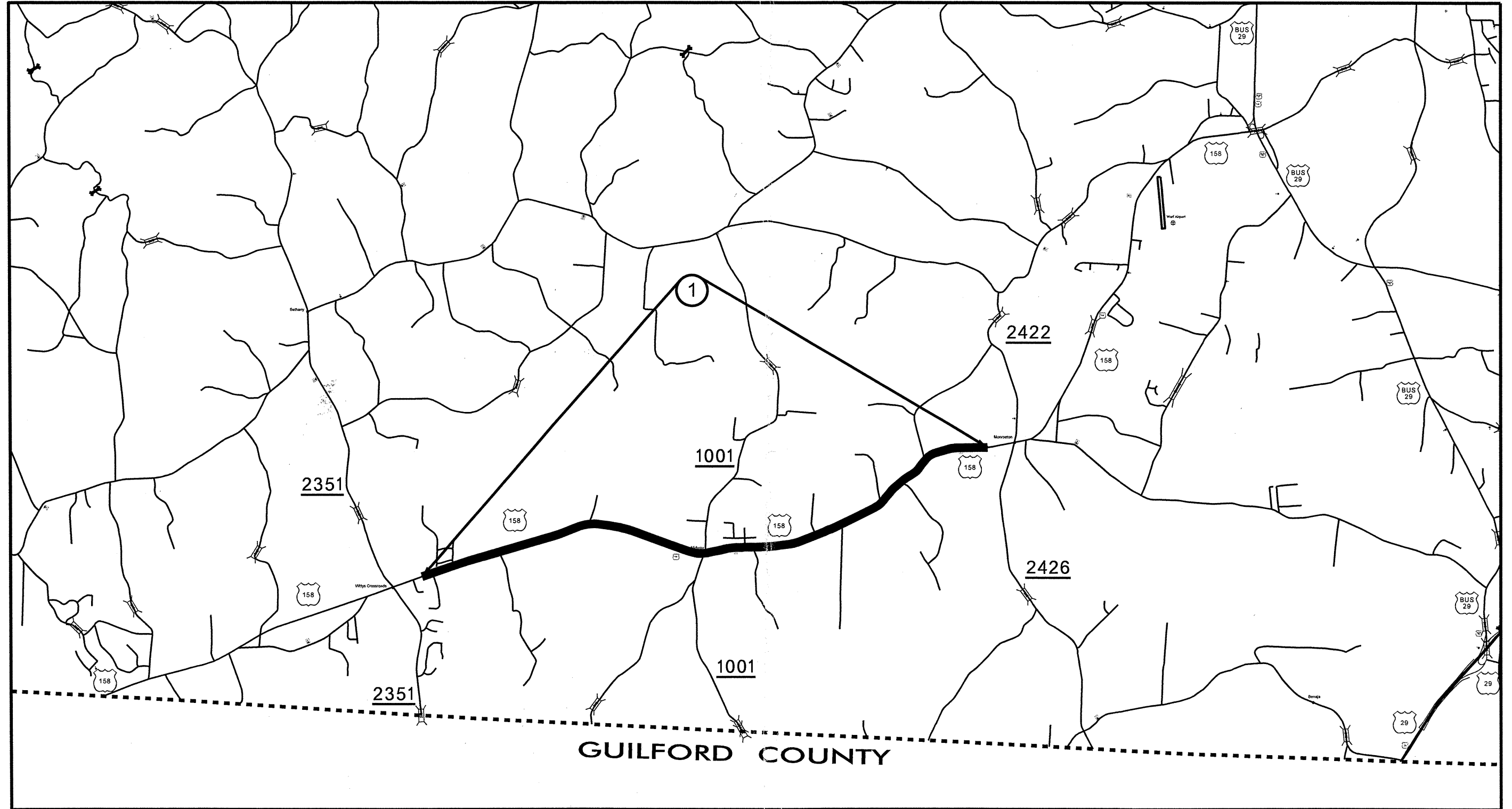


2013 ROCKINGHAM COUNTY

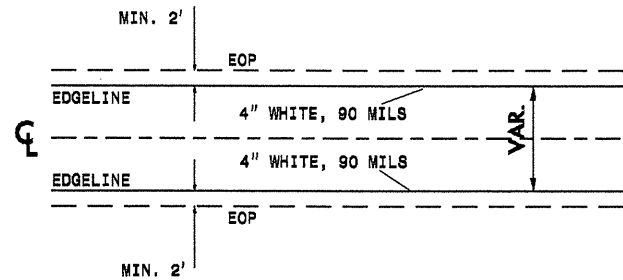
STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	7CR.10791.50	1	
F.A. PROJ. NO.			



\$\$\$\$\$SYTIME\$\$\$\$\$
\$\$\$\$\$DDCN\$\$\$\$\$
\$\$\$\$\$SERNAME\$\$\$\$\$
\$\$\$\$\$

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	7CR.10791.50	3	

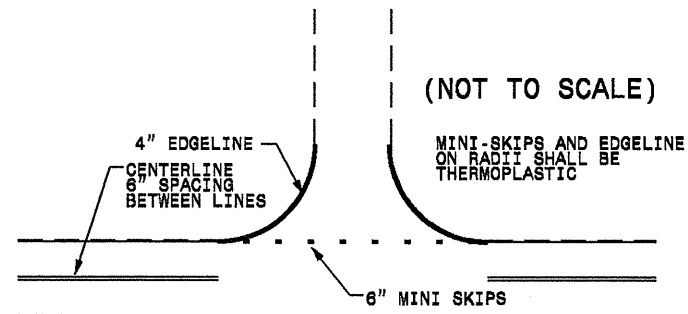
STRIPING DETAIL 1 GENERAL STRIPING DETAIL FOR 2' PAVED SHOULDERS



NOTE:

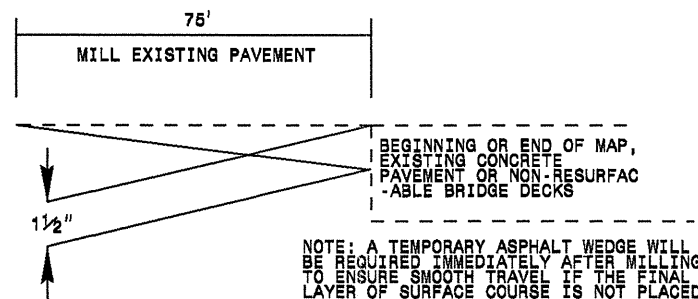
1. TO BE USED IN CONJUNCTION WITH MAP 1.
2. USE IN CONJUNCTION WITH THE EXISTING PAVEMENT MARKINGS TO ESTABLISH THE STRIPING.
3. USE IN CONJUNCTION WITH THE NCDOT STANDARD DRAWINGS.

TO BE USED AT ALL NON-SIGNALIZED INTERSECTIONS



NOTE: MINI SKIPS SHALL BE PLACED ON A 8' CYCLE, CONTAINING AN 6' AND 2' SKIP, THE WIDTH OF THE SKIP SHALL BE 6".

INCIDENTAL MILLING DETAIL

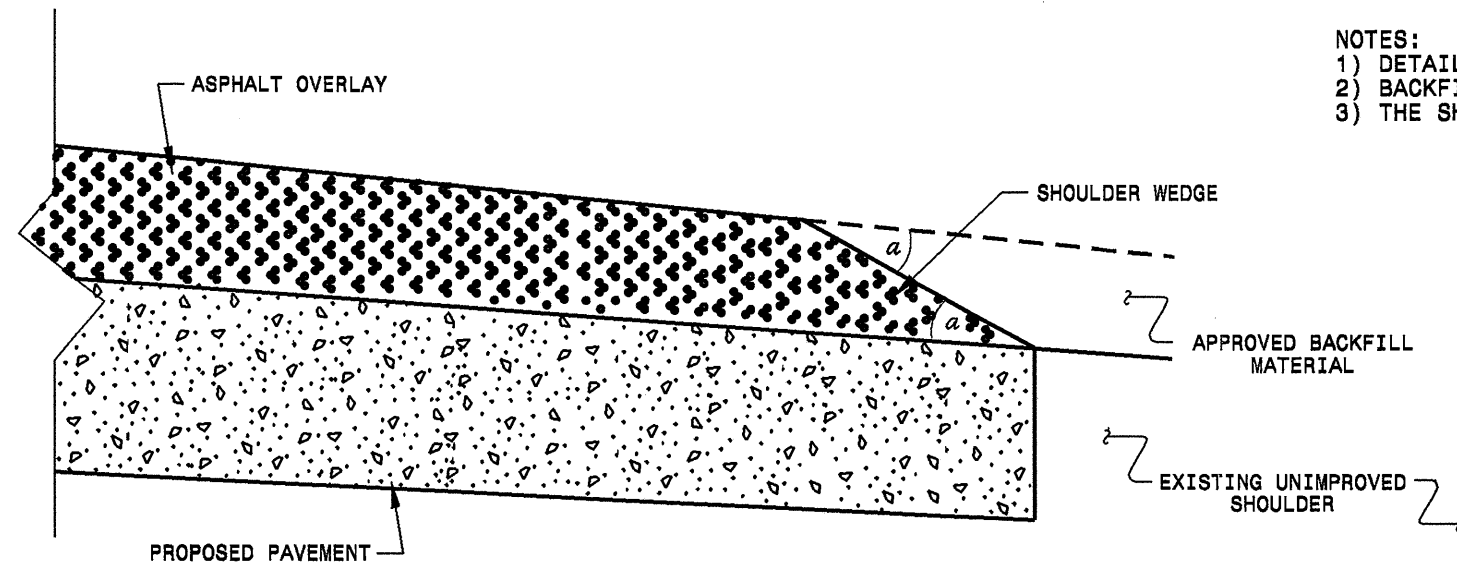


NOTE: A TEMPORARY ASPHALT WEDGE WILL BE REQUIRED IMMEDIATELY AFTER MILLING TO ENSURE SMOOTH TRAVEL IF THE FINAL LAYER OF SURFACE COURSE IS NOT PLACED PRIOR TO OPENING THE LANE TO TRAFFIC.

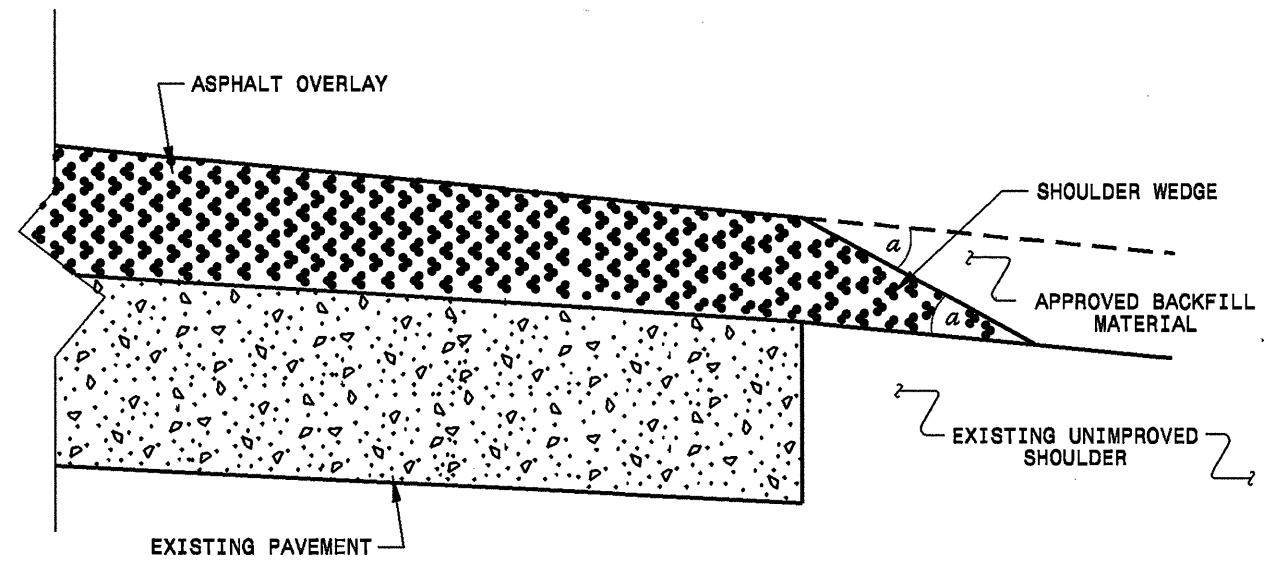
PAVEMENT SCHEDULE

C	PROP. APPROX. 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
E	PROP. APPROX. 8" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD. IN EACH OF TWO LAYERS
F	AST MAT COAT #67 STONE
T	SHOULDER RECONSTRUCTION, AS DIRECTED BY THE ENGINEER.
U	EXISTING PAVEMENT.

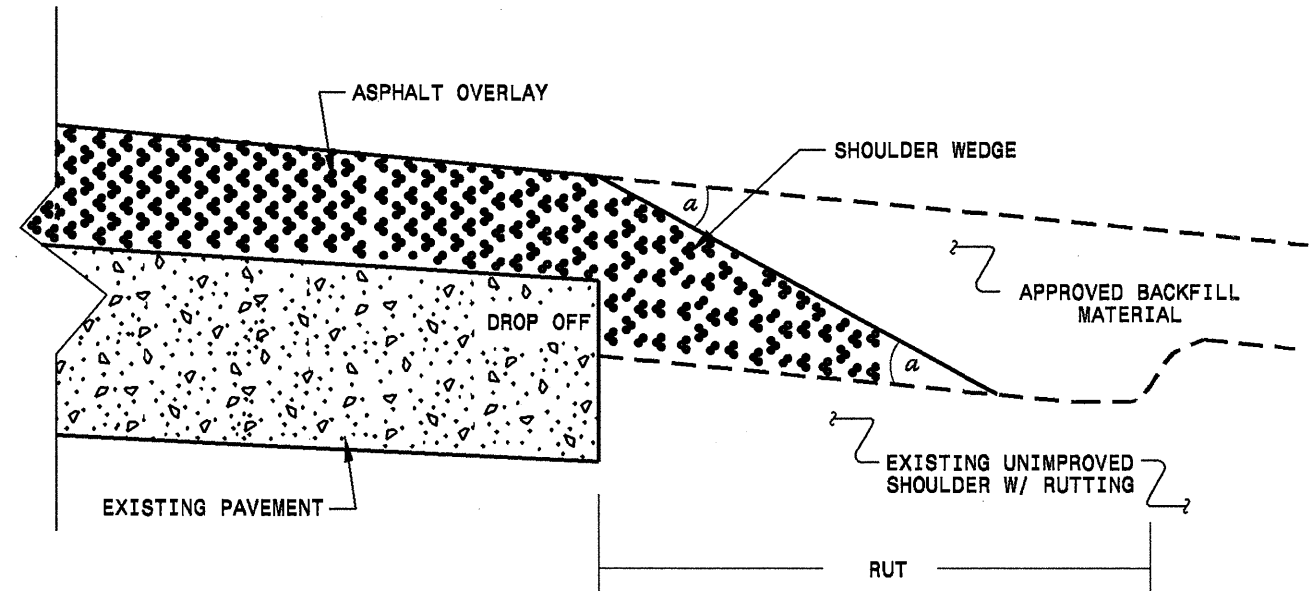
- NOTES:
- 1) DETAIL DOES NOT APPLY TO OGAFD AND ULTRA-THIN BONDED WEARING COURSE.
 - 2) BACKFILL SHOULDER WITH APPROVED MATERIAL.
 - 3) THE SHOULDER WEDGE DEVICE MAY BE DISENGAGED AT PAVED DRIVEWAYS AND SIDE STREETS.



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
SHOULDER WEDGE DETAILS	
ORIGINAL BY: T.SPILL	DATE: 7-19-11
MODIFIED BY:	DATE: 10/18/12
CHECKED BY:	DATE:
FILE SPEC.: s:\usr\details\stand\shoulderwedge\std1.dgn	

05-APR-2013 09:43
 C:\Users\jporter\Documents\misc\REVISED Shoulder Wedge Detail.dgn
 jporter AT CS20261858

PROJECT NO.	SHEET NO.	TOTAL NO.
7CR.10791.50	5	

SUMMARY OF QUANTITIES

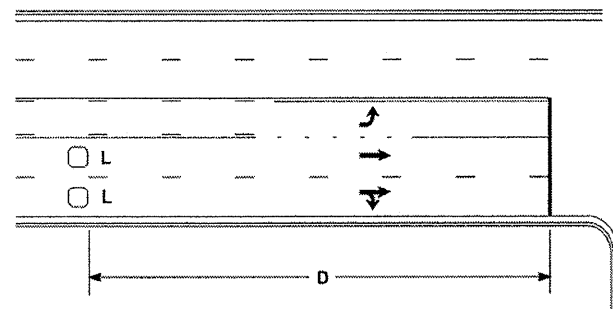
PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP	LANES	FINAL SURFACE TESTING REQUIRED	WARM MIX ASPHALT REQUIRED	LENGTH MI	WIDTH FT	BORROW EXCAVATION CY	INCIDENTAL STONE BASE TONS	SHOULDER RECONSTRUCTION SMI	INCIDENTAL MILLING SY	ASPHALT CONC BASE COURSE, TYPE B25.0B TONS	ASPHALT CONC SURFACE COURSE, TYPE S9.5B TONS	ASPHALT BINDER FOR PLANT MIX TONS	ASPHALT SURFACE TREATMENT, MAT COAT, #67 STONE SY	ADJ. OF MANHOLES EA	SEEDING & MULCHING AC	RESIDENTIAL SEEDING ACR	TRENCHING (UNPAVED) (1) (2") LF	JUNCTION BOX (STANDARD SIZE) EA	2" RISER WITH WEATHER-HEAD EA	INDUCTIVE LOOP SAW CUT LF	LEAD-IN CABLE (14-2) LF				
7CR.10791.50	Rockingham	1	US 158	FROM JOINT 750' EAST OF SR 2351 (WHITTY ROAD) - 3.31 TO JOINT 630' WEST OF SR 2426 (CUNNINGHAM MILL ROAD) - 9.62	1	2	NO	NO	0.386	24	100	290	12.63	200	482	557	55	5,435		2.3	2.3									
					1	2	NO	NO	0.046	24-36								57	77	7	810									
					1	2	NO	NO	0.058	36									72	115	10	1,225								
					1	2	NO	NO	0.027	47									34	78	6	744								
					1	2	NO	NO	0.044	24-47									55	87	8	929								
					1	2	NO	NO	1.157	24									1,444	1,661	163	16,291	1							
					1	2	NO	NO	0.305	26									381	465	45	4,652								
					1	2	NO	NO	0.844	24									1,054	1,175	117	11,884								
					1	2	NO	NO	0.138	24-40									172	246	22	2,591								
					1	2	NO	NO	0.104	40									130	347	27	2,441				1,800	12	2	1,000	2,000
					1	2	NO	NO	0.187	24-40									233	334	30	3,511								
					1	2	NO	NO	1.705	24									2,129	2,424	239	24,006								
					1	2	NO	NO	0.123	26									154	183	18	1,876								
					1	2	NO	NO	0.205	24									256	296	29	2,886								
					1	2	NO	NO	0.085	26									106	126	12	1,297								
					1	2	NO	NO	0.127	24									159	217	20	1,788								
					1	2	NO	NO	0.143	26									179	213	21	2,181								
					1	2	NO	NO	0.104	24									130	145	14	1,464								
					1	2	NO	NO	0.061	26									76	91	9	930								
					1	2	NO	NO	0.463	24								200	578	644	64	6,519								
GRAND TOTAL FOR PROJ NO. 7CR.10791.50									6.312		100	290	12.63	400	7,881	9,481	916	93,460	1	2.3	2.3	1,800	12	2	1,000	2,000				

THERMOPLASTIC AND PAINT QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP	LANES	LENGTH	WIDTH	4685000000-E	4686000000-E	4690000000-E	4695000000-E	4710000000-E	4721000000-E			4725000000-E			4905000000-N	
									4" X 90 M WHITE THERMO LF	4" X 120 M WHITE THERMO LF	4" X 120 M YELLOW THERMO LF	6" X 120 M WHITE THERMO LF	8" X 90 M YELLOW THERMO LF	24" X 120 M WHITE THERMO LF	THERMO MSG SIGNAL 120 M EA	THERMO MSG AHEAD 120 M EA	THERMO LT ARROW 90 M EA	THERMO RT ARROW 90 M EA	THERMO STR & RT ARROW 90 M EA	SNOWPLOWABLE PAVEMENT MARKERS EA	
7CR.10791.50	Rockingham	1	US 158	FROM JOINT 750' EAST OF SR 2351 (WHITTY ROAD) - 3.31 TO JOINT 630' WEST OF SR 2426 (CUNNINGHAM MILL ROAD) - 9.62	1	2	0.386	24	66,670	588	58,521	278	464	104	12	10	4	1	3	550	
GRAND TOTAL FOR PROJ NO. 7CR.10791.50									0.386	66,670	588	58,521	278	464	104	12	10	4	1	3	550
										59,109					22		8				

High Speed Detection

[≥40 mph (64 km/hr)]

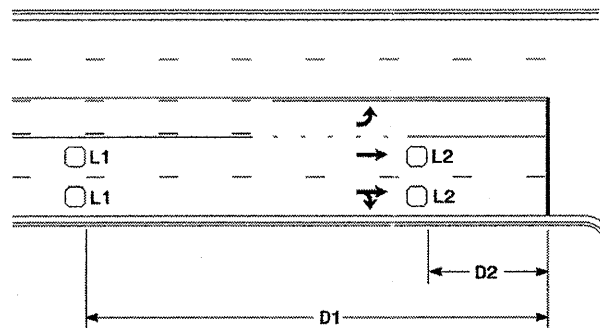


Speed Limit mph (km/hr)	D ft (m)
40 (64)	250 (75)
45 (72)	300 (90)
50 (80)	355 (110)
55 (88)	420 (130)

L = 6ft X 6ft (1.8m X 1.8m)
Wired in series for TS1
Controllers
Wired separately for TS2,
170, and 2070L Controllers

Volume Density Operation

OR



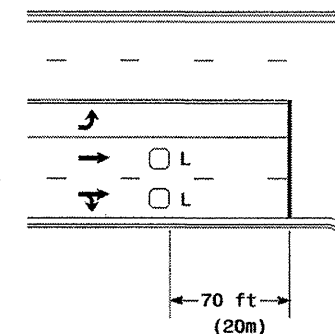
Speed Limit mph (km/hr)	D1 ft (m)	D2 ft (m)
40 (64)	250 (75)	80 (25)
45 (72)	300 (90)	90 (27)
50 (80)	355 (110)	100 (30)
55 (88)	420 (130)	110 (35)

L1 = 6ft X 6ft
(1.8m X 1.8m)
Wired in series
L2 = 6ft X 6ft
(1.8m X 1.8m)
Wired in series

"Stretch" Operation

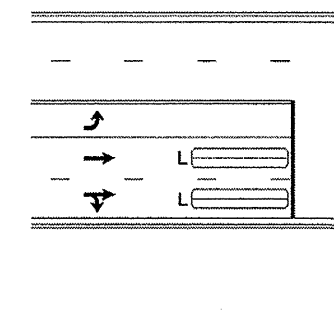
Low Speed Detection

[≤35 mph (56 km/hr)]



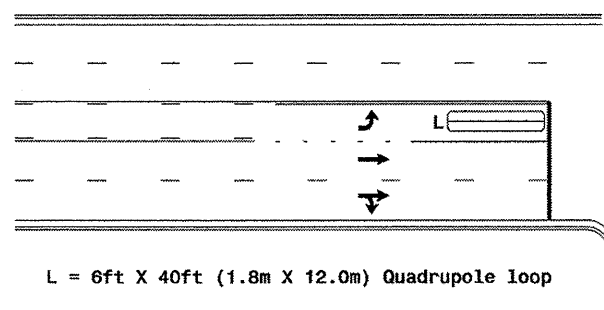
L = 6ft X 6ft (1.8m X 1.8m)
Wired in series

OR



L = 6ft X 40ft (1.8m X 12.0m)
Quadrupole loop, wired separately

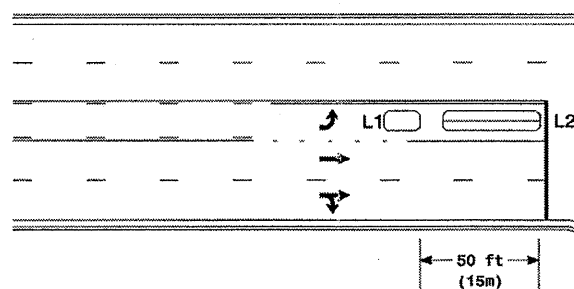
Left Turn Lane Detection



L = 6ft X 40ft (1.8m X 12.0m) Quadrupole loop

Presence Loop Detection

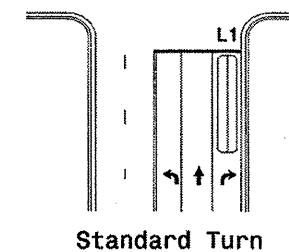
OR



L1 = 6ft X 15ft (1.8m X 4.6m) Queue detector
L2 = 6ft X 40ft (1.8m X 12.0m) Quadrupole loop

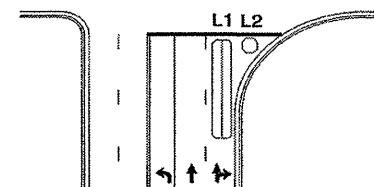
Queue Loop Detection

Right Turn Lane Detection

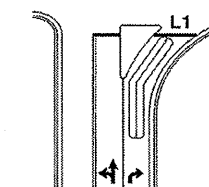


Standard Turn

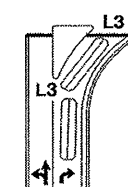
L1 = 6ft X 40ft (1.8m X 12.0m) Quadrupole loop
L2 = 6ft X 6ft (1.8m X 1.8m) [Minimum] Presence loop
Wired separately
L3 = 6ft X 20ft (1.8m X 6.0m) Quadrupole loop
Wired in series



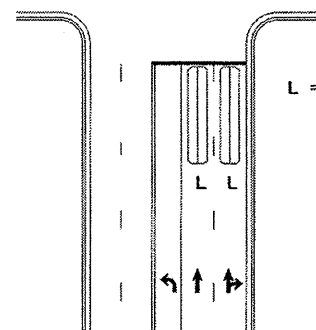
Wide Radius Turn



Channelized Turn



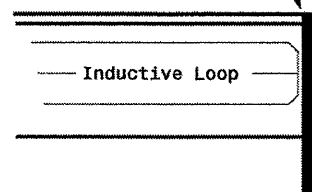
Side Street Detection



L = 6ft X 40ft (1.8m X 12.0m)
Quadrupole loop
Wired to separate
detectors/channels

Presence Loop Placement at Stop Lines

Locate loop slightly
behind leading
edge of stop line



Note:
Loop may be located in advance
of stop line when stop line is
greater than 15' (4.5m) from edge
of intersecting roadway; or, when
loop detects a permissive or
protected/permissive left turn.

Recommended Number of Turns

Single 6' X 6' (1.8m X 1.8m)
loop (wired separately):

Length of Lead-in ft (m)	Number of Turns
< 250 (75)	3
250-375 (75-115)	4
375-525 (115-160)	5
> 525 (160)	6

Quadrupole loops: Use 2-4-2 turns

6' X 15' (1.8m X 4.6m) Loops:

Lead-in < 150' (45 m), use 2 turns

Lead-in > 150' (45 m), use 3 turns

	<p>Typical Loop Locations</p>	
	<p>PLAN DATE: June 2006</p> <p>PREPARED BY: P. L. Alexander</p>	<p>REVIEWED BY:</p> <p>REVISIONS</p> <p>SCALE: N/A</p>
<p>122 N. McDowell St., Raleigh, NC 27603</p>	<p>DATE: 12/1/06</p>	<p>SIGNATURE: [Signature]</p> <p>DATE: [Date]</p> <p>SIG. INVENTORY NO.</p>