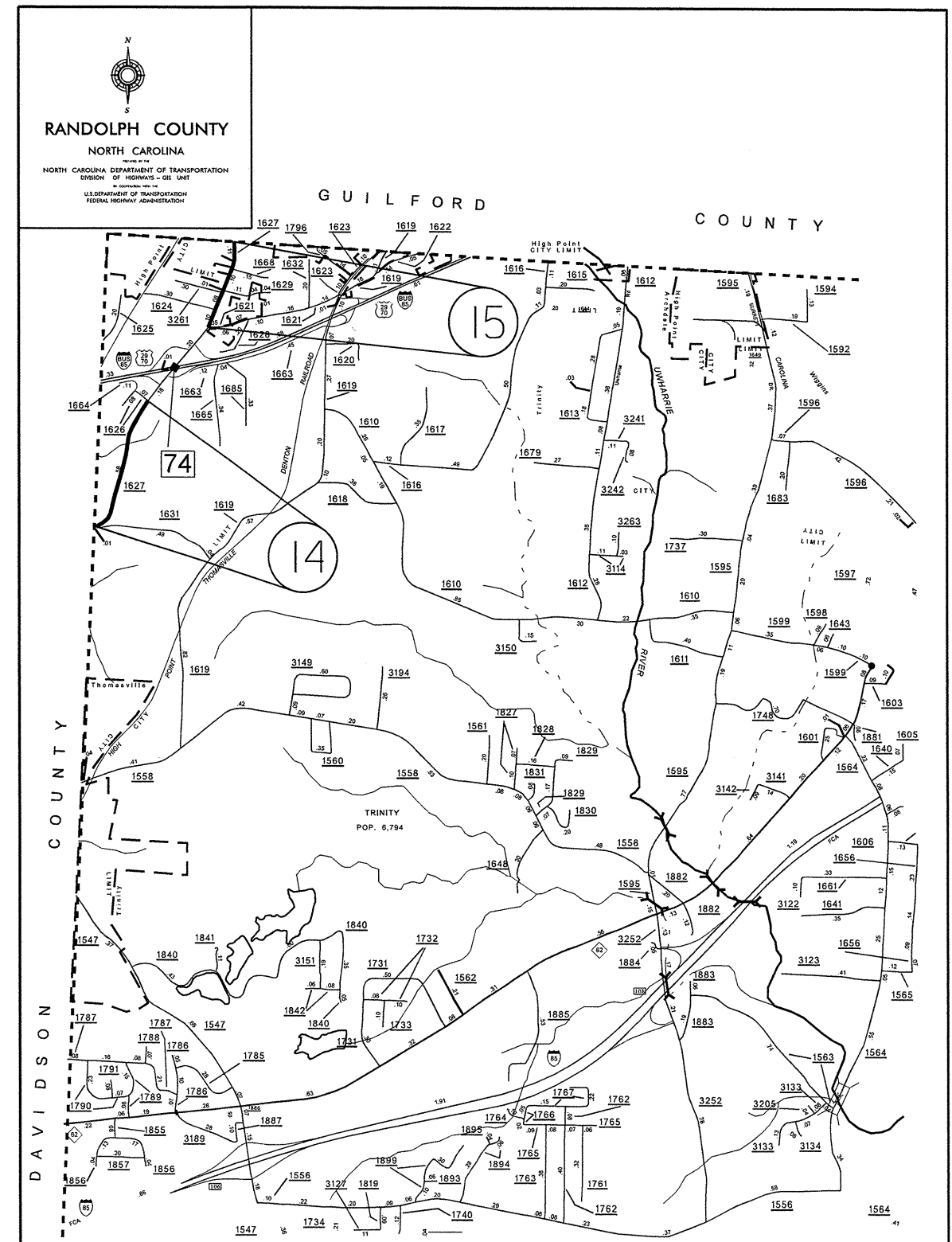
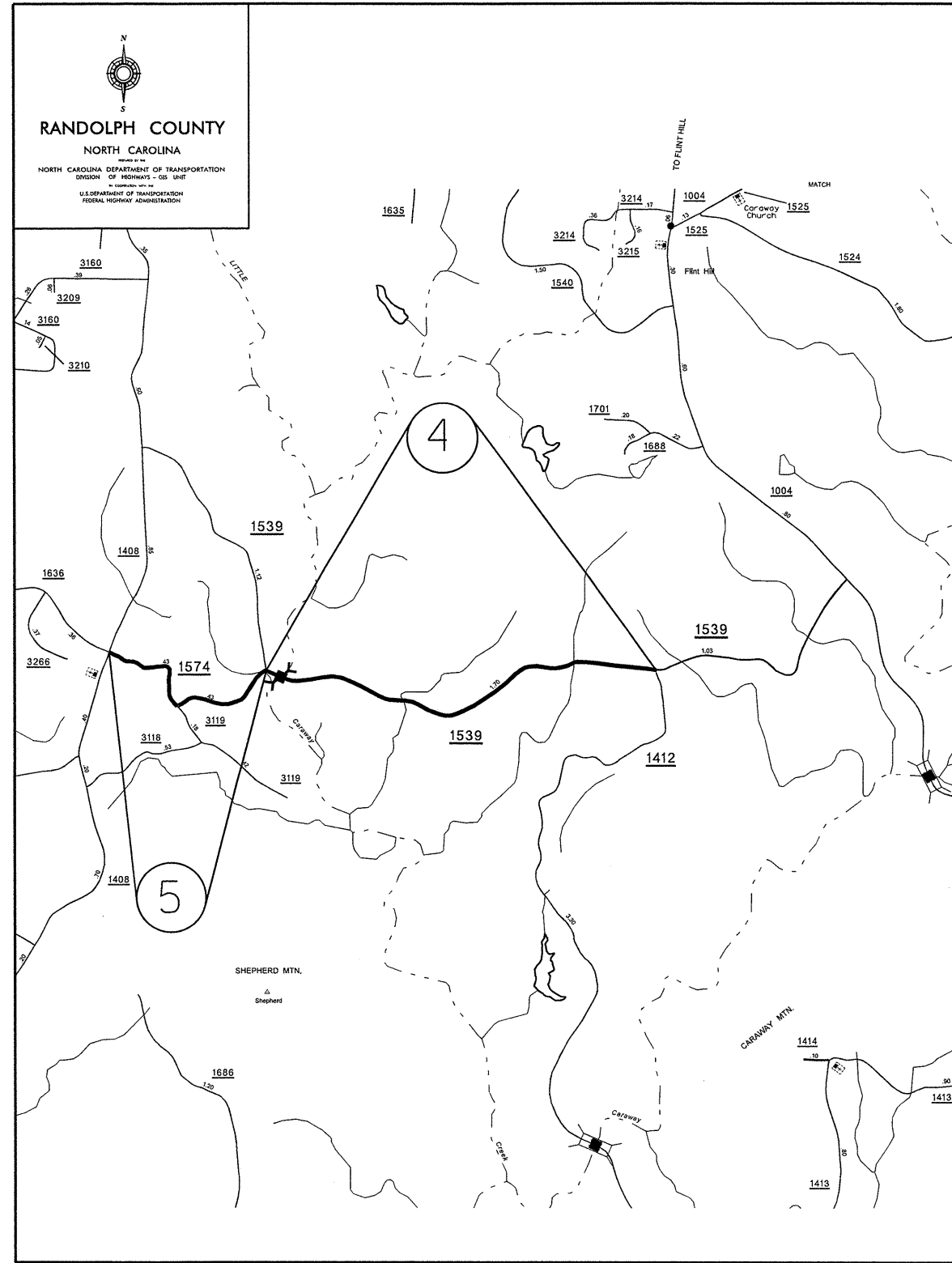


RANDOLPH COUNTY
 PRIMARY AND SECONDARY RESURFACING MAP

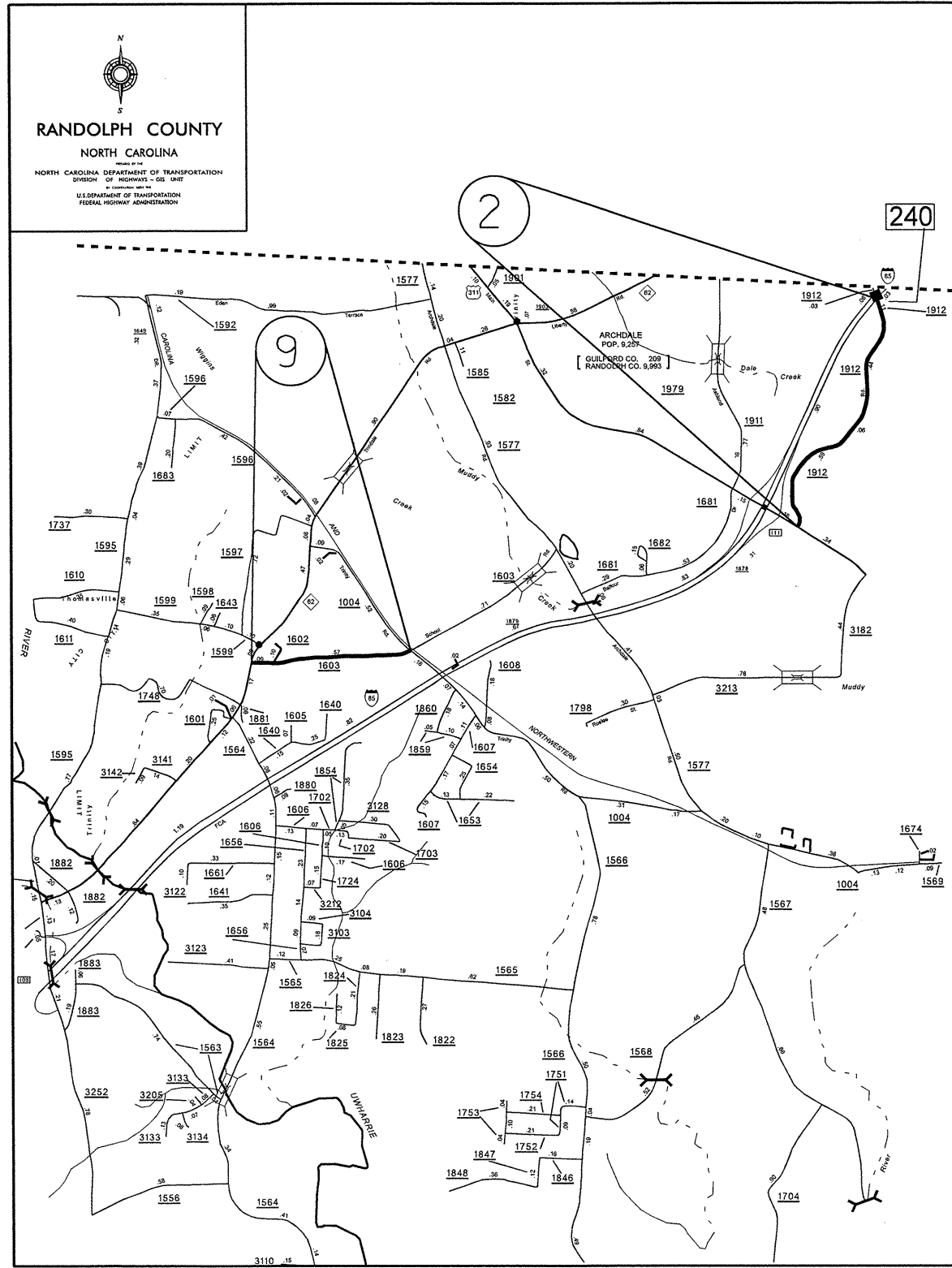
040397

MAPS #4 & #5

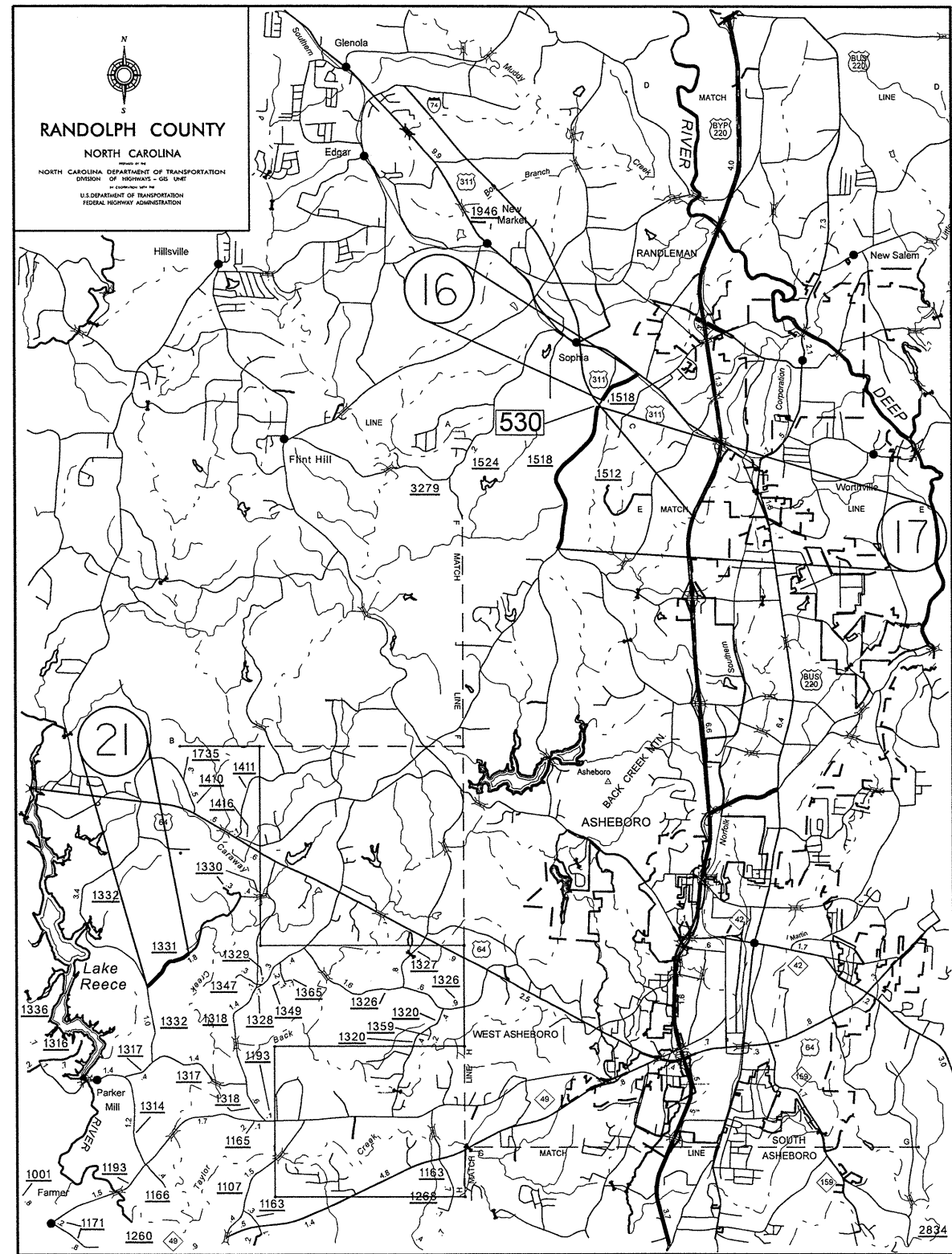
MAPS #14 & #15

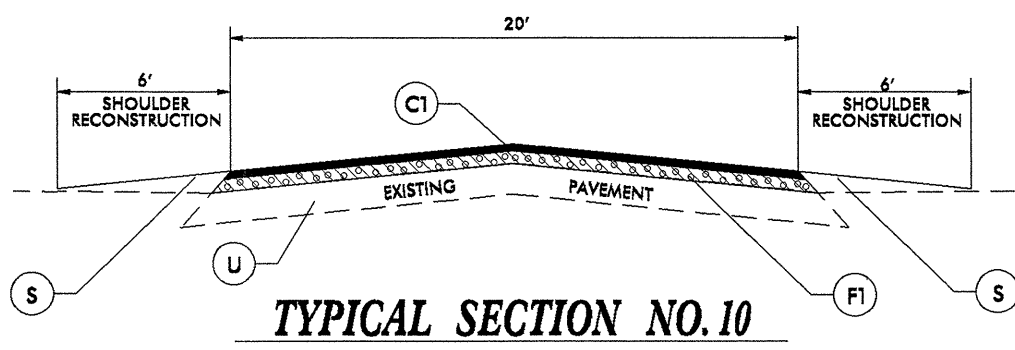
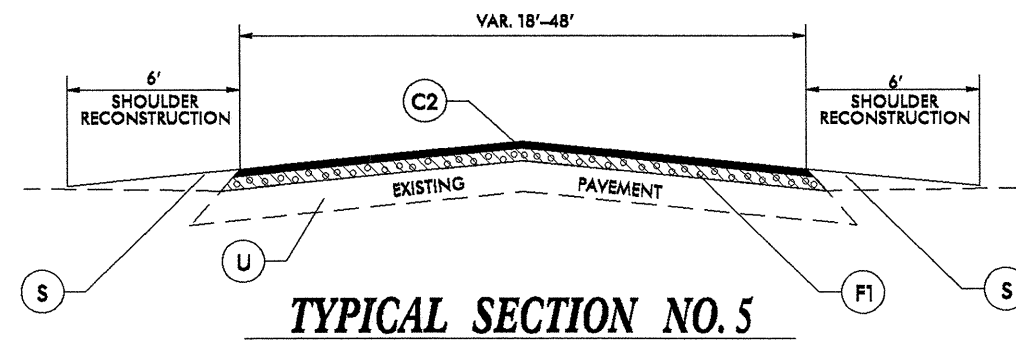
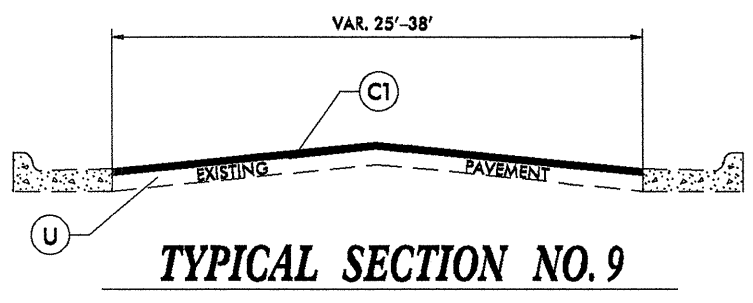
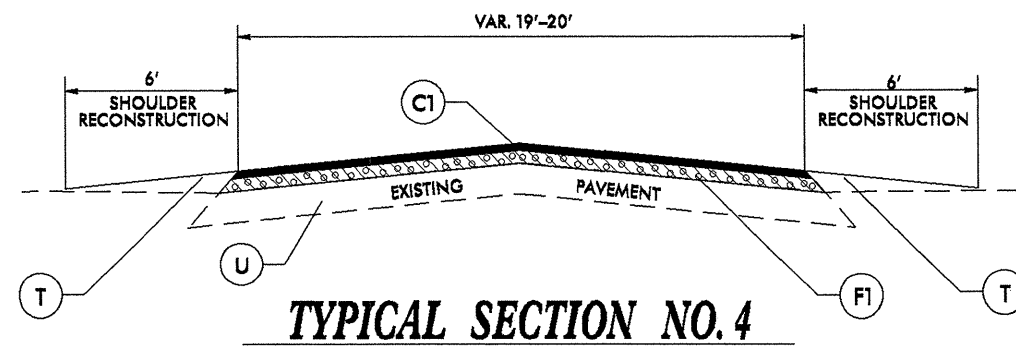
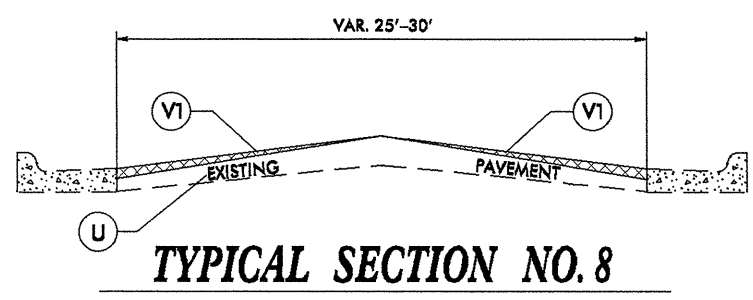
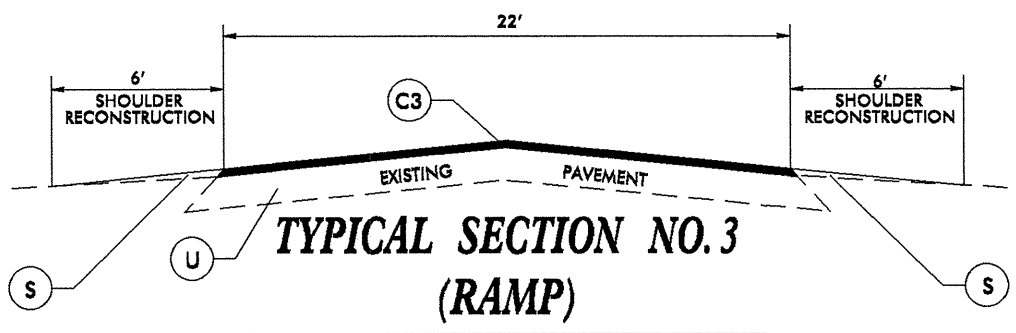
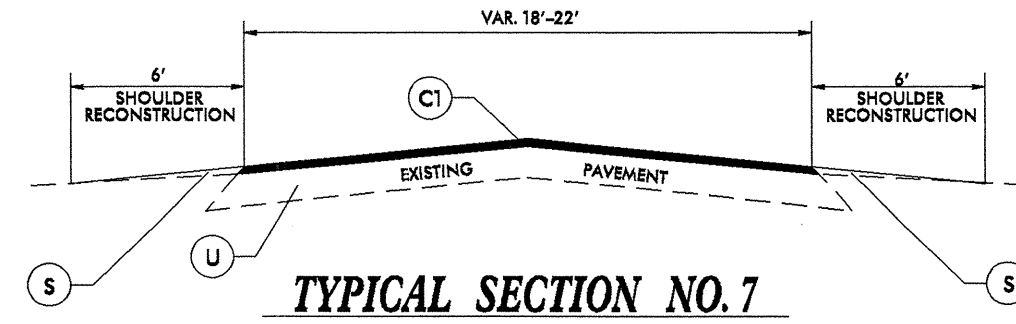
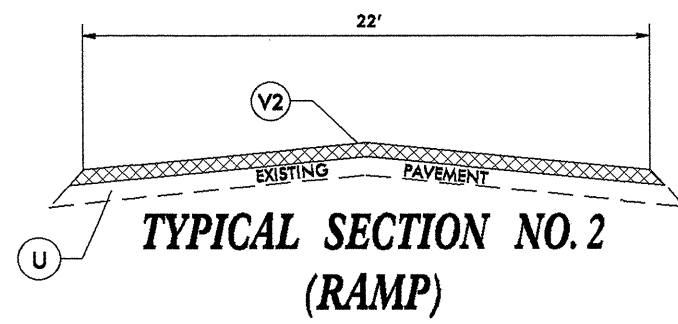
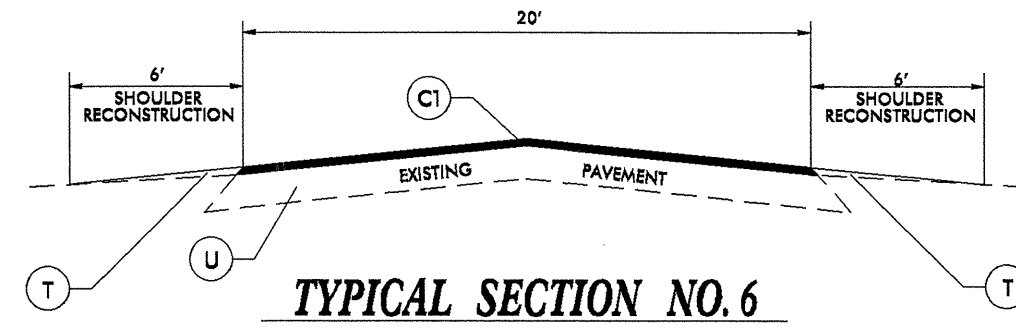
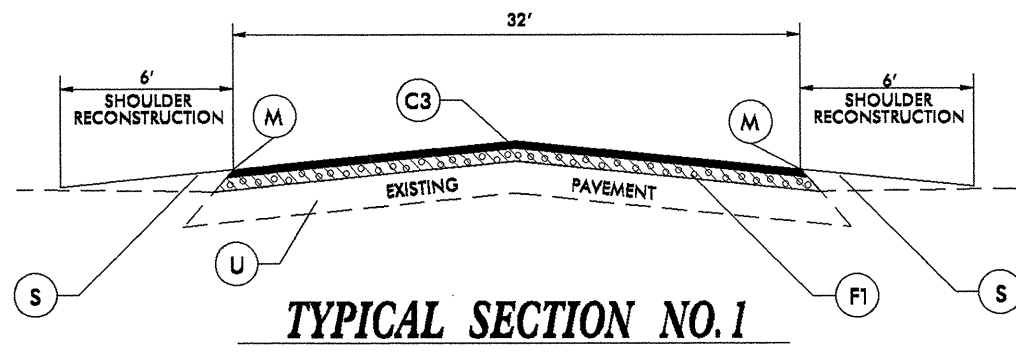


MAPS #2 & #9

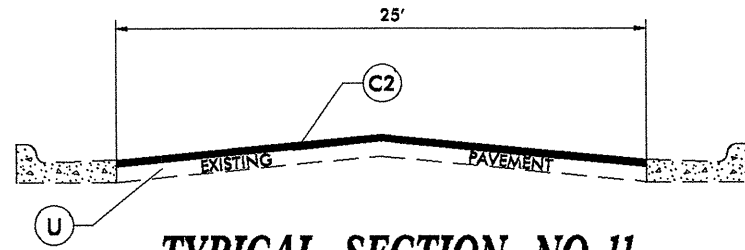


MAPS #16, #17 & #21

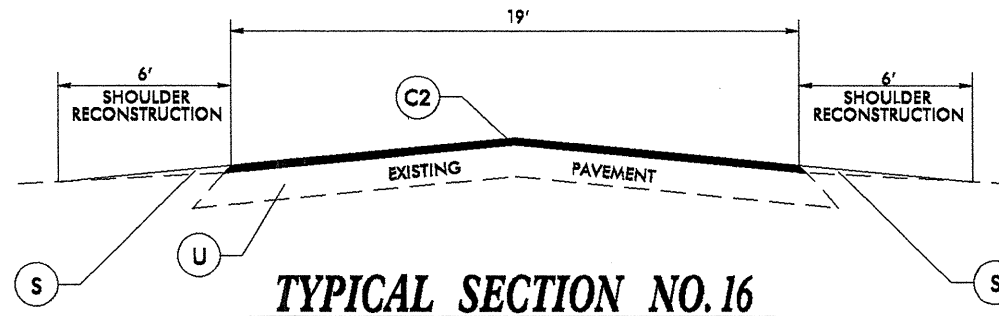




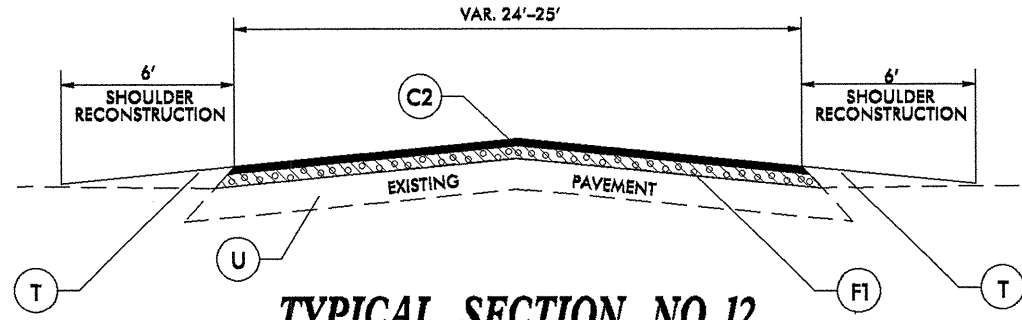
PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.
C2	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C3	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
D1	PROP. APPROX. 5.5" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 627 LBS. PER SQ. YD.
D2	PROP. APPROX. 3" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 342 LBS. PER SQ. YD.
E1	PROP. APPROX. 5" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 570 LBS. PER SQ. YD.
E2	PROP. APPROX. 11" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, IN 2 EQUAL LIFTS AT AN AVERAGE RATE OF 627 LBS. PER SQ. YD.
F1	PROPOSED ASPHALT SURFACE TREATMENT, MAT COAT WITH #6M STONE
M	MILLED RUMBLE STRIP
S	AGGREGATE SHOULDER BORROW
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
V1	MILLING 1.5" TO 0" IN DEPTH
V2	MILLING 1.5" IN DEPTH
Z	TRENCHING 9" DEPTH FOR WIDENING, BEGIN MIN. 6" INSIDE EXISTING PAVEMENT.



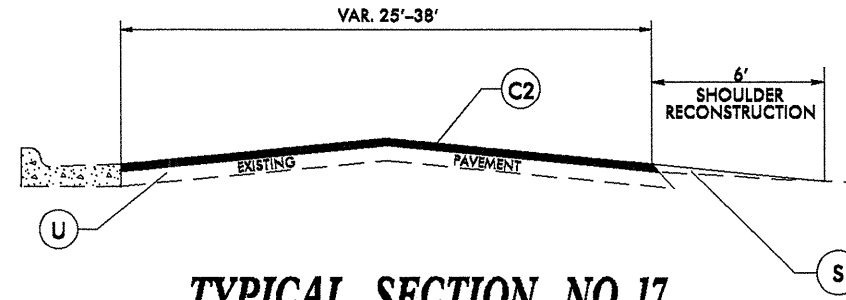
TYPICAL SECTION NO. 11



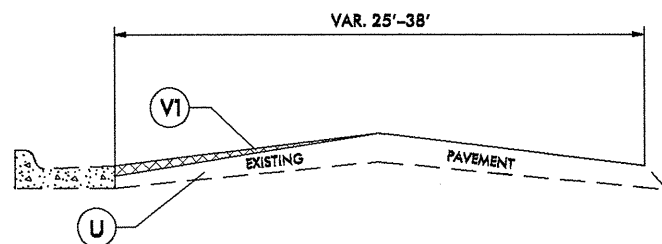
TYPICAL SECTION NO. 16



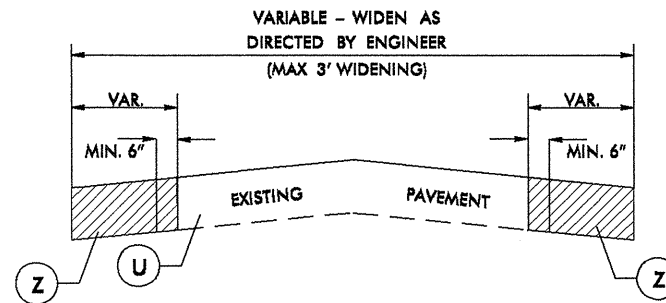
TYPICAL SECTION NO. 12



TYPICAL SECTION NO. 17

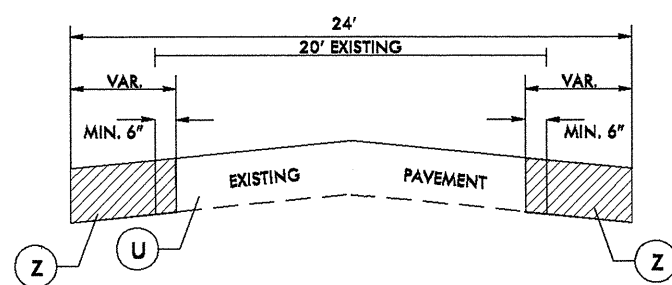


TYPICAL SECTION NO. 13

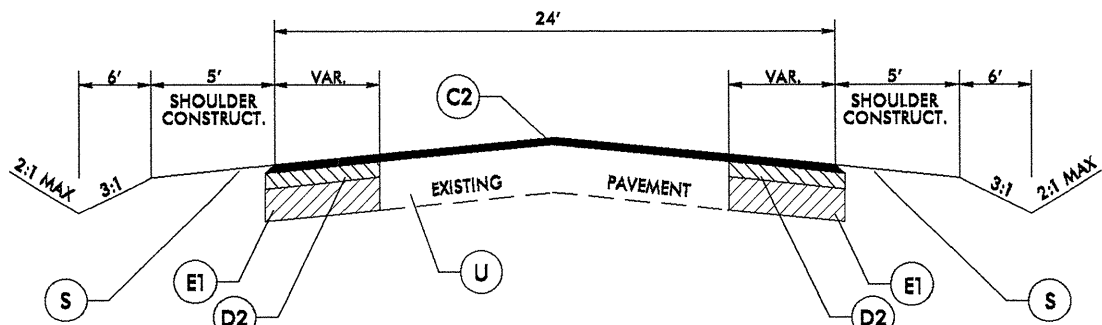


TYPICAL SECTION NO. 18

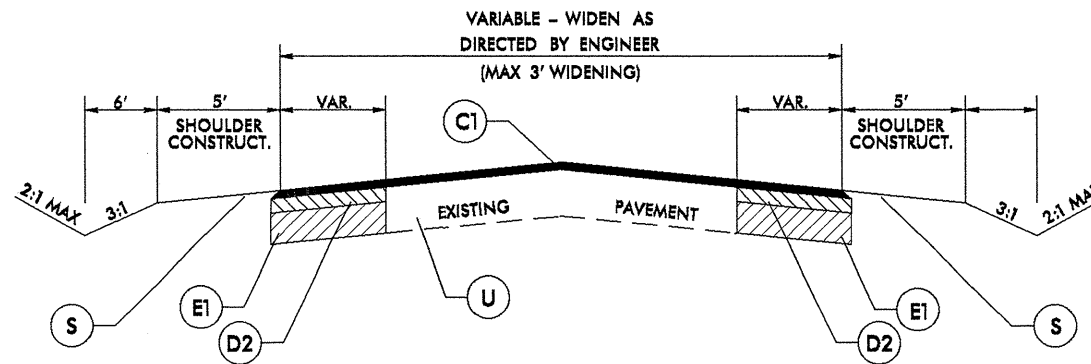
NOTE: WIDEN INSIDE OF CURVES AS DIRECTED BY ENGINEER FOR MAP 20 (ONLY)



TYPICAL SECTION NO. 14



TYPICAL SECTION NO. 15



TYPICAL SECTION NO. 19

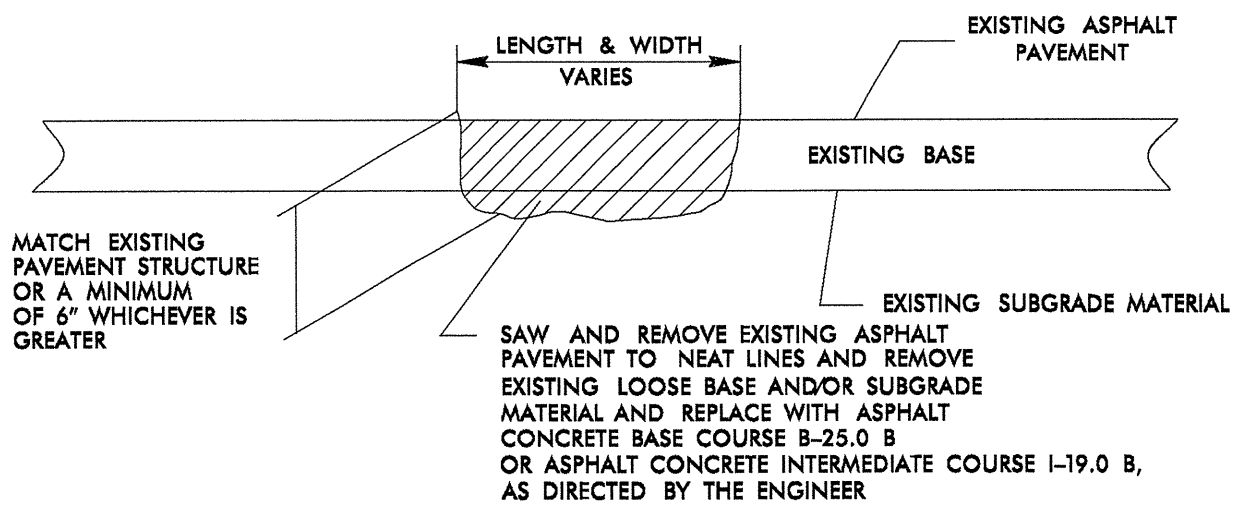
NOTE: WIDEN INSIDE OF CURVES AS DIRECTED BY ENGINEER FOR MAP 20 (ONLY)

PAVEMENT SCHEDULE

C1	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.
C2	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C3	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
D1	PROP. APPROX. 5.5" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 627 LBS. PER SQ. YD. IN TWO LAYER
D2	PROP. APPROX. 3" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 342 LBS. PER SQ. YD.
E1	PROP. APPROX. 5.5" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 570 LBS. PER SQ. YD.
E2	PROP. APPROX. 11" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, IN 2 EQUAL LIFTS AT AN AVERAGE RATE OF 627 LBS. PER SQ. YD.
F1	PROPOSED ASPHALT SURFACE TREATMENT, MAT COAT WITH #6M STONE
M	MILLED RUMBLE STRIP
S	AGGREGATE SHOULDER BORROW
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
V1	MILLING 1.5" TO 0" IN DEPTH
V2	MILLING 1.5" IN DEPTH
Z	TRENCHING 9" DEPTH FOR WIDENING. BEGIN MIN. 6" INSIDE EXISTING PAVEMENT.

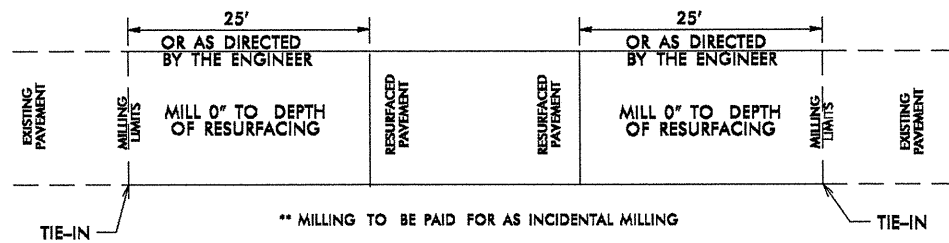
DETAILS OF PATCHING EXISTING PAVEMENT PRIOR TO RESURFACING

DETAIL



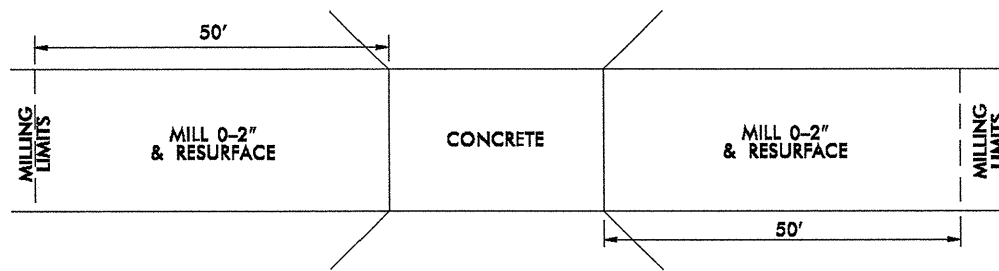
MATCH EXISTING PAVEMENT STRUCTURE OR A MINIMUM OF 6" WHICHEVER IS GREATER

SAW AND REMOVE EXISTING ASPHALT PAVEMENT TO NEAT LINES AND REMOVE EXISTING LOOSE BASE AND/OR SUBGRADE MATERIAL AND REPLACE WITH ASPHALT CONCRETE BASE COURSE B-25.0 B OR ASPHALT CONCRETE INTERMEDIATE COURSE I-19.0 B, AS DIRECTED BY THE ENGINEER



** MILLING TO BE PAID FOR AS INCIDENTAL MILLING

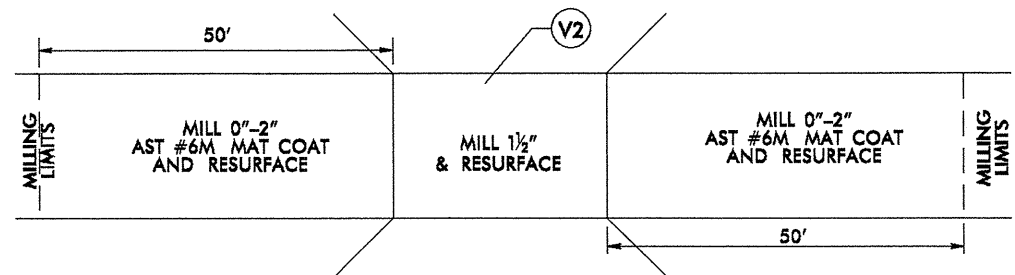
PAVEMENT TIE-IN DETAIL



BRIDGE DRAWING FOR SR 1912, SR 1005, SR 2261 & SR 1603

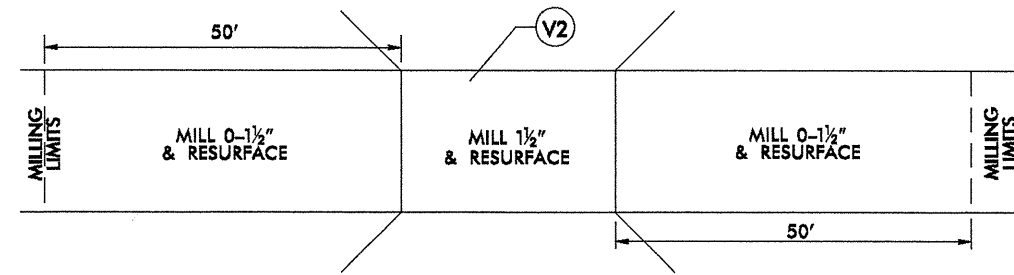
USE FOR MAP #2, #3, #19 & #9

* MILLING SHALL BE PAID FOR UNDER INCIDENTAL MILLING



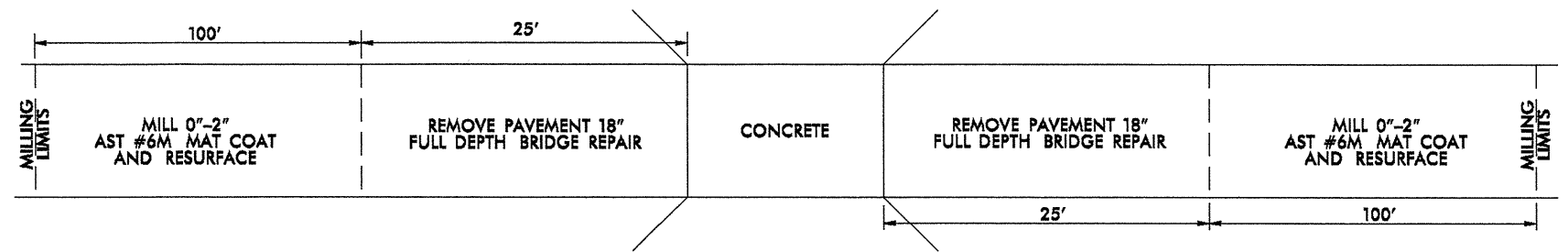
BRIDGE DRAWING FOR SR 2261
USE FOR MAP #13

* MILLING ON APPROACHES SHALL BE PAID FOR UNDER INCIDENTAL MILLING

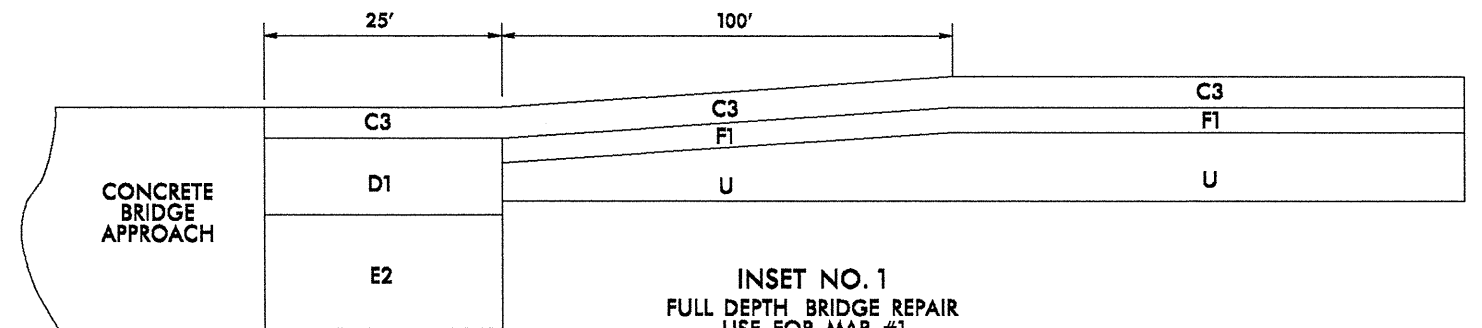


BRIDGE DRAWING FOR SR 2614 & SR 2261
USE FOR MAP #18 & #20

* MILLING ON APPROACHES SHALL BE PAID FOR UNDER INCIDENTAL MILLING



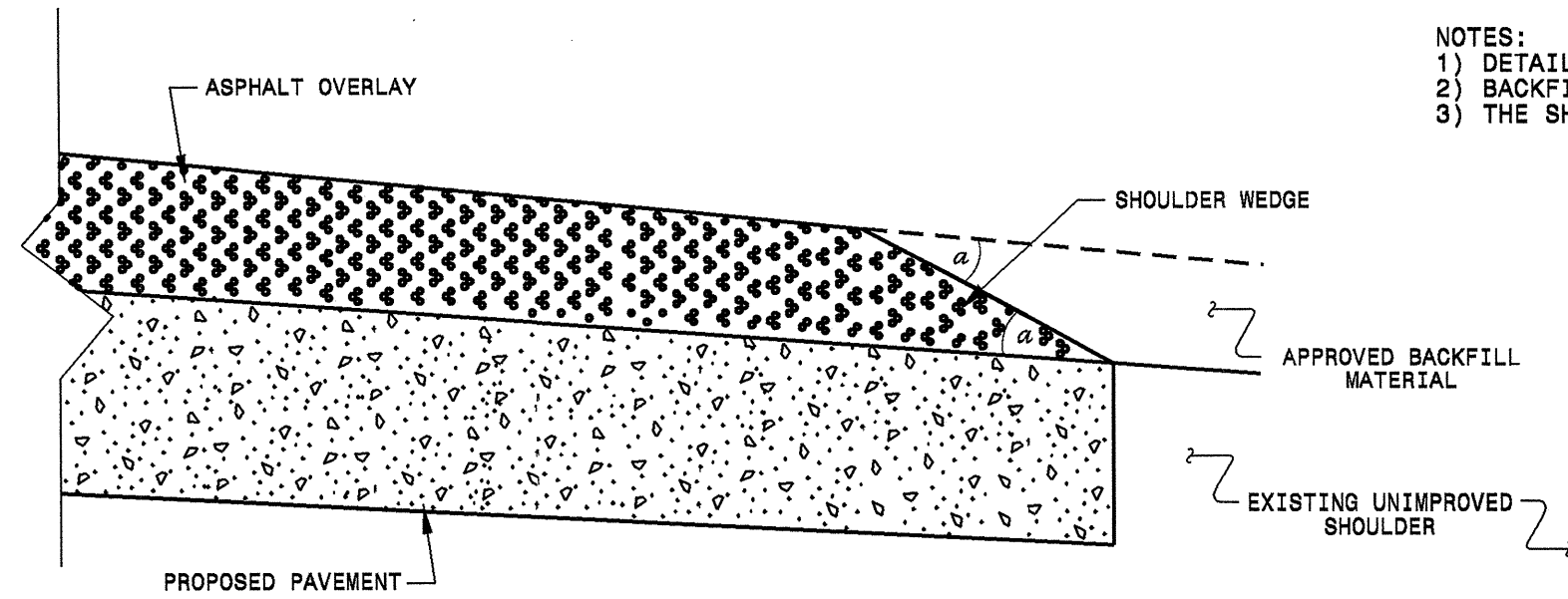
BRIDGE DRAWING FOR U.S. HWY #421
USE FOR MAP #1
USE FOR BRIDGE #119
* SEE INSET NO. 1



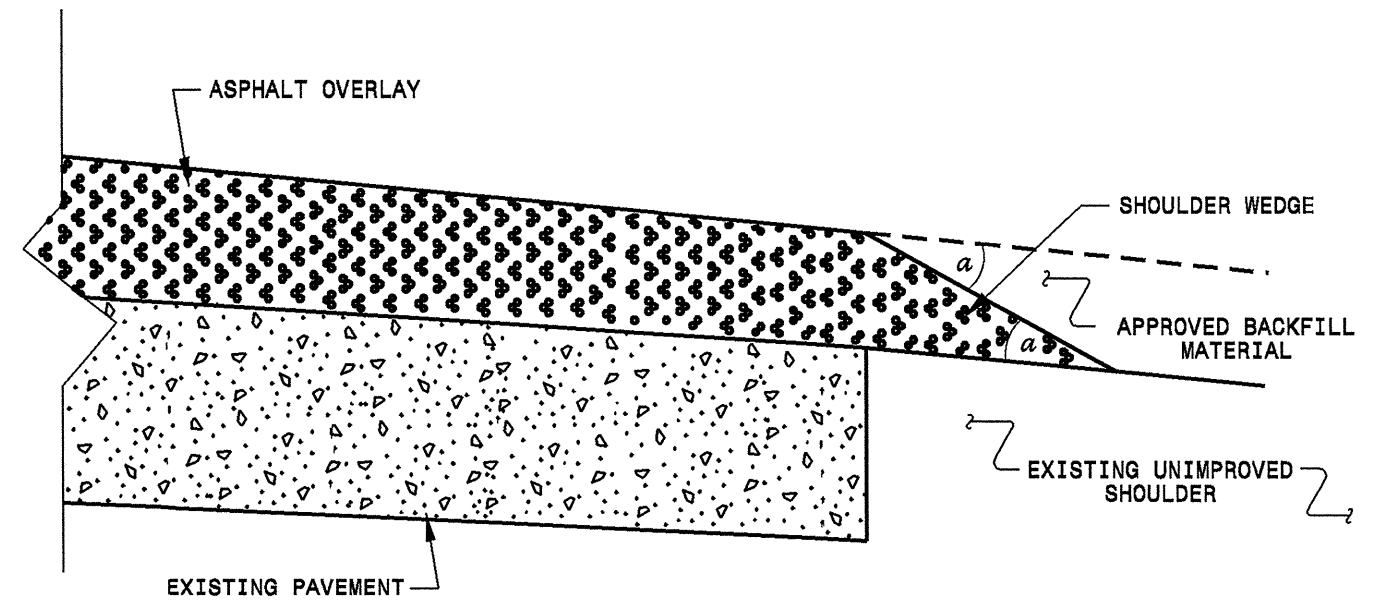
INSET NO. 1
FULL DEPTH BRIDGE REPAIR
USE FOR MAP #1
BRIDGE #119

PAVEMENT SCHEDULE	
C3	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE 59.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
D1	PROP. APPROX. 5.5" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 119.0C, AT AN AVERAGE RATE OF 627 LBS. PER SQ. YD. IN 2 LAYERS
E2	PROP. APPROX. 11" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, IN 2 EQUAL LIFTS AT AN AVERAGE RATE OF 627 LBS. PER SQ. YD.
FI	PROPOSED ASPHALT SURFACE TREATMENT, MAT COAT WITH #6M STONE
U	EXISTING PAVEMENT.
V2	MILLING 1.5" IN DEPTH

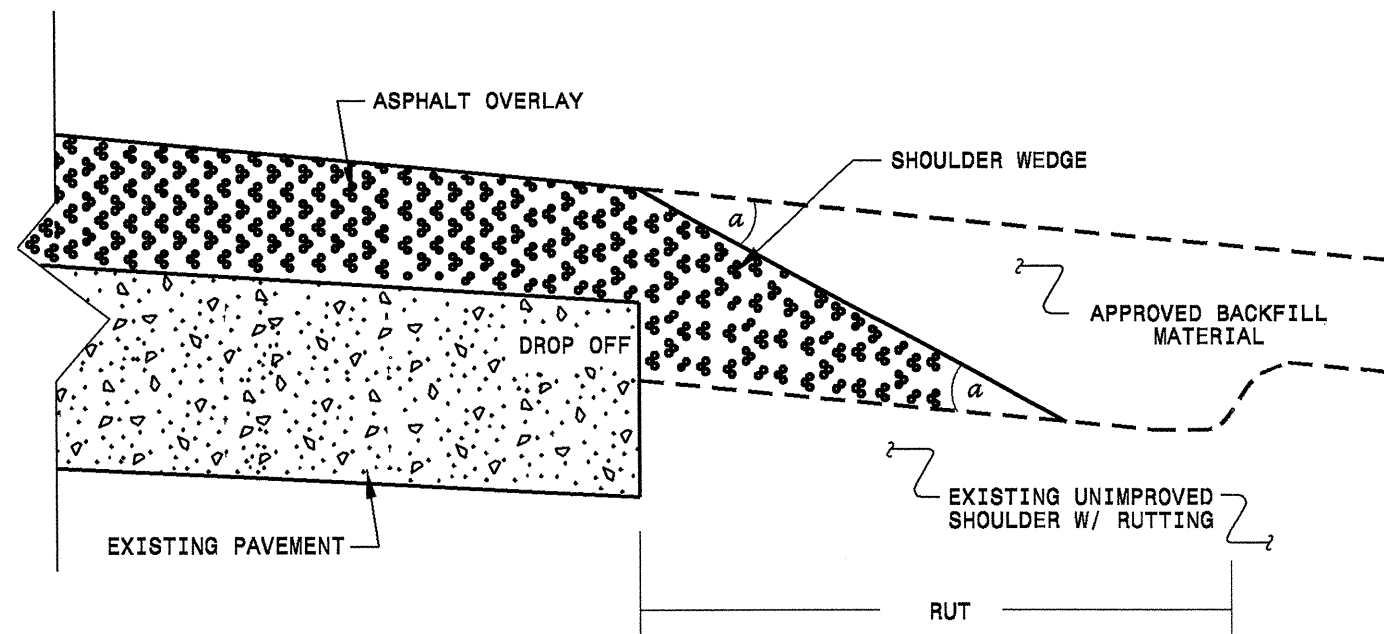
- NOTES:
 1) DETAIL DOES NOT APPLY TO OGAFD AND ULTRA-THIN BONDED WEARING COURSE.
 2) BACKFILL SHOULDER WITH APPROVED MATERIAL.
 3) THE SHOULDER WEDGE DEVICE MAY BE DISENGAGED AT PAVED DRIVEWAYS AND SIDE STREETS.



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°

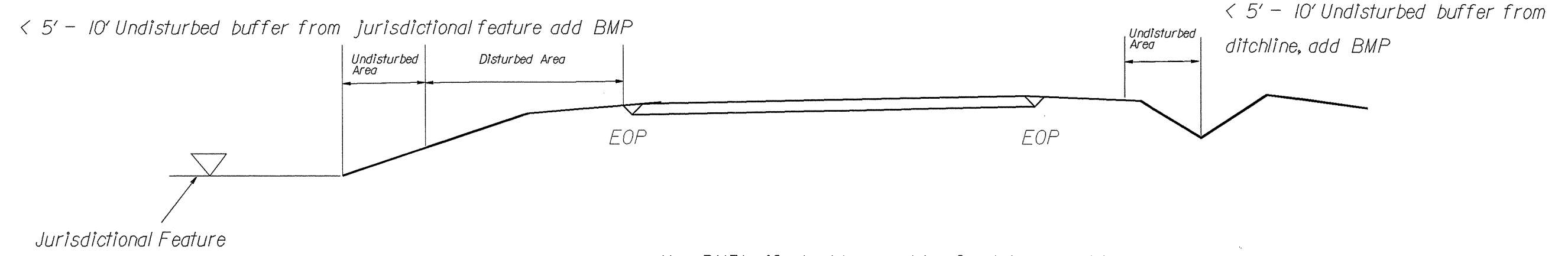
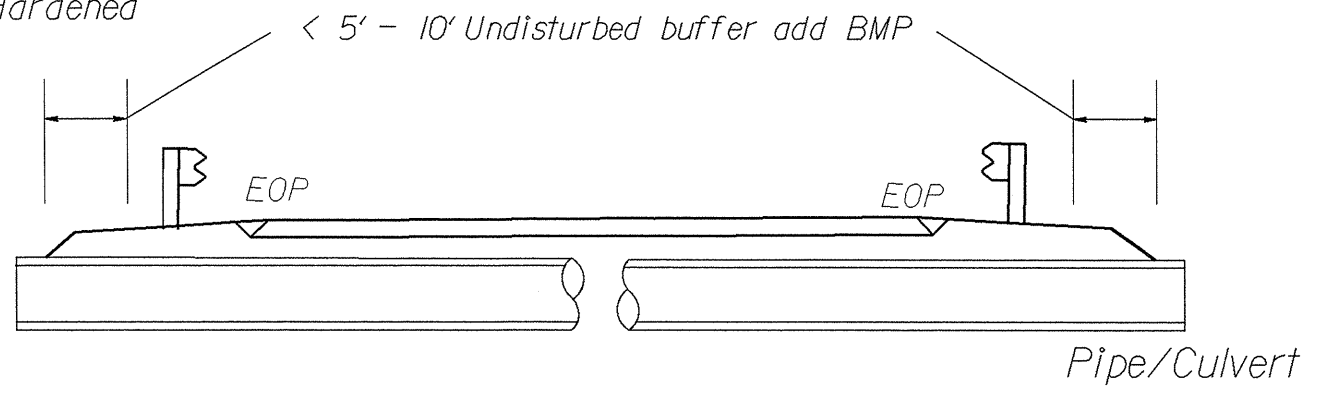
CONTRACT STANDARDS AND DEVELOPMENT UNIT			
Office 919-707-6950		FAX 919-250-4119	
SHOULDER WEDGE DETAILS			
ORIGINAL BY: T.SPELL	DATE: 7-19-11	CHECKED BY:	DATE: 10/18/12
FILE SPEC: s:\usr\details\stand\shoulderwedge\detail.dgn			

T:\AN-2014_0925\contracts\Resurfacing Projects\Revised Shoulder Wedge Detail.dgn
 \$\$\$\$(USERNAM)\$\$\$

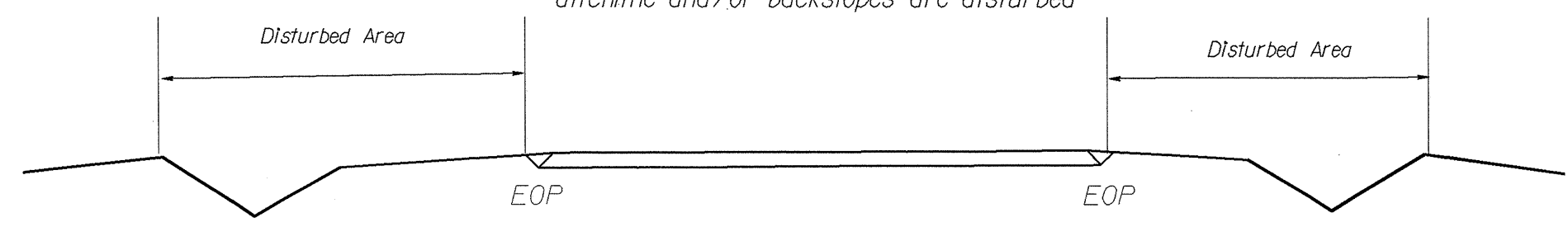
NOTES: Less than 5' - 10' undisturbed buffer from ROW, ditchline, water feature, or drainage inlet, add BMP.

EROSION CONTROL DETAIL

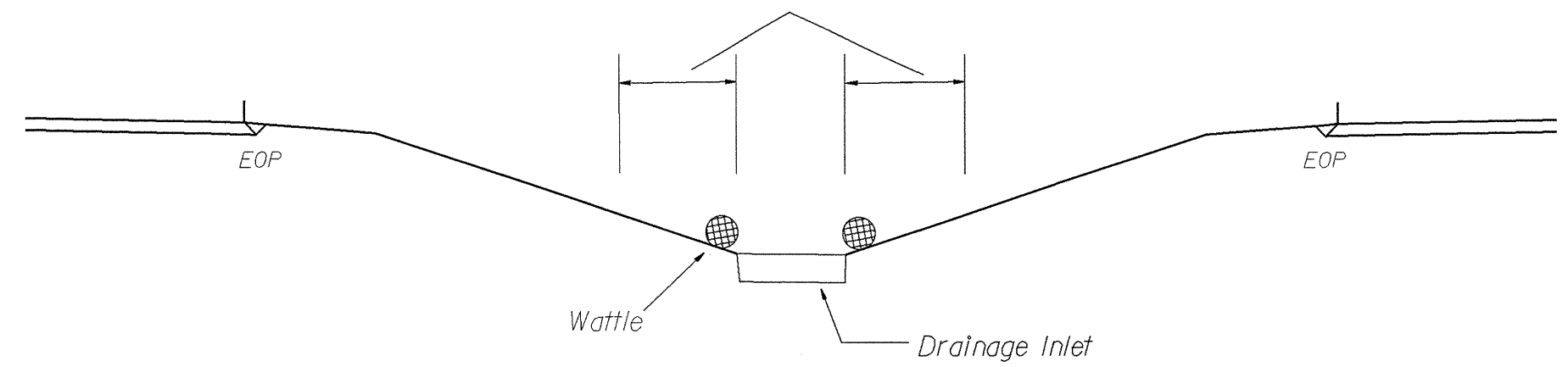
BMP Options: Wattle, Silt Fence or Hardened Aggregate.



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

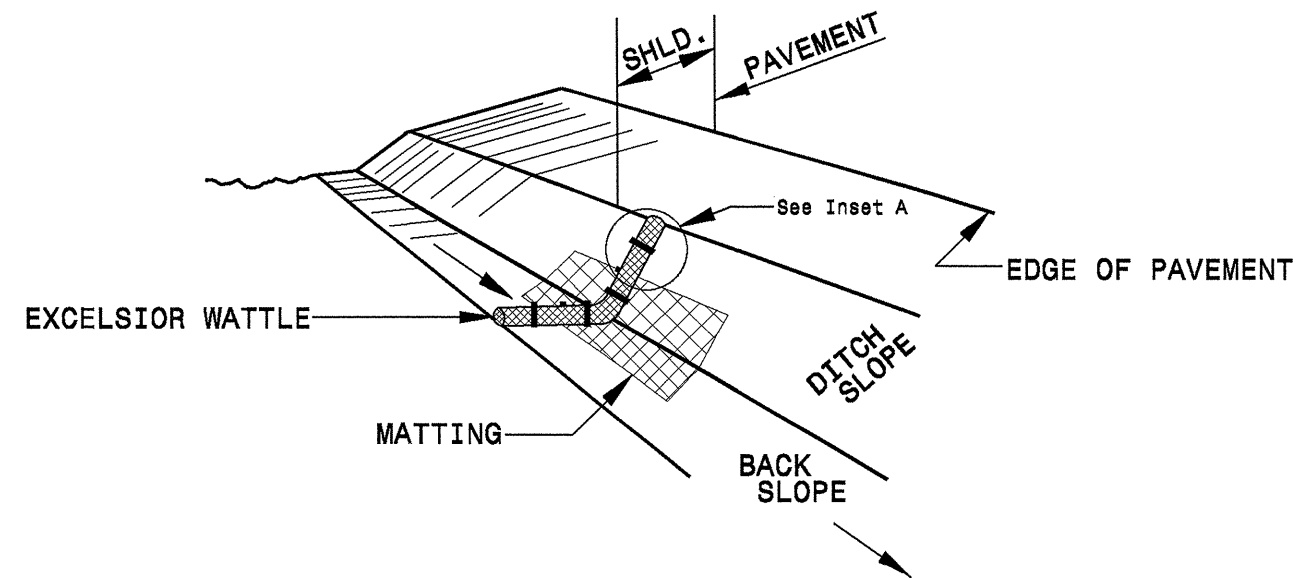


< 5' - 10' Undisturbed buffer from inlet, add wattle

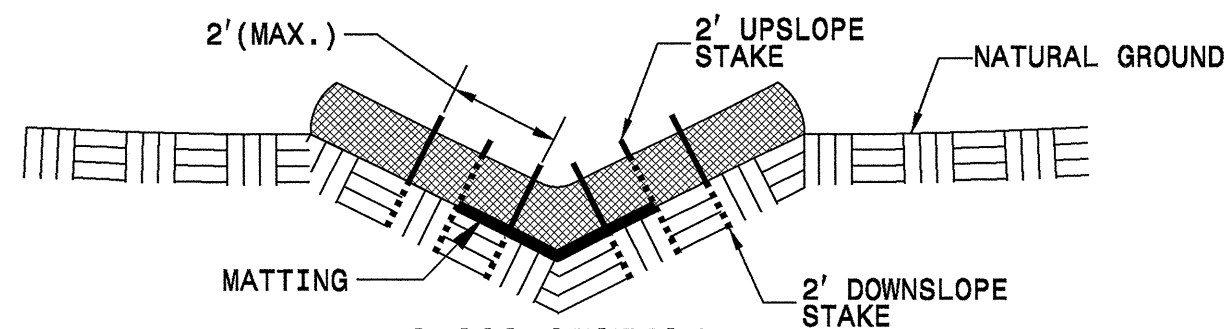


NOT TO SCALE

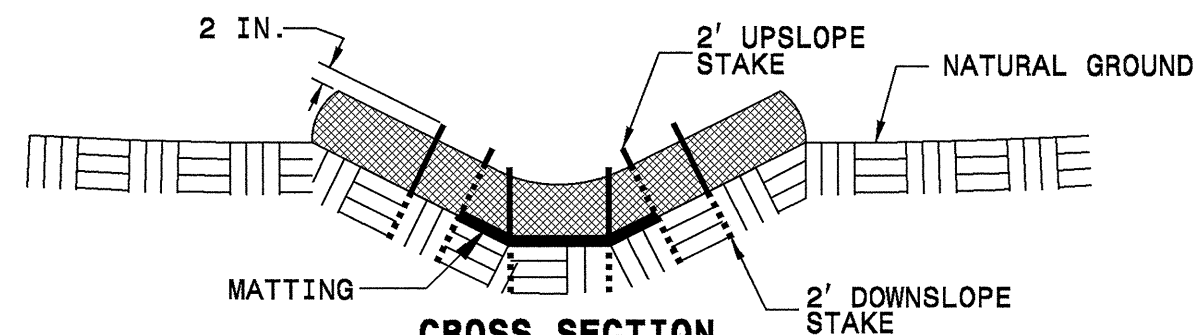
WATTLE DETAIL



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.

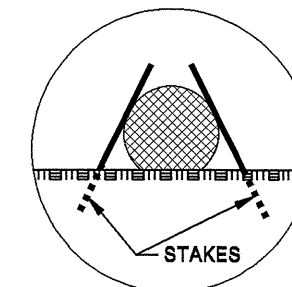
ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.

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

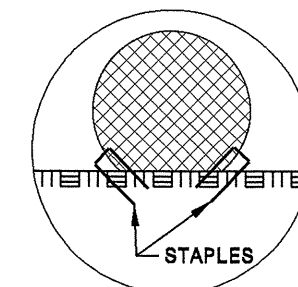
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.

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

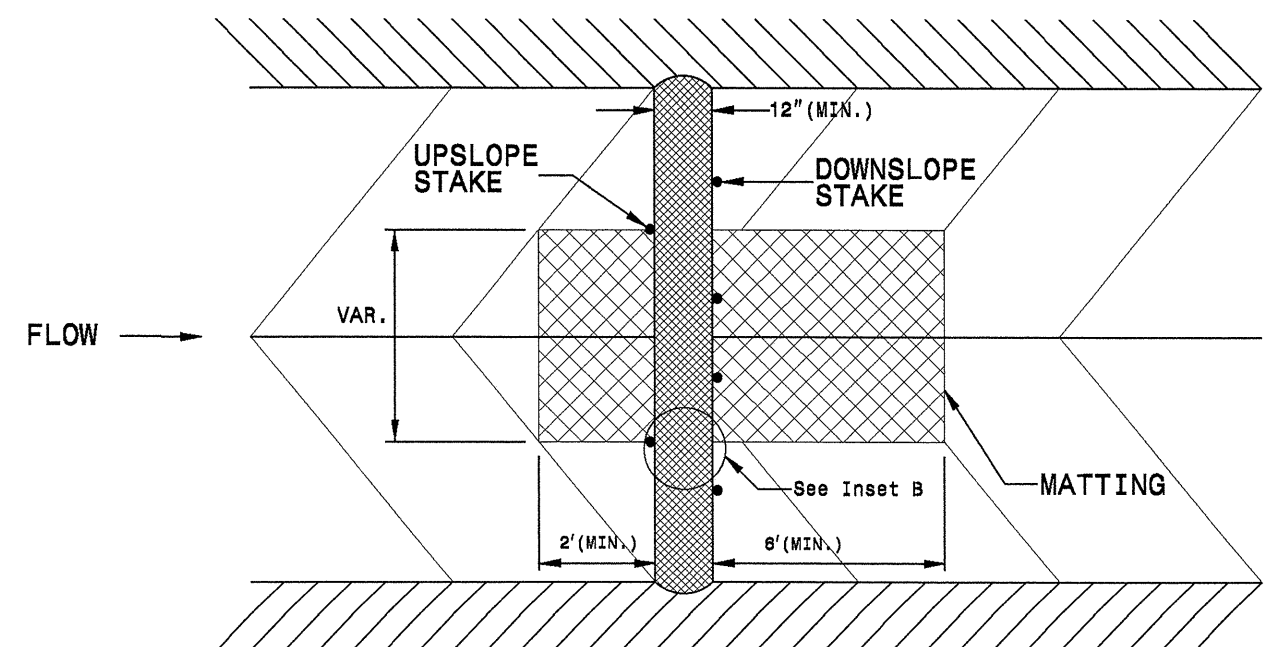
INSTALL MATTING IN ACCORDANCE WITH SECTION 1631 OF THE STANDARD SPECIFICATIONS.



INSET A



INSET B



TOP VIEW

PROJECT NO.	SHEET NO.	TOTAL NO.
8CR.10761.23, 8CR.20761.23	11	12

SUMMARY OF QUANTITIES

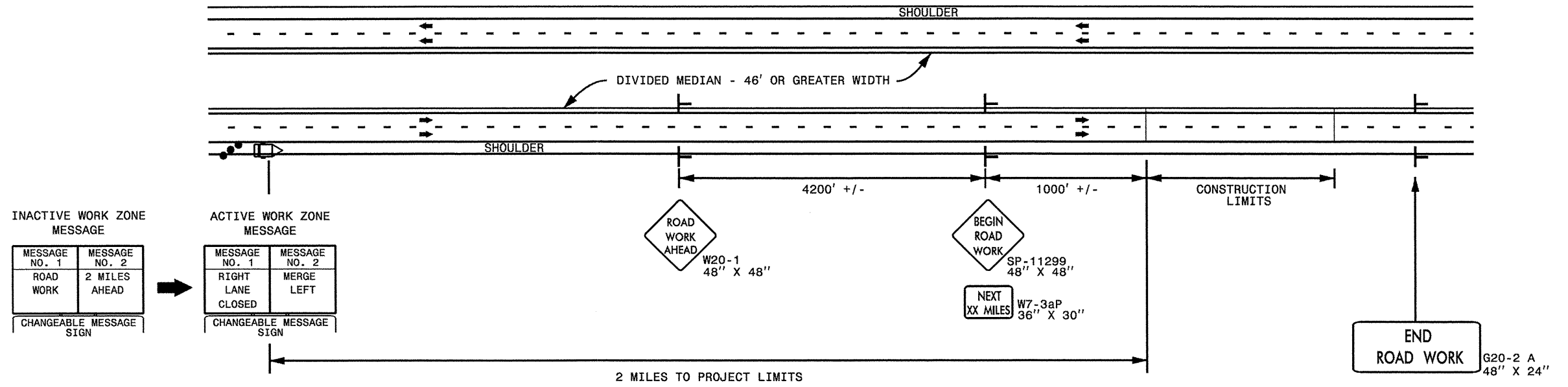
PROJECT NO.	COUNTY	MAP NO.	ROUTE	DESCRIPTION	TYP	LANES	LANE TYPE	FINAL SURFACE TESTING REQUIRED	WARM MIX ASPHALT REQUIRED	LENGTH MI	WIDTH FT	BORROW EXCAVATION CY	REMOVAL OF EXISTING ASPHALT PAVEMENT SY	GENERIC GRADING ITEM - AGGREGATE SHOULDER BORROW TON	INCIDENTAL STONE BASE TONS	SHOULDER CONSTRUCTION SMI	SHOULDER RECONSTRUCTION SMI	1.5" MILLING SY	0" TO 2" MILLING SY	0" TO 1.5" MILLING SY	INCIDENTAL MILLING SY	BASE COURSE, B25.0B TONS	BASE COURSE, B25.0C TONS	INTERMEDIATE COURSE, I19.0B TONS	INTERMEDIATE COURSE, I19.0C TONS	SURFACE COURSE, S9.5B TONS	SURFACE COURSE, S9.5C TONS	SURFACE COURSE, S9.5A TONS	ASPHALT BINDER FOR PLANT MIX TONS	PATCHING EXISTING PAVEMENT TONS	ASPHALT SURFACE TREATMENT, MATCOAT, #6M STONE SY	MILLED RUMBLE STRIPS LF	ADJUST MANHOLES EA	ADJUST METER OR VALVE BOX EA	TEMPORARY SILT FENCE LF	WATTLE LF	SEED & MULCHING AC	INDUCTIVE LOOP SAWCUT LF	
8CR.10761.23	Randolph	1	US 421 SB	FROM SR 2407 SHILOH RD TO PVT. JT. JUST N OF BRIDGE #142 (SR 2261 BRIDGE) PLUS SB RAMP	1,2,3	2	MD	NO	NO	2.308	32		356	461.60							622	222			4,833		299	120	43,500.00	24,372									
TOTAL FOR MAP NO. 1										2.308			356	461.60							622	222			4,833		299	120	43,500.00	24,372									
TOTAL FOR PROJ NO. 8CR.10761.23										2.308			356	461.60							622	222			4,833		299	120	43,500.00	24,372									
8CR.20761.23	Randolph	2	SR 1912 (ALDRIDGE RD)	FROM US 311 TO S. JOINT BRIDGE #240 (GUILFORD CO. LINE)		4	2	2WU	NO	1.08	19	162			28		2.16				475					1,181	79	200	12,050.00			1	1	22	50	1.08	324		
TOTAL FOR MAP NO. 2										1.08		162			28		2.16				475					1,181	79	200	12,050.00			1	1	22	50	1.08	324		
8CR.20761.23	Randolph	3	SR 1005 (LANES MILL RD)	FROM CHATH. CO. LINE TO SR 2634 (OLD COLERIDGE RD)		5	2	2WU	NO	3.528	18			987.84	60		7.06				700				3,796		228	200	38,000.00							3.53	350		
TOTAL FOR MAP NO. 3										3.528				987.84	60		7.06				700				3,796		228	200	38,000.00							3.53	350		
8CR.20761.23	Randolph	4	SR 1539 (EARNHARDT RD)	PVT. JOINT W. OF SR 1412 (JERICHO RD) TO SR 1574 (SLICK MTN. RD)		6	2	2WU	NO	1.656	20	248			62		3.31				111				1,885	126	390					33	50	1.66					
TOTAL FOR MAP NO. 4										1.656		248			62		3.31				111				1,885	126	390				33	50	1.66						
8CR.20761.23	Randolph	5	SR 1574 (SLICK MOUNTAIN RD)	FROM SR 1539 (EARNHARDT RD) TO SR 1408 (HOOVER HILL RD)		7	2	2WU	NO	0.741	20			207.48	14		1.48				333				904	61	100												
TOTAL FOR MAP NO. 5										0.741				207.48	14		1.48				333				904	61	100												
8CR.20761.23	Randolph	6	SR 1462 (PARK DR)	FROM SR 1465 (EDGEWOOD RD) TO SR 1463 (OAKMONT DR)		7	2	2WU	NO	0.07	18			14.00			0.14				200				178	12	50						2	1				0.07	
TOTAL FOR MAP NO. 6										0.07				14.00			0.14				200				178	12	50					2	1				0.07		
8CR.20761.23	Randolph	7	SR 1462 (PARK DR)	FROM SR 1463 (OAKMONT DR) TO END C&G		8,9	2	2WU	NO	0.284	30									4,993				620	42	40						7	4						
TOTAL FOR MAP NO. 7										0.284										4,993				620	42	40					7	4							
8CR.20761.23	Randolph	8	SR 1463 (OAKMONT DR)	SR 1462 (PARK DR) TO (NEELY DR)		4	2		NO	0.33	19	50			39		1.32				422				556	37	30	3,700.00				7	1	7	50	0.33			
TOTAL FOR MAP NO. 8										0.33		50			39		1.32				422				556	37	30	3,700.00				7	1	7	50	0.33			
8CR.20761.23	Randolph	9	SR 1603 (BRAXTON CRAVEN RD)	FROM NC 62 TO SR 1004 (TRINITY RD)		10	2		NO	1.37	20			383.60			2.74				670				1,990	133	60	16,100.00				1	2				1.37	1,520	
TOTAL FOR MAP NO. 9										1.37				383.60			2.74				670				1,990	133	60	16,100.00				1	2				1.37	1,520	
8CR.20761.23	Randolph	10	SR 2261 (OLD LIBERTY RD)	US 220BUS TO ASHLEY ST (END C&G)		8,11	2	2WU	NO	0.073	25									1,072				192														432	
TOTAL FOR MAP NO. 10										0.073										1,072				192														432	
8CR.20761.23	Randolph	11	SR 2261 (OLD LIBERTY RD)	FROM END C & G TO BEGIN 1-SIDED C & G		12	2	2WU	NO	1.023	25	102			100		2.05				278				1,410		85	100	15,004.00						20	50	1.02		
TOTAL FOR MAP NO. 11										1.023		102			100		2.05				278				1,410		85	100	15,004.00						20	50	1.02		
8CR.20761.23	Randolph	12	SR 2261 (OLD LIBERTY RD)	FROM BEGIN 1-SIDED C & G TO END 1-SIDED C & G		13,17	2	2WU	NO	0.105	25			14.70			0.11			1,975				230		14							1						
TOTAL FOR MAP NO. 12										0.105				14.70			0.11			1,975				230		14						1							
8CR.20761.23	Randolph	13	SR 2261 (OLD LIBERTY RD)	FROM END 1-SIDED C & G TO SR 2128 WOW RD		12	2	2WU	NO	1.532	25	230			76		3.06		335		1,181				2,362		142	90	22,500.00				7	5	31	100	1.53		
TOTAL FOR MAP NO. 13										1.532		230			76		3.06		335		1,181				2,362		142	90	22,500.00				7	5	31	100	1.53		
8CR.20761.23	Randolph	14	SR 1627 (OLD THOMASVILLE RD)	FROM DAVIDSON COUNTY LINE TO PVT. JOINT S. OF BRIDGE #74		5	2	2WU	NO	0.587	24			164.36	78		1.17				600				865		52	250	8,300.00										
TOTAL FOR MAP NO. 14										0.587				164.36	78		1.17				600				865		52	250	8,300.00										
8CR.20761.23	Randolph	15	SR 1627 (OLD THOMASVILLE RD)	FROM GUILFORD COUNTY LINE TO PVT. JOINT N. OF BRIDGE #74		12	2	2WU	NO	0.404	24	61					0.81				600				665		40	375	5,700.00				8			50	0.40		
TOTAL FOR MAP NO. 15										0.404		61					0.81				600				665		40	375	5,700.00				8			50	0.40		
8CR.20761.23	Randolph	16	SR 1518 (PLAINFIELDS RD)	FROM S. JOINT RR TRACK NEAR US 311 TO PVT. JOINT 608FT N OF BRIDGE #530		14,15	2	2WU	NO	0.52	24			145.60	28		1.04				306	558		326	702		82	80									0.52		
TOTAL FOR MAP NO. 16										0.52				145.60	28		1.04				306	558		326	702		82	80								0.52			
8CR.20761.23	Randolph	17	SR 1518 (PLAINFIELDS RD)	FROM PVT. JOINT 608FT N. OF BRIDGE #530 TO PVT. JOINT 791FT S OF SR 1504 (SPERO RD)		10	2	2WU	NO	1.912	20			535.36			3.82				222				2,104		141	120	22,435.00									1.91	
TOTAL FOR MAP NO. 17										1.912				535.36			3.82				222				2,104		141	120	22,435.00								1.91		
8CR.20761.23	Chatham	18	SR 2261 (OLD LIBERTY RD)	FROM SR 2442 (RAMSEUR JULIAN RD) TO SR 2440 (BROWER MEADOW RD)		16	2	2WU	NO	1.39	19			278.00			2.78		425		476				1,496		90	200									1.39		
TOTAL FOR MAP NO. 18										1.39				278.00			2.78		425		476				1,496		90	200									1.39		
8CR.20761.23	Randolph	19	SR 2261 (OLD LIBERTY RD)	W. JT. BRIDGE # 142 OVER US 421 TO SR 2442 (RAMSEUR JULIAN RD)		5	2	2WU	NO	0.822	19			230.16	40		1.64				772				1,200		72	100	10,500.00									0.82	
TOTAL FOR MAP NO. 19										0.822				230.16	40		1.64				772				1,200		72	100	10,500.00								0.82		
8CR.20761.23	Randolph	20	SR 2614 (GRANTVILLE LN)	FROM SR 1003 (PLEASANT RIDGE RD) TO NC 42		7,18,19	2	2WU	NO	5.29	20			1,481.20	44	0.50	10.58				1,000	230		185		6,060	425	290								5.29			
TOTAL FOR MAP NO. 20										5.29				1,481.20	44	0.50	10.58				1,000	230		185		6,060	425	290							5.29				
8CR.20761.23	Randolph	21	SR 1331 (RIDGES MOUNTAIN RD)	FROM SR 1332 (GARREN TOWN RD) TO PVT. JOINT		7	2	2WU	NO	0.7	20																												

PROJECT NO.	SHEET NO.	TOTAL NO.
8CR.10761.23, 8CR.20761.23	12	12

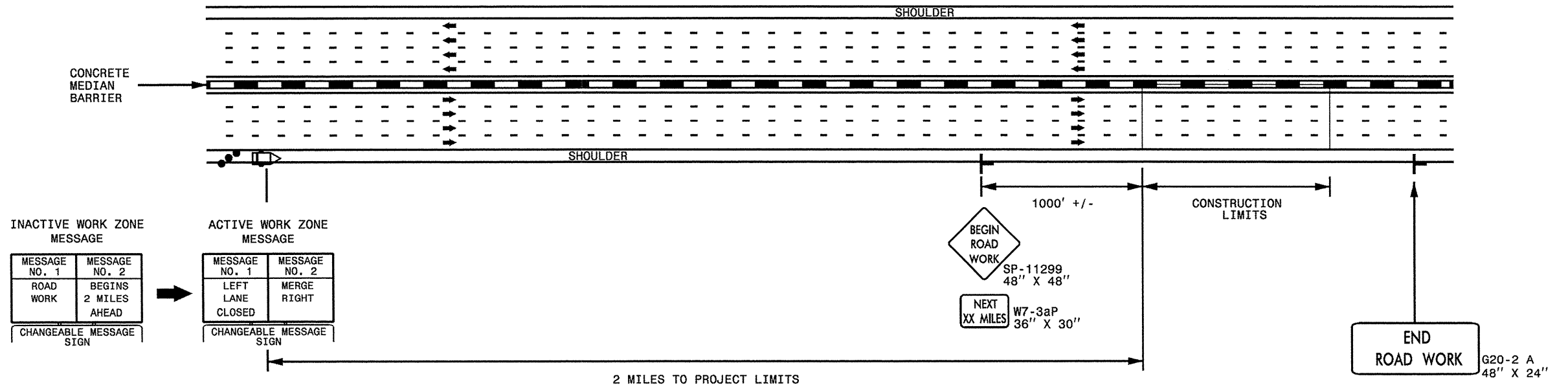
THERMOPLASTIC AND PAINT QUANTITIES

PROJECT NO.	COUNTY	MAP NO.	ROUTE	DESCRIPTION	TYP	LANES	LANE TYPE	LENGTH	WIDTH	445700000-N TEMPORARY TRAFFIC CONTROL	441300000-E	451000000-N	468500000-E	468500000-E	468500000-E	468500000-E	469700000-E	470500000-E	471000000-E	472100000-E	472100000-E	472500000-E	472500000-E	472500000-E	472500000-E	472500000-E	472500000-E	477000000-E	481000000-E	490000000-N	490500000-N													
											WORK ZONE ADVANCE/GEN ERAL WARNING SIGNING	LAW ENFORCEMENT	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 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 RXR 120 M	THERMO STR ARROW 90 M	THERMO RT ARROW 90 M	THERMO STR & RT ARROW 90 M	THERMO LT ARROW 90 M	THERMO STR & LT ARROW 90 M	COLD APPLIED PLASTIC PAVEMENT MARKING LINES, TYPE III (4")	4" WHITE PAINT	4" YELLOW PAINT	YELLOW & YELLOW MARKERS	CRYSTAL & RED MARKERS	SNOW PLOWABLE MARKERS C & R MARKERS	SNOW PLOWABLE MARKERS Y & Y MARKERS										
NO					NO					IS	SF	HR	LF	LF	LF	LF	LF	LF	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA												
8CR.10761.23	Randolph	1	US 421 SB	FROM SR 2407 SHILOH RD TO PVT. JT. JUST N OF BRIDGE #142 (SR 2261 BRIDGE) PLUS SB RAMPS		1,2,3	2	MD	2,308	32	*	238	24	12,232	12,232	3,047																152	152											
				TOTAL FOR MAP NO. 1					2,308																							152	152											
TOTAL FOR PROJ NO. 8CR.10761.23											2,308																																	
8CR.20761.23	Randolph	2	SR 1912 (ALDRIDGE RD)	FROM US 311 TO S. JOINT BRIDGE #240 (GUILFORD CO. LINE)		4	2	ZWU	1.08	19		2623	40																				22,810	22,810										
				TOTAL FOR MAP NO. 2					1.08			40																					22,810	22,810										
8CR.20761.23	Randolph	3	SR 1005 (LANES MILL RD)	FROM CHATH. CO. LINE TO SR 2634 (OLD COLERIDGE RD)		5	2	ZWU	3,528	18		*	40																			74,511	74,511	233										
				TOTAL FOR MAP NO. 3					3,528			40																				74,511	74,511	233										
8CR.20761.23	Randolph	4	SR 1539 (EARNHARDT RD)	PVT. JOINT W. OF SR 1412 (JERICHO RD) TO SR 1574 (SLICK MTN. RD)		6	2	ZWU	1,656	20		*																				34,975	34,975											
				TOTAL FOR MAP NO. 4					1,656																							34,975	34,975											
8CR.20761.23	Randolph	5	SR 1574 (SLICK MOUNTAIN RD)	FROM SR 1539 (EARNHARDT RD) TO SR 1408 (HOOVER HILL RD)		7	2	ZWU	0,741	20		*																				15,650	15,650											
				TOTAL FOR MAP NO. 5					0,741																							15,650	15,650											
8CR.20761.23	Randolph	6	SR 1462 (PARK DR)	FROM SR 1465 (EDGEWOOD RD) TO SR 1463 (OAKMONT DR)		7	2	ZWU	0,07	18		*																				1,478	1,478											
				TOTAL FOR MAP NO. 6					0,07																							1,478	1,478											
8CR.20761.23	Randolph	7	SR 1462 (PARK DR)	FROM SR 1463 (OAKMONT DR) TO END C&G		8,9	2	ZWU	0,284	30		*																				5,998	5,998											
				TOTAL FOR MAP NO. 7					0,284																							5,998	5,998											
8CR.20761.23	Randolph	8	SR 1463 (OAKMONT DR)	SR 1462 (PARK DR) TO (NEELY DR)		4	2		0,33	19		*																				6,970	6,970											
				TOTAL FOR MAP NO. 8					0,33																							6,970	6,970											
8CR.20761.23	Randolph	9	SR 1603 (BRAXTON CRAVEN RD)	FROM NC 62 TO SR 1004 (TRINITY RD)		10	2		1,37	20		*	40				50	144	12	2												29,300	28,764											
				TOTAL FOR MAP NO. 9					1,37				40				50	144	12	2												29,300	28,764											
8CR.20761.23	Randolph	10	SR 2261 (OLD LIBERTY RD)	US 220BUS TO ASHLEY ST (END C&G)		8,11	2	ZWU	0,073	25		*	40																					5	24									
				TOTAL FOR MAP NO. 10					0,073				40																				5	24										
8CR.20761.23	Randolph	11	SR 2261 (OLD LIBERTY RD)	FROM END C & G TO BEGIN 1-SIDED C & G		12	2	ZWU	1,023	25		*		10,560																				68										
				TOTAL FOR MAP NO. 11					1,023					10,560																			68											
8CR.20761.23	Randolph	12	SR 2261 (OLD LIBERTY RD)	FROM BEGIN 1-SIDED C & G TO END 1-SIDED C & G		13,17	2	ZWU	0,105	25		*		650									1										7	20										
				TOTAL FOR MAP NO. 12					0,105					650								1										7	20											
8CR.20761.23	Randolph	13	SR 2261 (OLD LIBERTY RD)	FROM END 1-SIDED C & G TO SR 2128 WOW RD		12	2	ZWU	1,532	25		*		16,178																				101										
				TOTAL FOR MAP NO. 13					1,532					16,178																			101											
8CR.20761.23	Randolph	14	SR 1627 (OLD THOMASVILLE RD)	FROM DAVIDSON COUNTY LINE TO PVT. JOINT S. OF BRIDGE #74		5	2	ZWU	0,587	24		*																				12,397	12,397	39										
				TOTAL FOR MAP NO. 14					0,587																							12,397	12,397	39										
8CR.20761.23	Randolph	15	SR 1627 (OLD THOMASVILLE RD)	FROM GUILFORD COUNTY LINE TO PVT. JOINT N. OF BRIDGE #74		12	2	ZWU	0,404	24		*																				8,532	8,532	27										
				TOTAL FOR MAP NO. 15					0,404																							8,532	8,532	27										
8CR.20761.23	Randolph	16	SR 1518 (PLAINFIELDS RD)	FROM S. JOINT RR TRACK NEAR US 311 TO PVT. JOINT 608FT N OF BRIDGE #530		14,15	2	ZWU	0,52	20		*						25	50														10,982	10,982	34									
				TOTAL FOR MAP NO. 16					0,52									25	50													10,982	10,982	34										
8CR.20761.23	Randolph	17	SR 1518 (PLAINFIELDS RD)	FROM PVT. JOINT 608FT N. OF BRIDGE #530 TO PVT. JOINT 791FT S OF SR 1504 (SPERO RD)		10	2	ZWU	1,912	20		*																				40,381	40,381	126										
				TOTAL FOR MAP NO. 17					1,912																							40,381	40,381	126										
8CR.20761.23	Chatham	18	SR 2261 (OLD LIBERTY RD)	FROM SR 2442 (RAMSEUR JULIAN RD) TO SR 2440 (BROWER MEADOW RD)		16	2	ZWU	1,39	19		*																				29,913	29,913											
				TOTAL FOR MAP NO. 18					1,39																							29,913	29,913											
8CR.20761.23	Randolph	19	SR 2261 (OLD LIBERTY RD)	W. JT. BRIDGE # 142 OVER US 421 TO SR 2442 (RAMSEUR JULIAN RD)		5	2	ZWU	0,822	19		*																				17,361	17,361											
				TOTAL FOR MAP NO. 19					0,822																							17,361	17,361											
8CR.20761.23	Randolph	20	SR 2614 (GRANTVILLE LN)	FROM SR 1003 (PLEASANT RIDGE RD) TO NC 42		7,18,19	2	ZWU	5,29	20		*								40												111,725	111,725											
				TOTAL FOR MAP NO. 20					5,29											40												111,725	111,725											
8CR.20761.23	Randolph	21	SR 1331 (RIDGES MOUNTAIN RD)	FROM SR 1332 (GARREN TOWN RD) TO PVT. JOINT		7	2	ZWU	0,7	20		*																				15,064	15,064											
				TOTAL FOR MAP NO. 21					0,7																							15,064	15,064											
TOTAL FOR PROJ NO. 8CR.20761.23											23,417																																	
GRAND TOTAL											25,725	1	2,861	184	39,620	12,232	3,301	29,243	192	230	75	357	12	6	1	4	4	18	2	670	438,047	437,511												

DIVIDED MEDIANS WITH WIDTHS 46' OR GREATER



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

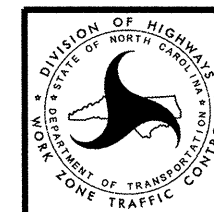


NOTES:

- 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

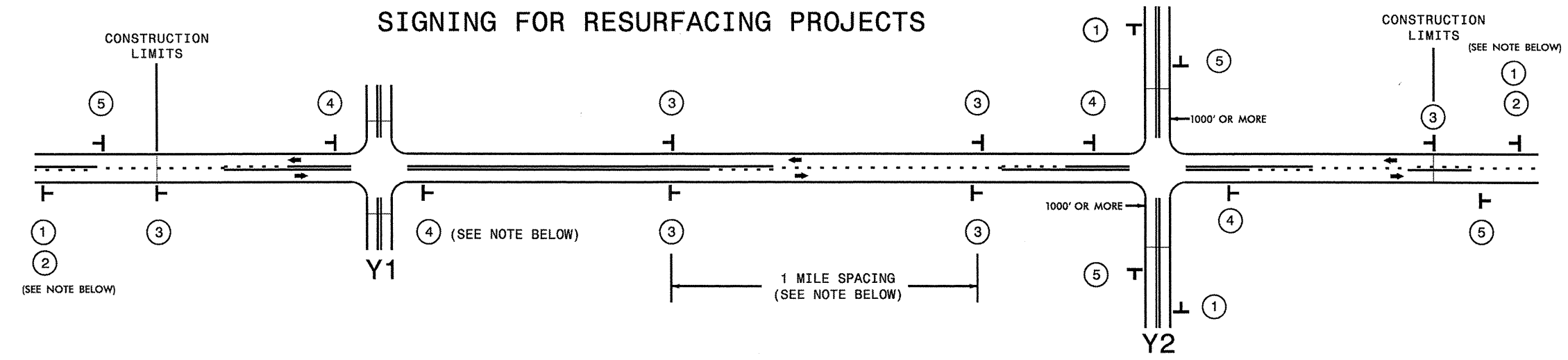
- CHANGEABLE MESSAGE SIGN (CMS)
- STATIONARY SIGN
- DIRECTION OF TRAFFIC FLOW
- TRAFFIC DRUM



RESURFACING ADVANCE WARNING SIGNS FOR HIGH SPEED FACILITIES ≥ 60 MPH

30-JAN-2014 16:46 C:\div8_projects\Resurfacing\Mar ch 2014\Randolph\Randolph_Submittal_Mar ch 2014\Resurfacing_AdvWarn_HSpd.dgn gsdovis AT DBCAD=270410

SIGNING FOR RESURFACING PROJECTS



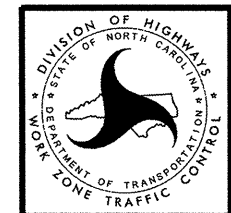
LEGEND	
T	STATIONARY SIGN
←	DIRECTION OF TRAFFIC FLOW

MAINLINE (-L-) SIGNING

-Y- LINE SIGNING

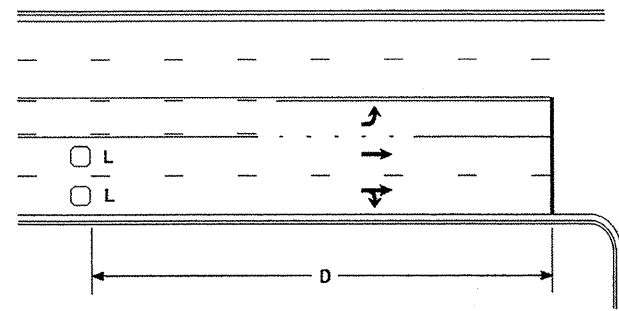
SIGNING NOTES AND PLACEMENT PER DIRECTION	①	 <small>W20-1 48" X 48"</small>	PLACE 1000' PRIOR TO BEGINNING OF CONSTRUCTION LIMITS. ONLY USED ON -Y- LINES IF RESURFACING LIMITS EXTEND 1000' ALONG -Y- LINE.	<p style="text-align: center;">NO REQUIRED STATIONARY SIGNING FOR THE FOLLOWING -Y- LINE CONDITIONS:</p> <ol style="list-style-type: none"> 1) LESS THAN 1000' OF RESURFACING ALONG -Y- LINE 2) SUBDIVISION ROADS 3) DEAD END ROADS <p style="text-align: center; font-size: small;">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; font-size: small;">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.	

30-JAN-2014 16:46 C:\d\88_projects\Resurfacing\Mar ch_2014\Randolph\Randolph_Submittal_Mar ch_2014\Resurfacing_AdvWarn-2Ln.dgn gscavis AT DBCAD-210410



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

High Speed Detection [≥40 mph (64 km/hr)]

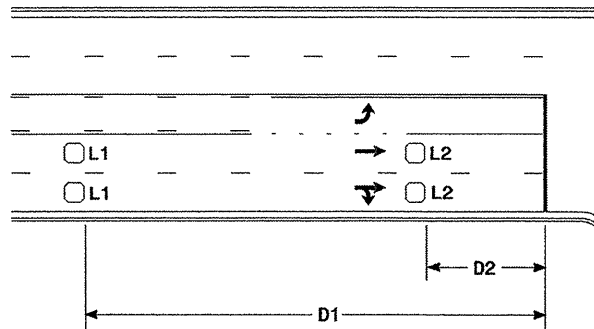


Speed Limit mph (km/hr)	D ft (m)
40 (64)	250 (75)
45 (72)	300 (90)
50 (80)	355 (110)
55 (88)	420 (130)

L = 6ft X 6ft (1.8m X 1.8m)
Wired in series for TS1
Controllers
Wired separately for TS2,
170, and 2070L Controllers

Volume Density Operation

OR



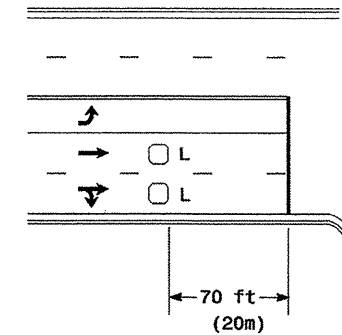
Speed Limit mph (km/hr)	D1 ft (m)	D2 ft (m)
40 (64)	250 (75)	80 (25)
45 (72)	300 (90)	90 (27)
50 (80)	355 (110)	100 (30)
55 (88)	420 (130)	110 (35)

L1 = 6ft X 6ft
(1.8m X 1.8m)
Wired in series

L2 = 6ft X 6ft
(1.8m X 1.8m)
Wired in series

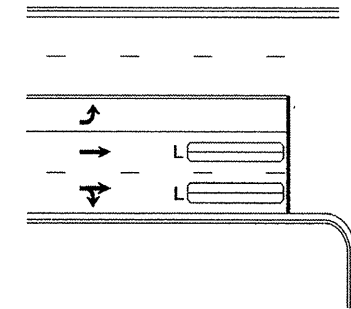
"Stretch" Operation

Low Speed Detection [≤35 mph (56 km/hr)]



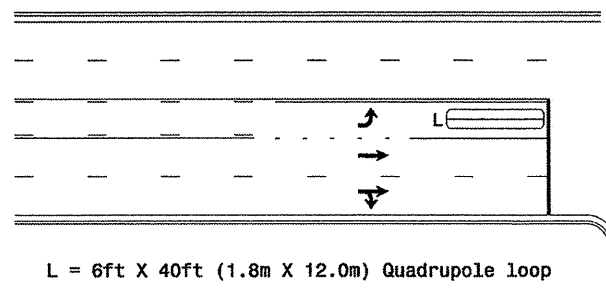
L = 6ft X 6ft (1.8m X 1.8m)
Wired in series

OR



L = 6ft X 40ft (1.8m X 12.0m)
Quadrupole loop, wired separately

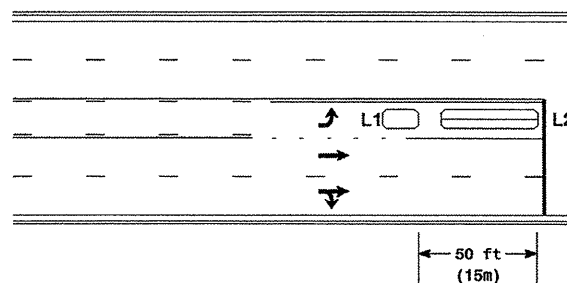
Left Turn Lane Detection



L = 6ft X 40ft (1.8m X 12.0m) Quadrupole loop

Presence Loop Detection

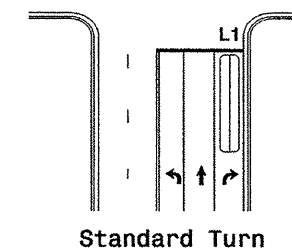
OR



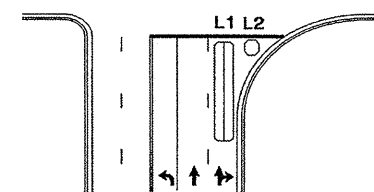
L1 = 6ft X 15ft (1.8m X 4.6m) Queue detector
L2 = 6ft X 40ft (1.8m X 12.0m) Quadrupole loop

Queue Loop Detection

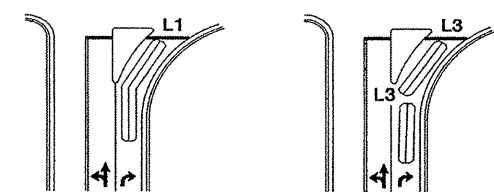
Right Turn Lane Detection



Standard Turn



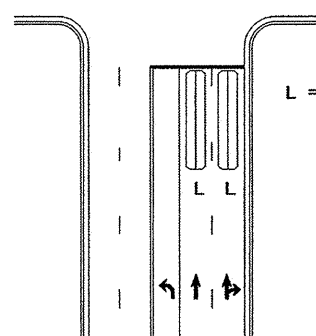
Wide Radius Turn



Channelized Turn

L1 = 6ft X 40ft (1.8m X 12.0m) Quadrupole loop
L2 = 6ft X 6ft (1.8m X 1.8m) [Minimum] Presence loop
Wired separately
L3 = 6ft X 20ft (1.8m X 6.0m) Quadrupole loop
Wired in series

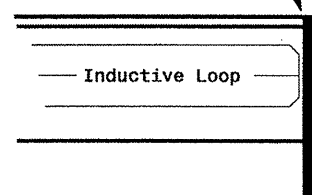
Side Street Detection



L = 6ft X 40ft (1.8m X 12.0m)
Quadrupole loop
Wired to separate
detectors/channels

Presence Loop Placement at Stop Lines

Locate loop slightly
behind leading
edge of stop line



Note:
Loop may be located in advance
of stop line when stop line is
greater than 15' (4.5m) from edge
of intersecting roadway; or, when
loop detects a permissive or
protected/permissive left turn.

Recommended Number of Turns

Single 6' X 6' (1.8m X 1.8m)
loop (wired separately):

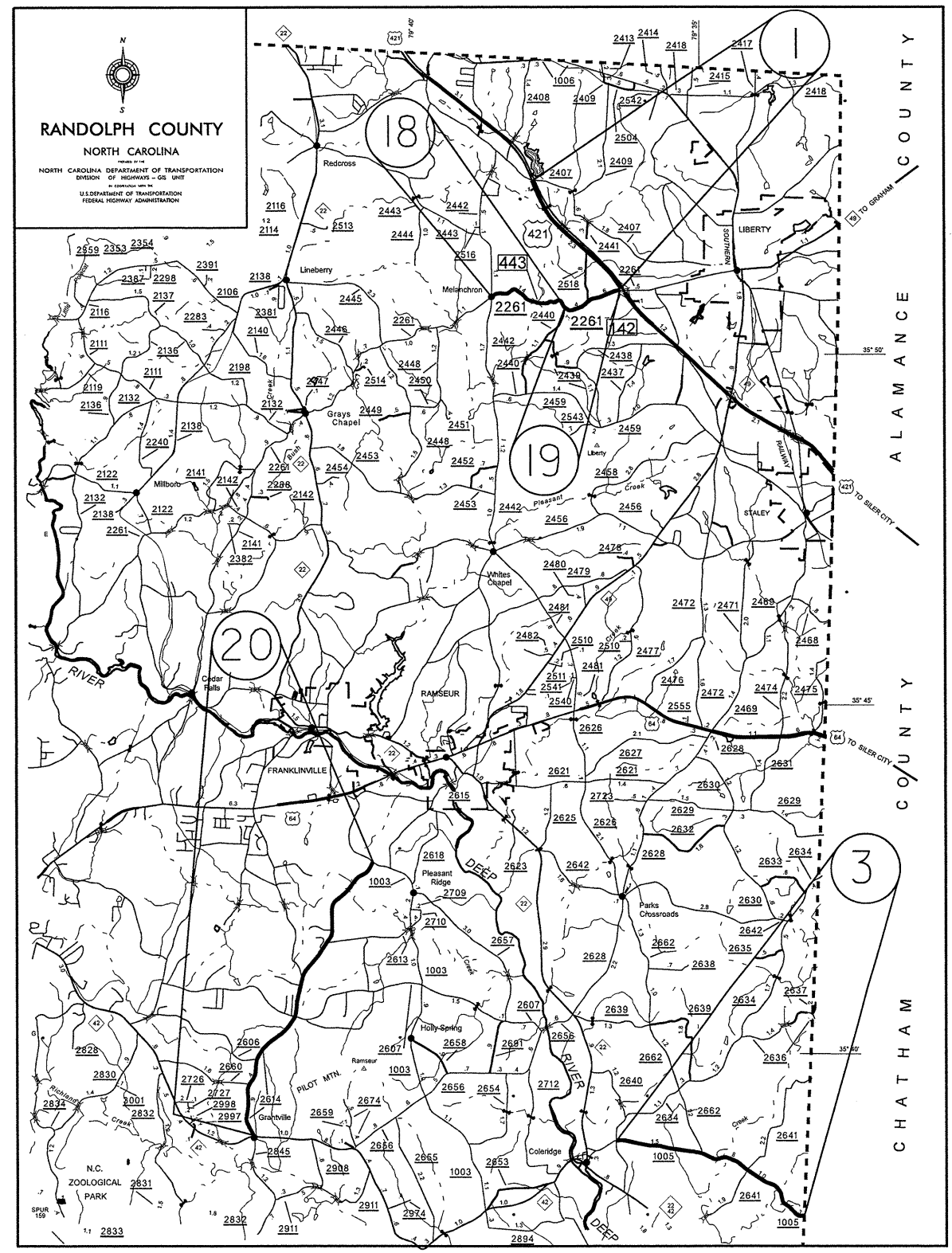
Length of Lead-in ft (m)	Number of Turns
< 250 (75)	3
250-375 (75-115)	4
375-525 (115-160)	5
> 525 (160)	6

Quadrupole loops: Use 2-4-2 turns

6' X 15' (1.8m X 4.6m) Loops:
Lead-in < 150' (45 m), use 2 turns
Lead-in > 150' (45 m), use 3 turns

	Typical Loop Locations		
	Prepared in the Office of: State of North Carolina Department of Transportation Planning and Geometric Section 122 N. McDowell St., Raleigh, NC 27603	PLAN DATE: June 2006 PREPARED BY: P. L. Alexander	
SCALE: N/A	REVISIONS: Revise pavement markings	INIT. DATE: AC 12/21/06	SIGNATURE DATE: 6/16/06

MAPS #1, #3, #18, #19, & #20



MAPS #6 - #8, & #10 - #13

