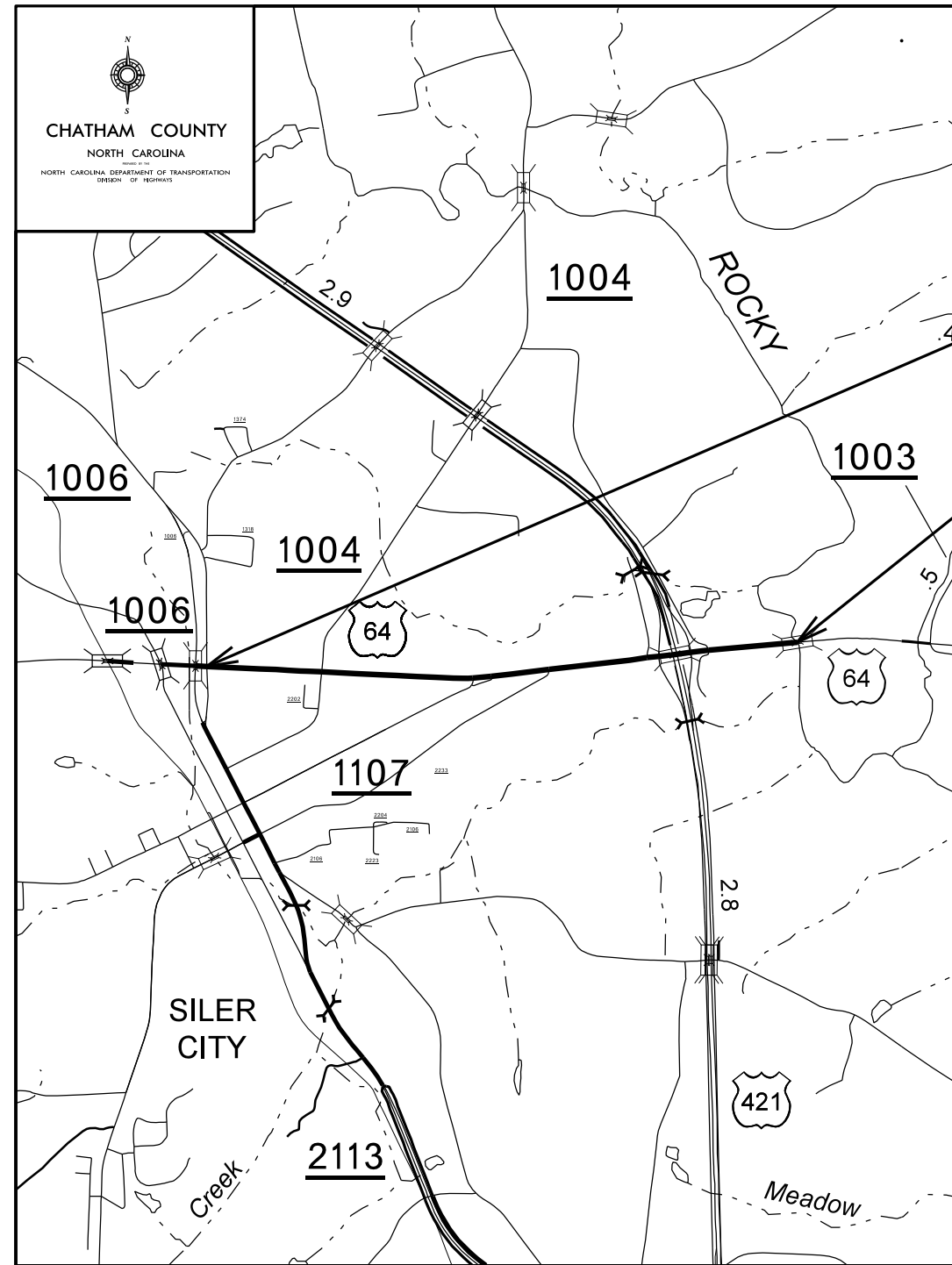


CHATHAM COUNTY
RESURFACING MAP



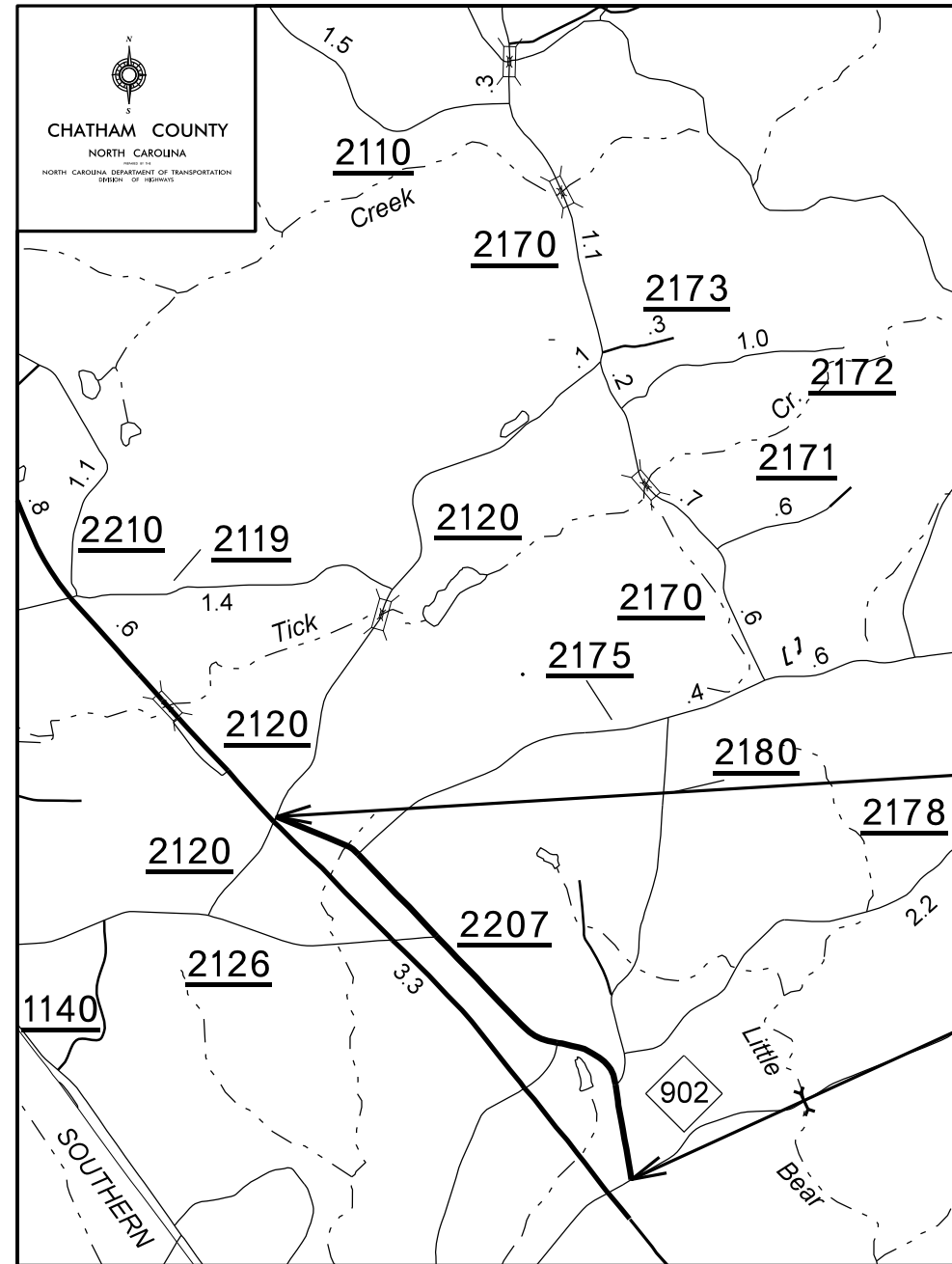
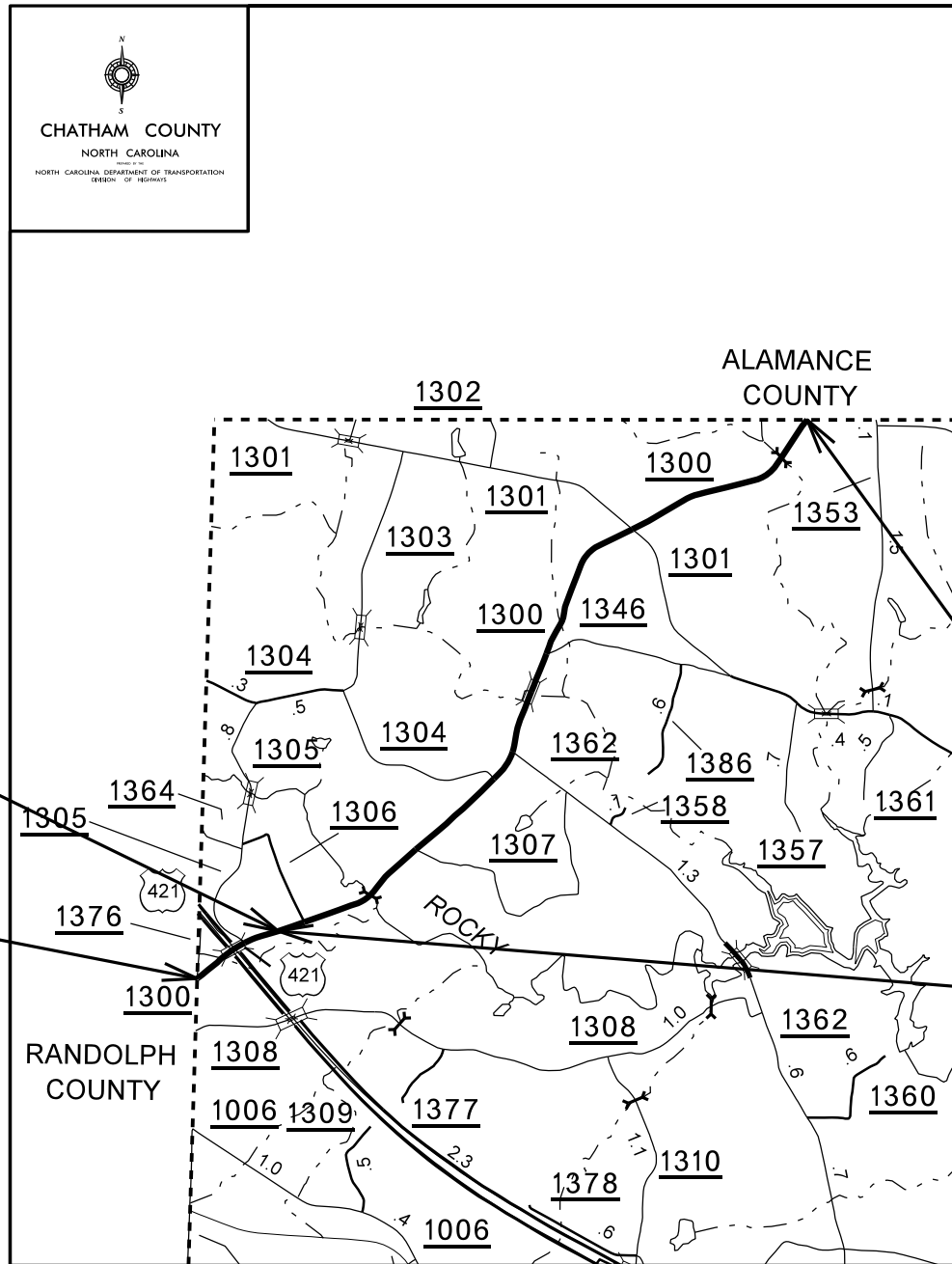
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Map 1

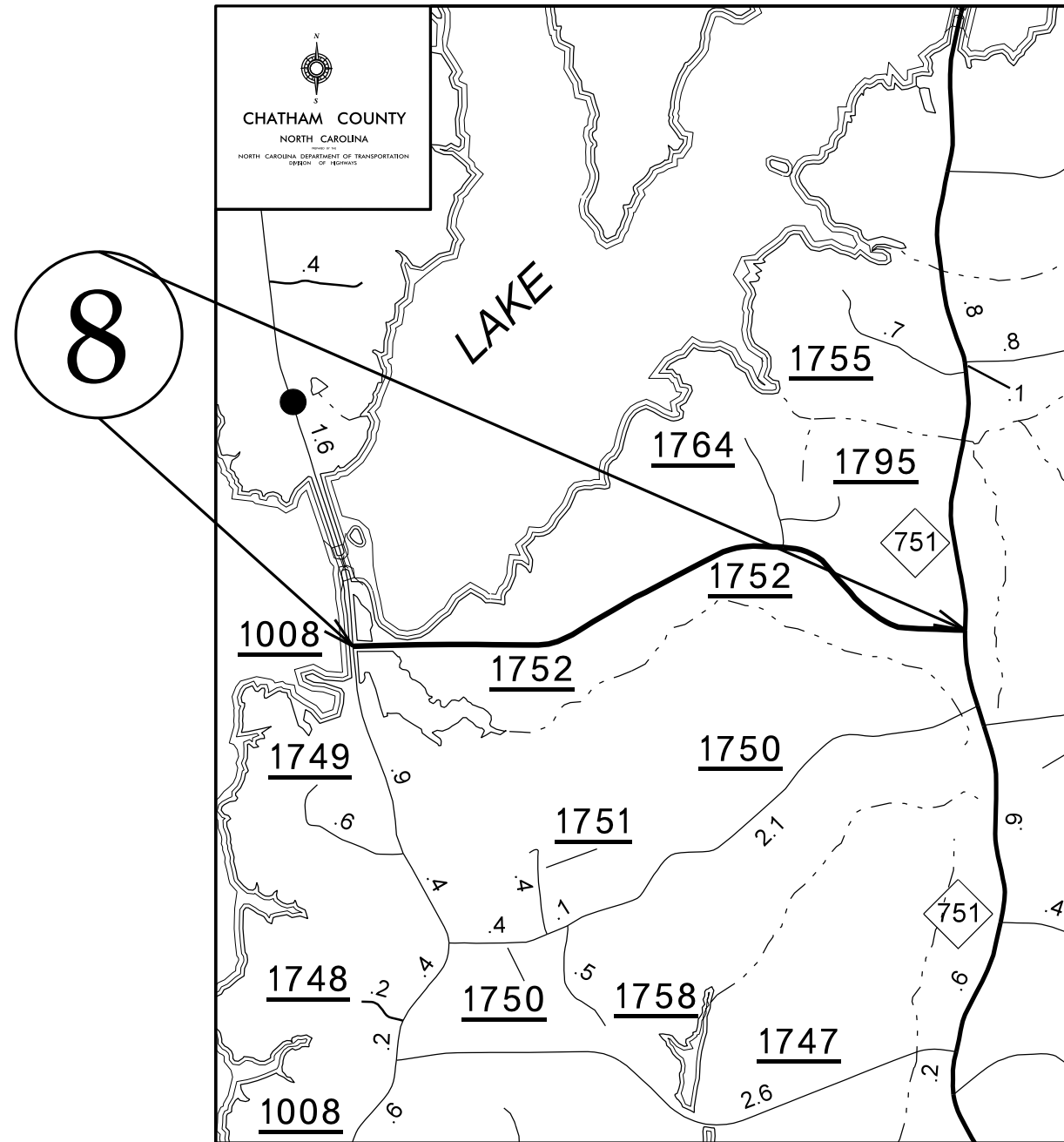


Maps 5,6

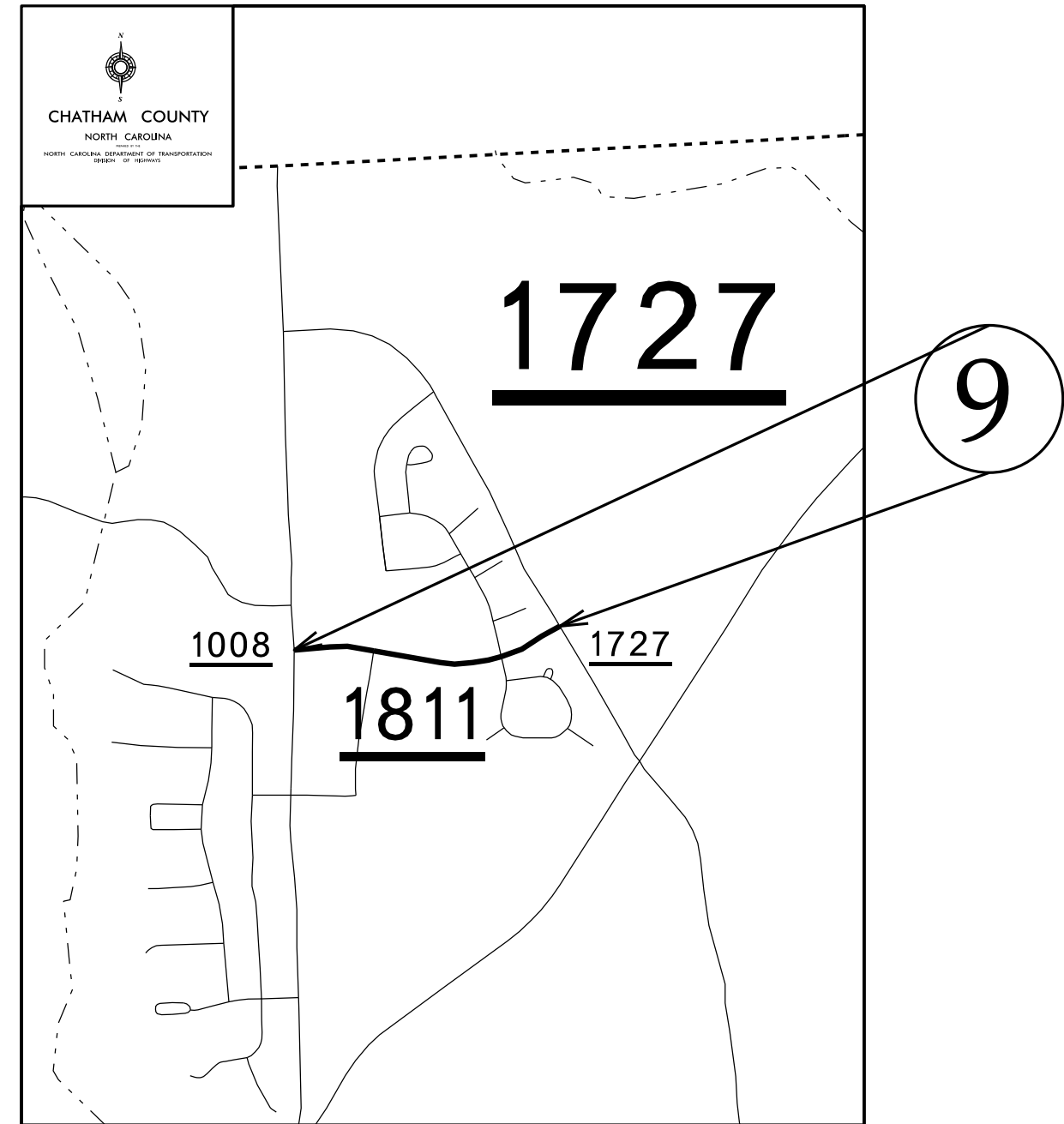
Map 7



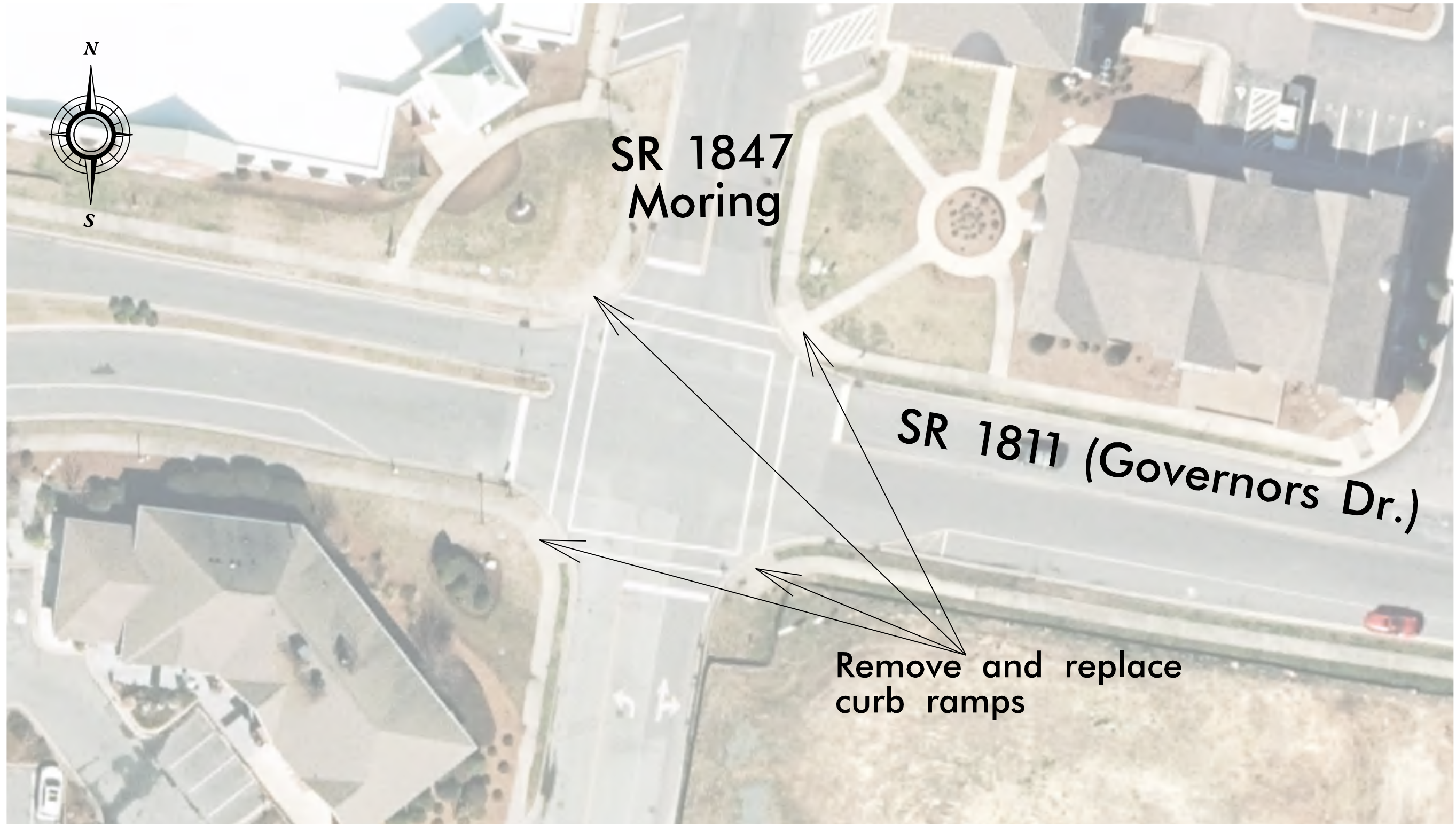
Map 8



Map 9



Map 9 - Curb Ramps



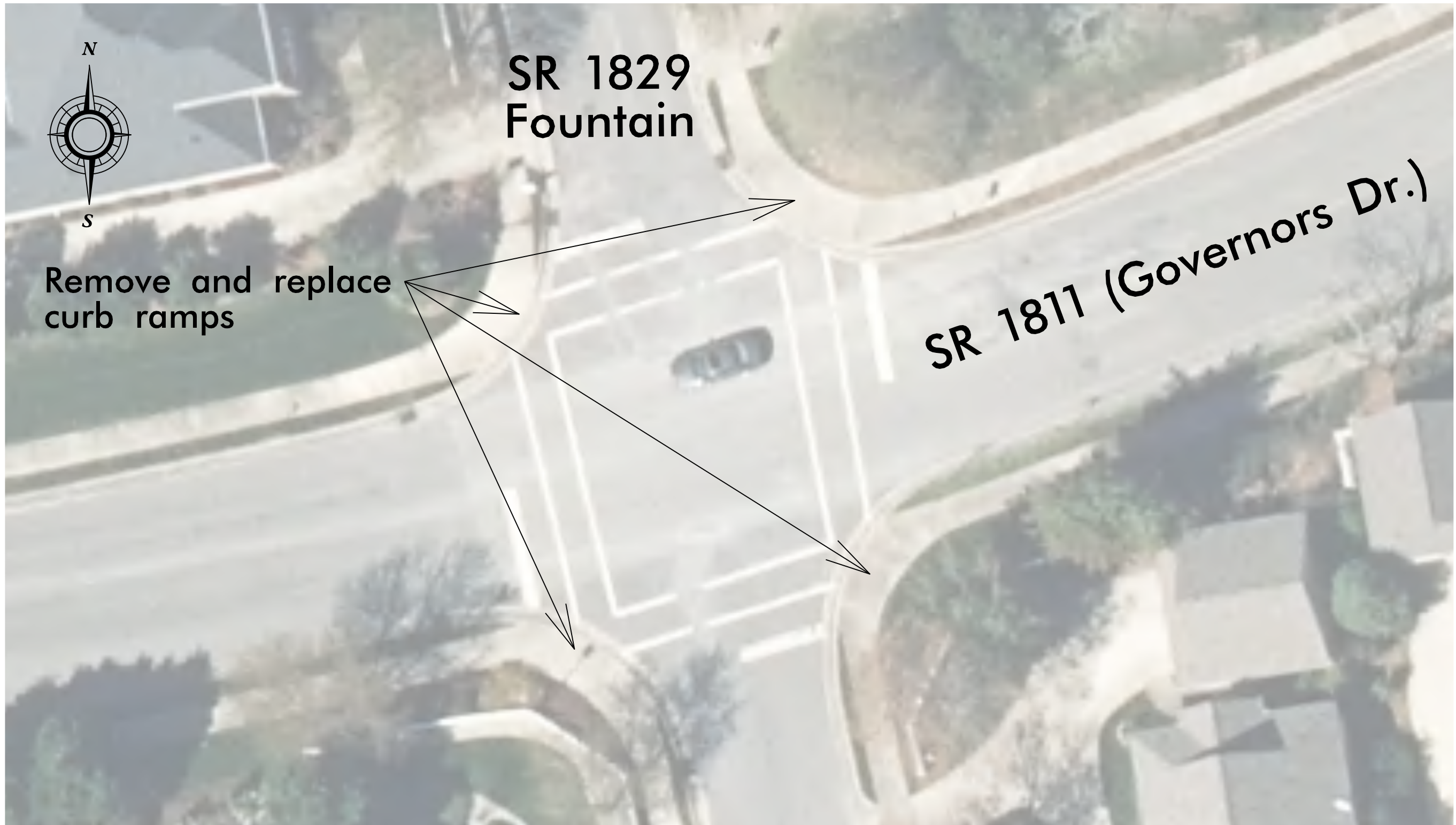
**SR 1847
Moring**

SR 1811 (Governors Dr.)

**Remove and replace
curb ramps**



Map 9 - Curb Ramps

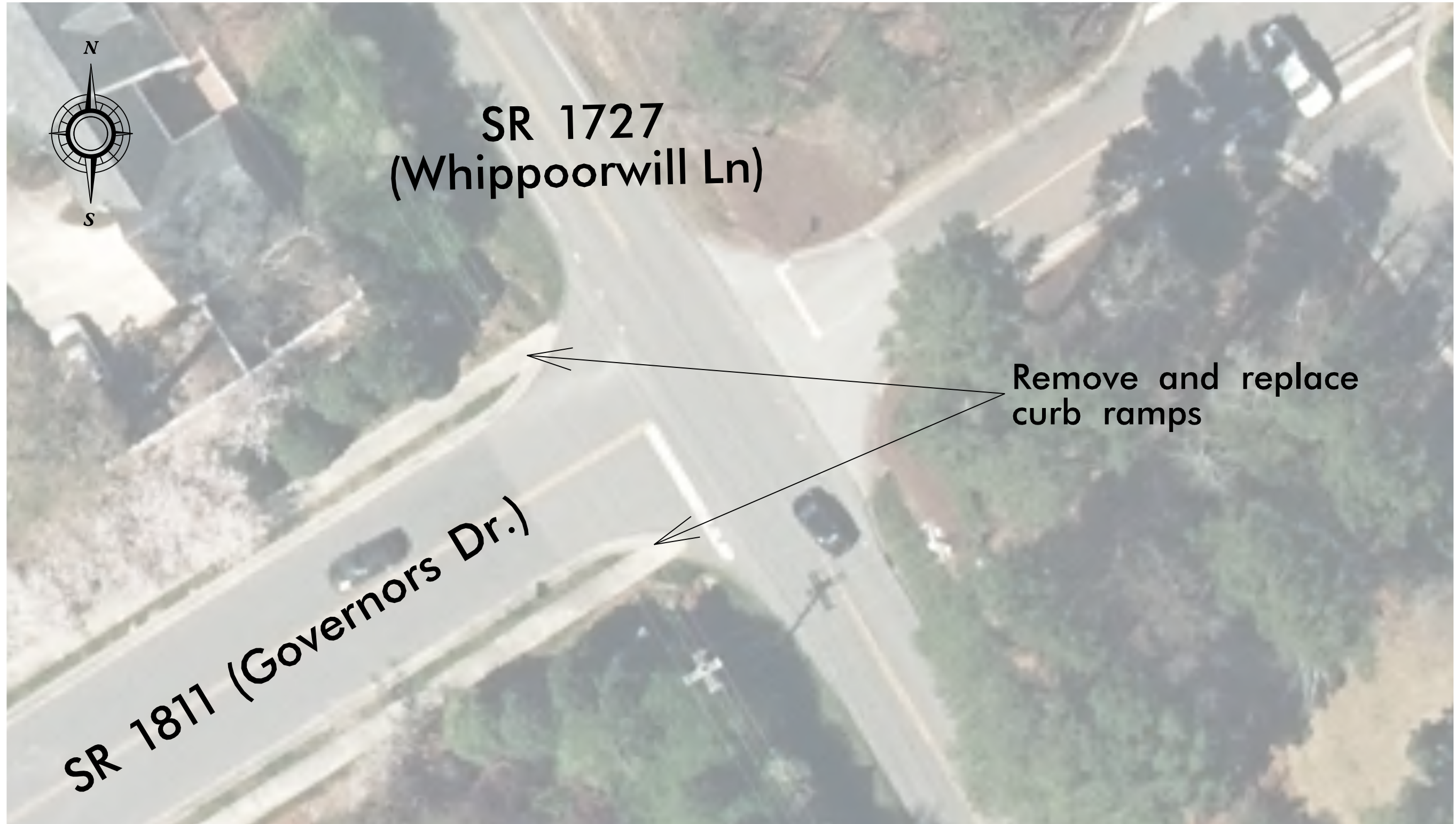


Remove and replace
curb ramps

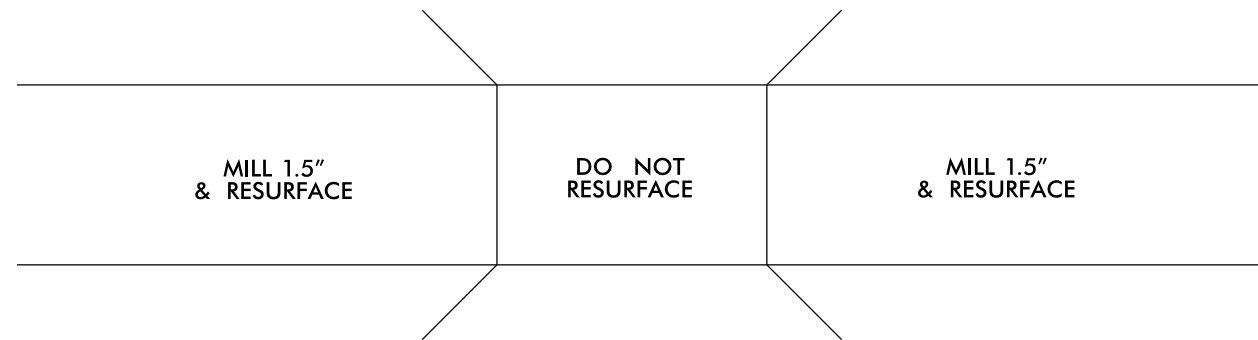
SR 1829
Fountain

SR 1811 (Governors Dr.)

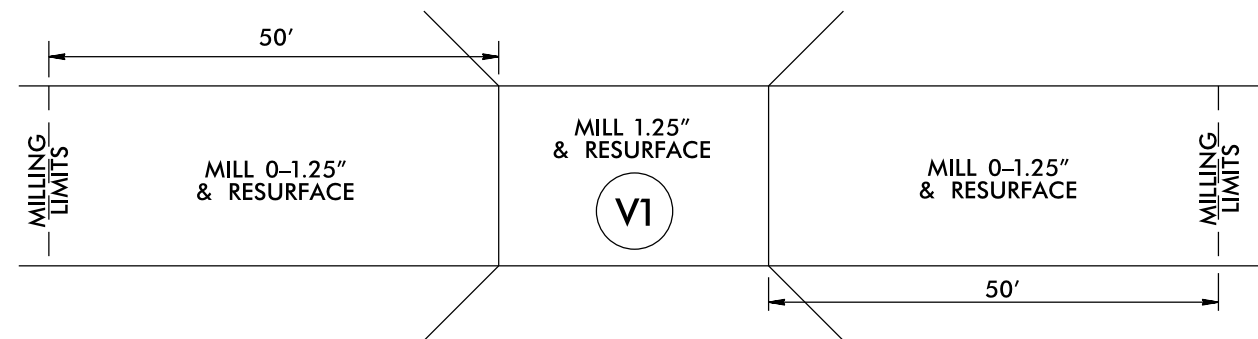
Map 9 - Curb Ramps



BRIDGE DETAILS

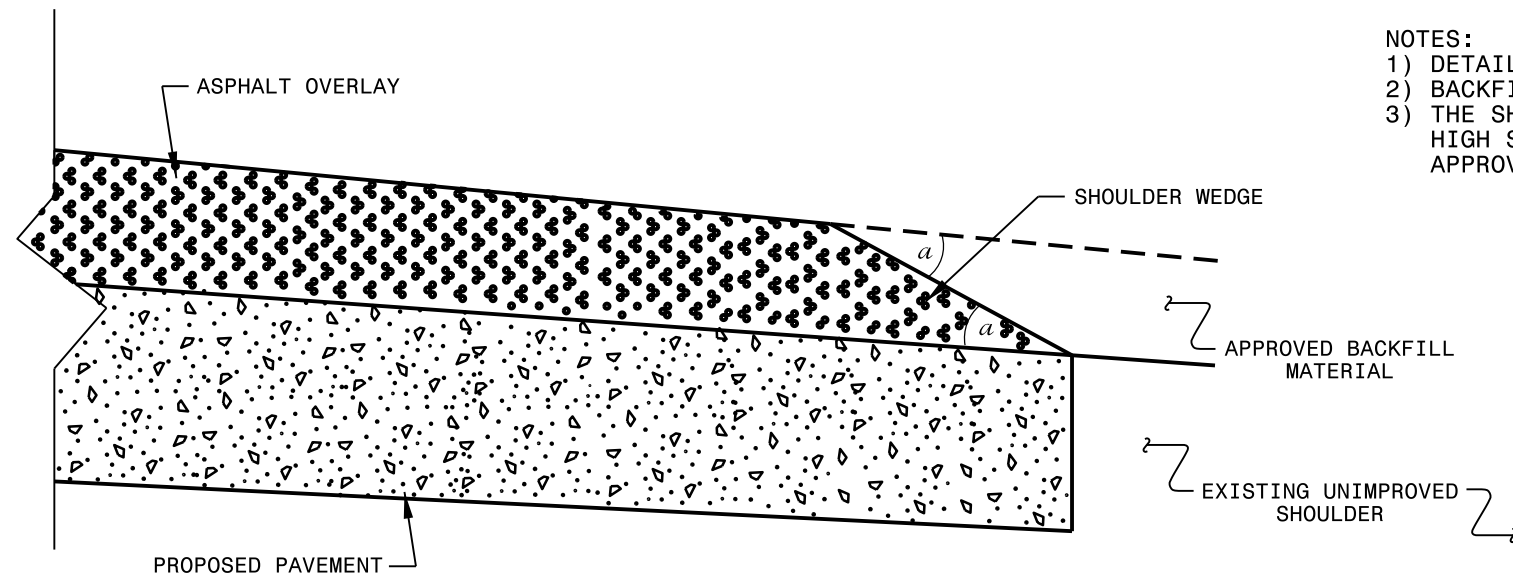


USE FOR
MAP #1 US 64 BRIDGE #447
MAP #2 NC 42 BRIDGE #56
MAP #5 SR 1300 (STALEY SNOW CAMP RD) BRIDGE #455
MAP #11 SR 1004 (SILER CITY SNOW CAMP RD) BRIDGES #257 AND #445

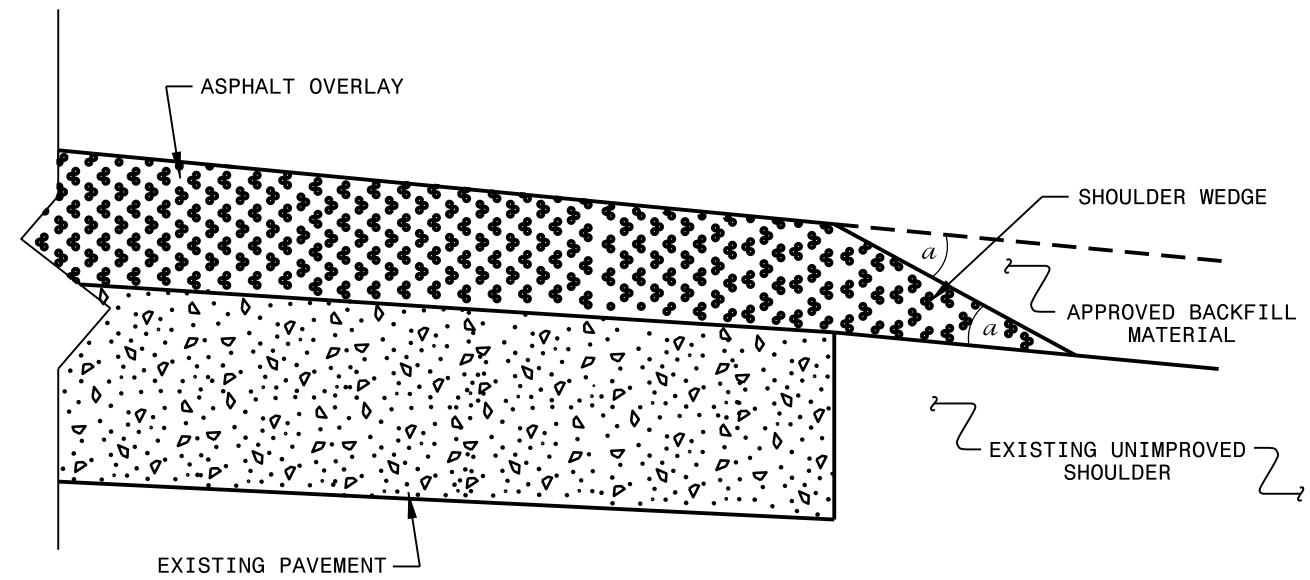


*** MILLING FOR APPROACHES SHALL BE PAID FOR UNDER INCIDENTAL MILLING**
USE FOR MAP #6 SR 1300 (STALEY SNOW CAMP RD) BRIDGE #284

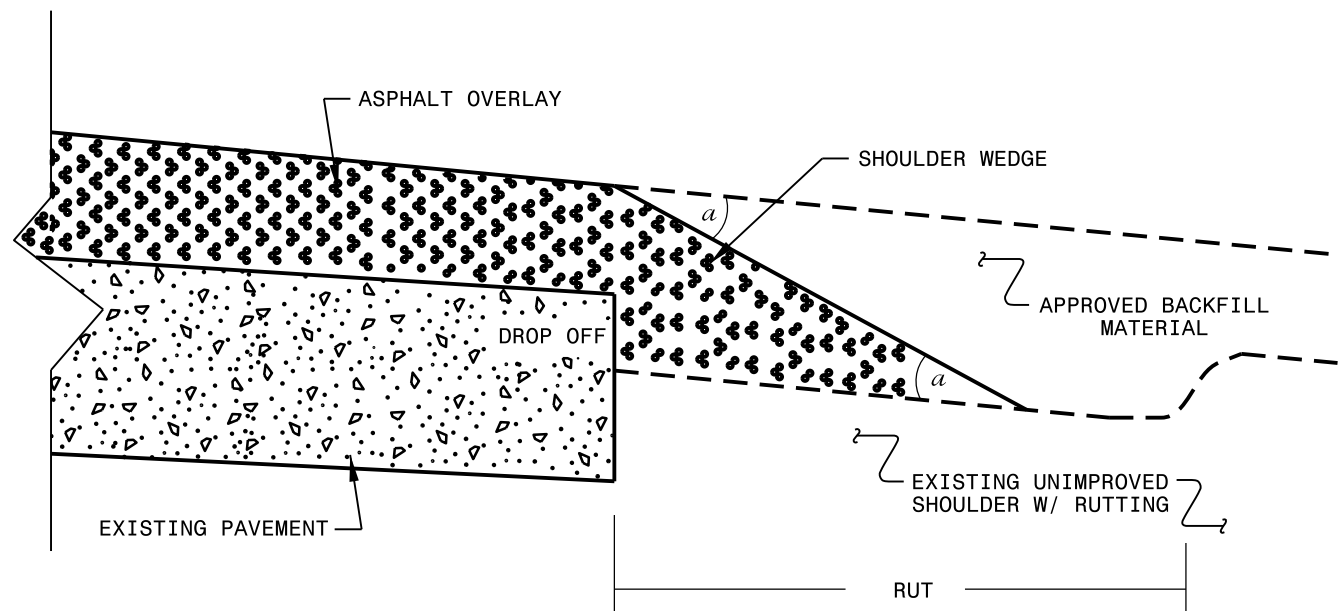
- NOTES:
 1) DETAIL DOES NOT APPLY TO OGAFB AND ULTRA-THIN BONDED WEARING COURSE.
 2) BACKFILL SHOULDER WITH APPROVED MATERIAL.
 3) THE SHOULDER WEDGE DEVICE MAY BE DISENGAGED AT PAVED DRIVEWAYS, SIDE STREETS, HIGH SHOULDERS, AND OTHER LOCATIONS NOT FEASIBLE TO CONSTRUCT AS APPROVED BY THE ENGINEER.



SHOULDER WEDGE DETAIL
 (Resurfacing Projects w/ Widening or with Existing Paved Shoulder having no dropoffs)



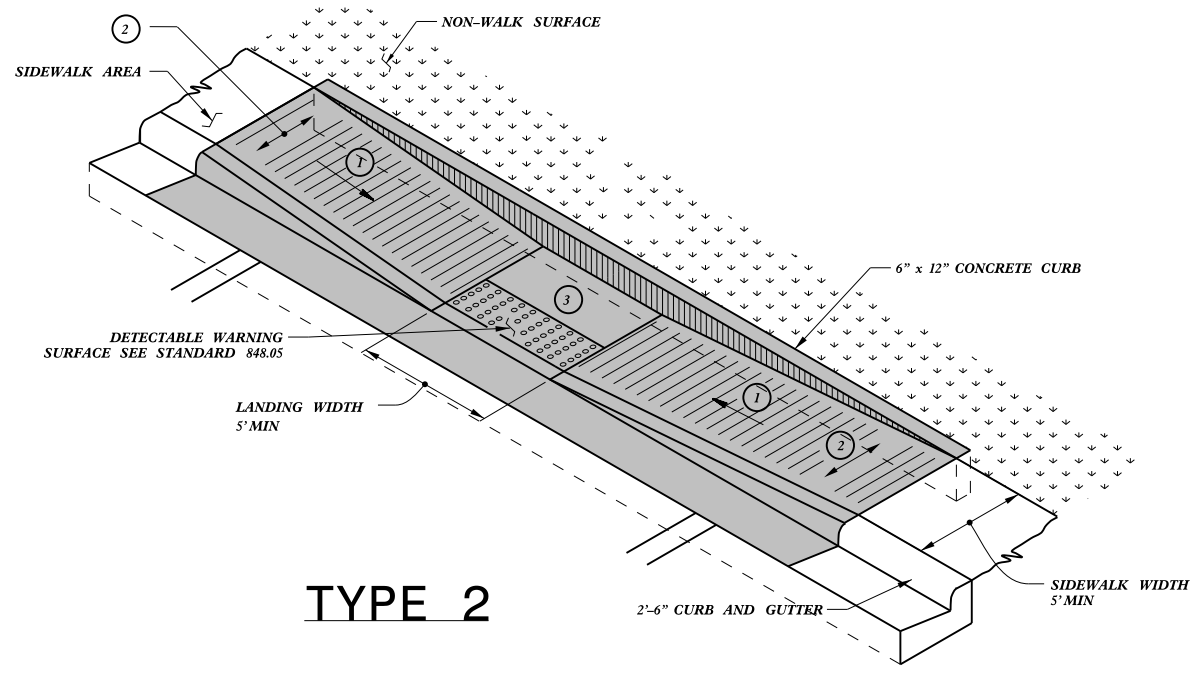
SHOULDER WEDGE DETAIL
 (Resurfacing Projects w/ NO Widening)



SHOULDER WEDGE DETAIL
 (Resurfacing Adjacent to Rutted Shoulder)

- SHOULDER WEDGE ANGLE = 30°

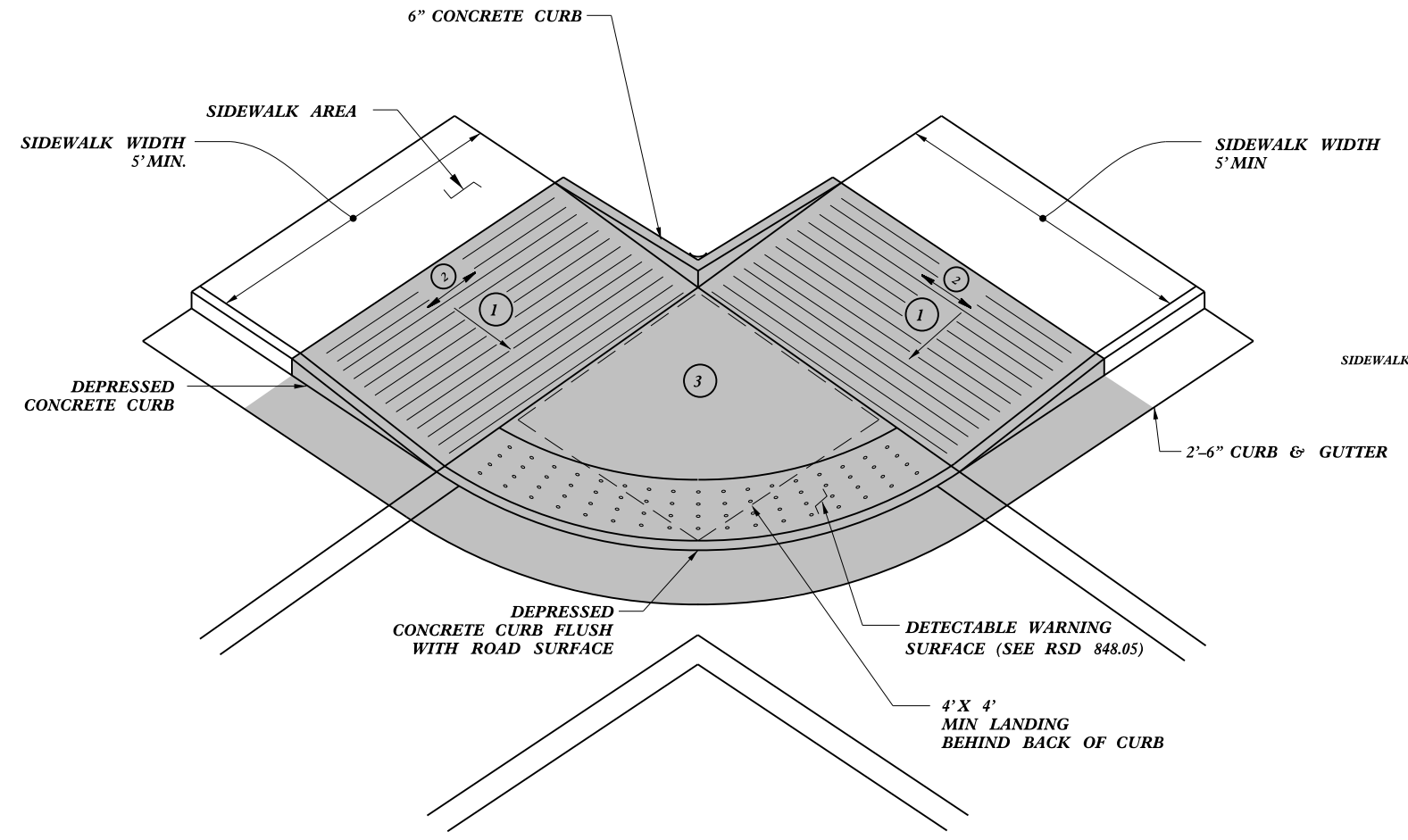
CONTRACT STANDARDS AND DEVELOPMENT UNIT		
Office 919-707-6950 FAX 919-250-4119		
SHOULDER WEDGE DETAILS		
ORIGINAL BY: T.SPELL	DATE: 7-19-11	
MODIFIED BY:	DATE: 2/2/16	
CHECKED BY:	DATE:	
FILE SPEC.: szusr/details/stand/shoulderwedgedetail.dgn		



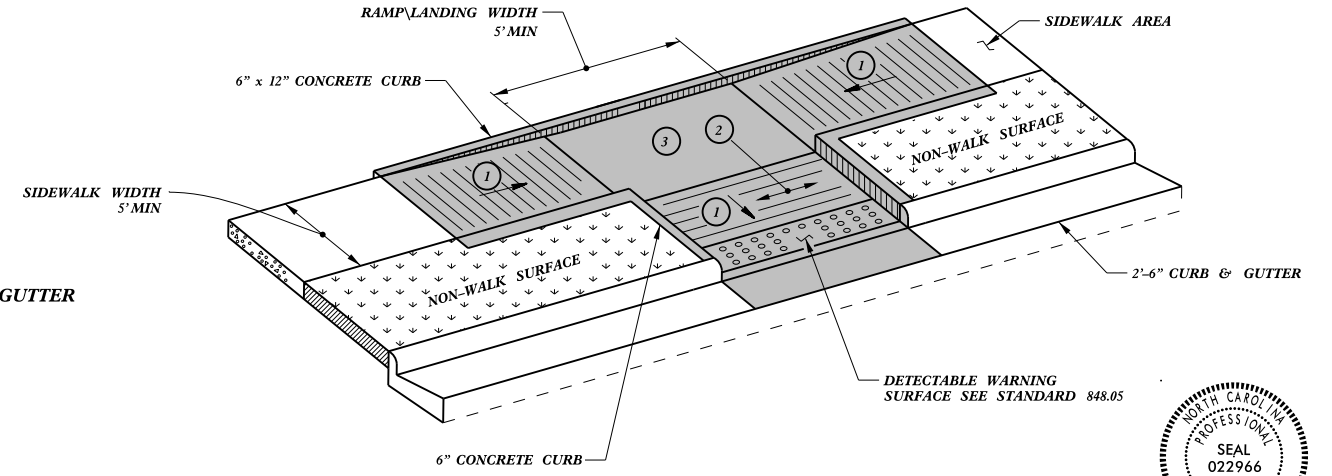
TYPE 2

PAY LIMITS FOR 1 CURB RAMP

- 1 8.33% (12:1) MAX RAMP SLOPE
- 2 CROSS SLOPE: 2.00%
- 3 CURB RAMPS REQUIRE A (4'-0") MINIMUM LANDING WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00% WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SLOPE TO DRAIN TO CURB.



TYPE 2A



TYPE 3



DocuSign
 Joel S. Howerton
 449E8E25522144E

11/18/2015

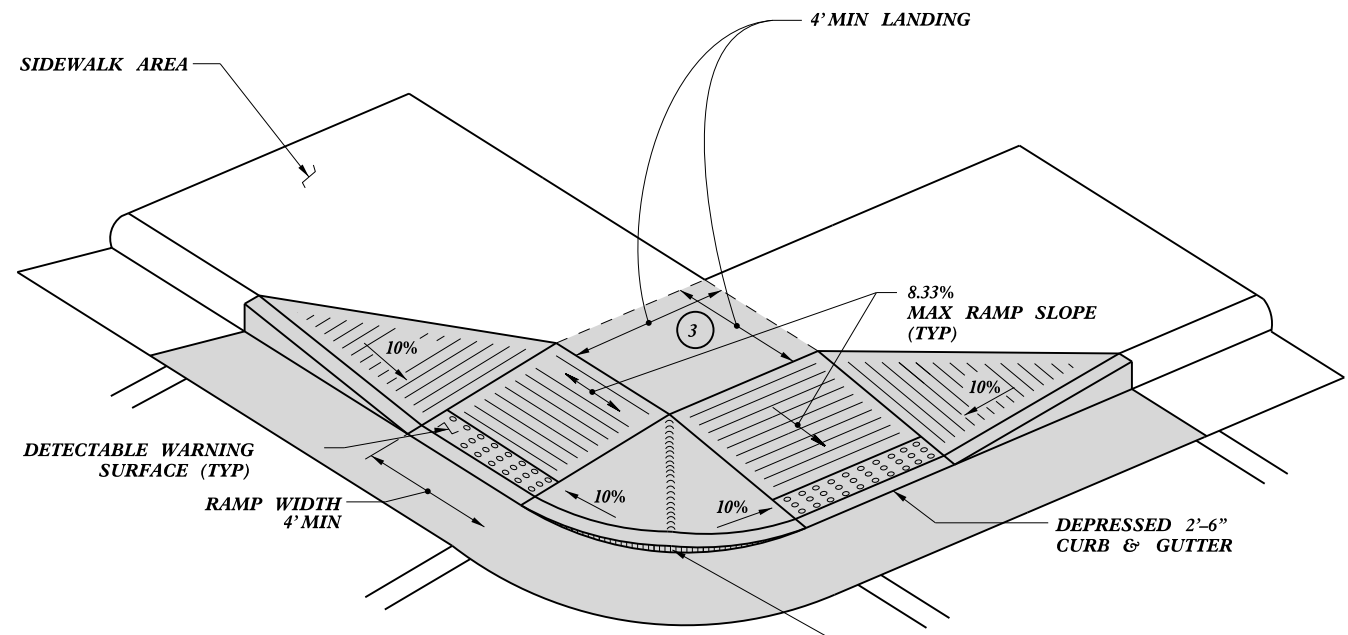
CONTRACT STANDARDS AND DEVELOPMENT UNIT
 Office 919-707-6950 FAX 919-250-4119

CURB RAMPS
 Parallel Ramps

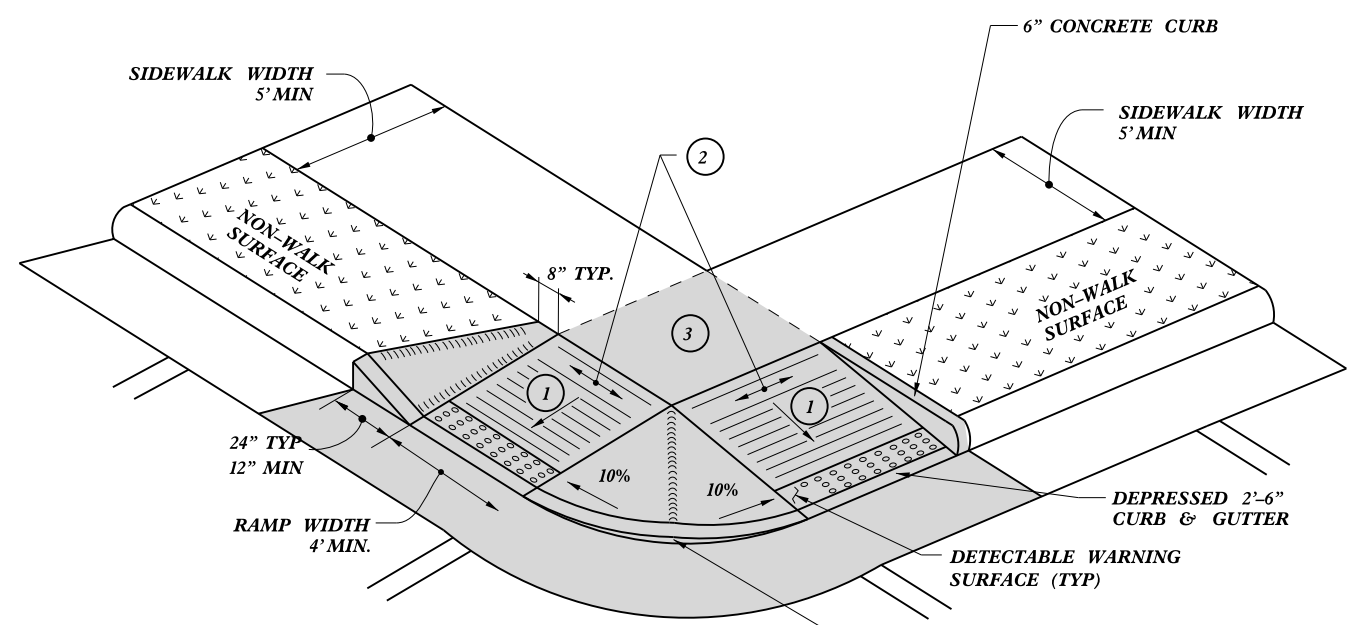
ORIGINAL BY: J.S. HOWERTON DATE: 7/7/11
 MODIFIED BY: DATE:
 CHECKED BY: DATE:
 FILE SPEC: stds/2012CurbRamp/CurbRampDetails.dwg

REFER TO ROADWAY STANDARD DRAWING NUMBER 848.05 SHEET 3 OF 3 FOR ALL RAMP NOTES

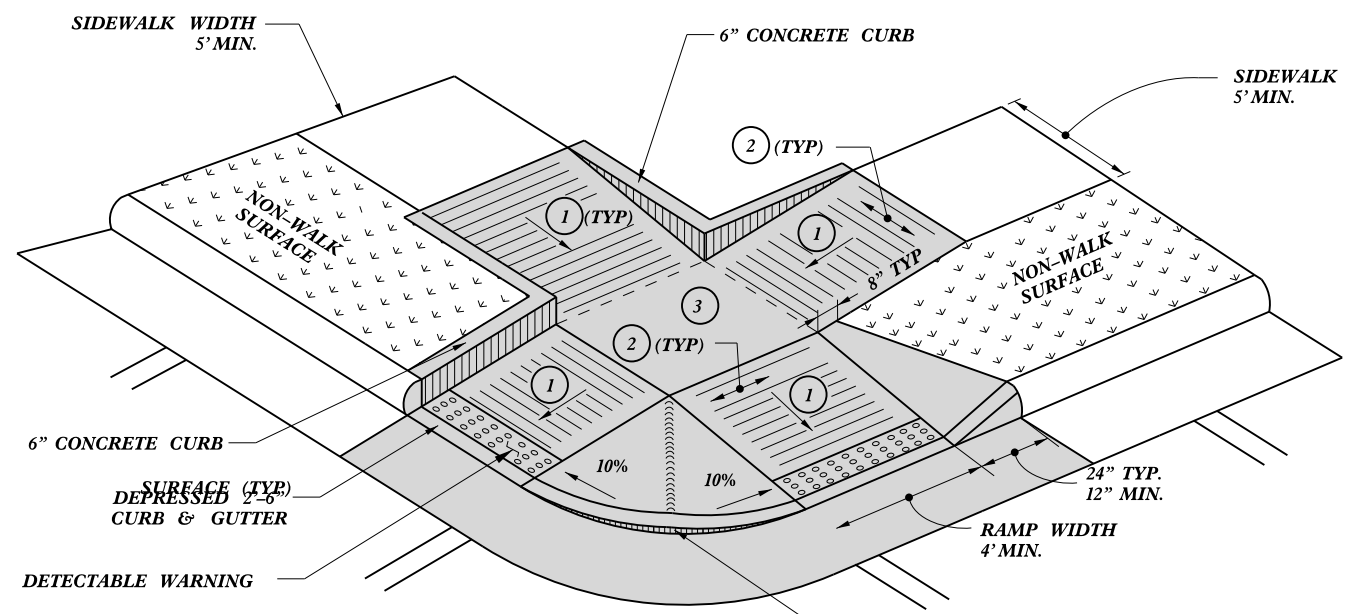
5/14/99



TYPE 4



TYPE 4A



TYPE 5

PAY LIMITS FOR 2 CURB RAMPS

- 1 8.33% (12:1) MAX RAMP SLOPE
- 2 CROSS SLOPE: 2.00%
- 3 CURB RAMPS REQUIRE A (4'-0") MINIMUM LANDING WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00% WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SLOPE TO DRAIN TO CURB.

DocuSigned by:
Joel S Howerton
 449E8E25522144F...



11/18/2015

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

CONTRACT STANDARDS AND DEVELOPMENT UNIT	
Office 919-707-6950	FAX 919-250-4119
CURB RAMPS	
Shared Landing	
ORIGINAL BY: J.S. HOWERTON	DATE: 7/7/11
MODIFIED BY:	DATE:
CHECKED BY:	DATE:
FILE SPEC. :stds/2012CurbRamp/CurbRampDetails.dwg	

REFER TO ROADWAY STANDARD DRAWING NUMBER 848.05 SHEET 3 OF 3 FOR ALL RAMP NOTES

5/14/99
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PROJECT NO. 2022CPT.08.19.10191, 2022CPT.08.19.20191	SHEET NO. 22	TOTAL NO.
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SUMMARY OF QUANTITIES

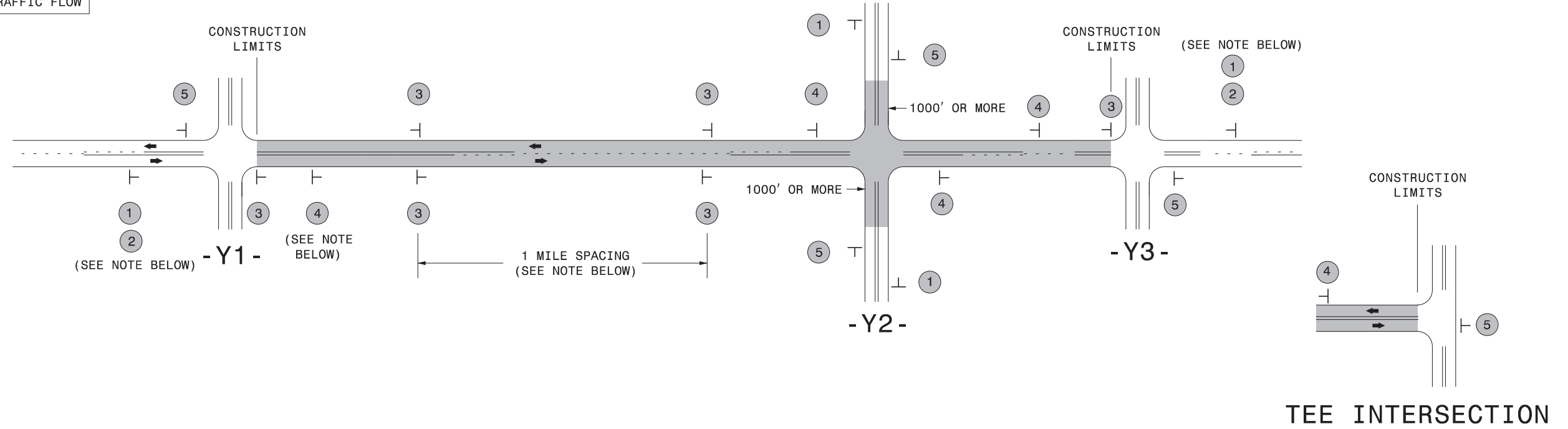
PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	LANE TYPE	FINAL SURFACE TESTING REQUIRED	WARM MIX ASPHALT REQUIRED	LENGTH	WIDTH	1245000000-E	1260000000-E	1297000000-E	1330000000-E	1491000000-E	1519000000-E	1524200000-E	1575000000-E	1577000000-E	1704000000-E	1775000000-E	1838000000-E	1838500000-N	2613000000-N	2815000000-N	2830000000-N	2845000000-N	5255000000-N	7444000000-E	7456000000-E										
												SHOULDER RECONSTRUCTION	AGGREGATE SHOULDER BORROW	1.5" MILLING	1.25" MILLING	INCIDENTAL MILLING	BASE COURSE, B25.0C	SURFACE COURSE, S9.5B	ASPHALT CONC SURFACE COURSE, TYPE S9.5D	ASPHALT BINDER FOR PLANT MIX	POLYMER MODIFIED ASPHALT BINDER FOR PLANT MIX	PATCHING EXISTING PAVEMENT	ASPHALT SURFACE TREATMENT, MATCOAT, #78 STONE	EMULSION FOR ASPHALT SURFACE TREATMENT	VACUUM TRUCK	REMOVE AND REPLACE CURB RAMPS	ADJUST DROP INLET	ADJUST MANHOLES	ADJUST METER OR VALVE BOX	PORTABLE LIGHTING	INDUCTIVE LOOP SAWCUT	LEAD-IN CABLE (14-2 PAIR)									
												MI	FT	SMI	TON	SY	SY	SY	TONS	TONS	TON	TONS	TONS	TONS	SY	GAL	WK	EA	EA	EA	EA	LS	LF	LF							
2022CPT.08.19.10191	Chatham	1	US 64	FROM E JT B#27 OVER SR 1006 (N 2ND AVE) TO W JT OF ROCKY RIVER BRIDGE #34 (2,500 LF E OF US 421)	1,2,3,4	2	MU	NO	NO	2.48	64			93,116				9,517		543	100					2	10	4	1	7,000	7,000										
TOTAL FOR MAP NO. 1												2.48				93,116				9,517		543	100				2	10	4	1	7,000	7,000									
2022CPT.08.19.10191	Chatham	2	NC 42	FROM PVT JT 480LF NW OF BRIDGE #56 OVER BUCKHORN CREEK (1.0MI E OF SR 1912 CHRISTIAN CHPL. CH. RD) TO HARNETT CO LINE	5	2	2WU	NO	NO	2.94	24	5.88	823		400			3,776		253	75		41,395.00	14,488	2.00																
TOTAL FOR MAP NO. 2												2.94				5.88	823		400		3,776		253	75	41,395.00	14,488	2.00														
2022CPT.08.19.10191	Chatham	3	NC 42	FROM SR 1009 (BONLEE CARBONTON RD) TO W SIDE OF RR TRACKS NEAR LEE CO LINE	6	2	2WU	NO	NO	1.6	24	3.20	448	26,422	250			2,193		147	80																				
TOTAL FOR MAP NO. 3												1.6				3.20	448	26,422	250		2,193		147	80																	
2022CPT.08.19.10191	Chatham	4	NC 42	FROM SR 2329 (HAW BRANCH RD) TO SR 1009 (BONLEE CARBONTON RD)	7	2	2WU	NO	NO	1.55	24	3.10	434		300			2,032		136	160																				
TOTAL FOR MAP NO. 4												1.55				3.10	434		300		2,032		136	160																	
TOTAL FOR PROJ NO. 2022CPT.08.19.10191												8.57				12.18	1,705	119,538	950		8,001		9,517	536	543	415	41,395.00	14,488	2.00			2	10	4	1	7,000	7,000				
2022CPT.08.19.20191	Chatham	5	SR 1300 (STALEY SNOW CAMP RD)	FROM 800 LF E OF B#455 OVER US 421 TO RANDOLPH COUNTY	9	2	2WU	NO	NO	0.438	22	0.88	123		611			430		29	10																				
TOTAL FOR MAP NO. 5												0.438				0.88	123		611		430		29	10																	
2022CPT.08.19.20191	Chatham	6	SR 1300 (STALEY SNOW CAMP RD)	FROM ALAMANCE COUNTY TO 800FT E OF B#455 OVER US 421	8	2	2WU	NO	NO	4.22	22	9.50	1,350		208	978	3,116	4,139		418	50					1															
TOTAL FOR MAP NO. 6												4.22				9.50	1,350		208	978	3,116	4,139		418	50						1										
2022CPT.08.19.20191	Chatham	7	SR 2207 (SANDY BRANCH CH RD)	FROM SR 2120 (IKE BROOKS RD) TO NC 902	9	2	2WU	NO	NO	2.23	20	4.46	624					1,989		133	100																				
TOTAL FOR MAP NO. 7												2.23				4.46	624				1,989		133	100																	
2022CPT.08.19.20191	Chatham	8	SR 1752 (MARTHAS CHAPEL RD)	FROM NC 751 TO SR 1008 (FARRINGTON RD)	10	2	2WU	NO	NO	2.82	22	5.64	790		367			2,766		185	175	1,700.00	600																		
TOTAL FOR MAP NO. 8												2.82				5.64	790		367		2,766		185	175	1,700.00	600															
2022CPT.08.19.20191	Chatham	9	SR 1811 (GOVERNORS DR)	FROM SR 1008 (MT CARMEL CHURCH RD) TO SR 1727 (WHIPPOORWILL)	11	2	2WU	NO	NO	0.34	30			8,430				454		30					18		1	9													
TOTAL FOR MAP NO. 9												0.34						8,430			454		30		18		1	9													
2022CPT.08.19.20191	Chatham	10	SR 1003 (SILK HOPE LINDLEY MILL RD)	FROM ALAMANCE COUNTY TO SR 1334 (WADE HARRIS RD)	7	2	2WU	NO	NO	2.44	22	4.88	683		720			2,874		193	25																				
TOTAL FOR MAP NO. 10												2.44				4.88	683		720		2,874		193	25																	
2022CPT.08.19.20191	Chatham	11	SR 1004 (SILER CITY SNOW CAMP RD)	FROM ALAMANCE COUNTY TO US 64	5	2	2WU	NO	NO	8.17	22	16.34	2,288		1,451			9,822		658	150	108,150.00	37,860	5.00																	
TOTAL FOR MAP NO. 11												8.17				16.34	2,288		1,451		9,822		658	150	108,150.00	37,860	5.00														
TOTAL FOR PROJ NO. 2022CPT.08.19.20191												20.658				41.70	5,858		8,638	4,794	3,116	22,474		1,646	510	109,850.00	38,460	5.00	18	1	1	9									
GRAND TOTAL												29.228				53.88	7,563	119,538	8,638	5,744	3,116	30,475		9,517	2,182	543	925	151,245.00	52,948	7.00	18	3	11	13	1	7,000	7,000				

SIGNING FOR RESURFACING PROJECTS

LEGEND

┆ STATIONARY SIGN

← DIRECTION OF TRAFFIC FLOW



MAINLINE (-L-) SIGNING

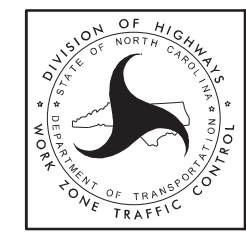
-Y- LINE SIGNING

SIGNING NOTES AND PLACEMENT PER DIRECTION	1		PLACE 1000' PRIOR TO BEGINNING OF CONSTRUCTION LIMITS. ONLY USED ON -Y- LINES IF RESURFACING LIMITS EXTEND 1000' ALONG -Y- LINE.	<p>NO REQUIRED STATIONARY SIGNING FOR THE FOLLOWING -Y- LINE CONDITIONS:</p> <ol style="list-style-type: none"> 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, PORTABLE ADVANCE WARNING SIGNS SHALL BE USED ALONG THE -Y- LINE AS SHOWN BELOW. REMOVE UPON COMPLETION OF WORK.</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> W20-1 48" X 48" PLACED 500' IN ADVANCE OF FLAGGER. </div> <div style="text-align: center;"> W20-7 A 48" X 48" PLACED 250' IN ADVANCE OF FLAGGER. </div> </div>
	2		#2 SIGN ONLY USED WHEN CONSTRUCTION LIMITS ARE 2 OR MORE MILES IN LENGTH. ROUND UP TO NEXT WHOLE NUMBER. (NO FRACTIONAL OR DECIMAL NUMBERS)	
	3		- PLACE INITIALLY AT THE CONSTRUCTION LIMITS AND SPACE 1 MILE APART THEREAFTER. - AT TEE INTERSECTIONS INSTALL INITIALLY 1/2 MILE FROM INTERSECTION AND SPACE 1 MILE APART THEREAFTER.	
	4		- THESE ARE FOR -Y- LINES THAT ARE "THROUGH" ROADWAYS. - DEAD END AND SUBDIVISION ROADS ARE NOT "THROUGH" ROADWAYS. - INSTALL 500' +/- FROM EACH -Y- LINE APPROACH AS SHOWN ABOVE. - FOR MULTIPLE -Y- LINES THAT ARE SEPARATED BY 0.25 MILES OR LESS, TREAT AS A SINGLE UNIT AND INSTALL WITHIN 500' OF EACH APPROACH. - A MAXIMUM OF 2 SIGN SETS PER MILE. DO NOT INSTALL WHEN -Y- LINES ARE WITHIN 0.5 MILES FROM "END ROAD WORK" SIGN. - FOR TEE INTERSECTIONS, INSTALL WITHIN 500' +/- OF THE INTERSECTION ALONG -L- LINE.	
	5		PLACE 500' FOLLOWING THE END OF CONSTRUCTION LIMITS OR AS SHOWN WHEN WORK ENDS AT A 3-WAY TEE INTERSECTION.	

THE ABOVE SIGNS ARE ALL THAT ARE REQUIRED FOR A CONTRACTOR TO BEGIN A RESURFACING CONTRACT. ANY ADDITIONAL SIGNS REQUESTED BY NCDOT DIVISIONS SHALL BE INSTALLED WITHIN 7 BUSINESS DAYS OF THE START OF CONTRACT WORK.

MAPS LESS THAN 2 MILES

FOR RESURFACING MAPS WITH CONSTRUCTION LIMITS LESS THAN 2 MILES IN LENGTH, NO STATIONARY SIGNS ARE REQUIRED. USE PORTABLE "ROAD UNDER CONSTRUCTION" OR "ROAD WORK AHEAD" SIGNS IN LIEU OF STATIONARY ADVANCE WARNINGS SIGNS.

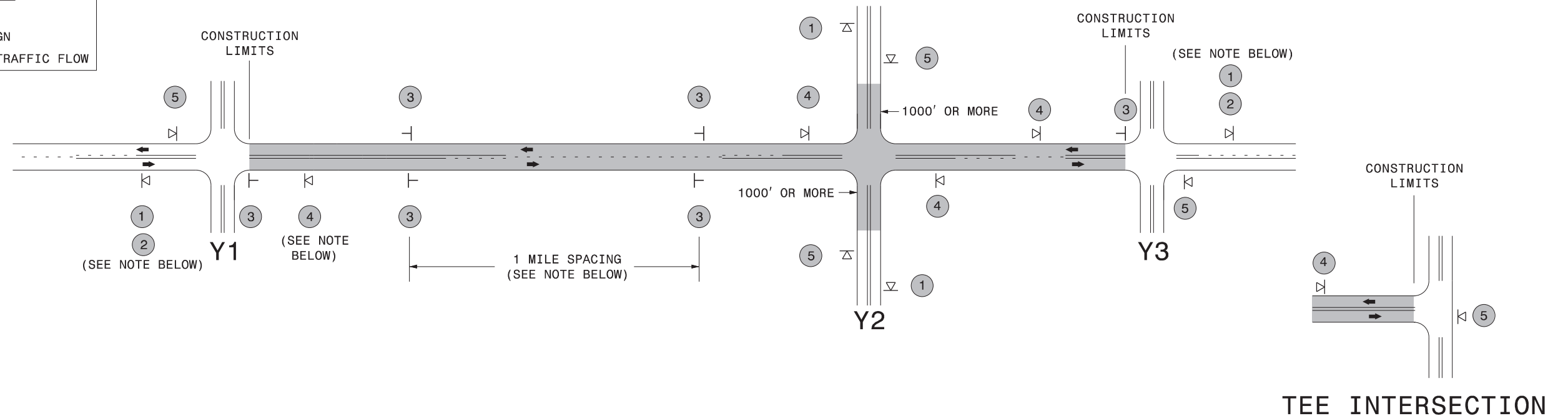


ADVANCE WARNING SIGNS FOR RURAL AND SUBURBAN 2-LANE ROADWAY RESURFACING

SIGNING FOR ASPHALT SURFACE TREATMENT

LEGEND

- ⏏ PORTABLE SIGN
- ┌ STATIONARY SIGN
- ← DIRECTION OF TRAFFIC FLOW



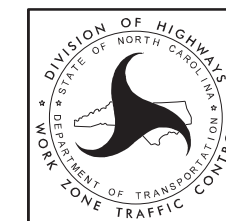
MAINLINE (-L-) SIGNING

-Y- LINE SIGNING

SIGNING NOTES AND PLACEMENT PER DIRECTION	1	 	<ul style="list-style-type: none"> - PLACE 1000' PRIOR TO BEGINNING OF CONSTRUCTION LIMITS. ONLY USED ON -Y- LINES IF RESURFACING LIMITS EXTEND 1000' ALONG -Y- LINE. - SIGN #2 ONLY USED WHEN RESURFACING LIMITS ARE 2 OR MORE MILES IN LENGTH. ROUND UP TO THE NEAREST WHOLE NUMBER. DO NOT USE FRACTIONAL OR DECIMAL NUMBERS. 	<p>STATIONARY SIGNING NOT REQUIRED 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, PORTABLE ADVANCE WARNING SIGNS SHALL BE USED ALONG THE -Y- LINE AS SHOWN BELOW. REMOVE UPON COMPLETION OF WORK.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <small>W20-1 48" X 48"</small> PLACED 500' IN ADVANCE OF FLAGGER. </div> <div style="text-align: center;"> <small>W20-7 A 48" X 48"</small> PLACED 250' IN ADVANCE OF FLAGGER. </div> </div>
	3	 	<ul style="list-style-type: none"> - ALTERNATE THE FOLLOWING TWO SIGNS: - STARTING WITH "LOOSE GRAVEL" (W8-7) FOLLOWED BY "UNMARKED PAVEMENT". - PLACE INITIALLY AT THE CONSTRUCTION LIMITS AND SPACED 1 MILE APART THEREAFTER. - AT TEE INTERSECTIONS INSTALL INITIALLY 0.5 MILE FROM INTERSECTION AND SPACE 1 MILE APART THEREAFTER. 	
	4		<ul style="list-style-type: none"> - 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		<ul style="list-style-type: none"> - PLACE 500' FOLLOWING THE END OF CONSTRUCTION LIMITS OR AS SHOWN WHEN WORK ENDS AT A 3-WAY TEE INTERSECTION. 	
	<p>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.</p>			

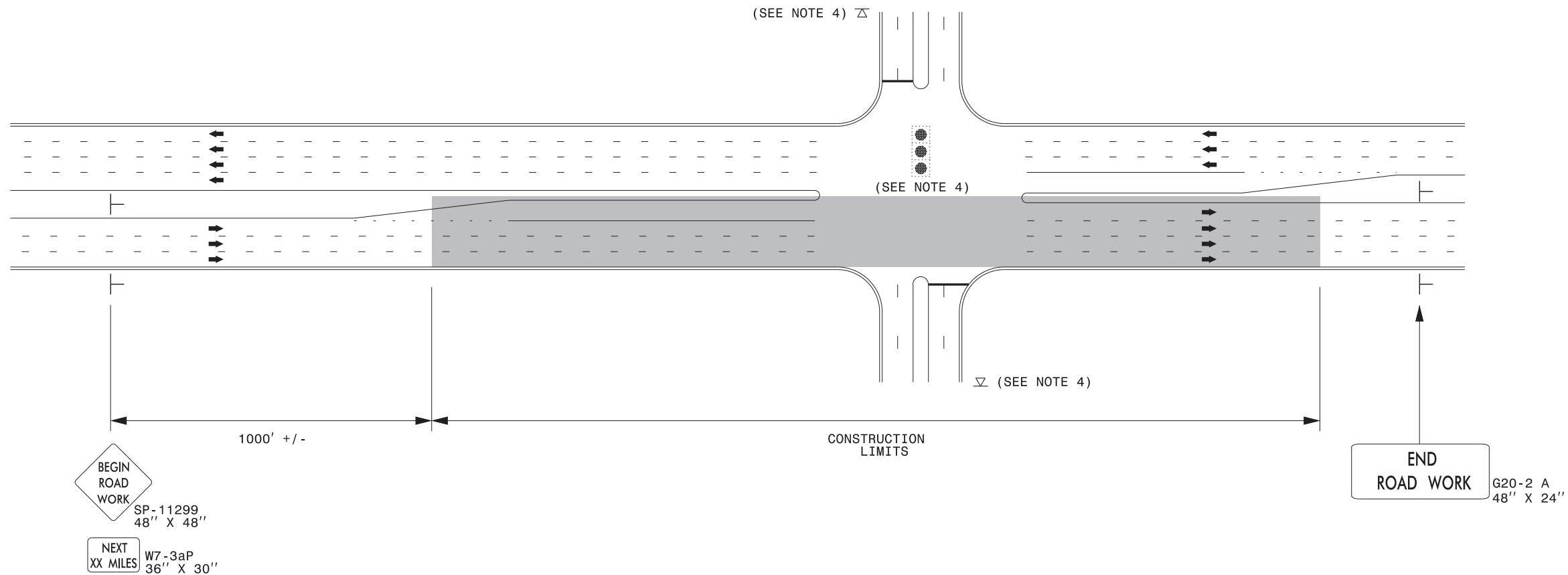
MAPS LESS THAN 2 MILES

FOR AST RESURFACING MAPS WITH CONSTRUCTION LIMITS LESS THAN 2 MILES IN LENGTH, USE A STATIONARY "LOOSE GRAVEL" SIGN AT THE BEGINNING CONSTRUCTION LIMIT FOLLOWED BY AN "UNMARKED PAVEMENT" SIGN MIDWAY THROUGH AND AN "END ROAD WORK" SIGN AT THE END CONSTRUCTION LIMIT.



**ADVANCE WARNING SIGNS
FOR
2-LANE ROADWAY
ASPHALT SURFACE TREATMENT**

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.

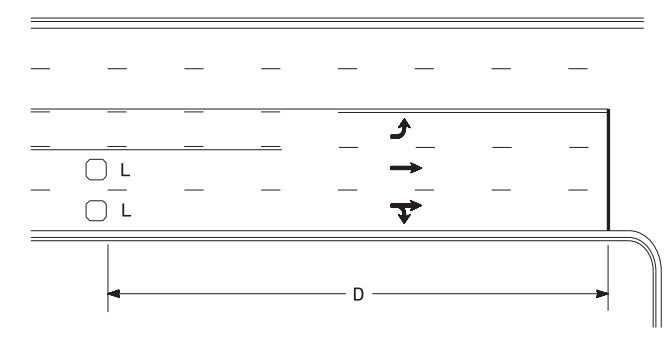
LEGEND

- ┆ STATIONARY SIGN
- ➔ DIRECTION OF TRAFFIC FLOW



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

High Speed Detection (≥40 mph)

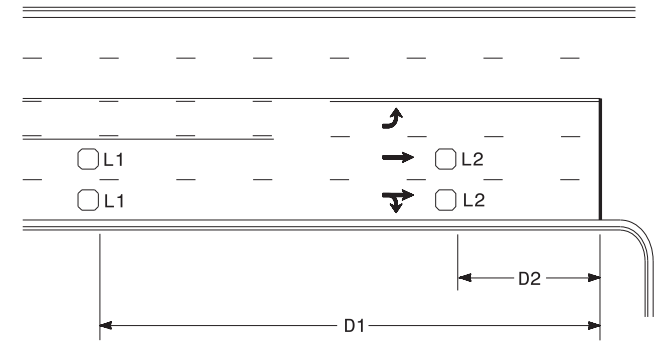


Speed Limit mph	D ft
40	250
45	300
50	355
55	420

L = 6ft X 6ft
Wired separately

Volume Density Operation

OR



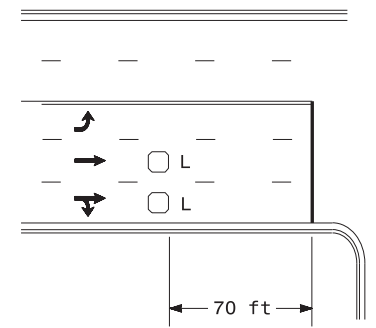
Speed Limit mph	D1 ft	D2 ft
40	250	80
45	300	90
50	355	100
55	420	110

L1 = 6ft X 6ft
Wired in series

L2 = 6ft X 6ft
Wired in series

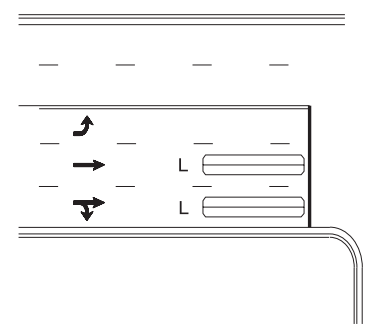
"Stretch" Operation

Low Speed Detection (≤35 mph)



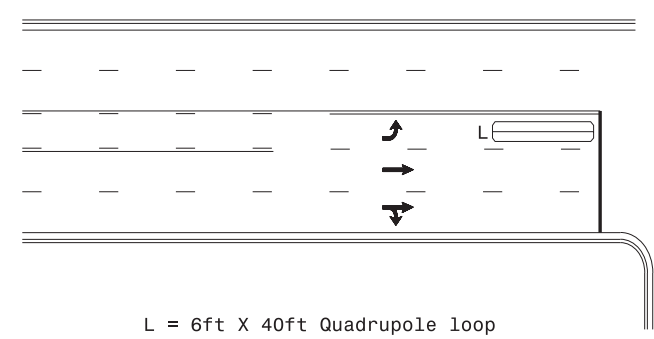
L = 6ft X 6ft
Wired in series

OR



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

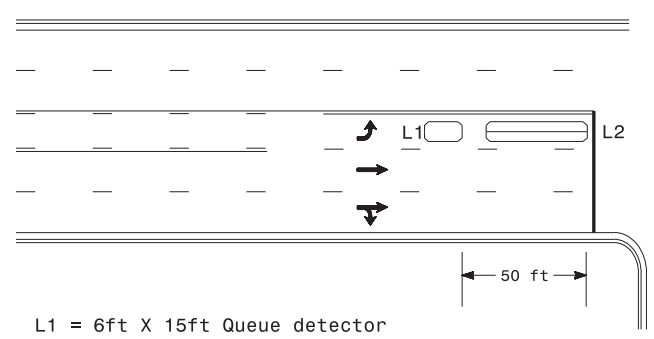
Left Turn Lane Detection



L = 6ft X 40ft Quadrupole loop

Presence Loop Detection

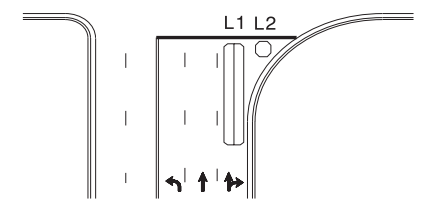
OR



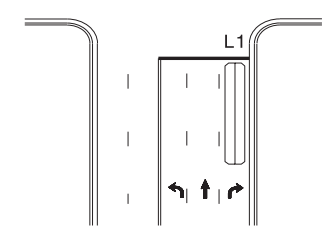
L1 = 6ft X 15ft Queue detector
L2 = 6ft X 40ft Quadrupole loop

Queue Loop Detection

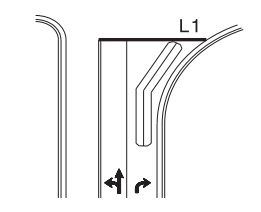
Right Turn Lane Detection



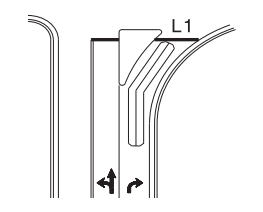
L1 = 6ft X 40ft Quadrupole loop
L2 = 6ft X 6ft [Minimum] Presence loop
Wired separately



Standard Turn

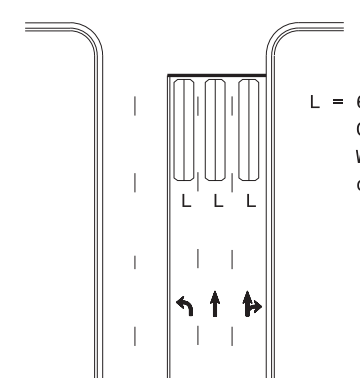


Wide Radius Turn



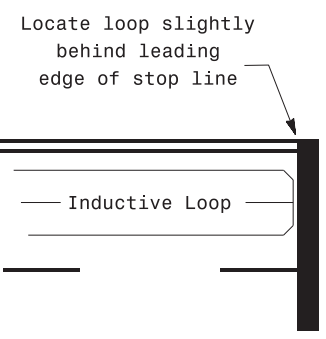
Channelized Turn

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

08-SEP-2020 11:54 S:\17525\17525\SIGNAL\Design\Section\Eastern_Regional\Loop_Type\cal\loop\typical\cal\2015.dgn JGallaway

750 N. Greenfield Pkwy, Garner, NC 27529

Prepared In the Offices of:

Typical Signal Loop Locations	
PLAN DATE: September 2020	REVIEWED BY: JPG
PREPARED BY: PLA	REVIEWED BY:
SCALE: N/A	REVISIONS: INIT. DATE
DATE: 9/8/2020	

SIG. INVENTORY NO.