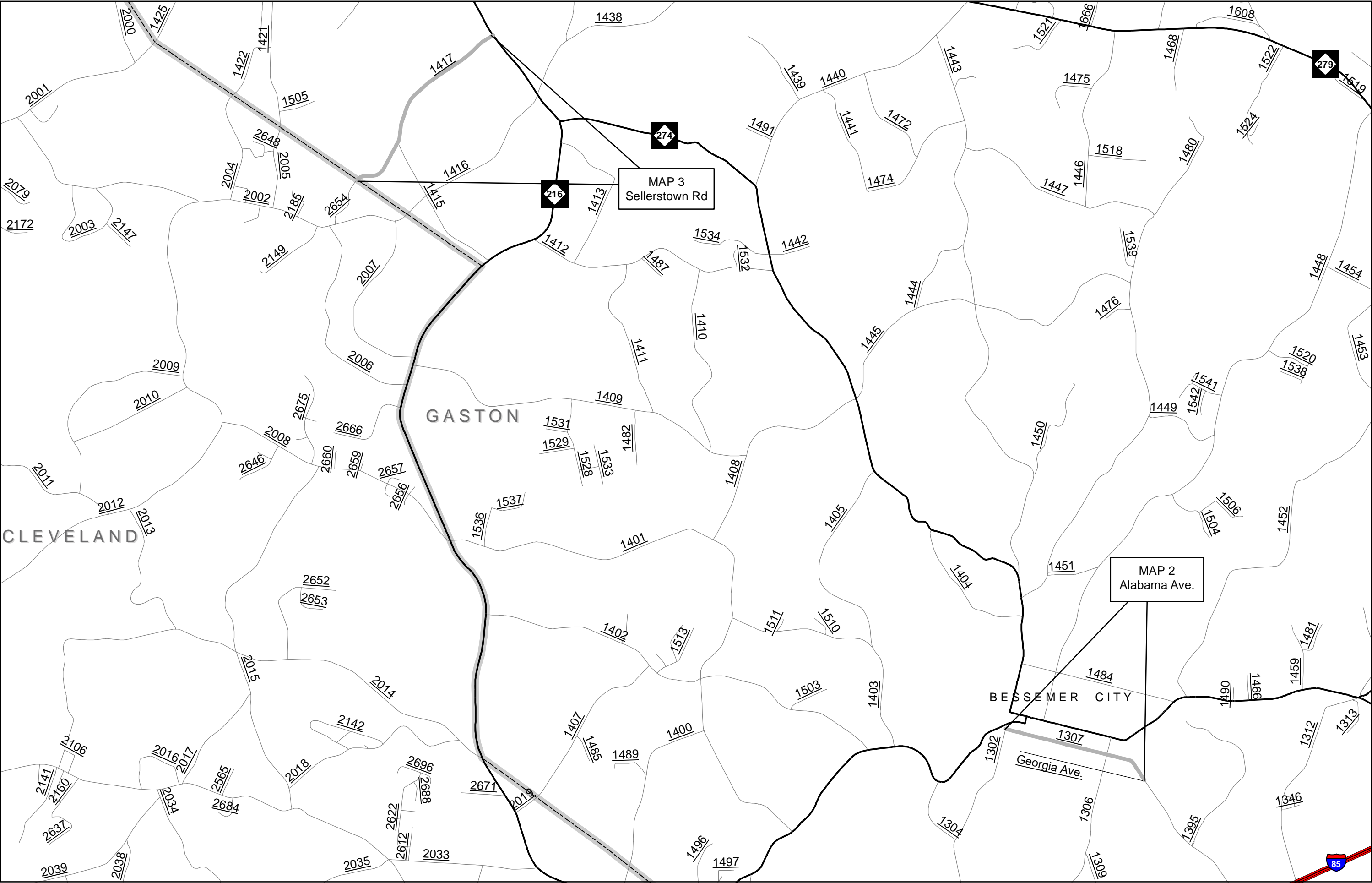


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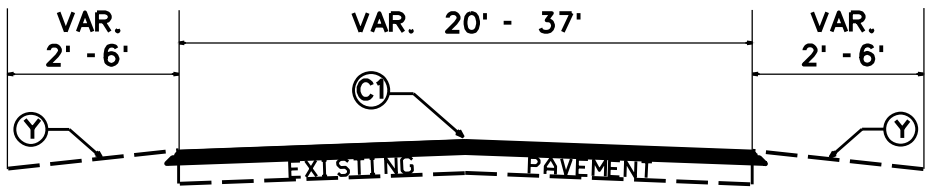
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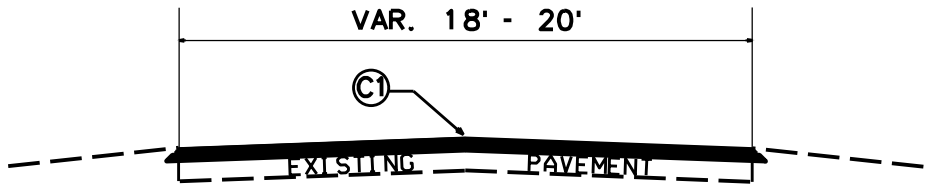


PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
V1	MILL ASPHALT PAVEMENT APPROX. 1-1/2" AS DIRECTED BY ENGINEER
Y	SHOULDER RECONSTRUCTION
Z	INCIDENTAL MILLING AS DIRECTED BY THE ENGINEER.

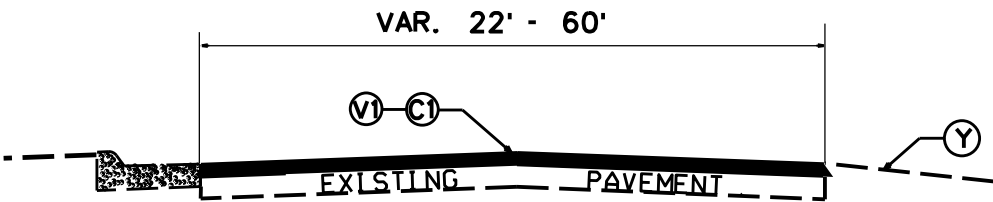
NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.
MILL BRIDGE APPROACHES & RXR APPROACHES 100' TO PROVIDE A SMOOTH TRANSITION AS DIRECTED.
MILL INTO GUTTER LINE WHERE SHOWN AND AS DIRECTED.
MAINTAIN PROPER CROWN FOR DRAINAGE OF THE ROAD SURFACE.



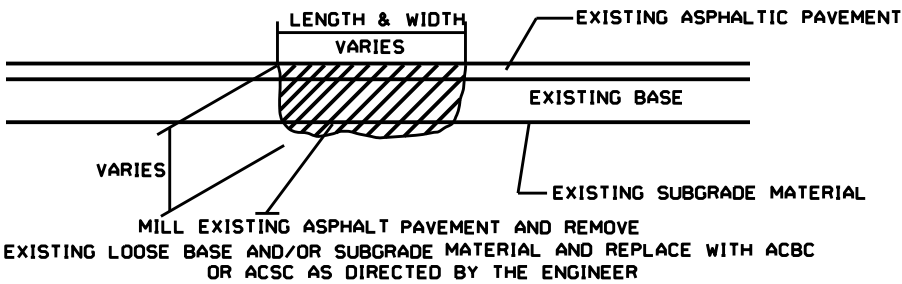
TYPICAL SECTION NO. 1
(MAP 1, 2, 4, 5)



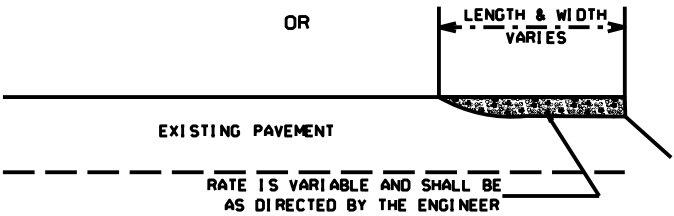
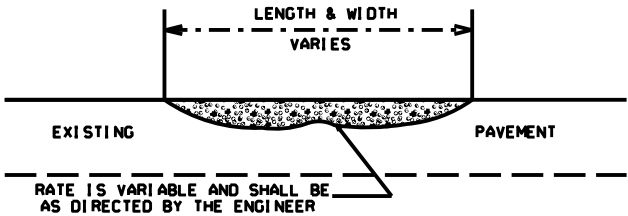
TYPICAL SECTION NO. 2
(MAP 3)



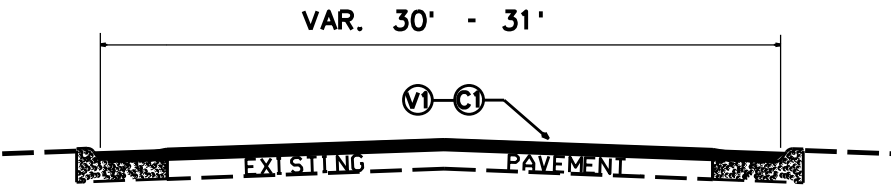
TYPICAL SECTION NO. 3
(MAP 2, 4)



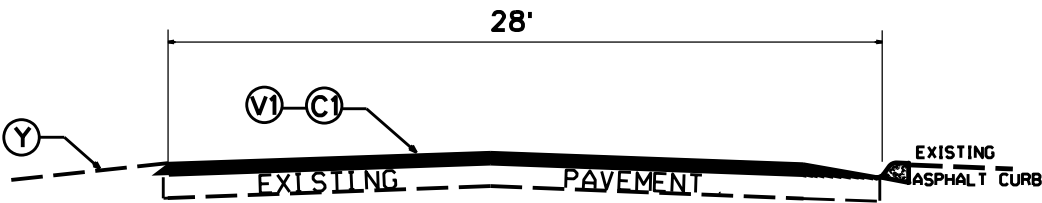
PATCHING EXISTING PAVEMENT



ASPHALT CONCRETE SURFACE COURSE
TYPE S9.5C (LEVELING COURSE)

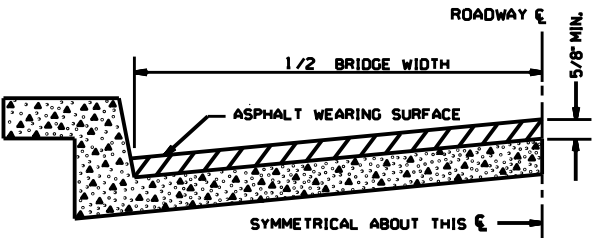


TYPICAL SECTION NO. 4
(MAP 2)



TYPICAL SECTION NO. 5
(MAP 2)

PROJ. REFERENCE NO.	SHEET NO.	TOTAL SHEETS
GASTON COUNTY 2023-2024	4	9
STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
2023CPT. 12.12.20361		



BRIDGE HALF TYPICAL SECTION

FOR BRIDGES WITH FLOOR DRAINS, CARE SHALL BE EXERCISED IN PLACING THE WEARING SURFACE AROUND FLOOR DRAINS SO AS NOT TO HINDER EFFECTIVE DRAINAGE. ALL DRAINS SHALL BE LEFT OPEN.

THE PROPOSED WEARING SURFACE SHALL VARY IN THICKNESS AS NECESSARY TO PROVIDE A SMOOTH RIDING SURFACE. A THICKNESS OF NOT LESS THAN 5/8\"/>

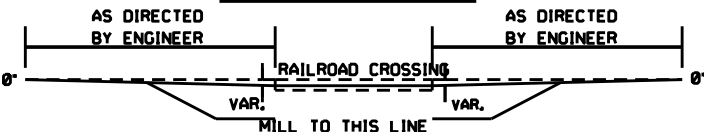
NOTES

ALL UNPAVED S.R. ROADS TO BE SURFACED 50' FROM EDGE OF PAVEMENT OF MAIN PROJECT.
ALL PAVED S.R. ROADS TO BE RESURFACED TO THE ENDS OF THE RADII, OR AS DIRECTED BY THE ENGINEER.
EDGES, PAVEMENT WIDENING, INTERSECTIONS AND BRIDGE FLARES ARE INCLUDED IN THE TABLE OF QUANTITIES.
SHOULDERS AND DITCHES ARE TO BE CONSTRUCTED BY OTHERS UNLESS OTHERWISE NOTED.
BRIDGES TO BE RESURFACED AT LOCATIONS AND TO DEPTH AS DIRECTED BY THE ENGINEER.

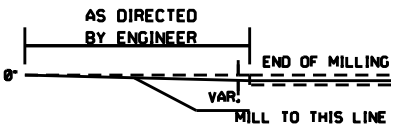
INCIDENTAL MILLING DETAILS



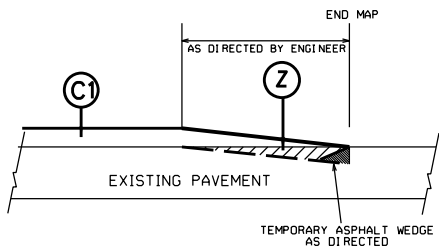
BRIDGE PROFILE



RAILROAD PROFILE

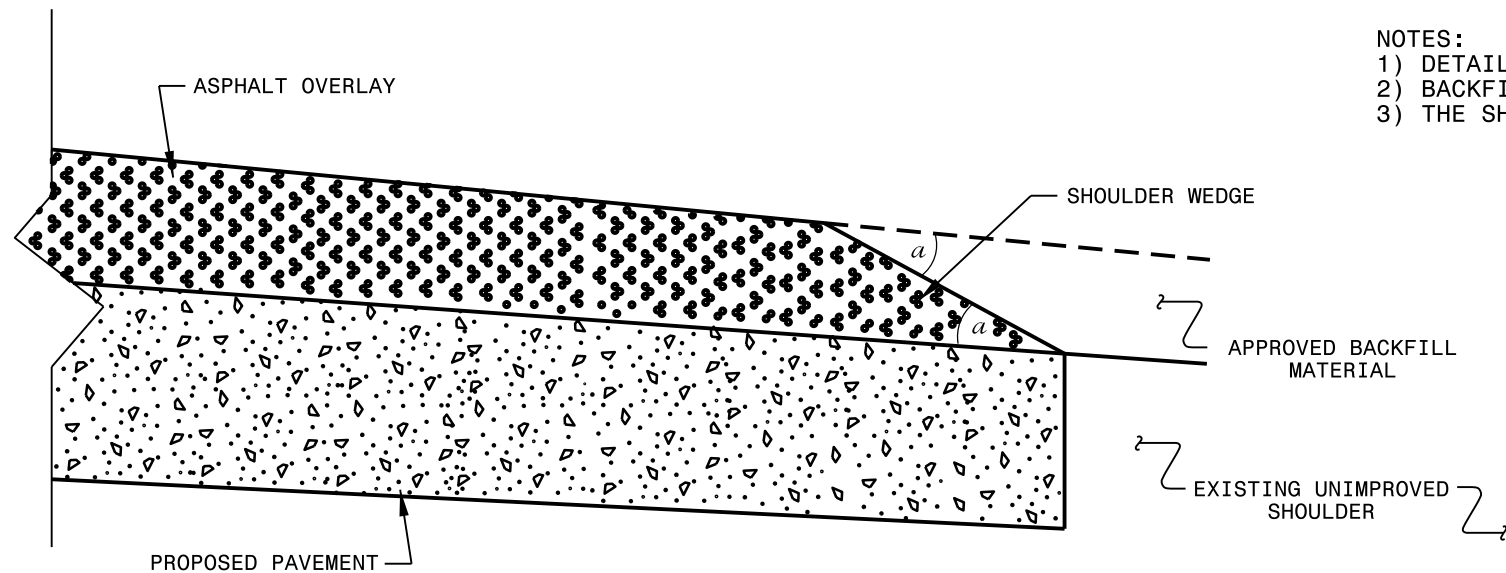


END OF MILLING PROFILE

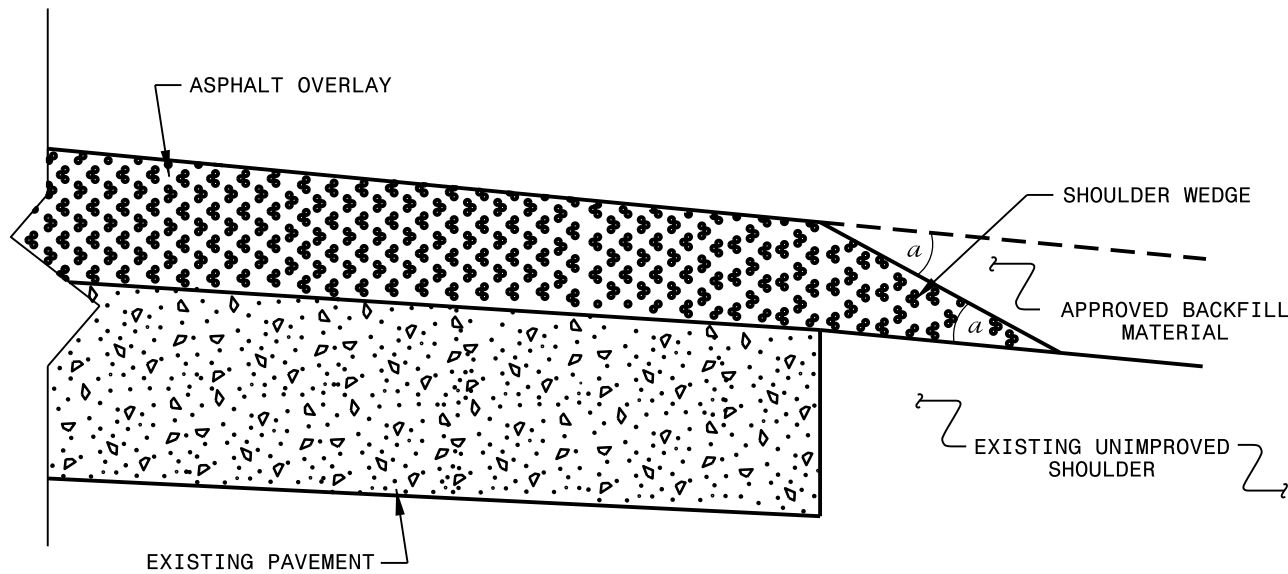


TIE-IN MILLING DETAIL

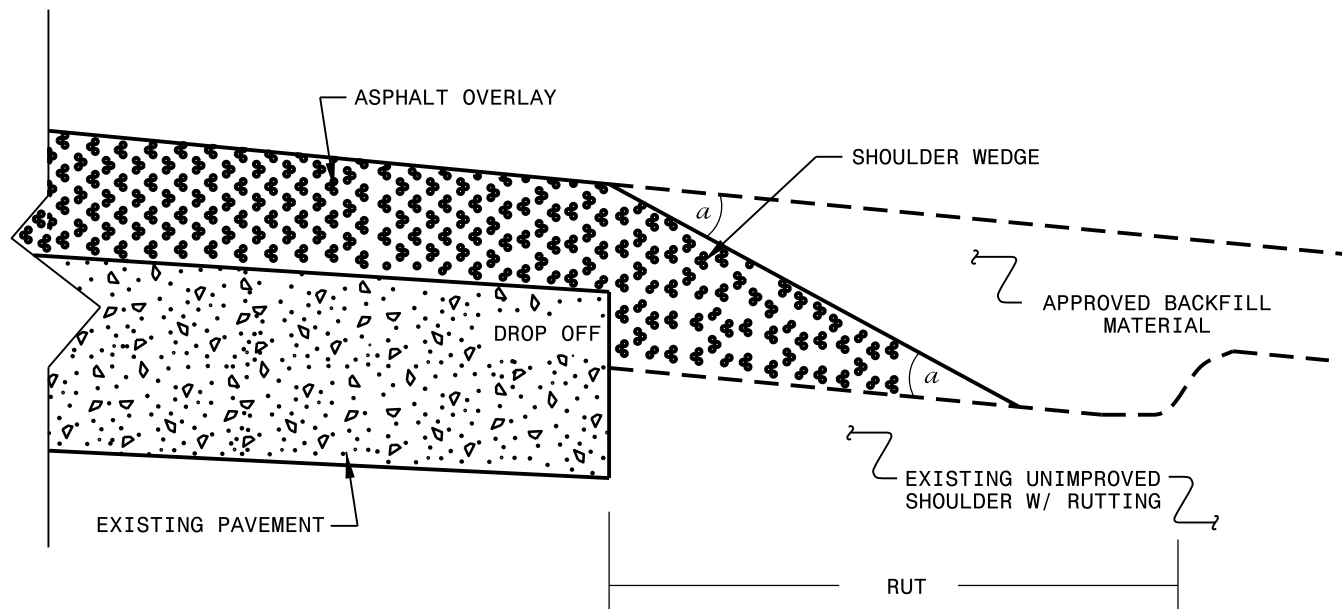
- NOTES:
- 1) DETAIL DOES NOT APPLY TO OGAFB AND ULTRA-THIN BONDED WEARING COURSE.
 - 2) BACKFILL SHOULDER WITH APPROVED MATERIAL.
 - 3) THE SHOULDER WEDGE DEVICE MAY BE DISENGAGED AT PAVED DRIVEWAYS AND SIDE STREETS.



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



SHOULDER WEDGE DETAIL
(Resurfacing Projects w/ NO Widening)

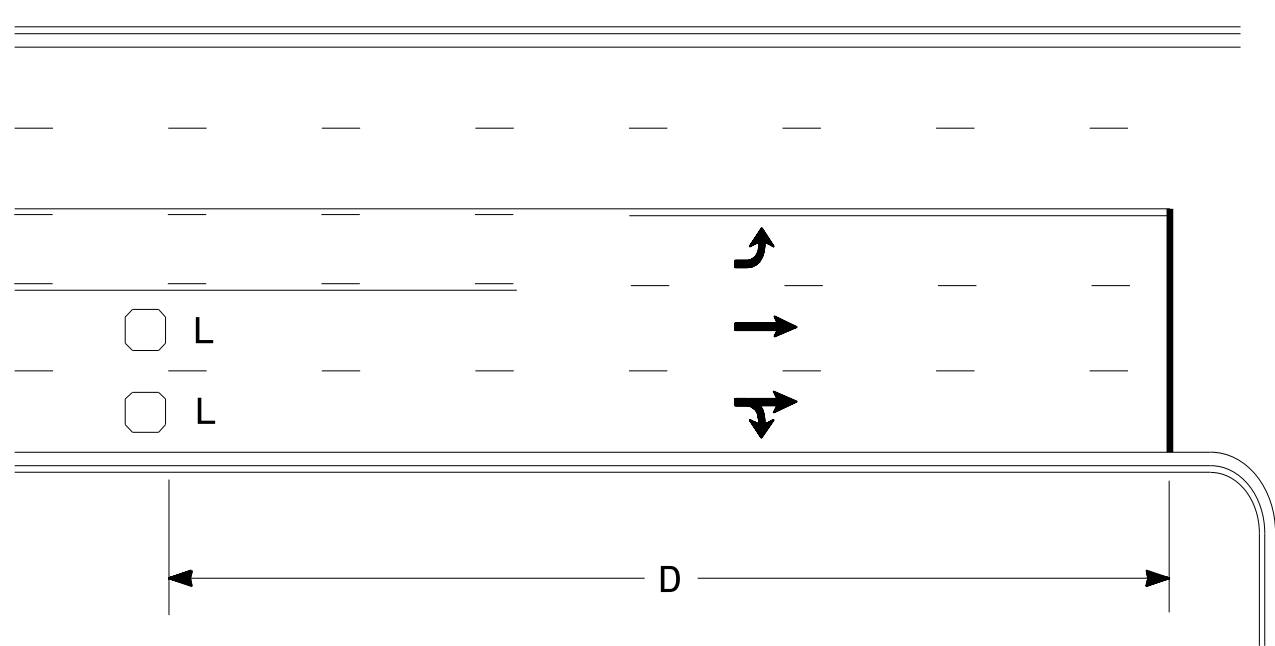


SHOULDER WEDGE DETAIL
(Resurfacing Adjacent to
Rutted Shoulder)

- SHOULDER WEDGE ANGLE = 30°

CONTRACT STANDARDS AND DEVELOPMENT UNIT			
Office 919-707-6950		FAX 919-250-4119	
<hr/>			
SHOULDER WEDGE DETAILS			
<hr/>			
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		

High Speed Detection
(≥40 mph)

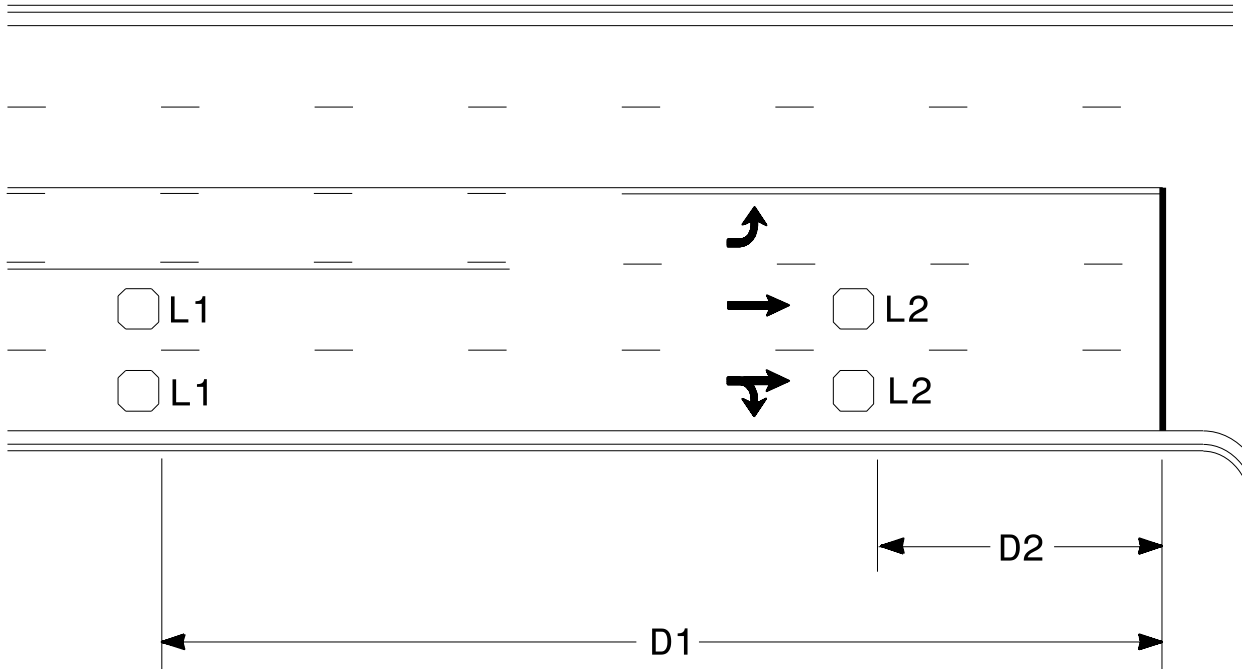


Speed Limit mph	D ft
40	250
45	300
50	355
55	420

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

Volume Density Operation

OR

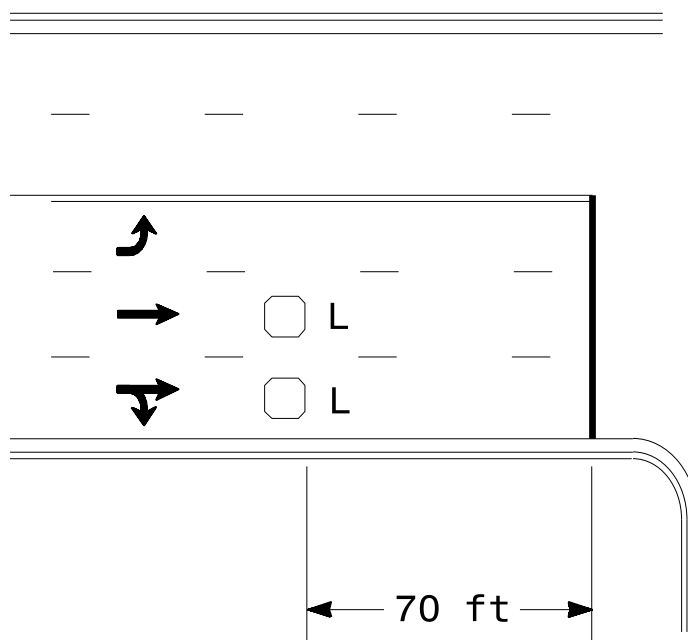


Speed Limit mph	D1 ft	D2 ft
40	250	80
45	300	90
50	355	100
55	420	110

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

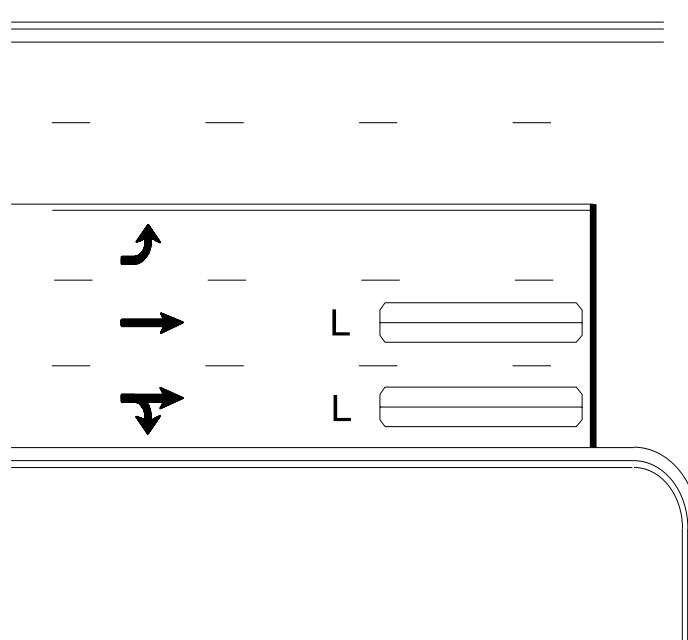
"Stretch" Operation

Low Speed Detection
(≤35 mph)



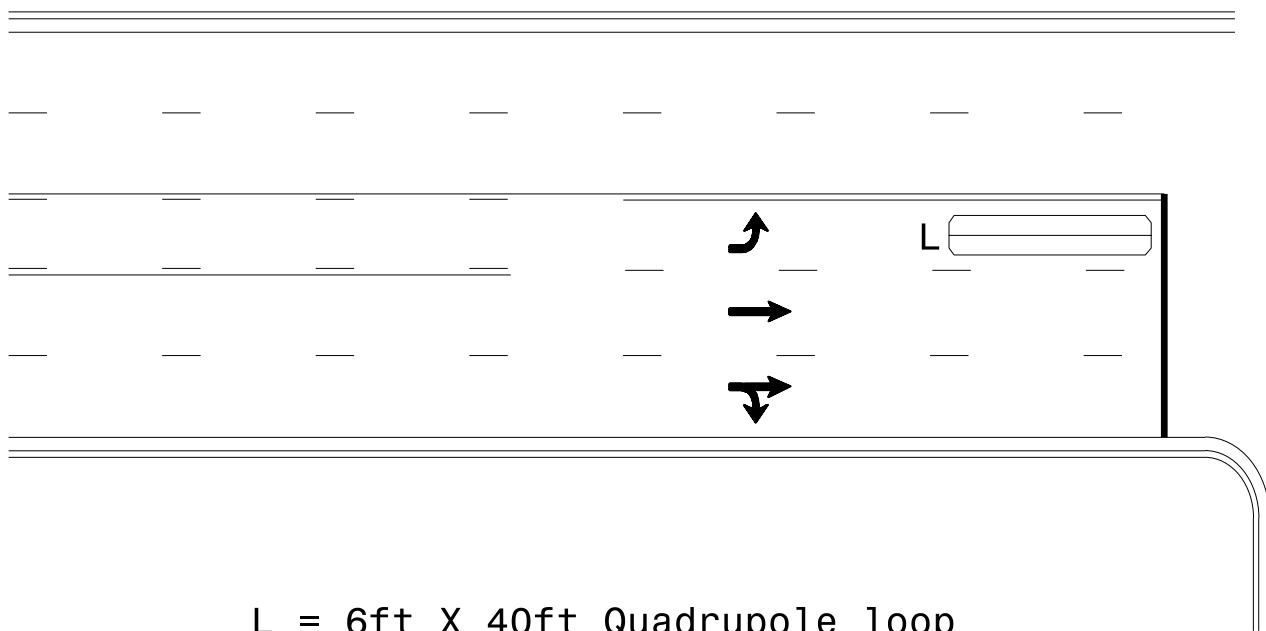
L = 6ft X 6ft
Wired in series

OR



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

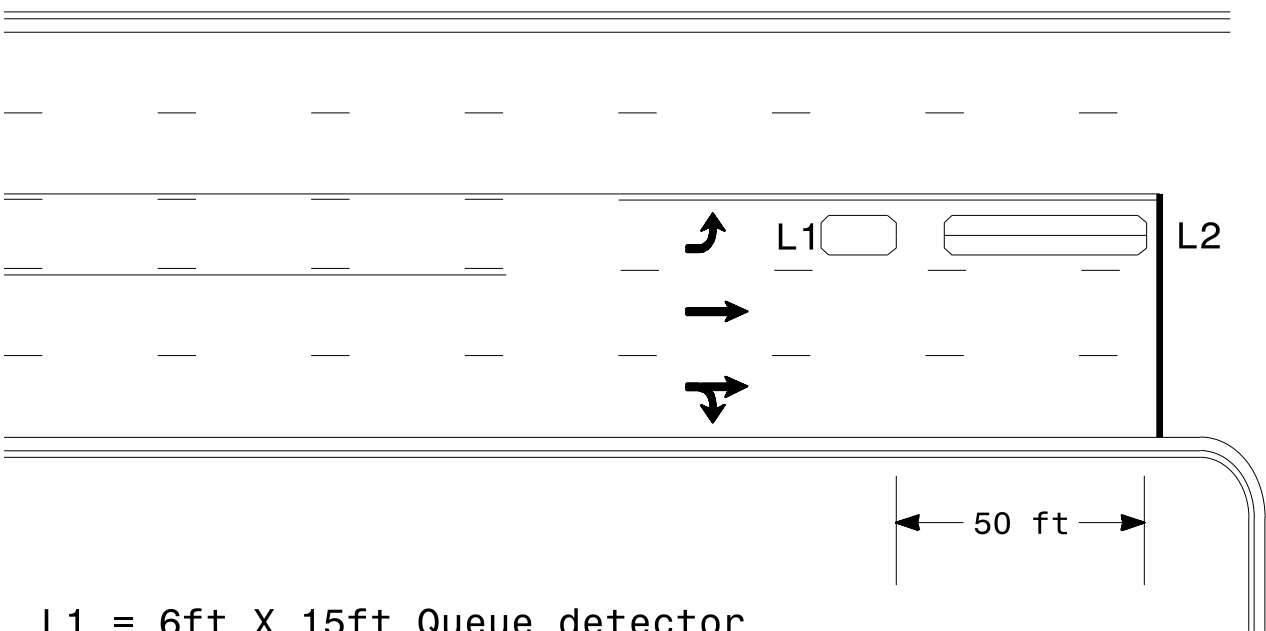
Left Turn Lane Detection



L = 6ft X 40ft Quadrupole loop

Presence Loop Detection

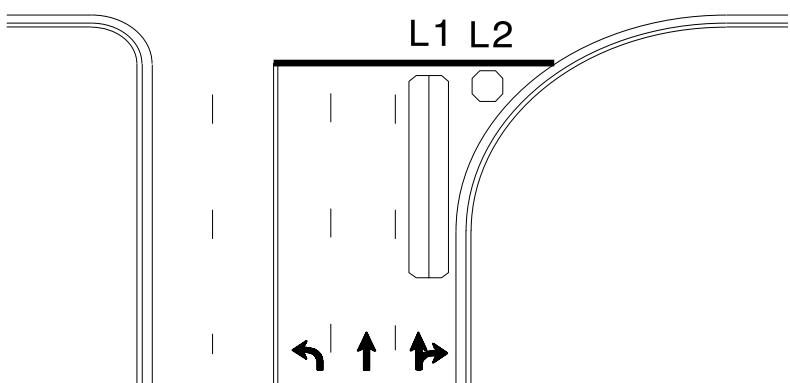
OR



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

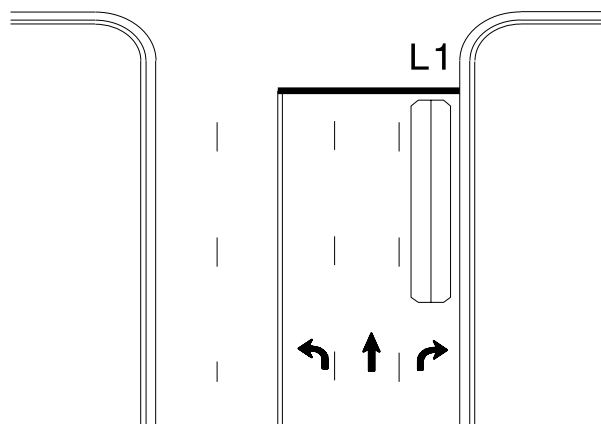
Queue Loop Detection

Right Turn Lane Detection

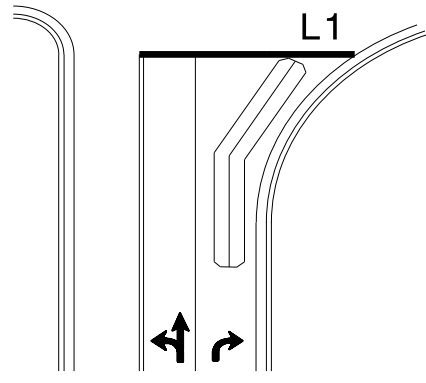


Shared Lane/
Wide Radius Turn

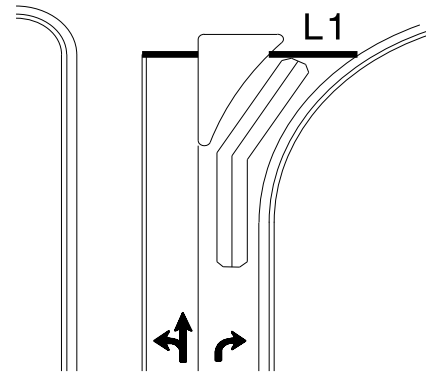
L1 = 6ft X 40ft Quadrupole loop
L2 = 6ft X 6ft [Minimum] Presence loop
Wired separately



Standard Turn

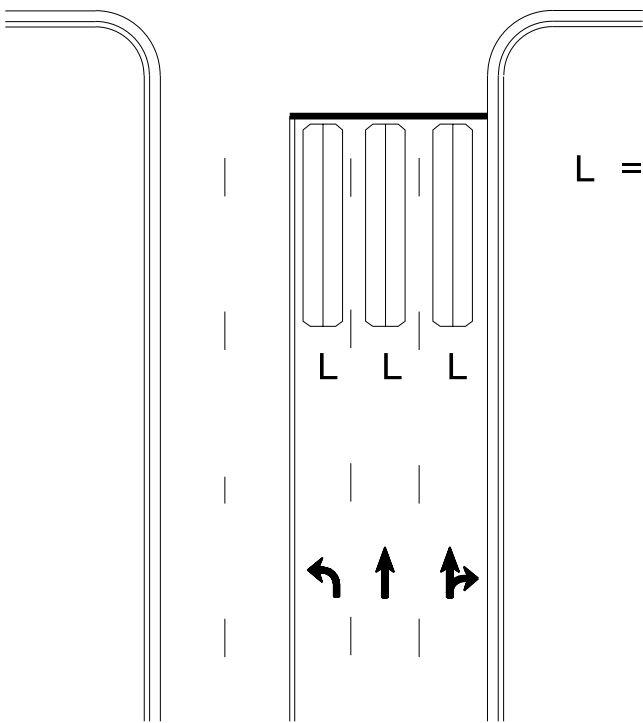


Wide Radius Turn



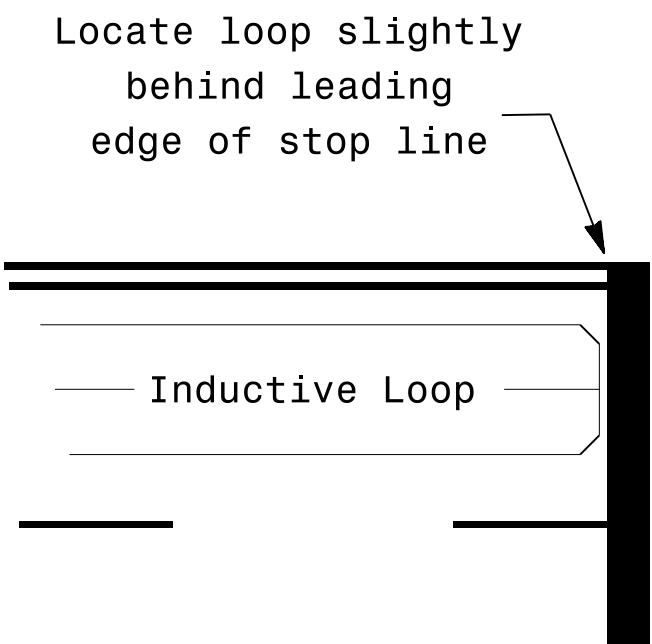
Channelized Turn

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

	Typical Signal Loop Locations		
	PLAN DATE: January 2015	REVIEWED BY: JPG	
PREPARED BY: PLA	REVIEWED BY:	REVISIONS	SIG. INVENTORY NO.
SCALE: N/A			

PROJECT NO.	SHEET NO.	TOTAL NO.
2023CPT.12.12.20361	7	9

SUMMARY OF QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	LANE TYPE	FINAL SURFACE TESTING REQUIRED	WARM MIX ASPHALT REQUIRED	LENGTH	WIDTH	0255000000-E	1220000000-E	1245000000-E	1297000000-E	1330000000-E	1523000000-E	1524000000-E	1575000000-E	1704000000-E	2815000000-N	2830000000-N	2845000000-N	7324000000-N	7444000000-E	7456000000-E
												AGGREGATE SHOULDER BORROW	INCIDENTAL STONE BASE	SHOULDER RECONSTRUCTI ON	1½" MILLING	INCIDENTAL MILLING	SURFACE COURSE, \$9.5C	LEVELING COURSE, \$9.5C	ASPHALT BINDER FOR PLANT MIX	PATCHING EXISTING PAVEMENT	ADJ. OF DROP INLET	ADJ. OF MANHOLES	ADJ. OF METER OR VALVE BOX	JUNCTION BOX (STANDARD SIZE)	INDUCTIVE LOOP SAWCUT	LEAD-IN CABLE (14-2)
										MI	FT	TON	TONS	SMI	SY	SY	TONS	TONS	TONS	TONS	EA	EA	EA	EA	LF	LF
2023CPT.12.12.20361	Gaston	1	SR-1108 (CRAWFORD RD.)	US-321 TO S.C. STATE LINE	1	2	2WU	NO	NO	2.53	VAR. 20-22	886	152	5.06		912	2,938	437	227	465						
2023CPT.12.12.20361	Gaston	2	SR-1307 (ALABAMA AVE.)	SR-1302 TO GEORGIA AVE.	1	2	2WU	NO	NO	0.44	VAR. 24-26	210	15	1.20	10,755	333	1,509	66	108	272	2	14	5			
					3					0.23	VAR. 22-27															
					4					0.27	VAR. 30-31															
					5					0.09	VAR. 28															
2023CPT.12.12.20361	Gaston	3	SR-1417 (SELLERSTOWN RD)	NC-274 TO CLEVELAND CO. LINE	2	2	2WU	NO	NO	1.5	VAR. 18-20		90			67	1,528	70	103	140						
2023CPT.12.12.20361	Gaston	4	SR-2416 (ROBINSON RD.)	NC-274 TO US 321	1	2	2WU	NO	NO	3.54	VAR. 22-37	1,222	210	7.08	1,100	728	5,315	425	382	744			3	1	400	150
2023CPT.12.12.20361	Gaston	5	SR-2423 (BUD WILSON / SPARROW DAIRY RD.)	NC-274 TO SR-2416	1	2	2WU	NO	NO	3.71	20	1,299	223	7.42		294	4,047	610	310	567						
TOTAL FOR PROJ NO. 2023CPT.12.12.20361										12.36		3,617	690	20.76	11,855	2,334	15,337	1,608	1,130	2,188	2	14	8	1	400	150
GRAND TOTAL										12.36		3,617	690	20.76	11,855	2,334	15,337	1,608	1,130	2,188	2	14	8	1	400	150

PROJECT NO.	SHEET NO.	TOTAL NO.
2023CPT.12.12.20361	8	9

THERMOPLASTIC AND PAINT QUANTITIES

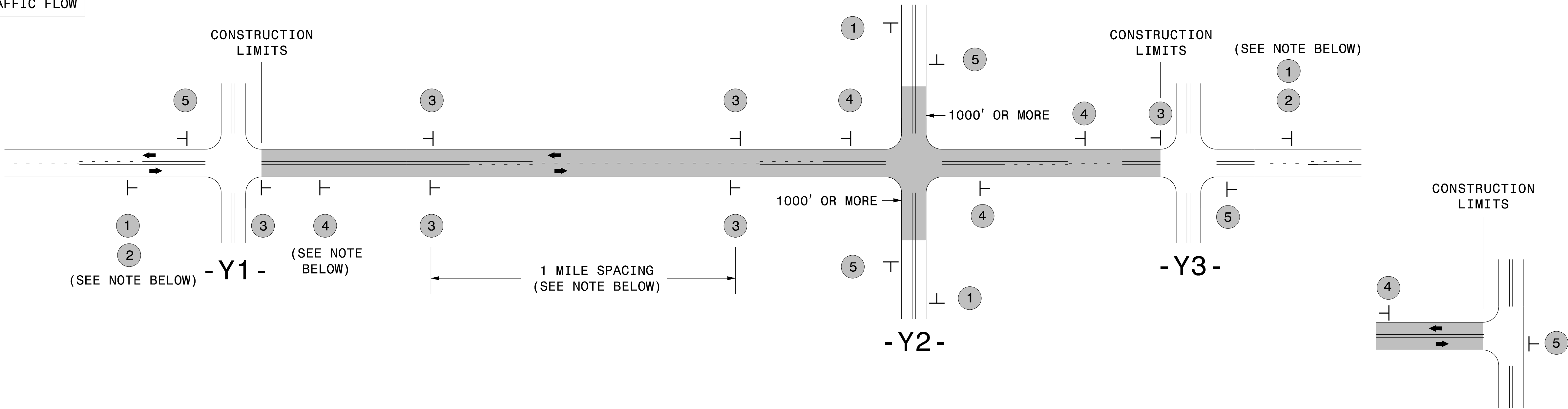
PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	LANE TYPE	LENGTH	WIDTH	4413000000-E WORK ZONE ADV/GEN WARNING SIGNS	4457000000-N TEMPORARY TRAFFIC CONTROL	4510000000-N LAW ENFORCEMEN T	4685000000-E 4" X 90 M WHITE THERMO	4" X 90M YELLOW THERMO	4695000000-E 8" X 90 M WHITE THERMO	4709000000-E 24" X 90 M WHITE THERMO	4725000000-E THERMO RT ARROW 90 M	THERMO LT ARROW 90 M	4810000000-E 4" WHITE PAINT	4" YELLOW PAINT	4835000000-E 24" WHITE PAINT	4845000000-N PAINT LT ARROW	4892000000-N THERMO 24"X36" YIELD LINE SYMBOL 90 M	4905000000-N SNOW PLOWABLE MARKERS
								MI	FT	SF	LS	HR	LF	LF	LF	LF	EA	EA	LF	LF	LF	EA	EA	EA
2023CPT.12.12.20361	Gaston	1	SR-1108 (CRAWFORD RD.)	US-321 TO S.C. STATE LINE	1	2	2WU	2.53	VAR. 20-22	244		25				25			54,235	54,235				
2023CPT.12.12.20361	Gaston	2	SR-1307 (ALABAMA AVE.)	SR-1302 TO GEORGIA AVE.	1 3 4 5	2	2WU	0.44 0.23 0.27 0.09	VAR. 24-26 VAR. 22-27 VAR. 30-31 28	164		25	6,336	10,877	160	12								70
2023CPT.12.12.20361	Gaston	3	SR-1417 (SELLERSTOWN RD)	NC-274 TO CLEVELAND CO. LINE	2	2	2WU	1.5	VAR. 18-20	116								32,280	19,800					
2023CPT.12.12.20361	Gaston	4	SR-2416 (ROBINSON RD.)	NC-274 TO US 321	1 3	2	2WU	3.54 0.05	VAR. 22-37 VAR. 37-60	324		40	38,629	33,694		55	4	3			55	7		231
2023CPT.12.12.20361	Gaston	5	SR-2423 (BUD WILSON / SPARROW DAIRY RD.)	NC-274 TO SR-2416	1	2	2WU	3.71	20	180		15				20			79,531	79,531			3	
TOTAL FOR PROJ NO. 2023CPT.12.12.20361								12.36		1,028	1	105	44,965	44,571	160	112	4	3	166,046	153,566	55	7	3	301
													89,536				7		319,612					

SIGNING FOR RESURFACING PROJECTS

LEGEND

STATIONARY SIGN

DIRECTION OF TRAFFIC FLOW



TEE INTERSECTION

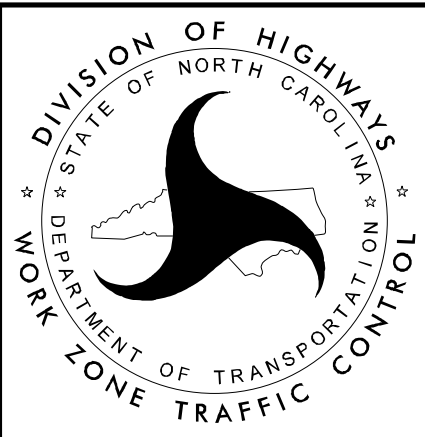
MAINLINE (-L-) SIGNING

-Y- LINE SIGNING

SIGNING NOTES AND PLACEMENT PER DIRECTION	<div><div>1</div><div><div>ROAD WORK AHEAD</div><div>W20-1 48" X 48"</div><div><div>NEXT XX MILES</div><div>W7-3aP 24" X 18"</div></div></div><div>PLACE 1000' PRIOR TO BEGINNING OF CONSTRUCTION LIMITS. ONLY USED ON -Y- LINES IF RESURFACING LIMITS EXTEND 1000' ALONG -Y- LINE.</div><div>#2 SIGN ONLY USED WHEN CONSTRUCTION LIMITS ARE 2 OR MORE MILES IN LENGTH. ROUND UP TO NEXT WHOLE NUMBER.(NO FRACTIONAL OR DECIMAL NUMBERS)</div></div>	NO REQUIRED STATIONARY SIGNING FOR THE FOLLOWING -Y- LINE CONDITIONS: 1) LESS THAN 1000' OF RESURFACING ALONG -Y- LINE 2) SUBDIVISION ROADS 3) DEAD END ROADS WHEN PAVING/CONSTRUCTION ACTIVITIES PROCEED ACROSS AN UNSIGNED -Y- LINE, PORTABLE ADVANCE WARNING SIGNS SHALL BE USED ALONG THE -Y- LINE AS SHOWN BELOW. REMOVE UPON COMPLETION OF WORK.
	<div><div>3</div><div><div>LOW/SOFT SHOULDER</div><div>SP 13107 48" X 48"</div></div><div>- PLACE INITIALLY AT THE CONSTRUCTION LIMITS AND SPACE 1 MILE APART THEREAFTER. - AT TEE INTERSECTIONS INSTALL INITIALLY 1/2 MILE FROM INTERSECTION AND SPACE 1 MILE APART THEREAFTER.</div></div>	
	<div><div>4</div><div><div>ROAD UNDER CONST</div><div>SP 13106 48" X 48"</div></div><div>- 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.</div></div>	
	<div><div>5</div><div><div>END ROAD WORK</div><div>G20-2 A 48" X 24"</div></div><div>PLACE 500' FOLLOWING THE END OF CONSTRUCTION LIMITS OR AS SHOWN WHEN WORK ENDS AT A 3-WAY TEE INTERSECTION.</div></div>	
	THE ABOVE SIGNS ARE ALL THAT ARE REQUIRED FOR A CONTRACTOR TO BEGIN A RESURFACING CONTRACT. ANY ADDITIONAL SIGNS REQUESTED BY NCDOT DIVISIONS SHALL BE INSTALLED WITHIN 7 BUSINESS DAYS OF THE START OF CONTRACT WORK.	
LESS 2 MILES	FOR RESURFACING MAPS WITH CONSTRUCTION LIMITS LESS THAN 2 MILES IN LENGTH, NO STATIONARY SIGNS ARE REQUIRED. USE PORTABLE "ROAD UNDER CONSTRUCTION" OR "ROAD WORK AHEAD" SIGNS IN LIEU OF STATIONARY ADVANCE WARNINGS SIGNS.	

DIVISION OF HIGHWAYS
* * * * *
OFFICE OF NORTH CAROLINA
* * * * *
DEPARTMENT OF TRANSPORTATION
* * * * *
WORK ZONE * * * * * TRAFFIC CONTROL

AD



ADVANCE WARNING SIGNS
FOR
RURAL AND SUBURBAN
2-LANE ROADWAY
RESURFACING