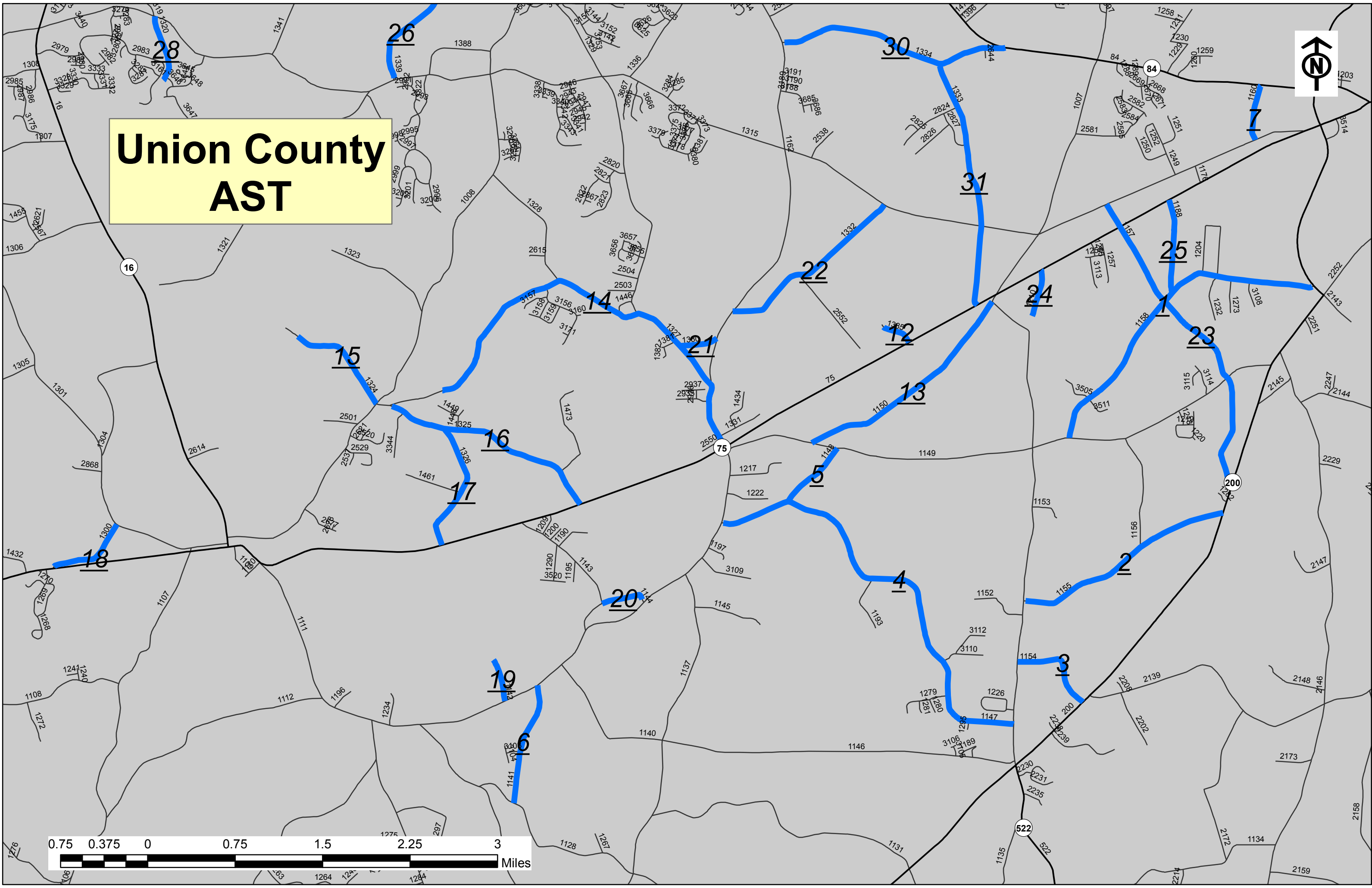
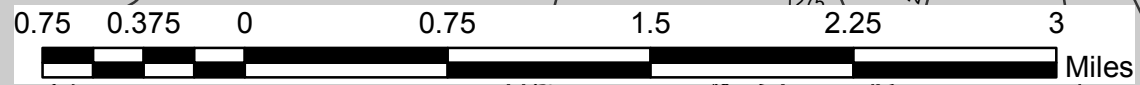


PROJECT NO.	SHEET NO.	TOTAL NO.
2016CPT.10.58.20902	1	5

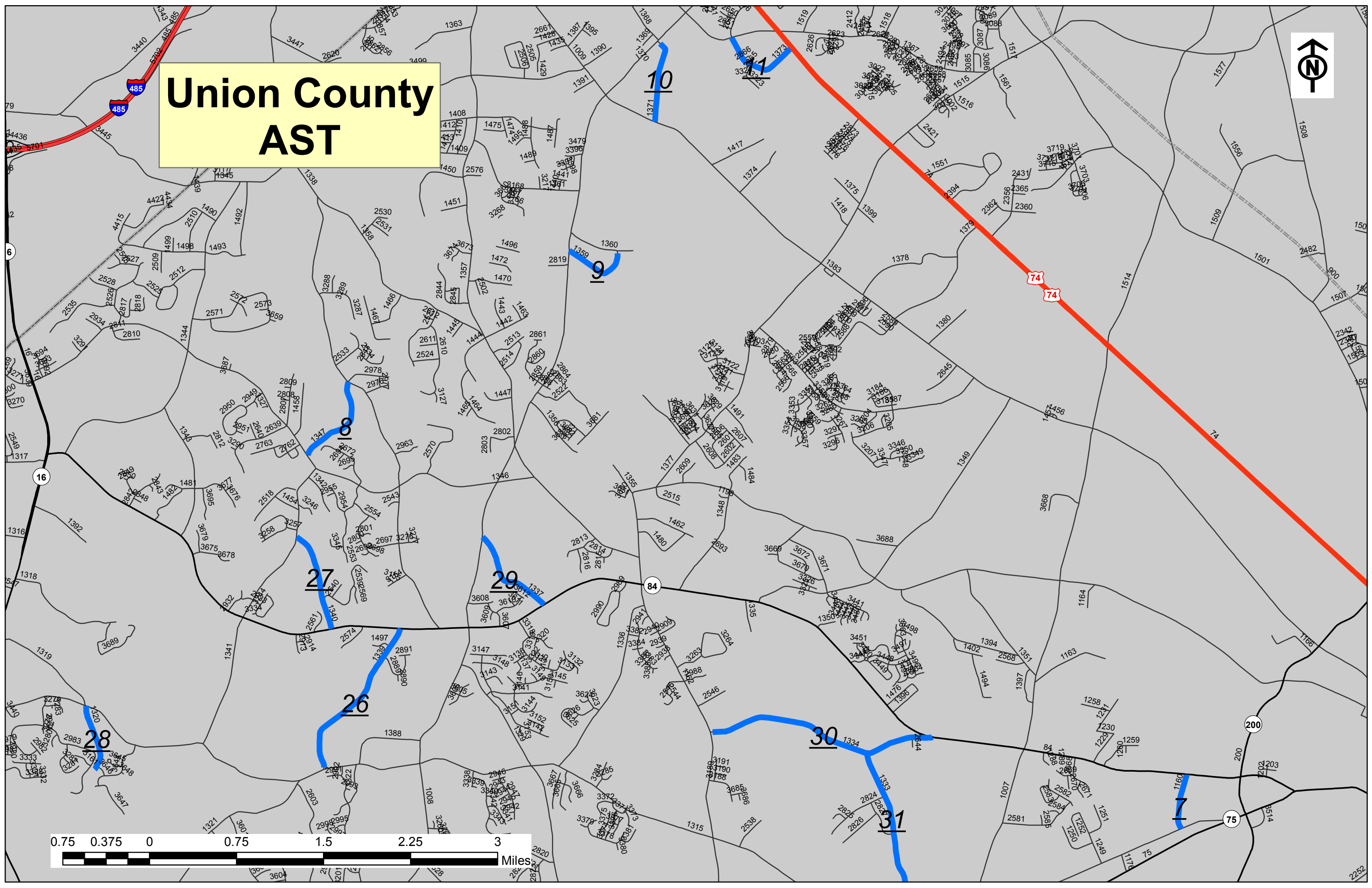
### SUMMARY OF QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	FINAL SURFACE TESTING REQUIRED	WARM MIX ASPHALT REQUIRED	LENGTH	WIDTH	ASPHALT SURFACE TREATMENT, DOUBLE SEAL	ASPHALT SURFACE TREATMENT, TRIPLE SEAL	EMULSION FOR ASPHALT SURFACE TREATMENT	BLOTTING SAND	WORK ZONE ADVANCE/GENERAL WARNING SIGNING	TEMPORARY TRAFFIC CONTROL
2016CPT.10.58.20902	Union	1	CORINTH CH RD (SR 1158)	FROM NC 200 TO DOSTER RD (SR 1149)	NO	NO	2.84	20		33,323	26,325			
<b>TOTAL FOR MAP NO. 1</b>														182
2016CPT.10.58.20902	Union	2	LONG HOPE RD (SR 1155)	FROM ROCKY RIVER RD (SR 1007) TO NC 200	NO	NO	1.92	18	20,275		11,151			
<b>TOTAL FOR MAP NO. 2</b>														118
2016CPT.10.58.20902	Union	3	GRIFFITH RD (SR 1154)	FROM ROCKY RIVER RD (SR 1007) TO NC 200	NO	NO	0.8	20	9,387		5,163			
<b>TOTAL FOR MAP NO. 3</b>														112
2016CPT.10.58.20902	Union	4	CROW RD (SR 1147)	FROM POTTER RD (SR 1111) TO ROCKY RIVER RD (SR 1007)	NO	NO	3.76	18	39,706		21,838			
<b>TOTAL FOR MAP NO. 4</b>														144
2016CPT.10.58.20902	Union	5	TOM LANDRY (SR 1148)	FROM CROW RD (SR 1147) TO DOSTER RD (SR 1149)	NO	NO	0.62	18	6,547		3,601			
<b>TOTAL FOR MAP NO. 5</b>														112
2016CPT.10.58.20902	Union	6	JOHN CRAIG RD (SR 1141)	FROM OLD WAXHAW/MONROE RD (SR 1111) TO MCWHORTER RD (SR 1128)	NO	NO	1.05	18	11,088		6,098			
<b>TOTAL FOR MAP NO. 6</b>														112
2016CPT.10.58.20902	Union	7	CLARK RD (SR 1160)	FROM NC 84 TO NEW TOWN RD (SR 1315)	NO	NO	0.48	18	5,069		2,788			
<b>TOTAL FOR MAP NO. 7</b>														112
2016CPT.10.58.20902	Union	8	HUNTINGTON RD (SR 1347)	FROM BEAULAH CH RD (SR 1346) TO ANTIOCH CH RD (SR 1338)	NO	NO	0.83	20	9,739		5,356			
<b>TOTAL FOR MAP NO. 8</b>														112
2016CPT.10.58.20902	Union	9	HARTIS GROVE CH RD (SR 1359)	FROM WAXHAW/INDIANTRAIL RD (SR 1008) TO BLANCHARD CIRCLE (SR 1360)	NO	NO	0.59	18	6,230		3,427			
<b>TOTAL FOR MAP NO. 9</b>														112
2016CPT.10.58.20902	Union	10	SOUTH FORK RD (SR 1371)	FROM OLD CHARLOTTE RD (SR 1009) TO WAXHAW INDIANTRAIL RD (SR 1008)	NO	NO	0.71	18	7,498		4,124			
<b>TOTAL FOR MAP NO. 10</b>														112
2016CPT.10.58.20902	Union	11	PLYER RD (SR 1373)	FROM US 74 TO UNIONVILLE/INDIANTRAIL RD (SR 1367)	NO	NO	0.71	18	7,498		4,124			
<b>TOTAL FOR MAP NO. 11</b>														112
2016CPT.10.58.20902	Union	12	JOHN BAKER (SR 1385)	NC 75 TO DEAD END	NO	NO	0.27	18	2,851		1,568			
<b>TOTAL FOR MAP NO. 12</b>														56
2016CPT.10.58.20902	Union	13	OLD WAXHAW/MONROE RD (SR 1150)	FROM ROCKY RIVER RD (SR 1007) TO DOSTER RD (SR 1149)	NO	NO	2.03	18	21,437		11,790			
<b>TOTAL FOR MAP NO. 13</b>														182
2016CPT.10.58.20902	Union	14	PLEASANT GROVE RD (SR 1327)	FROM POTTERS RD (SR 1357) TO WAXHAW/INDIANTRAIL RD (SR 1008)	NO	NO	3.69	20	43,296		23,813			
<b>TOTAL FOR MAP NO. 14</b>														182
2016CPT.10.58.20902	Union	15	GROVER RODGERS RD (SR 1324)	FROM WAXHAW/INDIANTRAIL RD (SR 1008) TO THE DEAD END	NO	NO	0.97	20	11,381		6,260			
<b>TOTAL FOR MAP NO. 15</b>														56
2016CPT.10.58.20902	Union	16	MCKNEELY RD (SR 1325)	FROM NC 75 TO WAXHAW/INDIANTRAIL RD (SR 1008)	NO	NO	1.93	18	20,381		11,209			
<b>TOTAL FOR MAP NO. 16</b>														182
2016CPT.10.58.20902	Union	17	COLLINS RD (SR 1326)	FROM NC 75 TO MCKNEELY RD (SR 1325)	NO	NO	1.13	18	11,933		6,563			
<b>TOTAL FOR MAP NO. 17</b>														56
2016CPT.10.58.20902	Union	18	HELMS RD (SR 1300)	FROM WAXHAW/MARVIN RD (SR 1301) TO NC 75	NO	NO	0.71	20	8,331		4,582			
<b>TOTAL FOR MAP NO. 18</b>														112
2016CPT.10.58.20902	Union	19	ADAMS RD (SR 1142)	FROM OLD WAXHAW/MONROE RD (SR 1111) TO THE DEAD END	NO	NO	0.4	18	4,224		2,323			
<b>TOTAL FOR MAP NO. 19</b>														56
2016CPT.10.58.20902	Union	20	ROBINSON RD (SR 1144)	FROM WESTERN SCHOOL RD (SR 1143) TO OLD WAXHAW/MONROE RD (SR 1111)	NO	NO	0.38	18	4,013		2,207			
<b>TOTAL FOR MAP NO. 20</b>														112
2016CPT.10.58.20902	Union	21	RAYMOND AUSTIN RD (SR 1330)	FROM PLEASANT GROVE RD (SR 1327) TO POTTERS RD (SR 1162)	NO	NO	0.33	18	3,485		1,917			
<b>TOTAL FOR MAP NO. 21</b>														56
2016CPT.10.58.20902	Union	22	ROSCOE HOWEY RD (SR 1332)	FROM POTTERS RD (SR 1162) TO NEW TOWN RD (SR 1315)	NO	NO	1.67	20	19,595		10,777			
<b>TOTAL FOR MAP NO. 22</b>														112
2016CPT.10.58.20902	Union	23	FLETCHER BROOME RD (SR 1157)	FROM NEW TOWN RD (SR 1315) TO NC 200 SOUTH	NO	NO	2.84	20	33,323		18,327			
<b>TOTAL FOR MAP NO. 23</b>														214
2016CPT.10.58.20902	Union	24	MCATEER RD (SR 1210)	FROM NC 75 TO THE DEAD END	NO	NO	0.41	18	4,330		2,381			
<b>TOTAL FOR MAP NO. 24</b>														56
2016CPT.10.58.20902	Union	25	ZEB HELMS RD (SR 1188)	FROM NC 75 TO CORINTH CH RD (SR 1158)	NO	NO	0.8	18	8,448		4,646			
<b>TOTAL FOR MAP NO. 25</b>														112
2016CPT.10.58.20902	Union	26	LESTER DAVIS RD (SR 1339)	FROM NC 84 TO NEW TOWN RD (SR 1315)	NO	NO	1.47	20	17,248		9,486			
<b>TOTAL FOR MAP NO. 26</b>														112
2016CPT.10.58.20902	Union	27	DEAL RD (SR 1340)	FROM TWELVE MILE CREEK RD TO NC 84	NO	NO	0.87	20	10,208		5,614			
<b>TOTAL FOR MAP NO. 27</b>														112
2016CPT.10.58.20902	Union	28	BROOMES OLD MILL RD (SR 1320)	FROM NEW TOWN RD (SR 1315) TO THE DEAD END	NO	NO	0.66	18	6,970		3,833			
<b>TOTAL FOR MAP NO. 28</b>														112
2016CPT.10.58.20902	Union	29	UNDERWOOD RD (SR 1337)	FROM NC 84 TO WAXHAW/INDIANTRAIL RD (SR 1008)	NO	NO	0.84	18	8,870		4,879			
<b>TOTAL FOR MAP NO. 29</b>														112
2016CPT.10.58.20902	Union	30	WILLOUGHBY RD (SR 1334)	FROM NC 84 TO POTTERS RD (SR 1162)	NO	NO	2.02	20	23,701		13,036			
<b>TOTAL FOR MAP NO. 30</b>														182
2016CPT.10.58.20902	Union	31	CLARENCE SECREST RD (SR 1333)	FROM NC 75 TO WILLOUGHBY RD (SR 1334)	NO	NO	2.13	18	22,493		12,371			
<b>TOTAL FOR MAP NO. 31</b>														88
<b>TOTAL FOR PROJ NO. 2016CPT.10.58.20902</b>														3,602
<b>GRAND TOTAL</b>														1

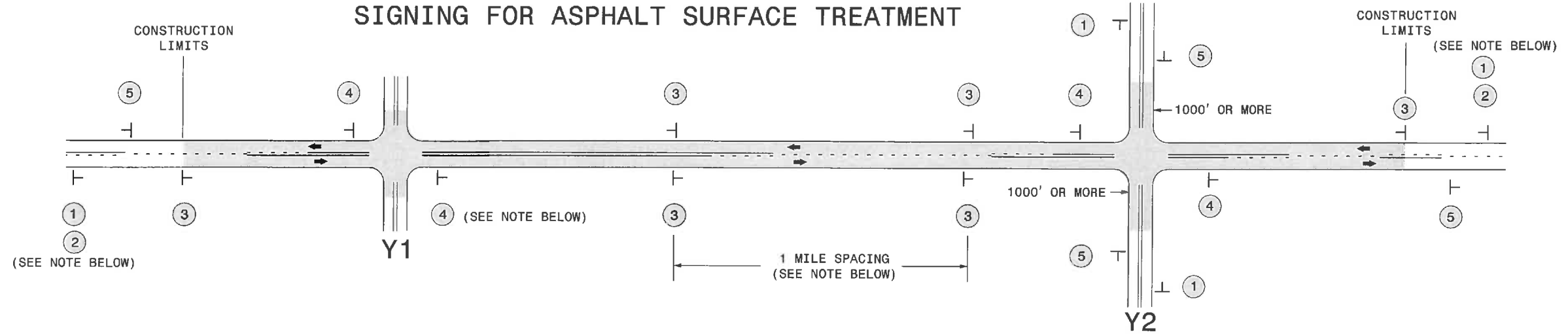
# Union County AST



# Union County AST



## SIGNING FOR ASPHALT SURFACE TREATMENT



LEGEND	
	STATIONARY SIGN
←	DIRECTION OF TRAFFIC FLOW

### MAINLINE (-L-) SIGNING

### -Y- LINE SIGNING

SIGNING NOTES AND PLACEMENT PER DIRECTION	1	 <small>W20-1 48" X 48"</small>	<p>PLACE 1000' PRIOR TO BEGINNING OF CONSTRUCTION LIMITS. ONLY USED ON -Y- LINES IF RESURFACING LIMITS EXTEND 1000' ALONG -Y- LINE.</p> <p>#2 SIGN ONLY USED WHEN RESURFACING LIMITS ARE 2 OR MORE MILES IN LENGTH. ROUND UP TO NEXT WHOLE NUMBER. (NO FRACTIONAL OR DECIMAL NUMBERS)</p>
	2	 <small>W7-30P 24" X 18"</small>	
	3	 <small>W8-7 48" X 48"</small>   <small>SP 48" X 48"</small>	<p>ALTERNATE THE FOLLOWING TWO SIGNS:</p> <p>STARTING WITH "LOOSE GRAVEL" (W8-7) FOLLOWED BY "UNMARKED PAVEMENT".</p> <p>PLACE INITIALLY AT THE CONSTRUCTION LIMITS AND SPACED 1 MILE APART THEREAFTER. IF NO -Y- LINES EXIST, PLACE 2ND SET 1/2 MILE FROM THE CONSTRUCTION LIMITS AND THEN SPACE 1 MILE THEREAFTER.</p>
	4	 <small>SP 13106 48" X 48"</small>	<p>THESE ARE FOR -Y- LINES THAT ARE "THROUGH" ROADWAYS. DEAD END AND SUBDIVISION ROADS ARE NOT "THROUGH" ROADWAYS. INSTALL 500' +/- FROM EACH -Y- LINE APPROACH AS SHOWN ABOVE. FOR MULTIPLE -Y- LINES THAT ARE SEPARATED BY 0.25 MILES OR LESS, TREAT AS A SINGLE UNIT AND INSTALL WITHIN 500' OF EACH APPROACH. A MAXIMUM OF 2 SIGN SETS PER MILE. DO NOT INSTALL WHEN -Y- LINES ARE WITHIN 0.5 MILES FROM "END ROAD WORK" SIGN.</p>
	5	 <small>G20-2 A 48" X 24"</small>	<p>PLACE 500' FOLLOWING THE END OF CONSTRUCTION LIMITS.</p>

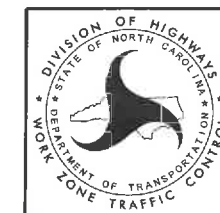
NO REQUIRED STATIONARY SIGNING FOR THE FOLLOWING -Y- LINE CONDITIONS:

- 1) LESS THAN 1000' OF RESURFACING ALONG -Y- LINE
- 2) SUBDIVISION ROADS
- 3) DEAD END ROADS

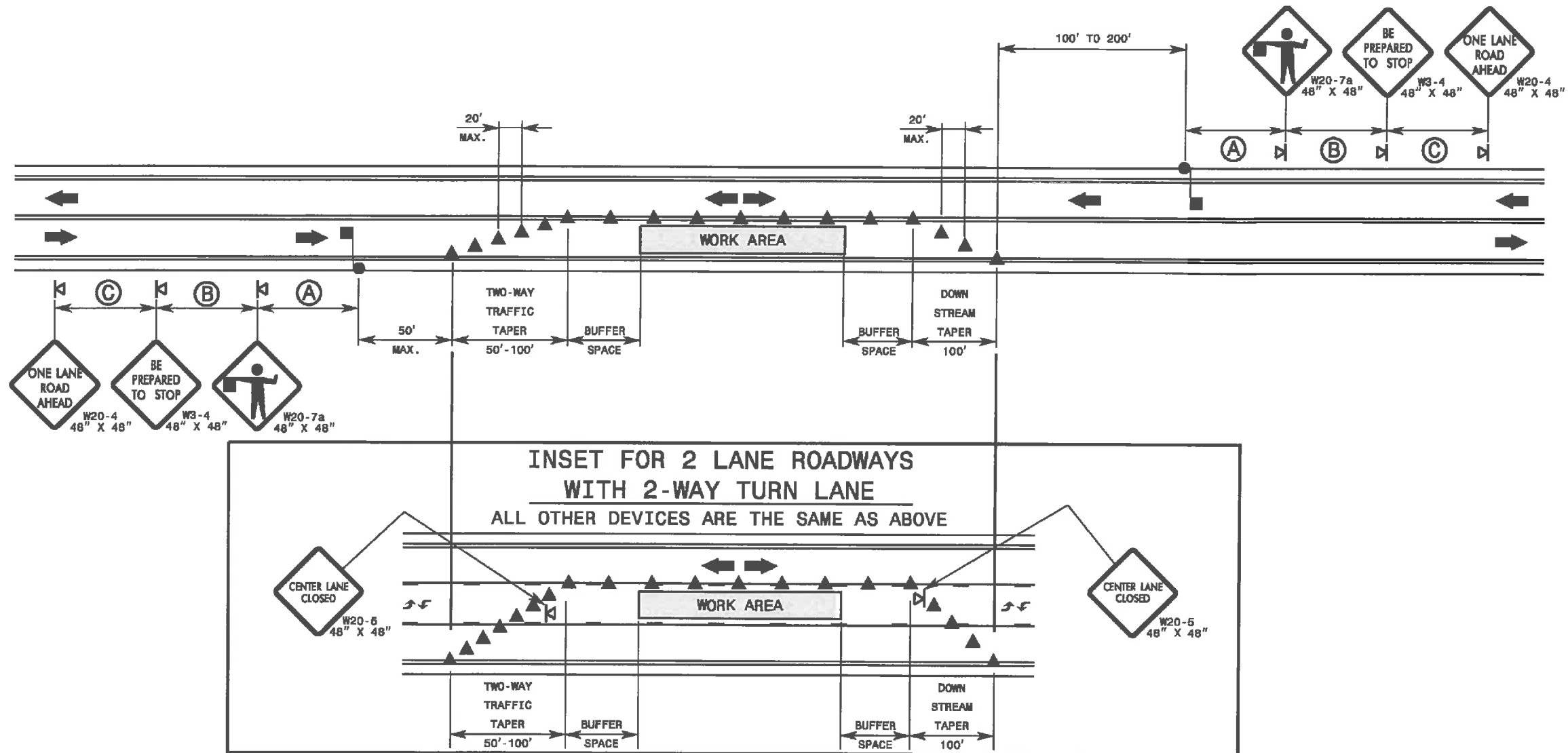
WHEN PAVING/CONSTRUCTION ACTIVITIES PROCEED ACROSS AN UNSIGNED -Y- LINE, ADVANCE WARNING PORTABLE SIGNS SHALL BE USED ALONG THE -Y- LINE AS SHOWN BELOW. REMOVE UPON COMPLETION OF WORK.



PLACED 500' IN ADVANCE OF FLAGGER. PLACED 250' IN ADVANCE OF FLAGGER.



ADVANCE WARNING SIGNS  
FOR  
ASPHALT SURFACE TREATMENTS  
2 LANE ROADWAYS



**GENERAL NOTES FOR FLAGGER OPERATIONS**

- REFER TO STD. 1101.11 SHEET 4 FOR SIGN SPACING.
- INSTALL LANE CLOSURES WITH THE TRAFFIC FLOW, BEGINNING WITH DEVICES ON THE UPSTREAM SIDE OF TRAFFIC.
- REMOVE LANE CLOSURES AGAINST THE TRAFFIC FLOW, BEGINNING WITH DEVICES ON THE DOWNSTREAM SIDE OF TRAFFIC.
- PLACE CONES THRU THE WORK AREA AT THE MAXIMUM SPACING EQUAL IN FEET TO 2 TIMES THE POSTED SPEED LIMIT.
- EXTEND LANE CLOSURES AT THE BUFFER SPACE SUCH THAT STOPPING SIGHT DISTANCE IS PROVIDED TO THE FLAGGER (REFER TO STD. 1101.11 SHEET 2).
- DO NOT STOP TRAFFIC IN ANY ONE DIRECTION FOR MORE THAN 5 MINUTES AT A TIME.
- DRUMS OR SKINNY-DRUMS MAY BE USED IN LIEU OF CONES. REFER TO ROADWAY STANDARD DRAWING 1180.01 FOR SKINNY-DRUM REQUIREMENTS.
- USE FLAGGERS TO CONTROL TRAFFIC AT INTERSECTIONS AFFECTED BY THE LANE CLOSURE. SUPPLEMENT FLAGGERS LOCATED AT INTERSECTIONS WITH FLAGGER AHEAD SIGNS (W20-7a) PLACED APPROXIMATELY 250 FT. IN ADVANCE OF THE FLAGGER. FOR SIGNALIZED INTERSECTIONS PLACE SIGNALS IN THE FLASH MODE AND RECOMMEND THE USE OF LAW ENFORCEMENT.
- REFER TO 2009 MUTCD, CHAPTER 6, FOR FLAGGER CONTROL, REQUIREMENTS, AND PROCEDURES.
- DO NOT EXCEED A 1 MILE LANE CLOSURE LENGTH UNLESS OTHERWISE SHOWN IN THE TMP OR AS DIRECTED BY THE ENGINEER.

**GENERAL NOTES FOR PILOT CAR OPERATIONS**

- USE PILOT CARS WHEN DIRECTED BY THE ENGINEER.
- IF ROADWAY WIDTH IS LESS THAN 22 FEET (EOP TO EOP), CONES MAY NOT BE REQUIRED ALONG WORK AREA, AND AT THE DISCRETION OF THE ENGINEER, CONES MAY BE OMITTED ALONG THE WORK AREA IF USING A PILOT CAR.
- CONES ARE ALWAYS REQUIRED IN THE UPSTREAM AND DOWNSTREAM TAPERS.
- MOUNT SIGN G20-4 "PILOT CAR FOLLOW ME" AT A CONSPICUOUS POSITION ON THE REAR OF THE PILOT VEHICLE.
- DO NOT INSTALL MORE THAN ONE (1) MILE OF LANE CLOSURE, MEASURED FROM THE BEGINNING OF THE MERGE TAPER TO THE END OF THE LANE CLOSURE.
- ADVISE RESIDENTS AND BUSINESSES WITHIN THE LANE CLOSURE LIMITS ABOUT METHODS OF SAFE EGRESS AND INGRESS FROM DRIVEWAYS DURING FLAGGING AND PILOT CAR OPERATIONS.

**LEGEND**

- FLAGGER
- CONE
- PORTABLE SIGN
- DIRECTION OF TRAFFIC FLOW