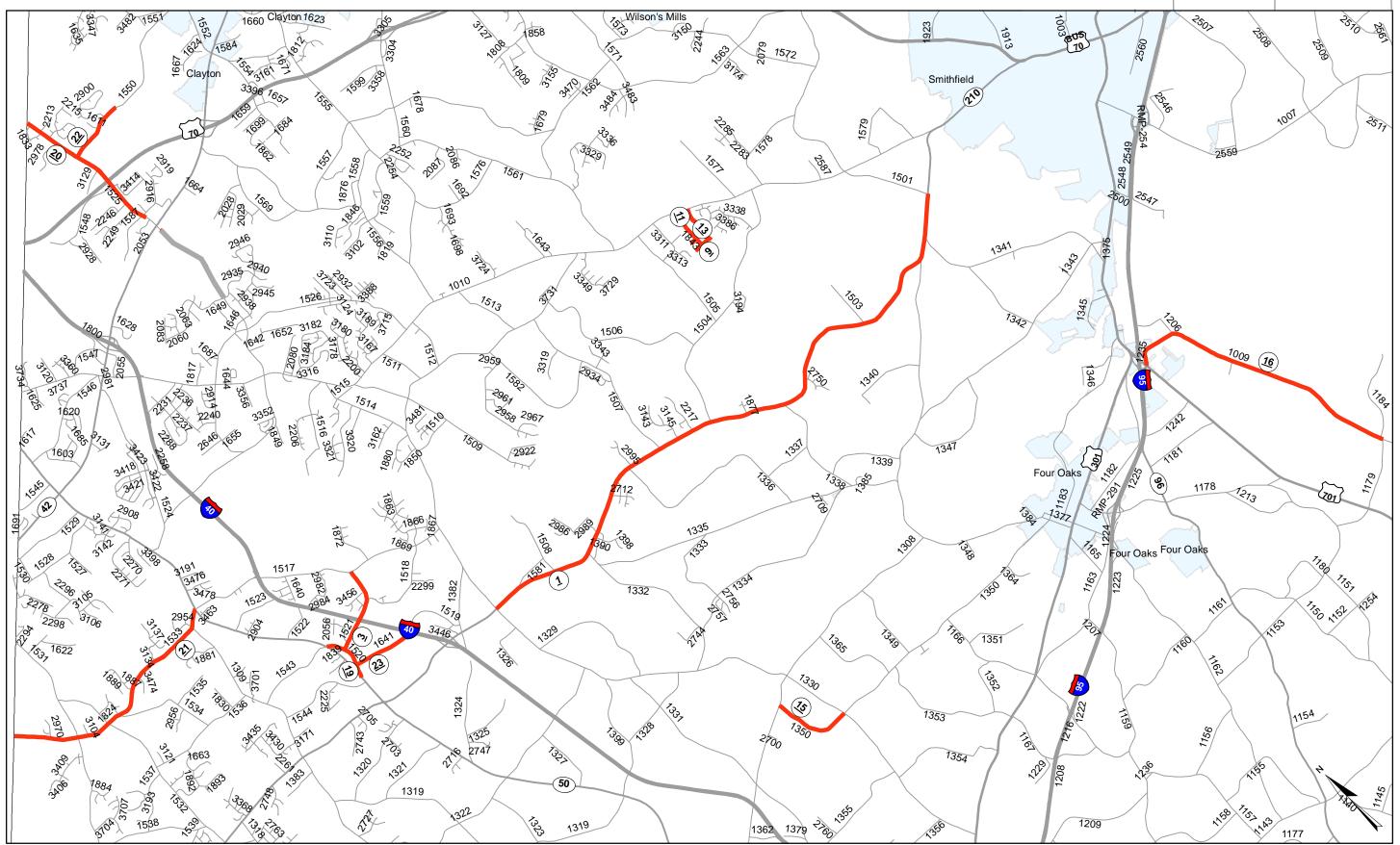
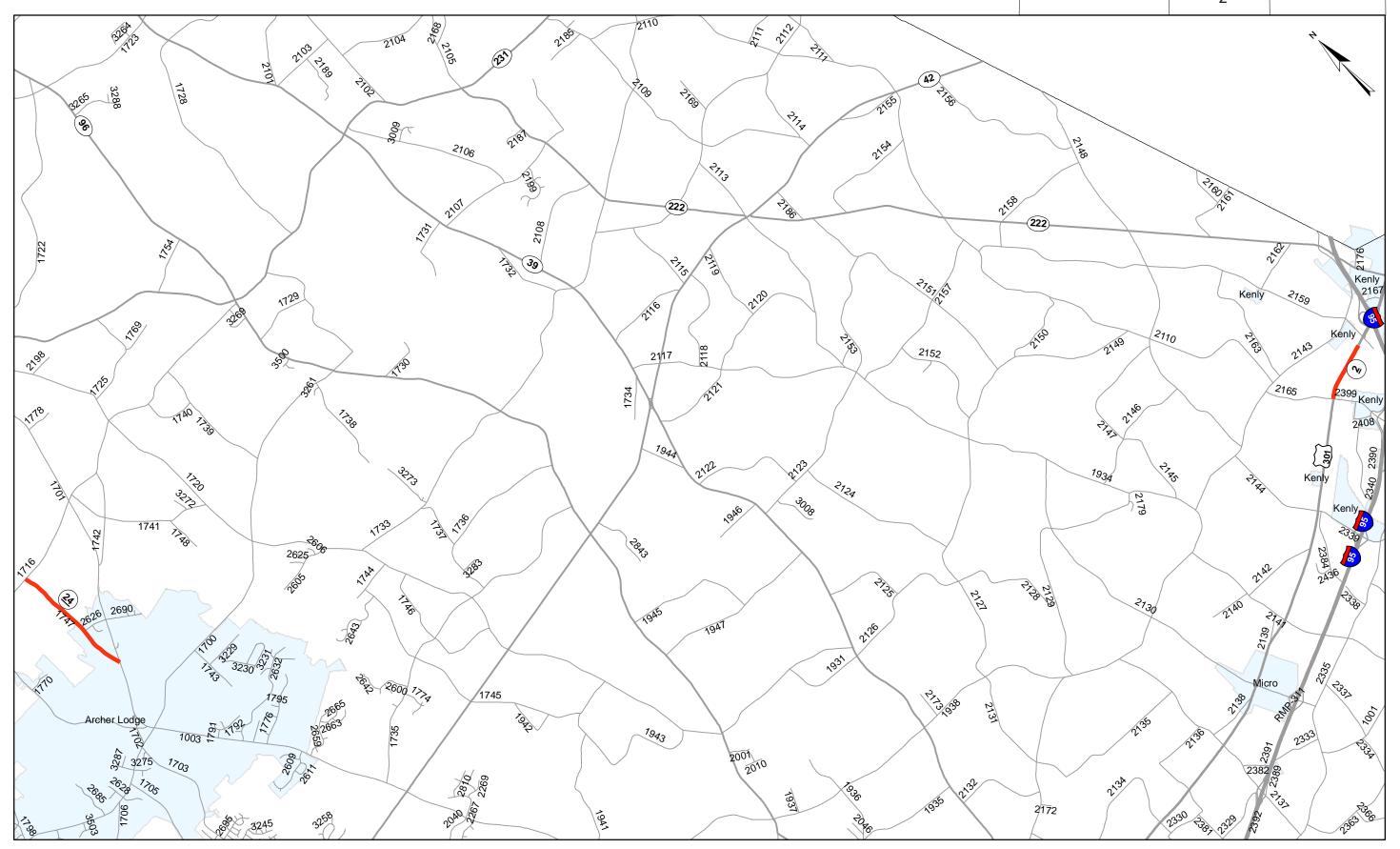
PROJECT NO. SHEET NO. TOTAL SHEETS **Johnston County** 2021CPT.04.06.10511, 2021CPT.04.06.20511, Wilson's Mills 1660 Clayton 1623 923 1584 2560 1572



Johnston County

PROJECT NO. SHEET NO. TOTAL SHEETS

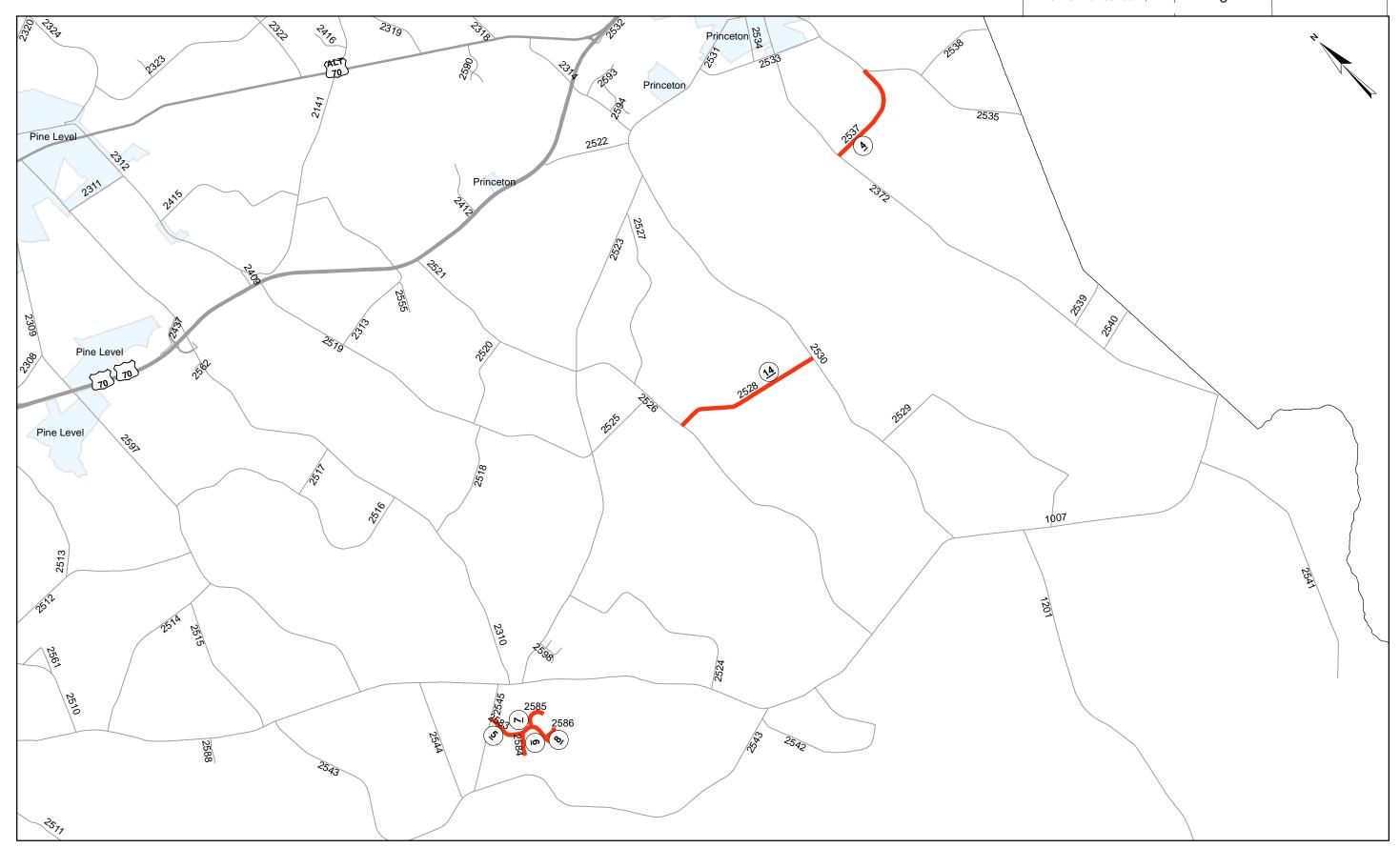
2021CPT.04.06.10511,
2021CPT.04.06.20511,
2



Johnston County

PROJECT NO. SHEET NO. TOTAL SHEETS

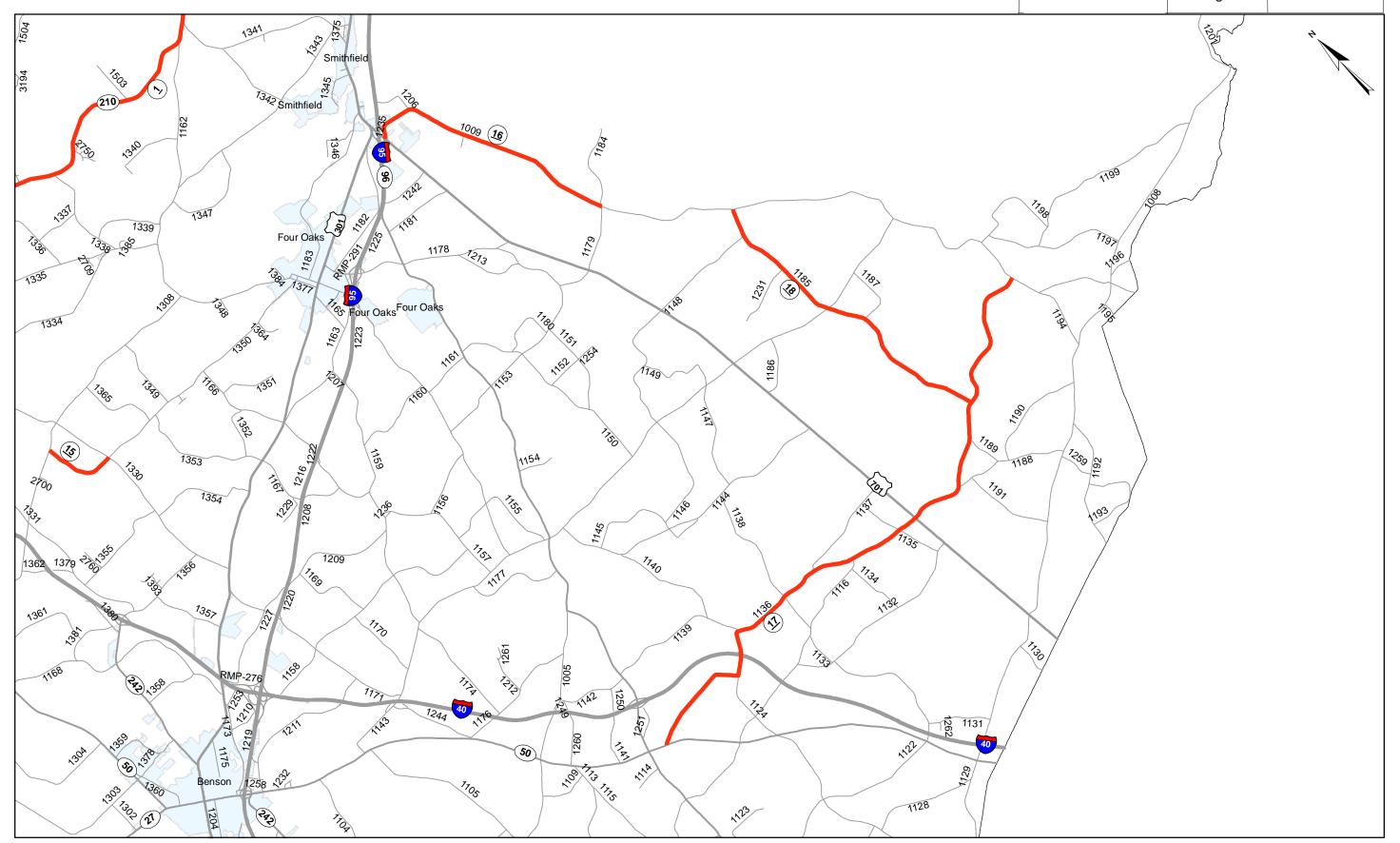
2021CPT.04.06.10511,
2021CPT.04.06.20511,
3

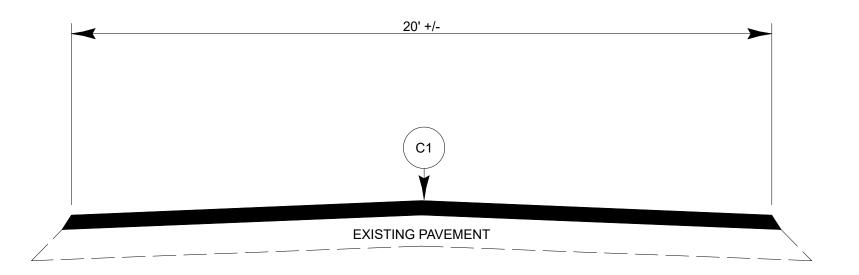


Johnston County

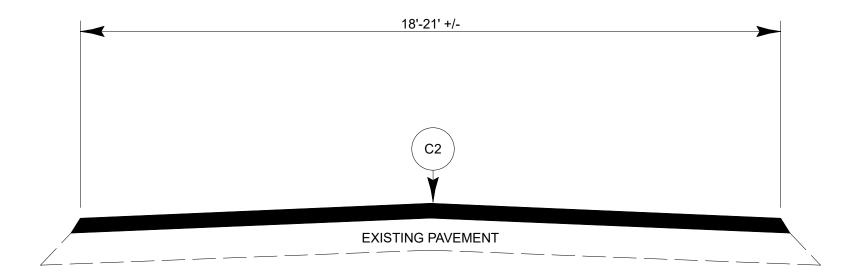
PROJECT NO. SHEET NO. TOTAL SHEETS

2021CPT.04.06.10511,
2021CPT.04.06.20511,
5





TYPICAL SECTION NO. 1



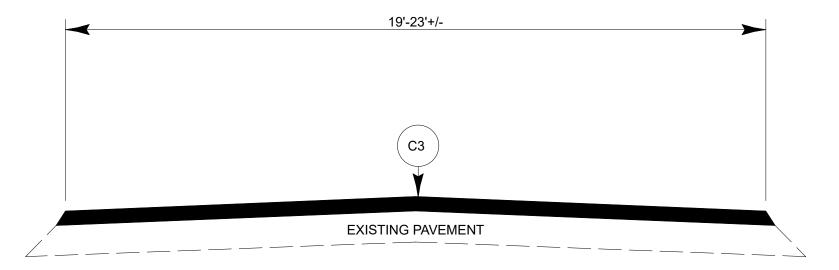
TYPICAL SECTION NO. 2

PROJECT NO.	SHEET NO.	TOTAL SHEETS
2021CPT.04.06.10511, 2021CPT.04.06.20511	6	

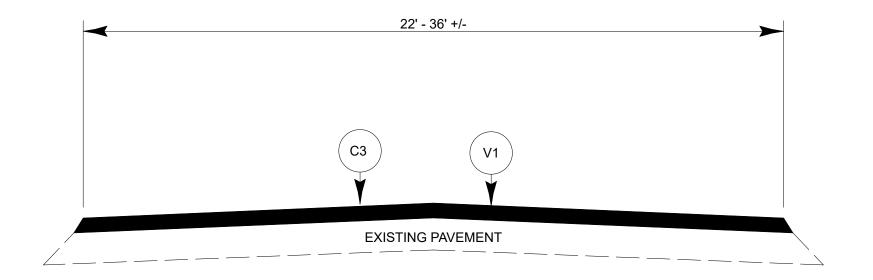
Note:

- 1. Some SR Routes are less than 20'. Contractor is responsible for appropriate size paving equipment.
- 2. Shoulder Reconstruction will be by State Forces except for Map # 2.

	PAVEMENT SCHEDULE
C1	PROP. APPROX 1.25" OF S9.5B AT AN
C I	AVERAGE RATE OF 138 LBS PER SQ YARD
C2	PROP. APPROX 1.5" OF S9.5B AT AN
CZ	AVERAGE RATE OF 165 LBS PER SQ YARD
С3	PROP. APPROX 1.5" OF S9.5C AT AN
CS	AVERAGE RATE OF 168 LBS PER SQ YARD
	PROP. APPOX 3" OF I-19.0C AT AN
D1	AVERAGE RATE OF 342 LBS PER SQ
	YARD.
	PROP. APPROX. 2.5" OF I-19.0C AT AN
D2	AVERAGE RATE OF 285 LBS PER SQ
	YARD.
Т	SHOULDER RECONSTRUCTION
V1	MILL ASPHALT PAVEMENT, 1-1/2" DEPTH
V2	MILL ASPHALT PAVEMENT, 2 " DEPTH
V3	MILL ASPHALT PAVEMENT, 2.5" DEPTH



TYPICAL SECTION NO. 3



TYPICAL SECTION NO. 4

Note: Map # 1 - Mill 1.5" & replace on Bridge # 0050

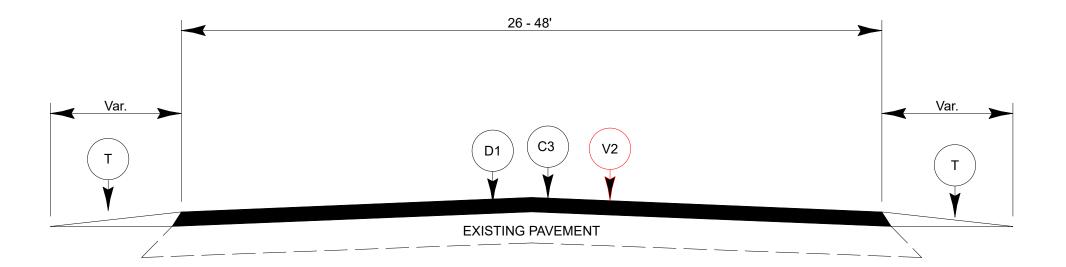
	PAVEMENT SCHEDULE
-	PROP. APPROX 1.25" OF S9.5B AT AN
C1	AVERAGE RATE OF 138 LBS PER SQ YARD
C2	PROP. APPROX 1.5" OF S9.5B AT AN
02	AVERAGE RATE OF 165 LBS PER SQ YARD
СЗ	PROP. APPROX 1.5" OF S9.5C AT AN
00	AVERAGE RATE OF 168 LBS PER SQ YARD
	PROP. APPOX 3" OF I-19.0C AT AN
D1	AVERAGE RATE OF 342 LBS PER SQ
	YARD.
	PROP. APPROX. 2.5" OF I-19.0C AT AN
D2	AVERAGE RATE OF 285 LBS PER SQ
	YARD.
Т	SHOULDER RECONSTRUCTION
V1	MILL ASPHALT PAVEMENT, 1-1/2" DEPTH
V2	MILL ASPHALT PAVEMENT, 2 " DEPTH
V3	MILL ASPHALT PAVEMENT, 2.5" DEPTH

PROJECT NO.

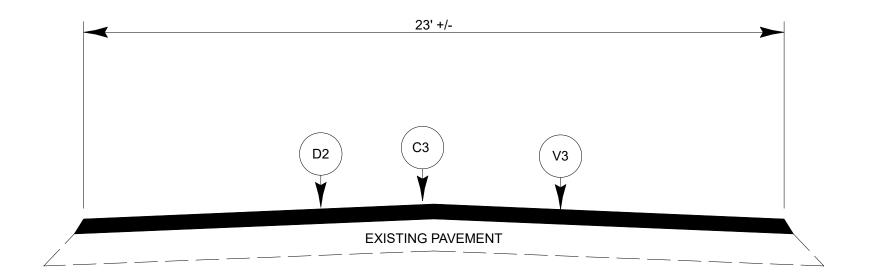
2021CPT.04.06.10511, 2021CPT.04.06.20511 SHEET NO.

7

TOTAL SHEETS



TYPICAL SECTION NO. 5



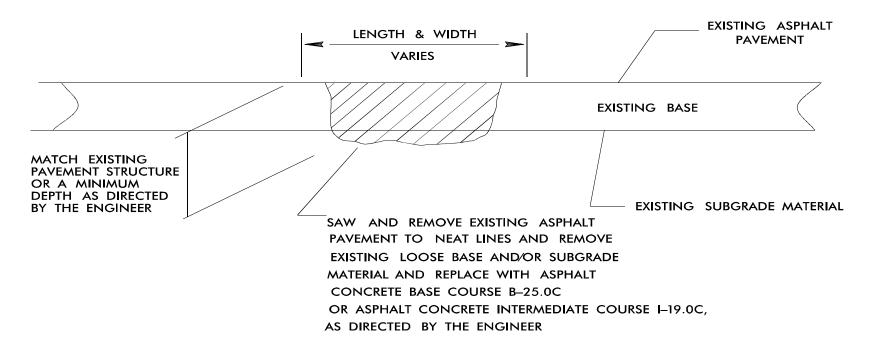
TYPICAL SECTION NO. 6

PROJECT NO.	SHEET NO.	TOTAL SHEETS
2021CPT.04.06.10511, 2021CPT.04.06.20511	8	

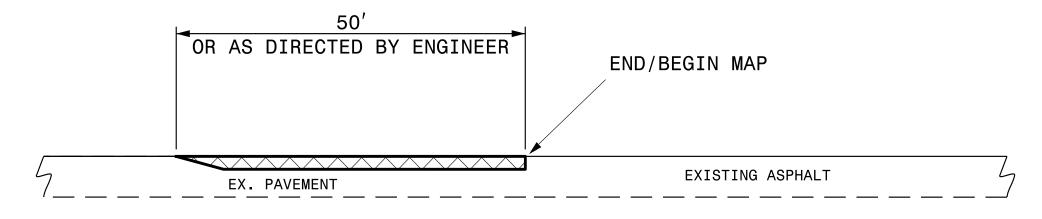
	PAVEMENT SCHEDULE
C1	PROP. APPROX 1.25" OF S9.5B AT AN
Ci	AVERAGE RATE OF 138 LBS PER SQ YARD
C2	PROP. APPROX 1.5" OF S9.5B AT AN
02	AVERAGE RATE OF 165 LBS PER SQ YARD
СЗ	PROP. APPROX 1.5" OF S9.5C AT AN
	AVERAGE RATE OF 168 LBS PER SQ YARD
	PROP. APPOX 3" OF I-19.0C AT AN
D1	AVERAGE RATE OF 342 LBS PER SQ
	YARD.
	PROP. APPROX. 2.5" OF I-19.0C AT AN
D2	AVERAGE RATE OF 285 LBS PER SQ
	YARD.
Т	SHOULDER RECONSTRUCTION
V1	MILL ASPHALT PAVEMENT, 1-1/2" DEPTH
V2	MILL ASPHALT PAVEMENT, 2 " DEPTH
V3	MILL ASPHALT PAVEMENT, 2.5" DEPTH

WBS ELEMENT SHEET 2021CPT.04.06.10511, 2021CPT.04.06.20511,

DETAILS OF PATCHING EXISTING PAVEMENT PRIOR TO RESURFACING DETAIL



INCIDENTAL MILLING DETAIL

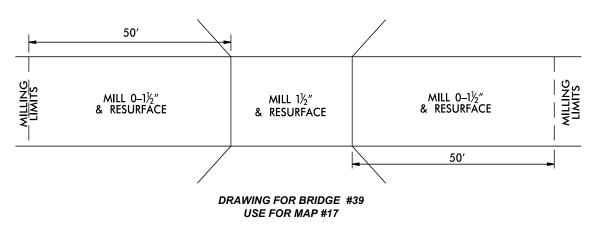


INCIDENTAL MILLING

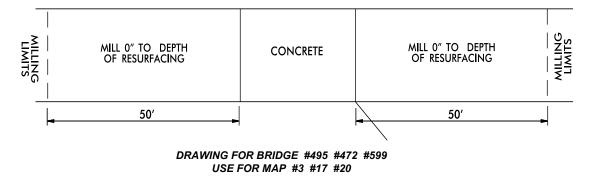
NOTE:

1. PERFORM INCIDENTAL MILLING AT THE TIE INS, RAILROADS, BRIDGE DECKS AND APPROACHES AT THE DIRECTION OF THE ENGINEER.

PAVEMENT TIE-IN DETAIL



* MILLING SHALL BE PAID FOR UNDER INCIDENTAL MILLING



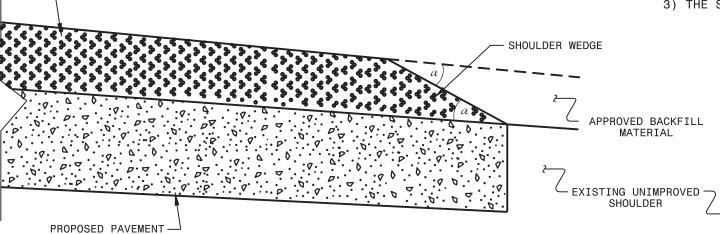
* MILLING SHALL BE PAID FOR UNDER INCIDENTAL MILLING

PROJECT NO.	SHEET NO.	TOTAL SHEETS
2021CPT.04.06.10511, 2021CPT.04.06.20511.	10	

2021CPT.04.06.10511, 2021CPT.04.06.20511

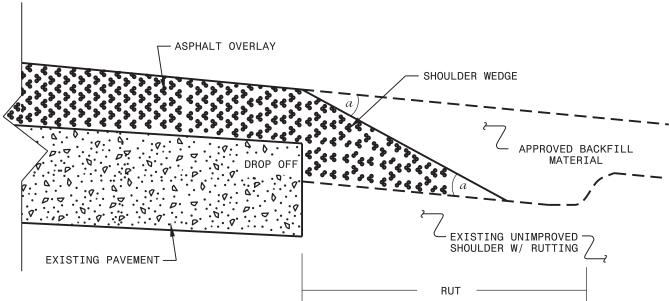
NOTES:

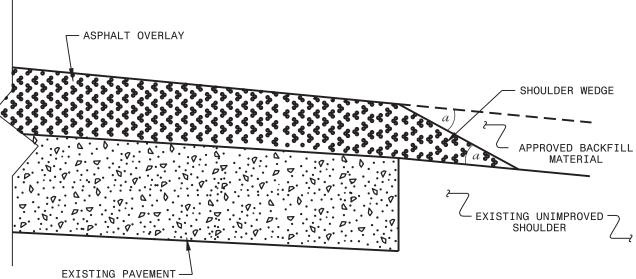
- 1) DETAIL DOES NOT APPLY TO OGAFC AND ULTRA-THIN BONDED WEARING COURSE.
- 2) BACKFILL SHOULDER WITH APPROVED MATERIAL.
 3) THE SHOULDER WEDGE DEVICE MAY BE DISENGAGED AT PAVED DRIVEWAYS AND SIDE STREETS.



SHOULDER WEDGE DETAIL

(Resurfacing Projects w/ Widening or with Existing Paved Shoulder having no dropoffs)





SHOULDER WEDGE DETAIL

(Resurfacing Projects w/ NO Widening)

- SHOULDER WEDGE ANGLE = 30°

CONTRACT STANDARDS AND DEVELOPMENT UNIT Office 919-707-6950 FAX 919-250-41

SHOULDER WEDGE **DETAILS**

ORIGINAL BY:	T.SPELL DATE:	7-19-11
MODIFIED BY:	DATE:	10/16/12
CHECKED BY:_	DATE:	
FILE SPEC.:	s:usr/details/stand/shoulderwed	gedetail.dgn

SHOULDER WEDGE DETAIL

(Resurfacing Adjacent to Rutted Shoulder)

- ASPHALT OVERLAY

PROJECT NO.	SHEET NO.	TOTAL NO.
2021CPT.04.06.10511, 2021CPT.04.06.20511	12	

SUMMARY OF QUANTITIES

												O 141 141																
										0106000000-E		1245000000-E		.297000000-1		1330000000-E			1523000000-E		1704000000-i			2845000000-N			6084000000-E	7444000000-E
9	.	ROUTE	DESCRIPTION	TYP NO LAN			WARM MI		H WIDTH	BORROW	INCIDENTAL	SHOULDER	1 1	2" MILLING		INCIDENTAL	INTERMEDIATE	SURFACE	SURFACE	ASPHALT	PATCHING	ADJ. OF DROP	ADJ. OF	ADJ. OF METER		WATTLE	SEED &	INDUCTIVE
5	È	ON			TYPE	SURFACE					STONE BASE		MILLING		MILLING	MILLING	COURSE, I19.0C	COURSE, S9.5B	COURSE, S9.50		EXISTING	INLET	MANHOLES	OR VALVE BOX	SILT FENCE		MULCHING	LOOP
JEC	80	A P				TESTING	REQUIRED)				ON								PLANT MIX	PAVEMENT							1
8	8	Σ				REQUIRED)																					
								MI	FT	CY	TONS	SMI	SY	SY	SY	SY	TONS	TONS	TONS	TONS	TONS	EA	EA	EA	LF	LF	AC	LF
1																												ı I.
)51																												1
3.10	_	1 NC 210	FROM SR 1330 TO SR 1501	4 2	2WU	J NO	NO	8.8	22-36		50		130.000						11,140	668								1
1.06	sto		FROM SR 2399 (TRUCK STOP RD)	1											1 1													
0	Ę		INCLUDE INTERSECTION TO JOINT																									1
CP	۲	2 US 301 (KENLY)	500' +/- WEST OF SR 2159		2WU	J NO	NO	0.7	26-48	200	50	1.40		12,113			2,212		1,124	174			2	2	200	100	1.00	300
120	F	, ,						9.5	_	200	100	1.40	130,000	12,113			2,212		12,264	842			2	2	200	100	1.00	300
50		TOTAL FOR PROJ NO. 2021CPT.04.06.1051	1			-	1	3.3		200	100	21.10	100,000	12,110	1		-,		12,204					-		100	1.00	
				1 1					-1	l	1	Į	l .				L	l		1	l .		l .	I.		l .		
		3 SR 1521 - B H PARRISH RD.	FROM SR 1520 TO SR 1517	2 2	2WU	J NO	NO	1.1	19		25					500		1.120		75	50			1				
	F	4 SR 2537 - HOLT RD.	FROM SR 2535 TO SR 2372		2 2WU		NO		20		23		+		1	250		835	+	56	20			-				$\overline{}$
	F	5 SR 2583 - BONNIE AVE.	FROM SR 2545 TO CUL DE SAC	1 2	21//	J NO	NO	0.6					+		1	250		507	+	34	20							$\overline{}$
	F	6 SR 2584 - LAKE VISTA DR.	FROM SR 2583 TO CUL DE SAC	1 2	2 2WU		NO		20				+		1			154	+	10	20							
	F	7 SR 2585 - PARTRIDGE DR.	FROM SR 2583 TO CUL DE SAC		2 2WU		NO		20		+		+		+ +			170	+	11	20							
	F	8 SR 2586 - DEER DR.	FROM SR 2583 TO CUL DE SAC	1 2	2 2WU		NO		20				+		1			103	+	7	20							$\overline{}$
	F	9 SR 1898 - ALEXANDER LANE	FROM SR 1897 TO CUL DE SAC	1 2	2 2WU		NO		20				+		1			217	+	15	20							$\overline{}$
	-	10 SR 1899 - RUSS RD.	FROM SR 1843 TO CUL DE SAC	1 2	2 2WU		NO		20				+ +		+			111		7	20							
	-	11 SR 1897 - SERENITY DR.	FROM SR 1010 TO DEAD END		2 2WU		NO		20				+		+ +			463	+	31	20							
	-	12 SR 1844 - HOBSON RD.	FROM SR 1843 TO CUL DE SAC		2 2WU		NO		20				+ +		+			103		7	20							
	_	13 SR 1843 - HARRIS RD	FROM SR 1010 TO SR 1898		2 2WU		NO		20				+ +		+			471		32	20							
	<u> </u>	14 SR 2528 - QUARTERHORSE RD.	FROM SR 2526 TO SR 2530		2 WU		NO		20		-		++		+ +	250		1.133	+	76	20	+	-		-	-		
111	H	15 SR 1350 - JOHNSON'S CHAPEL RD.	FROM SR 1308 TO SR 1330		2 2WU		NO		20-21				+ +		+ +	250		1,120	+	75	20							
205	F	16 SR 1009 - DEVIL'S RACETRACK RD.	FROM US 701 TO SR 1179		2 WU		NO		20-21		50		++		+ +	250		1,120	4,327	260	50	+	-		-	-		
.90	ğ	17 SR 1136 - MEADOWBROOK RD.	FROM SR 1009 TO NC 50		2 2WU		NO		20-21		25		+ +		+	1,500		10.662	4,327	714	50							
8	Ju -	18 SR 1185 - JOYNER BRIDGE RD.	FROM SR 1009 TO SR 1136		2 2WU		NO		20-21		25		+ +		+	1,000		4.941		331	40							
PT.	흐ー	19 SR 1520 - CHURCH RD.	FROM NC 50 TO NC 50		2 2WU		NO NO		18		25	-	+		+	250		735		49	20							
21C		19 SR 1520 - CHURCH RD.	FROM JOINT 960 FT. NORTH OF N		2000) NO	NU	0.73	18			-	+		+	250		/35		49	20							
20:		20 SR 1525 - CORNWALLIS RD.	42 TO SR 2246	6 2	2WU	J NO	NO	0.22	23						3,000		435		256	36								1
	F	20 SK 1525 - CORNWALLIS RD.	FROM SR 2246 TO WAKE COUNTY		2000	NO NO	NO	0.22	23		-		++		3,000		455		250	30		+	-		-	-		
			LINE	' , ,	2WL	J NO	NO	1.9	23							1.000			2.683	161	400							ı l
		TOTAL FOR MAP NO. 20	LINE	3 Z	2000) NO	NU	2.12				-	+		2.000	1,000	435		2,683	197	400							
		TOTAL FOR WAP NO. 20					-	2.12				-	+		3,000	1,000	435		2,939	197	400							
		21 SR 1533 - MT. PLEASANT RD.	FROM NC 50 TO WAKE COUNTY LIN	ue	2WL	J NO	NO	3.47	21		25					500		4.229		283	100			_				1
		21 SR 1533 - WIT. PLEASANT RD.			2000) NO	NU	3.47	21		25	-	+		+	500		4,229		283	100	1		5				
		22 00 4550 1441457014 00	FROM SR 1525 TO JOINT AT NEW BRIDGE (MP 1.68)	′	214	J NO	NO	0.88	24							250		4 027		69								ı I.
		22 DR 1550 - WINSTON RD.	, ,	2 2	2000										+	250		1,027			-							
	_	23 SR 1641 - MCGEE RD.	FROM SR 1520 TO DEAD END		2WU	_	NO		19						+	250		784	4.520	53	5							
		24 SR 1747 - WALL RD.	FROM SR 1716 TO SR 1701	3 2	2WU	J NO	NO		19-20	ļ	150	1	+ +		2.000	250	425	20.005	1,520	91	50	+ -	 	 	1	 		
		TOTAL FOR PROJ NO. 2021CPT.04.06.2051	1			+	 	35.19	' 		150	+	+		3,000	6,500	435	28,885	8,786	2,483	1,005	1	-	6	-	-		
	i_					+	 	44.50	+	200	250	1.10	120.000	12.112	2.000	C F00	2.647	20.005	21.050	2 225	1.005	+			200	100	1.00	200
		GRAND TOTAL				+	1	44.69	+	200	250	1.40	130,000	12,113	3,000	6,500	2,647	28,885	21,050	3,325	1,005	1	2	8	200	100	1.00	300
											1									1	l .		1	l .	1	1		

PROJECT NO. SHEET NO. TOTAL NO. 21CPT.04.06.10511, 2021CPT.04.06.20511 13

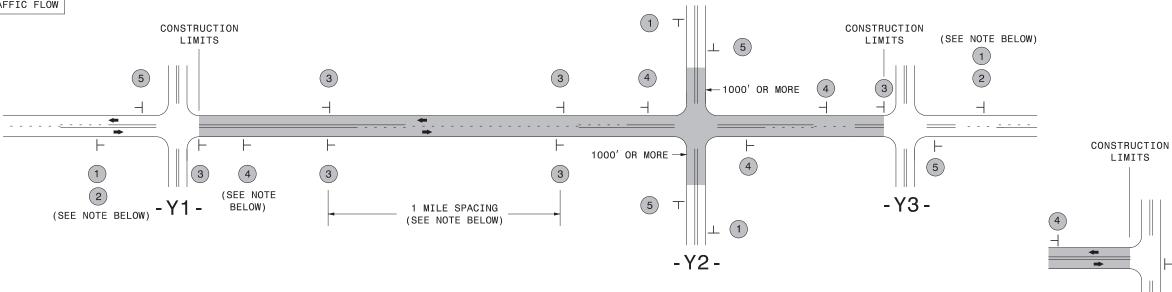
THERMOPLASTIC AND PAINT QUANTITIES

The contract The											HEKIVIO																		
Part	L			T	, ,				4413000000-E	4420000000-N						4695000000-E	ļ						485000000-E	L	489000000-E		4891000000-E		000000-N
Part			ROUTE	DESCRIPTION	TYP NO			WIDTH	ADVANCE/GENERAL	CHANGEABLE			YELLOW	WHITE	YELLOW		ARROW	ARROW 9	0 & RT ARROV		COLD APPLIED	COLD APPLIED	4" LINE REMOVAL	HOT SPRAY	HOT SPRAY	HOT SPRAY		YELLOW &	CRYSTAL & RED MARKER
No.	N	⋛	Q.						WARNING SIGNING	MESSAGE SIGN			THERMO	THERMO	THERMO		90 M	М	90 M									MARKERS	
No. 1	l g	δl	AP																						PAVEMENT				
The content of the	8	ŏ	Σ																		LINES, TYPE II	LINES, TYPE II		MARKINGS,	MARKINGS, 50	MARKINGS, 50	ı		
1																								MILS	MILS	MILS			
Property							MI	FT	SF	EA	LS	LF	LF	LF	LF	LF	EA	EA	EA	EA	LF	LF	LF	LF	LF	LF	LF	EA	EA
Production Pro	11																												
Production Pro	105:		4 NG 240	FROM CR 4220 TO CR 4504	-	2 2040		22.26	1 000	2		04.670	70.625			050	45	2	2									765	100
VICTOR PROPERTY	90	E G	1 NC 210		3	2 2000	0.0	22-30	1,000	2	*	94,678	79,033			650	15	3	2	+		+						765	100
## 2 U.S. SELECTION NO. PROCESS (1987) 19 2 2 700 0 7 2-64 80 100 1 2-7 20 0 400 100 11 2 2 1 100 1 1 1 2 2 7 1 100 1 1 1 2 1 2 1 1 1 2 1 1 2 1 1 1 2 1 1 1 2 1 1 1 1 1 2 1	9.	uust																											
TOTAL FOR MONDAY SOCIETY AGE (158) TOTAL FOR MONDAY SOCIETY AGE (158) TOTAL FOR	E I	ᅙ	2 US 301 (KENLY)		7	2 2WU	0.7	26-48	80			7,800	9,400			130	3	1	2	2							120	120	25
1	021	Ī	TOTAL FOR REQUISIO 2024 CRT 04 05 40544				9.5		1,080	2	*	102,478	89,035			980	18	4	4	2							120	885	125
## SEAST-HOLDING PROMISED STREET 2 2 2 2 00 0.8	2		TOTAL FOR PROJ NO. 2021CP1.04.06.10511									191,5	13						28						,			1	1,010
## SEAST-HOLDING PROMISED STREET 2 2 2 2 00 0.8																													
SAME		L								2											400	400	800	,					\bot
State Proceeding		Ļ																						8,875	7,565				
Total Column From May 2888 TOCK (U.S. M. C.		-																				-						 	+
8 \$ 93.788-DEREOR FROM \$91.2891 OLIG ESAC 1 2 200 0.15 20 1.6 0.5 0.1		-									_	-							+	_	-	+		-				+	+
9 93 93 93 93 93 93 93 93 93 93 93 93 93		F			1			_			-	-					1			+		+		+	+			+	+
TOTAL FOR MAN NO. 20		F			1												1		+	+				1				+	+
1 SA 18897 - SERINITY DR. FROM SR 120 TO DEAD FORD 3 2 200 0.56 2 0 64		f			1																								1
STATE 13 STATE 13 STATE 14 STATE 15 STA		Ī	11 SR 1897 - SERENITY DR.		1	2 2WU			64																			1	+
## SEASE-QUARTERIORS RD. FROM \$1,2526 TO \$1,3526 TO \$		Ī	12 SR 1844 - HOBSON RD.	FROM SR 1843 TO CUL DE SAC	1	2 2WU	0.11	20	16																				
State Stat			13 SR 1843 - HARRIS RD	FROM SR 1010 TO SR 1898	1	2 2WU	J 0.57	20																					
Fraction	₽.	L																											
Part	051	Ļ			2																			11,566	11,562				
SECONDARY SEC	96.2	5			3						*			42,000	26,200						440	440	000	105 500	66,000				+
Second From Micro of the Control	0.4.0	S									_						1			+	440	440	880	,				+	+
FROM JOINTS 60 FT. NORTH OF NO. 42 TO SR 1525 CORNWALLIS RD. 42 TO SR 2246 TO WAKE COUNTY LINE 3 2 2WU 1.9 23 224	F.	÷ -									-	-					1			+		+						+	+
20 SR 1525 - CORNWALLIS RD. 4 2 TO SR 2246 8 2 2WU 0.22 23 32 24 2 2,330 2,330 2,330 2,330 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	210	F	15 SK 1920 CHOKET KB.		_	2 2000	0.75	10	50								1		+	+				7,750	7,750			+	+
## FROM SR 2246 TO WAKE COUNTY LINE	20		20 SR 1525 - CORNWALLIS RD.			2 2WU	0.22	23	32			2.330	2.330																
TOTAL FOR MAP NO. 20 21 SR 1533 - MT. PLEASANT RD. FROM NC 50 TO WAKE COUNTY LINE 2 2 2 2WU 3.47 21 384 22 DR 1550 - WINSTON RD. BRIDGE (MP 1.68) 2 2 2WU 0.88 21 96 23 SR 1641 - MCGE RD. FROM SR 1520 TO JOINT AT NEW 2 2 2WU 0.88 21 96 24 SR 1747 - WALL RD. FROM SR 150 TO WAKE COUNTY LINE 2 2 2WU 0.88 21 96 TOTAL FOR PROJ NO. 2021CPT.04.06.20511 TOTAL FOR PROJ NO. 2021CPT.04.06.20511 FROM SR 1520 TO JOINT AT NEW 3.6950 32,600 40 22 DR 1550 - WINSTON RD. BRIDGE (MP 1.68) 2 2 2WU 0.88 21 96 2 2 WU 0.88 21 96 8 80 8 9,420 9,500 40 9		Ī		FROM SR 2246 TO WAKE COUNTY																									
21 SR 1533 - MT. PLEASANT RD. FROM NC 50 TO WAKE COUNTY LINE 2 2 2 WU 3.47 21 384 22 DR 1550 - WINSTON RD. BRIDGE (MP 1.68) 2 2 2 WU 0.88 21 96 23 SR 1641 - MCGEE RD. FROM SR 1520 TO DEAD END 2 2 2 WU 0.83 19 80 24 SR 1747 - WALL RD. FROM SR 1716 TO SR 1701 3 2 2 WU 1.5 19-20 160 TOTAL FOR PROJ NO. 2021CPT.04.06.20511 T		L	п	LINE	3	2 2WL	1.9	23	224			20,400	17,700			100	4	2			600	600	1,200						
PRIDE FROM SR 1525 TO JOINT AT NEW SR		L	TOTAL FOR MAP NO. 20				2.12		256			22,730	20,030			100	4	2			600	600	1,200						
PRIDE FROM SR 1525 TO JOINT AT NEW SR									204															25.050		40			
22 DR 1550 - WINSTON RD. BRIDGE (MP 1.68) 2 2 2WU 0.88 21 96		-	21 SR 1533 - MT. PLEASANT RD.			2 2WU	3.47	21	384		_									+				36,950	32,600	40		+	+
23 SR 1641 - MCGEE RD. FROM SR 1520 TO DEAD END 2 2 2WU 0.83 19 80			22 DR 1550 - WINSTON RD		2	2 21///	0.88	21	96								2							9.420	9 500	40			
24 SR1747-WALLRD. FROM SR 1716 TO SR 1701 3 2 2WU 1.5 19-20 160		F			2												-		+	+	+	+				70		+	+
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$																	1		1	1				-,	-,			1	+
TOTAL FOR PROJ NO. 2021CP1.04.06.20511		Ī								2	*	22.730	20.030	42.000	26.200	100	8	2			1.440	1.440	2.880	279,667	210.997	80		1	1
GRAND TOTAL 44.69 5,091 4 1 125,208 109,065 42,000 26,200 1,080 26 6 4 2 1,440 1,440 2,880 279,667 210,997 80 120 8			TOTAL FOR PROJ NO. 2021CPT.04.06.20511		1		33.23	1	7,022	-							† Ť	-	10	-1			2,000					+	
			CRAND TOTAL				44.69		5,091	4	1					1,080	26	6		2			2,880			80	120	885	125
			GRAND IOIAL									234,2					1		38	-	2	,880		4					1,010

PROJ. REFERENCE NO. SHEET NO. 2021CPT.04.06.1051, TMP-1 ETC.

SIGNING FOR RESURFACING PROJECTS





TEE INTERSECTION

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.

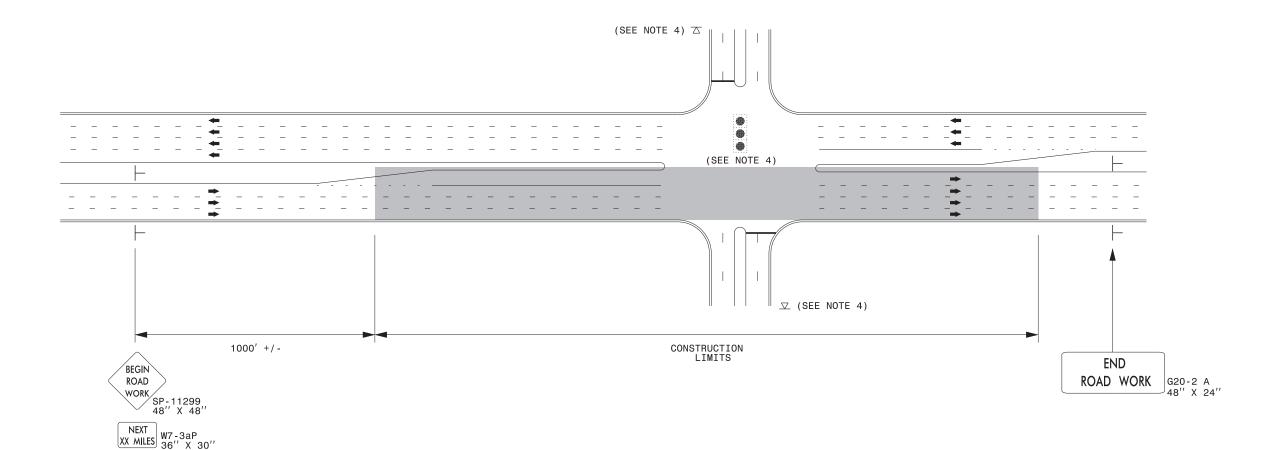


ADVANCE WARNING SIGNS
FOR
RURAL AND SUBURBAN
2-LANE ROADWAY
RESURFACING

NUNWZICKKESULTACINGKZLZW & ASI KESULTACING DETAIISKRESULTACING_AAVWALN_. .kedais

PROJ. REFERENCE NO. SHEET NO. 2021CPT.04.06.10511, TMP-2 FTC.

URBAN / SUBURBAN WORKZONES



NOTES:

- 1) 48" x 48" SIZED SIGNS (SP- 11299) MAY BE REDUCED TO 36" X 36" ON ROADWAYS WITH SPEED LIMITS OF 40 MPH OR LESS.
- 2) MOUNT SIGNS THAT ARE LARGER THAN 10 SQUARE FEET IN AREA ON TWO OR MORE WOOD OR U-CHANNEL SUPPORTS. PERFORATED SQUARE TUBING SUPPORT SYSTEMS MAY SUPPORT LARGER AREAS ON A SINGLE SUPPORT. FOLLOW MANUFACTURER'S RECOMMENDATIONS. THESE SYSTEMS SHALL BE NCHRP 350 COMPLIANT AND NCDOT APPROVED.
- 3) ADVANCE WARNING SIGNS NOT REQUIRED ON NON-SIGNALIZED SIDE STREETS.
- 4) 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.
- 5) LATERAL CLEARANCE AT ALL SIGN LOCATIONS SHALL BE 2' AS MEASURED FROM THE EDGE OF PAVEMENT OR THE FACE OF THE CURB. WHEN UNABLE TO OBTAIN THE LATERAL CLEARANCE WITHIN THE MEDIAN AREA USE SHOULDER MOUNTS ONLY.
- 6) SIGN MOUNT LOCATIONS SHALL NOT BLOCK SIDEWALKS OR DRIVEWAYS.
- 7) IF STATIONARY GENERAL WARNING SIGNS ARE USED, THEY WILL BE PAID FOR PER SECTION 104 OF THE NCDOT STANDARD SPECIFICATIONS AS EXTRA WORK.
- 8) IF MILLED AREAS ARE NOT PAVED BACK BY THE END OF THE WORK DAY, PORTABLE SIGNS SHALL BE USED TO WARN DRIVERS OF THE PRESENT CONDITIONS. THESE ARE TO INCLUDE, BUT NOT LIMITED TO "ROUGH ROAD" W8-8, "UNEVEN LANES" W8-11, "GROOVED PAVEMENT" W8-15 w/MOTORCYCLE PLAQUE MOUNTED BELOW. THESE ARE TO BE DOUBLE INDICATED ON MULTI-LANE ROADWAYS WITH SPEED LIMITS 45 MPH AND GREATER WHERE LATERAL CLEARANCE CAN BE OBTAINED WITHIN THE MEDIAN AREAS.THESE PORTABLE SIGNS ARE INCIDENTAL TO THE OTHER ITEMS OF WORK INCLUDED IN THE TEMPORARY TRAFFIC CONTROL (LUMP SUM) PAY ITEM.





RESURFACING ADVANCE WARNING SIGNS FOR URBAN / SUBURBAN FACILITIES

mgarre++

Wattle

E0P

Drainage Inlet

E0P

SHEET NO.

EC -1

NOT TO SCALE

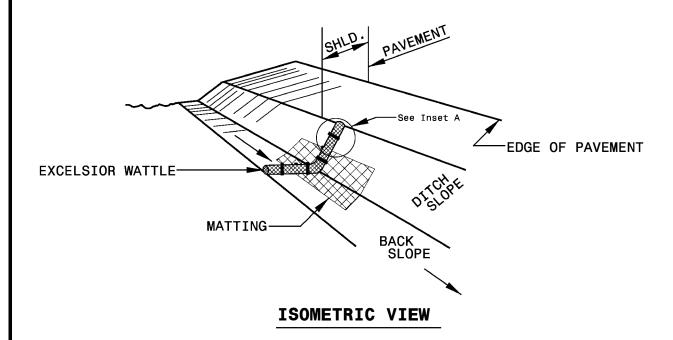
DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA

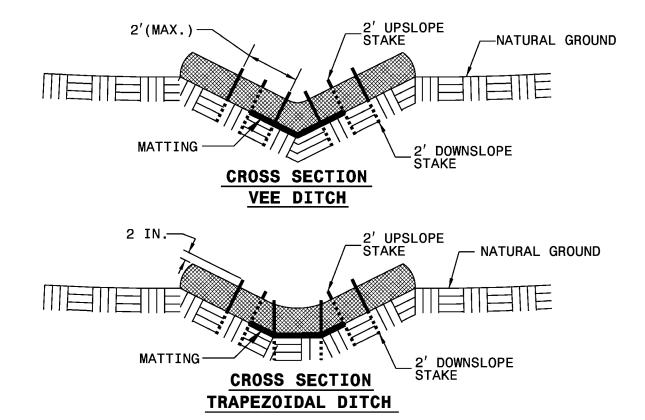
PROJECT REFERENCE NO).	SHEET NO.
2020CPT.04.06.10511,	ETC.	EC - 2
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER

SOIL STABILIZATION TIMEFRAMES

SITE DESCRIPTION	STABILIZATION TIME	TIMEFRAME EXCEPTIONS
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
SLOPES 3:1 OR FLATTER	I4 DAYS	7 DAYS FOR SLOPES GREATER THAN 50'IN LENGTH.
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	I4 DAYS	NONE, EXCEPT FOR PERIMETERS AND HOW ZONES.

WATTLE DETAIL





NOTES:

USE MINIMUM 12 IN. DIAMETER EXCELSIOR WATTLE.

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

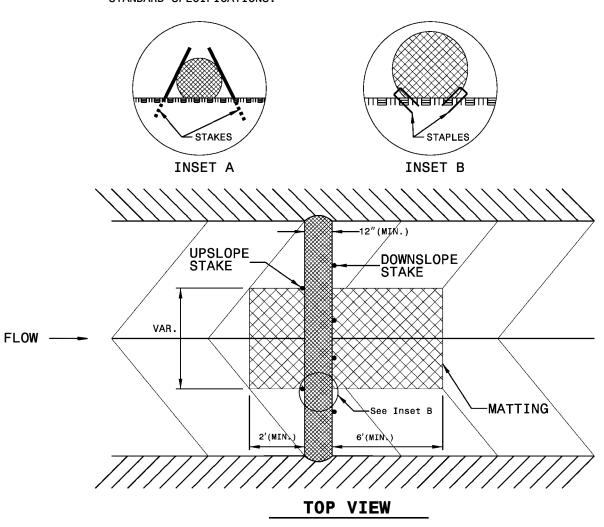
ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.

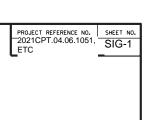
INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.

PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.

INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.

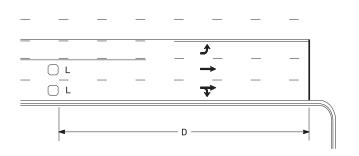
INSTALL MATTING IN ACCORDANCE WITH SECTION 1631 OF THE STANDARD SPECIFICATIONS.







(≥40 mph)



Speed Limit

mph

40

45

50

55

ft

250

300

355

420

Volume Density Operation

L = 6ft X 6ft

Wired separately

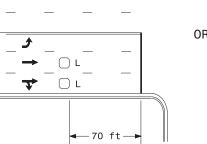
OR	 •
	 → □L2
	 → □ L2
	D2
	 D1

	 	_		1
)L1		\rightarrow	L2	
)L1		₹		
4		— D1——	◄ D2 —	>

Speed Limit	D1	D2
mph	ft	ft
40	250	80
45	300	90
50	355	100
55	420	110

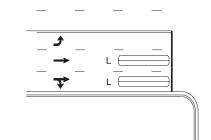
L1 = 6ft X 6ftWired in series

L2 = 6ft X 6ftWired in series



Low Speed Detection

(≤35 mph)



 $L = 6ft \times 6ft$ Wired in series

 $L = 6ft \times 40ft$ Quadrupole loop, wired separately

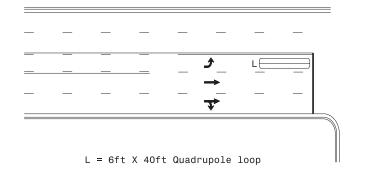
Right Turn Lane Detection

L1 = 6ft X 40ft Quadrupole loop L2 = 6ft X 6ft [Minimum] Presence loop

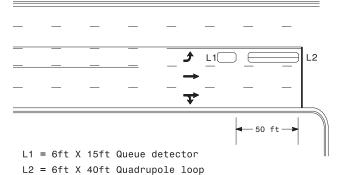
Wired separately

"Stretch" Operation

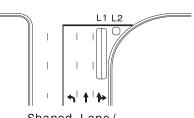
Left Turn Lane Detection



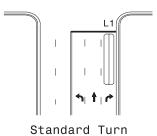
OR

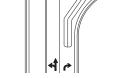


Queue Loop Detection



Shared Lane/ Wide Radius Turn



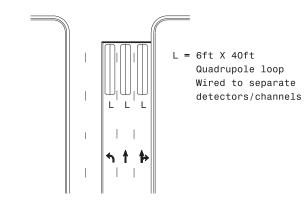


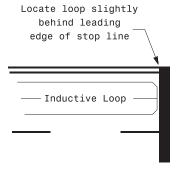
Wide Radius Turn

Channelized Turn

Side Street Detection

Presence Loop Detection





Presence Loop Placement at Stop Lines

Loop may be located in advance of stop line under any of the following conditions:

- 1) stop line is greater than 15' from edge of intersecting roadway
- 2) loop detects a permissive or protected/permissive left turn
- 3) for an exclusive right turn lane

Recommended Number of Turns

Single 6' X 6' loop (when wired separately):

-	
Length of Lead-in ft	Number of Turns
< 250	3
250-375	4
375 - 525	5
> 525	6

Quadrupole loops: Use 2-4-2 turns

6' X 15' Loops: Lead-in < 150', use 2 turns Lead-in > 150', use 3 turns



Typical Signal Loop Locations

Senoi Design Section	PLAN DATE: September 2020	REVIEWED BY:	JPG		
50 N.Greenfield Pkwy,Garner,NC 27529	PREPARED BY: PLA	REVIEWED BY:			
SCALE	REVISIONS		INIT.	DATE	-
N / A					_