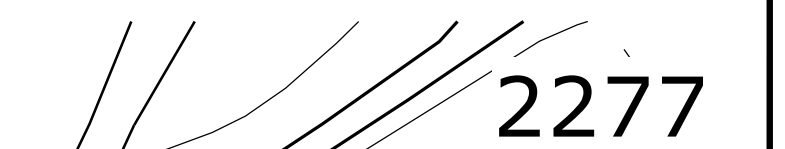
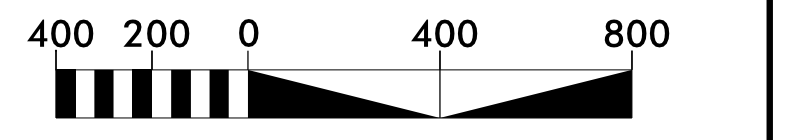


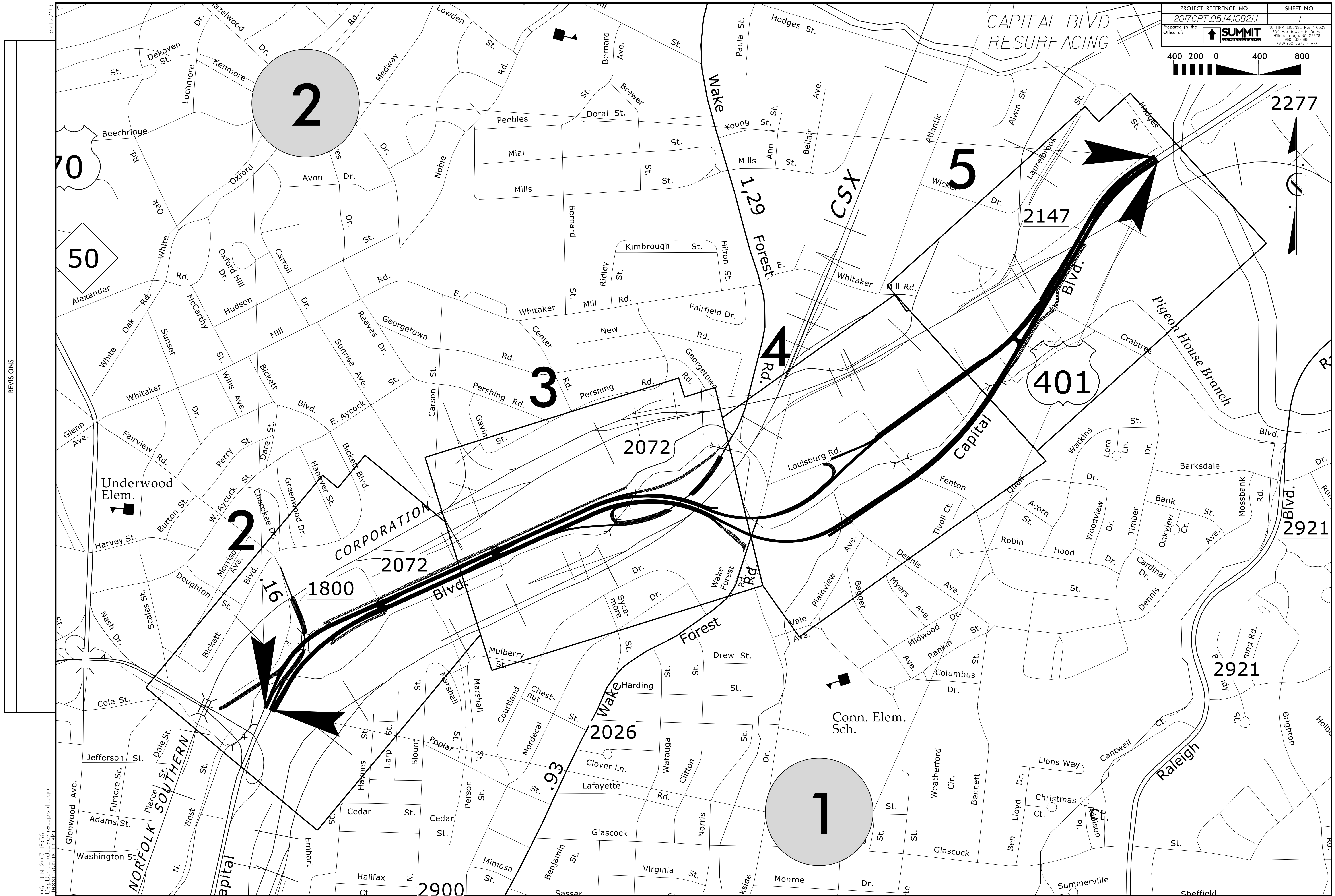
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**The documents contained herein were originally issued  
and sealed by the individuals whose names and license  
numbers appear on each page, on the dates appearing  
with their signature on that page.**

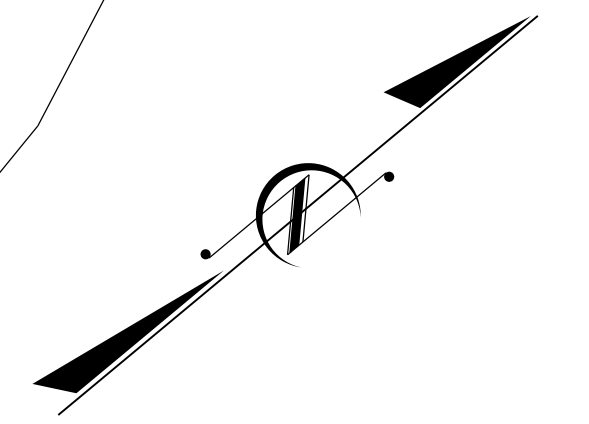
**This file or an individual page  
shall not be considered a certified document.**



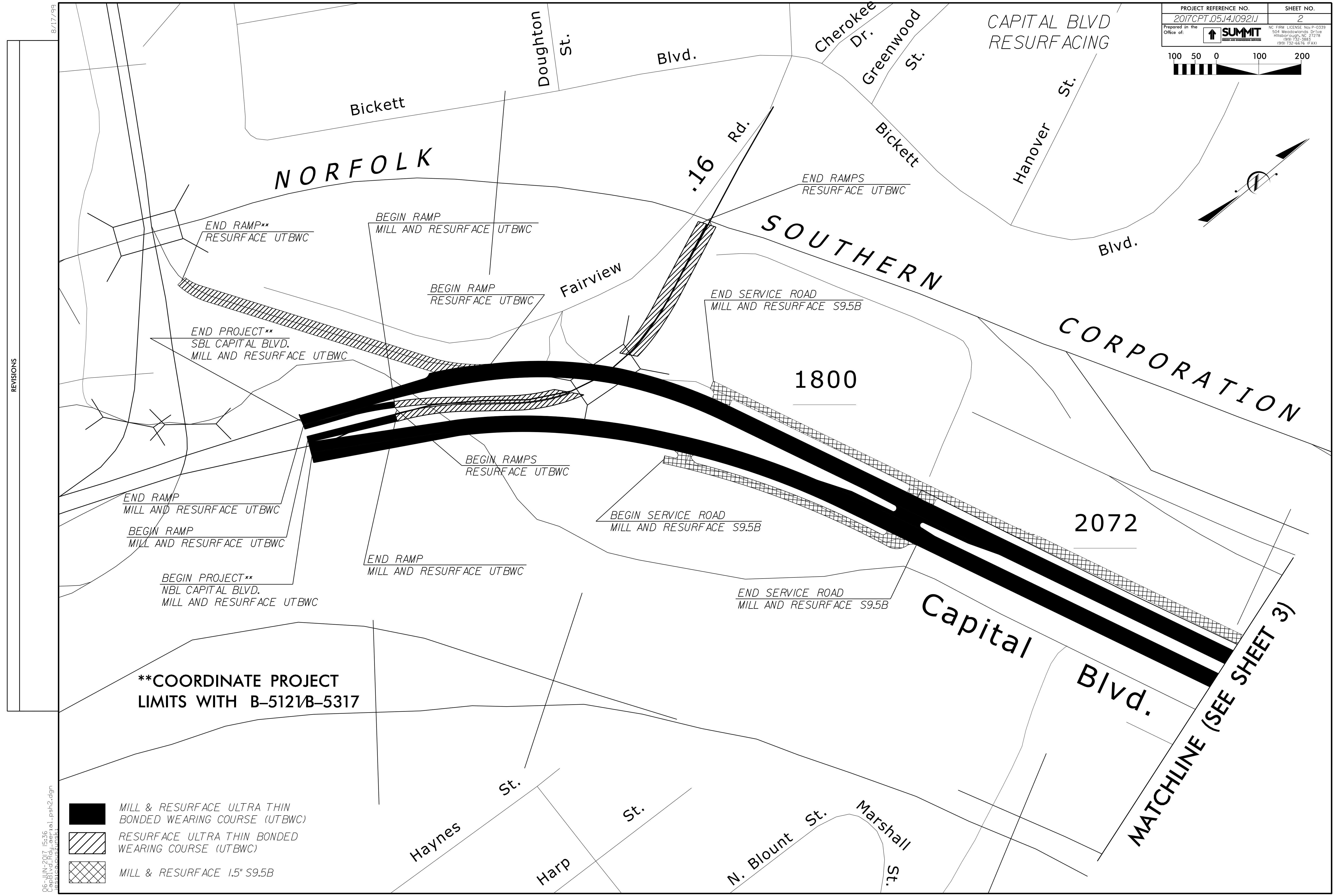
CAPITAL BLVD  
RESURFACING



REVISIONS



**CAPITAL BLVD  
RESURFACING**

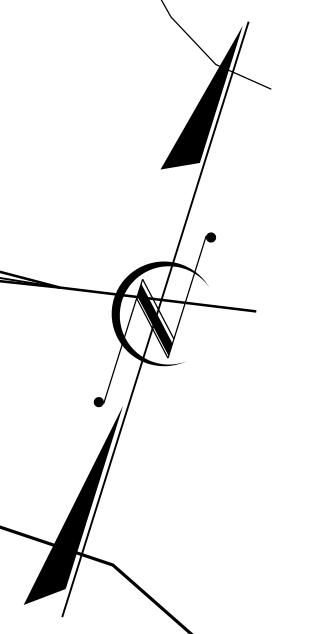
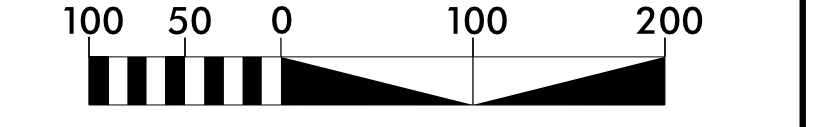


**\*\*COORDINATE PROJECT  
LIMITS WITH B-5121B-5317**

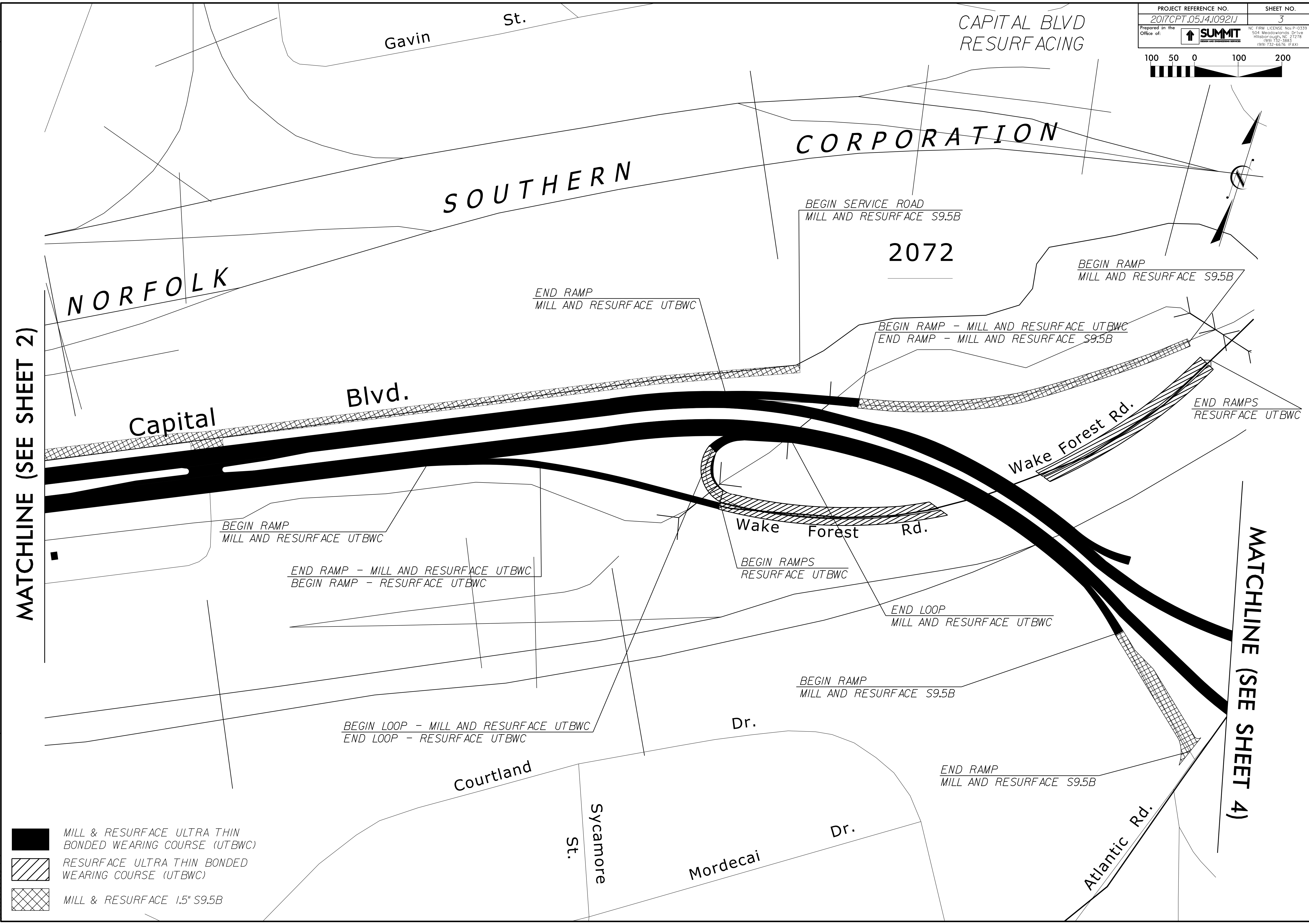
- MILL & RESURFACE ULTRA THIN BONDED WEARING COURSE (UTBWC)
- RESURFACE ULTRA THIN BONDED WEARING COURSE (UTBWC)
- MILL & RESURFACE 1.5" S9.5B

REVISIONS

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jessica.cousins@summit


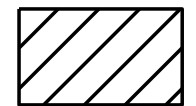



**CAPITAL BLVD  
RESURFACING**



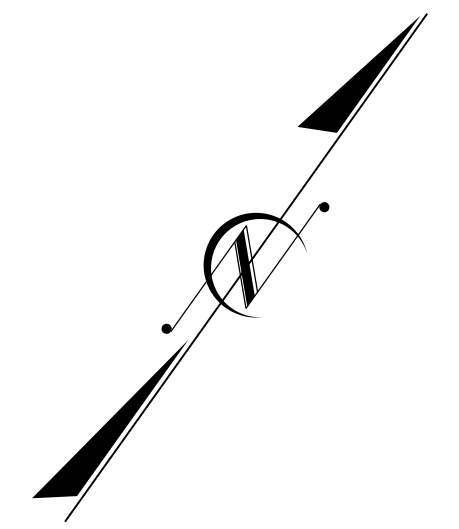
MATCHLINE (SEE SHEET 2)

MATCHLINE (SEE SHEET 4)

-  MILL & RESURFACE ULTRA THIN BONDED WEARING COURSE (UTBWC)
-  RESURFACE ULTRA THIN BONDED WEARING COURSE (UTBWC)
-  MILL & RESURFACE 1.5" S9.5B

REVISIONS

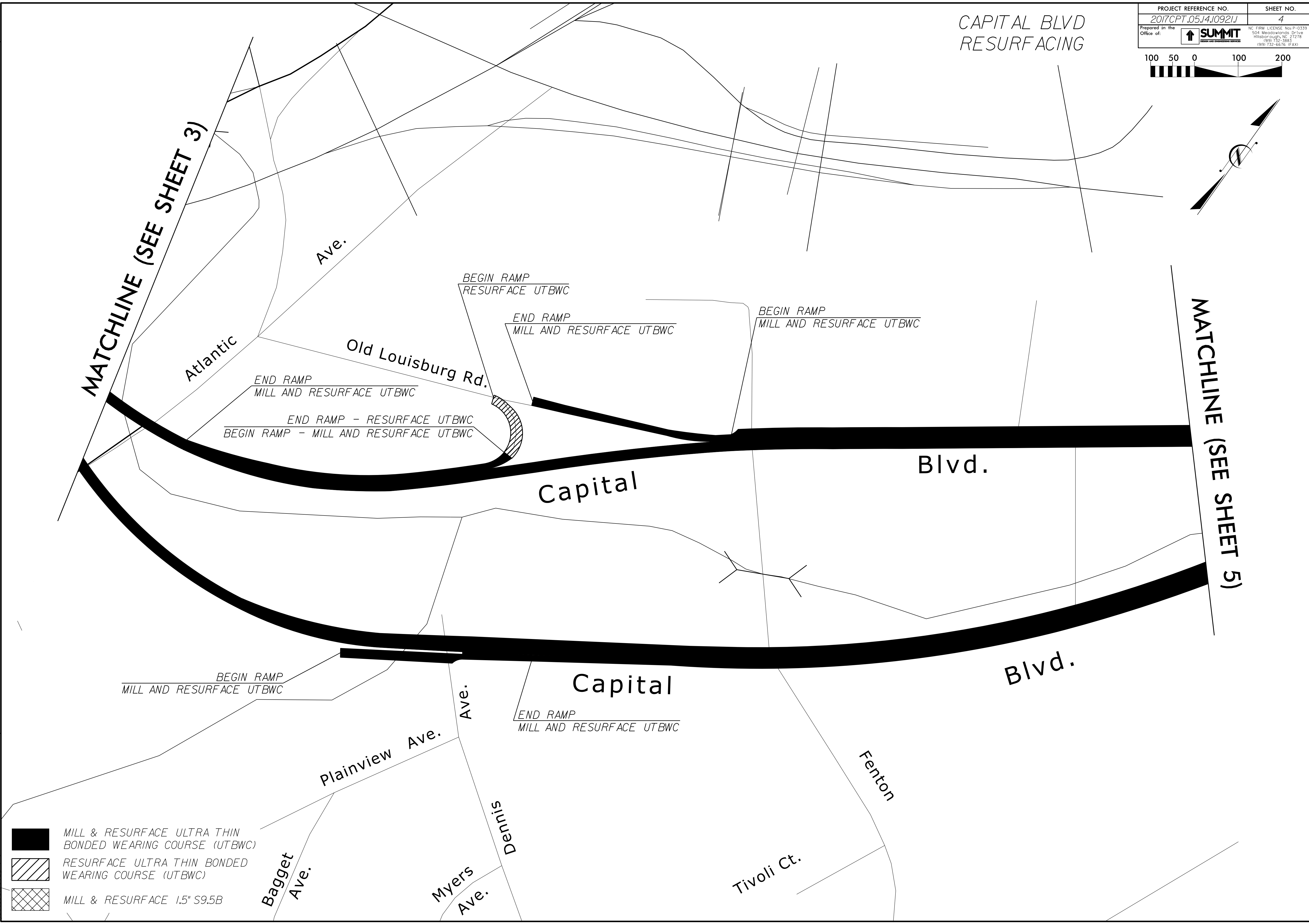
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8/17/99



# CAPITAL BLVD RESURFACING


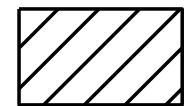

MATCHLINE (SEE SHEET 3)

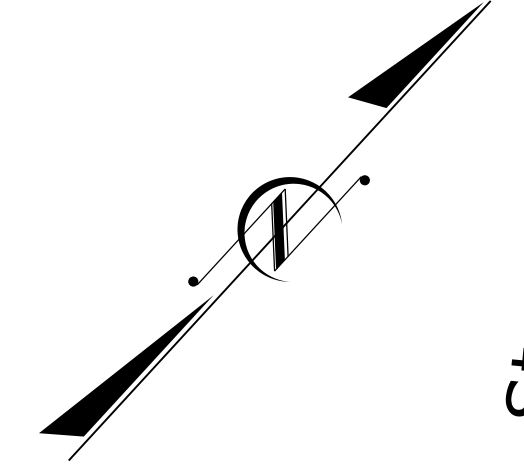
MATCHLINE (SEE SHEET 5)



REVISIONS

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-  MILL & RESURFACE ULTRA THIN BONDED WEARING COURSE (UTBWC)
-  RESURFACE ULTRA THIN BONDED WEARING COURSE (UTBWC)
-  MILL & RESURFACE 1.5" S9.5B



**CAPITAL BLVD  
RESURFACING**

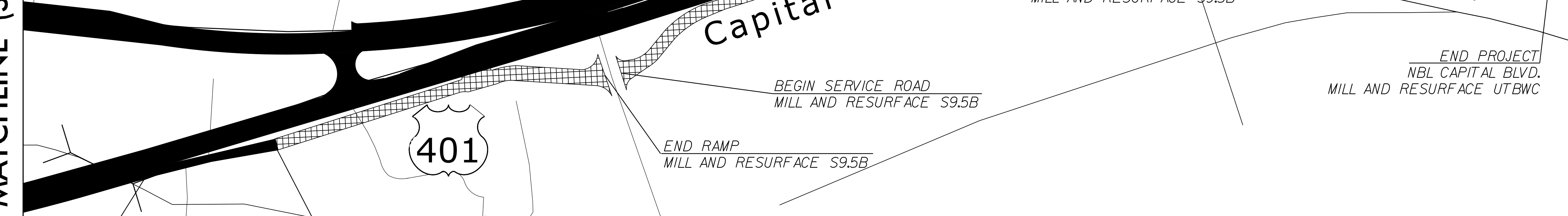
**NORFOLK**

2147

**SOUTHERN**

**CORPORATION**

**MATCHLINE (SEE SHEET 4)**



BEGIN RAMP  
MILL AND RESURFACE UTBWC

END RAMP - MILL AND RESURFACE UTBWC  
BEGIN RAMP - MILL AND RESURFACE S9.5B

END RAMP  
MILL AND RESURFACE S9.5B

BEGIN SERVICE ROAD  
MILL AND RESURFACE S9.5B

END SERVICE ROAD  
MILL AND RESURFACE S9.5B

END PROJECT  
NBL CAPITAL BLVD.  
MILL AND RESURFACE UTBWC

BEGIN PROJECT  
SBL CAPITAL BLVD.  
MILL AND RESURFACE UTBWC

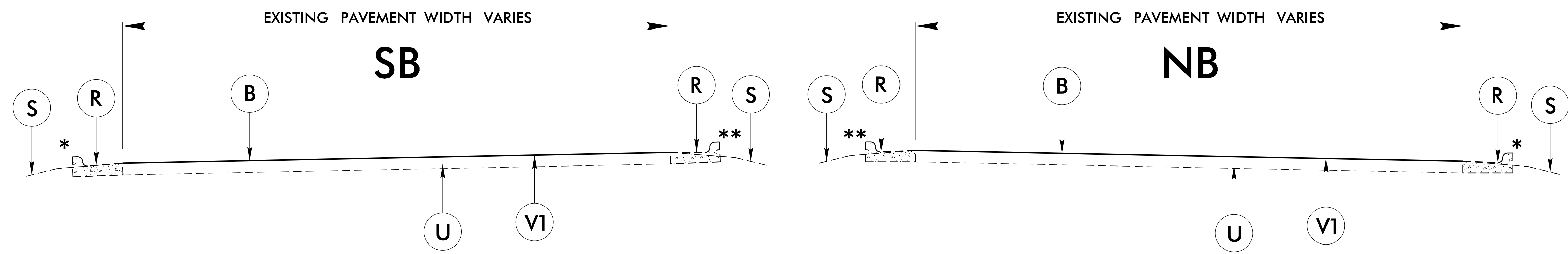
- MILL & RESURFACE ULTRA THIN BONDED WEARING COURSE (UTBWC)
- RESURFACE ULTRA THIN BONDED WEARING COURSE (UTBWC)
- MILL & RESURFACE 1.5" S9.5B

8/17/99  
  
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 (s)stac@summitse.com

6/2/99

PAVEMENT SCHEDULE			
B	ULTRATHIN HOT MIX ASPHALT COURSE AT AN AVERAGE RATE OF 70 LBS. PER SQ. YD.	S	PROP. SHOULDER GRADING WITH AGGREGATE SHOULDER BORROW, AS DIRECTED BY THE ENGINEER
C	PROP. APPROX. 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B AT AN AVERAGE RATE OR 168 LBS. PER SQ. YD.	U	EXISTING PAVEMENT
E	PROP. APPROX. 10" ASPHALT CONCRETE SURFACE COURSE, TYPE B25.0C AT AN AVERAGE RATE OR 114 LBS. PER SQ. YD.	V1	MILL ASPHALT PAVEMENT, 0" TO 1.5" DEPTH
R	EXISTING CURB AND GUTTER	V2	INCIDENTAL MILLING

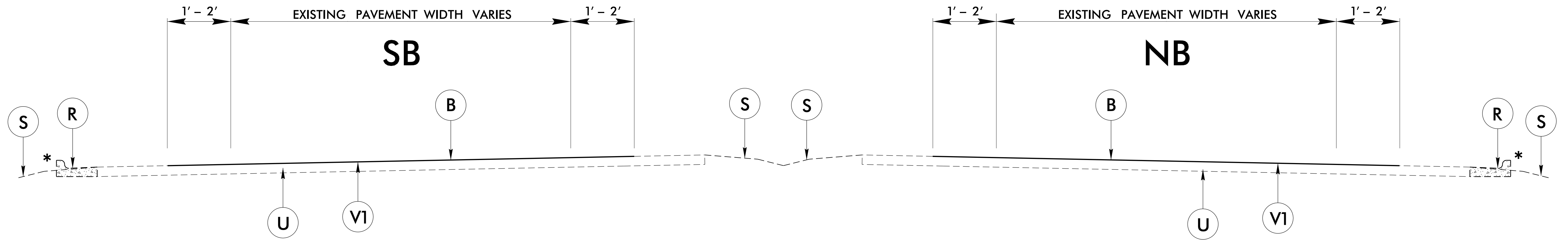
- \* VARIABLE OUTSIDE SHOULDER – PARTIAL C&G, PARTIAL EARTH SHOULDER
- \*\* VARIABLE MEDIAN SHOULDER – PARTIAL C&G, PARTIAL EARTH SHOULDER
- # MILL TO EXPOSE EXISTING CONCRETE



**TYPICAL SECTION NO. 1**  
MILL AND RESURFACE UTBWC #

**SOUTHBOUND**  
 – North of Fairview Rd to End Project  
 – Crabtree Blvd to South of Atlantic Ave

**NORTHBOUND**  
 – Begin Project to North of Fairview Rd  
 – South of Atlantic Ave to Crabtree Blvd



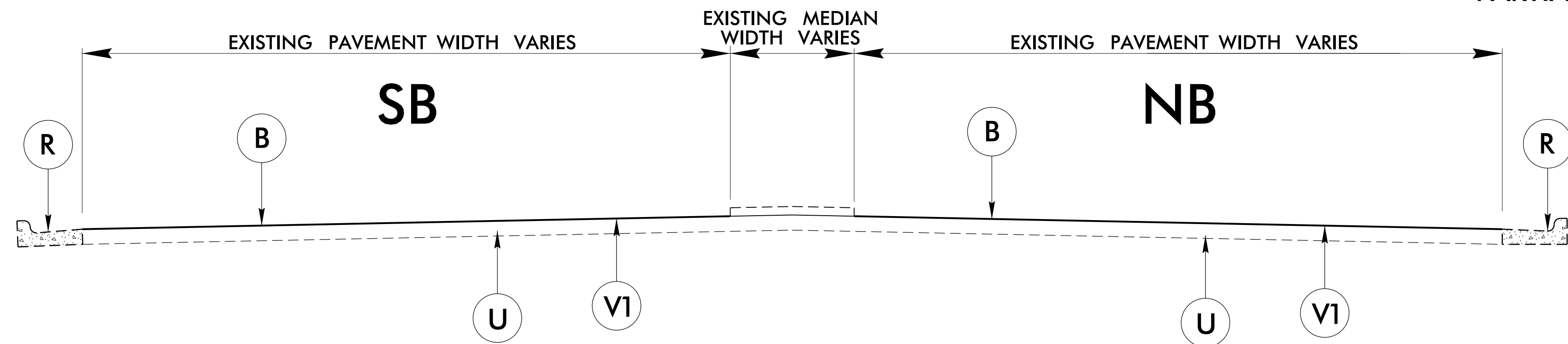
**TYPICAL SECTION NO. 2**  
MILL AND RESURFACE UTBWC #

– North of Fairview Rd to South of Atlantic Ave

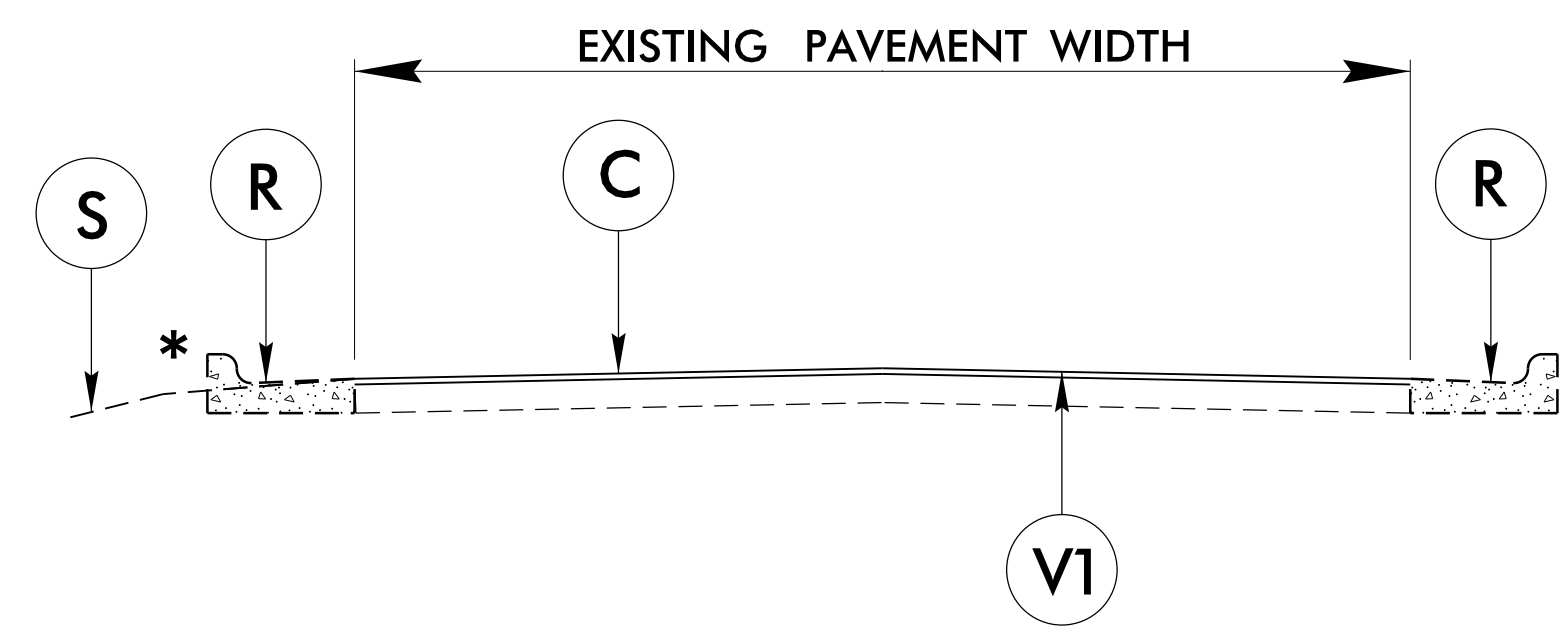
06-JUN-2017 15:36  
CapBlvd\_Rdy\_Typ-6.dgn  
jessica.palms@summit

PAVEMENT SCHEDULE	
B	ULTRATHIN
C	1½" S9.5B
E	10" B25.0C
R	EX C&G
S	SHLDR GRADING
U	EX PVMT
V1	MILL 0" - 1.5"
V2	INCIDENTAL MILL

# MILL TO EXPOSE EXISTING CONCRETE \* VARIABLE OUTSIDE SHOULDER – PARTIAL C&G, PARTIAL EARTH SHOULDER

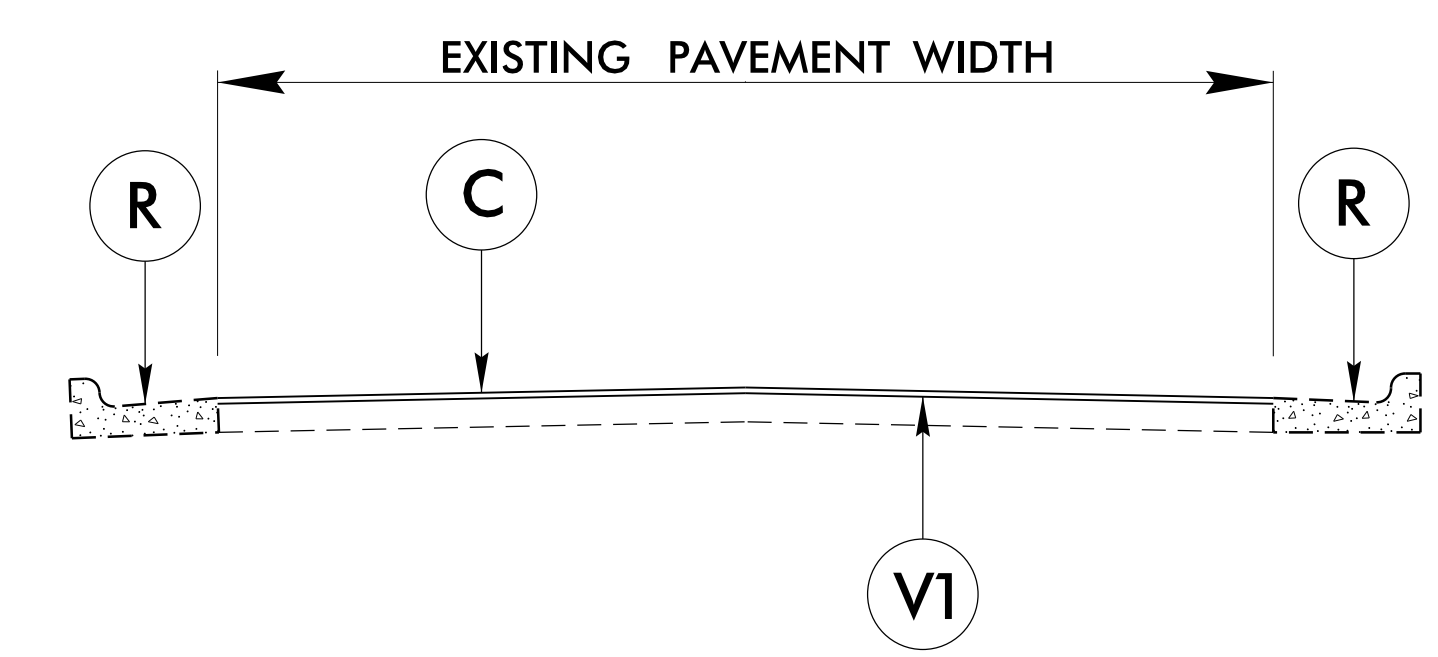


**TYPICAL SECTION NO. 3**  
MILL AND RESURFACE UTBWC #  
– Crabtree Blvd to Hodges St



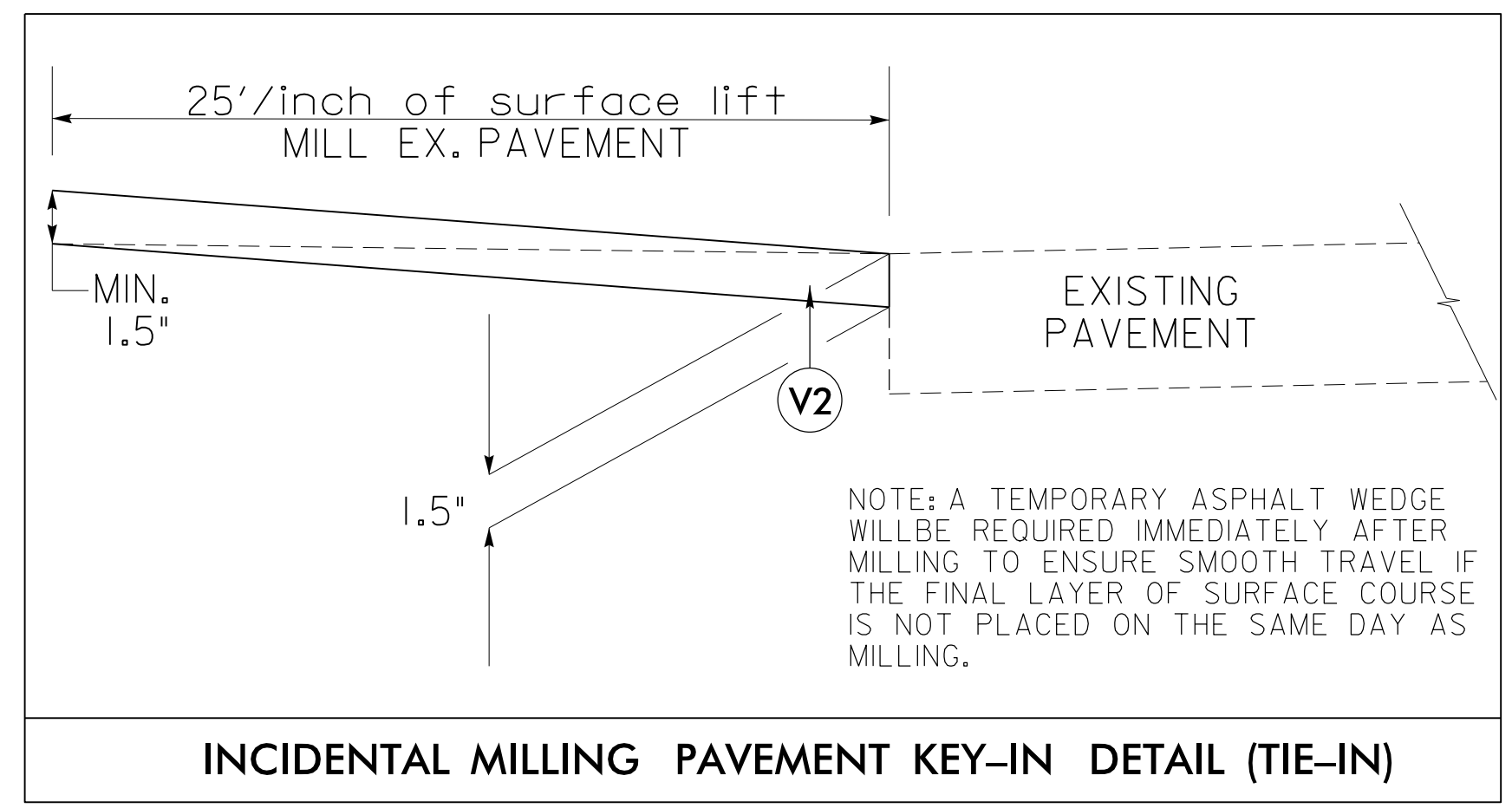
**TYPICAL SECTION NO. 4**  
MILL AND RESURFACE S9.5B

– Southbound Service Rd (Between Wake Forest Rd and Fairview Rd)



**TYPICAL SECTION NO. 5**  
MILL AND RESURFACE S9.5B

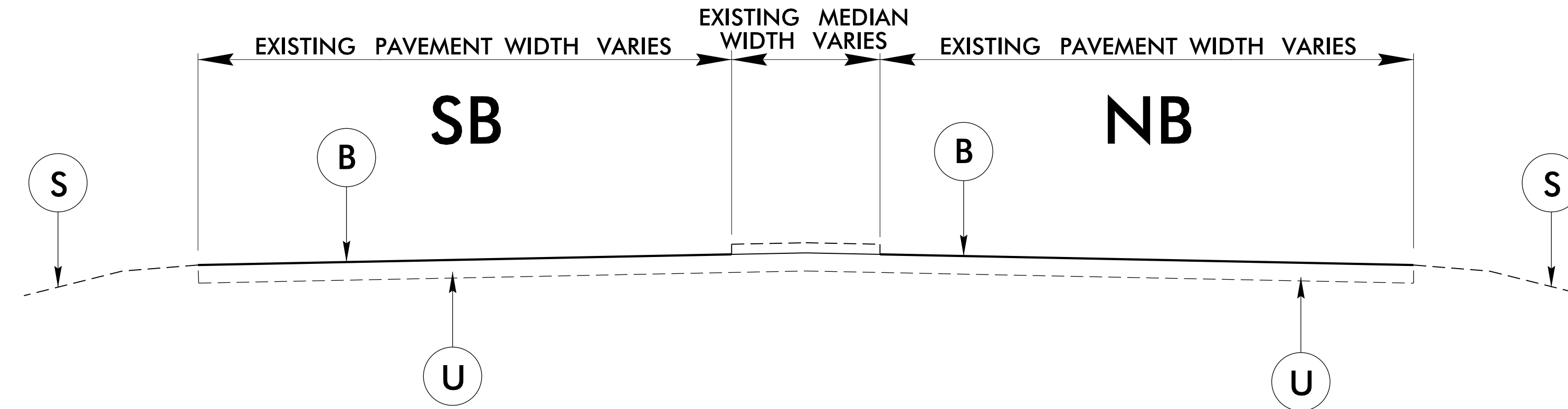
– Northbound Service Rd (North of Fairview Rd)  
– Northbound Slip Ramp to Crabtree Blvd  
– Northbound Service Rd (North of Crabtree Blvd)



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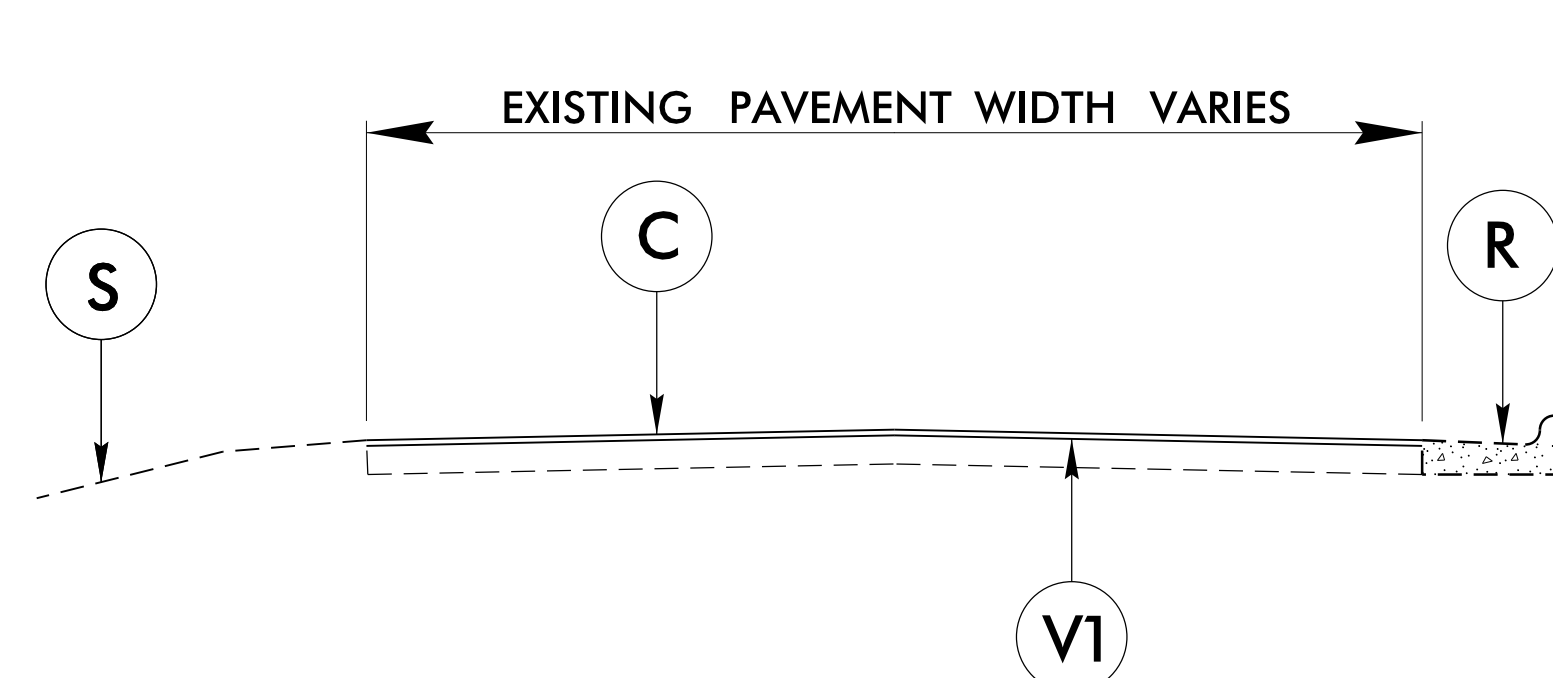
PAVEMENT SCHEDULE	
B	ULTRATHIN
C	1½" S9.5B
E	10" B25.0C
R	EX C&G
S	SHLDR GRADING
U	EX PVMT
V1	MILL 0" - 1.5"
V2	INCIDENTAL MILL



**TYPICAL SECTION NO. 6**  
RESURFACE UTBWC#

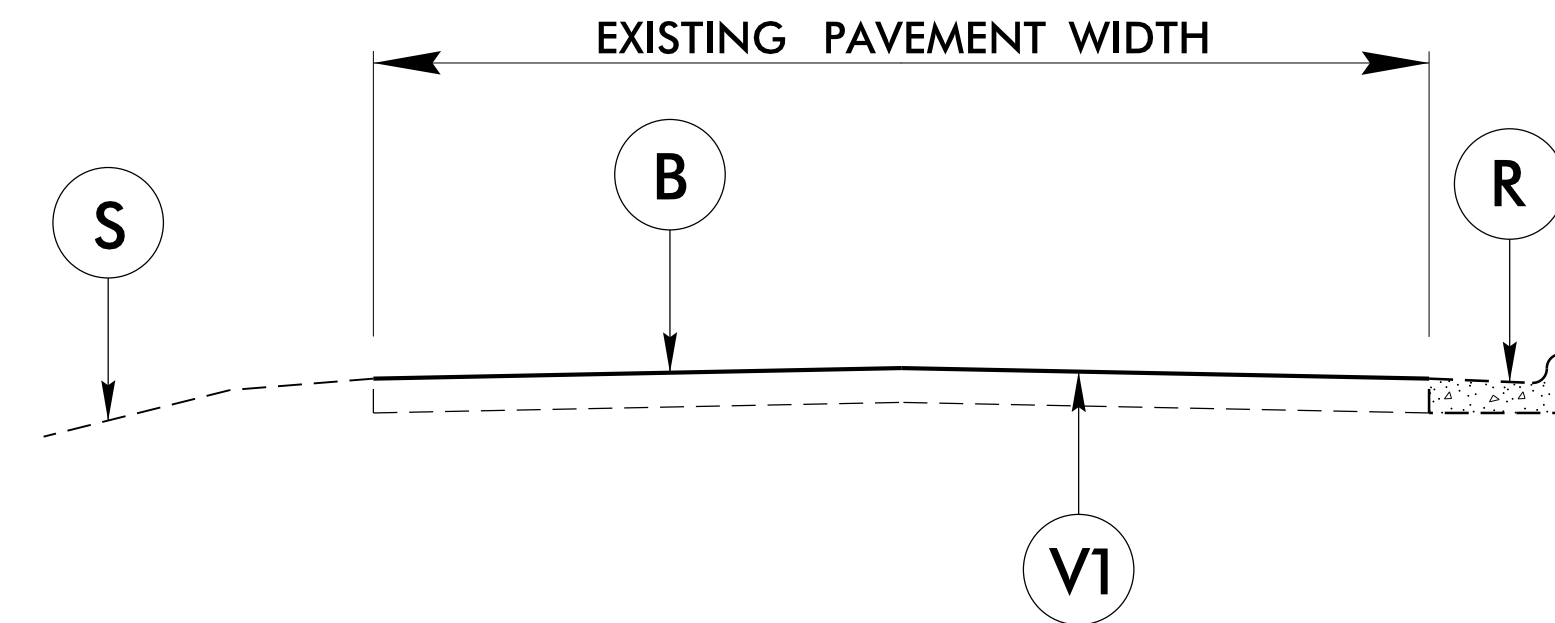
- Wake Forest Rd (from RampLoop gore to end)

\* PARTIAL C&G,  
PARTIAL EARTH SHOULDER  
# MILL TO EXPOSE  
EXISTING CONCRETE



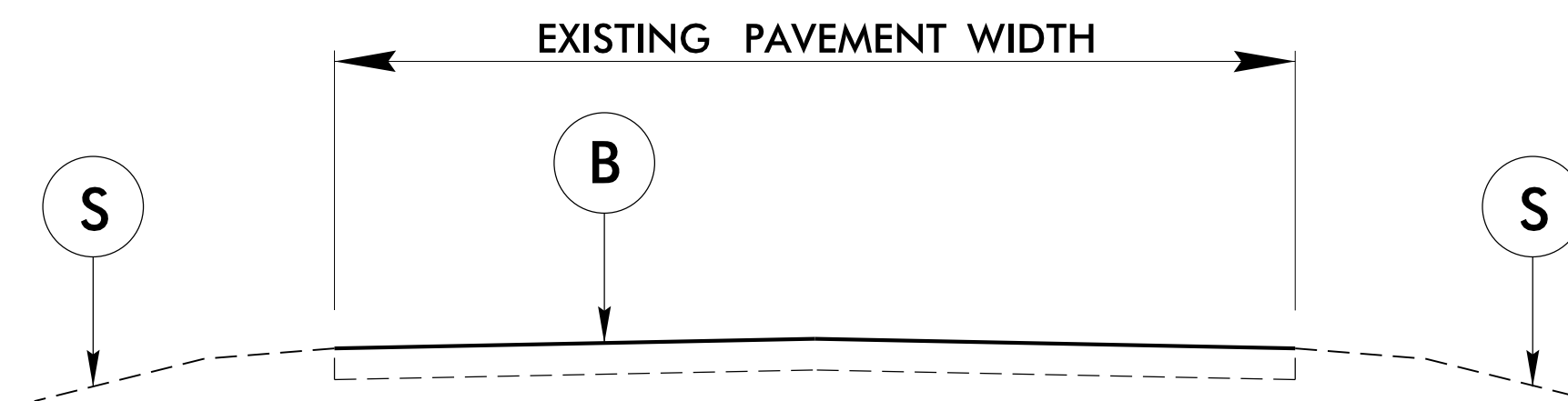
**TYPICAL SECTION NO. 7**  
MILL AND RESURFACE S9.5B

- Northbound Atlantic Ave Off-Ramp



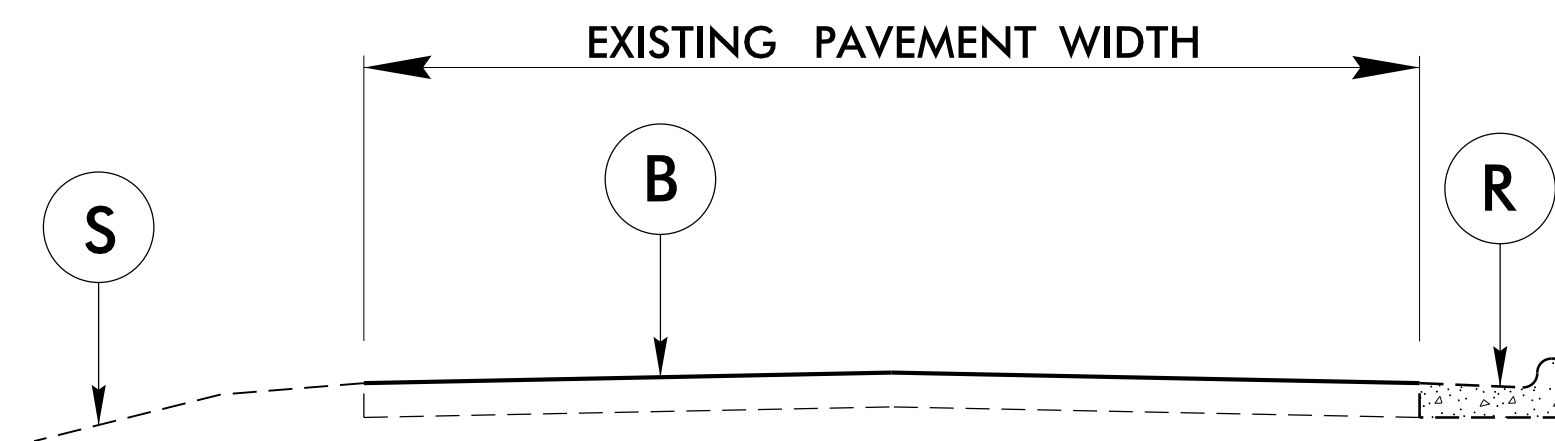
**TYPICAL SECTION NO. 8**  
MILL AND RESURFACE UTBWC#

- Northbound Wake Forest Rd Off-Ramp  
- Southbound Atlantic Ave Off-Ramp



**TYPICAL SECTION NO. 9**  
RESURFACE UTBWC

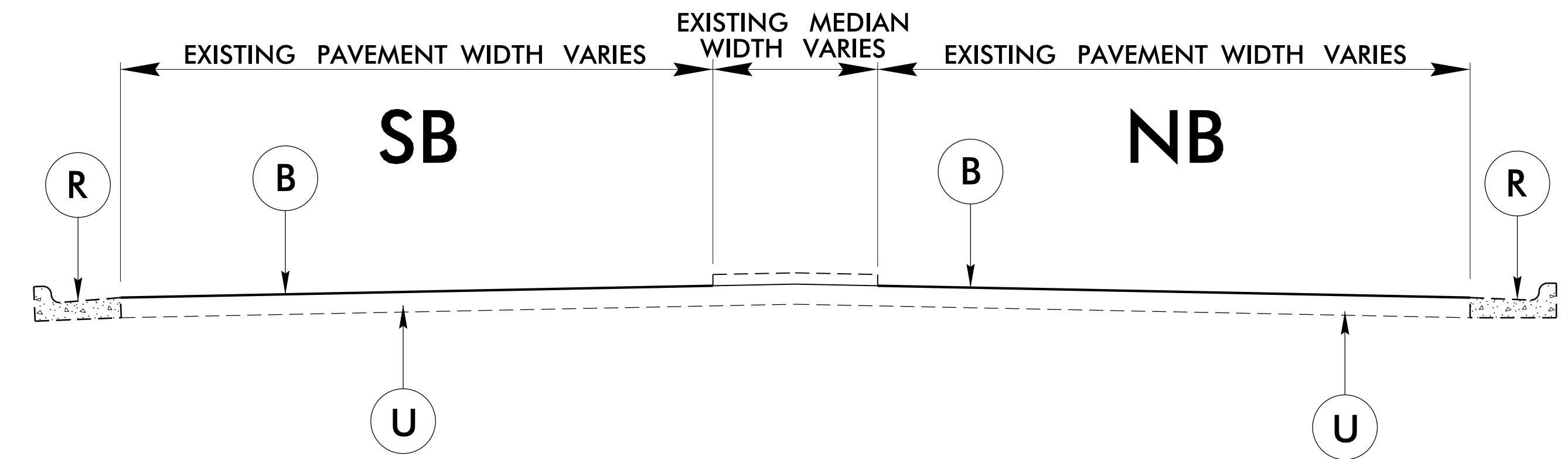
- Northbound On-Loop from Wake Forest Rd  
- Southbound On-Loop from Atlantic Ave



**TYPICAL SECTION NO. 10**  
RESURFACE UTBWC

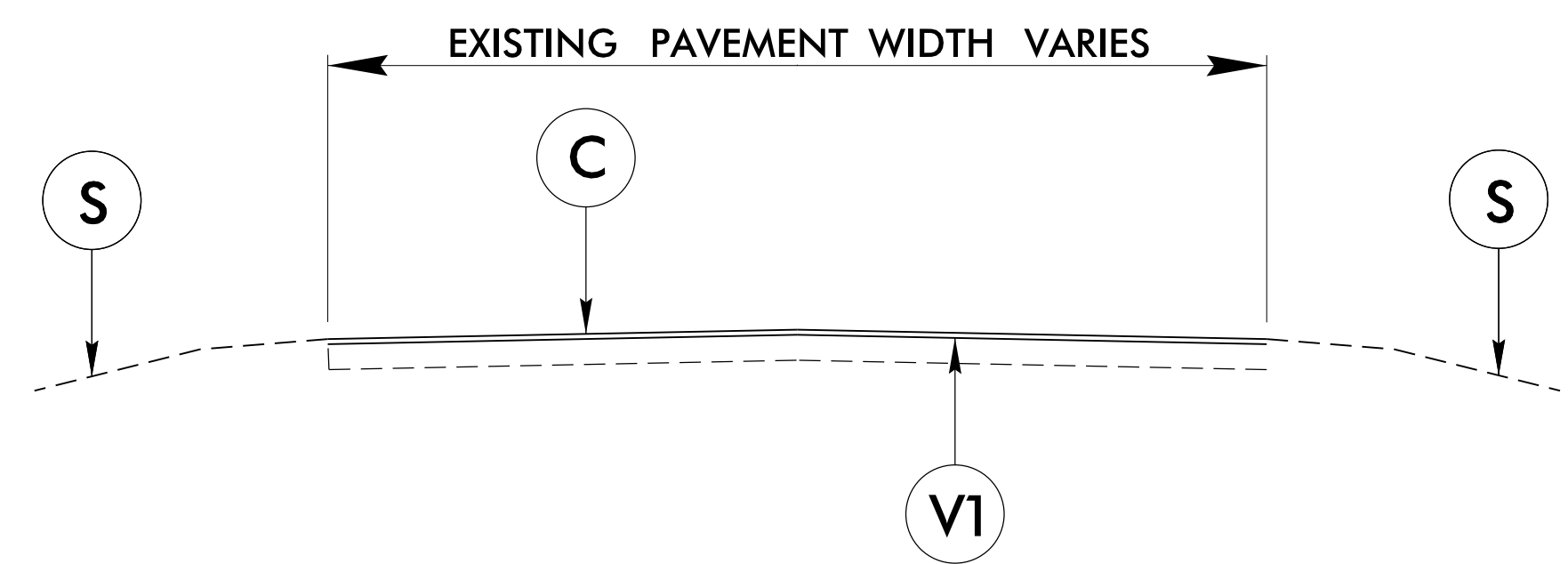
- Southbound Off-Ramp to Wade Ave

PAVEMENT SCHEDULE	
B	ULTRATHIN
C	1 1/2" S9.5B
E	10" B25.0C
R	EX C&G
S	SHLDR GRADING
U	EX PVMT
V1	MILL 0" - 1.5"
V2	INCIDENTAL MILL



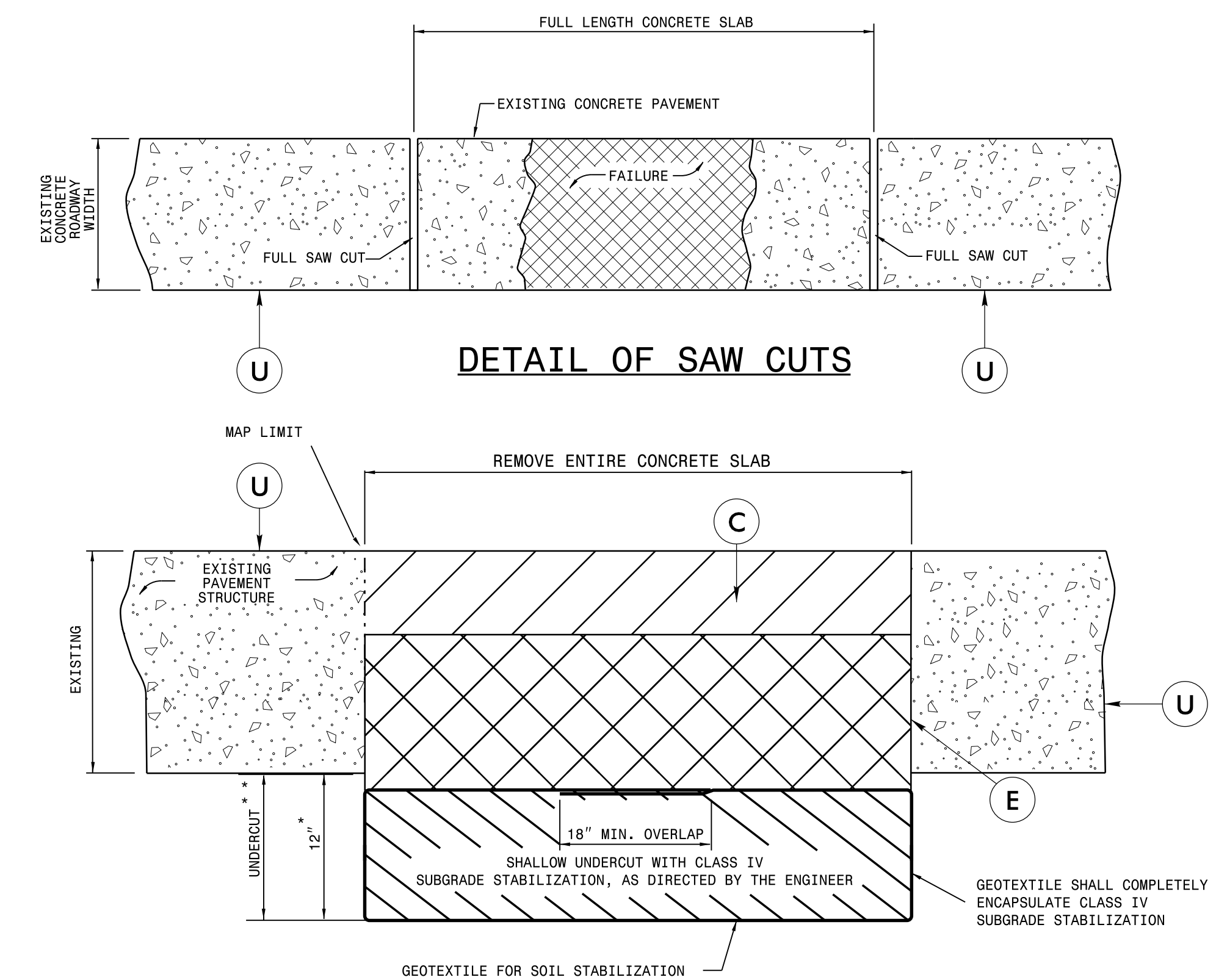
**TYPICAL SECTION NO. 11**  
RESURFACE UTWC

- On-Ramp/Off-Ramp to/from Fairview Rd



**TYPICAL SECTION NO. 12**  
MILL AND RESURFACE S9.5B

- Southbound Wake Forest Rd On-Ramp



**DETAIL OF CONCRETE PAVEMENT REPAIR**

- \* DIMENSIONS ARE APPROXIMATE AND SHOULD BE FIELD VERIFIED
- \*\* UNDERCUT REQUIRED ONLY IN AREAS AS DIRECTED BY THE ENGINEER

DETAIL FOR REPLACEMENT TO BE USED AS DIRECTED BY THE ENGINEER

6/2/19  
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 \$\$\$\$LSPRNG\$\$\$\$

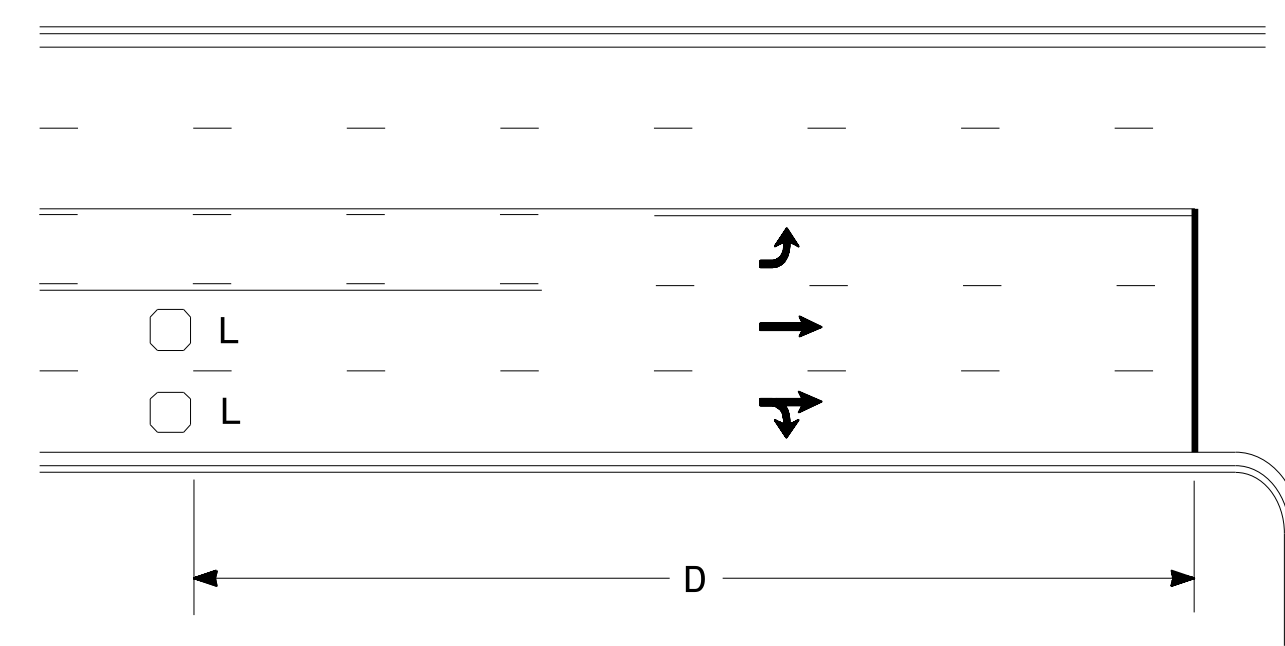


PROJECT NO.	SHEET NO.	TOTAL NO.
2017CPT.05.14.10921.1	11	

### THERMOPLASTIC AND PAINT QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP	LANES	LENGTH	WIDTH	4685000000-E				4686000000-E				4695000000-E				4697000000-E				4705000000-E				4710000000-E				4721000000-E				4725000000-E				4810000000-E		4820000000-E		4835000000-E		4905000000-N	
									4" X 90 M YELLOW THERMO	4" X 90 M WHITE THERMO	4" X 120 M WHITE THERMO	4" X 120 M YELLOW THERMO	8" X 90 M WHITE THERMO	8" X 120 M WHITE THERMO	16" X 120 M WHITE THERMO	24" X 120 M WHITE THERMO	THERMO MSG ONLY 120 M	THERMO RXR 120 M	THERMO MSG LANE 120 M	THERMO MSG BUS 120 M	THERMO STR ARROW 90 M	THERMO LT ARROW 90 M	THERMO RT ARROW 90 M	THERMO STR & RT ARROW 90 M	THERMO STR & LT ARROW 90 M	THERMO MERGE ARROW 90 M	4" WHITE PAINT	4" YELLOW PAINT	8" WHITE PAINT	24" WHITE PAINT	SNOW PLOWABLE MARKERS																	
NO		NO			NO			LF	LF	LF	LF	LF	LF	LF	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA							
2017CPT.05.14.10921.1	Wake	1	NB CAPITAL BLVD	WADE AVE TO HODGES ST	1,2,3	2	2.027	26	9,760	6,650	6,840	450	1,770	510																																		
		"	"	NB SERVICE RD - NORTH OF FAIRVIEW RD	5	2	0.121	19.25																																								
		"	"	NB OFF RAMP TO ATLANTIC AVE	7	1	0.065	30																																								
		"	"	NB SLIP RAMP TO CRABTREE BLVD	5	2	0.117	23																																								
		"	"	NB SERVICE RD - NORTH OF CRABTREE BLVD	5	2	0.12	22.5																																								
		"	"	NB OFF RAMP TO FAIRVIEW RD - SKIP BRIDGE	11	1	0.193	18																																								
		"	"	NB OFF RAMP TO WF RD - SKIP BRIDGE	8	1	0.188	15																																								
		"	"	NB ON RAMP FROM WF RD - SKIP BRIDGE	6	1	0.211	21																																								
<b>TOTAL FOR MAP NO. 1</b>									<b>3.042</b>	<b>9,760</b>	<b>6,650</b>	<b>6,840</b>	<b>450</b>	<b>1,770</b>	<b>510</b>	<b>50</b>	<b>215</b>	<b>8</b>	<b>2</b>					<b>18</b>	<b>16</b>	<b>6</b>	<b>9</b>	<b>3</b>											<b>20,200</b>	<b>15,310</b>	<b>3,420</b>	<b>280</b>	<b>280</b>					
2017CPT.05.14.10921.1	Wake	2	SB CAPITAL BLVD	HODGES ST TO WADE AVE	1,2,3	2	1.987	26	9,850	6,280	7,060		1,700	640																																		
		"	"	SB OFF RAMP TO ATL AVE	8	1	0.106	16																																								
		"	"	SB ON RAMP FROM WF RD	12	1	0.148	22																																								
		"	"	SB SERVICE RD - SR 2072	4	2	0.618	21																																								
		"	"	SB ON-LOOP FROM ATL AVE	9	1	0.035	20.5																																								
		"	"	SB ON RAMP FAIRVIEW RD - SKIP BRIDGE	11	1	0.152	17																																								
		"	"	SB OFF RAMP TO WADE AVE	10	1	0.143	28																																								
<b>TOTAL FOR MAP NO. 2</b>									<b>3.189</b>	<b>9,850</b>	<b>6,280</b>	<b>7,060</b>		<b>1,700</b>	<b>640</b>		<b>60</b>	<b>12</b>			<b>4</b>	<b>3</b>	<b>9</b>	<b>7</b>	<b>12</b>														<b>19,730</b>	<b>5,190</b>	<b>3,490</b>	<b>90</b>	<b>241</b>					
<b>TOTAL FOR PROJ NO. 2017CPT.05.14.10921.1</b>									<b>6.231</b>	<b>19,610</b>	<b>12,930</b>	<b>13,900</b>	<b>450</b>	<b>3,470</b>	<b>1,150</b>	<b>50</b>	<b>275</b>	<b>20</b>	<b>2</b>	<b>4</b>	<b>3</b>	<b>27</b>	<b>23</b>	<b>18</b>	<b>9</b>	<b>3</b>	<b>6</b>	<b>9</b>	<b>3</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	
									<b>32,540</b>			<b>14,350</b>						<b>29</b>					<b>86</b>														<b>60,430</b>											

### High Speed Detection (≥40 mph)

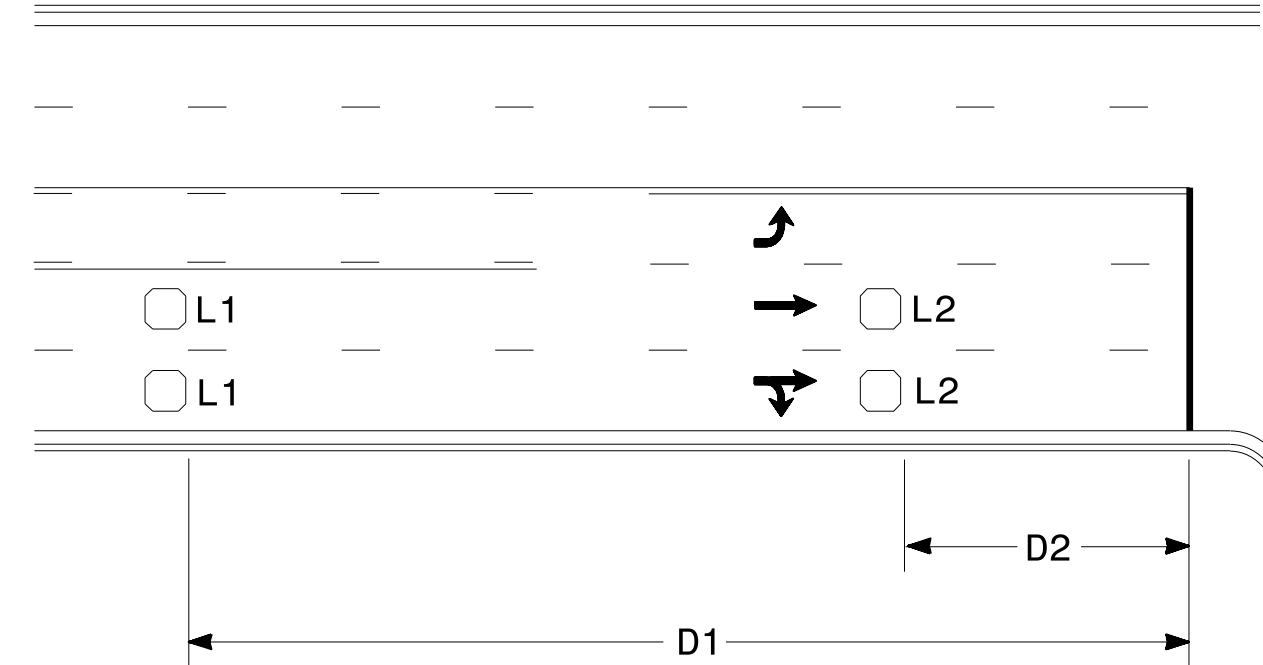


Speed Limit mph	D ft
40	250
45	300
50	355
55	420

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

Volume Density Operation

OR

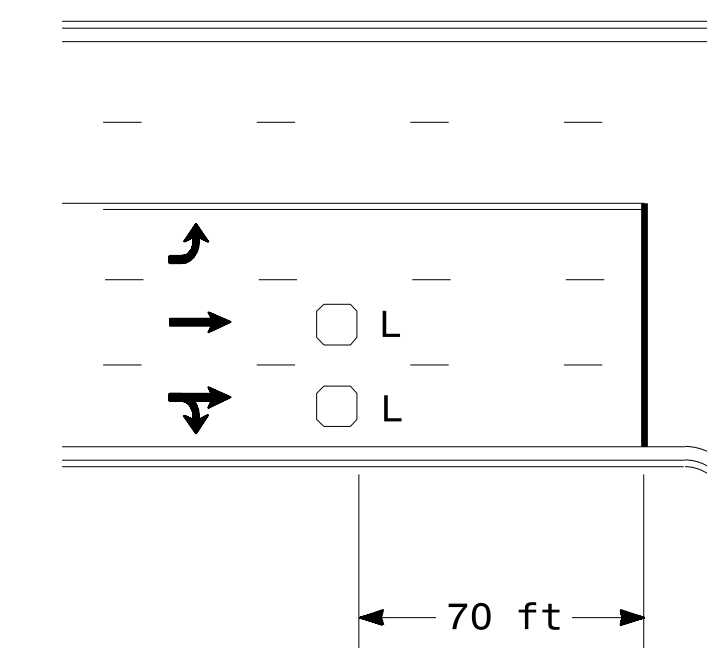


Speed Limit mph	D1 ft	D2 ft
40	250	80
45	300	90
50	355	100
55	420	110

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

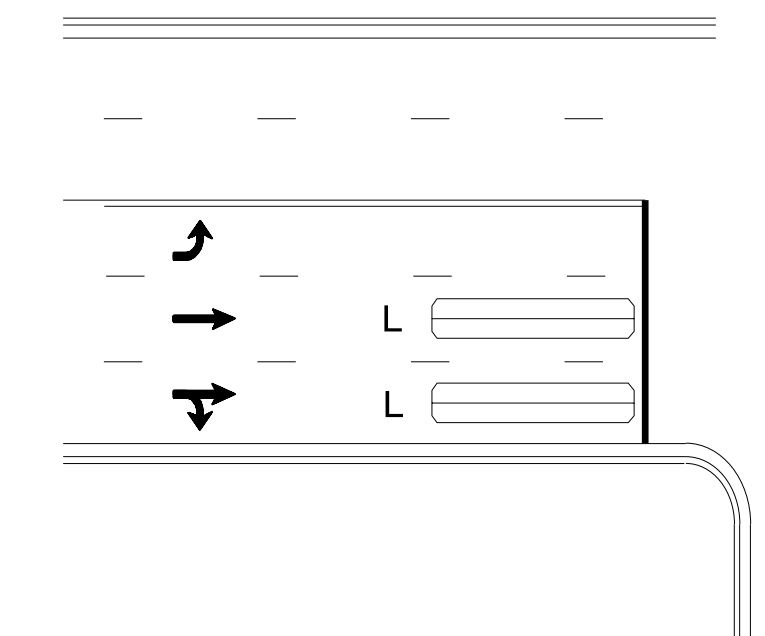
"Stretch" Operation

### Low Speed Detection (≤35 mph)



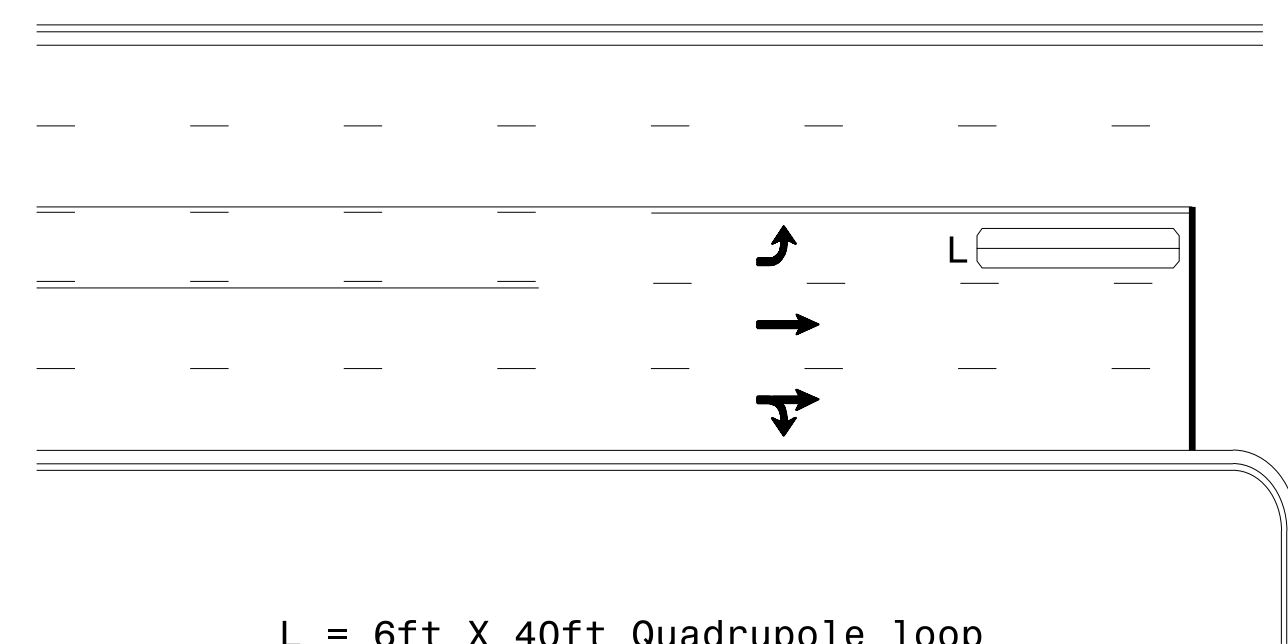
L = 6ft X 6ft  
Wired in series

OR



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

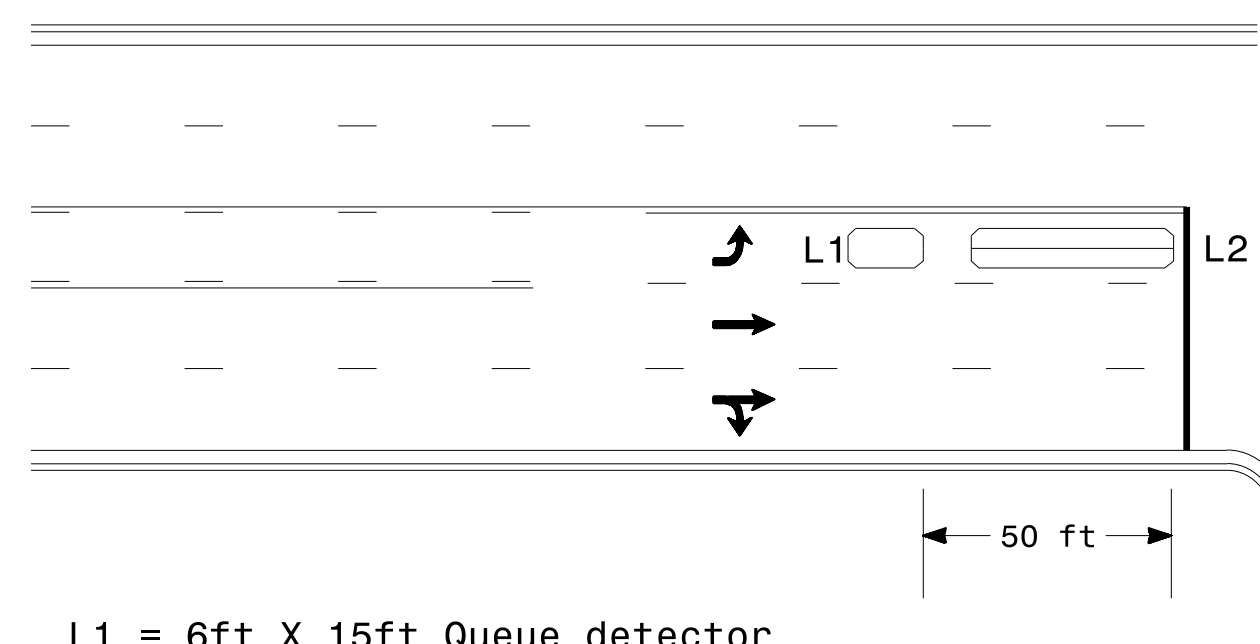
### Left Turn Lane Detection



L = 6ft X 40ft Quadrupole loop

Presence Loop Detection

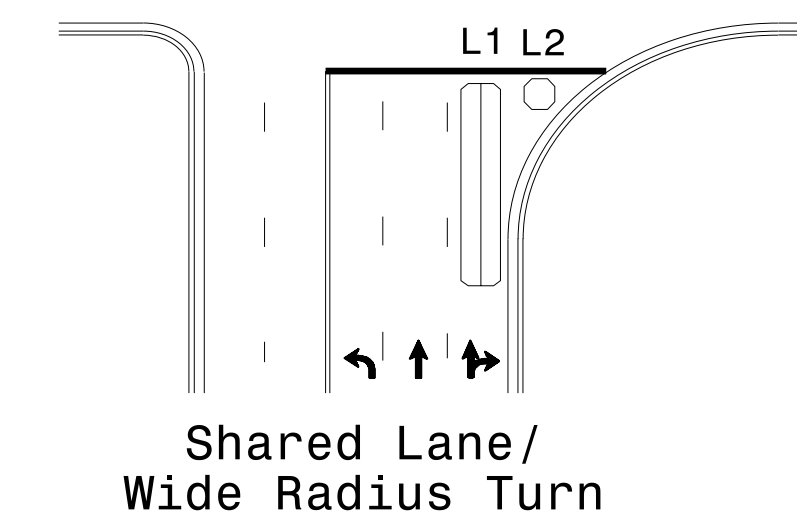
OR



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

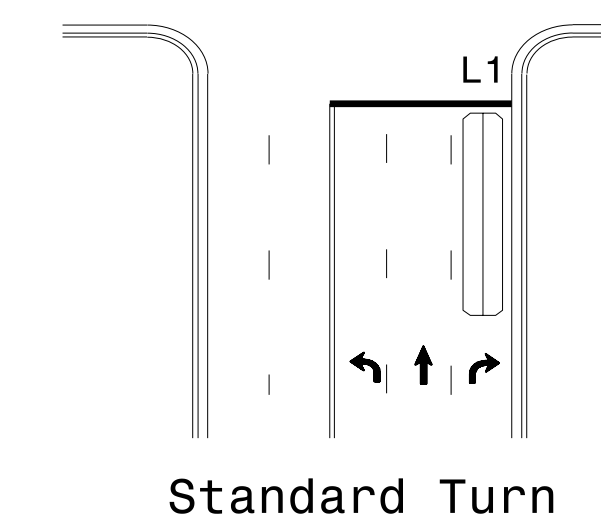
Queue Loop Detection

### Right Turn Lane Detection

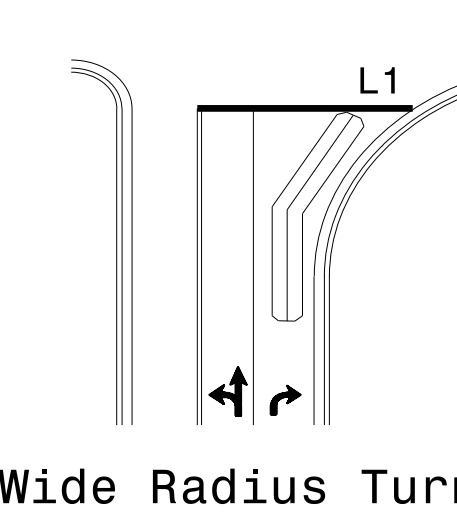


Shared Lane/  
Wide Radius Turn

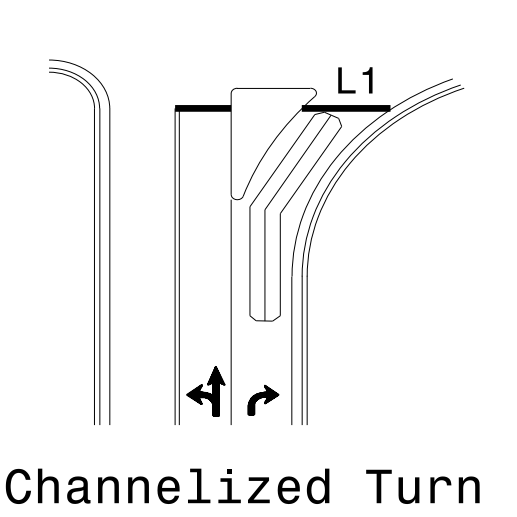
L1 = 6ft X 40ft Quadrupole loop  
L2 = 6ft X 6ft [Minimum] Presence loop  
Wired separately



Standard Turn

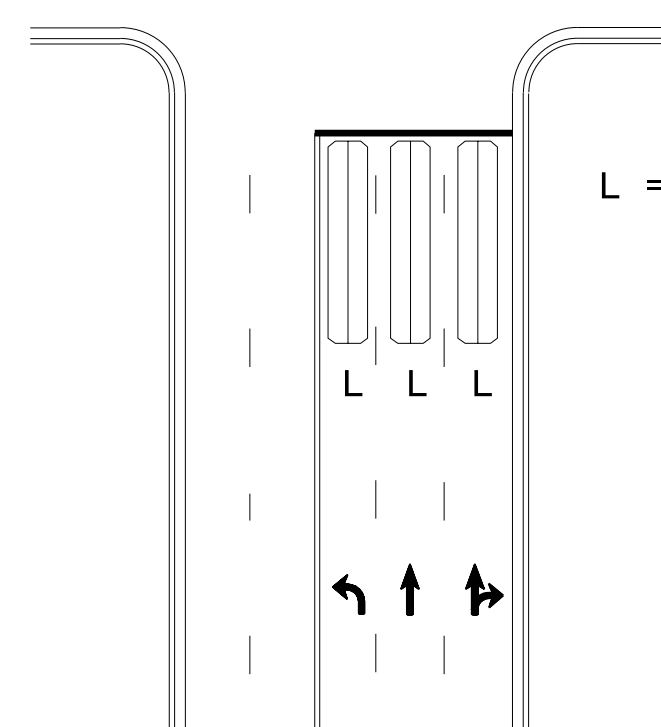


Wide Radius Turn



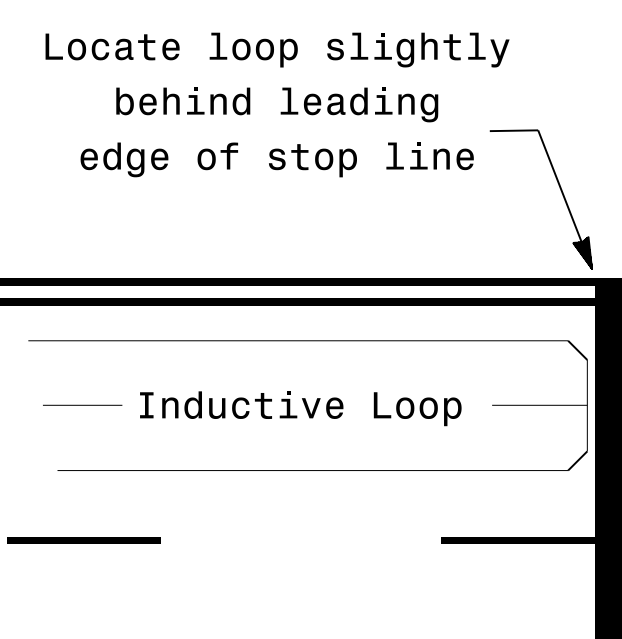
Channelized Turn

### 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):

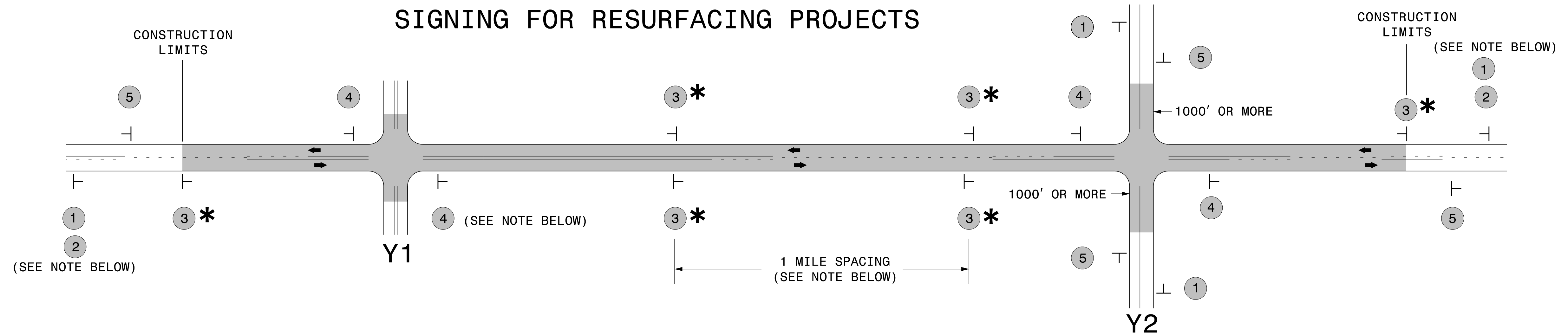
Length of Lead-in ft	Number of Turns
< 250	3
250-375	4
375-525	5
> 525	6

Quadrupole loops: Use 2-4-2 turns

6' X 15' Loops:  
Lead-in < 150', use 2 turns  
Lead-in > 150', use 3 turns

	<p>Prepared In the Offices of:</p> <p>TRANSPORTATION MOBILITY AND SAFETY SOLUTIONS, INC. SIGNAL DESIGN SECTION</p> <p>750 N. Greenfield Pkwy, Garner, NC 27529</p>		<p>SEAL</p> <p>NORTH CAROLINA</p> <p>PROFESSIONAL ENGINEER</p> <p>23489</p> <p>PAMELA L. ALEXANDER</p>
	<p>Typical Signal Loop Locations</p>		
<p>SCALE</p> <p>N/A</p>	<p>PLAN DATE: January 2015</p> <p>PREPARED BY: PLA</p>	<p>REVIEWED BY: JPG</p> <p>REVIEWED BY:</p>	<p>DocuSigned by:</p> <p>P. Alexander</p> <p>1/30/2015</p>

# SIGNING FOR RESURFACING PROJECTS



LEGEND	
┆	STATIONARY SIGN
←	DIRECTION OF TRAFFIC FLOW

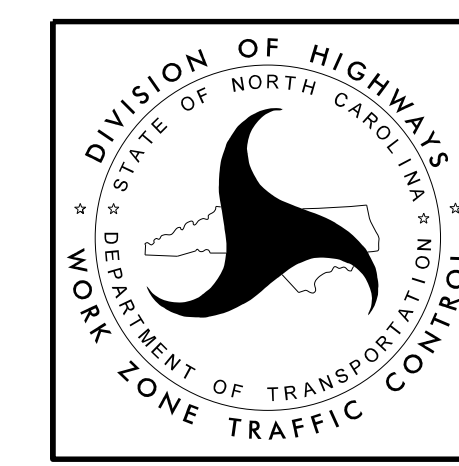
## MAINLINE (-L-) SIGNING

## -Y- LINE SIGNING

SIGNING NOTES AND PLACEMENT PER DIRECTION	MAINLINE (-L-) SIGNING		-Y- LINE SIGNING	
	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"> <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;"> <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.		

### \* SIGNING FOR ASPHALT SURFACE TREATMENTS (ONLY)

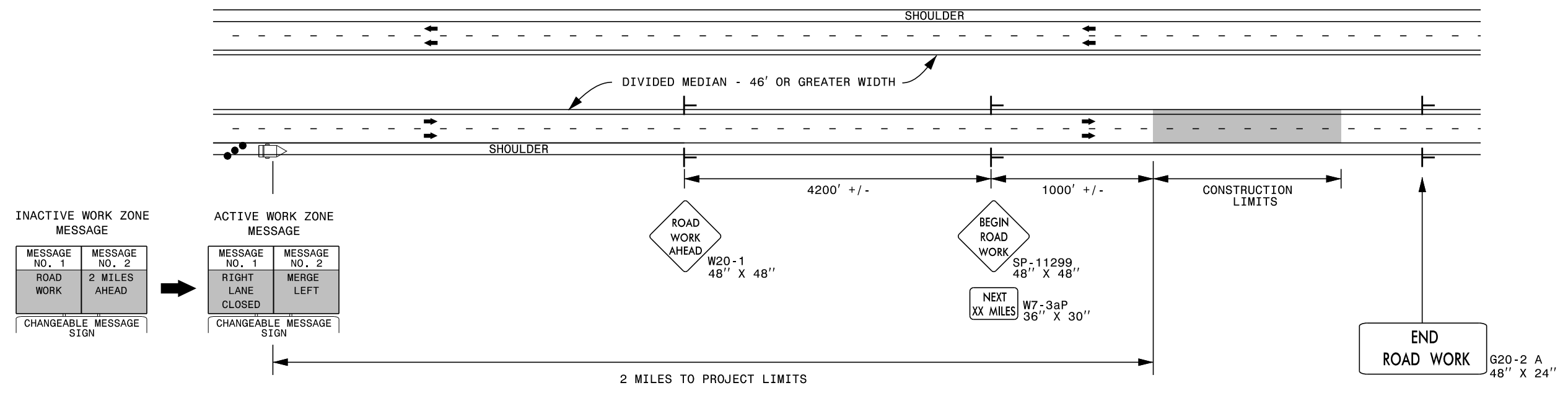
SUBSTITUTE LOW/SOFT SHOULDER SIGNS BY ALTERNATING THE FOLLOWING TWO SIGNS: STARTING WITH "UNMARKED PAVEMENT AHEAD" (SP 06026) FOLLOWED BY "LOOSE GRAVEL" (W8-7).



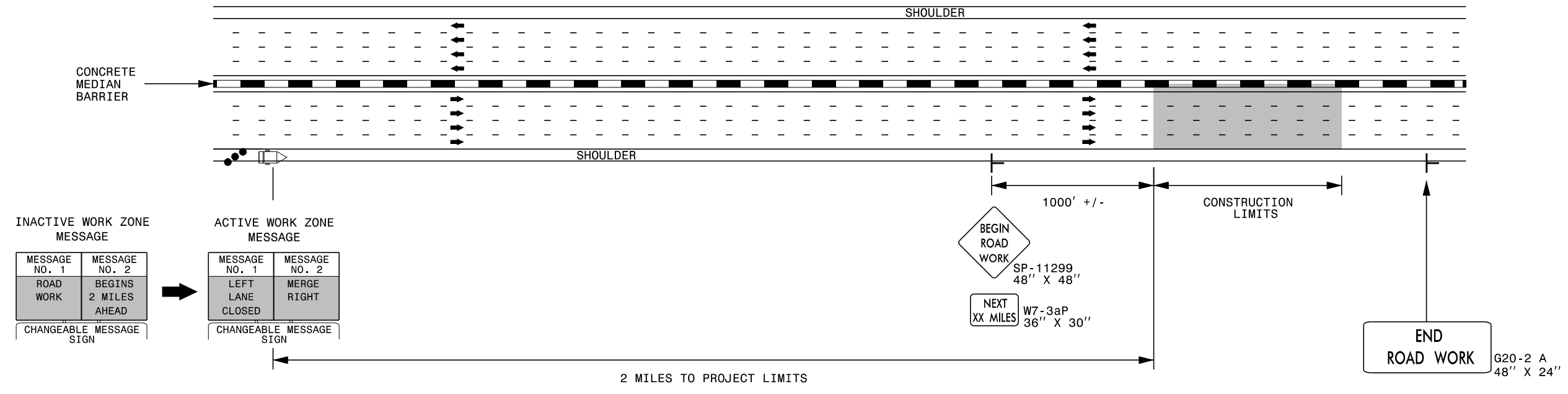
RESURFACING  
ADVANCE WARNING SIGNS  
FOR  
RURAL AND SUBURBAN  
2 LANE ROADWAYS

6/3/2014 S:\T\U\WZTC\Apps\WorkZoneGeneral\ExternalWebPage\DesRes\Resurfacing\Resurfacing\_AdvWarn\_2Ln.dgn User:rmgarr.eht

## DIVIDED MEDIANS WITH WIDTHS 46' OR GREATER



## DIVIDED MEDIANS WITH WIDTHS LESS THAN 46' OR WITH PERMANENT MEDIAN BARRIER



**NOTES:**

- 1) LATERAL CLEARANCE AT ALL SIGN LOCATIONS SHALL BE 6' AS MEASURED FROM THE EDGE OF PAVEMENT.
- 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) FOR MEDIAN WIDTHS LESS THAN 46' (MEASURED EDGELINE TO EDGELINE) USE THE BOTTOM DRAWING.
- 4) IF STATIONARY GENERAL WARNING SIGNS ARE USED, THEY WILL BE PAID FOR PER SECTION 104 OF THE NCDOT STANDARD SPECIFICATIONS AS EXTRA WORK.
- 5) INSTALL "ROAD WORK AHEAD" (W20-1) ALONG ENTRANCE RAMP 500' PRIOR TO RAMP TERMINAL, AND "END ROAD WORK" (G20-2a) AT THE END OF EXIT RAMP WITHIN THE WORK ZONE.
- 6) 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 AND WITH DIVIDED MEDIANS OF 46' OR GREATER. THESE PORTABLE SIGNS ARE INCIDENTAL TO THE OTHER ITEMS OF WORK INCLUDED IN THE TEMPORARY TRAFFIC CONTROL (LUMP SUM) PAY ITEM.

**LEGEND**

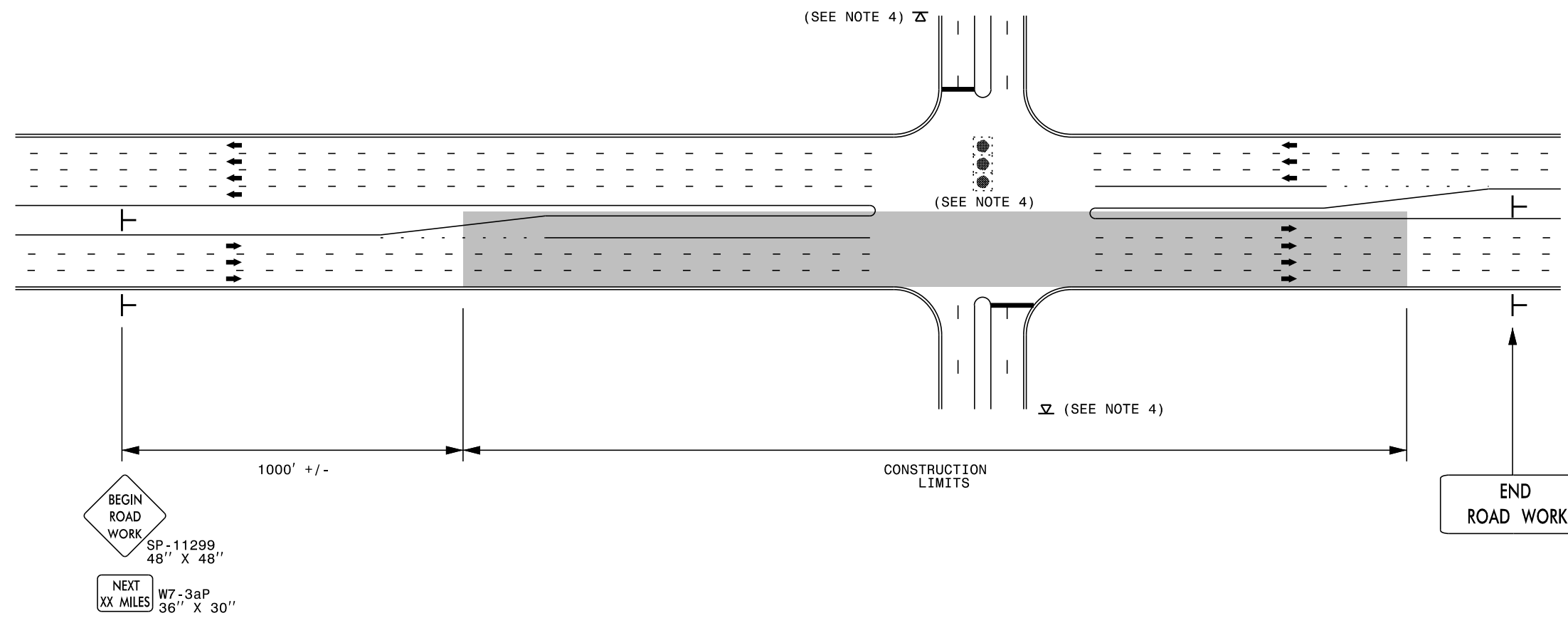
- CHANGEABLE MESSAGE SIGN (CMS)
- STATIONARY SIGN
- DIRECTION OF TRAFFIC FLOW
- TRAFFIC DRUM



**RESURFACING ADVANCE  
WARNING SIGNS FOR  
HIGH SPEED FACILITIES  
≥ 60 MPH**

10/3/2013 S:\T\U\WZTC\Resurfacing\2013\Documents\New\_Procedures\_05\_09\_2013\Resurfacing\_AdvWarn\_HSpd.dgn User:frmgarratt

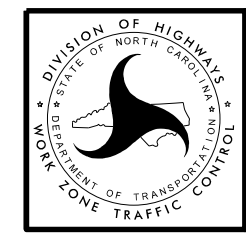
## URBAN / SUBURBAN WORKZONES



**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

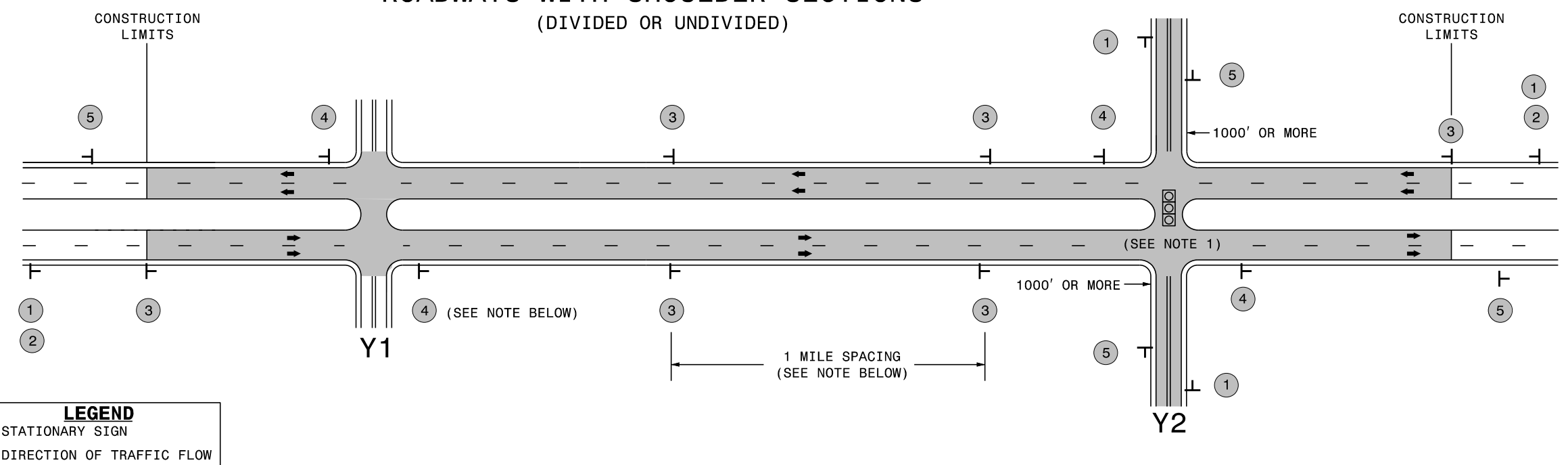


**RESURFACING ADVANCE  
WARNING SIGNS FOR  
URBAN / SUBURBAN  
FACILITIES**

2/24/2014 S:\TMU\WZTC\Resurfacing\2013Documents\New\_Procedures\_05\_09\_2013\Resurfacing\_AdvWarn\_UrSub.dgn



# SIGNING FOR RURAL AND SUBURBAN MULTI-LANE ROADWAYS WITH SHOULDER SECTIONS (DIVIDED OR UNDIVIDED)



**LEGEND**  
 T STATIONARY SIGN  
 ← DIRECTION OF TRAFFIC FLOW

## MAINLINE (-L-) SIGNING

## -Y- LINE SIGNING

<b>SIGNING NOTES AND PLACEMENT PER DIRECTION</b>	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.	<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 style="text-align: center;">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;">   <small>W20-1 48" X 48"</small> </div> <div style="text-align: center;">   <small>W20-7 A 48" X 48"</small> </div> </div> <p style="text-align: center;">PLACED 500' IN ADVANCE OF FLAGGER. PLACED 250' IN ADVANCE OF FLAGGER.</p> <p><b>NOTES:</b></p> <ol style="list-style-type: none"> <li>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.</li> </ol>
	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>SP 13107 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.		

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