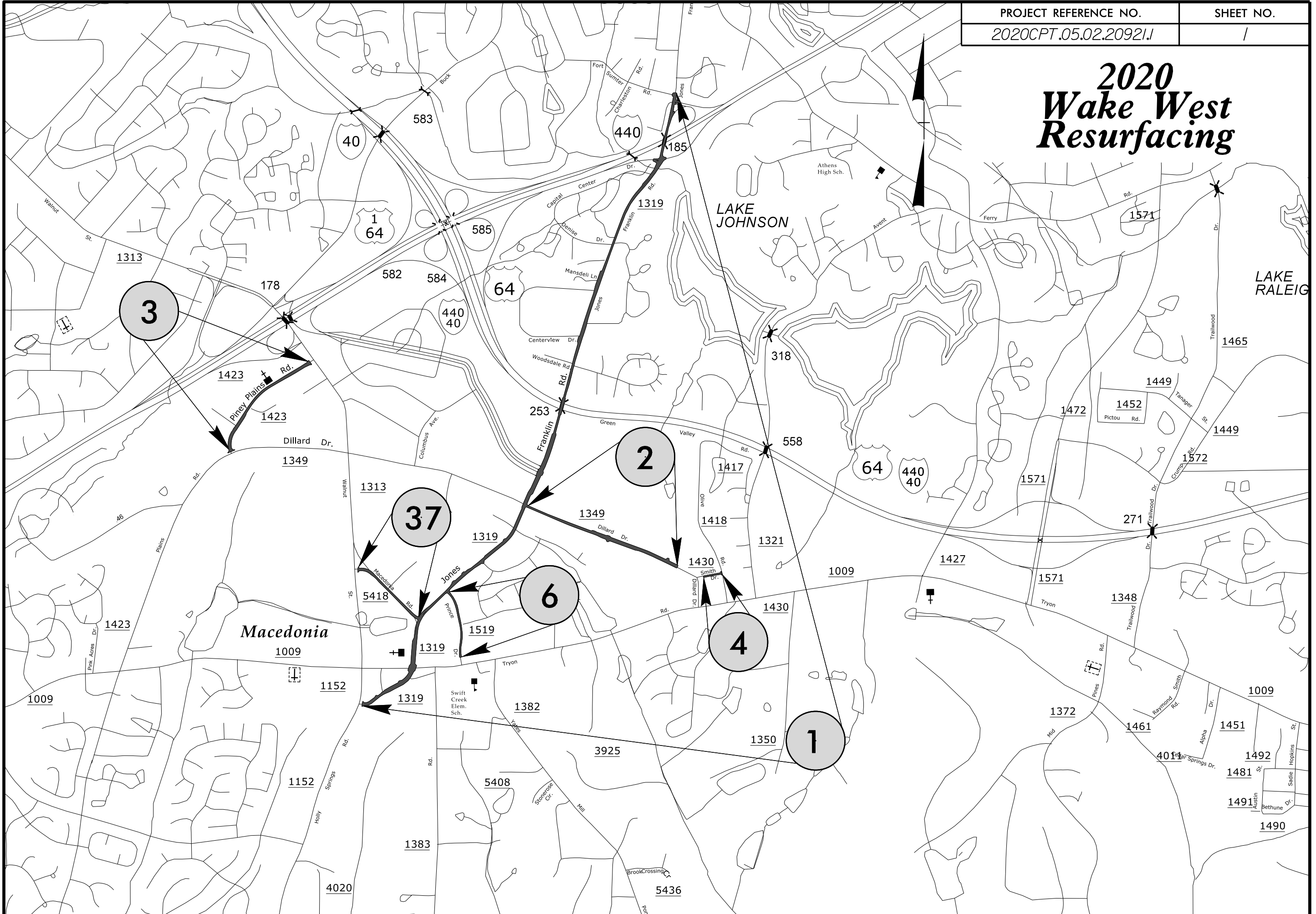
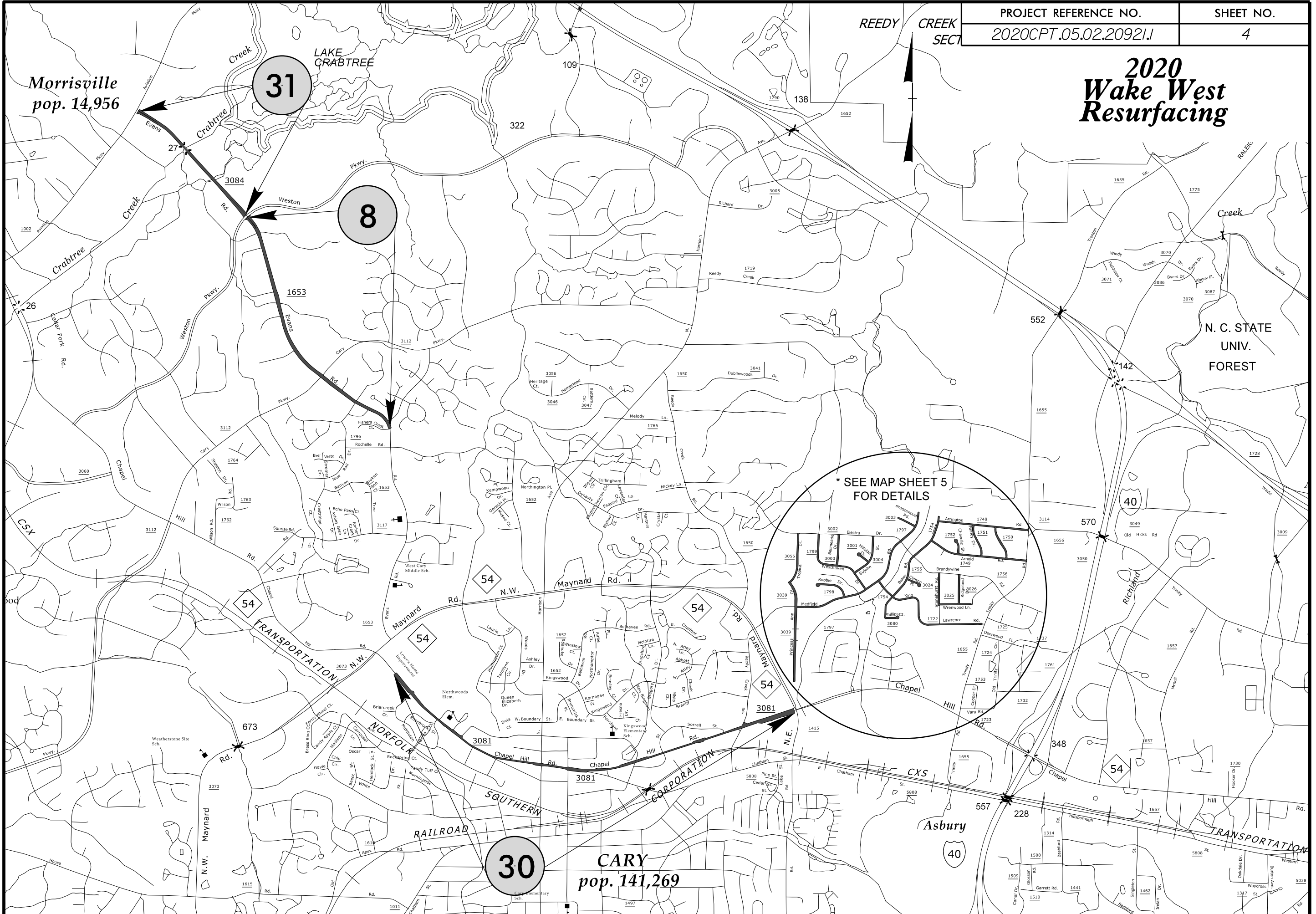


2020 Wake West Resurfacing



2020 Wake West Resurfacing



Morrisville
pop. 14,956

31

8

30

CARY
pop. 141,269

* SEE MAP SHEET 5
FOR DETAILS

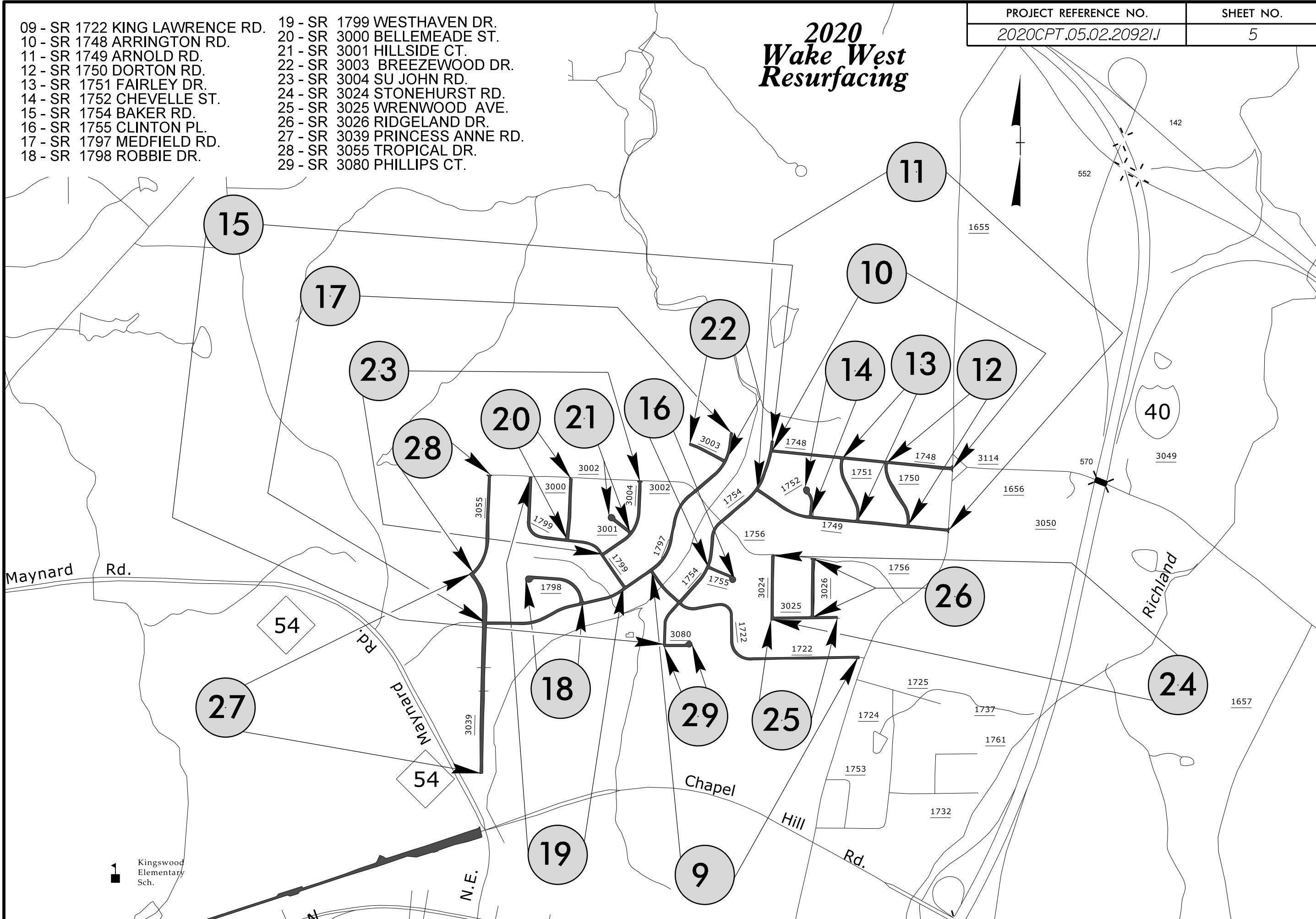
N. C. STATE
UNIV.
FOREST

- 09 - SR 1722 KING LAWRENCE RD.
- 10 - SR 1748 ARRINGTON RD.
- 11 - SR 1749 ARNOLD RD.
- 12 - SR 1750 DORTON RD.
- 13 - SR 1751 FAIRLEY DR.
- 14 - SR 1752 CHEVELLE ST.
- 15 - SR 1754 BAKER RD.
- 16 - SR 1755 CLINTON PL.
- 17 - SR 1797 MEDFIELD RD.
- 18 - SR 1798 ROBBIE DR.

- 19 - SR 1799 WESTHAVEN DR.
- 20 - SR 3000 BELLEMEADE ST.
- 21 - SR 3001 HILLSIDE CT.
- 22 - SR 3003 BREEZEWOOD DR.
- 23 - SR 3004 SU JOHN RD.
- 24 - SR 3024 STONEHURST RD.
- 25 - SR 3025 WRENWOOD AVE.
- 26 - SR 3026 RIDGELAND DR.
- 27 - SR 3039 PRINCESS ANNE RD.
- 28 - SR 3055 TROPICAL DR.
- 29 - SR 3080 PHILLIPS CT.

PROJECT REFERENCE NO.	SHEET NO.
2020CPT.05.02.2092I	5

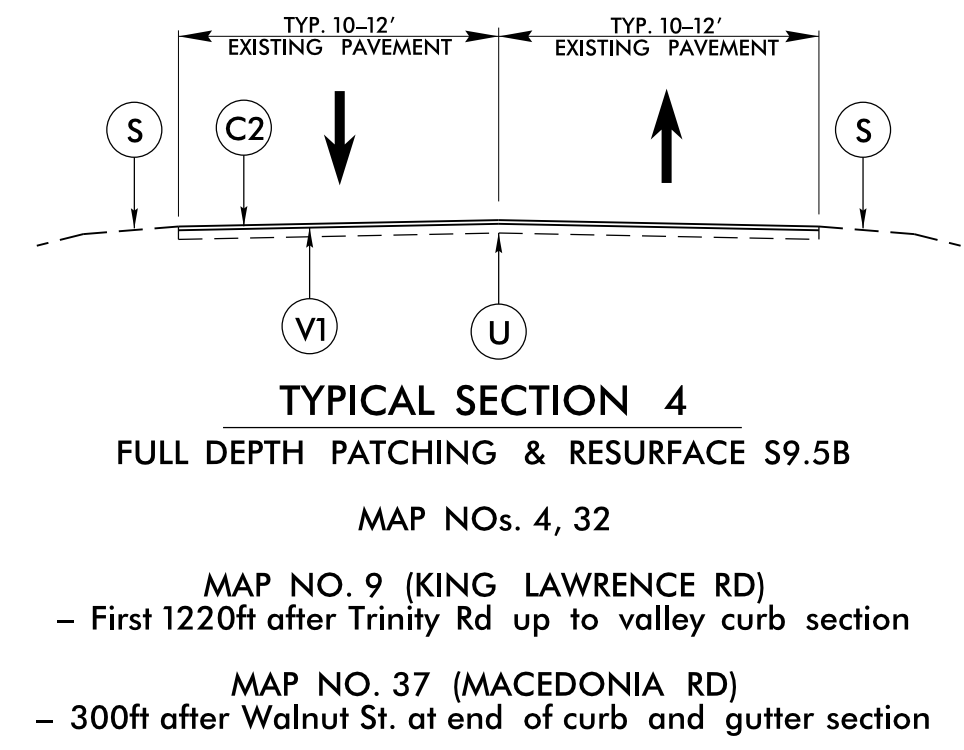
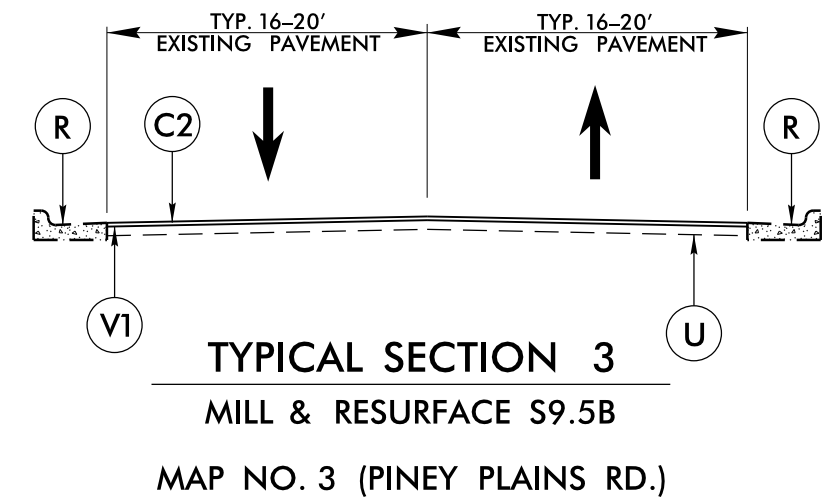
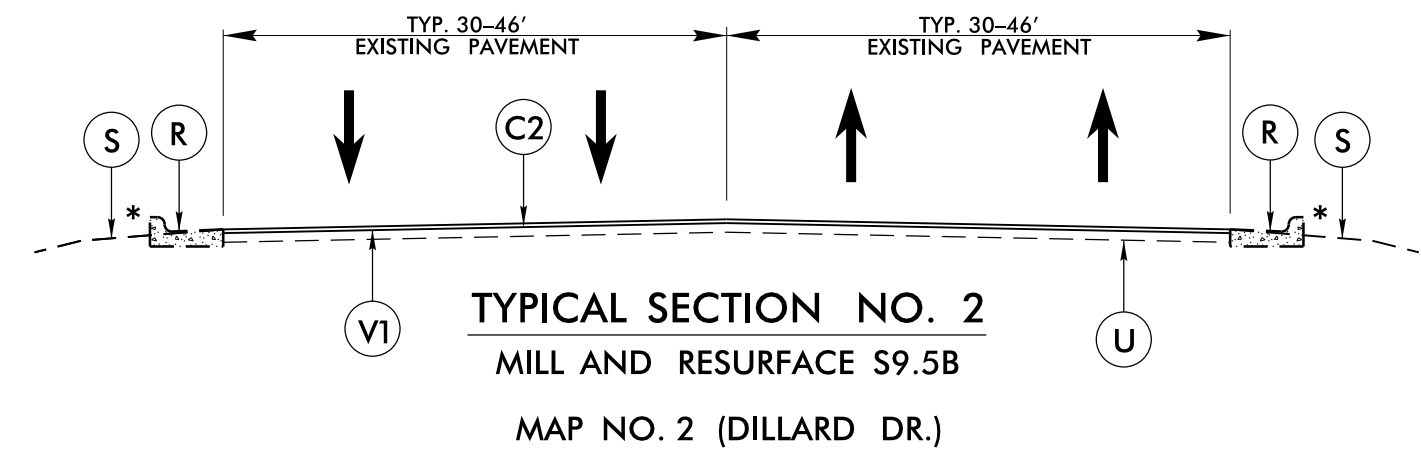
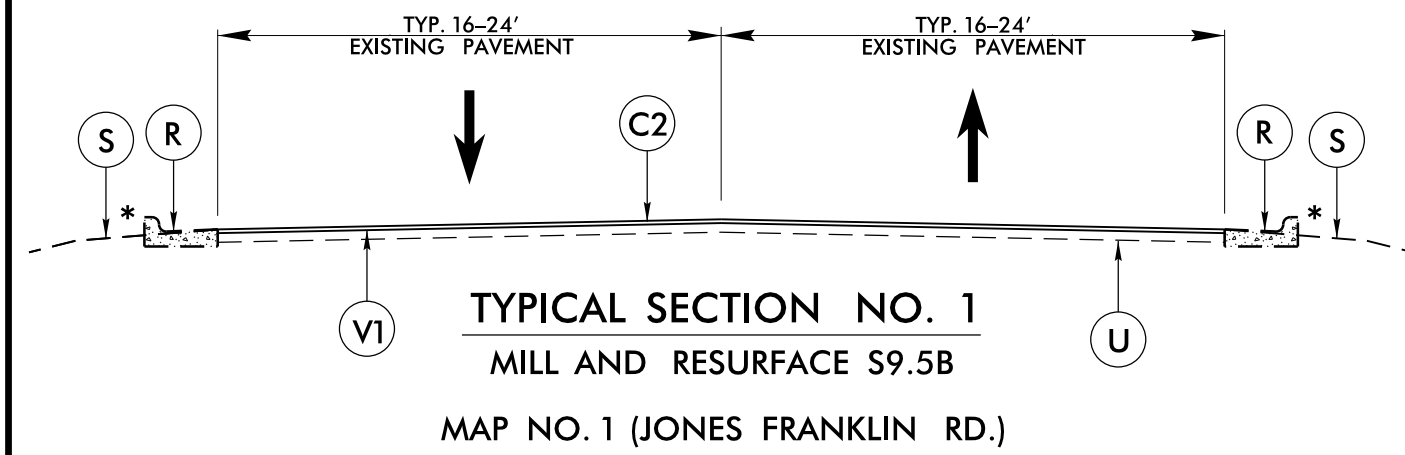
2020 Wake West Resurfacing



PAVEMENT SCHEDULE

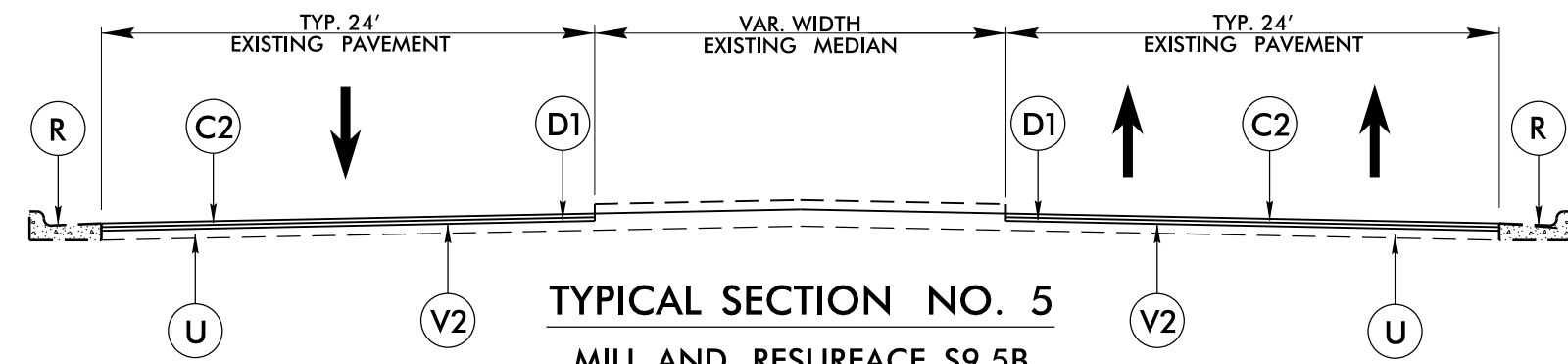
* VARIABLE OUTSIDE SHOULDER – PARTIAL C&G, PARTIAL EARTH SHOULDER

C1	PROP. APPROX. 1 1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B AT AN AVERAGE RATE OF 137.5 LBS. PER SQ. YD.	D1	PROP. APPROX. 2.5" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.	U	EXISTING PAVEMENT
C2	PROP. APPROX. 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.	R	EXISTING CURB AND GUTTER/ VALLEY CURB	V1	MILL ASPHALT PAVEMENT, 1 1/2" DEPTH
C3	PROP. APPROX. 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.	S	SHOULDER GRADING, ASB REQUIRED (EXCEPT AT RESIDENTIAL AREAS)	V2	MILL ASPHALT PAVEMENT, 4" DEPTH

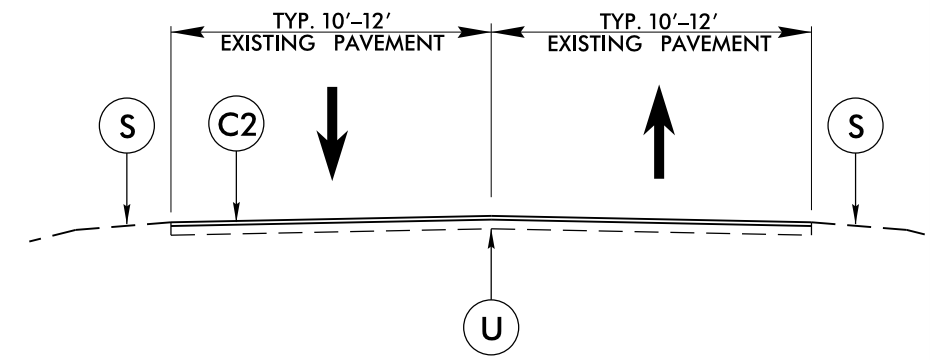


6/2/19 25-JUN-2018 09:38 2020 Wake West Rdj - sup-24-1.dgn

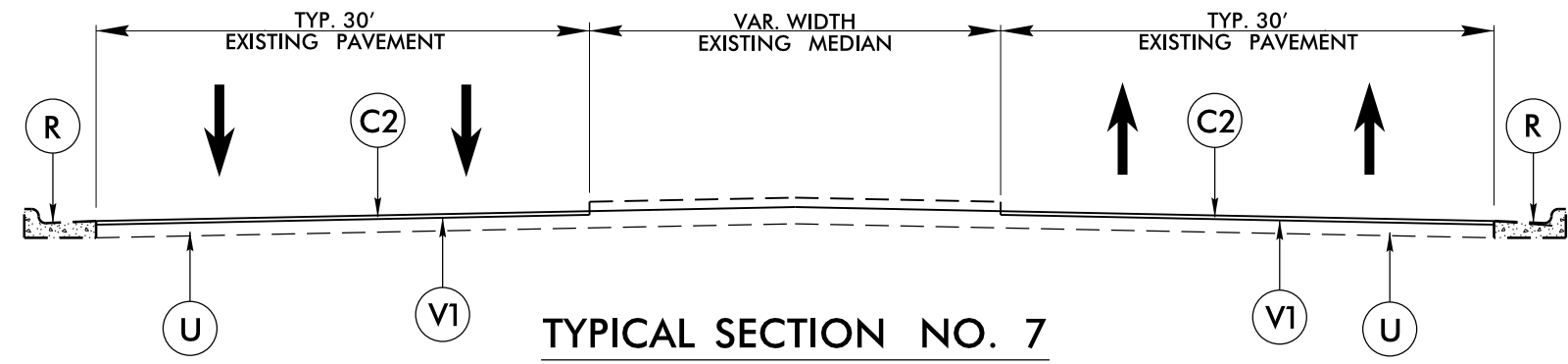
PAVEMENT SCHEDULE	
C1	1 1/4" S9.5B
C2	1 1/2" S9.5B
C3	1 1/2" S9.5C
D1	2.5" I19.0C
R	EX C & G
S	SHLD GRADING
U	EXIST. PAVEMENT
V1	1 1/2" MILLING
V2	4" MILLING



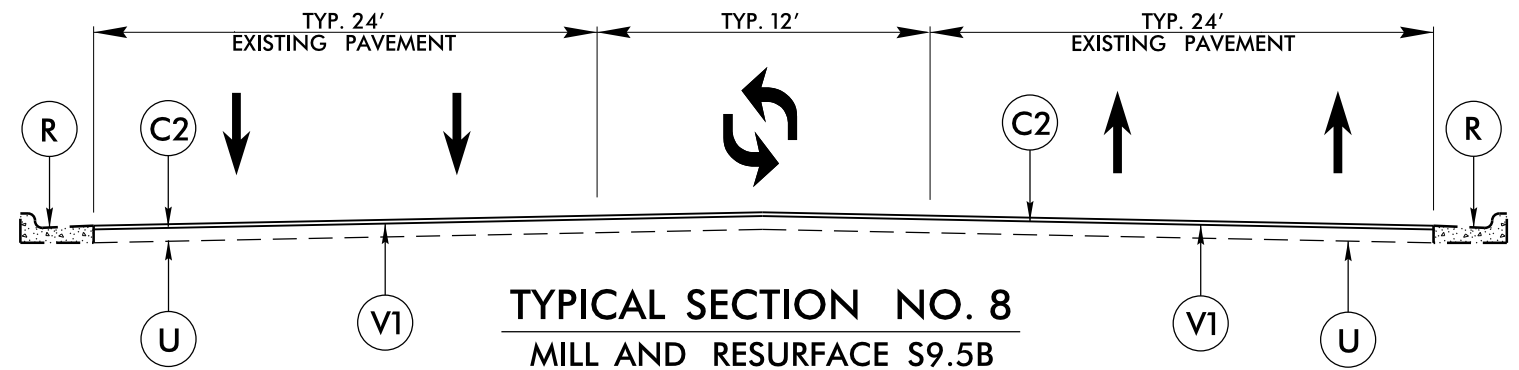
TYPICAL SECTION NO. 5
MILL AND RESURFACE S9.5B
MAP NO. 5 (GREGSON DR.)



TYPICAL SECTION NO. 6
RESURFACE S9.5B
MAP NOS. 6,7

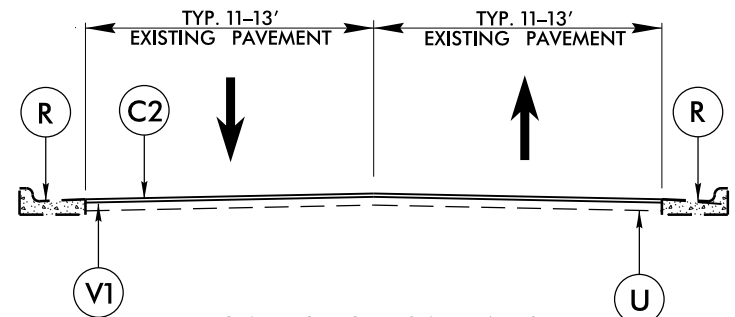


TYPICAL SECTION NO. 7
MILL AND RESURFACE S9.5B
MAP NO. 8 (EVANS RD.)
320' From Evans AND Weston Pkwy Intersection
MAP NO. 31 (EVANS RD.)
From Aviation Pkwy to Pharma Dr.

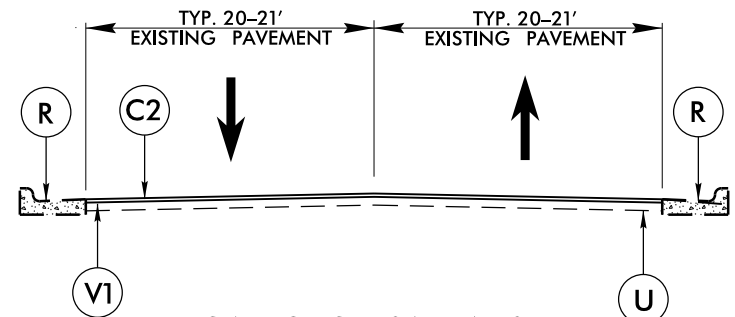


TYPICAL SECTION NO. 8
MILL AND RESURFACE S9.5B
MAP NO. 8 (EVANS RD.)
-From 320' SOUTH OF WESTON PARKWY AND EVANS RD. INTERSECTION
TO FISHERS CREEK

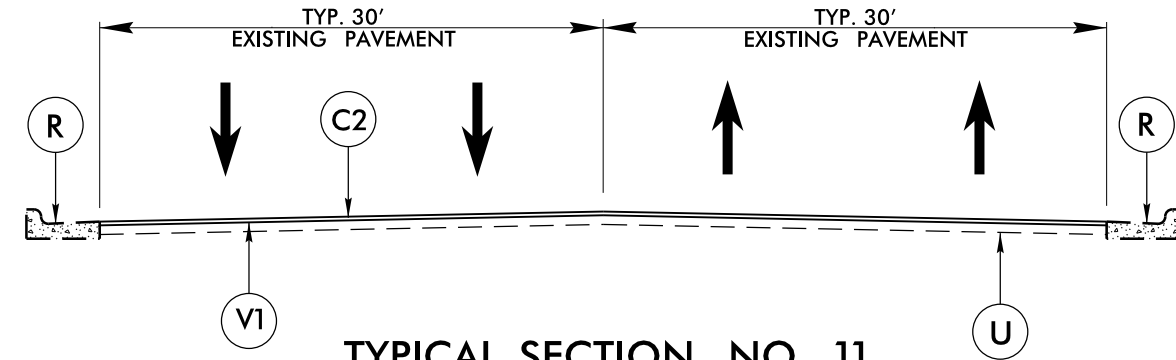
PAVEMENT SCHEDULE	
C1	1¼" S9.5B
C2	1½" S9.5B
C3	1½" S9.5C
D1	2.5" I19.0C
R	EX C & G
S	SHLD GRADING
U	EXIST. PAVEMENT
V1	1½" MILLING
V2	4" MILLING



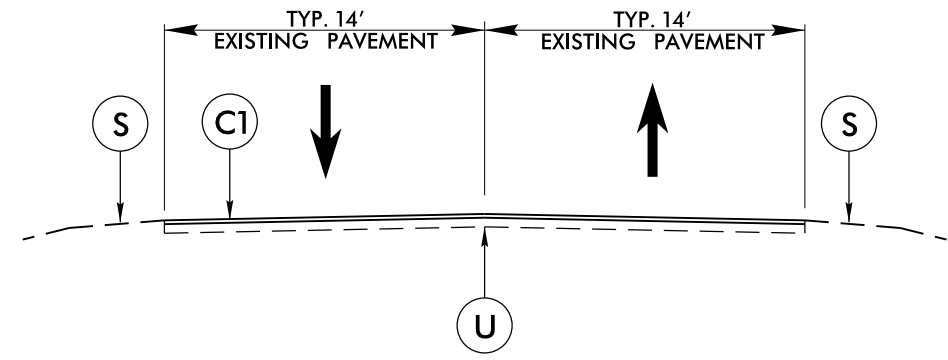
TYPICAL SECTION NO. 9
 MILL AND RESURFACE S9.5B
 MAP NOS. 9-26, 28-29
 MAP NO. 37 (MACEDONIA RD)
 - First 300ft after Walnut Street)



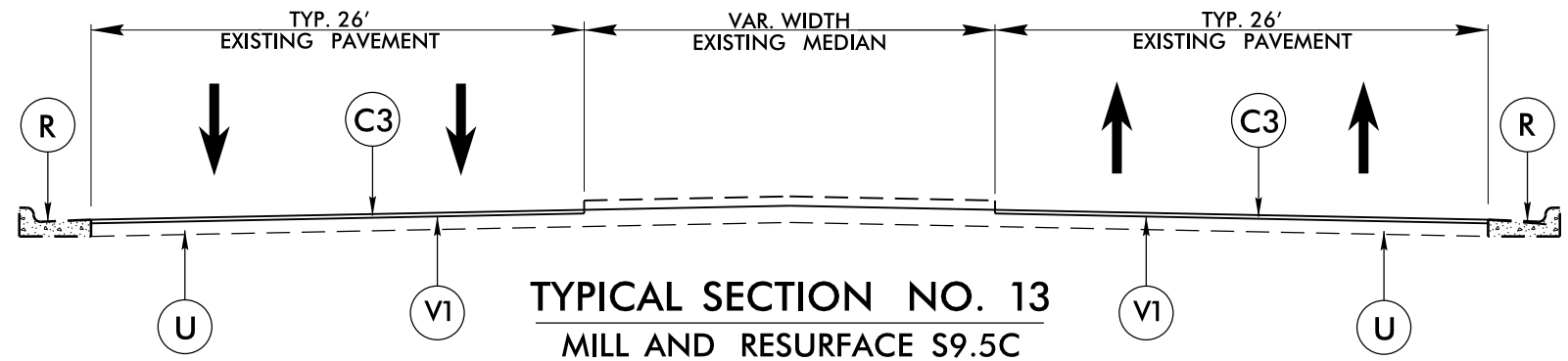
TYPICAL SECTION NO. 10
 MILL AND RESURFACE S9.5B
 MAP NOS. 27, 30



TYPICAL SECTION NO. 11
 MILL AND RESURFACE S9.5B
 MAP NO. 31 (EVANS RD.)
 -From Pharma Dr. to Weston Pkwy



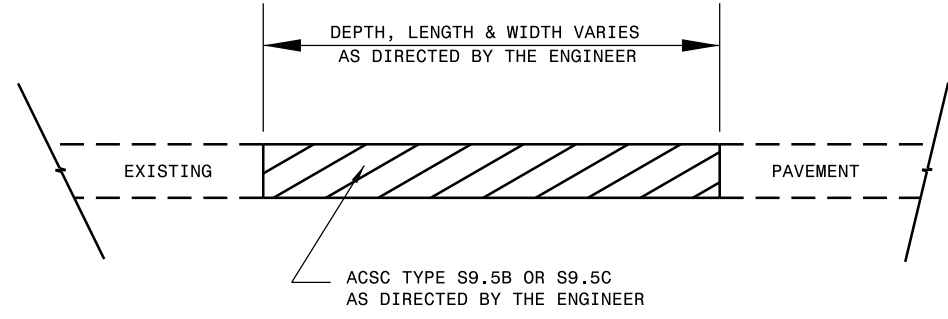
TYPICAL SECTION NO. 12
 FULL DEPTH PATCHING & RESURFACE S9.5B
 MAP NO. 33, 34, 36



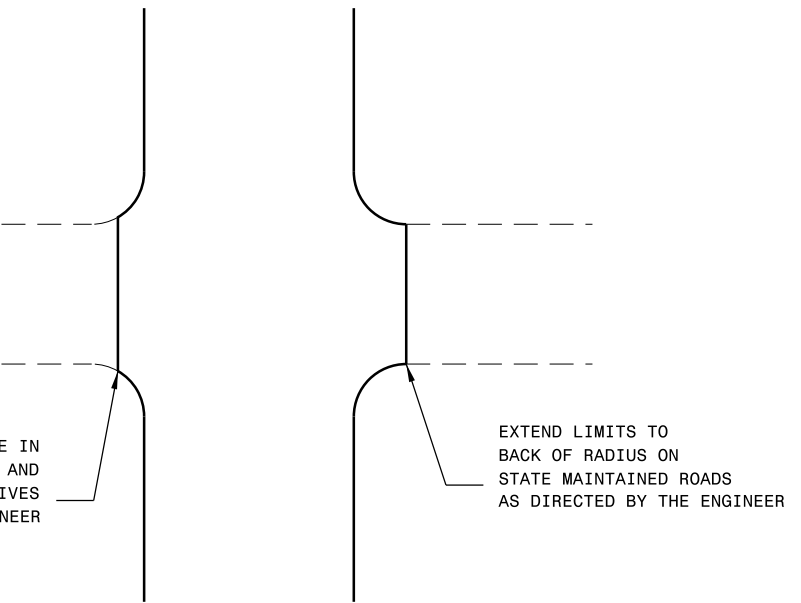
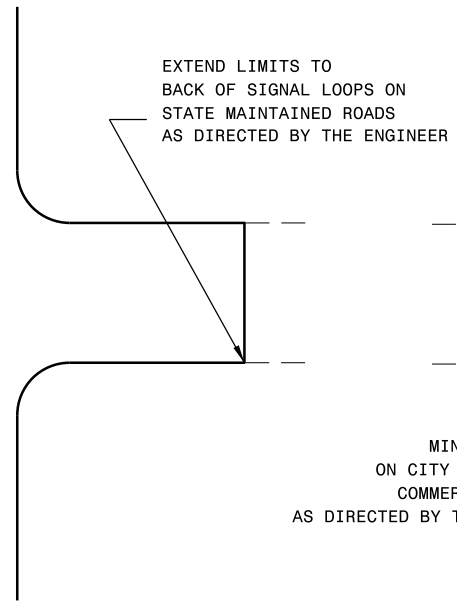
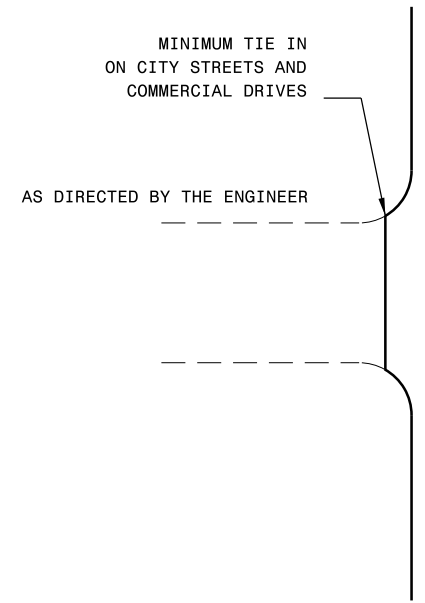
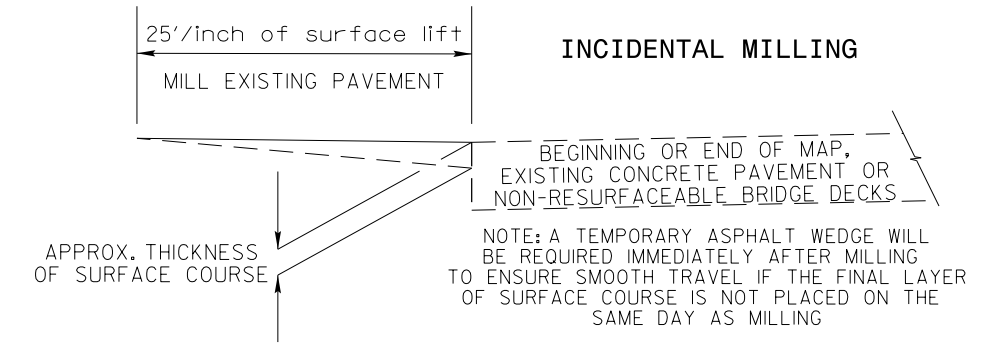
TYPICAL SECTION NO. 13
 MILL AND RESURFACE S9.5C
 MAP NO. 35 (SE CARY PARKWAY)

6/2/19
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 2020 Wake West Rdj - Typ-24-3.dgn
 seencer.meritt

PAVEMENT SCHEDULE	
C1	1 1/4" S9.5B
C2	1 1/2" S9.5B
C3	1 1/2" S9.5C
D1	2.5" I19.0C
R	EX C & G
S	SHLD GRADING
U	EXIST. PAVEMENT
V1	1 1/2" MILLING
V2	4" MILLING



PATCHING EXISTING PAVEMENT
MILLING TO BE PERFORMED PRIOR TO PATCHING

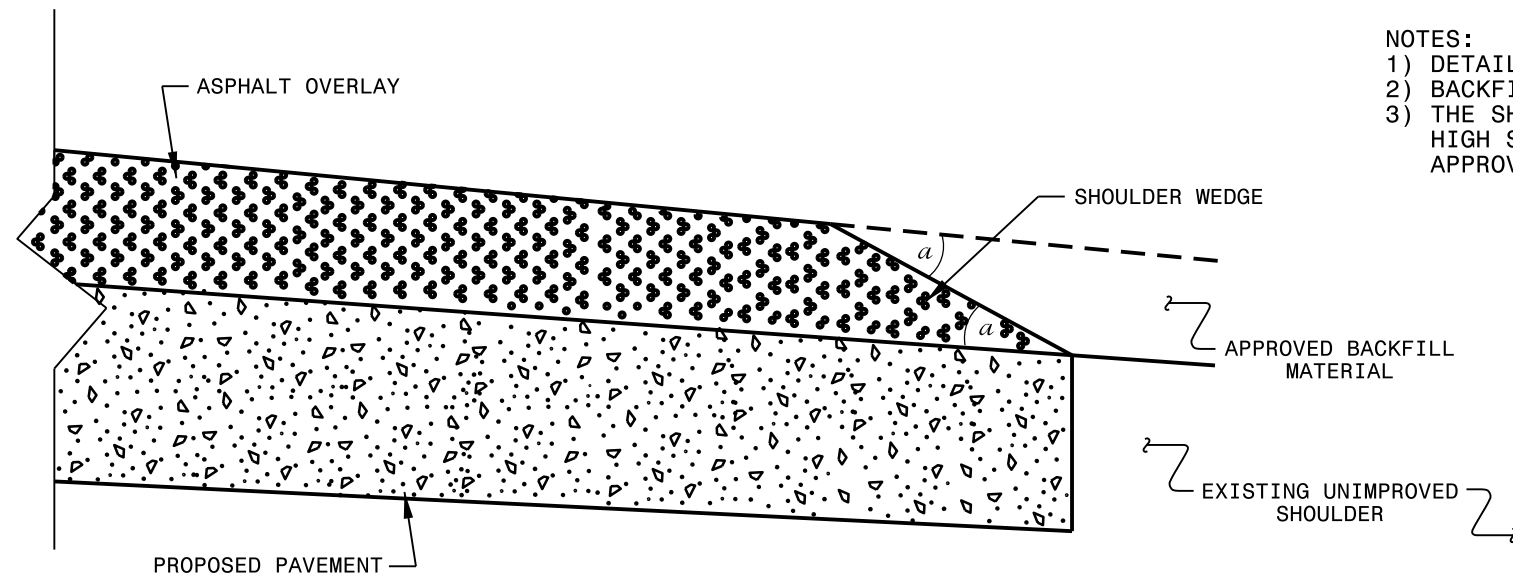


DETAIL OF PROJECT LIMITS AT SIGNALIZED Y LINES

DETAIL OF PROJECT LIMITS AT UNSIGNALIZED Y LINES

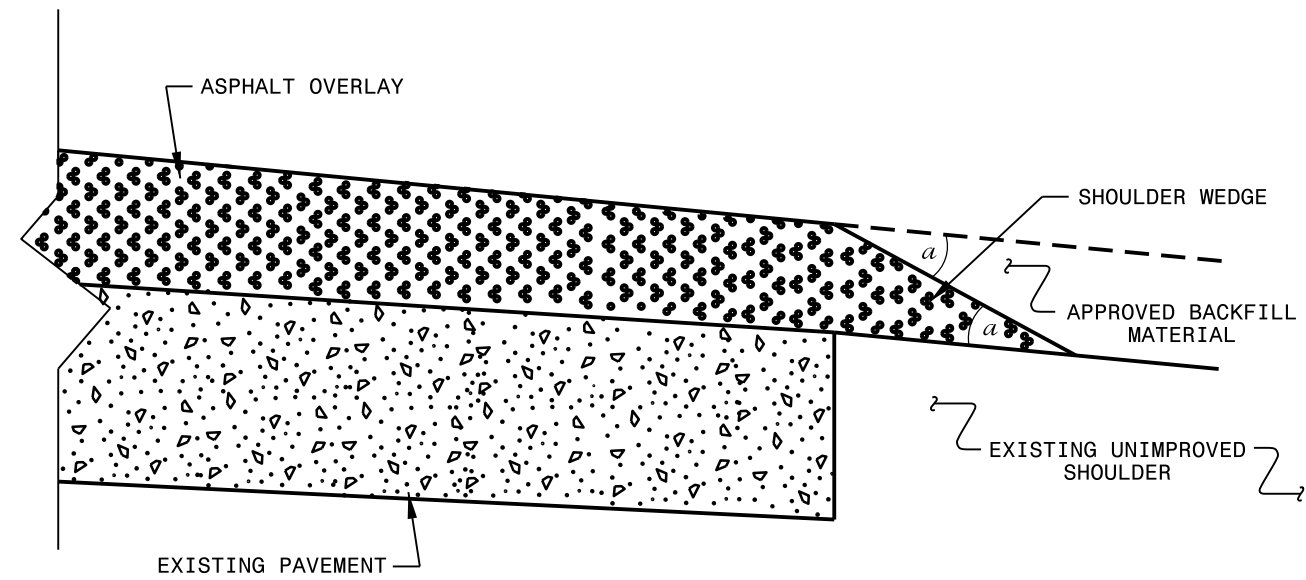
NOTES:

- 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.



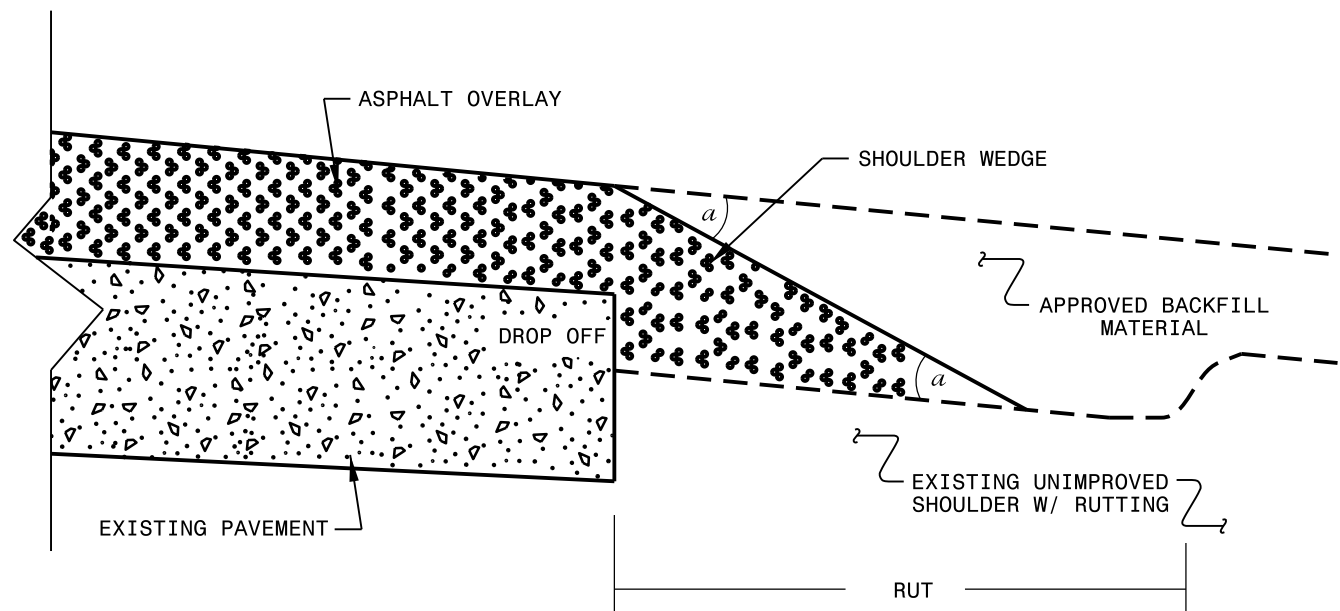
SHOULDER WEDGE DETAIL

(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		

PROJECT NO.	SHEET NO.	TOTAL NO.
2020CPT.05.02.20921.1	12	

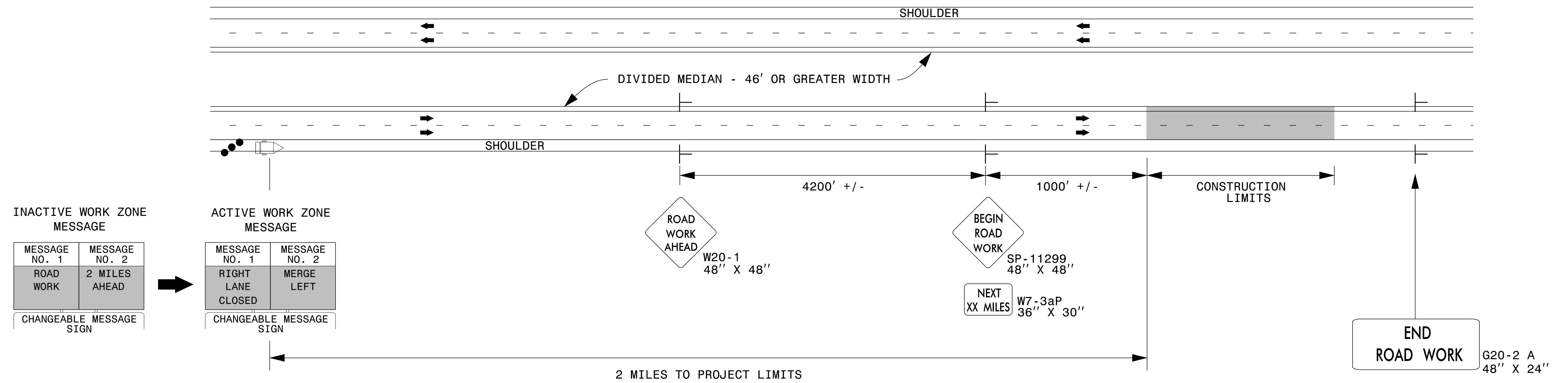
SUMMARY OF QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANS	FINAL SURFACE TESTING REQUIRED	WARM MIX ASPHALT REQUIRED	LENGT	WI	BORROW	SHOULDER GRADING	INCLINENTAL STONE BASE	ASB	1½" MILLING	4" MILLING	INCLINENTAL MILLING	INTERMEDIATE COURSE, I19.0C	SURFACE COURSE, S9.5B	SURFACE COURSE, S9.5C	ASPHALT BINDER FOR PLANT MIX	PATCHING EXISTING PAVEMENT	ADJ. OF MANHOLES	ADJ. OF METER OR VALVE BOXES	PORTABLE LIGHTING	TEMP. SILT FENCE	WAT TLE	SEED & MULCHING	INDUCTIVE LOOP SAW-CUT	
									MI	FT		CY	SMI	TONS	TON	SY	SY	SY	TONS	TONS	TONS	TON	TONS	EA	EA	LS	LF	LF	AC	LF
		1	SR 1319 - JONES FRANKLIN RD	FROM SR 1152 (HOLLY SPRINGS RD) TO FORT SUMTER RD	1	2	NO	NO	2.36	45	160	3.22		300	62,304		1,603		5,154		345	222	1	1	*	330	50	2.5	4,645	
		2	SR 1349 - DILLARD DR	FROM SR 1319 (JONES FRANKLIN RD) TO PAVEMENT JOINT NEAR SR 1009 (TRYON RD)	2	4	NO	NO	0.54	42	50	0.34		40	13,306		200		1,156		77	39		1		40	10	0.5		
		3	SR 1423 - PINEY PLAINS RD	FROM SR 1313 (WALNUT ST) TO SR 1349 (DILLARD ST)	3	5	NO	NO	0.43	40					10,091		683		877		59	149								
		4	SR 1430 - SMITH DR	FROM SR 1418 (OLIVE RD) TO SR 1349 (DILLARD DR). SKIP NEW PAVEMENT.	4	2	NO	NO	0.06	24	20	0.06		30	845				74		5					12	10	0.5		
		5	SR 1435 - GREGSON DR	FROM SR 1319 (OLD RALEIGH RD/ EDINBURGH S DR) TO US 64. PAVE BOTH SIDES OF MEDIAN. SKIP NEW PAVEMENT.	5	2	NO	NO	0.04	44						1,033		148		90		13		1					315	
		6	SR 1519 - PRINCE DR	FROM SR 1319 (JONES FRANKLIN RD) TO SR 1009 (TRYON RD)	6	2	NO	NO	0.25	20	50	0.44	6	30			80		256		17	22				100	20	5.5		
		7	SR 1601 - JENKS RD	FROM SR 1600 (GREEN LEVEL CHURCH RD) TO US 64	6	2	NO	NO	1.46	23	150	2.40		270			60		1,642		110	223				300	50	2.5		
		8	SR 1653 - EVANS RD	FROM FISHERS CREEK CT TO WESTON PKWY	7,8	5	NO	NO	1.17	62					42,557		508		3,694		247	236							1,235	
		9	SR 1722 - KING LAWRENCE RD	FROM SR 1655 (TRINITY RD) TO SR 1797 (MEDFIELD RD)	4,9	2	NO	NO	0.59	23	30	0.46	6	50	7,961				693		46	6				50	10	0.5		
		10	SR 1748 - ARRINGTON RD	FROM SR 1754 (BAKER RD) TO SR 1655 (TRINITY RD /TRENTON RD)	9	2	NO	NO	0.39	26					5,949				498		33	11								
		11	SR 1749 - ARNOLD RD	FROM SR 1655 (TRINITY RD) TO SR 1754 (BAKER RD)	9	2	NO	NO	0.44	26					6,245		24		584		39	10								
		12	SR 1750 - DORTON RD	FROM SR 1748 (ARRINGTON RD) TO SR 1749 (ARNOLD RD)	9	2	NO	NO	0.15	26					2,288				199		13	15								
		13	SR 1751 - FAIRLEY DR	FROM SR 1748 (ARRINGTON RD) TO SR 1749 (ARNOLD RD)	9	2	NO	NO	0.15	26					2,288				199		13	9								
		14	SR 1752 - CHEVELLE ST	FROM SR 1749 (ARNOLD RD) TO CUL-DE-SAC	9	2	NO	NO	0.07	32					1,314				114		8	4								
		15	SR 1754 - BAKER RD	FROM BEGIN OF MAINT TO SR 3080 (PHILLIPS CT)	9	2	NO	NO	0.51	26					7,779				677		45	40								
		16	SR 1755 - CLINTON PL	FROM SR 1754 (BAKER RD) TO CUL-DE-SAC	9	2	NO	NO	0.07	28					1,150				100		7	2								
		17	SR 1797 - MEDFIELD RD	FROM DEAD END TO SR 3039 (PRINCESS ANNE RD)	9	2	NO	NO	0.74	26					11,288				982		66	24								
		18	SR 1798 - ROBBIE DR	FROM SR 1797 (MEDFIELD RD) TO CUL-DE-SAC	9	2	NO	NO	0.16	28					2,628				229		15	2								
		19	SR 1799 - WESTHAVEN DR	FROM SR 1797 (MEFIELD RD) TO SR 3002 (ELECTRA DR)	9	2	NO	NO	0.38	26					5,796				505		34	14								
		20	SR 3000 - BELLEMEADE ST	FROM SR 1799 (WESTHAVEN DR) TO SR 3002 (ELECTRA DR)	9	2	NO	NO	0.14	28					2,300				200		13	3								
		21	SR 3001 - HILLSIDE CT	FROM SR 3004 (SU JOHN RD) TO CUL-DE-SAC	9	2	NO	NO	0.07	32					1,314				109		7	2								
		22	SR 3003 - BREEZEWOOD DR	FROM SR 1797 (MEDFIELD RD) TO SR 3002 (ELECTRA DR)	9	2	NO	NO	0.08	28					1,314				114		8	3								
		23	SR 3004 - SU JOHN RD	FROM SR 1799 (WESTHAVEN DR) TO SR 3002 (ELECTRA DR)	9	2	NO	NO	0.2	26					3,051				266		18	2								
		24	SR 3024 - STONEHURST RD	FROM SR 1756 (BRANDYWINE RD) TO SR 3025 (WRENWOOD AVE)	9	2	NO	NO	0.14	26					2,136				186		12	2								
		25	SR 3025 - WRENWOOD AVE	FROM SR 3024 (STONEHURST RD) TO DEAD END	9	2	NO	NO	0.15	24					2,112				184		12									
		26	SR 3026 - RIDGELAND DR	FROM SR 1756 (BRANDYWINE RD) TO SR 3025 (WRENWOOD AVE)	9	2	NO	NO	0.13	26					1,983				265		18	2								
		27	SR 3039 - PRINCESS ANNE RD	FROM SR 3055 (TROPICAL DR) TO DEAD END	10	2	NO	NO	0.46	40					10,795		16		938		63	18								
		28	SR 3055 - TROPICAL DR	FROM SR 3002 (ELECTRA DR) TO SR 3039 (PRINCESS ANNE RD)	9	2	NO	NO	0.23	26					3,508				305		20	63								
		29	SR 3080 - PHILLIPS CT	FROM SR 1754 (BAKER RD) TO END OF MAINTENANCE	9	2	NO	NO	0.06	32					915				80		5	8								
		30	SR 3081 - CHAPEL HILL RD	FROM NC 54 (NE MAYNARD) TO JOINT AT LOWE'S HOME IMPROVEMENT.	10	5	NO	NO	2.06	40					48,341		1,902		4,201		281	232	2	2					230	
		31	SR 3084 - EVANS RD	FROM SR 1002 (AVIATION PKWY) TO WESTON PKWY	7,11	4	NO	NO	0.67	56					22,012		367		1,911		128	195							1,045	
		32	SR 3948 - FIELDING DR	FROM SR 1152 (HOLLY SPRINGS RD) TO END OF MAINTENANCE	4	2	NO	NO	0.54	26	60	1.10		100	8,237		45		717		48	31				110	20	1.0		
		33	SR 3949 - LITTLEFIELD CT	FROM SR 3948 (FIELDING DR) TO END OF MAINTENANCE	12	2	NO	NO	0.1	26	10	0.19		20					105		7	6				20	10	0.5		
		34	SR 3950 - INLAND CT	FROM SR 3948 (FIELDING DR) TO CUL-DE-SAC	12	2	NO	NO	0.1	26	10	0.21		20					111		7	14				20	10	0.5		
		35	SR 3977 - SE CARY PARKWAY	FROM SR 1009 (TRYON RD) TO SR 1300 (KILDAIRE FARM RD)	13	3	NO	NO	1.75	75					77,000		1,180			6,803	408								2,495	
		36	SR 3987 - MEADOW FIELD LN	FROM SR 3948 (FIELDING DR) TO CUL-DE-SAC	12	2	NO	NO	0.07	26	10	0.13		20					77		5	859				20	10	0.5		
		37	SR 5418 - MACEDONIA RD	FROM SR 1319 (JONES FRANKLIN RD) TO SR 1313 (WALNUT ST)	4,9	2	NO	NO	0.26	24	30	0.52		50	3,661				319		21					60	10	0.5	315	
GRAND TOTAL FOR PROJ NO. 2020CPT.05.02.20921.1									17.17	580	9.07	12	930	372,468	1,033	6,668	148	27,811	6,803	2,273	2,468	4	4	1	1,062	210	15	10,280		

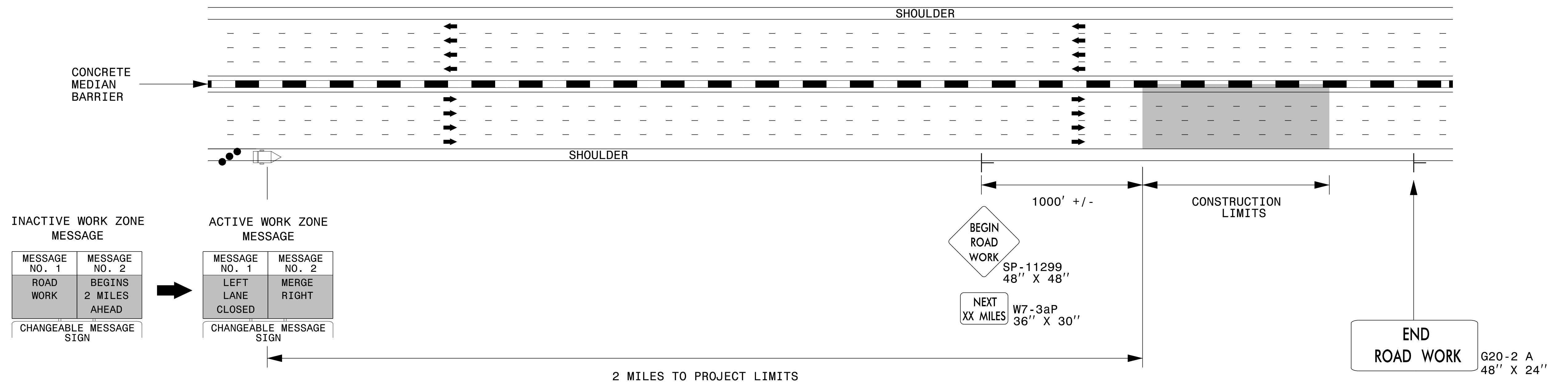
2020CPT.05.02.20921.1

Wake

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.

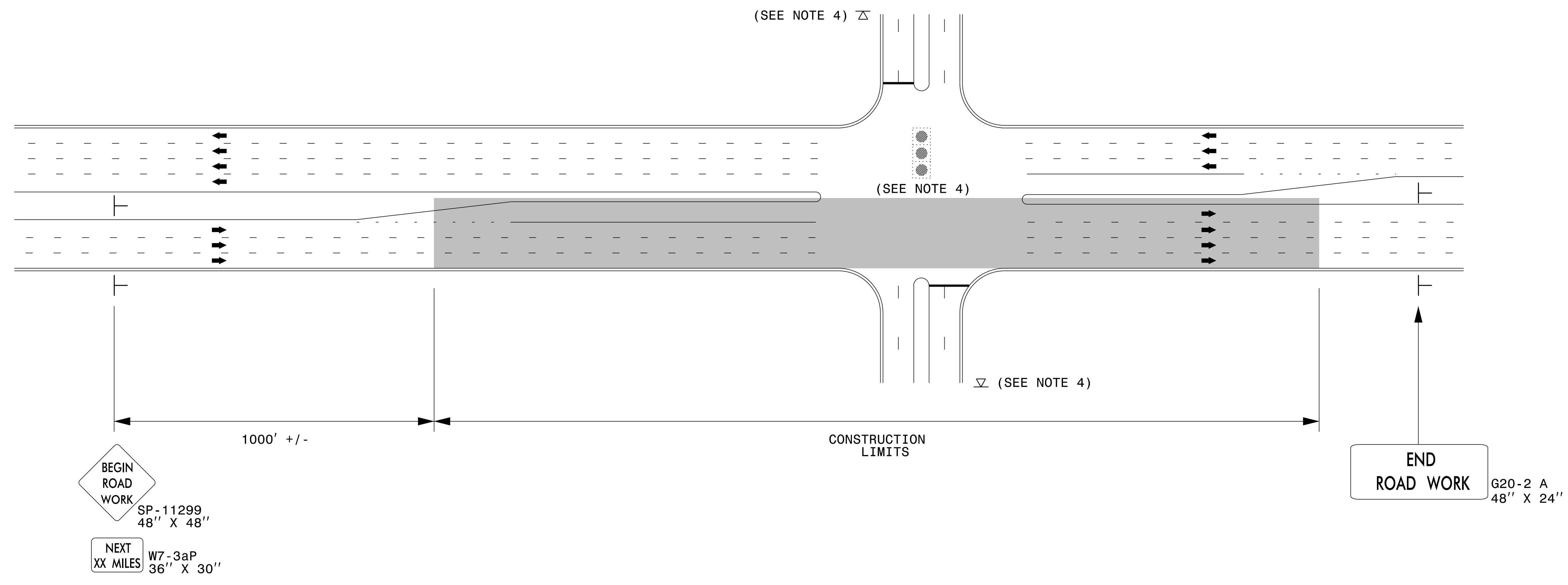
LEGEND

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



RESURFACING ADVANCE WARNING SIGNS FOR HIGH SPEED FACILITIES ≥ 60 MPH

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.

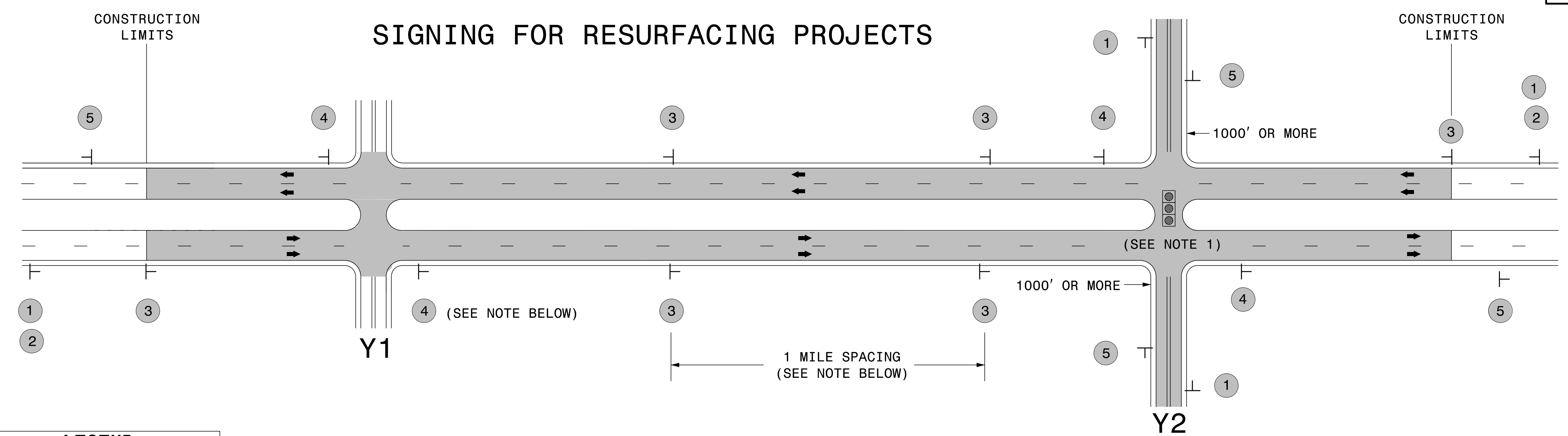
LEGEND

┆ STATIONARY SIGN

➔ DIRECTION OF TRAFFIC FLOW

RESURFACING ADVANCE WARNING SIGNS FOR URBAN / SUBURBAN FACILITIES

4/8/2015
 C:\Users\rmgarrrett\Downloads\Resurfacing_AdvWarn_UrSu (2).dgn
 User:rmgarrrett



LEGEND	
—	STATIONARY SIGN
←	DIRECTION OF TRAFFIC FLOW

MAINLINE (-L-) SIGNING

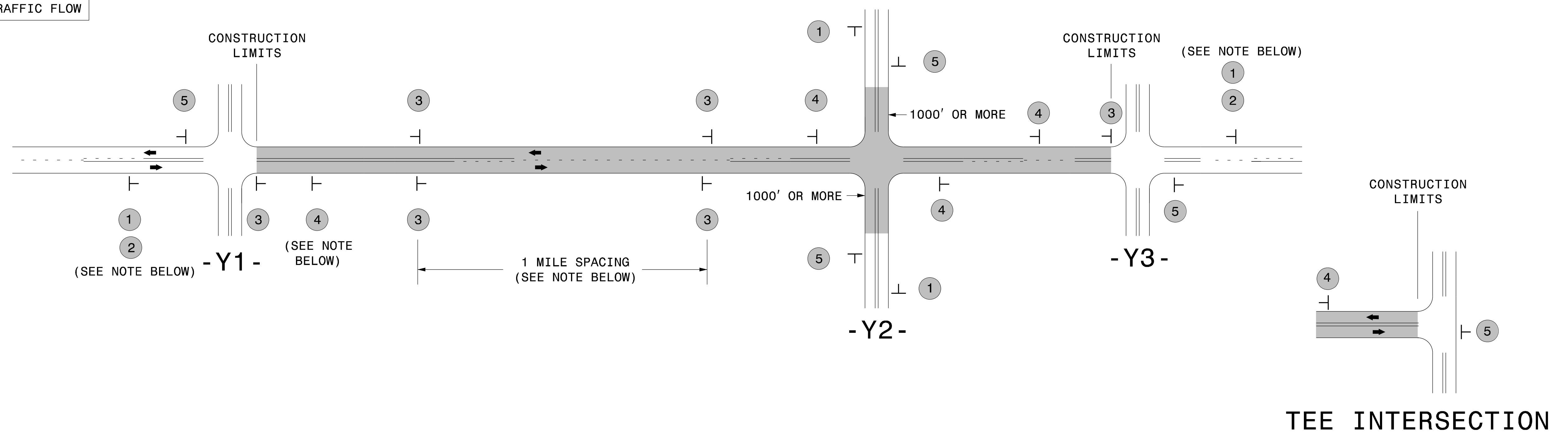
-Y- LINE SIGNING

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>	

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

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;"> PLACED 500' IN ADVANCE OF FLAGGER. </div> <div style="text-align: center;"> 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.

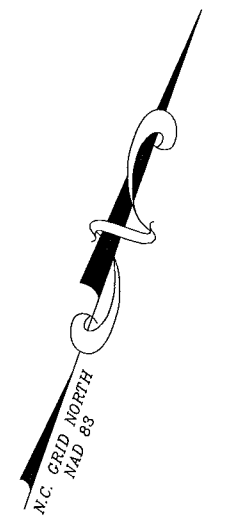
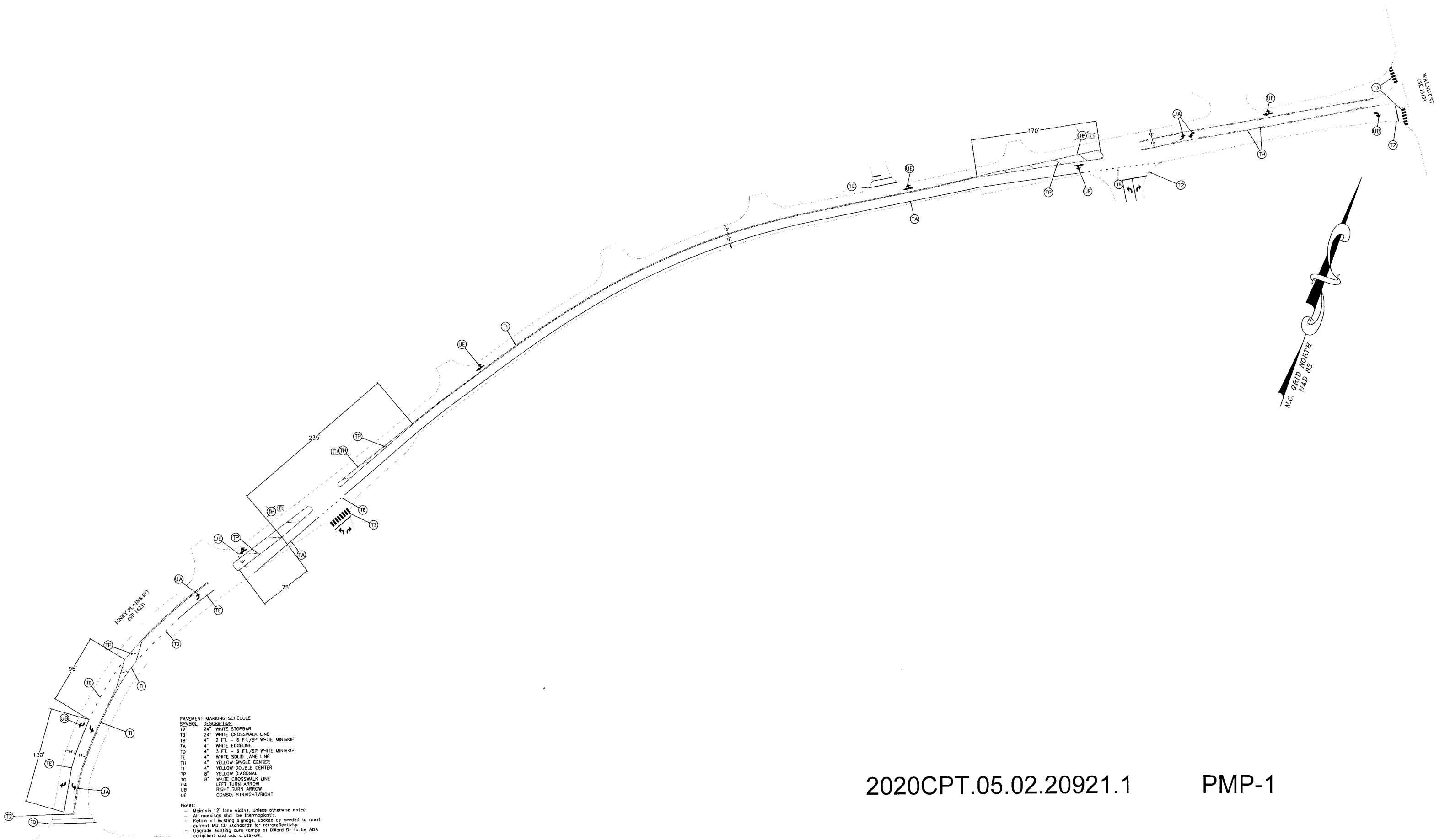
MAPS LESS THAN 2 MILES

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

5/15/2017 S:\TUXWZTC\Resurfacing\2L2W & AST Resurfacing Details\Resurfacing_AdvWarn_2Ln.dgn User:kadai



PAVEMENT MARKING SCHEDULE

SYMBOL	DESCRIPTION
T2	24" WHITE STOPBAR
T3	24" WHITE CROSSWALK LINE
TB	4" 2 FT. - 6 FT./SP WHITE MINISKIP
TA	4" WHITE EDGELINE
TD	4" 3 FT. - 9 FT./SP WHITE MINISKIP
TE	4" WHITE SOLID LANE LINE
TH	4" YELLOW SINGLE CENTER
TI	4" YELLOW DOUBLE CENTER
TP	8" YELLOW DIAGONAL
TQ	8" WHITE CROSSWALK LINE
UA	LEFT TURN ARROW
UB	RIGHT TURN ARROW
UE	COMBO. STRAIGHT/RIGHT

- Notes:
- Maintain 12' lane widths, unless otherwise noted.
 - All markings shall be thermoplastic.
 - Retain all existing signage, update as needed to meet current MUTCD standards for retroreflectivity.
 - Upgrade existing curb ramps at Dillard Dr to be ADA compliant and add crosswalk.

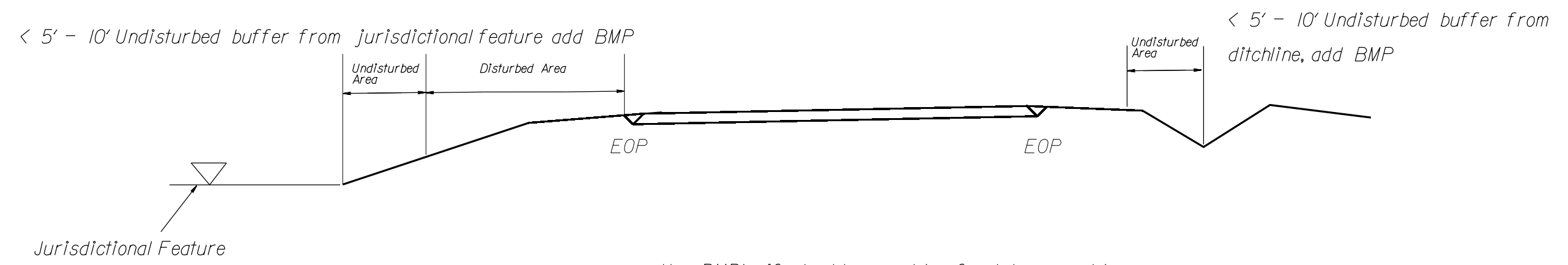
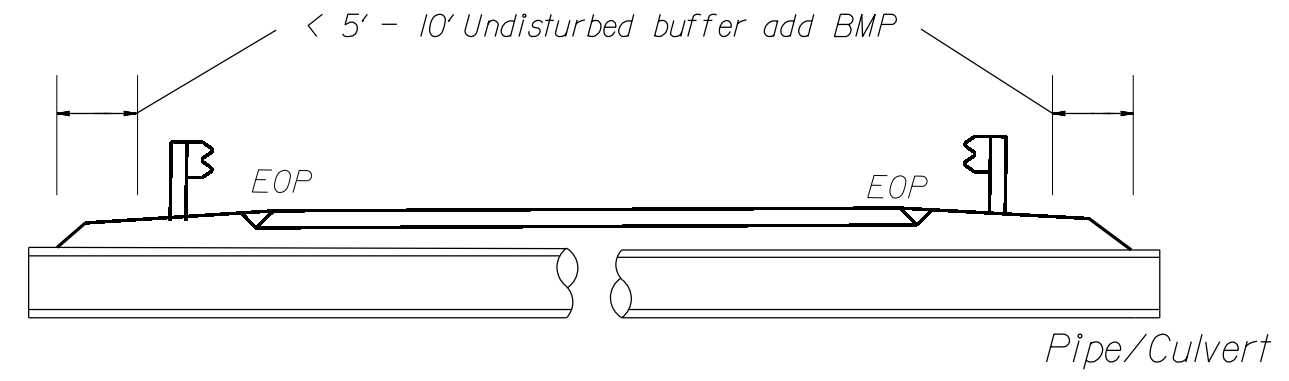
2020CPT.05.02.20921.1

PMP-1

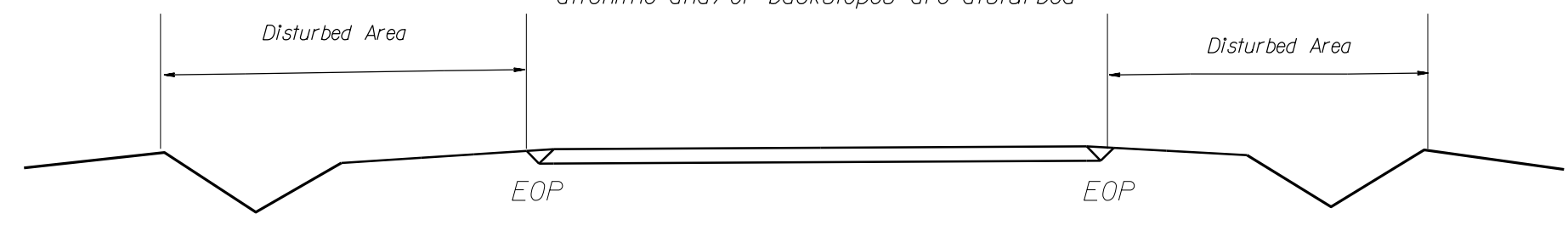
NOTES: Less than 5' - 10' undisturbed buffer from ROW, ditchline, water feature, or drainage inlet, add BMP.

BMP Options: Wattle, Silt Fence or Hardened Aggregate.

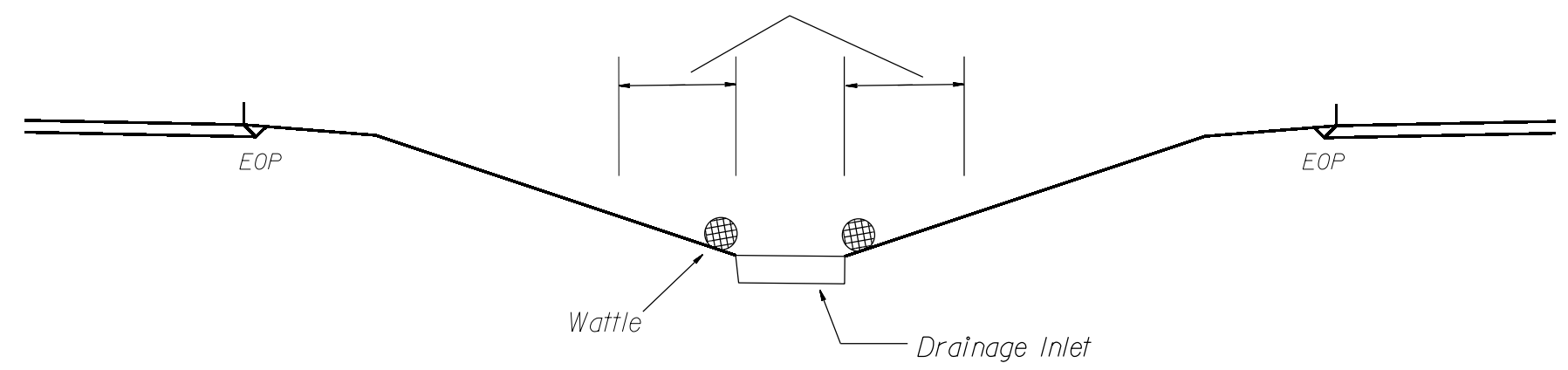
EROSION CONTROL DETAIL



Use BMP's if shoulders and/or frontslopes and/or ditchline and/or backslopes are disturbed

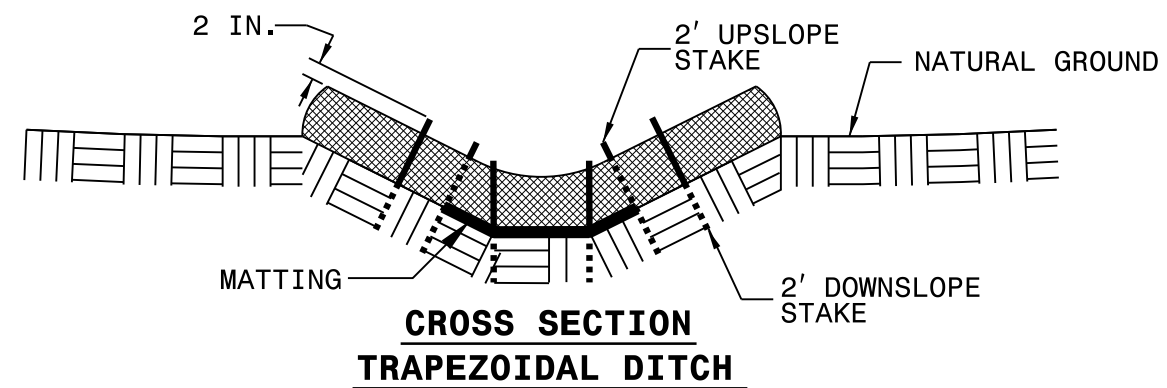
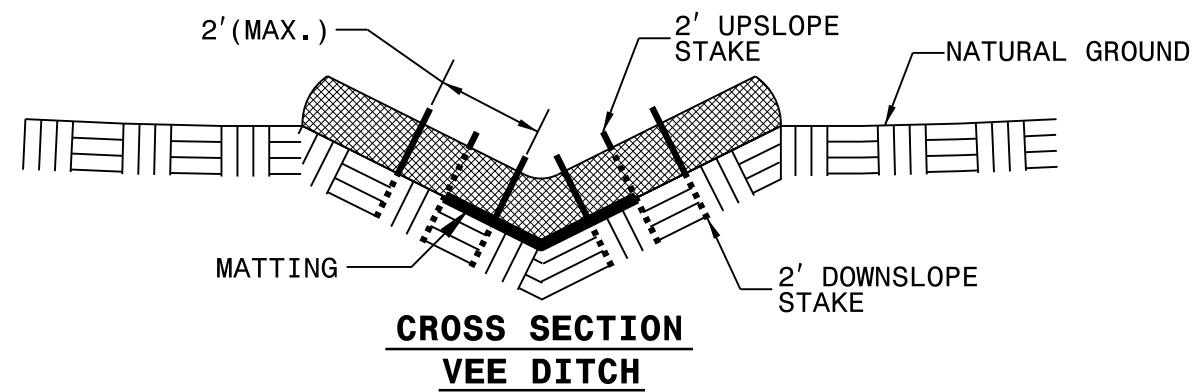
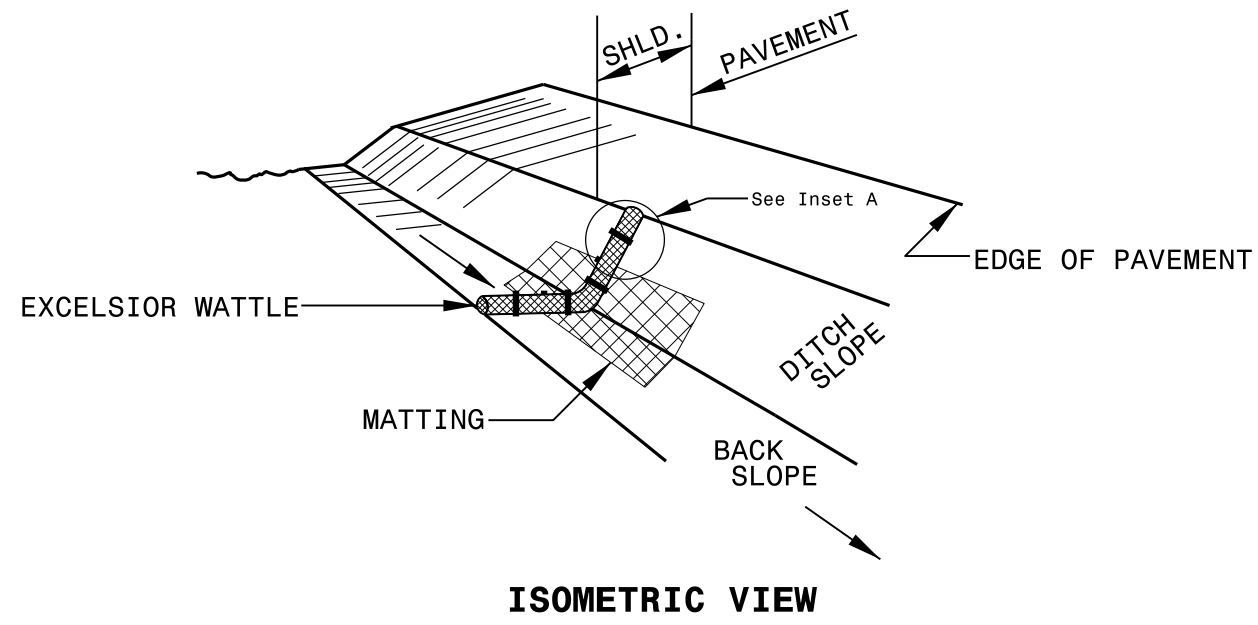


< 5' - 10' Undisturbed buffer from inlet, add wattle



NOT TO SCALE

WATTLE DETAIL



NOTES:

USE MINIMUM 12 IN. DIAMETER EXCELSIOR WATTLE.

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

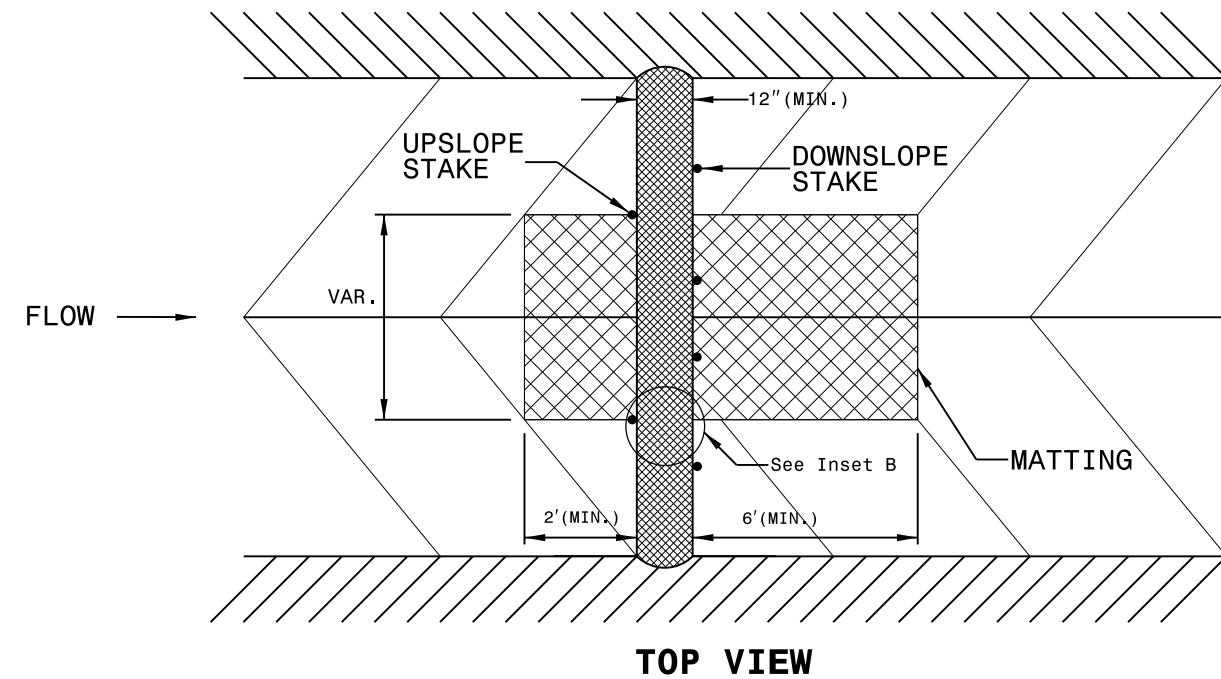
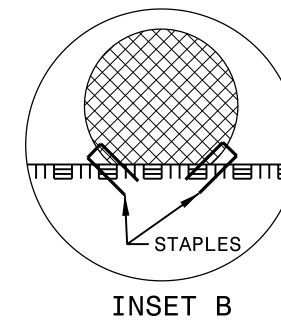
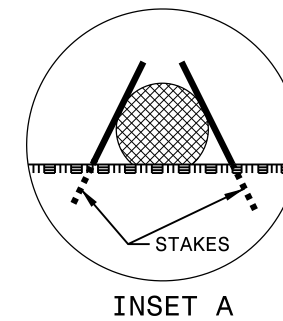
ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.

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

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

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

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



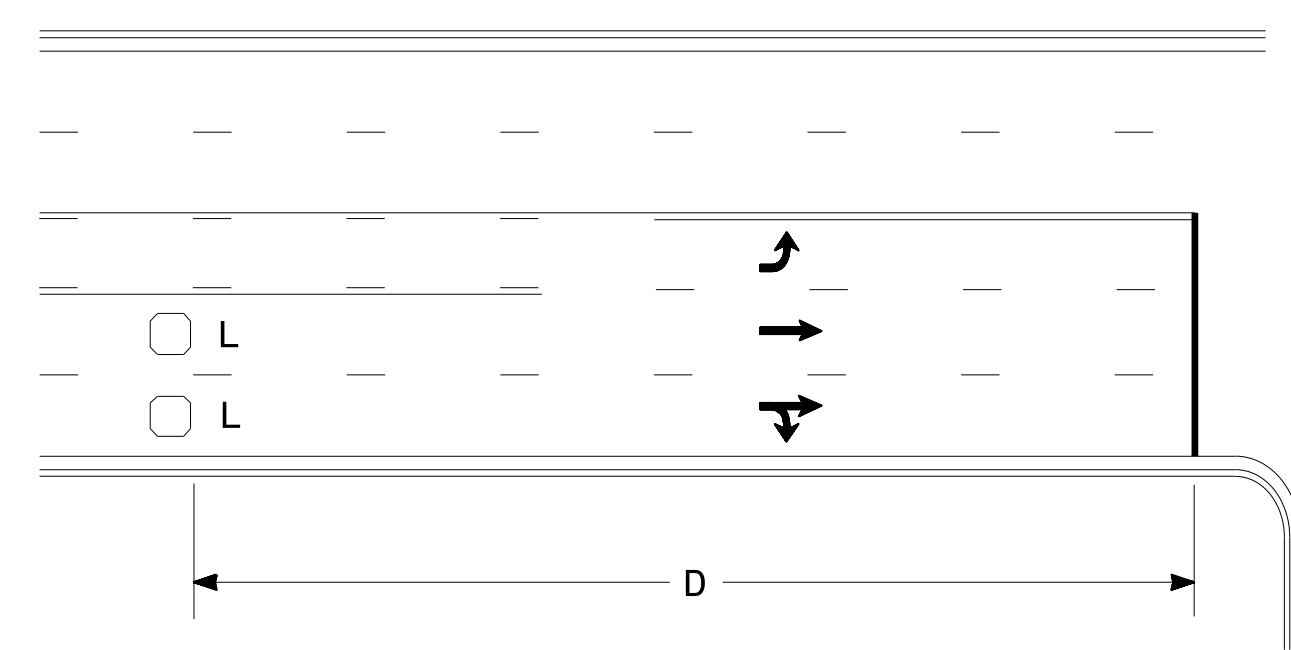
DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

SOIL STABILIZATION TIMEFRAMES

PROJECT REFERENCE NO.	SHEET NO.
2020CPT.05.02.20921.1	EC-3
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

<i>SITE DESCRIPTION</i>	<i>STABILIZATION TIME</i>	<i>TIMEFRAME EXCEPTIONS</i>
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
SLOPES 3:1 OR FLATTER	14 DAYS	7 DAYS FOR SLOPES GREATER THAN 50' IN LENGTH.
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE, EXCEPT FOR PERIMETERS AND HQW ZONES.

High Speed Detection (≥40 mph)

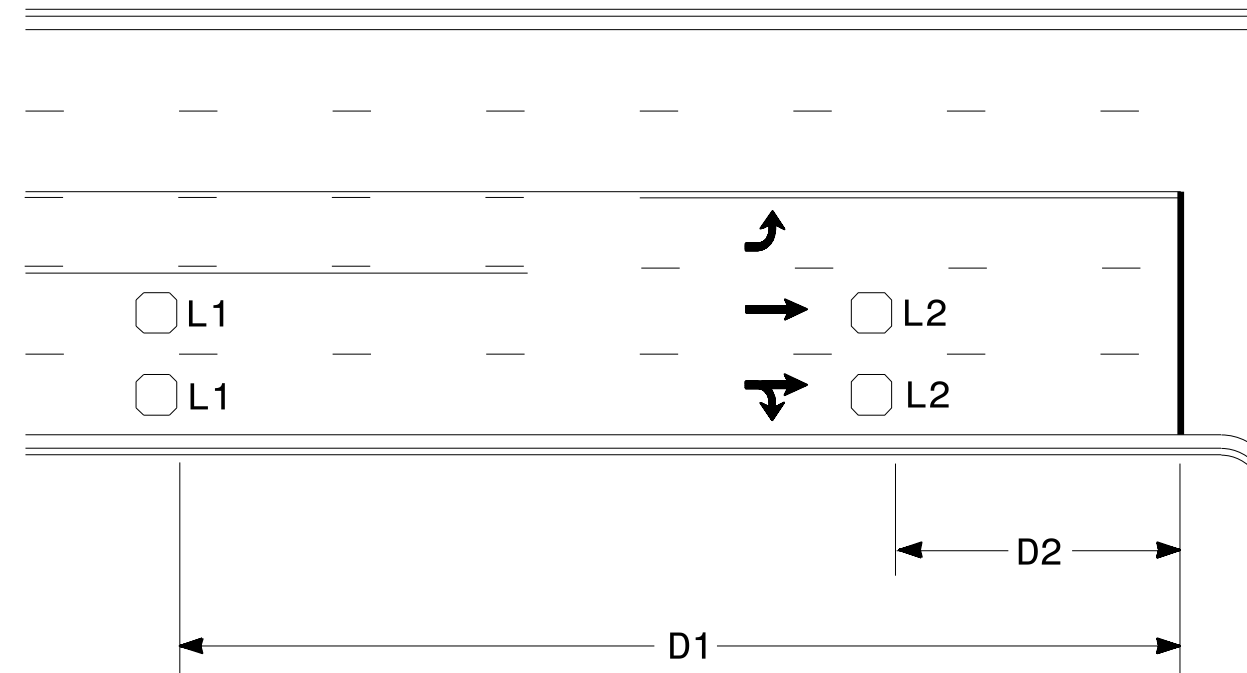


Speed Limit mph	D ft
40	250
45	300
50	355
55	420

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

Volume Density Operation

OR

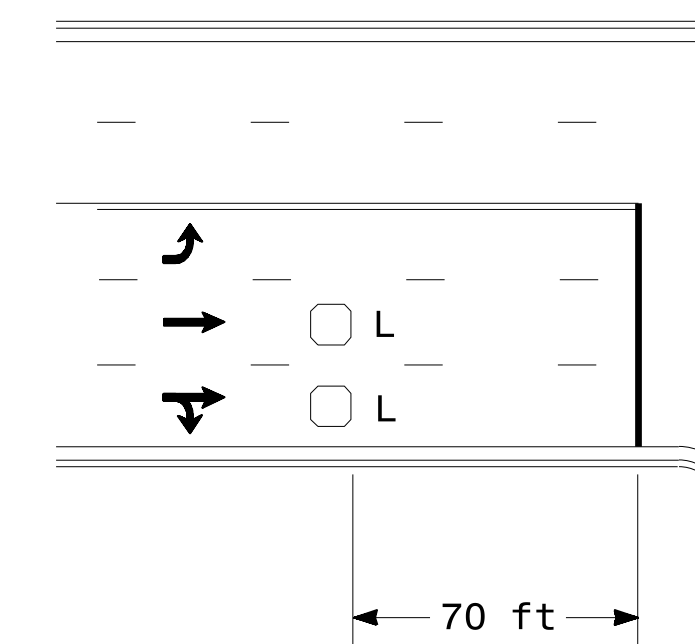


Speed Limit mph	D1 ft	D2 ft
40	250	80
45	300	90
50	355	100
55	420	110

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

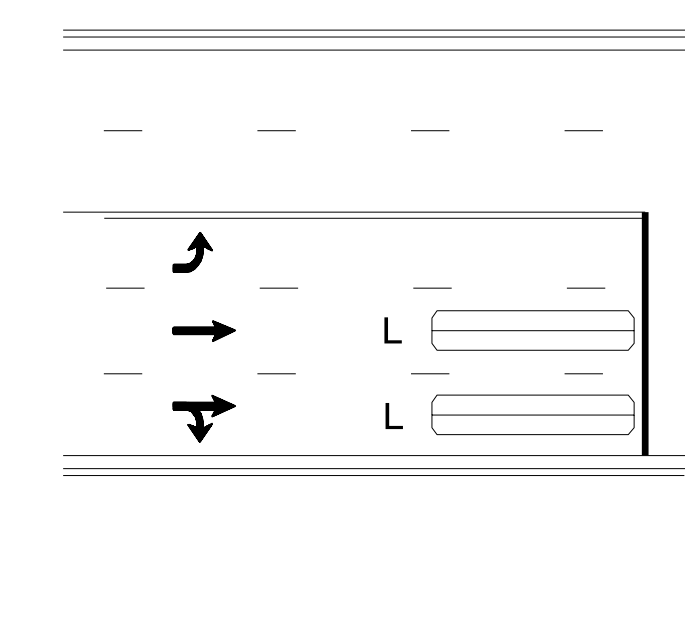
"Stretch" Operation

Low Speed Detection (≤35 mph)



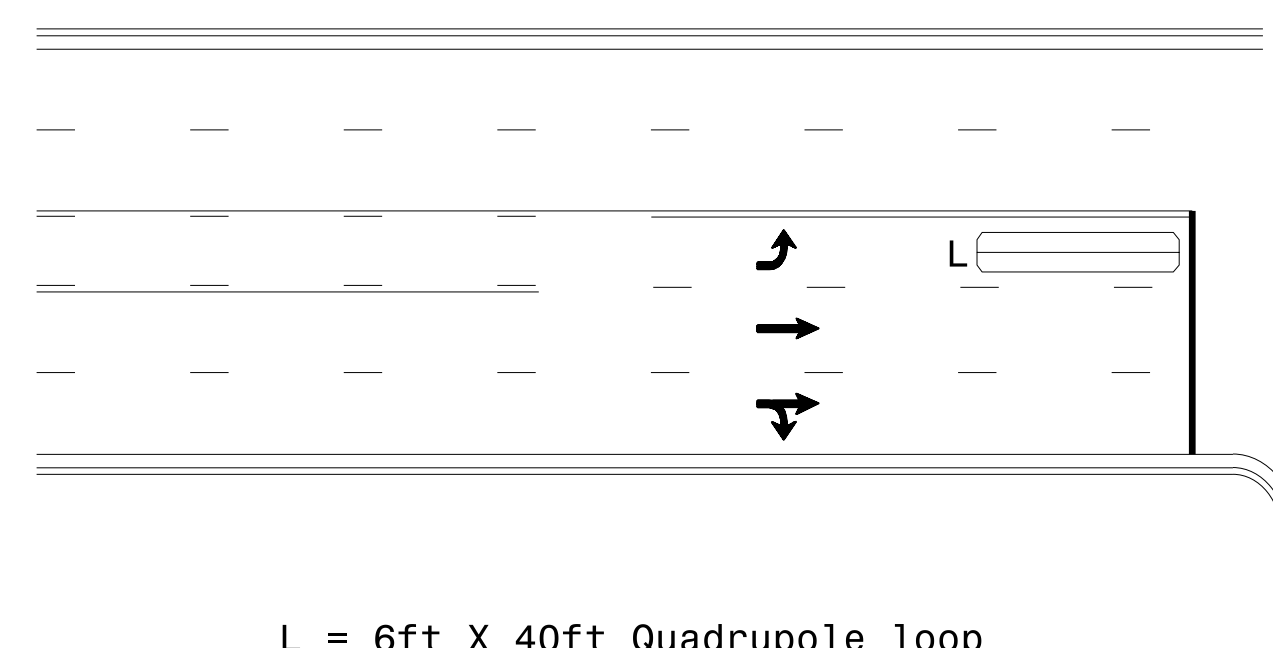
L = 6ft X 6ft
Wired in series

OR



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

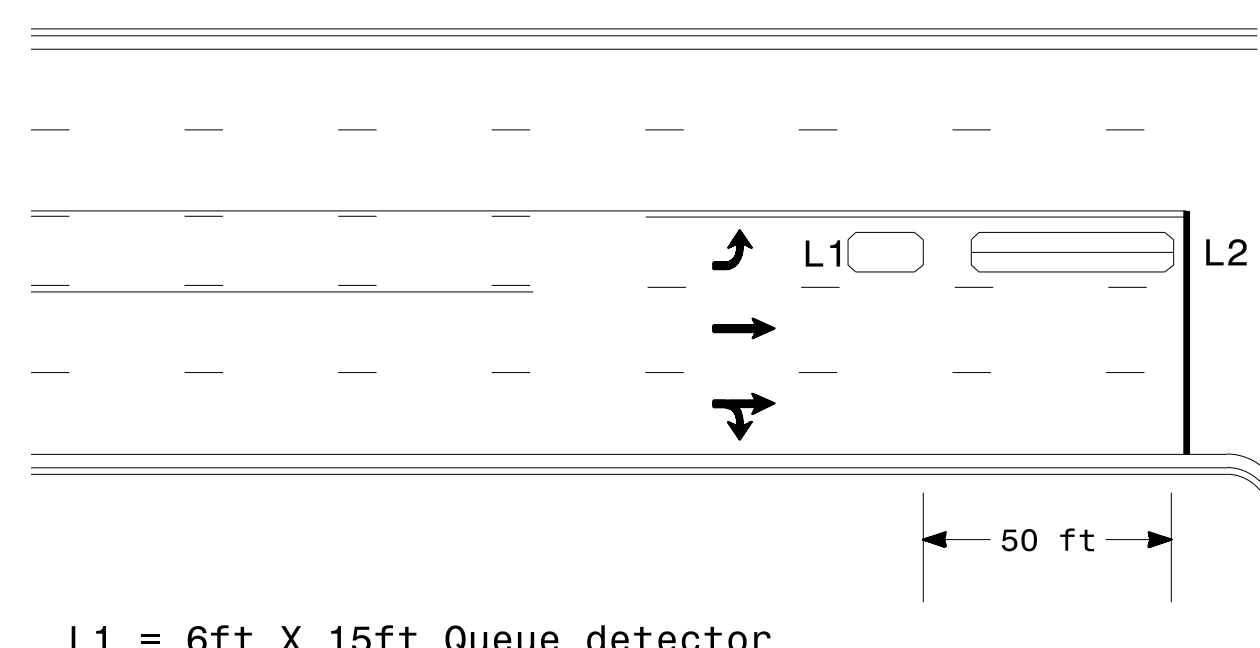
Left Turn Lane Detection



L = 6ft X 40ft Quadrupole loop

Presence Loop Detection

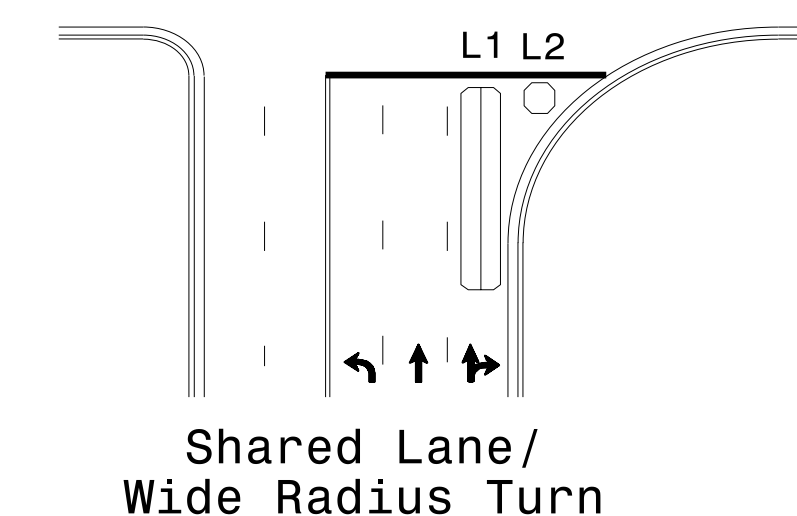
OR



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

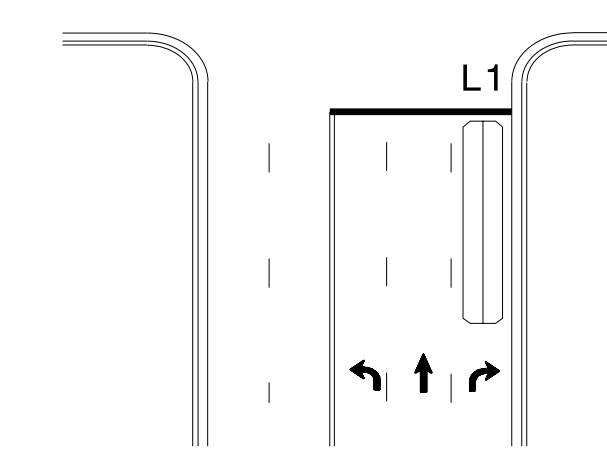
Queue Loop Detection

Right Turn Lane Detection

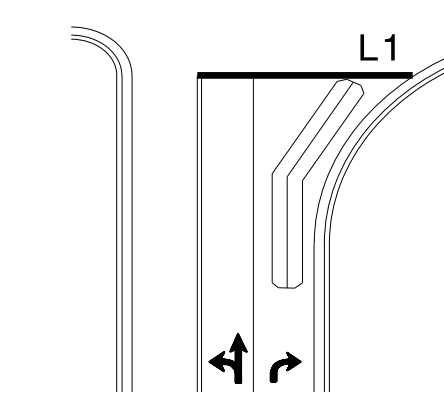


Shared Lane/
Wide Radius Turn

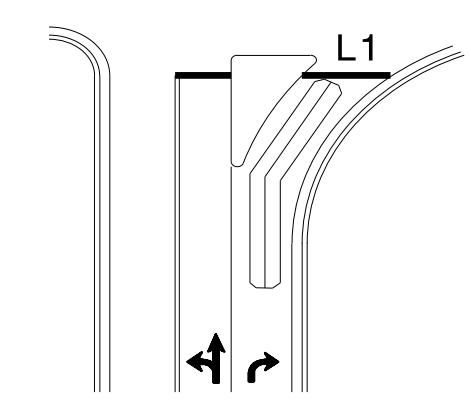
L1 = 6ft X 40ft Quadrupole loop
L2 = 6ft X 6ft [Minimum] Presence loop
Wired separately



Standard Turn

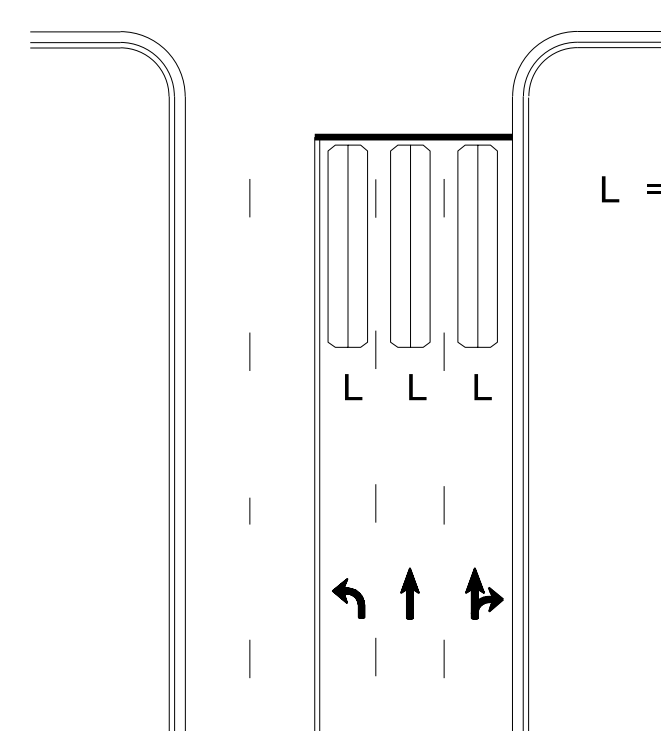


Wide Radius Turn



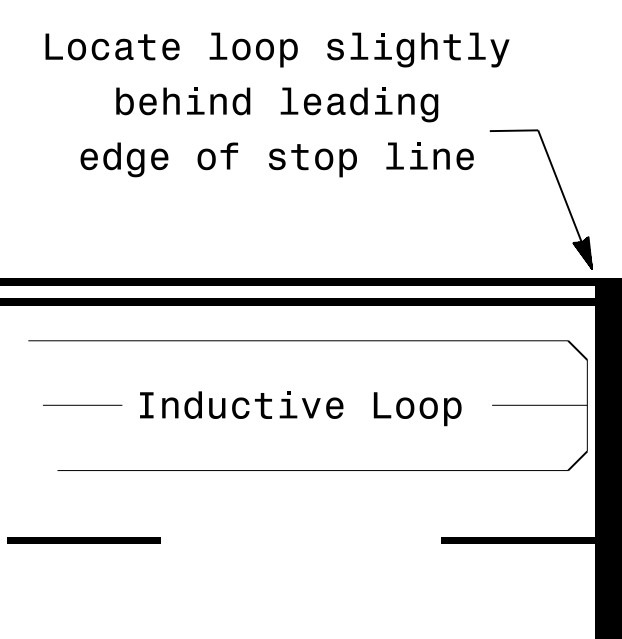
Channelized Turn

Side Street Detection



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

Presence Loop Placement at Stop Lines



Note:
Loop may be located in advance
of stop line under any of the
following conditions:
1) stop line is greater than 15'
from edge of intersecting
roadway
2) loop detects a permissive or
protected/permissive left turn
3) for an exclusive right turn
lane

Recommended Number of Turns

Single 6' X 6' loop
(when wired separately):

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

Quadrupole loops: Use 2-4-2 turns

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

750 N. Greenfield Pkwy, Garner, NC 27529

Typical Signal Loop Locations

PLAN DATE: January 2015 REVIEWED BY: JPG
PREPARED BY: PLA REVIEWED BY:

SEAL
NORTH CAROLINA
PROFESSIONAL ENGINEER
PAMELA L. ALEXANDER
23489

SCALE: N/A

REVISIONS: _____ INIT. DATE _____

SIG. INVENTORY NO. _____ DATE _____