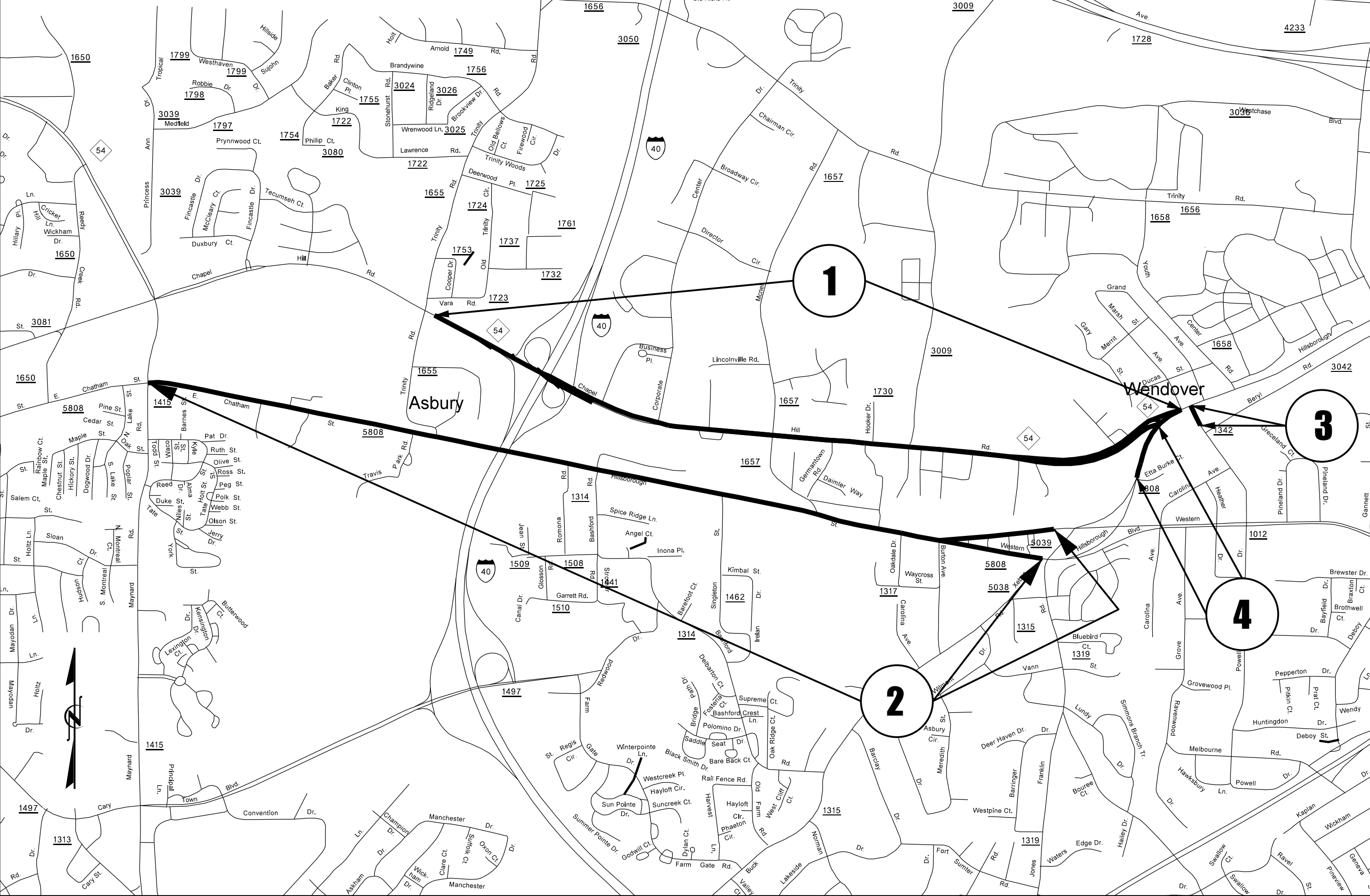


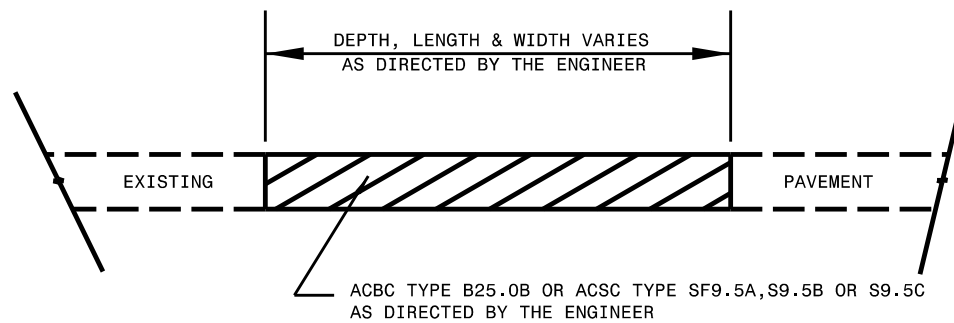
WAKE COUNTY RESURFACING NC HWY 54 & HILLSBOROUGH ST



*****SYSTEM*****
*****CUCN*****
*****DUN*****
*****M*****
*****S*****
*****A*****

PAVEMENT SCHEDULE

C	1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
D	2½" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.
S	PROP. SHOULDER GRADING
U1	EXISTING CONCRETE PAVEMENT WITH ASPHALT OVERLAY
U2	EXISTING ASPHALT PAVEMENT
V1	1½" MILLING
V2	4" MILLING

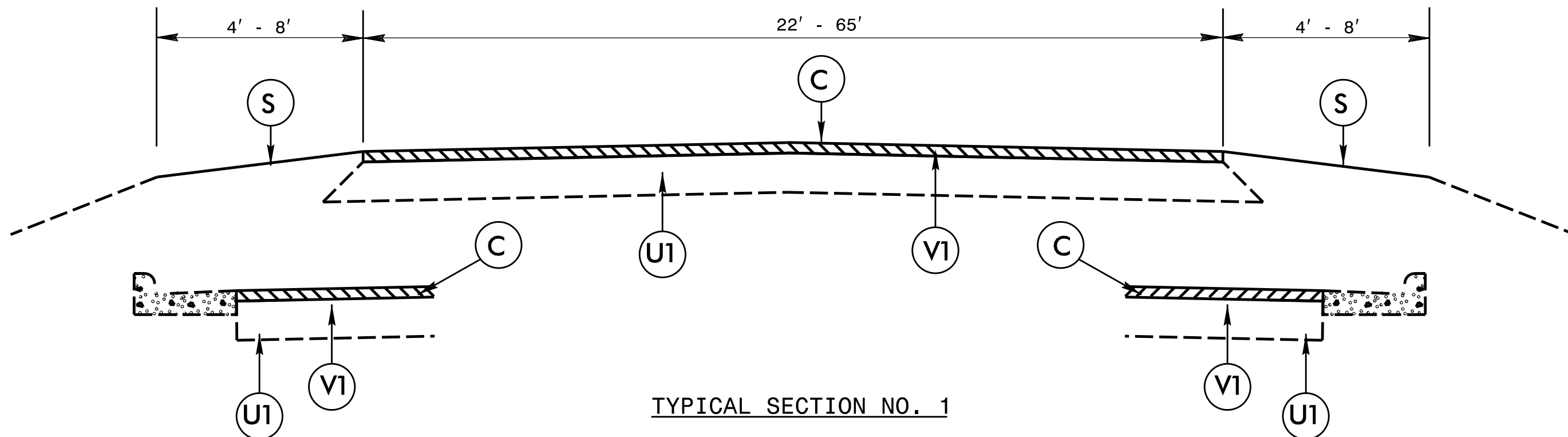


PATCHING EXISTING PAVEMENT

PATCHING TO BE PERFORMED PRIOR TO MILL AND FILL OPERATION

NOTES

ALL UNPAVED S.R. ROADS TO BE RESURFACED 50' FROM EDGE OF PAVEMENT OF MAIN PROJECT
 ALL PAVED S.R. ROADS TO BE RESURFACED TO THE ENDS OF THE RADII, OR AS DIRECTED BY THE ENGINEER.
 EDGES, PAVEMENT WIDENING, INTERSECTIONS AND BRIDGE FLARES ARE INCLUDED IN THE TABLE OF QUANTITIES.
 BRIDGES TO BE RESURFACED AT LOCATIONS AND TO DEPTH AS DIRECTED BY THE ENGINEER.

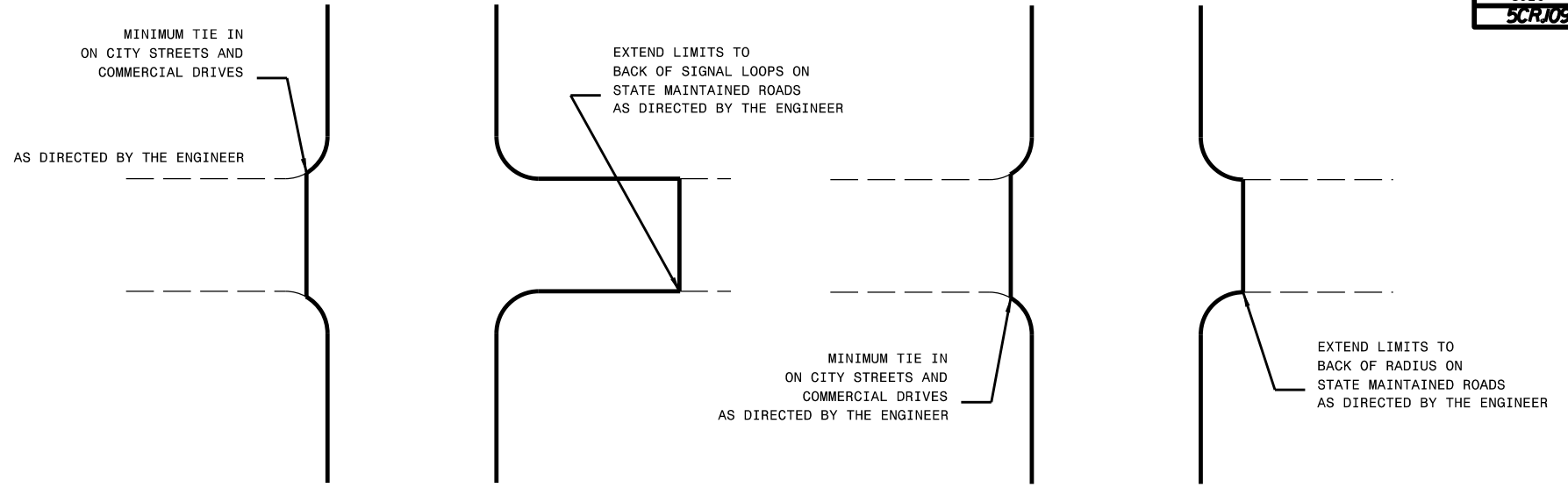


TYPICAL SECTION NO. 1

- NOTES: * CRACK SEAL MAPS 1 AND 4 AFTER MILLING OPERATION
 * AREAS ON MAPS 1 AND 4 THAT ARE CRACK SEALED REQUIRE WARM MIX ASPHALT.

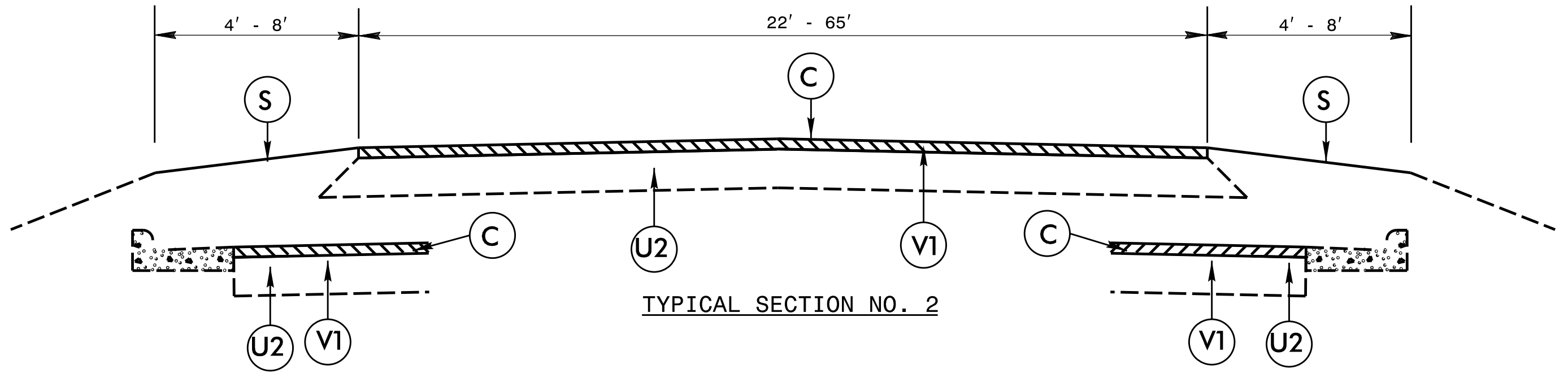
PAVEMENT SCHEDULE

C	1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
D	2½" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.
S	PROP. SHOULDER GRADING
U1	EXISTING CONCRETE PAVEMENT WITH ASPHALT OVERLAY
U2	EXISTING ASPHALT PAVEMENT
V1	1½" MILLING
V2	4" MILLING

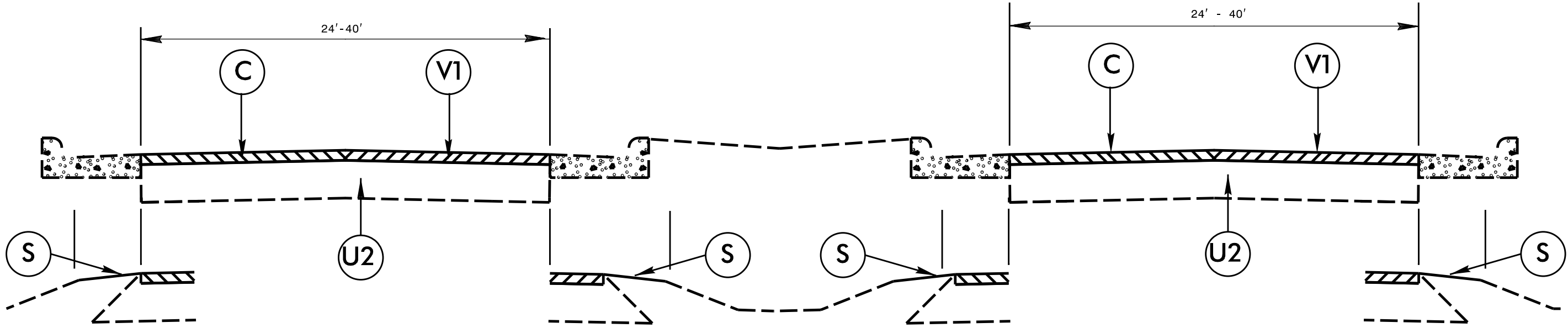


DETAIL OF PROJECT LIMITS AT SIGNALIZED Y LINES

DETAIL OF PROJECT LIMITS AT UNSIGNALIZED Y LINES



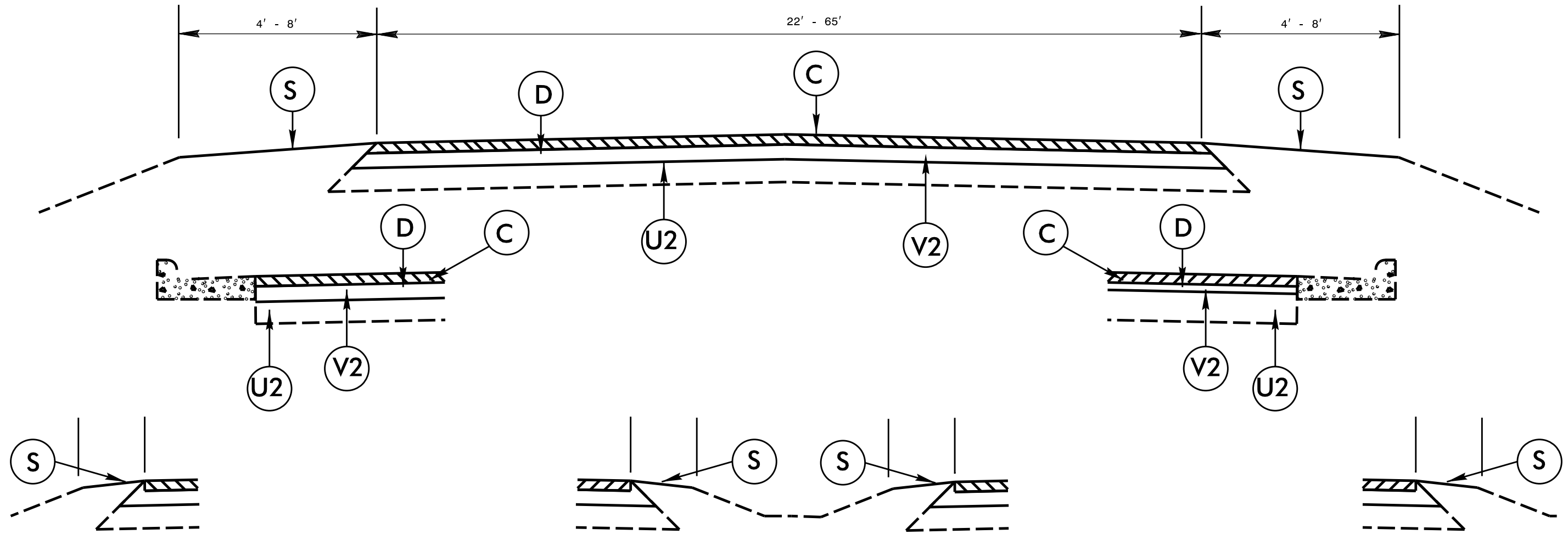
TYPICAL SECTION NO. 2



TYPICAL SECTION NO. 3

PAVEMENT SCHEDULE

C	1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
D	2½" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.
S	PROP. SHOULDER GRADING
U1	EXISTING CONCRETE PAVEMENT WITH ASPHALT OVERLAY
U2	EXISTING ASPHALT PAVEMENT
V1	1½" MILLING
V2	4" MILLING



TYPICAL SECTION NO. 4

PROJECT NO.	SHEET NO.	TOTAL NO.
SCR.10921.49, 5CR.20921.49		

SUMMARY OF QUANTITIES

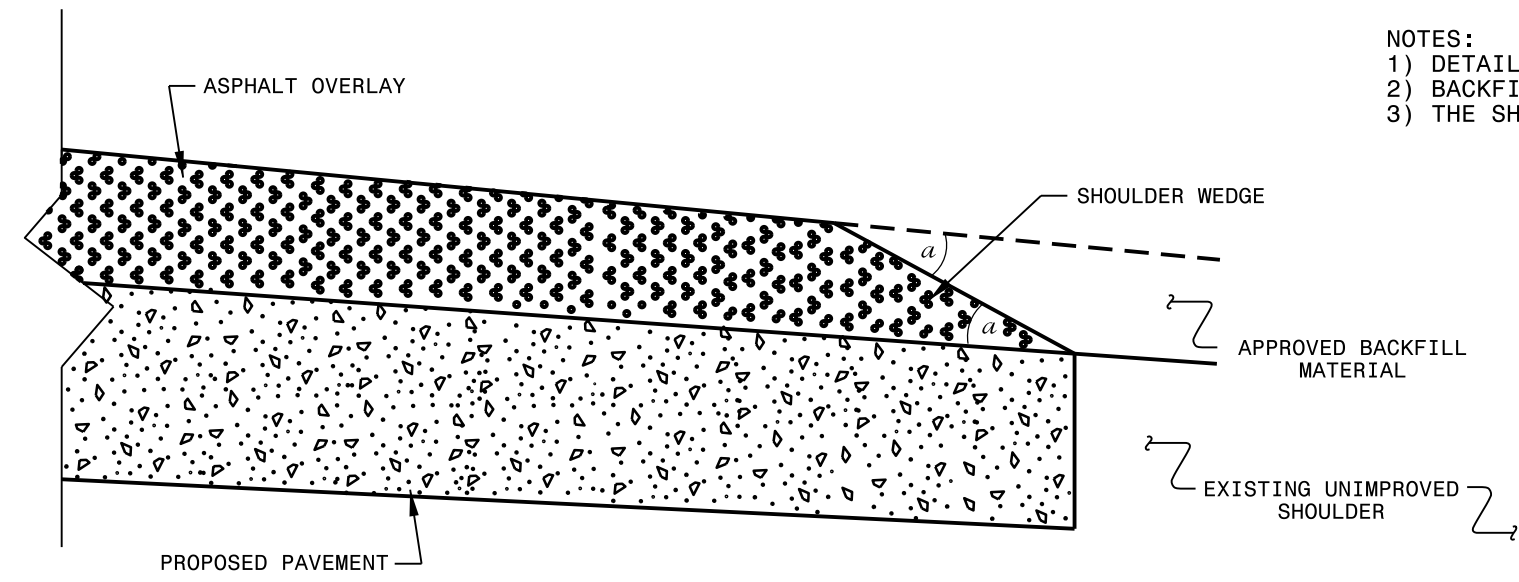
PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP	LANES	LANE TYPE	FINAL SURFACE TESTING REQUIRED	WARM MIX ASPHALT REQUIRED	LENGTH MI	WIDTH FT	BORROW CY	SHOULDER GRADING SMI	INCIDENTAL STONE BASE TONS	4" MILLING SY	1 1/2" MILLING SY	INTER-MEDIATE COURSE, I19.0B TONS	SURFACE COURSE, S9.5B TONS	ASPHALT BINDER FOR PLANT MIX TON	PATCHING EXISTING PAVEMENT TONS	SEALING EXISTING PAVEMENT CRACKS & JOINTS LB	ADJUST MANHOLES EA	ADJUST METER OR VALVE BOX EA	TEMPORARY SILT FENCE LF	WATTLE LF	SEED & MULCHING AC	INDUCTIVE LOOP LF
SCR.10921.49	Wake	1	NC 54	EAST OF SR 1655 - TRINITY RD TO JT AT BURK BROS HARDWARE	1,4	2		NO	YES	2.02	26	285	2.84	142	65,411	2,564	9,824	6,008	832	129	946.00	4	1	206	520	2.06	2,542
TOTAL FOR MAP NO. 1										2.02		285	2.84	142	65,411	2,564	9,824	6,008	832	129	946.00	4	1	206	520	2.06	2,542
TOTAL FOR PROJ NO. SCR.10921.49										2.02		285	2.84	142	65,411	2,564	9,824	6,008	832	129	946.00	4	1	206	520	2.06	2,542
SCR.20921.49	Wake	2	SR 5808 - CHATHAM ST/HILLSBOROUGH ST	SR 1012 - WESTERN BLVD TO SR 1415 - MAYNARD RD	2,3	2		NO	NO	0.913	34	173	1.73	87	30,560		2,830	170	137					126	320	1.26	
TOTAL FOR MAP NO. 2										0.913		173	1.73	87	30,560		2,830	170	137					126	320	1.26	
SCR.20921.49	Wake	3	SR 1342 - POWELL DR	SR 5808 - HILLSBOROUGH ST TO RR	2	2		NO	NO	0.057	23	9	0.09	3	869		71	4	12			1		6	12	0.03	
TOTAL FOR MAP NO. 3										0.057		9	0.09	3	869		71	4	12			1		6	12	0.03	
SCR.20921.49	Wake	4	SR 5808 - HILLSBOROUGH ST	NC 54 TO LIMIT OF BRG REMOVAL PROJ	1	2		NO	YES	0.113	24	7	0.07	4	2,062		191	11	12		983.00						
TOTAL FOR MAP NO. 4										0.113		7	0.07	4	2,062		191	11	12		983.00						
TOTAL FOR PROJ NO. SCR.20921.49										1.083		189	1.89	94	33,491		3,092	185	161		983.00	1		132	332	1.29	
GRAND TOTAL										3.103		474	4.73	236	65,411	36,055	9,824	9,100	1,017	290	1,929.00	5	1	338	852	3.35	2,542

THERMOPLASTIC AND PAINT QUANTITIES

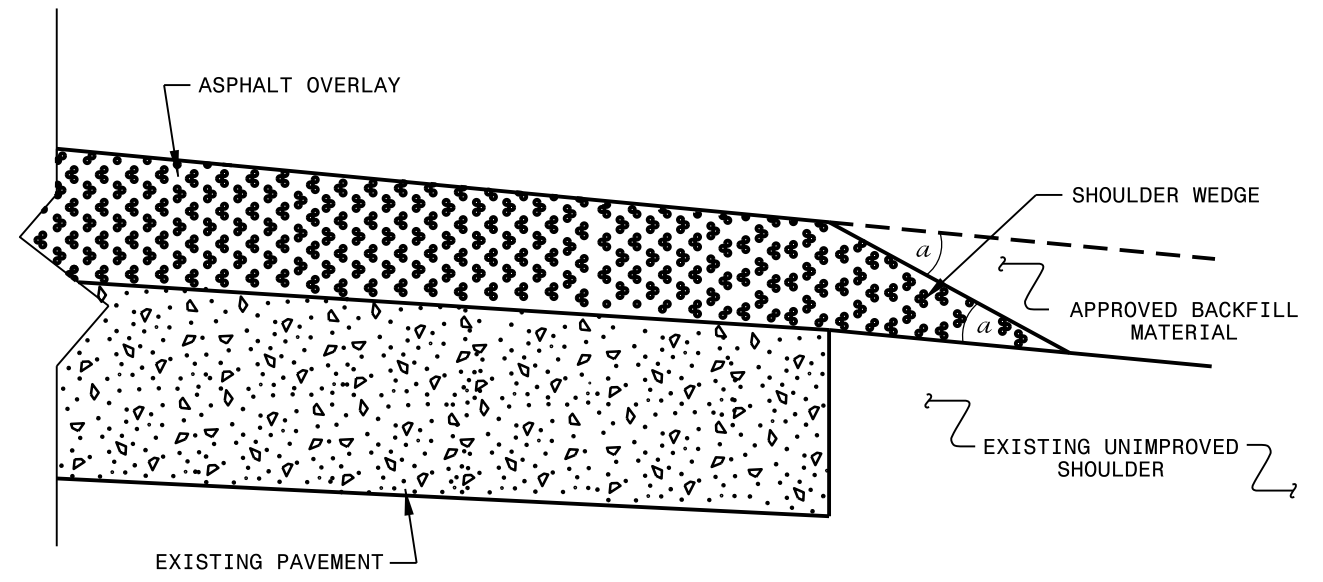
PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP	LANES	LANE TYPE	LENGTH	WIDTH	4399000000-N	4510000000-N	4590000000-E	4685000000-E		4686000000-E		4695000000-E		4697000000-E		4705000000-E	4710000000-E	4721000000-E			4725000000-E							
										TEMPORARY TRAFFIC CONTROL	LAW ENFORCEMENT	GENERIC TRAFFIC CONTROL ITEM ADVANCE/GENERAL WARNING SIGNS SF	4" X 90 M WHITE THERMO	4" X 90 M YELLOW THERMO	4" X 120 M WHITE THERMO	4" X 120 M YELLOW THERMO	8" X 90 M WHITE THERMO	8" X 90 M YELLOW THERMO	8" X 120 M WHITE THERMO	16" X 120 M WHITE THERMO	24" X 120 M WHITE THERMO	THERMO MSG SCHOOL 120 M	THERMO MSG ONLY 120 M	THERMO RXR 120 M	THERMO LT ARROW 90 M	THERMO RT ARROW 90 M	THERMO STR ARROW 90 M	THERMO STR & LT ARROW 90 M	THERMO STR & RT ARROW 90 M	THERMO MERGE ARROW 90 M			
SCR.10921.49	Wake	1	NC 54	EAST OF SR 1655 - TRINITY RD TO JT AT BURK BROS HARDWARE	1,4	2		2.02	26	0.61	85	176	10,197	4,433	4,466	14,210	1,440	275	572			723	12	4		33	21	25	2	9	3		
TOTAL FOR MAP NO. 1								2.02		0.61	85	176	10,197	4,433	4,466	14,210	1,440	275	572			723	12	4		33	21	25	2	9	3		
TOTAL FOR PROJ NO. SCR.10921.49								2.02		0.61	85	176	10,197	4,433	4,466	14,210	1,440	275	572			723	12	4		33	21	25	2	9	3		
															14,630	18,676	1,715														93		
SCR.20921.49	Wake	2	SR 5808 - CHATHAM ST/HILLSBOROUGH ST	SR 1012 - WESTERN BLVD TO SR 1415 - MAYNARD RD	2,3	2		0.913	34	0.35	50	144	24,500		2,675	27,300	450									68	10	4	4	3	4		
TOTAL FOR MAP NO. 2								0.913		0.35	50	144	24,500		2,675	27,300	450									68	10	4	4	3	4		
SCR.20921.49	Wake	3	SR 1342 - POWELL DR	SR 5808 - HILLSBOROUGH ST TO RR	2	2		0.057	23	0.01	10	112	536		536					50	39			2									
TOTAL FOR MAP NO. 3								0.057		0.01	10	112	536		536					50	39			2									
SCR.20921.49	Wake	4	SR 5808 - HILLSBOROUGH ST	NC 54 TO LIMIT OF BRG REMOVAL PROJ	1	2		0.113	24	0.02	20	112	385		1,210																		
TOTAL FOR MAP NO. 4								0.113		0	20	112	385		1,210																		
TOTAL FOR PROJ NO. SCR.20921.49								1.083		0	80	368	25,421		2,675	29,046	450			50	109			2		68	10	4	4	3	4		
													25,421		31,721	450							2								93		
GRAND TOTAL										3.103		1	165	544	35,618	4,433	7,141	43,256	1,890	275	572		50	832	12	4	2	101	31	29	6	12	7
															40,051		50,397	2,165							18						186		

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP	LANES	LANE TYPE	LENGTH	WIDTH	4770000000-E			4805000000-N	4810000000-E		4820000000-E		4835000000-E		4845000000-N					4850000000-E	4900000000-N		4905000000-N			
										4" WHITE COLD APPLIED PLASTIC, TYPE III	4" YELLOW COLD APPLIED PLASTIC, TYPE III	COLD APPLIED PLASTIC RT ARROW, TYPE III	4" WHITE PAINT	4" YELLOW PAINT	8" WHITE PAINT	8" YELLOW PAINT	24" WHITE PAINT	PAINT MSG SCHOOL	PAINT MSG ONLY	PAINT LT ARROW	PAINT RT ARROW	PAINT STR ARROW	PAINT STR & LT ARROW	PAINT STR & RT ARROW	PAINT MERGE ARROW	4" LINE REMOVAL	YELLOW & YELLOW MARKERS	CRYSTAL & RED MARKERS	SNOW PLOWABLE MARKERS		
SCR.10921.49	Wake	1	NC 54	EAST OF SR 1655 - TRINITY RD TO JT AT BURK BROS HARDWARE	1,4	2		2.02	26	280		4	14,663	18,643	2,012	275	723	12	4	33	21	25	2	9	3	280			440		
TOTAL FOR MAP NO. 1								2.02		280		4	14,663	18,643	2,012	275	723	12	4	33	21	25	2	9	3	280			440		
TOTAL FOR PROJ NO. SCR.10921.49								2.02		280		4	14,663	18,643	2,012	275	723	12	4	33	21	25	2	9	3	280			440		
										280			33,306		2,287					16											
SCR.20921.49	Wake	2	SR 5808 - CHATHAM ST/HILLSBOROUGH ST	SR 1012 - WESTERN BLVD TO SR 1415 - MAYNARD RD	2,3	2		0.913	34	700			875													1,575	500	236			
TOTAL FOR MAP NO. 2								0.913		700			875													1,575	500	236			
SCR.20921.49	Wake	3	SR 1342 - POWELL DR	SR 5808 - HILLSBOROUGH ST TO RR	2	2		0.057	23																	8					
TOTAL FOR MAP NO. 3								0.057																			8				
SCR.20921.49	Wake	4	SR 5808 - HILLSBOROUGH ST	NC 54 TO LIMIT OF BRG REMOVAL PROJ	1	2		0.113	24			385	1,210															3			
TOTAL FOR MAP NO. 4								0.113				385	1,210																3		
TOTAL FOR PROJ NO. SCR.20921.49								1.083		700		875	385	1,210													1,575	508	239		
										1,575			1,595																	747	
GRAND TOTAL										3.103		980	875	4	15,048	19,853	2,012	275	723	12	4	33	21	25	2	9	3	1,855	508	239	440
															1,855		34,901	2,287			16			93					747		

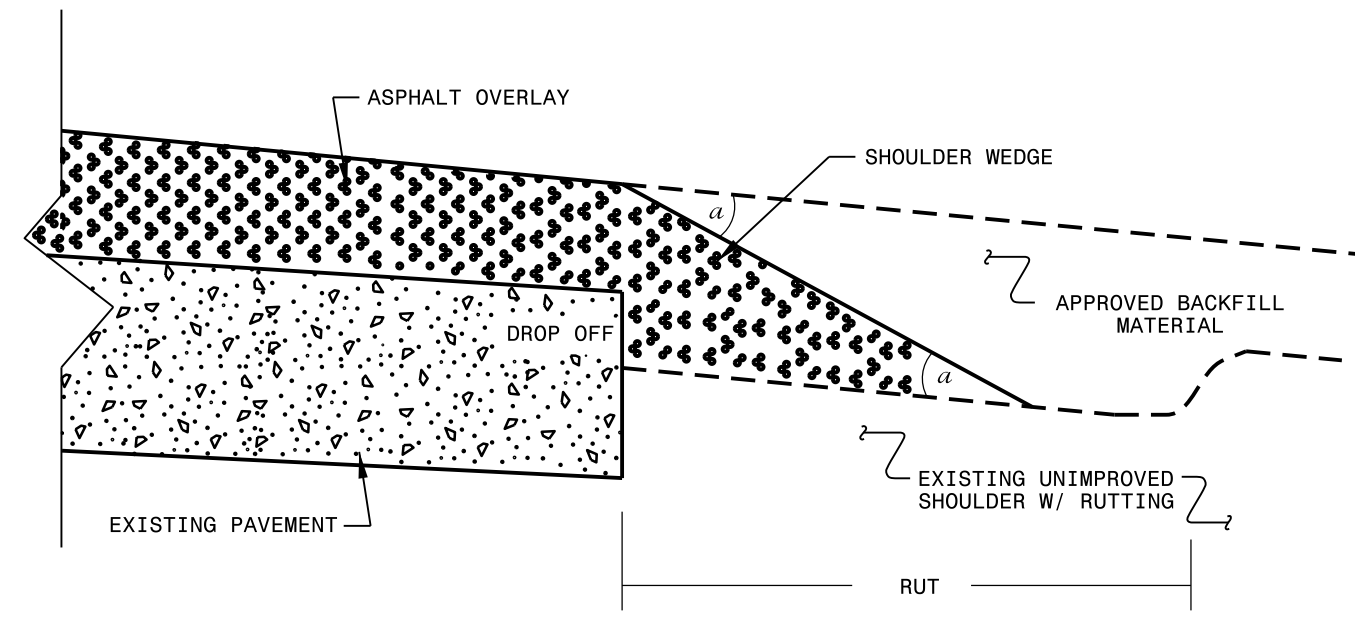
- NOTES:
- 1) DETAIL DOES NOT APPLY TO OGAFD AND ULTRA-THIN BONDED WEARING COURSE.
 - 2) BACKFILL SHOULDER WITH APPROVED MATERIAL.
 - 3) THE SHOULDER WEDGE DEVICE MAY BE DISENGAGED AT PAVED DRIVEWAYS AND SIDE STREETS.



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: 10/16/12		
CHECKED BY:	DATE:		
FILE SPEC.: susr/details/stand/shoulderwedgedetail.dgn			

SYSTEMS DESIGN
 USER NAME

**DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA**

SOIL STABILIZATION TIMEFRAMES

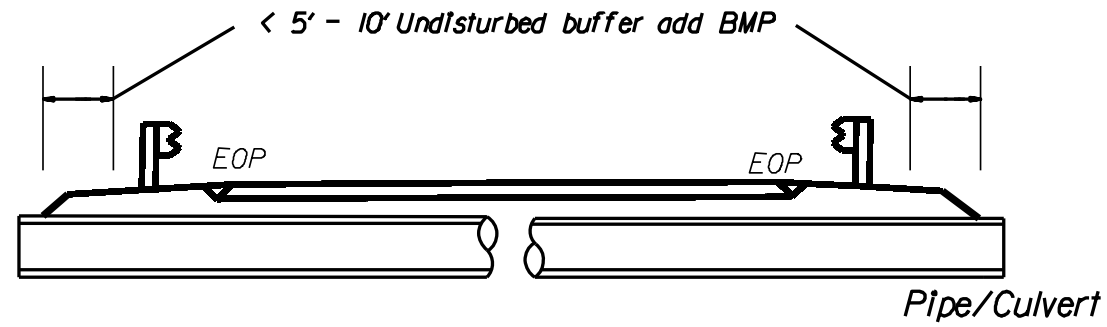
<i>SITE DESCRIPTION</i>	<i>STABILIZATION TIME</i>	<i>TIMEFRAME EXCEPTIONS</i>
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HOW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
SLOPES 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 HOW ZONES.

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

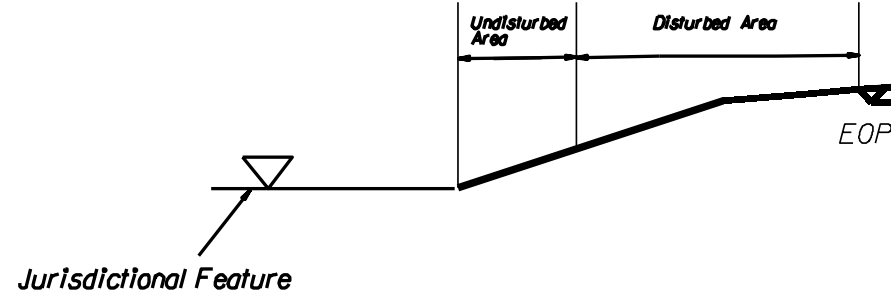
BMP Options: Wattle, Silt Fence, or Hardened Aggregate.

EROSION CONTROL DETAIL

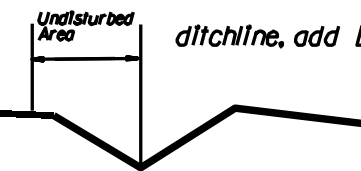
PROJECT REFERENCE NO. 1-1111	SHEET NO. 10-11/10-11
RDW SHEET NO. ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



< 5' - 10' Undisturbed buffer from jurisdictional feature add BMP



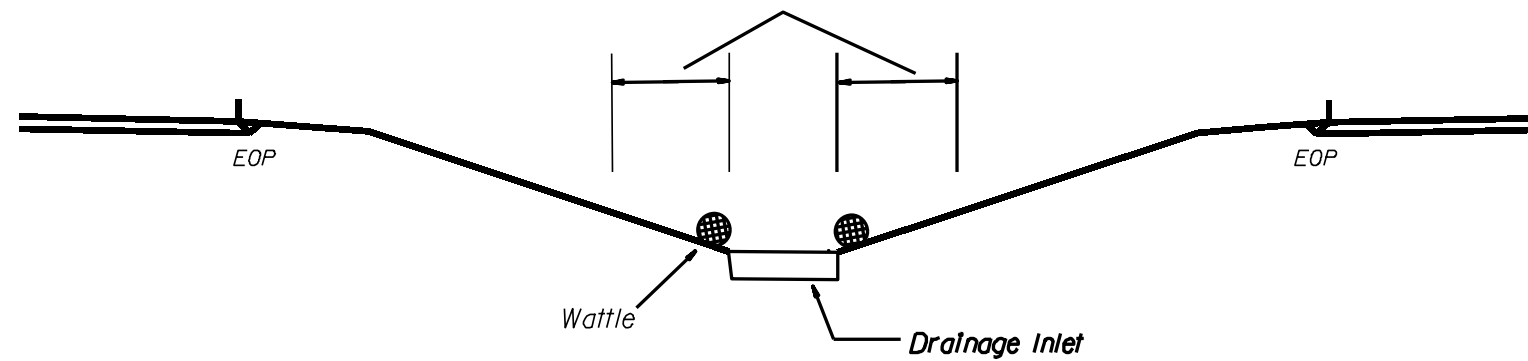
< 5' - 10' Undisturbed buffer from ditchline, add BMP



Use BMP's if shoulders and/or front slopes and/or ditchline and/or back slopes are disturbed

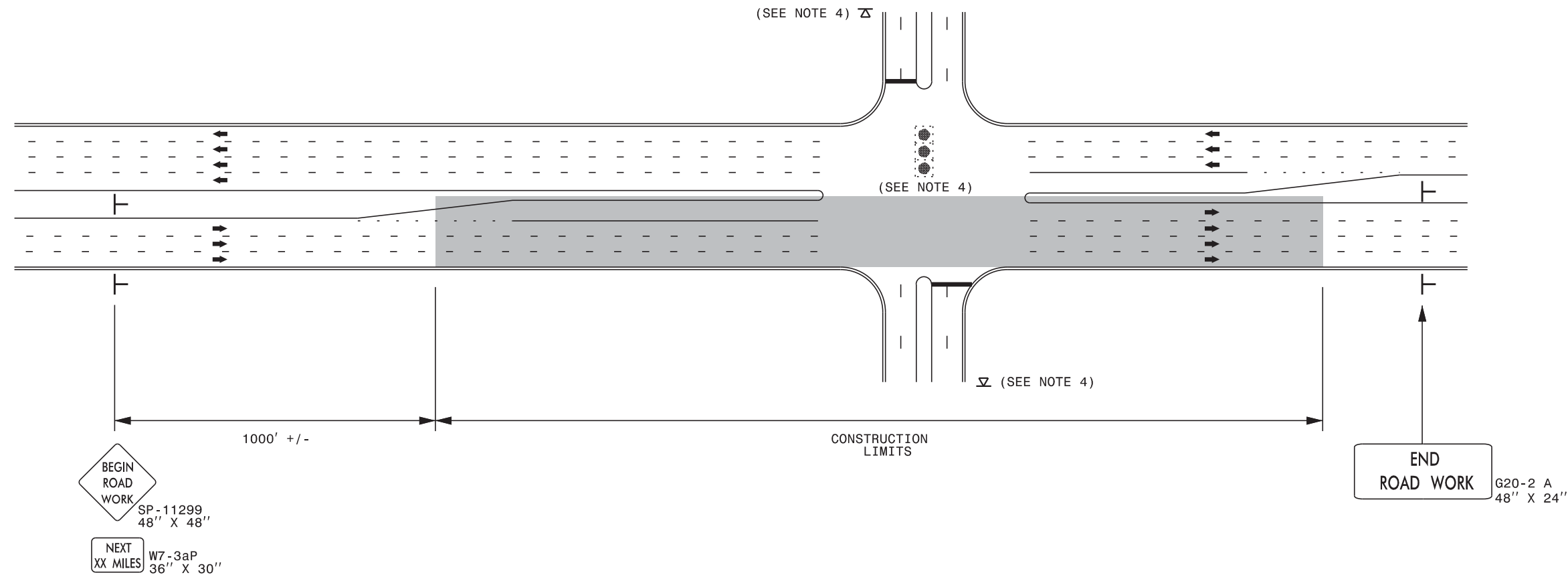


< 5' - 10' Undisturbed buffer from Inlet, add wattle



NOT TO SCALE

URBAN / SUBURBAN WORKZONES

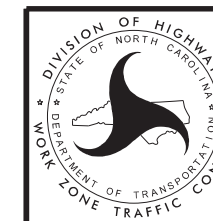


NOTES:

- 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) USE LAW ENFORCEMENT TO CONTROL TRAFFIC AT SIGNALIZED INTERSECTIONS AND 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.

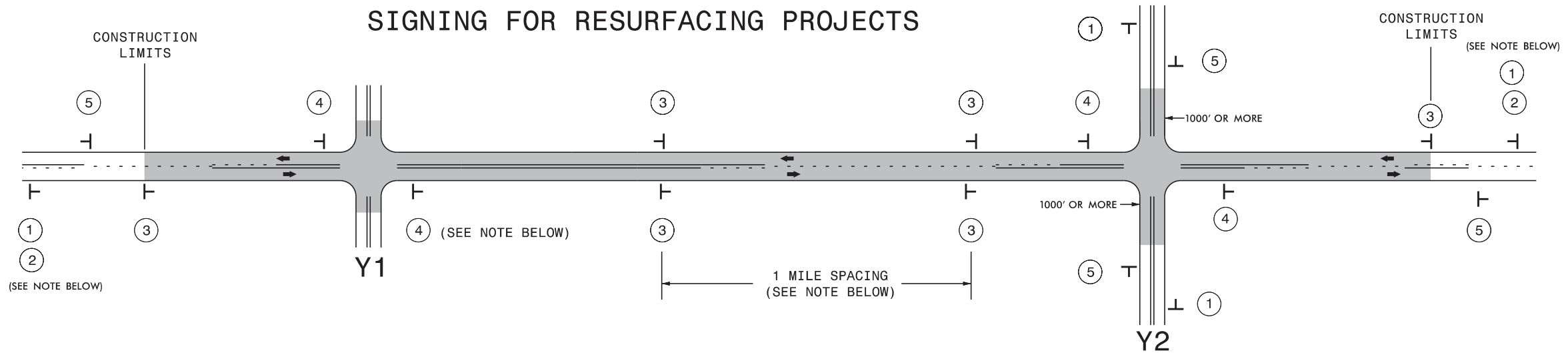
LEGEND

- STATIONARY SIGN
- DIRECTION OF TRAFFIC FLOW



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

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	<p>PLACE 1000' PRIOR TO BEGINNING OF CONSTRUCTION LIMITS. ONLY USED ON -Y- LINES IF RESURFACING LIMITS EXTEND 1000' ALONG -Y- LINE.</p>	<p>NO REQUIRED STATIONARY SIGNING FOR THE FOLLOWING -Y- LINE CONDITIONS:</p> <ol style="list-style-type: none"> LESS THAN 1000' OF RESURFACING ALONG -Y- LINE SUBDIVISION ROADS 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>
②	<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>	
③	<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>	
④	<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>	
⑤	<p>PLACE 500' FOLLOWING THE END OF CONSTRUCTION LIMITS.</p>	

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