

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
HIGHWAY DIVISION 6

# PLANS

**Letting Date: September 4, 2024**

**CONTRACT ID: DF00487**

**TIP NO.: -----**

**FEDERAL AID NO.: STATE FUNDED**

**WBS ELEMENT NO.: 2025CPT.06.02.20241.1**

**ROUTE NO.: VARIES**

**LOCATION: VARIES**

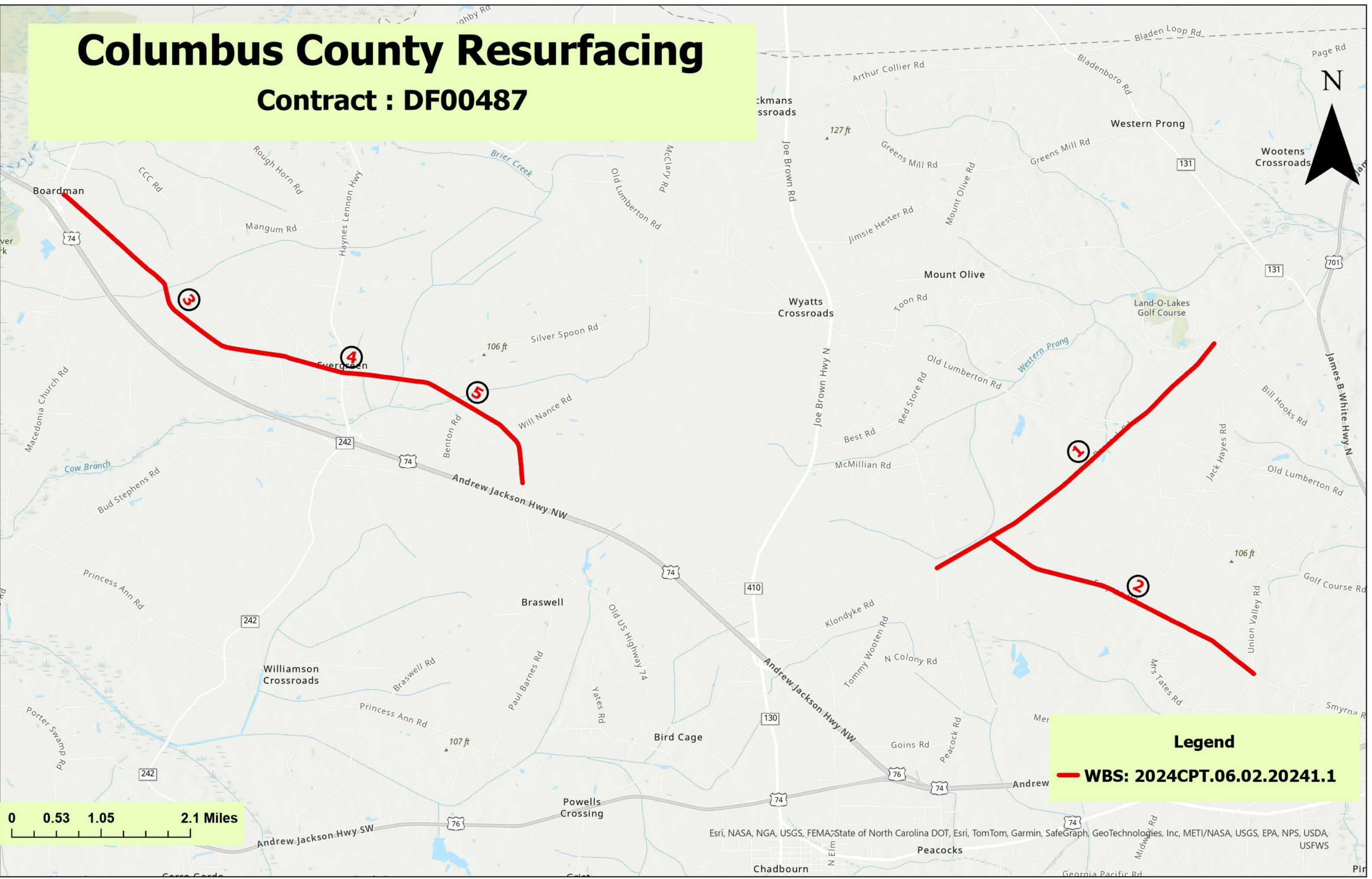
**COUNTY: COLUMBUS**

**LENGTH OF PROJECT: 12.877 MILES**

**TYPE OF WORK: WIDENING, RESURFACING, MILLING & PAVEMENT MARKINGS**

# Columbus County Resurfacing

Contract : DF00487

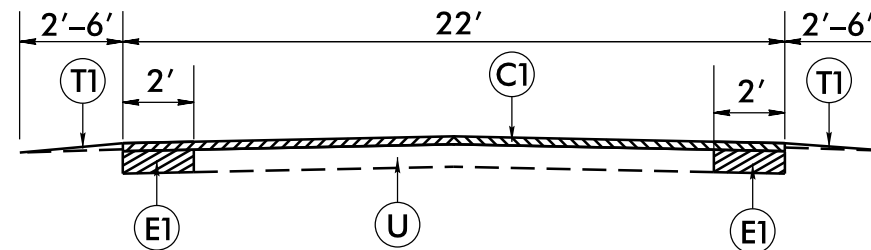


**Legend**

**— WBS: 2024CPT.06.02.20241.1**

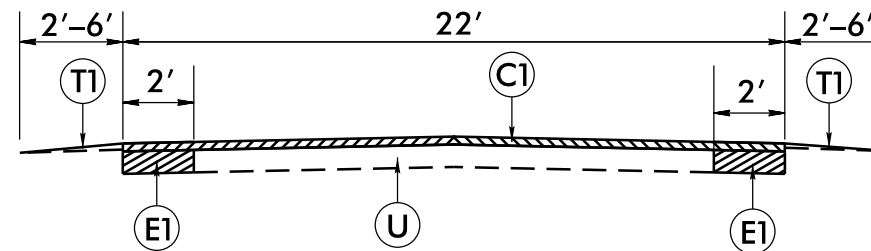
### PAVEMENT SCHEDULE

C1	1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 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.
R1	EXISTING CURB AND GUTTER
T1	SHOULDER RECONSTRUCTION WITH AGGREGATE SHOULDER BORROW
U	EXISTING PAVEMENT
V1	0" - 1½" MILLING
V2	1½" MILLING
V3	2½" MILLING



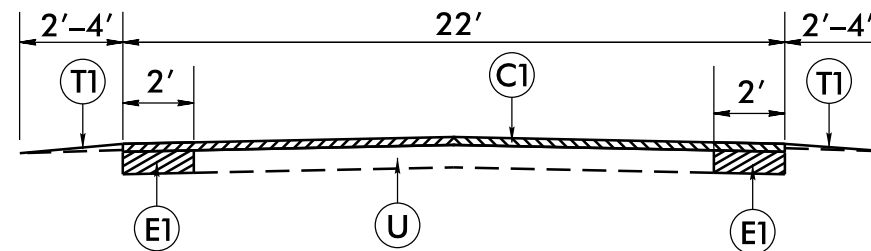
**TYPICAL SECTION NO. 1**

\*PLUS 2.5" MILL AND FILL (SEE DETAIL 1)  
\*\*PLUS 2' INSIDE CURVE WIDENING (SEE DETAIL)



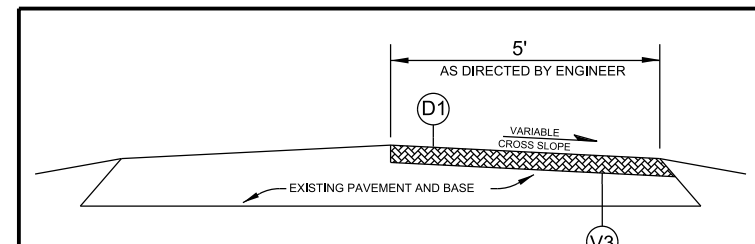
**TYPICAL SECTION NO. 2**

\*PLUS 2' INSIDE CURVE WIDENING (SEE DETAIL)



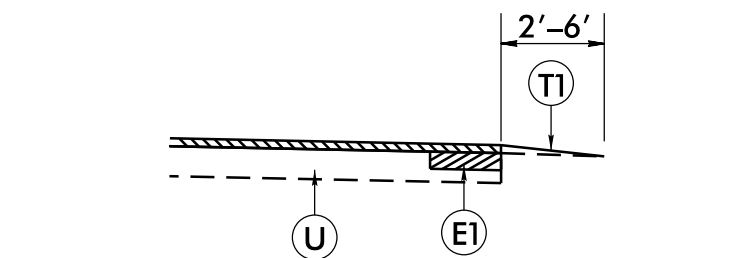
**TYPICAL SECTION NO. 3**

\*PLUS 2.5" MILL AND FILL (SEE DETAIL 2)  
\*\*PLUS 2' INSIDE CURVE WIDENING (SEE DETAIL)

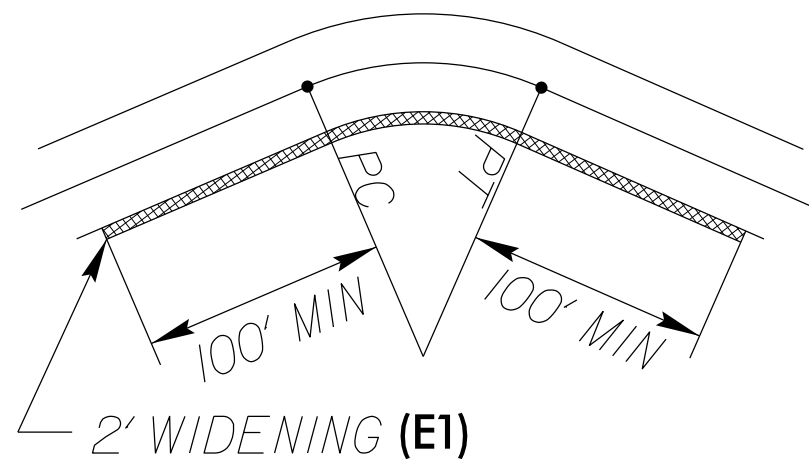


**MILL & FILL PAVEMENT REPAIR DETAIL 1**

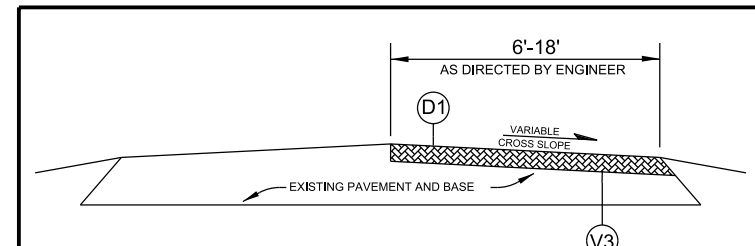
NOTES:  
1. DISTRESSED AREAS TO BE REPAIRED BY MILL & FILL SHALL BE DESIGNATED BY THE ENGINEER.  
2. FILL MILLED AREAS WITH ASPHALT INTERMEDIATE COURSE BACK FLUSH WITH THE EXISTING ASPHALT LEFT IN PLACE, PRIOR TO PLACEMENT OF PROPOSED ASPHALT SURFACE COURSE.



SHOULDER RECONSTRUCTION WITH ASB AT ALL AREAS WITH INSIDE SHOULDER WIDENING AS SHOWN



**INSIDE CURVE WIDENING**



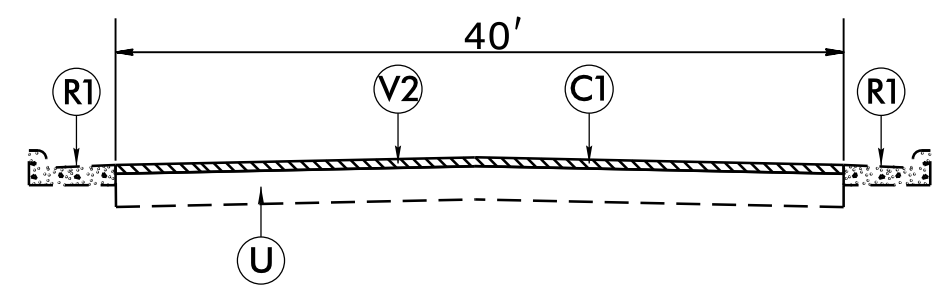
**MILL & FILL PAVEMENT REPAIR DETAIL 2**

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.

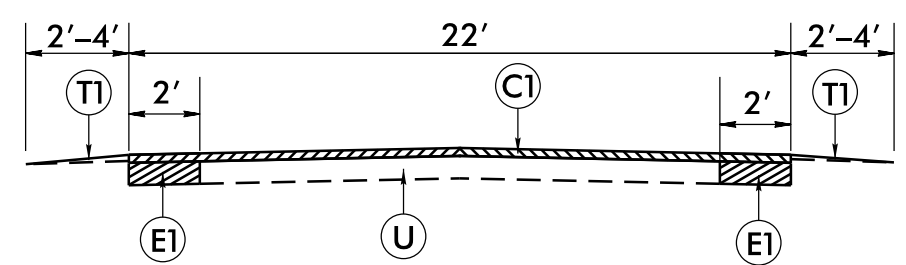
6/2/99  
07\_AUG\_2024\_09:25  
C:\p\k Files\Projects\Resurfacing\2024 Fall\IND3\TYPICAL.sdg

### PAVEMENT SCHEDULE

C1	1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.
D1	2 1/2" 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.
R1	EXISTING CURB AND GUTTER
T1	SHOULDER RECONSTRUCTION WITH AGGREGATE SHOULDER BORROW
U	EXISTING PAVEMENT
V1	0" - 1 1/2" MILLING
V2	1 1/2" MILLING
V3	2 1/2" MILLING

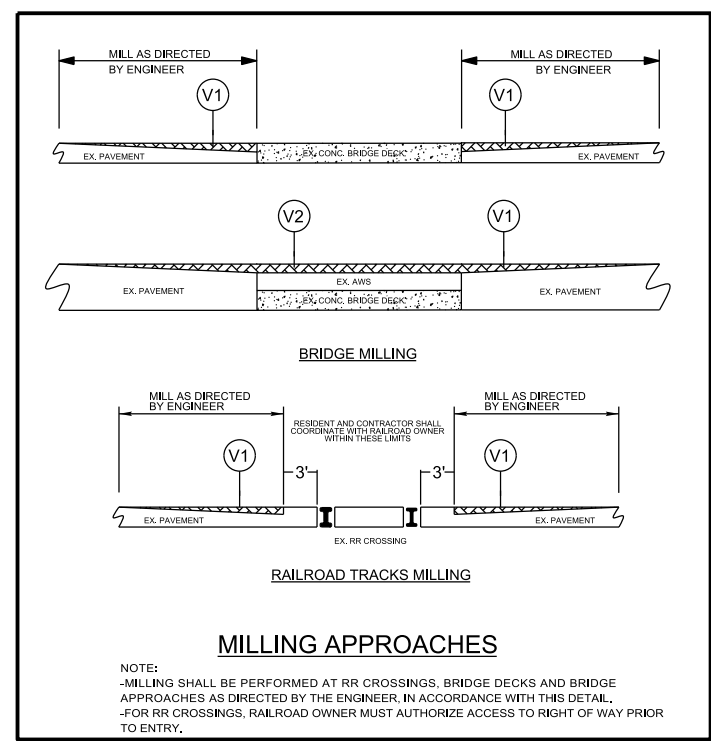


TYPICAL SECTION NO. 4



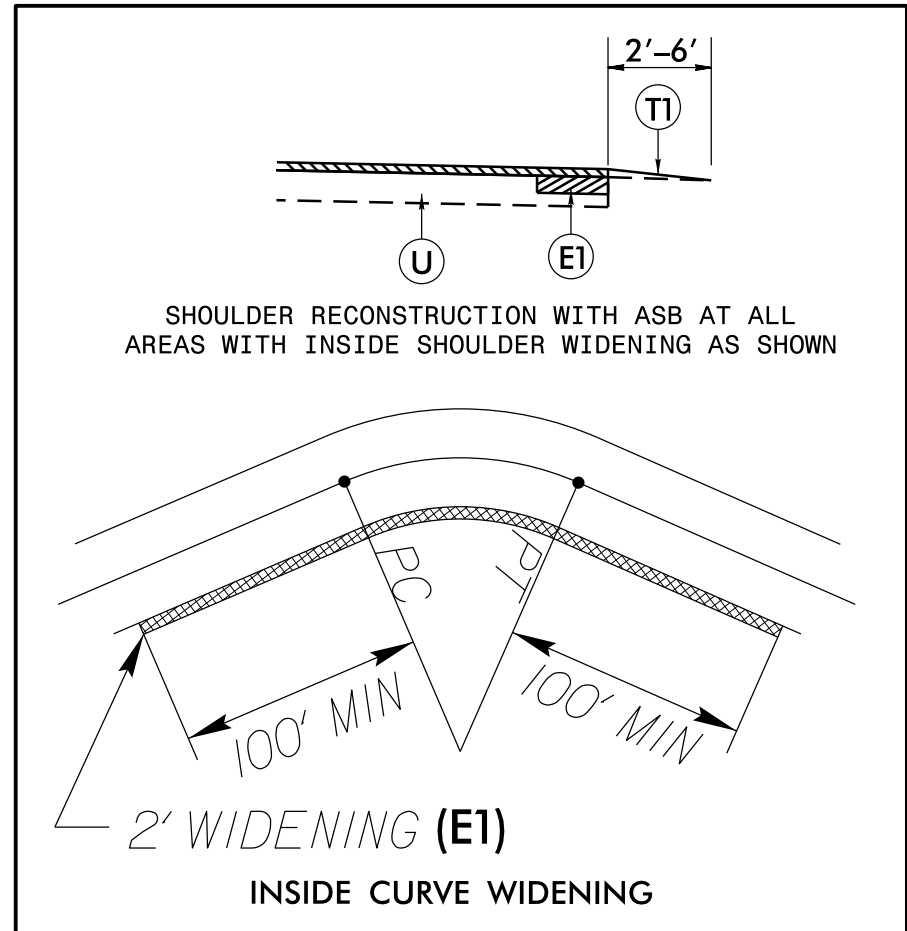
TYPICAL SECTION NO. 5

\*PLUS 2.5" MILL AND FILL (SEE DETAIL 3)  
\*\*PLUS 2' INSIDE CURVE WIDENING (SEE DETAIL)



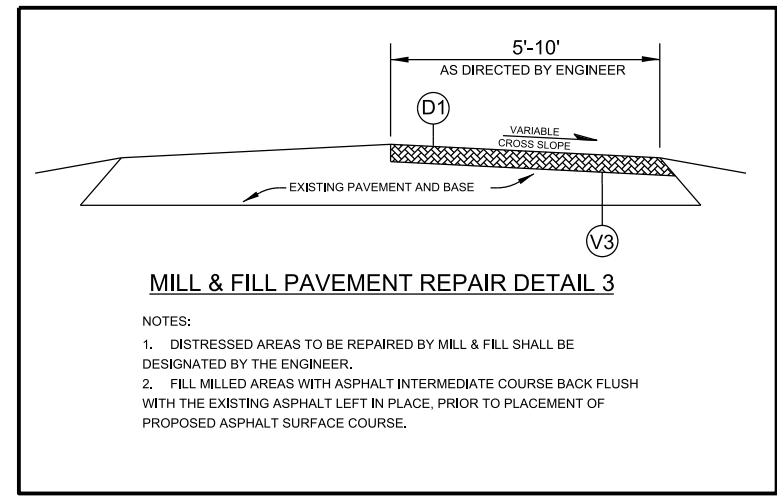
MILLING APPROACHES

NOTE:  
-MILLING SHALL BE PERFORMED AT RR CROSSINGS, BRIDGE DECKS AND BRIDGE APPROACHES AS DIRECTED BY THE ENGINEER, IN ACCORDANCE WITH THIS DETAIL.  
-FOR RR CROSSINGS, RAILROAD OWNER MUST AUTHORIZE ACCESS TO RIGHT OF WAY PRIOR TO ENTRY.



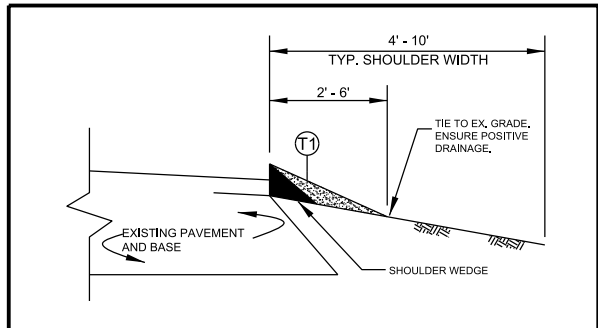
SHOULDER RECONSTRUCTION WITH ASB AT ALL AREAS WITH INSIDE SHOULDER WIDENING AS SHOWN

2' WIDENING (E1)  
INSIDE CURVE WIDENING



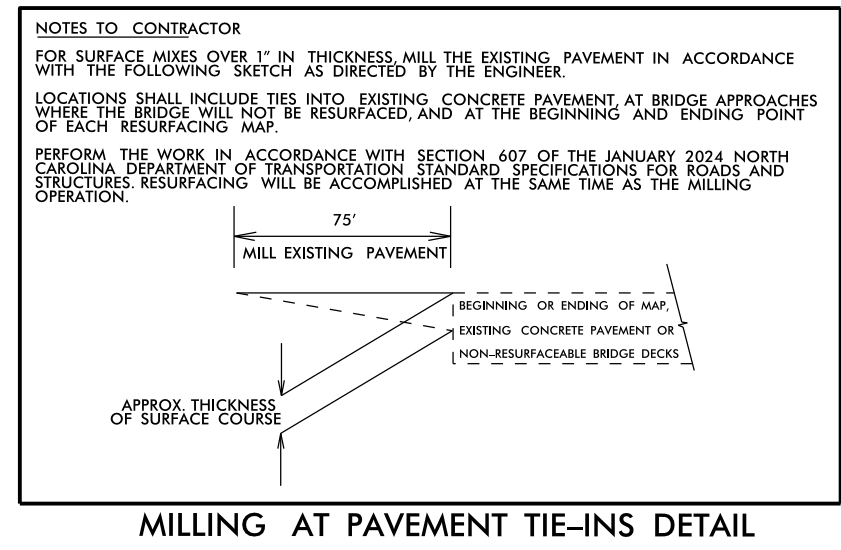
MILL & FILL PAVEMENT REPAIR DETAIL 3

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.

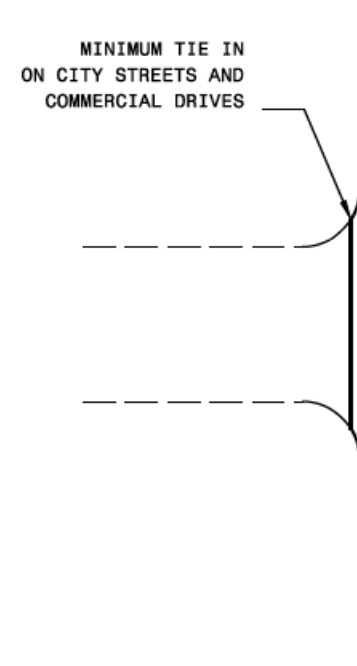


SHOULDER RECONSTRUCTION

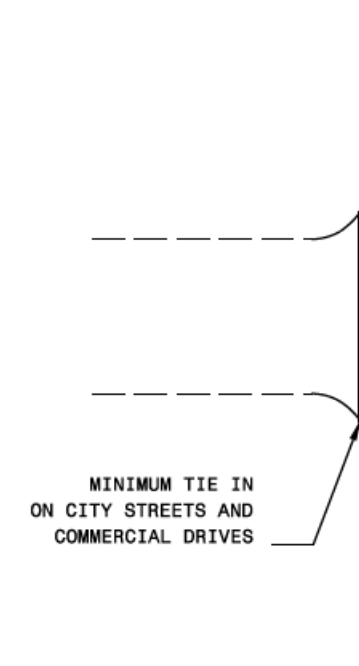
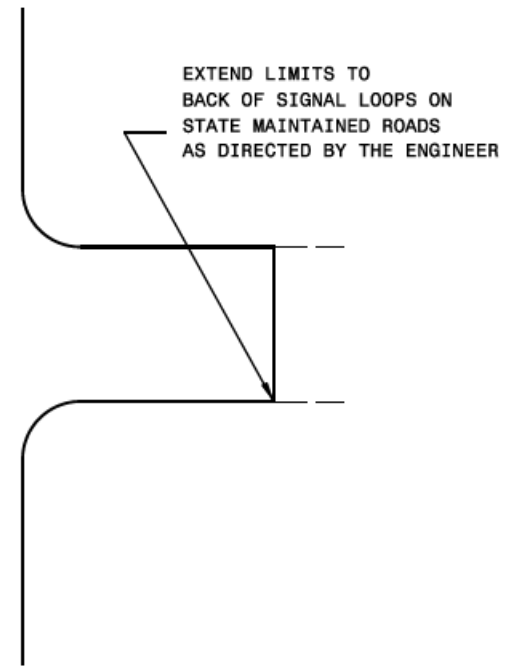
NOTES:  
1. SHOULDER SHALL BE RECONSTRUCTED AS SHOWN IN STD. DWG. NO. 560.01 & 560.02, WITH A MINIMUM SLOPE OF 1" PER FOOT TO ENSURE POSITIVE DRAINAGE AWAY FROM ROADWAY.  
2. AGGREGATE SHOULDER BORROW (ASB) MATERIAL SHALL BE PLACED USING A WIDENING MACHINE OR SIMILAR DEVICE.  
3. A VEGETATIVE BUFFER SHALL BE MAINTAINED BETWEEN THE DISTURBED AREA ALONG THE EDGE OF PAVEMENT AND THE DITCH SHOULDER POINT TO MINIMIZE EROSION. PULLING DITCHES OR CUTTING SHOULDERS TO GENERATE BORROW MATERIAL WILL NOT BE ALLOWED.  
4. REQUIRED BORROW MATERIAL MAY BE OBTAINED BY THE CONTRACTOR FROM WIDENING OPERATIONS WITHIN THE PROJECT LIMITS, FROM NCDOT APPROVED BORROW PITS OR FROM NCDOT STOCKPILES, ANY EXCESS MATERIAL SHALL BE DISPOSED OF BY THE CONTRACTOR IN AN APPROVED DISPOSAL SITE.



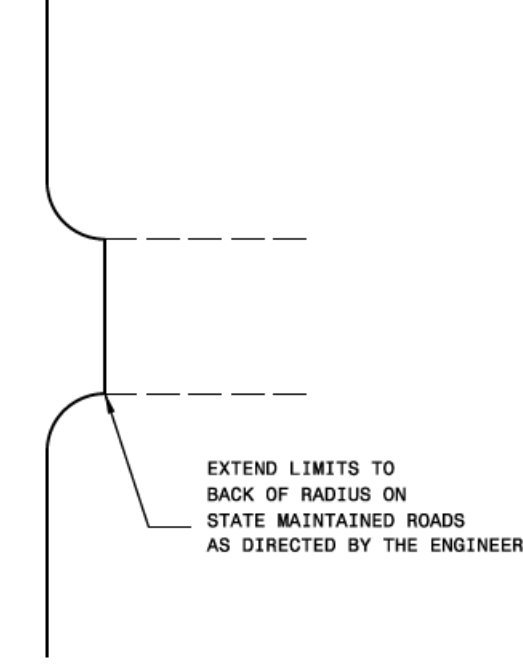
MILLING AT PAVEMENT TIE-INS DETAIL



TYPICAL DETAIL OF PROJECT LIMITS AT SIGNALIZED Y LINES



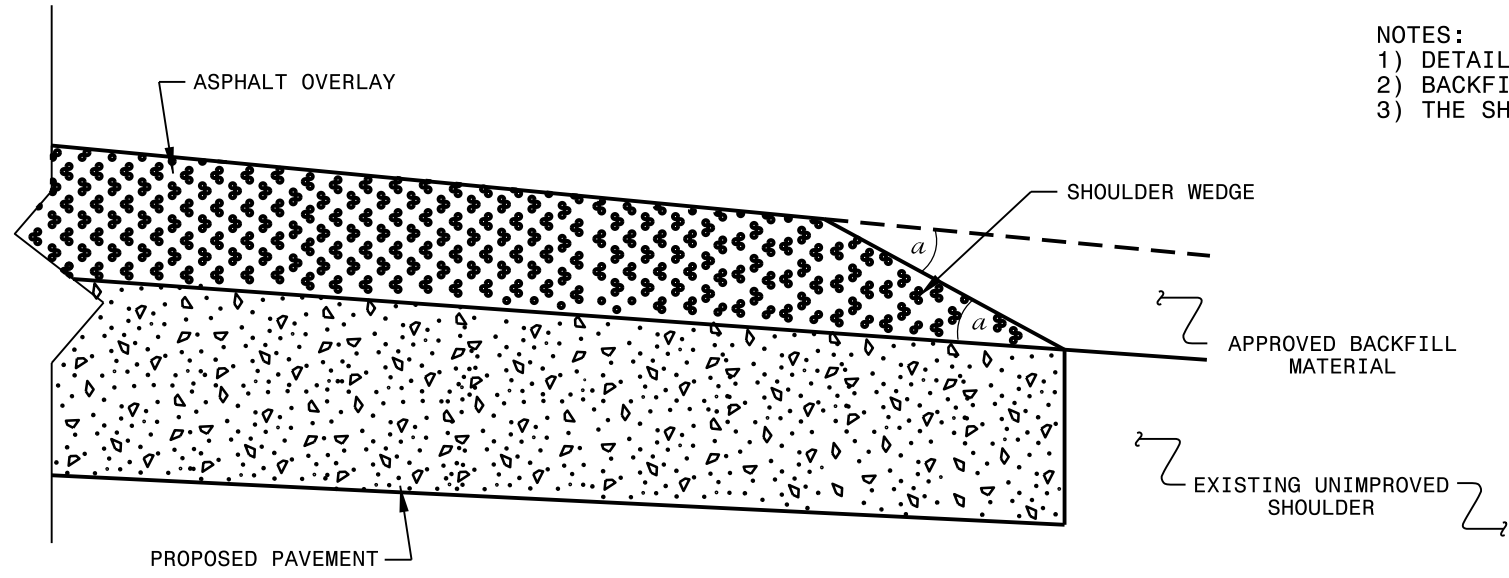
TYPICAL DETAIL OF PROJECT LIMITS AT UNSIGNALIZED Y LINES



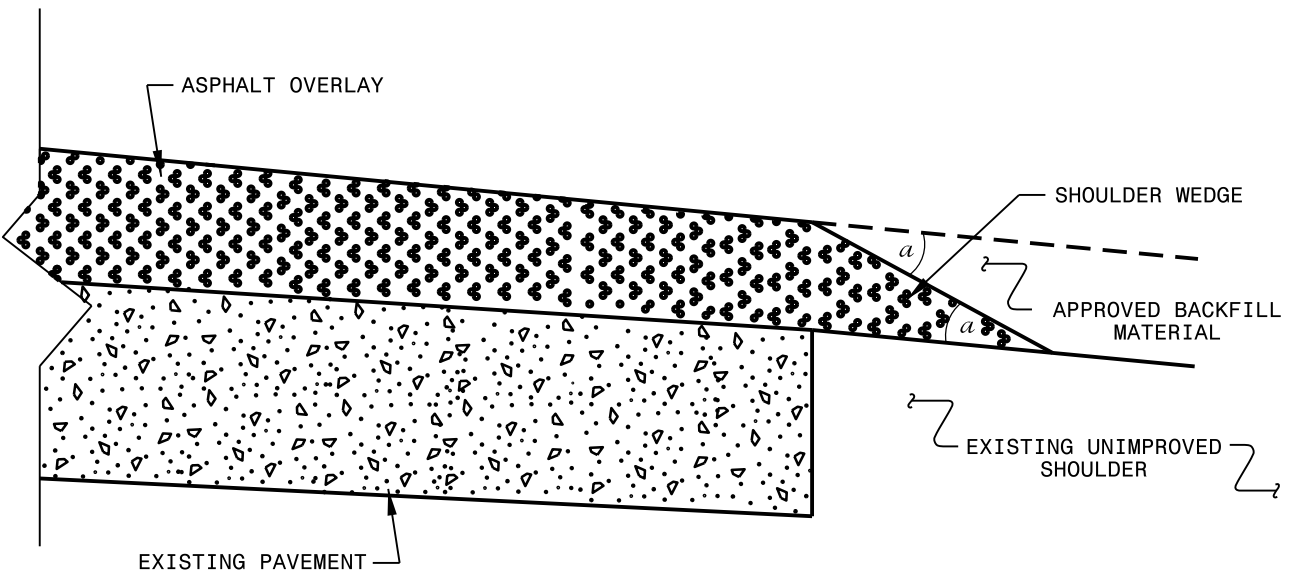
ADDITIONAL INTERSECTIONS (NON-TYPICAL)		
Extend paving limits to back of radius or loop on the following intersections		
Map #	Street Name	Comments
1	SR1534	83 FT from EP of L-line = 521.57 SY (PAVE ONLY)
1	SR1552	53 FT from EP of L-line = 282.67 SY (PAVE ONLY)
1	SR1547	82 FT from EP of L-line = 463.37 SY (PAVE ONLY)
2	SR1585 RT-L-	65 FT from EP of L-line = 385.67 SY (PAVE ONLY)
2	SR1585 LT-L-	61 FT from EP of L-line = 298.22 SY (PAVE ONLY)
2	SR1547	53 FT from EP of L-line = 248.51 SY (PAVE ONLY)
2	SR1555	87 FT from EP of L-line = 270.67 SY (PAVE ONLY)
2	SR1556	65 FT from EP of L-line = 266.02 SY (PAVE ONLY)
3	SR1575	50 FT from EP of L-line = 155.56 SY (PAVE ONLY)
3	SR1510	60 FT from EP of L-line = 288.89 SY (PAVE ONLY)
4	SR1513	54 FT from EP of L-line = 246 SY (MILL & PAVE)
4	SR1514	50 FT from EP of L-line = 217.78 SY (MILL & PAVE)
4	NC242 RT-L-	50 FT from EP of L-line = 200 SY (MILL & PAVE)
4	NC242 LT-L-	57 FT from EP of L-line = 236.87 SY (MILL & PAVE)
5	SR1526	75 FT from EP of L-line = 394.05 SY (PAVE ONLY)
5	SR1577	45 FT from EP of L-line = 148.75 SY (PAVE ONLY)
5	SR1523	86 FT from EP of L-line = 388.19 SY (PAVE ONLY)
5	SR1003	100 FT from EP of L-line = 553.97 SY (PAVE ONLY)



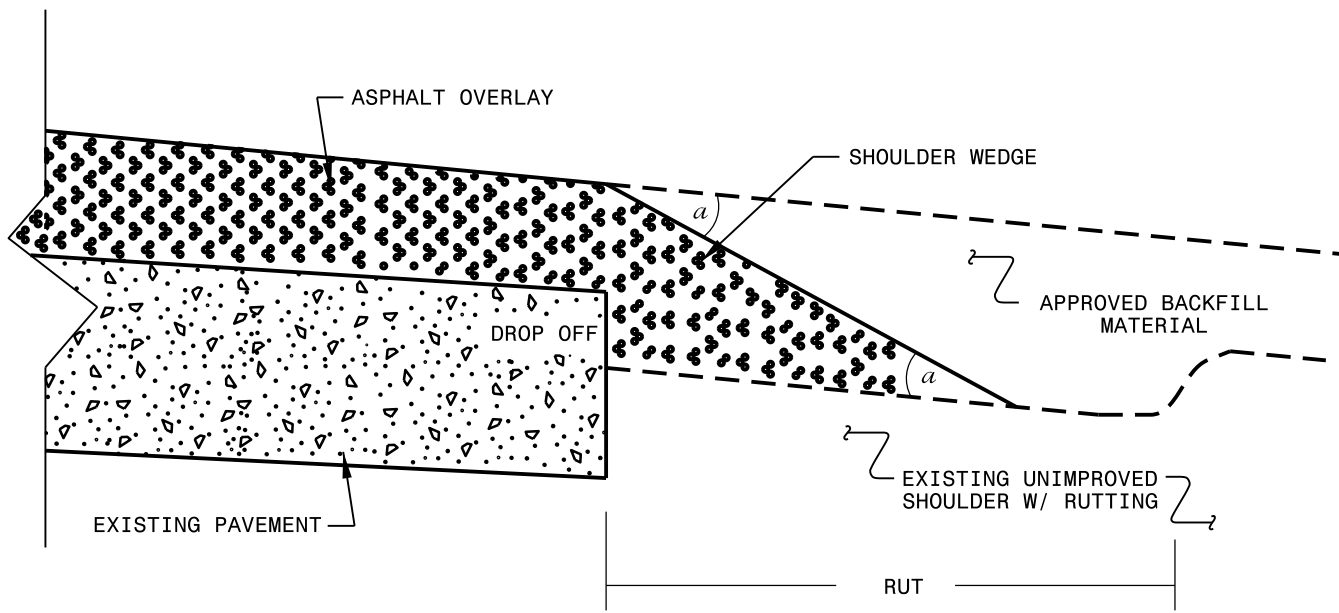
- NOTES:  
 1) DETAIL DOES NOT APPLY TO OGAFD AND ULTRA-THIN BONDED WEARING COURSE.  
 2) BACKFILL SHOULDER WITH APPROVED MATERIAL.  
 3) THE SHOULDER WEDGE DEVICE MAY BE DISENGAGED AT PAVED DRIVEWAYS AND SIDE STREETS.



**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°

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

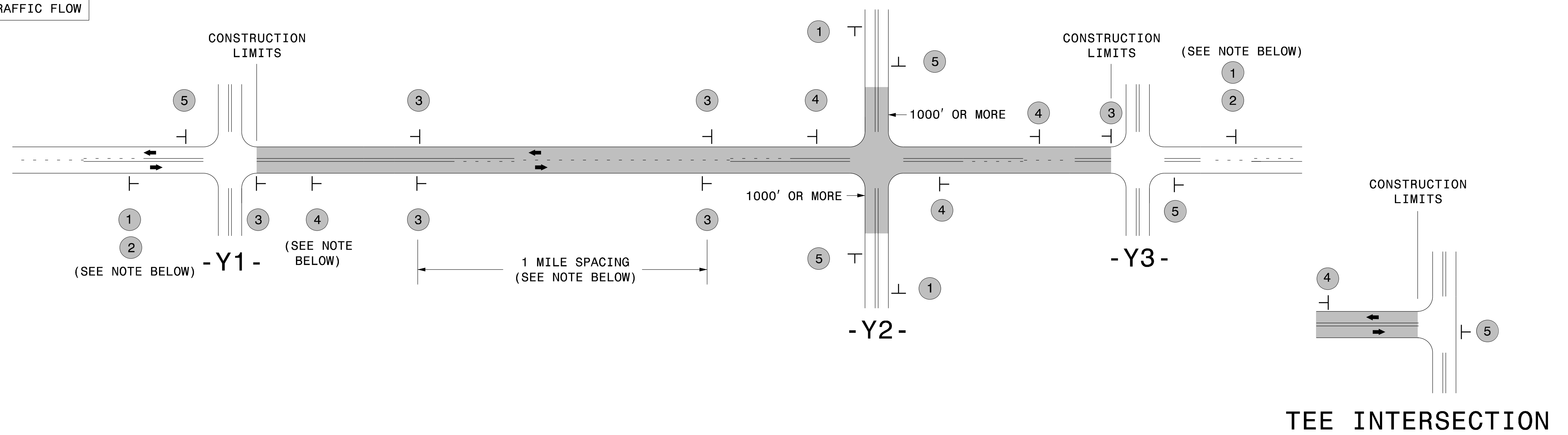
SYSTEMS DESIGN  
 USER NAME  
 \$\$\$\$\$\$

# SIGNING FOR RESURFACING PROJECTS

**LEGEND**

┃ STATIONARY SIGN

← DIRECTION OF TRAFFIC FLOW



## MAINLINE (-L-) SIGNING

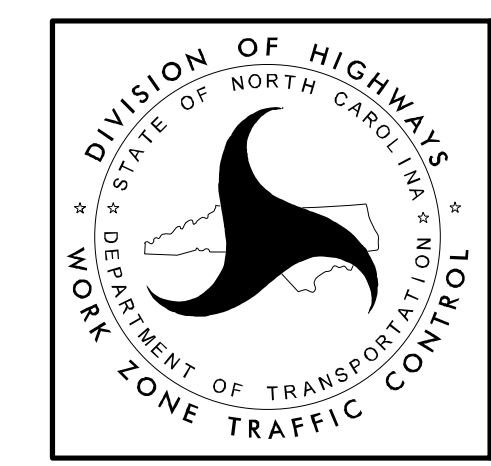
## -Y- LINE SIGNING

SIGNING NOTES AND PLACEMENT PER DIRECTION	1	 W20-1 48" X 48"	PLACE 1000' PRIOR TO BEGINNING OF CONSTRUCTION LIMITS. ONLY USED ON -Y- LINES IF RESURFACING LIMITS EXTEND 1000' ALONG -Y- LINE.	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.  <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	 NEXT XX MILES W7-3aP 24" X 18"	#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	 SP 13107 48" X 48"	- 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	 SP 13106 48" X 48"	- 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.



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.

<b>TWO LANE - TWO WAY ROADWAY - 55 MPH</b>		
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'

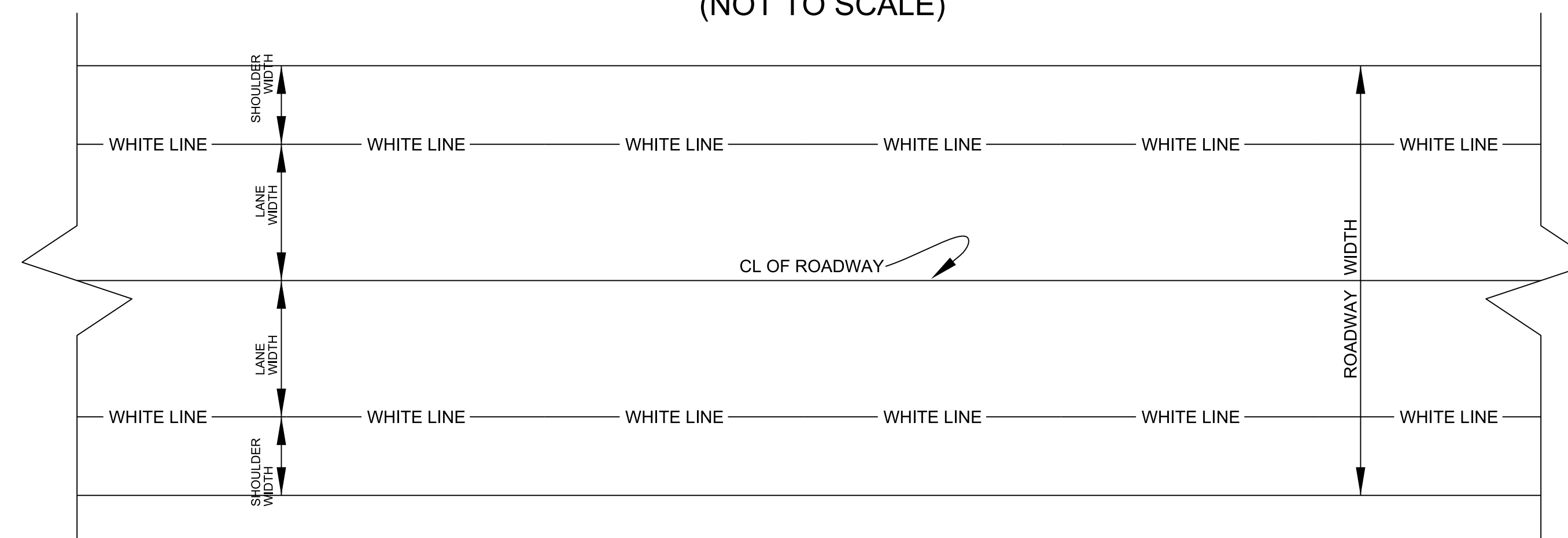
\* May vary due to pavement width

<b>TWO LANE - TWO WAY ROADWAY</b>		<b>50</b>
<b>MPH OR LESS</b>		
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.
2025CPT.06.02.20241.1		

### SUMMARY OF QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	LANE TYPE	FINAL SURFACE TESTING REQUIRED	WARM MIX ASPHALT REQUIRED	LENGTH	WIDTH	BEGIN MP	END MP	1220000000-E	1245000000-E	1260000000-E	1297000000-E	1330000000-E	1491000000-E	1503000000-E	1519000000-E	1575000000-E	
														INCIDENTAL STONE BASE	SHOULDER RECONSTRUCTION	AGGREGATE SHOULDER BORROW	2 1/2" MILLING	1 1/2" MILLING	INCIDENTAL MILLING	BASE COURSE, B25.0C	INTERMEDIATE COURSE, I19.0C	SURFACE COURSE, S9.5B	ASPHALT BINDER FOR PLANT MIX
														TONS	SMI	TON	SY	SY	SY	TONS	TONS	TONS	TONS
2025CPT.06.02.20241.1	Columbus	1	SR-1005 / PEACOCK RD	FROM SR 1572 TO SR 1546	1	2		NO	NO	3.777	22	20.073	23.85		7.60	1,133	504		185	2,155	75	4,665	404
<b>TOTAL FOR MAP NO. 1</b>										<b>3.777</b>					<b>7.60</b>	<b>1,133</b>	<b>504</b>		<b>185</b>	<b>2,155</b>	<b>75</b>	<b>4,665</b>	<b>404</b>
2025CPT.06.02.20241.1	Columbus	2	SR-1552 / SMYRNA RD	FROM SR 1585 TO SR 1005	2	2		NO	NO	3.05	22	2.33	5.38	5	6.10	915			180	1,770		3,844	329
<b>TOTAL FOR MAP NO. 2</b>										<b>3.05</b>				<b>5</b>	<b>6.10</b>	<b>915</b>			<b>180</b>	<b>1,770</b>		<b>3,844</b>	<b>329</b>
2025CPT.06.02.20241.1	Columbus	3	SR-1574 / OLD 74-B	FROM SR 1506 TO SR 1513	3	2		NO	NO	3.413	22	0.35	3.763	5	6.82	921	836		155	2,017	120	4,190	369
<b>TOTAL FOR MAP NO. 3</b>										<b>3.413</b>				<b>5</b>	<b>6.82</b>	<b>921</b>	<b>836</b>		<b>155</b>	<b>2,017</b>	<b>120</b>	<b>4,190</b>	<b>369</b>
2025CPT.06.02.20241.1	Columbus	4	SR-1574 / OLD 74-C	FROM BEGIN C&G TO END C&G	4	2		NO	NO	0.397	40	3.763	4.16					9,320	1,222			886	58
<b>TOTAL FOR MAP NO. 4</b>										<b>0.397</b>								<b>9,320</b>	<b>1,222</b>			<b>886</b>	<b>58</b>
2025CPT.06.02.20241.1	Columbus	5	SR-1574 / OLD 74-D	FROM END OF C&G TO SR 1588/1589	5	2		NO	NO	2.24	22	4.16	6.4	5	4.48	672	185		148	1,350	28	2,802	244
<b>TOTAL FOR MAP NO. 5</b>										<b>2.24</b>				<b>5</b>	<b>4.48</b>	<b>672</b>	<b>185</b>		<b>148</b>	<b>1,350</b>	<b>28</b>	<b>2,802</b>	<b>244</b>
<b>TOTAL FOR PROJ NO. 2025CPT.06.02.20241.1</b>										<b>12.877</b>				<b>15</b>	<b>25.00</b>	<b>3,641</b>	<b>1,525</b>	<b>9,320</b>	<b>1,890</b>	<b>7,292</b>	<b>223</b>	<b>16,387</b>	<b>1,404</b>
<b>GRAND TOTAL</b>																	<b>10,845</b>						
<b>GRAND TOTAL</b>														<b>15</b>	<b>25.00</b>	<b>3,641</b>	<b>1,525</b>	<b>9,320</b>	<b>1,890</b>	<b>7,292</b>	<b>223</b>	<b>16,387</b>	<b>1,404</b>
<b>GRAND TOTAL</b>																	<b>10,845</b>						

PROJECT NO.	SHEET NO.	TOTAL NO.
2025CPT.06.02.20241.1		

## 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		4688000000-E		4709000000-E	4900000000-N
												WORK ZONE ADVANCE/GENERAL WARNING SIGNING	TEMPORARY TRAFFIC CONTROL	4" X 90 M YELLOW THERMO	4" X 90 M WHITE THERMO	6" X 90 M YELLOW THERMO	6" X 90 M WHITE THERMO	24" X 90 M WHITE THERMO	YELLOW & YELLOW MARKERS
												MI	FT	SF	LS	LF	LF	LF	LF
2025CPT.06.02.20241.1	Columbus	1	SR-1005 / PEACOCK RD	FROM SR 1572 TO SR 1546	1	2		3.777	22	20.073	23.85	219	0.29	18,386	40,352				257
<b>TOTAL FOR MAP NO. 1</b>								<b>3.777</b>				<b>219</b>	<b>0.29</b>	<b>18,386</b>	<b>40,352</b>				<b>257</b>
2025CPT.06.02.20241.1	Columbus	2	SR-1552 / SMYRNA RD	FROM SR 1585 TO SR 1005	2	2		3.05	22	2.33	5.38	259	0.23	19,234	32,875			83	213
<b>TOTAL FOR MAP NO. 2</b>								<b>3.05</b>				<b>259</b>	<b>0.23</b>	<b>19,234</b>	<b>32,875</b>			<b>83</b>	<b>213</b>
2025CPT.06.02.20241.1	Columbus	3	SR-1574 / OLD 74-B	FROM SR 1506 TO SR 1513	3	2		3.413	22	0.35	3.763	176	0.26	3,467	12,832	14,140	23,240		232
<b>TOTAL FOR MAP NO. 3</b>								<b>3.413</b>				<b>176</b>	<b>0.26</b>	<b>3,467</b>	<b>12,832</b>	<b>14,140</b>	<b>23,240</b>		<b>232</b>
2025CPT.06.02.20241.1	Columbus	4	SR-1574 / OLD 74-C	FROM BEGIN C&G TO END C&G	4	2		0.397	40	3.763	4.16	32	0.04	209	268	4,100			31
<b>TOTAL FOR MAP NO. 4</b>								<b>0.397</b>				<b>32</b>	<b>0.04</b>	<b>209</b>	<b>268</b>	<b>4,100</b>			<b>31</b>
2025CPT.06.02.20241.1	Columbus	5	SR-1574 / OLD 74-D	FROM END OF C&G TO SR 1588/1589	5	2		2.24	22	4.16	6.4	139	0.18	223	429	14,800	23,550		155
<b>TOTAL FOR MAP NO. 5</b>								<b>2.24</b>				<b>139</b>	<b>0.180</b>	<b>223</b>	<b>429</b>	<b>14,800</b>	<b>23,550</b>		<b>155</b>
<b>TOTAL FOR PROJ NO. 2025CPT.06.02.20241.1</b>								<b>12.877</b>				<b>825</b>	<b>1.000</b>	<b>41,519</b>	<b>86,756</b>	<b>33,040</b>	<b>46,790</b>	<b>83</b>	<b>888</b>
												<b>128,275</b>		<b>79,830</b>					
<b>GRAND TOTAL</b>								<b>12.877</b>				<b>825</b>	<b>1.000</b>	<b>41,519</b>	<b>86,756</b>	<b>33,040</b>	<b>46,790</b>	<b>83</b>	<b>888</b>
												<b>128,275</b>		<b>79,830</b>					