

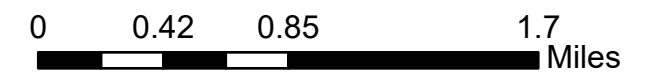
| Warren Co. | |
|----------------------------|-----------|
| PROJECT REFERENCE NO. | SHEET NO. |
| 2024CPT.05.16.10931.1, ETC | 1 |

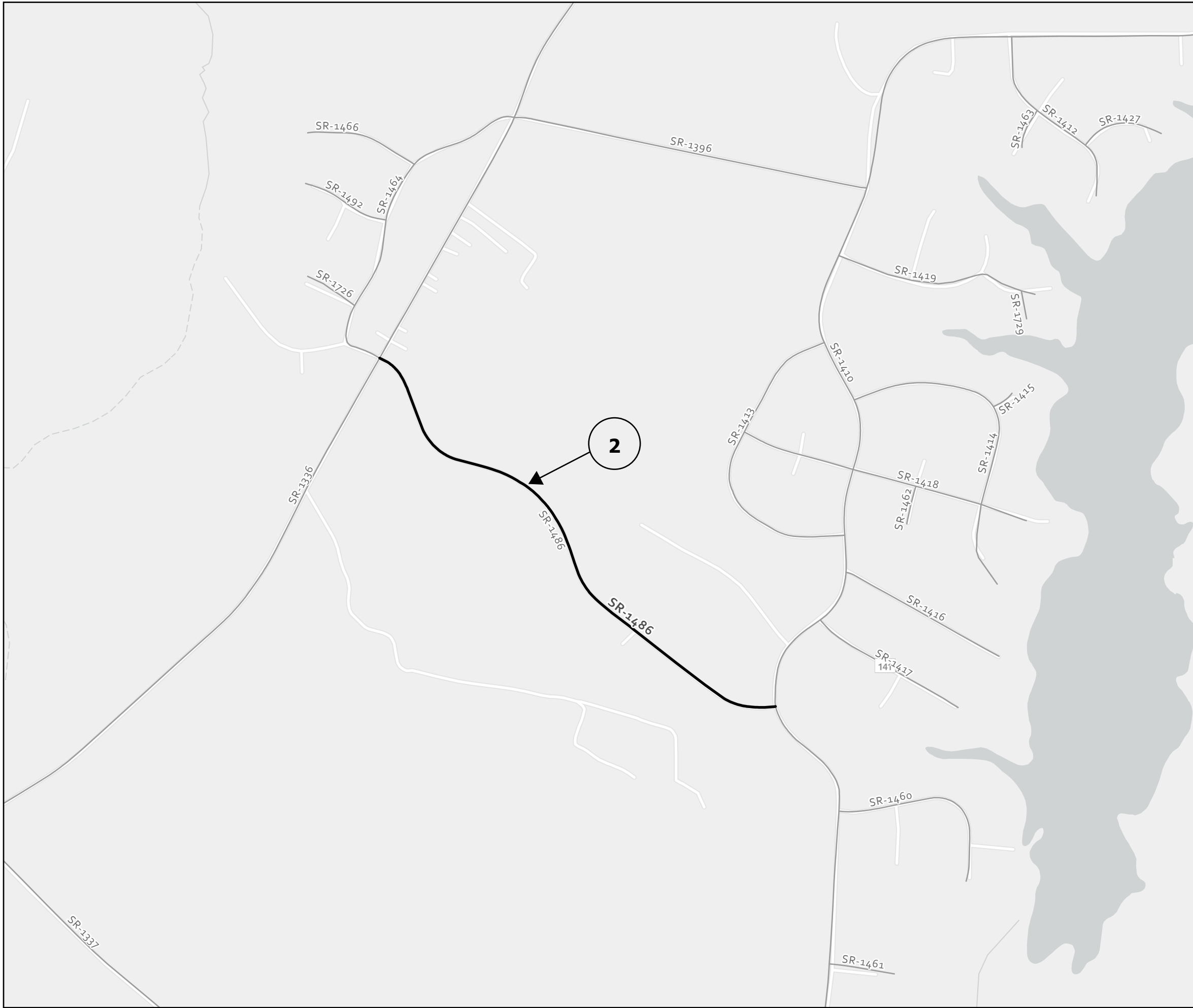
Map 1 U.S. 158
From U.S. 1 to U.S. 158 Business

Map 3 SR-1319 (Weldon Rd.)
From U.S. 1 to SR 1320 (Warren Plains Norlina Rd)

Map 4 SR-1320 (Warren Plains Norlina Rd./ Hyco st.)
From SR-1305 (Warren Plains Rd.) to U.S. 1

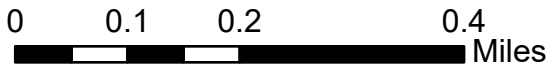
Map 5 SR-1311 (Falkner Quarter Rd.) From U.S. 1 to
SR-1305 (Warren Plains Rd.)

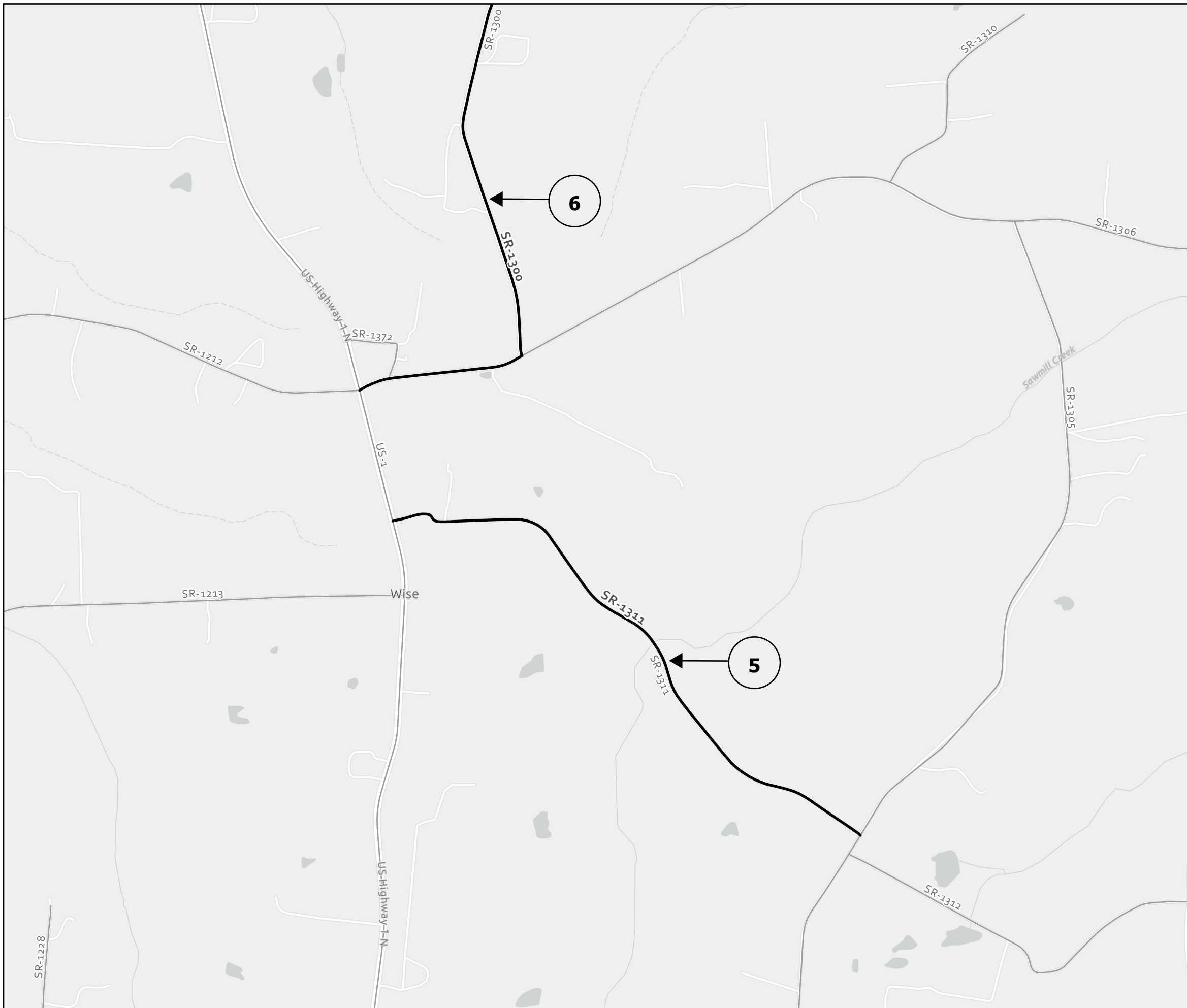




| Warren | |
|----------------------------|-----------|
| PROJECT REFERENCE NO. | SHEET NO. |
| 2024CPT.05.16.10931.1, ETC | 2 |

Map 2 SR-1486 (Clubhouse Dr.)
 From SR-1336 (Hubquarter Rd.) to SR-1410 (S. Holiday Dr.)



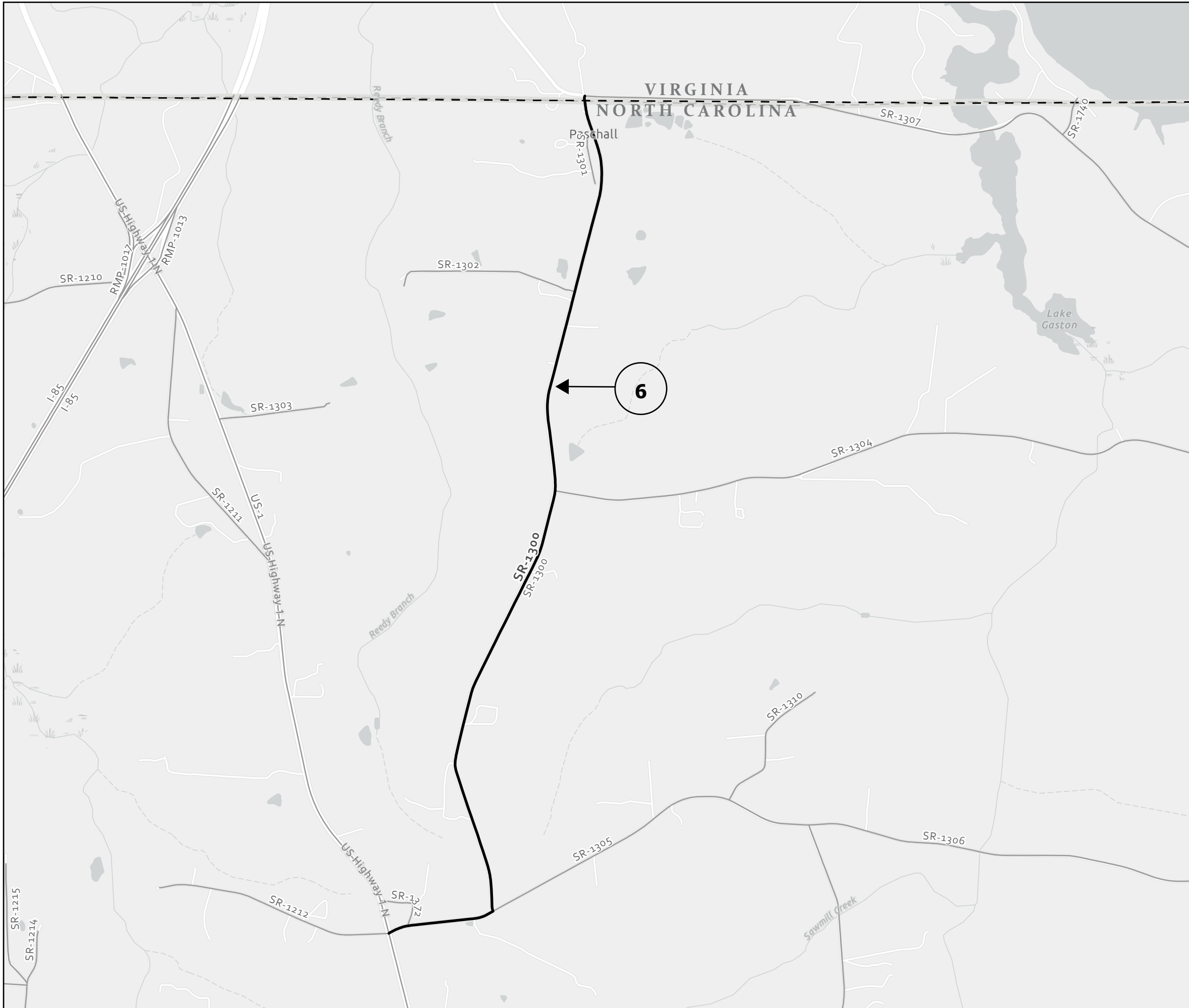


| Warren Co. | |
|----------------------------|-----------|
| PROJECT REFERENCE NO. | SHEET NO. |
| 2024CPT.05.16.10931.1, ETC | 3 |

Map 5 SR-1311 (Falkner Quarter Rd.) From U.S. 1 to SR-1305 (Warren Plains Rd.)

Map 6 SR-1300 (Paschall Station Rd.) From VIRGINIA to U.S. 1

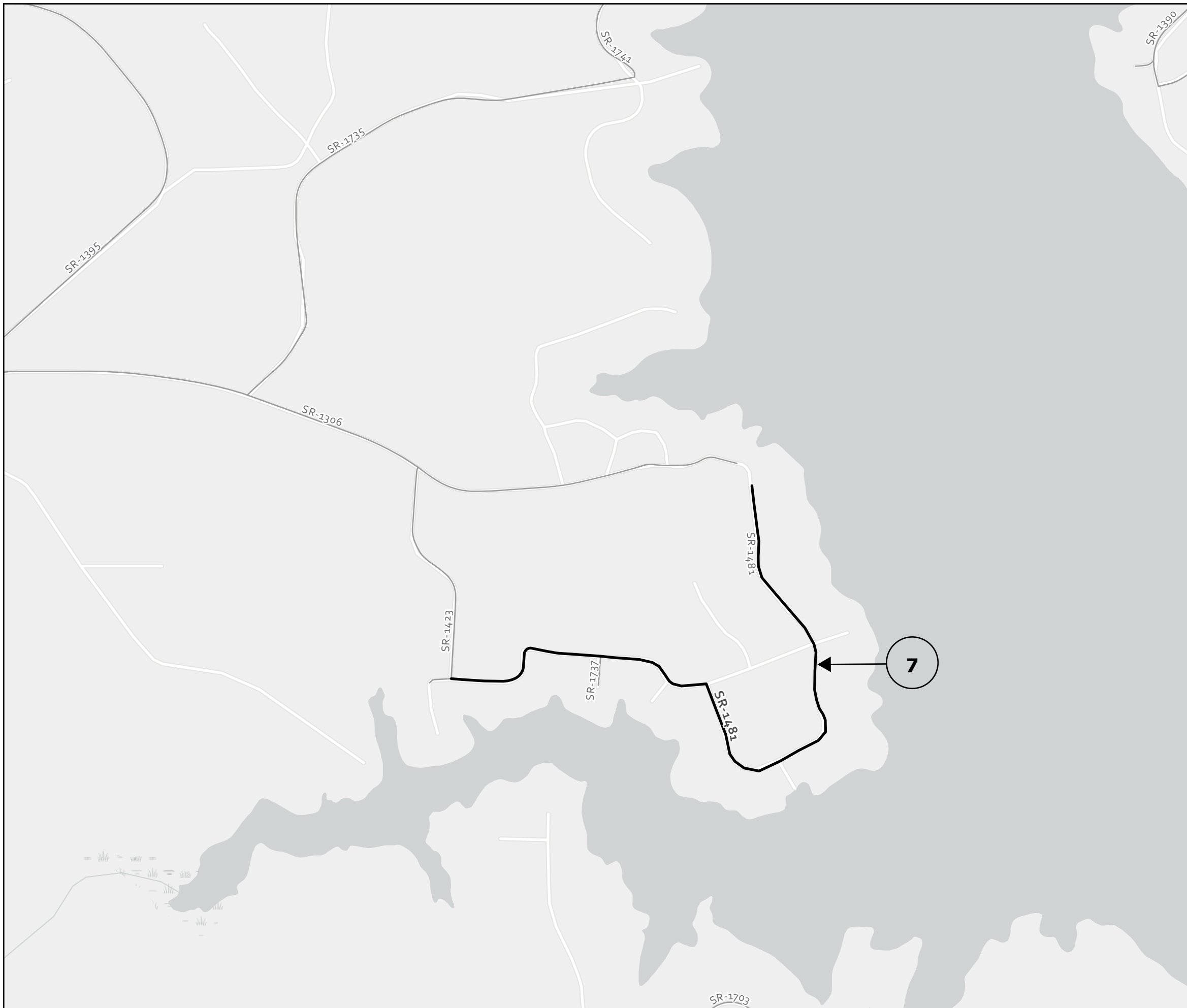




| Warren Co. | |
|----------------------------|-----------|
| PROJECT REFERENCE NO. | SHEET NO. |
| 2024CPT.05.16.10931.1, ETC | 4 |

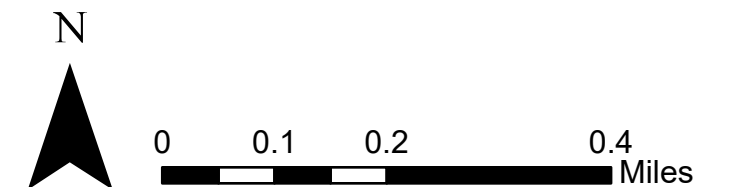
Map 6 SR-1300 (Paschall Station Rd. / Wise-Five Forks Rd.)
 From VIRGINIA to U.S. 1



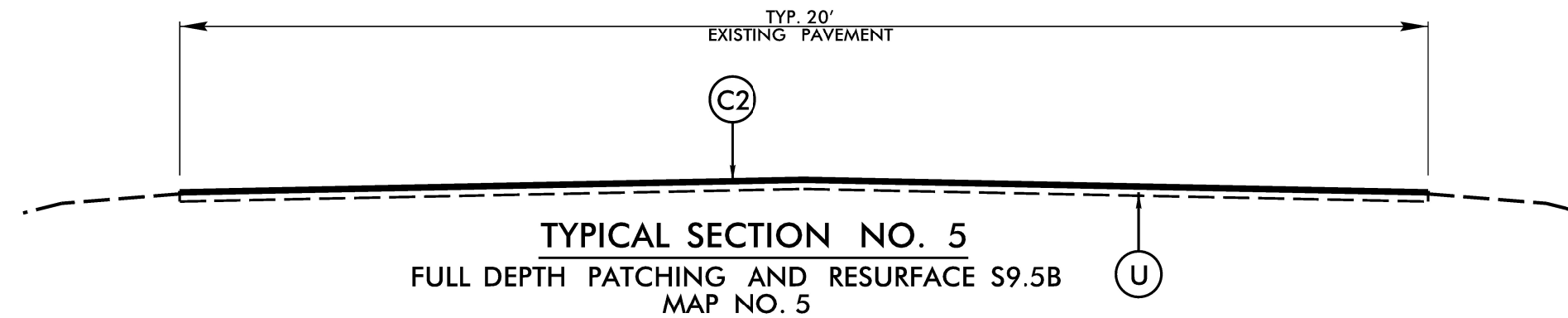
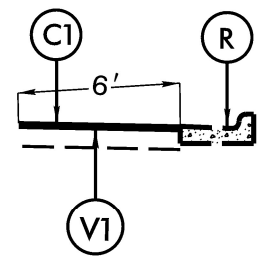
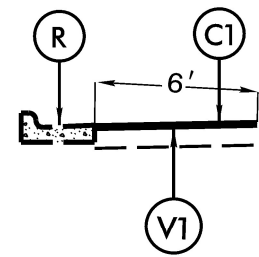
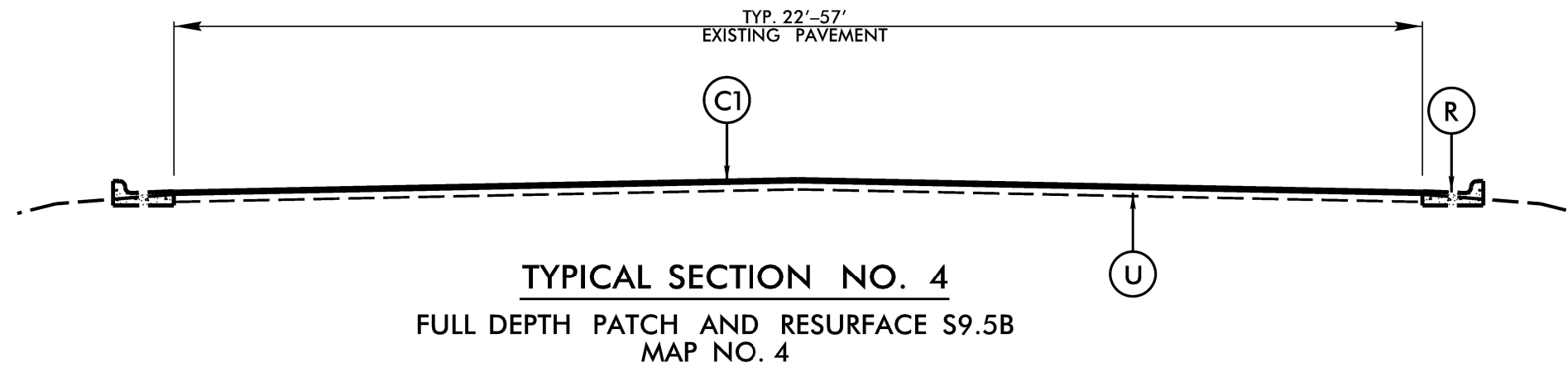
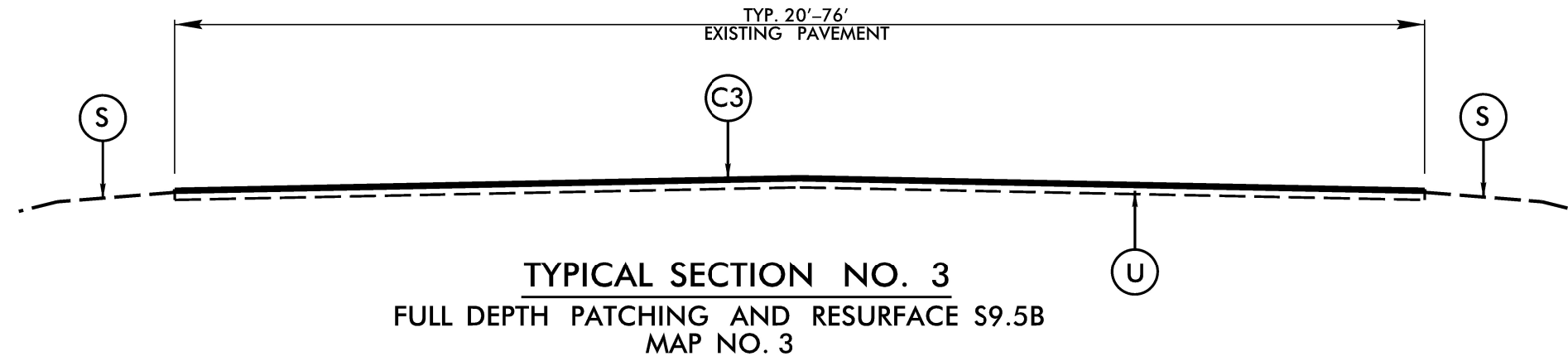


| Warren Co. | |
|-----------------------------|-----------|
| PROJECT REFERENCE NO. | SHEET NO. |
| 2024CPT.05.16.10931.1, ETC. | 5 |

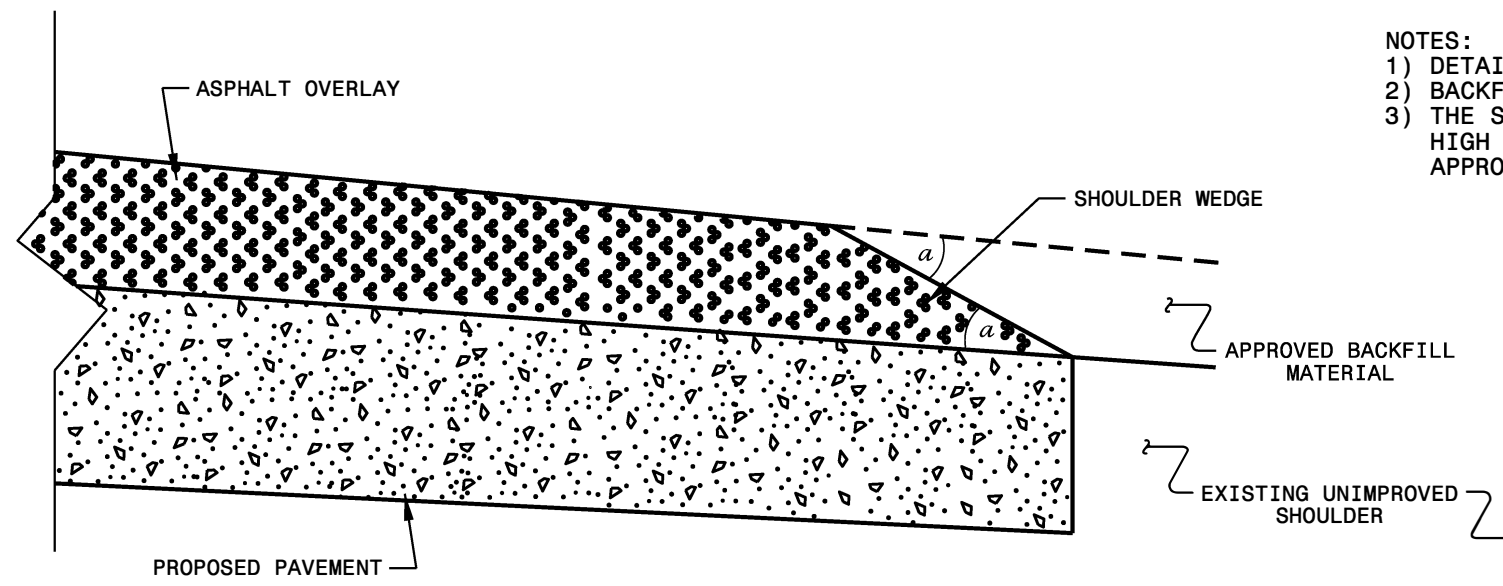
Map 7 SR-1481 Bell St./Malcolm St./Robinson Ferry Rd.)
From SR-1423 (River Bend Rd.) to End Pavement



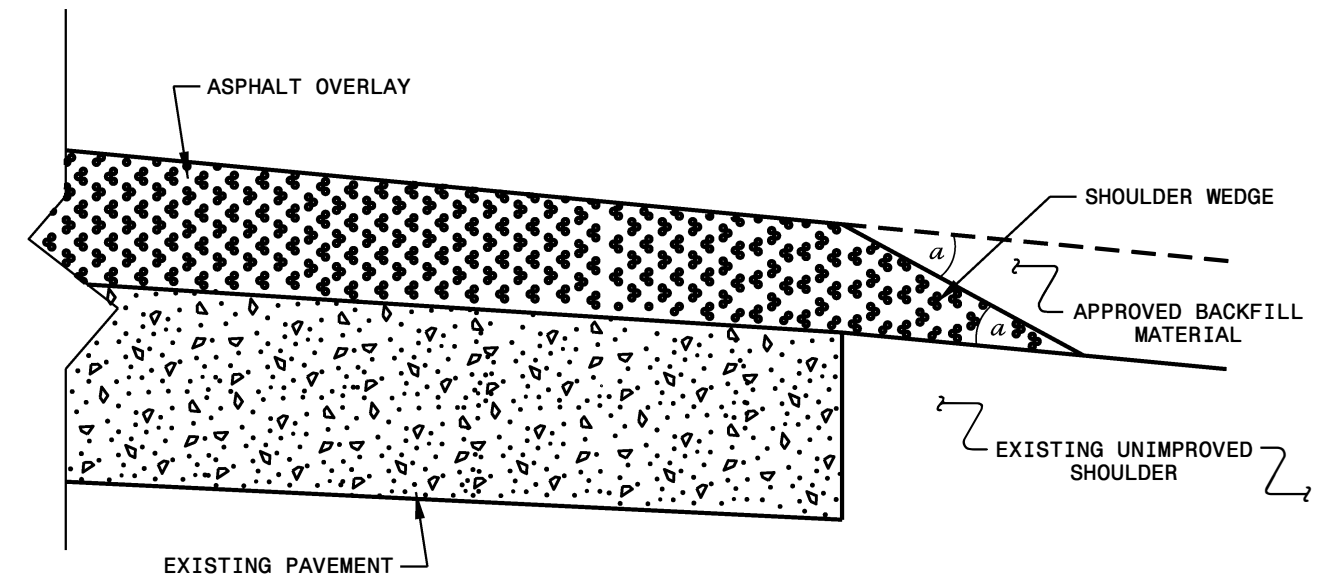
| PAVEMENT SCHEDULE | |
|-------------------|-----------------|
| C1 | 1" S9.5B |
| C2 | 1¼" S9.5B |
| C3 | 1½" S9.5B |
| R | EXIST. C&G |
| S | SHOULDER RECON |
| U | EXIST. PAVEMENT |
| V1 | 0-1" MILLING |
| V2 | 0-1½" MILLING |



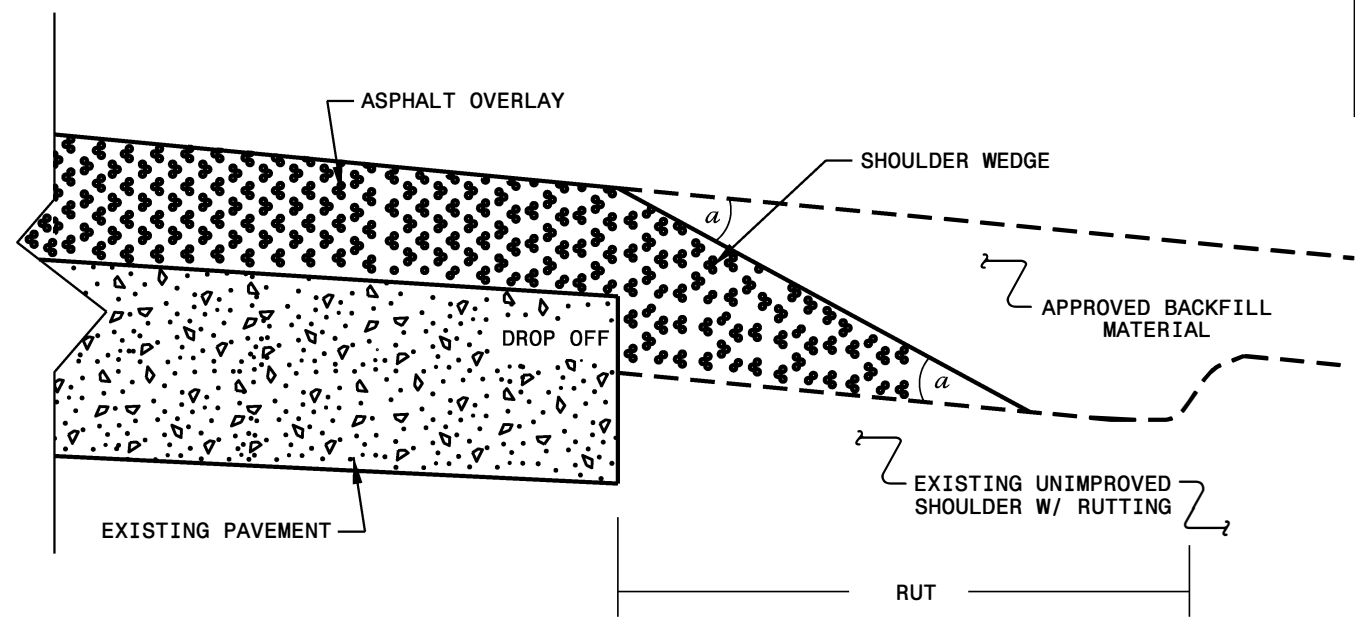
- NOTES:
 1) DETAIL DOES NOT APPLY TO OGAFB AND ULTRA-THIN BONDED WEARING COURSE.
 2) BACKFILL SHOULDER WITH APPROVED MATERIAL.
 3) THE SHOULDER WEDGE DEVICE MAY BE DISENGAGED AT PAVED DRIVEWAYS, SIDE STREETS, HIGH SHOULDERS, AND OTHER LOCATIONS NOT FEASIBLE TO CONSTRUCT AS APPROVED BY THE ENGINEER.



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: 2/2/16 |
| CHECKED BY: | DATE: |
| FILE SPEC.: s:\usr\details\stand\shoulderwedgedetail.dgn | |

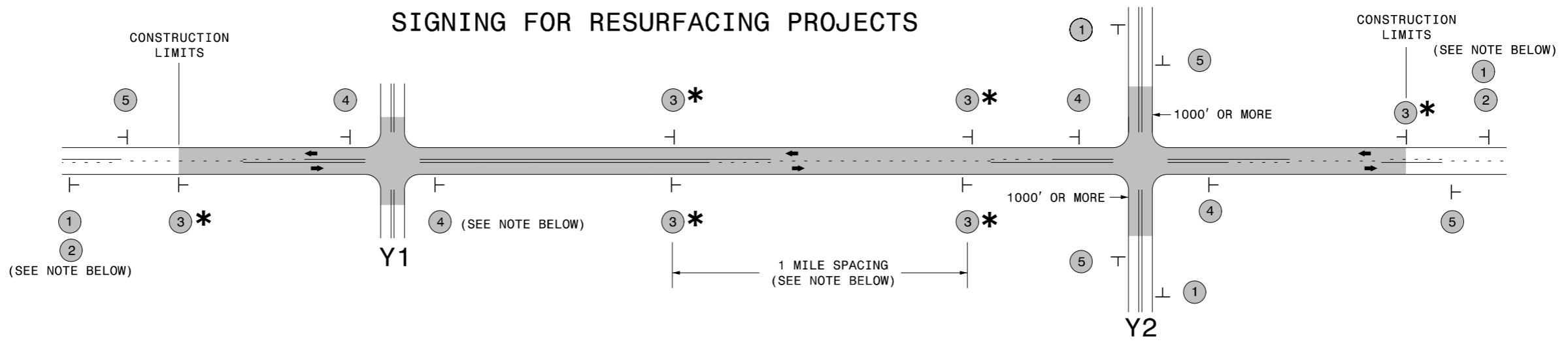
22-MAN-2018-0941
 S:\Contracts\16-10931.1\Resurfacing Projects\Division 4\1-5937 Wilson March 2018\Revised Shoulder Wedge Detail.dgn
 P:\piper\16-10931.1\USD-E-1652

| | | |
|----------------------------|-----------|-----------|
| PROJECT NO. | SHEET NO. | TOTAL NO. |
| 2024CPT.05.16.10931.1, ETC | | 11 |

SUMMARY OF QUANTITIES

| PROJECT NO | COUNTY | MAP NO | ROUTE | DESCRIPTION | TYP NO | LANES | FINAL SURFACE TESTING REQUIRED | WARM MIX ASPHALT REQUIRED | LENGTH | WIDTH | AGGREGATE BASE COURSE 1121000000-E | SHOULDER RECONSTRUCTION 1245000000-E | 0" TO 1" MILLING 1308000000-E | INCIDENTAL MILLING 1330000000-E | SURFACE COURSE, S9.5B 1519000000-E | ASPHALT BINDER FOR PLANT MIX 1575000000-E | PATCHING EXISTING PAVEMENT 1704000000-E | ADJUST MANHOLES 2830000000-N | ADJUST METER OR VALVE BOX 2845000000-N | INDUCTIVE LOOP SAWCUT 7444000000-E |
|---|--------|--------|--|--------------------------|--------|-------|--------------------------------|---------------------------|---------------|-------|------------------------------------|--------------------------------------|-------------------------------|---------------------------------|------------------------------------|---|---|------------------------------|--|------------------------------------|
| | | | | | | | | | MI | FT | TONS | SMI | SY | SY | TONS | TON | TONS | EA | EA | LF |
| 2024CPT.05.16.10931.1 | Warren | 1 | US-158 E / US HIGHWAY 158 401/US HIGHWAY 158 BUS W/US HIGHWAY 158 BYP/US HIGHWAY 158 E | FROM US 1 TO US 158 BUS | 1 | 2 | NO | NO | 6.224 | 22 | | 1145 | 12.40 | 8,232 | 8,046 | 526 | 73 | 11 | 1 | 530 |
| TOTAL FOR PROJ NO. 2024CPT.05.16.10931.1 | | | | | | | | | 6.224 | | | 1145 | 12.40 | 8,232 | 8,046 | 526 | 73 | 11 | 1 | 530 |
| 2024CPT.05.16.20931.1 | Warren | 2 | SR-1486 / CLUBHOUSE DR | FROM SR 1336 TO SR 1410 | 2 | 2 | NO | NO | 0.787 | 20-59 | | | | 525 | 561 | 37 | 15 | | | |
| 2024CPT.05.16.20931.1 | Warren | 3 | SR-1319 / WELDON RD | FROM US 1 TO SR 1320 | 1 | 2 | NO | NO | 1.141 | 20-76 | | | | 728 | 1,547 | 124 | 480 | | | |
| 2024CPT.05.16.20931.1 | Warren | 4 | SR-1320 / WARREN PLAINS NORLINA RD/WARREN PLAINS RD/HYCO ST | FROM SR 1305 TO US 1 | 2,3 | 2 | NO | NO | 2.015 | 22-57 | 208 | 2.25 | 270 | 628 | 1,619 | 106 | 20 | 1 | 3 | |
| 2024CPT.05.16.20931.1 | Warren | 5 | SR-1311 / FALKNER QUARTER RD | FROM US 1 TO SR 1305 | 3 | 2 | NO | NO | 1.617 | 20 | | | | 19 | 1,442 | 99 | 113 | | | |
| 2024CPT.05.16.20931.1 | Warren | 6 | SR-1300 / PASCHALL STATION RD/WISE - FIVE FORKS RD | FROM VIRGINIA TO US 1 | 2 | 2 | NO | NO | 3.943 | 18-70 | | | | 2,233 | 2,810 | 184 | 25 | | | |
| 2024CPT.05.16.20931.1 | Warren | 7 | SR-1481 BELL ST/MALCOLM ST/ROBINSON FERRY RD | FROM SR 1423 TO END PVMT | 2 | 2 | NO | NO | 1.049 | 18-28 | | | | 299 | 936 | 61 | 10 | | | |
| TOTAL FOR PROJ NO. 2024CPT.05.16.20931.1 | | | | | | | | | 10.552 | | 208 | 2 | 270 | 4,432 | 8,915 | 611 | 663 | 1 | 3 | |
| GRAND TOTAL | | | | | | | | | 16.776 | | 208 | 1,147 | 282 | 12,664 | 16,961 | 1,137 | 736 | 12 | 4 | 530 |

SIGNING FOR RESURFACING PROJECTS



| LEGEND | |
|--------|---------------------------|
| — | STATIONARY SIGN |
| ← | DIRECTION OF TRAFFIC FLOW |

MAINLINE (-L-) SIGNING

-Y- LINE SIGNING

| | | | |
|---|-------------------|--|---|
| SIGNING NOTES AND PLACEMENT PER DIRECTION | <p>1</p> <p>2</p> | <p>PLACE 1000' PRIOR TO BEGINNING OF CONSTRUCTION LIMITS. ONLY USED ON -Y- LINES IF RESURFACING LIMITS EXTEND 1000' ALONG -Y- LINE.</p> <p>#2 SIGN ONLY USED WHEN RESURFACING LIMITS ARE 2 OR MORE MILES IN LENGTH. ROUND UP TO NEXT WHOLE NUMBER. (NO FRACTIONAL OR DECIMAL NUMBERS)</p> | <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, ADVANCE WARNING PORTABLE SIGNS SHALL BE USED ALONG THE -Y- LINE AS SHOWN BELOW. REMOVE UPON COMPLETION OF WORK.</p> <p>PLACED 500' IN ADVANCE OF FLAGGER. PLACED 250' IN ADVANCE OF FLAGGER.</p> |
| | <p>3 *</p> | <p>PLACE INITIALLY AT THE CONSTRUCTION LIMITS AND SPACED 1 MILE APART THEREAFTER. IF NO -Y- LINES EXIST, PLACE 2ND SET 1/2 MILE FROM THE CONSTRUCTION LIMITS AND THEN SPACE 1 MILE THEREAFTER.</p> | |
| | <p>4</p> | <p>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.</p> | |
| | <p>5</p> | <p>PLACE 500' FOLLOWING THE END OF CONSTRUCTION LIMITS.</p> | |

* SIGNING FOR ASPHALT SURFACE TREATMENTS (ONLY)

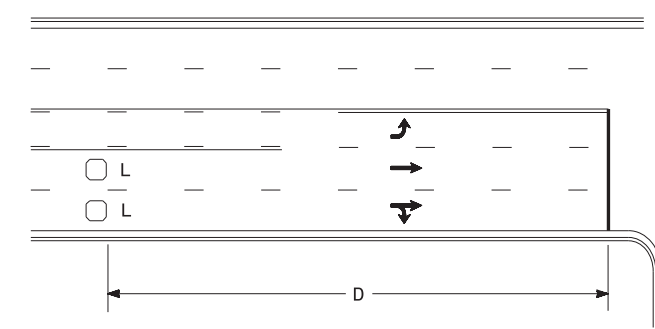
SUBSTITUTE LOW/SOFT SHOULDER SIGNS BY ALTERNATING THE FOLLOWING TWO SIGNS: STARTING WITH "UNMARKED PAVEMENT AHEAD" (SP 06026) FOLLOWED BY "LOOSE GRAVEL" (W8-7).



RESURFACING ADVANCE WARNING SIGNS FOR RURAL AND SUBURBAN 2 LANE ROADWAYS

6/7/2014 10:17:11 AM W:\ZTC\apps\work\zonegenerator\external\webpage\desres\documents\resurfacing\advwarn_2ln.dgn User:mgarrrett

High Speed Detection (≥40 mph)

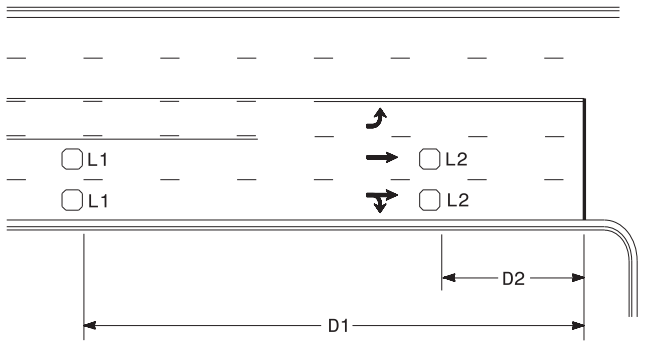


| Speed Limit mph | D ft |
|--------------------|---------|
| 40 | 250 |
| 45 | 300 |
| 50 | 355 |
| 55 | 420 |

L = 6ft X 6ft
Wired separately

Volume Density Operation

OR



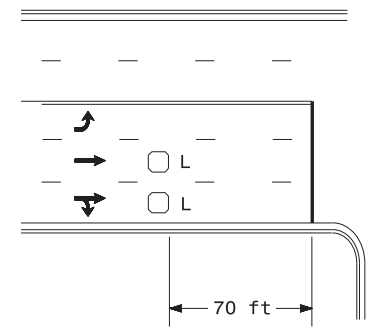
| Speed Limit mph | D1 ft | D2 ft |
|--------------------|----------|----------|
| 40 | 250 | 80 |
| 45 | 300 | 90 |
| 50 | 355 | 100 |
| 55 | 420 | 110 |

L1 = 6ft X 6ft
Wired in series

L2 = 6ft X 6ft
Wired in series

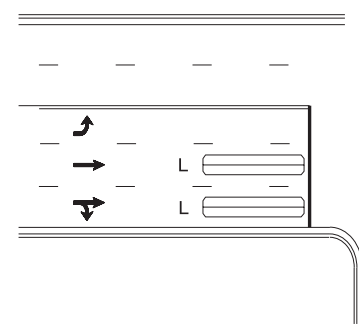
"Stretch" Operation

Low Speed Detection (≤35 mph)



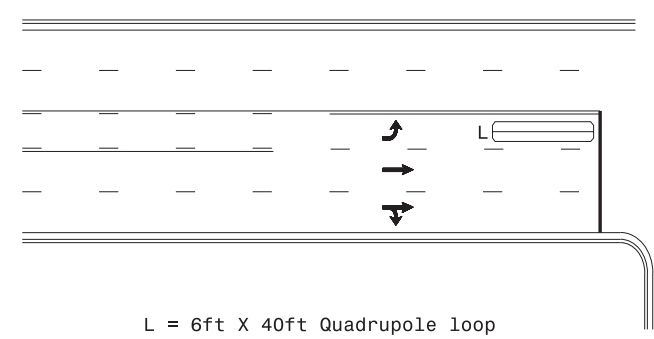
L = 6ft X 6ft
Wired in series

OR



L = 6ft X 40ft
Quadrupole loop, wired separately

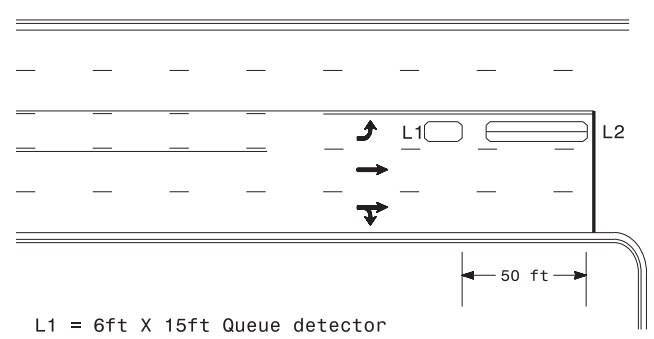
Left Turn Lane Detection



L = 6ft X 40ft Quadrupole loop

Presence Loop Detection

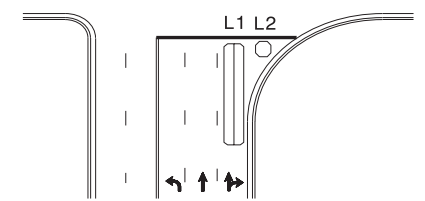
OR



L1 = 6ft X 15ft Queue detector
L2 = 6ft X 40ft Quadrupole loop

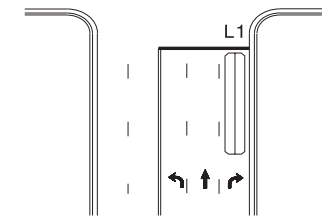
Queue Loop Detection

Right Turn Lane Detection

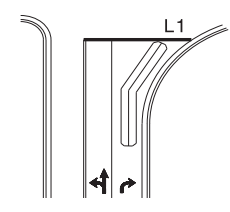


L1 = 6ft X 40ft Quadrupole loop
L2 = 6ft X 6ft [Minimum] Presence loop
Wired separately

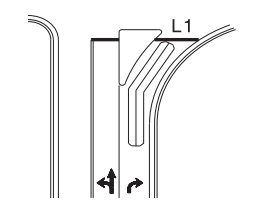
Shared Lane/
Wide Radius Turn



Standard Turn

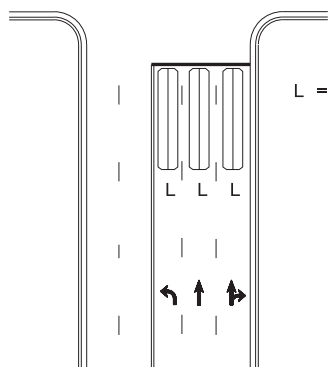


Wide Radius Turn



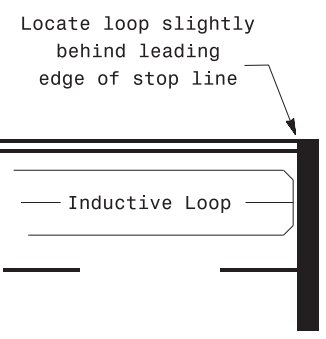
Channelized Turn

Side Street Detection



L = 6ft X 40ft
Quadrupole loop
Wired to separate
detectors/channels

Presence Loop Placement at Stop Lines



Locate loop slightly
behind leading
edge of stop line

- Note:
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

| | |
|---------------------------|-----------------------|
| PLAN DATE: September 2020 | REVIEWED BY: JPG |
| PREPARED BY: PLA | REVIEWED BY: |
| SCALE: N/A | REVISIONS: INIT. DATE |

750 N. Greenfield Pkwy, Garner, NC 27529