

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
HIGHWAY DIVISION 6

PLANS

Letting Date: March 2, 2022

CONTRACT ID: DF00302

TIP NO.: -----

FEDERAL AID NO.: STATE FUNDED

WBS ELEMENT NO.: 2022CPT.06.12.10091.1

ROUTE NO.: NC 211

LOCATION: FROM COLUMBUS COUNTY TO SR 1755

COUNTY: BLADEN

LENGTH OF PROJECT: 9.54 MILES

TYPE OF WORK: RESURFACING, MILLING & PVT. MKGS.

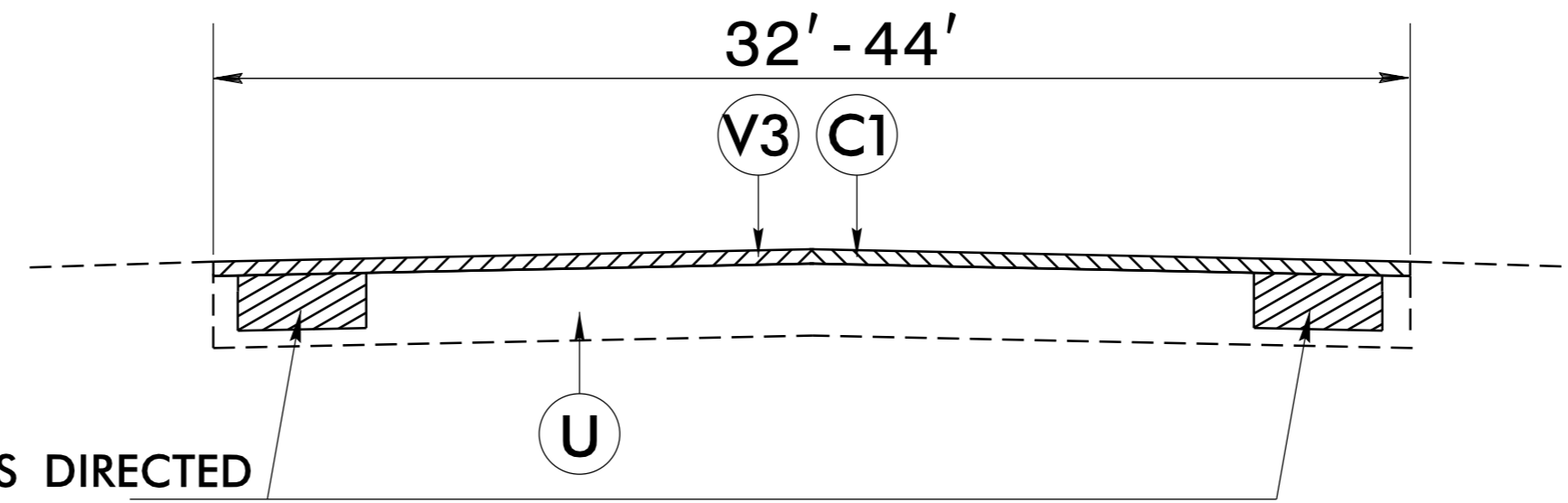
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PAVEMENT SCHEDULE

C1	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.
T1	SHOULDER RECONSTRUCTION WITH AGGREGATE SHOULDER BORROW
U	EXISTING ASPHALT PAVEMENT
V1	0"-1½" MILLING
V2	1½" MILLING
V3	2" MILLING
V4	2½" MILLING



TYPICAL SECTION NO. 1

NOTES:

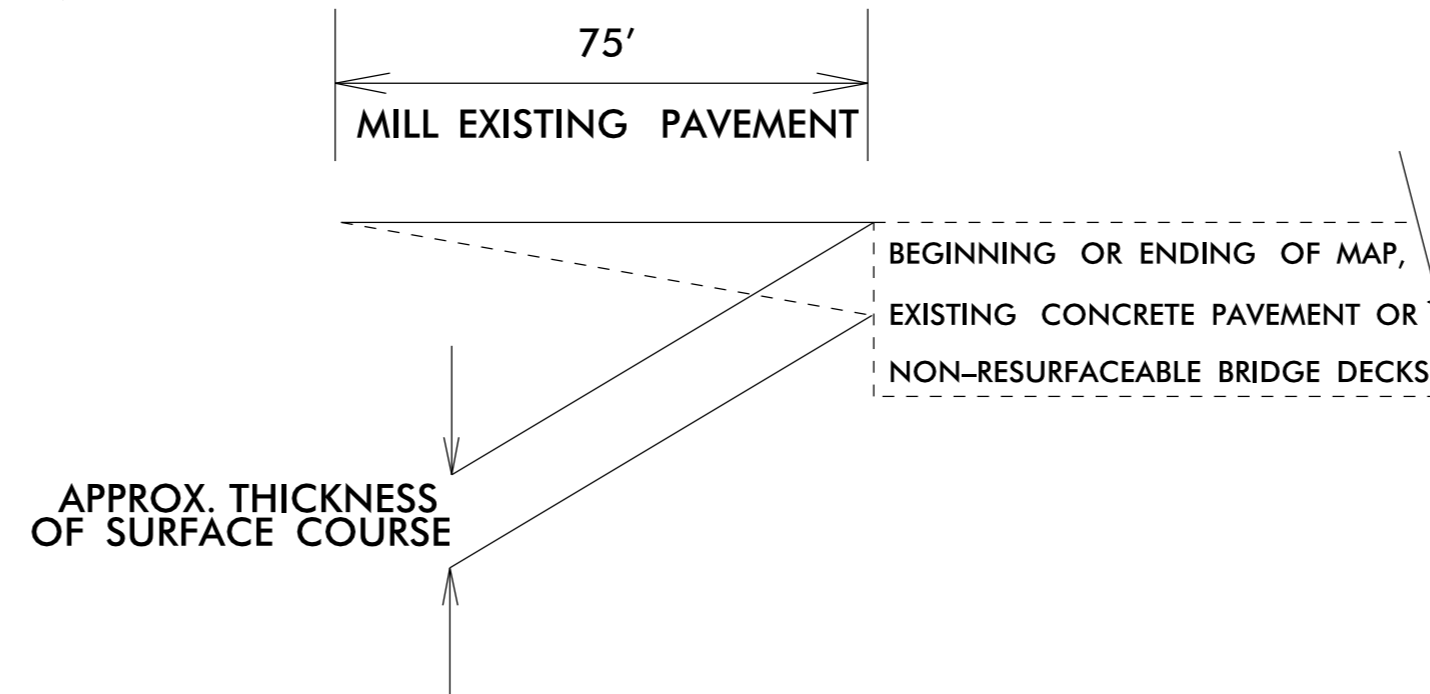
- UPON COMPLETION OF SURFACE MILLING, TEMPORARY PAINT MARKINGS SHALL BE INSTALLED WITHIN TIME FRAME ESTABLISHED IN STD. SPECS.
- CONTRACTOR SHALL BEGIN MILL & FILL OPERATION WITHIN 3 DAYS OF COMPLETING SURFACE MILLING.
- CONTRACTOR SHALL BEGIN PLACEMENT OF FINAL SURFACE WITHIN 3 DAYS OF COMPLETING MILL & FILL OPERATION.

NOTES TO CONTRACTOR

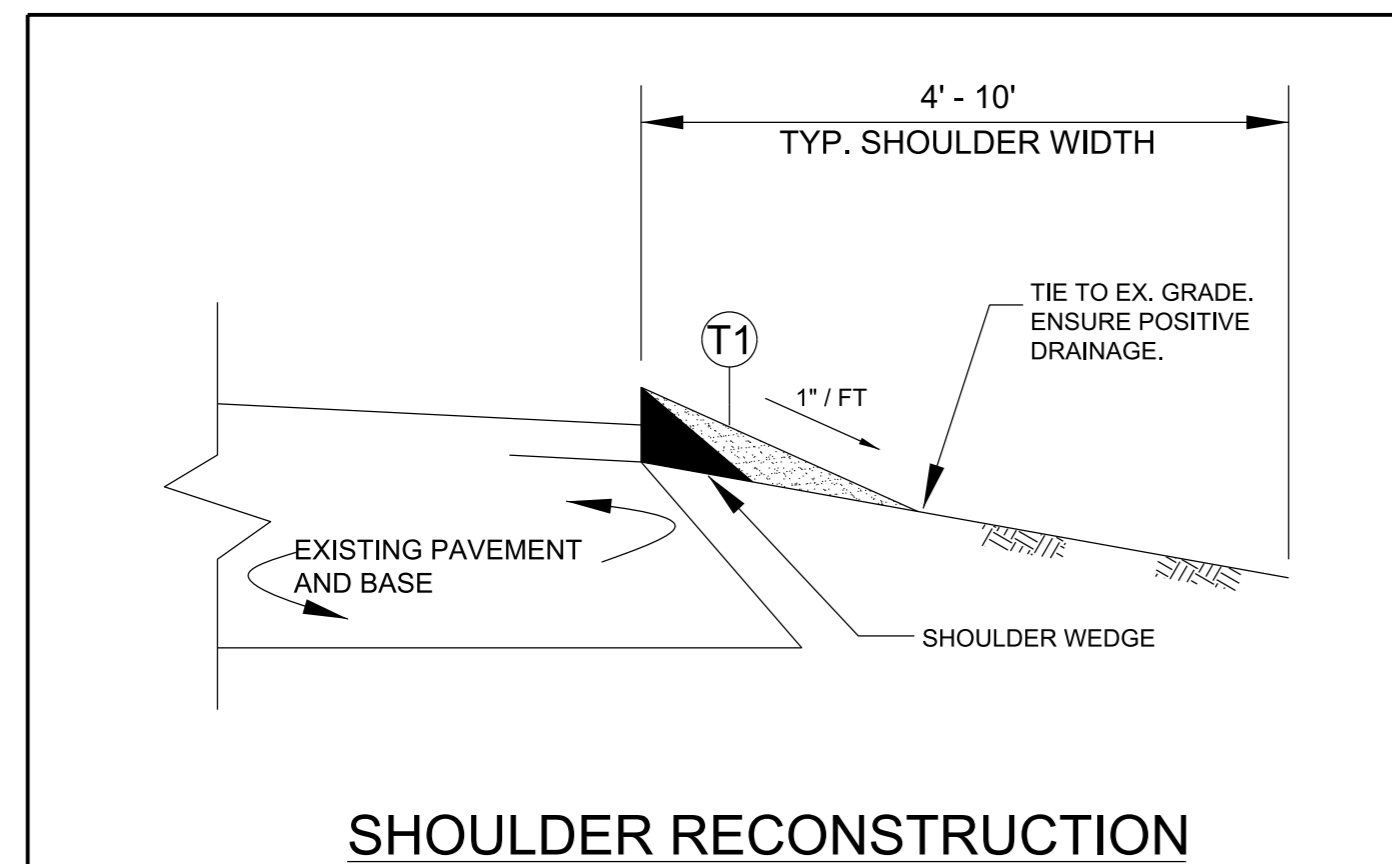
FOR SURFACE MIXES OVER 1" IN THICKNESS, MILL THE EXISTING PAVEMENT IN ACCORDANCE WITH THE FOLLOWING SKETCH AS DIRECTED BY THE ENGINEER.

LOCATIONS SHALL INCLUDE TIES INTO EXISTING CONCRETE PAVEMENT, AT BRIDGE APPROACHES WHERE THE BRIDGE WILL NOT BE RESURFACED, AND AT THE BEGINNING AND ENDING POINT OF EACH RESURFACING MAP.

PERFORM THE WORK IN ACCORDANCE WITH SECTION 607 OF THE JANUARY 2012 NORTH CAROLINA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES. RESURFACING WILL BE ACCOMPLISHED AT THE SAME TIME AS THE MILLING OPERATION.



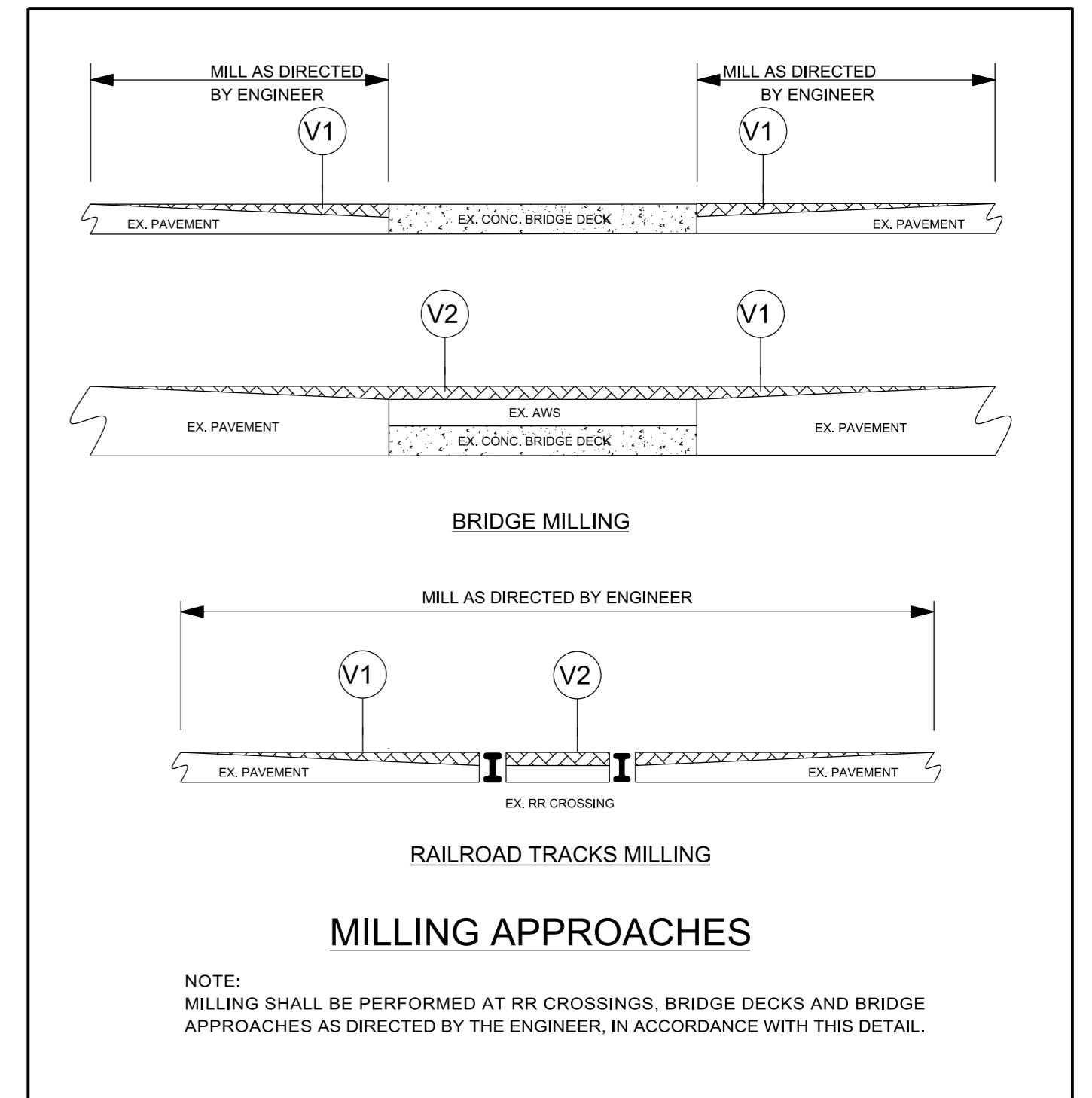
MILLING AT PAVEMENT TIE-INS DETAIL



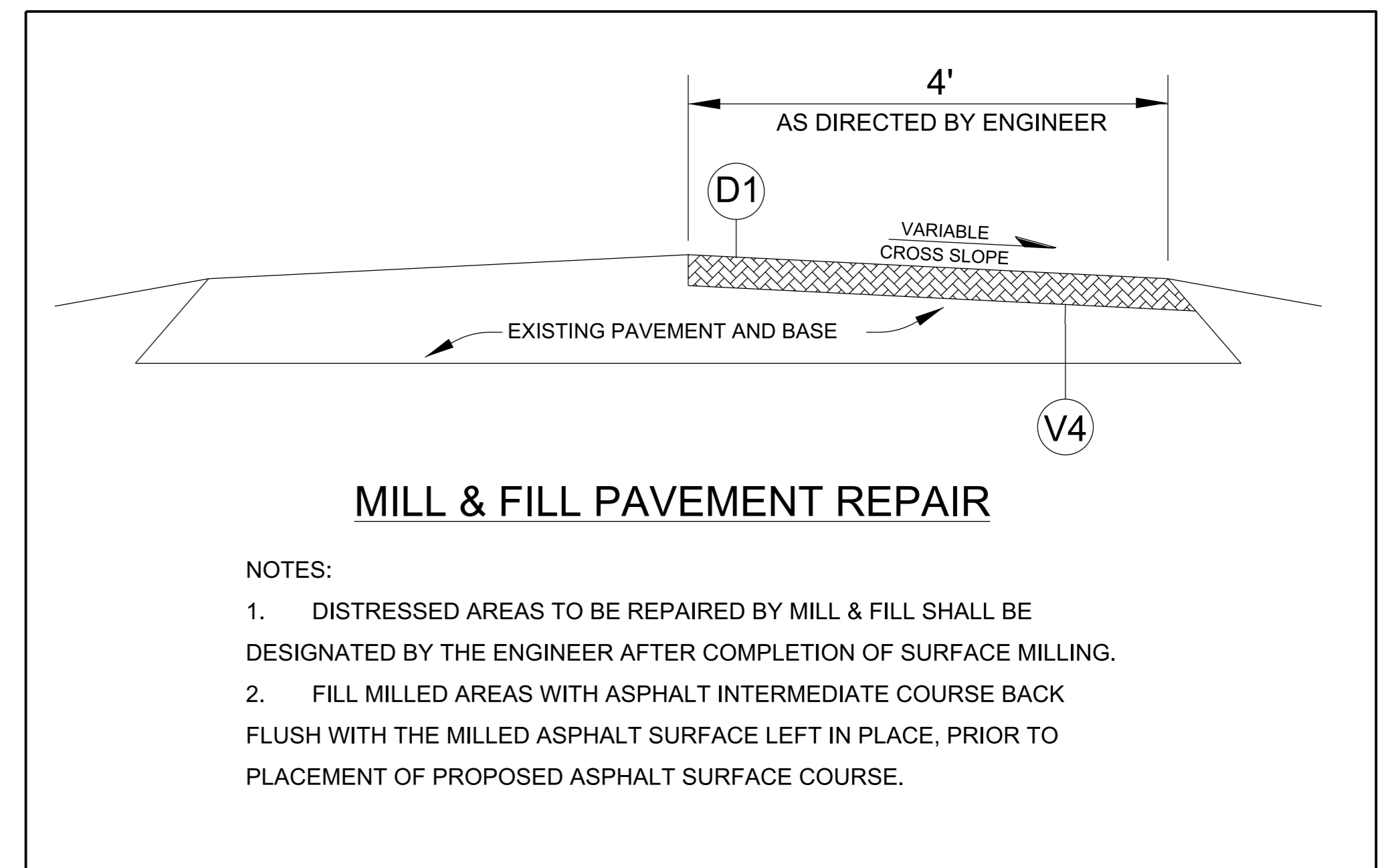
SHOULDER RECONSTRUCTION

NOTES:

- SHOULDER SHALL BE RECONSTRUCTED AS SHOWN IN STD. DWG. NO. 560.01 & 560.02, WITH A MINIMUM SLOPE OF 1" PER FOOT TO ENSURE POSITIVE DRAINAGE AWAY FROM ROADWAY.
- AGGREGATE SHOULDER BORROW (ASB) MATERIAL SHALL BE PLACED USING A WIDENING MACHINE OR SIMILAR DEVICE AND COMPACTED USING A ROLLER. ASB SHALL TIE FLUSH TO PAVEMENT AND EXISTING SHOULDER.



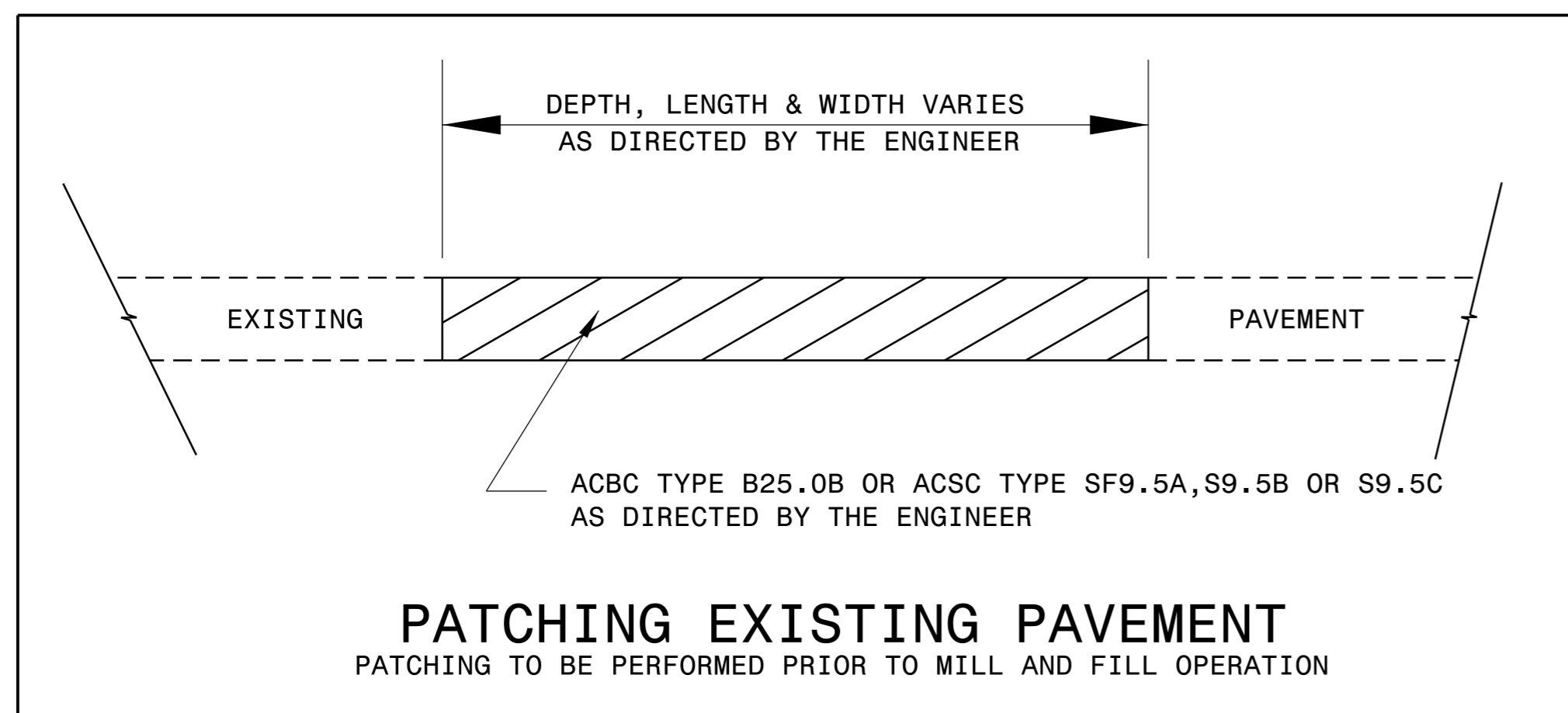
MILLING APPROACHES



MILL & FILL PAVEMENT REPAIR

NOTES:

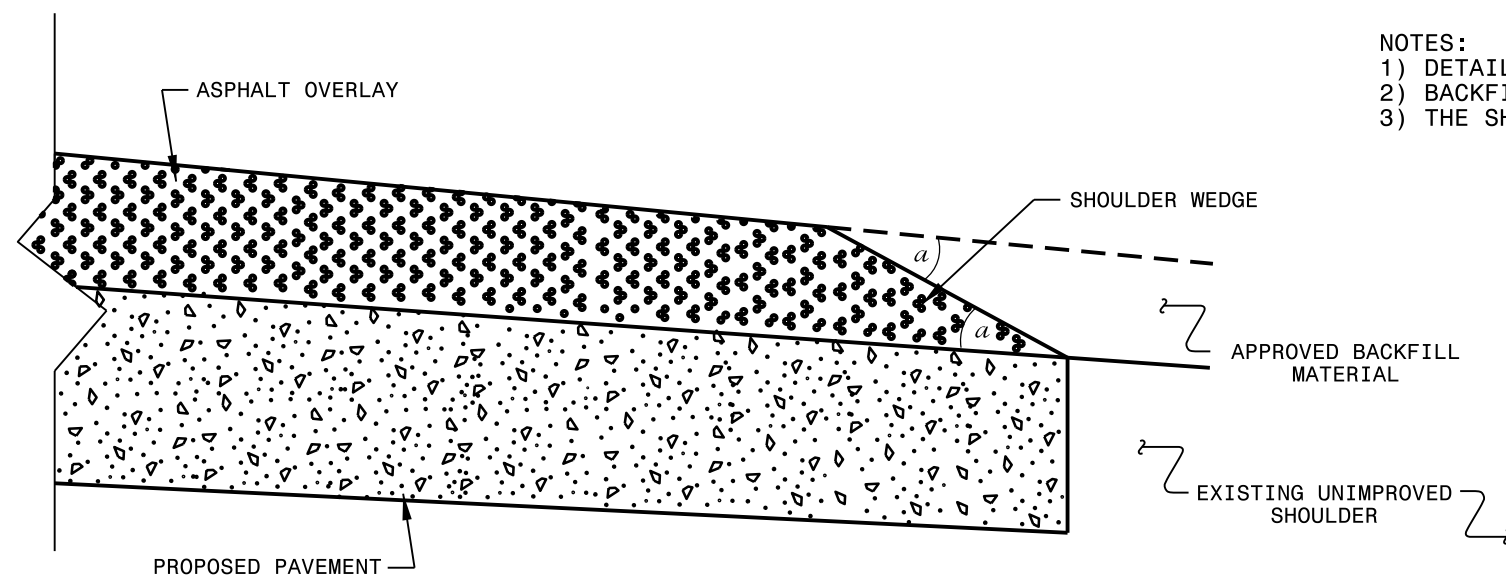
- DISTRESSED AREAS TO BE REPAIRED BY MILL & FILL SHALL BE DESIGNATED BY THE ENGINEER AFTER COMPLETION OF SURFACE MILLING.
- FILL MILLED AREAS WITH ASPHALT INTERMEDIATE COURSE BACK FLUSH WITH THE MILLED ASPHALT SURFACE LEFT IN PLACE, PRIOR TO PLACEMENT OF PROPOSED ASPHALT SURFACE COURSE.



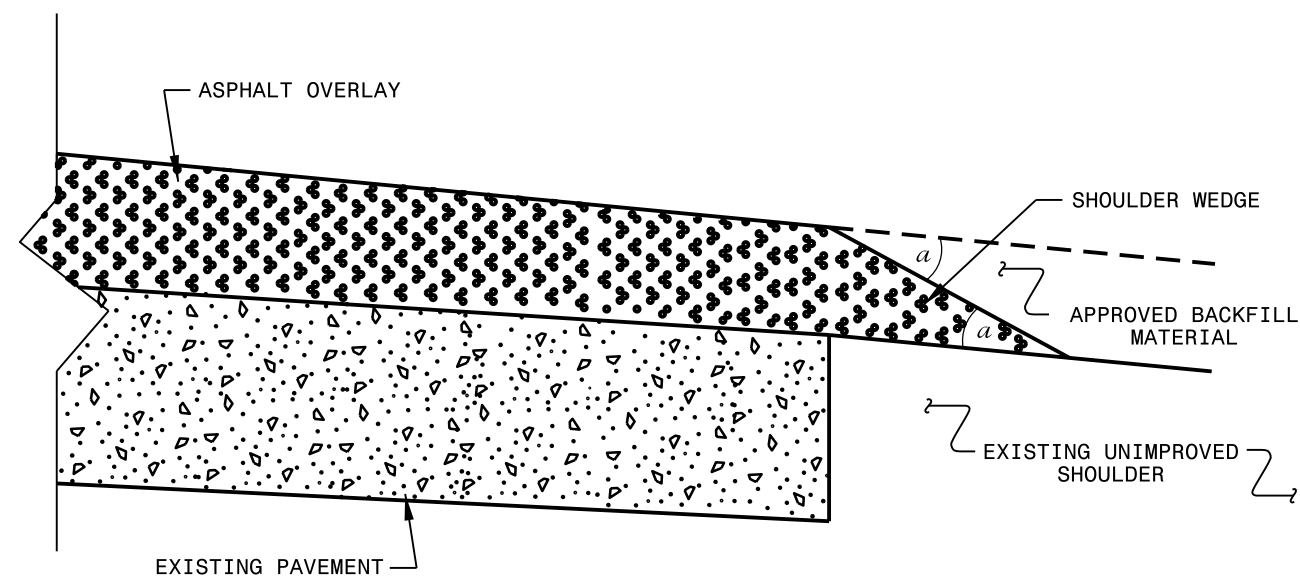
PATCHING EXISTING PAVEMENT
PATCHING TO BE PERFORMED PRIOR TO MILL AND FILL OPERATION

NOTES:

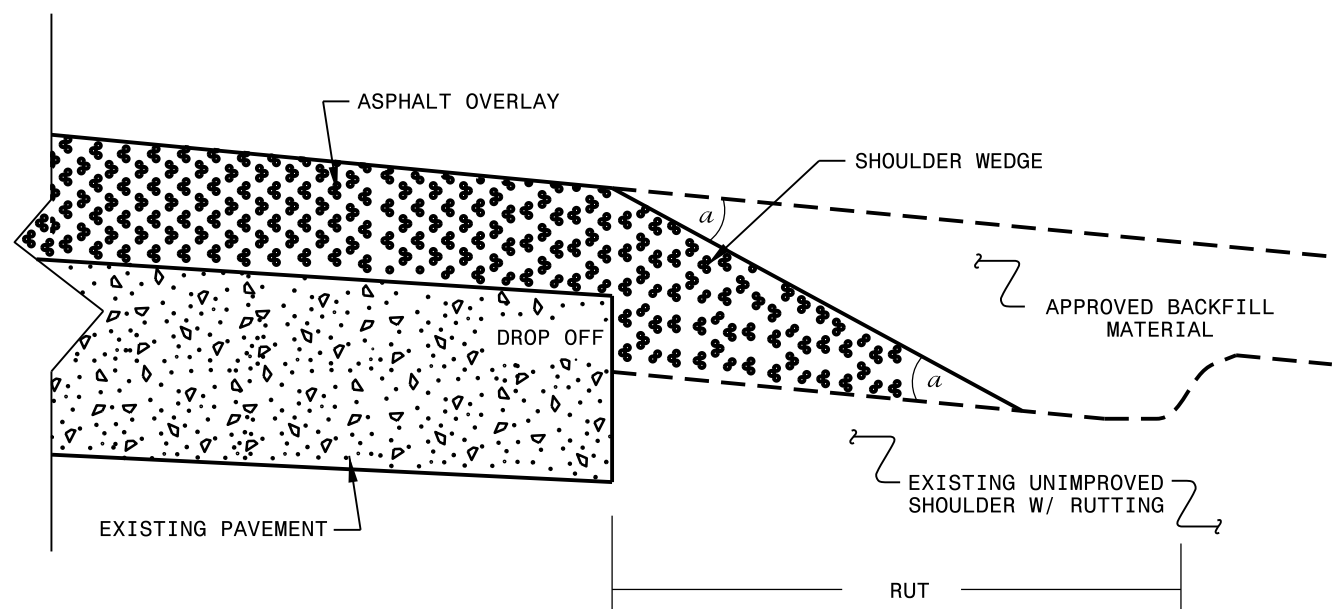
- 1) DETAIL DOES NOT APPLY TO OGAFB AND ULTRA-THIN BONDED WEARING COURSE.
- 2) BACKFILL SHOULDER WITH APPROVED MATERIAL.
- 3) THE SHOULDER WEDGE DEVICE MAY BE DISENGAGED AT PAVED DRIVEWAYS AND SIDE STREETS.



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			

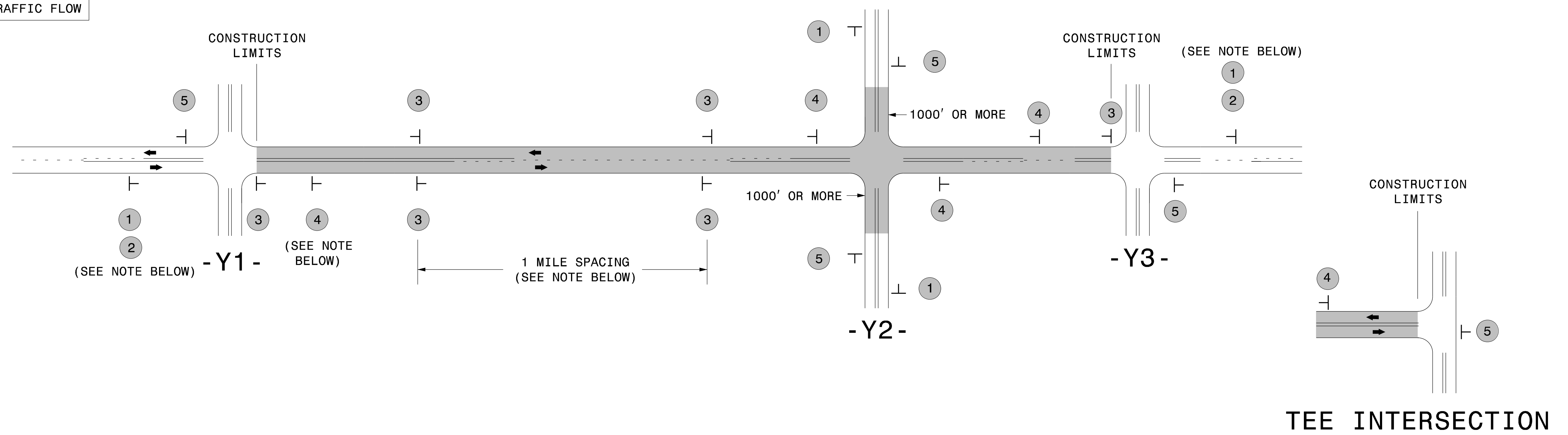
SYSTEMS DESIGN
USER NAME

SIGNING FOR RESURFACING PROJECTS

LEGEND

┆ STATIONARY SIGN

← DIRECTION OF TRAFFIC FLOW



MAINLINE (-L-) SIGNING

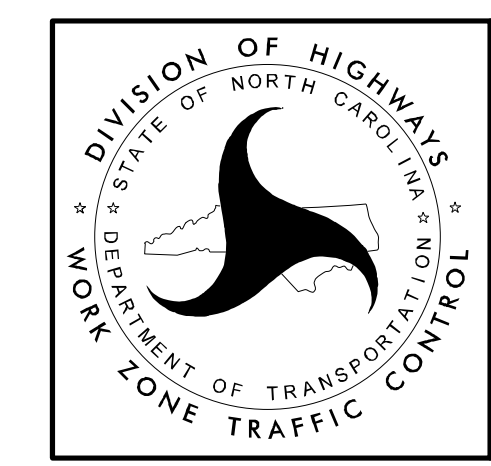
-Y- LINE SIGNING

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"> LESS THAN 1000' OF RESURFACING ALONG -Y- LINE SUBDIVISION ROADS 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'

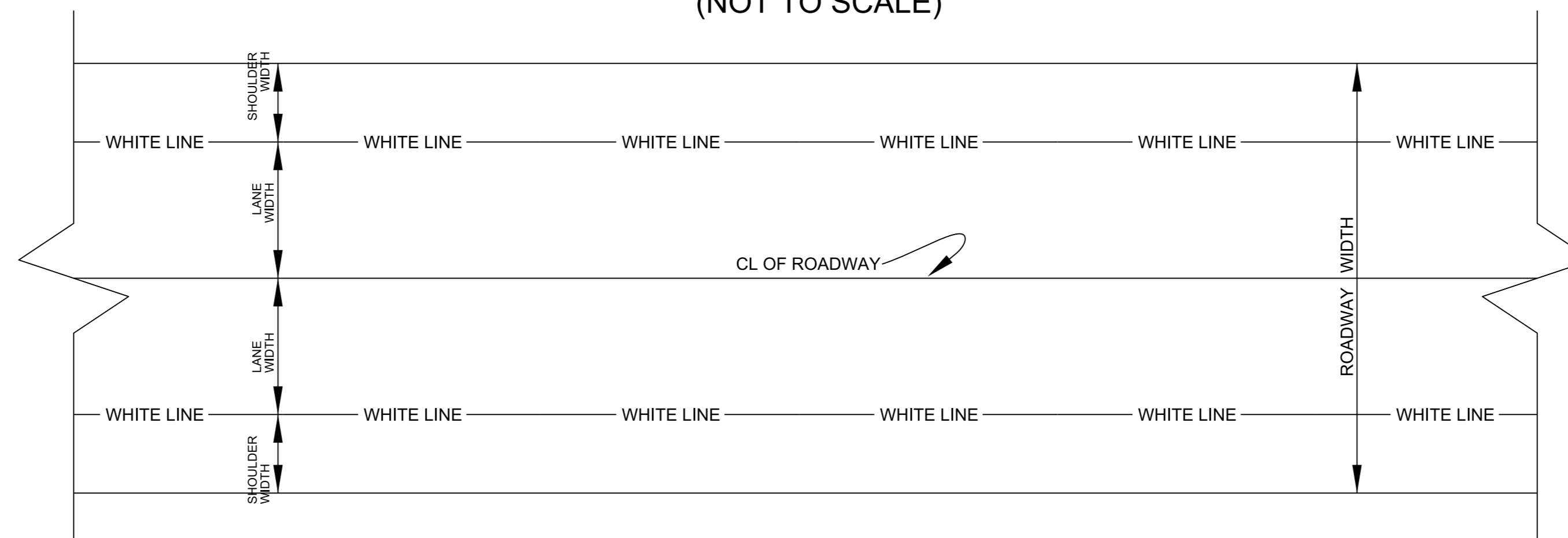
* May vary due to pavement width

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)



SUMMARY OF QUANTITIES

													PROJECT NO.		SHEET NO.	TOTAL NO.				
													2022CPT.06.12.10091.1							
													1220000000-E		1297000000-E		1330000000-E	1503000000-E	1523000000-E	1575000000-E
PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	LANE TYPE	FINAL SURFACE TESTING REQUIRED	WARM MIX ASPHALT REQUIRED	LENGTH		INCIDENTAL STONE BASE	2.5" MILLING	2" MILLING	INCIDENTAL MILLING	INTERMEDIATE COURSE, I19.0C	SURFACE COURSE, S9.5C	ASPHALT BINDER FOR PLANT MIX		
										MI	FT								TONS	SY
2022CPT.06.12.10091.1	Bladen	1	NC 211	FROM COLUMBUS CL TO SR 1755	1	2	2WU	NO	NO	9.54	32	95	939	179,098	4,444	134	15,447	933		
TOTAL FOR MAP NO. 1										9.54		95	939	179,098	4,444	134	15,447	933		
TOTAL FOR PROJ NO. 2022CPT.06.12.10091.1										9.54		95	939	179,098	4,444	134	15,447	933		
													180,037							
GRAND TOTAL										9.54		95	939	179,098	4,444	134	15,447	933		
													180,037							

THERMOPLASTIC AND PAINT QUANTITIES

PROJECT NO.	SHEET NO.	TOTAL NO.
2022CPT.06.12.10091.1		

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	LANE TYPE	4413000000-E		4457000000-N	4685000000-E		4695000000-E	4725000000-E	4810000000-E		4900000000-N		
								WORK ZONE ADVANCE/GENERAL WARNING SIGNING	TEMPORARY TRAFFIC CONTROL	4" X 90 M WHITE THERMO	4" X 90 M YELLOW THERMO	8" X 90 M YELLOW THERMO	THERMO LT ARROW 90 M	4" WHITE PAINT	4" YELLOW PAINT	YELLOW & YELLOW MARKERS	CRYSTAL & RED MARKERS		
								MI	FT	SF	LS	LF	LF	LF	EA	LF	LF	EA	EA
2022CPT.06.12.10091.1	Bladen	1	NC 211	FROM COLUMBUS CL TO SR 1755	1	2	2WU	9.54	32	1,068	1	100,742	70,520	100	6	100,742	70,520	630	8
TOTAL FOR MAP NO. 1								9.54		1,068	1	100,742	70,520	100	6	100,742	70,520	630	8
TOTAL FOR PROJ NO. 2022CPT.06.12.10091.1								9.54		1,068	1	100,742	70,520	100	6	100,742	70,520	630	8
												171,262				171,262		638	
GRAND TOTAL								9.54		1,068	1	100,742	70,520	100	6	100,742	70,520	630	8
												171,262				171,262		638	