

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	2023CPT.10.12.10901 2023CPT.10.12.20901	1	
F.A. PROJECT NO.			



ENLARGED MUNICIPAL AND SUBURBAN AREAS

UNION COUNTY

NORTH CAROLINA

PREPARED BY THE

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS - DIVISION 10 DISTRICT 3

MAP #1 NC 75

2.78 MILES

FROM SOUTH CAROLINA STATE LINE
TO PAVEMENT JOINT AT
SR 1111 OLD PROVIDENCE ROAD

MAP #6 SR 1175 TRAILS END DRIVE

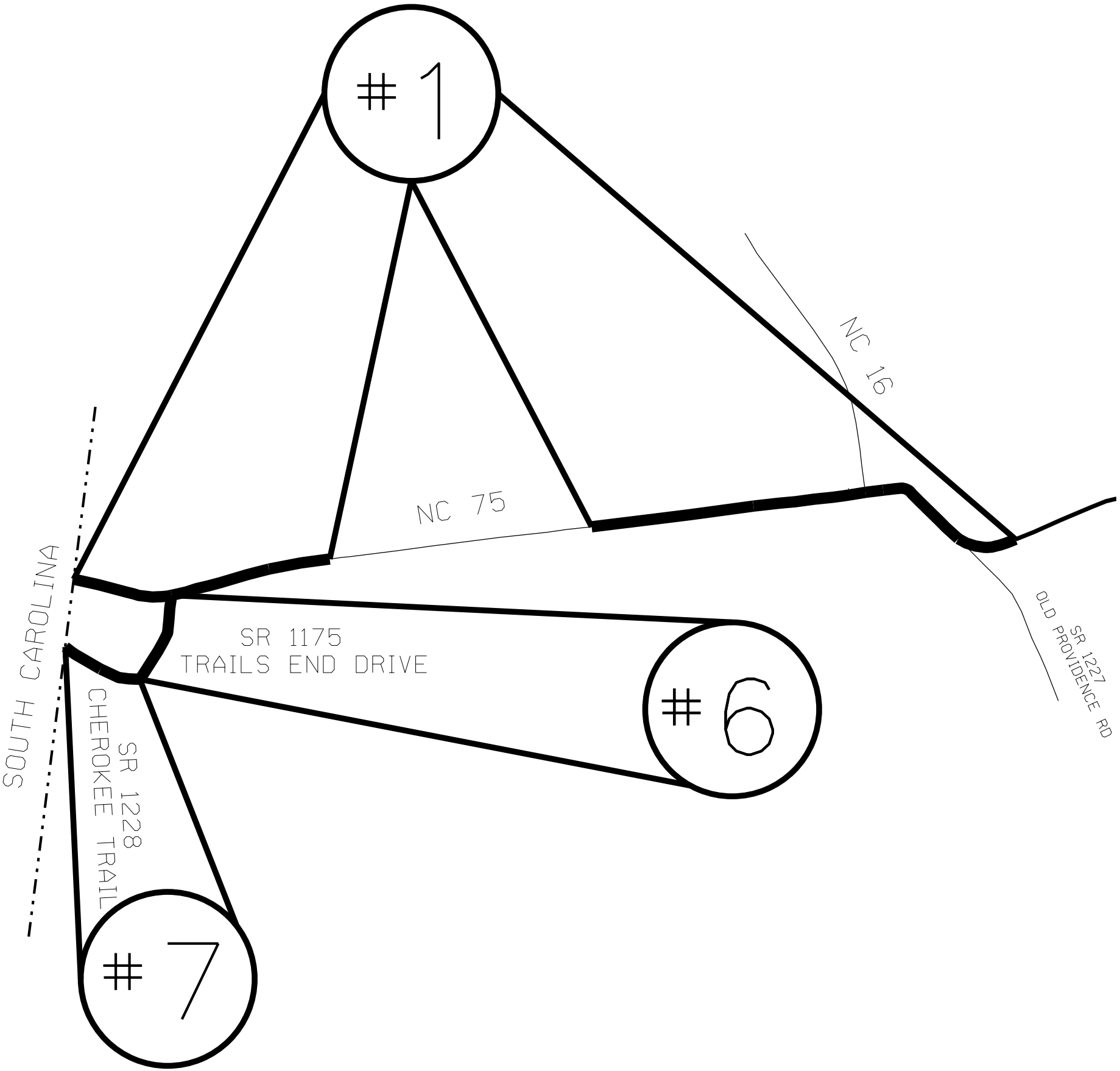
0.27 MILES

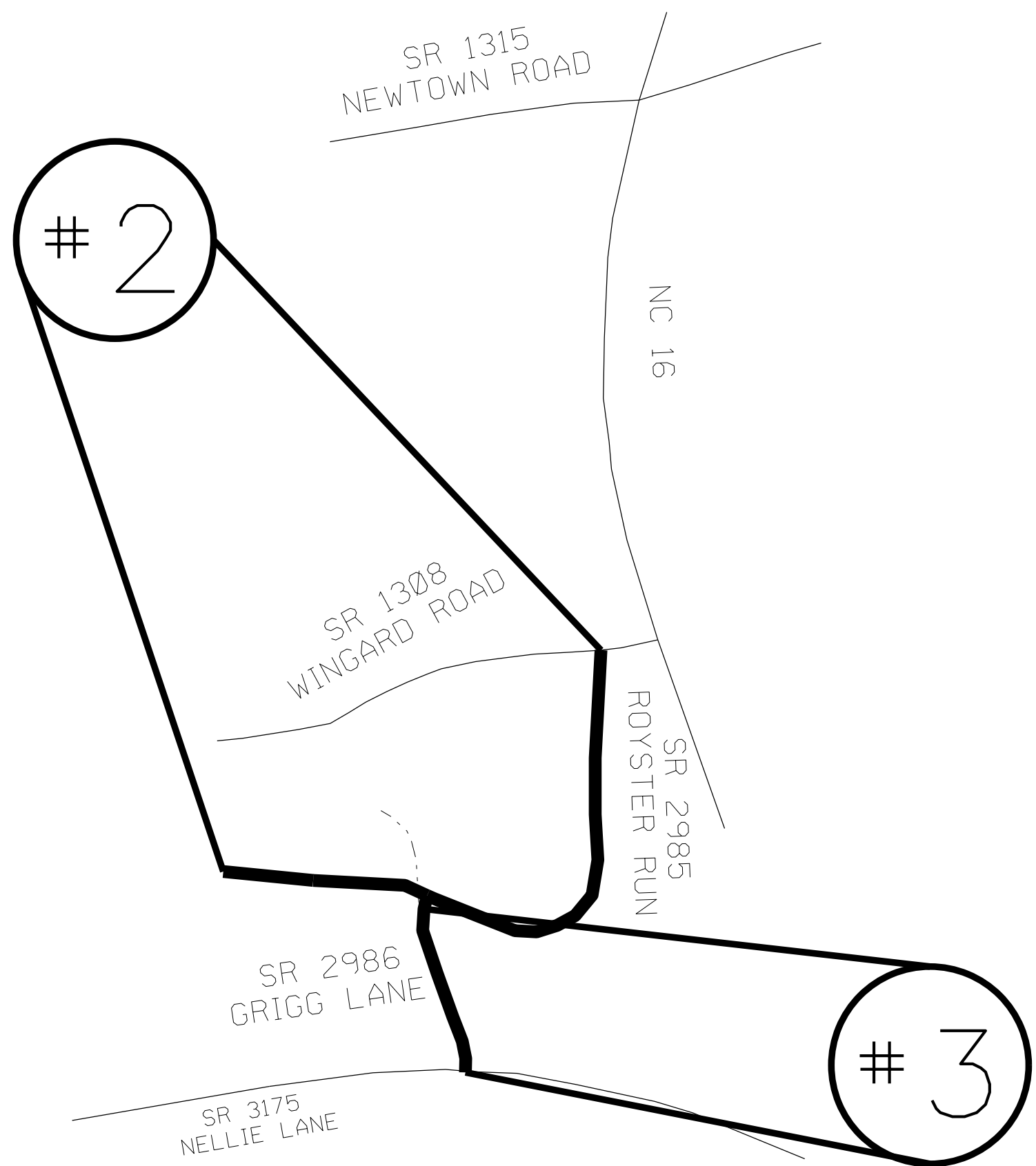
FROM NC 75 TO
SR 1228 CHEROKEE TRAIL

MAP #7 SR 1228 CHEROKEE TRAIL

0.19 MILES

FROM SR 1175 TRAILS END DRIVE
TO CUL DE SAC





STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
	2023CPT.10.12.10901 2023CPT.10.12.20901	2	
F.A. PROJECT NO.			



ENLARGED MUNICIPAL AND SUBURBAN AREAS
UNION COUNTY
NORTH CAROLINA
PREPARED BY THE
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS - DIVISION 10 DISTRICT 3

MAP # 2 SR 2985 ROYSTER RUN
0.4 MILES
FROM SR 1308 WINGARD ROAD
TO CUL DE SAC

MAP # 3 SR 2986 GRIGG LANE
0.25 MILES
FROM SR 2985 ROYSTER RUN
TO SR 3175 NELLIE LANE

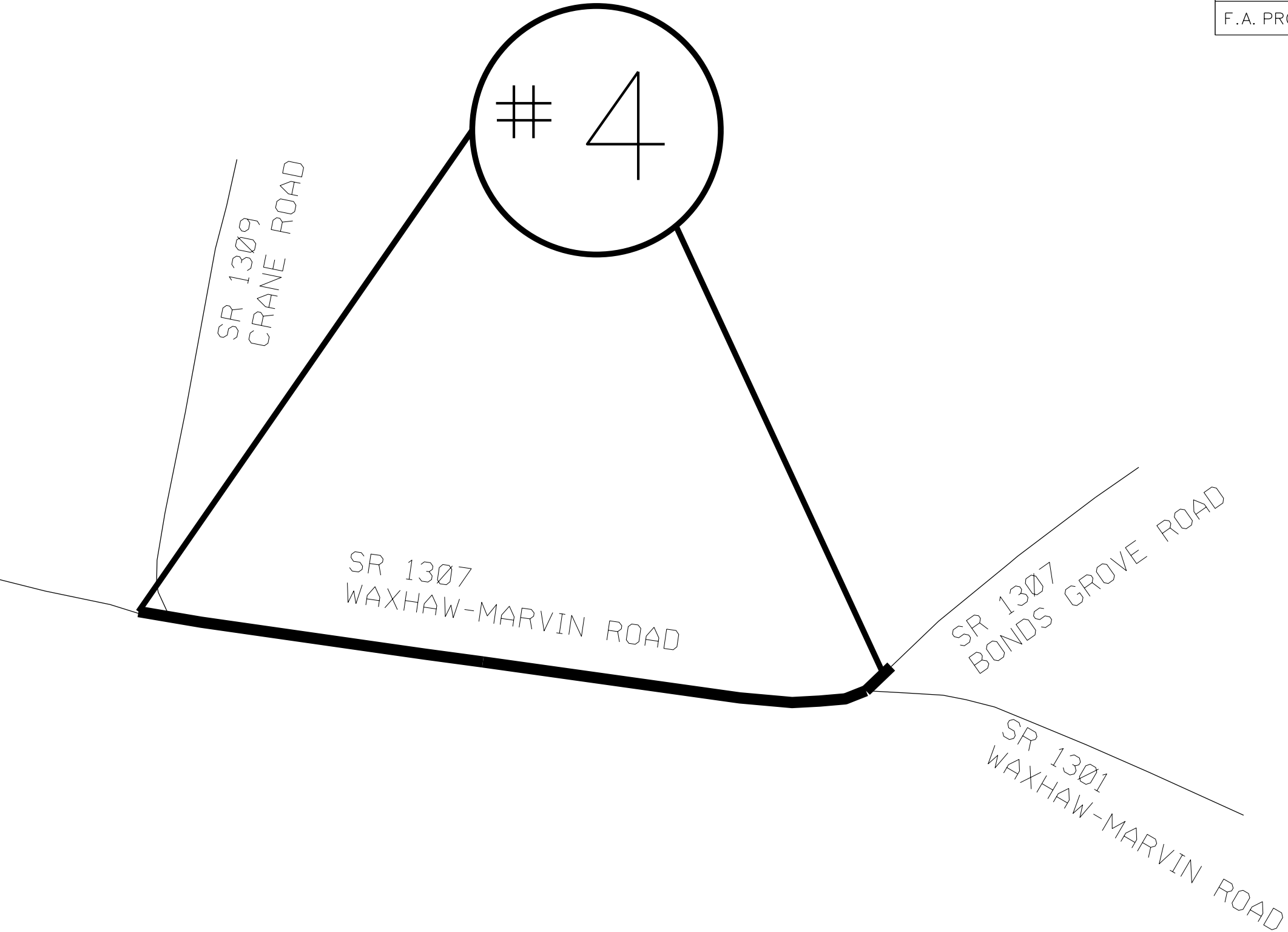
STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	2023CPT.10.12.10901 2023CPT.10.12.20901	3	
F.A. PROJECT NO.			



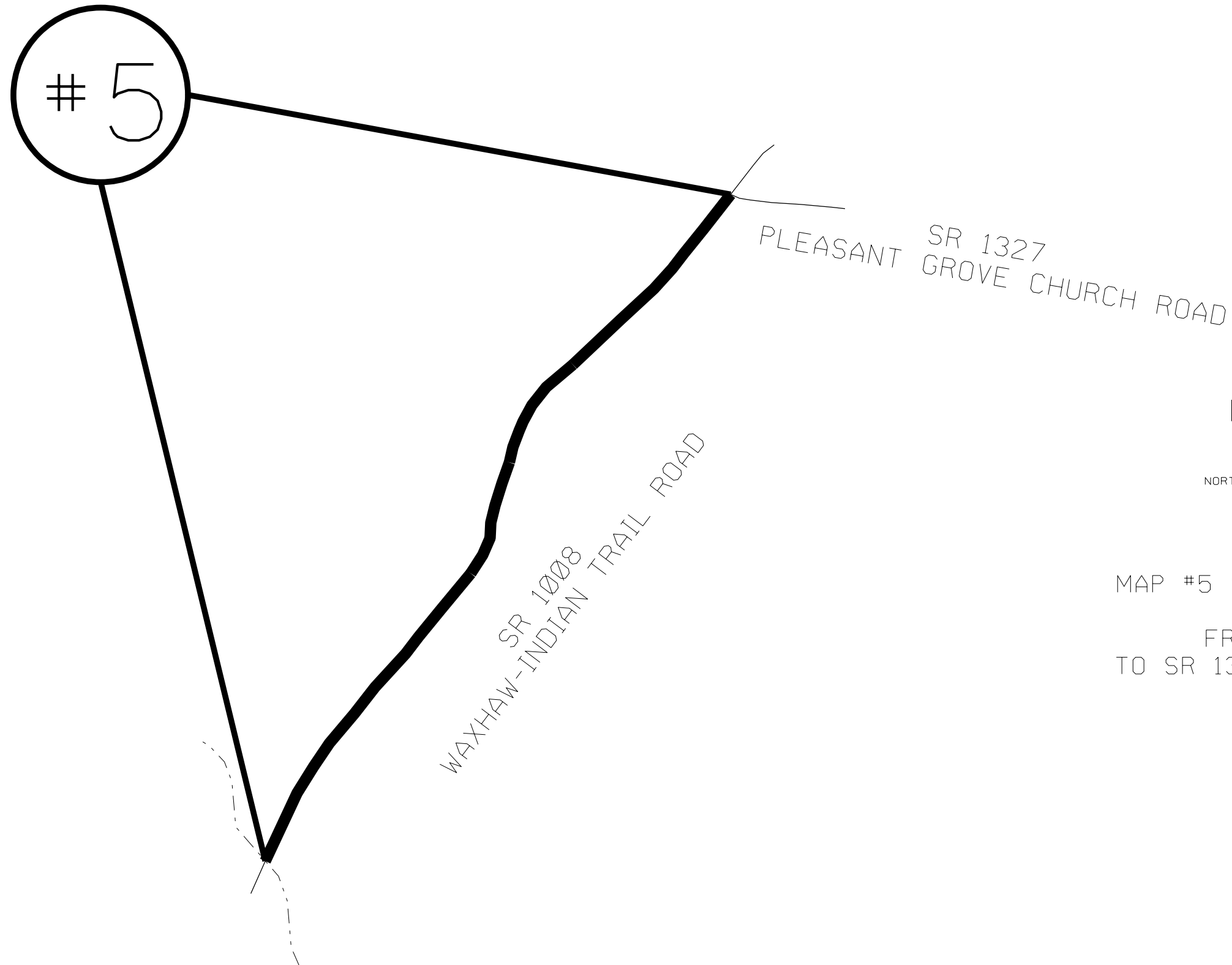
ENLARGED MUNICIPAL AND SUBURBAN AREAS
UNION COUNTY
NORTH CAROLINA

PREPARED BY THE
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS - DIVISION 10 DISTRICT 3

MAP #4 SR 1307 WAXHAW-MARVIN ROAD
0.49 MILES
FROM SR 1309 CRANE ROAD
TO SR 1307 BONDS GROVE ROAD



STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
	2023CPT.10.12.10901 2023CPT.10.12.20901	4	
F.A. PROJECT NO.			



ENLARGED MUNICIPAL AND SUBURBAN AREAS
UNION COUNTY
NORTH CAROLINA
PREPARED BY THE
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS - DIVISION 10 DISTRICT 3

MAP #5 SR 1008 WAXHAW-INDIAN TRAIL ROAD
0.73 MILES
FROM PVMT JOINT AT BRIDGE
TO SR 1327 PLEASANT GROVE CHURCH ROAD

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
	2023CPT.10.12.10901 2023CPT.10.12.20901	5	
F.A. PROJECT NO.			



ENLARGED MUNICIPAL AND SUBURBAN AREAS

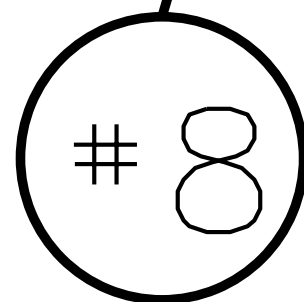
UNION COUNTY

NORTH CAROLINA

PREPARED BY THE

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS - DIVISION 10 DISTRICT 3

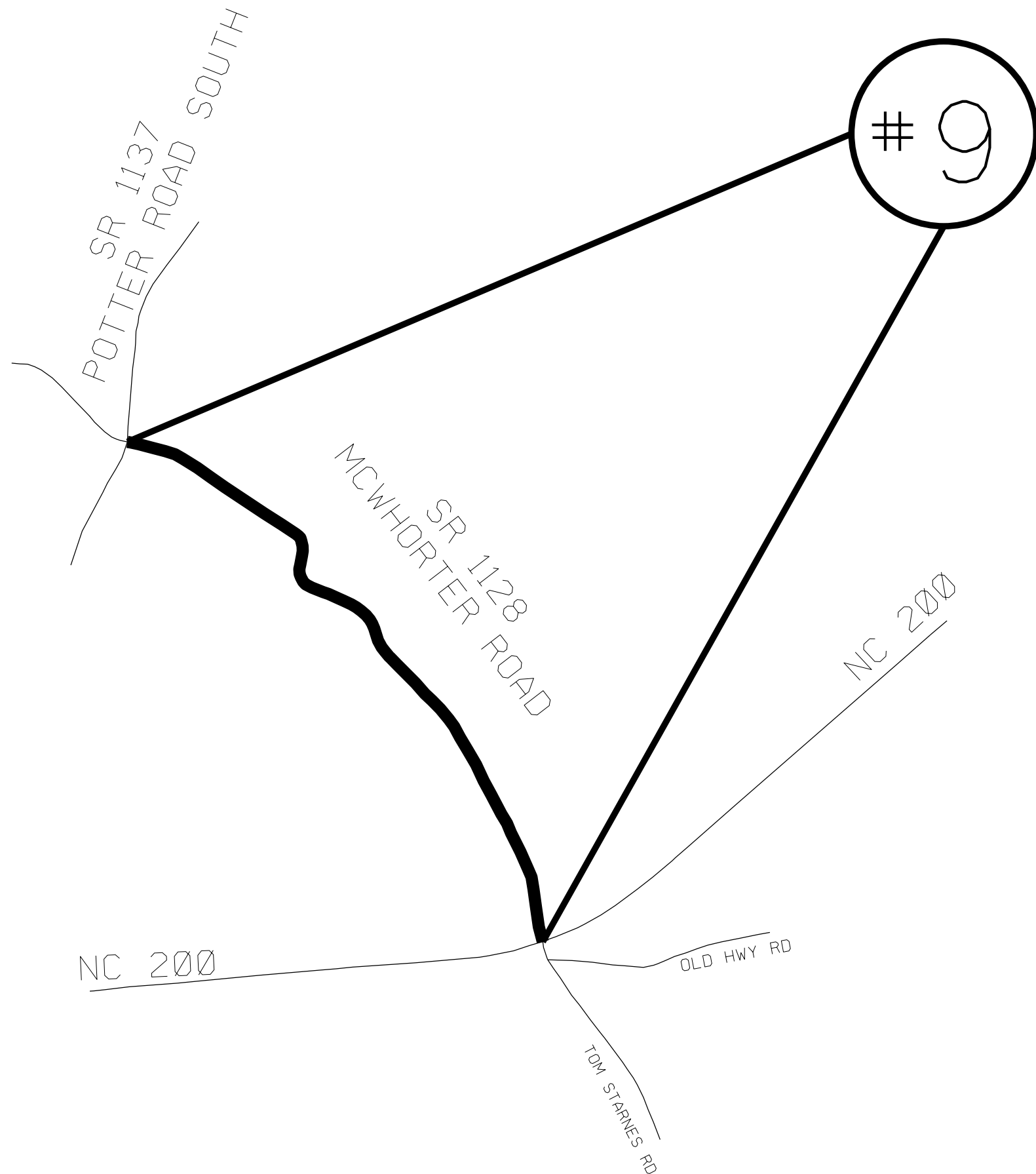
MAP #8 SR 1126 BIGHAM ROAD
0.77 MILES
FROM SR 1128 MCWHORTER ROAD
TO SR 1111 OLD WAXHAW-MONROE ROAD



SR 1111
OLD WAXHAW-MONROE ROAD

SR 1126
BIGHAM ROAD

SR 1128
MCWHORTER ROAD

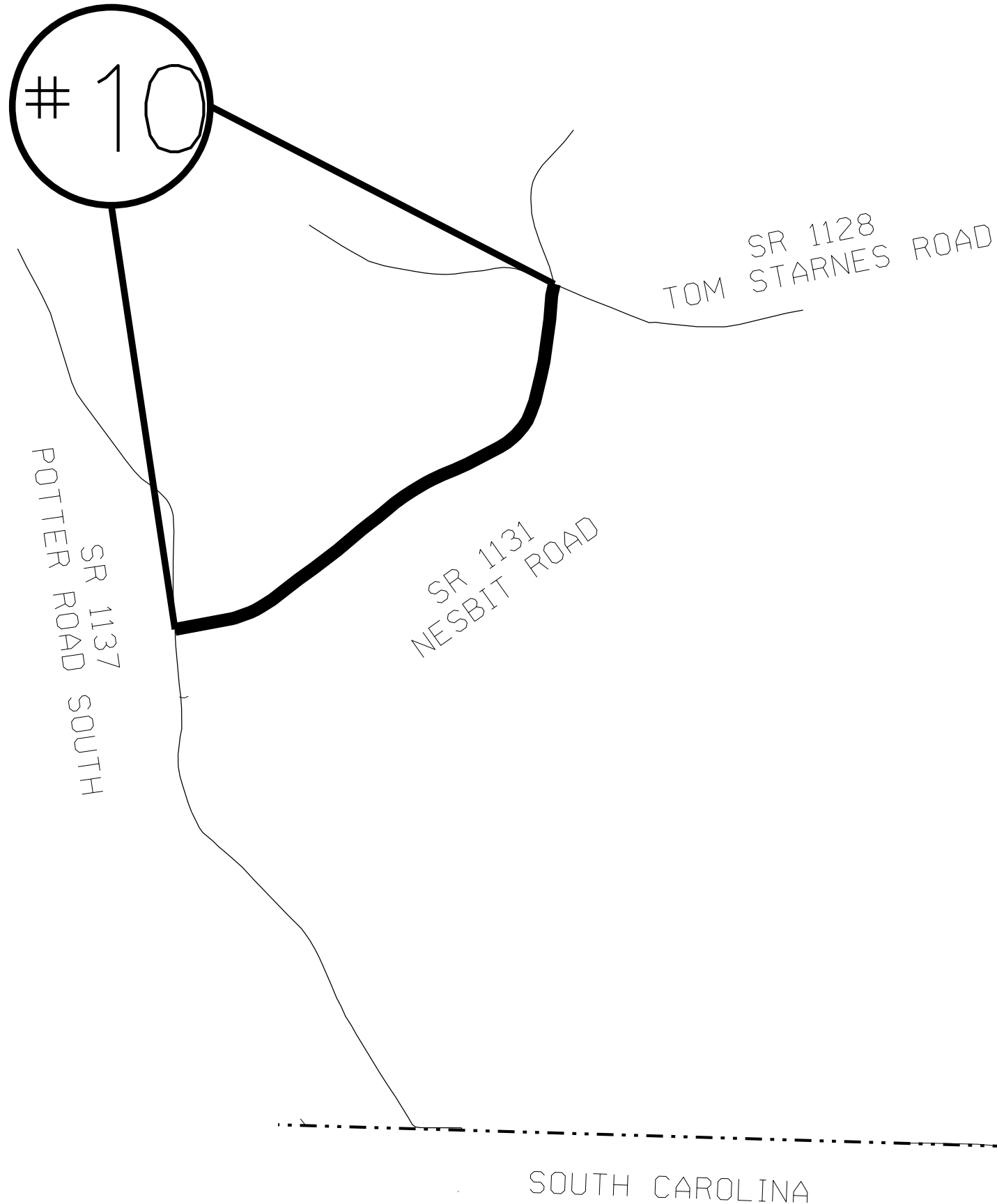


STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
	2023CPT.10.12.10901 2023CPT.10.12.20901	6	
F.A. PROJECT NO.			



ENLARGED MUNICIPAL AND SUBURBAN AREAS
UNION COUNTY
NORTH CAROLINA
PREPARED BY THE
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS - DIVISION 10 DISTRICT 3

MAP #9 SR 1128 MCWHORTER ROAD
1.48 MILES
FROM SR 1137 POTTER ROAD SOUTH
TO NC 200



STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
	2023CPT.10.12.10901 2023CPT.10.12.20901	7	
F.A. PROJECT NO.			



ENLARGED MUNICIPAL AND SUBURBAN AREAS

UNION COUNTY

NORTH CAROLINA

PREPARED BY THE
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS - DIVISION 10 DISTRICT 3

MAP #10 SR 1131 NESBIT ROAD
1.39 MILES
FROM SR 1137 POTTER ROAD SOUTH
TO SR 1128 TOM STARNES ROAD

11

WESLEY CHAPEL-STOUTS ROAD
SR1377
Old Charlotte Hwy

SR 1378
HAYES ROAD

SR 1009
OLD CHARLOTTE HWY

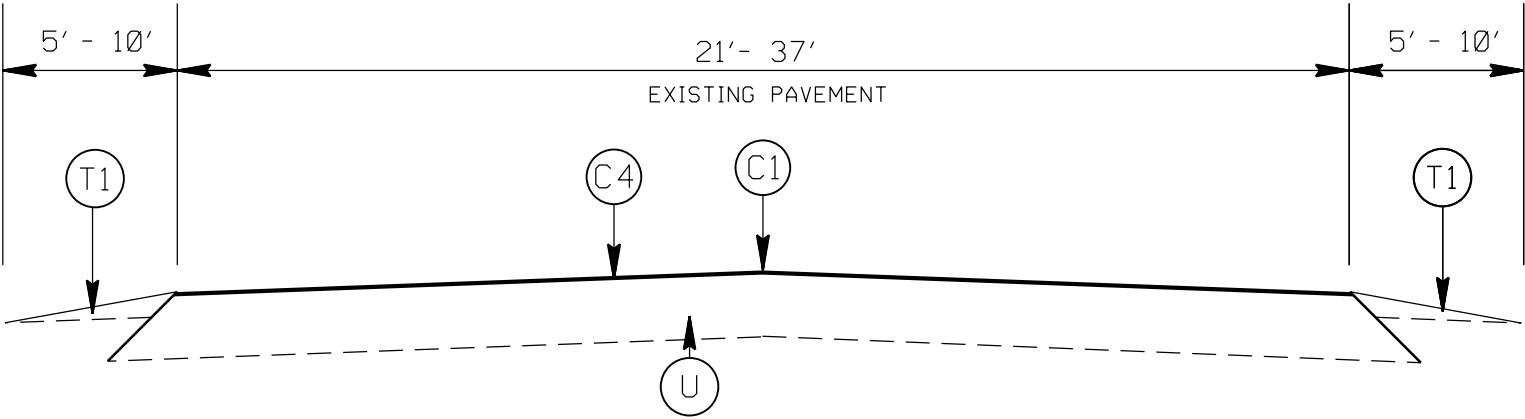
SR 1007
ROCKY RIVER ROAD

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
	2023CPT.10.12.10901 2023CPT.10.12.20901	8	
F.A. PROJECT NO.			

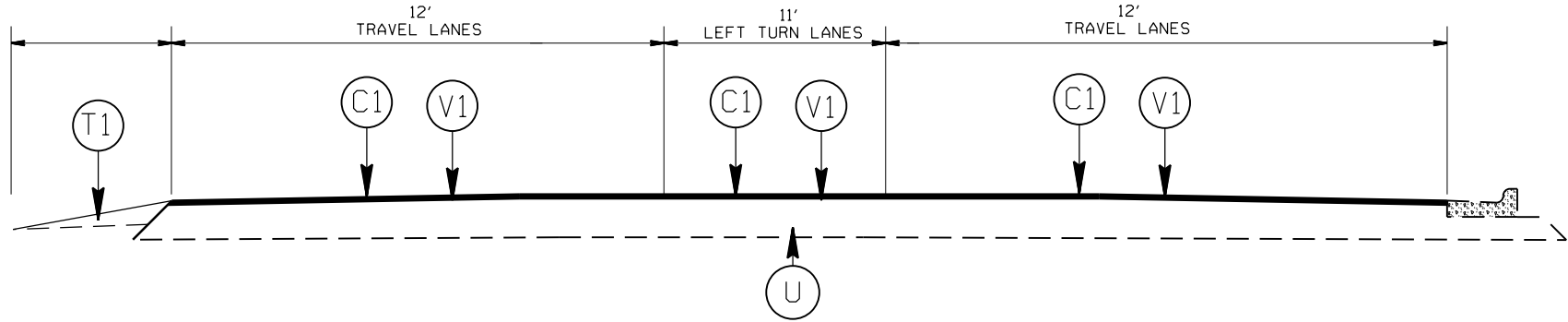


ENLARGED MUNICIPAL AND SUBURBAN AREAS
UNION COUNTY
NORTH CAROLINA
PREPARED BY THE
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS - DIVISION 10 DISTRICT 3

MAP #11 SR 1009 OLD CHARLOTTE HWY
2.32 MILES
FROM SR 1007 ROCKY RIVER ROAD
TO THE WEST END OF SR 1378 HAYES ROAD



TYPICAL SECTION 1
NC 75 (MAP 1)
APPROX. STA: 10+00 TO 52+60
APPROX. STA. 79+60 TO 110+85
APPROX. STA; 115+30 TO 124+60
APPROX. STA: 136+20 TO END OF MAP
SR 1008 WAXHAW-INDIAN TRAIL ROAD (MAP 5)




TYPICAL SECTION 2
NC 75 (MAP 1)
APPROX. STA: 110+85 TO 115+30

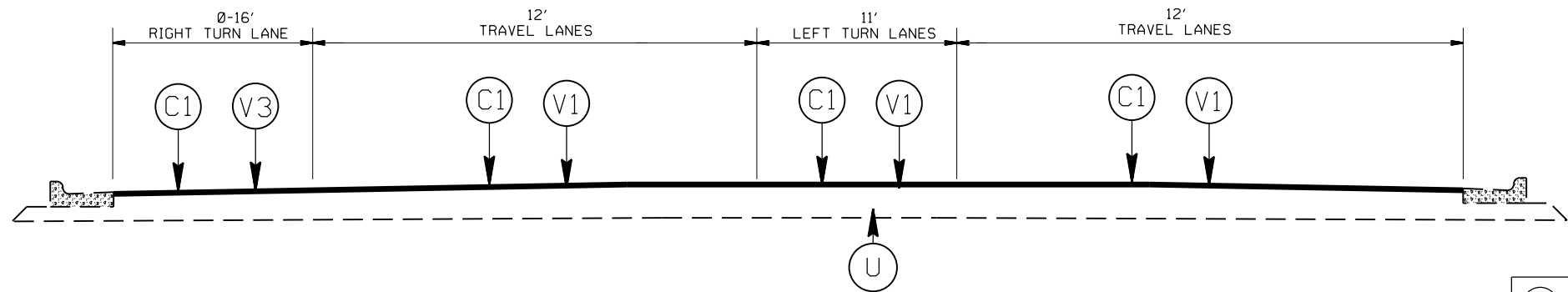
SHOULDER RECONSTRUCTION WILL BE AS DIRECTED BY THE ENGINEER.

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	2023CPT.10.12.10901 2023CPT.10.12.20901	9	
F.A. PROJECT NO.			

PAVEMENT SCHEDULE

C1	PROP. APPROX. 2.0" ASPHALT CONC. SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
C2	PROP. APPROX. 1.5" ASPHALT CONC. SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS PER SQ. YD.
C3	PROP. APPROX. 1.5" ASPHALT CONC. SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS PER SQ. YD.
C4	ASPHALT SURFACE TREATMENT, MAT COAT # 67
T1	SHOULDER RECONSTRUCTION
U	EXISTING PAVEMENT
V1	MILLING OF EXISTING PAVEMENT, 2.0" DEPTH.
V2	MILLING OF EXISTING PAVEMENT, 1.5" DEPTH.
V3	INCIDENTAL MILLING (FULL WIDTH TURN LANES 500' OR LESS)

2023-2024 UNION COUNTY RESURFACING			
SCALE	-NA-		REVISIONS
DATE	1/20		
DWG. BY	AMO		
DESIGN BY	AMO		
APPROVED	CLA		

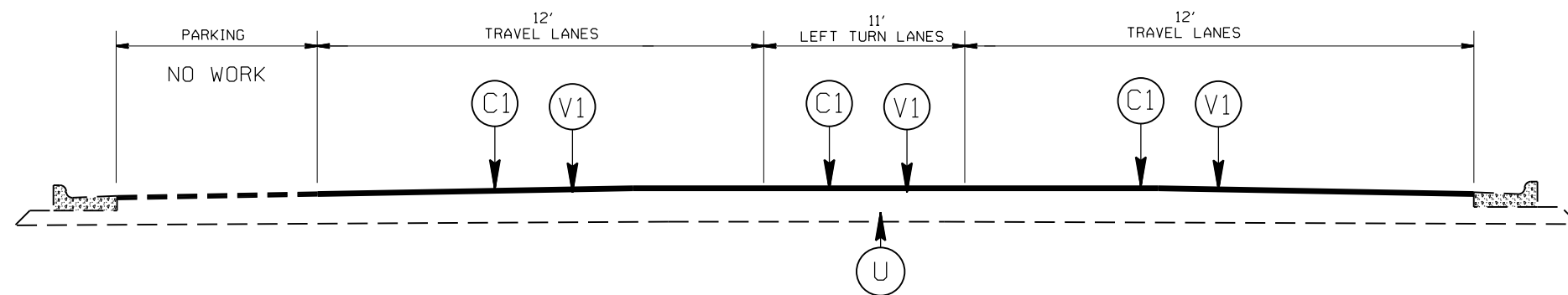


TYPICAL SECTION 3
NC 75 (MAP 1)
APPROX. STA: 124+60 TO 136+20

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	2023CPT.10.12.10901 2023CPT.10.12.20901	10	
F.A. PROJECT NO.			


PAVEMENT SCHEDULE

(C1)	PROP. APPROX. 2.0" ASPHALT CONC. SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
(C2)	PROP. APPROX. 1.5" ASPHALT CONC. SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS PER SQ. YD.
(C3)	PROP. APPROX. 1.5" ASPHALT CONC. SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS PER SQ. YD.
(C4)	ASPHALT SURFACE TREATMENT, MAT COAT # 67
(T1)	SHOULDER RECONSTRUCTION
(U)	EXISTING PAVEMENT
(V1)	MILLING OF EXISTING PAVEMENT, 2.0" DEPTH.
(V2)	MILLING OF EXISTING PAVEMENT, 1.5" DEPTH.
(V3)	INCIDENTAL MILLING (FULL WIDTH TURN LANES 500' OR LESS)

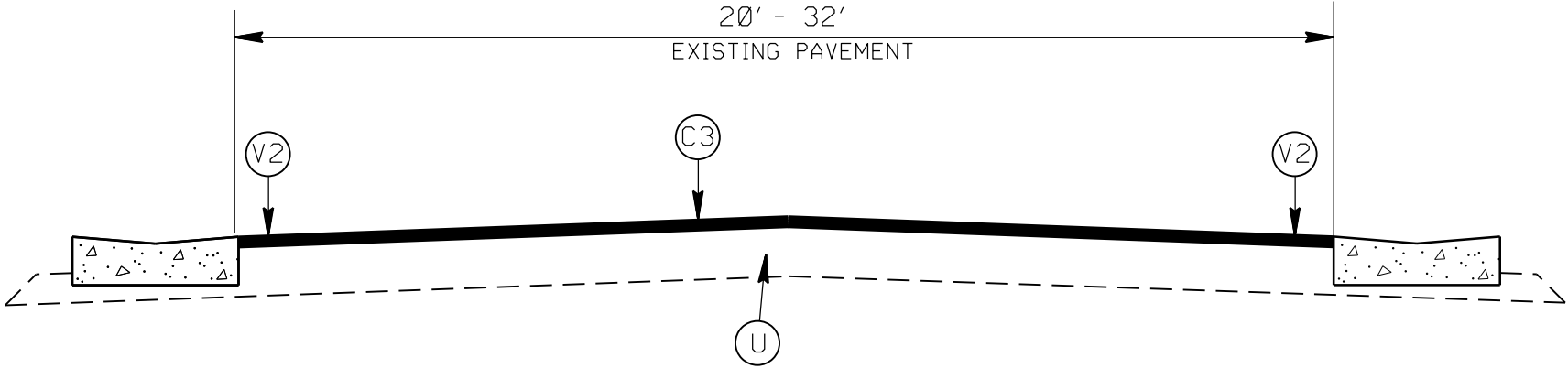


TYPICAL SECTION 4
NC 75 (MAP 1)

SHOULDER RECONSTRUCTION WILL BE AS DIRECTED BY THE ENGINEER.

2023-2024 UNION COUNTY RESURFACING			
SCALE	-NA-		REVISIONS
DATE	9/21		
DWG. BY	AMO		
DESIGN BY	AMO		
APPROVED			

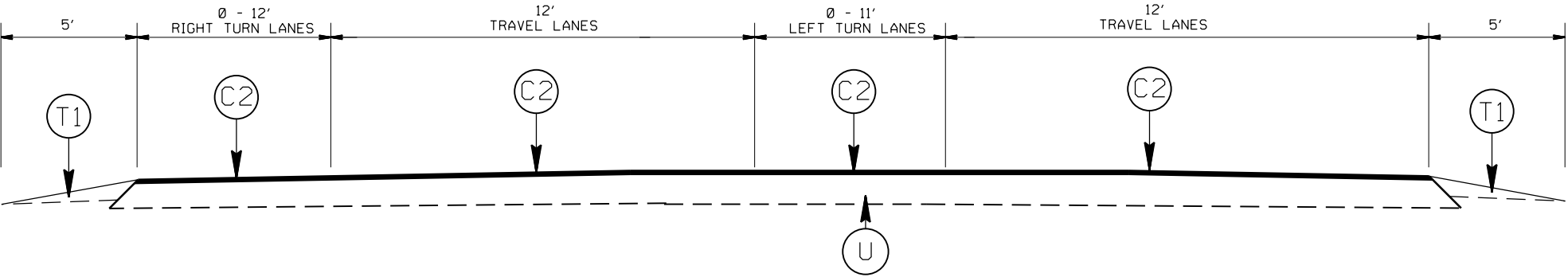
STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	2023CPT.10.12.10901 2023CPT.10.12.20901	11	
F.A. PROJECT NO.			



TYPICAL SECTION 5
SR 2985 ROYSTER RUN (MAP 2)
SR 2986 GRIGG LANE (MAP 3)


PAVEMENT SCHEDULE

C1	PROP. APPROX. 2.0" ASPHALT CONC. SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
C2	PROP. APPROX. 1.5" ASPHALT CONC. SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS PER SQ. YD.
C3	PROP. APPROX. 1.5" ASPHALT CONC. SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS PER SQ. YD.
C4	ASPHALT SURFACE TREATMENT, MAT COAT # 67
T1	SHOULDER RECONSTRUCTION
U	EXISTING PAVEMENT
V1	MILLING OF EXISTING PAVEMENT, 2.0" DEPTH.
V2	MILLING OF EXISTING PAVEMENT, 1.5" DEPTH.
V3	INCIDENTAL MILLING (FULL WIDTH TURN LANES 500' OR LESS)

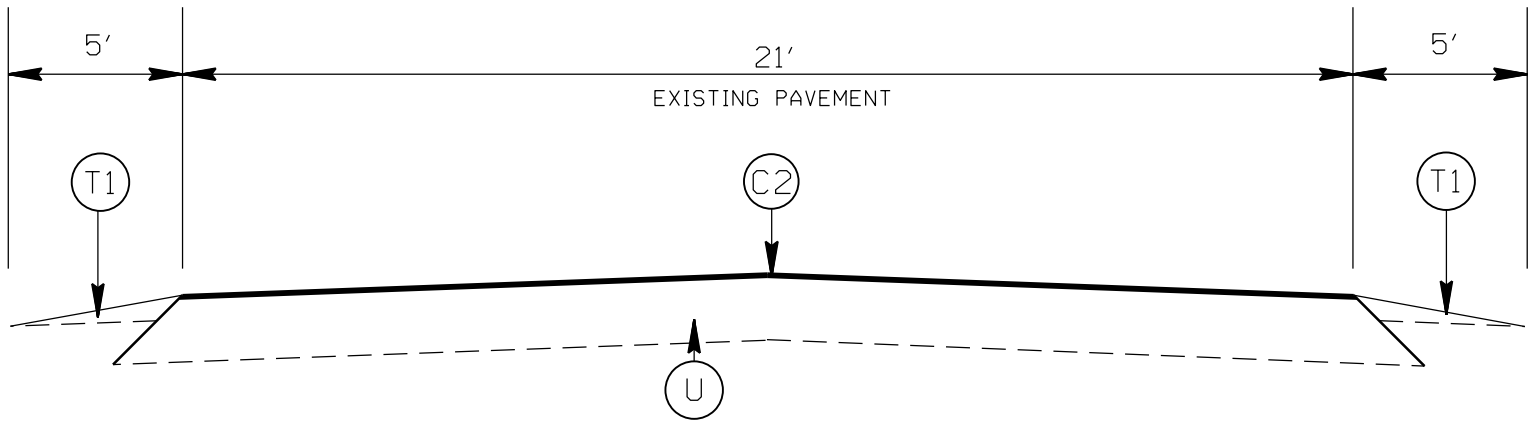


TYPICAL SECTION 6
SR 1307 WAXHAW-MARVIN ROAD (MAP 4)
APPROX. STA. 10+00 TO STA. 20+10

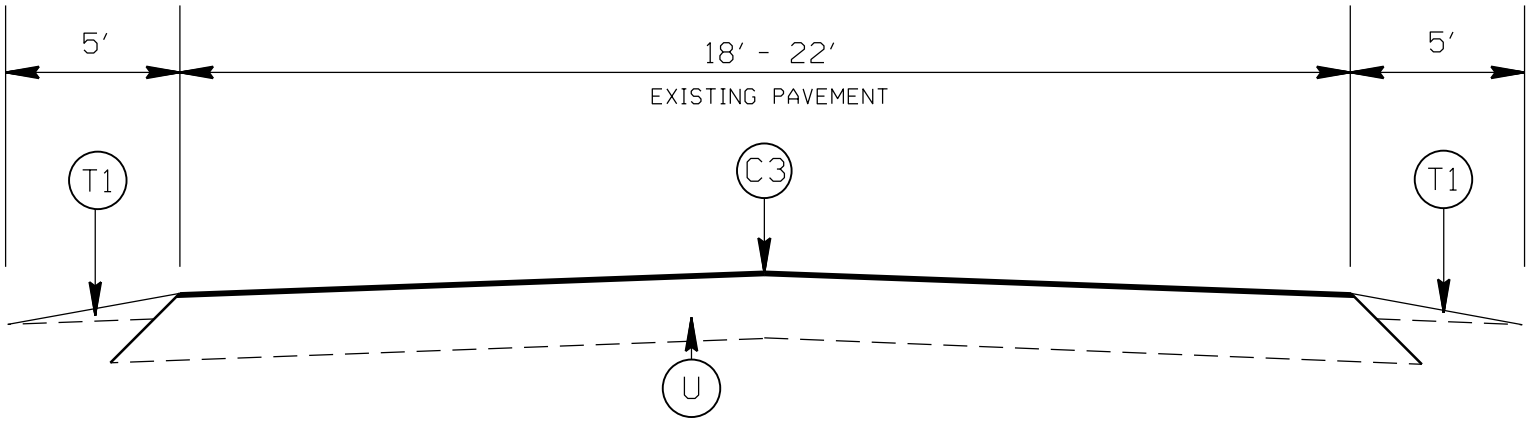
SHOULDER RECONSTRUCTION WILL BE AS DIRECTED BY THE ENGINEER.

2023-2024 UNION COUNTY RESURFACING			
SCALE	-1/4"		REVISIONS
DATE	9/21		
DWG. BY	AMO		
DESIGN BY	AMO		
APPROVED			

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	2023CPT.10.12.10901 2023CPT.10.12.20901	12	
F.A. PROJECT NO.			



TYPICAL SECTION 7
SR 1307 WAXHAW-MARVIN ROAD (MAP 4)
APPROX. STA. 20+10 TO END OF MAP



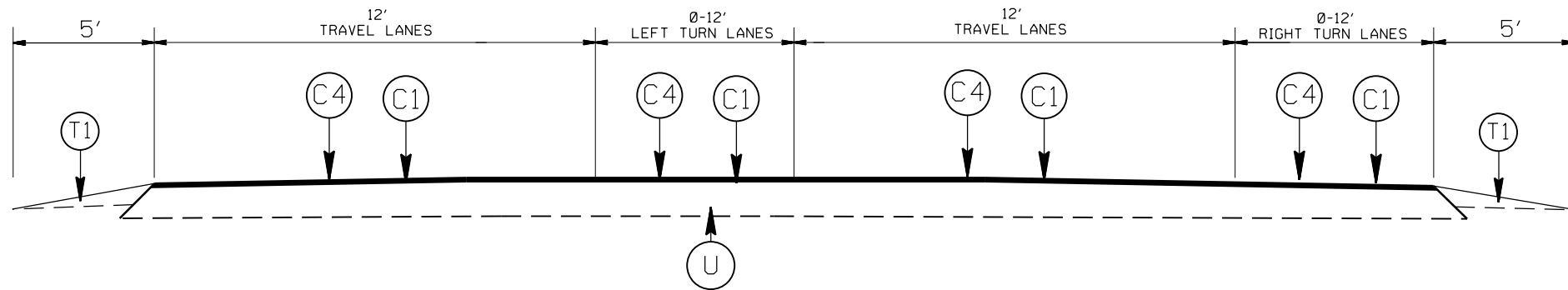
TYPICAL SECTION 8
SR 1175 TRAILS END (MAP 6)
SR 1228 CHEROKEE TRAIL (MAP 7)
SR 1126 BIGHAM ROAD (MAP 8)
SR 1128 MCWHORTER ROAD (MAP 9)
SR 1131 NESBIT ROAD (MAP 10)

PAVEMENT SCHEDULE

C1	PROP. APPROX. 2.0" ASPHALT CONC. SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
C2	PROP. APPROX. 1.5" ASPHALT CONC. SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS PER SQ. YD.
C3	PROP. APPROX. 1.5" ASPHALT CONC. SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS PER SQ. YD.
C4	ASPHALT SURFACE TREATMENT, MAT COAT # 67
T1	SHOULDER RECONSTRUCTION
U	EXISTING PAVEMENT
V1	MILLING OF EXISTING PAVEMENT, 2.0" DEPTH.
V2	MILLING OF EXISTING PAVEMENT, 1.5" DEPTH.
V3	INCIDENTAL MILLING (FULL WIDTH TURN LANES 500' OR LESS)

SHOULDER RECONSTRUCTION WILL BE AS DIRECTED BY THE ENGINEER.

2023-2024 UNION COUNTY RESURFACING			
SCALE	-1/4"		REVISIONS
DATE	1/20		
DWG. BY	AMO		
DESIGN BY	AMO		
APPROVED	CLA		

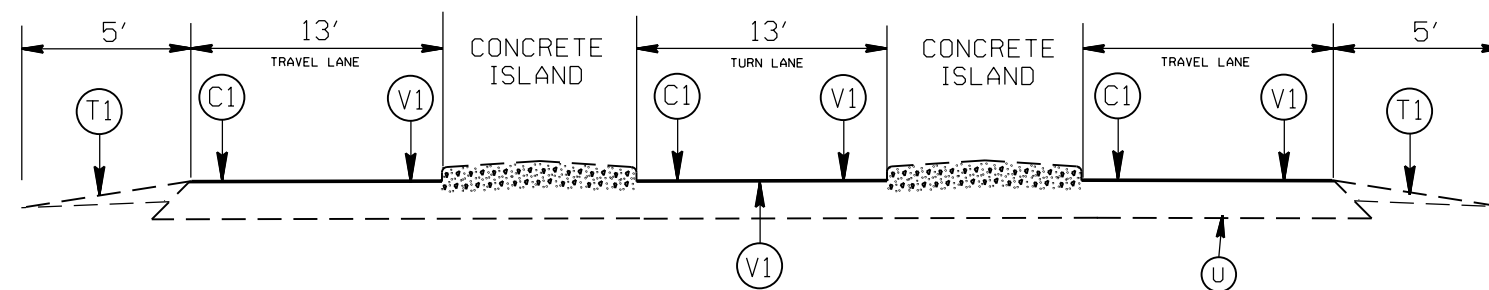


TYPICAL SECTION 9
 SR 1007 OLD CHARLOTTE HWY (MAP 11)
 APPROX. STA: 10+00 TO 55+80
 APPROX. STA. 61+75 TO 141+62

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	2023CPT.10.12.10901 2023CPT.10.12.20901	13	
F.A. PROJECT NO.			


PAVEMENT SCHEDULE

C1	PROP. APPROX. 2.0" ASPHALT CONC. SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
C2	PROP. APPROX. 1.5" ASPHALT CONC. SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS PER SQ. YD.
C3	PROP. APPROX. 1.5" ASPHALT CONC. SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS PER SQ. YD.
C4	ASPHALT SURFACE TREATMENT, MAT COAT # 67
T1	SHOULDER RECONSTRUCTION
U	EXISTING PAVEMENT
V1	MILLING OF EXISTING PAVEMENT, 2.0" DEPTH.
V2	MILLING OF EXISTING PAVEMENT, 1.5" DEPTH.
V3	INCIDENTAL MILLING (FULL WIDTH TURN LANES 500' OR LESS)

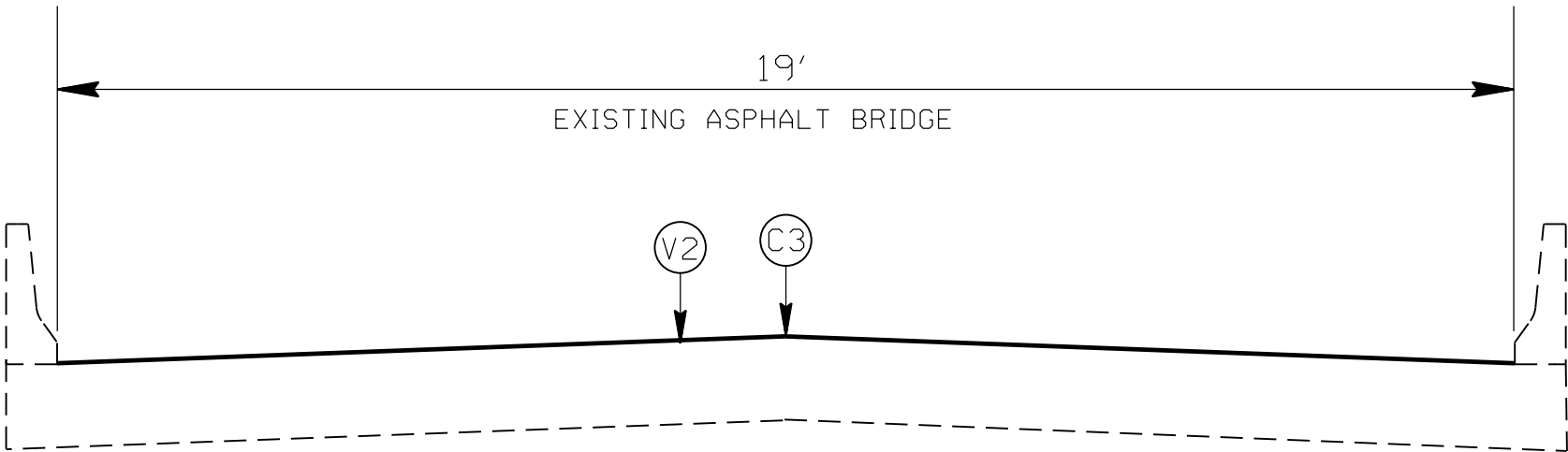


TYPICAL SECTION 10
 SR 1007 OLD CHARLOTTE HWY (MAP 11)
 APPROX. STA. 55+80 TO 61+75

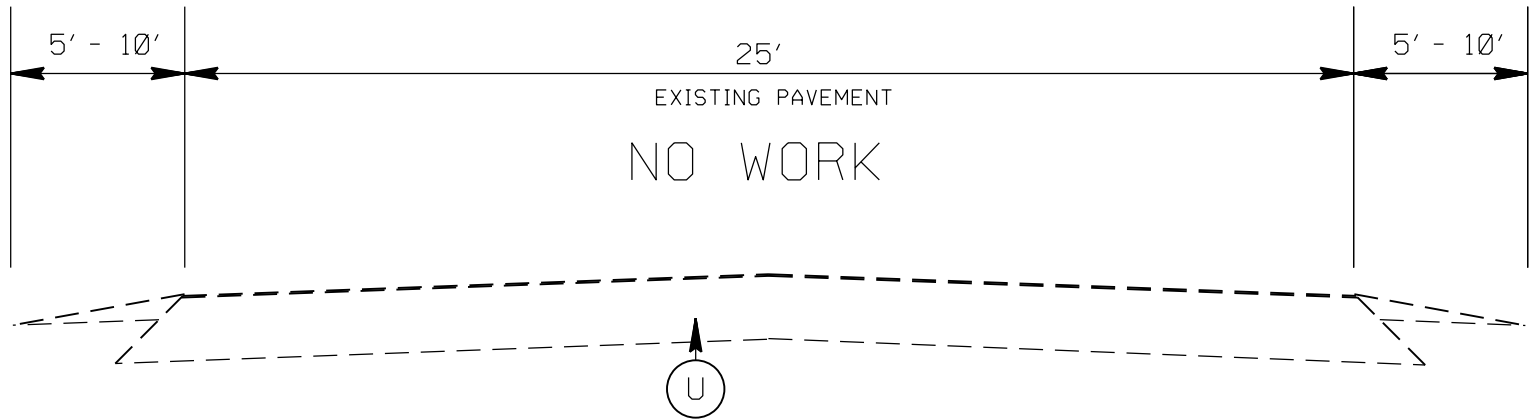
SHOULDER RECONSTRUCTION WILL BE AS DIRECTED BY THE ENGINEER.

2023-2024 UNION COUNTY RESURFACING			
SCALE	-NA-		REVISIONS
DATE	1/20		
DWG. BY	AMO		
DESIGN BY	AMO		
APPROVED	CLA		

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	2023CPT.10.12.10901 2023CPT.10.12.20901	14	
F.A. PROJECT NO.			



TYPICAL SECTION 11
SR 1126 BIGHAM ROAD (MAP 8)




TYPICAL SECTION 12
NC 75 (MAP 1)
APPROX. STA: 52+60 TO 79+60
NO WORK

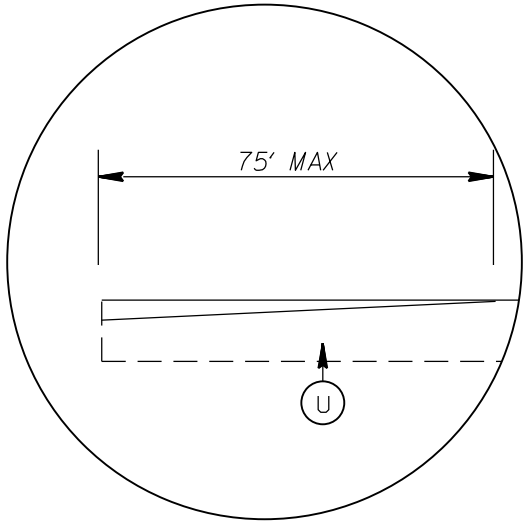
PAVEMENT SCHEDULE

C1	PROP. APPROX. 2.0" ASPHALT CONC. SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
C2	PROP. APPROX. 1.5" ASPHALT CONC. SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS PER SQ. YD.
C3	PROP. APPROX. 1.5" ASPHALT CONC. SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS PER SQ. YD.
C4	ASPHALT SURFACE TREATMENT, MAT COAT # 67
T1	SHOULDER RECONSTRUCTION
U	EXISTING PAVEMENT
V1	MILLING OF EXISTING PAVEMENT, 2.0" DEPTH.
V2	MILLING OF EXISTING PAVEMENT, 1.5" DEPTH.
V3	INCIDENTAL MILLING (FULL WIDTH TURN LANES 500' OR LESS)

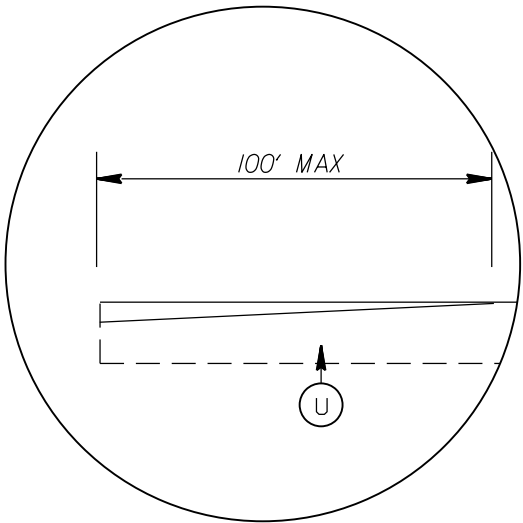
SHOULDER RECONSTRUCTION WILL BE AS DIRECTED BY THE ENGINEER.

2023-2024 UNION COUNTY RESURFACING			
SCALE	-NA-		REVISIONS
DATE	1/20		
DWG. BY	AMO		
DESIGN BY	AMO		
APPROVED	CLA		

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	2023CPT.10.12.10901 2023CPT.10.12.20901	15	
F.A. PROJECT NO.			



DETAIL FOR INCIDENTAL MILLING (0" TO 1.5")
TIE IN

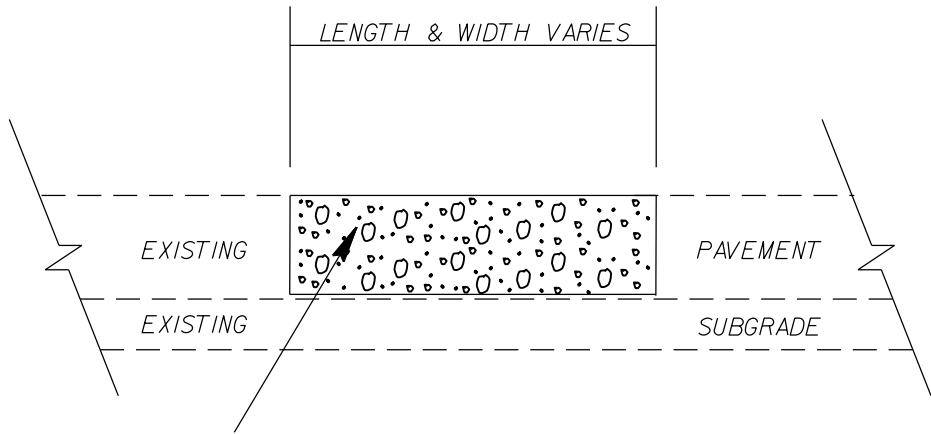


DETAIL FOR INCIDENTAL MILLING (0" TO 2.0")
TIE IN

PAVEMENT SCHEDULE

C1	PROP. APPROX. 2.0" ASPHALT CONC. SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
C2	PROP. APPROX. 1.5" ASPHALT CONC. SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS PER SQ. YD.
C3	PROP. APPROX. 1.5" ASPHALT CONC. SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS PER SQ. YD.
C4	ASPHALT SURFACE TREATMENT, MAT COAT # 67
T1	SHOULDER RECONSTRUCTION
U	EXISTING PAVEMENT
V1	MILLING OF EXISTING PAVEMENT, 2.0" DEPTH.
V2	MILLING OF EXISTING PAVEMENT, 1.5" DEPTH.
V3	INCIDENTAL MILLING (FULL WIDTH TURN LANES 500' OR LESS)

PATCHING DETAIL



RATE IS VARIABLE AND SHALL BE
AS DIRECTED BY THE ENGINEER.
ASPHALT TYPE 119.0C SHALL BE PLACED.

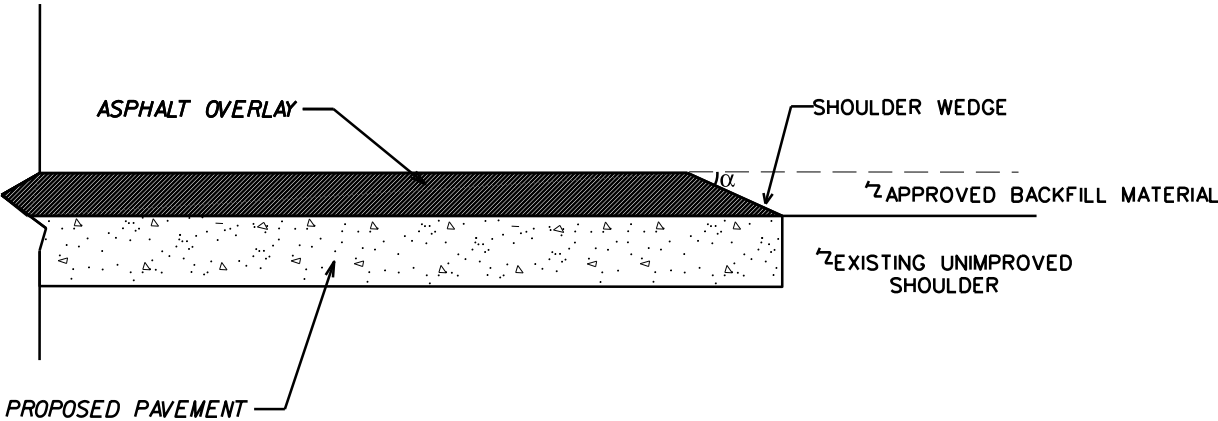
SHOULDER RECONSTRUCTION WILL BE AS DIRECTED BY THE ENGINEER.

2023-2024 UNION COUNTY RESURFACING			
SCALE	-NA-		REVISIONS
DATE	9/21		
DWG. BY	AMO		
DESIGN BY	AMO		
APPROVED			

NOTES:

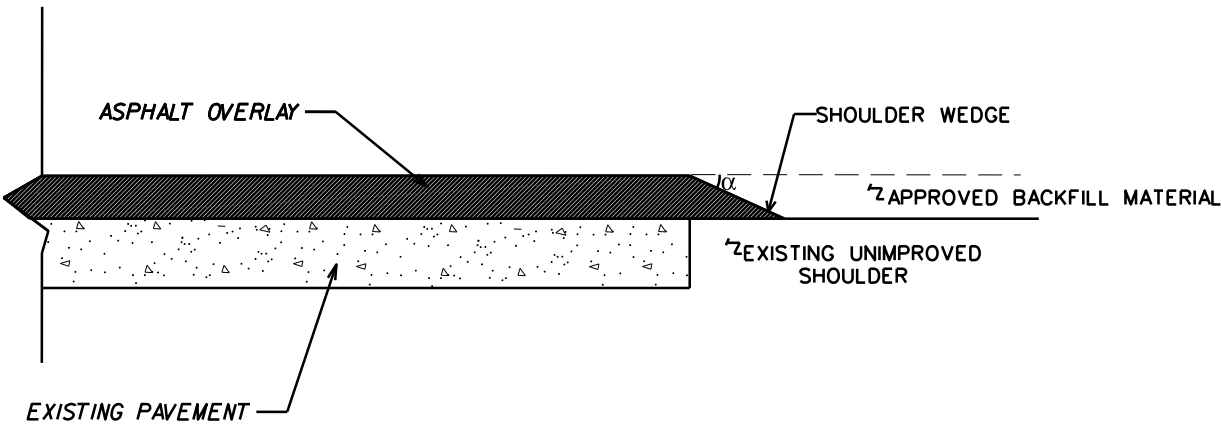
- 1) DETAIL DOES NOT APPLY TO OGAFB AND ULTRA-THIN BONDED WEARING COURSE.
- 2) BACKFILL SHOULDER WITH APPROVED MATERIAL.
- 3) THE SHOULDER WEDGE DEVICE MAY BE DISENGAGED AT PAVED DRIVEWAYS AND SIDE STREETS.

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	2023CPT.10.12.10901 2023CPT.10.12.20901	16	
F.A. PROJECT NO.			



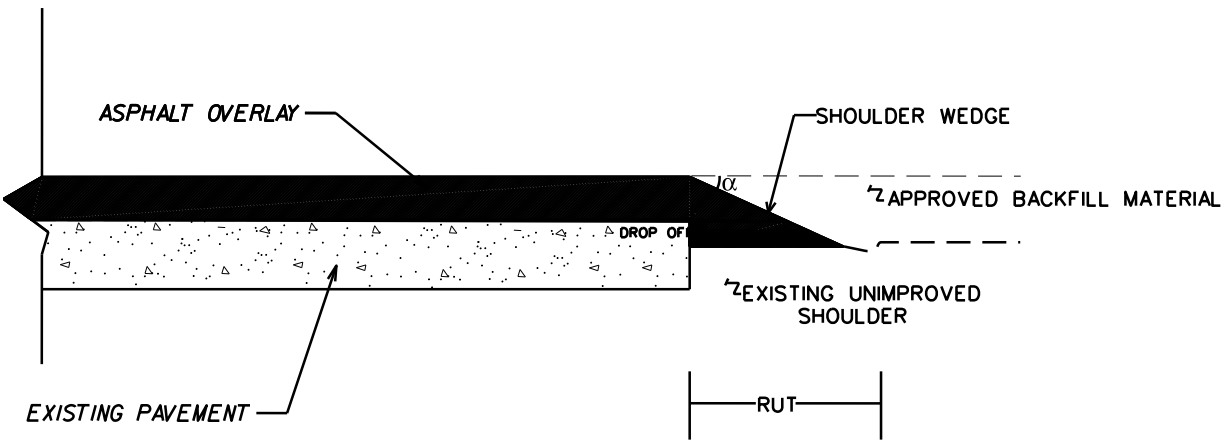
SHOULDER WEDGE DETAIL

(RESURFACING PROJECTS W/ WIDENING OR WITH EXISTING PAVED SHOILDER HAVING NO DROPOFFS)



SHOULDER WEDGE DETAIL


(RESURFACING PROJECTS W/ NO WIDENING)



SHOULDER WEDGE DETAIL

(RESURFACING ADJACENT TO RUTTED SHOULDER)

α = 30 DEGREES

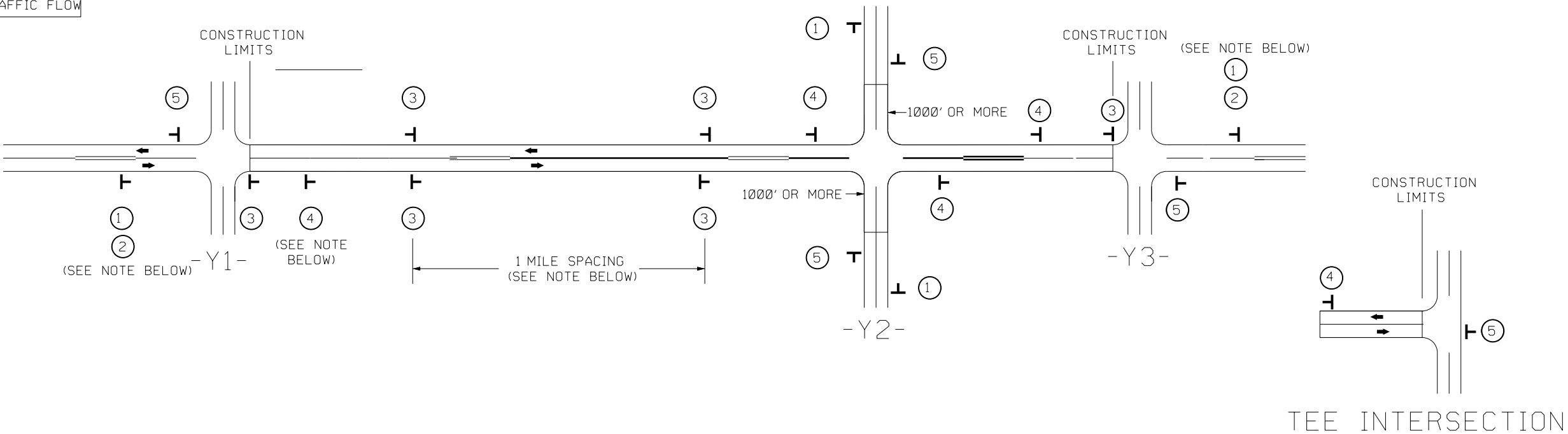
SHOULDER WEDGE DETAILS			
SCALE	-NA-		REVISIONS
DATE	11/20		
DWG. BY	AMO		
DESIGN BY	AMO		
APPROVED			

SIGNING FOR RESURFACING PROJECTS

LEGEND

STATIONARY SIGN

DIRECTION OF TRAFFIC FLOW



MAINLINE (-L-) SIGNING

-Y- LINE SIGNING

SIGNING NOTES AND PLACEMENT PER DIRECTION	<div>1</div> <div>2</div> <div><div>ROAD WORK AHEAD</div><div>W20-1 48" X 48"</div><div>NEXT W7-3aP XX MILES 24" X 18"</div></div> <div>PLACE 1000' PRIOR TO BEGINNING OF CONSTRUCTION LIMITS. ONLY USED ON -Y- LINES IF RESURFACING LIMITS EXTEND 1000' ALONG -Y- LINE.</div>	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><div><div>ROAD WORK AHEAD</div><div>W20-1 48" X 48"</div></div><div>PLACED 500' IN ADVANCE OF FLAGGER.</div></div> <div><div><div>ROAD WORK AHEAD</div><div>W20-7 A 48" X 48"</div></div><div>PLACED 250' IN ADVANCE OF FLAGGER.</div></div>
	<div>3</div> <div><div>LOW/SOFT SHOULDER</div><div>SP 13107 48" X 48"</div></div> <div>- PLACE INITIALLY AT THE CONSTRUCTION LIMITS AND SPACE 1 MILE APART THEREAFTER. - AT TEE INTERSECTIONS INSTALL INITIALLY ½ MILE FROM INTERSECTION AND SPACE 1 MILE APART THEREAFTER.</div>	
	<div>4</div> <div><div>ROAD UNDER CONST</div><div>SP 13106 48" X 48"</div></div> <div>- 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.</div>	
	<div>5</div> <div><div>END ROAD WORK</div><div>G20-2 A 48" X 24"</div></div> <div>PLACE 500' FOLLOWING THE END OF CONSTRUCTION LIMITS OR AS SHOWN WHEN WORK ENDS AT A 3-WAY TEE INTERSECTION.</div>	
	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

WATTLE WITH POLYACRYLAMIDE DETAIL

NOTES:

USE MINIMUM 12 IN. DIAMETER EXCELSIOR WATTLE.

USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. CROSS SECTION.

INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.

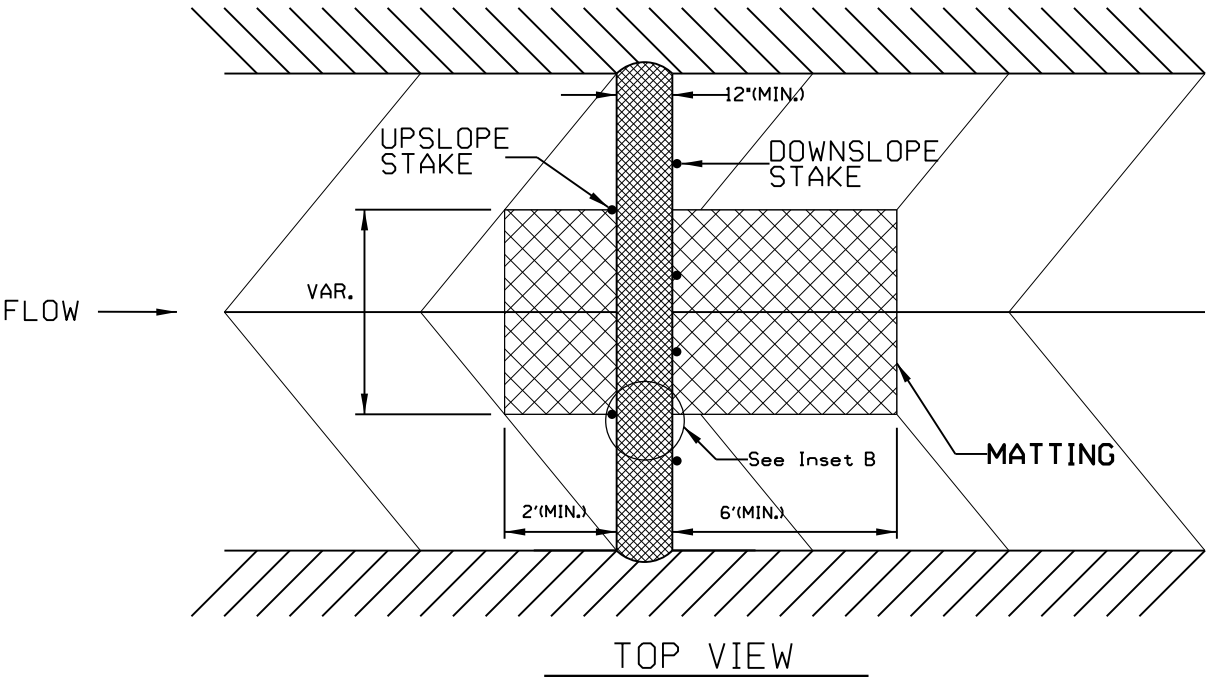
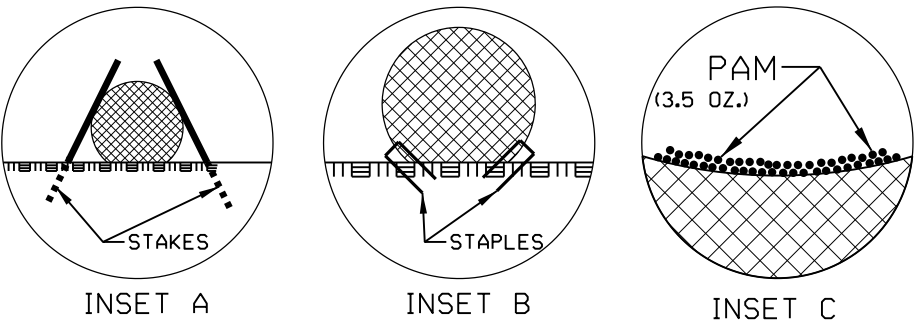
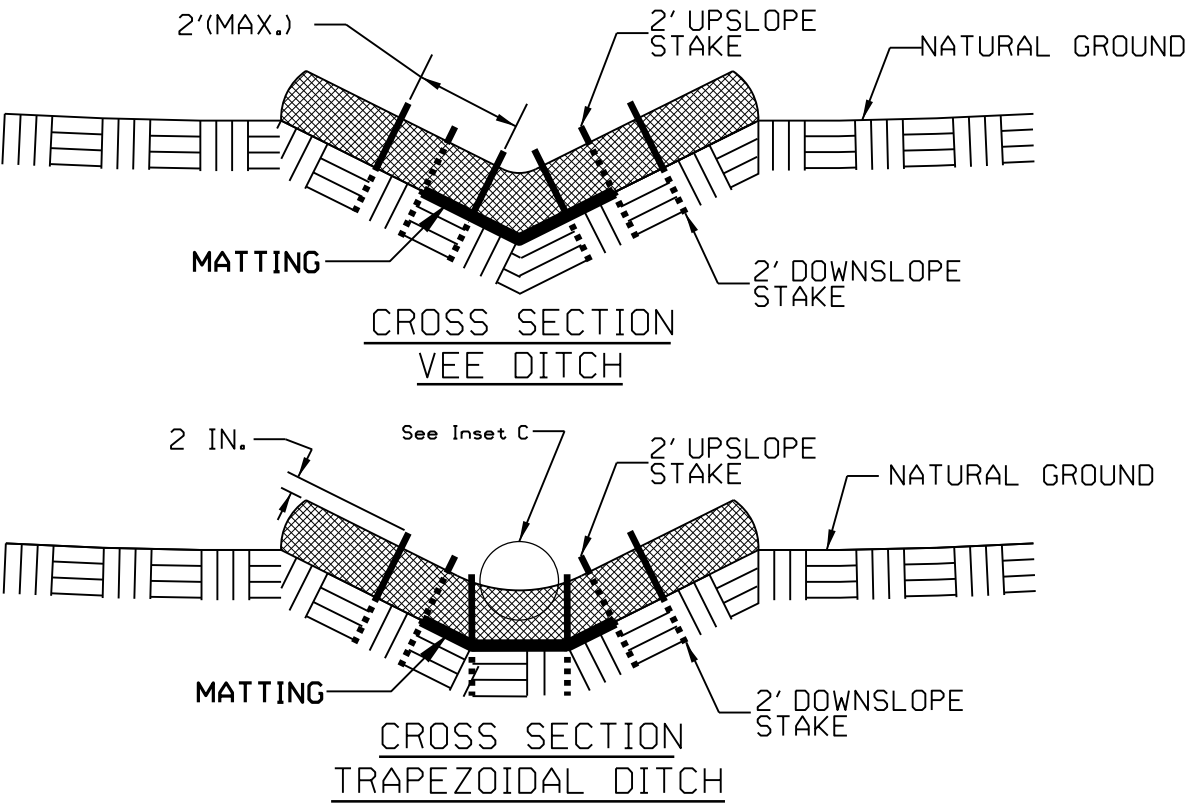
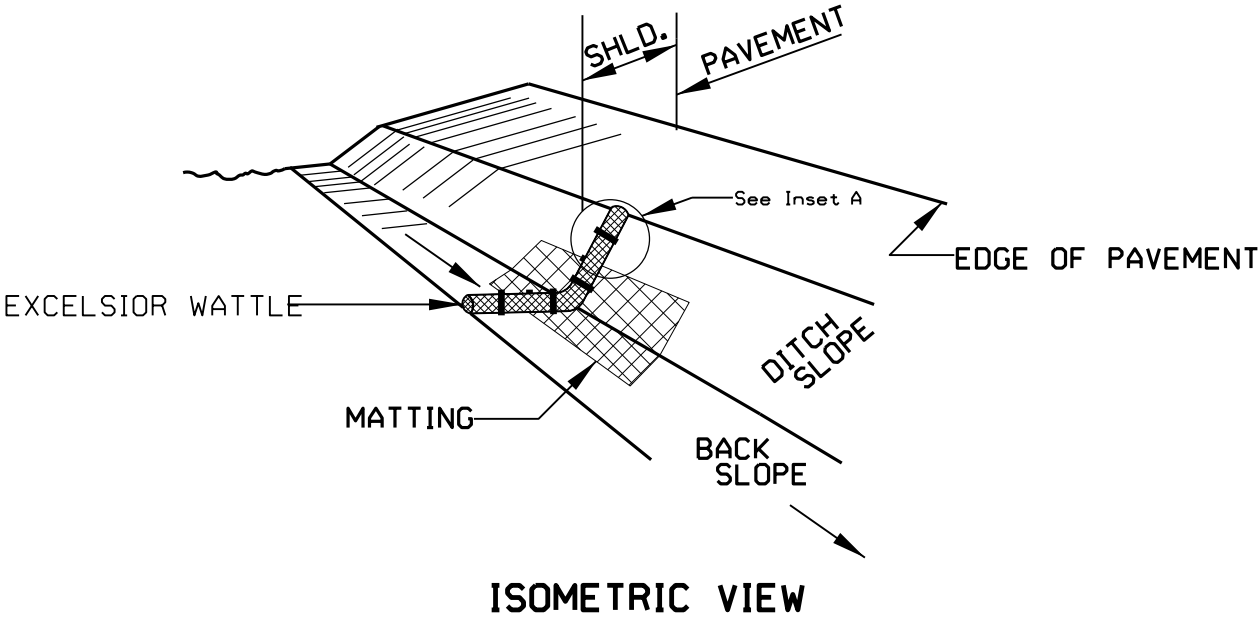
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.

INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.

INSTALL MATTING IN ACCORDANCE WITH SECTION 1631 OF THE STANDARD SPECIFICATIONS.

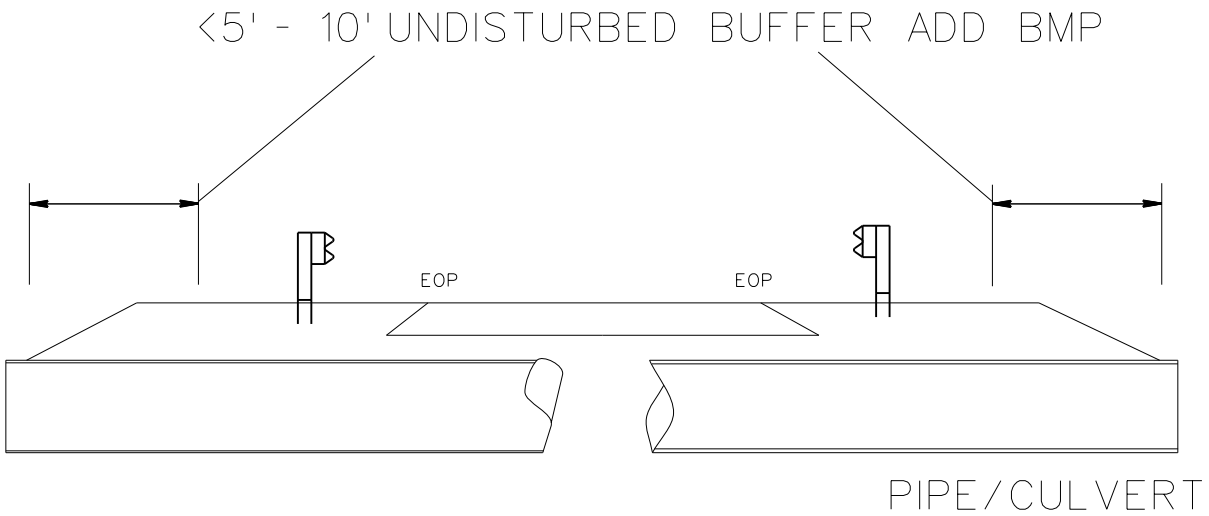
PRIOR TO POLYACRYLAMIDE (PAM) APPLICATION, OBTAIN A SOIL SAMPLE FROM PROJECT LOCATION, AND FROM OFFSITE MATERIAL, AND ANALYZE FOR APPROPRIATE PAM FLOCCULANT TO BE APPLIED TO EACH WATTLE.

INITIALLY APPLY 3.5 OUNCES OF ANIONIC OR NEUTRALLY CHARGED POLYACRYLAMIDE (PAM) OVER WATTLE WHERE WATER WILL FLOW AND AFTER EVERY RAINFALL EVENT THAT IS EQUAL TO OR EXCEEDS 0.50 IN.



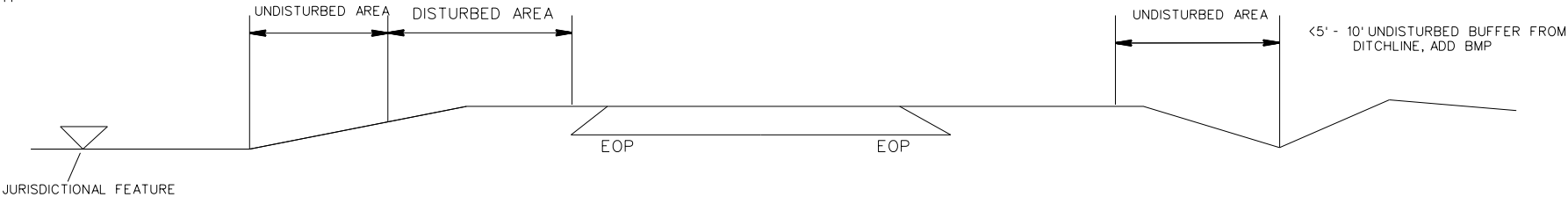
NOTES: LESS THAN 5' - 10' UNDISTURBED BUFFER FROM ROW, DITCHLINE, WATER FEATURE, OR DRAINAGE INLET, ADD BMP.

BMP OPTIONS: WATTLE OR SILT FENCE

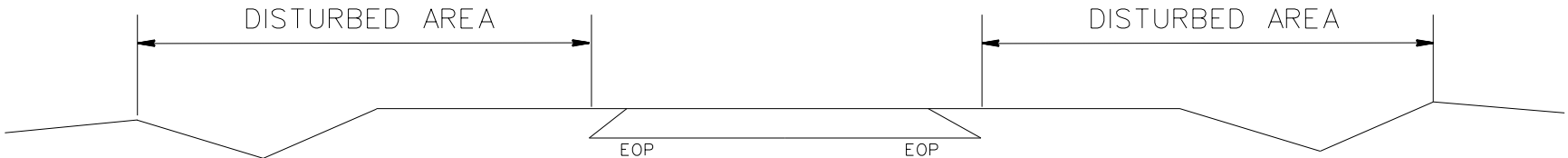


STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	2023CPT.10.12.10901 2023CPT.10.12.20901	EC2	
F.A. PROJECT NO.			

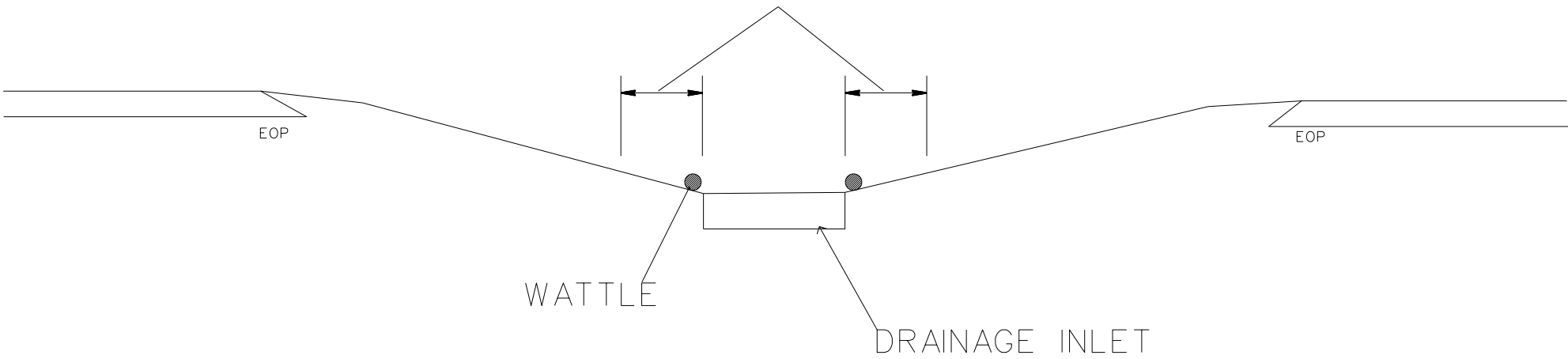
<5' - 10' UNDISTURBED BUFFER FROM JURISDICTIONAL FEATURE ADD BMP



USE BMP'S IF SHOULDERS AND/OR FRONTSLOPES AND/OR DITCHLINE AND/OR BACKSLOPES ARE DISTURBED



<5' - 10' UNDISTURBED BUFFER FROM INLET, ADD WATTLE

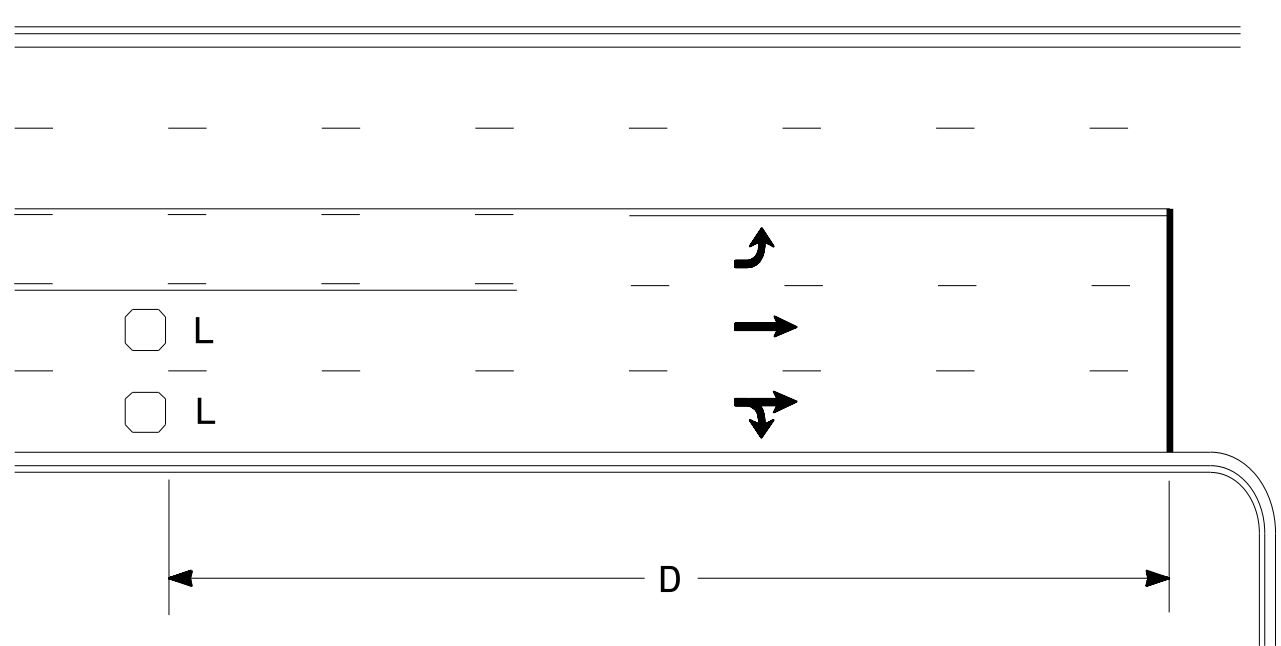


EROSION CONTROL DETAIL

SCALE	-NA-	REVISIONS	
DATE	11/20		
DWG. BY	AMO		
DESIGN BY	AMO		
APPROVED			



High Speed Detection
(≥40 mph)

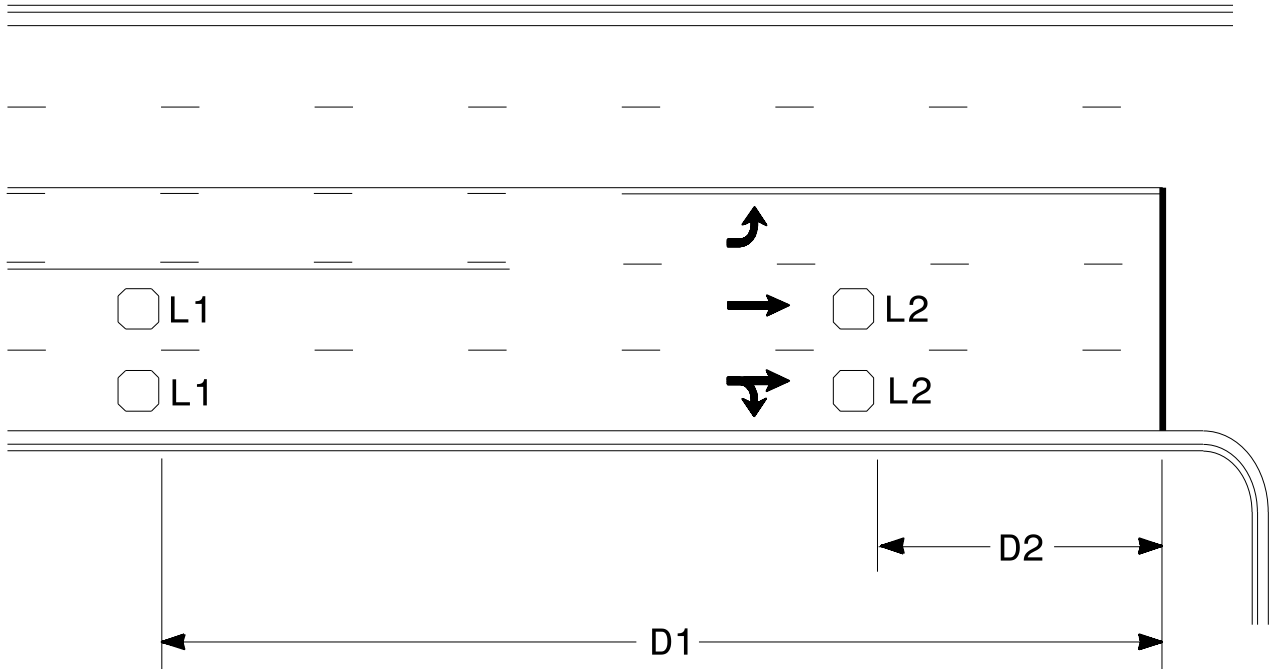


Speed Limit mph	D ft
40	250
45	300
50	355
55	420

L = 6ft X 6ft
Wired in series for TS1
Controllers
Wired separately for TS2,
170, and 2070L Controllers

Volume Density Operation

OR

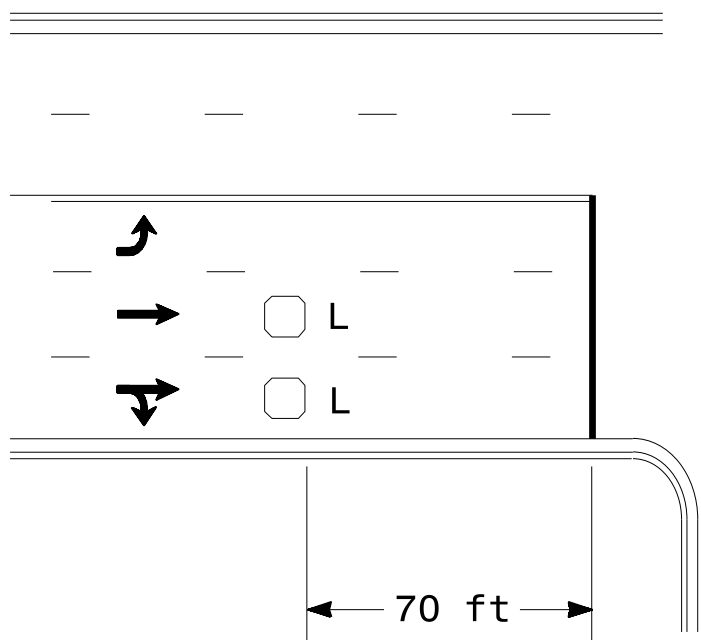


Speed Limit mph	D1 ft	D2 ft
40	250	80
45	300	90
50	355	100
55	420	110

L1 = 6ft X 6ft
Wired in series
L2 = 6ft X 6ft
Wired in series

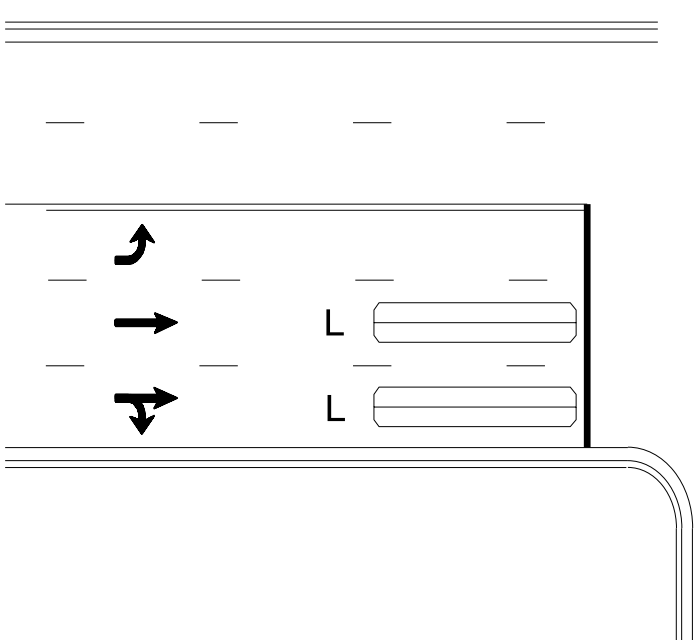
"Stretch" Operation

Low Speed Detection
(≤35 mph)



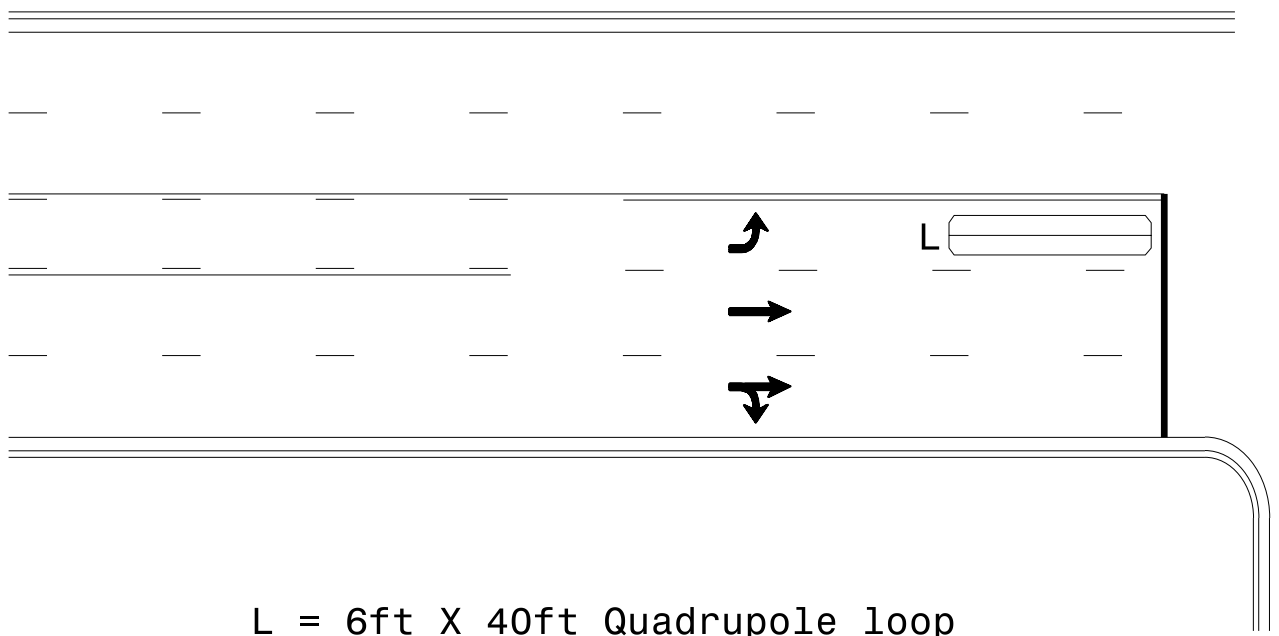
L = 6ft X 6ft
Wired in series

OR



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

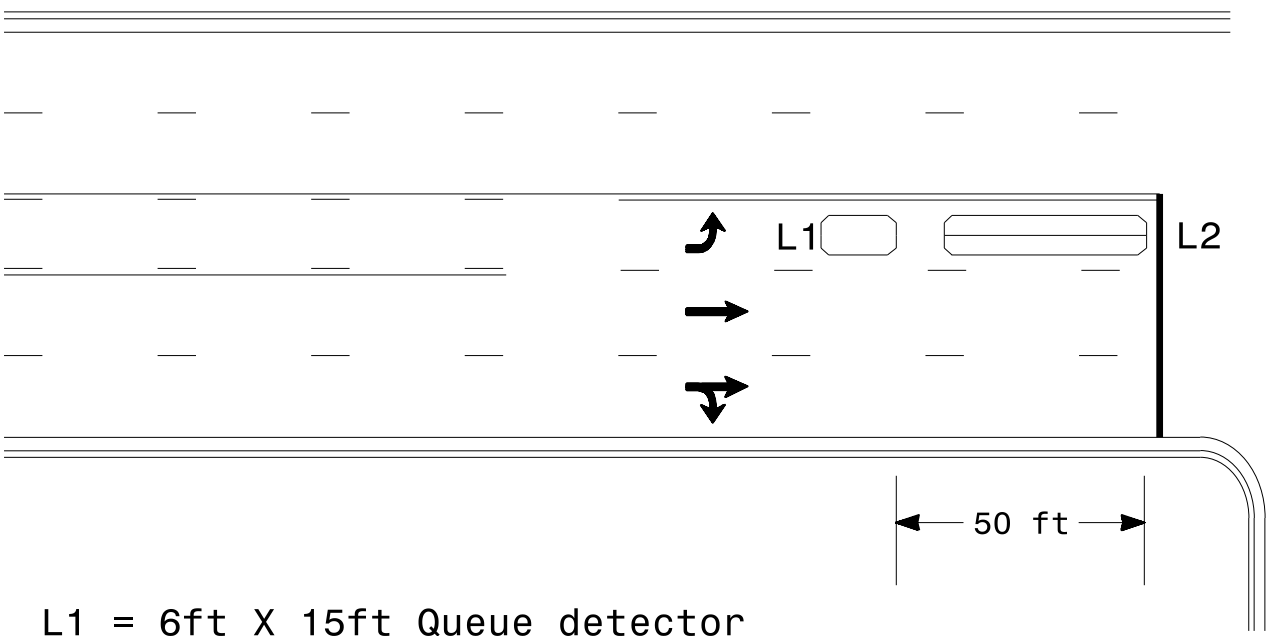
Left Turn Lane Detection



L = 6ft X 40ft Quadrupole loop

Presence Loop Detection

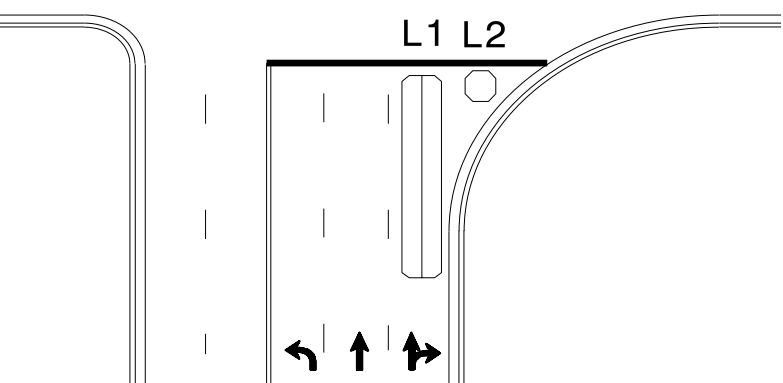
OR



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

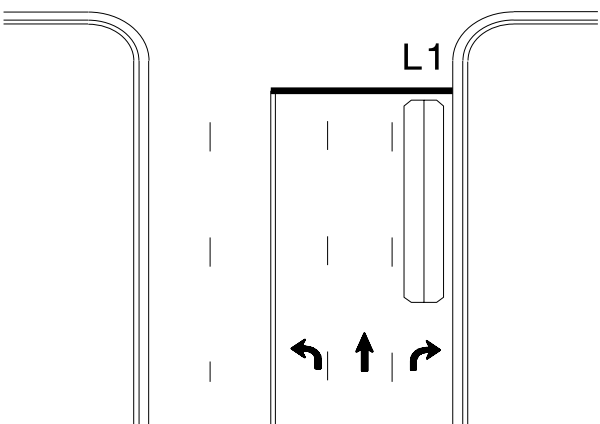
Queue Loop Detection

Right Turn Lane Detection

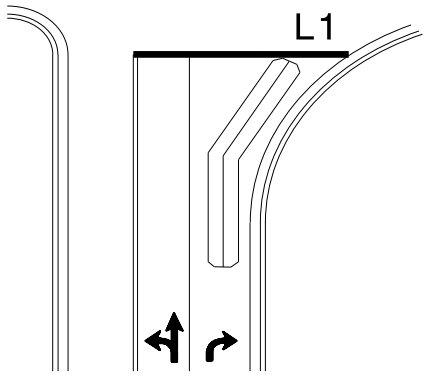


Shared Lane/
Wide Radius Turn

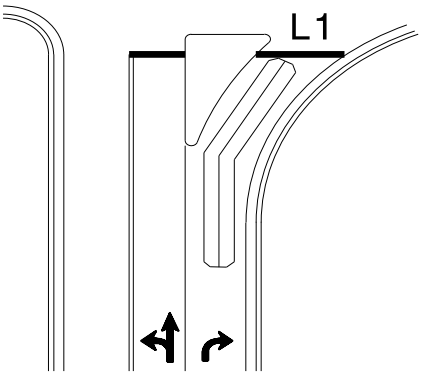
L1 = 6ft X 40ft Quadrupole loop
L2 = 6ft X 6ft [Minimum] Presence loop
Wired separately



Standard Turn

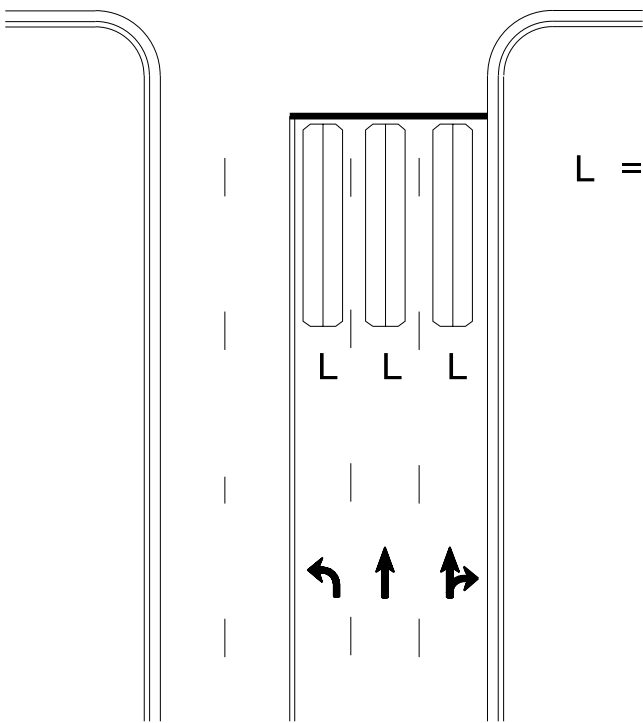


Wide Radius Turn



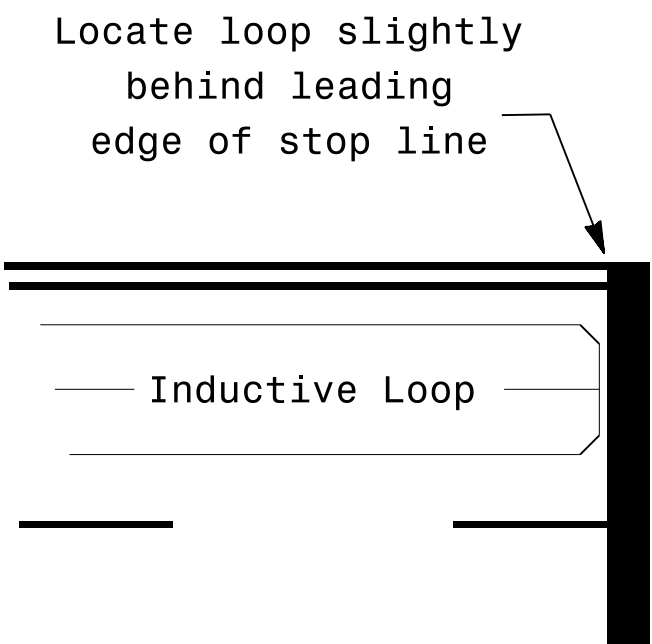
Channelized Turn

Side Street Detection



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

Presence Loop Placement at Stop Lines



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

Prepared In the Offices of:

750 N. Greenfield Pkwy, Garner, NC 27529

SCALE
N/A

Typical Signal Loop Locations
PLAN DATE: January 2015
PREPARED BY: PLA
REVISIONS
REVIEWED BY: JPG
INIT. DATE
SHEET NO. 23489

SEAL
NORTH CAROLINA
PROFESSIONAL ENGINEER
PAMELA L. ALEXANDER
1/30/2015
DATE
SHEET NO. 23489

PROJECT NO.	SHEET NO.	TOTAL NO.
2023CPT.10.12.10901		
2023CPT.10.12.20901		

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	1260000000-E	0106000000-E	1220000000-E	2450000000-E	1297000000-E	1308000000-E	1330000000-E	1519000000-E	1520000000-E	1523000000-E	1524000000-E	1575000000-E	1704000000-E	1775500000-E	1838000000-E	2600000000-N	2612000000-E	2830000000-N	2845000000-N	5255000000-N	6000000000-E	6009000000-E	6012000000-E	6071010000-E	6071020000-E																																																																																																		
												MI	FT	TON		TONS	SMI	SY	SY	SY	SY	TONS	TONS	TONS	TONS	TONS	TONS	SY	GAL	EA	SY	EA	EA	LS	LF	TN	TN	LF	LB																																																																																															
2023CPT.10.12.10901	Union	1	NC 75 / ROUTE ID 30000075090 TOTAL FOR MAP NO. 1	FROM SOUTH CAROLINA STATE LINE TO PAVEMENT JOINT AT SR 1111 OLD PROVIDENCE ROAD MILEPOST 0-2.78	1,2,3,4,12	2	ZWU	NO	NO	2.78	30	1,280	330	75	4.20	20,366				1,230			5,238	319	100	19,828	7,935	2	100	1	3	1	417	46	23	417	1																																																																																																	
																																						2.78	1,280	330	75	4.20	20,366	1,230	5,238	319	100	19,828	7,935	2	100	1	3	1	417	46	23	417	1																																																																											
TOTAL FOR PROJ NO. 2023CPT.10.12.10901																20,366																																																																																																																						
2023CPT.10.12.20901	Union	2	SR 2985 ROYSTER RUN / ROUTE ID 40002985090 TOTAL FOR MAP NO. 2	FROM SR 1308 WINGARD ROAD TO CUL DE SAC MILEPOST 0 TO 0.4	5	2	ZWU	NO	NO	0.4	26								595				40																																																																																																															
										0.4									595				40																																																																																																															
2023CPT.10.12.20901	Union	3	SR 2986 GRIGG LANE / ROUTE ID 40002986090 TOTAL FOR MAP NO. 3	FROM SR 2985 ROYSTER RUN TO SR 3175 NELLIE LANE MILEPOST 0 TO 0.25	5	2	ZWU	NO	NO	0.25	24					3,520				426				29																																																																																																														
																																					0.25				3,520	426	29																																																																																											
2023CPT.10.12.20901	Union	4	SR 1307 WAXHAW-MARVIN ROAD ROUTE ID 40001307090 TOTAL FOR MAP NO. 4	FROM SR 1309 CRANE ROAD TO PAVEMENT JOINT AT SR 1307 BONDS GROVE ROAD MILEPOST 2.36-2.85	6,7	2		NO	NO	0.49	34		165	20	1.00			620		1,056	310	96	300									74	10	5	74																																																																																																			
																																					0.49																																																																																																	
2023CPT.10.12.20901	Union	5	SR 1008 WAXHAW-INDIAN TRAIL ROAD ROUTE ID 40001008090 TOTAL FOR MAP NO. 5	FROM PAVEMENT JOINT @ BRIDGE TO SR 1327 PLEASANT GROVE CHURCH ROAD MILEPOST 1.15 TO 1.88	1	2	ZWU	NO	NO	0.73	22	223	65	1.50				510		1,196	500	111	200	9,348	3,275						110	15	8	110																																																																																																				
																																				0.73	223	65	1.50	510	1,196	500	111	200	9,348	3,275	110	15	8	110																																																																																				
2023CPT.10.12.20901	Union	6	SR 1175 TRAILS END DRIVE ROUTE ID 40001175090 TOTAL FOR MAP NO. 6	FROM NC 75 TO SR 1228 CHEROKEE TRAIL MILEPOST 0 TO 0.27	8	2	ZWU	NO	NO	0.27	19	123	20	0.50				160	270			19	10									41	6	3	41																																																																																																			
																																					0.27	123	20	0.50	160	270	19	10	41	6	3	41																																																																																						
2023CPT.10.12.20901	Union	7	SR 1228 CHEROKEE TRAIL / ROUTE ID 40001228090 TOTAL FOR MAP NO. 7	FROM SR 1175 TRAILS END DR TO CUL DE SAC MILEPOST 0 TO 0.19	8	2	ZWU	NO	NO	0.19	18	88	30	0.40				182				14	30									29	4	2	29																																																																																																			
																																					0.19	88	30	0.40	182	14	30	29	4	2	29																																																																																							
2023CPT.10.12.20901	Union	8	SR 1126 BIGHAM ROAD ROUTE ID 40001126090 TOTAL FOR MAP NO. 8	FROM SR 1128 MCWHORTER ROAD TO SR 1111 OLD WAXHAW MONROE ROAD MILEPOST 2.12-2.89	8,11	2	ZWU	NO	NO	0.77	19	356	190	1.50		64			325	800	460		99	300								116	16	8	116																																																																																																			
																																					0.77	356	190	1.50	325	800	460	99	300	116	16	8	116																																																																																					
2023CPT.10.12.20901	Union	9	SR 1128 MCWHORTER ROAD ROUTE ID 40001128090 TOTAL FOR MAP NO. 9	FROM SR 1137 S. POTTER ROAD SOUTH TO NC 200 MILEPOST 1.71 TO 3.19	8	2	ZWU	NO	NO	1.48	21	684	175	3.00				385	1,642	920		186	300								222	30	15	222	1																																																																																																			
																																				1.48	684	175	3.00	385	1,642	920	186	300	222	30	15	222	1																																																																																					
2023CPT.10.12.20901	Union	10	SR 1131 NESBIT ROAD ROUTE ID 40001131090 TOTAL FOR MAP NO. 10	FROM SR 1137 POTTER ROAD SOUTH TO SR 1128 TOM STARNES ROAD MILEPOST 0 TO 1.39	8	2	ZWU	NO	NO	1.39	18	640	90	2.80				310	1,350	830		163	350								209	28	14	209	1																																																																																																			
										1.39		640	90	2.80				310	1,350	830		163	350								209	28	14	209	1																																																																																																			
2023CPT.10.12.20901	Union	11	SR 1009 OLD CHARLOTTE HWY ROUTE ID 40001009090 TOTAL FOR MAP NO. 11	FROM SR 1007 ROCKY RIVER ROAD TO WEST END OF SR 1738 HAYES ROAD MILEPOST 4.40-6.72	9,10	2	ZWU	NO	NO	2.32	30	710	65	4.60	2,545		1,120	800		5,190	359	1,000	40,590	16,240	1	375	4	8	*		345	46	23	345	1																																																																																																			
																																				2.32	710	165	65	4.60	2,545	1,120	800	5,190	359	1,000	40,590	16,240	1	375	4	8	345	46	23	345	1																																																																													
TOTAL FOR PROJ NO. 2023CPT.10.12.20901																																																																																																																																						
GRAND TOTAL																																																																																																																																						

PROJECT NO.	SHEET NO.	TOTAL NO.
2023CPT.10.12.10901,		
2023CPT.10.12.20901		

THERMOPLASTIC AND PAINT QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	LANE TYPE	LENGTH	WIDTH	4413000000-E	4457000000-N	4510000000-N	4685000000-E		4695000000-E		4700000000-E	4704000000-E	4709000000-E	4720000000-E		4725000000-E		4810000000-E		4835000000-E	4845000000-N		4905100000-N	
										WORK ZONE ADVANCE/GENERAL WARNING SIGNING	TEMPORARY TRAFFIC CONTROL	LAW ENFORCEMENT	THERMO PVT MKG LINES 4",90 MILS WHITE	THERMO PVT MKG LINES 4",90 MILS YELLOW	THERMO PVT MKG LINES 8" 90 MILS WHITE	THERMO PVT MKG LINES 8", 90 MILS YELLOW	THERMO PVT MKG LINES 8", 90 MILS WHITE	THERMO PVT MKG LINES 12", 90 MILS YELLOW	THERMOPLAS TIC PAVEMENT MARKING LINES (16", 90 MILS)	THERMOPLAS TIC PAVEMENT MARKING LINES (24", 90 MILS)	THERMO PVT MKG CHARACTER 90 MILS (SCHOOL)	THERMO PVT MKG CHARACTER 90 MILS (RXR)	THERMO PVT MKG SYMBOL 90 MILS (LEFT)	THERMO PVT MKG SYMBOL 90 MILS (RIGHT)	4" WHITE PAINT	4" YELLOW PAINT	24" WHITE PAINT	PAINT LT ARROW	PAINT RT ARROW	NON-CAST IRON SNOWPLOWABLE PAVEMENT MARKER
								MI	FT	SF	LS	HR	LF	LF	LF	LF	LF	LF	EA	EA	EA	EA	LF	LF	LF	EA	EA	EA		
2023CPT.10.12.10901	Union	1	NC 75 / ROUTE ID 30000075090	FROM SOUTH CAROLINA STATE LINE TO PAVEMENT JOINT AT SR 1111 OLD PROVIDENCE ROAD MILEPOST 0-2.78	1,2,3,4,12	2	2WU	2.78	30	311.4	1	20	24,384	25,783	800	240			520			13	1	1,510	28,000	250			225	
TOTAL FOR MAP NO. 1								2.78		311.4	1.0	20	24,384	25,783	800	240			520			13	1	1,510	28,000	250			225	
TOTAL FOR PROJ NO. 2023CPT.10.12.10901								2.78		311.4	1.0	20	24,384	25,783	800	240			520			13	1	1,510	28,000	250			225	
2023CPT.10.12.20901	Union	2	SR 2985 ROYSTER RUN / ROUTE ID 40002985090	FROM SR 1308 WINGARD ROAD TO CUL DE SAC MILEPOST 0 TO 0.4	5	2	2WU	0.4	26		*		50,167		1,040							14		29,510						
TOTAL FOR MAP NO. 2								0.4																						
2023CPT.10.12.20901	Union	3	SR 2986 GRIGG LANE / ROUTE ID 40002986090	FROM SR 2985 ROYSTER RUN TO SR 3175 NELLIE LANE MILEPOST 0 TO 0.25	5	2	2WU	0.25	24		*																			
TOTAL FOR MAP NO. 3								0.25																						
2023CPT.10.12.20901	Union	4	SR 1307 WAXHAW-MARVIN ROAD ROUTE ID 40001307090	FROM SR 1309 CRANE ROAD TO PAVEMENT JOINT AT SR 1307 BONDS GROVE ROAD MILEPOST 2.36-2.85	6,7	2		0.49	34		*	5	5,802	6,244			115		177	6		3	6							
TOTAL FOR MAP NO. 4								0.49				5	5,802	6,244			115		177	6		3	6							
2023CPT.10.12.20901	Union	5	SR 1008 WAXHAW-INDIAN TRAIL ROAD ROUTE ID 40001008090	FROM PAVEMENT JOINT @ BRIDGE TO SR 1327 PLEASANT GROVE CHURCH ROAD MILEPOST 1.15 TO 1.88	1	2	2WU	0.73	22		*		7,648	7,648					40											
TOTAL FOR MAP NO. 5								0.73					7,648	7,648					40											
2023CPT.10.12.20901	Union	6	SR 1175 TRAILS END DRIVE ROUTE ID 40001175090	FROM NC 75 TO SR 1228 CHEROKEE TRAIL MILEPOST 0 TO 0.27	8	2	2WU	0.27	19		*																			
TOTAL FOR MAP NO. 6								0.27																						
2023CPT.10.12.20901	Union	7	SR 1228 CHEROKEE TRAIL / ROUTE ID 40001228090	FROM SR 1175 TRAILS END DR TO CUL DE SAC MILEPOST 0 TO 0.19	8	2	2WU	0.19	18		*																			
TOTAL FOR MAP NO. 7								0.19																						
2023CPT.10.12.20901	Union	8	SR 1126 BIGHAM ROAD ROUTE ID 40001126090	FROM SR 1128 MCWHORTER ROAD TO SR 1111 OLD WAXHAW MONROE ROAD MILEPOST 2.12-2.89	8,11	2	2WU	0.77	19		*								30					16,260	16,260					
TOTAL FOR MAP NO. 8								0.77											30					16,260	16,260					
2023CPT.10.12.20901	Union	9	SR 1128 MCWHORTER ROAD ROUTE ID 40001128090	FROM SR 1137 S. POTTER ROAD SOUTH TO NC 200 MILEPOST 1.71 TO 3.19	8	2	2WU	1.48	21		*								30					31,288	31,288					
TOTAL FOR MAP NO. 9								1.48											30					31,288	31,288					
2023CPT.10.12.20901	Union	10	SR 1131 NESBIT ROAD ROUTE ID 40001131090	FROM SR 1137 POTTER ROAD SOUTH TO SR 1128 TOM STARNES ROAD MILEPOST 0 TO 1.39	8	2	2WU	1.39	18		*								40					29,272	26,950					
TOTAL FOR MAP NO. 10								1.39											40					29,272	26,950					
2023CPT.10.12.20901	Union	11	SR 1009 OLD CHARLOTTE HWY ROUTE ID 40001009090	FROM SR 1007 ROCKY RIVER ROAD TO WEST END OF SR 1738 HAYES ROAD MILEPOST 4.40-6.72	9,10	2	2WU	2.32	30	259.8	*	30	27,180	30,026		580	300		100	563	12	4	17	4	1,430	10,732		4	4	377
TOTAL FOR MAP NO. 11								2.32		259.8		30	27,180	30,026		580	300		100	563	12	4	17	4	1,430	10,732		4	4	377
TOTAL FOR PROJ NO. 2023CPT.10.12.20901								8.29		259.8		35	40,630	43,918		580	300	115	100	880	18	4	20	10	78,250	85,230		4	4	377
													84,548		880					22		30		163,480			8			
GRAND TOTAL								11.07		571.2	1.0	55	65,014	69,701	800	820	300	115	100	1,400	18	4	33	11	79,760	113,230	250	4	4	602
													134,715		1,920					22		44		192,990			8			