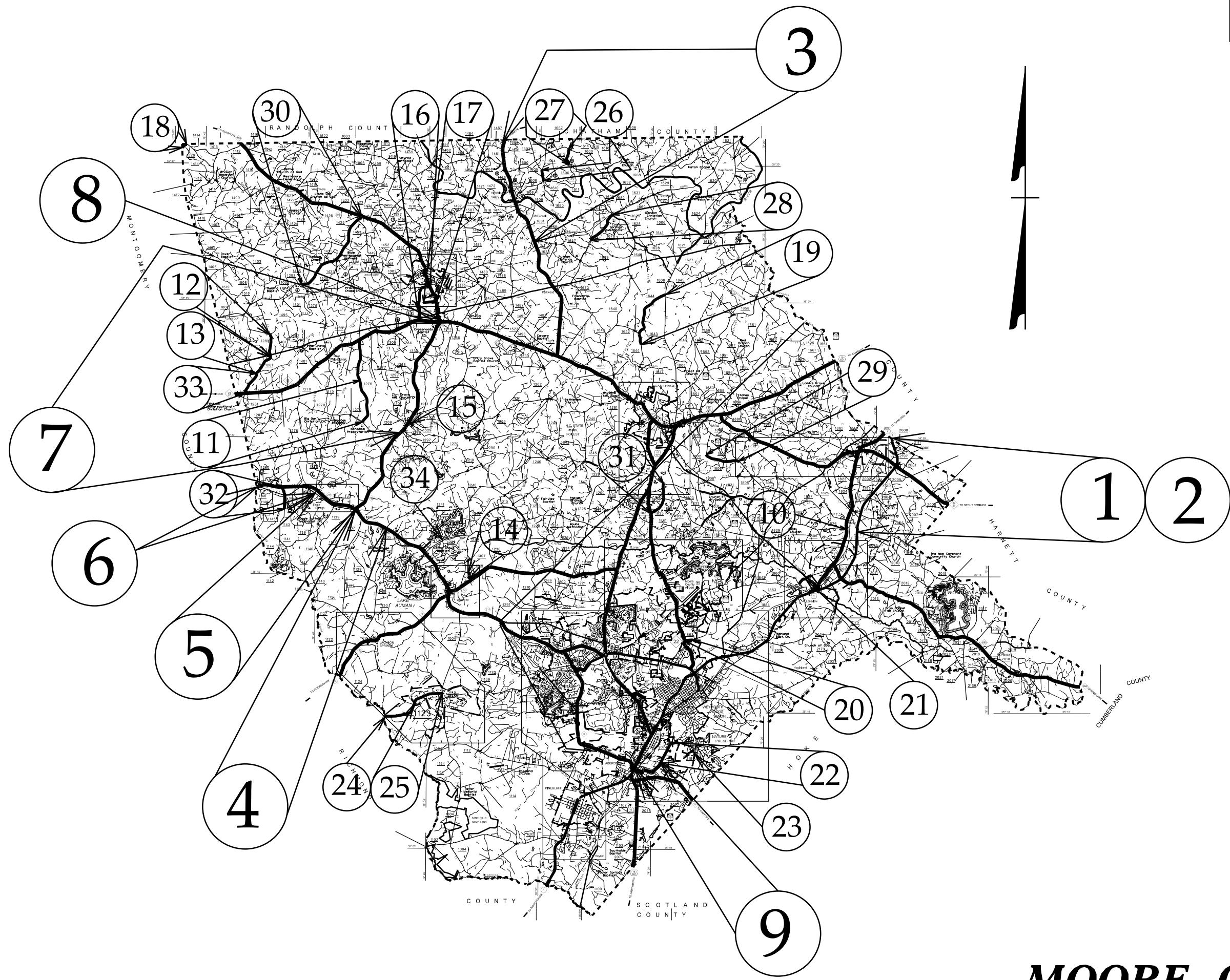


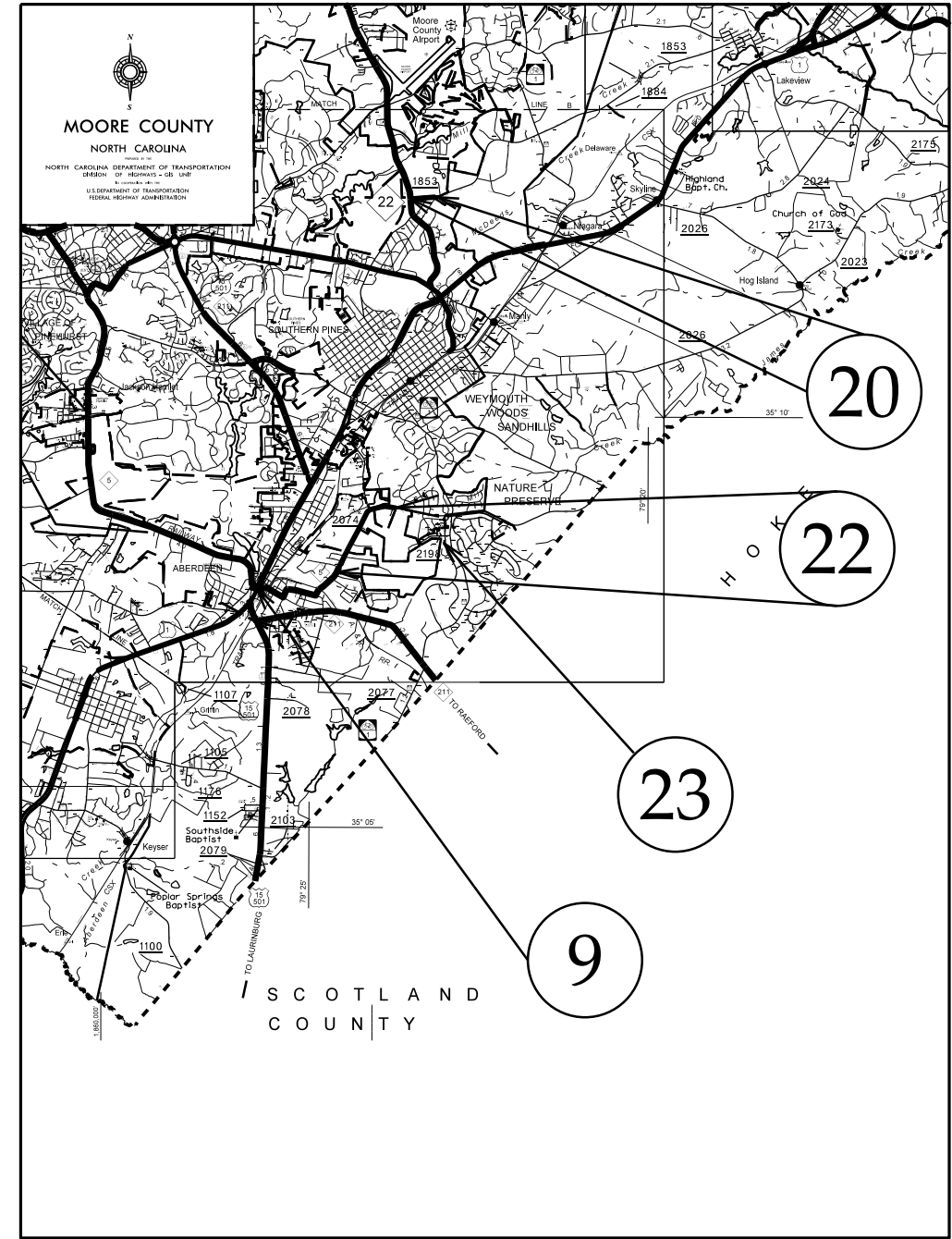
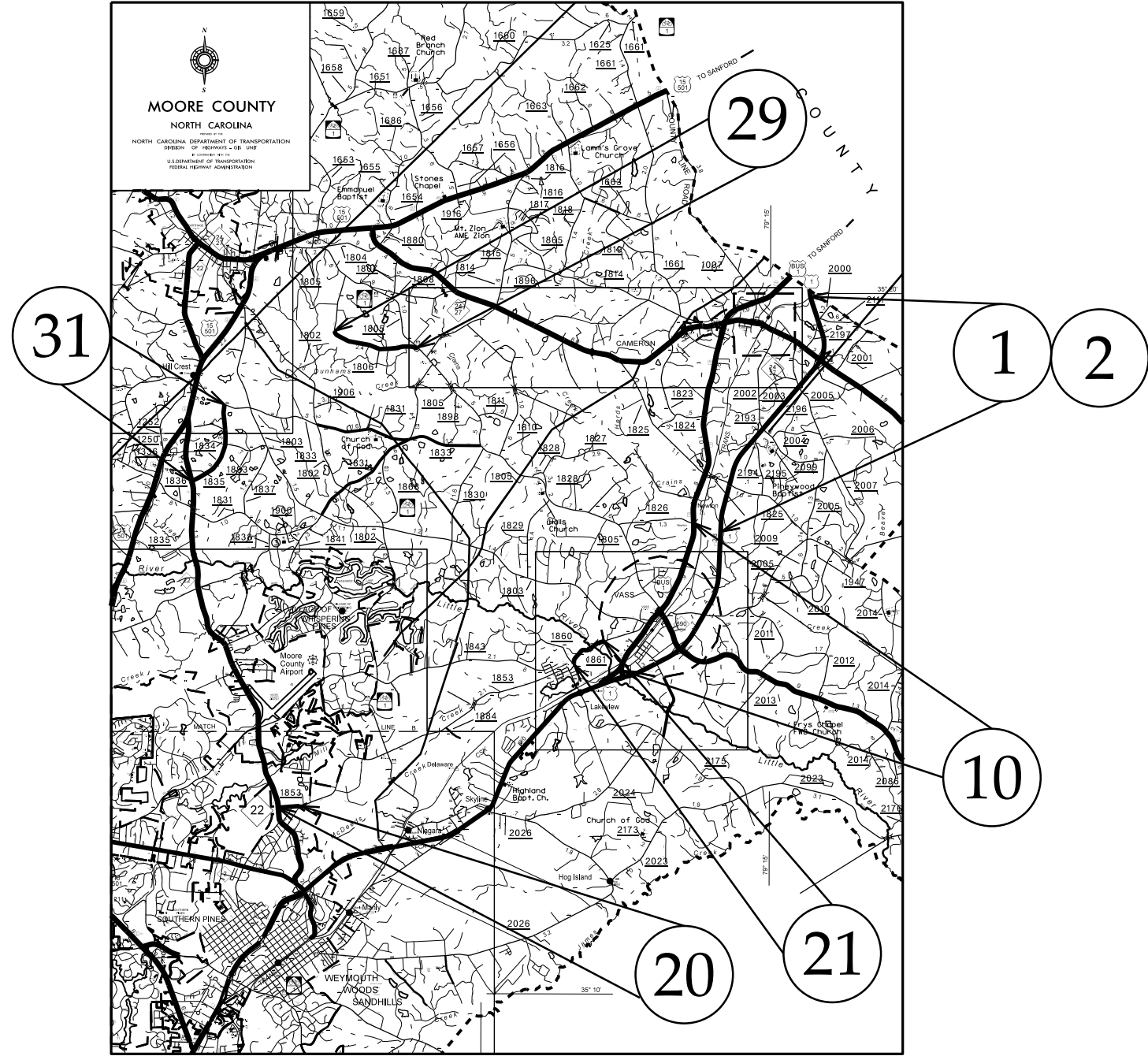
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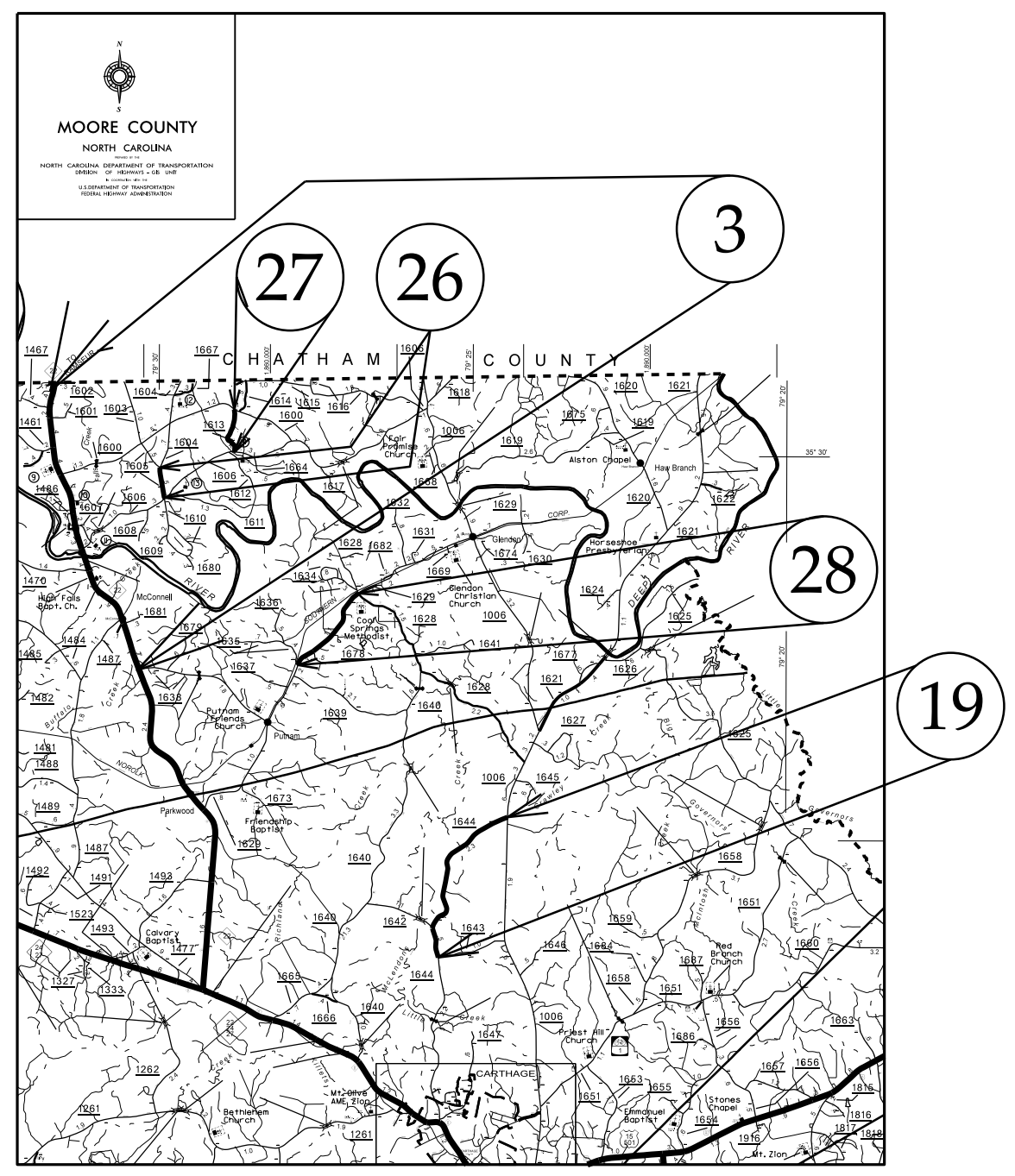
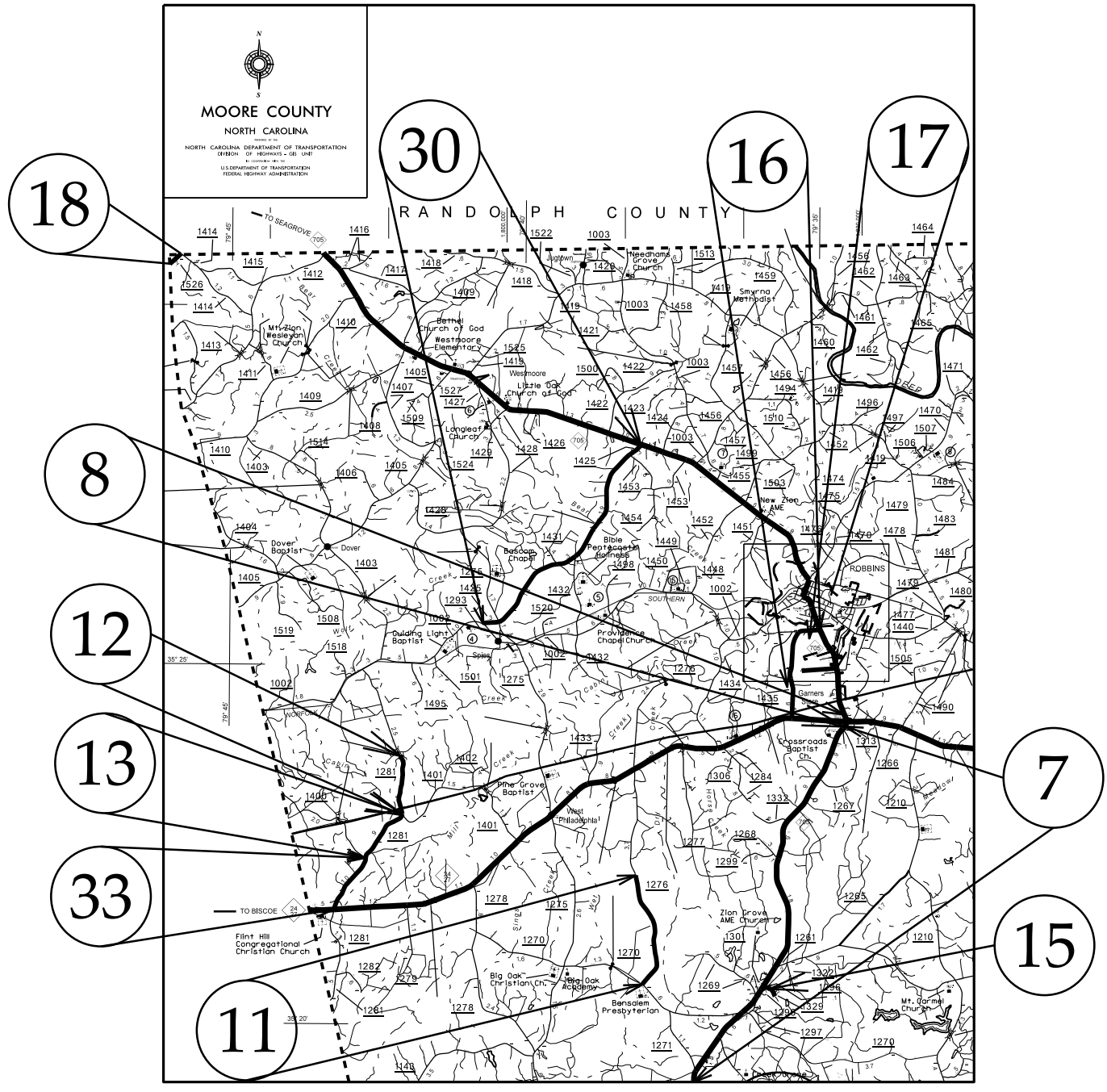
MOORE COUNTY

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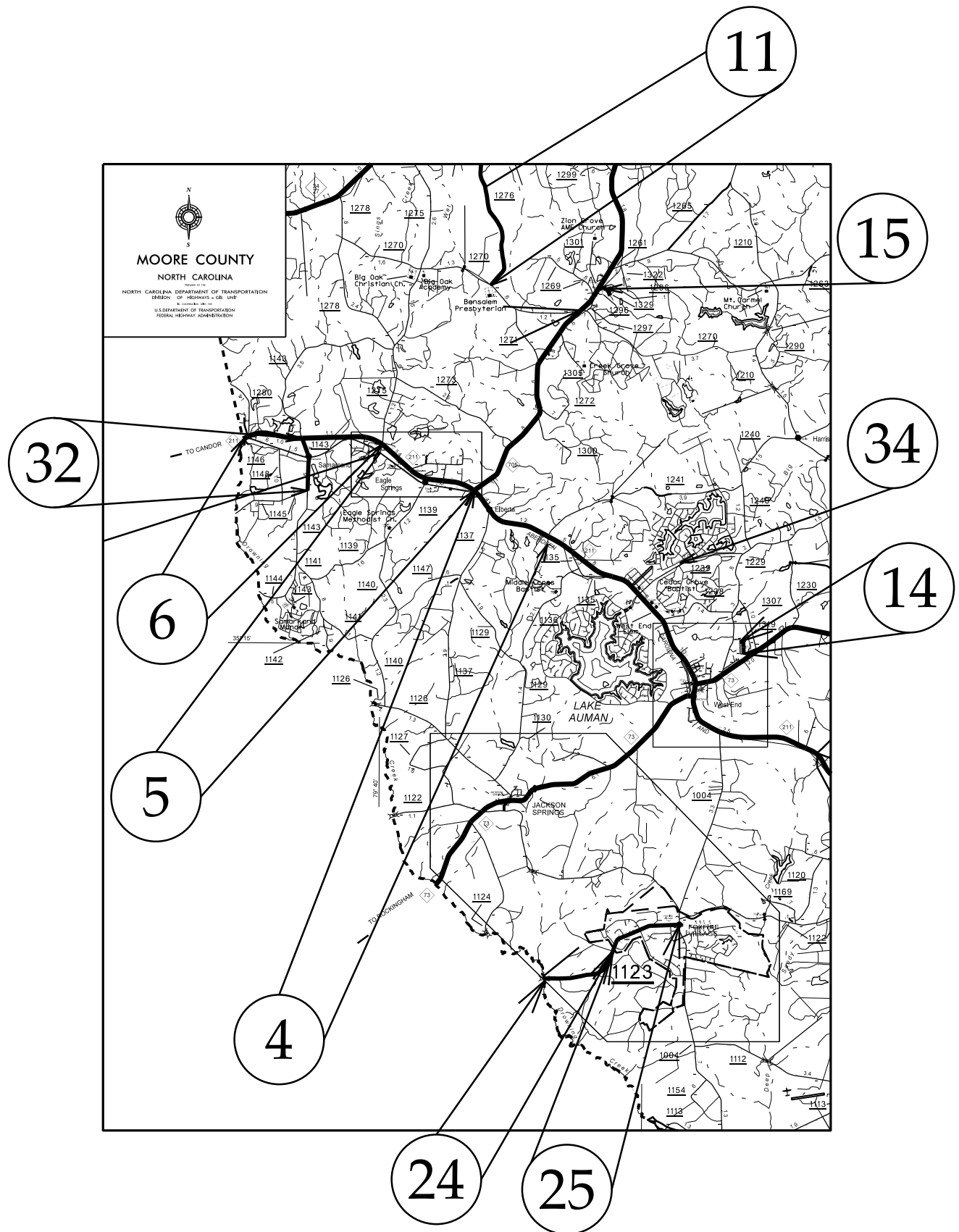


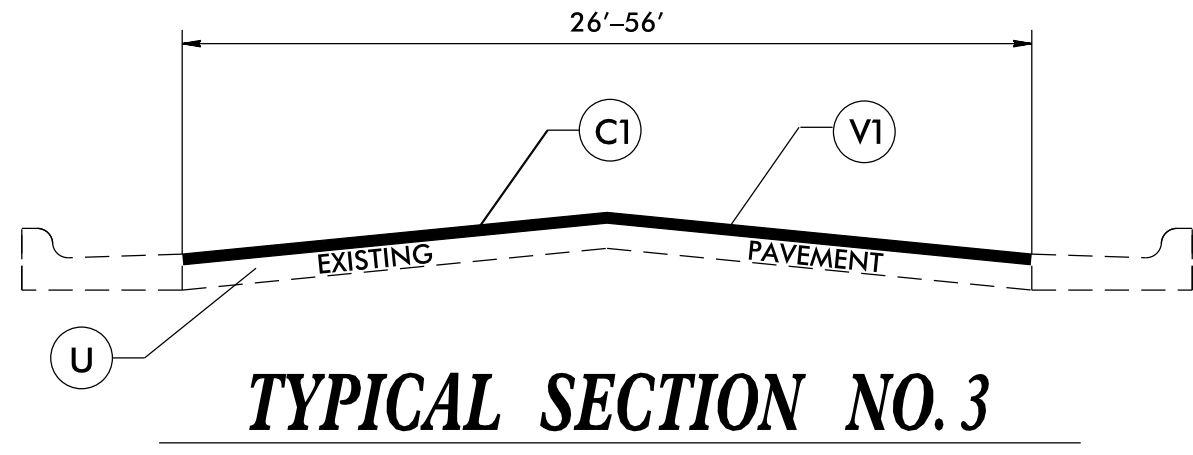
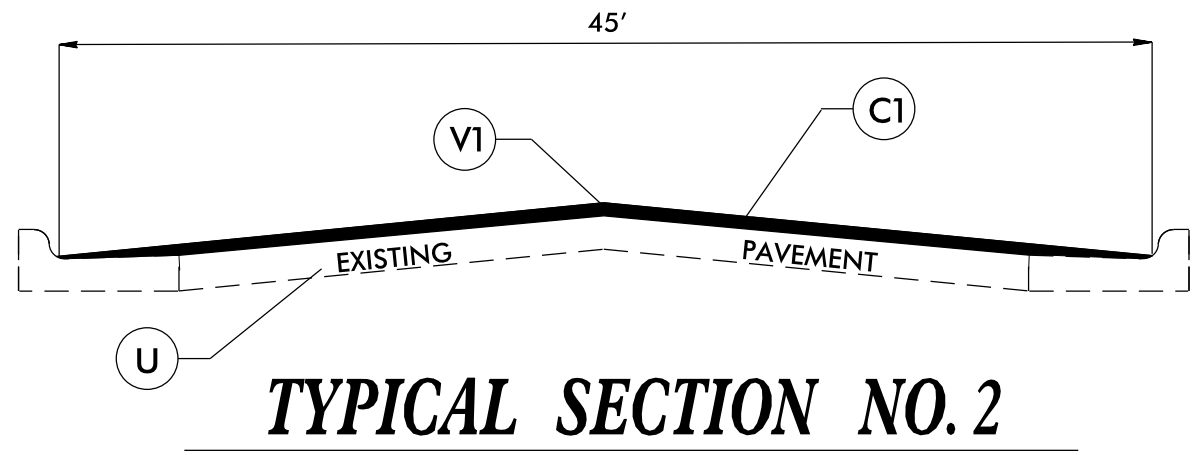
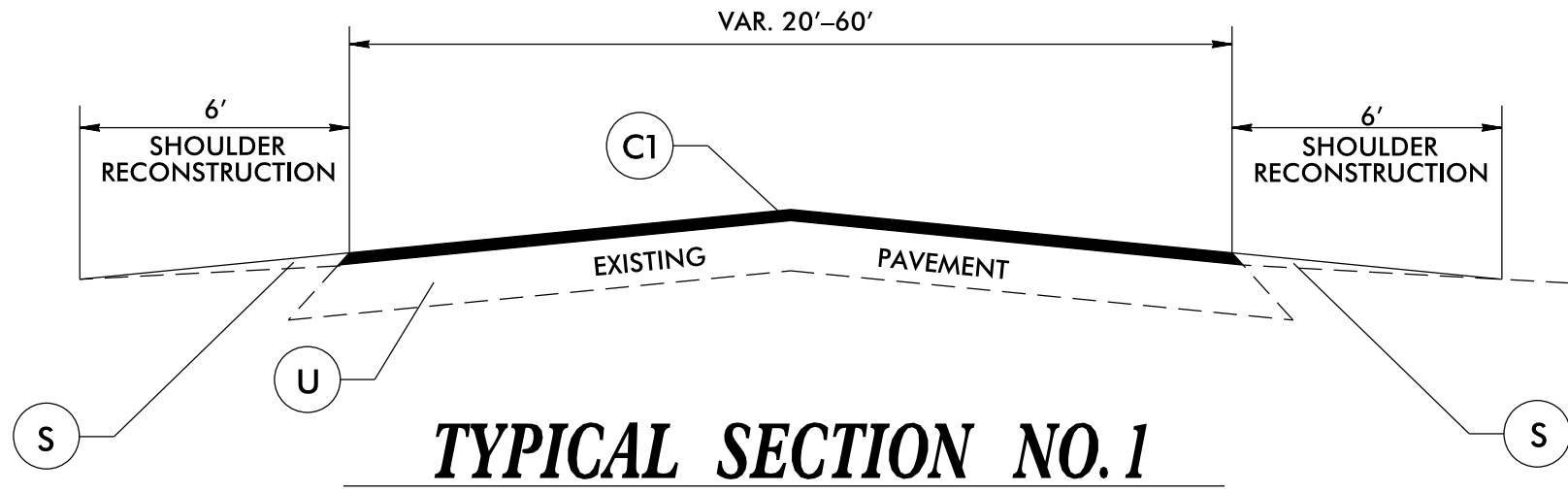
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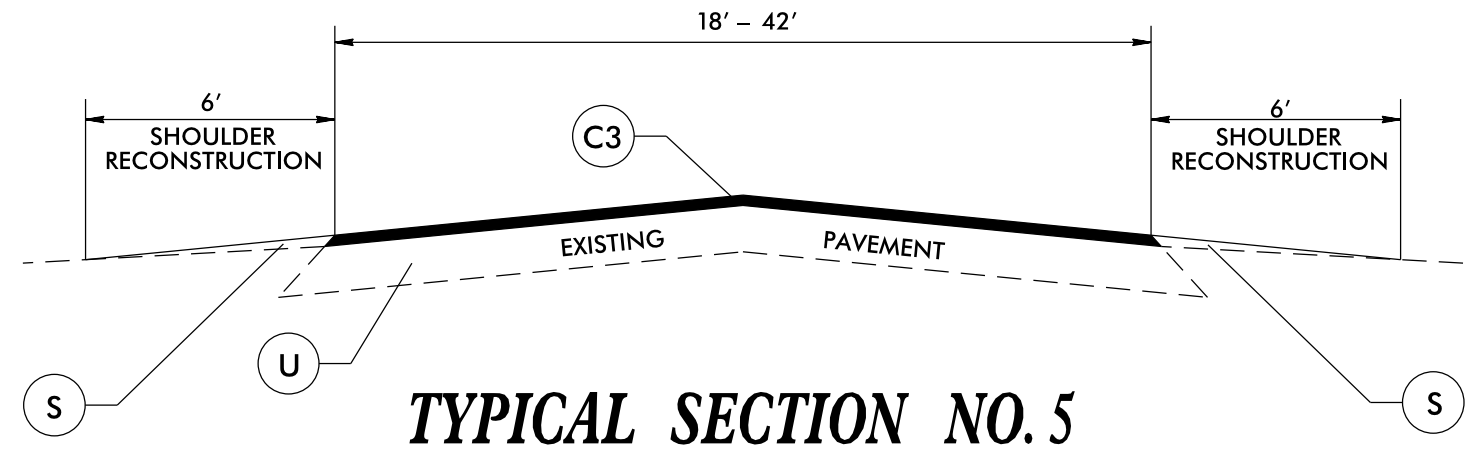
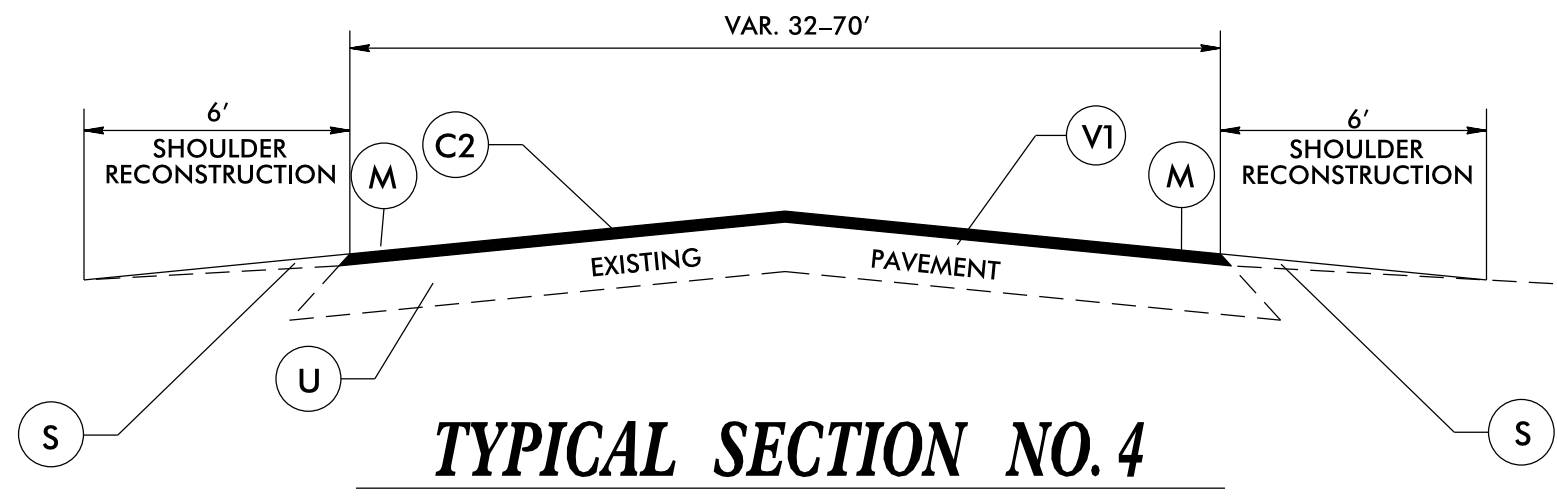


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Projects\111510\111510.dwg





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

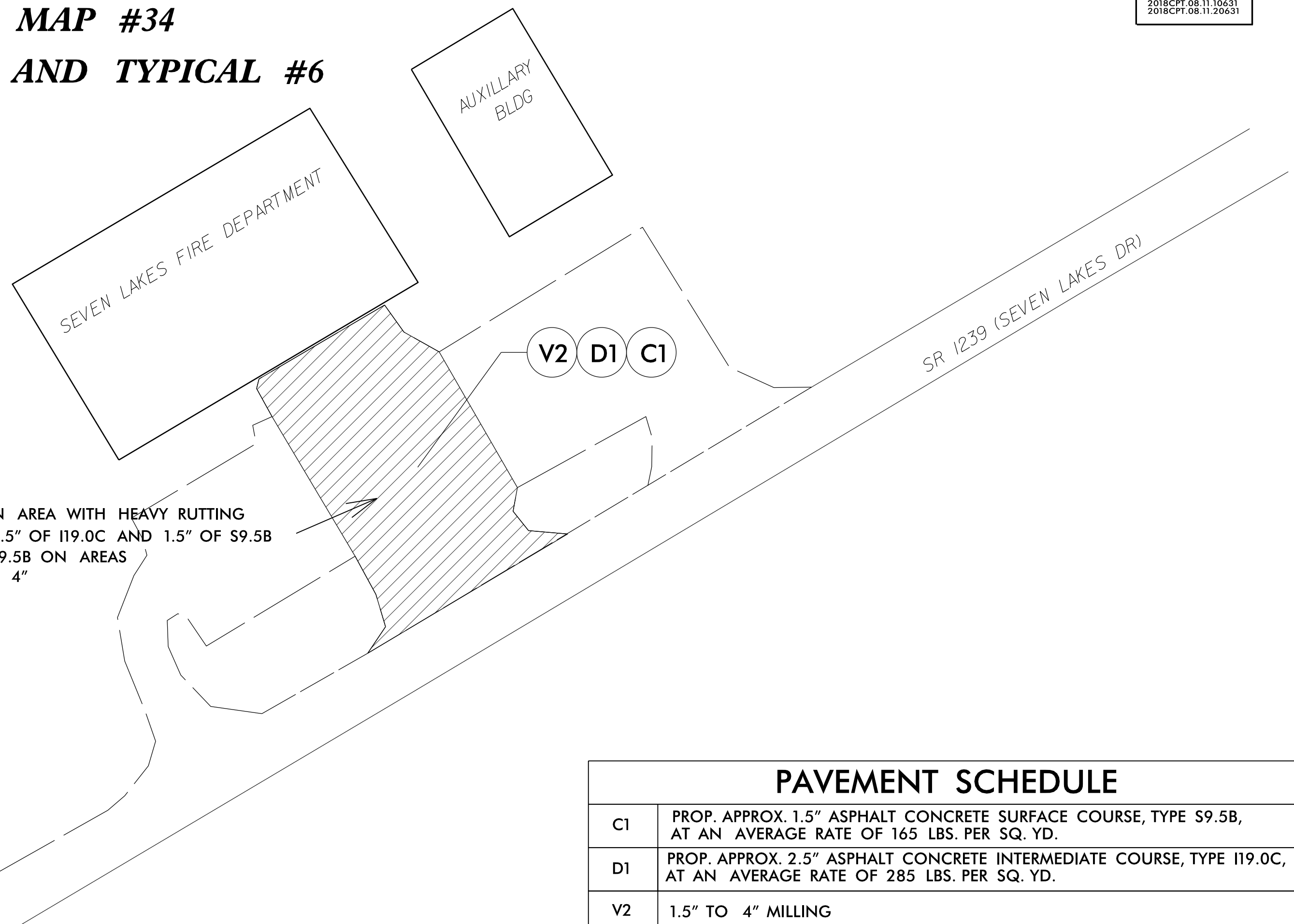


PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.
C2	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C3	PROP. APPROX. 1.25" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 137.5 LBS. PER SQ. YD.
M	MILLED RUMBLE STRIPS
S	AGGREGATE SHOULDER BORROW
U	EXISTING PAVEMENT.
V1	MILLING 1.5" IN DEPTH

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 Projects\2018\Moore County May 2018\Moore_Maps_Typicals - sheet 6.dgn

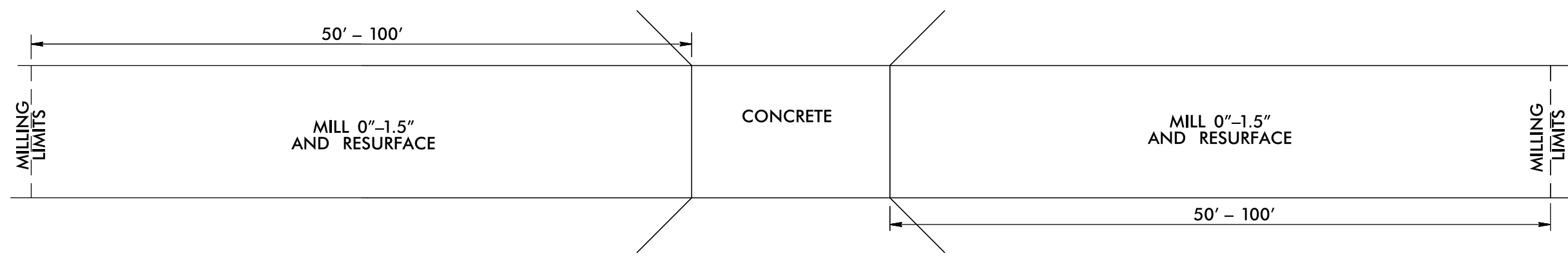
MAP #34

DETAIL AND TYPICAL #6



MILL UPTO 4" IN AREA WITH HEAVY RUTTING
 REPLACE WITH 2.5" OF I19.0C AND 1.5" OF S9.5B
 PLACE 1.5" OF S9.5B ON AREAS
 NOT MILLED TO 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.
D1	PROP. APPROX. 2.5" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.
V2	1.5" TO 4" MILLING

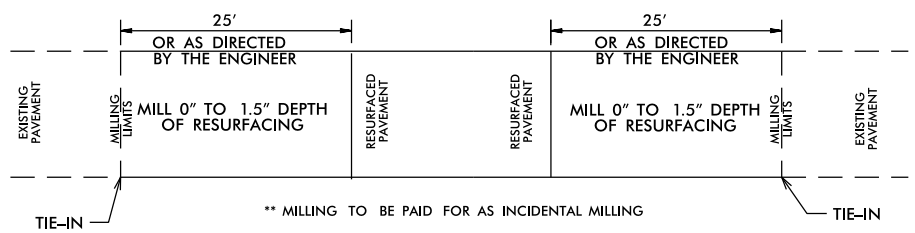


BRIDGE MILLING DETAIL

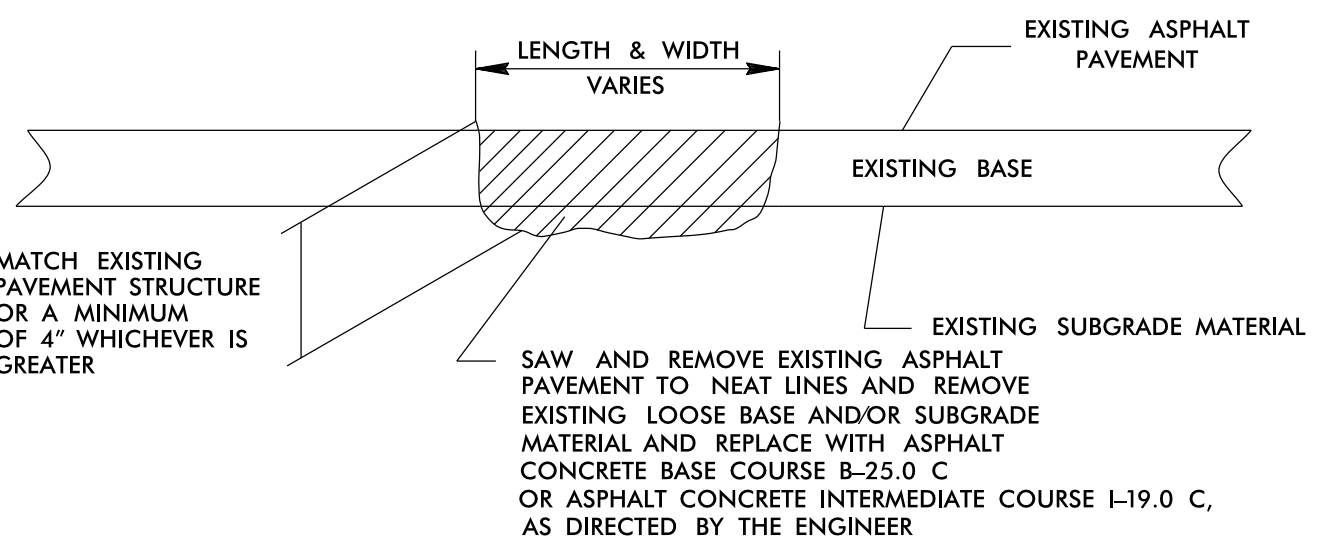
*MILLING TO BE PAID AS INCIDENTAL MILLING

DETAILS OF PATCHING EXISTING PAVEMENT PRIOR TO RESURFACING

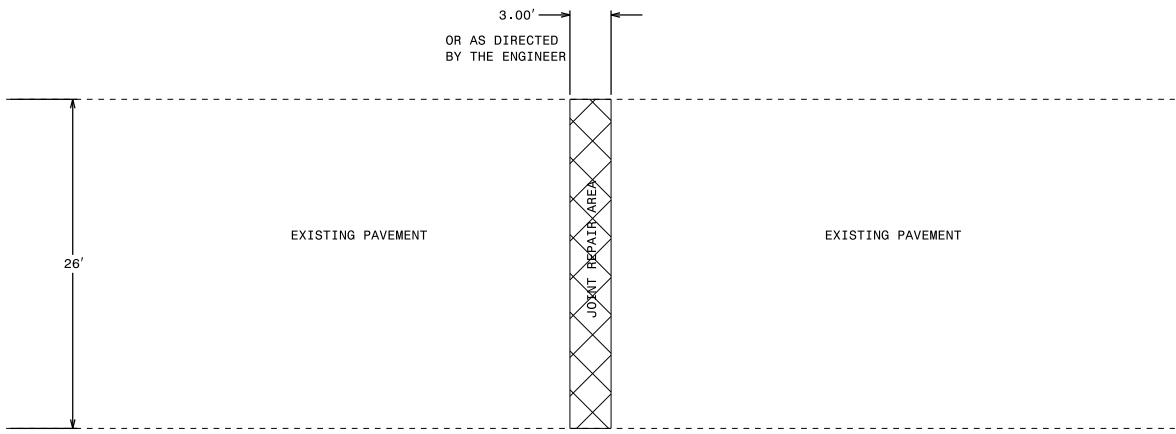
DETAIL



PAVEMENT TIE-IN DETAIL

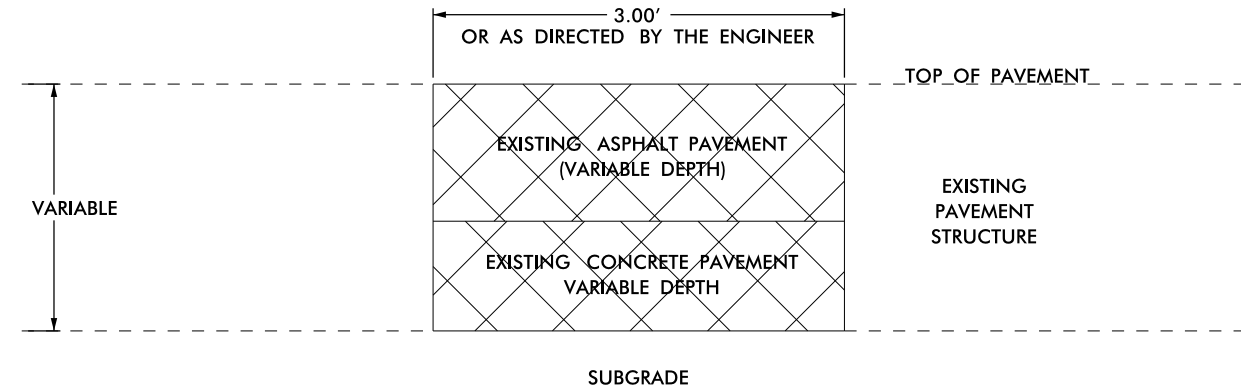


JOINT REPAIR



CONTRACTOR SHALL COORDINATE WITH RESIDENT ENGINEER'S OFFICE FOR LOCATION OF JOINTS TO BE REPAIRED.

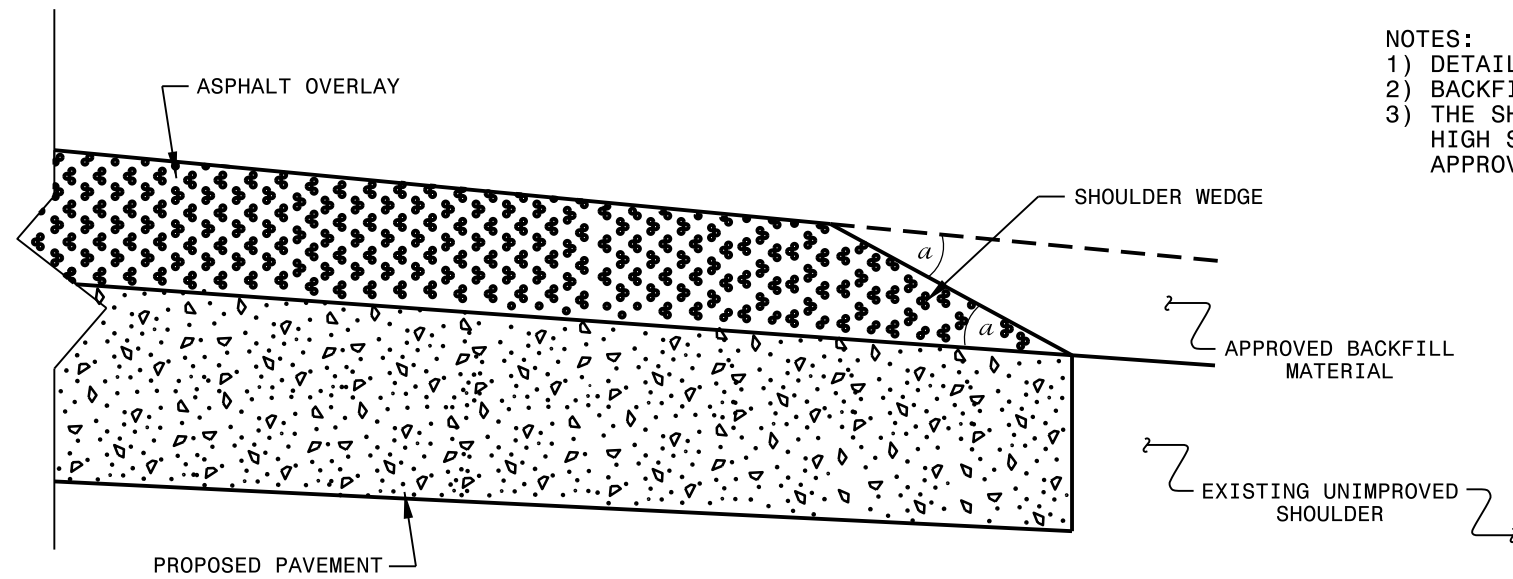
PLAN VIEW



PROFILE VIEW

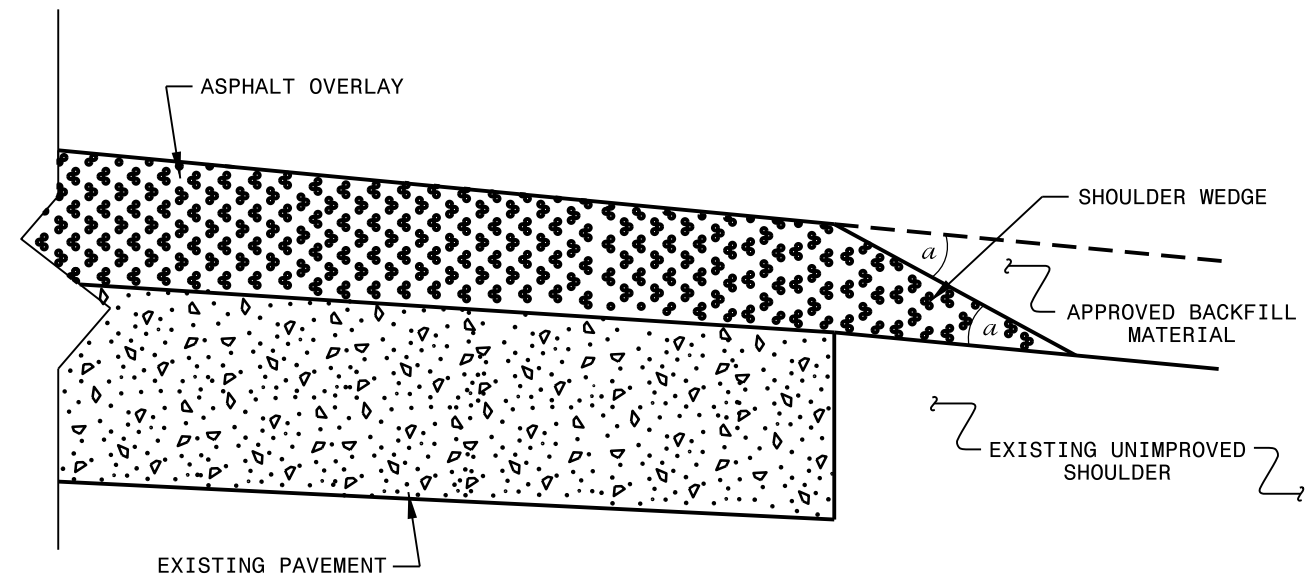
NOTES:

- 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.



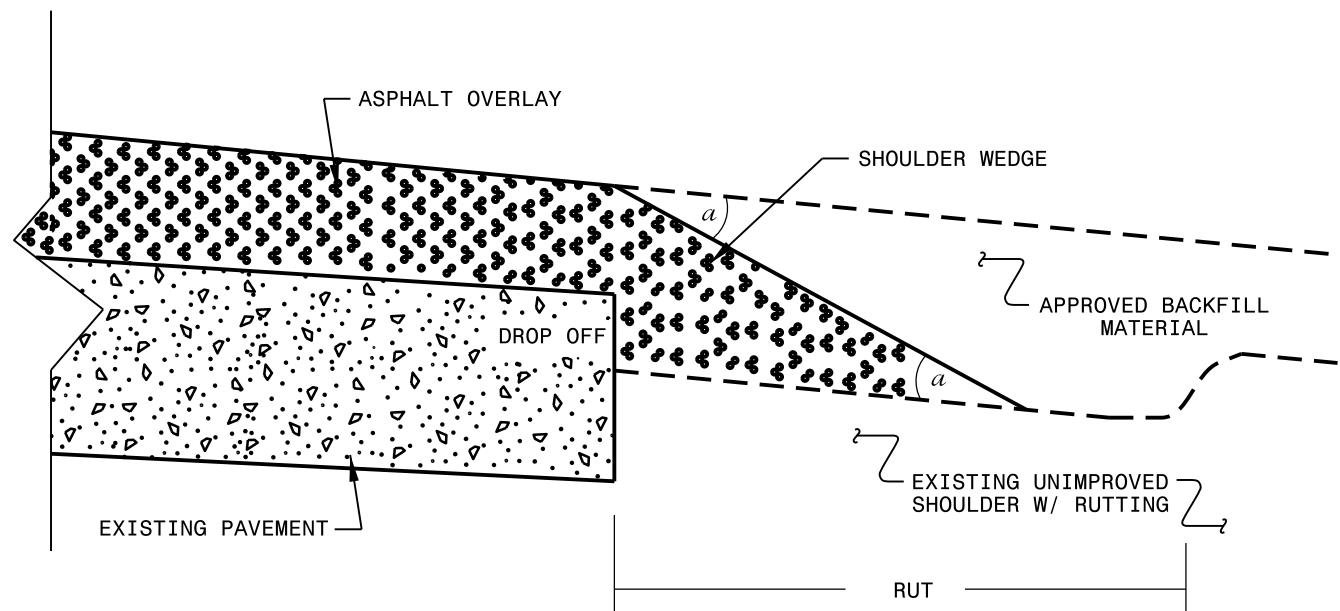
SHOULDER WEDGE DETAIL

(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°

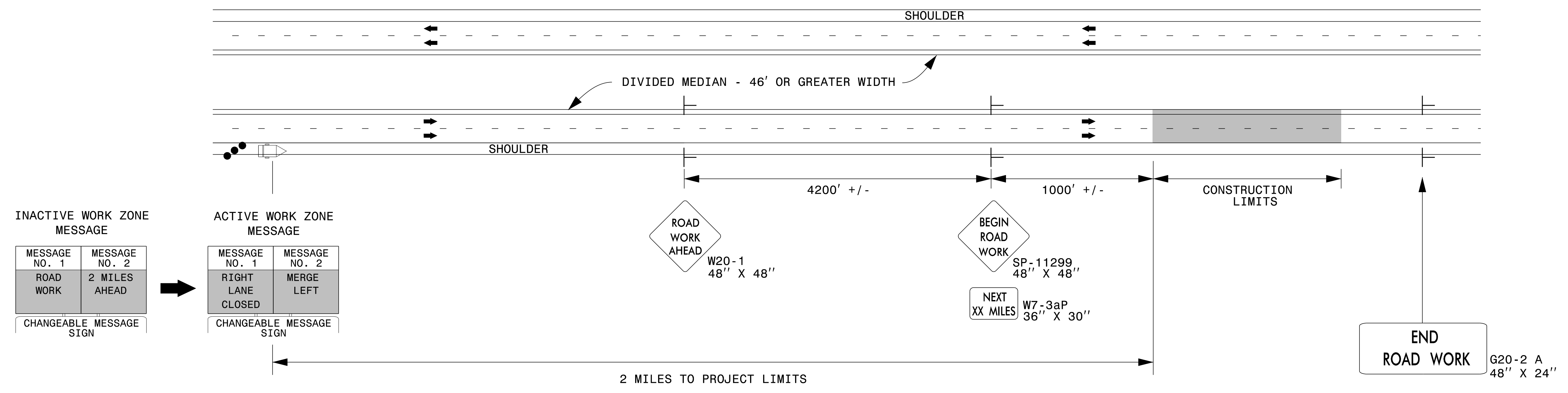
CONTRACT STANDARDS AND DEVELOPMENT UNIT		
Office 919-707-6950 FAX 919-250-4119		
SHOULDER WEDGE DETAILS		
ORIGINAL BY: T.SPELL	DATE: 7-19-11	
MODIFIED BY:	DATE: 2/2/16	
CHECKED BY:	DATE:	
FILE SPEC.: szusr/details/stand/shoulderwedgedetail.dgn		

PROJECT NO.	SHEET NO.	TOTAL NO.
2018CPT.08.11.10631, etc	11	

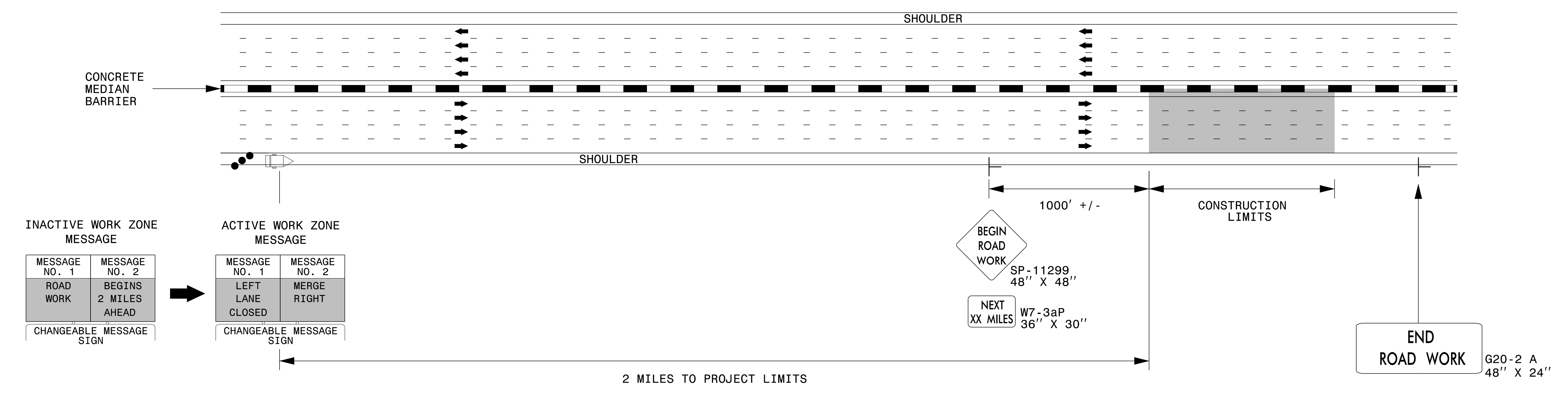
SUMMARY OF QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LAN ES	LANE TYPE	FINAL SURFACE TESTING REQUIRED	WARM MIX ASPHALT REQUIRED	LENGTH		SHOULDER RECONSTRUCTION	AGGREGATE SHOULDER BORROW	1.5" MILLING	1.5" TO 4" MILLING	INCIDENTAL MILLING	INTER-MEDIATE COURSE, I19.0C	SURFACE COURSE, S9.5B	SURFACE COURSE, S9.5C	ASPHALT BINDER FOR PLANT MIX	PATCHING EXISTING PAVEMENT	MILLED RUMBLE STRIPS	JOINT REPAIR	ADJ. OF MAN-HOLES	ADJ. OF METER OR VALVE BOXES	PORTABLE LIGHTING	INDUCTIVE LOOP SAWCUT			
										MI	FT																	SMI	TON	SY
2018CPT.08.11.10631	Moore	1	US 1 BYP NBL	FROM BRIDGE AT CRAIN'S CREEK TO RR BRIDGE AT LEE CO LINE	4	2	MD	NO	NO	4.43	32	8.86	1,245	88,665					8,360	502	250	43,660								
		2	US 1 BYP SBL	FROM RR BRIDGE AT LEE CO. LINE TO BRIDGE AT CRAIN'S CREEK	4	2	MD	NO	NO	4.4	32	8.80	1,450	89,000						8,385	503	250	43,365							
		3	NC 22	FROM SR 1638 (PUTNAM CH RD) TO CHATHAM CO. LINE (EXCLUDE THE PROJECT LIMITS OF 17BP.8.R.121)	1	2	2WU	NO	NO	4.6	21.5	9.14	1,288			3,921			5,940		398	979								
		4	NC 211	FROM SR 1241 TO NC HWY 705	1	2	2WU	NO	NO	1.62	40	3.36	471			883			2,960		198	253								
		5	NC 211	FROM NC HWY 705 TO SR 1275 (BIG OAK CH RD)	1	2	2WU	NO	NO	1.89	34.5	3.82	535			377			3,230		216	268								
		6	NC 211	FROM SR 1275 (BIG OAK CH RD) TO MONT. CO. LINE	1	2	2WU	NO	NO	2.55	42	5.10	714			1,634			4,825		323	111								
		7	NC 705	FROM CJ AT SR 1270 (BENSALEM CH RD) TO PVMT. JT. OF SR 1267 (NOAH RD) SOUTH OF NC HWY 24/27	1	2	2WU	NO	NO	5.1	22	10.13	1,419			1,744			6,370		427	405								
		8	NC 705/24/27	FROM CJ AT SR 1267 SOUTH NC 24/27 TO CJ'S NORTH, EAST, WEST OF INTERSECTION	1	2	2WU	NO	NO	0.276	22-60	0.50	70			1,111			530		36	54			3			800		
		9	NC 5	FROM POPLAR ST. TO END OF POSTED ROUTE	1,2,3	2	2WU	NO	NO	1.37	42.5	1.06	150	9,046			782			2,035		136	258				1	412		
		10	US 1 BUS.	FROM CJ AT US HWY. 1 BYPASS TO CJ AT SR 1826 (THURLOW LAKE RD)	1,2,3	2	2WU	NO	NO	2.817	26	2.87	402	27,417			1,935			5,215		349	198		511		8	2,515		
TOTAL FOR PROJ NO. 2018CPT.08.11.10631													29.053		53.64	7,744	214,128		12,387	31,105	16,745	3,089	3,026	87,025	511	3	8	1	3,727	
2018CPT.08.11.20631	Moore	11	SR 1276 (ALTON RD)	FROM SR 1270 (BENSALEM CHURCH RD) TO MP 2.00	5	2		NO	NO	2	20	4.00	560			200		1,785		120	50									
		12	SR 1281 (TARRY CHURCH RD)	FROM CABIN CREEK BRIDGE TO SR 1401 (BROWERS MILL RD)	5	2		NO	NO	1.02	20	2.04	285			300			965		65	50								
		13	SR 1281 (TARRY CHURCH RD)	SR 1401 (BROWERS MILL RD) TO SR 1400 (LEACH RD)	5	2		NO	NO	0.93	20	1.86	260			300			845		57	125								
		14	SR 1319 (SHEPHERD RD)	FROM SR 1231 (PATTON RD) TO SR 1231 (PATTON RD)	5	2		NO	NO	0.27	18	0.54	75			200			220		15									
		15	SR 1329 (POPLAR RIDGE RD)	FROM SR 1296 (SUBSTATION RD) TO DEAD END	5	2		NO	NO	0.21	18	0.42	59			200			170		11	20								
		16	SR 1435 (SUNSET DRIVE)	FROM NC 24 TO NC 705	5	2		NO	NO	1.75	18	3.50	490			500			1,570		105	200								
		17	SR 1502 (SUNSET HILLS RD)	FROM NC 705 TO DEAD END	5	2		NO	NO	0.56	18	1.12	156			200			450		30	100								
		18	SR 1526 (OLD HWY 220)	FROM RANDOLPH CO LINE TO MONTGOMERY CO LINE	5	2		NO	NO	0.23	20	0.46	32			200			205		14	25								
		19	SR 1644 (OLD GLENDON RD)	FROM SR 1643 (BRADY RD) TO SR 1006 (GLENDON CARTHAGE RD)	5	2		NO	NO	2.71	18	5.42	758			300			2,230		149	836								
		20	SR 1853 (AIKEN RD)	FROM NC 22 TO MP 0.34	1	2		NO	NO	0.34	20	0.68	95			300			425		28	102								
		21	SR 1861 (HOLLY STREET/RD)	FROM PAVMT CHANGE TO SR 1860 (MCINNIS RD)	5	2		NO	NO	0.99	19	2.00	277			200			925		62	240								
		22	SR 2074 (BETHESDA RD)	FROM MP 3.16 TO NC 5	1	2		NO	NO	1.27	20	2.54	355			300			1,390		93	200								
		23	SR 2198 (FOX FIRE PLAZA)	FROM SR 2162 (E. HEDGELAWN WAY) TO CUL-DE-SAC	5	2		NO	NO	0.04	28	0.08	11						55		4									
		24	SR 1123 (RICHMOND RD)	FROM RICHMOND COUNTY LINE TO PAVMNT CHANGE	1	2		NO	NO	1.49	22	2.98	417			200			1,505		101	200								
		25	SR 1123 (RICHMOND RD)	PAVMT CHANGE TO SR 1004 (HOFFMAN RD)	5	2		NO	NO	1.35	25	2.70	378						1,395		93	100								
		26	SR 1605 (TOMMY RD)	FROM SR 1606 (RIVER RD) TO SR 1604 (CALVIN RD)	5	2		NO	NO	0.47	20	0.94	131			300			475		32	50								
		27	SR 1613 (CHRIS RD)	FROM SR 1600 (WILSON RD) TO SR 1606 (RIVER RD)	5	2		NO	NO	0.67	20	1.34	187			200			600		40	75								
		28	SR 1629 (PUTNAM-GLENDON RD)	FROM SR 1635 (HERBIE RD) TO SR 1628 (COOL SPRINGS RD)	5	2		NO	NO	1.47	20	2.94	411			300			1,340		90	200								
		29	SR 1806 (HULSEY RD)	FROM PAVMNT CHANGE TO SR 1805 (UNION CHURCH RD)	5	2		NO	NO	1.25	20	2.50	350			200			1,115		75	150								
		30	SR 1425 (BROWNS MILL RD)	FROM NC 705 TO SR 1002 (SPIES RD)	5	2		NO	NO	4.11	20	8.22	1,150			400			3,825		256	575								
31	SR 1834 (STAR RIDGE RD)	FROM NC 22 TO SR 1833 (JOEL RD)	5	2		NO	NO	1.51	20	3.02	422			400			1,440		96	200										
32	SR 1143 (SAMARCAND RD)	FROM NC 211 TO SR 1145 (CANDOR RD)	5	2		NO	NO	0.96	18	1.92	268						790		53	300										
33	SR 1281 (TARRY CHURCH RD)	FROM NC 24 TO SR 1400 (LEACH RD)	5	2		NO	NO	0.99	20	1.98	277			200			920		62	500										
34	SR 1239 (SEVEN LAKES DR)	SEVEN LAKES FIRE DEPARTMENT (PAVEMENT IN FRONT OF EMERGENCY VEHICLE BAYS)	6	2	2WU	NO	NO	0.022	65					840		60	75		8											
TOTAL FOR PROJ NO. 2018CPT.08.11.20631													26.612		53.20	7,404		840	5,400	60	24,715		1,659	4,298						
GRAND TOTAL													55.665		106.84	15,148	214,128	840	17,787	60	55,820	16,745	4,748	7,324	87,025	511	3	8	1	3,727

DIVIDED MEDIANS WITH WIDTHS 46' OR GREATER



DIVIDED MEDIANS WITH WIDTHS LESS THAN 46' OR WITH PERMANENT MEDIAN BARRIER

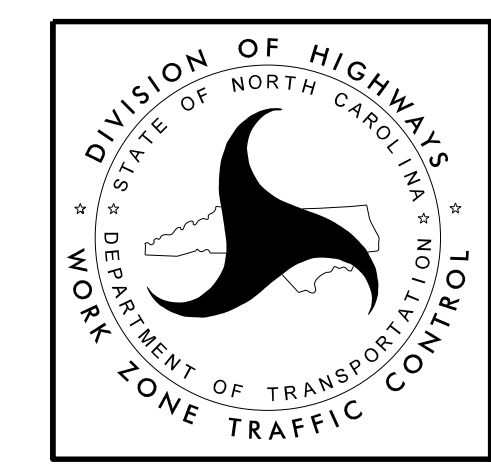


NOTES:

- 1) LATERAL CLEARANCE AT ALL SIGN LOCATIONS SHALL BE 6' AS MEASURED FROM THE EDGE OF PAVEMENT.
- 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) FOR MEDIAN WIDTHS LESS THAN 46' (MEASURED EDGELINE TO EDGELINE) USE THE BOTTOM DRAWING.
- 4) IF STATIONARY GENERAL WARNING SIGNS ARE USED, THEY WILL BE PAID FOR PER SECTION 104 OF THE NCDOT STANDARD SPECIFICATIONS AS EXTRA WORK.
- 5) INSTALL "ROAD WORK AHEAD" (W20-1) ALONG ENTRANCE RAMP 500' PRIOR TO RAMP TERMINAL, AND "END ROAD WORK" (G20-2a) AT THE END OF EXIT RAMP WITHIN THE WORK ZONE.
- 6) 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 AND WITH DIVIDED MEDIANS OF 46' OR GREATER. THESE PORTABLE SIGNS ARE INCIDENTAL TO THE OTHER ITEMS OF WORK INCLUDED IN THE TEMPORARY TRAFFIC CONTROL (LUMP SUM) PAY ITEM.

LEGEND

- CHANGEABLE MESSAGE SIGN (CMS)
- STATIONARY SIGN
- DIRECTION OF TRAFFIC FLOW
- TRAFFIC DRUM



RESURFACING ADVANCE WARNING SIGNS FOR HIGH SPEED FACILITIES ≥ 60 MPH

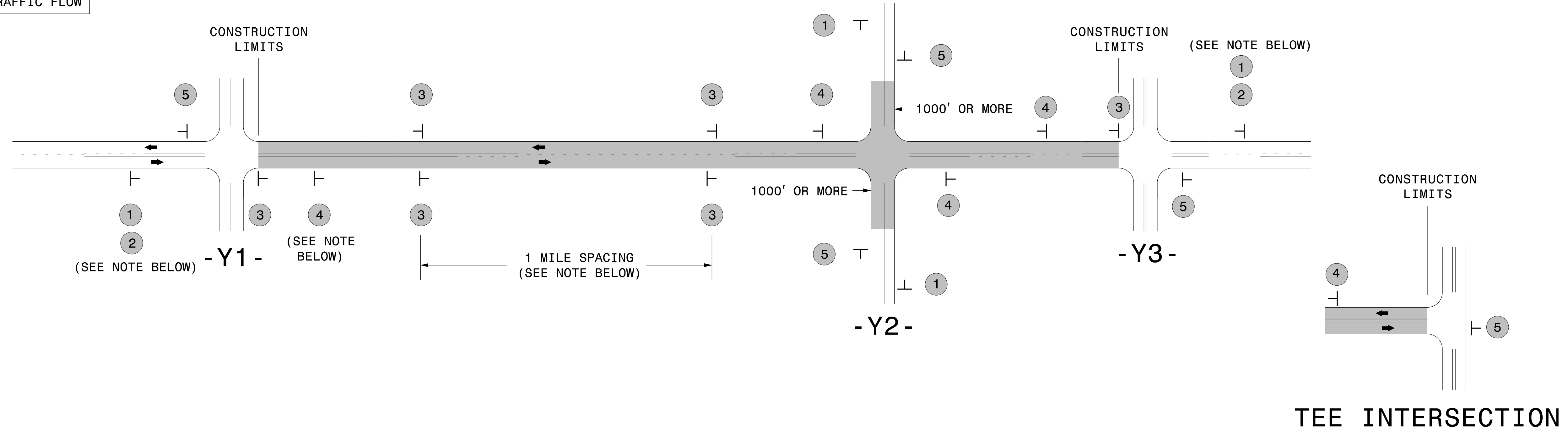
3/23/2015
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 User:rmgarrrett

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.	

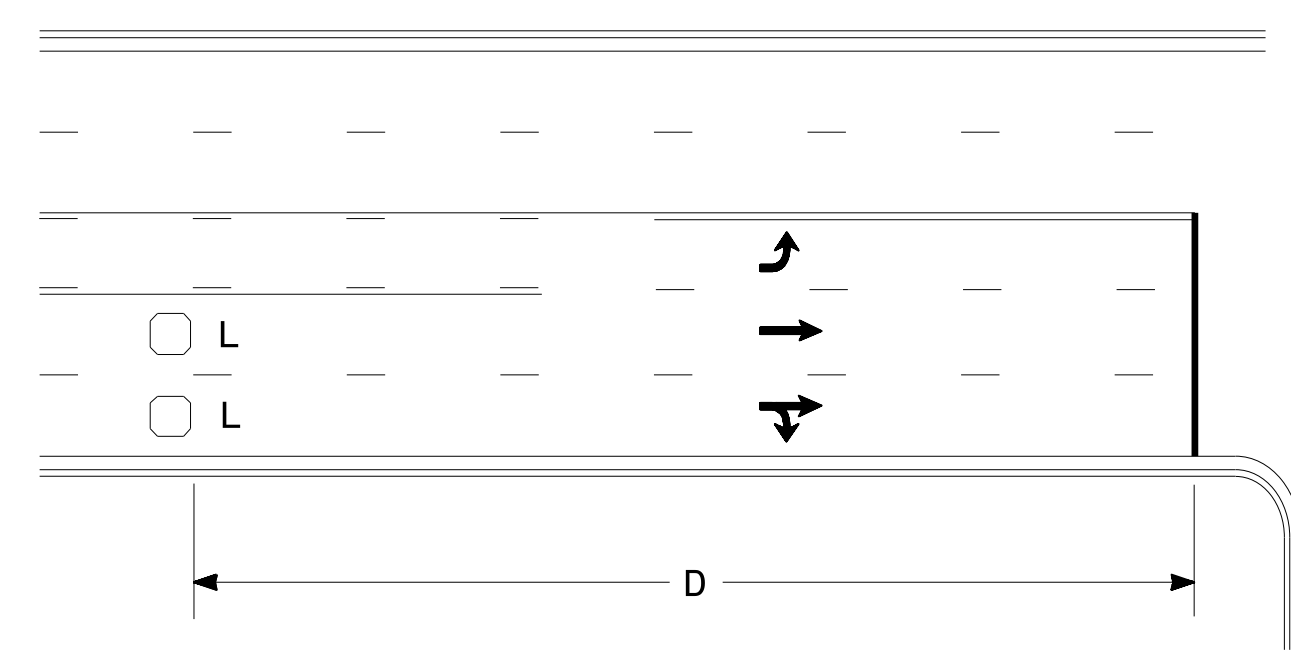
THE ABOVE SIGNS ARE ALL THAT ARE REQUIRED FOR A CONTRACTOR TO BEGIN A RESURFACING CONTRACT. ANY ADDITIONAL SIGNS REQUESTED BY NCDOT DIVISIONS SHALL BE INSTALLED WITHIN 7 BUSINESS DAYS OF THE START OF CONTRACT WORK.

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

High Speed Detection (≥40 mph)

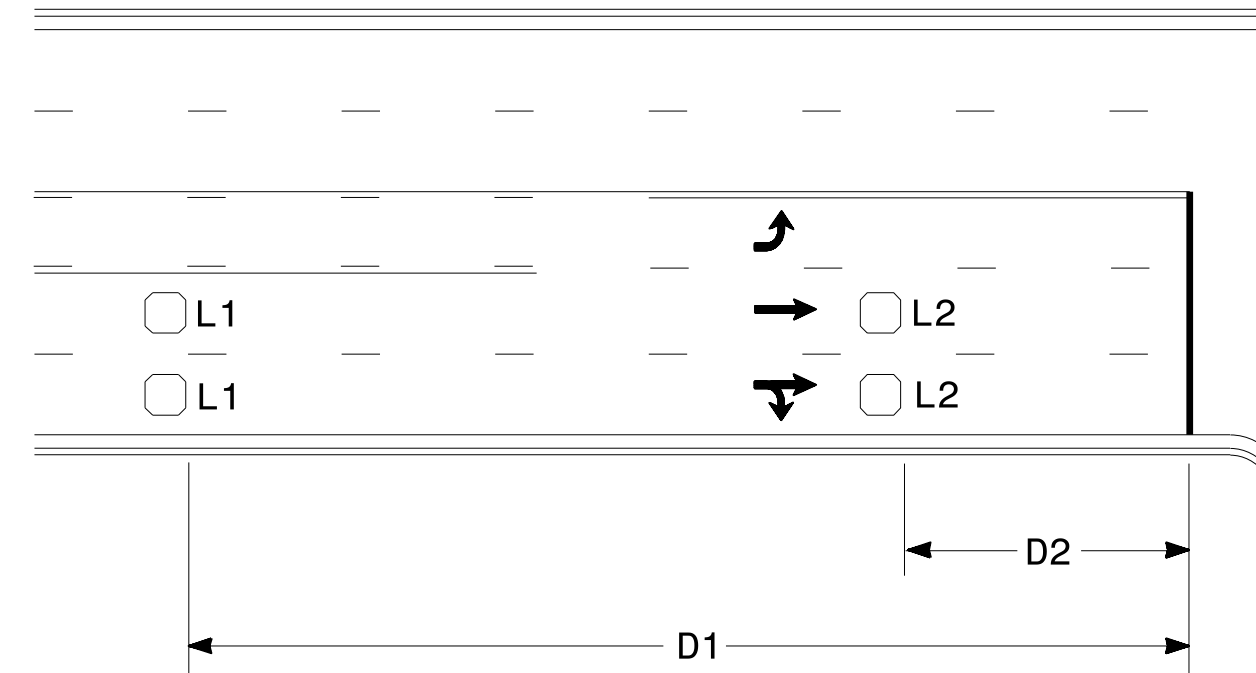


Speed Limit mph	D ft
40	250
45	300
50	355
55	420

L = 6ft X 6ft
 Wired in series for TS1
 Controllers
 Wired separately for TS2,
 170, and 2070L Controllers

Volume Density Operation

OR

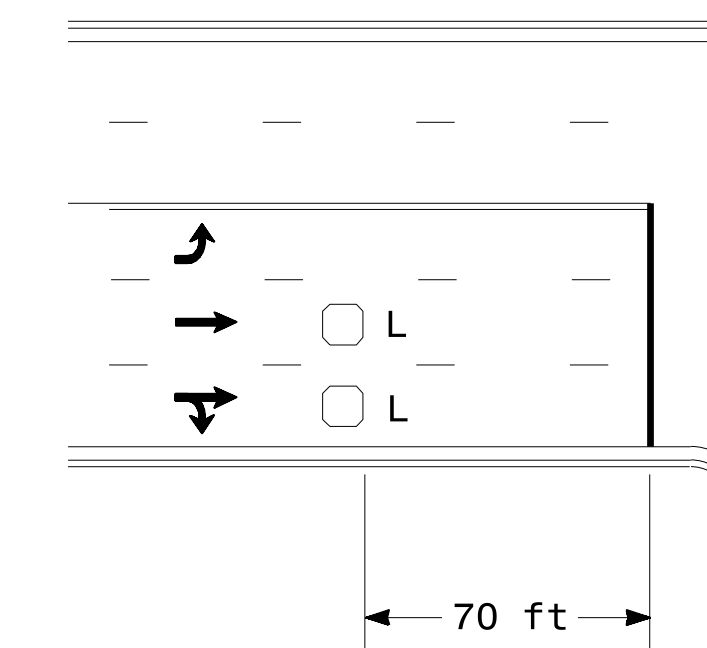


Speed Limit mph	D1 ft	D2 ft
40	250	80
45	300	90
50	355	100
55	420	110

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

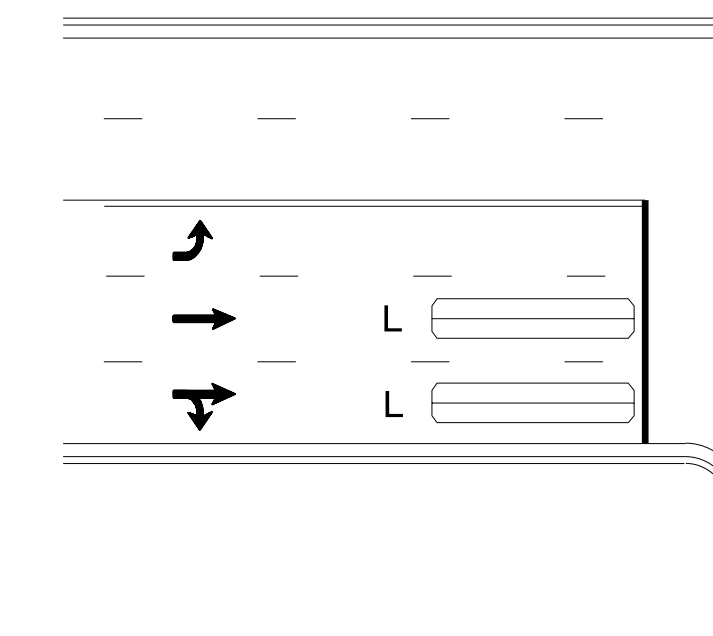
"Stretch" Operation

Low Speed Detection (≤35 mph)



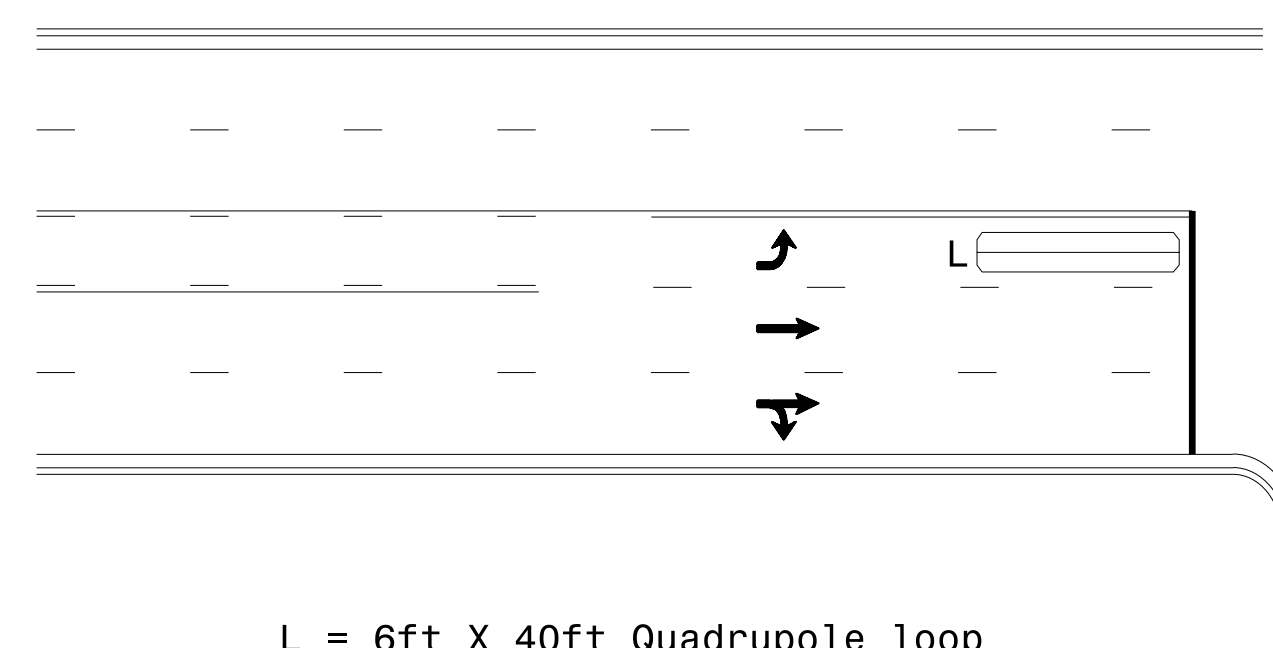
L = 6ft X 6ft
 Wired in series

OR



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

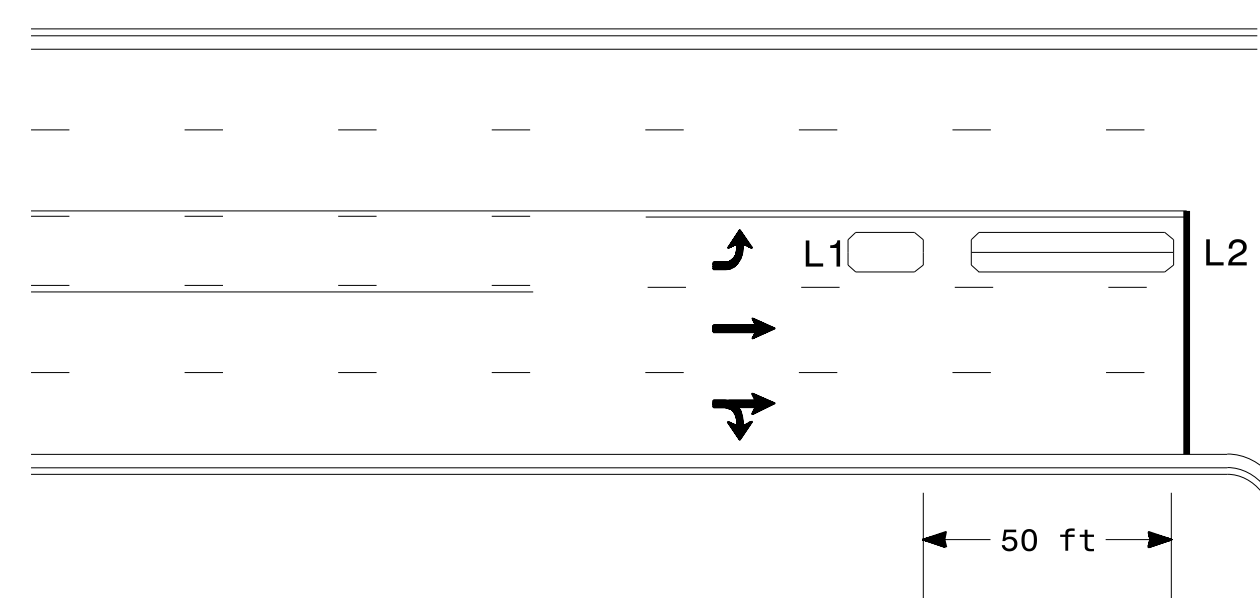
Left Turn Lane Detection



L = 6ft X 40ft Quadrupole loop

Presence Loop Detection

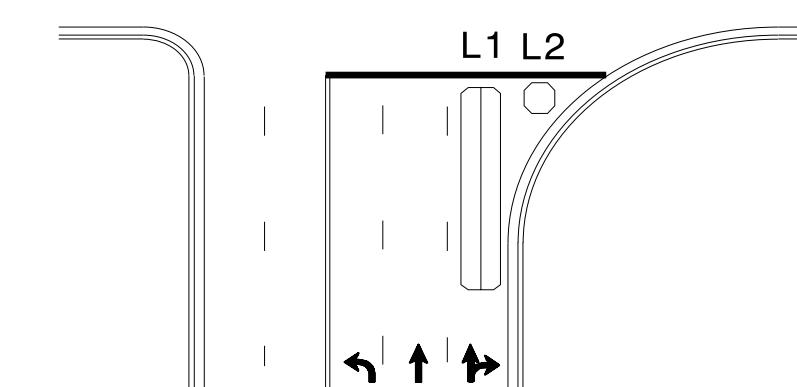
OR



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

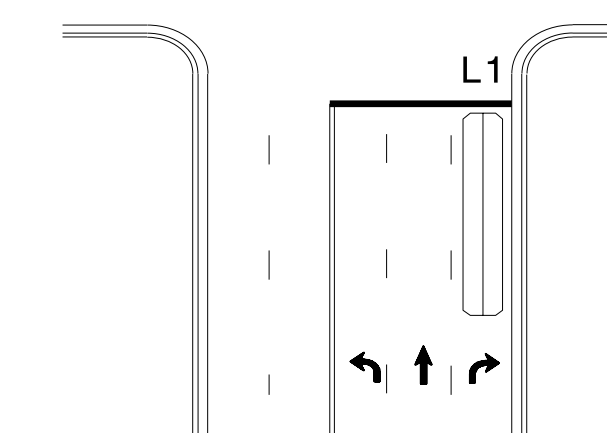
Queue Loop Detection

Right Turn Lane Detection

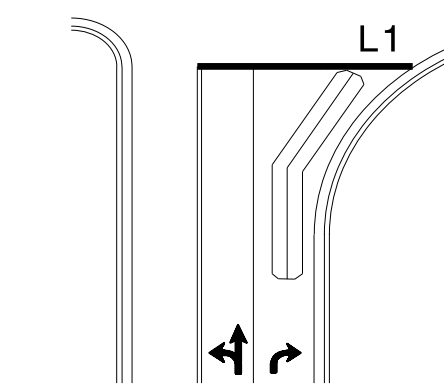


Shared Lane/
 Wide Radius Turn

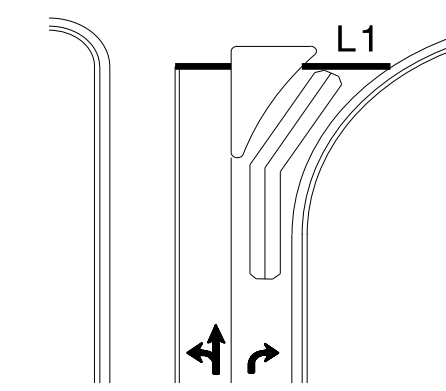
L1 = 6ft X 40ft Quadrupole loop
 L2 = 6ft X 6ft [Minimum] Presence loop
 Wired separately



Standard Turn

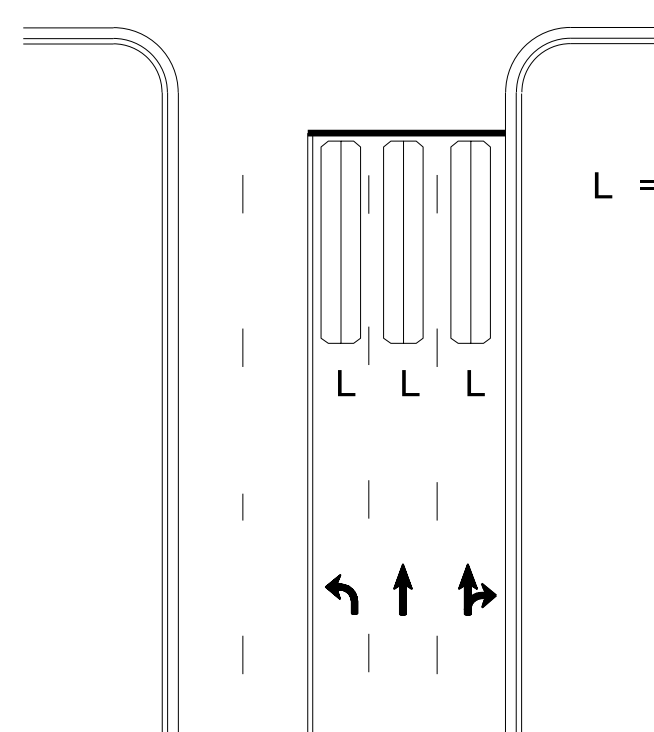


Wide Radius Turn



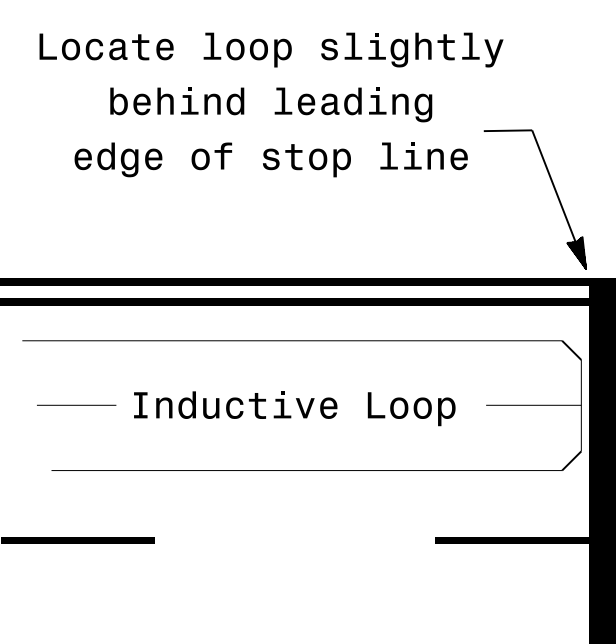
Channelized Turn

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

Prepared In the Offices of:

750 N. Greenfield Pkwy, Garner, NC 27529

SCALE
N/A

Typical Signal Loop Locations

PLAN DATE: January 2015	REVIEWED BY: JPG
PREPARED BY: PLA	REVIEWED BY:
REVISIONS	INIT. DATE

SEAL

1/30/2015

SIG. INVENTORY NO.

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 paalexander