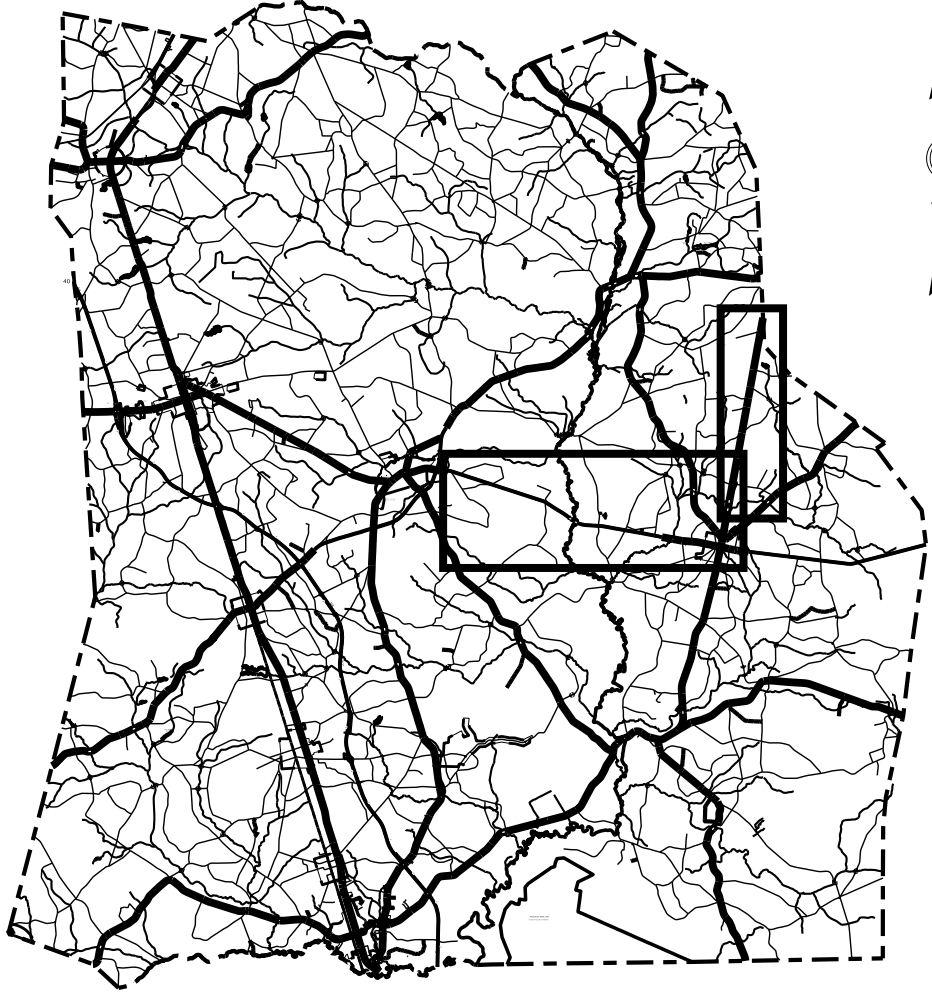
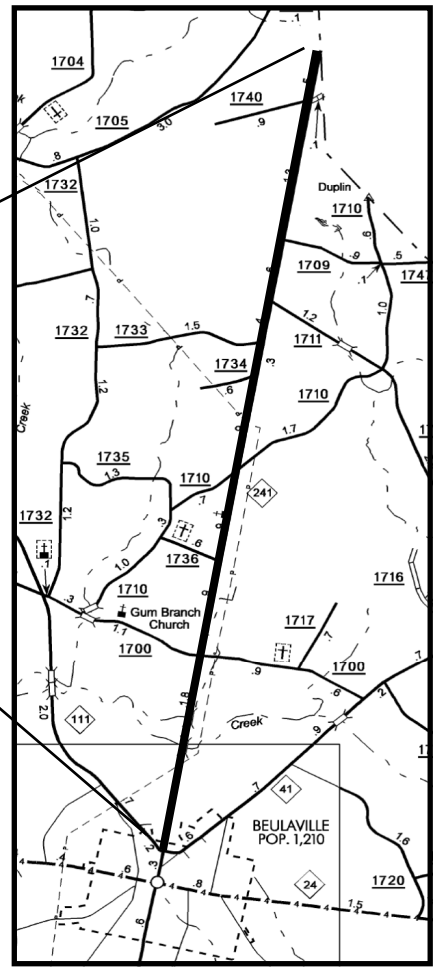


# DUPLIN COUNTY



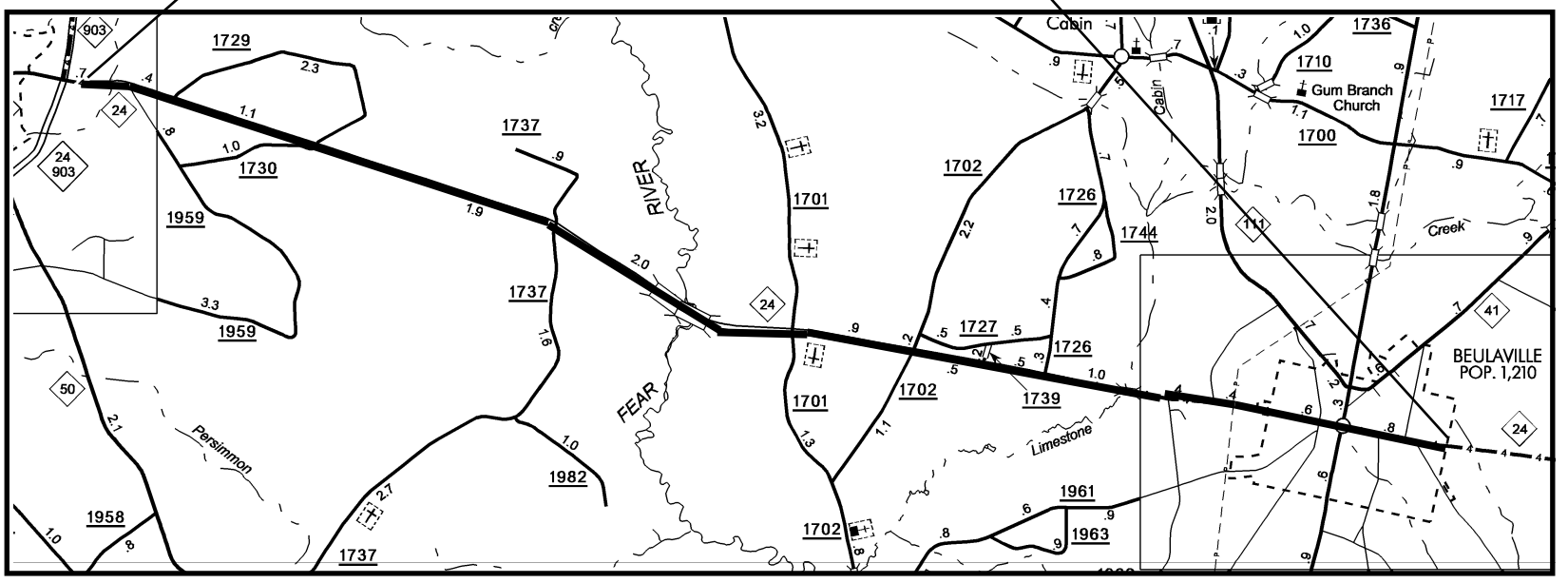
**1** NC-241



**2** NC-24

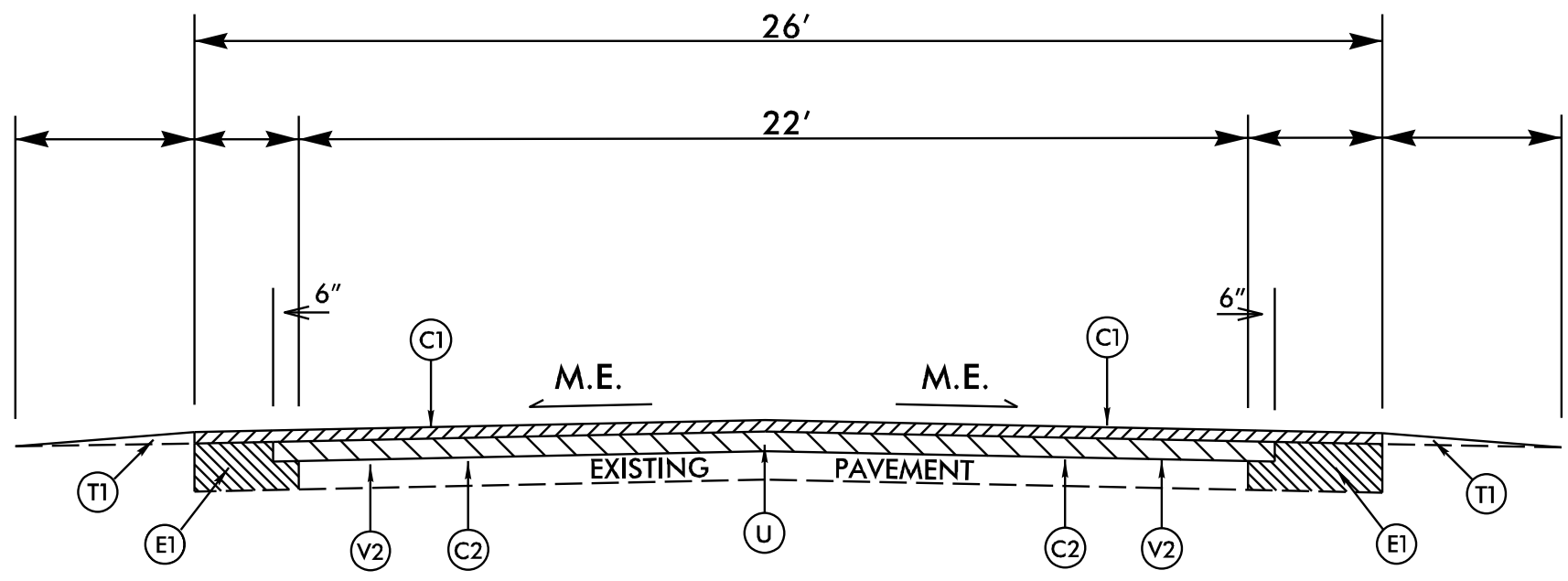
**DUPLIN COUNTY**

Kenansville



**MAPS N.T.S.**

DC00217 Duplin County



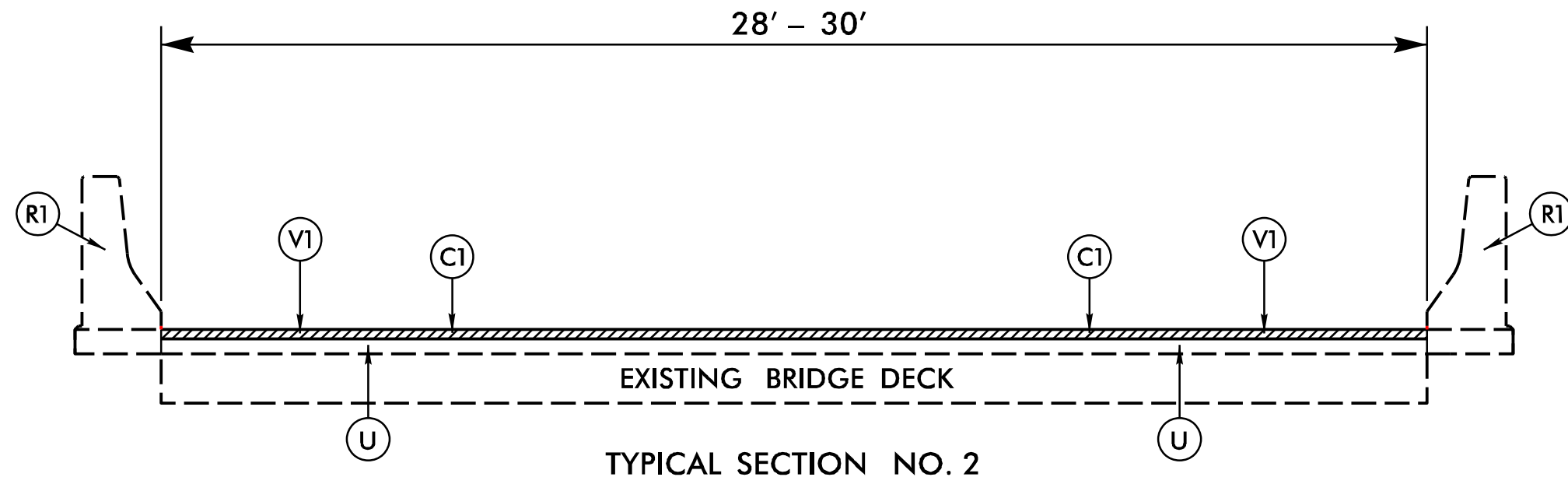
**TYPICAL SECTION NO. 1**  
NC 241

PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1.5" DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ.YD.
C2	PROP. APPROX. 2.5" DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE TYPE I19.0C, AT AN AVERAGE RATE OF 285 LBS. PER SQ.YD.
E1	PROP. APPROX. 5.5" DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 627 LBS. PER SQ.YD.
R1	EXISTING BRIDGE RAIL
T	AGGREGATE SHOULDER BORROW
U	EXISTING PAVEMENT
V1	MILLING ASPHALT PAVEMENT 1.5" DEPTH
V2	MILLING ASPHALT PAVEMENT 2.5" DEPTH, 23' WIDTH

CONSTRUCTION SEQUENCE:

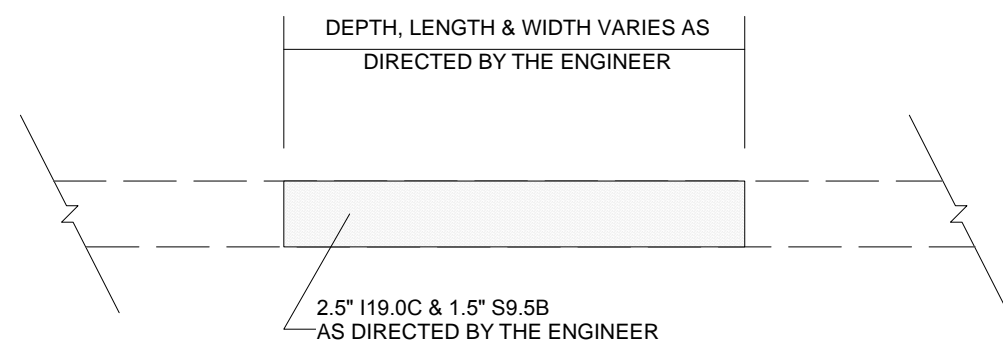
WIDEN PAVEMENT ON EACH SIDE USING MILLING MACHINE WITH 2' MILL DRUM  
 MILL EACH LANE (2.5" DEPTH)  
 RESURFACE MILLED SURFACE (I19.0C) BY THE END OF EACH WORK DAY  
 RESURFACE ROADWAY WITH 1.5" OF S9.5B

DC00217 Duplin County



NC 241

PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1.5" DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ.YD.
C2	PROP. APPROX. 2.5" DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE TYPE I19.0C, AT AN AVERAGE RATE OF 285 LBS. PER SQ.YD.
E1	PROP. APPROX. 5.5" DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 627 LBS. PER SQ.YD.
R1	EXISTING BRIDGE RAIL
T	AGGREGATE SHOULDER BORROW
U	EXISTING PAVEMENT
V1	MILLING ASPHALT PAVEMENT 1.5" DEPTH
V2	MILLING ASPHALT PAVEMENT 2.5" DEPTH, 23' WIDTH



**NC 24 MILL PATCHING**

**PATCHING EXISTING PAVEMENT:**

THE MILL PATCHING ON MAP 2 CONSISTS OF MILLING DELINEATED AREAS 4" DEEP AND REPLACE WITH 2.5" ASPHALT CONCRETE INTERMEDIATE COURSE AND 1.5" OF ASPHALT CONCRETE SURFACE COURSE.

USE ASPHALT SURFACE COURSE IN THE TOP 1.5 INCHES OF THE PATCH, AND SCHEDULE OPERATIONS SO THAT ALL AREAS WHERE PAVEMENT HAS BEEN REMOVED WILL BE REPAIRED ON THE SAME DAY OF THE PAVEMENT REMOVAL AND ALL LANES OF TRAFFIC RESTORED.



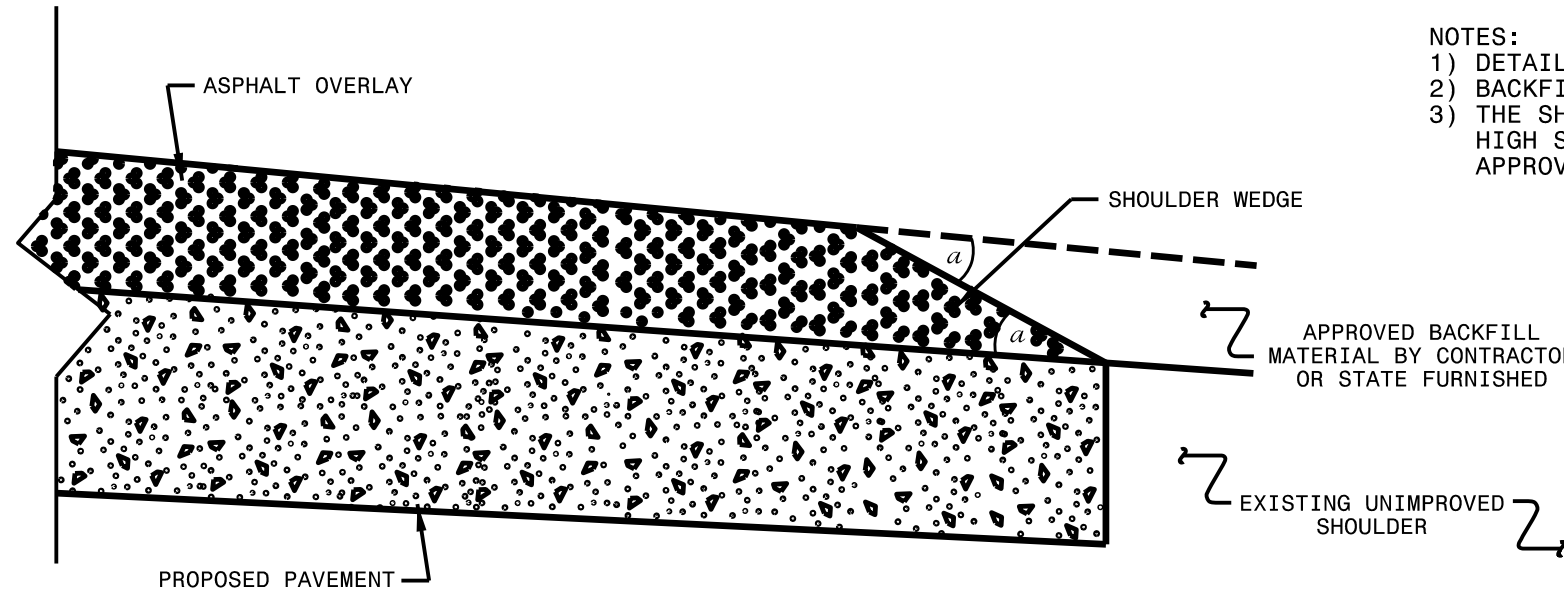
PROJECT NO.	SHEET NO.	TOTAL NO.
2018CPT.03.21.10311, 2018CPT.03.21.10312	5	

### THERMOPLASTIC AND PAINT QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	LANE TYPE	LENGTH	WIDTH	4413000000-E	4457000000-N	4685000000-E		4686000000-E		4710000000-E	4725000000-E	4810000000-E		4835000000-E	4905000000-N	
										WORK ZONE ADVANCE/GENERAL WARNING SIGNING	TEMPORARY TRAFFIC CONTROL	4" X 90 M WHITE THERMO	4" X 90 M YELLOW THERMO	4" X 120 M YELLOW THERMO	4" X 120 M WHITE THERMO	24" X 120 M WHITE THERMO	THERMO STR ARROW 90 M	4" WHITE PAINT	4" YELLOW PAINT	24" WHITE PAINT	SNOW PLOWABLE MARKERS (Y/Y)	SNOW PLOWABLE MARKERS (C/R)
										SF	LS	LF	LF	LF	LF	LF	EA	LF	LF	LF	EA	EA
2018CPT.03.21.10311	Duplin	1	NC-241	FROM .15 MI NORTH OF NC-111 TO LENOIR COUNTY LINE	1 & 2	2	2WU	7.5	26	534	0.79	80,700		49,500		300		161,400	99,000	300	548	
<b>TOTAL FOR MAP NO. 1</b>								7.5		534	0.79	80,700		49,500		300		161,400	99,000	300	548	
<b>TOTAL FOR PROJ NO. 2018CPT.03.21.10311</b>								7.5		534	0.79	80,700		49,500		300		161,400	99,000	300	548	
												<b>80,700</b>	<b>49,500</b>			<b>260,400</b>			<b>548</b>			
2018CPT.03.21.10312	Duplin	2	NC-24	VAR LOCATIONS: FROM NC-903 TO EAST BEULAVILLE CITY LIMITS	3	2	2WD	10.4	28		0.21	5,500	5,500		2,750		4					130
<b>TOTAL FOR MAP NO. 2</b>								10.4			0	5,500	5,500		2,750		4					130
<b>TOTAL FOR PROJ NO. 2018CPT.03.21.10312</b>								10.4			0	5,500	5,500		2,750		4					130
												<b>11,000</b>	<b>2,750</b>						<b>130</b>			
<b>GRAND TOTAL</b>								17.9		534	1	86,200	5,500	49,500	2,750	300	4	161,400	99,000	300	548	130
												<b>91,700</b>	<b>52,250</b>			<b>260,400</b>			<b>678</b>			

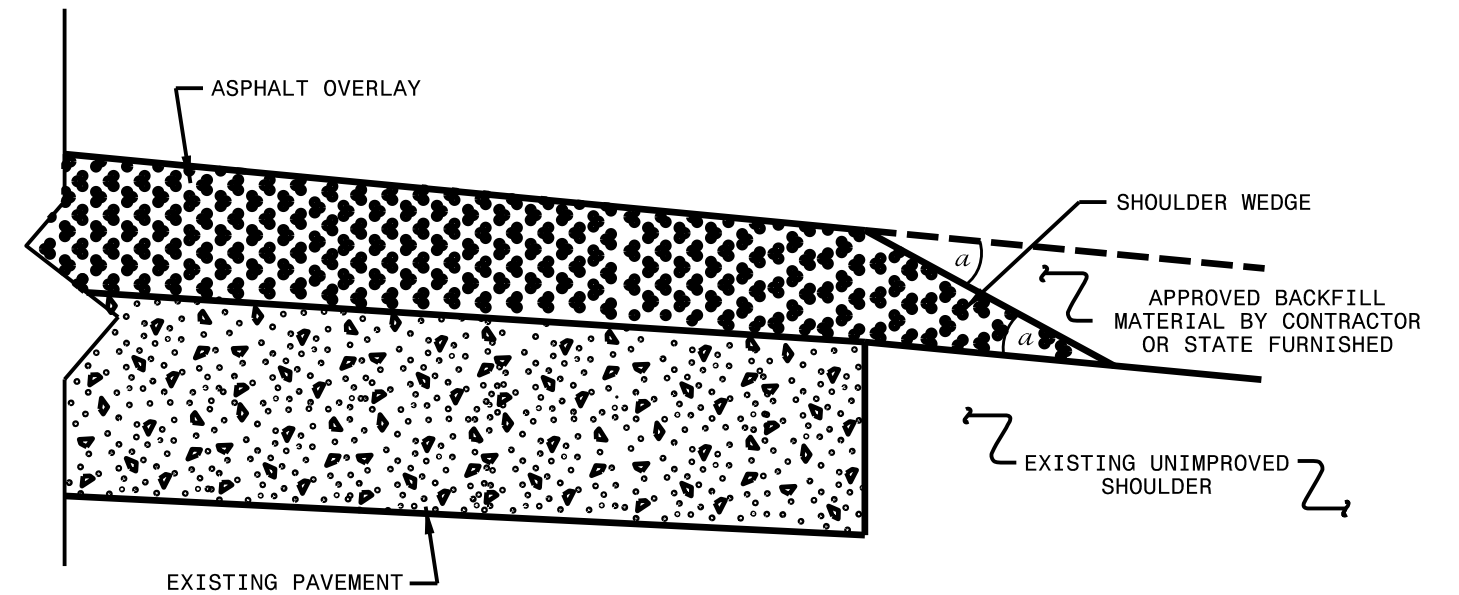
**NOTES:**

- 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, SIDE STREETS, HIGH SHOULDERS, AND OTHER LOCATIONS NOT FEASIBLE TO CONSTRUCT AS APPROVED BY THE ENGINEER.



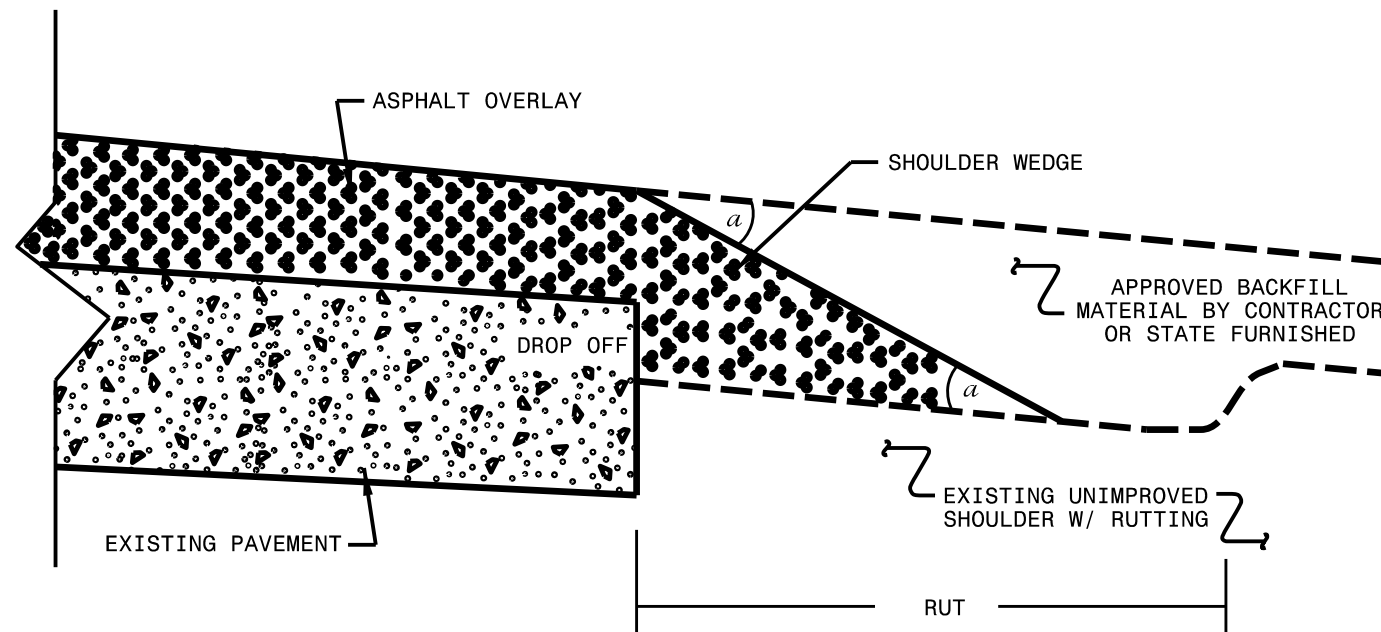
**SHOULDER WEDGE DETAIL**

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



**SHOULDER WEDGE DETAIL**

(Resurfacing Projects w/ NO Widening)



**SHOULDER WEDGE DETAIL**

(Resurfacing Adjacent to Rutted Shoulder)

- SHOULDER WEDGE ANGLE = 30°

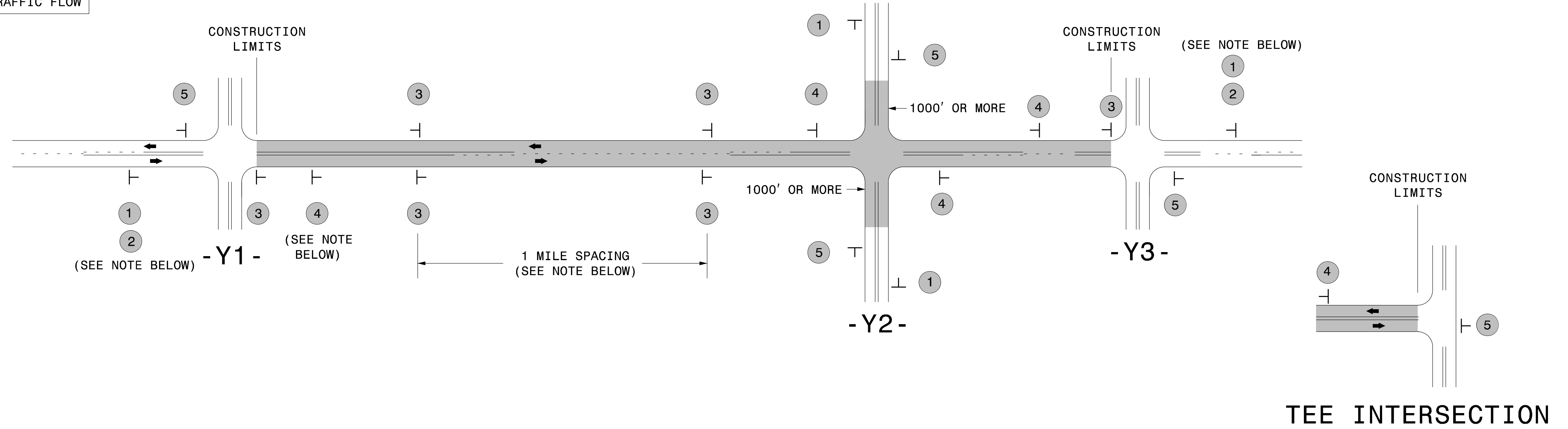
**CONTRACT STANDARDS AND DEVELOPMENT UNIT**  
Office 919-707-6950 FAX 919-250-4119

**SHOULDER WEDGE DETAILS**

ORIGINAL BY: T.SPELL	DATE: 7-19-11
MODIFIED BY:	DATE: 2/2/16
CHECKED BY:	DATE:
FILE SPEC.: s:\usr\details\stand\shoulderwedgedetail.dgn	

# SIGNING FOR RESURFACING PROJECTS

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



## MAINLINE (-L-) SIGNING

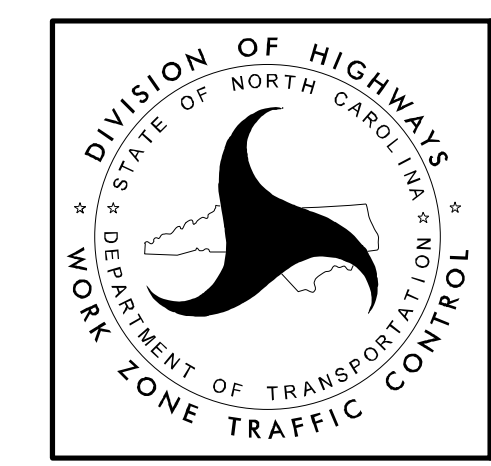
## -Y- LINE SIGNING

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"> <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, 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.

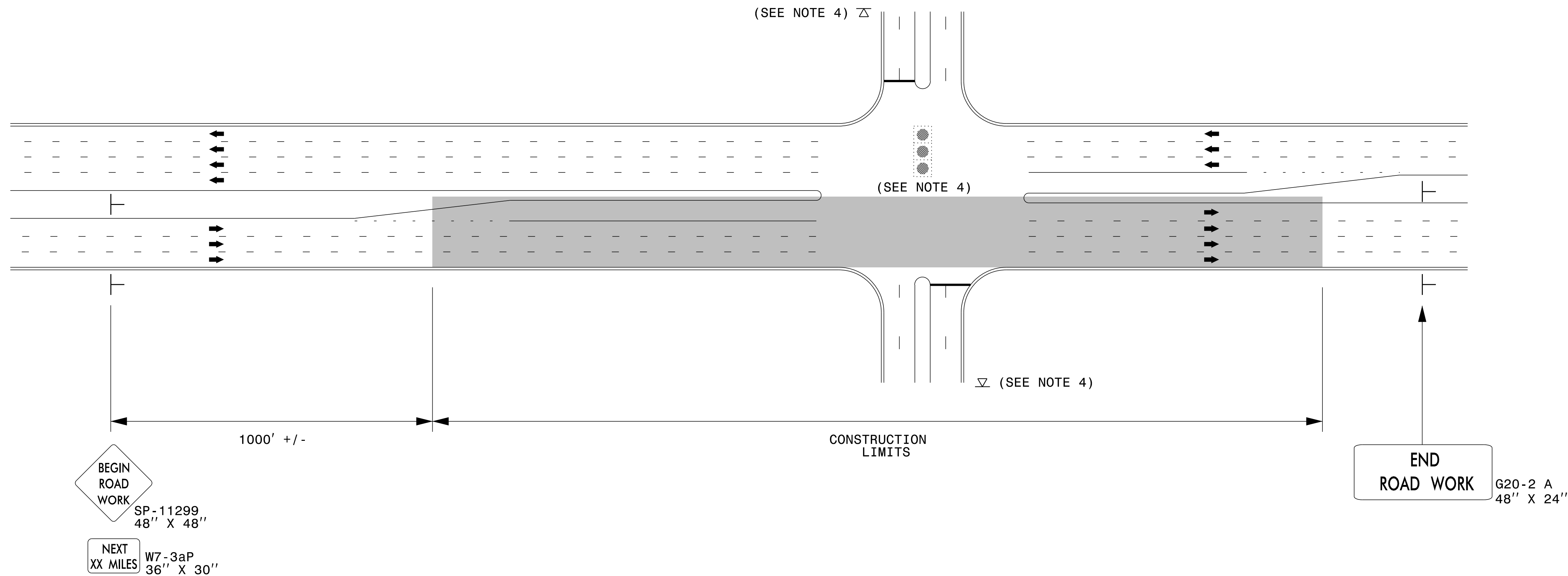
**MAPS LESS THAN 2 MILES**

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**

## URBAN / SUBURBAN WORKZONES

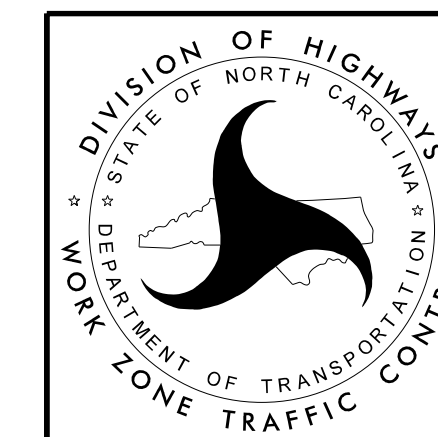


### NOTES:

- 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**