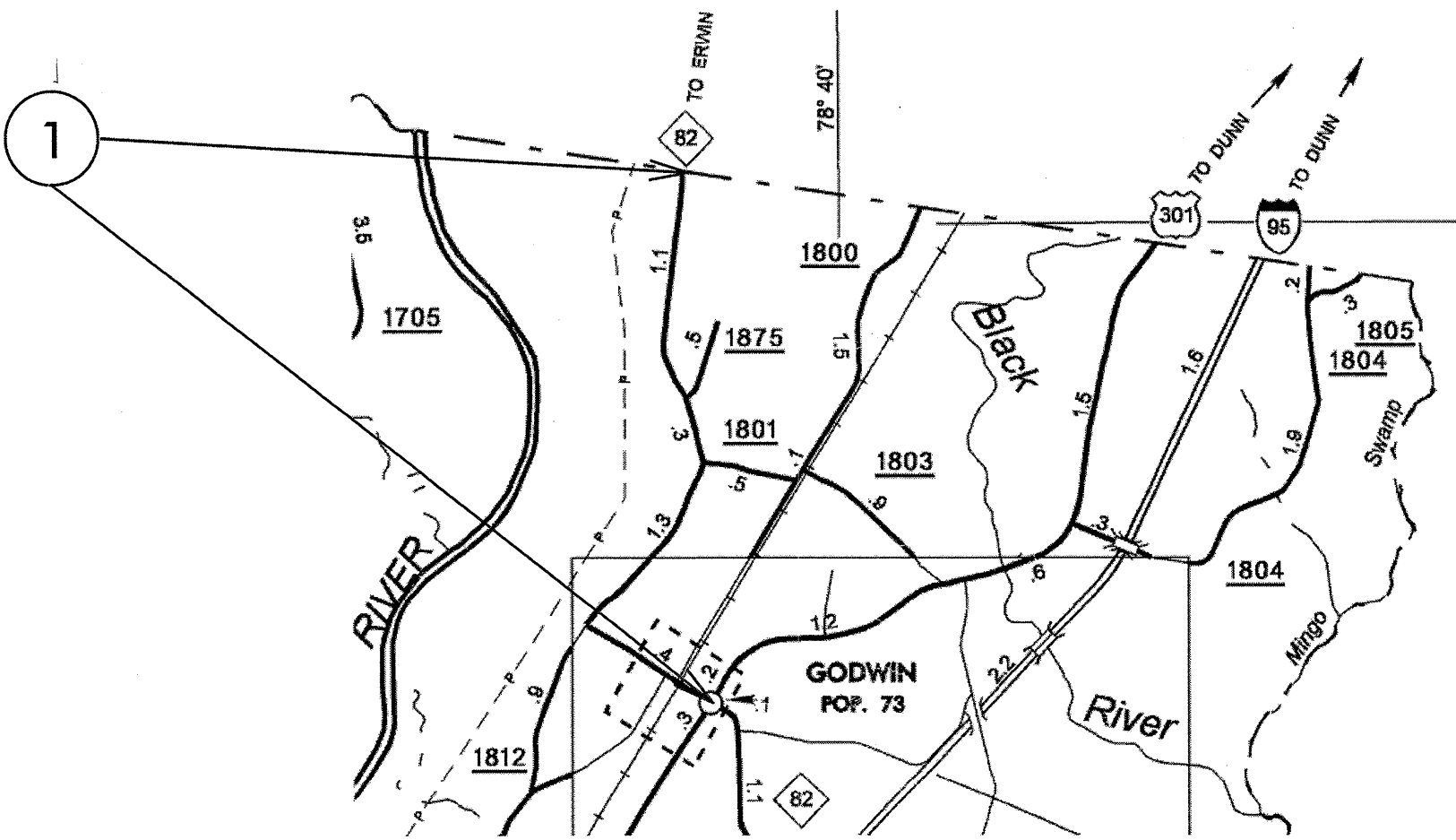
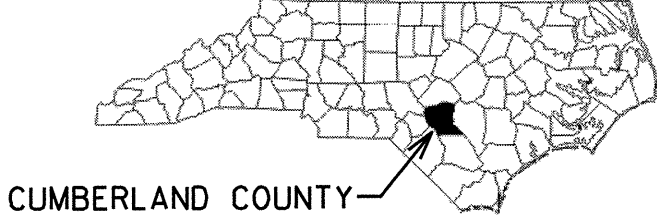
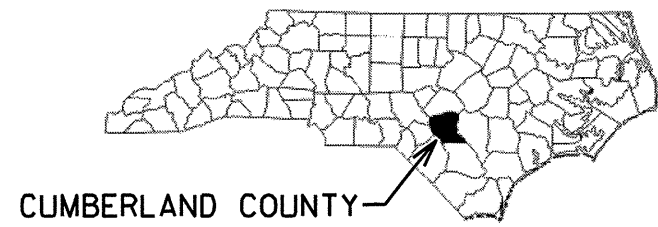


# RESURFACING MAPS - CUMBERLAND COUNTY



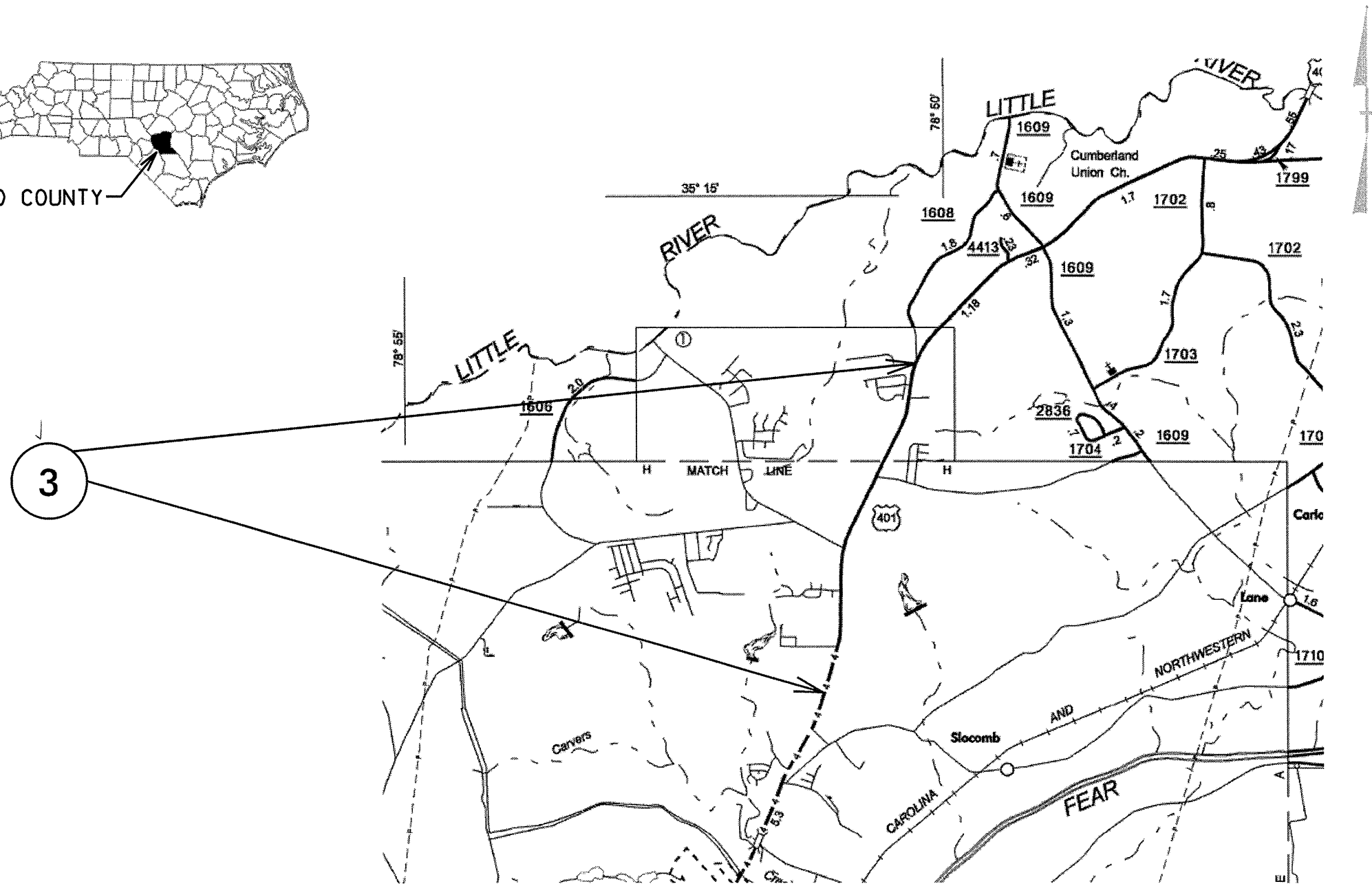
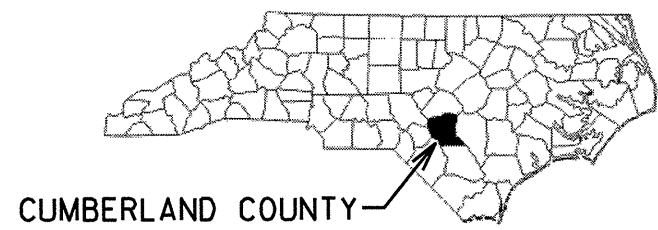
# RESURFACING MAPS - CUMBERLAND COUNTY



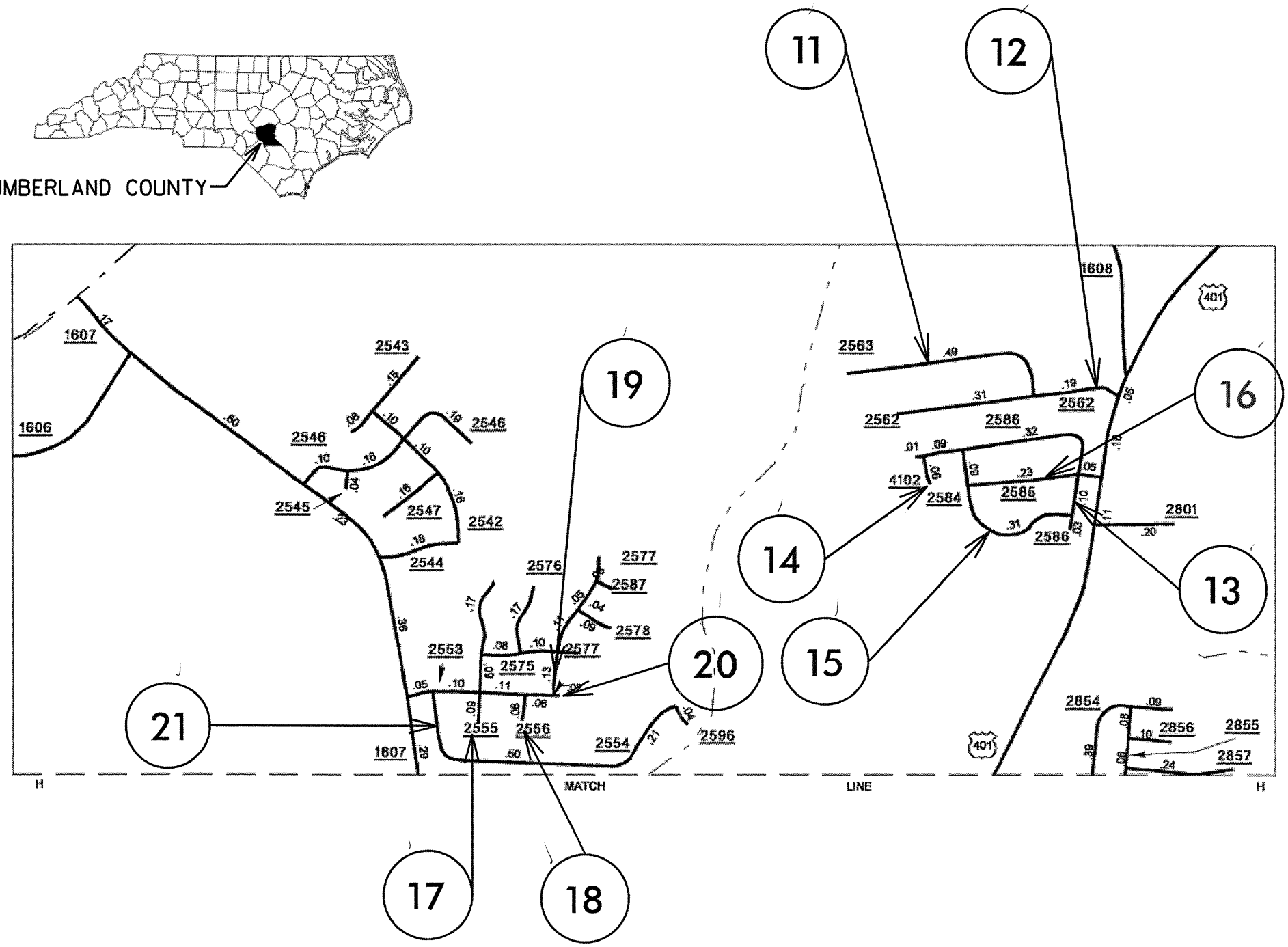
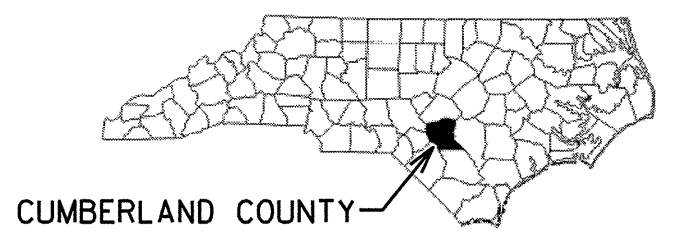
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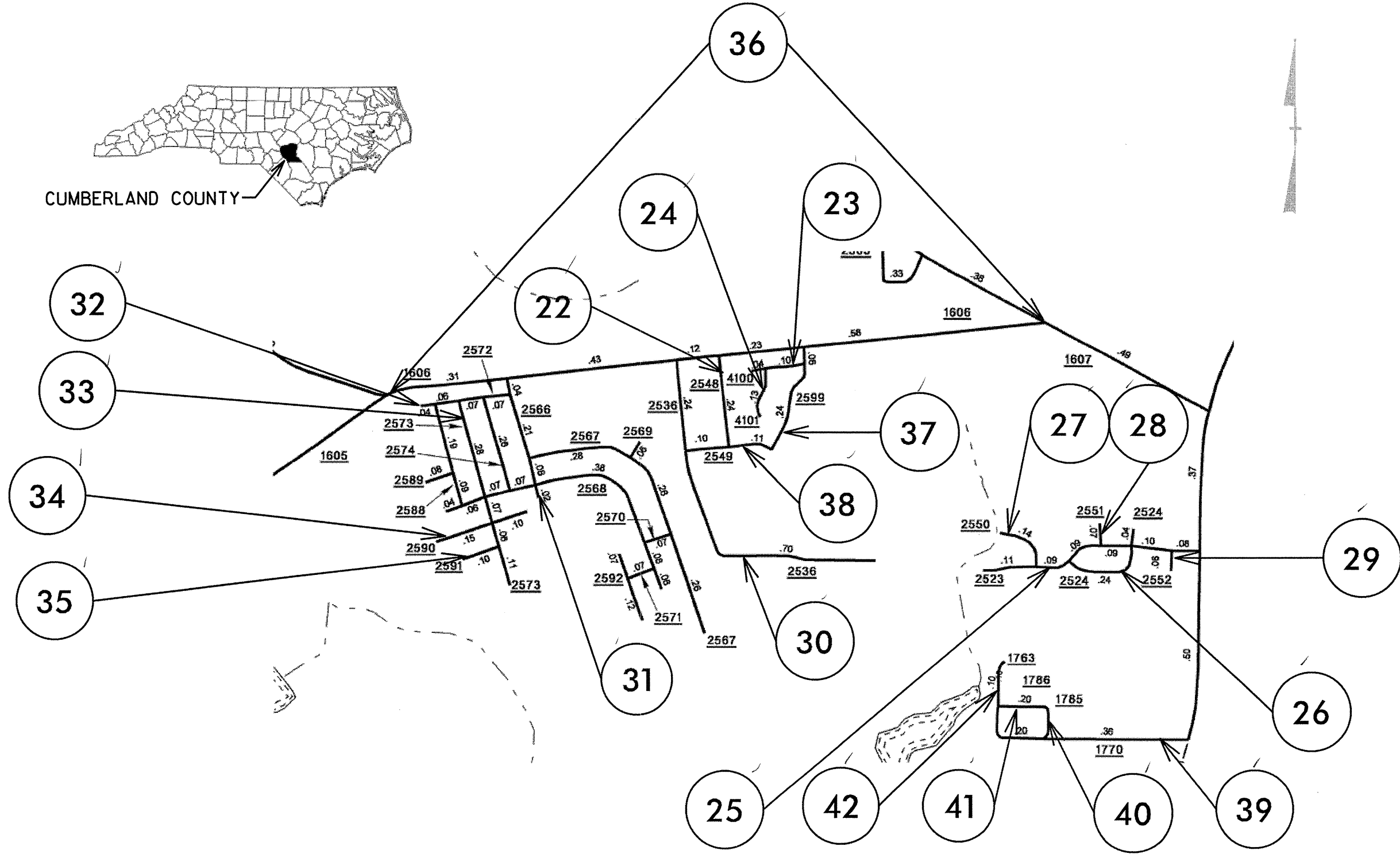
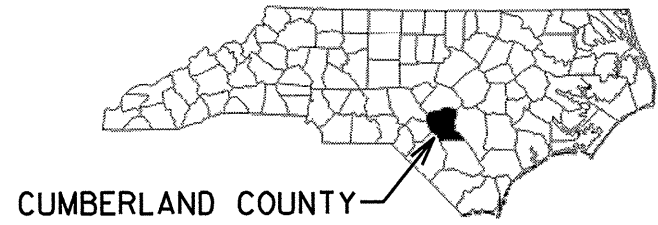
# RESURFACING MAPS - CUMBERLAND COUNTY



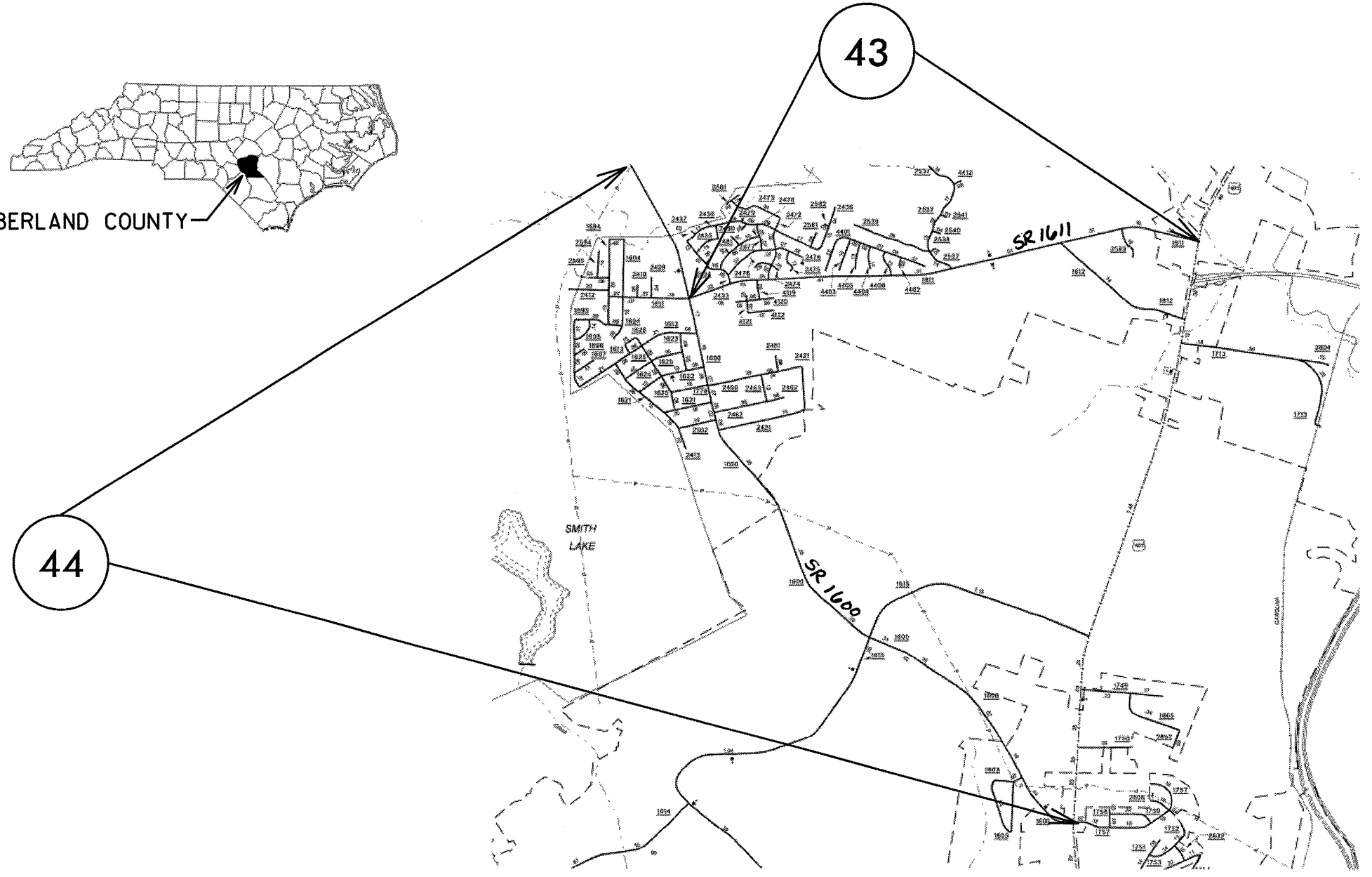
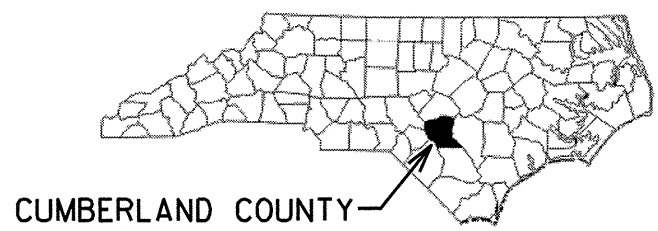
# RESURFACING MAPS - CUMBERLAND COUNTY



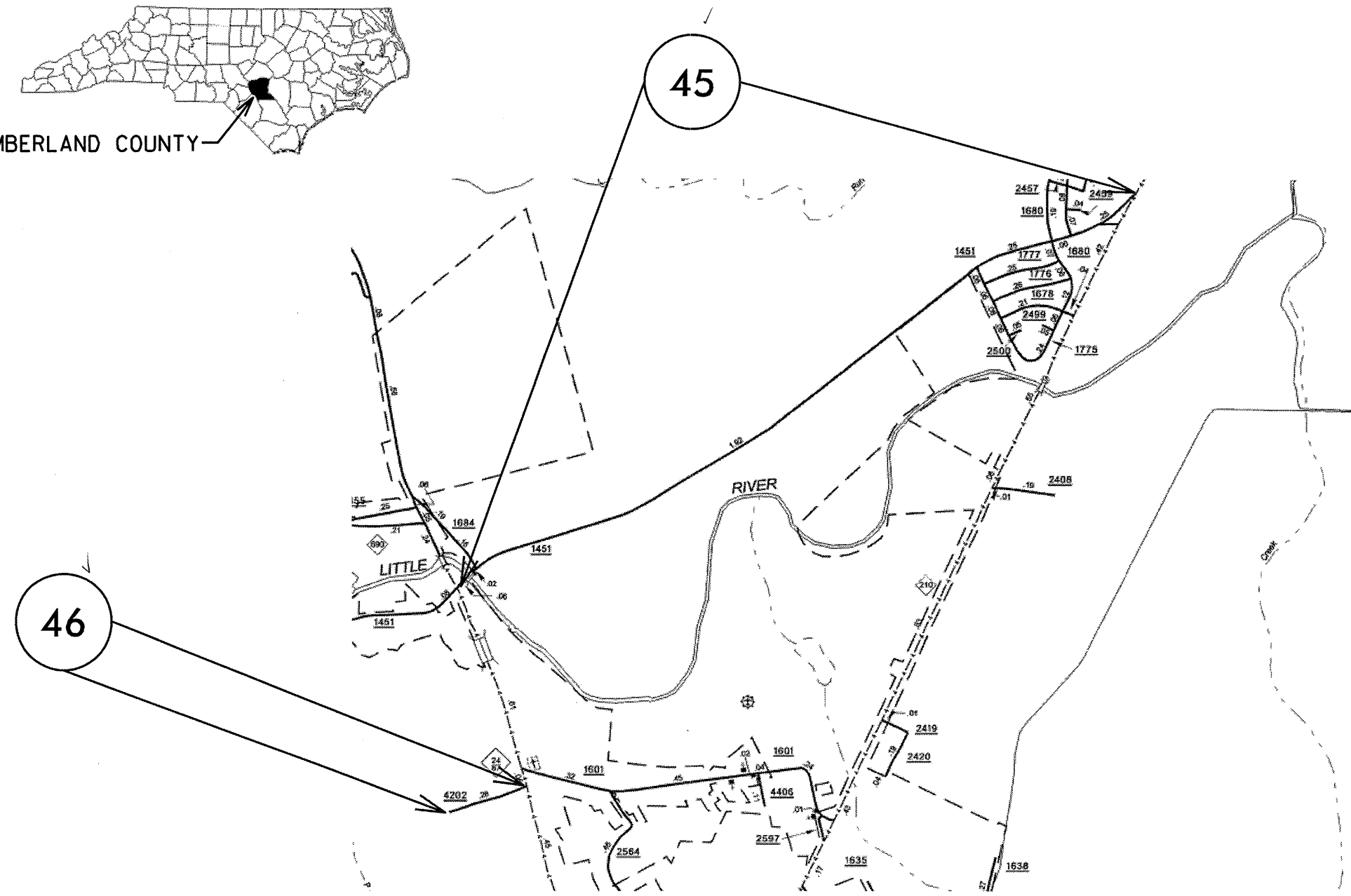
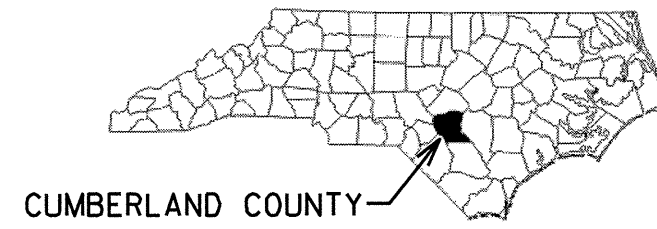
# RESURFACING MAPS - CUMBERLAND COUNTY



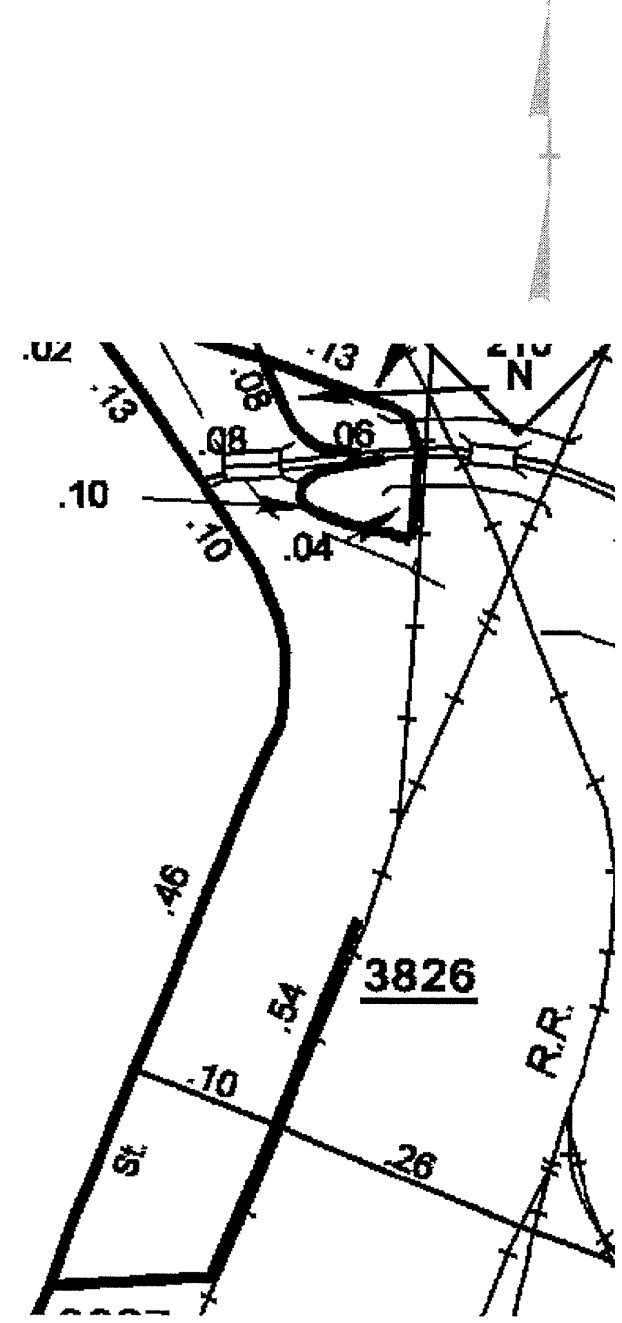
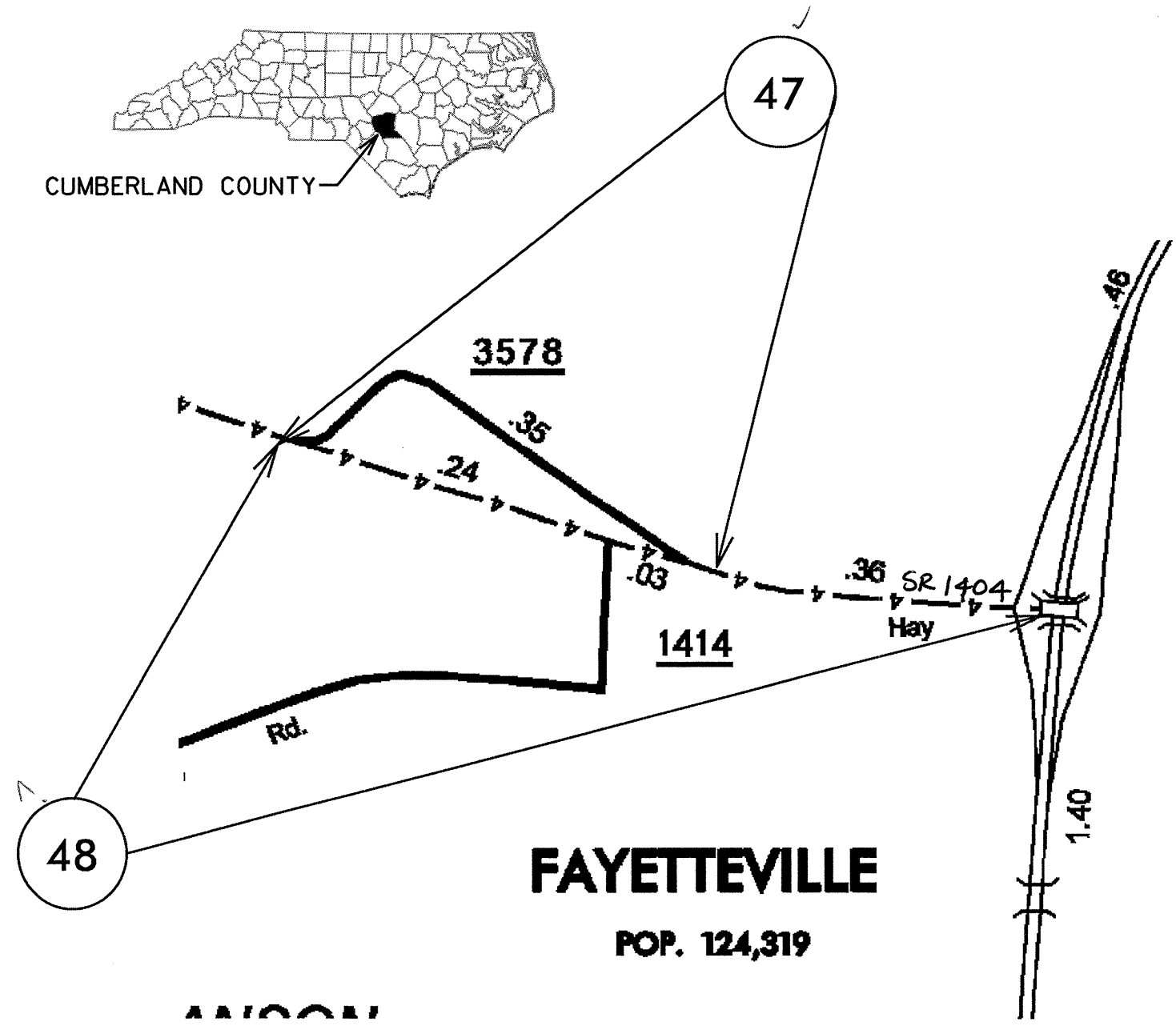
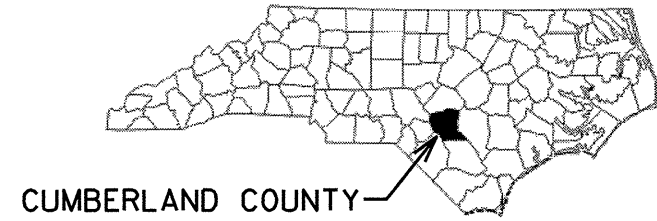
# RESURFACING MAPS - CUMBERLAND COUNTY



# RESURFACING MAPS - CUMBERLAND COUNTY

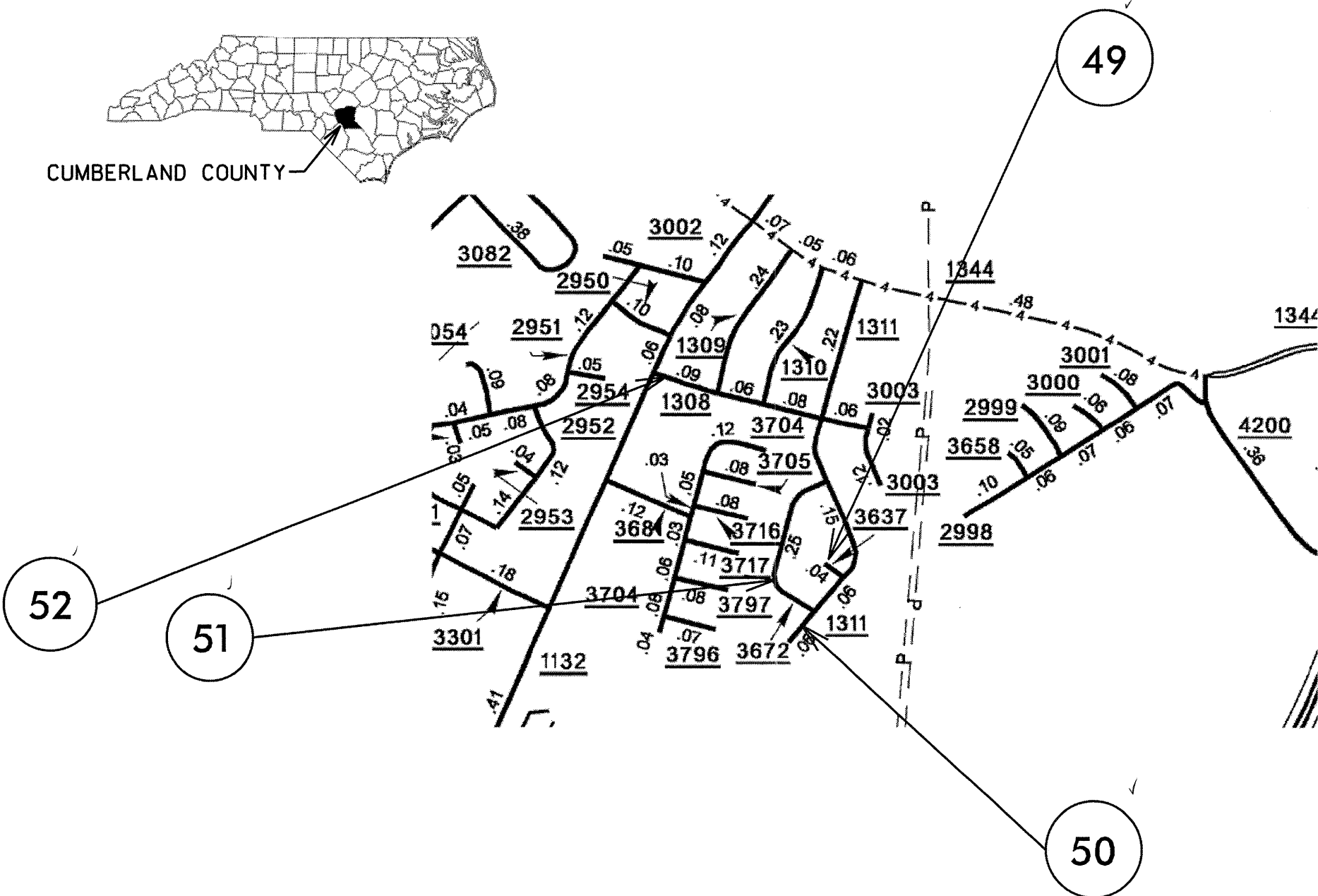
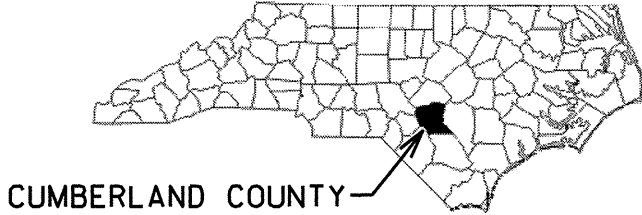


# RESURFACING MAPS - CUMBERLAND COUNTY

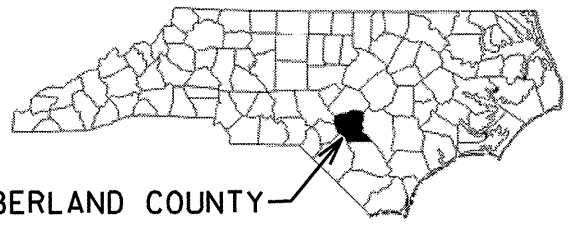




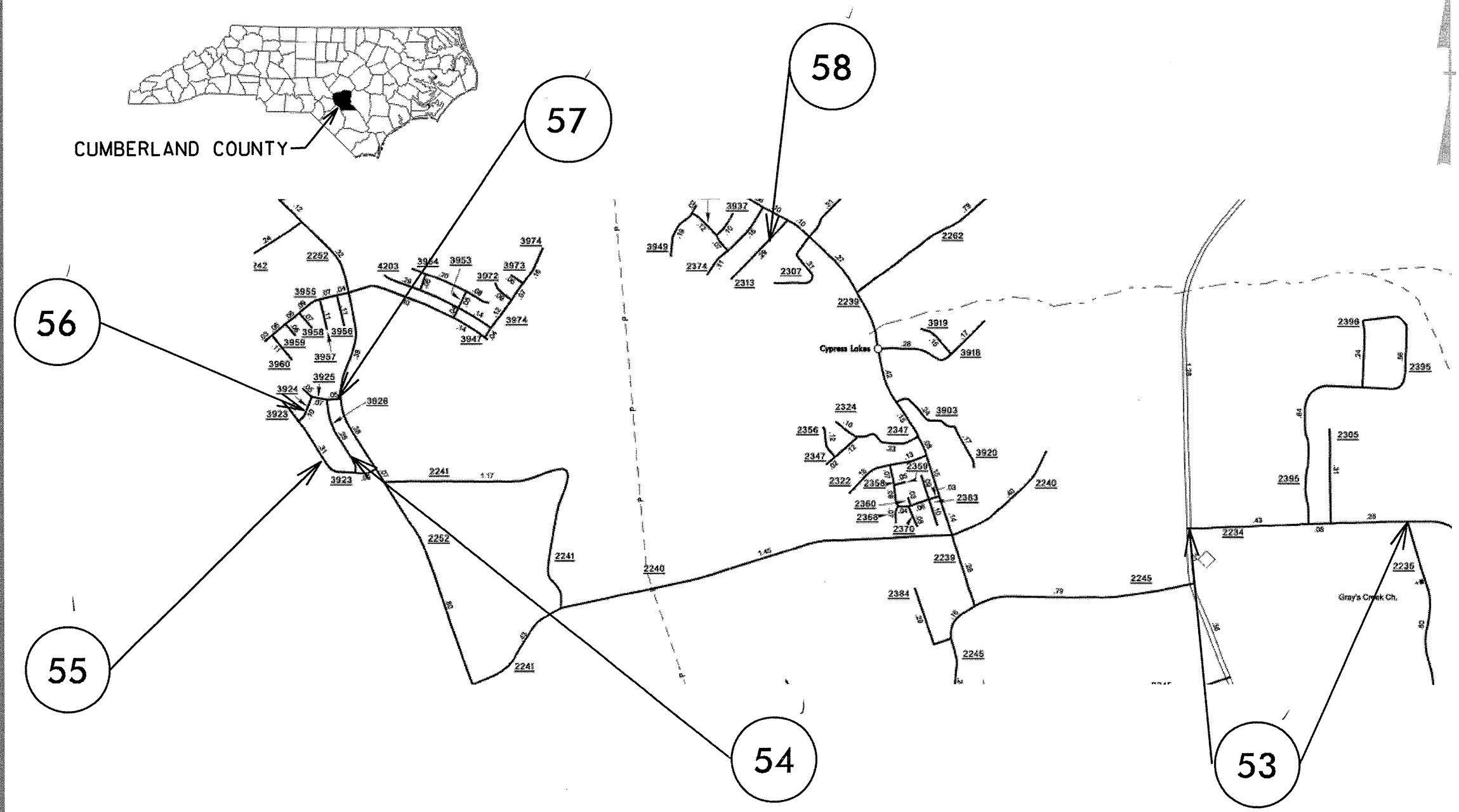
# RESURFACING MAPS - CUMBERLAND COUNTY



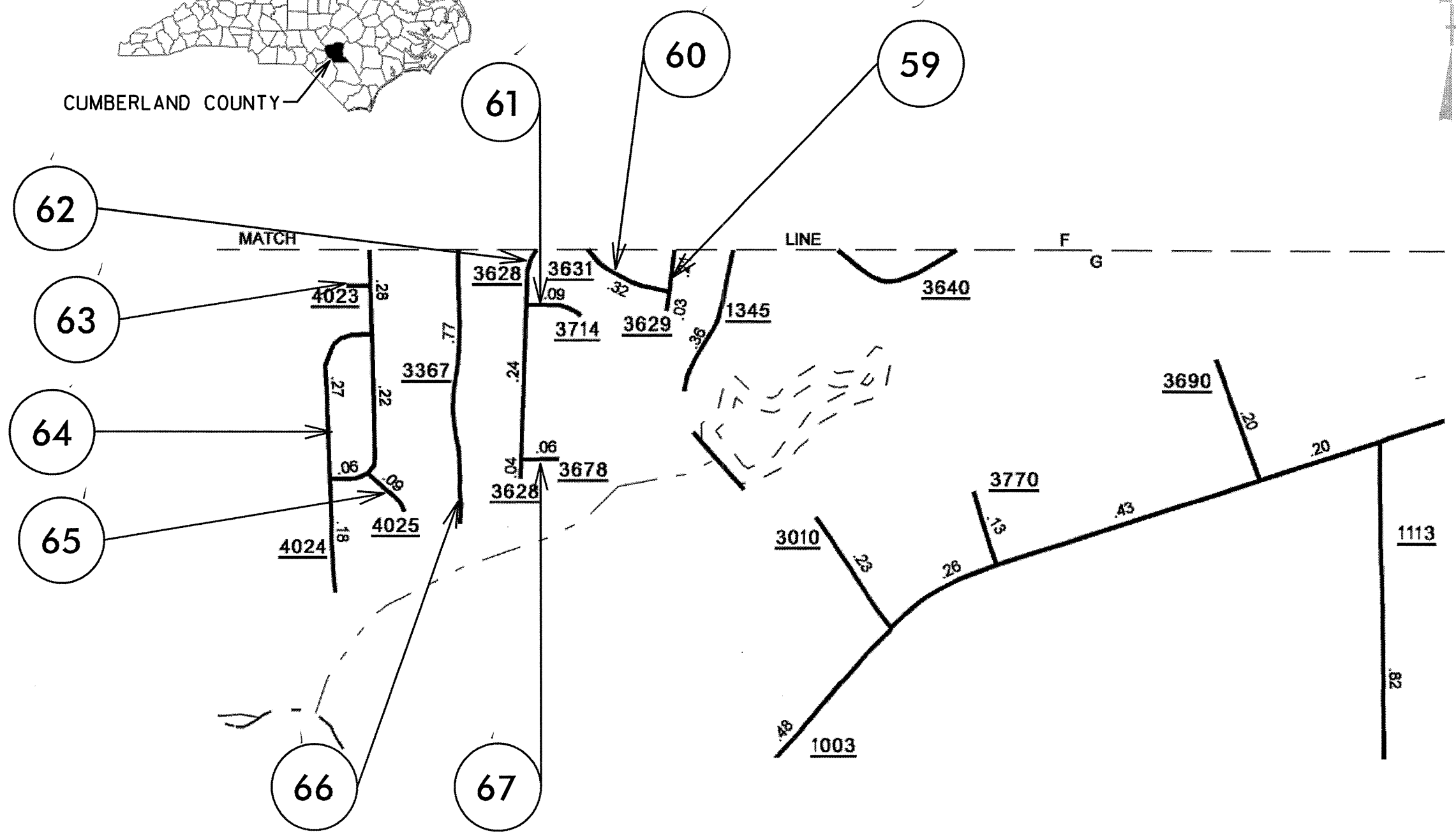
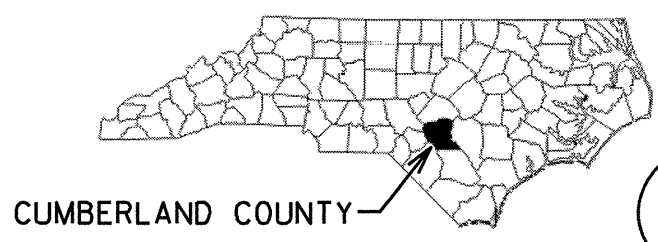
# RESURFACING MAPS - CUMBERLAND COUNTY



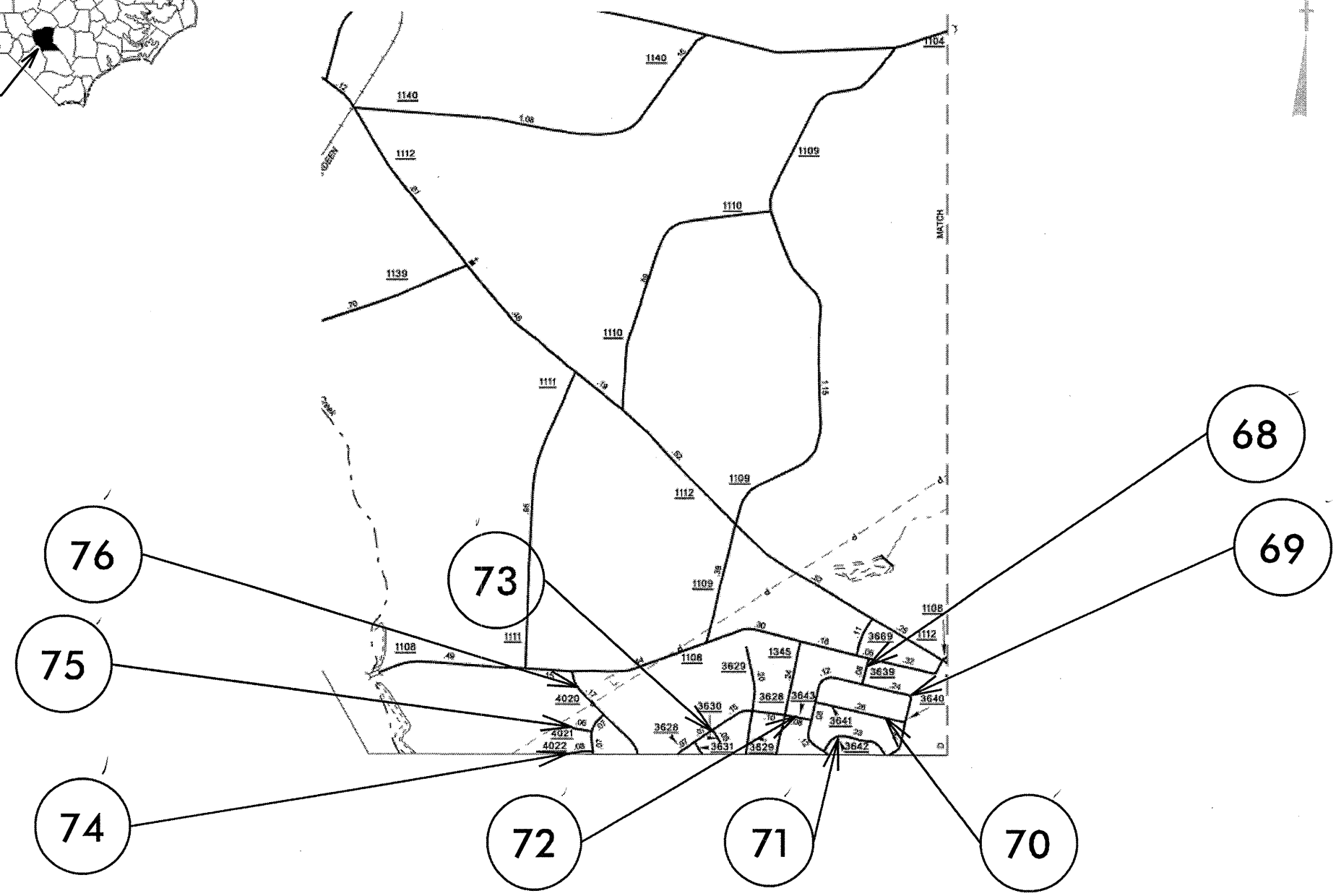
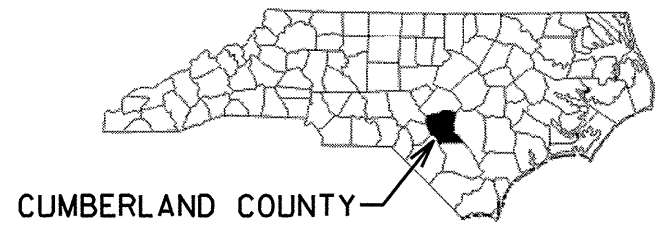
CUMBERLAND COUNTY



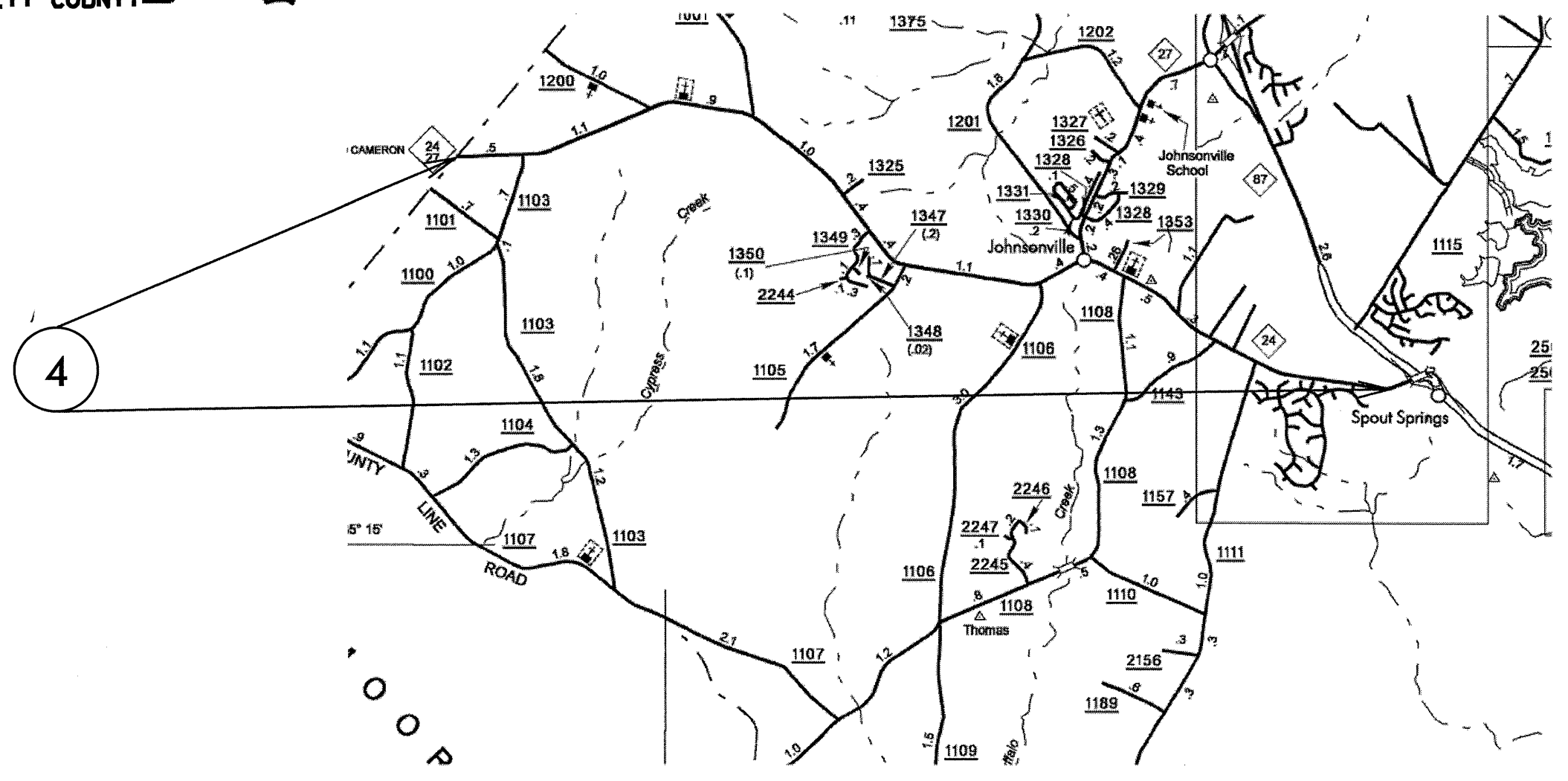
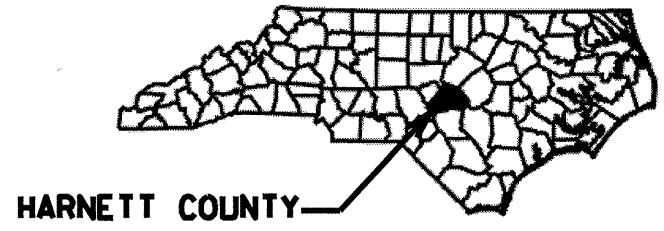
# RESURFACING MAPS - CUMBERLAND COUNTY

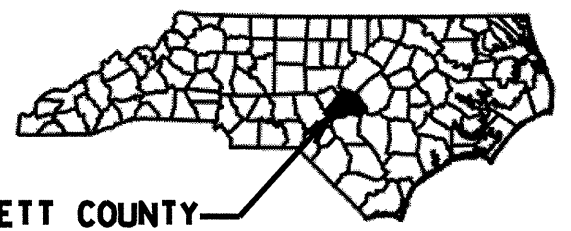


# RESURFACING MAPS - CUMBERLAND COUNTY



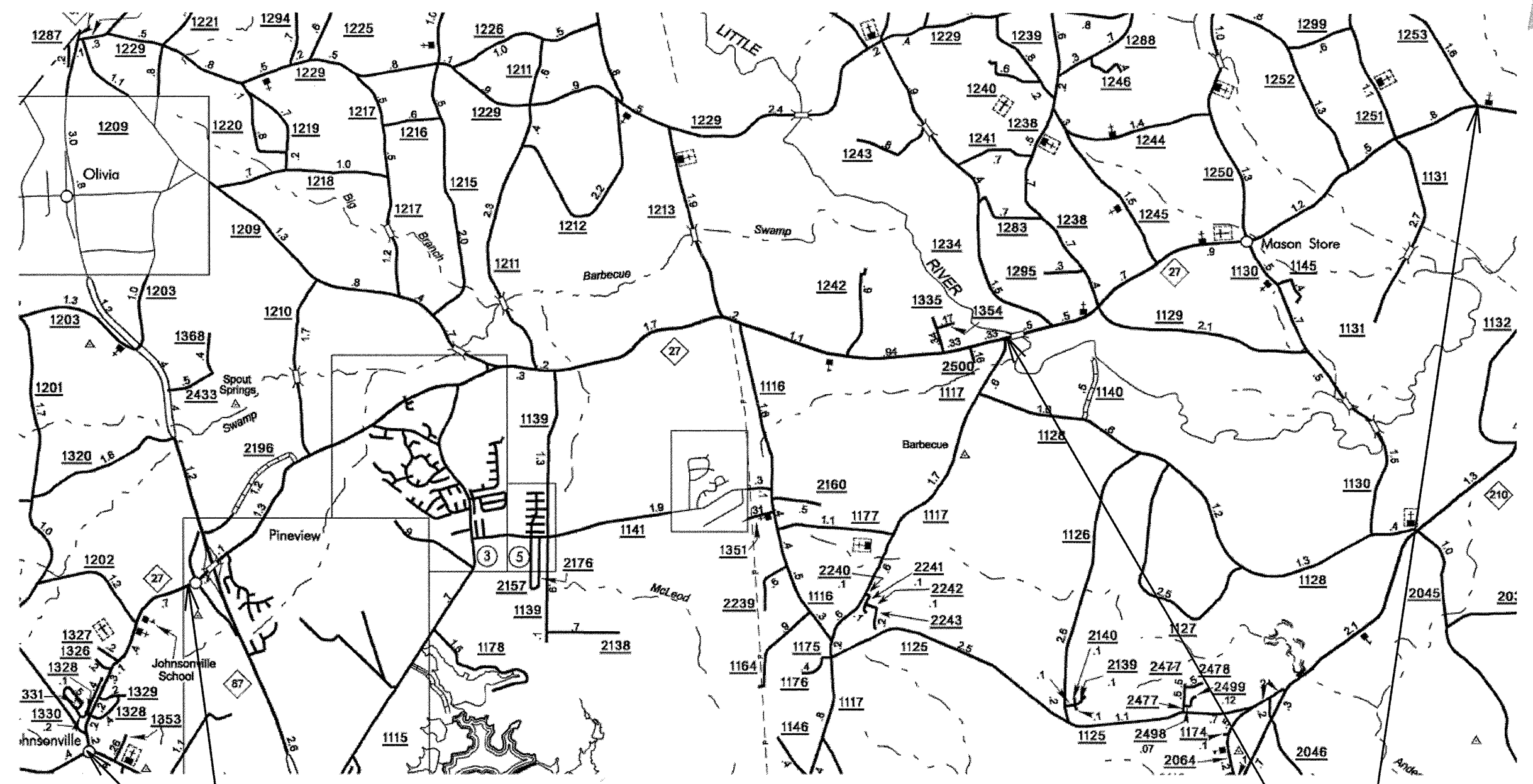
# RESURFACING MAPS - HARNETT COUNTY





# RESURFACING MAPS - HARNETT COUNTY

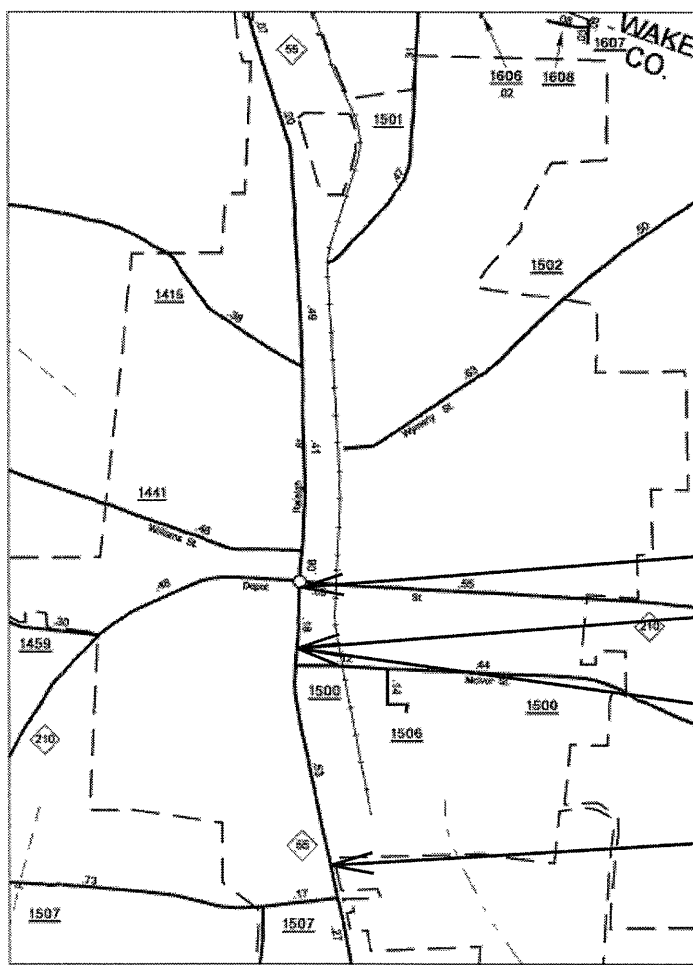
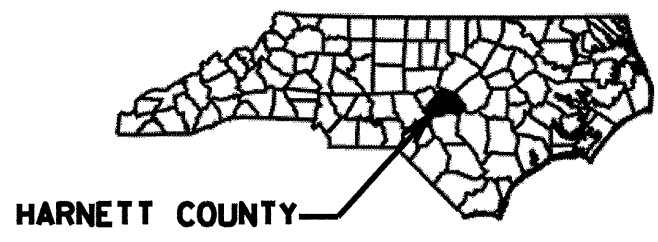
HARNETT COUNTY



5

6

# RESURFACING MAPS - HARNETT COUNTY

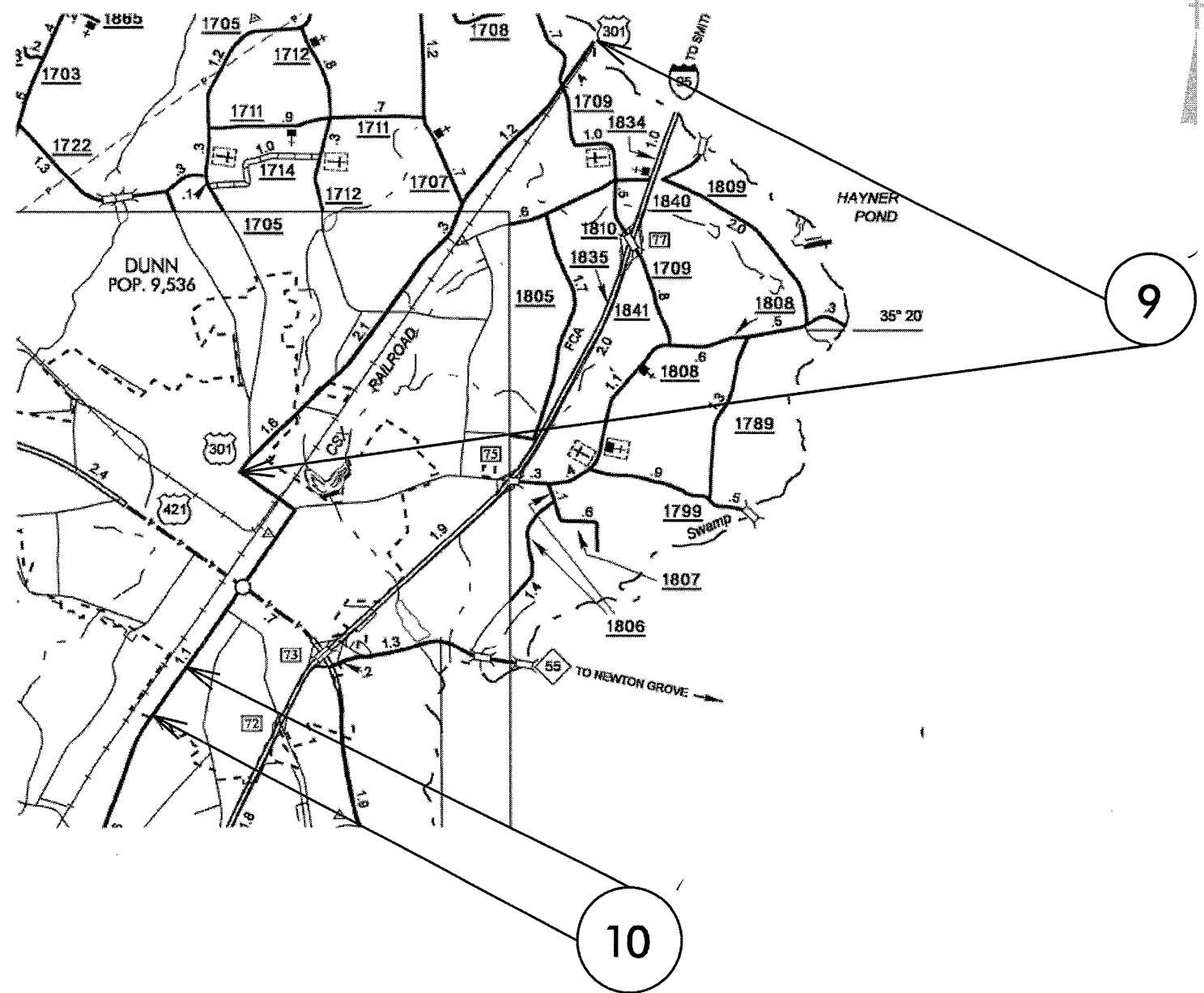
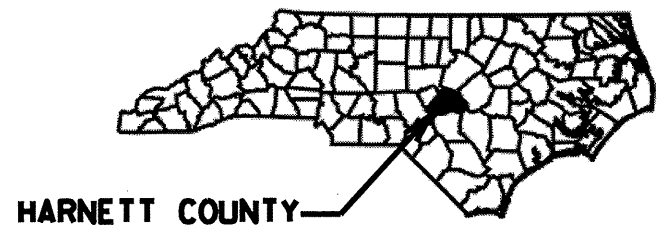


Angier  
Pop. 3,652

7

8

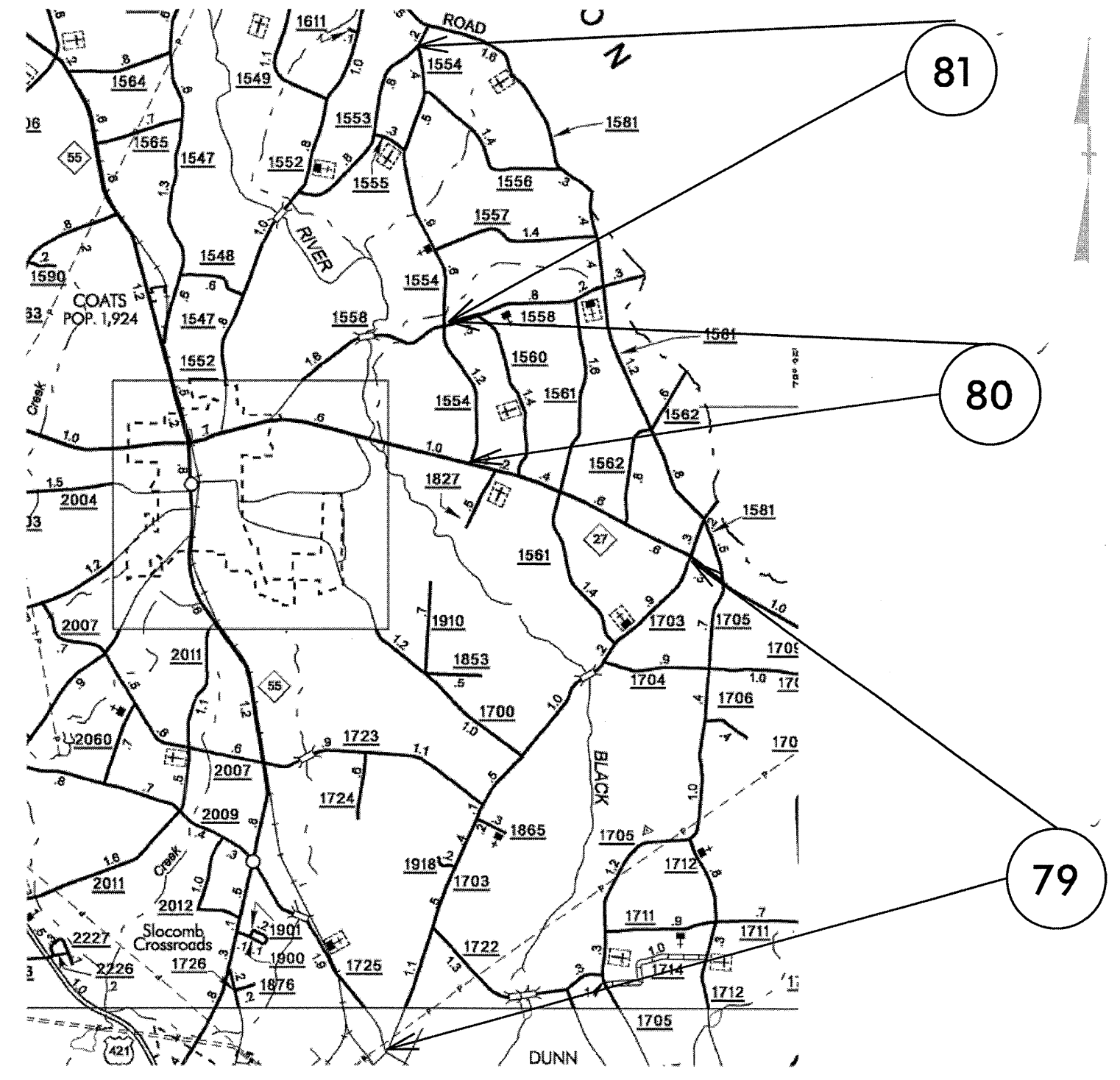
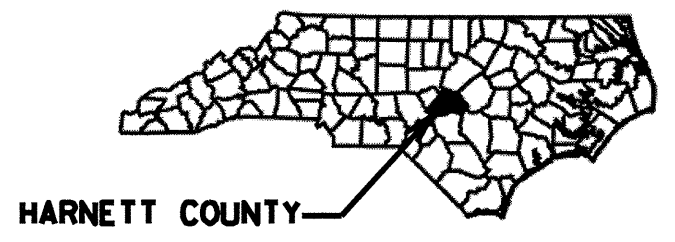
# RESURFACING MAPS - HARNETT COUNTY



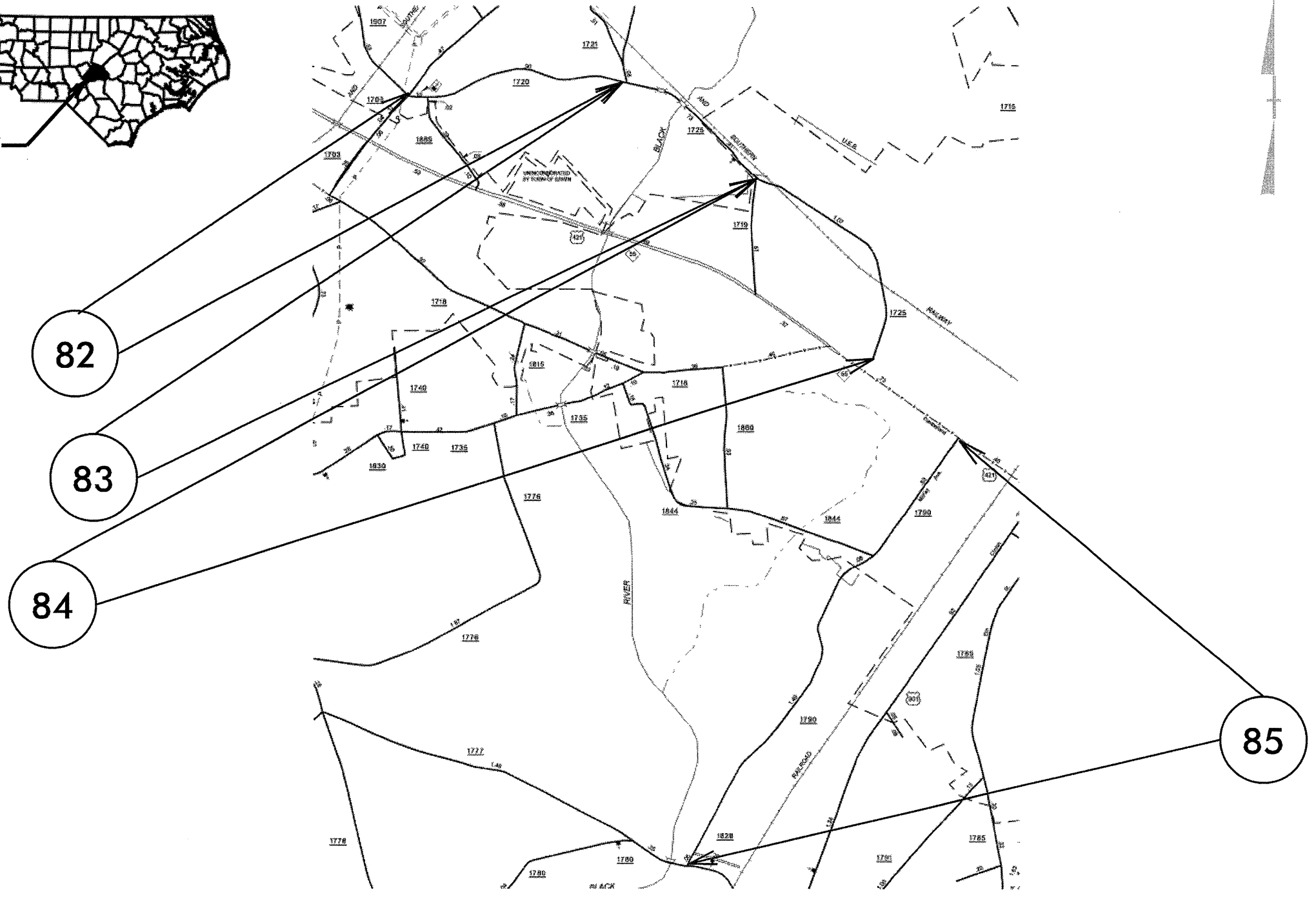
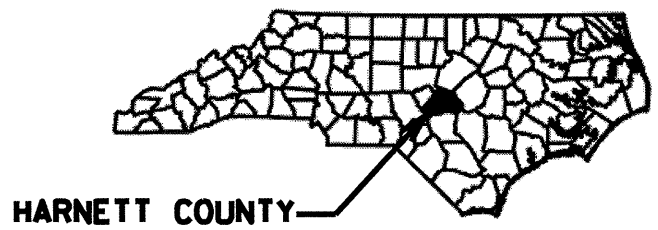




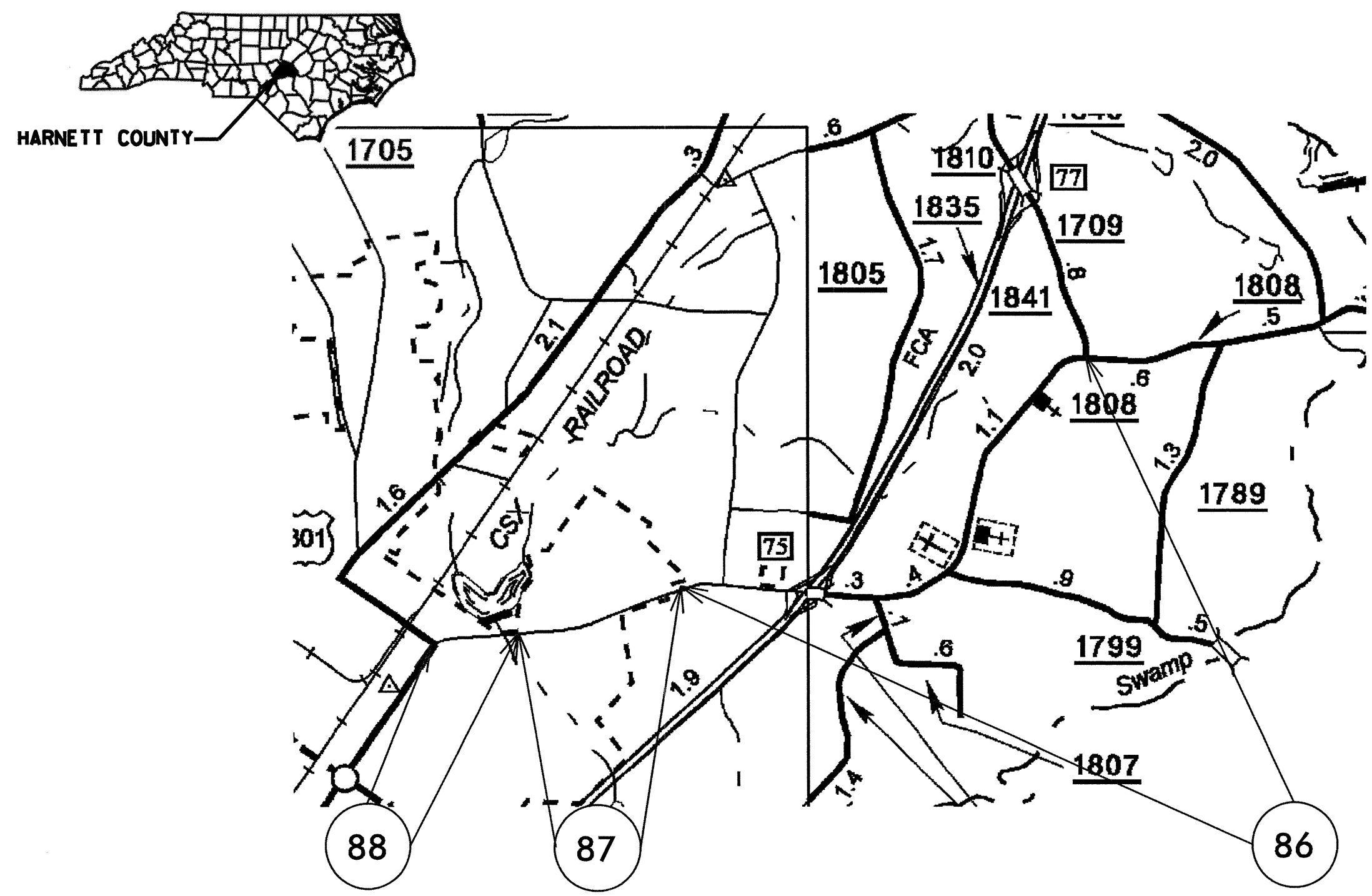
# RESURFACING MAPS - HARNETT COUNTY



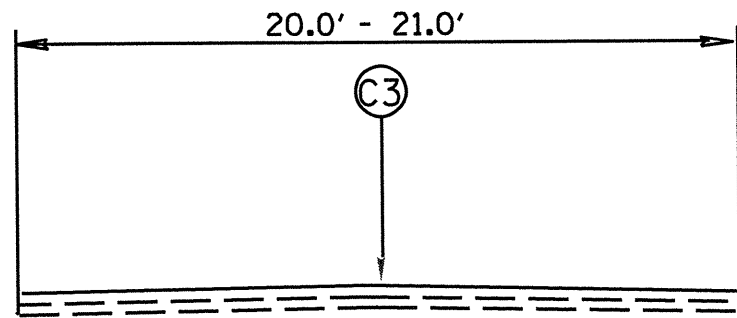
# RESURFACING MAPS - HARNETT COUNTY



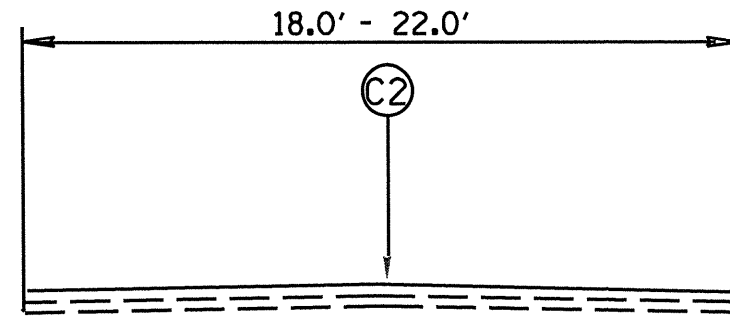
# RESURFACING MAPS - HARNETT COUNTY



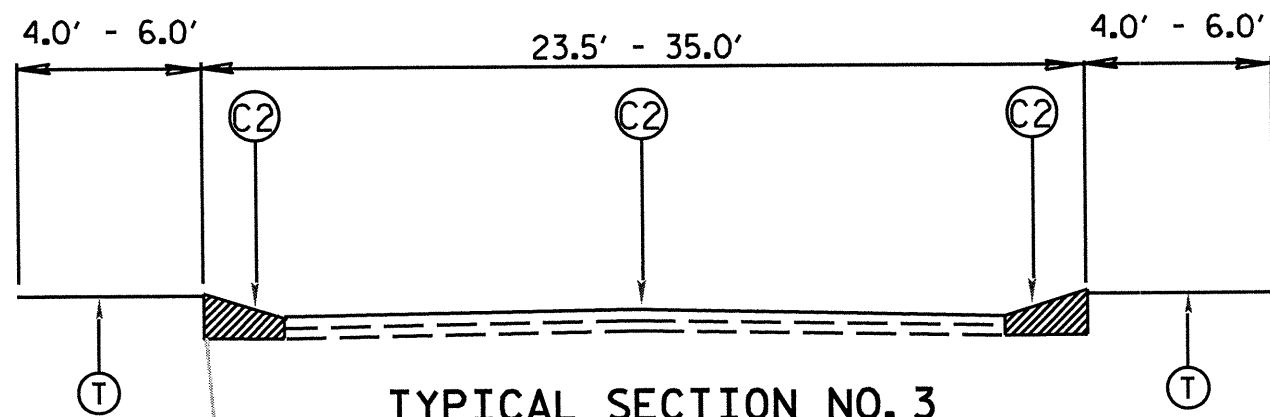
PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1.50" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C2	PROP. APPROX. 1.50" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.
C3	PROP. APPROX. 0.75" ASPHALT CONCRETE SURFACE COURSE, TYPE S4.75A, AT AN AVERAGE RATE OF 75 LBS. PER SQ. YD.
E1	PROP. APPROX. 5.00" ASPHALT CONCRETE BASE COURSE, TYPE B25.0.0B, AT AN AVERAGE RATE OF 570 LBS. PER SQ. YD.
F1	MATCOAT, #6 STONE
F2	MATCOAT, #78M STONE
V1	MILLING AT A DEPTH OF 0" TO 1.50" TO BE MILLED TO A DEPTH OF 1.50" BELOW THE GUTTER AT EP AS DIRECTED BY THE ENGINEER.
V2	MILLING AT A DEPTH OF 1.50" AS DIRECTED BY THE ENGINEER.
T	SHOULDER RECONSTRUCTION.



TYPICAL SECTION NO. 1

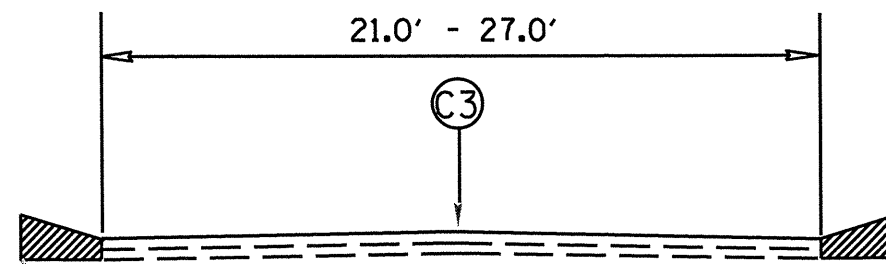


TYPICAL SECTION NO. 2



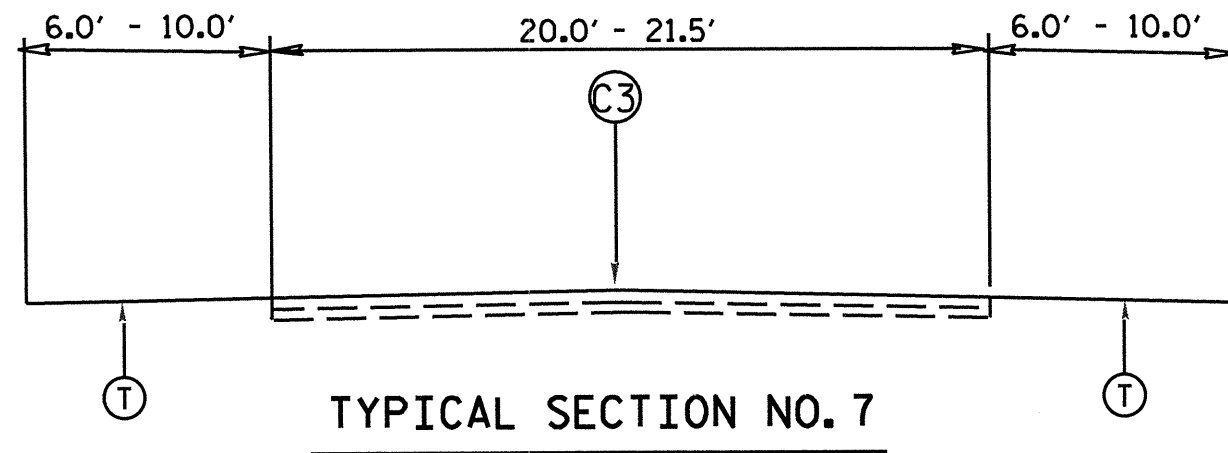
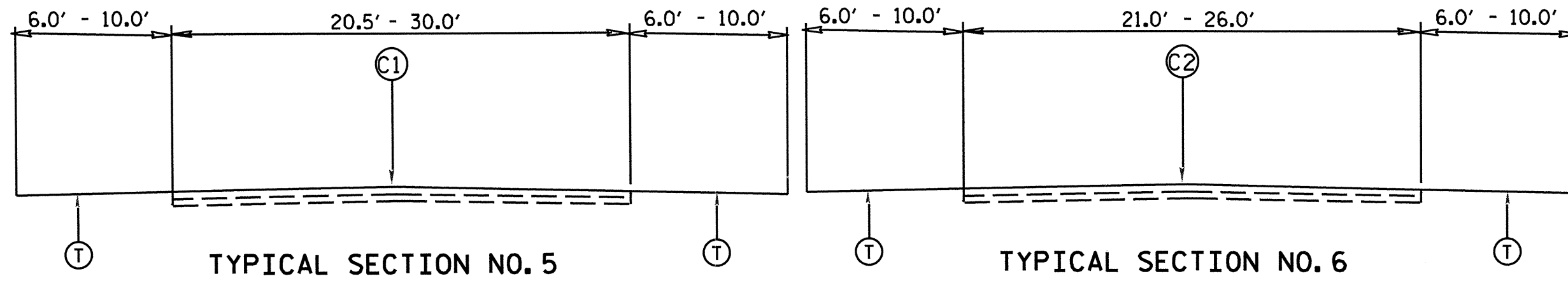
TYPICAL SECTION NO. 3

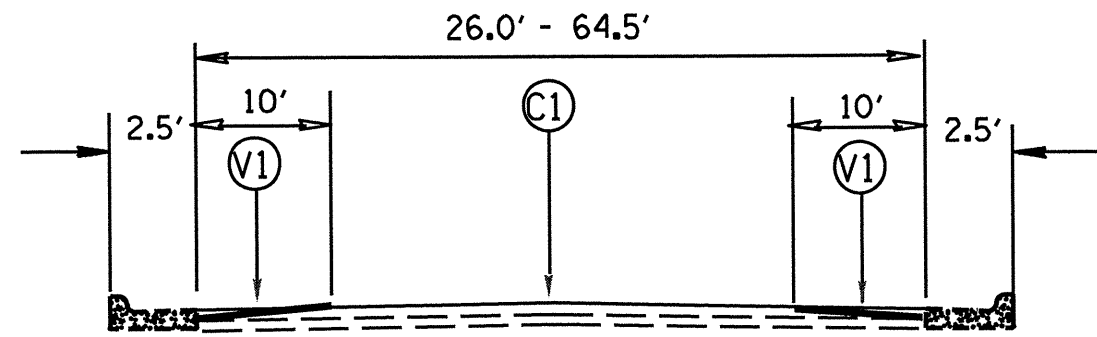
WEDGED ASPHALT CURB  
TO BE OVERLAYED



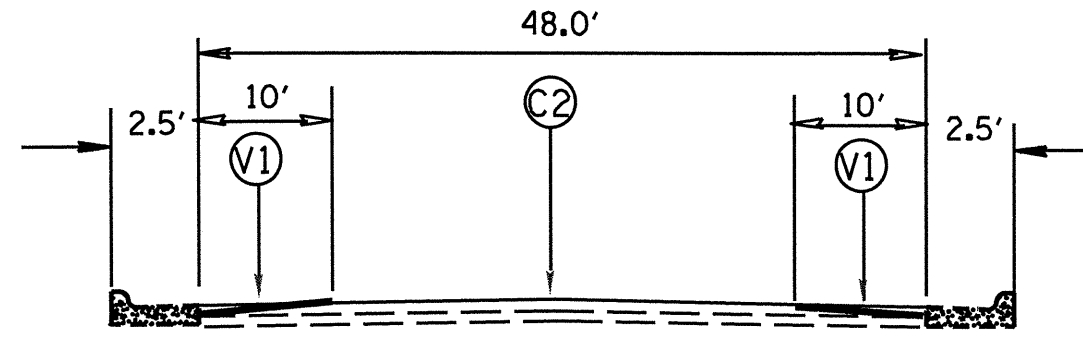
TYPICAL SECTION NO. 4

WEDGED ASPHALT CURB  
(NO OVERLAY)

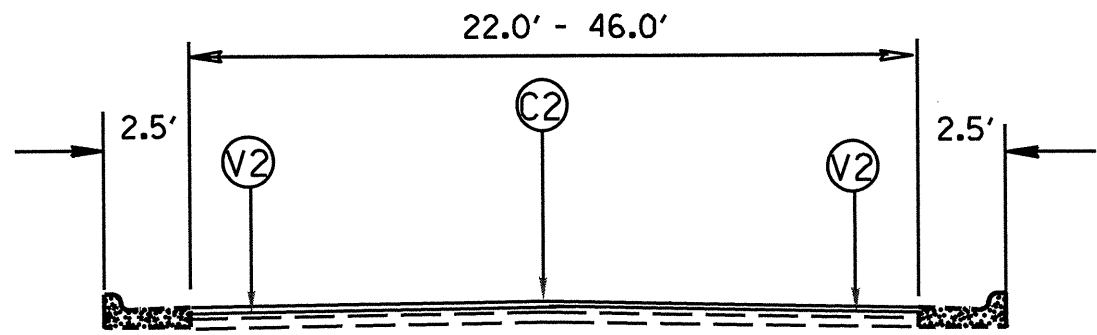




TYPICAL SECTION NO. 8

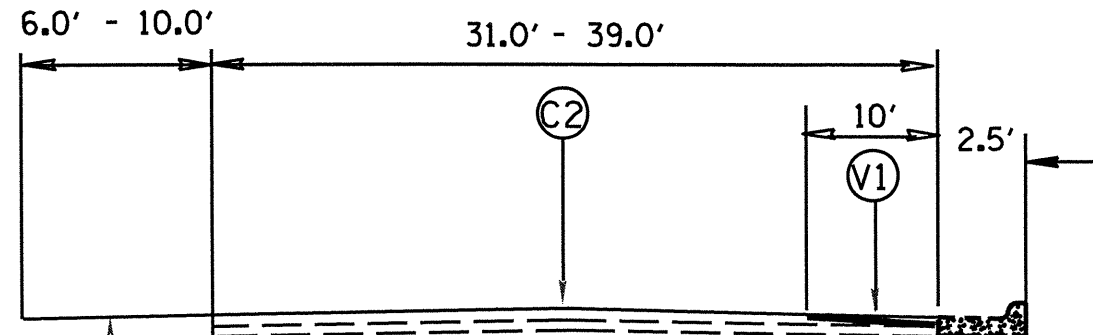


TYPICAL SECTION NO. 9



TYPICAL SECTION NO. 10

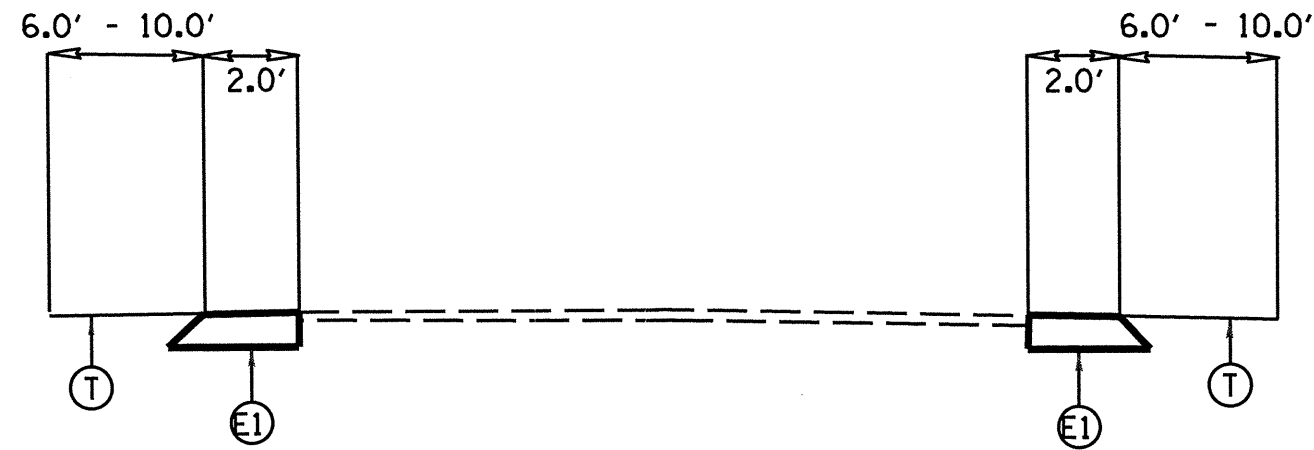
FULL-WIDTH MILLING



TYPICAL SECTION NO. 11

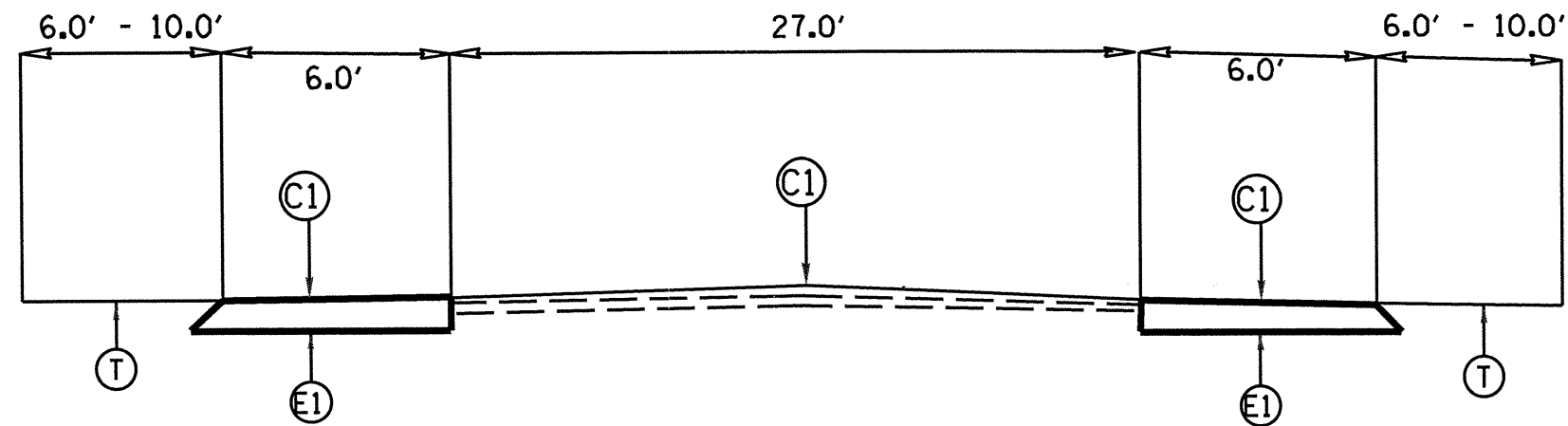
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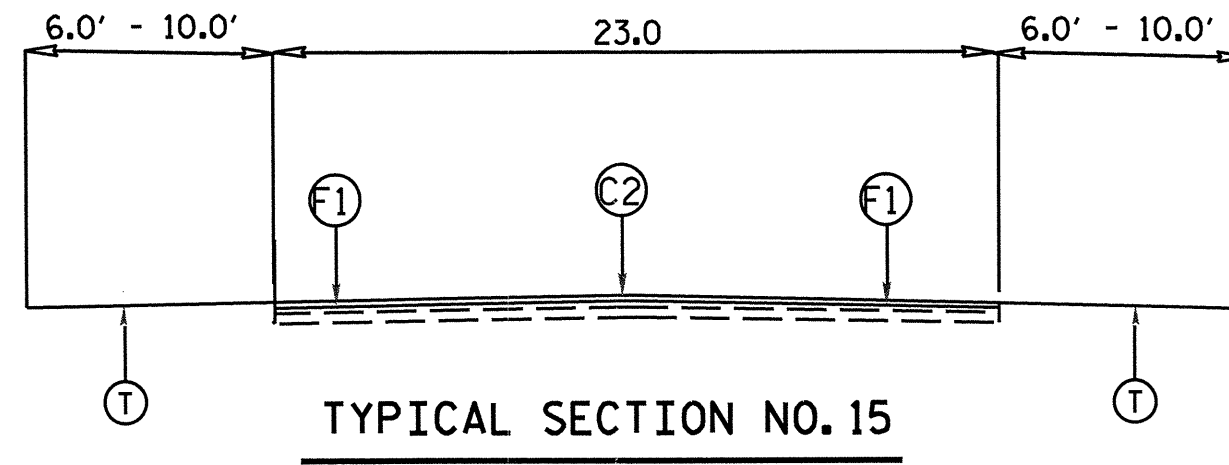
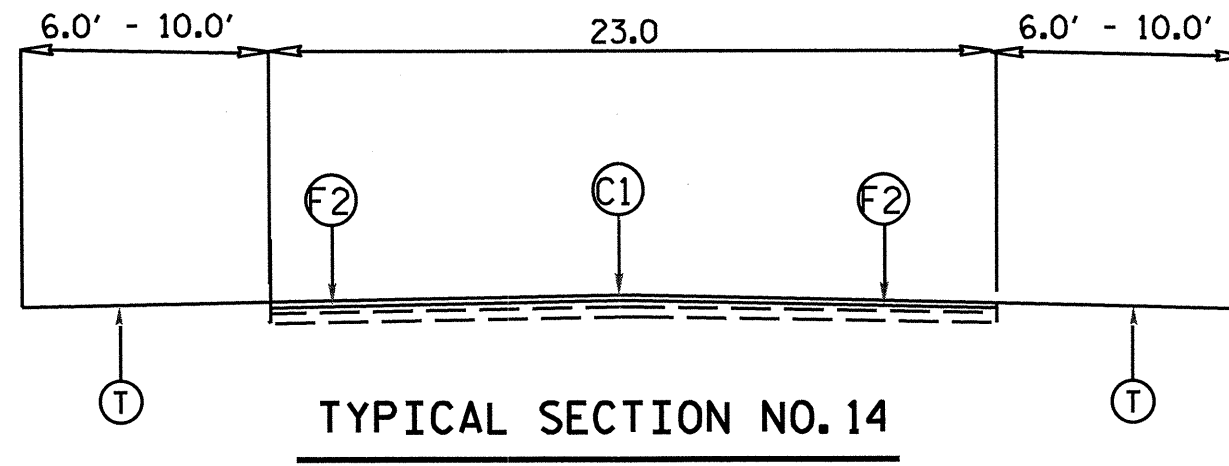
TYPICAL SECTION NO. 12

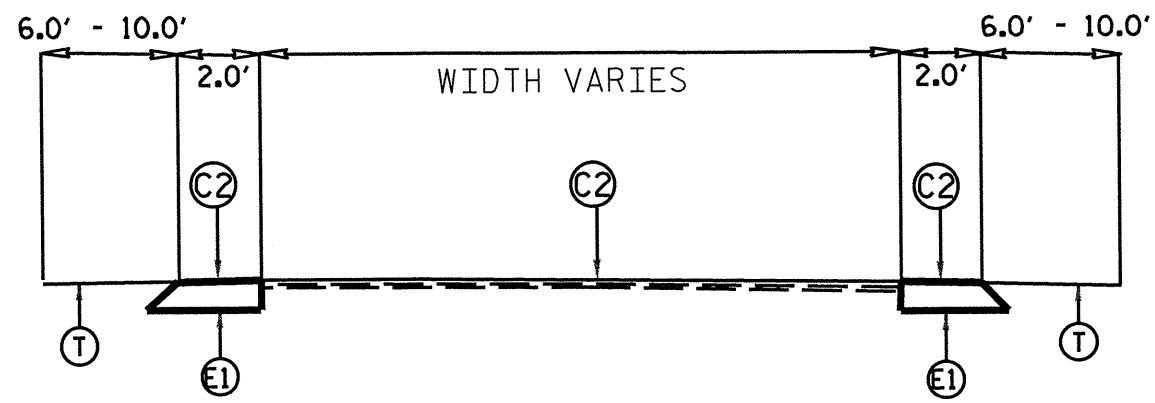
\* PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE  1:1



TYPICAL SECTION NO. 13

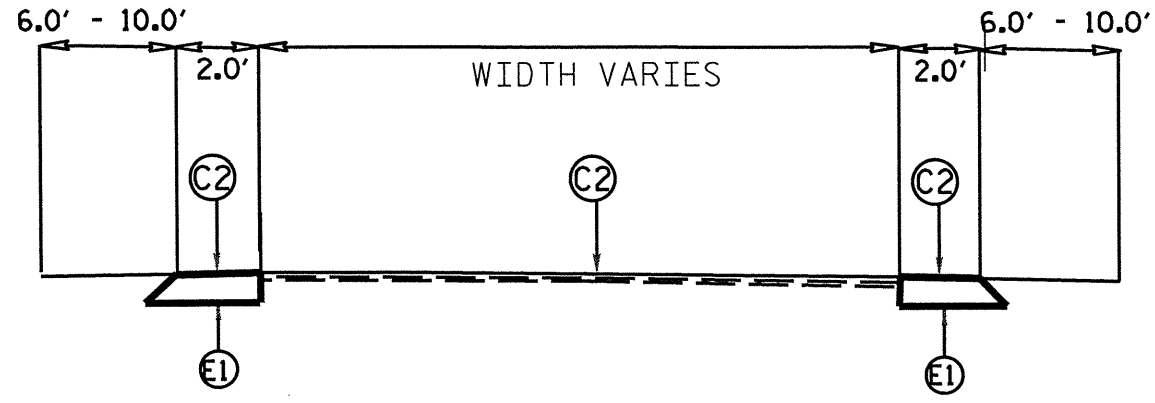
\* PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE  1:1





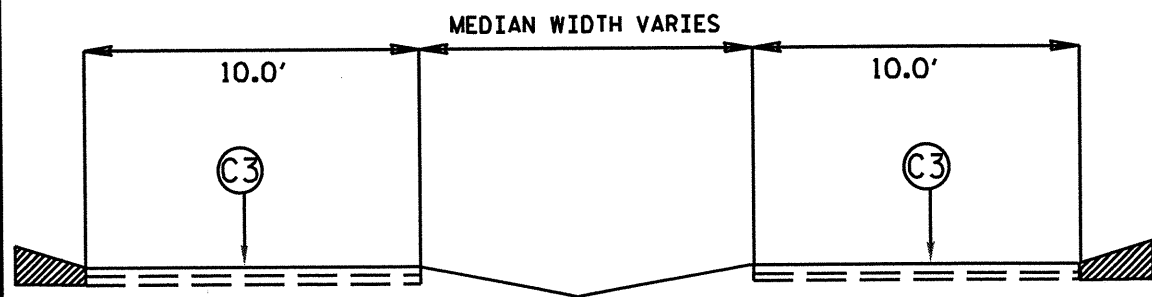
TYPICAL SECTION NO. 16

\* PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE 

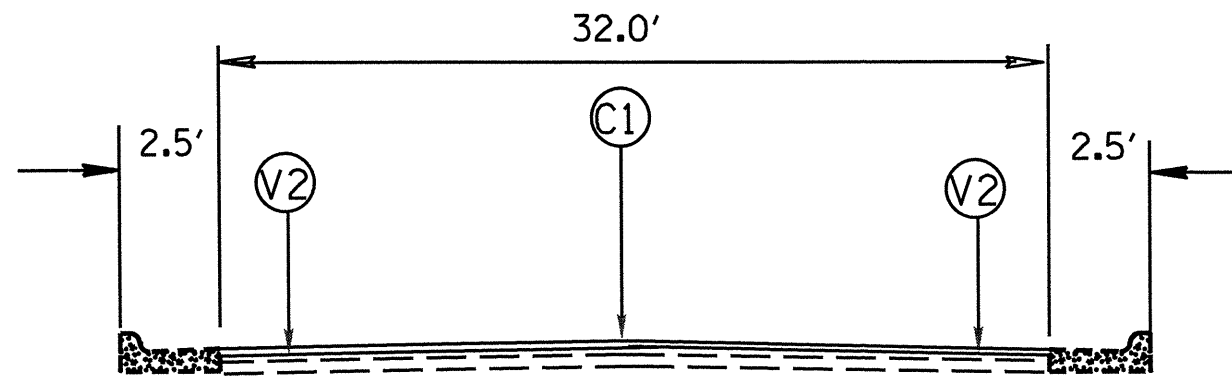


TYPICAL SECTION NO. 18

\* PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE 



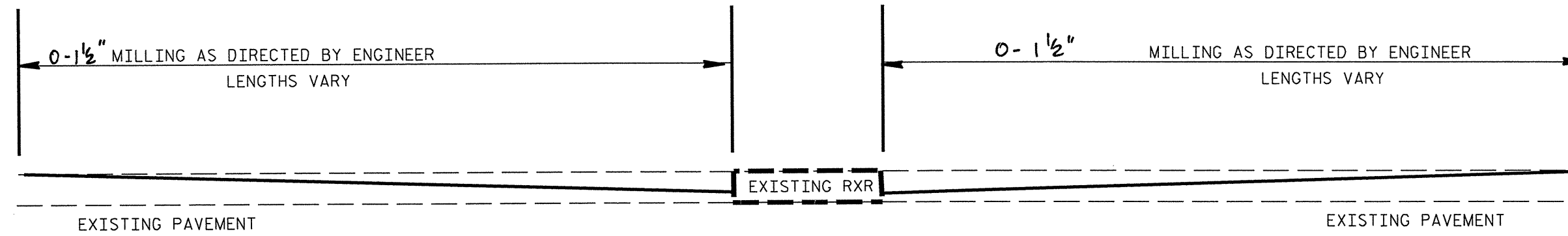
TYPICAL SECTION NO. 17



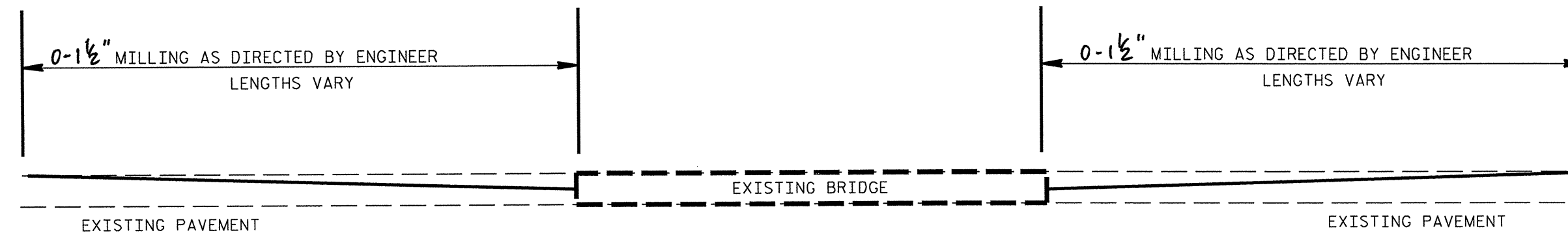
TYPICAL SECTION NO. 19

FULL-WIDTH MILLING

# BRIDGE AND RXR MILLING TYPICAL

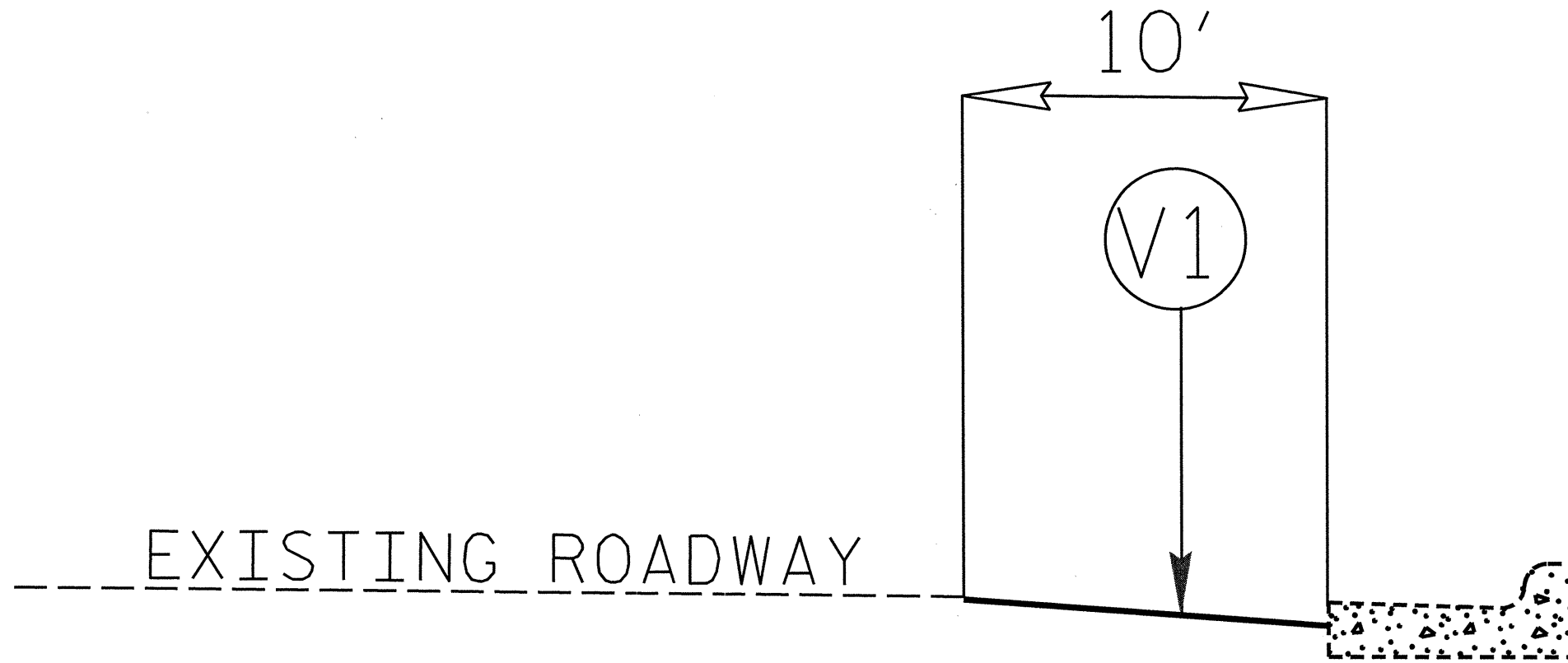


\* RXR TYPICAL IS FOR MAP 1

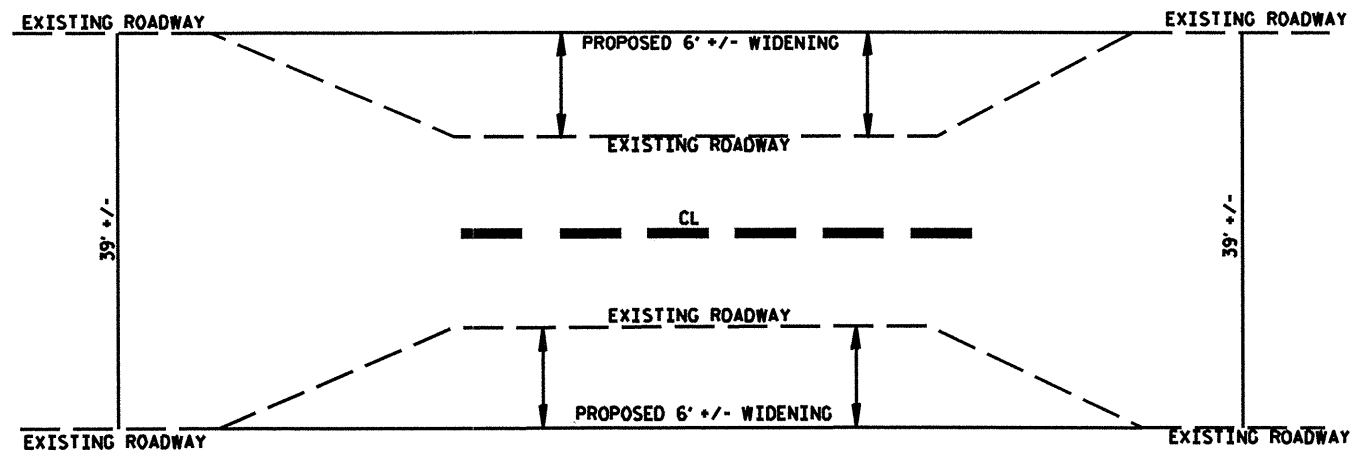


BRIDGE TYPICAL IS FOR MAPS 6, 45, 77, 79, 83 & 86

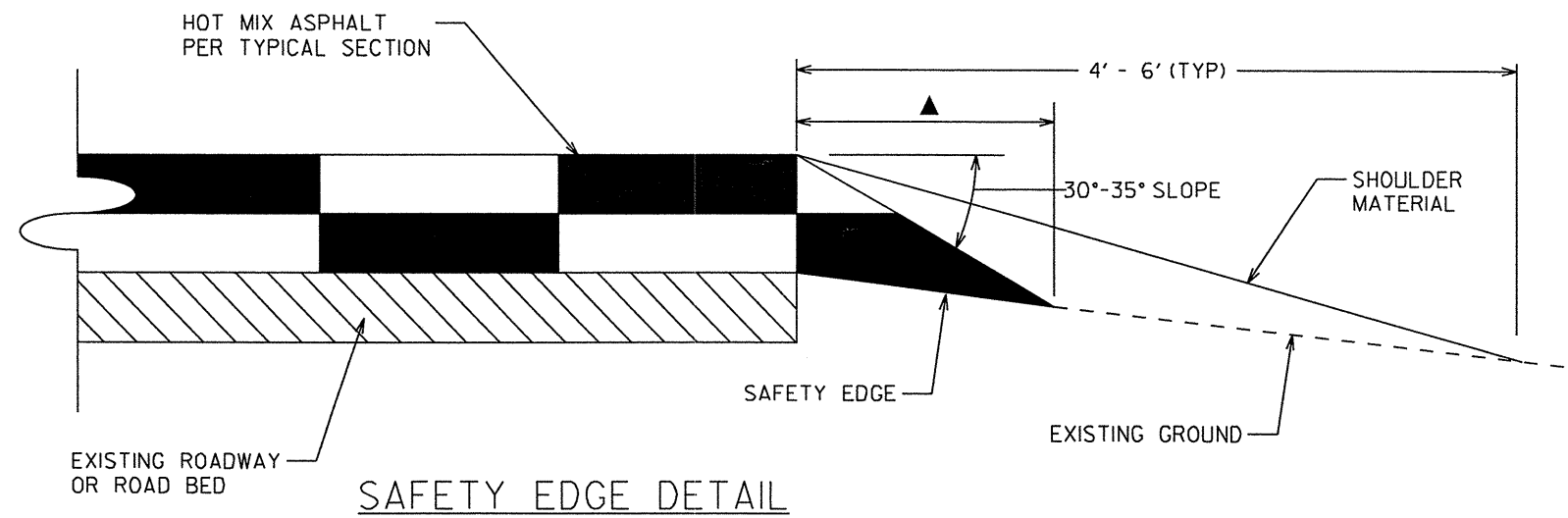
# CURB MILLING DETAIL



CURB MILLING DETAIL IS FOR MAPS 43, 44, 45, 84, 85 & 87



NC HWY 55 DETAIL  
FOR TYPICAL #13



GENERAL NOTES

1. THE SAFETY EDGE WILL BE CONSTRUCTED AS PART OF THE ROADWAY PAVEMENT. A SHOULDER WEDGE DEVICE WILL BE ADDED TO THE SCREED OF THE PAVING MACHINE.
2. SAFETY EDGE IS TO BE USED ON THE SURFACE LAYER ONLY.
3. SHORT SECTIONS OF HANDWORK WILL BE ALLOWED WHEN NECESSARY FOR TRANSITIONS AND TURNOUTS.
4. SITE PREPARATION AND ADDITIONAL EARTHWORK REQUIRED TO CONSTRUCT THE SAFETY EDGE WILL NOT PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE WORK.





PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP	FINAL SURFACE TESTING REQUIRED	LENGTH MI	WIDTH FT	INCIDENTAL STONE BASE TONS	SHOULDER RECONSTRUCTION SMI	BORROW CY	1 1/2" MILLING SY	0" TO 1.5" MILLING SY	INCIDENTAL MILLING SY	BASE COURSE, B25.0B TONS	SURFACE COURSE, S9.5B TONS	SURFACE COURSE, SF9.5A TONS	SURFACE COURSE, S4.75A TONS	ASPHALT BINDER FOR PLANT MIX TONS	PATCHING EXISTING PAVEMENT TONS	ASPHALT SURFACE TREATMENT, MATCOAT, #6 STONE SY	ASPHALT SURFACE TREATMENT, MATCOAT, #78M STONE SY	RETROFIT EXISTING CURB RAMPS EA	CONCRETE CURB RAMPS EA	ADJ. OF MANHOLES EA	ADJ. OF METER OR VALVE BOX EA				
6cr.20261.73	Cumberland	31	SR 2566	FROM SR 1606 TO DEAD END	4	NO	0.32	26									183	12	30							1				
<b>TOTAL FOR MAP NO. 31</b>							<b>0.32</b>											<b>183</b>	<b>12</b>	<b>30</b>							<b>1</b>			
6cr.20261.73	Cumberland	32	SR 2572	FROM SR 2566 TO DEAD END	4	NO	0.24	26									137	9	15											
<b>TOTAL FOR MAP NO. 32</b>							<b>0.24</b>											<b>137</b>	<b>9</b>	<b>15</b>										
6cr.20261.73	Cumberland	33	SR 2573	FROM SR 2572 TO CUL DE SAC	4	NO	0.51	26									292	20	10											
<b>TOTAL FOR MAP NO. 33</b>							<b>0.51</b>											<b>292</b>	<b>20</b>	<b>10</b>										
6cr.20261.73	Cumberland	34	SR 2590	FROM CUL DE SAC TO CUL DE SAC	4	NO	0.25	26									143	10	20											
<b>TOTAL FOR MAP NO. 34</b>							<b>0.25</b>											<b>143</b>	<b>10</b>	<b>20</b>										
6cr.20261.73	Cumberland	35	SR 2591	FROM SR 2573 TO CUL DE SAC	4	NO	0.11	26									63	4	20											
<b>TOTAL FOR MAP NO. 35</b>							<b>0.11</b>											<b>63</b>	<b>4</b>	<b>20</b>										
6cr.20261.73	Cumberland	36	SR 1606	FROM SR 1607 TO SR 1605	12	NO	1.75	4	42	3.50					1,170				51											
<b>TOTAL FOR MAP NO. 36</b>							<b>1.75</b>			<b>42</b>	<b>3.50</b>					<b>1,170</b>				<b>51</b>										
6cr.20261.73	Cumberland	37	SR 2599	FROM SR 1606 TO SR 2549	4	NO	0.29	27										172	12	10						2				
<b>TOTAL FOR MAP NO. 37</b>							<b>0.29</b>												<b>172</b>	<b>12</b>	<b>10</b>						<b>2</b>			
6cr.20261.73	Cumberland	38	SR 2549	FROM SR 2599 TO SR 2536	4	NO	0.22	27										131	9	3						3				
<b>TOTAL FOR MAP NO. 38</b>							<b>0.22</b>												<b>131</b>	<b>9</b>	<b>3</b>						<b>3</b>			
6cr.20261.73	Cumberland	39	SR 1770	FROM US 401 TO SR 1763	7	NO	0.48	20	12	1.00	20.00							211	14	8						3				
<b>TOTAL FOR MAP NO. 39</b>							<b>0.48</b>			<b>12</b>	<b>1.00</b>	<b>20.00</b>							<b>211</b>	<b>14</b>	<b>8</b>						<b>3</b>			
6cr.20261.73	Cumberland	40	SR 1785	FROM SR 1786 TO SR 1770	7	NO	0.07	20	2	0.14	3.00							31	2	2										
<b>TOTAL FOR MAP NO. 40</b>							<b>0.07</b>			<b>2</b>	<b>0.14</b>	<b>3.00</b>							<b>31</b>	<b>2</b>	<b>2</b>									
6cr.20261.73	Cumberland	41	SR 1786	FROM SR 1763 TO SR 1785	7	NO	0.13	20	3	0.26	6.00							57	4	5										
<b>TOTAL FOR MAP NO. 41</b>							<b>0.13</b>			<b>3</b>	<b>0.26</b>	<b>6.00</b>							<b>57</b>	<b>4</b>	<b>5</b>									
6cr.20261.73	Cumberland	42	SR 1763	FROM SR 1770 TO DEAD END	7	NO	0.13	20	3	0.26	6.00							57	4	20										
<b>TOTAL FOR MAP NO. 42</b>							<b>0.13</b>			<b>3</b>	<b>0.26</b>	<b>6.00</b>							<b>57</b>	<b>4</b>	<b>20</b>									
6cr.20261.73	Cumberland	43	SR 1611	FROM US 401 TO SR 1600	6	NO	2.48	24	60	5.00	100.00		3,579	694			4,491		301	50			7		1	9				
<b>TOTAL FOR MAP NO. 43</b>							<b>2.48</b>			<b>60</b>	<b>5.00</b>	<b>100.00</b>		<b>3,579</b>	<b>694</b>			<b>4,491</b>		<b>301</b>	<b>50</b>				<b>7</b>		<b>1</b>	<b>9</b>		
6cr.20261.73	Cumberland	44	SR 1600	FROM US 401 TO FAYETTEVILLE CL	6	NO	3.67	26	88	7.34	147.00		3,168	764			6,218		417	50					15	16				
<b>TOTAL FOR MAP NO. 44</b>							<b>3.67</b>			<b>88</b>	<b>7.34</b>	<b>147.00</b>		<b>3,168</b>	<b>764</b>			<b>6,218</b>		<b>417</b>	<b>50</b>						<b>15</b>	<b>16</b>		
6cr.20261.73	Cumberland	45	SR 1451	FROM NC 87 TO NC 210	6	NO	2.43	25	58	4.86	98.00		2,258	556			3,213		215	20					5	5				
<b>TOTAL FOR MAP NO. 45</b>							<b>2.43</b>			<b>58</b>	<b>4.86</b>	<b>98.00</b>		<b>2,258</b>	<b>556</b>			<b>3,213</b>		<b>215</b>	<b>20</b>						<b>5</b>	<b>5</b>		
6cr.20261.73	Cumberland	46	SR 4202	FROM NC 87 TO END STATE MAINT.	11	NO	0.25	39		0.25	5.00		2,112	69			798		53	100			12		1	3				
<b>TOTAL FOR MAP NO. 46</b>							<b>0.25</b>				<b>0.25</b>	<b>5.00</b>		<b>2,112</b>	<b>69</b>			<b>798</b>		<b>53</b>	<b>100</b>				<b>12</b>		<b>1</b>	<b>3</b>		
6cr.20261.73	Cumberland	47	SR 3578	FROM SR 1404 TO SR 1404	18	NO	0.46	32				8,636		139		751		45	80			7	2							
<b>TOTAL FOR MAP NO. 47</b>							<b>0.46</b>						<b>8,636</b>		<b>139</b>		<b>751</b>		<b>45</b>	<b>80</b>					<b>7</b>	<b>2</b>				
6cr.20261.73	Cumberland	48	SR 1404	FROM PVMT JT @ SR 3578 TO NC 87	8	NO	0.32	44					5,726			765		46	60			42			15	8				
<b>TOTAL FOR MAP NO. 48</b>							<b>0.32</b>							<b>5,726</b>			<b>765</b>		<b>46</b>	<b>60</b>					<b>42</b>			<b>15</b>	<b>8</b>	
6cr.20261.73	Cumberland	49	SR 3637	FROM SR 1311 TO CUL DE SAC	10	NO	0.04	22				4,729				397		24												
<b>TOTAL FOR MAP NO. 49</b>							<b>0.04</b>						<b>4,729</b>			<b>397</b>		<b>24</b>		<b>70</b>	<b>60</b>							<b>42</b>	<b>15</b>	<b>8</b>
6cr.20261.73	Cumberland	50	SR 1311	FROM SR 1308 TO DEAD END	10	NO	0.35	22				516		69		55		4												
<b>TOTAL FOR MAP NO. 50</b>							<b>0.35</b>						<b>516</b>		<b>69</b>		<b>55</b>		<b>4</b>											
6cr.20261.73	Cumberland	51	SR 3672	FROM SR 1311 TO SR 1311	10	NO	0.24	22				4,517		208		410		27	20											
<b>TOTAL FOR MAP NO. 51</b>							<b>0.24</b>						<b>4,517</b>		<b>208</b>		<b>410</b>		<b>27</b>	<b>20</b>										
6cr.20261.73	Cumberland	52	SR 1308	FROM SR 1132 TO SR 3003	10	NO	0.1	46				3,098				256		17	20											
<b>TOTAL FOR MAP NO. 52</b>							<b>0.1</b>						<b>3,098</b>				<b>256</b>		<b>17</b>	<b>20</b>										
6cr.20261.73	Cumberland	53	SR 2234	FROM SR 2235 TO NC 87	12	NO	0.71	4	17	1.42					475				21											
<b>TOTAL FOR MAP NO. 53</b>							<b>0.71</b>			<b>17</b>	<b>1.42</b>					<b>475</b>				<b>21</b>										
6cr.20261.73	Cumberland	54	SR 3926	FROM SR 3925 TO SR 3923	2	NO	0.28	18								244		16	10											
<b>TOTAL FOR MAP NO. 54</b>							<b>0.28</b>										<b>244</b>		<b>16</b>	<b>10</b>										
6cr.20261.73	Cumberland	55	SR 3923	FROM SR 2252 TO END STATE MAINT	2	NO	0.45	21.5						69		481		32	50											
<b>TOTAL FOR MAP NO. 55</b>							<b>0.45</b>								<b>69</b>		<b>481</b>		<b>32</b>	<b>50</b>										
6cr.20261.73	Cumberland	56	SR 3924	FROM SR 3925 TO SR 3923	19	NO	0.09	22							60		96		9	5										
<b>TOTAL FOR MAP NO. 56</b>							<b>0.09</b>									<b>60</b>		<b>96</b>		<b>9</b>	<b>5</b>									
6cr.20261.73	Cumberland	57	SR 3925	FROM SR 2252 TO END STATE MAINT	2	NO	0.15	22						69		172		12	10											
<b>TOTAL FOR MAP NO. 57</b>							<b>0.15</b>								<b>69</b>		<b>172</b>		<b>12</b>	<b>10</b>										
6cr.20261.73	Cumberland	58	SR 2313	FROM SR 2239 TO END STATE MAINT	2	NO	0.29	20.5						69		300		20	10											
<b>TOTAL FOR MAP NO. 58</b>							<b>0.29</b>								<b>69</b>		<b>300</b>		<b>20</b>	<b>10</b>										
6cr.20261.73	Cumberland	59	SR 3629	FROM CUL DE SAC TO CUL DE SAC	1	NO	0.44	20									194	13	15											
<b>TOTAL FOR MAP NO. 59</b>							<b>0.44</b>											<b>194</b>	<b>13</b>	<b>15</b>										
6cr.20261.73	Cumberland	60	SR 3631	FROM SR 3628 TO SR 3629	1	NO	0.2	21									92	6	3											
<b>TOTAL FOR MAP NO. 60</b>							<b>0.2</b>											<b>92</b>	<b>6</b>	<b>3</b>										

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP	FINAL SURFACE TESTING REQUIRED	LENGTH MI	WIDTH FT	INCIDENTAL STONE BASE TONS	SHOULDER RECONSTRUCTION SMI	BORROW CY	1 1/2" MILLING SY	0" TO 1.5" MILLING SY	INCIDENTAL MILLING SY	BASE COURSE, B25.0B TONS	SURFACE COURSE, S9.5B TONS	SURFACE COURSE, SF9.5A TONS	SURFACE COURSE, S4.75A TONS	ASPHALT BINDER FOR PLANT MIX TONS	PATCHING EXISTING PAVEMENT TONS	ASPHALT SURFACE TREATMENT, MATCOAT, #6 STONE SY	ASPHALT SURFACE TREATMENT, MATCOAT, #78M STONE SY	RETROFIT EXISTING CURB RAMPS EA	CONCRETE CURB RAMPS EA	ADJ. OF MANHOLES EA	ADJ. OF METER OR VALVE BOX EA		
6cr.20261.73	Cumberland	67	SR 3678	FROM SR 3628 TO CUL DE SAC	4	NO	0.06	26									34	2	2									
<b>TOTAL FOR MAP NO. 67</b>																		34	2	2								
6cr.20261.73	Cumberland	68	SR 3639	FROM SR 1108 TO SR 3640	17	NO	0.08	20									35	2								1		
<b>TOTAL FOR MAP NO. 68</b>																		35	2								1	
6cr.20261.73	Cumberland	69	SR 3640	FROM SR 3639 TO SR 3639	4	NO	0.97	27									576	39	10						3	6		
<b>TOTAL FOR MAP NO. 69</b>																		576	39	10						3	6	
6cr.20261.73	Cumberland	70	SR 3641	FROM SR 3640 TO SR 3640	4	NO	0.28	27									166	11	1									
<b>TOTAL FOR MAP NO. 70</b>																		166	11	1								
6cr.20261.73	Cumberland	71	SR 3642	FROM SR 3640 TO SR 3640	4	NO	0.23	27									137	9	1									
<b>TOTAL FOR MAP NO. 71</b>																		137	9	1								
6cr.20261.73	Cumberland	72	SR 3643	FROM SR 3640 TO SR 1345	4	NO	0.08	27									48	3	1							3		
<b>TOTAL FOR MAP NO. 72</b>																		48	3	1							3	
6cr.20261.73	Cumberland	73	SR 3630	FROM SR 3628 TO CUL DE SAC	1	NO	0.05	21									23	2	3									
<b>TOTAL FOR MAP NO. 73</b>																		23	2	3								
6cr.20261.73	Cumberland	74	SR 4022	FROM SR 4020 TO DEAD END	4	NO	0.08	26									46	3										
<b>TOTAL FOR MAP NO. 74</b>																		46	3									
6cr.20261.73	Cumberland	75	SR 4021	FROM SR 4020 TO CUL DE SAC	4	NO	0.07	26									40	3	1									
<b>TOTAL FOR MAP NO. 75</b>																		40	3	1								
6cr.20261.73	Cumberland	76	SR 4020	FROM SR 3367 TO SR 4024	4	NO	0.54	26									309	21	5									
<b>TOTAL FOR MAP NO. 76</b>																		309	21	5								
<b>TOTAL FOR PROJ NO. 6cr.20261.73</b>								28.14		305	27.95	465.00	27,298	16,843	3,122	1,705	1,913	18,569	6,603	1,882	927				68	2	37	71
6cr.20431.73	Hammett	77	SR 1120	FROM NC 87 TO SR 1121	6	NO	3.68	25.5	88	7.36	148.00		1,613	278			4,649		311	20					1	1		
<b>TOTAL FOR MAP NO. 77</b>									88	7.36	148.00		1,613	278			4,649		311	20							1	1
6cr.20431.73	Hammett	78	SR 1116	FROM SR 1117 TO NC 27	6	NO	3.15	23	76	6.30	126.00			556			3,606		242	10						3		
<b>TOTAL FOR MAP NO. 78</b>									76	6.30	126.00			556			3,606		242	10								3
6cr.20431.73	Hammett	79	SR 1703	FROM SR 1725 TO NC 27	6	NO	4.8	23	115	9.60	192.00		1,484	764			5,479		367	175					1	2		
<b>TOTAL FOR MAP NO. 79</b>									115	9.60	192.00		1,484	764			5,479		367	175							1	2
6cr.20431.73	Hammett	80	SR 1554-A	FROM NC 27 TO SR 1558	6	NO	1.19	22	29	2.38	48.00			139			1,292		87	100						1		
<b>TOTAL FOR MAP NO. 80</b>									29	2.38	48.00			139			1,292		87	100								1
6cr.20431.73	Hammett	81	SR 1554-B	FROM SR 1558 TO SR 1553	16	NO	2.36	22	57	4.72				347	1,578		2,575		242	30								
<b>TOTAL FOR MAP NO. 81</b>									57	4.72				347	1,578		2,575		242	30								
6cr.20431.73	Hammett	82	SR 1720	FROM SR 1725 TO SR 1703	6	NO	0.97	22.5	23	2.00	40.00			139			1,081		72							1		
<b>TOTAL FOR MAP NO. 82</b>									23	2.00	40.00			139			1,081		72									1
6cr.20431.73	Hammett	83	SR 1725-A	FROM SR 1703 TO SR 1719	6	NO	1.48	23.5	36	3.00	60.00		3,033	417			1,758		118	8					1	3		
<b>TOTAL FOR MAP NO. 83</b>									36	3.00	60.00		3,033	417			1,758		118	8							1	3
6cr.20431.73	Hammett	84	SR 1725-B	FROM SR 1719 TO W. BROAD ST	6	NO	0.87	24	21	1.74	35.00			352			1,105		74							5		
<b>TOTAL FOR MAP NO. 84</b>									21	1.74	35.00			352			1,105		74									5
6cr.20431.73	Hammett	85	SR 1780	FROM SR 1780 TO US 421	15	NO	2.32	23	56	4.64	93.00		1,643	139			2,669		179	200	31,305			1	11	9		
<b>TOTAL FOR MAP NO. 85</b>									56	4.64	93.00		1,643	139			2,669		179	200	31,305					1	11	9
6cr.20431.73	Hammett	86	SR 1808-A	FROM SR 1709 TO COOPER ST	6	NO	1.73	21	42	5.10	102.00			347			1,820		122	20								
<b>TOTAL FOR MAP NO. 86</b>									42	5.10	102.00			347			1,820		122	20								
6cr.20431.73	Hammett	87	SR 1808-B	COOPER ST TO BEGIN TAPER	11	NO	0.43	31	10	0.73	15.00			2,523			670		45	5								
<b>TOTAL FOR MAP NO. 87</b>									10	0.73	15.00			2,523			670		45	5								
6cr.20431.73	Hammett	88	SR 1808-C	BEGIN TAPER TO US 301	9	NO	0.23	48					2,112	139			534		36	25						5		
<b>TOTAL FOR MAP NO. 88</b>														2,112	139			534		36	25						5	
<b>TOTAL FOR PROJ NO. 6cr.20431.73</b>								24.18		553	47.57	859.00	27,298	14,244	3,404	1,578	28,318	1,967	593	31,305		1					24	33
<b>GRAND TOTAL</b>								81.41		1,497	128.70	2,373.00	27,298	66,055	10,901	3,805	47,099	46,887	6,603	6,584	2,370	31,305	33,058	77	2	87	144	





PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	FINAL SURFACE TESTING REQUIRED	LENGTH MI	WIDTH FT	TEMPORARY SILT FENCE LF	MATting FOR EROSION CONTROL SY	WATTLE LF	POLYACRYLAMIDE (PAM) LB	SEEDING & MULCHING ACR	PAVED TRENCHING (1 CONDUIT, 2") LF	UNPAVED TRENCHING (1 CONDUIT, 1") LF	UNPAVED TRENCHING (1 CONDUIT, 2") LF	JUNCTION BOX (STANDARD) EA	JUNCTION BOX (OVER-SIZED, HEAVY DUTY) EA	2" RISER WITH WEATHERHEAD EA	INDUCTIVE LOOP SAWCUT LF	LEAD-IN CABLE (14-2) LF	WORK ZONE TRAFFIC CONTROL LS			
6cr.20261.73	Cumberland	67	SR 3678	FROM SR 3628 TO CUL DE SAC	4	NO	0.06	26																	
<b>TOTAL FOR MAP NO. 67</b>							<b>0.06</b>																		
6cr.20261.73	Cumberland	68	SR 3639	FROM SR 1108 TO SR 3640	17	NO	0.08	20																	
<b>TOTAL FOR MAP NO. 68</b>							<b>0.08</b>																		
6cr.20261.73	Cumberland	69	SR 3640	FROM SR 3639 TO SR 3639	4	NO	0.97	27																	
<b>TOTAL FOR MAP NO. 69</b>							<b>0.97</b>																		
6cr.20261.73	Cumberland	70	SR 3641	FROM SR 3640 TO SR 3640	4	NO	0.28	27																	
<b>TOTAL FOR MAP NO. 70</b>							<b>0.28</b>																		
6cr.20261.73	Cumberland	71	SR 3642	FROM SR 3640 TO SR 3640	4	NO	0.23	27																	
<b>TOTAL FOR MAP NO. 71</b>							<b>0.23</b>																		
6cr.20261.73	Cumberland	72	SR 3643	FROM SR 3640 TO SR 1345	4	NO	0.08	27																	
<b>TOTAL FOR MAP NO. 72</b>							<b>0.08</b>																		
6cr.20261.73	Cumberland	73	SR 3630	FROM SR 3628 TO CUL DE SAC	1	NO	0.05	21																	
<b>TOTAL FOR MAP NO. 73</b>							<b>0.05</b>																		
6cr.20261.73	Cumberland	74	SR 4022	FROM SR 4020 TO DEAD END	4	NO	0.08	26																	
<b>TOTAL FOR MAP NO. 74</b>							<b>0.08</b>																		
6cr.20261.73	Cumberland	75	SR 4021	FROM SR 4020 TO CUL DE SAC	4	NO	0.07	26																	
<b>TOTAL FOR MAP NO. 75</b>							<b>0.07</b>																		
6cr.20261.73	Cumberland	76	SR 4020	FROM SR 3367 TO SR 4024	4	NO	0.54	26																	
<b>TOTAL FOR MAP NO. 76</b>							<b>0.54</b>																		
<b>TOTAL FOR PROJ NO. 6cr.20261.73</b>							<b>28.14</b>		<b>1,406</b>	<b>220</b>	<b>310</b>	<b>13</b>	<b>34</b>	<b>110</b>	<b>330</b>	<b>1,100</b>	<b>11</b>	<b>7</b>	<b>11</b>	<b>10,880</b>	<b>1,100</b>				
6cr.20431.73	Harnett	77	SR 1120	FROM NC 87 TO SR 1121	6	NO	3.68	25.5	368	30	60	2	9	20.00	60.00	200.00	2.00	2.00	2.00	1,340.00	200.00				
<b>TOTAL FOR MAP NO. 77</b>							<b>3.68</b>		<b>368</b>	<b>30</b>	<b>60</b>	<b>2</b>	<b>9</b>	<b>20.00</b>	<b>60.00</b>	<b>200.00</b>	<b>2.00</b>	<b>2.00</b>	<b>2.00</b>	<b>1,340.00</b>	<b>200.00</b>				
6cr.20431.73	Harnett	78	SR 1116	FROM SR 1117 TO NC 27	6	NO	3.15	23	315	20	50	2	8												
<b>TOTAL FOR MAP NO. 78</b>							<b>3.15</b>		<b>315</b>	<b>20</b>	<b>50</b>	<b>2</b>	<b>8</b>												
6cr.20431.73	Harnett	79	SR 1703	FROM SR 1725 TO NC 27	6	NO	4.8	23	480	40	80	3	12												
<b>TOTAL FOR MAP NO. 79</b>							<b>4.8</b>		<b>480</b>	<b>40</b>	<b>80</b>	<b>3</b>	<b>12</b>												
6cr.20431.73	Harnett	80	SR 1554-A	FROM NC 27 TO SR 1558	6	NO	1.19	22	119	10	20	1	3												
<b>TOTAL FOR MAP NO. 80</b>							<b>1.19</b>		<b>119</b>	<b>10</b>	<b>20</b>	<b>1</b>	<b>3</b>												
6cr.20431.73	Harnett	81	SR 1554-B	FROM SR 1558 TO SR 1553	16	NO	2.36	22	236	20	40	2	6												
<b>TOTAL FOR MAP NO. 81</b>							<b>2.36</b>		<b>236</b>	<b>20</b>	<b>40</b>	<b>2</b>	<b>6</b>												
6cr.20431.73	Harnett	82	SR 1720	FROM SR 1725 TO SR 1703	6	NO	0.97	22.5	97	10	20	1	2												
<b>TOTAL FOR MAP NO. 82</b>							<b>0.97</b>		<b>97</b>	<b>10</b>	<b>20</b>	<b>1</b>	<b>2</b>												
6cr.20431.73	Harnett	83	SR 1725-A	FROM SR 1703 TO SR 1719	6	NO	1.48	23.5	148	20	30	1	4												
<b>TOTAL FOR MAP NO. 83</b>							<b>1.48</b>		<b>148</b>	<b>20</b>	<b>30</b>	<b>1</b>	<b>4</b>												
6cr.20431.73	Harnett	84	SR 1725-B	FROM SR 1719 TO W. BROAD ST	6	NO	0.87	24	87	10	20	1	2												
<b>TOTAL FOR MAP NO. 84</b>							<b>0.87</b>		<b>87</b>	<b>10</b>	<b>20</b>	<b>1</b>	<b>2</b>												
6cr.20431.73	Harnett	85	SR 1790	FROM SR 1780 TO US 421	15	NO	2.32	23	232	20	40	2	6												
<b>TOTAL FOR MAP NO. 85</b>							<b>2.32</b>		<b>232</b>	<b>20</b>	<b>40</b>	<b>2</b>	<b>6</b>												
6cr.20431.73	Harnett	86	SR 1808-A	FROM SR 1709 TO COOPER ST	6	NO	1.73	21	255	20	40	2	4	10.00	30.00	100.00	1.00	1.00	1.00	500.00	100.00				
<b>TOTAL FOR MAP NO. 86</b>							<b>1.73</b>		<b>255</b>	<b>20</b>	<b>40</b>	<b>2</b>	<b>4</b>	<b>10.00</b>	<b>30.00</b>	<b>100.00</b>	<b>1.00</b>	<b>1.00</b>	<b>1.00</b>	<b>500.00</b>	<b>100.00</b>				
6cr.20431.73	Harnett	87	SR 1808-B	FROM SR 1709 TO COOPER ST	6	NO	0.82	23																	
<b>TOTAL FOR MAP NO. 87</b>							<b>0.82</b>																		
6cr.20431.73	Harnett	87	SR 1808-B	COOPER ST TO BEGIN TAPER	11	NO	0.43	31	58	10	10	0	1												
<b>TOTAL FOR MAP NO. 87</b>							<b>0.43</b>		<b>58</b>	<b>10</b>	<b>10</b>	<b>0</b>	<b>1</b>												
6cr.20431.73	Harnett	88	SR 1808-C	FROM COOPER ST TO BEGING TAPER	6	NO	0.15	23																	
<b>TOTAL FOR MAP NO. 88</b>							<b>0.15</b>																		
6cr.20431.73	Harnett	88	SR 1808-C	BEGIN TAPER TO US 301	9	NO	0.23	48						10.00	30.00	100.00	1.00	1.00	1.00	150.00	100.00				
<b>TOTAL FOR MAP NO. 88</b>							<b>0.23</b>								<b>10.00</b>	<b>30.00</b>	<b>100.00</b>	<b>1.00</b>	<b>1.00</b>	<b>1.00</b>	<b>150.00</b>	<b>100.00</b>			
<b>TOTAL FOR PROJ NO. 6cr.20431.73</b>							<b>24.18</b>		<b>2,395</b>	<b>210</b>	<b>410</b>	<b>17</b>	<b>57</b>	<b>40.00</b>	<b>120.00</b>	<b>400.00</b>	<b>4.00</b>	<b>4.00</b>	<b>4.00</b>	<b>1,990.00</b>	<b>400.00</b>				
<b>GRAND TOTAL</b>							<b>81.41</b>		<b>6,460</b>	<b>640</b>	<b>1,150</b>	<b>46</b>	<b>154</b>	<b>190.00</b>	<b>670.00</b>	<b>1,900.00</b>	<b>19.00</b>	<b>15.00</b>	<b>19.00</b>	<b>17,145.00</b>	<b>1,900.00</b>	<b>1.00</b>			





PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	LENGTH	WIDTH	4" X 90 M WHITE THERMO LF	4" X 90 M YELLOW THERMO LF	4" X 120 M YELLOW THERMO LF	4" X 120 M WHITE THERMO LF	8" X 90 M WHITE THERMO LF	8" X 120 M WHITE THERMO LF	8" X 120 M YELLOW THERMO LF	16" X 120 M WHITE THERMO LF	24" X 120 M WHITE THERMO LF	24" X 120 M WHITE THERMO HIGH VISIBILIY X-WAI KS LF	THERMO RXR 120 M EA	THERMO MSG SCHOOL 120 M EA	THERMO MSG ONLY 120 M EA	THERMO MSG STOP 120 M EA	THERMO MSG AHEAD 120 M EA	
TOTAL FOR MAP NO. 68					0.08																	
6cr.20261.73	Cumberland	69	SR 3640	FROM SR 3639 TO SR 3639	0.97	27																
TOTAL FOR MAP NO. 69					0.97																	
6cr.20261.73	Cumberland	70	SR 3641	FROM SR 3640 TO SR 3640	0.28	27																
TOTAL FOR MAP NO. 70					0.28																	
6cr.20261.73	Cumberland	71	SR 3642	FROM SR 3640 TO SR 3640	0.23	27																
TOTAL FOR MAP NO. 71					0.23																	
6cr.20261.73	Cumberland	72	SR 3643	FROM SR 3640 TO SR 1345	0.08	27																
TOTAL FOR MAP NO. 72					0.08																	
6cr.20261.73	Cumberland	73	SR 3630	FROM SR 3628 TO CUL DE SAC	0.05	21																
TOTAL FOR MAP NO. 73					0.05																	
6cr.20261.73	Cumberland	74	SR 4022	FROM SR 4020 TO DEAD END	0.08	26																
TOTAL FOR MAP NO. 74					0.08																	
6cr.20261.73	Cumberland	75	SR 4021	FROM SR 4020 TO CUL DE SAC	0.07	26																
TOTAL FOR MAP NO. 75					0.07																	
6cr.20261.73	Cumberland	76	SR 4020	FROM SR 3367 TO SR 4024	0.54	26																
TOTAL FOR MAP NO. 76					0.54																	
TOTAL FOR PROJ NO. 6cr.20261.73					28.14		82,650		98,940	10,100	350	300	2,735		1,170	150		12	36			
							82,650	109,390	10,100	350	300	3,035		1,320	150		12	48				
6cr.20431.73	Harnett	77	SR 1120	FROM NC 87 TO SR 1121	3.68	25.5	40,000		34,000	75					60							
TOTAL FOR MAP NO. 77					3.68		40,000		34,000	75					60							
6cr.20431.73	Harnett	78	SR 1116	FROM SR 1117 TO NC 27	3.15	23																
TOTAL FOR MAP NO. 78					3.15																	
6cr.20431.73	Harnett	79	SR 1703	FROM SR 1725 TO NC 27	4.8	23														4	5	
TOTAL FOR MAP NO. 79					4.8															4	5	
6cr.20431.73	Harnett	80	SR 1554-A	FROM NC 27 TO SR 1558	1.19	22																
TOTAL FOR MAP NO. 80					1.19																	
6cr.20431.73	Harnett	81	SR 1554-B	FROM SR 1558 TO SR 1553	2.36	22																
TOTAL FOR MAP NO. 81					2.36																	
6cr.20431.73	Harnett	82	SR 1720	FROM SR 1725 TO SR 1703	0.97	22.5																
TOTAL FOR MAP NO. 82					0.97																	
6cr.20431.73	Harnett	83	SR 1725-A	FROM SR 1703 TO SR 1719	1.48	23.5																
TOTAL FOR MAP NO. 83					1.48																	
6cr.20431.73	Harnett	84	SR 1725-B	FROM SR 1719 TO W. BROAD ST	0.87	24																
TOTAL FOR MAP NO. 84					0.87																	
6cr.20431.73	Harnett	85	SR 1790	FROM SR 1780 TO US 421	2.32	23																
TOTAL FOR MAP NO. 85					2.32																	
6cr.20431.73	Harnett	86	SR 1808-A	FROM SR 1709 TO COOPER ST	1.73	21	6,000		5,100													
TOTAL FOR MAP NO. 86					2.55		6,000		5,100													
6cr.20431.73	Harnett	87	SR 1808-B	COOPER ST TO BEGIN TAPER	0.43	31	6,000		6,000													
TOTAL FOR MAP NO. 87					0.58		6,000		6,000													
6cr.20431.73	Harnett	88	SR 1808-C	BEGIN TAPER TO US 301	0.23	48	400		2,500	150		100			25							
TOTAL FOR MAP NO. 88					0.23		400		2,500	150		100			25							
TOTAL FOR PROJ NO. 6cr.20431.73					24.18		52,400		47,600	225		100			85					4	5	
							52,400	47,825	225		100								9	4	5	
GRAND TOTAL					81.41		424,950	600	446,815	25,040	1,500	1,855	8,750	100	3,195	150		4	84	48	4	5
							425,550	473,355	25,040	1,500	10,705			3,345					145			







PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	LENGTH	WIDTH	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	4" WHITE PAINT	4" YELLOW PAINT	8" WHITE PAINT	YELLOW & YELLOW MARKERS	CRYSTAL & RED MARKERS
							EA	EA	EA	EA	EA	LF	LF	LF	EA	EA
<b>TOTAL FOR MAP NO. 68</b>					0.08											
6cr.20261.73	Cumberland	69	SR 3640	FROM SR 3639 TO SR 3639	0.97	27										
<b>TOTAL FOR MAP NO. 69</b>					0.97											
6cr.20261.73	Cumberland	70	SR 3641	FROM SR 3640 TO SR 3640	0.28	27										
<b>TOTAL FOR MAP NO. 70</b>					0.28											
6cr.20261.73	Cumberland	71	SR 3642	FROM SR 3640 TO SR 3640	0.23	27										
<b>TOTAL FOR MAP NO. 71</b>					0.23											
6cr.20261.73	Cumberland	72	SR 3643	FROM SR 3640 TO SR 1345	0.08	27										
<b>TOTAL FOR MAP NO. 72</b>					0.08											
6cr.20261.73	Cumberland	73	SR 3630	FROM SR 3628 TO CUL DE SAC	0.05	21										
<b>TOTAL FOR MAP NO. 73</b>					0.05											
6cr.20261.73	Cumberland	74	SR 4022	FROM SR 4020 TO DEAD END	0.08	26										
<b>TOTAL FOR MAP NO. 74</b>					0.08											
6cr.20261.73	Cumberland	75	SR 4021	FROM SR 4020 TO CUL DE SAC	0.07	26										
<b>TOTAL FOR MAP NO. 75</b>					0.07											
6cr.20261.73	Cumberland	76	SR 4020	FROM SR 3367 TO SR 4024	0.54	26										
<b>TOTAL FOR MAP NO. 76</b>					0.54											
<b>TOTAL FOR PROJ NO. 6cr.20261.73</b>					28.14		115	54	36	8	10	54,400	61,540	250	1,060	550
							223				115,940				1,610	
6cr.20431.73	Harnett	77	SR 1120	FROM NC 87 TO SR 1121	3.68	25.5	2		1	1					250	15
<b>TOTAL FOR MAP NO. 77</b>					3.68		2		1	1					250	15
6cr.20431.73	Harnett	78	SR 1116	FROM SR 1117 TO NC 27	3.15	23					68,000	57,800			225	
<b>TOTAL FOR MAP NO. 78</b>					3.15						68,000	57,800			225	
6cr.20431.73	Harnett	79	SR 1703	FROM SR 1725 TO NC 27	4.8	23					104,000	88,400			370	
<b>TOTAL FOR MAP NO. 79</b>					4.8						104,000	88,400			370	
6cr.20431.73	Harnett	80	SR 1554-A	FROM NC 27 TO SR 1558	1.19	22					26,000	22,100				
<b>TOTAL FOR MAP NO. 80</b>					1.19						26,000	22,100				
6cr.20431.73	Harnett	81	SR 1554-B	FROM SR 1558 TO SR 1553	2.36	22					50,000	42,500				
<b>TOTAL FOR MAP NO. 81</b>					2.36						50,000	42,500				
6cr.20431.73	Harnett	82	SR 1720	FROM SR 1725 TO SR 1703	0.97	22.5					22,000	18,700				
<b>TOTAL FOR MAP NO. 82</b>					0.97						22,000	18,700				
6cr.20431.73	Harnett	83	SR 1725-A	FROM SR 1703 TO SR 1719	1.48	23.5					32,000	27,200				
<b>TOTAL FOR MAP NO. 83</b>					1.48						32,000	27,200				
6cr.20431.73	Harnett	84	SR 1725-B	FROM SR 1719 TO W. BROAD ST	0.87	24					18,250	15,300			60	8
<b>TOTAL FOR MAP NO. 84</b>					0.87						18,250	15,300			60	8
6cr.20431.73	Harnett	85	SR 1790	FROM SR 1780 TO US 421	2.32	23					48,000	43,200				
<b>TOTAL FOR MAP NO. 85</b>					2.32						48,000	43,200				
6cr.20431.73	Harnett	86	SR 1808-A	FROM SR 1709 TO COOPER ST	1.73	21					44,000	37,400			40	
<b>TOTAL FOR MAP NO. 86</b>					1.73						44,000	37,400			40	
6cr.20431.73	Harnett	87	SR 1808-B	FROM SR 1709 TO COOPER ST	0.82	23									45	
<b>TOTAL FOR MAP NO. 87</b>					0.82										45	
6cr.20431.73	Harnett	88	SR 1808-C	COOPER ST TO BEGIN TAPER	0.43	31										
<b>TOTAL FOR MAP NO. 88</b>					0.43											
6cr.20431.73	Harnett	88	SR 1808-C	FROM COOPER ST TO BEGING TAPER	0.15	23										
<b>TOTAL FOR MAP NO. 87</b>					0.58										45	
6cr.20431.73	Harnett	88	SR 1808-C	BEGIN TAPER TO US 301	0.23	48		2		2					20	8
<b>TOTAL FOR MAP NO. 88</b>					0.23			2		2					20	8
<b>TOTAL FOR PROJ NO. 6cr.20431.73</b>					24.18		2	2	1	3		412,250	352,600		1,010	31
							8				764,850				1,041	
<b>GRAND TOTAL</b>					81.41		243	90	62	11	10	466,650	414,140	250	4,750	1,051
							416				880,790				5,801	

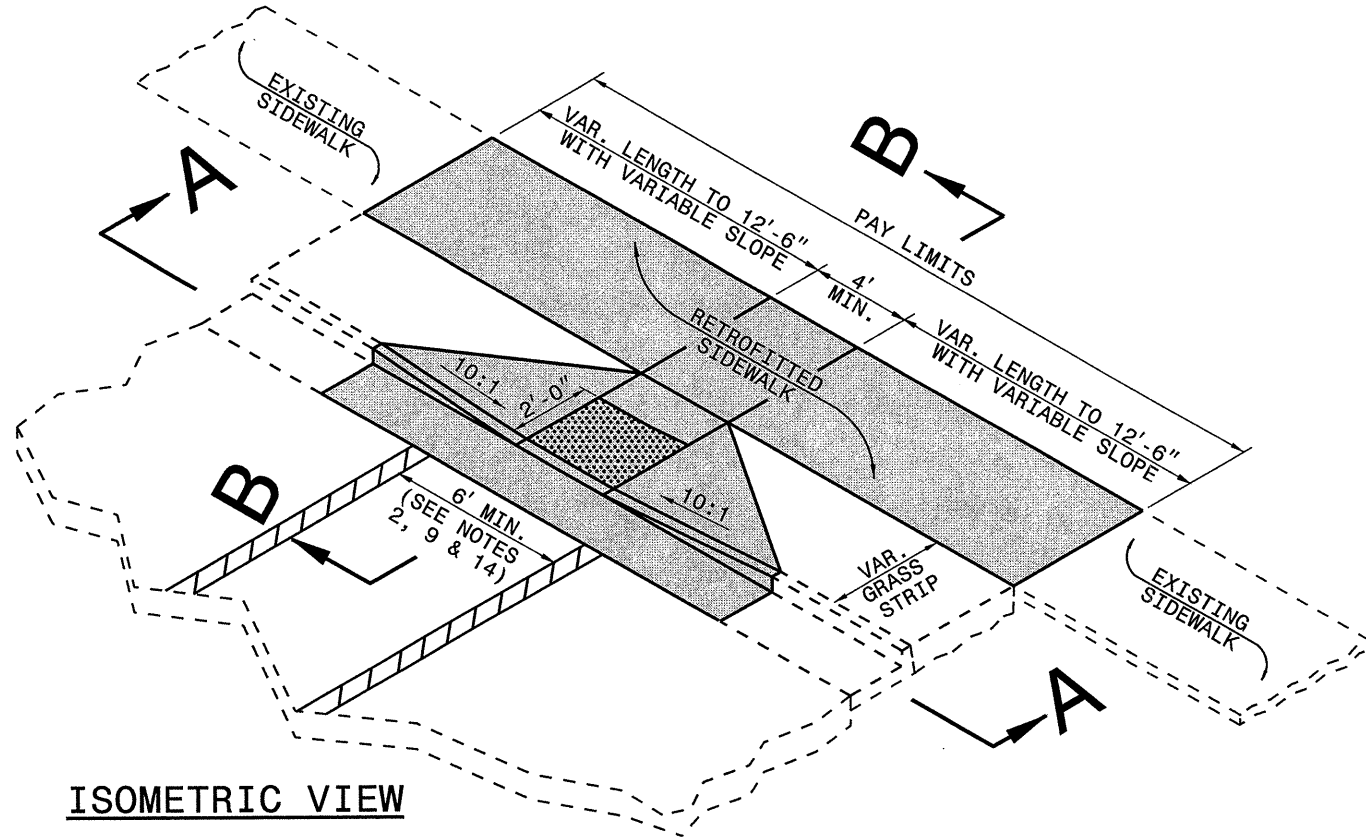
STATE OF NORTH CAROLINA  
DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR  
**CURB RAMP**  
EXISTING CURB AND GUTTER

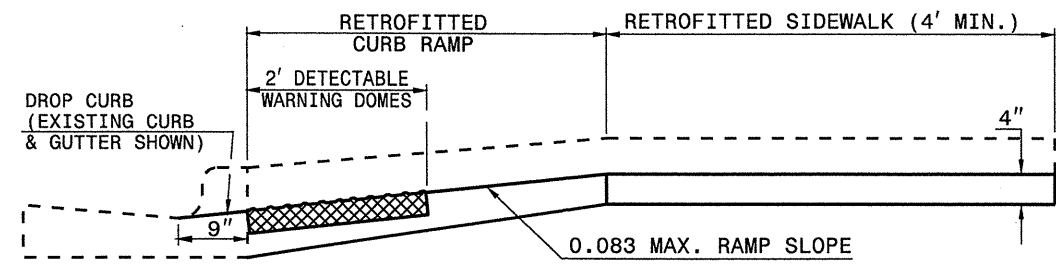
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DIVISION OF HIGHWAYS  
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ENGLISH DETAIL DRAWING FOR  
**CURB RAMP**  
EXISTING CURB AND GUTTER

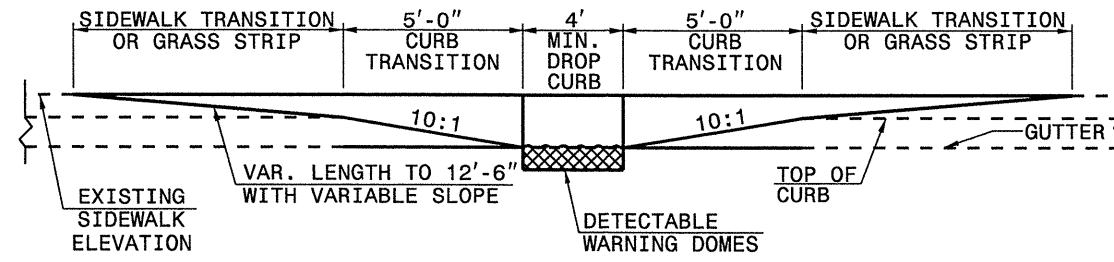
**CURB RAMP AND EXISTING SIDEWALK WITH GRASS STRIP**



**ISOMETRIC VIEW**

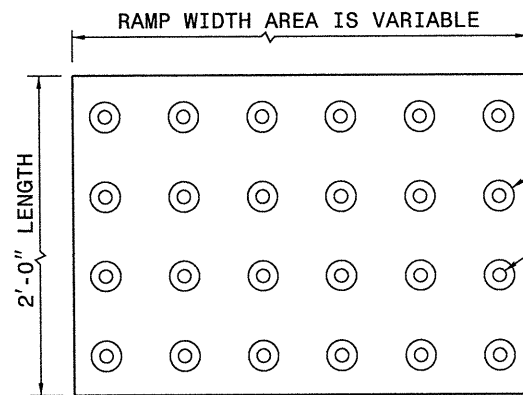


**SECTION B-B**

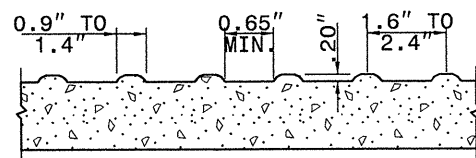


**SECTION A-A**

PAY LIMITS OF RETROFIT CURB RAMP

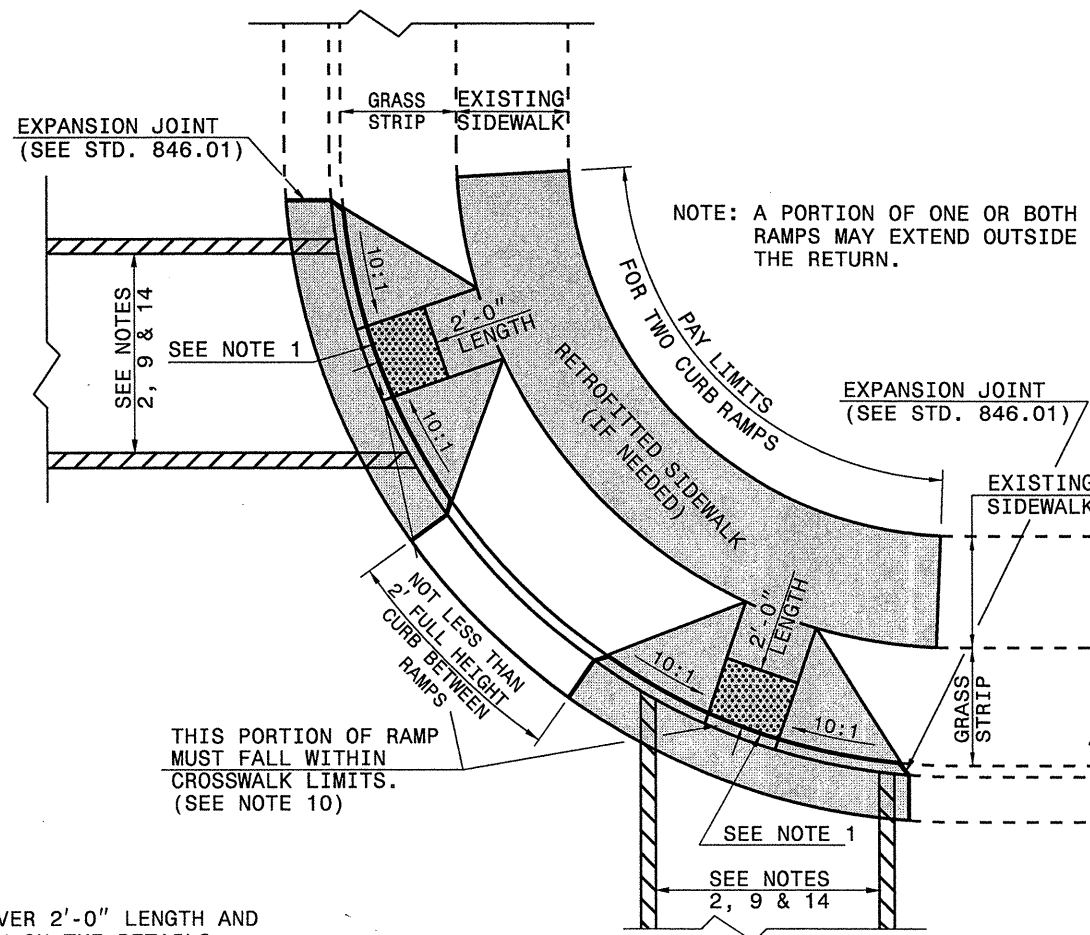


BASE DIAMETER  
0.90"R TO 1.40"R  
TOP DIAMETER OF NO LESS  
THAN 50% TO NO MORE  
THAN 65% OF THE BASE  
DIAMETER



**DETECTABLE WARNING DOMES**

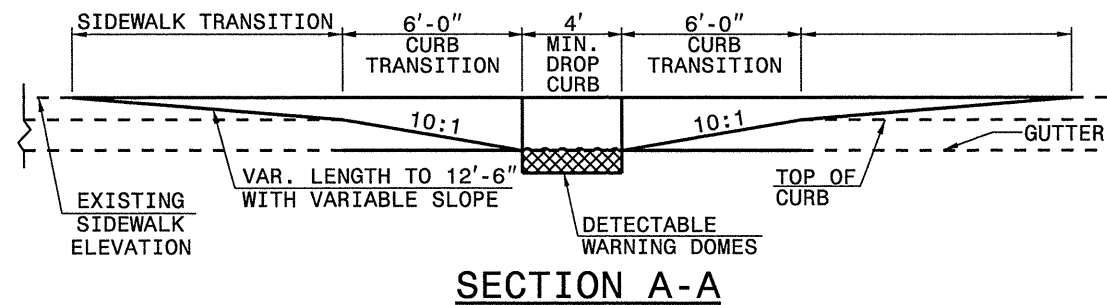
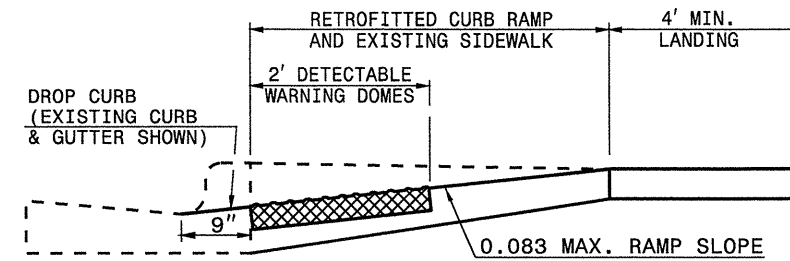
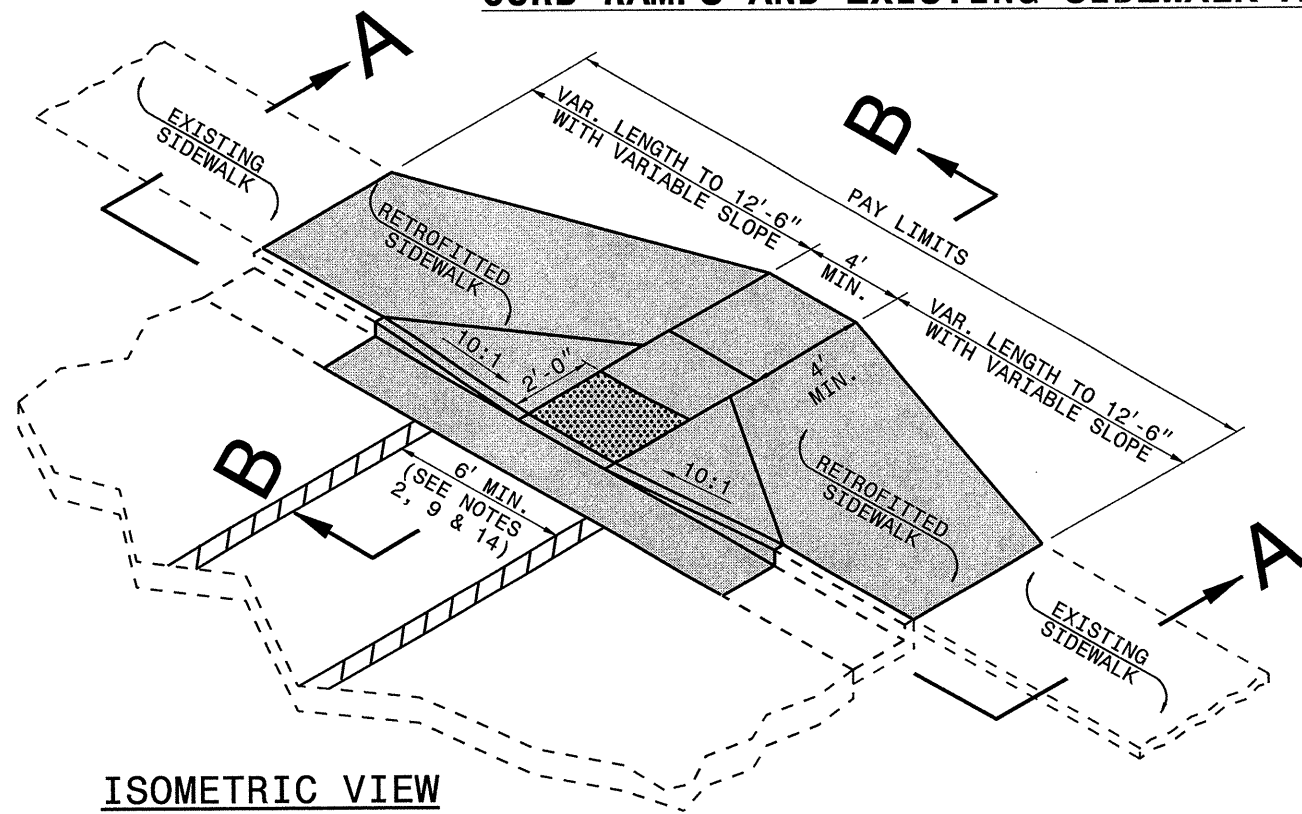
- NOTES:
1. PLACE DETECTABLE WARNING DOMES TO COVER 2'-0" LENGTH AND FULL WIDTH OF THE RAMP FLOOR AS SHOWN ON THE DETAILS.
  2. OBTAIN VISIBLE CONTRAST WITH ADJOINING SURFACE, EITHER LIGHT-ON-DARK, OR DARK-ON-LIGHT SEQUENCE COVERING THE ENTIRE RAMP.



**PLAN VIEW**

DUAL RAMPS  
ANY RADII  
(40" MIN. FLOOR WIDTH)

**CURB RAMPS AND EXISTING SIDEWALK ADJACENT TO CURB**



ISOMETRIC VIEW

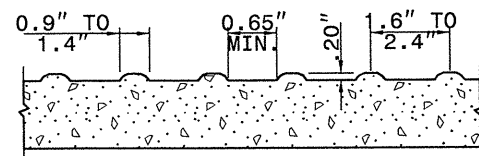
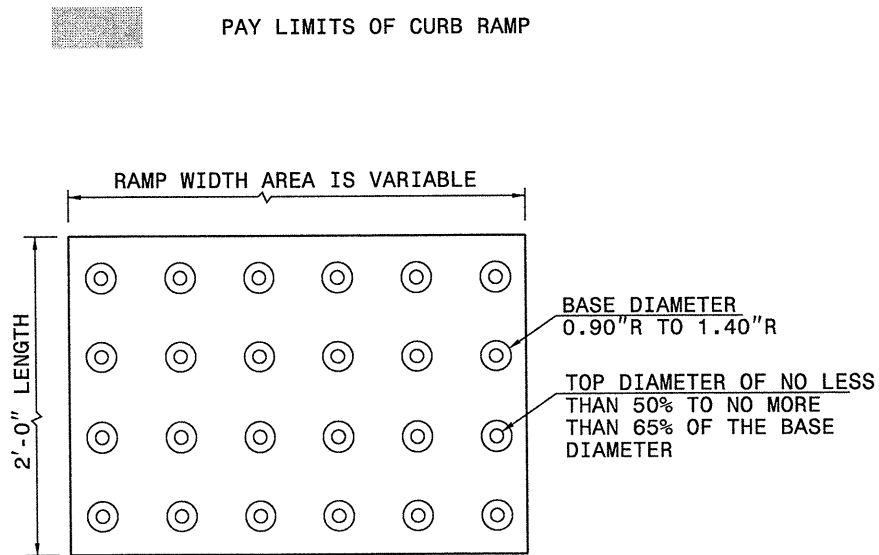
SECTION A-A

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RALEIGH, N.C.

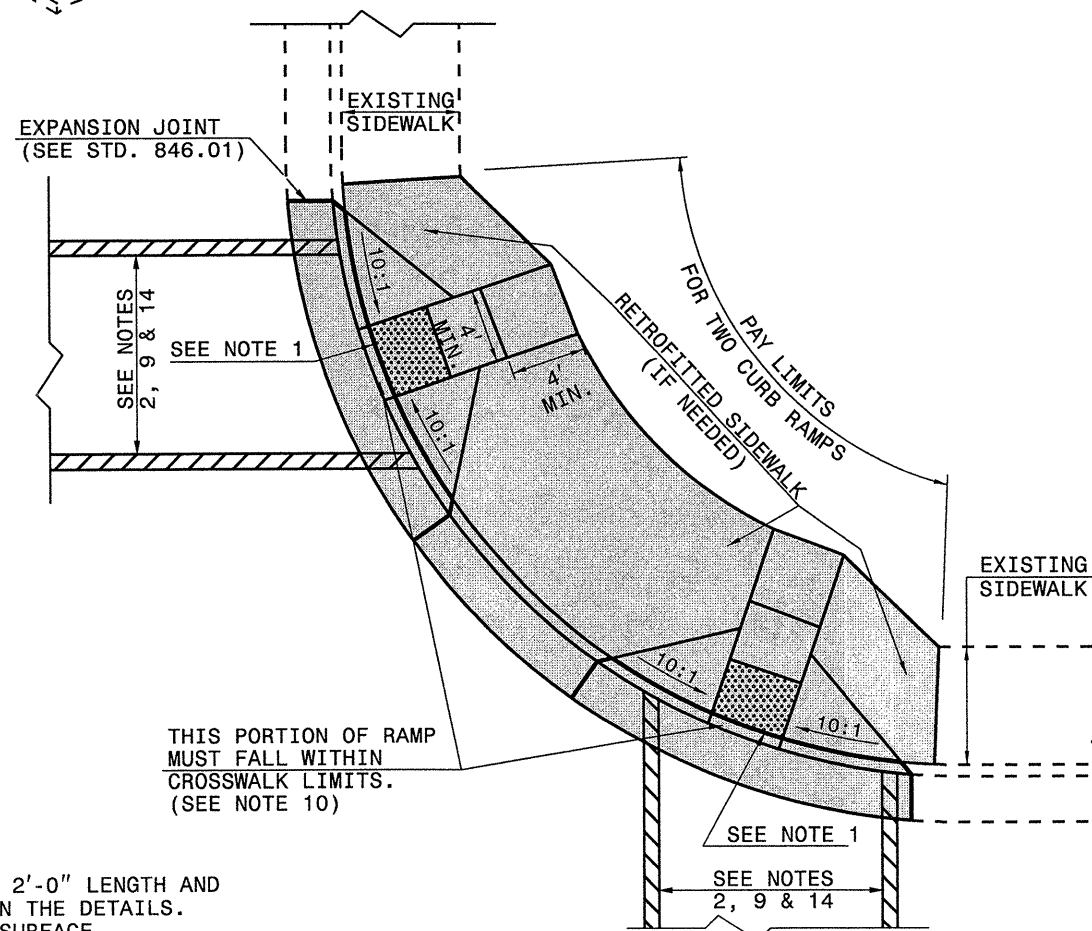
ENGLISH DETAIL DRAWING FOR  
**CURB RAMP**  
EXISTING CURB AND GUTTER

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

ENGLISH DETAIL DRAWING FOR  
**CURB RAMP**  
EXISTING CURB AND GUTTER



- NOTES:
1. PLACE DETECTABLE WARNING DOMES TO COVER 2'-0" LENGTH AND FULL WIDTH OF THE RAMP FLOOR AS SHOWN ON THE DETAILS.
  2. OBTAIN VISIBLE CONTRAST WITH ADJOINING SURFACE, EITHER LIGHT-ON-DARK, OR DARK-ON-LIGHT SEQUENCE COVERING THE ENTIRE RAMP.



PLAN VIEW

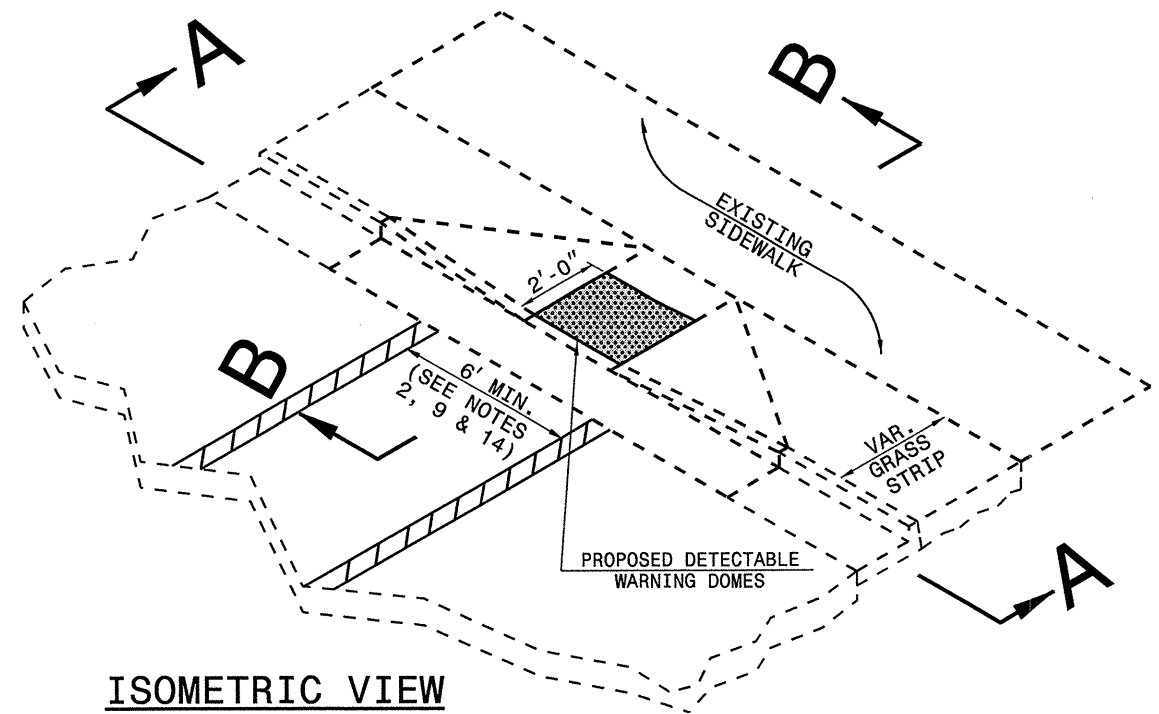
DUAL RAMPS  
ANY RADII  
(40" MIN. FLOOR WIDTH)

DETECTABLE WARNING DOMES

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

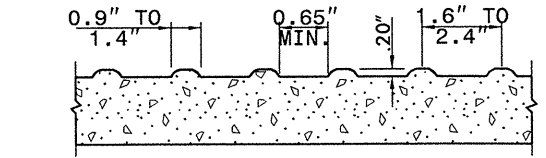
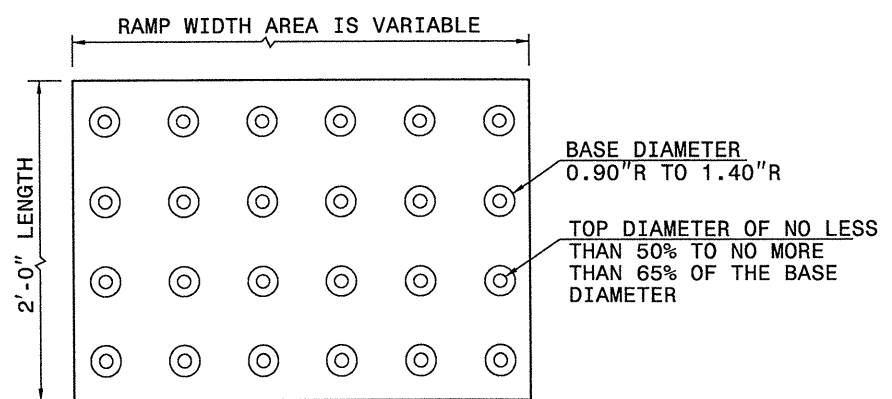
ENGLISH DETAIL DRAWING FOR  
**CURB RAMP**  
EXISTING CURB AND GUTTER

**RETROFITTING DETECTABLE WARNING DOMES ONTO EXISTING CURB RAMP**



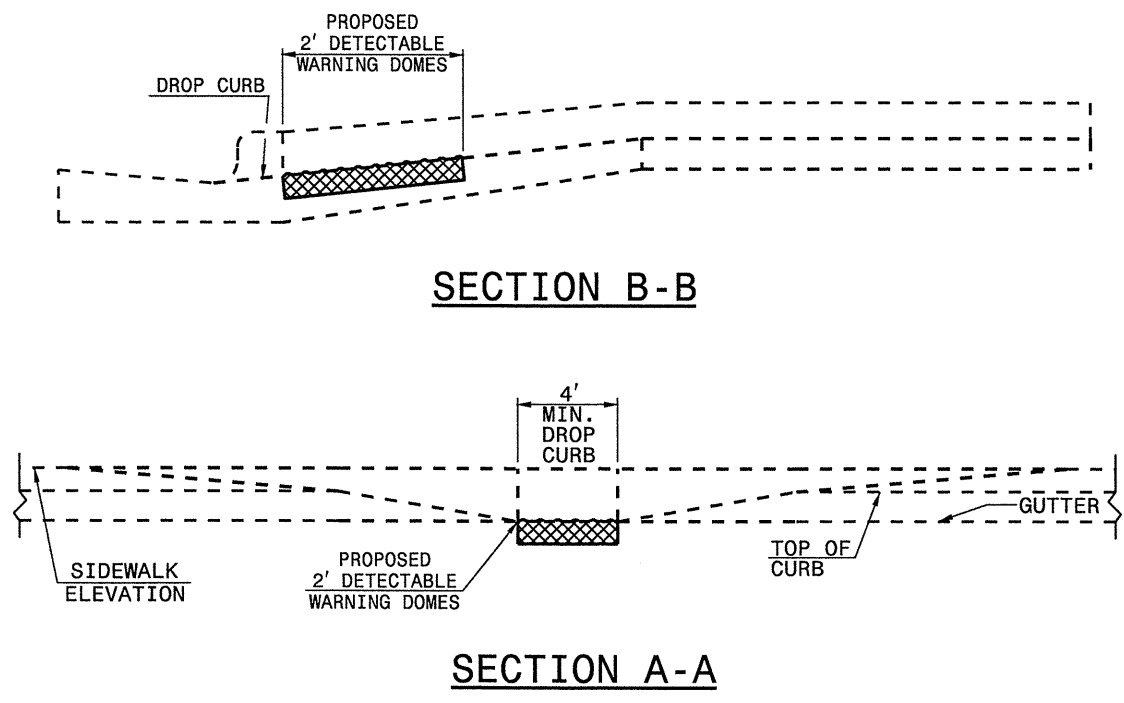
**ISOMETRIC VIEW**

PAY LIMITS OF RETROFIT CURB RAMP



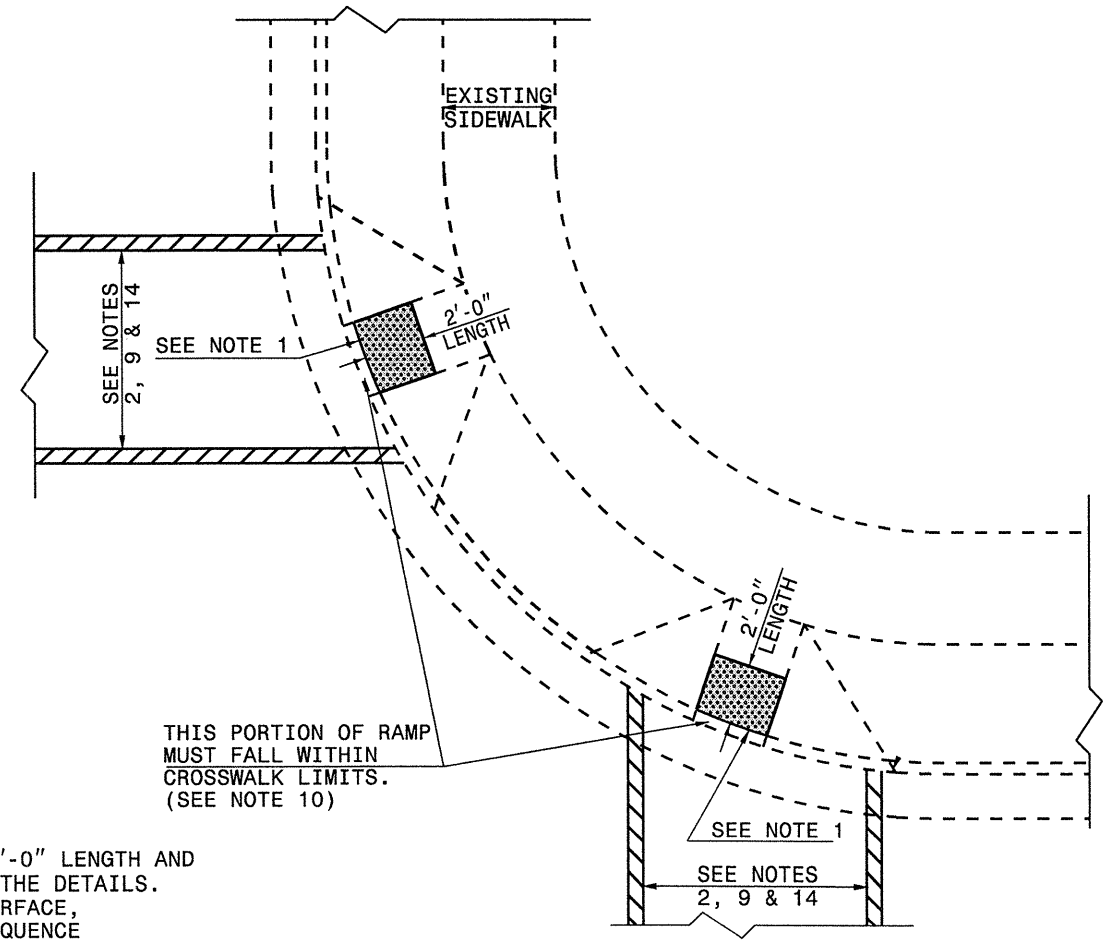
- NOTES:**
1. PLACE DETECTABLE WARNING DOMES TO COVER 2'-0" LENGTH AND FULL WIDTH OF THE RAMP FLOOR AS SHOWN ON THE DETAILS.
  2. OBTAIN VISIBLE CONTRAST WITH ADJOINING SURFACE, EITHER LIGHT-ON-DARK, OR DARK-ON-LIGHT SEQUENCE COVERING THE ENTIRE RAMP.

**DETECTABLE WARNING DOMES**



**SECTION B-B**

**SECTION A-A**



**PLAN VIEW**

DUAL RAMPS  
ANY RADII  
(40" MIN. FLOOR WIDTH)

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

ENGLISH DETAIL DRAWING FOR  
**CURB RAMP**  
EXISTING CURB AND GUTTER

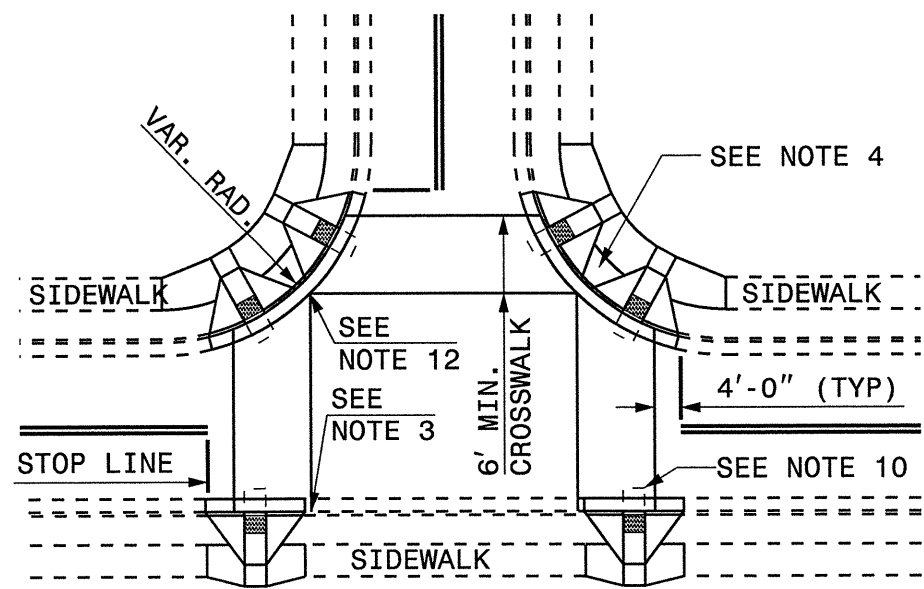
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ENGLISH DETAIL DRAWING FOR  
**CURB RAMP**  
EXISTING CURB AND GUTTER

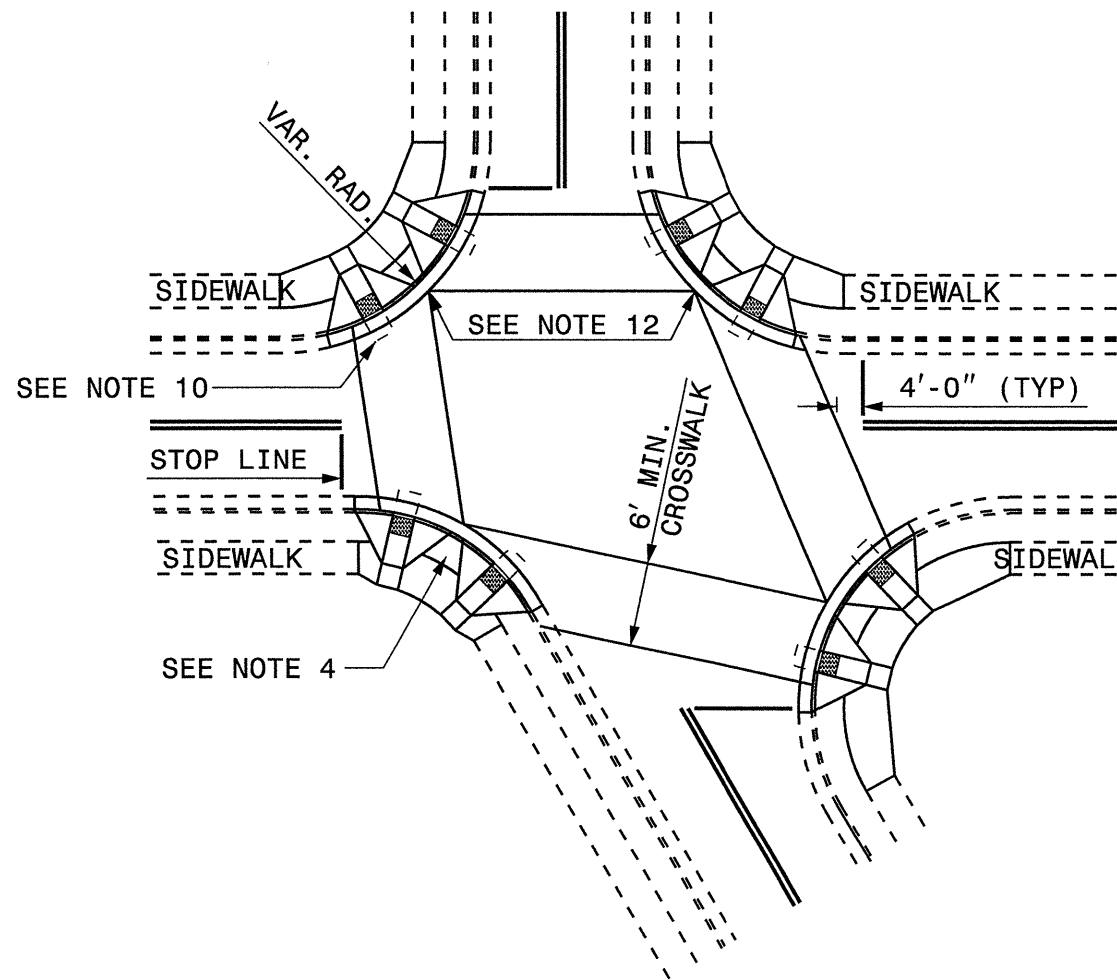
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ENGLISH DETAIL DRAWING FOR  
**CURB RAMP**  
EXISTING CURB AND GUTTER

**CURB RAMPS AND EXISTING SIDEWALK**

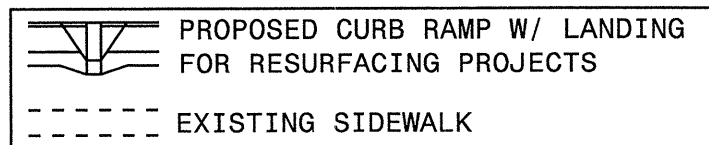


DETAIL SHOWING TYPICAL LOCATION OF CURB RAMPS,  
PEDESTRIAN CROSSWALKS AND STOP LINES FOR TEE INTERSECTIONS



DETAIL SHOWING TYPICAL LOCATION OF CURB  
RAMPS, PEDESTRIAN CROSSWALKS AND STOP LINES

**RESURFACING PROJECTS**



ALLOWABLE LOCATIONS  
.....ANY

**CURB RAMP AND EXISTING SIDEWALK**

NOTES:

1. CONSTRUCT THE RAMP SURFACE TO BE STABLE, FIRM, AND SLIP RESISTANT. CONSTRUCT THE CURB RAMP TYPE AS SHOWN IN THE PAVEMENT MARKING PLANS OR AS DIRECTED BY THE ENGINEER.
2. LOCATE CURB RAMPS AND PLACE PEDESTRIAN CROSSWALK MARKINGS AS SHOWN IN THE PAVEMENT MARKING PLANS. WHEN FIELD ADJUSTMENTS REQUIRE MOVING CURB RAMPS OR MARKINGS AS SHOWN, CONTACT THE SIGNING AND DELINEATION UNIT OR LOCATE AS DIRECTED BY THE ENGINEER.
3. COORDINATE THE CURB RAMP AND THE PEDESTRIAN CROSSWALK MARKINGS SO A 4'x4' CLEAR SPACE AT THE BASE OF THE CURB RAMP WILL FALL WITHIN THE PEDESTRIAN CROSSWALK LINES.
4. SET BACK DISTANCE FROM INSIDE CROSSWALK MARKING TO NEAREST EDGE OF TRAVEL LANE IS 4' MINIMUM.
5. REFER TO THE PAVEMENT MARKING PLANS FOR STOP BAR LOCATIONS AT SIGNALIZED INTERSECTIONS. IF A PAVEMENT MARKING PLAN IS NOT PROVIDED, CONTACT THE SIGNAL DESIGN SECTION FOR THE STOP BAR LOCATIONS OR LOCATE AS DIRECTED BY THE ENGINEER.
6. TERMINATE PARKING A MINIMUM OF 20' BACK OF A PEDESTRIAN CROSSWALK.
7. CONSTRUCT CURB RAMPS A MINIMUM OF 4' WIDE.
8. CONSTRUCT THE RUNNING SLOPE OF THE RAMP 8.33% MAXIMUM.
9. ALLOWABLE CROSS SLOPE ON SIDEWALKS AND CURB RAMPS WILL BE 2% MAXIMUM.
10. CONSTRUCT THE SIDE FLARE SLOPE A MAXIMUM OF 10% MEASURED ALONG THE CURB LINE.
11. CONSTRUCT THE COUNTER SLOPE OF THE GUTTER OR STREET AT THE BASE OF THE CURB RAMP A MAXIMUM OF 5% AND MAINTAIN A SMOOTH TRANSITION.
12. CONSTRUCT LANDINGS FOR SIDEWALK A MINIMUM OF 4'x4' WITH A MAXIMUM SLOPE OF 2% IN ANY DIRECTION. CONSTRUCT LANDINGS FOR MEDIAN ISLANDS A MINIMUM OF 5'x5' WITH A MAXIMUM SLOPE OF 2% IN ANY DIRECTION.
13. TO USE A MEDIAN ISLAND AS A PEDESTRIAN REFUGE AREA, MEDIAN ISLANDS WILL BE A MINIMUM OF 6' WIDE. CONSTRUCT MEDIAN ISLANDS TO PROVIDE PASSAGE OVER OR THROUGH THE ISLAND.
14. SMALL CHANNELIZATION ISLANDS THAT CAN NOT PROVIDE A 5'x5' LANDING AT THE TOP OF A RAMPS, WILL BE CUT THROUGH LEVEL WITH THE SURFACE STREET.
15. CURB RAMPS WITH RETURNED CURBS MAY BE USED ONLY WHERE PEDESTRIANS WOULD NOT NORMALLY WALK ACROSS THE RAMP. THE ADJACENT SURFACE IS PLANTING OR OTHER NON-WALKING SURFACE OR THE SIDE APPROACH IS SUBSTANTIALLY OBSTRUCTED.
16. PLACE A 1/2" EXPANSION JOINT WHERE THE CONCRETE CURB RAMP JOINS THE CURB AS SHOWN IN ROADWAY STANDARD DRAWING 848.01
17. PLACE ALL PEDESTRIAN PUSH BUTTON ACTUATORS AND CROSSING SIGNALS AS SHOWN IN THE PLANS OR AS SHOWN IN THE MUTCD.
18. CURB RAMPS THROUGH MEDIAN ISLANDS, SINGLE RAMPS AT DUAL CROSSWALKS OR LIMITED R/W SITUATIONS, WILL BE HANDLED BY SPECIAL DETAILS. CONTACT THE CONTRACT STANDARDS AND DEVELOPMENT UNIT FOR THE DETAILS OR FOR A SPECIAL DESIGN.

STATE OF  
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ENGLISH DETAIL DRAWING FOR  
**CURB RAMP**  
EXISTING CURB AND GUTTER

STATE OF  
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DIVISION OF HIGHWAYS  
RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR  
**CURB RAMP**  
EXISTING CURB AND GUTTER



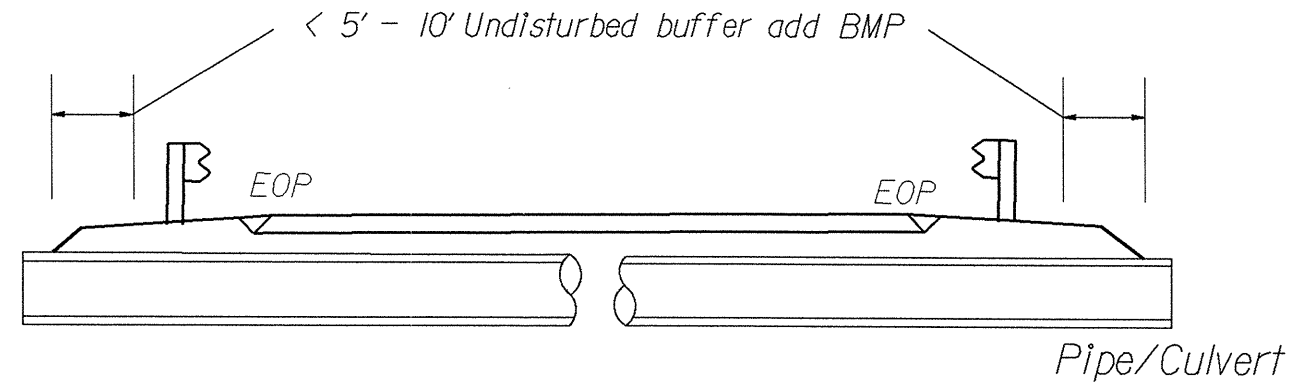
NOTES: Less than 5' - 10' undisturbed buffer from ROW, ditchline, water feature, or drainage inlet, add BMP.

BMP Options: Wattle or Silt Fence

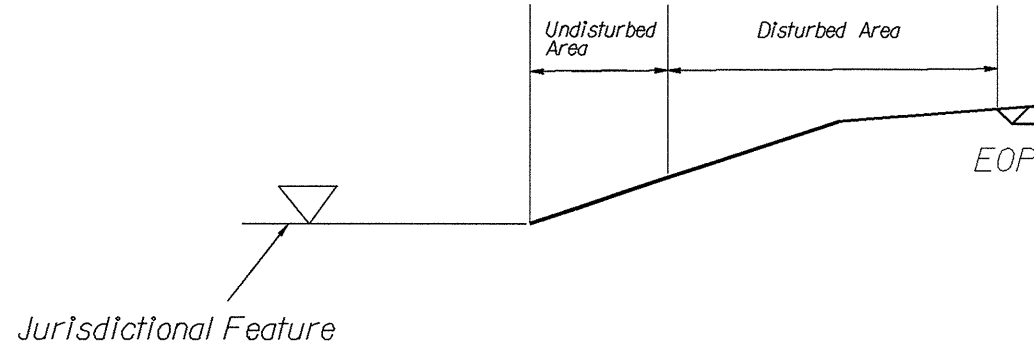
# EROSION CONTROL DETAIL

Sheet 49

PROJECT REFERENCE NO. 6CRJ026173, etc.	SHEET NO. EC-1
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



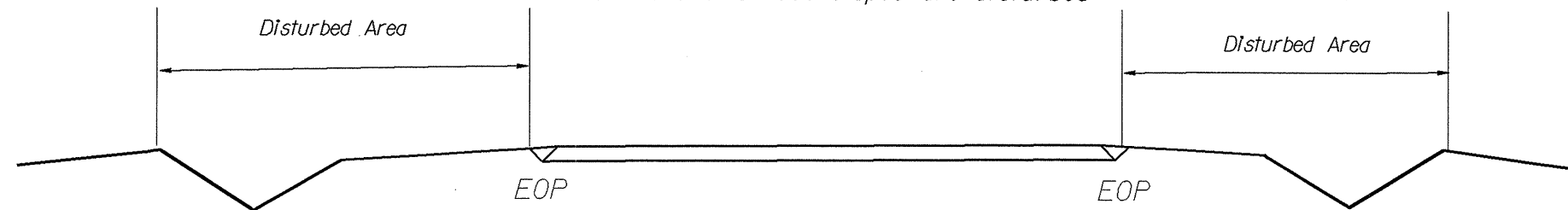
< 5' - 10' Undisturbed buffer from jurisdictional feature add BMP



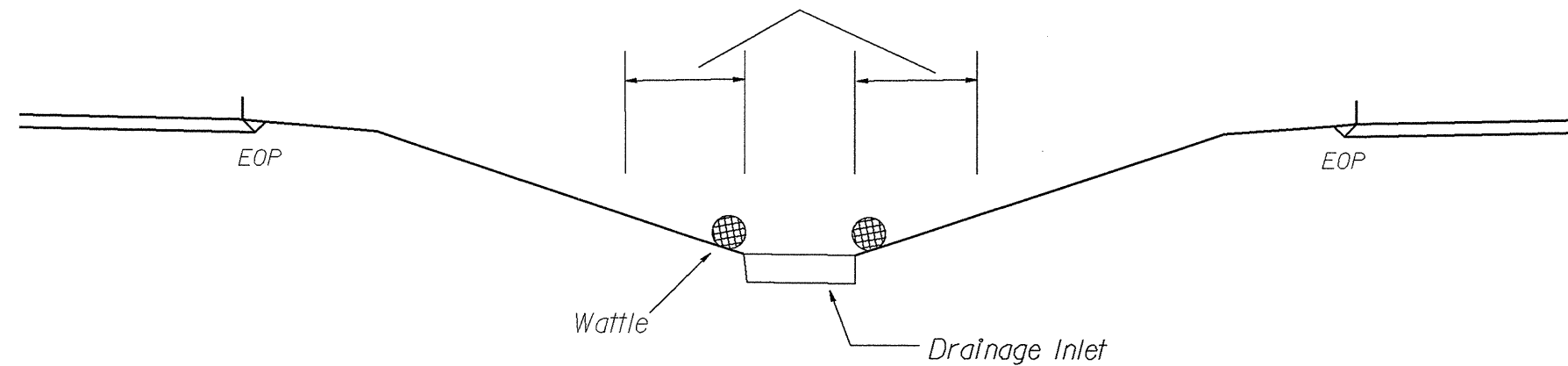
< 5' - 10' Undisturbed buffer from ditchline, add BMP



Use BMP's if shoulders and/or frontslopes and/or ditchline and/or backslopes are disturbed



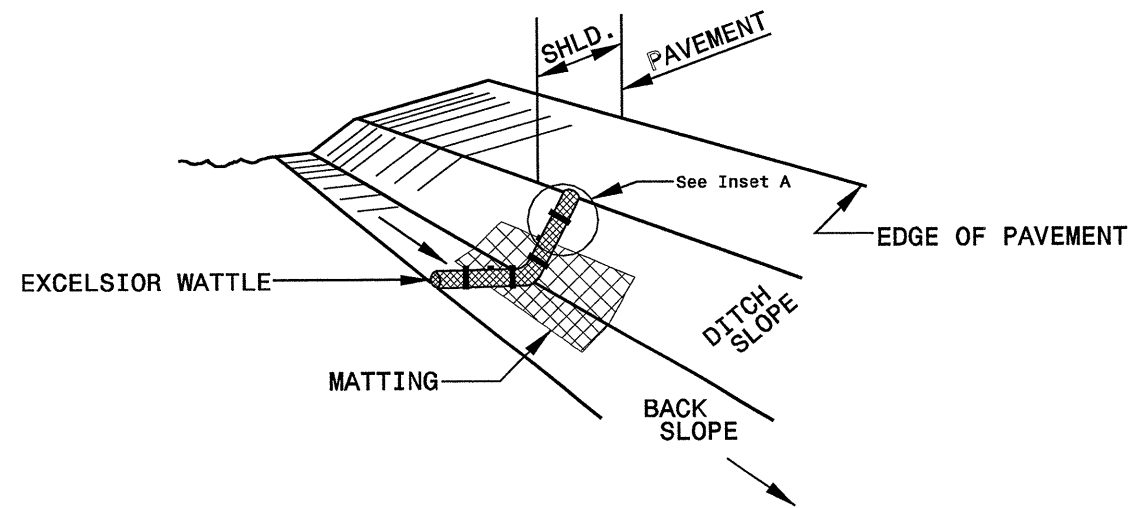
< 5' - 10' Undisturbed buffer from inlet, add wattle



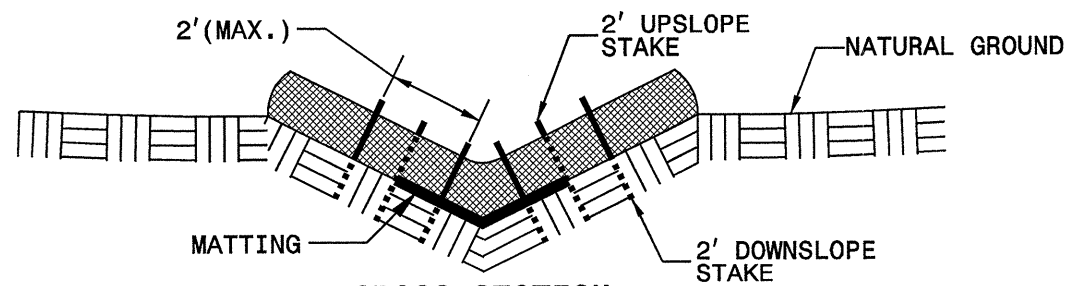
NOT TO SCALE

PROJECT REFERENCE NO.	SHEET NO.
	EC-2
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

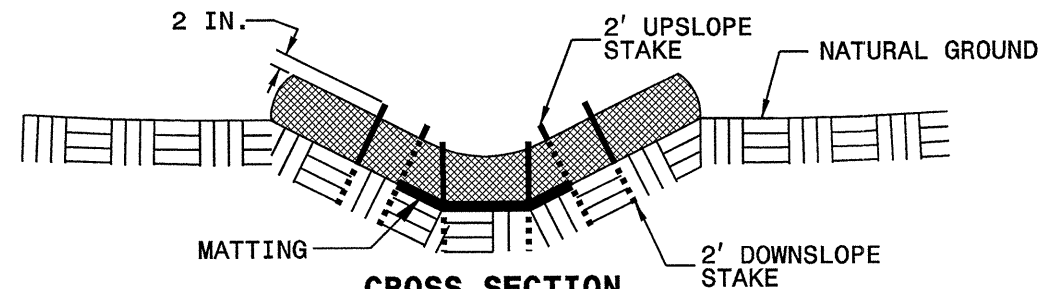
# WATTLE DETAIL



**ISOMETRIC VIEW**

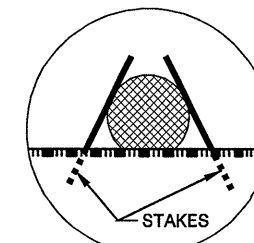


**CROSS SECTION VEE DITCH**

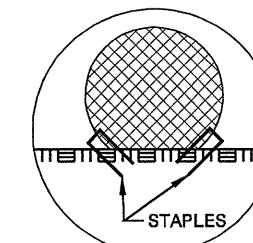


**CROSS SECTION TRAPEZOIDAL DITCH**

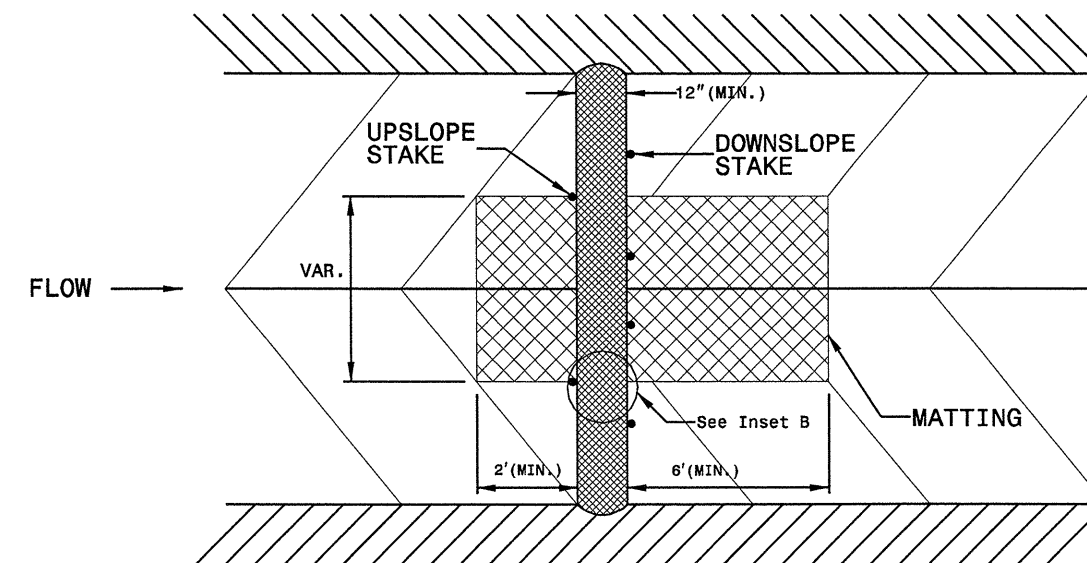
- NOTES:**
- USE MINIMUM 12 IN. DIAMETER EXCELSIOR WATTLE.
  - USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.
  - ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.
  - INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.
  - PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.
  - INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.
  - INSTALL MATTING IN ACCORDANCE WITH SECTION 1631 OF THE STANDARD SPECIFICATIONS.



INSET A



INSET B



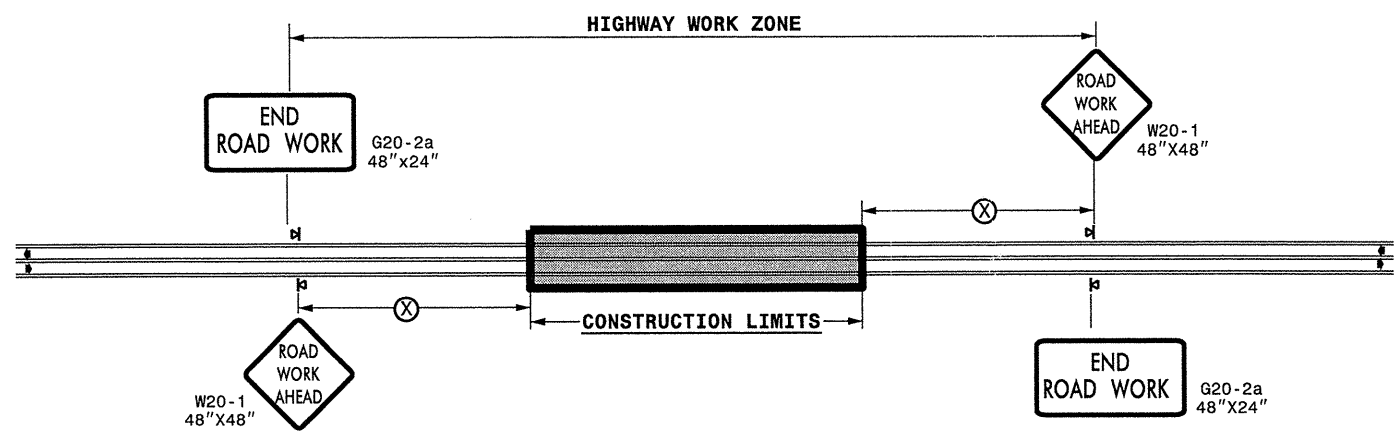
**TOP VIEW**

26-SEP-2011 09:46  
 N:\DOT\UP\SR06\1\CR0\UPS-WZTCCC-TMUN\WZTC\Resurfacing\2011\Resurfacing\2011\Div06\C20286A-D\_6CR.10261.73x4\_Cumb\_Harrn\_NC82m88.okp\Files Out\C202854A-B\_6CR.10181.72x2\_2wayundivurbfr.wys.july2006\_portable.dwg  
 ONP0181 AT TEL24748

WBS ELEMENTS: 6CR.10261.73, 6CR.10431.73,  
6CR.20261.73 & 6CR.20431.73

PROJ. REFERENCE NO. SEE TO THE LEFT	SHEET NO. TCP-1
--	--------------------

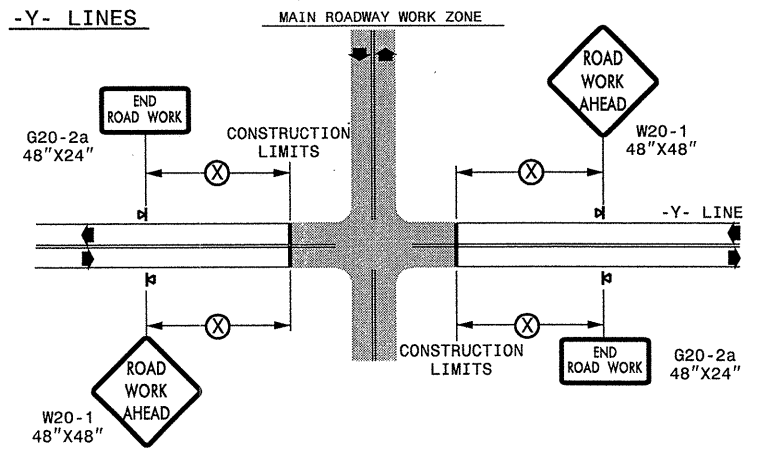
**TWO-WAY UNDIVIDED \*\* (L-LINES)**



POSTED SPEED LIMIT (M.P.H.)	RECOMMENDED MINIMUM SIGN SPACING
≤ 50	500'
≥ 55	1000'

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

**ROADWAYS INTERSECTING ALONG 2 WAY UNDIVIDED WORK ZONE (Y-LINES)**



DETAIL DRAWING  
 FOR TWO-WAY UNDIVIDED  
 WORK ZONE WARNING SIGNS

**GENERAL NOTES**

- USE FLUORESCENT ORANGE SHEETING (TYPE VII OR HIGHER) ON ALL ADVANCE 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 URBAN 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

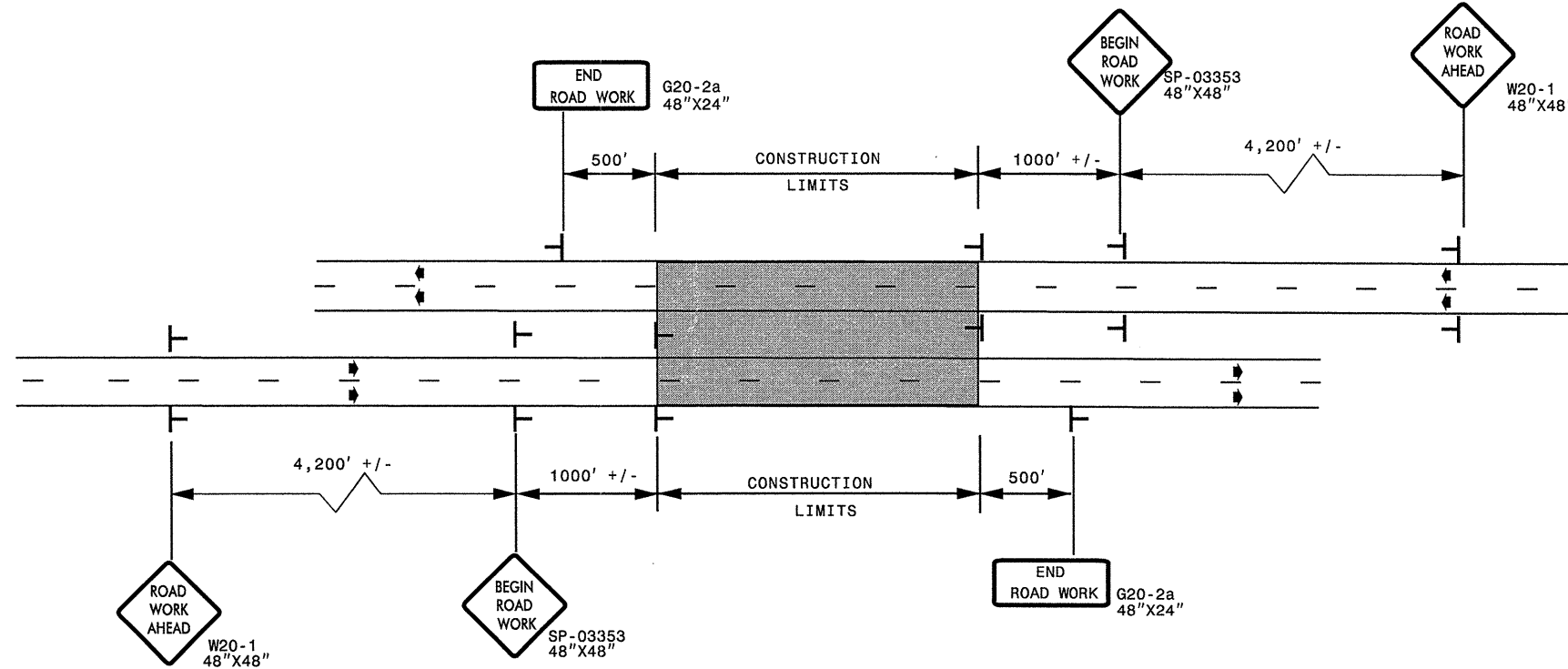
APPROVED: _____ DATE: _____	DETAIL DRAWING FOR TWO-WAY UNDIVIDED ADVANCED WORK ZONE WARNING SIGNS							
SEAL 	SCALE: NONE							
	DATE: 09/11							
	DESIGN BY: _____							
	REVIEWED BY: _____							
		REVISIONS <table border="1"> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </table>						

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

WBS ELEMENTS: 6CR.10261.73, 6CR.10431.73, 6CR.20261.73 & 6CR.20431.73

PROJ. REFERENCE NO.	SHEET NO.
SEE TO THE LEFT	TCP-2

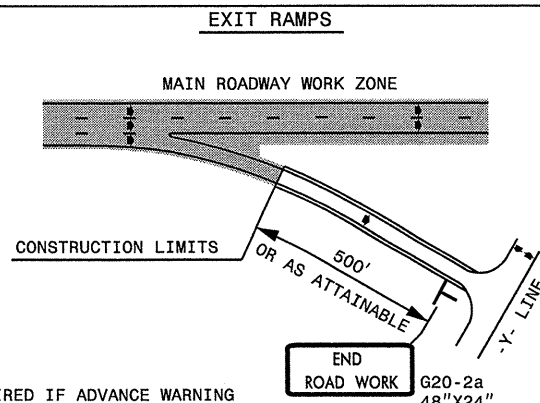
## DETAIL A



LEGEND	
—	STATIONARY SIGN
→	DIRECTION OF TRAFFIC FLOW

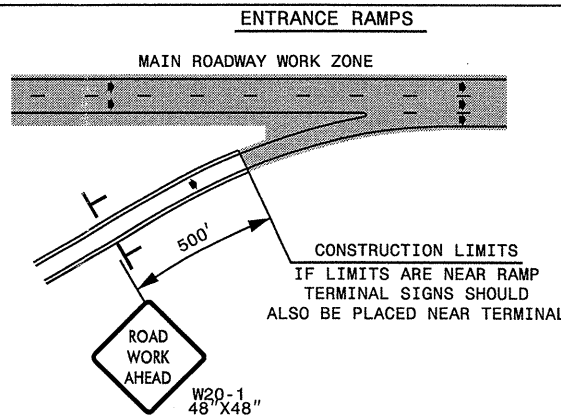
\* USE THE "\$250 SPEEDING PENALTY" SIGN, SPEED LIMIT SIGN, AND ORANGE PANEL; ONLY WHEN A "\$250 SPEEDING PENALTY" ORDINANCE HAS BEEN ISSUED BY THE REGIONAL TRAFFIC ENGINEER.

## DETAIL B

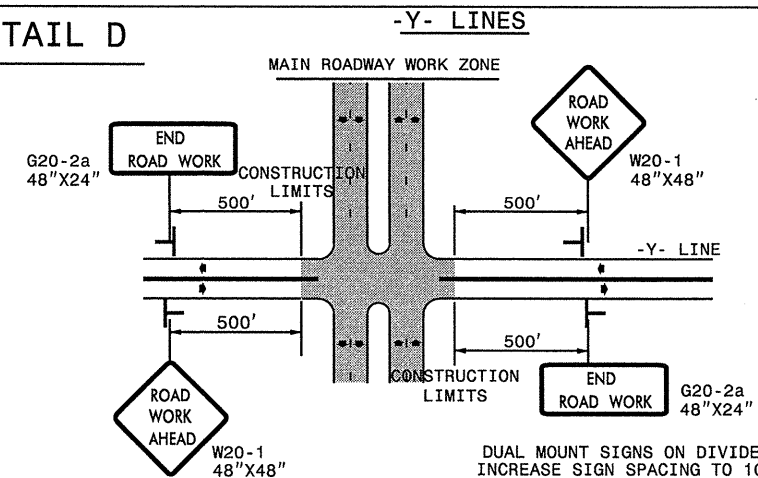


NOTE: SIGN NOT REQUIRED IF ADVANCE WARNING SIGNS HAVE BEEN PLACED ALONG -Y- LINE THAT RAMP INTERSECTS. IF CONSTRUCTION LIMITS ARE AT END OF RAMP, PLACE SIGN AT END OF RAMP.

## DETAIL C



## DETAIL D



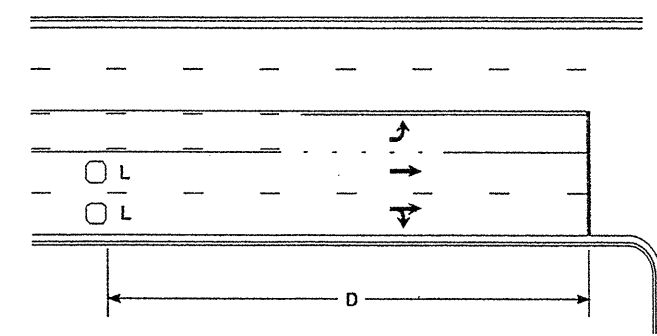
## GENERAL NOTES

- 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.
- SIGNS SHOWN ARE REQUIRED FOR WORK ZONES THAT WILL REMAIN IN EFFECT OVERNIGHT. FOR SHORT-TERM DAILY MAINTENANCE TYPE OPERATIONS, THIS SIGNING APPLICATION IS OPTIONAL; MAY USE ONLY APPLICABLE ROADWAY STANDARD DRAWINGS INSTEAD. HOWEVER, IF THIS SIGNING APPLICATION IS USED, SIGNS MAY BE PORTABLE MOUNTED.
- ALL SIGN SPACING DIMENSIONS ARE APPROXIMATE, FIELD ADJUST AS NECESSARY OR AS DIRECTED.
- USE 3LB STEEL U-CHANNEL POST OR 4" X 4" WOOD POST FOR ALL WORK ZONE SIGNS. 3LB STEEL U-CHANNEL POSTS MUST MEET THE REQUIREMENTS OF STANDARD SPECIFICATION SECTION 1094-1(B), MAY BE GALVANIZED STEEL, OR MAY BE PAINTED GREEN BY THE POST MANUFACTURER. SQUARE STEEL TUBING POSTS HAVING EQUIVALENT STRENGTH OF THE 3 LB STEEL U-CHANNEL POST ARE ALSO ACCEPTABLE FOR USE. ERECT SIGNS PER ROADWAY STANDARD DRAWING 1110.01. PAYMENT FOR WOOD POSTS, 3LB STEEL U-CHANNEL AND SQUARE STEEL TUBING POSTS WITH SIGNS WILL BE MADE ACCORDING TO STANDARD SPECIFICATION "WORK ZONE SIGNS" SECTION 1110.
- WHEN NECESSARY, USE SPLICING IN ACCORDANCE WITH ROADWAY STANDARD DRAWING NO. 1110.01. REMOVE ENTIRE POST WHEN REMOVING SIGNS WITH SPLICED POSTS.
- DO NOT BACK BRACE SIGN SUPPORTS.

APPROVED: _____ DATE: _____	ADVANCED WORK ZONE WARNING SIGNS FOR FREEWAYS (4 LANES OR GREATER)									
	SCALE: NONE	<table border="1"> <tr> <th colspan="2">REVISIONS</th> </tr> <tr> <td>03/04</td> <td></td> </tr> <tr> <td></td> <td></td> </tr> <tr> <td></td> <td></td> </tr> </table>	REVISIONS		03/04					
	REVISIONS									
	03/04									
DATE: 8/03										
DWG. BY: JI										
DESIGN BY: JI										
REVIEWED BY:										

27-SEP-2011 15:43 \\VOT105\F5000101\GROUPS-WZTCCC-TMU\WZTC\Resur\Facing\2011Resur\Facing\2011Eoastern\2011Div06\C202861A-D\_6CR.10261.73x4\_Cumb Horn\_NC82m88\_akp\Files Out\1117-C202xxx-wbsNNM-Freeways\_4lanes\_or\_greater\_stationary.dgn

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

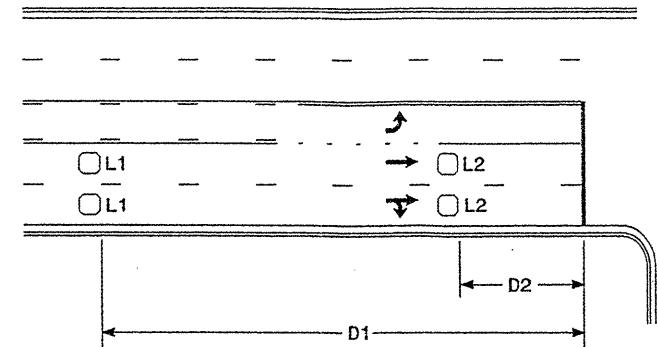


Speed Limit mph (km/hr)	D ft (m)
40 (64)	250 (75)
45 (72)	300 (90)
50 (80)	355 (110)
55 (88)	420 (130)

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

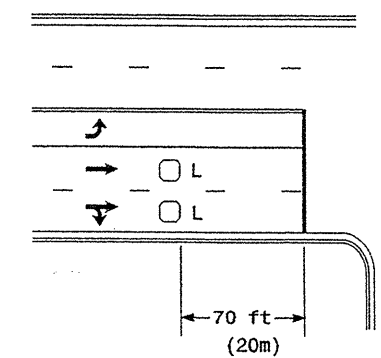


Speed Limit mph (km/hr)	D1 ft (m)	D2 ft (m)
40 (64)	250 (75)	80 (25)
45 (72)	300 (90)	90 (27)
50 (80)	355 (110)	100 (30)
55 (88)	420 (130)	110 (35)

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

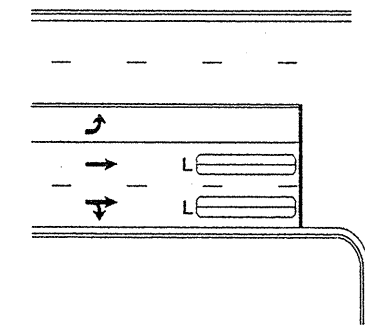
"Stretch" Operation

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



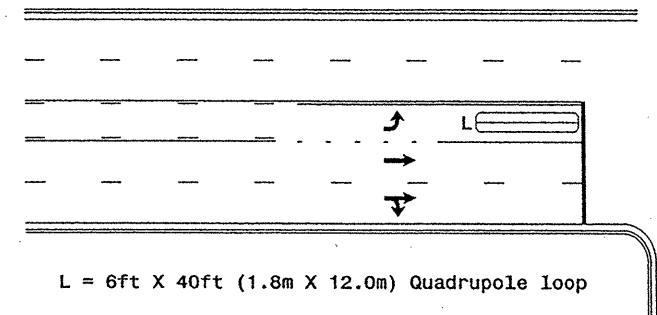
L = 6ft X 6ft (1.8m X 1.8m)  
 Wired in series

OR



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

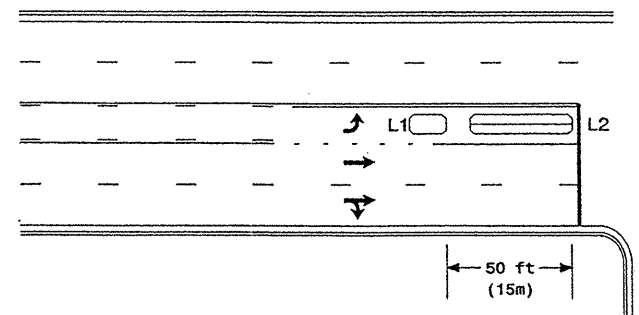
### Left Turn Lane Detection



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

Presence Loop Detection

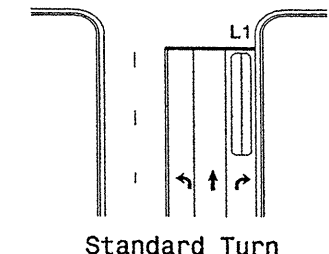
OR



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

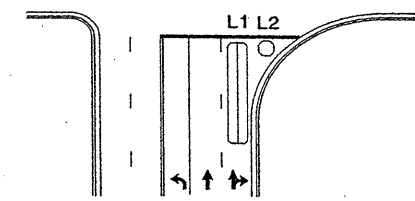
Queue Loop Detection

### Right Turn Lane Detection

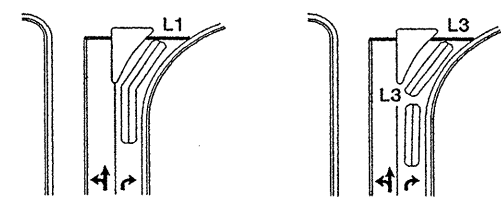


Standard Turn

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

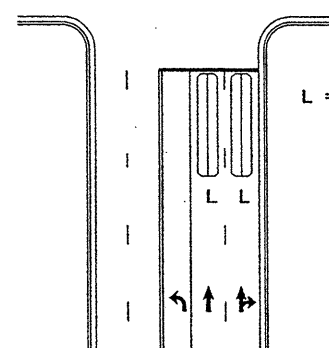


Wide Radius Turn



Channelized Turn

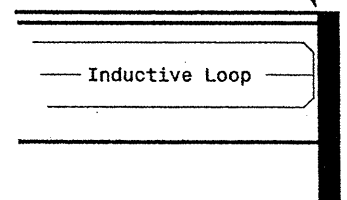
### Side Street Detection



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:
PREPARED BY: P. L. Alexander	REVIEWED BY:
SCALE: N/A	REVISIONS:
	INIT. DATE
	SIGNATURE DATE
	SIG. INVENTORY NO.

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

11-08

INDUCTIVE DETECTION LOOPS  
ENGLISH DETAIL DRAWING FOR

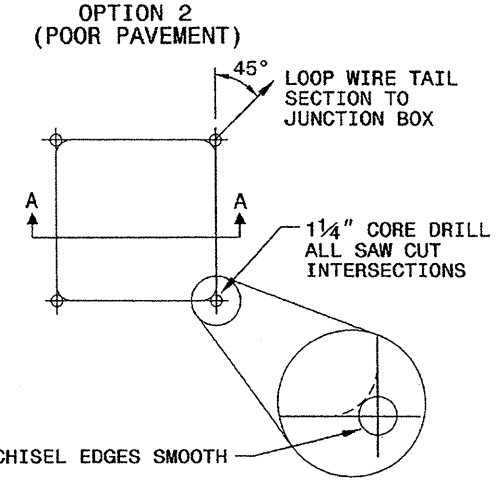
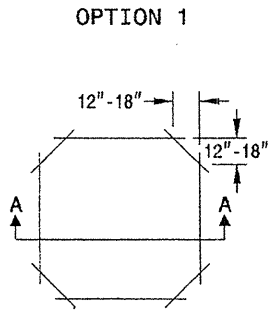
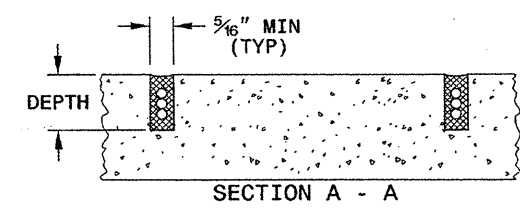
SHEET 1 OF 3  
1725D01

**CONVENTIONAL 4-SIDED LOOP**

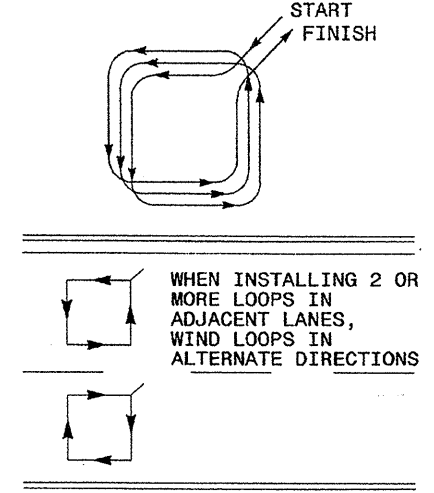
**SAW CUT OPTIONS**

**SAW SLOT DEPTH CHART**

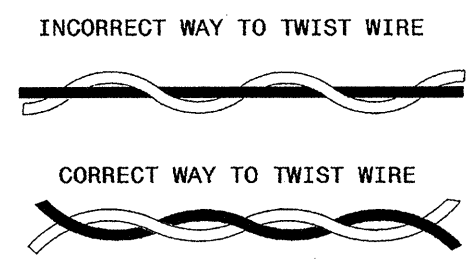
DEPTH (IN)	NO. OF WIRE TURNS				
	2	3	4	5	6
CONCRETE	2.0	2.0	2.5	2.5	3.0
ASPHALT	2.0	2.5	3.0	3.0	3.0



**LOOP WINDING METHOD**



**LOOP WIRE TWISTING METHOD**

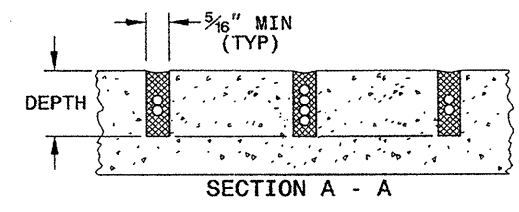
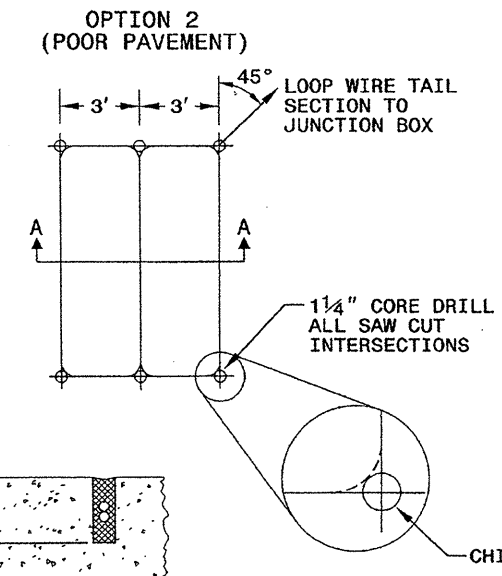
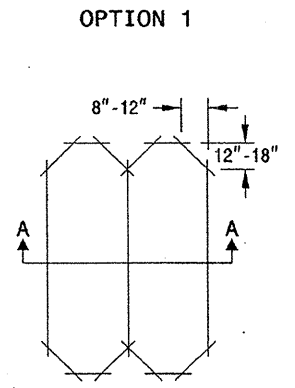


**NOTES**

1. OVERLAP SAW CUTS AT CORNERS AND INTERSECTION POINTS TO ENSURE UNIFORM SAW SLOT DEPTH.
2. MAINTAIN 12" SPACING BETWEEN LOOP WIRE TAIL SECTIONS.
3. WIRE LOOPS CONNECTED TO THE SAME DETECTOR CHANNEL IN SERIES.
4. LOCATE LOOPS IN CENTER OF LANES UNLESS OTHERWISE SHOWN ON PLANS OR APPROVED BY ENGINEER.

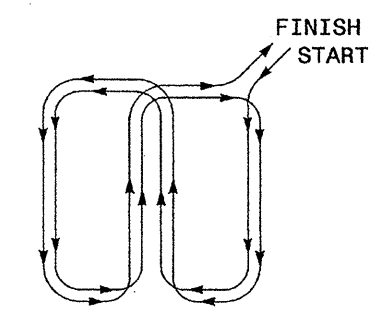
**QUADRUPOLE LOOP**

**SAW CUT OPTIONS**



DEPTH IS 2.5" FOR CONCRETE AND 3.0" FOR ASPHALT

**LOOP WINDING METHOD**



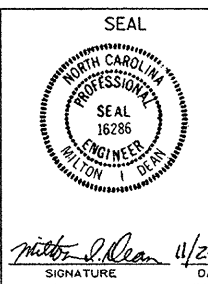
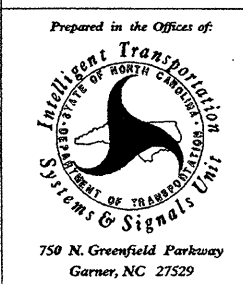
STATE OF NORTH CAROLINA  
DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
RALEIGH, N.C.

11-08

INDUCTIVE DETECTION LOOPS  
ENGLISH DETAIL DRAWING FOR

SHEET 1 OF 3  
1725D01

See Plate for Title



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

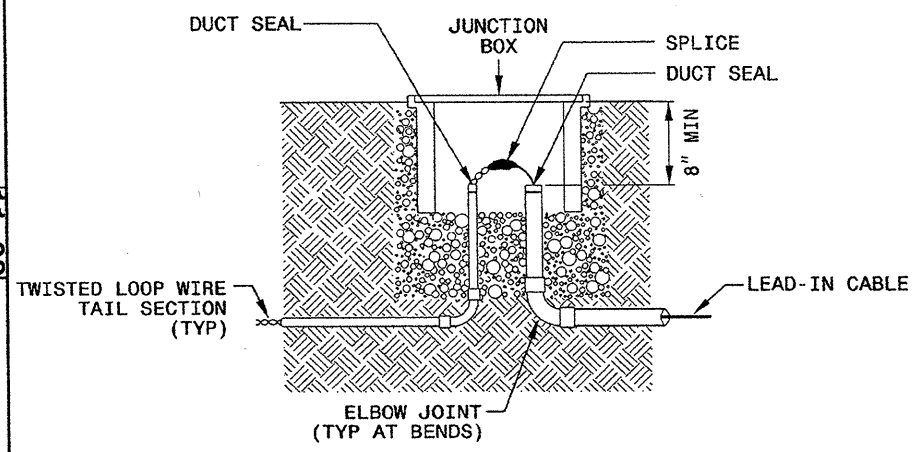
11-08

ENGLISH DETAIL DRAWING FOR  
**INDUCTIVE DETECTION LOOPS**  
LOOP WIRE DETAILS

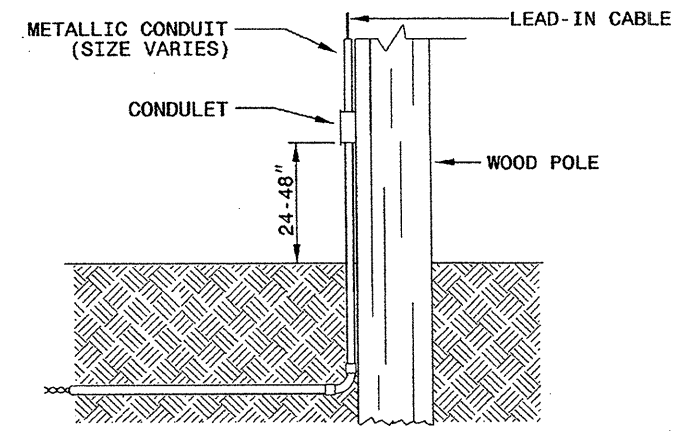
SHEET 2 OF 3  
**1725D01**

**LOOP WIRE SPLICE POINT DETAILS**

**LOOP WIRE AT JUNCTION BOX**



**LOOP WIRE AT POLE**

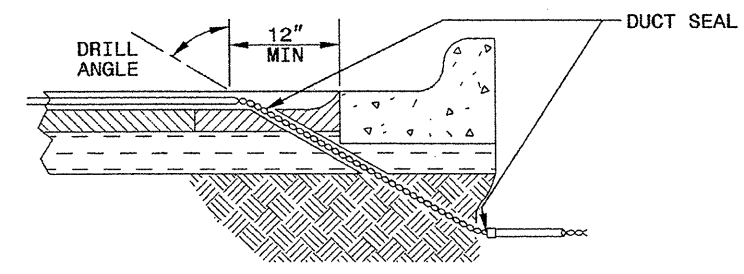


**NOTE**

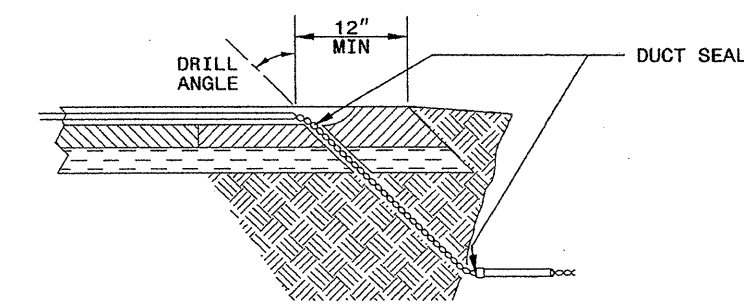
SPLICE ALL LOOP WIRE TAIL SECTIONS/LEAD-IN CABLE IN JUNCTION BOXES OR APPROVED CONDULETS.

**LOOP WIRE PAVEMENT EDGE DETAILS**

**LOOP WIRE AT CURB & GUTTER SECTION**



**LOOP WIRE AT PAVEMENT SECTION**



**NOTES**

1. DO NOT EXCAVATE UNDER CURB AND GUTTER SECTIONS FOR CONDUIT INSTALLATION.
2. TWIST LOOP WIRE TAIL SECTIONS FROM WHERE LOOP WIRE TAIL LEAVES SAW CUT TO JUNCTION BOX, INCLUDING THROUGH CONDUIT.
3. BEFORE SEALING LOOPS, INSTALL DUCT SEAL WHERE LOOP WIRE TAIL SECTION LEAVES SAW CUT IN PAVEMENT AND AT ENTRANCE OF CONDUIT TO JUNCTION BOX.

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

11-08

ENGLISH DETAIL DRAWING FOR  
**INDUCTIVE DETECTION LOOPS**  
LOOP WIRE DETAILS

SHEET 2 OF 3  
**1725D01**

See Plate for Title

Prepared in the Offices of:

750 N. Greenfield Parkway  
Garner, NC 27529

SEAL

*Milton A. Dean* 11/24/08  
SIGNATURE DATE

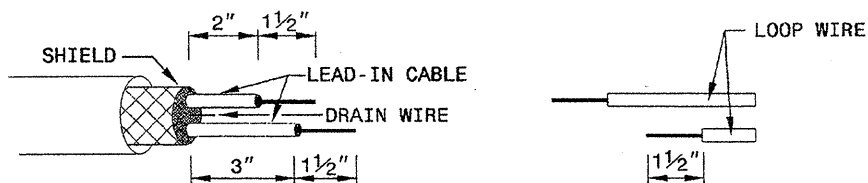
STATE OF NORTH CAROLINA  
DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
RALEIGH, N.C.

11-08

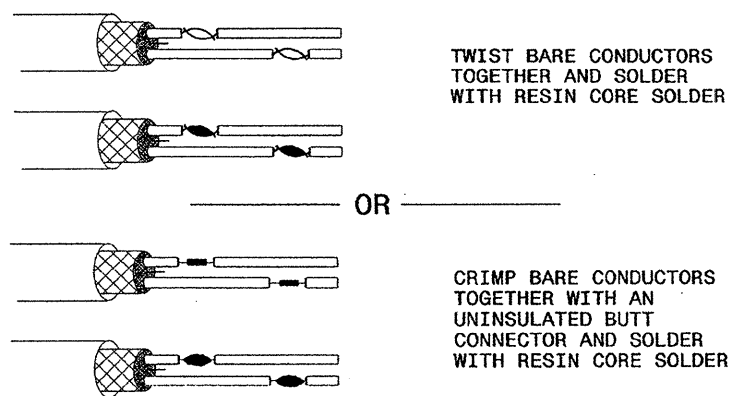
ENGLISH DETAIL DRAWING FOR  
**INDUCTIVE DETECTION LOOPS**  
SPlicing FOR LEAD-IN CABLE AND LOOP WIRE

SHEET 3 OF 3  
**1725D01**

**STEP 1. STRIP LOOP WIRE AND LEAD-IN CABLE**

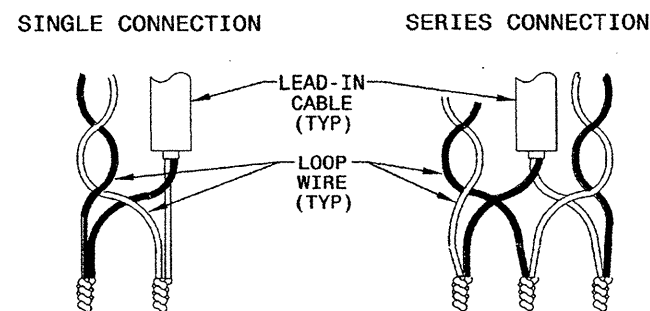


**STEP 2. CONNECT AND SOLDER**

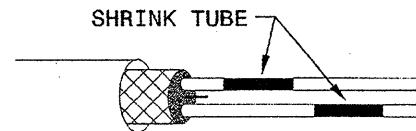


BOND SHIELD DRAIN WIRE AT SPLICE SECTIONS (DO NOT GROUND)

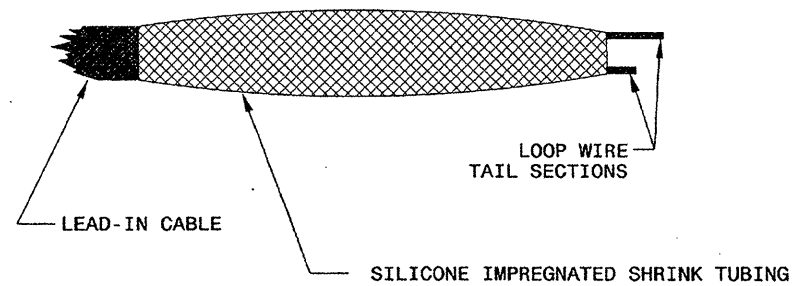
**LOOP WIRE AND LEAD-IN CABLE CONNECTION DETAILS**



**STEP 3. INSULATE EACH SOLDER JOINT SEPARATELY**



**STEP 4. ENVIRONMENTALLY PROTECT SPLICE**



STATE OF NORTH CAROLINA  
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11-08

ENGLISH DETAIL DRAWING FOR  
**INDUCTIVE DETECTION LOOPS**  
SPlicing FOR LEAD-IN CABLE AND LOOP WIRE

SHEET 3 OF 3  
**1725D01**

See Plate for Title



SEAL

SEAL 16286  
MILTON DEW






*Milton Dew* 11/24/08  
SIGNATURE DATE

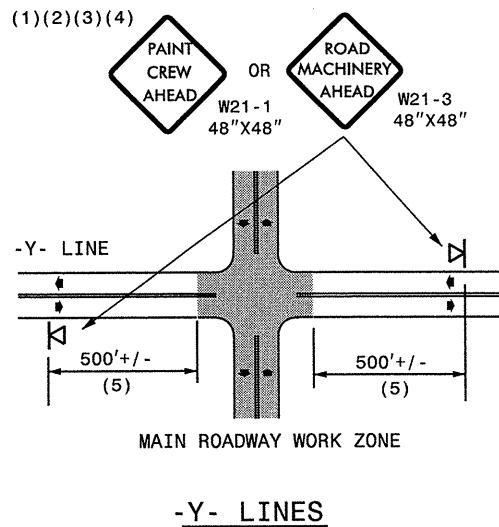


## GENERAL NOTES

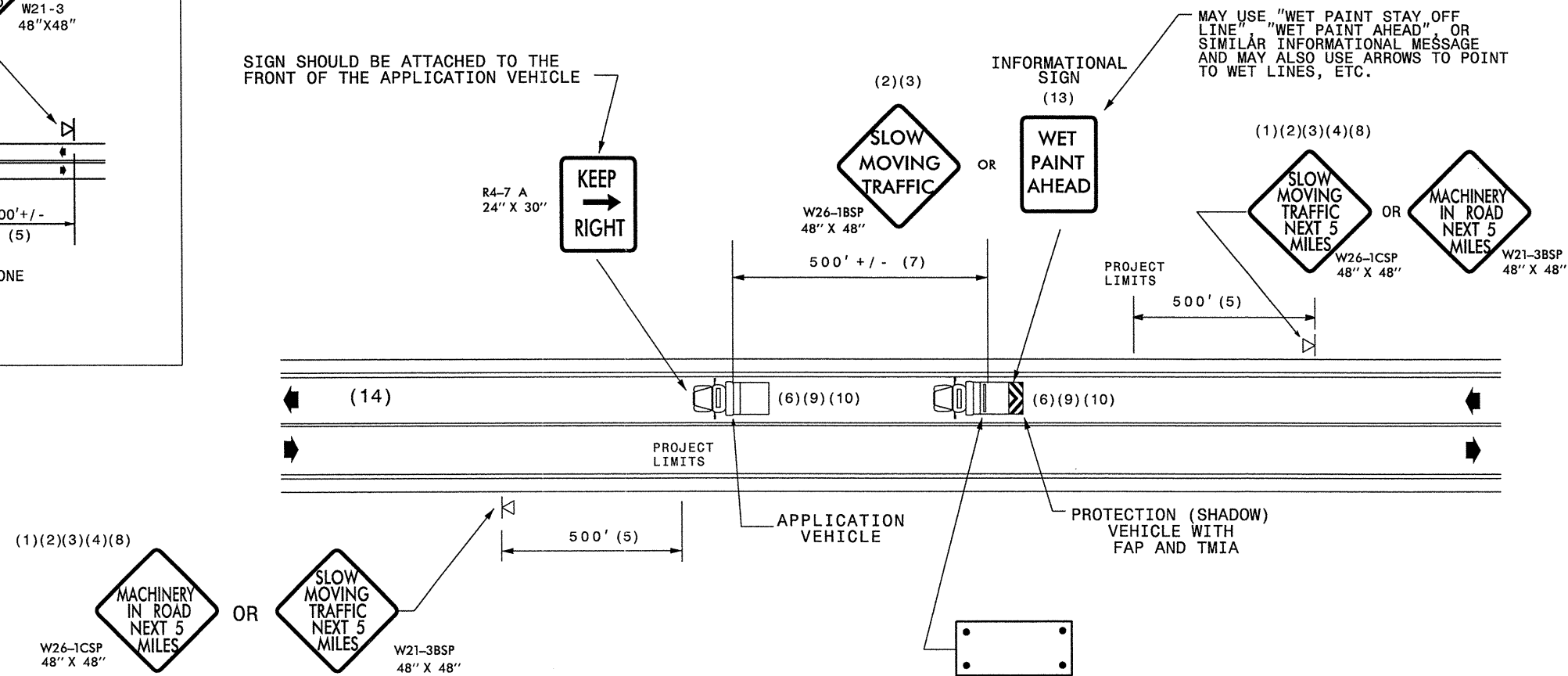
- (1) THE FOLLOWING OPTIONS MAY BE USED FOR ADVANCE WARNING SIGNS:
  - A. TRUCK MOUNTED SIGNS
  - B. TRUCK MOUNTED CHANGEABLE MESSAGE SIGN (CMS)
  - C. GROUND MOUNTED ADVANCE WARNING SIGNS (MUST CIRCLE TO PICK UP SIGNS)
  - D. GROUND MOUNTED CHANGEABLE MESSAGE SIGN (CMS) (MUST USE CIRCLE TO PICK UP SIGNS)
- (2) ALL ADVANCE WARNING SIGNS MUST BE 48" X 48" WITH FLUORESCENT ORANGE TYPE VII, VIII OR IX SHEETING. IF SPACE LIMITATIONS ON SHOULDER PROHIBIT A 48" X 48" SIGN, A SMALLER SIGN CAN BE USED WITH APPROVAL FROM ENGINEER.
- (3) SIGNS ON VEHICLES SHOULD BE MOUNTED A MINIMUM OF ONE (1) FOOT FROM THE GROUND AND SHOULD NOT BLOCK THE MOTORIST'S SIGHT OF THE FLASHING ARROW PANEL AND/OR LIGHTBAR.
- (4) GROUND MOUNTED ADVANCED WARNING SIGNS SHOULD BE MOUNTED A MINIMUM OF ONE (1) FOOT FROM THE GROUND TO BOTTOM OF SIGN.
- (5) SIGN SPACING SHOULD BE ADJUSTED FOR HORIZONTAL AND VERTICAL CURVES, ETC. TO IMPROVE SIGHT DISTANCES.
- (6) ADDITIONAL VEHICLES SHOULD BE USED IN WORK CARAVAN TO FACILITATE DRYING OF PAVEMENT MARKING MATERIAL (TMIA'S ARE OPTIONAL ON THESE ADDITIONAL VEHICLES). HOWEVER, THE FIRST VEHICLE MOTORISTS SEE IN THE TRAVEL LANE SHALL HAVE A TMIA.
- (7) ADJUST DISTANCE AS NEEDED TO PREVENT MOTORISTS FROM ENTERING SPACE BETWEEN THE APPLICATION AND PROTECTION VEHICLE. DISTANCE CAN BE LENGTHENED TO ACCOMODATE SIGHT DISTANCE NEEDS.
- (8) ROUND UP MILEAGE TO NEXT WHOLE MILE. WORK ZONE SHOULD NOT EXCEED FIVE (5) MILES IN LENGTH.
- (9) RADIO COMMUNICATION BETWEEN VEHICLES IS REQUIRED.
- (10) USE OF A LIGHT BAR ON ALL VEHICLES IS PREFERRED, BUT A ROTATING BEACON MAY BE USED INSTEAD.
- (11) IF WORK IS PERFORMED AT NIGHT, THE WORK AREA MUST BE ILLUMINATED WITH MACHINE AND/OR TOWER LIGHTS AS APPROVED BY THE ENGINEER.
- (12) ALL TRAFFIC CONTROL DEVICES WILL BE CONSIDERED INCIDENTAL TO THE PAY ITEMS FOR PAVEMENT MARKING AND MARKERS.
- (13) INFORMATIONAL SIGNS SHOULD BE ACTIVITY SPECIFIC, i.e. "PAINT CREW IN ROAD". SIGNS MAY BE RECTANGULAR OR DIAMOND SHAPE. SIGN SIZE SHOULD BE BASED ON THE MOTORIST ABILITY TO RECOGNIZE SIGN WHEN TRAVELING FIVE (5) MILES ABOVE POSTED SPEED LIMIT.
- (14) IF A LEAD VEHICLE IS ADDED TO OPERATION, IT SHOULD HAVE THE SAME ADVANCE WARNING SIGNS AS THE APPLICATION VEHICLE SHOWN BELOW.

## LEGEND

-  PORTABLE SIGN. SIGNS MUST BE NCHRP-350 AND NCDOT APPROVED.
-  DIRECTION OF TRAFFIC FLOW
-  APPLICATION VEHICLE WITH LIGHT BAR
-  PROTECTION VEHICLE WITH TRUCK MOUNTED IMPACT ATTENUATOR (TMIA) AND LIGHT BAR (SEE ROADWAY STANDARD NO. 1165.01). TMIA MUST BE NCHRP-350 TEST LEVEL 3 (60+MPH) APPROVED.
-  FLASHING ARROW PANEL, TYPE "B" (60"X30" MIN.), "CAUTION MODE"



SIGN SHOULD BE ATTACHED TO THE FRONT OF THE APPLICATION VEHICLE



# MOVING OPERATION CARAVAN

(OPERATIONS TRAVELING 3 MPH OR FASTER)  
PLACING PAVEMENT MARKING OR MARKERS  
ON TWO-LANE TWO-WAY ROADWAYS








**DRAWING NUMBER 6**  
IMPLEMENTATION DATE: 07/01/97  
REVISED: 11/03/04

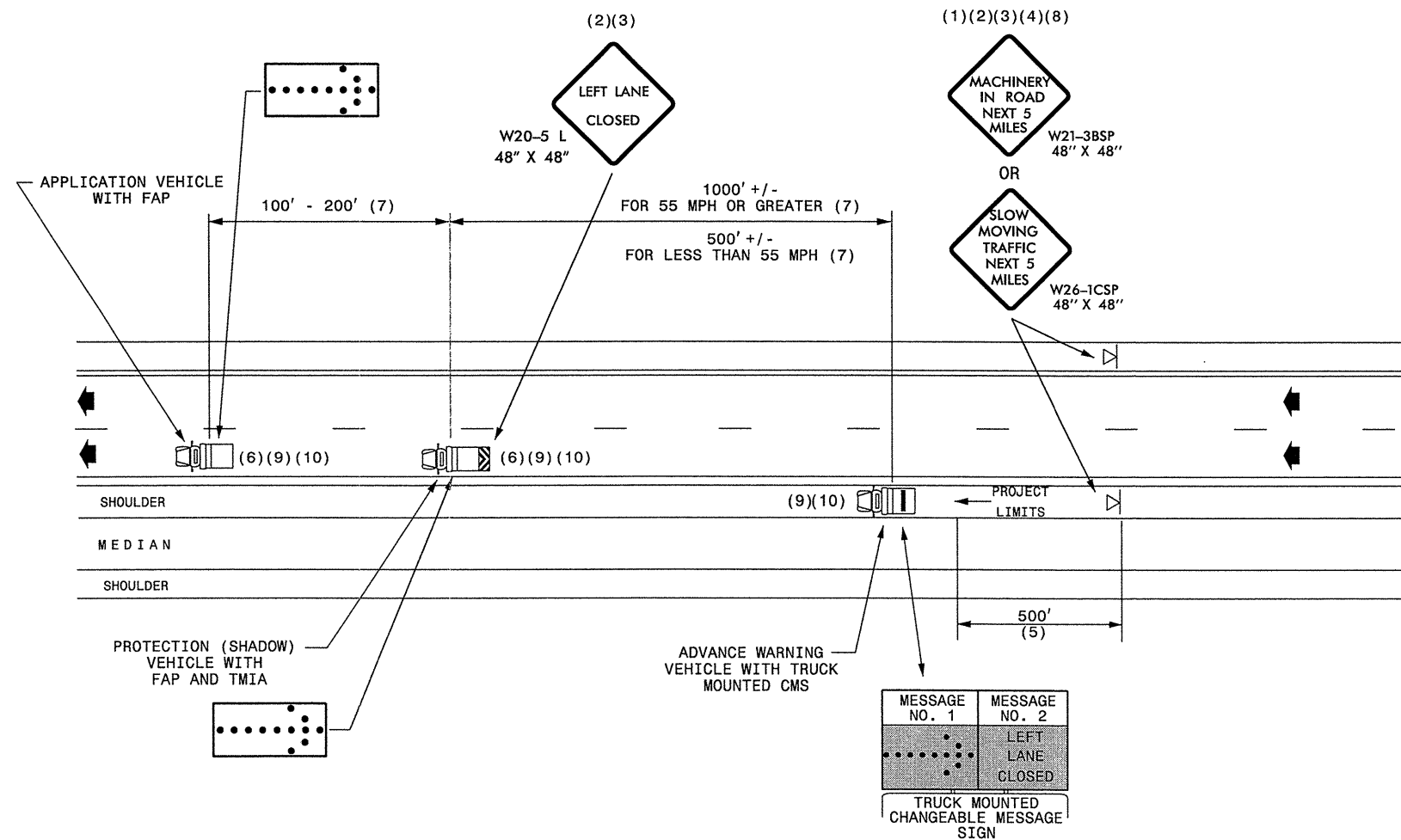
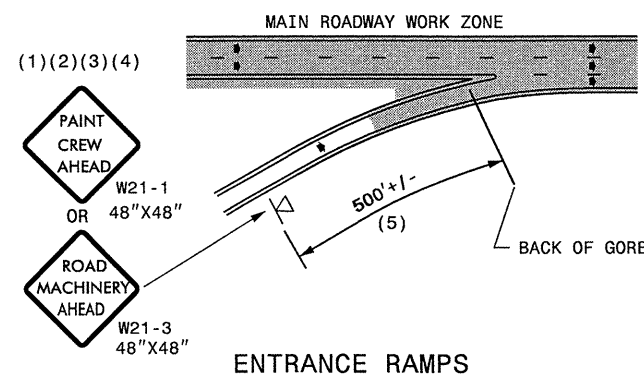
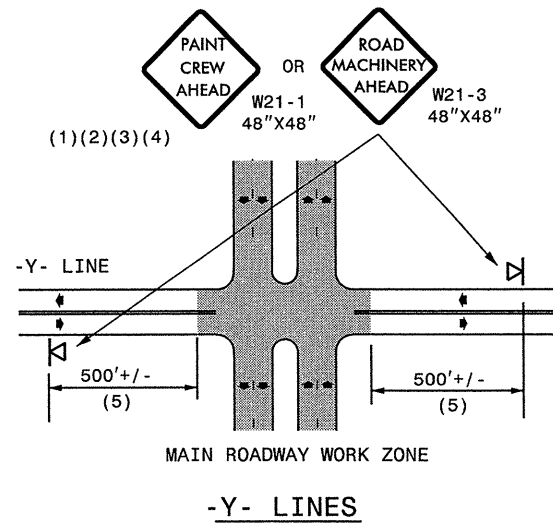
### GENERAL NOTES

- (1) THE FOLLOWING OPTIONS MAY BE USED FOR ADVANCE WARNING SIGNS:
  - A. TRUCK MOUNTED SIGNS
  - B. TRUCK MOUNTED CHANGEABLE MESSAGE SIGN (CMS)
  - C. GROUND MOUNTED ADVANCE WARNING SIGNS (MUST CIRCLE TO PICK UP SIGNS)
  - D. GROUND MOUNTED CHANGEABLE MESSAGE SIGN (CMS) (MUST USE CIRCLE TO PICK UP SIGNS)
- (2) ALL ADVANCE WARNING SIGNS MUST BE 48" X 48" WITH FLUORESCENT ORANGE TYPE VII, VIII OR IX SHEETING. IF SPACE LIMITATIONS ON SHOULDER PROHIBIT A 48" X 48" SIGN, A SMALLER SIGN CAN BE USED WITH APPROVAL FROM ENGINEER.
- (3) SIGNS ON VEHICLES SHOULD BE MOUNTED A MINIMUM OF ONE (1) FOOT FROM THE GROUND AND SHOULD NOT BLOCK THE MOTORIST'S SIGHT OF THE FLASHING ARROW PANEL AND/OR LIGHTBAR.
- (4) GROUND MOUNTED ADVANCED WARNING SIGNS SHOULD BE MOUNTED A MINIMUM OF FIVE (5) FEET FROM THE GROUND TO BOTTOM OF SIGN.
- (5) SIGN SPACING SHOULD BE ADJUSTED FOR HORIZONTAL AND VERTICAL CURVES, ETC. TO IMPROVE SIGHT DISTANCES.

- (6) ADDITIONAL VEHICLES SHOULD BE USED IN WORK CARAVAN TO FACILITATE DRYING OF PAVEMENT MARKING MATERIAL (TMIA'S ARE OPTIONAL ON THESE ADDITIONAL VEHICLES). HOWEVER, THE FIRST VEHICLE MOTORISTS SEE IN THE TRAVEL LANE SHALL HAVE A TMIA.
- (7) ADJUST DISTANCE AS NEEDED TO PREVENT MOTORISTS FROM ENTERING SPACE BETWEEN THE APPLICATION AND PROTECTION VEHICLE. DISTANCE CAN BE LENGTHENED TO ACCOMODATE SIGHT DISTANCE NEEDS.
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- (9) RADIO COMMUNICATION BETWEEN VEHICLES IS REQUIRED.
- (10) USE OF A LIGHT BAR ON ALL VEHICLES IS PREFERRED, BUT A ROTATING BEACON MAY BE USED INSTEAD.
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- (12) ALL TRAFFIC CONTROL DEVICES WILL BE CONSIDERED INCIDENTAL TO THE PAY ITEMS FOR PAVEMENT MARKING AND MARKERS.

### LEGEND

-  PORTABLE SIGN. SIGNS MUST BE NCHRP-350 AND NCDOT APPROVED.
-  DIRECTION OF TRAFFIC FLOW
-  APPLICATION VEHICLE WITH LIGHT BAR
-  PROTECTION VEHICLE WITH TRUCK MOUNTED IMPACT ATTENUATOR (TMIA) AND LIGHT BAR (SEE ROADWAY STANDARD NO. 1165.01). TMIA MUST BE NCHRP-350 TEST LEVEL 3 (60+MPH) APPROVED.
-  ADVANCE WARNING VEHICLE WITH TRUCK MOUNTED CHANGEABLE MESSAGE SIGN (CMS) AND LIGHT BAR. MESSAGE SIGN LETTER HEIGHT SHOULD BE A MINIMUM OF 10 INCHES.
-  FLASHING ARROW PANEL, TYPE "B" (60"X30" MIN.), APPROPRIATE DIRECTION INDICATED
-  CHANGEABLE MESSAGE SIGN



## MOVING OPERATION CARAVAN

(OPERATIONS TRAVELING 3 MPH OR FASTER)  
 PLACING PAVEMENT MARKING OR MARKERS  
 ON NON-INTERSTATE MULTILANE DIVIDED ROADWAYS

**DRAWING NUMBER 7**  
 IMPLEMENTATION DATE: 07/01/97  
 REVISED: 11/03/04