

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
	2021CPT.10.12.20901	1	
F.A. PROJECT NO.			



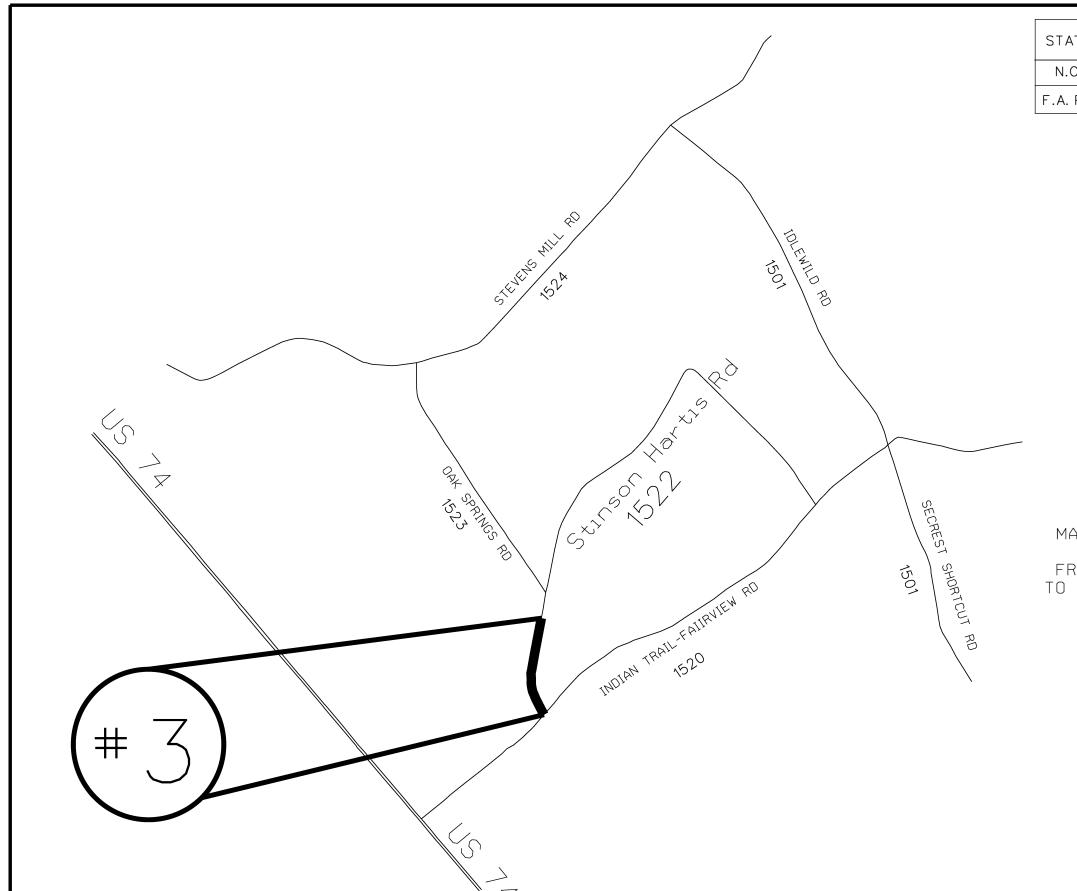
### UNION COUNTY

NORTH CAROLINA

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

MAP #1 SR 1690 NORTH HILLS DRIVE 0.30 MILES FROM SR 1615 UNIONVILLE ROAD TO END OF MAINTENANCE

MAP #2 SR 1691 NORTH HILLS LANE Ø.11 MILES FROM SR 1615 UNIONVILLE ROAD TO SR 1690 NORTH HILLS DRIVE



STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	2021CPT.10.12.20901	2	
F.A. PROJECT NO.			

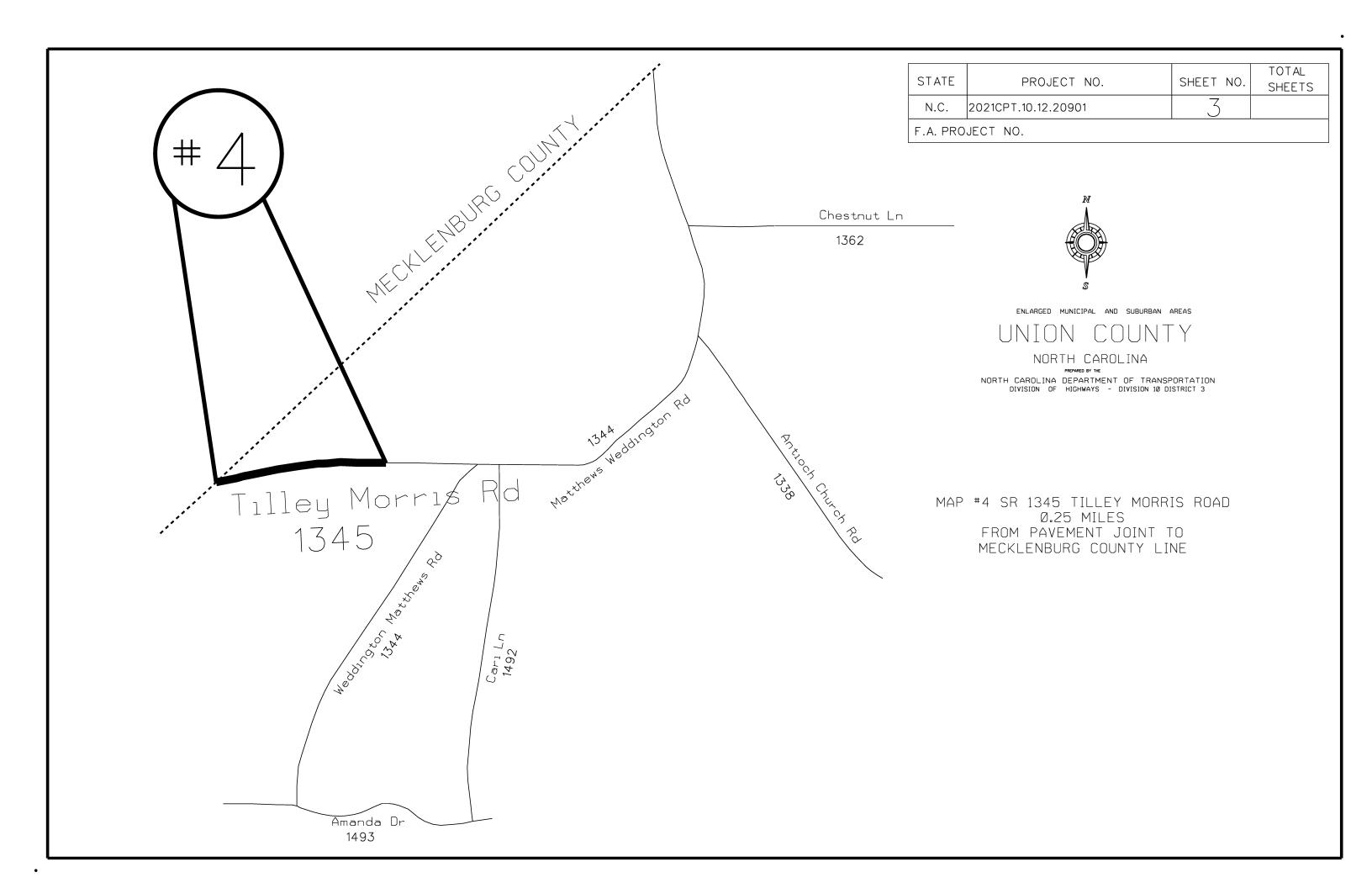


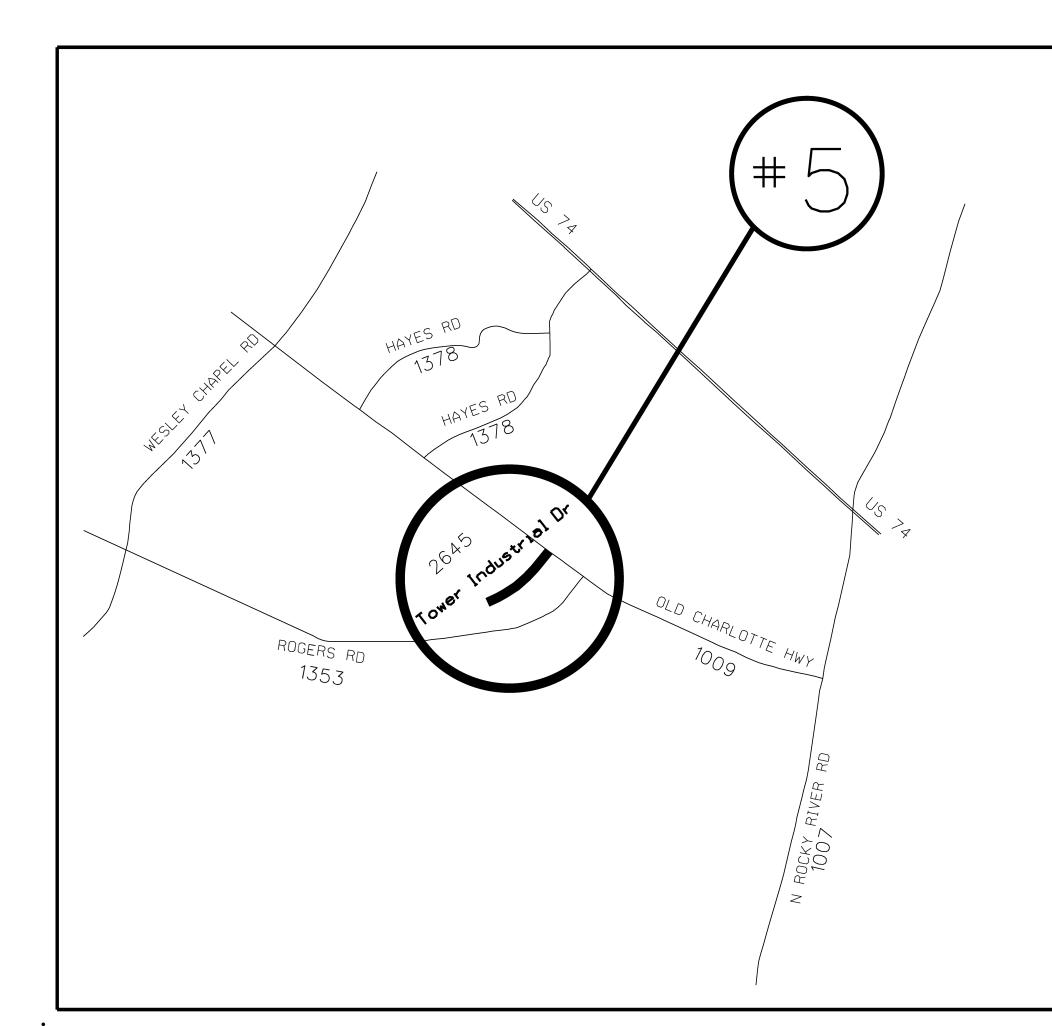
### UNION COUNTY

NORTH CAROLINA

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

MAP #3 SR 1522 STINSON HARTIS ROAD Ø.35 MILES FROM PAVEMENT JOINT AT NEW BRIDGE TO SR 1520 INDIAN TRAIL-FAIRVIEW ROAD





STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
	2021CPT.10.12.20901	4	
F.A. PROJECT NO.			

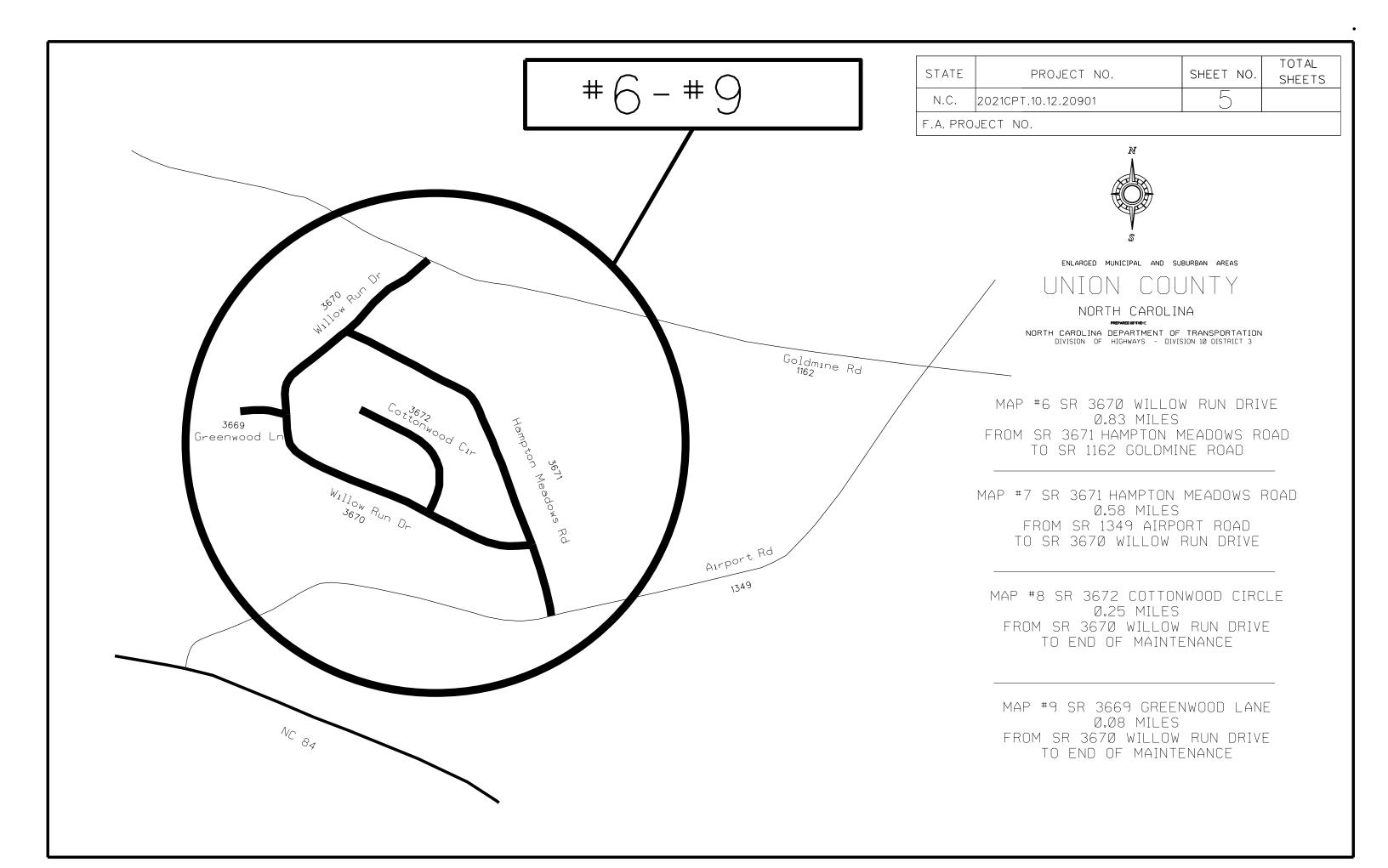


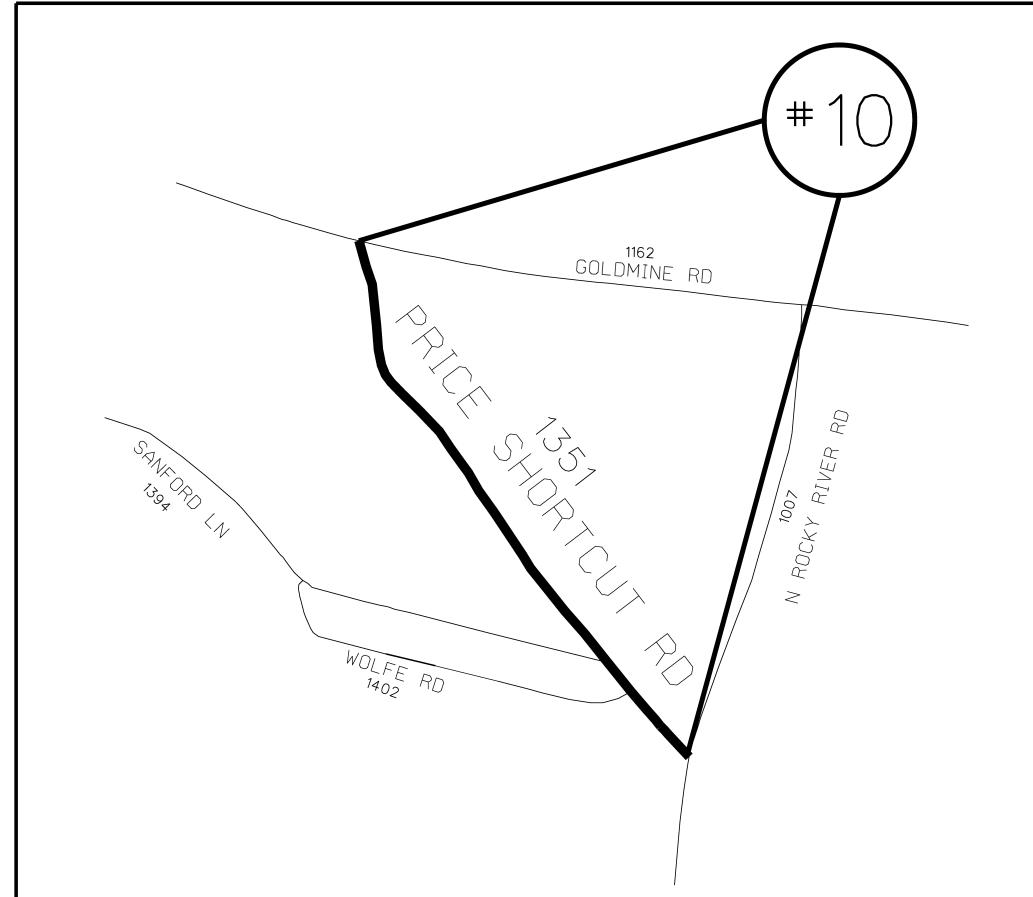
### UNION COUNTY

NORTH CAROLINA

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

MAP #5 SR 2645 TOWER INDUSTRIAL DRIVE Ø.34 MILES FROM SR 1009 OLD CHARLOTTE HWY TO END OF MAINTENANCE





STA	ΛTE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.	C.	2021CPT.10.12.20901	6	
F.A. PROJECT NO.				

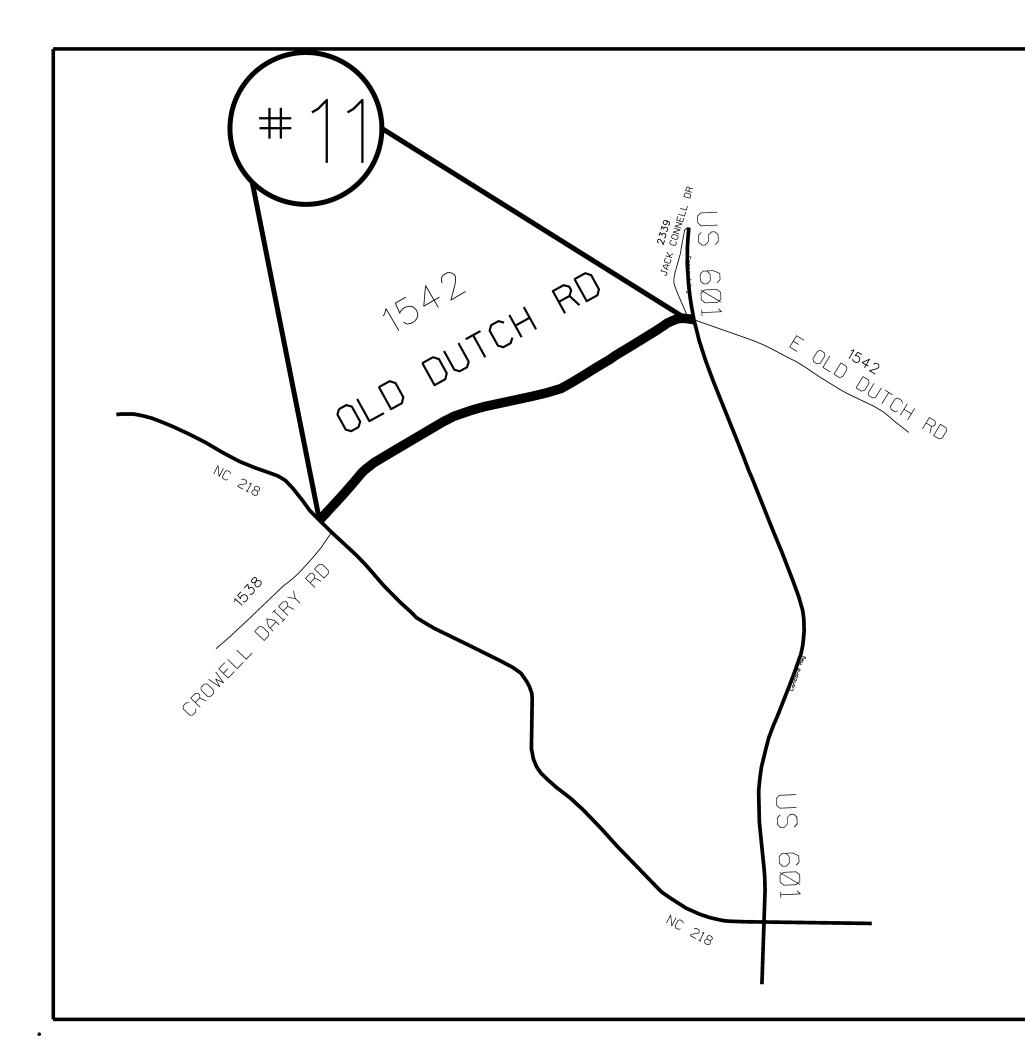


### UNION COUNTY

NORTH CAROLINA

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

MAP #10 SR 1351 PRICE SHORTCUT ROAD
1.1 MILES
FROM SR 1162 GOLDMINE ROAD
TO SR 1007 N ROCKY RIVER ROAD



STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	2021CPT.10.12.20901	7	
F.A. PROJECT NO.			

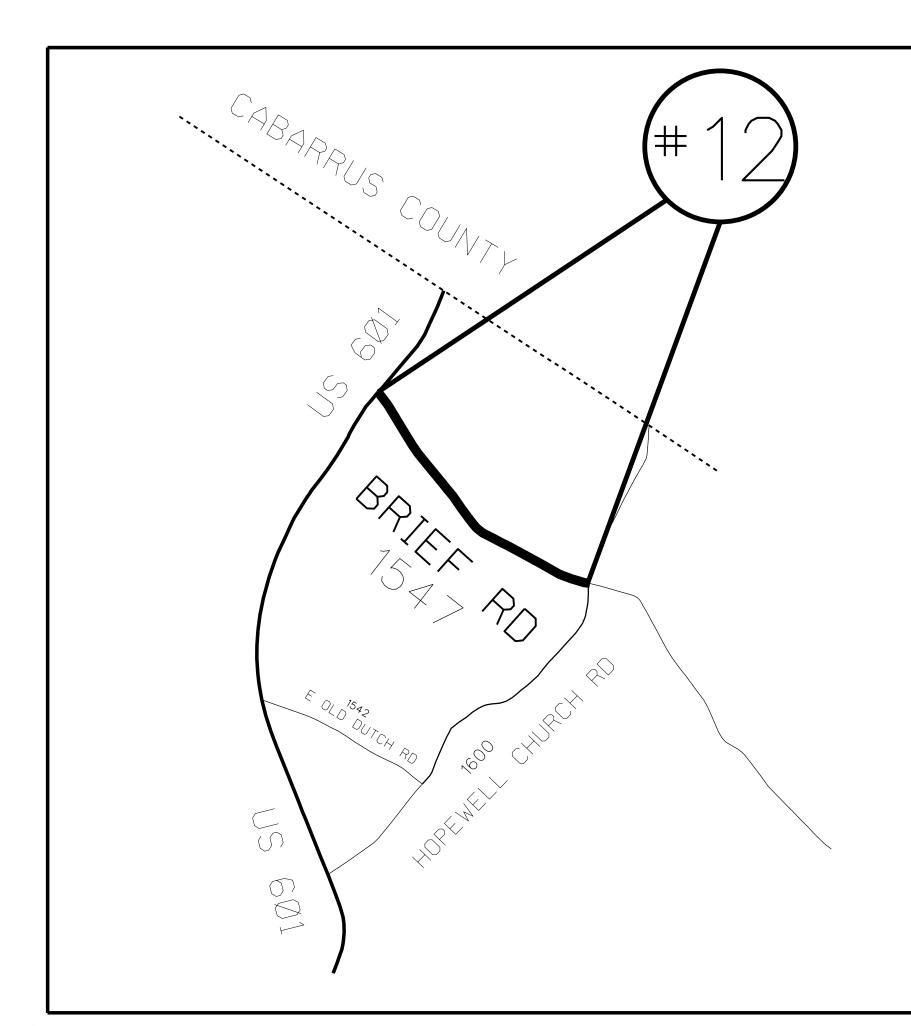
### UNION COUNTY

NORTH CAROLINA

PREPARED BY THE

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

MAP #11 SR 1542 OLD DUTCH ROAD 1.49 MILES FROM US 601 NORTH TO NC 218



STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	2021CPT.10.12.20901	8	
F.A. PROJECT NO.			



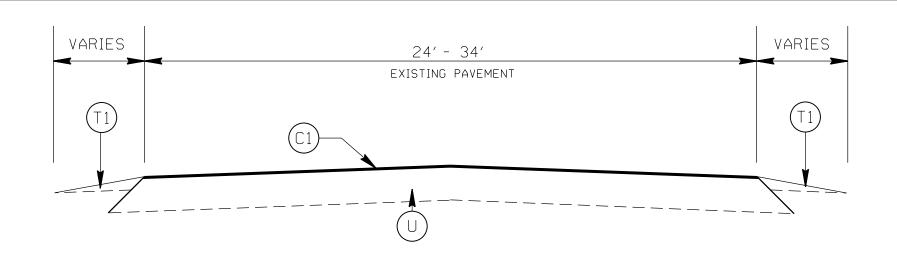
### UNION COUNTY

NORTH CAROLINA

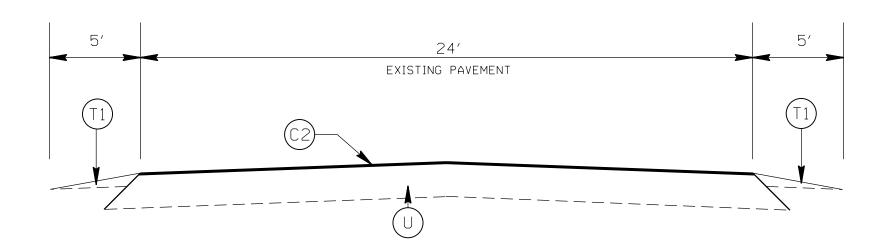
PREPARED BY THE

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

MAP #12 SR 1547 BRIEF ROAD
1.36 MILES
FROM US 6Ø1 NORTH
TO SR 16ØØ HOPEWELL CHURCH ROAD



TYPICAL SECTION NO. 1 SR 1522 STINSON HARTIS ROAD (MAP 3) SR SR 1345 TILLEY MORRIS ROAD (MAP 4)



TYPICAL SECTION NO. 2 SR 1690 NORTH HILLS DRIVE (MAP 1) SR 1691 NORTH HILLS LANE (MAP 2)

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	202ICPT.I0.I2.2090I	9	
F.A. PROJECT N	0.		

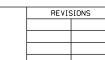
### PAVEMENT SCHEDULE

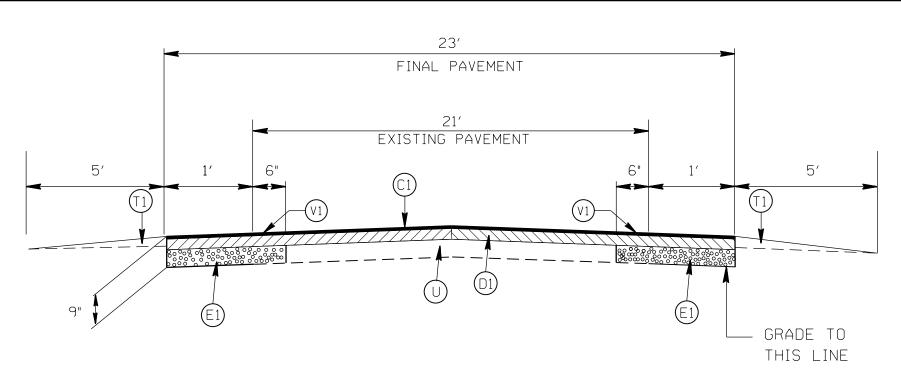
C1)	PROP. APPROX. 1.5" ASPHALT CONC. SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.	
(C2)	PROP. APPROX. 1.5" ASPHALT CONC. SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.	
(C3)	PROP. APPROX. 1.0" ASPHALT CONC. SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 110 LBS PER SQ. YD.	
(C4)	ASPHALT SURFACE TREATMENT, MAT COAT # 78M STONE	
(C5)	ASPHALT SURFACE TREATMENT, DOUBLE SEAL	
D1	PROPOSED 2.5" ASPHALT CONC. INTERMEDIATE COURSE, TYPE 119.0C, AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.	
E1)	PROPOSED 5" OF ASPHALT CONC. BASE COURSE, B25.0C, AT AN AVERAGE RATE 570 LBS. PER SO. YD.	
(T1)	SHOULDER RECONSTRUCTION	
U	EXISTING PAVEMENT	
(V1)	MILLING 6" OF EXISTING ASPHALT PAVEMENT, 5" DEPTH. (SEE S.P. TRENCHING FOR BASE COURSE BY MILLING.")	
Z	FULL DEPTH RECLAMATION	

2021-2022 UNION COUNTY RESURFACING

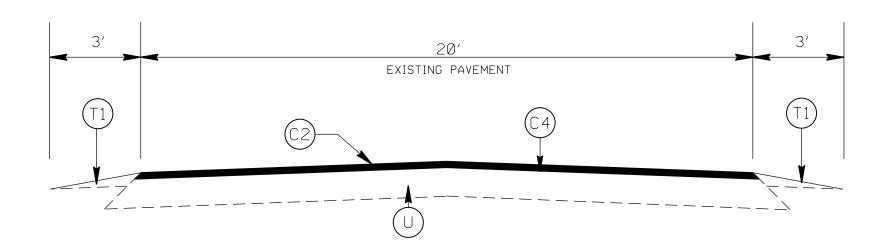
DATE 1/20 DWG. BY AMO







TYPICAL SECTION NO. 3 SR 2645 TOWER INDUSTRIAL DRIVE (MAP 5)



TYPICAL SECTION NO. 4 SR 3670 WILLOW RUN DRIVE (MAP 6) SR 3671 HAMPTON MEADOW ROAD (MAP 7) SR 3672 COTTONWOOD CIRCLE (MAP 8) SR 3669 GREENWOOD LANE (MAP 9)

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	202ICPT.I0.I2.2090I		
F.A. PROJECT N	10.		

### PAVEMENT SCHEDULE

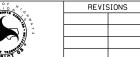
PROP. APPROX. 1.5" ASPHALT CONC. SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE

(C1)	RATE OF 168 LBS. PER SQ. YD.
(C2)	PROP. APPROX. 1.5" ASPHALT CONC. SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.
(C3)	PROP. APPROX. 1.0" ASPHALT CONC. SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 110 LBS PER SQ. YD.
(C4)	ASPHALT SURFACE TREATMENT, MAT COAT # 78M STONE
(C5)	ASPHALT SURFACE TREATMENT, DOUBLE SEAL
(D1)	PROPOSED 2.5" ASPHALT CONC. INTERMEDIATE COURSE, TYPE 119.0C, AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.
E1)	PROPOSED 5" OF ASPHALT CONC. BASE COURSE, B25.0C, AT AN AVERAGE RATE 570 LBS. PER SQ. YD.
(T1)	SHOULDER RECONSTRUCTION
U	EXISTING PAVEMENT
V1	MILLING 6" OF EXISTING ASPHALT PAVEMENT, 5" DEPTH. (SEE S.P. TRENCHING FOR BASE COURSE BY MILLING.")
Z	FULL DEPTH RECLAMATION

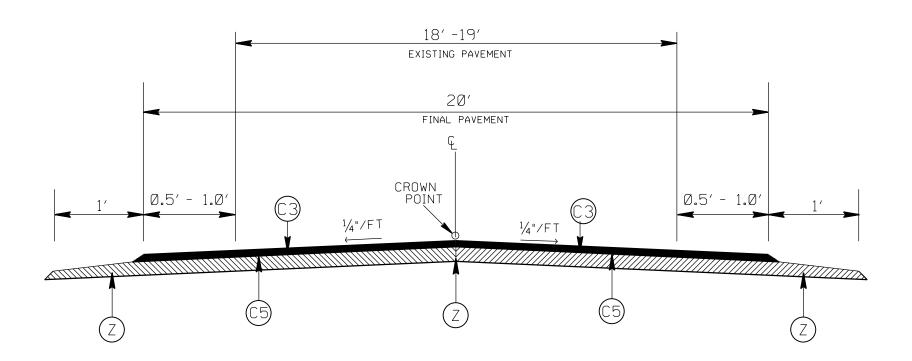
2021-2022 UNION COUNTY RESURFACING

DATE 1/20 DWG. BY **AMO** 





STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	202ICPT.IO.I2.2090I		
F.A. PROJECT N	10.		



TYPICAL SECTION NO.5

SR 1351 PRICE SHORTCUT ROAD (MAP 10)

SR 1542 OLD DUTCH ROAD (MAP 11)

SR SR 1547 BRIEF ROAD (MAP 12)

\*SEE NOTES 3 AND 4

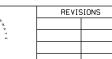
### PAVEMENT SCHEDULE

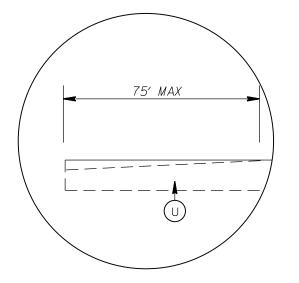
$\bigcirc$	PROP. APPROX. 1.5" ASPHALT CONC. SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
	RATE OF 168 LBS.PER SQ.YD.

- PROP. APPROX. 1.5" ASPHALT CONC. SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.
- PROP. APPROX. 1.0" ASPHALT CONC. SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 110 LBS PER SO. YD.
- (C4) ASPHALT SURFACE TREATMENT, MAT COAT # 78M STONE
- (C5) ASPHALT SURFACE TREATMENT, DOUBLE SEAL
- PROPOSED 2.5" ASPHALT CONC. INTERMEDIATE COURSE, TYPE 119.0C, AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.
- PROPOSED 5" OF ASPHALT CONC. BASE COURSE, B25.0C, AT AN AVERAGE RATE 570 LBS. PER SQ. YD.
- (T1) SHOULDER RECONSTRUCTION
- (U) EXISTING PAVEMENT
- WILLING 6" OF EXISTING ASPHALT PAVEMENT, 5" DEPTH. (SEE S.P. TRENCHING FOR BASE COURSE BY MILLING.")
- Z FULL DEPTH RECLAMATION

2021-2022 UNION COUNTY RESURFACING

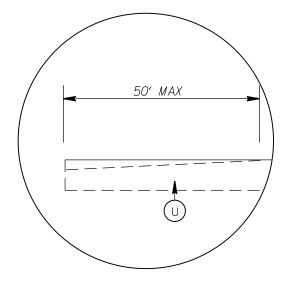






DETAIL FOR INCIDENTAL MILLING (O" TO 1.5")

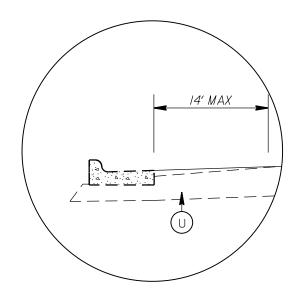
TIE-IN



DETAIL FOR INCIDENTAL MILLING (O" TO 1.0")

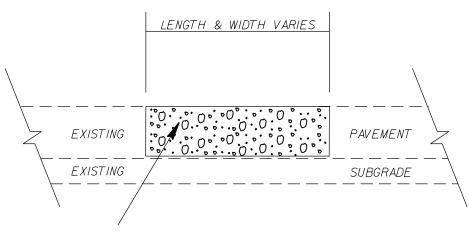
TIE-IN

PATCHING DETAIL



DETAIL FOR PROFILE MILLING (0- 1.5")

MAPS 3 AND 4



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

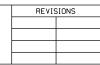
STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	202ICPT.I0.I2.2090I		
F.A. PROJECT N	10.		

### PAVEMENT SCHEDULE

C1	PROP. APPROX. 1.5" ASPHALT CONC. SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
(C2)	PROP. APPROX. 1.5" ASPHALT CONC. SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.
(C3)	PROP. APPROX. 1.0" ASPHALT CONC. SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 110 LBS PER SQ. YD.
(C4)	ASPHALT SURFACE TREATMENT, MAT COAT # 78M STONE
(C5)	ASPHALT SURFACE TREATMENT, DOUBLE SEAL
(D1)	PROPOSED 2.5" ASPHALT CONC. INTERMEDIATE COURSE, TYPE 119.0C, AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.
E1	PROPOSED 5" OF ASPHALT CONC. BASE COURSE, B25.0C, AT AN AVERAGE RATE 570 LBS. PER SQ. YD.
T1	SHOULDER RECONSTRUCTION
	EXISTING PAVEMENT
(V1)	MILLING 6" OF EXISTING ASPHALT PAVEMENT, 5" DEPTH. (SEE S.P. TRENCHING FOR BASE COURSE BY MILLING.")
Z	FULL DEPTH RECLAMATION

2021-2022 UNION COUNTY RESURFACING





STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	2021CPT.10.12.20901	13	
.A. PROJECT I	NO.		

### NOTES:

I.DEPTH OF PATCHING WILL BE AS DIRECTED BY THE ENGINEER.

2. SHOULDER RECONSTRUCTION WILL BE AS DIRECTED BY THE ENGINEER.

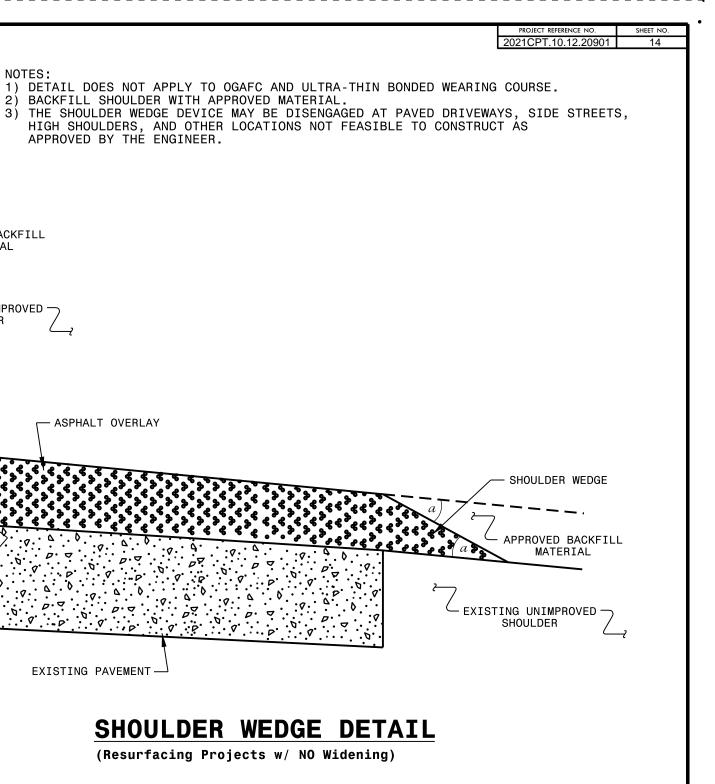
3. FULL DEPTH RECLAMATION AND AST SHALL BE COMPLETED, ON MAPS 10, 11 AND 12, PRIOR TO THE ASPHALT OVERLAY.

4. WIDENING WITH ABC, ON FULL DEPTH RECLAMATION MAPS 10, 11, AND 12, WILL BE DONE BY STATE FORCES.

2021-2022 UNION COUNTY RESURFACING

SCALE	-NA-
DATE	01/20
DWG. BY	AMO
DESIGN BY	AMO
APPROVED	CLA







(Resurfacing Projects w/ NO Widening)

APPROVED BY THE ENGINEER.

- ASPHALT OVERLAY

EXISTING PAVEMENT —

SHOULDER WEDGE

- APPROVED BACKFILL MATERIAL

EXISTING UNIMPROVED — SHOULDER W/ RUTTING /

APPROVED BACKFILL MATERIAL

EXISTING UNIMPROVED -SHOULDER

- SHOULDER WEDGE ANGLE =  $30^{\circ}$ 

CONTRACT STANDARDS AND DEVELOPMENT UNIT Office 919-707-6950 FAX 919-250

### SHOULDER WEDGE **DETAILS**

ORIGINAL BY:\_ MODIFIED BY:\_ CHECKED BY:\_ FILE SPEC::s DATE: 7-19-11 DATE: 2/2/16 DATE:

EXISTING PAVEMENT-

SHOULDER WEDGE DETAIL

(Resurfacing Adjacent to Rutted Shoulder)

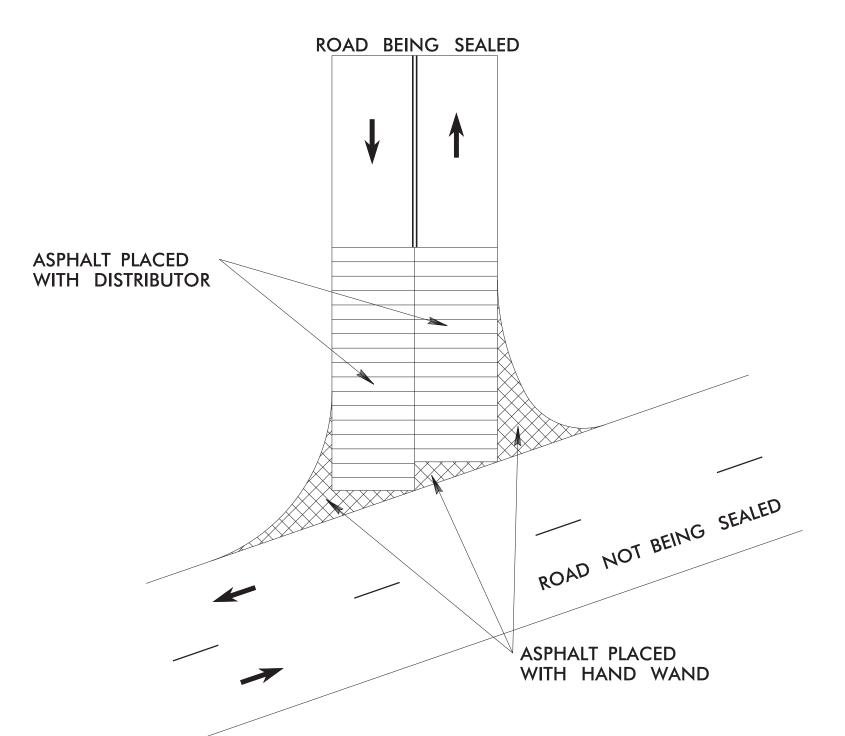
PROPOSED PAVEMENT SHOULDER WEDGE DETAIL (Resurfacing Projects w/ Widening or with Existing Paved Shoulder having no dropoffs) - ASPHALT OVERLAY SHOULDER WEDGE

ASPHALT OVERLAY

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

# INTERSECTION EMULSION PLACEMENT TWO LANE TWO WAY ROADWAY

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	2021CPT.10.12.20901	15	
F.A. PROJECT	NO.		



### <u>LEGEND</u>

DIRECTION OF TRAFFIC FLOW

SKIP LINES

DOUBLE YELLOW LINES

INTERSECTION EMULSION PLACEMENT

 SCALE
 N/A

 DATE
 9-20/9

 DWG. BY
 TBL

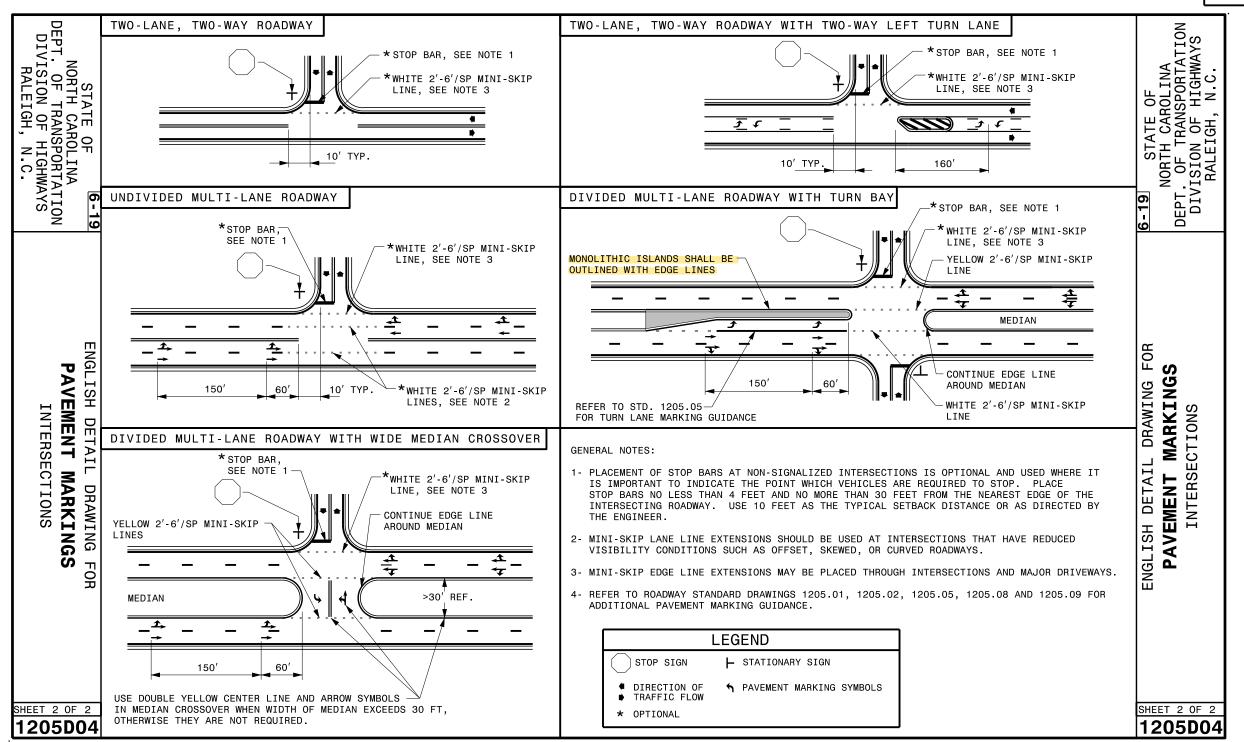
 DESIGN BY
 TBL



REVISIONS

### SHEET 16





REVISED PAVEMENT MARKING ROADWAY STANDARD DRAWING

8-19

PROJECT NO.	SHEET NO.	TOTAL NO.
2021CPT.10.12.20901	17	

### SUMMARY OF QUANTITIES

																							-I						
DDG IFCT NO	L COUNTY LAAR NO	DOUTE	DESCRIPTION	T TOTAL LABOR	re L. Anir		Luzanaaan	Lineri										E 1503000000-E							1775000000-E				
PROJECT NO	COUNTY MAP NO	ROUTE	DESCRIPTION	TYP LANE	TYPE	FINAL	WARM MIX ASPHALT	LENGTH	WIDTH	BORROW	SOIL CEMENT	PORTLAND CEMENT FOR			0" TO 1.5"	INCIDENTAL	BASE	INTERNACRIAT	SURFACE COURSE,	LEVELING	SURFACE	LEVELING	ASPHALT	PATCHING EXISTING	ASPHALT SURFACE	ASPHALT	EMULSION	VACUUM	RETROFIT EXISTING
				NO	TYPE	TESTING	-				BASE (FULL DEPTH		STONE BASE	TION	MILLING	MILLING	COURSE,	INTERMEDIAT		COURSE,	COURSE,	COURSE,	BINDER FOR			SURFACE	FOR ASPHALT	TRUCK	CURB RAMP
						REQUIRED	REQUIRED				RECLAMATIO	SOIL CE- MENT BASE		IION			B25.0C	E COURSE, I19.0C	S9.5B	S9.5B	S9.5C	\$9.5C	PLANT MIX	PAVEMENT	TREATMENT, MATCOAT,	TREATMENT, DOUBLE SEAL	SURFACE		CORB RAIVIP
						KEQUIKED					N)	IVIENT BASE						119.00							#78M STONE	DOUBLE SEAL	IREATIVIENT		
											14,														#70IVI STOILE				
								МІ	FT	CY	SY	TON	TONS	SMI	SY	SY	TONS	TONS	TONS	TONS	TONS	TONS	TONS	TONS	SY	SY	GAL	WK	EA
			FROM SR 1615 UNIONVILLE ROAD TO				1	T			<u> </u>		10.10	5	<u> </u>		10.45	10.15	10.15	10.10		10.15	10.10	10.15	<u> </u>	J.	- O/IL	•••	
			END OF MAINTENANCE MILEPOST 0 -	.																									
2021CPT.10.12.2090	1 Union 1	SR 1690 NORTH HILLS DRIVE	0.30	2 2	2WU	NO	NO	0.3	24	50				0.60		15			387	165			37	200					
	TOTAL FOR MAP N							0.3		50				0.60		15			387	165			37	200					
			FROM SR 1615 UNIONVILLE ROAD TO	1																									
			SR 1690 NORTH HILLS DRIVE																										
2021CPT.10.12.2090	1 Union 2	SR 1691 NORTH HILLS LANE		2 2	2WU	NO	NO	0.11	24	20				0.20		15			145	65			14	75					
	TOTAL FOR MAP N	10. 2						0.11		20				0.20		15			145	65			14	75					
			FROM PAVEMENT JOINT AT NEW																										
			BRIDGE TO SR 1520 INDIAN TRAIL-																										
		SR 1522 STINSON HARTIS	FAIRVIEW ROAD MILEPOST 1.07 -																										
2021CPT.10.12.2090		ROAD	1.42	1 2	2WU	NO	NO	0.35	24-30	55				0.70	622	515					578	230	49	300					3
	TOTAL FOR MAP N	10.3		ļ ļ				0.35		55				0.70	622	515					578	230	49	300					3
	1 1		FROM PAVEMENT JOINT TO		1							1			l				1			1	1		1				
			MECKLENBURG COUNTY LINE																										
2021CPT.10.12.2090		SR 1345 TILLEY MORIS ROAD	MILEPOST 0.14 - 0.39	1 2	2WU	NO	NO	0.25	25-34	40			25	0.50	155	416					400	180	35	115					
	TOTAL FOR MAP N	10.4						0.25		40			25	0.50	155	416					400	180	35	115					
			FROM SR 1009 OLD CHARLOTTE																										
			HIGHWAY TO END OF MAINTENANCE																										
2021CPT.10.12.2090		DRIVE	MILEPOST 0-0.34	3 2	2WU	NO	NO	0.34	23	55			20	0.70		250	188	720	1		425	-	69	170					
	TOTAL FOR MAP N	0.5			_		-	0.34	-	55			20	0.70		250	188	720			425		69	170					
			FROM CR SCT4 HANARTON MEARONG																										
			FROM SR 3671 HAMPTON MEADOWS	'l l																									
2021CPT.10.12.2090	1 Union C	CD 2670 WILLOW BLIN DRIVE	ROAD TO SR 1162 GOLDMINE ROAD	4 2	214/11	NO	NO	0.02	20	125			240	1.70		15			880				59	415	0.607		2.910		
2021CP1.10.12.2090.	1 Union 6 TOTAL FOR MAP N	SR 3670 WILLOW RUN DRIVE	MILEPOST 0-0.83	4 2	2WU	NU	NU	0.83	20	125			240	1.70		15			880	1		1	59	415 <b>415</b>	9,687 <b>9,687</b>		2,910		
	TOTAL FOR WAF IN	0.0	FROM SR 1349 AIRPORT ROAD TO SR	1 1	-			0.63		123		+	240	1.70		15			880			+	33	413	3,087		2,510		
		SR 3671 HAMPTON	3670 WILLOW RUN DRIVE MILEPOST																										
2021CPT.10.12.2090	1 Union 7	MEADOWS ROAD	0-0.58	4 2	2WU	NO	NO	0.58	20	90			150	1.20		15			620				42	290	6,844		2.050		
	TOTAL FOR MAP N							0.58		90			150	1.20		15			620				42	290	6,844		2,050		
			FROM DR 3670 WILLOW RUN DRIVE																								, , , , ,		
		SR 3672 COTTONWOOD	TO END OF MAINTENANCE MILEPOST	-																									
2021CPT.10.12.2090	1 Union 8	CIRCLE	0-0.25	4 2	2WU	NO	NO	0.25	20	40			105	0.50					270				18	125	2,987		900		
	TOTAL FOR MAP N	10. 8						0.25		40			105	0.50					270				18	125	2,987		900		
			FROM SR 3670 WILLOW RUN DRIVE																									*	
			TO END OF MAINTENANCE MILEPOST																										
2021CPT.10.12.2090		SR 3669 GREENWOOD LANE	0-0.08	4 2	2WU	NO	NO	0.08	20	13			25	0.20					93				6	30	1,020		310		
	TOTAL FOR MAP N	10.9						0.08		13			25	0.20					93				6	30	1,020		310		
	1 1		FROM SR 1162 GOLDMINE ROAD TO		1							1			l				1			1	1		1				
	1 1	SR 1351 PRICE SHORTCUT	SR 1007 ROCKY RIVER ROAD		1							1			l				1			1	1		1				
2021CPT.10.12.2090		ROAD	MILEPOST 0-1.10	5 2	2WU	NO	NO	1.1	20		14,063.00	352.00	205			20			1,226				82			12,784	7,035		
	TOTAL FOR MAP N	0. 10				1		1.1	1		14,063.00	352.00	205	<b>.</b>		20		ļ	1,226	<b>!</b>		<del></del>	82	1	1	12,784	7,035		
	1 1		FROM US 601 NORTH TO NC 218		1							1			l				1			1	1		1				
2021CPT.10.12.2090		SR 1542 OLD DUTCH ROAD	MILEPOST 0-1.49	5 2	2WU	NO	NO	1.49	20		19,260.00	597.00	135	<b>.</b>		55		ļ	1,127	<b>!</b>		<del></del>	76	1	1	17,509	9,630		
	TOTAL FOR MAP N	0. 11		<del>                                     </del>		1	1	1.49	1		19,260.00	597.00	135	1		55		1	1,127	1		1	76	1	+	17,509	9,630		
	1 1		FROM US 601 NORTH TO SR 1600	.1 1	1							1			l				1			1	1		1				
2024 CDT 40 42 2222		CD 4547 DDIFF DC : 7	HOPEWELL CHURCH ROAD MILEPOST	1 . 1 .				4.25	20		47.500.00	544.05			l	20			4 000			1	68		1	45.044	0.770		
2021CPT.10.12.2090	1 Union 12 TOTAL FOR MAP N	SR 1547 BRIEF ROAD	5.25-6.61	5 2	2WU	NO	NO	1.36 1.36	20		17,539.00 17.539.00	544.00 <b>544.00</b>	50	<del>                                     </del>		20	1	+	1,009 1.009	<del> </del>		+	- 00	+	+	15,944	8,770 <b>8.770</b>	•	
T0				$\vdash$		<del>                                     </del>	1		+	400	,		50	6.22		20	100	722		222	1 400		68	1 720	20.520	15,944		3	
TOTAL	FOR PROJ NO. 2021CF GRAND TOTAL		<del> </del>	<del>                                     </del>		<b>-</b>	<del>                                     </del>	7.04	1	488 488	50,862.00 50,862.00	1,493.00 1,493.00	955 955	6.30 6.30	777 777	1,336 1,336	188 188	720 720	5,757 5,757	230 230	1,403 1,403	410 410	555 555	1,720 1,720	20,538 20,538	46,237 46,237	31,605 31,605	3	3
l	GRAND TOTAL	-	l	1		1	1	7.04		488	50,862.00	1,493.00	955	6.30	///	1,336	188	/20	5,/5/	230	1,403	410	555	1,/20	20,538	46,237	31,605	3	3

PROJECT NO.	SHEET NO.	TOTAL NO.
2021CPT.10.12.20901	18	

### SUMMARY OF QUANTITIES

													283000000-N	2845000000-N	5255000000-N				6071010000-E	6071020000-E
PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP	LANES		FINAL	WARM MIX	LENGTH	WIDTH	6" CONCRETE	ADJ. OF	ADJ. OF	PORTABLE	TEMPORARY	STONE FOR	SEDIMENT	WATTLE	POLYACRYLA
					NO		TYPE	SURFACE	ASPHALT			DRIVEWAYS	MANHOLES	METER OR	LIGHTING	SILT FENCE	EROSION	CONTROL		MIDE (PAM)
								TESTING	REQUIRED					VALVE BOX			CONTROL,	STONE		
								REQUIRED									CLASS B			
				FROM CR 1615 LINUONIVILLE ROAD TO			-			MI	FT	SY	EA	EA	LS	LF	TN	TN	LF	LB
				FROM SR 1615 UNIONVILLE ROAD TO END OF MAINTENANCE MILEPOST 0 -																
2021CPT.10.12.20901	Union	1	SR 1690 NORTH HILLS DRIVE		2	2	2WU	NO	NO	0.3	24			2		45	6	3	45	
2021011.10.12.20301		OR MAP NO		0.50			2000	140	140	0.3	24			2		45	6	3	45	
	1			FROM SR 1615 UNIONVILLE ROAD TO													-	-		
				SR 1690 NORTH HILLS DRIVE																
2021CPT.10.12.20901	Union	2	SR 1691 NORTH HILLS LANE	MILEPOST 0 - 0.11	2	2	2WU	NO	NO	0.11	24					15	2	1	15	
	TOTAL F	OR MAP NO								0.11						15	2	1	15	
				FROM PAVEMENT JOINT AT NEW																
				BRIDGE TO SR 1520 INDIAN TRAIL-																
			SR 1522 STINSON HARTIS	FAIRVIEW ROAD MILEPOST 1.07 -																
2021CPT.10.12.20901		3	ROAD	1.42	1	2	2WU	NO	NO	0.35	24-30			4		53	7	3	53	
	TOTAL F	OR MAP NO	0.3							0.35				4		53	7	3	53	
				FROM PAVEMENT JOINT TO		1						l	l			1		l	l	1
				MECKLENBURG COUNTY LINE		1						l	l			1		l	l	1
2021CPT.10.12.20901			SR 1345 TILLEY MORIS ROAD	MILEPOST 0.14 - 0.39	1	2	2WU	NO	NO	0.25	25-34				1	38	5	2	38	
	TOTAL F	OR MAP NO	0.4							0.25					1	38	5	2	38	
				FROM SR 1009 OLD CHARLOTTE																
		_	SR 2645 TOWER INDUSTRIAL		_													_		
2021CPT.10.12.20901	Union	5	DRIVE	MILEPOST 0-0.34	3	2	2WU	NO	NO	0.34 0.34	23	400	1			102	10	5 <b>5</b>	102	1 1
	IOIALE	OR MAP NO	J. 5							0.34		400	1	1		102	10	5	102	1
				EDONA CD 2674 LIANADTON NACADONAC																
				FROM SR 3671 HAMPTON MEADOWS																
2021CPT.10.12.20901	Union	_	SR 3670 WILLOW RUN DRIVE	ROAD TO SR 1162 GOLDMINE ROAD	4	2	2WU	NO	NO	0.83	20					124	17	8	124	
2021CF1.10.12.20301		OR MAP NO		MILEPOST 0-0.83	-4		2000	INO	NO	0.83	20					124	17	8	124	
	IOIALI	OK WAL IN	5.0	FROM SR 1349 AIRPORT ROAD TO SR						0.03						12-7	- 17		124	
			SR 3671 HAMPTON	3670 WILLOW RUN DRIVE MILEPOST																
2021CPT.10.12.20901	Union	7	MEADOWS ROAD	0-0.58	4	2	2WU	NO	NO	0.58	20					87	12	6	87	
		OR MAP NO								0.58						87	12	6	87	
				FROM DR 3670 WILLOW RUN DRIVE									ĺ						ĺ	
			SR 3672 COTTONWOOD	TO END OF MAINTENANCE MILEPOST		1						l	l			1		l	l	1
2021CPT.10.12.20901	Union	8	CIRCLE	0-0.25	4	2	2WU	NO	NO	0.25	20					37	5	2	37	<u> </u>
		OR MAP NO								0.25						37	5	2	37	
				FROM SR 3670 WILLOW RUN DRIVE								1						1	1	
				TO END OF MAINTENANCE MILEPOST		1						l	l			1		l	l	1
2021CPT.10.12.20901			SR 3669 GREENWOOD LANE	0-0.08	4	2	2WU	NO	NO	0.08	20					12	2	1	12	
	TOTAL F	OR MAP NO	0.9			<u> </u>	<u> </u>			0.08						12	2	1	12	
1				FROM SR 1162 GOLDMINE ROAD TO		1						l	l			1		l	l	1
			SR 1351 PRICE SHORTCUT	SR 1007 ROCKY RIVER ROAD	_	١.				l			l							1 . 1
2021CPT.10.12.20901		10	ROAD	MILEPOST 0-1.10	5	2	2WU	NO	NO	1.1	20	100		1		330	33	16	330	1
	TOTAL F	OR MAP NO	). 10	FROM US COA NORTH TO AVE CAS		-	<del>                                     </del>			1.1		100		<del>                                     </del>		330	33	16	330	1
2024 CDT 40 42 2222			CD 4542 OLD DUTCH TO	FROM US 601 NORTH TO NC 218	5		214//			4.40	20	50	l				45		447	1 . 1
2021CPT.10.12.20901	Union	11	SR 1542 OLD DUTCH ROAD	MILEPOST 0-1.49	- 5	2	2WU	NO	NO	1.49	20	50 <b>50</b>	<b> </b>	<del>                                     </del>		447	45 <b>45</b>	22 <b>22</b>	447 <b>447</b>	1
	IUIALF	OR MAP NO	. 11	FROM HIS COL MORTH TO SO 1000		<del>                                     </del>	1			1.49	1	50		1		447	45	22	447	1
				FROM US 601 NORTH TO SR 1600		1						l	l			1		l	l	1
2021CPT.10.12.20901	Union	12	SR 1547 BRIEF ROAD	HOPEWELL CHURCH ROAD MILEPOST 5.25-6.61	5	2	2WU	NO	NO	1.36	20	75	l			408	41	20	408	1
2021071.10.12.20901		OR MAP NO		3.23-0.01	J	+-	2000	NO	INU	1.36	20	75 75	<del>                                     </del>	<del> </del>		408	41	20 20	408	1
TOTAL			Г.10.12.20901			1	<del>                                     </del>			7.04	1	625	1	6	1	1,698	185	89	1,698	4
IOTALI		AND TOTAL				t				7.04		625	1	6	1	1,698	185	89	1,698	4
	310												_							

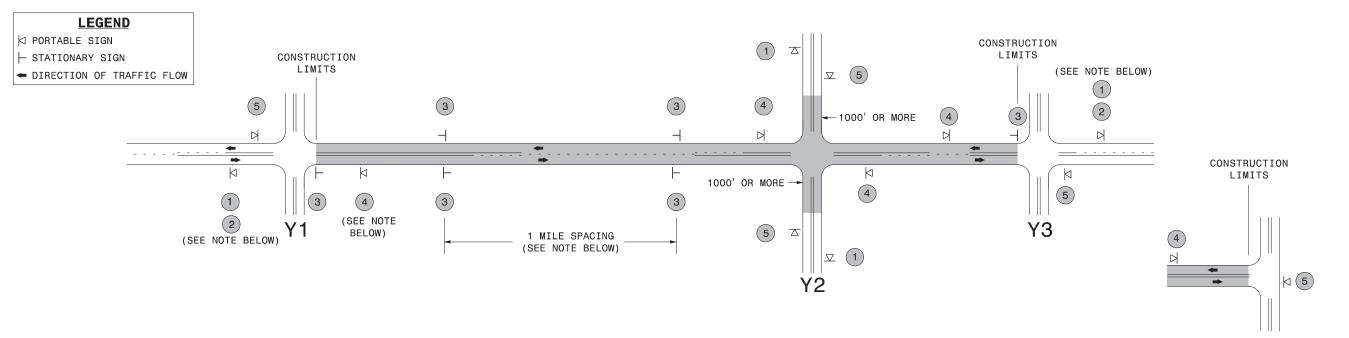
PROJECT NO.	SHEET NO.	TOTAL NO.
2021CPT.10.12.20901	19	

### THERMOPLASTIC AND PAINT QUANTITIES

				IIILIKIVI											4700000000	472500	20000 г	401000	10000 F	4901000000
PROJECT NO	COLINTY	MAP NO	ROUTE	DESCRIPTION	TVD NO	LANES	LANE	LENGTH	WIDTH	4413000000-E WORK ZONE		468500 4" X 90 M	00000-E 4" X 90 М	4695000000-E 8" X 90 M	12" X 90 M	THERMO LT	00000-E THERMO STR	481000 4" WHITE	0000-E 4" YELLOW	4891000000-E 24" X 90 M
PROJECT NO	COUNTY	WAF NO	ROUTE	DESCRIPTION	TTFINO	LAINES	TYPE		WIDIN	ADVANCE/GE	TRAFFIC	WHITE	YELLOW	WHITE	YELLOW	ARROW 90		PAINT	PAINT	WHITE
										NERAL	CONTROL	THERMO	THERMO	THERMO	THERMO	M	90 M	.,		THERMO
										WARNING						***				
										SIGNING										1
								МІ	FT	SF	LS	LF	LF	LF	LF	EA	EA	LF	LF	LF
				FROM SR 1615 UNIONVILLE ROAD																
				TO END OF MAINTENANCE																
2021CPT.10.12.20901	Union	1	SR 1690 NORTH HILLS DRIVE	MILEPOST 0 - 0.30	2	2	2WU	0.3	24											1
	T	OTAL FOR I	MAP NO. 1					0.3												
				FROM SR 1615 UNIONVILLE ROAD																
				TO SR 1690 NORTH HILLS DRIVE																
2021CPT.10.12.20901	Union	2	SR 1691 NORTH HILLS LANE	MILEPOST 0 - 0.11	2	2	2WU	0.11	24											
	T	OTAL FOR I	MAP NO. 2					0.11												
				FROM PAVEMENT JOINT AT NEW																
				BRIDGE TO SR 1520 INDIAN TRAIL-																1
				FAIRVIEW ROAD MILEPOST 1.07 -																[ ]
2021CPT.10.12.20901	Union	3	SR 1522 STINSON HARTIS ROAD	1.42	1	2	2WU	0.35	24-30			3,660	3,660							40
	T	OTAL FOR I	MAP NO. 3					0.35				3,660	3,660							40
_				FROM PAVEMENT JOINT TO													Ι Τ			1 7
				MECKLENBURG COUNTY LINE																1 1
2021CPT.10.12.20901	Union	4	SR 1345 TILLEY MORIS ROAD	MILEPOST 0.14 - 0.39	1	2	2WU		25-34			2,735	3,826	54	40	2				
	T	OTAL FOR I	MAP NO. 4					0.25			,	2,735	3,826	54	40	2				igsquare
				FROM SR 1009 OLD CHARLOTTE																1
				HIGHWAY TO END OF																1
2021CPT.10.12.20901	_	5	SR 2645 TOWER INDUSTRIAL DRIVE	MAINTENANCE MILEPOST 0-0.34	3	2	2WU		23											
	T	OTAL FOR I	MAP NO. 5					0.34												igsquare
																				1
				FROM SR 3671 HAMPTO MEADOWS																1
				ROAD TO SR 1162 GOLDMINE ROAD							*									1
2021CPT.10.12.20901	•	6	SR 3670 WILLOW RUN DRIVE	MILEPOST 0-0.83	4	2	2WU		20	80.0	ļ									
	T	OTAL FOR I	MAP NO. 6					0.83		80.0	ļ									
				FROM SR 1349 AIRPORT ROAD TO SI	R															1
				3670 WILLOW RUN DRIVE MILEPOST																1
2021CPT.10.12.20901	•	7	SR 3671 HAMPTON MEADOWS ROAD	0-0.58	4	2	2WU		20	80.0										
	T	OTAL FOR I	MAP NO. 7					0.58		80.0										
				FROM DR 3670 WILLOW RUN DRIVE																1
		_		TO END OF MAINTENANCE	_															1
2021CPT.10.12.20901	•	8	SR 3672 COTTONWOOD CIRCLE	MILEPOST 0-0.25	4	2	2WU		20	80.0										$\vdash$
<u> </u>	T	JIAL FOR I	MAP NO. 8	EDOM CD 2670 W/U OW DUN DOW			_	0.25		80.0										$\vdash \vdash \vdash$
				FROM SR 3670 WILLOW RUN DRIVE																1 1
2021 CDT 10 12 20001	Heier		CD 2660 CDEFNIMOOD LAND	TO END OF MAINTENANCE	4	٦	2/4/11	0.00	20	90.0										1 1
2021CPT.10.12.20901	•	9 OTAL FOR I	SR 3669 GREENWOOD LANE	MILEPOST 0-0.08	4	2	2WU	0.08	20	80.0 <b>80.0</b>			1	<del>                                     </del>			<del>                                     </del>			$\vdash \vdash \vdash$
<u> </u>	1	JIAL FUR I	MAP NO. 9	EPOM SP 1162 GOLDMINE BOAD TO		-	1	0.08	-	80.0			1	<del>                                     </del>			<del>                                     </del>			$\vdash \vdash \vdash$
				FROM SR 1162 GOLDMINE ROAD TO																1 1
2021CPT.10.12.20901	Union	10	SR 1351 PRICE SHORTCUT ROAD	SR 1007 ROCKY RIVER ROAD  MILEPOST 0-1.10	5	2	2WU	1 1	20	80.0								23,012	21,796	20
2021011.10.12.20901	_	10	MAP NO. 10	WILLE 031 0-1.10	J	<del>-</del>	2440	1.1 1.1	20	80.0							<del>                                     </del>	23,012	21,796	20
	1	TAL FOR IV	10.10	FROM US 601 NORTH TO NC 218				1.1		50.0							<del>                                     </del>	23,012	21,/30	20
2021CPT.10.12.20901	Union	11	SR 1542 OLD DUTCH ROAD	MILEPOST 0-1.49	5	2	2WU	1.49	20	80.0						1	1	32,018	22,377	30
			MAP NO. 11	2. 531 6 1.43		<del>-</del>	-775	1.49		80.0			<b>-</b>	<del> </del>		1	1	32,018	22,377	30
	<u> </u>			FROM US 601 NORTH TO SR 1600				-:		55.0			<b>-</b>	<del> </del>		-	<del>                                     </del>	32,310	,,,,	<del></del>
1				HOPEWELL CHURCH ROAD																1 1
2021CPT.10.12.20901	Union	12	SR 1547 BRIEF ROAD	MILEPOST 5.25-6.61	5	2	2WU	1.36	20	80.0								28,700	25,010	1 1
			MAP NO. 12	057 5123 0101		<del>-</del>	-775	1.36		80			<b>-</b>	<del> </del>			<del>                                     </del>	28,700	25,010	$\vdash$
								7.04		560	1	6,395	7,486	54	40	3	1	83,730	69,183	90
Т	OTAL FOR	PROJ NO. 2	2021CPT.10.12.20901					<del>-                                    </del>				13,		<u> </u>					,913	
							-	-		<u> </u>						1				
								7.04		560	1	6,395	7,486	54	40	3	1	83,730	69,183	90
		GRAND 1	IUIAL										881				4		,913	
-				•			•		-					•	-					

PROJ. REFERENCE NO. SHEET NO. 2021CPT.10.12.20901 TMP-1

### SIGNING FOR ASPHALT SURFACE TREATMENT



### -Y- LINE SIGNING

### MAINLINE (-L-) SIGNING STATIONARY SIGNING NOT REQUIRED FOR ROAD - PLACE 1000' PRIOR TO BEGINNING OF CONSTRUCTION LIMITS. ONLY USED ON -Y-WORK THE FOLLOWING -Y- LINE CONDITIONS: LINES IF RESURFACING LIMITS EXTEND 1000' ALONG -Y- LINE. AHEAD / W20-1 48" X 48" 1) LESS THAN 1000' OF RESURFACING ALONG -Y- LINE - SIGN #2 ONLY USED WHEN RESURFACING LIMITS ARE 2 OR MORE MILES IN LENGTH 2 2) SUBDIVISION ROADS ROUND UP TO THE NEAREST WHOLE NUMBER. DO NOT USE FRACTIONAL OR DECIMAL 3) DEAD END ROADS TES AND DIRECTION WHEN PAVING/CONSTRUCTION ACTIVITIES PROCEED ACROSS LOOSE - ALTERNATE THE FOLLOWING TWO SIGNS: (3) AN UNSIGNED -Y- LINE, PORTABLE ADVANCE WARNING SIGNS GRAVEL SHALLE BE USED ALONG THE -Y- LINE AS SHOWN BELOW. - STARTING WITH "LOOSE GRAVEL" (W8-7) FOLLOWED BY "UNMARKED PAVEMENT". W8-7 48" X 48" REMOVE UPON COMPLETION OF WORK. - PLACE INITIALLY AT THE CONSTRUCTION LIMITS AND SPACED 1 MILE APART THEREAFTER. NOT ER UNMARKED - AT TEE INTERSECTIONS INSTALL INITIALLY 0.5 MILE FROM INTERSECTION ROAD PAVEMENT AND SPACE 1 MILE APART THEREAFTER. WORK ŚP 48'' X 48'' Д AHFAD SIGNING PLACEMENT F - THESE ARE FOR -Y- LINES THAT ARE "THROUGH" ROADWAYS. DEAD END AND PLACED 500' IN ADVANCE PLACED 250' IN ADVANCE SUBDIVISION ROADS ARE NOT "THROUGH" ROADWAYS. OF FLAGGER. OF FLAGGER. ROAD - INSTALL 500' +/- FROM EACH -Y- LINE APPROACH AS SHOWN ABOVE. UNDER - FOR MULTIPLE -Y- LINES THAT ARE SEPARATED BY 0.25 MILES OR LESS. TREAT CONST SP 13106 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. FND

MAPS LESS THAN 2 MILES ROAD WORK

G20–2 A 48" X 24"

START OF CONTRACT WORK.

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.

WHEN WORK ENDS AT A 3-WAY TEE INTERSECTION.

THE ABOVE SIGNS ARE ALL THAT ARE REQUIRED FOR A CONTRACTOR TO BEGIN A RESURFACING CONTRACT. ANY ADDITIONAL SIGNS REQUESTED BY NCDOT DIVISIONS SHALL BE INSTALLED WITHIN 7 BUSINESS DAYS OF THE

PLACE 500' FOLLOWING THE END OF CONSTRUCTION LIMITS OR AS SHOWN



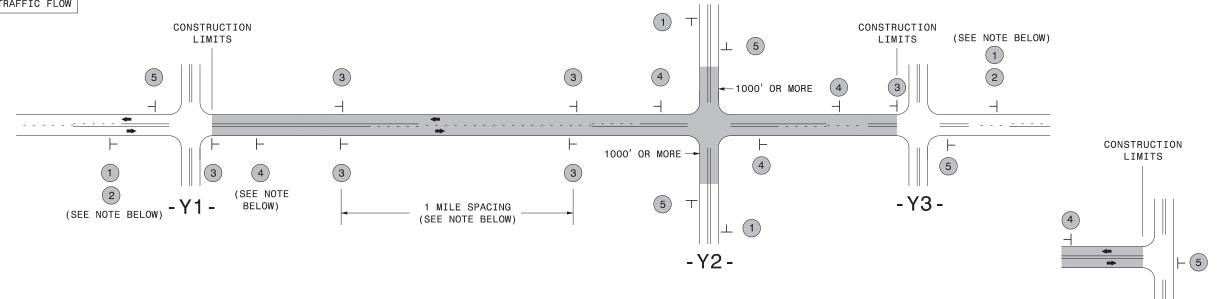
ADVANCE WARNING SIGNS FOR 2-LANE ROADWAY ASPHALT SURFACE TREATMENT

TEE INTERSECTION

PROJ. REFERENCE NO. SHEET NO. 2021CPT.10.12.20901 TMP-2

### SIGNING FOR RESURFACING PROJECTS





### MAINLINE (-L-) SIGNING

### -Y- LINE SIGNING

# SIGNING NOTES AND PLACEMENT PER DIRECTION



PLACE 1000' PRIOR TO BEGINNING OF CONSTRUCTION LIMITS.
ONLY USED ON -Y- LINES IF RESURFACING LIMITS EXTEND 1000' ALONG -Y- LINE.

#2 SIGN ONLY USED WHEN CONSTRUCTION LIMITS ARE 2 OR MORE MILES IN LENGTH. ROUND UP TO NEXT WHOLE NUMBER.(NO FRACTIONAL OR DECIMAL NUMBERS)

3 LOWSOFT SHOULDER SP 13107 48" X 48"

ROAD

UNDER

CONST SP 13106

- PLACE INITIALLY AT THE CONSTRUCTION LIMITS AND SPACE 1 MILE APART THEREAFTER.
- AT TEE INTERSECTIONS INSTALL INITIALLY  $1\!\!\!/_2$  MILE FROM INTERSECTION AND SPACE 1 MILE APART THEREAFTER.
- 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.
- FOR TEE INTERSECTIONS, INSTALL WITHIN 500' +/- OF THE INTERSECTION ALONG -L- LINE.

5 END ROAD WORK G20-2 A 48"' X 24"'

PLACE 500' FOLLOWING THE END OF CONSTRUCTION LIMITS OR AS SHOWN WHEN WORK ENDS AT A 3-WAY TEE INTERSECTION.

THE ABOVE SIGNS ARE ALL THAT ARE REQUIRED FOR A CONTRACTOR TO BEGIN A RESURFACING CONTRACT. ANY ADDITIONAL SIGNS REQUESTED BY NCDOT DIVISIONS SHALL BE INSTALLED WITHIN 7 BUSINESS DAYS OF THE START OF CONTRACT WORK.

MAPS LESS THAN 2 MILES FOR RESURFACING MAPS WITH CONSTRUCTION LIMITS LESS THAN 2 MILES IN LENGTH, NO STATIONARY SIGNS ARE REQUIRED. USE PORTABLE "ROAD UNDER CONSTRUCTION" OR "ROAD WORK AHEAD" SIGNS IN LIEU OF STATIONARY ADVANCE WARNINGS SIGNS.

## 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, PORTABLE ADVANCE WARNING 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
RURAL AND SUBURBAN
2-LANE ROADWAY
RESURFACING

TEE INTERSECTION

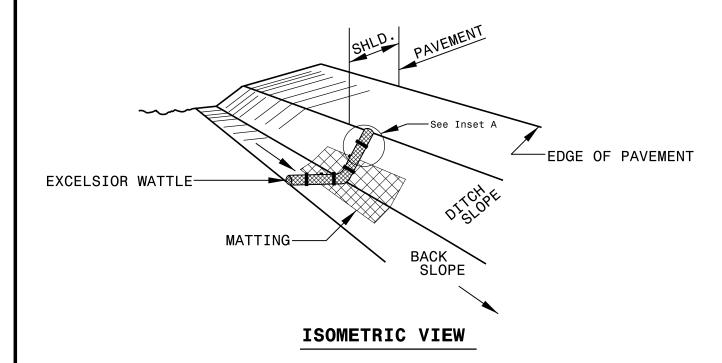
SIDDA

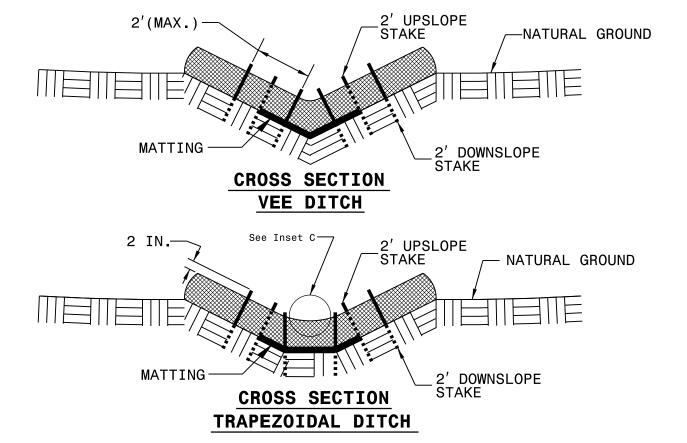
Wattle

Drainage Inlet

PROJECT REFERENCE NO.	SHEET NO.
2021CPT.10.12.20901	EC-2

# WATTLE WITH POLYACRYLAMIDE (PAM) DETAIL





### 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  $12^{\prime\prime}$  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 2 OUNCES OF ANIONIC OR NEUTRALLY CHARGED PAM OVER WATTLE WHERE WATER WILL FLOW AND 1 OUNCE OF PAM ON MATTING ON EACH SIDE OF WATTLE. REAPPLY PAM AFTER EVERY RAINFALL EVENT THAT IS EQUAL TO OR EXCEEDS 0.50 IN.

