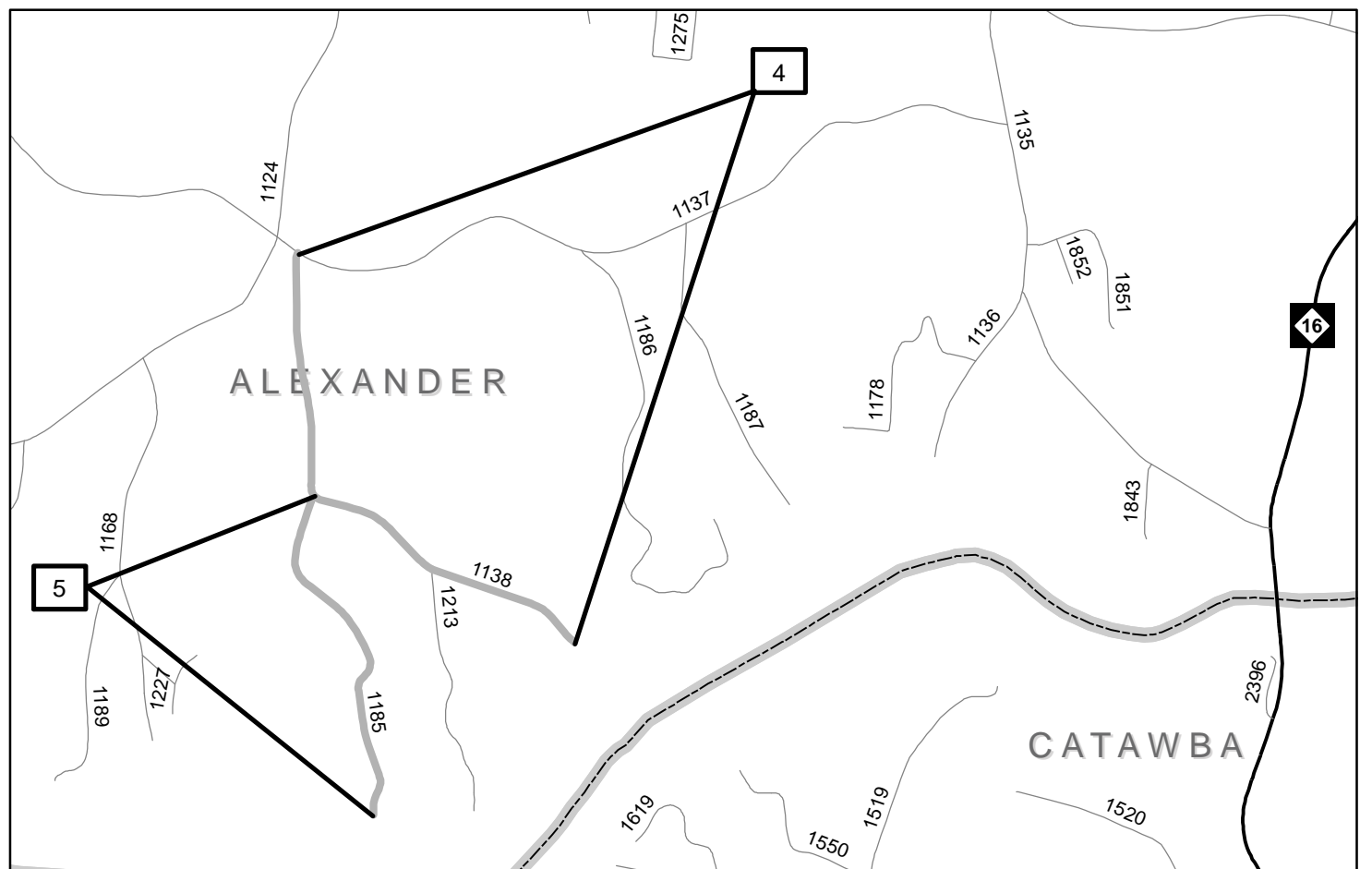
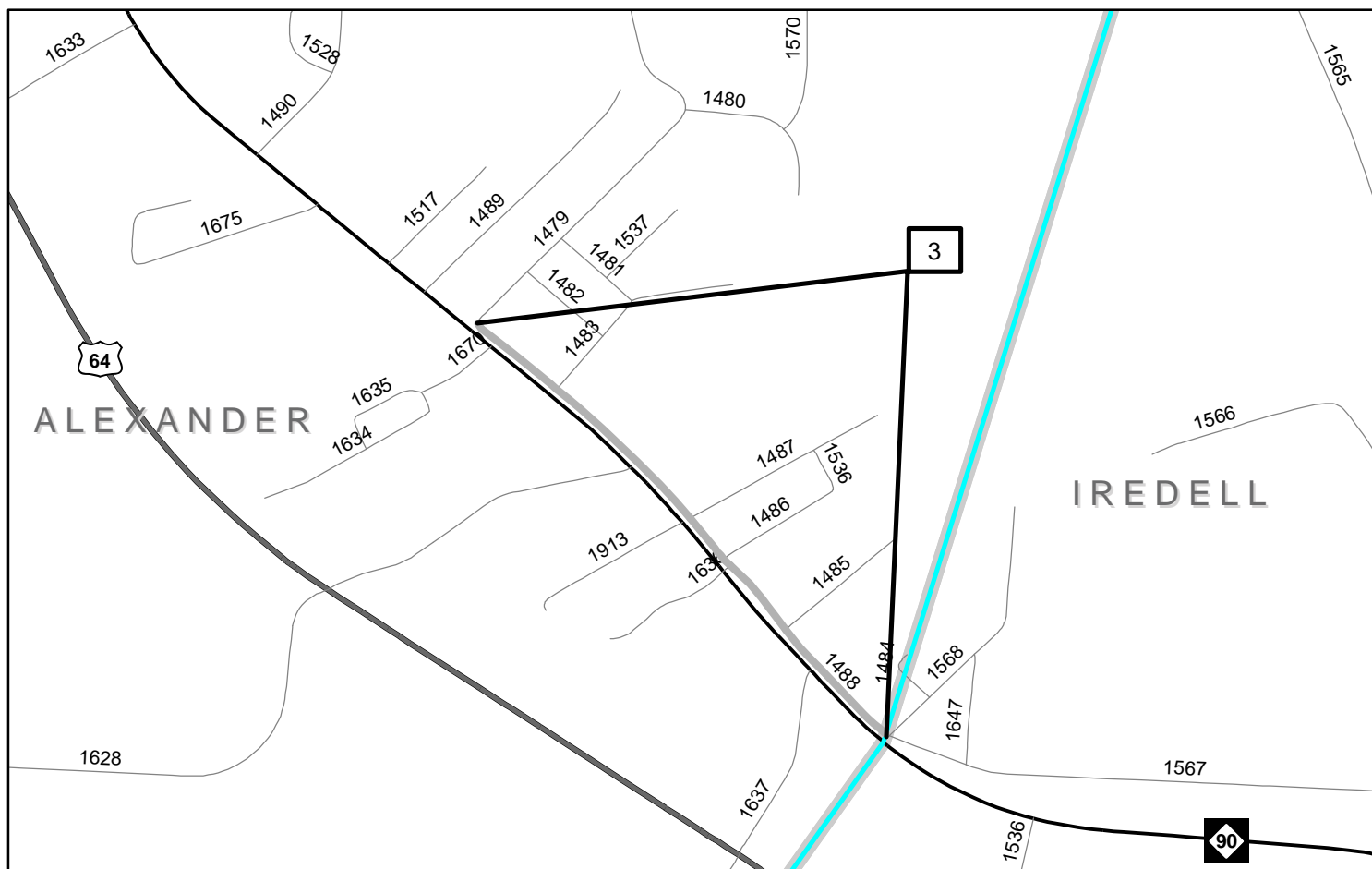
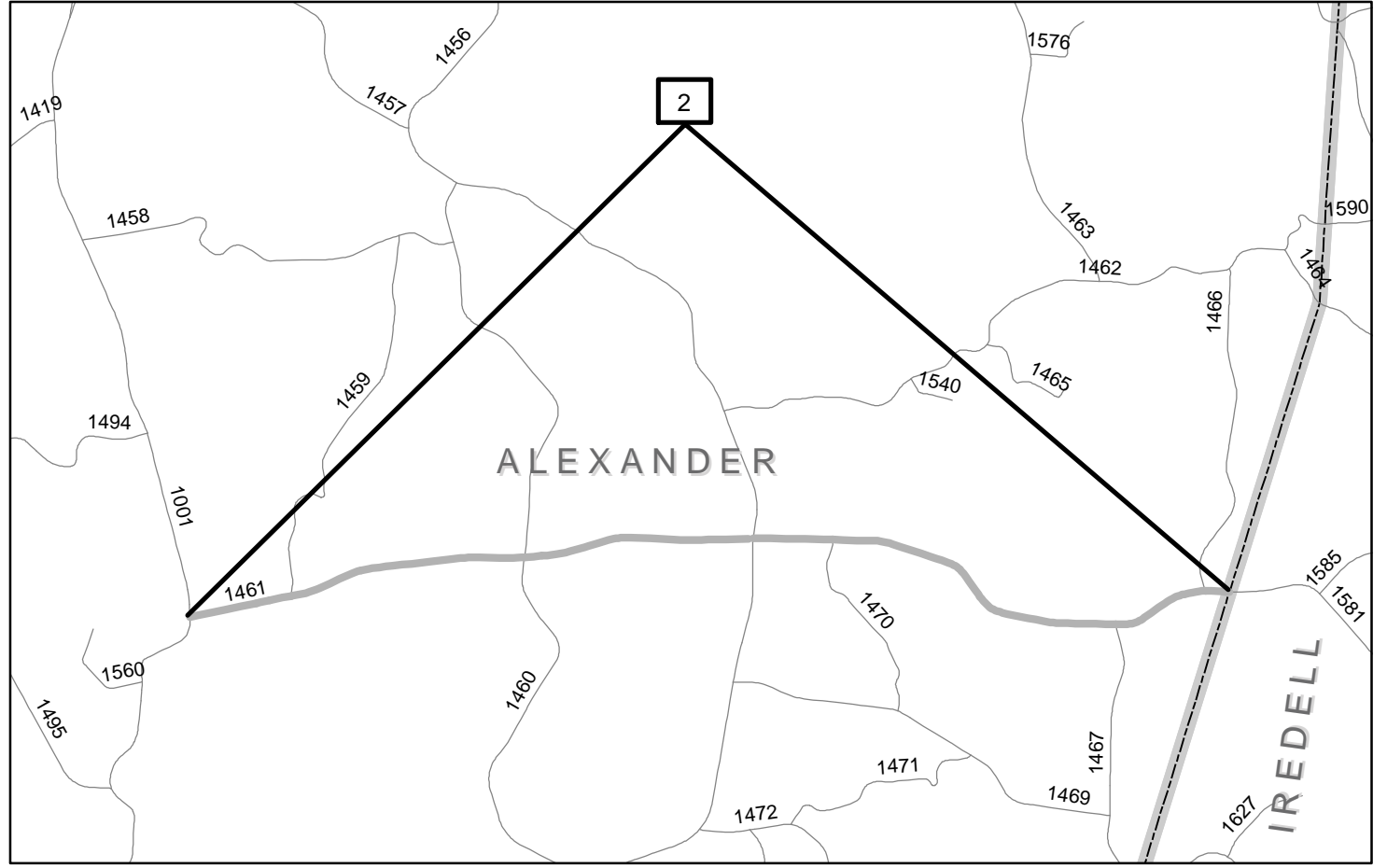
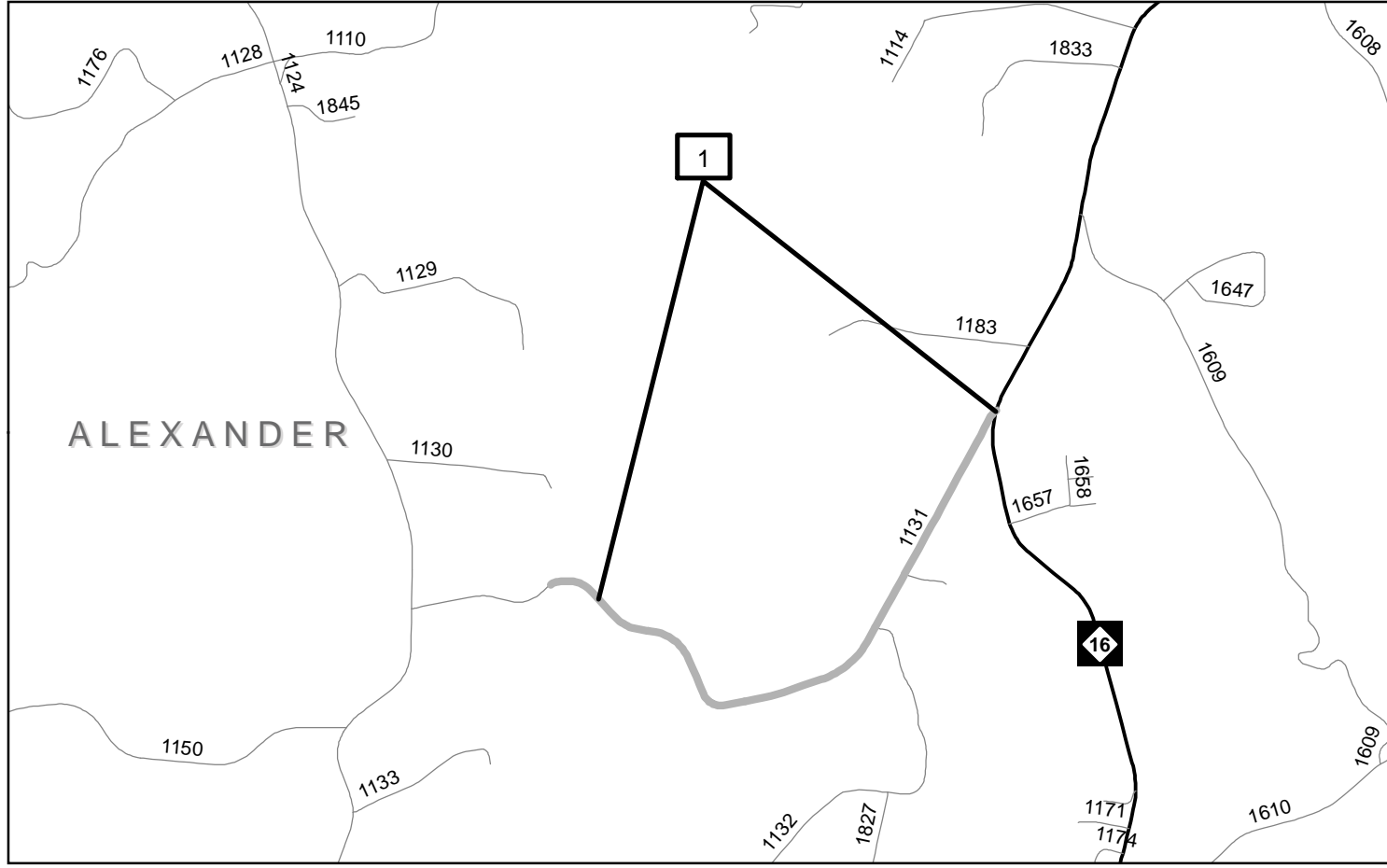
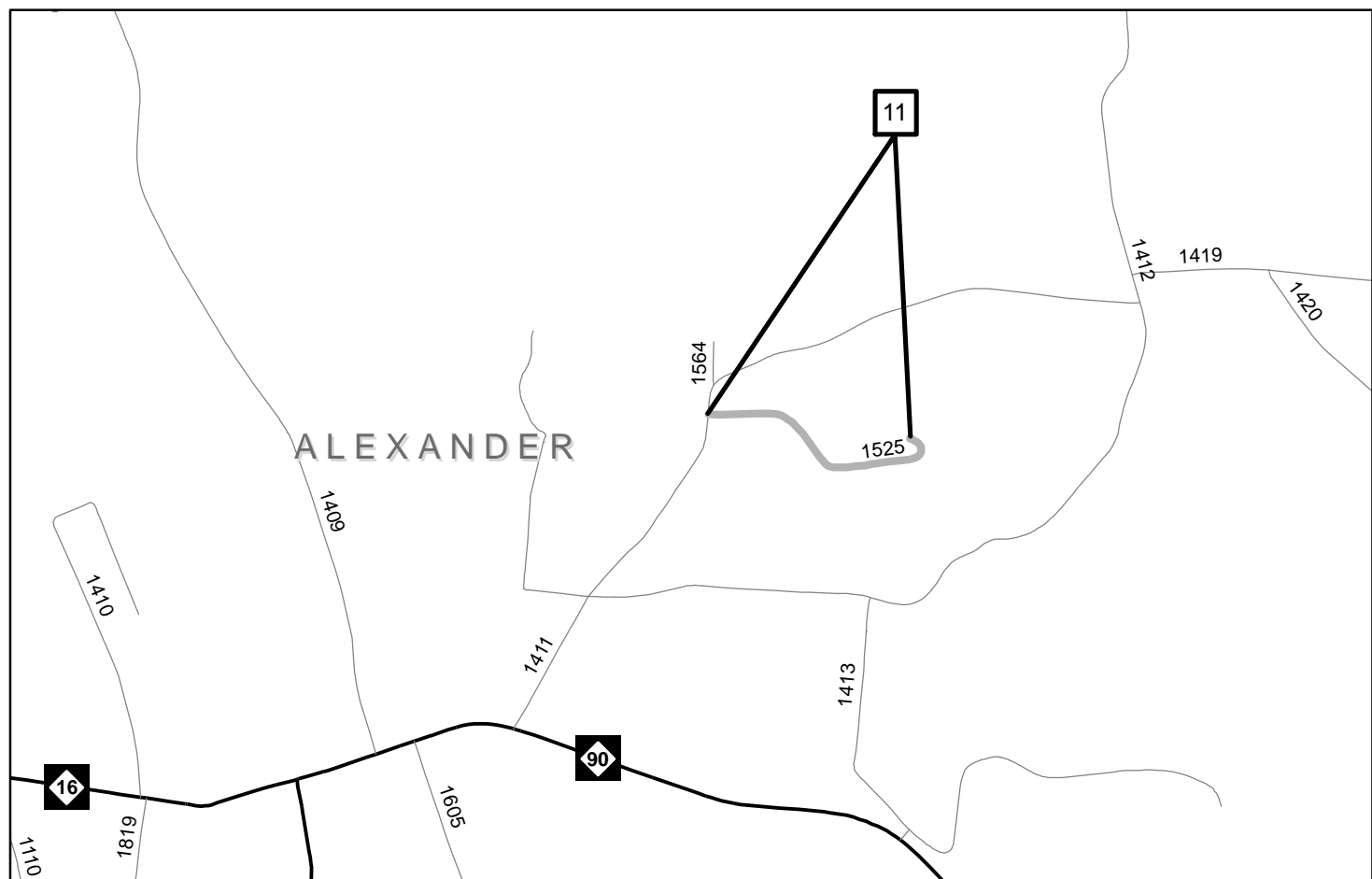
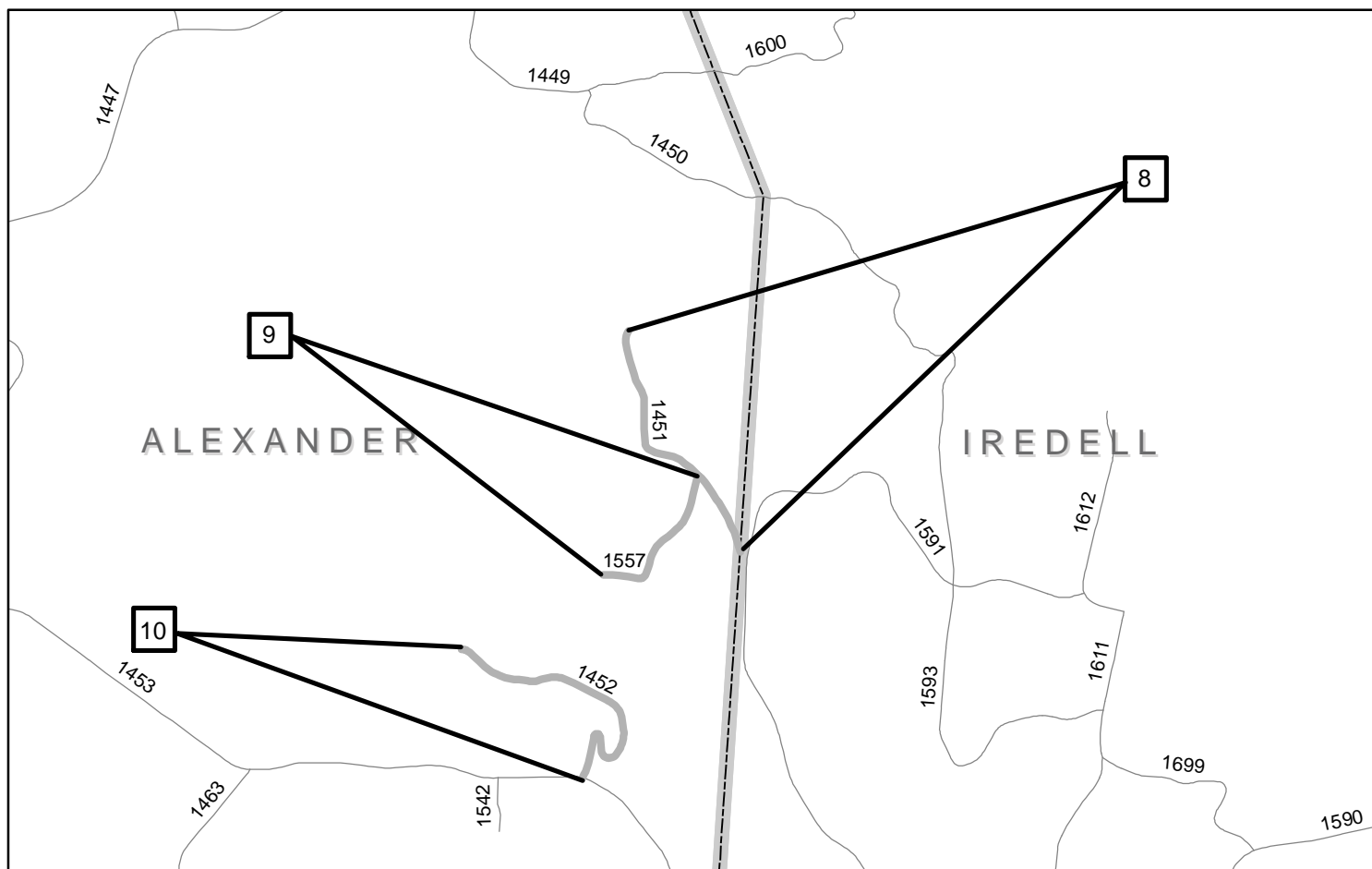
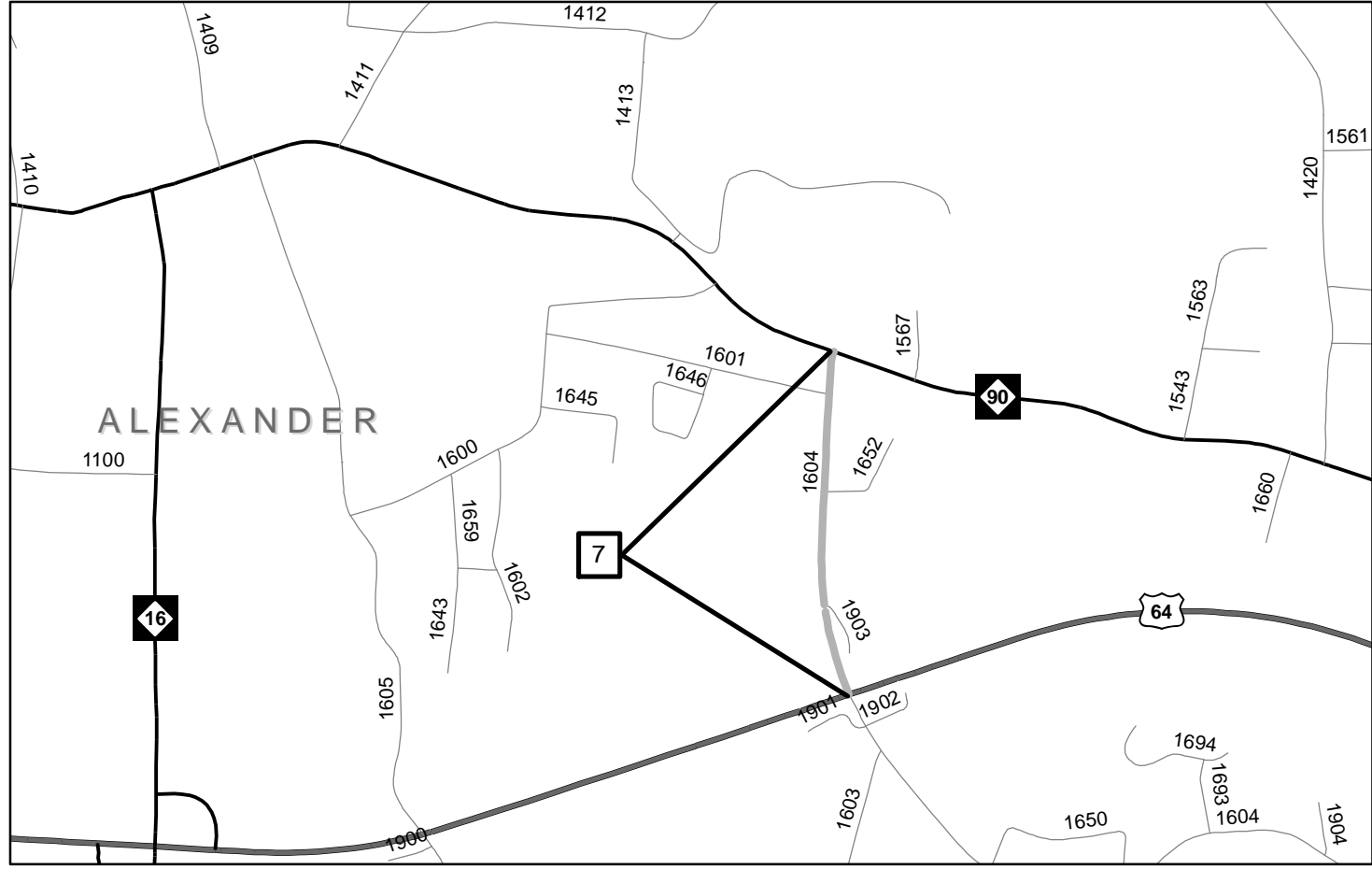
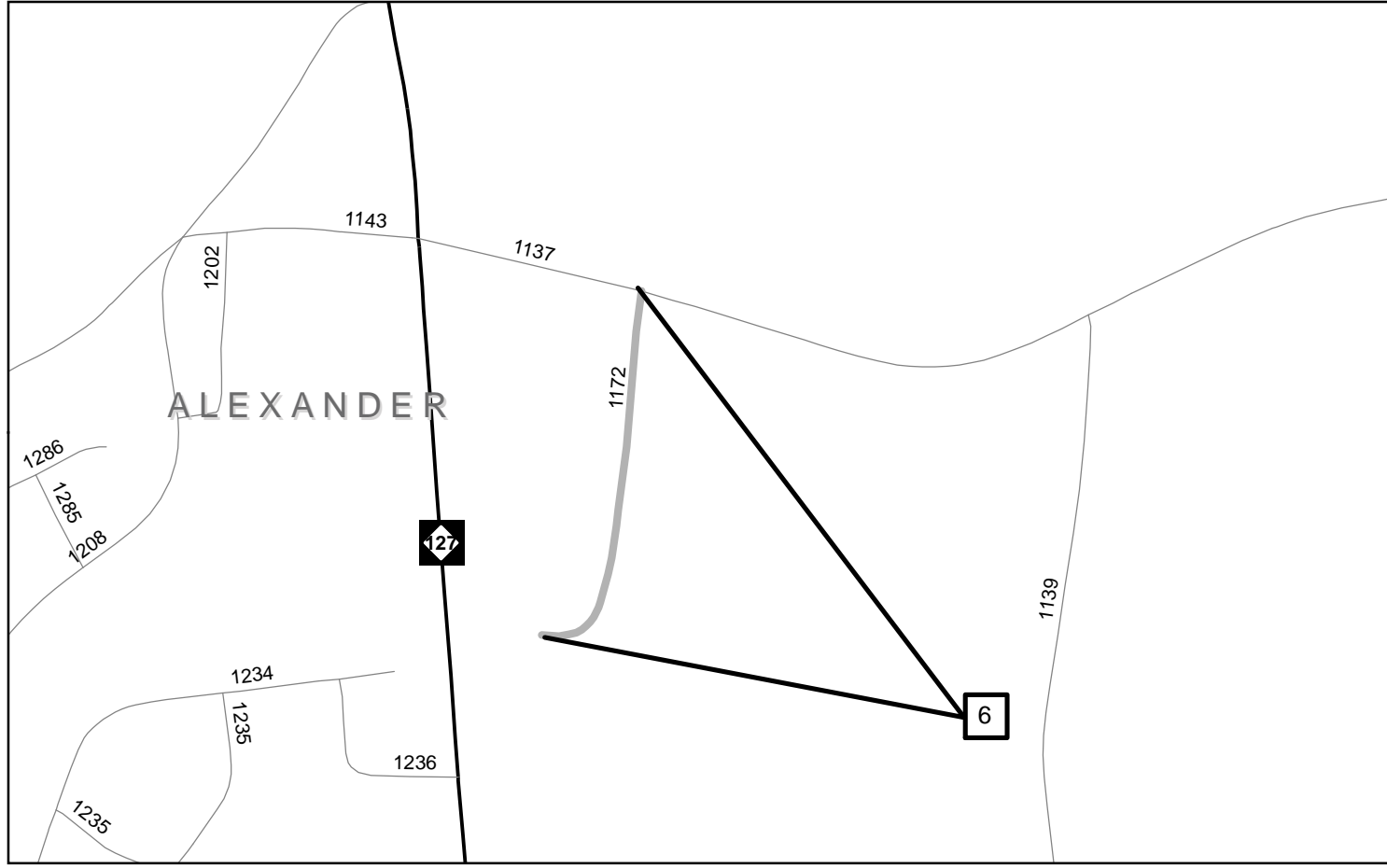


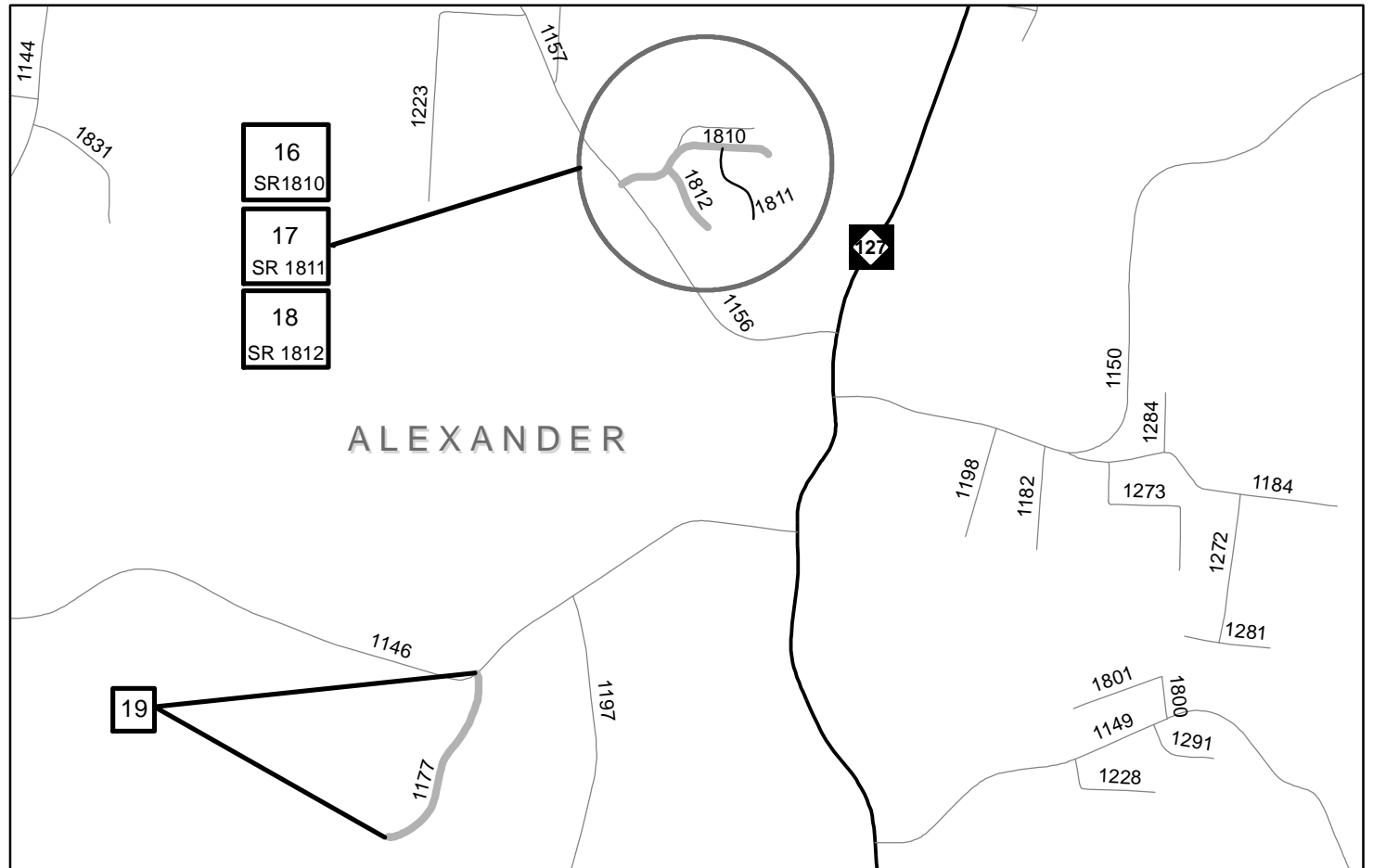
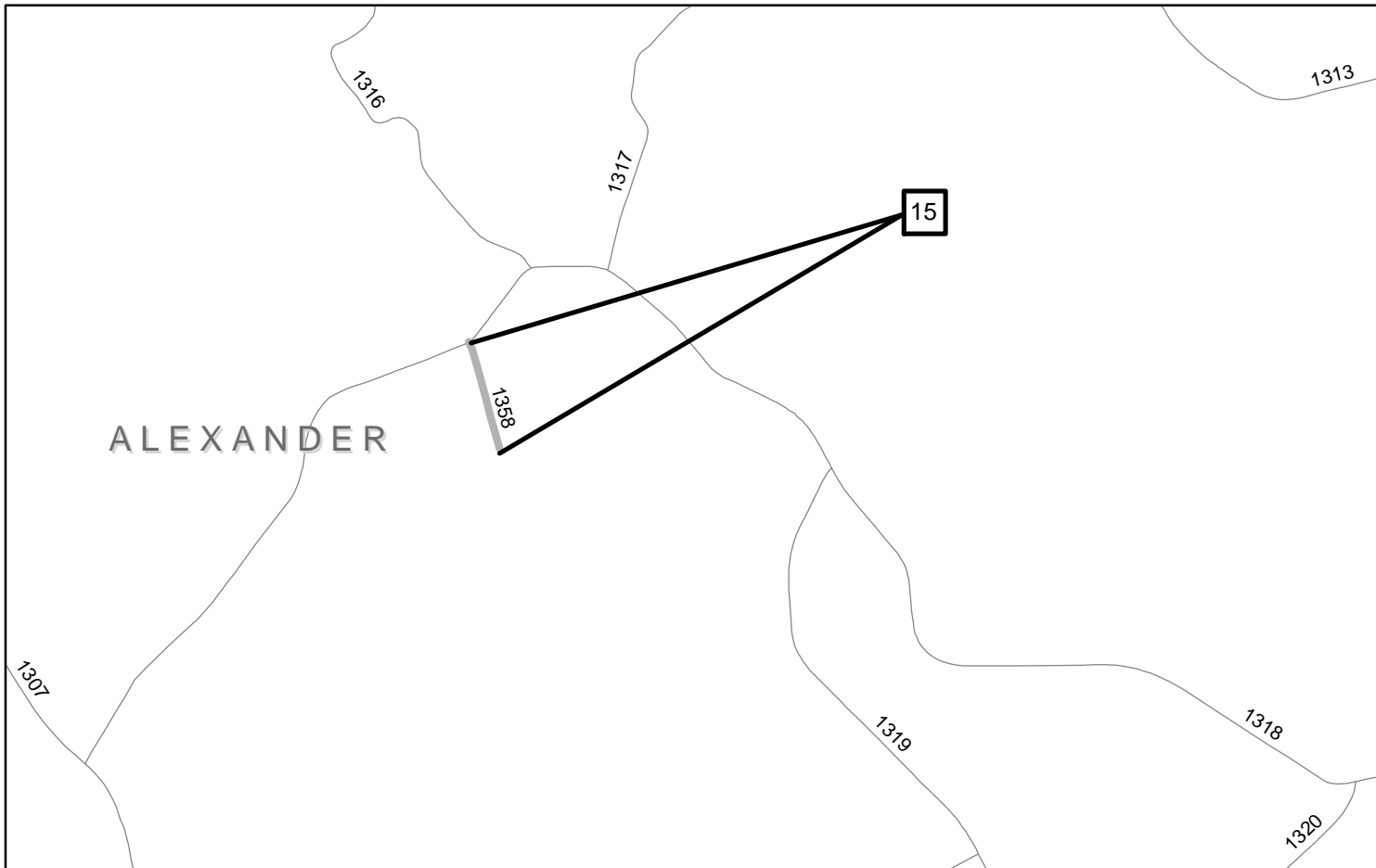
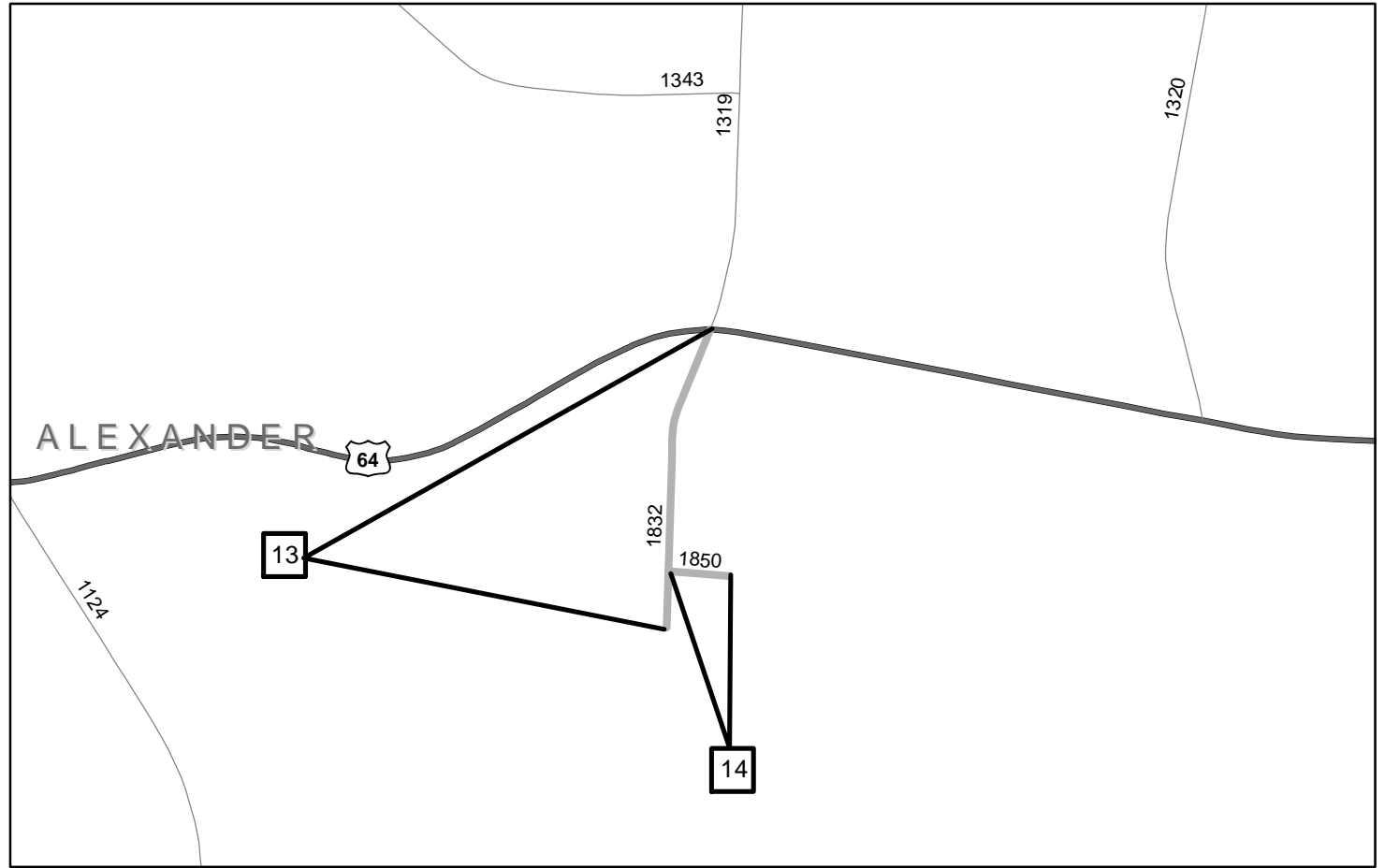
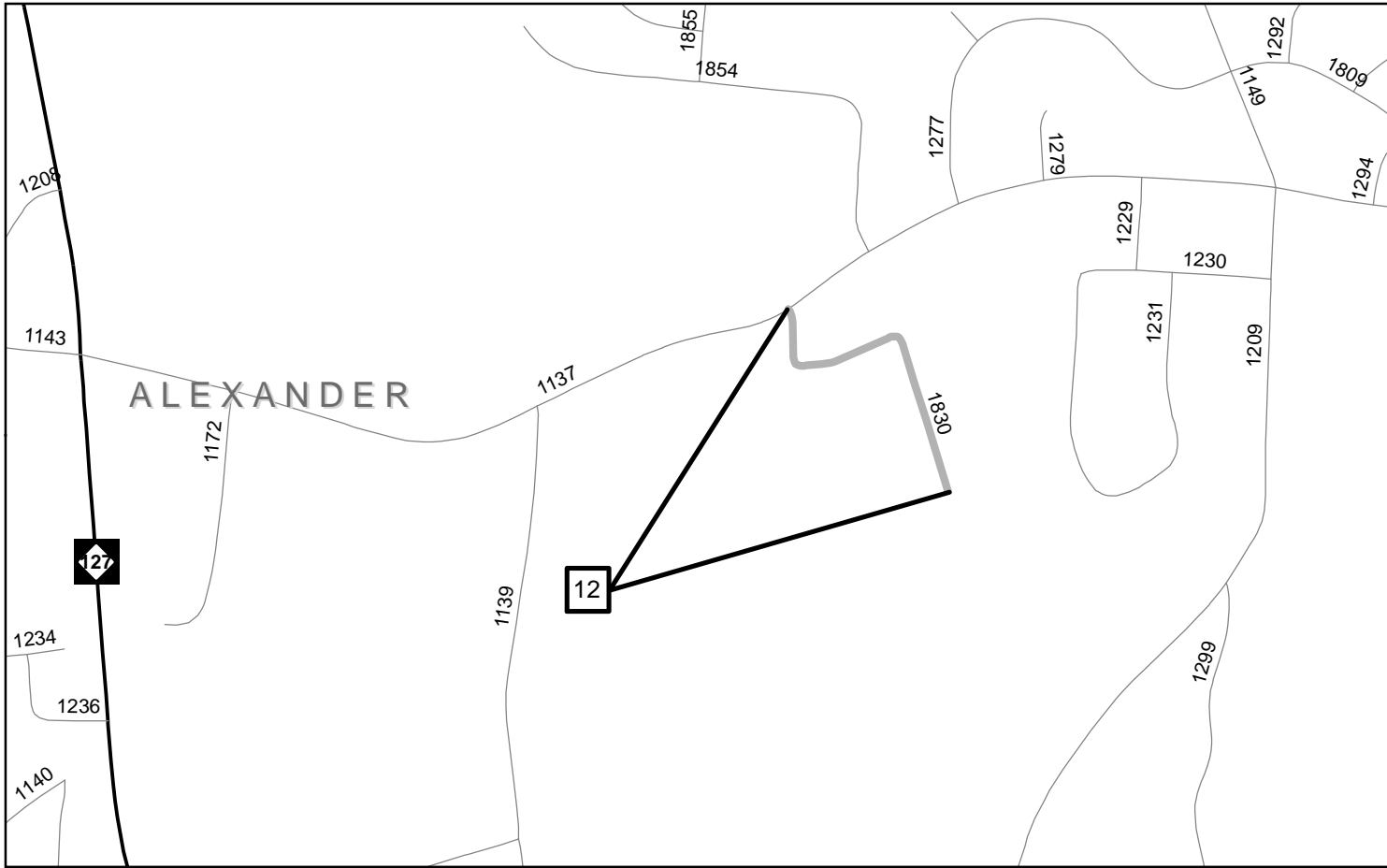
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and sealed by the individuals whose names and license
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with their signature on that page.**

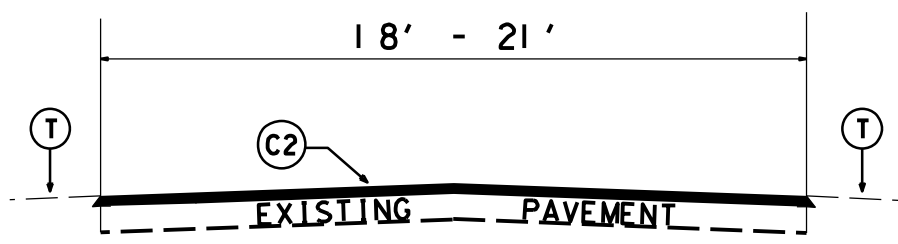
**This file or an individual page
shall not be considered a certified document.**





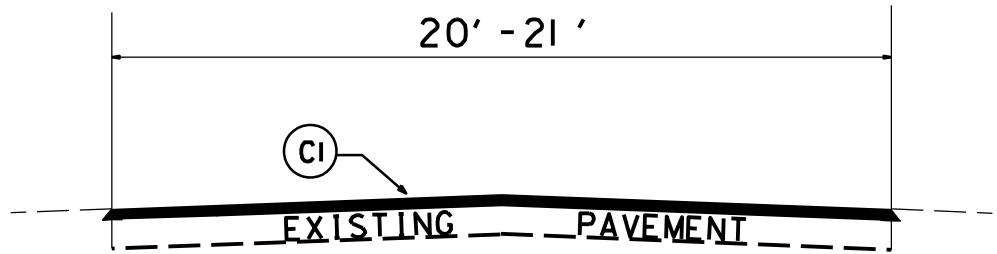


PROJ. REFERENCE NO.	SHEET NO.	TOTAL SHEETS
ALEXANDER COUNTY	5	
STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
2022CPT. 12. 06. 20021		SECONDARY RESURFACING



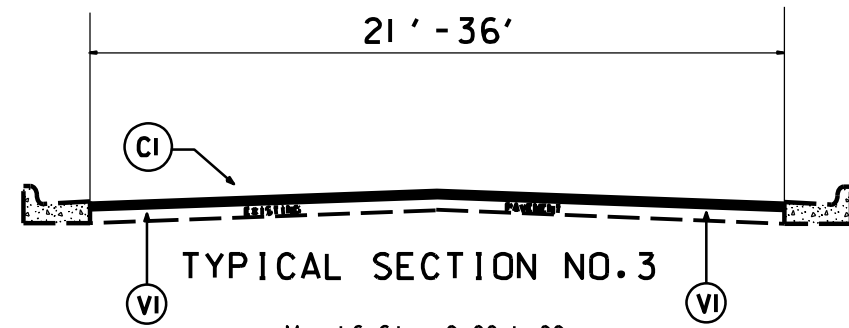
TYPICAL SECTION NO.1

Maps 1 - 7 (ALL)



TYPICAL SECTION NO.2

Maps 8-15 (ALL)
Map 16 Sta. 1+00-15+31
Maps 17-19 (ALL)



TYPICAL SECTION NO.3

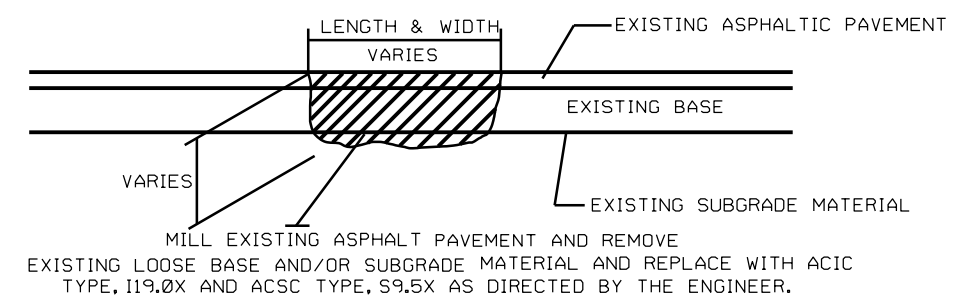
Map 16 Sta. 0+00-1+00

PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1.0" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 110 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.
T	SHOULDER RECONSTRUCTION (AGGREGATE SHOULDER BORROW)
V1	MILL EXISTING ASPHALT PAVEMENT APPROX. 1' IN DEPTH

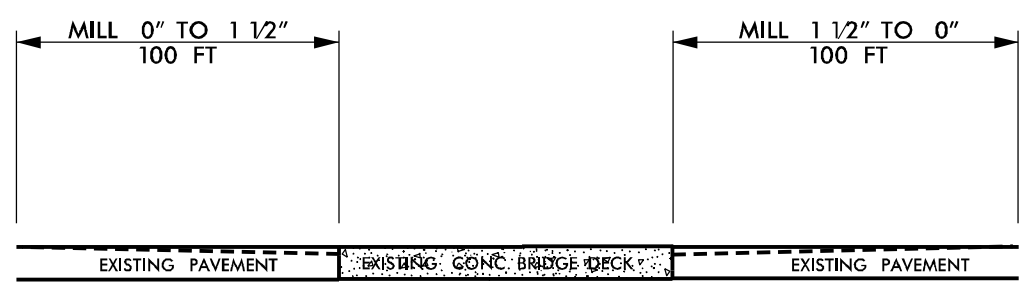
2021 - 2022
Resurfacing Program
Typical Sections
Alexander County

PROJ. REFERENCE NO.	SHEET NO.	TOTAL SHEETS
ALEXANDER COUNTY	6	
STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
2022CPT. 12. 06. 20021		SECONDARY RESURFACING

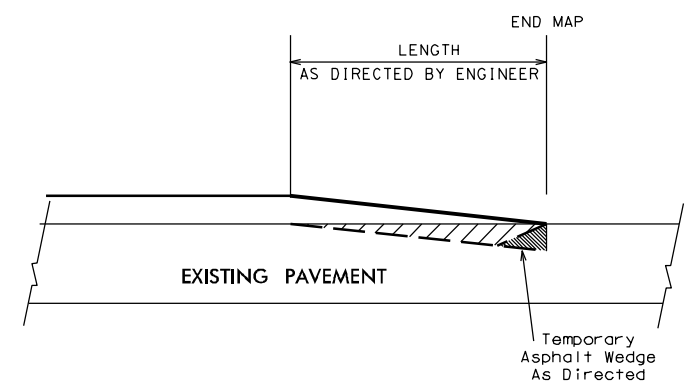
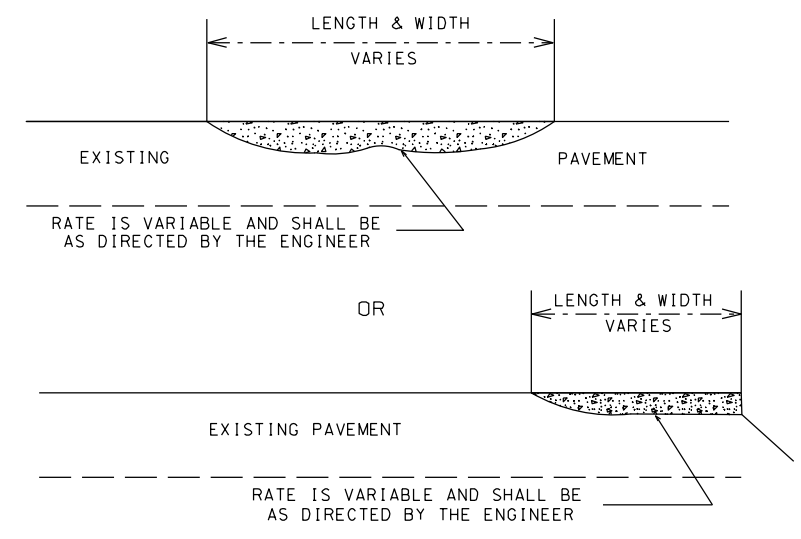
**DETAIL A
PATCHING EXISTING PAVEMENT**



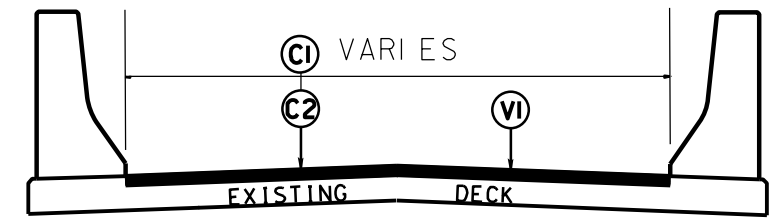
**DETAIL C
MILLING BRIDGE APPROACHES**



**DETAIL B
ASPHALT CONCRETE SURFACE COURSE
TYPE S9.5X (LEVELING COURSE)**

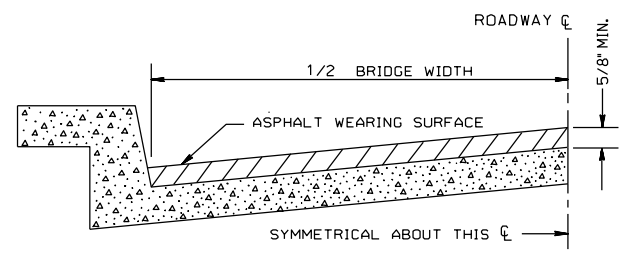


TIE-IN (INCIDENTAL) MILLING DETAIL



ASPHALT BRIDGE SECTION
Use for all asphalt bridges

**DETAIL E
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" SHALL BE PROVIDED. THE MAXIMUM THICKNESS SHALL PREFERABLY BE 1-1/2" UNLESS IT IS IMPRACTICAL TO PROVIDE A SMOOTH RIDING SURFACE OTHERWISE.

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.

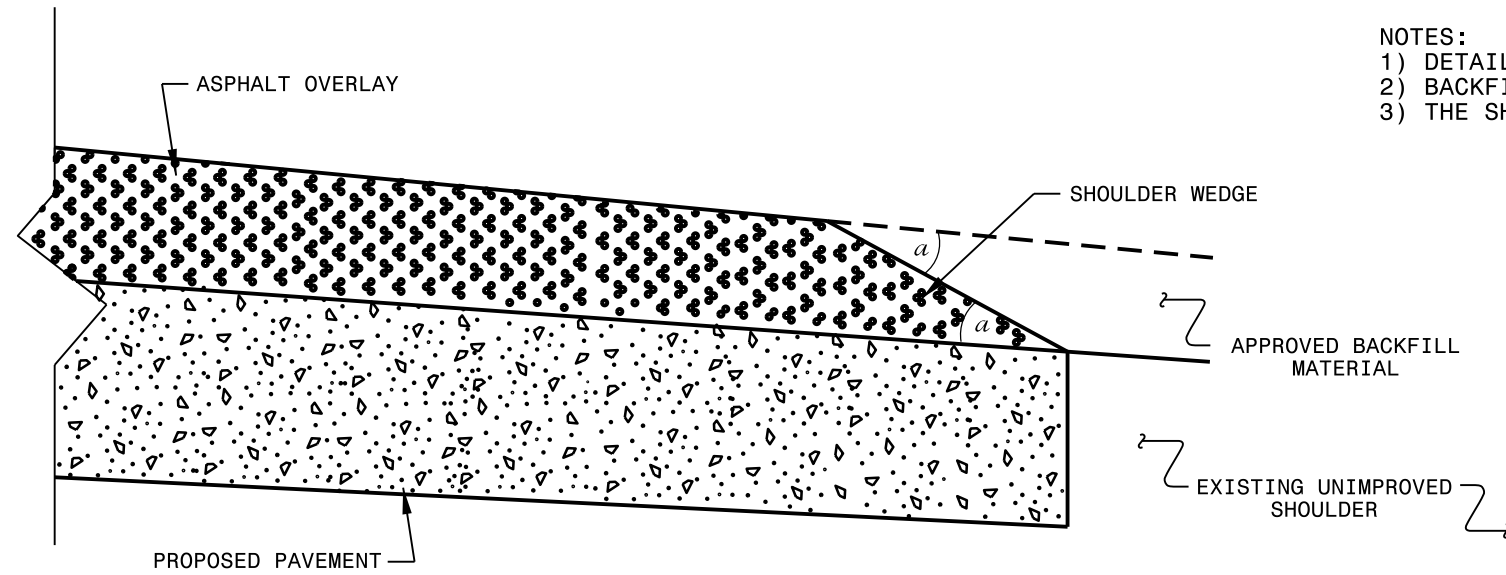
SHOULDERS AND DITCHES ARE TO BE CONSTRUCTED BY OTHERS UNLESS OTHERWISE NOTED.

BRIDGES TO BE RESURFACED AT LOCATIONS AND TO DEPTH AS DIRECTED BY THE ENGINEER.

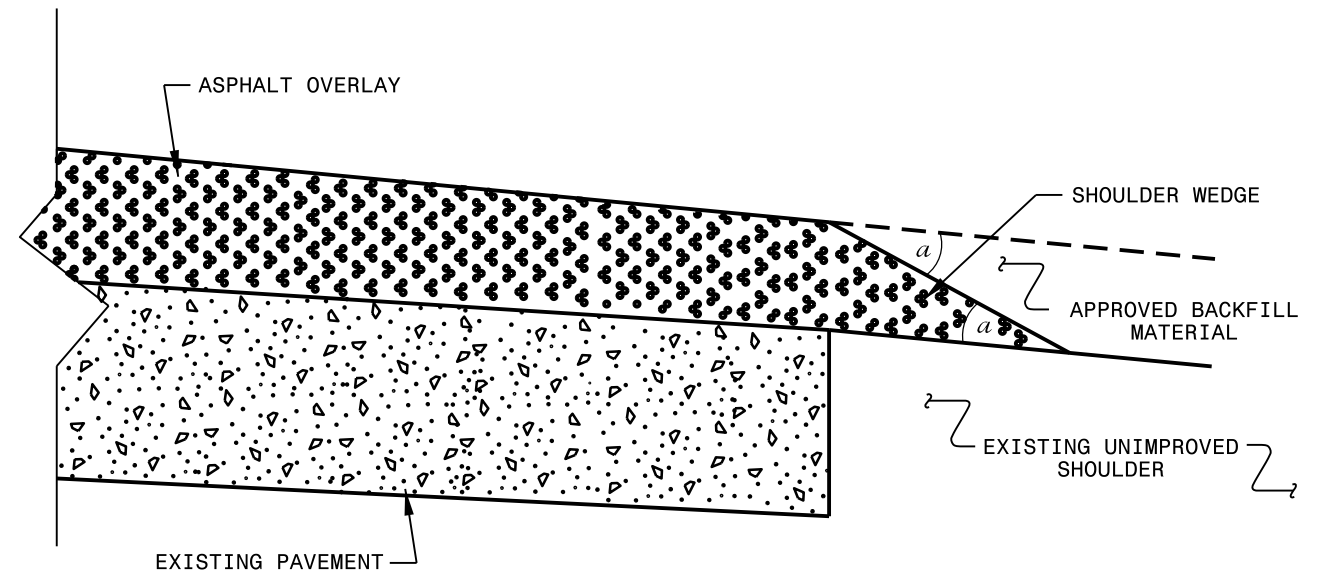
PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1.0" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 110 LBS. PER SQ. YD.
C2	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
T	SHOULDER RECONSTRUCTION (AGGREGATE SHOULDER BORROW)
V1	MILL EXISTING ASPHALT PAVEMENT APPROX. 1" IN DEPTH

2021 - 2022
Resurfacing Program
Detail Sheet
Alexander County

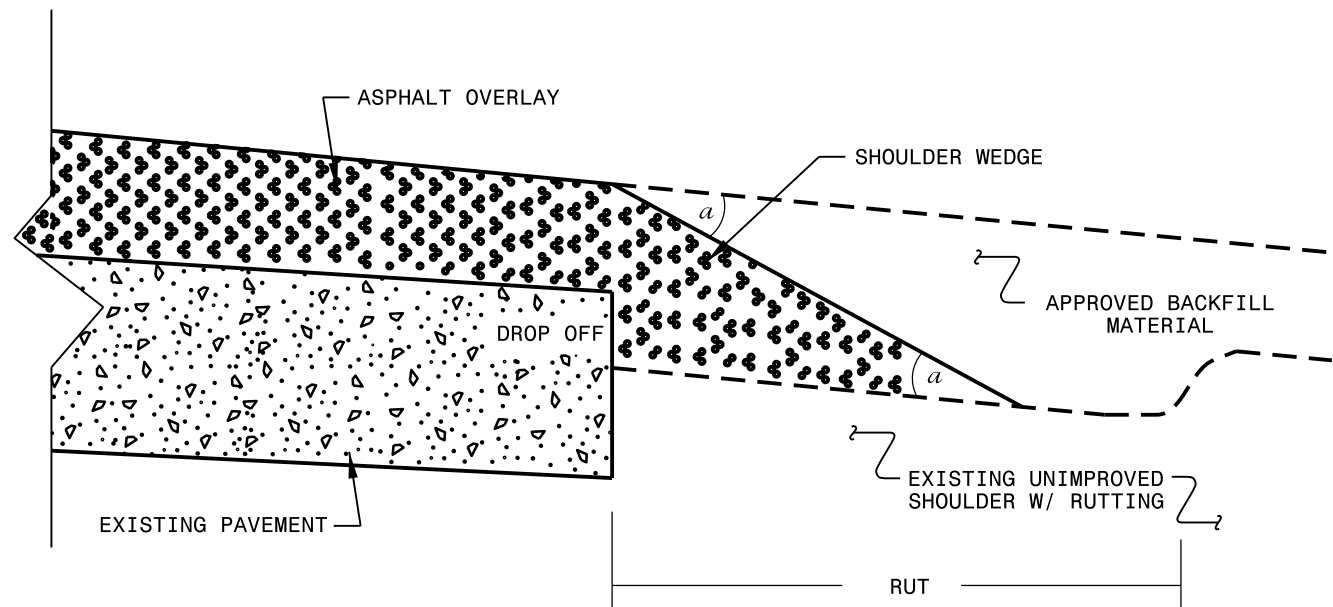
- NOTES:
- 1) DETAIL DOES NOT APPLY TO OGAFB AND ULTRA-THIN BONDED WEARING COURSE.
 - 2) BACKFILL SHOULDER WITH APPROVED MATERIAL.
 - 3) THE SHOULDER WEDGE DEVICE MAY BE DISENGAGED AT PAVED DRIVEWAYS AND SIDE STREETS.



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	
SHOULDER WEDGE DETAILS			
ORIGINAL BY: T.SPELL	DATE: 7-19-11		
MODIFIED BY:	DATE: 10/16/12		
CHECKED BY:	DATE:		
FILE SPEC.: susr/details/stand/shoulderwedgedetail.dgn			

SYSTEMS DESIGN
USER NAME

PROJECT NO.	SHEET NO.	TOTAL NO.
2022CPT.12.06.20021		

SUMMARY OF QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	FINAL SURFACE TESTING REQUIRED	WARM MIX ASPHALT REQUIRED	LENGTH	WIDTH	0255000000-E	1220000000-E	1245000000-E	1297000000-E	1308000000-E	1330000000-E	1519000000-E	1520000000-E	1523000000-E	1524000000-E	1575000000-E	1704000000-E	2800000000-N	2830000000-N	2845000000-N
											AGGREGATE SHOULDER BORROW	INCIDENTAL STONE BASE	SHOULDER RECONSTRUCTION	1" MILLING	0" TO 1.5" MILLING	INCIDENTAL MILLING	SURFACE COURSE, \$9.5B	LEVELING COURSE, \$9.5B	SURFACE COURSE, \$9.5C	LEVELING COURSE, \$9.5C	ASPHALT BINDER FOR PLANT MIX	PATCHING EXISTING PAVEMENT	ADJ. OF CATCH BASIN	ADJ. OF MANHOLES	ADJ. OF METER OR VALVE BOX
									MI	FT	TON	TONS	SMI	SY	SY	SY	TONS	TONS	TONS	TONS	TONS	TONS	EA	EA	EA
2022CPT.12.06.20021	Alexander	1	SR 1131 (ALSPAUGH DAM RD.)	FROM NC 16 TO BRIDGE #125 (LOWER LITTLE RIVER)	1	2	NO	NO	1.74	21	295	60	3.48		250	75			1,900	150	124	320			
2022CPT.12.06.20021	Alexander	2	SR 1461 (SHARPE MILL RD.)	FROM SR 1001 (SULPHUR SPRINGS RD.) TO IREDELL COUNTY LINE	1	2	NO	NO	3.89	19	655	125	7.78			225			3,850	350	254	300			
2022CPT.12.06.20021	Alexander	3	SR 1488 (RURITAN PARK RD.)	FROM SR 1479 (STONE POINT SCHOOL RD.) TO IREDELL COUNTY LINE	1	2	NO	NO	0.8	20	135	25	1.60			150			750	100	52	220	1		4
2022CPT.12.06.20021	Alexander	4	SR 1138 (POLLY BOWMAN RD.)	FROM SR 1137 (RINK DAMN RD.) TO DEAD END	1	2	NO	NO	1.23	18	210	40	2.46			100			1,175	60	74	120			
2022CPT.12.06.20021	Alexander	5	SR 1185 (DEAL FARM RD.)	FROM SR 1138 (POLLY BOWMAN RD.) TO DEAD END	1	2	NO	NO	0.79	20	135	25	1.58			75			825	50	53	165			
2022CPT.12.06.20021	Alexander	6	SR 1172 (BOLICK LN.)	FROM SR 1137 (RINK DAMN RD.) TO DEAD END	1	2	NO	NO	0.25	21	50	10	0.50			50			275	25	18	170			
2022CPT.12.06.20021	Alexander	7	SR 1604 (BOSTON RD.)	FROM US 64 TO NC 90	1	2	NO	NO	0.55	19	92	20	1.10			125			650	45	42	130		1	
2022CPT.12.06.20021	Alexander	8	SR 1451 (MASON FARM RD.)	FROM SR 1591 (BACON RD.) TO DEAD END	2	2	NO	NO	0.52	20		35				50	355	25			25	75			
2022CPT.12.06.20021	Alexander	9	SR 1557 (KENNINGTON LN.)	FROM SR 1451 (MASON FARM RD.) TO DEAD END	2	2	NO	NO	0.35	20		25					230	20			17	40			
2022CPT.12.06.20021	Alexander	10	SR 1452 (LILES LN.)	FROM SR 1453 (POPLAR SPRINGS RD.) TO DEAD END	2	2	NO	NO	0.5	21		15				25	355	75			29	150			
2022CPT.12.06.20021	Alexander	11	SR 1525 (TOWER RD.)	FROM SR 1411 (LINNEYS MTN. RD.) TO DEAD END	2	2	NO	NO	0.37	21		15				25	265	25			19	100			2
2022CPT.12.06.20021	Alexander	12	SR 1830 (DOGWOOD ACRES LN.)	FROM SR 1137 (RINK DAMN RD.) TO DEAD END	2	2	NO	NO	0.31	19		10				50	200	35			16	100			
2022CPT.12.06.20021	Alexander	13	SR 1832 (ELLENDALE LN.)	FROM US 64 TO DEAD END	2	2	NO	NO	0.27	19		10				25	175	20			13	75			
2022CPT.12.06.20021	Alexander	14	SR 1850 (RED OAK DR.)	FROM SR 1832 (ELLENDALE LN.) TO DEAD END	2	2	NO	NO	0.05	18		5					35	10			3	40			
2022CPT.12.06.20021	Alexander	15	SR 1358 (DEWEY ELDER LN.)	FROM SR 1318 (ZEB WATTS RD.) TO DEAD END	2	2	NO	NO	0.15	19		5				25	100	5			7	15			2
2022CPT.12.06.20021	Alexander	16	SR 1810 (ARBOR SPRINGS RD.)	FROM SR 1156 (RICHEY RD.) TO DEAD END	2,3	2	NO	NO	0.29	19		10		450		25	190	25			14	100			
2022CPT.12.06.20021	Alexander	17	SR 1811 (CEDAR RIDGE DR.)	FROM SR 1810 (ARBOR SPRINGS DR.) TO DEAD END	2	2	NO	NO	0.17	18		10				25	105	10			8	60			2
2022CPT.12.06.20021	Alexander	18	SR 1812 (DOGWOOD CT.)	FROM SR 1810 (ARBOR SPRINGS DR.) TO DEAD END	2	2	NO	NO	0.15	19		5					100	15			8	50			1
2022CPT.12.06.20021	Alexander	19	SR 1177 (CRUZ LN.)	FROM SR 1146 (BETHLEHEM SCHOOL RD.) TO DEAD END	2	2	NO	NO	0.36	20		15				25	245	15			17	100			
TOTAL FOR PROJ NO. 2022CPT.12.06.20021									12.74		1,572	465	18.50	450	250	1,075	2,355	280	9,425	780	793	2,330	1	1	11
GRAND TOTAL											1,572	465	18.50	450	250	1,075	2,355	280	9,425	780	793	2,330	1	1	11

PROJECT NO.	SHEET NO.	TOTAL NO.
2022CPT.12.06.20021		

THERMOPLASTIC AND PAINT QUANTITIES

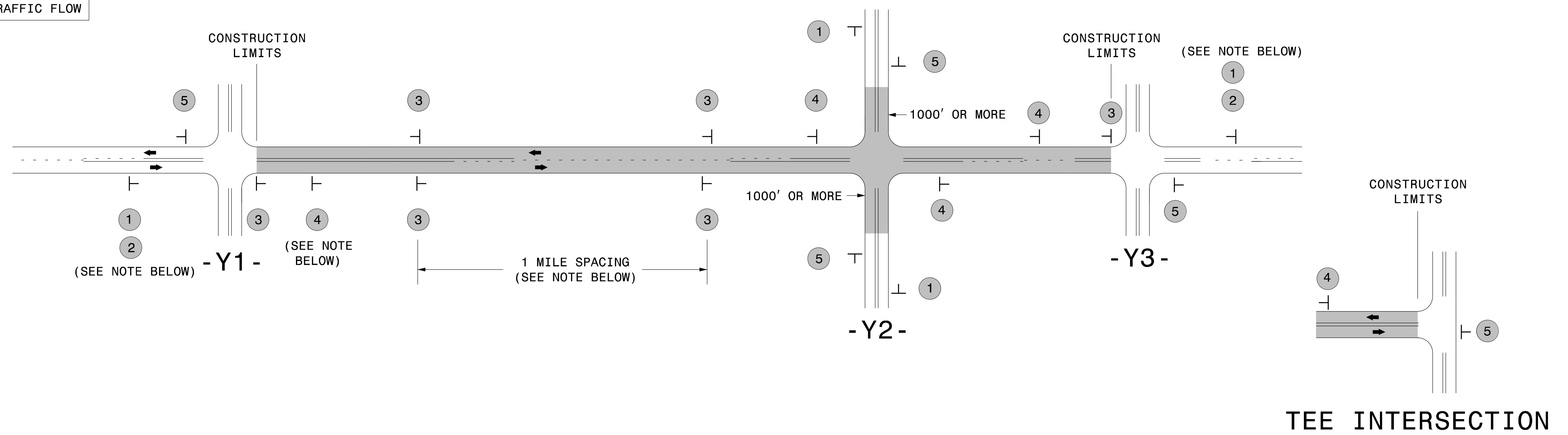
PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	LENGTH		WIDTH	4400000000-E	4457000000-N	4710000000-E	4810000000-E	4810000000-E	
							MI	FT		WORK ZONE ADVANCE/GENERAL WARNING SIGNING	TEMPORARY TRAFFIC CONTROL	24" X 90 M WHITE THERMO	4" WHITE PAINT	4" YELLOW PAINT	
											SF	LS	LF	LF	LF
2022CPT.12.06.20021	Alexander	1	SR 1131 (ALSPAUGH DAM RD.)	FROM NC 16 TO BRIDGE #125 (LOWER LITTLE RIVER)	1	2	1.74	21		200	*		37,500	37,500	
2022CPT.12.06.20021	Alexander	2	SR 1461 (SHARPE MILL RD.)	FROM SR 1001 (SULPHUR SPRINGS RD.) TO IREDELL COUNTY LINE	1	2	3.89	19		450	*		83,000	83,000	
2022CPT.12.06.20021	Alexander	3	SR 1488 (RURITAN PARK RD.)	FROM SR 1479 (STONE POINT SCHOOL RD.) TO IREDELL COUNTY LINE	1	2	0.8	20		100	*	24	17,000	17,000	
2022CPT.12.06.20021	Alexander	4	SR 1138 (POLLY BOWMAN RD.)	FROM SR 1137 (RINK DAMN RD.) TO DEAD END	1	2	1.23	18		150	*		26,250	26,250	
2022CPT.12.06.20021	Alexander	5	SR 1185 (DEAL FARM RD.)	FROM SR 1138 (POLLY BOWMAN RD.) TO DEAD END	1	2	0.79	20		100	*		17,000	17,000	
2022CPT.12.06.20021	Alexander	6	SR 1172 (BOLICK LN.)	FROM SR 1137 (RINK DAMN RD.) TO DEAD END	1	2	0.25	21		50	*				
2022CPT.12.06.20021	Alexander	7	SR 1604 (BOSTON RD.)	FROM US 64 TO NC 90	1	2	0.55	19		75	*		11,750	11,750	
2022CPT.12.06.20021	Alexander	8	SR 1451 (MASON FARM RD.)	FROM SR 1591 (BACON RD.) TO DEAD END	2	2	0.52	20		65	*		11,000	11,000	
2022CPT.12.06.20021	Alexander	9	SR 1557 (KENNINGTON LN.)	FROM SR 1451 (MASON FARM RD.) TO DEAD END	2	2	0.35	20		50	*				
2022CPT.12.06.20021	Alexander	10	SR 1452 (LILES LN.)	FROM SR 1453 POPLAR SPRINGS RD.) TO DEAD END	2	2	0.5	21		65	*		10,750	10,750	
2022CPT.12.06.20021	Alexander	11	SR 1525 (TOWER RD.)	FROM SR 1411 (LINNEYS MTN. RD.) TO DEAD END	2	2	0.37	21		45	*		7,900	7,900	
2022CPT.12.06.20021	Alexander	12	SR 1830 (DOGWOOD ACRES LN.)	FROM SR 1137 (RINK DAMN RD.) TO DEAD END	2	2	0.31	19		35	*				
2022CPT.12.06.20021	Alexander	13	SR 1832 (ELLEDALE LN.)	FROM US 64 TO DEAD END	2	2	0.27	19		35	*				
2022CPT.12.06.20021	Alexander	14	SR 1850 (RED OAK DR.)	FROM SR 1832 (ELLEDALE LN.) TO DEAD END	2	2	0.05	18		16	*				
2022CPT.12.06.20021	Alexander	15	SR 1358 (DEWEY ELDER LN.)	FROM SR 1318 (ZEB WATTS RD.) TO DEAD END	2	2	0.15	19		25	*				
2022CPT.12.06.20021	Alexander	16	SR 1810 (ARBOR SPRINGS RD.)	FROM SR 1156 (RICHEY RD.) TO DEAD END	2,3	2	0.29	19		40	*				
2022CPT.12.06.20021	Alexander	17	SR 1811 (CEDAR RIDGE DR.)	FROM SR 1810 (ARBOR SPRINGS DR.) TO DEAD END	2	2	0.17	18		25	*				
2022CPT.12.06.20021	Alexander	18	SR 1812 (DOGWOOD CT.)	FROM SR 1810 (ARBOR SPRINGS DR.) TO DEAD END	2	2	0.15	19		20	*				
2022CPT.12.06.20021	Alexander	19	SR 1177 (CRUZ LN.)	FROM SR 1146 (BETHLEHEM SCHOOL RD.) TO DEAD END	2	2	0.36	20		45	*				
TOTAL FOR PROJ NO. 2022CPT.12.06.20021							12.74			1,591	1	24	222,150	222,150	
GRAND TOTAL							12.74			1,591	1	24	222,150	222,150	

SIGNING FOR RESURFACING PROJECTS

LEGEND

┃ STATIONARY SIGN

← DIRECTION OF TRAFFIC FLOW



MAINLINE (-L-) SIGNING

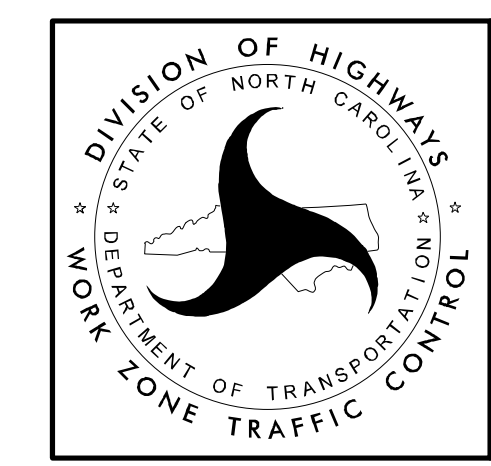
-Y- LINE SIGNING

SIGNING NOTES AND PLACEMENT PER DIRECTION	1		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"> 1) LESS THAN 1000' OF RESURFACING ALONG -Y- LINE 2) SUBDIVISION ROADS 3) 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;"> W20-1 48" X 48" PLACED 500' IN ADVANCE OF FLAGGER. </div> <div style="text-align: center;"> W20-7 A 48" X 48" PLACED 250' IN ADVANCE OF FLAGGER. </div> </div>
	2		#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		- 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		- 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		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