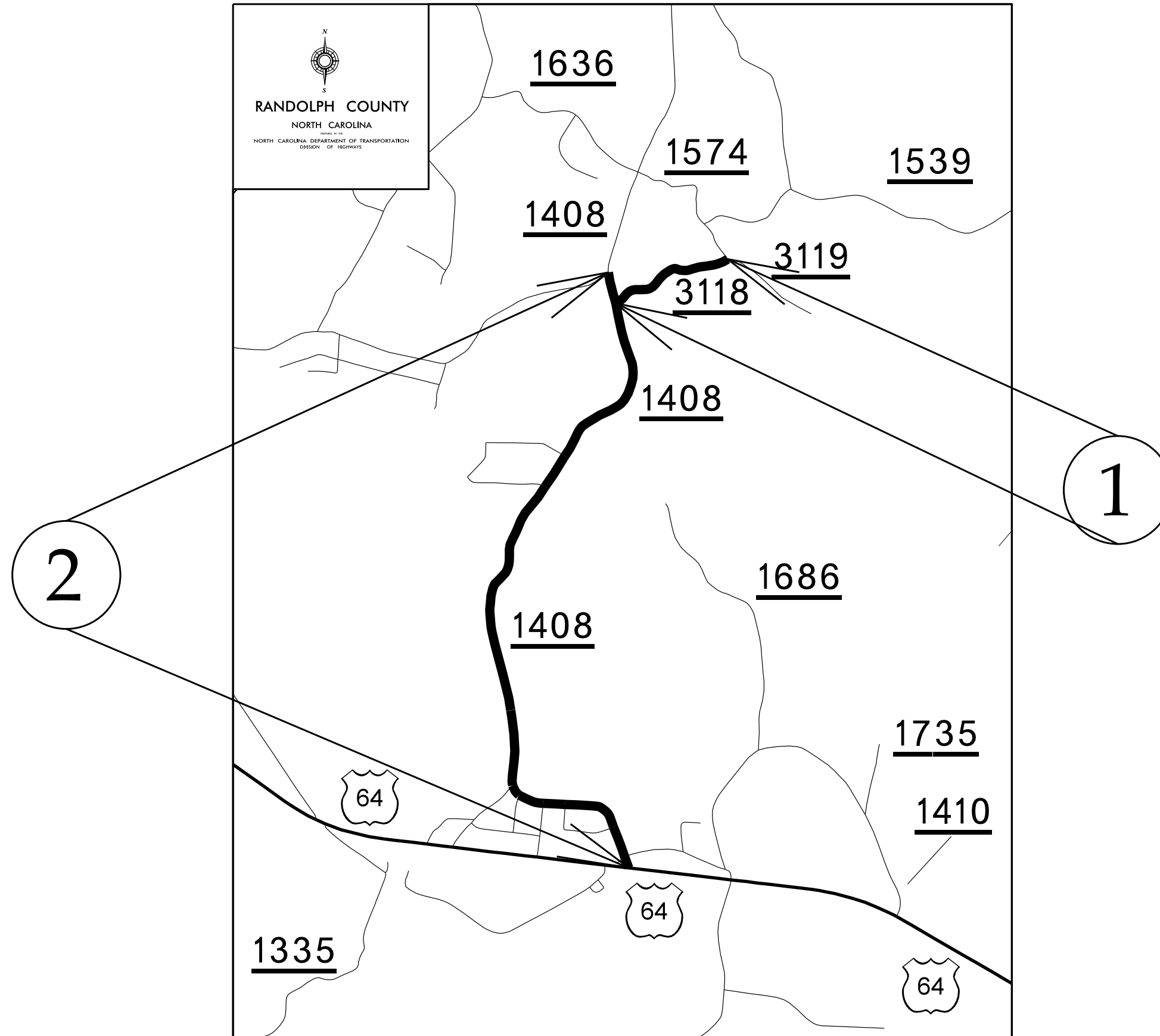


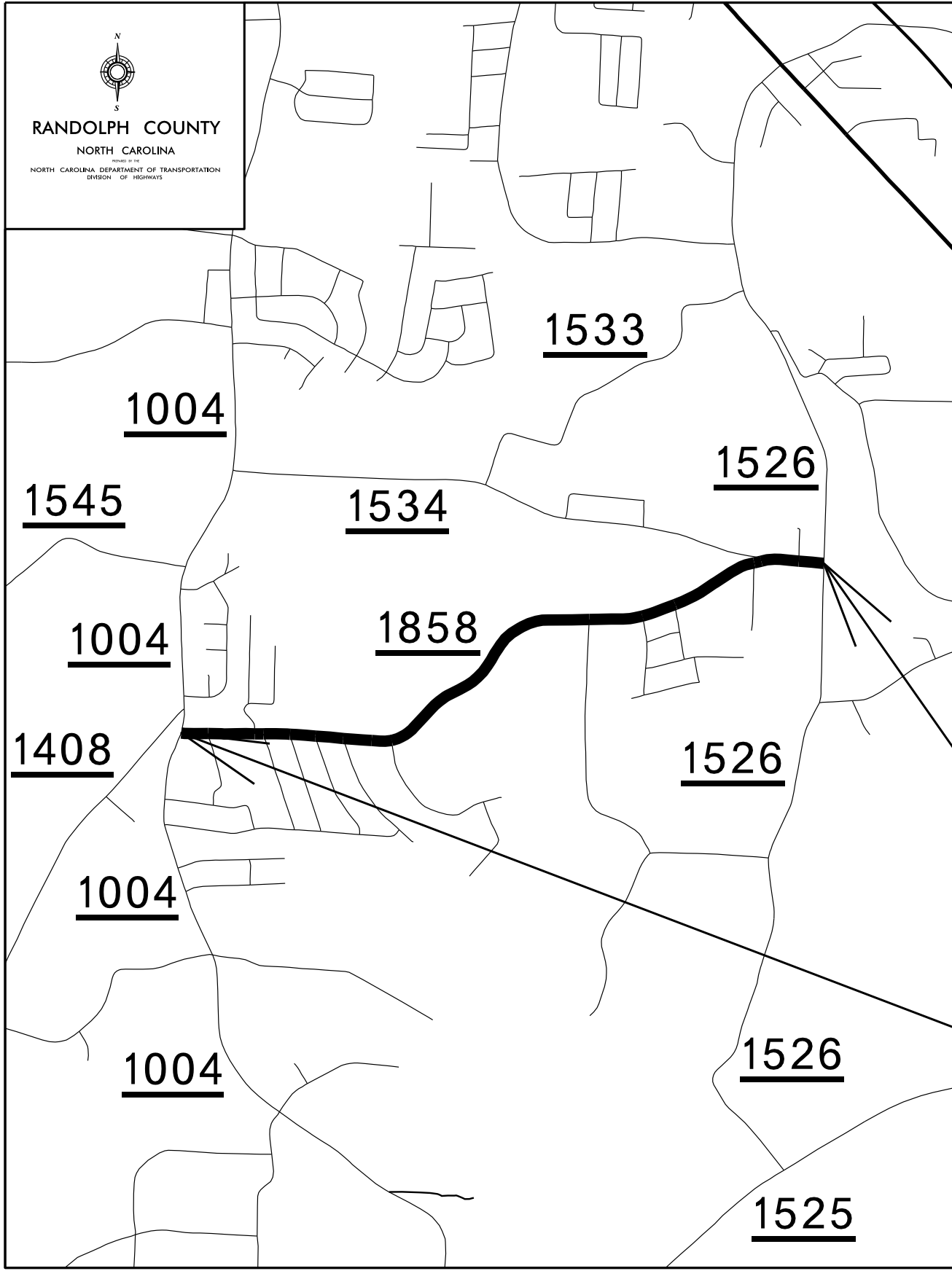
RANDOLPH COUNTY RESURFACING

040397
 31-JAN-2024 17:19
 C:\Users\jrandolph\OneDrive\Documents\2024_CPT\ Randolph_County_2024_Resurfacing\ Randolph_County_2024_Resurfacing.dgn

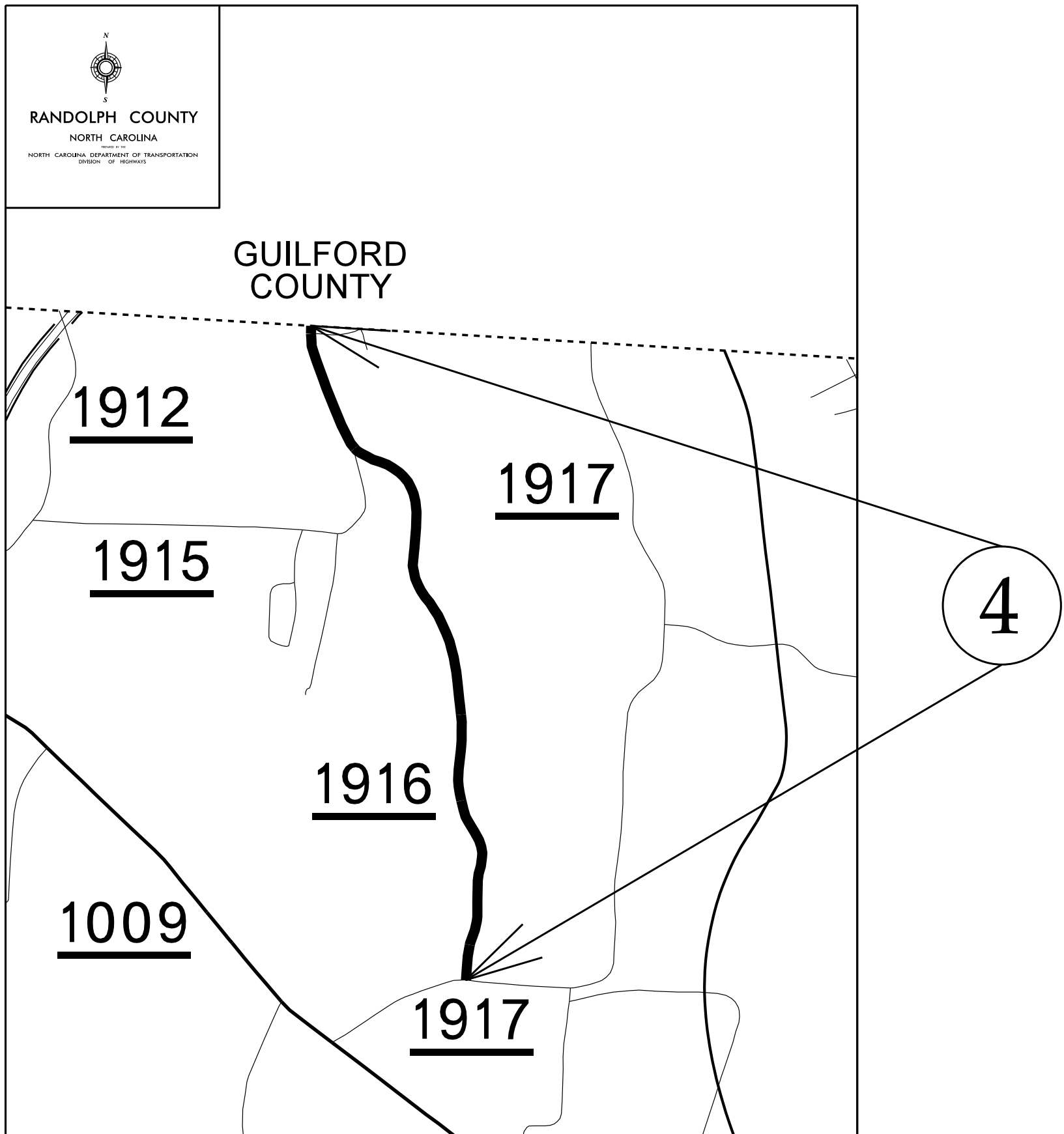
Maps 1 and 2



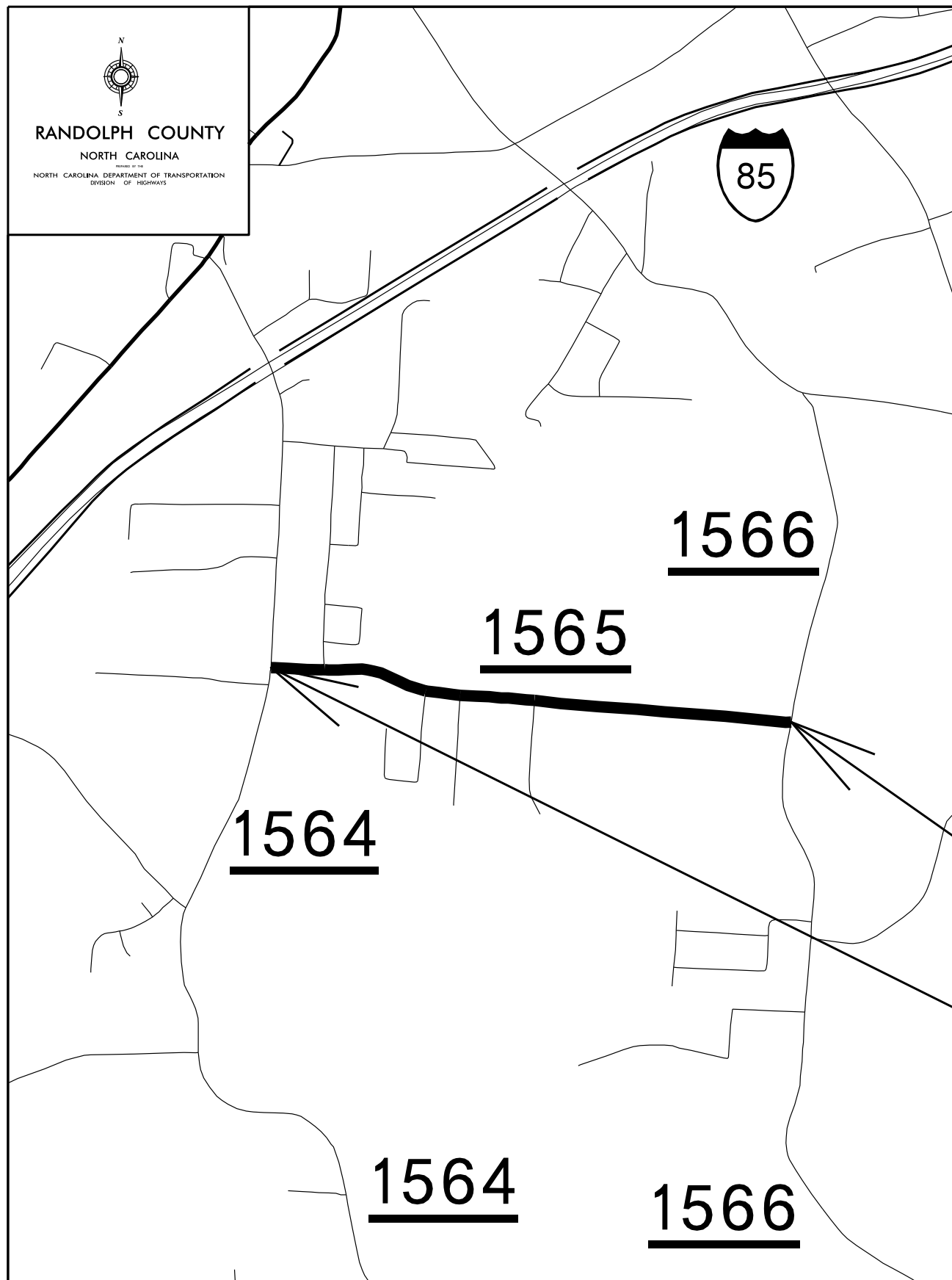
Map 3




Map 4

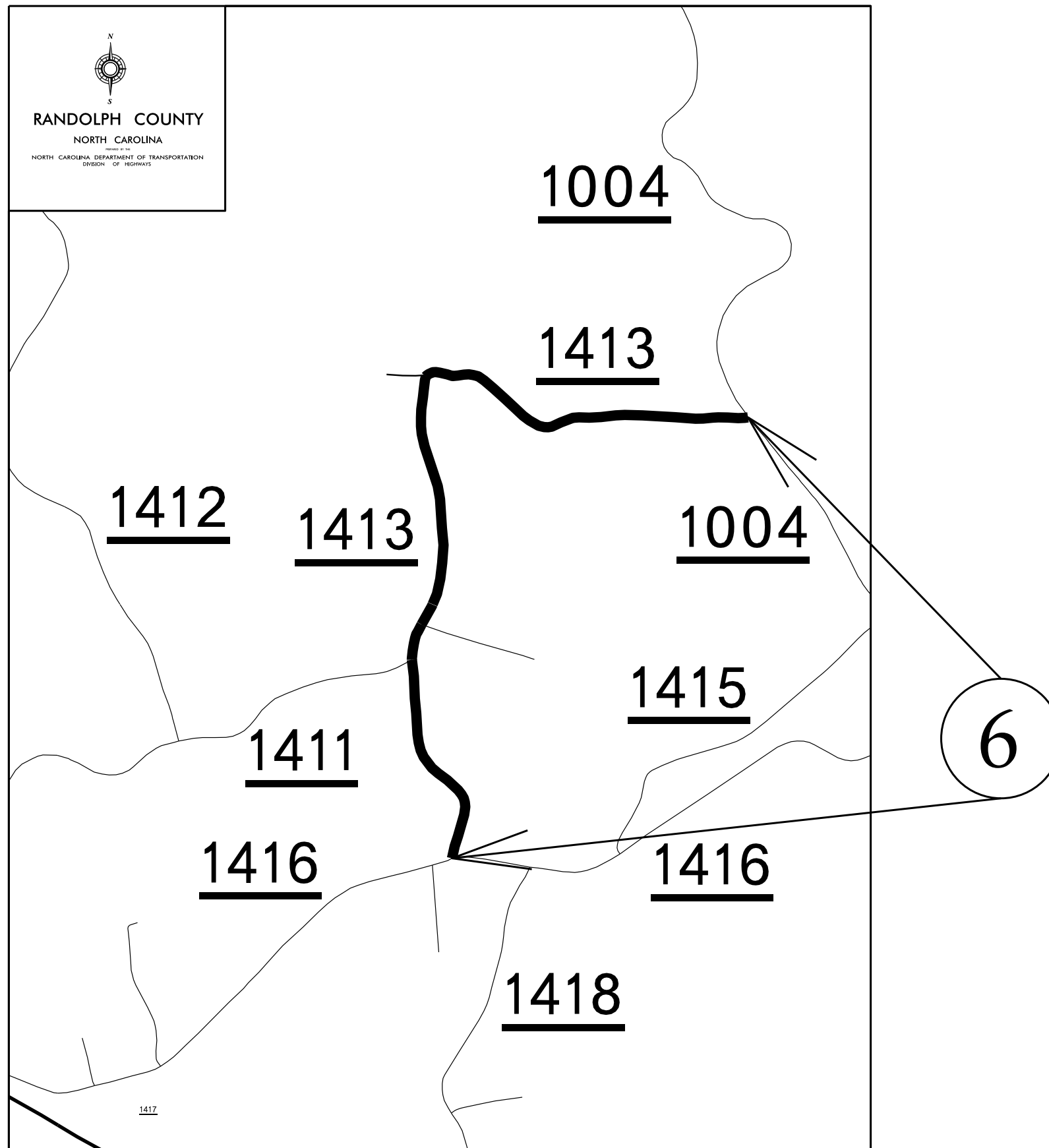


Map 5

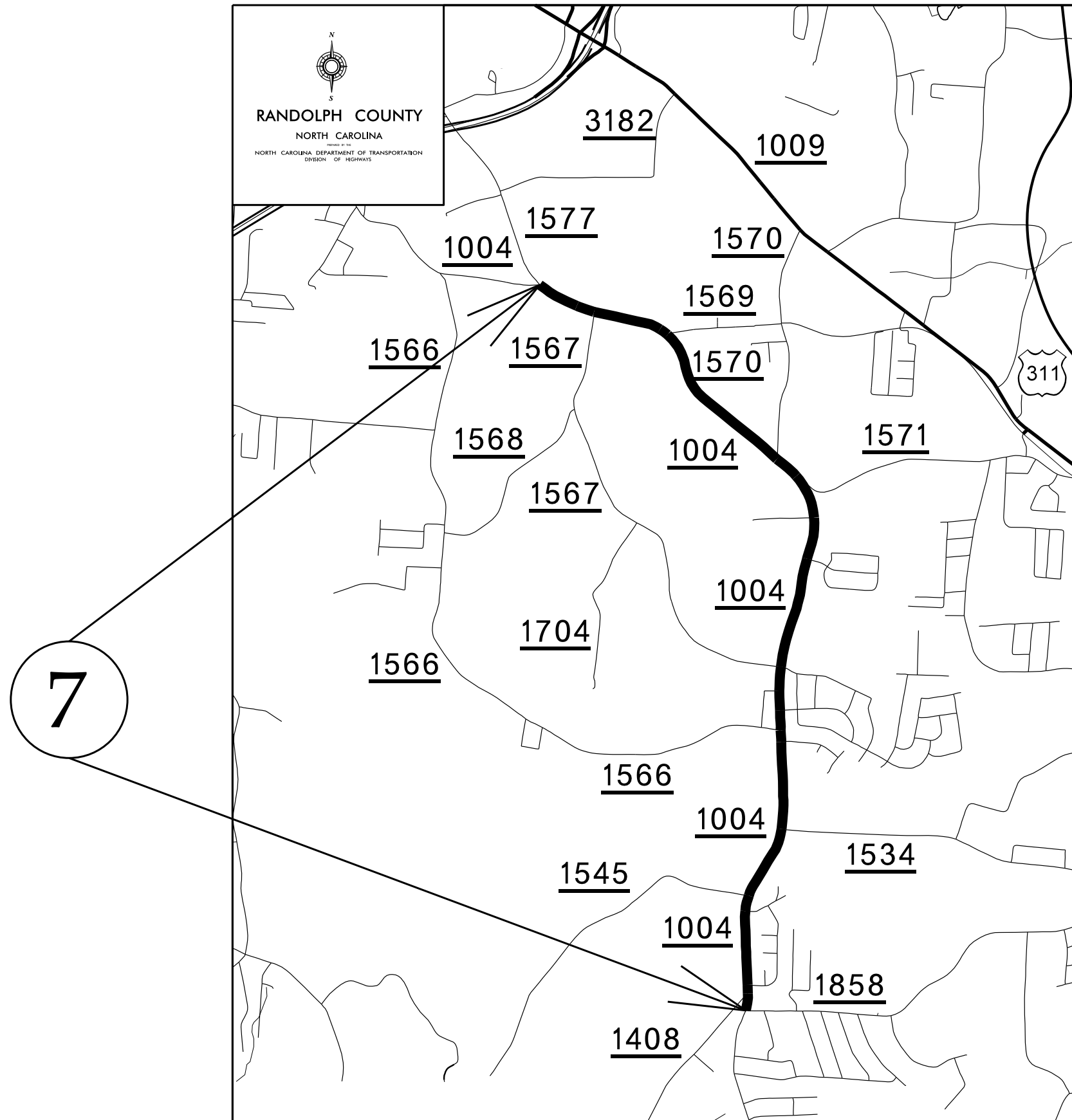



RANDOLPH COUNTY
NORTH CAROLINA
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

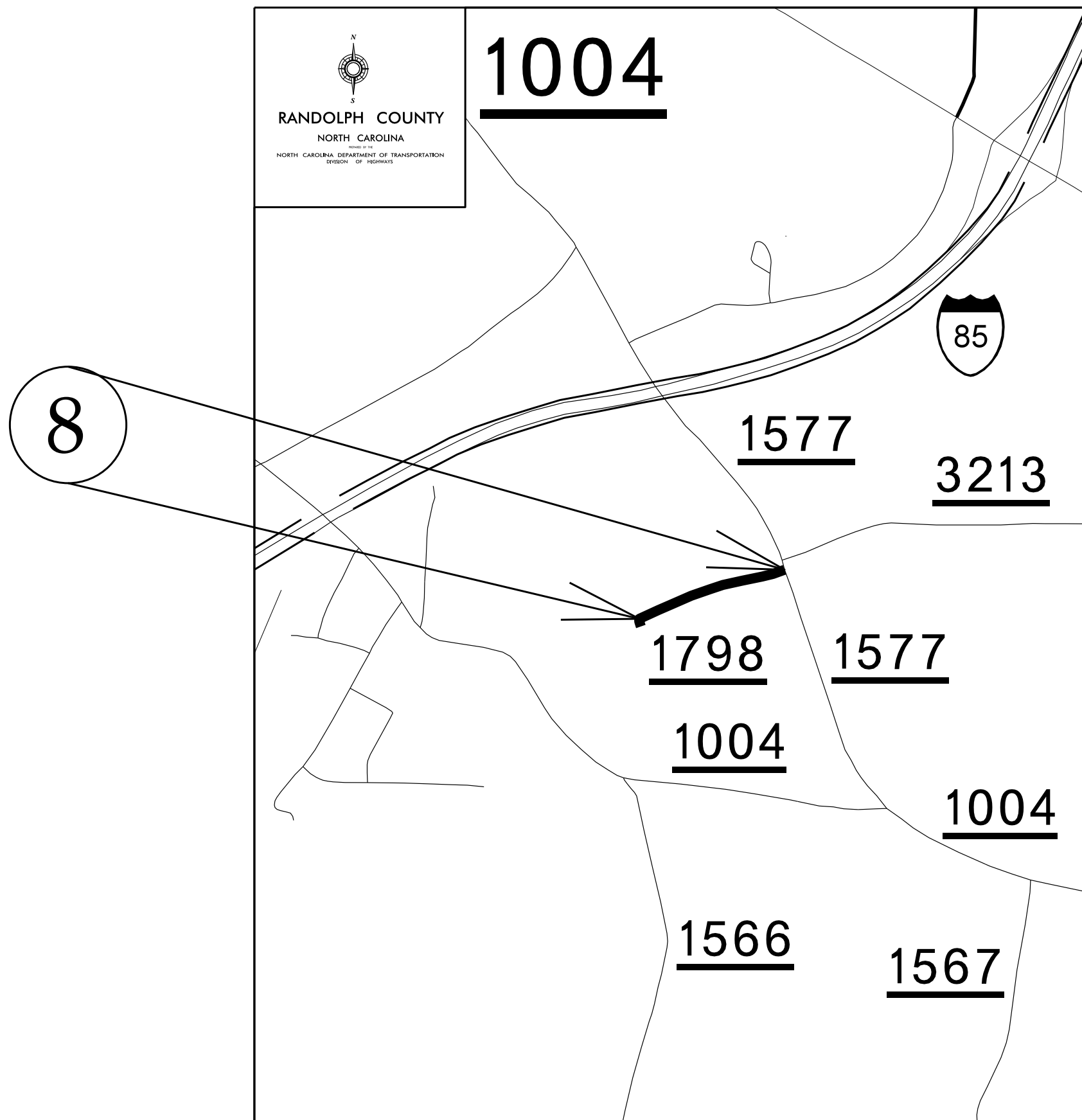
Map 6



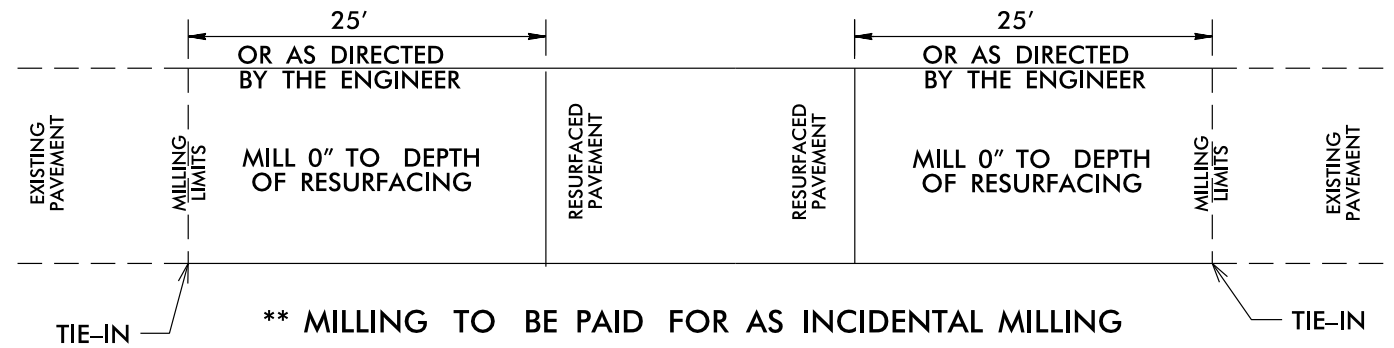
Map 7



Map 8

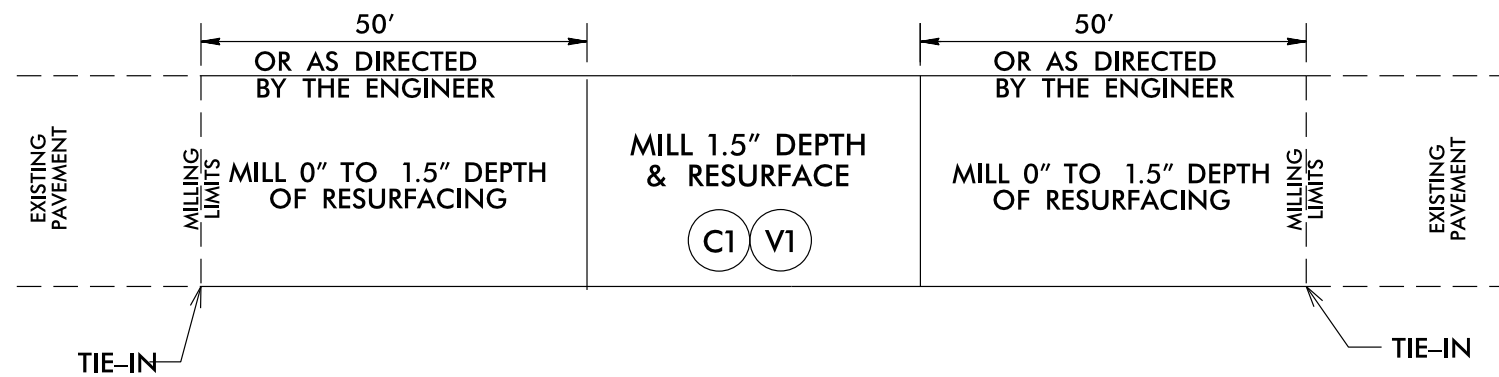
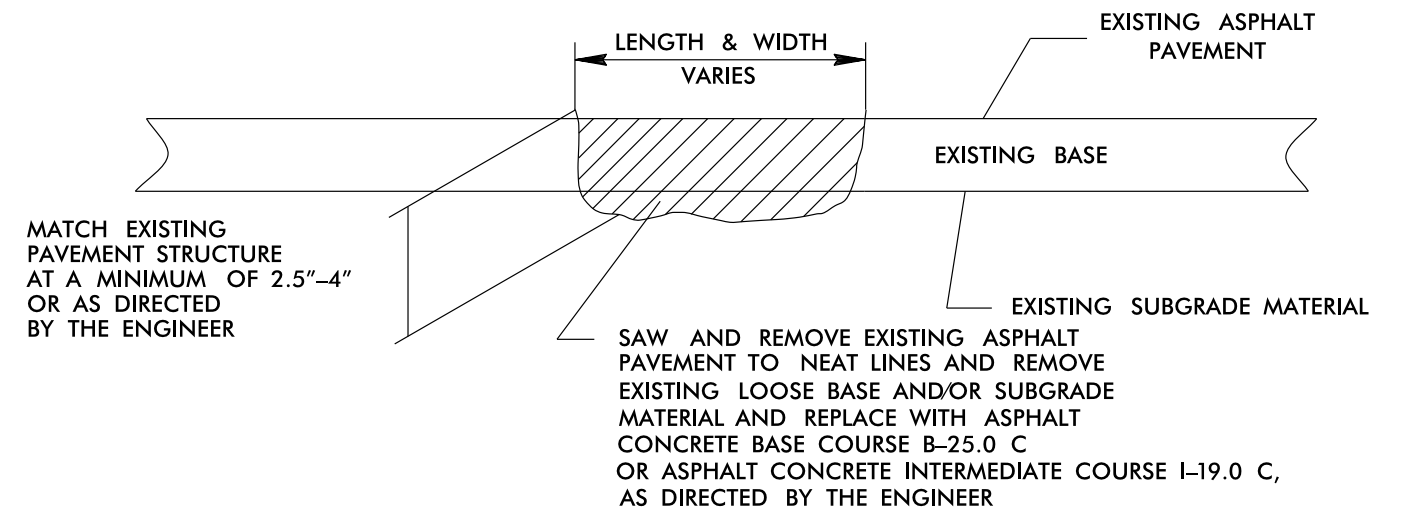


PAVEMENT TIE-IN DETAIL



**** MILLING TO BE PAID FOR AS INCIDENTAL MILLING**

DETAILS OF PATCHING EXISTING PAVEMENT PRIOR TO RESURFACING



*** MILLING FOR APPROACHES SHALL BE PAID FOR UNDER INCIDENTAL MILLING**

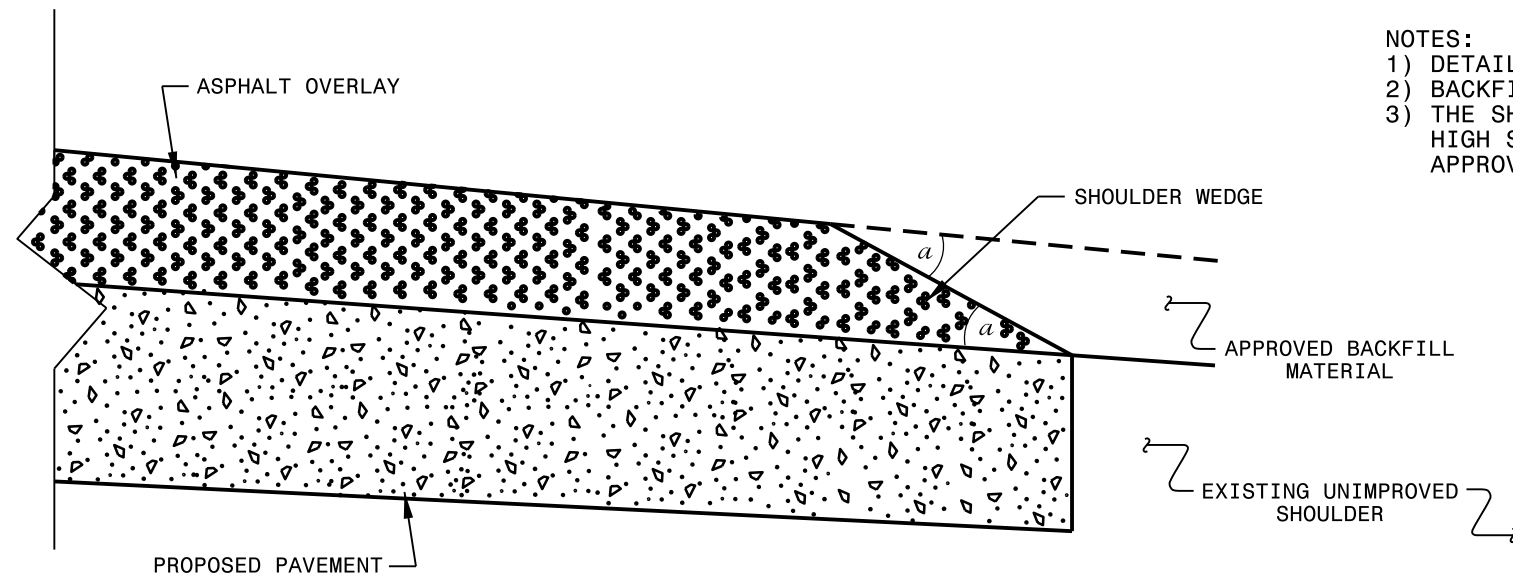
**BRIDGE DRAWING FOR
MAP #3 OLD MARLBORO RD BRIDGE #79
MAP #4 WEANT RD BRIDGE #285**

PROJECT NOTES

- ONE COAT OF PAINT MARKINGS TO BE APPLIED ON MAPS 1-6 AND 8. PERMANENT MARKINGS TO BE HANDLED ON A LATER PROJECT.

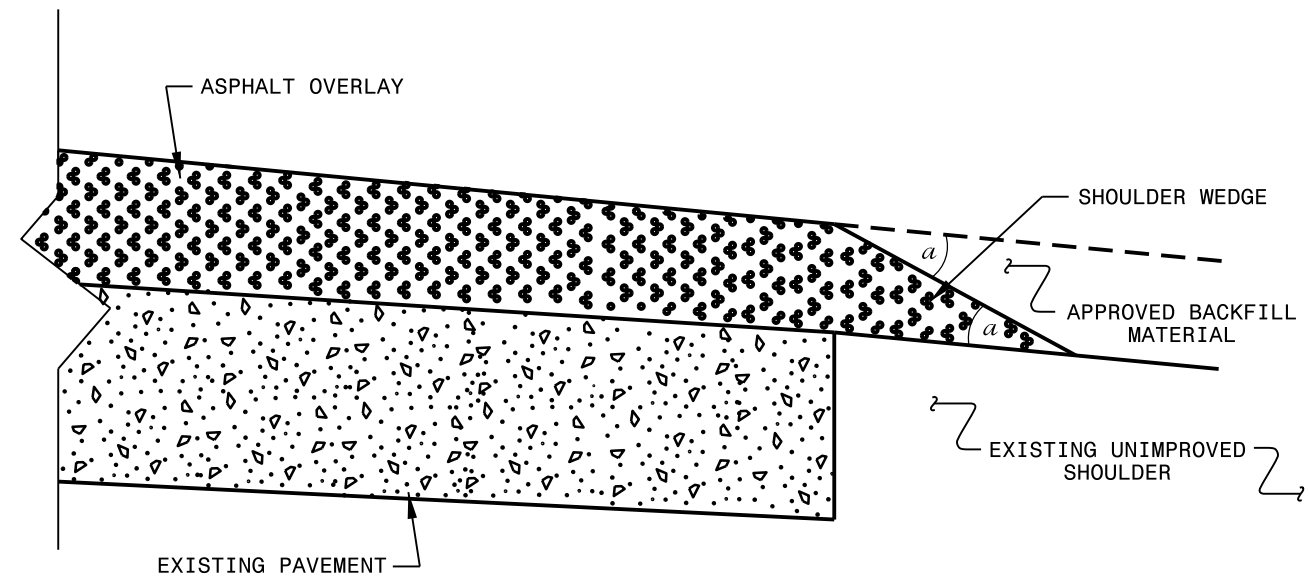
NOTES:

- 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.



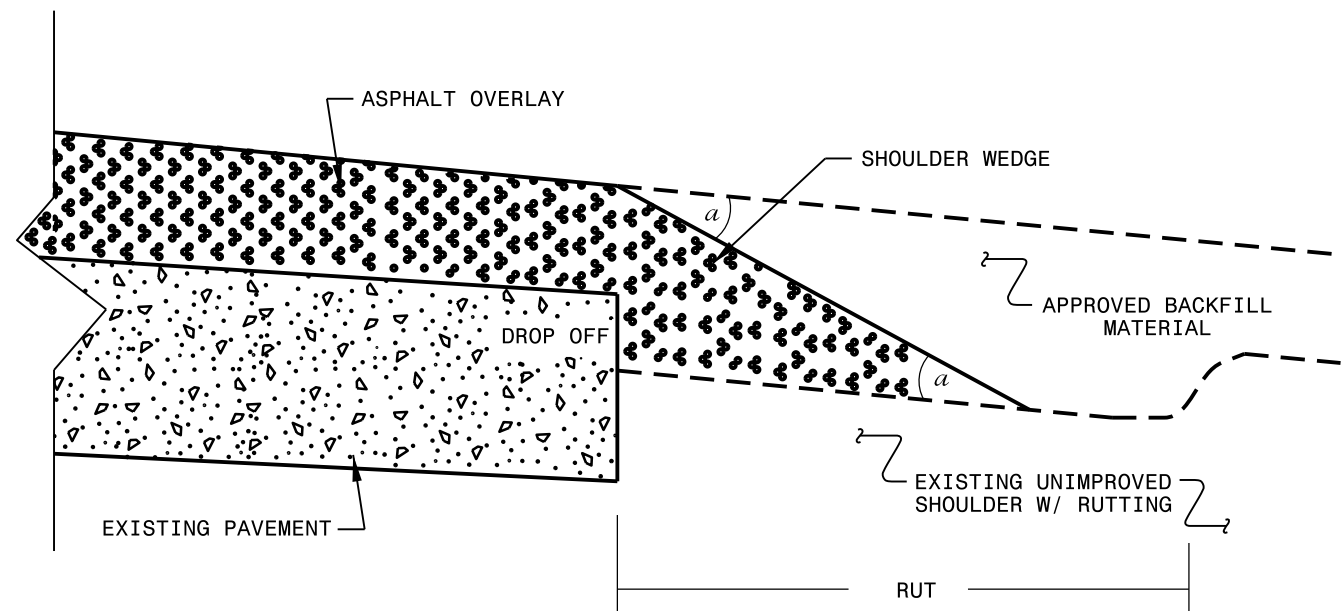
SHOULDER WEDGE DETAIL

(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°

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.: szusr/details/stand/shoulderwedgedetail.dgn		

PROJECT NO.	SHEET NO.	TOTAL NO.
2024CPT.08.13.20761, 50702	12	

SUMMARY OF QUANTITIES

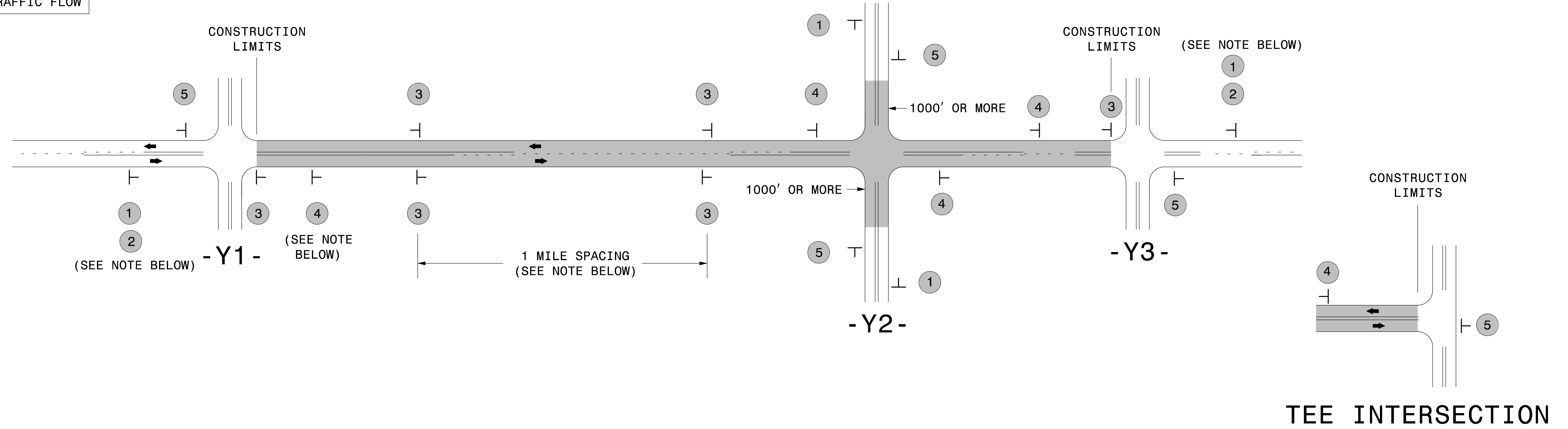
PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	LANE TYPE	FINAL SURFACE TESTING REQUIRED	WARM MIX ASPHALT REQUIRED	LENGTH	WIDTH	BEGIN MP	END MP	1245000000-E	1260000000-E	1297000000-E	1330000000-E	1503000000-E	1519000000-E	1575000000-E	1704000000-E	1775000000-E	1838000000-E	1838500000-N	2143000000-E	2815000000-N	2830000000-N	2845000000-N	7444000000-E				
														SHOULDER RECONSTRUCTION	AGGREGATE SHOULDER BORROW	1.5" MILLING	INCIDENTAL MILLING	INTERMEDIATE COURSE, I19.0C	SURFACE COURSE, S9.5B	ASPHALT BINDER FOR PLANT MIX	PATCHING EXISTING PAVEMENT	ASPHALT SURFACE TREATMENT, MATCOAT, #67 STONE	EMULSION FOR ASPHALT SURFACE TREATMENT	VACUUM TRUCK	BLOTTING SAND	ADJUST DROP INLET	ADJUST MANHOLES	ADJUST METER OR VALVE BOX	INDUCTIVE LOOP SAWCUT				
														MI	FT																		
														SMI	TON	SY	SY	TONS	TONS	TONS	TONS	SY	GAL	WK	TON	EA	EA	EA	LF				
2024CPT.08.13.20761	Randolph	1	SR-3118 / LINDA LN	FROM SR 1408 (HOOVER HILL RD) TO SR 3119 (MOUNTAIN VIEW DR)	1	2	2WU	NO	NO	0.536	21	0	0.536	1.07	150.00		260		644	50	100												
TOTAL FOR MAP NO. 1														0.536				1.07	150.00		260		644	50	100								
2024CPT.08.13.20761	Randolph	2	SR-1408 / HOOVER HILL RD	(FROM SR 1406 (COVERED BRIDGE RD) TO US 64	2	2	2WU	NO	NO	3.09	22	5.01	8.1	6.18	865.00		1,950		3,919	270	300	39,884.00	15,953	2.00	5								
TOTAL FOR MAP NO. 2														3.09				6.18	865.00		1,950		3,919	270	300	39,884.00	15,953	2.00	5				
2024CPT.08.13.20761	Randolph	3	SR-1858 / OLD MARLBORO RD	FROM SR 1526 (EDGAR RD) TO SR 1004 (HILLSVILLE RD)	1	2	2WU	NO	NO	2.412	20	0	2.412	4.82	675.00	335	2,340		2,887	210	400												
TOTAL FOR MAP NO. 3														2.412				4.82	675.00	335	2,340		2,887	210	400								
2024CPT.08.13.20761	Randolph	4	SR-1916 / WEANT RD	FROM GUILFORD COUNTY LINE TO SR 1917 (SUITS RD)	1	2	2WU	NO	NO	1.888	20	0	1.888	3.78	529.00	582	2,285		2,273	170	450												
TOTAL FOR MAP NO. 4														1.888				3.78	529.00	582	2,285		2,273	170	450								
2024CPT.08.13.20761	Randolph	5	SR-1565 / RONNIEDALE RD	FROM SR 1564 (MEADOWBROOK DR) TO SR 1566 (FAIRVIEW CHURCH RD)	1	2	2WU	NO	NO	1.242	21	0	1.242	2.48	347.00		910		1,526	120	350												
TOTAL FOR MAP NO. 5														1.242				2.48	347.00		910		1,526	120	350								
2024CPT.08.13.20761	Randolph	6	SR-1413 / MT VIEW CHURCH RD	FROM SR 1416 (OLD LEXINGTON RD) TO SR 1004 (CARAWAY MOUNTAIN RD)	1	2	2WU	NO	NO	2.25	20	0	2.25	4.50	630.00		1,170		2,576	185	300												
TOTAL FOR MAP NO. 6														2.25				4.50	630.00		1,170		2,576	185	300								
2024CPT.08.13.20761	Randolph	7	SR-1004 / ARCHDALE RD / HILLSVILLE RD.	FROM SR 1004 (TRINITY RD) TO SR 1858 (OLD MARLBORO RD)	1	2	2WU	NO	NO	3.96	36	2.04	6	7.92	1,109.00		5,460		6,626	450	400					1	1	5	1,650				
TOTAL FOR MAP NO. 7														3.96				7.92	1,109.00		5,460		6,626	450	400					1	1	5	1,650
TOTAL FOR PROJ NO. 2024CPT.08.13.20761														15.378				30.75	4,305.00	917	14,375		20,451	1,455	2,300	39,884.00	15,953	2.00	5	1	1	5	1,650
50702	Randolph	8	SR-1798 / ROELEE ST	FROM SR 1577 (ARCHDALE RD) TO END OF MAINTENANCE	1,3	2	2WU	NO	NO	0.46	24	0	0.46	0.92	129.00		780	1,108	535	95	100								200				
TOTAL FOR MAP NO. 8														0.46				0.92	129.00		780	1,108	535	95	100							200	
TOTAL FOR PROJ NO. 50702														0.46				0.92	129.00		780	1,108	535	95	100							200	
GRAND TOTAL														15.838				31.67	4,434.00	917	15,155	1,108	20,986	1,550	2,400	39,884.00	15,953	2.00	5	1	1	5	1,850

SIGNING FOR RESURFACING PROJECTS

LEGEND

┃ STATIONARY SIGN

← DIRECTION OF TRAFFIC FLOW



MAINLINE (-L-) SIGNING

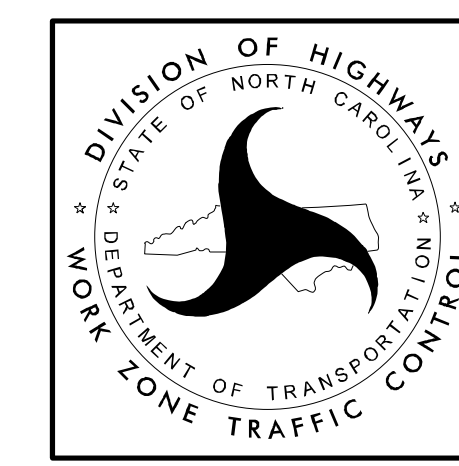
-Y- LINE SIGNING

SIGNING NOTES AND PLACEMENT PER DIRECTION	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.	<p>NO REQUIRED STATIONARY SIGNING FOR THE FOLLOWING -Y- LINE CONDITIONS:</p> <ol style="list-style-type: none"> LESS THAN 1000' OF RESURFACING ALONG -Y- LINE SUBDIVISION ROADS DEAD END ROADS <p>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.</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>W20-1 48" X 48"</p> <p>PLACED 500' IN ADVANCE OF FLAGGER.</p> </div> <div style="text-align: center;"> <p>W20-7 A 48" X 48"</p> <p>PLACED 250' IN ADVANCE OF FLAGGER.</p> </div> </div>
	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	 LOW SOFT SHOULDER 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 1/2 MILE FROM INTERSECTION AND SPACE 1 MILE APART THEREAFTER. 	
	4	 ROAD UNDER CONST 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. 	
	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.

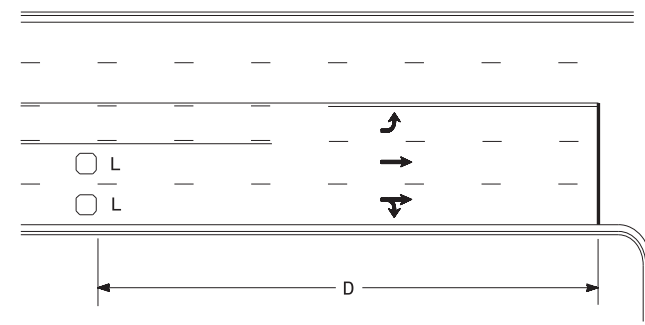
MAPS LESS THAN 2 MILES

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.



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

High Speed Detection (≥40 mph)

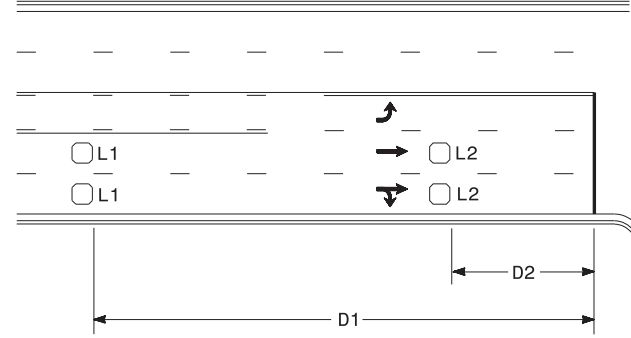


Speed Limit mph	D ft
40	250
45	300
50	355
55	420

L = 6ft X 6ft
Wired separately

Volume Density Operation

OR

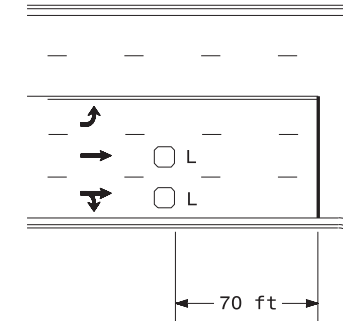


Speed Limit mph	D1 ft	D2 ft
40	250	80
45	300	90
50	355	100
55	420	110

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

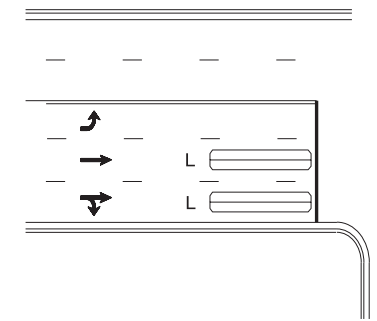
"Stretch" Operation

Low Speed Detection (≤35 mph)



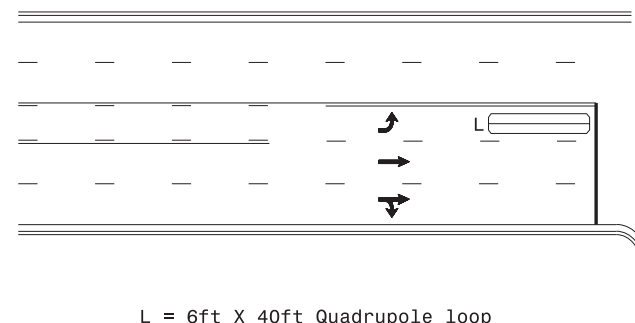
L = 6ft X 6ft
Wired in series

OR



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

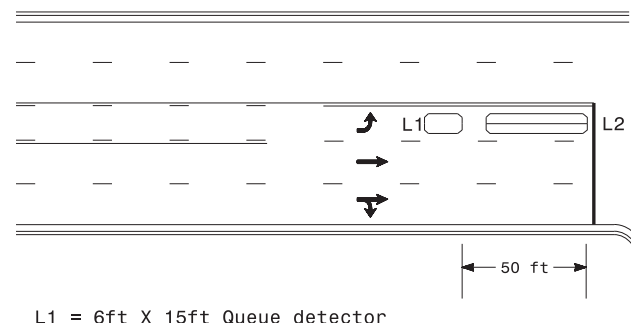
Left Turn Lane Detection



L = 6ft X 40ft Quadrupole loop

Presence Loop Detection

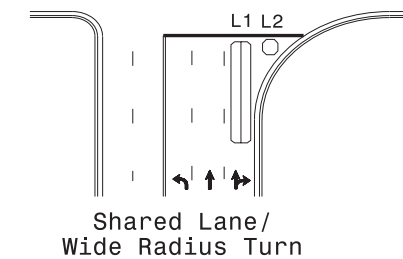
OR



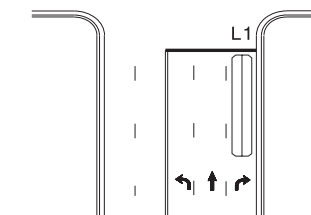
L1 = 6ft X 15ft Queue detector
L2 = 6ft X 40ft Quadrupole loop

Queue Loop Detection

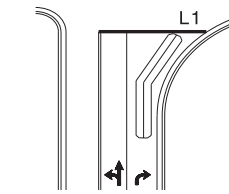
Right Turn Lane Detection



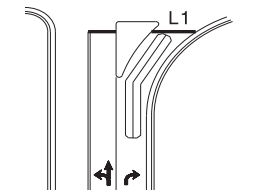
L1 = 6ft X 40ft Quadrupole loop
L2 = 6ft X 6ft [Minimum] Presence loop
Wired separately



Standard Turn

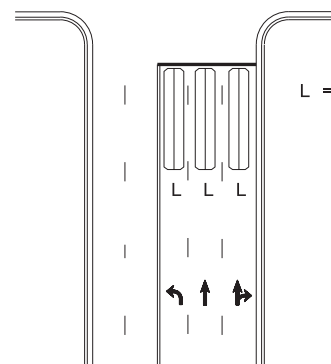


Wide Radius Turn



Channelized Turn

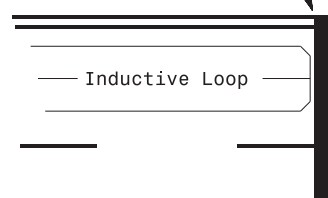
Side Street Detection



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

750 N. Greenfield Pkwy, Garner, NC 27529

Prepared In the Offices of:

Typical Signal Loop Locations	
PLAN DATE: September 2020	REVIEWED BY: JPG
PREPARED BY: PLA	REVIEWED BY:
SCALE: N/A	REVISIONS: INIT. DATE
DATE: 9/8/2020	

SIG. INVENTORY NO.