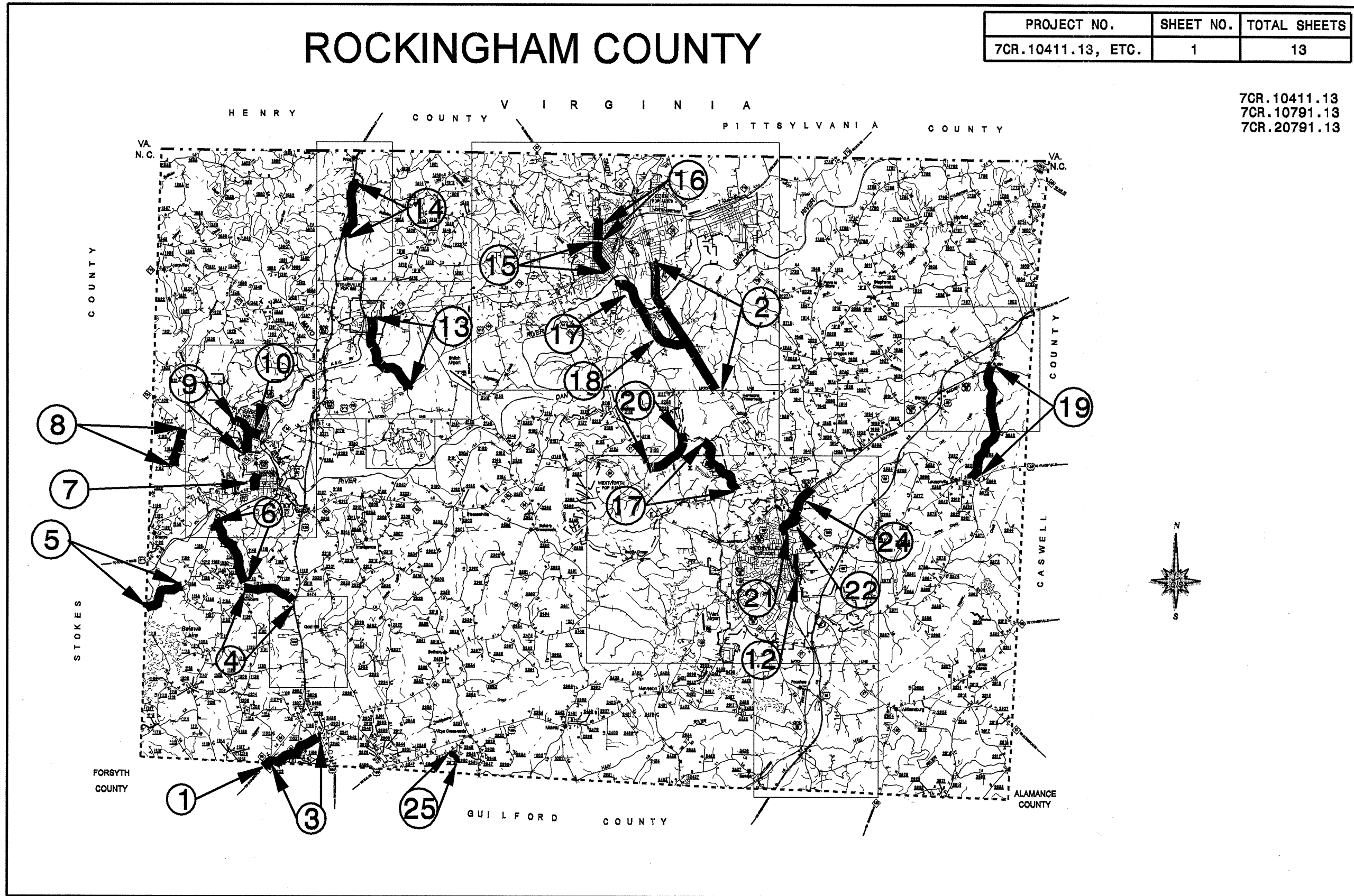


ROCKINGHAM COUNTY

PROJECT NO.	SHEET NO.	TOTAL SHEETS
7CR.10411.13, ETC.	1	13

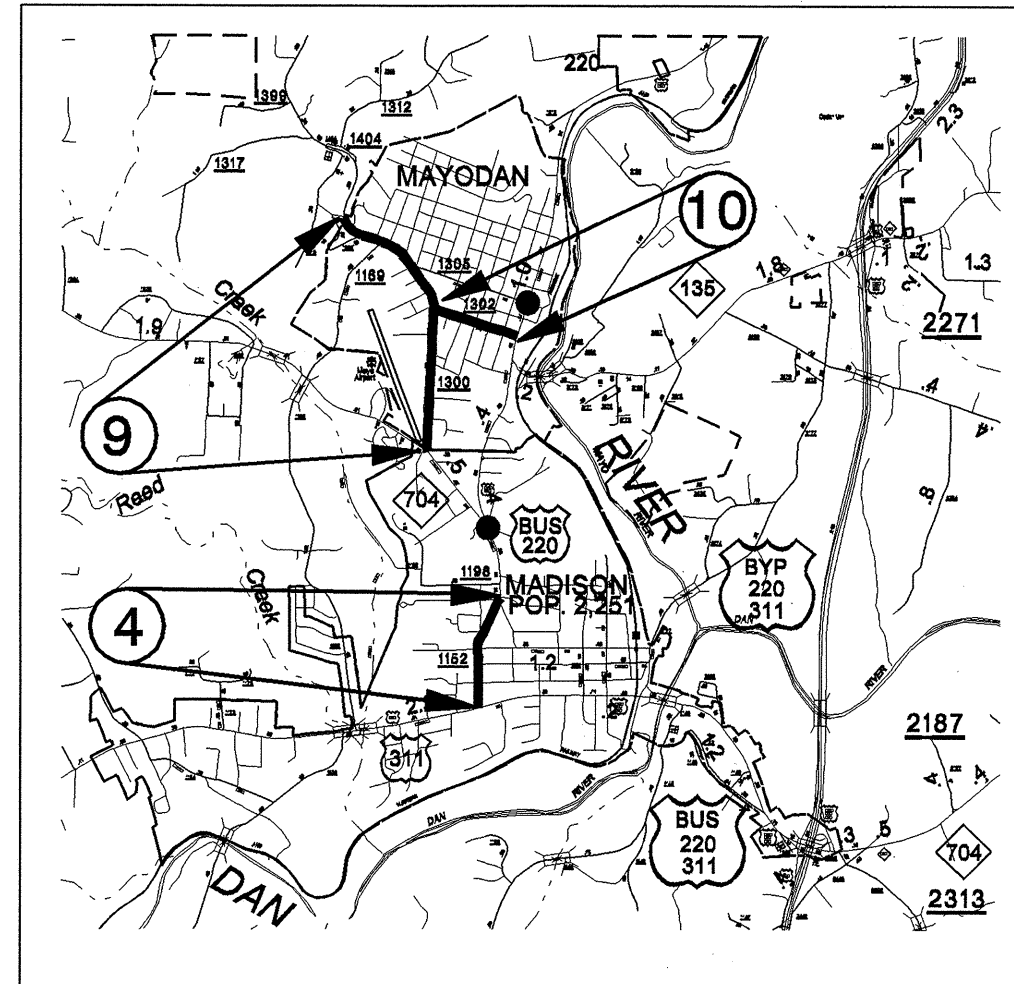
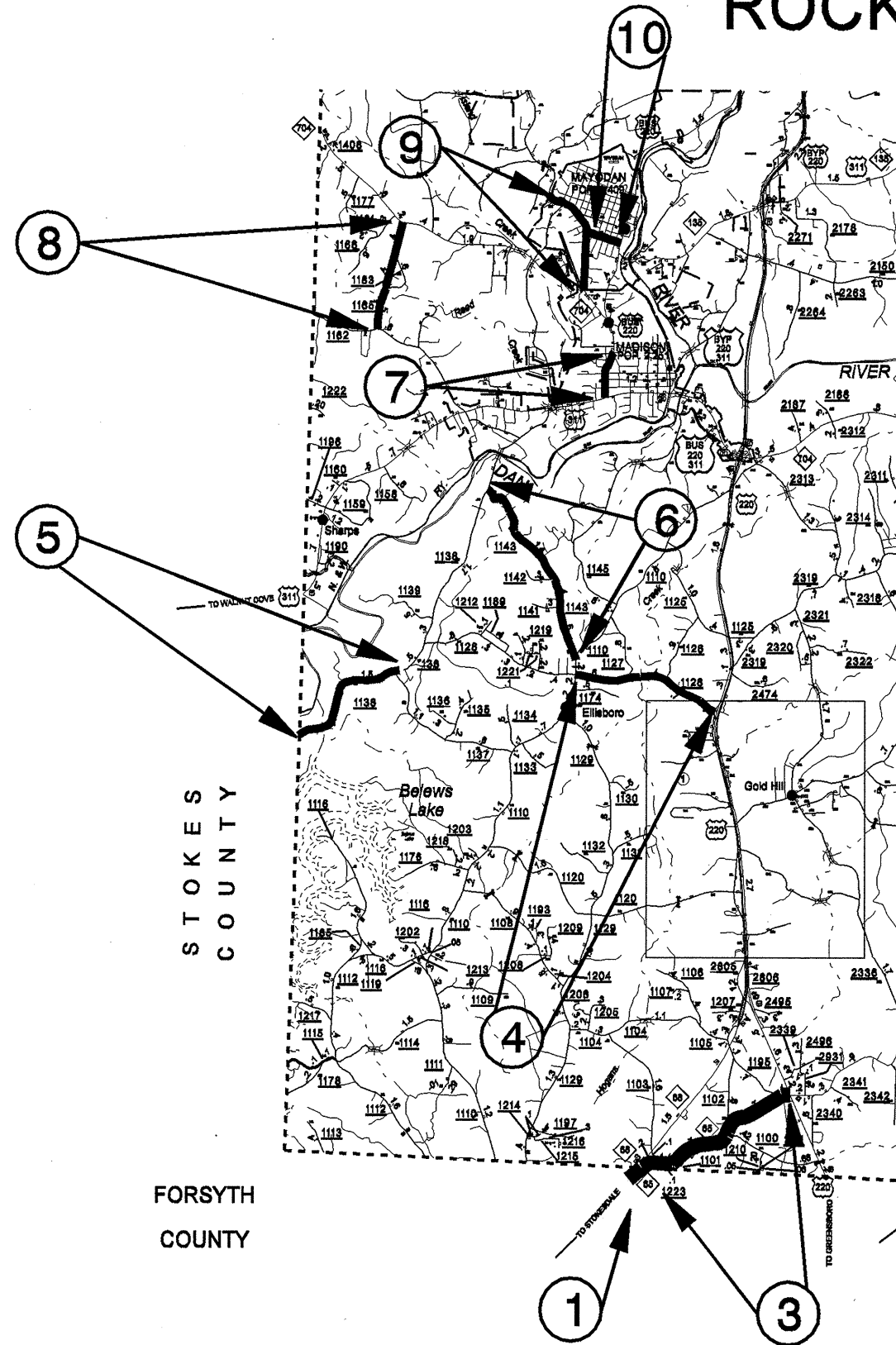
7CR.10411.13
7CR.10791.13
7CR.20791.13



ROCKINGHAM COUNTY

PROJECT NO.	SHEET NO.	TOTAL SHEETS
7CR.10411.13, ETC.	2	13

7CR.10411.13
7CR.10791.13
7CR.20791.13

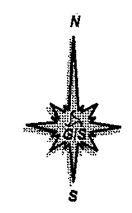
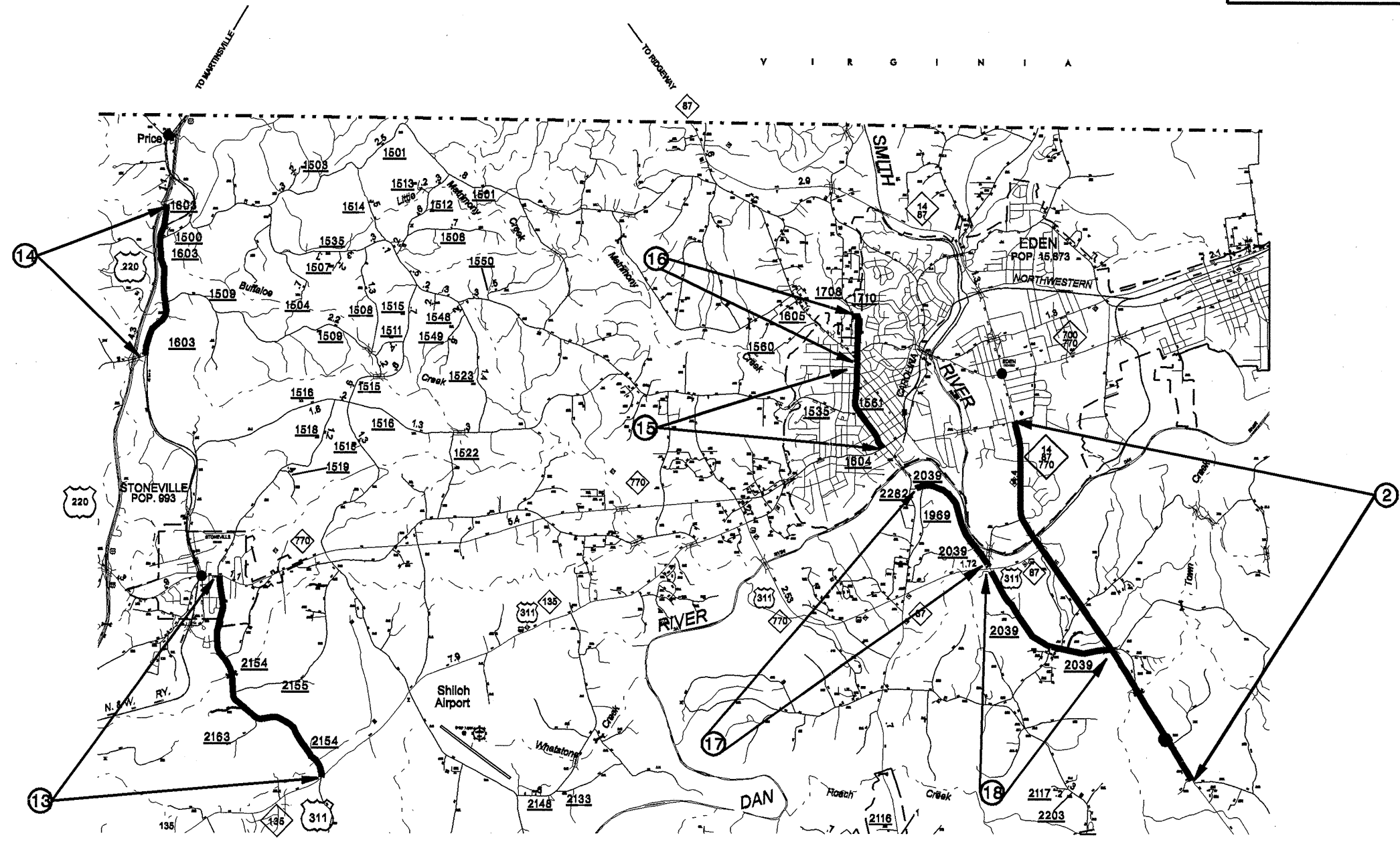


ENLARGED VIEW OF MADISON & MAYODAN



PROJECT NO.	SHEET NO.	TOTAL SHEETS
7CR.10411.13, ETC.	3	13

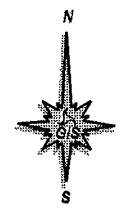
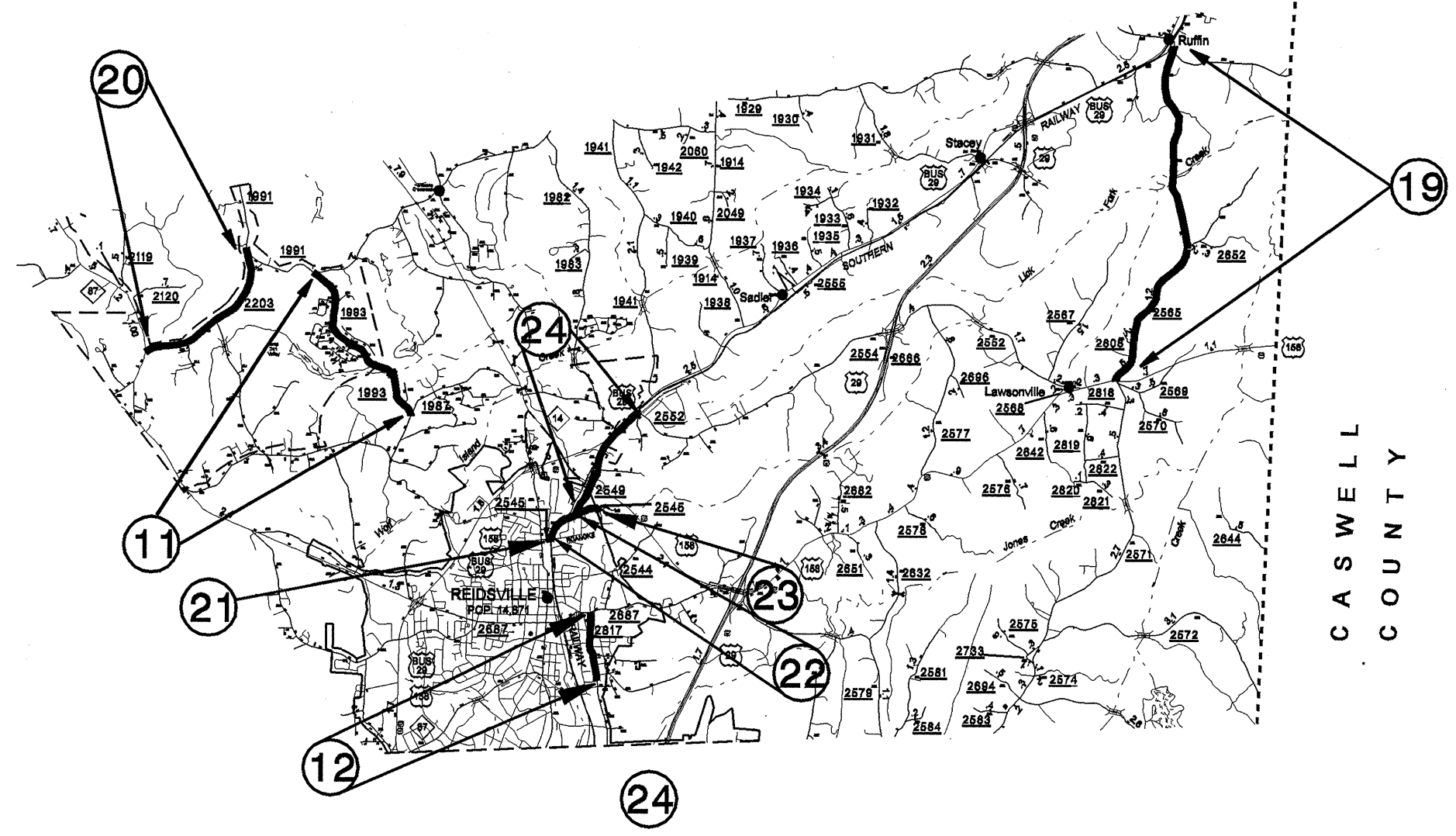
7CR.10411.13
7CR.10791.13
7CR.20791.13



ROCKINGHAM COUNTY

PROJECT NO.	SHEET NO.	TOTAL SHEETS
7CR.10411.13, ETC.	4	13

7CR.10411.13
 7CR.10791.13
 7CR.20791.13

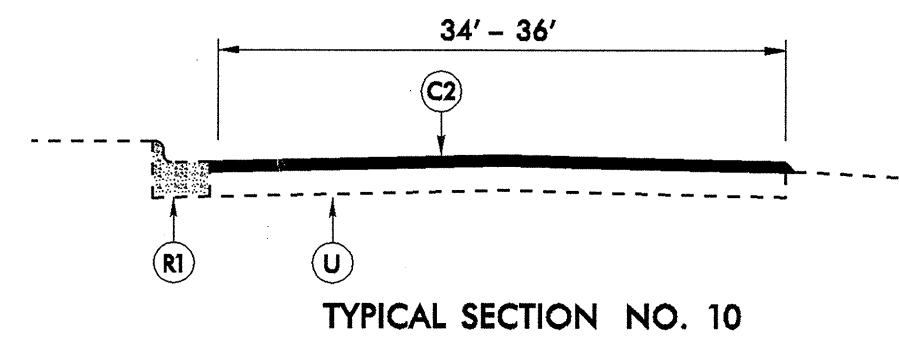
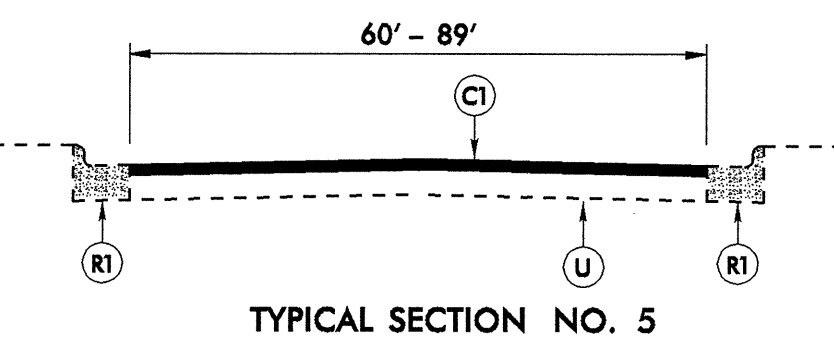
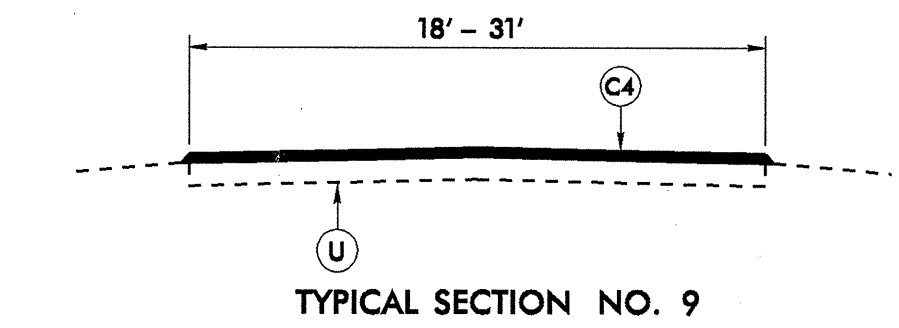
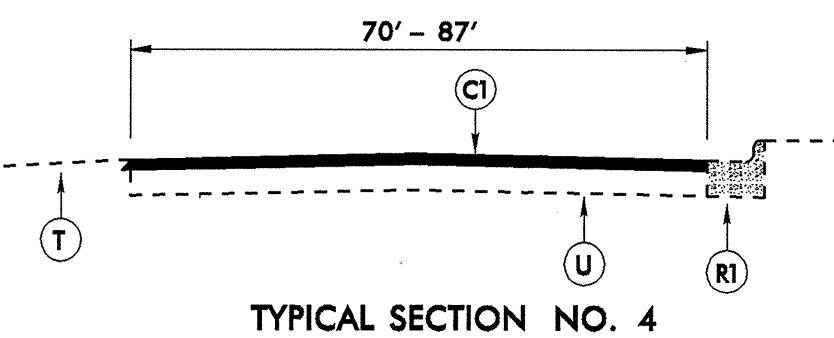
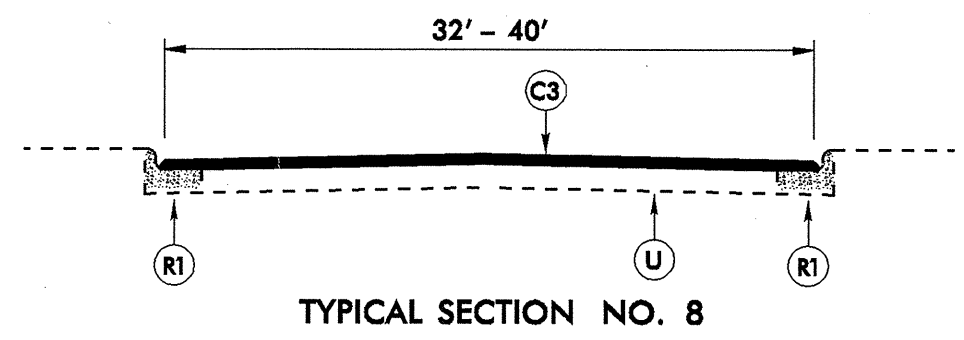
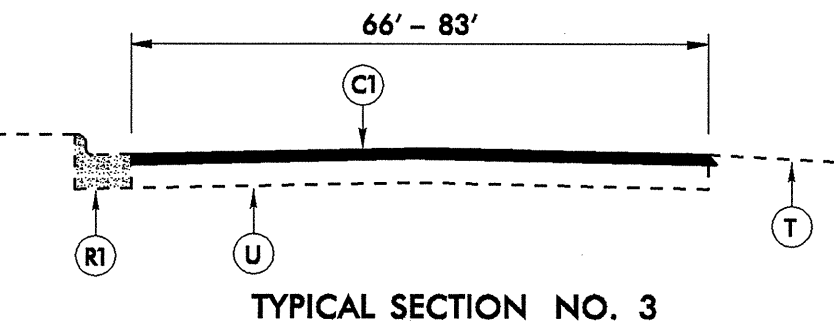
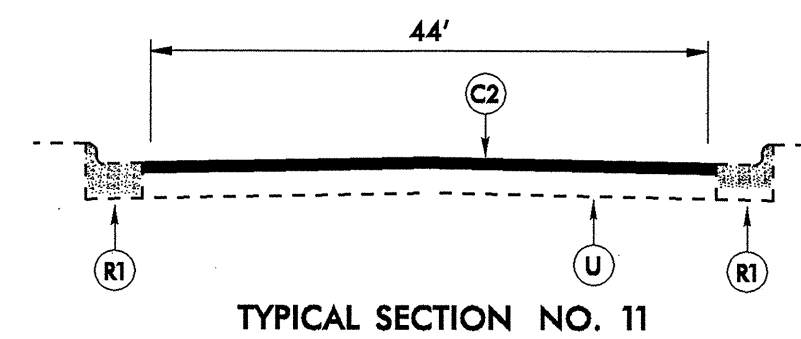
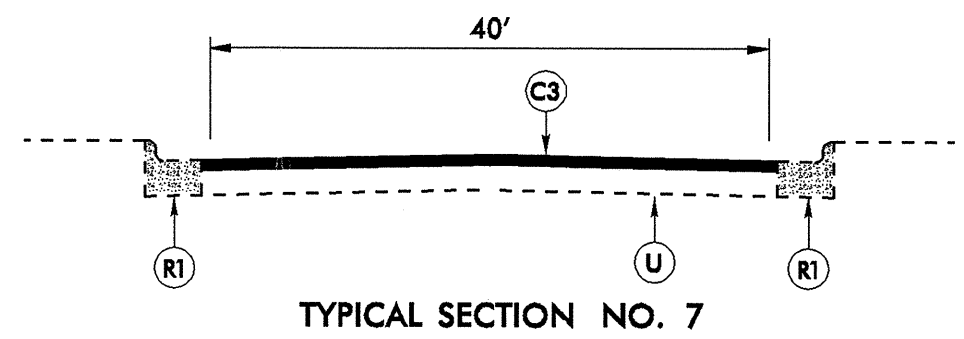
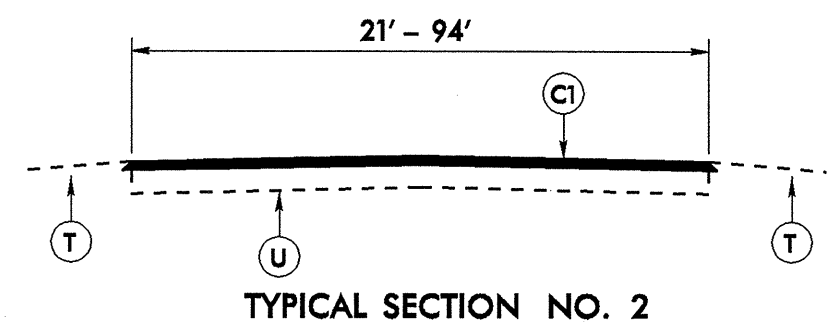
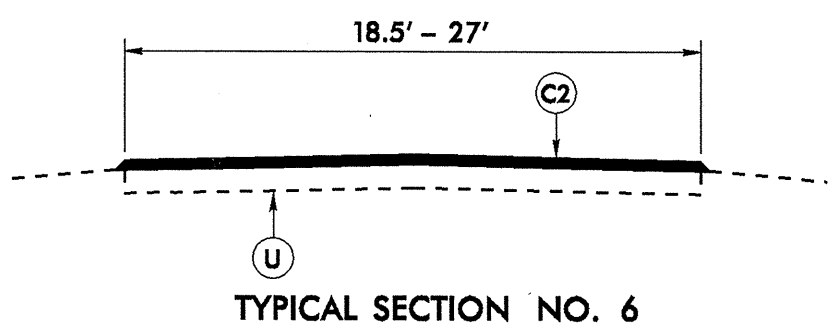
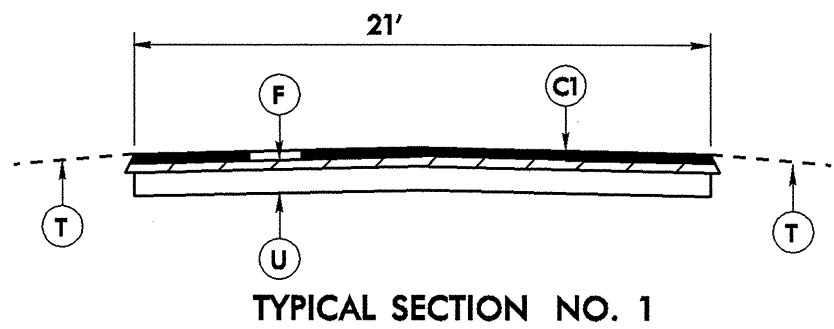


ROCKINGHAM COUNTY

5/28/99

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	7CR.10411.13, ETC	5	13

7CR.10411.13, 7CR.10791.13, 7CR.20791.13



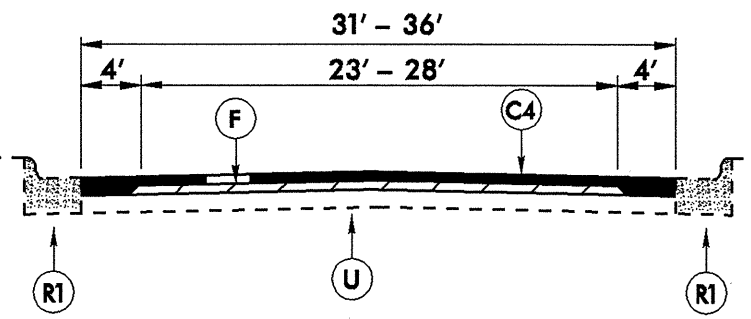
PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C2	PROP. APPROX. 1 1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5A, AT AN AVERAGE RATE OF 137.5 LBS. PER SQ. YD.
C3	PROP. APPROX. 1 1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 140 LBS. PER SQ. YD.
C4	PROP. APPROX. 1" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5A, AT AN AVERAGE RATE OF 110 LBS. PER SQ. YD.
F	MAT COAT, 78M STONE
R1	EXISTING 2'-6" CURB AND GUTTER OR EXPRESSWAY GUTTER OR VALLEY GUTTER
T	SHOULDER RECONSTRUCTION
U	EXISTING PAVEMENT.

03_OCT_2006_09:30
surfc03.in\p\n\divison 7\7cr.10411.13\staff_eng-typical.dgn
05/28/99

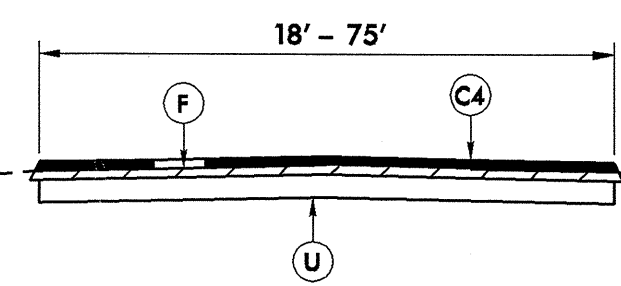
5/28/99
07-OCT-2006 09:40
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m:\field

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	7CR.10411.13, ETC	6	13

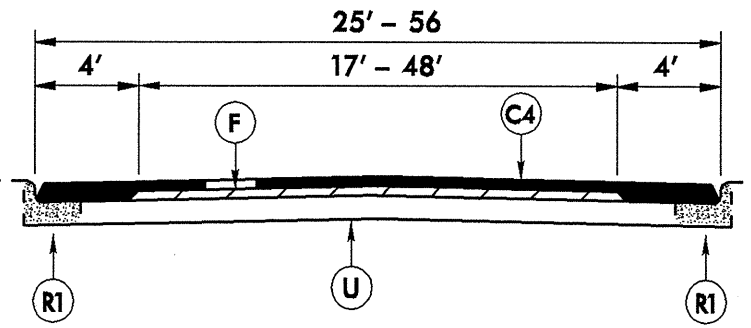
7CR.10411.13, 7CR.10791.13, 7CR.20791.13



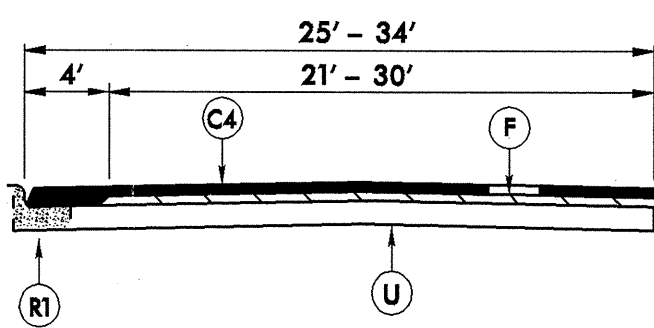
TYPICAL SECTION NO. 12



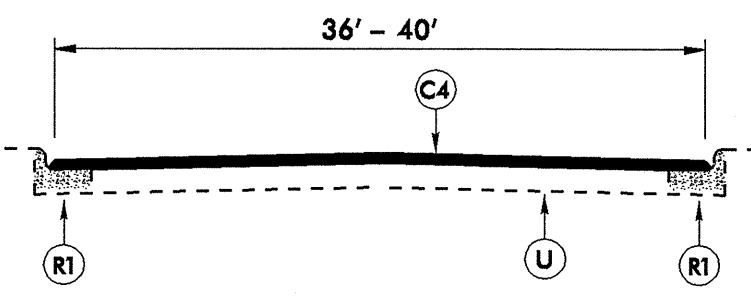
TYPICAL SECTION NO. 17



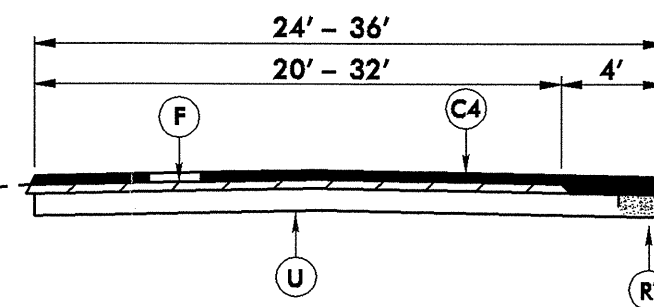
TYPICAL SECTION NO. 13



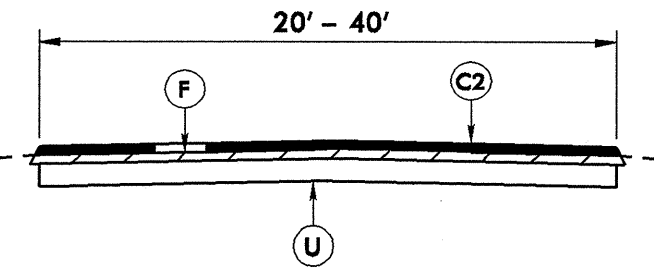
TYPICAL SECTION NO. 18



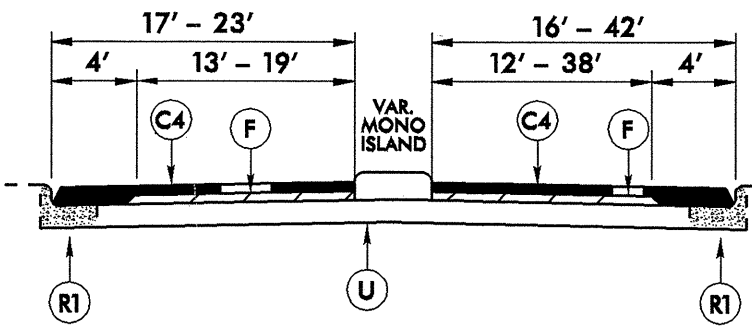
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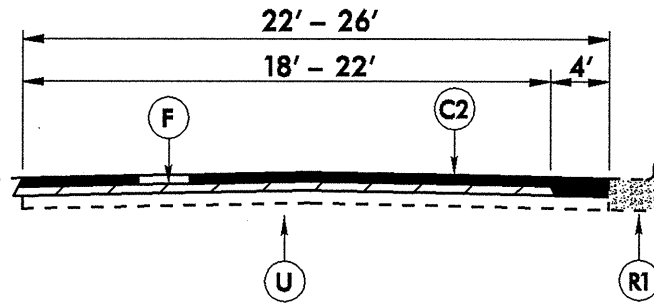
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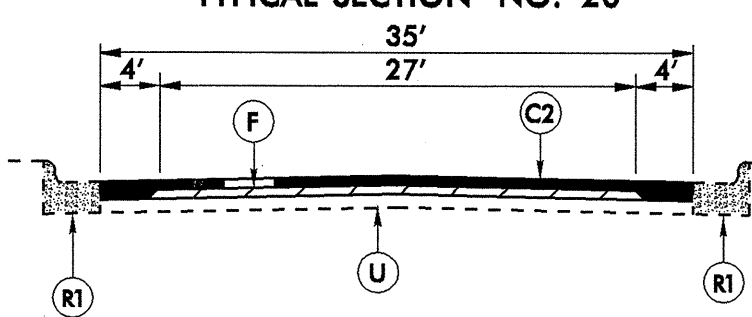
TYPICAL SECTION NO. 15



TYPICAL SECTION NO. 20



TYPICAL SECTION NO. 16



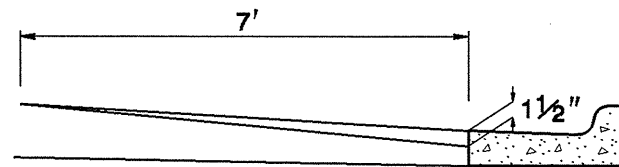
TYPICAL SECTION NO. 21

PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C2	PROP. APPROX. 1 1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 137.5 LBS. PER SQ. YD.
C3	PROP. APPROX. 1 1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 140 LBS. PER SQ. YD.
C4	PROP. APPROX. 1" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 110 LBS. PER SQ. YD.
F	MAT COAT, 78M STONE
R1	EXISTING 2'-6" CURB AND GUTTER OR EXPRESSWAY GUTTER OR VALLEY GUTTER
T	SHOULDER RECONSTRUCTION
U	EXISTING PAVEMENT.

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	7CR.10411.13, ETC	7	13

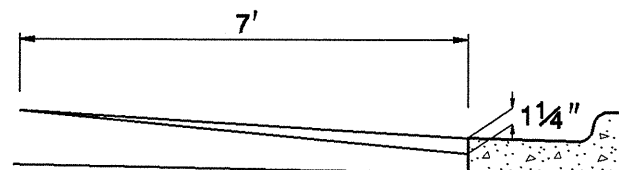
7CR.10411.13, 7CR.10791.13, 7CR.20791.13

MILLING DETAIL 1



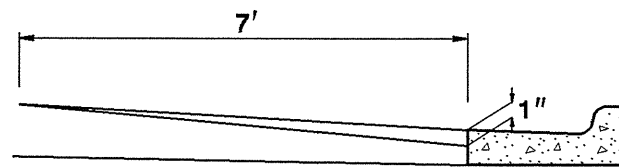
MILL EXISTING ASPHALT PAVEMENT 0-1 1/2" AT LOCATIONS AS DIRECTED BY THE ENGINEER
NOTE:
TO BE USED IN CONJUNCTION WITH TS. NO. 3, 4, & 5 ON MAP 2

MILLING DETAIL 2



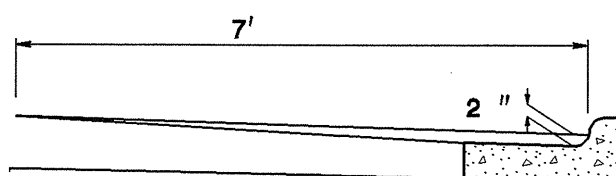
MILL EXISTING ASPHALT PAVEMENT 0-1 1/4" AT LOCATIONS AS DIRECTED BY THE ENGINEER
NOTE:
TO BE USED IN CONJUNCTION WITH TS. NO. 7 & 8 ON MAP 7
TS. NO. 10 & 11 ON MAP 9
TS. NO. 21 ON MAP 16

MILLING DETAIL 3



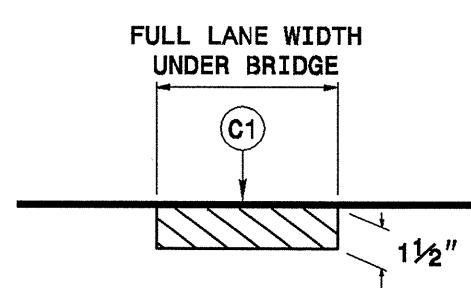
MILL EXISTING ASPHALT PAVEMENT 0-1" AT LOCATIONS AS DIRECTED BY THE ENGINEER
NOTE:
TO BE USED IN CONJUNCTION WITH TS. NO. 12 & 13 ON MAP 10
TS. NO. 14 ON MAP 12
TS. NO. 13, 18, 19 & 20 ON MAP 15
TS. NO. 19 ON MAP 22

MILLING DETAIL 4



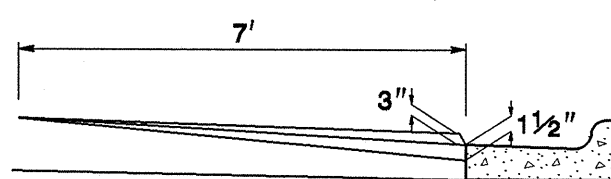
MILL EXISTING ASPHALT PAVEMENT 0-2" AT LOCATIONS AS DIRECTED BY THE ENGINEER
NOTE:
TO BE USED IN CONJUNCTION WITH TS. NO. 12 ON MAP 21

MILLING DETAIL 5



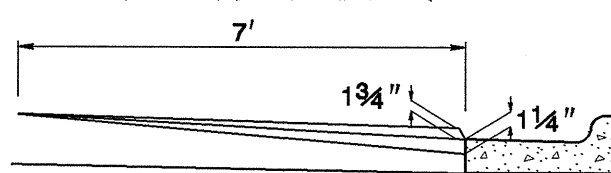
MILL EXISTING ASPHALT PAVEMENT 1 1/2" IN DEPTH TO BE USED ON MAP 2

MILLING DETAIL 6



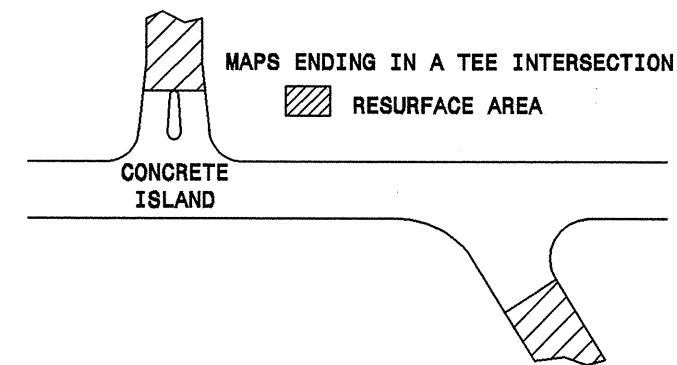
MILL EXISTING ASPHALT PAVEMENT 0-4 1/2" AT LOCATIONS AS DIRECTED BY THE ENGINEER
NOTE:
TO BE USED IN CONJUNCTION WITH TS. NO. 16 ON MAP 13

MILLING DETAIL 7

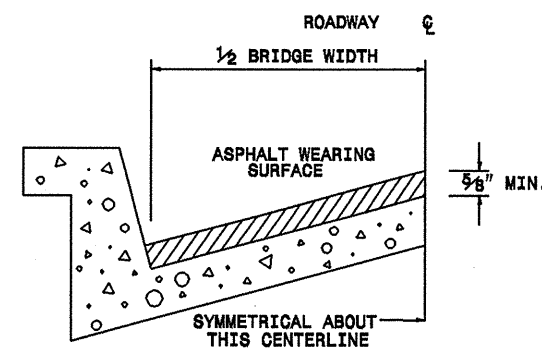
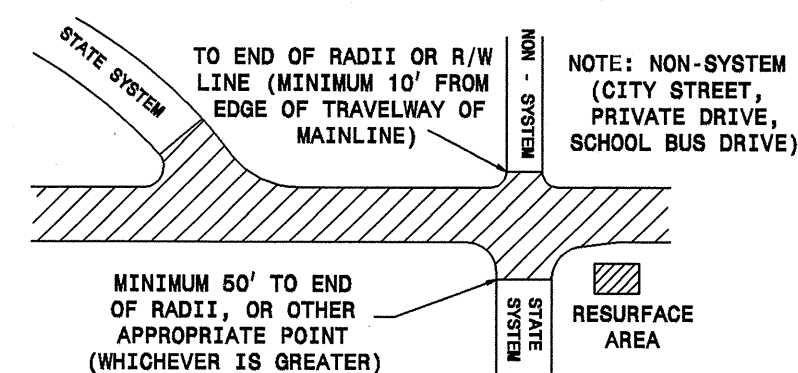


MILL EXISTING ASPHALT PAVEMENT 0-3" AT LOCATIONS AS DIRECTED BY THE ENGINEER
NOTE:
TO BE USED IN CONJUNCTION WITH TS. NO. 21 ON MAP 16

PAVING DETAIL 1 MAIN LINE IS NOT BEING RESURFACED



PAVING DETAIL 2 MAIN LINE IS BEING RESURFACED



BRIDGE HALF TYPICAL SECTION

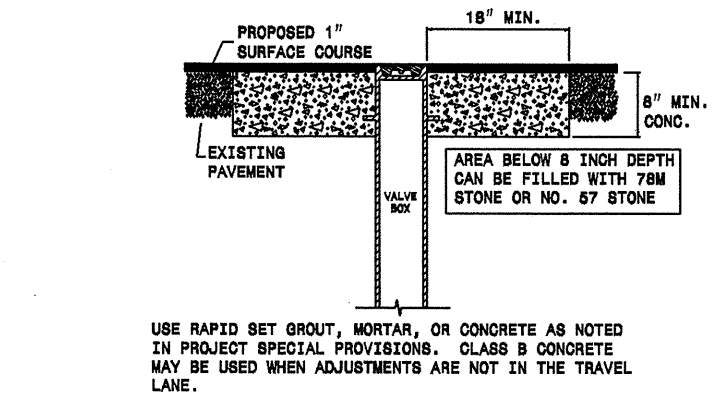
FOR BRIDGES WITH FLOOR DRAINS, CARE SHALL BE EXERCISED IN PLACING THE WEARING SURFACE AROUND FLOOR DRAINS SO AS NOT TO HINDER EFFECTIVE DRAINAGE. ALL DRAINS SHALL BE LEFT OPEN. THE PROPOSED WEARING SURFACE SHALL VARY IN THICKNESS AS NECESSARY TO PROVIDE A SMOOTH RIDING SURFACE. A THICKNESS OF NOT LESS 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

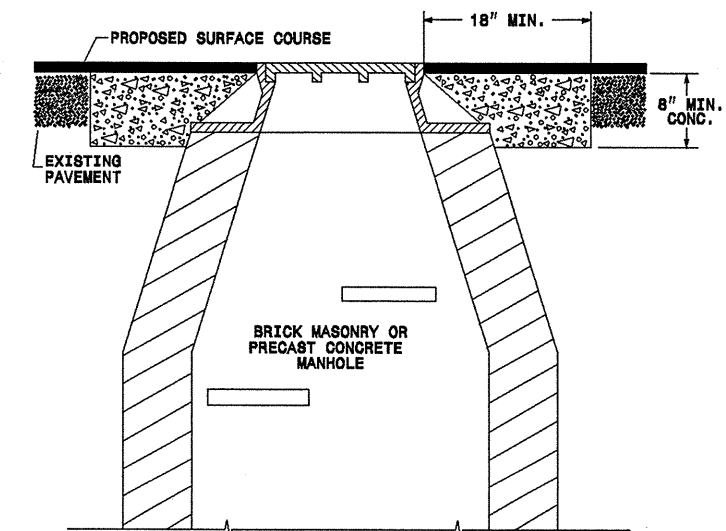
ALL UNPAVED S.R. ROUTES TO BE SURFACED 50' FROM EDGE OF PAVEMENT OF MAIN PROJECT.
ALL PAVED S.R. ROUTES TO BE RESURFACED TO END OF RADDII, OR AS DIRECTED BY THE ENGINEER. EDGES, PAVEMENT WIDENING, INTERSECTIONS AND BRIDGE FLARES ARE INCLUDED IN THE SUMMARY OF QUANTITIES. BRIDGES TO BE RESURFACED AT LOCATIONS AND DEPTH AS DIRECTED BY THE ENGINEER.

STANDARD CONCRETE ENCASEMENT FOR MANHOLE & VALVE CASTINGS IN PAVEMENT

DETAIL DRAWING NO. 858.01



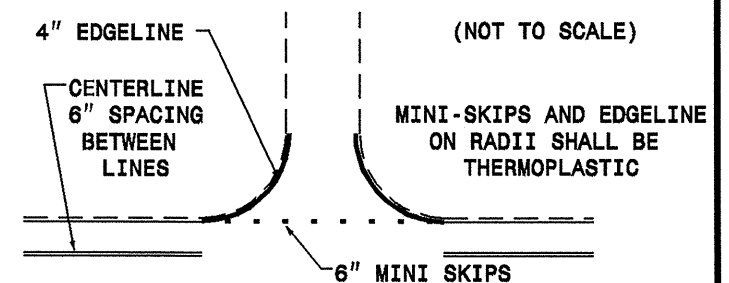
USE RAPID SET GROUT, MORTAR, OR CONCRETE AS NOTED IN PROJECT SPECIAL PROVISIONS. CLASS B CONCRETE MAY BE USED WHEN ADJUSTMENTS ARE NOT IN THE TRAVEL LANE.



NOTES:

- MORTAR SHALL BE MIXED TO NCDOT SPECIFICATIONS.
- ALL FAULTY EXISTING BRICKWORK TO BE REMOVED AND REPLACED WITH NEW BRICK MASONRY.
- EXCAVATION FOR THE ADJUSTMENT SHALL BE SHEER CUT ON ALL SIDES.
- USE RAPID SET GROUT, MORTAR OR CONCRETE AS NOTED IN PROJECT SPECIAL PROVISIONS. CLASS B CONCRETE MAY BE USED WHEN THE ADJUSTMENTS ARE NOT IN THE TRAVEL LANE.

STRIPING DETAIL NON-SIGNALIZED/NON-CURB & GUTTER INTERSECTIONS



NOTE: MINI SKIPS SHALL BE PLACED ON A 10' CYCLE, CONTAINING AN 8' SPACE AND 2' SKIP. THE WIDTH OF THE SKIP SHALL BE 6".

SUMMARY OF QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LENGTH	WIDTH	INCIDENTAL STONE BASE	SHOULDER RECONSTRUCTION	1 1/2" MILLING	0" TO 1.5" MILLING	0" TO 1.25" MILLING	0" TO 1" MILLING	0" TO 2" MILLING	0" TO 4.5" MILLING	0" TO 3" MILLING	INCIDENTAL MILLING	SURFACE COURSE, SF9.5B	SURFACE COURSE, SF9.5A	PG 64-22 PLANT MIX	AST, MAT COAT 78M	WHEELCHAIR RAMPS	RETROFITTING EXISTING WHEELCHAIR RAMPS	ADJ. OF MANHOLES	ADJ. OF METER OR VALVE BOX	SEED & MULCHING	RESIDENTIAL SEEDING	TRENCHING (UNPAVED) (1 1/2")	TRENCHING (PAVED) (1 1/2")	JUNCTION BOX (STANDARD)	INDUCTIVE LOOP SAW CUT	LEAD-IN CABLE (18-2)	LEAD-IN CABLE (18-4)									
						MI	FT											TONS	SMI															SY	SY	SY	SY	SY	SY	SY	SY	TONS
7CR.10411.13	Guilford	1	NC 65 WEST	FROM NC 68 TO THE ROCKINGHAM COUNTY LINE	1	0.213	21	7.5	0.21									221.74		13.00	2,624.20																					
TOTAL FOR PROJ NO. 7CR.10411.13						0.213		7.5	0.21									222.00		13.00	2,624.20																					
7CR.10791.13	Rockingham	2	NC 14	FROM NORTHSIDE OF SR 2037 (HARRISON CROSSROAD) TO SR 2066 (KINGS HIGHWAY)	2	0.06	66	35										195.52		12.00																						
					2	0.07	66 - 80														272.25		16.00																			
					2	0.1	64															316.01		19.00																		
					2	0.06	66 - 80															236.22		14.00																		
					2	0.08	66																260.69		16.00																	
					2	0.03	67 - 79																108.11		6.00																	
					3	0.03	77 - 83									124							118.46		7.00																	
					3	0.04	70 - 71									156							159.22		10.00																	
					2	0.45	65 - 73																1,532.92		92.00																	
					4	0.03	71 - 78									39							110.33		7.00																	
					5	0.09	76									778							337.63		20.00																	
					3	0.02	71 - 78									82							73.55		4.00																	
					2	0.05	73 - 77																205.11		12.00																	
					2	0.02	71 - 73																71.09		4.00																	
					3	0.09	71 - 75									358							324.32		19.00																	
					4	0.15	71									595							525.76		32.00																	
					4	0.11	73 - 87									467							491.45		29.00																	
					2	0.01	89 - 94																75.15		5.00																	
					2	0.22	66								249								716.90		43.00																	
					4	0.01	71 - 75.5									21							36.18		2.00																	
					5	0.07	75.5 - 77									605							263.64		16.00																	
					3	0.01	66 - 75									32							34.80		2.00																	
					2	0.35	66																1,140.52		68.00																	
					2	0.05	68 - 78																180.18		11.00																	
					2	0.02	78																197.00		12.00																	
					2	0.06	68 - 78																216.22		13.00																	
					2	0.27	66																879.83		53.00																	
					4	0.06	71									226							210.30		13.00																	
					2	0.07	66																228.10		14.00																	
					3	0.04	71									145							140.20		8.00																	
					5	0.02	75									187							74.04		4.00																	
					4	0.04	71									148							140.20		8.00																	
					2	0.17	66																553.97		33.00																	
					2	0.15	77 - 80																661.20		40.00																	
					5	0.05	66 - 83									451							203.88		12.00					2	13			100	100	1	2,000	400	400			
					5	0.04	64									366							126.40		8.00																	
					5	0.03	63 - 78									233							104.41		6.00																	
					5	0.04	60 - 64									327							142.46		9.00																	
					5	0.03	64 - 73									249							101.46		6.00																	
					5	0.07	64 - 73									534							276.73		17.00																	
					5	0.38	60									3091							1,145.92		69.00																	
					5	0.05	63 - 72									381							166.63		10.00																	
					5	0.02	60 - 72									142							85.17		5.00																	
					5	0.01	60									115							29.63		2.00																	
					5	0.04	64 - 72									334							134.29		8.00																	
5	0.02	60 - 72									140							85.17		5.00																						
5	0.05	60									370							148.15		9.00																						
5	0.05	64 - 73									392							169.09		10.00																						
5	0.05	64 - 73									420							209.09		13.00																						

PROJECT NO. 7CR.10411.13, ETC.	SHEET NO. 9	TOTAL NO. 13
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SUMMARY OF QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LENGTH	WIDTH	INCIDENTAL STONE BASE	SHOULDER RECONSTRUCTION	1 1/2" MILLING	0" TO 1.5" MILLING	0" TO 1.25" MILLING	0" TO 1" MILLING	0" TO 2" MILLING	0" TO 4.5" MILLING	0" TO 3" MILLING	INCIDENTAL MILLING	SURFACE COURSE, S9.5B	SURFACE COURSE, SF9.5A	PG 64-22 PLANT MIX	AST, MAT COAT 78M	WHEELCHAIR RAMPS	RETROFITTING EXISTING WHEELCHAIR RAMPS	ADJ. OF MANHOLES	ADJ. OF METER OR VALVE BOX	SEED & MULCHING	RESIDENTIAL SEEDING	TRENCHING (UNPAVED) (1 X 2')	TRENCHING (PAVED) (1 X 2')	JUNCTION BOX (STANDARD)	INDUCTIVE LOOP SAW CUT	LEAD-IN CABLE (18-2)	LEAD-IN CABLE (18-4)							
						MI	FT	TONS	SMI	SY	SY	SY	SY	SY	SY	SY	SY	TONS	TONS	TONS	SY	EA	EA	EA	EA	AC	AC	LF	LF	EA	LF	LF	LF	LF	LF					
7CR.20791.13	Rockingham	4	SR 1128	SARDIS CHURCH ROAD - FROM SR 1110 (ELLISBORO ROAD) TO PAVEMENT JOINT NORTH OF US 220	6	0.753	21	28											680.95	40.00																				
					6	0.017	21															14.47	1.00																	
					6	0.754	20.5 - 21																655.72	39.00																
					TOTAL FOR MAP NO. 4						1.524		28	0	210	0							1,331.14	80.00					0	0		0	0	0						
"	"	5	SR 1138	LINDSEY BRIDGE ROAD - FROM STOKES COUNTY LINE TO A PAVEMENT JOINT AT THE NEW BRIDGE NEW BRIDGE - DO NOT PAVE THIS SECTION LINDSEY BRIDGE ROAD - FROM A PAVEMENT JOINT AT THE NEW BRIDGE TO A PAVEMENT JOINT WEST OF SR 1137 (EDEN CHURCH ROAD)	6	0.138	20.3	22.5												113.57	7.00																			
					6	0.305	20.3																																	
					6	0.992	20.3																816.38	49.00																
					TOTAL FOR MAP NO. 5						1.435		22.5	0	0	0							929.95	56.00					0	0		0	0	0						
"	"	6	SR 1143	RIERSON ROAD - FROM SR 1138 (LINDSEY BRIDGE ROAD) TO SR 1110 (ELLISBORO ROAD)	6	1.917	20	105												1,594.43	96.00																			
					6	0.006	20																4.87																	
					6	0.215	20																174.34	10.00																
					6	0.133	20 - 22																113.21	7.00																
TOTAL FOR MAP NO. 6						2.271		105	0	0	0								1,886.85	113.00					0	0		0	0	0										
"	"	7	SR 1152	WILSON STREET - FROM PAVEMENT JOINT ON US 220 BUSINESS TO TO PAVEMENT JOINT AT US 311	7	0.258	32 - 40					4,387							524.91	31.00					5	3		200	50	6	1,000	500	100							
					8	0.263	32															406.74	24.00					3	2											
					8	0.009	32 - 40																13.34	1.00																
					7	0.004	40																6.59					1												
TOTAL FOR MAP NO. 7						0.534		0	0	0	4,387								952.00	56.00					9	5		200	50	6	1,000	500	100							
"	"	8	SR 1185	CARDINAL ROAD - FROM NC 704 TO SR 1182 (K-FORK ROAD)	9	0.046	21 - 30	90												37.97	2.00																			
					9	0.382	21																259.87	16.00																
					9	0.022	21																14.97	1.00																
					9	0.762	21																578.38	35.00																
TOTAL FOR MAP NO. 8						1.24		90	0	0	0								914.76	55.00					0	0		0	0	0										
"	"	9	SR 1300	AYERSVILLE ROAD - FROM PAVEMENT JOINT NORTH OF NC 704 TO MAYODAN CITY LIMITS	10	0.16	34 - 36	72.5				651								246.54	15.00					2														
					10	0.18	36																282.12	17.00					1	2										
					11	0.07	44																164.52	10.00																
					10	0.07	35																99.11	6.00																
					6	0.02	24 - 27																	20.65	1.00															
					6	0.74	24																919.43	55.00					6	10										
TOTAL FOR MAP NO. 9						1.24		72.5	0	0	0	2,156							1,732.37	104.00					9	13		0	0	0										
"	"	10	SR 1302	WASHINGTON STREET - FROM US 220 BUSINESS TO SR 1300 (AYERSVILLE ROAD)	12	0.198	36													234.53	14.00	4,181.80		6	5	2														
					13	0.206	36																279.84	17.00	4,350.70			3	8											
					TOTAL FOR MAP NO. 10						0.404		0	0	0	0	1,696	1,629					514.37	31.00	8,532.50		6	8	10			0	0	0						
"	"	11	SR 1993	CEDAR LANE - FROM SR 1991 (BERRYMORE ROAD) TO SR 1987 (SALEM CHURCH ROAD)	9	0.028	21 - 24	55												20.40	1.00																			
					9	0.919	21																645.19	39.00																
					9	1.104	20 - 21																843.23	51.00																
TOTAL FOR MAP NO. 11						2.051		55	0	0	0	0	0						1,508.82	91.00					0	0	0	0	0	0										
"	"	12	SR 2817	BARNES STREET - FROM PAVEMENT JOINT NORTH OF TRIPLETT STREET (NON-SYSTEM) TO PAVEMENT JOINT SOUTH OF SR 2687 (LAWSONVILLE AVENUE)	14	0.551	36						4,528							654.52	39.00		4	7	8	9		150	150	1	400	150	150							
					14	0.176	36 - 40																223.27	13.00			4	5	6											
TOTAL FOR MAP NO. 12						0.727		0	0	0	0	4,528	5,975	0						877.79	52.00		4	11	13	15		150	150	1	400	150	150							
"	"	13	SR 2154	STONE MOUNTAIN ROAD - FROM NC 135 TO NC 770	15	2.585	20	72.5												2,096.09	126.00	30,327.00																		
					16	0.213	24 - 26																215.67	13.00	2,250.00															
					16	0.081	22 - 26									333							78.75	5.00	808.00															
TOTAL FOR MAP NO. 13						2.879		72.5	0	0	0	333	0	0	875				2,390.51	144.00	33,385.00		0	0	5	5		0	0	0										
"	"	14	SR 1603	OLD US 220 BUSINESS - FROM SR 1360 (SMITH ROAD) TO US 220	17	1.809	22	55												1,309.01	79.00	23,344.00																		
					17	0.022	22 - 35																20.29	1.00	364.00															
TOTAL FOR MAP NO. 14						1.831		55	0	0	0	0	0	0					1,329.30	80.00	23,708.00		0	0	0	0		0	0	0										

SUMMARY OF QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LENGTH	WIDTH	INCIDENTAL STONE BASE TONS	SHOULDER RECONSTRUCTION SMI	1 1/2" MILLING SY	0" TO 1.5" MILLING SY	0" TO 1.25" MILLING SY	0" TO 1" MILLING SY	0" TO 2" MILLING SY	0" TO 4.5" MILLING SY	0" TO 3" MILLING SY	INCIDENTAL MILLING SY	SURFACE COURSE, S9.5B	SURFACE COURSE, SF9.5A	PG 64-22 PLANT MIX TONS	AST_MAT COAT 78M SY	WHEELCHAIR RAMPS EA	RETROFITTING EXISTING WHEELCHAIR RAMPS EA	ADJ. OF MANHOLES EA	ADJ. OF METER OR VALVE BOX EA	SEED & MULCHING AC	RESIDENTIAL SEEDING AC	TRENCHING (UNPAVED) (1" X 2")	TRENCHING (PAVED) (1" X 2")	JUNCTION BOX (STANDARD) EA	INDUCTIVE LOOP SAW CUT LF	LEAD-IN CABLE (18-2) LF	LEAD-IN CABLE (18-4) LF								
						MI	FT											TONS	TONS									LF	LF					EA	EA	EA	EA	AC	AC	LF	LF
"	"	15	SR 1561	HAMILTON STREET - FROM SR 1604 (WASHINGTON STREET) TO SR 1605 (OAKLAND AVENUE)	13	0.12	36												139.71	8.00	1,979.00																				
					13	0.038	30 - 56															112.83	7.00	1,056.00	1	1	2	1													
					13	0.03	30																31.12	2.00	386.00	2		1	1												
					13	0.256	25																217.20	13.00	2,558.00	6			1	2											
					13	0.035	25 - 34																	53.41	3.00	603.00			2	2											
					18	0.073	32 - 34																	87.93	5.00	1,078.00															
					18	0.033	25 - 31																	29.90	2.00	467.00															
					9	0.049	23 - 25																	38.08	2.00	685.00				1											
					19	0.059	26.5 - 27																	51.18	3.00	792.00				1											
					19	0.053	36																	141.71	9.00	874.00				3	2										
					13	0.009	36																	10.48	1.00	152.00															
					13	0.184	36																	237.23	14.00	3,024.00				4	3										
					20	0.013	33 - 65																	20.59	1.00	284.00															
TOTAL FOR MAP NO. 15						0.952		0	0	0	0	308	6,795	0	0		0	1,171.37	70.00	13,938.00	9	3	15	11			150	25	5	800	300	100									
"	"	16	SR 1709	HAMILTON STREET - FROM SR 1605 (OAKLAND AVENUE) TO SR 1785 (CHURCH STREET) AND FROM JOINT AT SR 1785 (CHURCH STREET) TO SR 1708 (BRYANT STREET)	21	0.071	35													100.53	6.00	1,125.00				1															
					9	0.03	23 - 28	10															24.76	1.00																	
					9	0.036	22 - 23																	31.23	2.00					1											
					9	0.398	18																	232.23	14.00					1											
TOTAL FOR MAP NO. 16						0.535		10	0	0	0	0	0	0	0	583	0	388.75	23.00	1,125.00	0	0	3	0			0	0	0												
"	"	17	SR 2039	BETHELEHEM CHURCH ROAD - FROM PAVEMENT JOINT EAST OF SR 2282 (HAMILTON STREET) TO PAVEMENT JOINT WEST OF NC 87/HARRINGTON HIGHWAY CONCRETE BRIDGE - DO NOT PAVE BETHELEHEM CHURCH ROAD - FROM PAVEMENT JOINT EAST OF SR 2282 (HAMILTON STREET) TO PAVEMENT JOINT WEST OF NC 87/HARRINGTON HIGHWAY	6	1.136	20	23												941.15	56.00																				
					6	0.027	20																																		
					6	0.093	20																	75.41	5.00																
					6	0.044	20 - 24																	39.23	2.00																
TOTAL FOR MAP NO. 17						1.358		23	0	0	0	0	0	0	0	0	335		1,112.18	66.00			0	0	0	0			0	0	0										
"	"	18	SR 2039	BETHLEHEM CHURCH ROAD - FROM PAVEMENT JOINT EAST OF NC 87/HARRINGTON HIGHWAY TO PAVEMENT JOINT WEST OF NC 14/87/770 CONCRETE BRIDGE - DO NOT PAVE	15	0.068	24	53													66.11	4.00	960.00																		
					15	0.042	20 - 24																	37.44	2.00	538.00															
					15	1.573	20																	1,320.50	79.00	18,451.00				1											
					15	0.009	20 - 24																		8.02		122.00														
					15	0.074	24 - 40																		115.82	7.00	1,397.00														
					15	0.009	30																		10.93	1.00	167.00														
					15	0.039	30																																		
					15	0.018	25 - 30																		20.04	1.00	287.00														
TOTAL FOR MAP NO. 18						2.305		53	0	0	0	0	0	0	0	0	335		2,027.84	121.00	27,551.00	0	0	0	1			0	0	0											
"	"	19	SR 2565	LICK FORK CREEK ROAD - FROM US 158 TO PAVEMENT JOINT SOUTH OF SR 2560 (RUFFIN ROAD)	6	2.53	20	168													2,071.50	124.00																			
					6	0.019	20																	15.41	1.00																
					6	0.961	20																	779.24	47.00																
					6	0.53	18.5 - 20																	434.80	26.00																
TOTAL FOR MAP NO. 19						4.04		168	0	0	0	0	0	0	0	0			3,300.95	198.00			0	0	0	0			0	0	0										
"	"	20	SR 2203	ASHLEY LOOP ROAD - FROM PAVEMENT JOINT AT NC 87 TO SR 1991 (BERRYMORE ROAD)	15	0.073	22 - 32	28													79.80	5.00	1,155.00																		
					15	0.041	20 - 22																	34.90	2.00	502.00															
					15	1.697	20																	1,426.04	86.00	19,911.00															
TOTAL FOR MAP NO. 20						1.811		28	0	0	0	0	0	0	0	0			1,540.74	93.00	21,568.00	0	0	0	0			0	0	0											
"	"	21	SR 2545	CARTER STREET - FROM PAVEMENT JOINT AT SR 2670 (SCALES STREET) TO ROANOKE STREET (NON SYSTEM)	12	0.08	31														80.24	5.00	1,086.00	3			2			100	25	1	400	150	150						
					12	0.026	31																	26.08	2.00	465.00															
TOTAL FOR MAP NO. 21						0.106		0	0	0	0	0	0	661	0	0	0			106.32	7.00	1,551.00	3	0	0	2			100	25	1	400	150	150							

PROJECT NO. 7CR.10411.13, ETC.	SHEET NO. 11	TOTAL NO. 13
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SUMMARY OF QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LENGTH	WIDTH	INCIDENTAL STONE BASE	SHOULDER RECONSTRUCTION	1 1/2" MILLING	0" TO 1.5" MILLING	0" TO 1.25" MILLING	0" TO 1" MILLING	0" TO 2" MILLING	0" TO 4.5" MILLING	0" TO 3" MILLING	INCIDENTAL MILLING	SURFACE COURSE, S9.5B	SURFACE COURSE, SF9.5A	PG 64-22 PLANT MIX	AST, MAT COAT 78M	WHEELCHAIR RAMPS	RETROFITTING EXISTING WHEELCHAIR RAMPS	ADJ. OF MANHOLES	ADJ. OF METER OR VALVE BOX	SEED & MULCHING	RESIDENTIAL SEEDING	TRENCHING (UNPAVED) (1 X 2")	TRENCHING (PAVED) (1 X 2")	JUNCTION BOX (STANDARD)	INDUCTIVE LOOP SAW CUT	LEAD-IN CABLE (18-2)	LEAD-IN CABLE (18-4)	
																																		MI
"	"	22	SR 2545	MARKET STREET - FROM SR 2545 (CARTER STREET)/ROANOKE STREET (NON SYSTEM) TO SR 2545 (WILLOW STREET)	17	0.142	20 - 24	3											101.18	6.00	1,662.00													
					17	0.037	24												28.75	2.00	520.00			1										
					19	0.054	24						222						41.96	3.00	636.00			1										
					17	0.044	24												34.19	2.00	624.00			1										
					17	0.013	19 - 24												29.05	2.00	167.00				2									
					17	0.059	19												56.33	3.00	659.00			2	3									
					17	0.027	19 - 20												77.06	5.00	312.00													
TOTAL FOR MAP NO. 22						0.376		3	0	0	0	0	222	0	0	0	0		368.52	23.00	4,580.00	0	0	5	5		0	0	0					
"	"	23	SR 2545	WILLOW STREET - FROM SR 2549 (NE MARKET STREET) TO END OF PAVEMENT	17	0.156	20												107.09	6.00	1,833.00			4	1									
					17	0.134	18 - 20												87.51	5.00	1,495.00			1	1									
TOTAL FOR MAP NO. 23						0.29		0	0	0	0	0	0	0	0	0	0		194.60	11.00	3,328.00	0	0	5	2		0	0	0					
"	"	24	SR 2549	N.E. MARKET STREET - FROM SR 2552 (NARROW GUAGE ROAD) TO SR 2545 (MARKET STREET)	17	0.01	24 - 75	33											16.00	1.00	292.00													
					17	0.047	24												36.52	2.00	659.00													
					17	0.225	20												145.81	9.00	2,638.00													
					17	0.075	26 - 33										367		71.59	4.00	1,295.00													
						0.041	33																											
					17	0.001	33												1.07		15.00													
					17	0.051	33 - 45												64.32	4.00	1,174.00													
					17	0.014	45												80.37	5.00	370.00													
					17	0.014	29												13.14	1.00	242.00				1									
					17	0.354	21												250.82	15.00	4,359.00													
					17	0.06	26												50.50	3.00	919.00													
					17	0.439	21												303.65	18.00	5,411.00													
TOTAL FOR MAP NO. 24						1.331		33	0	0	0	0	0	0	0	0	367		1,033.79	62.00	17,374.00	0	0	0	1		0	0	0					
"	"	25	SR 2912	NORMAN FARM ROAD - FROM PAVMENT JOINT SOUTH OF SR 2349 (GLENCOE CHURCH ROAD) TO END OF MAINTENANCE (AT CUL-DE-SAC)	9	0.474	20	38											404.16	24.00														
TOTAL FOR PROJ NO. 7CR.20791.13						29.714		856.5	0	210	0	7,184	14,688	2,290	875	583	1,270	952.00	25,065.00	1,560.00	156,640.50	16	20	72	70		600	250	13	2,600	1,100	500		
GRAND TOTAL						36.337		974	2.18	459	14,665	7,184	14,688	2,290	875	583	2,447	18,919.00	25,065.00	2,637.00	159,264.70	16	20	74	84	0.60	0.46	700	350	14	4,600	1,500	900	

PROJECT NO. 7CR.10411.13, ETC.	SHEET NO. 12	TOTAL NO. 13
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THERMOPLASTIC AND PAINT QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	4" X 90 M WHITE THERMO LF	4" X 120 M YELLOW THERMO LF	4" X 120 M WHITE THERMO LF	6" X 90 M WHITE THERMO LF	6" X 120 M WHITE THERMO LF	8" X 90 M WHITE THERMO LF	8" X 90 M YELLOW THERMO LF	16" X 120 M WHITE THERMO LF	24" X 120 M WHITE THERMO LF	THERMO MSG ONLY 120 M EA	THERMO MSG SIGNAL 120 M EA	THERMO MSG AHEAD 120 M EA	THERMO MSG SCHOOL 120 M EA	THERMO RXR 120 M EA	THERMO LT ARROW 90 M EA	THERMO RT ARROW 90 M EA	THERMO STR ARROW 90 M EA	THERMO STR & LT ARROW 90 M EA	THERMO STR & RT ARROW 90 M EA	THERMO LT ARROW 90 M EA	THERMO RT ARROW 90 M EA	4" WHITE PAINT LF	4" YELLOW PAINT LF	24" WHITE PAINT LF		
7CR.10411.13	Guilford	1	NC 65 WEST	FROM NC 68 TO THE ROCKINGHAM COUNTY LINE																							4,500	3,763		
TOTAL FOR PROJ NO. 7CR.10411.13																											4,500	3,763		
					8,263																									
7CR.10791.13	Rockingham	2	NC 14	FROM NORTHSIDE OF SR 2037 (HARRISON CROSSROAD) TO SR 2066 (KINGS HIGHWAY)	1,963	16,338				446	133		381	8	12	10				100	12	42	1							
TOTAL FOR MAP NO. 2					1,963	29,896	7,262			446	157		777	56	12	10				154	26	92	1	1						
"	"	3	NC 65	FROM THE GUILFORD COUNTY LINE TO US 220	600			128																			41,780	37,356		
TOTAL FOR PROJ NO. 7CR.10791.13					2,563	29,896	7,262	128		446	157		777	56	12	10				154	26	92	1	1			41,780	37,356		
					79,136																									
7CR.20791.13	Rockingham	4	SR 1128	SARDIS CHURCH ROAD - FROM SR 1110 (ELLISBORO ROAD) TO PAVEMENT JOINT NORTH OF US 220	200				20				50														32,180	27,165		
"	"	5	SR 1138	LINDSEY BRIDGE ROAD - FROM STOKES COUNTY LINE TO A PAVEMENT JOINT AT THE NEW BRIDGE AND FROM A PAVEMENT JOINT AT THE NEW BRIDGE TO A PAVEMENT JOINT WEST OF SR 1137 (EDEN CHURCH ROAD)																							23,868	21,455		
"	"	6	SR 1143	RIERSON ROAD - FROM SR 1138 (LINDSEY BRIDGE ROAD) TO SR 1110 (ELLISBORO ROAD)	200				22																		47,960	41,866		
"	"	7	SR 1152	WILSON STREET - FROM PAVEMENT JOINT ON US 220 BUSINESS TO TO PAVEMENT JOINT AT US 311		5,640	465		153				198												6	2				
"	"	8	SR 1165	CARDINAL ROAD - FROM NC 704 TO SR 1162 (K-FORK ROAD)	200				44																		26,200	20,463		
"	"	9	SR 1300	AYERSVILLE ROAD - FROM PAVEMENT JOINT NORTH OF NC 704 TO MAYODAN CITY LIMITS	1,500				176																	1	10,652	13,144		
"	"	10	SR 1302	WASHINGTON STREET - FROM US 220 BUSINESS TO SR 1300 (AYERSVILLE ROAD)																							100	9,144	30	
"	"	11	SR 1993	CEDAR LANE - FROM SR 1991 (BERRYMORE ROAD) TO SR 1987 (SALEM CHURCH ROAD)	800				100																		42,516	45,570		
"	"	12	SR 2817	BARNES STREET - FROM PAVEMENT JOINT NORTH OF TRIPLET STREET (NON-SYSTEM) TO PAVEMENT JOINT SOUTH OF SR 2887 (LAWSONVILLE AVENUE)		7,144								23						2	2									
"	"	13	SR 2154	STONE MOUNTAIN ROAD - FROM NC 135 TO NC 770	600				84																		57,074	56,738		
"	"	14	SR 1603	OLD US 220 BUSINESS - FROM SR 1360 (SMITH ROAD) TO US 220	120				14																		38,540	37,900		
"	"	15	SR 1561	HAMILTON STREET - FROM SR 1604 (WASHINGTON STREET) TO SR 1605 (OAKLAND AVENUE)	1,320	10,062	270		30	195			117													4	3			
"	"	16	SR 1709	HAMILTON STREET - FROM SR 1605 (OAKLAND AVENUE) TO SR 1785 (CHURCH STREET) AND FROM JOINT AT SR 1785 (CHURCH STREET) TO SR 1708 (BRYANT STREET)					16																				750	
"	"	17	SR 2039	BETHELEHEM CHURCH ROAD - FROM PAVEMENT JOINT EAST OF SR 2282 (HAMILTON STREET) TO PAVEMENT JOINT WEST OF NC 87/HARRINGTON HIGHWAY			100		14																		28,580	27,768		

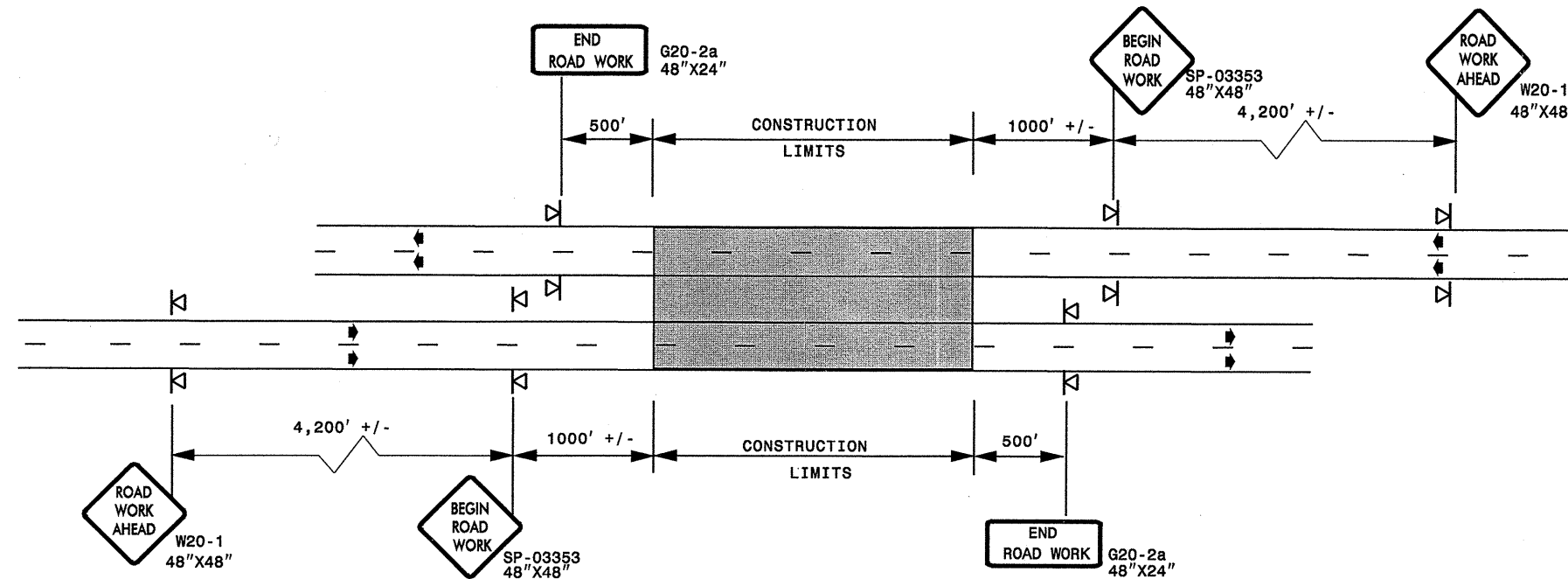
PROJECT NO. 7CR.10411.13, ETC.	SHEET NO. 13	TOTAL NO. 13
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THERMOPLASTIC AND PAINT QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	4" X 90 M WHITE THERMO	4" X 120 M YELLOW THERMO	4" X 120 M WHITE THERMO	6" X 90 M WHITE THERMO	6" X 120 M WHITE THERMO	8" X 90 M WHITE THERMO	8" X 90 M YELLOW THERMO	16" X 120 M WHITE THERMO	24" X 120 M WHITE THERMO	THERMO MSG ONLY 120 M	THERMO MSG SIGNAL 120 M	THERMO MSG AHEAD 120 M	THERMO MSG SCHOOL 120 M	THERMO RXR 120 M	THERMO LT ARROW 90 M	THERMO RT ARROW 90 M	THERMO STR ARROW 90 M	THERMO STR & LT ARROW 90 M	THERMO STR & RT ARROW 90 M	THERMO LT ARROW 90 M	THERMO RT ARROW 90 M	4" WHITE PAINT	4" YELLOW PAINT	24" WHITE PAINT	
					LF	LF	LF	LF	LF	LF	LF	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA
"	"	18	SR 2039	BETHLEHEM CHURCH ROAD - FROM PAVEMENT JOINT EAST OF NC 87/HARRINGTON HIGHWAY TO PAVEMENT JOINT WEST OF NC 14/87/770			970		114																		47,892	47,686	
"	"	19	SR 2565	LICK FORK CREEK ROAD - FROM US 158 TO PAVEMENT JOINT SOUTH OF SR 2560 (RUFFIN ROAD)	200				28																		85,328	76,228	
"	"	20	SR 2203	ASHLEY LOOP ROAD - FROM PAVEMENT JOINT AT NC 87 TO SR 1991 (BERRYMORE ROAD)	300				44																		37,940	36,525	
"	"	21	SR 2545	CARTER STREET - FROM PAVEMENT JOINT AT SR 2670 (SCALES STREET) TO ROANOKE STREET (NON SYSTEM)								50	25						2									1,700	
"	"	22	SR 2545	MARKET STREET - FROM SR 2545 (CARTER STREET)/ROANOKE STREET (NON SYSTEM) TO SR 2545 (WILLOW STREET)	300				46																		7,956	7,956	
"	"	23	SR 2545	WILLOW STREET - FROM SR 2549 (NE MARKET STREET) TO END OF PAVEMENT																								546	
"	"	24	SR 2549	N.E. MARKET STREET - FROM SR 2552 (NARROW GAUGE ROAD) TO SR 2545 (MARKET STREET)			348		52		100	60							4								27,800	23,621	
"	"	25	SR 2912	NORMAN FARM ROAD - FROM PAVEMENT JOINT SOUTH OF SR 2349 (GLENCOE CHURCH ROAD) TO END OF MAINTENANCE (AT CUL-DE-SAC)																									
TOTAL FOR PROJ NO. 7CR.20791.13					5,740	22,846	2,153		957	195		150	473				6	6	2	2					11	5	519,492	501,131	30
						24,999				195						12						20					1,020,623		
GRAND TOTAL					8,303	52,742	9,415	128	957	641	157	150	1,250	56	12	10	6	6	156	28	92	1	1	11	5	565,772	542,250	30	
						62,157				798						90						294					1,108,022		

ADVANCED WORK ZONE WARNING SIGNING FOR FREEWAYS (4 LANES OR GREATER)

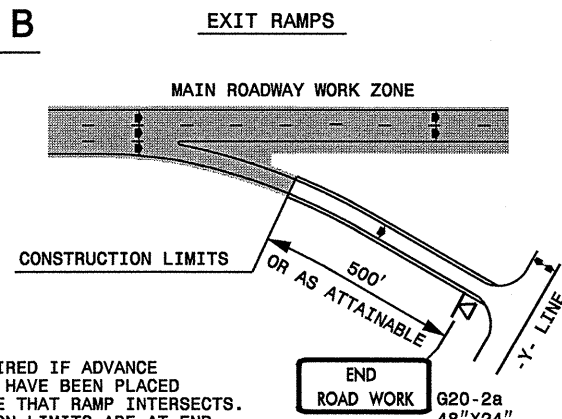
DETAIL A



STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

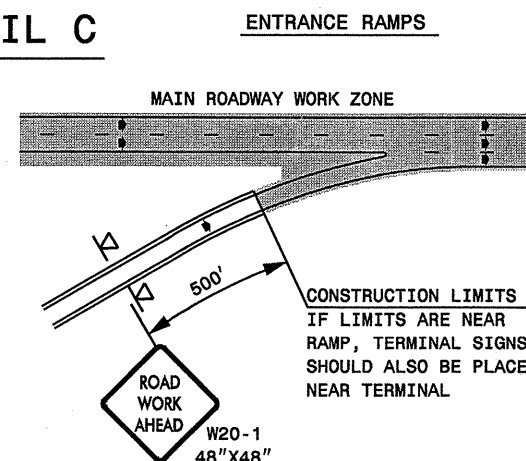
ROADWAYS INTERSECTING ALONG FREEWAY WORK ZONE (Y-LINES)

DETAIL B

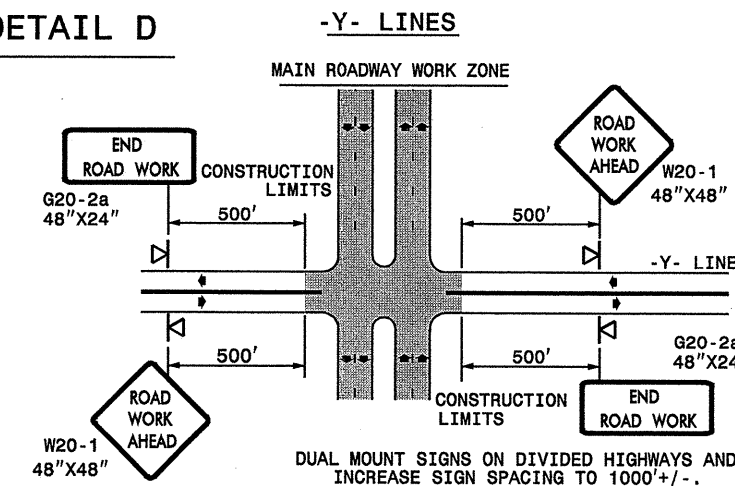


NOTE:
SIGN NOT REQUIRED IF ADVANCE WARNING SIGNS HAVE BEEN PLACED ALONG -Y- LINE THAT RAMP INTERSECTS. IF CONSTRUCTION LIMITS ARE AT END OF RAMP, PLACE SIGN AT END OF RAMP.

DETAIL C



DETAIL D



DUAL MOUNT SIGNS ON DIVIDED HIGHWAYS AND INCREASE SIGN SPACING TO 1000' +/-.

DETAIL DRAWING
FOR FREEWAYS
WORK ZONE WARNING SIGNS
(SHORT-DURATION LANE CLOSURES)

GENERAL NOTES

- USE FLUORESCENT ORANGE SHEETING (TYPE VII OR HIGHER) ON ALL ADVANCED WORK ZONE SIGNS.
- DO NOT INSTALL ADVANCE WARNING SIGNS MORE THAN 3 DAYS PRIOR TO BEGINNING OF WORK.
- ALL SIGN SPACING DIMENSIONS ARE APPROXIMATE, FIELD ADJUST AS NECESSARY OR AS DIRECTED.
- USE PORTABLE WORK ZONE SIGNS ONLY WITH PORTABLE WORK ZONE SIGN STANDS SPECIFICALLY DESIGNED FOR ONE ANOTHER. PORTABLE WORK ZONE SIGNS MAY BE ROLL UP OR APPROVED COMPOSITE.
- PROVIDE PORTABLE WORK ZONE SIGN STANDS, PORTABLE SIGNS AND SIGN SHEETING WHICH ARE LISTED ON THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION'S APPROVED PRODUCT LIST OR ACCEPTED AS TRAFFIC QUALIFIED BY THE TRAFFIC CONTROL UNIT.
- ** TWO-WAY UNDIVIDED ADVANCE WARNING SIGN CONFIGURATION MAY BE USED ON MULTI-LANE FACILITIES WHERE CONDITIONS LIMIT THE USE OF DUAL MOUNTED SIGNS AS DETERMINED BY THE ENGINEER.

LEGEND

◁ PORTABLE SIGN

➡ DIRECTION OF TRAFFIC FLOW

SHEET 1 OF 1

APPROVED: _____	DATE: _____	DETAIL DRAWING FOR FREEWAYS WORK ZONE WARNING SIGNS	
SEAL			
SCALE: NONE		REVISIONS	
DATE: _____		7-98	10/01
DWG. BY: _____		10-98	03/04
DESIGN BY: _____		01/01	11/04
REVIEWED BY: _____	CADD FILE		

09-OCT-2006 15:37 \\DOT\DFSR001\GROUPS-WZTCCC\design\group4\common4\resurfacing\resurfacing2006\div07\7cr104113freeway4lanesgreatJuly2006.dgn pseyemore AT WZTCCC206427

SP 03353

<p>SIGN NUMBER: SP-03353 TYPE: A QUANTITY: 1 SIGN WIDTH: 4'-0" HEIGHT: 4'-0" TOTAL AREA: 16.0 Sq.Ft. BORDER TYPE: FLUSH RECESS: 0.59" WIDTH: 0.75" RADIUS: 1.38" NO. Z BARS: N/A LENGTH: N/A</p>	<p>BACKG COLOR: Fluorescent Orange COPY COLOR: Black</p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>SYMBOL</th> <th>X</th> <th>Y</th> <th>WID</th> <th>HT</th> </tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </table>	SYMBOL	X	Y	WID	HT																																														<p>DESIGN BY: CL DOWNEY PROJECT ID: ALL PROJECTS CHECKED BY: CHECKED DIV: DIV STD #: W20-1 DATE: Aug 20, 2003</p>
SYMBOL	X	Y	WID	HT																																																

BORDER
R=1.38"
TH=0.75"
IN=0.59"

Letter positions										Series/Size
Letter spacings are to start of next letter										Text Length
B	E	G	I	H						C7
22.4	5.3	4.6	5.4	2.5	3.8	22.4				21.6
R	O	A	D							C7
23.4	5	5.2	5.6	3.8	23.4					19.6
W	O	R	K							C7
22.8	5.4	5.6	5.2	4	22.8					21.2

Spacing Factor is 1 unless specified otherwise
FILENAME: SPEC184X
NORTH CAROLINA D.O.T. SIGN DETAIL

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

DETAIL DRAWING FOR
WORK ZONE SIGNS
BEGIN ROAD WORK

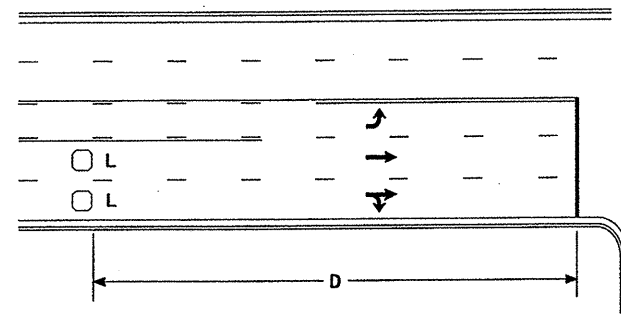
GENERAL NOTES FOR SIGN SP-03353 "BEGIN ROAD WORK"

- SIGN SP-03353 "BEGIN ROAD WORK" ONLY APPLIES TO FULL CONTROL AND PARTIAL CONTROL OF ACCESS ROADWAYS
- WHEN USED, INSTALL SIGN SP-03353 "BEGIN ROAD WORK" ACCORDING TO DETAIL FOR FREEWAY WORK ZONE SIGNS

<p>APPROVED: _____ DATE: _____</p> <div style="text-align: center; margin-top: 20px;"> </div>	<p>DETAIL DRAWING FOR ADVANCED WORK ZONE WARNING SIGN DESIGNS</p>								
<p>SCALE: NONE DATE: 0803 DWG. BY: DESIGN BY: REVIEWED BY:</p>	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th colspan="2">REVISIONS</th> </tr> <tr> <td style="width:50%;">0404</td> <td style="width:50%;"></td> </tr> <tr> <td>1104</td> <td></td> </tr> <tr> <td> </td> <td> </td> </tr> </table>	REVISIONS		0404		1104			
REVISIONS									
0404									
1104									

09-OCT-2006 15:39 \\DOT\DFSROOT\GROUPS-WZTCCC\designgroup4\common4\resurfacing\resurfacing2006\div07\7cr104113etforockgull\7CR104113\signDesigns\July2006.dgn pseymore AT WZTCC206427

High Speed Detection [≥40 mph (64 km/hr)]

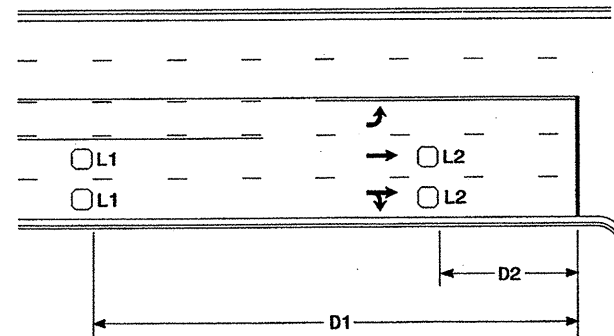


Speed Limit mph (km/hr)	D ft (m)
40 (64)	250 (75)
45 (72)	300 (90)
50 (80)	355 (110)
55 (88)	420 (130)

L = 6ft X 6ft (1.8m X 1.8m)
Wired in series for TS1
Controllers
Wired separately for TS2,
170, and 2070L Controllers

Volume Density Operation

OR

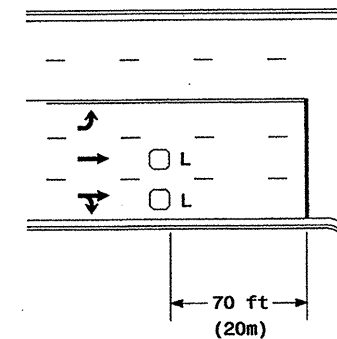


Speed Limit mph (km/hr)	D1 ft (m)	D2 ft (m)
40 (64)	250 (75)	80 (25)
45 (72)	300 (90)	90 (27)
50 (80)	355 (110)	100 (30)
55 (88)	420 (130)	110 (35)

L1 = 6ft X 6ft
(1.8m X 1.8m)
Wired in series
L2 = 6ft X 6ft
(1.8m X 1.8m)
Wired in series

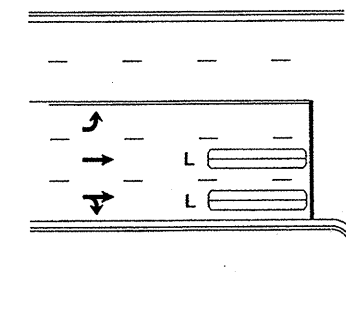
"Stretch" Operation

Low Speed Detection [≤35 mph (56 km/hr)]



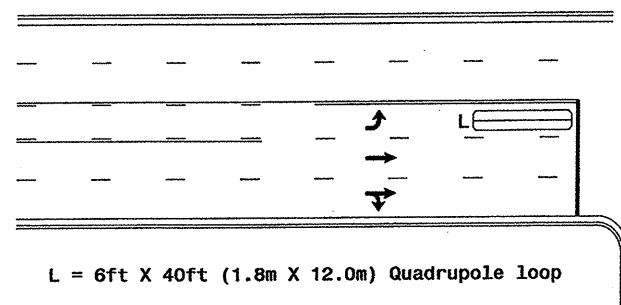
L = 6ft X 6ft (1.8m X 1.8m)
Wired in series

OR



L = 6ft X 40ft (1.8m X 12.0m)
Quadrupole loop, wired separately

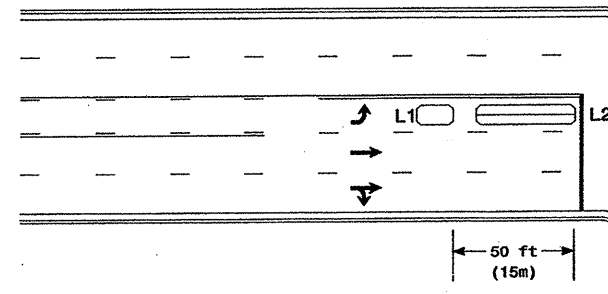
Left Turn Lane Detection



L = 6ft X 40ft (1.8m X 12.0m) Quadrupole loop

Presence Loop Detection

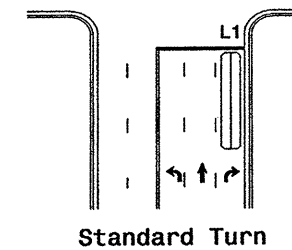
OR



L1 = 6ft X 15ft (1.8m X 4.6m) Queue detector
L2 = 6ft X 40ft (1.8m X 12.0m) Quadrupole loop

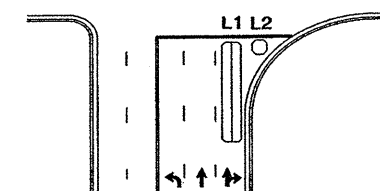
Queue Loop Detection

Right Turn Lane Detection

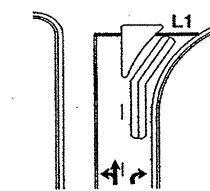


Standard Turn

L1 = 6ft X 40ft (1.8m X 12.0m) Quadrupole loop
L2 = 6ft X 6ft (1.8m X 1.8m) [Minimum] Presence loop
Wired separately
L3 = 6ft X 20ft (1.8m X 6.0m) Quadrupole loop
Wired in series

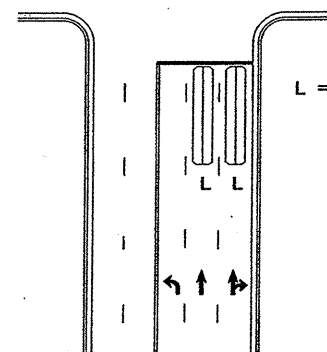


Wide Radius Turn



Channelized Turn

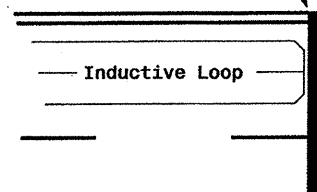
Side Street Detection



L = 6ft X 40ft (1.8m X 12.0m)
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 when stop line is
greater than 15' (4.5m) from edge
of intersecting roadway; or, when
loop detects a permissive or
protected/permissive left turn.

Recommended Number of Turns

Single 6' X 6' (1.8m X 1.8m)
loop (wired separately):

Length of Lead-in ft (m)	Number of Turns
< 250 (75)	3
250-375 (75-115)	4
375-525 (115-160)	5
> 525 (160)	6

Quadrupole loops: Use 2-4-2 turns

6' X 15' (1.8m X 4.6m) Loops:
Lead-in < 150' (45 m), use 2 turns
Lead-in > 150' (45 m), use 3 turns

	Typical Loop Locations		
	PLAN DATE: June 2006	REVIEWED BY:	
222 N. McDowell St., Raleigh, NC 27603	PREPARED BY: P. L. Alexander	REVIEWED BY:	
SCALE: N/A	REVISIONS:	INIT. DATE	
		SIGNATURE: P. L. Alexander	DATE: 6/16/06
		SIG. INVENTORY NO.	