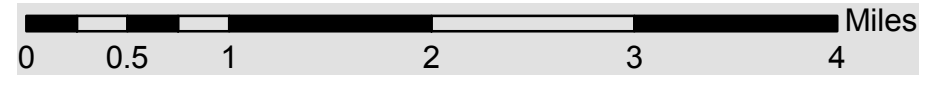
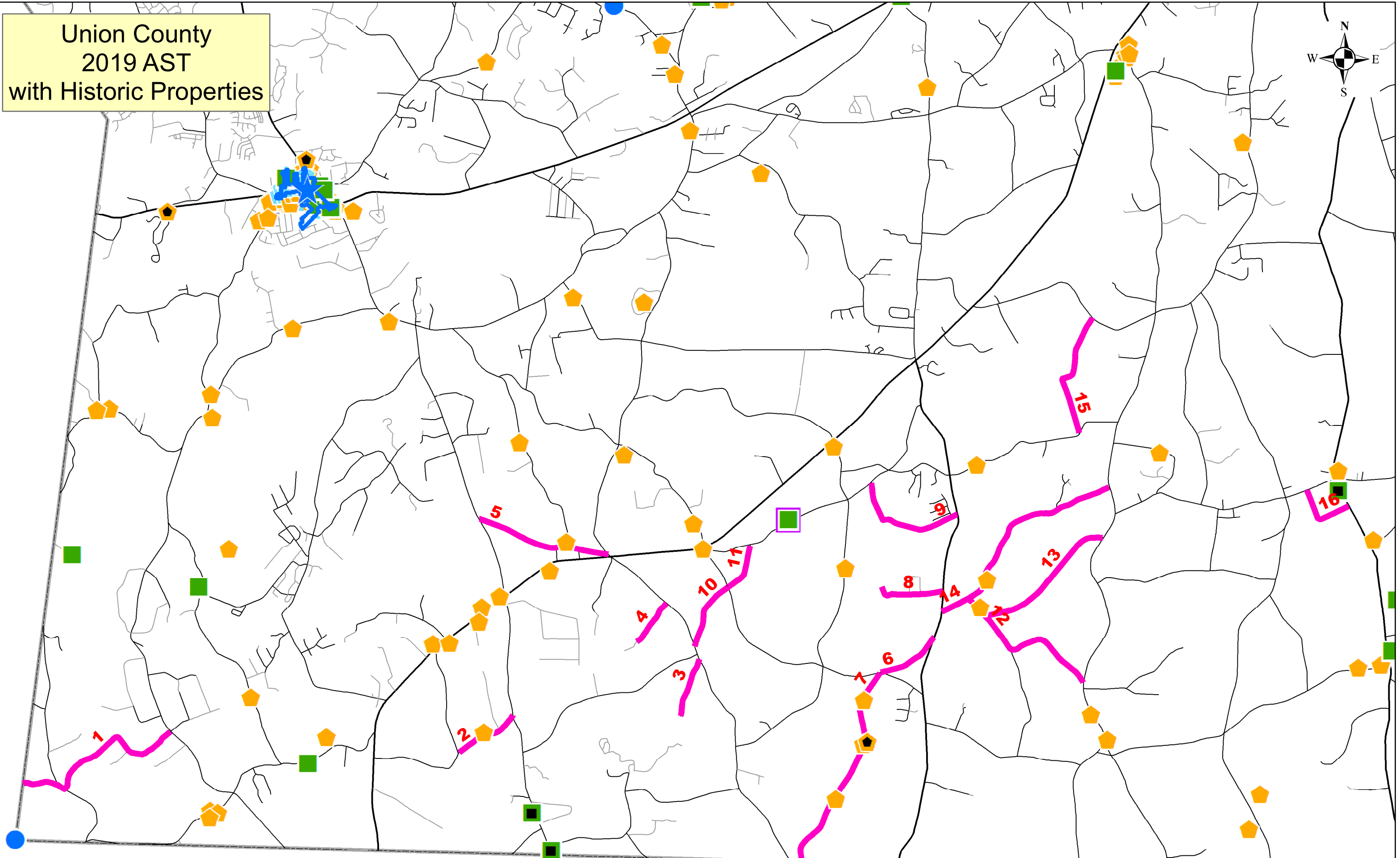
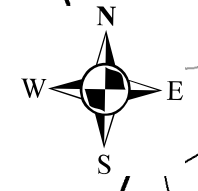
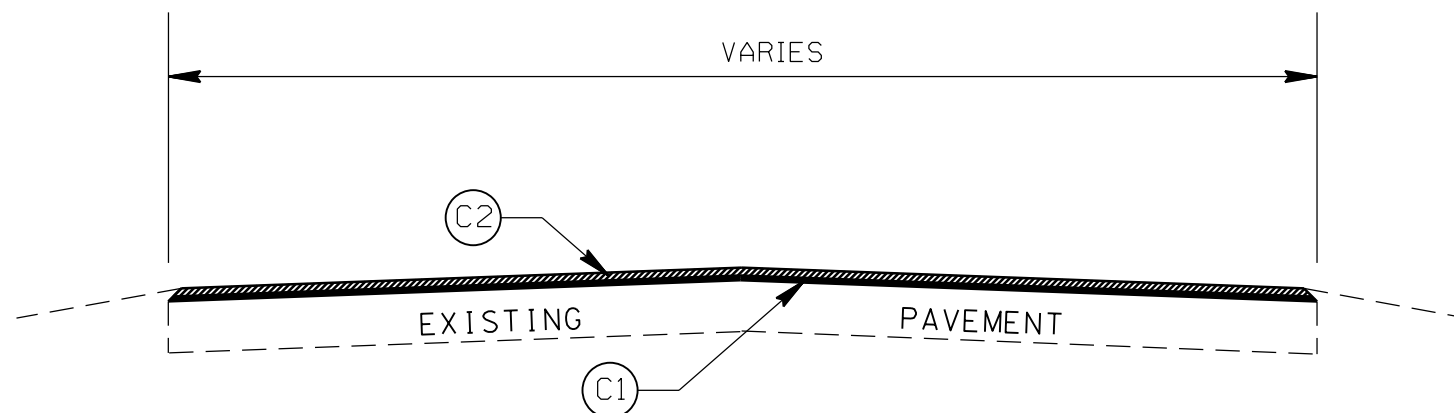


Union County
2019 AST
with Historic Properties



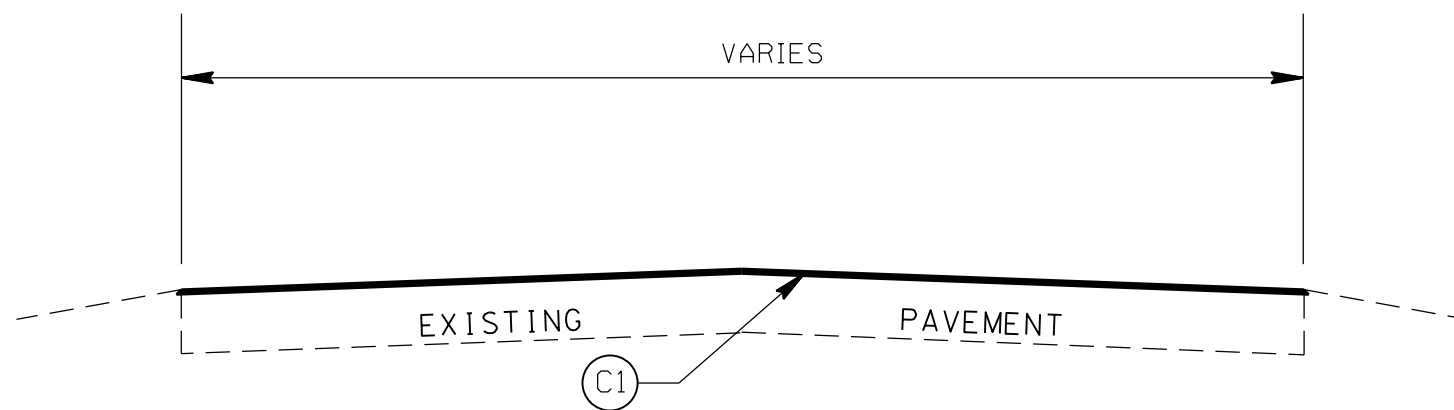
STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	2018CPT.10.06.20902.1	2	
F.A. PROJECT NO.			



TYPICAL SECTION NO. 2
MAPS 3,8,15,16

PAVEMENT SCHEDULE

(C1)	ASPHALT SURFACE TREATMENT
(C2)	FOG SEAL



TYPICAL SECTION NO. 1
MAPS 1-2,4-7,9-14

UNION COUNTY AST 2019

SCALE	NTS
DATE	1-11-2018
DWG. BY	TBL
DESIGN BY	TWB
APPROVED	TWB



REVISIONS	

PROJECT NO.	SHEET NO.	TOTAL NO.
2018CPT.10.06.20902.1	3	5

SUMMARY OF QUANTITIES

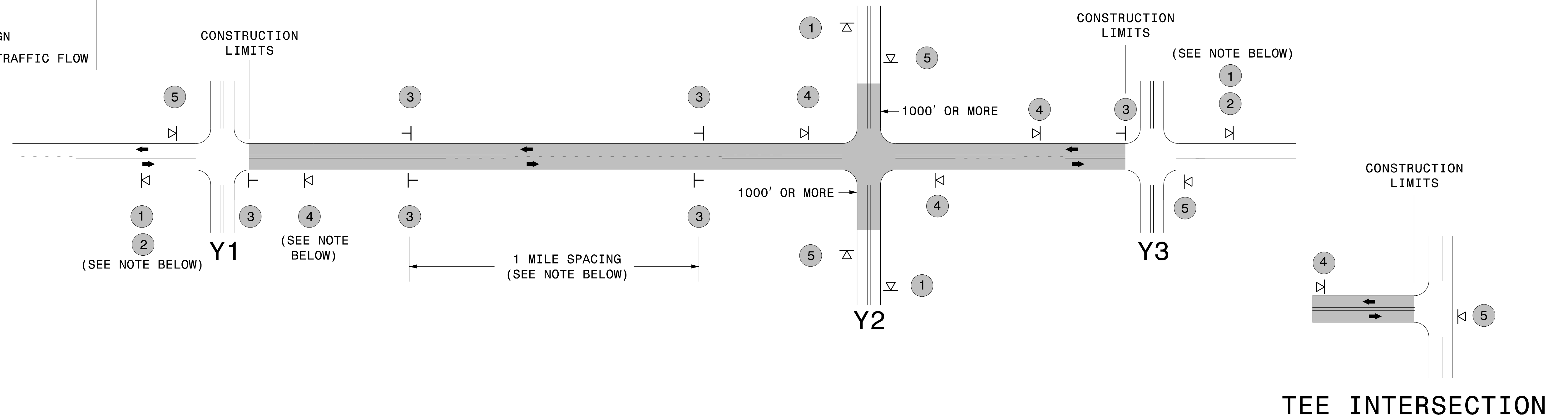
PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	BEGIN MP	END MP	TYP NO	LANES	FINAL SURFACE TESTING REQUIRED	WARM MIX ASPHALT REQUIRED	LENGTH	WIDTH	180350000-E	182000000-E	183800000-E	214300000-E	445700000-N	441300000-E		
													ASPHALT SURFACE TREATMENT, DOUBLE SEAL	ASPHALT SURFACE TREATMENT, FOG SEAL	EMULSION FOR ASPHALT SURFACE TREATMENT	BLOTTING SAND	TEMPORARY TRAFFIC CONTROL	WORK ZONE ADVANCE/GENERAL WARNING SIGNING		
													MI	FT	SY	SY	GAL	TON	LS	SF
2018CPT.10.06.20902.1	Union	1	MINI-RANCH RD (SR 1102)	FROM THE SOUTH CAROLINA LINE TO WAXHAW CREEK RD (SR 1104)	0.00	2.10	1	2	NO	NO	2.1	20	24,640		13,552				96	
TOTAL FOR MAP NO. 1													2.1		24,640		13,552			96
2018CPT.10.06.20902.1	Union	2	BUD HUEY RD (SR 1115)	FROM SIMPSON RD (SR 1114) TO PROVIDENCE RD (SR 1117)	0.01	0.75	1	2	NO	NO	0.74	20	8,683		4,775				64	
TOTAL FOR MAP NO. 2													0.74		8,683		4,775			64
2018CPT.10.06.20902.1	Union	3	MCCAIN MILL RD (SR 1118)	FROM POTTERS RD (SR 1137) TO THE END OF MAINTENANCE	0.00	0.67	2	2	NO	NO	0.67	18	7,075	7,075	3,891				64	
TOTAL FOR MAP NO. 3													0.67		7,075	7,075	3,891			64
2018CPT.10.06.20902.1	Union	4	RAYMOND HELMS RD (SR 1122)	FROM POTTERS RD (SR 1137) TO THE END OF MAINTENANCE	0.00	0.55	1	2	NO	NO	0.55	18	5,808		3,194				64	
TOTAL FOR MAP NO. 4													0.55		5,808		3,194			64
2018CPT.10.06.20902.1	Union	5	BRADY RD (SR 1125)	FROM PROVIDENCE RD (SR 1117) TO POTTERS RD (SR 1137)	0.00	1.50	1	2	NO	NO	1.5	20	17,600		9,680				64	
TOTAL FOR MAP NO. 5													1.5		17,600		9,680			64
2018CPT.10.06.20902.1	Union	6	TOM GREENE RD (SR 1129)	FROM NC 522 TO TOM STARNES RD (SR 1128)	0.00	0.74	1	2	NO	NO	0.74	18	7,814		4,298				64	
TOTAL FOR MAP NO. 6													0.74		7,814		4,298			64
2018CPT.10.06.20902.1	Union	7	TOM GREENE RD (SR 1130)	FROM TOM STARNES RD (SR 1128) TO THE SOUTH CAROLINA LINE	0.00	2.38	1	2	NO	NO	2.38	20	27,925		15,359				96	
TOTAL FOR MAP NO. 7													2.38		27,925		15,359			96
2018CPT.10.06.20902.1	Union	8	FRANK BROOME RD (SR 1132)	FROM NC 522 TO THE END OF MAINTENANCE	0.00	0.74	2	2	NO	NO	0.74	18	7,814	7,814	4,298				64	
TOTAL FOR MAP NO. 8													0.74		7,814	7,814	4,298			64
2018CPT.10.06.20902.1	Union	9	LITTLE TOM STARNES RD (SR 1133)	FROM NC 522 TO OLD HIGHWAY RD (SR 1133)	0.00	1.32	1	2	NO	NO	1.32	18	13,939		7,667				64	
TOTAL FOR MAP NO. 9													1.32		13,939		7,667			64
2018CPT.10.06.20902.1	Union	10	MARY ELIZABETH CH RD (SR 1139)	FROM POTTERS RD (SR 1137) TO TOM STARNES RD (SR 1128)	0.00	0.79	1	2	NO	NO	0.79	20	9,269		5,098				64	
TOTAL FOR MAP NO. 10													0.79		9,269		5,098			64
2018CPT.10.06.20902.1	Union	11	MARY ELIZABETH CH RD (SR 1139)	FROM TOM STARNES RD (SR 1128) TO OLD HIGHWAY RD (SR 1133)	0.79	1.34	1	2	NO	NO	0.55	18	5,808		3,194				64	
TOTAL FOR MAP NO. 11													0.55		5,808		3,194			64
2018CPT.10.06.20902.1	Union	12	PROSPECT RD (SR 2169)	FROM RUBEN RD (SR 2171) TO PLYLER MILL RD (SR 2146)	0.00	1.77	1	2	NO	NO	1.77	18	18,691		10,280				64	
TOTAL FOR MAP NO. 12													1.77		18,691		10,280			64
2018CPT.10.06.20902.1	Union	13	IRBY RD (SR 2170)	FROM PROSPECT RD (SR 2169) TO PLYLER MILL RD (SR 2146)	0.00	1.63	1	2	NO	NO	1.63	18	17,213		9,467				64	
TOTAL FOR MAP NO. 13													1.63		17,213		9,467			64
2018CPT.10.06.20902.1	Union	14	RUBEN RD (SR 2171)	FROM NC 522 TO PLYLER MILL RD (SR 2146)	0.00	2.47	1	2	NO	NO	2.47	18	26,083		14,346				96	
TOTAL FOR MAP NO. 14													2.47		26,083		14,346			96
2018CPT.10.06.20902.1	Union	15	MCMANUS RD (SR 2172)	FROM LATHAN RD (SR 1134) TO GRIFFITH RD (SR 2139)	0.00	1.43	2	2	NO	NO	1.43	18	15,101	15,101	8,305				64	
TOTAL FOR MAP NO. 15													1.43		15,101	15,101	8,305			64
2018CPT.10.06.20902.1	Union	16	ALTAN WOODS RD (SR 2223)	FROM NC 207 TO W. SANDY RIDGE RD (SR 2152)	0.00	0.71	2	2	NO	NO	0.71	18	7,498	7,498	4,124				64	
TOTAL FOR MAP NO. 16													0.71		7,498	7,498	4,124			64
TOTAL FOR PROJ NO. 2018CPT.10.06.20902.1													20.09		220,961	37,488	121,528	20.00	1	1,120
GRAND TOTAL													20.09		220,961	37,488	121,528	20.00	1	1,120

Note: The Contractor shall not park equipment or work outside of the existing right of way in Historic Areas

SIGNING FOR ASPHALT SURFACE TREATMENT

LEGEND

- ◻ PORTABLE SIGN
- └ STATIONARY SIGN
- ← DIRECTION OF TRAFFIC FLOW



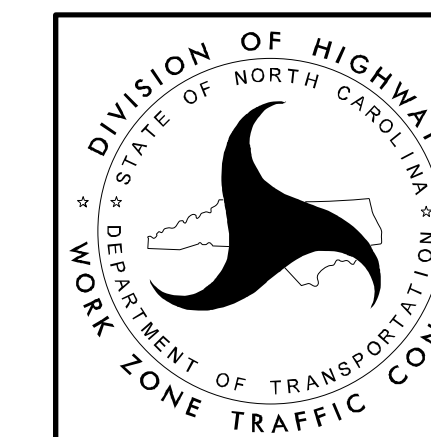
MAINLINE (-L-) SIGNING

-Y- LINE SIGNING

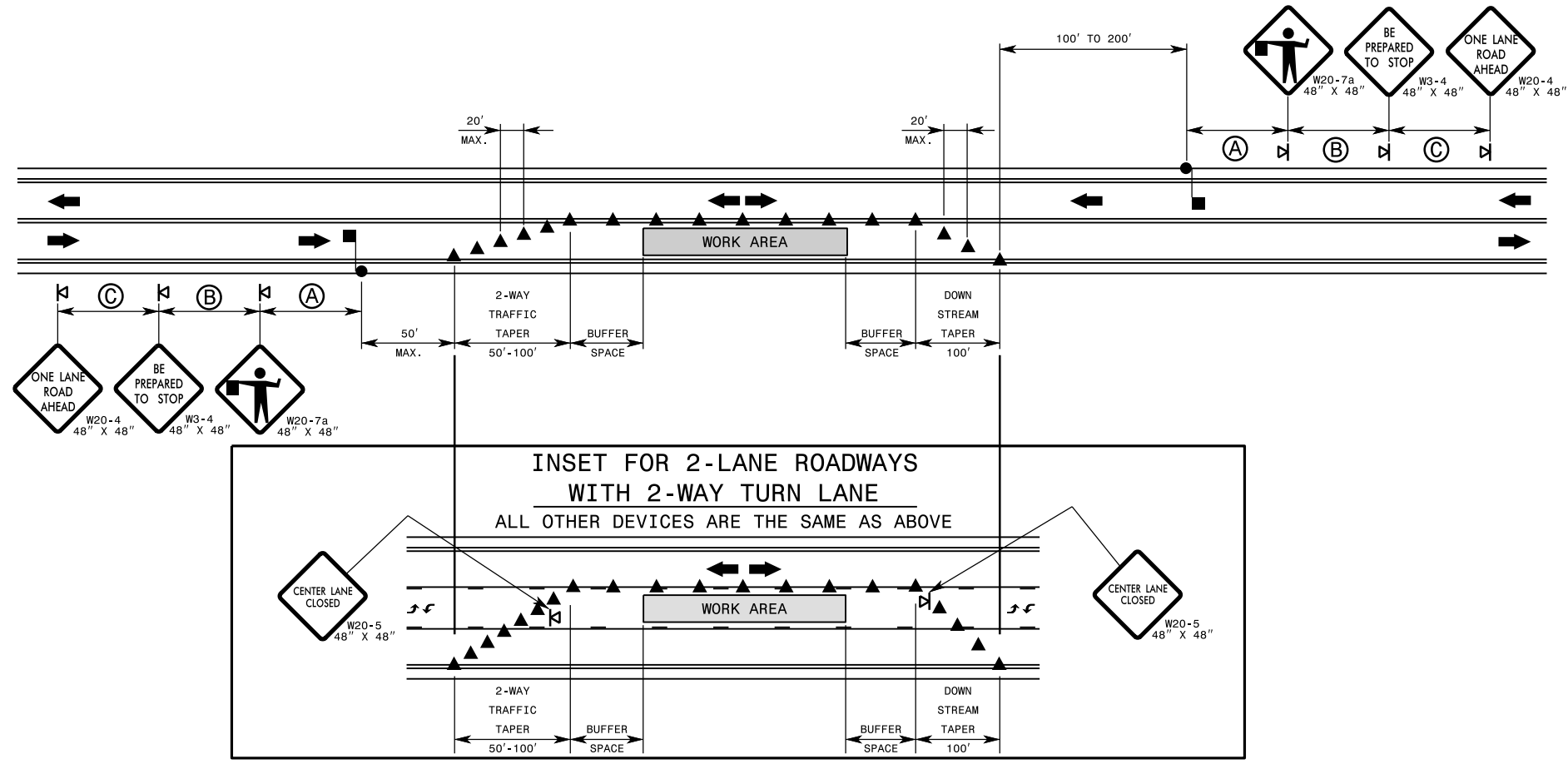
SIGNING NOTES AND PLACEMENT PER DIRECTION	1	 	<ul style="list-style-type: none"> - PLACE 1000' PRIOR TO BEGINNING OF CONSTRUCTION LIMITS. ONLY USED ON -Y- LINES IF RESURFACING LIMITS EXTEND 1000' ALONG -Y- LINE. - SIGN #2 ONLY USED WHEN RESURFACING LIMITS ARE 2 OR MORE MILES IN LENGTH. ROUND UP TO THE NEAREST WHOLE NUMBER. DO NOT USE FRACTIONAL OR DECIMAL NUMBERS. 	<p>STATIONARY SIGNING NOT REQUIRED FOR THE FOLLOWING -Y- LINE CONDITIONS:</p> <ol style="list-style-type: none"> 1) LESS THAN 1000' OF RESURFACING ALONG -Y- LINE 2) SUBDIVISION ROADS 3) DEAD END ROADS <p>WHEN PAVING/CONSTRUCTION ACTIVITIES PROCEED ACROSS AN UNSIGNED -Y- LINE, PORTABLE ADVANCE WARNING SIGNS SHALL BE USED ALONG THE -Y- LINE AS SHOWN BELOW. REMOVE UPON COMPLETION OF WORK.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <small>W20-1 48" X 48"</small> PLACED 500' IN ADVANCE OF FLAGGER. </div> <div style="text-align: center;"> <small>W20-7 A 48" X 48"</small> PLACED 250' IN ADVANCE OF FLAGGER. </div> </div>
	2	 	<ul style="list-style-type: none"> - ALTERNATE THE FOLLOWING TWO SIGNS: - STARTING WITH "LOOSE GRAVEL" (W8-7) FOLLOWED BY "UNMARKED PAVEMENT". - PLACE INITIALLY AT THE CONSTRUCTION LIMITS AND SPACED 1 MILE APART THEREAFTER. - AT TEE INTERSECTIONS INSTALL INITIALLY 0.5 MILE FROM INTERSECTION AND SPACE 1 MILE APART THEREAFTER. 	
	3		<ul style="list-style-type: none"> - 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. 	
	4		<ul style="list-style-type: none"> - PLACE 500' FOLLOWING THE END OF CONSTRUCTION LIMITS OR AS SHOWN WHEN WORK ENDS AT A 3-WAY TEE INTERSECTION. 	
	5			

MAPS LESS THAN 2 MILES

FOR AST RESURFACING MAPS WITH CONSTRUCTION LIMITS LESS THAN 2 MILES IN LENGTH, USE A STATIONARY "LOOSE GRAVEL" SIGN AT THE BEGINNING CONSTRUCTION LIMIT FOLLOWED BY AN "UNMARKED PAVEMENT" SIGN MIDWAY THROUGH AND AN "END ROAD WORK" SIGN AT THE END CONSTRUCTION LIMIT.



ADVANCE WARNING SIGNS FOR 2-LANE ROADWAY ASPHALT SURFACE TREATMENT



GENERAL NOTES FOR FLAGGING OPERATIONS

- 1- REFER TO RSD. 1101.11, SHEETS 1 & 4, FOR "L" DISTANCE AND SIGN SPACING.
- 2- INSTALL LANE CLOSURES WITH THE TRAFFIC FLOW, BEGINNING WITH DEVICES ON THE UPSTREAM SIDE OF TRAFFIC.
- 3- REMOVE LANE CLOSURES AGAINST THE TRAFFIC FLOW, BEGINNING WITH DEVICES ON THE DOWNSTREAM SIDE OF TRAFFIC.
- 4- PLACE CONES THRU THE WORK AREA AT THE MAXIMUM SPACING EQUAL IN FEET TO 2 TIMES THE POSTED SPEED LIMIT.
- 5- EXTEND LANE CLOSURES AT THE BUFFER SPACE SUCH THAT STOPPING SIGHT DISTANCE IS PROVIDED TO THE FLAGGER (REFER TO RSD. 1101.11, SHEET 2).
- 6- DO NOT STOP TRAFFIC IN ANY ONE DIRECTION FOR MORE THAN 5 MINUTES AT A TIME.
- 7- DRUMS OR SKINNY DRUMS MAY BE USED IN LIEU OF CONES. REFER TO RSD. 1180.01 FOR SKINNY DRUM REQUIREMENTS.
- 8- 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 USE LAW ENFORCEMENT.
- 9- REFER TO THE CURRENT MUTCD FOR FLAGGER CONTROL, REQUIREMENTS, AND PROCEDURES.
- 10- DO NOT EXCEED A 1 MILE LANE CLOSURE LENGTH UNLESS OTHERWISE SHOWN IN THE TMP OR AS DIRECTED BY THE ENGINEER.

- 11- IF VEHICLE QUEUES WILL REACH WITHIN 15' OF EITHER SIDE OF ACTIVE RAILROAD TRACKS, PROVIDE A UNIFORMED LAW ENFORCEMENT OFFICER OR FLAGGER TO PREVENT VEHICLES FROM STOPPING WITHIN THE GRADE CROSSING. PROVIDE OFFICER OR FLAGGER EVEN IF AUTOMATIC WARNING MEASURES ALREADY EXIST.

GENERAL NOTES FOR PILOT CAR OPERATIONS

- 1- USE PILOT CARS WHEN DIRECTED BY THE ENGINEER.
- 2- 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.
- 3- CONES ARE ALWAYS REQUIRED IN THE UPSTREAM AND DOWNSTREAM TAPERS.
- 4- MOUNT SIGN G20-4 "PILOT CAR FOLLOW ME" AT A CONSPICUOUS POSITION ON THE REAR OF THE PILOT VEHICLE.
- 5- 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.
- 6- ADVISE RESIDENTS AND BUSINESSES WITHIN THE LANE CLOSURE LIMITS ABOUT METHODS OF SAFE EGRESS AND INGRESS FROM DRIVEWAYS DURING FLAGGING AND PILOT CAR OPERATIONS.

