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#	STATE N.C.	21
	F.A. PRO	*
522		FRC
SOUTH CAROLINA		

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	2017CPT.I0.I8.I090I.I 2017CPT.I0.I8.2090I.I - ETC.		

CT NO.



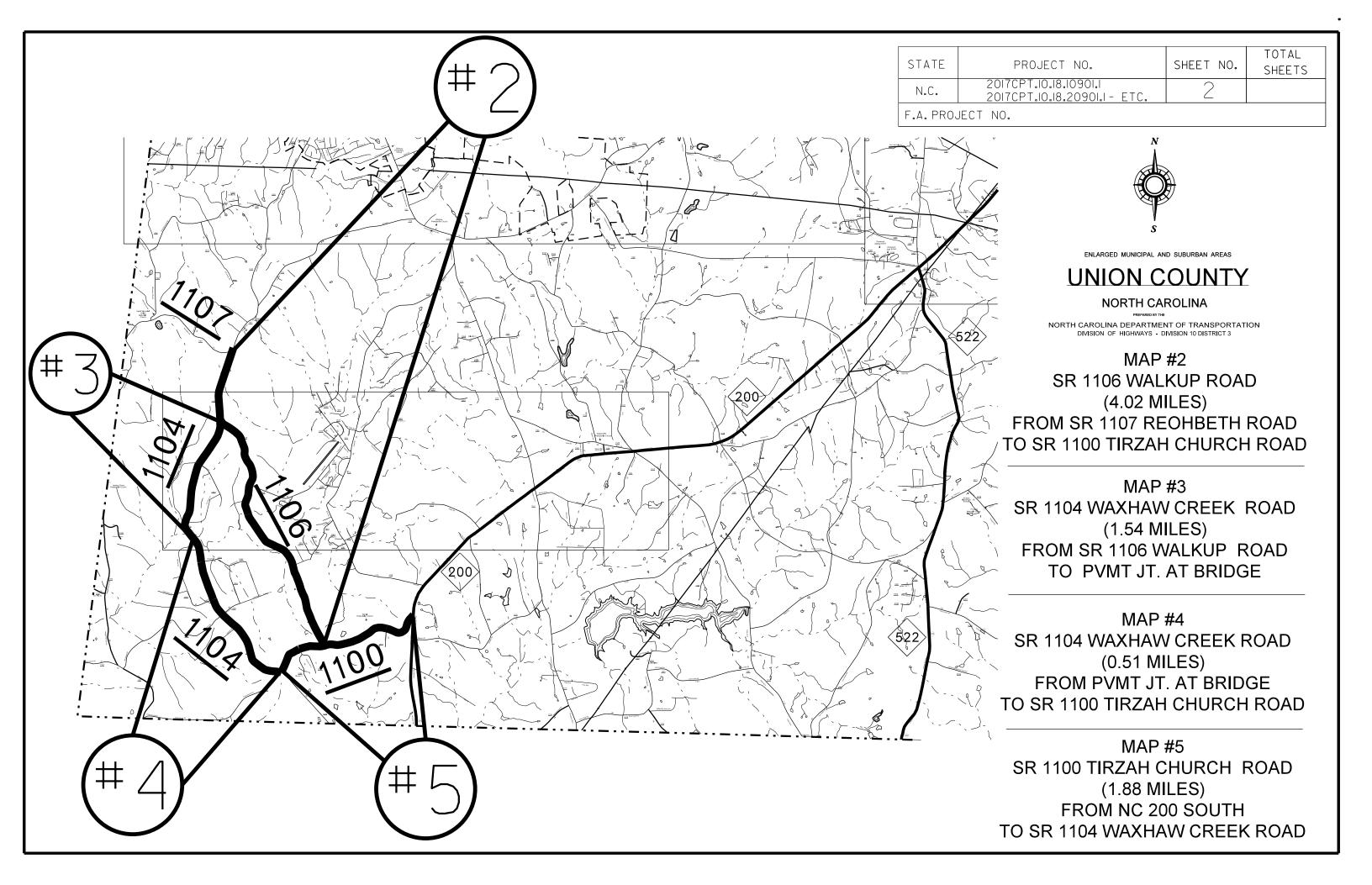
ENLARGED MUNICIPAL AND SUBURBAN AREAS

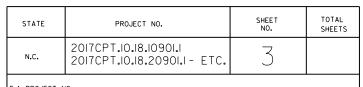
# **UNION COUNTY**

NORTH CAROLINA

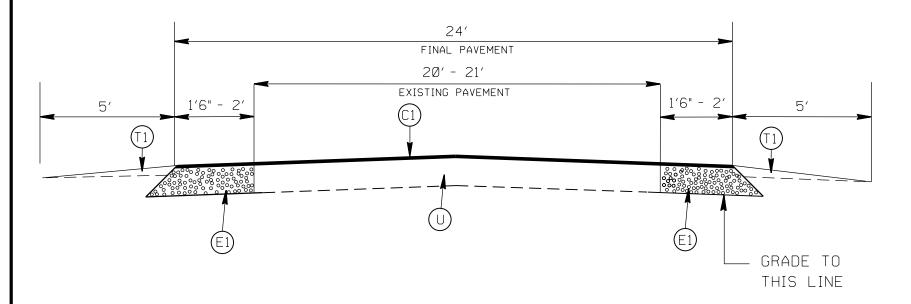
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS - DIVISION 10 DISTRICT 3

MAP #1 NC 200 SOUTH (9.9 MILES) OM PVMT JT. AT SR 2139 GRIFFITH ROAD TO SOUTH CAROLINA STATE LINE

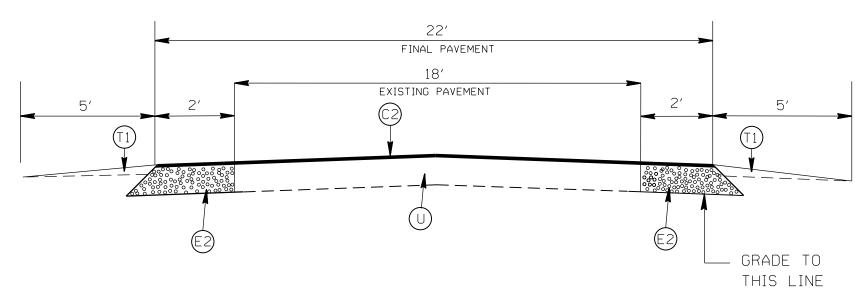




F.A. PROJECT NO.



# TYPICAL SECTION NO.1 NC 200 SOUTH (MAP 1)



TYPICAL SECTION NO. 2 SR 1106 WALKUP ROAD (MAP 2) FROM STA 10+00 TO STA: 54+00 \*SEE NOTE 2

### PAVEMENT SCHEDULE

$\left( \bigcap_{i=1}^{n} \right)$	PROP. APPROX. 2.0" ASPHALT CONC. SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 224 LBS. PER SO. YD.
	RATE OF 224 LBS.PER SO.YD.

PROP. APPROX. 1.5" ASPHALT CONC. SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SO. YD.

PROPOSED 8" OF ASPHALT CONC. BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE 456 LBS. PER SQ. YD. IN EACH OF TWO LIFTS.

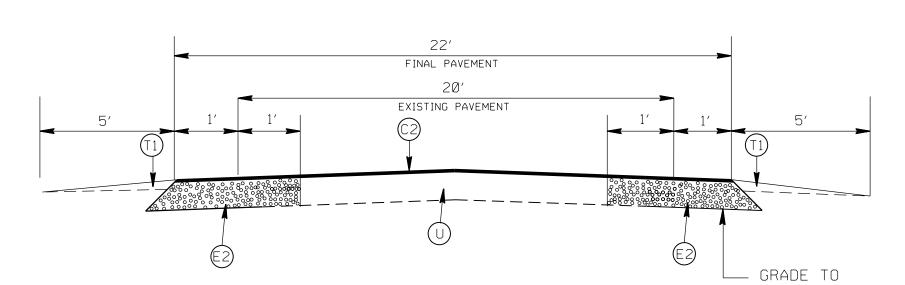
PROPOSED 5" OF ASPHALT CONC. BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE 570 LBS. PER SQ. YD.

T1 SHOULDER RECONSTRUCTION

EXISTING PAVEMENT

2017-2018 UNION COUNTY RESURFACING





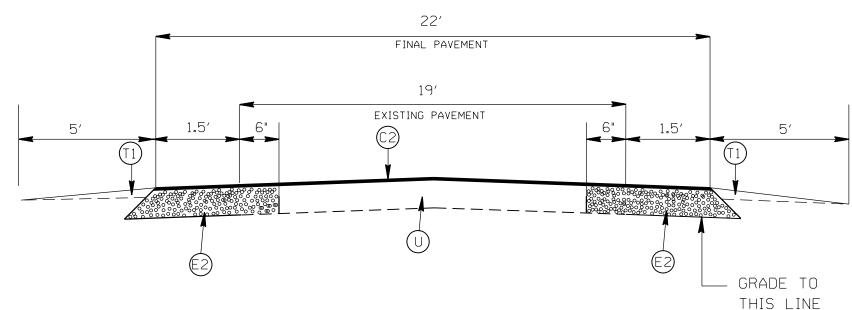
TYPICAL SECTION NO.3

SR 1106 WALKUP ROAD (MAP 2)

FROM STA: STA: 54+00 TO END OF MAP

\*SEE NOTE 2

SR 1104 WAXHAW CREEK ROAD (MAP 3)



TYPICAL SECTION NO. 4

SR 1104 WAXHAW CREEK ROAD (MAP 4)

\*SEE NOTE 3

SR 1100 TIRZAH CHURCH ROAD (MAP 5)

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	2017CPT.IO.I8.I090I.I 2017CPT.IO.I8.2090I.I - ETC.	4	

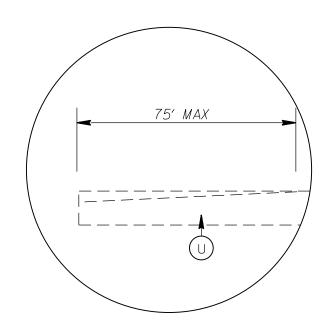
F.A. PROJECT NO.

### PAVEMENT SCHEDULE

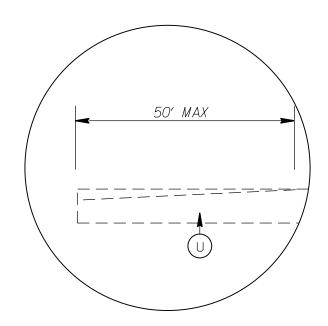
C1	PROP. APPROX. 2.0" ASPHALT CONC. SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
(C2)	PROP. APPROX. 1.5" ASPHALT CONC. SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
E1	PROPOSED 8" OF ASPHALT CONC. BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE 456 LBS. PER SQ. YD. IN EACH OF TWO LIFTS.
E2	PROPOSED 5" OF ASPHALT CONC. BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE 570 LBS. PER SQ. YD.
(T1)	SHOULDER RECONSTRUCTION
U	EXISTING PAVEMENT

2017-2018 UNION COUNTY RESURFACING

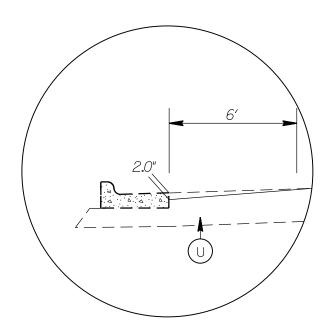




DETAIL FOR INCIDENTAL MILLING (O" TO 2.0")



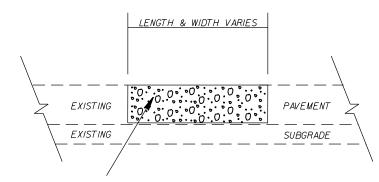
DETAIL FOR INCIDENTAL MILLING (0" TO 1.5")



DETAIL FOR PROFILE MILLING (0" TO 2.0")

MAP I

### PATCHING DETAIL



RATE IS VARIABLE AND SHALL BE AS DIRECTED BY THE ENGINEER. ASPHALT TYPE 119.0C SHALL BE PLACED.

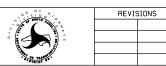
STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	2017CPT.IO.I8.I090I.I 2017CPT.IO.I8.2090I.I - ETC.	5	

F.A. PROJECT NO.

### PAVEMENT SCHEDULE

- PROP. APPROX. 2.0" ASPHALT CONC. SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 224 LBS. PER SO. YD.
- PROP. APPROX. 1.5" ASPHALT CONC. SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SO. YD.
- PROPOSED 8" OF ASPHALT CONC. BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE 456 LBS. PER SQ. YD. IN EACH OF TWO LIFTS.
- PROPOSED 5" OF ASPHALT CONC. BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE 570 LBS. PER SQ. YD.
- (T1) SHOULDER RECONSTRUCTION
- (U) EXISTING PAVEMENT

2017-2018 UNION COUNTY RESURFACING



STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	2017CPT.IO.18.10901.1 2017CPT.IO.18.20901.1 - ETC.	6	

F.A. PROJECT NO.

# NOTES:

I: LEVELING COURSE TO BE PLACED AT LOCATIONS AS DIRECTED BY THE ENGINEER.

2: ON MAP 2 MILL AND FILL BRIDGE 1.5",

3: ON MAP 4, SKIP CONCRETE BRIDGE.

4: SHOULDER RECONSTRUCTION WILL BE AS DIRECTED BY THE ENGINEER.

2017-2018 UNION COUNTY RESURFACING

 SCALE
 -NA 

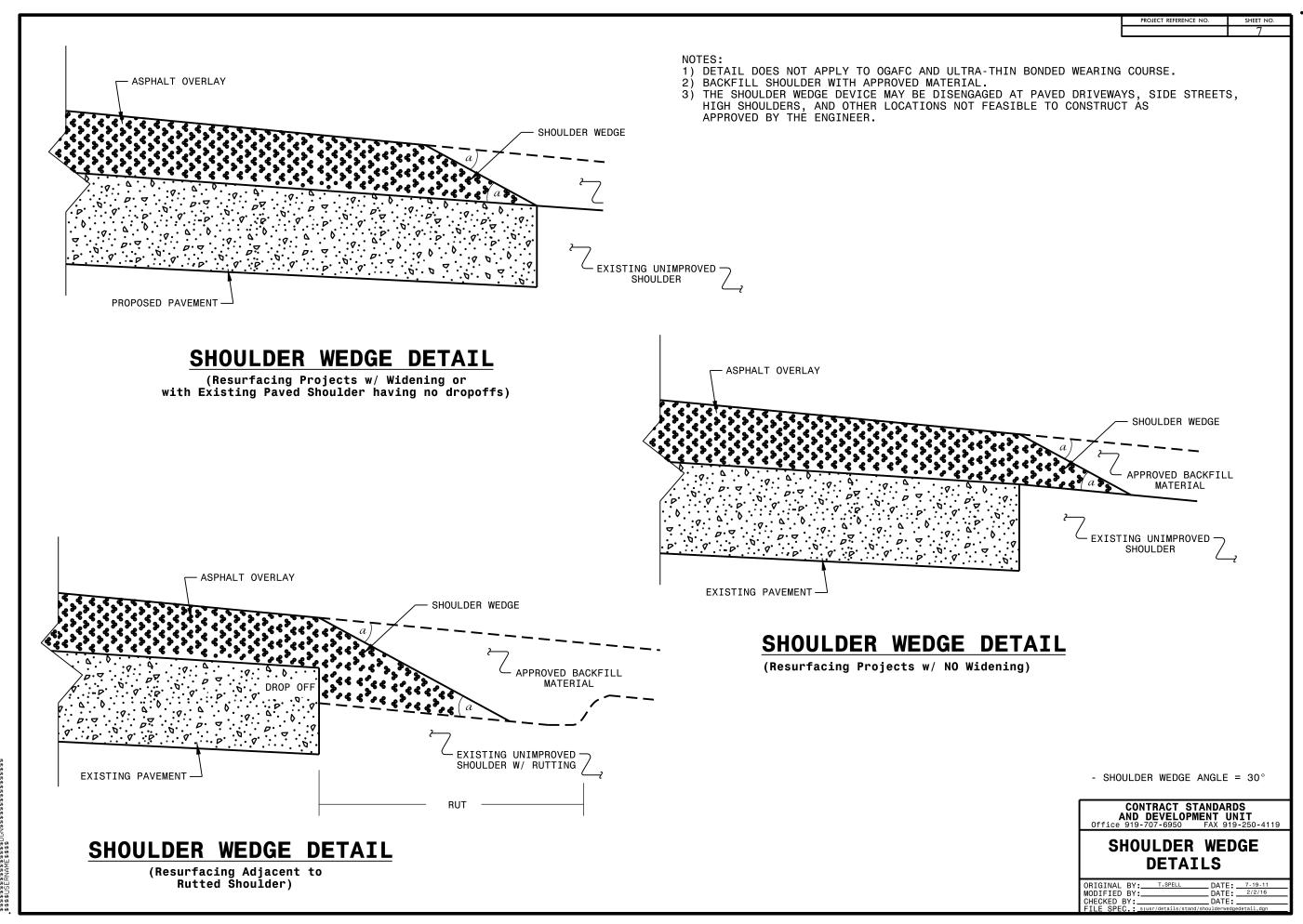
 DATE
 04/17

 DWG. BY
 AMO

 DESIGN BY
 AMO



REVIS	SIONS	



ssssssySTIMEsssss ssssssssssssssSDGNsssssssss ssssUSERNAMEssss

PROJECT NO.	SHEET NO.	TOTAL NO.
2017CPT.10.18.10901.1,	8	
2017CPT 10 18 20901 1-FTC		

# SUMMARY OF QUANTITIES

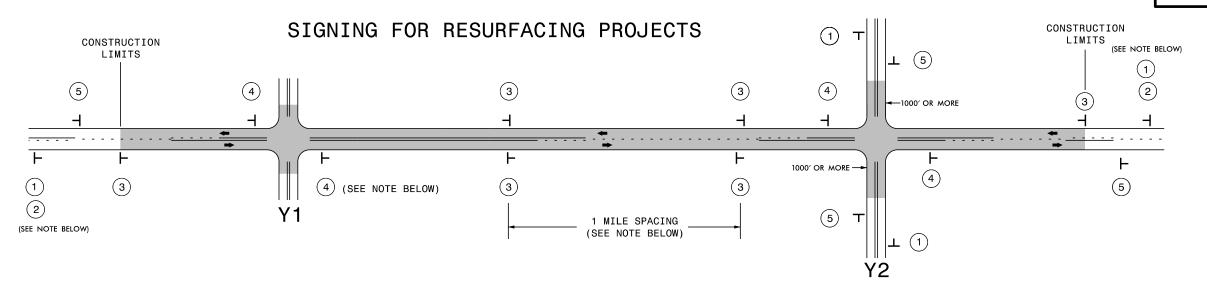
PROJECT	COUNTY	1AP ROUTE	DESCRIPTION	TYP LA		SUR TES	FACE AS	ARM MIX SPHALT QUIRED	LENGTH	WIDTH	BORROW		SHOULDER RECONSTRU		l l		BASE COURSE, B25.0C	SURFACE COURSE, S9.5B	LEVELING COURSE, S9.5B	BINDER FOR	PATCHING EXISTING PAVEMENT	6" DRIVEWAYS	TEMPORAR Y SILT FENCE	,	SEDIMENT CONTROL STONE	WATTLE	POLYACRYLA MIDE (PAM)
NO		NO		NO		REQU	JIRED		мі	FT	CY	TONS	SMI	SY	SY	SY	TONS	TONS	TONS	TONS	TONS	SY	16	CLASS B TN	TN	LF	LB
NO				140	-						Ci	10113	Jivii	31	٠,	31	10113	10113	10143	10143	10113				114		+
			FROM PAVEMENT JOINT AT SR 2139																								
			GRIFFITH ROAD TO SOUTH CAROLINA																								
2017CPT.10.18.10901.1	Union	1 NC 200 SOUTH/ROUTE 3000020089	STATE LINE MILEPOST 0.00 TO 9.9	1	2 2W	U N	10	NO	9.9	24	1,700	1,240	20		60	560	11,699	17,690		1,576		400	2,970	300	149	2,970	4
	TOTAL FO	PROJ NO. 2017CPT.10.18.10901.1							9.9		1,700	1,240	20		60	560	11,699	17,690		1,576		400	2,970	300	149	2,970	4
					•																						
			FROM SR 1107 REOHBETH ROAD TO																								
			SR 1100 TIRZAH CHURCH ROAD																								
2017CPT.10.18.20901.1	Union	2 SR 1106 WALKUP ROAD/ROUTE 40001106894	MILEPOST 4.02 TO 0.00	2,3	2 2W	'U N	10	NO	4.02	22	660	300	8	347		269	2,979	4,895	1,770	540	2,211	125	1,200	120	60	1,200	3
	TOTAL FO	PROJ NO. 2017CPT.10.18.20901.1							4.02		660	300	8	347		269	2,979	4,895	1,770	540	2,211	125	1,200	120	60	1,200	3
		1												1	1					T		T	1	1			
			FROM SR 1106 WALKUP ROAD TO																								
			PAVEMENT JOINT A BRIDGE																								
2017CPT.10.18.20901.2	Union	3 SR 1104 WAXHAW CREEK ROAD/ROUTE 4000110489	MILEPOST 4.3 TO 2.87	3	2 2W	'U N	10	NO	1.54	22	250	115	3.1			245	1,130	1,832	678	204	763	50	462	46	23	462	1
	TOTAL FO	PROJ NO. 2017CPT.10.18.20901.2							1.54		250	115	3.1			245	1,130	1,832	678	204	763	50	462	46	23	462	1
						-				-		1	Т		ı	ı				Т		Т	_				
			FROM PAVEMENT JOINT AT BRIDGE																								
			TO SR 1100 TIRZAH CHURCH ROAD	_																							
2017CPT.10.18.20901.3		4 SR 1104 WAXHAW CREEK ROAD/ROUTE 4000110489	MILEPOST 2.86 TO 0.84	4	2 2W	U N	10	NO	0.51	22	83	21	1			285	374	720	225	74	252	25	153	16	8	153	1
	TOTAL FO	PROJ NO. 2017CPT.10.18.20901.3							0.51		83	21	1			285	374	720	225	74	252	25	153	16	8	153	1
		1	FROM NG 200 COUTH TO CR 4404									1	1				1			1		1					
			FROM NC 200 SOUTH TO SR 1104 WAXHAW CREEK ROAD MILEPOST																								
2017CDT 10 10 20001 4	Llminn	5 SR 1100 TIRZAH CHURCH ROAD/ROUTE 4000110089			2 214		10	NO	1.00	22	211	141				200	1.053	2 244	020	241	021	125	564	F.C	20	FC4	2
2017CPT.10.18.20901.4	Union		1.88 TO 3.77	4	2 2W	U N	10	NO	1.88	22	311	141	4	1		269	1,053	2,341	828	241	931	125	564	56	28	564	+ 2
	TOTAL FO	RPROJ NO. 2017CPT.10.18.20901.4							1.88		311	141	36.1	3/17	60	269 1.628	1,053	2,341	828 3 501	241	931	125 725	564	56 538	28	564 5 3/19	11

PROJECT NO.	SHEET NO.	TOTAL NO.
2017CPT.10.18.10901.1	9	
2017CPT.10.18.20901.1. ETC.		

# THERMOPLASTIC AND PAINT QUANTITIES

				•							<del>~ · · · · · · · · · · · · · · · · · · ·</del>					1			
							I			4510000000-N					00000-E		00000-E		00000-N
PROJECT	COUNTY MA	AP ROUTE	DESCRIPTION	TYP LANES		1		WORK ZONE	TEMPORARY	LAW		THERMO MSG		4" YELLOW	4" WHITE	THERMOPLASTIC		YELLOW &	CRYSTAL &
					TYPE			ADVANCE/GE	TRAFFIC	ENFORCEMENT	WHITE	STOP 120 M	ARROW 90	PAINT	PAINT	PAVEMENT	PAVEMENT	YELLOW	RED MARKERS
								NERAL	CONTROL		THERMO		M			MARKING LINES	MARKING LINES	MARKERS	
								WARNING								4",90 MILS	4",120 MILS		
								SIGNING								(HRM)	(HRM)		
NO	N	o		NO				SF	LS	HR	LF	EA	EA	LF	LF	LF	LF	EA	EA
			FROM PAVEMENT JOINT AT SR 2139																
			GRIFFITH ROAD TO SOUTH																
			CAROLINA STATE LINE MILEPOST																
2017CPT.10.18.10901.1	Union 1	NC 200 SOUTH/ROUTE 3000020089	0.00 TO 9.9	1 2	2WU	9.9	24	358.0	1.00	40.00	200	8	1			106,000	81,241	656	4
	TOTAL FOR F	DROLNO 2017CDT 10 19 10001 1				9.9		358.0	1.00	40	200	8	1			106,000	81,241	656	4
	TOTAL FOR F	PROJ NO. 2017CPT.10.18.10901.1																6	60
			FROM SR 1107 REOHBETH ROAD TO																
			SR 1100 TIRZAH CHURCH ROAD																
2017CPT.10.18.20901.1	Union 2	SR 1106 WALKUP ROAD/ROUTE 40001106894	MILEPOST 4.02 TO 0.00	2,3 2	2WU	4.02	22	358.0	*					84,170	85,820				
	TOTAL FOR F	DROLNO 2017CDT 10 10 20001 1				4.02		358.0						84,170	85,820				
	TOTAL FOR F	PROJ NO. 2017CPT.10.18.20901.1												169	9,990				•
			FROM SR 1106 WALKUP ROAD TO																
			PAVEMENT JOINT A BRIDGE																
2017CPT.10.18.20901.2	Union 3	SR 1104 WAXHAW CREEK ROAD/ROUTE 4000110489	MILEPOST 4.3 TO 2.87	3 2	2WU	1.54	22	358.0	*					30,302	32,432				
		DD 0.1 NO. 2047CDT 40.40.20004.2				1.54		358.0						30,302	32,432				
	TOTAL FOR E	PROJ NO. 2017CPT.10.18.20901.2												62	,734				1
															1				
			FROM PAVEMENT JOINT AT BRIDGE																
			TO SR 1100 TIRZAH CHURCH ROAD																
2017CPT.10.18.20901.3	Union 4	SR 1104 WAXHAW CREEK ROAD/ROUTE 4000110489	MILEPOST 2.86 TO 0.84	4 2	2WU	0.51	22	358.0	*					8,415	11,224				
2017 61 1.10.10.20301.3				7 -	200	0.51		358.0						8,415	11,224				
	TOTAL FOR F	PROJ NO. 2017CPT.10.18.20901.3				0.51		330.0							,639				
			FROM NC 200 SOUTH TO SR 1104									+		13,	,,,,,,				
			WAXHAW CREEK ROAD MILEPOST																
2017CPT.10.18.20901.4	Union 5	SR 1100 TIRZAH CHURCH ROAD/ROUTE 4000110089	1.88 TO 3.77	4 2	2WU	1.88	22	358.0	*					40,588	40,588				
2017011.10.10.20301.4		·	1.00 10 0.77	7 2	2000	1.88		358.0			1	+		40,588	40,588				
	TOTAL FOR F	PROJ NO. 2017CPT.10.18.20901.4			1	1.00	1	330			1	+			,176				L
						17.85		1,790	1	40	200	8	1	163,475	170,064	106,000	81,241	656	4
		GRAND TOTAL			1	17.03	1	1,730	-	40	200	•	-		3,539	100,000	01,241		660
			1			1			l			1		333	,,,,,,,			U	

PROJ. REFERENCE NO. SHEET NO. 10



### **LEGEND**

- STATIONARY SIGN

← DIRECTION OF TRAFFIC FLOW

## MAINLINE (-L-) SIGNING

PLACE 1000' PRIOR TO BEGINNING OF CONSTRUCTION LIMITS.

CONSTRUCTION LIMITS AND THEN SPACE 1 MILE THEREAFTER.

# NO REQUIRED STATIONARY SIGNING FOR THE

### FOLLOWING -Y- LINE CONDITIONS:

1) LESS THAN 1000' OF RESURFACING ALONG -Y- LINE

-Y- LINE SIGNING

- 2) SUBDIVISION ROADS
- 3) DEAD END ROADS

(2) ROUND UP TO NEXT WHOLE NUMBER. (NO FRACTIONAL OR DECIMAL NUMBERS) 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. PLACE INITIALLY AT THE CONSTRUCTION LIMITS AND SPACED 1 MILE APART LOW/SOFT (3) THEREAFTER. IF NO -Y- LINES EXIST, PLACE 2ND SET 1/2 MILE FROM THE





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

# NOTES AND PER DIRECTION SIGNING PLACEMENT 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.

ONLY USED ON -Y- LINES IF RESURFACING LIMITS EXTEND 1000' ALONG -Y- LINE.

#2 SIGN ONLY USED WHEN RESURFACING LIMITS ARE 2 OR MORE MILES IN LENGTH.

ROAD WORK G20-2 A 48" X 24"

(4)

ROAD

WORK

SHOULDER

ROAD`

UNDER

CONST/

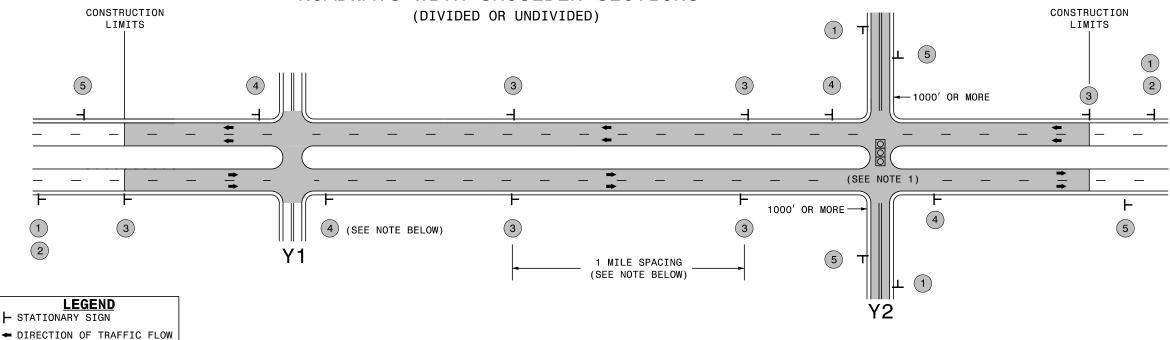
AHEAD W20-1

PLACE 500' FOLLOWING THE END OF CONSTRUCTION LIMITS.



RESURFACING ADVANCE WARNING SIGNS FOR RURAL AND SUBURBAN 2 LANE ROADWAYS

# SIGNING FOR RURAL AND SUBURBAN MULTI-LANE ROADWAYS WITH SHOULDER SECTIONS



# MAINLINE (-L-) SIGNING

# -Y- LINE SIGNING

### PLACE 1000' PRIOR TO BEGINNING OF CONSTRUCTION LIMITS. ROAD ONLY USED ON -Y- LINES IF RESURFACING LIMITS EXTEND 1000' ALONG -Y- LINE. WORK NOTES AND PER DIRECTION AHEAD / W20-1 #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) PLACE INITIALLY AT THE CONSTRUCTION LIMITS AND SPACED 1 MILE APART LOWSOFT (3) THEREAFTER. IF NO -Y- LINES EXIST, PLACE 2ND SET 1/2 MILE FROM THE SHOULDER CONSTRUCTION LIMITS AND THEN SPACE 1 MILE THEREAFTER. SIGNING PLACEMENT P THESE ARE FOR -Y- LINES THAT ARE "THROUGH" ROADWAYS. DEAD END AND SUBDIVISION ROADS ARE NOT "THROUGH" ROADWAYS. INSTALL 500' +/- FROM ROAD` EACH -Y- LINE APPROACH AS SHOWN ABOVE. FOR MULTIPLE -Y- LINES THAT UNDER 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. PLACE 500' FOLLOWING THE END OF CONSTRUCTION LIMITS. ROAD WORK G20-2 A 48" X 24"

# 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.





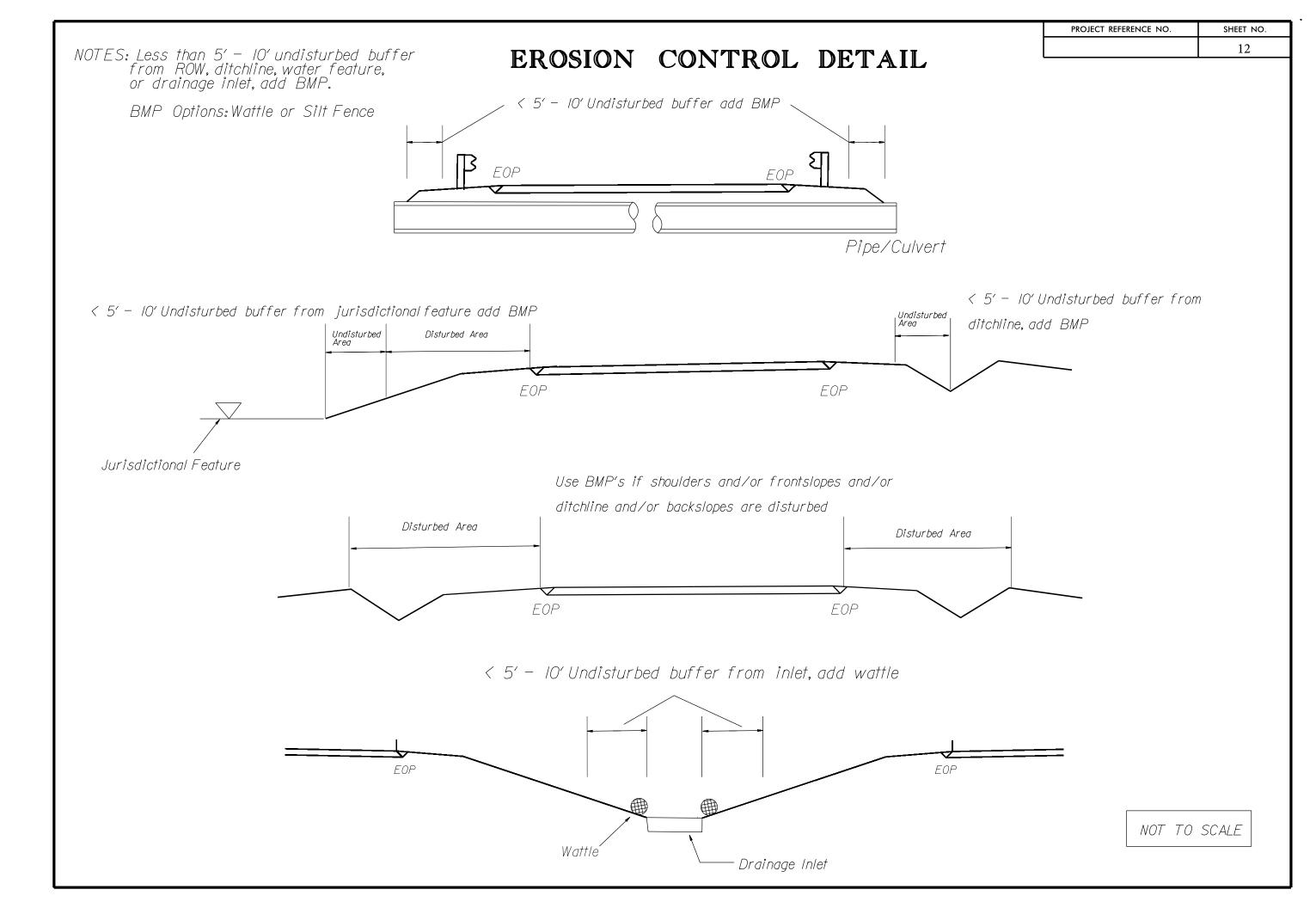
PLACED 500' IN ADVANCE OF FLAGGER. PLACED 250' IN ADVANCE OF FLAGGER

### NOTES:

1) MAY USE LAW ENFORCEMENT TO CONTROL TRAFFIC AT SIGNALIZED INTERSECTIONS AS DIRECTED BY THE ENGINEER. PROVIDE PORTABLE "ROAD WORK AHEAD" (W20-1) SIGNS 500' IN ADVANCE ALONG BOTH APPROACHES FROM THE SIDE STREETS WHEN PAVING PROCEEDS THROUGH THE INTERSECTION.

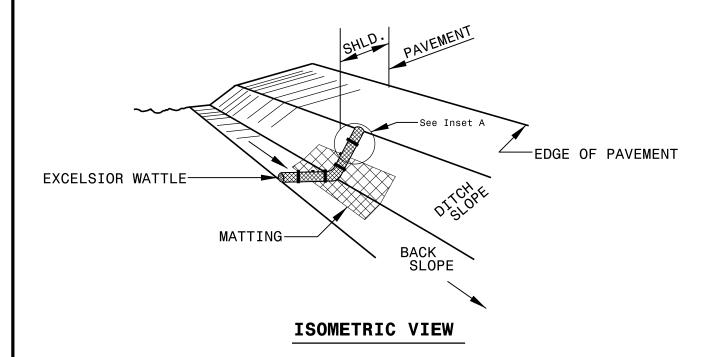


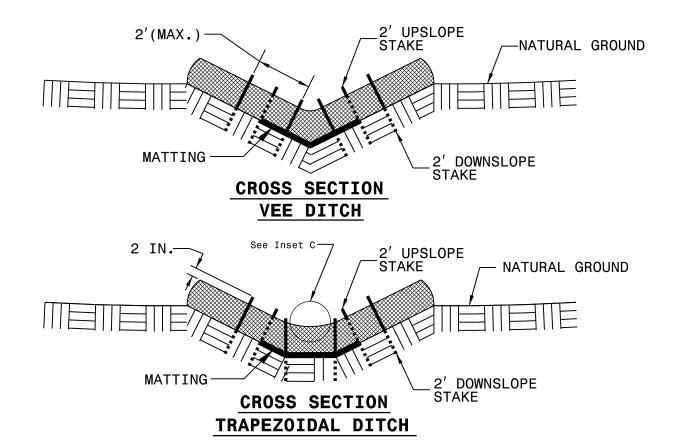
RESURFACING
ADVANCE WARNING SIGNS
FOR RURAL AND SUBURBAN
MULTI-LANE ROADWAYS
W/ SHOULDER SECTIONS
(DIVIDED OR UNDIVIDED)



CT REFERENCE NO. SHEET NO.

# WATTLE WITH POLYACRYLAMIDE DETAIL





### NOTES:

USE MINIMUM 12 IN. DIAMETER EXCELSIOR WATTLE.

USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. CROSS SECTION.

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.

PRIOR TO POLYACRYLAMIDE (PAM) APPLICATION, OBTAIN A SOIL SAMPLE FROM PROJECT LOCATION, AND FROM OFFSITE MATERIAL, AND ANALYZE FOR APPROPRIATE PAM FLOCCULANT TO BE APPLIED TO EACH WATTLE.

INITIALLY APPLY 3.5 OUNCES OF ANIONIC OR NEUTRALLY CHARGED POLYACRYLAMIDE (PAM) OVER WATTLE WHERE WATER WILL FLOW AND AFTER EVERY RAINFALL EVENT THAT IS EQUAL TO OR EXCEEDS 0.50 IN.

