

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
HIGHWAY DIVISION 6

PLANS

Letting Date: September 18, 2024

CONTRACT ID: DF00488

TIP NO.: -----

FEDERAL AID NO.: STATE FUNDED

WBS ELEMENT NO.: 2025CPT.06.03.10241.1 & 2025CPT.06.03.20241.1

ROUTE NO.: VARIES

LOCATION: VARIES

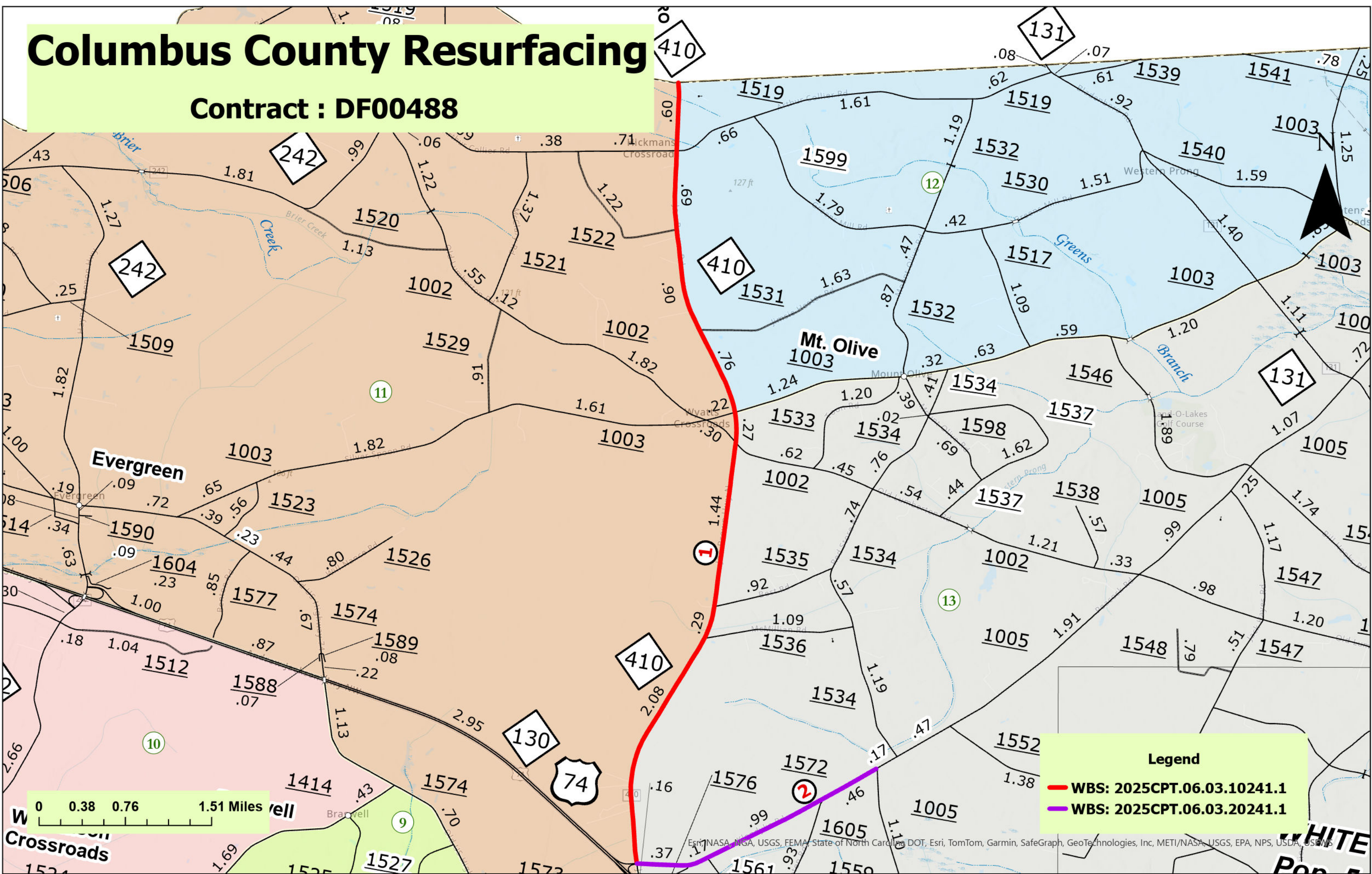
COUNTY: COLUMBUS

LENGTH OF PROJECT: 8.905 MILES

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

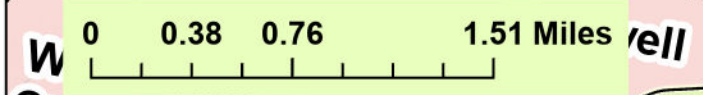
Columbus County Resurfacing

Contract : DF00488



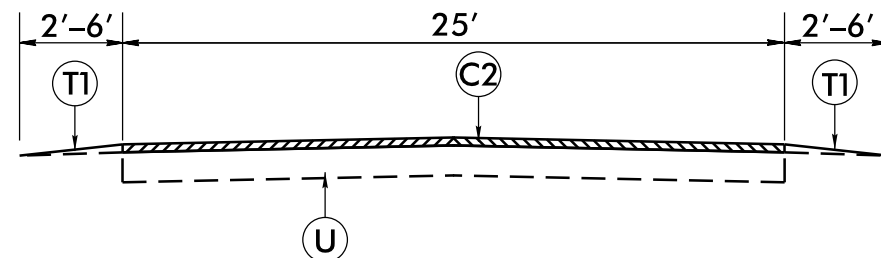
Legend

- WBS: 2025CPT.06.03.10241.1
- WBS: 2025CPT.06.03.20241.1

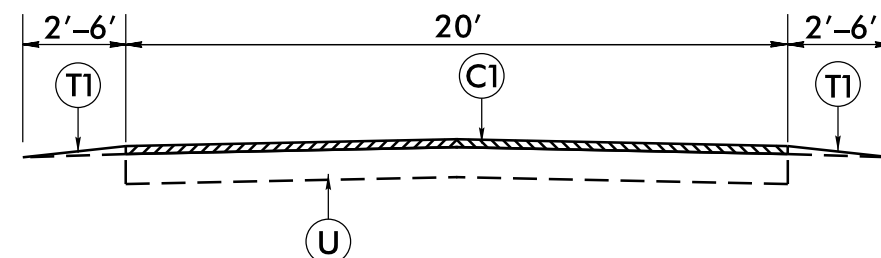


PAVEMENT SCHEDULE

| | |
|----|---|
| C1 | 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD. |
| C2 | 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 | 1½" MILLING |
| V3 | 2½" MILLING |



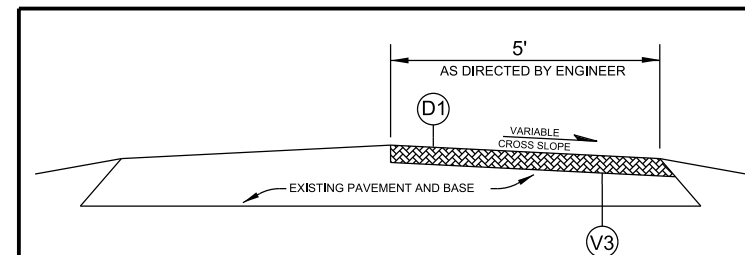
TYPICAL SECTION NO. 1
-PLUS 2' INSIDE CURVE WIDENING (SEE DETAIL)



TYPICAL SECTION NO. 2
-PLUS 2' INSIDE CURVE WIDENING (SEE DETAIL)

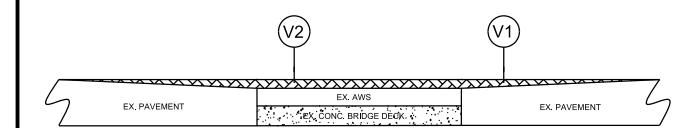
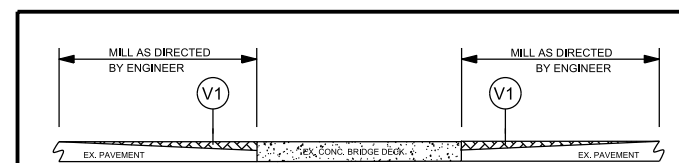
**PLUS 2.5" MILL AND FILL (SEE DETAIL 2)

***PLUS S9.5B LEVELING COURSE, AS DIRECTED BY ENGINEER



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.

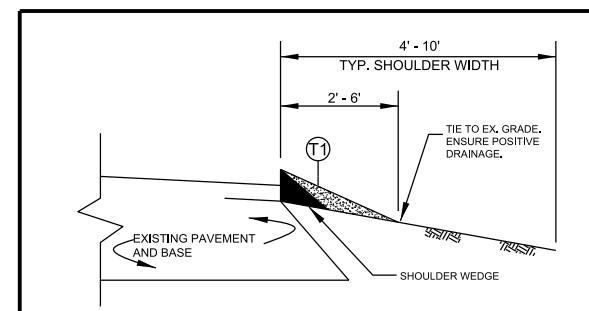
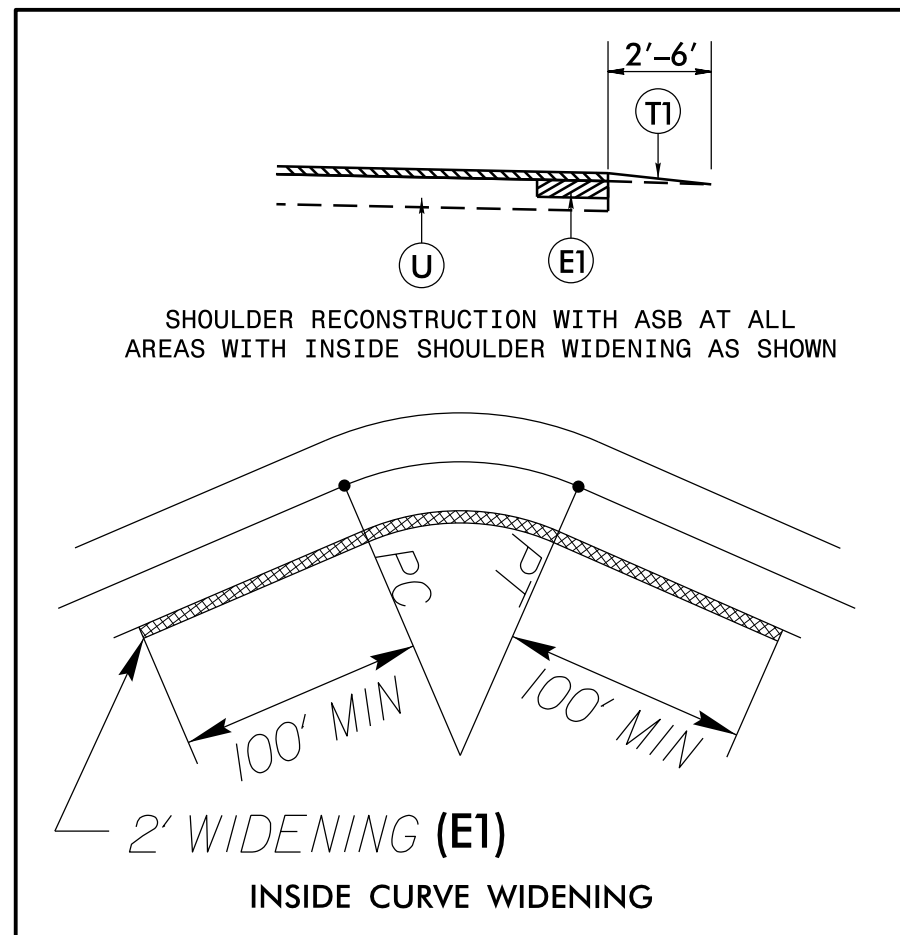


BRIDGE MILLING

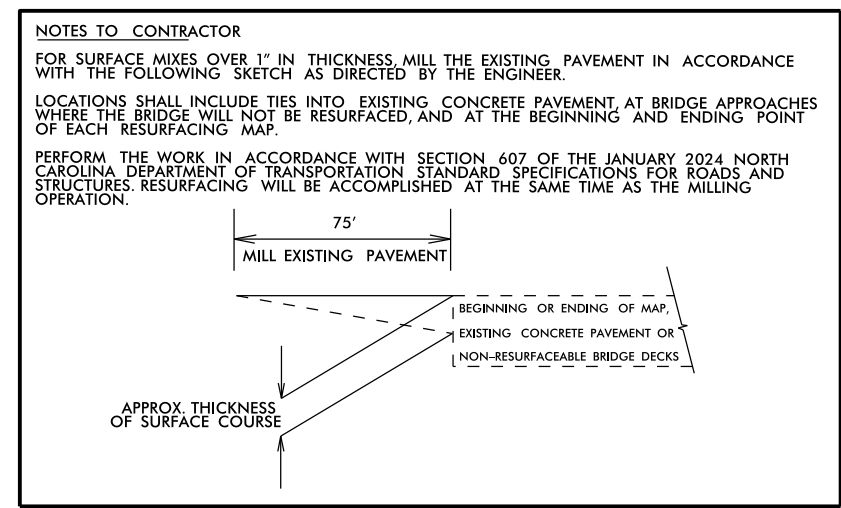
RAILROAD TRACKS MILLING

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.



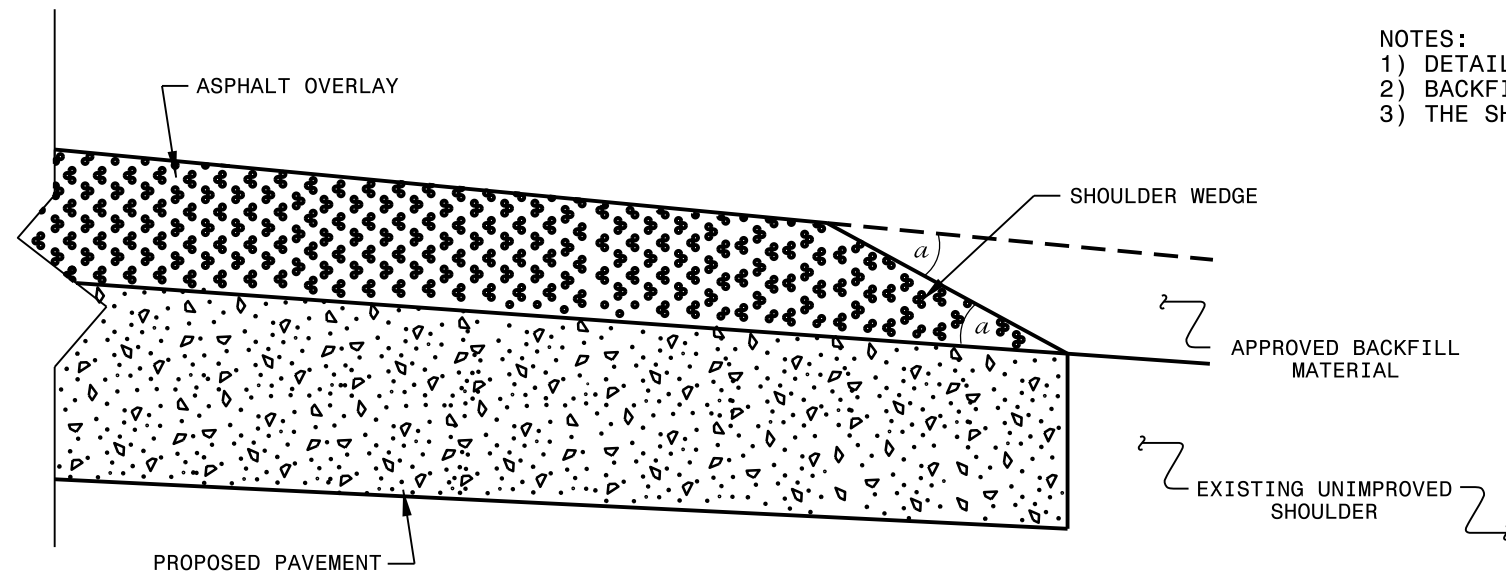
- NOTES:
1. SHOULDER SHALL BE RECONSTRUCTED AS SHOWN IN STD. DWG. NO. 560.01 & 560.02, WITH A MINIMUM SLOPE OF 1" PER FOOT TO ENSURE POSITIVE DRAINAGE AWAY FROM ROADWAY.
 2. AGGREGATE SHOULDER BORROW (ASB) MATERIAL SHALL BE PLACED USING A WIDENING MACHINE OR SIMILAR DEVICE.
 3. A VEGETATIVE BUFFER SHALL 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.



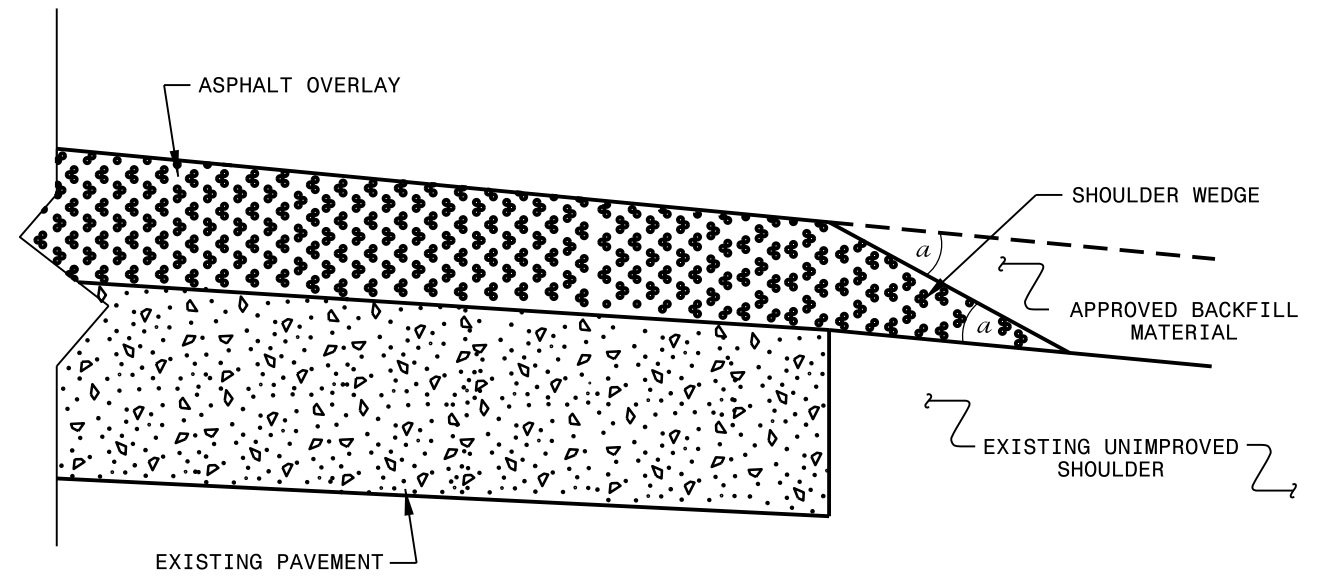
- NOTES TO CONTRACTOR
- FOR SURFACE MIXES OVER 1" IN THICKNESS, MILL THE EXISTING PAVEMENT IN ACCORDANCE WITH THE FOLLOWING SKETCH AS DIRECTED BY THE ENGINEER.
 - LOCATIONS SHALL INCLUDE TIES INTO EXISTING CONCRETE PAVEMENT AT BRIDGE APPROACHES WHERE THE BRIDGE WILL NOT BE RESURFACED, AND AT THE BEGINNING AND ENDING POINT OF EACH RESURFACING MAP.
 - PERFORM THE WORK IN ACCORDANCE WITH SECTION 607 OF THE JANUARY 2024 NORTH CAROLINA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES. RESURFACING WILL BE ACCOMPLISHED AT THE SAME TIME AS THE MILLING OPERATION.

6/2/09 27 AUG 2024 16:12 C:\p\Projects\Resurfacing\2024 Feil\IND3\TYPICAL.Sdgn

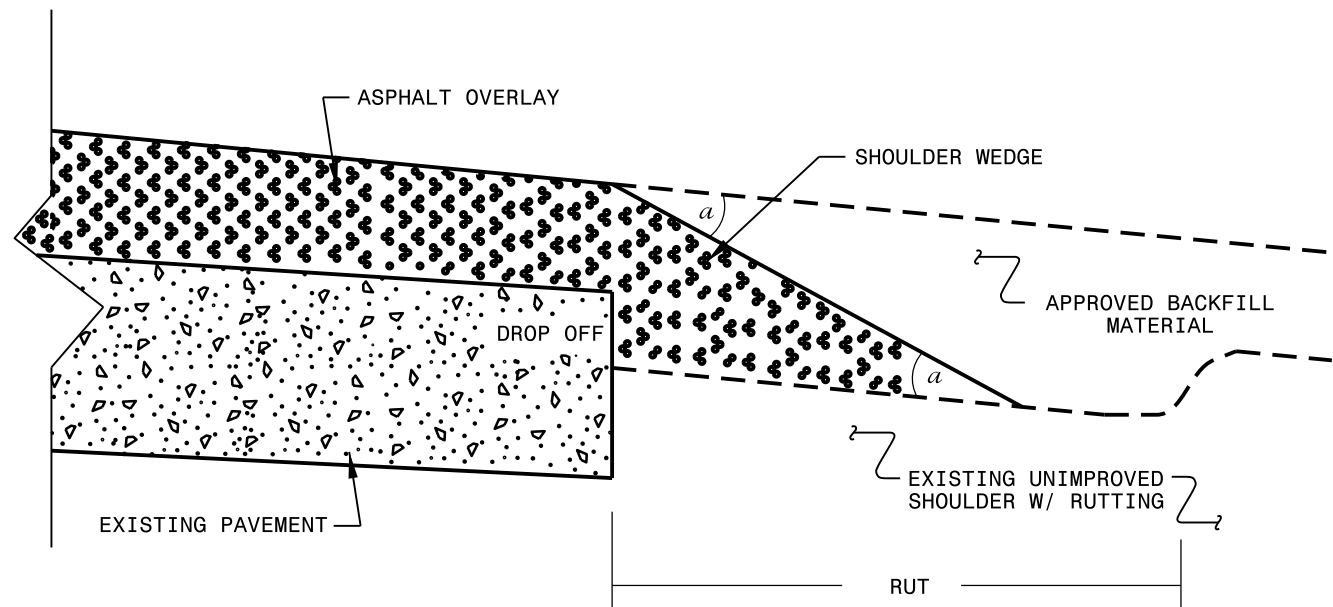
- NOTES:
- 1) DETAIL DOES NOT APPLY TO OGAFB AND ULTRA-THIN BONDED WEARING COURSE.
 - 2) BACKFILL SHOULDER WITH APPROVED MATERIAL.
 - 3) THE SHOULDER WEDGE DEVICE MAY BE DISENGAGED AT PAVED DRIVEWAYS AND SIDE STREETS.



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)

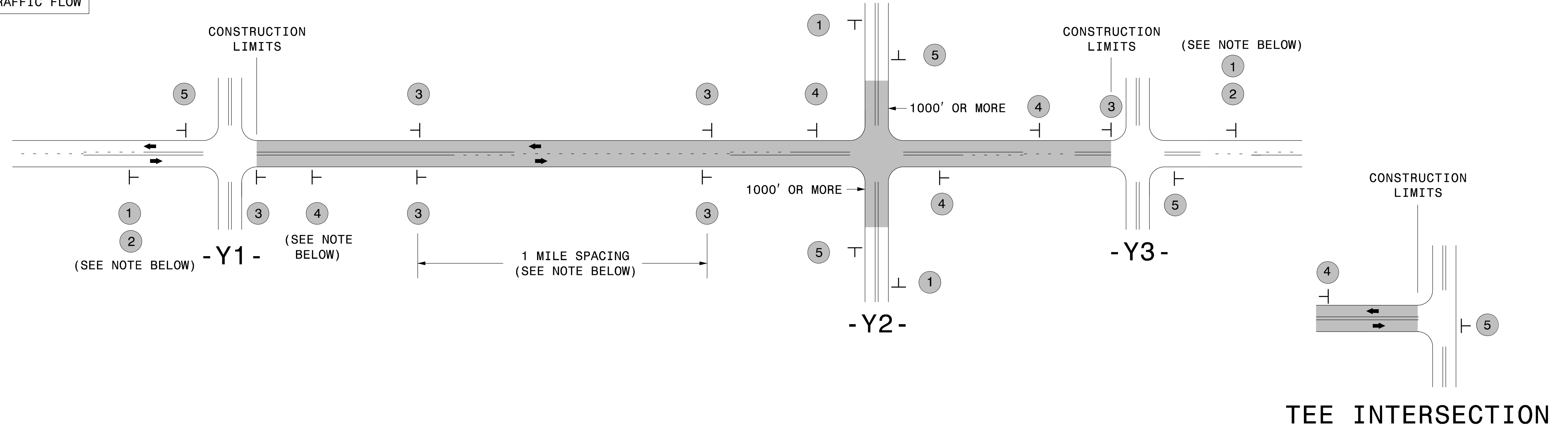
- SHOULDER WEDGE ANGLE = 30°

| | | | |
|--|----------------|------------------|--|
| 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 | | | |

SYSTEM: 11/15/11 10:58:58 AM
USER: T.SPELL

SIGNING FOR RESURFACING PROJECTS

LEGEND
 ┆ STATIONARY SIGN
 ← DIRECTION OF TRAFFIC FLOW



MAINLINE (-L-) SIGNING

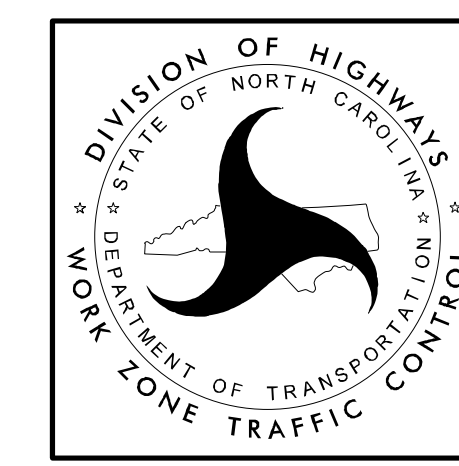
-Y- LINE SIGNING

| | | | | |
|---|---|--|---|--|
| 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;"> PLACED 500' IN ADVANCE OF FLAGGER. </div> <div style="text-align: center;"> 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' |

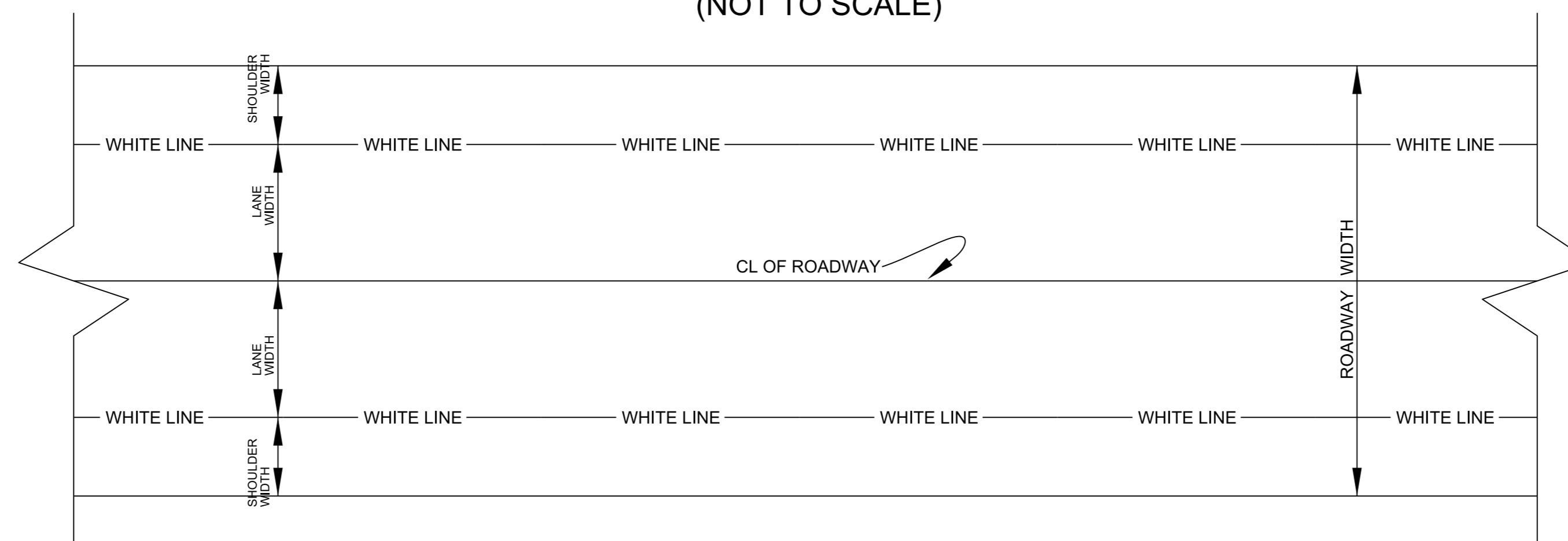
* May vary due to pavement width

| 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. |
| 2025CPT.06.03.10241.1 ,etc | | |

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 | 1520000000-E | 1523000000-E | 1575000000-E | | | | | | | | | | | | | |
|---|----------|--------|-----------------------|-------------------------------|--------|-------|-----------|--------------------------------|---------------------------|--------------|-------|----------|--------|-----------------------|-------------------------|---------------------------|----------------|--------------------|---------------------|-----------------------------|-----------------------|------------------------|-----------------------|------------------------------|------------|--|------|-----|-----|----|----|------|------|------|------|------|------|
| | | | | | | | | | | | | | | INCIDENTAL STONE BASE | SHOULDER RECONSTRUCTION | AGGREGATE SHOULDER BORROW | 2 1/2" MILLING | INCIDENTAL MILLING | BASE COURSE, B25.0C | INTERMEDIATE COURSE, I19.0C | SURFACE COURSE, S9.5B | LEVELING COURSE, S9.5B | SURFACE COURSE, S9.5C | ASPHALT BINDER FOR PLANT MIX | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | MI | FT | | | | | | | | | | | | TONS | SMI | TON | SY | SY | TONS | TONS | TONS | TONS | TONS | TONS |
| 2025CPT.06.03.10241.1 | Columbus | 1 | NC-410 | FROM SR 1572 TO BLADEN COUNTY | 1 | 2 | | NO | NO | 6.935 | 25 | 17.215 | 24.15 | 10 | 12.97 | 1,946 | | 840 | 437 | | | | | 9,334 | 570 | | | | | | | | | | | | |
| TOTAL FOR MAP NO. 1 | | | | | | | | | | 6.935 | | | | 10 | 12.97 | 1,946 | | 840 | 437 | | | | | 9,334 | 570 | | | | | | | | | | | | |
| TOTAL FOR PROJ NO. 2025CPT.06.03.10241.1 | | | | | | | | | | 6.935 | | | | 10 | 12.97 | 1,946 | | 840 | 437 | | | | | 9,334 | 570 | | | | | | | | | | | | |
| 2025CPT.06.03.20241.1 | Columbus | 2 | SR-1572 / KLONDYKE RD | FROM NC 410 TO SR 1005 | 2 | 2 | | NO | NO | 1.97 | 20 | 0 | 1.97 | 10 | 3.92 | 530 | 355 | | 56 | 53 | 2,278 | 62 | | 157 | | | | | | | | | | | | | |
| TOTAL FOR MAP NO. 2 | | | | | | | | | | 1.97 | | | | 10 | 3.92 | 530 | 355 | | 56 | 53 | 2,278 | 62 | | 157 | | | | | | | | | | | | | |
| TOTAL FOR PROJ NO. 2025CPT.06.03.20241.1 | | | | | | | | | | 1.97 | | | | 10 | 3.92 | 530 | 355 | | 56 | 53 | 2,278 | 62 | | 157 | | | | | | | | | | | | | |
| GRAND TOTAL | | | | | | | | | | 8.905 | | | | 20 | 16.89 | 2,476 | 355 | | 840 | 493 | 53 | 2,278 | 62 | 9,334 | 727 | | | | | | | | | | | | |

| | | |
|----------------------------|-----------|-----------|
| PROJECT NO. | SHEET NO. | TOTAL NO. |
| 2025CPT.06.03.10241.1 ,etc | | |

THERMOPLASTIC AND PAINT QUANTITIES

| | | | | | | | | | | | | 4413000000-E | 4457000000-N | 4685000000-E | | 4900000000-N |
|---|----------|--------|-----------------------|-------------------------------|--------|-------|--------------|--------|-------|----------|--------|---|---------------------------|-------------------------|------------------------|-------------------------|
| PROJECT NO | COUNTY | MAP NO | ROUTE | DESCRIPTION | TYP NO | LANES | LANE TYPE | LENGTH | WIDTH | BEGIN MP | END MP | WORK ZONE ADVANCE/GENERAL WARNING SIGNING | TEMPORARY TRAFFIC CONTROL | 4" X 90 M YELLOW THERMO | 4" X 90 M WHITE THERMO | YELLOW & YELLOW MARKERS |
| | | | | | | | | MI | FT | | | SF | LS | LF | LF | EA |
| 25CPT.06.03.10241 | Columbus | 1 | NC-410 | FROM SR 1572 TO BLADEN COUNTY | 1 | 2 | | 6.935 | 25 | 17.215 | 24.15 | 550 | 0.79 | 29,381 | 69,944 | 473 |
| TOTAL FOR MAP NO. 1 | | | | | | | 6.935 | | | | | 550 | 0.79 | 29,381 | 69,944 | 473 |
| TOTAL FOR PROJ NO. 2025CPT.06.03.10241.1 | | | | | | | 6.935 | | | | | 550 | 0.79 | 29,381 | 69,944 | 473 |
| | | | | | | | | | | | | 99,325 | | | | |
| 25CPT.06.03.20241 | Columbus | 2 | SR-1572 / KLONDYKE RD | FROM NC 410 TO SR 1005 | 2 | 2 | | 1.97 | 20 | 0 | 1.97 | 187 | 0.21 | 10,043 | 21,313 | 136 |
| TOTAL FOR MAP NO. 2 | | | | | | | 1.97 | | | | | 187 | 0.210 | 10,043 | 21,313 | 136 |
| TOTAL FOR PROJ NO. 2025CPT.06.03.20241.1 | | | | | | | 1.97 | | | | | 187 | 0.210 | 10,043 | 21,313 | 136 |
| | | | | | | | | | | | | 31,356 | | | | |
| GRAND TOTAL | | | | | | | 8.905 | | | | | 737 | 1.000 | 39,424 | 91,257 | 609 |
| | | | | | | | | | | | | 130,681 | | | | |