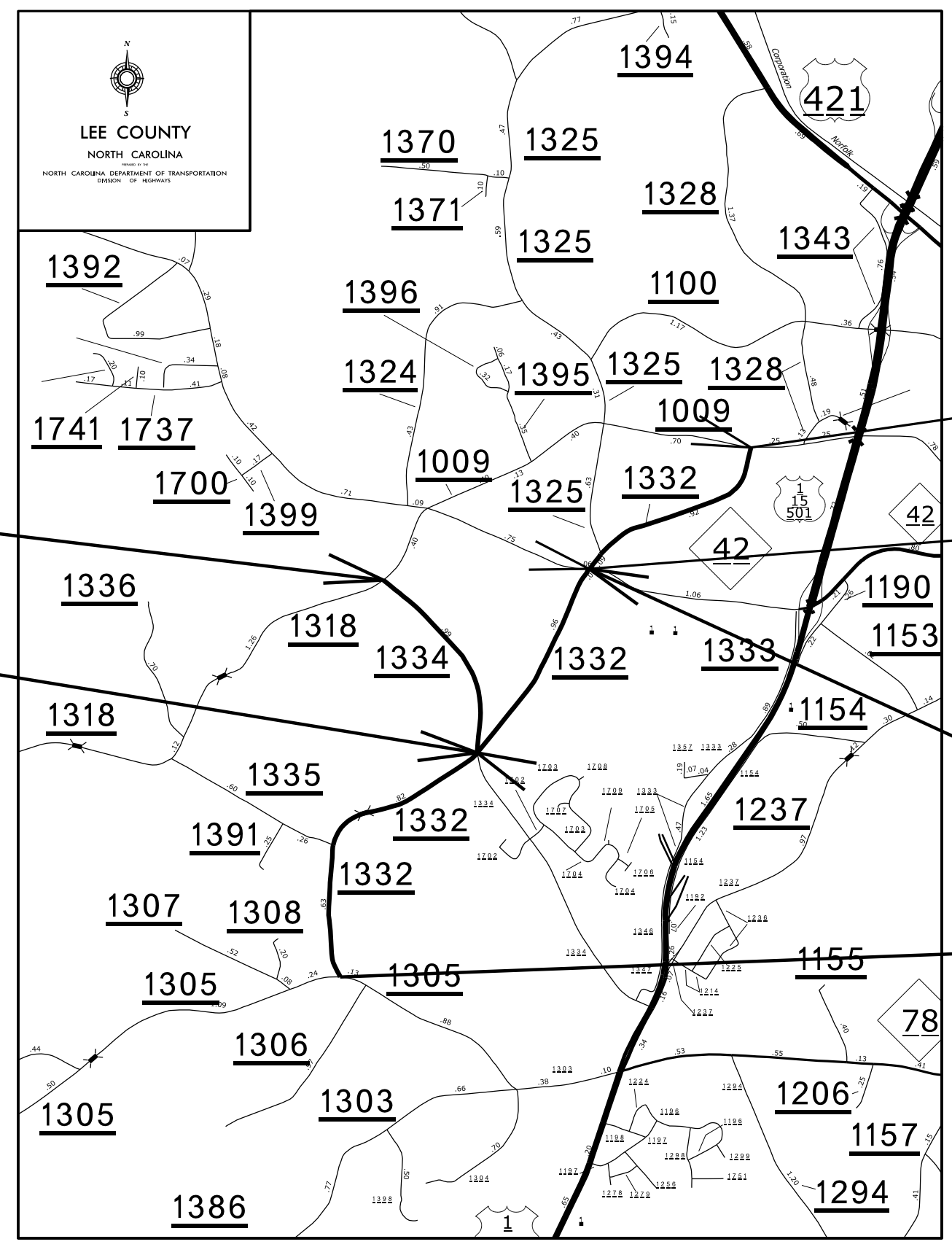


LEE COUNTY RESURFACING MAP

Maps 1,2,3

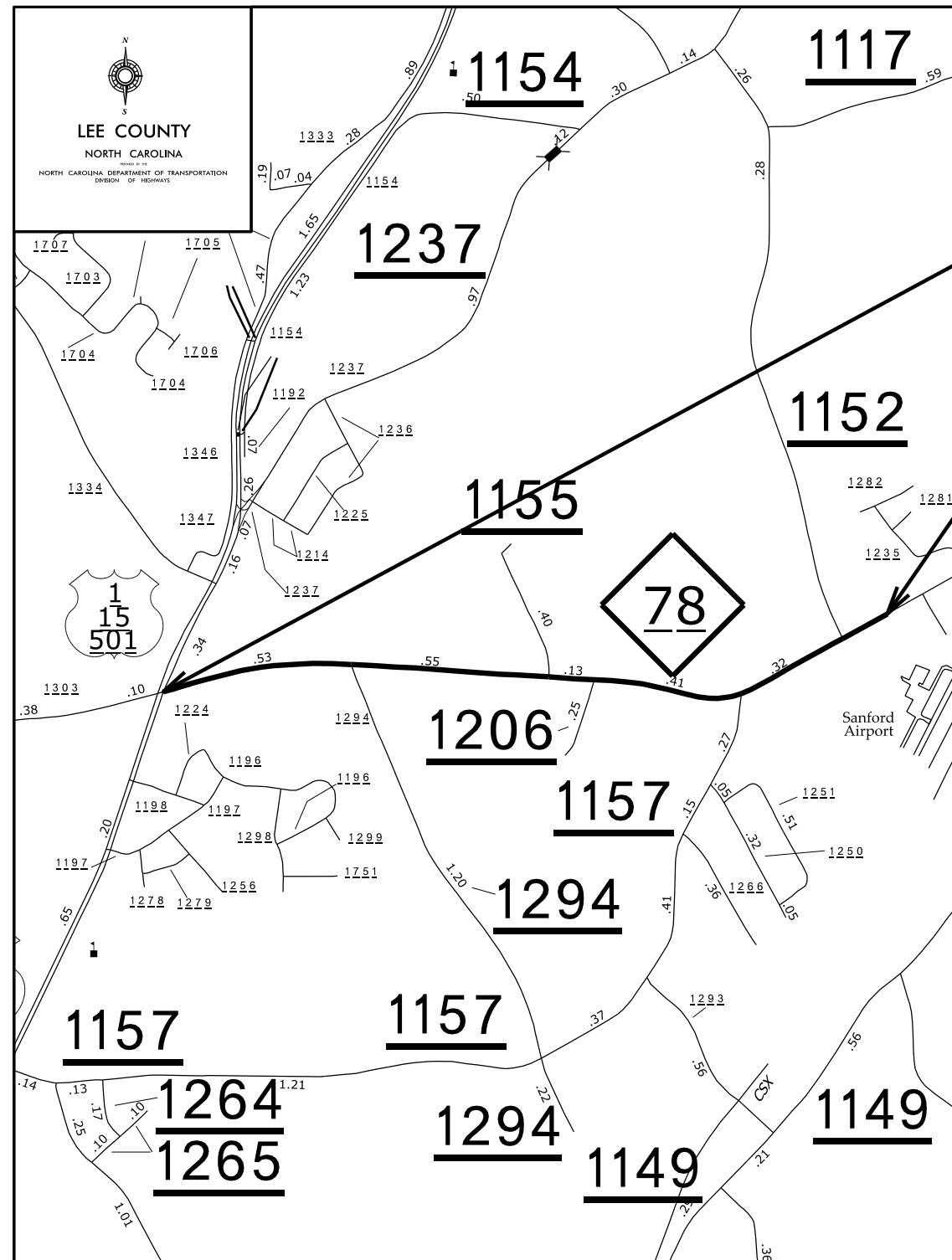


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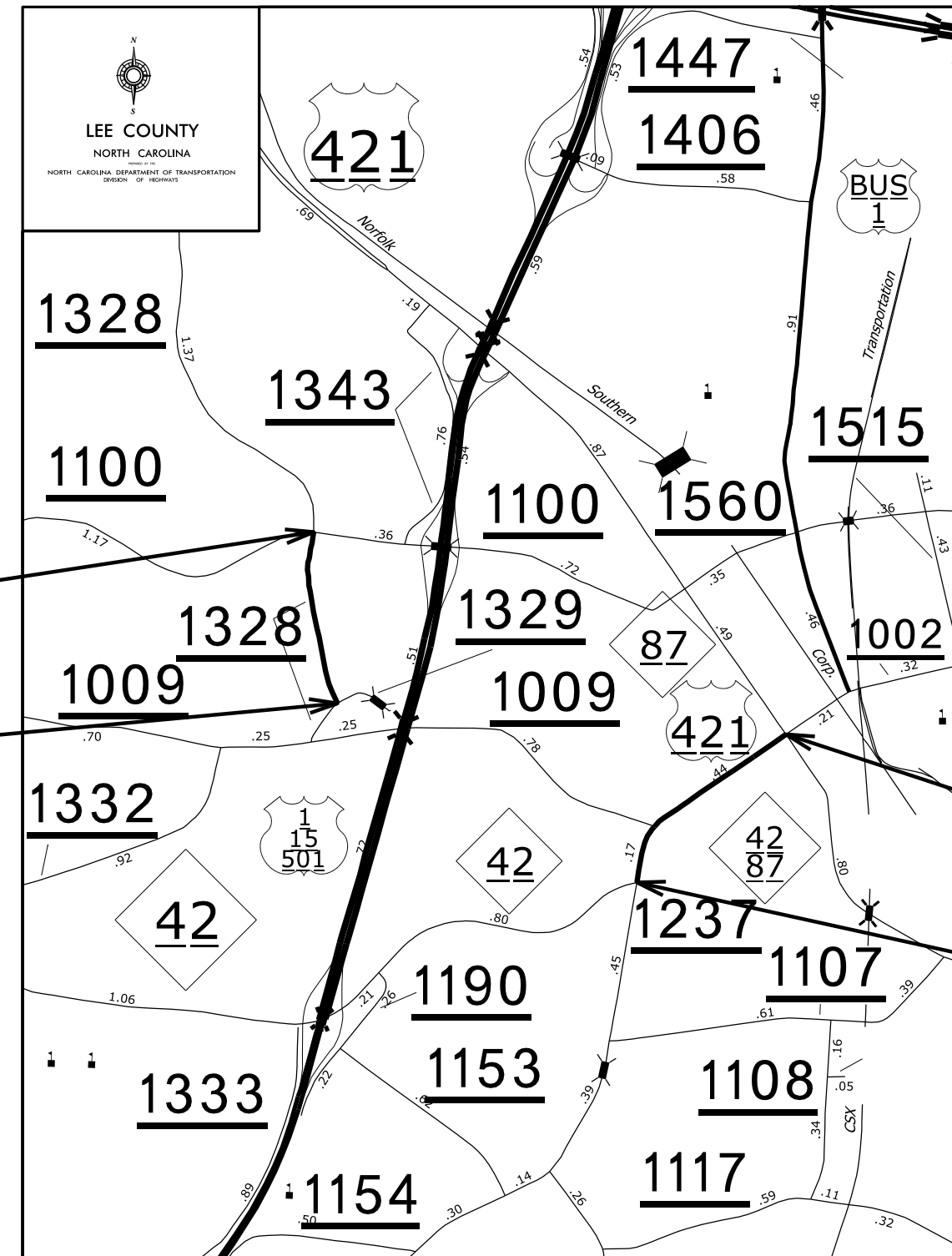
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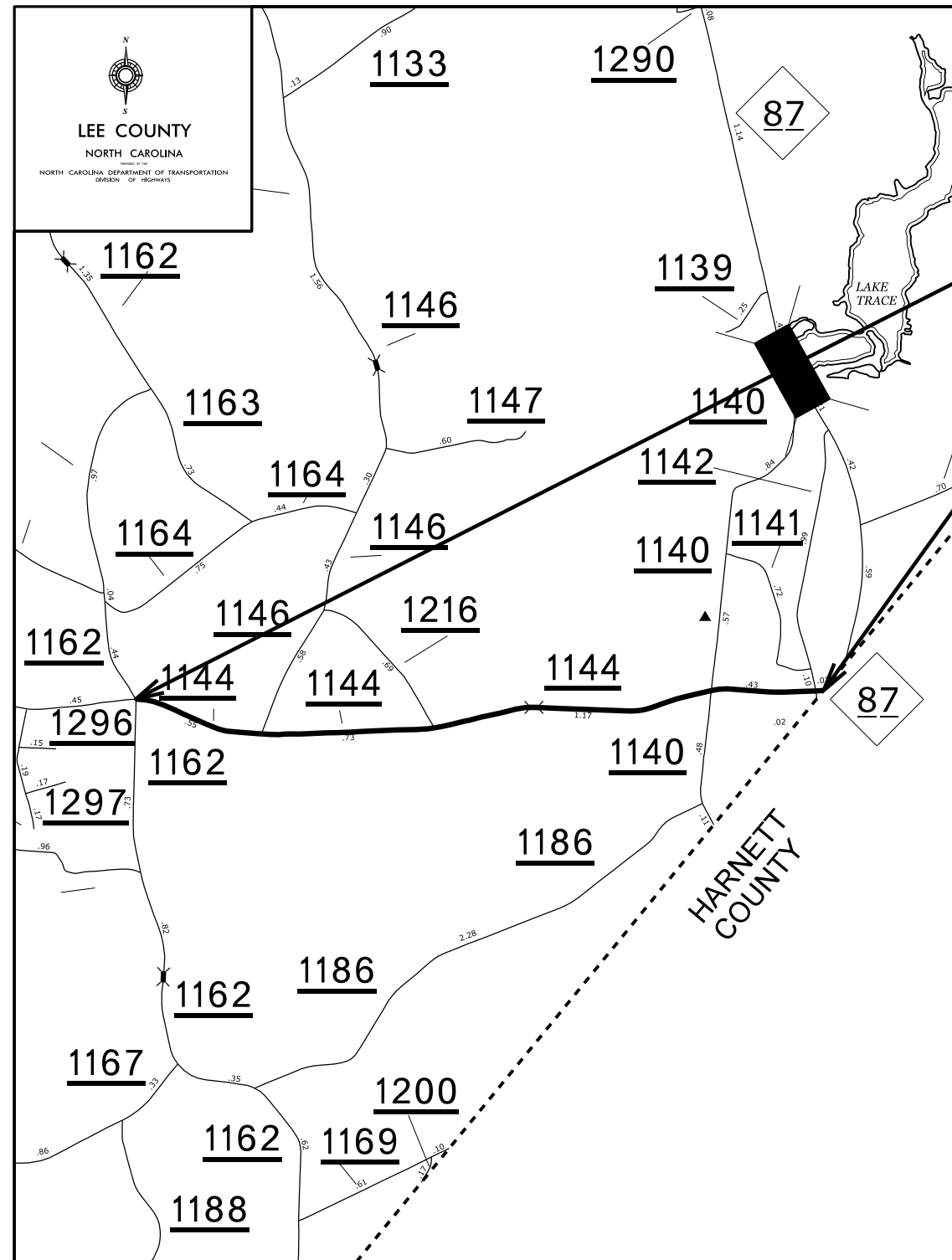
Map 6



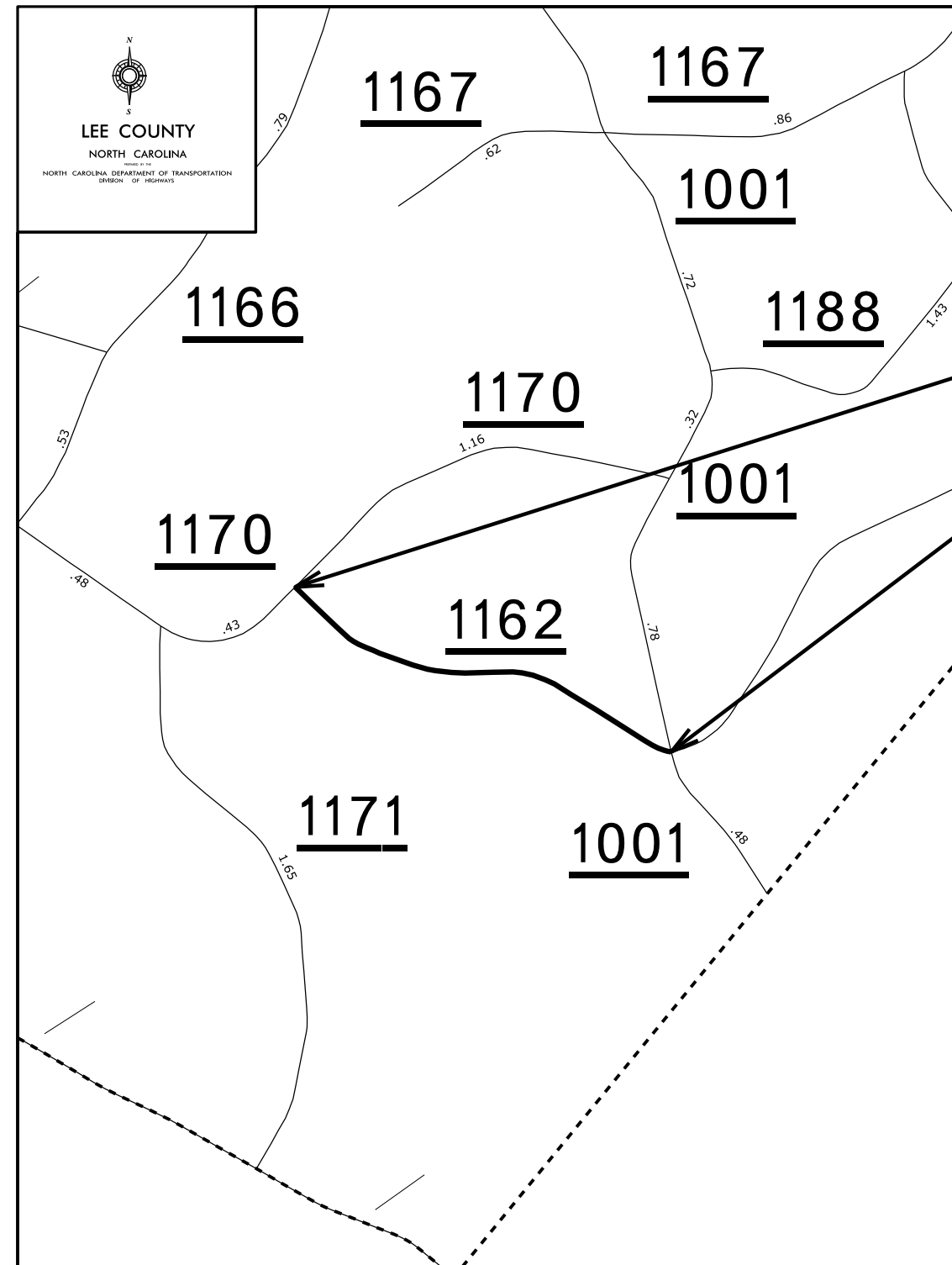
Maps 7 and 10



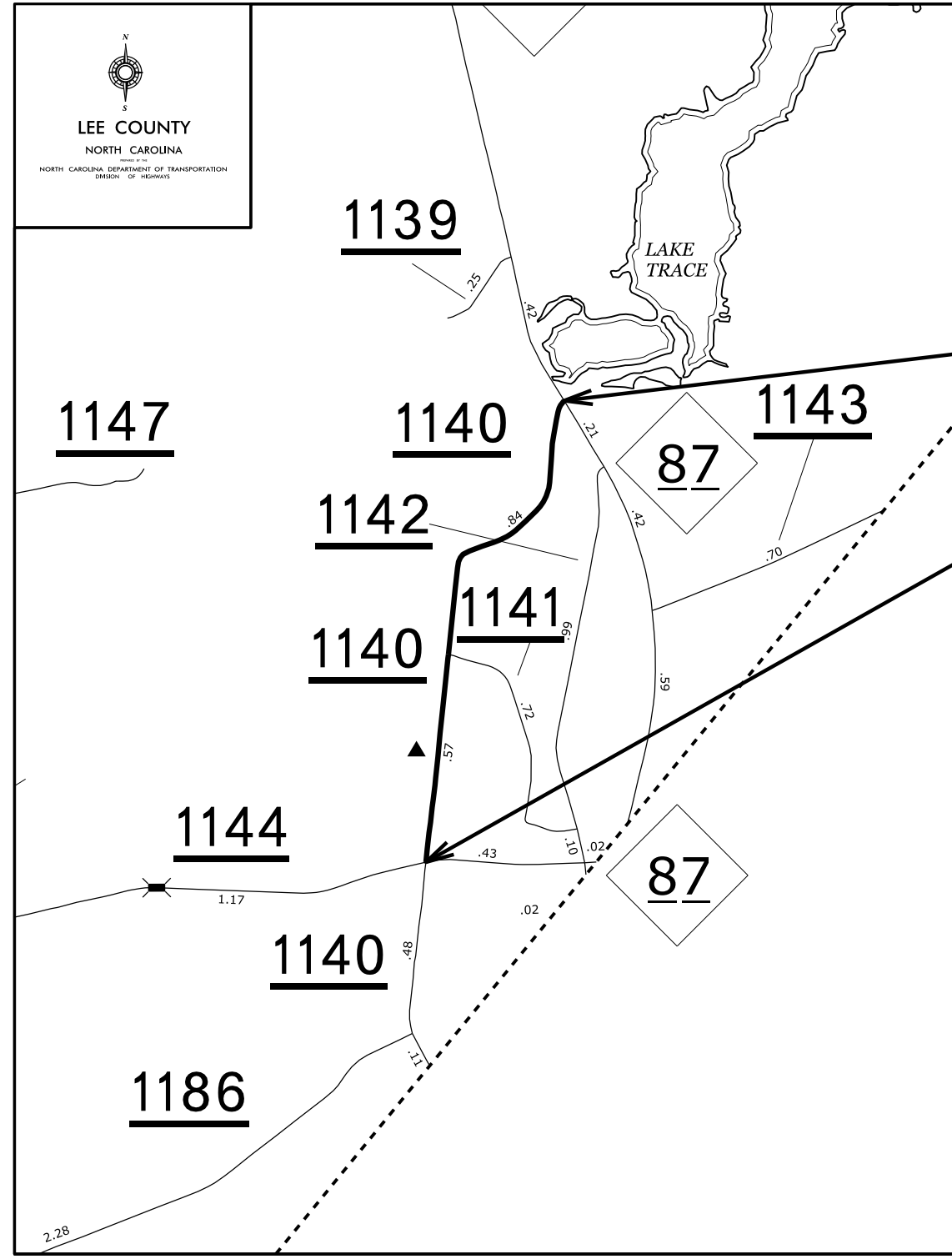
Map 11



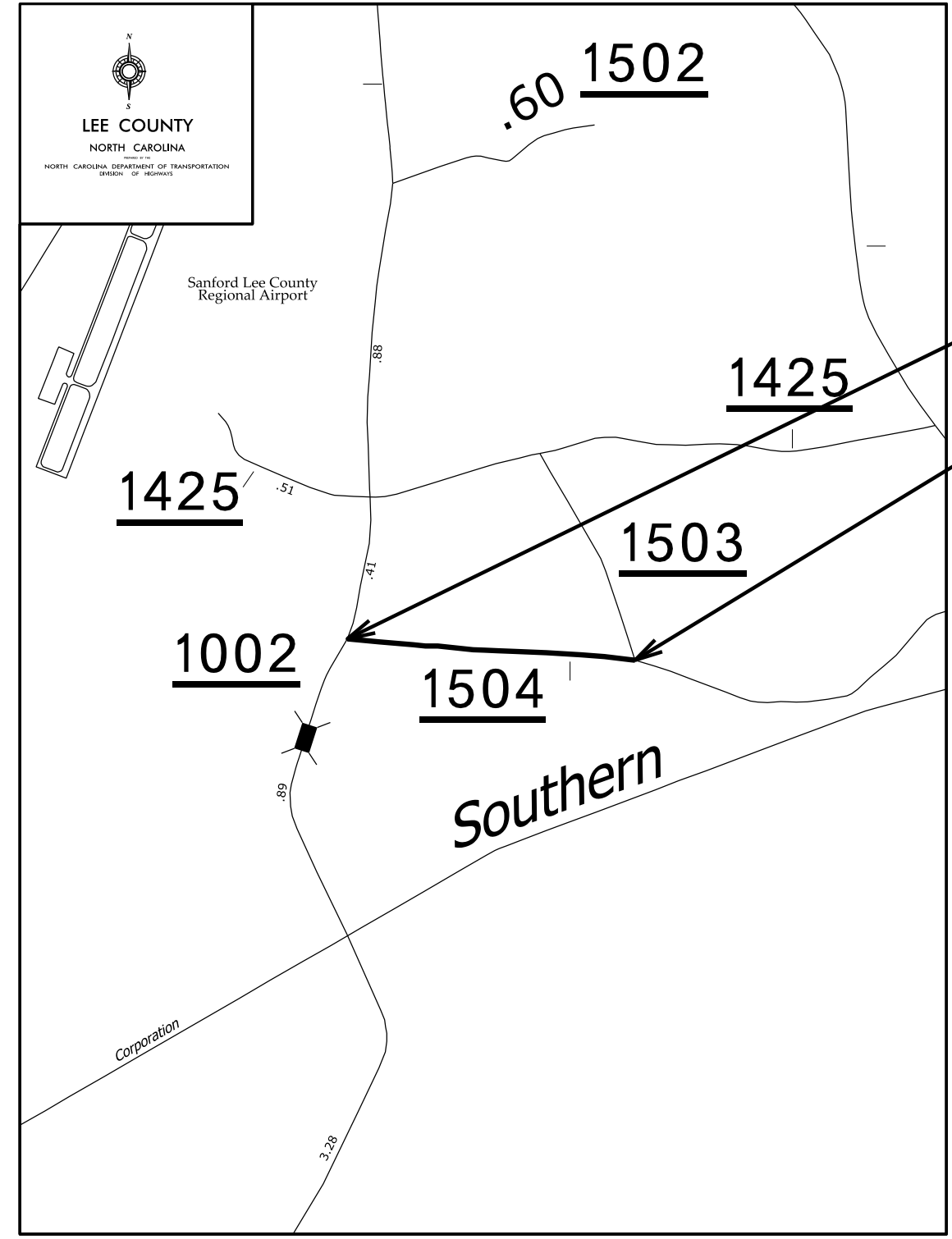
Map 12



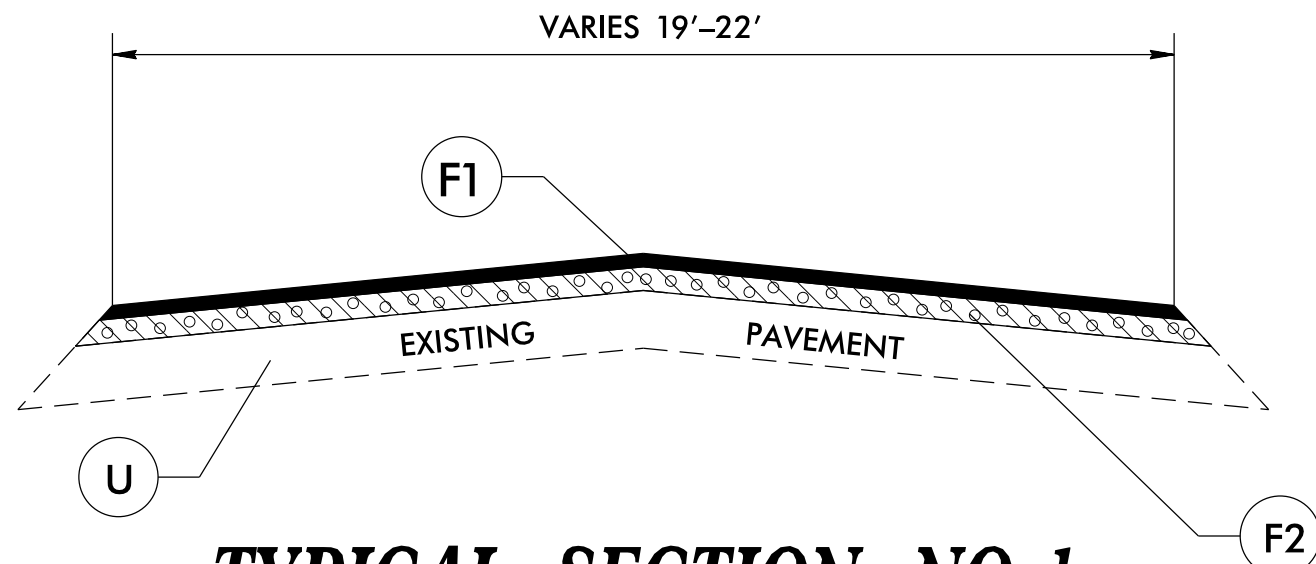
Map 13



Map 14

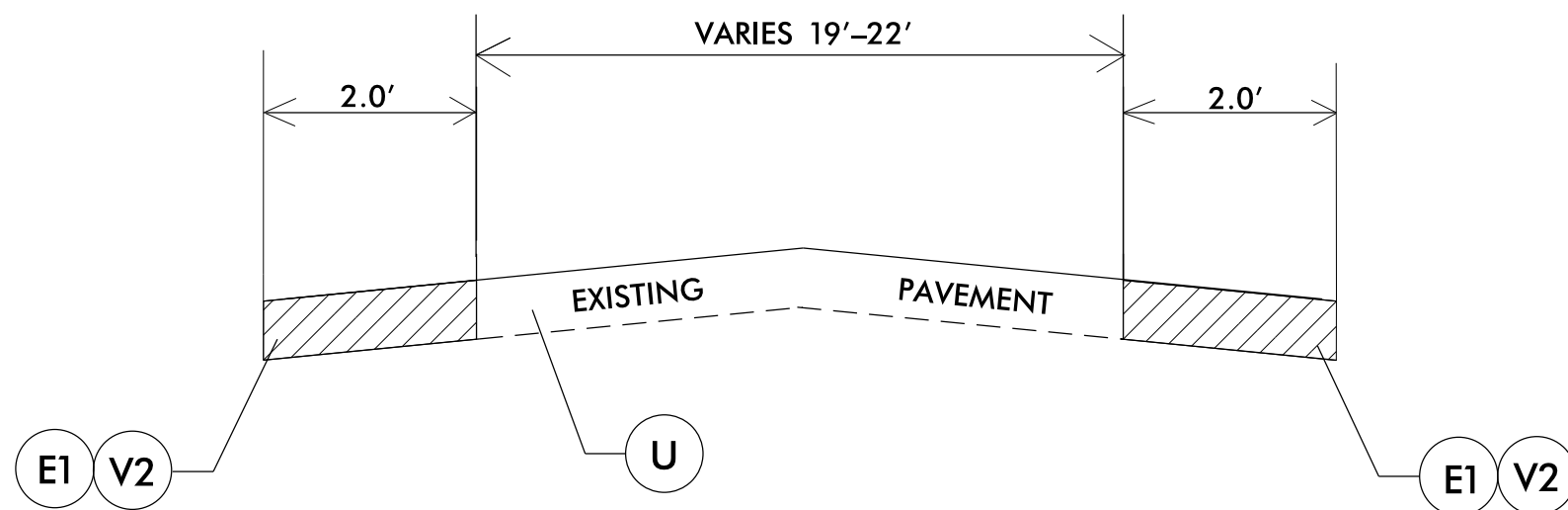


12-08-DEC-2021 09:34
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 11/18/2021 8:55:05 AM



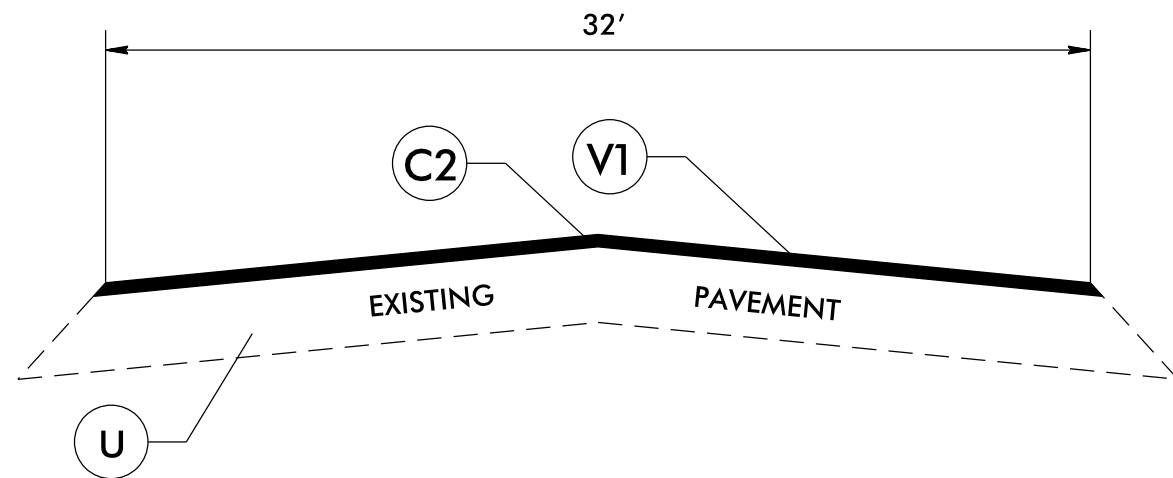
TYPICAL SECTION NO. 1

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.
D1	PROP. APPROX. 2.5" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.
E1	PROP. APPROX. 4.0" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
F1	PROP. ASPHALT SURFACE TREATMENT, FOG SEAL
F2	PROP. ASPHALT SURFACE TREATMENT DOUBLE SEAL
F3	PROP. ASPHALT SURFACE TREATMENT, MAT COAT WITH #67 STONE
S	AGGREGATE SHOULDER BORROW
U	EXISTING PAVEMENT.
V1	MILLING 1.5" IN DEPTH
V2	TRENCHING FOR BASE COURSE (SEE S.P.)

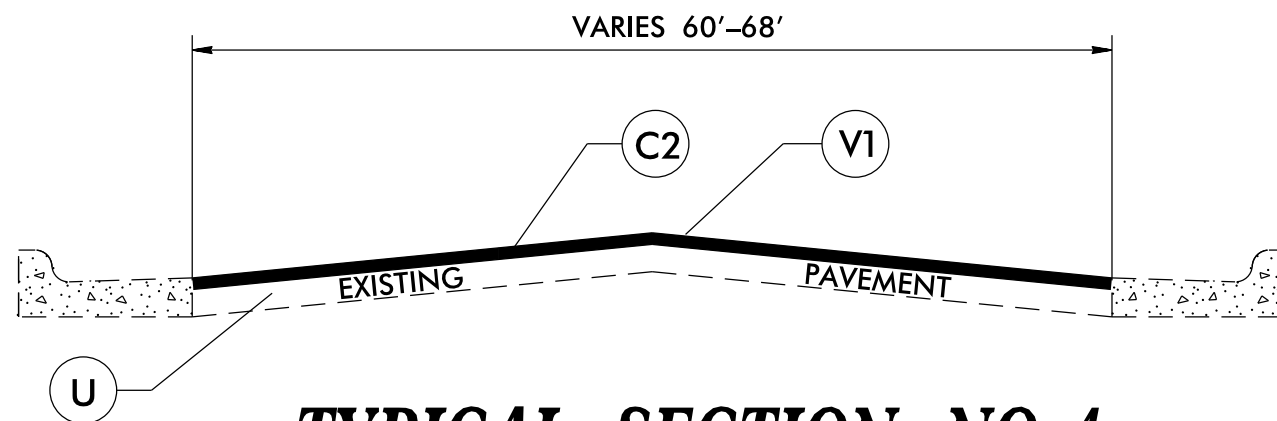


TYPICAL SECTION NO. 2

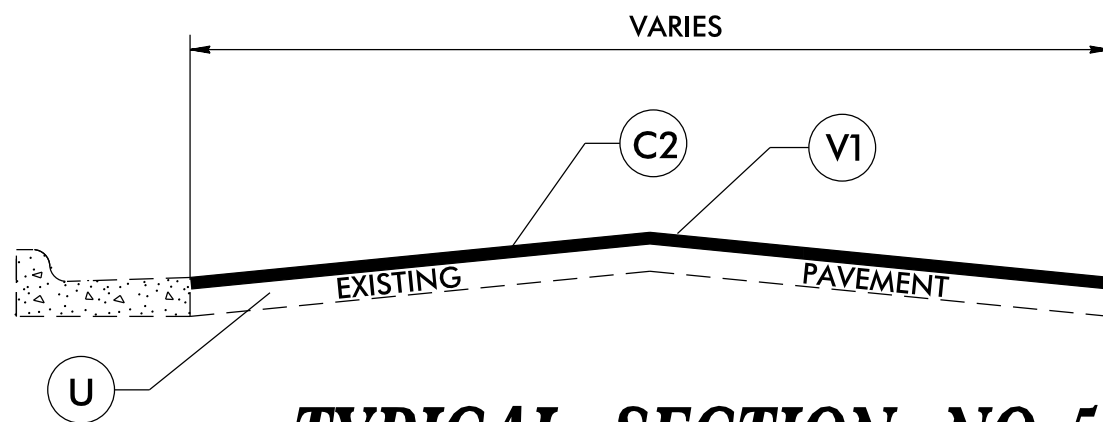
NOTE: USE TYPICAL #2 FOR MAPS #1,2,3
USE FOR MAP #3 FROM SR 1334
PENDERGRASS RD TO NC 42



TYPICAL SECTION NO. 3



TYPICAL SECTION NO. 4



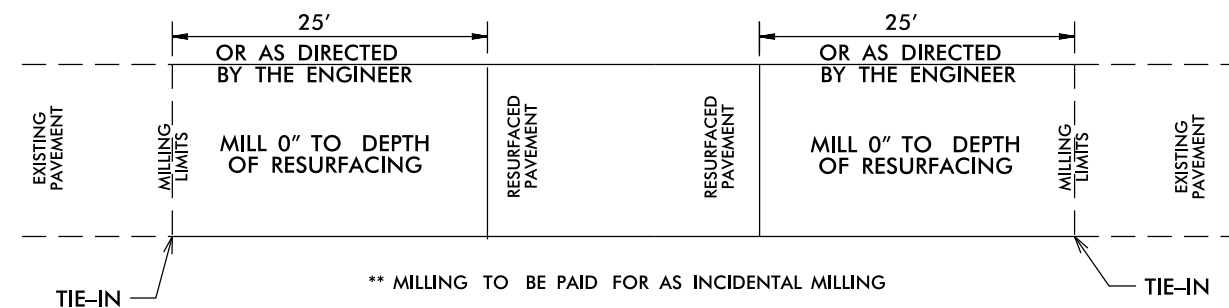
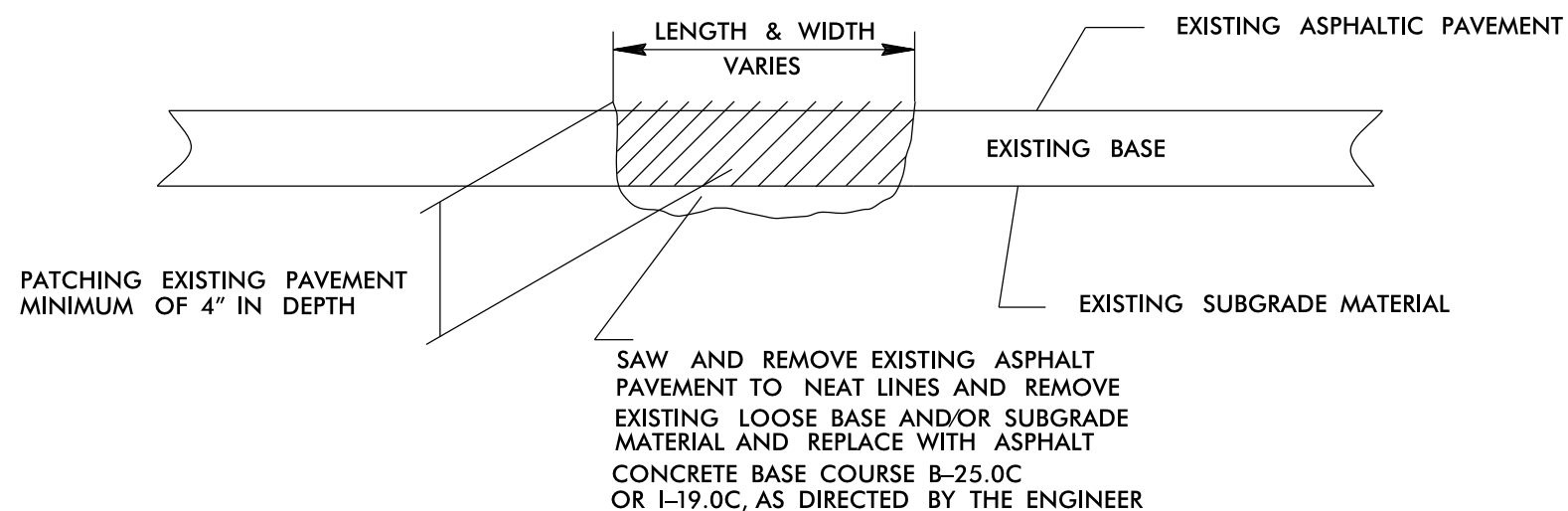
TYPICAL SECTION NO. 5

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.
D1	PROP. APPROX. 2.5" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.
E1	PROP. APPROX. 4.0" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
F1	PROP. ASPHALT SURFACE TREATMENT, FOG SEAL
F2	PROP. ASPHALT SURFACE TREATMENT DOUBLE SEAL
F3	PROP. ASPHALT SURFACE TREATMENT, MAT COAT WITH #67 STONE
S	AGGREGATE SHOULDER BORROW
U	EXISTING PAVEMENT.
V1	MILLING 1.5" IN DEPTH
V2	TRENCHING FOR BASE COURSE (SEE S.P.)

DETAILS AND NOTES

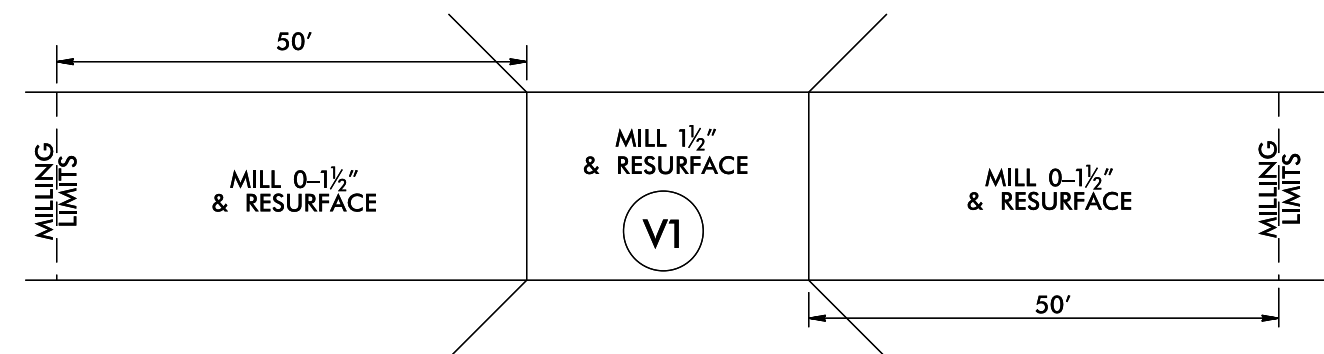
DETAILS OF PATCHING EXISTING PAVEMENT PRIOR TO RESURFACING



PAVEMENT TIE-IN DETAIL

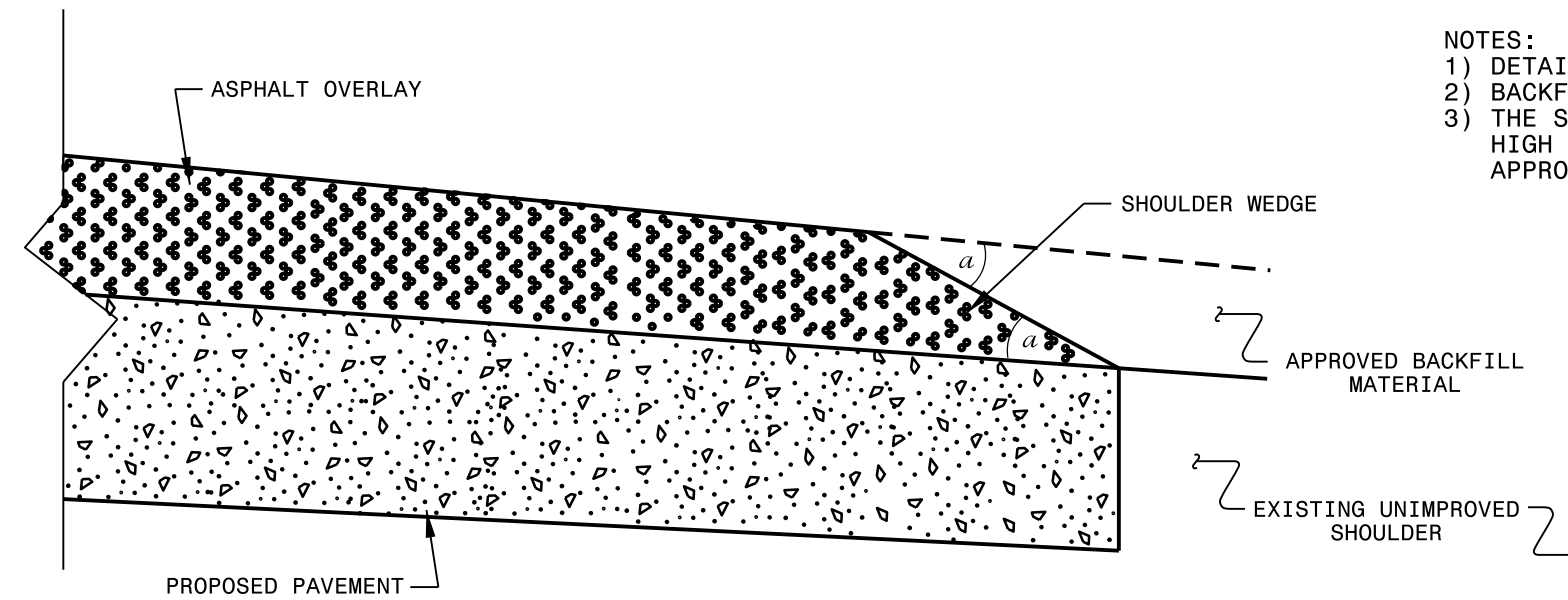
PROJECT NOTES

- FINAL PAVEMENT MARKINGS TO BE HANDLED BY STATE FORCES ON MAPS #1-3 AND #8-15.
- INCLUDE AST DOUBLE SEAL ON MAP 3 BRIDGE #59.
- STATE FORCES WILL BE HANDLING ALL SHOULDER WORK EXCEPT INCIDENTAL STONE AS DIRECTED BY THE ENGINEER.
- TEMPORARY PAINT QUANTITIES INCLUDED FOR MAPS #4,5,6,7, AND 10 WITH MILLING.

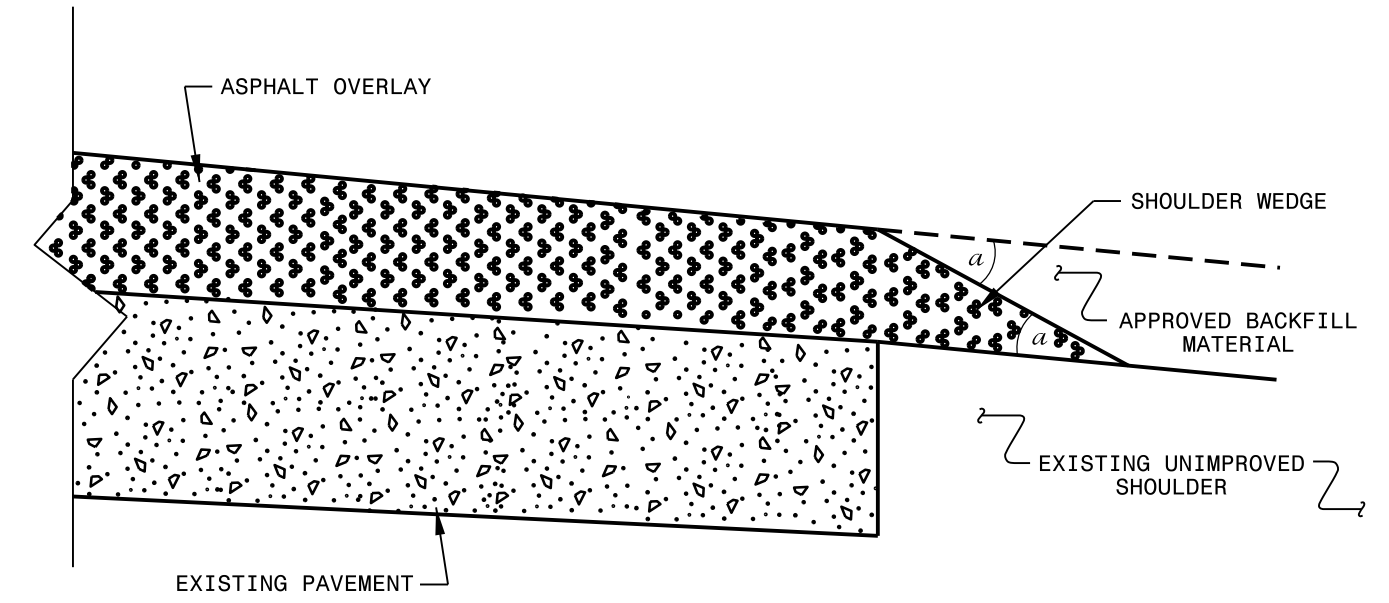


USE FOR MAP #11 SR 1144 SWANNS STATION RD BRIDGE #35
 * MILLING FOR APPROACHES SHALL BE PAID FOR UNDER INCIDENTAL MILLING

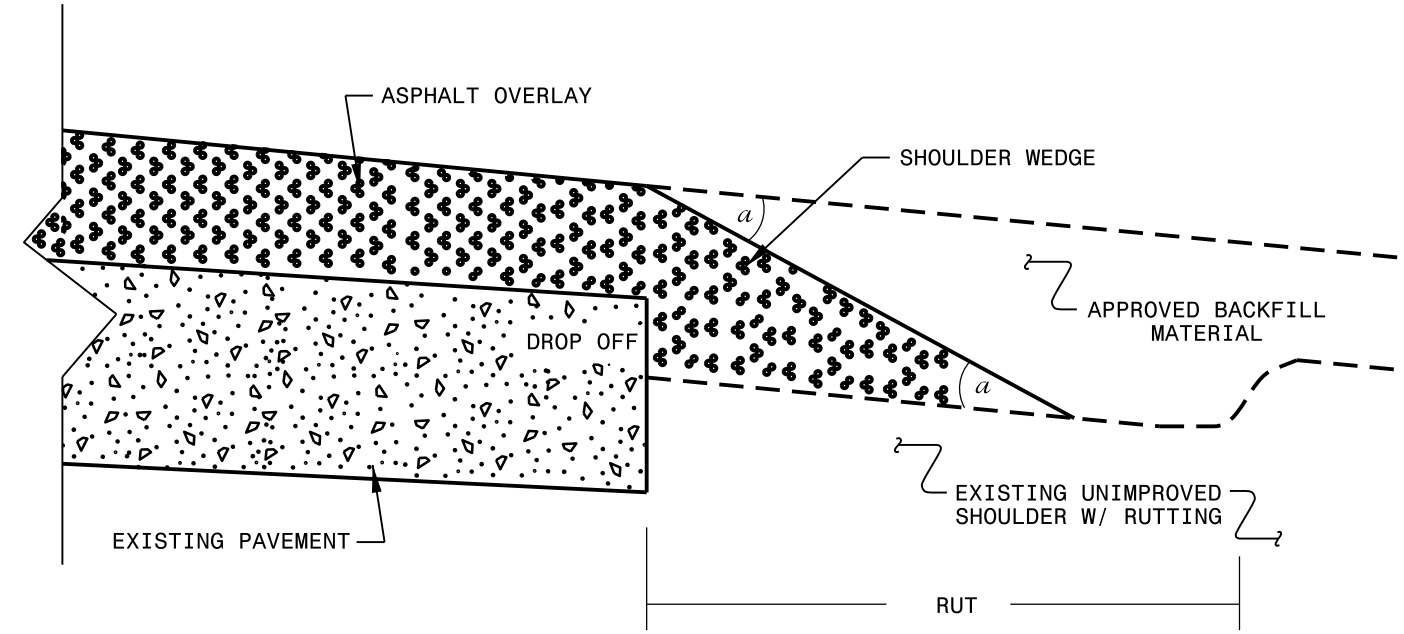
- NOTES:
- 1) DETAIL DOES NOT APPLY TO OGAFc AND ULTRA-THIN BONDED WEARING COURSE.
 - 2) BACKFILL SHOULDER WITH APPROVED MATERIAL.
 - 3) THE SHOULDER WEDGE DEVICE MAY BE DISENGAGED AT PAVED DRIVEWAYS, SIDE STREETS, HIGH SHOULDERS, AND OTHER LOCATIONS NOT FEASIBLE TO CONSTRUCT AS APPROVED BY THE ENGINEER.



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\detatl1s\stand\shoulderwedgedetatl1.dgn	

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

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

PROJECT NO.	SHEET NO.
2022CPT.08.10.20532, 2022CPT.08.20.10531	13
2022CPT.08.20.20531	

SUMMARY OF QUANTITIES

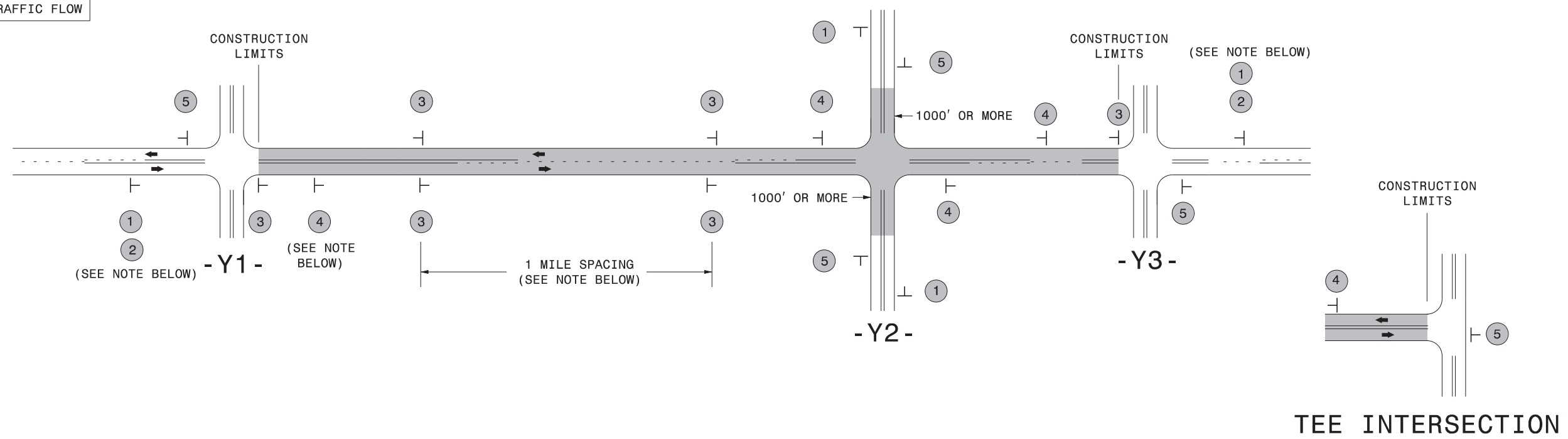
PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	LANE TYPE	FINAL SURFACE TESTING REQUIRED	WARM MIX ASPHALT REQUIRED	LENGTH	WIDTH	1220000000-E	1297000000-E	1330000000-E	1491000000-E	1503000000-E	1519000000-E	1523000000-E	1575000000-E	1704000000-E	1775500000-E	1803500000-E	1820000000-E	1838000000-E	1838500000-N	2830000000-N	2845000000-N	2525000000-N	7444000000-E	7456000000-E													
												INCIDENTAL STONE BASE	1.5" MILLING	INCIDENTAL MILLING	BASE COURSE, B25.0C	INTER-MEDIATE COURSE, I19.0C	SURFACE COURSE, S9.5B	SURFACE COURSE, S9.5C	ASPHALT BINDER FOR PLANT MIX	PATCHING EXISTING PAVEMENT	ASPHALT SURFACE TREATMENT MATCOAT, #67 STONE	ASPHALT SURFACE TREATMENT DOUBLE SEAL	ASPHALT SURFACE TREATMENT FOG SEAL	EMULSION FOR ASPHALT SURFACE TREATMENT	VACUUM TRUCK	ADJUST MANHOLES	ADJUST METER OR VALVE BOX	PORTABLE LIGHTING	INDUCTIVE LOOP SAWCUT	LEAD-IN CABLE (14-2 PAIR)													
										MI	FT	TONS	SY	SY	TONS	TONS	TONS	TONS	TONS	TONS	SY	SY	SY	GAL	WK	EA	EA	LS	LF	LF													
2022CPT.08.10.20532	Lee	1	SR 1332 (N FRANKLIN DR)	FROM NC 42 TO SR 1009 (CARBANTON RD)	1,2	2	2WU	NO	NO	0.98	19	25			525				24	85		11,000	11,000	5,500	1																		
TOTAL FOR MAP NO. 1												0.98		25			525			24	85		11,000	11,000	5,500	1																	
2022CPT.08.10.20532	Lee	2	SR 1334 (PENDERGRASS RD)	FROM SR 1318 (STEEL BRIDGE RD) TO SR 1332 S (FRANKLIN DR)	1,2	2	2WU	NO	NO	0.98	22	25			525				24	70		12,645	12,645	6,323	1																		
TOTAL FOR MAP NO. 2												0.98		25			525			24	70		12,645	12,645	6,323	1																	
2022CPT.08.10.20532	Lee	3	SR 1332 (S FRANKLIN DR)	FROM NC 42 TO SR 1305 (HENLEY RD), WIDEN FROM SR 1334 PENDERGRASS RD TO NC 42	1,2	2	2WU	NO	NO	2.48	22	25			551				25	75		32,100	32,100	16,050	2																		
TOTAL FOR MAP NO. 3												2.48		25			551			25	75		32,100	32,100	16,050	2																	
TOTAL FOR PROJ NO. 2022CPT.08.10.20532												4.44		75			1,601			73	230		55,745	55,745	27,873	4																	
2022CPT.08.20.10531	Lee	4	US 421 BUSINESS	HARNETT CO LINE TO +382' N OF SR 1526 (MT PISGAH CHURCH RD)	3	2	MU	NO	NO	3.557	32		68,257	5,000					6,647	399	40									2,400	2,400												
TOTAL FOR MAP NO. 4												3.557					68,257	5,000		6,647	399	40																		2,400	2,400		
2022CPT.08.20.10531	Lee	5	NC 87 (S HORNER BLVD)	FROM PVMNT JT +97' N OF SR 1138 (HARVEY FAULK RD) TO PVMNT JT +382' N OF SR 1597 (COX MADDOX RD)	3,4,5	2	MU	NO	NO	0.57	68		22,739	2,230					2,270	136										2,280	2,280												
TOTAL FOR MAP NO. 5												0.57					22,739	2,230		2,270	136																		*	2,280	2,280		
2022CPT.08.20.10531	Lee	6	NC 78 (TRAMWAY RD)	FROM US 1 TO +400' E OF SR 1152 (FIRE TOWER RD), PAVE BACK TO PVMNT JT 1060' ON SR 1157 (HICKORY HOUSE RD)	3	2	MU	NO	NO	1.95	38		48,740	842					4,499	270	20									1,200	1,200												
TOTAL FOR MAP NO. 6												1.95					48,740	842		4,499	270	20																		1,200	1,200		
2022CPT.08.20.10531	Lee	7	US 1-BUS (CARTHAGE ST)	FROM US 1-BUS (WICKER ST) TO US 421 BUS (N. HORNER BLVD)	4	2	MU	NO	NO	0.59	60		21,058	1,958					2,977	179	20						14	9		2,400	2,400												
TOTAL FOR MAP NO. 7												0.59					21,058	1,958		2,977	179	20																14	9		2,400	2,400	
TOTAL FOR PROJ NO. 2022CPT.08.20.10531												6.667					160,794	10,030		16,393	984	80																14	9	1	8,280	8,280	
2022CPT.08.20.20531	Lee	8	SR 1303 (CENTER CH RD)	FROM SR 1311 (BIG SPRINGS DR TO SR 1007 (S PLANK)	9	2	2WU	NO	NO	1.78	20							1,895	127	75																							
TOTAL FOR MAP NO. 8												1.78								1,895	127	75																					
2022CPT.08.20.20531	Lee	9	SR 1158 ((WILLET RD)	FROM 1157 (HICKORY HOUSE RD) TO SR 1144 (GREENWOOD RD)	7	2	2WU	NO	NO	2.7	20					4,514	2,874		409	20																							
TOTAL FOR MAP NO. 9												2.7								4,514	2,874	409	20																				
2022CPT.08.20.20531	Lee	10	SR 1328 (WILKINS DR)	FROM SR 1100 (SPRING LN) TO SR 1329 (OLD CARBANTON RD)	8	2	2WU	NO	NO	0.48	20		5,632						512	34	50									300	300												
TOTAL FOR MAP NO. 10												0.48					5,632			512	34	50																		300	300		
2022CPT.08.20.20531	Lee	11	SR 1144 (SWANNS STATION RD)	FROM HARNETT CO TO SR 1162 (SHERIFF WATSON RD)	6	2	2WU	NO	NO	2.91	20	100	560	400					3,098	208	300	34,144		13,658	2																		
TOTAL FOR MAP NO. 11												2.91					100	560	400	3,098	208	300	34,144		13,658	2																	
2022CPT.08.20.20531	Lee	12	SR 1162 (SHERIFF WATSON)	FROM SR 1170 (BLACKS CHAPEL RD) TO SR 1001 (EDWARDS RD)	9	2	2WU	NO	NO	1.15	20								1,224	82	180																						
TOTAL FOR MAP NO. 12												1.15								1,224	82	180																					
2022CPT.08.20.20531	Lee	13	SR 1140 (FRANK WICKER)	FROM SR 1144 (SWANNS STATION RD) TO NC 87	9	2	2WU	NO	NO	1.39	20								1,480	99	125																						
TOTAL FOR MAP NO. 13												1.39								1,480	99	125																					
2022CPT.08.20.20531	Lee	14	SR 1504 (CLETUS HALL RD)	FORM SR 1503 (BUCHANAN FARM RD) TO SR 1002 (LOWER MONCURE RD)	9	2	2WU	NO	NO	0.81	19								820	55	175																						
TOTAL FOR MAP NO. 14												0.81								820	55	175																					
2022CPT.08.20.20531	Lee	15	SR 1159 (JOE MATTHEWS RD)	FROM RR TRACKS TO SR 1158 (WILLET RD)	9	2	2WU	NO	NO	0.64	20								686	46	130																						
TOTAL FOR MAP NO. 15												0.64								686	46	130																					
TOTAL FOR PROJ NO. 2022CPT.08.20.20531												11.86					200	6,192	400	4,514	12,589	1,060	1,055	34,144		13,658	2													300	300		
GRAND TOTAL												22.967					275	166,986	10,430	1,601	4,514	12,589	16,393	2,117	1,365	34,144	55,745	55,745	41,531	6	14	9	1				8,580	8,580					

SIGNING FOR RESURFACING PROJECTS

LEGEND

┆ STATIONARY SIGN

← DIRECTION OF TRAFFIC FLOW



SIGNING NOTES AND PLACEMENT PER DIRECTION	1	 <small>W20-1 48" X 48"</small>	PLACE 1000' PRIOR TO BEGINNING OF CONSTRUCTION LIMITS. ONLY USED ON -Y- LINES IF RESURFACING LIMITS EXTEND 1000' ALONG -Y- LINE.	
	2	 <small>W7-3aP 24" X 18"</small>	#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	 <small>SP 13107 48" X 48"</small>	- 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	 <small>SP 13106 48" X 48"</small>	- 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	 <small>G20-2 A 48" X 24"</small>	PLACE 500' FOLLOWING THE END OF CONSTRUCTION LIMITS OR AS SHOWN WHEN WORK ENDS AT A 3-WAY TEE INTERSECTION.	

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.

W20-1
48" X 48"
 PLACED 500' IN ADVANCE OF FLAGGER.

W20-7 A
48" X 48"
 PLACED 250' IN ADVANCE OF FLAGGER.

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.

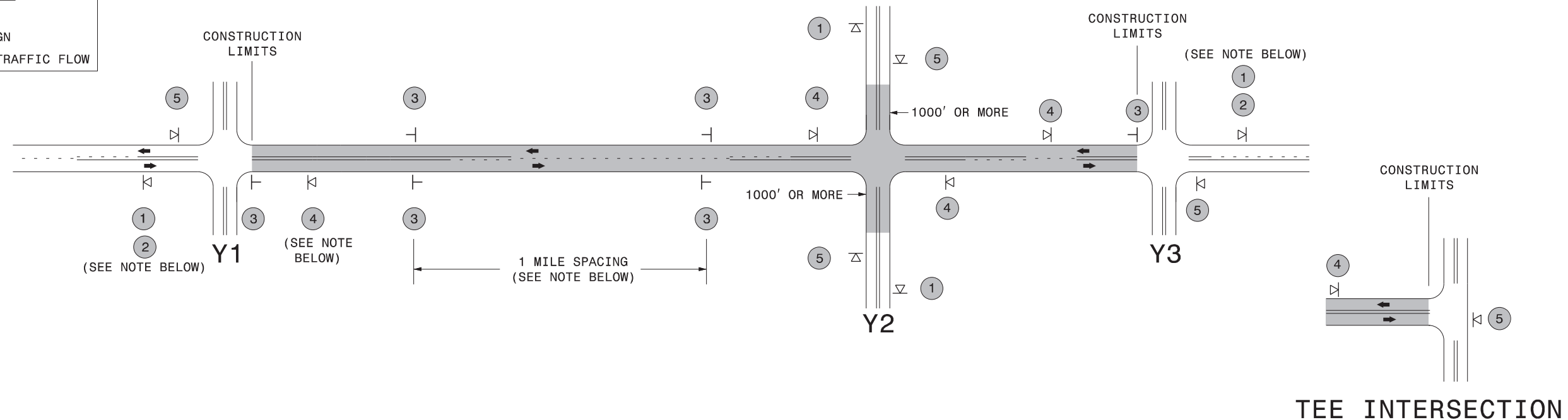
ADVANCE WARNING SIGNS FOR RURAL AND SUBURBAN 2-LANE ROADWAY RESURFACING

5/15/2017 S:\TMU\WZTC\Resurfacing\2L2W & AST Resurfacing Details\Resurfacing_AdvWarn_2Ln.dgn User:kedais

SIGNING FOR ASPHALT SURFACE TREATMENT

LEGEND

- ⏏ PORTABLE SIGN
- ┆ STATIONARY SIGN
- ➔ DIRECTION OF TRAFFIC FLOW



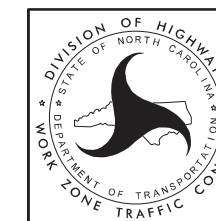
MAINLINE (-L-) SIGNING

-Y- LINE SIGNING

SIGNING NOTES AND PLACEMENT PER DIRECTION	1	 	<ul style="list-style-type: none"> - PLACE 1000' PRIOR TO BEGINNING OF CONSTRUCTION LIMITS. ONLY USED ON -Y- LINES IF RESURFACING LIMITS EXTEND 1000' ALONG -Y- LINE. - SIGN #2 ONLY USED WHEN RESURFACING LIMITS ARE 2 OR MORE MILES IN LENGTH. ROUND UP TO THE NEAREST WHOLE NUMBER. DO NOT USE FRACTIONAL OR DECIMAL NUMBERS. 	<p>STATIONARY SIGNING NOT REQUIRED 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; align-items: center;"> <div style="text-align: center;"> <small>W20-1 48" X 48"</small> PLACED 500' IN ADVANCE OF FLAGGER. </div> <div style="text-align: center;"> <small>W20-7 A 48" X 48"</small> PLACED 250' IN ADVANCE OF FLAGGER. </div> </div>
	3	 	<ul style="list-style-type: none"> - ALTERNATE THE FOLLOWING TWO SIGNS: - STARTING WITH "LOOSE GRAVEL" (W8-7) FOLLOWED BY "UNMARKED PAVEMENT". - PLACE INITIALLY AT THE CONSTRUCTION LIMITS AND SPACED 1 MILE APART THEREAFTER. - AT TEE INTERSECTIONS INSTALL INITIALLY 0.5 MILE FROM INTERSECTION AND SPACE 1 MILE APART THEREAFTER. 	
	4		<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. 	
	5		<ul style="list-style-type: none"> - PLACE 500' FOLLOWING THE END OF CONSTRUCTION LIMITS OR AS SHOWN WHEN WORK ENDS AT A 3-WAY TEE INTERSECTION. 	
	<p>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.</p>			

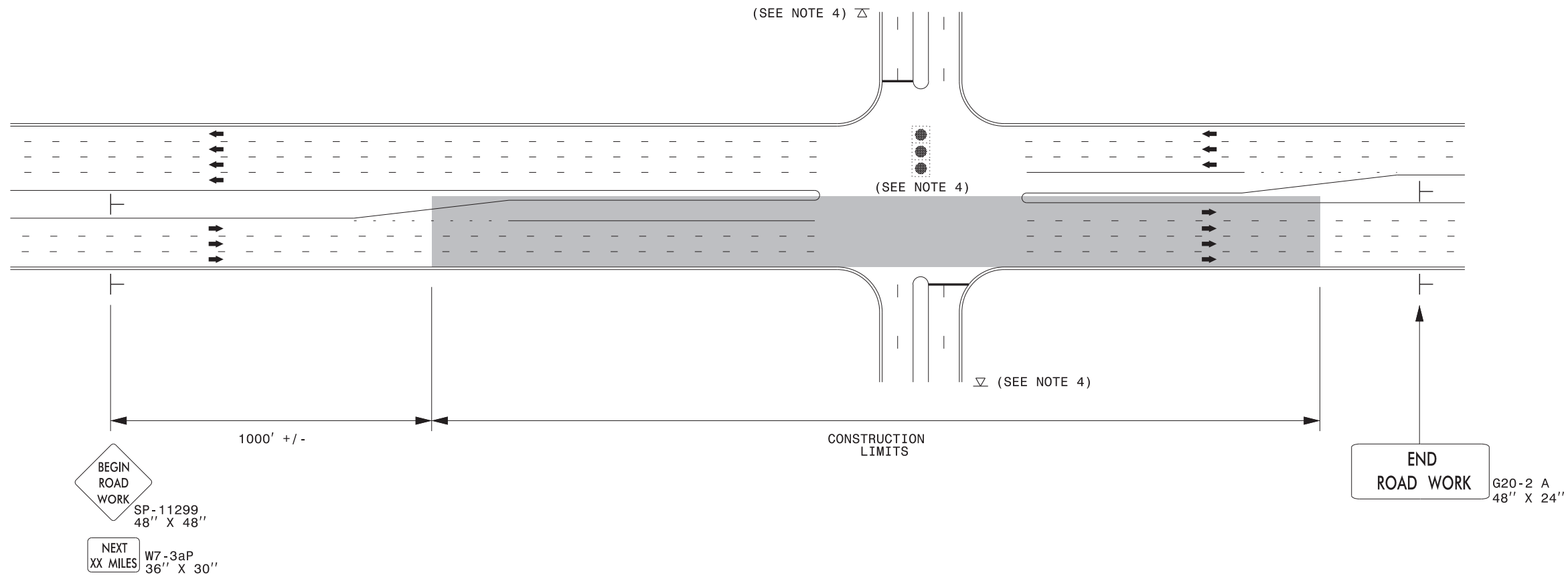
**MAPS LESS
THAN 2 MILES**

FOR AST RESURFACING MAPS WITH CONSTRUCTION LIMITS LESS THAN 2 MILES IN LENGTH, USE A STATIONARY "LOOSE GRAVEL" SIGN AT THE BEGINNING CONSTRUCTION LIMIT FOLLOWED BY AN "UNMARKED PAVEMENT" SIGN MIDWAY THROUGH AND AN "END ROAD WORK" SIGN AT THE END CONSTRUCTION LIMIT.



**ADVANCE WARNING SIGNS
FOR
2-LANE ROADWAY
ASPHALT SURFACE TREATMENT**

URBAN / SUBURBAN WORKZONES

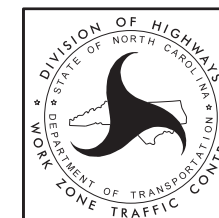


NOTES:

- 1) 48" x 48" SIZED SIGNS (SP- 11299) MAY BE REDUCED TO 36" X 36" ON ROADWAYS WITH SPEED LIMITS OF 40 MPH OR LESS.
- 2) MOUNT SIGNS THAT ARE LARGER THAN 10 SQUARE FEET IN AREA ON TWO OR MORE WOOD OR U-CHANNEL SUPPORTS. PERFORATED SQUARE TUBING SUPPORT SYSTEMS MAY SUPPORT LARGER AREAS ON A SINGLE SUPPORT. FOLLOW MANUFACTURER'S RECOMMENDATIONS. THESE SYSTEMS SHALL BE NCHRP 350 COMPLIANT AND NCDOT APPROVED.
- 3) ADVANCE WARNING SIGNS NOT REQUIRED ON NON-SIGNALIZED SIDE STREETS.
- 4) 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.
- 5) LATERAL CLEARANCE AT ALL SIGN LOCATIONS SHALL BE 2' AS MEASURED FROM THE EDGE OF PAVEMENT OR THE FACE OF THE CURB. WHEN UNABLE TO OBTAIN THE LATERAL CLEARANCE WITHIN THE MEDIAN AREA USE SHOULDER MOUNTS ONLY.
- 6) SIGN MOUNT LOCATIONS SHALL NOT BLOCK SIDEWALKS OR DRIVEWAYS.
- 7) IF STATIONARY GENERAL WARNING SIGNS ARE USED, THEY WILL BE PAID FOR PER SECTION 104 OF THE NCDOT STANDARD SPECIFICATIONS AS EXTRA WORK.
- 8) IF MILLED AREAS ARE NOT PAVED BACK BY THE END OF THE WORK DAY, PORTABLE SIGNS SHALL BE USED TO WARN DRIVERS OF THE PRESENT CONDITIONS. THESE ARE TO INCLUDE, BUT NOT LIMITED TO "ROUGH ROAD" W8-8, "UNEVEN LANES" W8-11, "GROOVED PAVEMENT" W8-15 w/MOTORCYCLE PLAQUE MOUNTED BELOW. THESE ARE TO BE DOUBLE INDICATED ON MULTI-LANE ROADWAYS WITH SPEED LIMITS 45 MPH AND GREATER WHERE LATERAL CLEARANCE CAN BE OBTAINED WITHIN THE MEDIAN AREAS. THESE PORTABLE SIGNS ARE INCIDENTAL TO THE OTHER ITEMS OF WORK INCLUDED IN THE TEMPORARY TRAFFIC CONTROL (LUMP SUM) PAY ITEM.

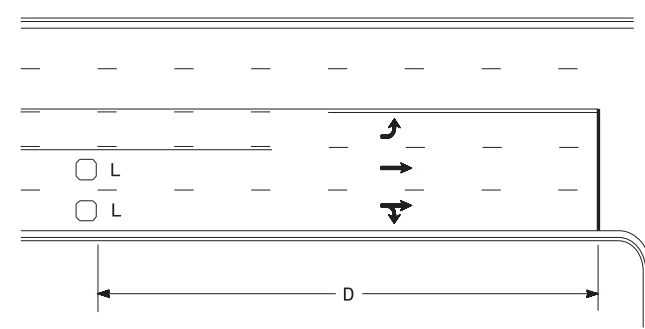
LEGEND

- STATIONARY SIGN
- DIRECTION OF TRAFFIC FLOW



**RESURFACING ADVANCE
WARNING SIGNS FOR
URBAN / SUBURBAN
FACILITIES**

High Speed Detection (≥40 mph)

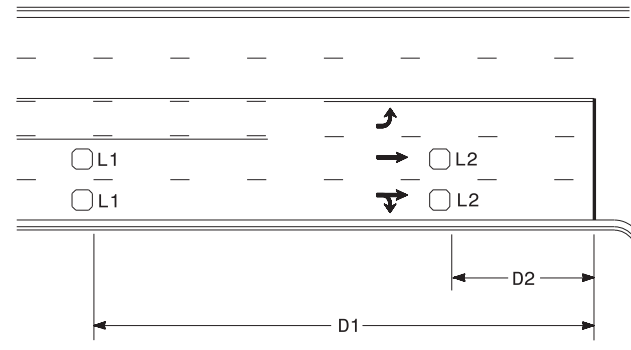


Speed Limit mph	D ft
40	250
45	300
50	355
55	420

L = 6ft X 6ft
Wired separately

Volume Density Operation

OR



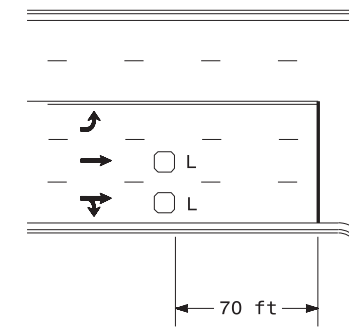
Speed Limit mph	D1 ft	D2 ft
40	250	80
45	300	90
50	355	100
55	420	110

L1 = 6ft X 6ft
Wired in series

L2 = 6ft X 6ft
Wired in series

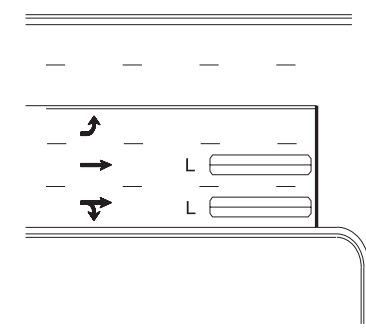
"Stretch" Operation

Low Speed Detection (≤35 mph)



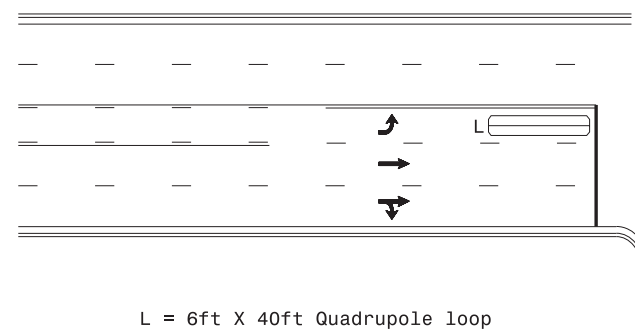
L = 6ft X 6ft
Wired in series

OR



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

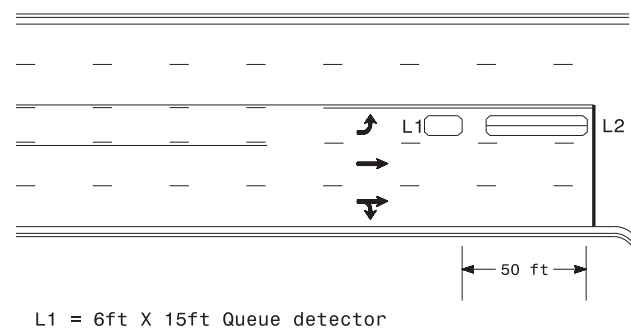
Left Turn Lane Detection



L = 6ft X 40ft Quadrupole loop

Presence Loop Detection

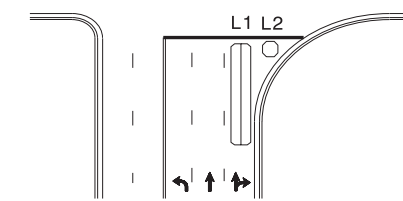
OR



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

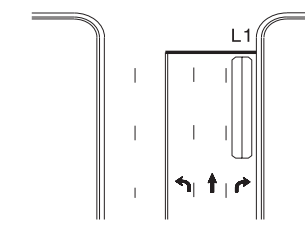
Queue Loop Detection

Right Turn Lane Detection

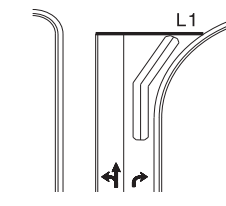


Shared Lane/
Wide Radius Turn

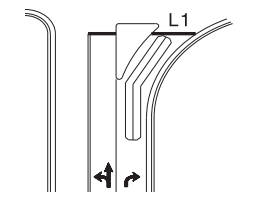
L1 = 6ft X 40ft Quadrupole loop
L2 = 6ft X 6ft [Minimum] Presence loop
Wired separately



Standard Turn

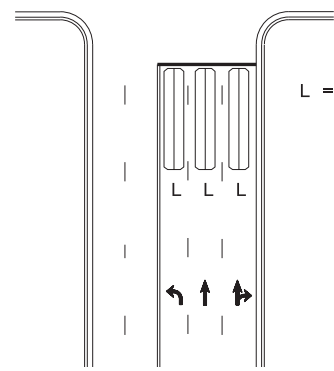


Wide Radius Turn



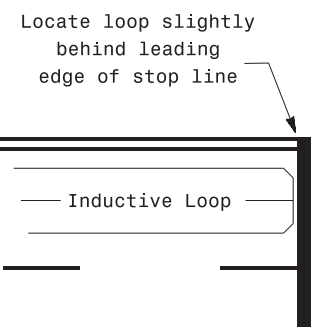
Channelized Turn

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:
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	