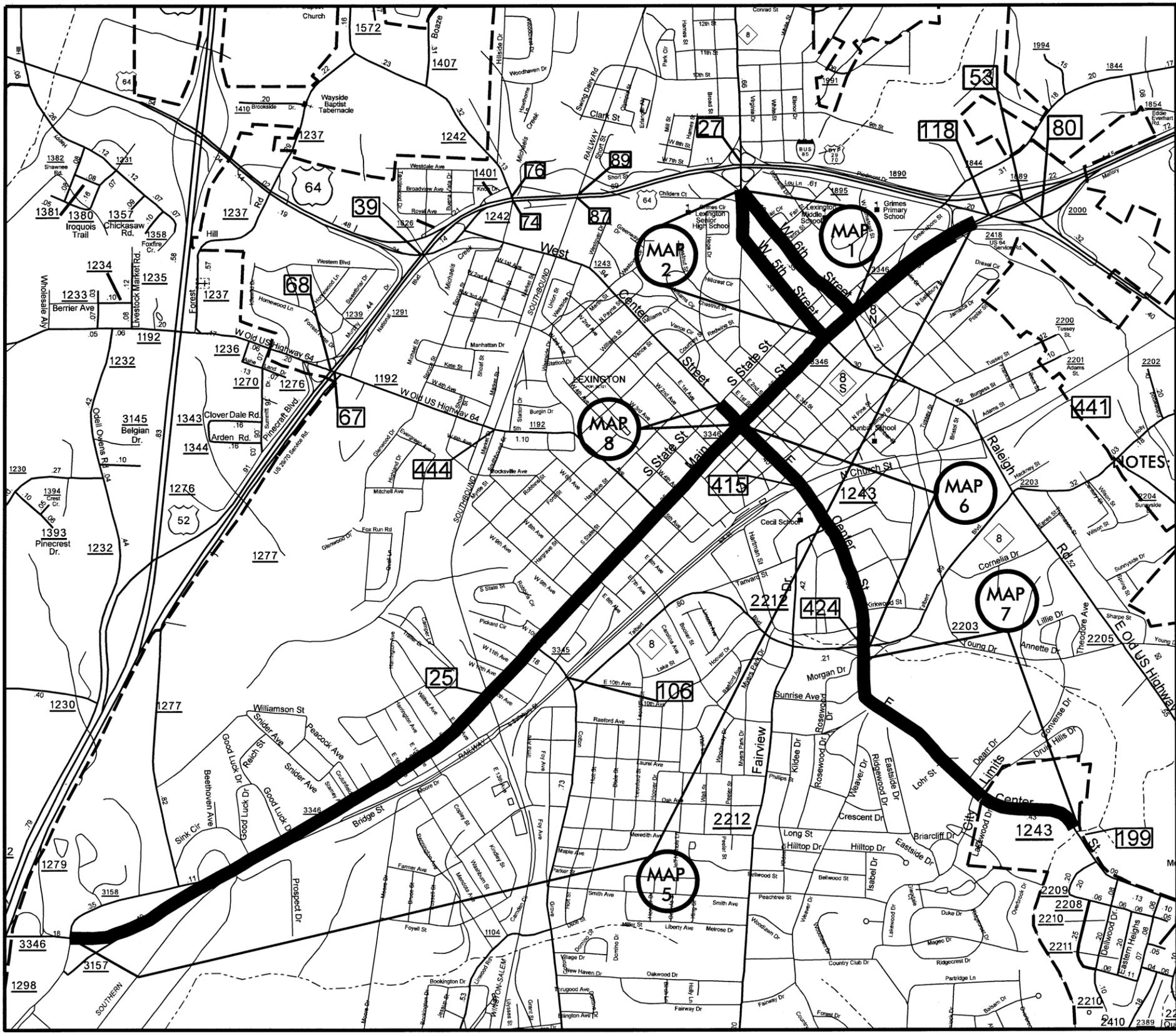


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MAP 1  
 NC 8 W. 6th St/ML King Dr.  
 Curb Reveal 7 ft. from gutter, 0-1½"

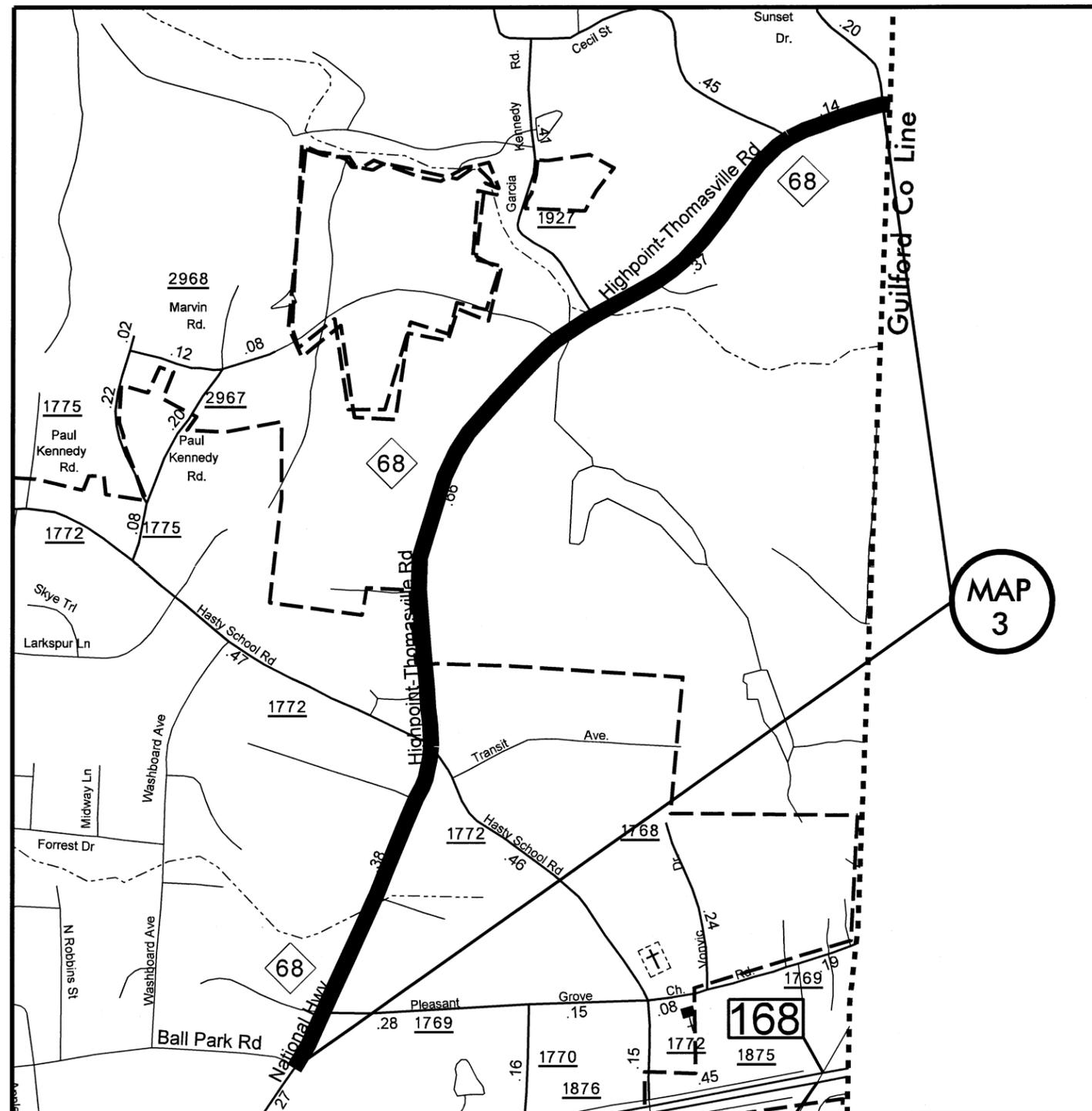
MAP 2  
 NC 8- W. 5th St.  
 Mill 4" depth full width

MAP 5  
 Main Street SR 3346  
 Tie ¾" S4.75A down at the gutter line.

MAP 6  
 E. Center St. SR 1243  
 ALL WORK ON THIS MAP TO BE NIGHT TIME  
 ONLY 7 P.M. TO 6 A.M., Monday-Sunday.  
 Mill 1½" depth full width curb to curb.  
 DO NOT PAVE RAMP.  
 \*Coordinate with Bridge Project Engineer  
 Jeremy Guy (336)747-7950 for C202978

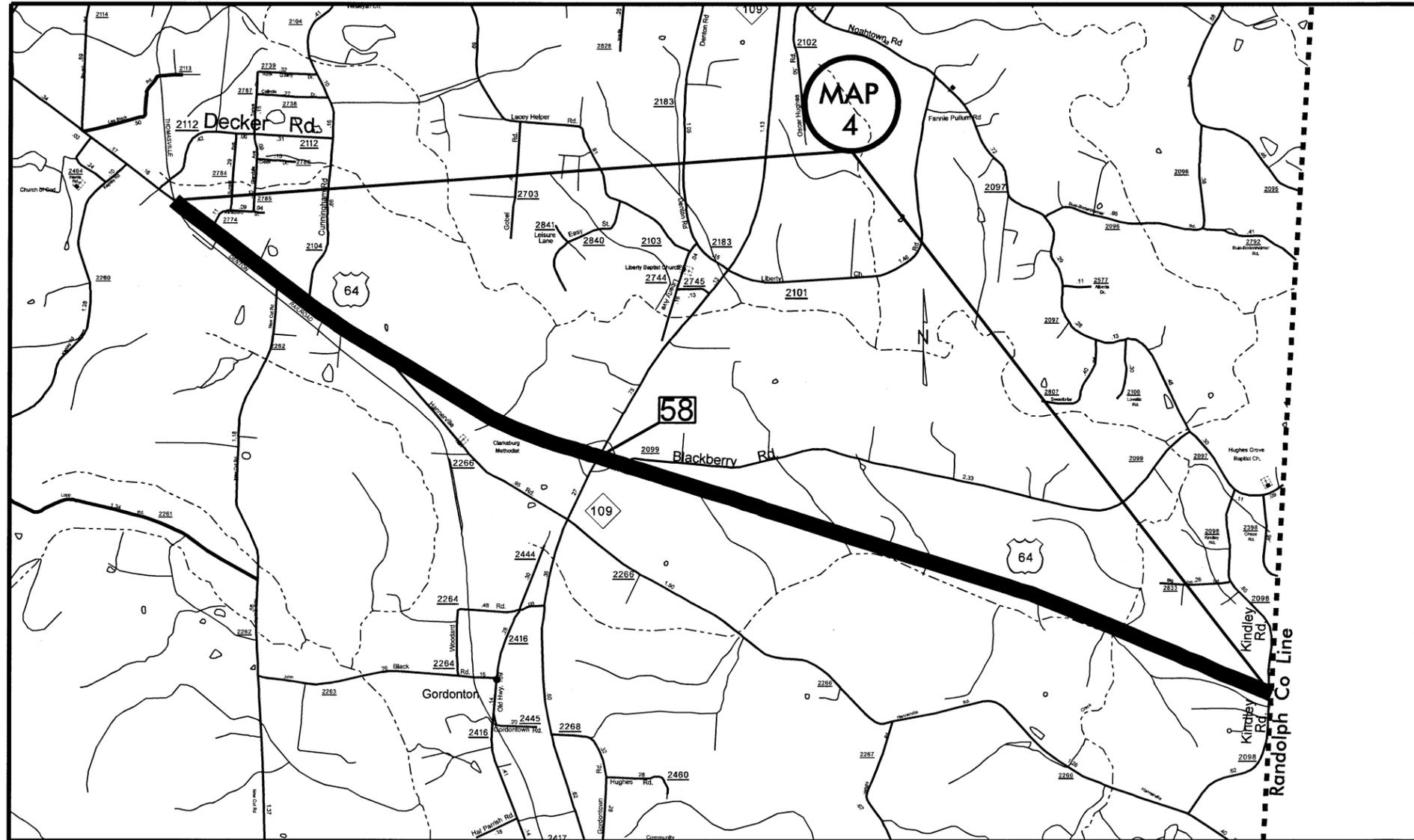
MAP 7  
 E. Center St. SR 1243  
 ALL WORK ON THIS MAP TO BE NIGHT TIME  
 ONLY 7 P.M. TO 6 A.M., Monday-Sunday.  
 Mill 1½" depth full width  
 DO NOT PAVE RAMP.  
 \*Coordinate with Bridge Project Engineer  
 Jeremy Guy (336)747-7950 for C202978

MAP 8  
 W. Center St. SR 1243  
 ALL WORK ON THIS MAP TO BE NIGHT TIME  
 ONLY 7 P.M. TO 6 A.M.,  
 Monday-Sunday. Mill 1½" depth full width  
 curb to curb.

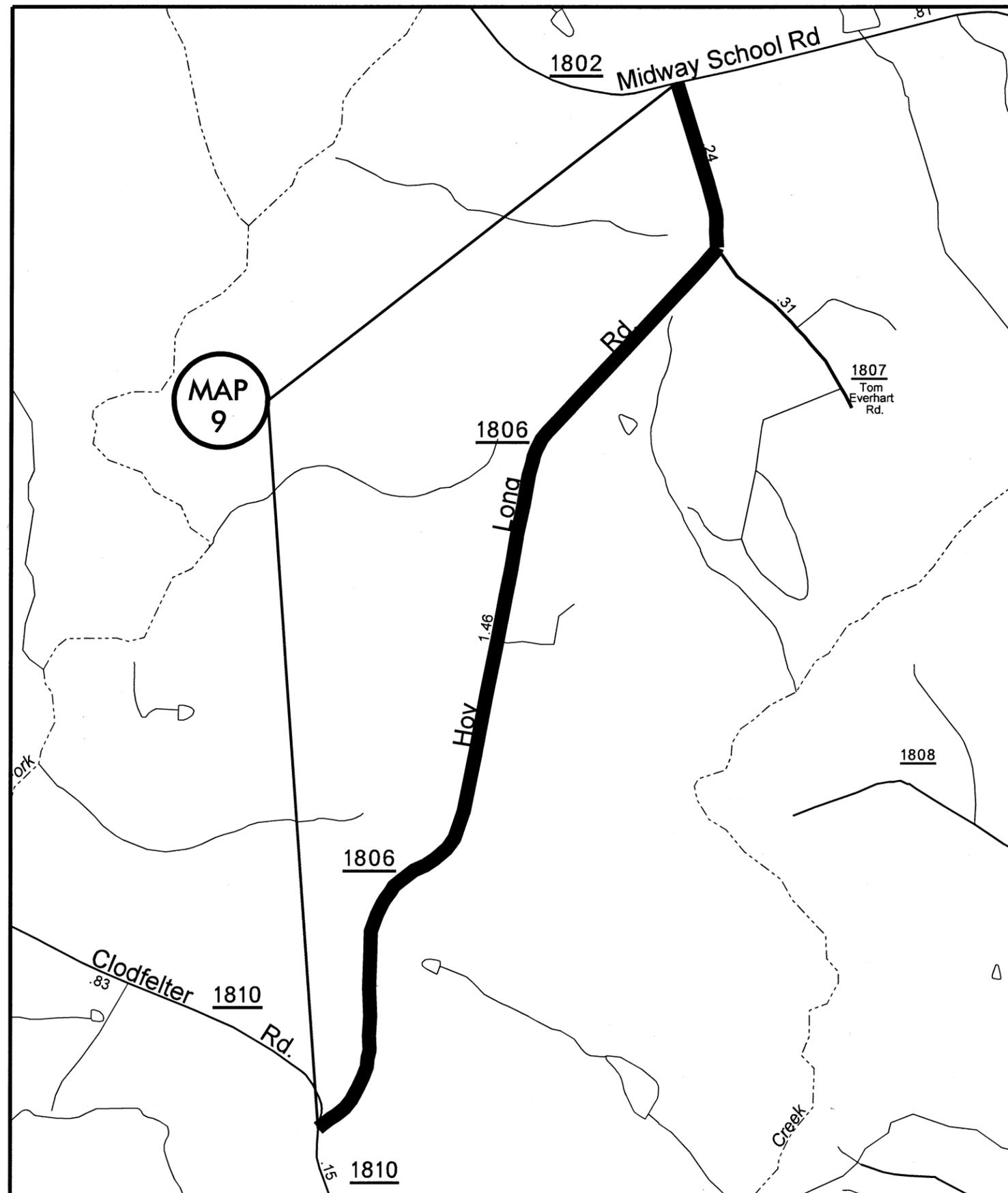


MAP 3  
 NC 68  
 Curb Reveal 7 ft. from gutter, 0-1½"

**DAVIDSON COUNTY**  
 NORTH CAROLINA

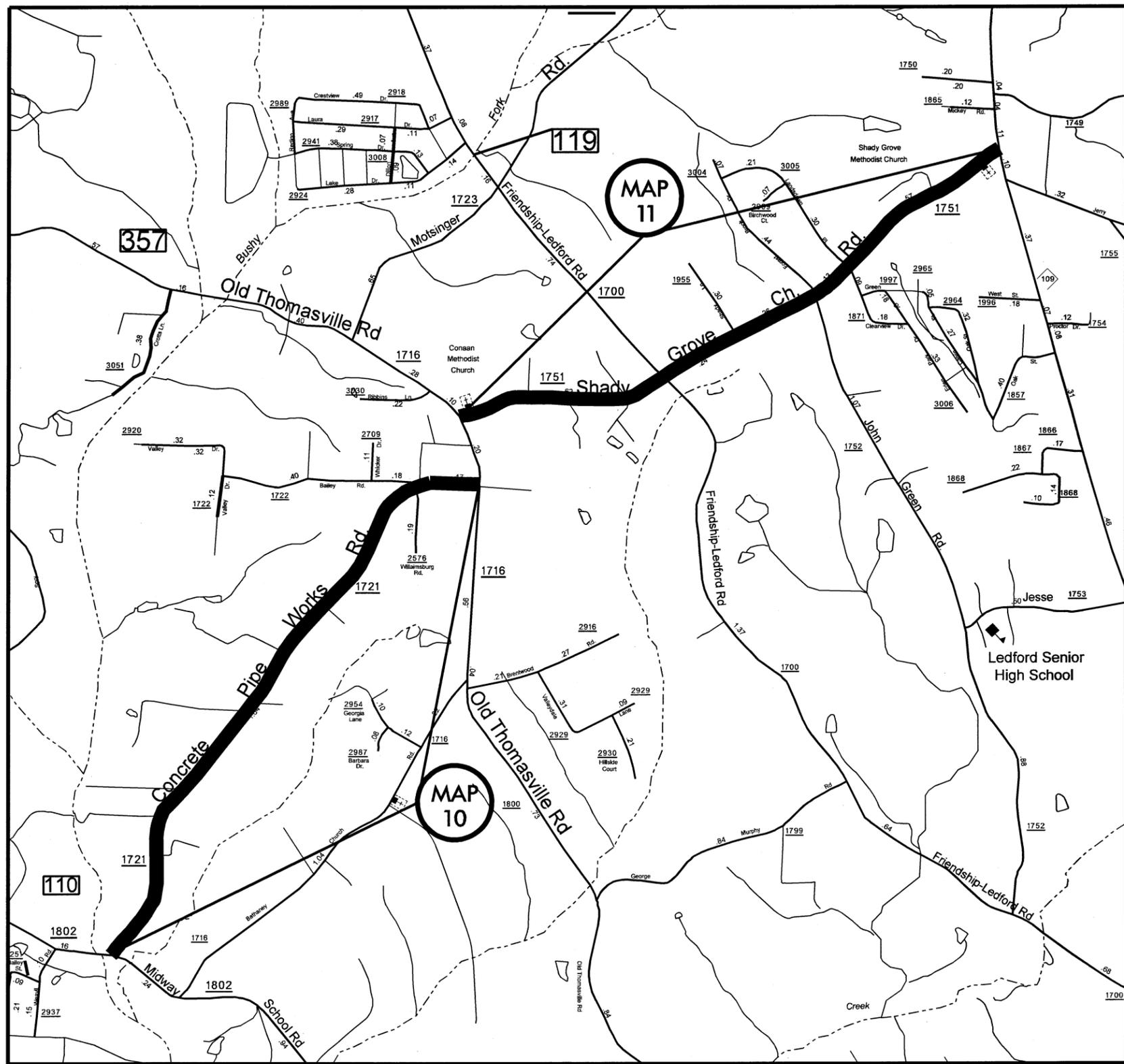


**MAP 4**  
**US 64**  
 Mill 1½" Depth full width,  
 edge of pavement to edge of pavement.  
 Replace Milled Rumble Strips.



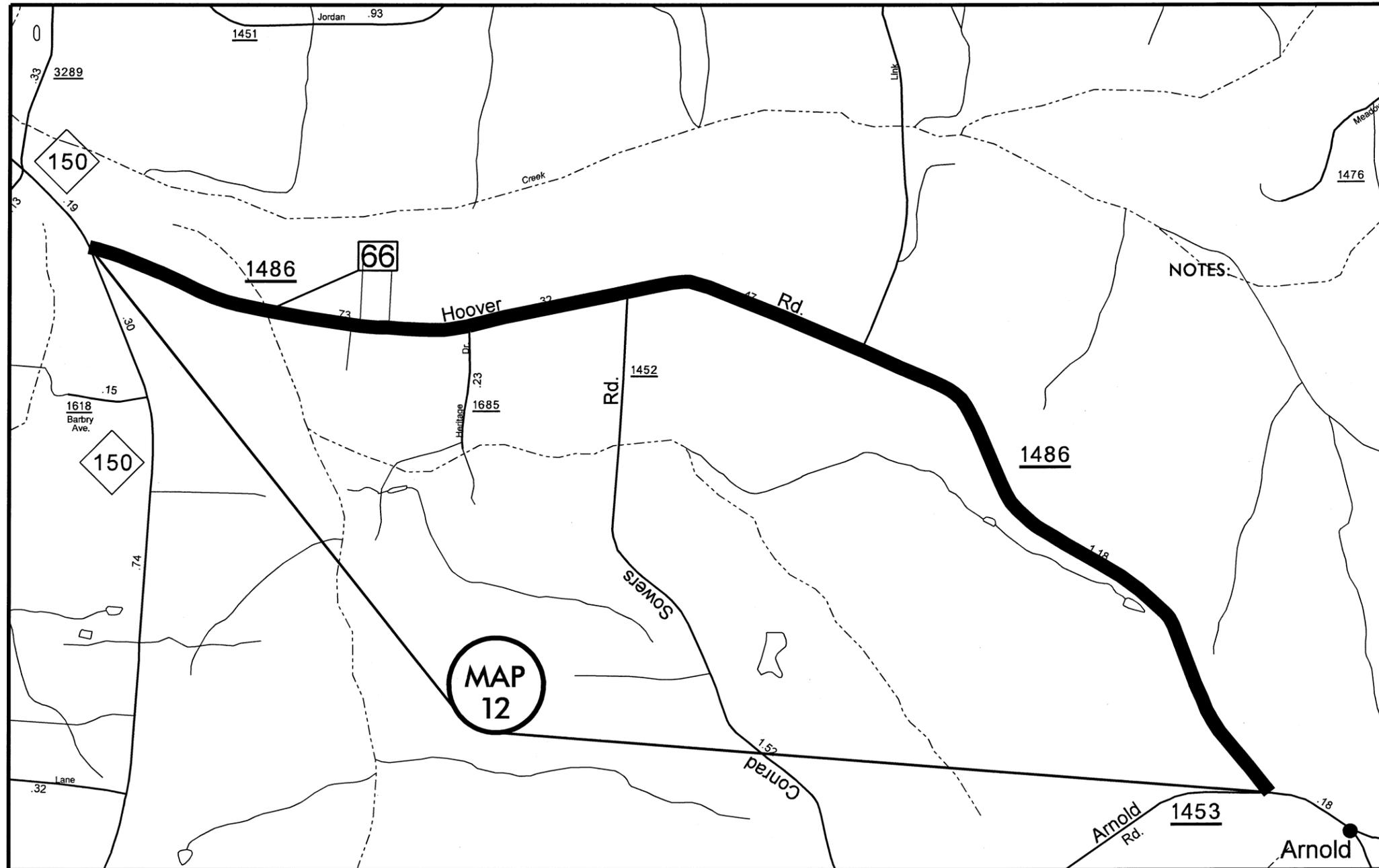
MAP 9  
Hoy Long Road SR 1806  
Curb Reval Mill at driveway to School.  
Pave to nose of island at round about.  
Level pavement prior to paving  
operation.  
Leveling to be "dragged" the entire  
length of map.

**DAVIDSON COUNTY**  
NORTH CAROLINA



**MAP 10**  
Concrete Pipe Works Road SR 1721  
Level pavement prior to paving operation.  
Leveling to be "dragged" the entire length of map.  
Pave to mini skips Edge of Pavement at Old Thamasville Rd.

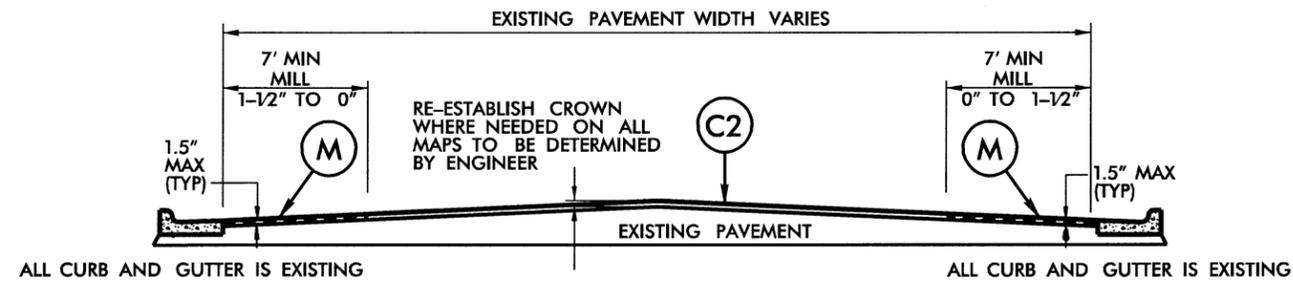
**MAP 11**  
Shady Grove Church Rd SR 1751  
Level pavement prior to paving operation.  
Leveling to be "dragged" the entire length of map.



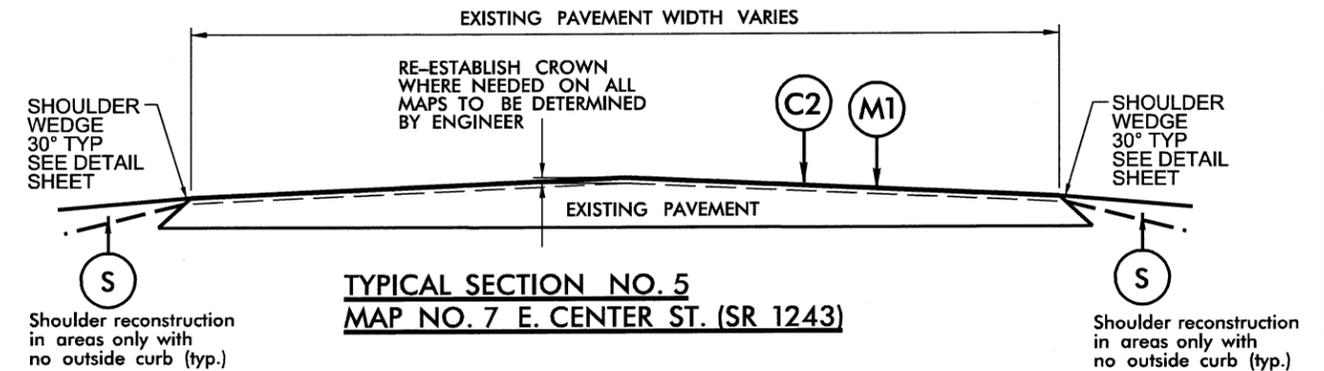
NOTES:

**MAP 12**  
 Hoover Rd. SR 1486  
 Mill 3 feet each side to widen,  
 1 foot into existing pavement.  
 Pave back with 5½" of B25.0B  
 and 1½" of SF9.5A.  
 Level pavement prior to final surface  
 paving operation.  
 Leveling to be "dragged" the entire  
 length of map.

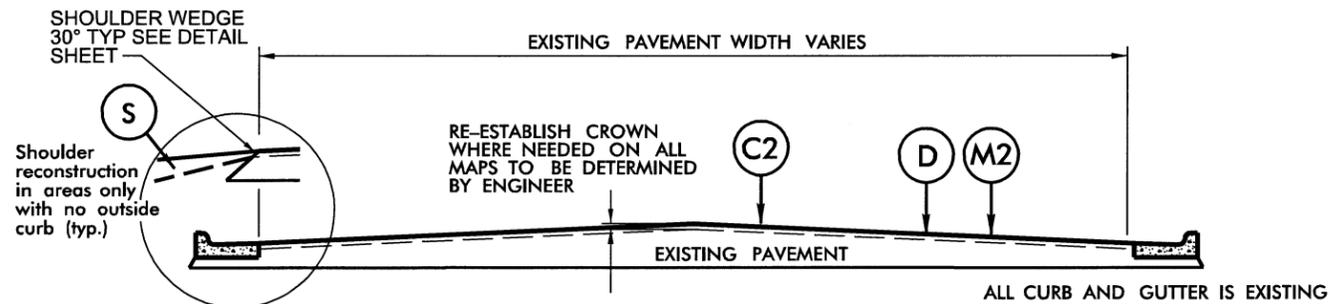
**DAVIDSON COUNTY**  
 NORTH CAROLINA



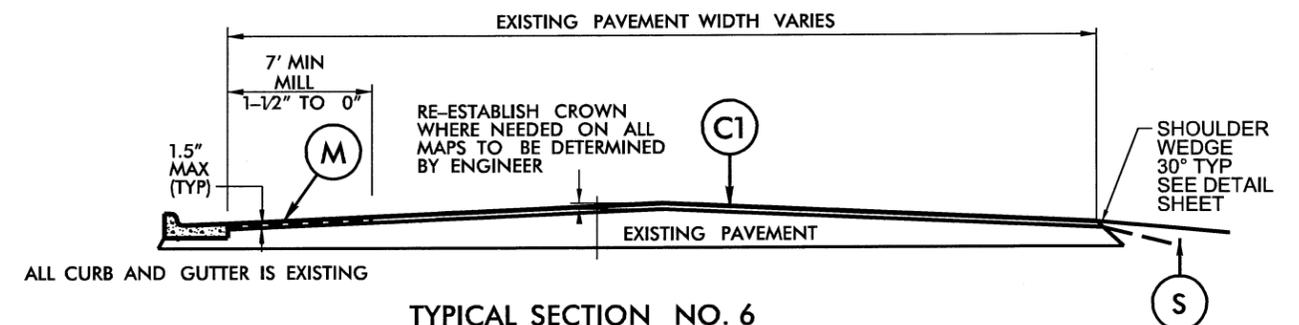
**TYPICAL SECTION NO. 1**  
**MAP NO. 1 NC 8 /6TH ST.**  
**MAP NO. 3 NC 68**



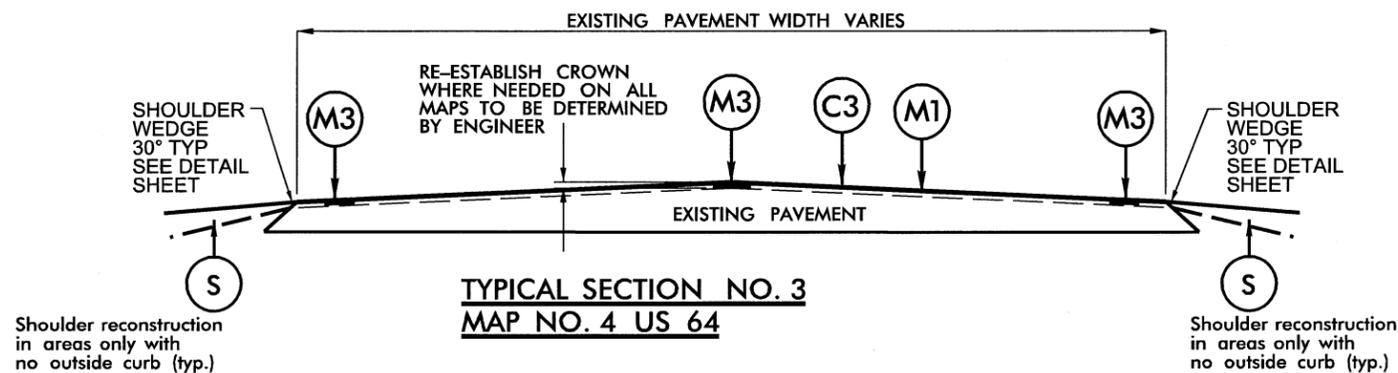
**TYPICAL SECTION NO. 5**  
**MAP NO. 7 E. CENTER ST. (SR 1243)**



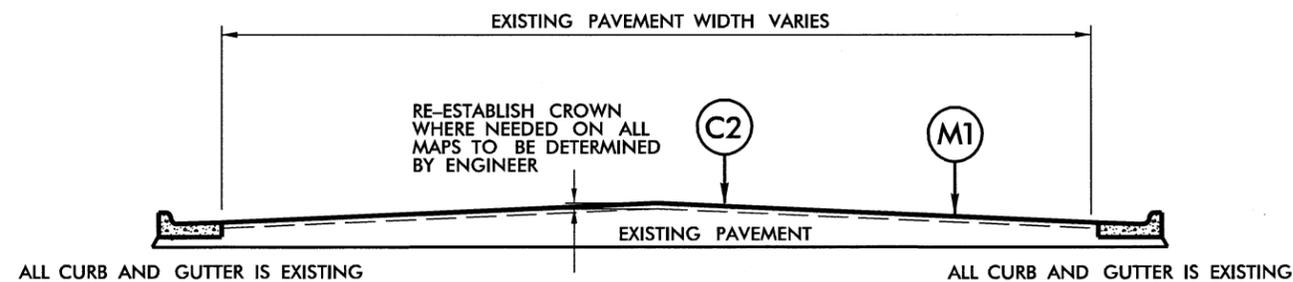
**TYPICAL SECTION NO. 2**  
**MAP NO. 2 NC 8 /5TH ST.**



**TYPICAL SECTION NO. 6**  
**MAP NO. 9 Hoy Long Rd. (SR 1806)**

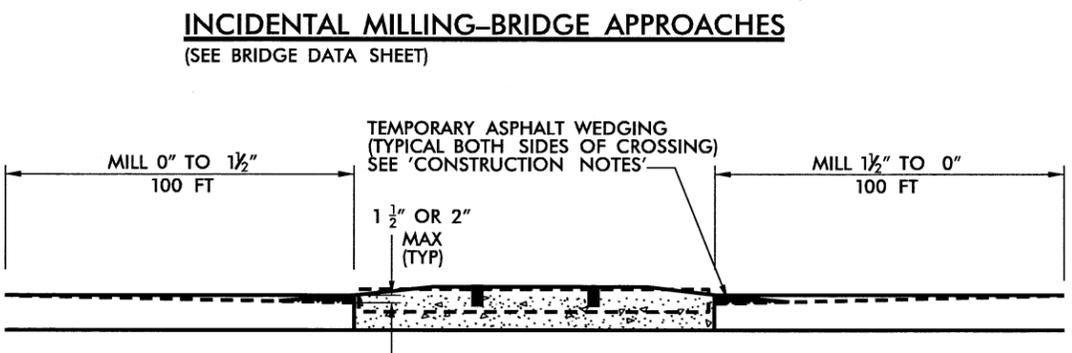
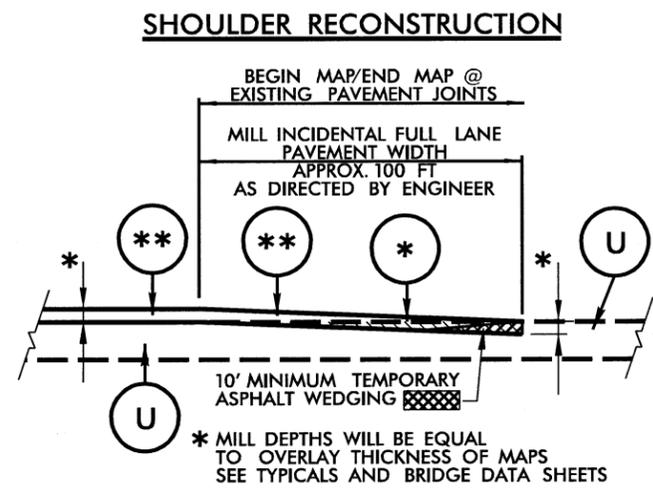
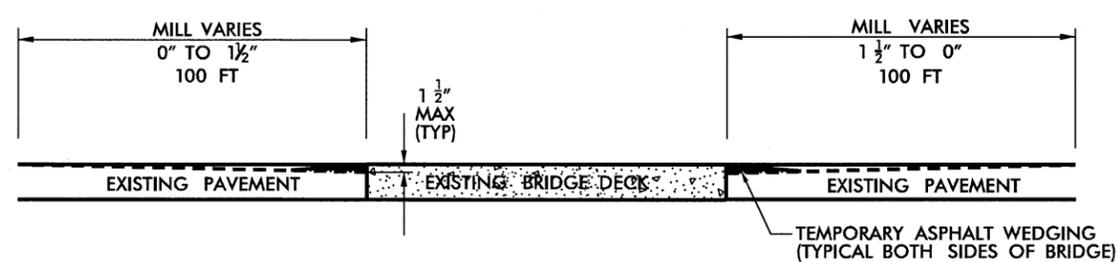
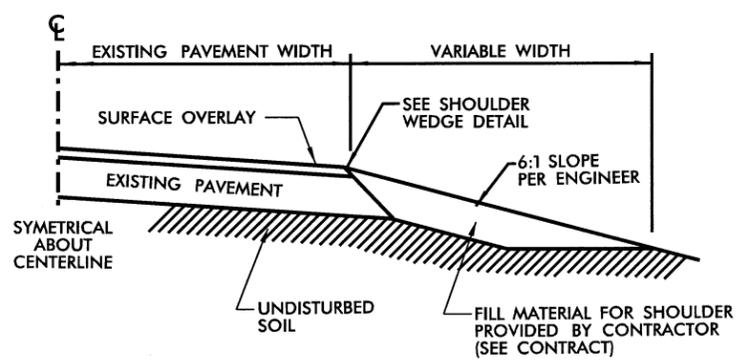
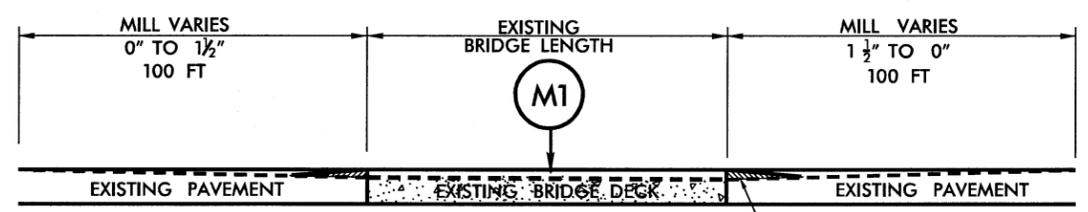
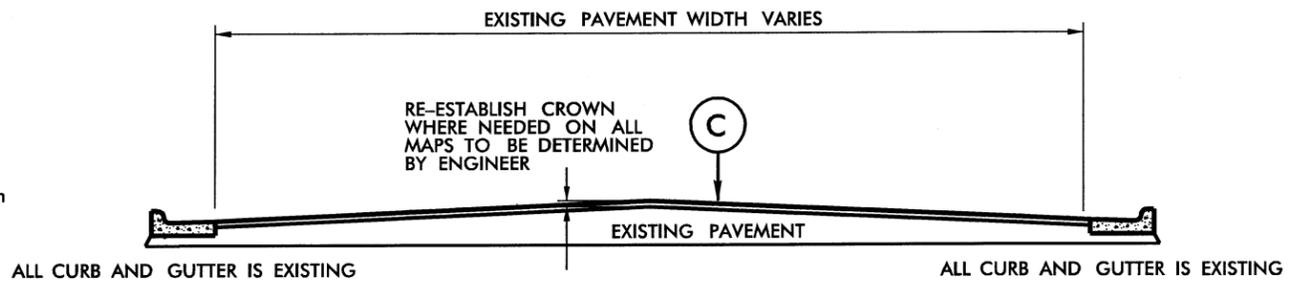
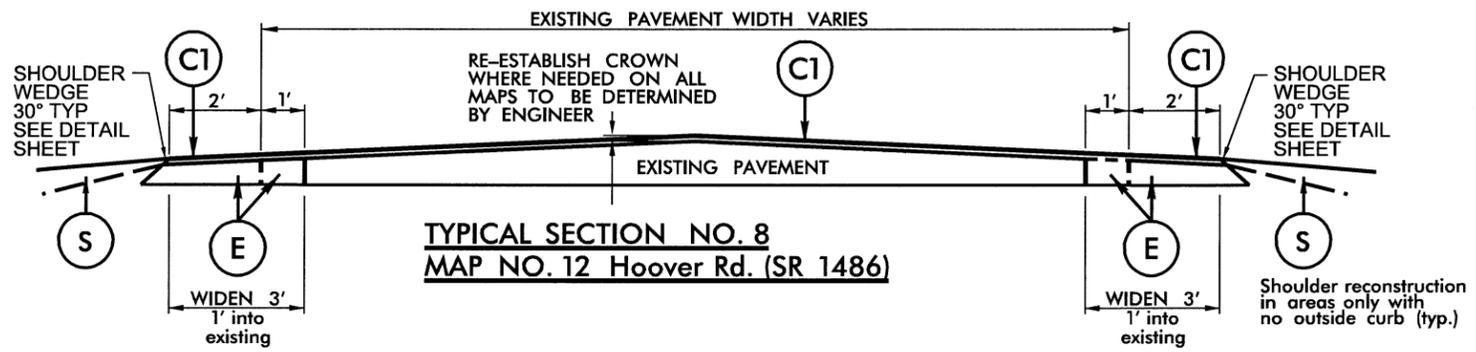
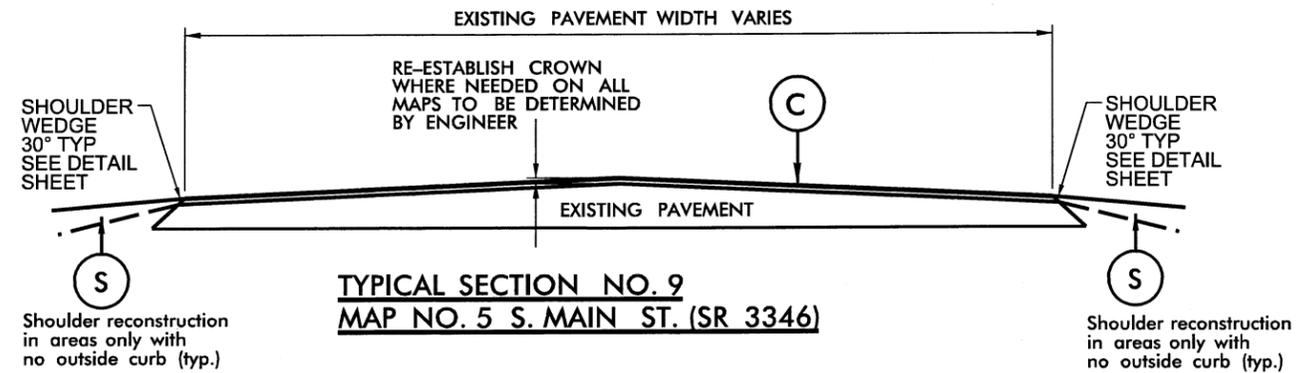
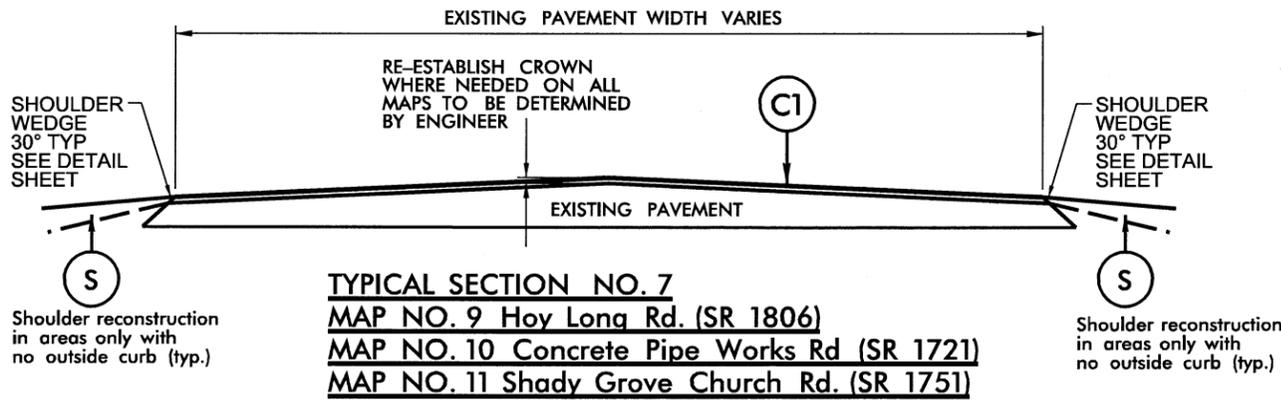


**TYPICAL SECTION NO. 3**  
**MAP NO. 4 US 64**



**TYPICAL SECTION NO. 4**  
**MAP NO. 6 E. CENTER ST. (SR 1243)**  
**MAP NO. 7 E. CENTER ST. (SR 1243)**  
**MAP NO. 8 W. CENTER ST. (SR 1243)**

PAVEMENT SCHEDULE	
C	PROP. APPROX. 3/4" ASPHALT CONCRETE SURFACE COURSE, TYPE S 4.75A, TO BE APPLIED AT AN AVERAGE RATE OF 75 LBS PER SQ. YD.
C1	PROP. APPROX. 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, TO BE APPLIED AT AN AVERAGE RATE OF 165 LBS PER SQ. YD.
C2	PROP. APPROX. 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, TO BE APPLIED AT AN AVERAGE RATE OF 168 LBS PER SQ. YD.
C3	PROP. APPROX. 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, TO BE APPLIED AT AN AVERAGE RATE OF 168 LBS PER SQ. YD.
D	PROP. APPROX. 2 1/2" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, TO BE APPLIED AT AN AVERAGE RATE OF 285 LBS PER SQ. YD.
E	PROP. APPROX. 5 1/2" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, TO BE APPLIED AT AN AVERAGE RATE OF 627 LBS PER SQ. YD.
M	MILL ASPHALT PAVEMENT, 0" TO 1 1/2"
M1	MILL ASPHALT PAVEMENT, 1 1/2" DEPTH
M2	MILL ASPHALT PAVEMENT, 4" DEPTH
M3	MILLED RUMBLE STRIPS
S	SHOULDER RECONSTRUCTION (SEE DETAIL)
U	EXISTING PAVEMENT



PAVEMENT SCHEDULE	
C	PROP. APPROX. 3/4" ASPHALT CONCRETE SURFACE COURSE, TYPE S 4.75A, TO BE APPLIED AT AN AVERAGE RATE OF 75 LBS PER SQ YD.
C1	PROP. APPROX. 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, TO BE APPLIED AT AN AVERAGE RATE OF 165 LBS PER SQ YD.
C2	PROP. APPROX. 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, TO BE APPLIED AT AN AVERAGE RATE OF 168 LBS PER SQ YD.
C3	PROP. APPROX. 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, TO BE APPLIED AT AN AVERAGE RATE OF 168 LBS PER SQ YD.
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M	MILL ASPHALT PAVEMENT, 0" TO 1 1/2"
M1	MILL ASPHALT PAVEMENT, 1 1/2" DEPTH
M2	MILL ASPHALT PAVEMENT, 4" DEPTH
M3	MILLED RUMBLE STRIPS
S	SHOULDER RECONSTRUCTION (SEE DETAIL)
U	EXISTING PAVEMENT

\* MILL DEPTHS WILL BE EQUAL TO OVERLAY THICKNESS OF MAPS SEE TYPICALS AND BRIDGE DATA SHEETS  
 \*\* SEE TYPICALS FOR MIX TYPE

CONSTRUCTION NOTES:

1. ALL QUANTITIES ARE "ESTIMATED" AS INDICATED IN THE "SUMMARY OF QUANTITIES".

2. CONSTRUCTION SHALL PROGRESS IN PHASES, IN THE ORDER INDICATED BELOW:

- PHASE 1 - MILLING AND PATCHING (WHEN REQUIRED)
- PHASE 2 - SURFACE OVERLAY
- PHASE 3 - SHOULDER DROP-OFF REPAIR (AS NEEDED AND DIRECTED BY ENGINEER)
- PHASE 4 - UTILITY ADJUSTMENTS (MANHOLE RING/COVER, VALVE/METER BOX RING/COVER, CATCH BASIN GRATE/COVER, DROP INLET GRATE/COVER, ETC.) WHEN REQUIRED.

3. BRIDGES THAT HAVE FLOOR DRAINS, SHALL HAVE ALL FLOOR DRAINS LEFT OPEN. EXTRA CARE SHALL BE EXERCISED IN MILLING (IF REQUIRED) AND IN PLACING THE WEARING SURFACE AROUND FLOOR DRAINS SO AS NOT TO HINDER EFFECTIVE DRAINAGE.

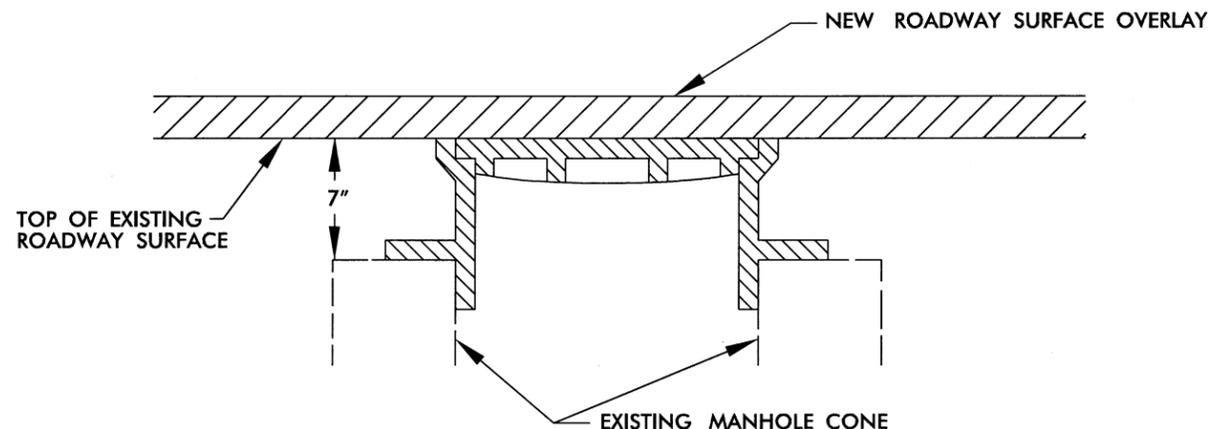
4. TEMPORARY ASPHALT WEDGING SHALL BE PLACED ON THE SAME DAY THAT BRIDGE AND/OR RAILROAD APPROACHES ARE MILLED (AND IF APPROACHES ARE MILLED PRIOR TO BRIDGE DECK).

5. FOR TWO-LANE ROADWAYS - IT SHALL BE UNDERSTOOD THAT TYPICALLY ON A ROADWAY MEASURING 20 FEET OR LESS IN WIDTH, THE CENTER OF THE WHITE EDGELINE SHALL BE LOCATED SIX INCHES FROM THE EDGE OF PAVEMENT ON EITHER SIDE OF THE ROADWAY; ON A ROADWAY MEASURING 22 FEET IN WIDTH, TRAVEL LANES SHALL MEASURE 10 FEET AND THE WHITE EDGELINE SHALL BE LOCATED ONE FOOT FROM THE EDGE OF PAVEMENT ON EITHER SIDE; ON A ROADWAY MEASURING 24 FEET IN WIDTH, TRAVEL LANES SHALL MEASURE 11 FEET AND THE WHITE EDGELINE SHALL BE LOCATED ONE FOOT FROM THE EDGE OF PAVEMENT ON EITHER SIDE; ON A ROADWAY MEASURING 26 FEET OR MORE IN WIDTH, TRAVEL LANES SHALL MEASURE 12 FEET AND THE WHITE EDGELINE SHALL BE LOCATED NO LESS THAN ONE FOOT FROM THE EDGE OF PAVEMENT ON EITHER SIDE. THIS SHALL BE STANDARD PRACTICE UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

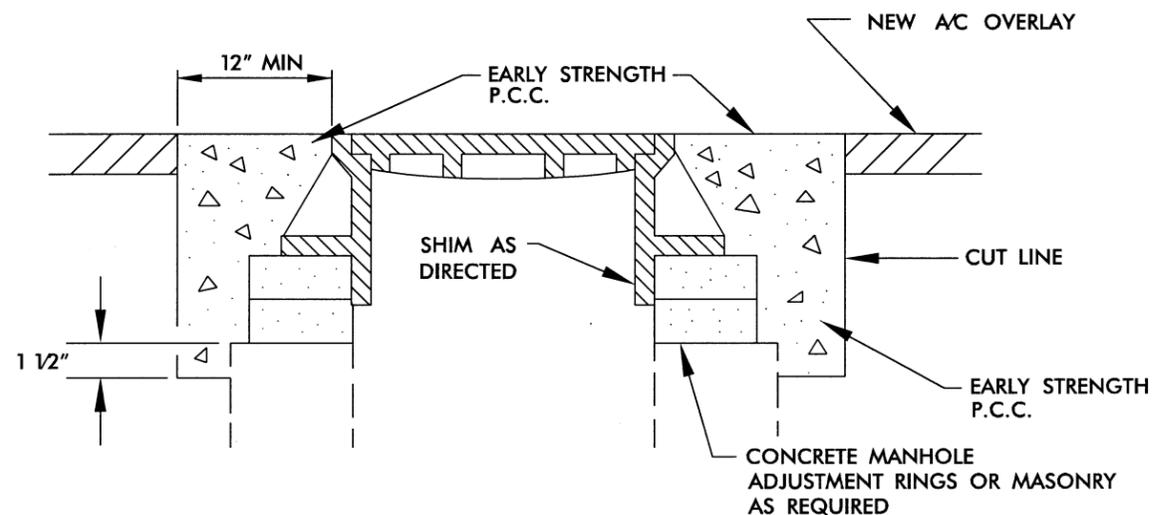
6. PAPER JOINTS ARE TO BE PLACED BETWEEN DAYS OF PAVING OPERATIONS AS SPECIFIED IN THE STANDARD SPECIFICATIONS SECTION 610-11.

7. ALL MILLED AREAS WILL BE PAVED WITHIN 72 HOURS UNLESS APPROVED BY THE ENGINEER.

9. REPLACE ANY PORTION OF STOP BARS AND OTHER PAVEMENT MARKINGS AT ANY INTERSECTION INCLUDING Y-LINES NOT ACTUALLY BEING PAVED OVER, THAT ARE OBLITERATED BY THE PAVING OPERATION EITHER BY HAULING WHEEL TRACKS OR TACK TRUCK BY THE END OF EACH RESURFACING OPERATION



STEP 1



STEPS 2,3, & 4

- STEP 1 COVER EXISTING MANHOLE WITH APPROVED MATERIAL AND CONSTRUCT OVERLAY ACROSS TOP OF MANHOLE
- STEP 2 SAW CUT EXCAVATION AROUND MANHOLE 12" MIN. FROM MANHOLE FRAME.
- STEP 3 RAISE MANHOLE FRAME RINGS TO FINISH PAVEMENT PROFILE AND CROSS SLOPE.
- STEP 4 BACKFILL WITH EARLY STRENGTH P.C.C. TO DEPTHS AS DIRECTED.

**MANHOLE ADJUSTMENT DETAIL**



## Davidson County 2016 Resurfacing Bridges

								PROJECT NO.	SHEET NO.	TOTAL NO.	
								9CR.10291.160, 9CR.20291.160	11		
Map No.	Route No.	Route Name	Bridge No.	Feature Intersected	Floor Construction	Clear Roadway Width (Ft)	Horizontal Clearance Under (Ft.)	Vertical Clearance Under	Length (Ft)	Posting	Recommended Treatment, From Bridge Maintenance
4	NC 109	US 64	58	US 64	6.5 SLAB, 3 AWS	NA	43.8	13 FT 11 IN	135	NA	Mill and pave back; vertical clearance <b>can't</b> change
5	US29B	S. MAIN ST.	25	WINSTON SALEM SB RR	10 RC, 5 AWS	36	NA	NA	143	SV 30 TTST 33	Mill and pave back
5	US 29&70/ I-85 NBL	US 29&70/ I-85 NBL	118	US 29/70 BUS/ I-85 BUS NBL	6.5 RC 5" AWS	30	NA	14 FT 04 IN SR3346 NB 14 FT 11 IN SR3346 SB	260	NA	Mill and pave back; vertical clearance <b>can't</b> change
6	SR 1243	E. CENTER ST.	415	SOUTHERN RAILROAD	8 1/2" RC SLAB	48	NA	NA	112	NA	Do Not pave on bridge
6	SR 1243	E. CENTER ST.	424	NC 8 / TALBERT BLVD.	7 RC, 2.5 AWS	48	NA	NA	112	SV 33 TTST 40	Mill and pave back
12	SR 1468	HOOVER RD.	66	PRONG OF REEDY CREEK	PPCCS, 3.0 AWS	24	NA	NA	67	NA	Mill and pave back
13	SR 1836	BETHESDA RD.	514	US 52/NC 8	5.25 RC, 3.5 PPC	31	NA	NA	206	NA	Do Not pave on bridge

PROJECT NO.	SHEET NO.	TOTAL NO.
9CR.10291.160,	12	
9CR.20291.160		

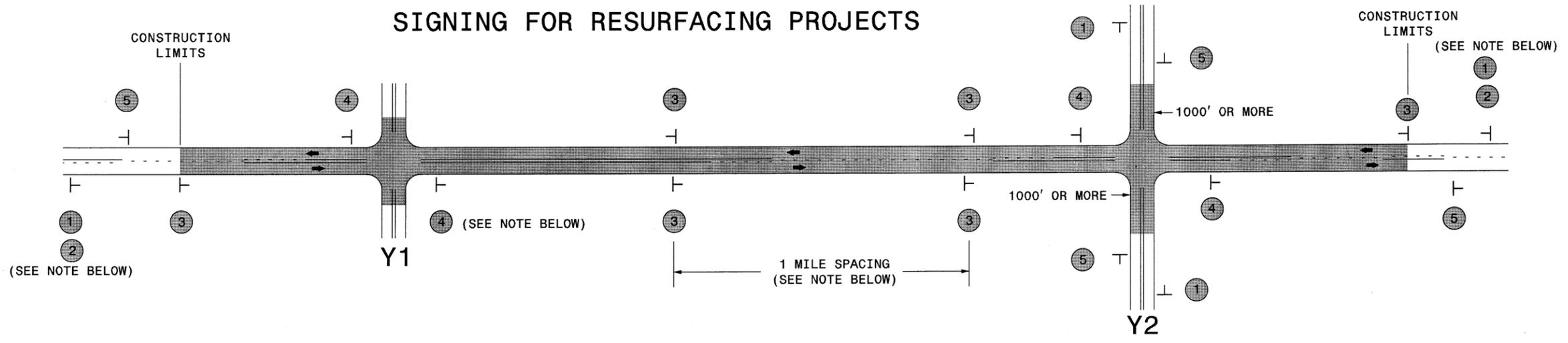
### SUMMARY OF QUANTITIES

PROJECT NO.	COUNTY	MAP NO.	ROUTE	DESCRIPTION	TYP	LANES	LANE TYPE	FINAL SURFACE TESTING REQUIRED	WARM MIX ASPHALT REQUIRED	LENGTH MI	WIDTH FT	BORROW EXCAVATION CY	INCIDENTAL STONE BASE TONS	SHOULDER RECONSTRUCTION SMI	MILLING ASPHALT PAVEMENT, 4" DEPTH SY	MILLING ASPHALT PAVEMENT, 1 1/2" DEPTH SY	MILLING ASPHALT PAVEMENT, 0" TO 1 1/2" DEPTH SY	INCIDENTAL MILLING SY	BASE COURSE, B25.08 TONS	INTERMEDIATE COURSE, I19.08 TONS	SURFACE COURSE, S9.5B TONS	SURFACE COURSE, S9.5C TONS	SURFACE COURSE, SF9.5A TONS	ASPHALT CONC SURFACE COURSE, TYPE SF9.5A (LEVELING COURSE) TON	SURFACE COURSE, S4.75A TONS	ASPHALT BINDER FOR PLANT MIX TONS	PATCHING EXISTING PAVEMENT TONS	MILLED RUMBLE STRIPS (ASPHALT CEMENT CONCRETE) LF	ADI. OF CATCH BASIN EA	ADI. OF DROP INLET EA	ADI. OF MANHOLES EA	ADI. OF METER OR VALVE BOX EA	TEMPORARY SILT FENCE LF	WATTLE LF	PORTABLE LIGHTING LS				
9CR.10291.160	Davidson	1	NC 8 NORTH- W. 6TH ST.-MARTIN LUTHER KING JR. BLVD.	FROM EDGE OF PAVEMENT AT MAIN ST. (SR3346) TO STOP BAR AT RAMP TO BUS 85/US64/US70/US29	1	2	MU	NO	NO	0.504	32-36					4,140	778				966					58	15					13	10						
TOTAL FOR MAP NO. 1										0.504						4,140	778				966					58	15					13	10						
9CR.10291.160	Davidson	2	NC 8 SOUTH-W. 5TH STREET	FROM STOP BAR AT RAMP BUS 85/US64/US70/US29 TO MAIN ST. (SR 3346)	2	2	MU	NO	NO	0.534	25-36	16		0.13	8,176				1,461		830					120				5	13	5	52	5					
TOTAL FOR MAP NO. 2										0.534				0.13	8,176				1,461		830					120				5	13	5	52	5					
9CR.10291.160	Davidson	3	NC 68	FROM GUILFORD CO. LINE TO PAVEMENT JT. NEAR BALL PARK RD.	1	5	MU	NO	NO	1.657	60					13,608	1,333				5,422					325	15				5	8							
TOTAL FOR MAP NO. 3										1.657						13,608	1,333				5,422					325	15				5	8							
9CR.10291.160	Davidson	4	US 64	FROM RANDOLPH COUNTY LINE TO SOUTH SIDE OF RFR APPROACH NEAR DECKER ROAD (SR2112)	3	2	2WU	NO	NO	4.66	28-32	559	603	9.32		120,572										659	15	73,815						1,864	186				
TOTAL FOR MAP NO. 4										4.66		559	603	9.32		120,572										659	15	73,815						1,864	186				
TOTAL FOR PROJ NO. 9CR.10291.160										7.355		575	603	9.45	8,176	17,748	2,111		1,461		7,218		11,172				1,162	45	73,815		5	31	23	1,916	191				
9CR.20291.160	Davidson	5	MAIN ST. SR 3346	FROM PAVEMENT JT. NEAR GRIMES BLVD. (SR 1298) TO PAVEMENT JT. NEAR US 64 RAMP	9,10	4	MU	NO	NO	3.449	VARIES	247	147	2.06												4,104	279			4	8	24	20	824	82	1			
TOTAL FOR MAP NO. 5										3.449		247	147	2.06												4,104	279			4	8	24	20	824	82	1			
9CR.20291.160	Davidson	6	E CENTER ST. SR 1243	EDGE OF PAVEMENT MAIN ST. (SR3346) TO SOUTH RADIUS POINT OF EAST BOUND RAMP TO TALBERT BLVD./NC 8 NEAR MORGAN DR.	4	4	M2	NO	NO	0.855	36-60					20,534						1,903					114						17	19			*		
TOTAL FOR MAP NO. 6										0.855						20,534						1,903					114						17	19			*		
9CR.20291.160	Davidson	7	E. CENTER ST. SR 1243	NEW PAVEMENT JT. SOUTH OF MORGAN DR. (NS)/RAMP AT NC 8 TO PAVEMENT JOINT NEAR NEW BRIDGE	4,5	3	M2	NO	NO	0.812	21-36	57	24	0.48		15,587						1,438					86					7	8	191	19			*	
TOTAL FOR MAP NO. 7										0.812		57	24	0.48		15,587						1,438					86					7	8	191	19			*	
9CR.20291.160	Davidson	8	W. CENTER ST. SR 1243	FROM MAIN ST. EDGE OF PAVEMENT TO SUNTRUST BANK DRIVE AT S. STATE ST. TO INCLUDE LOOPS	4	5	M2	NO	NO	0.109	60					3,837						355					21					4	4					*	
TOTAL FOR MAP NO. 8										0.109						3,837						355					21					4	4					*	
9CR.20291.160	Davidson	9	HOY LONG RD. SR 1806	MIDWAY SCHOOL RD. (SR1802) NOSE AT ROUND ABOUT TO CLODFELTER RD. (SR 1810)	6,7	2	2WU	NO	NO	1.668	21	200	84	3.34		369	489							1,876	634		164	15						667	67				
TOTAL FOR MAP NO. 9										1.668		200	84	3.34		369	489							1,876	634		164	15						667	67				
9CR.20291.160	Davidson	10	CONCRETE PIPE WORKS RD. SR 1721	MIDWAY SCHOOL RD. (SR1802) TO OLD THOMASVILLE RD. (SR 1716) EDGE OF PAVEMENT	7	2	2WU	NO	NO	1.835	VARIES	220	90	3.67		467							2,064	698		180	15							734	73				
TOTAL FOR MAP NO. 10										1.835		220	90	3.67		467							2,064	698		180	15							734	73				
9CR.20291.160	Davidson	11	SHADY GROVE CHURCH RD. SR 1751	NC 109 TO OLD THOMASVILLE RD. (SR 1716) EDGE OF PAVEMENT	7	2	2WU	NO	NO	1.781	VARIES	214	160	3.56		444							1,908	645		167	15							712	71				
TOTAL FOR MAP NO. 11										1.781		214	160	3.56		444							1,908	645		167	15							712	71				
9CR.20291.160	Davidson	12	HOOVER RD. SR 1486	FROM NC 150 TO ARNOLD RD. (SR 1453)	8	2	2WU	NO	NO	2.679	22	321	384	5.36		179		933	3,500				3,156	873		418	15							1,072	107				
TOTAL FOR MAP NO. 12										2.679		321	384	5.36		179		933	3,500				3,156	873		418	15							1,072	107				
TOTAL FOR PROJ NO. 9CR.20291.160										13.188		1,259	889	18.47		40,137	369	2,333	3,500				3,696		9,004	2,850	4,104	1,429	60		4	8	52	51	4,200	419	1		
GRAND TOTAL										20.543		1,834	1,492	27.92	8,176	160,709	18,117	4,444	3,500		1,461		10,914	11,172	9,004	2,850	4,104	2,591	105	73,815	4	13	83	74	6,116	610	1		

NOTE: All Quantities listed include turn lanes and are estimates; Payment will be based on actual field measurements and quantities received.



## SIGNING FOR RESURFACING PROJECTS



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

### MAINLINE (-L-) SIGNING

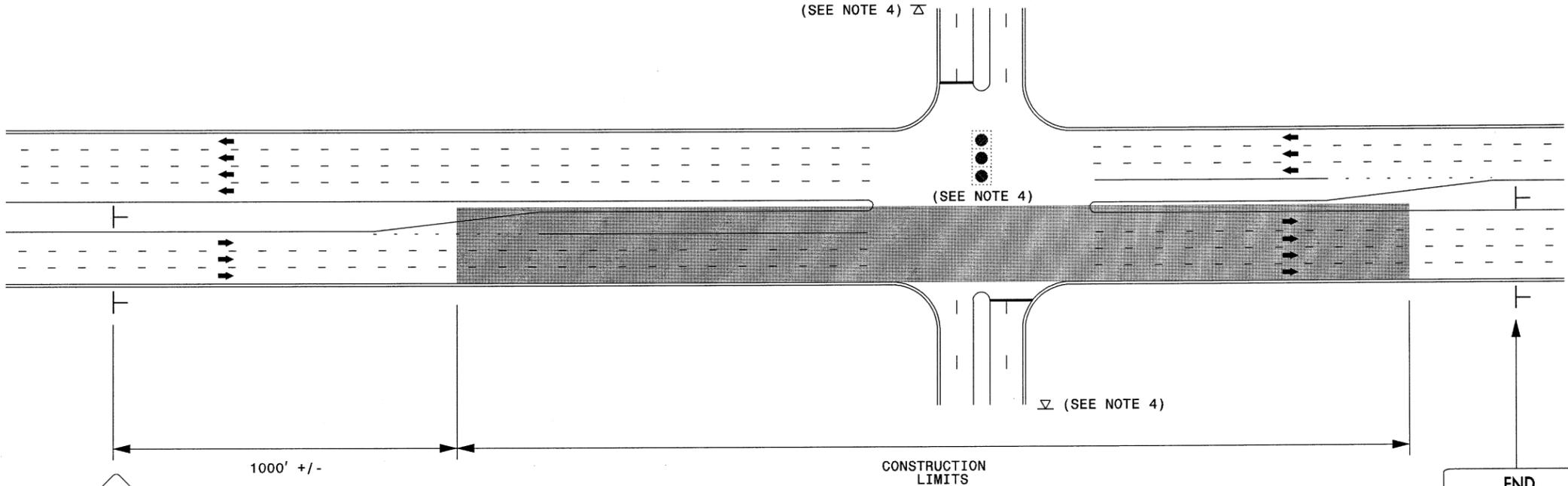
### -Y- LINE SIGNING

<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>
	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  
2 LANE ROADWAYS**

# URBAN / SUBURBAN WORKZONES



**BEGIN ROAD WORK**  
SP-11299  
48" X 48"

**NEXT XX MILES**  
W7-3aP  
36" X 30"

**END ROAD WORK**  
G20-2 A  
48" X 24"

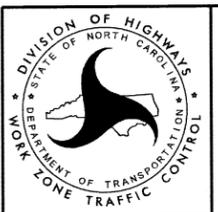
**NOTES:**

- 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**

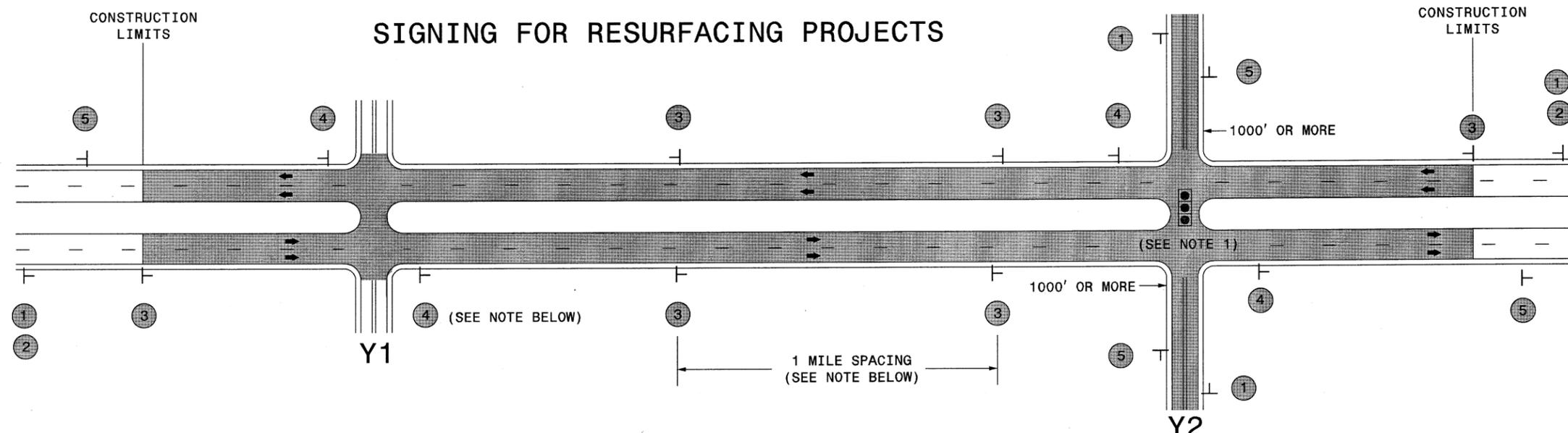
├ STATIONARY SIGN

➔ DIRECTION OF TRAFFIC FLOW



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

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**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><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>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><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>
		<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**

**Notes on Moving Operation Caravan for Placing Pavement Marking or Markers on Four Lanes or More of a Multi-Lane Roadway**

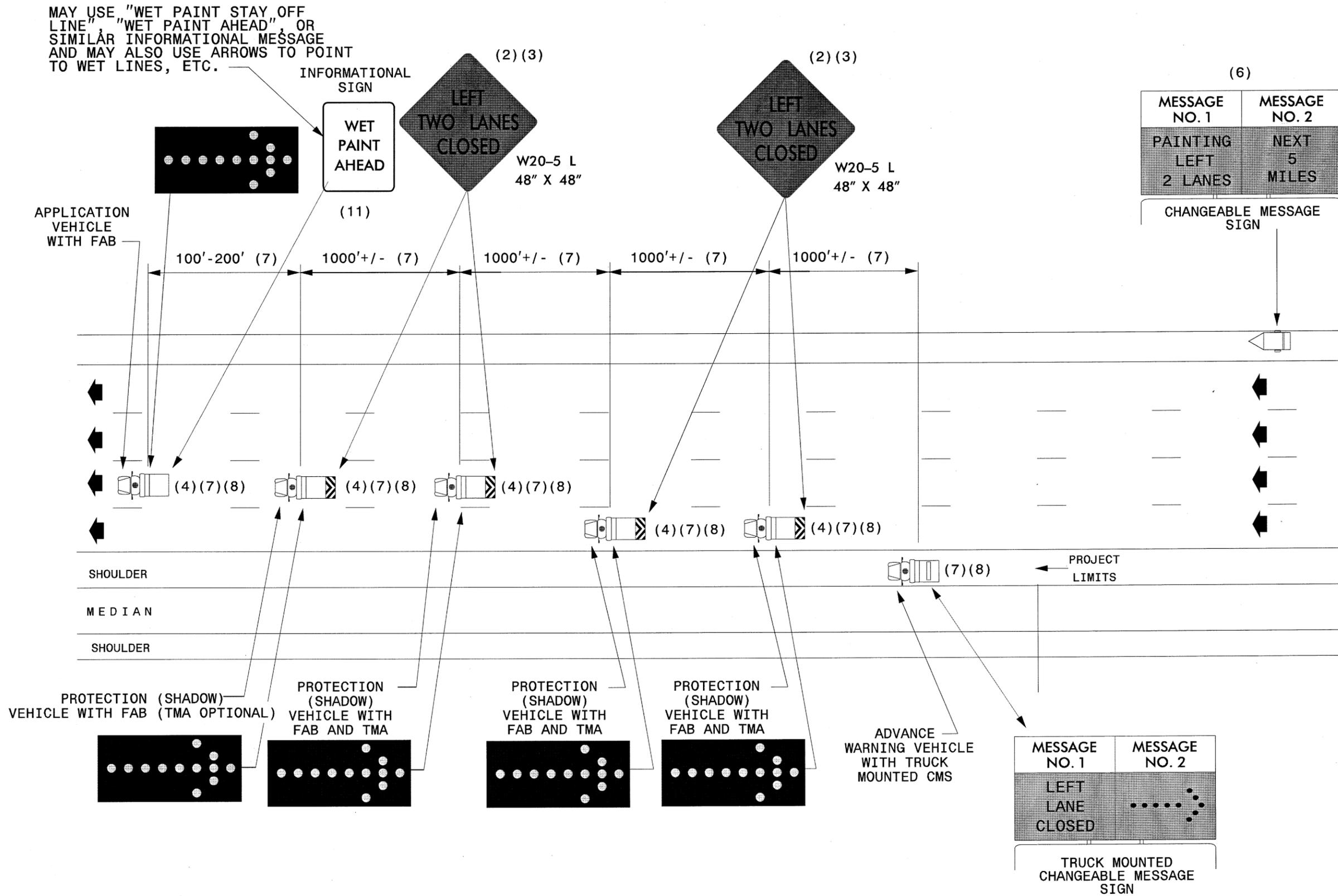
- (1) The following options may be used as the first advance warning the motorists see:
- a. Truck mounted advance warning signs
  - b. Truck mounted changeable message sign (CMS)
  - c. Ground mounted changeable message sign (CMS)  
(Must circle to pick up signs)
- (2) All advance warning signs must be 48" x 48" with fluorescent orange grade B sheeting. If space limitations on shoulder prohibit a 48" x 48" sign, a smaller sign can be used with approval from engineer.
- (3) Signs on vehicles should be mounted a minimum of one foot from the ground and should not block the motorist's sight of the flashing arrow board and/or warning lights.
- (4) Additional vehicles should be used in work caravan to facilitate drying of pavement marking material (TMA's are optional on these additional vehicles). However, the first vehicle motorists see in the travel lane shall have a TMA.
- (5) Adjust distances as needed to prevent motorists from entering space between the application and protection vehicle. Distance can be lengthened to accommodate sight distance needs.
- (6) Round up mileage to next whole mile. Work zone should not exceed five miles in length.
- (7) Radio communication between vehicles is required.
- (8) Use of warning lights on all vehicles is required. (See page 3 for definition)
- (9) If work is performed at night, the work area must be illuminated with machine and/or tower lights as approved by engineer.
- (10) All traffic control devices will be considered incidental to the pay items for pavement marking and markers.
- (11) Informational signs should be activity specific, i.e. "Paint Crew in Road". Signs may be rectangular or diamond shape. Sign size should be based on the motorist ability to recognize sign when traveling five miles above posted speed limit.

**LEGEND**

	DIRECTION OF TRAFFIC FLOW		APPLICATION VEHICLE WITH WARNING LIGHTS		PROTECTION VEHICLE WITH TRUCK MOUNTED ATTENUATOR (TMA) AND WARNING LIGHTS (SEE ROADWAY STANDARD NO. 1165.01)
	CHANGEABLE MESSAGE SIGN		ADVANCE WARNING VEHICLE i.e., PICKUP TRUCK WITH MOUNTED SIGN		
	FLASHING ARROW BOARD, TYPE "B" "CAUTION MODE"				

# Moving Operation Caravan

(Operations Traveling 3 mph or Faster)  
Placing Pavement Marking or Markers  
On Four Lanes or More of a Multi-Lane Roadway

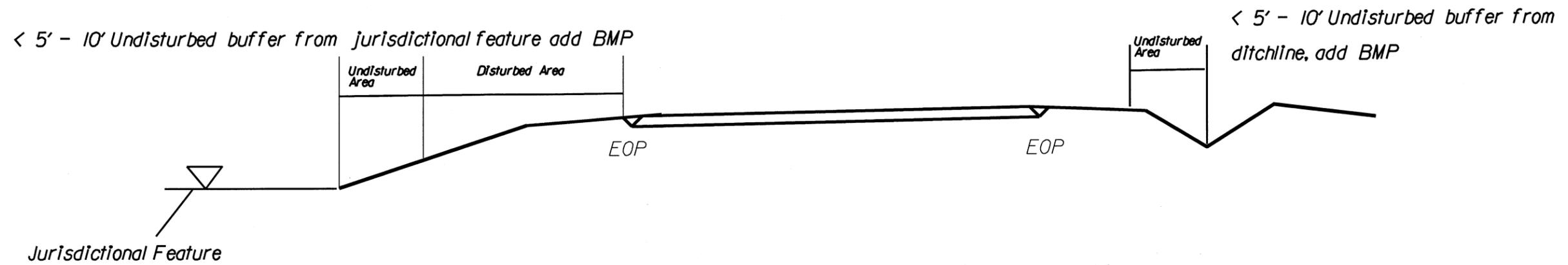
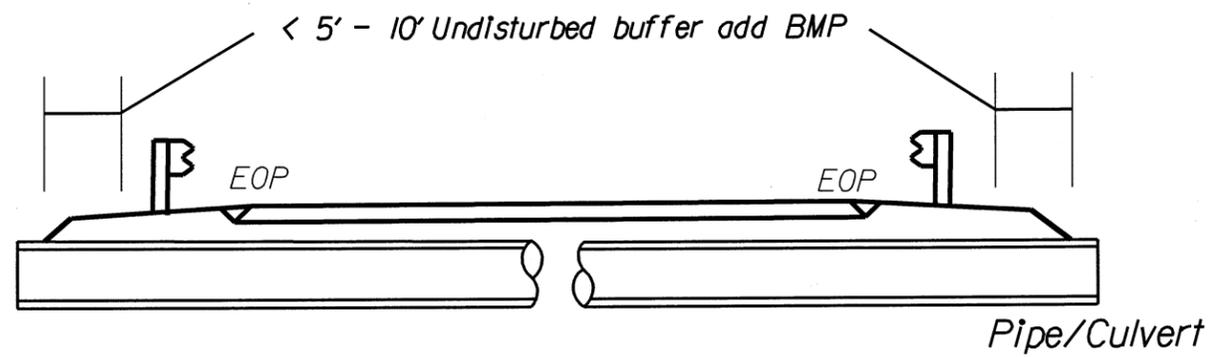


NOTES: Less than 5' - 10' undisturbed buffer from ROW, ditchline, water feature, or drainage inlet, add BMP.

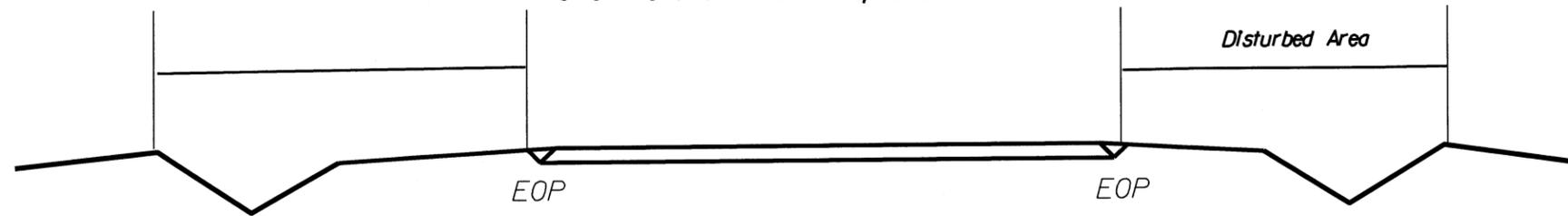
BMP Options: Wattle or Silt Fence

# EROSION CONTROL DETAIL

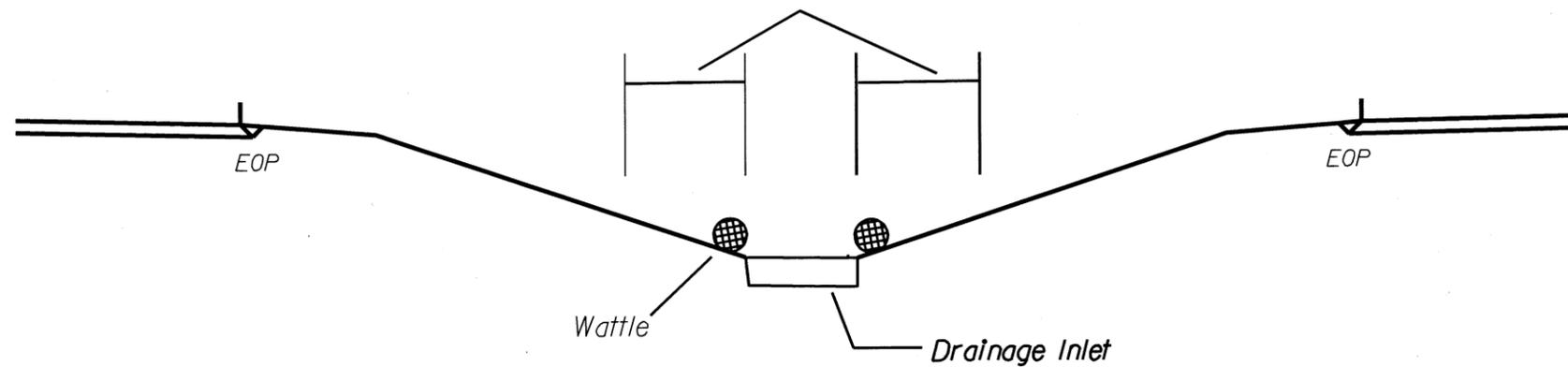
PROJECT REFERENCE NO.	SHEET NO.
9CR.10291.160, 9CR.20291.160	EC-1



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

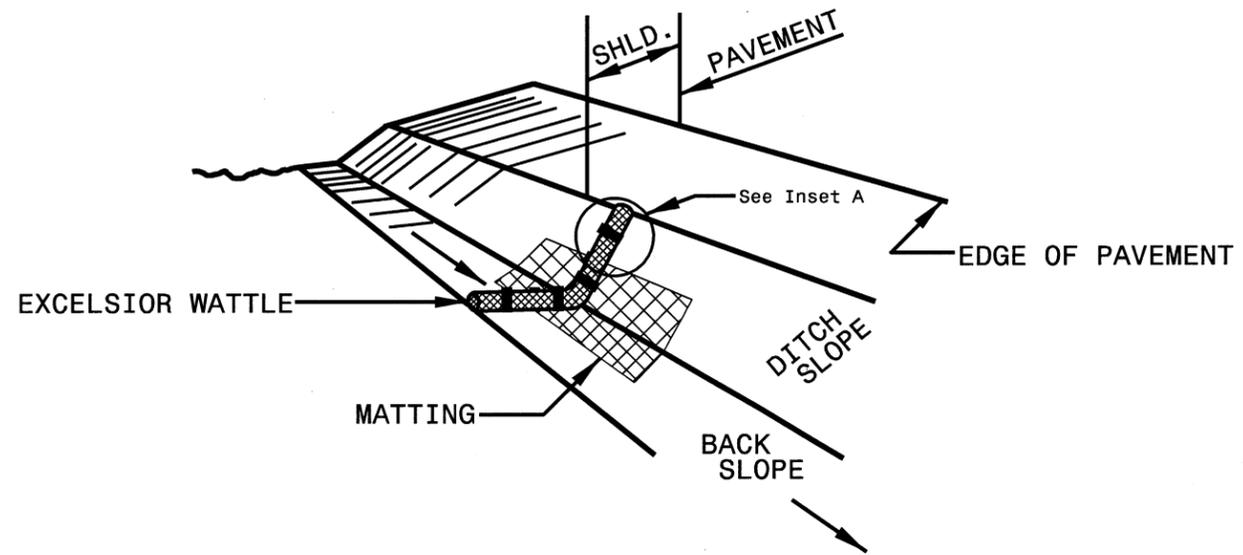


< 5' - 10' Undisturbed buffer from inlet, add wattle

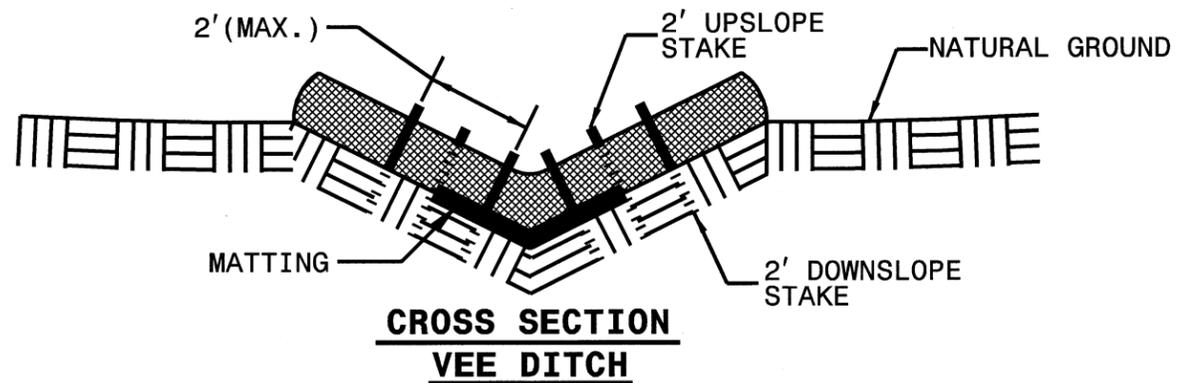


NOT TO SCALE

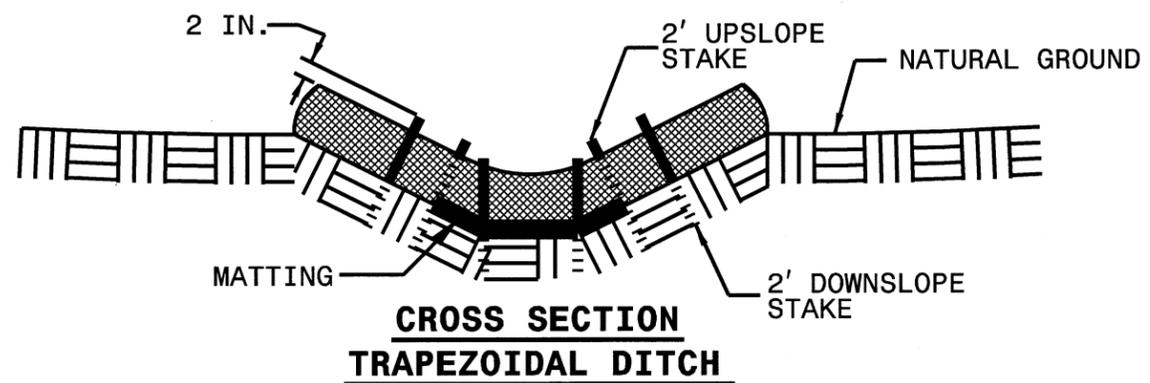
# WATTLE DETAIL



**ISOMETRIC VIEW**



**CROSS SECTION  
VEE DITCH**



**CROSS SECTION  
TRAPEZOIDAL DITCH**

**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.

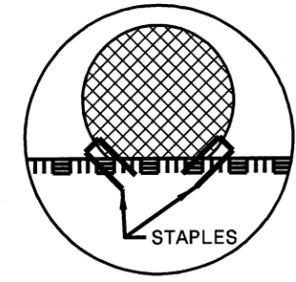
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.

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

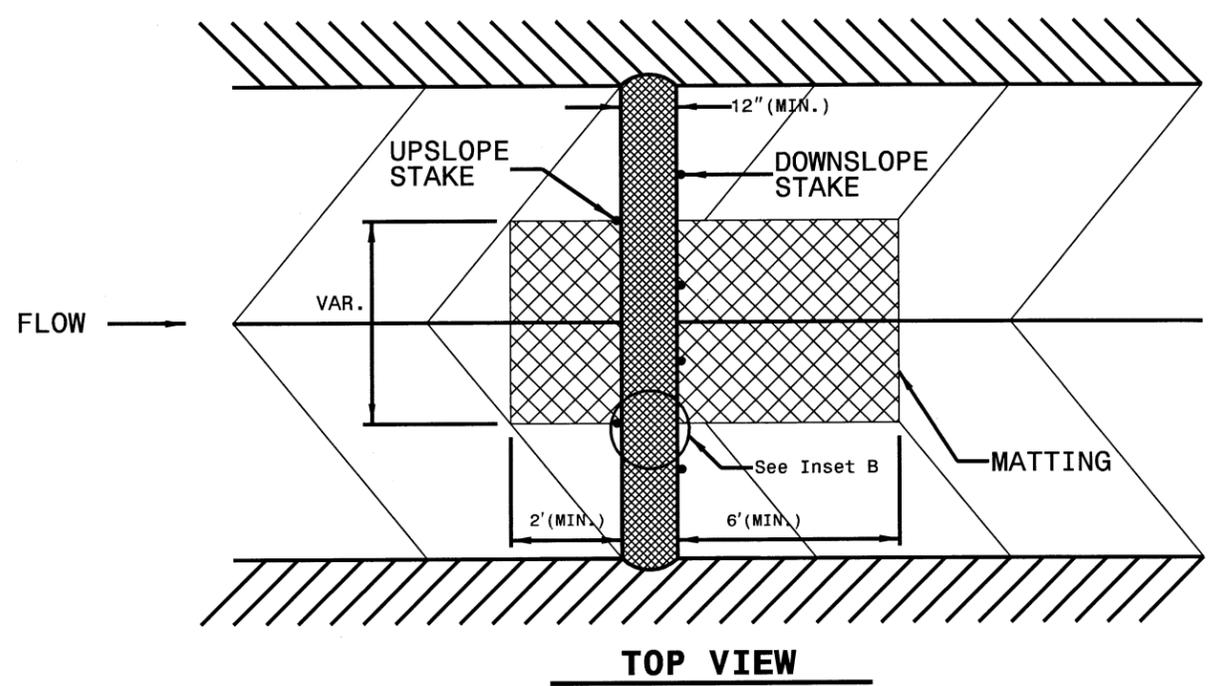
INSTALL MATTING IN ACCORDANCE WITH SECTION 1631 OF THE STANDARD SPECIFICATIONS.



INSET A



INSET B



**TOP VIEW**