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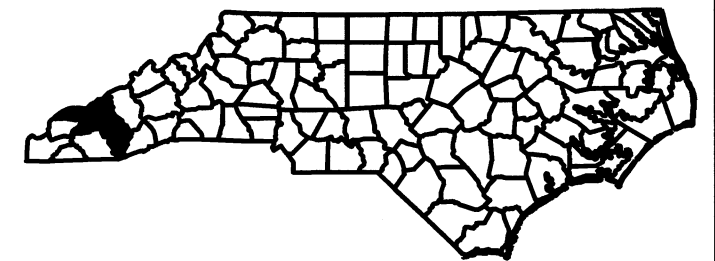
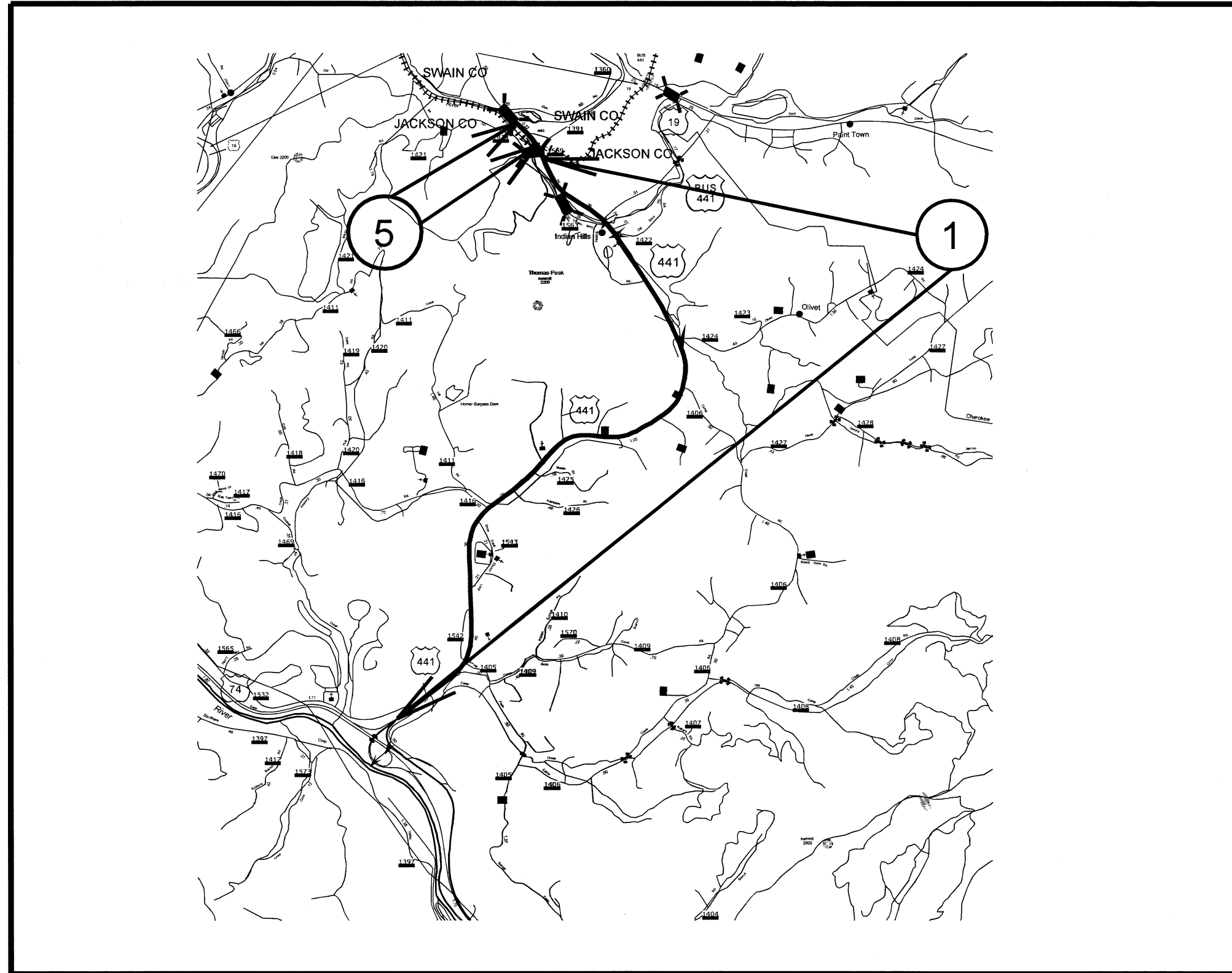
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# SWAIN COUNTY /JACKSON CO

PROJECT REFERENCE NO.		SHEET NO.
2017CPT.14.01.10441.1,ETC		1
STATE PROJECT	F.A. PROJECT NO.	DESCRIPTION

TIP PROJECT: N/A

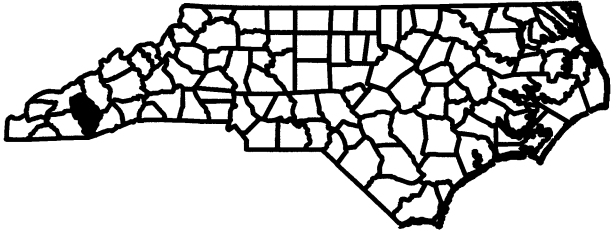
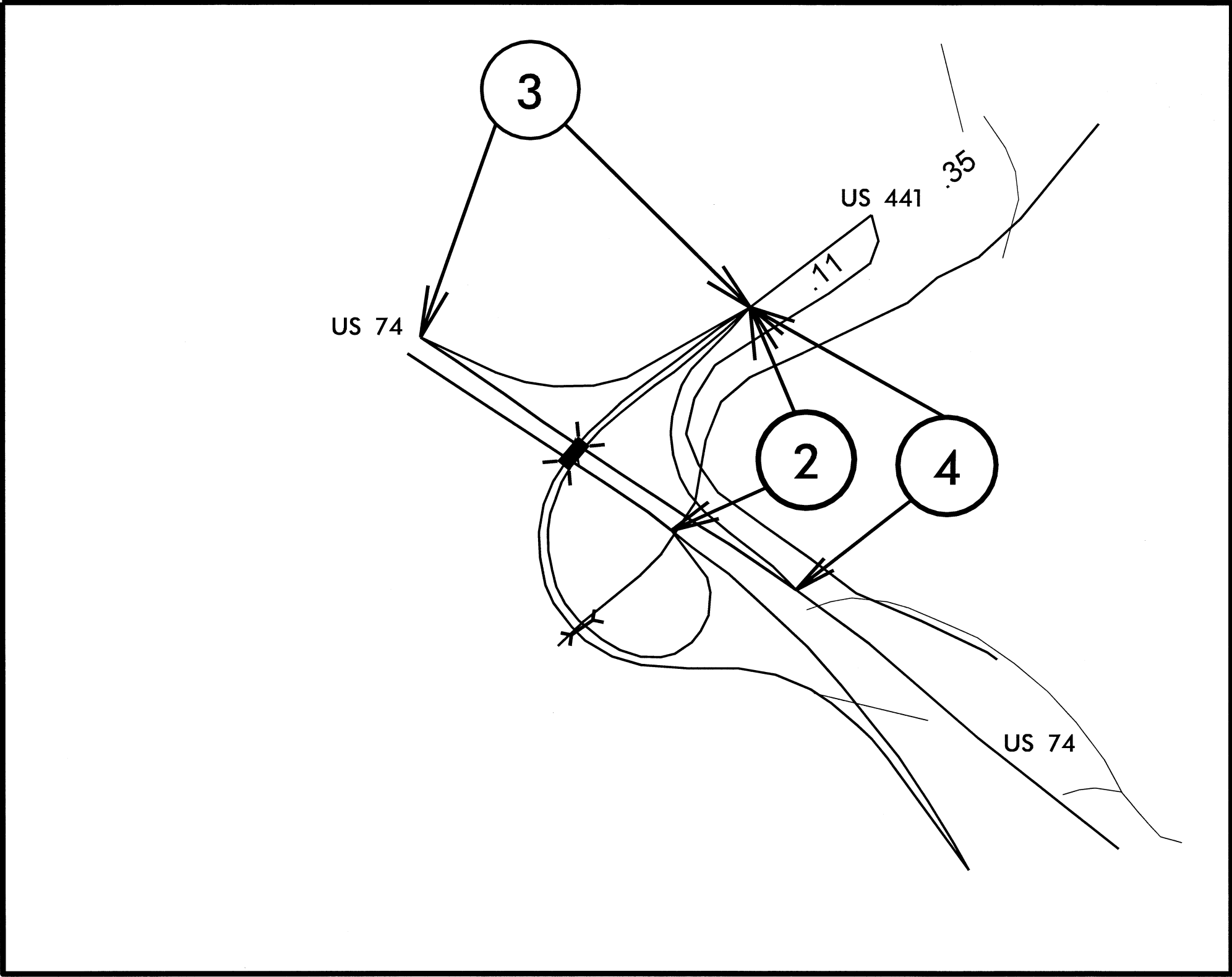
CONTRACT:



# JACKSON COUNTY

PROJECT REFERENCE NO.		SHEET NO.
2017CPT.14.01.10441.1.ETC		2
STATE PROJECT	F.A. PROJECT NO.	DESCRIPTION

**CONTRACT:** TIP PROJECT: N/A

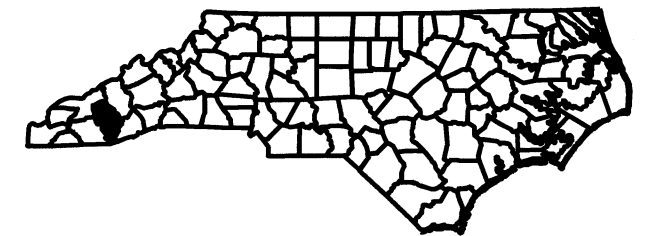
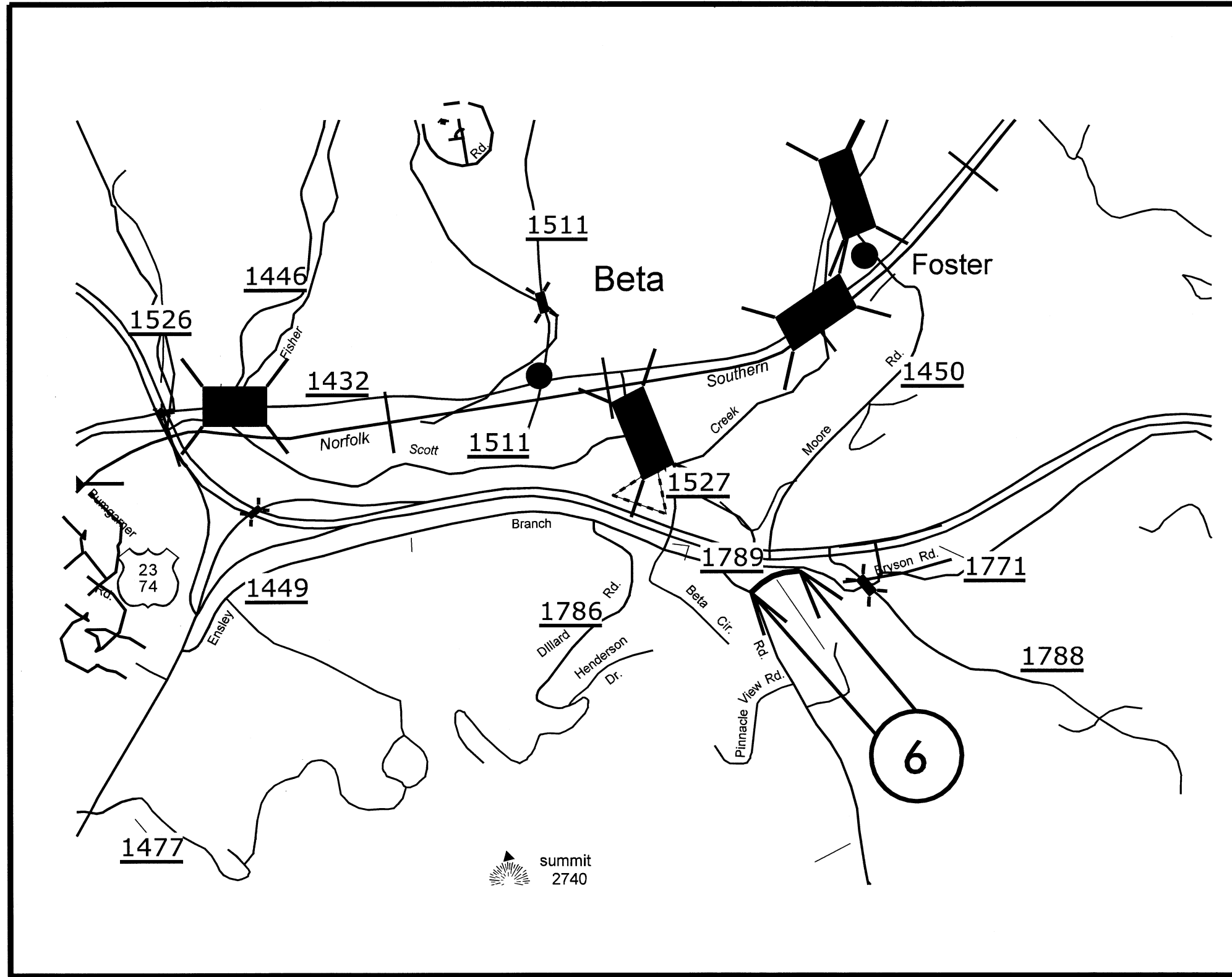


TIP PROJECT: N/A

CONTRACT:

# JACKSON COUNTY

PROJECT REFERENCE NO.		SHEET NO.
2017CPT.14.01.10441.1,ETC		3
STATE PROJECT	F.A. PROJECT NO.	DESCRIPTION

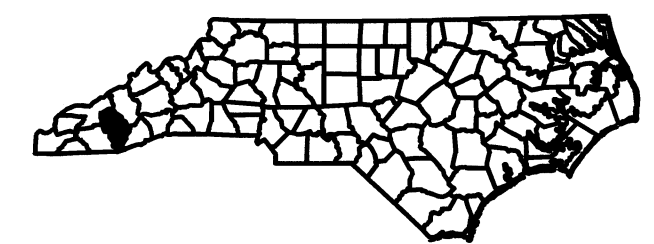
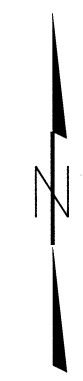
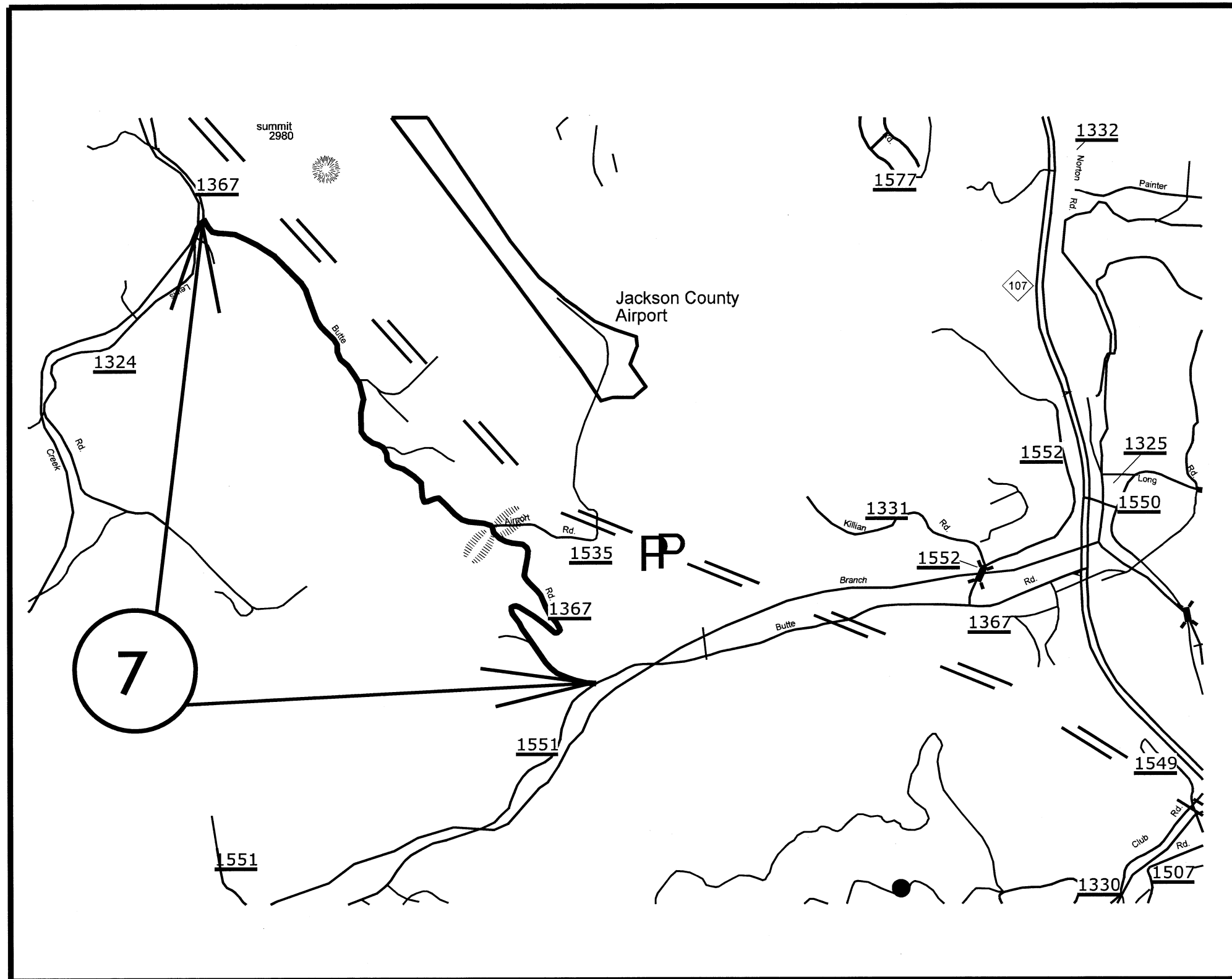


# JACKSON COUNTY

PROJECT REFERENCE NO.		SHEET NO.
2017CPT.14.01.10441.1.ETC		4
STATE PROJECT	F.A. PROJECT NO.	DESCRIPTION

**TIP PROJECT: N/A**

**CONTRACT:**

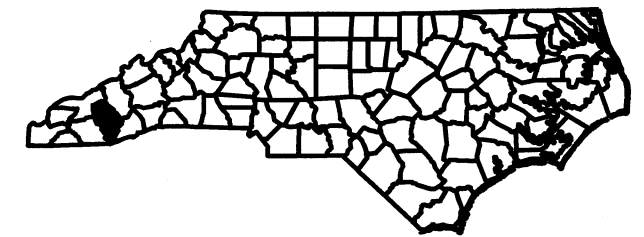
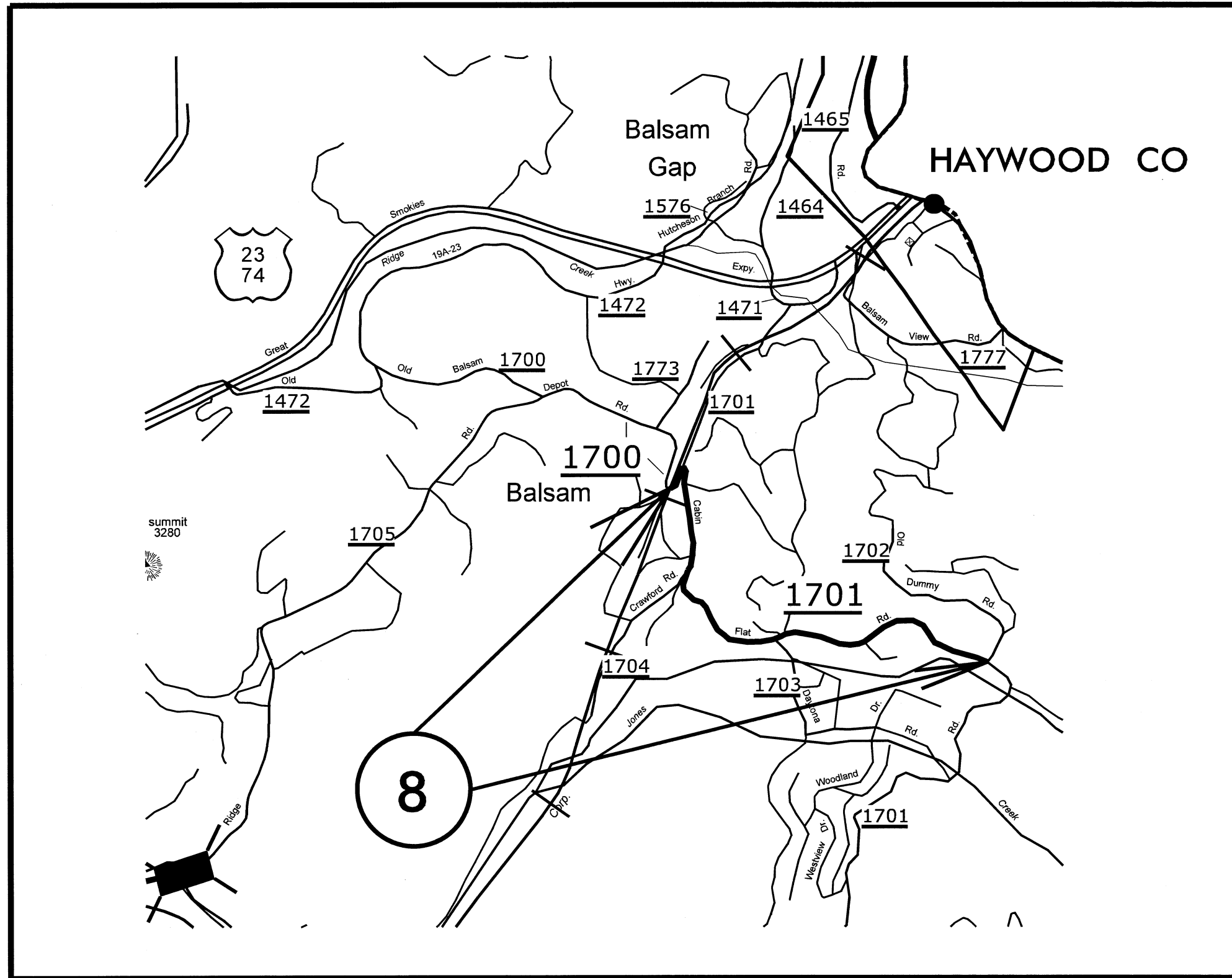


# JACKSON COUNTY

PROJECT REFERENCE NO.		SHEET NO.
2017CPT.14.01.10441.1.ETC		5
STATE PROJECT	F.A. PROJECT NO.	DESCRIPTION

**TIP PROJECT: N/A**

**CONTRACT:**

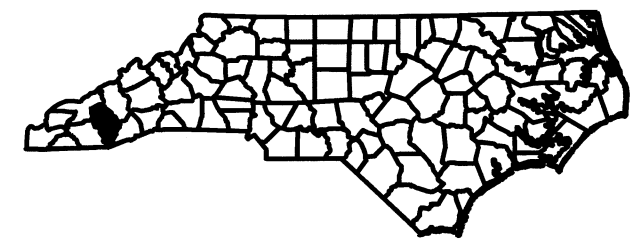
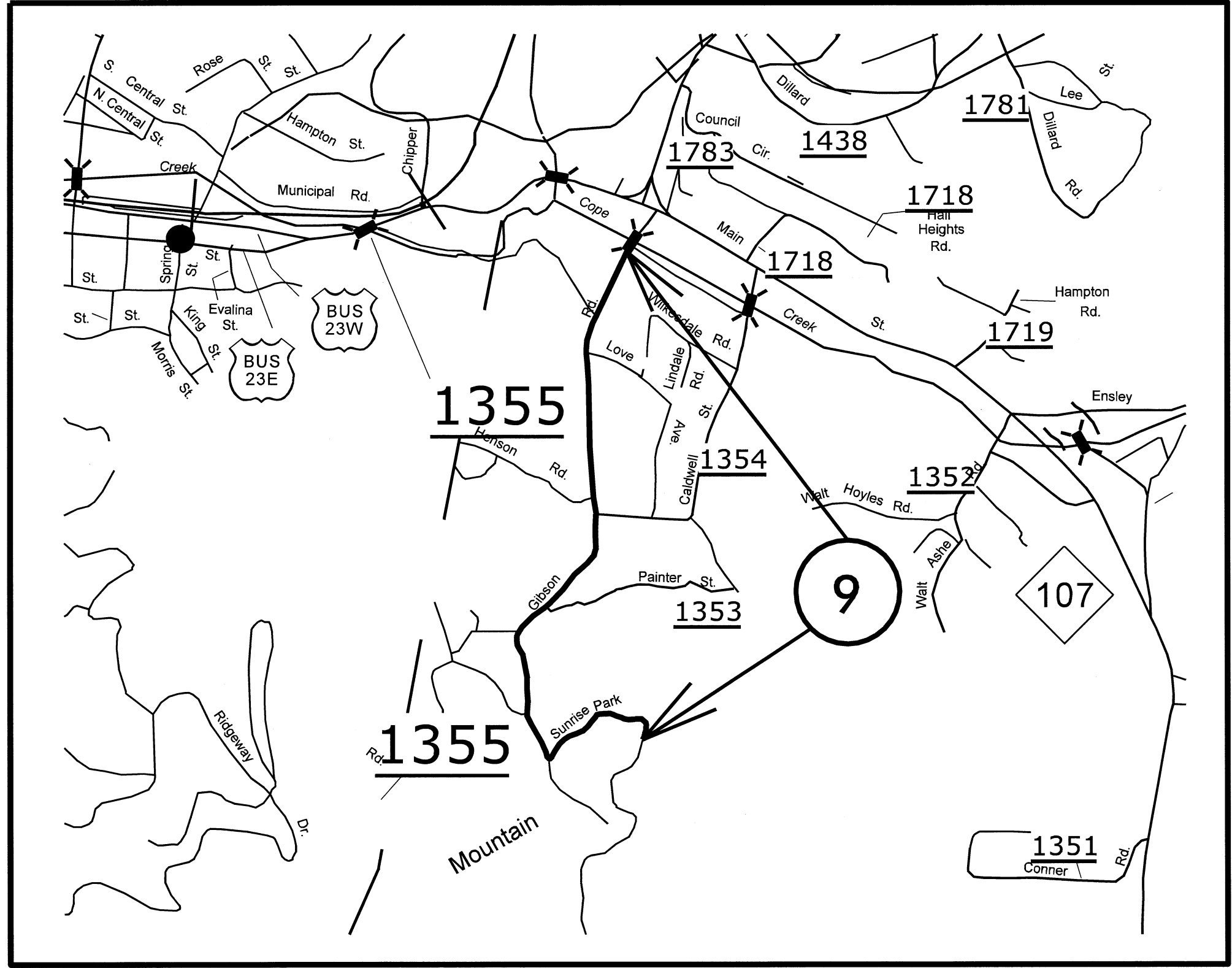


TIP PROJECT: NA

CONTRACT:

# JACKSON COUNTY

PROJECT REFERENCE NO.		SHEET NO.
2017CPT.14.01.10441.1.ETC		6
STATE PROJECT	F.A. PROJECT NO.	DESCRIPTION

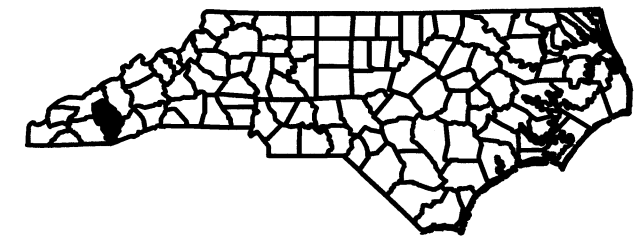
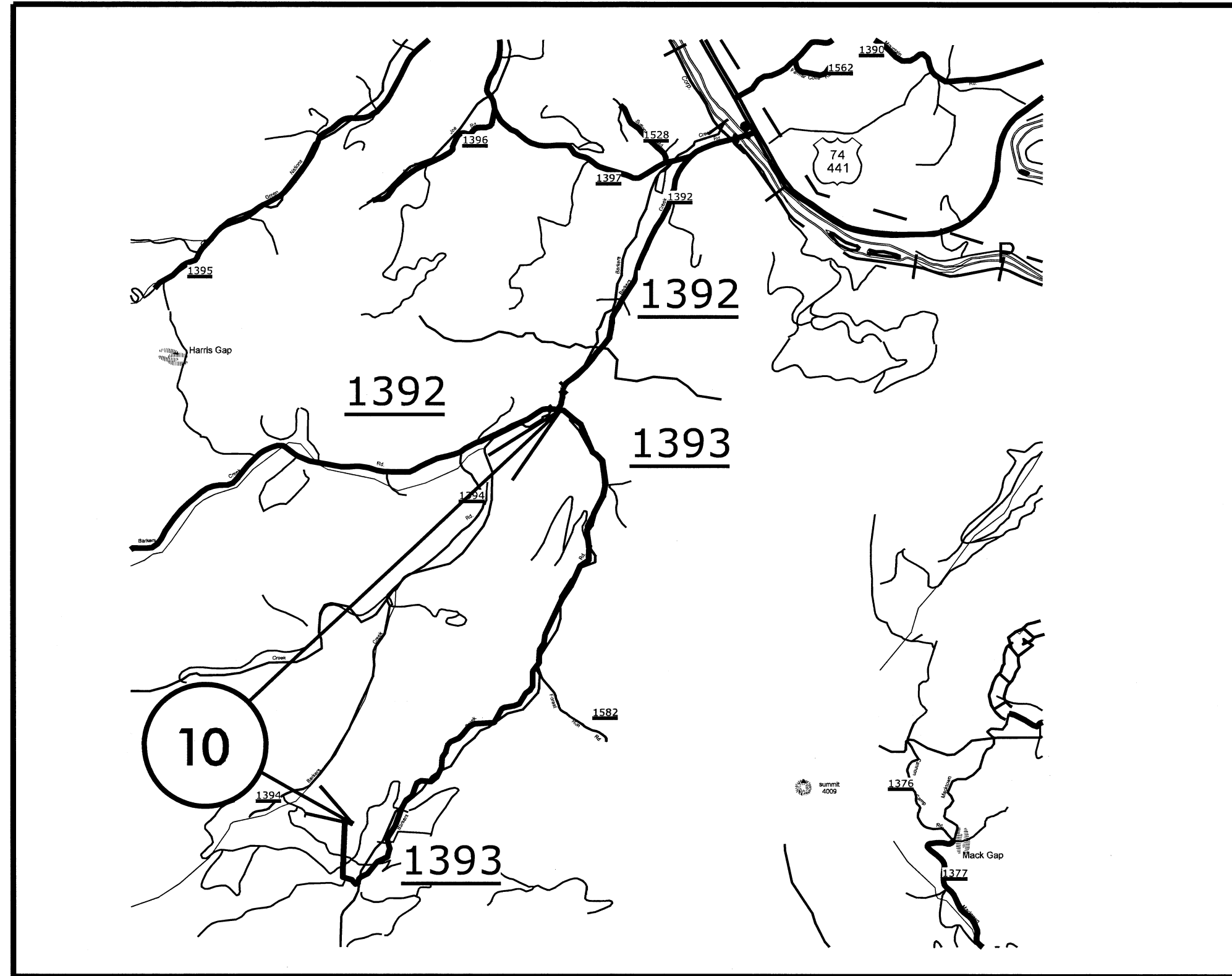


# JACKSON COUNTY

PROJECT REFERENCE NO.		SHEET NO.
2017CPT.14.01.10441.1,ETC		7
STATE PROJECT	F.A. PROJECT NO.	DESCRIPTION

**TIP PROJECT: N/A**

**CONTRACT:**



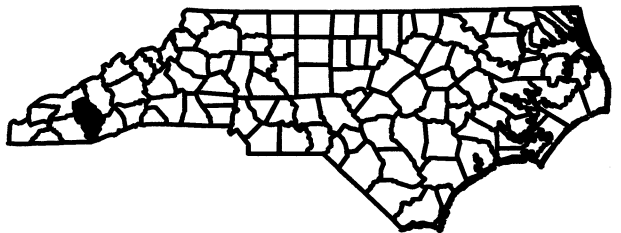
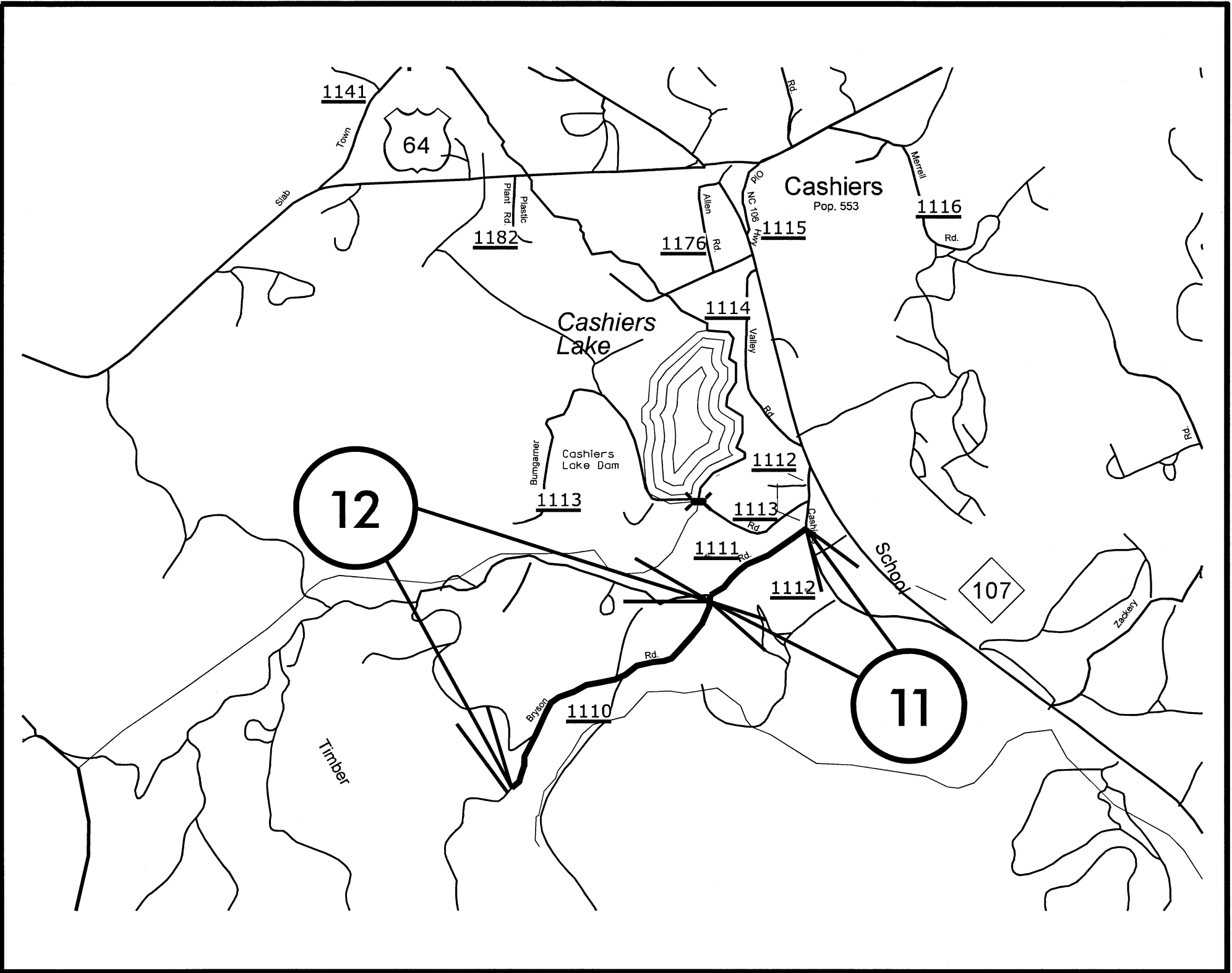


# JACKSON COUNTY

PROJECT REFERENCE NO.		SHEET NO.
2017CPT.14.01.10441.1,ETC		8
STATE PROJECT	F.A. PROJECT NO.	DESCRIPTION

**TIP PROJECT: N/A**

**CONTRACT:**



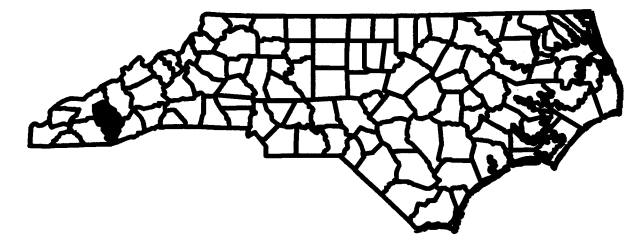
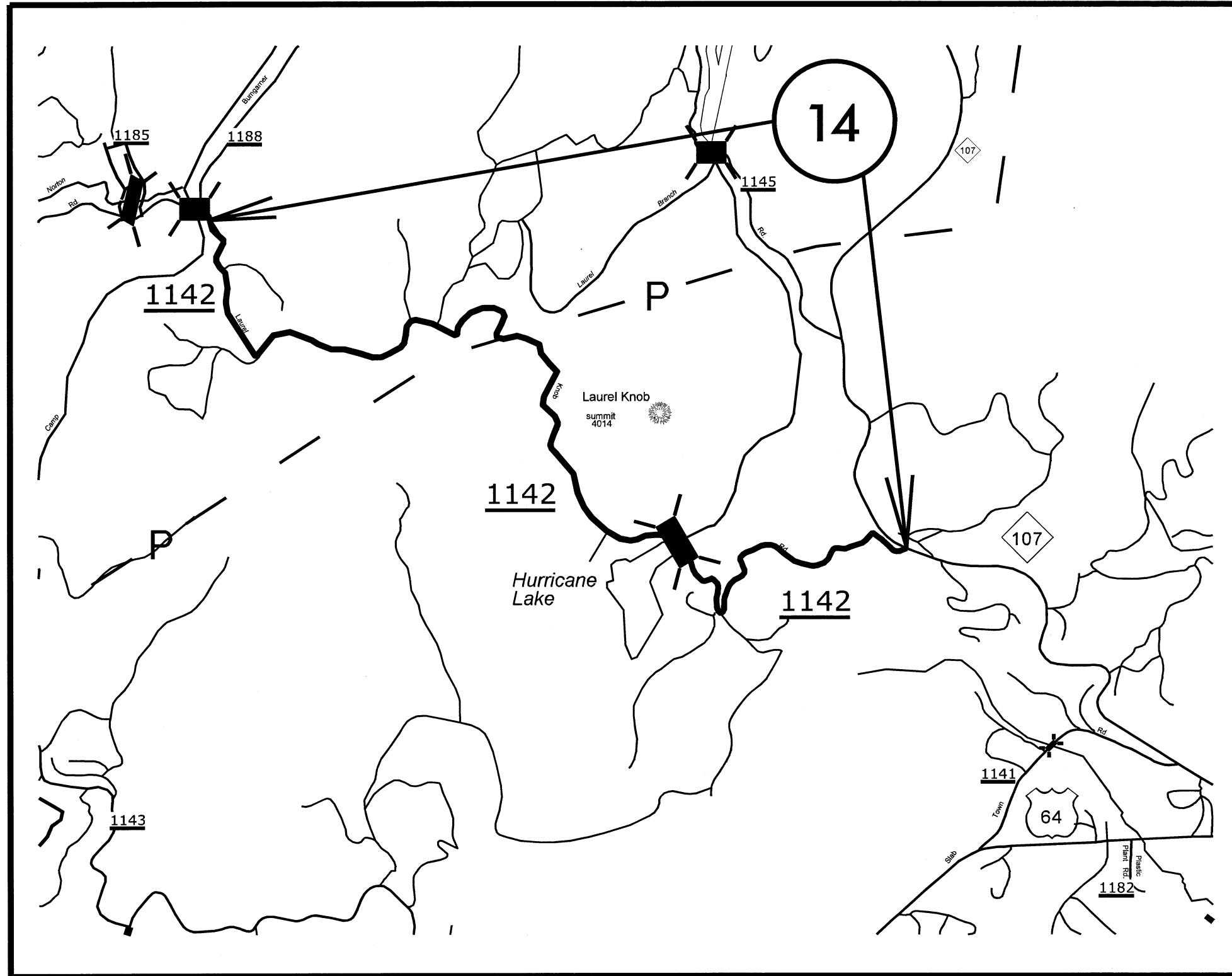


# JACKSON COUNTY

PROJECT REFERENCE NO.		SHEET NO.
2017 CPT 14.01.10441.1 ETC		10
STATE PROJECT	F.A. PROJECT NO.	DESCRIPTION

**TIP PROJECT: N/A**

**CONTRACT:**

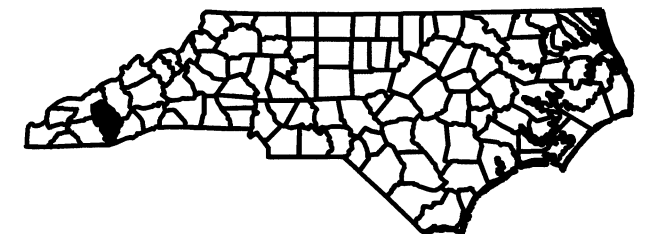
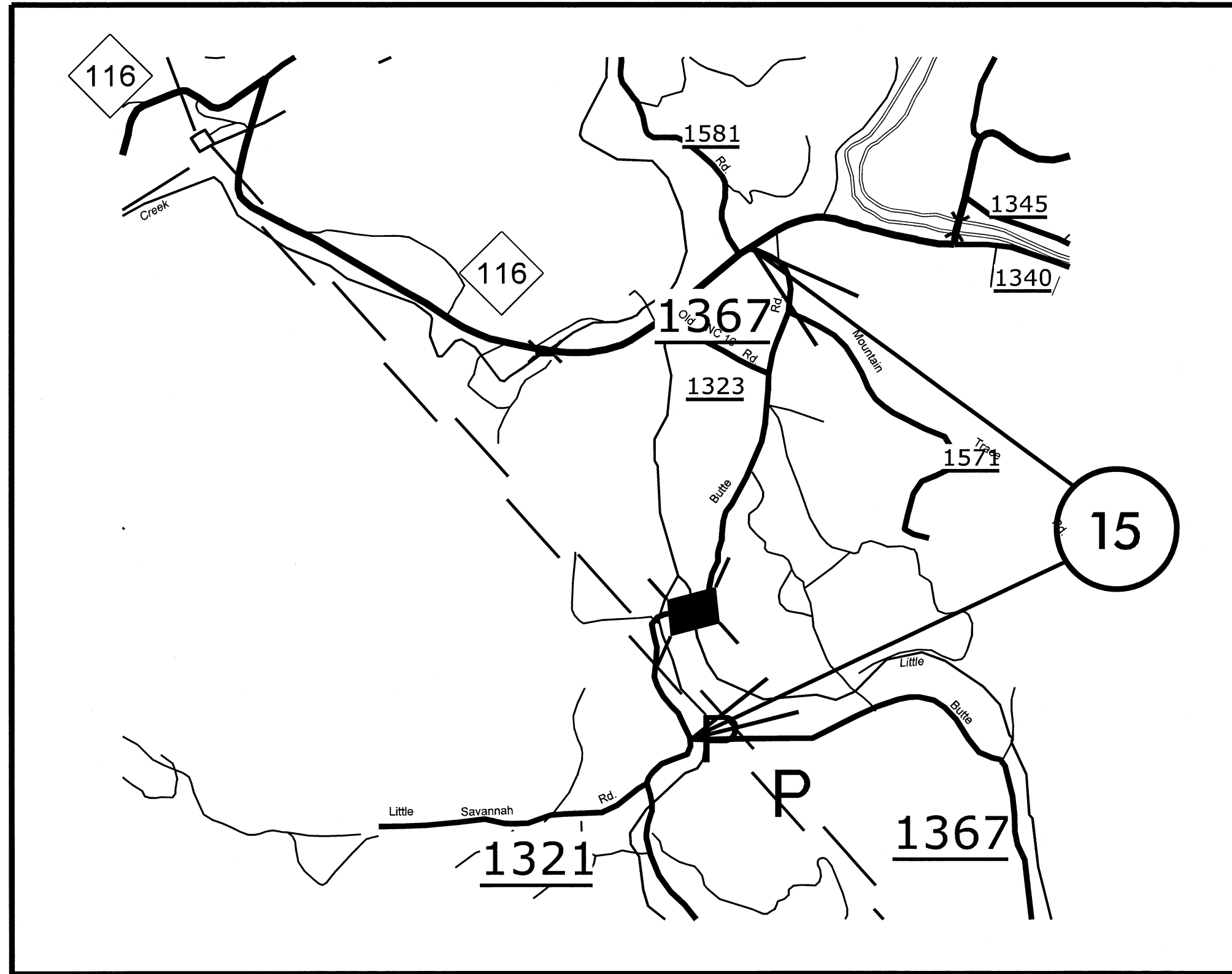


# JACKSON COUNTY

PROJECT REFERENCE NO.		SHEET NO.
2017CPT.14.01.10441.1,ETC		11
STATE PROJECT	F.A. PROJECT NO.	DESCRIPTION

**TIP PROJECT: N/A**

**CONTRACT:**

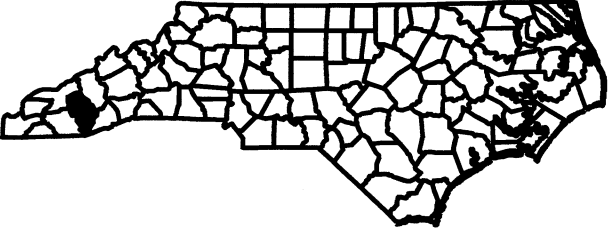
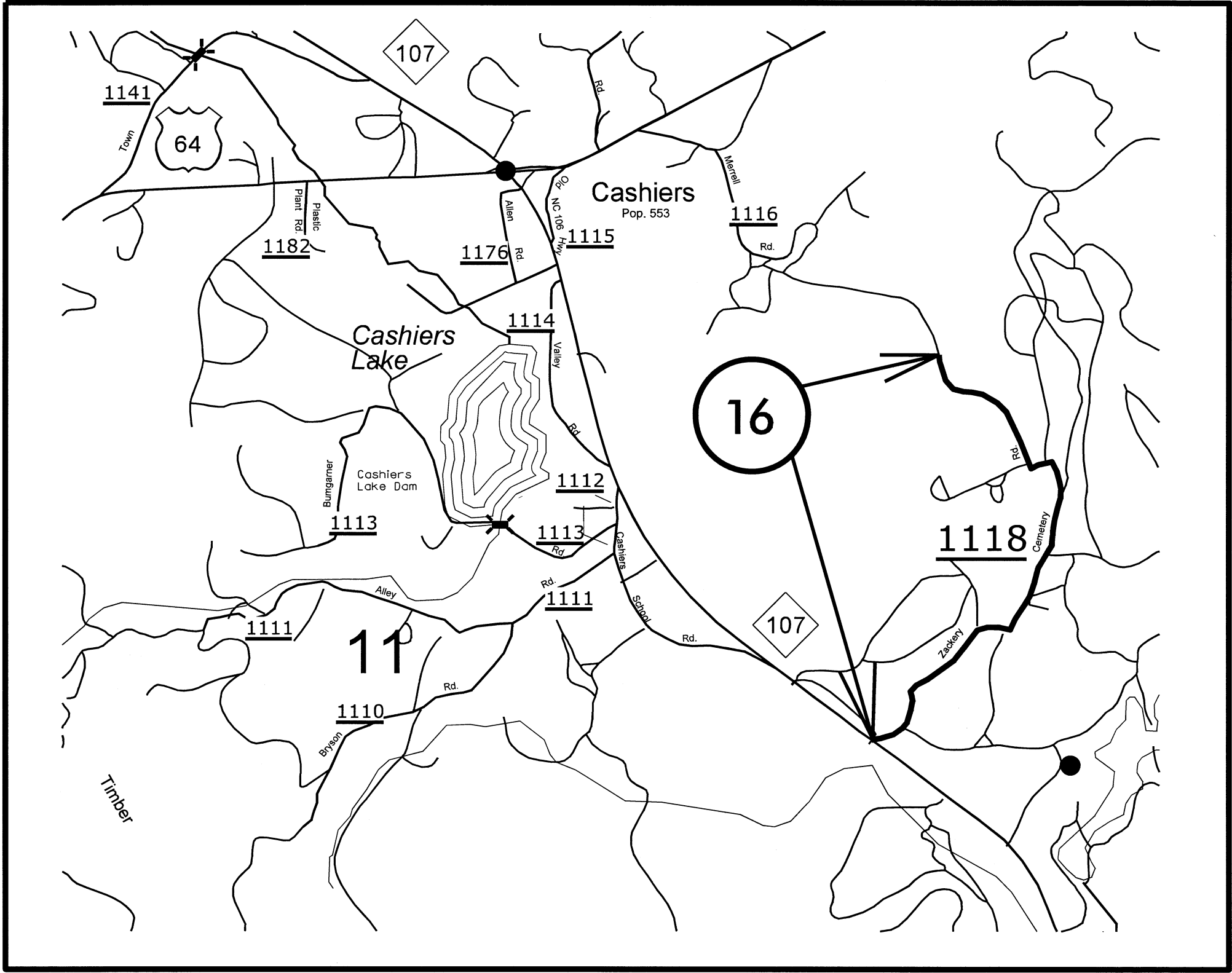


# JACKSON COUNTY

PROJECT REFERENCE NO.		SHEET NO.
2017CPT.14.01.10441.1,ETC		12
STATE PROJECT	F.A. PROJECT NO.	DESCRIPTION

**TIP PROJECT: N/A**

**CONTRACT:**

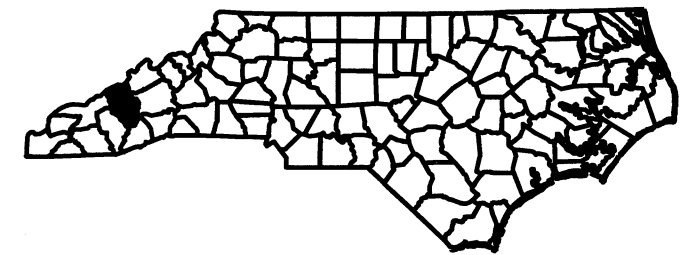
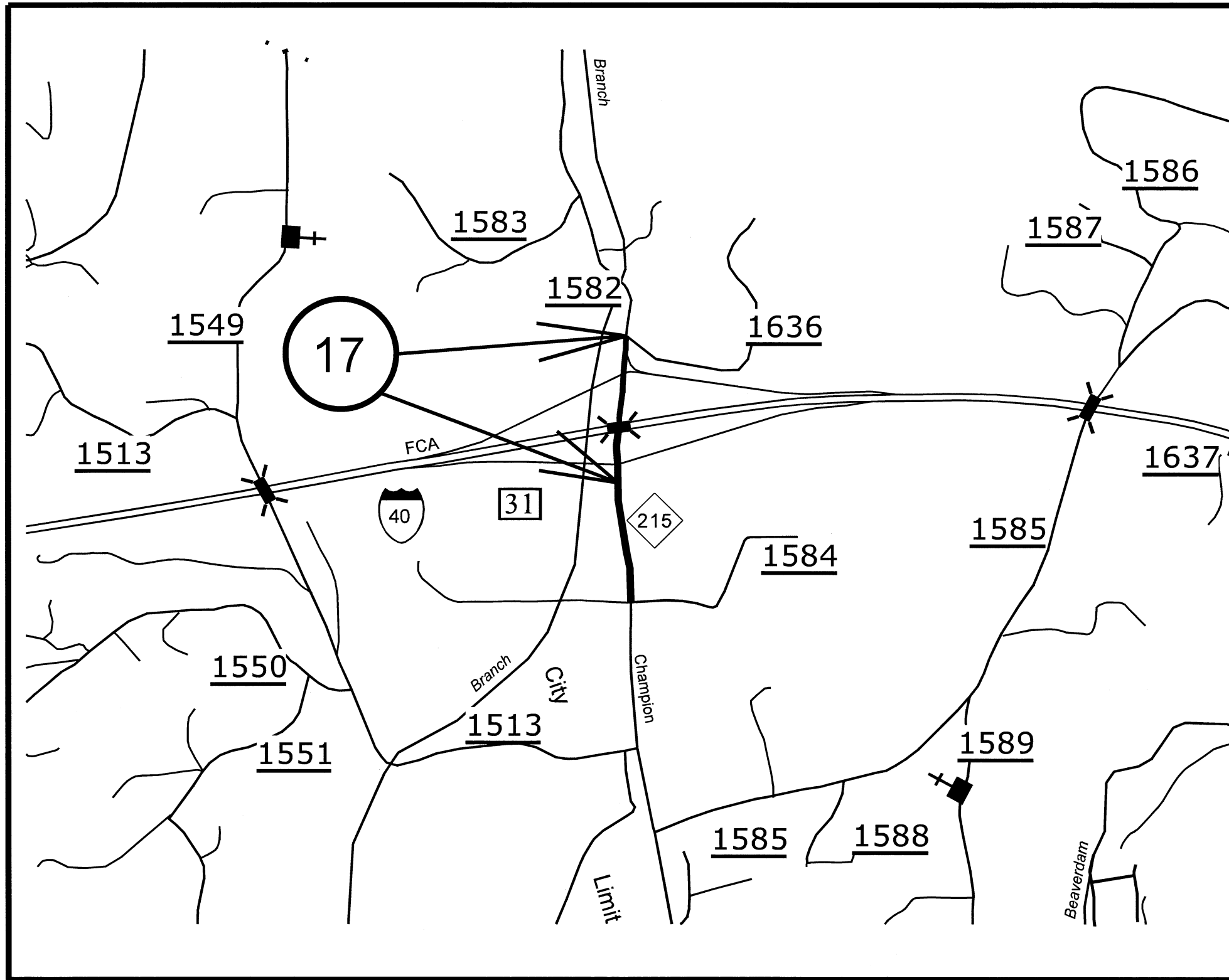


# HAYWOOD COUNTY

PROJECT REFERENCE NO.		SHEET NO.
2017CPT.14.01.10441.1,ETC		13
STATE PROJECT	F.A. PROJECT NO.	DESCRIPTION

**TIP PROJECT:**

**CONTRACT:**

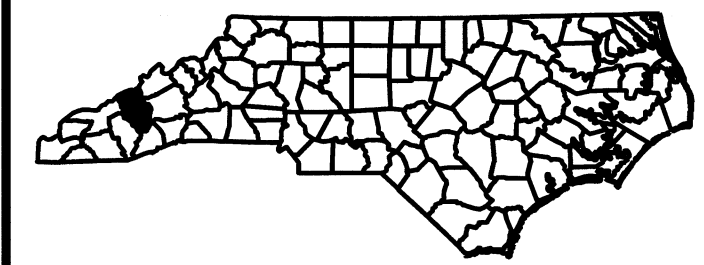
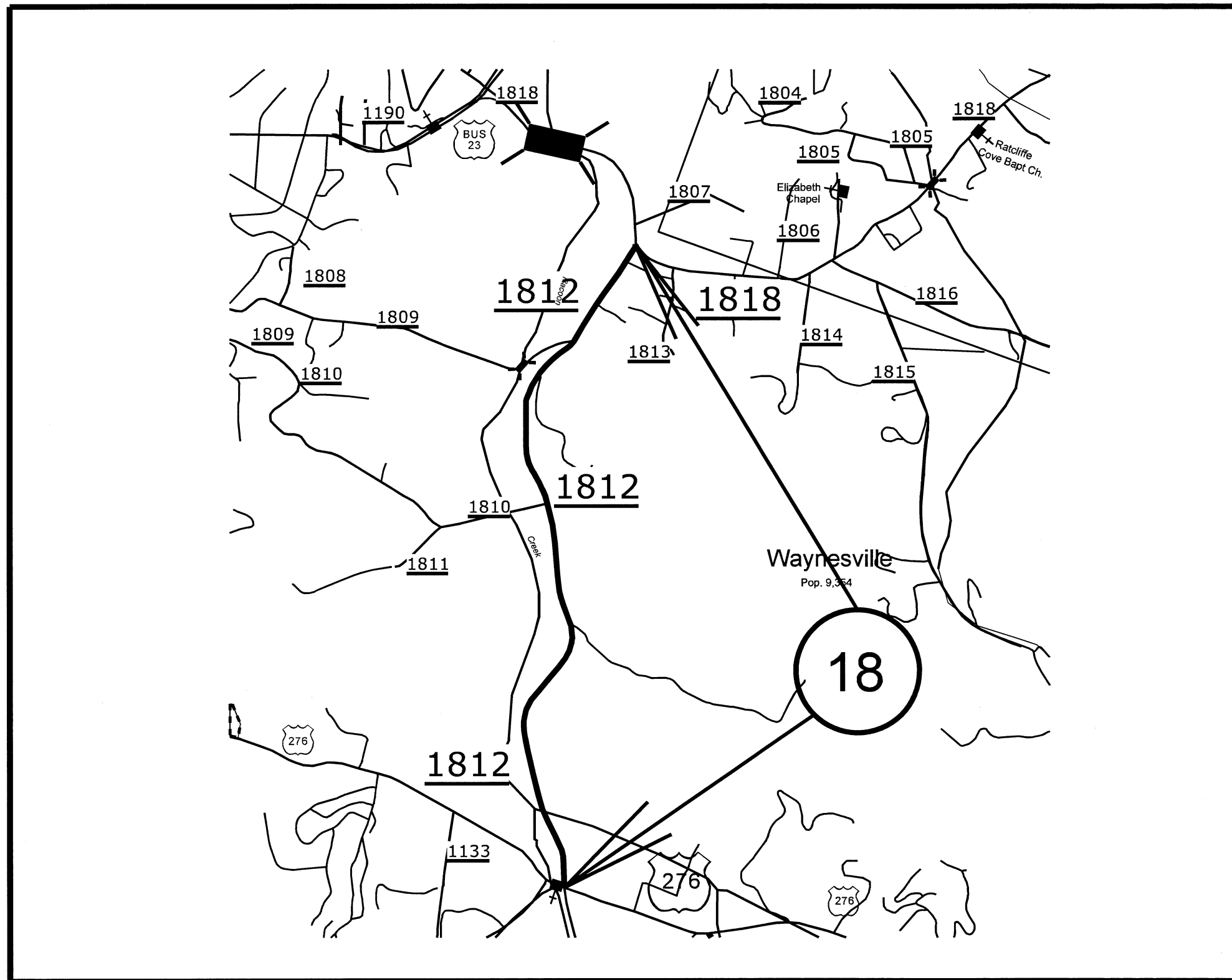


# HAYWOOD COUNTY

PROJECT REFERENCE NO.		SHEET NO.
2017CPT.14.01.10441.1.ETC		14
STATE PROJECT	F.A. PROJECT NO.	DESCRIPTION

**TIP PROJECT:**

**CONTRACT:**

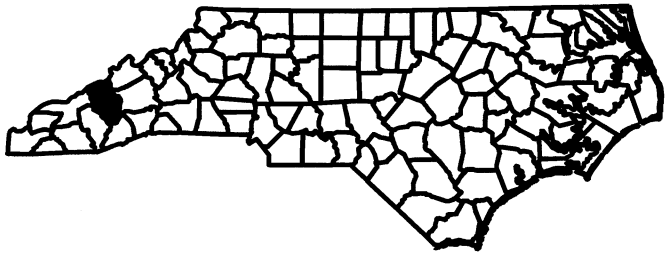
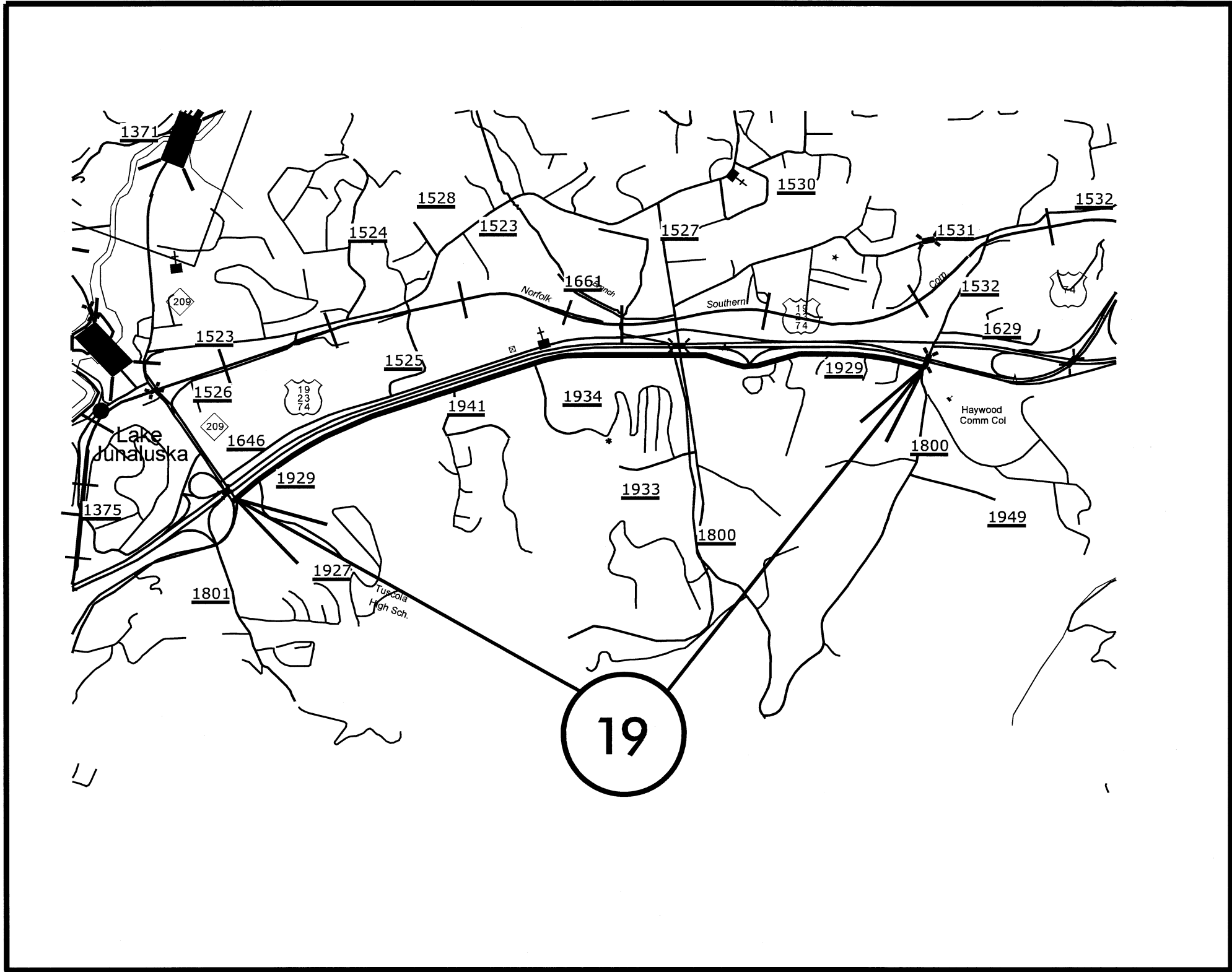


# HAYWOOD COUNTY

PROJECT REFERENCE NO.		SHEET NO.
2017CPT.14.01.10441.1.ETC		15
STATE PROJECT	F.A. PROJECT NO.	DESCRIPTION

**TIP PROJECT:**

**CONTRACT:**





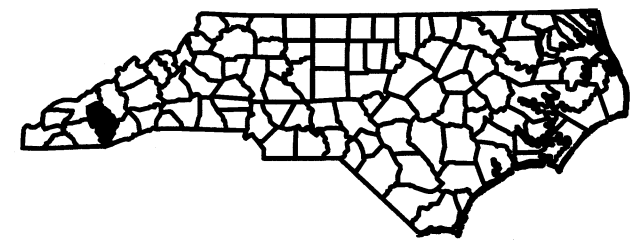
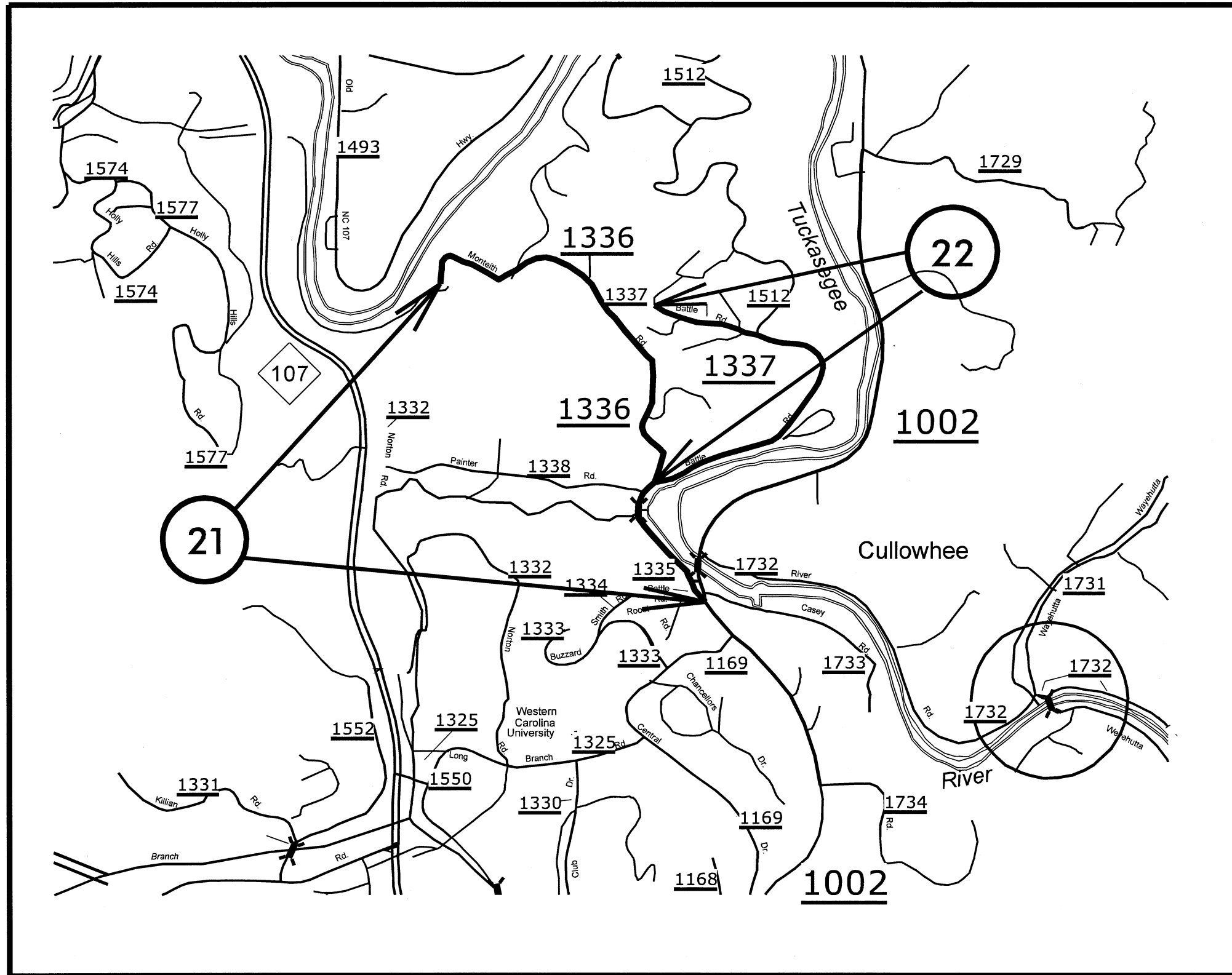


# JACKSON COUNTY

PROJECT REFERENCE NO.		SHEET NO.
2017CPT.14.01.10441.1,ETC		17
STATE PROJECT	F.A. PROJECT NO.	DESCRIPTION

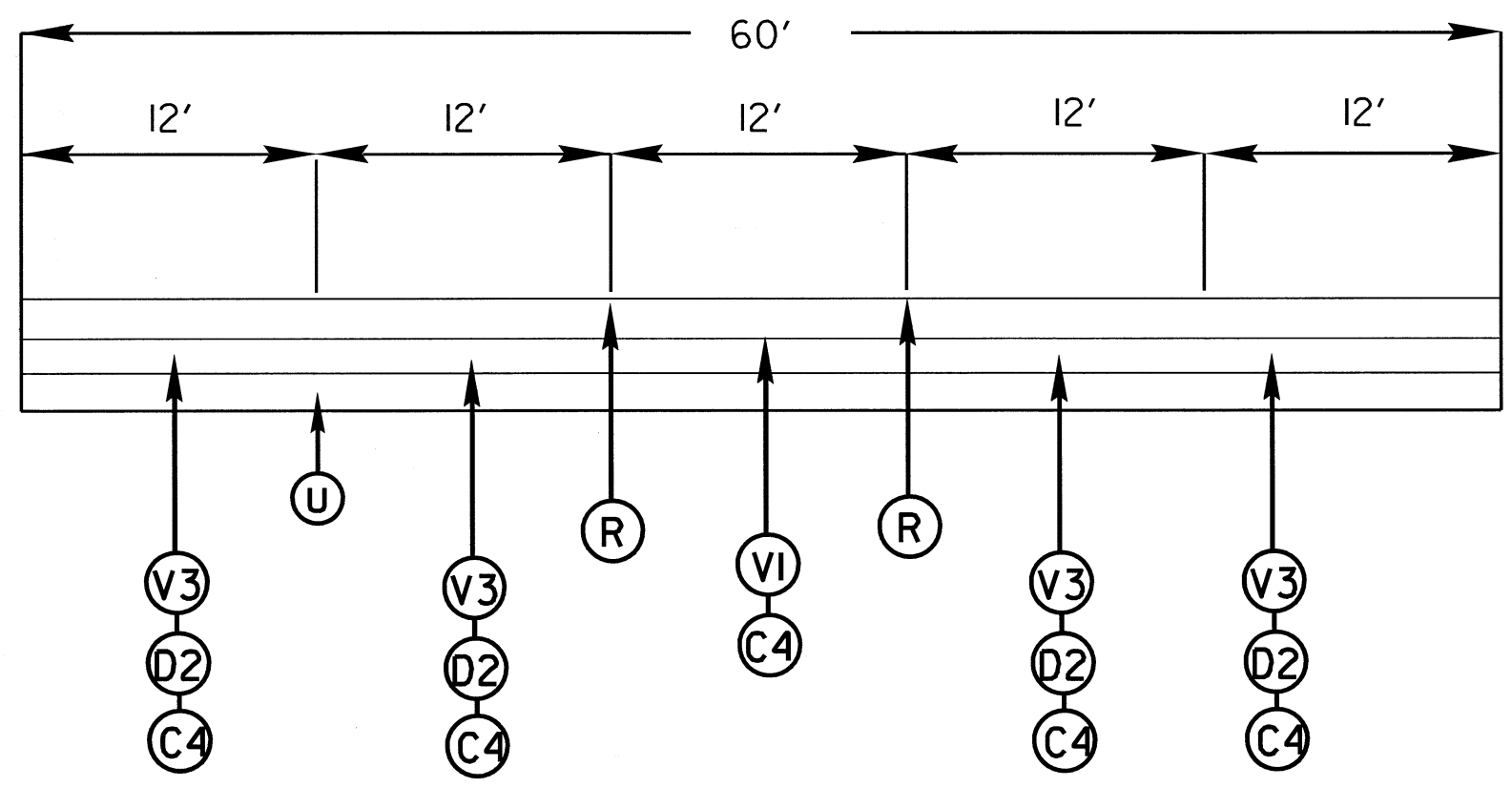
**TIP PROJECT: N/A**

**CONTRACT:**

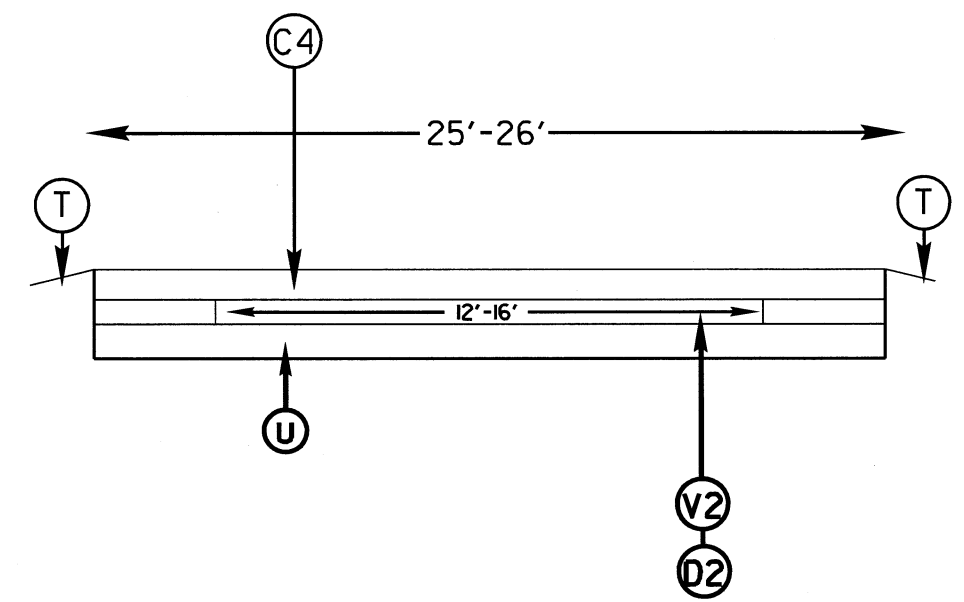


PROJECT REFERENCE NO.		SHEET NO.
2017CPT.14.01.10441.1,ETC		18
STATE PROJECT	F.A. PROJECT NO.	DESCRIPTION

# TYPICAL 1

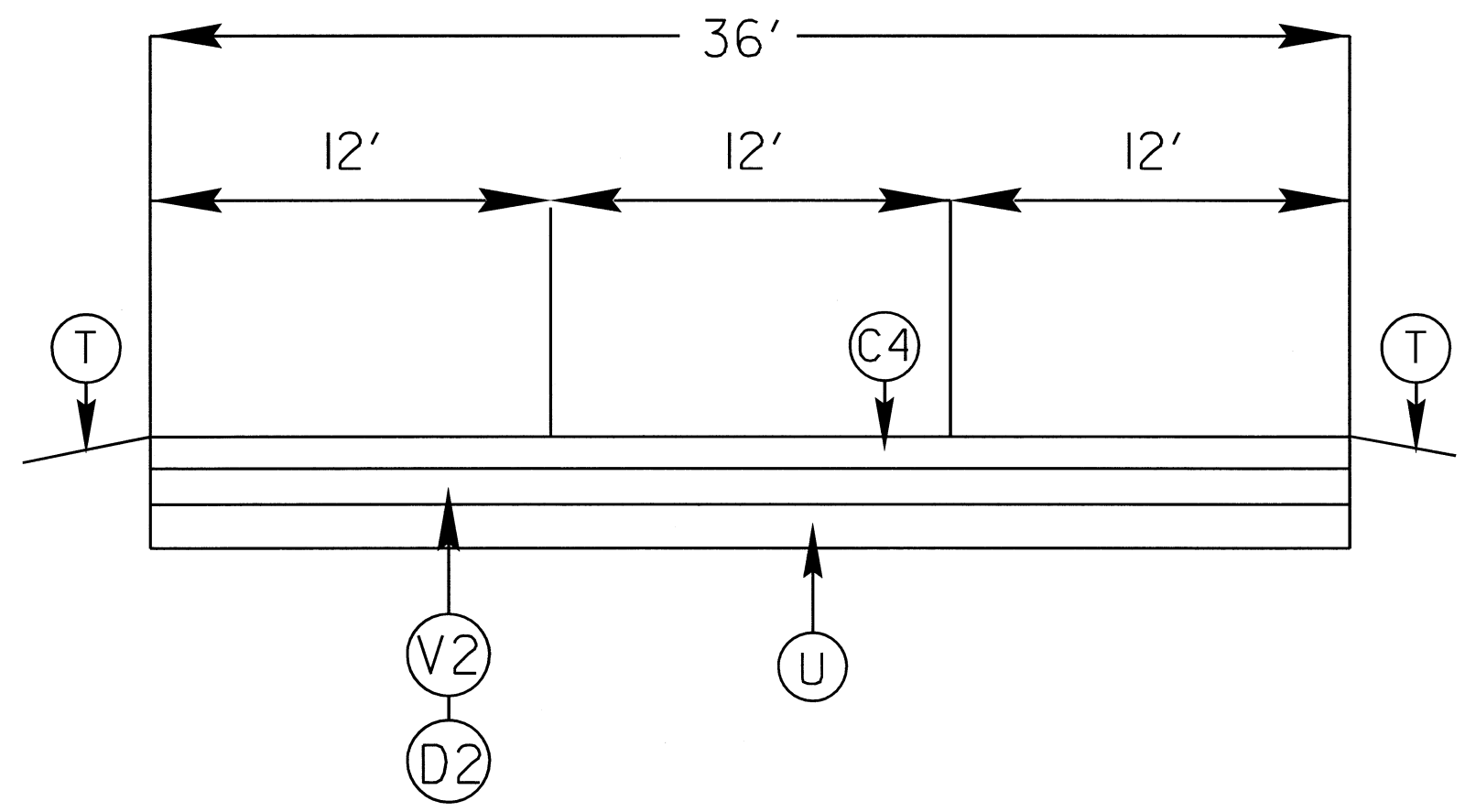


# TYPICAL 2

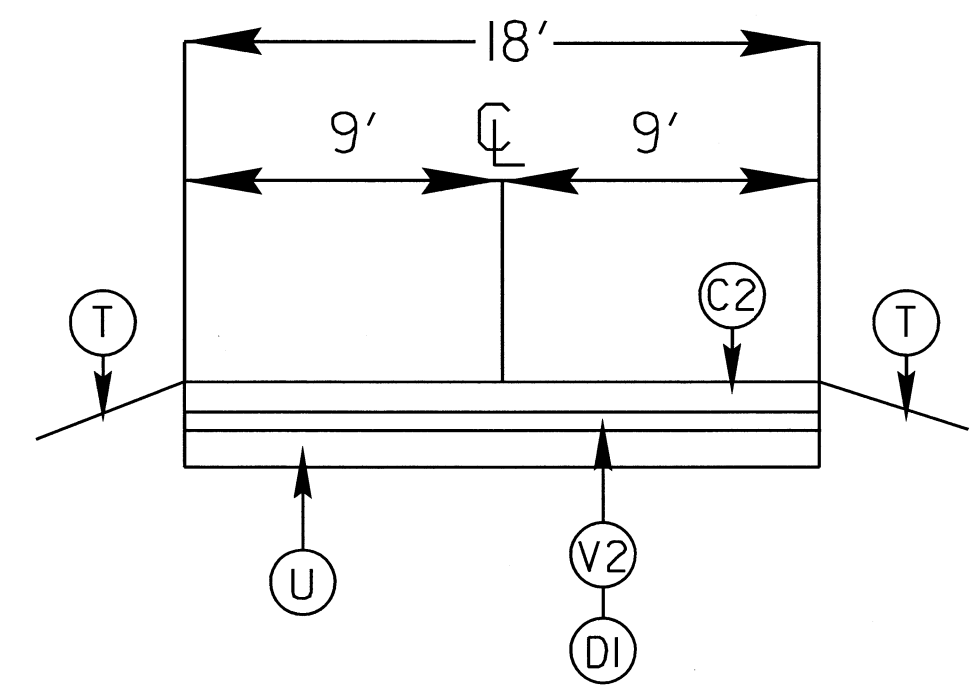


PROJECT REFERENCE NO.		SHEET NO.
2017CPT.14.01.10441.1.ETC		19
STATE PROJECT	F.A. PROJECT NO.	DESCRIPTION

# TYPICAL 3

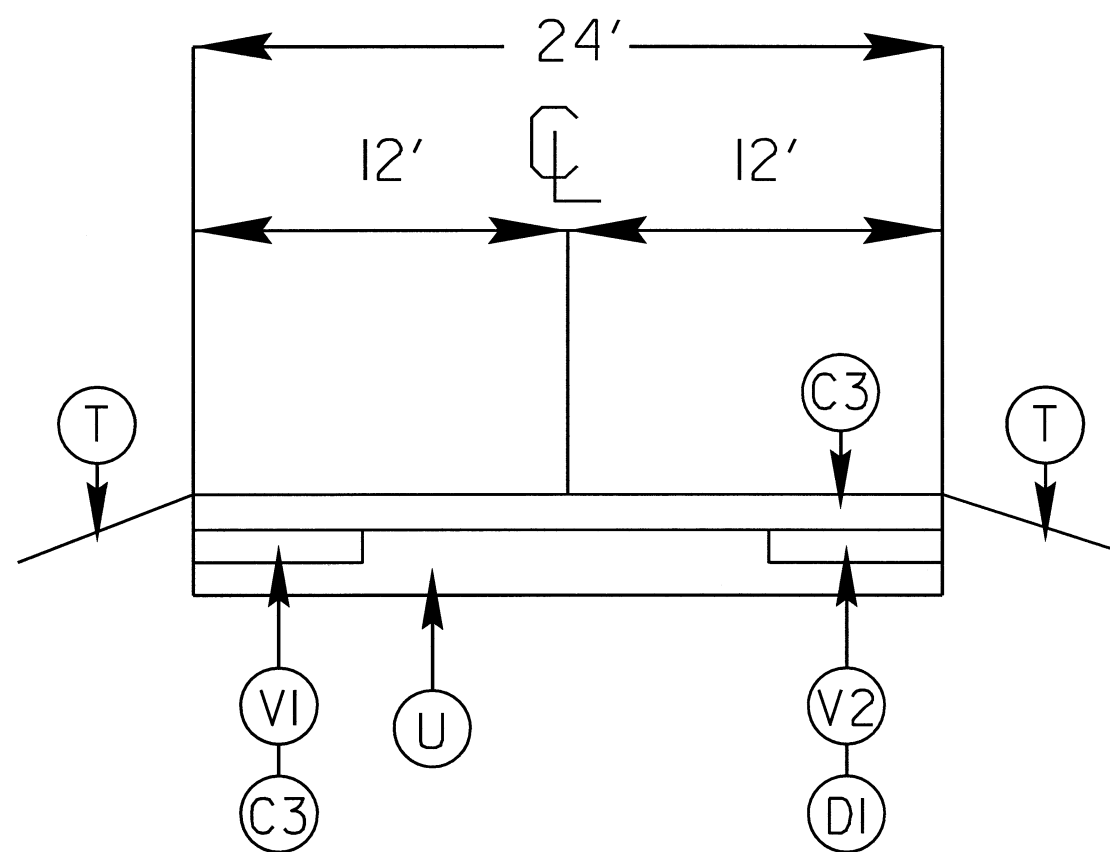


# TYPICAL 4

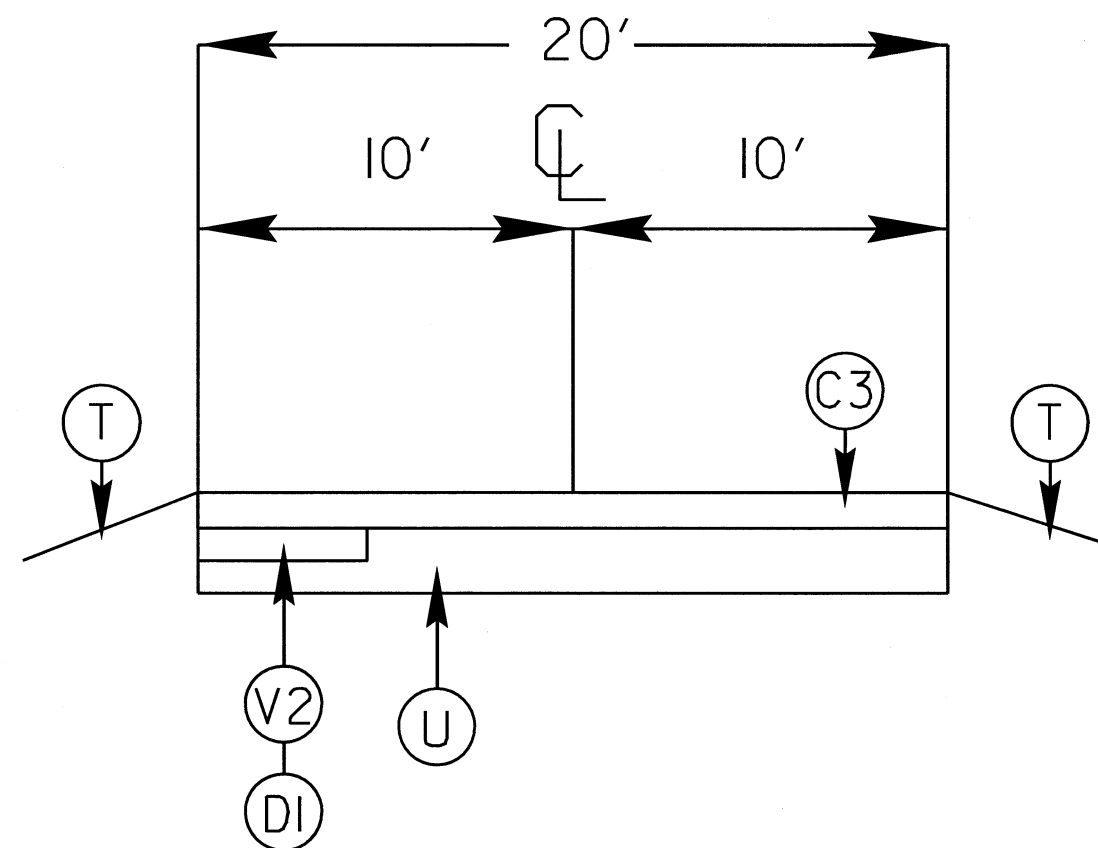


PROJECT REFERENCE NO.		SHEET NO.
2017CPT.14.01.10441.1.ETC		20
STATE PROJECT	F.A. PROJECT NO.	DESCRIPTION

# TYPICAL 5

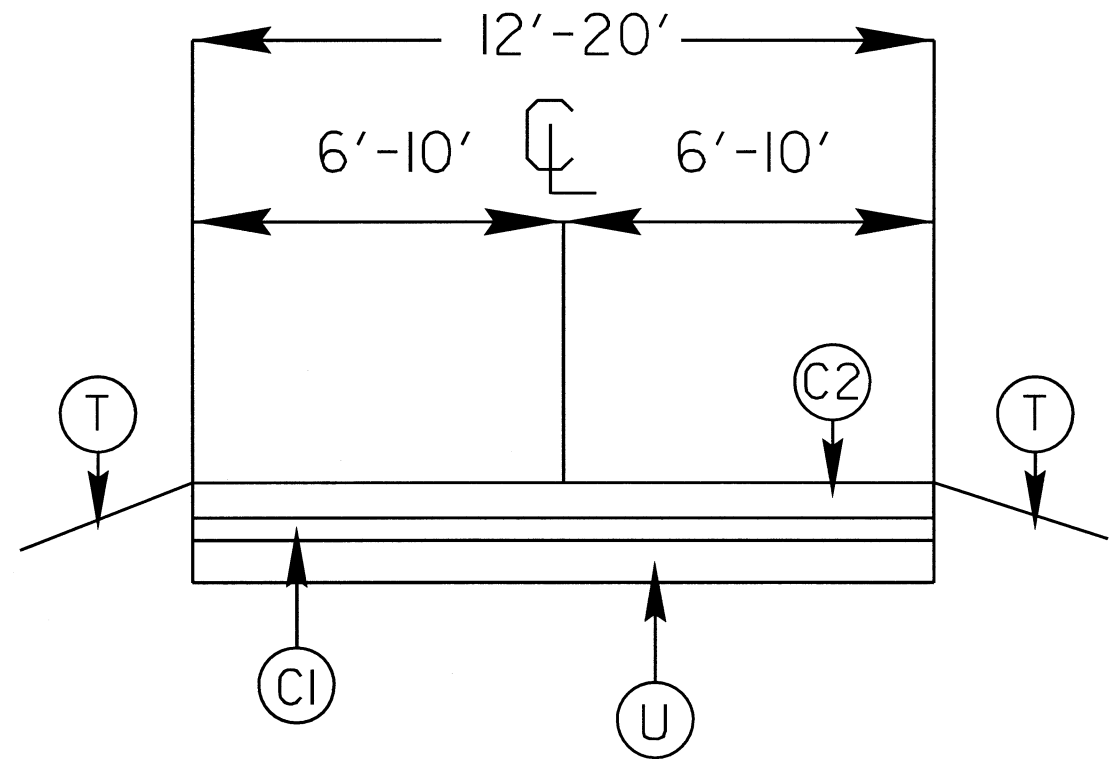


# TYPICAL 6

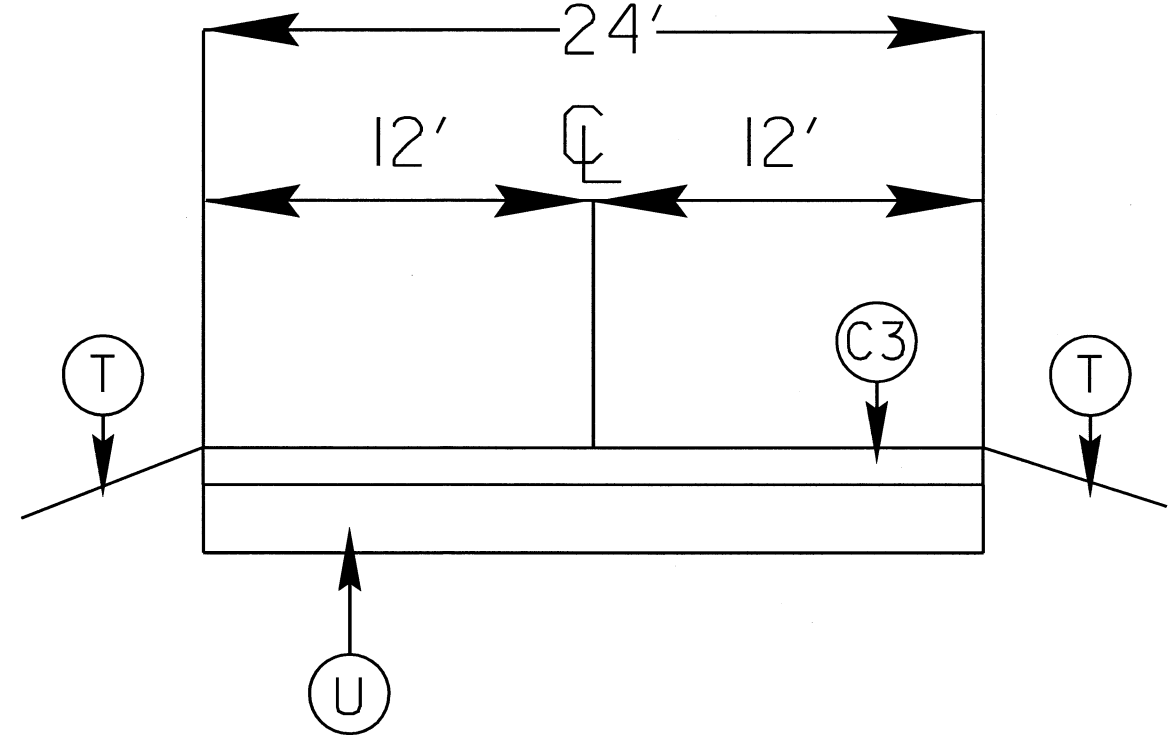


PROJECT REFERENCE NO.		SHEET NO.
2017CPT.14.01.10441.1.ETC		21
STATE PROJECT	F.A. PROJECT NO.	DESCRIPTION

# TYPICAL 7



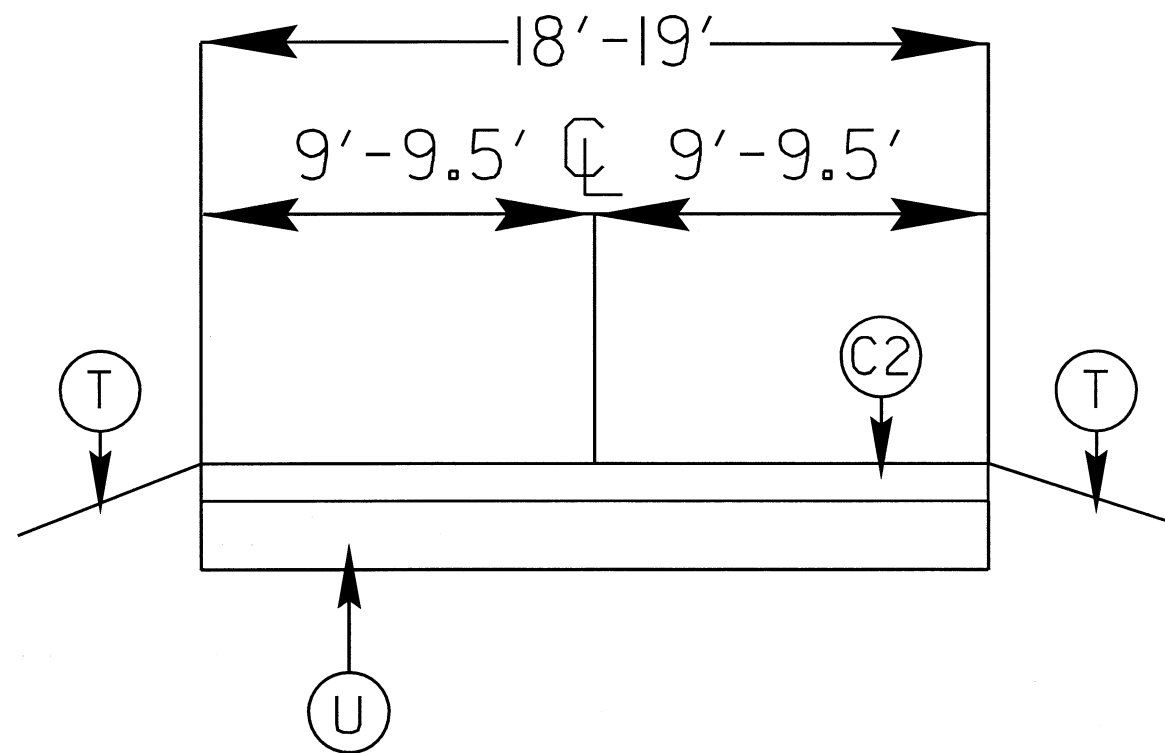
# TYPICAL 8



## SURFACING SCHEDULE

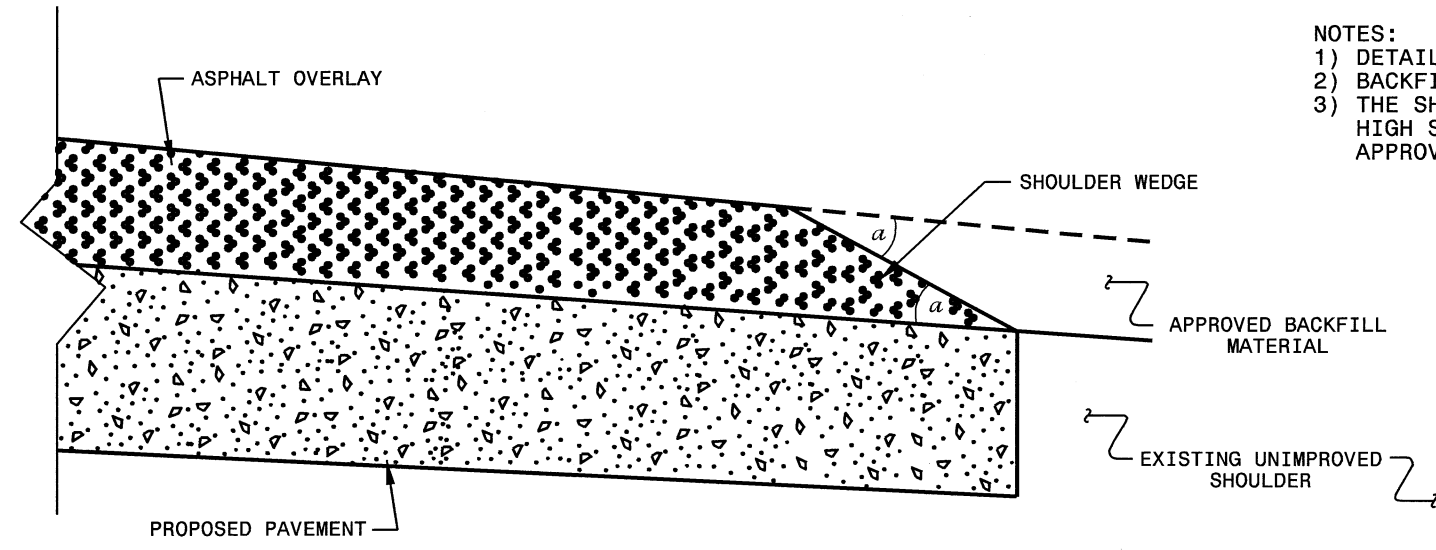
PROJECT REFERENCE NO.		SHEET NO.
2017CPT.14.01.10441.1, ETC		22
STATE PROJECT	F.A. PROJECT NO.	DESCRIPTION

# TYPICAL 9

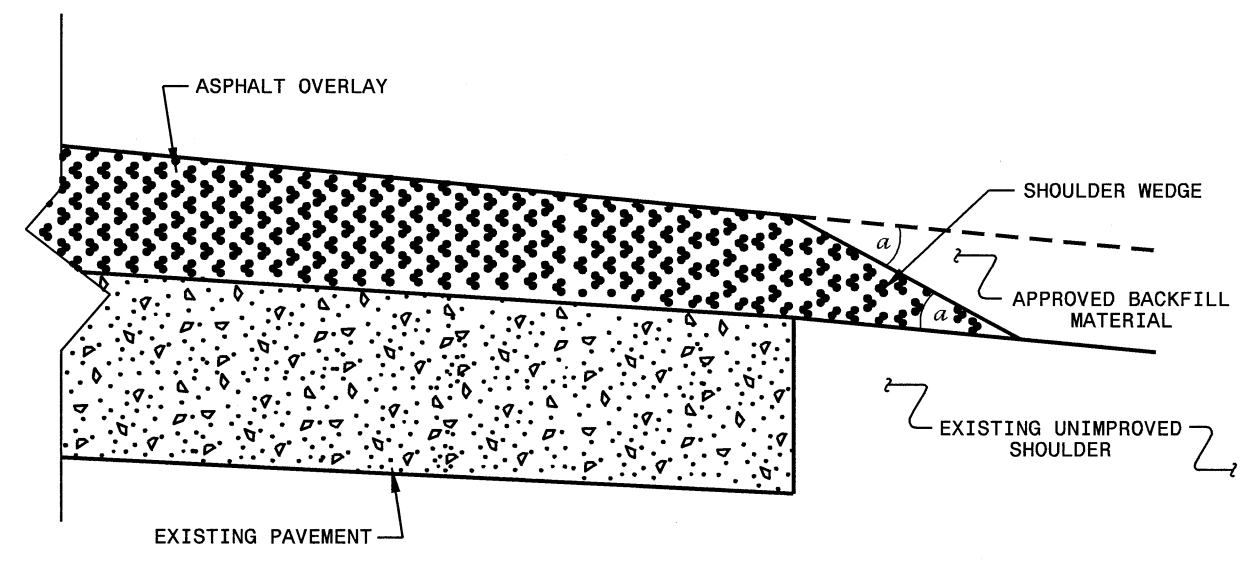


ITEM NO	DESCRIPTION
C1	PROP. APPROX. 3/4" ASPHALT CONCRETE SURFACE COURSE, (LEVELING) TYPE SF9.5A AT AN AVERAGE RATE OF 82.5 LBS.PER.SQ.YD
C2	PROP. APPROX. 1 1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 137.5 LBS. PER SQ YD
C3	PROP. APPROX. 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD
C4	PROP. APPROX. 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ YD
D1	PROP. APPROX. 3" ASPHALT CONCRETE INTERMEDIATE COURSE,TYPE I19.OB,AT A AVERAGE RATE OF 342 LBS PER SQ.YD.
D2	PROP. APPROX. 3" ASPHALT CONCRETE INTERMEDIATE COURSE,TYPE I19.OC,AT A AVERAGE RATE OF 342 LBS PER SQ.YD.
R	MILLED RUMBLE STRIPS AS DIRECTED BY PROJECT ENGINEER
T	SHOULDER RECONSTRUCTION
V1	MILLED ASPHALT PAVEMENT 1 1/2" IN DEPTH IN LOCATIONS AS DIRECTED BY PROJECT ENGINEER
V2	MILLED ASPHALT PAVEMENT 3" IN DEPTH IN LOCATIONS AS DIRECTED BY PROJECT ENGINEER
V3	MILLED ASPHALT PAVEMENT 4 1/2" IN DEPTH IN LOCATIONS AS DIRECTED BY PROJECT ENGINEER
U	EXISTING ASPHALT

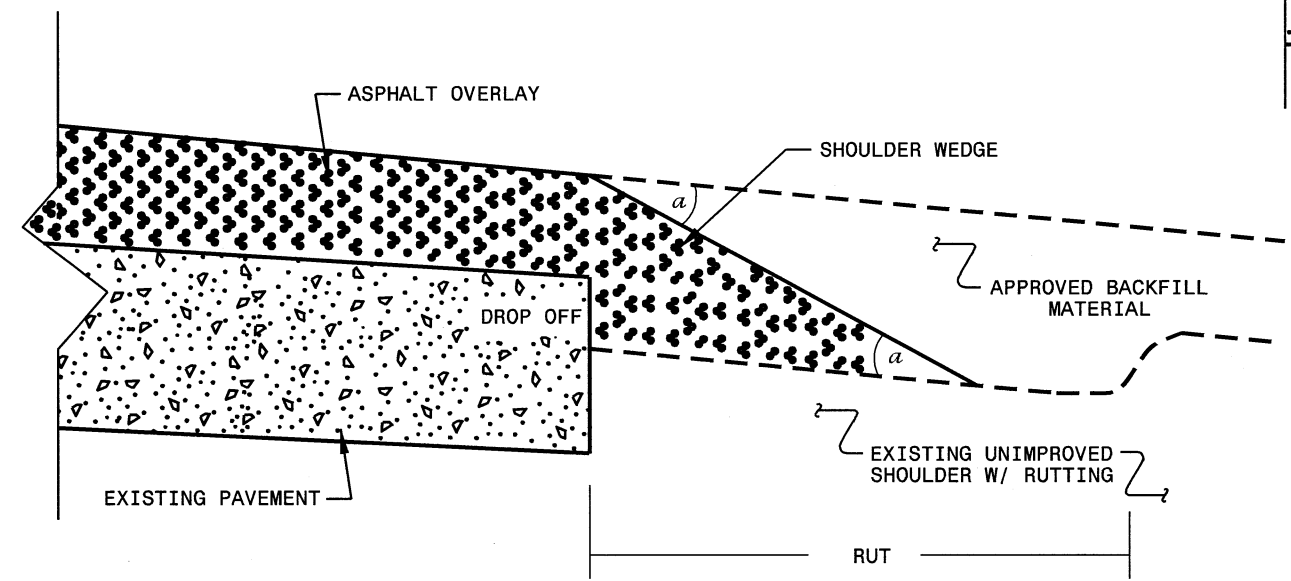
- NOTES:
- 1) DETAIL DOES NOT APPLY TO OGAFB AND ULTRA-THIN BONDED WEARING COURSE.
  - 2) BACKFILL SHOULDER WITH APPROVED MATERIAL.
  - 3) THE SHOULDER WEDGE DEVICE MAY BE DISENGAGED AT PAVED DRIVEWAYS, SIDE STREETS, HIGH SHOULDERS, AND OTHER LOCATIONS NOT FEASIBLE TO CONSTRUCT AS APPROVED BY THE ENGINEER.



**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°

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

24-MAR-2016 11:45  
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 \$\$\$USERNAME\$\$\$



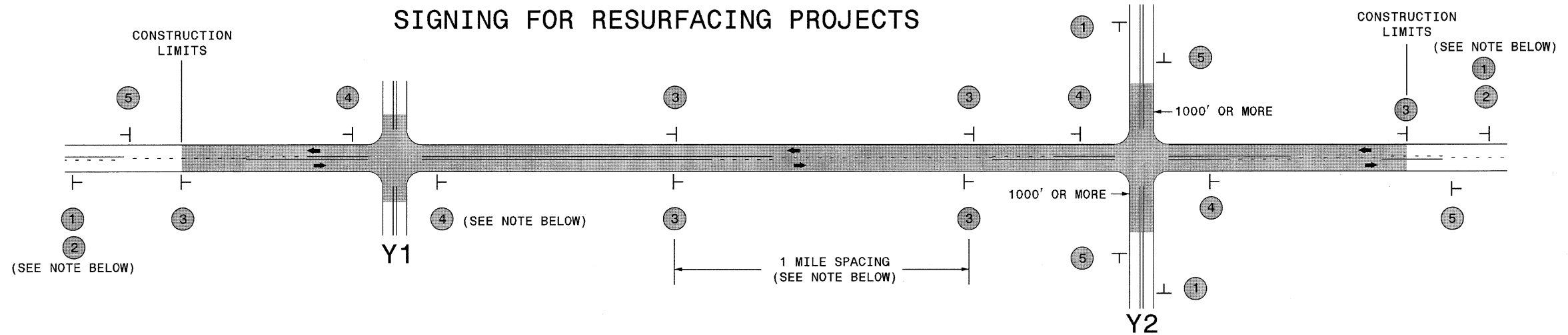
PROJECT NO.	SHEET NO.	TOTAL NO.
2017CPT.14.01.10441.1 ETC	24	

### SUMMARY OF QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP	LANES	LANE TYPE	FINAL SURFACE TESTING REQUIRED	WARM MIX ASPHALT REQUIRED	LENGTH MI	WIDTH FT	SHOULDER RECONSTRUCTION SMI	3" MILLING SY	1 1/2" MILLING SY	4 1/2" MILLING SY	INTERMEDIATE COURSE, I19.0B TONS	INTERMEDIATE COURSE, I19.0C TONS	SURFACE COURSE, S9.5B TONS	SURFACE COURSE, S9.5C TONS	SURFACE COURSE, S9.5A TONS	LEVELING COURSE, SF9.5A TON	ASPHALT BINDER FOR PLANT MIX TONS	PATCHING EXISTING PAVEMENT TONS	MILLED RUMBLE STRIPS (ASPHALT CEMENT CONCRETE) CENTER LANE LF	ADJ. OF METER OR VALVE BOX EA	PORTABLE LIGHTING LS	INDUCTIVE LOOP SAWCUT LF	LEAD-IN CABLE (14-2) LF	
2017CPT.14.01.10501.1	Jackson	1	US 441	FROM US 74 TO SWAIN COUNTY LINE	1	5	MU	YES	NO	4.29	60			36,200	133,000		29,042		13,955			2,220		2,600				1,592	842
<b>TOTAL FOR MAP NO. 1</b>										4.29				36,200	133,000		29,042		13,955			2,220		2,600				1,592	842
2017CPT.14.01.10501.1	Jackson	2	US 441 RAMP	FROM US 74 EAST BOUND TO US 441 NORTH BOUND	2	1		NO	NO	0.25	26	0.50	4,200				717		372			56							
<b>TOTAL FOR MAP NO. 2</b>										0.25		0.50	4,200				717		372			56							
2017CPT.14.01.10501.1	Jackson	3	US 441 RAMP	FROM US 441 TO US74 WEST BOUND	2	1		NO	NO	0.19	25	0.38	3,060				525		274			41							
<b>TOTAL FOR MAP NO. 3</b>										0.19		0.38	3,060				525		274			41							
2017CPT.14.01.10501.1	Jackson	4	US 441 RAMP	FROM US 74 WEST BOUND TO US 441 NORTH BOUND	2	1		NO	NO	0.17	25	0.34	2,750				469		248			37							
<b>TOTAL FOR MAP NO. 4</b>										0.17		0.34	2,750				469		248			37							
<b>TOTAL FOR PROJ NO. 2017CPT.14.01.10501.1</b>										4.9		1.22	10,010	36,200	133,000		30,753		14,849			2,354		2,600				1,592	842
2017CPT.14.01.10871.1	Swain	5	US 441	FROM JACKSON LINE TO US 19	1	5	MU	YES	NO	0.7	60			5,900	23,600		4,065		2,502			343						624	814
<b>TOTAL FOR MAP NO. 5</b>										0.7				5,900	23,600		4,065		2,502			343						624	814
<b>TOTAL FOR PROJ NO. 2017CPT.14.01.10871.1</b>										0.7				5,900	23,600		4,065		2,502			343						624	814
2017CPT.14.01.20501.1	Jackson	6	SR-1789	FROM SR-1449 TO END OF STATE MAINT.	7	2	2WU	NO	NO	0.07	12	0.14								39	31	4							
<b>TOTAL FOR MAP NO. 6</b>										0.07		0.14								39	31	4							
2017CPT.14.01.20501.1	Jackson	7	SR-1367	FROM SR-1324 TO SR-1551	9	2	2WU	NO	NO	1.55	19	3.10								1,314		88	150						
<b>TOTAL FOR MAP NO. 7</b>										1.55		3.10								1,314		88	150						
2017CPT.14.01.20501.1	Jackson	8	SR-1701	FROM SR-1700 DEAD END	7	2	2WU	NO	NO	0.93	18	1.86								747	280	67							
<b>TOTAL FOR MAP NO. 8</b>										0.93		1.86								747	280	67							
2017CPT.14.01.20501.1	Jackson	9	SR-1355	FROM .07 MILES SOUTH OF NC107 TO END OF PAVE.	9	2	2WU	NO	NO	0.23	18	0.46								185		12	100						
<b>TOTAL FOR MAP NO. 9</b>										0.23		0.46								185		12	100						
2017CPT.14.01.20501.1	Jackson	10	SR-1393	FROM SR-1392 TO END OF PAVE	7	2	2WU	NO	NO	2.15	18	4.30								1,727	658	155	200						
<b>TOTAL FOR MAP NO. 10</b>										2.15		4.30								1,727	658	155	200						
2017CPT.14.01.20501.1	Jackson	11	SR-1111	FROM SR-1112 TO SR-1110	7	2	2WU	NO	NO	0.22	20	0.44								196	71	17	25						
<b>TOTAL FOR MAP NO. 11</b>										0.22		0.44								196	71	17	25						
2017CPT.14.01.20501.1	Jackson	12	SR-1110	FROM SR-1111 TO END OF STATE MAINT.	7	2	2WU	NO	NO	0.38	20	0.76								339	121	30	75						
<b>TOTAL FOR MAP NO. 12</b>										0.38		0.76								339	121	30	75						
2017CPT.14.01.20501.1	Jackson	13	SR-1360	FROM NC 116 TO US 23/441	7	2	2WU	NO	NO	2.39	18	4.78								1,920	250	144	430						
<b>TOTAL FOR MAP NO. 13</b>										2.39		4.78								1,920	250	144	430						
2017CPT.14.01.20501.1	Jackson	14	SR-1142	FROM PVT CHG. .01 MILES SOUTH OF NC 107 TO END OF PAVE.	7	2	2WU	NO	NO	1.25	20	2.50								1,115	398	99	250						
<b>TOTAL FOR MAP NO. 14</b>										1.25		2.50								1,115	398	99	250						
2017CPT.14.01.20501.1	Jackson	15	SR-1367	FROM NC 116 TO SR-1321	9	2	2WU	NO	NO	0.85	19	1.70								720		48	160						
<b>TOTAL FOR MAP NO. 15</b>										0.85		1.70								720		48	160						
2017CPT.14.01.20501.1	Jackson	16	SR-1118	FROM NC 107 TO END OF PAVEMENT	7	2	2WU	NO	NO	0.75	18	1.50								602	209	53	100						
<b>TOTAL FOR MAP NO. 16</b>										0.75		1.50								602	209	53	100						
2017CPT.14.01.20501.1	Jackson	21	SR-1336	FROM SR-1002 TO END OF MAINT.	7	2	2WU	NO	NO	1.13	18	2.26								944	731	107	460						
<b>TOTAL FOR MAP NO. 21</b>										1.13		2.26								944	731	107	460						
2017CPT.14.01.20501.1	Jackson	22	SR-1337	FROM SR-1336 TO END OF MAINT.	4	2	2WU	NO	NO	0.79	18	1.58	8,342			1,562				660		119							
<b>TOTAL FOR MAP NO. 22</b>										0.79		1.58	8,342			1,562				660		119							
<b>TOTAL FOR PROJ NO. 2017CPT.14.01.20501.1</b>										12.69		25.38	8,342			1,562				10,508	2,749	943	1,950						
2017CPT.14.01.10441.1	Haywood	17	NC 215	FROM SR-1636 TO 850' SOUTH UNDER I-40	3	3	MU	NO	NO	0.16	36	0.32	3,600							669		295					1		
<b>TOTAL FOR MAP NO. 17</b>										0.16		0.32	3,600							669		295					1		
<b>TOTAL FOR PROJ NO. 2017CPT.14.01.10441.1</b>										0.16		0.32	3,600							669		295					1		
2017CPT.14.01.20441.1	Haywood	18	SR-1812	FROM SR-1818 TO US276	8	2	2WU	NO	NO	1.41	24	2.82								1,877		113	175						
<b>TOTAL FOR MAP NO. 18</b>										1.41		2.82								1,877		113	175						
2017CPT.14.01.20441.1	Haywood	19	SR-1929	FROM US 23 BUS TO SR-1800	5	2	2WU	NO	NO	1.59	24	3.10	13,000	2,000		2,779				2,079		258			5		1,380	250	
<b>TOTAL FOR MAP NO. 19</b>										1.59		3.10	13,000	2,000		2,779				2,079		258			5		1,380	250	
2017CPT.14.01.20441.1	Haywood	20	SR-1818	FROM US 23 BUS TO CLYDE CITY LIMITS	6	2	2WU	NO	NO	4.75	20	9.50	25,266			4,315				5,276		524	250		1				
<b>TOTAL FOR MAP NO. 20</b>										4.75		9.50	25,266			4,315				5,276		524	250		1				
<b>TOTAL FOR PROJ NO. 2017CPT.14.01.20441.1</b>										7.75		15.42	38,266	2,000		7,094				9,232		895	425		6		1,380	250	
<b>GRAND TOTAL</b>										26.2		42.34	60,218	44,100	156,600		8,656	35,487	9,232	17,646	10,508	2,749	4,585	2,375	2,600	6	1	3,596	1,906



## SIGNING FOR RESURFACING PROJECTS

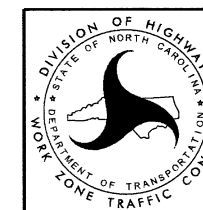


LEGEND	
	STATIONARY SIGN
←	DIRECTION OF TRAFFIC FLOW

### MAINLINE (-L-) SIGNING

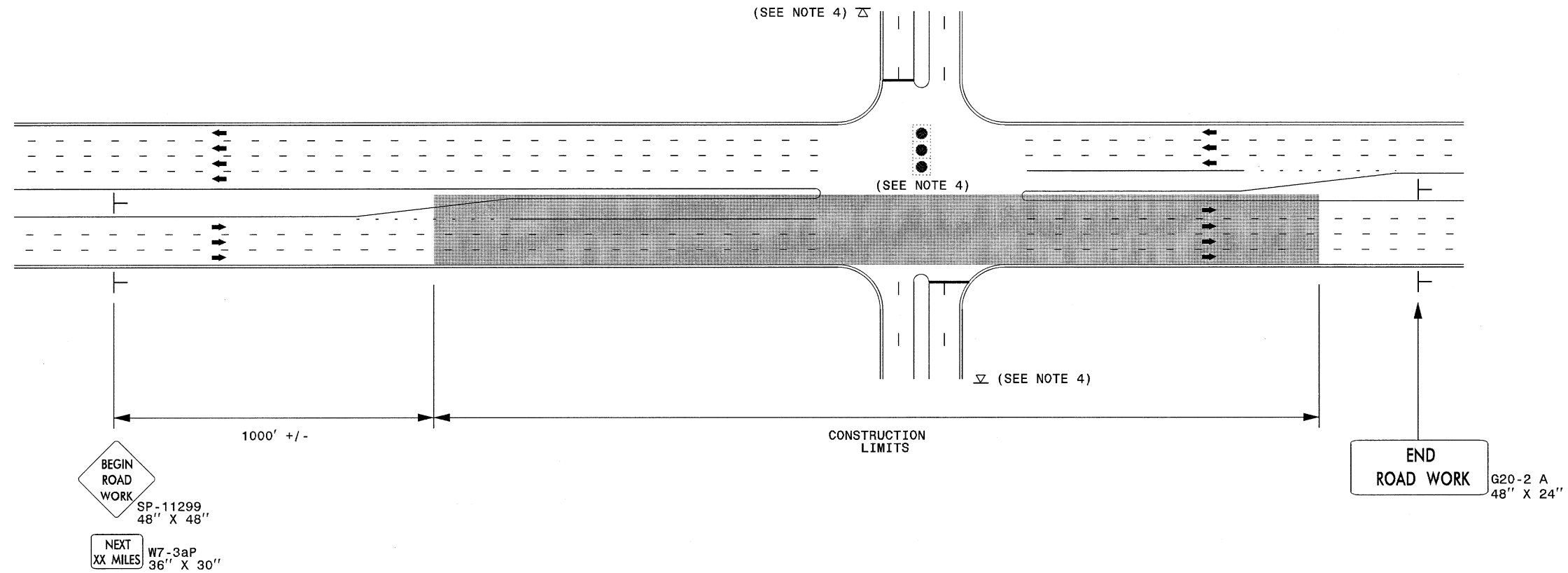
### -Y- LINE SIGNING

<b>SIGNING NOTES AND PLACEMENT PER DIRECTION</b>	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.	<p style="text-align: center;"><b>NO REQUIRED STATIONARY SIGNING FOR THE FOLLOWING -Y- LINE CONDITIONS:</b></p> <ol style="list-style-type: none"> <li>1) LESS THAN 1000' OF RESURFACING ALONG -Y- LINE</li> <li>2) SUBDIVISION ROADS</li> <li>3) DEAD END ROADS</li> </ol> <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> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  W20-1 48" X 48"           </div> <div style="text-align: center;">  W20-7 A 48" X 48"           </div> </div> <p>PLACED 500' IN ADVANCE OF FLAGGER. PLACED 250' IN ADVANCE OF FLAGGER.</p>
	2	 W7-3aP 24" X 18"	#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)	
	3	 SP 13107 48" X 48"	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.	
	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.	
5	 G20-2 A 48" X 24"	PLACE 500' FOLLOWING THE END OF CONSTRUCTION LIMITS.		



**RESURFACING  
ADVANCE WARNING SIGNS  
FOR  
RURAL AND SUBURBAN  
2 LANE ROADWAYS**

## URBAN / SUBURBAN WORKZONES



### NOTES:

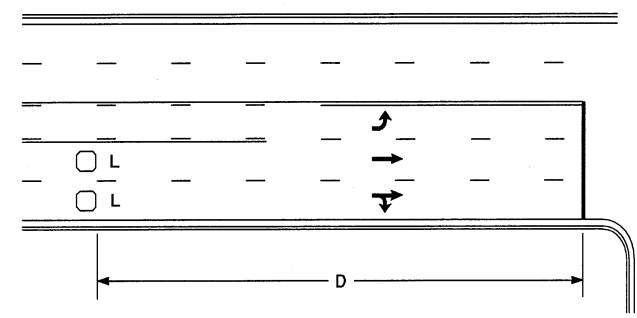
- 1) 48" x 48" SIZED SIGNS (SP- 11299) MAY BE REDUCED TO 36" X 36" ON ROADWAYS WITH SPEED LIMITS OF 40 MPH OR LESS.
- 2) MOUNT SIGNS THAT ARE LARGER THAN 10 SQUARE FEET IN AREA ON TWO OR MORE WOOD OR U-CHANNEL SUPPORTS. PERFORATED SQUARE TUBING SUPPORT SYSTEMS MAY SUPPORT LARGER AREAS ON A SINGLE SUPPORT. FOLLOW MANUFACTURER'S RECOMMENDATIONS. THESE SYSTEMS SHALL BE NCHRP 350 COMPLIANT AND NCDOT APPROVED.
- 3) ADVANCE WARNING SIGNS NOT REQUIRED ON NON-SIGNALIZED SIDE STREETS.
- 4) MAY USE LAW ENFORCEMENT TO CONTROL TRAFFIC AT SIGNALIZED INTERSECTIONS AS DIRECTED BY THE ENGINEER. PROVIDE PORTABLE "ROAD WORK AHEAD" (W20-1) SIGNS 500' IN ADVANCE ALONG BOTH APPROACHES FROM THE SIDE STREETS WHEN PAVING PROCEEDS THROUGH THE INTERSECTION.
- 5) LATERAL CLEARANCE AT ALL SIGN LOCATIONS SHALL BE 2' AS MEASURED FROM THE EDGE OF PAVEMENT OR THE FACE OF THE CURB. WHEN UNABLE TO OBTAIN THE LATERAL CLEARANCE WITHIN THE MEDIAN AREA USE SHOULDER MOUNTS ONLY.
- 6) SIGN MOUNT LOCATIONS SHALL NOT BLOCK SIDEWALKS OR DRIVEWAYS.
- 7) IF STATIONARY GENERAL WARNING SIGNS ARE USED, THEY WILL BE PAID FOR PER SECTION 104 OF THE NCDOT STANDARD SPECIFICATIONS AS EXTRA WORK.
- 8) IF MILLED AREAS ARE NOT PAVED BACK BY THE END OF THE WORK DAY, PORTABLE SIGNS SHALL BE USED TO WARN DRIVERS OF THE PRESENT CONDITIONS. THESE ARE TO INCLUDE, BUT NOT LIMITED TO "ROUGH ROAD" W8-8, "UNEVEN LANES" W8-11, "GROOVED PAVEMENT" W8-15 w/MOTORCYCLE PLAQUE MOUNTED BELOW. THESE ARE TO BE DOUBLE INDICATED ON MULTI-LANE ROADWAYS WITH SPEED LIMITS 45 MPH AND GREATER WHERE LATERAL CLEARANCE CAN BE OBTAINED WITHIN THE MEDIAN AREAS. THESE PORTABLE SIGNS ARE INCIDENTAL TO THE OTHER ITEMS OF WORK INCLUDED IN THE TEMPORARY TRAFFIC CONTROL (LUMP SUM) PAY ITEM.

LEGEND	
├	STATIONARY SIGN
➔	DIRECTION OF TRAFFIC FLOW

	<b>RESURFACING ADVANCE WARNING SIGNS FOR URBAN / SUBURBAN FACILITIES</b>
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4/8/2015  
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### High Speed Detection (≥40 mph)

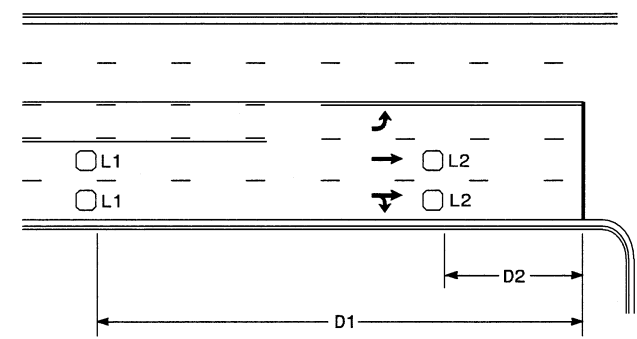


Speed Limit mph	D ft
40	250
45	300
50	355
55	420

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

Volume Density Operation

OR

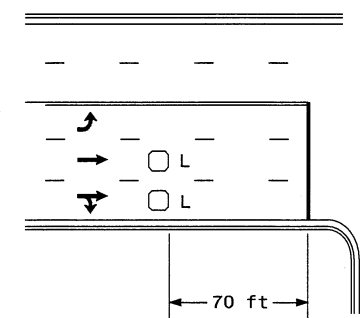


Speed Limit mph	D1 ft	D2 ft
40	250	80
45	300	90
50	355	100
55	420	110

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

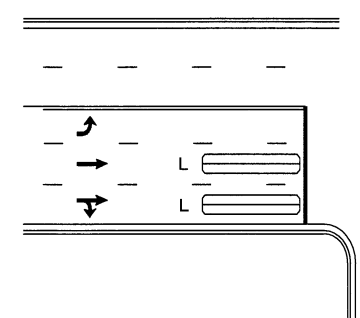
"Stretch" Operation

### Low Speed Detection (≤35 mph)



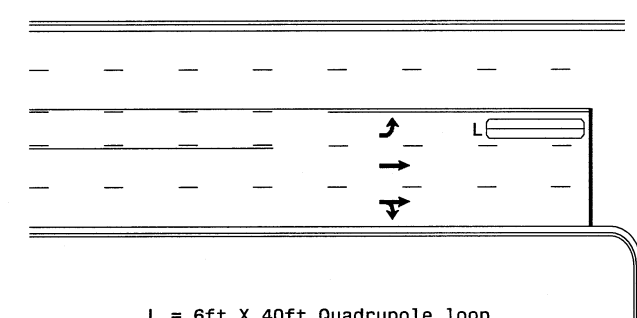
L = 6ft X 6ft  
Wired in series

OR



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

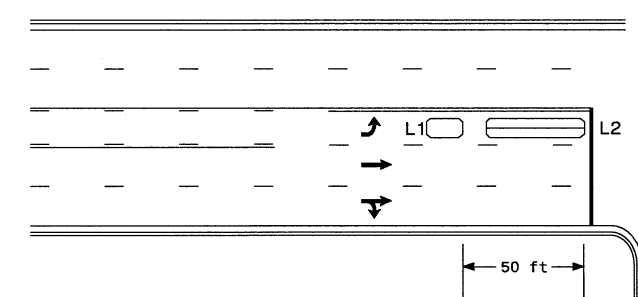
### Left Turn Lane Detection



L = 6ft X 40ft Quadrupole loop

Presence Loop Detection

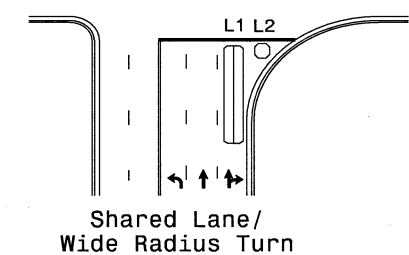
OR



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

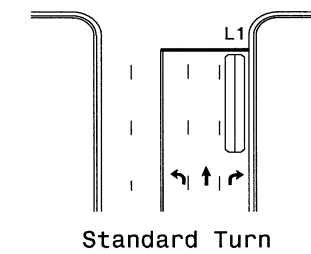
Queue Loop Detection

### Right Turn Lane Detection

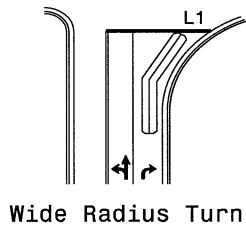


Shared Lane/  
Wide Radius Turn

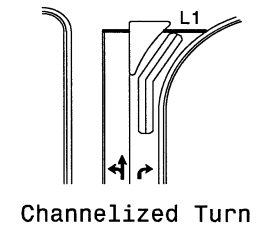
L1 = 6ft X 40ft Quadrupole loop  
L2 = 6ft X 6ft [Minimum] Presence loop  
Wired separately



Standard Turn

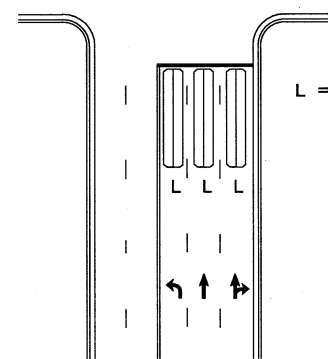


Wide Radius Turn



Channelized Turn

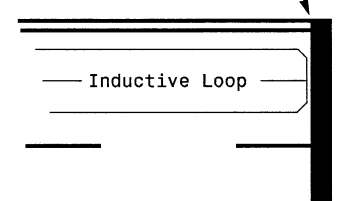
### Side Street Detection



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

### Presence Loop Placement at Stop Lines

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

	<b>Typical Signal Loop Locations</b>		
	Prepared in the Office of: 	PLAN DATE: January 2015 PREPARED BY: PLA SCALE: N/A	