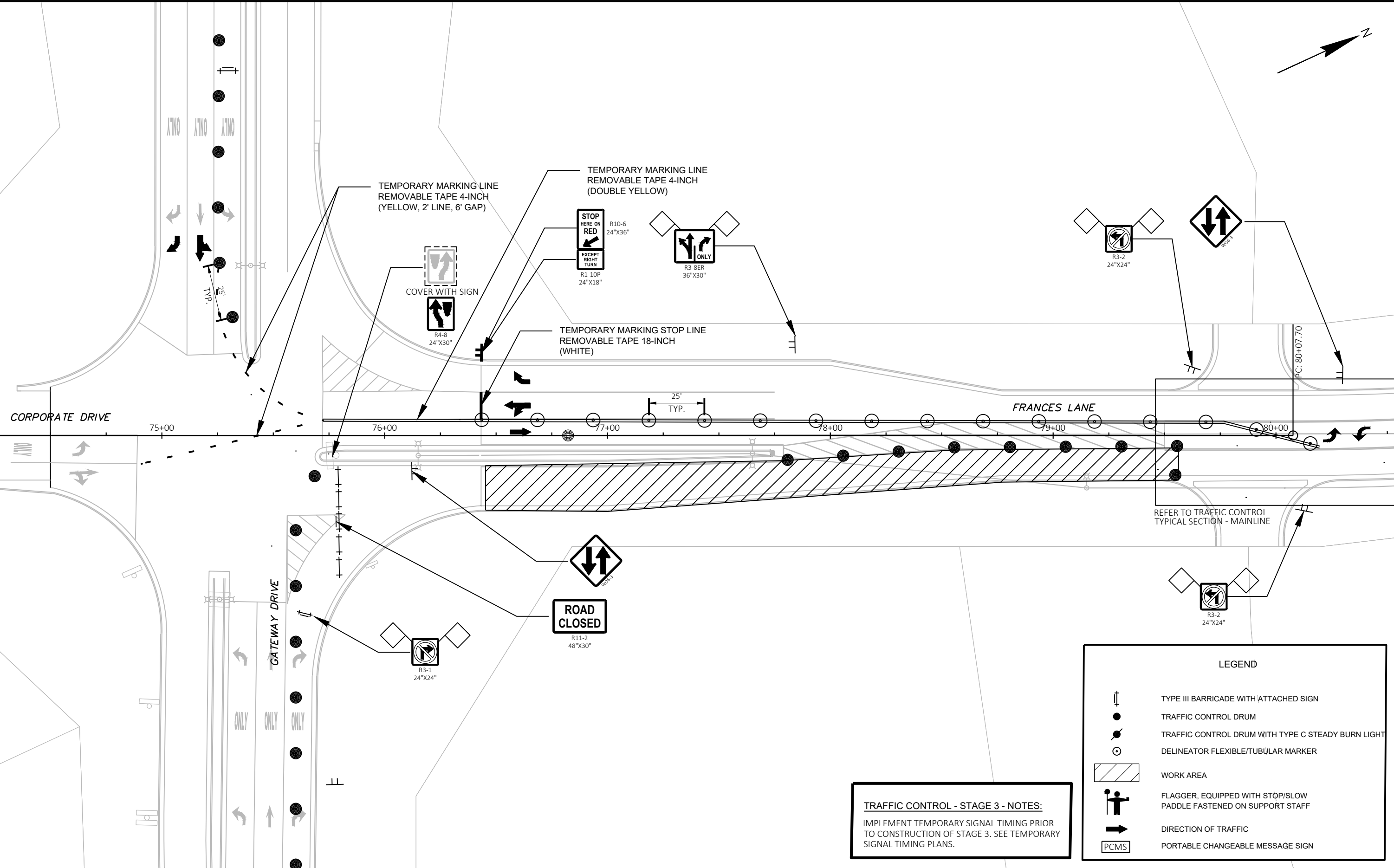
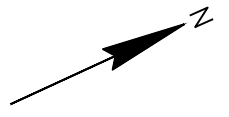
E



REFER TO TRAFFIC CONTROL
TYPICAL SECTION - MAINLINE

LEGEND









	TYPE III BARRICADE WITH ATTACHED SIGN
	TRAFFIC CONTROL DRUM
	TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
	DELINEATOR FLEXIBLE/TUBULAR MARKER
	WORK AREA
	FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
	DIRECTION OF TRAFFIC
	PORTABLE CHANGEABLE MESSAGE SIGN

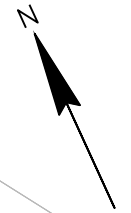


LEGEND	
	TYPE III BARRICADE WITH ATTACHED SIGN
	TRAFFIC CONTROL DRUM
	TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
	DELINEATOR FLEXIBLE/TUBULAR MARKER
	WORK AREA
	FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
	DIRECTION OF TRAFFIC
	PORTABLE CHANGEABLE MESSAGE SIGN

TRAFFIC CONTROL - STAGE 3 - NOTES:
 IMPLEMENT TEMPORARY SIGNAL TIMING PRIOR TO CONSTRUCTION OF STAGE 3. SEE TEMPORARY SIGNAL TIMING PLANS.

LEGEND

-  TYPE III BARRICADE WITH ATTACHED SIGN
-  TRAFFIC CONTROL DRUM
-  TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
-  DELINEATOR FLEXIBLE/TUBULAR MARKER
-  WORK AREA
-  FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
-  DIRECTION OF TRAFFIC
-  PORTABLE CHANGEABLE MESSAGE SIGN

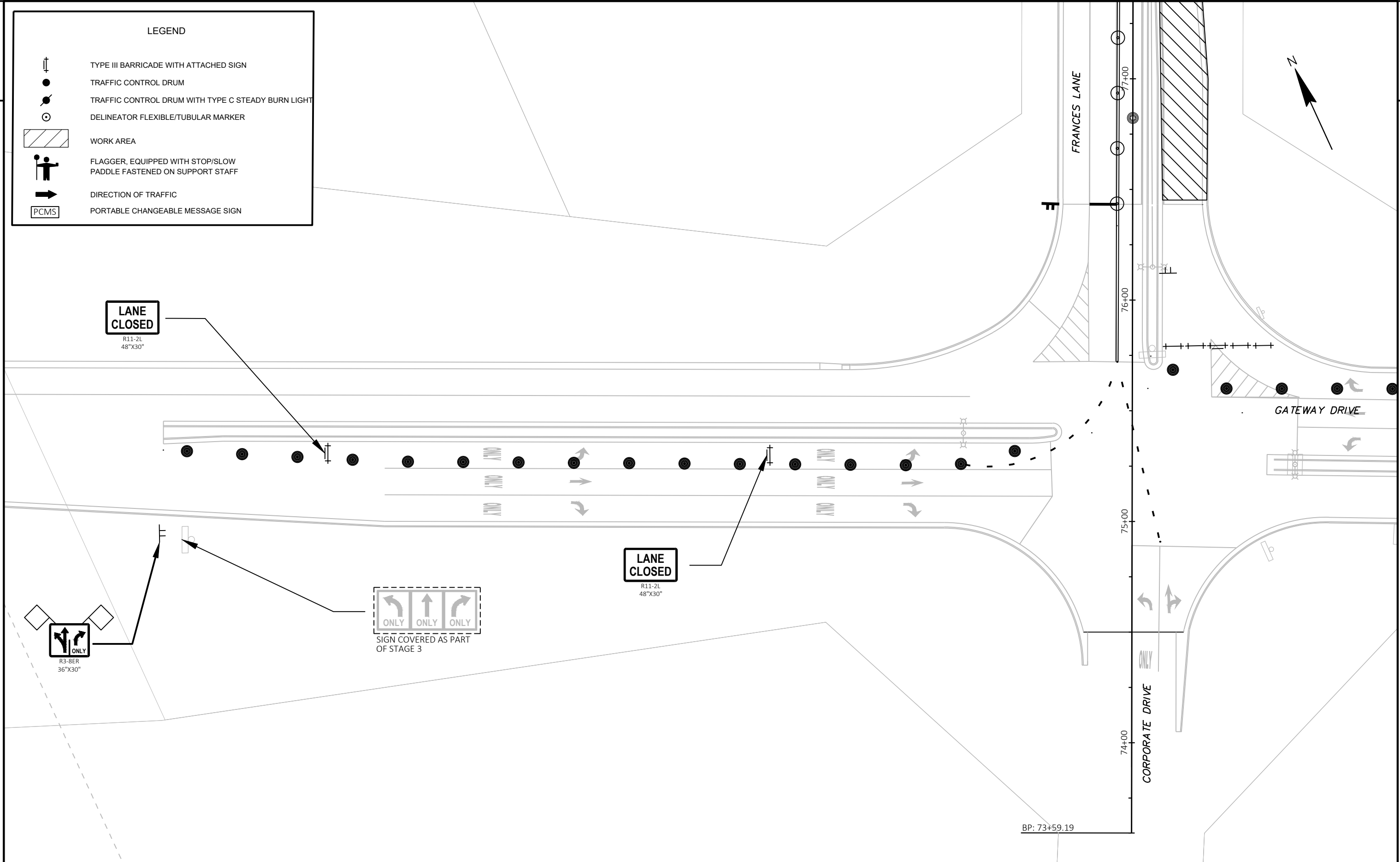


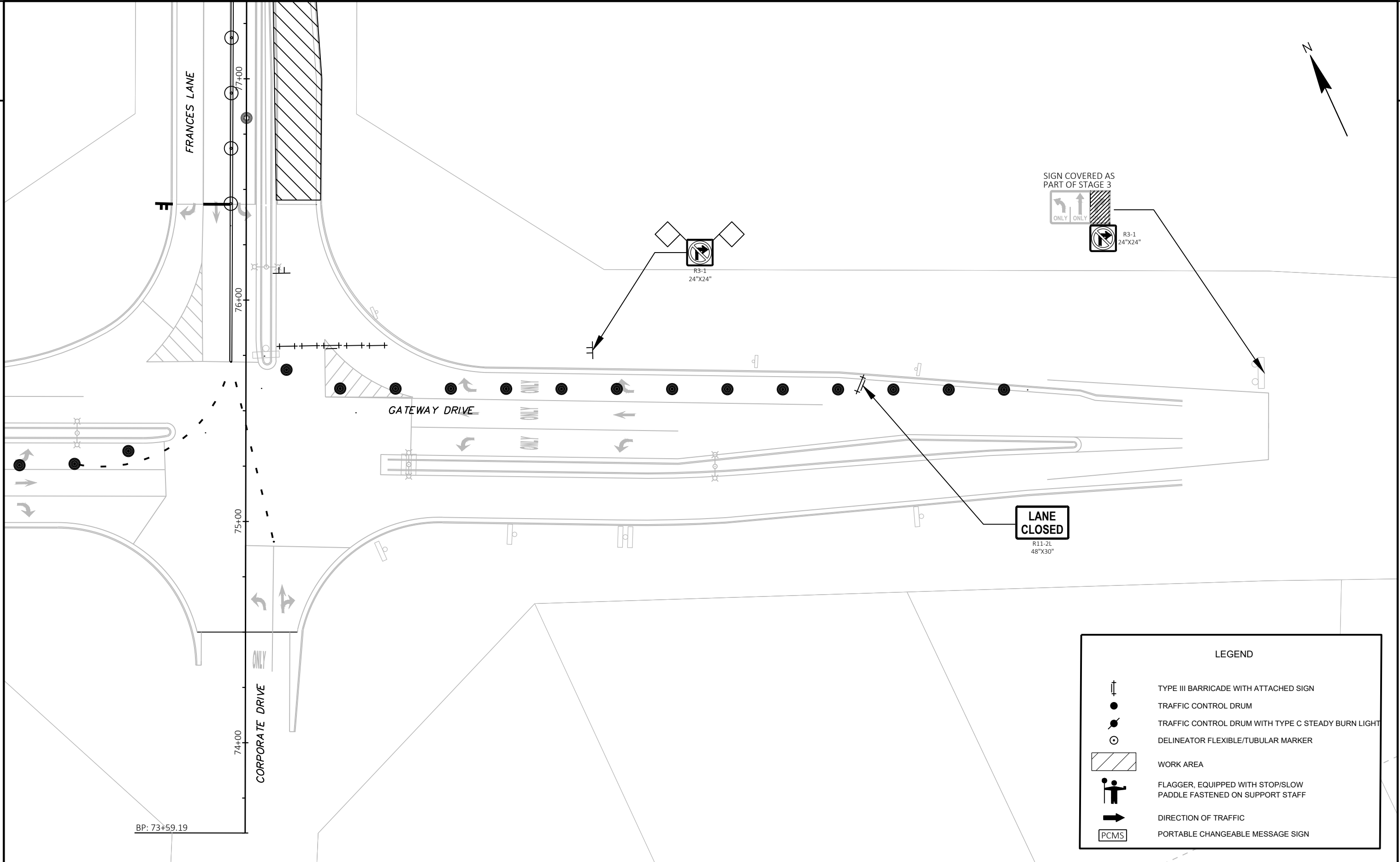
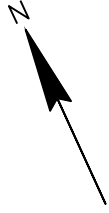
LANE CLOSED
R11-2L
48"x30"

LANE CLOSED
R11-2L
48"x30"

ONLY
R3-8ER
36"x30"

ONLY ONLY ONLY
SIGN COVERED AS PART OF STAGE 3



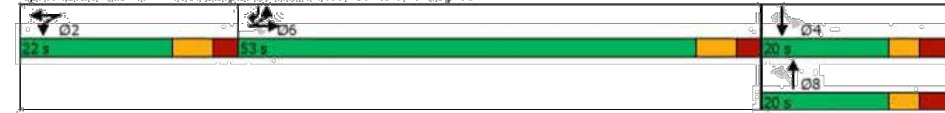


LEGEND

	TYPE III BARRICADE WITH ATTACHED SIGN
	TRAFFIC CONTROL DRUM
	TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
	DELINEATOR FLEXIBLE/TUBULAR MARKER
	WORK AREA
	FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
	DIRECTION OF TRAFFIC
	PORTABLE CHANGEABLE MESSAGE SIGN

Gateway Dr at Corporate Dr/Frances Ln

Splits and Phases: 100: Corporate Dr/Frances Ln & Gateway Dr



Day of Week: —
 Time of Day: All Day
 From: 8:00 AM
 To: 7:00 PM
 Cycle Length: 95 s
 Coordinated?: No
 Master Intersection Reference Phase(s) Offset: 0 s

Note: Seconds (s) displayed in Splits and Phases diagram represent total split, not green time

Phase Data								
Phase	ø1	ø2	ø3	ø4	ø5	ø6	ø7	ø8
	NOT USED		NOT USED		NOT USED		NOT USED	
Assignment	EB L	WB All	—	SB All	WB L	EB All	—	NB All
Min Green, s	0	15	0	10	0	15	0	10
Passage/Extension, s	3.0	4.5	3.0	4.1	3.0	3.9	3.0	4.1
Max Green, s	0	15	0	13	0	46	0	13
Yellow, s	0.0	4.1	0.0	3.0	0.0	4.1	0.0	3.0
All Red, s	0.0	2.5	0.0	4.0	0.0	2.5	0.0	4.0
Green Delay, s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow Delay, s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Min Split, s	0.0	21.6	0.0	17.0	0.0	21.6	0.0	17.0
Max Split, s	0.0	22.0	0.0	20.0	0.0	53.0	0.0	20.0
Walk, s	0	0	0	0	0	0	0	0
Walk Offset, s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Walk Offset Mode								
Rest In Walk	No	No	No	No	No	No	No	No
Flashing Don't Walk, s	0	0	0	0	0	0	0	0
Min Gap, s	3	3	3	3	3	3	3	3
Time Before Reduce, s	0	15	0	10	0	15	0	10
Time To Reduce, s	0	0	0	2	0	16	0	2
Recall	None	None	None	Min	None	Min	None	None
Recall Delay, s	0	0	0	0	0	0	0	0
Detection Delay, s	0	0	0	0	0	0	0	0
Non Lock								
Dual Entry	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Phase Notes	
Overlaps	
O.L.A	ø1 Detectors shall be disabled for Stage 3, EB left-turn lane
O.L.B	ø2 Detectors shall also call Phase 5
O.L.C	ø3
O.L.D	ø4
O.L.E	ø5 Detectors shall also call Phase 2
O.L.F	ø6 Detectors shall also call Phase 1 & O.L. E; All Phase 6 detectors shall operate in locking mode for Stage 3
O.L.G	ø7 Detectors shall be disabled for Stage 3, SB left-turn lane
O.L.H	ø8

Off-Peak Notes
 Signal shall rest in green for Phase 4 (SB approach) utilizing clearance intervals shown above from 7:00 PM to 8:00 AM

Estimate Of Quantities

5995-04-71

Line	Item	Item Description	Unit	Total	Qty
0002	204.0100	Removing Concrete Pavement	SY	3.000	3.000
0004	204.0115	Removing Asphaltic Surface Butt Joints	SY	18.000	18.000
0006	204.0120	Removing Asphaltic Surface Milling	SY	8,617.000	8,617.000
0008	205.0100	Excavation Common	CY	670.000	670.000
0010	211.0101	Prepare Foundation for Asphaltic Paving (project) 01. 5995-04-71	EACH	1.000	1.000
0012	213.0100	Finishing Roadway (project) 01. 5995-04-71	EACH	1.000	1.000
0014	305.0110	Base Aggregate Dense 3/4-Inch	TON	15.000	15.000
0016	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	340.000	340.000
0018	305.0500	Shaping Shoulders	STA	8.000	8.000
0020	312.0110	Select Crushed Material	TON	900.000	900.000
0022	455.0605	Tack Coat	GAL	939.000	939.000
0024	460.2000	Incentive Density HMA Pavement	DOL	1,456.000	1,456.000
0026	460.6223	HMA Pavement 3 MT 58-28 S	TON	1,309.000	1,309.000
0028	460.6224	HMA Pavement 4 MT 58-28 S	TON	966.000	966.000
0030	611.8110	Adjusting Manhole Covers	EACH	6.000	6.000
0032	618.0100	Maintenance And Repair of Haul Roads (project) 01. 5995-04-71	EACH	1.000	1.000
0034	619.1000	Mobilization	EACH	1.000	1.000
0036	624.0100	Water	MGAL	8.000	8.000
0038	628.1905	Mobilizations Erosion Control	EACH	1.000	1.000
0040	628.1910	Mobilizations Emergency Erosion Control	EACH	1.000	1.000
0042	628.7020	Inlet Protection Type D	EACH	15.000	15.000
0044	642.5401	Field Office Type D	EACH	1.000	1.000
0046	643.0300	Traffic Control Drums	DAY	1,334.000	1,334.000
0048	643.0420	Traffic Control Barricades Type III	DAY	87.000	87.000
0050	643.0500	Traffic Control Flexible Tubular Marker Posts	EACH	23.000	23.000
0052	643.0600	Traffic Control Flexible Tubular Marker Bases	EACH	23.000	23.000
0054	643.0705	Traffic Control Warning Lights Type A	DAY	20.000	20.000
0056	643.0715	Traffic Control Warning Lights Type C	DAY	35.000	35.000
0058	643.0900	Traffic Control Signs	DAY	553.000	553.000
0060	643.0920	Traffic Control Covering Signs Type II	EACH	2.000	2.000
0062	643.1050	Traffic Control Signs PCMS	DAY	62.000	62.000
0064	643.5000	Traffic Control	EACH	1.000	1.000
0066	646.1020	Marking Line Epoxy 4-Inch	LF	5,423.000	5,423.000
0068	646.3020	Marking Line Epoxy 8-Inch	LF	490.000	490.000
0070	646.5020	Marking Arrow Epoxy	EACH	14.000	14.000
0072	646.6120	Marking Stop Line Epoxy 18-Inch	LF	44.000	44.000
0074	646.7120	Marking Diagonal Epoxy 12-Inch	LF	105.000	105.000
0076	646.9100	Marking Removal Line 8-Inch	LF	218.000	218.000
0078	646.9200	Marking Removal Line Wide	LF	86.000	86.000
0080	646.9300	Marking Removal Special Marking	EACH	4.000	4.000
0082	649.0150	Temporary Marking Line Removable Tape 4-Inch	LF	1,260.000	1,260.000
0084	649.0250	Temporary Marking Line Removable Tape 8-Inch	LF	12.000	12.000
0086	649.0850	Temporary Marking Stop Line Removable Tape 18-Inch	LF	13.000	13.000
0088	650.8000	Construction Staking Resurfacing Reference	LF	2,179.000	2,179.000
0090	650.9911	Construction Staking Supplemental Control (project) 01. 5995-04-71	EACH	1.000	1.000
0092	740.0440	Incentive IRI Ride	DOL	826.000	826.000
0094	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	500.000	500.000
0096	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	550.000	550.000
0098	SPV.0060	Special 01. Adjust Ex. Water Valve Box	EACH	11.000	11.000

Estimate Of Quantities

5995-04-71

Line	Item	Item Description	Unit	Total	Qty
0100	SPV.0060	Special 02. Sanitary MH Cover Type J-Special	EACH	4.000	4.000
0102	SPV.0060	Special 03. Temporary Signal Timing Modification	EACH	1.000	1.000

211 - PREPARE FOUNDATION

211.0101
PREPARE FOUNDATION FOR
ASPHALTIC PAVING (PROJECT)
(01. 5995-04-71)

CATEGORY	STATION	TO	STATION	LOCATION	EACH	REMARKS
0010	76+43.28	-	98+22	PROJECT	1	
TOTAL 0010					1	

213 - FINISHING ROADWAY

213.0100.01
FINISHING ROADWAY (PROJECT)
(01. 5995-04-71)

CATEGORY	STATION	TO	STATION	LOCATION	EACH	REMARKS
0010	76+43.28	-	98+22	PROJECT	1	
TOTAL 0010					1	

204 - REMOVALS

204.0100 204.0115 646.9100 646.9200 646.9300
 REMOVING REMOVING MARKING REMOVAL MARKING REMOVAL MARKING REMOVAL
 CONCRETE ASPHALTIC LINE 8-INCH LINE WIDE SPECIAL MARKING
 PAVEMENT SURFACE BUTT JOINTS LINE WIDE EACH
 SY SY LF LF EACH

CATEGORY	STATION	TO	STATION	LOCATION	SY	SY	LF	LF	EACH	REMARKS
0010	76+45	-		LT	-	9	-	-	4	
0010	75+72	-	76+43	LT	-	-	218	86	-	
0010	76+45	-		RT	-	4	-	-	-	
0010	98+22	-		LT & RT	-	5	-	-	-	
0010	91+75	-		LT & RT	3	-	-	-	-	
TOTAL 0010					3	18	218	86	4	

205 - EARTHWORK

205.0100
EXCAVATION
COMMON
CY

CATEGORY	STATION	TO	STATION	DESCRIPTION	CY	REMARKS
0010	76+43.28	-	91+95	UNDISTRIBUTED FOR EBS	670	
TOTAL 0010					670	

204 - MILLING

204.0120
REMOVING
ASPHALTIC
SURFACE MILLING
SY

CATEGORY	STATION	TO	STATION	LOCATION	SY	REMARKS
0010	76+43	-	91+95	LT & RT	6,676	
0010	91+95	-	98+22	LT & RT	1,941	
TOTAL 0010					8,617	

305 - BASE AGGREGATE

305.0110 305.0120 305.0500 312.0110 624.0100
 BASE AGGREGATE BASE AGGREGATE SHAPING SELECT CRUSHED WATER
 DENSE 3/4-INCH DENSE 1 1/4-INCH SHOULDERS MATERIAL MGAL

CATEGORY	STATION	TO	STATION	DESCRIPTION	TON	TON	STA	TON	MGAL	REMARKS
0010	91+95	-	98+22	LT & RT	15	-	8	-	1	
0010	76+43.28	-	91+95	UNDISTRIBUTED FOR EBS	-	340	-	900	7	ASSUMED 6" BASE AGGREGATE OVER 18" SELECT CRUSHED
TOTAL 0010					15	340	8	900	8	

460 - SURFACING

CATEGORY	STATION TO STATION	LOCATION	455.0605	460.6223	460.6224	REMARKS
			TACK COAT GAL	HMA PAVEMENT 3 MT 58-28 S TON	HMA PAVEMENT 4 MT 58-28 S TON	
0010	76+43.28 - 91+95	LT & RT	802	1,309	748	
0010	91+95 - 98+22	LT & RT	137	-	218	
TOTAL 0010			939	1,309	966	

611-ADJUSTMENTS

CATEGORY	STATION TO STATION	LOCATION	611.8110	SPV.0060.01	SPV.0060.02	REMARKS
			ADJUSTING MANHOLE COVERS EACH	SPECIAL (01. ADJUST EX. WATER VALVE BOX) EACH	SPECIAL (02. SANITARY MH COVER TYPE J-SPECIAL) EACH	
0010	76+82		1	-	-	
0010	80+76		1	-	-	
0010	83+84		1	-	-	
0010	87+80		1	-	-	
0010	91+75		1	-	-	
0010	95+76		1	-	-	
CATEGORY 0010 TOTAL			6	0	0	
0020	77+50	LT	-	1	-	
0020	81+05	LT	-	1	-	
0020	82+94	LT	-	1	-	
0020	84+05	LT	-	1	-	
0020	87+12	LT	-	1	-	
0020	88+05	LT	-	1	-	
0020	92+03	LT	-	1	-	
0020	92+15	LT	-	1	-	
0020	95+53	LT	-	1	-	
0020	95+73	LT	-	1	-	
0020	95+78	LT	-	1	-	
0020	76+82		-	-	1	
0020	80+76		-	-	1	
0020	83+84		-	-	1	
0020	87+80		-	-	1	
CATEGORY 0020 TOTAL			0	11	4	
PROJECT TOTAL			6	11	4	

619 - MOBILIZATION

CATEGORY	STATION	LOCATION	619.1000	REMARKS
			MOBILIZATION EACH	
0010	PROJECT 5995-04-71		1	
TOTAL 0010			1	

628 - EROSION CONTROL

CATEGORY	STATION	LOCATION	628.1905	628.1910	628.7020	REMARKS
			MOBILIZATIONS EROSION CONTROL EACH	MOBILIZATIONS EMERGENCY EROSION CONTROL EACH	INLET PROTECTION TYPE D EACH	
0010	78+81	LT & RT	-	-	4	
0010	80+50	LT & RT	-	-	2	
0010	82+77	LT & RT	-	-	2	
0010	86+65	LT & RT	-	-	2	
0010	89+00	LT & RT	-	-	2	
0010	91+85	LT & RT	-	-	2	
0010	95+30,	LT	-	-	1	
0010	PROJECT 5995-04-71		1	1	-	
TOTAL 0010			1	1	15	

642 - FIELD OFFICE

CATEGORY	STATION TO STATION	LOCATION	642.5401	REMARKS
			FIELD OFFICE TYPE D EACH	
0010	PROJECT 5995-04-71		1	
TOTAL 0010			1	

3

3

643 - TRAFFIC CONTROL

CATEGORY	STATION TO	STATION	DESCRIPTION	DAYS	643.0300	643.0420	643.0500	643.0600	643.0705	643.0715	643.0900	643.0920	643.1050	643.5000	649.0150	649.0250	649.0850	SPV.0060.03	REMARKS
					TRAFFIC CONTROL DRUMS	TRAFFIC CONTROL BARRICADES TYPE III	TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS	TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER BASES	TRAFFIC CONTROL WARNING LIGHTS TYPE A	TRAFFIC CONTROL WARNING LIGHTS TYPE C	TRAFFIC CONTROL SIGNS	TRAFFIC CONTROL COVERING SIGNS TYPE II	TRAFFIC CONTROL COVERING SIGNS TYPE II	TRAFFIC CONTROL SIGNS PCMS	TRAFFIC CONTROL	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)	TEMPORARY MARKING LINE REMOVABLE TAPE 8-INCH	TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH	
0010	76+43.28	98+22	PROJECT	31	-	-	-	-	-	-	372	-	-	62	1	-	-	-	-
0010	76+43.28	- 79+00	INTERSECTION - STAGE 1	5	85	5	-	-	10	15	5	-	-	-	-	-	-	-	-
0010	76+43.28	- 79+00	INTERSECTION - STAGE 2	5	70	5	7	7	10	20	5	-	-	-	-	320	-	-	-
0010	76+43.28	- 79+00	INTERSECTION - STAGE 3	5	195	45	16	16	-	-	75	1	2	-	-	940	12	13	1
0010	79+00	- 98+22	MAINLINE	16	842	-	-	-	-	-	64	-	-	-	-	-	-	-	-
0010	79+00	- 98+22	DRIVEWAY ACCESS	16	142	32	-	-	-	-	32	-	-	-	-	-	-	-	-
TOTAL 0010					1,334	87	23	23	20	35	553	2	62	1	1,260	12	13	1	

646 - MARKING LINE

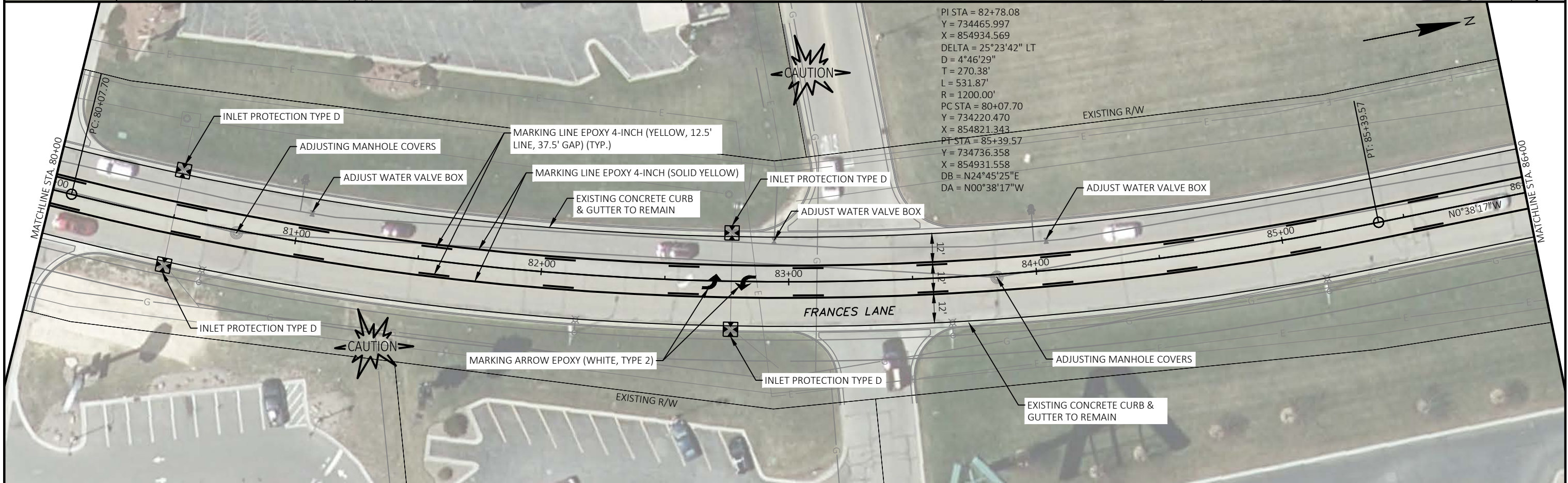
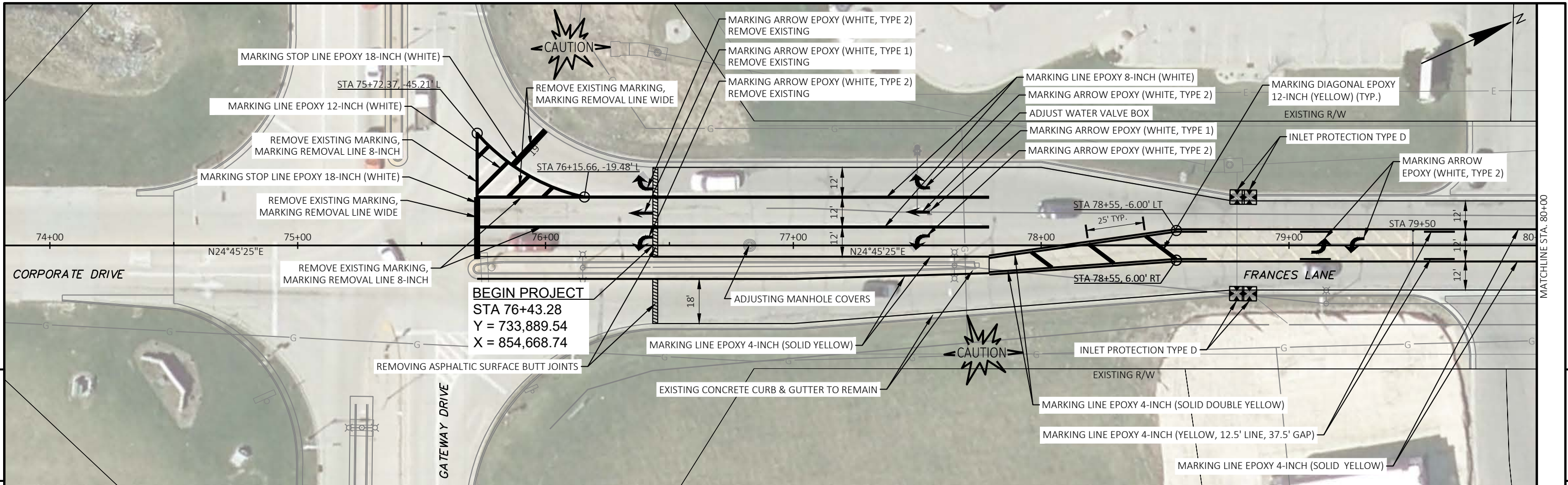
CATEGORY	STATION TO	STATION	LOCATION	646.1020	646.3020	646.5020		646.6120	646.7120		REMARKS
				MARKING LINE EPOXY 4-INCH (YELLOW) LF	MARKING LINE EPOXY 8-INCH (WHITE) LF	MARKING ARROW (TYPE 1) EACH	EPOXY (WHITE) (TYPE 2) EACH	MARKING STOP LINE EPOXY 18-INCH (WHITE) LF	MARKING DIAGONAL (YELLOW) LF	EPOXY 12-INCH (WHITE) LF	
0010	76+43.28	- 78+55		717	490	2	4	44	39	42	
0010	78+55	- 91+91		3,340	-	-	8	-	-	-	
0010	91+91	- 98+22		1,366	-	-	-	-	24	-	
SUBTOTAL						2	12		63	42	
TOTAL 0010				5,423	490		14	44		105	

650 - STAKING

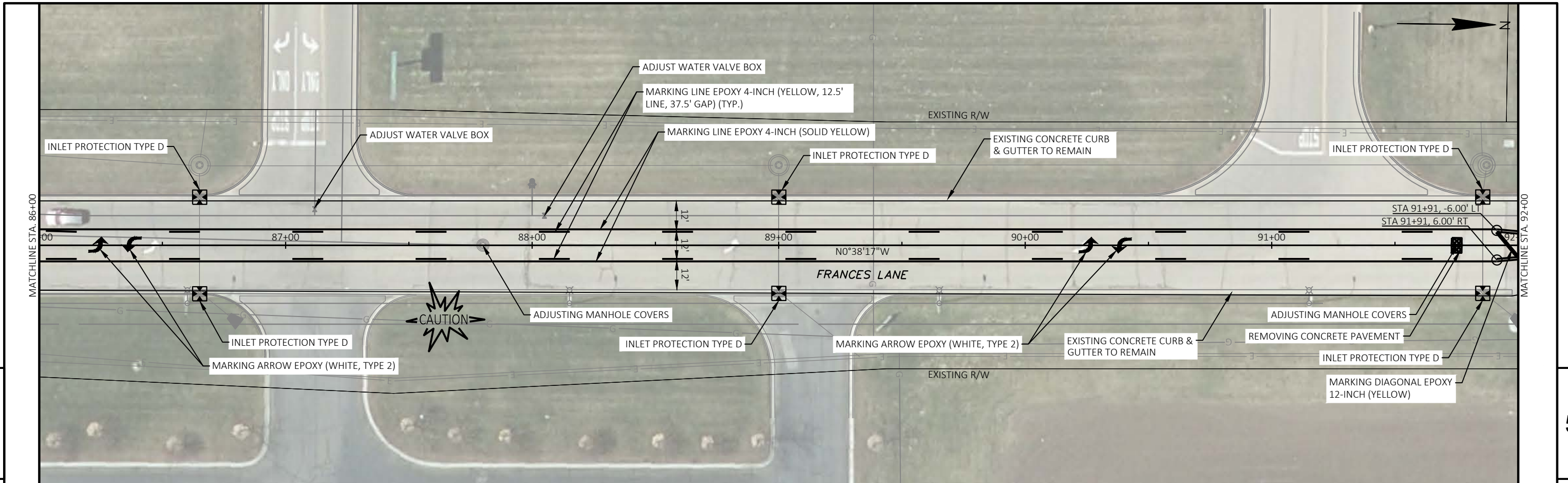
CATEGORY	STATION TO	STATION	LOCATION	650.8000	650.9911.01	REMARKS
				CONSTRUCTION STAKING RESURFACING REFERENCE LF	CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) (01. 5995-04-71) LS	
0010	76+43.28	- 98+22		2,179	-	
0010	PROJECT 5995-04-71			-	1	
TOTAL 0010				2,179	1	

618 - HAUL ROADS (NON PARTICIPATING)

CATEGORY	STATION	LOCATION	618.0100.01	REMARKS
			MAINTENANCE AND REPAIR OF HAUL ROADS (PROJECT) (01. 5995-04-71) EACH	
0020	PROJECT 5995-04-71		1	
TOTAL 0020			1	

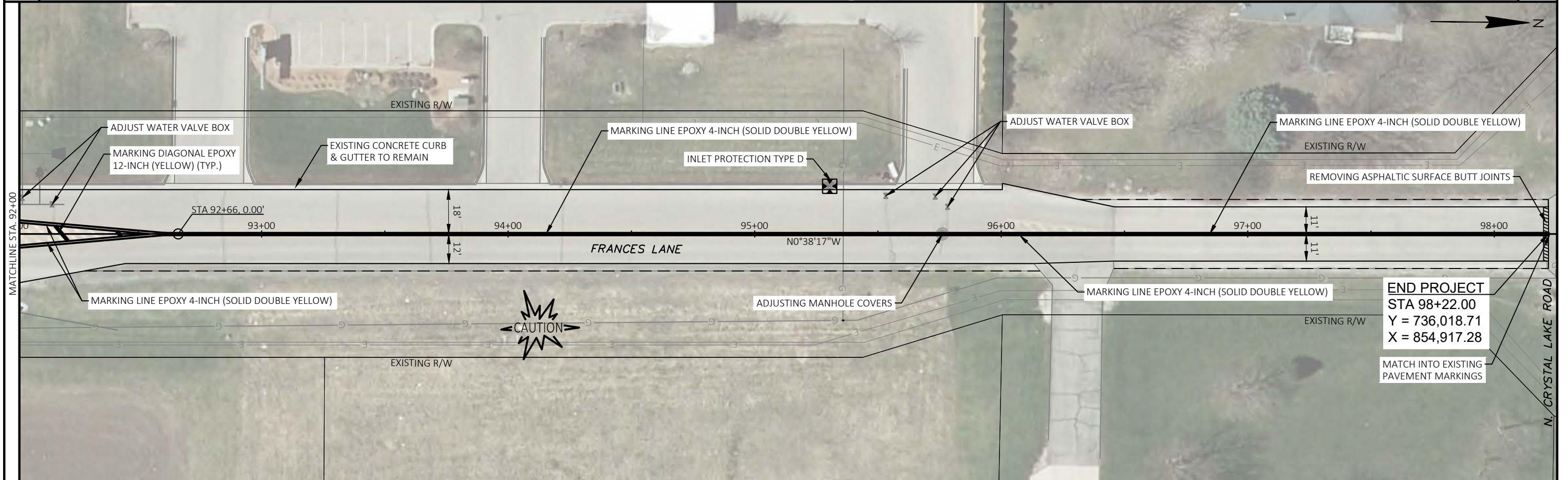


PROJECT NO: 5995-04-71	HWY: FRANCES LANE	COUNTY: DODGE	PLAN	SHEET	E
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5

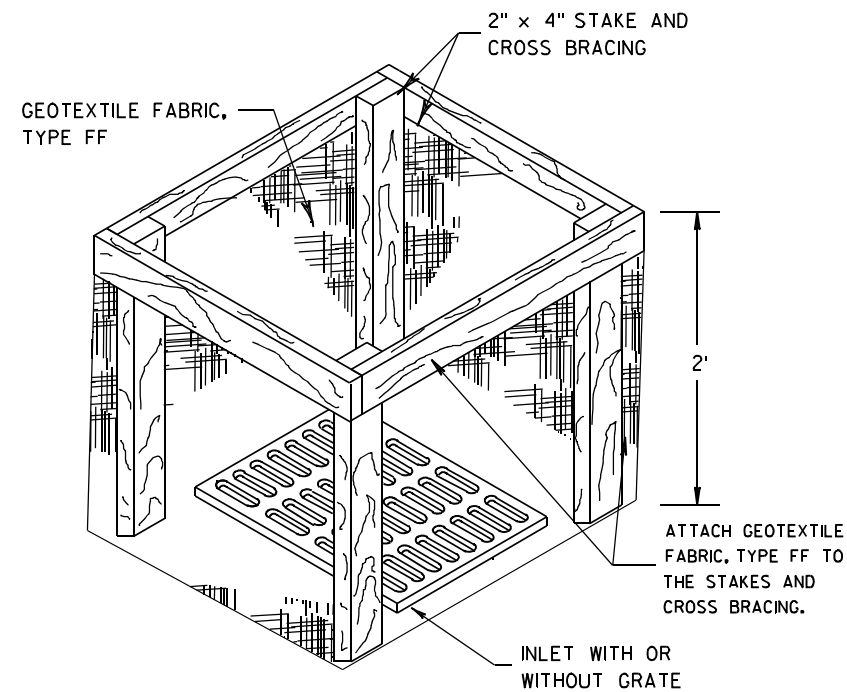
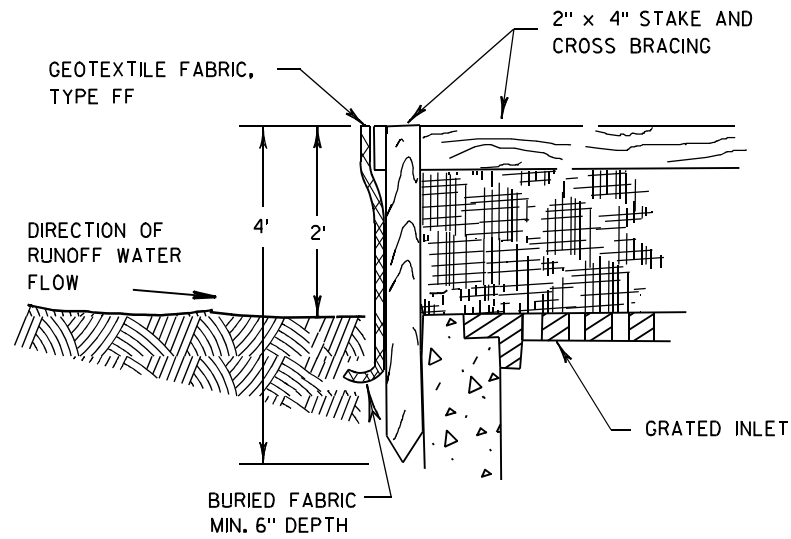
5



PROJECT NO: 5995-04-71	HWY: FRANCES LANE	COUNTY: DODGE	PLAN	SHEET	E
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Standard Detail Drawing List

08E10-02	INLET PROTECTION TYPE A, B, C AND D
15C05-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M. P. H. OR LESS
15C07-15C	PAVEMENT MARKING ARROWS
15C08-21A	LONGITUDINAL MARKING (MAINLINE)
15C08-21C	PAVEMENT MARKING (TURN LANES)
15C08-21D	PAVEMENT MARKING (TURN LANES)
15C11-09A	CHANNELIZING DEVICES FLEXIBLE TUBULAR MARKER POST
15C11-09B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C12-09A	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15C12-09B	TRAFFIC CONTROL, LANE CLOSURE WITH AUTOMATED FLAGGER ASSISTANCE DEVICE
15C35-05A	PAVEMENT MARKING (INTERSECTIONS)
15D20-06A	TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY



INLET PROTECTION, TYPE A

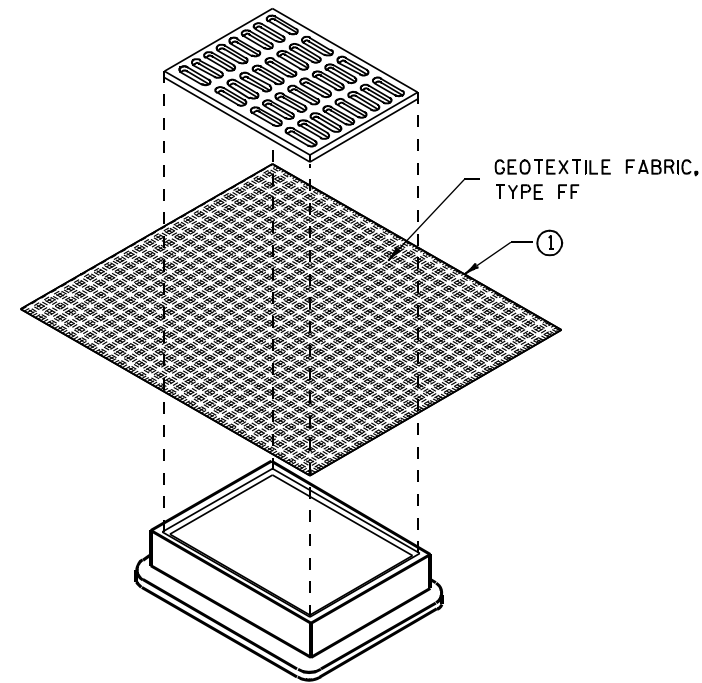
GENERAL NOTES

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.

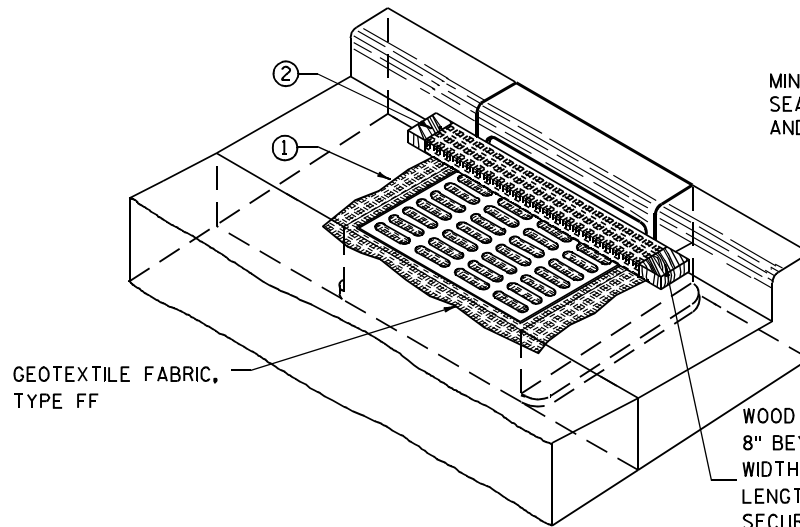
WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

- 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.

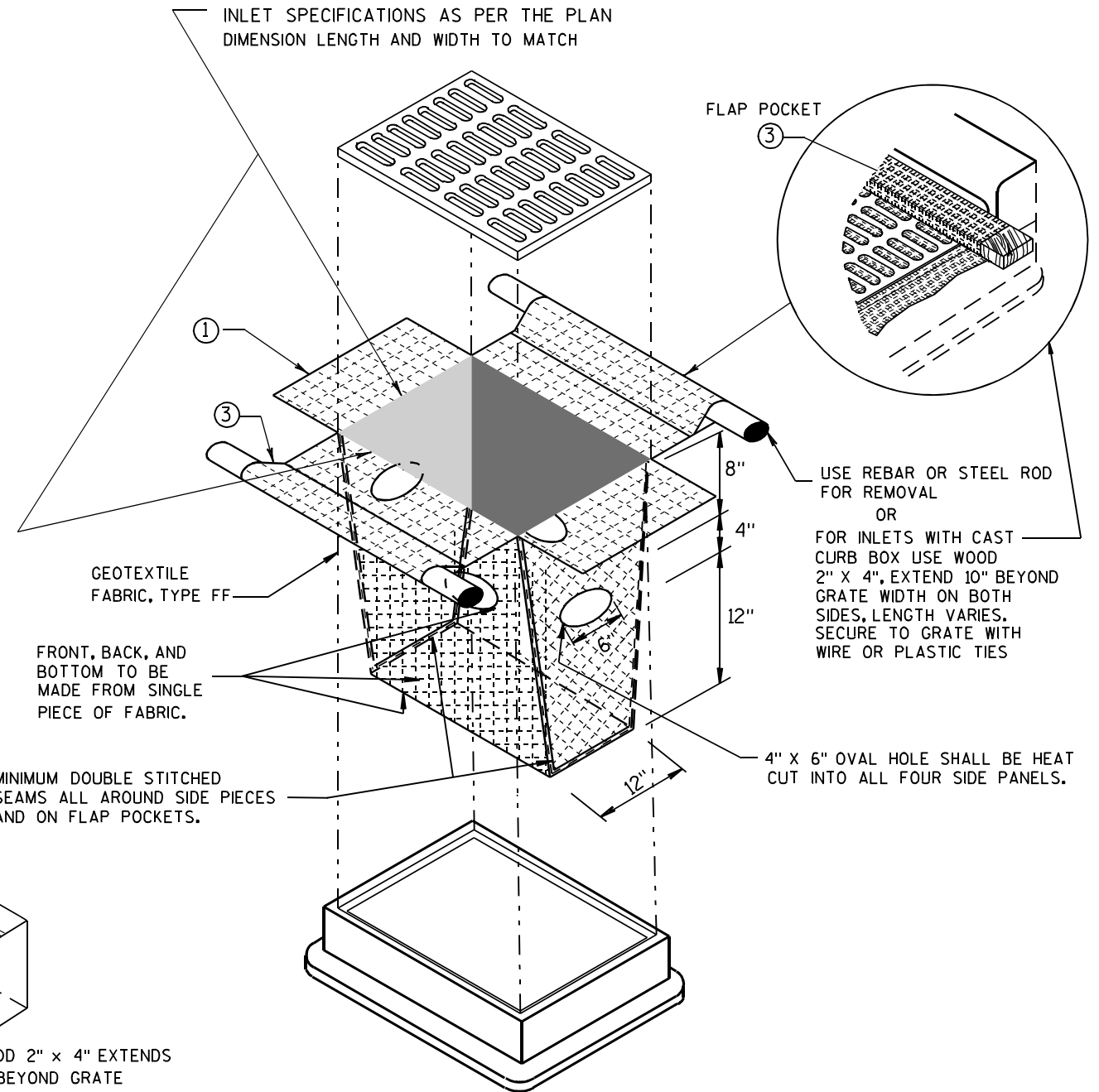
THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

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)

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

GENERAL NOTES

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

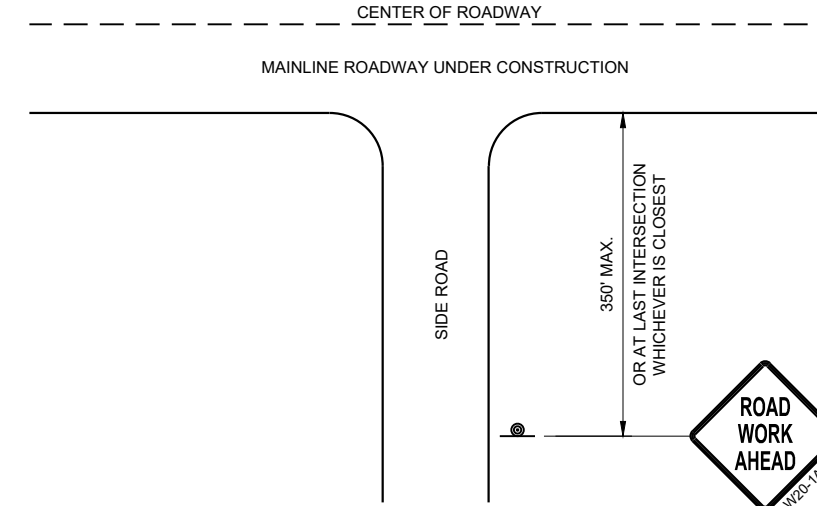
THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS, 36"X36" SIGNS MAY BE USED INSTEAD OF 48" X 48" SIGNS.

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.

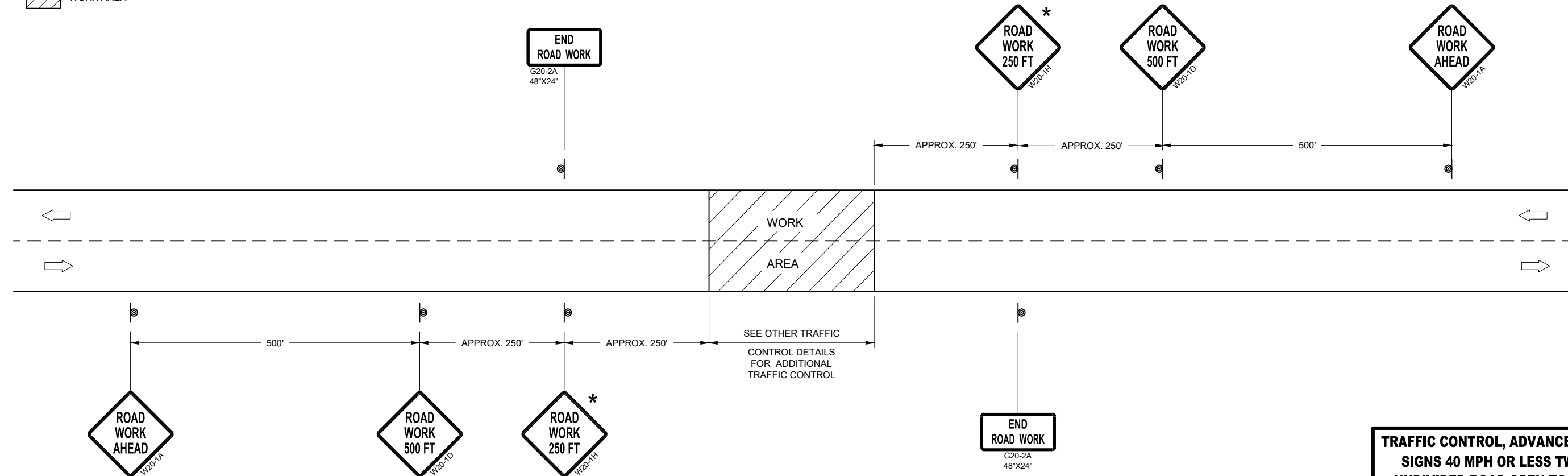
* THE THIRD W20-1 SIGN IS REQUIRED ONLY IF THERE IS AN INTERSECTION BETWEEN THE "ROAD WORK 500 FEET" SIGN AND THE WORK ZONE. ADJUST THE PLACEMENT OF THIS SIGN BASED ON INTERSECTION LOCATION AND OTHER FIELD CONDITIONS.



**TYPICAL SIDE ROAD APPROACH
WARNING SIGN DETAIL**

LEGEND

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



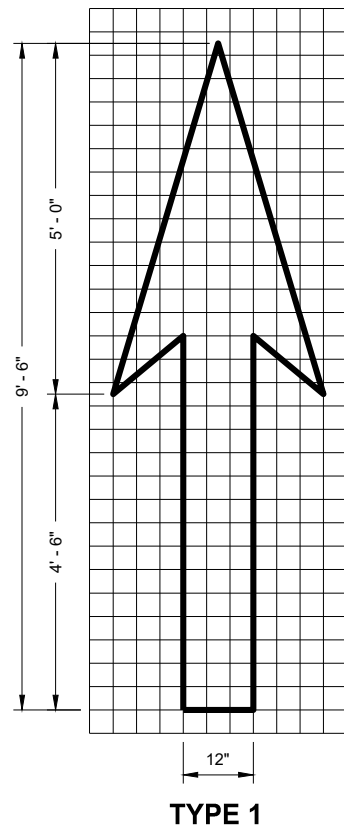
TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40MPH OR LESS

**TRAFFIC CONTROL, ADVANCE WARNING
SIGNS 40 MPH OR LESS TWO-WAY
UNDIVIDED ROAD OPEN TO TRAFFIC**

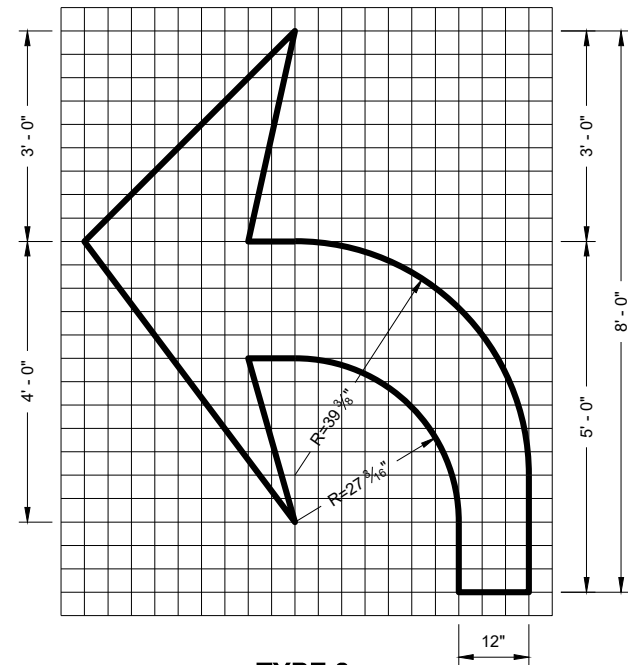
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

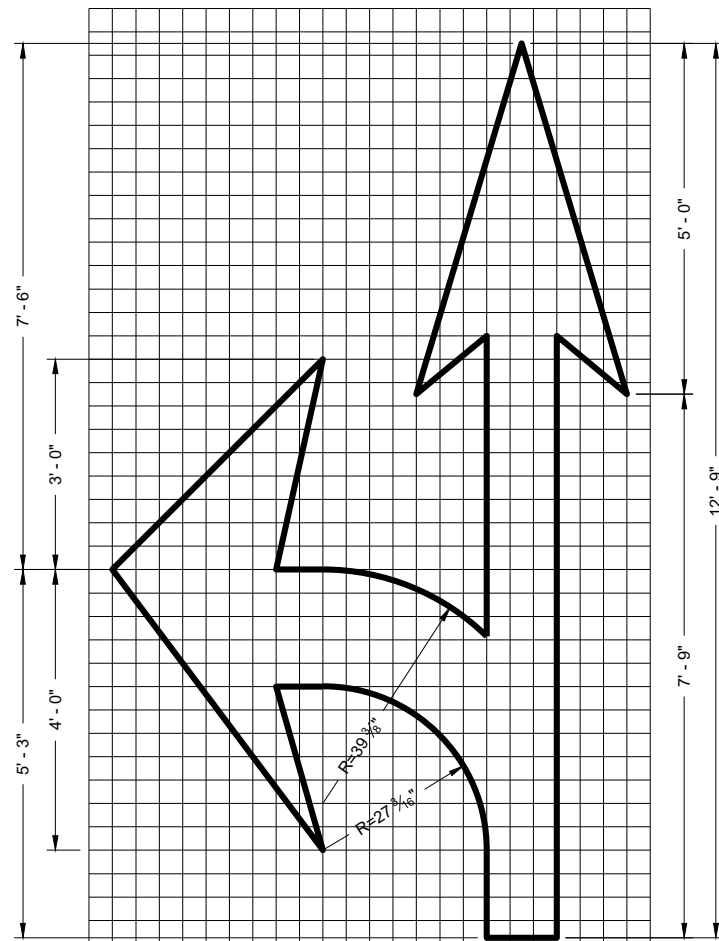
FHWA



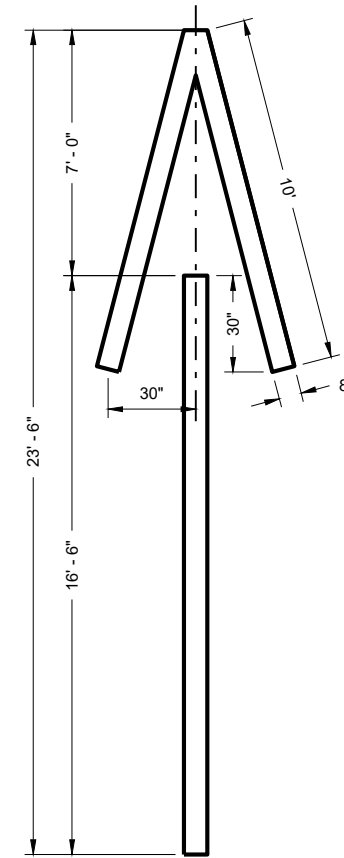
TYPE 1



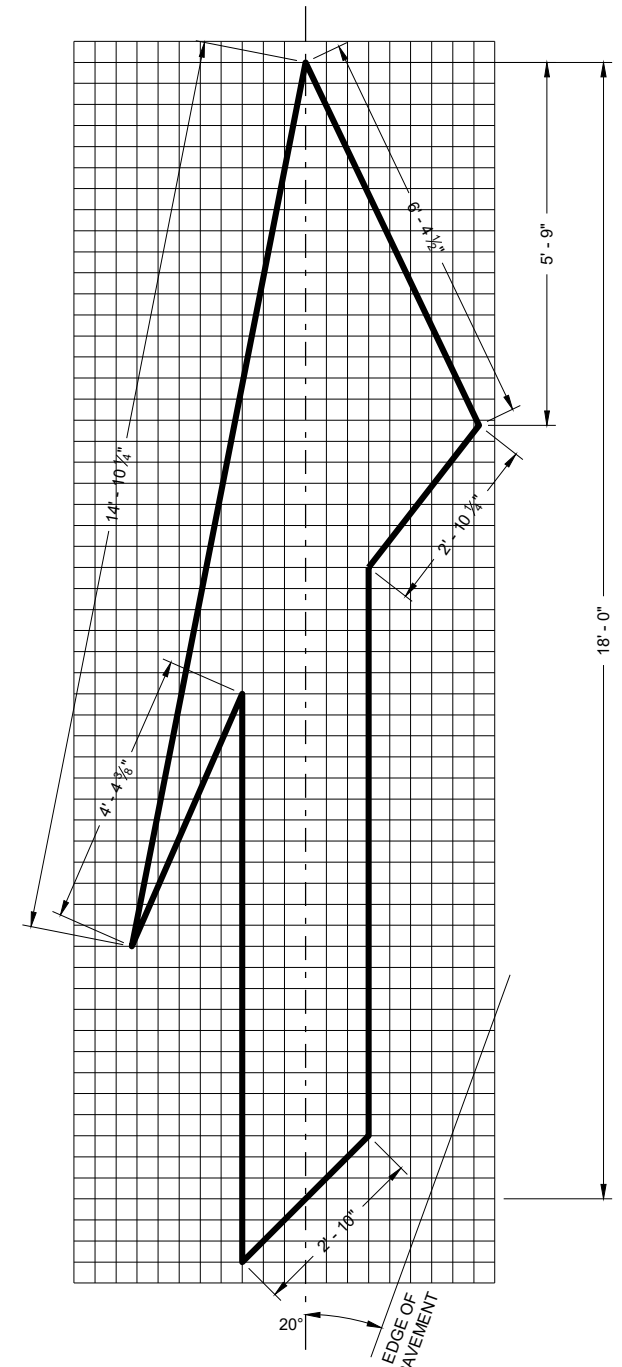
TYPE 2



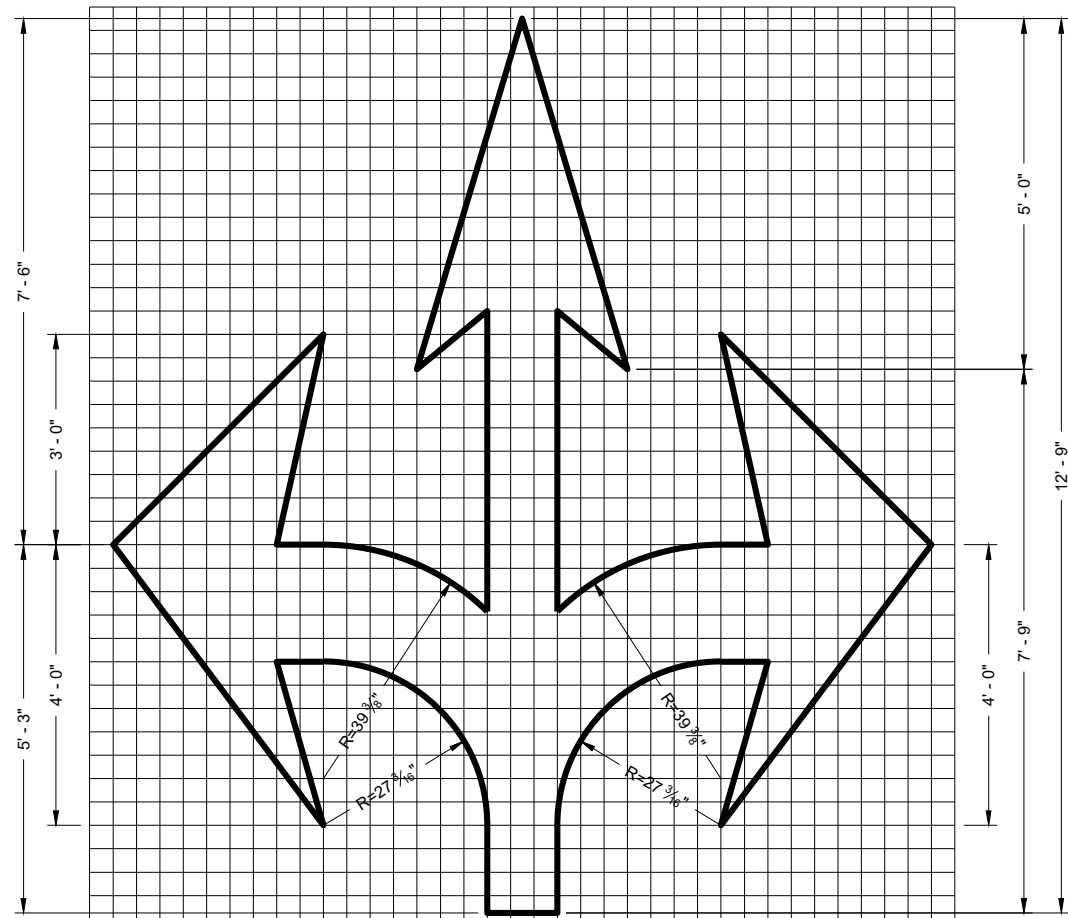
TYPE 3



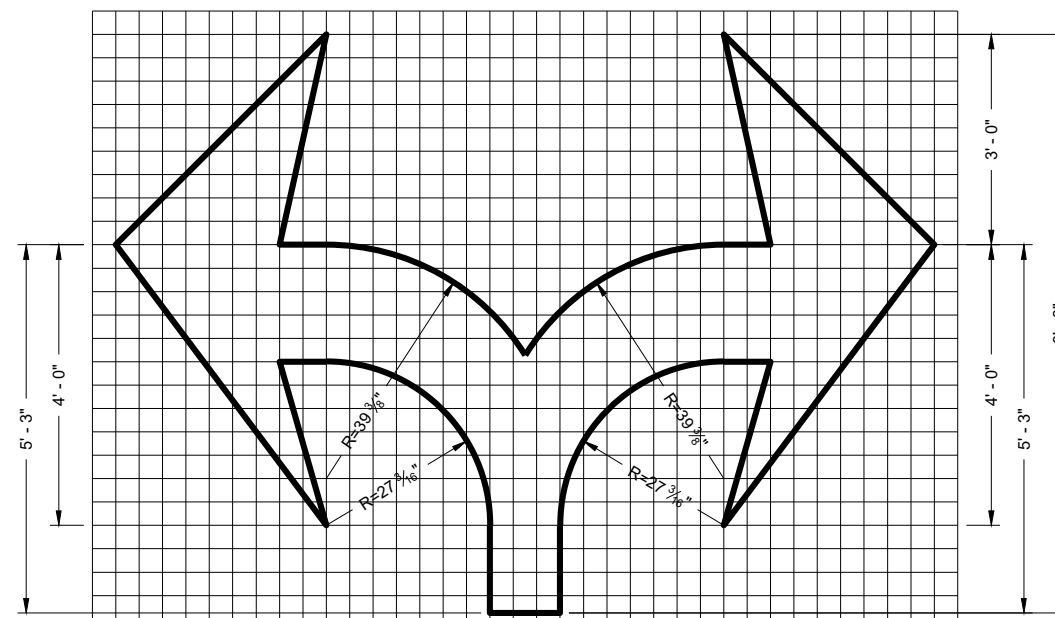
TYPE 4



TYPE 5 LANE DROP ARROW



TYPE 6



TYPE 7

GENERAL NOTES

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

PAVEMENT MARKING ARROWS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

November 2019

DATE

FHWA




/S/ Matthew Rauch
STATE SIGNING AND MARKING
ENGINEER

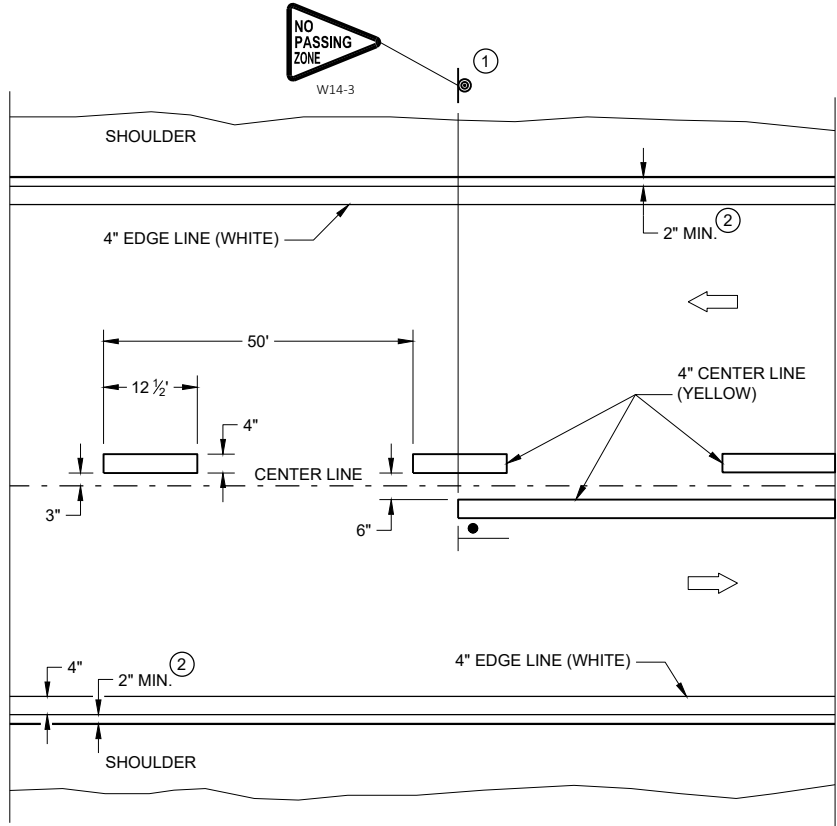
GENERAL NOTES

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

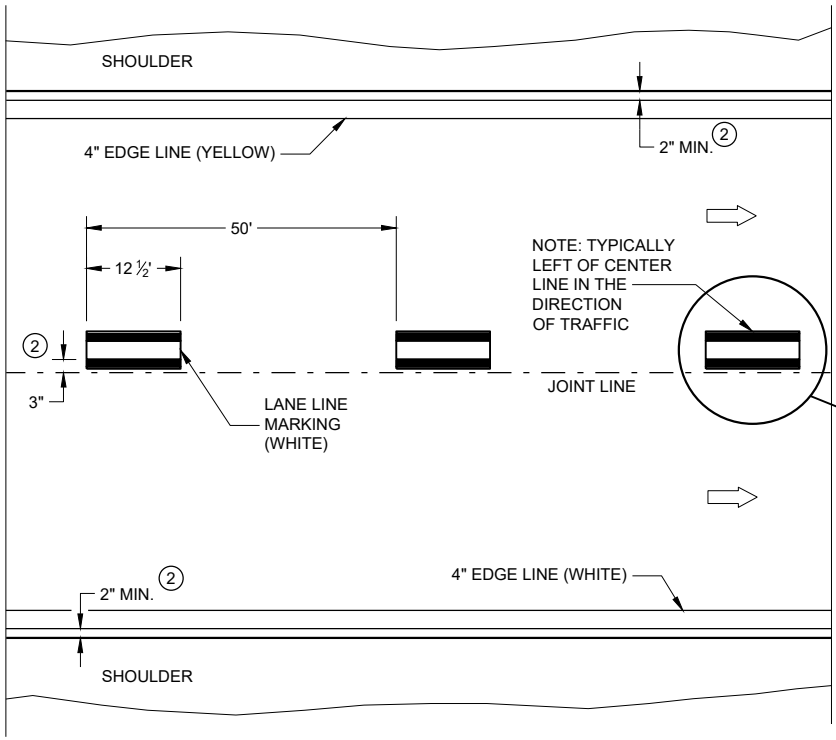
- ① LOCATE THE NO PASSING ZONE W14-3 SIGN WITHIN 50 FEET OF THE "T" MARKING
- ② MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

LEGEND

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

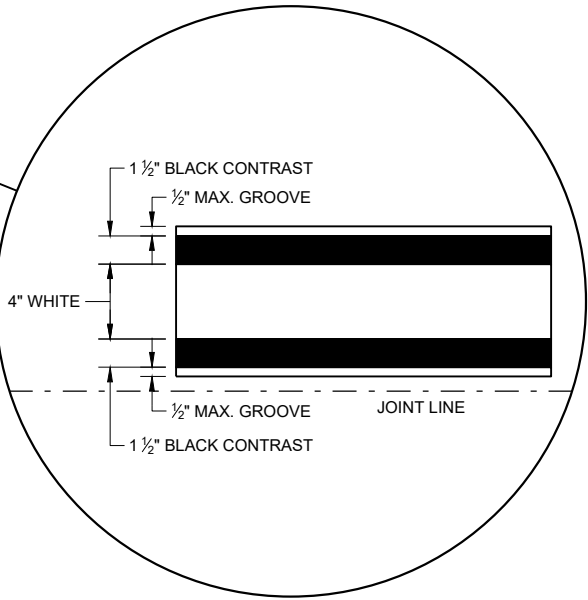


TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



PERMANENT LONGITUDINAL PAVEMENT MARKINGS

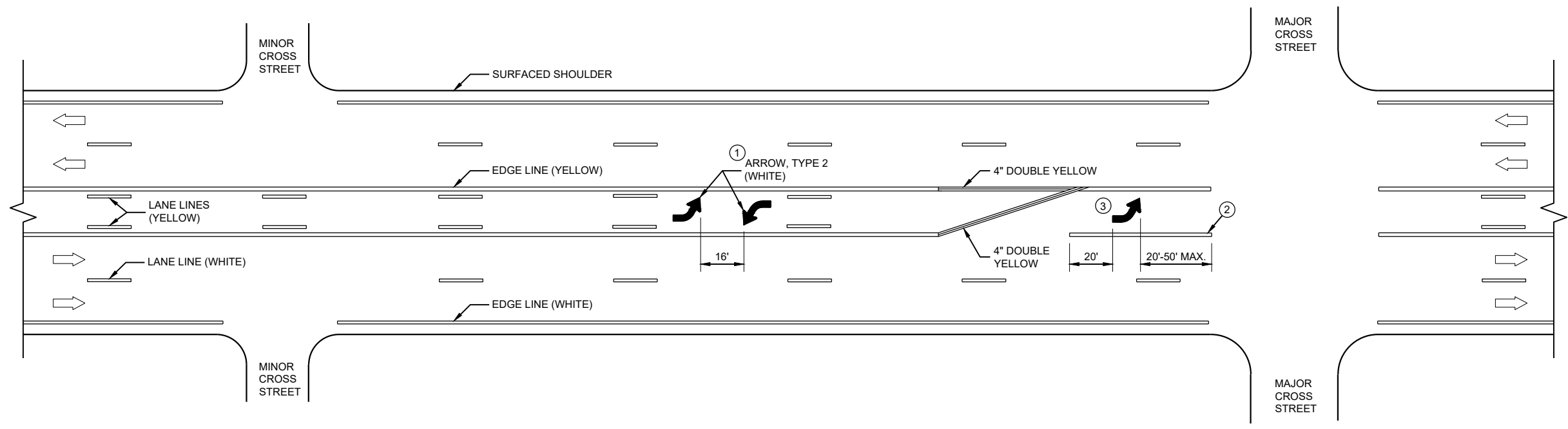
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
DATE: May 2022 /S/ Jeannie Silver
STATEWIDE SIGNING AND MARKING ENGINEER

GENERAL NOTES

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

➡ DIRECTION OF TRAFFIC



TWO WAY LEFT TURN LANE

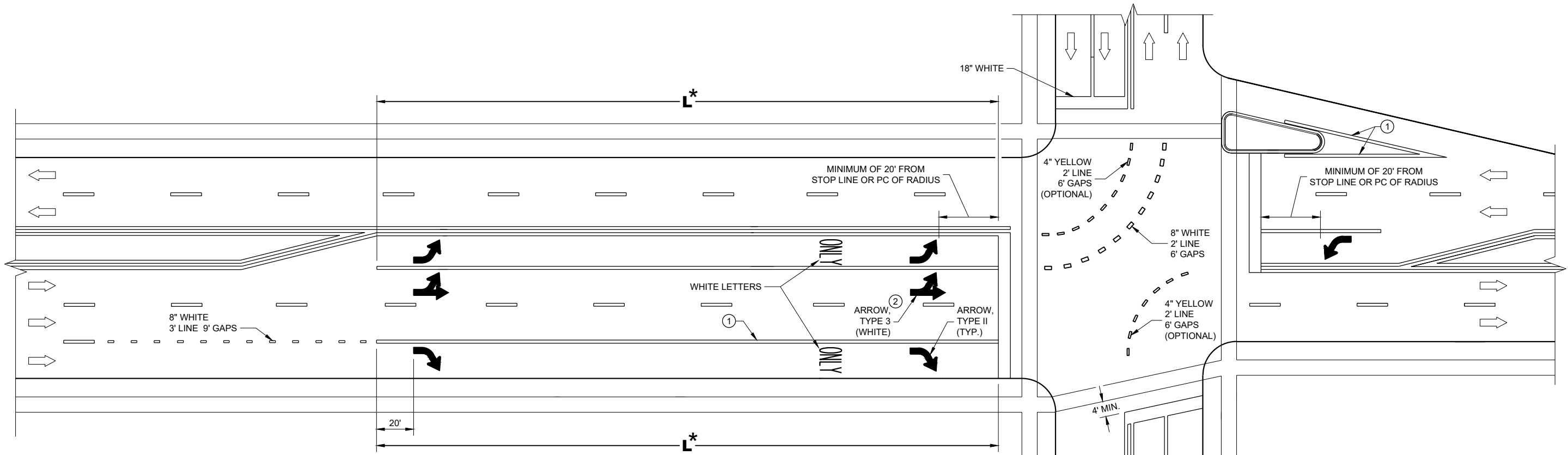
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SDD 15C08 - 21c

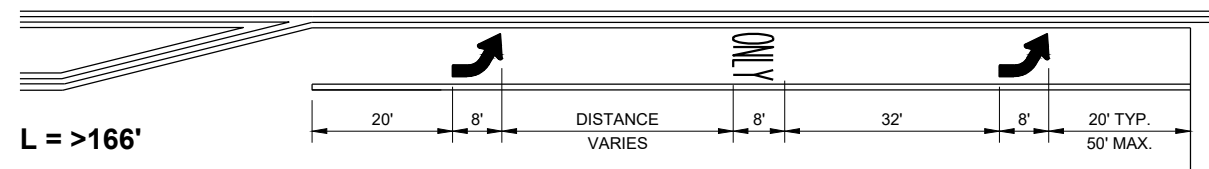
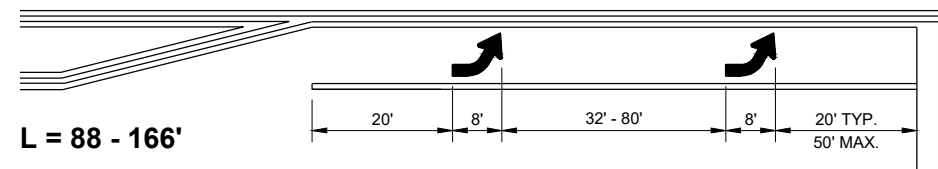
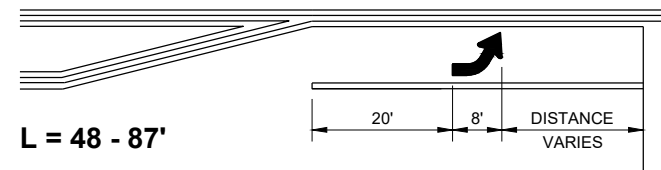
SDD 15C08 - 21c

<p>PAVEMENT MARKING (TURN LANES)</p>
<p>STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION</p>



TURN LANE OPTIONS

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



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

GENERAL NOTES

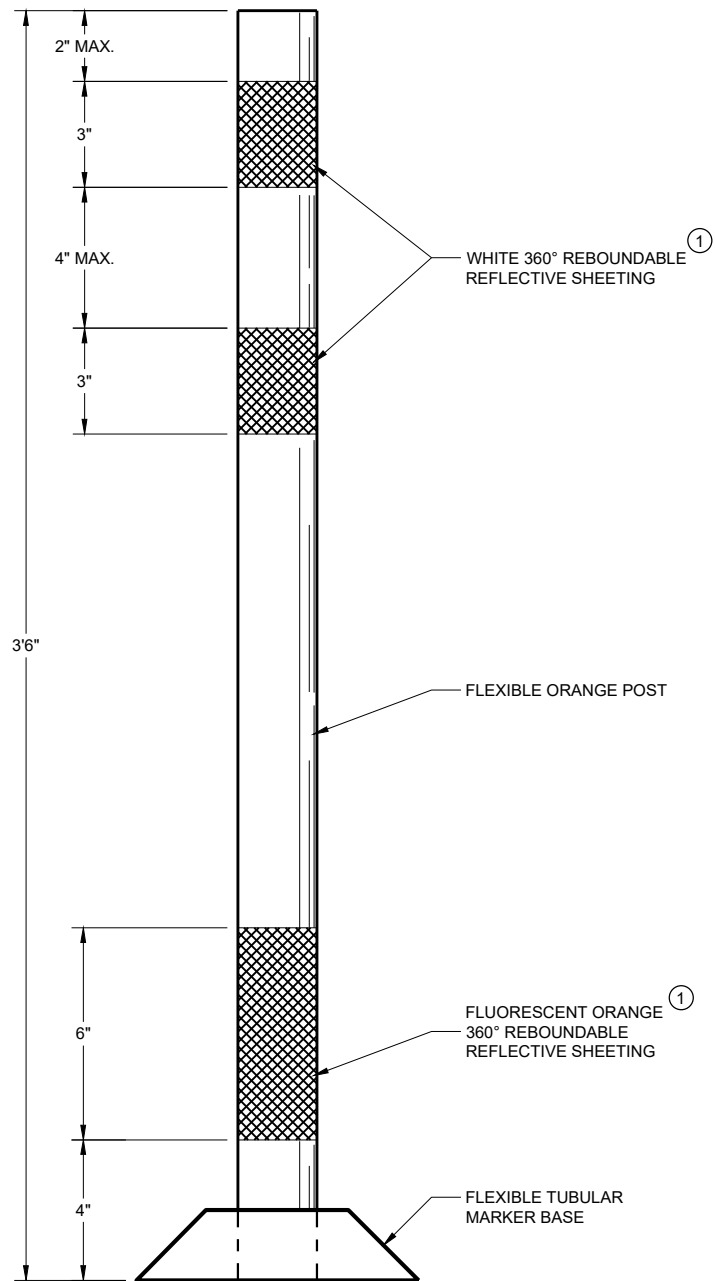
- ① 8" WHITE
- ② QUANTITY AND LOCATION OF TYPE 3 ARROWS ARE THE SAME AS THE TYPE II ARROWS IN THE ADJACENT TURN LANE. FOR TURN LANES WITH A PHYSICAL SEPARATION IN THE SAME DIRECTION OF TRAVEL, THE ARROWS AND "ONLY" MARKING MAY BE ELIMINATED.

➡ DIRECTION OF TRAFFIC

L = LENGTH OF TURN BAY

PAVEMENT MARKING (TURN LANES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



FLEXIBLE TUBULAR MARKER POST WORK ZONE

GENERAL NOTES

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

SURFACE MOUNTED BASES SHALL BE FURNISHED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS TO BE COMPATIBLE WITH FLEXIBLE TUBULAR MARKER POSTS TO A SIZE AND SHAPE THAT WILL PROVIDE A STABLE POST FOUNDATION WHEN SECURED TO THE PAVEMENT.

THE ASPHALTIC ADHESIVE OR BUTYL PAD FURNISHED SHALL BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS, UNLESS DIRECTED BY THE ENGINEER TO USE BOLTS.

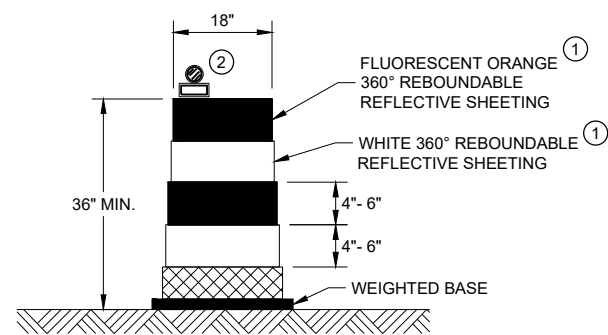
① REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.

**CHANNELIZING DEVICES
FLEXIBLE TUBULAR
MARKER POST**

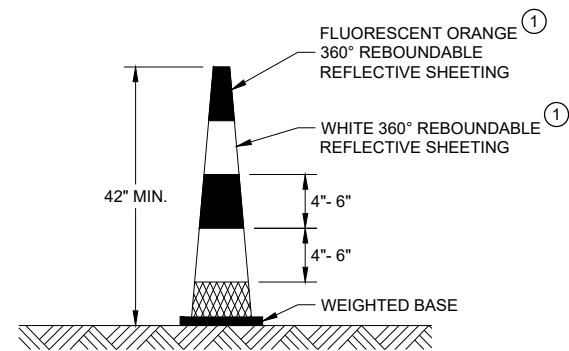
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2021 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER

FHWA

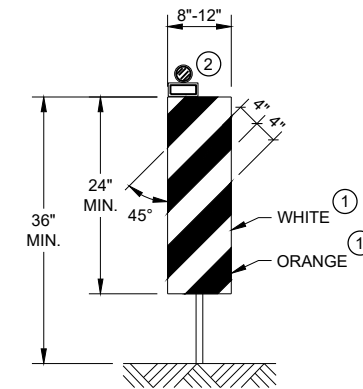


DRUM



42" CONE

DO NOT USE IN TAPERS
 1/2 SPACING OF DRUMS

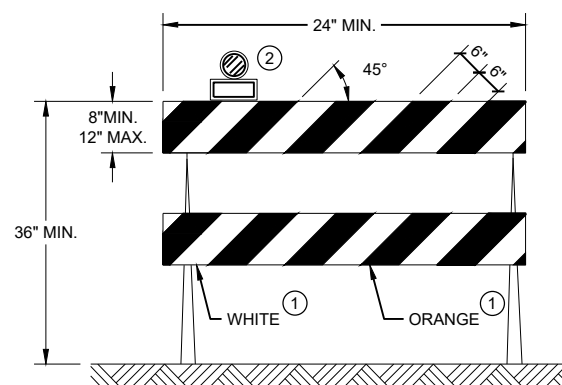


VERTICAL PANEL

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

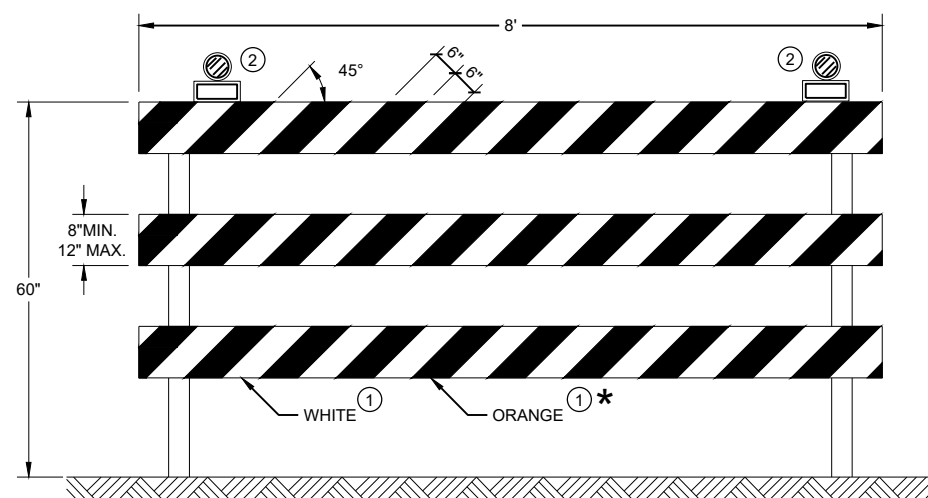
GENERAL NOTES

- 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.

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

LEGEND

-  SIGN ON PORTABLE OR PERMANENT SUPPORT
-  TEMPORARY PORTABLE RUMBLE STRIP ARRAY
-  DIRECTION OF TRAFFIC
-  WORK AREA
-  FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

GENERAL NOTES

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

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

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

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

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

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

FLAGGING

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

- ① FOR MOVING WORK OPERATIONS, POST ADDITIONAL W20-7A FLAGGER SIGNS AT APPROXIMATELY 3,500' INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.
- ② SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

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

TEMPORARY PORTABLE RUMBLE STRIPS

UTILIZE TEMPORARY PORTABLE RUMBLE STRIPS ON ALL FLAGGING OPERATIONS.

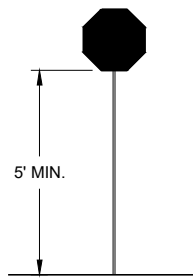
- ③ EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS PLACED TRANSVERSE ACROSS THE LANE AT THE LOCATIONS SHOWN. WITHIN EACH ARRAY, SPACING BETWEEN RUMBLE STRIPS SHALL BE 15 FEET ON CENTER

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

INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS.

PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.

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



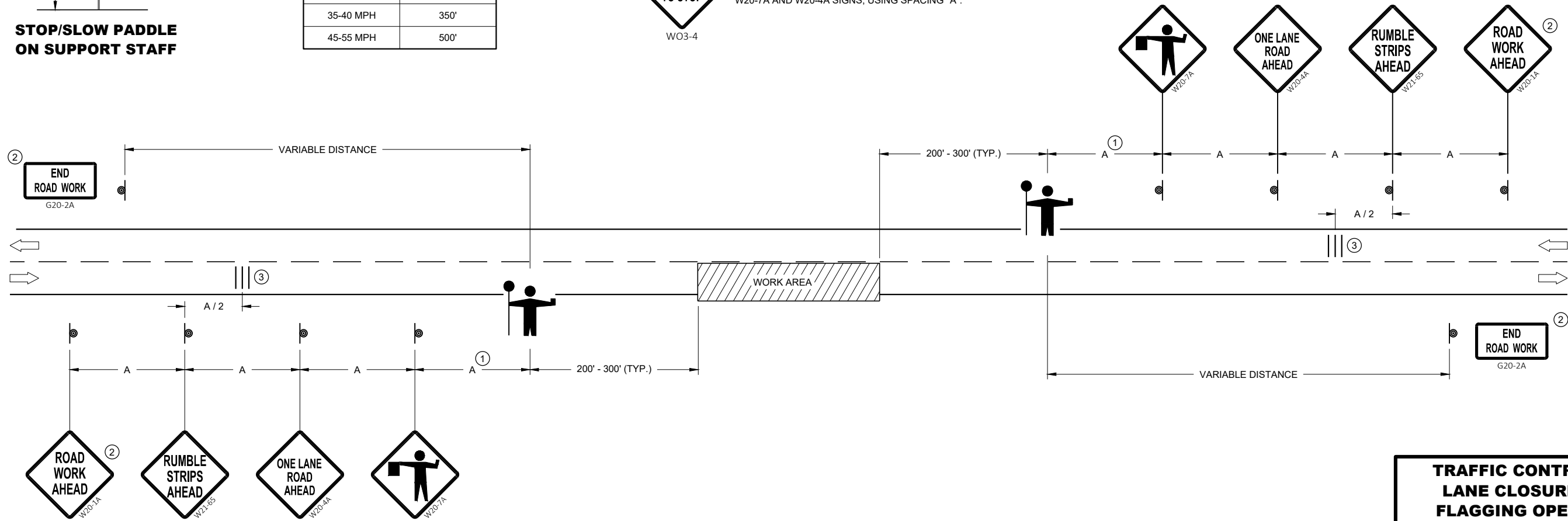
STOP/SLOW PADDLE ON SUPPORT STAFF

SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

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



USE OF W03-4 SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7A AND W20-4A SIGNS, USING SPACING "A".



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

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SDD 15C12 - 09a

SDD 15C12 - 09a

TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2022 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	

GENERAL NOTES

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

GENERAL NOTES

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

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

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

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

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

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

FLAGGING

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

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

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

TEMPORARY PORTABLE RUMBLE STRIPS

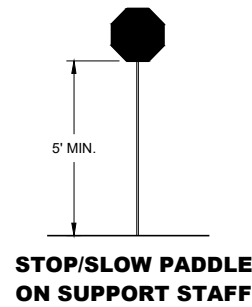
UTILIZE TEMPORARY PORTABLE RUMBLE STRIPS ON ALL FLAGGING OPERATIONS.

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

PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.

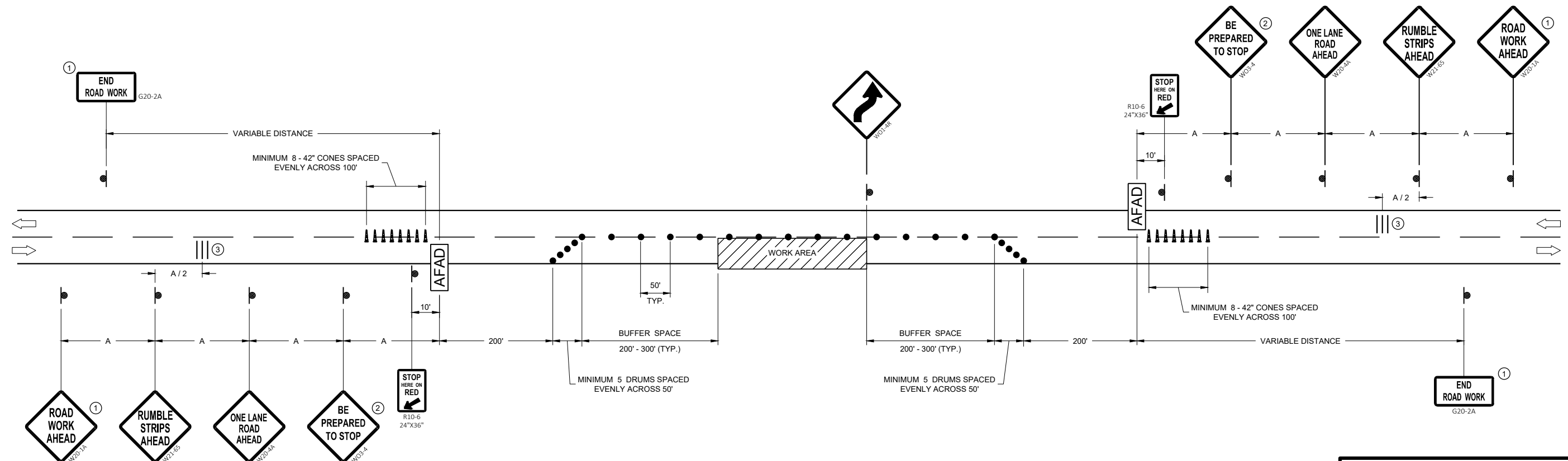
DO NOT INSTALL TEMPORARY PORTABLE RUMBLE STRIPS ON GRAVEL, MILLED SURFACES, OR ASPHALT THAT HAS BEEN PAVED LESS THAN 12 HOURS.

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



SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

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



TRAFFIC CONTROL, LANE CLOSURE WITH AUTOMATED FLAGGER ASSISTANCE DEVICE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

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SDD 15D12 - 09b

SDD 15D12 - 09b

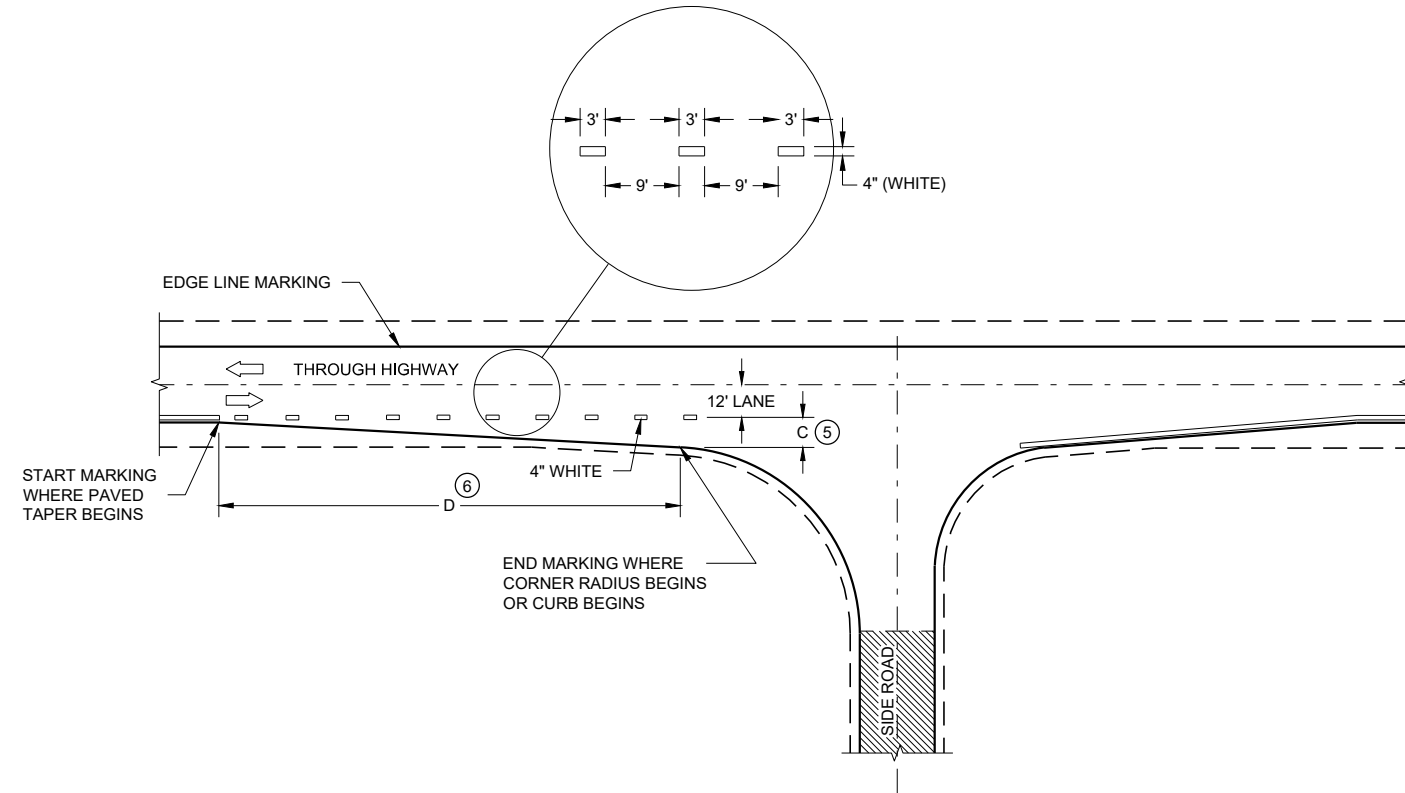
GENERAL NOTES

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

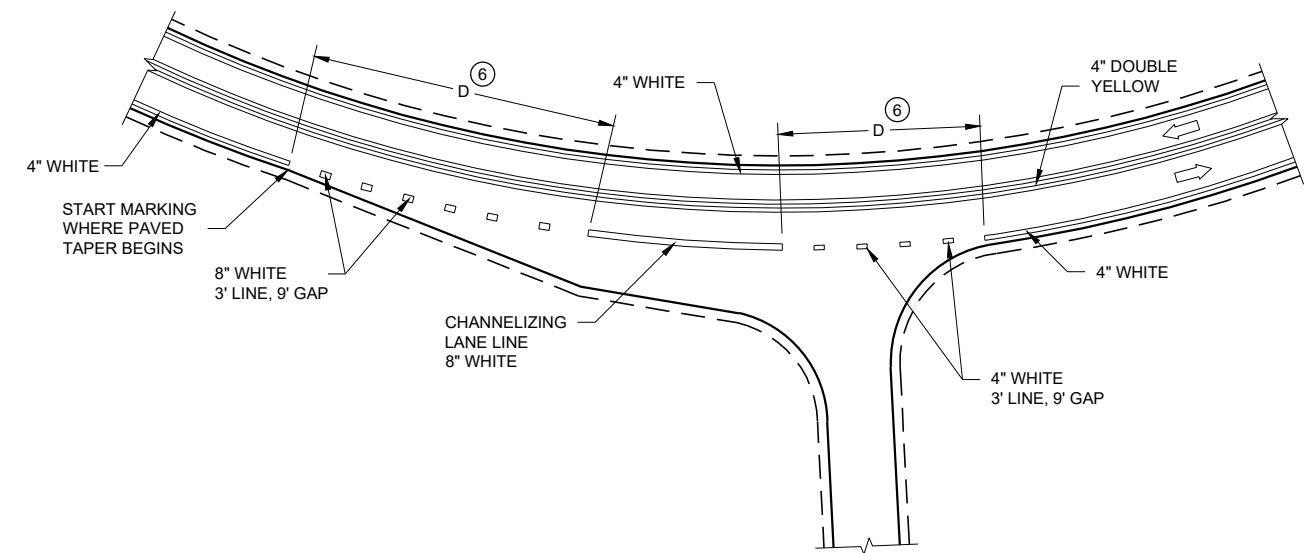
- ① WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.
- ② WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.
- ③ BARRIER LINE ENDS AT SIDE ROAD PAVEMENT / SURFACE EDGE EXTENSION.
- ④ BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.
- ⑤ WHEN DISTANCE "C" IS LESS THAN 4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

LEGEND

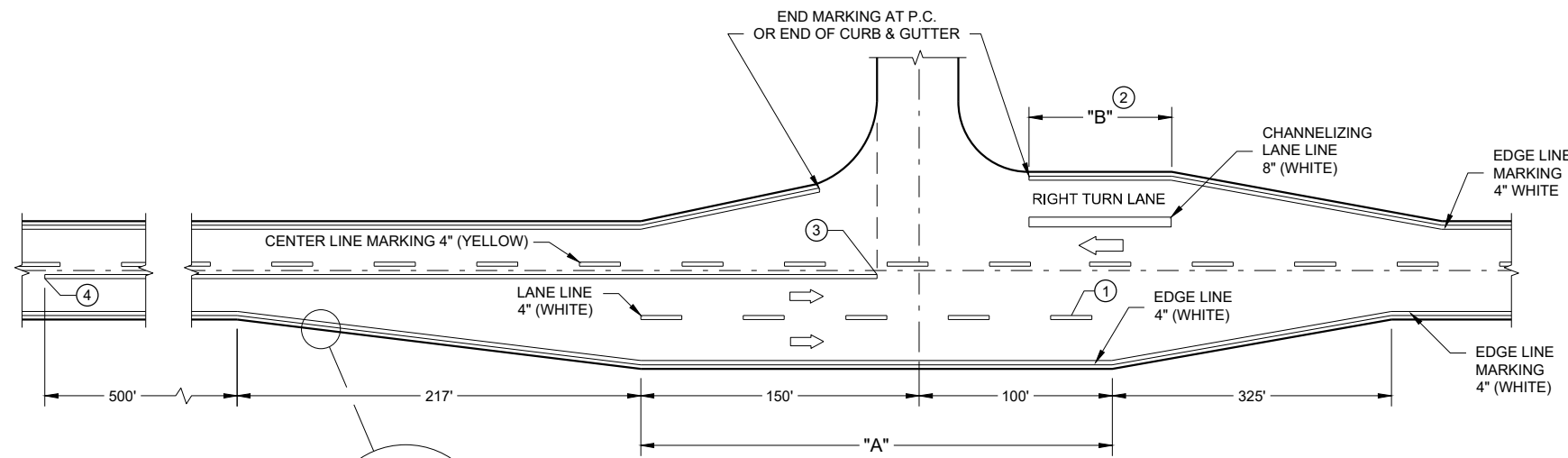
➡ DIRECTION OF TRAVEL



MINOR INTERSECTION

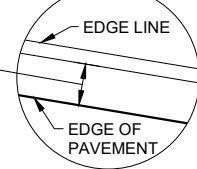


INTERSECTION ON OUTSIDE OF CURVE



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










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



**PAVEMENT MARKING
(INTERSECTIONS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

LEGEND

-  SIGN ON PERMANENT SUPPORT
-  TRAFFIC CONTROL DRUM
-  TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
-  TYPE III BARRICADE WITH ATTACHED SIGN
-  TYPE "A" WARNING LIGHT (FLASHING)
-  FLASHING ARROW BOARD
-  DIRECTION OF TRAFFIC
-  REMOVE PAVEMENT MARKING (SEE GENERAL NOTES)
-  WORK AREA

GENERAL NOTES

FOR WORK ON ROADWAYS WITH SPEEDS GREATER THAN 45MPH, USE SDD 15D12.

THIS LANE CLOSURE DETAIL IS TYPICAL FOR CLOSING THE LEFT LANE. FOR A RIGHT LANE CLOSURE, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR ROADWAYS WITH EITHER TWO OR THREE LANES IN EACH DIRECTION.

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 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. NO WARNING LIGHTS SHALL BE WORKING ON COVERED OR "DOWNED" SIGNS.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE MAY BE MOUNTED ON TEMPORARY SUPPORTS.

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

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

W20-1A, G20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE LANE CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

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

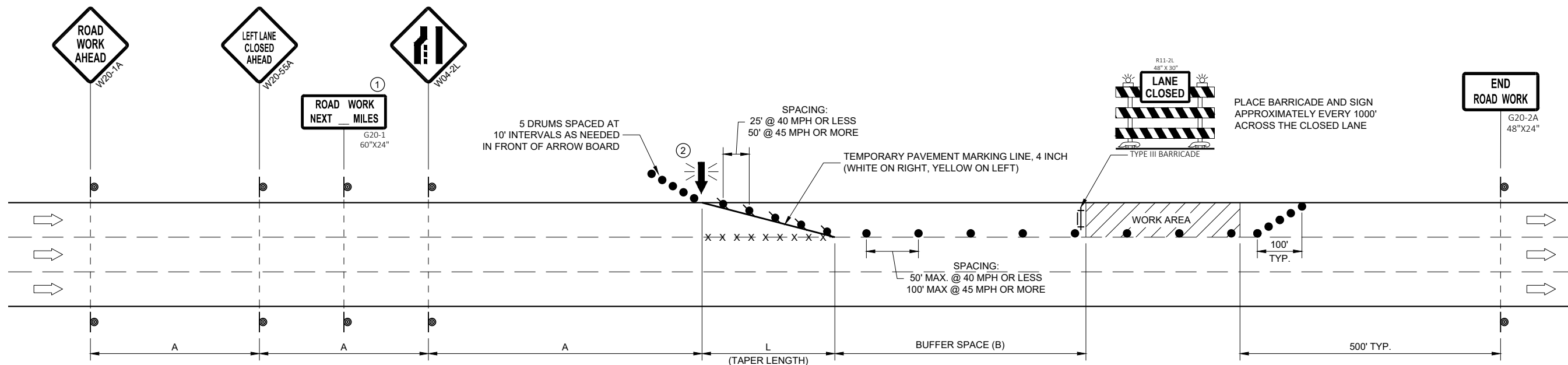
CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARDS SO THE APPROACHING DRIVER HAS A CLEAR VIEW OF THE ARROW BOARDS AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUMS.

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

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

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

- ① OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.
- ② WHERE THE SHOULDER OR TERRACE HAS INSUFFICIENT SPACE TO PLACE THE ARROW BOARD AS SHOWN, PLACE THE ARROW BOARD AT THE END OF THE TAPER.



POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	TAPER LENGTH (12 FT. LANE) (L) FEET	BUFFER SPACE (B) FEET
25	200'	125'	55'
30	200'	180'	85'
35	350'	245'	120'
40	350'	320'	170'
45	500'	540'	220'

TRAFFIC CONTROL, SINGLE LANE CLOSURE, DIVIDED NON-FREEWAY/EXPRESSWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

Notes



Wisconsin Department of Transportation

Dedicated people creating transportation solutions through innovation and exceptional service.

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