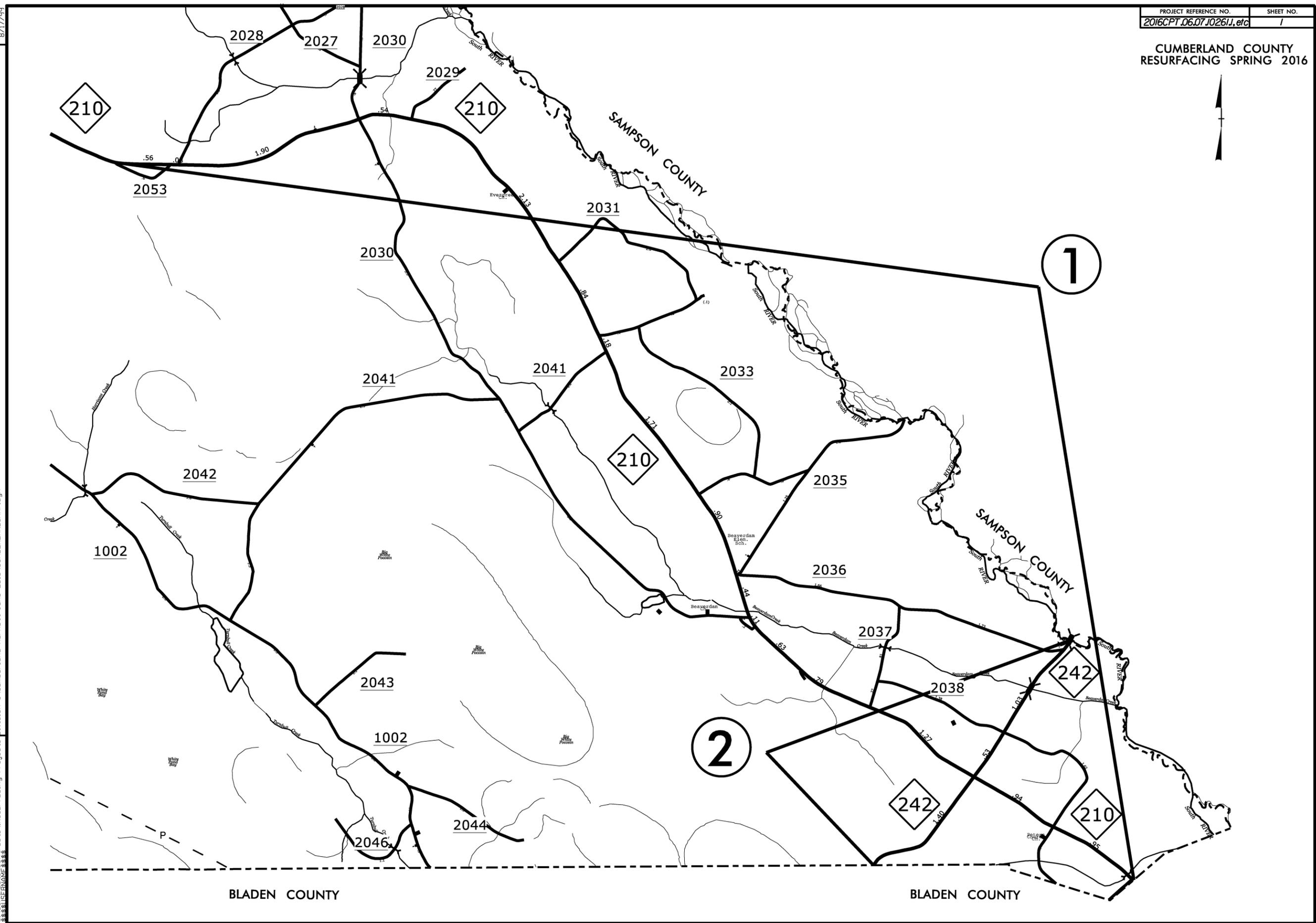


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CUMBERLAND COUNTY RESURFACING SPRING 2016



REVISIONS

25-APR-2016 11:06 Projects\Resurfacing Projects\Division 6\Cumberland\Harnett June 2016\CUMBERLAND_MAP.dgn
8/17/99

BLADEN COUNTY

BLADEN COUNTY



3

Branson Creek

1414

RAEFORD RD

1414

Branson Lake

Branson Creek

BUS 401

Robeson St.

BUS 401

1.40

Robeson St.

.44

Aberdeen

87

.58

CSX Railroad

.91

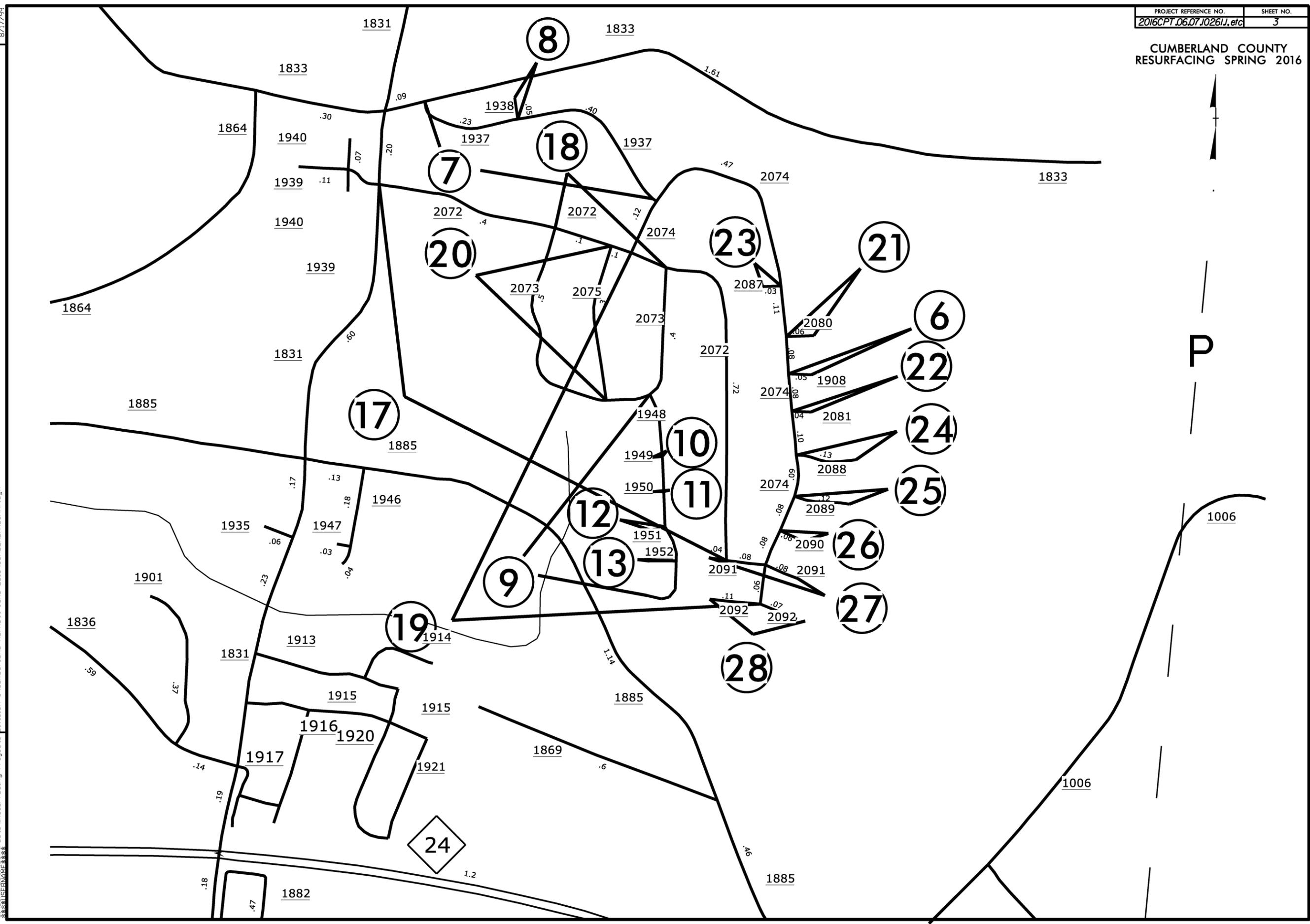
REVISIONS

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8/17/99

CUMBERLAND COUNTY
RESURFACING SPRING 2016



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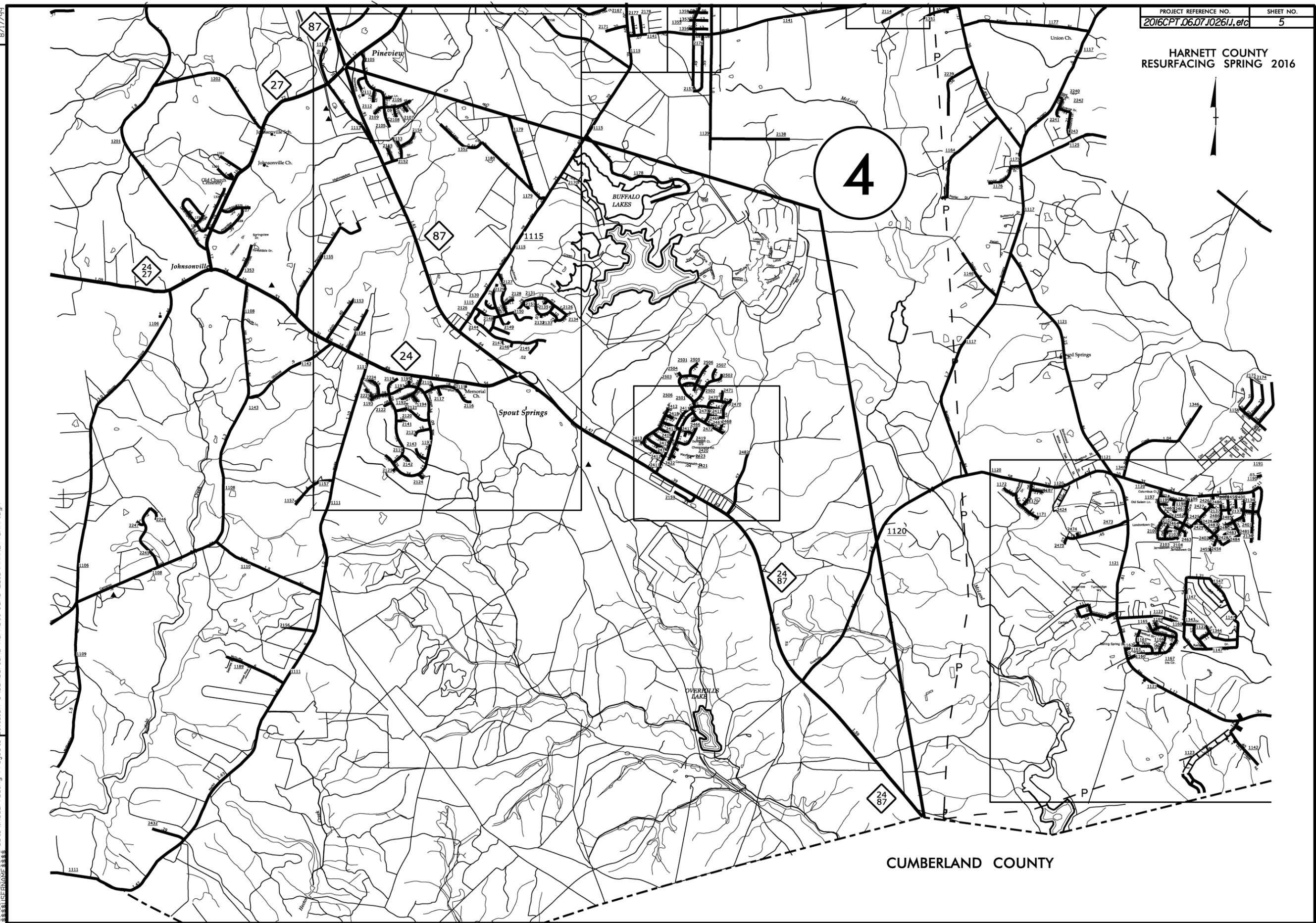
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HARNETT COUNTY RESURFACING SPRING 2016



4



CUMBERLAND COUNTY

REVISIONS

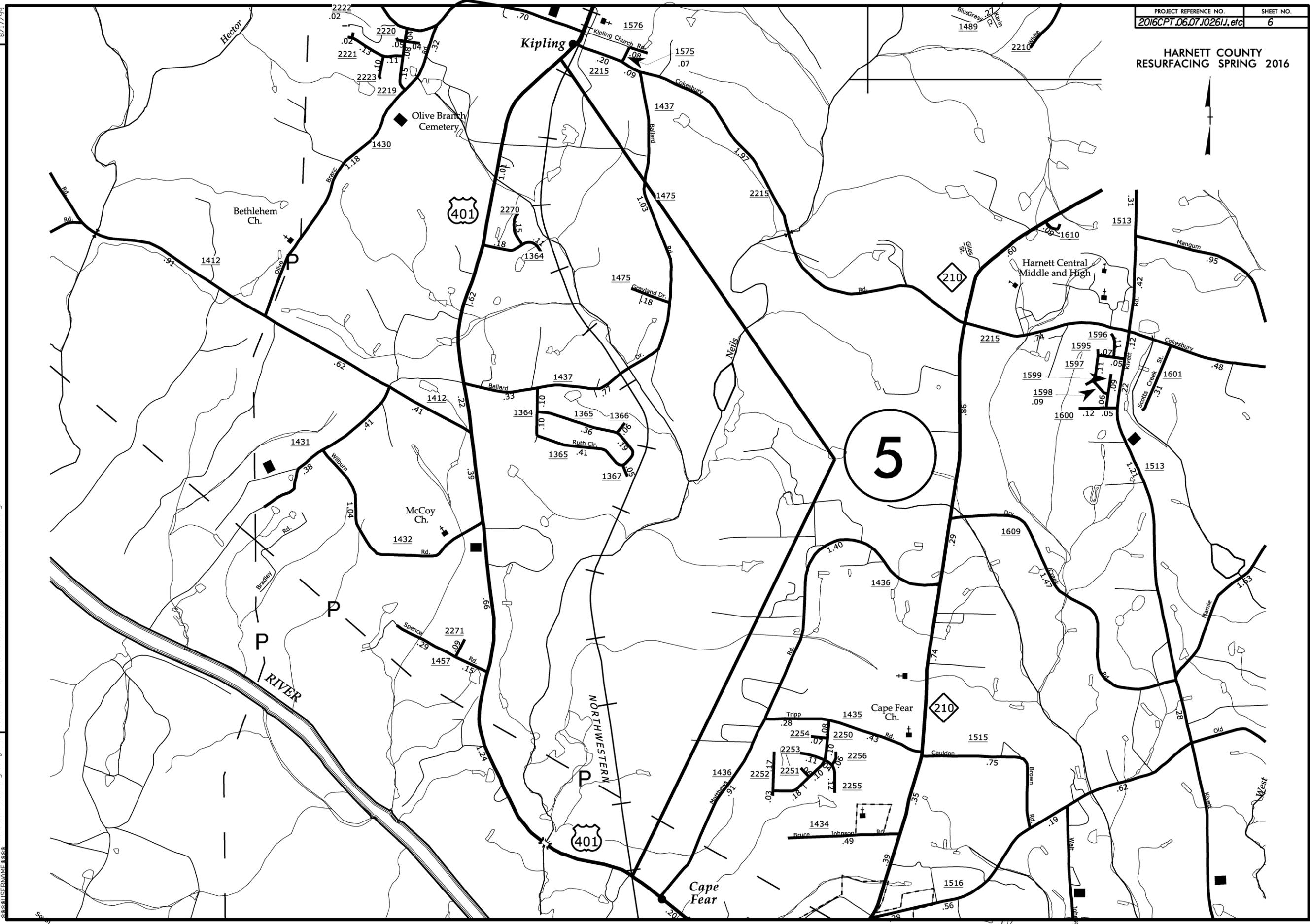
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HARNETT COUNTY RESURFACING SPRING 2016



5



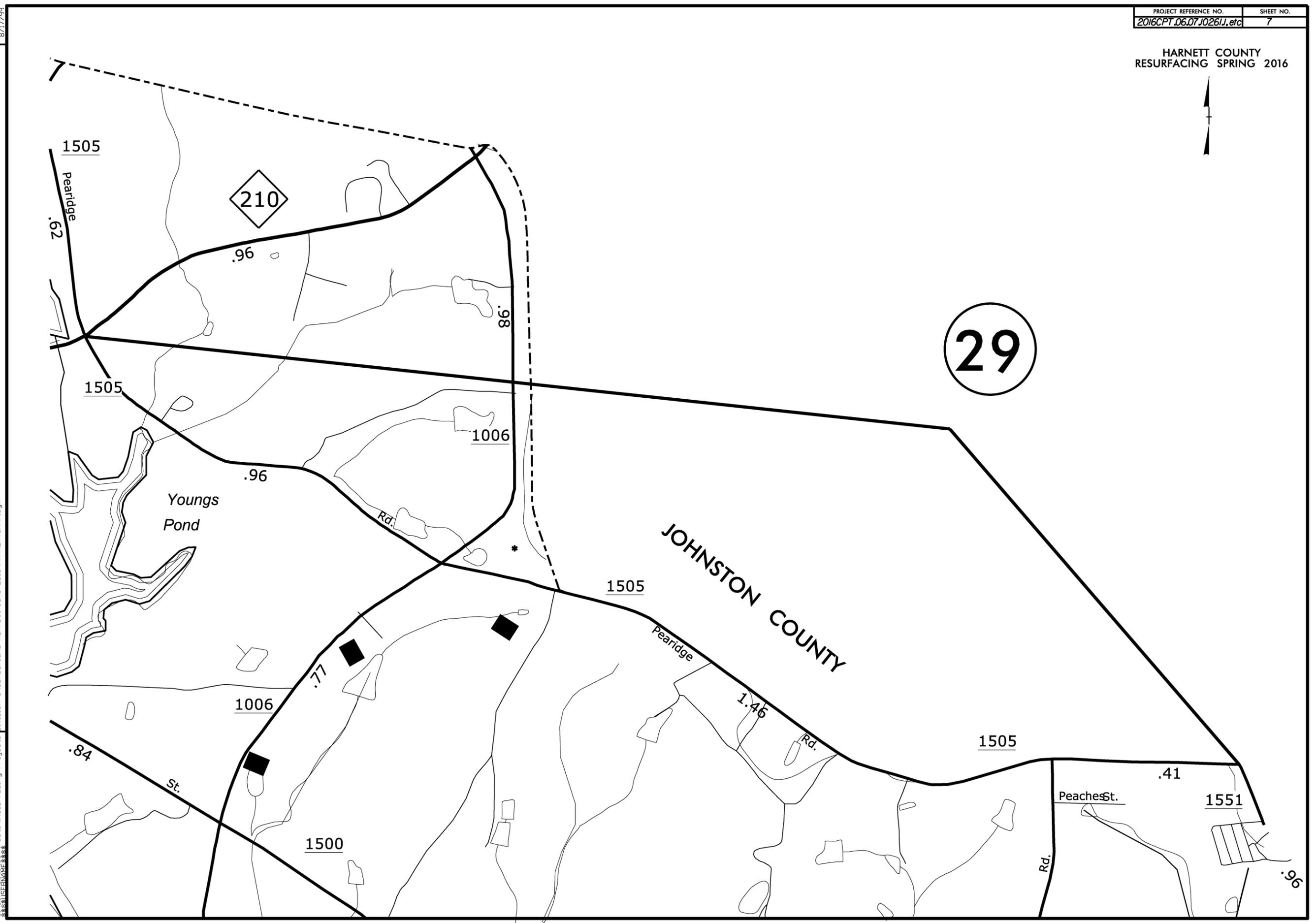
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HARNETT COUNTY
RESURFACING SPRING 2016



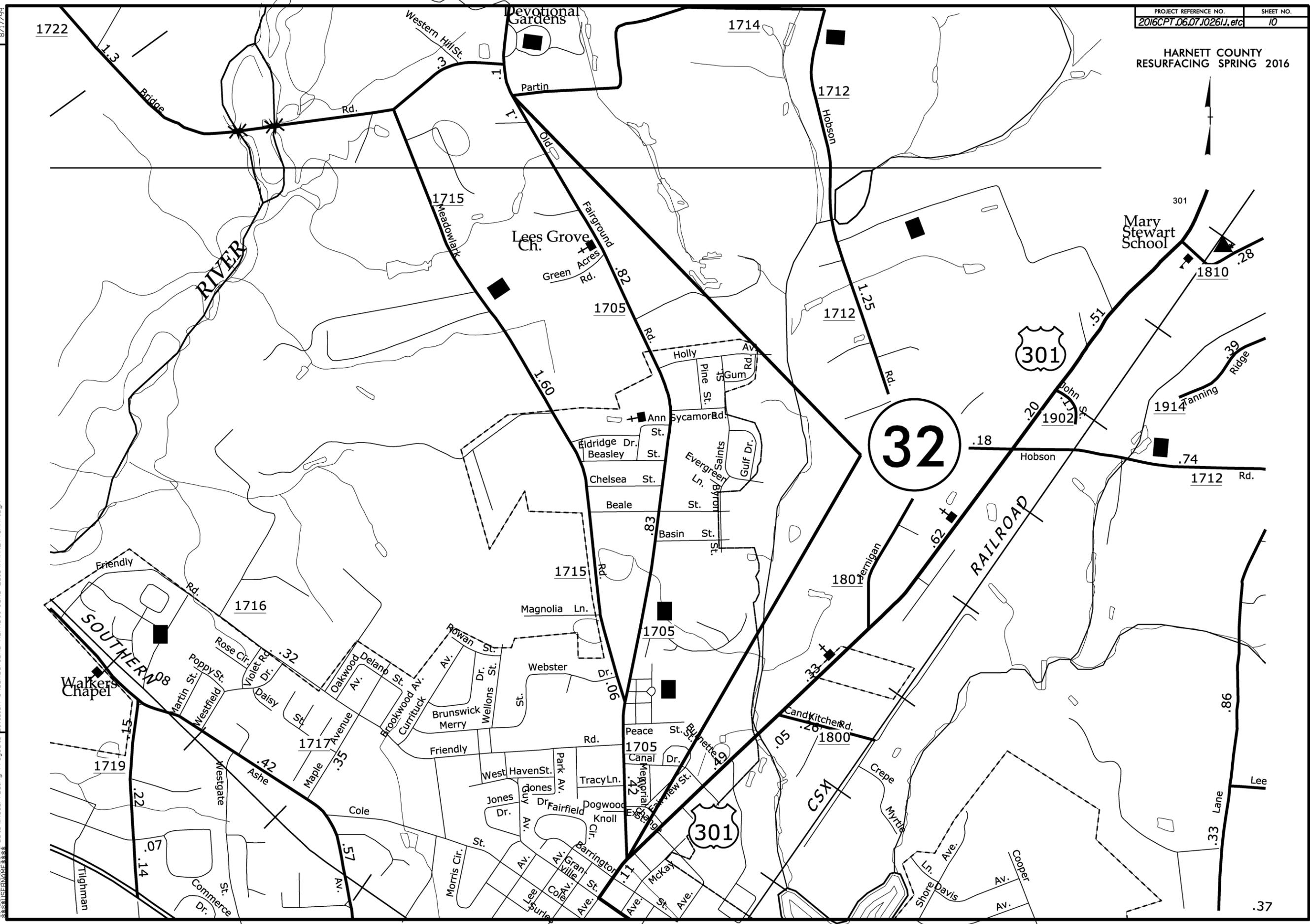
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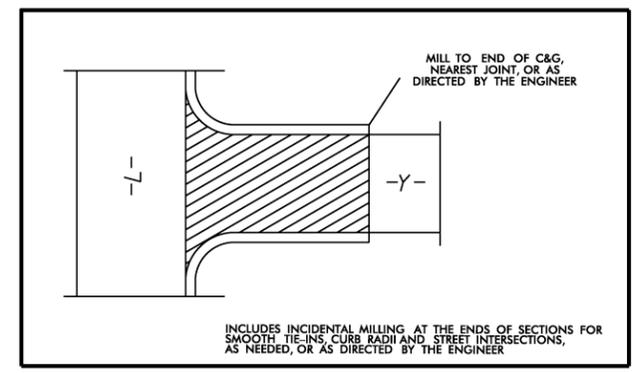
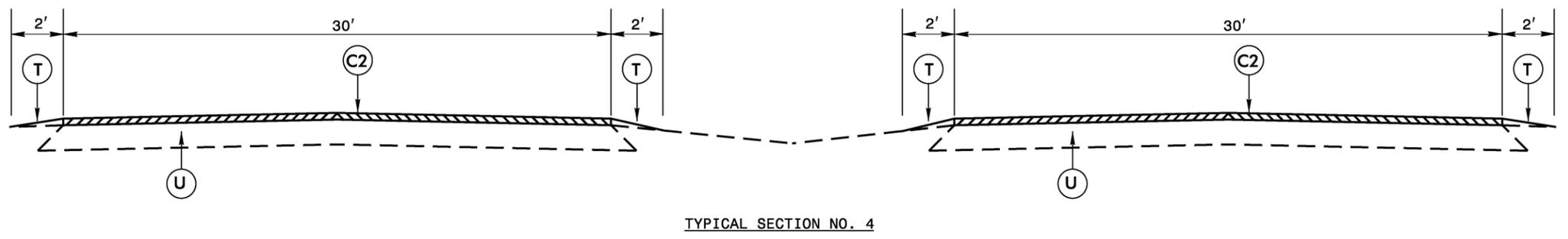
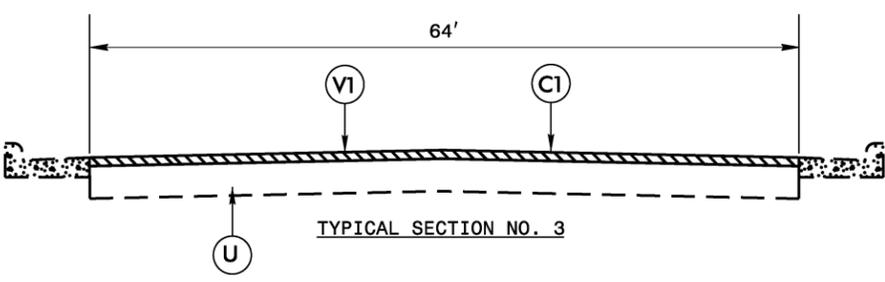
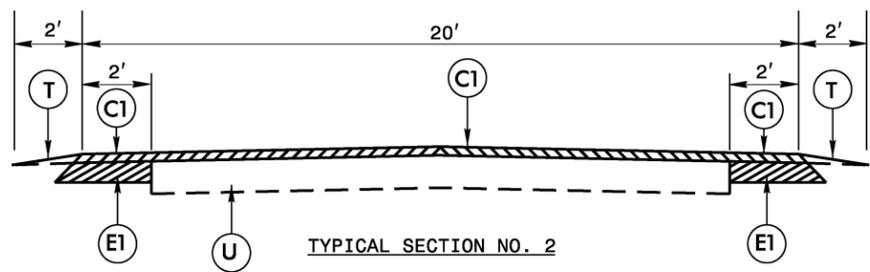
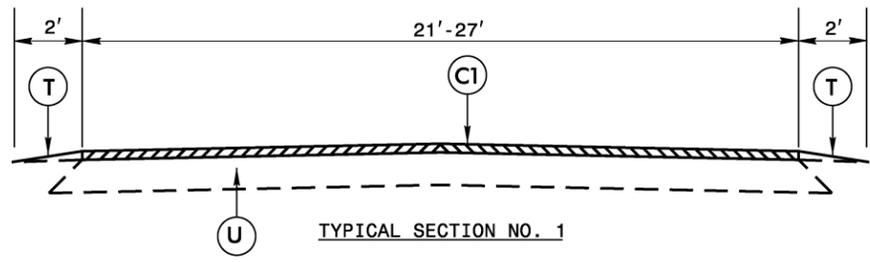
HARNETT COUNTY
RESURFACING SPRING 2016



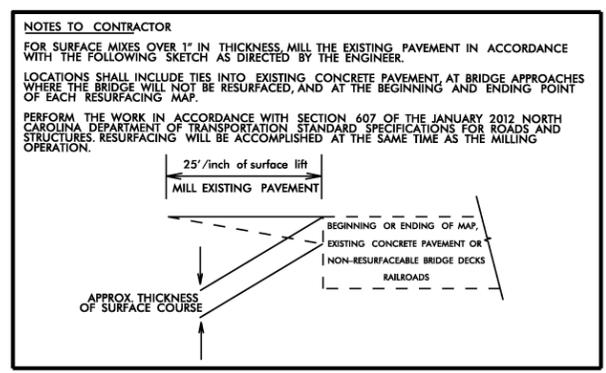
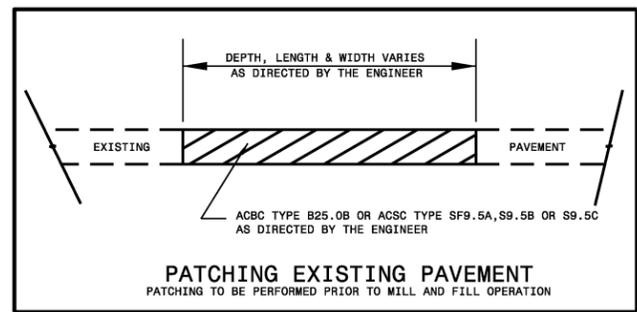
REVISIONS

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 8/17/99

PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C2	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C3	PROP. APPROX. ¾" ASPHALT CONCRETE SURFACE COURSE, TYPE S4.75A, AT AN AVERAGE RATE OF 75 LBS. PER SQ. YD.
C4	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.
F1	#6M MAT COAT
E1	PROP. APPROX. 5" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 570 LBS. PER SQ. YD.
T	SHOULDER RECONSTRUCTION WITH AGGREGATE SHOULDER BORROW
U	EXISTING PAVEMENT
V1	1½" MILLING



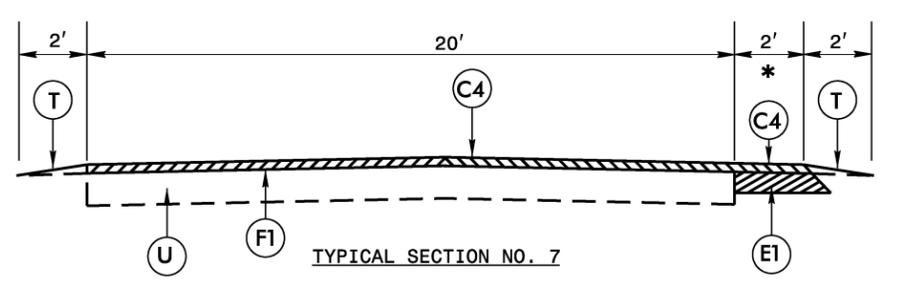
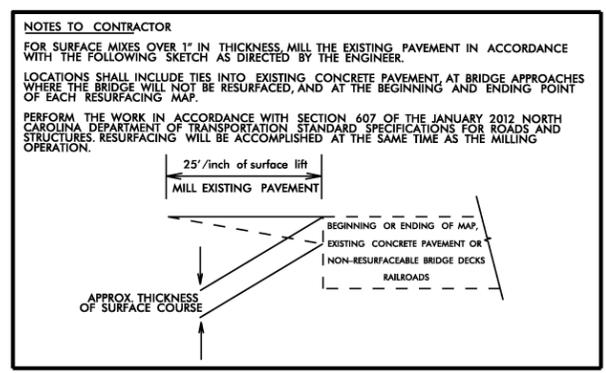
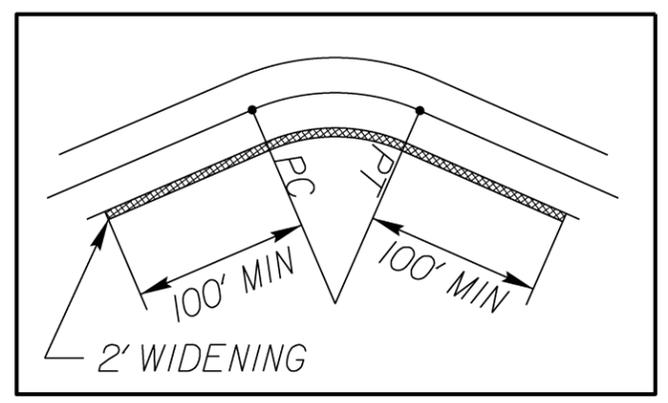
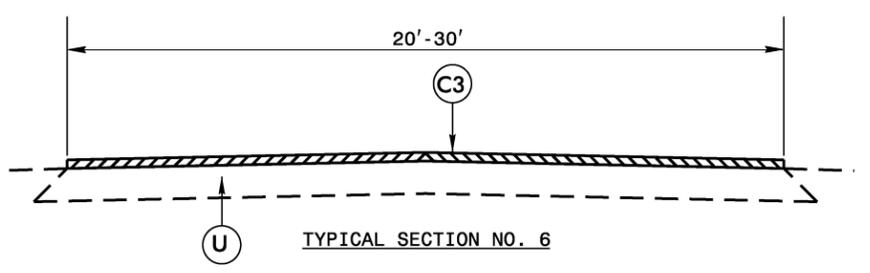
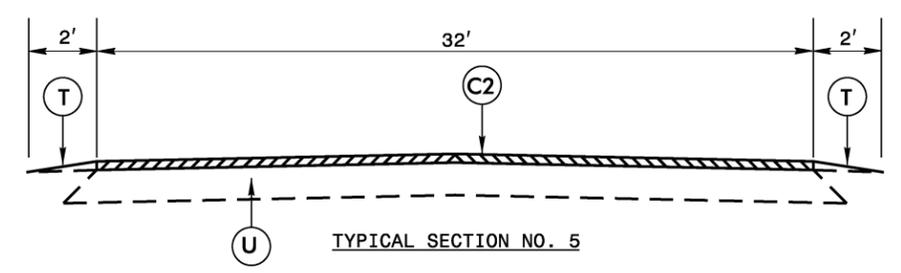
MILLING AT CURB AND GUTTER INTERSECTIONS



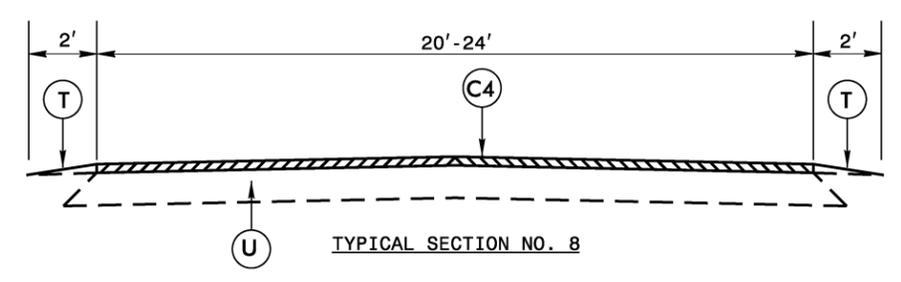
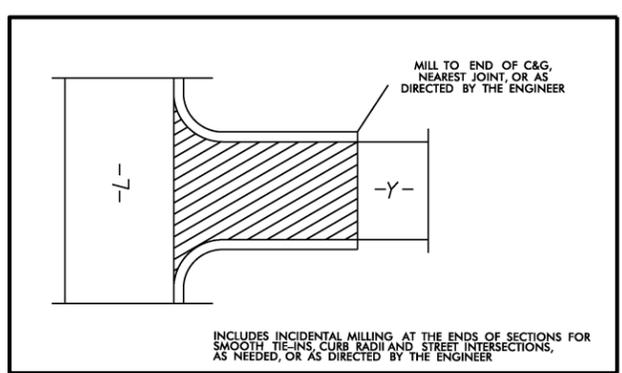
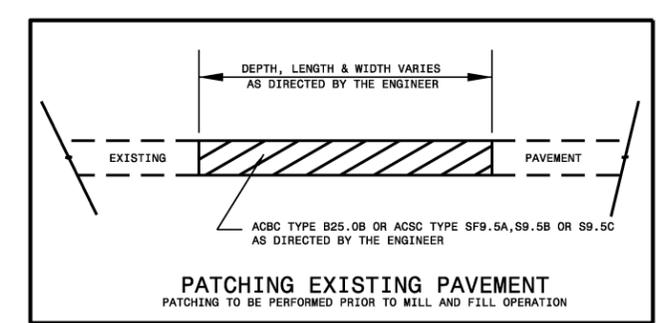
INCIDENTAL MILLING AT PAVEMENT TIE-INS DETAIL

6/2/99
28-APR-2016 09:32
S:\Projects\Resurfacing Projects\Division 6\Cumberland\Hennett June 2016\Revised Files\TYP_Rdy_tupRev.dgn

PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C2	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
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C4	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.
F1	#6M MAT COAT
E1	PROP. APPROX. 5" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 570 LBS. PER SQ. YD.
T	SHOULDER RECONSTRUCTION WITH AGGREGATE SHOULDER BORROW
U	EXISTING PAVEMENT
V1	1½" MILLING



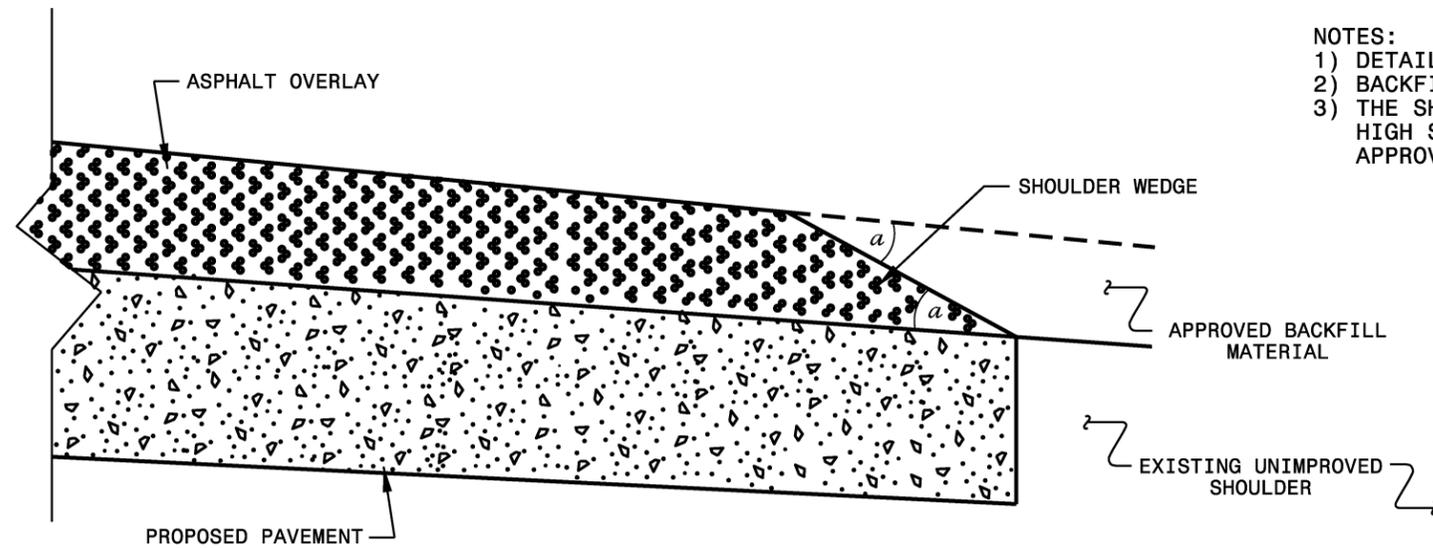
*INSIDE CURVE WIDENING (SEE DETAIL)



6/2/99
03-MAY-2016 15:24
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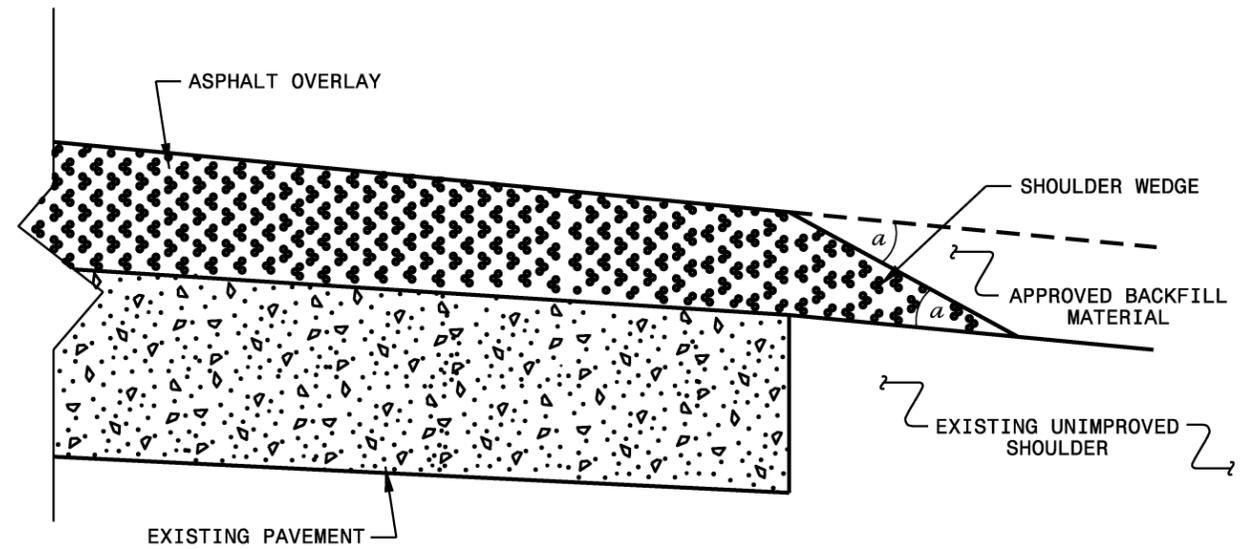
NOTES:

- 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.



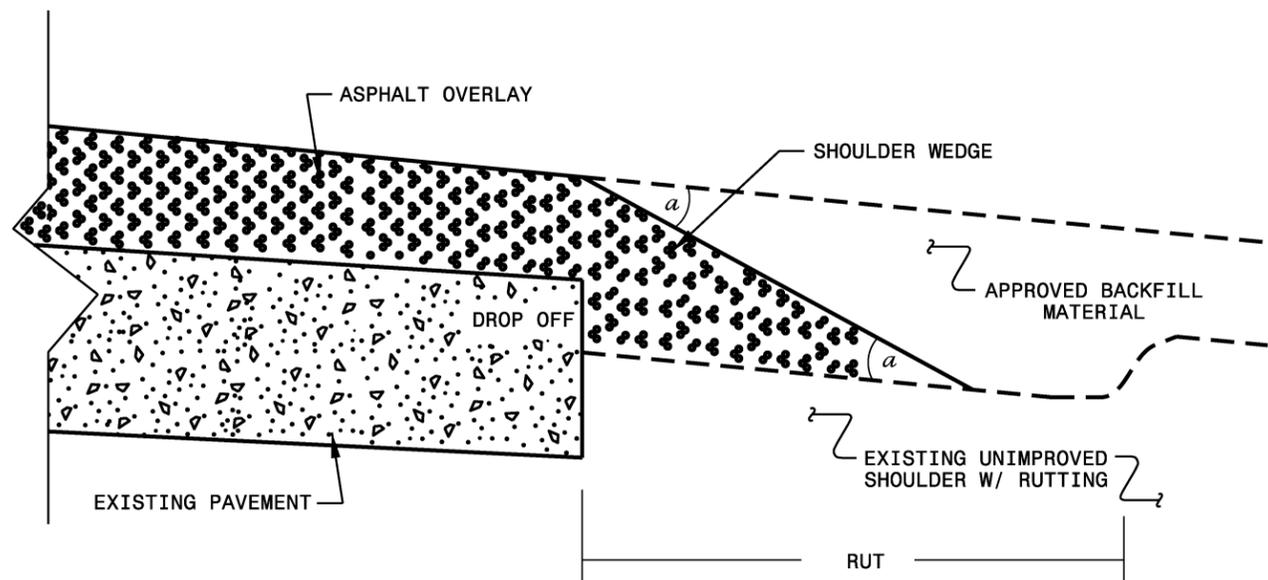
SHOULDER WEDGE DETAIL

(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\shoulderwedge\detail.dgn			

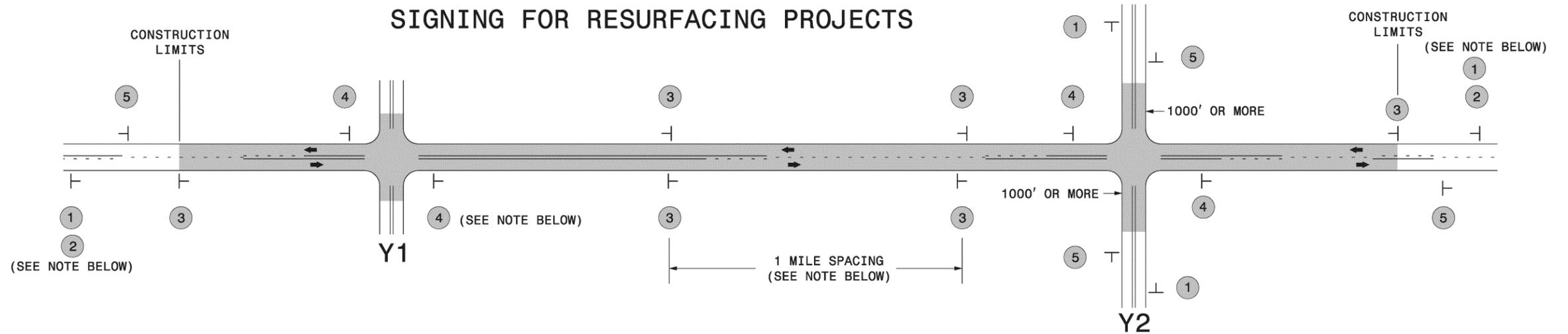
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PROJECT NO.	SHEET NO.	TOTAL NO.
2016CPT.06.07.10261.1, ETC.	14	

SUMMARY OF QUANTITIES

PROJECT NO.	COUNTY	MAP NO.	ROUTE	DESCRIPTION	TYP	LANES	LANE TYPE	FINAL SURFACE TESTING REQUIRED	WARM MIX ASPHALT REQUIRED	LENGTH	WIDTH	AGGREGATE SHOULDER BORROW	SHOULDER RECONSTRUCTION	1.5" MILLING	INCIDENTAL MILLING	BASE COURSE, B25.08	SURFACE COURSE, S9.5B	SURFACE COURSE, S9.5C	SURFACE COURSE, SF9.5A	SURFACE COURSE, S4.75A	ASPHALT BINDER FOR PLANT MIX	PATCHING EXISTING PAVEMENT	ASPHALT SURFACE TREATMENT, MATCOAT, #6M STONE	EMULSION FOR ASPHALT SURFACE TREATMENT	RETROFIT EXISTING CURB RAMP (Std. 848.06)	ADJ. OF MANHOLES	ADJ. OF METER OR VALVE BOX	JUNCTION BOX (STANDARD SIZE)	JUNCTION BOX (OVERSIZED, HEAVY DUTY)	INDUCTIVE LOOP SAWCUT	LEAD-IN CABLE (14-2)		
NO		NO								MI	FT	TON	SMI	SY	SY	TONS	TONS	TONS	TONS	TONS	TONS	TONS	SY	GAL	EA	EA	EA	EA	EA	EA	EA	EA	
2016CPT.06.07.10261.1	Cumberland	1	NC HWY 210	FROM: SR 2053 TO: ADDRESS 7946		1	2	2WU	NO	1.36	24	177	2.72		128		1,848				111	35				1	1						
		"	"	FROM: ADDRESS 7946 TO:SR 2035		2	2	2WU	NO	7.52	20	977	15.04		709		8,894					763	180										
		"	"	FROM: SR 2035 TO: BLADEN COUNTY		1	2	2WU	NO	5.1	24	663	10.20		481		6,032				362	122											
TOTAL FOR MAP NO. 1										13.98		1,817	27.96		1,318		16,774				1,236	337				1	1						
2016CPT.06.07.10261.1	Cumberland	2	NC HWY 242	FROM: SAMPSON COUNTY TO: BLADEN COUNTY		1	2	2WU	NO	3.08	27	400	6.12		3,110		4,174				250	50											
TOTAL FOR MAP NO. 2										3.08		400	6.12		3,110		4,174				250	50											
2016CPT.06.07.10261.1	Cumberland	3	US HWY 401	FROM: NC HWY 87 TO: RAEFORD ROAD		3	2	MU	NO	1.84	64				69,086		5,816				349				14	30	13						
TOTAL FOR MAP NO. 3										1.84					69,086		5,816				349				14	30	13						
TOTAL FOR PROJ NO. 2016CPT.06.07.10261.1										18.9		2,217	34.08		69,086		26,764				1,835	387			14	31	14						
2016CPT.06.07.10431.1	Harnett	4	NC HWY 87	FROM: PAVEMENT JOINT AT HWY 27 TO: CUMBERLAND COUNTY		4	2	MD	NO	8.22	60	4,608	32.88		2,014						1,861	2,523				5	5	26	13	7,935	1,300		
TOTAL FOR MAP NO. 4										8.22		4,608	32.88		2,014						1,861	2,523				5	5	26	13	7,935	1,300		
2016CPT.06.07.10431.1	Harnett	5	US HWY 401	FROM PAVEMENT JOINT AT R/R TRACKS TO: NEW PAVEMENT JOINT IN KIPLING		5	2	2WU	NO	3.94	32	512	7.88		486						391	331				1	1	0	0	0	0		
TOTAL FOR MAP NO. 5										3.94		512	7.88		486						391	331				1	1	0	0	0	0		
TOTAL FOR PROJ NO. 2016CPT.06.07.10431.1										12.16		5,120	40.76		2,500		38,158				2,252	2,854				6	6	26	13	7,935	1,300		
2016CPT.06.07.20261.1	Cumberland	6	SR 1908	FROM: SR 2074 TO: CUL DE SAC		6	2	2WU	NO	0.05	20									22	2	1				1	2						
TOTAL FOR MAP NO. 6										0.05											22	2	1				1	2					
2016CPT.06.07.20261.1	Cumberland	7	SR 1937	FROM: SR 2074 TO: SR 1833		6	2	2WU	NO	0.63	20									336	24					12	1						
TOTAL FOR MAP NO. 7										0.63										336	24					12	1						
2016CPT.06.07.20261.1	Cumberland	8	SR 1938	FROM: SR 1937 TO: CUL DE SAC		6	2	2WU	NO	0.05	25									27	2					1	1						
TOTAL FOR MAP NO. 8										0.05										27	2					1	1						
2016CPT.06.07.20261.1	Cumberland	9	SR 1948	FROM: SR 2073 TO: CUL DE SAC		6	2	2WU	NO	0.5	30									330	23	10				12	2						
TOTAL FOR MAP NO. 9										0.5										330	23	10				12	2						
2016CPT.06.07.20261.1	Cumberland	10	SR 1949	FROM: SR1948 TO: CUL DE SAC		6	2	2WU	NO	0.03	30									20	1					1	1						
TOTAL FOR MAP NO. 10										0.03										20	1					1	1						
2016CPT.06.07.20261.1	Cumberland	11	SR 1950	FROM: SR 1948 TO: CUL DE SAC		6	2	2WU	NO	0.03	30									20	1					1	1						
TOTAL FOR MAP NO. 11										0.03										20	1					1	1						
2016CPT.06.07.20261.1	Cumberland	12	SR 1951	FROM: SR 1948 TO: CUL DE SAC		6	2	2WU	NO	0.04	30									26	2					1	1						
TOTAL FOR MAP NO. 12										0.04										26	2					1	1						
2016CPT.06.07.20261.1	Cumberland	13	SR 1952	FROM: SR 1948 TO: CUL DE SAC		6	2	2WU	NO	0.07	30									46	3					1	1						
TOTAL FOR MAP NO. 13										0.07										46	3					1	1						
2016CPT.06.07.20261.1	Cumberland	14	SR 2069	FROM: SR 2023 TO: SR 2070		6	2	2WU	NO	0.06	30									41	3												
TOTAL FOR MAP NO. 14										0.06										41	3												
2016CPT.06.07.20261.1	Cumberland	15	SR 2070	FROM: SR 2070 TO: CUL DE SAC		6	2	2WU	NO	1.08	21									512	36												
TOTAL FOR MAP NO. 15										1.08										512	36												
2016CPT.06.07.20261.1	Cumberland	16	SR 2071	FROM: SR 2070 TO: CUL DE SAC		6	2	2WU	NO	0.09	20									40	3												
TOTAL FOR MAP NO. 16										0.09										40	3												
2016CPT.06.07.20261.1	Cumberland	17	SR 2072	FROM: SR 1831 TO: SR 2091		6	2	2WU	NO	1.38	20									607	42	23				21	2						
TOTAL FOR MAP NO. 17										1.38										607	42	23				21	2						
2016CPT.06.07.20261.1	Cumberland	18	SR 2073	FROM: SR 2072 TO: SR 2072		6	2	2WU	NO	0.87	20									383	27	25				16	2						
TOTAL FOR MAP NO. 18										0.87										383	27	25				16	2						
2016CPT.06.07.20261.1	Cumberland	19	SR 2074	FROM SR 2072 TO: SR 2092		6	2	2WU	NO	1.3	20									590	42	38				21	4						
TOTAL FOR MAP NO. 19										1.3										590	42	38				21	4						
2016CPT.06.07.20261.1	Cumberland	20	SR 2075	FROM: SR 2072 TO SR: 2073		6	2	2WU	NO	0.34	20									150	11	3				5	2						
TOTAL FOR MAP NO. 20										0.34										150	11	3				5	2						
2016CPT.06.07.20261.1	Cumberland	21	SR 2080	FROM: SR 2074 TO: CUL DE SAC		6	2	2WU	NO	0.06	20									26	2	1				1	2						
TOTAL FOR MAP NO. 21										0.06										26	2	1				1	2						
2016CPT.06.07.20261.1	Cumberland	22	SR 2081	FROM: SR 2074 TO: CUL DE SAC		6	2	2WU	NO	0.04	20									18	1	1				1	2						
TOTAL FOR MAP NO. 22										0.04										18	1	1				1	2						
2016CPT.06.																																	

SIGNING FOR RESURFACING PROJECTS



LEGEND

┆ STATIONARY SIGN

← DIRECTION OF TRAFFIC FLOW

MAINLINE (-L-) SIGNING

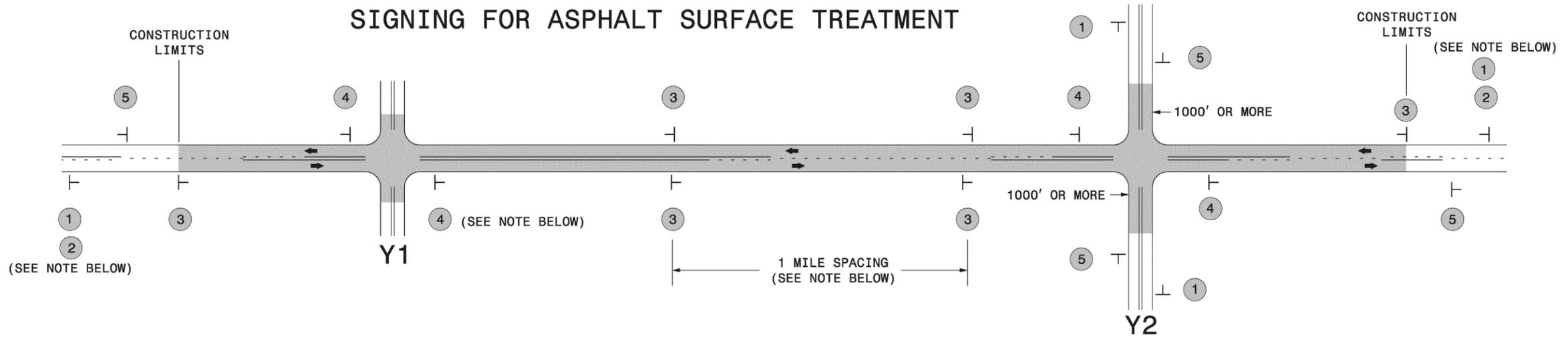
-Y- LINE SIGNING

SIGNING NOTES AND PLACEMENT PER DIRECTION	1	 W20-1 48" X 48"	PLACE 1000' PRIOR TO BEGINNING OF CONSTRUCTION LIMITS. ONLY USED ON -Y- LINES IF RESURFACING LIMITS EXTEND 1000' ALONG -Y- LINE.	<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> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>W20-1 48" X 48"</p> </div> <div style="text-align: center;"> <p>W20-7 A 48" X 48"</p> </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.	

3/19/2015 C:\Users\rmgarrrett\Downloads\Resurfacing_AdvWarn_2Ln (2).dgn User:rmgarrrett

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

SIGNING FOR ASPHALT SURFACE TREATMENT



LEGEND	
	STATIONARY SIGN
←	DIRECTION OF TRAFFIC FLOW

MAINLINE (-L-) SIGNING

-Y- LINE SIGNING

SIGNING NOTES AND PLACEMENT PER DIRECTION	1	 <small>W20-1 48" X 48"</small>	PLACE 1000' PRIOR TO BEGINNING OF CONSTRUCTION LIMITS. ONLY USED ON -Y- LINES IF RESURFACING LIMITS EXTEND 1000' ALONG -Y- LINE.		
	2	 <small>W7-3aP 24" X 18"</small>	#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	 <small>W8-7 48" X 48"</small>	ALTERNATE THE FOLLOWING TWO SIGNS: STARTING WITH "LOOSE GRAVEL" (W8-7) FOLLOWED BY "UNMARKED PAVEMENT".		
		 <small>SP 48" X 48"</small>	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	 <small>SP 13106 48" X 48"</small>	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	 <small>G20-2 A 48" X 24"</small>	PLACE 500' FOLLOWING THE END OF CONSTRUCTION LIMITS.			

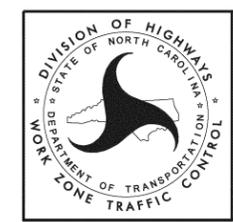
NO REQUIRED STATIONARY SIGNING FOR THE FOLLOWING -Y- LINE CONDITIONS:

- 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, ADVANCE WARNING PORTABLE SIGNS SHALL BE USED ALONG THE -Y- LINE AS SHOWN BELOW. REMOVE UPON COMPLETION OF WORK.

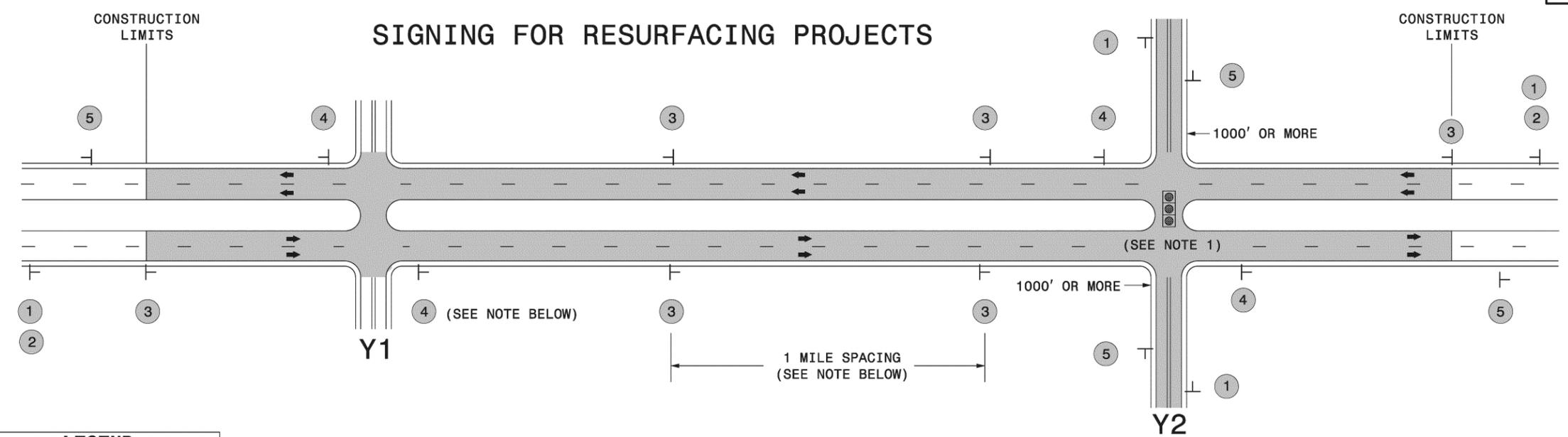


PLACED 500' IN ADVANCE OF FLAGGER. PLACED 250' IN ADVANCE OF FLAGGER.



**ADVANCE WARNING SIGNS
FOR
ASPHALT SURFACE TREATMENTS
2 LANE ROADWAYS**

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LEGEND
 | STATIONARY SIGN
 ← DIRECTION OF TRAFFIC FLOW

MAINLINE (-L-) SIGNING

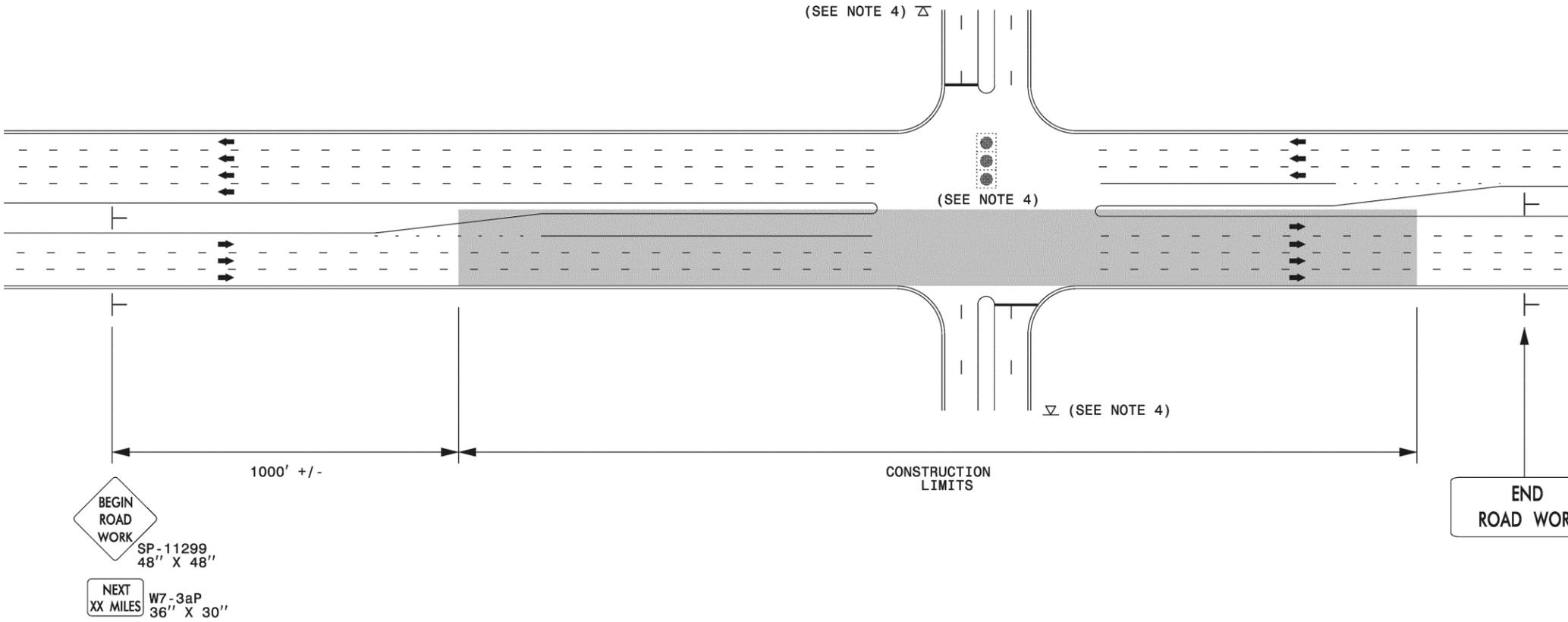
-Y- LINE SIGNING

SIGNING NOTES AND PLACEMENT PER DIRECTION	 	<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> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <small>W20-1 48" X 48"</small> </div> <div style="text-align: center;"> <small>W20-7 A 48" X 48"</small> </div> </div> <p>PLACED 500' IN ADVANCE OF FLAGGER. PLACED 250' IN ADVANCE OF FLAGGER.</p> <p>NOTES:</p> <ol style="list-style-type: none"> 1) 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.
		<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>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>PLACE 500' FOLLOWING THE END OF CONSTRUCTION LIMITS.</p>	

3/23/2015
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 User:rmgarrrett

**RESURFACING
 ADVANCE WARNING SIGNS
 FOR RURAL AND SUBURBAN
 MULTI-LANE ROADWAYS
 W/ SHOULDER SECTIONS**

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

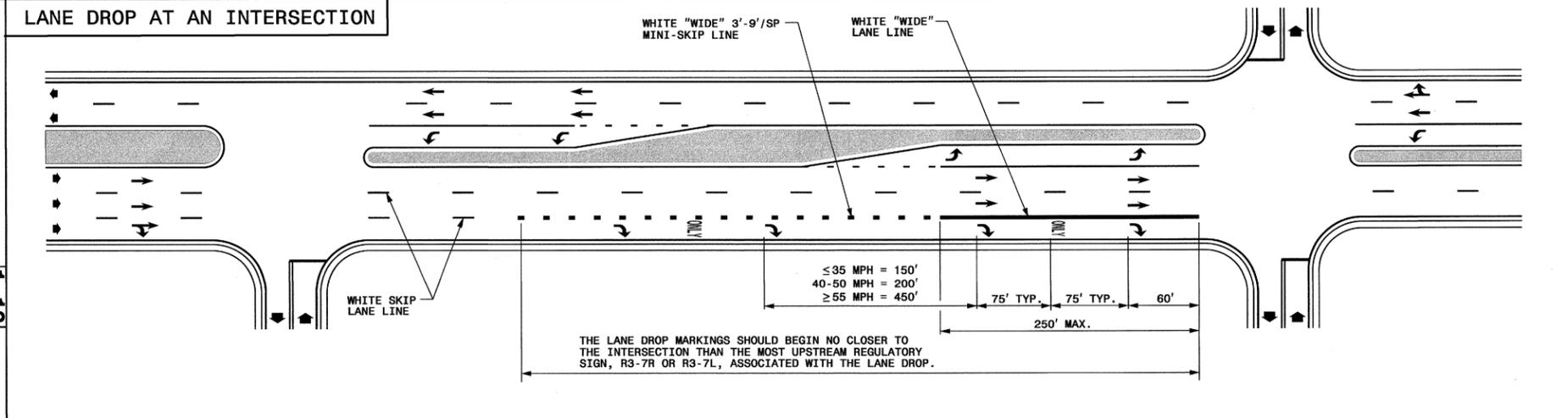


**RESURFACING ADVANCE
WARNING SIGNS FOR
URBAN / SUBURBAN
FACILITIES**

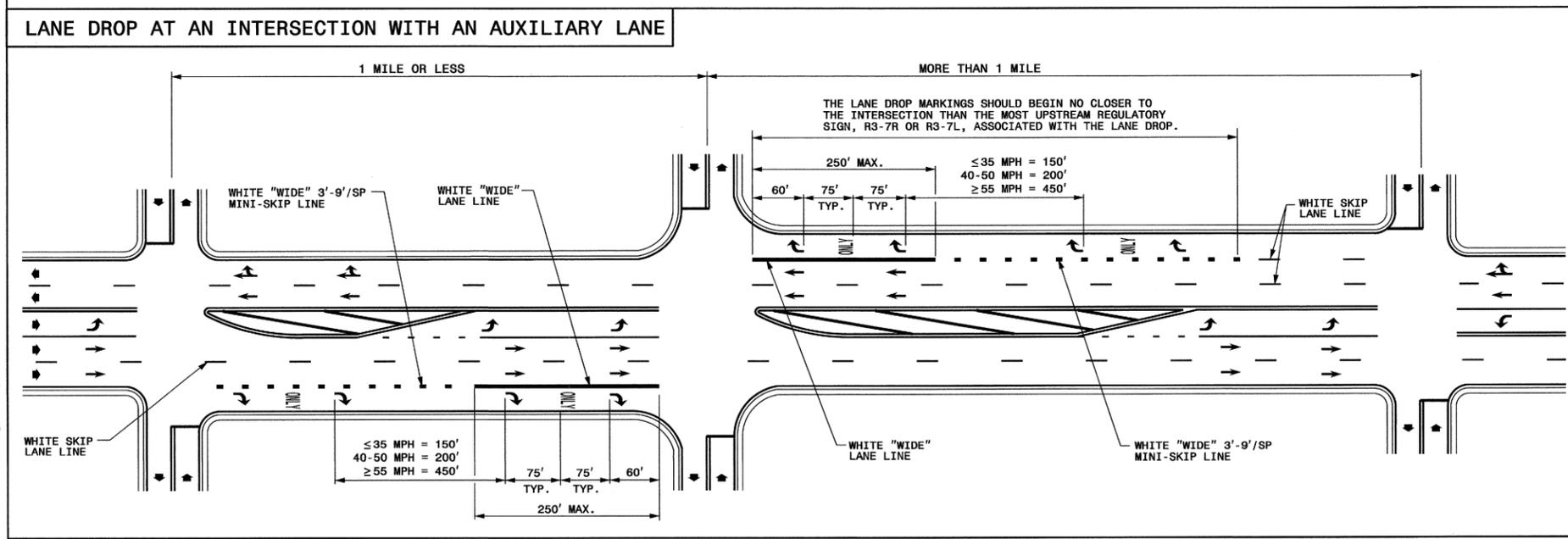
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TIP NO.	SHEET NO.
2016CPT.06.07.10261.1, Etc.	TMP-5
APPROVED: <i>RW</i>	
DATE: 3/6/12	
SEAL	

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.



ENGLISH DETAIL DRAWING FOR
PAVEMENT MARKINGS
LANE DROPS



- GENERAL NOTES:**
- USE THE GUIDANCE SHOWN ON THE ABOVE DETAILS IN CONJUNCTION WITH INTERSECTION GUIDANCE SHOWN ON ROADWAY STANDARD DRAWING 1205.04.
 - LANE LINES INDICATED AS "WIDE" SHALL BE AT LEAST TWICE THE WIDTH OF THE NORMAL LINE.

LEGEND

W = WIDTH OF TRAVEL LANE	ONLY PAVEMENT MARKING SYMBOLS & CHARACTERS
◆ DIRECTION OF TRAFFIC FLOW	

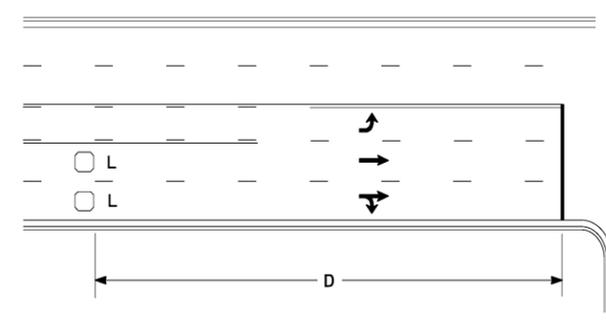
SHEET 1 OF 3
1205D06

SHEET 1 OF 3
1205D06

**REVISED PAVEMENT MARKING
ROADWAY STANDARD DRAWING**

08-MAR-2012 10:09 1205D06.dwg Standard Drawings\Standard Drawings\2012 Standard Drawings\MP\1205D06.dwg Revised 9-14-11 Sealed.dgn

High Speed Detection (≥40 mph)

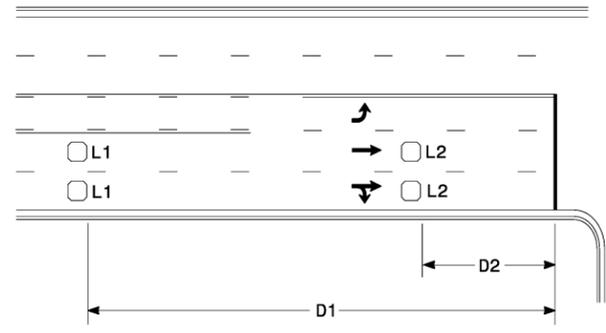


Speed Limit mph	D ft
40	250
45	300
50	355
55	420

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

Volume Density Operation

OR

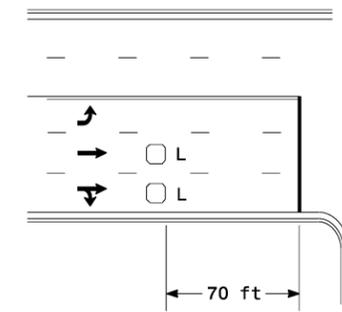


Speed Limit mph	D1 ft	D2 ft
40	250	80
45	300	90
50	355	100
55	420	110

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

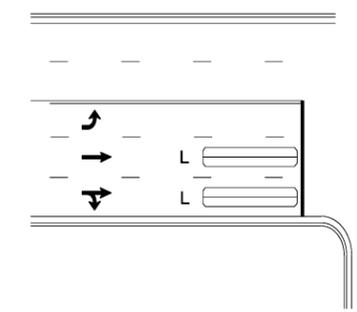
"Stretch" Operation

Low Speed Detection (≤35 mph)



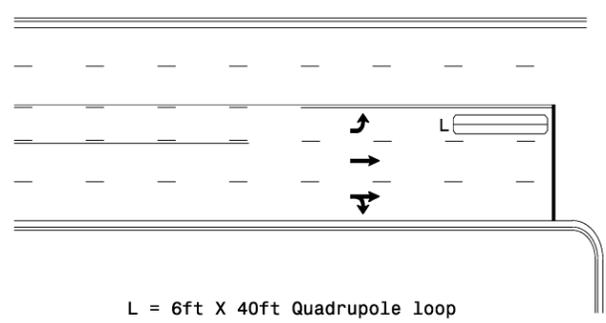
L = 6ft X 6ft
Wired in series

OR



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

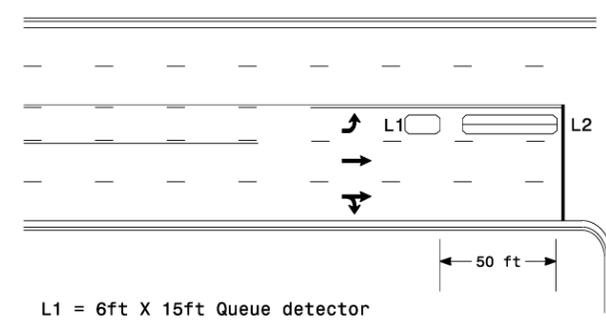
Left Turn Lane Detection



L = 6ft X 40ft Quadrupole Loop

Presence Loop Detection

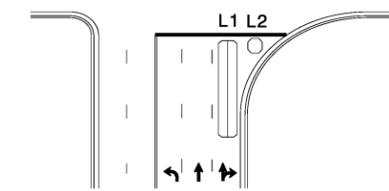
OR



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

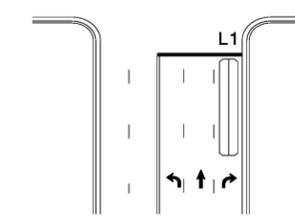
Queue Loop Detection

Right Turn Lane Detection

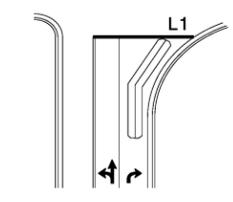


Shared Lane/
Wide Radius Turn

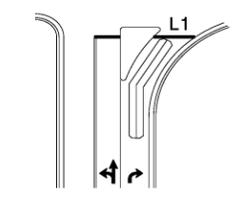
L1 = 6ft X 40ft Quadrupole loop
L2 = 6ft X 6ft [Minimum] Presence loop
Wired separately



Standard Turn

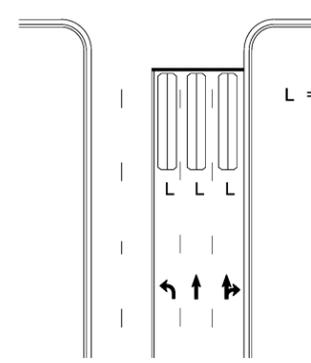


Wide Radius Turn



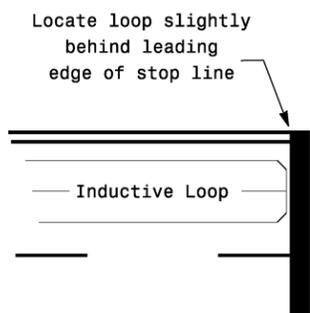
Channelized Turn

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

Typical Signal Loop Locations

Prepared in the Offices of:		SEAL	
PLAN DATE: January 2015	REVIEWED BY: JPG	DATE: 1/30/2015	
PREPARED BY: PLA	REVIEWED BY:	DATE:	
SCALE: N/A	REVISIONS:	INIT.:	DATE:
		SIG. INVENTORY NO.:	

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palexander