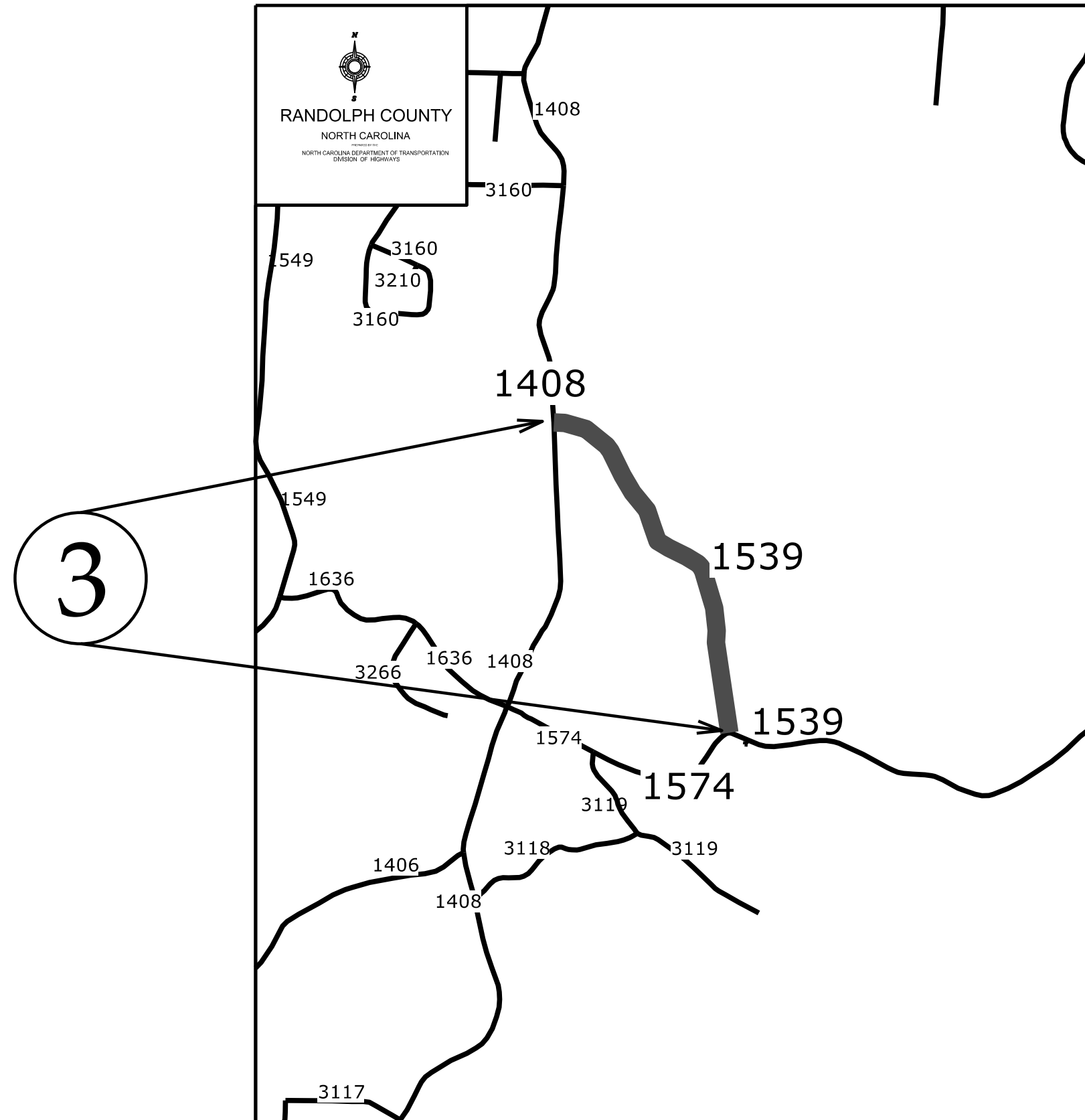






# Map 3

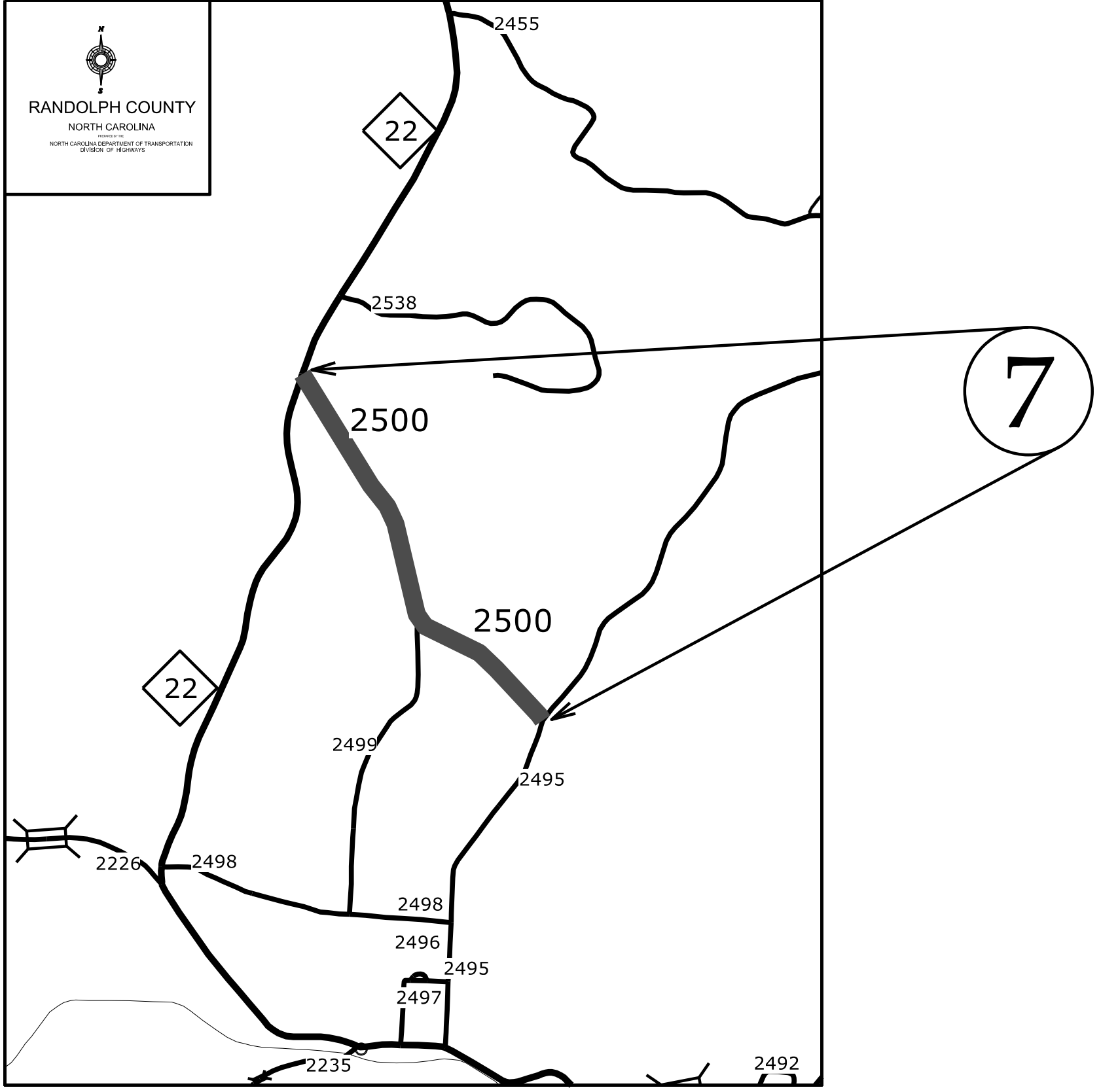








# Map 7



\$\$\$\$\$SYTIME\$\$\$\$\$  
\$\$\$\$\$DATE\$\$\$\$\$  
\$\$\$\$\$DRAWN BY\$\$\$\$\$  
\$\$\$\$\$CHECKED BY\$\$\$\$\$  
\$\$\$\$\$DATE\$\$\$\$\$  
\$\$\$\$\$DRAWN BY\$\$\$\$\$  
\$\$\$\$\$CHECKED BY\$\$\$\$\$  
\$\$\$\$\$DATE\$\$\$\$\$







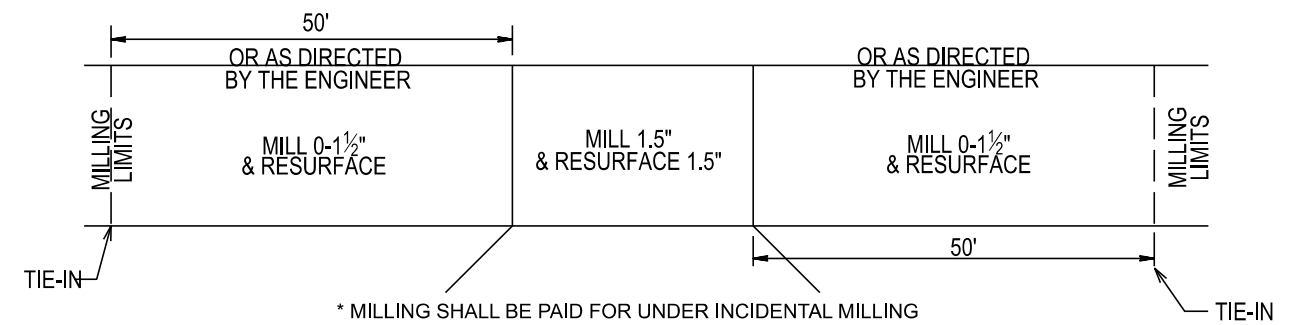
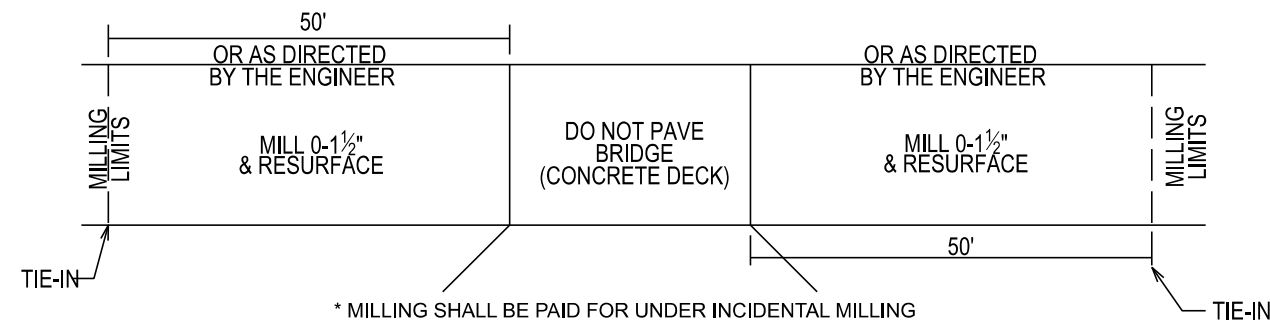








# BRIDGE DETAILS



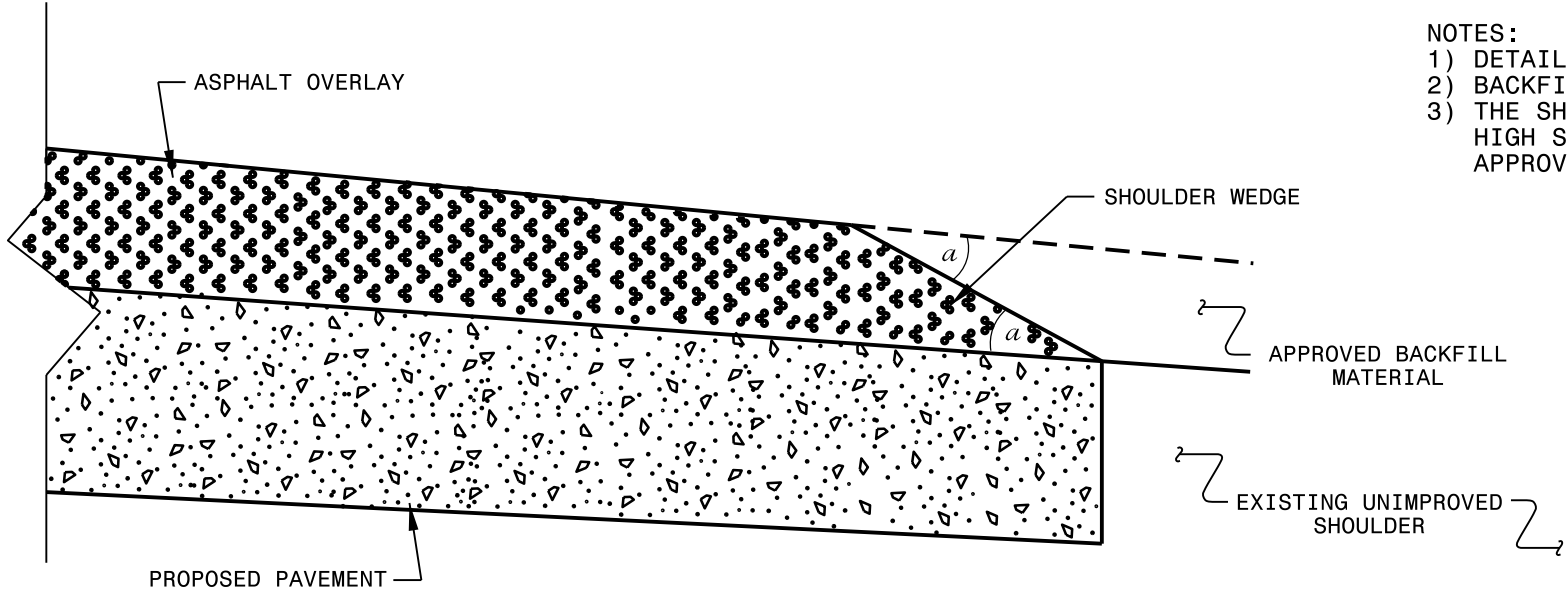
NOTE: DO NOT FILL IN DRAIN HOLES DURING RESURFACING.

**DRAWING FOR MAPS:**  
MAP 1 - SR1401 - BRIDGE #0057  
MAP 5 - SR 1524 - BRIDGE #0078  
MAP 10 - SR 2235 - BRIDGE #0406

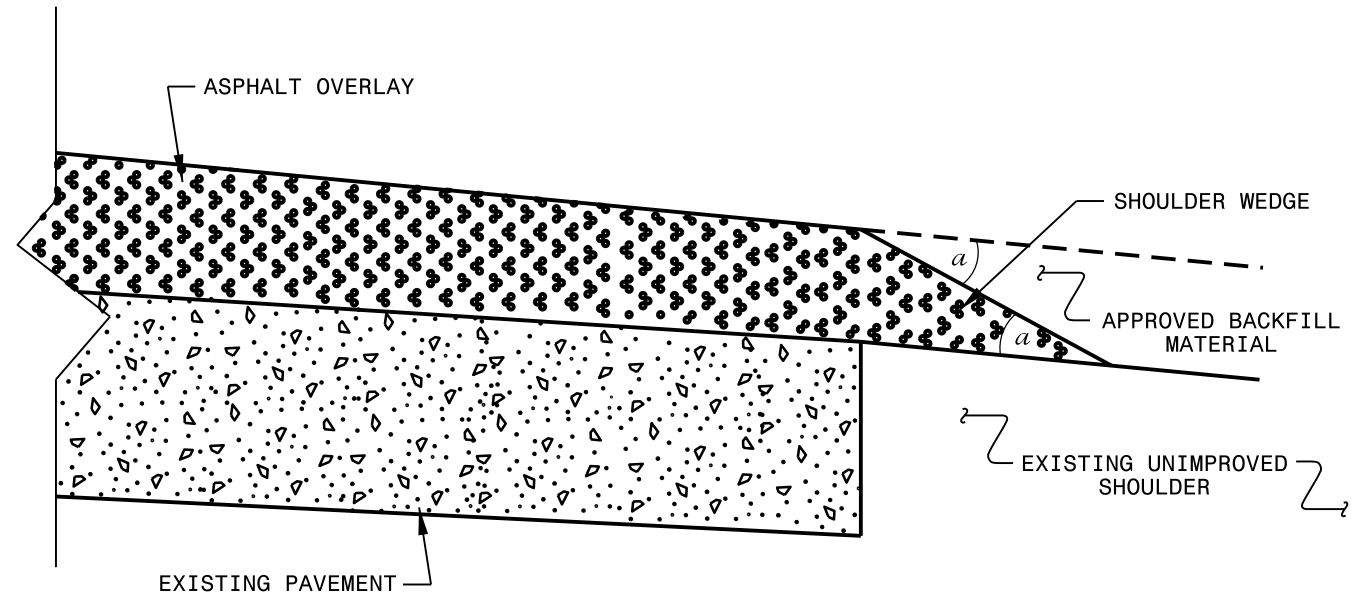
**DRAWING FOR MAPS:**  
MAP 1 - SR 1401 BRIDGE #0056

\$\$\$\$\$SYTIME\$\$\$\$\$  
\$\$\$\$\$USERNAME\$\$\$\$\$

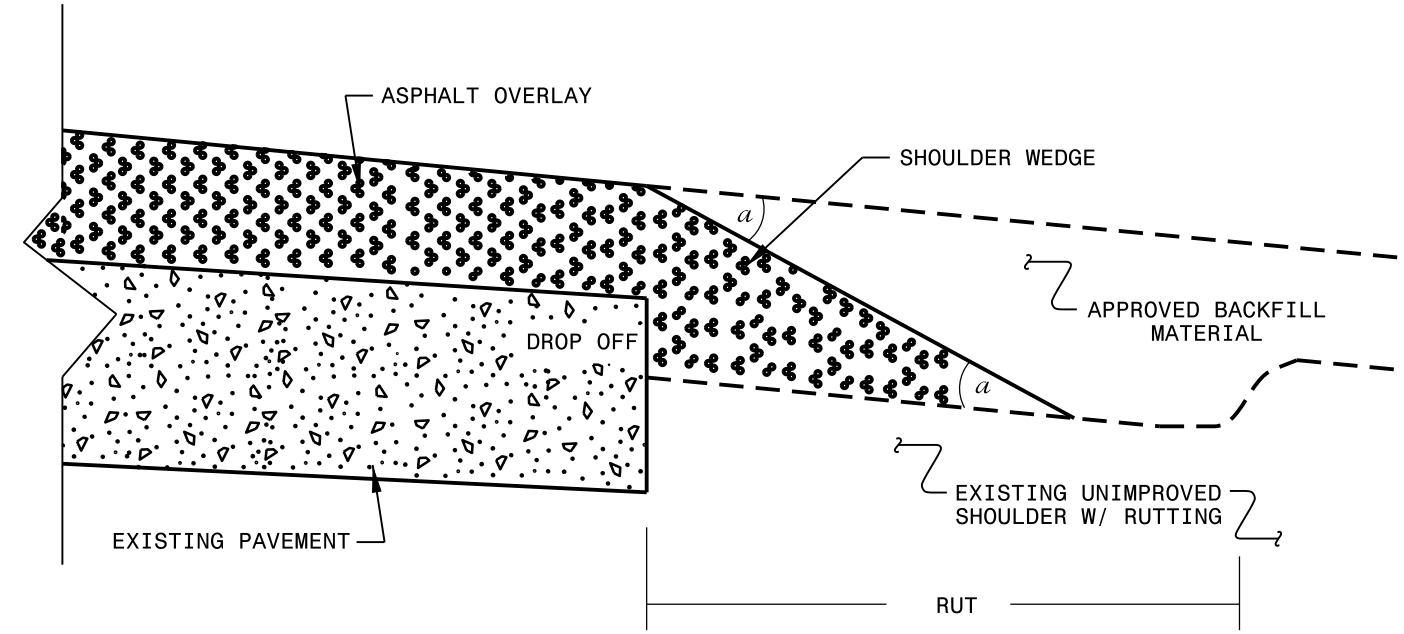
- NOTES:
- 1) DETAIL DOES NOT APPLY TO OGAFB AND ULTRA-THIN BONDED WEARING COURSE.
  - 2) BACKFILL SHOULDER WITH APPROVED MATERIAL.
  - 3) THE SHOULDER WEDGE DEVICE MAY BE DISENGAGED AT PAVED DRIVEWAYS, SIDE STREETS, HIGH SHOULDERS, AND OTHER LOCATIONS NOT FEASIBLE TO CONSTRUCT AS APPROVED BY THE ENGINEER.



**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°

\$\$\$\$SYTIME\$\$\$\$  
 \$\$\$USERNAME\$\$\$

<b>CONTRACT STANDARDS AND DEVELOPMENT UNIT</b>	
Office 919-707-6950 FAX 919-250-4119	
<b>SHOULDER WEDGE DETAILS</b>	
ORIGINAL BY: T.SPELL	DATE: 7-19-11
MODIFIED BY:	DATE: 2/2/16
CHECKED BY:	DATE:
FILE SPEC.: s:\usr\detatl1\stand\shoulderwedgedetatl1.dgn	

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED



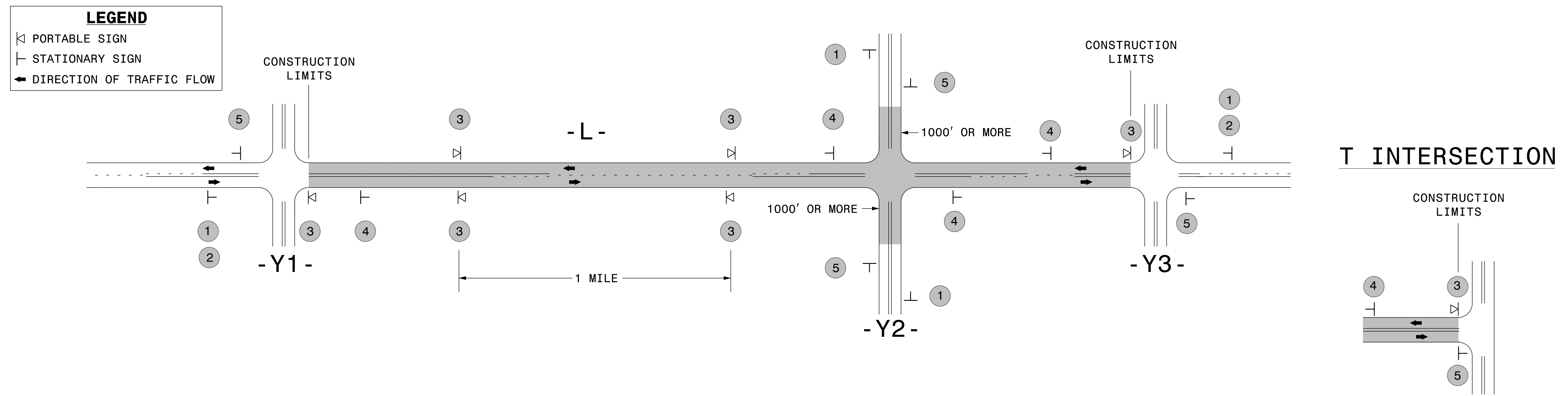
PROJECT NO.	SHEET NO.	TOTAL NO.
26CPT.08.17.20761, 52073.08.301	18	

### SUMMARY OF QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	LANE TYPE	LENGTH	WIDTH	BEGIN MP	END MP	122000000-E	124500000-E	126000000-E	129700000-E	133000000-E	151900000-E	157500000-E	170400000-E	177500000-E	183800000-E	183850000-N	214300000-E	283000000-N	284500000-N	744400000-E		
												INCIDENTAL STONE BASE	SHOULDER RECONSTRUCTION	AGGREGATE SHOULDER BORROW	1.5" MILLING	INCIDENTAL MILLING	SURFACE COURSE, S9.5B	ASPHALT BINDER FOR PLANT MIX	PATCHING EXISTING PAVEMENT	ASPHALT SURFACE TREATMENT, MATCOAT, #*** STONE	EMULSION FOR ASPHALT SURFACE TREATMENT	VACUUM TRUCK	BLOTTING SAND	ADJUST MANHOLES	ADJUST METER OR VALVE BOX	INDUCTIVE LOOP SAWCUT		
								MI	FT			TONS	SMI	TON	SY	SY	TONS	TONS	TONS	SY	GAL	WK	TON	EA	EA	LF		
2026CPT.08.17.20761	Randolph	1	SR-1401 / KENNEDY FARM RD N	FROM DAVIDSON COUNTY LINE TO US 64	1	2	2WU	4.160	21	0.000	4.160	20	8.32	1,169.00		1,800	4,791	329	363	56,377.20	22,550	3.00	10					
<b>TOTAL FOR MAP NO. 1</b>								<b>4.160</b>				<b>20</b>	<b>8.32</b>	<b>1,169.00</b>		<b>1,800</b>	<b>4,791</b>	<b>329</b>	<b>363</b>	<b>56,377.20</b>	<b>22,550</b>	<b>3.00</b>	<b>10</b>					
2026CPT.08.17.20761	Randolph	2	SR-1400 / OLD POST OFFICE RD	FROM SR 1401 (KENNEDY FARM RD N) TO SR 1404 (FULLER MILL RD N)	1	2	2WU	0.940	20	1.120	2.060	10	1.88	264.00		260	1,041	89	448	11,031.00	4,411	1.00	10					
<b>TOTAL FOR MAP NO. 2</b>								<b>0.940</b>				<b>10</b>	<b>1.88</b>	<b>264.00</b>		<b>260</b>	<b>1,041</b>	<b>89</b>	<b>448</b>	<b>11,031.00</b>	<b>4,411</b>	<b>1.00</b>	<b>10</b>					
2026CPT.08.17.20761	Randolph	3	SR-1539 / JORDAN VALLEY RD	FROM SR 1574 (SLICK ROCK MTN) TO SR 1408 (HOOVER HILL RD)	1	2	2WU	1.110	18	2.720	3.830	15	2.22	312.00		260	1,104	87	309	11,722.00	4,688	1.00	10					
<b>TOTAL FOR MAP NO. 3</b>								<b>1.110</b>				<b>15</b>	<b>2.22</b>	<b>312.00</b>		<b>260</b>	<b>1,104</b>	<b>87</b>	<b>309</b>	<b>11,722.00</b>	<b>4,688</b>	<b>1.00</b>	<b>10</b>					
2026CPT.08.17.20761	Randolph	4	SR-1595 / SURRETT DR	FROM NC HWY 62 TO GUILFORD COUNTY LINE	2	2	2WU	2.760	40	0.000	2.760	10	5.52	775.00	64,768	5,700	4,959	343	423					2	2	1,500		
<b>TOTAL FOR MAP NO. 4</b>								<b>2.760</b>				<b>10</b>	<b>5.52</b>	<b>775.00</b>	<b>64,768</b>	<b>5,700</b>	<b>4,959</b>	<b>343</b>	<b>423</b>							<b>2</b>	<b>2</b>	<b>1,500</b>
2026CPT.08.17.20761	Randolph	5	SR-1524 / BECKERDITE RD	FROM US HWY 311 TO SR 1525 (BEESON FARM RD.)	1	2	2WU	4.950	20	0.000	4.950	10	9.90	1,390.00		1,530	5,799	377		63,888.00	25,556	3.00	10					
<b>TOTAL FOR MAP NO. 5</b>								<b>4.950</b>				<b>10</b>	<b>9.90</b>	<b>1,390.00</b>		<b>1,530</b>	<b>5,799</b>	<b>377</b>			<b>63,888.00</b>	<b>25,556</b>	<b>3.00</b>	<b>10</b>				
2026CPT.08.17.20761	Randolph	6	SR-2138 / MACK LINEBERRY RD	FROM NC HWY 22 N TO SR 2122 (MILLBORO RD.)	1	2	2WU	4.600	24	0.000	4.600	10	1.32	1,292.00		2,065	6,286	419	212	73,700.00	29,480	4.00	10					
<b>TOTAL FOR MAP NO. 6</b>								<b>4.600</b>				<b>10</b>	<b>1.32</b>	<b>1,292.00</b>		<b>2,065</b>	<b>6,286</b>	<b>419</b>	<b>212</b>	<b>73,700.00</b>	<b>29,480</b>	<b>4.00</b>	<b>10</b>					
2026CPT.08.17.20761	Randolph	7	SR-2500 / ACADEMY RD EXT	FROM NC HWY 22 N TO: SR 2495 (MULBERRY ACADEMY ST)	1	2	2WU	1.300	18	0.000	1.300	10	3.00	365.00		390	1,306	96	238	15,100.00	6,040	1.00	10					
<b>TOTAL FOR MAP NO. 7</b>								<b>1.300</b>				<b>10</b>	<b>3.00</b>	<b>365.00</b>		<b>390</b>	<b>1,306</b>	<b>96</b>	<b>238</b>	<b>15,100.00</b>	<b>6,040</b>	<b>1.00</b>	<b>10</b>					
2026CPT.08.17.20761	Randolph	8	SR-1007 / RANDLEMAN RD	FROM US 220 BUS TO GUILFORD COUNTY LINE	1	2	2WU	1.580	24	0.000	1.580	10	3.16	450.00		1,100	2,272	155	150	26,320.00	10,530	1.00	10					
<b>TOTAL FOR MAP NO. 8</b>								<b>1.580</b>				<b>10</b>	<b>3.16</b>	<b>450.00</b>		<b>1,100</b>	<b>2,272</b>	<b>155</b>	<b>150</b>	<b>26,320.00</b>	<b>10,530</b>	<b>1.00</b>	<b>10</b>					
2026CPT.08.17.20761	Randolph	9	SR-1950 / W ACADEMY ST	FROM PAVEMENT JOINT EAST OF TRAFFIC CIRCLE TO US 220 BUS (MAIN STREET)	3,4	2	MU	0.930	51	0.650	1.580				27,826	425	2,416	163	125					10	6	750		
<b>TOTAL FOR MAP NO. 9</b>								<b>0.930</b>								<b>27,826</b>	<b>425</b>	<b>2,416</b>	<b>163</b>	<b>125</b>					<b>10</b>	<b>6</b>	<b>750</b>	
2026CPT.08.17.20761	Randolph	10	SR-2235 / ANDREW HUNTER RD	FROM US64 EAST TO NC22	1	2	2WU	1.790	20	0.000	1.790	10	3.58	510.00		1,320	1,918	132	150	22,125.00	8,850	1.00	10					
<b>TOTAL FOR MAP NO. 10</b>								<b>1.790</b>				<b>10</b>	<b>3.58</b>	<b>510.00</b>		<b>1,320</b>	<b>1,918</b>	<b>132</b>	<b>150</b>	<b>22,125.00</b>	<b>8,850</b>	<b>1.00</b>	<b>10</b>					
2026CPT.08.17.20761	Randolph	11	SR-2456 / WHITES CHAPEL RD	FROM SR 2442 (RAMSUER JULIAN) TO NC HWY 49	1	2	2WU	2.925	20	0.000	2.925	10	5.85	833.00		420	2,992	205	220	34,320.00	13,728	2.00	10					
<b>TOTAL FOR MAP NO. 11</b>								<b>2.925</b>				<b>10</b>	<b>5.85</b>	<b>833.00</b>		<b>420</b>	<b>2,992</b>	<b>205</b>	<b>220</b>	<b>34,320.00</b>	<b>13,728</b>	<b>2.00</b>	<b>10</b>					
<b>TOTAL FOR PROJ NO. 2026CPT.08.17.20761</b>								<b>27.045</b>				<b>115</b>	<b>44.75</b>	<b>7,360.00</b>	<b>92,594</b>	<b>15,270</b>	<b>34,884</b>	<b>2,395</b>	<b>2,638</b>	<b>314,583.20</b>	<b>125,833</b>	<b>17.00</b>	<b>90</b>	<b>12</b>	<b>8</b>	<b>2,250</b>		
52073.08.301	Randolph	12	NC-49	INT. OF NC 49 AND W/E RALEIGH AVE		2		0.010	38	36.280	36.290																	
<b>TOTAL FOR MAP NO. 12</b>								<b>0.010</b>																				
<b>TOTAL FOR PROJ NO. 52073.08.301</b>								<b>0.010</b>																				
<b>GRAND TOTAL</b>								<b>27.055</b>				<b>115</b>	<b>44.75</b>	<b>7,360.00</b>	<b>92,594</b>	<b>15,270</b>	<b>34,884</b>	<b>2,395</b>	<b>2,638</b>	<b>314,583.20</b>	<b>125,833</b>	<b>17.00</b>	<b>90</b>	<b>12</b>	<b>8</b>	<b>2,250</b>		



# SIGNING FOR ASPHALT SURFACE TREATMENT



## MAINLINE (-L-) SIGNING

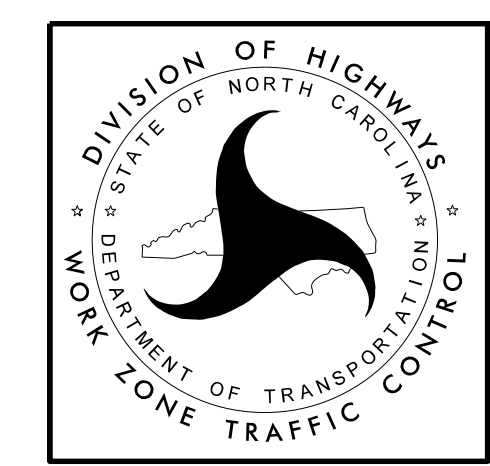
## -Y- LINE SIGNING

SIGNING NOTES AND PLACEMENT PER DIRECTION	 	<ul style="list-style-type: none"> <li>- PLACE 1000' PRIOR TO BEGINNING OF CONSTRUCTION LIMITS.</li> <li>- SIGN 2 MAY BE OMITTED FOR T INTERSECTIONS. FOLLOW T INTERSECTION SIGNING DETAIL ABOVE.</li> <li>- SIGN 2 MAY BE OMITTED WHEN CONSTRUCTION LIMITS ARE LESS THAN 2 MILES IN LENGTH. ROUND UP TO THE NEAREST WHOLE NUMBER. DO NOT USE FRACTIONAL OR DECIMAL NUMBERS.</li> </ul>	<p>NO STATIONARY SIGNING REQUIRED FOR THE FOLLOWING -Y- LINE CONDITIONS:</p> <ol style="list-style-type: none"> <li>1) LESS THAN 1000' OF RESURFACING ALONG -Y- LINE</li> <li>2) SUBDIVISION ROADS</li> <li>3) DEAD END ROADS</li> </ol> <p>SIGNS 1 &amp; 5 ARE REQUIRED FOR -Y- LINES WITH 1000' OR MORE OF RESURFACING OR PAVING</p> <p>WHEN PAVING/CONSTRUCTION ACTIVITIES PROCEED ACROSS AN UNSIGNED -Y- LINE, PORTABLE MOUNTED ADVANCE WARNING SIGNS SHALL BE USED ALONG THE -Y- LINE AS SHOWN BELOW. REMOVE UPON COMPLETION OF WORK.</p> PLACED 500' IN ADVANCE OF FLAGGER	
	<p>ALTERNATE SIGNS</p>   	<ul style="list-style-type: none"> <li>- BEGIN SEQUENCE WITH LOOSE GRAVEL SIGN INSTALLED AT THE CONSTRUCTION LIMITS FOLLOWED BY AN UNMARKED PAVEMENT SIGN INSTALLED A MILE THEREAFTER. REPEAT SEQUENCE THROUGHOUT CONSTRUCTION LIMITS.</li> <li>- PLACE ADDITIONAL PORTABLE MOUNTED LOOSE GRAVEL SIGNS WITHIN 100' OF -Y- LINE APPROACH DURING CURE TIME. REMOVE WHEN PAVEMENT MARKINGS ARE INSTALLED.</li> </ul>		 PLACED 250' IN ADVANCE OF FLAGGER
		<ul style="list-style-type: none"> <li>- INSTALL 500' FROM EACH -Y- LINE APPROACH AS SHOWN ABOVE.</li> <li>- 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.</li> <li>- FOR T INTERSECTIONS, INSTALL WITHIN 500' OF THE INTERSECTION.</li> </ul>		
		<ul style="list-style-type: none"> <li>- PLACE 500' FOLLOWING THE END OF CONSTRUCTION LIMITS OR WITHIN 100' OF T INTERSECTION AS SHOWN IN THE ABOVE DETAIL.</li> </ul>		

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.

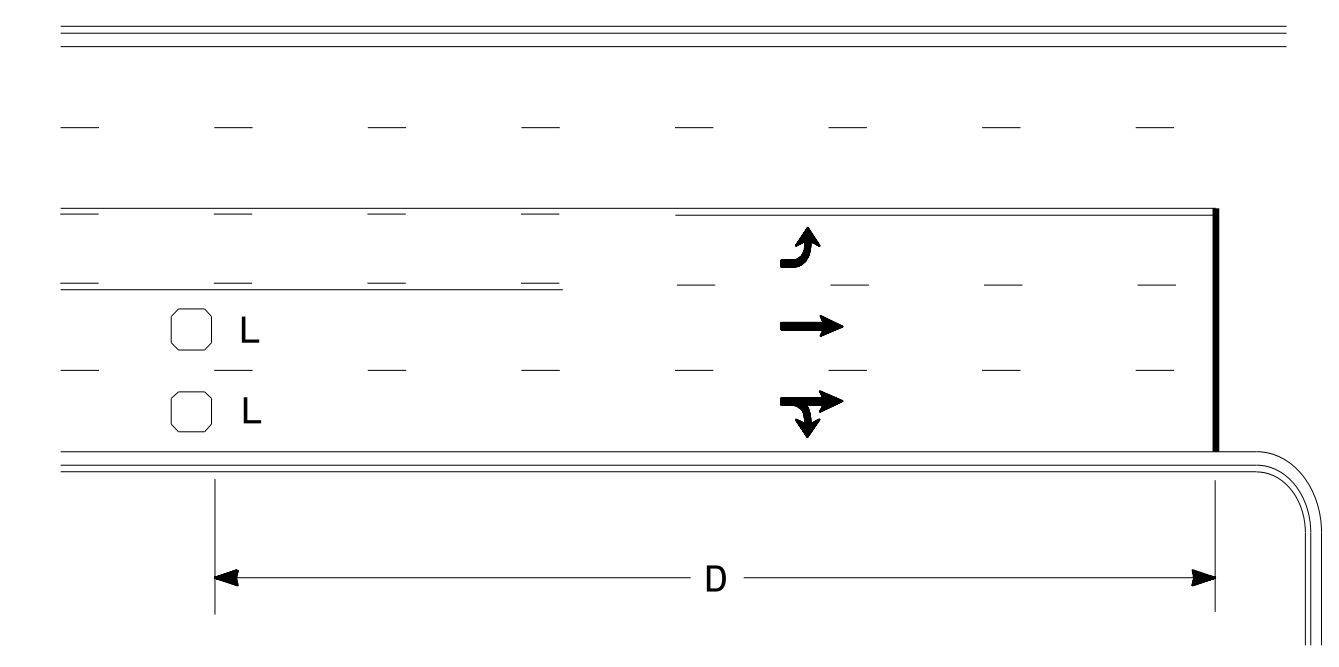
MAPS LESS THAN 2 MILES

FOR AST RESURFACING MAPS WITH CONSTRUCTION LIMITS LESS THAN 2 MILES IN LENGTH, INSTALL A PORTABLE MOUNTED LOOSE GRAVEL (W8-7) SIGN AT THE BEGINNING CONSTRUCTION LIMIT, AN UNMARKED PAVEMENT (SP) SIGN MIDWAY THROUGH AND AN END ROAD WORK (G20-2A) SIGN AT THE END CONSTRUCTION LIMIT.



ADVANCE WARNING SIGNS FOR 2-LANE ROADWAY ASPHALT SURFACE TREATMENT

### High Speed Detection ( $\geq 35$ mph)

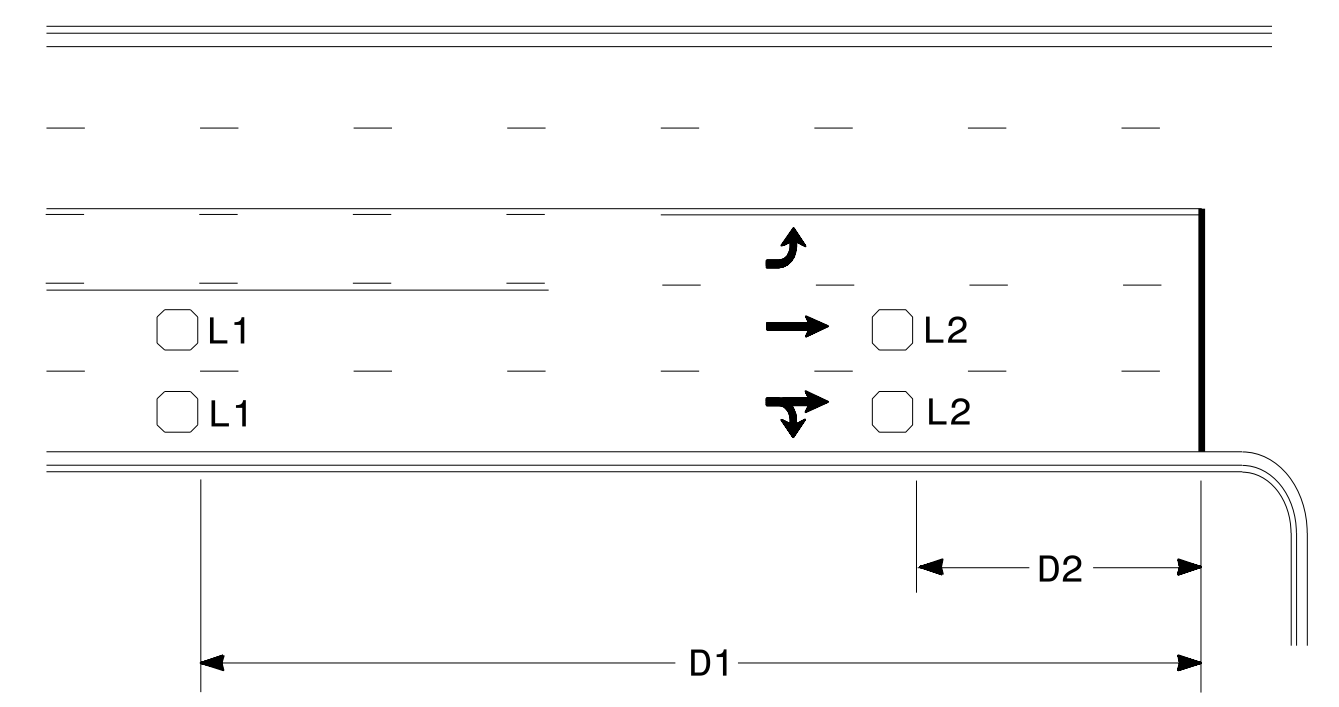


Speed Limit mph	D ft
35	200
40	250
45	300
50	355
55	420
60	475
65	550

L = 6ft X 6ft  
Wired separately

Volume Density Operation

OR



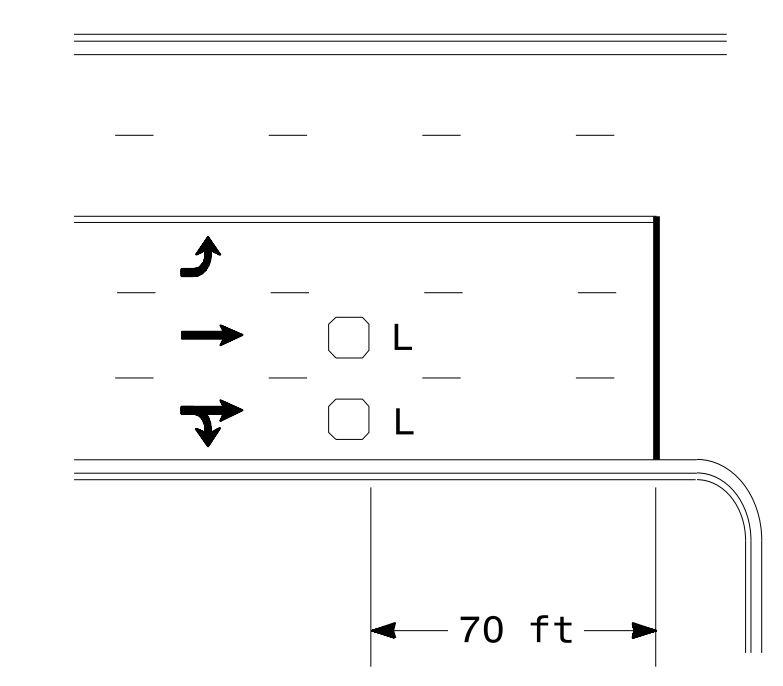
Speed Limit mph	D1 ft	D2 ft
40	250	80
45	300	90
50	355	100
55	420	110
60	475	120
65	550	130

L1 = 6ft X 6ft  
Wired in series

L2 = 6ft X 6ft  
Wired in series

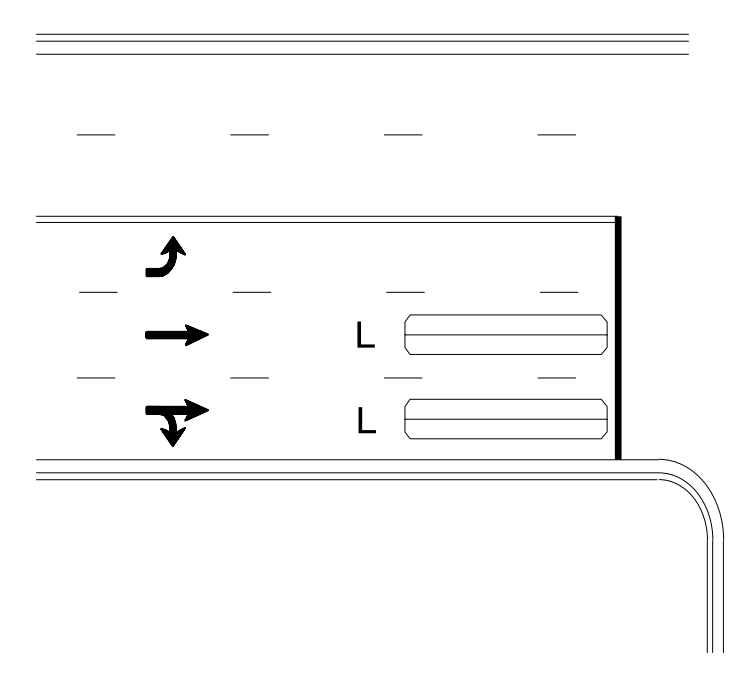
"Stretch" Operation

### Low Speed Detection ( $\leq 35$ mph)



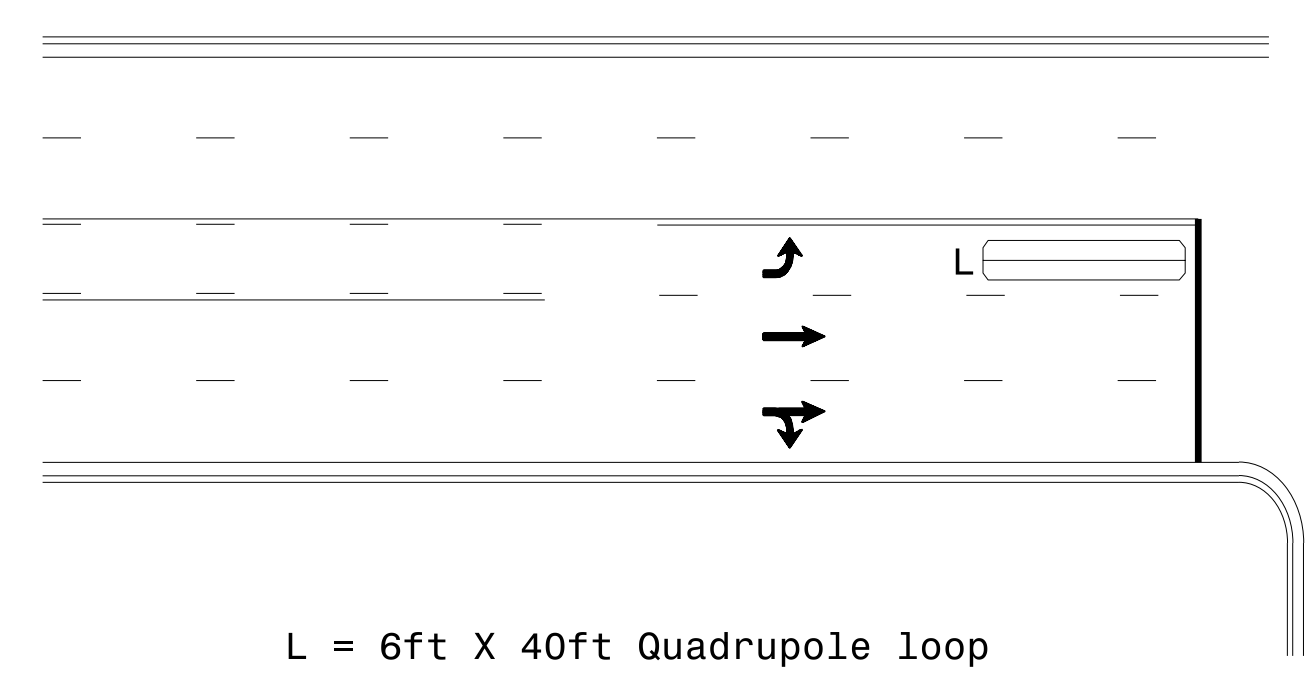
L = 6ft X 6ft  
Wired in series

OR



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

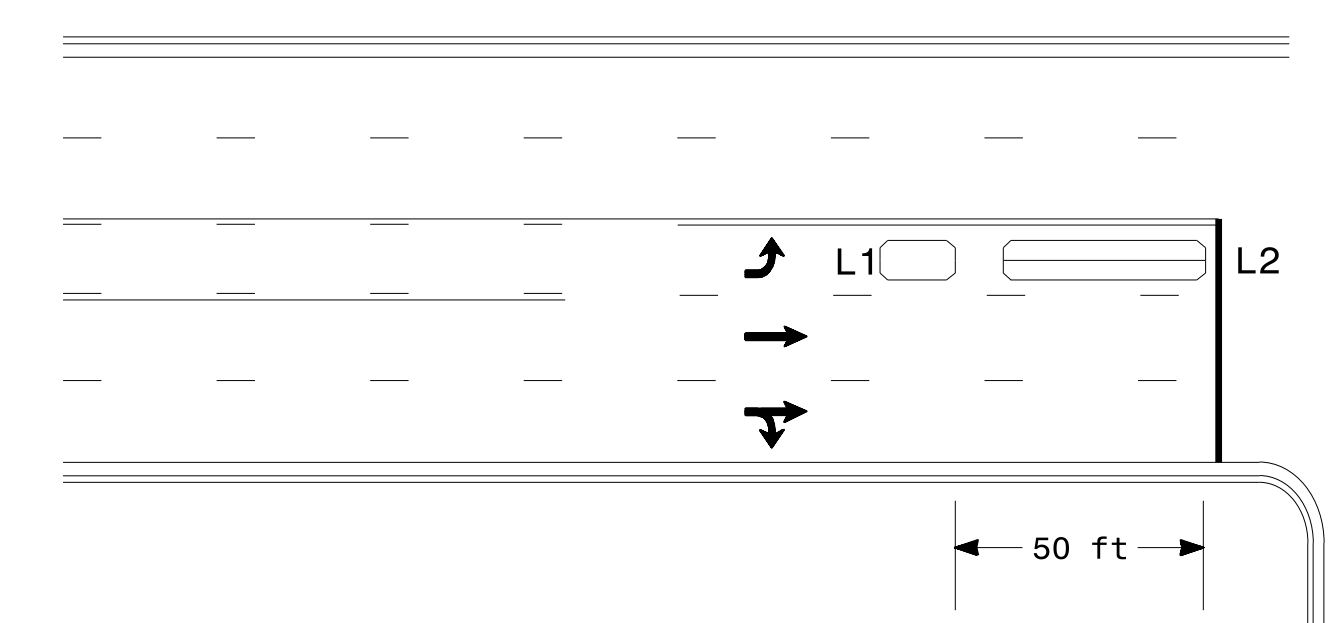
### Left Turn Lane Detection



L = 6ft X 40ft Quadrupole loop

Presence Loop Detection

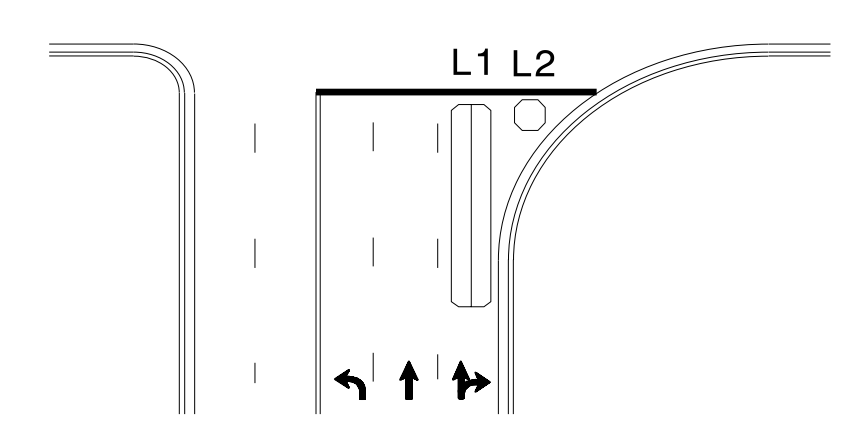
OR



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

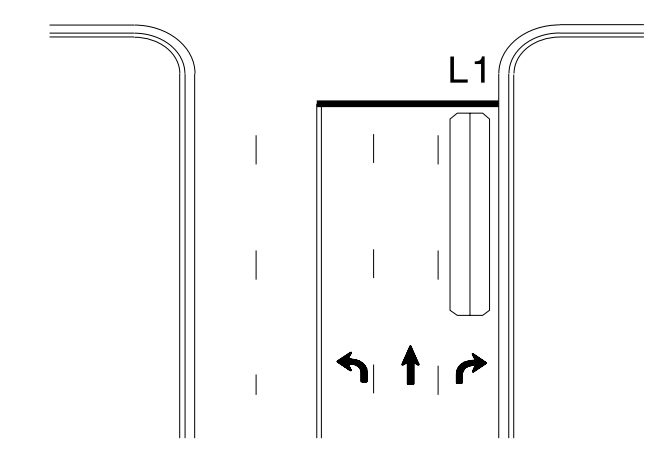
Queue Loop Detection

### Right Turn Lane Detection

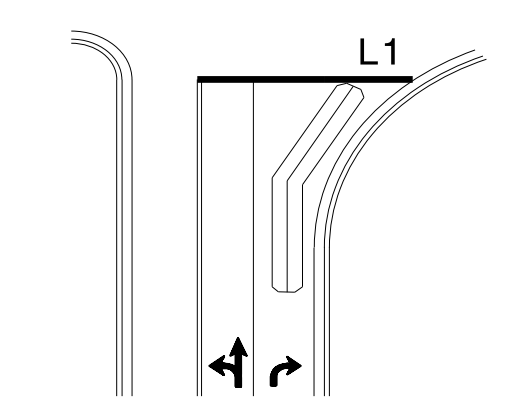


Shared Lane/  
Wide Radius Turn

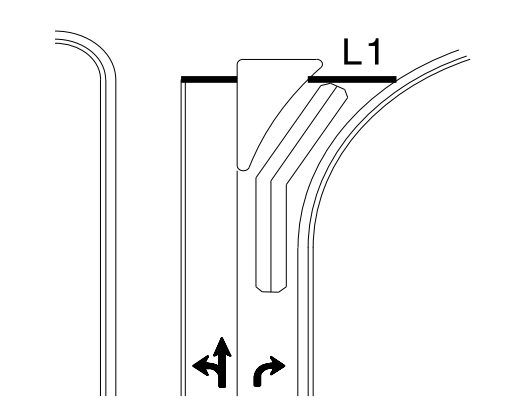
L1 = 6ft X 40ft Quadrupole loop  
L2 = 6ft X 6ft [Minimum] Presence loop  
Wired separately



Standard Turn

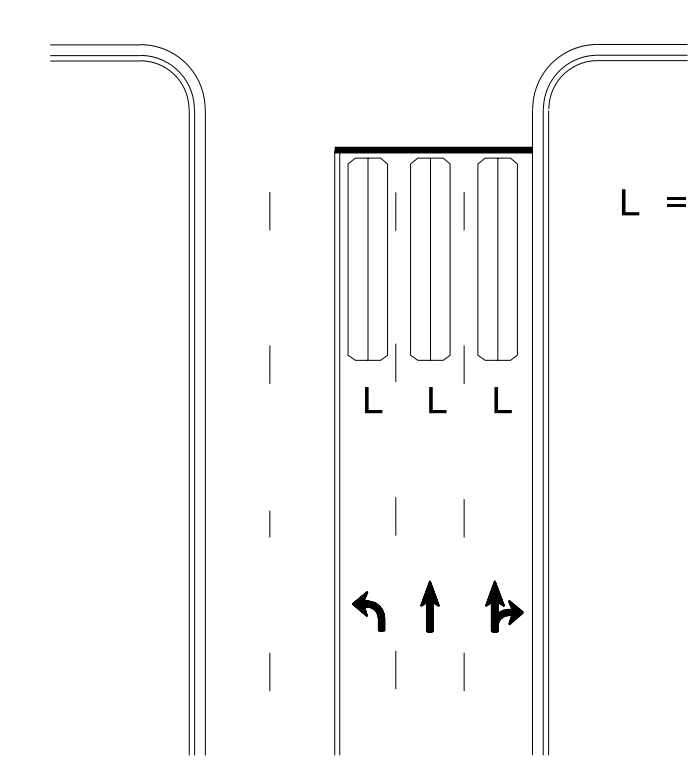


Wide Radius Turn



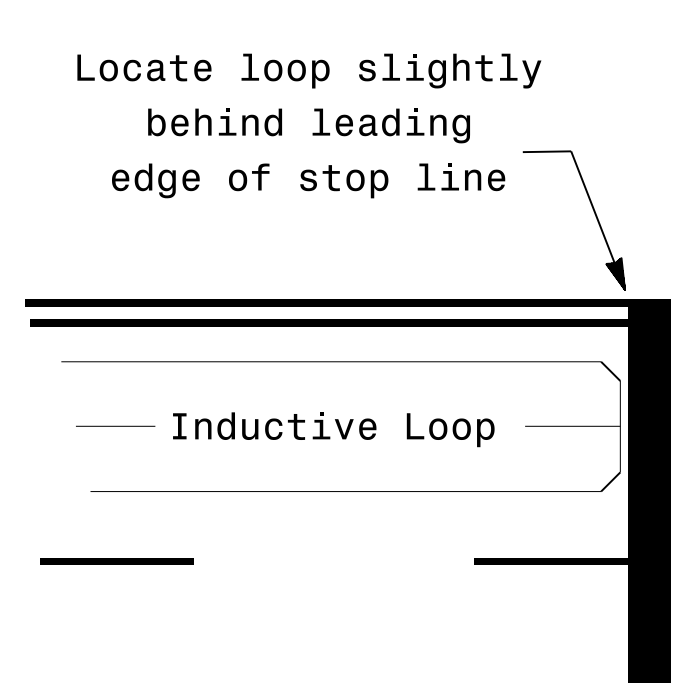
Channelized Turn

### Side Street Detection



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

### Presence Loop Placement at Stop Lines



Locate loop slightly  
behind leading  
edge of stop line

- 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

Prepared In the Offices of:

750 N. Greenfield Pkwy, Garner, NC 27529

#### Typical Signal Loop Locations

PLAN DATE: September 2025 REVIEWED BY:

PREPARED BY: J.A. Lohr REVIEWED BY:

REVISIONS: \_\_\_\_\_ INIT. DATE

SCALE: N/A

SEAL

11/25/2025

SIG. INVENTORY NO.

17-0004-2025\_07-25  
 S:\170004\2025\17-0004\SIG-1\SIG-1.dgn  
 17-0004-2025\_07-25