

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
HIGHWAY DIVISION 6

PLANS

Letting Date: February 21, 2024

CONTRACT ID: DF00467

TIP NO.: -----

FEDERAL AID NO.: STATE FUNDED

WBS ELEMENT NO.: 2024CPT.06.13.10241.1 & 2024CPT.06.13.20241.1

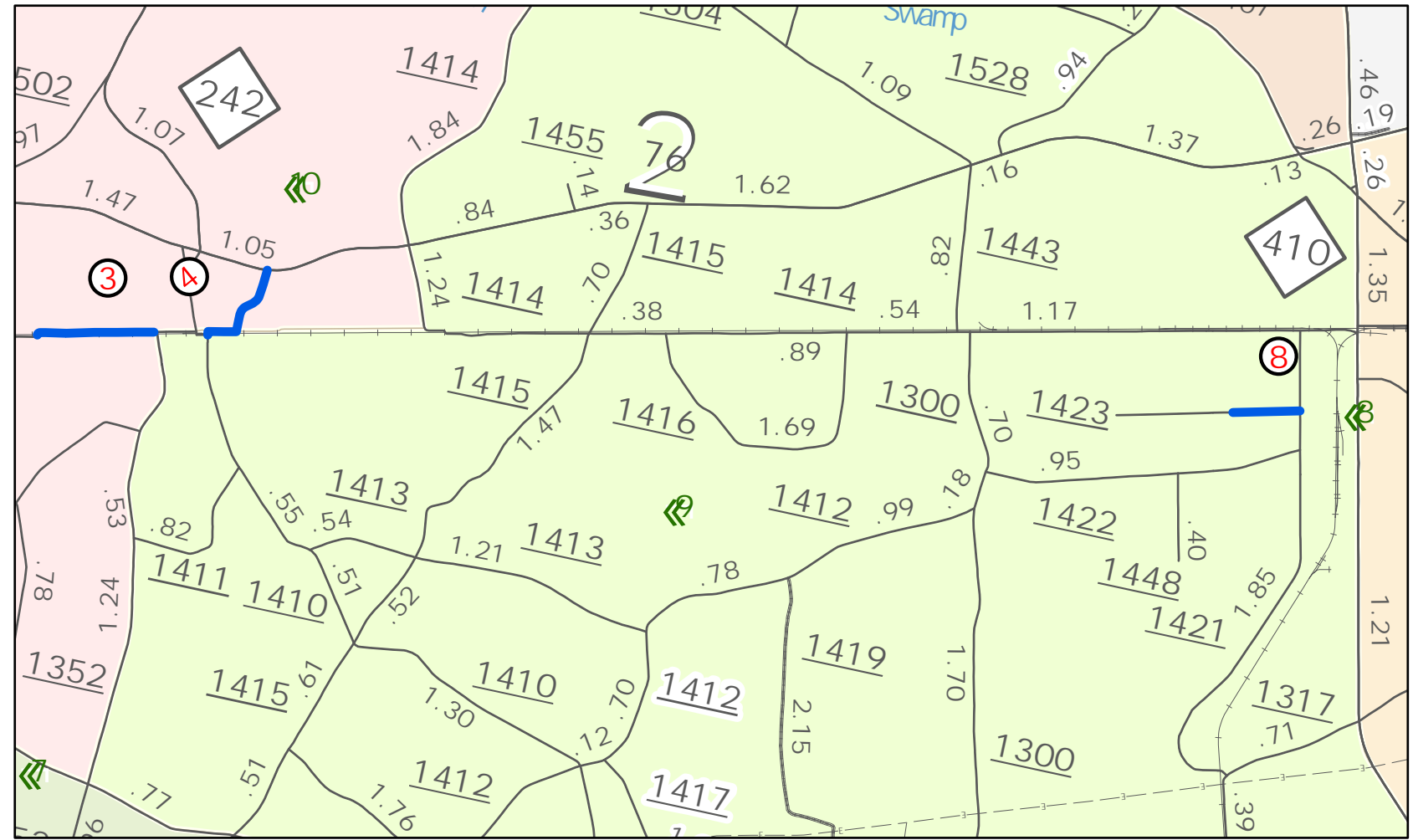
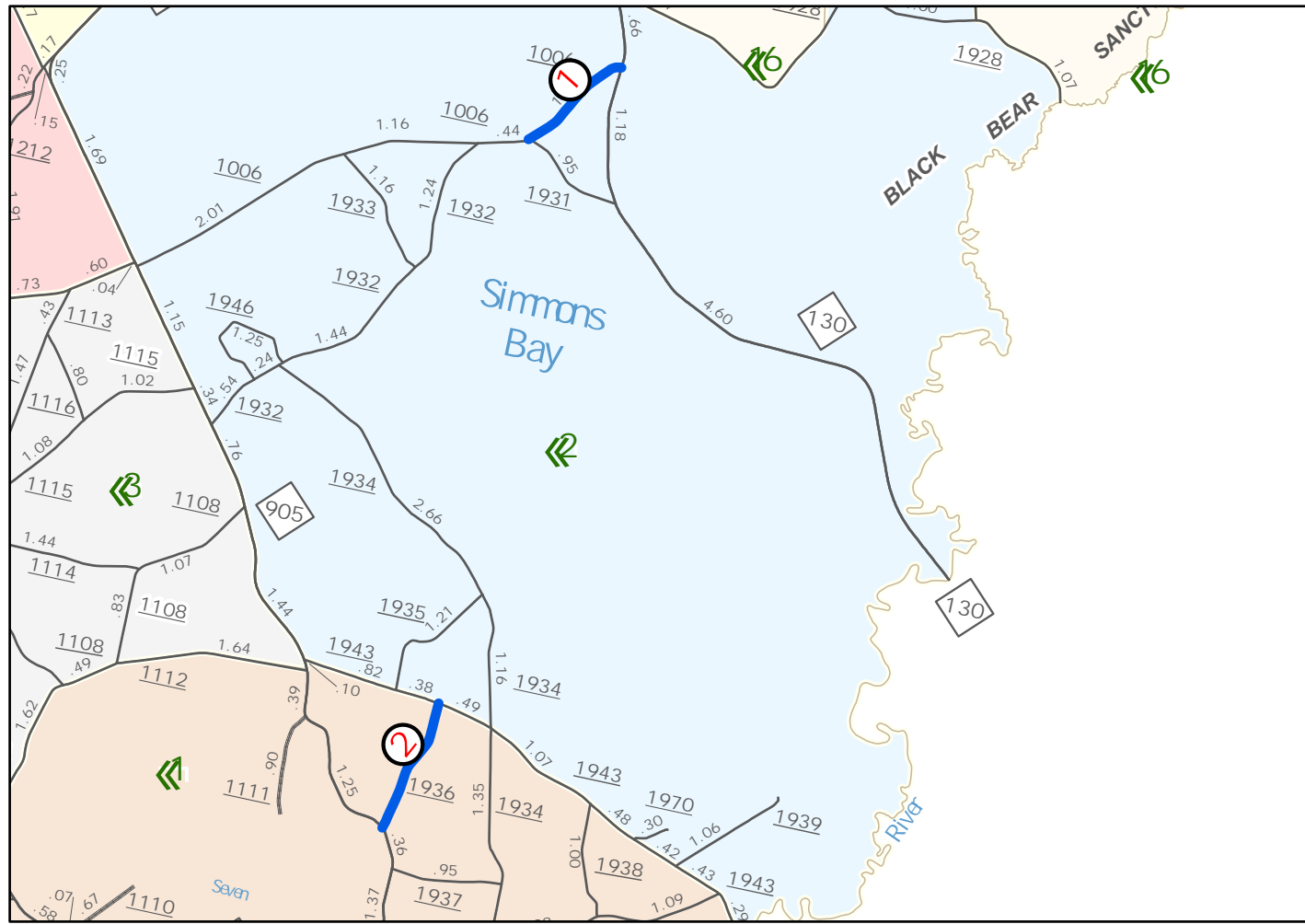
ROUTE NO.: VARIES

LOCATION: VARIES

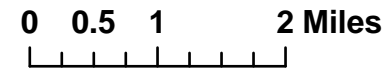
COUNTY: COLUMBUS

LENGTH OF PROJECT: 11.84 MILES

TYPE OF WORK: RESURFACING, MILLING & PAVEMENT MARKINGS

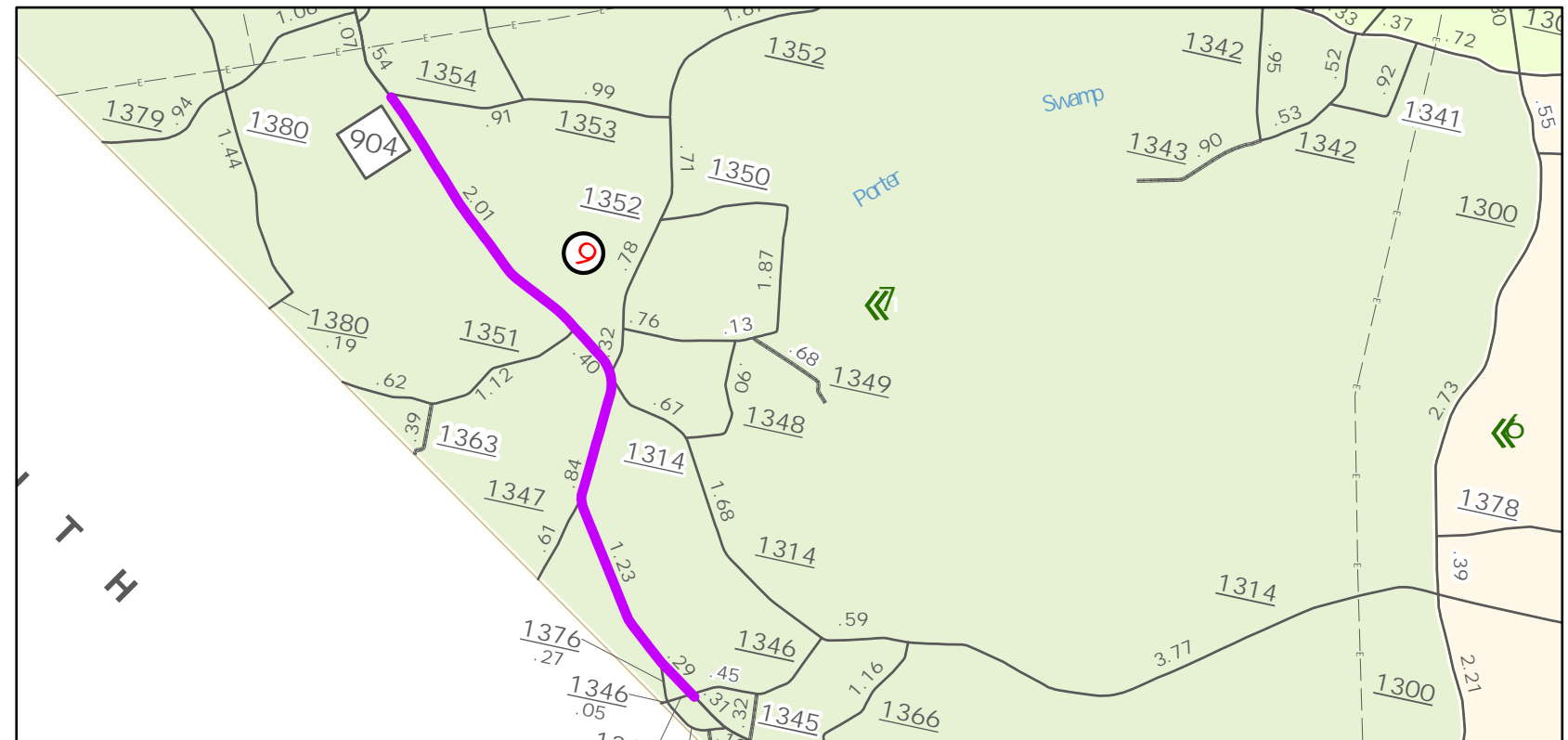
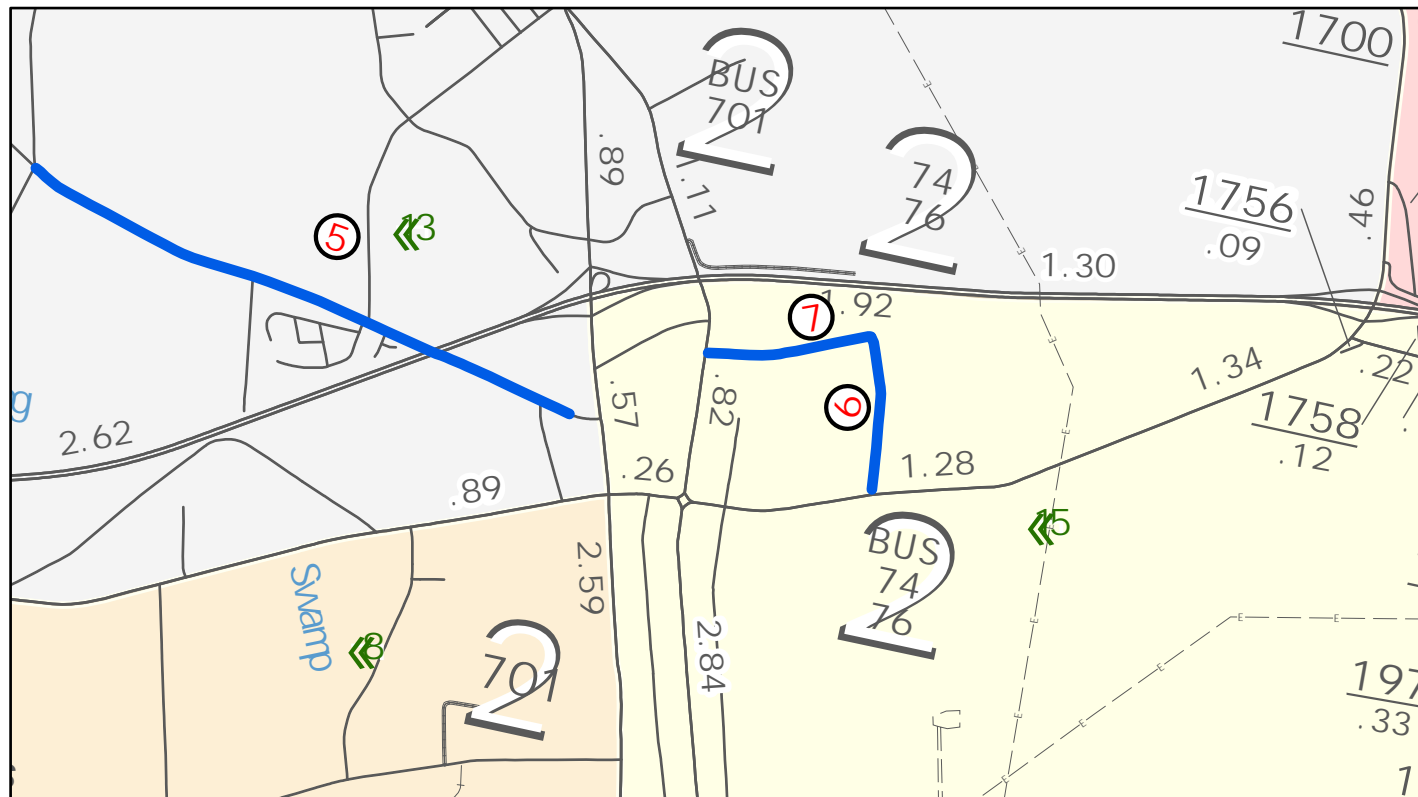


Columbus County Resurfacing Contract: DF00467



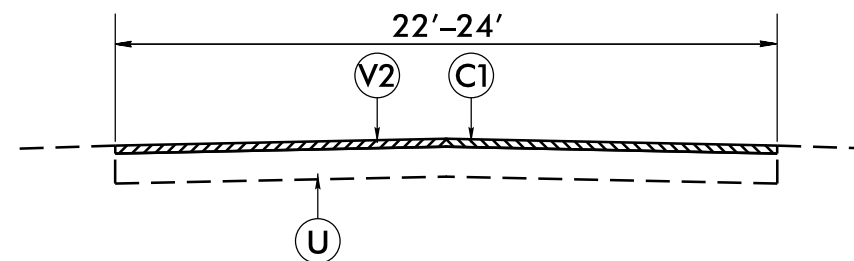
Legend

- WBS: 2024CPT.06.13.10241.1
- WBS: 2024CPT.06.13.20241.1



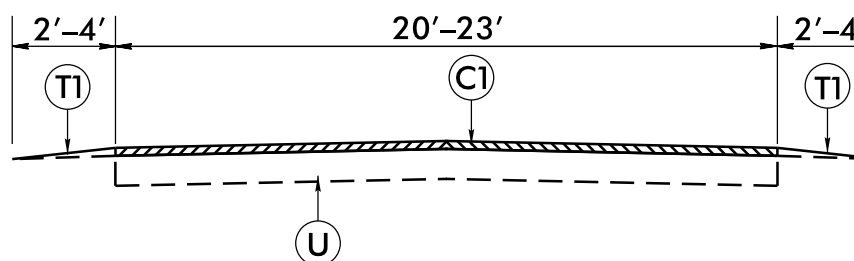
PAVEMENT SCHEDULE

C1	1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.
C2	3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, TO BE PLACED IN 2 LAYERS OF 1½" LIFTS AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD. PER LIFT.
C3	1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
D1	2½" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.
E1	4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
T1	SHOULDER RECONSTRUCTION WITH AGGREGATE SHOULDER BORROW
U	EXISTING PAVEMENT
V1	0" - 1½" MILLING
V2	¾" MILLING
V3	1½" MILLING
V4	2½" MILLING



TYPICAL SECTION NO. 1

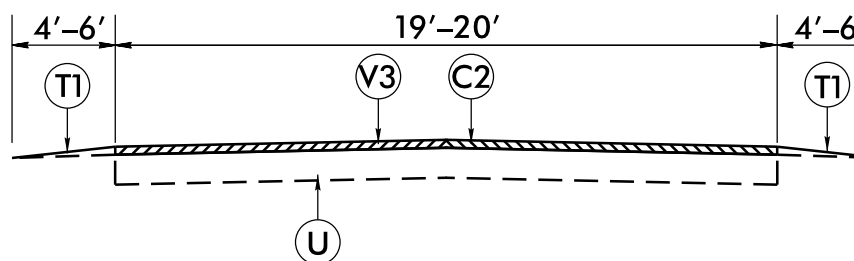
-PLUS 2' INSIDE CURVE WIDENING (SEE DETAIL)



TYPICAL SECTION NO. 2

-PLUS 2' INSIDE CURVE WIDENING (SEE DETAIL)

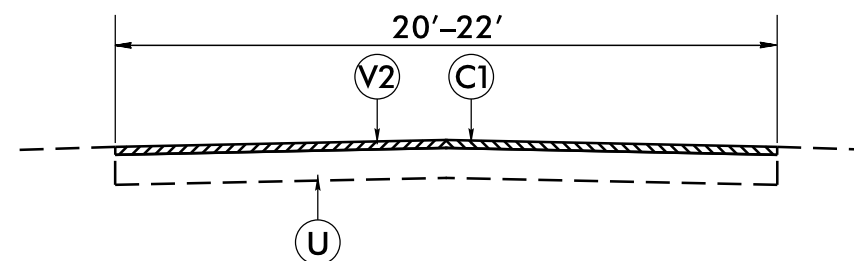
-PLUS 2.5" MILL AND FILL WITH I19.0C (SEE DETAIL 1)



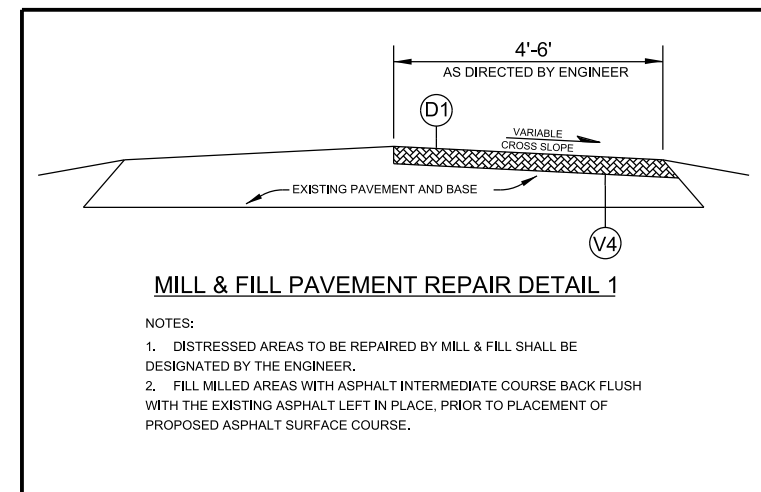
TYPICAL SECTION NO. 3

-PLUS 2' INSIDE CURVE WIDENING (SEE DETAIL)

-PLUS 1.5" MILL AND FILL WITH S9.5B (SEE DETAIL 2)

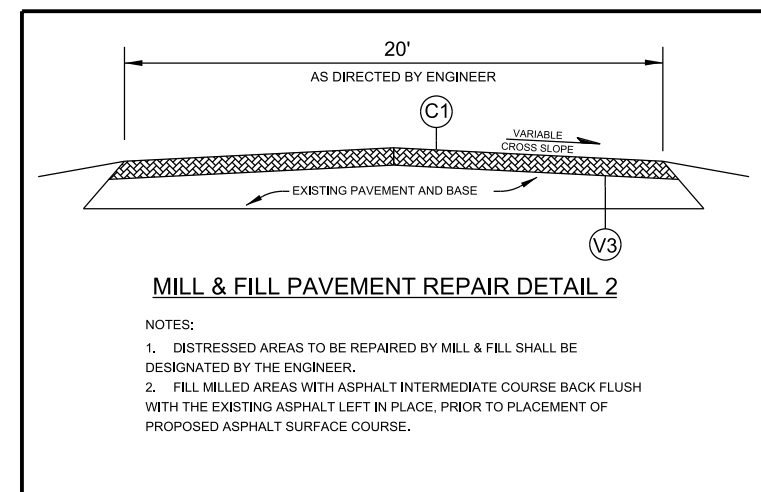


TYPICAL SECTION NO. 4



MILL & FILL PAVEMENT REPAIR DETAIL 1

- NOTES:
1. DISTRESSED AREAS TO BE REPAIRED BY MILL & FILL SHALL BE DESIGNATED BY THE ENGINEER.
 2. FILL MILLED AREAS WITH ASPHALT INTERMEDIATE COURSE BACK FLUSH WITH THE EXISTING ASPHALT LEFT IN PLACE, PRIOR TO PLACEMENT OF PROPOSED ASPHALT SURFACE COURSE.

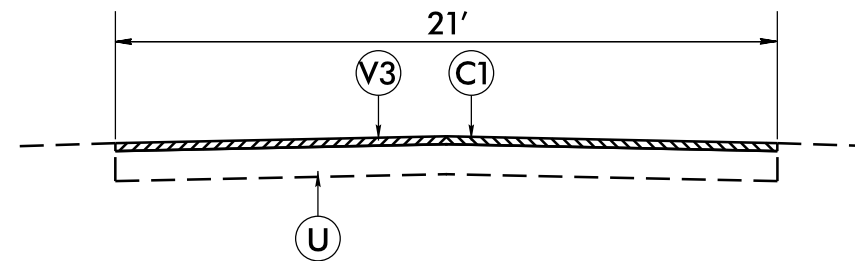


MILL & FILL PAVEMENT REPAIR DETAIL 2

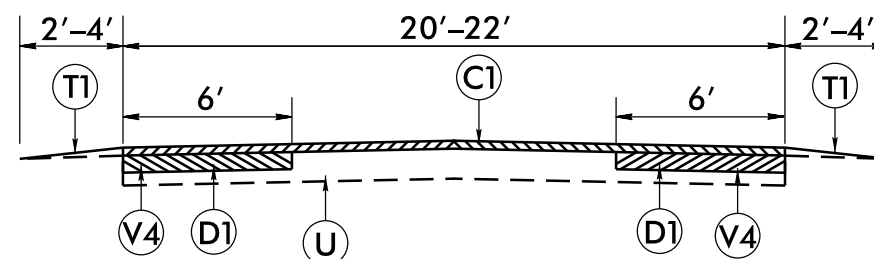
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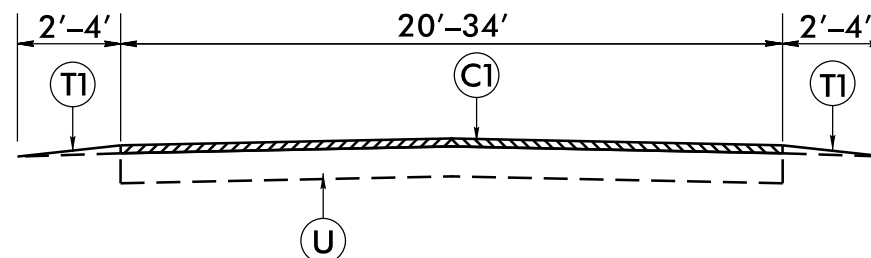


TYPICAL SECTION NO. 5

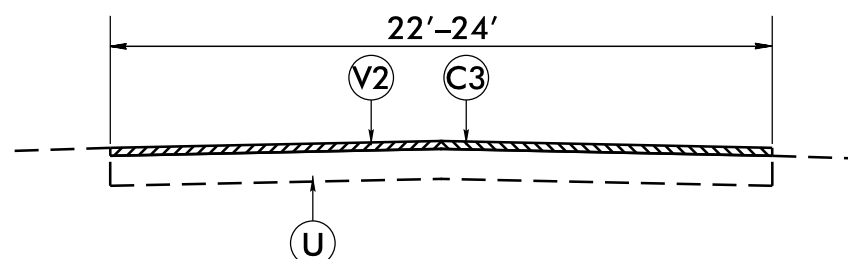


TYPICAL SECTION NO. 6

-PLUS 2' INSIDE CURVE WIDENING (SEE DETAIL)



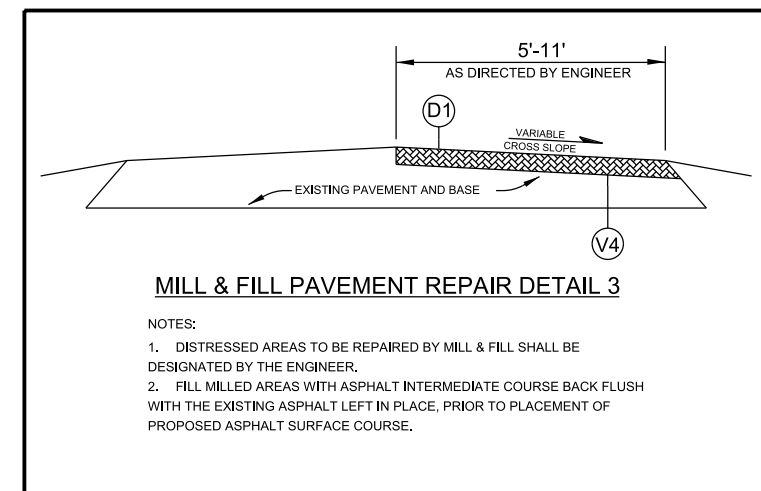
TYPICAL SECTION NO. 7

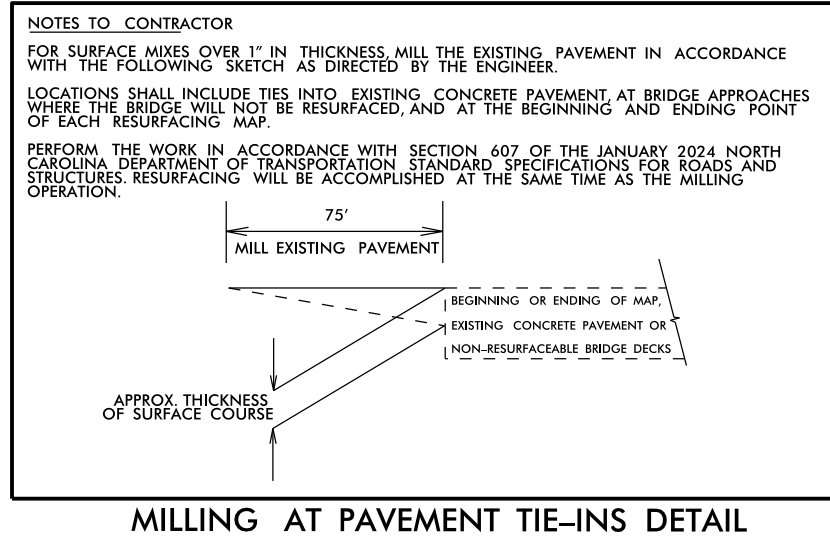
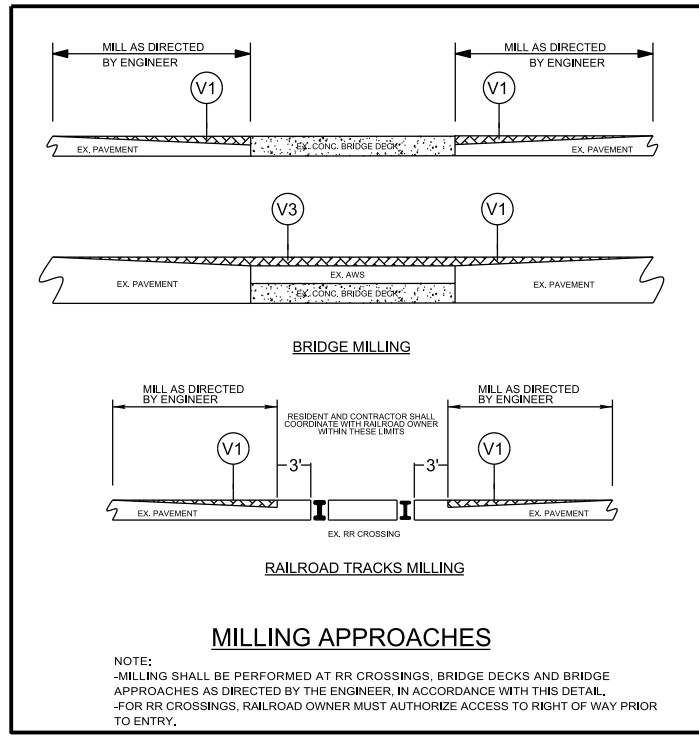
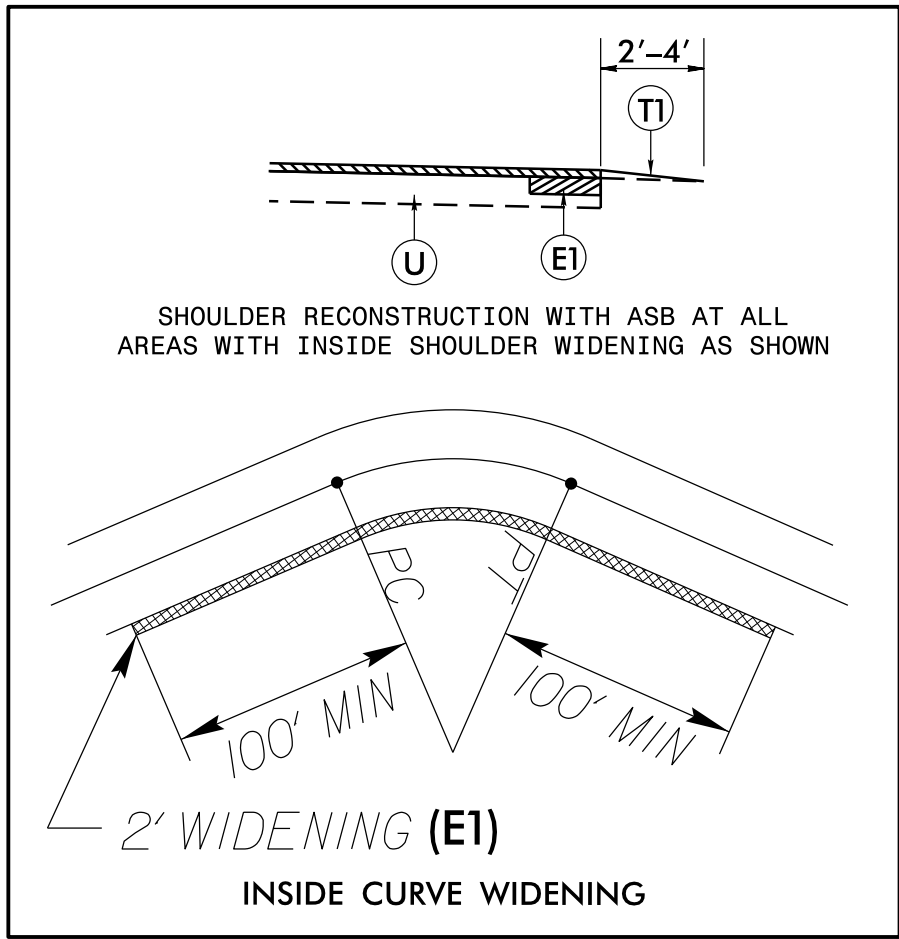
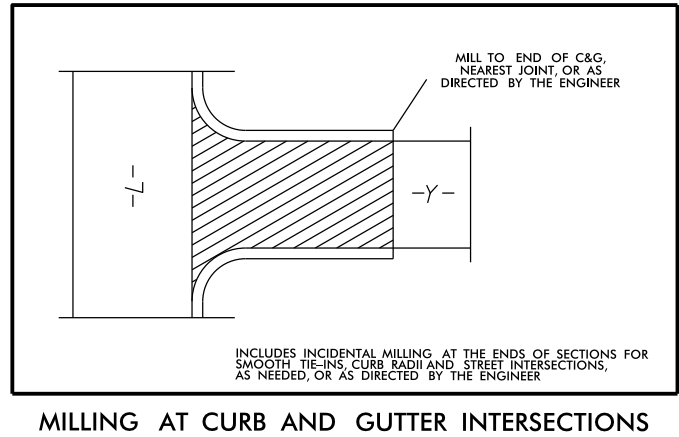
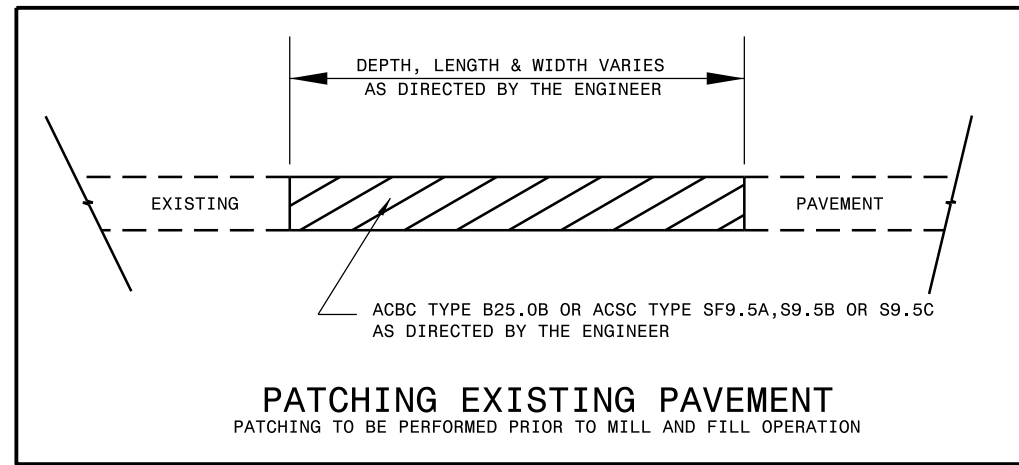
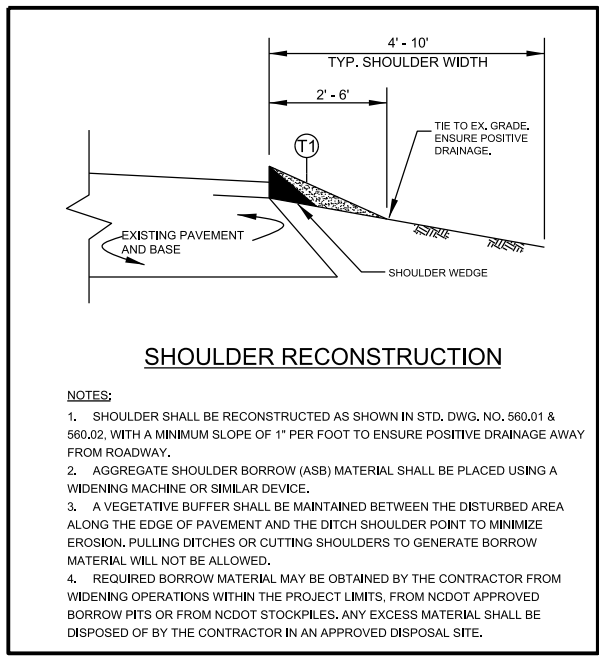


TYPICAL SECTION NO. 8

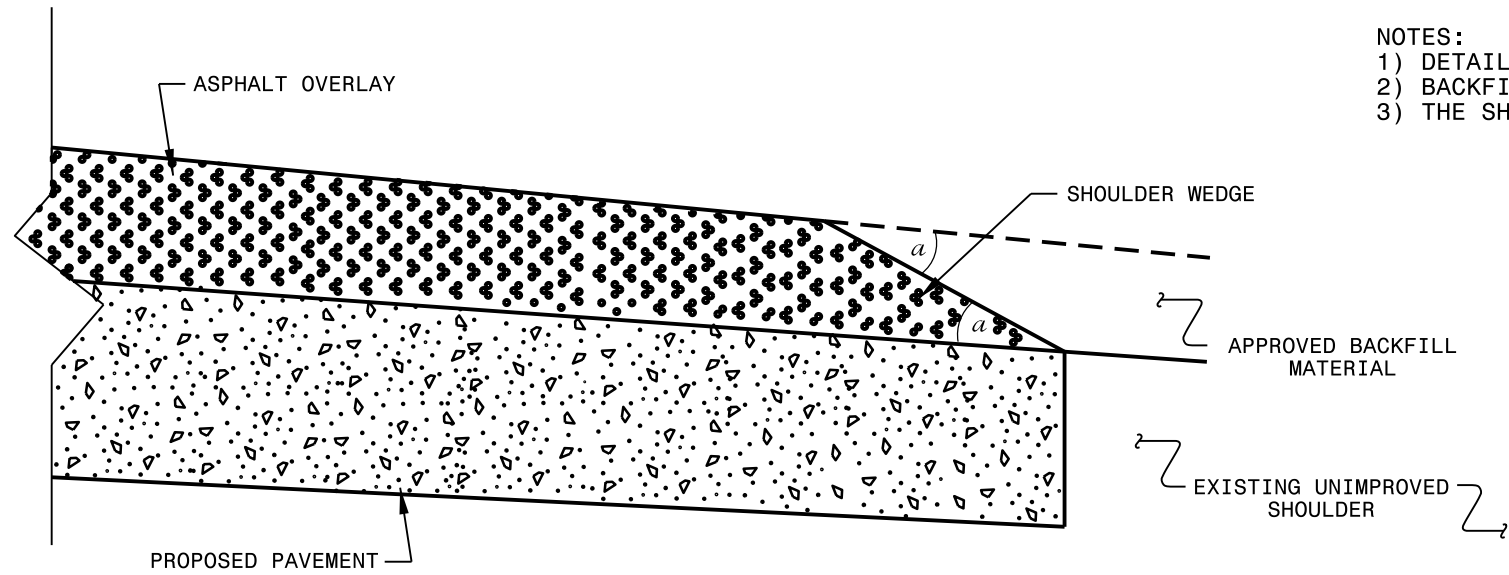
-PLUS 2' INSIDE CURVE WIDENING (SEE DETAIL)

-PLUS 2.5" MILL AND FILL WITH I19.0C (SEE DETAIL 3)

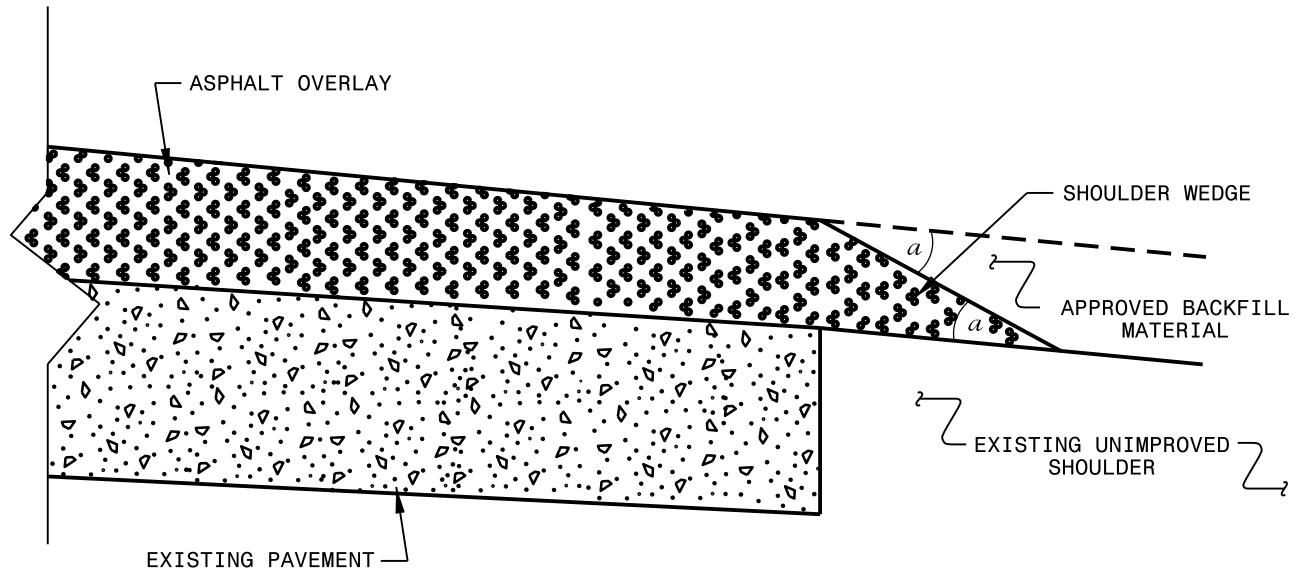




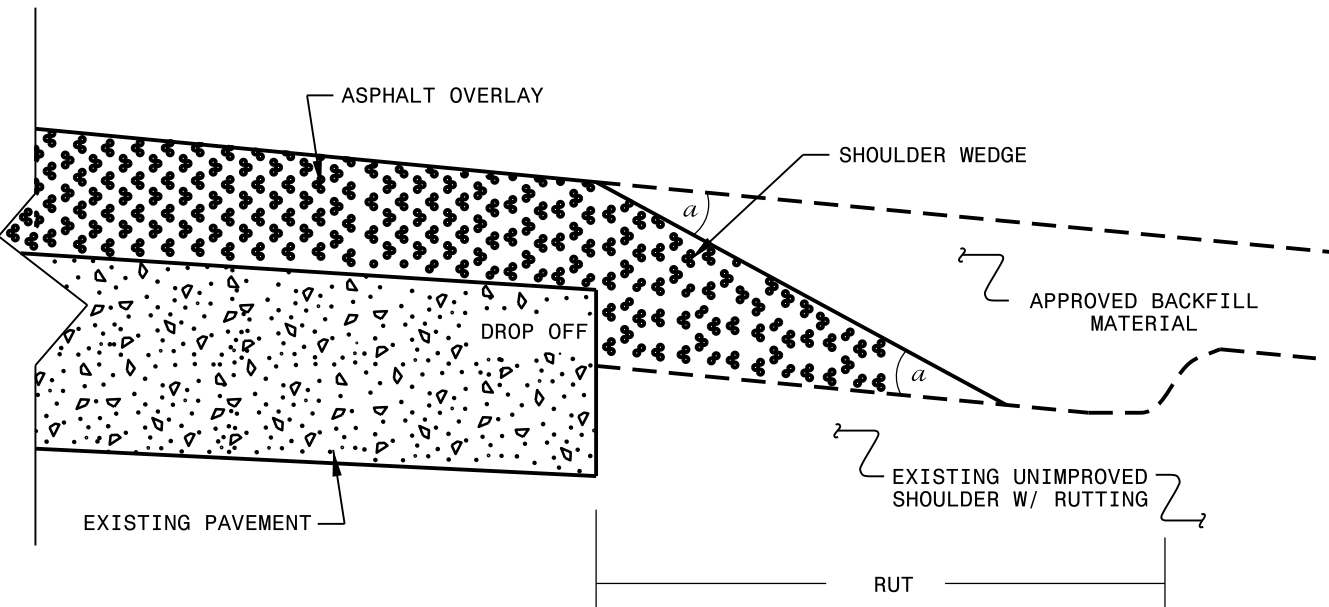
- NOTES:
- 1) DETAIL DOES NOT APPLY TO OGAFB AND ULTRA-THIN BONDED WEARING COURSE.
 - 2) BACKFILL SHOULDER WITH APPROVED MATERIAL.
 - 3) THE SHOULDER WEDGE DEVICE MAY BE DISENGAGED AT PAVED DRIVEWAYS AND SIDE STREETS.



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 DETAIL
(Resurfacing Adjacent to
Rutted Shoulder)

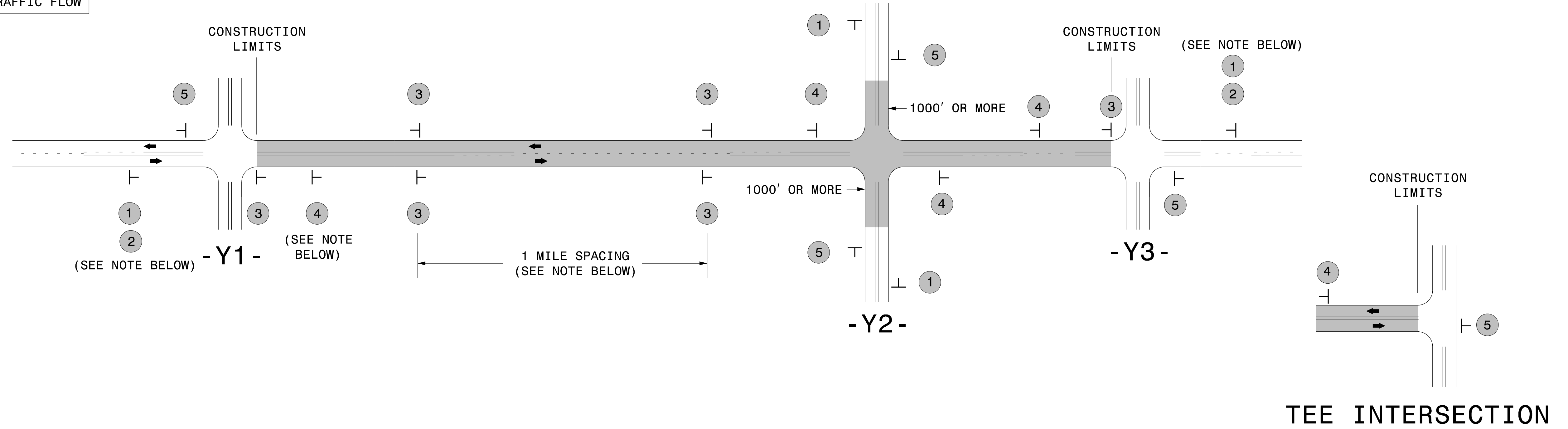
- SHOULDER WEDGE ANGLE = 30°

CONTRACT STANDARDS AND DEVELOPMENT UNIT	
Office 919-707-6950	FAX 919-250-4119
SHOULDER WEDGE DETAILS	
ORIGINAL BY: T.SPELL	DATE: 7-19-11
MODIFIED BY:	DATE: 10/16/12
CHECKED BY:	DATE:
FILE SPEC.: susr/details/stand/shoulderwedgedetail.dgn	

SYSTEMS DESIGN
USER NAME

SIGNING FOR RESURFACING PROJECTS

LEGEND
 ┆ STATIONARY SIGN
 ← DIRECTION OF TRAFFIC FLOW



MAINLINE (-L-) SIGNING

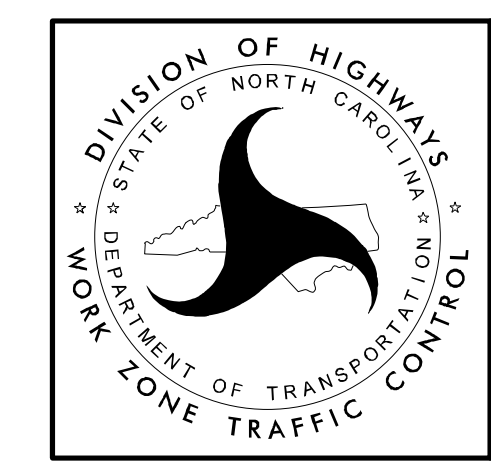
-Y- LINE SIGNING

SIGNING NOTES AND PLACEMENT PER DIRECTION	1		PLACE 1000' PRIOR TO BEGINNING OF CONSTRUCTION LIMITS. ONLY USED ON -Y- LINES IF RESURFACING LIMITS EXTEND 1000' ALONG -Y- LINE.	<p>NO REQUIRED STATIONARY SIGNING 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;"> <div style="text-align: center;"> W20-1 48" X 48" PLACED 500' IN ADVANCE OF FLAGGER. </div> <div style="text-align: center;"> W20-7 A 48" X 48" PLACED 250' IN ADVANCE OF FLAGGER. </div> </div>
	2		#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		- 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.	
	4		- 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		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.



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

GUIDELINES FOR LANE WIDTHS ON RESURFACING PROJECTS

Contractor shall place the new pavement markings in accordance with this table and detail unless otherwise directed by the Engineer.

TWO LANE - TWO WAY ROADWAY - 55 MPH		
ROADWAY WIDTH	LANE WIDTH	SHOULDER WIDTH
18'	9' *	0'
20'	10' *	0'
22'	10'	1'
24'	10'	2'
26'	11'	2'
28'	12'	2'
32'	12'	4'

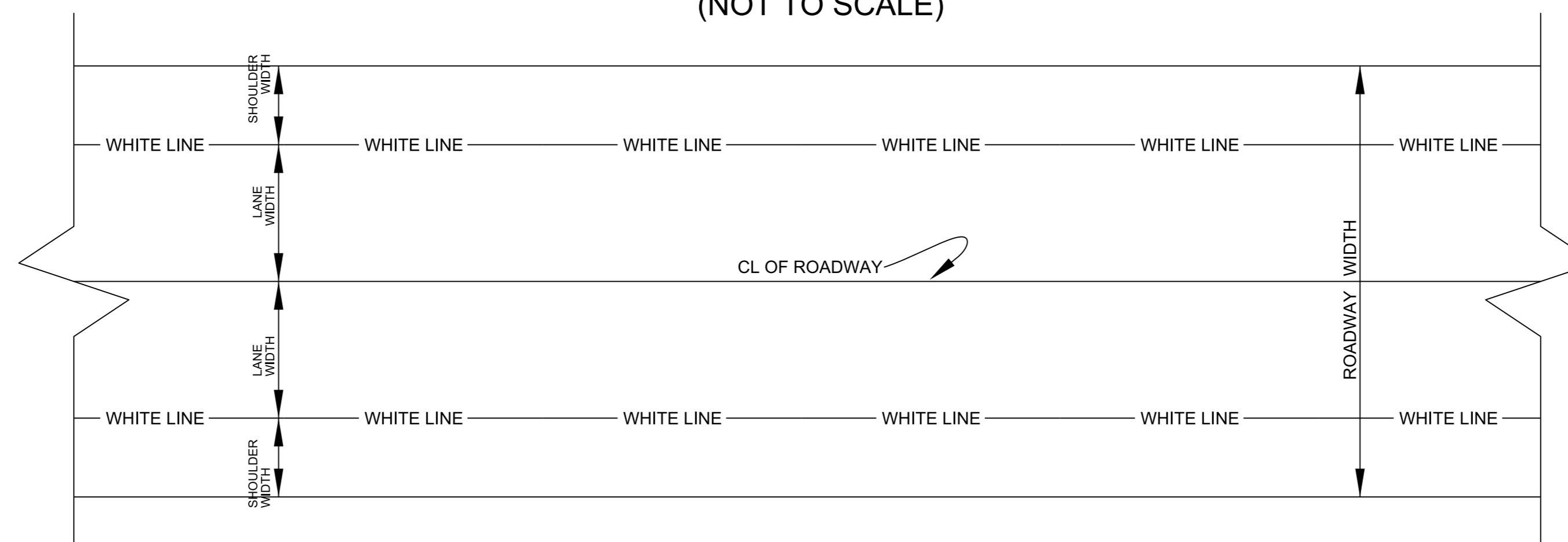
* May vary due to pavement width

TWO LANE - TWO WAY ROADWAY		50
MPH OR LESS		
ROADWAY WIDTH	LANE WIDTH	SHOULDER WIDTH
18'	9' *	0'
20'	10' *	0'
22'	10'	1'
24'	10'	2'
26'	11'	2'
28'	11'	3'
32'	11'	5'

* May vary due to pavement width

SCHEMATIC OF ROADWAY

(NOT TO SCALE)



PROJECT NO.	SHEET NO.	TOTAL NO.
2024CPT.06.13.20241.1, 2024CPT.06.13.10241.1		

THERMOPLASTIC AND PAINT QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	LANE TYPE	LENGTH	WIDTH	BEGIN MP	END MP	4413000000-E	4457000000-N	4685000000-E		4720000000-E				4810000000-E		4709000000-E	4704000000-E	4900000000-N		
												WORK ZONE ADVANCE/GENERAL WARNING SIGNING	TEMPORARY TRAFFIC CONTROL	4" X 90 M YELLOW THERMO	4" X 90 M WHITE THERMO	THERMO MSG RXR 90 M	THERMO RT ARROW 90 M	THERMO LT ARROW 90 M	THERMO STR & RT ARROW 90 M	4" WHITE PAINT	4" YELLOW PAINT	24" X 90 M WHITE THERMO	16" X 90 M WHITE THERMO(RXR CROSSBUCK)	YELLOW & YELLOW MARKERS	CRYSTAL & RED MARKERS	
								MI	FT			SF	LS	LF	LF	EA	EA	EA	EA	LF	LF	LF	LF	EA	EA	
2024CPT.06.13.20241.1	Columbus	1	SR-1006 / ERVIN T RICHARDSON RD	FROM NC 130 TO SR 1932		2		1.02	22	0	1.02	112	0.09	7,650	10,975									82		
2024CPT.06.13.20241.1	Columbus	2	SR-1936 / S P LONG RD	FROM NC 905 TO SR 1943		2		1.17	20	0	1.17	112	0.10	8,775	12,589									94		
2024CPT.06.13.20241.1	Columbus	3	SR-1403 / JUNE BALDWIN RD	FROM WCL CERRO GORDO TO SR 1352		2		0.58	19	1.98	2.56	80	0.05	4,350	6,241	2						35	50	46		
2024CPT.06.13.20241.1	Columbus	4	SR-1409 / PINE ST / RAILROAD ST	FROM SR 1408 TO US 76		2		0.51	20	0	0.51	96	0.04	3,825	5,488	2						37	50	41		
2024CPT.06.13.20241.1	Columbus	5	SR-1552 / SMYRNA ROAD	FROM US 701 TO SR 1585		2		2.21	20	0.12	2.33	198	0.19	16,575	23,780		1					23,758	16,575	177	10	
2024CPT.06.13.20241.1	Columbus	6	SR-1706 / SPIVEY RD	FROM US 74 BUS TO US 701 BUS		2		0.58	21	0.02	0.6	72	0.05	4,350	6,241			1		1				46		
2024CPT.06.13.20241.1	Columbus	7	SR-1706 / WARRIOR TRL	FROM SPIVEY RD TO US 701 BUS		2		0.62	20	0.6	1.22	72	0.05	4,650	6,671									50		
2024CPT.06.13.20241.1	Columbus	8	SR-1423 / W SMITH ST	FROM SR 1422 TO COLLINS ST.		2		0.35	20	0	0.35	64	0.03	3,696	3,766									28		
TOTAL FOR PROJ NO. 2024CPT.06.13.20241.1								7.04				806	0.60	53,871	75,751	4	1	1	1	23,758	16,575	72	100	564	10	
														129,622				3		40,333		72		100	574	
2024CPT.06.13.10241.1	Columbus	9	NC-904	FROM SR 1354 TO SR 1346		2		4.8	22	4.85	9.65	310	0.41	36,000	51,648								36,000	384		
TOTAL FOR PROJ NO. 2024CPT.06.13.10241.1								4.8				310	0.410	36,000	51,648							36,000			384	
														87,648					36,000				384			
GRAND TOTAL								11.84				1,116	1.010	89,871	127,399	4	1	1	1	23,758	52,575	72	100	948	10	
														217,270				3		76,333		72		100	958	