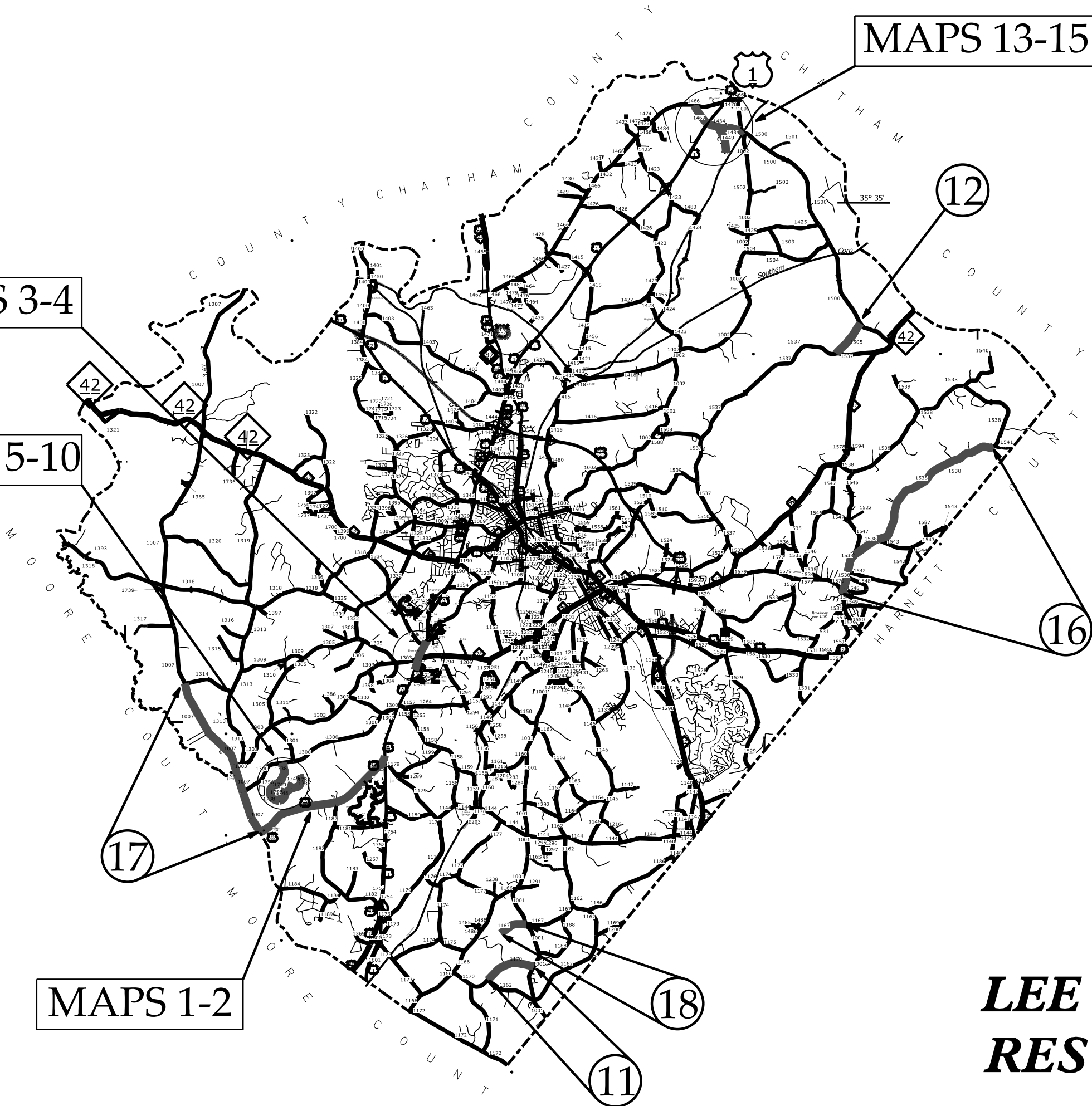


MAPS 3-4

MAPS 5-10

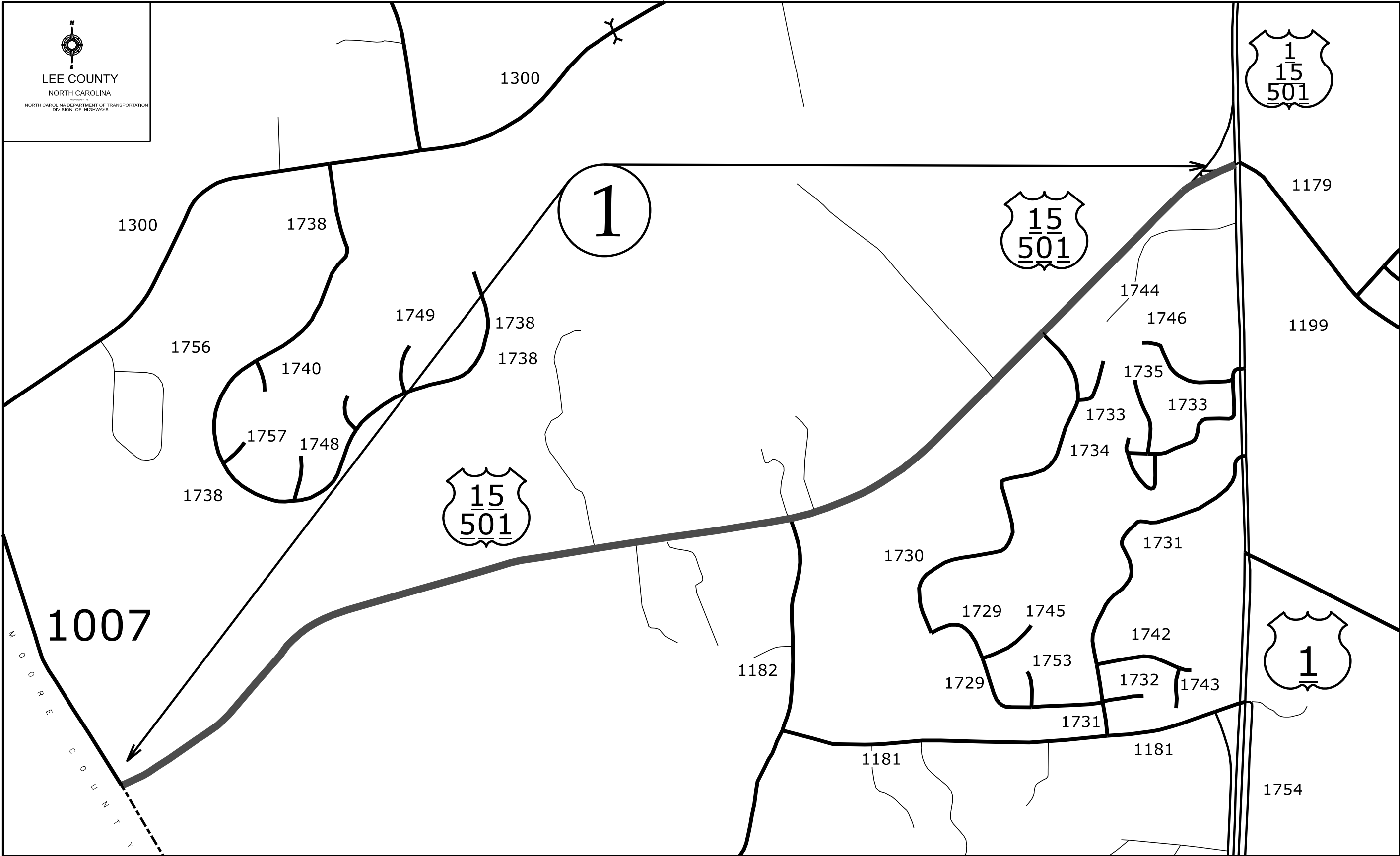
MAPS 1-2

MAPS 13-15

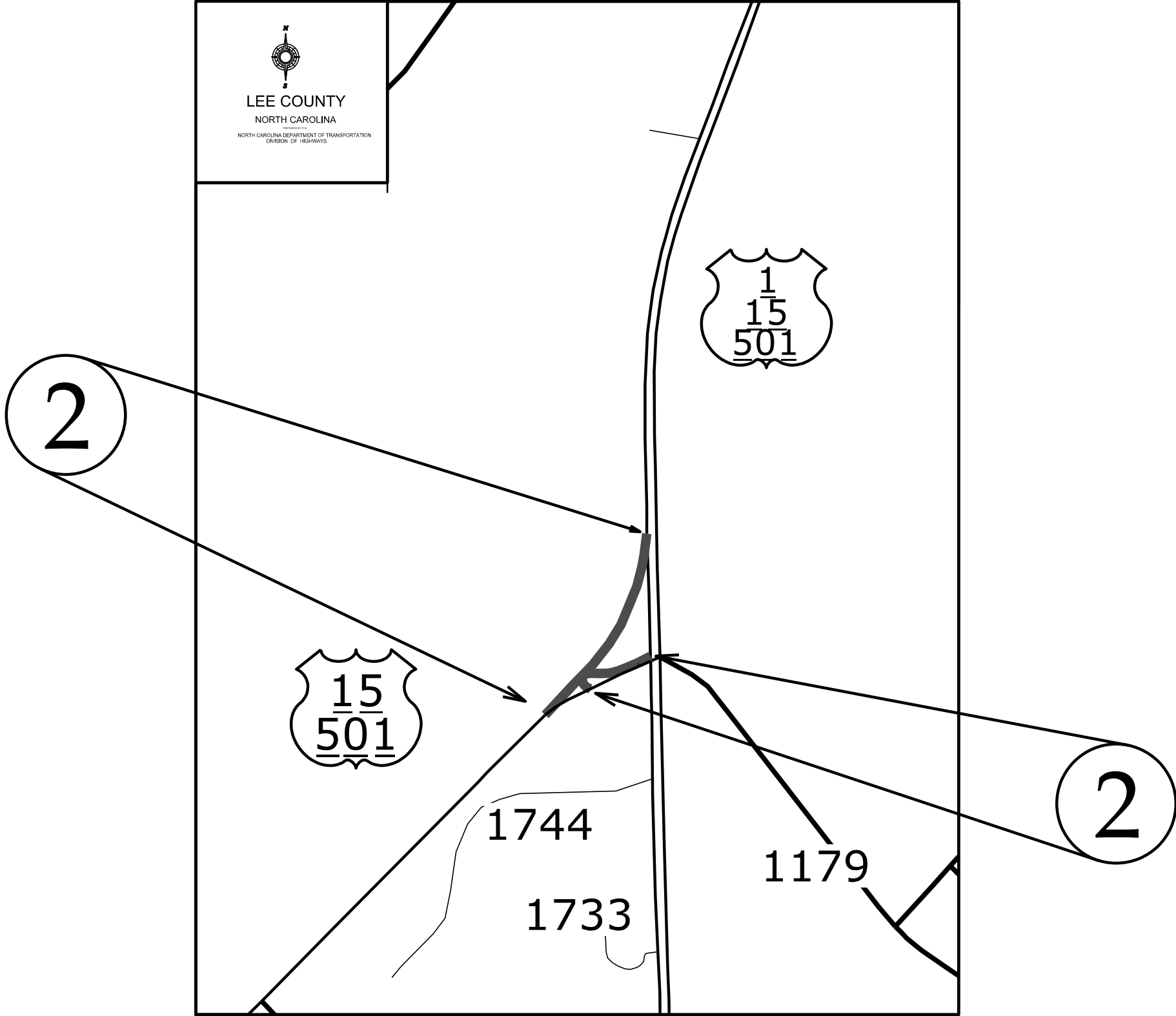


LEE COUNTY RESURFACING

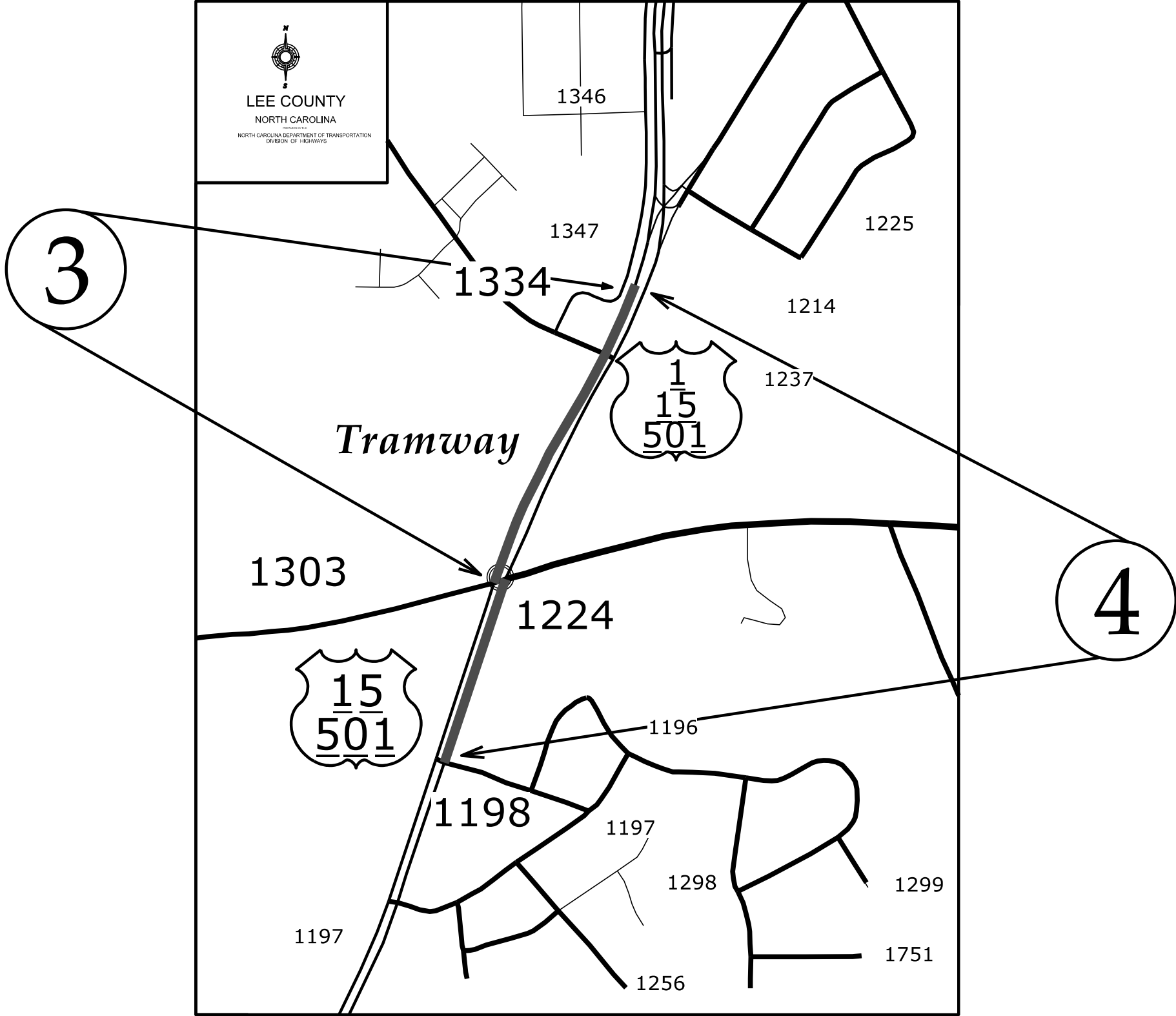
Map 1



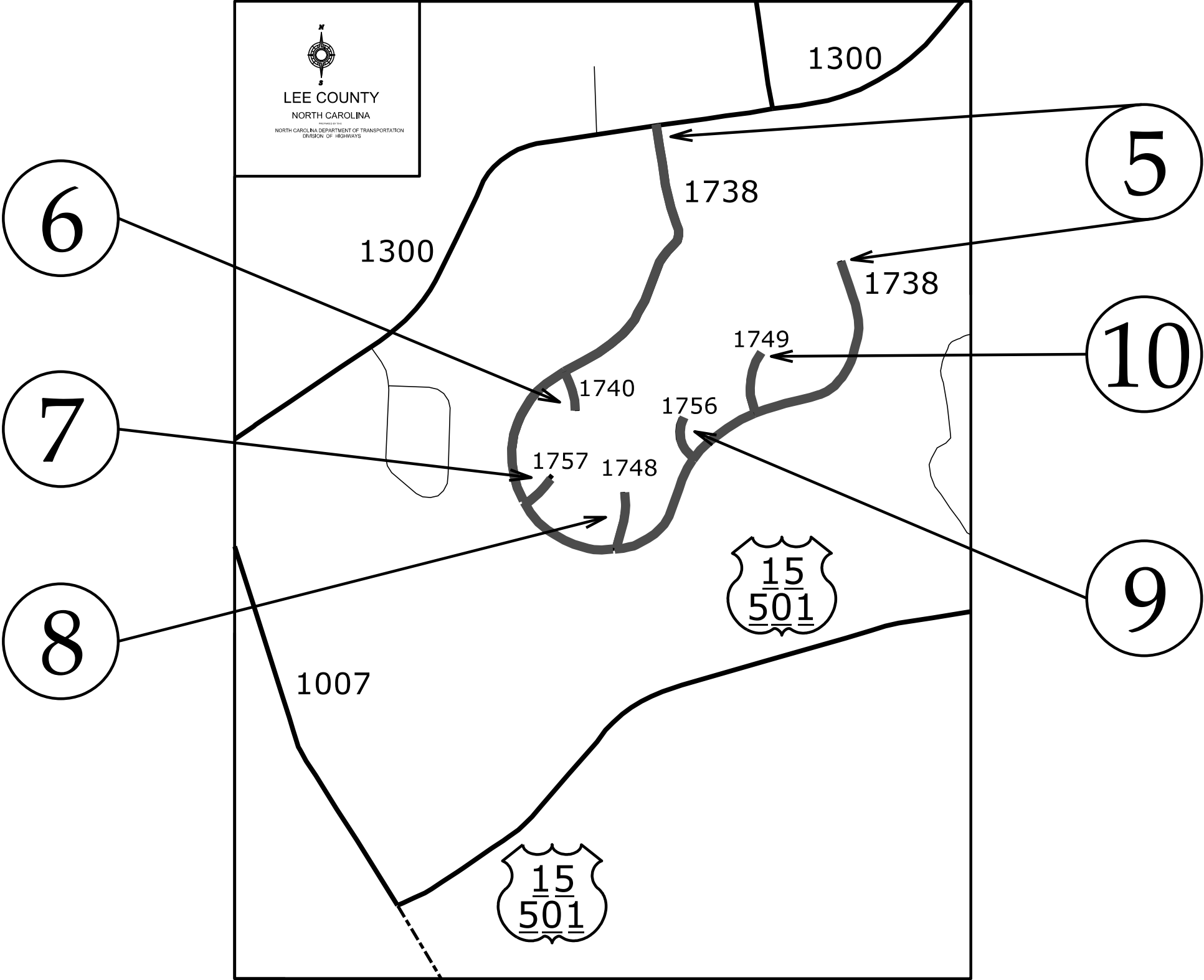
Map 2



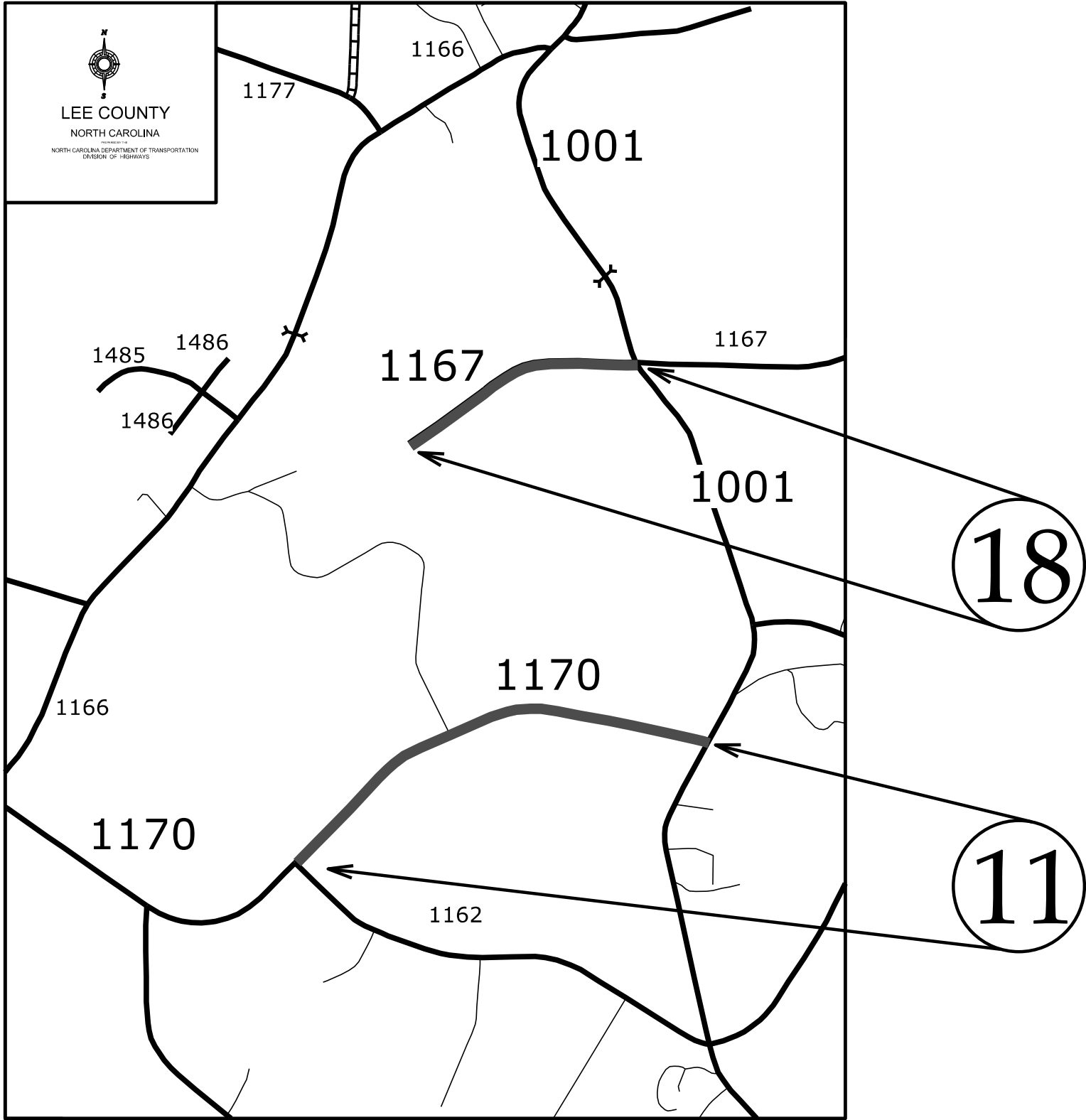
Map 3 - 4



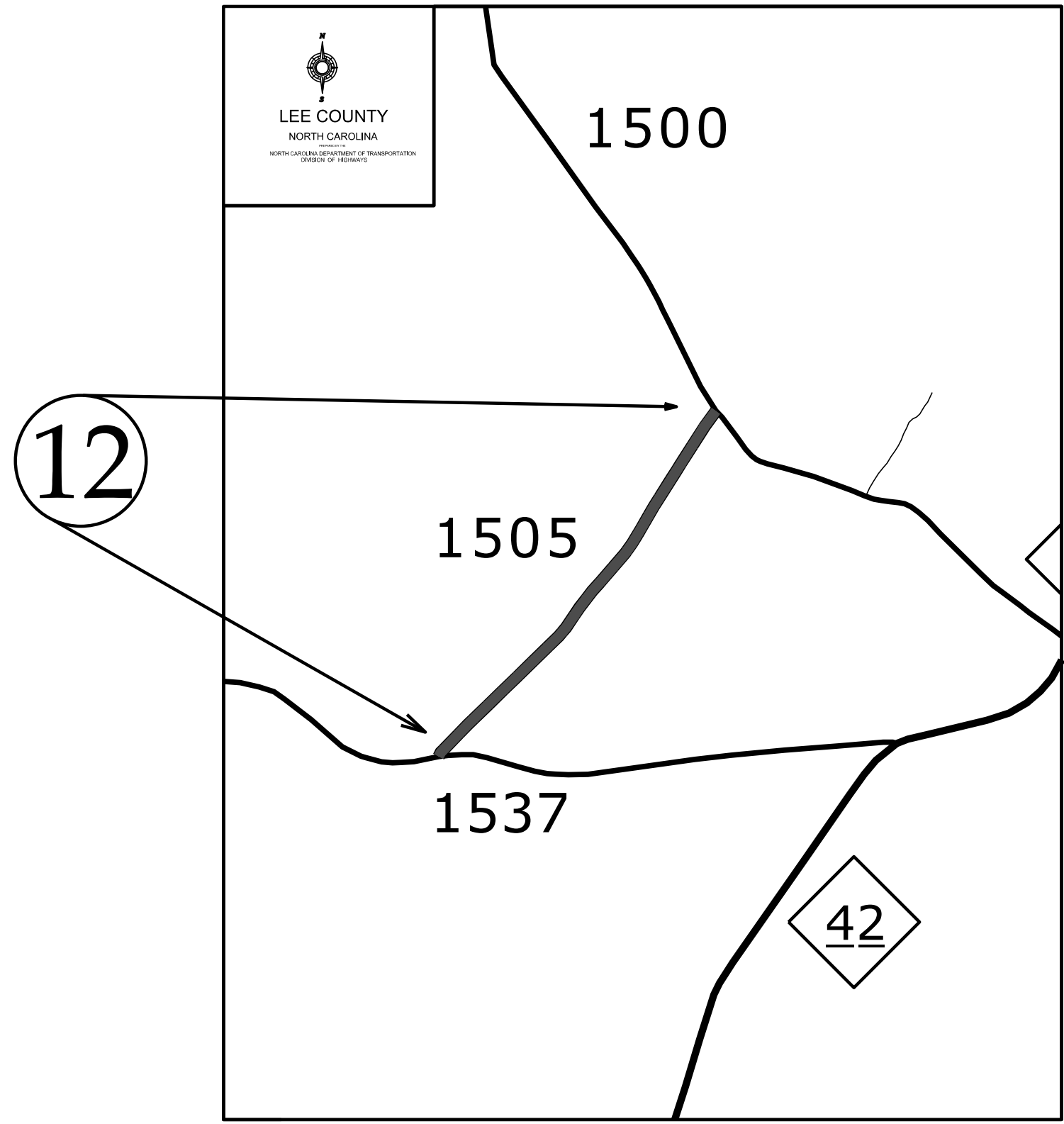
Maps 5 - 10



Map 11 & 18

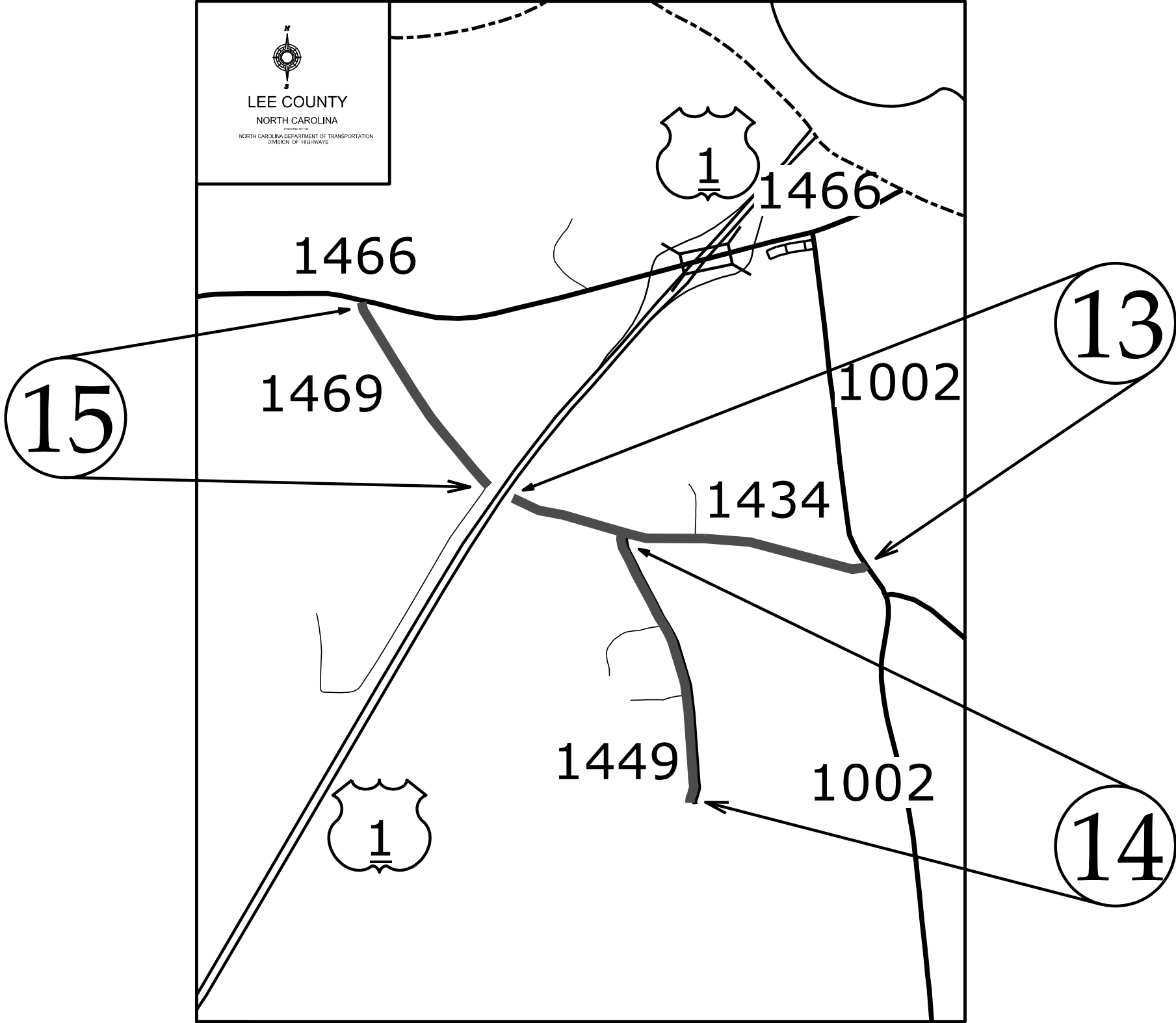


Map 12

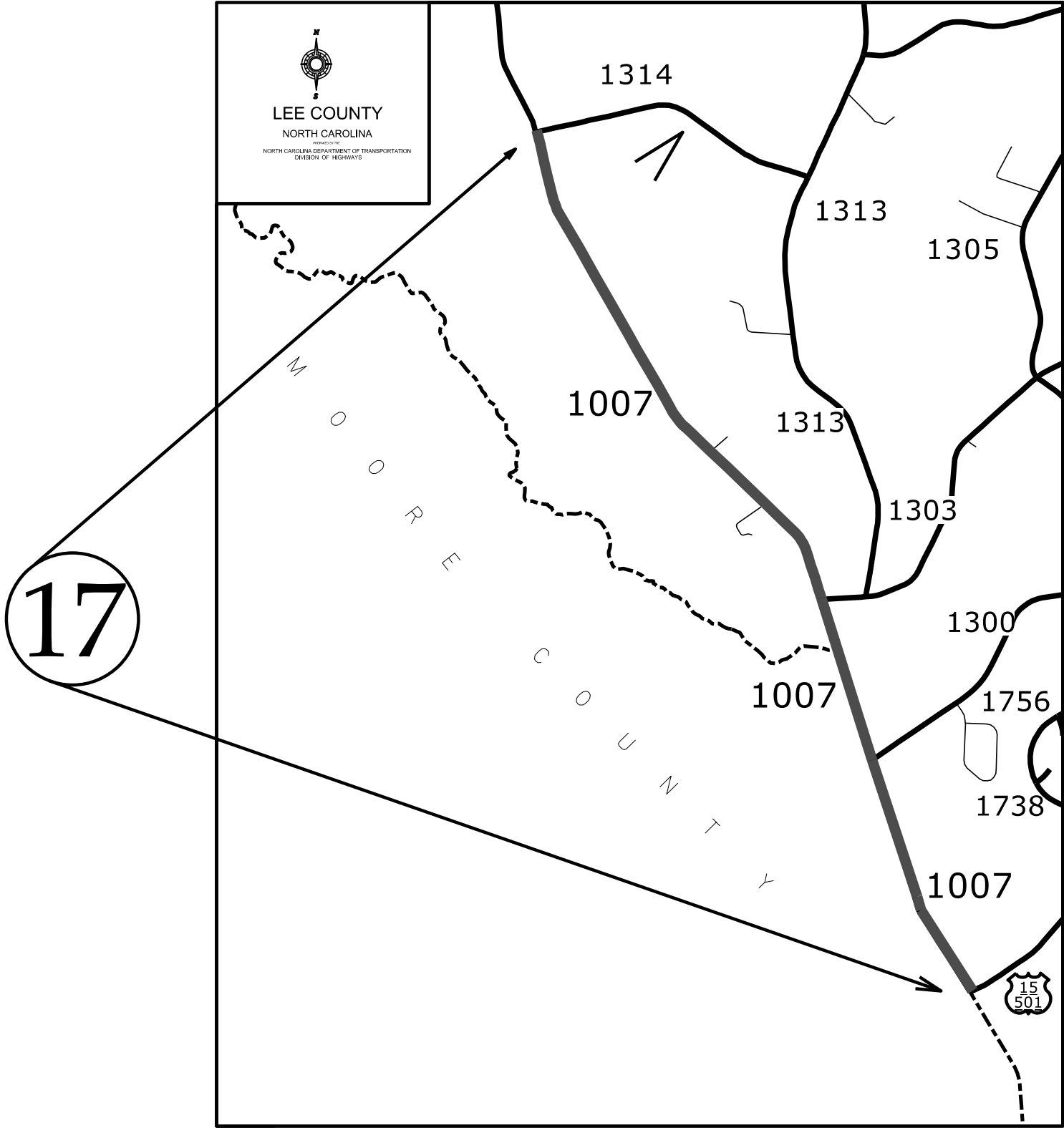


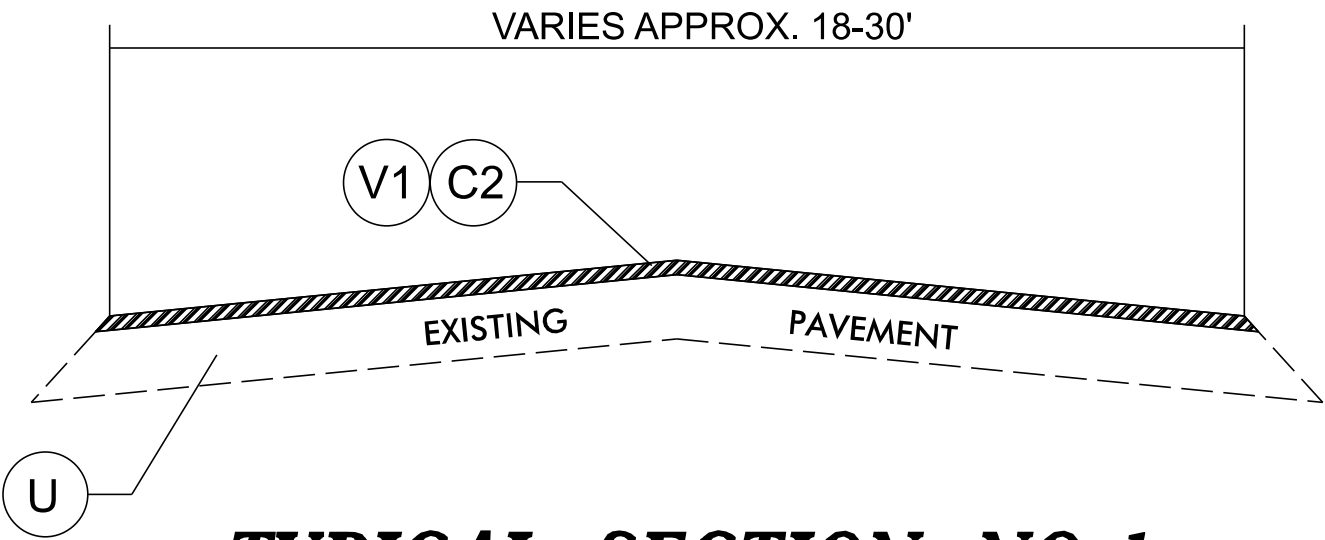
2026CPT.08.04.10531
2026CPT.08.04.20531

Maps 13 - 15

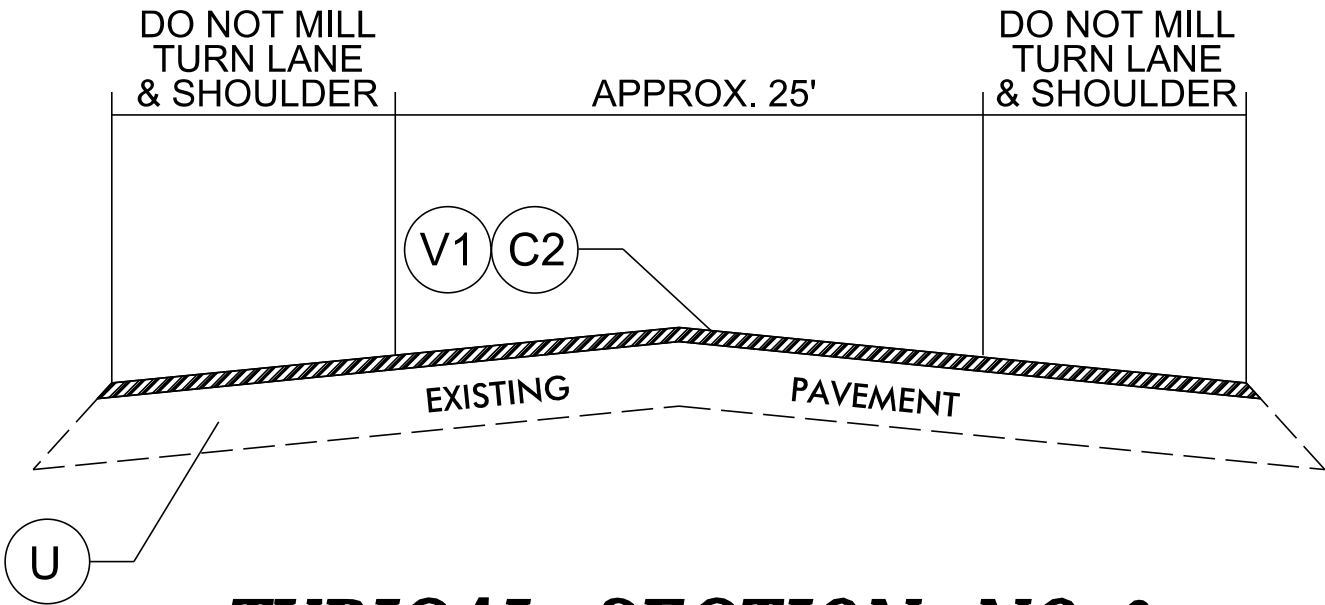


Map 17



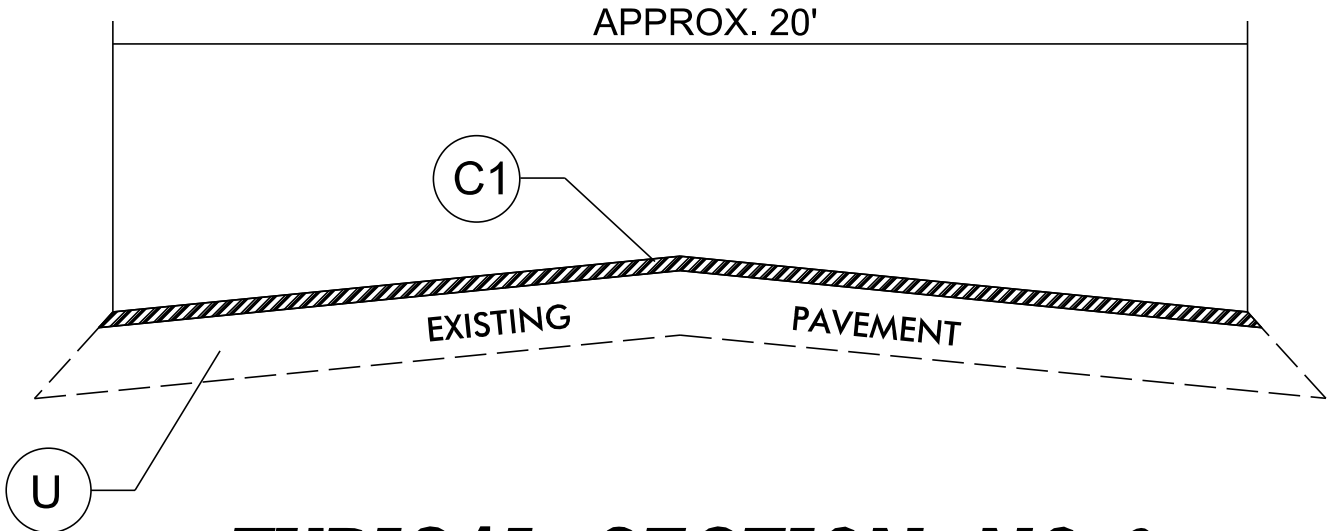


TYPICAL SECTION NO. 1
USE FOR MAPS 1 – 2



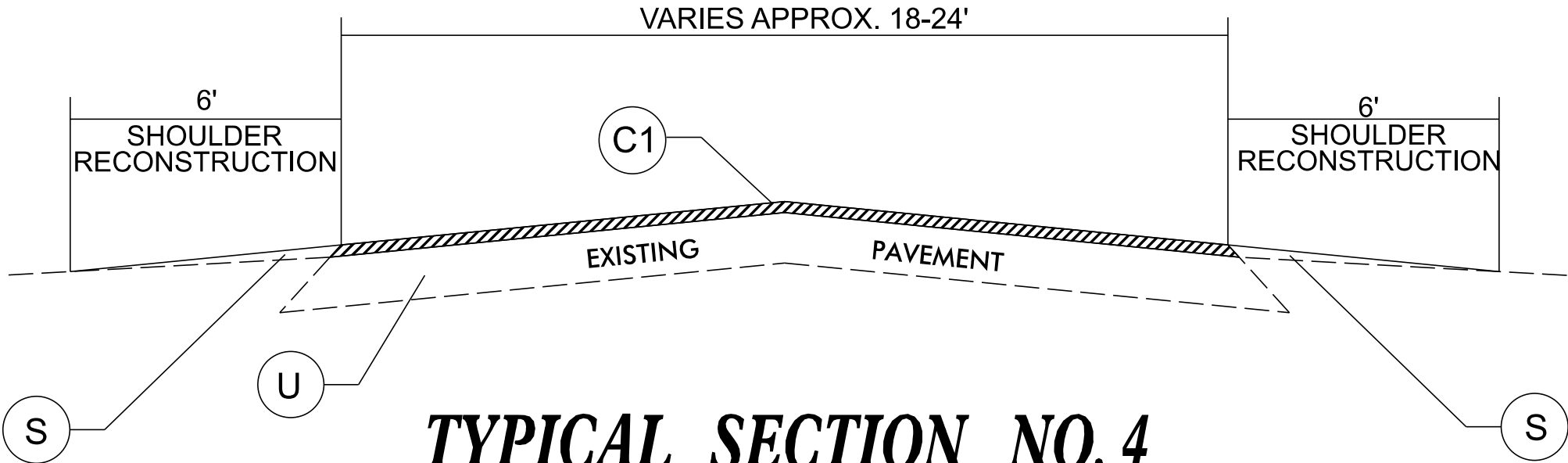
TYPICAL SECTION NO. 2
USE FOR MAPS 3 – 4

PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.
C2	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
S	AGGREGATE SHOULDER BORROW
U	EXISTING PAVEMENT.
V1	MILLING 1.5" IN DEPTH



TYPICAL SECTION NO. 3
USE FOR MAPS 5 – 10, 18

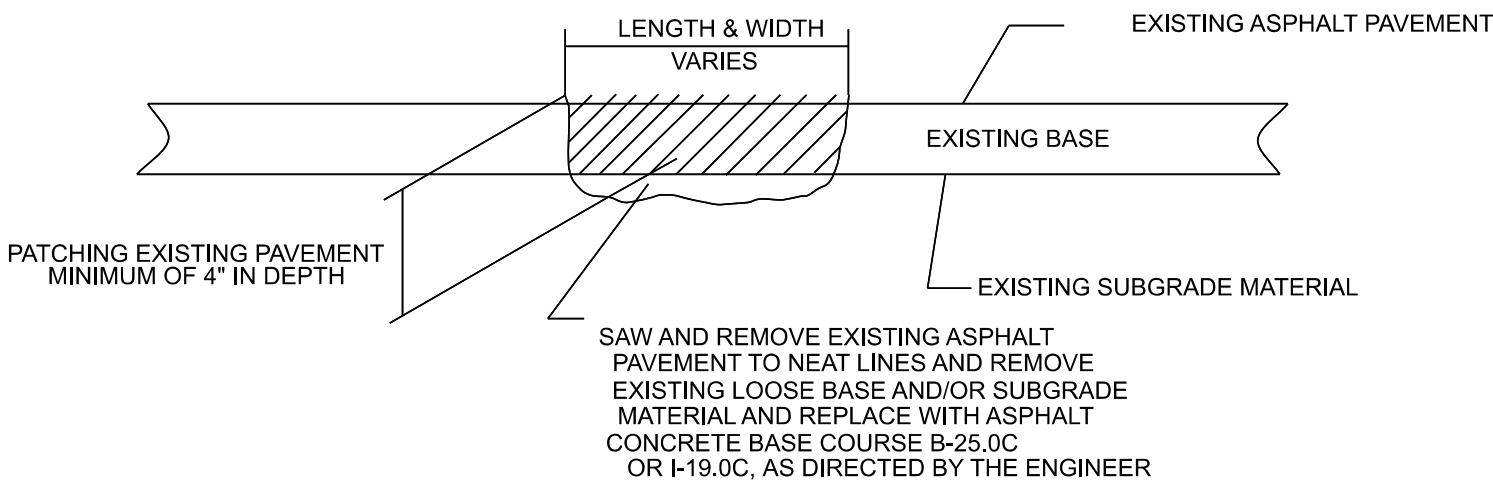
PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.
C2	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
S	AGGREGATE SHOULDER BORROW
U	EXISTING PAVEMENT.
V1	MILLING 1.5" IN DEPTH



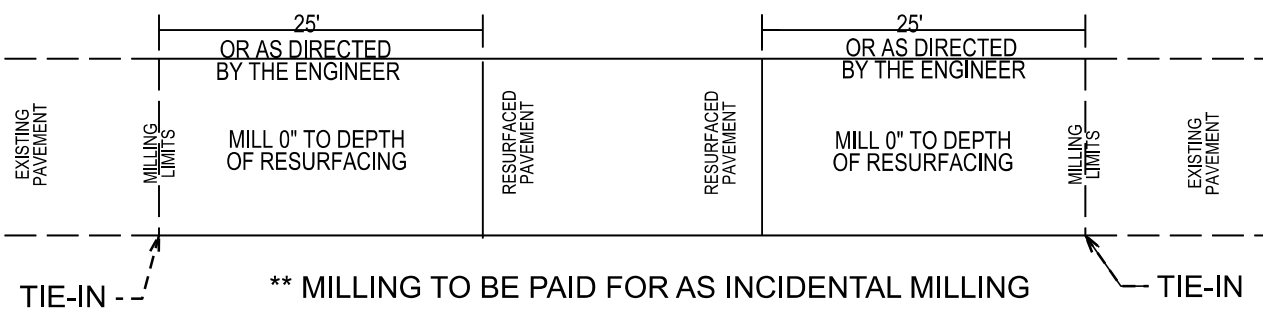
TYPICAL SECTION NO. 4
USE FOR MAPS 11 – 17

DETAILS

DETAILS OF PATCHING EXISTING PAVEMENT PRIOR TO RESURFACING



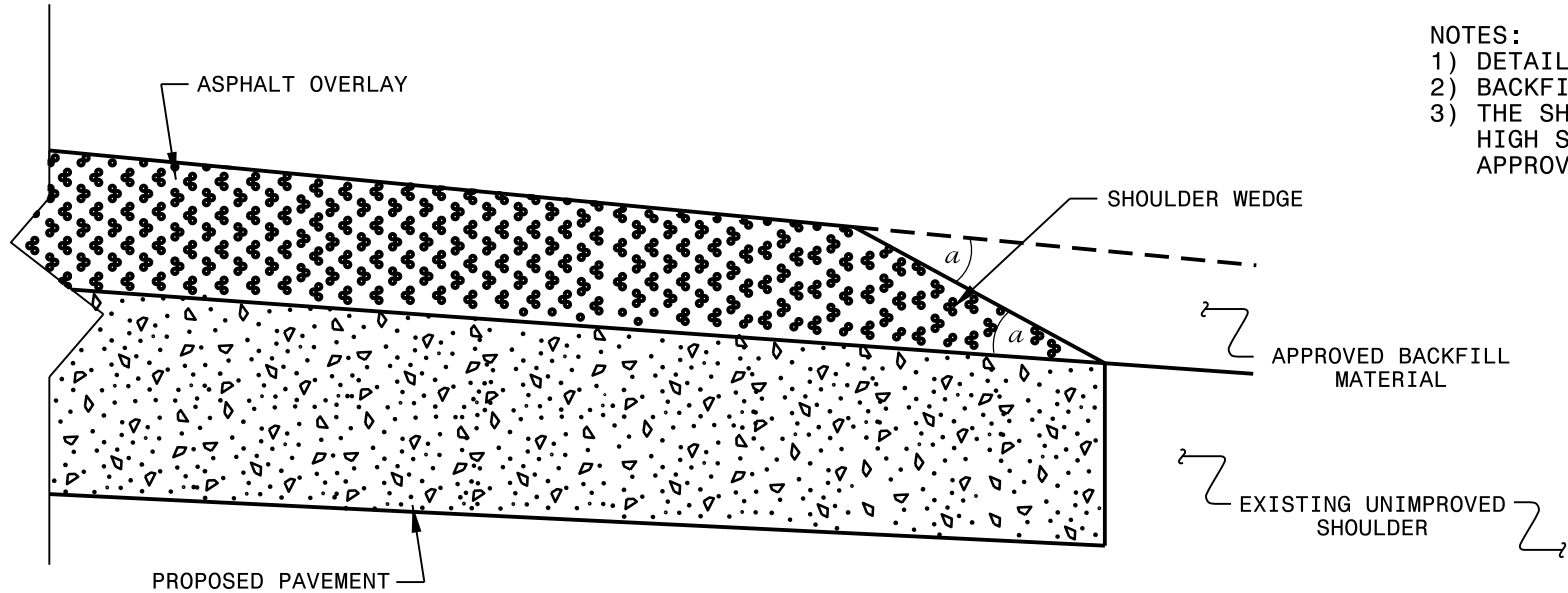
PAVEMENT TIE-IN DETAIL



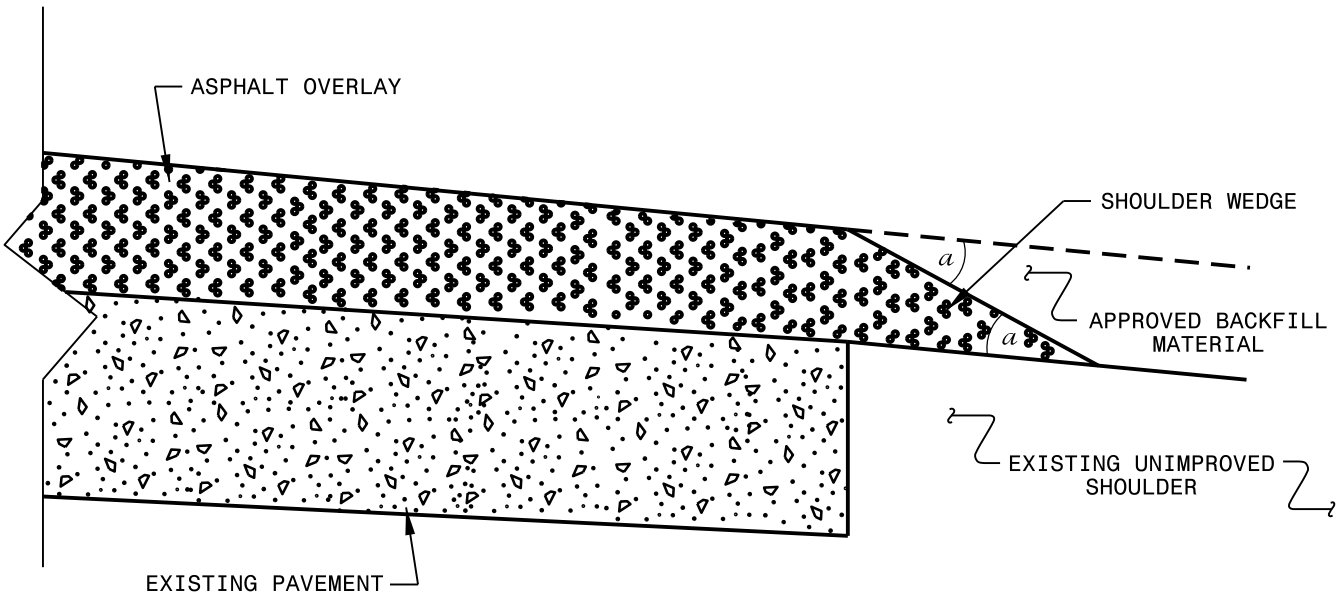
PROJECT NOTES

- INCLUDE PAINT MARKINGS WHEN MILLING MAPS 3 - 4.

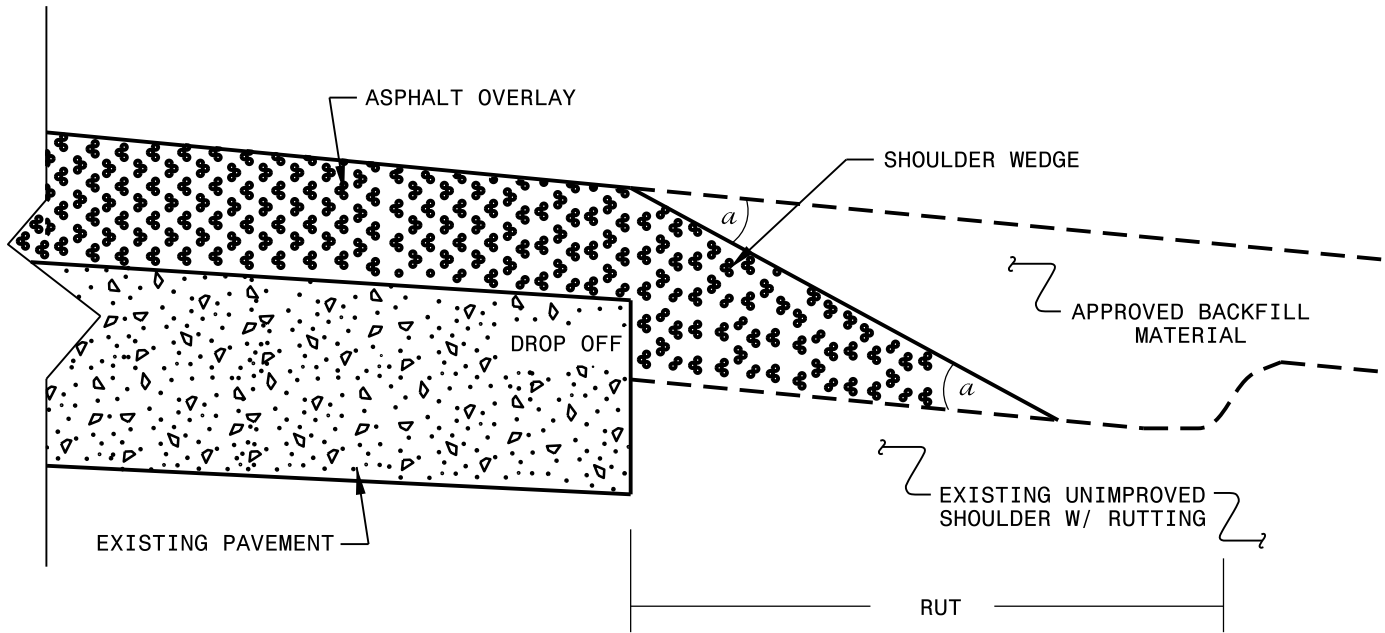
- NOTES:
- 1) DETAIL DOES NOT APPLY TO OGAFD AND ULTRA-THIN BONDED WEARING COURSE.
 - 2) BACKFILL SHOULDER WITH APPROVED MATERIAL.
 - 3) THE SHOULDER WEDGE DEVICE MAY BE DISENGAGED AT PAVED DRIVEWAYS, SIDE STREETS, HIGH SHOULDERS, AND OTHER LOCATIONS NOT FEASIBLE TO CONSTRUCT AS APPROVED BY THE ENGINEER.



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°

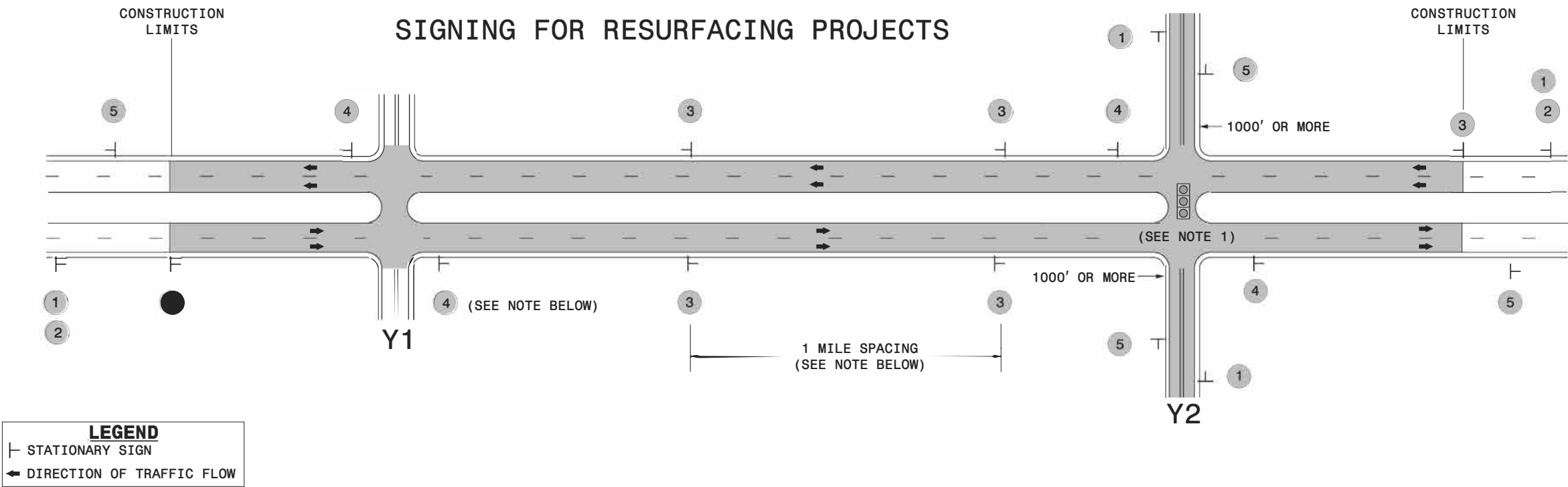
CONTRACT STANDARDS AND DEVELOPMENT UNIT	
Office 919-707-6950 FAX 919-250-4119	
SHOULDER WEDGE DETAILS	
ORIGINAL BY: T.SPELL	DATE: 7-19-11
MODIFIED BY:	DATE: 2/2/16
CHECKED BY:	DATE:
FILE SPEC.: s:\usr\details\stand\shoulderwedgedetail.dgn	

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

PROJECT NO.	SHEET NO.	TOTAL NO.
2026CPT.08.04.10531, 2026CPT.08.04.20531	16	

SUMMARY OF QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	LANE TYPE	LENGTH	WIDTH	BEGIN MP	END MP	1245000000-E SHOULDER RECONSTRUCTIO N	1260000000-E AGGREGATE SHOULDER BORROW	1297000000-E 1.5" MILLING	1330000000-E INCIDENTAL MILLING	1519000000-E SURFACE COURSE, S9.5B	1523000000-E SURFACE COURSE, S9.5C	1575000000-E ASPHALT BINDER FOR PLANT MIX	1704000000-E PATCHING EXISTING PAVEMENT	1881000000-E GENERIC PAVING ITEM - SINUSOIDAL RUMBLE STRIPS (18" CENTERLINE)	1881000000-E GENERIC PAVING ITEM - SINUSOIDAL RUMBLE STRIPS (8" EDGELINE)	5255000000-N PORTABLE LIGHTING	7060000000-E SIGNAL CABLE	7444000000-E INDUCTIVE LOOP SAWCUT
								MI	FT			SMI	TON	SY	SY	TONS	TONS	TONS	TONS	LF	LF	LS	LF	LF
2026CPT.08.04.10531	Lee	1	US-15	FROM MP 0.00 SR 1007 S PLANK RD MOORE COUNTY LINE TO MP	1	2		3.260	30	0.000	3.260			57,500	2,780		5,324	319	110	17,200	34,426			
TOTAL FOR MAP NO. 1								3.260						57,500	2,780		5,324	319	110	17,200	34,426			
2026CPT.08.04.10531	Lee	2	US-15	FROM MP 12.475 AT HWY I TO MP 12.84 ADDED MILEAGE FOR RAMPS IN INTERSECTION TO BE PAVED	1	2		0.365	18	12.475	12.840			3,860	100		342	21	7		3,854	*	800	800
TOTAL FOR MAP NO. 2								0.365						3,860	100		342	21	7		3,854		800	800
2026CPT.08.04.10531	Lee	3	US-1 S	FROM PVMT JNT TO MP 14.753 (INTERSECTION)	2	2		0.433	25	14.320	14.753			6,351	139		568	34	11				1,500	1,500
TOTAL FOR MAP NO. 3								0.433						6,351	139		568	34	11				1,500	1,500
2026CPT.08.04.10531	Lee	4	US-1 N	FROM MP 7.06 (JUST NORTH OF SR 1198 BRYAN DR) TO MP 7.30 (INTERSECTION OF SR 1303 CENTER CHURCH RD)	2	2		0.240	25	7.060	7.300			3,379	139		312	19	11				750	750
TOTAL FOR MAP NO. 4								0.240						3,379	139		312	19	11				750	750
TOTAL FOR PROJ NO. 2026CPT.08.04.10531								4.298						71,090	3,158		6,546	393	139	17,200	38,280		3,050	3,050
2026CPT.08.04.20531	Lee	5	SR-1738 / VILLANOW DR	FROM SR 1300 (CHRIS COLE RD) TO END OF MAINTENANCE	3	2		1.930	20	0.000	1.930				185	1,974		130	33					
TOTAL FOR MAP NO. 5								1.930							185	1,974		130	33					
2026CPT.08.04.20531	Lee	6	SR-1740 / HARRINGTON PL	FROM SR 1738 (VILLANOW DR) TO END OF MAINTENANCE	3	2		0.100	20	0.000	0.100					107		7	6					
TOTAL FOR MAP NO. 6								0.100								107		7	6					
2026CPT.08.04.20531	Lee	7	SR-1757 / TWIN BRIDGE CIR	FROM SR 1738 (VILLANOW DR) TO END OF MAINTENANCE	3	2		0.070	20	0.000	0.070					75		6	22					
TOTAL FOR MAP NO. 7								0.070								75		6	22					
2026CPT.08.04.20531	Lee	8	SR-1748 / HOLLY POND RD	FROM SR 1738 (VILLANOW DR) TO END OF MAINTENANCE	3	2		0.110	20	0.000	0.110					118		8	6					
TOTAL FOR MAP NO. 8								0.110								118		8	6					
2026CPT.08.04.20531	Lee	9	SR-1756 / PERSIMMON PATH	FROM SR 1738 (VILLANOW DR) TO END OF MAINTENANCE	3	2		0.110	20	0.000	0.110					118		8	6					
TOTAL FOR MAP NO. 9								0.110								118		8	6					
2026CPT.08.04.20531	Lee	10	SR-1749 / SUGAR CREEK DR	FROM SR 1738 (VILLANOW DR) TO END OF MAINTENANCE	3	2		0.120	20	0.000	0.120					129		9	6					
TOTAL FOR MAP NO. 10								0.120								129		9	6					
2026CPT.08.04.20531	Lee	11	SR-1170 / BLACKS CHAPEL RD	FROM MP 0.90 EXT PVT JNT TO MP 2.06 EXT PVT JNT AT SR 1001 (EDWARDS RD)	4	2		1.160	19	0.900	2.060	2.32	350.00		450	1,149		76	33					
TOTAL FOR MAP NO. 11								1.160				2.32	350.00		450	1,149		76	33					
2026CPT.08.04.20531	Lee	12	SR-1505 / GUNTHER RD	FROM SR 1500 (LOWER RIVER RD) MP 0.00 TO SR 1537 (POPLAR SPRINGS CHURCH RD) MP 0.86	4	2		0.860	23	0.000	0.860	1.72	250.00		130	1,011		68	55					
TOTAL FOR MAP NO. 12								0.860				1.72	250.00		130	1,011		68	55					
2026CPT.08.04.20531	Lee	13	SR-1434 / E FOREST OAKS DR	FROM MP 0.00 SR 1002 (LOWER MONCURE RD) TO MP 0.76 END OF MAINTENANCE	4	2		0.760	20	0.000	0.760	1.52	220.00		60	777		52	33					
TOTAL FOR MAP NO. 13								0.760				1.52	220.00		60	777		52	33					
2026CPT.08.04.20531	Lee	14	SR-1449 / BREEZEWOOD RD	FROM MP 0.00 SR 1434 (E FOREST OAKS DR) TO MP 0.58 NEW PVMT JNT	4	2		0.580	17	0.000	0.580	1.16	200.00		50	505		34	22					
TOTAL FOR MAP NO. 14								0.580				1.16	200.00		50	505		34	22					
2026CPT.08.04.20531	Lee	15	SR-1469 / W FOREST OAKS DR	FROM MP 0.0 SR 1466 (DEEP RIVER RD) TO MP 0.47 END OF MAINTENANCE	4	2		0.470	21	0.000	0.470	0.92	150.00		60	505		34	17					
TOTAL FOR MAP NO. 15								0.470				0.92	150.00		60	505		34	17					
2026CPT.08.04.20531	Lee	16	SR-1538 / BUCKHORN RD	FROM EXT PVMT JNT AT MP 5.68 SR 1541 (DANIELS CREEK RD) TO SR 1579 (S MAIN ST OLD 421) MP 10.80	4	2		5.120	20	5.680	10.800	10.24	1,600.00		1,220	5,386		359	193					
TOTAL FOR MAP NO. 16								5.120				10.24	1,600.00		1,220	5,386		359	193					
2026CPT.08.04.20531	Lee	17	SR-1007 / S PLANK RD	FROM MP 9.39 EXT PVMT JNT AT SR 1314 MCPHERSON RD TO MP	4	2		3.735	22	9.390	13.125	7.47	1,150.00		1,100	4,280		285	138					
TOTAL FOR MAP NO. 17								3.735				7.47	1,150.00		1,100	4,280		285	138					
2026CPT.08.04.20531	Lee	18	SR-1167 / JOHNSON CEMETERY RD	FORM MP 1.205 AT SR 1001 EDWARDS RD TO MP 1.81 TO NEW PVMT JNT	3	2		0.605	20	1.205	1.810				115	619		41	17					
TOTAL FOR MAP NO. 18								0.605							115	619		41	17					
TOTAL FOR PROJ NO. 2026CPT.08.04.20531								15.730				25.35	3,920.00		3,370	16,753		1,117	587					
GRAND TOTAL								20.028				25.35	3,920.00	71,090	6,528	16,753	6,546	1,510	726	17,200	38,280	1	3,050	3,050



MAINLINE (-L-) SIGNING

-Y- LINE SIGNING

SIGNING NOTES AND PLACEMENT PER DIRECTION	1 2 ROAD WORK AHEAD W20-1 48" X 48" NEXT XX MILES W7-3aP 24" X 18" PLACE 1000' PRIOR TO BEGINNING OF CONSTRUCTION LIMITS. ONLY USED ON -Y- LINES IF RESURFACING LIMITS EXTEND 1000' ALONG -Y- LINE. #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)	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, ADVANCE WARNING PORTABLE SIGNS SHALL BE USED ALONG THE -Y- LINE AS SHOWN BELOW. REMOVE UPON COMPLETION OF WORK. ROAD WORK AHEAD W20-1 48" X 48" ROAD WORK AHEAD W20-7 A 48" X 48" PLACED 500' IN ADVANCE OF FLAGGER. PLACED 250' IN ADVANCE OF FLAGGER.
	3 LOW/SOFT SHOULDER SP 13107 48" X 48" PLACE INITIALLY AT THE CONSTRUCTION LIMITS AND SPACED 1 MILE APART THEREAFTER. IF NO -Y- LINES EXIST, PLACE 2ND SET ½ MILE FROM THE CONSTRUCTION LIMITS AND THEN SPACE 1 MILE THEREAFTER.	
	4 ROAD UNDER CONST. SP 13106 48" X 48" 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.	
	5 END ROAD WORK G20-2 A 48" X 24" PLACE 500' FOLLOWING THE END OF CONSTRUCTION LIMITS.	
		NOTES: 1) MAY USE LAW ENFORCEMENT TO CONTROL TRAFFIC AT SIGNALIZED INTERSECTIONS AS DIRECTED BY THE ENGINEER. PROVIDE PORTABLE "ROAD WORK AHEAD" (W20-1) SIGNS 500' IN ADVANCE ALONG BOTH APPROACHES FROM THE SIDE STREETS WHEN PAVING PROCEEDS THROUGH THE INTERSECTION.



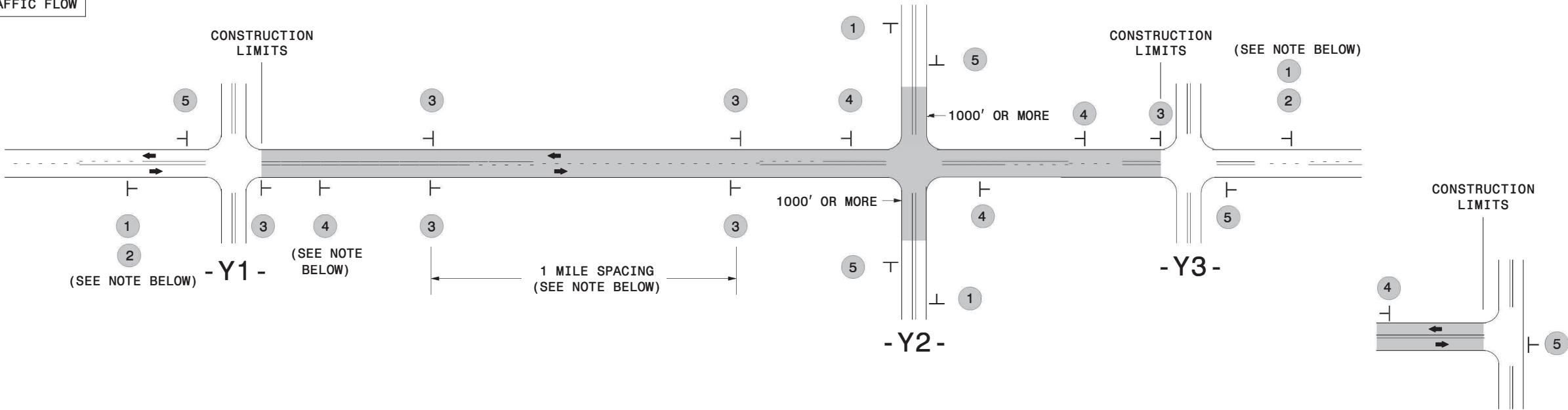
RESURFACING
ADVANCE WARNING SIGNS
FOR RURAL AND SUBURBAN
MULTI-LANE ROADWAYS
W/ SHOULDER SECTIONS

SIGNING FOR RESURFACING PROJECTS

LEGEND

STATIONARY SIGN

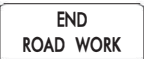
DIRECTION OF TRAFFIC FLOW



TEE INTERSECTION

MAINLINE (-L-) SIGNING

-Y- LINE SIGNING

SIGNING NOTES AND PLACEMENT PER DIRECTION	1 ROAD WORK AHEAD 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: 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.
	2 NEXT XX MILES W7-3aP 24" X 18"	#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)	
	3 LOWSOFT SHOULDER SP 13107 48" X 48"	- 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.	
	4 ROAD UNDER CONST SP 13106 48" X 48"	- 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.	
	5 END ROAD WORK 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.	
	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.		

ROAD
WORK
AHEAD

W20-1
48" X 48"

PLACED 500' IN ADVANCE
OF FLAGGER.

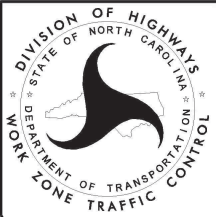


W20-7 A
48" X 48"

PLACED 250' IN ADVANCE
OF FLAGGER.

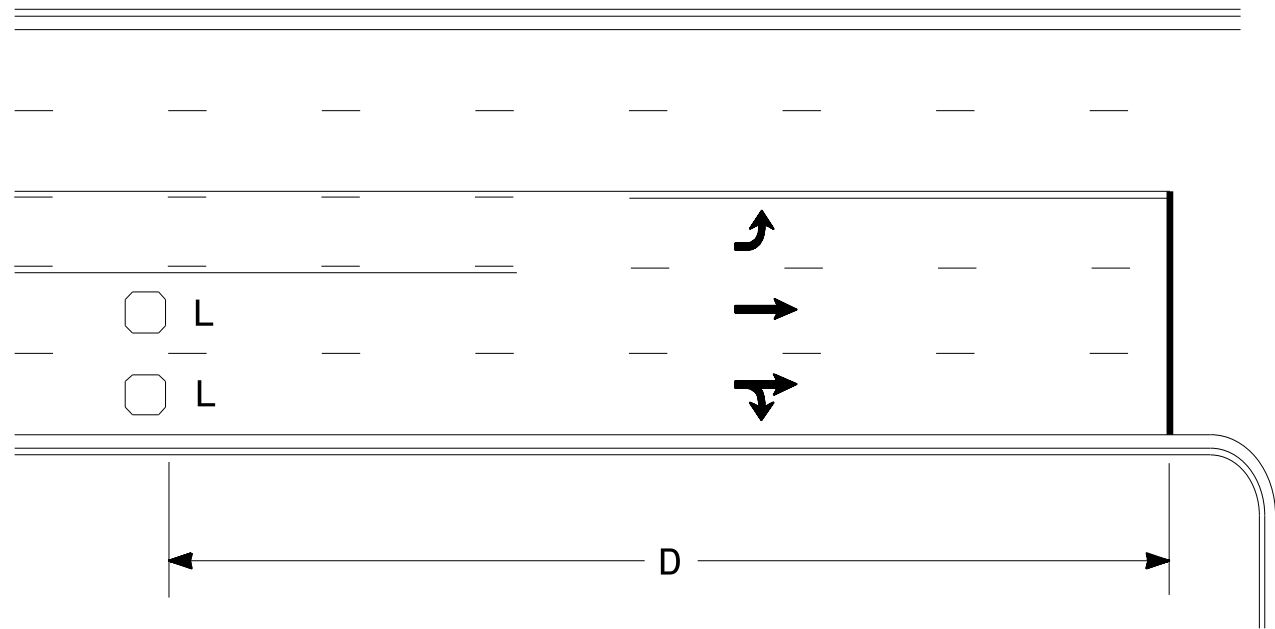


AD



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

High Speed Detection
(≥35 mph)

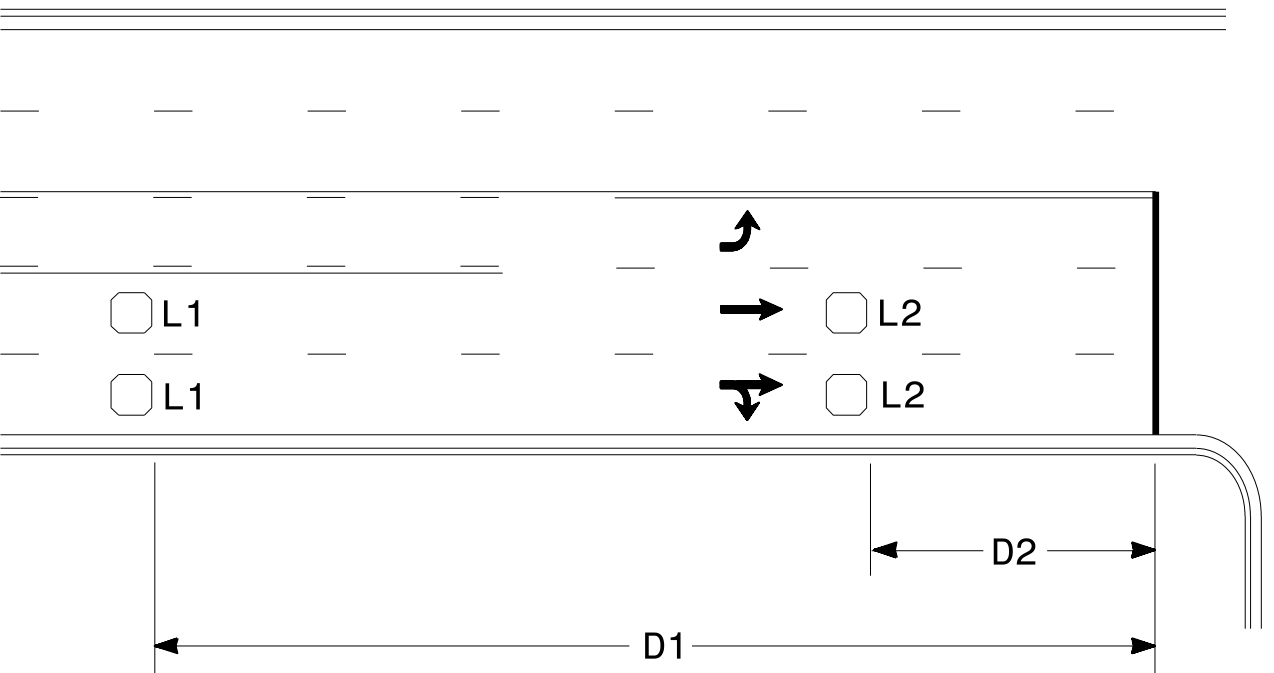


Speed Limit mph	D ft
35	200
40	250
45	300
50	355
55	420
60	475
65	550

L = 6ft X 6ft
Wired separately

Volume Density Operation

OR



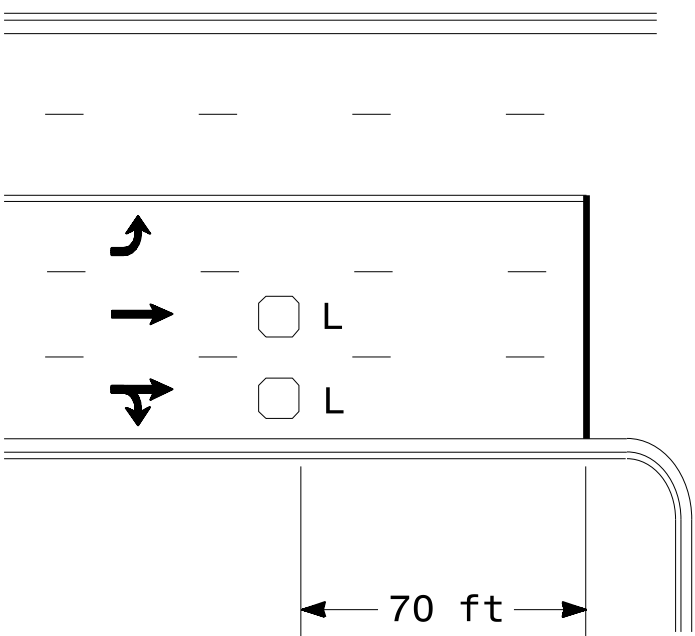
Speed Limit mph	D1 ft	D2 ft
40	250	80
45	300	90
50	355	100
55	420	110
60	475	120
65	550	130

L1 = 6ft X 6ft
Wired in series

L2 = 6ft X 6ft
Wired in series

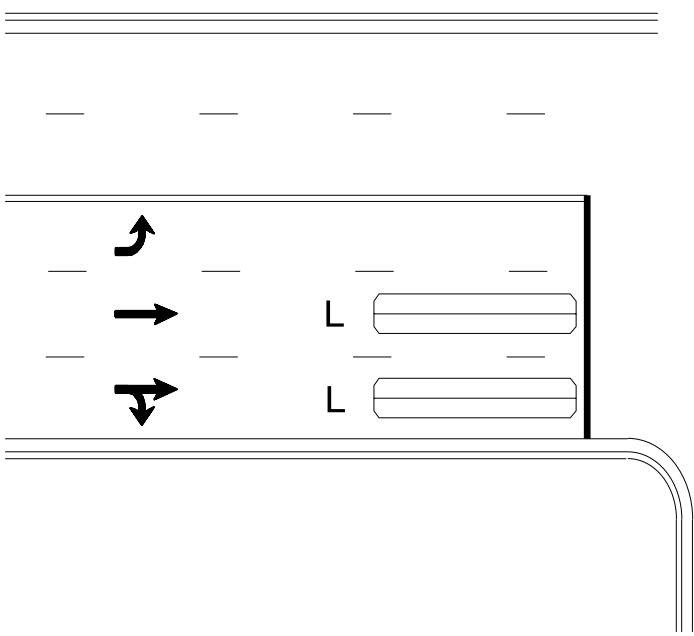
"Stretch" Operation

Low Speed Detection
(≤35 mph)



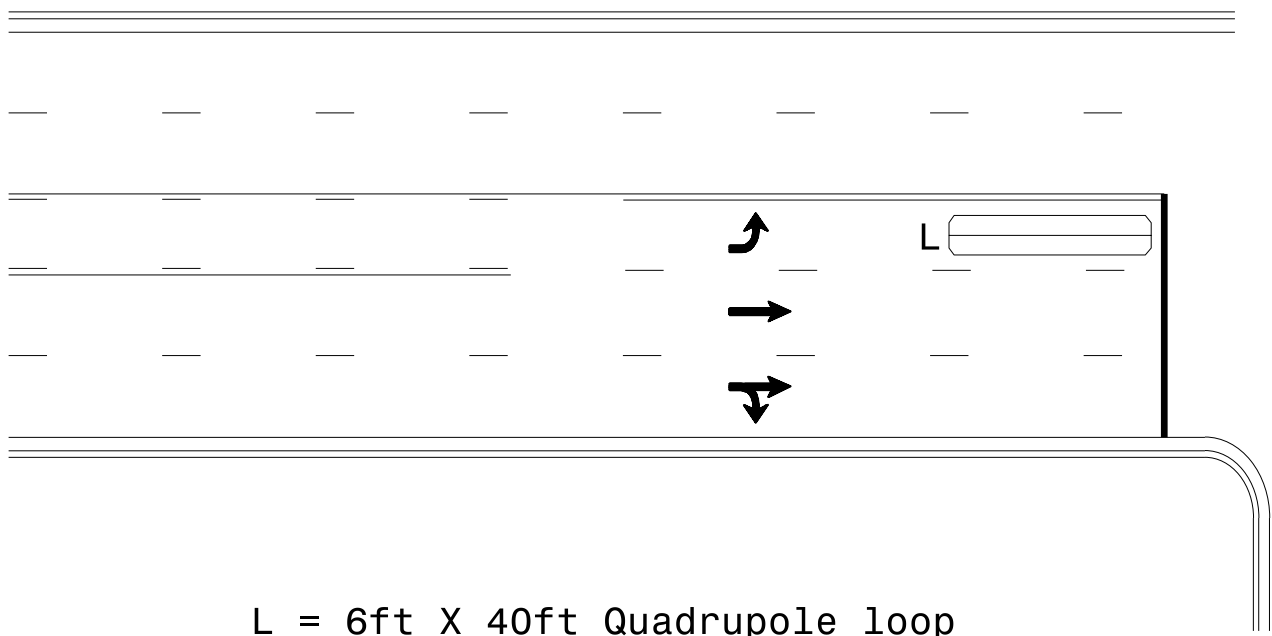
L = 6ft X 6ft
Wired in series

OR



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

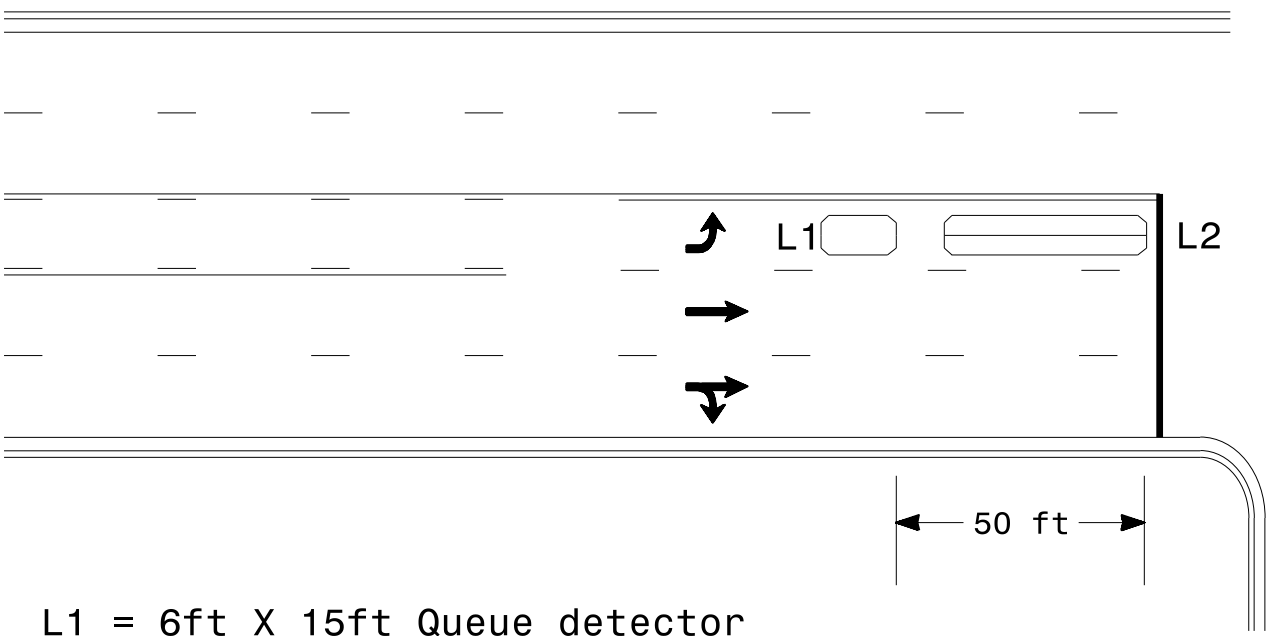
Left Turn Lane Detection



L = 6ft X 40ft Quadrupole loop

Presence Loop Detection

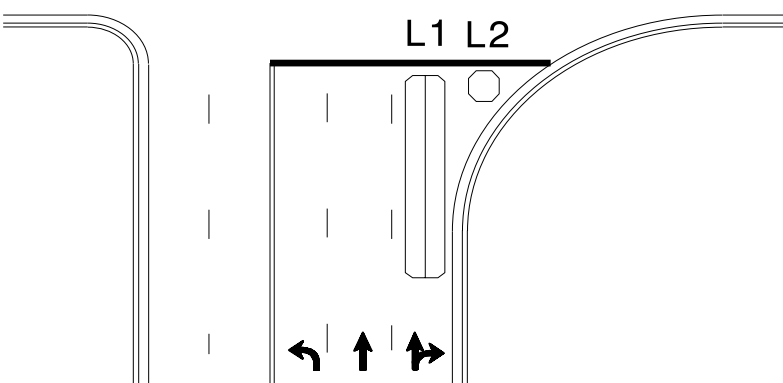
OR



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

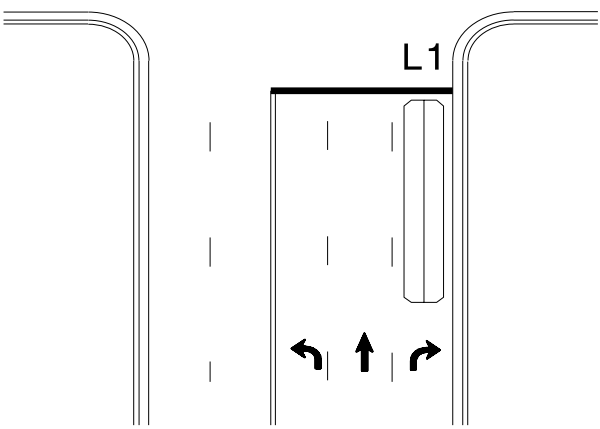
Queue Loop Detection

Right Turn Lane Detection

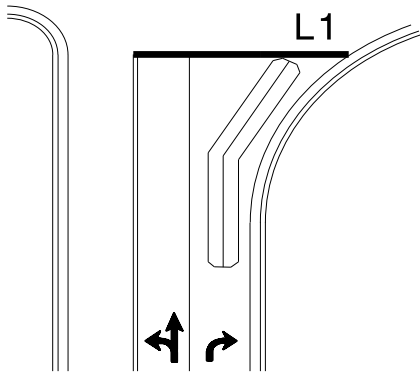


Shared Lane/
Wide Radius Turn

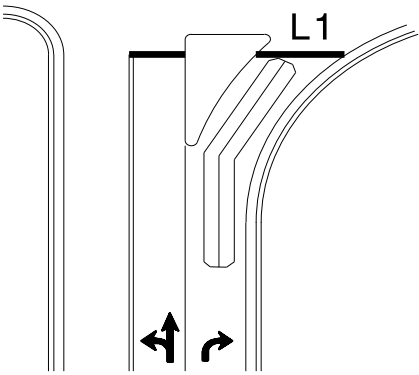
L1 = 6ft X 40ft Quadrupole loop
L2 = 6ft X 6ft [Minimum] Presence loop
Wired separately



Standard Turn

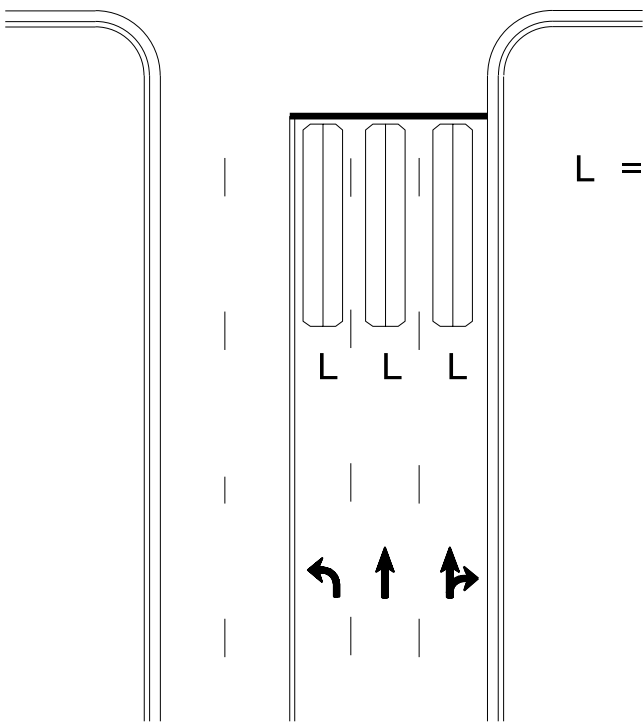


Wide Radius Turn



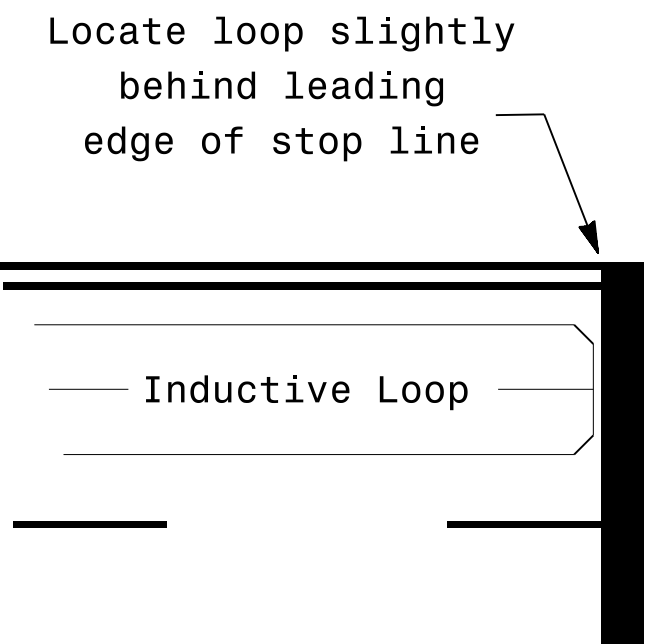
Channelized Turn

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:
- stop line is greater than 15' from edge of intersecting roadway
 - loop detects a permissive or protected/permissive left turn
 - 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:

TRANSPORTATION MOBILITY AND SAFETY DIVISION

DEPARTMENT OF TRANSPORTATION

SIGNAL DESIGN SECTION

750 N. Greenfield Pkwy, Garner, NC 27529

SCALE

N/A

Typical Signal Loop Locations

PLAN DATE: September 2025
PREPARED BY: J.A. Lohr

REVIEWED BY:
REVISIONS
INIT. DATE

SEAL
NORTH CAROLINA
PROFESSIONAL ENGINEER
ROBERT J. ZIEMBA
11/25/2025
DATE

SIG. INVENTORY NO.