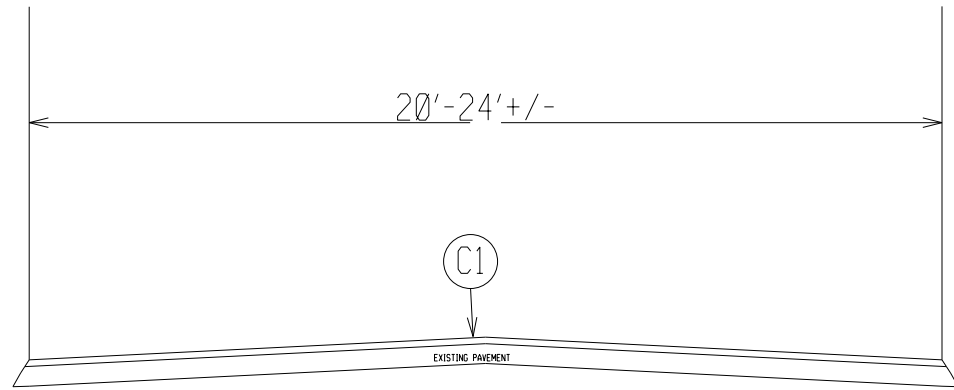
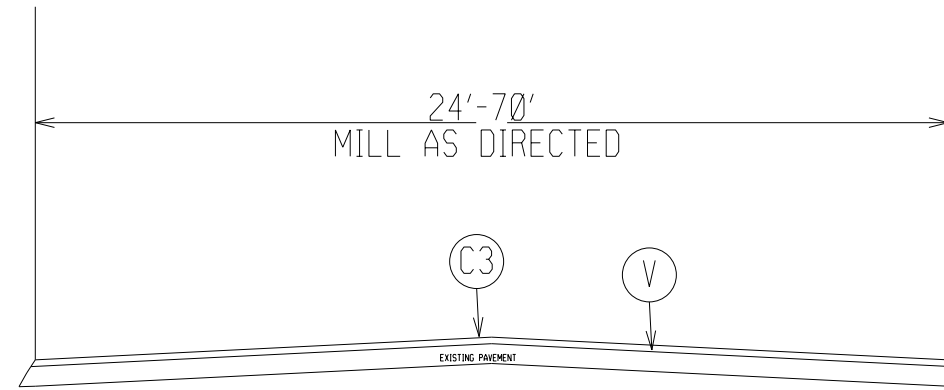


ALL WIDTHS ARE APPROXIMATE.
 SR ROUTES MAY BE LESS THAN 20'
 CONTRACTOR IS RESPONSIBLE FOR APPROPRIATE
 SIZE PAVING EQUIPMENT.

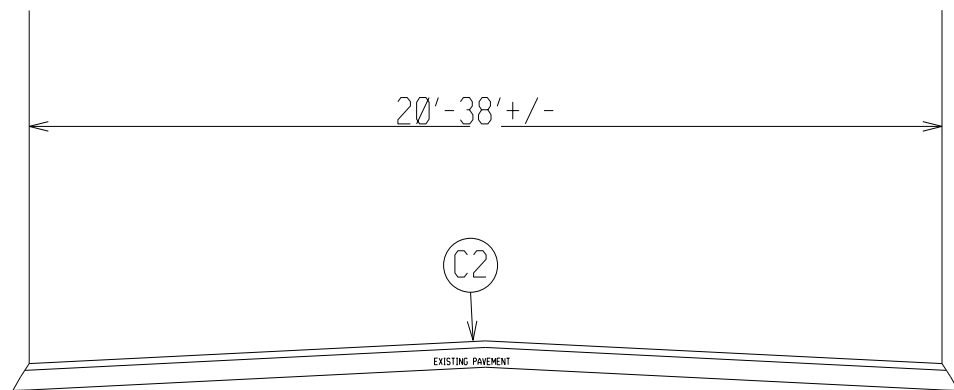
WBS	SHEET NO.	TOTAL SHEETS
2018CPT.04.06.10961	6	
2018CPT.04.06.20961		



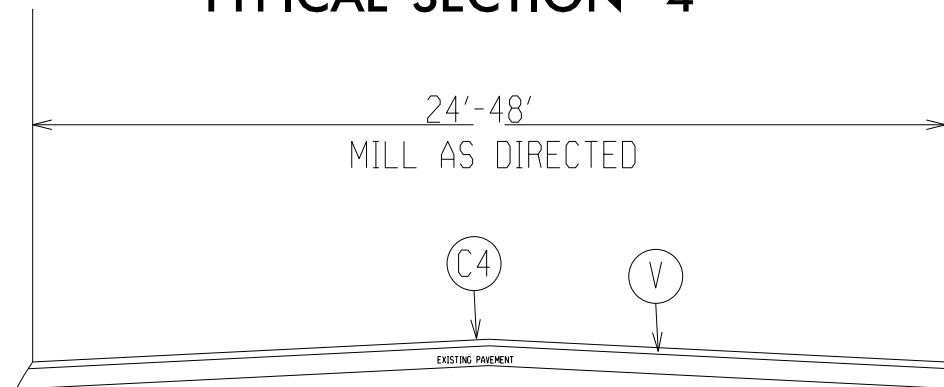
TYPICAL SECTION 1



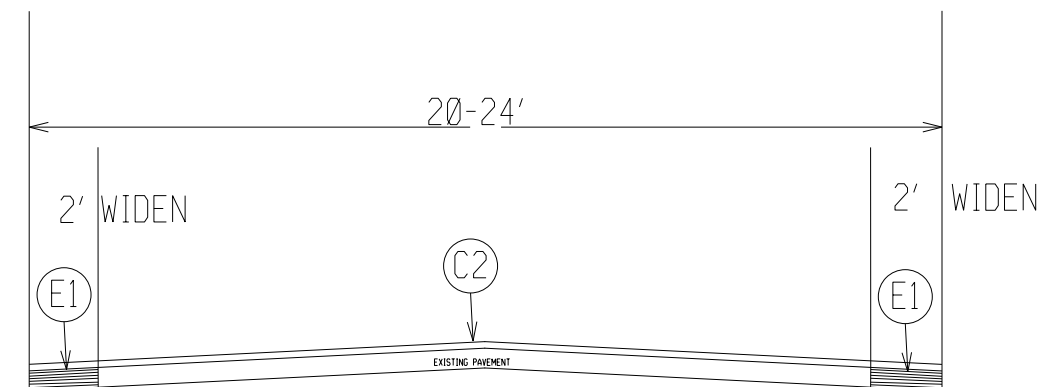
TYPICAL SECTION 4



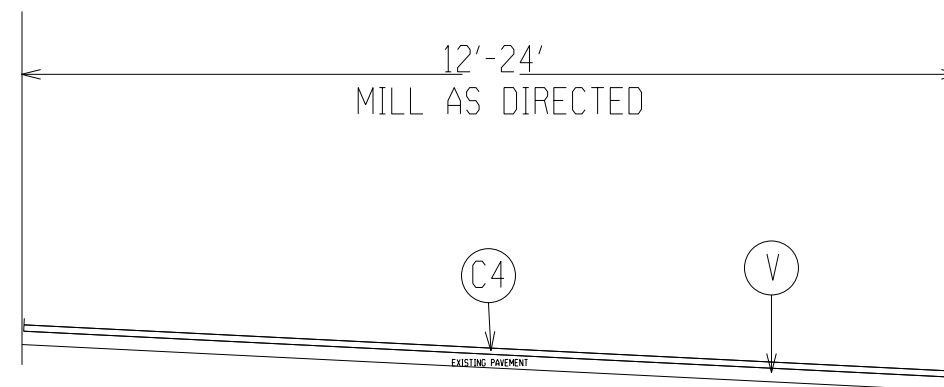
TYPICAL SECTION 2



TYPICAL SECTION 5



TYPICAL SECTION 3



**TYPICAL SECTION 6
 FOR RAMPS AND LOOPS
 ON MAPS 29 AND 30**

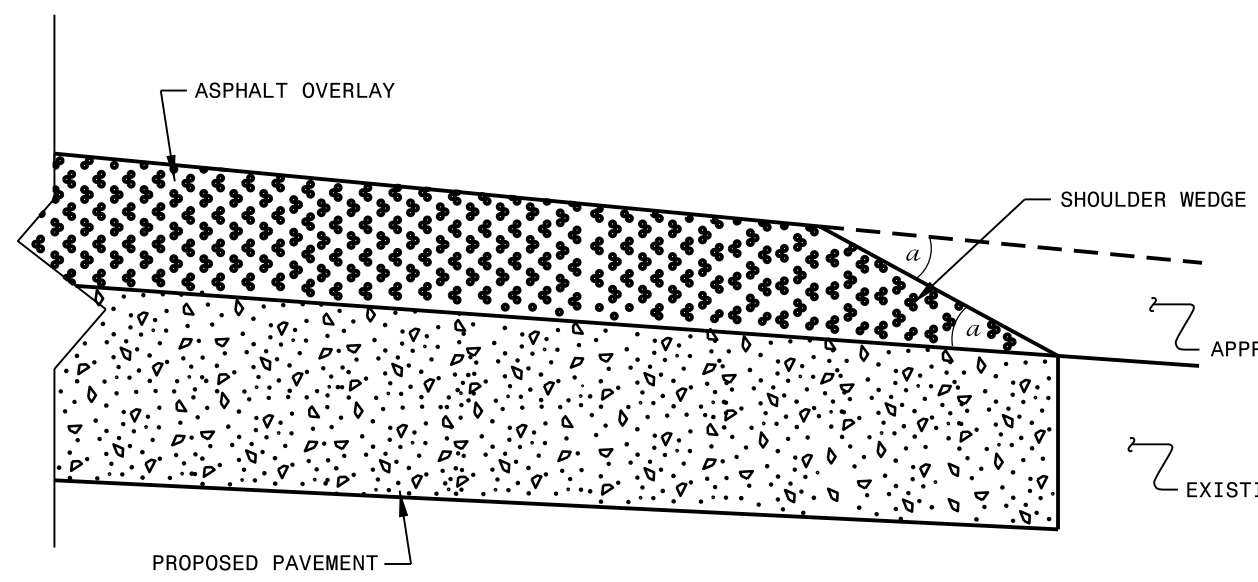
- (C1) APPROX 1" OF S4.75A AT AN AVERAGE RATE OF 100 LB/SY
- (C2) APPROX 1.25" OF SF9.5A AT AN AVERAGE RATE OF 137.5 LB/SY
- (C3) APPROX 1.5" OF S9.5B AT AN AVERAGE RATE OF 168 LB/SY
- (C4) APPROX 1.5" OF S9.5C AT AN AVERAGE RATE OF 168 LB/SY
- (E1) APPROX 5.5" OF B25.0B AT AN AVERAGE RATE OF 627 LB/SY
- (V) MILL 1.5" AS DIRECTED BY THE ENGINEER

NOTES:

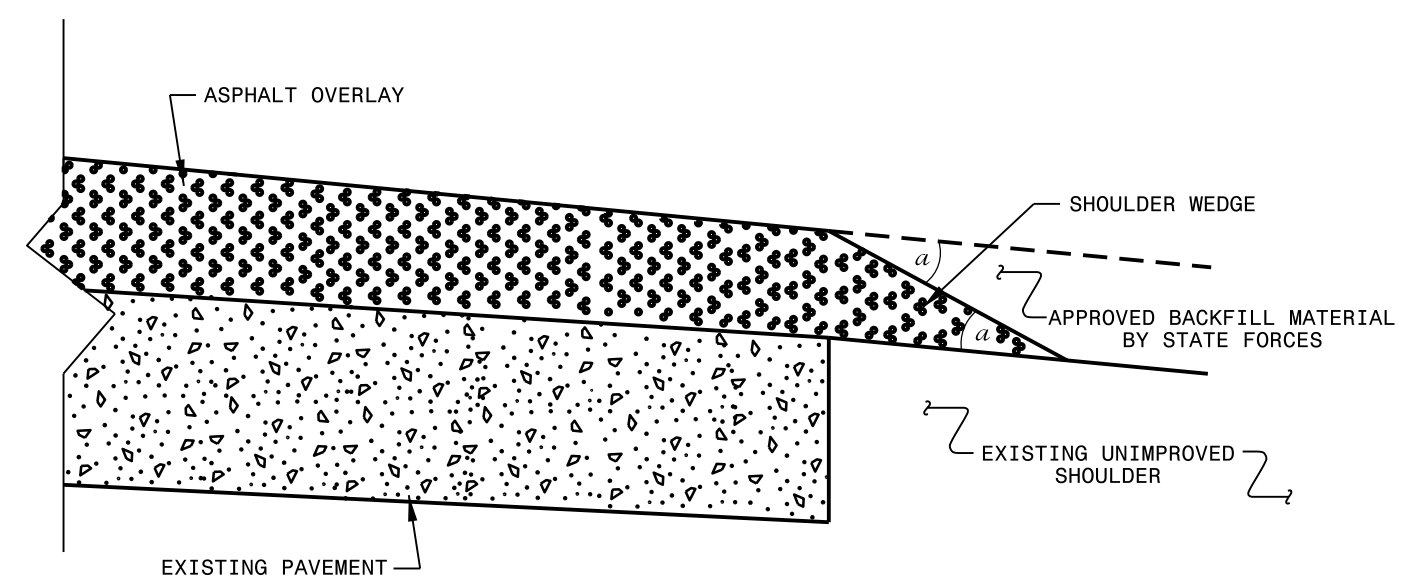
- SHOULDER WORK WILL BE BY NCDOT FORCES.
- 1.25" MILLING ON MAP 9 IS FOR THE BRIDGE AND APPROACHES AS DIRECTED BY THE ENGINEER.

**WAYNE COUNTY
 NORTH CAROLINA**

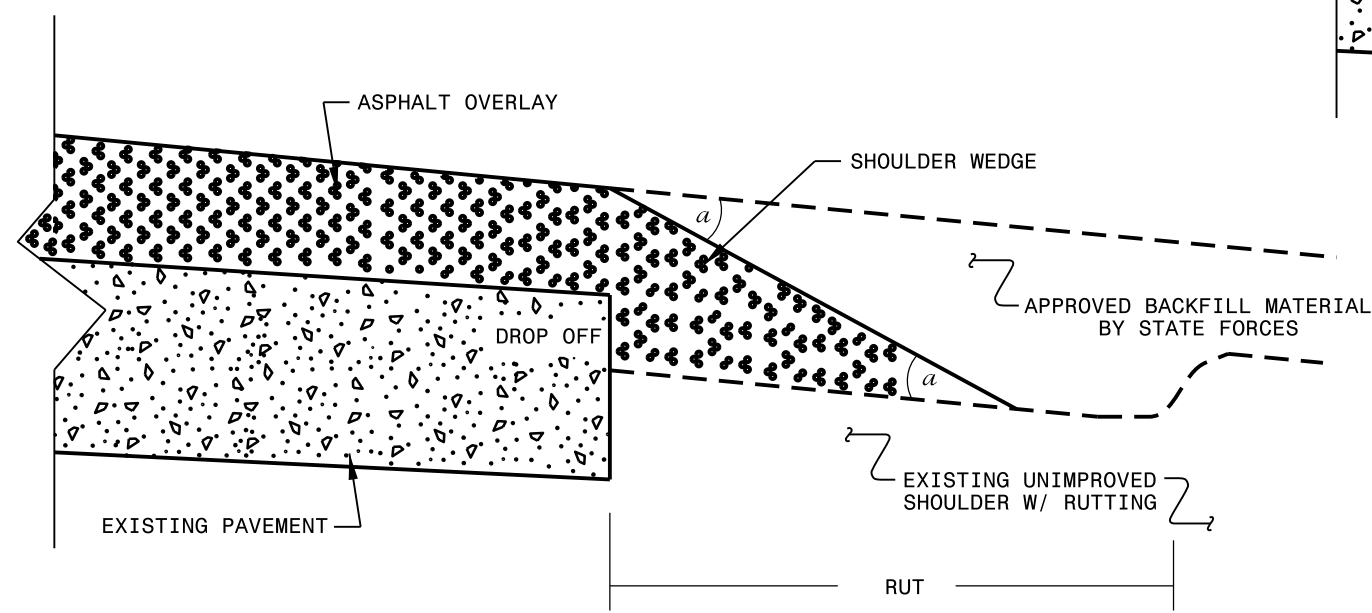
- NOTES:
- 1) DETAIL DOES NOT APPLY TO OGAFD AND ULTRA-THIN BONDED WEARING COURSE.
 - 2) BACKFILL SHOULDER WITH APPROVED MATERIAL.
 - 3) THE SHOULDER WEDGE DEVICE MAY BE DISENGAGED AT PAVED DRIVEWAYS, SIDE STREETS, HIGH SHOULDERS, AND OTHER LOCATIONS NOT FEASIBLE TO CONSTRUCT AS APPROVED BY THE ENGINEER.



SHOULDER WEDGE DETAIL
 (Resurfacing Projects w/ Widening or
 with Existing Paved Shoulder having no dropoffs)



SHOULDER WEDGE DETAIL
 (Resurfacing Projects w/ NO Widening)



SHOULDER WEDGE DETAIL
 (Resurfacing Adjacent to
 Rutted Shoulder)

- SHOULDER WEDGE ANGLE = 30°

CONTRACT STANDARDS AND DEVELOPMENT UNIT			
Office 919-707-6950		FAX 919-250-4119	
SHOULDER WEDGE DETAILS			
ORIGINAL BY:	T.SPELL	DATE:	7-19-11
MODIFIED BY:		DATE:	10/16/12
CHECKED BY:		DATE:	
FILE SPEC.:	s:\usr\details\stand\shoulderwedgedetail.dgn		

Q3-MAY-2017 14:08
 S:\Contracts\2017\Resurfacing Projects\Division 4\Wayne (June 2017)\Revised Shoulder Wedge Detail.dgn
 P:\porter - A\USD-E\2512

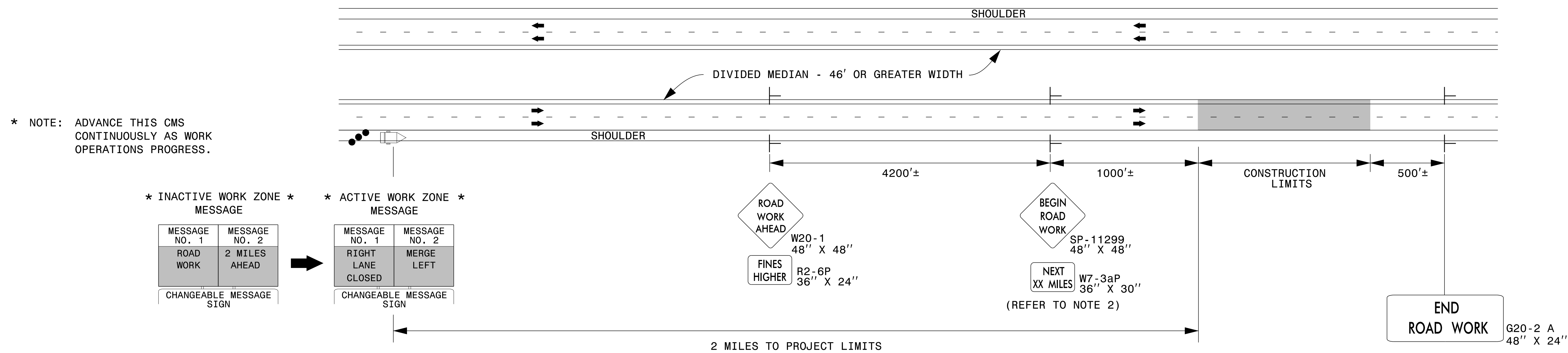
PROJECT NO.	SHEET NO.	TOTAL NO.
2018CPT.04.06.20961, 2018CPT.04.06.10961	8	

SUMMARY OF QUANTITIES

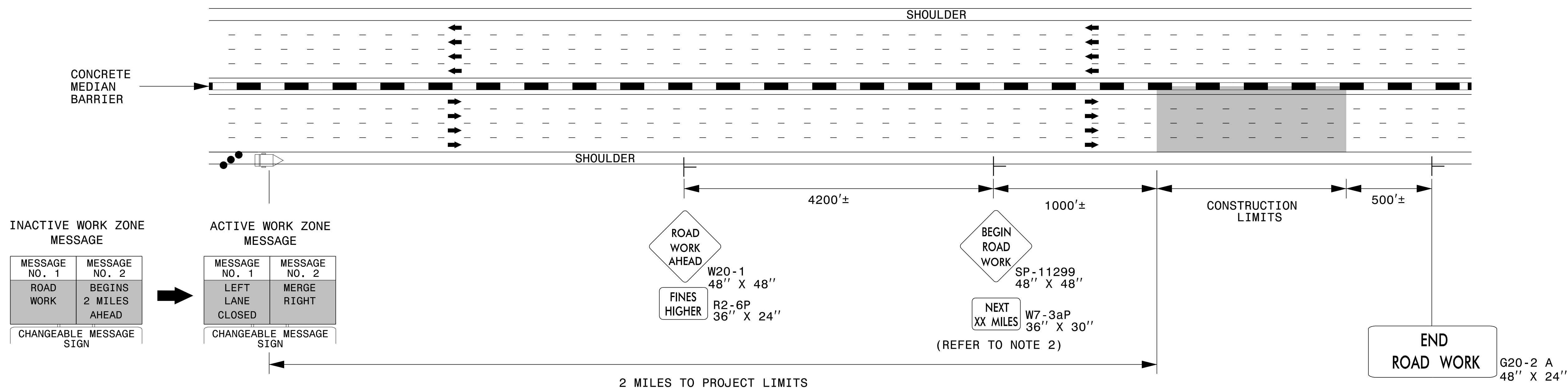
PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANE S	LANE TYPE	FINAL SURFACE TESTING REQUIRED	WARM MIX ASPHALT REQUIRED	LENGTH MI	WIDTH FT	1.25" MILLING SY	1.5" MILLING SY	INC. MILLING SY	INC. STONE BASE TONS	BASE COURSE, B25.0B TONS	SURFACE COURSE, S9.5B TONS	SURFACE COURSE, S9.5C TONS	SURFACE COURSE, SF9.5A TONS	SURFACE COURSE, S4.75A TONS	ASPHALT BINDER FOR PLANT MIX TONS	ADJ. OF MAN-HOLES EA	ADJ. OF METER OR VALVE BOXES EA	INDUCTIVE LOOP LF			
2018CPT.04.06.20961	Wayne	1	SR 1006 GRANTHAM SCHOOL RD WIDEN 2' EA. SIDE	NC 55 TO DUPLIN COUNTY LINE	3	2	2WD	NO	NO	1.73	20					1,278			1,563		163						
		2	SR 1058 FARO RD WIDEN 2' EA. SIDE	SR 1529 TO GREENE COUNTY LINE	3	2	2WU	NO	NO	1.41	18						1,000			1,423		140					
		3	SR 1109 BRITT RD S/D	SR 1105 TO SR 1108	2	2	2WU	NO	NO	1.64	20									1,330		89					
		4	SR 1385 EDMUNDSON ST S/D	US 117 ALT TO END STATE MAINT.	2	2	2WU	NO	NO	0.08	20										65		4				
		5	SR 1386 BRITT ST. S/D	US 117 ALT TO END STATE MAINT.	2	2	2WU	NO	NO	0.08	20										65		4				
		6	SR 1387 DUCK POND LN. S/D	US 117 ALT. TO END STATE MAINT.	1	2	2WU	NO	NO	0.06	20											37	3				
		7	SR 2088 OLIVE LN. S/D	SR 1879 TO SR 1744	2	2	2WU	NO	NO	0.11	20										89		6				
		8	SR 1411 LANE ST. S/D	US 117 ALT. TO END STATE MAINT.	2	2	2WU	NO	NO	0.08	20										65		4				
		9	SR 1513 RED HILL RD	NC 222 TO NC 222	2	2	2WU	NO	NO	3.5	20	524									2,918		196				
		10	SR 1529 HERMAN LANE RD	SR 1058 TO SR 1527	2	2	2WU	NO	NO	2.5	20										2,067		139				
		11	SR 1984 DALE RD S/D	US 117 ALT TO END MAINT.	1	2	2WU	NO	NO	0.17	20											105	7				
		12	SR 1535 ANTIOCH RD WIDEN 2' EA SIDE	SR 1534 TO NC111	3	2	2WU	NO	NO	1.9	20							1,271			1,936		187				
		13	SR 1765 WOODROSE AVE S/D	SR1003 TO END STATE MAINT	2	2	2WU	NO	NO	0.3	20										243		16				
		14	SR 1766 DALEVIEW DR S/D	SR 1765 TO SR 1765	2	2	2WU	NO	NO	0.24	20										195		13				
		15	SR 1779 VINWOOD S/D	SR 1003 TO END STATE MAINT.	2	2	2WU	NO	NO	0.4	20										324		22				
		16	SR 1780 BRYANT CIR. S/D	SR 1779 TO END STATE MAINT.	2	2	2WU	NO	NO	0.29	20										235		16				
		17	SR 1781 NORLEE S/D	SR 1779 TO SR 1780	2	2	2WU	NO	NO	0.15	20										122		8				
		18	SR 1852 KELLY CT. S/D	SR 1779 TO CUL DE SAC	2	2	2WU	NO	NO	0.22	20										208		14				
		19	SR 1796 NEWSOME RD S/D	SR 1792 TO SR 1003	2	2	2WU	NO	NO	0.12	20										97		7				
		20	SR 1805 JESSE JACKSON ST S/D	SR 1715 TO END STATE MAINT.	2	2	2WU	NO	NO	0.17	20										138		9				
		21	SR 1819 QUEEN DR S/D	SR 1719 TO SR 1820	2	2	2WU	NO	NO	0.27	20										219		15				
		22	SR 1820 BARBARA DR S/D	SR 1819 TO SR 1719	2	2	2WU	NO	NO	0.26	20										211		14				
		23	SR 1842 SUN VALLEY DR S/D	SR 1719 TO END STATE MAINT.	2	2	2WU	NO	NO	0.16	20										130		9				
		24	SR 1843 DIAMOND CT. S/D	SR 1842 TO END STATE MAINT.	2	2	2WU	NO	NO	0.04	20										62		4				
		25	SR 1879 TARHEEL DR. S/D	SR 1744 TO SR 1744	2	2	2WU	NO	NO	0.32	20										259		17				
		26	SR 1974 PINELAND AVE. S/D	S. US 117 ALT. TO END MAINT.	2	2	2WU	NO	NO	0.5	20										405		27		1		
		28	SR 1215 WEAVER RD WIDEN 2' EA	SR 1219 TO US 13 S	3	2	2WU	NO	NO	1.68	22							275			1,498		112				
		TOTAL FOR PROJ NO. 2018CPT.04.06.20961										18.38		524		500	50	3,824			15,867	142	1,245		1		
2018CPT.04.06.10961	Wayne	27	NC 55	US 117 ALT TO SR 1117	4	2	2WU	NO	NO	2.7	24 - 70		56,837				4,791				287	1		4,200			
		29	US13/US70/US117 WESTBOUND WITH LOOPS AND RAMPS	WILLIAMS ST. BRIDGE TO JOINT AT US13/US 117 RXR	5,6	2	MD	YES	NO	2.2	24 - 48		43,912						3,702			218			750		
		30	US13/US70/US117 EASTBOUND WITH LOOPS AND RAMPS	JOINT AT US13/US 117 RXR TO WILLIAM ST. BRIDGE	5,6	2	MD	YES	NO	2.2	24 - 48		44,577							3,758			222			1,200	
		31	US 13/US 117 SOUTHBOUND	1600'+/- SOUTH OF GEORGE ST TO SR 1927	5	2	MD	YES	NO	2.83	24 - 48		45,982								3,880			229			3,400
		32	US 13/US117 NORTHBOUND	SR 1927 TO 1600'+/- SOUTH OF GEORGE ST.	5	2	MD	YES	NO	2.62	24 - 48		43,222								3,647			215			3,400
TOTAL FOR PROJ NO. 2018CPT.04.06.10961										12.55				50		4,791	14,987			1,171	1		12,950				
GRAND TOTAL										30.93		524		500	100	3,824	4,791	14,987	15,867	142	2,416	1	1	12,950			

Note: S/D denotes subdivision.

DIVIDED MEDIANS WITH WIDTHS 46' OR GREATER



DIVIDED MEDIANS WITH WIDTHS LESS THAN 46' OR WITH PERMANENT MEDIAN BARRIER



NOTES

1. THIS DRAWING IS TO BE USED IN CONJUNCTION WITH THE WORK ZONE VARIABLE SPEED LIMIT USING DIGITAL SPEED LIMIT SIGNS FOR INTERSTATE/FREEWAY RESURFACING PROJECTS DETAIL.
2. FOR SIGN W7-3aP, ROUND TO THE NEAREST MILE.
3. FOR ENTRANCE AND EXIT RAMP, REFER TO RSD 1101.01, SHEET 1, DETAIL B & C.
4. FOR ADDITIONAL NOTES, REFER TO RSD 1101.01, SHEET 1.

LEGEND

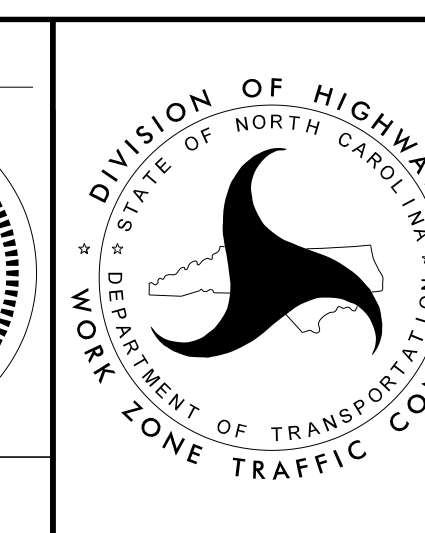
- CHANGEABLE MESSAGE SIGN (CMS)
- STATIONARY SIGN
- DIRECTION OF TRAFFIC FLOW
- TRAFFIC DRUM

APPROVED:

DATE: 2/23/2017

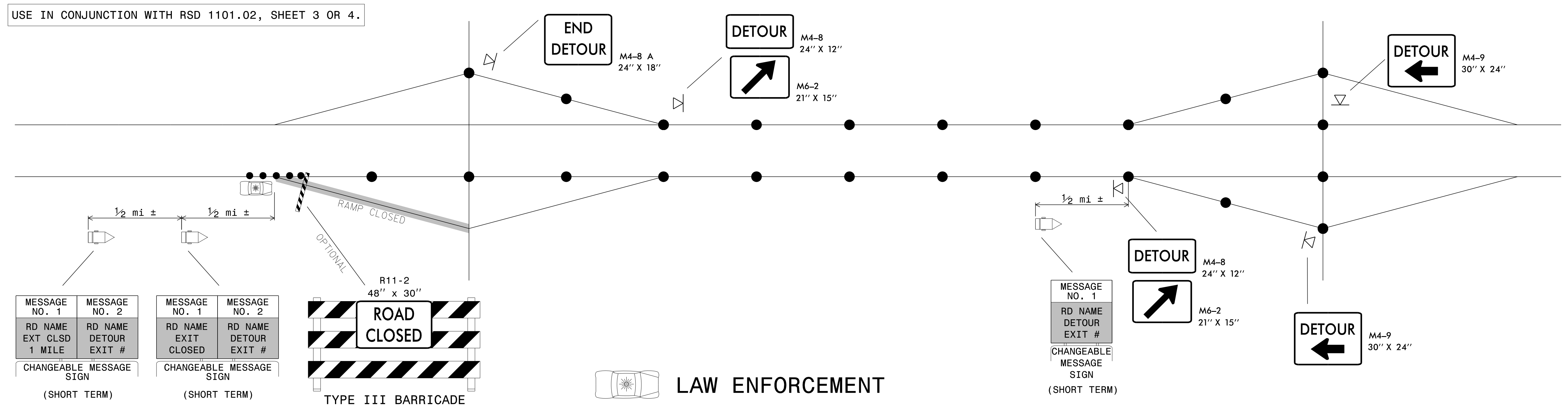
SEAL 022104
JOHN S. KITE, III
ENGINEER

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

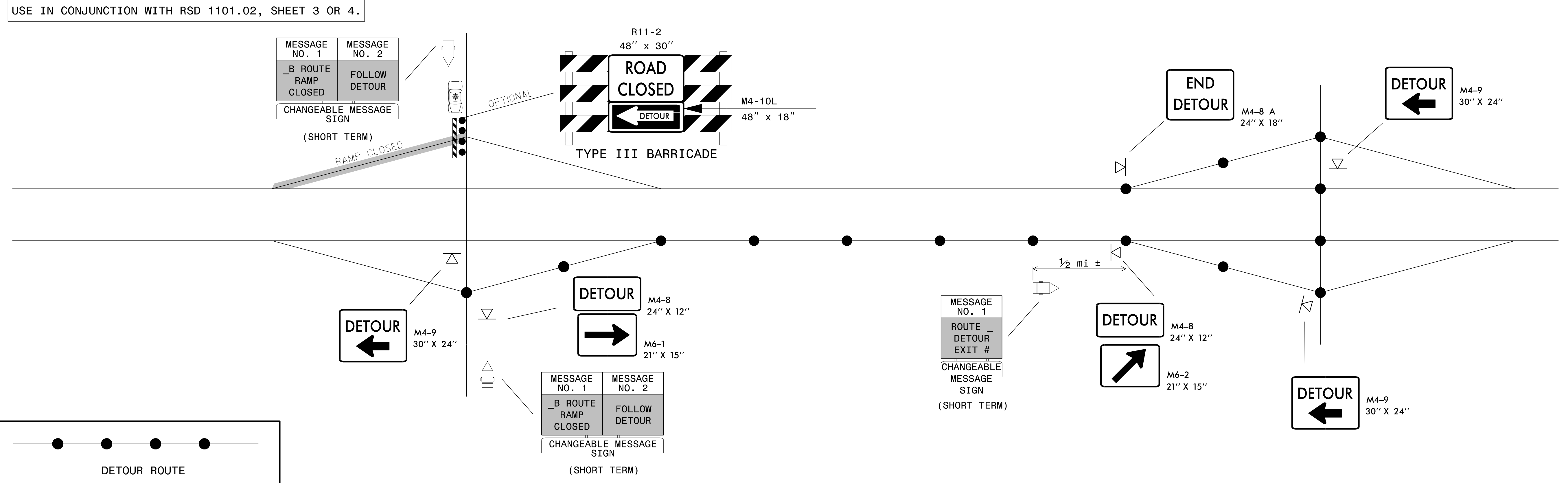


STATIONARY ADVANCE
WARNING SIGNS FOR
INTERSTATE/FREEWAY
RESURFACING PROJECTS

SHORT TERM CLOSURE AND DETOUR OF OFF-RAMP TO ADJACENT INTERCHANGE



SHORT TERM CLOSURE AND DETOUR OF ON-RAMP TO ADJACENT INTERCHANGE



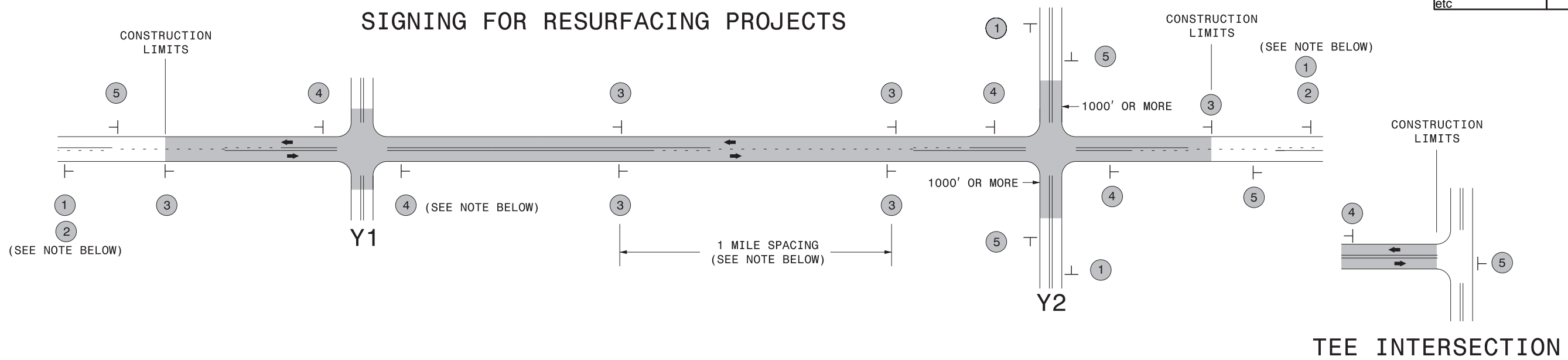
GENERAL NOTES:

1. THIS DRAWING IS INTENDED FOR USE DURING SHORT TERM CLOSURES OF INTERSTATE AND FREEWAY RAMPS.
2. RAMP CLOSURES SHALL BE APPROVED BY THE ENGINEER.
3. IF RAMP CLOSURE RESTRICTIONS APPLY, SEE SPECIAL PROVISION, "INTERMEDIATE CONTRACT TIMES AND LIQUIDATED DAMAGES".
4. ADDITIONAL CHANGEABLE MESSAGE SIGNS AND POSSIBLE DETOUR SIGNS MAY BE NECESSARY FOR MORE COMPLEX CLOSURES/DETOURS. COMPENSATION FOR ADDITIONAL DEVICES SHALL BE MADE BASED ON THE UNIT BID PRICE FOR THE RESPECTIVE DEVICE.

APPROVED: <i>Steve Kite</i> DATE: 2/23/2017 E27C930E10FC442...			SHORT TERM CLOSURE AND DETOUR OF INTERSTATE/FREEWAY RAMPS
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			

2/23/2017 S:\TMU\WZTC\DesignGroup3\Squad3B\04\Interstate Resurfacing Provisions and Details\TypicalOff-Ramp Detour.dgn User:keddis

SIGNING FOR RESURFACING PROJECTS




LEGEND	
— —	STATIONARY SIGN
←	DIRECTION OF TRAFFIC FLOW

MAINLINE (-L-) SIGNING

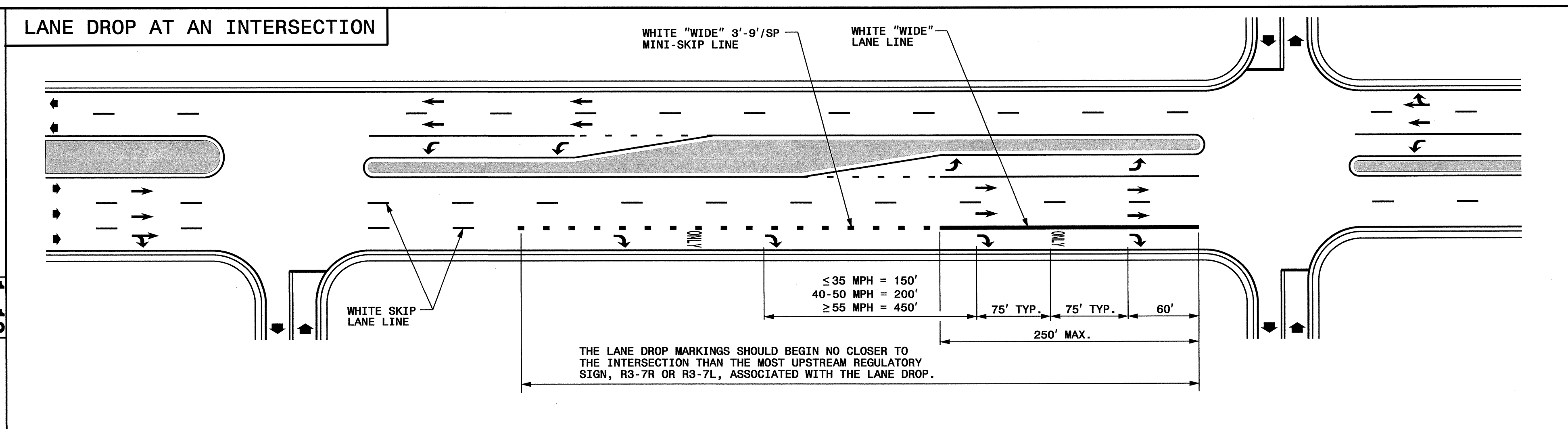
-Y- LINE SIGNING

SIGNING NOTES AND PLACEMENT PER DIRECTION	MAINLINE (-L-) SIGNING		-Y- LINE SIGNING		
	1	 W20-1 48" X 48"	PLACE 1000' PRIOR TO BEGINNING OF CONSTRUCTION LIMITS. ONLY USED ON -Y- LINES IF RESURFACING LIMITS EXTEND 1000' ALONG -Y- LINE.	NO REQUIRED STATIONARY SIGNING FOR THE FOLLOWING -Y- LINE CONDITIONS: <ol style="list-style-type: none"> 1) LESS THAN 1000' OF RESURFACING ALONG -Y- LINE 2) SUBDIVISION ROADS 3) DEAD END ROADS 	
	2	 W7-3aP 24" X 18"	#2 SIGN ONLY USED WHEN RESURFACING LIMITS ARE 2 OR MORE MILES IN LENGTH. ROUND UP TO NEXT WHOLE NUMBER. (NO FRACTIONAL OR DECIMAL NUMBERS)	WHEN PAVING/CONSTRUCTION ACTIVITIES PROCEED ACROSS AN UNSIGNED -Y- LINE, ADVANCE WARNING PORTABLE SIGNS SHALL BE USED ALONG THE -Y- LINE AS SHOWN BELOW. REMOVE UPON COMPLETION OF WORK.	
	3	 SP 13107 48" X 48"	<ul style="list-style-type: none"> - PLACE INITIALLY AT THE CONSTRUCTION LIMITS AND SPACE 1 MILE APART THEREAFTER. - AT TEE INTERSECTIONS INSTALL INITIALLY 0.5 MILE FROM INTERSECTION AND SPACE 1 MILE APART THEREAFTER. 	 W20-1 48" X 48"	 W20-7 A 48" X 48"
	4	 SP 13106 48" X 48"	<ul style="list-style-type: none"> - THESE ARE FOR -Y- LINES THAT ARE "THROUGH" ROADWAYS. - DEAD END AND SUBDIVISION ROADS ARE NOT "THROUGH" ROADWAYS. - INSTALL 500' +/- FROM EACH -Y- LINE APPROACH AS SHOWN ABOVE. - FOR MULTIPLE -Y- LINES THAT ARE SEPARATED BY 0.25 MILES OR LESS, TREAT AS A SINGLE UNIT AND INSTALL WITHIN 500' OF EACH APPROACH. - A MAXIMUM OF 2 SIGN SETS PER MILE. DO NOT INSTALL WHEN -Y- LINES ARE WITHIN 0.5 MILES FROM "END ROAD WORK" SIGN. - FOR TEE INTERSECTIONS, INSTALL WITHIN 500' +/- OF THE INTERSECTION ALONG -L- LINE. 	PLACED 500' IN ADVANCE OF FLAGGER. PLACED 250' IN ADVANCE OF FLAGGER.	
5	 G20-2 A 48" X 24"	PLACE 500' FOLLOWING THE END OF CONSTRUCTION LIMITS OR AS SHOWN WHEN WORK ENDS AT A 3-WAY TEE INTERSECTION.			

**RESURFACING
ADVANCE WARNING SIGNS
FOR
RURAL AND SUBURBAN
2 LANE ROADWAYS**

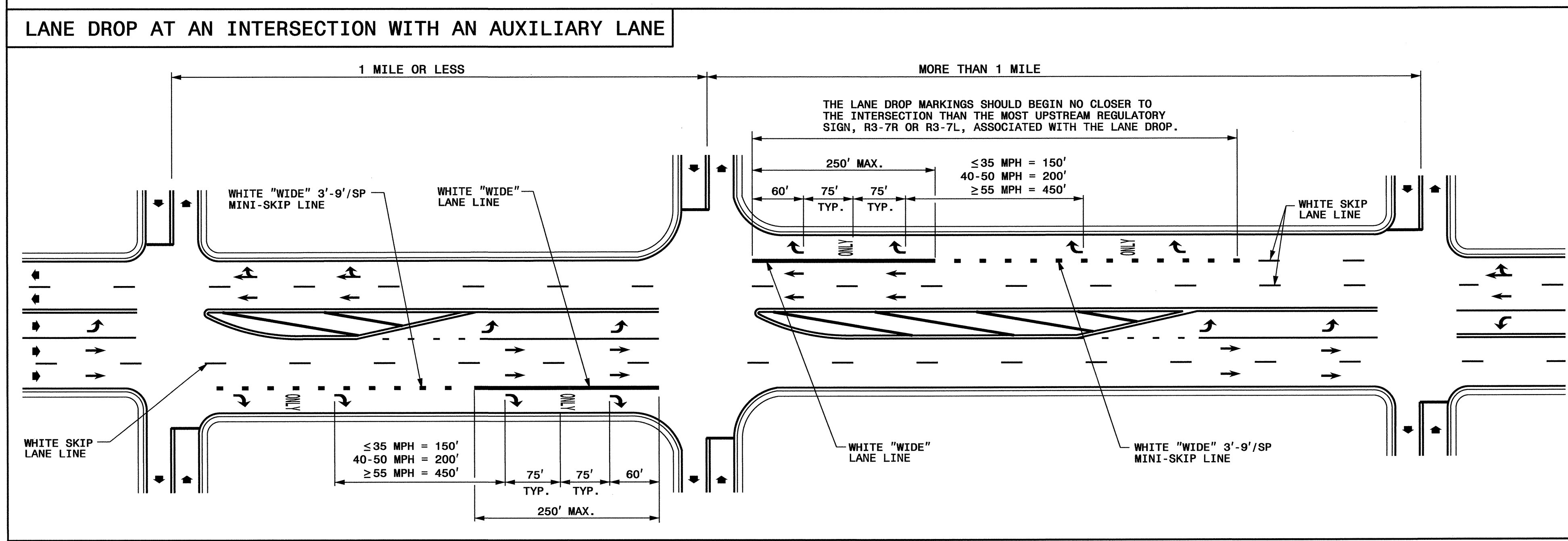
TIP NO. 2018CPT.04.06.10961 etc	SHEET NO. PMP-1
APPROVED: <i>RW</i>	
DATE: 3/6/12	
	

STATE OF NORTH CAROLINA
 DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 RALEIGH, N.C.



STATE OF NORTH CAROLINA
 DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR
PAVEMENT MARKINGS
 LANE DROPS



ENGLISH DETAIL DRAWING FOR
PAVEMENT MARKINGS
 LANE DROPS

- GENERAL NOTES:**
- USE THE GUIDANCE SHOWN ON THE ABOVE DETAILS IN CONJUNCTION WITH INTERSECTION GUIDANCE SHOWN ON ROADWAY STANDARD DRAWING 1205.04.
 - LANE LINES INDICATED AS "WIDE" SHALL BE AT LEAST TWICE THE WIDTH OF THE NORMAL LINE.

LEGEND	
W = WIDTH OF TRAVEL LANE	ONLY PAVEMENT MARKING SYMBOLS & CHARACTERS
➔ DIRECTION OF TRAFFIC FLOW	

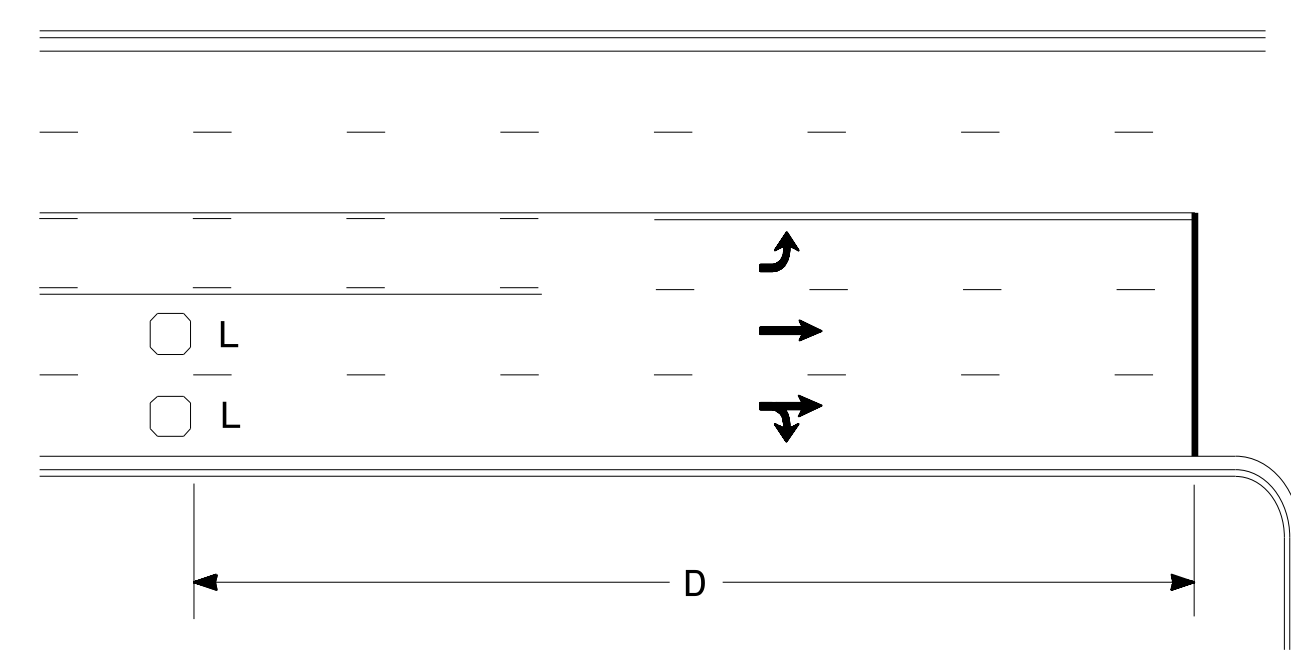
SHEET 1 OF 3
1205D06

SHEET 1 OF 3
1205D06

**REVISED PAVEMENT MARKING
ROADWAY STANDARD DRAWING**

08-MAR-2012 11:09
 C:\Users\Standard\Documents\Standard Drawings\Standard Drawings\2012 Standard Drawings\Standard Drawings\1205D06\1205D06.dgn
 DISTORSES AT 12244745

High Speed Detection (≥40 mph)

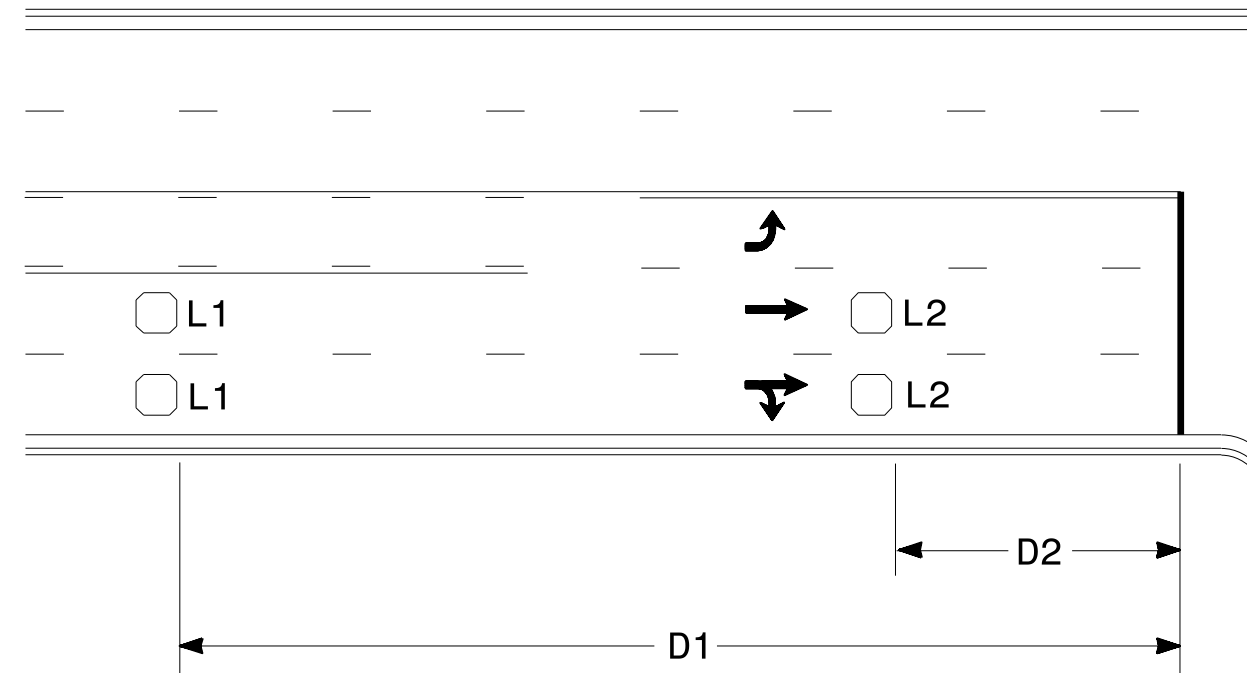


Speed Limit mph	D ft
40	250
45	300
50	355
55	420

L = 6ft X 6ft
Wired in series for TS1
Controllers
Wired separately for TS2,
170, and 2070L Controllers

Volume Density Operation

OR

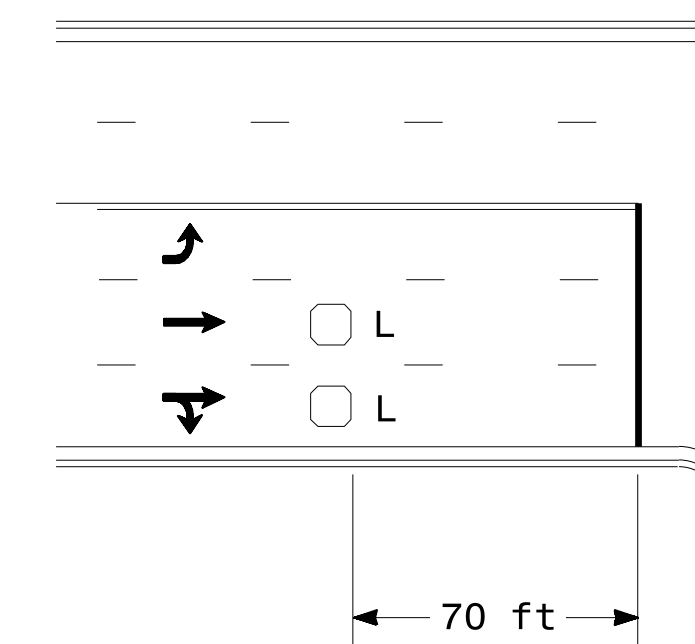


Speed Limit mph	D1 ft	D2 ft
40	250	80
45	300	90
50	355	100
55	420	110

L1 = 6ft X 6ft
Wired in series
L2 = 6ft X 6ft
Wired in series

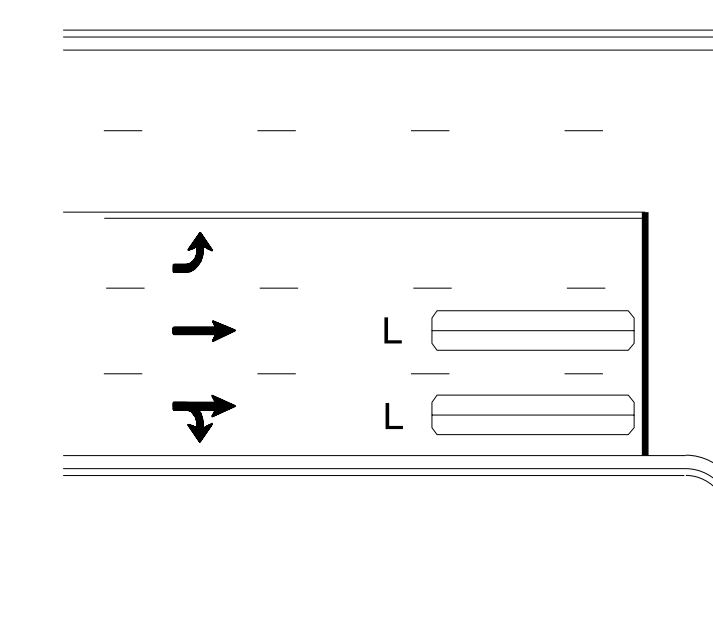
"Stretch" Operation

Low Speed Detection (≤35 mph)



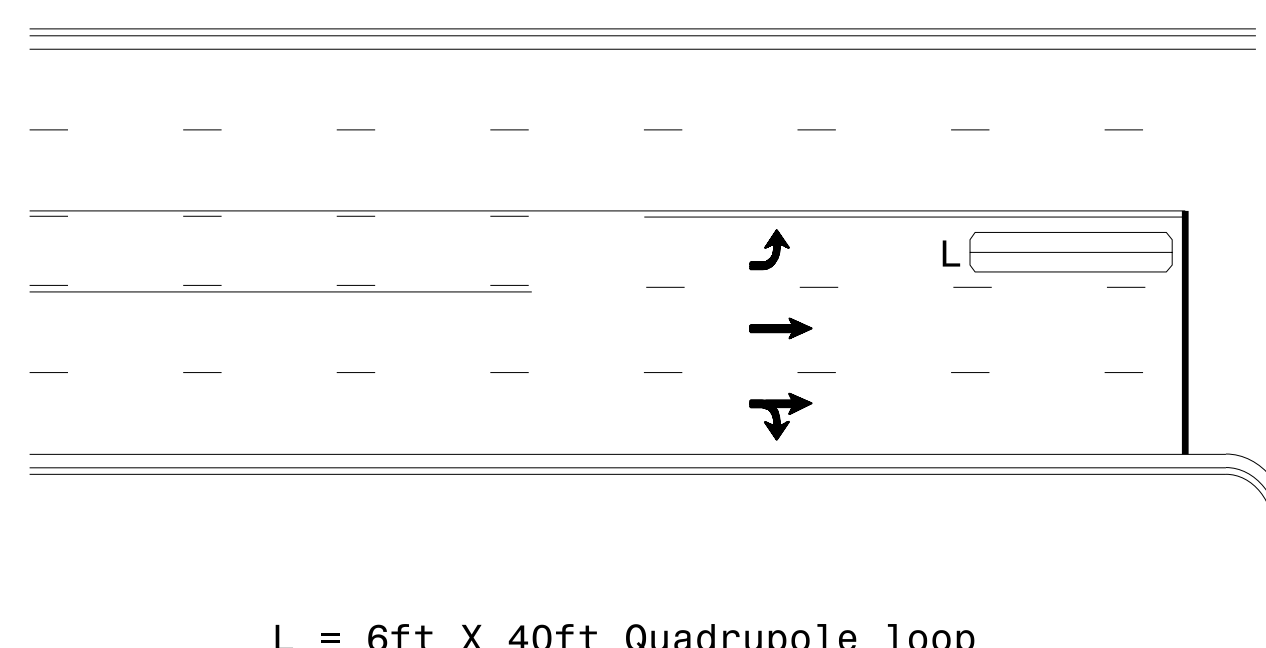
L = 6ft X 6ft
Wired in series

OR



L = 6ft X 40ft
Quadrupole loop, wired separately

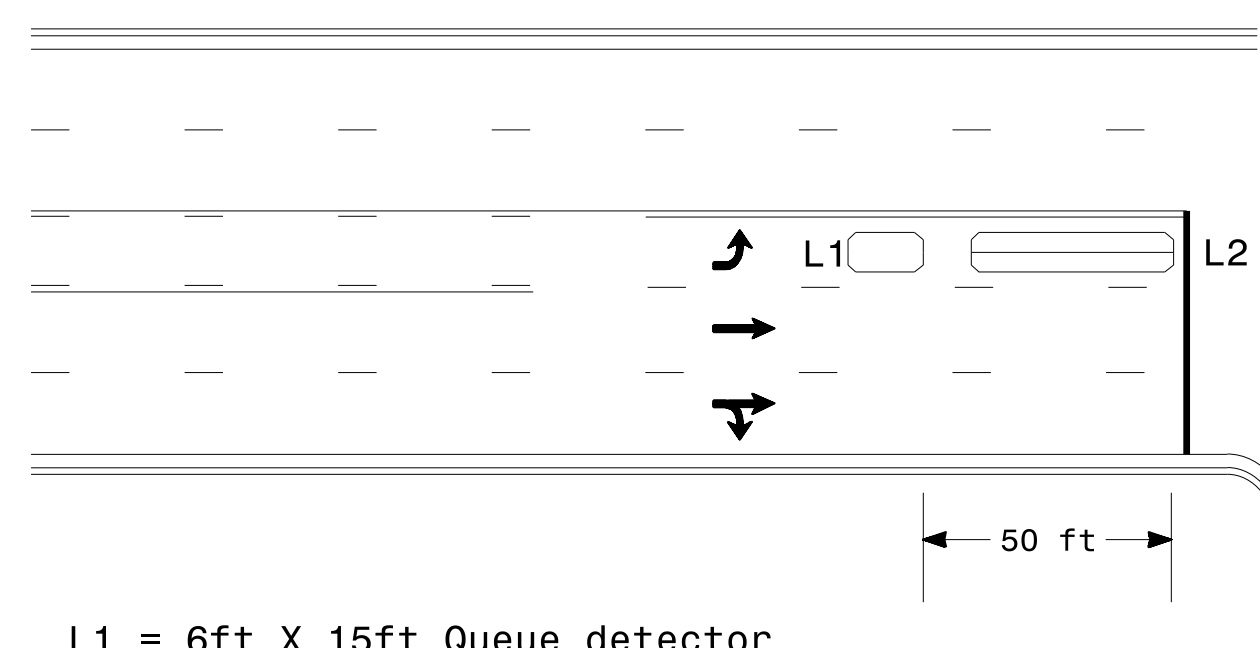
Left Turn Lane Detection



L = 6ft X 40ft Quadrupole loop

Presence Loop Detection

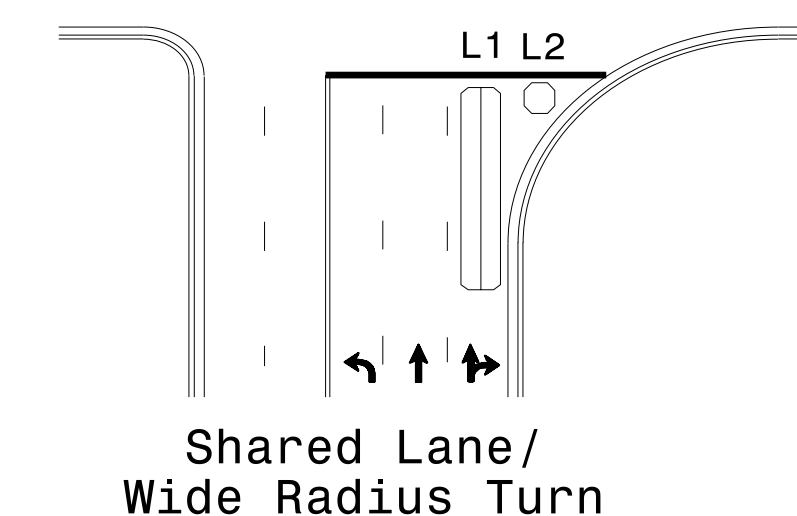
OR



L1 = 6ft X 15ft Queue detector
L2 = 6ft X 40ft Quadrupole loop

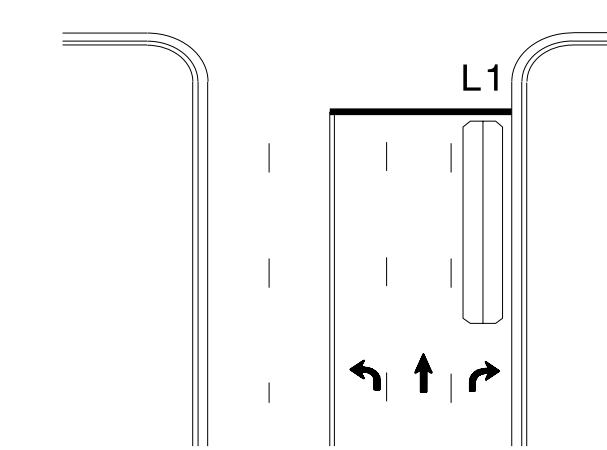
Queue Loop Detection

Right Turn Lane Detection

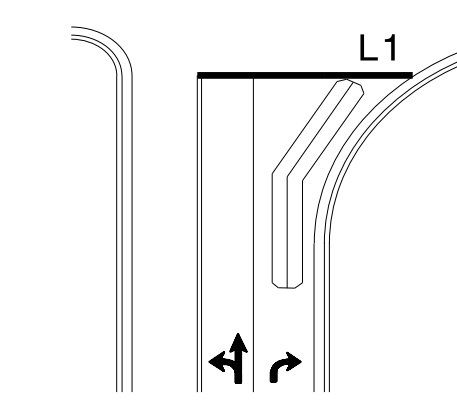


Shared Lane/
Wide Radius Turn

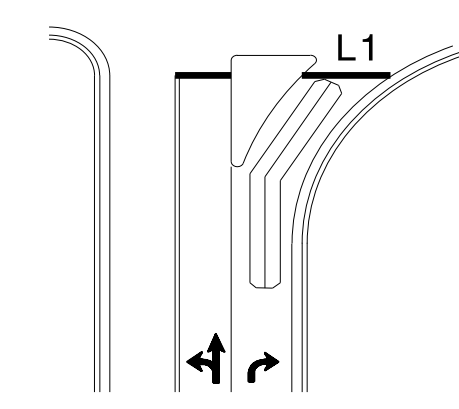
L1 = 6ft X 40ft Quadrupole loop
L2 = 6ft X 6ft [Minimum] Presence loop
Wired separately



Standard Turn

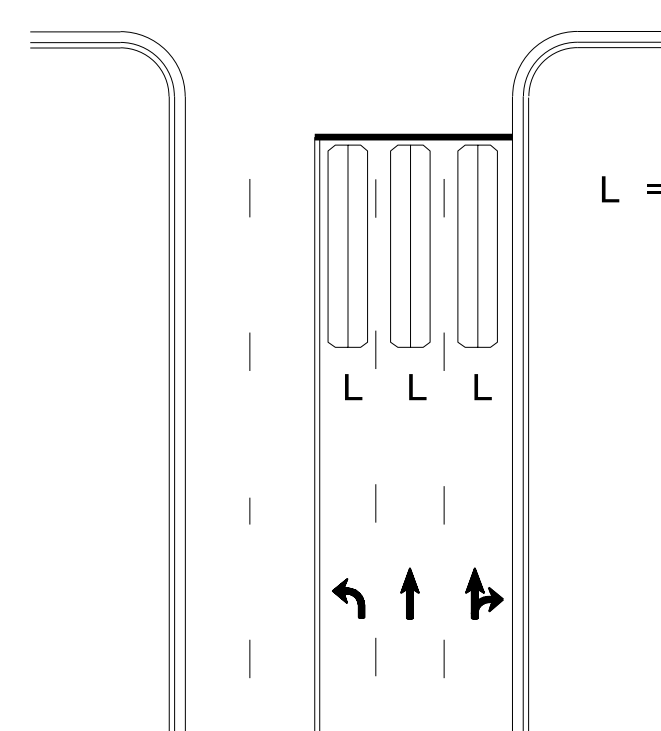


Wide Radius Turn



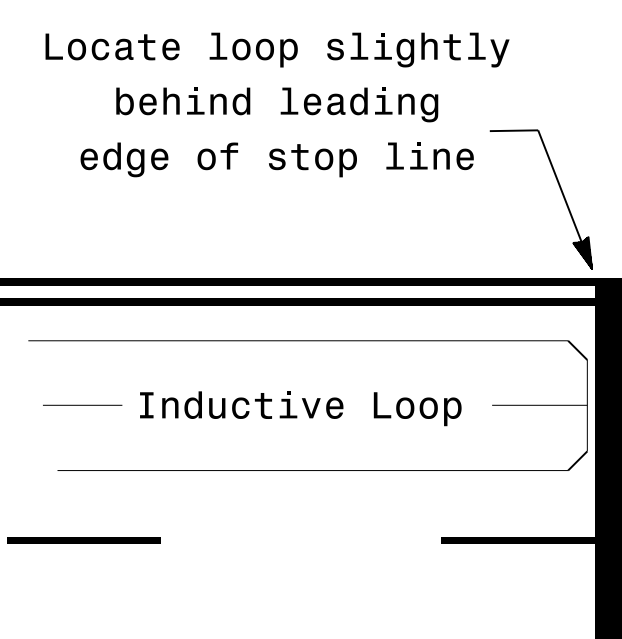
Channelized Turn

Side Street Detection



L = 6ft X 40ft
Quadrupole loop
Wired to separate
detectors/channels

Presence Loop Placement at Stop Lines



Note:
Loop may be located in advance
of stop line under any of the
following conditions:
1) stop line is greater than 15'
from edge of intersecting
roadway
2) loop detects a permissive or
protected/permissive left turn
3) for an exclusive right turn
lane

Recommended Number of Turns

Single 6' X 6' loop
(when wired separately):

Length of Lead-in ft	Number of Turns
< 250	3
250-375	4
375-525	5
> 525	6

Quadrupole loops: Use 2-4-2 turns

6' X 15' Loops:
Lead-in < 150', use 2 turns
Lead-in > 150', use 3 turns

	<p>Prepared In the Offices of:</p> <p>TRANSPORTATION MOBILITY AND SAFETY DIVISION DEPARTMENT OF TRANSPORTATION SIGNAL DESIGN SECTION 750 N. Greenfield Pkwy, Garner, NC 27529</p>		<p>SEAL NORTH CAROLINA PROFESSIONAL ENGINEER PAMELA L. ALEXANDER 23489</p>	
	<p>PLAN DATE: January 2015</p>		<p>REVIEWED BY: JPG</p>	
<p>PREPARED BY: PLA</p>		<p>REVIEWED BY:</p>		
<p>SCALE N/A</p>	<p>REVISIONS</p>	<p>INIT.</p>	<p>DATE</p>	<p>1/30/2015</p>
<p>SIG. INVENTORY NO.</p>		<p>DocuSign P. Alexander B4756E00CE4E4ED DATE</p>		