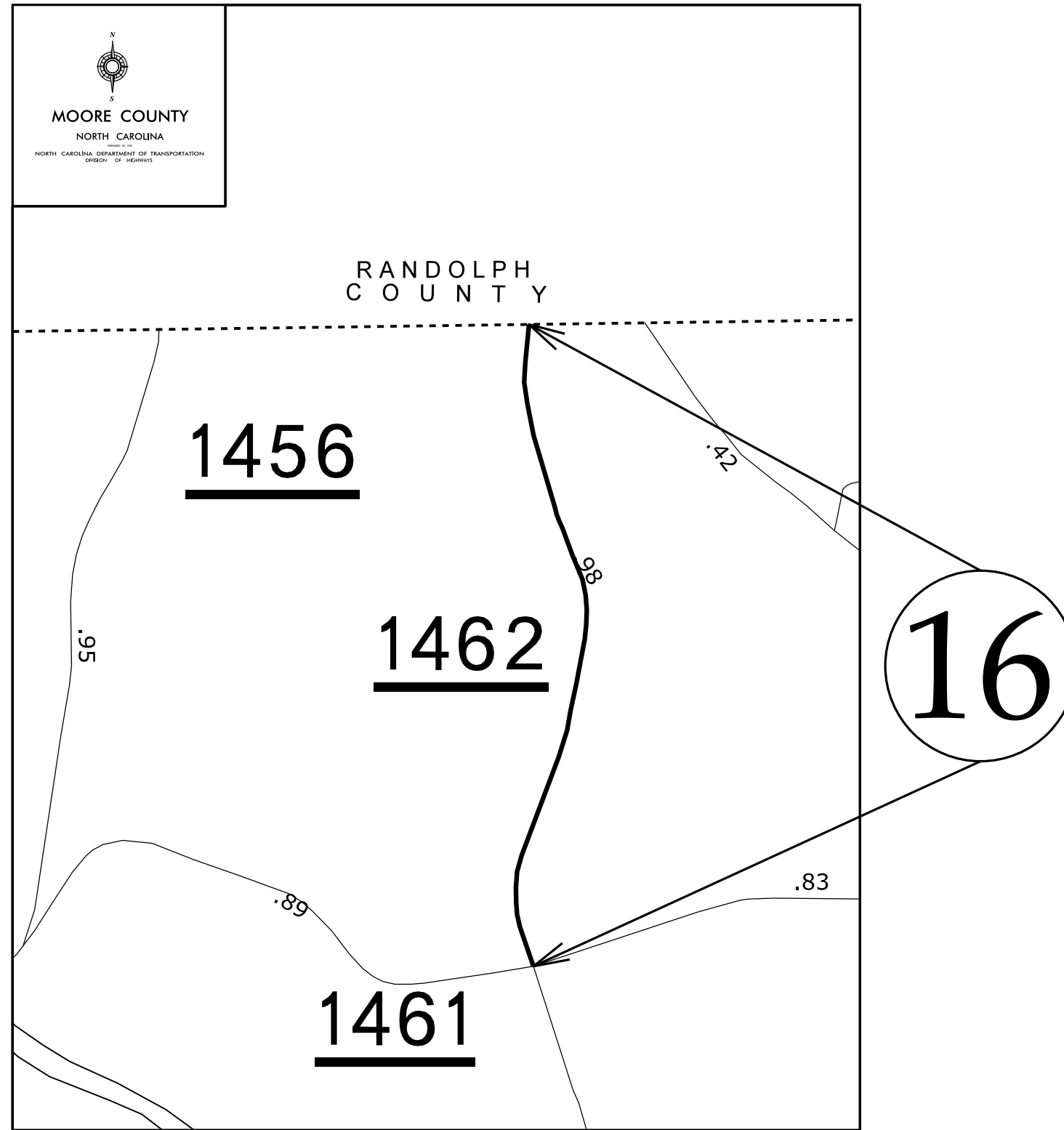
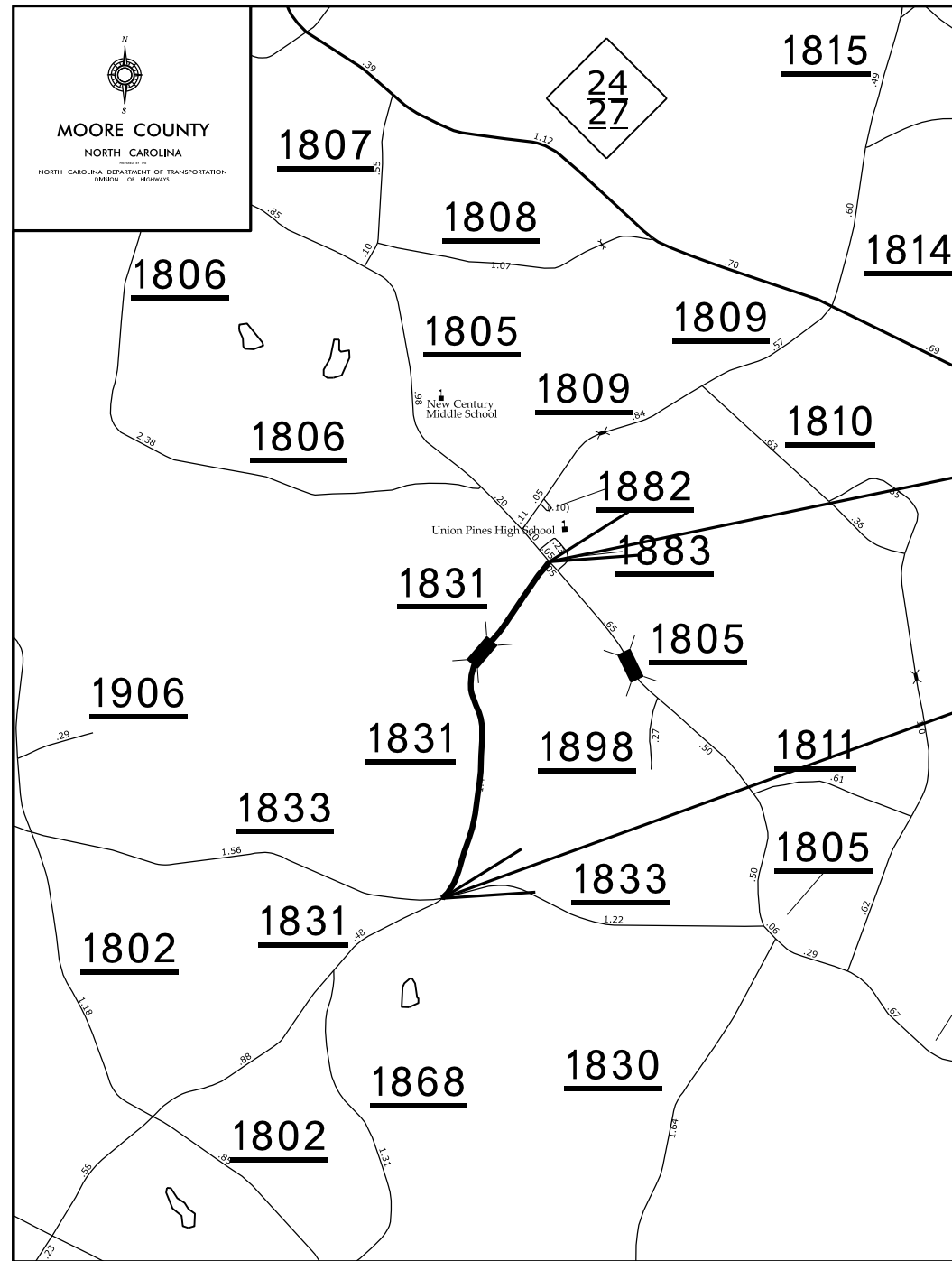


Map 16

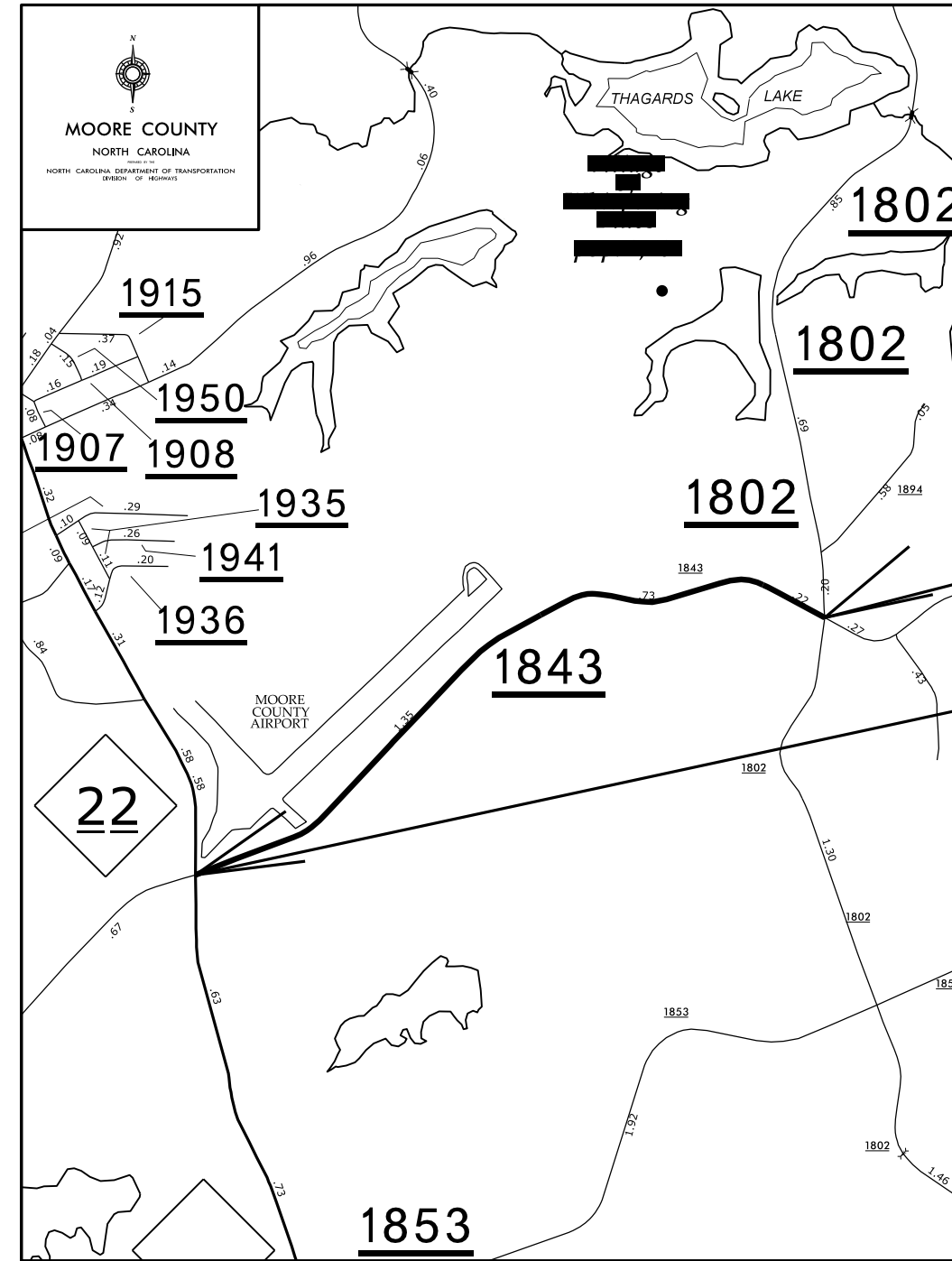


Map 17

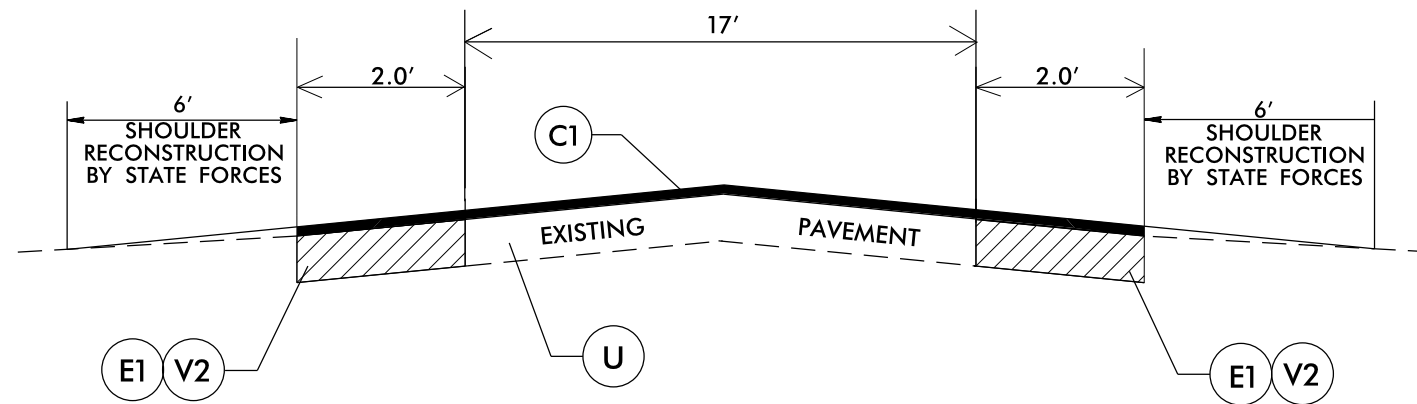


17

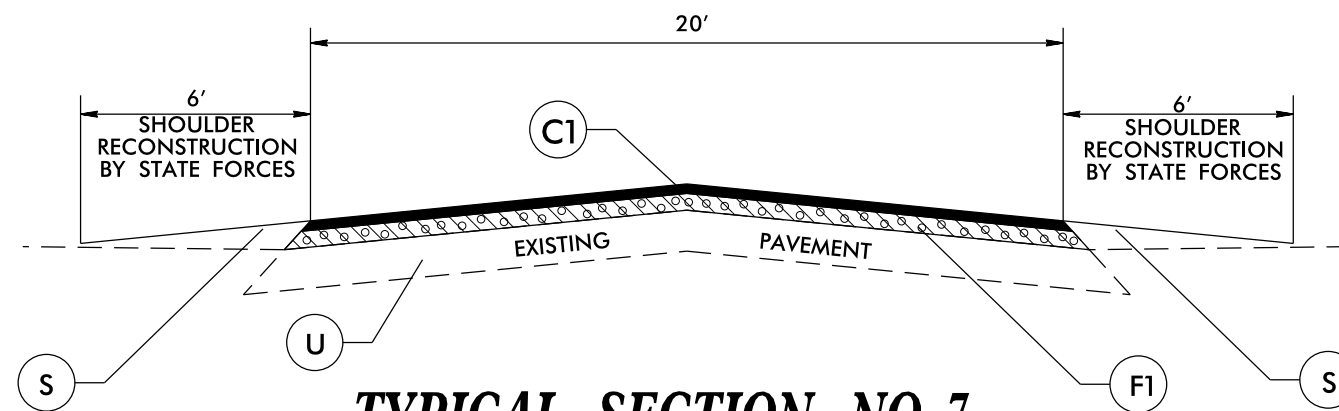
Map 18



18

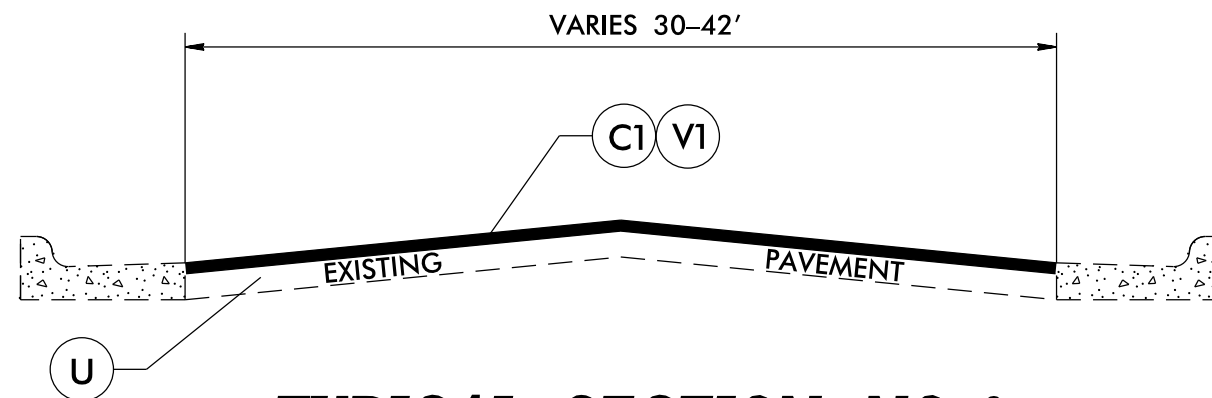


TYPICAL SECTION NO. 6



TYPICAL SECTION NO. 7

USE TYPICAL NO. 7 FOR MAP #4 FROM CITY LIMITS TO W. BALTIMORE

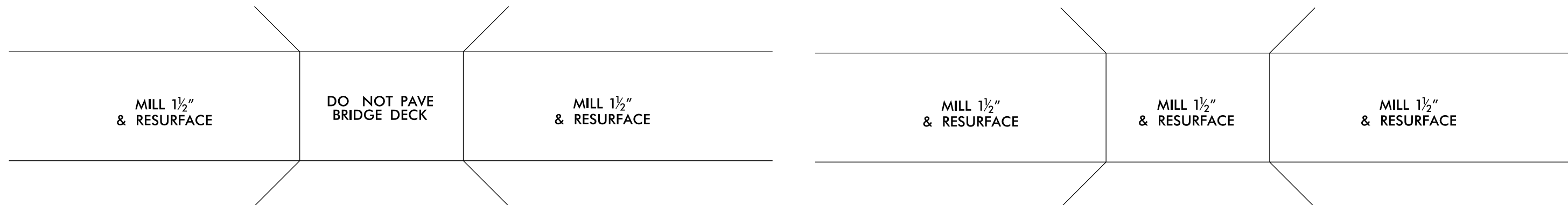


TYPICAL SECTION NO. 8

PAVEMENT SCHEDULE

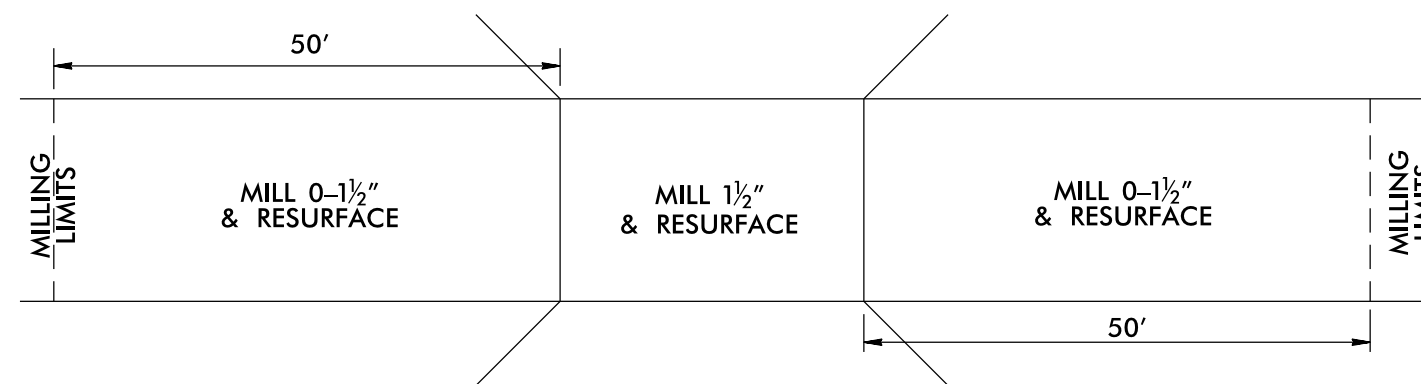
C1	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.
C2	PROP. APPROX. 2.0" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 220 LBS. PER SQ. YD.
C3	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE 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, MATCOAT, #67 STONE.
F2	PROPOSED ASPHALT SURFACE TREATMENT, DOUBLE SEAL
S	AGGREGATE SHOULDER BORROW (BY STATE FORCES)
U	EXISTING PAVEMENT.
V1	MILLING 1.5" IN DEPTH
V2	TRENCHING FOR BASE COURSE (SEE S.P.)

BRIDGE DETAILS



BRIDGE DRAWING TO BE USED FOR
MAP 5 SR 2080 (OLD US 1) BRIDGE #210

BRIDGE DRAWING TO BE USED FOR
MAP 11 SAUNDERS BLVD BRIDGE #187



BRIDGE DRAWING TO BE USED FOR
MAP 17 FARM LIFE SCHOOL RD BRIDGE #131

* MILLING FOR APPROACHES SHALL BE PAID FOR UNDER INCIDENTAL MILLING

2021/5/SEP-2021 11:24 AM C:\Users\moore\OneDrive\Documents\2021\Map 17 Farm Life School Rd Bridge #131.dgn

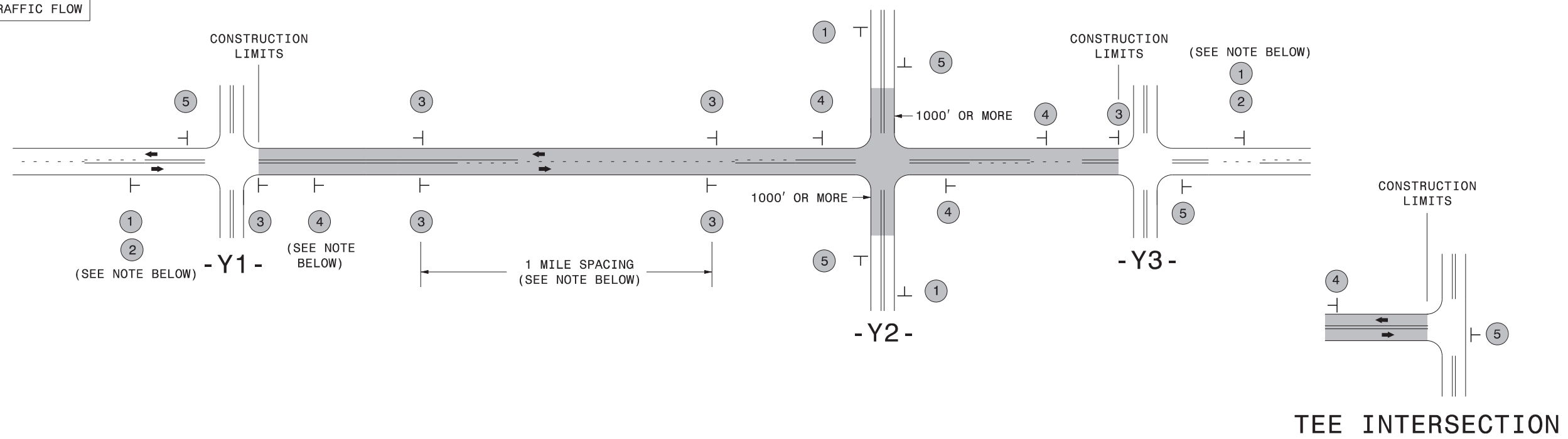
PROJECT NO. 2022CPT.08.11.10631, 2022CPT.08.11.20631	SHEET NO. 19	TOTAL NO.
--	-----------------	-----------

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	1775000000-E	1803500000-E	1838000000-E	1838500000-N	2143000000-E	2815000000-N	2830000000-N	2845000000-N	5255000000-N	7444000000-E	7456000000-E														
												INCIDENTAL STONE BASE	1.5" MILLING	INCIDENTAL MILLING	BASE COURSE, B25.0C	INTERMEDIATE 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	EMULSION FOR ASPHALT SURFACE TREATMENT	VACUUM TRUCK	BLOTTING SAND	ADJUST DROP INLET	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	GAL	WK	TON	EA	EA	EA	LS	LF	LF												
2022CPT.08.11.10631	Moore	1	NC 24/27	FROM US 15-501 TO PVMNT JT 880' PAST SR 1814 (GRADY RD)	1	2	2WU	NO	NO	2.68	28		48,372	1,200				4,469	268																										
TOTAL FOR MAP NO. 1												2.68			48,372	1,200			4,469	268																									
2022CPT.08.11.10631	Moore	2	US 15-501	SB OUTSIDE LANE 1245' PRIOR TO BRUCEWOOD RD INTERSECTION	2	2	MU	NO	NO	0.24	12		1,690					140	8													1													
TOTAL FOR MAP NO. 2												0.24			1,690				140	8																			1						
TOTAL FOR PROJ NO. 2022CPT.08.11.10631												2.92			50,062	1,200			4,609	276																						1			
2022CPT.08.11.20631	Moore	3	SR 1229 (CARTHAGE RD)	FROM SR 1227 (KANOEY RD) TO SR 1240 (DOWD RD)	5	2	2WU	NO	NO	3.19	20	100					3,226		216	200																									
TOTAL FOR MAP NO. 3												3.19			100				3,226	216	200																								
2022CPT.08.11.20631	Moore	4	SR 1103 (SAND PIT RD)	FROM NC 5 TO SR 1103 (W BALTIMORE AVE)	5,7	2	2WU	NO	NO	2.52	20	100		200			2,695		181	25	6,586.00		2,634	0.50	10								600	600											
TOTAL FOR MAP NO. 4												2.52			100	200			2,695	181	25	6,586.00	2,634	0.50	10																600	600			
2022CPT.08.11.20631	Moore	5	SR 2080 (OLD US 1)	US 1 TO SR 2080 (S MAY ST)	4,8	2	MU	NO	NO	0.51	42		12,566	300			1,140		76	25	6,586.00		2,634	0.50	10							1,800	1,800												
TOTAL FOR MAP NO. 5												0.51			12,566	300			1,140	76	25	6,586.00	2,634	0.50	10														1	6	8	1,800	1,800		
2022CPT.08.11.20631	Moore	6	SR 1309 (W MORGANTON RD)	FROM PVMNT JT 747' FROM US 1 TO SR 2035 (SW BROAD ST)	8	2	MU	NO	NO	0.153	37		3,321	300			300		20																										
TOTAL FOR MAP NO. 6												0.153			3,321	300			300	20																									
2022CPT.08.11.20631	Moore	7	SR 2035 (SW BROAD ST)	FROM SR 1309 (W MORGANTON RD) TO (W MASSACHUSETTS ST)	9	2	2WU	NO	NO	0.478	44		12,339	600			1,122		75																										
TOTAL FOR MAP NO. 7												0.478			12,339	600			1,122	75																									
2022CPT.08.11.20631	Moore	8	SR 1261 (OLD CARTHAGE RD)	FROM NC 705 TO SR 1210 (MT CARMEL RD)	5	2	2WU	NO	NO	3.21	20	100					3,418		229	200																									
TOTAL FOR MAP NO. 8												3.21			100				3,418	229	200																								
2022CPT.08.11.20631	Moore	9	SR 1208 (PAGE RD)	FROM NC 2 TO LIMITS OF PROJECT SM-5708D (660' FROM US 15-501)	4,8	2	2WU	NO	NO	0.828	30		14,495	400			1,313		88																										
TOTAL FOR MAP NO. 9												0.828			14,495	400			1,313	88																									
2022CPT.08.11.20631	Moore	10	SR 1124 (DERBY RD)	FROM MONTGOMERY CO. LINE TO NC 73	6	2	2WU	NO	NO	2.225	17				1,190		2,029		189	75																									
TOTAL FOR MAP NO. 10												2.225							1,190	2,029	189	75																							
2022CPT.08.11.20631	Moore	11	SR 2053 (SAUNDERS BLVD)	FROM PVMNT JT 0.16 MI FROM US 1 TO SR 2074 (BETHESDA RD)	4	2	2WU	NO	NO	1.05	22	100		13,552	600			1,237		83																									
TOTAL FOR MAP NO. 11												1.05			100	13,552	600			1,237	83																								
2022CPT.08.11.20631	Moore	12	SR 2074 (FORT BRAGG RD)	FROM PVMNT JT 85' E OF SR 2075 (E INDIANA AVE) TO (S BETHESDA RD) INCLUDE INTERSECTION OF E INDIANA	4	2	2WU	NO	NO	0.81	20	100		9,504	300			907		61	85																								
TOTAL FOR MAP NO. 12												0.81			100	9,504	300			907	61	85																							
2022CPT.08.11.20631	Moore	13	SR 1637 (SPIVEY RD)	FROM SR 1629 (PUTNAM GLENDON RD) TO DEAD END	11	2	2WU	NO	NO	0.72	20						937		63	75																									
TOTAL FOR MAP NO. 13												0.72								937	63	75																							
2022CPT.08.11.20631	Moore	14	SR 1635 (HERBIE RD)	FROM SR 1629 (PUTNAM GLENDON RD) TO DEAD END	3,10	2	2WU	NO	NO	1.179	20					253		12	100			13,833.00	7,608	0.50	10																				
TOTAL FOR MAP NO. 14												1.179							253	12	100		13,833.00	7,608	0.50	10																			
2022CPT.08.11.20631	Moore	15	SR 2011 (BYRD RD)	FROM NC 690 TO SR 2005 (CYPRESS CH RD)	5	2	2WU	NO	NO	1.52	20	100					1,629		109	145																									
TOTAL FOR MAP NO. 15												1.52			100				1,629	109	145																								
2022CPT.08.11.20631	Moore	16	SR 1462 (CAVINESS TOWN RD)	FROM RANDOLPH CO. LINE TO SR 1461 (GEORGE P RD)	5	2	2WU	NO	NO	0.97	20						1,034		69	100																									
TOTAL FOR MAP NO. 16												0.97							1,034	69	100																								
2022CPT.08.11.20631	Moore	17	SR 1831 (FARM LIFE SCHOOL RD)	FROM SR 1805 (UNION CH RD) TO SR 1833 (JOEL RD)	5	2	2WU	NO	NO	1.32	24			219	292			1,686		113																									
TOTAL FOR MAP NO. 17												1.32				219	292			1,686	113																								
2022CPT.08.11.20631	Moore	18	SR 1843 (AIRPORT RD)	FROM SR 1802 (NIAGARA CARTHAGE RD) TO BEGIN MONOLITHIC ISLANDS AT TRAFFIC CIRCLE	4	2	2WU	NO	NO	2.4	22			30,976	400			2,861		192																									
TOTAL FOR MAP NO. 18												2.4				30,976	400			2,861	192																								
2022CPT.08.11.20631	Moore	19	SR 1831 (FARM LIFE SCHOOL RD)	FROM SR 1803 (VASS CARTHAGE RD) TO NC 22	5	2	2WU	NO	NO	2.4	22						2,861		192																										
TOTAL FOR MAP NO. 19												2.4							2,861	192																									
2022CPT.08.11.20631	Moore	20	SR 2080 (N MAY ST)	FROM CITY LIMITS TO PVMNT JT N OF EQUESTRIAN RD NEAR US 1	4	2	2WU	NO	NO	2.49	21			30,677	1,000			2,834		190																									
TOTAL FOR MAP NO. 20												2.49				30,677	1,000			2,834	190																								
TOTAL FOR PROJ NO. 2022CPT.08.11.20631												27.973			600	127,649	4,592	1,190	253	31,229	2,158	1,005	6,586.00	13,833.00	10,242	1.00	20	1																	

SIGNING FOR RESURFACING PROJECTS

LEGEND
 ┃ STATIONARY SIGN
 ← DIRECTION OF TRAFFIC FLOW



MAINLINE (-L-) SIGNING

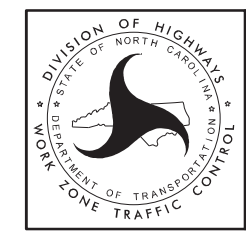
-Y- LINE SIGNING

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"> 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;"> 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.

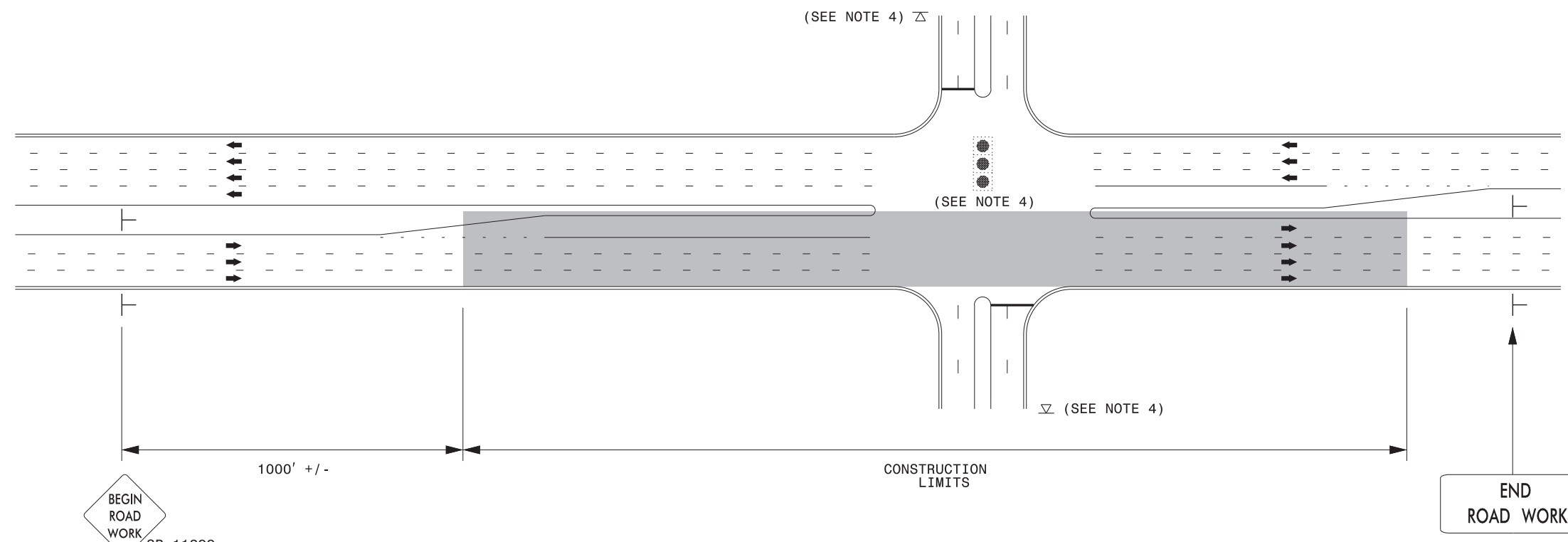
MAPS LESS THAN 2 MILES

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

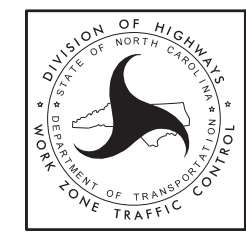
URBAN / SUBURBAN WORKZONES



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.

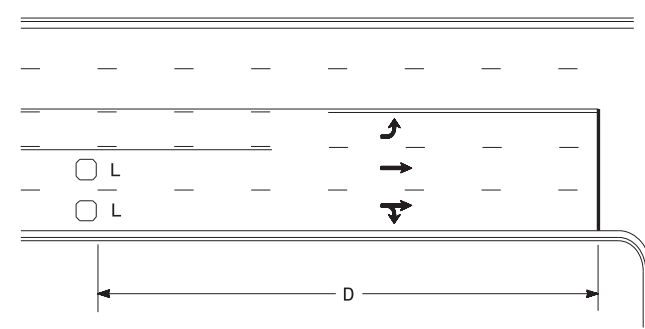
LEGEND	
┆	STATIONARY SIGN
➔	DIRECTION OF TRAFFIC FLOW



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

4/8/2015 C:\Users\rmgarrrett\Downloads\Resurfacing_AdvWarn_UrSu (2).dgn User:rmgarrrett

High Speed Detection (≥40 mph)

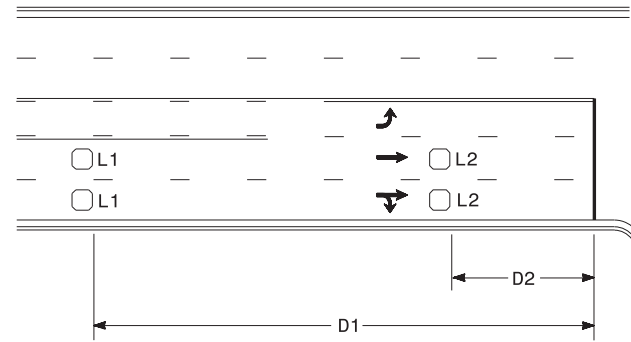


Speed Limit mph	D ft
40	250
45	300
50	355
55	420

L = 6ft X 6ft
Wired separately

Volume Density Operation

OR

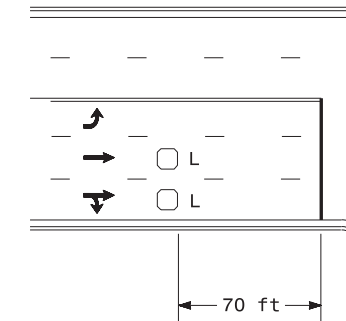


Speed Limit mph	D1 ft	D2 ft
40	250	80
45	300	90
50	355	100
55	420	110

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

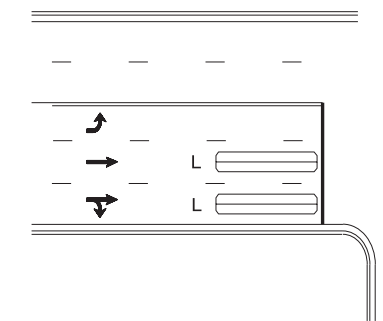
"Stretch" Operation

Low Speed Detection (≤35 mph)



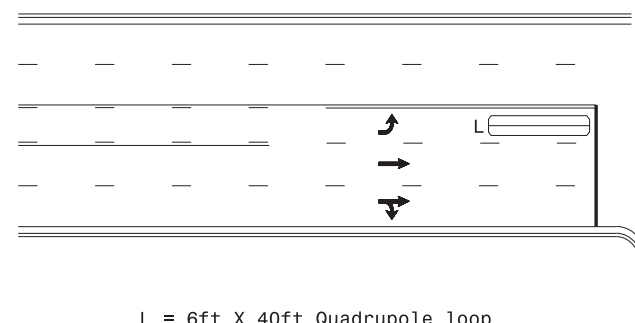
L = 6ft X 6ft
Wired in series

OR



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

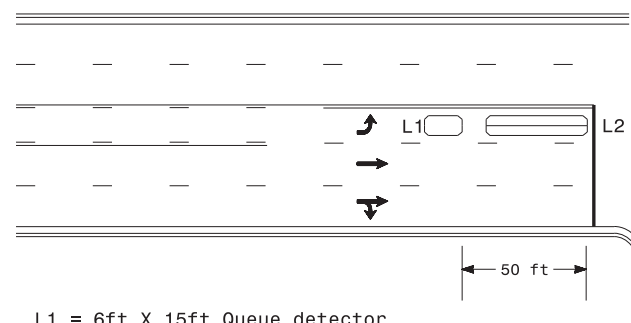
Left Turn Lane Detection



L = 6ft X 40ft Quadrupole loop

Presence Loop Detection

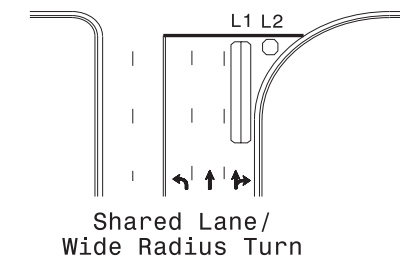
OR



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

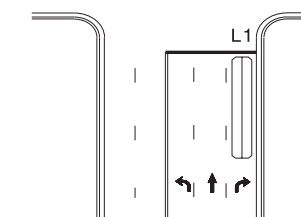
Queue Loop Detection

Right Turn Lane Detection

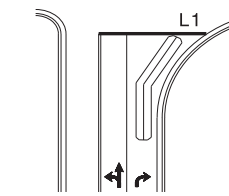


L1 = 6ft X 40ft Quadrupole loop
L2 = 6ft X 6ft [Minimum] Presence loop
Wired separately

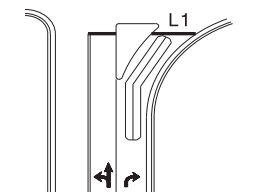
Shared Lane/
Wide Radius Turn



Standard Turn

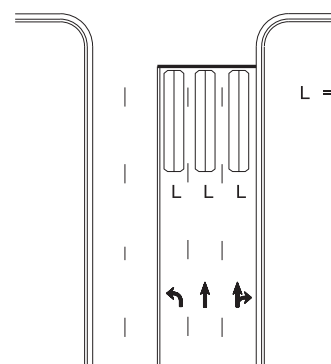


Wide Radius Turn



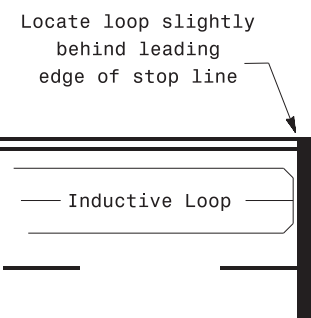
Channelized Turn

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

Inductive Loop

- 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: September 2020	REVIEWED BY: JPG
PREPARED BY: PLA	REVIEWED BY:
REVISIONS	INIT. DATE

9/8/2020

SIG. INVENTORY NO.